



Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 05:48 PM UTC

PDB ID : 3JAN / pdb_00003jan
EMDB ID : EMD-3045
Title : Structure of the scanning state of the mammalian SRP-ribosome complex
Authors : Voorhees, R.M.; Hegde, R.S.
Deposited on : 2015-06-17
Resolution : 3.75 Å(reported)
Based on initial model : 3JAJ

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:

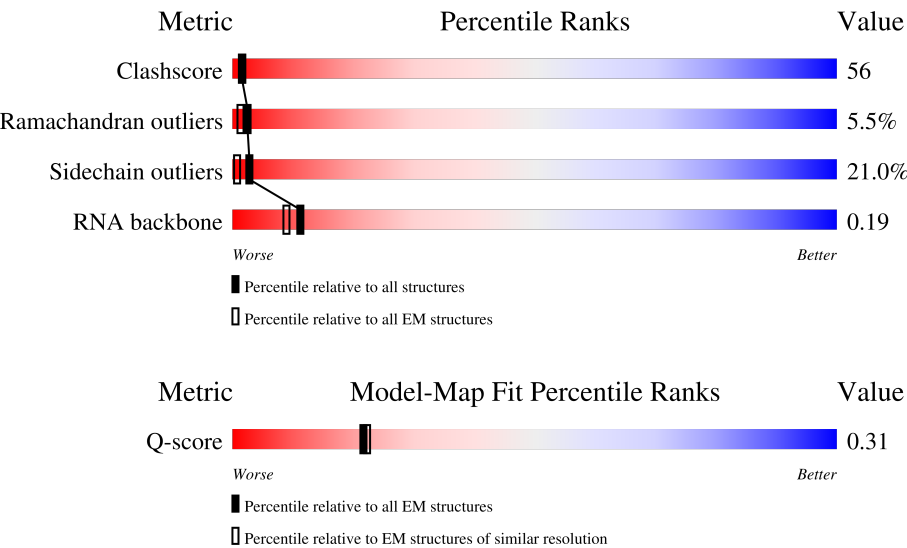
EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & 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.



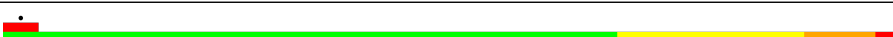
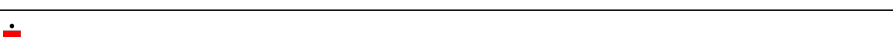
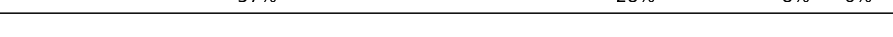
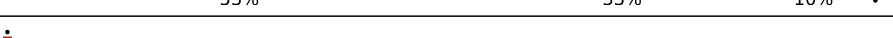
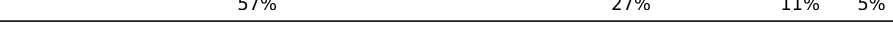
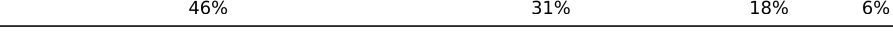
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	8855 (3.40 - 4.40)

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	

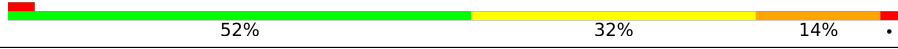
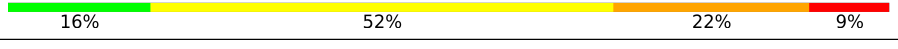
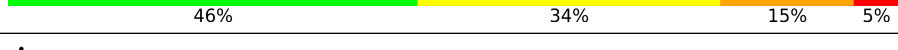
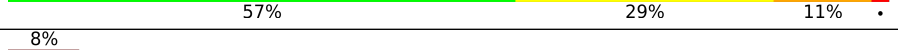
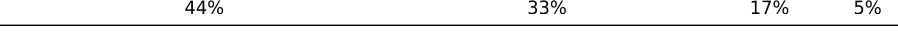
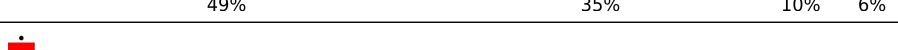
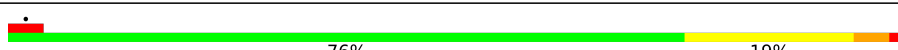
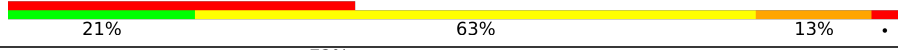
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Mol	Chain	Length	Quality of chain
4	H	190	
5	J	170	
6	L	210	
7	M	138	
8	N	203	
9	O	201	
10	Q	187	
11	R	180	
12	S	175	
13	T	159	
14	U	99	
15	V	131	
16	X	119	
17	Y	134	
18	Z	135	
19	a	147	
20	b	75	
21	c	94	
22	d	107	
23	e	128	
24	f	109	
25	g	114	
26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

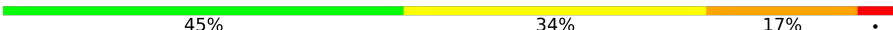
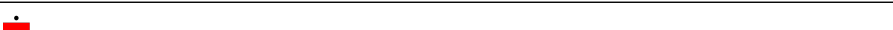
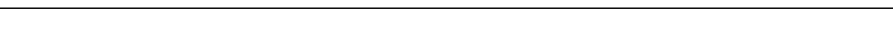
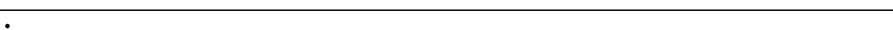
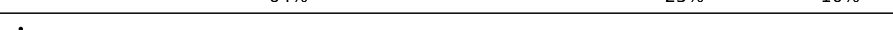
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Mol	Chain	Length	Quality of chain
29	l	50	
30	m	52	
31	o	104	
32	5	3658	
33	7	120	
34	8	156	
35	B	394	
36	C	367	
37	E	236	
38	F	225	
39	I	213	
40	P	153	
41	W	63	
42	j	86	
43	n	23	
44	p	91	
45	r	125	
46	K	163	
47	q	202	
48	z	426	
49	3	76	
50	4	206	
51	9	105	
52	6	179	
53	S2	1742	

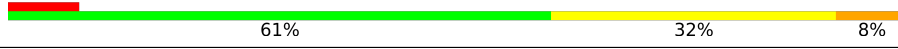
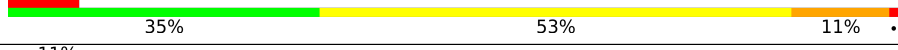
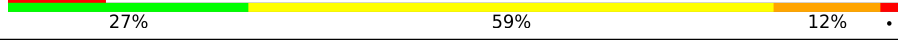
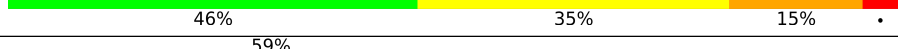
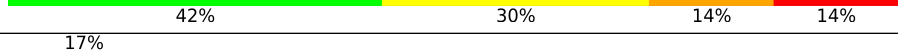
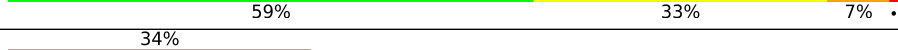
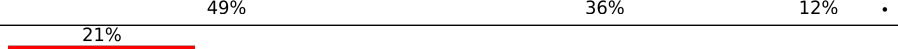
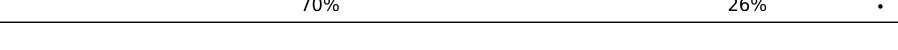
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Mol	Chain	Length	Quality of chain
54	SA	208	
55	SB	213	
56	SC	218	
57	SE	262	
58	SG	237	
59	SH	189	
60	SI	206	
61	SJ	185	
62	SL	152	
63	SN	149	
64	SO	136	
65	SV	82	
66	SW	129	
67	SX	141	
68	SY	126	
69	Sa	98	
70	Sb	83	
71	Se	57	
72	SD	227	
73	SF	191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

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Mol	Chain	Length	Quality of chain
79	SS	137	
80	ST	141	
81	SU	104	
82	SZ	75	
83	Sc	64	
84	Sd	52	
85	Sf	71	
86	Sg	313	
87	S1	74	
88	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
90	ZN	Sa	101	-	-	X	-
90	ZN	j	101	-	-	X	-
90	ZN	o	201	-	-	X	-

2 Entry composition

There are 90 unique types of molecules in this entry. The entry contains 227964 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 RNA chain called Val tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	3	76	Total	C	N	O	P	0	0
			1616	723	290	528	75		

- Molecule 50 is a RNA chain called SRP 7S RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	4	206	Total	C	N	O	P	6	0
			4551	2026	836	1477	212		

- Molecule 51 is a protein called SRP19.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	9	105	Total	C	N	O	S	0	0
			844	534	152	152	6		

- Molecule 52 is a protein called SRP68.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	6	179	Total	C	N	O	S	0	0
			1497	939	280	271	7		

- Molecule 53 is a RNA chain called 18S ribosomal RNA.

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

- Molecule 54 is a protein called Ribosomal protein uS2.

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

- Molecule 55 is a protein called Ribosomal protein eS1.

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

- Molecule 56 is a protein called Ribosomal protein uS5.

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

- Molecule 57 is a protein called Ribosomal protein eS4.

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

- Molecule 58 is a protein called Ribosomal protein eS6.

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

- Molecule 59 is a protein called Ribosomal protein eS7.

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

- Molecule 60 is a protein called Ribosomal protein eS8.

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

- Molecule 61 is a protein called Ribosomal protein uS4.

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

- Molecule 62 is a protein called Ribosomal protein uS17.

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

- Molecule 63 is a protein called Ribosomal protein uS15.

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

- Molecule 64 is a protein called Ribosomal protein uS11.

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

- Molecule 65 is a protein called Ribosomal protein eS21.

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

- Molecule 66 is a protein called Ribosomal protein uS8.

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

- Molecule 67 is a protein called Ribosomal protein uS12.

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

- Molecule 68 is a protein called Ribosomal protein eS24.

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

- Molecule 69 is a protein called Ribosomal protein eS26.

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

- Molecule 70 is a protein called Ribosomal protein eS27.

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

- Molecule 71 is a protein called Ribosomal protein eS30.

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

- Molecule 72 is a protein called Ribosomal protein uS3.

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

- Molecule 73 is a protein called Ribosomal protein uS7.

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

- Molecule 74 is a protein called Ribosomal protein eS10.

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

- Molecule 75 is a protein called Ribosomal protein eS12.

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

- Molecule 76 is a protein called Ribosomal protein uS19.

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

- Molecule 77 is a protein called Ribosomal protein uS9.

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

- Molecule 78 is a protein called Ribosomal protein eS17.

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

- Molecule 79 is a protein called Ribosomal protein uS13.

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

- Molecule 80 is a protein called Ribosomal protein eS19.

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

- Molecule 81 is a protein called Ribosomal protein uS10.

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

- Molecule 82 is a protein called Ribosomal protein es25.

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

- Molecule 83 is a protein called Ribosomal protein eS28.

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

- Molecule 84 is a protein called Ribosomal protein uS14.

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

- Molecule 85 is a protein called Ribosomal protein eS31.

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

- Molecule 86 is a protein called Ribosomal protein RACK1.

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

- Molecule 87 is a protein called SRP9.

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

- Molecule 88 is a protein called SRP14.

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

- Molecule 89 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
89	D	1	Total	Mg	0
			1	1	
89	V	1	Total	Mg	0
			1	1	
89	g	1	Total	Mg	0
			1	1	
89	5	116	Total	Mg	0
			116	116	
89	7	5	Total	Mg	0
			5	5	
89	8	6	Total	Mg	0
			6	6	

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Mol	Chain	Residues	Atoms		AltConf
89	S2	36	Total 36	Mg 36	0

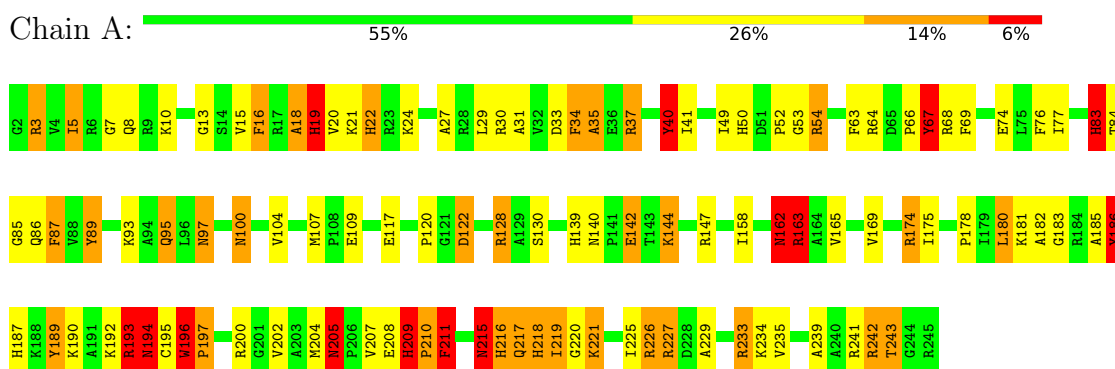
- Molecule 90 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

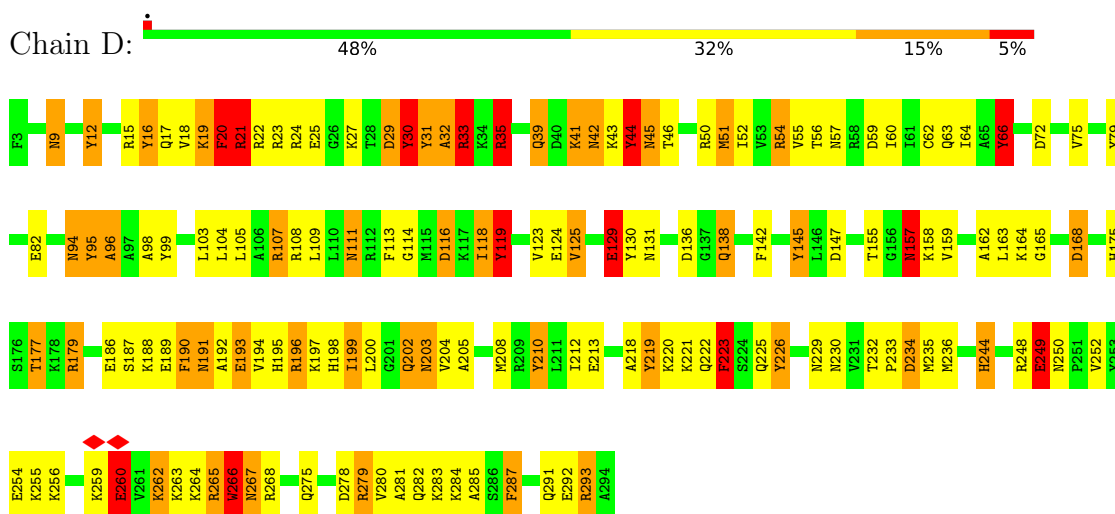
3 Residue-property plots

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.

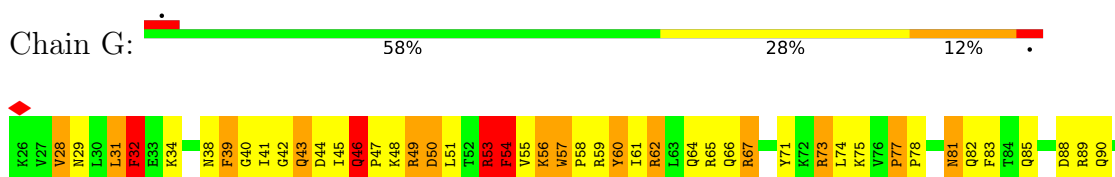
• Molecule 1: Ribosomal protein uL2

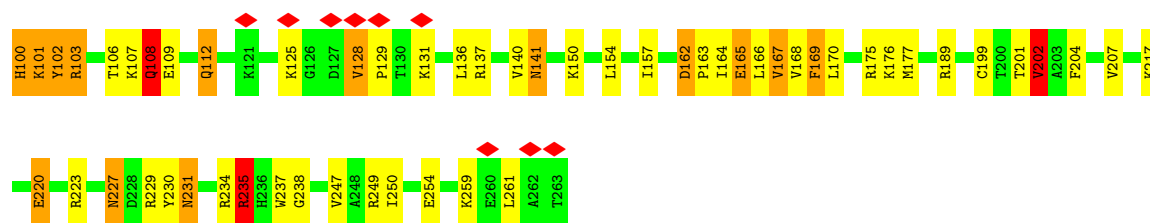


• Molecule 2: Ribosomal protein uL18

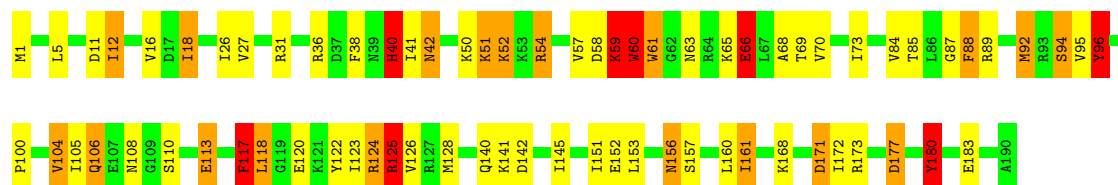


• Molecule 3: Ribosomal protein eL8

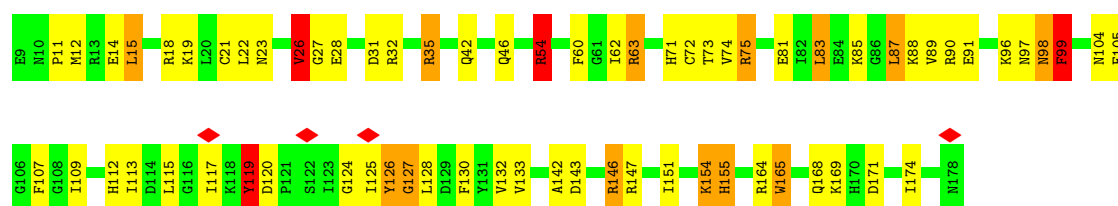




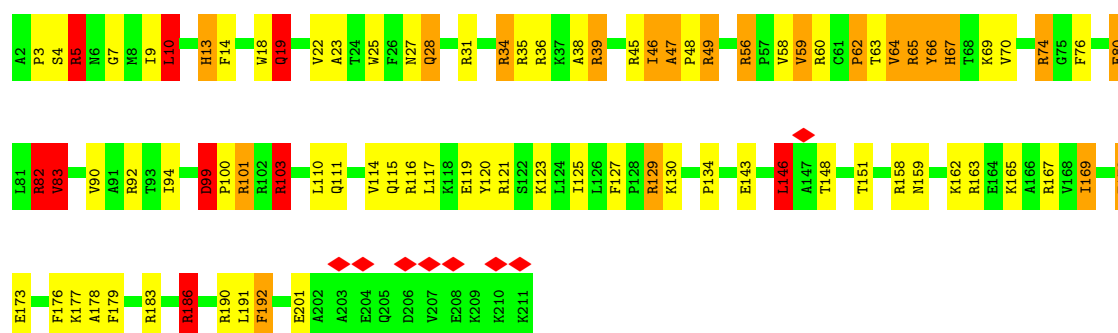
• Molecule 4: Ribosomal protein uL6



• Molecule 5: Ribosomal protein uL5

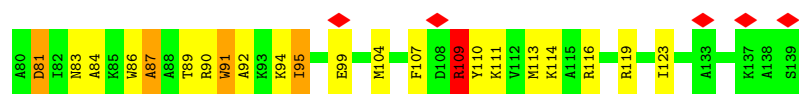


• Molecule 6: Ribosomal protein eL13

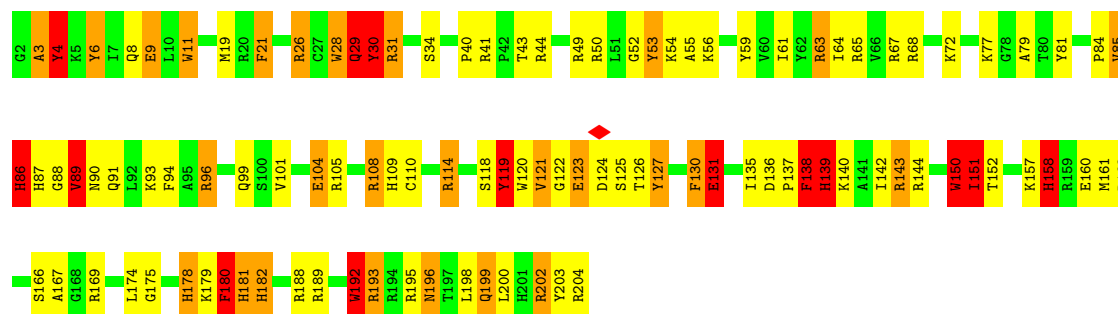


• Molecule 7: Ribosomal protein eL14

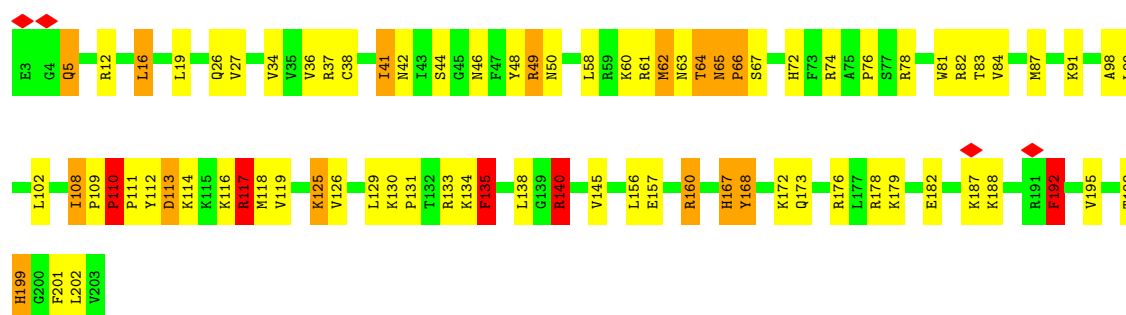




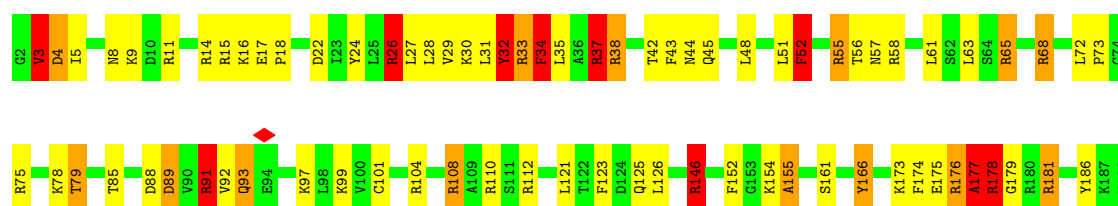
• Molecule 8: Ribosomal protein eL15



• Molecule 9: Ribosomal protein uL13

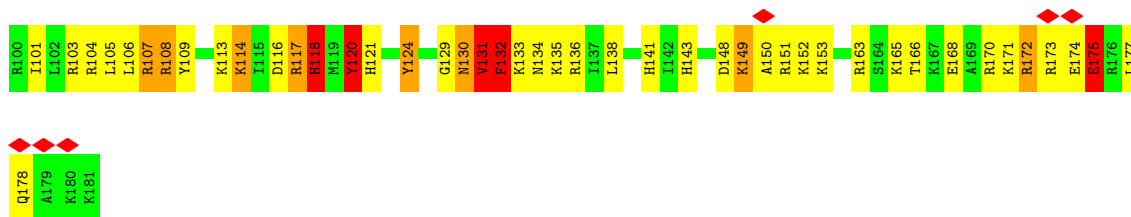


• Molecule 10: Ribosomal protein eL18



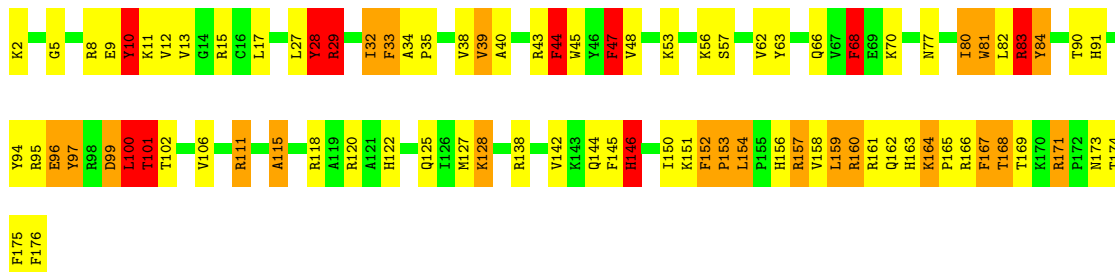
• Molecule 11: Ribosomal protein eL19





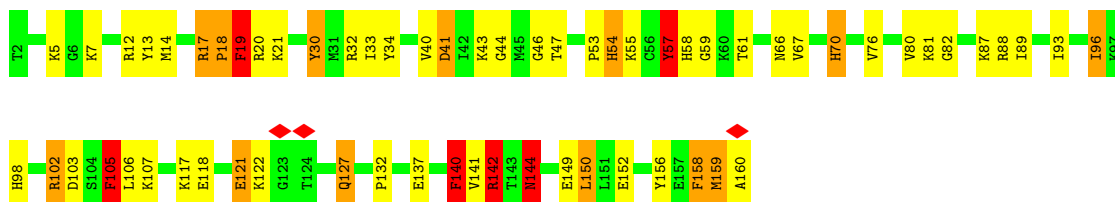
• Molecule 12: Ribosomal protein eL20

Chain S: 50% 31% 13% 6%



• Molecule 13: Ribosomal protein eL21

Chain T: 60% 28% 8%



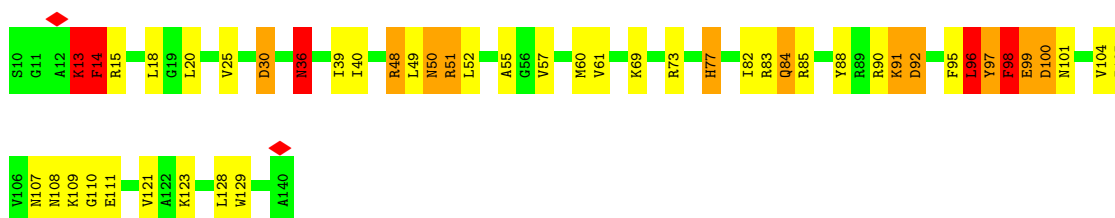
• Molecule 14: Ribosomal protein eL22

Chain U: 69% 21% 8%



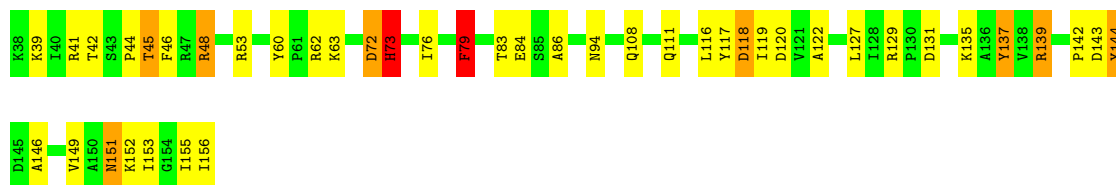
• Molecule 15: Ribosomal protein uL14

Chain V: 63% 24% 8%



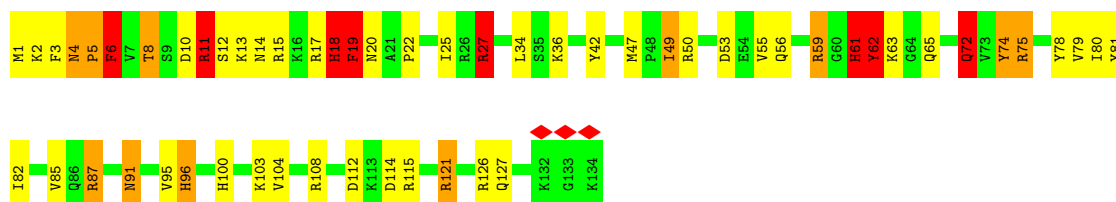
• Molecule 16: Ribosomal protein uL23

Chain X: 



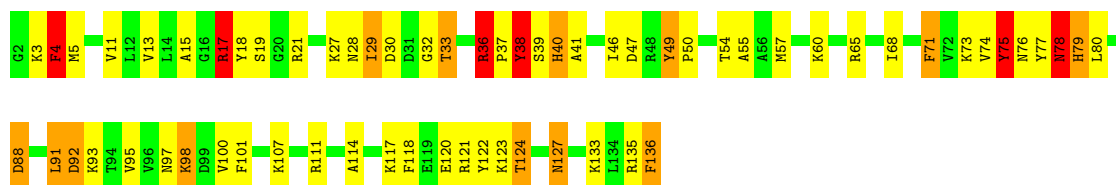
- Molecule 17: Ribosomal protein uL24

Chain Y: 



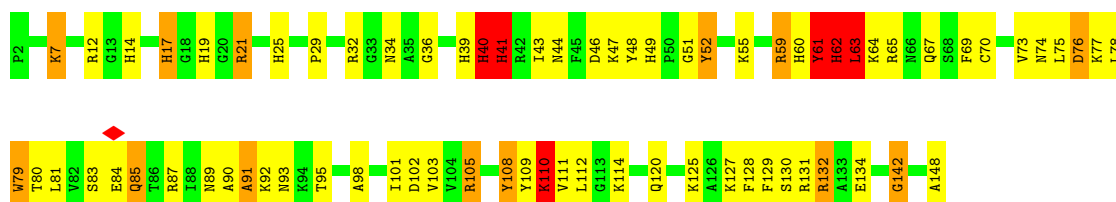
- Molecule 18: Ribosomal protein eL27

Chain Z: 



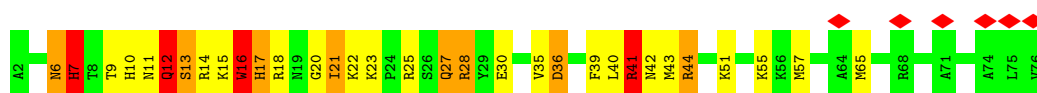
- Molecule 19: Ribosomal protein uL15

Chain a: 



- Molecule 20: Ribosomal protein eL29

Chain b: 

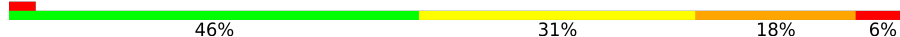


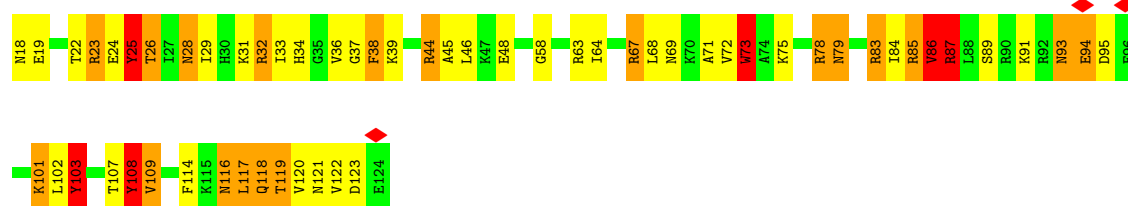
- Molecule 21: Ribosomal protein eL30

Chain c: 



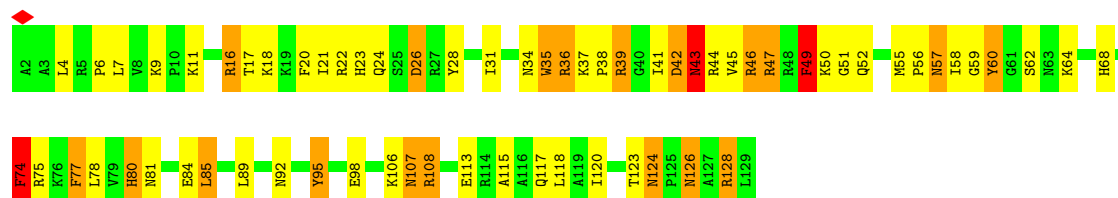
• Molecule 22: Ribosomal protein eL31

Chain d: 



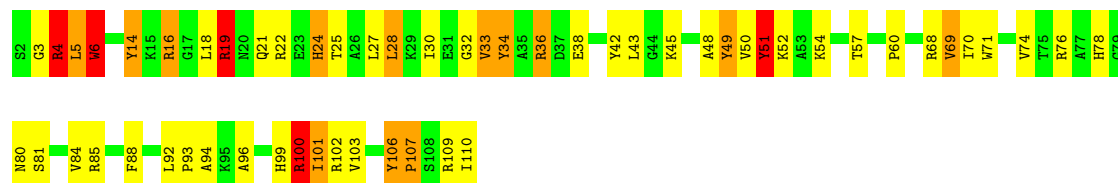
• Molecule 23: Ribosomal protein eL32

Chain e: 



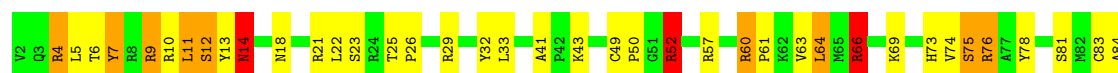
• Molecule 24: Ribosomal protein eL33

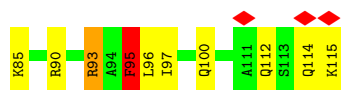
Chain f: 



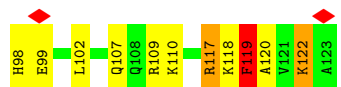
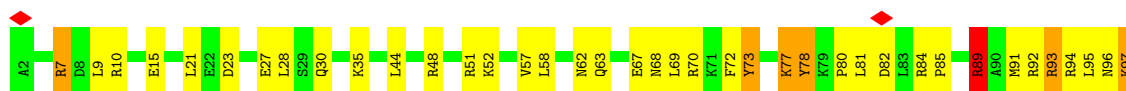
• Molecule 25: Ribosomal protein eL34

Chain g: 

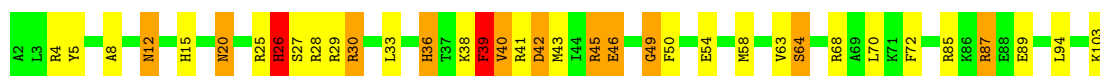




- Molecule 26: Ribosomal protein uL29



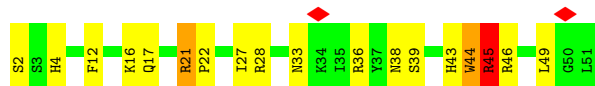
- Molecule 27: Ribosomal protein eL36



- Molecule 28: Ribosomal protein eL38



- Molecule 29: Ribosomal protein eL39

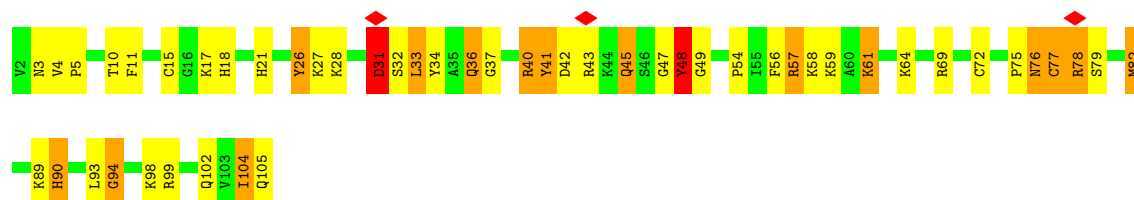


- Molecule 30: Ribosomal protein eL40

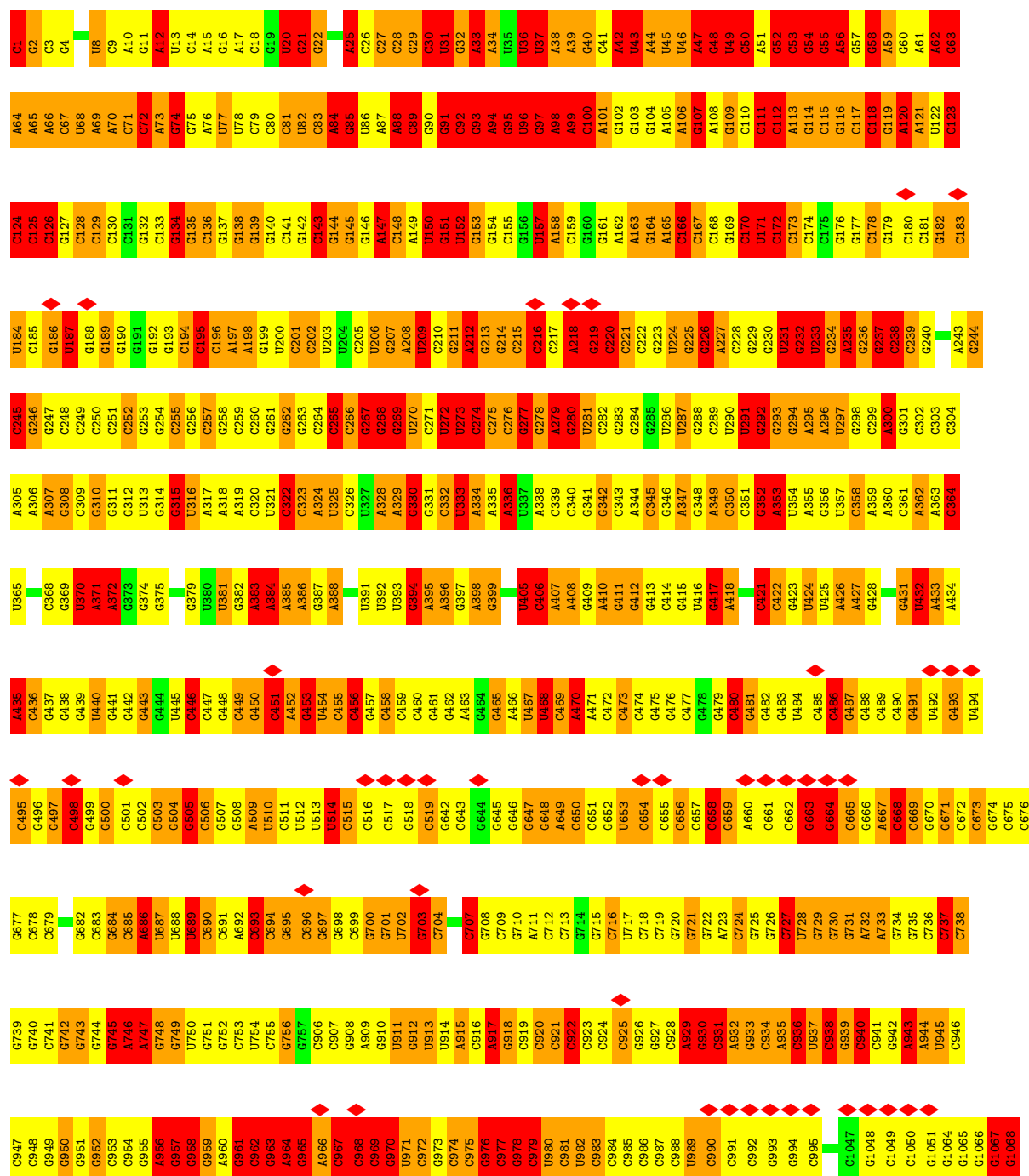


- Molecule 31: Ribosomal protein eL42





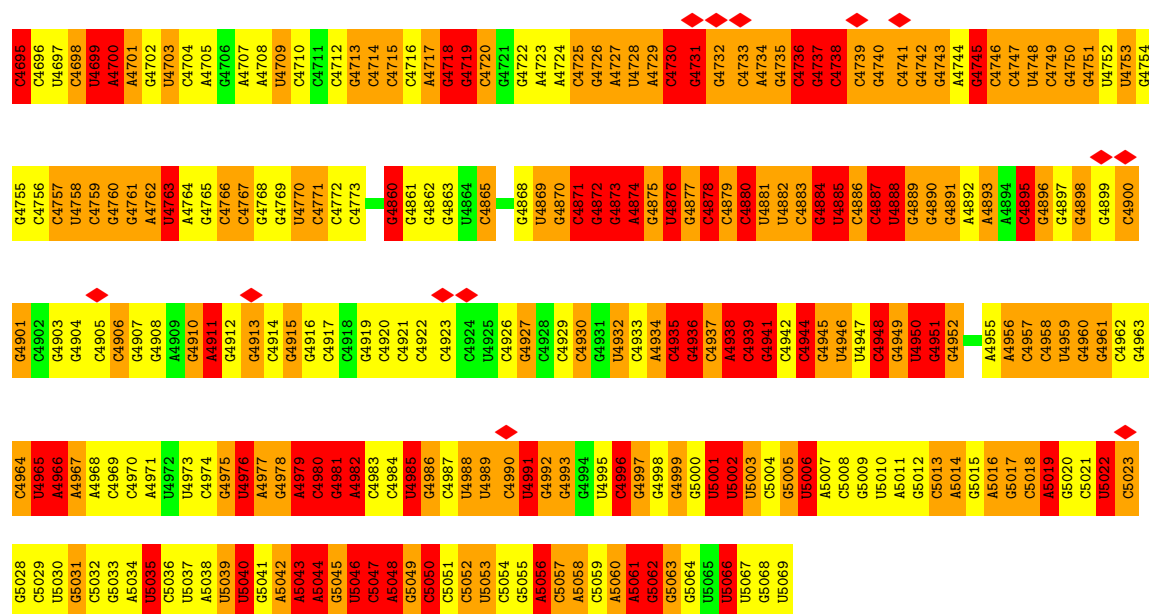
• Molecule 32: 28S ribosomal RNA



G1069	G1070	G1071	G1072	G1073	G1074	G1075	G1076	G1077	G1078	G1079	G1080	G1081	G1082	G1083	G1084	G1085	G1086	G1089	G1090	G1091	G1092	G1093	G1094	G1095	G1096	G1097	G1098	G1099	G1100	G1167	G1168	G1169	G1170	G1171	G1172	G1173	G1174	G1175	G1176	G1177	G1178	G1179	G1180	G1181	G1182	G1183	G1184	G1185	G1186	G1187	G1188	G1189	G1190	G1191	G1192	G1193	G1194	G1195																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
G1196	G1197	G1198	G1199	G1200	G1201	G1202	G1203	G1204	G1205	G1206	G1207	G1208	G1209	G1210	G1211	G1212	G1213	G1214	G1215	G1216	G1217	G1218	G1219	G1220	G1221	G1222	G1223	G1224	G1225	G1226	G1227	G1228	G1229	G1230	G1231	G1232	G1233	G1234	G1235	G1236	G1237	G1238	G1239	G1240	G1241	G1242	G1243	G1244	G1245	G1246	G1247	G1248	G1249	G1250	G1251	G1252	G1253	G1254	G1255	G1256	G1257	G1258	G1259	G1260	G1261	G1262	G1263	G1264																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										

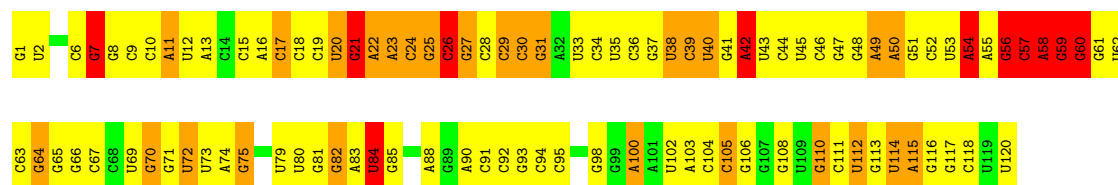
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G3600	G2862	C2802	C2738	A2674	C2613	A2553	G2493	G2433	A2307	C2247	G2076	A2013
C3601	C2863	U2802	C2739	A2675	C2614	G2554	U2494	G2434	A2308	C2248	C2077	C2014
G3603	U2864	U2803	U2740	A2676	G2555	G2556	U2495	G2435	G2309	C2249	C2078	U2015
G3604	U2865	C2804	U2741	G2677	G2556	G2557	G2496	U2436	C2310	C2250	G2079	C2016
A3604	C2866	C2805	G2742	A2678	G2558	C2558	G2497	U2437	G2311	C2251	U2080	A2017
C3605	C2867	G2806	A2743	G2679	G2618	G2559	C2498	A2438	U2312	G2252	C2081	C2018
U3606	U2868	A2807	A2744	G2682	G2619	C2560	U2500	G2439	A2313	G2253	G2082	C2019
U3607	U2869	G2808	A2745	C2683	G2620	C2561	C2501	U2440	A2253	A2254	C2083	U2020
A3608	A2870	C2811	A2746	C2684	A2621	G2562	G2502	G2442	G2316	G2255	C2084	G2021
G3609	A2871	G2812	G2748	C2685	A2623	G2563	C2504	G2443	G2317	C2256	G2085	G2022
C3610	C2872	A2813	C2749	G2686	G2624	G2564	G2505	U2444	C2318	C2257	A2024	C2023
A3611	U2873	G2814	G2749	U2687	U2625	A2565	C2506	C2445	G2319	G2258	G2086	G2024
C3612	U2874	C2815	G2750	U2688	U2626	G2566	G2507	U2446	C2320	G2259	G2087	A2025
U3613	C2875	A2816	G2751	C2689	G2627	G2567	A2507	U2447	G2321	C2260	G2088	A2026
G3614	G2876	G2817	G2752	U2690	U2628	C2568	U2508	G2448	C2322	G2261	U2089	U2027
C3615	A2878	C2818	G2753	C2691	U2629	G2569	G2509	A2449	C2323	G2262	G2092	U2032
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G3617	U2880	U2820	A2755	G2693	U2631	C2571	A2511	A2451	C2325	C2264	G2094	G2034
C3618	G2884	U2821	U2756	U2694	U2632	C2572	A2512	G2452	G2326	G2265	A2095	C2035
G3619	G2885	G2822	G2758	A2695	U2633	A2573	A2453	C2453	C2327	G2266	G2096	C2036
A3620	C3621	C2823	G2759	A2696	C2634	G2574	U2454	U2454	G2328	U2267	G2097	C2037
C3622	C3622	G2824	U2760	A2697	C2635	U2575	G2515	G2455	U2329	U2268	G2098	U2038
G3623	U2891	A2825	U2761	G2698	U2636	G2576	G2516	G2456	G2330	A2269	G2099	A2040
A3624	C2892	U2826	G2762	C2699	U2637	C2577	A2517	G2457	G2331	C2270	A2105	A2041
G3625	U2893	G2827	U2763	G2700	U2638	G2578	G2518	C2458	A2332	G2271	A2106	U2048
C3626	A2894	U2828	A2764	U2701	G2640	G2579	U2519	G2459	G2333	A2272	G2107	G2049
G3627	A2895	U2829	A2765	C2702	A2641	U2580	G2520	A2460	C2334	C2273	G2108	G2050
C3628	G2896	G2830	A2766	G2703	A2642	A2581	G2521	G2461	C2335	G2274	G2109	C2051
A3629	C2897	G2831	U2767	C2704	G2643	A2582	G2522	C2462	C2336	U2281	G2110	G2052
U3630	G2898	A2832	G2768	G2705	G2644	C2583	G2523	G2463	C2337	A2282	G2111	C2053
U3631	C2899	A2833	U2769	G2706	G2645	G2584	U2524	C2464	C2338	G2275	A2105	U2046
C3632	U2900	C2834	C2770	U2707	C2646	G2585	U2525	C2465	C2339	A2276	A2106	G2047
C3633	G2901	A2835	G2771	U2708	A2647	G2586	A2527	G2466	C2340	C2277	G2107	U2048
G3634	G2902	A2836	C2772	C2709	G2648	C2587	G2528	U2468	A2341	A2278	G2108	G2049
A3635	U2903	U2837	G2773	C2710	G2649	C2588	G2529	C2469	G2342	G2279	G2109	G2050
C3636	U2904	G2838	C2774	G2711	G2650	C2589	A2530	C2470	G2343	G2280	G2110	C2051
U3637	C2905	A2839	G2775	G2712	C2651	G2590	U2531	G2471	U2344	U2281	G2111	G2052
U3640	G2906	G2841	G2776	G2713	C2652	U2591	C2532	A2472	C2346	G2283	G2112	U2054
C3638	U2907	G2842	G2777	G2714	C2653	C2592	C2533	A2473	A2347	A2284	G2113	G2055
A3641	U2908	G2843	G2778	G2715	C2654	G2593	C2534	G2474	G2348	A2285	G2114	G2056
A3642	C2909	U2844	G2779	G2716	U2655	G2594	G2535	G2475	A2349	G2286	G2115	A2057
U3644	U3583	A2845	U2782	C2720	G2656	G2595	A2536	G2476	U2350	G2287	C2116	G2058
G3645	C3583	G2846	C2783	G2721	G2657	C2596	A2537	A2477	C2351	G2288	G2117	G2059
A3646	U3584	G2847	C2784	G2722	A2659	A2598	U2538	C2478	U2352	C2289	G2118	G2060
G3647	G3585	A2849	C2785	U2723	A2660	G2599	C2539	G2479	U2353	C2290	G2119	U2061
U3648	G3586	U2850	A2787	U2724	U2661	A2600	G2540	G2480	G2354	G2291	G2120	G2062
A3649	C3587	G2851	U2788	G2725	G2662	A2601	G2541	G2481	G2355	U2292	G2121	G2063
C3650	C3588	U2852	A2789	A2726	G2663	G2602	G2542	C2482	G2357	C2294	G2122	G2064
A3651	G3589	C2853	U2790	G2727	G2664	C2603	A2543	C2483	G2358	G2295	C2123	G2065
C3652	U2854	G2854	U2791	C2728	U2665	G2604	U2485	A2484	A2360	G2296	G2124	C2066
A3653	G3590	C2855	G2792	U2728	U2666	C2605	U2486	U2485	U2362	G2297	C2125	C2067
G3654	C3591	G2856	G2793	C2731	G2667	G2606	G2486	G2487	U2363	U2298	G2126	A2069
C3655	G3592	A2857	C2794	G2732	C2668	C2607	G2487	C2488	G2364	A2299	C2127	U2070
A3656	U3593	G2858	A2795	C2733	C2669	G2608	C2548	C2489	A2365	A2300	A2071	A2071
U3657	C3594	U2797	G2796	G2734	C2670	G2609	G2549	A2429	G2366	G2301	G2128	C2072
C3658	U3595	G2860	G2797	G2735	C2671	G2610	G2550	U2490	C2367	C2302	C2129	C2073
				G2736	C2672	A2611	A2551	C2491	U2305	U2303	G2130	G2074





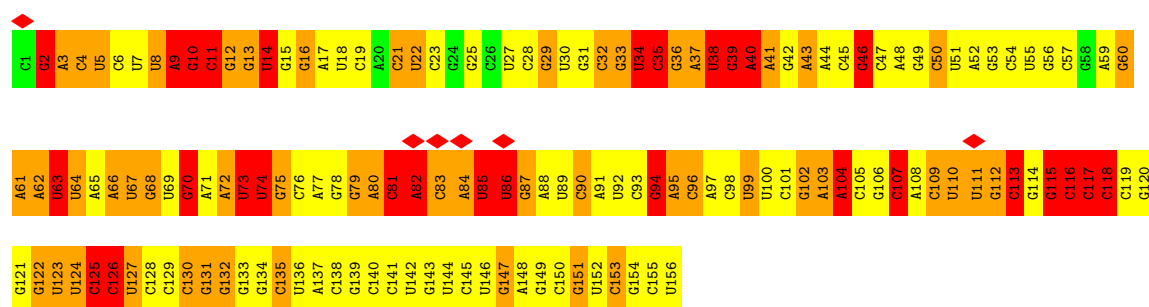
- Molecule 33: 5S ribosomal RNA

Chain 7: 16% 52% 22% 9%



- Molecule 34: 5.8S ribosomal RNA

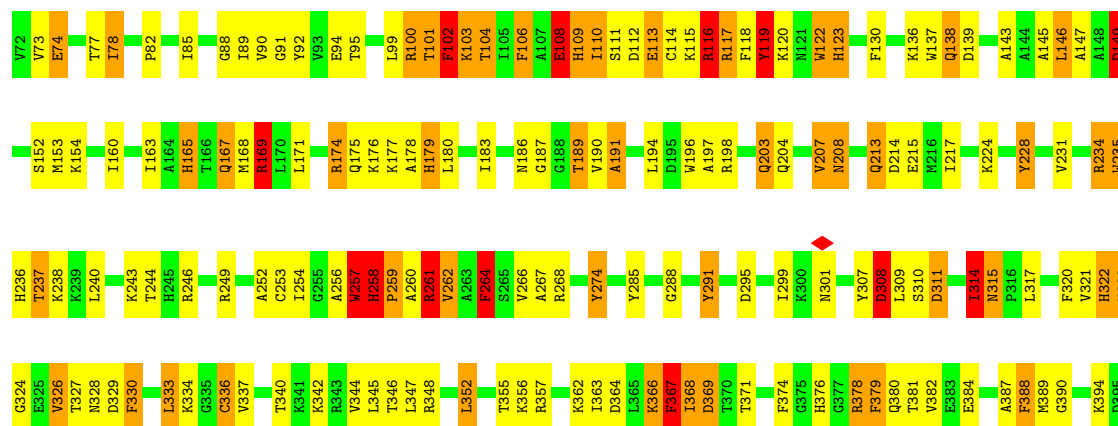
Chain 8: 45% 33% 19%



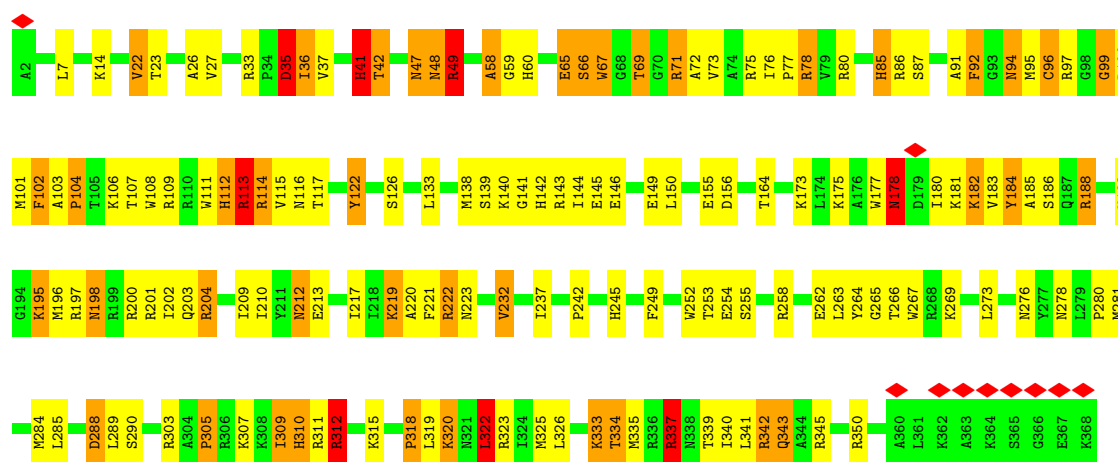
- Molecule 35: Ribosomal protein uL3

Chain B: 46% 34% 15% 5%

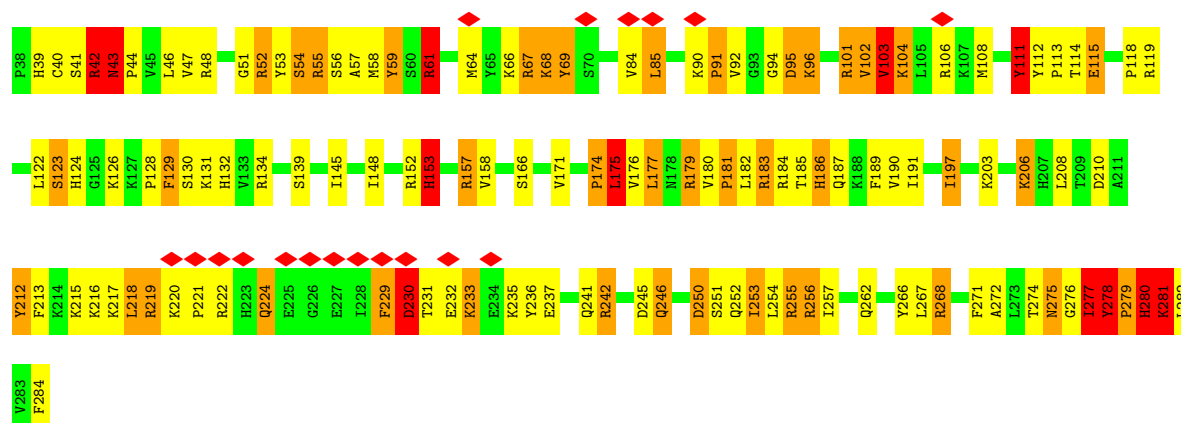




• Molecule 36: Ribosomal protein uL4

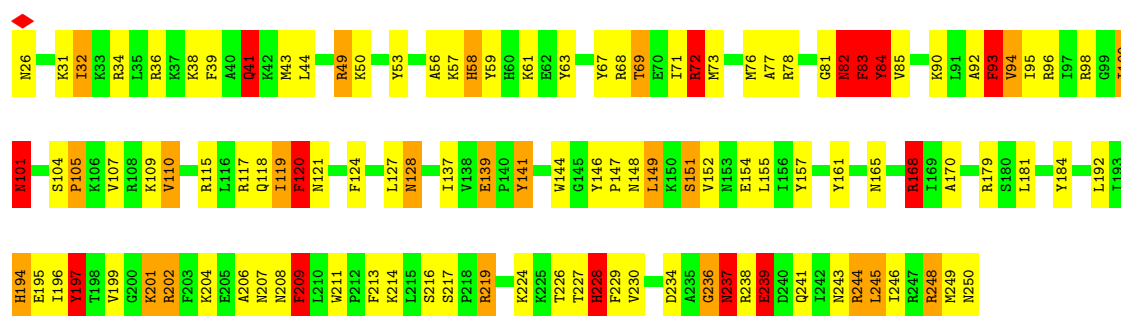


• Molecule 37: Ribosomal protein eL6



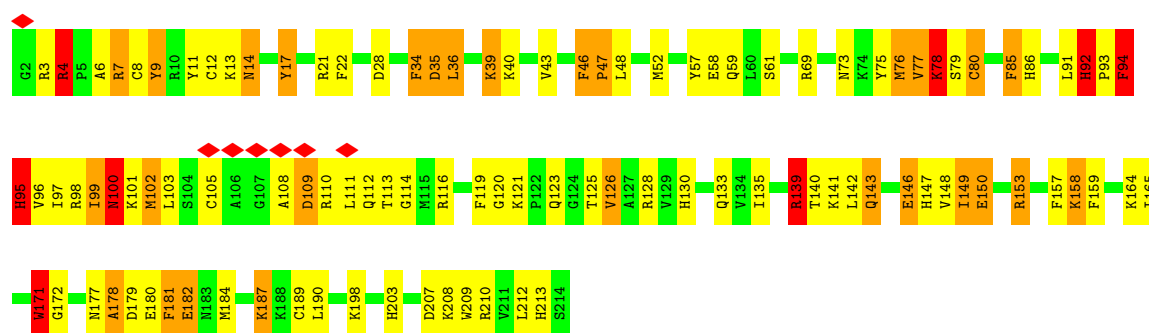
• Molecule 38: Ribosomal protein uL30

Chain F: 



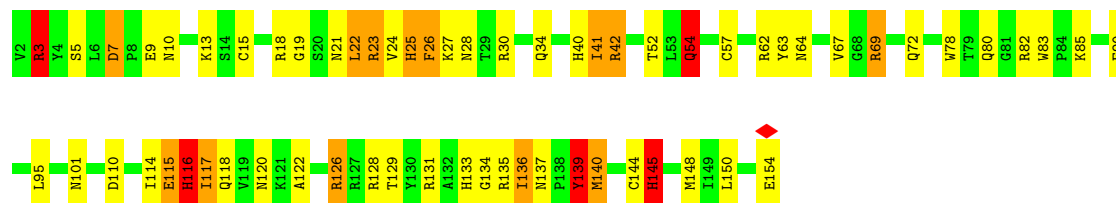
• Molecule 39: Ribosomal protein uL16

Chain I: 



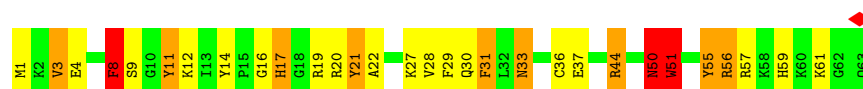
• Molecule 40: Ribosomal protein uL22

Chain P: 



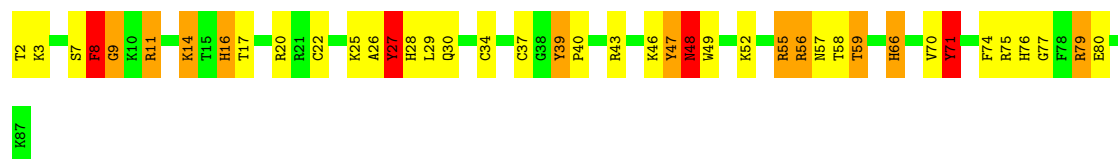
• Molecule 41: Ribosomal protein eL24

Chain W: 

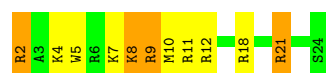


• Molecule 42: Ribosomal protein eL37

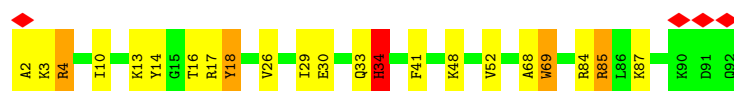
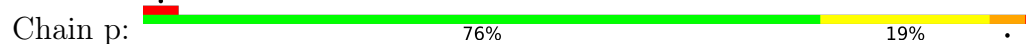
Chain j: 



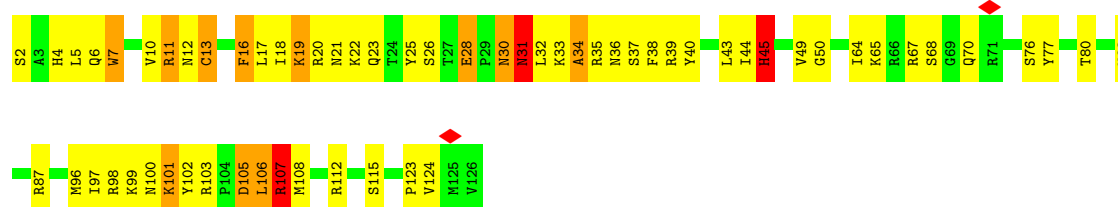
- Molecule 43: Ribosomal protein eL41



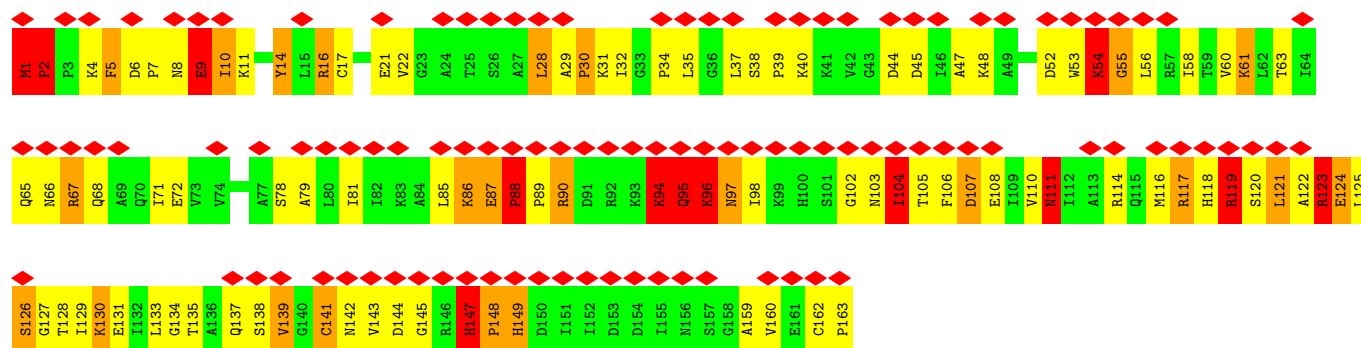
- Molecule 44: Ribosomal protein eL43



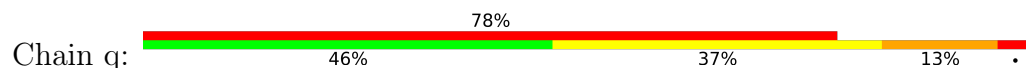
- Molecule 45: Ribosomal protein eL28

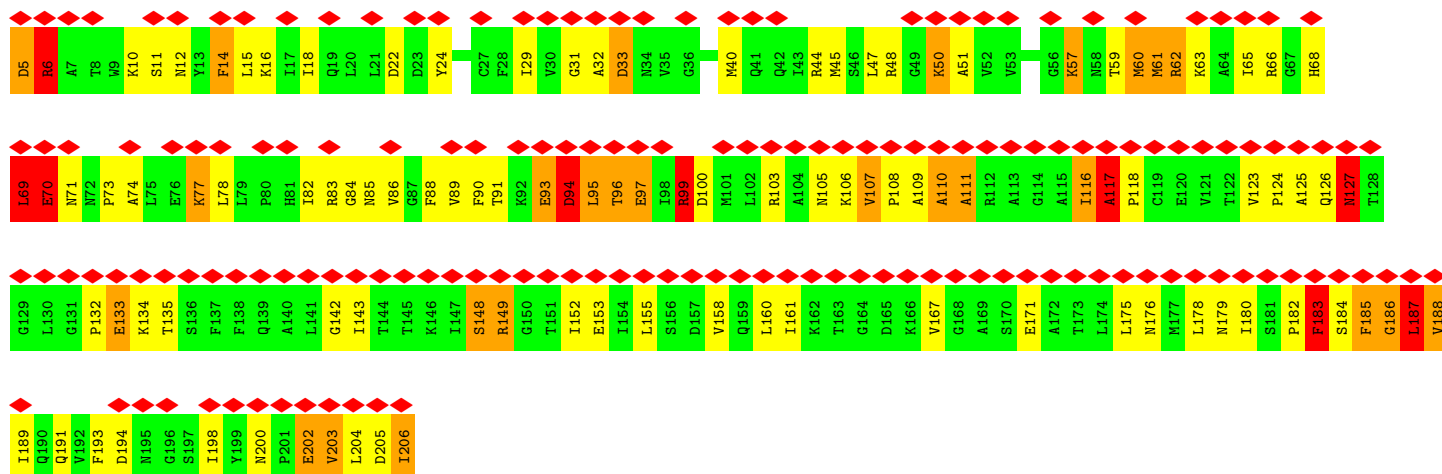


- Molecule 46: Ribosomal protein uL11

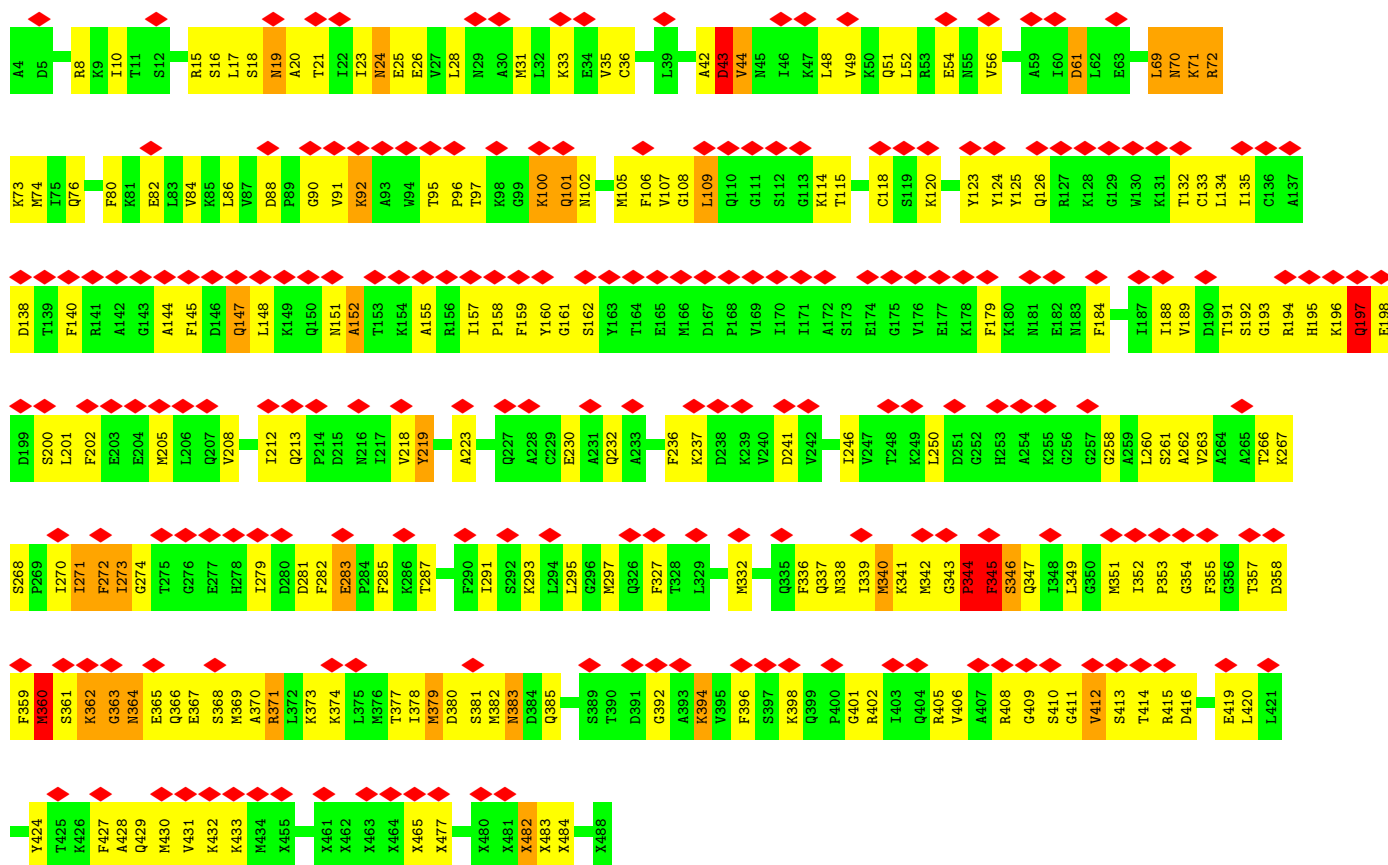


- Molecule 47: Ribosomal protein uL10

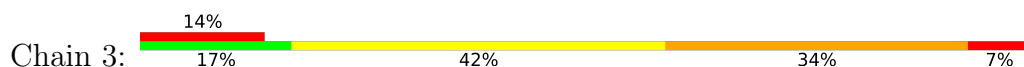




• Molecule 48: SRP54

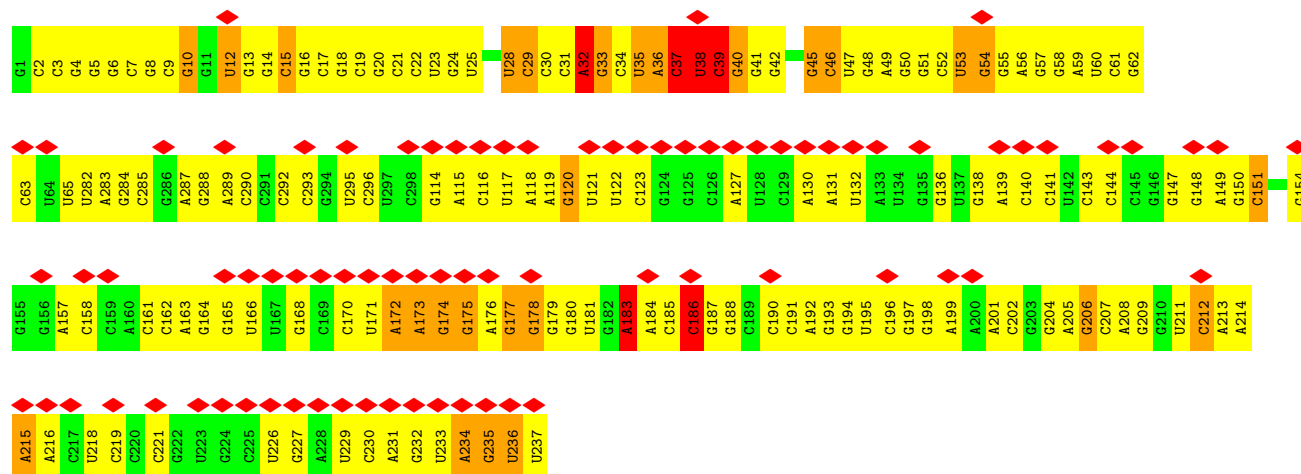


• Molecule 49: Val tRNA

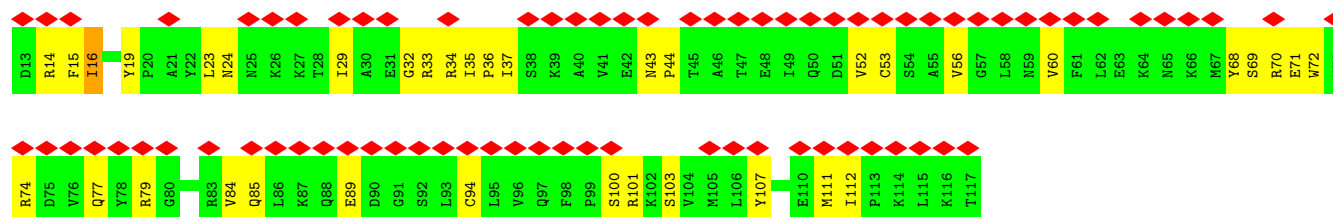




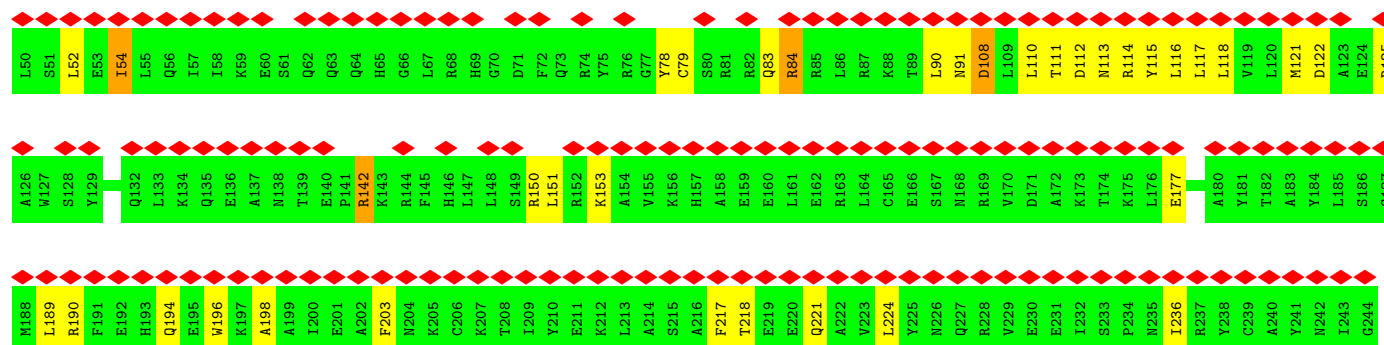
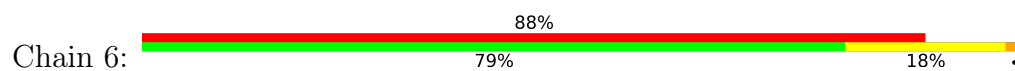
• Molecule 50: SRP 7S RNA



• Molecule 51: SRP19

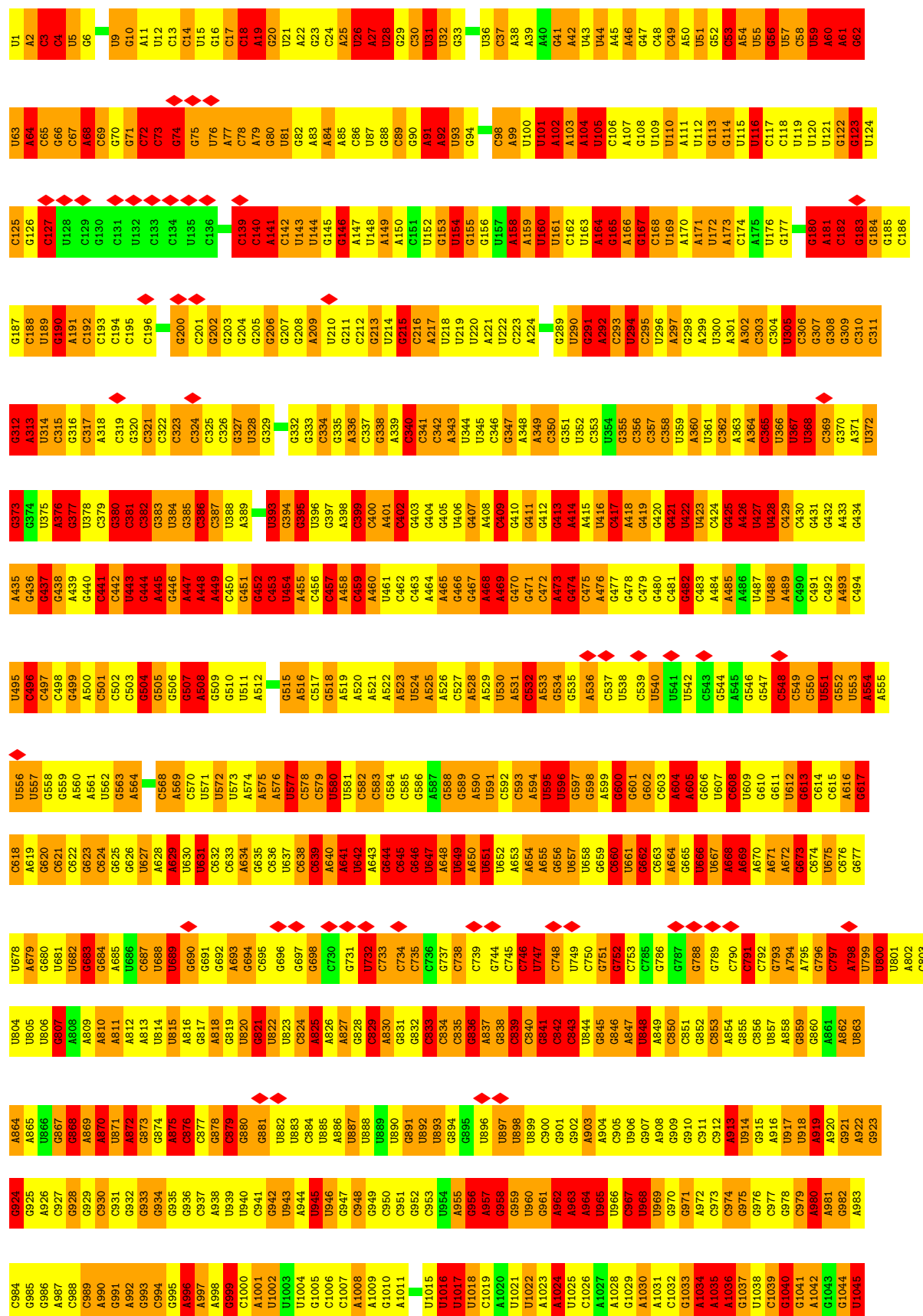


• Molecule 52: SRP68

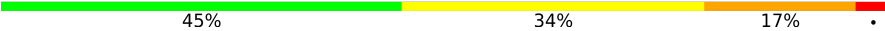


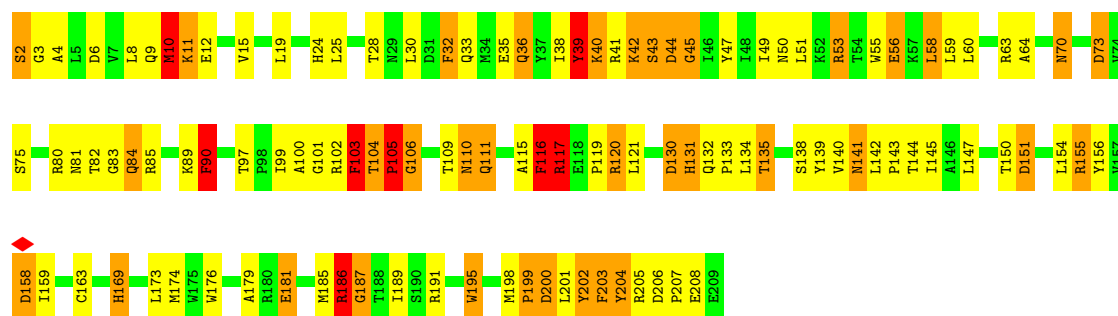
• Molecule 53: 18S ribosomal RNA





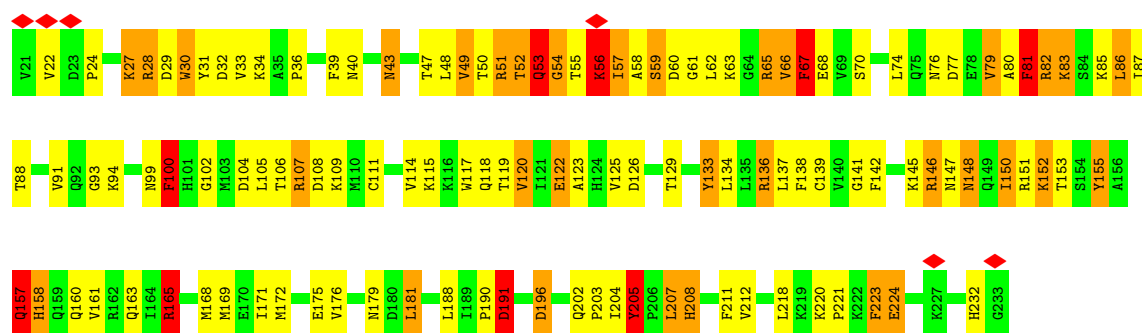


Chain SA: 



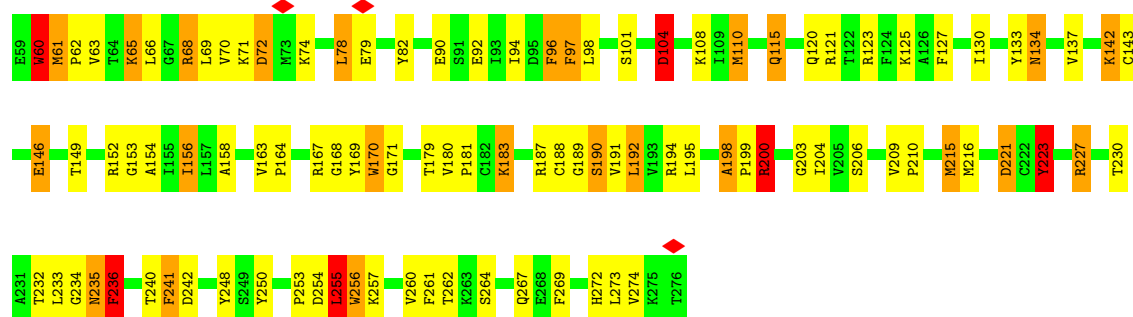
• Molecule 55: Ribosomal protein eS1

Chain SB: 



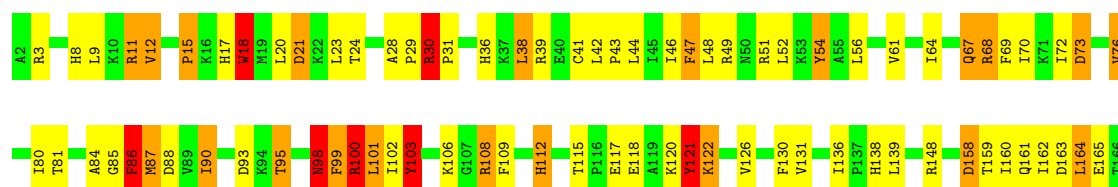
• Molecule 56: Ribosomal protein uS5

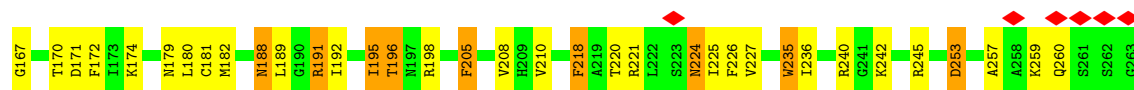
Chain SC: 



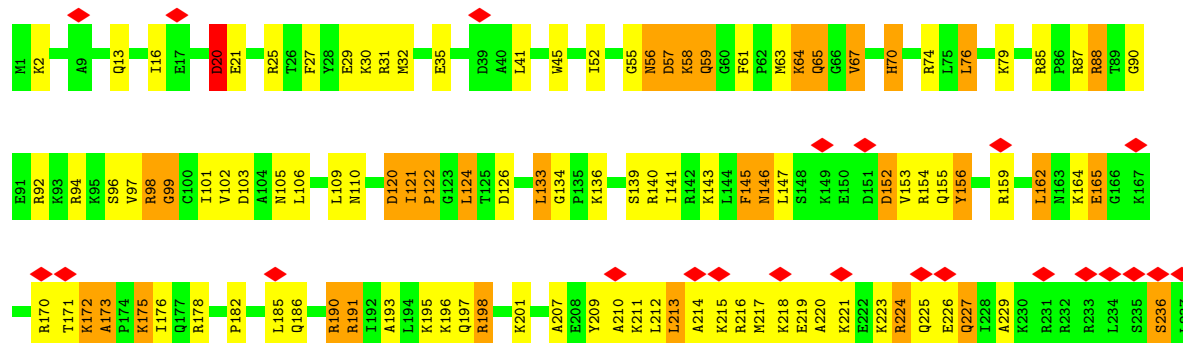
• Molecule 57: Ribosomal protein eS4

Chain SE: 

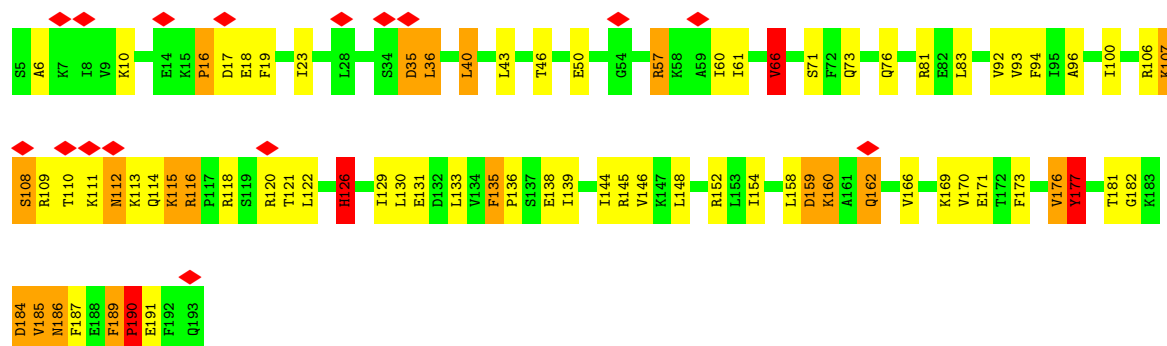




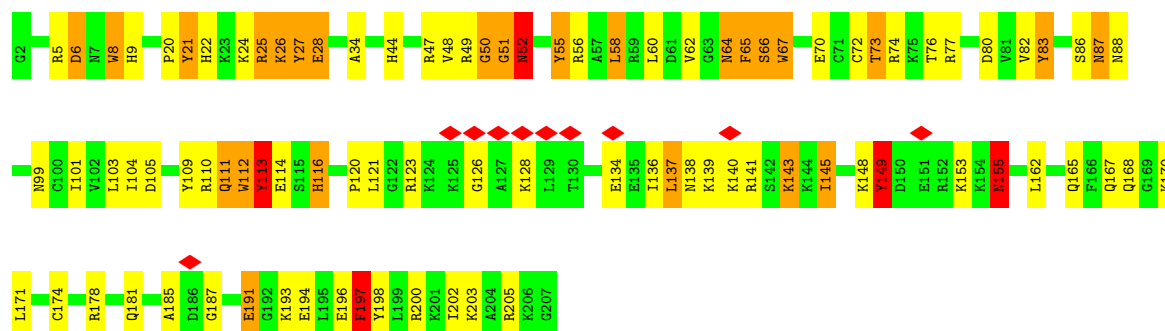
• Molecule 58: Ribosomal protein eS6



• Molecule 59: Ribosomal protein eS7

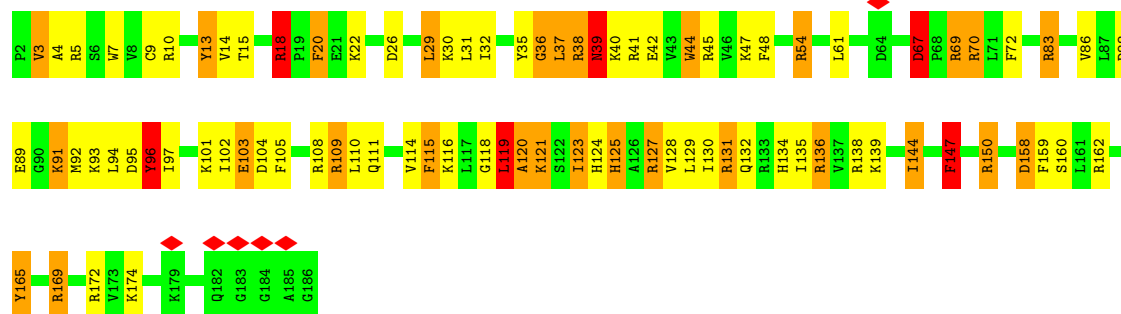


• Molecule 60: Ribosomal protein eS8

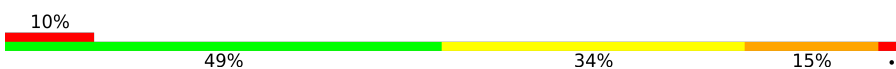


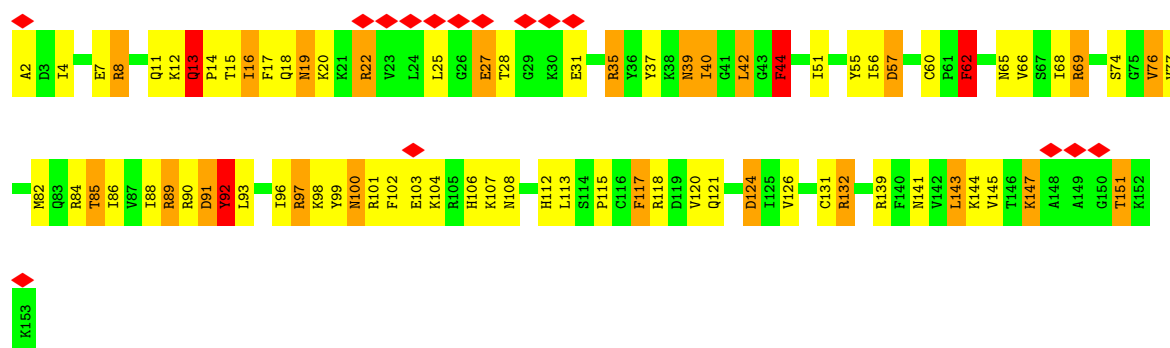
• Molecule 61: Ribosomal protein uS4

Chain SJ: 



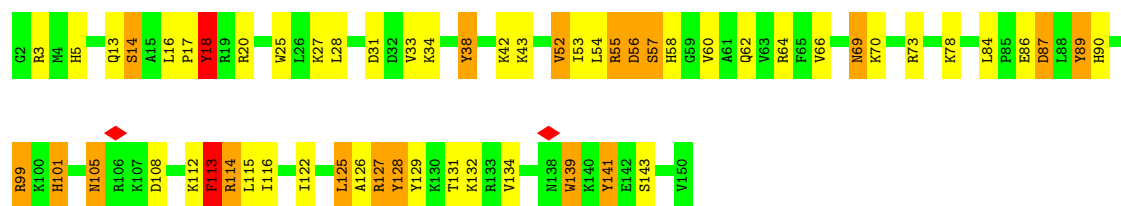
- Molecule 62: Ribosomal protein uS17

Chain SL: 



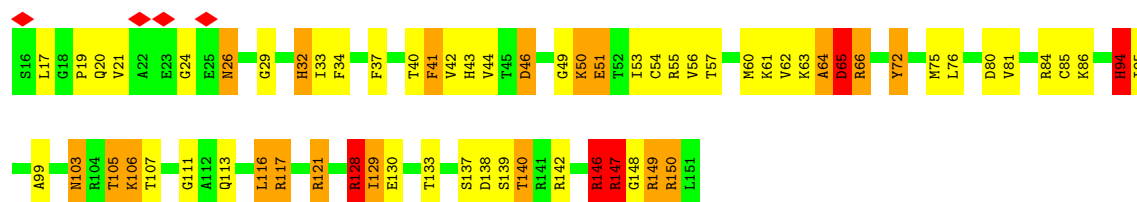
- Molecule 63: Ribosomal protein uS15

Chain SN: 



- Molecule 64: Ribosomal protein uS11

Chain SO: 



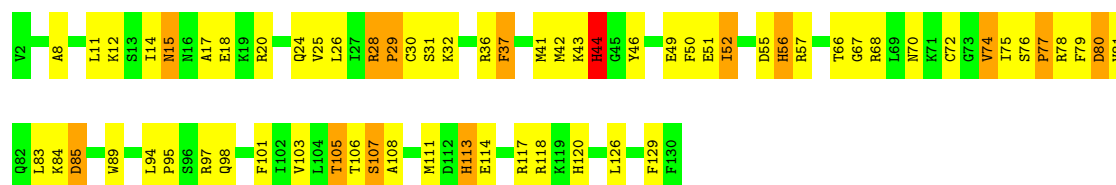
- Molecule 65: Ribosomal protein eS21

Chain SV: 



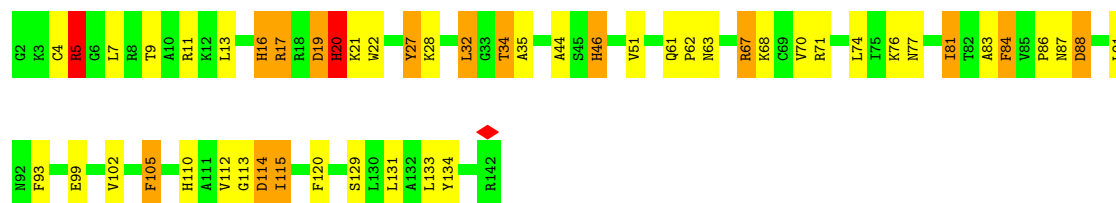
- Molecule 66: Ribosomal protein uS8

Chain SW: 



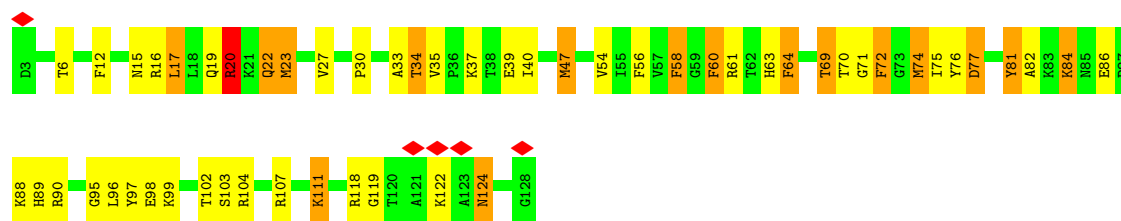
- Molecule 67: Ribosomal protein uS12

Chain SX: 

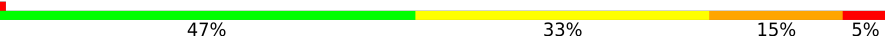


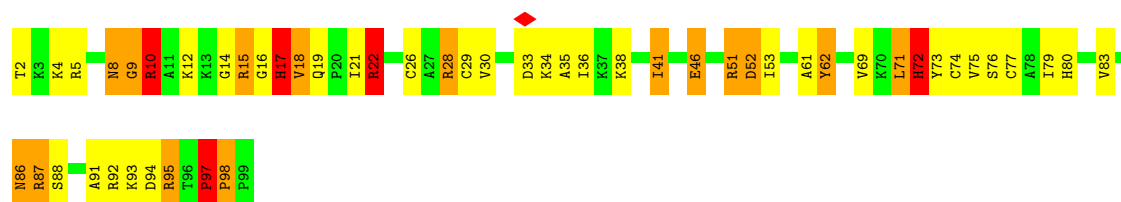
- Molecule 68: Ribosomal protein eS24

Chain SY: 

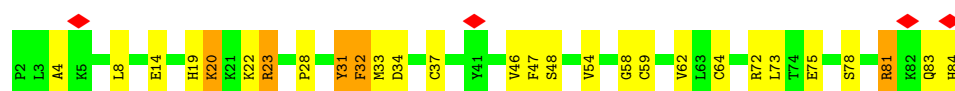


- Molecule 69: Ribosomal protein eS26

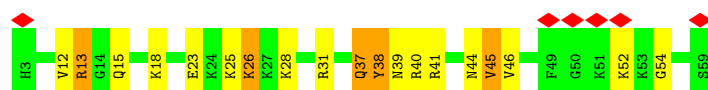
Chain Sa: 



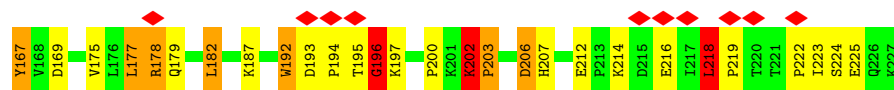
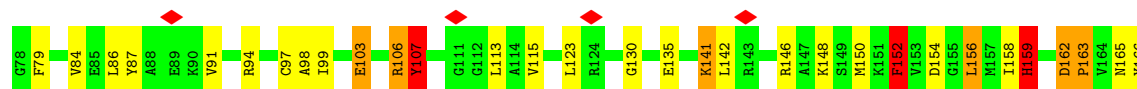
- Molecule 70: Ribosomal protein eS27



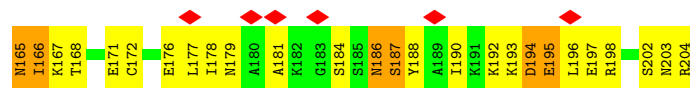
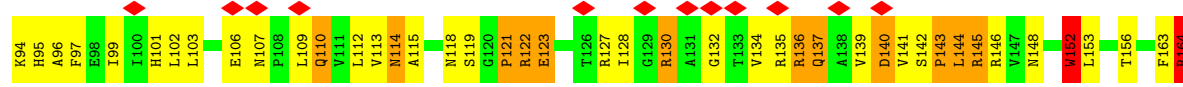
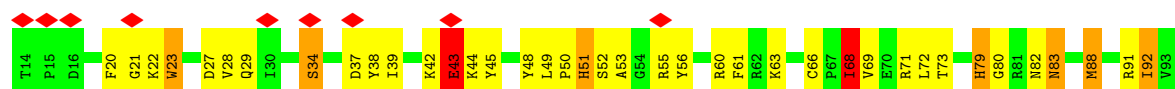
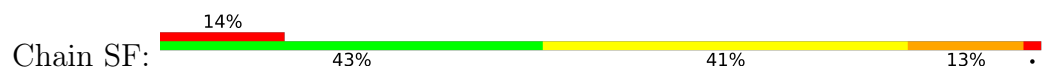
- Molecule 71: Ribosomal protein eS30



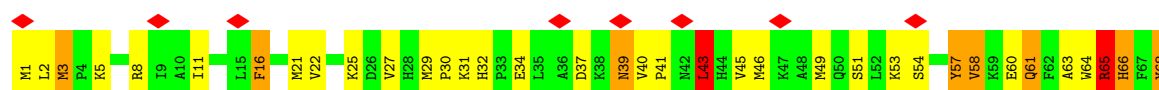
- Molecule 72: Ribosomal protein uS3

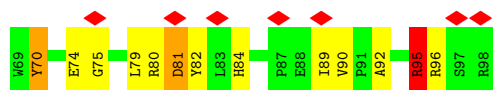


- Molecule 73: Ribosomal protein uS7

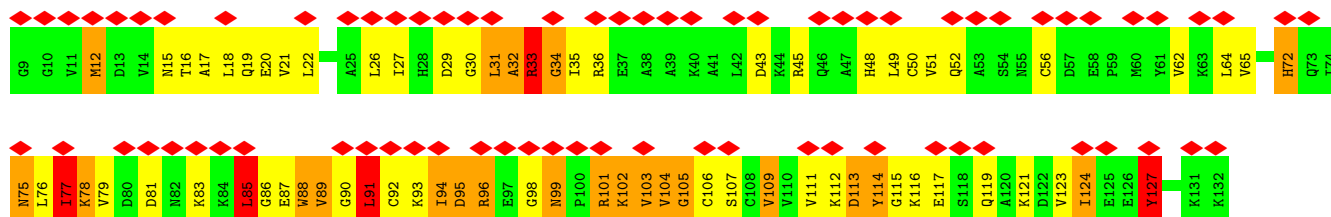
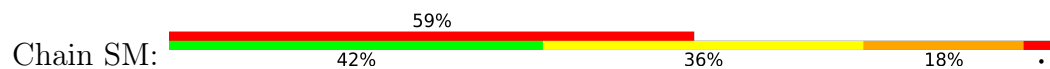


- Molecule 74: Ribosomal protein eS10

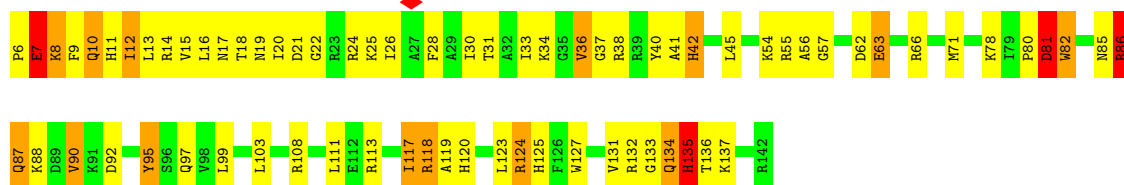




• Molecule 75: Ribosomal protein eS12

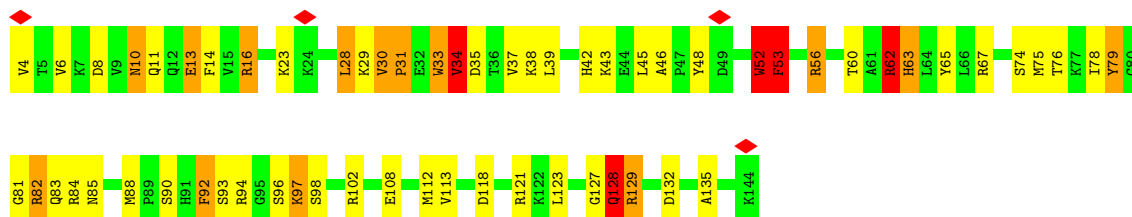


Chain SS: 



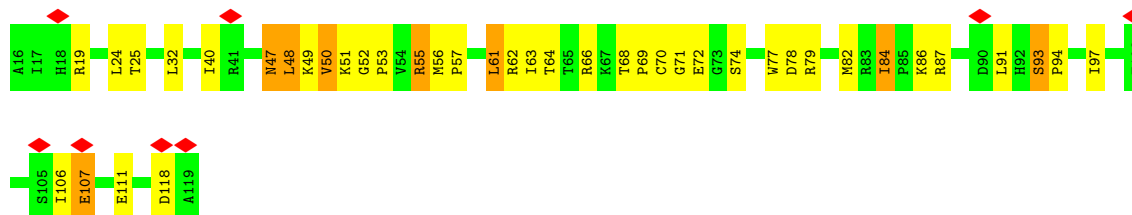
- Molecule 80: Ribosomal protein eS19

Chain ST: 



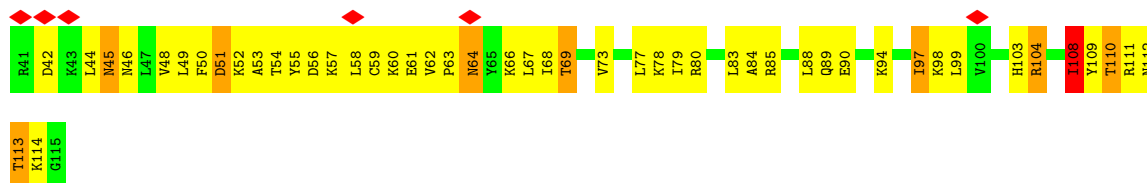
- Molecule 81: Ribosomal protein uS10

Chain SU: 



- Molecule 82: Ribosomal protein es25

Chain SZ: 



- Molecule 83: Ribosomal protein eS28

Chain Sc: 



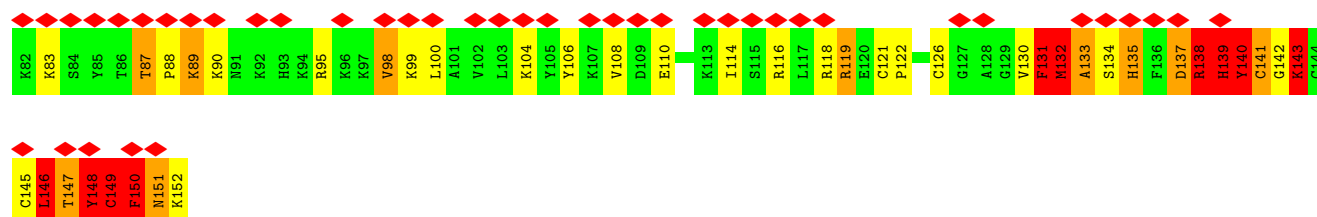
- Molecule 84: Ribosomal protein uS14

Chain Sd: 



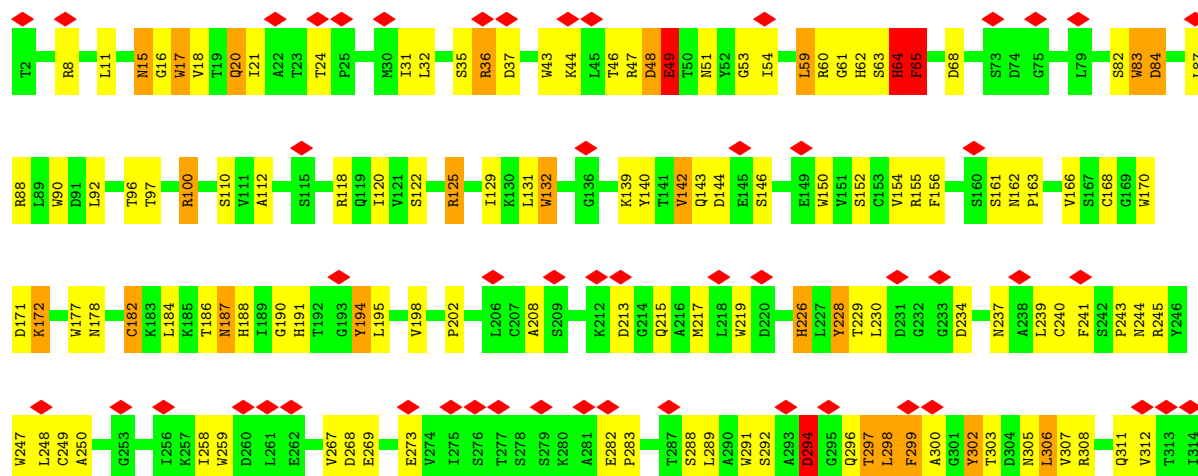
• Molecule 85: Ribosomal protein eS31

Chain Sf: 



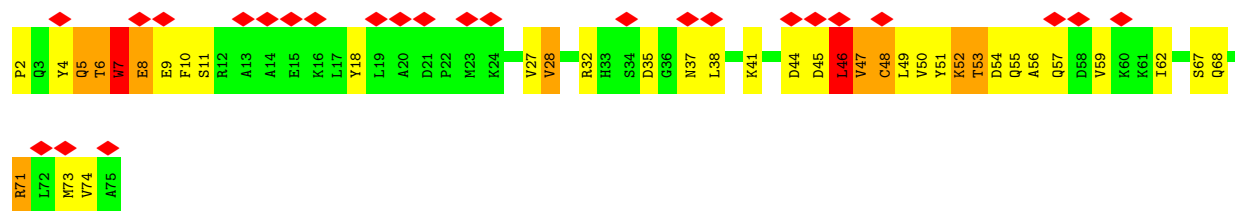
• Molecule 86: Ribosomal protein RACK1

Chain Sg: 



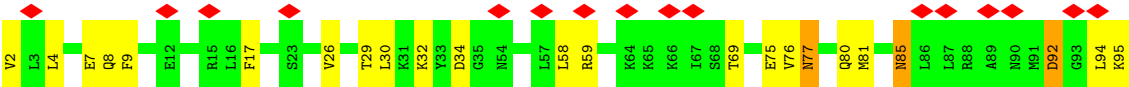
• Molecule 87: SRP9

Chain S1: 



• Molecule 88: SRP14

Chain S4: 



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	27627	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)	2000	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	59000	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.577	Depositor
Minimum map value	-0.384	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.018	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: ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.99	7/1906 (0.4%)	1.41	29/2556 (1.1%)
2	D	0.91	9/2426 (0.4%)	1.37	31/3252 (1.0%)
3	G	0.96	9/1944 (0.5%)	1.24	16/2618 (0.6%)
4	H	0.83	3/1537 (0.2%)	1.20	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	1.15	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	0.77	2/1326 (0.2%)	1.14	8/1770 (0.5%)
14	U	0.87	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	0.88	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	0.92	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	0.73	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	1308/136805 (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	29/4308 (0.7%)
36	C	0.88	4/2973 (0.1%)	1.23	17/3990 (0.4%)
37	E	0.96	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	16/953 (1.7%)
43	n	0.96	0/223	1.18	0/284
44	p	0.74	1/718 (0.1%)	1.19	3/953 (0.3%)
45	r	0.79	1/1017 (0.1%)	1.23	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	1.26	11/3171 (0.3%)	1.41	13/4257 (0.3%)
49	3	1.29	2/1804 (0.1%)	1.18	12/2805 (0.4%)
50	4	0.61	1/5090 (0.0%)	0.76	6/7936 (0.1%)
51	9	0.45	0/858	0.90	0/1156
52	6	0.38	0/1521	0.80	2/2039 (0.1%)
53	S2	0.59	11/41241 (0.0%)	1.26	593/64249 (0.9%)
54	SA	0.86	2/1679 (0.1%)	1.25	14/2283 (0.6%)
55	SB	0.92	5/1753 (0.3%)	1.30	17/2350 (0.7%)
56	SC	0.84	3/1726 (0.2%)	1.23	15/2332 (0.6%)
57	SE	0.85	5/2118 (0.2%)	1.26	15/2849 (0.5%)
58	SG	0.81	1/1946 (0.1%)	1.17	10/2590 (0.4%)
59	SH	0.70	0/1544	1.13	4/2068 (0.2%)
60	SI	0.97	5/1715 (0.3%)	1.29	14/2287 (0.6%)
61	SJ	0.80	0/1550	1.27	10/2069 (0.5%)
62	SL	0.84	2/1259 (0.2%)	1.25	13/1684 (0.8%)
63	SN	0.82	2/1226 (0.2%)	1.23	11/1649 (0.7%)
64	SO	0.84	0/1029	1.32	7/1380 (0.5%)
65	SV	0.72	0/631	1.08	2/844 (0.2%)
66	SW	0.82	0/1051	1.21	6/1406 (0.4%)
67	SX	0.86	3/1118 (0.3%)	1.18	6/1493 (0.4%)
68	SY	0.75	1/1040 (0.1%)	1.12	5/1382 (0.4%)
69	Sa	0.93	2/794 (0.3%)	1.37	9/1065 (0.8%)
70	Sb	0.71	0/665	1.05	2/891 (0.2%)
71	Se	0.66	0/458	1.05	2/602 (0.3%)
72	SD	0.83	0/1793	1.19	11/2414 (0.5%)
73	SF	0.82	2/1531 (0.1%)	1.25	9/2059 (0.4%)
74	SK	0.83	0/851	1.21	7/1147 (0.6%)
75	SM	1.09	1/970 (0.1%)	1.27	7/1300 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SP	1.16	3/816 (0.4%)	1.20	5/1084 (0.5%)
77	SQ	0.71	0/1142	1.13	6/1528 (0.4%)
78	SR	0.69	0/1060	1.04	4/1421 (0.3%)
79	SS	0.65	0/1157	1.16	5/1548 (0.3%)
80	ST	0.81	2/1119 (0.2%)	1.29	11/1499 (0.7%)
81	SU	0.76	0/828	1.06	2/1112 (0.2%)
82	SZ	0.71	0/604	1.07	0/810
83	Sc	0.75	2/507 (0.4%)	1.01	2/677 (0.3%)
84	Sd	0.87	1/445 (0.2%)	1.20	3/589 (0.5%)
85	Sf	1.39	8/593 (1.3%)	1.68	14/786 (1.8%)
86	Sg	0.76	1/2493 (0.0%)	1.02	9/3394 (0.3%)
87	S1	1.15	5/619 (0.8%)	1.16	5/832 (0.6%)
88	S4	0.78	2/608 (0.3%)	1.00	0/809
All	All	0.73	223/244482 (0.1%)	1.25	2825/358687 (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
22	d	0	5

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Mol	Chain	#Chirality outliers	#Planarity outliers
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	173
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	1
45	r	0	3
46	K	0	10
47	q	0	8
48	z	0	7
53	S2	0	59
54	SA	0	5
55	SB	0	7
56	SC	0	7
57	SE	0	6
58	SG	0	1
59	SH	0	2
60	SI	0	9
61	SJ	0	3
62	SL	0	3
63	SN	0	5
64	SO	0	1
65	SV	0	3
66	SW	0	3
67	SX	0	2
68	SY	0	1
69	Sa	0	3
70	Sb	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
72	SD	0	3
73	SF	0	4
74	SK	0	1
75	SM	0	2
76	SP	0	3
77	SQ	0	1
79	SS	0	1
80	ST	0	2
81	SU	0	1
82	SZ	0	1
84	Sd	0	3
85	Sf	0	4
86	Sg	0	3
87	S1	0	4
All	All	0	525

All (223) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
49	3	31	C	O3'-P	-49.80	0.86	1.61
48	z	340	MET	C-N	41.61	1.86	1.33
50	4	183	A	O3'-P	-35.37	1.08	1.61
48	z	345	PHE	C-N	-29.98	0.91	1.33
32	5	1823	G	O3'-P	28.51	2.04	1.61
11	R	149	LYS	C-N	25.34	1.67	1.33
12	S	81	TRP	CA-CB	16.93	1.74	1.53
76	SP	21	ASP	CG-OD1	16.62	1.56	1.25
46	K	9	GLU	C-N	-16.55	1.11	1.33
46	K	2	PRO	CA-C	14.64	1.65	1.52
87	S1	44	ASP	CG-OD2	13.86	1.51	1.25
60	SI	99	ASN	CG-OD1	12.57	1.47	1.23
3	G	54	PHE	N-CA	12.17	1.60	1.46
40	P	139	TYR	CA-CB	12.07	1.69	1.52
49	3	39	G	O3'-P	-12.00	1.43	1.61
36	C	35	ASP	CG-OD1	10.94	1.46	1.25
4	H	66	GLU	CD-OE1	10.78	1.45	1.25
60	SI	99	ASN	CG-ND2	10.78	1.55	1.33
3	G	54	PHE	CA-CB	10.61	1.68	1.53
76	SP	21	ASP	CG-OD2	10.60	1.45	1.25
37	E	278	TYR	CA-CB	10.41	1.69	1.53
12	S	96	GLU	CD-OE1	10.36	1.45	1.25
3	G	53	ARG	CA-C	10.09	1.66	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	z	25	GLU	CD-OE2	9.82	1.44	1.25
57	SE	18	TRP	CA-CB	9.47	1.66	1.53
87	S1	44	ASP	CG-OD1	9.39	1.43	1.25
48	z	379	MET	C-N	9.06	1.46	1.33
85	Sf	148	TYR	CA-C	9.03	1.64	1.52
3	G	54	PHE	CB-CG	-8.96	1.30	1.50
88	S4	75	GLU	CD-OE1	8.91	1.42	1.25
85	Sf	149	CYS	N-CA	8.84	1.56	1.46
48	z	25	GLU	CD-OE1	8.65	1.41	1.25
10	Q	34	PHE	CA-CB	8.63	1.68	1.53
8	N	119	TYR	CA-CB	8.57	1.66	1.53
12	S	10	TYR	CA-CB	8.41	1.67	1.53
84	Sd	46	TYR	CA-CB	8.27	1.64	1.52
35	B	257	TRP	CA-CB	8.24	1.67	1.53
1	A	209	HIS	CA-C	8.24	1.62	1.52
73	SF	127	ARG	CZ-NH1	8.13	1.44	1.32
80	ST	33	TRP	CA-CB	8.13	1.66	1.53
58	SG	35	GLU	CD-OE1	8.10	1.40	1.25
3	G	46	GLN	CD-NE2	8.06	1.50	1.33
12	S	96	GLU	CD-OE2	8.06	1.40	1.25
35	B	59	GLU	CD-OE2	8.02	1.40	1.25
53	S2	1292	C	O3'-P	8.01	1.73	1.61
87	S1	8	GLU	CD-OE1	8.01	1.40	1.25
2	D	44	TYR	CA-CB	7.97	1.67	1.53
83	Sc	26	GLN	CD-OE1	7.94	1.38	1.23
1	A	40	TYR	CA-CB	7.80	1.61	1.53
2	D	95	TYR	CA-CB	7.53	1.65	1.53
39	I	171	TRP	CA-CB	7.44	1.61	1.52
57	SE	86	PHE	CA-CB	7.41	1.65	1.53
47	q	93	GLU	CD-OE1	7.39	1.39	1.25
12	S	29	ARG	CA-CB	7.32	1.65	1.53
48	z	344	PRO	C-N	7.32	1.44	1.33
1	A	34	PHE	N-CA	7.28	1.54	1.46
40	P	139	TYR	CA-C	7.27	1.61	1.53
53	S2	1309	C	O3'-P	7.24	1.72	1.61
57	SE	121	TYR	CA-C	7.23	1.62	1.52
53	S2	1290	G	O3'-P	7.20	1.72	1.61
2	D	21	ARG	N-CA	7.18	1.55	1.46
5	J	14	GLU	CD-OE1	7.09	1.38	1.25
22	d	87	ARG	CA-CB	7.09	1.62	1.52
53	S2	427	U	O5'-C5'	7.09	1.53	1.42
20	b	16	TRP	CA-CB	7.01	1.65	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
6	L	119	GLU	CD-OE1	6.96	1.38	1.25
27	i	39	PHE	CA-CB	6.95	1.64	1.53
36	C	35	ASP	CB-CG	6.95	1.69	1.52
4	H	61	TRP	N-CA	6.92	1.55	1.46
69	Sa	97	PRO	CA-C	6.92	1.58	1.52
23	e	74	PHE	CA-CB	6.91	1.62	1.53
19	a	108	TYR	CA-C	6.90	1.60	1.53
35	B	119	TYR	CA-CB	6.86	1.61	1.53
35	B	55	HIS	CA-CB	6.86	1.62	1.53
55	SB	157	GLN	CD-OE1	6.84	1.36	1.23
11	R	95	TRP	CA-C	-6.83	1.46	1.53
48	z	272	PHE	N-CA	6.78	1.54	1.46
63	SN	18	TYR	CA-CB	6.76	1.64	1.53
12	S	81	TRP	CB-CG	-6.74	1.29	1.50
31	o	48	TYR	CA-CB	6.72	1.61	1.52
67	SX	22	TRP	CA-CB	6.72	1.64	1.53
73	SF	51	HIS	CA-CB	6.70	1.64	1.53
83	Sc	26	GLN	CD-NE2	6.62	1.47	1.33
1	A	211	PHE	CA-CB	6.62	1.63	1.53
53	S2	1293	A	O5'-C5'	6.62	1.52	1.42
56	SC	236	PHE	CA-CB	6.59	1.63	1.53
19	a	79	TRP	CA-CB	6.58	1.64	1.53
22	d	25	TYR	CA-CB	6.58	1.64	1.53
55	SB	81	PHE	CA-CB	6.52	1.61	1.53
24	f	6	TRP	CA-CB	6.50	1.64	1.53
2	D	145	TYR	CA-CB	6.49	1.61	1.53
2	D	16	TYR	CA-CB	6.48	1.63	1.53
5	J	99	PHE	CA-CB	6.47	1.60	1.52
56	SC	90	GLU	CD-OE1	6.42	1.37	1.25
67	SX	16	HIS	CA-CB	6.41	1.63	1.53
14	U	99	TRP	CA-C	6.40	1.60	1.52
55	SB	205	TYR	CA-CB	6.38	1.64	1.53
4	H	66	GLU	CD-OE2	6.37	1.37	1.25
35	B	54	THR	CA-C	6.36	1.60	1.52
53	S2	1291	A	O3'-P	6.35	1.70	1.61
24	f	19	ARG	CA-CB	6.34	1.63	1.53
12	S	28	TYR	CA-C	6.31	1.59	1.53
88	S4	75	GLU	CD-OE2	6.30	1.37	1.25
9	O	173	GLN	CD-OE1	6.30	1.35	1.23
85	Sf	151	ASN	CA-C	6.28	1.62	1.53
48	z	198	GLU	CD-OE2	6.22	1.37	1.25
85	Sf	149	CYS	CA-C	6.15	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	B	367	PHE	CA-C	6.14	1.59	1.52
19	a	62	HIS	CA-CB	6.13	1.63	1.53
7	M	6	PHE	CA-CB	6.09	1.62	1.53
18	Z	38	TYR	CA-CB	6.09	1.62	1.53
35	B	274	TYR	CA-CB	6.07	1.63	1.53
37	E	250	ASP	CG-OD2	6.06	1.36	1.25
2	D	29	ASP	CA-C	-6.05	1.45	1.52
40	P	140	MET	N-CA	6.04	1.53	1.45
8	N	180	PHE	CA-CB	6.04	1.62	1.53
42	j	66	HIS	CA-CB	6.03	1.63	1.53
3	G	53	ARG	CA-CB	5.98	1.63	1.53
3	G	57	TRP	CA-CB	5.98	1.62	1.53
35	B	61	ASP	CG-OD2	5.95	1.36	1.25
56	SC	170	TRP	CA-CB	5.94	1.62	1.53
87	S1	8	GLU	CD-OE2	5.88	1.36	1.25
41	W	21	TYR	CA-CB	5.85	1.62	1.53
53	S2	1310	U	O5'-C5'	5.85	1.51	1.42
32	5	964	A	O3'-P	5.82	1.69	1.61
32	5	4390	A	O3'-P	-5.82	1.52	1.61
36	C	178	ASN	CG-OD1	5.82	1.34	1.23
17	Y	6	PHE	CA-CB	5.81	1.63	1.53
32	5	4497	U	O3'-P	5.81	1.69	1.61
8	N	119	TYR	N-CA	5.79	1.52	1.45
11	R	95	TRP	CB-CG	-5.78	1.32	1.50
48	z	198	GLU	CD-OE1	5.77	1.36	1.25
19	a	110	LYS	N-CA	5.75	1.53	1.46
40	P	139	TYR	CB-CG	-5.70	1.39	1.51
53	S2	1292	C	O5'-C5'	5.70	1.51	1.42
13	T	19	PHE	CA-C	-5.69	1.45	1.52
13	T	144	ASN	CG-ND2	5.67	1.45	1.33
48	z	281	ASP	CG-OD2	5.67	1.36	1.25
63	SN	113	PHE	CA-C	-5.66	1.46	1.53
24	f	6	TRP	CB-CG	-5.66	1.32	1.50
57	SE	18	TRP	CA-C	5.66	1.60	1.52
10	Q	176	ARG	CA-CB	5.65	1.59	1.53
22	d	26	THR	N-CA	5.64	1.53	1.46
32	5	1887	G	O3'-P	5.64	1.69	1.61
55	SB	100	PHE	CA-CB	5.62	1.63	1.53
85	Sf	140	TYR	CA-CB	5.58	1.61	1.53
32	5	514	U	O3'-P	5.57	1.69	1.61
67	SX	22	TRP	N-CA	5.57	1.54	1.46
24	f	4	ARG	CA-CB	5.57	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
46	K	147	HIS	CA-C	5.56	1.57	1.52
37	E	280	HIS	CA-C	5.54	1.60	1.52
35	B	215	GLU	CD-OE1	5.54	1.35	1.25
19	a	40	HIS	CA-CB	-5.53	1.48	1.54
14	U	99	TRP	CA-CB	5.53	1.61	1.53
2	D	119	TYR	CA-CB	5.50	1.61	1.53
57	SE	121	TYR	CA-CB	5.50	1.62	1.53
2	D	210	TYR	CA-CB	5.50	1.62	1.53
1	A	186	TYR	CA-CB	5.50	1.61	1.53
1	A	209	HIS	CA-CB	5.49	1.64	1.53
3	G	46	GLN	CD-OE1	5.46	1.33	1.23
23	e	60	TYR	N-CA	-5.43	1.38	1.46
55	SB	224	GLU	CD-OE2	5.41	1.35	1.25
80	ST	34	VAL	N-CA	5.41	1.53	1.46
86	Sg	83	TRP	CA-CB	5.40	1.61	1.53
26	h	78	TYR	CA-CB	5.39	1.59	1.52
60	SI	149	TYR	CA-CB	5.37	1.60	1.53
2	D	20	PHE	CA-CB	5.36	1.62	1.53
53	S2	409	C	O3'-P	5.36	1.69	1.61
53	S2	1838	U	O3'-P	5.36	1.69	1.61
68	SY	64	PHE	N-CA	5.35	1.53	1.46
69	Sa	17	HIS	CA-CB	5.35	1.62	1.53
36	C	41	HIS	CA-CB	5.34	1.61	1.53
45	r	100	ASN	N-CA	-5.33	1.41	1.46
21	c	78	ASN	CA-C	5.32	1.59	1.52
53	S2	662	G	O3'-P	5.31	1.69	1.61
54	SA	90	PHE	CA-CB	5.31	1.61	1.53
24	f	6	TRP	CA-C	5.30	1.59	1.52
1	A	186	TYR	N-CA	5.30	1.52	1.46
6	L	103	ARG	CA-CB	5.29	1.59	1.52
37	E	94	GLY	N-CA	5.29	1.49	1.44
75	SM	105	GLY	N-CA	5.29	1.51	1.45
23	e	35	TRP	CA-C	5.28	1.59	1.52
87	S1	48	CYS	N-CA	5.27	1.52	1.46
10	Q	181	ARG	CA-CB	5.27	1.60	1.53
32	5	2362	U	O3'-P	5.26	1.69	1.61
12	S	81	TRP	N-CA	5.25	1.53	1.46
12	S	151	LYS	CA-C	5.24	1.58	1.52
44	p	34	HIS	CA-CB	5.22	1.60	1.53
19	a	63	LEU	N-CA	5.22	1.52	1.46
32	5	964	A	O5'-C5'	5.22	1.50	1.42
85	Sf	146	LEU	CB-CG	5.21	1.63	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	5	1669	A	O3'-P	-5.21	1.53	1.61
17	Y	19	PHE	CA-CB	5.20	1.59	1.53
85	Sf	134	SER	CA-C	5.19	1.58	1.52
32	5	1365	C	O3'-P	5.19	1.69	1.61
39	I	95	HIS	CA-C	5.19	1.59	1.52
19	a	62	HIS	N-CA	5.17	1.52	1.46
10	Q	34	PHE	N-CA	5.17	1.52	1.46
9	O	173	GLN	CD-NE2	5.16	1.44	1.33
31	o	41	TYR	CA-CB	5.16	1.61	1.53
54	SA	151	ASP	CB-CG	5.16	1.65	1.52
76	SP	39	ALA	N-CA	5.15	1.52	1.46
3	G	109	GLU	CD-OE2	5.15	1.35	1.25
37	E	278	TYR	CB-CG	-5.15	1.40	1.51
85	Sf	132	MET	N-CA	5.14	1.52	1.46
27	i	26	HIS	CA-C	5.13	1.59	1.52
12	S	33	PHE	N-CA	-5.11	1.40	1.47
60	SI	67	TRP	CA-CB	5.11	1.61	1.53
10	Q	38	ARG	CA-C	-5.08	1.47	1.53
32	5	1364	U	O3'-P	5.08	1.68	1.61
10	Q	177	ALA	N-CA	5.07	1.52	1.46
17	Y	61	HIS	CA-CB	5.07	1.61	1.53
62	SL	107	LYS	N-CA	-5.07	1.40	1.46
32	5	171	U	O3'-P	-5.06	1.53	1.61
18	Z	39	SER	N-CA	5.05	1.52	1.46
62	SL	27	GLU	CD-OE2	5.05	1.34	1.25
18	Z	38	TYR	CA-C	5.05	1.58	1.52
35	B	137	TRP	CA-CB	5.04	1.61	1.53
14	U	100	LEU	N-CA	5.03	1.51	1.46
34	8	86	U	O5'-C5'	5.02	1.50	1.42
27	i	39	PHE	CA-C	5.02	1.59	1.52
48	z	271	ILE	CA-C	5.01	1.59	1.52
60	SI	67	TRP	N-CA	5.00	1.52	1.45

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
49	3	31	C	O3'-P-O5'	-23.73	68.41	104.00
46	K	1	MET	CA-C-N	-18.12	101.72	120.38
46	K	1	MET	C-N-CA	-18.12	101.72	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	O	135	PHE	N-CA-C	17.92	136.21	108.79
49	3	38	C	P-O3'-C3'	-16.83	94.95	120.20
32	5	1676	C	C1'-C2'-O2'	-15.61	88.39	111.80
48	z	345	PHE	CA-C-N	15.26	150.69	121.54
48	z	345	PHE	C-N-CA	15.26	150.69	121.54
50	4	186	C	O3'-P-O5'	-14.23	82.65	104.00
53	S2	1063	C	C1'-C2'-O2'	13.98	129.37	108.40
34	8	34	U	C4'-C3'-O3'	-13.75	92.37	113.00
32	5	1501	C	N1-C1'-C2'	13.65	132.48	112.00
53	S2	3	C	N1-C1'-C2'	13.61	134.41	114.00
32	5	4163	U	C4'-C3'-O3'	13.49	133.24	113.00
10	Q	33	ARG	N-CA-C	-13.40	96.73	111.07
11	R	149	LYS	CA-C-N	-13.17	102.53	120.44
11	R	149	LYS	C-N-CA	-13.17	102.53	120.44
85	Sf	133	ALA	N-CA-C	13.09	125.48	108.34
32	5	1479	G	C1'-C2'-O2'	-12.94	92.39	111.80
32	5	2511	A	C4'-C3'-O3'	-12.92	90.02	109.40
11	R	132	PHE	CB-CA-C	12.91	131.75	111.73
60	SI	197	PHE	N-CA-C	-12.75	96.88	111.03
32	5	1642	A	C4'-C3'-O3'	-12.69	93.97	113.00
53	S2	1838	U	N1-C1'-C2'	12.68	133.03	114.00
12	S	81	TRP	CB-CA-C	12.66	129.91	110.67
32	5	2389	A	C2'-C3'-O3'	12.52	132.49	113.70
1	A	67	TYR	CA-CB-CG	12.42	136.26	113.90
32	5	2398	U	C2'-C3'-O3'	12.33	127.99	109.50
53	S2	60	A	C1'-C2'-O2'	-12.18	93.54	111.80
53	S2	92	A	N9-C1'-C2'	12.10	132.15	114.00
60	SI	197	PHE	N-CA-CB	12.07	127.49	109.98
32	5	1481	C	C2'-C3'-O3'	12.06	127.59	109.50
32	5	1358	G	C4'-C3'-O3'	12.02	131.02	113.00
11	R	132	PHE	N-CA-C	-11.95	86.22	107.73
34	8	85	U	C2'-C3'-O3'	11.93	131.60	113.70
53	S2	367	U	C1'-C2'-O2'	11.93	126.30	108.40
53	S2	1292	C	C4'-C3'-O3'	11.90	130.85	113.00
53	S2	1552	G	C2'-C3'-O3'	11.84	131.46	113.70
32	5	3912	U	C1'-C2'-O2'	-11.82	90.66	108.40
32	5	1279	A	C2'-C3'-O3'	11.69	127.04	109.50
32	5	3735	G	C2'-C3'-O3'	11.67	127.01	109.50
32	5	4528	G	C2'-C3'-O3'	11.60	131.10	113.70
32	5	1474	C	C2'-C3'-O3'	11.52	130.98	113.70
46	K	9	GLU	O-C-N	-11.46	107.35	122.59
53	S2	833	C	C2'-C3'-O3'	11.46	130.89	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	E	278	TYR	CA-CB-CG	-11.41	93.36	113.90
20	b	16	TRP	N-CA-C	-11.41	99.32	113.01
32	5	5040	U	C4'-C3'-O3'	-11.40	92.29	109.40
80	ST	33	TRP	N-CA-C	-11.32	97.96	112.23
8	N	180	PHE	CB-CA-C	11.32	127.25	111.74
32	5	5043	A	C1'-C2'-O2'	-11.23	94.95	111.80
57	SE	18	TRP	N-CA-C	-11.17	98.96	112.59
53	S2	841	G	C1'-C2'-O2'	11.11	125.06	108.40
53	S2	919	A	C4'-C3'-O3'	11.07	126.00	109.40
32	5	1697	G	N9-C1'-C2'	10.95	130.43	114.00
53	S2	294	U	N1-C1'-C2'	10.94	130.41	114.00
32	5	964	A	C4'-C3'-O3'	10.93	129.39	113.00
32	5	383	A	C1'-C2'-O2'	-10.91	95.44	111.80
32	5	1211	G	C2'-C3'-O3'	10.80	129.90	113.70
25	g	14	ASN	N-CA-C	-10.78	94.40	110.24
32	5	974	C	C2'-C3'-O3'	10.75	129.82	113.70
46	K	2	PRO	CB-CA-C	10.71	123.99	110.92
16	X	73	HIS	N-CA-C	-10.70	99.75	112.92
10	Q	34	PHE	N-CA-CB	10.68	128.54	110.49
32	5	1359	G	C4'-C3'-O3'	-10.59	97.12	113.00
18	Z	38	TYR	N-CA-C	-10.58	92.03	109.07
53	S2	1452	A	C2'-C3'-O3'	10.57	125.36	109.50
46	K	9	GLU	CA-C-N	10.50	140.87	121.97
46	K	9	GLU	C-N-CA	10.50	140.87	121.97
32	5	3735	G	C4'-C3'-O3'	-10.49	93.67	109.40
32	5	2396	A	N9-C1'-C2'	10.48	129.72	114.00
85	Sf	146	LEU	CA-CB-CG	10.48	152.97	116.30
32	5	2511	A	C2'-C3'-O3'	10.47	125.21	109.50
32	5	5046	U	C2'-C3'-O3'	10.46	129.39	113.70
48	z	197	GLN	N-CA-C	10.44	125.91	112.34
49	3	2	U	C1'-C2'-O2'	10.42	124.03	108.40
42	j	66	HIS	N-CA-CB	10.41	128.08	110.49
53	S2	596	U	C1'-C2'-O2'	-10.41	96.19	111.80
32	5	2695	A	C2'-C3'-O3'	10.40	125.10	109.50
53	S2	1429	G	C2'-C3'-O3'	10.36	129.25	113.70
46	K	2	PRO	N-CA-C	10.31	123.28	110.70
32	5	5061	A	C2'-C3'-O3'	10.31	124.97	109.50
22	d	25	TYR	CA-CB-CG	-10.31	95.34	113.90
33	7	56	G	N9-C1'-C2'	10.26	127.40	112.00
53	S2	428	U	N1-C1'-C2'	10.24	129.36	114.00
32	5	48	G	C2'-C3'-O3'	10.23	124.85	109.50
53	S2	1835	A	N9-C1'-C2'	10.18	129.27	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2465	C	N1-C1'-C2'	10.17	127.26	112.00
12	S	81	TRP	CA-CB-CG	-10.17	94.27	113.60
34	8	94	G	C2'-C3'-O3'	10.16	124.74	109.50
60	SI	197	PHE	CB-CA-C	-10.14	95.23	110.95
53	S2	964	A	C1'-C2'-O2'	-10.12	96.61	111.80
53	S2	421	G	N9-C1'-C2'	10.11	127.17	112.00
32	5	30	C	N1-C1'-C2'	10.11	127.17	112.00
32	5	747	A	C2'-C3'-O3'	10.11	124.66	109.50
32	5	1	C	N1-C1'-C2'	10.11	129.16	114.00
32	5	2513	A	N9-C1'-C2'	10.10	129.14	114.00
32	5	215	C	C4'-C3'-O3'	-10.09	97.87	113.00
32	5	930	G	C4'-C3'-O3'	10.08	124.52	109.40
53	S2	1419	C	C2'-C3'-O3'	10.03	128.74	113.70
34	8	14	U	N1-C1'-C2'	9.99	126.99	112.00
8	N	131	GLU	CA-CB-CG	9.98	134.07	114.10
32	5	171	U	C4'-C3'-O3'	-9.98	94.43	109.40
57	SE	86	PHE	N-CA-CB	9.93	124.88	109.48
53	S2	1433	C	C4'-C3'-O3'	9.91	127.86	113.00
53	S2	1408	U	N1-C1'-C2'	9.88	126.81	112.00
53	S2	1282	A	C2'-C3'-O3'	-9.87	98.89	113.70
32	5	209	U	C4'-C3'-O3'	9.86	127.78	113.00
53	S2	1452	A	N9-C1'-C2'	9.85	128.77	114.00
37	E	278	TYR	CB-CA-C	9.84	129.55	110.17
30	m	118	THR	N-CA-C	9.82	121.67	110.97
32	5	279	A	C4'-C3'-O3'	-9.79	94.71	109.40
3	G	54	PHE	CA-CB-CG	-9.79	104.01	113.80
53	S2	747	U	C2'-C3'-O3'	9.76	128.34	113.70
32	5	5040	U	N1-C1'-C2'	9.74	128.61	114.00
19	a	79	TRP	CA-CB-CG	-9.73	95.12	113.60
53	S2	1162	C	C1'-C2'-O2'	9.70	122.95	108.40
32	5	4693	C	N1-C1'-C2'	9.70	126.55	112.00
32	5	1696	C	C2'-C3'-O3'	9.66	123.99	109.50
27	i	39	PHE	N-CA-CB	9.66	124.54	110.06
32	5	2116	C	C2'-C3'-O3'	9.65	123.97	109.50
32	5	1853	G	C1'-C2'-O2'	9.65	122.87	108.40
37	E	103	VAL	N-CA-C	9.64	120.29	108.53
53	S2	1623	A	C2'-C3'-O3'	9.63	128.15	113.70
73	SF	51	HIS	N-CA-CB	9.63	124.13	109.97
12	S	81	TRP	N-CA-C	-9.62	95.29	109.15
32	5	1500	A	C4'-C3'-O3'	9.62	127.43	113.00
53	S2	367	U	N1-C1'-C2'	-9.62	97.58	112.00
32	5	2509	C	C1'-C2'-O2'	-9.61	93.98	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	118	C	C2'-C3'-O3'	9.61	128.12	113.70
53	S2	61	A	C4'-C3'-O3'	-9.61	98.59	113.00
16	X	73	HIS	CB-CA-C	9.60	126.78	110.56
1	A	186	TYR	N-CA-C	-9.60	100.80	111.07
32	5	1370	G	N9-C1'-C2'	9.57	128.36	114.00
32	5	4234	A	N9-C1'-C2'	9.57	128.36	114.00
32	5	2446	C	N1-C1'-C2'	9.56	126.34	112.00
32	5	31	U	N1-C1'-C2'	9.55	126.33	112.00
32	5	4464	A	C2'-C3'-O3'	9.56	128.03	113.70
53	S2	1247	C	N1-C1'-C2'	9.54	128.30	114.00
32	5	2268	A	N9-C1'-C2'	9.53	128.30	114.00
11	R	132	PHE	CA-CB-CG	-9.52	104.28	113.80
87	S1	7	TRP	N-CA-C	9.51	123.61	109.24
53	S2	1823	A	N9-C1'-C2'	9.46	128.19	114.00
32	5	4280	A	C2'-C3'-O3'	9.45	127.87	113.70
69	Sa	98	PRO	N-CA-C	9.45	122.23	110.70
32	5	1938	C	N1-C1'-C2'	9.44	128.16	114.00
53	S2	666	U	N1-C1'-C2'	9.44	126.16	112.00
48	z	271	ILE	N-CA-C	9.43	119.67	111.56
32	5	1329	G	C2'-C3'-O3'	9.41	127.81	113.70
53	S2	349	A	C4'-C3'-O3'	-9.41	98.89	113.00
32	5	1356	U	C2'-C3'-O3'	9.40	127.80	113.70
32	5	4119	C	C2'-C3'-O3'	9.39	127.78	113.70
57	SE	172	PHE	N-CA-C	9.38	122.40	108.14
19	a	62	HIS	N-CA-CB	9.37	126.33	110.49
32	5	1439	C	C4'-C3'-O3'	-9.37	98.95	113.00
53	S2	1293	A	C4'-C3'-O3'	9.37	127.05	113.00
32	5	668	C	C2'-C3'-O3'	9.36	127.74	113.70
64	SO	147	ARG	CA-CB-CG	9.35	132.81	114.10
32	5	2586	G	N9-C1'-C2'	9.35	128.03	114.00
53	S2	604	A	C2'-C3'-O3'	9.35	127.73	113.70
38	F	58	HIS	CB-CA-C	-9.35	96.20	110.88
32	5	2546	G	C4'-C3'-O3'	9.33	126.99	113.00
32	5	151	G	C1'-C2'-O2'	9.32	122.37	108.40
21	c	89	TYR	N-CA-C	9.31	122.72	107.73
32	5	977	C	C2'-C3'-O3'	9.28	127.62	113.70
32	5	2272	C	C1'-C2'-O2'	-9.27	94.49	108.40
61	SJ	144	ILE	N-CA-C	9.27	118.16	107.77
32	5	961	G	C4'-C3'-O3'	9.26	123.29	109.40
63	SN	18	TYR	N-CA-CB	9.26	126.14	110.49
7	M	95	ILE	N-CA-C	-9.23	99.98	110.05
53	S2	603	C	C4'-C3'-O3'	9.23	123.25	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	160	U	C2'-C3'-O3'	9.23	123.35	109.50
32	5	2124	G	C2'-C3'-O3'	9.22	127.53	113.70
32	5	4885	U	C2'-C3'-O3'	9.21	127.52	113.70
32	5	2436	U	N1-C1'-C2'	9.20	127.80	114.00
32	5	4373	G	N9-C1'-C2'	9.19	127.79	114.00
32	5	3914	U	C2'-C3'-O3'	-9.18	99.94	113.70
57	SE	103	TYR	CA-CB-CG	9.17	130.41	113.90
36	C	41	HIS	N-CA-CB	9.16	123.28	109.91
32	5	1631	A	C4'-C3'-O3'	-9.16	95.66	109.40
84	Sd	46	TYR	CB-CA-C	9.15	122.48	111.22
32	5	1235	G	C2'-C3'-O3'	-9.14	100.00	113.70
53	S2	127	C	C4'-C3'-O3'	9.13	123.09	109.40
32	5	4084	G	C2'-C3'-O3'	9.12	123.18	109.50
53	S2	1352	G	C2'-C3'-O3'	9.12	127.37	113.70
32	5	2347	A	C1'-C2'-O2'	9.10	125.44	111.80
32	5	88	A	C1'-C2'-O2'	-9.09	94.76	108.40
32	5	4871	C	N1-C1'-C2'	9.09	127.64	114.00
8	N	131	GLU	CB-CA-C	9.07	124.72	109.48
32	5	62	A	N9-C1'-C2'	9.07	125.60	112.00
32	5	231	U	C4'-C3'-O3'	-9.07	99.39	113.00
42	j	66	HIS	CA-CB-CG	-9.06	104.74	113.80
24	f	24	HIS	N-CA-C	-9.05	100.99	111.03
32	5	2510	G	C4'-C3'-O3'	-9.04	99.43	113.00
64	SO	29	GLY	N-CA-C	-9.04	101.94	112.79
34	8	86	U	O4'-C1'-C2'	-9.04	98.56	107.60
32	5	1390	G	C1'-C2'-O2'	9.04	121.95	108.40
32	5	2394	G	N9-C1'-C2'	-9.04	100.44	114.00
53	S2	453	C	C1'-C2'-O2'	-9.03	98.25	111.80
32	5	2745	A	C1'-C2'-O2'	-9.03	94.86	108.40
32	5	2588	C	C4'-C3'-O3'	9.03	126.54	113.00
39	I	171	TRP	N-CA-CB	9.00	124.10	109.88
32	5	3905	A	C2'-C3'-O3'	8.99	127.19	113.70
3	G	57	TRP	CA-CB-CG	-8.98	96.53	113.60
32	5	187	U	C2'-C3'-O3'	8.97	127.16	113.70
32	5	2553	A	N9-C1'-C2'	8.97	127.45	114.00
32	5	1668	A	N9-C1'-C2'	8.96	125.44	112.00
32	5	4448	G	C4'-C3'-O3'	8.95	122.82	109.40
38	F	209	PHE	N-CA-C	-8.94	100.70	111.69
32	5	3653	A	C1'-C2'-O2'	8.93	121.80	108.40
53	S2	798	A	C2'-C3'-O3'	8.93	127.10	113.70
67	SX	27	TYR	CA-CB-CG	8.93	129.97	113.90
53	S2	841	G	O4'-C1'-C2'	-8.90	98.70	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	H	156	ASN	N-CA-C	-8.88	101.56	111.07
32	5	2328	G	C1'-C2'-O2'	-8.88	95.08	108.40
55	SB	205	TYR	CA-CB-CG	-8.87	97.93	113.90
32	5	4162	C	N1-C1'-C2'	8.87	127.31	114.00
53	S2	305	U	C2'-C3'-O3'	8.84	122.76	109.50
53	S2	1088	U	N1-C1'-C2'	8.84	127.26	114.00
6	L	99	ASP	N-CA-C	-8.84	97.34	110.24
19	a	79	TRP	CB-CA-C	8.83	126.70	110.36
32	5	4693	C	C2'-C3'-O3'	8.82	126.94	113.70
53	S2	1407	U	C4'-C3'-O3'	-8.82	99.77	113.00
32	5	53	C	C2'-C3'-O3'	8.80	126.91	113.70
53	S2	495	U	C1'-C2'-O2'	-8.79	98.61	111.80
32	5	4498	U	C1'-C2'-O2'	8.79	121.58	108.40
32	5	3676	G	C2'-C3'-O3'	-8.78	100.53	113.70
53	S2	1394	G	C2'-C3'-O3'	8.77	126.86	113.70
32	5	1916	G	N9-C1'-C2'	8.77	125.16	112.00
32	5	3727	A	C1'-C2'-O2'	-8.77	95.25	108.40
63	SN	18	TYR	CA-CB-CG	-8.77	98.12	113.90
19	a	40	HIS	N-CA-CB	-8.77	104.18	114.17
8	N	139	HIS	N-CA-CB	8.76	124.15	109.87
32	5	3938	G	N9-C1'-C2'	8.76	127.14	114.00
57	SE	18	TRP	CB-CA-C	8.75	125.11	111.02
32	5	4880	C	N1-C1'-C2'	8.74	125.11	112.00
32	5	3739	C	O4'-C1'-C2'	-8.74	98.86	107.60
86	Sg	228	TYR	N-CA-C	8.73	122.15	108.79
32	5	1359	G	C2'-C3'-O3'	8.73	126.79	113.70
53	S2	437	G	N9-C1'-C2'	8.73	127.09	114.00
4	H	96	TYR	N-CA-C	8.72	122.13	108.79
32	5	707	C	C1'-C2'-O2'	8.72	121.48	108.40
56	SC	241	PHE	N-CA-CB	8.70	122.59	109.98
12	S	10	TYR	CA-CB-CG	-8.67	98.29	113.90
44	p	34	HIS	N-CA-C	-8.67	102.84	112.72
20	b	17	HIS	N-CA-C	8.66	123.97	113.41
32	5	2804	C	C1'-C2'-O2'	8.64	121.37	108.40
32	5	5044	A	C1'-C2'-O2'	-8.64	95.44	108.40
32	5	5001	U	N1-C1'-C2'	8.64	124.96	112.00
67	SX	20	HIS	CB-CA-C	8.64	126.01	110.72
32	5	2361	G	N9-C1'-C2'	-8.63	99.05	112.00
85	Sf	148	TYR	CA-C-N	8.63	134.91	123.00
85	Sf	148	TYR	C-N-CA	8.63	134.91	123.00
19	a	62	HIS	CA-CB-CG	-8.63	105.17	113.80
53	S2	292	A	C2'-C3'-O3'	8.62	122.43	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	978	G	C2'-C3'-O3'	8.62	126.63	113.70
10	Q	34	PHE	CA-CB-CG	-8.62	105.18	113.80
16	X	73	HIS	CA-CB-CG	-8.62	105.18	113.80
62	SL	62	PHE	CB-CA-C	8.61	124.63	109.65
32	5	1484	G	O4'-C4'-C3'	-8.61	97.49	106.10
53	S2	1063	C	N1-C1'-C2'	-8.59	99.12	112.00
35	B	258	HIS	CA-C-N	-8.58	109.11	119.84
35	B	258	HIS	C-N-CA	-8.58	109.11	119.84
32	5	2046	G	C2'-C3'-O3'	8.56	126.55	113.70
32	5	1455	G	C2'-C3'-O3'	8.56	126.54	113.70
32	5	3625	G	C2'-C3'-O3'	8.56	126.54	113.70
53	S2	1309	C	C4'-C3'-O3'	8.56	125.84	113.00
32	5	106	A	C1'-C2'-O2'	8.55	121.23	108.40
53	S2	426	A	C4'-C3'-O3'	8.54	125.81	113.00
32	5	2251	G	C4'-C3'-O3'	8.53	122.20	109.40
32	5	2280	G	N9-C1'-C2'	8.53	124.79	112.00
32	5	2833	A	C1'-C2'-O2'	-8.53	99.01	111.80
53	S2	956	G	N9-C1'-C2'	8.53	124.79	112.00
53	S2	968	U	C4'-C3'-O3'	8.52	125.78	113.00
32	5	4125	C	C4'-C3'-O3'	-8.52	100.22	113.00
32	5	1398	A	N9-C1'-C2'	8.51	126.77	114.00
33	7	72	U	C2'-C3'-O3'	8.51	126.47	113.70
39	I	171	TRP	CA-CB-CG	-8.51	97.44	113.60
32	5	943	A	C4'-C3'-O3'	8.50	122.15	109.40
32	5	157	U	C3'-C2'-O2'	8.50	123.44	110.70
2	D	31	TYR	N-CA-C	-8.49	96.50	110.17
53	S2	110	U	C2'-C3'-O3'	8.48	126.42	113.70
2	D	210	TYR	N-CA-CB	8.48	122.28	109.91
53	S2	452	G	C1'-C2'-O2'	-8.46	95.70	108.40
32	5	4228	G	C1'-C2'-O2'	8.45	121.07	108.40
32	5	1671	U	O4'-C1'-C2'	-8.44	99.16	107.60
32	5	4234	A	C2'-C3'-O3'	8.44	122.16	109.50
32	5	4644	G	C1'-C2'-O2'	8.44	121.06	108.40
19	a	61	TYR	CB-CA-C	8.44	124.81	109.37
48	z	371	ARG	N-CA-C	8.43	120.47	111.28
32	5	2118	G	C4'-C3'-O3'	8.42	125.63	113.00
32	5	4693	C	C4'-C3'-O3'	-8.42	100.37	113.00
35	B	54	THR	N-CA-C	8.42	120.93	108.14
53	S2	1167	G	N9-C1'-C2'	8.41	124.62	112.00
69	Sa	10	ARG	N-CA-C	-8.41	92.89	110.80
25	g	14	ASN	N-CA-CB	8.41	122.51	109.48
32	5	45	U	C2'-C3'-O3'	-8.40	101.10	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	5043	A	N9-C1'-C2'	8.40	126.59	114.00
19	a	34	ASN	CB-CA-C	8.39	125.51	112.00
53	S2	291	G	C4'-C3'-O3'	-8.39	96.81	109.40
1	A	83	HIS	N-CA-C	-8.39	98.05	110.46
32	5	1685	G	N9-C1'-C2'	8.39	124.58	112.00
32	5	151	G	N9-C1'-C2'	-8.38	99.43	112.00
67	SX	16	HIS	N-CA-CB	8.37	122.14	109.91
56	SC	236	PHE	N-CA-CB	8.37	122.21	110.07
32	5	1211	G	C4'-C3'-O3'	8.37	125.55	113.00
32	5	2271	C	N1-C1'-C2'	8.37	124.55	112.00
53	S2	1537	A	C3'-C2'-O2'	8.36	123.24	110.70
53	S2	631	U	C2'-C3'-O3'	8.34	122.02	109.50
32	5	2246	C	C2'-C3'-O3'	8.32	126.19	113.70
53	S2	1823	A	C2'-C3'-O3'	8.31	121.96	109.50
57	SE	86	PHE	CA-CB-CG	-8.30	105.50	113.80
53	S2	957	A	C2'-C3'-O3'	8.29	121.94	109.50
32	5	4464	A	N9-C1'-C2'	8.29	124.43	112.00
53	S2	968	U	C3'-C2'-O2'	8.29	123.14	110.70
32	5	958	G	C2'-C3'-O3'	8.28	126.12	113.70
53	S2	1395	C	C2'-C3'-O3'	8.28	126.12	113.70
32	5	93	G	N9-C1'-C2'	8.27	126.40	114.00
54	SA	90	PHE	N-CA-C	-8.27	102.21	111.14
53	S2	1394	G	O4'-C1'-C2'	-8.27	99.33	107.60
32	5	2046	G	C3'-C2'-O2'	8.26	123.09	110.70
32	5	88	A	N9-C1'-C2'	8.26	124.39	112.00
32	5	1214	C	C3'-C2'-O2'	-8.26	102.21	114.60
55	SB	100	PHE	N-CA-C	-8.25	98.43	110.64
32	5	4536	C	C1'-C2'-O2'	8.25	120.77	108.40
32	5	1974	U	N1-C1'-C2'	8.25	126.37	114.00
60	SI	113	TYR	N-CA-C	-8.24	102.25	111.07
53	S2	1372	U	C1'-C2'-O2'	-8.23	99.46	111.80
32	5	1292	C	C2'-C3'-O3'	8.22	126.04	113.70
1	A	211	PHE	CB-CA-C	8.21	124.50	110.94
32	5	2264	C	C2'-C3'-O3'	8.21	121.82	109.50
53	S2	164	A	C3'-C2'-O2'	8.21	123.01	110.70
32	5	2851	G	C1'-C2'-O2'	8.21	120.71	108.40
32	5	5066	U	N1-C1'-C2'	8.21	124.31	112.00
60	SI	66	SER	N-CA-C	8.20	122.23	109.52
50	4	37	C	C2'-C3'-O3'	8.20	126.00	113.70
32	5	454	U	C2'-C3'-O3'	8.20	125.99	113.70
32	5	1724	G	O4'-C4'-C3'	-8.19	97.91	106.10
40	P	7	ASP	CA-C-N	8.19	128.68	119.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	P	7	ASP	C-N-CA	8.19	128.68	119.92
22	d	25	TYR	CB-CA-C	8.18	126.69	110.42
32	5	2438	A	N9-C1'-C2'	-8.18	99.73	112.00
32	5	4169	G	N9-C1'-C2'	8.18	124.27	112.00
32	5	2406	G	C1'-C2'-O2'	8.18	120.66	108.40
53	S2	1475	G	C4'-C3'-O3'	8.17	121.66	109.40
32	5	119	G	O4'-C4'-C3'	-8.16	97.94	106.10
17	Y	75	ARG	CG-CD-NE	8.16	129.96	112.00
32	5	2282	A	N9-C1'-C2'	8.16	124.24	112.00
74	SK	68	TYR	CA-CB-CG	-8.16	99.21	113.90
32	5	1357	C	C3'-C2'-O2'	8.15	122.92	110.70
59	SH	177	TYR	N-CA-CB	8.15	122.77	110.22
11	R	95	TRP	N-CA-CB	8.14	122.93	110.39
32	5	3734	U	C1'-C2'-O2'	-8.14	99.59	111.80
34	8	35	C	N1-C1'-C2'	8.12	124.19	112.00
32	5	1815	G	N9-C1'-C2'	8.12	126.18	114.00
53	S2	1682	C	C4'-C3'-O3'	8.12	121.58	109.40
32	5	29	G	N9-C1'-C2'	8.11	124.16	112.00
32	5	292	G	O4'-C4'-C3'	-8.07	98.03	106.10
53	S2	1378	A	O4'-C4'-C3'	-8.07	98.03	106.10
46	K	95	GLN	N-CA-C	-8.06	93.64	110.80
32	5	2661	U	C2'-C3'-O3'	8.06	121.58	109.50
32	5	3938	G	C4'-C3'-O3'	-8.05	97.32	109.40
19	a	79	TRP	N-CA-C	-8.05	103.57	113.15
32	5	2470	C	O4'-C1'-C2'	-8.05	99.55	107.60
32	5	4265	U	N1-C1'-C2'	8.03	126.05	114.00
53	S2	1407	U	N1-C1'-C2'	8.04	124.05	112.00
46	K	2	PRO	CA-C-N	-8.03	109.80	119.84
46	K	2	PRO	C-N-CA	-8.03	109.80	119.84
1	A	13	GLY	N-CA-C	-8.02	104.29	111.67
32	5	350	C	N1-C1'-C2'	8.02	124.03	112.00
53	S2	1668	U	N1-C1'-C2'	8.02	124.02	112.00
32	5	4169	G	C4'-C3'-O3'	-8.01	100.98	113.00
53	S2	26	U	O4'-C1'-C2'	-8.00	99.60	107.60
34	8	72	A	C1'-C2'-O2'	7.99	120.38	108.40
53	S2	1168	G	N9-C1'-C2'	7.99	123.98	112.00
32	5	5056	A	N9-C1'-C2'	7.99	123.98	112.00
53	S2	1123	C	O4'-C1'-C2'	-7.98	99.62	107.60
62	SL	13	GLN	CA-C-N	-7.97	112.63	120.52
62	SL	13	GLN	C-N-CA	-7.97	112.63	120.52
32	5	2325	C	O4'-C1'-C2'	-7.97	99.63	107.60
47	q	203	VAL	N-CA-C	7.97	119.34	107.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	SB	81	PHE	N-CA-C	-7.97	100.64	111.87
53	S2	1542	C	C1'-C2'-O2'	-7.96	99.86	111.80
32	5	3790	U	N1-C1'-C2'	7.96	125.93	114.00
53	S2	631	U	N1-C1'-C2'	7.96	125.94	114.00
32	5	1636	U	C2'-C3'-O3'	-7.95	101.77	113.70
32	5	3880	G	C1'-C2'-O2'	-7.95	99.87	111.80
32	5	2858	A	C2'-C3'-O3'	7.95	121.43	109.50
53	S2	825	A	N9-C1'-C2'	7.95	123.93	112.00
10	Q	52	PHE	N-CA-C	7.95	127.73	110.80
32	5	2082	G	N9-C1'-C2'	7.94	123.91	112.00
53	S2	1492	U	C1'-C2'-O2'	7.93	120.30	108.40
81	SU	72	GLU	N-CA-C	7.93	121.82	109.52
37	E	59	TYR	N-CA-C	-7.93	93.92	110.80
32	5	4737	G	N9-C1'-C2'	7.92	123.88	112.00
1	A	209	HIS	CA-CB-CG	-7.91	105.89	113.80
53	S2	496	C	C3'-C2'-O2'	7.91	122.56	110.70
32	5	33	A	N9-C1'-C2'	7.90	123.85	112.00
53	S2	1842	C	N1-C1'-C2'	7.88	123.82	112.00
18	Z	54	THR	N-CA-C	7.88	122.47	112.86
32	5	1364	U	C2'-C3'-O3'	7.88	125.52	113.70
32	5	54	G	C2'-C3'-O3'	7.87	125.50	113.70
75	SM	127	TYR	CA-CB-CG	7.86	128.06	113.90
32	5	2806	A	C1'-C2'-O2'	7.86	120.19	108.40
32	5	3596	A	C3'-C2'-O2'	7.86	122.49	110.70
32	5	4199	C	O4'-C1'-C2'	-7.86	99.75	107.60
53	S2	746	C	C2'-C3'-O3'	7.85	125.47	113.70
60	SI	55	TYR	CA-CB-CG	-7.85	99.77	113.90
32	5	2806	A	N9-C1'-C2'	-7.85	100.23	112.00
32	5	94	A	N9-C1'-C2'	7.84	123.76	112.00
32	5	4888	U	C4'-C3'-O3'	7.84	121.16	109.40
32	5	3938	G	C2'-C3'-O3'	7.83	121.25	109.50
3	G	77	PRO	N-CA-C	7.83	120.25	110.70
32	5	1377	G	C2'-C3'-O3'	7.82	125.43	113.70
32	5	965	G	C4'-C3'-O3'	7.82	121.13	109.40
32	5	4557	U	C4'-C3'-O3'	-7.82	101.28	113.00
53	S2	675	U	C1'-C2'-O2'	7.82	120.13	108.40
23	e	80	HIS	CB-CA-C	7.81	119.67	109.28
53	S2	532	C	C2'-C3'-O3'	7.81	125.42	113.70
32	5	147	A	N9-C1'-C2'	7.80	123.70	112.00
3	G	53	ARG	CA-CB-CG	7.80	129.71	114.10
32	5	2782	U	C4'-C3'-O3'	7.80	124.70	113.00
32	5	2093	A	C2'-C3'-O3'	7.80	121.20	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2263	A	C2'-C3'-O3'	7.79	121.19	109.50
32	5	2517	A	N9-C1'-C2'	7.79	123.69	112.00
26	h	78	TYR	CA-CB-CG	-7.79	99.88	113.90
32	5	1324	A	N9-C1'-C2'	7.78	125.67	114.00
67	SX	20	HIS	CA-CB-CG	-7.76	106.04	113.80
32	5	1214	C	N1-C1'-C2'	7.76	125.64	114.00
1	A	211	PHE	CA-CB-CG	-7.76	106.04	113.80
32	5	332	C	N1-C1'-C2'	7.76	123.64	112.00
32	5	2546	G	C3'-C2'-O2'	7.75	122.32	110.70
32	5	316	U	C4'-C3'-O3'	-7.75	101.38	113.00
32	5	4589	A	C2'-C3'-O3'	7.74	121.11	109.50
53	S2	1221	G	N9-C1'-C2'	7.74	123.61	112.00
39	I	4	ARG	CG-CD-NE	-7.74	94.98	112.00
32	5	4951	G	C2'-C3'-O3'	7.73	121.10	109.50
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
12	S	146	HIS	N-CA-C	7.73	127.27	110.80
32	5	2827	G	O4'-C4'-C3'	-7.72	98.38	106.10
53	S2	31	U	N1-C1'-C2'	7.72	123.58	112.00
62	SL	92	TYR	N-CA-C	7.72	118.77	107.88
32	5	3882	C	N1-C1'-C2'	7.72	123.58	112.00
32	5	125	C	C2'-C3'-O3'	7.72	125.28	113.70
53	S2	30	C	N1-C1'-C2'	7.71	123.57	112.00
32	5	2858	A	C4'-C3'-O3'	-7.71	97.83	109.40
53	S2	1838	U	O4'-C4'-C3'	-7.71	98.39	106.10
32	5	1267	C	C2'-C3'-O3'	7.70	121.06	109.50
48	z	344	PRO	O-C-N	-7.70	112.24	122.64
25	g	9	ARG	CG-CD-NE	-7.70	95.06	112.00
32	5	406	C	C2'-C3'-O3'	7.70	125.25	113.70
53	S2	644	G	C3'-C2'-O2'	7.70	122.25	110.70
53	S2	1368	U	C4'-C3'-O3'	7.69	124.54	113.00
32	5	4275	G	N9-C1'-C2'	-7.68	100.48	112.00
53	S2	92	A	C2'-C3'-O3'	7.68	121.02	109.50
58	SG	61	PHE	CB-CA-C	7.68	117.35	110.44
32	5	2125	C	C1'-C2'-O2'	-7.67	100.29	111.80
32	5	1577	G	C1'-C2'-O2'	7.67	119.90	108.40
32	5	1650	A	O4'-C4'-C3'	-7.67	98.43	106.10
53	S2	1664	A	C2'-C3'-O3'	7.67	125.20	113.70
32	5	2328	G	C3'-C2'-O2'	7.67	122.20	110.70
34	8	70	G	N9-C1'-C2'	-7.66	100.51	112.00
34	8	74	U	O4'-C1'-C2'	-7.66	99.94	107.60
32	5	3677	U	N1-C1'-C2'	7.66	123.48	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	C	41	HIS	N-CA-C	-7.65	102.63	110.97
32	5	4745	G	C4'-C3'-O3'	-7.64	101.54	113.00
53	S2	1313	A	N9-C1'-C2'	7.64	125.46	114.00
32	5	1894	C	N1-C1'-C2'	7.64	123.46	112.00
32	5	52	G	C2'-C3'-O3'	7.64	125.16	113.70
32	5	514	U	C2'-C3'-O3'	7.63	125.15	113.70
38	F	237	ASN	N-CA-CB	7.63	121.37	109.69
53	S2	91	A	C2'-C3'-O3'	7.63	125.15	113.70
53	S2	647	U	O4'-C1'-C2'	-7.63	99.97	107.60
32	5	2107	C	C2'-C3'-O3'	7.63	120.94	109.50
32	5	277	G	C2'-C3'-O3'	7.63	120.94	109.50
38	F	197	TYR	N-CA-CB	7.63	120.93	110.10
5	J	99	PHE	CB-CA-C	7.62	123.08	110.88
32	5	4528	G	O4'-C1'-C2'	-7.62	99.97	107.60
40	P	139	TYR	CA-CB-CG	-7.61	100.20	113.90
53	S2	327	G	C2'-C3'-O3'	7.61	120.91	109.50
32	5	265	C	C4'-C3'-O3'	7.60	120.80	109.40
32	5	1264	C	C3'-C2'-O2'	7.58	122.08	110.70
32	5	2597	G	N9-C1'-C2'	7.58	123.38	112.00
60	SI	67	TRP	N-CA-CB	7.58	121.08	110.17
7	M	6	PHE	CA-CB-CG	-7.58	106.22	113.80
32	5	3868	G	N9-C1'-C2'	-7.57	102.64	114.00
53	S2	1059	G	N9-C1'-C2'	7.57	123.36	112.00
53	S2	349	A	C2'-C3'-O3'	7.57	125.05	113.70
8	N	151	ILE	CB-CA-C	-7.57	102.41	111.94
32	5	4872	G	C2'-C3'-O3'	7.57	120.85	109.50
34	8	35	C	C1'-C2'-O2'	-7.56	97.06	108.40
53	S2	448	A	N9-C1'-C2'	-7.56	102.66	114.00
53	S2	980	A	C2'-C3'-O3'	7.55	125.03	113.70
12	S	77	ASN	CB-CA-C	7.55	123.27	111.72
32	5	2859	G	C2'-C3'-O3'	7.54	120.81	109.50
1	A	193	ARG	CG-CD-NE	-7.54	95.41	112.00
8	N	139	HIS	CA-CB-CG	-7.54	106.26	113.80
32	5	686	A	C4'-C3'-O3'	7.54	120.71	109.40
32	5	4165	C	O4'-C1'-C2'	-7.54	100.06	107.60
7	M	66	HIS	N-CA-C	7.53	122.11	113.15
32	5	3683	C	N1-C1'-C2'	7.53	125.29	114.00
35	B	102	PHE	CB-CA-C	-7.53	99.29	110.95
32	5	2844	A	C4'-C3'-O3'	-7.52	101.72	113.00
32	5	267	G	C2'-C3'-O3'	7.52	124.98	113.70
32	5	1067	G	C2'-C3'-O3'	7.52	124.98	113.70
32	5	3908	A	N9-C1'-C2'	7.51	125.27	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	141	A	C4'-C3'-O3'	7.50	120.65	109.40
32	5	957	G	C2'-C3'-O3'	7.50	120.75	109.50
32	5	88	A	C2'-C3'-O3'	-7.50	102.46	113.70
32	5	1893	C	N1-C1'-C2'	7.49	123.24	112.00
1	A	34	PHE	N-CA-CB	7.49	122.46	109.72
32	5	3692	A	C2'-C3'-O3'	7.49	124.94	113.70
32	5	5048	A	C4'-C3'-O3'	-7.49	101.76	113.00
32	5	31	U	C4'-C3'-O3'	-7.49	101.77	113.00
53	S2	449	A	C2'-C3'-O3'	-7.49	102.47	113.70
53	S2	427	U	N1-C1'-C2'	7.49	123.23	112.00
32	5	3729	U	C2'-C3'-O3'	7.48	124.92	113.70
53	S2	1674	G	C1'-C2'-O2'	7.48	119.62	108.40
53	S2	1082	A	N9-C1'-C2'	7.48	123.22	112.00
32	5	4115	G	C4'-C3'-O3'	7.48	120.62	109.40
32	5	4966	A	N9-C1'-C2'	7.47	123.21	112.00
46	K	90	ARG	N-CA-C	-7.47	100.46	110.55
2	D	44	TYR	CB-CA-C	7.47	125.29	110.42
32	5	4476	C	C4'-C3'-O3'	-7.47	101.79	113.00
27	i	39	PHE	CA-CB-CG	-7.47	106.33	113.80
1	A	189	TYR	CA-CB-CG	7.46	127.33	113.90
32	5	2395	A	C3'-C2'-O2'	7.46	121.90	110.70
32	5	3883	U	N1-C1'-C2'	7.46	123.19	112.00
31	o	31	ASP	N-CA-C	7.46	120.89	108.73
32	5	2769	U	C1'-C2'-O2'	7.46	119.59	108.40
32	5	4979	A	N9-C1'-C2'	7.46	123.19	112.00
32	5	3667	C	C2'-C3'-O3'	7.46	124.88	113.70
19	a	41	HIS	N-CA-C	-7.46	103.75	112.92
32	5	3663	A	O4'-C4'-C3'	-7.45	98.66	106.10
54	SA	103	PHE	N-CA-CB	7.43	123.06	110.49
53	S2	1350	U	C2'-C3'-O3'	7.43	124.85	113.70
32	5	4497	U	C2'-C3'-O3'	7.42	124.84	113.70
75	SM	72	HIS	N-CA-C	-7.42	100.75	110.33
9	O	65	ASN	CA-C-N	7.42	126.94	118.85
9	O	65	ASN	C-N-CA	7.42	126.94	118.85
32	5	2443	G	N9-C1'-C2'	7.42	123.13	112.00
32	5	964	A	O4'-C1'-C2'	-7.41	100.19	107.60
53	S2	845	G	N9-C1'-C2'	7.40	123.11	112.00
53	S2	957	A	C4'-C3'-O3'	-7.40	98.30	109.40
58	SG	156	TYR	CA-CB-CG	-7.40	100.58	113.90
32	5	4874	A	O4'-C1'-C2'	-7.40	100.20	107.60
53	S2	1529	C	N1-C1'-C2'	7.40	123.10	112.00
53	S2	1157	G	C2'-C3'-O3'	-7.40	102.61	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
12	S	28	TYR	N-CA-C	7.39	119.58	107.23
53	S2	1284	A	C3'-C2'-O2'	-7.39	103.51	114.60
2	D	54	ARG	CG-CD-NE	-7.39	95.75	112.00
32	5	2581	A	N9-C1'-C2'	7.38	123.07	112.00
37	E	111	TYR	N-CA-CB	7.38	121.21	110.06
29	1	21	ARG	CA-C-N	7.38	129.06	119.84
29	1	21	ARG	C-N-CA	7.38	129.06	119.84
32	5	2632	U	N1-C1'-C2'	7.38	123.07	112.00
32	5	170	C	C2'-C3'-O3'	7.38	120.57	109.50
32	5	1397	A	C3'-C2'-O2'	7.38	121.77	110.70
32	5	962	C	N1-C1'-C2'	7.37	125.05	114.00
55	SB	82	ARG	CG-CD-NE	-7.37	95.79	112.00
53	S2	139	C	C3'-C2'-O2'	7.37	121.75	110.70
32	5	2081	C	C2'-C3'-O3'	-7.36	102.66	113.70
53	S2	595	U	C2'-C3'-O3'	7.36	120.54	109.50
53	S2	958	G	C2'-C3'-O3'	7.36	120.54	109.50
56	SC	170	TRP	N-CA-CB	7.36	120.65	109.91
32	5	292	G	N9-C1'-C2'	7.36	125.03	114.00
32	5	292	G	C2'-C3'-O3'	7.35	120.53	109.50
32	5	4283	G	O4'-C1'-C2'	-7.35	100.25	107.60
4	H	60	TRP	CB-CA-C	7.35	125.04	110.42
32	5	1355	G	N9-C1'-C2'	7.35	123.02	112.00
32	5	2370	A	C1'-C2'-O2'	-7.34	100.79	111.80
32	5	4464	A	C4'-C3'-O3'	-7.34	101.99	113.00
79	SS	42	HIS	N-CA-CB	7.34	121.57	110.19
37	E	217	LYS	N-CA-C	7.34	121.51	110.14
32	5	1650	A	C2'-C3'-O3'	7.33	120.50	109.50
32	5	4986	G	N9-C1'-C2'	7.33	123.00	112.00
5	J	119	TYR	CA-CB-CG	7.33	127.09	113.90
32	5	2463	G	N9-C1'-C2'	7.33	122.99	112.00
53	S2	840	C	C2'-C3'-O3'	-7.32	102.72	113.70
32	5	2796	G	N9-C1'-C2'	7.31	124.97	114.00
32	5	2319	C	N1-C1'-C2'	7.31	122.96	112.00
56	SC	170	TRP	CA-CB-CG	-7.31	99.72	113.60
32	5	979	C	C2'-C3'-O3'	7.31	124.66	113.70
26	h	117	ARG	CG-CD-NE	-7.30	95.93	112.00
32	5	2852	U	C4'-C3'-O3'	7.30	123.96	113.00
53	S2	1442	U	O4'-C1'-C2'	-7.30	100.30	107.60
32	5	1937	C	N1-C1'-C2'	7.29	122.94	112.00
32	5	4199	C	C4'-C3'-O3'	7.29	123.94	113.00
53	S2	441	C	C4'-C3'-O3'	-7.29	102.06	113.00
27	i	26	HIS	CA-CB-CG	-7.29	106.51	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4981	G	C1'-C2'-O2'	7.29	119.33	108.40
38	F	209	PHE	N-CA-CB	7.29	121.05	110.20
32	5	3635	A	C1'-C2'-O2'	7.28	119.33	108.40
47	q	99	ARG	CG-CD-NE	7.28	128.02	112.00
53	S2	1578	U	N1-C1'-C2'	7.28	124.92	114.00
32	5	1325	C	N1-C1'-C2'	7.28	124.92	114.00
32	5	4395	U	C4'-C3'-O3'	-7.27	102.09	113.00
32	5	486	C	C2'-C3'-O3'	7.27	124.61	113.70
11	R	118	HIS	N-CA-C	-7.27	103.98	112.92
32	5	4713	G	C4'-C3'-O3'	-7.27	102.10	113.00
32	5	1394	G	C1'-C2'-O2'	-7.27	97.50	108.40
53	S2	596	U	N1-C1'-C2'	7.27	124.90	114.00
32	5	4589	A	O4'-C4'-C3'	-7.26	98.83	106.10
53	S2	1257	G	C2'-C3'-O3'	7.26	120.40	109.50
32	5	1319	U	C1'-C2'-O2'	7.26	119.29	108.40
2	D	210	TYR	N-CA-C	-7.26	103.06	110.97
32	5	113	A	C1'-C2'-O2'	7.25	119.28	108.40
32	5	2081	C	N1-C1'-C2'	7.25	122.87	112.00
32	5	100	C	C2'-C3'-O3'	7.25	124.57	113.70
32	5	3879	G	O4'-C1'-C2'	-7.24	100.36	107.60
34	8	79	G	N9-C1'-C2'	7.24	122.86	112.00
53	S2	1137	U	C2'-C3'-O3'	7.24	120.36	109.50
32	5	2270	G	N9-C1'-C2'	7.24	122.85	112.00
53	S2	1114	U	N1-C1'-C2'	7.24	124.85	114.00
38	F	120	PHE	CB-CA-C	7.23	124.81	110.42
32	5	2109	G	C3'-C2'-O2'	7.23	121.55	110.70
73	SF	51	HIS	CA-CB-CG	-7.23	106.57	113.80
32	5	4451	G	C4'-C3'-O3'	7.23	123.84	113.00
39	I	35	ASP	N-CA-C	7.23	120.26	108.55
38	F	58	HIS	N-CA-CB	7.23	120.49	110.01
2	D	175	HIS	N-CA-C	-7.22	97.18	109.24
10	Q	33	ARG	CA-CB-CG	7.22	128.55	114.10
32	5	2521	G	C3'-C2'-O2'	7.22	121.53	110.70
34	8	66	A	N9-C1'-C2'	7.22	122.83	112.00
53	S2	1045	U	O4'-C1'-C2'	-7.22	100.38	107.60
8	N	21	PHE	N-CA-CB	7.21	120.69	109.94
69	Sa	17	HIS	N-CA-CB	7.21	120.73	109.69
31	o	31	ASP	CB-CA-C	7.21	121.88	110.19
32	5	2083	C	C4'-C3'-O3'	7.21	120.22	109.40
53	S2	965	U	N1-C1'-C2'	7.21	122.82	112.00
41	W	8	PHE	CB-CA-C	7.21	120.52	109.34
45	r	45	HIS	N-CA-CB	-7.21	98.30	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1439	C	O4'-C1'-C2'	-7.21	100.39	107.60
57	SE	121	TYR	CA-CB-CG	-7.20	100.94	113.90
20	b	7	HIS	CB-CA-C	-7.20	96.09	110.42
32	5	663	G	C4'-C3'-O3'	7.20	123.80	113.00
32	5	2307	A	N9-C1'-C2'	7.20	122.80	112.00
53	S2	1850	A	N9-C1'-C2'	7.20	122.80	112.00
53	S2	28	U	C4'-C3'-O3'	7.19	123.78	113.00
32	5	1616	U	O4'-C1'-C2'	-7.19	100.41	107.60
66	SW	44	HIS	CB-CA-C	7.18	122.94	110.01
33	7	42	A	O4'-C1'-C2'	-7.18	100.42	107.60
12	S	29	ARG	CA-CB-CG	7.18	128.46	114.10
9	O	110	PRO	CA-C-N	7.18	128.81	119.84
9	O	110	PRO	C-N-CA	7.18	128.81	119.84
56	SC	241	PHE	CA-CB-CG	-7.18	106.62	113.80
38	F	71	ILE	N-CA-C	-7.17	103.68	110.42
53	S2	1302	G	C1'-C2'-O2'	-7.17	101.05	111.80
32	5	2447	U	C2'-C3'-O3'	7.16	120.24	109.50
53	S2	1293	A	N9-C1'-C2'	7.16	122.75	112.00
20	b	6	ASN	CB-CA-C	7.16	122.35	111.18
32	5	1614	C	C2'-C3'-O3'	7.16	124.43	113.70
32	5	3775	A	N9-C1'-C2'	7.16	122.73	112.00
17	Y	78	TYR	CB-CA-C	7.15	124.65	110.42
32	5	4238	G	C2'-C3'-O3'	7.14	124.42	113.70
53	S2	1401	A	C2'-C3'-O3'	7.14	124.42	113.70
32	5	2761	U	C4'-C3'-O3'	7.14	120.11	109.40
53	S2	996	A	C1'-C2'-O2'	-7.14	101.09	111.80
24	f	4	ARG	CA-CB-CG	7.14	128.37	114.10
32	5	2689	C	O4'-C1'-C2'	-7.13	100.47	107.60
38	F	244	ARG	N-CA-C	-7.13	103.44	111.07
53	S2	1533	A	C2'-C3'-O3'	-7.13	103.00	113.70
27	i	40	VAL	CB-CA-C	-7.13	102.90	111.81
49	3	38	C	O3'-P-O5'	-7.13	93.31	104.00
32	5	4510	A	C2'-C3'-O3'	7.12	120.19	109.50
80	ST	34	VAL	N-CA-C	7.12	124.15	109.34
18	Z	75	TYR	CA-CB-CG	7.12	126.71	113.90
32	5	84	A	O4'-C4'-C3'	-7.12	98.98	106.10
32	5	1586	G	N9-C1'-C2'	7.12	122.67	112.00
32	5	4404	U	N1-C1'-C2'	-7.12	101.33	112.00
32	5	2468	U	C4'-C3'-O3'	7.11	120.07	109.40
32	5	2649	G	N9-C1'-C2'	7.11	122.67	112.00
53	S2	140	C	C2'-C3'-O3'	7.11	120.17	109.50
34	8	13	G	N9-C1'-C2'	7.11	122.66	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	3692	A	C1'-C2'-O2'	7.11	119.06	108.40
58	SG	67	VAL	N-CA-C	7.11	119.93	111.05
32	5	1789	C	N1-C1'-C2'	7.10	122.66	112.00
32	5	2266	C	C2'-C3'-O3'	7.10	120.15	109.50
32	5	1211	G	O4'-C1'-C2'	-7.10	100.50	107.60
73	SF	165	ASN	N-CA-CB	7.10	121.98	110.41
50	4	38	U	C2'-C3'-O3'	7.10	120.14	109.50
53	S2	1404	U	C4'-C3'-O3'	-7.10	98.76	109.40
32	5	3717	A	C1'-C2'-O2'	-7.09	101.16	111.80
32	5	3799	A	N9-C1'-C2'	7.09	122.63	112.00
53	S2	594	A	C4'-C3'-O3'	7.09	120.03	109.40
32	5	5006	U	N1-C1'-C2'	-7.08	103.37	114.00
36	C	22	VAL	N-CA-C	7.08	118.04	111.45
46	K	104	ILE	N-CA-C	7.08	124.07	109.34
53	S2	1198	G	C4'-C3'-O3'	-7.08	102.38	113.00
32	5	1440	U	C2'-C3'-O3'	7.08	124.32	113.70
32	5	1867	A	N9-C1'-C2'	7.08	122.62	112.00
32	5	291	U	N1-C1'-C2'	7.08	122.61	112.00
32	5	292	G	C4'-C3'-O3'	-7.08	98.79	109.40
32	5	3656	A	C4'-C3'-O3'	-7.08	102.39	113.00
26	h	78	TYR	CB-CA-C	7.07	123.56	111.68
38	F	41	GLN	N-CA-C	7.07	120.03	111.40
32	5	1881	C	N1-C1'-C2'	7.07	124.60	114.00
32	5	89	C	N1-C1'-C2'	7.07	122.60	112.00
32	5	1921	C	C4'-C3'-O3'	7.07	120.00	109.40
32	5	5044	A	N9-C1'-C2'	7.06	122.59	112.00
18	Z	40	HIS	N-CA-C	7.06	119.60	108.79
38	F	83	PHE	N-CA-C	7.06	119.90	107.61
56	SC	96	PHE	N-CA-CB	7.06	120.22	109.91
32	5	3938	G	O4'-C4'-C3'	-7.06	99.04	106.10
53	S2	1395	C	O4'-C1'-C2'	-7.06	100.54	107.60
53	S2	1453	C	C4'-C3'-O3'	7.06	123.58	113.00
53	S2	1591	C	C2'-C3'-O3'	7.05	124.28	113.70
32	5	4341	C	C1'-C2'-O2'	7.05	118.97	108.40
33	7	58	A	C2'-C3'-O3'	7.05	124.28	113.70
32	5	936	C	C4'-C3'-O3'	7.05	119.97	109.40
32	5	3843	C	C2'-C3'-O3'	7.05	120.07	109.50
32	5	1564	A	N9-C1'-C2'	7.04	122.57	112.00
32	5	1835	G	C4'-C3'-O3'	7.04	119.96	109.40
53	S2	1849	G	C1'-C2'-O2'	-7.04	101.24	111.80
53	S2	445	A	C2'-C3'-O3'	-7.04	103.14	113.70
32	5	42	A	C1'-C2'-O2'	-7.04	101.25	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1805	A	N9-C1'-C2'	7.04	124.55	114.00
56	SC	236	PHE	CA-CB-CG	-7.04	106.77	113.80
72	SD	79	PHE	CB-CA-C	7.03	119.48	110.34
32	5	384	A	N9-C1'-C2'	7.03	122.54	112.00
32	5	2263	A	C3'-C2'-O2'	-7.03	104.06	114.60
23	e	60	TYR	CB-CA-C	7.03	122.89	112.07
32	5	1522	G	C1'-C2'-O2'	7.03	118.94	108.40
32	5	4718	G	N9-C1'-C2'	-7.03	103.46	114.00
32	5	2317	C	N1-C1'-C2'	7.02	122.53	112.00
53	S2	41	G	N9-C1'-C2'	-7.02	103.47	114.00
39	I	96	VAL	CB-CA-C	-7.02	102.21	110.91
32	5	4232	U	C2'-C3'-O3'	7.02	120.03	109.50
32	5	3611	A	N9-C1'-C2'	7.01	122.52	112.00
32	5	1519	C	C3'-C2'-O2'	7.00	121.21	110.70
53	S2	1190	A	N9-C1'-C2'	7.00	122.50	112.00
32	5	2666	U	N1-C1'-C2'	-6.99	101.51	112.00
34	8	68	G	N9-C1'-C2'	6.99	122.49	112.00
32	5	1573	G	N9-C1'-C2'	6.99	122.49	112.00
32	5	336	A	C1'-O4'-C4'	-6.99	102.91	109.90
32	5	353	A	N9-C1'-C2'	-6.99	103.52	114.00
26	h	119	PHE	CB-CA-C	-6.98	96.52	110.42
53	S2	613	G	C2'-C3'-O3'	6.98	119.97	109.50
53	S2	1519	U	N1-C1'-C2'	6.98	124.47	114.00
32	5	1365	C	N1-C1'-C2'	6.98	124.47	114.00
53	S2	556	U	C2'-C3'-O3'	6.98	119.97	109.50
62	SL	13	GLN	CB-CG-CD	-6.98	100.74	112.60
32	5	2812	A	C1'-C2'-O2'	-6.98	101.33	111.80
32	5	3851	U	C1'-C2'-O2'	6.98	118.86	108.40
40	P	116	HIS	CA-CB-CG	-6.97	106.83	113.80
53	S2	102	A	C2'-C3'-O3'	6.97	119.96	109.50
32	5	1398	A	C2'-C3'-O3'	6.97	119.96	109.50
58	SG	134	GLY	CA-C-N	6.97	128.56	119.84
58	SG	134	GLY	C-N-CA	6.97	128.56	119.84
55	SB	100	PHE	N-CA-CB	6.97	119.92	109.19
32	5	1932	A	N9-C1'-C2'	6.97	122.45	112.00
32	5	2281	U	C4'-C3'-O3'	-6.97	102.55	113.00
32	5	3676	G	C1'-C2'-O2'	-6.97	97.95	108.40
53	S2	850	C	N1-C1'-C2'	6.97	122.45	112.00
53	S2	1791	A	C1'-C2'-O2'	6.97	118.85	108.40
32	5	1658	G	N9-C1'-C2'	6.96	122.45	112.00
32	5	4120	U	C2'-C3'-O3'	-6.96	103.25	113.70
20	b	6	ASN	CA-CB-CG	-6.96	105.64	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4424	A	C1'-C2'-O2'	6.96	118.84	108.40
32	5	1554	A	C1'-C2'-O2'	6.96	118.84	108.40
32	5	1378	C	N1-C1'-C2'	6.96	122.44	112.00
53	S2	454	U	N1-C1'-C2'	6.96	122.44	112.00
53	S2	73	C	N1-C1'-C2'	6.96	124.44	114.00
53	S2	1453	C	C1'-C2'-O2'	6.96	118.83	108.40
32	5	2396	A	O4'-C4'-C3'	-6.96	99.14	106.10
32	5	371	A	C1'-C2'-O2'	-6.95	97.97	108.40
53	S2	1201	U	C1'-C2'-O2'	6.95	118.83	108.40
32	5	4326	G	N9-C1'-C2'	6.95	122.43	112.00
56	SC	170	TRP	N-CA-C	-6.95	103.39	110.97
32	5	1885	G	C4'-C3'-O3'	6.95	123.42	113.00
32	5	2087	C	N1-C1'-C2'	-6.95	101.58	112.00
53	S2	166	A	C4'-C3'-O3'	-6.95	102.58	113.00
53	S2	917	U	C4'-C3'-O3'	-6.95	102.58	113.00
85	Sf	143	LYS	CD-CE-NZ	6.94	134.12	111.90
11	R	95	TRP	N-CA-C	-6.94	97.10	110.56
32	5	4978	G	N9-C1'-C2'	6.93	122.40	112.00
53	S2	1374	C	N1-C1'-C2'	6.93	122.40	112.00
32	5	4887	C	C2'-C3'-O3'	6.93	124.10	113.70
7	M	17	PHE	N-CA-C	6.93	117.74	108.38
32	5	3871	A	N9-C1'-C2'	6.93	122.40	112.00
38	F	197	TYR	CB-CA-C	-6.93	100.37	111.39
32	5	89	C	C1'-C2'-O2'	-6.93	98.01	108.40
32	5	219	G	O4'-C1'-C2'	-6.93	100.67	107.60
32	5	2818	C	C1'-C2'-O2'	6.93	118.79	108.40
32	5	38	A	C4'-C3'-O3'	-6.92	102.61	113.00
53	S2	304	C	C2'-C3'-O3'	6.92	119.88	109.50
42	j	27	TYR	CA-CB-CG	-6.92	101.45	113.90
32	5	93	G	C4'-C3'-O3'	-6.91	99.03	109.40
37	E	42	ARG	N-CA-C	6.91	125.53	110.80
12	S	29	ARG	CG-CD-NE	-6.91	96.80	112.00
32	5	50	C	N1-C1'-C2'	6.91	122.36	112.00
32	5	1521	C	C2'-C3'-O3'	6.91	124.06	113.70
32	5	1638	A	C2'-C3'-O3'	6.91	119.86	109.50
32	5	4394	A	C1'-C2'-O2'	-6.91	101.44	111.80
19	a	108	TYR	N-CA-C	6.91	118.76	107.23
32	5	2714	G	C4'-C3'-O3'	-6.91	102.64	113.00
53	S2	732	U	C2'-C3'-O3'	6.90	124.06	113.70
62	SL	62	PHE	CA-CB-CG	-6.90	106.90	113.80
32	5	2790	U	N1-C1'-C2'	6.90	124.35	114.00
64	SO	147	ARG	CG-CD-NE	-6.90	96.83	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	Q	33	ARG	N-CA-CB	6.89	120.01	110.01
22	d	108	TYR	CA-CB-CG	-6.89	101.49	113.90
32	5	4229	U	O4'-C1'-C2'	-6.89	100.71	107.60
32	5	4884	G	O4'-C1'-C2'	-6.89	100.71	107.60
2	D	210	TYR	CA-CB-CG	-6.89	101.50	113.90
53	S2	662	G	N9-C1'-C2'	6.89	124.33	114.00
53	S2	1246	A	C1'-C2'-O2'	6.88	118.72	108.40
32	5	3880	G	N9-C1'-C2'	6.88	124.32	114.00
32	5	4221	C	N1-C1'-C2'	-6.88	101.68	112.00
1	A	209	HIS	N-CA-CB	6.88	121.22	110.01
32	5	216	C	C2'-C3'-O3'	6.88	124.02	113.70
53	S2	26	U	C2'-C3'-O3'	6.88	124.02	113.70
53	S2	399	C	C2'-C3'-O3'	-6.88	103.39	113.70
32	5	3909	C	C1'-C2'-O2'	6.88	118.71	108.40
40	P	144	CYS	N-CA-C	6.87	119.61	109.24
53	S2	1292	C	P-O5'-C5'	6.87	131.20	120.90
32	5	1356	U	C4'-C3'-O3'	-6.86	102.71	113.00
32	5	1280	C	C4'-C3'-O3'	-6.86	102.71	113.00
32	5	2382	A	C2'-C3'-O3'	-6.86	103.41	113.70
84	Sd	46	TYR	CA-CB-CG	-6.86	101.56	113.90
32	5	1	C	C5'-C4'-C3'	6.86	125.48	115.20
32	5	3740	G	O4'-C1'-C2'	-6.86	100.75	107.60
63	SN	113	PHE	N-CA-CB	6.86	120.84	110.14
12	S	44	PHE	N-CA-CB	6.85	120.30	110.16
84	Sd	12	ARG	N-CA-C	-6.85	104.83	112.57
32	5	1244	G	C4'-C3'-O3'	6.85	119.68	109.40
32	5	3726	A	C1'-C2'-O2'	-6.85	101.53	111.80
32	5	1723	A	C4'-C3'-O3'	-6.85	102.73	113.00
53	S2	181	A	C4'-C3'-O3'	6.85	119.67	109.40
32	5	1324	A	C1'-C2'-O2'	-6.84	101.54	111.80
32	5	2122	G	C2'-C3'-O3'	6.84	119.76	109.50
32	5	514	U	C4'-C3'-O3'	6.84	123.26	113.00
53	S2	1543	U	C4'-C3'-O3'	6.84	119.66	109.40
32	5	1238	A	C2'-C3'-O3'	6.84	119.75	109.50
8	N	180	PHE	N-CA-C	-6.83	102.04	110.65
32	5	1379	C	N1-C1'-C2'	6.83	124.25	114.00
32	5	2851	G	N9-C1'-C2'	-6.83	101.75	112.00
32	5	4939	C	O4'-C1'-C2'	-6.83	100.77	107.60
32	5	46	U	N1-C1'-C2'	6.83	122.24	112.00
32	5	1573	G	C4'-C3'-O3'	-6.83	102.76	113.00
32	5	1624	G	C4'-C3'-O3'	6.83	119.64	109.40
32	5	4463	U	O4'-C1'-C2'	-6.83	100.77	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2460	A	C1'-C2'-O2'	6.82	118.64	108.40
31	o	48	TYR	CB-CA-C	6.82	122.35	112.12
32	5	1947	U	C4'-C3'-O3'	6.82	123.23	113.00
32	5	3698	G	C4'-C3'-O3'	-6.82	102.78	113.00
40	P	54	GLN	CA-CB-CG	6.81	127.72	114.10
32	5	21	G	C4'-C3'-O3'	6.81	123.22	113.00
17	Y	61	HIS	N-CA-CB	6.81	120.13	110.12
63	SN	113	PHE	CB-CA-C	-6.81	98.30	111.03
32	5	1271	G	C4'-C3'-O3'	6.81	123.21	113.00
32	5	2257	C	C2'-C3'-O3'	6.80	119.70	109.50
32	5	4589	A	C4'-C3'-O3'	-6.80	99.19	109.40
53	S2	1221	G	C1'-C2'-O2'	-6.80	98.19	108.40
32	5	245	C	C2'-C3'-O3'	6.80	123.90	113.70
53	S2	912	C	C4'-C3'-O3'	-6.80	102.80	113.00
53	S2	19	A	C2'-C3'-O3'	6.80	123.90	113.70
34	8	70	G	C1'-C2'-O2'	6.80	118.60	108.40
53	S2	1621	U	C2'-C3'-O3'	6.80	119.70	109.50
53	S2	1667	U	N1-C1'-C2'	6.80	122.19	112.00
53	S2	190	G	C4'-C3'-O3'	6.79	119.59	109.40
32	5	4666	G	C4'-C3'-O3'	-6.79	102.81	113.00
53	S2	1513	C	C1'-C2'-O2'	-6.79	98.21	108.40
27	i	26	HIS	N-CA-CB	6.79	120.68	110.22
32	5	4123	C	O4'-C1'-C2'	-6.79	100.81	107.60
53	S2	1249	C	N1-C1'-C2'	-6.79	101.82	112.00
53	S2	1559	C	C1'-C2'-O2'	6.78	118.57	108.40
32	5	1358	G	O4'-C1'-C2'	-6.78	100.82	107.60
32	5	2797	C	N1-C1'-C2'	-6.78	103.83	114.00
58	SG	156	TYR	CB-CA-C	6.77	122.59	112.03
32	5	2874	U	C2'-C3'-O3'	6.77	119.66	109.50
53	S2	1838	U	C2'-C3'-O3'	6.77	119.65	109.50
53	S2	829	C	N1-C1'-C2'	-6.77	103.85	114.00
32	5	1930	U	N1-C1'-C2'	6.76	124.14	114.00
2	D	198	HIS	CB-CA-C	6.76	123.14	110.63
3	G	57	TRP	CB-CA-C	6.76	123.48	110.17
32	5	2577	C	O4'-C1'-C2'	-6.76	100.84	107.60
44	p	34	HIS	CB-CA-C	6.76	122.09	110.94
31	o	42	ASP	N-CA-CB	6.75	119.77	109.91
38	F	237	ASN	CA-CB-CG	-6.75	105.85	112.60
32	5	4535	A	C1'-C2'-O2'	6.74	118.51	108.40
54	SA	90	PHE	N-CA-CB	6.74	119.85	110.07
32	5	1239	C	C2'-C3'-O3'	6.74	119.60	109.50
32	5	3645	U	C4'-C3'-O3'	-6.74	102.90	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1142	G	C2'-C3'-O3'	6.73	123.80	113.70
73	SF	152	TRP	N-CA-CB	6.73	119.83	110.07
32	5	2038	U	N1-C1'-C2'	6.73	122.10	112.00
34	8	63	U	O4'-C1'-C2'	-6.73	100.87	107.60
32	5	1368	A	C1'-C2'-O2'	-6.72	101.71	111.80
32	5	3839	G	O4'-C4'-C3'	-6.72	99.38	106.10
75	SM	72	HIS	N-CA-CB	6.72	119.43	110.29
53	S2	65	C	C2'-C3'-O3'	6.72	119.58	109.50
32	5	1631	A	C2'-C3'-O3'	6.72	119.58	109.50
28	k	61	PRO	N-CA-C	6.72	118.90	110.70
32	5	1853	G	N9-C1'-C2'	-6.72	101.92	112.00
32	5	4170	A	C2'-C3'-O3'	6.71	119.57	109.50
32	5	1887	G	C2'-C3'-O3'	6.71	123.77	113.70
32	5	3727	A	N9-C1'-C2'	6.71	122.07	112.00
53	S2	9	U	C2'-C3'-O3'	6.71	123.77	113.70
66	SW	46	TYR	CA-CB-CG	-6.71	101.83	113.90
32	5	1852	U	C1'-C2'-O2'	6.70	118.46	108.40
53	S2	1604	G	C4'-C3'-O3'	-6.70	102.95	113.00
87	S1	48	CYS	N-CA-C	6.70	118.38	108.60
12	S	157	ARG	CG-CD-NE	6.70	126.73	112.00
32	5	2089	G	C1'-C2'-O2'	-6.70	101.75	111.80
8	N	143	ARG	CG-CD-NE	-6.70	97.27	112.00
32	5	2320	G	C2'-C3'-O3'	6.70	119.55	109.50
32	5	93	G	O4'-C4'-C3'	-6.69	99.41	106.10
32	5	2075	G	C2'-C3'-O3'	6.69	123.74	113.70
53	S2	340	C	C2'-C3'-O3'	6.68	123.72	113.70
85	Sf	148	TYR	CA-CB-CG	6.68	125.93	113.90
32	5	4996	C	C1'-C2'-O2'	6.68	118.42	108.40
53	S2	1669	G	N9-C1'-C2'	6.68	122.02	112.00
8	N	118	SER	N-CA-C	6.68	120.17	108.75
19	a	34	ASN	CA-CB-CG	-6.68	105.92	112.60
53	S2	638	C	C1'-C2'-O2'	-6.68	98.39	108.40
32	5	1216	C	C2'-C3'-O3'	6.67	123.71	113.70
32	5	1733	G	C4'-C3'-O3'	6.67	123.01	113.00
32	5	4122	G	C2'-C3'-O3'	6.67	123.71	113.70
10	Q	33	ARG	CB-CG-CD	6.67	126.64	111.30
53	S2	104	A	C2'-C3'-O3'	6.67	123.70	113.70
32	5	5022	U	C2'-C3'-O3'	6.67	123.70	113.70
32	5	336	A	C8-N9-C1'	-6.67	107.71	127.70
32	5	2123	C	C2'-C3'-O3'	6.67	119.50	109.50
32	5	2587	A	C2'-C3'-O3'	-6.66	103.70	113.70
32	5	1075	G	C4'-C3'-O3'	-6.66	103.01	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1575	A	N9-C1'-C2'	6.66	121.98	112.00
10	Q	37	ARG	NE-CZ-NH2	6.66	125.19	119.20
32	5	4228	G	N9-C1'-C2'	-6.65	102.03	112.00
34	8	41	A	C1'-C2'-O2'	6.65	118.37	108.40
53	S2	443	U	C1'-C2'-O2'	6.65	118.37	108.40
67	SX	16	HIS	CA-CB-CG	-6.65	107.15	113.80
32	5	3859	G	C4'-C3'-O3'	-6.64	103.04	113.00
19	a	129	PHE	N-CA-C	6.63	119.59	110.24
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
12	S	77	ASN	CA-CB-CG	-6.63	105.97	112.60
12	S	111	ARG	CB-CG-CD	6.63	126.54	111.30
32	5	1649	U	N1-C1'-C2'	6.63	123.94	114.00
32	5	5002	U	C2'-C3'-O3'	6.63	119.44	109.50
32	5	1359	G	N9-C1'-C2'	6.62	121.94	112.00
32	5	2403	A	N9-C1'-C2'	6.62	121.94	112.00
32	5	3739	C	C2'-C3'-O3'	6.62	123.64	113.70
32	5	4215	C	O4'-C1'-C2'	-6.62	100.98	107.60
33	7	59	G	C3'-C2'-O2'	6.62	120.64	110.70
53	S2	1577	G	N9-C1'-C2'	6.62	121.92	112.00
55	SB	82	ARG	N-CA-C	6.62	124.89	110.80
32	5	4745	G	N9-C1'-C2'	6.61	121.92	112.00
38	F	194	HIS	CB-CA-C	-6.61	100.70	110.95
53	S2	72	C	C4'-C3'-O3'	6.61	119.32	109.40
2	D	157	ASN	CB-CA-C	6.61	120.95	109.65
32	5	1501	C	O4'-C1'-N1	6.60	118.41	108.50
32	5	938	C	N1-C1'-C2'	6.60	121.90	112.00
32	5	245	C	O4'-C1'-C2'	-6.60	101.00	107.60
32	5	2395	A	C2'-C3'-O3'	6.60	123.59	113.70
71	Se	45	VAL	N-CA-C	-6.60	104.73	110.74
32	5	1382	G	N9-C1'-C2'	6.59	121.89	112.00
53	S2	1603	G	O4'-C4'-C3'	-6.59	99.51	106.10
66	SW	15	ASN	N-CA-C	-6.59	104.02	111.14
32	5	505	G	C2'-C3'-O3'	6.59	123.59	113.70
37	E	277	ILE	N-CA-C	6.59	118.30	107.24
53	S2	64	A	C2'-C3'-O3'	-6.59	103.82	113.70
32	5	703	G	C2'-C3'-O3'	-6.58	103.83	113.70
9	O	49	ARG	CG-CD-NE	-6.58	97.52	112.00
32	5	2312	U	O4'-C1'-C2'	-6.57	101.03	107.60
39	I	76	MET	N-CA-C	-6.57	100.55	110.28
38	F	58	HIS	N-CA-C	-6.57	104.04	111.07
39	I	92	HIS	N-CA-C	-6.57	100.11	109.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	798	A	C4'-C3'-O3'	6.57	122.85	113.00
13	T	105	PHE	CB-CA-C	6.57	120.88	109.65
7	M	64	PHE	N-CA-C	-6.57	100.54	110.39
32	5	4519	C	C2'-C3'-O3'	6.56	123.55	113.70
32	5	2053	C	C4'-C3'-O3'	-6.56	103.16	113.00
53	S2	824	C	N1-C1'-C2'	6.56	121.84	112.00
63	SN	139	TRP	CA-CB-CG	6.56	126.07	113.60
32	5	27	C	C4'-C3'-O3'	-6.56	103.16	113.00
53	S2	1825	A	C2'-C3'-O3'	6.55	119.33	109.50
53	S2	594	A	N9-C1'-C2'	-6.55	104.17	114.00
32	5	2265	G	C4'-C3'-O3'	6.55	119.23	109.40
32	5	123	C	C2'-C3'-O3'	6.55	123.52	113.70
32	5	4197	G	C1'-C2'-O2'	6.55	118.22	108.40
53	S2	382	C	N1-C1'-C2'	6.55	121.83	112.00
32	5	664	G	C4'-C3'-O3'	6.54	119.22	109.40
53	S2	1659	U	C4'-C3'-O3'	6.54	122.81	113.00
32	5	2046	G	C1'-O4'-C4'	-6.54	103.36	109.90
53	S2	680	G	N9-C1'-C2'	6.54	121.81	112.00
32	5	226	G	N9-C1'-C2'	-6.54	104.19	114.00
32	5	4392	G	C1'-C2'-O2'	6.54	118.21	108.40
46	K	123	ARG	N-CA-C	6.54	120.31	109.46
53	S2	146	G	C3'-C2'-O2'	6.54	120.51	110.70
1	A	186	TYR	N-CA-CB	6.54	119.49	110.01
53	S2	1450	G	C3'-C2'-O2'	6.53	120.50	110.70
32	5	4876	U	N1-C1'-C2'	6.53	123.79	114.00
37	E	231	THR	N-CA-C	-6.53	104.79	112.89
32	5	3843	C	N1-C1'-C2'	6.53	123.79	114.00
32	5	4738	C	C4'-C3'-O3'	-6.53	103.21	113.00
38	F	228	HIS	N-CA-CB	6.53	119.68	109.69
53	S2	444	G	O4'-C1'-C2'	-6.53	101.07	107.60
85	Sf	131	PHE	N-CA-C	6.53	120.14	109.24
32	5	2529	A	C2'-C3'-O3'	-6.53	103.91	113.70
32	5	4279	A	N9-C1'-C2'	-6.52	104.22	114.00
53	S2	551	U	C1'-C2'-O2'	6.52	118.18	108.40
53	S2	1255	G	C4'-C3'-O3'	-6.52	103.22	113.00
32	5	3817	A	N9-C1'-C2'	6.52	123.78	114.00
32	5	4481	U	N1-C1'-C2'	6.52	121.78	112.00
53	S2	1697	A	C3'-C2'-O2'	-6.51	104.83	114.60
32	5	969	C	C3'-C2'-O2'	-6.51	104.83	114.60
8	N	150	TRP	CA-CB-CG	6.51	125.97	113.60
23	e	35	TRP	CA-CB-CG	-6.51	101.23	113.60
32	5	47	A	C4'-C3'-O3'	6.51	119.17	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	274	C	C1'-C2'-O2'	-6.51	102.04	111.80
53	S2	417	C	C2'-C3'-O3'	6.50	123.46	113.70
32	5	215	C	C2'-C3'-O3'	6.50	123.45	113.70
32	5	58	G	N9-C1'-C2'	6.50	123.75	114.00
32	5	153	G	C4'-C3'-O3'	-6.50	103.25	113.00
32	5	2321	G	N9-C1'-C2'	6.50	121.75	112.00
42	j	8	PHE	CA-CB-CG	-6.50	107.30	113.80
80	ST	85	ASN	N-CA-C	-6.50	105.11	113.16
53	S2	507	G	C2'-C3'-O3'	6.50	119.24	109.50
53	S2	1480	A	N9-C1'-C2'	6.50	121.74	112.00
32	5	4600	G	O4'-C1'-C2'	-6.49	101.11	107.60
32	5	72	C	C1'-O4'-C4'	-6.49	103.41	109.90
53	S2	497	C	C3'-C2'-O2'	6.49	120.43	110.70
32	5	4239	A	C1'-C2'-O2'	6.49	118.13	108.40
75	SM	33	ARG	CG-CD-NE	6.48	126.26	112.00
5	J	120	ASP	N-CA-C	-6.48	101.36	110.31
31	o	78	ARG	NE-CZ-NH2	6.48	125.03	119.20
32	5	1292	C	N1-C1'-C2'	6.48	121.72	112.00
32	5	1534	A	N9-C1'-C2'	6.48	123.72	114.00
53	S2	1585	U	O4'-C4'-C3'	-6.48	99.62	106.10
32	5	2851	G	C2'-C3'-O3'	6.48	123.42	113.70
53	S2	1315	U	C3'-C2'-O2'	6.48	120.42	110.70
32	5	1650	A	C4'-C3'-O3'	-6.47	99.69	109.40
34	8	135	C	N1-C1'-C2'	6.47	121.71	112.00
32	5	235	A	O4'-C1'-C2'	-6.46	101.14	107.60
32	5	4342	C	C2'-C3'-O3'	6.46	123.40	113.70
68	SY	20	ARG	N-CA-C	6.46	118.89	109.07
21	c	90	ARG	CA-CB-CG	6.46	127.02	114.10
32	5	3673	C	C4'-C3'-O3'	-6.46	103.31	113.00
32	5	4275	G	C1'-C2'-O2'	6.46	118.09	108.40
60	SI	51	GLY	N-CA-C	-6.46	97.87	113.18
74	SK	57	TYR	CA-CB-CG	-6.46	102.28	113.90
53	S2	123	G	C1'-C2'-O2'	6.46	118.08	108.40
53	S2	912	C	C2'-C3'-O3'	6.46	123.39	113.70
54	SA	103	PHE	CA-CB-CG	-6.46	107.34	113.80
32	5	4117	U	O4'-C1'-C2'	-6.45	101.15	107.60
32	5	4747	C	C3'-C2'-O2'	6.45	120.38	110.70
35	B	258	HIS	N-CA-C	6.45	124.06	109.81
32	5	1353	G	C4'-C3'-O3'	-6.45	103.33	113.00
13	T	13	TYR	N-CA-CB	-6.45	100.57	111.27
35	B	179	HIS	CA-CB-CG	-6.45	107.35	113.80
32	5	2344	U	N1-C1'-C2'	6.44	121.67	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	P	117	ILE	N-CA-C	6.44	116.85	108.35
32	5	1296	G	C4'-C3'-O3'	6.44	119.06	109.40
32	5	4518	A	C3'-C2'-O2'	-6.44	104.94	114.60
32	5	2277	C	O4'-C1'-C2'	-6.43	101.17	107.60
53	S2	863	U	N1-C1'-C2'	6.43	121.65	112.00
53	S2	1114	U	C2'-C3'-O3'	6.43	119.15	109.50
32	5	4074	C	C1'-C2'-O2'	-6.43	102.16	111.80
53	S2	1603	G	N9-C1'-C2'	6.43	123.64	114.00
32	5	30	C	C1'-C2'-O2'	-6.43	98.76	108.40
32	5	1268	G	C4'-C3'-O3'	6.42	119.04	109.40
32	5	2035	C	C1'-C2'-O2'	6.42	118.04	108.40
60	SI	28	GLU	N-CA-C	-6.42	97.12	110.80
56	SC	250	TYR	CA-CB-CG	-6.42	102.34	113.90
32	5	1409	C	C4'-C3'-O3'	6.42	119.03	109.40
35	B	261	ARG	N-CA-C	-6.42	99.35	109.50
32	5	514	U	N1-C1'-C2'	-6.42	102.37	112.00
32	5	1804	A	C4'-C3'-O3'	6.42	119.03	109.40
32	5	1887	G	N9-C1'-C2'	-6.42	102.38	112.00
32	5	2078	C	O4'-C1'-C2'	-6.42	101.19	107.60
38	F	141	TYR	CA-CB-CG	6.42	125.45	113.90
53	S2	822	U	N1-C1'-C2'	6.42	123.62	114.00
18	Z	38	TYR	CB-CA-C	6.41	120.82	109.72
32	5	2879	A	O4'-C4'-C3'	-6.41	99.69	106.10
53	S2	842	C	N1-C1'-C2'	6.41	121.62	112.00
1	A	194	ASN	N-CA-CB	6.41	119.81	110.58
32	5	2464	C	C1'-C2'-O2'	-6.41	102.19	111.80
32	5	1215	C	O4'-C1'-C2'	-6.41	101.19	107.60
32	5	1930	U	O4'-C4'-C3'	-6.40	99.70	106.10
34	8	118	C	O4'-C1'-C2'	-6.40	101.20	107.60
40	P	145	HIS	CA-CB-CG	-6.40	107.40	113.80
32	5	43	U	C1'-C2'-O2'	6.40	118.00	108.40
53	S2	399	C	C4'-C3'-O3'	6.40	122.60	113.00
53	S2	870	A	C4'-C3'-O3'	6.40	119.00	109.40
32	5	2256	C	C2'-C3'-O3'	6.40	119.10	109.50
32	5	4337	C	C1'-C2'-O2'	-6.40	98.80	108.40
66	SW	44	HIS	N-CA-C	-6.40	105.22	113.16
34	8	38	U	C3'-C2'-O2'	6.40	120.30	110.70
1	A	194	ASN	N-CA-C	6.39	119.64	108.52
24	f	4	ARG	N-CA-CB	6.39	121.29	110.49
23	e	60	TYR	N-CA-C	-6.39	99.93	109.83
22	d	86	VAL	N-CA-C	6.38	117.90	108.45
12	S	83	ARG	CG-CD-NE	6.38	126.04	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	393	U	O4'-C1'-C2'	-6.38	99.42	105.80
53	S2	1367	U	C2'-C3'-O3'	6.38	123.27	113.70
32	5	5062	G	P-O5'-C5'	6.38	130.46	120.90
37	E	275	ASN	N-CA-CB	6.38	120.88	110.17
53	S2	161	U	N1-C1'-C2'	6.38	123.56	114.00
53	S2	1309	C	C2'-C3'-O3'	-6.38	104.14	113.70
32	5	25	A	N9-C1'-C2'	6.37	121.56	112.00
32	5	85	G	C1'-C2'-O2'	6.37	121.36	111.80
32	5	4566	U	C4'-C3'-O3'	-6.37	103.44	113.00
53	S2	1293	A	C2'-C3'-O3'	-6.37	104.15	113.70
32	5	3906	A	N9-C1'-C2'	-6.37	102.45	112.00
2	D	16	TYR	N-CA-CB	6.36	119.56	109.51
32	5	62	A	C1'-C2'-O2'	-6.36	98.86	108.40
53	S2	501	C	O4'-C1'-C2'	-6.36	101.24	107.60
53	S2	1436	C	C3'-C2'-O2'	6.36	120.24	110.70
34	8	2	G	O4'-C1'-C2'	-6.36	101.24	107.60
38	F	228	HIS	CA-CB-CG	-6.36	107.44	113.80
53	S2	1379	A	C2'-C3'-O3'	-6.36	104.17	113.70
32	5	4355	G	C4'-C3'-O3'	-6.36	103.47	113.00
53	S2	55	U	N1-C1'-C2'	6.35	123.53	114.00
73	SF	44	LYS	N-CA-C	-6.35	105.57	113.38
32	5	74	G	N9-C1'-C2'	6.35	121.53	112.00
53	S2	1331	C	C4'-C3'-O3'	-6.34	103.48	113.00
55	SB	205	TYR	CB-CA-C	6.34	117.45	110.15
32	5	112	C	O4'-C1'-C2'	-6.34	101.26	107.60
53	S2	646	G	O4'-C1'-C2'	-6.34	101.26	107.60
58	SG	172	LYS	N-CA-C	6.34	118.51	110.33
32	5	279	A	C2'-C3'-O3'	6.34	119.01	109.50
32	5	2613	C	C2'-C3'-O3'	6.34	123.21	113.70
32	5	4888	U	C1'-C2'-O2'	6.34	121.31	111.80
53	S2	402	C	C1'-C2'-O2'	6.34	117.91	108.40
32	5	4282	A	N9-C1'-C2'	6.34	123.51	114.00
53	S2	1099	G	O4'-C1'-C2'	-6.33	101.27	107.60
7	M	109	ARG	NE-CZ-NH2	6.33	124.90	119.20
13	T	159	MET	N-CA-C	6.33	118.06	111.03
32	5	4272	G	N9-C1'-C2'	6.33	123.50	114.00
32	5	4677	U	C3'-C2'-O2'	6.33	120.20	110.70
2	D	96	ALA	N-CA-C	6.33	120.57	112.34
17	Y	6	PHE	CB-CA-C	6.33	123.01	110.42
53	S2	1085	C	N1-C1'-C2'	6.33	123.49	114.00
53	S2	1298	G	C1'-C2'-O2'	-6.33	102.31	111.80
53	S2	377	G	O4'-C1'-C2'	-6.33	101.27	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1319	U	N1-C1'-C2'	6.33	121.49	112.00
32	5	4948	C	C2'-C3'-O3'	6.32	123.18	113.70
32	5	2046	G	O4'-C1'-C2'	-6.32	101.28	107.60
53	S2	1851	A	N9-C1'-C2'	6.32	121.48	112.00
72	SD	202	LYS	CA-C-N	-6.32	111.94	119.84
72	SD	202	LYS	C-N-CA	-6.32	111.94	119.84
8	N	192	TRP	CA-CB-CG	6.32	125.60	113.60
32	5	1820	C	C1'-C2'-O2'	-6.32	102.33	111.80
32	5	470	A	O4'-C1'-C2'	-6.32	101.28	107.60
22	d	26	THR	N-CA-C	6.31	118.24	109.15
32	5	2406	G	N9-C1'-C2'	-6.31	102.54	112.00
32	5	3870	C	N1-C1'-C2'	6.31	121.46	112.00
2	D	145	TYR	CB-CA-C	6.31	120.87	110.78
32	5	1274	A	C2'-C3'-O3'	6.31	118.96	109.50
32	5	1394	G	N9-C1'-C2'	6.31	121.46	112.00
32	5	118	C	C4'-C3'-O3'	-6.30	103.54	113.00
32	5	1738	A	C3'-C2'-O2'	6.30	120.15	110.70
53	S2	14	C	N1-C1'-C2'	6.30	121.45	112.00
71	Se	38	TYR	CA-CB-CG	6.30	125.24	113.90
53	S2	1136	U	N1-C1'-C2'	6.30	121.45	112.00
32	5	300	A	O4'-C1'-C2'	-6.30	101.30	107.60
53	S2	399	C	N1-C1'-C2'	-6.30	102.55	112.00
34	8	9	A	C1'-C2'-O2'	6.29	117.84	108.40
32	5	1912	G	C4'-C3'-O3'	-6.29	103.56	113.00
32	5	4328	G	C1'-C2'-O2'	6.29	117.84	108.40
23	e	43	ASN	CB-CA-C	6.29	119.95	109.89
32	5	1822	U	N1-C1'-C2'	6.29	121.43	112.00
53	S2	821	G	O4'-C1'-C2'	-6.29	101.31	107.60
6	L	64	VAL	N-CA-C	6.28	122.41	109.34
53	S2	1371	U	O4'-C1'-C2'	-6.28	101.32	107.60
32	5	2311	C	C1'-C2'-O2'	6.28	117.82	108.40
53	S2	1292	C	O4'-C1'-C2'	-6.28	101.32	107.60
32	5	1790	U	C2'-C3'-O3'	6.28	118.92	109.50
32	5	5060	A	C4'-C3'-O3'	6.28	122.42	113.00
8	N	53	TYR	N-CA-CB	6.28	119.31	109.83
10	Q	174	PHE	CB-CA-C	6.28	121.33	111.72
53	S2	1545	A	C4'-C3'-O3'	-6.28	99.99	109.40
32	5	451	C	C2'-C3'-O3'	6.27	118.91	109.50
32	5	4314	C	O4'-C1'-C2'	-6.27	101.33	107.60
32	5	405	U	C1'-C2'-O2'	6.27	117.81	108.40
32	5	291	U	C2'-C3'-O3'	-6.27	104.30	113.70
32	5	4301	U	C4'-C3'-O3'	-6.27	103.60	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4911	A	C1'-O4'-C4'	-6.27	103.63	109.90
69	Sa	80	HIS	N-CA-CB	6.27	119.28	109.94
32	5	1480	C	C2'-C3'-O3'	6.27	118.90	109.50
32	5	3615	G	C4'-C3'-O3'	6.27	118.80	109.40
61	SJ	123	ILE	CB-CA-C	-6.27	102.44	112.16
57	SE	167	GLY	N-CA-C	-6.26	103.83	111.35
53	S2	669	A	C4'-C3'-O3'	-6.26	103.61	113.00
36	C	267	TRP	CA-CB-CG	6.26	125.50	113.60
61	SJ	69	ARG	NE-CZ-NH2	6.26	124.83	119.20
32	5	2348	G	O4'-C4'-C3'	-6.26	99.84	106.10
55	SB	67	PHE	N-CA-CB	-6.26	99.92	110.49
56	SC	104	ASP	N-CA-C	6.26	118.97	108.02
53	S2	798	A	C3'-C2'-O2'	6.25	120.08	110.70
24	f	19	ARG	CA-CB-CG	6.25	126.61	114.10
12	S	115	ALA	N-CA-C	6.25	117.89	111.14
32	5	968	C	C4'-C3'-O3'	6.25	118.78	109.40
32	5	4318	C	C4'-C3'-O3'	-6.25	103.62	113.00
32	5	4900	C	C2'-C3'-O3'	6.25	118.88	109.50
2	D	45	ASN	N-CA-C	6.25	119.03	111.40
7	M	6	PHE	CB-CA-C	6.25	121.32	112.07
32	5	2324	C	C2'-C3'-O3'	6.25	123.07	113.70
32	5	2825	A	C4'-C3'-O3'	6.25	118.77	109.40
22	d	73	TRP	N-CA-CB	-6.24	101.13	111.49
32	5	1742	A	O4'-C1'-C2'	-6.24	101.36	107.60
32	5	2077	C	O4'-C1'-C2'	-6.24	101.36	107.60
40	P	27	LYS	N-CA-C	6.24	120.16	112.54
17	Y	19	PHE	CB-CA-C	6.24	118.96	111.22
53	S2	18	C	C4'-C3'-O3'	-6.24	103.64	113.00
66	SW	44	HIS	CA-CB-CG	-6.24	107.56	113.80
11	R	120	TYR	N-CA-CB	6.24	119.29	110.12
32	5	36	U	C2'-C3'-O3'	6.24	123.06	113.70
53	S2	1232	U	C1'-C2'-O2'	6.24	117.76	108.40
53	S2	1545	A	C2'-C3'-O3'	6.24	118.86	109.50
32	5	2407	G	C4'-C3'-O3'	-6.24	103.64	113.00
19	a	40	HIS	N-CA-C	6.24	123.07	113.28
53	S2	1701	C	N1-C1'-C2'	6.24	123.35	114.00
32	5	2408	U	C4'-C3'-O3'	6.23	118.75	109.40
34	8	81	C	N1-C1'-C2'	6.23	121.35	112.00
17	Y	87	ARG	NE-CZ-NH2	6.23	124.81	119.20
32	5	1361	G	C2'-C3'-O3'	6.23	123.05	113.70
32	5	4377	G	C4'-C3'-O3'	-6.23	103.66	113.00
53	S2	1341	C	N1-C1'-C2'	6.23	123.35	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	5062	G	O4'-C1'-C2'	-6.23	101.37	107.60
49	3	22	U	N1-C1'-C2'	6.23	121.34	112.00
53	S2	28	U	N1-C1'-C2'	6.23	121.34	112.00
2	D	197	LYS	N-CA-C	-6.22	104.42	111.14
32	5	4079	C	O4'-C1'-C2'	-6.22	101.38	107.60
53	S2	1429	G	C3'-C2'-O2'	6.22	120.04	110.70
53	S2	1438	A	N9-C1'-C2'	6.22	121.34	112.00
9	O	192	PHE	N-CA-C	-6.22	104.65	112.93
24	f	51	TYR	CA-CB-CG	6.22	125.10	113.90
53	S2	447	A	O4'-C1'-N9	6.22	117.53	108.20
24	f	42	TYR	CA-CB-CG	-6.22	102.71	113.90
56	SC	200	ARG	NE-CZ-NH2	6.22	124.80	119.20
32	5	187	U	C4'-C3'-O3'	6.22	122.32	113.00
32	5	1637	A	N9-C1'-C2'	-6.21	102.68	112.00
32	5	1992	U	C2'-C3'-O3'	-6.21	100.18	109.50
64	SO	106	LYS	N-CA-C	6.21	119.99	111.54
32	5	92	C	N1-C1'-C2'	-6.21	102.68	112.00
32	5	4976	U	O4'-C4'-C3'	-6.21	99.89	106.10
32	5	1236	C	C2'-C3'-O3'	6.21	123.01	113.70
53	S2	1143	A	C2'-C3'-O3'	-6.21	104.39	113.70
1	A	163	ARG	CB-CA-C	6.21	119.91	109.48
53	S2	465	A	C4'-C3'-O3'	6.21	118.71	109.40
32	5	2323	C	C2'-C3'-O3'	6.20	123.01	113.70
45	r	21	ASN	N-CA-CB	-6.20	103.04	112.47
8	N	180	PHE	CA-CB-CG	-6.20	107.60	113.80
38	F	110	VAL	CB-CA-C	-6.20	104.03	111.97
32	5	2743	A	C4'-C3'-O3'	-6.20	103.70	113.00
53	S2	452	G	N9-C1'-C2'	6.20	121.30	112.00
32	5	1487	G	C2'-C3'-O3'	6.20	122.99	113.70
53	S2	963	A	N9-C1'-C2'	6.20	121.29	112.00
53	S2	1551	U	C2'-C3'-O3'	6.20	122.99	113.70
32	5	236	G	N9-C1'-C2'	6.19	121.29	112.00
32	5	443	G	N9-C1'-C2'	6.19	121.29	112.00
32	5	2745	A	N9-C1'-C2'	6.19	121.29	112.00
53	S2	27	A	O4'-C1'-C2'	-6.19	101.41	107.60
53	S2	631	U	O4'-C4'-C3'	-6.19	99.91	106.10
22	d	87	ARG	N-CA-C	-6.19	97.79	108.56
32	5	4451	G	N9-C1'-C2'	6.19	121.28	112.00
32	5	84	A	C1'-C2'-O2'	-6.18	102.52	111.80
32	5	2039	G	N9-C1'-C2'	6.18	121.28	112.00
53	S2	4	C	C4'-C3'-O3'	-6.18	103.72	113.00
9	O	168	TYR	N-CA-CB	6.18	119.15	109.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	5048	A	C2'-C3'-O3'	6.18	122.97	113.70
53	S2	413	G	N9-C1'-C2'	6.18	121.28	112.00
69	Sa	22	ARG	CG-CD-NE	-6.18	98.40	112.00
32	5	4464	A	C5'-C4'-O4'	6.18	119.07	109.80
12	S	28	TYR	CA-CB-CG	6.18	125.02	113.90
32	5	4499	G	C2'-C3'-O3'	-6.18	104.43	113.70
1	A	87	PHE	N-CA-C	-6.17	99.59	109.96
53	S2	1567	G	N9-C1'-C2'	6.17	121.26	112.00
5	J	119	TYR	CB-CA-C	6.17	119.71	109.53
32	5	3644	U	C2'-C3'-O3'	-6.17	104.44	113.70
40	P	139	TYR	CB-CA-C	6.17	121.71	111.83
53	S2	508	A	C1'-C2'-O2'	6.17	117.65	108.40
60	SI	55	TYR	CB-CA-C	6.17	121.98	111.68
32	5	1428	U	C2'-C3'-O3'	6.17	122.95	113.70
36	C	41	HIS	CA-CB-CG	-6.17	107.63	113.80
72	SD	159	HIS	CA-CB-CG	-6.17	107.64	113.80
32	5	2263	A	C5'-C4'-O4'	6.16	118.34	109.10
32	5	2507	A	O4'-C1'-C2'	-6.16	101.44	107.60
32	5	3619	G	C4'-C3'-O3'	-6.16	103.76	113.00
32	5	1440	U	O4'-C1'-C2'	-6.16	101.44	107.60
32	5	2035	C	O4'-C1'-C2'	-6.16	101.44	107.60
32	5	2673	G	O4'-C1'-C2'	-6.16	99.64	105.80
32	5	3879	G	N9-C1'-C2'	-6.16	102.77	112.00
69	Sa	93	LYS	N-CA-C	6.15	117.99	111.28
32	5	1521	C	C1'-C2'-O2'	6.15	117.63	108.40
32	5	1633	G	C2'-C3'-O3'	-6.15	104.48	113.70
32	5	4231	C	C2'-C3'-O3'	-6.15	104.48	113.70
3	G	32	PHE	N-CA-CB	6.15	119.17	109.71
32	5	4194	U	N1-C1'-C2'	-6.15	102.78	112.00
32	5	514	U	C4'-C3'-C2'	-6.14	96.45	102.60
53	S2	1141	G	C2'-C3'-O3'	6.14	122.92	113.70
32	5	3912	U	C3'-C2'-O2'	6.14	119.91	110.70
32	5	2077	C	C2'-C3'-O3'	6.14	122.91	113.70
32	5	2118	G	O4'-C4'-C3'	-6.14	97.86	104.00
53	S2	91	A	C1'-C2'-O2'	6.14	117.61	108.40
53	S2	91	A	N9-C1'-C2'	-6.14	102.79	112.00
1	A	211	PHE	N-CA-C	-6.14	105.72	112.72
32	5	99	A	C2'-C3'-O3'	6.14	122.91	113.70
32	5	2518	G	C4'-C3'-O3'	-6.13	103.80	113.00
34	8	82	A	O4'-C1'-C2'	-6.13	101.47	107.60
32	5	4656	A	C2'-C3'-O3'	6.13	118.69	109.50
32	5	1901	C	N1-C1'-C2'	6.13	121.19	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1925	G	O4'-C1'-C2'	-6.13	101.47	107.60
32	5	4346	U	N1-C1'-C2'	6.12	121.19	112.00
32	5	4719	G	C3'-C2'-O2'	6.12	119.89	110.70
53	S2	957	A	N9-C1'-C2'	6.12	123.19	114.00
34	8	126	C	C4'-C3'-O3'	6.12	118.58	109.40
53	S2	1474	A	C2'-C3'-O3'	6.12	118.68	109.50
65	SV	43	THR	N-CA-C	6.12	117.62	111.07
32	5	2076	G	C1'-C2'-O2'	6.12	117.58	108.40
53	S2	618	C	C1'-C2'-O2'	6.12	117.58	108.40
86	Sg	15	ASN	N-CA-CB	-6.12	102.20	111.19
53	S2	451	G	C2'-C3'-O3'	-6.11	104.53	113.70
53	S2	1375	G	C4'-C3'-O3'	-6.11	103.83	113.00
31	o	41	TYR	N-CA-CB	6.11	119.10	110.12
34	8	117	C	O4'-C1'-C2'	-6.11	101.49	107.60
53	S2	362	C	C2'-C3'-O3'	-6.11	104.53	113.70
58	SG	25	ARG	CG-CD-NE	-6.11	98.56	112.00
77	SQ	99	TYR	CA-CB-CG	6.11	124.90	113.90
32	5	4280	A	N9-C1'-C2'	-6.11	102.84	112.00
32	5	417	G	O4'-C1'-C2'	-6.11	101.50	107.60
32	5	456	C	O4'-C1'-C2'	-6.11	101.50	107.60
32	5	334	A	N9-C1'-C2'	6.10	121.16	112.00
32	5	3814	U	N1-C1'-C2'	6.10	121.16	112.00
53	S2	1315	U	C2'-C3'-O3'	6.10	122.86	113.70
32	5	4938	A	C2'-C3'-O3'	-6.10	104.55	113.70
35	B	243	LYS	N-CA-C	6.10	118.90	111.82
53	S2	303	C	N1-C1'-C2'	6.10	121.15	112.00
33	7	26	C	C1'-C2'-O2'	6.10	117.55	108.40
10	Q	32	TYR	N-CA-C	6.10	119.98	111.56
32	5	1572	U	N1-C1'-C2'	6.10	121.15	112.00
34	8	14	U	C1'-C2'-O2'	-6.10	99.25	108.40
53	S2	1404	U	O4'-C4'-C3'	-6.10	100.00	106.10
53	S2	1556	A	N9-C1'-C2'	6.10	123.15	114.00
53	S2	1648	G	C2'-C3'-O3'	-6.10	100.35	109.50
33	7	21	G	N9-C1'-C2'	6.10	121.14	112.00
40	P	54	GLN	N-CA-C	6.10	120.09	111.92
42	j	27	TYR	N-CA-CB	6.10	120.80	110.49
12	S	47	PHE	N-CA-C	6.10	118.00	111.36
32	5	1946	G	N9-C1'-C2'	-6.09	102.86	112.00
32	5	1238	A	C3'-C2'-O2'	6.09	123.74	114.60
32	5	126	C	O4'-C1'-C2'	-6.09	101.51	107.60
32	5	1894	C	C1'-C2'-O2'	-6.09	99.26	108.40
32	5	1663	C	C3'-C2'-O2'	6.09	119.83	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4270	C	C2'-C3'-O3'	6.08	122.83	113.70
32	5	1667	G	C2'-C3'-O3'	6.08	122.83	113.70
32	5	4622	A	C1'-C2'-O2'	6.08	117.53	108.40
32	5	1241	C	C2'-C3'-O3'	6.08	122.82	113.70
32	5	307	A	N9-C1'-C2'	6.08	121.12	112.00
32	5	3645	U	N1-C1'-C2'	6.08	121.11	112.00
32	5	84	A	N9-C1'-C2'	6.08	123.11	114.00
32	5	664	G	O4'-C1'-N9	6.08	117.31	108.20
32	5	1588	U	N1-C1'-C2'	6.08	121.11	112.00
42	j	71	TYR	CA-CB-CG	6.08	124.83	113.90
32	5	336	A	O4'-C1'-N9	6.07	117.61	108.50
34	8	102	G	N9-C1'-C2'	6.07	121.11	112.00
41	W	51	TRP	N-CA-CB	6.07	119.15	110.16
32	5	3827	G	N9-C1'-C2'	-6.07	104.89	114.00
53	S2	645	C	N1-C1'-C2'	-6.07	102.89	112.00
35	B	368	ILE	CB-CA-C	-6.07	102.10	110.96
32	5	3691	G	N9-C1'-C2'	6.06	123.10	114.00
31	o	31	ASP	CA-CB-CG	-6.06	106.54	112.60
32	5	2511	A	O4'-C4'-C3'	-6.06	100.04	106.10
32	5	4880	C	C1'-C2'-O2'	-6.06	99.31	108.40
53	S2	807	G	N9-C1'-C2'	6.06	121.09	112.00
32	5	4544	A	C4'-C3'-O3'	-6.06	103.91	113.00
35	B	330	PHE	N-CA-C	-6.06	101.49	110.46
53	S2	1523	C	O4'-C1'-C2'	-6.06	101.54	107.60
31	o	32	SER	N-CA-C	6.05	117.55	111.07
32	5	4270	C	C1'-C2'-O2'	6.05	117.48	108.40
45	r	105	ASP	N-CA-C	-6.05	104.01	112.12
32	5	1624	G	C2'-C3'-O3'	-6.05	100.42	109.50
32	5	4670	C	O4'-C1'-C2'	-6.05	101.55	107.60
80	ST	62	ARG	NE-CZ-NH2	6.05	124.65	119.20
32	5	432	U	C2'-C3'-O3'	-6.05	104.62	113.70
32	5	2054	U	C4'-C3'-O3'	-6.05	100.33	109.40
32	5	2846	G	C1'-C2'-O2'	6.05	117.47	108.40
32	5	4175	G	C4'-C3'-O3'	-6.05	103.92	113.00
33	7	29	C	N1-C1'-C2'	6.05	121.07	112.00
37	E	278	TYR	N-CA-C	-6.05	96.44	109.81
32	5	4763	U	C2'-C3'-O3'	-6.05	104.63	113.70
32	5	237	G	C2'-C3'-O3'	6.04	118.57	109.50
5	J	99	PHE	CA-CB-CG	-6.04	107.76	113.80
25	g	76	ARG	N-CA-C	6.04	116.22	108.24
32	5	4557	U	N1-C1'-C2'	6.04	121.06	112.00
32	5	1992	U	N1-C1'-C2'	6.04	123.06	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1198	G	C2'-C3'-O3'	6.04	122.76	113.70
32	5	2260	C	C2'-C3'-O3'	6.04	118.56	109.50
32	5	372	A	C4'-C3'-O3'	-6.04	103.95	113.00
32	5	1	C	C5'-C4'-O4'	6.03	118.15	109.10
32	5	4599	A	N9-C1'-C2'	6.03	123.05	114.00
55	SB	79	VAL	N-CA-C	6.03	121.89	109.34
12	S	100	LEU	N-CA-C	6.03	119.81	111.55
36	C	340	ILE	N-CA-C	-6.03	106.38	111.56
31	o	42	ASP	CB-CA-C	-6.03	101.68	110.96
32	5	238	C	N1-C1'-C2'	6.03	121.04	112.00
34	8	81	C	C1'-O4'-C4'	-6.03	103.87	109.90
32	5	1890	G	N9-C1'-C2'	-6.03	102.96	112.00
53	S2	468	A	C1'-C2'-O2'	6.03	117.44	108.40
23	e	108	ARG	N-CA-C	-6.02	104.71	111.28
32	5	405	U	O4'-C1'-C2'	-6.02	101.58	107.60
53	S2	1341	C	C2'-C3'-O3'	6.02	118.54	109.50
53	S2	1496	U	O4'-C1'-C2'	-6.02	101.58	107.60
85	Sf	114	ILE	N-CA-C	6.02	116.69	107.77
32	5	1379	C	C1'-O4'-C4'	-6.02	103.68	109.70
32	5	4951	G	C3'-C2'-O2'	6.02	123.63	114.60
32	5	1998	A	N9-C1'-C2'	6.02	123.03	114.00
53	S2	1088	U	O4'-C4'-C3'	-6.02	100.08	106.10
32	5	4276	G	C1'-C2'-O2'	6.02	117.42	108.40
32	5	2744	A	C1'-C2'-O2'	-6.01	99.38	108.40
53	S2	661	U	C1'-C2'-O2'	6.01	117.42	108.40
32	5	2262	G	C4'-C3'-O3'	6.01	118.42	109.40
32	5	4683	U	N1-C1'-C2'	6.01	121.02	112.00
53	S2	1292	C	C4'-C3'-C2'	-6.01	96.59	102.60
53	S2	158	A	C3'-C2'-O2'	6.01	119.72	110.70
32	5	134	G	O4'-C4'-C3'	-6.01	100.09	106.10
9	O	66	PRO	N-CA-C	6.01	121.45	113.40
32	5	1395	U	N1-C1'-C2'	6.01	121.01	112.00
53	S2	182	C	C2'-C3'-O3'	6.00	122.71	113.70
64	SO	105	THR	N-CA-C	6.00	123.59	110.80
32	5	1522	G	N9-C1'-C2'	-6.00	102.99	112.00
32	5	4251	A	C1'-C2'-O2'	-6.00	99.39	108.40
36	C	232	VAL	N-CA-C	-6.00	105.00	110.82
32	5	4325	A	N9-C1'-C2'	6.00	121.00	112.00
53	S2	833	C	C4'-C3'-O3'	-6.00	104.00	113.00
53	S2	1104	G	C1'-C2'-O2'	6.00	117.40	108.40
53	S2	1459	G	C2'-C3'-O3'	6.00	122.70	113.70
32	5	727	C	C2'-C3'-O3'	6.00	118.50	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	Sa	17	HIS	CA-CB-CG	-6.00	107.80	113.80
32	5	4320	G	N9-C1'-C2'	6.00	121.00	112.00
32	5	4338	G	N9-C1'-C2'	-6.00	105.00	114.00
37	E	250	ASP	N-CA-C	-6.00	102.79	110.53
53	S2	833	C	O4'-C1'-C2'	-6.00	101.60	107.60
32	5	421	C	C1'-C2'-O2'	6.00	117.39	108.40
32	5	1938	C	O4'-C4'-C3'	-6.00	100.10	106.10
1	A	189	TYR	N-CA-CB	6.00	120.13	110.42
32	5	233	U	C2'-C3'-O3'	6.00	118.49	109.50
32	5	1628	C	O4'-C1'-C2'	-5.99	101.61	107.60
35	B	262	VAL	N-CA-C	-5.99	101.84	109.80
32	5	1520	C	C3'-C2'-O2'	5.98	119.67	110.70
62	SL	120	VAL	N-CA-C	-5.98	103.53	110.05
32	5	745	G	N9-C1'-C2'	5.98	120.97	112.00
39	I	139	ARG	CG-CD-NE	5.98	125.16	112.00
53	S2	1369	A	C2'-C3'-O3'	-5.98	104.73	113.70
32	5	2848	G	N9-C1'-C2'	-5.98	103.03	112.00
32	5	85	G	O4'-C1'-C2'	-5.98	99.82	105.80
32	5	1302	U	O4'-C1'-C2'	-5.97	101.62	107.60
32	5	1847	C	N1-C1'-C2'	5.97	120.96	112.00
53	S2	149	A	N9-C1'-C2'	5.97	120.96	112.00
60	SI	113	TYR	CB-CA-C	-5.97	101.50	110.88
32	5	157	U	N1-C1'-C2'	-5.97	103.04	112.00
32	5	962	C	C4'-C3'-O3'	-5.97	100.44	109.40
53	S2	1109	C	N1-C1'-C2'	5.97	122.96	114.00
53	S2	1671	G	N9-C1'-C2'	5.97	120.96	112.00
59	SH	185	VAL	N-CA-C	5.97	116.45	108.27
9	O	135	PHE	CA-CB-CG	5.97	119.77	113.80
11	R	32	ILE	N-CA-C	-5.97	103.46	110.21
32	5	1370	G	C4'-C3'-O3'	5.97	118.35	109.40
35	B	149	ASP	N-CA-C	5.97	117.48	110.97
53	S2	473	A	C2'-C3'-O3'	-5.97	104.75	113.70
32	5	2746	A	N9-C1'-C2'	5.97	120.95	112.00
53	S2	617	G	C2'-C3'-O3'	5.96	122.65	113.70
57	SE	103	TYR	N-CA-CB	5.96	120.13	110.41
36	C	312	ARG	CG-CD-NE	-5.96	98.88	112.00
32	5	1899	G	C4'-C3'-O3'	-5.96	104.06	113.00
12	S	97	TYR	CA-CB-CG	-5.96	103.18	113.90
23	e	47	ARG	N-CA-C	-5.96	97.98	108.23
10	Q	181	ARG	CA-CB-CG	5.96	126.01	114.10
32	5	1440	U	C4'-C3'-O3'	5.96	121.94	113.00
32	5	1818	G	C4'-C3'-O3'	-5.96	104.06	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4560	C	O4'-C4'-C3'	-5.96	100.14	106.10
20	b	13	SER	N-CA-C	-5.95	101.61	111.37
32	5	963	G	C4'-C3'-O3'	5.95	118.33	109.40
32	5	4519	C	O4'-C4'-C3'	-5.95	98.05	104.00
38	F	119	ILE	N-CA-CB	5.95	117.43	110.82
53	S2	1641	A	N9-C1'-C2'	5.95	120.93	112.00
58	SG	173	ALA	N-CA-C	5.95	113.58	108.22
32	5	4163	U	N1-C1'-C2'	-5.95	103.07	112.00
32	5	4368	G	O4'-C1'-C2'	-5.95	101.65	107.60
32	5	2803	U	C1'-C2'-O2'	5.95	117.32	108.40
53	S2	1146	C	N1-C1'-C2'	5.95	120.92	112.00
53	S2	376	A	C1'-C2'-O2'	5.95	117.32	108.40
32	5	2424	G	N9-C1'-C2'	5.95	120.92	112.00
53	S2	65	C	O4'-C4'-C3'	-5.95	100.15	106.10
32	5	221	C	C4'-C3'-O3'	-5.94	104.08	113.00
80	ST	53	PHE	N-CA-C	-5.94	105.86	113.23
35	B	363	ILE	N-CA-C	5.94	116.43	108.11
32	5	1880	G	N9-C1'-C2'	5.94	120.91	112.00
32	5	4510	A	O4'-C4'-C3'	-5.94	100.16	106.10
32	5	381	U	N1-C1'-C2'	5.94	120.90	112.00
53	S2	1538	C	O4'-C1'-C2'	-5.94	101.66	107.60
75	SM	34	GLY	N-CA-C	5.94	119.78	111.00
2	D	20	PHE	CB-CA-C	5.93	122.23	110.42
32	5	2316	G	N9-C1'-C2'	5.93	120.90	112.00
42	j	8	PHE	CB-CA-C	5.93	122.23	110.42
35	B	68	ASN	N-CA-CB	5.93	119.02	110.06
32	5	426	A	C3'-C2'-O2'	5.93	119.60	110.70
32	5	4737	G	C1'-C2'-O2'	-5.93	99.51	108.40
55	SB	165	ARG	CG-CD-NE	5.93	125.04	112.00
35	B	55	HIS	CA-CB-CG	-5.93	107.87	113.80
53	S2	167	G	N9-C1'-C2'	5.93	120.89	112.00
4	H	66	GLU	N-CA-C	-5.92	106.18	113.41
32	5	3716	C	C4'-C3'-O3'	-5.92	104.11	113.00
53	S2	649	U	C4'-C3'-O3'	5.92	121.89	113.00
79	SS	95	TYR	CB-CA-C	5.92	119.64	111.23
53	S2	215	G	C4'-C3'-O3'	5.92	118.28	109.40
53	S2	843	C	N1-C1'-C2'	5.92	120.88	112.00
53	S2	76	U	C3'-C2'-O2'	5.92	119.58	110.70
55	SB	120	VAL	N-CA-C	-5.92	103.60	110.05
32	5	4742	G	O4'-C1'-C2'	-5.92	101.68	107.60
53	S2	413	G	C2'-C3'-O3'	-5.92	104.83	113.70
32	5	422	C	C2'-C3'-O3'	5.92	122.57	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1370	G	O4'-C4'-C3'	-5.91	100.19	106.10
32	5	4693	C	O4'-C1'-N1	-5.91	99.63	108.50
33	7	84	U	N1-C1'-C2'	5.91	122.87	114.00
53	S2	1337	C	C1'-C2'-O2'	5.91	117.27	108.40
65	SV	50	PHE	N-CA-C	5.91	117.69	107.93
9	O	108	ILE	CA-C-N	5.91	126.47	120.38
9	O	108	ILE	C-N-CA	5.91	126.47	120.38
32	5	5001	U	C1'-C2'-O2'	-5.91	99.54	108.40
53	S2	687	C	C2'-C3'-O3'	5.91	118.36	109.50
32	5	2474	G	C2'-C3'-O3'	5.91	122.56	113.70
53	S2	1666	C	N1-C1'-C2'	5.91	120.86	112.00
32	5	2889	G	N9-C1'-C2'	5.91	120.86	112.00
32	5	4695	C	N1-C1'-C2'	5.91	120.86	112.00
53	S2	53	C	O4'-C1'-C2'	-5.91	101.69	107.60
53	S2	366	U	C2'-C3'-O3'	5.91	122.56	113.70
53	S2	386	C	O4'-C1'-C2'	-5.91	101.69	107.60
32	5	1449	C	C2'-C3'-O3'	5.90	122.55	113.70
26	h	119	PHE	N-CA-CB	5.90	120.46	110.49
53	S2	1225	U	N1-C1'-C2'	-5.90	103.15	112.00
53	S2	1253	A	C2'-C3'-O3'	5.90	118.35	109.50
32	5	2737	C	N1-C1'-C2'	5.90	120.85	112.00
32	5	4170	A	N9-C1'-C2'	5.90	122.85	114.00
53	S2	32	U	C4'-C3'-O3'	-5.90	104.15	113.00
32	5	2666	U	C4'-C3'-C2'	-5.90	96.70	102.60
53	S2	426	A	C4'-C3'-C2'	-5.90	96.70	102.60
32	5	4761	G	N9-C1'-C2'	5.89	120.84	112.00
53	S2	872	A	C2'-C3'-O3'	5.89	118.34	109.50
32	5	333	U	N1-C1'-C2'	5.89	120.83	112.00
32	5	2077	C	C1'-C2'-O2'	5.89	117.24	108.40
32	5	4238	G	C1'-C2'-O2'	5.89	117.23	108.40
34	8	126	C	C2'-C3'-O3'	5.89	118.33	109.50
38	F	94	VAL	CB-CA-C	-5.89	102.91	110.98
32	5	2000	G	C1'-C2'-O2'	5.89	117.23	108.40
53	S2	1534	C	C2'-C3'-O3'	-5.89	100.67	109.50
33	7	114	U	N1-C1'-C2'	5.89	120.83	112.00
53	S2	1292	C	C5'-C4'-C3'	5.89	124.83	116.00
53	S2	469	A	O4'-C1'-C2'	-5.88	101.72	107.60
32	5	5048	A	O4'-C1'-C2'	-5.88	101.72	107.60
50	4	39	C	C2'-C3'-O3'	5.88	118.32	109.50
61	SJ	18	ARG	CA-C-N	5.88	125.42	119.19
61	SJ	18	ARG	C-N-CA	5.88	125.42	119.19
6	L	5	ARG	N-CA-C	5.88	118.37	111.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	107	G	C1'-C2'-O2'	5.88	117.22	108.40
32	5	2643	G	C2'-C3'-O3'	5.88	122.52	113.70
32	5	3635	A	N9-C1'-C2'	-5.88	103.18	112.00
2	D	95	TYR	N-CA-CB	5.88	118.70	109.94
32	5	4224	A	C1'-C2'-O2'	5.88	117.22	108.40
32	5	2725	A	N9-C1'-C2'	5.88	120.81	112.00
53	S2	122	G	C1'-C2'-O2'	5.88	117.21	108.40
2	D	226	TYR	CA-CB-CG	-5.87	103.33	113.90
33	7	56	G	C1'-C2'-O2'	-5.87	99.59	108.40
36	C	48	ASN	N-CA-C	-5.87	101.21	109.96
46	K	88	PRO	N-CA-C	5.87	117.86	110.70
39	I	34	PHE	N-CA-C	-5.87	106.03	112.72
32	5	917	A	C4'-C3'-O3'	5.87	118.20	109.40
32	5	4935	C	C2'-C3'-O3'	5.87	122.50	113.70
53	S2	1207	G	C4'-C3'-O3'	-5.87	104.20	113.00
32	5	42	A	C1'-O4'-C4'	-5.87	103.83	109.70
59	SH	126	HIS	N-CA-CB	5.87	119.37	110.28
32	5	315	G	C1'-O4'-C4'	-5.86	103.84	109.70
32	5	2554	U	C2'-C3'-O3'	5.86	122.49	113.70
12	S	151	LYS	N-CA-C	5.86	119.06	108.69
32	5	4463	U	C1'-C2'-O2'	5.86	117.19	108.40
32	5	1539	G	C1'-C2'-O2'	5.86	117.18	108.40
32	5	1615	C	C2'-C3'-O3'	5.86	122.48	113.70
34	8	11	C	O4'-C1'-C2'	-5.86	101.74	107.60
34	8	46	G	N9-C1'-C2'	5.86	120.78	112.00
53	S2	426	A	O4'-C4'-C3'	-5.86	98.14	104.00
32	5	2294	G	C4'-C3'-O3'	-5.85	104.22	113.00
78	SR	85	VAL	CA-C-N	-5.85	114.23	120.03
78	SR	85	VAL	C-N-CA	-5.85	114.23	120.03
32	5	664	G	C1'-O4'-C4'	-5.85	103.85	109.70
38	F	239	GLU	CA-CB-CG	5.85	125.80	114.10
53	S2	1204	A	C4'-C3'-O3'	5.85	121.78	113.00
32	5	1539	G	C2'-C3'-O3'	5.85	122.47	113.70
37	E	278	TYR	CA-C-N	5.85	125.95	119.87
37	E	278	TYR	C-N-CA	5.85	125.95	119.87
32	5	4478	G	C1'-C2'-O2'	5.85	117.17	108.40
86	Sg	82	SER	N-CA-C	5.85	117.11	108.86
32	5	2325	C	C2'-C3'-O3'	5.84	122.47	113.70
32	5	4592	C	C3'-C2'-O2'	5.84	119.47	110.70
34	8	104	A	O4'-C4'-C3'	-5.84	100.26	106.10
53	S2	290	U	C4'-C3'-O3'	-5.84	104.24	113.00
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(°)
11	R	57	VAL	N-CA-C	5.84	117.61	109.55
21	c	78	ASN	CA-CB-CG	-5.84	106.76	112.60
32	5	1887	G	C4'-C3'-C2'	-5.84	96.76	102.60
53	S2	651	U	N1-C1'-C2'	5.84	120.76	112.00
85	Sf	146	LEU	CB-CA-C	5.83	121.20	111.51
32	5	1319	U	C2'-C3'-O3'	5.83	122.45	113.70
32	5	2666	U	C2'-C3'-O3'	5.83	122.45	113.70
53	S2	482	G	C1'-C2'-O2'	5.83	117.15	108.40
53	S2	1064	C	C1'-C2'-O2'	5.83	117.15	108.40
2	D	35	ARG	CG-CD-NE	5.83	124.83	112.00
53	S2	313	A	C1'-O4'-C4'	-5.83	103.87	109.70
21	c	88	TYR	N-CA-CB	-5.83	102.30	111.39
32	5	468	U	N1-C1'-C2'	5.83	120.74	112.00
32	5	1381	U	C4'-C3'-O3'	-5.83	104.26	113.00
32	5	2368	A	C2'-C3'-O3'	-5.83	104.96	113.70
32	5	2080	U	N1-C1'-C2'	5.83	120.74	112.00
32	5	272	U	N1-C1'-C2'	5.82	120.74	112.00
32	5	2852	U	O4'-C1'-C2'	-5.82	101.78	107.60
32	5	4527	G	C4'-C3'-O3'	5.82	118.14	109.40
32	5	4950	U	N1-C1'-C2'	5.82	122.73	114.00
53	S2	1622	U	O4'-C4'-C3'	-5.82	100.28	106.10
32	5	4982	A	C1'-C2'-O2'	5.82	117.13	108.40
70	Sb	31	TYR	N-CA-C	5.82	117.37	108.52
77	SQ	115	TYR	N-CA-C	5.82	117.89	110.61
32	5	1214	C	O4'-C4'-C3'	-5.82	100.28	106.10
34	8	104	A	C2'-C3'-O3'	5.82	118.22	109.50
53	S2	109	U	C4'-C3'-O3'	-5.82	104.28	113.00
53	S2	1339	U	C4'-C3'-O3'	-5.82	104.28	113.00
32	5	268	G	C2'-C3'-O3'	5.81	122.42	113.70
10	Q	35	LEU	N-CA-C	5.81	117.29	111.07
53	S2	516	A	C2'-C3'-O3'	5.81	118.22	109.50
77	SQ	24	HIS	N-CA-C	5.81	118.69	108.75
27	i	28	ARG	CG-CD-NE	-5.81	99.22	112.00
37	E	275	ASN	CA-CB-CG	-5.81	106.79	112.60
53	S2	459	C	O4'-C1'-C2'	-5.81	101.79	107.60
85	Sf	150	PHE	CA-CB-CG	5.81	119.61	113.80
23	e	41	ILE	N-CA-C	-5.81	105.07	110.53
21	c	87	LYS	N-CA-C	-5.80	103.04	110.53
32	5	446	C	O4'-C1'-C2'	-5.80	101.80	107.60
53	S2	600	G	N9-C1'-C2'	5.80	120.71	112.00
32	5	4379	A	N9-C1'-C2'	-5.80	103.30	112.00
9	O	140	ARG	NE-CZ-NH2	5.80	124.42	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1552	G	N9-C1'-C2'	-5.80	103.30	112.00
53	S2	154	U	O4'-C1'-C2'	-5.80	101.80	107.60
32	5	166	C	C2'-C3'-O3'	-5.80	105.00	113.70
45	r	31	ASN	CA-CB-CG	-5.80	106.80	112.60
53	S2	30	C	C1'-C2'-O2'	-5.80	99.70	108.40
53	S2	1216	C	C4'-C3'-O3'	-5.80	104.30	113.00
19	a	40	HIS	CA-CB-CG	5.80	119.60	113.80
34	8	124	U	C2'-C3'-O3'	5.79	118.19	109.50
53	S2	1150	A	N9-C1'-C2'	5.79	122.69	114.00
32	5	1444	G	N9-C1'-C2'	5.79	120.69	112.00
32	5	2536	A	C2'-C3'-O3'	5.79	122.39	113.70
32	5	4239	A	O4'-C1'-C2'	-5.79	101.81	107.60
6	L	192	PHE	N-CA-CB	5.79	118.56	109.94
32	5	4221	C	C3'-C2'-O2'	5.79	119.38	110.70
32	5	4337	C	N1-C1'-C2'	5.79	120.68	112.00
32	5	4564	A	C4'-C3'-O3'	-5.79	104.32	113.00
36	C	42	THR	N-CA-CB	5.79	118.41	110.01
32	5	4665	A	C1'-C2'-O2'	5.78	117.08	108.40
54	SA	10	MET	N-CA-C	5.78	118.53	111.82
1	A	205	ASN	N-CA-C	-5.78	102.33	110.31
32	5	4527	G	N9-C1'-C2'	-5.78	105.33	114.00
32	5	3812	C	C2'-C3'-O3'	5.78	122.37	113.70
32	5	4663	G	C3'-C2'-O2'	5.78	119.37	110.70
53	S2	638	C	N1-C1'-C2'	5.78	120.67	112.00
54	SA	117	ARG	N-CA-C	-5.78	99.19	108.55
32	5	2046	G	O4'-C1'-N9	5.78	117.17	108.50
32	5	2275	G	C2'-C3'-O3'	5.78	122.37	113.70
35	B	49	TYR	CA-CB-CG	5.78	124.30	113.90
32	5	148	C	N1-C1'-C2'	5.78	120.66	112.00
32	5	3801	U	C4'-C3'-O3'	-5.78	104.34	113.00
32	5	1467	C	C1'-C2'-O2'	5.77	117.06	108.40
3	G	53	ARG	CG-CD-NE	-5.77	99.30	112.00
12	S	29	ARG	CB-CA-C	5.77	118.08	110.06
32	5	1553	A	C3'-C2'-O2'	5.77	119.36	110.70
32	5	2795	A	C1'-C2'-O2'	-5.77	103.14	111.80
45	r	31	ASN	N-CA-C	-5.77	101.47	110.42
53	S2	1649	U	C4'-C3'-O3'	-5.77	104.34	113.00
15	V	98	PHE	CA-CB-CG	-5.77	108.03	113.80
53	S2	457	C	C2'-C3'-O3'	5.77	122.36	113.70
53	S2	964	A	N9-C1'-C2'	5.77	122.66	114.00
32	5	3663	A	C4'-C3'-O3'	-5.77	100.75	109.40
53	S2	427	U	P-O5'-C5'	5.77	129.55	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1376	A	C2'-C3'-O3'	5.77	122.35	113.70
14	U	90	TYR	CB-CA-C	-5.76	101.79	110.90
53	S2	294	U	O4'-C4'-C3'	-5.76	100.34	106.10
87	S1	46	LEU	CA-C-N	5.76	132.35	121.97
87	S1	46	LEU	C-N-CA	5.76	132.35	121.97
34	8	82	A	C4'-C3'-O3'	5.76	121.64	113.00
39	I	78	LYS	N-CA-C	-5.76	98.53	110.80
17	Y	72	GLN	CA-CB-CG	5.76	125.62	114.10
32	5	64	A	C4'-C3'-O3'	5.76	118.04	109.40
32	5	1410	U	C2'-C3'-O3'	5.76	118.14	109.50
32	5	4693	C	C5'-C4'-O4'	5.76	118.44	109.80
53	S2	1481	G	N9-C1'-C2'	5.76	120.64	112.00
34	8	10	G	O4'-C1'-C2'	-5.76	101.84	107.60
32	5	1341	U	N1-C1'-C2'	5.75	120.63	112.00
53	S2	839	C	N1-C1'-C2'	5.75	120.63	112.00
32	5	2127	C	N1-C1'-C2'	5.75	120.63	112.00
53	S2	56	G	N9-C1'-C2'	5.75	120.63	112.00
32	5	1521	C	N1-C1'-C2'	-5.75	103.38	112.00
32	5	4078	C	C2'-C3'-O3'	5.75	122.33	113.70
53	S2	1138	C	C2'-C3'-O3'	-5.75	105.07	113.70
83	Sc	51	ARG	N-CA-C	5.75	117.53	108.96
32	5	2369	U	N1-C1'-C2'	-5.75	103.38	112.00
2	D	145	TYR	CA-CB-CG	-5.74	103.56	113.90
32	5	37	U	C1'-C2'-O2'	5.74	117.01	108.40
67	SX	5	ARG	NE-CZ-NH2	5.74	124.37	119.20
32	5	1820	C	C4'-C3'-O3'	5.74	118.01	109.40
32	5	2836	A	C4'-C3'-O3'	-5.74	104.39	113.00
32	5	4941	G	C4'-C3'-O3'	-5.74	104.39	113.00
32	5	1576	G	C2'-C3'-O3'	5.74	118.11	109.50
53	S2	647	U	C4'-C3'-O3'	5.74	121.60	113.00
36	C	96	CYS	N-CA-C	5.73	119.07	109.95
53	S2	105	U	C2'-C3'-O3'	5.73	122.30	113.70
32	5	2806	A	O4'-C1'-C2'	-5.73	101.87	107.60
32	5	1534	A	C2'-C3'-O3'	5.73	118.09	109.50
53	S2	1092	G	C2'-C3'-O3'	5.73	122.30	113.70
63	SN	25	TRP	N-CA-CB	5.73	119.12	109.78
32	5	2658	G	N9-C1'-C2'	-5.73	103.41	112.00
63	SN	90	HIS	CB-CA-C	5.73	120.30	110.79
80	ST	46	ALA	CA-C-N	5.73	125.68	119.78
80	ST	46	ALA	C-N-CA	5.73	125.68	119.78
34	8	67	U	C4'-C3'-O3'	-5.72	104.42	113.00
32	5	171	U	N1-C1'-C2'	5.72	122.58	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1858	G	C1'-C2'-O2'	5.72	116.98	108.40
32	5	1879	C	C2'-C3'-O3'	-5.72	105.12	113.70
32	5	3845	A	C1'-C2'-O2'	5.72	116.98	108.40
53	S2	639	C	C1'-C2'-O2'	-5.72	103.22	111.80
32	5	1365	C	C4'-C3'-O3'	5.72	117.98	109.40
32	5	4398	C	C2'-C3'-O3'	5.72	122.28	113.70
32	5	4463	U	N1-C1'-C2'	-5.72	103.42	112.00
32	5	4510	A	N9-C1'-C2'	5.72	122.58	114.00
38	F	84	TYR	N-CA-CB	5.72	119.14	110.45
53	S2	312	G	C3'-C2'-O2'	5.72	119.27	110.70
32	5	1465	G	C1'-C2'-O2'	5.71	116.97	108.40
53	S2	1623	A	O4'-C1'-C2'	-5.71	101.89	107.60
2	D	44	TYR	CA-CB-CG	-5.71	103.62	113.90
53	S2	605	A	C4'-C3'-O3'	-5.71	104.43	113.00
53	S2	1593	C	O4'-C1'-C2'	-5.71	101.89	107.60
32	5	1636	U	N1-C1'-C2'	5.71	120.56	112.00
32	5	1725	U	O4'-C1'-C2'	-5.71	101.89	107.60
75	SM	124	ILE	N-CA-C	5.71	118.22	111.09
32	5	2543	A	C4'-C3'-O3'	5.70	121.55	113.00
32	5	4601	U	O4'-C1'-C2'	-5.70	101.90	107.60
26	h	96	ASN	N-CA-C	5.70	118.43	111.82
32	5	1479	G	N9-C1'-C2'	5.70	122.55	114.00
53	S2	447	A	C1'-O4'-C4'	-5.70	104.00	109.70
55	SB	100	PHE	CA-CB-CG	-5.70	108.10	113.80
63	SN	113	PHE	N-CA-C	-5.70	102.84	111.56
72	SD	24	PHE	N-CA-CB	5.70	118.43	109.94
32	5	2305	U	O4'-C4'-C3'	-5.70	100.40	106.10
53	S2	385	G	N9-C1'-C2'	5.70	122.55	114.00
32	5	2450	G	C1'-C2'-O2'	5.70	116.95	108.40
38	F	83	PHE	N-CA-CB	-5.70	102.00	110.71
53	S2	504	G	N9-C1'-C2'	5.70	120.55	112.00
32	5	4539	U	N1-C1'-C2'	5.69	120.54	112.00
49	3	19	U	C4'-C3'-O3'	5.69	117.94	109.40
34	8	12	G	C4'-C3'-O3'	-5.69	104.46	113.00
36	C	85	HIS	N-CA-CB	5.69	118.78	110.47
53	S2	1017	U	O4'-C1'-C2'	-5.69	101.91	107.60
32	5	1642	A	C2'-C3'-O3'	5.69	122.24	113.70
53	S2	1200	A	O4'-C1'-C2'	-5.69	101.91	107.60
32	5	1382	G	C2'-C3'-O3'	-5.69	105.17	113.70
32	5	2250	C	P-O5'-C5'	5.69	129.43	120.90
32	5	4589	A	N9-C1'-C2'	5.69	122.53	114.00
13	T	140	PHE	CB-CA-C	-5.69	99.76	110.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	P	25	HIS	CB-CA-C	5.69	121.00	111.22
53	S2	668	A	C4'-C3'-O3'	-5.69	104.47	113.00
32	5	2082	G	C1'-C2'-O2'	-5.69	99.87	108.40
18	Z	71	PHE	N-CA-C	5.68	116.58	108.74
32	5	922	C	C2'-C3'-O3'	5.68	122.23	113.70
32	5	2086	G	C3'-C2'-O2'	5.68	119.23	110.70
55	SB	165	ARG	NE-CZ-NH2	5.68	124.32	119.20
32	5	54	G	N9-C1'-C2'	-5.68	103.48	112.00
53	S2	1659	U	C4'-C3'-C2'	-5.68	96.92	102.60
34	8	67	U	N1-C1'-C2'	5.68	120.52	112.00
29	1	45	ARG	CG-CD-NE	-5.68	99.51	112.00
32	5	405	U	C2'-C3'-O3'	5.68	122.22	113.70
32	5	1264	C	C2'-C3'-O3'	5.68	122.22	113.70
53	S2	1629	C	O4'-C1'-C2'	-5.68	101.92	107.60
53	S2	1846	G	C1'-C2'-O2'	5.68	116.92	108.40
32	5	4227	U	C2'-C3'-O3'	5.68	122.22	113.70
42	j	56	ARG	CG-CD-NE	5.68	124.49	112.00
53	S2	752	G	C4'-C3'-O3'	5.68	117.92	109.40
32	5	4114	C	N1-C1'-C2'	5.68	120.52	112.00
40	P	7	ASP	CB-CA-C	5.68	117.56	109.38
73	SF	134	VAL	N-CA-C	5.68	112.28	106.21
32	5	118	C	O4'-C1'-C2'	-5.67	101.93	107.60
32	5	4606	G	N9-C1'-C2'	5.67	120.51	112.00
32	5	4498	U	N1-C1'-C2'	-5.67	103.49	112.00
53	S2	74	G	O4'-C1'-C2'	-5.67	101.93	107.60
32	5	2296	G	C4'-C3'-O3'	-5.67	104.49	113.00
35	B	137	TRP	CA-CB-CG	-5.67	102.83	113.60
85	Sf	138	ARG	CG-CD-NE	5.67	124.48	112.00
32	5	4324	A	C3'-C2'-O2'	5.67	119.20	110.70
53	S2	1079	C	C4'-C3'-O3'	-5.67	104.50	113.00
61	SJ	67	ASP	CB-CA-C	5.67	117.07	109.42
72	SD	107	TYR	CA-CB-CG	5.67	124.11	113.90
32	5	1394	G	C3'-C2'-O2'	5.67	119.20	110.70
32	5	5049	G	C4'-C3'-O3'	5.67	117.90	109.40
1	A	86	GLN	N-CA-C	-5.67	101.05	110.17
32	5	956	A	C2'-C3'-O3'	5.67	118.00	109.50
32	5	4915	G	C4'-C3'-O3'	-5.66	104.50	113.00
47	q	117	ALA	N-CA-C	5.66	122.33	109.81
72	SD	159	HIS	CB-CA-C	5.66	120.23	111.28
32	5	4726	G	C4'-C3'-O3'	-5.66	104.51	113.00
45	r	45	HIS	N-CA-C	5.66	122.86	110.80
32	5	370	U	N1-C1'-C2'	5.66	120.49	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	940	C	N1-C1'-C2'	5.66	120.49	112.00
53	S2	422	U	N1-C1'-C2'	5.66	120.49	112.00
53	S2	425	G	C4'-C3'-O3'	5.66	121.49	113.00
53	S2	1664	A	C4'-C3'-O3'	5.66	121.49	113.00
5	J	54	ARG	N-CA-C	-5.66	105.02	111.07
53	S2	603	C	N1-C1'-C2'	-5.66	105.52	114.00
32	5	1534	A	C5'-C4'-O4'	5.66	117.58	109.10
32	5	2533	C	C1'-C2'-O2'	-5.66	99.92	108.40
32	5	2805	C	C1'-C2'-O2'	5.66	116.88	108.40
32	5	5019	A	C4'-C3'-O3'	-5.66	104.52	113.00
53	S2	1432	U	N1-C1'-C2'	5.66	120.48	112.00
32	5	1320	U	C2'-C3'-O3'	-5.65	105.22	113.70
32	5	1463	C	C1'-C2'-O2'	5.65	116.88	108.40
32	5	1756	U	N1-C1'-C2'	5.65	120.48	112.00
45	r	68	SER	N-CA-C	-5.65	104.76	111.03
32	5	2087	C	C1'-C2'-O2'	5.65	116.87	108.40
79	SS	86	ARG	NE-CZ-NH1	-5.65	115.85	121.50
32	5	1468	C	C1'-C2'-O2'	5.65	116.87	108.40
32	5	5050	C	O4'-C1'-C2'	-5.65	101.95	107.60
53	S2	1839	U	C1'-C2'-O2'	5.65	116.87	108.40
8	N	121	VAL	N-CA-C	5.65	121.08	109.34
32	5	2667	C	C2'-C3'-O3'	-5.64	105.23	113.70
32	5	4291	G	N9-C1'-C2'	5.64	122.47	114.00
32	5	4404	U	C1'-C2'-O2'	5.64	116.87	108.40
53	S2	1852	C	C4'-C3'-O3'	-5.64	104.53	113.00
78	SR	121	GLN	CA-C-N	-5.64	114.44	120.03
78	SR	121	GLN	C-N-CA	-5.64	114.44	120.03
2	D	249	GLU	CA-CB-CG	5.64	125.38	114.10
32	5	4166	G	O4'-C1'-C2'	-5.64	101.96	107.60
32	5	1825	A	C1'-C2'-O2'	5.64	116.86	108.40
64	SO	94	HIS	N-CA-CB	5.64	118.86	110.29
32	5	5047	C	C2'-C3'-O3'	5.64	117.96	109.50
35	B	169	ARG	CG-CD-NE	5.64	124.40	112.00
32	5	2531	C	C1'-C2'-O2'	-5.64	103.35	111.80
32	5	45	U	N1-C1'-C2'	5.63	120.45	112.00
53	S2	1743	G	N9-C1'-C2'	5.63	120.45	112.00
34	8	73	U	C2'-C3'-O3'	5.63	122.15	113.70
53	S2	1868	U	N1-C1'-C2'	5.63	122.44	114.00
32	5	747	A	C3'-C2'-O2'	5.63	123.04	114.60
32	5	2058	G	O4'-C1'-C2'	-5.63	101.97	107.60
35	B	179	HIS	CB-CA-C	5.63	120.98	111.41
39	I	100	ASN	N-CA-C	-5.63	102.70	110.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	28	U	C2'-C3'-O3'	-5.63	105.26	113.70
53	S2	1797	U	C3'-C2'-O2'	5.63	119.14	110.70
32	5	4280	A	C4'-C3'-C2'	-5.63	96.97	102.60
32	5	4288	C	N1-C1'-C2'	5.63	120.44	112.00
52	6	54	ILE	N-CA-C	5.63	116.08	110.23
54	SA	104	THR	CA-C-N	5.63	126.87	119.84
54	SA	104	THR	C-N-CA	5.63	126.87	119.84
25	g	66	ARG	CG-CD-NE	5.62	124.37	112.00
32	5	737	C	C2'-C3'-O3'	5.62	122.13	113.70
32	5	1620	U	N1-C1'-C2'	5.62	120.43	112.00
32	5	4158	C	N1-C1'-C2'	5.62	120.43	112.00
35	B	257	TRP	N-CA-CB	5.62	119.98	110.49
53	S2	1439	A	C1'-C2'-O2'	-5.62	99.97	108.40
76	SP	42	ARG	CA-CB-CG	5.62	125.33	114.10
56	SC	223	TYR	N-CA-C	-5.61	100.56	109.76
32	5	2671	C	N1-C1'-C2'	5.61	120.42	112.00
1	A	89	TYR	CB-CA-C	5.61	118.91	109.48
32	5	1920	C	C4'-C3'-O3'	5.61	117.82	109.40
53	S2	41	G	C4'-C3'-O3'	5.61	117.82	109.40
53	S2	1061	U	O4'-C1'-C2'	-5.61	101.99	107.60
32	5	1683	U	O4'-C1'-C2'	-5.61	101.99	107.60
53	S2	1194	A	N9-C1'-C2'	-5.61	103.59	112.00
21	c	89	TYR	CA-CB-CG	5.61	123.99	113.90
23	e	74	PHE	CB-CA-C	5.61	119.58	110.22
32	5	152	U	O4'-C1'-C2'	-5.61	102.00	107.60
32	5	157	U	C1'-O4'-C4'	-5.61	104.30	109.90
33	7	27	G	C1'-C2'-O2'	5.61	116.81	108.40
80	ST	52	TRP	N-CA-CB	5.61	118.47	110.06
25	g	9	ARG	CB-CG-CD	5.60	124.19	111.30
32	5	1376	C	N1-C1'-C2'	5.60	120.40	112.00
53	S2	504	G	C1'-C2'-O2'	-5.60	100.00	108.40
62	SL	62	PHE	N-CA-C	-5.60	106.49	113.38
32	5	2510	G	N9-C1'-C2'	5.60	120.40	112.00
32	5	2733	C	C2'-C3'-O3'	5.60	122.10	113.70
53	S2	797	C	O4'-C1'-C2'	-5.60	100.20	105.80
32	5	1534	A	C3'-C2'-O2'	-5.60	106.20	114.60
53	S2	582	C	N1-C1'-C2'	5.60	120.40	112.00
21	c	79	ILE	CB-CA-C	-5.60	104.65	111.87
32	5	1832	C	O4'-C1'-C2'	-5.60	102.00	107.60
32	5	352	G	N9-C1'-C2'	-5.59	103.61	112.00
32	5	1445	U	C2'-C3'-O3'	5.59	122.09	113.70
32	5	2665	U	C2'-C3'-O3'	5.59	122.09	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1648	G	C4'-C3'-O3'	5.59	117.79	109.40
57	SE	188	ASN	N-CA-C	-5.59	98.88	110.80
32	5	480	C	C2'-C3'-O3'	5.59	122.09	113.70
53	S2	536	A	O4'-C1'-C2'	-5.59	102.01	107.60
27	i	40	VAL	N-CA-CB	5.59	116.71	110.62
32	5	1895	G	N9-C1'-C2'	5.59	120.38	112.00
32	5	2669	C	C1'-C2'-O2'	5.59	120.18	111.80
26	h	89	ARG	CG-CD-NE	5.59	124.29	112.00
32	5	1681	G	C1'-C2'-O2'	5.59	116.78	108.40
32	5	2032	U	C3'-C2'-O2'	5.59	119.08	110.70
53	S2	488	U	C2'-C3'-O3'	5.59	117.88	109.50
53	S2	642	U	N1-C1'-C2'	-5.59	103.62	112.00
32	5	2753	G	C2'-C3'-O3'	5.58	122.08	113.70
32	5	4513	A	N9-C1'-C2'	5.58	120.38	112.00
48	z	219	TYR	CA-CB-CG	5.58	123.95	113.90
53	S2	1420	G	C2'-C3'-O3'	5.58	122.08	113.70
10	Q	176	ARG	CG-CD-NE	-5.58	99.72	112.00
32	5	1266	G	C2'-C3'-O3'	5.58	122.07	113.70
32	5	1309	C	C1'-C2'-O2'	5.58	116.77	108.40
32	5	4083	U	N1-C1'-C2'	5.58	120.37	112.00
25	g	52	ARG	N-CA-C	-5.58	103.02	110.55
32	5	2533	C	N1-C1'-C2'	5.58	120.37	112.00
32	5	4322	G	C2'-C3'-O3'	5.58	122.07	113.70
53	S2	381	C	C1'-C2'-O2'	-5.58	103.43	111.80
53	S2	1644	C	C1'-C2'-O2'	-5.58	100.03	108.40
32	5	1501	C	C1'-C2'-O2'	5.58	116.77	108.40
32	5	226	G	C4'-C3'-O3'	5.58	117.77	109.40
32	5	1929	A	N9-C1'-C2'	5.58	120.36	112.00
32	5	5031	G	C4'-C3'-O3'	-5.58	104.64	113.00
64	SO	72	TYR	CA-CB-CG	5.57	123.93	113.90
4	H	117	PHE	CB-CA-C	5.57	117.80	110.06
32	5	4378	A	N9-C1'-C2'	5.57	122.36	114.00
38	F	194	HIS	N-CA-CB	5.57	118.06	109.98
53	S2	1606	G	N9-C1'-C2'	-5.57	103.64	112.00
32	5	2113	G	C4'-C3'-O3'	5.57	121.35	113.00
32	5	4542	U	N1-C1'-C2'	5.57	120.35	112.00
37	E	250	ASP	CB-CA-C	5.57	121.93	110.40
32	5	2785	C	C4'-C3'-O3'	-5.57	104.65	113.00
32	5	3863	C	N1-C1'-C2'	5.57	120.35	112.00
53	S2	1605	G	C2'-C3'-O3'	5.57	122.05	113.70
54	SA	155	ARG	CG-CD-NE	-5.57	99.75	112.00
32	5	4991	U	C3'-C2'-O2'	5.57	119.05	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	100	C	O4'-C1'-C2'	-5.56	102.04	107.60
53	S2	139	C	C4'-C3'-O3'	5.56	121.34	113.00
1	A	162	ASN	N-CA-CB	5.56	118.14	109.97
23	e	74	PHE	N-CA-C	-5.56	100.12	108.96
32	5	84	A	C2'-C3'-O3'	5.56	117.84	109.50
32	5	3636	C	O4'-C1'-C2'	-5.56	102.04	107.60
32	5	5059	C	C4'-C3'-O3'	-5.56	104.66	113.00
32	5	218	A	C4'-C3'-O3'	5.56	117.73	109.40
32	5	364	G	O4'-C1'-C2'	-5.55	102.05	107.60
35	B	367	PHE	CA-CB-CG	-5.55	108.25	113.80
53	S2	1283	C	O4'-C1'-C2'	-5.55	102.05	107.60
62	SL	92	TYR	CA-CB-CG	5.55	123.90	113.90
32	5	232	G	N9-C1'-C2'	-5.55	105.67	114.00
32	5	3647	A	C4'-C3'-O3'	-5.55	104.67	113.00
53	S2	1642	U	N1-C1'-C2'	5.55	120.33	112.00
32	5	172	C	O4'-C1'-C2'	-5.55	100.25	105.80
32	5	395	A	C2'-C3'-O3'	-5.55	105.37	113.70
32	5	220	C	C4'-C3'-O3'	-5.55	104.67	113.00
33	7	54	A	N9-C1'-C2'	5.55	120.33	112.00
53	S2	1225	U	C2'-C3'-O3'	5.55	122.03	113.70
53	S2	1621	U	C1'-C2'-O2'	-5.55	103.48	111.80
53	S2	1604	G	N9-C1'-C2'	5.55	120.32	112.00
53	S2	1034	A	N9-C1'-C2'	5.55	120.32	112.00
53	S2	1339	U	C1'-C2'-O2'	5.55	116.72	108.40
60	SI	148	LYS	N-CA-C	5.55	117.00	111.07
42	j	16	HIS	CB-CA-C	5.54	118.87	109.50
32	5	4211	C	N1-C1'-C2'	5.54	120.31	112.00
33	7	39	C	C4'-C3'-O3'	-5.54	104.69	113.00
58	SG	25	ARG	CB-CG-CD	5.54	124.04	111.30
85	Sf	143	LYS	N-CA-C	5.54	122.68	114.09
17	Y	19	PHE	N-CA-C	-5.54	105.67	113.20
32	5	55	G	C1'-C2'-O2'	5.54	116.71	108.40
32	5	1867	A	C1'-C2'-O2'	-5.54	100.09	108.40
32	5	4911	A	O4'-C1'-N9	5.54	116.81	108.50
53	S2	608	C	O4'-C1'-C2'	-5.54	102.06	107.60
32	5	4623	G	C1'-C2'-O2'	5.54	116.71	108.40
39	I	95	HIS	N-CA-C	-5.54	101.45	110.20
53	S2	1135	C	N1-C1'-C2'	5.54	120.30	112.00
32	5	3894	A	C4'-C3'-O3'	-5.53	104.70	113.00
53	S2	180	G	C2'-C3'-O3'	5.53	117.80	109.50
53	S2	999	G	O4'-C1'-C2'	-5.53	102.07	107.60
32	5	96	U	C2'-C3'-O3'	5.53	121.99	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	3674	G	O4'-C1'-C2'	-5.53	102.07	107.60
32	5	976	G	O4'-C1'-C2'	-5.53	102.07	107.60
16	X	79	PHE	N-CA-C	5.53	117.18	108.23
32	5	422	C	O4'-C1'-C2'	-5.53	102.07	107.60
32	5	1675	C	N1-C1'-C2'	5.53	120.29	112.00
32	5	2110	C	C3'-C2'-O2'	-5.53	106.31	114.60
53	S2	1597	C	C2'-C3'-O3'	5.53	117.79	109.50
13	T	57	TYR	CA-CB-CG	5.52	123.84	113.90
53	S2	1805	G	O4'-C1'-C2'	-5.52	102.08	107.60
79	SS	42	HIS	CB-CA-C	-5.52	100.45	110.56
8	N	108	ARG	CG-CD-NE	-5.52	99.85	112.00
32	5	1832	C	C2'-C3'-O3'	5.52	121.98	113.70
32	5	56	A	O4'-C1'-C2'	-5.52	102.08	107.60
32	5	2688	G	O4'-C1'-C2'	-5.52	102.08	107.60
53	S2	62	G	C1'-C2'-O2'	5.52	116.68	108.40
32	5	3909	C	O4'-C1'-C2'	-5.52	102.08	107.60
32	5	3879	G	C3'-C2'-O2'	5.52	118.97	110.70
53	S2	427	U	C5'-C4'-O4'	5.52	118.07	109.80
86	Sg	306	LEU	N-CA-C	5.51	116.78	108.46
6	L	19	GLN	N-CA-C	5.51	117.72	111.11
32	5	2847	G	C1'-C2'-O2'	5.51	116.67	108.40
53	S2	73	C	C2'-C3'-O3'	5.51	117.77	109.50
76	SP	39	ALA	N-CA-C	5.51	117.74	111.02
83	Sc	26	GLN	OE1-CD-NE2	5.51	128.11	122.60
32	5	1292	C	C4'-C3'-O3'	-5.51	104.74	113.00
32	5	1293	G	N9-C1'-C2'	5.51	120.27	112.00
32	5	3697	U	C3'-C2'-O2'	5.51	118.97	110.70
53	S2	1142	G	O4'-C1'-C2'	-5.51	102.09	107.60
32	5	4454	G	C1'-C2'-O2'	5.51	116.66	108.40
22	d	108	TYR	N-CA-CB	5.51	118.10	110.17
32	5	969	C	C4'-C3'-O3'	5.51	117.66	109.40
32	5	1620	U	C2'-C3'-O3'	-5.51	105.44	113.70
32	5	1609	U	C2'-C3'-O3'	5.50	121.96	113.70
12	S	10	TYR	CB-CA-C	5.50	121.36	110.42
32	5	4958	C	O4'-C1'-C2'	-5.50	102.10	107.60
48	z	379	MET	O-C-N	5.50	129.80	122.43
53	S2	1386	A	C2'-C3'-O3'	5.50	121.95	113.70
53	S2	1525	C	C2'-C3'-O3'	5.50	121.94	113.70
53	S2	1568	C	C1'-C2'-O2'	-5.50	103.55	111.80
53	S2	645	C	C2'-C3'-O3'	5.50	121.94	113.70
18	Z	36	ARG	CG-CD-NE	5.49	124.08	112.00
20	b	41	ARG	CG-CD-NE	-5.49	99.91	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	3	16	U	C3'-C2'-O2'	5.49	118.93	110.70
32	5	1793	A	C2'-C3'-O3'	5.49	121.93	113.70
53	S2	1194	A	C1'-C2'-O2'	5.49	116.63	108.40
57	SE	47	PHE	CB-CA-C	-5.49	102.20	110.92
17	Y	27	ARG	NE-CZ-NH2	5.48	124.14	119.20
32	5	1986	U	C2'-C3'-O3'	-5.48	105.47	113.70
46	K	55	GLY	N-CA-C	-5.48	100.19	113.18
53	S2	1476	A	O4'-C1'-C2'	-5.48	102.12	107.60
2	D	130	TYR	CA-CB-CG	-5.48	104.04	113.90
53	S2	553	U	N1-C1'-C2'	5.48	120.22	112.00
3	G	54	PHE	CB-CA-C	5.48	119.84	111.02
6	L	7	GLY	N-CA-C	-5.48	101.20	111.66
35	B	17	LEU	N-CA-C	5.48	121.91	109.81
49	3	46	G	N9-C1'-C2'	5.48	122.22	114.00
53	S2	1644	C	C3'-C2'-O2'	5.48	118.92	110.70
14	U	99	TRP	N-CA-C	-5.48	104.85	112.30
53	S2	612	U	N1-C1'-C2'	5.47	120.21	112.00
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
33	7	60	G	O4'-C1'-C2'	-5.47	102.13	107.60
39	I	95	HIS	N-CA-CB	5.47	118.32	110.06
32	5	4239	A	C2'-C3'-O3'	5.47	121.90	113.70
32	5	1520	C	C2'-C3'-O3'	5.46	121.90	113.70
32	5	4281	A	C2'-C3'-O3'	-5.46	105.50	113.70
32	5	3715	U	N1-C1'-C2'	5.46	120.19	112.00
32	5	3898	G	C2'-C3'-O3'	5.46	121.89	113.70
53	S2	1296	U	N1-C1'-C2'	5.46	120.19	112.00
32	5	3719	A	C2'-C3'-O3'	5.46	121.89	113.70
33	7	57	C	C2'-C3'-O3'	5.46	121.89	113.70
32	5	4497	U	N1-C1'-C2'	-5.46	103.81	112.00
63	SN	114	ARG	N-CA-C	-5.46	105.72	112.38
75	SM	72	HIS	CA-CB-CG	5.46	119.26	113.80
23	e	49	PHE	N-CA-C	-5.46	101.93	110.17
53	S2	1525	C	O4'-C1'-C2'	-5.46	102.14	107.60
32	5	4183	G	O4'-C4'-C3'	-5.45	100.65	106.10
87	S1	46	LEU	O-C-N	5.45	128.59	122.27
32	5	1878	G	N9-C1'-C2'	5.45	120.18	112.00
53	S2	1391	C	C2'-C3'-O3'	5.45	121.88	113.70
4	H	180	TYR	CA-CB-CG	5.45	123.71	113.90
32	5	1863	U	C1'-C2'-O2'	5.45	116.57	108.40
32	5	4985	U	N1-C1'-C2'	5.45	120.17	112.00
53	S2	1097	G	C2'-C3'-O3'	5.45	121.87	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	3846	C	C1'-C2'-O2'	5.44	116.56	108.40
36	C	67	TRP	CA-CB-CG	5.44	123.94	113.60
53	S2	1350	U	C3'-C2'-O2'	5.44	118.86	110.70
53	S2	942	G	C4'-C3'-O3'	-5.44	104.84	113.00
53	S2	1623	A	N9-C1'-C2'	-5.44	103.84	112.00
32	5	3875	G	C1'-C2'-O2'	5.44	116.56	108.40
53	S2	645	C	C1'-C2'-O2'	5.44	116.56	108.40
32	5	1722	C	C4'-C3'-O3'	-5.44	104.84	113.00
32	5	3721	U	O4'-C1'-C2'	-5.44	102.16	107.60
61	SJ	48	PHE	N-CA-CB	5.44	117.89	110.01
86	Sg	132	TRP	CA-CB-CG	-5.44	103.27	113.60
32	5	2043	A	C4'-C3'-O3'	-5.44	104.85	113.00
53	S2	836	G	N9-C1'-C2'	5.44	120.15	112.00
32	5	931	C	C2'-C3'-O3'	5.43	117.65	109.50
38	F	57	LYS	N-CA-C	5.43	119.08	112.23
53	S2	1567	G	C1'-O4'-C4'	-5.43	104.47	109.90
79	SS	135	HIS	N-CA-C	-5.43	101.12	109.76
35	B	380	GLN	N-CA-C	5.43	119.86	112.04
53	S2	381	C	P-O5'-C5'	5.43	129.05	120.90
53	S2	1351	G	C4'-C3'-O3'	-5.43	104.85	113.00
32	5	195	C	O4'-C1'-C2'	-5.43	102.17	107.60
32	5	3875	G	N9-C1'-C2'	-5.43	103.86	112.00
68	SY	58	PHE	N-CA-C	-5.43	101.19	108.19
53	S2	169	U	C4'-C3'-O3'	-5.43	104.86	113.00
53	S2	1530	U	C4'-C3'-O3'	-5.43	104.86	113.00
32	5	4441	A	C2'-C3'-O3'	5.42	121.83	113.70
53	S2	924	G	C1'-C2'-O2'	5.42	116.53	108.40
32	5	235	A	N9-C1'-C2'	-5.42	103.87	112.00
32	5	943	A	N9-C1'-C2'	-5.42	105.87	114.00
32	5	1880	G	C4'-C3'-O3'	-5.42	104.87	113.00
32	5	3917	A	C4'-C3'-O3'	-5.42	104.87	113.00
34	8	38	U	C1'-O4'-C4'	-5.42	104.48	109.90
32	5	1821	G	C3'-C2'-O2'	5.42	118.83	110.70
11	R	175	GLU	N-CA-C	-5.42	105.03	111.69
32	5	280	G	O4'-C1'-N9	5.42	116.32	108.20
32	5	4270	C	C4'-C3'-O3'	-5.42	104.88	113.00
53	S2	968	U	C2'-C3'-O3'	5.42	121.82	113.70
53	S2	1274	G	O4'-C4'-C3'	-5.42	100.68	106.10
32	5	143	C	O4'-C1'-C2'	-5.42	102.19	107.60
32	5	170	C	O4'-C4'-C3'	-5.42	100.69	106.10
53	S2	1036	A	C2'-C3'-O3'	5.42	121.82	113.70
32	5	1326	A	C3'-C2'-O2'	5.41	118.82	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2580	U	N1-C1'-C2'	5.41	120.12	112.00
53	S2	31	U	C4'-C3'-O3'	-5.41	104.88	113.00
53	S2	1604	G	C2'-C3'-O3'	5.41	121.82	113.70
32	5	406	C	C3'-C2'-O2'	5.41	118.82	110.70
32	5	2405	G	C1'-C2'-O2'	5.41	116.52	108.40
53	S2	1406	G	N9-C1'-C2'	5.41	120.12	112.00
32	5	2089	G	C4'-C3'-O3'	5.41	117.52	109.40
32	5	2827	G	N9-C1'-C2'	5.41	122.12	114.00
53	S2	1712	A	C3'-C2'-O2'	5.41	118.81	110.70
53	S2	1863	A	C1'-C2'-O2'	-5.41	103.68	111.80
32	5	1455	G	C4'-C3'-O3'	-5.41	104.89	113.00
32	5	1488	G	C2'-C3'-O3'	5.41	121.81	113.70
32	5	1501	C	C1'-O4'-C4'	-5.41	104.49	109.90
32	5	4123	C	C1'-C2'-O2'	5.41	116.51	108.40
32	5	4217	G	N9-C1'-C2'	5.41	120.11	112.00
32	5	1975	G	O4'-C4'-C3'	-5.41	100.69	106.10
33	7	81	G	C2'-C3'-O3'	5.41	121.81	113.70
34	8	113	C	C2'-C3'-O3'	5.41	121.81	113.70
53	S2	683	G	C4'-C3'-O3'	-5.41	104.89	113.00
53	S2	1338	G	C1'-C2'-O2'	5.41	116.51	108.40
32	5	4307	A	C4'-C3'-O3'	-5.40	104.89	113.00
32	5	2560	C	O4'-C1'-C2'	-5.40	102.20	107.60
53	S2	65	C	C4'-C3'-O3'	5.40	117.50	109.40
60	SI	120	PRO	N-CA-C	5.40	118.78	111.22
53	S2	646	G	C2'-C3'-O3'	5.40	121.80	113.70
53	S2	660	C	C3'-C2'-O2'	5.40	118.80	110.70
12	S	160	ARG	N-CA-C	-5.40	101.47	109.94
53	S2	1474	A	C1'-C2'-O2'	-5.40	103.71	111.80
32	5	1406	G	C4'-C3'-O3'	5.39	121.09	113.00
53	S2	1040	G	O4'-C1'-C2'	-5.39	102.20	107.60
60	SI	149	TYR	CB-CA-C	5.39	119.42	111.06
32	5	1319	U	N1-C1'-C2'	-5.39	103.91	112.00
32	5	1867	A	C2'-C3'-O3'	-5.39	105.61	113.70
32	5	2452	G	C4'-C3'-O3'	-5.39	104.91	113.00
32	5	2670	C	N1-C1'-C2'	5.39	120.09	112.00
39	I	147	HIS	CB-CA-C	5.39	120.50	109.55
53	S2	1361	G	C1'-C2'-O2'	5.39	116.49	108.40
53	S2	1584	G	N9-C1'-C2'	5.39	122.09	114.00
32	5	2599	G	C3'-C2'-O2'	5.39	118.79	110.70
32	5	4464	A	O4'-C1'-N9	-5.39	100.41	108.50
53	S2	1137	U	O4'-C4'-C3'	-5.39	100.71	106.10
77	SQ	81	ILE	N-CA-C	5.39	116.88	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2307	A	C1'-C2'-O2'	-5.39	100.31	108.40
32	5	4522	G	N9-C1'-C2'	5.39	120.08	112.00
49	3	11	U	N1-C1'-C2'	5.39	120.08	112.00
53	S2	59	U	N1-C1'-C2'	5.39	120.08	112.00
53	S2	406	U	N1-C1'-C2'	5.39	120.09	112.00
53	S2	1282	A	C4'-C3'-O3'	5.39	121.08	113.00
54	SA	39	TYR	CA-CB-CG	5.39	123.60	113.90
25	g	90	ARG	CG-CD-NE	-5.39	100.15	112.00
74	SK	57	TYR	CB-CA-C	5.39	121.14	110.42
32	5	338	A	C2'-C3'-O3'	5.39	121.78	113.70
32	5	1536	U	N1-C1'-C2'	5.39	120.08	112.00
32	5	1788	A	N9-C1'-C2'	5.39	120.08	112.00
32	5	2272	C	C3'-C2'-O2'	5.39	118.78	110.70
32	5	2330	G	N9-C1'-C2'	5.39	120.08	112.00
32	5	4094	G	C2'-C3'-O3'	5.39	121.78	113.70
32	5	4878	C	N1-C1'-C2'	5.39	120.08	112.00
33	7	59	G	C2'-C3'-O3'	5.39	121.78	113.70
53	S2	56	G	C2'-C3'-O3'	-5.39	105.62	113.70
48	z	100	LYS	N-CA-C	5.38	116.87	110.19
32	5	689	U	O4'-C1'-C2'	-5.38	102.22	107.60
32	5	2545	U	C2'-C3'-O3'	5.38	121.78	113.70
34	8	123	U	C3'-C2'-O2'	5.38	118.77	110.70
53	S2	414	A	N9-C1'-C2'	5.38	120.07	112.00
77	SQ	82	TYR	N-CA-C	-5.38	106.22	112.89
13	T	142	ARG	N-CA-C	5.38	117.38	108.13
32	5	1631	A	N9-C1'-C2'	5.38	122.07	114.00
32	5	4980	C	C1'-C2'-O2'	5.38	116.47	108.40
32	5	1601	A	C1'-C2'-O2'	5.38	116.47	108.40
53	S2	945	U	N1-C1'-C2'	5.38	120.06	112.00
53	S2	1292	C	O4'-C4'-C3'	-5.38	98.62	104.00
53	S2	1374	C	C1'-C2'-O2'	-5.38	100.34	108.40
32	5	2112	G	N9-C1'-C2'	5.38	120.06	112.00
32	5	1329	G	C3'-C2'-O2'	5.37	118.76	110.70
53	S2	654	A	C1'-C2'-O2'	5.37	116.46	108.40
55	SB	223	PHE	N-CA-C	5.37	122.25	110.80
26	h	109	ARG	CG-CD-NE	5.37	123.81	112.00
32	5	2034	G	O4'-C1'-C2'	-5.37	102.23	107.60
53	S2	800	U	O4'-C4'-C3'	-5.37	98.63	104.00
53	S2	1313	A	C4'-C3'-O3'	5.37	117.46	109.40
73	SF	165	ASN	CA-CB-CG	-5.37	107.23	112.60
32	5	124	C	O4'-C1'-C2'	-5.37	102.23	107.60
32	5	2527	A	C4'-C3'-O3'	-5.37	104.94	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1863	A	C2'-C3'-O3'	-5.37	101.45	109.50
32	5	98	A	C3'-C2'-O2'	5.37	118.75	110.70
32	5	172	C	C1'-C2'-O2'	5.37	119.85	111.80
32	5	1210	C	N1-C1'-C2'	5.37	122.05	114.00
34	8	29	G	C1'-C2'-O2'	5.36	116.44	108.40
53	S2	1464	C	N1-C1'-C2'	5.36	120.04	112.00
53	S2	1839	U	O4'-C1'-C2'	-5.36	102.24	107.60
32	5	12	A	C1'-C2'-O2'	5.36	116.44	108.40
32	5	4293	U	C1'-C2'-O2'	5.36	116.44	108.40
32	5	4727	A	N9-C1'-C2'	5.36	120.04	112.00
8	N	130	PHE	CB-CA-C	5.36	118.87	110.19
12	S	81	TRP	N-CA-CB	5.36	118.39	109.60
32	5	2054	U	C1'-O4'-C4'	-5.36	104.34	109.70
42	j	14	LYS	N-CA-C	5.36	118.36	109.46
53	S2	666	U	O4'-C1'-C2'	-5.36	102.24	107.60
32	5	3869	C	N1-C1'-C2'	5.36	120.03	112.00
32	5	4120	U	N1-C1'-C2'	-5.36	103.97	112.00
62	SL	44	PHE	N-CA-CB	5.36	118.25	109.95
17	Y	87	ARG	CG-CD-NE	5.35	123.78	112.00
32	5	1378	C	C4'-C3'-O3'	5.35	121.03	113.00
3	G	235	ARG	CG-CD-NE	5.35	123.78	112.00
32	5	1318	C	C1'-C2'-O2'	5.35	116.43	108.40
32	5	1987	C	O4'-C1'-C2'	-5.35	102.25	107.60
32	5	2598	A	N9-C1'-C2'	5.35	120.03	112.00
32	5	3648	A	C4'-C3'-O3'	5.35	117.43	109.40
49	3	57	G	N9-C1'-C2'	5.35	120.03	112.00
37	E	253	ILE	N-CA-C	-5.35	106.47	111.45
53	S2	968	U	N1-C1'-C2'	-5.35	103.97	112.00
53	S2	1416	C	C2'-C3'-O3'	5.35	121.73	113.70
32	5	85	G	N9-C1'-C2'	-5.35	105.98	114.00
32	5	970	G	N9-C1'-C2'	5.35	122.02	114.00
32	5	1807	C	O4'-C1'-C2'	-5.35	102.25	107.60
53	S2	532	C	O4'-C1'-C2'	-5.35	102.25	107.60
53	S2	572	U	C4'-C3'-O3'	-5.35	104.97	113.00
4	H	106	GLN	N-CA-C	5.35	121.64	113.19
32	5	2851	G	O4'-C1'-C2'	-5.35	102.25	107.60
32	5	4434	C	N1-C1'-C2'	5.35	120.02	112.00
32	5	4725	C	C4'-C3'-O3'	5.35	121.02	113.00
53	S2	667	U	N1-C1'-C2'	5.35	120.02	112.00
32	5	432	U	N1-C1'-C2'	-5.34	103.98	112.00
32	5	514	U	O4'-C1'-C2'	-5.34	102.25	107.60
32	5	454	U	C3'-C2'-O2'	5.34	118.71	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1541	C	C1'-C2'-O2'	5.34	116.41	108.40
13	T	140	PHE	CA-CB-CG	5.34	119.14	113.80
32	5	55	G	O4'-C1'-C2'	-5.34	102.26	107.60
32	5	498	C	C4'-C3'-O3'	5.34	117.41	109.40
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	4390	A	C3'-C2'-O2'	5.34	118.71	110.70
4	H	96	TYR	CA-CB-CG	5.33	123.50	113.90
21	c	78	ASN	N-CA-CB	5.33	119.50	110.49
32	5	2079	G	C4'-C3'-O3'	-5.33	105.00	113.00
9	O	135	PHE	CB-CA-C	-5.33	100.70	110.62
32	5	1936	C	O4'-C1'-C2'	-5.33	102.27	107.60
32	5	2279	A	C1'-C2'-O2'	5.33	116.40	108.40
54	SA	116	PHE	N-CA-CB	5.33	119.05	111.05
66	SW	55	ASP	N-CA-C	-5.33	102.50	110.23
32	5	1819	G	N9-C1'-C2'	5.33	119.99	112.00
53	S2	368	U	C3'-C2'-O2'	5.33	118.69	110.70
32	5	4251	A	N9-C1'-C2'	5.33	119.99	112.00
32	5	3925	U	C3'-C2'-O2'	5.33	118.69	110.70
32	5	2008	U	O4'-C4'-C3'	-5.32	98.68	104.00
32	5	4336	A	N9-C1'-C2'	-5.32	104.01	112.00
53	S2	1541	G	N9-C1'-C2'	5.32	119.98	112.00
32	5	4400	G	C3'-C2'-O2'	5.32	118.68	110.70
10	Q	181	ARG	N-CA-CB	5.32	118.54	109.87
32	5	3635	A	C2'-C3'-O3'	5.32	121.68	113.70
32	5	5022	U	O4'-C1'-C2'	-5.32	102.28	107.60
53	S2	474	G	O4'-C1'-C2'	-5.32	102.28	107.60
57	SE	218	PHE	N-CA-C	-5.32	102.65	110.52
34	8	73	U	N1-C1'-C2'	-5.32	104.02	112.00
53	S2	1225	U	C1'-C2'-O2'	5.32	116.38	108.40
80	ST	53	PHE	CB-CA-C	5.32	120.34	109.55
25	g	95	PHE	CB-CA-C	-5.32	102.71	110.95
32	5	2643	G	O4'-C1'-C2'	-5.32	102.28	107.60
37	E	153	HIS	N-CA-C	5.32	122.12	110.80
8	N	130	PHE	CA-CB-CG	-5.31	108.49	113.80
32	5	2792	C	C1'-C2'-O2'	5.31	116.37	108.40
53	S2	1473	G	C3'-C2'-O2'	5.31	118.67	110.70
32	5	31	U	C1'-C2'-O2'	-5.31	100.43	108.40
32	5	114	G	C2'-C3'-O3'	-5.31	105.73	113.70
32	5	1295	C	N1-C1'-C2'	5.31	121.97	114.00
10	Q	27	LEU	N-CA-C	5.31	116.88	111.14
31	o	48	TYR	CA-CB-CG	-5.31	104.34	113.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	C	102	PHE	N-CA-CB	5.31	117.82	109.69
32	5	967	C	O4'-C1'-C2'	-5.31	102.29	107.60
53	S2	1352	G	C3'-C2'-O2'	5.31	118.66	110.70
53	S2	1513	C	N1-C1'-C2'	5.31	119.97	112.00
62	SL	100	ASN	N-CA-C	5.31	122.11	110.80
10	Q	26	ARG	CG-CD-NE	-5.31	100.32	112.00
10	Q	52	PHE	N-CA-CB	-5.31	101.52	110.49
32	5	349	A	O4'-C4'-C3'	-5.31	100.79	106.10
32	5	1301	C	O4'-C1'-C2'	-5.31	102.29	107.60
32	5	4201	G	N9-C1'-C2'	5.31	119.96	112.00
32	5	4762	A	C4'-C3'-O3'	5.31	117.36	109.40
41	W	50	ASN	CB-CA-C	5.31	119.22	109.99
32	5	4497	U	C4'-C3'-C2'	-5.31	97.29	102.60
32	5	4941	G	N9-C1'-C2'	5.31	119.96	112.00
53	S2	531	A	C4'-C3'-O3'	-5.31	105.04	113.00
53	S2	580	U	O4'-C1'-C2'	-5.31	102.29	107.60
32	5	1210	C	C4'-C3'-O3'	5.30	117.36	109.40
53	S2	1579	A	C2'-C3'-O3'	5.30	121.66	113.70
31	o	56	PHE	N-CA-CB	5.30	117.81	110.17
53	S2	1109	C	C4'-C3'-O3'	5.30	117.35	109.40
8	N	6	TYR	CA-CB-CG	-5.30	104.36	113.90
35	B	116	ARG	CG-CD-NE	5.30	123.66	112.00
53	S2	71	G	N9-C1'-C2'	5.30	121.95	114.00
53	S2	1068	G	N9-C1'-C2'	5.30	119.95	112.00
32	5	4092	G	O4'-C1'-C2'	-5.30	102.30	107.60
32	5	4885	U	O4'-C1'-C2'	-5.30	102.30	107.60
53	S2	1653	U	C4'-C3'-O3'	-5.30	105.05	113.00
17	Y	61	HIS	CA-CB-CG	-5.30	108.50	113.80
32	5	1930	U	C4'-C3'-O3'	-5.30	101.45	109.40
15	V	36	ASN	N-CA-C	5.30	117.71	108.76
32	5	330	G	C4'-C3'-O3'	-5.30	105.06	113.00
32	5	2009	A	C3'-C2'-O2'	5.30	118.65	110.70
32	5	2056	G	P-O5'-C5'	-5.30	112.96	120.90
32	5	1676	C	C2'-C3'-O3'	5.29	117.44	109.50
53	S2	1172	U	C4'-C3'-O3'	-5.29	105.06	113.00
53	S2	1859	A	C1'-C2'-O2'	5.29	116.34	108.40
53	S2	1429	G	C4'-C3'-O3'	-5.29	105.06	113.00
8	N	143	ARG	CB-CG-CD	5.29	123.47	111.30
32	5	273	U	N1-C1'-C2'	5.29	119.93	112.00
32	5	2448	G	N9-C1'-C2'	5.29	121.93	114.00
32	5	2632	U	C4'-C3'-O3'	-5.29	105.07	113.00
32	5	4731	G	N9-C1'-C2'	5.29	121.93	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1676	U	C1'-C2'-O2'	5.29	116.33	108.40
31	o	34	TYR	CA-CB-CG	-5.29	104.39	113.90
32	5	1660	U	N1-C1'-C2'	-5.29	106.07	114.00
32	5	3744	G	N9-C1'-C2'	5.29	119.93	112.00
32	5	4504	C	N1-C1'-C2'	5.29	119.93	112.00
47	q	148	SER	N-CA-C	-5.29	103.41	110.55
50	4	15	C	C1'-C2'-O2'	5.28	116.33	108.40
53	S2	380	G	N9-C1'-C2'	5.28	119.92	112.00
8	N	119	TYR	N-CA-C	-5.28	102.17	110.36
32	5	1212	G	C2'-C3'-O3'	5.28	121.62	113.70
32	5	322	C	O4'-C1'-C2'	-5.28	102.32	107.60
62	SL	13	GLN	N-CA-C	-5.28	99.88	109.44
34	8	125	C	O4'-C1'-C2'	-5.28	102.32	107.60
32	5	394	G	N9-C1'-C2'	-5.28	104.08	112.00
32	5	3905	A	N9-C1'-C2'	-5.28	104.08	112.00
37	E	123	SER	N-CA-C	5.28	117.62	111.02
47	q	127	ASN	CB-CA-C	5.28	118.18	110.26
21	c	88	TYR	N-CA-C	-5.28	104.43	111.87
32	5	170	C	C4'-C3'-O3'	5.28	117.31	109.40
32	5	1396	G	C3'-C2'-O2'	5.28	118.61	110.70
32	5	4343	U	O4'-C1'-C2'	-5.28	102.32	107.60
34	8	115	G	O4'-C1'-C2'	-5.28	102.32	107.60
80	ST	33	TRP	CB-CA-C	5.28	121.14	110.38
32	5	81	C	C1'-C2'-O2'	5.27	116.31	108.40
32	5	219	G	P-O5'-C5'	5.27	128.81	120.90
53	S2	962	A	C2'-C3'-O3'	-5.27	105.79	113.70
53	S2	1114	U	C1'-O4'-C4'	-5.27	104.43	109.70
32	5	4094	G	C4'-C3'-O3'	-5.27	105.09	113.00
53	S2	1204	A	O4'-C1'-C2'	-5.27	102.33	107.60
32	5	1380	G	C4'-C3'-O3'	5.27	117.31	109.40
2	D	30	TYR	CB-CA-C	5.27	121.23	110.75
32	5	2363	A	C1'-C2'-O2'	5.27	116.30	108.40
53	S2	373	G	C3'-C2'-O2'	5.27	118.61	110.70
53	S2	1242	U	N1-C1'-C2'	5.27	121.91	114.00
32	5	2874	U	O4'-C4'-C3'	-5.27	100.83	106.10
32	5	3905	A	O4'-C4'-C3'	-5.27	98.73	104.00
8	N	109	HIS	N-CA-CB	5.26	117.61	109.98
53	S2	548	C	C2'-C3'-O3'	5.26	121.60	113.70
74	SK	68	TYR	CB-CA-C	5.26	120.90	110.42
3	G	67	ARG	N-CA-C	-5.26	103.51	111.56
32	5	746	A	C2'-C3'-O3'	5.26	117.39	109.50
32	5	2532	C	N1-C1'-C2'	5.26	119.89	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4600	G	N9-C1'-C2'	-5.26	104.11	112.00
2	D	230	ASN	CB-CA-C	5.26	119.36	111.89
5	J	83	LEU	N-CA-C	-5.26	105.46	111.14
32	5	2024	G	C4'-C3'-O3'	5.26	117.29	109.40
34	8	5	U	N1-C1'-C2'	5.26	119.89	112.00
53	S2	215	G	C2'-C3'-O3'	5.26	117.39	109.50
32	5	1664	U	N1-C1'-C2'	5.26	119.89	112.00
32	5	4144	C	C4'-C3'-O3'	5.26	117.28	109.40
32	5	63	G	N9-C1'-C2'	5.25	119.88	112.00
32	5	4543	G	C1'-C2'-O2'	-5.25	100.52	108.40
34	8	21	C	C4'-C3'-O3'	-5.25	105.12	113.00
32	5	4981	G	C2'-C3'-O3'	5.25	121.58	113.70
2	D	66	TYR	CA-CB-CG	5.25	123.35	113.90
34	8	40	A	C1'-C2'-O2'	5.25	116.27	108.40
53	S2	1522	A	O4'-C4'-C3'	-5.25	98.75	104.00
32	5	4670	C	C2'-C3'-O3'	-5.25	105.83	113.70
37	E	153	HIS	N-CA-CB	-5.25	101.62	110.49
53	S2	68	A	N9-C1'-C2'	5.25	119.87	112.00
53	S2	1643	U	N1-C1'-C2'	5.25	121.87	114.00
32	5	2857	A	C1'-C2'-O2'	-5.25	103.93	111.80
39	I	94	PHE	N-CA-CB	-5.24	101.63	110.49
32	5	214	G	N9-C1'-C2'	5.24	119.86	112.00
53	S2	358	C	C1'-C2'-O2'	5.24	116.26	108.40
32	5	1740	C	C1'-C2'-O2'	5.24	116.26	108.40
32	5	4331	G	C3'-C2'-O2'	5.24	118.56	110.70
32	5	4365	C	C4'-C3'-O3'	-5.24	105.14	113.00
32	5	4297	G	C1'-C2'-O2'	5.24	116.26	108.40
63	SN	18	TYR	N-CA-C	-5.24	99.64	110.80
32	5	1368	A	C3'-C2'-O2'	5.24	122.45	114.60
32	5	2670	C	C1'-C2'-O2'	-5.24	100.55	108.40
53	S2	116	U	C3'-C2'-O2'	5.24	118.55	110.70
32	5	1921	C	C2'-C3'-O3'	5.23	117.35	109.50
32	5	4986	G	C1'-C2'-O2'	-5.23	100.55	108.40
32	5	244	G	C1'-C2'-O2'	5.23	116.25	108.40
33	7	20	U	C3'-C2'-O2'	5.23	118.55	110.70
40	P	3	ARG	CG-CD-NE	5.23	123.51	112.00
38	F	168	ARG	CB-CG-CD	5.23	123.33	111.30
42	j	39	TYR	CA-C-N	-5.23	113.36	119.32
42	j	39	TYR	C-N-CA	-5.23	113.36	119.32
32	5	1612	G	C2'-C3'-O3'	5.23	117.34	109.50
32	5	4976	U	C5'-C4'-O4'	5.23	116.94	109.10
53	S2	922	A	C2'-C3'-O3'	5.23	121.54	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	929	A	N9-C1'-C2'	-5.23	104.16	112.00
32	5	936	C	N1-C1'-C2'	-5.23	106.16	114.00
32	5	3666	C	C2'-C3'-O3'	5.22	121.53	113.70
32	5	4342	C	O4'-C1'-C2'	-5.22	102.38	107.60
32	5	4951	G	O4'-C4'-C3'	-5.22	100.88	106.10
34	8	82	A	C2'-C3'-O3'	5.22	121.53	113.70
44	p	34	HIS	CA-CB-CG	-5.22	108.58	113.80
53	S2	101	U	C2'-C3'-O3'	-5.22	105.87	113.70
1	A	34	PHE	CB-CA-C	-5.22	102.18	110.84
32	5	1961	G	C1'-C2'-O2'	5.22	116.23	108.40
38	F	84	TYR	CA-CB-CG	-5.22	104.51	113.90
53	S2	1267	C	C1'-C2'-O2'	-5.22	100.57	108.40
32	5	3650	C	C3'-C2'-O2'	5.22	118.53	110.70
32	5	32	G	C2'-C3'-O3'	5.22	121.53	113.70
32	5	2675	G	O4'-C1'-C2'	-5.22	102.38	107.60
32	5	3790	U	O4'-C4'-C3'	-5.22	100.88	106.10
32	5	371	A	N9-C1'-C2'	5.21	119.82	112.00
32	5	964	A	C5'-C4'-O4'	-5.21	101.98	109.80
32	5	4080	C	O4'-C1'-C2'	-5.21	102.39	107.60
53	S2	982	G	C2'-C3'-O3'	-5.21	105.88	113.70
53	S2	1294	G	C2'-C3'-O3'	-5.21	105.88	113.70
32	5	95	G	C4'-C3'-O3'	5.21	120.82	113.00
80	ST	30	VAL	N-CA-CB	5.21	114.93	110.08
22	d	94	GLU	N-CA-C	5.21	117.36	111.11
32	5	3626	G	C3'-C2'-O2'	5.21	118.52	110.70
32	5	4545	G	C1'-C2'-O2'	5.21	116.22	108.40
53	S2	1222	G	N9-C1'-C2'	5.21	119.82	112.00
74	SK	29	MET	CA-C-N	5.21	126.36	119.84
74	SK	29	MET	C-N-CA	5.21	126.36	119.84
32	5	4736	C	C1'-C2'-O2'	-5.21	103.98	111.80
55	SB	208	HIS	N-CA-CB	5.21	117.53	109.98
11	R	101	ILE	N-CA-C	5.21	115.42	110.42
53	S2	1637	A	C2'-C3'-O3'	5.21	117.31	109.50
32	5	54	G	O4'-C1'-C2'	-5.21	102.39	107.60
32	5	4448	G	N9-C1'-C2'	5.21	121.81	114.00
53	S2	92	A	O4'-C4'-C3'	-5.21	100.89	106.10
32	5	1323	A	N9-C1'-C2'	5.21	119.81	112.00
86	Sg	15	ASN	N-CA-C	-5.21	101.76	109.83
32	5	4479	A	C1'-C2'-O2'	5.20	116.21	108.40
32	5	4745	G	C3'-C2'-O2'	-5.20	102.89	110.70
53	S2	1185	C	C1'-C2'-O2'	5.20	116.21	108.40
18	Z	49	TYR	N-CA-C	-5.20	102.47	110.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	49	U	N1-C1'-C2'	5.20	119.80	112.00
32	5	427	A	N9-C1'-C2'	5.20	119.80	112.00
32	5	3653	A	N9-C1'-C2'	-5.20	104.20	112.00
32	5	4965	U	C4'-C3'-O3'	-5.20	105.20	113.00
46	K	96	LYS	N-CA-C	5.20	121.88	110.80
32	5	2341	A	C1'-C2'-O2'	5.20	116.20	108.40
32	5	2474	G	C3'-C2'-O2'	5.20	118.50	110.70
1	A	163	ARG	CB-CG-CD	5.20	123.26	111.30
53	S2	1152	U	N1-C1'-C2'	5.20	119.80	112.00
17	Y	8	THR	N-CA-C	5.20	120.64	110.56
48	z	370	ALA	N-CA-C	5.20	116.94	111.28
32	5	1492	G	N9-C1'-C2'	5.20	119.79	112.00
32	5	1732	C	C1'-C2'-O2'	5.19	116.19	108.40
46	K	111	ASN	N-CA-CB	5.19	117.54	110.01
32	5	4888	U	C3'-C2'-O2'	-5.19	106.81	114.60
32	5	5035	U	O4'-C1'-C2'	-5.19	102.41	107.60
53	S2	848	U	N1-C1'-C2'	5.19	119.79	112.00
73	SF	152	TRP	CB-CA-C	-5.19	102.69	110.90
17	Y	75	ARG	CB-CG-CD	-5.19	99.36	111.30
45	r	45	HIS	CB-CA-C	-5.19	100.09	110.42
68	SY	56	PHE	CB-CA-C	5.19	119.21	109.71
32	5	267	G	O4'-C1'-C2'	-5.19	102.41	107.60
32	5	3648	A	C1'-O4'-C4'	-5.19	104.51	109.70
32	5	3693	U	O4'-C1'-C2'	-5.19	102.41	107.60
32	5	4510	A	C4'-C3'-O3'	-5.19	101.62	109.40
53	S2	948	C	C2'-C3'-O3'	5.19	121.48	113.70
85	Sf	138	ARG	N-CA-C	5.19	117.02	110.33
47	q	97	GLU	N-CA-C	5.18	121.84	110.80
57	SE	126	VAL	N-CA-C	5.18	116.05	108.53
32	5	1953	U	N1-C1'-C2'	5.18	119.77	112.00
25	g	95	PHE	N-CA-CB	5.18	117.49	109.98
32	5	1423	U	N1-C1'-C2'	5.18	119.77	112.00
32	5	2037	C	C2'-C3'-O3'	-5.18	105.93	113.70
32	5	2635	U	N1-C1'-C2'	5.18	119.77	112.00
53	S2	1140	G	C1'-C2'-O2'	5.18	116.17	108.40
32	5	2453	A	O4'-C1'-C2'	-5.18	102.42	107.60
32	5	3647	A	C2'-C3'-O3'	5.18	121.47	113.70
32	5	4333	C	N1-C1'-C2'	5.18	119.77	112.00
32	5	4736	C	N1-C1'-C2'	5.18	121.77	114.00
32	5	4766	C	C2'-C3'-O3'	5.18	121.47	113.70
32	5	3726	A	N9-C1'-C2'	5.18	121.77	114.00
53	S2	1857	G	C2'-C3'-O3'	5.18	121.47	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	M	109	ARG	CA-CB-CG	5.17	124.45	114.10
53	S2	928	G	C4'-C3'-O3'	-5.17	105.24	113.00
57	SE	18	TRP	CA-CB-CG	-5.17	103.77	113.60
32	5	4762	A	C2'-C3'-O3'	-5.17	101.74	109.50
37	E	69	TYR	N-CA-C	5.17	117.60	107.57
46	K	102	GLY	N-CA-C	5.17	125.44	113.18
53	S2	917	U	C3'-C2'-O2'	5.17	118.46	110.70
53	S2	548	C	O4'-C1'-C2'	-5.17	102.43	107.60
53	S2	1419	C	C3'-C2'-O2'	5.17	118.45	110.70
53	S2	1629	C	C1'-C2'-O2'	5.17	116.15	108.40
9	O	117	ARG	N-CA-C	5.17	116.92	108.76
32	5	269	G	O4'-C1'-C2'	-5.17	102.43	107.60
32	5	4215	C	C4'-C3'-O3'	-5.17	105.25	113.00
53	S2	336	A	C1'-C2'-O2'	5.17	116.15	108.40
54	SA	202	TYR	N-CA-C	5.17	120.44	113.72
32	5	2849	A	C4'-C3'-O3'	5.17	117.15	109.40
36	C	42	THR	N-CA-C	5.17	116.60	111.07
32	5	2658	G	C1'-C2'-O2'	5.17	116.15	108.40
32	5	3909	C	C4'-C3'-O3'	-5.17	105.25	113.00
85	Sf	146	LEU	N-CA-C	-5.17	96.33	107.49
32	5	3864	C	C4'-C3'-O3'	-5.16	105.25	113.00
53	S2	980	A	O4'-C1'-C2'	-5.16	102.44	107.60
81	SU	93	SER	N-CA-C	5.16	112.67	108.07
53	S2	1355	C	C2'-C3'-O3'	-5.16	105.96	113.70
61	SJ	104	ASP	N-CA-C	5.16	116.60	110.97
17	Y	6	PHE	CA-CB-CG	-5.16	108.64	113.80
22	d	101	LYS	N-CA-C	-5.16	103.58	110.55
32	5	1494	U	N1-C1'-C2'	5.16	119.74	112.00
1	A	19	HIS	N-CA-CB	-5.16	101.77	110.49
32	5	2268	A	C2'-C3'-O3'	5.16	117.24	109.50
46	K	60	VAL	N-CA-C	-5.16	101.05	108.89
53	S2	1121	G	C2'-C3'-O3'	5.16	121.44	113.70
72	SD	197	LYS	N-CA-C	-5.16	99.81	110.80
32	5	3688	U	O4'-C1'-C2'	-5.16	102.44	107.60
36	C	337	ARG	N-CA-C	-5.16	105.57	111.14
32	5	1473	U	C2'-C3'-O3'	5.16	121.43	113.70
23	e	77	PHE	N-CA-C	-5.15	101.00	109.40
32	5	2426	U	N1-C1'-C2'	5.15	119.73	112.00
32	5	3638	G	N9-C1'-C2'	5.15	119.73	112.00
32	5	4235	G	N9-C1'-C2'	5.15	119.73	112.00
33	7	7	G	O4'-C1'-C2'	-5.15	102.45	107.60
53	S2	165	G	O4'-C4'-C3'	-5.15	98.85	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1806	G	C4'-C3'-O3'	-5.15	105.27	113.00
53	S2	669	A	N9-C1'-C2'	5.15	119.72	112.00
53	S2	967	C	C2'-C3'-O3'	5.15	121.43	113.70
53	S2	1024	A	C3'-C2'-O2'	5.15	118.43	110.70
32	5	4282	A	O4'-C4'-C3'	-5.15	100.95	106.10
32	5	2442	G	C4'-C3'-O3'	-5.15	105.28	113.00
32	5	4359	U	C1'-C2'-O2'	5.15	116.12	108.40
32	5	4537	C	O4'-C1'-C2'	-5.15	102.45	107.60
53	S2	868	G	C2'-C3'-O3'	-5.15	101.78	109.50
23	e	75	ARG	CG-CD-NE	-5.15	100.68	112.00
32	5	4434	C	C4'-C3'-O3'	-5.15	105.28	113.00
32	5	3896	C	C3'-C2'-O2'	5.14	118.42	110.70
32	5	4311	A	C2'-C3'-O3'	5.14	121.42	113.70
62	SL	151	THR	N-CA-C	5.14	117.18	108.02
13	T	17	ARG	CB-CA-C	5.14	117.49	109.42
32	5	658	C	C2'-C3'-O3'	5.14	121.41	113.70
32	5	3938	G	O4'-C1'-N9	-5.14	100.49	108.20
74	SK	95	ARG	N-CA-C	5.14	117.45	111.02
53	S2	409	C	O4'-C1'-C2'	-5.14	102.46	107.60
53	S2	524	U	C4'-C3'-O3'	-5.14	105.29	113.00
32	5	4228	G	O4'-C1'-C2'	-5.14	102.46	107.60
40	P	116	HIS	N-CA-CB	5.14	118.64	110.16
47	q	6	ARG	N-CA-C	5.14	121.75	110.80
53	S2	879	C	O4'-C1'-C2'	-5.14	102.46	107.60
53	S2	923	G	O4'-C1'-C2'	-5.14	102.46	107.60
73	SF	48	TYR	CA-CB-CG	5.14	123.15	113.90
2	D	16	TYR	CA-CB-CG	-5.14	104.65	113.90
32	5	1068	G	C2'-C3'-O3'	5.14	121.41	113.70
2	D	223	PHE	CA-C-N	5.14	127.47	120.54
2	D	223	PHE	C-N-CA	5.14	127.47	120.54
8	N	175	GLY	N-CA-C	-5.14	103.86	110.69
32	5	4230	C	N1-C1'-C2'	5.14	119.71	112.00
76	SP	86	LEU	CA-C-N	5.14	126.26	119.84
76	SP	86	LEU	C-N-CA	5.14	126.26	119.84
32	5	3905	A	C1'-C2'-O2'	5.13	116.10	108.40
52	6	110	LEU	N-CA-C	5.13	117.21	109.41
53	S2	577	U	C2'-C3'-O3'	5.13	121.40	113.70
3	G	202	VAL	CB-CA-C	5.13	116.56	111.74
8	N	4	TYR	N-CA-C	5.13	118.32	111.75
53	S2	143	U	C1'-C2'-O2'	5.13	116.10	108.40
32	5	684	G	C2'-C3'-O3'	5.13	121.40	113.70
53	S2	1850	A	O4'-C1'-C2'	-5.13	102.47	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	l	44	TRP	N-CA-CB	5.13	118.25	110.14
32	5	2793	G	C4'-C3'-O3'	-5.13	105.31	113.00
33	7	82	G	C1'-C2'-O2'	5.13	116.09	108.40
56	SC	198	ALA	CA-C-N	-5.13	114.70	120.14
56	SC	198	ALA	C-N-CA	-5.13	114.70	120.14
32	5	693	C	C3'-C2'-O2'	5.13	118.39	110.70
34	8	94	G	O4'-C4'-C3'	-5.13	100.97	106.10
69	Sa	72	HIS	N-CA-CB	-5.13	101.83	110.49
72	SD	152	PHE	CB-CA-C	5.13	119.09	109.71
37	E	59	TYR	N-CA-CB	5.12	119.15	110.49
45	r	124	VAL	N-CA-C	5.12	115.34	110.42
47	q	94	ASP	N-CA-CB	5.12	119.15	110.49
53	S2	1142	G	C4'-C3'-C2'	-5.12	97.47	102.60
70	Sb	31	TYR	CA-CB-CG	5.12	123.13	113.90
32	5	701	G	O4'-C1'-C2'	-5.12	102.48	107.60
32	5	3692	A	N9-C1'-C2'	-5.12	104.31	112.00
32	5	4878	C	C4'-C3'-O3'	-5.12	105.32	113.00
57	SE	235	TRP	CA-CB-CG	5.12	123.33	113.60
32	5	4266	G	C3'-C2'-O2'	5.12	118.38	110.70
34	8	4	C	N1-C1'-C2'	5.12	119.68	112.00
72	SD	152	PHE	N-CA-C	-5.12	100.56	108.90
4	H	156	ASN	N-CA-CB	5.12	117.43	110.01
12	S	44	PHE	N-CA-C	-5.12	105.78	111.36
32	5	2034	G	C1'-C2'-O2'	5.12	116.08	108.40
32	5	2502	G	C3'-C2'-O2'	5.12	118.38	110.70
53	S2	1342	U	C2'-C3'-O3'	5.12	117.18	109.50
32	5	336	A	C4-N9-C1'	5.12	141.65	126.30
20	b	16	TRP	CB-CA-C	5.12	120.61	110.17
32	5	393	U	C1'-C2'-O2'	5.12	116.07	108.40
32	5	1428	U	N1-C1'-C2'	5.12	119.67	112.00
34	8	107	C	N1-C1'-C2'	5.12	119.67	112.00
53	S2	1827	U	N1-C1'-C2'	5.12	119.67	112.00
76	SP	42	ARG	CG-CD-NE	-5.12	100.75	112.00
32	5	2732	G	C2'-C3'-O3'	5.11	121.37	113.70
32	5	4122	G	O4'-C1'-C2'	-5.11	102.49	107.60
53	S2	913	A	C4'-C3'-O3'	-5.11	105.33	113.00
32	5	4303	C	C1'-C2'-O2'	-5.11	100.73	108.40
68	SY	75	ILE	N-CA-C	5.11	116.02	107.18
1	A	195	CYS	N-CA-C	-5.11	102.22	110.14
32	5	97	G	N9-C1'-C2'	-5.11	104.33	112.00
32	5	4550	G	O4'-C1'-C2'	-5.11	102.49	107.60
32	5	4911	A	O4'-C1'-C2'	-5.11	102.49	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4978	G	C1'-C2'-O2'	-5.11	100.74	108.40
37	E	54	SER	N-CA-C	5.11	117.06	108.73
53	S2	1805	G	C2'-C3'-O3'	5.11	121.36	113.70
53	S2	1863	A	N9-C1'-C2'	5.11	121.66	114.00
53	S2	60	A	C4'-C3'-O3'	5.11	117.06	109.40
72	SD	192	TRP	N-CA-C	-5.10	107.00	113.18
32	5	111	C	C1'-C2'-O2'	5.10	116.05	108.40
32	5	394	G	C4'-C3'-C2'	-5.10	97.50	102.60
32	5	1672	U	O4'-C1'-C2'	-5.10	102.50	107.60
32	5	2807	A	C2'-C3'-O3'	5.10	121.35	113.70
32	5	3901	A	C3'-C2'-O2'	-5.10	106.95	114.60
53	S2	1258	A	C3'-C2'-O2'	5.10	118.35	110.70
56	SC	200	ARG	CG-CD-NE	5.10	123.22	112.00
32	5	1864	G	O4'-C1'-C2'	-5.10	102.50	107.60
53	S2	554	A	N9-C1'-C2'	5.10	119.65	112.00
69	Sa	18	VAL	CB-CA-C	-5.10	102.89	110.33
32	5	2677	G	O4'-C1'-C2'	-5.10	102.50	107.60
39	I	17	TYR	CA-C-N	-5.10	114.66	119.76
39	I	17	TYR	C-N-CA	-5.10	114.66	119.76
32	5	2264	C	C3'-C2'-O2'	5.10	122.24	114.60
32	5	4700	A	C1'-C2'-O2'	5.10	116.04	108.40
32	5	2459	G	C2'-C3'-O3'	5.09	121.34	113.70
53	S2	1199	A	C3'-C2'-O2'	-5.09	103.06	110.70
32	5	4982	A	O4'-C1'-C2'	-5.09	102.51	107.60
32	5	212	A	N9-C1'-C2'	5.09	119.64	112.00
32	5	1798	G	C4'-C3'-O3'	-5.09	105.36	113.00
32	5	3860	A	O4'-C1'-C2'	-5.09	102.51	107.60
32	5	4413	C	C1'-C2'-O2'	5.09	116.03	108.40
6	L	186	ARG	CG-CD-NE	-5.09	100.81	112.00
32	5	2385	U	N1-C1'-C2'	5.09	119.63	112.00
32	5	4767	C	C1'-C2'-O2'	5.09	116.03	108.40
32	5	4860	G	O4'-C1'-C2'	-5.09	102.51	107.60
32	5	2583	C	C2'-C3'-O3'	5.08	121.33	113.70
53	S2	1016	U	C4'-C3'-O3'	5.08	120.63	113.00
32	5	453	G	O4'-C1'-C2'	-5.08	102.52	107.60
32	5	1672	U	N1-C1'-C2'	5.08	119.62	112.00
34	8	8	U	C1'-C2'-O2'	5.08	116.03	108.40
36	C	217	ILE	N-CA-C	5.08	115.81	110.62
22	d	87	ARG	N-CA-CB	5.08	117.43	110.57
32	5	4627	U	O4'-C1'-C2'	-5.08	102.52	107.60
34	8	34	U	O4'-C1'-C2'	-5.08	102.52	107.60
55	SB	106	THR	N-CA-C	5.08	119.43	113.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	E	280	HIS	CA-CB-CG	-5.08	108.72	113.80
32	5	3800	A	C4'-C3'-O3'	-5.08	105.38	113.00
32	5	3852	A	C2'-C3'-O3'	-5.08	106.08	113.70
32	5	4124	G	C4'-C3'-O3'	5.08	117.02	109.40
53	S2	1326	U	N1-C1'-C2'	5.08	121.62	114.00
5	J	35	ARG	CG-CD-NE	5.08	123.17	112.00
32	5	394	G	O4'-C1'-C2'	-5.08	102.53	107.60
32	5	1332	C	C2'-C3'-O3'	5.08	121.31	113.70
34	8	96	C	C3'-C2'-O2'	5.08	118.31	110.70
18	Z	78	ASN	N-CA-C	5.07	119.34	113.20
32	5	1379	C	C5'-C4'-O4'	5.07	116.71	109.10
23	e	60	TYR	N-CA-CB	-5.07	103.73	111.19
32	5	1738	A	C4'-C3'-O3'	-5.07	105.39	113.00
53	S2	673	G	C3'-C2'-O2'	5.07	118.31	110.70
32	5	2623	A	O4'-C1'-C2'	-5.07	102.53	107.60
32	5	3651	A	C2'-C3'-O3'	5.07	121.30	113.70
53	S2	798	A	C4'-C3'-C2'	-5.07	97.53	102.60
32	5	1724	G	C2'-C3'-O3'	-5.07	101.90	109.50
32	5	2813	A	N9-C1'-C2'	5.07	119.60	112.00
32	5	4441	A	N9-C1'-C2'	5.07	119.60	112.00
53	S2	1452	A	C4'-C3'-O3'	-5.07	101.80	109.40
3	G	40	GLY	N-CA-C	-5.07	104.89	112.89
32	5	4731	G	C4'-C3'-O3'	5.07	117.00	109.40
42	j	43	ARG	CG-CD-NE	5.07	123.15	112.00
53	S2	368	U	C2'-C3'-O3'	5.07	121.30	113.70
53	S2	395	G	N9-C1'-C2'	5.07	119.60	112.00
53	S2	1745	A	N9-C1'-C2'	5.07	119.60	112.00
3	G	49	ARG	N-CA-CB	5.06	118.56	110.46
3	G	77	PRO	CA-C-N	5.06	126.17	119.84
3	G	77	PRO	C-N-CA	5.06	126.17	119.84
3	G	81	ASN	CB-CA-C	-5.06	102.93	110.88
32	5	1534	A	O4'-C4'-C3'	-5.06	101.04	106.10
32	5	3667	C	O4'-C1'-C2'	-5.06	102.54	107.60
32	5	4691	A	O4'-C1'-C2'	-5.06	102.54	107.60
32	5	3594	C	N1-C1'-C2'	5.06	119.59	112.00
50	4	32	A	N9-C1'-C2'	-5.06	106.41	114.00
53	S2	641	A	C4'-C3'-O3'	5.06	120.59	113.00
53	S2	1035	A	C1'-C2'-O2'	5.06	115.99	108.40
32	5	1674	C	C3'-C2'-O2'	5.06	118.29	110.70
32	5	2089	G	O4'-C4'-C3'	-5.06	101.04	106.10
32	5	4333	C	C1'-C2'-O2'	-5.06	100.81	108.40
33	7	49	A	N9-C1'-C2'	-5.06	106.41	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	183	G	C4'-C3'-O3'	5.06	116.99	109.40
32	5	1075	G	C2'-C3'-O3'	5.06	121.29	113.70
32	5	2055	G	O4'-C1'-C2'	-5.06	102.54	107.60
32	5	4274	A	C2'-C3'-O3'	5.06	121.29	113.70
35	B	213	GLN	CB-CA-C	5.06	118.30	109.65
53	S2	1536	G	C1'-C2'-O2'	5.06	115.99	108.40
32	5	1522	G	C4'-C3'-C2'	-5.06	97.54	102.60
32	5	1591	U	C4'-C3'-O3'	-5.06	105.41	113.00
32	5	4944	C	N1-C1'-C2'	5.06	121.58	114.00
32	5	2669	C	C2'-C3'-O3'	5.06	117.08	109.50
54	SA	131	HIS	CB-CA-C	5.06	118.79	109.99
32	5	4936	G	C2'-C3'-O3'	-5.05	106.12	113.70
53	S2	365	C	C3'-C2'-O2'	5.05	118.28	110.70
77	SQ	99	TYR	N-CA-CB	5.05	117.73	110.40
2	D	33	ARG	N-CA-C	-5.05	105.85	111.36
2	D	54	ARG	CB-CG-CD	5.05	122.92	111.30
32	5	435	A	C2'-C3'-O3'	5.05	121.28	113.70
53	S2	1022	U	C1'-C2'-O2'	5.05	115.98	108.40
63	SN	25	TRP	N-CA-C	-5.05	103.03	111.37
8	N	85	VAL	CB-CA-C	-5.05	105.40	112.02
42	j	76	HIS	CB-CA-C	5.05	118.48	109.29
53	S2	1271	C	O4'-C1'-C2'	-5.05	102.55	107.60
32	5	150	U	C4'-C3'-O3'	5.05	116.97	109.40
32	5	2878	G	C1'-C2'-O2'	5.05	115.97	108.40
53	S2	1743	G	C4'-C3'-O3'	-5.05	105.42	113.00
32	5	124	C	C2'-C3'-O3'	5.05	121.27	113.70
32	5	4563	U	N1-C1'-C2'	5.05	119.57	112.00
35	B	32	PHE	CB-CA-C	5.05	115.52	109.31
17	Y	5	PRO	N-CA-C	-5.05	102.69	111.32
32	5	4873	G	N9-C1'-C2'	5.05	121.57	114.00
32	5	970	G	O4'-C4'-C3'	-5.04	101.06	106.10
53	S2	1727	G	C2'-C3'-O3'	5.04	121.27	113.70
53	S2	1853	C	C3'-C2'-O2'	5.04	118.27	110.70
10	Q	32	TYR	CA-CB-CG	5.04	122.98	113.90
32	5	231	U	C2'-C3'-O3'	5.04	121.27	113.70
32	5	398	A	N9-C1'-C2'	5.04	119.57	112.00
32	5	1934	A	C1'-C2'-O2'	5.04	115.97	108.40
32	5	2687	U	C2'-C3'-O3'	-5.04	106.14	113.70
35	B	25	HIS	CA-CB-CG	5.04	118.84	113.80
32	5	20	U	N1-C1'-C2'	-5.04	106.44	114.00
32	5	1534	A	P-O5'-C5'	5.04	128.46	120.90
32	5	4644	G	C3'-C2'-O2'	-5.04	103.14	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	S2	1652	G	N9-C1'-C2'	5.04	119.56	112.00
86	Sg	140	TYR	CA-CB-CG	-5.04	104.83	113.90
86	Sg	294	ASP	N-CA-C	5.04	118.92	112.87
53	S2	651	U	C1'-C2'-O2'	-5.04	100.84	108.40
32	5	28	C	N1-C1'-C2'	5.04	119.56	112.00
32	5	4511	A	C3'-C2'-O2'	5.04	118.26	110.70
38	F	93	PHE	CB-CA-C	5.04	117.95	109.89
53	S2	796	G	N9-C1'-C2'	5.04	119.56	112.00
55	SB	80	ALA	N-CA-C	5.04	117.27	110.06
32	5	92	C	C1'-C2'-O2'	5.04	115.95	108.40
53	S2	919	A	C2'-C3'-O3'	-5.04	101.94	109.50
53	S2	1362	U	C1'-C2'-O2'	-5.04	104.25	111.80
53	S2	1657	G	C1'-C2'-O2'	5.04	115.95	108.40
32	5	1390	G	C2'-C3'-O3'	5.04	121.25	113.70
32	5	2896	G	O4'-C1'-C2'	-5.04	102.56	107.60
53	S2	507	G	C1'-C2'-O2'	5.04	119.35	111.80
53	S2	1249	C	C2'-C3'-O3'	5.04	121.25	113.70
68	SY	64	PHE	N-CA-CB	5.04	119.00	110.49
32	5	4238	G	N9-C1'-C2'	-5.03	104.45	112.00
32	5	4364	G	N9-C1'-C2'	5.03	119.55	112.00
32	5	4871	C	O4'-C4'-C3'	-5.03	101.07	106.10
34	8	104	A	N9-C1'-C2'	5.03	121.55	114.00
32	5	4699	U	C4'-C3'-O3'	5.03	116.95	109.40
32	5	2605	G	C4'-C3'-O3'	-5.03	105.45	113.00
32	5	4677	U	C1'-C2'-O2'	5.03	115.94	108.40
32	5	4895	C	C4'-C3'-O3'	5.03	116.95	109.40
53	S2	689	U	N1-C1'-C2'	5.03	119.55	112.00
32	5	4212	A	N9-C1'-C2'	5.03	121.54	114.00
22	d	108	TYR	N-CA-C	5.03	117.59	110.50
32	5	125	C	O4'-C1'-C2'	-5.03	102.57	107.60
32	5	508	G	C2'-C3'-O3'	5.03	121.24	113.70
32	5	1850	A	N9-C1'-C2'	5.03	119.54	112.00
32	5	2269	C	C2'-C3'-O3'	-5.03	106.16	113.70
32	5	4160	C	N1-C1'-C2'	5.03	119.54	112.00
38	F	197	TYR	N-CA-C	-5.03	103.25	111.04
10	Q	91	ARG	NE-CZ-NH2	5.03	123.72	119.20
53	S2	629	A	C4'-C3'-O3'	-5.03	101.86	109.40
61	SJ	3	VAL	N-CA-C	5.03	119.79	109.34
32	5	2674	A	O4'-C4'-C3'	-5.02	101.08	106.10
34	8	73	U	C1'-C2'-O2'	5.02	115.93	108.40
59	SH	106	ARG	N-CA-C	-5.02	105.51	111.69
15	V	97	TYR	N-CA-C	-5.02	102.43	109.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	Y	74	TYR	N-CA-C	-5.02	100.11	110.80
23	e	62	SER	N-CA-C	5.02	117.75	109.72
32	5	338	A	C4'-C3'-O3'	-5.02	105.47	113.00
42	j	70	VAL	CB-CA-C	-5.02	105.39	111.87
53	S2	105	U	O4'-C1'-C2'	-5.02	102.58	107.60
86	Sg	64	HIS	N-CA-C	5.02	116.62	109.14
4	H	125	ARG	CG-CD-NE	5.02	123.04	112.00
32	5	4586	G	O4'-C1'-C2'	-5.02	102.58	107.60
32	5	4730	C	C4'-C3'-O3'	5.02	116.93	109.40
53	S2	4	C	O4'-C1'-C2'	-5.02	102.58	107.60
32	5	1237	C	C4'-C3'-O3'	-5.02	105.48	113.00
32	5	1489	G	O4'-C1'-C2'	-5.01	102.58	107.60
49	3	58	A	C2'-C3'-O3'	5.01	117.02	109.50
54	SA	117	ARG	CG-CD-NE	5.01	123.03	112.00
2	D	12	TYR	N-CA-CB	5.01	117.41	109.94
32	5	2089	G	C3'-C2'-O2'	5.01	122.12	114.60
32	5	2257	C	C4'-C3'-O3'	5.01	116.92	109.40
32	5	2351	C	O4'-C1'-C2'	-5.01	102.59	107.60
32	5	4078	C	O4'-C1'-C2'	-5.01	102.59	107.60
32	5	4600	G	C1'-C2'-O2'	5.01	115.92	108.40
35	B	119	TYR	CB-CA-C	5.01	119.73	111.31
49	3	31	C	OP2-P-O3'	5.01	123.04	108.00
53	S2	791	C	C1'-C2'-O2'	5.01	115.92	108.40
53	S2	1595	U	O4'-C1'-C2'	-5.01	102.59	107.60
53	S2	1852	C	O4'-C1'-C2'	-5.01	102.59	107.60
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	4317	A	N9-C1'-C2'	5.01	119.51	112.00
32	5	4766	C	C3'-C2'-O2'	5.01	118.22	110.70
53	S2	69	C	N1-C1'-C2'	5.01	119.52	112.00
32	5	53	C	N1-C1'-C2'	-5.01	104.49	112.00
32	5	1382	G	C1'-C2'-O2'	-5.01	100.89	108.40
32	5	4161	G	N9-C1'-C2'	5.01	119.51	112.00
34	8	116	C	C2'-C3'-O3'	5.01	121.21	113.70
35	B	53	MET	N-CA-C	5.01	115.14	108.38
42	j	11	ARG	CG-CD-NE	-5.01	100.98	112.00
32	5	2467	U	N1-C1'-C2'	-5.01	104.49	112.00
32	5	4436	U	N1-C1'-C2'	-5.01	106.49	114.00
61	SJ	147	PHE	CB-CA-C	5.01	119.07	110.81
32	5	73	A	N9-C1'-C2'	5.00	119.51	112.00
32	5	3933	G	C1'-C2'-O2'	5.00	115.91	108.40
34	8	9	A	O4'-C1'-C2'	-5.00	102.59	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	280	G	C1'-O4'-C4'	-5.00	104.70	109.70
32	5	693	C	C2'-C3'-O3'	5.00	121.21	113.70
32	5	1320	U	C1'-C2'-O2'	5.00	115.91	108.40
32	5	4519	C	C4'-C3'-C2'	-5.00	97.60	102.60
53	S2	1830	U	N1-C1'-C2'	-5.00	106.50	114.00

There are no chirality outliers.

All (525) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
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
32	5	1740	C	Sidechain
32	5	1853	G	Sidechain

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Mol	Chain	Res	Type	Group
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	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
32	5	2675	G	Sidechain
32	5	2769	U	Sidechain
32	5	2796	G	Sidechain

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Mol	Chain	Res	Type	Group
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
32	5	4234	A	Sidechain
32	5	4270	C	Sidechain
32	5	4275	G	Sidechain

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Mol	Chain	Res	Type	Group
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
32	5	5050	C	Sidechain
32	5	5066	U	Sidechain
32	5	53	C	Sidechain
32	5	54	G	Sidechain

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Mol	Chain	Res	Type	Group
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
35	B	16	PHE	Peptide
35	B	179	HIS	Sidechain
35	B	257	TRP	Peptide
35	B	264	PHE	Peptide

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Mol	Chain	Res	Type	Group
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
38	F	228	HIS	Sidechain
38	F	237	ASN	Peptide
38	F	81	GLY	Peptide
38	F	82	ASN	Peptide

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Mol	Chain	Res	Type	Group
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
9	O	110	PRO	Peptide
9	O	117	ARG	Peptide
9	O	135	PHE	Sidechain
9	O	64	THR	Peptide

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Mol	Chain	Res	Type	Group
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
87	S1	46	LEU	Peptide
87	S1	5	GLN	Peptide,Mainchain
87	S1	52	LYS	Peptide
53	S2	1036	A	Sidechain
53	S2	1063	C	Sidechain
53	S2	1085	C	Sidechain
53	S2	1088	U	Sidechain
53	S2	1142	G	Sidechain
53	S2	1167	G	Sidechain
53	S2	1168	G	Sidechain
53	S2	1221	G	Sidechain
53	S2	1247	C	Sidechain
53	S2	1249	C	Sidechain
53	S2	1378	A	Sidechain
53	S2	1408	U	Sidechain
53	S2	1452	A	Sidechain
53	S2	1453	C	Sidechain
53	S2	1537	A	Sidechain
53	S2	1552	G	Sidechain

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Mol	Chain	Res	Type	Group
53	S2	1578	U	Sidechain
53	S2	1603	G	Sidechain
53	S2	1606	G	Sidechain
53	S2	1623	A	Sidechain
53	S2	1659	U	Sidechain
53	S2	1835	A	Sidechain
53	S2	1838	U	Sidechain
53	S2	26	U	Sidechain
53	S2	27	A	Sidechain
53	S2	294	U	Sidechain
53	S2	3	C	Sidechain
53	S2	31	U	Sidechain
53	S2	313	A	Sidechain
53	S2	367	U	Sidechain
53	S2	381	C	Sidechain
53	S2	382	C	Sidechain
53	S2	399	C	Sidechain
53	S2	409	C	Sidechain
53	S2	421	G	Sidechain
53	S2	423	U	Sidechain
53	S2	426	A	Sidechain
53	S2	427	U	Sidechain
53	S2	428	U	Sidechain
53	S2	437	G	Sidechain
53	S2	447	A	Sidechain
53	S2	448	A	Sidechain
53	S2	482	G	Sidechain
53	S2	596	U	Sidechain
53	S2	617	G	Sidechain
53	S2	631	U	Sidechain
53	S2	642	U	Sidechain
53	S2	645	C	Sidechain
53	S2	648	A	Sidechain
53	S2	662	G	Sidechain
53	S2	821	G	Sidechain
53	S2	825	A	Sidechain
53	S2	841	G	Sidechain
53	S2	875	A	Sidechain
53	S2	876	C	Sidechain
53	S2	91	A	Sidechain
53	S2	92	A	Sidechain
53	S2	945	U	Sidechain

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Mol	Chain	Res	Type	Group
53	S2	999	G	Sidechain
54	SA	103	PHE	Sidechain
54	SA	115	ALA	Peptide
54	SA	163	CYS	Peptide
54	SA	2	SER	Peptide
54	SA	40	LYS	Peptide
55	SB	100	PHE	Sidechain
55	SB	205	TYR	Sidechain
55	SB	211	PHE	Peptide
55	SB	40	ASN	Peptide
55	SB	66	VAL	Peptide
55	SB	81	PHE	Peptide,Sidechain
56	SC	168	GLY	Peptide
56	SC	235	ASN	Peptide
56	SC	236	PHE	Sidechain
56	SC	240	THR	Peptide
56	SC	241	PHE	Sidechain
56	SC	60	TRP	Peptide
56	SC	96	PHE	Peptide
72	SD	159	HIS	Sidechain
72	SD	196	GLY	Peptide
72	SD	203	PRO	Peptide
57	SE	100	ARG	Peptide
57	SE	121	TYR	Sidechain
57	SE	17	HIS	Peptide
57	SE	205	PHE	Peptide
57	SE	41	CYS	Peptide
57	SE	86	PHE	Sidechain
73	SF	164	ARG	Peptide
73	SF	22	LYS	Peptide
73	SF	43	GLU	Peptide
73	SF	51	HIS	Sidechain
58	SG	57	ASP	Peptide
59	SH	108	SER	Peptide
59	SH	189	PHE	Peptide
60	SI	111	GLN	Peptide
60	SI	149	TYR	Peptide
60	SI	153	LYS	Peptide
60	SI	155	ASN	Peptide
60	SI	197	PHE	Peptide
60	SI	26	LYS	Peptide
60	SI	50	GLY	Peptide

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Mol	Chain	Res	Type	Group
60	SI	64	ASN	Peptide
60	SI	65	PHE	Peptide
61	SJ	18	ARG	Peptide
61	SJ	38	ARG	Peptide
61	SJ	93	LYS	Peptide
74	SK	60	GLU	Peptide
62	SL	15	THR	Peptide
62	SL	151	THR	Peptide
62	SL	62	PHE	Sidechain
75	SM	32	ALA	Peptide
75	SM	75	ASN	Peptide
63	SN	112	LYS	Peptide
63	SN	113	PHE	Peptide
63	SN	127	ARG	Peptide
63	SN	18	TYR	Sidechain
63	SN	57	SER	Peptide
64	SO	147	ARG	Sidechain
76	SP	11	THR	Peptide
76	SP	21	ASP	Sidechain
76	SP	36	LEU	Peptide
77	SQ	43	GLU	Peptide
79	SS	81	ASP	Peptide
80	ST	10	ASN	Peptide
80	ST	52	TRP	Peptide
81	SU	71	GLY	Peptide
65	SV	32	ILE	Peptide
65	SV	49	GLN	Peptide
65	SV	52	THR	Peptide
66	SW	44	HIS	Sidechain
66	SW	67	GLY	Peptide
66	SW	76	SER	Peptide
67	SX	16	HIS	Sidechain
67	SX	20	HIS	Sidechain
68	SY	34	THR	Peptide
82	SZ	108	ILE	Peptide
69	Sa	17	HIS	Sidechain
69	Sa	71	LEU	Peptide
69	Sa	9	GLY	Peptide
70	Sb	81	ARG	Peptide
84	Sd	10	HIS	Peptide
84	Sd	26	ASN	Peptide
84	Sd	8	TRP	Peptide

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Mol	Chain	Res	Type	Group
85	Sf	132	MET	Peptide
85	Sf	135	HIS	Peptide
85	Sf	138	ARG	Peptide
85	Sf	139	HIS	Peptide
86	Sg	125	ARG	Peptide
86	Sg	155	ARG	Peptide
86	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
26	h	97	LYS	Peptide
27	i	26	HIS	Sidechain
27	i	39	PHE	Sidechain
27	i	49	GLY	Peptide

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Mol	Chain	Res	Type	Group
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
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	Peptide,Mainchain
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	135	0
2	D	2380	0	2412	129	0
3	G	1912	0	2059	95	0
4	H	1518	0	1601	69	0
5	J	1359	0	1390	58	0
6	L	1703	0	1818	75	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	M	1131	0	1209	62	0
8	N	1701	0	1749	122	0
9	O	1651	0	1786	68	0
10	Q	1506	0	1623	70	0
11	R	1508	0	1664	115	0
12	S	1454	0	1496	118	0
13	T	1298	0	1366	60	0
14	U	808	0	831	15	0
15	V	979	0	1039	44	0
16	X	976	0	1053	39	0
17	Y	1115	0	1205	51	0
18	Z	1107	0	1182	57	0
19	a	1163	0	1211	82	0
20	b	610	0	650	39	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	43	0
26	h	1015	0	1150	48	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	10946	0
33	7	2558	0	1296	326	0
34	8	3314	0	1683	566	0
35	B	3147	0	3280	203	0
36	C	2919	0	3100	130	0
37	E	1904	0	2055	119	0
38	F	1870	0	1996	131	0
39	I	1713	0	1752	133	0
40	P	1242	0	1269	63	0
41	W	528	0	541	55	0
42	j	706	0	742	41	0
43	n	222	0	258	39	0
44	p	708	0	760	18	0
45	r	1001	0	1062	50	0
46	K	1238	0	1293	99	0
47	q	1556	0	1612	116	0
48	z	3241	0	3210	498	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
49	3	1616	0	824	168	0
50	4	4551	0	2299	450	0
51	9	844	0	861	54	0
52	6	1497	0	1504	25	0
53	S2	36900	0	18593	5342	0
54	SA	1642	0	1646	175	0
55	SB	1725	0	1794	161	0
56	SC	1690	0	1777	77	0
57	SE	2076	0	2177	79	0
58	SG	1923	0	2089	75	0
59	SH	1521	0	1615	93	0
60	SI	1686	0	1772	85	0
61	SJ	1525	0	1640	67	0
62	SL	1238	0	1313	67	0
63	SN	1202	0	1289	62	0
64	SO	1016	0	1037	68	0
65	SV	625	0	628	21	0
66	SW	1034	0	1080	52	0
67	SX	1099	0	1166	47	0
68	SY	1023	0	1090	42	0
69	Sa	781	0	832	60	0
70	Sb	651	0	672	13	0
71	Se	452	0	494	12	0
72	SD	1765	0	1865	66	0
73	SF	1509	0	1563	141	0
74	SK	827	0	854	30	0
75	SM	960	0	989	66	0
76	SP	805	0	861	21	0
77	SQ	1124	0	1193	39	0
78	SR	1047	0	1101	222	0
79	SS	1139	0	1190	146	0
80	ST	1101	0	1135	61	0
81	SU	818	0	883	25	0
82	SZ	598	0	655	128	0
83	Sc	506	0	531	208	0
84	Sd	434	0	427	29	0
85	Sf	581	0	599	199	0
86	Sg	2436	0	2393	89	0
87	S1	608	0	617	32	0
88	S4	604	0	638	16	0
89	5	116	0	0	0	0
89	7	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
89	8	6	0	0	0	0
89	D	1	0	0	0	0
89	S2	36	0	0	1	0
89	V	1	0	0	0	0
89	g	1	0	0	0	0
90	Sa	1	0	0	2	0
90	j	1	0	0	2	0
90	m	1	0	0	0	0
90	o	1	0	0	2	0
All	All	227964	0	169843	21978	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 (21978) 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)
48:z:297:MET:HE3	48:z:355:PHE:CD1	1.21	1.70
32:5:294:G:C5'	32:5:296:A:H4'	1.20	1.68
49:3:31:C:H4'	53:S2:1640:A:C2	1.31	1.65
11:R:166:THR:HG21	53:S2:872:A:C3'	1.21	1.64
11:R:172:ARG:HG2	53:S2:909:G:P	1.35	1.61
39:I:101:LYS:HE2	39:I:121:LYS:CG	1.28	1.60
48:z:413:SER:HB2	51:9:74:ARG:CB	1.33	1.59
48:z:413:SER:CB	51:9:74:ARG:HD2	1.34	1.58
53:S2:870:A:C5	53:S2:915:G:N7	1.72	1.57
48:z:405:ARG:HG2	50:4:207:C:C5'	1.30	1.57
82:SZ:58:LEU:CD2	82:SZ:77:LEU:CD1	1.82	1.57
43:n:10:MET:CE	53:S2:1172:U:H5''	1.26	1.56
43:n:10:MET:HE1	53:S2:1172:U:C5'	1.11	1.55
48:z:405:ARG:HG2	50:4:207:C:C4'	1.30	1.54
32:5:100:C:C5	32:5:101:A:C8	1.94	1.53
53:S2:460:A:C2	53:S2:461:U:C5	1.92	1.52
11:R:166:THR:CG2	53:S2:872:A:H3'	1.35	1.52
53:S2:795:A:C2	53:S2:796:G:N7	1.78	1.52
48:z:413:SER:CA	51:9:74:ARG:HG3	1.38	1.52
32:5:3767:C:C5'	53:S2:1849:G:C6	1.94	1.51
48:z:408:ARG:HH11	50:4:206:G:C5'	1.18	1.51
43:n:10:MET:CE	53:S2:1172:U:C5'	1.76	1.50
11:R:149:LYS:C	11:R:150:ALA:N	1.67	1.50
82:SZ:58:LEU:HD21	82:SZ:77:LEU:CD1	1.32	1.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:870:A:C5	53:S2:915:G:C8	2.00	1.49
83:Sc:14:VAL:CG2	83:Sc:30:VAL:HG12	1.03	1.49
48:z:413:SER:HB2	51:9:74:ARG:CG	1.40	1.49
53:S2:1133:A:C2	53:S2:1134:G:C8	1.97	1.49
32:5:294:G:H5'	32:5:296:A:C4'	1.42	1.49
32:5:4283:G:C2	32:5:4284:C:C5	2.02	1.48
32:5:4283:G:C2	32:5:4284:C:C6	2.01	1.48
39:I:101:LYS:CE	39:I:121:LYS:CG	1.81	1.47
48:z:382:MET:C	50:4:208:A:H4'	1.27	1.47
48:z:405:ARG:CG	50:4:207:C:H5''	1.00	1.47
48:z:410:SER:C	50:4:194:G:N3	1.73	1.47
11:R:151:ARG:HH22	62:SL:118:ARG:CD	1.25	1.47
39:I:101:LYS:CE	39:I:121:LYS:HG2	1.04	1.47
50:4:183:A:O3'	50:4:184:A:P	1.08	1.47
83:Sc:14:VAL:HG22	83:Sc:31:ARG:C	1.08	1.47
53:S2:870:A:N7	53:S2:915:G:C8	1.83	1.46
48:z:413:SER:CB	51:9:74:ARG:CD	1.92	1.46
83:Sc:14:VAL:CG2	83:Sc:31:ARG:C	1.84	1.46
32:5:3759:A:N1	53:S2:1709:G:C5'	1.74	1.45
48:z:405:ARG:CG	50:4:207:C:C5'	1.80	1.45
32:5:2314:G:N2	32:5:2315:G:N7	1.62	1.45
60:SI:168:GLN:NE2	60:SI:170:LYS:HE2	1.13	1.45
83:Sc:14:VAL:CG1	83:Sc:31:ARG:O	1.65	1.44
54:SA:200:ASP:CB	78:SR:85:VAL:CG1	1.91	1.44
4:H:31:ARG:NH1	4:H:87:GLY:HA3	1.28	1.44
53:S2:1249:C:C5	53:S2:1250:A:N7	1.85	1.44
55:SB:150:ILE:HD12	78:SR:129:LYS:NZ	1.14	1.44
83:Sc:14:VAL:CG2	83:Sc:30:VAL:CG1	1.95	1.43
48:z:293:LYS:HG2	48:z:351:MET:CB	1.22	1.43
53:S2:870:A:C4	53:S2:915:G:N7	1.84	1.43
54:SA:200:ASP:HB3	78:SR:85:VAL:CG1	0.96	1.43
55:SB:145:LYS:NZ	78:SR:128:PHE:CZ	1.85	1.42
48:z:411:GLY:N	50:4:194:G:N3	1.60	1.42
32:5:1613:A:N6	32:5:3637:U:N3	1.64	1.42
48:z:382:MET:O	50:4:208:A:C4'	1.68	1.42
64:SO:72:TYR:CD1	83:Sc:63:ARG:NH1	1.80	1.41
54:SA:50:ASN:HA	78:SR:105:MET:CE	1.48	1.41
33:7:54:A:C2	33:7:55:A:N7	1.86	1.41
48:z:413:SER:CB	51:9:74:ARG:CG	1.97	1.40
33:7:18:C:N3	33:7:19:C:C5	1.88	1.40
48:z:297:MET:CE	48:z:355:PHE:CD1	2.02	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SB:145:LYS:NZ	78:SR:128:PHE:CE2	1.89	1.40
83:Sc:14:VAL:HG23	83:Sc:32:VAL:CG1	1.50	1.40
83:Sc:14:VAL:HG22	83:Sc:32:VAL:N	1.34	1.40
83:Sc:14:VAL:CB	83:Sc:31:ARG:O	1.67	1.39
53:S2:1453:C:C4	53:S2:1455:A:H1'	1.55	1.39
15:V:97:TYR:HE2	41:W:21:TYR:CD1	1.38	1.39
73:SF:95:HIS:NE2	82:SZ:108:ILE:CD1	1.84	1.39
78:SR:100:PRO:HG2	78:SR:119:VAL:CG1	1.51	1.39
48:z:293:LYS:CG	48:z:351:MET:HB3	1.15	1.39
32:5:2856:C:O2	32:5:2857:A:C8	1.76	1.38
48:z:408:ARG:HH11	50:4:206:G:C4'	1.36	1.38
53:S2:381:C:N4	60:SI:49:ARG:NH1	1.69	1.38
39:I:101:LYS:NZ	39:I:121:LYS:CG	1.83	1.37
32:5:1174:G:N2	32:5:1175:A:N7	1.67	1.37
50:4:183:A:C3'	50:4:184:A:P	2.10	1.36
48:z:413:SER:HA	51:9:74:ARG:CG	1.54	1.36
48:z:410:SER:CB	50:4:193:G:N2	1.88	1.36
50:4:183:A:HO3'	50:4:184:A:P	0.89	1.36
54:SA:12:GLU:OE1	78:SR:111:PHE:CD1	1.77	1.36
32:5:3767:C:H5'	53:S2:1849:G:C6	1.56	1.36
48:z:408:ARG:CD	50:4:206:G:H4'	1.56	1.36
53:S2:830:A:N6	53:S2:844:U:H3	1.21	1.36
48:z:413:SER:CA	51:9:74:ARG:CG	2.01	1.35
79:SS:13:LEU:CD1	79:SS:56:ALA:O	1.73	1.35
34:8:12:G:C2	34:8:13:G:C8	2.14	1.34
32:5:1478:C:O2	32:5:1479:G:N7	1.59	1.34
53:S2:746:C:O2'	59:SH:111:LYS:NZ	1.60	1.34
11:R:151:ARG:CZ	62:SL:118:ARG:HD2	1.58	1.34
32:5:983:C:O2	32:5:984:C:C6	1.78	1.34
32:5:4213:A:N1	32:5:4218:U:O4	1.60	1.34
82:SZ:55:TYR:CE2	82:SZ:59:CYS:SG	2.20	1.34
48:z:411:GLY:H	50:4:194:G:N2	1.21	1.34
83:Sc:45:ASN:ND2	83:Sc:68:LEU:HD22	1.39	1.34
32:5:4167:G:C2	32:5:4168:G:C8	2.16	1.33
48:z:374:LYS:CE	50:4:195:U:OP1	1.76	1.33
53:S2:551:U:O2	53:S2:552:G:C8	1.80	1.33
32:5:1899:G:C2	32:5:1900:C:C5	2.15	1.33
32:5:3662:A:N1	32:5:3680:U:O4	1.61	1.33
32:5:4233:A:N1	32:5:4290:U:O4	1.61	1.33
48:z:411:GLY:N	50:4:194:G:C2	1.95	1.33
78:SR:100:PRO:CG	78:SR:119:VAL:CG1	2.05	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3596:A:N1	62:SL:2:ALA:HB2	1.40	1.33
54:SA:50:ASN:CA	78:SR:105:MET:HE1	1.31	1.33
60:SI:168:GLN:NE2	60:SI:170:LYS:CE	1.89	1.33
55:SB:150:ILE:CD1	78:SR:129:LYS:NZ	1.91	1.32
64:SO:72:TYR:CE1	83:Sc:63:ARG:NH1	1.85	1.32
32:5:3702:A:C2	32:5:3703:G:C8	2.15	1.32
53:S2:875:A:C2	53:S2:876:C:C6	2.18	1.32
32:5:4166:G:C2	32:5:4167:G:C8	2.18	1.32
32:5:2078:C:N3	32:5:2079:G:N7	1.77	1.32
32:5:3795:A:H4'	53:S2:1815:A:O2'	1.21	1.32
53:S2:875:A:C6	53:S2:876:C:C5	2.16	1.32
32:5:1756:U:O4	32:5:1775:A:N1	1.57	1.32
32:5:2314:G:C2	32:5:2315:G:N7	1.97	1.31
43:n:4:LYS:HE2	53:S2:1844:U:C5	1.63	1.31
53:S2:846:G:OP2	57:SE:108:ARG:NH2	1.62	1.31
48:z:340:MET:C	48:z:341:LYS:N	1.86	1.31
73:SF:140:ASP:OD1	83:Sc:58:LEU:CD2	1.79	1.31
11:R:151:ARG:NH2	62:SL:118:ARG:CD	1.88	1.30
32:5:4369:A:C2	32:5:4370:G:C8	2.19	1.30
48:z:482:UNK:C	48:z:482:UNK:O	1.78	1.30
17:Y:74:TYR:HD1	34:8:74:U:O4	1.13	1.30
32:5:3714:G:C6	32:5:3715:U:N3	1.99	1.30
53:S2:841:G:C2	53:S2:842:C:C5	2.19	1.30
78:SR:103:LYS:HB2	78:SR:117:LEU:CD1	1.58	1.30
32:5:2058:G:C2	32:5:2059:C:C6	2.20	1.29
48:z:377:THR:CG2	50:4:193:G:O2'	1.80	1.29
48:z:408:ARG:HD2	50:4:206:G:C4'	1.60	1.29
49:3:38:C:C2	49:3:39:G:C8	2.20	1.29
46:K:35:LEU:O	46:K:35:LEU:HD12	1.24	1.29
48:z:340:MET:C	48:z:341:LYS:C	1.98	1.29
53:S2:458:A:C6	53:S2:459:C:C6	2.21	1.29
32:5:4080:C:O2	32:5:4081:G:H8	1.14	1.29
53:S2:50:A:N1	53:S2:488:U:O4	1.64	1.29
53:S2:994:C:N3	53:S2:995:G:N7	1.78	1.29
48:z:340:MET:C	48:z:341:LYS:CA	2.05	1.28
53:S2:449:A:C6	53:S2:452:G:C5	2.22	1.28
32:5:3767:C:C5'	53:S2:1849:G:O6	1.77	1.28
32:5:4165:C:N3	32:5:4166:G:C8	2.02	1.28
48:z:410:SER:HB3	50:4:193:G:N2	0.99	1.28
32:5:1632:A:N6	32:5:1634:A:C8	2.02	1.28
54:SA:198:MET:HE3	78:SR:86:PRO:O	1.24	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SA:205:ARG:NH2	78:SR:84:TYR:CD2	2.01	1.28
53:S2:870:A:C6	53:S2:915:G:C4	2.06	1.27
11:R:151:ARG:NH2	62:SL:118:ARG:HD2	1.39	1.27
34:8:96:C:O2	34:8:97:A:C8	1.87	1.27
47:q:106:LYS:O	47:q:107:VAL:HG13	1.14	1.27
32:5:28:C:O2	32:5:29:G:C8	1.86	1.27
79:SS:26:ILE:CG1	79:SS:54:LYS:O	1.81	1.27
53:S2:870:A:N6	53:S2:915:G:C4	1.99	1.27
54:SA:39:TYR:OH	78:SR:104:GLU:HB2	1.31	1.27
73:SF:128:ILE:CD1	83:Sc:68:LEU:HB2	1.63	1.27
17:Y:11:ARG:HH21	36:C:200:ARG:NH2	1.30	1.26
83:Sc:13:ARG:CB	83:Sc:54:ASP:O	1.82	1.26
32:5:1628:C:O2	32:5:1629:G:C8	1.87	1.26
32:5:54:G:C6	32:5:55:G:C8	2.23	1.26
46:K:37:LEU:O	46:K:37:LEU:HD23	1.13	1.26
48:z:297:MET:C	48:z:353:PRO:HD3	1.59	1.26
53:S2:165:G:C8	53:S2:166:A:N7	2.04	1.26
87:S1:5:GLN:O	87:S1:6:THR:HG23	1.31	1.26
32:5:1628:C:N3	32:5:1629:G:N7	1.83	1.26
32:5:3909:C:N3	32:5:3910:C:C5	2.04	1.26
53:S2:795:A:N3	53:S2:796:G:N7	1.81	1.26
78:SR:18:GLU:HB2	78:SR:70:SER:OG	1.36	1.26
49:3:38:C:N3	49:3:39:G:C8	2.02	1.26
48:z:408:ARG:NH1	50:4:206:G:H5''	1.48	1.25
48:z:413:SER:CA	51:9:74:ARG:CD	2.12	1.25
32:5:1245:C:O2	32:5:1246:G:C8	1.88	1.25
53:S2:1293:A:N3	85:Sf:151:ASN:N	1.84	1.25
82:SZ:57:LYS:O	82:SZ:61:GLU:N	1.68	1.25
32:5:4518:A:C8	35:B:257:TRP:CH2	2.25	1.25
39:I:101:LYS:NZ	39:I:121:LYS:CD	1.97	1.25
53:S2:1114:U:O4	53:S2:1119:A:N1	1.69	1.25
32:5:3795:A:C4'	53:S2:1815:A:O2'	1.83	1.25
53:S2:955:A:C8	53:S2:969:U:H5	1.52	1.25
32:5:2035:C:C4	32:5:2036:C:C5	2.24	1.24
32:5:2784:C:C2	32:5:2785:C:C5	2.25	1.24
32:5:3767:C:H5''	53:S2:1849:G:C5	1.70	1.24
34:8:10:G:C6	34:8:11:C:C5	2.24	1.24
39:I:101:LYS:NZ	39:I:121:LYS:HG2	1.45	1.24
43:n:4:LYS:HE2	53:S2:1844:U:C4	1.69	1.24
53:S2:1594:A:OP2	82:SZ:104:ARG:HG3	1.37	1.24
83:Sc:14:VAL:HB	83:Sc:30:VAL:CG1	1.66	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1899:G:C8	32:5:2278:G:N1	2.03	1.24
34:8:11:C:N3	34:8:12:G:N7	1.84	1.24
32:5:3759:A:N1	53:S2:1709:G:H5'	1.36	1.24
53:S2:796:G:O2'	59:SH:111:LYS:HG3	1.27	1.24
83:Sc:14:VAL:HG13	83:Sc:31:ARG:O	1.21	1.24
32:5:1388:A:C6	32:5:1396:G:N2	2.05	1.24
32:5:4283:G:N1	32:5:4284:C:C5	2.01	1.24
48:z:408:ARG:NH1	50:4:206:G:C5'	1.97	1.24
53:S2:56:G:C6	53:S2:90:G:N2	2.04	1.24
53:S2:460:A:H2	53:S2:461:U:C5	1.38	1.24
53:S2:1309:C:O2	85:Sf:143:LYS:CD	1.86	1.24
32:5:1683:U:O2	32:5:1684:A:H8	1.16	1.24
53:S2:458:A:N6	53:S2:459:C:C5	2.06	1.24
20:b:17:HIS:ND1	32:5:1724:G:N7	1.85	1.23
32:5:977:C:C2	32:5:978:G:C8	2.25	1.23
5:J:119:TYR:CE1	79:SS:12:ILE:HG21	1.74	1.23
32:5:977:C:N3	32:5:978:G:N7	1.86	1.23
34:8:133:G:C2	34:8:134:G:C8	2.26	1.23
48:z:339:ILE:CD1	48:z:484:UNK:CB	2.16	1.23
11:R:172:ARG:HG2	53:S2:909:G:OP1	1.34	1.23
32:5:161:G:N2	32:5:275:C:O2	1.69	1.23
32:5:1632:A:C6	32:5:1634:A:C8	2.25	1.23
32:5:2743:A:C2	32:5:2744:A:C5	2.27	1.23
53:S2:42:A:N3	53:S2:426:A:N7	1.86	1.23
53:S2:1133:A:N1	53:S2:1134:G:N7	1.86	1.23
32:5:2078:C:O2	32:5:2079:G:H8	1.14	1.23
32:5:2314:G:N2	32:5:2315:G:C5	2.05	1.23
82:SZ:57:LYS:HD3	82:SZ:61:GLU:OE2	1.30	1.23
32:5:2362:U:C4	32:5:3859:G:N2	2.07	1.22
53:S2:1205:C:H5	53:S2:1206:G:N7	1.37	1.22
79:SS:13:LEU:HD12	79:SS:56:ALA:O	1.28	1.22
11:R:172:ARG:CG	53:S2:909:G:P	2.27	1.22
47:q:107:VAL:HB	47:q:108:PRO:CD	1.69	1.22
53:S2:349:A:H5''	60:SI:27:TYR:OH	1.40	1.22
53:S2:1599:U:OP2	82:SZ:80:ARG:NH1	1.71	1.22
32:5:2314:G:N2	32:5:2315:G:C8	2.08	1.22
53:S2:367:U:O2'	53:S2:371:A:N7	1.67	1.22
47:q:32:ALA:HA	47:q:187:LEU:CD2	1.70	1.22
32:5:2080:U:C2	32:5:2081:C:C5	2.27	1.22
32:5:2326:G:C2	32:5:2327:G:C8	2.28	1.22
32:5:4165:C:N3	32:5:4166:G:N7	1.88	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:343:GLY:O	48:z:346:SER:HB2	1.05	1.22
53:S2:1204:A:H2'	53:S2:1205:C:O2	1.39	1.22
73:SF:141:VAL:O	83:Sc:56:LEU:CD1	1.86	1.22
73:SF:141:VAL:O	83:Sc:56:LEU:HD13	1.32	1.22
32:5:1672:U:C2	32:5:1673:U:C5	2.28	1.21
53:S2:1101:U:O2	53:S2:1102:G:N7	1.71	1.21
53:S2:1433:C:H2'	53:S2:1434:C:O4'	1.39	1.21
48:z:402:ARG:CG	50:4:184:A:O3'	1.81	1.21
49:3:31:C:C4'	53:S2:1640:A:H2	1.52	1.21
54:SA:12:GLU:OE1	78:SR:111:PHE:HD1	1.08	1.21
54:SA:198:MET:CE	78:SR:86:PRO:O	1.88	1.21
32:5:2079:G:C2	32:5:2080:U:C5	2.28	1.21
32:5:3759:A:N1	53:S2:1709:G:C4'	2.02	1.21
34:8:64:U:O2	34:8:65:A:N7	1.73	1.21
47:q:32:ALA:CA	47:q:187:LEU:HD22	1.69	1.21
53:S2:386:C:N3	53:S2:387:C:C5	2.09	1.21
32:5:28:C:O2	32:5:29:G:H8	1.14	1.21
32:5:3759:A:C2	53:S2:1709:G:O4'	1.93	1.21
32:5:3767:C:H5''	53:S2:1849:G:C6	1.60	1.21
48:z:374:LYS:HE3	50:4:195:U:P	1.80	1.21
32:5:1583:A:H1'	32:5:2396:A:N6	1.53	1.21
53:S2:460:A:C2	53:S2:461:U:H5	1.40	1.21
53:S2:875:A:C5	53:S2:876:C:C5	2.27	1.21
49:3:16:U:O4	49:3:59:A:N1	1.72	1.20
32:5:2856:C:O2	32:5:2857:A:N7	1.72	1.20
48:z:339:ILE:HD13	48:z:484:UNK:CB	1.71	1.20
53:S2:50:A:N6	53:S2:488:U:H3	1.39	1.20
83:Sc:14:VAL:CB	83:Sc:30:VAL:CG1	2.16	1.20
15:V:97:TYR:CE2	41:W:21:TYR:CD1	2.30	1.20
32:5:3702:A:N1	32:5:3703:G:C8	2.08	1.20
32:5:4537:C:N3	32:5:4538:G:N7	1.90	1.20
53:S2:381:C:H42	60:SI:49:ARG:CZ	1.53	1.20
32:5:1683:U:O2	32:5:1684:A:C8	1.94	1.20
34:8:96:C:O2	34:8:97:A:H8	1.20	1.20
83:Sc:45:ASN:ND2	83:Sc:68:LEU:CD2	2.03	1.20
2:D:29:ASP:HA	32:5:4280:A:N6	1.56	1.19
48:z:380:ASP:HB3	50:4:192:A:N1	1.57	1.19
32:5:27:C:O2	32:5:28:C:H6	1.22	1.19
32:5:2724:G:C2	32:5:2726:G:N7	2.10	1.19
32:5:2843:U:O2	32:5:2844:A:C8	1.95	1.19
32:5:1213:G:C4	32:5:1215:C:H1'	1.78	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1310:C:N3	32:5:1311:G:C8	2.10	1.19
53:S2:875:A:C4	53:S2:876:C:C6	2.30	1.19
32:5:1936:C:C5	33:7:84:U:C5	2.30	1.19
32:5:1961:G:O2'	32:5:2025:A:N6	1.75	1.19
53:S2:1231:C:O4'	53:S2:1665:G:N2	1.76	1.19
32:5:3767:C:C5'	53:S2:1849:G:C5	2.26	1.19
32:5:4123:C:N3	32:5:4124:G:C8	2.11	1.19
34:8:10:G:C6	34:8:11:C:C6	2.30	1.19
48:z:385:GLN:NE2	50:4:184:A:OP1	1.76	1.19
32:5:2736:G:C2	32:5:2737:C:C5	2.30	1.18
34:8:96:C:C2	34:8:97:A:C8	2.31	1.18
47:q:107:VAL:HB	47:q:108:PRO:HD2	1.22	1.18
48:z:401:GLY:C	50:4:185:C:H5'	1.68	1.18
15:V:97:TYR:CE2	41:W:21:TYR:HD1	1.61	1.18
32:5:77:U:O4	32:5:335:A:N1	1.77	1.18
32:5:2856:C:C2	32:5:2857:A:N7	2.10	1.18
48:z:339:ILE:O	48:z:343:GLY:N	1.76	1.18
83:Sc:60:GLU:HG3	83:Sc:63:ARG:HE	1.07	1.18
32:5:2468:U:O4	32:5:2473:A:N1	1.77	1.18
47:q:106:LYS:O	47:q:107:VAL:CG1	1.91	1.18
48:z:408:ARG:NH1	50:4:206:G:O3'	1.74	1.18
53:S2:1249:C:C5	53:S2:1250:A:C8	2.31	1.18
32:5:88:A:N6	32:5:97:G:N3	1.88	1.18
53:S2:551:U:O2	53:S2:552:G:N7	1.75	1.18
79:SS:10:GLN:HG3	79:SS:13:LEU:HD21	1.21	1.18
32:5:1475:G:C2	32:5:1476:C:C5	2.30	1.18
32:5:1899:G:C2	32:5:1900:C:C6	2.32	1.18
32:5:2843:U:N3	32:5:2844:A:N7	1.90	1.18
33:7:18:C:O2	33:7:19:C:C6	1.96	1.18
48:z:293:LYS:CG	48:z:351:MET:CB	1.89	1.18
32:5:2497:C:N3	32:5:2498:C:C5	2.12	1.17
53:S2:1412:C:O2	53:S2:1413:G:N7	1.76	1.17
54:SA:205:ARG:NH2	78:SR:84:TYR:CE2	2.11	1.17
54:SA:42:LYS:HD3	78:SR:99:ASP:OD2	1.37	1.17
32:5:208:A:O4'	32:5:232:G:N2	1.78	1.17
32:5:1268:G:C2	32:5:1270:A:C8	2.32	1.17
32:5:2327:G:C2	32:5:2328:G:C8	2.33	1.17
33:7:43:U:N3	33:7:44:C:C5	2.12	1.17
34:8:96:C:N3	34:8:97:A:N7	1.92	1.17
53:S2:1063:C:H4'	53:S2:1838:U:O4	1.42	1.17
53:S2:955:A:N6	53:S2:971:G:H1'	1.60	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SR:100:PRO:CG	78:SR:119:VAL:HG13	1.70	1.17
32:5:2508:U:O2	32:5:2509:C:C5	1.97	1.17
32:5:4999:G:C2	32:5:5000:G:C8	2.33	1.17
32:5:1823:G:O3'	32:5:1825:A:P	2.03	1.16
32:5:2035:C:N3	32:5:2036:C:C5	2.13	1.16
48:z:408:ARG:NH1	50:4:206:G:C3'	2.09	1.16
53:S2:1309:C:O2	85:Sf:143:LYS:HD3	1.00	1.16
54:SA:42:LYS:CD	78:SR:99:ASP:OD2	1.92	1.16
32:5:294:G:H3'	32:5:296:A:C5'	1.74	1.16
32:5:1632:A:N6	32:5:1634:A:N9	1.93	1.16
32:5:1946:G:N2	32:5:2037:C:C6	2.12	1.16
47:q:107:VAL:CB	47:q:108:PRO:HD2	1.73	1.16
49:3:34:A:C2	53:S2:1701:C:H6	1.62	1.16
53:S2:1539:U:O2	53:S2:1540:G:C8	1.99	1.16
53:S2:1603:G:C6	79:SS:28:PHE:CZ	2.32	1.16
55:SB:150:ILE:CD1	78:SR:129:LYS:HZ1	1.48	1.16
53:S2:870:A:C5	53:S2:915:G:C5	2.13	1.16
53:S2:955:A:H62	53:S2:971:G:H1'	1.02	1.16
83:Sc:60:GLU:HG3	83:Sc:63:ARG:NE	1.58	1.16
32:5:271:C:N3	32:5:272:U:C5	2.14	1.16
32:5:1929:A:N1	32:5:2054:U:O4	1.77	1.16
73:SF:122:ARG:HB3	83:Sc:57:THR:HG21	1.27	1.16
32:5:294:G:C3'	32:5:296:A:H5''	1.76	1.16
48:z:408:ARG:O	50:4:194:G:N2	1.77	1.16
53:S2:1857:G:N7	64:SO:146:ARG:NH2	1.94	1.16
87:S1:48:CYS:O	87:S1:49:LEU:CD2	1.94	1.16
32:5:1990:A:H2'	32:5:1991:A:C4'	1.77	1.15
32:5:2347:A:O2'	32:5:2348:G:N7	1.79	1.15
46:K:9:GLU:OE1	46:K:11:LYS:HG3	1.45	1.15
48:z:352:ILE:N	48:z:355:PHE:CZ	1.80	1.15
48:z:380:ASP:O	50:4:208:A:H1'	1.47	1.15
32:5:4276:G:C6	32:5:4277:G:C8	2.33	1.15
48:z:408:ARG:NH1	50:4:206:G:C4'	2.04	1.15
48:z:413:SER:HA	51:9:74:ARG:CD	1.75	1.15
49:3:31:C:C4'	53:S2:1640:A:C2	2.27	1.15
53:S2:378:U:N3	53:S2:379:C:C5	2.14	1.15
32:5:3740:G:C6	32:5:3741:C:C6	2.36	1.14
43:n:10:MET:HE2	53:S2:1172:U:H5'	1.19	1.14
53:S2:830:A:N6	53:S2:844:U:N3	1.83	1.14
53:S2:1109:C:C4	78:SR:123:THR:OG1	1.94	1.14
53:S2:1292:C:P	85:Sf:149:CYS:H	1.70	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:SZ:58:LEU:HD23	82:SZ:77:LEU:CD1	1.74	1.14
83:Sc:13:ARG:HB2	83:Sc:54:ASP:O	1.46	1.14
32:5:1556:C:O2	32:5:1557:C:C6	2.00	1.14
32:5:1618:G:C2	32:5:1619:G:C8	2.34	1.14
32:5:1667:G:N2	32:5:2283:G:O6	1.80	1.14
87:S1:48:CYS:O	87:S1:49:LEU:HD23	0.99	1.14
11:R:172:ARG:CG	53:S2:909:G:OP2	1.96	1.14
53:S2:524:U:N3	53:S2:594:A:N6	1.95	1.14
83:Sc:44:ARG:HG3	83:Sc:58:LEU:CD1	1.76	1.14
33:7:18:C:C2	33:7:19:C:C5	2.34	1.14
32:5:208:A:C1'	32:5:232:G:H21	1.59	1.14
32:5:1302:U:N3	32:5:1303:A:C8	2.14	1.14
32:5:1378:C:H3'	32:5:1379:C:H5'	1.30	1.14
32:5:4983:C:O2	32:5:4984:C:C6	2.01	1.14
54:SA:200:ASP:HB3	78:SR:85:VAL:HG12	1.19	1.14
2:D:268:ARG:HD3	33:7:60:G:O2'	1.46	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
32:5:3912:U:O2'	32:5:3913:G:H5'	1.47	1.13
48:z:408:ARG:CZ	50:4:206:G:O3'	1.96	1.13
49:3:39:G:C2	49:3:40:C:C6	2.35	1.13
53:S2:381:C:C4	60:SI:49:ARG:HG2	1.83	1.13
54:SA:39:TYR:OH	78:SR:104:GLU:CB	1.94	1.13
25:g:100:GLN:OE1	32:5:4119:C:N4	1.80	1.13
32:5:1899:G:N3	32:5:1900:C:C6	2.15	1.13
32:5:3739:C:N4	32:5:3740:G:N7	1.96	1.13
48:z:343:GLY:O	48:z:346:SER:CB	1.97	1.13
53:S2:118:C:H1'	53:S2:445:A:C2	1.83	1.13
53:S2:841:G:N3	53:S2:842:C:C6	2.16	1.13
82:SZ:46:ASN:ND2	82:SZ:78:LYS:HA	1.63	1.13
32:5:27:C:O2	32:5:28:C:C6	2.01	1.13
32:5:100:C:C4	32:5:101:A:N7	2.17	1.13
48:z:297:MET:O	48:z:353:PRO:HD3	1.45	1.13
53:S2:925:G:C2	53:S2:926:A:C8	2.37	1.13
73:SF:95:HIS:NE2	82:SZ:108:ILE:HD13	1.47	1.13
32:5:1266:G:N2	32:5:2111:G:N3	1.96	1.13
43:n:11:ARG:NH1	53:S2:1844:U:OP1	1.82	1.13
46:K:37:LEU:O	46:K:37:LEU:CD2	1.96	1.13
48:z:336:PHE:HE1	48:z:427:PHE:CE1	1.66	1.13
53:S2:337:C:N3	53:S2:338:G:C8	2.17	1.13
53:S2:841:G:N3	53:S2:842:C:C5	2.17	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2078:C:O2	32:5:2079:G:C8	2.02	1.13
17:Y:74:TYR:CD1	34:8:74:U:O4	2.01	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
32:5:3737:A:H2'	32:5:3738:G:O4'	1.46	1.12
32:5:3907:G:H1'	32:5:4449:A:N9	1.62	1.12
53:S2:1539:U:N3	53:S2:1540:G:N7	1.95	1.12
33:7:54:A:C2	33:7:55:A:C8	2.37	1.12
83:Sc:14:VAL:HG23	83:Sc:32:VAL:HG12	1.23	1.12
32:5:2058:G:N1	32:5:2059:C:C5	2.17	1.12
48:z:377:THR:HG22	50:4:193:G:O2'	0.96	1.12
53:S2:841:G:C2	53:S2:842:C:C4	2.36	1.12
32:5:469:C:O2	32:5:688:U:H1'	1.49	1.12
32:5:1563:A:N7	53:S2:678:U:O4'	1.83	1.12
32:5:733:A:C8	32:5:734:G:C8	2.38	1.12
32:5:1475:G:N2	32:5:1476:C:C5	2.18	1.12
32:5:1990:A:H2'	32:5:1991:A:H4'	1.22	1.12
32:5:3675:G:C2	32:5:3676:G:N7	2.17	1.12
34:8:43:A:C2	34:8:44:A:C8	2.38	1.12
48:z:405:ARG:HG2	50:4:207:C:H4'	1.22	1.12
54:SA:50:ASN:CA	78:SR:105:MET:CE	2.10	1.12
79:SS:30:ILE:HD11	79:SS:45:LEU:HD21	1.23	1.12
82:SZ:49:LEU:HD23	82:SZ:83:LEU:CD1	1.79	1.12
83:Sc:14:VAL:HG23	83:Sc:32:VAL:HG13	1.24	1.12
83:Sc:14:VAL:HG11	83:Sc:31:ARG:H	1.02	1.12
32:5:209:U:C2	32:5:233:U:C4	2.37	1.11
32:5:1302:U:N3	32:5:1303:A:N7	1.96	1.11
32:5:1392:A:C2	32:5:1393:G:C5	2.37	1.11
32:5:4343:U:N3	32:5:4344:U:C5	2.18	1.11
32:5:4892:A:N1	32:5:4927:G:O6	1.84	1.11
33:7:18:C:C2	33:7:19:C:C6	2.36	1.11
32:5:2604:C:O2	32:5:2605:G:H8	1.32	1.11
32:5:2843:U:C2	32:5:2844:A:C8	2.38	1.11
32:5:3755:G:N1	32:5:3770:U:C4	2.01	1.11
32:5:4982:A:C6	32:5:4983:C:C5	2.38	1.11
33:7:94:C:N3	33:7:95:C:C5	2.19	1.11
53:S2:1310:U:O4'	85:Sf:143:LYS:HD2	1.48	1.11
73:SF:192:LYS:NZ	73:SF:196:LEU:CD2	2.14	1.11
32:5:294:G:H5'	32:5:296:A:C5'	1.78	1.11
32:5:4283:G:N3	32:5:4284:C:C6	2.17	1.11
53:S2:1409:A:C2	53:S2:1410:C:C6	2.38	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Sc:14:VAL:HG23	83:Sc:30:VAL:HG12	1.11	1.11
11:R:172:ARG:HG2	53:S2:909:G:OP2	1.50	1.11
19:a:132:ARG:HH21	32:5:1468:C:H5''	1.07	1.11
32:5:2127:C:H2'	32:5:2128:G:C8	1.85	1.11
33:7:42:A:C2	33:7:43:U:C6	2.38	1.11
34:8:132:G:C2	34:8:133:G:C8	2.39	1.11
50:4:58:G:C6	50:4:288:G:N2	2.19	1.11
53:S2:870:A:C8	53:S2:915:G:C8	2.37	1.11
53:S2:1292:C:C4	85:Sf:150:PHE:HB2	1.86	1.11
82:SZ:58:LEU:HD21	82:SZ:77:LEU:HD13	1.13	1.11
49:3:38:C:C4	49:3:39:G:N7	2.19	1.11
53:S2:792:C:N3	53:S2:793:G:C8	2.18	1.11
53:S2:1405:A:H2'	53:S2:1406:G:O4'	1.51	1.11
53:S2:1455:A:C2	53:S2:1456:G:C8	2.38	1.11
55:SB:60:ASP:OD1	55:SB:63:LYS:NZ	1.84	1.11
32:5:98:A:N3	32:5:292:G:O6	1.83	1.10
32:5:2658:G:C2	32:5:2675:G:C2	2.39	1.10
32:5:3710:G:C2	32:5:3711:A:C2	2.38	1.10
48:z:374:LYS:NZ	50:4:195:U:OP1	1.84	1.10
53:S2:381:C:H42	60:SI:49:ARG:NH1	1.34	1.10
53:S2:955:A:C8	53:S2:969:U:C5	2.39	1.10
83:Sc:44:ARG:HG3	83:Sc:58:LEU:HD11	1.30	1.10
32:5:3702:A:N1	32:5:3703:G:N7	1.98	1.10
32:5:4549:G:C2	32:5:4550:G:C8	2.40	1.10
39:I:101:LYS:NZ	39:I:121:LYS:HD2	1.62	1.10
53:S2:648:A:C2	53:S2:649:U:C6	2.40	1.10
53:S2:1453:C:N4	53:S2:1455:A:H1'	1.64	1.10
78:SR:103:LYS:CB	78:SR:117:LEU:HD11	1.81	1.10
32:5:294:G:C5'	32:5:296:A:C4'	2.12	1.10
32:5:1556:C:N3	32:5:1557:C:C5	2.19	1.10
32:5:1991:A:H2'	32:5:1992:U:H2'	1.20	1.10
32:5:2632:U:C2	32:5:2633:U:C5	2.39	1.10
32:5:3637:U:O4	32:5:3651:A:H2	1.31	1.10
32:5:3710:G:N3	32:5:3711:A:C2	2.20	1.10
32:5:4653:C:C2	32:5:4654:C:C5	2.38	1.10
53:S2:799:U:H5''	59:SH:110:THR:HG22	1.19	1.10
78:SR:100:PRO:CD	78:SR:119:VAL:CG1	2.29	1.10
83:Sc:14:VAL:HG21	83:Sc:30:VAL:C	1.77	1.10
32:5:983:C:O2	32:5:984:C:H6	1.16	1.10
32:5:3739:C:N3	32:5:3740:G:C8	2.20	1.10
32:5:43:U:C5	32:5:44:A:C8	2.39	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:382:MET:C	50:4:208:A:C4'	2.19	1.10
53:S2:793:G:C6	53:S2:794:A:C8	2.38	1.10
53:S2:875:A:N3	53:S2:876:C:C6	2.20	1.10
32:5:85:G:N2	32:5:97:G:N7	2.00	1.09
32:5:1936:C:C5	33:7:84:U:C6	2.39	1.09
32:5:2105:A:C2	32:5:2106:G:N7	2.19	1.09
32:5:2735:G:C2	32:5:2736:G:C8	2.39	1.09
32:5:4166:G:N1	32:5:4167:G:N7	1.98	1.09
32:5:4283:G:N1	32:5:4284:C:C4	2.19	1.09
32:5:4283:G:N2	32:5:4284:C:C6	2.18	1.09
32:5:4983:C:O2	32:5:4984:C:C5	2.05	1.09
53:S2:875:A:C2	53:S2:876:C:N1	2.19	1.09
82:SZ:50:PHE:CE2	82:SZ:79:ILE:HB	1.87	1.09
5:J:119:TYR:CZ	79:SS:12:ILE:HG21	1.87	1.09
12:S:45:TRP:CZ3	12:S:56:LYS:HA	1.88	1.09
32:5:2532:C:C2	32:5:2533:C:C5	2.40	1.09
32:5:2736:G:C2	32:5:2737:C:C6	2.39	1.09
11:R:151:ARG:NH1	62:SL:118:ARG:HD2	1.66	1.09
32:5:144:G:C2	32:5:145:G:C8	2.41	1.09
32:5:983:C:N3	32:5:984:C:H5	1.51	1.09
32:5:4725:C:O2	32:5:4726:G:H8	1.33	1.09
33:7:94:C:C2	33:7:95:C:C5	2.40	1.09
39:I:101:LYS:HZ3	39:I:121:LYS:CD	1.62	1.09
53:S2:414:A:C2	53:S2:424:C:O2	2.05	1.09
53:S2:795:A:H2	53:S2:796:G:C5	1.70	1.09
53:S2:1273:C:O2	53:S2:1506:A:H2	1.34	1.09
12:S:99:ASP:OD1	12:S:100:LEU:N	1.85	1.09
32:5:2362:U:C5	32:5:3859:G:N2	2.21	1.09
32:5:4096:C:C4	32:5:4097:G:C8	2.40	1.09
32:5:4229:U:C4	32:5:4230:C:C5	2.40	1.09
32:5:4284:C:N3	32:5:4285:U:C5	2.20	1.09
53:S2:1599:U:P	82:SZ:80:ARG:HH11	1.74	1.09
78:SR:100:PRO:HG2	78:SR:119:VAL:HG11	1.10	1.09
32:5:3767:C:H4'	53:S2:1849:G:O6	1.53	1.09
48:z:402:ARG:HG3	50:4:184:A:O3'	1.14	1.09
48:z:413:SER:CB	51:9:74:ARG:CB	2.24	1.09
32:5:100:C:N4	32:5:101:A:N7	2.01	1.08
32:5:483:G:C2	32:5:484:U:C5	2.41	1.08
32:5:1634:A:C2	32:5:1635:C:C6	2.41	1.08
53:S2:419:G:N2	53:S2:661:U:O2	1.85	1.08
53:S2:1205:C:C5	53:S2:1206:G:N7	2.21	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1408:U:O4	53:S2:1439:A:N1	1.84	1.08
83:Sc:14:VAL:CB	83:Sc:30:VAL:HG12	1.81	1.08
32:5:484:U:C4	32:5:486:C:C5	2.41	1.08
32:5:2095:A:N1	38:F:41:GLN:OE1	1.86	1.08
32:5:4983:C:C2	32:5:4984:C:H5	1.70	1.08
48:z:410:SER:CA	50:4:193:G:C2	2.36	1.08
32:5:2277:C:O2	32:5:2278:G:C8	2.05	1.08
32:5:4094:G:H2'	32:5:4095:G:O4'	1.49	1.08
46:K:37:LEU:CD2	46:K:68:GLN:HB3	1.84	1.08
53:S2:795:A:C2	53:S2:796:G:C5	2.41	1.08
83:Sc:14:VAL:CG2	83:Sc:32:VAL:HG13	1.83	1.08
32:5:1388:A:N6	32:5:1396:G:N2	2.01	1.08
32:5:2856:C:N3	32:5:2857:A:N7	2.01	1.08
32:5:3710:G:N1	32:5:3711:A:N1	2.00	1.08
32:5:4123:C:N3	32:5:4124:G:N7	2.02	1.08
48:z:413:SER:HB2	51:9:74:ARG:CD	1.70	1.08
53:S2:1408:U:H2'	53:S2:1409:A:C8	1.89	1.08
73:SF:123:GLU:OE1	83:Sc:59:LEU:HD21	1.50	1.08
82:SZ:58:LEU:CD2	82:SZ:77:LEU:HD11	1.84	1.08
32:5:3754:G:H8	32:5:3754:G:H5'	1.18	1.08
32:5:3759:A:C2	53:S2:1709:G:C4'	2.37	1.08
49:3:16:U:C4	49:3:59:A:N1	2.21	1.08
53:S2:874:G:H1'	59:SH:114:GLN:HE21	1.19	1.08
82:SZ:58:LEU:CD2	82:SZ:77:LEU:HD13	1.63	1.08
32:5:3710:G:C2	32:5:3711:A:N1	2.22	1.07
32:5:3912:U:O2'	32:5:3913:G:C5'	2.02	1.07
32:5:4283:G:N2	32:5:4284:C:N1	2.01	1.07
79:SS:26:ILE:HG13	79:SS:54:LYS:O	0.91	1.07
82:SZ:58:LEU:HD21	82:SZ:77:LEU:HD12	1.13	1.07
17:Y:11:ARG:NH2	36:C:200:ARG:HH22	1.50	1.07
32:5:1245:C:C5	32:5:1269:G:C6	2.43	1.07
32:5:4983:C:C2	32:5:4984:C:C5	2.42	1.07
53:S2:1232:U:O2	53:S2:1233:G:C8	2.07	1.07
32:5:1340:C:N3	32:5:1341:U:C5	2.22	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
32:5:1899:G:C8	32:5:2278:G:C2	2.42	1.07
32:5:3710:G:C4	32:5:3711:A:C2	2.41	1.07
32:5:3741:C:C2	32:5:3742:G:C8	2.42	1.07
47:q:107:VAL:CG2	47:q:108:PRO:HD2	1.82	1.07
53:S2:99:A:C2	53:S2:100:U:C6	2.43	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SS:7:GLU:HG3	79:SS:9:PHE:HE2	1.16	1.07
87:S1:46:LEU:O	87:S1:47:VAL:HG13	1.54	1.07
32:5:2080:U:O2	32:5:2081:C:C5	2.07	1.07
32:5:2105:A:C2	32:5:2106:G:C8	2.43	1.07
32:5:2743:A:C2	32:5:2744:A:N7	2.23	1.07
32:5:4123:C:C2	32:5:4124:G:C8	2.43	1.07
32:5:3714:G:O6	32:5:3715:U:O4	1.72	1.07
34:8:64:U:O2	34:8:65:A:C8	2.07	1.07
43:n:10:MET:CE	53:S2:1172:U:H5'	1.60	1.07
48:z:411:GLY:N	50:4:194:G:N2	1.92	1.07
53:S2:387:C:N3	53:S2:388:U:C5	2.22	1.07
64:SO:72:TYR:HB2	73:SF:204:ARG:HH12	1.11	1.07
64:SO:72:TYR:HD1	83:Sc:63:ARG:CZ	1.68	1.07
32:5:2395:A:O2'	32:5:2806:A:N3	1.88	1.06
32:5:4080:C:O2	32:5:4081:G:C8	2.06	1.06
48:z:374:LYS:HE3	50:4:195:U:OP1	1.48	1.06
55:SB:58:ALA:O	55:SB:61:GLY:N	1.88	1.06
78:SR:103:LYS:CB	78:SR:117:LEU:CD1	2.32	1.06
83:Sc:14:VAL:CG2	83:Sc:32:VAL:CG1	2.33	1.06
32:5:54:G:O6	32:5:55:G:N7	1.87	1.06
32:5:4481:U:C2	32:5:4482:U:C5	2.43	1.06
34:8:64:U:C2	34:8:65:A:N7	2.23	1.06
48:z:297:MET:CE	48:z:355:PHE:CG	2.37	1.06
48:z:377:THR:HG21	50:4:194:G:H5'	1.27	1.06
53:S2:460:A:C2	53:S2:461:U:C6	2.43	1.06
53:S2:460:A:H2	53:S2:461:U:C6	1.73	1.06
60:SI:168:GLN:CD	60:SI:170:LYS:HE2	1.80	1.06
73:SF:192:LYS:HZ2	73:SF:196:LEU:HD23	1.16	1.06
32:5:3712:A:N6	32:5:3737:A:OP2	1.88	1.06
32:5:3718:A:H2'	32:5:3719:A:O4'	1.55	1.06
32:5:3759:A:C6	53:S2:1709:G:H4'	1.90	1.06
34:8:119:C:N3	34:8:120:G:N7	2.04	1.06
48:z:339:ILE:O	48:z:342:MET:C	1.96	1.06
48:z:363:GLY:O	48:z:365:GLU:N	1.88	1.06
73:SF:192:LYS:HZ2	73:SF:196:LEU:CD2	1.67	1.06
83:Sc:14:VAL:CG2	83:Sc:31:ARG:O	1.94	1.06
32:5:100:C:C5	32:5:101:A:N7	2.24	1.06
32:5:2035:C:N4	32:5:2036:C:N4	2.03	1.06
48:z:297:MET:HE2	48:z:355:PHE:HB2	1.35	1.06
53:S2:378:U:C2	53:S2:379:C:C6	2.43	1.06
53:S2:1101:U:O2	53:S2:1102:G:C8	2.08	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1284:A:O2'	75:SM:106:CYS:HA	1.54	1.06
53:S2:1512:C:O2	53:S2:1513:C:C5	2.06	1.06
32:5:4174:U:O2	32:5:4175:G:C8	2.09	1.06
32:5:4725:C:O2	32:5:4726:G:C8	2.07	1.06
53:S2:469:A:N1	53:S2:470:G:C8	2.23	1.06
53:S2:1051:G:C2	53:S2:1052:A:C8	2.43	1.06
53:S2:1292:C:O5'	85:Sf:149:CYS:N	1.88	1.06
73:SF:139:VAL:HG12	83:Sc:45:ASN:O	1.55	1.06
83:Sc:14:VAL:HB	83:Sc:30:VAL:HG13	1.08	1.06
83:Sc:14:VAL:CA	83:Sc:31:ARG:O	2.03	1.06
32:5:471:A:C6	32:5:472:C:C6	2.43	1.05
32:5:2441:C:O2	32:5:2442:G:C8	2.09	1.05
32:5:4165:C:C2	32:5:4166:G:C8	2.43	1.05
53:S2:620:G:N2	53:S2:620:G:OP1	1.89	1.05
53:S2:1840:U:N3	53:S2:1841:C:C5	2.24	1.05
19:a:132:ARG:NH2	32:5:1468:C:H5''	1.72	1.05
26:h:70:ARG:NH1	32:5:134:G:O6	1.86	1.05
32:5:1556:C:C2	32:5:1557:C:C5	2.44	1.05
32:5:2438:A:C6	32:5:2441:C:C5	2.43	1.05
32:5:4284:C:C2	32:5:4285:U:C5	2.43	1.05
32:5:5005:G:N7	41:W:51:TRP:HD1	1.54	1.05
48:z:297:MET:C	48:z:353:PRO:CD	2.29	1.05
48:z:381:SER:O	50:4:207:C:O2'	1.73	1.05
53:S2:1258:A:N7	53:S2:1659:U:O2	1.88	1.05
53:S2:1314:U:H3	53:S2:1315:U:H1'	1.21	1.05
83:Sc:14:VAL:HG21	83:Sc:31:ARG:N	1.71	1.05
32:5:294:G:O5'	32:5:296:A:H4'	1.56	1.05
32:5:2691:U:O2	32:5:2692:U:C5	2.08	1.05
32:5:2784:C:O2	32:5:2785:C:C6	2.09	1.05
34:8:12:G:N1	34:8:13:G:N7	2.03	1.05
53:S2:458:A:C6	53:S2:459:C:C5	2.44	1.05
53:S2:469:A:C2	53:S2:470:G:H8	1.73	1.05
32:5:289:C:N3	32:5:290:U:C5	2.24	1.05
32:5:1316:G:O4'	32:5:2348:G:N2	1.89	1.05
32:5:3723:A:N3	32:5:3724:A:N7	2.04	1.05
32:5:4981:G:C6	32:5:4982:A:C8	2.45	1.05
46:K:37:LEU:HD22	46:K:68:GLN:CB	1.86	1.05
49:3:16:U:O4	49:3:59:A:C2	2.09	1.05
53:S2:551:U:C2	53:S2:552:G:N7	2.24	1.05
64:SO:72:TYR:HD1	83:Sc:63:ARG:NH2	1.54	1.05
83:Sc:45:ASN:HD21	83:Sc:68:LEU:CD2	1.65	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:31:ARG:HH11	4:H:87:GLY:CA	1.68	1.05
9:O:114:LYS:HA	32:5:4757:C:O2	1.55	1.05
32:5:208:A:C1'	32:5:232:G:N2	2.18	1.05
32:5:294:G:H3'	32:5:296:A:H5''	1.08	1.05
32:5:3755:G:C2	32:5:3770:U:C2	2.44	1.05
32:5:3766:A:H1'	53:S2:1708:C:O2'	1.55	1.05
32:5:3773:U:O2	32:5:3776:G:C2	1.94	1.05
48:z:352:ILE:HB	48:z:355:PHE:CZ	1.91	1.05
48:z:413:SER:CB	51:9:74:ARG:HB3	1.85	1.05
10:Q:178:ARG:NH1	32:5:4339:A:O2'	1.90	1.04
48:z:405:ARG:C	50:4:207:C:H4'	1.82	1.04
53:S2:1202:U:N3	53:S2:1203:G:C8	2.25	1.04
73:SF:192:LYS:NZ	73:SF:196:LEU:HD23	1.69	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
32:5:1895:G:H2'	32:5:1896:A:O4'	1.56	1.04
53:S2:459:C:C4	53:S2:460:A:N7	2.25	1.04
53:S2:841:G:C2	53:S2:842:C:C6	2.45	1.04
53:S2:1513:C:O2'	53:S2:1514:G:H5'	1.57	1.04
73:SF:140:ASP:OD2	83:Sc:56:LEU:CD2	2.04	1.04
32:5:983:C:N3	32:5:984:C:C5	2.25	1.04
32:5:1269:G:H3'	32:5:2111:G:O6	1.56	1.04
32:5:1628:C:O2	32:5:1629:G:H8	1.23	1.04
32:5:2326:G:N1	32:5:2327:G:N7	2.05	1.04
32:5:3723:A:C2	32:5:3724:A:C5	2.45	1.04
43:n:8:LYS:NZ	53:S2:1845:A:N7	2.05	1.04
50:4:58:G:O6	50:4:288:G:N2	1.89	1.04
53:S2:875:A:C5	53:S2:876:C:C6	2.43	1.04
53:S2:1063:C:O2'	53:S2:1838:U:H5	1.39	1.04
78:SR:100:PRO:CD	78:SR:119:VAL:HG12	1.87	1.04
79:SS:13:LEU:HD11	79:SS:56:ALA:O	1.57	1.04
11:R:172:ARG:CG	53:S2:909:G:OP1	2.02	1.04
32:5:424:U:O2	32:5:425:U:C5	2.10	1.04
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
32:5:1476:C:N3	32:5:1477:C:C5	2.26	1.04
32:5:5005:G:N7	41:W:51:TRP:CD1	2.25	1.04
53:S2:992:A:C6	53:S2:993:G:C8	2.46	1.04
53:S2:1132:C:C4	53:S2:1133:A:C8	2.45	1.04
53:S2:1378:A:H4'	53:S2:1379:A:O5'	1.54	1.04
32:5:1739:G:H2'	32:5:1740:C:O4'	1.58	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1945:G:C6	32:5:1946:G:C8	2.46	1.04
32:5:2078:C:C2	32:5:2079:G:C8	2.45	1.04
32:5:2279:A:C2	32:5:2280:G:C5	2.45	1.04
32:5:3914:U:O4	32:5:4378:A:N1	1.91	1.04
32:5:4414:A:C2	32:5:4427:G:N2	2.26	1.04
48:z:413:SER:HB2	51:9:74:ARG:HB3	1.05	1.04
49:3:38:C:H4'	53:S2:1058:A:H8	1.19	1.04
53:S2:874:G:C1'	59:SH:114:GLN:HE21	1.70	1.04
54:SA:200:ASP:HB3	78:SR:85:VAL:HG13	1.09	1.04
55:SB:150:ILE:HD13	78:SR:129:LYS:HG3	1.37	1.04
69:Sa:26:CYS:SG	90:Sa:101:ZN:ZN	1.44	1.04
32:5:1408:G:O2'	32:5:1411:C:N4	1.91	1.03
32:5:2058:G:C2	32:5:2059:C:C5	2.46	1.03
49:3:38:C:N3	49:3:39:G:N7	2.04	1.03
32:5:2109:G:O6	32:5:2122:G:O6	1.75	1.03
32:5:2604:C:O2	32:5:2605:G:C8	2.10	1.03
48:z:382:MET:O	50:4:208:A:H4'	0.85	1.03
53:S2:597:G:N2	53:S2:640:A:C2	2.26	1.03
53:S2:636:C:N3	53:S2:637:U:C5	2.26	1.03
79:SS:33:ILE:O	79:SS:36:VAL:HG12	1.58	1.03
11:R:151:ARG:HH22	62:SL:118:ARG:HD3	0.88	1.03
32:5:173:C:N3	32:5:174:C:C5	2.26	1.03
32:5:1613:A:N6	32:5:3637:U:C2	2.26	1.03
53:S2:402:C:N3	53:S2:403:G:C8	2.27	1.03
53:S2:795:A:N3	53:S2:796:G:C8	2.26	1.03
53:S2:841:G:N2	53:S2:842:C:C2	2.26	1.03
53:S2:1552:G:N7	53:S2:1578:U:O4	1.91	1.03
53:S2:1594:A:OP2	82:SZ:104:ARG:CG	2.07	1.03
73:SF:95:HIS:NE2	82:SZ:108:ILE:HD12	1.69	1.03
78:SR:88:VAL:HB	78:SR:91:LEU:HD23	1.07	1.03
32:5:1672:U:O2	32:5:1673:U:C6	2.12	1.03
32:5:2590:G:C2	32:5:2754:G:C2	2.47	1.03
32:5:2851:G:C5	32:5:2852:U:H6	1.75	1.03
48:z:354:GLY:HA3	48:z:465:UNK:CB	1.88	1.03
49:3:72:C:C3'	49:3:73:A:H5''	1.89	1.03
53:S2:215:G:H1'	53:S2:216:C:O2	1.58	1.03
53:S2:469:A:N1	53:S2:470:G:H8	1.56	1.03
73:SF:128:ILE:HD12	83:Sc:68:LEU:HB2	1.40	1.03
32:5:1378:C:H3'	32:5:1379:C:C5'	1.88	1.03
32:5:1628:C:C2	32:5:1629:G:C8	2.47	1.03
32:5:1946:G:N1	32:5:2037:C:C4	2.27	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2361:G:O6	40:P:25:HIS:CD2	2.11	1.03
32:5:2854:G:O6	32:5:2856:C:O4'	1.75	1.03
32:5:3741:C:N3	32:5:3742:G:N7	2.07	1.03
32:5:3767:C:C4'	53:S2:1849:G:O6	2.06	1.03
32:5:3914:U:N3	32:5:4378:A:N6	2.07	1.03
32:5:4239:A:C6	32:5:4240:G:C8	2.45	1.03
47:q:31:GLY:O	47:q:187:LEU:HA	1.56	1.03
48:z:293:LYS:HG3	48:z:351:MET:HB3	1.05	1.03
53:S2:923:G:N2	53:S2:1022:U:O4	1.92	1.03
53:S2:1100:A:C2	53:S2:1101:U:C6	2.46	1.03
32:5:1302:U:C2	32:5:1303:A:C8	2.46	1.02
32:5:1390:G:C2	32:5:1394:G:C6	2.47	1.02
32:5:1613:A:C6	32:5:3637:U:N3	2.26	1.02
32:5:2397:G:C8	32:5:2399:G:C8	2.47	1.02
32:5:2428:A:C5	32:5:2789:A:H2	1.77	1.02
48:z:413:SER:C	51:9:74:ARG:HG3	1.84	1.02
53:S2:426:A:C2	53:S2:427:U:C5	2.46	1.02
73:SF:139:VAL:CG1	83:Sc:45:ASN:O	2.07	1.02
73:SF:140:ASP:OD1	83:Sc:58:LEU:HD21	0.86	1.02
32:5:1676:C:O2'	32:5:3914:U:O4	1.74	1.02
32:5:1899:G:N1	32:5:1900:C:C4	2.28	1.02
53:S2:349:A:C5'	60:SI:27:TYR:OH	2.05	1.02
53:S2:796:G:O2'	59:SH:111:LYS:CG	2.08	1.02
54:SA:158:ASP:OD1	54:SA:159:ILE:HB	1.59	1.02
32:5:1214:C:O2'	32:5:2114:G:N1	1.92	1.02
32:5:1650:A:C2	36:C:100:ARG:NH2	2.27	1.02
32:5:4283:G:N2	32:5:4284:C:C2	2.26	1.02
32:5:4998:G:C2	32:5:4999:G:C8	2.46	1.02
33:7:59:G:C6	33:7:60:G:N7	2.28	1.02
47:q:108:PRO:HB2	47:q:184:SER:HB2	1.40	1.02
53:S2:863:U:O2	53:S2:864:A:C8	2.12	1.02
32:5:161:G:N2	32:5:275:C:C2	2.26	1.02
32:5:433:A:C2	32:5:3867:A:H4'	1.94	1.02
32:5:1340:C:C2	32:5:1341:U:C5	2.48	1.02
48:z:377:THR:HB	50:4:193:G:H2'	1.42	1.02
53:S2:459:C:N3	53:S2:460:A:C8	2.26	1.02
54:SA:200:ASP:HB3	78:SR:85:VAL:HG11	1.05	1.02
8:N:4:TYR:OH	32:5:151:G:OP2	1.77	1.02
32:5:293:G:H2'	32:5:297:U:N1	1.74	1.02
32:5:736:C:H2'	32:5:737:C:O4'	1.58	1.02
32:5:1556:C:C2	32:5:1557:C:C6	2.48	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3905:A:C2	32:5:4449:A:N6	2.28	1.02
32:5:4518:A:N7	35:B:257:TRP:CZ2	2.27	1.02
48:z:381:SER:O	50:4:208:A:H5'	1.58	1.02
53:S2:634:A:C2	53:S2:635:G:C8	2.47	1.02
32:5:56:A:N1	32:5:57:G:C5	2.27	1.01
32:5:70:A:N1	32:5:4355:G:O4'	1.93	1.01
32:5:120:A:H1'	32:5:121:A:C2	1.94	1.01
32:5:470:A:C6	32:5:471:A:C8	2.47	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
32:5:2078:C:N3	32:5:2079:G:C8	2.28	1.01
32:5:3693:U:C4	32:5:3694:U:C5	2.49	1.01
32:5:4113:U:H2'	32:5:4114:C:O4'	1.60	1.01
79:SS:36:VAL:HG13	79:SS:37:GLY:H	1.24	1.01
2:D:29:ASP:HA	32:5:4280:A:H61	1.09	1.01
32:5:1672:U:O2	32:5:1673:U:C5	2.11	1.01
32:5:2367:A:N6	32:5:2788:U:H3	1.55	1.01
32:5:3740:G:C6	32:5:3741:C:C5	2.47	1.01
48:z:152:ALA:HB1	48:z:159:PHE:CE2	1.95	1.01
48:z:383:ASN:HA	50:4:208:A:O3'	1.60	1.01
3:G:261:LEU:O	3:G:261:LEU:HD23	1.59	1.01
22:d:34:HIS:CD2	32:5:5048:A:C8	2.47	1.01
32:5:1301:C:C4	32:5:1302:U:C6	2.48	1.01
32:5:2468:U:N3	32:5:2473:A:N6	2.08	1.01
32:5:2508:U:C2	32:5:2509:C:H5	1.77	1.01
34:8:12:G:H21	34:8:13:G:H1'	1.26	1.01
34:8:130:C:N3	34:8:131:G:C8	2.28	1.01
46:K:37:LEU:HD22	46:K:68:GLN:HB3	1.05	1.01
48:z:410:SER:HA	50:4:193:G:C2	1.81	1.01
53:S2:799:U:O4'	59:SH:110:THR:HG21	1.61	1.01
53:S2:1204:A:N3	53:S2:1205:C:N3	2.08	1.01
32:5:957:G:O5'	32:5:1284:G:N2	1.93	1.01
32:5:1929:A:N6	32:5:2054:U:H3	1.58	1.01
32:5:2035:C:N4	32:5:2036:C:C4	2.28	1.01
48:z:401:GLY:C	50:4:185:C:C5'	2.32	1.01
53:S2:989:C:N3	53:S2:1001:A:N1	2.08	1.01
53:S2:1860:A:C2	53:S2:1862:G:C8	2.48	1.01
3:G:53:ARG:NH2	3:G:54:PHE:CZ	2.28	1.01
12:S:158:VAL:HB	32:5:2055:G:O6	1.60	1.01
32:5:92:C:OP2	32:5:4341:C:O2'	1.78	1.01
32:5:2080:U:O2	32:5:2081:C:C6	2.14	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3910:C:C2	32:5:3911:C:C5	2.49	1.01
33:7:42:A:C6	33:7:43:U:C5	2.49	1.01
50:4:58:G:O6	50:4:288:G:C2	2.14	1.01
53:S2:119:U:N3	53:S2:120:U:C5	2.28	1.01
82:SZ:46:ASN:HD22	82:SZ:78:LYS:CA	1.73	1.01
82:SZ:57:LYS:HB3	82:SZ:61:GLU:HG3	1.41	1.01
32:5:2452:G:C2	32:5:2467:U:C4	2.49	1.00
32:5:2844:A:C6	32:5:3839:G:C8	2.49	1.00
32:5:3617:G:O2'	32:5:3620:G:N7	1.94	1.00
53:S2:1408:U:N3	53:S2:1439:A:C2	2.29	1.00
32:5:1339:U:O2	32:5:1340:C:C6	2.14	1.00
32:5:4982:A:N1	32:5:4983:C:C6	2.29	1.00
34:8:118:C:N3	34:8:119:C:C5	2.28	1.00
53:S2:449:A:N6	53:S2:452:G:C5	2.29	1.00
53:S2:524:U:N3	53:S2:594:A:C6	2.28	1.00
53:S2:1540:G:C2	53:S2:1541:G:C8	2.48	1.00
53:S2:1594:A:C2	53:S2:1595:U:C6	2.48	1.00
32:5:1635:C:C2	32:5:1636:U:C5	2.50	1.00
32:5:3655:C:N3	32:5:3656:A:C8	2.30	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
53:S2:1310:U:O4'	85:Sf:143:LYS:CD	2.10	1.00
32:5:1899:G:C2	32:5:1900:C:C4	2.48	1.00
34:8:131:G:C6	34:8:132:G:N7	2.29	1.00
48:z:411:GLY:N	50:4:194:G:H21	1.54	1.00
53:S2:618:C:N3	53:S2:619:A:C8	2.30	1.00
53:S2:909:G:C2	53:S2:910:G:C8	2.48	1.00
87:S1:5:GLN:O	87:S1:6:THR:CG2	2.09	1.00
32:5:27:C:N3	32:5:28:C:H5	1.59	1.00
39:I:109:ASP:OD1	39:I:110:ARG:N	1.93	1.00
53:S2:458:A:N1	53:S2:459:C:C6	2.28	1.00
53:S2:597:G:C2	53:S2:640:A:C2	2.48	1.00
53:S2:1419:C:OP2	80:ST:129:ARG:HA	1.59	1.00
32:5:4550:G:C6	32:5:4551:U:C5	2.50	1.00
48:z:340:MET:CA	48:z:341:LYS:N	2.23	1.00
48:z:405:ARG:CG	50:4:207:C:C4'	2.27	1.00
50:4:57:G:C2	50:4:289:A:C2	2.50	1.00
53:S2:875:A:C4	53:S2:876:C:H6	1.71	1.00
53:S2:1835:A:O4'	53:S2:1863:A:N7	1.95	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2508:U:O2	32:5:2509:C:C6	2.14	1.00
32:5:4983:C:N3	32:5:4984:C:H5	1.60	1.00
53:S2:27:A:C2	53:S2:28:U:C6	2.49	1.00
53:S2:869:A:N7	59:SH:115:LYS:HB2	1.75	1.00
53:S2:957:A:N1	53:S2:967:C:O2	1.95	1.00
78:SR:88:VAL:HB	78:SR:91:LEU:CD2	1.91	1.00
83:Sc:14:VAL:CB	83:Sc:30:VAL:HG13	1.84	1.00
83:Sc:14:VAL:HG11	83:Sc:31:ARG:N	1.77	1.00
32:5:88:A:N6	32:5:97:G:C2	2.30	0.99
33:7:54:A:N3	33:7:55:A:C8	2.30	0.99
53:S2:1250:A:H2	53:S2:1339:U:O2'	1.42	0.99
32:5:1325:C:H4'	32:5:3901:A:N1	1.76	0.99
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
53:S2:1294:G:C2	53:S2:1295:A:C8	2.50	0.99
73:SF:128:ILE:CD1	83:Sc:68:LEU:CB	2.40	0.99
4:H:31:ARG:NH1	4:H:87:GLY:CA	2.24	0.99
32:5:77:U:N3	32:5:335:A:N6	2.09	0.99
32:5:472:C:C2	32:5:473:C:C6	2.51	0.99
32:5:2327:G:C2	32:5:2328:G:N7	2.30	0.99
32:5:2724:G:N2	32:5:2726:G:C5	2.31	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
34:8:96:C:C2	34:8:97:A:H8	1.73	0.99
32:5:1358:G:C2'	32:5:1359:G:O4'	2.10	0.99
32:5:4233:A:N6	32:5:4290:U:H3	1.59	0.99
32:5:1673:U:C2	32:5:1674:C:C5	2.50	0.99
32:5:1899:G:N2	32:5:1900:C:C2	2.30	0.99
32:5:2833:A:O2'	32:5:2834:C:O4'	1.79	0.99
32:5:4239:A:N6	32:5:4240:G:C5	2.29	0.99
53:S2:1290:G:N3	85:Sf:146:LEU:HB3	1.75	0.99
53:S2:1453:C:C4	53:S2:1455:A:C1'	2.44	0.99
54:SA:200:ASP:OD1	78:SR:89:SER:HB2	1.61	0.99
11:R:166:THR:HG21	53:S2:872:A:C2'	1.91	0.99
32:5:1248:C:N3	32:5:1249:C:C5	2.30	0.99
32:5:1543:G:C2	32:5:1544:G:C8	2.51	0.99
32:5:1886:G:N2	32:5:1894:C:C2	2.31	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
53:S2:449:A:N1	53:S2:452:G:N7	2.09	0.99
11:R:166:THR:OG1	53:S2:873:G:OP2	1.81	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:c:101:ASP:CB	63:SN:43:LYS:HA	1.93	0.99
53:S2:955:A:H61	53:S2:969:U:H5''	1.26	0.99
16:X:117:TYR:O	16:X:119:ILE:HB	1.62	0.99
32:5:3675:G:N2	32:5:3676:G:N7	2.10	0.99
34:8:10:G:N1	34:8:11:C:C6	2.29	0.99
53:S2:793:G:C5	53:S2:794:A:C8	2.51	0.99
53:S2:1528:G:C2	53:S2:1529:C:C4	2.51	0.99
83:Sc:11:LEU:O	83:Sc:35:MET:HB3	1.62	0.99
22:d:25:TYR:OH	22:d:119:THR:HB	1.61	0.99
32:5:330:G:C2	32:5:331:G:C8	2.49	0.99
32:5:4167:G:N1	32:5:4168:G:N7	2.11	0.99
49:3:34:A:C2	53:S2:1701:C:C6	2.49	0.99
53:S2:381:C:N4	60:SI:49:ARG:HH11	1.41	0.99
53:S2:993:G:C6	53:S2:994:C:C5	2.51	0.99
32:5:84:A:N6	32:5:98:A:C8	2.29	0.99
32:5:3879:G:C6	32:5:3882:C:C5	2.51	0.99
53:S2:386:C:C2	53:S2:387:C:C6	2.51	0.99
32:5:100:C:H5	32:5:101:A:C8	1.70	0.98
49:3:38:C:H4'	53:S2:1058:A:C8	1.97	0.98
32:5:2293:U:O2	32:5:2294:G:C8	2.16	0.98
32:5:4215:C:C2	32:5:4216:G:C8	2.51	0.98
53:S2:841:G:N1	53:S2:842:C:C4	2.31	0.98
53:S2:1290:G:H2'	85:Sf:146:LEU:HB3	1.45	0.98
54:SA:205:ARG:HH22	78:SR:84:TYR:HD2	1.00	0.98
32:5:246:G:C2	32:5:247:G:C8	2.51	0.98
53:S2:337:C:C2	53:S2:338:G:C8	2.51	0.98
53:S2:1110:G:O2'	78:SR:122:PRO:HB3	1.63	0.98
53:S2:1204:A:C2'	53:S2:1205:C:O2	2.11	0.98
53:S2:1869:A:C6	55:SB:115:LYS:HG2	1.98	0.98
82:SZ:46:ASN:HD22	82:SZ:78:LYS:HA	1.17	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
32:5:3785:A:C2	32:5:4536:C:H1'	1.97	0.98
47:q:32:ALA:HA	47:q:187:LEU:HD22	0.99	0.98
53:S2:38:A:C2	53:S2:515:G:N2	2.31	0.98
32:5:70:A:C2	32:5:4355:G:O4'	2.15	0.98
32:5:1650:A:N1	36:C:100:ARG:NH2	2.11	0.98
32:5:2532:C:O2	32:5:2533:C:C5	2.16	0.98
32:5:5044:A:O2'	32:5:5045:G:H5'	1.62	0.98
53:S2:118:C:C4	53:S2:119:U:C6	2.52	0.98
53:S2:1204:A:C2	53:S2:1205:C:N3	2.32	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:961:G:O6	32:5:969:C:C5	2.17	0.98
32:5:1949:U:O2	32:5:1950:U:C6	2.17	0.98
32:5:4234:A:C2	32:5:4271:A:C8	2.51	0.98
43:n:10:MET:HE1	53:S2:1172:U:C4'	1.93	0.98
53:S2:1250:A:C2	53:S2:1339:U:O2'	2.13	0.98
32:5:94:A:H2'	32:5:95:G:O4'	1.64	0.98
32:5:4174:U:N3	32:5:4175:G:N7	2.11	0.98
32:5:270:U:N3	32:5:271:C:C5	2.32	0.98
32:5:4078:C:O2'	32:5:4172:A:N6	1.96	0.98
32:5:4335:C:H2'	32:5:4336:A:O4'	1.64	0.98
41:W:50:ASN:HB3	41:W:55:TYR:CE2	1.98	0.98
49:3:39:G:H2'	49:3:40:C:H5'	1.46	0.98
73:SF:140:ASP:CG	83:Sc:58:LEU:HD21	1.89	0.98
32:5:1340:C:O2	32:5:1341:U:C6	2.17	0.98
32:5:1613:A:N6	32:5:3637:U:C4	2.31	0.98
32:5:2035:C:C4	32:5:2036:C:H5	1.82	0.98
48:z:338:ASN:O	48:z:342:MET:HG2	1.62	0.98
53:S2:623:G:C2	53:S2:624:C:C6	2.52	0.98
53:S2:980:A:H2'	53:S2:981:A:C8	1.97	0.98
53:S2:1316:C:N3	53:S2:1317:C:C5	2.31	0.98
53:S2:992:A:N7	69:Sa:15:ARG:NH1	2.12	0.98
83:Sc:11:LEU:HB3	83:Sc:55:VAL:CG1	1.93	0.98
32:5:269:G:C6	32:5:270:U:C5	2.52	0.97
32:5:1310:C:C2	32:5:1311:G:C8	2.51	0.97
32:5:3710:G:C6	32:5:3711:A:N1	2.32	0.97
32:5:4982:A:C2	32:5:4983:C:C6	2.52	0.97
53:S2:449:A:N1	53:S2:452:G:C8	2.32	0.97
53:S2:1408:U:H2'	53:S2:1409:A:N9	1.79	0.97
82:SZ:49:LEU:HD23	82:SZ:83:LEU:HD11	1.42	0.97
83:Sc:11:LEU:O	83:Sc:35:MET:CB	2.12	0.97
32:5:90:G:N2	32:5:95:G:C6	2.32	0.97
32:5:4369:A:N1	32:5:4370:G:N7	2.12	0.97
32:5:917:A:C2	32:5:919:C:C5	2.52	0.97
32:5:1190:C:N3	32:5:1191:C:C5	2.32	0.97
32:5:3721:U:O2	32:5:3722:G:H8	1.48	0.97
39:I:101:LYS:HZ3	39:I:121:LYS:HD2	1.16	0.97
53:S2:996:A:C6	63:SN:113:PHE:CZ	2.51	0.97
53:S2:1291:A:C2	85:Sf:140:TYR:CD2	2.52	0.97
55:SB:51:ARG:HH11	55:SB:51:ARG:HB2	1.29	0.97
79:SS:7:GLU:HG3	79:SS:9:PHE:CE2	1.98	0.97
32:5:43:U:C6	32:5:44:A:C8	2.52	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1929:A:H61	32:5:2054:U:H3	0.99	0.97
32:5:2326:G:C6	32:5:2327:G:N7	2.31	0.97
39:I:101:LYS:CE	39:I:121:LYS:HG3	1.90	0.97
53:S2:165:G:H8	53:S2:166:A:N7	1.50	0.97
32:5:2633:U:N3	32:5:2634:C:C5	2.33	0.97
53:S2:1123:C:N3	53:S2:1124:C:C5	2.32	0.97
55:SB:145:LYS:NZ	78:SR:128:PHE:HE2	1.60	0.97
59:SH:111:LYS:HG2	59:SH:112:ASN:ND2	1.79	0.97
73:SF:140:ASP:OD2	83:Sc:56:LEU:HD23	1.61	0.97
32:5:43:U:C4	32:5:44:A:H1'	2.00	0.97
32:5:101:A:C2	32:5:102:G:C8	2.52	0.97
32:5:1245:C:C2	32:5:1246:G:N7	2.32	0.97
32:5:2736:G:N1	32:5:2737:C:C4	2.32	0.97
32:5:3846:C:N3	32:5:3847:C:C5	2.32	0.97
32:5:4999:G:C6	32:5:5000:G:N7	2.32	0.97
47:q:108:PRO:O	47:q:184:SER:OG	1.80	0.97
48:z:381:SER:OG	50:4:207:C:O2	1.83	0.97
53:S2:384:U:H5	53:S2:386:C:C6	1.80	0.97
53:S2:862:A:C2	53:S2:863:U:C6	2.52	0.97
53:S2:1541:G:C2	53:S2:1542:C:C5	2.52	0.97
5:J:125:ILE:HD11	79:SS:19:ASN:ND2	1.78	0.97
32:5:4213:A:N6	32:5:4218:U:H3	1.63	0.97
32:5:4518:A:C8	35:B:257:TRP:CZ2	2.52	0.97
83:Sc:54:ASP:C	83:Sc:55:VAL:N	2.23	0.97
32:5:1245:C:C6	32:5:1269:G:C6	2.53	0.97
32:5:2590:G:C2	32:5:2754:G:N2	2.31	0.97
46:K:9:GLU:OE1	46:K:11:LYS:CG	2.11	0.97
48:z:362:LYS:O	48:z:364:ASN:N	1.98	0.97
53:S2:378:U:C4	53:S2:379:C:C5	2.52	0.97
25:g:13:TYR:CD2	32:5:2513:A:N7	2.33	0.97
32:5:28:C:N3	32:5:29:G:N7	2.13	0.97
32:5:2509:C:O2'	32:5:2510:G:O5'	1.81	0.97
53:S2:452:G:N3	53:S2:453:C:C6	2.33	0.97
32:5:291:U:C2'	32:5:292:G:H2'	1.95	0.96
32:5:3709:U:H3'	32:5:3710:G:H5'	1.46	0.96
32:5:4284:C:C2	32:5:4285:U:H5	1.81	0.96
34:8:12:G:N2	34:8:13:G:H1'	1.80	0.96
34:8:131:G:C6	34:8:132:G:C8	2.52	0.96
48:z:413:SER:HA	51:9:74:ARG:HG3	1.10	0.96
54:SA:200:ASP:CG	78:SR:89:SER:HB2	1.90	0.96
32:5:733:A:N7	32:5:734:G:C8	2.32	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:909:A:C2	32:5:910:G:C8	2.52	0.96
32:5:1886:G:C2	32:5:1894:C:N3	2.32	0.96
32:5:4562:C:N3	32:5:4563:U:C6	2.33	0.96
32:5:4982:A:C6	32:5:4983:C:C6	2.53	0.96
39:I:101:LYS:HZ1	39:I:121:LYS:CD	1.68	0.96
53:S2:633:C:N3	53:S2:634:A:C8	2.32	0.96
53:S2:1124:C:N3	53:S2:1125:C:C5	2.33	0.96
32:5:2497:C:C2	32:5:2498:C:C6	2.53	0.96
53:S2:337:C:C2	53:S2:338:G:H8	1.83	0.96
53:S2:1109:C:N3	78:SR:123:THR:OG1	1.93	0.96
54:SA:39:TYR:HH	78:SR:104:GLU:HB2	1.02	0.96
79:SS:10:GLN:HB2	79:SS:57:GLY:O	1.64	0.96
53:S2:524:U:C4	53:S2:594:A:N6	2.33	0.96
53:S2:1564:C:N3	53:S2:1565:C:C5	2.31	0.96
32:5:486:C:C2	32:5:487:G:C8	2.54	0.96
32:5:4369:A:C2	32:5:4370:G:N7	2.34	0.96
32:5:56:A:N6	32:5:57:G:O6	1.96	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
32:5:3732:A:C2	32:5:3733:A:C8	2.54	0.96
32:5:3847:C:N3	32:5:3848:U:C5	2.33	0.96
32:5:4165:C:C4	32:5:4166:G:N7	2.33	0.96
32:5:4285:U:C2	32:5:4286:C:C5	2.52	0.96
32:5:4324:A:C2	32:5:4325:A:C5	2.53	0.96
34:8:10:G:C2	34:8:11:C:H1'	2.00	0.96
53:S2:848:U:O2	53:S2:849:A:C8	2.18	0.96
83:Sc:60:GLU:HG3	83:Sc:63:ARG:CD	1.94	0.96
32:5:27:C:O2	32:5:27:C:H2'	1.63	0.96
32:5:1624:G:N2	32:5:1642:A:O2'	1.99	0.96
48:z:402:ARG:HG2	50:4:185:C:OP2	1.34	0.96
53:S2:112:U:H1'	53:S2:114:G:O6	1.66	0.96
53:S2:339:A:C2	53:S2:340:C:N4	2.34	0.96
32:5:1946:G:N2	32:5:2037:C:N1	2.14	0.96
32:5:1984:A:N6	32:5:2011:C:O2'	1.98	0.96
32:5:3702:A:C6	32:5:3703:G:N7	2.33	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
53:S2:493:A:C2	53:S2:494:C:C5	2.53	0.96
32:5:1324:A:O2'	32:5:1326:A:OP1	1.82	0.96
32:5:4095:G:N2	32:5:4096:C:C4	2.34	0.96
16:X:117:TYR:CD1	16:X:153:ILE:CG2	2.47	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:470:A:C5	32:5:471:A:C8	2.54	0.96
32:5:1696:C:H1'	32:5:1697:G:H5'	1.46	0.96
32:5:1946:G:C2	32:5:2037:C:C4	2.53	0.96
32:5:3710:G:N1	32:5:3711:A:C6	2.34	0.96
34:8:94:G:C8	34:8:94:G:H5'	2.01	0.96
48:z:408:ARG:HB3	50:4:206:G:O2'	1.66	0.96
82:SZ:46:ASN:ND2	82:SZ:78:LYS:CA	2.28	0.96
32:5:1601:A:C8	32:5:3643:A:C8	2.54	0.95
32:5:1866:U:C4	32:5:4405:G:O4'	2.18	0.95
32:5:3880:G:O2'	32:5:3881:G:C8	2.17	0.95
32:5:4416:G:C2	32:5:4417:C:C6	2.54	0.95
47:q:188:VAL:HG13	47:q:189:ILE:H	1.27	0.95
82:SZ:50:PHE:CE2	82:SZ:58:LEU:HD11	2.00	0.95
32:5:4983:C:N3	32:5:4984:C:C5	2.34	0.95
32:5:2452:G:N1	32:5:2467:U:C4	2.34	0.95
32:5:2851:G:C5	32:5:2852:U:C6	2.54	0.95
32:5:3607:U:O2	32:5:3608:A:C8	2.19	0.95
32:5:3693:U:N3	32:5:3694:U:C5	2.35	0.95
32:5:4580:U:N3	32:5:4581:G:C8	2.34	0.95
53:S2:858:A:C2	53:S2:859:G:N7	2.34	0.95
53:S2:868:G:C2	59:SH:115:LYS:HD2	2.00	0.95
78:SR:88:VAL:CB	78:SR:91:LEU:HD23	1.95	0.95
32:5:2127:C:H2'	32:5:2128:G:N7	1.79	0.95
32:5:2409:U:C4	32:5:2783:A:N1	2.35	0.95
32:5:3629:A:H1'	53:S2:1721:U:O4	1.65	0.95
53:S2:553:U:C2	53:S2:554:A:C8	2.53	0.95
53:S2:1310:U:H3	53:S2:1311:C:H5	1.14	0.95
72:SD:76:ARG:HD2	72:SD:77:PHE:CE1	2.01	0.95
32:5:3739:C:C4	32:5:3740:G:N7	2.34	0.95
48:z:340:MET:O	48:z:344:PRO:HD3	1.66	0.95
55:SB:145:LYS:NZ	78:SR:128:PHE:HZ	1.54	0.95
32:5:1999:A:O2'	32:5:2000:G:O4'	1.85	0.95
32:5:2058:G:C6	32:5:2059:C:C5	2.55	0.95
32:5:2613:C:C4	32:5:2614:C:C5	2.54	0.95
46:K:9:GLU:OE2	46:K:11:LYS:HB2	1.67	0.95
53:S2:106:C:O2	53:S2:107:A:C8	2.19	0.95
53:S2:837:A:C2	53:S2:838:G:N7	2.34	0.95
32:5:2109:G:C6	32:5:2122:G:O6	2.18	0.95
32:5:3694:U:N3	32:5:3695:U:C5	2.34	0.95
32:5:4551:U:C2	32:5:4552:U:C5	2.55	0.95
32:5:4878:C:O2	32:5:4879:C:C5	2.19	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K:37:LEU:HD21	46:K:68:GLN:OE1	1.65	0.95
53:S2:1224:G:N2	53:S2:1643:U:N3	2.14	0.95
32:5:445:U:H1'	32:5:2313:A:C2	2.02	0.95
32:5:484:U:N3	32:5:486:C:C6	2.35	0.95
32:5:2279:A:C2	32:5:2280:G:N7	2.33	0.95
32:5:2453:A:C6	32:5:2454:U:C5	2.54	0.95
32:5:2735:G:C2	32:5:2736:G:N7	2.34	0.95
32:5:3731:C:N3	32:5:3732:A:N7	2.14	0.95
53:S2:449:A:C6	53:S2:452:G:N7	2.35	0.95
32:5:3675:G:N2	32:5:3676:G:C5	2.34	0.95
34:8:9:A:C2	34:8:10:G:C8	2.55	0.95
49:3:38:C:C4'	53:S2:1058:A:H8	1.80	0.95
53:S2:875:A:C6	53:S2:876:C:C4	2.55	0.95
53:S2:1291:A:H5''	85:Sf:146:LEU:HD12	1.49	0.95
32:5:120:A:C1'	32:5:121:A:N1	2.30	0.95
32:5:1354:A:C5	32:5:1503:A:C2	2.55	0.95
32:5:1444:G:H2'	32:5:1445:U:C6	2.01	0.95
32:5:1563:A:N6	53:S2:677:G:O2'	2.00	0.95
32:5:2857:A:O2'	32:5:2858:A:C8	2.20	0.95
32:5:3858:C:N4	32:5:3859:G:C5	2.35	0.95
32:5:4241:C:N3	32:5:4242:U:C5	2.34	0.95
48:z:297:MET:HE3	48:z:355:PHE:CE1	2.02	0.95
53:S2:1415:C:H2'	53:S2:1416:C:O4'	1.67	0.95
78:SR:91:LEU:HD12	78:SR:92:ASP:N	1.82	0.95
83:Sc:14:VAL:HG22	83:Sc:31:ARG:O	1.59	0.95
32:5:1692:C:N3	32:5:1693:U:C5	2.35	0.94
32:5:4166:G:C6	32:5:4167:G:N7	2.34	0.94
34:8:119:C:O2	34:8:120:G:H8	1.48	0.94
39:I:101:LYS:HE3	39:I:121:LYS:HG2	1.49	0.94
48:z:340:MET:O	48:z:344:PRO:CD	2.15	0.94
53:S2:977:C:N3	53:S2:978:G:C8	2.34	0.94
8:N:85:VAL:HG23	32:5:43:U:OP1	1.65	0.94
32:5:977:C:N3	32:5:978:G:C8	2.30	0.94
32:5:1270:A:H2'	32:5:1271:G:O5'	1.66	0.94
32:5:1899:G:N3	32:5:1900:C:C5	2.34	0.94
32:5:2089:G:C6	32:5:2263:A:N7	2.35	0.94
32:5:4941:G:N2	32:5:4942:C:C4	2.35	0.94
46:K:35:LEU:O	46:K:35:LEU:CD1	2.15	0.94
53:S2:1132:C:N4	53:S2:1133:A:N7	2.14	0.94
32:5:1269:G:C8	32:5:2111:G:C6	2.55	0.94
32:5:2058:G:N2	32:5:2059:C:N1	2.15	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1273:C:O2	53:S2:1506:A:C2	2.19	0.94
32:5:100:C:C5	32:5:101:A:H8	1.83	0.94
32:5:2301:G:C2	32:5:2302:C:C6	2.55	0.94
32:5:2452:G:C2	32:5:2467:U:O4	2.19	0.94
32:5:4273:A:H2'	32:5:4274:A:O4'	1.67	0.94
53:S2:42:A:H1'	53:S2:426:A:N7	1.82	0.94
69:Sa:51:ARG:HH12	83:Sc:40:ARG:CD	1.79	0.94
32:5:207:G:N2	32:5:383:A:N7	2.14	0.94
32:5:2270:G:C2	32:5:2271:C:C4	2.55	0.94
32:5:2463:G:C2	32:5:2464:C:C4	2.55	0.94
32:5:4562:C:C2	32:5:4563:U:C6	2.54	0.94
53:S2:799:U:O4'	59:SH:110:THR:CG2	2.15	0.94
53:S2:1258:A:C2	53:S2:1663:A:C5	2.55	0.94
53:S2:1291:A:C6	85:Sf:140:TYR:CE2	2.55	0.94
53:S2:1398:G:C2	53:S2:1399:C:C5	2.56	0.94
1:A:67:TYR:CE1	32:5:4086:G:N7	2.35	0.94
18:Z:77:TYR:HB2	21:c:39:ARG:HD3	1.50	0.94
32:5:4098:A:C2	32:5:4099:G:C8	2.56	0.94
53:S2:121:U:C2	53:S2:122:G:C8	2.55	0.94
53:S2:381:C:H41	60:SI:49:ARG:HH11	0.95	0.94
53:S2:1051:G:N1	53:S2:1052:A:N7	2.14	0.94
64:SO:72:TYR:HB2	73:SF:204:ARG:NH1	1.83	0.94
8:N:65:ARG:NH1	32:5:2457:G:OP1	2.00	0.94
32:5:2370:A:HO2'	32:5:2826:U:H3	1.16	0.94
32:5:3731:C:N3	32:5:3732:A:C8	2.35	0.94
34:8:73:U:C5	34:8:74:U:C6	2.56	0.94
53:S2:452:G:N2	53:S2:453:C:C2	2.35	0.94
53:S2:1074:C:C2	53:S2:1075:C:C5	2.54	0.94
64:SO:72:TYR:HE1	83:Sc:63:ARG:NH1	1.60	0.94
5:J:125:ILE:CD1	79:SS:19:ASN:HD21	1.81	0.94
32:5:208:A:H1'	32:5:232:G:H21	1.29	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
32:5:1235:G:C2	32:5:1236:C:C5	2.56	0.94
32:5:1477:C:N3	32:5:1478:C:C6	2.36	0.94
32:5:1991:A:C2'	32:5:1992:U:H2'	1.97	0.94
32:5:2078:C:C2	32:5:2079:G:H8	1.84	0.94
32:5:2857:A:O2'	32:5:2858:A:H8	1.50	0.94
32:5:3680:U:H2'	32:5:3680:U:O2	1.67	0.94
34:8:12:G:N2	34:8:13:G:N9	2.14	0.94
48:z:410:SER:CB	50:4:193:G:H22	1.63	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1017:U:N3	53:S2:1018:U:C5	2.35	0.94
53:S2:1114:U:N3	53:S2:1119:A:N6	2.16	0.94
53:S2:1156:U:O4	56:SC:194:ARG:NH1	2.00	0.94
55:SB:55:THR:O	55:SB:57:ILE:N	2.00	0.94
83:Sc:14:VAL:HA	83:Sc:31:ARG:O	1.68	0.94
32:5:2277:C:O2	32:5:2278:G:N7	2.00	0.94
32:5:3755:G:N1	32:5:3770:U:N3	2.14	0.94
48:z:413:SER:HB3	51:9:74:ARG:HD2	0.94	0.94
73:SF:141:VAL:N	83:Sc:56:LEU:HD11	1.83	0.94
32:5:272:U:O2	32:5:273:U:C5	2.21	0.94
32:5:2726:G:C2	32:5:2727:C:C4	2.56	0.94
42:j:22:CYS:HG	90:j:101:ZN:ZN	0.72	0.94
48:z:336:PHE:CE1	48:z:427:PHE:CE1	2.55	0.94
48:z:401:GLY:O	50:4:185:C:H5''	1.66	0.94
53:S2:955:A:N6	53:S2:971:G:C1'	2.31	0.94
32:5:2428:A:C5	32:5:2789:A:C2	2.55	0.93
32:5:2832:A:H2'	32:5:2833:A:H5''	1.51	0.93
32:5:3596:A:N1	62:SL:2:ALA:CB	2.30	0.93
32:5:4276:G:C5	32:5:4277:G:C8	2.55	0.93
53:S2:18:C:O4'	53:S2:1194:A:N6	2.00	0.93
64:SO:75:MET:SD	83:Sc:62:GLU:OE1	2.26	0.93
78:SR:103:LYS:HB2	78:SR:117:LEU:HD11	0.94	0.93
32:5:98:A:C4	32:5:292:G:O6	2.21	0.93
32:5:1476:C:C2	32:5:1477:C:C6	2.57	0.93
32:5:1818:G:C8	32:5:1821:G:O6	2.19	0.93
32:5:3662:A:N1	32:5:3680:U:C4	2.36	0.93
32:5:3714:G:N1	32:5:3715:U:C4	2.35	0.93
32:5:3717:A:C6	32:5:3736:A:C6	2.56	0.93
48:z:414:THR:N	51:9:74:ARG:HG3	1.83	0.93
83:Sc:44:ARG:HH12	83:Sc:58:LEU:HD22	1.33	0.93
32:5:425:U:O2	32:5:426:A:C8	2.21	0.93
32:5:2059:C:N3	32:5:2060:G:N7	2.17	0.93
53:S2:439:A:C2	53:S2:455:A:C2	2.57	0.93
53:S2:1051:G:C6	53:S2:1052:A:N7	2.37	0.93
83:Sc:31:ARG:HH12	83:Sc:41:SER:HB2	1.30	0.93
32:5:271:C:C2	32:5:272:U:C6	2.55	0.93
32:5:982:U:H2'	32:5:983:C:C6	2.03	0.93
32:5:1358:G:O2'	32:5:1359:G:O4'	1.86	0.93
32:5:2673:G:O4'	32:5:2675:G:H1'	1.69	0.93
32:5:3637:U:O4	32:5:3651:A:C2	2.21	0.93
32:5:3714:G:N1	32:5:3715:U:N3	2.14	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4100:C:N3	32:5:4101:C:C5	2.36	0.93
48:z:352:ILE:N	48:z:355:PHE:HZ	1.51	0.93
53:S2:426:A:N1	53:S2:427:U:C5	2.37	0.93
53:S2:1114:U:C4	53:S2:1119:A:N1	2.35	0.93
54:SA:200:ASP:CB	78:SR:85:VAL:HG11	1.78	0.93
87:S1:48:CYS:C	87:S1:49:LEU:HD23	1.93	0.93
5:J:125:ILE:CD1	79:SS:19:ASN:ND2	2.31	0.93
32:5:126:C:N3	32:5:127:G:N7	2.16	0.93
32:5:2613:C:N3	32:5:2614:C:C5	2.37	0.93
32:5:4481:U:H2'	32:5:4482:U:C6	2.03	0.93
32:5:4627:U:O2'	35:B:55:HIS:CE1	2.21	0.93
53:S2:841:G:C4	53:S2:842:C:C5	2.56	0.93
55:SB:150:ILE:HD12	78:SR:129:LYS:HZ2	1.15	0.93
73:SF:128:ILE:HD12	83:Sc:68:LEU:HD12	1.49	0.93
32:5:4314:C:N3	32:5:4315:A:C8	2.37	0.93
32:5:4939:C:O2'	37:E:242:ARG:NH2	2.01	0.93
33:7:54:A:H2	33:7:55:A:N7	1.59	0.93
34:8:134:G:C2	34:8:135:C:C6	2.55	0.93
48:z:410:SER:HB3	50:4:193:G:C2	2.03	0.93
53:S2:339:A:H2'	53:S2:340:C:C6	2.03	0.93
53:S2:971:G:O2'	53:S2:972:A:C8	2.21	0.93
64:SO:147:ARG:HB2	64:SO:147:ARG:CZ	1.99	0.93
32:5:294:G:O2'	32:5:295:A:OP1	1.85	0.93
32:5:2325:C:N3	32:5:2326:G:N7	2.16	0.93
32:5:2451:A:C5	32:5:2452:G:C8	2.57	0.93
32:5:4215:C:N3	32:5:4216:G:N7	2.17	0.93
53:S2:22:A:C2	53:S2:653:A:C2	2.57	0.93
53:S2:26:U:N3	53:S2:27:A:N7	2.17	0.93
53:S2:158:A:N6	53:S2:466:G:O6	2.01	0.93
53:S2:1551:U:H2'	53:S2:1552:G:C1'	1.99	0.93
53:S2:1562:C:O2	53:S2:1563:G:C8	2.21	0.93
32:5:300:A:C2	32:5:301:G:C5	2.56	0.93
32:5:1340:C:C2	32:5:1341:U:C6	2.57	0.93
32:5:1926:C:N3	32:5:1927:U:C5	2.36	0.93
32:5:2446:C:H2'	32:5:2447:U:C6	2.04	0.93
32:5:4653:C:O2	32:5:4654:C:C6	2.22	0.93
53:S2:983:A:OP1	53:S2:1073:U:O2'	1.87	0.93
53:S2:1666:C:C2	53:S2:1667:U:C5	2.56	0.93
32:5:1858:A:C2	32:5:1859:C:C5	2.57	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:S2:618:C:C4	53:S2:619:A:N7	2.36	0.93
53:S2:1122:A:C6	53:S2:1123:C:C5	2.56	0.93
53:S2:1545:A:C6	53:S2:1588:A:C6	2.57	0.93
32:5:3873:G:H2'	32:5:3874:G:O4'	1.68	0.93
32:5:5003:U:C2	32:5:5045:G:N2	2.37	0.93
53:S2:447:A:C6	53:S2:449:A:C4	2.56	0.93
54:SA:200:ASP:OD1	78:SR:89:SER:CB	2.17	0.93
18:Z:38:TYR:CE2	18:Z:76:ASN:OD1	2.22	0.92
32:5:291:U:H2'	32:5:292:G:H2'	1.48	0.92
32:5:1188:C:N3	32:5:1189:G:N7	2.17	0.92
32:5:1198:G:H2'	32:5:1199:G:C8	2.03	0.92
32:5:1339:U:C2	32:5:1340:C:C5	2.57	0.92
32:5:1936:C:C6	33:7:84:U:C6	2.57	0.92
32:5:2529:A:C5	32:5:2532:C:C5	2.56	0.92
32:5:3767:C:H5''	53:S2:1849:G:N7	1.84	0.92
32:5:3868:G:C6	32:5:4562:C:H1'	2.03	0.92
32:5:4355:G:C2	32:5:4356:G:C8	2.57	0.92
48:z:377:THR:CG2	50:4:193:G:C2'	2.47	0.92
49:3:39:G:N2	49:3:40:C:C2	2.37	0.92
1:A:67:TYR:CE1	32:5:4086:G:C8	2.57	0.92
19:a:61:TYR:CE1	32:5:294:G:C2	2.56	0.92
32:5:56:A:N1	32:5:57:G:C6	2.37	0.92
32:5:246:G:C2	32:5:247:G:N7	2.36	0.92
32:5:3714:G:O6	32:5:3715:U:C4	2.20	0.92
32:5:4934:A:C6	32:5:4935:C:C5	2.56	0.92
34:8:119:C:O2	34:8:120:G:C8	2.23	0.92
48:z:405:ARG:HG3	50:4:207:C:C5'	1.62	0.92
53:S2:555:A:C2	53:S2:557:U:C5	2.56	0.92
53:S2:923:G:N2	53:S2:1022:U:C4	2.37	0.92
53:S2:1134:G:N3	53:S2:1135:C:C6	2.36	0.92
53:S2:1551:U:O4'	53:S2:1558:C:O2	1.87	0.92
19:a:40:HIS:CE1	32:5:39:A:C2	2.57	0.92
32:5:1245:C:O2	32:5:1246:G:N7	2.01	0.92
32:5:2288:G:C2	32:5:2290:C:C6	2.56	0.92
32:5:2590:G:N1	32:5:2754:G:C2	2.36	0.92
32:5:2724:G:C2	32:5:2726:G:C5	2.58	0.92
32:5:3702:A:C2	32:5:3703:G:H8	1.85	0.92
32:5:4080:C:N3	32:5:4081:G:N7	2.17	0.92
34:8:10:G:C5	34:8:11:C:C6	2.58	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:96:C:N3	34:8:97:A:C8	2.36	0.92
34:8:133:G:N1	34:8:134:G:N7	2.17	0.92
53:S2:994:C:C2	53:S2:995:G:C8	2.58	0.92
53:S2:1310:U:O4'	85:Sf:143:LYS:HE3	1.69	0.92
32:5:2457:G:N2	32:5:2465:C:C2	2.38	0.92
32:5:5047:C:C2	32:5:5048:A:C6	2.56	0.92
53:S2:870:A:N6	53:S2:915:G:N3	2.17	0.92
53:S2:1540:G:N1	53:S2:1541:G:C5	2.37	0.92
73:SF:95:HIS:CD2	82:SZ:108:ILE:CD1	2.51	0.92
8:N:30:TYR:CE1	8:N:63:ARG:HD2	2.03	0.92
17:Y:11:ARG:NH2	36:C:200:ARG:NH2	2.11	0.92
32:5:1771:U:H2'	32:5:1772:C:O4'	1.69	0.92
32:5:1866:U:O2'	32:5:1867:A:O5'	1.88	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
48:z:381:SER:HA	50:4:207:C:O2	1.69	0.92
53:S2:1293:A:N3	85:Sf:150:PHE:C	2.27	0.92
32:5:70:A:C2	32:5:4355:G:C1'	2.53	0.92
32:5:977:C:O2	32:5:978:G:C8	2.23	0.92
32:5:1301:C:N3	32:5:1302:U:C5	2.38	0.92
32:5:2089:G:C6	32:5:2263:A:C5	2.58	0.92
32:5:3909:C:N3	32:5:3910:C:H5	1.54	0.92
32:5:3939:G:N3	32:5:4076:G:O6	2.01	0.92
32:5:4276:G:O6	32:5:4277:G:C5	2.23	0.92
32:5:5044:A:C2'	32:5:5045:G:H5'	1.99	0.92
32:5:42:A:N6	32:5:4379:A:C2	2.38	0.92
32:5:287:U:N3	32:5:288:G:N7	2.17	0.92
32:5:970:G:H2'	32:5:971:U:O4'	1.68	0.92
32:5:1899:G:N7	32:5:2278:G:N1	2.17	0.92
32:5:1916:G:N2	32:5:2067:C:O2	2.03	0.92
32:5:2260:C:H2'	32:5:2261:G:N7	1.84	0.92
32:5:4341:C:C4	32:5:4342:C:C6	2.57	0.92
48:z:413:SER:HA	51:9:74:ARG:NE	1.83	0.92
53:S2:404:G:C2	53:S2:405:G:C8	2.57	0.92
53:S2:1149:A:C2	53:S2:1151:G:N7	2.38	0.92
60:SI:168:GLN:HE21	60:SI:170:LYS:HE2	1.21	0.92
32:5:1598:C:O2	32:5:1598:C:H2'	1.69	0.92
32:5:2436:U:O4	32:5:2783:A:C8	2.22	0.92
53:S2:403:G:C6	53:S2:404:G:N7	2.38	0.92
32:5:1354:A:N7	32:5:1503:A:C2	2.38	0.92
32:5:4440:G:O2'	39:I:103:LEU:HD13	1.70	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:436:G:C6	53:S2:458:A:C2	2.57	0.92
53:S2:1063:C:O2'	53:S2:1838:U:C5	2.12	0.92
53:S2:1538:C:N3	53:S2:1539:U:H5	1.68	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
32:5:1321:G:N2	32:5:3876:A:C4	2.38	0.92
32:5:1324:A:C2	32:5:3876:A:H2'	2.04	0.92
32:5:1936:C:N3	32:5:1937:C:C5	2.38	0.92
32:5:2497:C:C2	32:5:2498:C:C5	2.58	0.92
32:5:4213:A:H61	32:5:4218:U:H3	1.18	0.92
32:5:4414:A:C6	32:5:4427:G:N1	2.38	0.92
49:3:38:C:C5'	53:S2:1058:A:H8	1.83	0.92
53:S2:452:G:C2	53:S2:453:C:C4	2.58	0.92
32:5:2632:U:O2	32:5:2633:U:C5	2.23	0.91
32:5:4481:U:H2'	32:5:4482:U:H6	1.34	0.91
53:S2:105:U:C4	53:S2:106:C:C6	2.58	0.91
53:S2:460:A:N1	53:S2:461:U:H5	1.67	0.91
53:S2:933:G:N2	53:S2:1000:C:N3	2.18	0.91
74:SK:95:ARG:HA	74:SK:95:ARG:HE	1.35	0.91
32:5:1289:C:C2	32:5:1290:G:C8	2.58	0.91
32:5:3723:A:C2	32:5:3724:A:C6	2.58	0.91
53:S2:821:G:O6	61:SJ:150:ARG:HD2	1.69	0.91
53:S2:1283:C:N4	75:SM:103:VAL:HA	1.85	0.91
53:S2:1407:U:H2'	53:S2:1408:U:C6	2.04	0.91
64:SO:72:TYR:HD1	83:Sc:63:ARG:NH1	1.51	0.91
13:T:140:PHE:HE1	32:5:1089:G:H5'	1.33	0.91
32:5:2508:U:C2	32:5:2509:C:C5	2.55	0.91
37:E:157:ARG:HD2	37:E:266:TYR:CD1	2.05	0.91
53:S2:1293:A:N3	85:Sf:151:ASN:CA	2.32	0.91
83:Sc:41:SER:C	83:Sc:42:ILE:HD12	1.94	0.91
11:R:172:ARG:CD	53:S2:909:G:OP2	2.18	0.91
32:5:2658:G:C2	32:5:2675:G:N2	2.39	0.91
53:S2:387:C:C2	53:S2:388:U:C5	2.58	0.91
73:SF:140:ASP:HB2	83:Sc:56:LEU:CG	2.01	0.91
32:5:957:G:O5'	32:5:1284:G:C2	2.23	0.91
32:5:2851:G:N7	32:5:2852:U:C5	2.39	0.91
32:5:3767:C:H5''	53:S2:1849:G:O6	1.51	0.91
32:5:4095:G:N2	32:5:4096:C:N4	2.18	0.91
34:8:65:A:C2	34:8:66:A:N7	2.39	0.91
34:8:68:G:C2	34:8:91:A:C2	2.58	0.91
53:S2:1133:A:N1	53:S2:1134:G:C8	2.32	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1316:C:O2	53:S2:1317:C:C6	2.23	0.91
78:SR:66:VAL:HB	78:SR:69:ILE:HB	1.50	0.91
32:5:44:A:C2	32:5:45:U:C6	2.58	0.91
32:5:711:A:C2	32:5:712:C:C5	2.58	0.91
32:5:754:U:N3	32:5:755:C:C5	2.39	0.91
32:5:1302:U:C2	32:5:1303:A:H8	1.87	0.91
32:5:1598:C:O2	32:5:1599:A:H8	1.54	0.91
32:5:1671:U:N3	32:5:1672:U:H5	1.68	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
32:5:4229:U:N3	32:5:4230:C:C6	2.38	0.91
34:8:134:G:C6	34:8:135:C:C5	2.59	0.91
53:S2:1667:U:C2	53:S2:1668:U:C5	2.58	0.91
32:5:370:U:C5	32:5:1637:A:C6	2.59	0.91
32:5:1390:G:N7	32:5:1392:A:OP2	2.04	0.91
32:5:3714:G:C2	32:5:3715:U:C2	2.58	0.91
49:3:39:G:N2	49:3:40:C:N1	2.18	0.91
32:5:1632:A:N1	32:5:1634:A:C8	2.39	0.91
32:5:1662:C:C2	32:5:1663:C:C5	2.58	0.91
32:5:4999:G:N1	32:5:5000:G:N7	2.18	0.91
34:8:12:G:N1	34:8:13:G:C8	2.37	0.91
48:z:381:SER:HB3	50:4:207:C:O2'	1.69	0.91
53:S2:858:A:C2	53:S2:859:G:C8	2.59	0.91
53:S2:1420:G:HO2'	80:ST:4:VAL:N	1.69	0.91
53:S2:1539:U:C2	53:S2:1540:G:N7	2.39	0.91
54:SA:12:GLU:CD	78:SR:111:PHE:HD1	1.77	0.91
82:SZ:58:LEU:HD23	82:SZ:77:LEU:HD11	1.39	0.91
83:Sc:14:VAL:HG13	83:Sc:31:ARG:C	1.95	0.91
32:5:173:C:C2	32:5:174:C:C6	2.58	0.91
32:5:440:U:C2	32:5:441:G:C8	2.59	0.91
32:5:1266:G:H5''	32:5:2112:G:N3	1.85	0.91
32:5:3791:C:N3	32:5:3802:U:C6	2.38	0.91
32:5:4097:G:C2	32:5:4098:A:C8	2.59	0.91
53:S2:310:C:H2'	53:S2:311:C:C6	2.06	0.91
11:R:172:ARG:HD2	53:S2:909:G:OP2	1.71	0.90
17:Y:11:ARG:HH11	17:Y:15:ARG:HD2	1.36	0.90
32:5:3711:A:N7	32:5:3712:A:H1'	1.85	0.90
34:8:10:G:N2	34:8:11:C:H1'	1.83	0.90
34:8:10:G:O6	34:8:11:C:C5	2.22	0.90
47:q:32:ALA:CB	47:q:187:LEU:CD2	2.49	0.90
49:3:39:G:N1	49:3:40:C:C4	2.38	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:792:C:C2	53:S2:793:G:C8	2.59	0.90
53:S2:955:A:N7	53:S2:969:U:C6	2.39	0.90
53:S2:1249:C:C4	53:S2:1250:A:N7	2.39	0.90
64:SO:72:TYR:CD1	83:Sc:63:ARG:CZ	2.47	0.90
6:L:65:ARG:NH1	32:5:1382:G:OP1	2.03	0.90
11:R:151:ARG:NH2	62:SL:118:ARG:HD3	1.68	0.90
32:5:293:G:H2'	32:5:297:U:C1'	2.01	0.90
32:5:2736:G:N3	32:5:2737:C:C6	2.39	0.90
32:5:3790:U:N3	32:5:3792:G:O4'	2.02	0.90
32:5:4166:G:N1	32:5:4167:G:C5	2.38	0.90
53:S2:449:A:C6	53:S2:452:G:C6	2.58	0.90
53:S2:646:G:C6	53:S2:647:U:C6	2.59	0.90
53:S2:830:A:N1	53:S2:844:U:O4	2.04	0.90
53:S2:1149:A:N1	53:S2:1151:G:C5	2.40	0.90
53:S2:1316:C:C2	53:S2:1317:C:C5	2.58	0.90
53:S2:1527:C:N3	53:S2:1528:G:C8	2.38	0.90
78:SR:57:LEU:O	78:SR:61:ILE:HG13	1.69	0.90
83:Sc:14:VAL:HG22	83:Sc:32:VAL:CA	2.01	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
32:5:962:C:OP2	32:5:2264:C:N3	2.03	0.90
32:5:1465:G:C6	32:5:1466:G:C8	2.59	0.90
32:5:2724:G:C2	32:5:2726:G:C8	2.60	0.90
32:5:4080:C:C2	32:5:4081:G:C8	2.59	0.90
32:5:4562:C:N3	32:5:4563:U:C5	2.39	0.90
37:E:181:PRO:HA	37:E:246:GLN:HE22	1.34	0.90
47:q:108:PRO:HB2	47:q:184:SER:CB	2.01	0.90
53:S2:56:G:C6	53:S2:90:G:C2	2.60	0.90
53:S2:414:A:C2	53:S2:424:C:C2	2.59	0.90
11:R:120:TYR:OH	32:5:2665:U:OP2	1.88	0.90
16:X:117:TYR:CD1	16:X:153:ILE:HG22	2.07	0.90
32:5:146:G:C2	32:5:147:A:C8	2.59	0.90
32:5:1213:G:C5	32:5:1215:C:C6	2.59	0.90
32:5:1843:A:C2	32:5:1844:G:C8	2.59	0.90
32:5:2497:C:O2	32:5:2498:C:C6	2.24	0.90
53:S2:118:C:C1'	53:S2:445:A:C2	2.54	0.90
53:S2:459:C:C4	53:S2:460:A:C8	2.60	0.90
53:S2:1000:C:H2'	53:S2:1000:C:O2	1.68	0.90
53:S2:1101:U:C2	53:S2:1102:G:N7	2.39	0.90
83:Sc:13:ARG:HD3	83:Sc:13:ARG:H	1.32	0.90
83:Sc:14:VAL:HG21	83:Sc:30:VAL:HG12	0.97	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:491:G:N2	32:5:663:G:N1	2.18	0.90
32:5:1634:A:C6	32:5:1635:C:C5	2.58	0.90
32:5:2399:G:C2	32:5:2400:G:C8	2.58	0.90
32:5:2568:C:O2	32:5:2569:G:C8	2.25	0.90
32:5:2743:A:N3	32:5:2744:A:N7	2.19	0.90
39:I:101:LYS:HE2	39:I:121:LYS:CB	2.02	0.90
48:z:293:LYS:HG2	48:z:351:MET:CA	2.01	0.90
49:3:46:G:H3'	49:3:47:U:P	2.12	0.90
53:S2:85:A:C2	53:S2:86:C:C5	2.59	0.90
53:S2:1018:U:O2	53:S2:1019:C:C6	2.24	0.90
53:S2:1291:A:C5'	85:Sf:146:LEU:HD12	2.02	0.90
79:SS:10:GLN:CG	79:SS:13:LEU:HD21	2.01	0.90
32:5:2079:G:N1	32:5:2080:U:C5	2.39	0.90
32:5:2736:G:N2	32:5:2737:C:C2	2.40	0.90
32:5:3755:G:N1	32:5:3770:U:C5	2.39	0.90
38:F:107:VAL:HG11	38:F:141:TYR:CE1	2.06	0.90
47:q:32:ALA:CA	47:q:187:LEU:CD2	2.39	0.90
32:5:370:U:C4	32:5:1637:A:C6	2.60	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
32:5:3730:U:N3	32:5:3731:C:C5	2.39	0.90
48:z:402:ARG:HG3	50:4:184:A:C3'	1.92	0.90
53:S2:120:U:N3	53:S2:121:U:C5	2.39	0.90
53:S2:339:A:C2	53:S2:340:C:C4	2.60	0.90
53:S2:402:C:C4	53:S2:403:G:N7	2.40	0.90
53:S2:999:G:C6	53:S2:1000:C:C5	2.59	0.90
53:S2:1018:U:N3	53:S2:1019:C:C5	2.40	0.90
53:S2:1291:A:P	85:Sf:146:LEU:HG	2.12	0.90
53:S2:1855:G:OP2	64:SO:147:ARG:NH2	2.05	0.90
32:5:2036:C:N3	32:5:2037:C:N4	2.18	0.90
32:5:4080:C:C2	32:5:4081:G:H8	1.89	0.90
48:z:359:PHE:CD2	48:z:360:MET:HG3	2.05	0.90
53:S2:341:C:N4	53:S2:342:C:C5	2.39	0.90
54:SA:200:ASP:CB	78:SR:85:VAL:HG12	1.81	0.90
83:Sc:13:ARG:HB3	83:Sc:54:ASP:O	1.68	0.90
83:Sc:31:ARG:HH11	83:Sc:31:ARG:HG2	1.36	0.90
4:H:156:ASN:OD1	4:H:157:SER:N	2.04	0.90
11:R:95:TRP:O	11:R:98:ARG:N	2.05	0.90
32:5:1884:C:H42	32:5:1896:A:H2	1.17	0.90
32:5:3710:G:C2	32:5:3711:A:C6	2.59	0.90
53:S2:386:C:O2	53:S2:387:C:C6	2.25	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:848:U:C2	53:S2:849:A:N7	2.40	0.90
53:S2:875:A:N1	53:S2:876:C:C6	2.40	0.90
11:R:131:VAL:HB	11:R:132:PHE:CZ	2.06	0.90
11:R:149:LYS:C	11:R:150:ALA:CA	2.45	0.90
23:e:108:ARG:HD3	23:e:128:ARG:HB2	1.54	0.90
32:5:4344:U:C2	32:5:4345:C:C5	2.60	0.90
34:8:65:A:N3	34:8:66:A:C8	2.40	0.90
48:z:359:PHE:HD2	48:z:360:MET:HG3	1.37	0.90
53:S2:341:C:C4	53:S2:342:C:C5	2.60	0.90
53:S2:460:A:N1	53:S2:461:U:C5	2.40	0.90
53:S2:1527:C:N4	53:S2:1528:G:N7	2.19	0.90
32:5:66:A:C2	32:5:312:G:O4'	2.25	0.89
32:5:2441:C:C2	32:5:2442:G:N7	2.41	0.89
34:8:119:C:C2	34:8:120:G:C8	2.59	0.89
53:S2:799:U:C5'	59:SH:110:THR:HG22	2.02	0.89
53:S2:1114:U:H3	53:S2:1119:A:N6	1.70	0.89
53:S2:1539:U:C2	53:S2:1540:G:C8	2.59	0.89
83:Sc:14:VAL:CG1	83:Sc:31:ARG:C	2.44	0.89
32:5:144:G:C2	32:5:145:G:N7	2.41	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
34:8:65:A:C2	34:8:66:A:C5	2.60	0.89
48:z:410:SER:CB	50:4:193:G:C2	2.55	0.89
49:3:31:C:H2'	49:3:32:C:O4'	1.70	0.89
53:S2:1292:C:O4'	85:Sf:148:TYR:C	2.15	0.89
73:SF:192:LYS:NZ	73:SF:196:LEU:HD21	1.85	0.89
16:X:117:TYR:O	16:X:119:ILE:N	2.06	0.89
32:5:173:C:C2	32:5:174:C:C5	2.60	0.89
32:5:4342:C:C4	32:5:4343:U:C5	2.60	0.89
32:5:4549:G:N1	32:5:4550:G:N7	2.20	0.89
43:n:10:MET:HE3	53:S2:1172:U:H5''	1.55	0.89
82:SZ:49:LEU:HD23	82:SZ:83:LEU:HD13	1.52	0.89
32:5:983:C:C2	32:5:984:C:C6	2.60	0.89
32:5:1392:A:C2	32:5:1393:G:N7	2.41	0.89
32:5:1676:C:O2'	32:5:3914:U:C4	2.22	0.89
32:5:2401:A:C2	32:5:2402:G:C8	2.60	0.89
32:5:2495:U:O2	32:5:2496:G:C8	2.25	0.89
32:5:2504:C:O2	32:5:2505:C:C5	2.25	0.89
32:5:2859:G:N2	32:5:3837:C:O2	2.05	0.89
48:z:346:SER:OG	48:z:369:MET:HE1	1.72	0.89
53:S2:165:G:H8	53:S2:166:A:C8	1.89	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:337:C:N3	53:S2:338:G:N7	2.20	0.89
53:S2:1293:A:C4	85:Sf:150:PHE:HB3	2.08	0.89
32:5:2529:A:C6	32:5:2532:C:C6	2.61	0.89
32:5:3662:A:C2	32:5:3680:U:O4	2.25	0.89
32:5:3759:A:N1	53:S2:1709:G:H5''	1.87	0.89
32:5:4490:C:N3	32:5:4491:G:C8	2.41	0.89
43:n:4:LYS:CE	53:S2:1844:U:C5	2.55	0.89
53:S2:875:A:C6	53:S2:876:C:C6	2.60	0.89
53:S2:1050:A:N7	53:S2:1051:G:C8	2.41	0.89
53:S2:1417:C:N3	53:S2:1419:C:H5	1.69	0.89
55:SB:51:ARG:HB2	55:SB:51:ARG:NH1	1.86	0.89
55:SB:62:LEU:HD13	55:SB:65:ARG:NH2	1.86	0.89
31:o:15:CYS:HG	90:o:201:ZN:ZN	0.60	0.89
32:5:78:U:C2	32:5:336:A:N6	2.41	0.89
32:5:146:G:C2	32:5:147:A:N7	2.40	0.89
32:5:3944:G:C2	32:5:3945:A:C8	2.61	0.89
53:S2:11:A:C2	53:S2:12:U:C6	2.60	0.89
53:S2:600:G:C5	53:S2:631:U:C4	2.61	0.89
53:S2:869:A:N7	59:SH:115:LYS:CB	2.35	0.89
53:S2:1315:U:N3	53:S2:1316:C:C5	2.41	0.89
32:5:152:U:N3	32:5:153:G:N7	2.20	0.89
32:5:1248:C:C2	32:5:1249:C:C6	2.60	0.89
32:5:1325:C:C4'	32:5:3901:A:N1	2.34	0.89
32:5:1674:C:N3	32:5:1675:C:C5	2.41	0.89
53:S2:469:A:C2	53:S2:470:G:C8	2.58	0.89
53:S2:1030:A:C2	53:S2:1031:A:N7	2.40	0.89
53:S2:1455:A:N1	53:S2:1456:G:C8	2.41	0.89
32:5:457:G:C2	32:5:458:C:C6	2.60	0.89
32:5:1247:U:N3	32:5:1248:C:C5	2.41	0.89
32:5:2576:G:C6	32:5:2577:C:C5	2.61	0.89
48:z:337:GLN:O	48:z:341:LYS:N	2.05	0.89
49:3:39:G:C2	49:3:40:C:C5	2.60	0.89
53:S2:1666:C:C2	53:S2:1667:U:C6	2.61	0.89
57:SE:100:ARG:NH1	57:SE:121:TYR:OH	2.06	0.89
32:5:2453:A:C2	32:5:2454:U:C6	2.61	0.89
53:S2:618:C:C4	53:S2:619:A:C8	2.60	0.89
53:S2:1710:C:N3	53:S2:1711:U:C5	2.40	0.89
32:5:1990:A:C2'	32:5:1991:A:H4'	2.03	0.88
32:5:3653:A:N1	32:5:3692:A:H4'	1.88	0.88
32:5:3795:A:C4'	53:S2:1815:A:HO2'	1.78	0.88
32:5:3909:C:O2	32:5:3910:C:C6	2.26	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:327:PHE:HD2	48:z:428:ALA:HB2	1.36	0.88
53:S2:341:C:C4	53:S2:342:C:C6	2.60	0.88
53:S2:1123:C:C4	53:S2:1124:C:C5	2.61	0.88
54:SA:50:ASN:HA	78:SR:105:MET:HE1	1.05	0.88
60:SI:168:GLN:HE21	60:SI:170:LYS:CE	1.78	0.88
78:SR:100:PRO:HD3	78:SR:119:VAL:HG12	1.51	0.88
83:Sc:45:ASN:HD21	83:Sc:68:LEU:HD22	0.97	0.88
47:q:106:LYS:C	47:q:107:VAL:HG13	1.98	0.88
49:3:38:C:C2	49:3:39:G:H8	1.83	0.88
53:S2:1110:G:O2'	78:SR:122:PRO:CB	2.21	0.88
64:SO:72:TYR:HD1	83:Sc:63:ARG:HH22	1.17	0.88
32:5:753:C:N3	32:5:754:U:C5	2.42	0.88
32:5:1262:G:C2	32:5:1263:A:C8	2.62	0.88
32:5:1960:A:C2	47:q:14:PHE:CD2	2.61	0.88
32:5:4284:C:N3	32:5:4285:U:H5	1.65	0.88
34:8:39:G:O2'	34:8:103:A:N6	2.07	0.88
53:S2:394:G:C2	53:S2:395:G:C8	2.62	0.88
53:S2:494:C:H2'	53:S2:494:C:O2	1.70	0.88
53:S2:955:A:H62	53:S2:971:G:C1'	1.85	0.88
53:S2:1308:U:C2	53:S2:1309:C:C5	2.61	0.88
53:S2:1422:G:N2	53:S2:1424:G:C8	2.42	0.88
83:Sc:14:VAL:CG1	83:Sc:31:ARG:H	1.87	0.88
32:5:2851:G:C6	32:5:2852:U:C6	2.62	0.88
32:5:3741:C:O2	32:5:3742:G:C8	2.26	0.88
34:8:119:C:N3	34:8:120:G:C8	2.41	0.88
53:S2:341:C:N3	53:S2:342:C:C6	2.41	0.88
53:S2:694:G:C2	53:S2:695:C:C5	2.62	0.88
53:S2:908:A:C2	53:S2:909:G:N7	2.41	0.88
53:S2:1408:U:C2'	53:S2:1409:A:C8	2.56	0.88
53:S2:1455:A:C6	53:S2:1456:G:N7	2.41	0.88
53:S2:1569:A:C8	53:S2:1570:G:H1'	2.07	0.88
16:X:117:TYR:CE1	16:X:153:ILE:CG2	2.56	0.88
32:5:424:U:O2	32:5:425:U:C6	2.26	0.88
32:5:1635:C:N3	32:5:1636:U:C5	2.41	0.88
32:5:1876:U:C2	32:5:1877:G:C8	2.62	0.88
32:5:2646:C:O2	32:5:2647:A:H8	1.57	0.88
32:5:3674:G:C2	32:5:3675:G:C8	2.61	0.88
34:8:10:G:C2	34:8:11:C:N1	2.42	0.88
49:3:72:C:H3'	49:3:73:A:H5''	1.53	0.88
50:4:57:G:C6	50:4:289:A:C6	2.61	0.88
53:S2:1093:A:C6	53:S2:1094:C:C5	2.61	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1135:C:C2	53:S2:1136:U:C5	2.61	0.88
53:S2:1248:U:H2'	53:S2:1249:C:H1'	1.54	0.88
55:SB:52:THR:HG23	55:SB:57:ILE:HA	1.55	0.88
3:G:53:ARG:NH2	3:G:54:PHE:HZ	1.66	0.88
32:5:451:C:N4	32:5:1295:C:H2'	1.89	0.88
32:5:471:A:C5	32:5:472:C:C6	2.61	0.88
32:5:730:G:N2	32:5:939:G:N2	2.22	0.88
32:5:1321:G:O4'	32:5:1891:A:N6	2.07	0.88
32:5:1339:U:O2	32:5:1340:C:C5	2.26	0.88
42:j:22:CYS:SG	90:j:101:ZN:ZN	1.62	0.88
53:S2:1307:U:C2	53:S2:1308:U:H1'	2.09	0.88
32:5:658:C:C2	32:5:659:G:C8	2.62	0.88
32:5:1245:C:C5	32:5:1269:G:O6	2.26	0.88
33:7:18:C:N3	33:7:19:C:H5	1.43	0.88
53:S2:444:G:H21	53:S2:446:G:H8	0.90	0.88
53:S2:868:G:N2	59:SH:115:LYS:HA	1.89	0.88
53:S2:955:A:N7	53:S2:969:U:C5	2.41	0.88
53:S2:1398:G:C2	53:S2:1399:C:C6	2.62	0.88
53:S2:1508:A:C5	53:S2:1510:G:C8	2.62	0.88
53:S2:1540:G:N3	53:S2:1541:G:C8	2.41	0.88
32:5:106:A:H1'	32:5:336:A:C8	2.09	0.88
32:5:172:C:C2	32:5:173:C:C6	2.62	0.88
32:5:2327:G:N1	32:5:2328:G:N7	2.21	0.88
32:5:2857:A:O2'	32:5:2858:A:O5'	1.90	0.88
32:5:4884:G:C2	32:5:4885:U:C6	2.62	0.88
48:z:297:MET:HE3	48:z:355:PHE:HD1	1.12	0.88
53:S2:377:G:C2	53:S2:378:U:C6	2.61	0.88
53:S2:1204:A:N3	53:S2:1205:C:C2	2.42	0.88
73:SF:128:ILE:HD11	83:Sc:68:LEU:C	1.99	0.88
73:SF:194:ASP:CG	73:SF:195:GLU:OE1	2.17	0.88
32:5:278:G:C2	32:5:330:G:C8	2.62	0.88
32:5:294:G:H5'	32:5:296:A:H5''	1.54	0.88
32:5:1213:G:C6	32:5:1215:C:C2	2.62	0.88
32:5:1950:U:C2	32:5:1951:G:C8	2.62	0.88
32:5:2081:C:H2'	32:5:2082:G:O5'	1.71	0.88
32:5:3759:A:C6	53:S2:1709:G:C5'	2.56	0.88
48:z:413:SER:CA	51:9:74:ARG:HD2	1.93	0.88
53:S2:1398:G:N2	53:S2:1399:C:C6	2.42	0.88
32:5:2035:C:N3	32:5:2036:C:C6	2.42	0.88
32:5:4174:U:O2	32:5:4175:G:H8	1.51	0.88
32:5:4878:C:C2	32:5:4879:C:C5	2.61	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1203:G:H3'	53:S2:1204:A:C8	2.09	0.88
53:S2:1501:C:N3	53:S2:1502:C:C5	2.42	0.88
55:SB:79:VAL:HB	55:SB:81:PHE:CZ	2.09	0.88
32:5:1542:U:O2	32:5:1543:G:C8	2.27	0.87
32:5:4189:U:H1'	32:5:4380:A:C2	2.09	0.87
53:S2:694:G:N2	53:S2:695:C:C2	2.42	0.87
53:S2:996:A:C6	63:SN:113:PHE:CE2	2.62	0.87
53:S2:1018:U:C2	53:S2:1019:C:C5	2.62	0.87
73:SF:102:LEU:HD13	82:SZ:110:THR:CG2	2.03	0.87
78:SR:65:PRO:HB3	78:SR:74:GLN:NE2	1.88	0.87
80:ST:31:PRO:HB2	80:ST:33:TRP:CH2	2.07	0.87
32:5:709:C:C2	32:5:710:G:C8	2.62	0.87
32:5:1247:U:C2	32:5:1248:C:C6	2.61	0.87
32:5:1269:G:C5	32:5:2111:G:C2	2.61	0.87
32:5:2268:A:H4'	32:5:2269:C:C5'	2.03	0.87
32:5:2272:C:O2'	32:5:2273:G:H5'	1.73	0.87
32:5:2668:G:H2'	32:5:2669:C:H5'	1.56	0.87
32:5:4092:G:C6	32:5:4093:G:C2	2.62	0.87
32:5:4123:C:C4	32:5:4124:G:N7	2.41	0.87
53:S2:1063:C:C4'	53:S2:1838:U:O4	2.23	0.87
53:S2:1205:C:C6	53:S2:1206:G:C8	2.62	0.87
73:SF:122:ARG:HB3	83:Sc:57:THR:CG2	2.05	0.87
78:SR:18:GLU:OE1	78:SR:70:SER:HB2	1.74	0.87
78:SR:91:LEU:CD1	78:SR:93:GLN:H	1.87	0.87
32:5:235:A:C6	32:5:238:C:C4	2.61	0.87
32:5:1268:G:N1	32:5:1270:A:N7	2.22	0.87
32:5:1392:A:N3	32:5:1393:G:N7	2.21	0.87
32:5:1634:A:N1	32:5:1635:C:C4	2.42	0.87
32:5:2507:A:N1	32:5:2508:U:H1'	1.88	0.87
32:5:3907:G:N9	32:5:4449:A:H1'	1.90	0.87
53:S2:459:C:C2	53:S2:460:A:C8	2.63	0.87
53:S2:998:A:C8	53:S2:999:G:O4'	2.26	0.87
53:S2:1538:C:N3	53:S2:1539:U:C5	2.42	0.87
53:S2:1564:C:C2	53:S2:1565:C:C5	2.62	0.87
73:SF:95:HIS:CD2	82:SZ:108:ILE:HD13	2.07	0.87
32:5:2515:G:N7	32:5:2516:G:N7	2.23	0.87
53:S2:381:C:N4	60:SI:49:ARG:HG2	1.89	0.87
53:S2:387:C:N3	53:S2:388:U:H5	1.69	0.87
53:S2:551:U:O2'	71:Se:44:ASN:OD1	1.91	0.87
53:S2:995:G:N2	53:S2:996:A:O2'	2.07	0.87
53:S2:1151:G:C2	53:S2:1152:U:C6	2.62	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SS:30:ILE:HD11	79:SS:45:LEU:CD2	2.04	0.87
32:5:291:U:O2	32:5:292:G:O2'	1.93	0.87
32:5:1757:U:C2	32:5:1758:G:C8	2.62	0.87
32:5:2452:G:N1	32:5:2467:U:C5	2.43	0.87
32:5:3695:U:C4	32:5:3696:C:C5	2.62	0.87
32:5:3909:C:O2	32:5:3909:C:H2'	1.75	0.87
32:5:4518:A:HO2'	35:B:257:TRP:HZ3	0.93	0.87
32:5:4530:U:H2'	32:5:4531:U:C2	2.09	0.87
34:8:11:C:O2	34:8:12:G:H8	1.56	0.87
39:I:112:GLN:O	39:I:113:THR:OG1	1.91	0.87
53:S2:121:U:N3	53:S2:122:G:N7	2.23	0.87
53:S2:452:G:C2	53:S2:453:C:C5	2.62	0.87
53:S2:1452:A:H4'	53:S2:1453:C:O4'	1.74	0.87
53:S2:1453:C:C5	53:S2:1455:A:H1'	2.09	0.87
53:S2:1454:A:C8	53:S2:1476:A:H1'	2.10	0.87
83:Sc:60:GLU:CG	83:Sc:63:ARG:HD3	2.04	0.87
32:5:961:G:H2'	32:5:961:G:N3	1.90	0.87
32:5:1563:A:C8	53:S2:678:U:C4'	2.58	0.87
32:5:1625:G:C4	32:5:1642:A:N1	2.43	0.87
32:5:1876:U:N3	32:5:1877:G:C8	2.42	0.87
32:5:3606:U:N3	32:5:3607:U:C5	2.42	0.87
32:5:3622:C:O2	32:5:3623:C:C2	2.27	0.87
32:5:4233:A:H61	32:5:4290:U:H3	1.09	0.87
32:5:4325:A:H2'	32:5:4326:G:O4'	1.75	0.87
48:z:297:MET:HE2	48:z:355:PHE:CB	2.04	0.87
53:S2:842:C:C2	53:S2:843:C:C5	2.63	0.87
53:S2:961:G:C2	53:S2:962:A:C8	2.62	0.87
79:SS:7:GLU:N	79:SS:7:GLU:OE2	2.07	0.87
32:5:270:U:C2	32:5:271:C:C5	2.63	0.87
32:5:707:C:O2'	32:5:4944:C:N4	2.07	0.87
32:5:983:C:C2	32:5:984:C:C5	2.63	0.87
32:5:2826:U:H1'	32:5:2827:G:H1	1.37	0.87
32:5:3754:G:H5'	32:5:3754:G:C8	2.07	0.87
83:Sc:14:VAL:CG2	83:Sc:31:ARG:N	2.38	0.87
32:5:55:G:C2	32:5:56:A:C8	2.62	0.87
32:5:1667:G:C2	32:5:2283:G:O6	2.26	0.87
32:5:2613:C:C2	32:5:2614:C:C6	2.63	0.87
32:5:2856:C:O2	32:5:2857:A:H8	1.48	0.87
32:5:2856:C:H42	32:5:2857:A:N6	1.72	0.87
32:5:4283:G:C6	32:5:4284:C:C5	2.63	0.87
53:S2:305:U:O2'	53:S2:306:C:OP1	1.91	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1528:G:C2	53:S2:1529:C:C5	2.63	0.87
32:5:1427:A:H3'	32:5:1428:U:H6	1.39	0.87
32:5:1936:C:H5	33:7:84:U:C5	1.91	0.87
32:5:2054:U:H4'	32:5:2056:G:H1'	1.56	0.87
32:5:2856:C:H42	32:5:2857:A:H62	1.20	0.87
32:5:4257:A:H2'	32:5:4258:C:C6	2.09	0.87
48:z:410:SER:HB3	50:4:193:G:H21	1.37	0.87
53:S2:445:A:H2'	53:S2:446:G:O4'	1.75	0.87
53:S2:862:A:C6	53:S2:863:U:C5	2.63	0.87
53:S2:999:G:C2	53:S2:1000:C:C6	2.63	0.87
32:5:745:G:H2'	32:5:746:A:O4'	1.75	0.86
32:5:751:G:C2	32:5:752:G:N7	2.43	0.86
32:5:1049:C:N3	32:5:1050:C:C5	2.43	0.86
32:5:3717:A:O2'	32:5:3718:A:O5'	1.91	0.86
48:z:411:GLY:CA	50:4:194:G:C2	2.56	0.86
53:S2:993:G:H1	53:S2:999:G:H1	1.24	0.86
78:SR:88:VAL:HG11	78:SR:91:LEU:HB3	1.55	0.86
23:e:35:TRP:CD1	23:e:36:ARG:N	2.43	0.86
32:5:514:U:H5	32:5:515:C:O4'	1.57	0.86
32:5:1583:A:C5	32:5:1584:G:C8	2.62	0.86
32:5:3740:G:O6	32:5:3741:C:C5	2.28	0.86
32:5:4342:C:N3	32:5:4343:U:C6	2.44	0.86
32:5:5045:G:H2'	32:5:5046:U:O4'	1.74	0.86
53:S2:1110:G:H3'	53:S2:1111:U:H6	1.37	0.86
53:S2:1232:U:O2	53:S2:1233:G:H8	1.52	0.86
82:SZ:48:VAL:HG12	82:SZ:83:LEU:HD11	1.56	0.86
32:5:425:U:N3	32:5:426:A:N7	2.23	0.86
32:5:2737:C:C2	32:5:2738:C:C5	2.63	0.86
32:5:3732:A:C2	32:5:3733:A:N7	2.43	0.86
32:5:4085:A:H3'	32:5:4086:G:H5'	1.56	0.86
32:5:4745:G:O2'	32:5:4746:C:H6	1.56	0.86
35:B:25:HIS:HB2	35:B:274:TYR:OH	1.75	0.86
48:z:297:MET:HB3	48:z:353:PRO:HA	1.56	0.86
48:z:405:ARG:NH1	50:4:185:C:OP2	2.08	0.86
48:z:408:ARG:HH11	50:4:206:G:H5''	1.08	0.86
50:4:58:G:C6	50:4:289:A:C4	2.63	0.86
59:SH:111:LYS:HG2	59:SH:112:ASN:HD22	1.39	0.86
73:SF:140:ASP:HB3	83:Sc:57:THR:O	1.75	0.86
32:5:272:U:C2	32:5:273:U:C5	2.62	0.86
32:5:1367:C:C2	32:5:1370:G:H2'	2.10	0.86
32:5:1751:A:C6	32:5:1752:G:C8	2.62	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2089:G:O6	32:5:2263:A:H5''	1.75	0.86
32:5:2294:G:C2	32:5:2295:C:C5	2.63	0.86
32:5:4240:G:C6	32:5:4241:C:C5	2.63	0.86
53:S2:387:C:O2	53:S2:388:U:C6	2.29	0.86
53:S2:1540:G:N2	53:S2:1541:G:C4	2.42	0.86
18:Z:77:TYR:CB	21:c:39:ARG:HD3	2.05	0.86
32:5:969:C:O2'	32:5:970:G:N3	2.08	0.86
32:5:1213:G:C4	32:5:1215:C:C1'	2.58	0.86
32:5:1618:G:N1	32:5:1619:G:N7	2.23	0.86
32:5:2099:G:C2	32:5:2100:A:C8	2.62	0.86
32:5:4217:G:O2'	32:5:4218:U:O5'	1.93	0.86
32:5:4269:G:H1	32:5:4277:G:H1	1.23	0.86
34:8:108:A:C2	34:8:112:G:N1	2.44	0.86
48:z:140:PHE:CE1	48:z:194:ARG:NE	2.44	0.86
53:S2:963:A:C2	53:S2:964:A:C5	2.63	0.86
53:S2:1290:G:H2'	85:Sf:146:LEU:CB	2.04	0.86
53:S2:1603:G:O6	79:SS:28:PHE:CZ	2.29	0.86
12:S:94:TYR:OH	12:S:96:GLU:HG3	1.76	0.86
32:5:352:G:O2'	34:8:22:U:O4	1.94	0.86
32:5:1238:A:O2'	32:5:1239:C:O5'	1.93	0.86
32:5:2086:G:N2	32:5:2272:C:C2	2.43	0.86
32:5:2293:U:O2	32:5:2294:G:H8	1.53	0.86
32:5:3759:A:N1	53:S2:1709:G:H4'	1.81	0.86
32:5:4285:U:O2	32:5:4286:C:C6	2.28	0.86
32:5:4342:C:N3	32:5:4343:U:C5	2.43	0.86
53:S2:1840:U:C2	53:S2:1841:C:C6	2.63	0.86
32:5:1248:C:C2	32:5:1249:C:C5	2.63	0.86
32:5:3662:A:N6	32:5:3680:U:H3	1.74	0.86
33:7:111:C:N3	33:7:112:U:C6	2.44	0.86
53:S2:1248:U:C5	53:S2:1249:C:C2	2.64	0.86
32:5:292:G:O2'	32:5:293:G:O5'	1.92	0.86
32:5:1248:C:O2	32:5:1249:C:C6	2.29	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
32:5:2507:A:C5	32:5:2508:U:C6	2.62	0.86
32:5:3721:U:O2	32:5:3722:G:C8	2.27	0.86
32:5:3731:C:C2	32:5:3732:A:C8	2.64	0.86
32:5:4344:U:O2	32:5:4345:C:C6	2.29	0.86
33:7:110:G:C2	33:7:111:C:C6	2.63	0.86
34:8:117:C:N3	34:8:118:C:C6	2.44	0.86
53:S2:309:G:N2	53:S2:310:C:C2	2.43	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:636:C:C2	53:S2:637:U:C5	2.64	0.86
53:S2:1249:C:N4	53:S2:1250:A:N6	2.24	0.86
32:5:86:U:C4	32:5:97:G:C2	2.64	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
50:4:58:G:C5	50:4:289:A:C2	2.63	0.86
53:S2:380:G:N2	53:S2:382:C:H3'	1.89	0.86
53:S2:381:C:N4	60:SI:49:ARG:CZ	2.26	0.86
53:S2:828:G:C6	53:S2:829:C:C5	2.64	0.86
53:S2:1302:G:C6	85:Sf:138:ARG:NH1	2.44	0.86
15:V:97:TYR:HE2	41:W:21:TYR:CE1	1.94	0.86
32:5:145:G:C2	32:5:146:G:C8	2.63	0.86
32:5:1634:A:N3	32:5:1635:C:C6	2.43	0.86
32:5:1807:C:N3	32:5:1808:C:C5	2.44	0.86
32:5:2079:G:N1	32:5:2080:U:C4	2.44	0.86
32:5:3739:C:C4	32:5:3740:G:C8	2.64	0.86
32:5:3759:A:C2	53:S2:1709:G:H5'	2.11	0.86
34:8:65:A:C2	34:8:66:A:C8	2.63	0.86
43:n:11:ARG:NH1	53:S2:1844:U:P	2.49	0.86
54:SA:42:LYS:NZ	78:SR:99:ASP:OD2	2.09	0.86
79:SS:26:ILE:HD11	79:SS:54:LYS:CB	2.06	0.86
32:5:85:G:N2	32:5:97:G:C5	2.43	0.85
32:5:701:G:C6	32:5:702:U:C6	2.64	0.85
32:5:1217:G:HO2'	32:5:1218:G:H8	0.90	0.85
32:5:3756:A:H8	32:5:3756:A:H5''	1.41	0.85
53:S2:994:C:H2'	53:S2:994:C:O2	1.73	0.85
2:D:29:ASP:CA	32:5:4280:A:N6	2.39	0.85
32:5:2327:G:N3	32:5:2328:G:C8	2.44	0.85
32:5:2726:G:C6	32:5:2727:C:N4	2.44	0.85
32:5:4281:A:C2	32:5:4283:G:C5	2.63	0.85
32:5:4744:A:C2	32:5:4745:G:C5	2.64	0.85
34:8:15:G:H2'	34:8:16:G:C1'	2.05	0.85
48:z:352:ILE:CB	48:z:355:PHE:CZ	2.44	0.85
53:S2:491:C:H1'	53:S2:574:A:N6	1.90	0.85
53:S2:594:A:HO2'	53:S2:595:U:H5	1.24	0.85
73:SF:195:GLU:OE1	73:SF:195:GLU:N	2.09	0.85
32:5:208:A:H1'	32:5:232:G:N2	1.87	0.85
32:5:1490:G:C2	32:5:1491:A:C8	2.64	0.85
32:5:3723:A:C2	32:5:3724:A:N7	2.43	0.85
32:5:4699:U:O2	32:5:4701:A:N7	2.10	0.85
48:z:410:SER:CA	50:4:194:G:N3	2.39	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:3:72:C:C2'	49:3:73:A:H5''	2.06	0.85
53:S2:371:A:C2	53:S2:372:U:C4	2.64	0.85
53:S2:449:A:N6	53:S2:452:G:C4	2.43	0.85
32:5:196:C:N3	32:5:243:A:N6	2.25	0.85
32:5:244:G:C6	32:5:246:G:N7	2.44	0.85
32:5:270:U:O2	32:5:271:C:C6	2.30	0.85
32:5:1406:G:O6	32:5:1408:G:O2'	1.92	0.85
32:5:1439:C:H5'	38:F:36:ARG:HH12	1.36	0.85
32:5:2058:G:N3	32:5:2059:C:C6	2.43	0.85
32:5:2449:A:C8	32:5:2450:G:C1'	2.58	0.85
32:5:3693:U:C2	32:5:3694:U:C6	2.64	0.85
32:5:3910:C:O2	32:5:3911:C:C5	2.29	0.85
32:5:4286:C:O2	32:5:4287:G:N7	2.10	0.85
53:S2:29:G:C2	53:S2:30:C:C4	2.64	0.85
53:S2:439:A:C2	53:S2:455:A:N1	2.44	0.85
53:S2:1310:U:C1'	85:Sf:143:LYS:HD2	2.06	0.85
83:Sc:44:ARG:NH1	83:Sc:58:LEU:HD22	1.91	0.85
32:5:1990:A:C2	32:5:1992:U:OP1	2.28	0.85
32:5:4167:G:N2	32:5:4168:G:N9	2.24	0.85
32:5:4735:G:N3	32:5:4736:C:C6	2.43	0.85
53:S2:1303:C:C5	53:S2:1304:U:C6	2.64	0.85
69:Sa:21:ILE:HG21	69:Sa:72:HIS:CE1	2.11	0.85
5:J:105:PHE:HE1	5:J:132:VAL:HB	1.40	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
32:5:2613:C:N3	32:5:2614:C:C6	2.45	0.85
32:5:2724:G:N2	32:5:2726:G:C4	2.45	0.85
33:7:59:G:C6	33:7:60:G:C8	2.64	0.85
34:8:132:G:N1	34:8:133:G:C5	2.44	0.85
48:z:344:PRO:C	48:z:346:SER:N	2.34	0.85
32:5:1442:C:C2	32:5:1443:A:C8	2.65	0.85
32:5:2450:G:C6	32:5:2451:A:C8	2.64	0.85
32:5:4164:C:N3	32:5:4165:C:C5	2.44	0.85
32:5:4581:G:C2	32:5:4582:C:C5	2.65	0.85
53:S2:453:C:O2'	53:S2:454:U:O5'	1.95	0.85
53:S2:955:A:C5	53:S2:969:U:C6	2.64	0.85
53:S2:1134:G:C2	53:S2:1135:C:C6	2.65	0.85
53:S2:1225:U:C4	53:S2:1226:G:N7	2.45	0.85
53:S2:1396:A:H2'	53:S2:1398:G:N7	1.91	0.85
53:S2:1414:A:C2	53:S2:1415:C:C5	2.64	0.85
53:S2:1539:U:O2	53:S2:1540:G:H8	1.56	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:86:U:O2	32:5:87:A:C8	2.30	0.85
32:5:483:G:C2	32:5:484:U:C4	2.65	0.85
32:5:1074:G:C2	32:5:1238:A:C2	2.64	0.85
32:5:4081:G:C2	32:5:4082:G:C8	2.65	0.85
32:5:4536:C:N3	32:5:4537:C:C5	2.45	0.85
32:5:4699:U:C4	32:5:4702:G:C6	2.64	0.85
33:7:60:G:C6	33:7:61:G:N7	2.45	0.85
46:K:123:ARG:HB3	46:K:129:ILE:HD11	1.56	0.85
49:3:16:U:O4	49:3:59:A:C6	2.29	0.85
53:S2:26:U:O2	53:S2:27:A:H8	1.58	0.85
53:S2:452:G:C4	53:S2:453:C:C5	2.65	0.85
53:S2:1315:U:C4	53:S2:1316:C:C6	2.64	0.85
53:S2:1540:G:C6	53:S2:1541:G:N7	2.45	0.85
53:S2:1793:A:C2	53:S2:1794:C:C5	2.65	0.85
2:D:29:ASP:CA	32:5:4280:A:H61	1.89	0.85
32:5:383:A:O2'	32:5:384:A:C8	2.30	0.85
32:5:504:G:N1	32:5:654:C:C2	2.44	0.85
32:5:2734:U:C2	32:5:2735:G:C8	2.64	0.85
32:5:3607:U:C2	32:5:3608:A:C8	2.64	0.85
32:5:4341:C:C4	32:5:4342:C:C5	2.65	0.85
48:z:377:THR:HG22	50:4:193:G:C2'	2.07	0.85
53:S2:524:U:C2	53:S2:594:A:N6	2.45	0.85
53:S2:1133:A:C6	53:S2:1134:G:N7	2.44	0.85
53:S2:1406:G:N3	53:S2:1407:U:H1'	1.91	0.85
32:5:422:C:O2	32:5:423:G:H8	1.59	0.85
32:5:486:C:N3	32:5:487:G:N7	2.25	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
32:5:4239:A:N6	32:5:4240:G:N7	2.23	0.85
34:8:132:G:N1	34:8:133:G:N7	2.25	0.85
53:S2:452:G:N1	53:S2:453:C:C4	2.45	0.85
53:S2:623:G:N1	53:S2:624:C:C4	2.45	0.85
53:S2:832:G:C5	53:S2:833:C:C6	2.65	0.85
53:S2:1310:U:P	85:Sf:143:LYS:HE2	2.16	0.85
79:SS:26:ILE:HG13	79:SS:54:LYS:C	2.00	0.85
32:5:1245:C:N3	32:5:1246:G:N7	2.24	0.84
32:5:1582:U:C4	32:5:1583:A:C8	2.64	0.84
32:5:2851:G:H1'	32:5:3840:U:O2	1.75	0.84
32:5:4416:G:N2	32:5:4417:C:C2	2.45	0.84
34:8:132:G:C6	34:8:133:G:N7	2.44	0.84
53:S2:1528:G:N2	53:S2:1529:C:C2	2.45	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1622:U:O4	79:SS:120:HIS:CE1	2.28	0.84
12:S:10:TYR:CZ	12:S:66:GLN:HG3	2.12	0.84
32:5:91:G:N7	32:5:93:G:C6	2.46	0.84
32:5:1213:G:N1	32:5:1215:C:C2	2.45	0.84
32:5:2251:G:H1'	32:5:2252:G:C2	2.12	0.84
32:5:2826:U:H1'	32:5:2827:G:N1	1.92	0.84
32:5:3606:U:O2	32:5:3607:U:C6	2.29	0.84
32:5:4166:G:C2	32:5:4167:G:N7	2.42	0.84
48:z:340:MET:C	48:z:343:GLY:H	1.84	0.84
53:S2:120:U:C4	53:S2:121:U:C5	2.65	0.84
53:S2:1258:A:C5	53:S2:1659:U:O2	2.30	0.84
53:S2:1527:C:C4	53:S2:1528:G:N7	2.45	0.84
53:S2:1545:A:C5	53:S2:1588:A:C6	2.65	0.84
32:5:470:A:N6	32:5:471:A:C5	2.45	0.84
32:5:689:U:N3	32:5:690:C:C5	2.45	0.84
32:5:1950:U:O2	32:5:1951:G:C8	2.30	0.84
32:5:2270:G:N2	32:5:2271:C:C2	2.46	0.84
32:5:2784:C:N3	32:5:2785:C:C5	2.43	0.84
32:5:3723:A:N1	32:5:3724:A:N6	2.24	0.84
32:5:4079:C:N3	32:5:4080:C:C5	2.45	0.84
32:5:4277:G:C2	32:5:4278:C:C6	2.65	0.84
53:S2:444:G:N2	53:S2:446:G:O5'	2.10	0.84
53:S2:792:C:N3	53:S2:793:G:N7	2.24	0.84
53:S2:1594:A:C6	53:S2:1595:U:C5	2.65	0.84
17:Y:11:ARG:HH21	36:C:200:ARG:HH22	0.86	0.84
19:a:110:LYS:HG3	19:a:128:PHE:O	1.76	0.84
32:5:1309:C:N3	32:5:1310:C:C5	2.44	0.84
32:5:1371:A:N6	34:8:28:C:O2'	2.10	0.84
32:5:1687:U:O2	32:5:1850:A:C6	2.29	0.84
32:5:3755:G:C2	32:5:3770:U:N3	2.44	0.84
32:5:4223:C:H4'	39:I:119:PHE:CE2	2.12	0.84
34:8:133:G:C6	34:8:134:G:N7	2.45	0.84
53:S2:1249:C:H5	53:S2:1250:A:C8	1.93	0.84
53:S2:1284:A:H61	75:SM:33:ARG:HB2	1.41	0.84
53:S2:1433:C:H2'	53:S2:1434:C:C1'	2.08	0.84
32:5:1671:U:H3	32:5:1672:U:H5	0.87	0.84
32:5:3739:C:C6	32:5:3739:C:H5''	2.12	0.84
32:5:4739:C:H2'	32:5:4740:G:O4'	1.77	0.84
34:8:11:C:O2	34:8:11:C:H2'	1.75	0.84
49:3:39:G:N3	49:3:40:C:C6	2.44	0.84
50:4:195:U:O2'	51:9:74:ARG:NH2	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:880:G:C8	53:S2:881:G:C8	2.66	0.84
53:S2:993:G:C2	53:S2:994:C:C6	2.66	0.84
53:S2:1405:A:O4'	53:S2:1580:A:C6	2.30	0.84
32:5:484:U:C2	32:5:486:C:C6	2.66	0.84
32:5:4091:G:N2	32:5:4159:C:C2	2.45	0.84
32:5:4981:G:N1	32:5:4982:A:C8	2.45	0.84
48:z:405:ARG:HG2	50:4:207:C:C3'	2.05	0.84
53:S2:469:A:H2	53:S2:470:G:O4'	1.60	0.84
53:S2:955:A:N6	53:S2:969:U:H5''	1.92	0.84
53:S2:1310:U:O2	53:S2:1311:C:H6	1.61	0.84
55:SB:150:ILE:CD1	78:SR:129:LYS:HG3	2.07	0.84
5:J:119:TYR:CE1	79:SS:12:ILE:CG2	2.61	0.84
21:c:101:ASP:HB3	63:SN:43:LYS:HA	1.58	0.84
32:5:101:A:C6	32:5:102:G:N7	2.46	0.84
32:5:1991:A:H2'	32:5:1992:U:C2'	2.07	0.84
32:5:2507:A:C6	32:5:2508:U:C6	2.65	0.84
53:S2:1124:C:C2	53:S2:1125:C:C6	2.65	0.84
53:S2:1540:G:C4	53:S2:1541:G:C8	2.65	0.84
53:S2:1562:C:O2	53:S2:1563:G:H8	1.57	0.84
57:SE:86:PHE:HE1	57:SE:102:ILE:HA	1.42	0.84
32:5:1249:C:N3	32:5:1250:C:C5	2.46	0.84
32:5:1628:C:C2	32:5:1629:G:N7	2.45	0.84
32:5:1899:G:C4	32:5:1900:C:C5	2.64	0.84
32:5:1996:C:P	46:K:124:GLU:OE2	2.36	0.84
32:5:4284:C:O2	32:5:4285:U:C6	2.31	0.84
32:5:4502:C:C4	32:5:4503:A:C8	2.66	0.84
33:7:25:G:H2'	33:7:26:C:O4'	1.76	0.84
53:S2:933:G:C2	53:S2:1000:C:N3	2.45	0.84
53:S2:994:C:O2	53:S2:995:G:C8	2.31	0.84
53:S2:1204:A:C2	53:S2:1205:C:C4	2.65	0.84
53:S2:1453:C:H1'	78:SR:48:ASN:HD21	1.43	0.84
82:SZ:57:LYS:CB	82:SZ:61:GLU:HG3	2.08	0.84
82:SZ:57:LYS:CD	82:SZ:61:GLU:OE2	2.23	0.84
15:V:97:TYR:HE2	41:W:21:TYR:HD1	0.86	0.84
32:5:738:C:N3	32:5:739:G:N7	2.25	0.84
32:5:751:G:N2	32:5:752:G:C5	2.46	0.84
32:5:2632:U:O2	32:5:2633:U:C6	2.31	0.84
32:5:4239:A:C6	32:5:4240:G:N7	2.45	0.84
32:5:4537:C:O2	32:5:4538:G:C8	2.31	0.84
32:5:4551:U:O2	32:5:4552:U:C5	2.31	0.84
33:7:110:G:N2	33:7:111:C:C2	2.46	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:131:G:N1	34:8:132:G:C8	2.45	0.84
34:8:133:G:N1	34:8:134:G:C5	2.46	0.84
48:z:157:ILE:HB	48:z:159:PHE:HZ	1.43	0.84
53:S2:444:G:N2	53:S2:446:G:H8	1.74	0.84
53:S2:449:A:C5	53:S2:452:G:C6	2.66	0.84
53:S2:806:U:C2	53:S2:807:G:C8	2.65	0.84
53:S2:1225:U:C4	53:S2:1226:G:C8	2.66	0.84
83:Sc:29:GLN:HG2	83:Sc:45:ASN:OD1	1.76	0.84
19:a:61:TYR:CD1	32:5:294:G:C6	2.65	0.84
32:5:54:G:N1	32:5:55:G:N9	2.26	0.84
32:5:2367:A:H61	32:5:2788:U:H3	0.84	0.84
32:5:4172:A:C2	32:5:4173:G:C8	2.66	0.84
48:z:109:LEU:HA	48:z:197:GLN:NE2	1.93	0.84
53:S2:518:G:C2	53:S2:519:A:C8	2.66	0.84
53:S2:1113:A:H2'	53:S2:1114:U:H3'	1.58	0.84
86:Sg:245:ARG:HD3	86:Sg:247:TRP:CZ3	2.12	0.84
11:R:166:THR:CG2	53:S2:872:A:C2'	2.51	0.83
32:5:1823:G:HO3'	32:5:1825:A:P	2.01	0.83
32:5:4416:G:N1	32:5:4417:C:C4	2.46	0.83
32:5:4426:C:C4	32:5:4427:G:N7	2.45	0.83
37:E:157:ARG:HD2	37:E:266:TYR:CE1	2.13	0.83
47:q:186:GLY:O	47:q:188:VAL:HG12	1.77	0.83
48:z:405:ARG:O	50:4:207:C:C4'	2.26	0.83
53:S2:402:C:C4	53:S2:403:G:C8	2.65	0.83
82:SZ:50:PHE:CZ	82:SZ:58:LEU:HD11	2.12	0.83
19:a:132:ARG:HH11	19:a:132:ARG:HG2	1.42	0.83
32:5:1310:C:C2	32:5:1311:G:H8	1.93	0.83
32:5:1899:G:N1	32:5:1900:C:C5	2.43	0.83
32:5:2078:C:O2	32:5:2078:C:H2'	1.78	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
32:5:4269:G:C6	32:5:4270:C:C5	2.65	0.83
32:5:4277:G:C6	32:5:4278:C:C5	2.66	0.83
32:5:4745:G:H21	32:5:4746:C:N4	1.75	0.83
32:5:5062:G:C2	32:5:5063:G:C8	2.65	0.83
39:I:98:ARG:CD	39:I:119:PHE:HE1	1.91	0.83
53:S2:309:G:C2	53:S2:310:C:C4	2.66	0.83
53:S2:340:C:C2	53:S2:341:C:C5	2.66	0.83
53:S2:1409:A:C2	53:S2:1410:C:C5	2.66	0.83
54:SA:39:TYR:CD2	78:SR:105:MET:HG2	2.13	0.83
32:5:657:C:H2'	32:5:658:C:O4'	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1264:C:C2	32:5:1265:G:C8	2.66	0.83
32:5:1411:C:O2	32:5:1412:G:C8	2.31	0.83
32:5:1987:C:N3	32:5:1988:G:C8	2.46	0.83
32:5:2108:G:N2	32:5:2125:C:N3	2.25	0.83
34:8:133:G:C2	34:8:134:G:N7	2.47	0.83
49:3:39:G:N1	49:3:40:C:C5	2.46	0.83
53:S2:92:A:C6	53:S2:447:A:C2	2.66	0.83
53:S2:579:C:C4	53:S2:580:U:C5	2.65	0.83
53:S2:933:G:N2	53:S2:1000:C:C4	2.46	0.83
53:S2:1453:C:N4	53:S2:1455:A:C1'	2.40	0.83
62:SL:99:TYR:O	62:SL:101:ARG:HG2	1.78	0.83
32:5:1269:G:C6	32:5:2111:G:C2	2.66	0.83
32:5:1354:A:C5	32:5:1503:A:H2	1.93	0.83
32:5:4213:A:N1	32:5:4218:U:C4	2.46	0.83
39:I:101:LYS:HZ3	39:I:121:LYS:CG	1.68	0.83
53:S2:98:C:N3	53:S2:409:C:C5	2.46	0.83
53:S2:384:U:C5	53:S2:386:C:C6	2.67	0.83
53:S2:992:A:N1	53:S2:993:G:C8	2.45	0.83
53:S2:1290:G:N3	85:Sf:146:LEU:CB	2.41	0.83
56:SC:170:TRP:CH2	66:SW:97:ARG:HD3	2.13	0.83
32:5:48:G:O2'	32:5:49:U:OP2	1.97	0.83
32:5:977:C:C4	32:5:978:G:N7	2.46	0.83
32:5:2735:G:N3	32:5:2736:G:C8	2.46	0.83
32:5:3770:U:O2'	49:3:12:G:H1'	1.77	0.83
53:S2:574:A:O2'	53:S2:575:A:C8	2.30	0.83
53:S2:601:G:O2'	53:S2:602:G:C8	2.30	0.83
53:S2:1314:U:N3	53:S2:1315:U:H1'	1.92	0.83
53:S2:1575:G:C2	53:S2:1576:G:N7	2.46	0.83
53:S2:1840:U:O2	53:S2:1841:C:C6	2.31	0.83
86:Sg:17:TRP:HB3	86:Sg:303:THR:HA	1.60	0.83
16:X:139:ARG:NH2	32:5:2533:C:OP1	2.11	0.83
17:Y:11:ARG:CZ	34:8:22:U:OP1	2.26	0.83
32:5:732:A:C6	32:5:733:A:C4	2.66	0.83
32:5:4735:G:N2	32:5:4736:C:C2	2.47	0.83
32:5:4998:G:C6	32:5:4999:G:N7	2.45	0.83
34:8:10:G:C2	34:8:11:C:C1'	2.62	0.83
34:8:12:G:N2	34:8:13:G:C8	2.46	0.83
37:E:157:ARG:CD	37:E:266:TYR:CE1	2.61	0.83
53:S2:608:C:N3	53:S2:609:U:C5	2.47	0.83
53:S2:875:A:N1	53:S2:876:C:C5	2.45	0.83
53:S2:1149:A:C2	53:S2:1151:G:C5	2.65	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SA:90:PHE:HB2	54:SA:179:ALA:HB2	1.61	0.83
73:SF:128:ILE:HD12	83:Sc:68:LEU:CB	2.08	0.83
32:5:1807:C:C2	32:5:1808:C:C6	2.67	0.83
32:5:1845:U:O2	32:5:1846:G:C8	2.32	0.83
32:5:3907:G:H1'	32:5:4449:A:C8	2.14	0.83
32:5:5003:U:O2	32:5:5045:G:N2	2.12	0.83
43:n:11:ARG:CZ	53:S2:1844:U:OP1	2.26	0.83
53:S2:616:A:C5	53:S2:617:G:H1'	2.14	0.83
72:SD:22:ASN:HD22	72:SD:22:ASN:C	1.85	0.83
79:SS:26:ILE:HD11	79:SS:54:LYS:HB2	1.61	0.83
32:5:1280:C:C2	32:5:1282:G:N7	2.46	0.83
32:5:1552:G:O2'	32:5:1575:A:N6	2.11	0.83
32:5:2532:C:O2	32:5:2533:C:C6	2.31	0.83
32:5:3732:A:N3	32:5:3733:A:C8	2.46	0.83
32:5:4213:A:C2	32:5:4218:U:O4	2.31	0.83
32:5:4416:G:C2	32:5:4417:C:C5	2.66	0.83
32:5:4426:C:N3	32:5:4427:G:C8	2.47	0.83
32:5:5062:G:N2	32:5:5063:G:C8	2.46	0.83
43:n:11:ARG:HH12	53:S2:1844:U:P	2.02	0.83
53:S2:694:G:N1	53:S2:695:C:C4	2.47	0.83
64:SO:75:MET:CE	83:Sc:62:GLU:OE1	2.27	0.83
79:SS:28:PHE:O	79:SS:31:THR:OG1	1.95	0.83
5:J:125:ILE:HD13	79:SS:19:ASN:HD21	1.42	0.83
32:5:28:C:C2	32:5:29:G:C8	2.67	0.83
32:5:1214:C:O2'	32:5:2114:G:C2	2.30	0.83
32:5:2055:G:H5'	32:5:2056:G:H5'	1.61	0.83
32:5:2291:G:C2	32:5:2292:C:C6	2.67	0.83
32:5:4302:U:H5	32:5:4303:C:C5	1.97	0.83
32:5:4482:U:N3	32:5:4483:C:H5	1.77	0.83
53:S2:38:A:N1	53:S2:515:G:C2	2.47	0.83
53:S2:1114:U:O4	53:S2:1119:A:C2	2.32	0.83
53:S2:1840:U:C2	53:S2:1841:C:C5	2.66	0.83
18:Z:49:TYR:CE2	18:Z:133:LYS:HA	2.14	0.83
32:5:244:G:N1	32:5:246:G:C8	2.47	0.83
32:5:1084:C:N3	32:5:1085:C:C5	2.47	0.83
32:5:2851:G:N7	32:5:2852:U:C6	2.45	0.83
32:5:4071:U:N3	32:5:4072:C:C5	2.46	0.83
32:5:4240:G:C5	32:5:4241:C:C5	2.66	0.83
32:5:4653:C:O2	32:5:4654:C:C5	2.29	0.83
48:z:157:ILE:HB	48:z:159:PHE:CZ	2.14	0.83
48:z:367:GLU:OE1	48:z:367:GLU:N	2.10	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:519:A:C2	53:S2:520:A:C8	2.67	0.83
53:S2:794:A:C2	53:S2:795:A:C4	2.67	0.83
53:S2:1073:U:N3	53:S2:1074:C:C5	2.46	0.83
32:5:120:A:H1'	32:5:121:A:N1	1.92	0.82
32:5:290:U:C2	32:5:291:U:C5	2.66	0.82
32:5:1392:A:C2	32:5:1393:G:C6	2.67	0.82
32:5:1466:G:C2	32:5:1467:C:C6	2.67	0.82
32:5:2089:G:C4	32:5:2262:G:H2'	2.13	0.82
32:5:2099:G:N2	32:5:2100:A:C8	2.47	0.82
32:5:2400:G:C2	32:5:2401:A:C8	2.66	0.82
32:5:2515:G:O6	32:5:2516:G:C4	2.32	0.82
32:5:2743:A:C2	32:5:2744:A:C6	2.66	0.82
32:5:2843:U:O2	32:5:2844:A:H8	1.59	0.82
32:5:3693:U:N3	32:5:3694:U:C6	2.46	0.82
32:5:3723:A:H2'	32:5:3724:A:H8	1.43	0.82
32:5:4549:G:C6	32:5:4550:G:N7	2.46	0.82
34:8:10:G:N1	34:8:11:C:N1	2.26	0.82
53:S2:535:G:N2	53:S2:536:A:N7	2.27	0.82
53:S2:1249:C:C6	53:S2:1250:A:C8	2.66	0.82
53:S2:1289:U:H3'	53:S2:1290:G:H8	1.44	0.82
53:S2:1378:A:N1	54:SA:105:PRO:HA	1.93	0.82
53:S2:1406:G:C4	53:S2:1407:U:H1'	2.14	0.82
53:S2:1528:G:N1	53:S2:1529:C:C4	2.47	0.82
82:SZ:55:TYR:CD2	82:SZ:59:CYS:SG	2.70	0.82
83:Sc:14:VAL:HG21	83:Sc:30:VAL:CG1	1.78	0.82
32:5:66:A:C2	32:5:312:G:C1'	2.62	0.82
32:5:424:U:O2	32:5:425:U:H5	1.62	0.82
32:5:1983:A:C2	32:5:2010:A:H5''	2.13	0.82
32:5:2367:A:C2	32:5:2368:A:N7	2.46	0.82
32:5:5006:U:H1'	32:5:5042:A:N7	1.93	0.82
32:5:5012:G:N2	32:5:5014:A:C8	2.47	0.82
53:S2:1099:G:C6	53:S2:1100:A:N7	2.47	0.82
53:S2:1292:C:H3'	85:Sf:150:PHE:HA	1.60	0.82
73:SF:128:ILE:HD11	83:Sc:68:LEU:CB	2.08	0.82
32:5:83:C:OP2	32:5:84:A:O2'	1.96	0.82
32:5:85:G:O2'	32:5:97:G:O6	1.97	0.82
32:5:1887:G:N1	32:5:1890:G:C6	2.47	0.82
32:5:2294:G:N3	32:5:2295:C:C6	2.47	0.82
32:5:3863:C:C2	32:5:3864:C:C5	2.67	0.82
32:5:4552:U:O2	32:5:4553:A:C8	2.32	0.82
32:5:4750:G:O6	32:5:4949:G:O6	1.96	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4981:G:N1	32:5:4982:A:N7	2.27	0.82
69:Sa:51:ARG:NH1	83:Sc:40:ARG:HD3	1.92	0.82
32:5:211:G:C2	32:5:212:A:N7	2.48	0.82
32:5:733:A:N7	32:5:734:G:N7	2.26	0.82
32:5:1069:G:C2	32:5:1070:G:H1'	2.13	0.82
32:5:2367:A:C8	32:5:2798:A:C2	2.67	0.82
32:5:2495:U:N3	32:5:2496:G:N7	2.27	0.82
32:5:4550:G:C2	32:5:4551:U:C6	2.67	0.82
33:7:94:C:C2	33:7:95:C:C6	2.66	0.82
53:S2:794:A:C6	53:S2:795:A:C5	2.68	0.82
53:S2:1410:C:C2	53:S2:1411:G:C8	2.68	0.82
53:S2:1746:U:H4'	58:SG:65:GLN:HE22	1.43	0.82
82:SZ:58:LEU:CD2	82:SZ:77:LEU:HD12	1.78	0.82
32:5:1663:C:C2	32:5:1664:U:C5	2.67	0.82
32:5:1885:G:C2	32:5:1895:G:C2	2.67	0.82
32:5:2089:G:C2	32:5:2263:A:N6	2.47	0.82
32:5:2743:A:H2	32:5:2744:A:C5	1.96	0.82
32:5:2857:A:C2	32:5:2858:A:C5	2.68	0.82
32:5:4165:C:C2	32:5:4166:G:H8	1.97	0.82
32:5:4934:A:N1	32:5:4935:C:C6	2.48	0.82
34:8:131:G:N2	34:8:132:G:H1'	1.94	0.82
53:S2:27:A:C6	53:S2:28:U:C5	2.67	0.82
53:S2:617:G:N7	67:SX:67:ARG:NH1	2.26	0.82
53:S2:794:A:N1	53:S2:795:A:C5	2.47	0.82
53:S2:835:C:N3	53:S2:837:A:H4'	1.94	0.82
53:S2:1603:G:C6	79:SS:28:PHE:HZ	1.61	0.82
69:Sa:51:ARG:HH12	83:Sc:40:ARG:HD3	1.45	0.82
8:N:96:ARG:NH1	32:5:2460:A:O2'	2.12	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
32:5:1412:G:N2	32:5:1413:C:C2	2.48	0.82
32:5:1542:U:C2	32:5:1543:G:C8	2.67	0.82
32:5:2590:G:C6	32:5:2754:G:N1	2.48	0.82
34:8:106:G:C2	34:8:107:C:C4	2.67	0.82
53:S2:1100:A:C6	53:S2:1101:U:C5	2.68	0.82
53:S2:1258:A:C2	53:S2:1663:A:C6	2.67	0.82
53:S2:1644:C:O2'	53:S2:1645:C:C5'	2.26	0.82
56:SC:230:THR:HG23	56:SC:236:PHE:CD2	2.15	0.82
73:SF:91:ARG:HG2	82:SZ:103:HIS:CE1	2.14	0.82
12:S:10:TYR:OH	12:S:66:GLN:HG3	1.79	0.82
16:X:117:TYR:CE1	16:X:153:ILE:HG21	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:2127:C:C2'	32:5:2128:G:C8	2.62	0.82
32:5:2468:U:C4	32:5:2473:A:N1	2.48	0.82
32:5:3635:A:C6	32:5:3636:C:H1'	2.13	0.82
32:5:4343:U:C2	32:5:4344:U:C5	2.67	0.82
34:8:135:C:C2	34:8:136:U:C5	2.68	0.82
48:z:43:ASP:HB2	48:z:258:GLY:HA3	1.61	0.82
48:z:367:GLU:O	48:z:371:ARG:HG3	1.78	0.82
48:z:402:ARG:HH12	50:4:184:A:P	2.02	0.82
49:3:39:G:C2'	49:3:40:C:H5'	2.09	0.82
53:S2:217:A:N3	53:S2:309:G:C6	2.48	0.82
53:S2:666:U:C2	53:S2:667:U:C5	2.67	0.82
53:S2:977:C:C2	53:S2:978:G:C8	2.66	0.82
53:S2:1053:C:O2	53:S2:1054:G:C8	2.32	0.82
55:SB:52:THR:HG23	55:SB:57:ILE:CA	2.09	0.82
78:SR:18:GLU:CD	78:SR:70:SER:HB2	2.04	0.82
32:5:660:A:C2	32:5:661:C:C6	2.67	0.82
32:5:1213:G:C5	32:5:1215:C:N1	2.47	0.82
32:5:1303:A:C2	32:5:1304:C:C5	2.67	0.82
32:5:1960:A:N1	47:q:14:PHE:CD2	2.47	0.82
32:5:2079:G:N3	32:5:2080:U:C6	2.47	0.82
32:5:4426:C:C2	32:5:4427:G:C8	2.67	0.82
32:5:4563:U:C2	32:5:4564:A:N7	2.47	0.82
33:7:50:A:C2	33:7:51:G:C8	2.67	0.82
43:n:4:LYS:CE	53:S2:1844:U:C4	2.59	0.82
53:S2:833:C:N3	53:S2:834:C:C5	2.47	0.82
53:S2:1735:A:N6	53:S2:1799:G:O2'	2.11	0.82
55:SB:52:THR:HG23	55:SB:57:ILE:HB	1.62	0.82
82:SZ:56:ASP:O	82:SZ:60:LYS:N	2.13	0.82
83:Sc:44:ARG:CG	83:Sc:58:LEU:HD11	2.10	0.82
32:5:468:U:O2	32:5:469:C:O4'	1.98	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
32:5:2261:G:H2'	32:5:2262:G:C8	2.14	0.82
32:5:2279:A:N3	32:5:2280:G:C8	2.48	0.82
32:5:2294:G:N2	32:5:2295:C:C2	2.48	0.82
32:5:2468:U:H3	32:5:2473:A:N6	1.74	0.82
32:5:2744:A:C2	32:5:2745:A:C6	2.68	0.82
32:5:3914:U:H3	32:5:4378:A:N6	1.76	0.82
48:z:377:THR:CG2	50:4:193:G:HO2'	1.72	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:600:G:C8	53:S2:631:U:C5	2.68	0.82
53:S2:1310:U:O4'	85:Sf:143:LYS:CE	2.27	0.82
53:S2:1510:G:C5	53:S2:1511:U:C5	2.68	0.82
55:SB:52:THR:HG23	55:SB:57:ILE:CB	2.10	0.82
32:5:1269:G:C3'	32:5:2111:G:O6	2.27	0.82
32:5:1271:G:H3'	32:5:1272:C:H5'	1.60	0.82
32:5:3593:C:H4'	32:5:3594:C:OP2	1.79	0.82
32:5:3740:G:N1	32:5:3741:C:C6	2.48	0.82
32:5:3909:C:C2	32:5:3910:C:C6	2.68	0.82
32:5:4627:U:N3	32:5:4628:U:C5	2.48	0.82
32:5:5006:U:H1'	32:5:5042:A:C5	2.14	0.82
33:7:111:C:C4	33:7:112:U:C5	2.67	0.82
48:z:354:GLY:CA	48:z:465:UNK:CB	2.57	0.82
53:S2:15:U:H2'	53:S2:16:G:O4'	1.80	0.82
53:S2:182:C:H2'	53:S2:184:G:H1'	1.62	0.82
53:S2:1368:U:H1'	53:S2:1372:U:C4	2.15	0.82
53:S2:1430:C:C2	53:S2:1431:G:C8	2.67	0.82
53:S2:1592:C:C4	53:S2:1593:C:C5	2.68	0.82
3:G:53:ARG:HB3	3:G:54:PHE:CZ	2.15	0.81
32:5:55:G:N1	32:5:56:A:C8	2.47	0.81
32:5:942:G:OP2	38:F:244:ARG:NH1	2.13	0.81
32:5:951:G:C2	32:5:952:G:N7	2.48	0.81
32:5:1390:G:C2	32:5:1394:G:C5	2.68	0.81
32:5:1929:A:N1	32:5:2054:U:C4	2.48	0.81
48:z:339:ILE:CG1	48:z:484:UNK:CB	2.57	0.81
53:S2:1205:C:C5	53:S2:1206:G:C8	2.67	0.81
55:SB:150:ILE:CD1	78:SR:129:LYS:HZ2	1.70	0.81
73:SF:192:LYS:HZ1	73:SF:196:LEU:HD21	1.40	0.81
5:J:105:PHE:CE1	5:J:132:VAL:HB	2.15	0.81
32:5:2294:G:C2	32:5:2295:C:C6	2.68	0.81
32:5:2736:G:N1	32:5:2737:C:C5	2.46	0.81
32:5:2784:C:C2	32:5:2785:C:H5	1.92	0.81
33:7:30:C:C2	33:7:48:G:N2	2.48	0.81
53:S2:316:G:N2	53:S2:317:C:C2	2.48	0.81
53:S2:449:A:C2	53:S2:452:G:N7	2.48	0.81
53:S2:863:U:C2	53:S2:864:A:N7	2.48	0.81
53:S2:1294:G:C4	85:Sf:138:ARG:HD3	2.15	0.81
32:5:38:A:C6	32:5:41:C:C5	2.67	0.81
32:5:289:C:C2	32:5:290:U:C6	2.69	0.81
32:5:702:U:O2	32:5:703:G:O2'	1.96	0.81
32:5:1691:G:C6	32:5:1692:C:C5	2.67	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2327:G:N1	32:5:2328:G:C5	2.49	0.81
32:5:3606:U:C2	32:5:3607:U:C5	2.68	0.81
32:5:3726:A:O2'	32:5:3727:A:N7	2.11	0.81
32:5:3772:U:O2'	32:5:3773:U:H5'	1.78	0.81
32:5:4098:A:N1	32:5:4099:G:C5	2.48	0.81
32:5:4342:C:C2	32:5:4343:U:C6	2.69	0.81
32:5:4481:U:C2	32:5:4482:U:C6	2.67	0.81
32:5:4561:C:O2	32:5:4561:C:H2'	1.78	0.81
48:z:401:GLY:O	50:4:185:C:C5'	2.25	0.81
50:4:2:C:N3	50:4:3:C:C5	2.48	0.81
53:S2:182:C:C2'	53:S2:184:G:H1'	2.10	0.81
53:S2:575:A:H2'	53:S2:576:A:O4'	1.79	0.81
53:S2:847:A:C2	53:S2:848:U:H1'	2.16	0.81
53:S2:1074:C:N3	53:S2:1075:C:C5	2.49	0.81
53:S2:1267:C:O2'	53:S2:1268:C:O5'	1.98	0.81
53:S2:1590:C:O2	53:S2:1652:G:N2	2.13	0.81
64:SO:72:TYR:CD1	83:Sc:63:ARG:NH2	2.46	0.81
8:N:192:TRP:HE1	32:5:48:G:H5'	1.44	0.81
31:o:54:PRO:HA	32:5:4379:A:C8	2.15	0.81
32:5:924:C:N3	32:5:925:C:C5	2.49	0.81
32:5:2561:C:N3	32:5:2562:G:C8	2.49	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
32:5:3591:C:N4	32:5:3592:G:N7	2.28	0.81
32:5:3795:A:C5'	53:S2:1815:A:O2'	2.29	0.81
32:5:4167:G:N2	32:5:4168:G:C8	2.49	0.81
34:8:119:C:C2	34:8:120:G:H8	1.97	0.81
48:z:408:ARG:CB	50:4:206:G:O2'	2.29	0.81
53:S2:10:G:C5	53:S2:1697:A:C2	2.68	0.81
53:S2:426:A:C2	53:S2:427:U:C6	2.67	0.81
32:5:172:C:O4'	32:5:172:C:P	2.39	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
32:5:1878:G:N2	32:5:1879:C:C2	2.49	0.81
32:5:2465:C:H2'	32:5:2466:G:C8	2.15	0.81
32:5:2690:C:C4	32:5:2691:U:C5	2.68	0.81
32:5:3648:A:C4	32:5:3785:A:N6	2.48	0.81
32:5:3899:G:P	35:B:257:TRP:HB2	2.19	0.81
53:S2:339:A:H2'	53:S2:340:C:C5	2.15	0.81
53:S2:623:G:N2	53:S2:624:C:C2	2.48	0.81
53:S2:986:G:C8	64:SO:137:SER:HA	2.16	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1408:U:C4	53:S2:1439:A:C2	2.68	0.81
55:SB:145:LYS:HZ2	78:SR:128:PHE:HZ	1.02	0.81
32:5:120:A:C1'	32:5:121:A:C2	2.64	0.81
32:5:1268:G:N2	32:5:1270:A:C8	2.49	0.81
32:5:1282:G:N7	37:E:124:HIS:CE1	2.49	0.81
32:5:1899:G:N7	32:5:2278:G:C6	2.48	0.81
32:5:2568:C:C2	32:5:2569:G:N7	2.48	0.81
32:5:4562:C:C4	32:5:4563:U:C5	2.68	0.81
39:I:98:ARG:HD3	39:I:119:PHE:HE1	1.45	0.81
53:S2:1467:C:OP1	78:SR:1:MET:N	2.14	0.81
53:S2:1591:C:C4	53:S2:1592:C:C5	2.69	0.81
78:SR:65:PRO:CB	78:SR:74:GLN:NE2	2.44	0.81
32:5:27:C:N3	32:5:28:C:C5	2.47	0.81
32:5:153:G:C2	32:5:154:G:C8	2.69	0.81
32:5:189:G:C2	32:5:190:G:N7	2.48	0.81
32:5:497:G:N2	32:5:657:C:C2	2.49	0.81
32:5:976:G:C6	32:5:977:C:C5	2.69	0.81
32:5:1479:G:C6	32:5:1487:G:C2	2.69	0.81
32:5:1876:U:N3	32:5:1877:G:N7	2.29	0.81
32:5:1909:G:OP1	33:7:84:U:O2	1.99	0.81
32:5:2272:C:O2'	32:5:2273:G:C5'	2.28	0.81
32:5:2517:A:H2'	32:5:2518:G:C8	2.16	0.81
32:5:3905:A:C6	32:5:4449:A:C6	2.69	0.81
49:3:38:C:H5'	53:S2:1058:A:C8	2.16	0.81
50:4:183:A:H3'	50:4:184:A:P	2.19	0.81
53:S2:461:U:N3	53:S2:462:C:C5	2.48	0.81
53:S2:563:G:C2	53:S2:564:A:C8	2.68	0.81
53:S2:880:G:N7	53:S2:881:G:N7	2.29	0.81
53:S2:994:C:C2	53:S2:995:G:N7	2.48	0.81
53:S2:1226:G:O6	53:S2:1638:G:H8	1.64	0.81
85:Sf:133:ALA:HB3	85:Sf:139:HIS:HA	1.62	0.81
7:M:3:PHE:HB2	7:M:6:PHE:CZ	2.16	0.81
32:5:77:U:C4	32:5:336:A:N6	2.49	0.81
32:5:105:A:H2'	32:5:106:A:O4'	1.81	0.81
32:5:1266:G:N2	32:5:1268:G:C5	2.49	0.81
32:5:2726:G:C4	32:5:2727:C:C5	2.69	0.81
32:5:2736:G:C2	32:5:2737:C:C4	2.68	0.81
32:5:4560:C:H2'	32:5:4560:C:O2	1.78	0.81
32:5:4934:A:N1	32:5:4935:C:C5	2.48	0.81
33:7:94:C:N3	33:7:95:C:H5	1.74	0.81
53:S2:623:G:C2	53:S2:624:C:C5	2.68	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:848:U:O2	53:S2:849:A:N7	2.12	0.81
32:5:975:C:OP1	38:F:49:ARG:NH1	2.13	0.81
32:5:1886:G:N2	32:5:1894:C:N3	2.28	0.81
32:5:2270:G:C4	32:5:2271:C:C5	2.69	0.81
32:5:3743:G:H2'	32:5:3744:G:H5'	1.61	0.81
32:5:4241:C:N3	32:5:4242:U:H5	1.75	0.81
32:5:4341:C:N4	32:5:4342:C:C5	2.49	0.81
40:P:54:GLN:HB3	40:P:83:TRP:CD1	2.15	0.81
47:q:108:PRO:C	47:q:184:SER:OG	2.23	0.81
53:S2:120:U:C2	53:S2:121:U:C6	2.69	0.81
53:S2:394:G:C2	53:S2:395:G:N7	2.49	0.81
53:S2:925:G:N1	53:S2:926:A:N7	2.28	0.81
53:S2:1122:A:O3'	55:SB:205:TYR:OH	1.99	0.81
53:S2:1134:G:C2	53:S2:1135:C:C5	2.69	0.81
82:SZ:50:PHE:CZ	82:SZ:79:ILE:CG1	2.64	0.81
11:R:124:TYR:CZ	32:5:2665:U:C4	2.69	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
48:z:297:MET:CB	48:z:353:PRO:HA	2.11	0.81
48:z:402:ARG:NH2	50:4:184:A:OP1	2.11	0.81
53:S2:1053:C:N3	53:S2:1054:G:N7	2.28	0.81
53:S2:1316:C:N3	53:S2:1317:C:H5	1.76	0.81
53:S2:1397:U:O4	77:SQ:12:VAL:HA	1.81	0.81
60:SI:168:GLN:NE2	60:SI:170:LYS:HE3	1.96	0.81
83:Sc:45:ASN:ND2	83:Sc:68:LEU:HD21	1.96	0.81
32:5:1271:G:H3'	32:5:1272:C:O4'	1.81	0.80
32:5:1877:G:C2	32:5:1878:G:C8	2.69	0.80
32:5:2753:G:H3'	32:5:2754:G:H8	1.45	0.80
32:5:4731:G:O4'	32:5:4732:G:N2	2.14	0.80
53:S2:118:C:H1'	53:S2:445:A:N3	1.95	0.80
53:S2:553:U:C2	53:S2:554:A:N7	2.50	0.80
55:SB:52:THR:CG2	55:SB:57:ILE:HA	2.11	0.80
83:Sc:14:VAL:CG1	83:Sc:31:ARG:N	2.43	0.80
3:G:169:PHE:CD2	8:N:6:TYR:HB3	2.16	0.80
32:5:42:A:C6	32:5:4379:A:C2	2.69	0.80
32:5:153:G:N3	32:5:154:G:C8	2.49	0.80
32:5:2034:G:C6	32:5:2035:C:C5	2.69	0.80
32:5:2035:C:N4	32:5:2036:C:C5	2.47	0.80
32:5:2736:G:N2	32:5:2737:C:N1	2.30	0.80
32:5:3909:C:C2	32:5:3910:C:C5	2.68	0.80
32:5:4123:C:C2	32:5:4124:G:H8	1.93	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4653:C:N3	32:5:4654:C:C5	2.48	0.80
32:5:5005:G:O6	41:W:51:TRP:HB3	1.82	0.80
53:S2:51:U:C2	53:S2:52:G:C8	2.69	0.80
8:N:30:TYR:HE1	8:N:63:ARG:HD2	1.46	0.80
11:R:130:ASN:O	11:R:131:VAL:HG22	1.82	0.80
32:5:77:U:C4	32:5:335:A:N1	2.48	0.80
32:5:436:C:O2	32:5:437:G:C8	2.35	0.80
32:5:1391:A:C5	32:5:1392:A:N7	2.50	0.80
32:5:1487:G:N2	32:5:1488:G:H1'	1.96	0.80
32:5:1753:G:O6	32:5:1776:A:N6	2.13	0.80
32:5:2294:G:N1	32:5:2295:C:C4	2.50	0.80
32:5:2856:C:N4	32:5:2857:A:H62	1.79	0.80
34:8:12:G:N2	34:8:13:G:C1'	2.45	0.80
53:S2:10:G:N7	53:S2:1697:A:N3	2.30	0.80
53:S2:378:U:C2	53:S2:379:C:C5	2.66	0.80
53:S2:386:C:C2	53:S2:387:C:C5	2.69	0.80
53:S2:618:C:C2	53:S2:619:A:C8	2.68	0.80
53:S2:648:A:C2	53:S2:649:U:C5	2.69	0.80
53:S2:653:A:H2'	53:S2:654:A:O4'	1.80	0.80
53:S2:874:G:C1'	59:SH:114:GLN:NE2	2.45	0.80
53:S2:1534:C:N4	53:S2:1600:G:O6	2.13	0.80
53:S2:1828:C:H2'	53:S2:1829:G:O4'	1.81	0.80
80:ST:31:PRO:CB	80:ST:33:TRP:CH2	2.64	0.80
32:5:755:C:C2	32:5:756:G:C8	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
32:5:2734:U:O2	32:5:2735:G:C8	2.33	0.80
48:z:339:ILE:O	48:z:342:MET:CA	2.29	0.80
48:z:409:GLY:HA3	50:4:207:C:C1'	2.10	0.80
49:3:72:C:H2'	49:3:73:A:H5''	1.64	0.80
53:S2:623:G:N1	53:S2:624:C:C5	2.49	0.80
53:S2:870:A:C8	53:S2:915:G:H8	1.99	0.80
53:S2:971:G:O2'	53:S2:972:A:N7	2.14	0.80
53:S2:1592:C:C2	53:S2:1593:C:C6	2.69	0.80
32:5:1671:U:H2'	32:5:1671:U:O2	1.80	0.80
32:5:2034:G:C5	32:5:2035:C:C5	2.69	0.80
32:5:4080:C:N3	32:5:4081:G:C8	2.50	0.80
32:5:4579:U:C2	32:5:4580:U:C5	2.69	0.80
33:7:110:G:N1	33:7:111:C:C4	2.50	0.80
53:S2:75:G:N2	53:S2:77:A:OP1	2.12	0.80
53:S2:1575:G:N2	53:S2:1576:G:C5	2.49	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1666:C:O2	53:S2:1667:U:C6	2.34	0.80
7:M:7:VAL:HB	12:S:152:PHE:HB2	1.62	0.80
32:5:142:G:C2	32:5:144:G:C8	2.69	0.80
32:5:289:C:C2	32:5:290:U:C5	2.70	0.80
32:5:293:G:H2'	32:5:297:U:C6	2.15	0.80
32:5:341:G:C2	32:5:342:G:C8	2.70	0.80
32:5:1287:G:C2	32:5:1289:C:C6	2.70	0.80
32:5:1634:A:C6	32:5:1635:C:C4	2.69	0.80
32:5:1878:G:C2	32:5:1879:C:C5	2.69	0.80
32:5:2658:G:C6	32:5:2675:G:C6	2.70	0.80
32:5:2690:C:C2	32:5:2691:U:C6	2.69	0.80
32:5:3596:A:C6	62:SL:2:ALA:HB2	2.16	0.80
32:5:3710:G:C4	32:5:3711:A:H2	1.96	0.80
33:7:54:A:C2	33:7:55:A:C5	2.70	0.80
33:7:93:G:C2	33:7:94:C:C6	2.70	0.80
38:F:149:LEU:HB2	38:F:197:TYR:OH	1.80	0.80
49:3:16:U:C4	49:3:59:A:C6	2.70	0.80
53:S2:165:G:C8	53:S2:166:A:C8	2.67	0.80
53:S2:957:A:C2	53:S2:967:C:O2	2.35	0.80
53:S2:1049:A:C4	53:S2:1070:A:C2	2.69	0.80
53:S2:1784:G:H2'	53:S2:1785:C:H5'	1.61	0.80
32:5:12:A:C2	32:5:14:C:C5	2.69	0.80
32:5:472:C:N3	32:5:473:C:C5	2.50	0.80
32:5:986:C:C2	32:5:1068:G:N2	2.48	0.80
32:5:1339:U:N3	32:5:1340:C:C5	2.50	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
32:5:2322:G:H2'	32:5:2323:C:O4'	1.81	0.80
47:q:108:PRO:C	47:q:184:SER:HG	1.90	0.80
49:3:72:C:H3'	49:3:73:A:C5'	2.10	0.80
53:S2:1109:C:O2	53:S2:1109:C:O2'	2.00	0.80
53:S2:1378:A:C4'	53:S2:1379:A:O5'	2.30	0.80
53:S2:1476:A:N3	53:S2:1476:A:H5'	1.96	0.80
53:S2:1540:G:C2	53:S2:1541:G:C4	2.69	0.80
53:S2:1594:A:N1	53:S2:1595:U:C5	2.49	0.80
32:5:2457:G:C2	32:5:2465:C:N3	2.49	0.80
32:5:4504:C:H2'	32:5:4505:C:H6	1.46	0.80
32:5:4580:U:C4	32:5:4581:G:N7	2.50	0.80
37:E:278:TYR:CD2	37:E:278:TYR:N	2.46	0.80
48:z:394:LYS:HB3	48:z:394:LYS:HZ3	1.46	0.80
48:z:409:GLY:HA3	50:4:207:C:N1	1.97	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:431:G:C2	53:S2:432:G:C8	2.69	0.80
53:S2:599:A:O4'	53:S2:605:A:C2	2.35	0.80
53:S2:833:C:C2	53:S2:834:C:C6	2.70	0.80
53:S2:1575:G:C2	53:S2:1576:G:C5	2.69	0.80
53:S2:1755:C:N3	53:S2:1756:C:C5	2.49	0.80
22:d:85:ARG:HG3	22:d:85:ARG:HH11	1.46	0.80
32:5:1946:G:N2	32:5:2037:C:C5	2.49	0.80
32:5:2301:G:N1	32:5:2302:C:C4	2.50	0.80
32:5:2830:G:C2	32:5:2831:G:C8	2.70	0.80
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
32:5:5066:U:H2'	32:5:5067:U:C6	2.16	0.80
47:q:200:ASN:N	47:q:205:ASP:OD2	2.13	0.80
48:z:377:THR:CB	50:4:193:G:H2'	2.12	0.80
49:3:39:G:C6	49:3:40:C:C5	2.69	0.80
53:S2:349:A:H5''	60:SI:27:TYR:HH	1.44	0.80
53:S2:402:C:N4	53:S2:403:G:N7	2.30	0.80
53:S2:648:A:N1	53:S2:649:U:C5	2.50	0.80
60:SI:197:PHE:O	60:SI:200:ARG:N	2.15	0.80
73:SF:141:VAL:H	83:Sc:56:LEU:HD11	1.44	0.80
32:5:209:U:C5	32:5:211:G:C8	2.70	0.80
32:5:274:C:O2'	32:5:275:C:O5'	2.00	0.80
32:5:321:U:N3	32:5:322:C:C5	2.50	0.80
32:5:458:C:C2	32:5:459:C:C6	2.70	0.80
32:5:2089:G:N1	32:5:2263:A:C6	2.50	0.80
32:5:2382:A:N6	32:5:2830:G:O4'	2.15	0.80
32:5:2734:U:N3	32:5:2735:G:C8	2.50	0.80
32:5:3858:C:C4	32:5:3859:G:C8	2.70	0.80
34:8:11:C:O2	34:8:12:G:C8	2.35	0.80
34:8:117:C:N3	34:8:118:C:C5	2.50	0.80
48:z:377:THR:OG1	50:4:194:G:H4'	1.82	0.80
48:z:410:SER:HA	50:4:194:G:H1'	1.64	0.80
53:S2:1545:A:C5	53:S2:1588:A:N6	2.49	0.80
53:S2:1569:A:N7	53:S2:1570:G:H1'	1.97	0.80
20:b:17:HIS:CG	32:5:1724:G:N7	2.49	0.79
32:5:287:U:C2	32:5:288:G:C8	2.69	0.79
32:5:1421:G:C2	32:5:1422:G:C8	2.70	0.79
32:5:1949:U:N3	32:5:1950:U:C5	2.50	0.79
32:5:2329:U:O2'	32:5:2330:G:C8	2.34	0.79
32:5:3730:U:C4	32:5:3731:C:C5	2.70	0.79
32:5:3912:U:HO2'	32:5:3913:G:H5'	1.44	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4498:U:H2'	32:5:4498:U:O2	1.79	0.79
32:5:4981:G:C6	32:5:4982:A:N9	2.50	0.79
32:5:5001:U:O2'	32:5:5002:U:O5'	1.99	0.79
33:7:42:A:C5	33:7:43:U:C5	2.69	0.79
53:S2:474:G:C2	53:S2:475:C:C6	2.70	0.79
53:S2:642:U:O2'	53:S2:644:G:O2'	1.95	0.79
53:S2:923:G:C2	53:S2:1022:U:O4	2.35	0.79
53:S2:1029:G:C2	53:S2:1030:A:C8	2.71	0.79
53:S2:1122:A:C2	53:S2:1123:C:C6	2.71	0.79
53:S2:1303:C:C5	53:S2:1304:U:C5	2.69	0.79
53:S2:1430:C:N3	53:S2:1431:G:C8	2.50	0.79
54:SA:49:ILE:C	78:SR:105:MET:HE3	2.05	0.79
32:5:289:C:C4	32:5:290:U:C5	2.70	0.79
32:5:924:C:C2	32:5:925:C:C6	2.69	0.79
32:5:1438:U:O2	32:5:2099:G:O6	2.00	0.79
32:5:3730:U:C2	32:5:3731:C:C6	2.70	0.79
32:5:4344:U:N3	32:5:4345:C:C5	2.50	0.79
32:5:4345:C:N3	32:5:4346:U:C5	2.50	0.79
32:5:4579:U:C2	32:5:4580:U:C6	2.70	0.79
53:S2:56:G:N1	53:S2:90:G:C2	2.51	0.79
53:S2:404:G:C6	53:S2:405:G:N7	2.50	0.79
53:S2:618:C:N4	53:S2:619:A:C5	2.50	0.79
53:S2:794:A:C2	53:S2:795:A:C8	2.70	0.79
53:S2:1290:G:H2'	85:Sf:146:LEU:CA	2.12	0.79
53:S2:1592:C:N3	53:S2:1593:C:C6	2.51	0.79
73:SF:139:VAL:CB	83:Sc:45:ASN:O	2.31	0.79
82:SZ:50:PHE:CD2	82:SZ:79:ILE:HD13	2.17	0.79
23:e:108:ARG:CD	23:e:128:ARG:HB2	2.12	0.79
32:5:1214:C:H4'	32:5:1215:C:O5'	1.82	0.79
32:5:1325:C:C4'	32:5:3901:A:C2	2.66	0.79
32:5:1806:G:C2	32:5:1807:C:C6	2.71	0.79
32:5:2409:U:C5	32:5:2783:A:C2	2.69	0.79
32:5:2605:G:C2	32:5:2606:G:C8	2.70	0.79
32:5:3688:U:C2	32:5:3689:G:C8	2.70	0.79
47:q:107:VAL:HB	47:q:108:PRO:HD3	1.63	0.79
53:S2:106:C:O2	53:S2:107:A:N7	2.13	0.79
53:S2:656:G:N2	53:S2:662:G:O4'	2.16	0.79
53:S2:1074:C:O2	53:S2:1075:C:C6	2.35	0.79
53:S2:1538:C:H2'	53:S2:1538:C:O2	1.82	0.79
32:5:917:A:C6	32:5:919:C:C4	2.70	0.79
32:5:2059:C:C2	32:5:2060:G:C8	2.69	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2395:A:O3'	32:5:2806:A:C2	2.35	0.79
32:5:2452:G:C6	32:5:2467:U:C5	2.70	0.79
32:5:4315:A:C2	32:5:4316:G:C8	2.70	0.79
32:5:4726:G:H4'	35:B:130:PHE:CE1	2.18	0.79
32:5:4884:G:C2	32:5:4885:U:C5	2.70	0.79
47:q:108:PRO:HA	47:q:109:ALA:HB3	1.65	0.79
48:z:374:LYS:HE3	50:4:194:G:O3'	1.81	0.79
53:S2:314:U:OP1	58:SG:191:ARG:NH2	2.16	0.79
53:S2:1303:C:C4	53:S2:1304:U:C5	2.71	0.79
53:S2:1538:C:O2	53:S2:1539:U:C6	2.35	0.79
53:S2:1868:U:H4'	53:S2:1869:A:OP2	1.83	0.79
75:SM:85:LEU:HA	75:SM:88:TRP:CH2	2.17	0.79
5:J:99:PHE:CE2	5:J:105:PHE:HB2	2.18	0.79
32:5:491:G:C2	32:5:492:U:C5	2.70	0.79
32:5:1674:C:C2	32:5:1675:C:C6	2.70	0.79
32:5:2011:C:H2'	32:5:2012:A:O4'	1.81	0.79
32:5:2399:G:N1	32:5:2400:G:C5	2.50	0.79
32:5:2604:C:N3	32:5:2605:G:N7	2.29	0.79
32:5:2812:A:O2'	32:5:2813:A:O4'	2.00	0.79
32:5:4483:C:C2	32:5:4484:A:C8	2.71	0.79
32:5:4885:U:C2	32:5:4886:C:C6	2.70	0.79
32:5:4951:G:O2'	32:5:4952:G:OP1	1.98	0.79
33:7:6:C:N4	33:7:7:G:C8	2.50	0.79
33:7:110:G:N3	33:7:111:C:C6	2.51	0.79
48:z:405:ARG:CB	50:4:207:C:H5''	2.08	0.79
49:3:16:U:N3	49:3:59:A:N6	2.29	0.79
53:S2:378:U:N3	53:S2:379:C:C6	2.47	0.79
53:S2:403:G:C2	53:S2:404:G:C8	2.70	0.79
53:S2:794:A:N3	53:S2:795:A:C8	2.51	0.79
53:S2:1552:G:O6	53:S2:1578:U:C2	2.35	0.79
78:SR:100:PRO:HG2	78:SR:119:VAL:HG13	1.40	0.79
22:d:87:ARG:NH1	22:d:87:ARG:N	2.30	0.79
32:5:70:A:C2	32:5:4355:G:H1'	2.17	0.79
32:5:90:G:C2	32:5:95:G:N1	2.51	0.79
32:5:126:C:O2	32:5:127:G:C8	2.36	0.79
32:5:2675:G:H2'	32:5:2675:G:N3	1.96	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
32:5:4285:U:C2	32:5:4286:C:C6	2.70	0.79
32:5:4699:U:O4	32:5:4702:G:C6	2.35	0.79
33:7:110:G:C2	33:7:111:C:C5	2.71	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:250:LEU:HD11	48:z:273:ILE:HD13	1.65	0.79
48:z:402:ARG:CG	50:4:184:A:C3'	2.50	0.79
53:S2:298:G:C2	53:S2:299:A:C8	2.71	0.79
53:S2:1109:C:H1'	53:S2:1110:G:P	2.23	0.79
53:S2:1567:G:H1'	79:SS:82:TRP:CH2	2.17	0.79
53:S2:1869:A:N6	55:SB:115:LYS:HG2	1.97	0.79
73:SF:28:VAL:HA	73:SF:110:GLN:OE1	1.82	0.79
73:SF:128:ILE:HD12	83:Sc:68:LEU:CD1	2.11	0.79
79:SS:12:ILE:O	79:SS:13:LEU:HD23	1.82	0.79
8:N:179:LYS:HB2	8:N:180:PHE:CE2	2.17	0.79
32:5:90:G:C5	32:5:92:C:H1'	2.18	0.79
32:5:470:A:N6	32:5:471:A:C4	2.51	0.79
32:5:1280:C:C2	32:5:1282:G:C5	2.70	0.79
32:5:1325:C:O4'	32:5:3901:A:C2	2.35	0.79
32:5:1563:A:N6	53:S2:1028:A:H61	1.80	0.79
32:5:1878:G:C2	32:5:1879:C:C4	2.71	0.79
32:5:1949:U:C2	32:5:1950:U:C5	2.71	0.79
32:5:3655:C:C2	32:5:3656:A:C8	2.71	0.79
53:S2:793:G:O6	53:S2:794:A:C5	2.35	0.79
53:S2:832:G:N1	53:S2:833:C:C2	2.51	0.79
53:S2:863:U:N3	53:S2:864:A:N7	2.29	0.79
53:S2:1416:C:H2'	53:S2:1417:C:C6	2.18	0.79
53:S2:1528:G:N3	53:S2:1529:C:C5	2.50	0.79
1:A:67:TYR:CD1	32:5:4086:G:N7	2.50	0.79
3:G:53:ARG:CZ	3:G:54:PHE:HZ	1.96	0.79
23:e:35:TRP:CD1	23:e:35:TRP:C	2.60	0.79
31:o:31:ASP:OD1	32:5:4343:U:O3'	1.99	0.79
32:5:1998:A:N3	32:5:2019:C:O2'	2.15	0.79
32:5:3935:C:N3	32:5:3936:A:C8	2.50	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
32:5:4535:A:C6	32:5:4536:C:C5	2.71	0.79
32:5:4537:C:O2	32:5:4537:C:H2'	1.83	0.79
34:8:14:U:O2'	34:8:15:G:O4'	2.01	0.79
49:3:38:C:C5'	53:S2:1058:A:C8	2.65	0.79
53:S2:70:G:C2	53:S2:80:G:C2	2.70	0.79
53:S2:316:G:C2	53:S2:317:C:C4	2.71	0.79
54:SA:38:ILE:HD11	54:SA:150:THR:HG22	1.62	0.79
78:SR:100:PRO:HG3	78:SR:119:VAL:HG13	1.62	0.79
79:SS:86:ARG:HA	79:SS:86:ARG:HE	1.48	0.79
32:5:86:U:O4	32:5:97:G:C2	2.35	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:100:C:C4	32:5:101:A:C8	2.61	0.79
32:5:1074:G:H2'	32:5:1075:G:C1'	2.12	0.79
32:5:1507:C:C2	32:5:1508:A:C8	2.71	0.79
32:5:3711:A:N6	32:5:3712:A:N3	2.30	0.79
32:5:3867:A:N3	32:5:3880:G:C6	2.50	0.79
32:5:4269:G:H22	32:5:4277:G:H22	1.27	0.79
39:I:9:TYR:HD2	39:I:97:ILE:HG12	1.45	0.79
48:z:405:ARG:CZ	50:4:208:A:OP1	2.27	0.79
54:SA:36:GLN:HA	54:SA:36:GLN:NE2	1.96	0.79
32:5:209:U:C4	32:5:211:G:C8	2.70	0.79
32:5:2457:G:N2	32:5:2465:C:N3	2.31	0.79
32:5:3785:A:H2	32:5:4536:C:H1'	1.47	0.79
53:S2:81:U:C4	53:S2:82:G:C8	2.71	0.79
53:S2:750:C:O2	53:S2:751:G:C8	2.36	0.79
53:S2:1123:C:OP1	55:SB:205:TYR:OH	2.01	0.79
53:S2:1394:G:N1	53:S2:1395:C:C5	2.51	0.79
53:S2:1511:U:N3	53:S2:1512:C:C6	2.51	0.79
53:S2:1512:C:C2	53:S2:1513:C:C5	2.70	0.79
32:5:90:G:C2	32:5:95:G:C6	2.72	0.78
32:5:348:G:C2	32:5:350:C:C4	2.71	0.78
32:5:1175:A:C2	32:5:1176:C:C6	2.70	0.78
32:5:4167:G:N1	32:5:4168:G:C8	2.51	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
33:7:18:C:C4	33:7:19:C:H5	2.01	0.78
53:S2:92:A:N1	53:S2:447:A:C2	2.51	0.78
53:S2:475:C:N3	53:S2:476:A:C8	2.51	0.78
53:S2:925:G:N2	53:S2:926:A:C8	2.50	0.78
53:S2:1540:G:N1	53:S2:1541:G:N7	2.32	0.78
53:S2:1564:C:O2	53:S2:1565:C:C6	2.36	0.78
32:5:68:U:C4	32:5:69:A:C8	2.70	0.78
32:5:291:U:H2'	32:5:292:G:C2'	2.12	0.78
32:5:1070:G:C6	32:5:1071:C:C5	2.71	0.78
32:5:1756:U:C4	32:5:1776:A:C2	2.71	0.78
32:5:1870:C:N3	32:5:1871:A:N7	2.31	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
32:5:4096:C:N4	32:5:4097:G:C8	2.51	0.78
32:5:4240:G:C4	32:5:4241:C:C6	2.71	0.78
53:S2:1302:G:C6	85:Sf:140:TYR:CE1	2.71	0.78
53:S2:1686:G:O3'	53:S2:1687:C:P	2.41	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SO:147:ARG:CZ	64:SO:147:ARG:CB	2.60	0.78
32:5:1202:C:C2	32:5:1203:G:C8	2.71	0.78
32:5:1661:C:O2	32:5:1662:C:C6	2.36	0.78
32:5:1735:U:H2'	32:5:1735:U:O2	1.82	0.78
32:5:2077:C:H2'	32:5:2077:C:O2	1.81	0.78
32:5:2463:G:N2	32:5:2464:C:C2	2.51	0.78
32:5:2857:A:C2	32:5:2858:A:C6	2.71	0.78
32:5:4283:G:C2	32:5:4284:C:C4	2.64	0.78
48:z:327:PHE:HD2	48:z:428:ALA:CB	1.96	0.78
53:S2:403:G:C6	53:S2:404:G:C5	2.71	0.78
53:S2:1033:G:H1	53:S2:1080:A:HO2'	1.30	0.78
53:S2:1039:C:N3	53:S2:1040:G:C8	2.51	0.78
53:S2:1045:U:N3	53:S2:1046:U:C5	2.51	0.78
53:S2:1501:C:C2	53:S2:1502:C:C6	2.71	0.78
82:SZ:50:PHE:CZ	82:SZ:79:ILE:HG12	2.17	0.78
11:R:166:THR:CG2	53:S2:872:A:C3'	2.15	0.78
19:a:63:LEU:C	19:a:63:LEU:HD23	2.08	0.78
32:5:3695:U:N3	32:5:3696:C:C5	2.51	0.78
32:5:3695:U:N3	32:5:3696:C:C6	2.50	0.78
32:5:3845:A:C6	32:5:3846:C:C5	2.70	0.78
32:5:4883:C:O2'	32:5:4884:G:OP2	1.99	0.78
32:5:5001:U:C2'	32:5:5002:U:O5'	2.31	0.78
49:3:19:U:N3	49:3:57:G:N2	2.31	0.78
53:S2:993:G:H22	53:S2:999:G:H22	1.31	0.78
53:S2:1405:A:C2	53:S2:1406:G:C4	2.71	0.78
17:Y:11:ARG:HH21	36:C:200:ARG:CZ	1.96	0.78
32:5:690:C:C2	32:5:691:C:C6	2.72	0.78
32:5:1280:C:O4'	36:C:323:ARG:NH2	2.17	0.78
32:5:1628:C:O2	32:5:1628:C:H2'	1.82	0.78
32:5:1634:A:N1	32:5:1635:C:C5	2.52	0.78
32:5:1985:G:O2'	32:5:2003:G:OP2	2.01	0.78
32:5:4100:C:C2	32:5:4101:C:C6	2.71	0.78
32:5:4504:C:C2	32:5:4505:C:C5	2.72	0.78
32:5:4537:C:C2	32:5:4538:G:C8	2.72	0.78
32:5:4983:C:O2	32:5:4984:C:H6	1.66	0.78
53:S2:388:U:C2	53:S2:389:A:C8	2.72	0.78
53:S2:694:G:C2	53:S2:695:C:C6	2.71	0.78
53:S2:974:C:N3	53:S2:975:G:C8	2.52	0.78
53:S2:1123:C:N3	53:S2:1124:C:C6	2.51	0.78
72:SD:192:TRP:CD1	72:SD:196:GLY:HA2	2.18	0.78
73:SF:192:LYS:HZ1	73:SF:196:LEU:CD2	1.89	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:55:VAL:HB	3:G:57:TRP:HE1	1.49	0.78
32:5:1049:C:C2	32:5:1050:C:C6	2.71	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
32:5:2534:C:O2'	32:5:2535:G:H5'	1.82	0.78
32:5:2633:U:C2	32:5:2634:C:C6	2.72	0.78
32:5:4081:G:C2	32:5:4082:G:N7	2.52	0.78
32:5:4551:U:O2	32:5:4552:U:C6	2.37	0.78
32:5:4601:U:O4	32:5:4609:G:N2	2.15	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
35:B:203:GLN:HA	35:B:203:GLN:HE21	1.49	0.78
53:S2:66:G:C6	53:S2:68:A:C8	2.71	0.78
53:S2:105:U:C4	53:S2:106:C:C5	2.72	0.78
53:S2:665:G:C2	53:S2:671:A:N7	2.52	0.78
53:S2:993:G:C2	53:S2:994:C:N1	2.51	0.78
53:S2:1528:G:C4	53:S2:1529:C:C5	2.72	0.78
53:S2:1596:U:C4	53:S2:1597:C:C5	2.72	0.78
83:Sc:45:ASN:HD22	83:Sc:68:LEU:HD22	1.49	0.78
10:Q:91:ARG:O	32:5:1501:C:N4	2.17	0.78
32:5:504:G:C2	32:5:654:C:O2	2.37	0.78
32:5:1334:A:C6	32:5:1335:G:N7	2.51	0.78
32:5:1778:C:O2	32:5:1779:U:C5	2.37	0.78
32:5:1964:A:C5	32:5:1965:G:C8	2.71	0.78
32:5:3717:A:N6	32:5:3736:A:C6	2.51	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
32:5:3859:G:H4'	40:P:139:TYR:CE1	2.18	0.78
33:7:43:U:C2	33:7:44:C:C5	2.72	0.78
53:S2:51:U:N3	53:S2:52:G:N7	2.32	0.78
53:S2:404:G:N1	53:S2:405:G:C5	2.51	0.78
53:S2:1139:C:H2'	53:S2:1140:G:O4'	1.82	0.78
53:S2:1526:G:C2	53:S2:1527:C:C6	2.70	0.78
53:S2:1578:U:H4'	53:S2:1579:A:O5'	1.83	0.78
53:S2:1776:G:C2	53:S2:1777:G:C8	2.71	0.78
19:a:132:ARG:HH21	32:5:1468:C:C5'	1.95	0.78
32:5:54:G:N1	32:5:55:G:C8	2.51	0.78
32:5:1476:C:C2	32:5:1477:C:C5	2.71	0.78
32:5:1563:A:C8	53:S2:678:U:H4'	2.18	0.78
32:5:1598:C:C5	32:5:2798:A:N7	2.52	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1946:G:C6	32:5:2037:C:N4	2.52	0.78
32:5:1981:G:O2'	32:5:1982:G:O4'	2.01	0.78
32:5:3629:A:C4'	53:S2:1721:U:H3	1.96	0.78
32:5:4096:C:N4	32:5:4097:G:C5	2.52	0.78
34:8:43:A:C2	34:8:44:A:N7	2.51	0.78
53:S2:71:G:H3'	53:S2:72:C:H5''	1.64	0.78
53:S2:499:G:C6	53:S2:501:C:H1'	2.18	0.78
53:S2:977:C:N3	53:S2:978:G:N7	2.30	0.78
53:S2:1419:C:OP2	80:ST:129:ARG:CA	2.31	0.78
59:SH:135:PHE:HD1	59:SH:136:PRO:N	1.81	0.78
63:SN:113:PHE:O	63:SN:116:ILE:N	2.17	0.78
86:Sg:125:ARG:HD3	86:Sg:150:TRP:CE2	2.18	0.78
32:5:723:A:C2	32:5:943:A:N1	2.52	0.78
32:5:1744:U:C2	32:5:1745:G:C8	2.72	0.78
32:5:1807:C:N3	32:5:1808:C:C6	2.51	0.78
32:5:1811:G:N2	32:5:1812:C:C2	2.52	0.78
32:5:1878:G:N3	32:5:1879:C:C6	2.51	0.78
32:5:1924:C:N3	32:5:1925:G:C8	2.51	0.78
32:5:2089:G:O6	32:5:2263:A:C5'	2.31	0.78
32:5:2743:A:N1	32:5:2744:A:N6	2.31	0.78
32:5:3793:U:N3	32:5:3794:C:C5	2.52	0.78
32:5:3899:G:OP1	35:B:257:TRP:HB2	1.84	0.78
32:5:4229:U:C5	32:5:4230:C:C5	2.72	0.78
47:q:107:VAL:HG23	47:q:108:PRO:HD2	1.64	0.78
53:S2:105:U:C5	53:S2:106:C:C5	2.72	0.78
53:S2:443:U:C4	53:S2:444:G:C8	2.71	0.78
53:S2:1224:G:N2	53:S2:1643:U:C2	2.52	0.78
57:SE:86:PHE:CE1	57:SE:102:ILE:HA	2.18	0.78
83:Sc:14:VAL:HA	83:Sc:32:VAL:HA	1.66	0.78
3:G:231:ASN:HD22	3:G:231:ASN:N	1.82	0.78
32:5:100:C:C6	32:5:101:A:C8	2.69	0.78
32:5:950:G:C2	32:5:951:G:C8	2.72	0.78
32:5:1388:A:H2'	32:5:1389:U:O4'	1.84	0.78
32:5:1946:G:C2	32:5:2037:C:C5	2.71	0.78
32:5:2050:G:H2'	32:5:2051:C:O4'	1.84	0.78
32:5:2089:G:C5	32:5:2262:G:H2'	2.19	0.78
32:5:2293:U:N3	32:5:2294:G:N7	2.30	0.78
32:5:2347:A:C2	32:5:2348:G:N1	2.52	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
32:5:4095:G:N3	32:5:4096:C:C5	2.52	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4166:G:N2	32:5:4167:G:C8	2.52	0.78
32:5:4536:C:C2	32:5:4537:C:C6	2.72	0.78
50:4:138:G:H4'	50:4:188:G:H4'	1.64	0.78
53:S2:449:A:N6	53:S2:452:G:C6	2.52	0.78
53:S2:1132:C:N3	53:S2:1133:A:C8	2.51	0.78
13:T:140:PHE:CE1	32:5:1089:G:H5'	2.17	0.77
32:5:85:G:N3	32:5:97:G:O6	2.17	0.77
32:5:688:U:N3	32:5:689:U:C6	2.52	0.77
32:5:1485:C:O2	32:5:4349:C:C4	2.37	0.77
32:5:1686:C:H2'	32:5:1687:U:H5'	1.63	0.77
32:5:1836:G:C2	32:5:1837:A:C8	2.71	0.77
32:5:1926:C:O2	32:5:1927:U:C6	2.37	0.77
32:5:2316:G:N2	32:5:2317:C:C2	2.52	0.77
32:5:2793:G:C6	32:5:2797:C:C4	2.72	0.77
32:5:3905:A:C5	32:5:4449:A:N1	2.52	0.77
32:5:4080:C:O2	32:5:4080:C:H2'	1.82	0.77
32:5:5050:C:H1'	35:B:374:PHE:CE2	2.19	0.77
34:8:70:G:N1	34:8:87:G:C2	2.51	0.77
53:S2:118:C:C5	53:S2:119:U:C5	2.72	0.77
6:L:103:ARG:NH2	32:5:75:G:O6	2.16	0.77
32:5:690:C:N3	32:5:691:C:C5	2.52	0.77
32:5:753:C:N3	32:5:754:U:C6	2.52	0.77
32:5:957:G:C5'	32:5:1284:G:N2	2.46	0.77
32:5:1489:G:C6	32:5:1490:G:C8	2.71	0.77
32:5:2251:G:O6	45:r:99:LYS:HA	1.84	0.77
32:5:4098:A:C2	32:5:4099:G:N7	2.53	0.77
32:5:4399:U:C4	32:5:4400:G:C8	2.72	0.77
48:z:336:PHE:HE1	48:z:427:PHE:HE1	1.32	0.77
48:z:352:ILE:HB	48:z:355:PHE:HZ	1.49	0.77
53:S2:10:G:N7	53:S2:1697:A:C2	2.52	0.77
53:S2:933:G:N2	53:S2:1000:C:C2	2.52	0.77
53:S2:1232:U:O2'	53:S2:1253:A:N7	2.15	0.77
54:SA:50:ASN:HA	78:SR:105:MET:SD	2.23	0.77
73:SF:204:ARG:OXT	73:SF:204:ARG:HG3	1.84	0.77
75:SM:85:LEU:O	75:SM:85:LEU:HD23	1.84	0.77
10:Q:65:ARG:NH1	32:5:1502:G:OP1	2.17	0.77
32:5:86:U:O2	32:5:86:U:H2'	1.84	0.77
32:5:2485:U:O2	32:5:2486:G:C8	2.37	0.77
32:5:3739:C:H5''	32:5:3739:C:H6	1.47	0.77
32:5:4095:G:C2	32:5:4096:C:C5	2.72	0.77
32:5:4196:G:H2'	32:5:4197:G:O4'	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4416:G:N1	32:5:4417:C:C5	2.53	0.77
49:3:9:A:O4'	49:3:46:G:C2	2.38	0.77
53:S2:964:A:C2	53:S2:965:U:C4	2.73	0.77
53:S2:1562:C:N3	53:S2:1563:G:N7	2.31	0.77
56:SC:253:PRO:O	56:SC:256:TRP:HB2	1.83	0.77
57:SE:191:ARG:HD2	57:SE:218:PHE:CE1	2.20	0.77
64:SO:75:MET:HE1	83:Sc:62:GLU:OE1	1.84	0.77
78:SR:91:LEU:HD12	78:SR:93:GLN:H	1.48	0.77
32:5:422:C:O2	32:5:422:C:H2'	1.82	0.77
32:5:440:U:N3	32:5:441:G:N7	2.33	0.77
32:5:481:G:C2	32:5:482:G:C8	2.72	0.77
32:5:484:U:N3	32:5:486:C:C5	2.50	0.77
32:5:1217:G:N2	32:5:1218:G:O6	2.17	0.77
32:5:1545:G:C6	32:5:1546:C:N4	2.52	0.77
32:5:1683:U:O2	32:5:1683:U:H2'	1.84	0.77
32:5:2079:G:N2	32:5:2080:U:C6	2.51	0.77
32:5:4355:G:N2	32:5:4356:G:C4	2.53	0.77
34:8:5:U:OP2	40:P:62:ARG:NH1	2.17	0.77
47:q:188:VAL:HG13	47:q:189:ILE:N	1.96	0.77
49:3:49:C:C2	49:3:50:C:C5	2.72	0.77
53:S2:106:C:C2	53:S2:107:A:N7	2.53	0.77
53:S2:340:C:C2	53:S2:341:C:C6	2.72	0.77
53:S2:475:C:C2	53:S2:476:A:C8	2.72	0.77
53:S2:551:U:HO2'	71:Se:44:ASN:CG	1.93	0.77
53:S2:640:A:O2'	53:S2:641:A:O4'	2.02	0.77
53:S2:1146:C:C2	53:S2:1147:C:C5	2.72	0.77
53:S2:1678:A:OP1	73:SF:145:ARG:NH2	2.16	0.77
54:SA:49:ILE:O	78:SR:105:MET:HE3	1.83	0.77
56:SC:115:GLN:HA	56:SC:115:GLN:HE21	1.48	0.77
79:SS:10:GLN:HG3	79:SS:13:LEU:CD2	2.08	0.77
32:5:73:A:C2	32:5:74:G:C8	2.73	0.77
32:5:114:G:H2'	32:5:115:C:H5'	1.65	0.77
32:5:300:A:C2	32:5:301:G:C6	2.73	0.77
32:5:1650:A:O4'	32:5:1650:A:N3	2.16	0.77
32:5:1806:G:N2	32:5:1807:C:C2	2.52	0.77
32:5:2113:G:C8	32:5:2115:G:H1'	2.20	0.77
32:5:3773:U:O2'	32:5:3774:A:OP1	2.02	0.77
32:5:4239:A:C5	32:5:4240:G:C8	2.73	0.77
32:5:4343:U:C4	32:5:4344:U:C5	2.72	0.77
32:5:4537:C:O2	32:5:4538:G:H8	1.67	0.77
32:5:4888:U:HO2'	32:5:4889:G:H8	1.30	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:43:U:C2	33:7:44:C:C6	2.73	0.77
34:8:15:G:H2'	34:8:16:G:H1'	1.65	0.77
53:S2:1111:U:O2	53:S2:1112:U:C5	2.38	0.77
54:SA:39:TYR:OH	78:SR:104:GLU:HB3	1.85	0.77
32:5:514:U:C5	32:5:515:C:O4'	2.38	0.77
32:5:692:A:C2	32:5:693:C:C5	2.72	0.77
32:5:2080:U:C2	32:5:2081:C:H5	1.99	0.77
32:5:2301:G:N2	32:5:2302:C:C2	2.52	0.77
32:5:4745:G:H21	32:5:4746:C:H41	1.29	0.77
33:7:51:G:N2	33:7:52:C:C2	2.52	0.77
36:C:48:ASN:O	36:C:49:ARG:HB3	1.84	0.77
53:S2:1111:U:O2	53:S2:1112:U:C6	2.37	0.77
2:D:29:ASP:HB3	2:D:32:ALA:HB3	1.65	0.77
5:J:75:ARG:NH1	33:7:42:A:C1'	2.48	0.77
32:5:56:A:N6	32:5:57:G:C6	2.52	0.77
32:5:193:G:H2'	32:5:194:C:O4'	1.85	0.77
32:5:1076:C:O3'	32:5:2114:G:O6	2.03	0.77
32:5:1304:C:HO2'	34:8:8:U:HO2'	1.30	0.77
32:5:1341:U:O2	32:5:1342:A:C8	2.37	0.77
32:5:1442:C:N3	32:5:1443:A:C8	2.53	0.77
32:5:1555:G:C5	32:5:1556:C:C5	2.72	0.77
32:5:2089:G:O6	32:5:2263:A:C8	2.38	0.77
32:5:2743:A:N1	32:5:2744:A:C6	2.53	0.77
32:5:4368:G:C6	32:5:4369:A:N7	2.52	0.77
32:5:4966:A:H2'	32:5:4967:A:O4'	1.84	0.77
34:8:81:C:O2	34:8:81:C:H2'	1.84	0.77
48:z:359:PHE:O	48:z:360:MET:O	2.03	0.77
53:S2:85:A:C2	53:S2:86:C:C4	2.73	0.77
53:S2:622:C:N4	53:S2:623:G:H1'	1.99	0.77
53:S2:875:A:N1	53:S2:876:C:C4	2.52	0.77
53:S2:956:G:C2	53:S2:957:A:C5	2.72	0.77
53:S2:1552:G:O6	53:S2:1578:U:N3	2.17	0.77
32:5:43:U:C5	32:5:44:A:N9	2.53	0.77
32:5:299:C:N3	32:5:300:A:C8	2.53	0.77
32:5:425:U:C2	32:5:426:A:N7	2.53	0.77
32:5:1811:G:C2	32:5:1812:C:C6	2.72	0.77
32:5:2107:C:C5	32:5:2126:G:C2	2.72	0.77
32:5:2126:G:H1'	32:5:2127:C:C6	2.18	0.77
32:5:2566:G:C2	32:5:2567:G:C8	2.73	0.77
32:5:2646:C:O2	32:5:2647:A:C8	2.37	0.77
32:5:2658:G:N1	32:5:2675:G:N1	2.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3668:C:C4	32:5:3669:G:N7	2.53	0.77
32:5:3731:C:C2	32:5:3732:A:H8	2.02	0.77
32:5:4355:G:C2	32:5:4356:G:C5	2.72	0.77
50:4:187:G:H2'	50:4:188:G:H8	1.50	0.77
53:S2:43:U:H2'	53:S2:43:U:O2	1.83	0.77
53:S2:340:C:H2'	53:S2:341:C:H6	1.50	0.77
53:S2:832:G:C2	53:S2:833:C:H1'	2.20	0.77
53:S2:874:G:O4'	59:SH:114:GLN:NE2	2.18	0.77
53:S2:1839:U:C2	53:S2:1840:U:C6	2.72	0.77
54:SA:39:TYR:CE2	78:SR:105:MET:HG2	2.19	0.77
73:SF:140:ASP:OD2	83:Sc:56:LEU:HD21	1.84	0.77
2:D:268:ARG:CD	33:7:60:G:O2'	2.31	0.77
10:Q:89:ASP:OD1	10:Q:91:ARG:NH2	2.17	0.77
32:5:90:G:N7	32:5:92:C:C1'	2.47	0.77
32:5:424:U:C2	32:5:425:U:H5	2.03	0.77
32:5:1280:C:N3	32:5:1282:G:C6	2.52	0.77
32:5:1764:G:C6	32:5:1766:A:OP2	2.38	0.77
32:5:1866:U:O4	32:5:4405:G:C8	2.37	0.77
32:5:2726:G:N3	32:5:2727:C:C5	2.52	0.77
32:5:2848:G:O2'	32:5:3838:U:O4	2.02	0.77
32:5:3794:C:C2	32:5:3795:A:C8	2.73	0.77
32:5:4332:C:O2	32:5:4332:C:H2'	1.83	0.77
32:5:4425:G:C6	32:5:4426:C:C6	2.73	0.77
32:5:4687:A:C2	32:5:4688:C:C6	2.72	0.77
34:8:42:G:C2	34:8:43:A:C8	2.73	0.77
34:8:94:G:H4'	34:8:95:A:OP1	1.85	0.77
43:n:8:LYS:NZ	53:S2:1845:A:C8	2.46	0.77
50:4:295:U:N3	50:4:296:C:C5	2.52	0.77
53:S2:26:U:O2	53:S2:26:U:H2'	1.84	0.77
53:S2:42:A:C4	53:S2:426:A:N7	2.52	0.77
53:S2:989:C:O2	53:S2:1001:A:N6	2.17	0.77
53:S2:1134:G:N1	53:S2:1135:C:C4	2.52	0.77
53:S2:1290:G:H2'	85:Sf:146:LEU:N	2.00	0.77
8:N:105:ARG:NH2	32:5:2459:G:N7	2.33	0.77
25:g:13:TYR:CG	32:5:2513:A:N7	2.53	0.77
32:5:295:A:N7	32:5:316:U:O2'	2.18	0.77
32:5:330:G:C2	32:5:331:G:N7	2.53	0.77
32:5:1177:U:O2	32:5:1178:G:C8	2.38	0.77
32:5:1618:G:C6	32:5:1619:G:N7	2.53	0.77
32:5:3739:C:C6	32:5:3739:C:C5'	2.67	0.77
32:5:4167:G:C2	32:5:4168:G:N7	2.52	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4216:G:C2	32:5:4217:G:C8	2.72	0.77
35:B:323:TYR:HB3	35:B:342:LYS:HG2	1.67	0.77
48:z:237:LYS:NZ	48:z:266:THR:OG1	2.15	0.77
53:S2:444:G:N1	53:S2:446:G:OP2	2.17	0.77
53:S2:551:U:O2	53:S2:551:U:H2'	1.84	0.77
53:S2:551:U:O2	53:S2:552:G:H8	1.64	0.77
53:S2:870:A:C4	53:S2:915:G:C5	2.59	0.77
53:S2:998:A:N7	53:S2:999:G:O4'	2.16	0.77
53:S2:1592:C:N3	53:S2:1593:C:C5	2.53	0.77
78:SR:18:GLU:HB2	78:SR:70:SER:CB	2.14	0.77
10:Q:176:ARG:NH2	32:5:1497:A:N6	2.33	0.76
16:X:117:TYR:CD1	16:X:153:ILE:HG21	2.18	0.76
32:5:425:U:C2	32:5:426:A:C8	2.72	0.76
32:5:1269:G:C6	32:5:2111:G:N2	2.53	0.76
32:5:1287:G:C2	32:5:1289:C:C5	2.73	0.76
32:5:1684:A:C6	32:5:1685:G:N7	2.53	0.76
32:5:1886:G:C2	32:5:1894:C:C4	2.73	0.76
32:5:2364:G:C2	32:5:2365:C:C5	2.73	0.76
32:5:2658:G:N1	32:5:2675:G:C2	2.54	0.76
32:5:2736:G:N2	32:5:2737:C:C6	2.53	0.76
32:5:4285:U:N3	32:5:4286:C:C5	2.53	0.76
33:7:54:A:H2	33:7:55:A:C5	2.01	0.76
40:P:41:ILE:HD11	40:P:150:LEU:HD13	1.67	0.76
45:r:31:ASN:OD1	45:r:32:LEU:N	2.18	0.76
48:z:191:THR:HG21	48:z:205:MET:HE1	1.67	0.76
48:z:377:THR:HB	50:4:193:G:C2'	2.15	0.76
48:z:411:GLY:CA	50:4:194:G:N3	2.48	0.76
53:S2:458:A:C2	53:S2:459:C:C1'	2.68	0.76
53:S2:1291:A:C2	85:Sf:140:TYR:CG	2.73	0.76
53:S2:1392:U:C2	53:S2:1393:G:C8	2.73	0.76
53:S2:1540:G:C2	53:S2:1541:G:N9	2.53	0.76
53:S2:1668:U:H5'	81:SU:77:TRP:CH2	2.21	0.76
73:SF:140:ASP:HB2	83:Sc:56:LEU:HG	1.67	0.76
32:5:437:G:C2	32:5:438:G:C8	2.74	0.76
32:5:1271:G:N2	32:5:2122:G:OP2	2.17	0.76
32:5:1967:A:C2	32:5:1968:G:C8	2.72	0.76
32:5:2056:G:C5	32:5:2058:G:C8	2.73	0.76
32:5:2316:G:N1	32:5:2317:C:C4	2.53	0.76
32:5:2367:A:C2	32:5:2368:A:C5	2.72	0.76
32:5:2498:C:N3	32:5:2499:C:C5	2.53	0.76
32:5:3759:A:C6	53:S2:1709:G:H5''	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3773:U:O2	32:5:3776:G:N3	2.17	0.76
32:5:4988:U:H4'	32:5:4989:U:O2	1.85	0.76
53:S2:1134:G:N2	53:S2:1135:C:C2	2.53	0.76
53:S2:1134:G:C4	53:S2:1135:C:C5	2.72	0.76
53:S2:1317:C:C2	53:S2:1318:G:C8	2.73	0.76
53:S2:1376:A:C6	53:S2:1377:U:H1'	2.21	0.76
53:S2:1609:C:O2	53:S2:1610:G:C8	2.38	0.76
53:S2:1859:A:C2	53:S2:1860:A:C5	2.74	0.76
55:SB:56:LYS:HD2	55:SB:57:ILE:N	2.01	0.76
17:Y:100:HIS:CD2	32:5:231:U:H4'	2.20	0.76
32:5:466:A:C2	32:5:467:U:C6	2.72	0.76
32:5:473:C:N3	32:5:474:C:C5	2.53	0.76
32:5:1516:G:C5	32:5:1518:A:C8	2.73	0.76
32:5:2301:G:C2	32:5:2302:C:C5	2.74	0.76
32:5:2328:G:O2'	32:5:2329:U:C5'	2.34	0.76
32:5:2633:U:C2	32:5:2634:C:C5	2.74	0.76
32:5:4215:C:N3	32:5:4216:G:C8	2.52	0.76
34:8:68:G:H2'	34:8:69:U:O4'	1.83	0.76
49:3:39:G:C2	49:3:40:C:N1	2.54	0.76
53:S2:1722:G:N2	53:S2:1723:G:H1'	1.99	0.76
55:SB:62:LEU:HD13	55:SB:65:ARG:CZ	2.15	0.76
59:SH:133:LEU:HD21	59:SH:176:VAL:HG11	1.67	0.76
12:S:45:TRP:HZ3	12:S:56:LYS:HA	1.49	0.76
16:X:117:TYR:CE1	16:X:153:ILE:HG22	2.19	0.76
32:5:244:G:C6	32:5:246:G:C8	2.73	0.76
32:5:1190:C:C2	32:5:1191:C:C6	2.73	0.76
32:5:1354:A:C8	32:5:1503:A:C2	2.73	0.76
32:5:1583:A:C1'	32:5:2396:A:N6	2.43	0.76
32:5:1634:A:C5	32:5:1635:C:C5	2.73	0.76
32:5:2037:C:H2'	32:5:2037:C:O2	1.83	0.76
32:5:2270:G:N1	32:5:2271:C:C4	2.54	0.76
34:8:120:G:C2	34:8:121:G:C8	2.73	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
53:S2:118:C:C5	53:S2:119:U:C6	2.73	0.76
53:S2:339:A:N3	53:S2:340:C:C5	2.54	0.76
53:S2:445:A:H2'	53:S2:446:G:O5'	1.85	0.76
53:S2:980:A:H2'	53:S2:981:A:H8	1.49	0.76
53:S2:1772:C:N3	53:S2:1773:C:C5	2.54	0.76
53:S2:1782:G:C2	53:S2:1784:G:N7	2.53	0.76
82:SZ:97:ILE:HD12	82:SZ:109:TYR:CE2	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:S:83:ARG:NH2	13:T:156:TYR:HB2	1.99	0.76
32:5:1261:G:C2	32:5:1262:G:C8	2.74	0.76
32:5:1684:A:C2	32:5:1685:G:H1'	2.20	0.76
32:5:4333:C:C2	32:5:4334:U:C5	2.73	0.76
32:5:4392:G:O2'	32:5:4395:U:O4	2.04	0.76
33:7:51:G:C2	33:7:52:C:C4	2.73	0.76
53:S2:430:C:C2	53:S2:431:G:C8	2.73	0.76
53:S2:578:C:C4	53:S2:579:C:C6	2.73	0.76
53:S2:598:G:N2	53:S2:639:C:C2	2.54	0.76
53:S2:955:A:N7	53:S2:969:U:H6	1.83	0.76
53:S2:1408:U:N3	53:S2:1439:A:H2	1.80	0.76
53:S2:1511:U:C2	53:S2:1512:C:C6	2.74	0.76
78:SR:85:VAL:HG13	78:SR:86:PRO:HD2	1.67	0.76
2:D:250:ASN:HD21	2:D:252:VAL:HG12	1.51	0.76
32:5:56:A:C6	32:5:57:G:C6	2.73	0.76
32:5:294:G:O5'	32:5:296:A:C4'	2.29	0.76
32:5:1213:G:C6	32:5:1215:C:N1	2.54	0.76
32:5:1279:A:H2'	32:5:1280:C:C5	2.20	0.76
32:5:1442:C:N3	32:5:1443:A:N7	2.33	0.76
32:5:2461:G:C2	32:5:2462:C:C5	2.73	0.76
32:5:3688:U:N3	32:5:3689:G:N7	2.34	0.76
32:5:4223:C:H4'	39:I:119:PHE:HE2	1.47	0.76
32:5:4880:C:C2'	32:5:4881:U:H5'	2.15	0.76
48:z:339:ILE:HG12	48:z:484:UNK:CB	2.15	0.76
53:S2:649:U:O2	53:S2:649:U:H2'	1.82	0.76
53:S2:1400:U:H2'	53:S2:1401:A:O4'	1.86	0.76
53:S2:1408:U:C4	53:S2:1439:A:N1	2.53	0.76
53:S2:1622:U:O4	79:SS:120:HIS:HE1	1.67	0.76
86:Sg:142:VAL:HG13	86:Sg:177:TRP:CZ3	2.20	0.76
32:5:1490:G:N3	32:5:1491:A:C8	2.53	0.76
32:5:1936:C:N3	32:5:1937:C:H5	1.82	0.76
32:5:1945:G:C2	32:5:1946:G:H1'	2.20	0.76
32:5:2463:G:C6	32:5:2464:C:N4	2.54	0.76
48:z:339:ILE:HD11	48:z:484:UNK:CB	2.15	0.76
50:4:59:A:N6	50:4:288:G:C2	2.54	0.76
32:5:2279:A:N3	32:5:2280:G:N7	2.33	0.76
32:5:2568:C:N3	32:5:2569:G:N7	2.33	0.76
32:5:3629:A:H4'	53:S2:1721:U:H3	1.51	0.76
32:5:4498:U:O2	32:5:4500:U:H5'	1.85	0.76
32:5:5007:A:N7	32:5:5040:U:O4	2.19	0.76
50:4:121:U:H3	50:4:229:U:H3	1.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:119:U:C2	53:S2:120:U:C6	2.74	0.76
53:S2:957:A:N1	53:S2:967:C:C2	2.54	0.76
67:SX:134:TYR:CE1	71:Se:13:ARG:NH2	2.53	0.76
82:SZ:50:PHE:HE2	82:SZ:79:ILE:HB	1.51	0.76
32:5:271:C:C4	32:5:272:U:C5	2.74	0.76
32:5:330:G:N2	32:5:331:G:C4	2.54	0.76
32:5:961:G:O6	32:5:969:C:C6	2.39	0.76
32:5:1266:G:H5''	32:5:2112:G:C2	2.20	0.76
32:5:1277:G:C2	32:5:1278:C:C6	2.73	0.76
32:5:1878:G:C4	32:5:1879:C:C5	2.74	0.76
32:5:2515:G:C5	32:5:2516:G:C8	2.74	0.76
32:5:2677:G:C6	32:5:2678:A:C8	2.73	0.76
32:5:3657:U:N3	32:5:3658:C:C5	2.54	0.76
32:5:3800:A:C2	32:5:4496:A:O4'	2.39	0.76
32:5:4536:C:C4	32:5:4537:C:C5	2.74	0.76
32:5:5063:G:C2	32:5:5064:G:C8	2.74	0.76
34:8:11:C:N3	34:8:12:G:C8	2.53	0.76
46:K:123:ARG:CB	46:K:129:ILE:HD11	2.16	0.76
48:z:381:SER:O	50:4:208:A:C5'	2.32	0.76
48:z:413:SER:CB	51:9:74:ARG:HG3	1.89	0.76
53:S2:118:C:C1'	53:S2:445:A:N3	2.49	0.76
53:S2:794:A:C2	53:S2:795:A:N9	2.53	0.76
53:S2:994:C:N3	53:S2:995:G:C8	2.52	0.76
1:A:40:TYR:HE1	32:5:4117:U:O2	1.68	0.76
32:5:3717:A:N6	32:5:3736:A:C5	2.53	0.76
32:5:3795:A:H4'	53:S2:1815:A:C2'	2.14	0.76
33:7:18:C:O2	33:7:19:C:H6	1.66	0.76
53:S2:832:G:N2	53:S2:843:C:C2	2.54	0.76
53:S2:1146:C:O2	53:S2:1147:C:C6	2.39	0.76
53:S2:1273:C:C2	53:S2:1506:A:H2	2.04	0.76
53:S2:1309:C:H2'	85:Sf:143:LYS:CD	2.15	0.76
53:S2:1408:U:C3'	53:S2:1409:A:C8	2.69	0.76
53:S2:1417:C:O2	53:S2:1419:C:H5'	1.86	0.76
53:S2:1623:A:N6	53:S2:1625:U:OP2	2.17	0.76
20:b:17:HIS:CE1	32:5:1724:G:N7	2.53	0.75
32:5:55:G:N1	32:5:56:A:N7	2.34	0.75
32:5:88:A:H62	32:5:97:G:N2	1.83	0.75
32:5:181:C:C2	32:5:256:G:N2	2.54	0.75
32:5:331:G:C2	32:5:332:C:C5	2.74	0.75
32:5:516:C:C2	32:5:646:G:N2	2.54	0.75
32:5:699:C:N3	32:5:700:G:C8	2.54	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:752:G:C6	32:5:753:C:C6	2.74	0.75
32:5:2035:C:O2	32:5:2035:C:H2'	1.86	0.75
32:5:4233:A:N1	32:5:4290:U:C4	2.53	0.75
32:5:4580:U:C2	32:5:4581:G:C8	2.74	0.75
34:8:102:G:P	34:8:104:A:O2'	2.44	0.75
53:S2:64:A:C6	53:S2:82:G:C2	2.74	0.75
53:S2:384:U:H5	53:S2:386:C:H6	1.32	0.75
53:S2:458:A:N1	53:S2:459:C:N1	2.33	0.75
53:S2:1205:C:H6	53:S2:1206:G:C8	2.03	0.75
53:S2:1310:U:O2	53:S2:1311:C:C6	2.38	0.75
53:S2:1598:G:H3'	82:SZ:80:ARG:HE	1.50	0.75
55:SB:56:LYS:O	55:SB:57:ILE:HG12	1.86	0.75
73:SF:128:ILE:HD11	83:Sc:68:LEU:O	1.85	0.75
32:5:77:U:C2	32:5:335:A:N6	2.54	0.75
32:5:949:G:C2	32:5:950:G:C8	2.74	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
32:5:1482: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
32:5:2279:A:C2	32:5:2280:G:C8	2.74	0.75
32:5:2325:C:N3	32:5:2326:G:C8	2.53	0.75
32:5:2366:A:H2	32:5:3851:U:H1'	1.50	0.75
32:5:3794:C:N3	32:5:3795:A:N7	2.34	0.75
32:5:4414:A:N6	32:5:4427:G:C6	2.54	0.75
32:5:4562:C:C2	32:5:4563:U:H6	2.03	0.75
48:z:270:ILE:HG22	48:z:285:PHE:CE2	2.21	0.75
53:S2:340:C:H2'	53:S2:341:C:C6	2.21	0.75
53:S2:797:C:O4'	59:SH:109:ARG:NH1	2.19	0.75
53:S2:799:U:H5''	59:SH:110:THR:CG2	2.08	0.75
53:S2:974:C:C2	53:S2:975:G:C8	2.74	0.75
53:S2:1050:A:C6	53:S2:1051:G:H1'	2.20	0.75
53:S2:1123:C:P	55:SB:205:TYR:OH	2.44	0.75
53:S2:1133:A:N1	53:S2:1134:G:C5	2.53	0.75
22:d:24:GLU:OE1	22:d:87:ARG:NH2	2.18	0.75
32:5:208:A:C4'	32:5:232:G:N2	2.49	0.75
32:5:1177:U:C2	32:5:1178:G:C8	2.75	0.75
32:5:1632:A:C6	32:5:1634:A:H8	2.02	0.75
32:5:1811:G:N1	32:5:1812:C:C4	2.55	0.75
32:5:2081:C:C2'	32:5:2082:G:O5'	2.33	0.75
32:5:2326:G:N1	32:5:2327:G:C8	2.49	0.75
32:5:2504:C:O2	32:5:2505:C:C6	2.40	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2565:A:N7	32:5:2566:G:H1'	2.01	0.75
32:5:3717:A:C5	32:5:3736:A:N6	2.55	0.75
32:5:4345:C:C2	32:5:4346:U:C5	2.74	0.75
32:5:4406:U:C2	32:5:4407:G:C8	2.75	0.75
39:I:101:LYS:HZ1	39:I:121:LYS:CE	1.99	0.75
43:n:2:ARG:HG2	53:S2:1842:C:OP2	1.86	0.75
48:z:374:LYS:CD	50:4:195:U:OP1	2.34	0.75
53:S2:426:A:C2	53:S2:427:U:C4	2.74	0.75
53:S2:461:U:O2	53:S2:462:C:C6	2.40	0.75
53:S2:551:U:N3	53:S2:552:G:N7	2.34	0.75
53:S2:827:A:C5	53:S2:828:G:C8	2.75	0.75
53:S2:928:G:H2'	53:S2:929:G:C8	2.22	0.75
53:S2:955:A:C5	53:S2:969:U:H6	2.04	0.75
53:S2:962:A:C2	53:S2:963:A:C8	2.74	0.75
53:S2:1066:U:N3	53:S2:1067:C:C6	2.54	0.75
53:S2:1224:G:N2	53:S2:1643:U:C4	2.54	0.75
53:S2:1696:C:H2'	53:S2:1696:C:O2	1.85	0.75
53:S2:1755:C:C2	53:S2:1756:C:C6	2.74	0.75
32:5:1213:G:O6	32:5:1215:C:C4	2.40	0.75
32:5:1391:A:N7	32:5:1392:A:N7	2.34	0.75
32:5:1598:C:O2	32:5:1598:C:C2'	2.34	0.75
32:5:2567:G:C2	32:5:2568:C:C6	2.74	0.75
32:5:4093:G:N7	32:5:4094:G:C8	2.54	0.75
40:P:30:ARG:NH2	40:P:34:GLN:OE1	2.19	0.75
53:S2:222:U:N3	53:S2:223:C:C5	2.55	0.75
53:S2:870:A:C5	53:S2:915:G:N9	2.54	0.75
53:S2:1035:A:H2'	53:S2:1036:A:O4'	1.86	0.75
53:S2:1149:A:C5	53:S2:1151:G:C8	2.74	0.75
53:S2:1225:U:O4	53:S2:1226:G:C5	2.39	0.75
53:S2:1291:A:O3'	85:Sf:149:CYS:N	2.19	0.75
53:S2:1408:U:H2'	53:S2:1409:A:C1'	2.15	0.75
53:S2:1860:A:C6	53:S2:1862:G:C5	2.74	0.75
53:S2:1862:G:N3	53:S2:1863:A:O2'	2.18	0.75
83:Sc:14:VAL:CG2	83:Sc:31:ARG:CA	2.64	0.75
8:N:138:PHE:HB3	8:N:143:ARG:HH22	1.52	0.75
21:c:89:TYR:CE1	32:5:2673:G:C2	2.74	0.75
27:i:45:ARG:NH1	27:i:49:GLY:O	2.20	0.75
32:5:1291:G:N2	32:5:1292:C:C2	2.55	0.75
32:5:1538:U:O2'	32:5:1629:G:OP1	2.04	0.75
32:5:1898:C:C5	32:5:2279:A:H1'	2.22	0.75
32:5:1945:G:N1	32:5:1946:G:N9	2.35	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1992:U:H4'	32:5:1993:C:OP1	1.86	0.75
32:5:2290:C:N3	32:5:2291:G:C8	2.54	0.75
32:5:3910:C:O2	32:5:3911:C:C6	2.39	0.75
32:5:4343:U:O2	32:5:4344:U:C6	2.39	0.75
32:5:4455:G:C2	32:5:4456:C:C6	2.75	0.75
32:5:4743:G:C2	32:5:4744:A:C8	2.75	0.75
32:5:5047:C:O2	32:5:5048:A:C5	2.39	0.75
33:7:112:U:O2	33:7:113:G:C8	2.40	0.75
34:8:117:C:C4	34:8:118:C:C5	2.74	0.75
36:C:325:MET:HE1	38:F:157:TYR:CE2	2.21	0.75
48:z:109:LEU:HA	48:z:197:GLN:HE21	1.52	0.75
53:S2:56:G:C5	53:S2:90:G:N2	2.55	0.75
53:S2:640:A:H2'	53:S2:641:A:O4'	1.87	0.75
53:S2:1146:C:O2	53:S2:1147:C:C5	2.40	0.75
53:S2:1366:G:N2	53:S2:1374:C:N3	2.34	0.75
53:S2:1409:A:H2'	53:S2:1410:C:O4'	1.86	0.75
82:SZ:52:LYS:HD3	82:SZ:52:LYS:C	2.12	0.75
83:Sc:16:LYS:HG2	83:Sc:17:VAL:O	1.86	0.75
10:Q:152:PHE:CE2	32:5:1847:C:H4'	2.21	0.75
32:5:124:C:N3	32:5:125:C:C5	2.55	0.75
32:5:244:G:N2	32:5:246:G:H1'	2.01	0.75
32:5:1301:C:N3	32:5:1302:U:C6	2.53	0.75
32:5:1806:G:N1	32:5:1807:C:C4	2.54	0.75
32:5:1876:U:C4	32:5:1877:G:N7	2.54	0.75
32:5:2568:C:C2	32:5:2569:G:C8	2.74	0.75
32:5:3759:A:N6	53:S2:1709:G:H5''	2.02	0.75
32:5:4122:G:C5	32:5:4123:C:C6	2.75	0.75
32:5:4302:U:C5	32:5:4303:C:C6	2.75	0.75
48:z:360:MET:HB3	48:z:365:GLU:HG3	1.68	0.75
53:S2:553:U:O2	53:S2:554:A:C8	2.39	0.75
53:S2:694:G:C2	53:S2:695:C:C4	2.75	0.75
53:S2:831:G:C2	53:S2:844:U:C4	2.75	0.75
53:S2:869:A:C8	59:SH:115:LYS:HB2	2.21	0.75
53:S2:963:A:H2'	53:S2:964:A:C8	2.21	0.75
53:S2:1248:U:H2'	53:S2:1249:C:C1'	2.15	0.75
53:S2:1393:G:C2	53:S2:1394:G:C8	2.75	0.75
53:S2:1511:U:N3	53:S2:1512:C:C5	2.55	0.75
53:S2:1646:C:OP1	77:SQ:138:ARG:NH1	2.20	0.75
11:R:151:ARG:HH12	62:SL:118:ARG:HD2	1.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:87:A:C2	32:5:292:G:N1	2.55	0.75
32:5:330:G:N3	32:5:331:G:C8	2.55	0.75
32:5:2077:C:C4	32:5:2078:C:C5	2.74	0.75
32:5:2361:G:O6	40:P:25:HIS:HD2	1.65	0.75
32:5:2724:G:N3	32:5:2726:G:C8	2.55	0.75
32:5:3709:U:H3'	32:5:3710:G:C5'	2.17	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
32:5:3867:A:N3	32:5:3880:G:O6	2.20	0.75
32:5:4723:A:C2	32:5:4724:A:C5	2.74	0.75
32:5:4998:G:N1	32:5:4999:G:N7	2.35	0.75
34:8:115:G:C6	34:8:116:C:C5	2.75	0.75
48:z:340:MET:O	48:z:344:PRO:HD2	1.85	0.75
53:S2:309:G:H2'	53:S2:310:C:C6	2.21	0.75
53:S2:446:G:OP1	60:SI:50:GLY:N	2.19	0.75
53:S2:495:U:O2'	53:S2:496:C:O4'	2.04	0.75
53:S2:1399:C:C2	53:S2:1400:U:C5	2.74	0.75
7:M:3:PHE:HB2	7:M:6:PHE:HZ	1.50	0.75
32:5:447:C:N3	32:5:448:G:N7	2.34	0.75
32:5:719:C:C2	32:5:720:G:C8	2.74	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
32:5:2034:G:C6	32:5:2035:C:C4	2.74	0.75
32:5:2110:C:C6	32:5:2110:C:OP1	2.38	0.75
32:5:3846:C:O2	32:5:3846:C:H2'	1.85	0.75
48:z:381:SER:O	50:4:207:C:C2'	2.34	0.75
53:S2:27:A:C2	53:S2:28:U:H1'	2.22	0.75
53:S2:92:A:C2	53:S2:447:A:C2	2.74	0.75
53:S2:461:U:C2	53:S2:462:C:C5	2.75	0.75
53:S2:553:U:N3	53:S2:554:A:N7	2.35	0.75
53:S2:667:U:H5''	53:S2:1087:A:C2	2.22	0.75
73:SF:141:VAL:C	83:Sc:56:LEU:HD13	2.12	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
32:5:472:C:C2	32:5:473:C:C5	2.74	0.75
32:5:992:C:C2	32:5:993:G:C8	2.75	0.75
32:5:1692:C:O2	32:5:1692:C:H2'	1.86	0.75
32:5:1950:U:N3	32:5:1951:G:N7	2.35	0.75
32:5:2041:A:C2	32:5:4464:A:C6	2.75	0.75
32:5:3847:C:C2	32:5:3848:U:C6	2.75	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4122:G:C6	32:5:4123:C:C6	2.75	0.75
32:5:4355:G:N3	32:5:4356:G:C8	2.55	0.75
32:5:4472:G:C6	32:5:4473:A:C8	2.75	0.75
32:5:4772:C:N3	32:5:4773:C:C5	2.55	0.75
48:z:344:PRO:O	48:z:346:SER:N	2.18	0.75
53:S2:637:U:C2	53:S2:638:C:C5	2.75	0.75
53:S2:666:U:O4'	53:S2:1088:U:C4	2.39	0.75
53:S2:964:A:N3	53:S2:965:U:C4	2.54	0.75
53:S2:995:G:H22	53:S2:997:A:H3'	1.51	0.75
53:S2:1420:G:O2'	80:ST:4:VAL:C	2.30	0.75
54:SA:205:ARG:NH2	78:SR:84:TYR:HE2	1.82	0.75
73:SF:139:VAL:HB	83:Sc:45:ASN:O	1.87	0.75
20:b:16:TRP:H	20:b:16:TRP:CD1	2.04	0.74
32:5:1213:G:N3	32:5:1215:C:H1'	2.01	0.74
32:5:1661:C:O2	32:5:1662:C:C5	2.39	0.74
32:5:1899:G:N2	32:5:1900:C:N1	2.34	0.74
32:5:2428:A:C4	32:5:2789:A:H2	2.05	0.74
32:5:2448:G:C6	32:5:2511:A:C6	2.74	0.74
32:5:3669:G:N2	32:5:3671:G:OP2	2.20	0.74
32:5:3858:C:H2'	32:5:3858:C:O2	1.87	0.74
32:5:3907:G:C1'	32:5:4449:A:C1'	2.64	0.74
32:5:4258:C:C2	32:5:4259:C:C5	2.74	0.74
46:K:4:LYS:O	46:K:5:PHE:HB3	1.86	0.74
48:z:359:PHE:CD2	48:z:360:MET:CG	2.70	0.74
53:S2:98:C:C2	53:S2:409:C:C6	2.75	0.74
53:S2:646:G:C5	53:S2:647:U:C6	2.75	0.74
53:S2:649:U:O2	53:S2:650:A:C8	2.40	0.74
53:S2:1295:A:C5	53:S2:1296:U:H1'	2.21	0.74
53:S2:1667:U:O2	53:S2:1668:U:C5	2.39	0.74
72:SD:24:PHE:C	72:SD:24:PHE:CD1	2.63	0.74
32:5:66:A:N3	32:5:312:G:H1'	2.02	0.74
32:5:445:U:C1'	32:5:2313:A:C2	2.69	0.74
32:5:2058:G:N2	32:5:2059:C:C6	2.53	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
32:5:2281:U:O2	32:5:2281:U:H2'	1.86	0.74
32:5:2830:G:C2	32:5:2831:G:N7	2.55	0.74
32:5:3702:A:C8	32:5:3774:A:C4	2.75	0.74
34:8:70:G:C6	34:8:87:G:N1	2.55	0.74
53:S2:751:G:O6	53:S2:791:C:N3	2.20	0.74
53:S2:752:G:N1	53:S2:790:C:C4	2.55	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:989:C:N3	53:S2:1001:A:C2	2.54	0.74
32:5:38:A:N1	32:5:41:C:C5	2.54	0.74
32:5:957:G:P	32:5:1284:G:H21	2.09	0.74
32:5:1213:G:C6	32:5:1215:C:C6	2.75	0.74
32:5:1359:G:H2'	32:5:1360:G:O4'	1.87	0.74
32:5:1755:C:H3'	32:5:1756:U:H5''	1.69	0.74
32:5:2108:G:N1	32:5:2125:C:N4	2.33	0.74
32:5:3771:C:H2'	32:5:3772:U:C6	2.22	0.74
32:5:3909:C:O2	32:5:3910:C:H6	1.67	0.74
32:5:4482:U:H3	32:5:4483:C:H5	1.32	0.74
49:3:19:U:H3	49:3:57:G:N2	1.86	0.74
53:S2:56:G:H2'	53:S2:57:U:O5'	1.88	0.74
53:S2:924:G:C5	53:S2:925:G:C8	2.74	0.74
53:S2:1058:A:C2	53:S2:1059:G:C5	2.75	0.74
53:S2:1454:A:C8	53:S2:1476:A:C1'	2.70	0.74
82:SZ:57:LYS:HB3	82:SZ:61:GLU:CG	2.17	0.74
2:D:41:LYS:HG3	13:T:93:ILE:HD11	1.69	0.74
30:m:104:HIS:HD2	32:5:4697:U:H4'	1.53	0.74
32:5:44:A:C6	32:5:45:U:C4	2.74	0.74
32:5:77:U:N3	32:5:336:A:N6	2.36	0.74
32:5:144:G:N2	32:5:145:G:C8	2.56	0.74
32:5:642:G:N2	32:5:643:C:C2	2.56	0.74
32:5:1666:C:O2'	32:5:1688:G:OP1	2.05	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
32:5:1946:G:C2	32:5:1948:G:C8	2.75	0.74
32:5:3631:U:N3	32:5:3632:C:C5	2.56	0.74
32:5:3859:G:OP2	40:P:25:HIS:NE2	2.19	0.74
32:5:3860:A:C2	32:5:3861:A:H1'	2.23	0.74
32:5:3873:G:N2	32:5:3883:U:C2	2.56	0.74
32:5:4151:G:C2	32:5:4152:G:C8	2.75	0.74
32:5:4677:U:H2'	32:5:4677:U:O2	1.85	0.74
34:8:102:G:O5'	34:8:104:A:O2'	2.05	0.74
48:z:410:SER:CA	50:4:194:G:H1'	2.14	0.74
53:S2:634:A:N1	53:S2:635:G:C5	2.56	0.74
55:SB:55:THR:O	55:SB:56:LYS:HG3	1.86	0.74
1:A:50:HIS:HB3	32:5:2741:U:O2'	1.87	0.74
32:5:1188:C:O2	32:5:1188:C:H2'	1.87	0.74
32:5:1543:G:N1	32:5:1544:G:N7	2.36	0.74
32:5:2076:G:C6	32:5:2077:C:C5	2.76	0.74
32:5:2290:C:C2	32:5:2291:G:C8	2.76	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2843:U:C2	32:5:2844:A:N7	2.52	0.74
32:5:3672:G:N7	32:5:3674:G:C1'	2.50	0.74
32:5:3762:U:H2'	32:5:3763:A:O4'	1.87	0.74
32:5:4166:G:N2	32:5:4167:G:N9	2.35	0.74
32:5:4702:G:C6	32:5:4703:U:C5	2.75	0.74
32:5:4754:G:N2	32:5:4880:C:C2	2.56	0.74
48:z:414:THR:H	51:9:74:ARG:HG3	1.50	0.74
50:4:183:A:O3'	50:4:184:A:O5'	2.06	0.74
53:S2:926:A:C6	53:S2:927:C:C5	2.76	0.74
53:S2:996:A:C5	63:SN:113:PHE:CE2	2.75	0.74
78:SR:18:GLU:CB	78:SR:70:SER:OG	2.29	0.74
20:b:12:GLN:O	20:b:13:SER:C	2.29	0.74
32:5:60:G:C2	32:5:61:A:C8	2.76	0.74
32:5:275:C:O2'	32:5:276:C:O4'	2.04	0.74
32:5:917:A:N1	32:5:919:C:C4	2.55	0.74
32:5:1477:C:O2	32:5:1478:C:H1'	1.87	0.74
32:5:1780:A:C6	32:5:1781:U:C6	2.76	0.74
32:5:1887:G:N1	32:5:1890:G:O6	2.21	0.74
32:5:2311:C:C4	32:5:2312:U:C6	2.75	0.74
32:5:2436:U:C4	32:5:2783:A:C8	2.75	0.74
32:5:2713:C:O2	32:5:2714:G:C8	2.41	0.74
32:5:4091:G:C2	32:5:4159:C:N3	2.56	0.74
32:5:4627:U:O2	32:5:4628:U:C6	2.41	0.74
48:z:340:MET:N	48:z:341:LYS:N	2.34	0.74
6:L:35:ARG:C	6:L:39:ARG:HH12	1.94	0.74
23:e:35:TRP:CZ3	23:e:56:PRO:HD3	2.23	0.74
32:5:106:A:H1'	32:5:336:A:H8	1.52	0.74
32:5:1271:G:H3'	32:5:1272:C:C5'	2.16	0.74
32:5:1983:A:C2	32:5:2010:A:C5'	2.71	0.74
32:5:2288:G:N1	32:5:2290:C:C4	2.55	0.74
32:5:2884:G:O2'	53:S2:1731:A:O2'	1.74	0.74
32:5:3911:C:C2	32:5:3912:U:C5	2.74	0.74
32:5:4098:A:N3	32:5:4099:G:C8	2.55	0.74
32:5:4269:G:C5	32:5:4270:C:C6	2.76	0.74
32:5:4537:C:N3	32:5:4538:G:C8	2.56	0.74
33:7:94:C:C2	33:7:95:C:H5	2.03	0.74
48:z:380:ASP:O	50:4:208:A:C1'	2.30	0.74
50:4:195:U:H2'	50:4:196:C:C6	2.23	0.74
53:S2:600:G:N7	53:S2:631:U:C5	2.55	0.74
53:S2:794:A:C4	53:S2:795:A:C8	2.75	0.74
53:S2:805:U:N3	53:S2:806:U:C5	2.55	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1394:G:C6	53:S2:1395:C:H5	2.06	0.74
53:S2:1411:G:C5	53:S2:1412:C:H1'	2.23	0.74
54:SA:50:ASN:HA	78:SR:105:MET:HE3	1.67	0.74
4:H:31:ARG:HH12	4:H:87:GLY:HA3	1.51	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
32:5:2101:C:O2	32:5:2102:G:C8	2.41	0.74
32:5:2650:G:H2'	32:5:2651:C:O4'	1.88	0.74
32:5:4344:U:O2	32:5:4345:C:C5	2.41	0.74
32:5:4549:G:N1	32:5:4550:G:C8	2.53	0.74
32:5:4744:A:C2	32:5:4745:G:C4	2.76	0.74
34:8:9:A:C6	34:8:10:G:N7	2.56	0.74
34:8:134:G:N3	34:8:135:C:C6	2.54	0.74
38:F:184:TYR:HB3	38:F:202:ARG:HG2	1.68	0.74
53:S2:452:G:C2	53:S2:453:C:C6	2.76	0.74
53:S2:830:A:N6	53:S2:844:U:C2	2.54	0.74
53:S2:833:C:N3	53:S2:834:C:C6	2.55	0.74
53:S2:1408:U:H3'	53:S2:1409:A:C8	2.22	0.74
53:S2:1409:A:C2	53:S2:1438:A:N1	2.56	0.74
84:Sd:40:ARG:HG2	84:Sd:41:GLN:OE1	1.88	0.74
3:G:29:ASN:HB3	3:G:32:PHE:CE1	2.23	0.74
25:g:11:LEU:HB3	25:g:18:ASN:HD21	1.52	0.74
32:5:66:A:C2	32:5:312:G:H1'	2.23	0.74
32:5:1724:G:N3	38:F:105:PRO:HB3	2.02	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
32:5:2634:C:C2	32:5:2635:U:C5	2.76	0.74
32:5:3879:G:C6	32:5:3882:C:C4	2.76	0.74
34:8:60:G:O6	34:8:96:C:O2'	2.06	0.74
50:4:5:G:H1'	50:4:290:C:OP1	1.88	0.74
53:S2:349:A:H4'	60:SI:27:TYR:OH	1.88	0.74
53:S2:1294:G:C5	85:Sf:138:ARG:HD3	2.22	0.74
53:S2:1350:U:C2'	54:SA:110:ASN:OD1	2.35	0.74
53:S2:1540:G:C2	53:S2:1541:G:C5	2.75	0.74
32:5:44:A:C5	32:5:45:U:C5	2.75	0.74
32:5:1245:C:O2	32:5:1246:G:H8	1.65	0.74
32:5:1563:A:N7	53:S2:678:U:C4'	2.51	0.74
32:5:2328:G:O2'	32:5:2329:U:O5'	2.05	0.74
32:5:4234:A:C6	32:5:4271:A:H1'	2.23	0.74
32:5:4240:G:C6	32:5:4241:C:C4	2.75	0.74
32:5:4369:A:N1	32:5:4370:G:C5	2.56	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4686:G:C6	32:5:4687:A:C8	2.75	0.74
32:5:5047:C:O4'	32:5:5048:A:C2	2.41	0.74
48:z:401:GLY:CA	50:4:185:C:H5'	2.16	0.74
3:G:102:TYR:OH	3:G:207:VAL:HA	1.87	0.73
32:5:153:G:C2	32:5:154:G:C5	2.75	0.73
32:5:655:C:C2	32:5:656:C:C5	2.77	0.73
32:5:977:C:C2	32:5:978:G:H8	2.02	0.73
32:5:1273:G:N7	37:E:69:TYR:N	2.35	0.73
32:5:1279:A:H3'	32:5:1280:C:C5	2.22	0.73
32:5:1390:G:N2	32:5:1394:G:C4	2.54	0.73
32:5:1632:A:N6	32:5:1634:A:C4	2.54	0.73
32:5:1830:G:C2	32:5:1831:G:C8	2.76	0.73
32:5:1866:U:O2'	32:5:1867:A:C8	2.39	0.73
32:5:1929:A:C2	32:5:2054:U:O4	2.40	0.73
32:5:1971:C:C2	32:5:1972:G:C8	2.76	0.73
32:5:2368:A:N6	32:5:2827:G:H1'	2.03	0.73
32:5:2623:A:C2	32:5:2633:U:N3	2.56	0.73
32:5:2691:U:C2	32:5:2692:U:H5	2.05	0.73
32:5:3783:A:H2	32:5:3789:C:H42	1.34	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
32:5:4229: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
32:5:4536:C:O2	32:5:4536:C:H2'	1.86	0.73
34:8:21:C:OP1	36:C:195:LYS:NZ	2.21	0.73
34:8:43:A:N1	34:8:44:A:N7	2.36	0.73
38:F:239:GLU:O	38:F:241:GLN:N	2.21	0.73
53:S2:600:G:N7	53:S2:631:U:C4	2.56	0.73
53:S2:618:C:H2'	53:S2:618:C:O2	1.88	0.73
53:S2:1133:A:N3	53:S2:1134:G:C8	2.56	0.73
53:S2:1222:G:H2'	53:S2:1223:A:O4'	1.88	0.73
59:SH:135:PHE:C	59:SH:135:PHE:CD1	2.65	0.73
69:Sa:28:ARG:HG3	69:Sa:28:ARG:HH11	1.51	0.73
11:R:109:TYR:CE1	11:R:114:LYS:HD2	2.23	0.73
32:5:21:G:N1	34:8:36:G:C2	2.56	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
32:5:723:A:H2	32:5:943:A:N1	1.85	0.73
32:5:1201:U:C2	32:5:1202:C:C6	2.76	0.73
32:5:1898:C:H5	32:5:2279:A:H1'	1.53	0.73
32:5:2327:G:C2	32:5:2328:G:C5	2.75	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2438:A:C6	32:5:2441:C:C4	2.75	0.73
32:5:2673:G:C4'	32:5:2675:G:H1'	2.18	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
32:5:3794:C:N3	32:5:3795:A:C8	2.56	0.73
32:5:4981:G:C5	32:5:4982:A:C8	2.75	0.73
36:C:122:TYR:CD1	36:C:122:TYR:O	2.41	0.73
48:z:340:MET:O	48:z:341:LYS:C	2.31	0.73
53:S2:357:C:N3	53:S2:358:C:C5	2.56	0.73
53:S2:458:A:N6	53:S2:459:C:C4	2.56	0.73
53:S2:535:G:N2	53:S2:536:A:C8	2.56	0.73
53:S2:752:G:C6	53:S2:790:C:N4	2.56	0.73
79:SS:38:ARG:HH21	80:ST:45:LEU:HD22	1.53	0.73
83:Sc:20:ARG:HG2	83:Sc:28:THR:HG22	1.68	0.73
2:D:17:GLN:HG3	13:T:20:ARG:HA	1.69	0.73
19:a:36:GLY:O	19:a:41:HIS:HB2	1.89	0.73
32:5:271:C:N3	32:5:272:U:C6	2.55	0.73
32:5:294:G:H5'	32:5:296:A:H4'	0.74	0.73
32:5:1507:C:N3	32:5:1508:A:N7	2.36	0.73
32:5:2841:G:C6	32:5:2842:G:N7	2.56	0.73
32:5:3754:G:C2	32:5:3755:G:C8	2.77	0.73
32:5:3771:C:H2'	32:5:3772:U:H6	1.52	0.73
32:5:4332:C:C2	32:5:4333:C:H5	2.07	0.73
32:5:4745:G:N2	32:5:4746:C:H41	1.85	0.73
32:5:4767:C:O2'	32:5:4874:A:N6	2.21	0.73
34:8:11:C:C2	34:8:12:G:C8	2.76	0.73
46:K:124:GLU:OE1	46:K:128:THR:HG21	1.88	0.73
53:S2:86:C:C4	53:S2:87:U:C5	2.75	0.73
53:S2:1017:U:O2	53:S2:1018:U:C6	2.42	0.73
53:S2:1249:C:H5	53:S2:1250:A:N7	1.75	0.73
53:S2:1307:U:O2	53:S2:1308:U:H1'	1.86	0.73
53:S2:1574:C:N3	53:S2:1575:G:N7	2.36	0.73
53:S2:1666:C:N3	53:S2:1667:U:C5	2.57	0.73
7:M:109:ARG:HH21	7:M:109:ARG:HB2	1.53	0.73
23:e:43:ASN:HD22	23:e:43:ASN:C	1.96	0.73
32:5:1218:G:N1	32:5:1219:G:H1'	2.02	0.73
32:5:1617:G:C6	32:5:1618:G:C5	2.76	0.73
32:5:1674:C:C2	32:5:1675:C:C5	2.76	0.73
32:5:2288:G:N2	32:5:2290:C:C2	2.56	0.73
32:5:2318:G:C2	32:5:2322:G:C2	2.77	0.73
32:5:2553:A:N1	32:5:2763:U:C5	2.57	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3675:G:N2	32:5:3676:G:C8	2.56	0.73
32:5:4189:U:C1'	32:5:4380:A:C2	2.70	0.73
32:5:4331:G:N3	32:5:4331:G:H2'	2.01	0.73
32:5:4332:C:O2	32:5:4333:C:C5	2.41	0.73
39:I:101:LYS:HE2	39:I:121:LYS:HG2	0.87	0.73
48:z:273:ILE:HD12	48:z:285:PHE:HE1	1.51	0.73
50:4:162:C:O2'	50:4:213:A:N3	2.21	0.73
53:S2:11:A:C6	53:S2:12:U:C5	2.76	0.73
53:S2:60:A:O2'	53:S2:61:A:H5'	1.88	0.73
53:S2:493:A:H2	53:S2:494:C:C5	2.05	0.73
53:S2:1229:G:H2'	53:S2:1230:C:O4'	1.88	0.73
53:S2:1378:A:C6	54:SA:105:PRO:HA	2.23	0.73
17:Y:11:ARG:CZ	36:C:200:ARG:HH22	2.02	0.73
19:a:55:LYS:NZ	32:5:4342:C:OP1	2.15	0.73
32:5:733:A:C8	32:5:734:G:H8	2.05	0.73
32:5:752:G:C5	32:5:753:C:C6	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
32:5:1076:C:C4	32:5:1077:C:C5	2.76	0.73
32:5:1267:C:H5''	32:5:2110:C:O2	1.89	0.73
32:5:2076:G:C5	32:5:2077:C:C6	2.75	0.73
32:5:2851:G:C6	32:5:2852:U:H6	2.03	0.73
32:5:4368:G:C2	32:5:4369:A:C8	2.77	0.73
53:S2:56:G:C2'	53:S2:57:U:O5'	2.37	0.73
53:S2:648:A:N3	53:S2:649:U:C6	2.56	0.73
53:S2:821:G:C8	53:S2:821:G:H5'	2.23	0.73
53:S2:956:G:N2	53:S2:957:A:C5	2.55	0.73
53:S2:1017:U:C2	53:S2:1018:U:C5	2.77	0.73
53:S2:1111:U:C2	53:S2:1112:U:H5	2.06	0.73
53:S2:1132:C:N4	53:S2:1133:A:C8	2.55	0.73
53:S2:1293:A:O4'	85:Sf:150:PHE:CG	2.42	0.73
53:S2:1526:G:N3	53:S2:1527:C:C6	2.57	0.73
53:S2:1552:G:O6	53:S2:1578:U:O2	2.05	0.73
53:S2:1839:U:C2	53:S2:1840:U:C5	2.77	0.73
73:SF:128:ILE:HD11	83:Sc:68:LEU:HB2	1.63	0.73
83:Sc:14:VAL:CG2	83:Sc:32:VAL:N	2.29	0.73
1:A:40:TYR:HE1	32:5:4117:U:C2	2.06	0.73
10:Q:34:PHE:HZ	10:Q:38:ARG:HE	1.36	0.73
17:Y:72:GLN:HE21	17:Y:72:GLN:C	1.97	0.73
23:e:98:GLU:OE1	23:e:123:THR:OG1	2.03	0.73
32:5:287:U:O2	32:5:288:G:C8	2.41	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1412:G:N1	32:5:1413:C:C4	2.57	0.73
32:5:1672:U:C2	32:5:1673:U:H5	2.05	0.73
32:5:1899:G:C1'	32:5:2278:G:N2	2.52	0.73
32:5:1946:G:C2	32:5:1948:G:N7	2.57	0.73
32:5:2106:G:N2	32:5:2107:C:H5	1.87	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
32:5:2691:U:O2	32:5:2692:U:H5	1.69	0.73
32:5:2770:C:C2	32:5:2771:G:C8	2.77	0.73
32:5:4199:C:N3	32:5:4200:G:C8	2.55	0.73
32:5:4997:G:C6	32:5:4998:G:N7	2.57	0.73
33:7:21:G:C6	33:7:58:A:C2	2.76	0.73
53:S2:806:U:N3	53:S2:807:G:N7	2.36	0.73
53:S2:1127:C:N3	53:S2:1128:C:C5	2.57	0.73
53:S2:1291:A:O5'	85:Sf:146:LEU:HG	1.88	0.73
70:Sb:46:VAL:HG22	70:Sb:54:VAL:HG11	1.70	0.73
6:L:129:ARG:CZ	32:5:173:C:OP1	2.37	0.73
26:h:73:TYR:HD2	26:h:80:PRO:HD3	1.52	0.73
32:5:55:G:C6	32:5:56:A:N7	2.56	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
32:5:495:C:C2	32:5:496:G:C8	2.77	0.73
32:5:661:C:C4	32:5:662:C:C5	2.77	0.73
32:5:1212:G:C2	32:5:1213:G:C8	2.76	0.73
32:5:1404:G:N2	32:5:1414:C:C2	2.57	0.73
32:5:2256:C:O2	32:5:2256:C:H2'	1.87	0.73
32:5:2347:A:N3	32:5:2348:G:C6	2.57	0.73
32:5:2783:A:C4	32:5:2784:C:C5	2.77	0.73
32:5:3907:G:H1'	32:5:4449:A:C1'	2.19	0.73
32:5:4269:G:C6	32:5:4270:C:C6	2.77	0.73
32:5:4481:U:O2	32:5:4482:U:C6	2.42	0.73
32:5:4910:G:H4'	32:5:4911:A:OP2	1.89	0.73
34:8:95:A:C2	34:8:96:C:C6	2.76	0.73
46:K:106:PHE:HB2	46:K:110:VAL:HG23	1.69	0.73
48:z:411:GLY:CA	50:4:194:G:N2	2.50	0.73
53:S2:173:A:C6	53:S2:174:C:C5	2.75	0.73
53:S2:449:A:N7	53:S2:452:G:O6	2.21	0.73
53:S2:1111:U:N3	53:S2:1112:U:H5	1.86	0.73
53:S2:1202:U:C4	53:S2:1203:G:N7	2.57	0.73
53:S2:1290:G:C4	85:Sf:146:LEU:HB3	2.23	0.73
53:S2:1311:C:N3	53:S2:1314:U:H5	1.86	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:SZ:55:TYR:CZ	82:SZ:59:CYS:SG	2.80	0.73
19:a:62:HIS:CE1	19:a:63:LEU:C	2.66	0.73
32:5:126:C:C2	32:5:127:G:C8	2.76	0.73
32:5:182:G:H22	32:5:254:G:H22	1.36	0.73
32:5:1198:G:H2'	32:5:1199:G:H8	1.54	0.73
32:5:1885:G:N1	32:5:1895:G:C2	2.56	0.73
32:5:2033:A:C2	32:5:2034:G:C8	2.76	0.73
32:5:2394:G:H1'	32:5:2397:G:H21	1.52	0.73
32:5:2532:C:C2	32:5:2533:C:H5	2.07	0.73
32:5:2604:C:O2	32:5:2604:C:H2'	1.87	0.73
32:5:2604:C:C2	32:5:2605:G:C8	2.75	0.73
32:5:2738:C:C2	32:5:2741:U:C4	2.77	0.73
32:5:2744:A:C2	32:5:2745:A:C5	2.76	0.73
32:5:4158:C:O2	32:5:4159:C:C5	2.42	0.73
32:5:4480:A:C2	32:5:4481:U:O4'	2.42	0.73
32:5:4735:G:N1	32:5:4736:C:C4	2.57	0.73
32:5:4884:G:N1	32:5:4885:U:C5	2.56	0.73
32:5:4932:U:H2'	32:5:4933:C:O4'	1.89	0.73
38:F:161:TYR:CE2	38:F:168:ARG:NH2	2.56	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
53:S2:120:U:N3	53:S2:121:U:C6	2.57	0.73
53:S2:340:C:N3	53:S2:341:C:C4	2.57	0.73
53:S2:536:A:C6	53:S2:537:C:C6	2.76	0.73
53:S2:832:G:C2	53:S2:843:C:N3	2.57	0.73
53:S2:1068:G:HO2'	53:S2:1069:U:H6	1.37	0.73
53:S2:1234:C:H2'	53:S2:1234:C:O2	1.89	0.73
53:S2:1293:A:N9	85:Sf:150:PHE:HB3	2.03	0.73
53:S2:1353:A:OP1	54:SA:139:TYR:OH	2.06	0.73
53:S2:1420:G:OP1	80:ST:132:ASP:HB3	1.89	0.73
53:S2:1564:C:C2	53:S2:1565:C:C6	2.77	0.73
53:S2:1644:C:O2'	53:S2:1645:C:O5'	2.06	0.73
54:SA:200:ASP:CB	78:SR:85:VAL:HG13	1.90	0.73
1:A:40:TYR:O	1:A:40:TYR:CG	2.42	0.73
4:H:61:TRP:HZ2	12:S:152:PHE:HE2	1.35	0.73
30:m:104:HIS:CD2	32:5:4697:U:H4'	2.24	0.73
32:5:158:A:C6	32:5:277:G:C6	2.75	0.73
32:5:2318:G:N2	32:5:2320:G:O2'	2.22	0.73
32:5:2522:G:N2	32:5:2534:C:C2	2.57	0.73
32:5:3737:A:C2'	32:5:3738:G:O4'	2.33	0.73
32:5:3738:G:C5	32:5:3739:C:C6	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4072:C:N3	32:5:4073:A:N7	2.37	0.73
32:5:4098:A:C2	32:5:4099:G:C5	2.76	0.73
32:5:4539:U:C2	32:5:4540:C:C5	2.77	0.73
46:K:121:LEU:HD13	46:K:129:ILE:HD13	1.70	0.73
48:z:413:SER:CA	51:9:74:ARG:NE	2.47	0.73
53:S2:220:U:C2	53:S2:221:A:C8	2.76	0.73
53:S2:381:C:N4	60:SI:49:ARG:CD	2.52	0.73
53:S2:636:C:C2	53:S2:637:U:C6	2.76	0.73
53:S2:819:G:H1	53:S2:828:G:H1	1.37	0.73
53:S2:995:G:N2	53:S2:997:A:H3'	2.03	0.73
53:S2:1030:A:C2	53:S2:1031:A:C8	2.77	0.73
53:S2:1051:G:N1	53:S2:1052:A:C5	2.57	0.73
82:SZ:50:PHE:CE2	82:SZ:79:ILE:HD13	2.24	0.73
87:S1:71:ARG:CG	88:S4:80:GLN:HE22	2.01	0.73
4:H:96:TYR:CE2	4:H:100:PRO:HA	2.24	0.73
32:5:70:A:N1	32:5:4355:G:C1'	2.52	0.73
32:5:688:U:C4	32:5:689:U:C5	2.77	0.73
32:5:1545:G:C2	32:5:1546:C:C4	2.77	0.73
32:5:1811:G:N3	32:5:1812:C:C6	2.57	0.73
32:5:2034:G:C5	32:5:2035:C:C6	2.77	0.73
32:5:2041:A:N3	32:5:4464:A:C6	2.56	0.73
32:5:3714:G:N1	32:5:3715:U:C2	2.56	0.73
32:5:3730:U:N3	32:5:3731:C:C6	2.57	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
32:5:4693:C:C6	32:5:4693:C:C5'	2.71	0.73
50:4:118[B]:A:H2'	50:4:119[B]:A:C8	2.24	0.73
53:S2:53:C:O2	53:S2:53:C:H2'	1.89	0.73
53:S2:1552:G:N7	53:S2:1578:U:C4	2.57	0.73
53:S2:1606:G:N1	53:S2:1632:G:C2	2.57	0.73
53:S2:1667:U:N3	53:S2:1668:U:C4	2.56	0.73
53:S2:1794:C:N3	53:S2:1795:G:C8	2.57	0.73
1:A:163:ARG:NH1	1:A:163:ARG:HB2	2.03	0.72
32:5:21:G:C6	34:8:36:G:N2	2.57	0.72
32:5:492:U:C2	32:5:493:G:C8	2.77	0.72
32:5:1247:U:C4	32:5:1248:C:C5	2.77	0.72
32:5:2589:C:C4	32:5:2590:G:C5	2.76	0.72
32:5:3717:A:C6	32:5:3736:A:N1	2.57	0.72
32:5:3847:C:N3	32:5:3848:U:C6	2.57	0.72
32:5:4490:C:O2	32:5:4490:C:H2'	1.87	0.72
50:4:183:A:O3'	50:4:184:A:OP1	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:105:U:H4'	60:SI:21:TYR:OH	1.90	0.72
53:S2:381:C:N4	60:SI:49:ARG:CG	2.51	0.72
53:S2:999:G:C2	53:S2:1000:C:N1	2.57	0.72
53:S2:1231:C:C1'	53:S2:1665:G:H21	2.02	0.72
78:SR:87:GLU:CD	78:SR:87:GLU:H	1.96	0.72
78:SR:100:PRO:CG	78:SR:119:VAL:HG11	1.89	0.72
1:A:180:LEU:O	32:5:3653:A:O2'	2.04	0.72
2:D:33:ARG:NH2	33:7:8:G:OP1	2.22	0.72
7:M:42:CYS:HG	7:M:77:TRP:CD1	2.07	0.72
32:5:291:U:O2'	32:5:292:G:H2'	1.89	0.72
32:5:732:A:C5	32:5:733:A:N3	2.57	0.72
32:5:1245:C:C2	32:5:1246:G:C8	2.76	0.72
32:5:1544:G:C2	32:5:1545:G:C8	2.77	0.72
32:5:1870:C:C2	32:5:1871:A:C8	2.77	0.72
32:5:1878:G:N1	32:5:1879:C:C4	2.57	0.72
32:5:1926:C:C2	32:5:1927:U:C5	2.77	0.72
32:5:2077:C:N3	32:5:2078:C:C5	2.58	0.72
32:5:2509:C:O2'	32:5:2510:G:C5'	2.37	0.72
32:5:3871:A:C6	32:5:3885:G:C2	2.77	0.72
32:5:4504:C:H2'	32:5:4505:C:C6	2.24	0.72
33:7:18:C:C2	33:7:19:C:H6	2.07	0.72
34:8:91:A:H2'	34:8:92:U:O4'	1.89	0.72
39:I:47:PRO:CB	39:I:171:TRP:HE1	2.03	0.72
50:4:16:G:C6	50:4:17:C:H1'	2.24	0.72
53:S2:37:C:C4	53:S2:38:A:C8	2.77	0.72
53:S2:143:U:N3	53:S2:315:C:OP1	2.22	0.72
53:S2:185:G:N2	53:S2:186:C:C2	2.57	0.72
53:S2:384:U:C5	53:S2:386:C:H6	2.05	0.72
53:S2:667:U:N3	53:S2:1144:A:C2	2.57	0.72
53:S2:1383:A:O3'	72:SD:156:LEU:HD21	1.89	0.72
53:S2:1528:G:N3	53:S2:1529:C:C6	2.57	0.72
53:S2:1755:C:C4	53:S2:1756:C:C5	2.77	0.72
73:SF:128:ILE:HD12	83:Sc:68:LEU:CG	2.19	0.72
73:SF:140:ASP:HB2	83:Sc:56:LEU:CD1	2.19	0.72
83:Sc:14:VAL:HG23	83:Sc:30:VAL:CG1	1.87	0.72
32:5:1662:C:O2	32:5:1663:C:C6	2.41	0.72
32:5:2054:U:H4'	32:5:2056:G:C1'	2.19	0.72
32:5:2277:C:O2	32:5:2278:G:H8	1.69	0.72
32:5:2367:A:N7	32:5:2798:A:C4	2.57	0.72
32:5:2451:A:N6	32:5:2452:G:C4	2.58	0.72
32:5:4561:C:O2	32:5:4562:C:C5	2.42	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4601:U:O4	32:5:4609:G:C2	2.43	0.72
33:7:17:C:C2	33:7:18:C:C5	2.77	0.72
41:W:50:ASN:CB	41:W:55:TYR:CE2	2.73	0.72
48:z:381:SER:CA	50:4:207:C:O2	2.37	0.72
53:S2:384:U:H5	53:S2:386:C:C5	2.08	0.72
53:S2:580:U:O4	53:S2:581:U:C5	2.42	0.72
53:S2:837:A:H2'	53:S2:837:A:N3	2.02	0.72
53:S2:908:A:C2	53:S2:909:G:C8	2.76	0.72
53:S2:1040:G:C6	53:S2:1041:G:N7	2.57	0.72
53:S2:1286:G:H21	75:SM:33:ARG:HD2	1.54	0.72
53:S2:1526:G:N2	53:S2:1527:C:C2	2.57	0.72
53:S2:1574:C:O2	53:S2:1574:C:H2'	1.87	0.72
65:SV:64:GLU:O	65:SV:66:ASP:N	2.22	0.72
78:SR:71:ILE:HD12	78:SR:74:GLN:CD	2.14	0.72
78:SR:88:VAL:CG1	78:SR:91:LEU:HB3	2.19	0.72
79:SS:7:GLU:CG	79:SS:9:PHE:HE2	2.00	0.72
85:Sf:118:ARG:HB2	85:Sf:131:PHE:CE2	2.24	0.72
3:G:54:PHE:CD2	3:G:54:PHE:N	2.55	0.72
32:5:90:G:N7	32:5:92:C:H1'	2.04	0.72
32:5:348:G:N2	32:5:350:C:C2	2.57	0.72
32:5:488:G:C2	32:5:489:C:C6	2.77	0.72
32:5:660:A:C6	32:5:661:C:C5	2.76	0.72
32:5:1358:G:O6	32:5:1379:C:N3	2.23	0.72
32:5:1695:U:O2'	32:5:1696:C:H5'	1.90	0.72
32:5:2449:A:N7	32:5:2450:G:H1'	2.02	0.72
32:5:3742:G:C2	32:5:3743:G:C8	2.77	0.72
32:5:4416:G:N2	32:5:4417:C:N1	2.38	0.72
34:8:12:G:N2	34:8:13:G:C4	2.57	0.72
34:8:106:G:N2	34:8:107:C:C2	2.57	0.72
53:S2:37:C:C4	53:S2:38:A:N7	2.57	0.72
53:S2:1034:A:H2'	53:S2:1035:A:O4'	1.88	0.72
53:S2:1597:C:H2'	53:S2:1598:G:C8	2.23	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
32:5:1421:G:N2	32:5:1422:G:C4	2.58	0.72
32:5:2270:G:N3	32:5:2271:C:C5	2.58	0.72
32:5:4164:C:N3	32:5:4165:C:C6	2.58	0.72
32:5:4627:U:C2	32:5:4628:U:C5	2.76	0.72
34:8:13:G:C4	34:8:14:U:C5	2.77	0.72
34:8:55:U:H3	34:8:62:A:H2	1.36	0.72
34:8:133:G:N3	34:8:134:G:C8	2.56	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:4:119[A]:A:H61	50:4:231[A]:A:H61	1.36	0.72
53:S2:316:G:N1	53:S2:317:C:C4	2.57	0.72
53:S2:419:G:N2	53:S2:661:U:C2	2.57	0.72
53:S2:452:G:N3	53:S2:453:C:C5	2.56	0.72
83:Sc:31:ARG:NH1	83:Sc:41:SER:HB2	2.04	0.72
1:A:95:GLN:HB2	32:5:4118:U:O4	1.89	0.72
11:R:117:ARG:HD3	11:R:118:HIS:CE1	2.24	0.72
18:Z:50:PRO:HG2	18:Z:122:TYR:HE2	1.54	0.72
24:f:6:TRP:HB2	24:f:102:ARG:HB3	1.69	0.72
32:5:152:U:H2'	32:5:152:U:O2	1.88	0.72
32:5:1245:C:C6	32:5:1269:G:C5	2.77	0.72
32:5:1583:A:N7	32:5:1584:G:C8	2.58	0.72
32:5:2041:A:C2	32:5:4464:A:C5	2.77	0.72
32:5:2294:G:C2	32:5:2295:C:C4	2.78	0.72
32:5:2843:U:C2	32:5:2844:A:H8	2.03	0.72
32:5:4174:U:C2	32:5:4175:G:C8	2.78	0.72
32:5:5042:A:C2	32:5:5043:A:C5	2.77	0.72
32:5:5047:C:C2	32:5:5048:A:N6	2.57	0.72
34:8:64:U:O2	34:8:64:U:H2'	1.88	0.72
36:C:197:ARG:C	36:C:198:ASN:ND2	2.47	0.72
46:K:114:ARG:HD2	46:K:130:LYS:HA	1.71	0.72
48:z:405:ARG:CG	50:4:207:C:H4'	2.04	0.72
53:S2:640:A:C2'	53:S2:641:A:O4'	2.37	0.72
53:S2:650:A:H2'	53:S2:651:U:O5'	1.89	0.72
53:S2:1094:C:N3	53:S2:1095:U:C5	2.57	0.72
53:S2:1527:C:C4	53:S2:1528:G:C8	2.77	0.72
53:S2:1538:C:O2	53:S2:1539:U:H6	1.70	0.72
53:S2:1794:C:C2	53:S2:1795:G:C8	2.77	0.72
79:SS:36:VAL:HG13	79:SS:37:GLY:N	2.04	0.72
3:G:41:ILE:O	32:5:4117:U:C6	2.43	0.72
5:J:75:ARG:HH12	33:7:42:A:H1'	1.55	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
32:5:736:C:C2'	32:5:737:C:O4'	2.37	0.72
32:5:1080:C:C2	32:5:1221:G:C2	2.77	0.72
32:5:1811:G:C2	32:5:1812:C:C5	2.78	0.72
32:5:2529:A:N7	32:5:2532:C:C4	2.57	0.72
32:5:4266:G:C2	32:5:4279:A:C6	2.77	0.72
32:5:4314:C:N3	32:5:4315:A:N7	2.37	0.72
32:5:4999:G:N1	32:5:5000:G:C8	2.58	0.72
34:8:138:C:C2	34:8:139:G:C8	2.78	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:359:PHE:HD2	48:z:360:MET:CG	2.02	0.72
53:S2:973:C:C4	53:S2:974:C:C6	2.77	0.72
53:S2:1510:G:C6	53:S2:1511:U:C5	2.76	0.72
53:S2:1841:C:O2	53:S2:1842:C:C5	2.43	0.72
3:G:141:ASN:ND2	32:5:151:G:C6	2.58	0.72
32:5:101:A:C6	32:5:102:G:C5	2.77	0.72
32:5:659:G:C2	32:5:660:A:C8	2.78	0.72
32:5:1291:G:N1	32:5:1292:C:C4	2.57	0.72
32:5:1440:U:H2'	32:5:1440:U:O2	1.90	0.72
32:5:1898:C:N4	32:5:2279:A:O2'	2.23	0.72
32:5:1948:G:O6	32:5:2034:G:O6	2.07	0.72
32:5:1970:A:C2	32:5:2016:C:C5	2.78	0.72
32:5:2277:C:O2	32:5:2277:C:H2'	1.89	0.72
32:5:2342:G:C2	32:5:2344:U:C6	2.77	0.72
32:5:3753:G:OP1	32:5:3777:G:H8	1.70	0.72
32:5:4332:C:N3	32:5:4333:C:H5	1.88	0.72
32:5:4684:A:H2'	32:5:4685:U:O4'	1.89	0.72
34:8:134:G:C4	34:8:135:C:C6	2.78	0.72
53:S2:504:G:O2'	53:S2:505:G:H5'	1.90	0.72
53:S2:623:G:N3	53:S2:624:C:C6	2.58	0.72
53:S2:1292:C:C6	85:Sf:149:CYS:HA	2.25	0.72
54:SA:200:ASP:CA	78:SR:89:SER:HB2	2.20	0.72
64:SO:146:ARG:HD3	69:Sa:29:CYS:HB3	1.72	0.72
1:A:174:ARG:HA	44:p:69:TRP:CH2	2.23	0.72
8:N:126:THR:C	8:N:127:TYR:HD1	1.97	0.72
23:e:36:ARG:NH1	32:5:2322:G:OP1	2.23	0.72
32:5:91:G:C5	32:5:93:G:C6	2.78	0.72
32:5:186:G:H1'	32:5:187:U:H1'	1.70	0.72
32:5:1339:U:C2	32:5:1340:C:H5	2.08	0.72
32:5:1466:G:N3	32:5:1467:C:C6	2.58	0.72
32:5:1696:C:H1'	32:5:1697:G:C5'	2.19	0.72
32:5:2311:C:C4	32:5:2312:U:C5	2.78	0.72
32:5:2394:G:H1'	32:5:2397:G:N2	2.04	0.72
32:5:3907:G:C1'	32:5:4449:A:N9	2.48	0.72
33:7:43:U:C4	33:7:44:C:C5	2.77	0.72
47:q:99:ARG:NE	47:q:103:ARG:NH2	2.36	0.72
48:z:405:ARG:C	50:4:207:C:C4'	2.60	0.72
53:S2:635:G:C4	53:S2:636:C:C5	2.78	0.72
53:S2:989:C:C2	53:S2:1001:A:N1	2.57	0.72
53:S2:1413:G:C2	53:S2:1414:A:H1'	2.24	0.72
54:SA:39:TYR:HE2	78:SR:105:MET:HA	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SB:53:GLN:CG	55:SB:56:LYS:HE2	2.19	0.72
79:SS:6:PRO:HB2	82:SZ:49:LEU:HB3	1.72	0.72
11:R:95:TRP:HE1	32:5:1572:U:H4'	1.54	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
32:5:494:U:N3	32:5:495:C:C5	2.58	0.72
32:5:1522:G:C6	32:5:1653:A:C6	2.78	0.72
32:5:2105:A:N1	32:5:2106:G:N7	2.38	0.72
32:5:2107:C:C4	32:5:2126:G:N2	2.57	0.72
32:5:2282:A:H2'	32:5:2283:G:O5'	1.90	0.72
32:5:2483:G:C2	32:5:2484:A:C8	2.78	0.72
32:5:2753:G:H3'	32:5:2754:G:C8	2.23	0.72
32:5:2851:G:H2'	32:5:2851:G:N3	2.04	0.72
32:5:4976:U:O4	35:B:342:LYS:HD2	1.90	0.72
48:z:237:LYS:HE2	48:z:268:SER:HB3	1.70	0.72
50:4:235:G:O2'	50:4:236:U:O4'	2.07	0.72
53:S2:23:G:N2	53:S2:652:U:C2	2.58	0.72
53:S2:219:U:N3	53:S2:220:U:C5	2.58	0.72
53:S2:403:G:N2	53:S2:404:G:H1'	2.05	0.72
53:S2:434:G:H2'	53:S2:435:A:C8	2.25	0.72
53:S2:875:A:C2	53:S2:876:C:C2	2.78	0.72
53:S2:1317:C:O2	53:S2:1318:G:C8	2.42	0.72
53:S2:1569:A:C8	53:S2:1570:G:C1'	2.72	0.72
53:S2:1599:U:OP2	82:SZ:80:ARG:CZ	2.38	0.72
53:S2:1843:G:O2'	53:S2:1844:U:O5'	2.07	0.72
86:Sg:150:TRP:HB2	86:Sg:170:TRP:HB2	1.70	0.72
10:Q:178:ARG:NH2	10:Q:186:TYR:CE1	2.58	0.71
32:5:488:G:N2	32:5:489:C:C2	2.58	0.71
32:5:1190:C:C2	32:5:1191:C:C5	2.78	0.71
32:5:1491:A:C2	32:5:1492:G:C4	2.78	0.71
32:5:1583:A:N1	32:5:1584:G:H1'	2.05	0.71
32:5:1945:G:N2	32:5:1946:G:H1'	2.04	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
32:5:4999:G:N3	32:5:5000:G:C8	2.58	0.71
34:8:43:A:N1	34:8:44:A:C5	2.58	0.71
53:S2:218:U:O3'	53:S2:305:U:O4	2.08	0.71
53:S2:751:G:C6	53:S2:791:C:N3	2.58	0.71
53:S2:800:U:H2'	53:S2:801:U:O4'	1.90	0.71
53:S2:1316:C:C2	53:S2:1317:C:H5	2.07	0.71
53:S2:1526:G:N1	53:S2:1527:C:C4	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SF:140:ASP:HB2	83:Sc:56:LEU:HD11	1.72	0.71
78:SR:103:LYS:HB2	78:SR:117:LEU:HD13	1.71	0.71
19:a:61:TYR:CE1	32:5:294:G:N1	2.58	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	1.73	0.71
32:5:483:G:N1	32:5:484:U:C4	2.58	0.71
32:5:747:A:O2'	32:5:748:G:H5'	1.90	0.71
32:5:1298:C:C2	32:5:1299:G:C8	2.78	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
32:5:3622:C:N3	32:5:3623:C:N3	2.37	0.71
32:5:3832:U:N3	32:5:3833:C:C5	2.57	0.71
32:5:4275:G:C6	32:5:4276:G:C5	2.78	0.71
32:5:4397:A:O4'	49:3:76:A:C2	2.43	0.71
32:5:4480:A:C6	32:5:4481:U:C5	2.78	0.71
32:5:4730:C:O5'	32:5:4731:G:N2	2.23	0.71
48:z:377:THR:HG21	50:4:194:G:C5'	2.12	0.71
48:z:377:THR:OG1	50:4:194:G:C4'	2.38	0.71
53:S2:26:U:N3	53:S2:27:A:C8	2.57	0.71
53:S2:459:C:N4	53:S2:460:A:N7	2.38	0.71
53:S2:796:G:C5	59:SH:109:ARG:NH2	2.58	0.71
53:S2:796:G:C6	59:SH:109:ARG:NH2	2.58	0.71
53:S2:1429:G:H2'	53:S2:1430:C:C6	2.25	0.71
53:S2:1665:G:N7	80:ST:88:MET:CG	2.52	0.71
78:SR:99:ASP:O	78:SR:102:THR:OG1	2.07	0.71
12:S:81:TRP:HE1	12:S:94:TYR:HD1	1.36	0.71
14:U:82:TYR:CE1	32:5:2631:U:O4'	2.43	0.71
32:5:88:A:N6	32:5:97:G:N2	2.38	0.71
32:5:1476:C:O2	32:5:1477:C:C6	2.43	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
32:5:2301:G:N1	32:5:2302:C:C5	2.57	0.71
32:5:4480:A:C2	32:5:4481:U:C1'	2.74	0.71
32:5:4606:G:H2'	32:5:4607:A:C8	2.25	0.71
32:5:4886:C:O2	32:5:4887:C:H6	1.72	0.71
34:8:13:G:C2	34:8:14:U:C2	2.78	0.71
48:z:364:ASN:O	48:z:367:GLU:N	2.22	0.71
48:z:411:GLY:H	50:4:194:G:H21	0.75	0.71
53:S2:379:C:C2	53:S2:380:G:C8	2.79	0.71
53:S2:581:U:C4	53:S2:582:C:C5	2.78	0.71
53:S2:1510:G:C6	53:S2:1511:U:C4	2.78	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1859:A:C2	53:S2:1860:A:C4	2.78	0.71
55:SB:145:LYS:CE	78:SR:128:PHE:HE2	2.02	0.71
32:5:986:C:N3	32:5:1068:G:C2	2.59	0.71
32:5:1284:G:O6	36:C:312:ARG:NH2	2.23	0.71
32:5:1358:G:O3'	36:C:114:ARG:NH1	2.22	0.71
32:5:1430:C:N3	32:5:1431:C:C5	2.59	0.71
32:5:2314:G:N3	32:5:2314:G:H2'	2.04	0.71
32:5:2723:U:O2	32:5:2724:G:C8	2.43	0.71
32:5:2724:G:N2	32:5:2726:G:C8	2.58	0.71
32:5:2855:G:N2	32:5:2859:G:H22	1.88	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
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
36:C:111:TRP:HB2	36:C:112:HIS:HD2	1.54	0.71
48:z:405:ARG:HG3	50:4:207:C:H5''	0.71	0.71
48:z:408:ARG:HD2	50:4:206:G:C5'	2.20	0.71
53:S2:554:A:C2	53:S2:555:A:C5	2.78	0.71
53:S2:625:G:C4'	53:S2:629:A:C2	2.74	0.71
53:S2:752:G:N1	53:S2:791:C:C2	2.58	0.71
53:S2:963:A:C2	53:S2:964:A:C6	2.77	0.71
53:S2:1017:U:O2	53:S2:1017:U:H2'	1.90	0.71
53:S2:1302:G:O6	85:Sf:138:ARG:NH1	2.23	0.71
53:S2:1309:C:O2	85:Sf:143:LYS:CE	2.39	0.71
53:S2:1375:G:H2'	53:S2:1376:A:C8	2.26	0.71
53:S2:1450:G:O2'	86:Sg:64:HIS:CE1	2.43	0.71
53:S2:1455:A:N1	53:S2:1456:G:N7	2.38	0.71
53:S2:1841:C:C2	53:S2:1842:C:C5	2.79	0.71
78:SR:77:GLU:OE2	78:SR:81:ARG:HD2	1.89	0.71
32:5:42:A:N7	32:5:4379:A:C6	2.58	0.71
32:5:94:A:H2'	32:5:95:G:C4'	2.20	0.71
32:5:102:G:HO2'	32:5:1381:U:HO2'	1.14	0.71
32:5:516:C:C2	32:5:646:G:C2	2.79	0.71
32:5:658:C:N3	32:5:659:G:N7	2.38	0.71
32:5:1215:C:N3	32:5:1216:C:C5	2.58	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
32:5:2602:G:H1'	32:5:2742:G:C4	2.24	0.71
32:5:2726:G:C2	32:5:2727:C:C5	2.77	0.71
32:5:2737:C:N3	32:5:2738:C:C5	2.59	0.71
32:5:2807:A:C2	32:5:2808:G:C8	2.78	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:7:G:C2	33:7:8:G:C8	2.79	0.71
48:z:367:GLU:H	48:z:367:GLU:CD	1.98	0.71
53:S2:387:C:C2	53:S2:388:U:H5	2.05	0.71
53:S2:968:U:O2'	53:S2:972:A:H1'	1.91	0.71
53:S2:1201:U:H2'	53:S2:1202:U:C6	2.26	0.71
53:S2:1593:C:O2	53:S2:1593:C:H2'	1.91	0.71
53:S2:1825:A:O2'	53:S2:1826:G:OP1	2.08	0.71
32:5:423:G:H1	34:8:10:G:H1	1.38	0.71
32:5:752:G:C6	32:5:753:C:C5	2.78	0.71
32:5:951:G:C2	32:5:952:G:C8	2.79	0.71
32:5:1175:A:C6	32:5:1176:C:C5	2.78	0.71
32:5:1771:U:C2	32:5:1772:C:C6	2.79	0.71
32:5:2479:G:C6	32:5:2480:G:N7	2.59	0.71
32:5:3832:U:C2	32:5:3833:C:C6	2.79	0.71
32:5:4490:C:C2	32:5:4491:G:H8	2.08	0.71
32:5:4532:U:H5	32:5:4554:G:H21	1.35	0.71
32:5:4933:C:C4	32:5:4934:A:C8	2.78	0.71
33:7:9:C:C5	33:7:10:C:C5	2.78	0.71
33:7:59:G:N1	33:7:60:G:C5	2.58	0.71
53:S2:1249:C:C5	53:S2:1250:A:C5	2.77	0.71
53:S2:1606:G:C2	53:S2:1632:G:C2	2.78	0.71
54:SA:42:LYS:CE	78:SR:99:ASP:OD2	2.38	0.71
79:SS:12:ILE:HA	79:SS:22:GLY:H	1.56	0.71
13:T:19:PHE:CZ	32:5:1791:U:H4'	2.26	0.71
31:o:45:GLN:HE21	31:o:45:GLN:HA	1.56	0.71
32:5:348:G:C6	32:5:350:C:N4	2.58	0.71
32:5:504:G:C6	32:5:654:C:C2	2.78	0.71
32:5:1245:C:C6	32:5:1269:G:O6	2.42	0.71
32:5:1249:C:C2	32:5:1250:C:C6	2.79	0.71
32:5:1393:G:H2'	32:5:1394:G:H5'	1.72	0.71
32:5:1696:C:O2	32:5:1697:G:H5'	1.91	0.71
32:5:1755:C:O2'	32:5:1756:U:OP1	2.08	0.71
32:5:1866:U:O2'	32:5:1867:A:P	2.48	0.71
32:5:2328:G:HO2'	32:5:2329:U:C5'	2.03	0.71
32:5:3591:C:C4	32:5:3592:G:C8	2.78	0.71
32:5:3857:G:C6	32:5:3858:C:C5	2.77	0.71
32:5:3914:U:C4	32:5:4378:A:N1	2.58	0.71
32:5:4123:C:H2'	32:5:4123:C:O2	1.89	0.71
32:5:4742:G:C6	32:5:4743:G:N7	2.58	0.71
39:I:111:LEU:H	39:I:111:LEU:HD23	1.55	0.71
48:z:73:LYS:HD3	48:z:73:LYS:C	2.15	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:383:G:H2'	53:S2:384:U:O4'	1.90	0.71
53:S2:499:G:C2	53:S2:504:G:N1	2.59	0.71
53:S2:993:G:C5	53:S2:994:C:C5	2.78	0.71
53:S2:1129:G:H3'	53:S2:1130:G:H8	1.53	0.71
53:S2:1834:A:H2	53:S2:1837:G:H1	1.38	0.71
54:SA:39:TYR:HB3	54:SA:50:ASN:OD1	1.90	0.71
54:SA:50:ASN:N	78:SR:105:MET:CE	2.54	0.71
60:SI:165:GLN:HE21	60:SI:171:LEU:HD23	1.56	0.71
6:L:56:ARG:NH1	32:5:107:G:C6	2.59	0.71
15:V:57:VAL:HG23	15:V:84:GLN:HG2	1.71	0.71
23:e:26:ASP:N	23:e:26:ASP:OD1	2.22	0.71
32:5:62:A:H2'	32:5:63:G:C8	2.26	0.71
32:5:472:C:C4	32:5:473:C:C5	2.78	0.71
32:5:499:G:C2	32:5:656:C:C2	2.79	0.71
32:5:1866:U:C4	32:5:4405:G:C1'	2.73	0.71
32:5:2691:U:C2	32:5:2692:U:C5	2.78	0.71
32:5:2769:U:O2'	32:5:2770:C:H6	1.73	0.71
32:5:3731:C:O2	32:5:3732:A:C8	2.44	0.71
32:5:3938:G:C6	32:5:4077:A:H2	2.08	0.71
32:5:4174:U:C2	32:5:4175:G:N7	2.59	0.71
32:5:4286:C:O2	32:5:4287:G:C8	2.43	0.71
32:5:4744:A:C6	32:5:4745:G:C6	2.78	0.71
32:5:4878:C:O2	32:5:4879:C:C6	2.43	0.71
32:5:5003:U:C2'	32:5:5004:C:O4'	2.38	0.71
34:8:73:U:C4	34:8:74:U:N1	2.59	0.71
34:8:108:A:C2	34:8:112:G:C6	2.79	0.71
39:I:112:GLN:OE1	39:I:114:GLY:N	2.23	0.71
48:z:340:MET:C	48:z:342:MET:N	2.49	0.71
48:z:377:THR:O	50:4:193:G:N2	2.23	0.71
53:S2:12:U:H2'	53:S2:13:C:C6	2.26	0.71
53:S2:99:A:N1	53:S2:100:U:C6	2.59	0.71
53:S2:217:A:C2	53:S2:309:G:C6	2.78	0.71
53:S2:378:U:O2	53:S2:379:C:C6	2.44	0.71
53:S2:691:G:C2	53:S2:692:G:C8	2.78	0.71
53:S2:946:U:C2	53:S2:947:G:C8	2.79	0.71
53:S2:1405:A:O4'	53:S2:1580:A:C5	2.44	0.71
55:SB:53:GLN:HG3	55:SB:56:LYS:HE2	1.72	0.71
79:SS:6:PRO:O	82:SZ:49:LEU:HD13	1.90	0.71
32:5:54:G:O6	32:5:55:G:C5	2.44	0.71
32:5:98:A:N3	32:5:292:G:C6	2.59	0.71
32:5:146:G:N3	32:5:147:A:C8	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:665:C:O2	32:5:665:C:H2'	1.90	0.71
32:5:1378:C:C3'	32:5:1379:C:H5'	2.17	0.71
32:5:1542:U:N3	32:5:1543:G:C8	2.59	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
32:5:1994:C:C2	32:5:1995:G:C8	2.79	0.71
32:5:2258:C:H2'	32:5:2258:C:O2	1.91	0.71
32:5:2382:A:H2'	32:5:2382:A:N3	2.04	0.71
32:5:2479:G:N1	32:5:2480:G:C5	2.59	0.71
32:5:4341:C:N3	32:5:4342:C:C6	2.59	0.71
48:z:381:SER:C	50:4:208:A:O4'	2.33	0.71
53:S2:532:C:C2	53:S2:533:A:C8	2.78	0.71
53:S2:634:A:N3	53:S2:635:G:C8	2.58	0.71
53:S2:927:C:C2	53:S2:928:G:C8	2.79	0.71
53:S2:1124:C:C2	53:S2:1125:C:C5	2.78	0.71
53:S2:1291:A:O4'	85:Sf:146:LEU:HB2	1.90	0.71
53:S2:1430:C:C4	53:S2:1431:G:N7	2.59	0.71
53:S2:1597:C:O2'	53:S2:1598:G:O4'	2.04	0.71
79:SS:30:ILE:CD1	79:SS:45:LEU:HD21	2.14	0.71
82:SZ:50:PHE:CE2	82:SZ:79:ILE:CB	2.70	0.71
87:S1:5:GLN:C	87:S1:6:THR:HG23	2.14	0.71
11:R:95:TRP:O	11:R:96:MET:C	2.33	0.71
19:a:12:ARG:NH1	32:5:1660:U:C4	2.58	0.71
26:h:63:GLN:HE22	34:8:95:A:H2'	1.56	0.71
32:5:370:U:C5	32:5:1637:A:N1	2.58	0.71
32:5:450:G:O2'	32:5:452:A:H4'	1.91	0.71
32:5:719:C:N3	32:5:720:G:N7	2.39	0.71
32:5:909:A:N1	32:5:910:G:C8	2.59	0.71
32:5:1661:C:C2	32:5:1662:C:C5	2.79	0.71
32:5:2677:G:C5	32:5:2678:A:C8	2.78	0.71
32:5:2856:C:O2	32:5:2856:C:H2'	1.90	0.71
32:5:3741:C:N3	32:5:3742:G:C8	2.57	0.71
32:5:3846:C:C2	32:5:3847:C:C6	2.79	0.71
32:5:4240:G:C5	32:5:4241:C:C6	2.78	0.71
32:5:4735:G:C2	32:5:4736:C:C6	2.78	0.71
32:5:5030:U:C2	32:5:5031:G:C8	2.79	0.71
33:7:30:C:N3	33:7:48:G:C2	2.58	0.71
34:8:125:C:C2	34:8:125:C:H5''	2.26	0.71
35:B:49:TYR:CE1	35:B:171:LEU:HD11	2.26	0.71
35:B:51:ALA:HA	35:B:323:TYR:CE2	2.25	0.71
49:3:9:A:O4'	49:3:46:G:N3	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:3:56:C:H2'	49:3:57:G:C8	2.25	0.71
53:S2:371:A:N3	53:S2:372:U:C5	2.59	0.71
53:S2:378:U:O4	53:S2:379:C:N4	2.24	0.71
53:S2:386:C:N3	53:S2:387:C:C6	2.56	0.71
53:S2:413:G:C6	53:S2:425:G:C2	2.78	0.71
53:S2:992:A:C6	53:S2:993:G:N7	2.59	0.71
53:S2:1224:G:C5	53:S2:1225:U:C6	2.77	0.71
53:S2:1293:A:C2	85:Sf:150:PHE:C	2.69	0.71
53:S2:1409:A:N1	53:S2:1410:C:C5	2.58	0.71
53:S2:1781:A:C2	53:S2:1782:G:C5	2.78	0.71
61:SJ:111:GLN:HE21	61:SJ:127:ARG:HB2	1.55	0.71
25:g:97:ILE:HA	32:5:4120:U:O4	1.91	0.70
32:5:10:A:H1'	32:5:2472:A:N1	2.05	0.70
32:5:244:G:C2	32:5:246:G:C8	2.79	0.70
32:5:370:U:C6	32:5:1637:A:N1	2.58	0.70
32:5:990:C:N3	32:5:991:C:C5	2.58	0.70
32:5:1661:C:H1'	32:5:2345:G:N2	2.06	0.70
32:5:1912:G:N2	32:5:1913:C:C2	2.59	0.70
32:5:1925:G:C5	32:5:1926:C:C5	2.79	0.70
32:5:2309:G:H2'	32:5:2310:C:O4'	1.91	0.70
32:5:2365:C:O2	32:5:2829:U:C5	2.44	0.70
32:5:2645:G:C2	32:5:2646:C:C6	2.79	0.70
32:5:2743:A:N3	32:5:2744:A:C8	2.58	0.70
32:5:3607:U:C2	32:5:3608:A:N7	2.59	0.70
32:5:3732:A:C2	32:5:3733:A:C5	2.78	0.70
32:5:3802:U:H3	32:5:4498:U:HO2'	1.39	0.70
32:5:4425:G:C2	32:5:4426:C:H1'	2.25	0.70
32:5:4735:G:C4	32:5:4736:C:C6	2.79	0.70
32:5:4935:C:N4	37:E:179:ARG:HG2	2.06	0.70
53:S2:378:U:C4	53:S2:379:C:C4	2.78	0.70
53:S2:600:G:C2	53:S2:601:G:C5	2.79	0.70
53:S2:833:C:C4	53:S2:834:C:C5	2.79	0.70
53:S2:981:A:H2'	53:S2:982:G:C8	2.26	0.70
53:S2:1034:A:H2'	53:S2:1035:A:O5'	1.90	0.70
53:S2:1134:G:C4	53:S2:1135:C:C6	2.78	0.70
53:S2:1417:C:N3	53:S2:1419:C:C5	2.56	0.70
84:Sd:26:ASN:ND2	84:Sd:39:CYS:SG	2.64	0.70
32:5:29:G:N7	32:5:54:G:N2	2.39	0.70
32:5:300:A:C2	32:5:301:G:N7	2.59	0.70
32:5:1074:G:H2'	32:5:1075:G:O4'	1.92	0.70
32:5:1203:G:C6	32:5:1204:C:C5	2.79	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1321:G:N2	32:5:3876:A:N3	2.39	0.70
32:5:1491:A:C2	32:5:1492:G:C5	2.79	0.70
32:5:1683:U:C2	32:5:1684:A:C8	2.78	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
32:5:2658:G:N2	32:5:2675:G:C2	2.60	0.70
32:5:3905:A:C6	32:5:4449:A:N1	2.59	0.70
32:5:4199:C:O2	32:5:4199:C:H2'	1.91	0.70
32:5:4583:C:C4	32:5:4718:G:N1	2.59	0.70
32:5:4885:U:N3	32:5:4886:C:C5	2.59	0.70
32:5:4942:C:O2	32:5:4942:C:O5'	2.09	0.70
32:5:5003:U:H2'	32:5:5004:C:O4'	1.91	0.70
48:z:140:PHE:CD2	48:z:192:SER:HB2	2.26	0.70
48:z:327:PHE:CD2	48:z:428:ALA:HB2	2.24	0.70
53:S2:66:G:C5	53:S2:68:A:C8	2.79	0.70
53:S2:85:A:N1	53:S2:86:C:C4	2.60	0.70
53:S2:466:G:O2'	58:SG:59:GLN:NE2	2.24	0.70
53:S2:694:G:N3	53:S2:695:C:C6	2.59	0.70
73:SF:102:LEU:HD13	82:SZ:110:THR:HG21	1.71	0.70
82:SZ:46:ASN:ND2	82:SZ:78:LYS:CB	2.54	0.70
2:D:23:ARG:NE	32:5:4280:A:C2	2.59	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
32:5:658:C:O2	32:5:659:G:C8	2.43	0.70
32:5:1215:C:H2'	32:5:1216:C:H5'	1.73	0.70
32:5:1358:G:C3'	36:C:114:ARG:HH12	2.04	0.70
32:5:1635:C:N3	32:5:1636:U:C4	2.60	0.70
32:5:1635:C:O2	32:5:1636:U:C6	2.43	0.70
32:5:1693:U:C4	32:5:1694:C:C5	2.79	0.70
32:5:1946:G:C2	32:5:2037:C:N3	2.59	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
48:z:340:MET:CB	48:z:341:LYS:N	2.55	0.70
50:4:58:G:C5	50:4:288:G:N2	2.59	0.70
53:S2:184:G:C2	53:S2:185:G:C8	2.80	0.70
53:S2:449:A:C5	53:S2:452:G:O6	2.44	0.70
53:S2:874:G:H1'	59:SH:114:GLN:NE2	2.01	0.70
53:S2:998:A:N7	53:S2:999:G:C1'	2.53	0.70
53:S2:1137:U:H3	53:S2:1148:A:H61	1.39	0.70
53:S2:1177:U:C2	53:S2:1178:U:C5	2.78	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SS:54:LYS:HA	79:SS:55:ARG:NH2	2.06	0.70
87:S1:6:THR:O	87:S1:51:TYR:CE1	2.43	0.70
11:R:131:VAL:HG23	11:R:132:PHE:CE2	2.26	0.70
12:S:27:LEU:C	12:S:28:TYR:HD1	1.98	0.70
12:S:81:TRP:NE1	12:S:94:TYR:HD1	1.90	0.70
26:h:73:TYR:CD2	26:h:80:PRO:HD3	2.26	0.70
32:5:293:G:O2'	32:5:297:U:C6	2.45	0.70
32:5:3724:A:C6	32:5:3725:G:C5	2.80	0.70
32:5:3878:C:O2	35:B:258:HIS:HE1	1.74	0.70
32:5:4167:G:N2	32:5:4168:G:C4	2.60	0.70
32:5:4195:G:N3	32:5:4195:G:H5''	2.06	0.70
32:5:4985:U:H4'	35:B:175:GLN:OE1	1.90	0.70
49:3:39:G:C6	49:3:40:C:C4	2.79	0.70
50:4:117:U:H5''	52:6:114:ARG:HH21	1.56	0.70
53:S2:377:G:C6	53:S2:378:U:C5	2.79	0.70
53:S2:380:G:H22	53:S2:382:C:H3'	1.57	0.70
53:S2:497:C:C2	53:S2:506:G:N2	2.59	0.70
53:S2:1085:C:C4	53:S2:1087:A:H1'	2.27	0.70
53:S2:1292:C:H6	85:Sf:149:CYS:HA	1.54	0.70
53:S2:1309:C:H2'	85:Sf:143:LYS:CG	2.21	0.70
59:SH:61:ILE:HD12	59:SH:93:VAL:HG13	1.73	0.70
65:SV:1:MET:SD	65:SV:1:MET:N	2.61	0.70
18:Z:38:TYR:CZ	18:Z:76:ASN:OD1	2.43	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
32:5:37:U:C4	32:5:38:A:N7	2.60	0.70
32:5:672:C:C4	32:5:673:C:C5	2.79	0.70
32:5:750:U:C2	32:5:751:G:C8	2.79	0.70
32:5:978:G:H2'	32:5:979:C:O4'	1.91	0.70
32:5:1298:C:N3	32:5:1299:G:C8	2.59	0.70
32:5:1309:C:C2	32:5:1310:C:C6	2.79	0.70
32:5:1487:G:C6	32:5:1488:G:C8	2.80	0.70
32:5:1537:A:N3	32:5:1628:C:O2'	2.25	0.70
32:5:1758:G:C2	32:5:1759:G:C5	2.79	0.70
32:5:2292:C:C2	32:5:2293:U:C6	2.79	0.70
32:5:2632:U:H2'	32:5:2633:U:C6	2.27	0.70
32:5:2657:G:H3'	32:5:2658:G:H8	1.57	0.70
32:5:4230:C:O2	32:5:4231:C:C6	2.44	0.70
33:7:33:U:N3	33:7:34:C:C5	2.60	0.70
34:8:130:C:C2	34:8:131:G:C8	2.79	0.70
37:E:197:ILE:HD12	37:E:257:ILE:HG23	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:W:28:VAL:HG12	41:W:30:GLN:OE1	1.92	0.70
48:z:84:VAL:HA	48:z:291:ILE:HD13	1.72	0.70
48:z:377:THR:HG22	50:4:193:G:HO2'	0.89	0.70
48:z:408:ARG:HD2	50:4:206:G:H4'	0.74	0.70
53:S2:50:A:N1	53:S2:488:U:C4	2.58	0.70
53:S2:393:U:O2	53:S2:394:G:C8	2.44	0.70
53:S2:955:A:N6	53:S2:969:U:O4'	2.25	0.70
53:S2:1322:G:H2'	53:S2:1323:U:C6	2.26	0.70
53:S2:1398:G:N1	53:S2:1399:C:C5	2.58	0.70
53:S2:1602:U:H4'	79:SS:24:ARG:HH21	1.56	0.70
73:SF:166:ILE:HG22	73:SF:166:ILE:O	1.89	0.70
1:A:40:TYR:O	1:A:40:TYR:CD1	2.45	0.70
10:Q:37:ARG:HG3	10:Q:38:ARG:N	2.04	0.70
26:h:92:ARG:NH1	34:8:38:U:N3	2.40	0.70
32:5:28:C:C2	32:5:29:G:N7	2.58	0.70
32:5:314:G:C2	32:5:4355:G:N7	2.59	0.70
32:5:909:A:C6	32:5:910:G:N7	2.60	0.70
32:5:1629:G:C2	32:5:1631:A:N1	2.59	0.70
32:5:2105:A:C2	32:5:2106:G:C5	2.80	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
32:5:2735:G:C2	32:5:2736:G:C5	2.79	0.70
32:5:4550:G:N1	32:5:4551:U:C6	2.59	0.70
34:8:106:G:C6	34:8:107:C:N4	2.60	0.70
37:E:157:ARG:HD3	37:E:266:TYR:CE1	2.26	0.70
50:4:233[A]:U:H2'	50:4:234:A:C8	2.27	0.70
53:S2:311:C:C4	53:S2:312:G:C8	2.80	0.70
53:S2:633:C:C2	53:S2:634:A:C8	2.80	0.70
53:S2:634:A:C6	53:S2:635:G:N7	2.60	0.70
53:S2:841:G:N1	53:S2:842:C:N4	2.39	0.70
53:S2:1291:A:O5'	85:Sf:146:LEU:CG	2.39	0.70
22:d:114:PHE:HA	22:d:117:LEU:HD23	1.74	0.70
32:5:269:G:C2	32:5:270:U:C6	2.79	0.70
32:5:1235:G:N2	32:5:1236:C:C6	2.60	0.70
32:5:1404:G:C2	32:5:1414:C:C2	2.80	0.70
32:5:1412:G:N3	32:5:1413:C:C6	2.59	0.70
32:5:1866:U:HO2'	32:5:1867:A:H8	1.30	0.70
32:5:2295:C:O2	32:5:2296:G:C8	2.44	0.70
32:5:2316:G:C4	32:5:2317:C:C5	2.79	0.70
32:5:2529:A:C5	32:5:2532:C:C6	2.79	0.70
32:5:2590:G:N1	32:5:2754:G:N1	2.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2664:G:N2	32:5:2671:C:C2	2.60	0.70
32:5:2737:C:C2	32:5:2738:C:C6	2.79	0.70
53:S2:1151:G:C2	53:S2:1152:U:C5	2.79	0.70
53:S2:1393:G:C6	53:S2:1394:G:N7	2.60	0.70
53:S2:1394:G:C6	53:S2:1395:C:C5	2.79	0.70
8:N:143:ARG:HD3	26:h:95:LEU:HD23	1.74	0.70
32:5:21:G:C5	34:8:36:G:N2	2.60	0.70
32:5:442:G:H2'	32:5:443:G:O5'	1.91	0.70
32:5:1439:C:C5'	38:F:36:ARG:HH12	2.05	0.70
32:5:1488:G:C6	32:5:1489:G:N7	2.59	0.70
32:5:2270:G:C2	32:5:2271:C:C5	2.80	0.70
32:5:2277:C:C2	32:5:2278:G:N7	2.59	0.70
32:5:2288:G:N1	32:5:2290:C:C5	2.60	0.70
32:5:2714:G:C2	32:5:2715:G:C8	2.79	0.70
32:5:3714:G:C5	32:5:3715:U:N3	2.60	0.70
32:5:3878:C:O2	35:B:258:HIS:CE1	2.45	0.70
32:5:4313:A:C6	32:5:4314:C:C5	2.78	0.70
32:5:4563:U:O2	32:5:4564:A:C8	2.43	0.70
32:5:4652:G:N2	32:5:4653:C:C2	2.60	0.70
32:5:4879:C:C2	32:5:4880:C:C5	2.80	0.70
48:z:152:ALA:HB1	48:z:159:PHE:CD2	2.27	0.70
53:S2:185:G:N1	53:S2:186:C:C4	2.59	0.70
53:S2:644:G:H2'	53:S2:645:C:O4'	1.92	0.70
53:S2:837:A:H2	53:S2:838:G:N7	1.87	0.70
53:S2:847:A:N1	53:S2:848:U:H1'	2.07	0.70
53:S2:1045:U:N3	53:S2:1046:U:C4	2.59	0.70
53:S2:1220:A:N6	53:S2:1221:G:O6	2.25	0.70
53:S2:1782:G:N2	53:S2:1784:G:C5	2.60	0.70
17:Y:11:ARG:NH2	36:C:200:ARG:HH12	1.89	0.70
22:d:87:ARG:N	22:d:87:ARG:HH12	1.89	0.70
32:5:247:G:N2	32:5:248:C:C2	2.60	0.70
32:5:690:C:C4	32:5:691:C:C5	2.79	0.70
32:5:964:A:H3'	32:5:964:A:C8	2.27	0.70
32:5:1265:G:H5''	32:5:2115:G:N2	2.07	0.70
32:5:1699:A:OP2	38:F:179:ARG:NH2	2.24	0.70
32:5:1818:G:C8	32:5:1821:G:C6	2.79	0.70
32:5:2633:U:O2	32:5:2634:C:C6	2.45	0.70
32:5:4071:U:C2	32:5:4072:C:C5	2.79	0.70
32:5:4369:A:N3	32:5:4370:G:C8	2.58	0.70
32:5:4939:C:N3	37:E:215:LYS:HA	2.06	0.70
33:7:42:A:N1	33:7:43:U:C5	2.60	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:18:C:C4'	53:S2:1194:A:N6	2.55	0.70
53:S2:43:U:O2	53:S2:43:U:C2'	2.39	0.70
53:S2:118:C:H1'	53:S2:445:A:C4	2.27	0.70
53:S2:316:G:C2	53:S2:317:C:C5	2.80	0.70
53:S2:388:U:O2	53:S2:389:A:C8	2.45	0.70
53:S2:1293:A:O4'	85:Sf:150:PHE:HB3	1.92	0.70
53:S2:1410:C:H2'	53:S2:1410:C:O2	1.92	0.70
55:SB:27:LYS:HA	55:SB:51:ARG:NH1	2.07	0.70
32:5:271:C:O2	32:5:272:U:C6	2.45	0.70
32:5:447:C:C2	32:5:448:G:C8	2.80	0.70
32:5:1092:G:C6	32:5:1093:C:C5	2.80	0.70
32:5:1270:A:C2'	32:5:1271:G:O5'	2.37	0.70
32:5:1309:C:C4	32:5:1310:C:C5	2.80	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
32:5:2279:A:N1	32:5:2280:G:C6	2.60	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
32:5:3648:A:C5	32:5:3785:A:N6	2.59	0.70
32:5:3754:G:H8	32:5:3754:G:C5'	2.01	0.70
32:5:4164:C:C4	32:5:4165:C:C5	2.78	0.70
32:5:4561:C:O2	32:5:4562:C:C6	2.45	0.70
32:5:4729:A:H5'	32:5:4965:U:O2'	1.92	0.70
47:q:62:ARG:HE	47:q:65:ILE:HB	1.56	0.70
48:z:160:TYR:CD2	48:z:179:PHE:CZ	2.79	0.70
53:S2:337:C:O2	53:S2:338:G:C8	2.44	0.70
53:S2:418:A:C6	53:S2:419:G:C5	2.79	0.70
53:S2:1083:A:N3	53:S2:1859:A:O2'	2.23	0.70
53:S2:1121:G:C6	53:S2:1122:A:C5	2.80	0.70
53:S2:1141:G:N2	53:S2:1147:C:C2	2.59	0.70
53:S2:1149:A:C6	53:S2:1151:G:C8	2.80	0.70
53:S2:1249:C:N4	53:S2:1250:A:C6	2.60	0.70
53:S2:1545:A:C6	53:S2:1588:A:N1	2.60	0.70
54:SA:116:PHE:C	54:SA:117:ARG:HG3	2.17	0.70
22:d:32:ARG:HG2	22:d:48:GLU:HG2	1.73	0.69
32:5:1076:C:N3	32:5:1077:C:C6	2.59	0.69
32:5:1269:G:C5	32:5:2111:G:N1	2.60	0.69
32:5:4072:C:O2	32:5:4073:A:C8	2.43	0.69
32:5:4481:U:C2'	32:5:4482:U:H6	2.05	0.69
32:5:4498:U:H3	32:5:4500:U:P	2.15	0.69
34:8:118:C:N3	34:8:119:C:H5	1.84	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:336:PHE:CE1	48:z:427:PHE:HE1	2.04	0.69
53:S2:402:C:C2	53:S2:403:G:C8	2.80	0.69
53:S2:549:C:C4	53:S2:550:C:C6	2.80	0.69
53:S2:821:G:O6	61:SJ:150:ARG:NH1	2.25	0.69
53:S2:823:U:N3	68:SY:64:PHE:CD2	2.60	0.69
53:S2:876:C:N3	53:S2:878:G:C8	2.60	0.69
53:S2:994:C:O2	53:S2:995:G:H8	1.75	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
32:5:1177:U:C2	32:5:1178:G:N7	2.61	0.69
32:5:1265:G:C2'	32:5:1266:G:H5'	2.21	0.69
32:5:1899:G:N2	32:5:1900:C:C6	2.60	0.69
32:5:2106:G:N2	32:5:2107:C:C5	2.60	0.69
32:5:2326:G:N2	32:5:2327:G:N9	2.39	0.69
32:5:2878:G:OP2	32:5:2879:A:O2'	2.10	0.69
32:5:3635:A:N7	32:5:3636:C:C6	2.60	0.69
32:5:3674:G:C6	32:5:3675:G:N7	2.60	0.69
32:5:4998:G:N1	32:5:4999:G:C8	2.60	0.69
34:8:10:G:C2	34:8:11:C:C6	2.80	0.69
44:p:29:ILE:HG23	44:p:69:TRP:CD1	2.25	0.69
53:S2:599:A:O4'	53:S2:605:A:H2	1.76	0.69
53:S2:823:U:H5	53:S2:824:C:H5	1.40	0.69
53:S2:924:G:H2'	53:S2:924:G:N3	2.07	0.69
53:S2:1225:U:N3	53:S2:1226:G:C8	2.61	0.69
53:S2:1294:G:O5'	85:Sf:151:ASN:O	2.10	0.69
53:S2:1323:U:H2'	53:S2:1324:G:O4'	1.92	0.69
69:Sa:26:CYS:HG	69:Sa:77:CYS:HG	1.38	0.69
79:SS:8:LYS:HD2	82:SZ:49:LEU:HB2	1.73	0.69
23:e:35:TRP:HD1	23:e:36:ARG:N	1.89	0.69
32:5:86:U:O2	32:5:86:U:C2'	2.40	0.69
32:5:255:C:O2	32:5:255:C:H2'	1.90	0.69
32:5:1202:C:N3	32:5:1203:G:N7	2.40	0.69
32:5:1629:G:C4	32:5:1631:A:N6	2.60	0.69
32:5:1895:G:C2'	32:5:1896:A:O4'	2.38	0.69
32:5:2248:C:O2	32:5:2248:C:H2'	1.92	0.69
32:5:4158:C:C2	32:5:4159:C:C5	2.80	0.69
34:8:131:G:C2	34:8:132:G:C8	2.80	0.69
48:z:352:ILE:CB	48:z:355:PHE:HZ	1.91	0.69
49:3:72:C:C3'	49:3:73:A:C5'	2.68	0.69
53:S2:309:G:N3	53:S2:310:C:C5	2.60	0.69
53:S2:635:G:C6	53:S2:636:C:C4	2.80	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:993:G:C4	53:S2:994:C:C6	2.80	0.69
53:S2:1205:C:H6	53:S2:1206:G:H8	1.37	0.69
53:S2:1290:G:H3'	85:Sf:146:LEU:HG	1.72	0.69
53:S2:1293:A:O4'	85:Sf:150:PHE:CD2	2.45	0.69
53:S2:1496:U:N3	53:S2:1498:A:C8	2.60	0.69
53:S2:1667:U:C2	53:S2:1668:U:C4	2.80	0.69
5:J:99:PHE:CE2	5:J:105:PHE:CB	2.75	0.69
8:N:138:PHE:N	8:N:138:PHE:CD1	2.60	0.69
32:5:20:U:C4	34:8:37:A:C6	2.80	0.69
32:5:31:U:O2	32:5:52:G:C2	2.45	0.69
32:5:125:C:N3	32:5:126:C:C6	2.60	0.69
32:5:144:G:N3	32:5:145:G:C8	2.60	0.69
32:5:293:G:O2'	32:5:294:G:H5''	1.93	0.69
32:5:1479:G:O2'	32:5:1480:C:C5'	2.41	0.69
32:5:1699:A:N6	32:5:2094:G:O2'	2.24	0.69
32:5:2451:A:C5	32:5:2452:G:N7	2.61	0.69
32:5:2481:G:C2	32:5:2498:C:C2	2.80	0.69
32:5:2606:G:C4	32:5:2607:C:C5	2.79	0.69
32:5:2769:U:O2'	32:5:2770:C:O5'	2.09	0.69
32:5:3695:U:C2	32:5:3696:C:C6	2.80	0.69
32:5:3793:U:C2	32:5:3794:C:C6	2.80	0.69
32:5:4164:C:C2	32:5:4165:C:C6	2.80	0.69
32:5:4345:C:C2	32:5:4346:U:C6	2.81	0.69
32:5:4520:G:N2	35:B:253:CYS:SG	2.65	0.69
32:5:4583:C:C2	32:5:4718:G:N2	2.61	0.69
33:7:43:U:O2	33:7:44:C:C6	2.45	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
53:S2:311:C:C2	53:S2:312:G:H1'	2.27	0.69
53:S2:358:C:C4	53:S2:359:U:C5	2.80	0.69
53:S2:474:G:N2	53:S2:475:C:C2	2.60	0.69
53:S2:635:G:C5	53:S2:636:C:C5	2.80	0.69
53:S2:1141:G:H5'	53:S2:1142:G:OP2	1.93	0.69
53:S2:1232:U:O2	53:S2:1232:U:H2'	1.90	0.69
53:S2:1291:A:O5'	85:Sf:146:LEU:CB	2.39	0.69
54:SA:64:ALA:HB2	65:SV:34:MET:HE1	1.74	0.69
54:SA:200:ASP:HA	78:SR:89:SER:HB2	1.73	0.69
54:SA:205:ARG:NH2	78:SR:84:TYR:HD2	1.62	0.69
69:Sa:51:ARG:NH1	83:Sc:40:ARG:CD	2.52	0.69
82:SZ:58:LEU:O	82:SZ:62:VAL:HB	1.93	0.69
7:M:123:ILE:HD11	9:O:182:GLU:HG3	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Y:11:ARG:NH2	36:C:200:ARG:NH1	2.41	0.69
31:o:82:MET:HE1	32:5:4345:C:O2'	1.91	0.69
32:5:44:A:C6	32:5:45:U:C5	2.80	0.69
32:5:1201:U:N3	32:5:1202:C:C5	2.61	0.69
32:5:1310:C:C4	32:5:1311:G:N7	2.59	0.69
32:5:1625:G:C8	32:5:1642:A:H2	2.09	0.69
32:5:1878:G:N3	32:5:1879:C:C5	2.61	0.69
32:5:1937:C:H3'	32:5:1938:C:H2'	1.74	0.69
32:5:1965:G:O6	32:5:2021:G:O6	2.10	0.69
32:5:2463:G:N3	32:5:2464:C:C5	2.60	0.69
32:5:2726:G:N2	32:5:2727:C:C2	2.61	0.69
32:5:3858:C:N4	32:5:3859:G:C6	2.59	0.69
32:5:4735:G:C4	32:5:4736:C:C5	2.80	0.69
33:7:59:G:C2	33:7:60:G:N9	2.60	0.69
34:8:43:A:N3	34:8:44:A:C8	2.59	0.69
34:8:92:U:H2'	34:8:93:C:O4'	1.93	0.69
34:8:132:G:C2	34:8:133:G:N9	2.59	0.69
53:S2:436:G:C8	53:S2:471:G:N2	2.60	0.69
53:S2:908:A:N3	53:S2:909:G:C8	2.59	0.69
53:S2:1039:C:C2	53:S2:1040:G:C8	2.79	0.69
53:S2:1201:U:H2'	53:S2:1202:U:H6	1.57	0.69
53:S2:1205:C:C6	53:S2:1206:G:H8	2.10	0.69
53:S2:1418:C:O2	53:S2:1420:G:C8	2.45	0.69
54:SA:110:ASN:O	54:SA:116:PHE:HD2	1.73	0.69
83:Sc:42:ILE:HD12	83:Sc:42:ILE:N	2.07	0.69
32:5:86:U:O2	32:5:87:A:N7	2.24	0.69
32:5:743:G:C2	32:5:744:G:C5	2.80	0.69
32:5:984:C:C2	32:5:1070:G:C2	2.81	0.69
32:5:1491:A:N1	32:5:1492:G:C5	2.60	0.69
32:5:1632:A:N1	32:5:1634:A:H8	1.90	0.69
32:5:1686:C:H2'	32:5:1687:U:C5'	2.22	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
32:5:3653:A:C2	32:5:3692:A:H4'	2.27	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	2.79	0.69
32:5:4122:G:C5	32:5:4123:C:C5	2.81	0.69
32:5:4539:U:C2	32:5:4540:C:C6	2.80	0.69
47:q:60:MET:HE3	47:q:88:PHE:CE2	2.28	0.69
50:4:37:C:H3'	50:4:37:C:O2	1.92	0.69
53:S2:625:G:O4'	53:S2:629:A:C2	2.46	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1217:A:H2'	53:S2:1218:C:C6	2.28	0.69
53:S2:1804:U:C2	53:S2:1805:G:C8	2.80	0.69
53:S2:1859:A:N1	53:S2:1860:A:C5	2.60	0.69
57:SE:121:TYR:C	57:SE:121:TYR:CD2	2.68	0.69
10:Q:176:ARG:HH22	32:5:1497:A:N6	1.90	0.69
32:5:33:A:N6	32:5:50:C:C2	2.61	0.69
32:5:56:A:C2	32:5:57:G:C4	2.81	0.69
32:5:246:G:N2	32:5:247:G:C8	2.61	0.69
32:5:422:C:C2	32:5:423:G:H8	2.11	0.69
32:5:504:G:C6	32:5:654:C:N3	2.60	0.69
32:5:1467:C:C2	32:5:1468:C:C5	2.80	0.69
32:5:1673:U:O2	32:5:1674:C:C6	2.46	0.69
32:5:1979:A:H3'	32:5:1980:U:H5'	1.74	0.69
32:5:2327:G:N2	32:5:2328:G:C4	2.61	0.69
32:5:2448:G:O6	32:5:2510:G:O2'	2.10	0.69
32:5:2841:G:C6	32:5:2842:G:C8	2.81	0.69
32:5:4276:G:C6	32:5:4277:G:C5	2.80	0.69
32:5:4324:A:N1	32:5:4325:A:C6	2.60	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
38:F:144:TRP:CH2	38:F:237:ASN:HB2	2.28	0.69
49:3:34:A:N3	53:S2:1701:C:C6	2.60	0.69
53:S2:11:A:N1	53:S2:12:U:C5	2.60	0.69
53:S2:56:G:O6	53:S2:90:G:N2	2.24	0.69
53:S2:92:A:N1	53:S2:447:A:N1	2.41	0.69
53:S2:828:G:C2	53:S2:829:C:N1	2.61	0.69
53:S2:909:G:N1	53:S2:910:G:N7	2.40	0.69
53:S2:1448:A:C6	53:S2:1449:G:C8	2.80	0.69
78:SR:65:PRO:CB	78:SR:74:GLN:HE22	2.06	0.69
83:Sc:13:ARG:HD3	83:Sc:13:ARG:N	2.07	0.69
9:O:116:LYS:HE3	12:S:169:THR:HG21	1.75	0.69
21:c:101:ASP:OD1	63:SN:42:LYS:HG2	1.92	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
32:5:197:A:N3	32:5:222:C:O2'	2.24	0.69
32:5:294:G:O2'	32:5:294:G:N3	2.26	0.69
32:5:1070:G:C2	32:5:1071:C:N1	2.60	0.69
32:5:1074:G:N2	32:5:1238:A:C2	2.60	0.69
32:5:1309:C:H2'	32:5:1309:C:O2	1.91	0.69
32:5:1313:C:N3	32:5:1323:A:C8	2.61	0.69
32:5:1430:C:C2	32:5:1431:C:C6	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1476:C:C4	32:5:1477:C:C5	2.80	0.69
32:5:1489:G:N1	32:5:1490:G:C8	2.61	0.69
32:5:1629:G:N2	32:5:1631:A:C2	2.60	0.69
32:5:1760:G:C2	32:5:1761:G:H1'	2.28	0.69
32:5:1945:G:C2	32:5:1946:G:C1'	2.75	0.69
32:5:2056:G:N1	32:5:2058:G:C5	2.61	0.69
32:5:2079:G:C2	32:5:2080:U:C4	2.81	0.69
32:5:2340:C:H2'	32:5:2340:C:O2	1.92	0.69
32:5:2368:A:N1	32:5:2788:U:C5	2.61	0.69
32:5:2451:A:C6	32:5:2452:G:C8	2.80	0.69
32:5:2567:G:N3	32:5:2568:C:C6	2.61	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
32:5:3759:A:H61	53:S2:1709:G:H5''	1.57	0.69
32:5:4502:C:N3	32:5:4503:A:C8	2.61	0.69
32:5:4510:A:H61	32:5:4592:C:H4'	1.58	0.69
32:5:4687:A:C2	32:5:4688:C:C5	2.81	0.69
32:5:5010:U:C2	32:5:5011:A:C8	2.80	0.69
33:7:93:G:C6	33:7:94:C:C5	2.81	0.69
34:8:116:C:C4	34:8:117:C:C5	2.80	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
39:I:101:LYS:O	39:I:102:MET:HG2	1.93	0.69
40:P:30:ARG:HD3	40:P:30:ARG:C	2.18	0.69
46:K:142:ASN:CG	46:K:143:VAL:H	2.01	0.69
53:S2:52:G:C6	53:S2:53:C:C5	2.81	0.69
53:S2:429:C:N3	53:S2:430:C:C5	2.61	0.69
53:S2:436:G:C2	53:S2:437:G:N7	2.61	0.69
53:S2:530:U:C2	53:S2:531:A:C8	2.81	0.69
53:S2:623:G:N2	53:S2:624:C:N1	2.40	0.69
53:S2:1067:C:C4	53:S2:1068:G:C5	2.80	0.69
53:S2:1100:A:N1	53:S2:1101:U:C5	2.61	0.69
53:S2:1124:C:O2	53:S2:1125:C:C6	2.46	0.69
53:S2:1256:G:C8	84:Sd:40:ARG:HD2	2.27	0.69
53:S2:1295:A:C4	53:S2:1296:U:H1'	2.28	0.69
53:S2:1317:C:N3	53:S2:1318:G:N7	2.40	0.69
53:S2:1785:C:C2	53:S2:1786:U:C5	2.79	0.69
59:SH:57:ARG:HA	59:SH:57:ARG:NE	2.07	0.69
74:SK:57:TYR:HB3	74:SK:75:GLY:HA2	1.74	0.69
86:Sg:46:THR:HG21	86:Sg:54:ILE:HD12	1.75	0.69
7:M:33:GLN:HA	7:M:33:GLN:NE2	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:85:G:N2	32:5:97:G:C8	2.61	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
32:5:1271:G:C3'	32:5:1272:C:H5'	2.23	0.69
32:5:1465:G:N2	32:5:1466:G:H1'	2.08	0.69
32:5:1475:G:N3	32:5:1476:C:C5	2.61	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
32:5:2316:G:C2	32:5:2317:C:C5	2.81	0.69
32:5:2533:C:C2	32:5:2534:C:C5	2.81	0.69
32:5:2736:G:N3	32:5:2737:C:C5	2.56	0.69
32:5:2851:G:N7	32:5:2852:U:H5	1.87	0.69
32:5:3635:A:C8	32:5:3692:A:H1'	2.28	0.69
32:5:4324:A:C2	32:5:4325:A:C6	2.80	0.69
32:5:4939:C:H2'	32:5:4939:C:O2	1.93	0.69
34:8:134:G:N2	34:8:135:C:C2	2.61	0.69
48:z:410:SER:C	50:4:194:G:C4	2.66	0.69
53:S2:404:G:N1	53:S2:405:G:N7	2.41	0.69
53:S2:404:G:N3	53:S2:405:G:C8	2.61	0.69
53:S2:579:C:C4	53:S2:580:U:C6	2.80	0.69
53:S2:1306:U:O4	85:Sf:140:TYR:CD1	2.45	0.69
53:S2:1337:C:O2	53:S2:1337:C:H2'	1.93	0.69
53:S2:1351:G:C4'	54:SA:110:ASN:HD21	2.06	0.69
53:S2:1382:A:C2	53:S2:1383:A:C8	2.81	0.69
83:Sc:13:ARG:CG	83:Sc:54:ASP:O	2.39	0.69
11:R:108:ARG:HH11	11:R:108:ARG:HG2	1.56	0.69
32:5:44:A:N3	32:5:45:U:C6	2.61	0.69
32:5:86:U:C4	32:5:97:G:N2	2.61	0.69
32:5:288:G:N1	32:5:289:C:C4	2.61	0.69
32:5:456:C:C2	32:5:457:G:C8	2.81	0.69
32:5:1379:C:C4'	32:5:1380:G:C8	2.72	0.69
32:5:1390:G:N3	32:5:1394:G:C6	2.60	0.69
32:5:1689:G:H2'	32:5:1690:C:O4'	1.93	0.69
32:5:2076:G:C6	32:5:2077:C:C6	2.81	0.69
32:5:2263:A:O2'	32:5:2265:G:H2'	1.92	0.69
32:5:3858:C:C2	32:5:3859:G:C8	2.81	0.69
32:5:4166:G:N3	32:5:4167:G:C8	2.61	0.69
32:5:4920:C:H2'	32:5:4921:C:C6	2.28	0.69
32:5:4982:A:N6	32:5:4983:C:C5	2.60	0.69
48:z:383:ASN:CA	50:4:208:A:O3'	2.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:309:G:C4	53:S2:310:C:C5	2.81	0.69
53:S2:499:G:N2	53:S2:504:G:C2	2.61	0.69
53:S2:1418:C:C2	53:S2:1420:G:N7	2.60	0.69
19:a:61:TYR:CD1	32:5:294:G:N1	2.61	0.68
32:5:210:C:N4	32:5:231:U:N3	2.42	0.68
32:5:1238:A:H2'	32:5:1239:C:C6	2.27	0.68
32:5:1264:C:N3	32:5:1265:G:C8	2.61	0.68
32:5:1447:C:C2	32:5:2098:G:C2	2.81	0.68
32:5:1478:C:O2	32:5:1479:G:C8	2.45	0.68
32:5:1619:G:C5	32:5:1620:U:C5	2.81	0.68
32:5:1904:G:N2	32:5:2073:C:C2	2.61	0.68
32:5:2071:A:C2	32:5:2072:C:C4	2.81	0.68
32:5:2105:A:N3	32:5:2106:G:C8	2.61	0.68
32:5:2367:A:C5	32:5:2798:A:N3	2.61	0.68
32:5:3633:C:C2	32:5:3634:G:C8	2.81	0.68
32:5:3867:A:C2	32:5:3880:G:C6	2.81	0.68
32:5:4165:C:N4	32:5:4166:G:N7	2.40	0.68
32:5:4229:U:C4	32:5:4230:C:C4	2.82	0.68
32:5:4878:C:C2	32:5:4879:C:H5	2.07	0.68
34:8:10:G:N2	34:8:11:C:C1'	2.55	0.68
34:8:82:A:H2'	34:8:82:A:N3	2.08	0.68
53:S2:358:C:H2'	53:S2:358:C:O2	1.92	0.68
53:S2:386:C:C4	53:S2:387:C:C5	2.79	0.68
53:S2:480:G:H2'	53:S2:481:C:O4'	1.93	0.68
53:S2:600:G:C2	53:S2:601:G:N7	2.61	0.68
53:S2:876:C:N4	53:S2:878:G:N7	2.40	0.68
53:S2:1130:G:C2	53:S2:1131:G:C8	2.81	0.68
53:S2:1302:G:C5	85:Sf:140:TYR:CE2	2.81	0.68
53:S2:1478:U:O2	53:S2:1479:G:C8	2.45	0.68
53:S2:1528:G:C6	53:S2:1529:C:N4	2.61	0.68
53:S2:1805:G:C2	53:S2:1806:A:C8	2.82	0.68
75:SM:16:THR:HA	75:SM:19:GLN:HG3	1.75	0.68
7:M:36:ALA:HB2	7:M:52:PHE:CE1	2.28	0.68
12:S:95:ARG:NH1	12:S:97:TYR:OH	2.23	0.68
32:5:87:A:C2	32:5:292:G:C2	2.81	0.68
32:5:144:G:N1	32:5:145:G:N7	2.42	0.68
32:5:711:A:C2	32:5:712:C:C6	2.80	0.68
32:5:1067:G:H2'	32:5:1068:G:O4'	1.93	0.68
32:5:1543:G:C6	32:5:1544:G:N7	2.61	0.68
32:5:1672:U:H2'	32:5:1673:U:H6	1.58	0.68
32:5:1846:G:C2	32:5:1847:C:C4	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2058:G:C2	32:5:2059:C:N1	2.60	0.68
32:5:2080:U:N3	32:5:2081:C:C5	2.61	0.68
32:5:2451:A:C6	32:5:2452:G:C4	2.81	0.68
32:5:2905:C:C2	32:5:3590:G:C2	2.82	0.68
32:5:3805:U:C2	32:5:3806:G:C8	2.81	0.68
32:5:4092:G:C5	32:5:4093:G:N2	2.60	0.68
32:5:4286:C:C2	32:5:4287:G:N7	2.61	0.68
32:5:4397:A:H5'	49:3:76:A:N1	2.07	0.68
32:5:4911:A:C5'	35:B:100:ARG:HD3	2.23	0.68
53:S2:18:C:C2	53:S2:19:A:C8	2.81	0.68
53:S2:474:G:N1	53:S2:475:C:C4	2.61	0.68
53:S2:1541:G:C2	53:S2:1542:C:C4	2.82	0.68
78:SR:73:LEU:HA	78:SR:76:GLU:OE1	1.91	0.68
3:G:57:TRP:HE3	3:G:61:ILE:HG21	1.58	0.68
6:L:56:ARG:O	6:L:116:ARG:NH2	2.25	0.68
11:R:143:HIS:CE1	32:5:3596:A:O3'	2.46	0.68
12:S:94:TYR:CZ	12:S:96:GLU:HG3	2.27	0.68
32:5:293:G:C2'	32:5:297:U:C6	2.76	0.68
32:5:1672:U:N3	32:5:1673:U:C5	2.60	0.68
32:5:1673:U:N3	32:5:1674:C:C4	2.61	0.68
32:5:2294:G:C4	32:5:2295:C:C5	2.81	0.68
32:5:2348:G:H5'	32:5:2348:G:C8	2.28	0.68
32:5:2453:A:N1	32:5:2454:U:C6	2.61	0.68
32:5:2567:G:C6	32:5:2568:C:C5	2.82	0.68
32:5:2811:G:H22	32:5:2813:A:H3'	1.58	0.68
32:5:3607:U:N3	32:5:3608:A:N7	2.42	0.68
32:5:3944:G:C2	32:5:3945:A:N7	2.61	0.68
32:5:4279:A:O4'	32:5:4281:A:C8	2.47	0.68
32:5:4400:G:N3	32:5:4400:G:H2'	2.07	0.68
34:8:13:G:C5	34:8:14:U:C4	2.82	0.68
34:8:35:C:O2'	34:8:36:G:H5'	1.94	0.68
34:8:103:A:C8	34:8:104:A:N7	2.61	0.68
45:r:80:THR:HG21	45:r:96:MET:HE1	1.75	0.68
48:z:126:GLN:HE22	48:z:157:ILE:HG12	1.57	0.68
53:S2:495:U:O2'	53:S2:496:C:C5'	2.41	0.68
53:S2:594:A:O2'	53:S2:595:U:H5	1.76	0.68
53:S2:804:U:N3	53:S2:805:U:C5	2.61	0.68
53:S2:1711:U:C2	53:S2:1712:A:C8	2.81	0.68
53:S2:1831:A:H1'	53:S2:1851:A:H2'	1.76	0.68
53:S2:1859:A:N1	53:S2:1860:A:C6	2.62	0.68
53:S2:1860:A:N3	53:S2:1862:G:C8	2.61	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SI:168:GLN:HE22	60:SI:170:LYS:CE	2.02	0.68
32:5:736:C:H2'	32:5:737:C:C1'	2.22	0.68
32:5:979:C:H2'	32:5:980:U:O4'	1.93	0.68
32:5:1444:G:H2'	32:5:1445:U:C5	2.27	0.68
32:5:1555:G:N2	32:5:1556:C:H1'	2.08	0.68
32:5:1618:G:C2	32:5:1619:G:N7	2.59	0.68
32:5:1806:G:N3	32:5:1807:C:C6	2.61	0.68
32:5:2079:G:N2	32:5:2080:U:C2	2.61	0.68
32:5:2367:A:N7	32:5:2798:A:N3	2.42	0.68
32:5:2454:U:N3	32:5:2455:G:N7	2.41	0.68
32:5:2812:A:H2'	32:5:2813:A:C8	2.29	0.68
32:5:3771:C:C5	32:5:3772:U:C4	2.82	0.68
32:5:4535:A:H2'	32:5:4535:A:N3	2.07	0.68
32:5:4772:C:C2	32:5:4773:C:C6	2.81	0.68
32:5:4941:G:C2	32:5:4942:C:N3	2.61	0.68
50:4:54:G:C2	50:4:293:C:C2	2.81	0.68
53:S2:75:G:HO2'	53:S2:76:U:H6	1.39	0.68
53:S2:459:C:N4	53:S2:460:A:C5	2.61	0.68
53:S2:493:A:C8	53:S2:574:A:C8	2.81	0.68
53:S2:751:G:N1	53:S2:792:C:C2	2.61	0.68
53:S2:818:A:C6	53:S2:819:G:C8	2.82	0.68
53:S2:836:G:H2'	53:S2:837:A:C5'	2.23	0.68
53:S2:923:G:C2	53:S2:924:G:N9	2.62	0.68
53:S2:1063:C:C2'	53:S2:1838:U:H5	2.05	0.68
53:S2:1100:A:N3	53:S2:1101:U:C6	2.60	0.68
53:S2:1145:A:N6	53:S2:1150:A:C2	2.62	0.68
53:S2:1292:C:P	85:Sf:149:CYS:N	2.56	0.68
53:S2:1311:C:H2'	53:S2:1312:G:O4'	1.92	0.68
53:S2:1431:G:C6	53:S2:1432:U:C5	2.82	0.68
73:SF:195:GLU:HA	73:SF:198:ARG:HB3	1.75	0.68
79:SS:26:ILE:CG1	79:SS:54:LYS:C	2.65	0.68
11:R:165:LYS:CD	53:S2:907:G:OP2	2.42	0.68
32:5:168:C:C2	32:5:268:G:N2	2.61	0.68
32:5:743:G:C2	32:5:744:G:N7	2.62	0.68
32:5:950:G:C2	32:5:951:G:N7	2.61	0.68
32:5:957:G:P	32:5:1284:G:N2	2.66	0.68
32:5:1278:C:H3'	32:5:1279:A:H4'	1.74	0.68
32:5:1595:G:C2	32:5:4557:U:H4'	2.27	0.68
32:5:1684:A:C6	32:5:1685:G:C8	2.81	0.68
32:5:1964:A:N6	32:5:1965:G:C5	2.61	0.68
32:5:2288:G:N2	32:5:2290:C:N1	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2505:C:H1'	32:5:2506:G:C5	2.28	0.68
32:5:2735:G:N1	32:5:2736:G:C5	2.61	0.68
32:5:3606:U:C2	32:5:3607:U:C6	2.81	0.68
32:5:3662:A:N6	32:5:3680:U:N3	2.39	0.68
32:5:3665:G:H2'	32:5:3666:C:O4'	1.93	0.68
32:5:4284:C:O2	32:5:4285:U:C5	2.46	0.68
32:5:4314:C:C2	32:5:4315:A:C8	2.81	0.68
32:5:4330:G:C6	32:5:4331:G:C8	2.81	0.68
32:5:4880:C:H2'	32:5:4881:U:H5'	1.74	0.68
32:5:5047:C:H5''	32:5:5050:C:H5	1.58	0.68
34:8:7:U:H2'	34:8:8:U:O4'	1.94	0.68
34:8:79:G:C2	34:8:80:A:N1	2.62	0.68
40:P:116:HIS:HE1	40:P:118:GLN:HB2	1.59	0.68
48:z:95:THR:HG22	48:z:271:ILE:HG23	1.75	0.68
48:z:297:MET:CE	48:z:355:PHE:CB	2.69	0.68
53:S2:37:C:N4	53:S2:38:A:C5	2.61	0.68
53:S2:85:A:C2	53:S2:86:C:C6	2.82	0.68
53:S2:447:A:C5	53:S2:449:A:N9	2.61	0.68
53:S2:751:G:H2'	53:S2:752:G:C8	2.27	0.68
53:S2:797:C:C2	59:SH:109:ARG:NH2	2.62	0.68
53:S2:798:A:O3'	53:S2:798:A:OP1	2.11	0.68
53:S2:835:C:C2	53:S2:837:A:H4'	2.29	0.68
53:S2:1266:C:O2	53:S2:1267:C:C5	2.47	0.68
54:SA:205:ARG:CZ	78:SR:84:TYR:HD2	2.06	0.68
32:5:54:G:N2	32:5:55:G:H1'	2.08	0.68
32:5:125:C:C2	32:5:126:C:H6	2.11	0.68
32:5:167:C:C2	32:5:269:G:C2	2.81	0.68
32:5:449:C:N3	32:5:450:G:C8	2.62	0.68
32:5:938:C:H2'	32:5:939:G:C8	2.29	0.68
32:5:1397:A:N3	32:5:1499:C:H1'	2.08	0.68
32:5:1542:U:N3	32:5:1543:G:N7	2.40	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
32:5:2688:G:N2	32:5:2689:C:C2	2.62	0.68
34:8:117:C:C2	34:8:118:C:C6	2.82	0.68
48:z:109:LEU:HD23	48:z:197:GLN:CD	2.18	0.68
53:S2:29:G:H2'	53:S2:30:C:C6	2.28	0.68
53:S2:384:U:C5	53:S2:386:C:C5	2.81	0.68
53:S2:1134:G:C5	53:S2:1135:C:C5	2.82	0.68
53:S2:1501:C:C2	53:S2:1502:C:C5	2.80	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1561:A:C5	53:S2:1562:C:C6	2.81	0.68
53:S2:1760:G:C2	53:S2:1773:C:C2	2.82	0.68
72:SD:76:ARG:HD2	72:SD:77:PHE:CD1	2.28	0.68
83:Sc:14:VAL:HG13	83:Sc:31:ARG:HB3	1.75	0.68
19:a:112:LEU:HD22	32:5:1396:G:N7	2.08	0.68
20:b:13:SER:O	20:b:17:HIS:HB2	1.94	0.68
32:5:84:A:C8	32:5:84:A:H5'	2.29	0.68
32:5:181:C:N3	32:5:256:G:C2	2.61	0.68
32:5:208:A:H3'	32:5:209:U:H5''	1.75	0.68
32:5:459:C:C2	32:5:460:C:C6	2.82	0.68
32:5:661:C:C2	32:5:662:C:C6	2.81	0.68
32:5:916:C:N3	32:5:918:G:O6	2.27	0.68
32:5:919:C:H2'	32:5:920:C:O4'	1.94	0.68
32:5:987:C:H2'	32:5:988:C:O4'	1.93	0.68
32:5:1249:C:C2	32:5:1262:G:C2	2.82	0.68
32:5:1326:A:H2'	32:5:1327:C:C6	2.29	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
32:5:1485:C:O2	32:5:4349:C:C5	2.46	0.68
32:5:2328:G:C5	32:5:2329:U:C4	2.82	0.68
32:5:2726:G:N1	32:5:2727:C:C4	2.61	0.68
32:5:3674:G:N1	32:5:3675:G:N7	2.41	0.68
32:5:4167:G:N3	32:5:4168:G:C8	2.59	0.68
32:5:4518:A:O2'	35:B:257:TRP:HZ3	1.71	0.68
33:7:28:C:C4	33:7:29:C:C6	2.82	0.68
34:8:79:G:N3	34:8:80:A:C2	2.61	0.68
46:K:37:LEU:CD2	46:K:68:GLN:CB	2.59	0.68
48:z:405:ARG:O	50:4:207:C:H4'	1.92	0.68
48:z:410:SER:HB3	50:4:193:G:H22	0.85	0.68
53:S2:609:U:C2	53:S2:610:G:C8	2.81	0.68
53:S2:1063:C:HO2'	53:S2:1838:U:H5	0.73	0.68
53:S2:1191:C:H2'	53:S2:1192:U:O4'	1.94	0.68
53:S2:1860:A:N1	53:S2:1862:G:C5	2.61	0.68
62:SL:13:GLN:N	62:SL:13:GLN:OE1	2.26	0.68
73:SF:83:ASN:N	73:SF:83:ASN:HD22	1.91	0.68
82:SZ:50:PHE:CZ	82:SZ:79:ILE:CB	2.76	0.68
12:S:29:ARG:CZ	12:S:29:ARG:CB	2.72	0.68
19:a:110:LYS:HG2	19:a:112:LEU:HD21	1.75	0.68
32:5:56:A:C6	32:5:57:G:C5	2.82	0.68
32:5:69:A:H3'	32:5:70:A:H8	1.57	0.68
32:5:87:A:N1	32:5:292:G:C6	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:138:G:H2'	32:5:139:G:H5'	1.73	0.68
32:5:299:C:H2'	32:5:299:C:O2	1.93	0.68
32:5:473:C:C2	32:5:474:C:C5	2.82	0.68
32:5:699:C:C2	32:5:700:G:C8	2.82	0.68
32:5:1339:U:O2	32:5:1339:U:H2'	1.92	0.68
32:5:1358:G:N2	32:5:1359:G:O6	2.26	0.68
32:5:1378:C:H2'	32:5:1378:C:O2	1.93	0.68
32:5:1857:C:O4'	32:5:1892:A:C2	2.46	0.68
32:5:2113:G:H8	32:5:2115:G:H1'	1.57	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
32:5:3727:A:O2'	32:5:3728:A:O5'	2.11	0.68
32:5:3857:G:C5	32:5:3858:C:C5	2.82	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	2.81	0.68
33:7:58:A:C6	33:7:59:G:C5	2.82	0.68
34:8:134:G:N1	34:8:135:C:C5	2.61	0.68
48:z:219:TYR:CD1	48:z:236:PHE:HD1	2.12	0.68
53:S2:426:A:H3'	53:S2:426:A:N3	2.08	0.68
53:S2:632:C:H2'	53:S2:632:C:O2	1.92	0.68
53:S2:797:C:H4'	53:S2:798:A:OP1	1.94	0.68
53:S2:948:C:C2	53:S2:949:G:C8	2.82	0.68
53:S2:1259:A:H3'	53:S2:1259:A:N3	2.09	0.68
53:S2:1290:G:C2'	85:Sf:146:LEU:HB3	2.21	0.68
53:S2:1315:U:C2	53:S2:1316:C:C5	2.82	0.68
53:S2:1409:A:H2	53:S2:1438:A:C2	2.11	0.68
53:S2:1642:U:O2	53:S2:1643:U:C5	2.47	0.68
53:S2:1711:U:N3	53:S2:1712:A:N7	2.42	0.68
32:5:470:A:C5	32:5:471:A:N7	2.61	0.68
32:5:1268:G:N2	32:5:1270:A:N9	2.42	0.68
32:5:1367:C:N4	32:5:1369:C:OP2	2.27	0.68
32:5:1388:A:N1	32:5:1396:G:N3	2.42	0.68
32:5:1667:G:C5	32:5:2280:G:C2	2.82	0.68
32:5:1806:G:C2	32:5:1807:C:C5	2.82	0.68
32:5:2293:U:C2	32:5:2294:G:C8	2.81	0.68
32:5:3704:U:C2	32:5:3705:G:C8	2.82	0.68
32:5:4276:G:N1	32:5:4277:G:C8	2.62	0.68
32:5:4281:A:C2	32:5:4283:G:C4	2.82	0.68
48:z:381:SER:OG	50:4:193:G:N2	2.27	0.68
53:S2:100:U:O2	53:S2:100:U:H2'	1.93	0.68
53:S2:112:U:H1'	53:S2:114:G:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:383:G:H2'	53:S2:384:U:C1'	2.24	0.68
53:S2:1591:C:N4	53:S2:1592:C:C4	2.62	0.68
60:SI:103:LEU:HD13	60:SI:170:LYS:HD2	1.75	0.68
1:A:208:GLU:OE1	32:5:1629:G:N1	2.27	0.68
3:G:81:ASN:HD21	3:G:238:GLY:HA3	1.58	0.68
22:d:73:TRP:HE1	32:5:2372:U:H1'	1.58	0.68
32:5:12:A:C2	32:5:14:C:C6	2.82	0.68
32:5:68:U:C5	32:5:69:A:C8	2.81	0.68
32:5:90:G:N2	32:5:95:G:C5	2.61	0.68
32:5:911:U:N3	32:5:912:G:C8	2.62	0.68
32:5:1479:G:O6	32:5:1487:G:C2	2.47	0.68
32:5:4698:C:H2'	32:5:4698:C:O2	1.94	0.68
32:5:4913:G:O2'	32:5:4914:C:O4'	2.11	0.68
33:7:56:G:H2'	33:7:57:C:O5'	1.93	0.68
34:8:132:G:N2	34:8:133:G:N9	2.41	0.68
48:z:80:PHE:HA	48:z:295:LEU:CD1	2.24	0.68
49:3:75:C:H5'	49:3:75:C:C6	2.29	0.68
53:S2:376:A:C6	53:S2:377:G:C8	2.82	0.68
53:S2:608:C:C2	53:S2:609:U:C6	2.82	0.68
53:S2:794:A:N1	53:S2:795:A:C4	2.62	0.68
53:S2:1149:A:C6	53:S2:1151:G:N9	2.62	0.68
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
13:T:19:PHE:CE2	32:5:1791:U:H4'	2.29	0.67
32:5:124:C:O2	32:5:124:C:H2'	1.94	0.67
32:5:299:C:C4	32:5:300:A:N7	2.63	0.67
32:5:730:G:H22	32:5:939:G:N2	1.92	0.67
32:5:732:A:C5	32:5:733:A:C2	2.82	0.67
32:5:964:A:H8	32:5:964:A:C5'	2.07	0.67
32:5:1265:G:H2'	32:5:1266:G:H5'	1.76	0.67
32:5:1542:U:C2	32:5:1543:G:H8	2.10	0.67
32:5:1557:C:H2'	32:5:1557:C:O2	1.95	0.67
32:5:1671:U:O2	32:5:1671:U:C2'	2.42	0.67
32:5:1878:G:C2	32:5:1879:C:C6	2.82	0.67
32:5:1924:C:C4	32:5:1925:G:C8	2.82	0.67
32:5:2857:A:C6	32:5:2858:A:N6	2.63	0.67
32:5:3590:G:C6	32:5:3591:C:C5	2.81	0.67
32:5:3621:A:C5	32:5:3622:C:C5	2.82	0.67
32:5:3736:A:O2'	32:5:3737:A:O5'	2.11	0.67
32:5:3938:G:H4'	32:5:3939:G:O5'	1.94	0.67
32:5:4283:G:N3	32:5:4284:C:C5	2.53	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4466:C:C2	32:5:4467:A:C8	2.81	0.67
32:5:4466:C:N3	32:5:4467:A:C8	2.62	0.67
46:K:95:GLN:O	46:K:97:ASN:N	2.26	0.67
53:S2:221:A:C6	53:S2:222:U:C5	2.83	0.67
53:S2:1308:U:C2	53:S2:1309:C:C6	2.82	0.67
53:S2:1373:C:O2'	53:S2:1374:C:O4'	2.11	0.67
53:S2:1565:C:C2	53:S2:1571:G:C2	2.82	0.67
53:S2:1596:U:O2	53:S2:1596:U:H2'	1.93	0.67
53:S2:1606:G:C2	53:S2:1632:G:N2	2.62	0.67
54:SA:158:ASP:OD1	54:SA:159:ILE:CB	2.40	0.67
8:N:99:GLN:OE1	8:N:167:ALA:HB2	1.93	0.67
32:5:183:C:O2	32:5:189:G:O6	2.12	0.67
32:5:288:G:N3	32:5:289:C:C6	2.62	0.67
32:5:497:G:C2	32:5:657:C:N3	2.62	0.67
32:5:907:C:C2	32:5:908:G:C8	2.82	0.67
32:5:1277:G:N2	32:5:1278:C:C2	2.62	0.67
32:5:1516:G:C5	32:5:1518:A:N7	2.63	0.67
32:5:1618:G:N1	32:5:1619:G:C5	2.62	0.67
32:5:1629:G:H2'	32:5:1631:A:N7	2.09	0.67
32:5:1870:C:N3	32:5:1871:A:C8	2.62	0.67
32:5:1984:A:N7	32:5:2011:C:H4'	2.09	0.67
32:5:2450:G:C5	32:5:2451:A:C8	2.81	0.67
32:5:2451:A:N6	32:5:2452:G:C5	2.62	0.67
32:5:2463:G:C4	32:5:2464:C:C5	2.82	0.67
32:5:2784:C:H2'	32:5:2785:C:H6	1.59	0.67
32:5:3623:C:H5	32:5:3624:A:C5	2.12	0.67
32:5:4085:A:H3'	32:5:4086:G:C5'	2.24	0.67
32:5:4696:C:H2'	32:5:4697:U:O4'	1.95	0.67
33:7:59:G:C5	33:7:60:G:C8	2.83	0.67
34:8:45:C:C2	34:8:46:G:C8	2.81	0.67
53:S2:2:A:C8	56:SC:223:TYR:CB	2.77	0.67
53:S2:60:A:O2'	53:S2:61:A:C5'	2.41	0.67
53:S2:71:G:H2'	53:S2:72:C:C6	2.28	0.67
53:S2:832:G:C6	53:S2:833:C:C5	2.82	0.67
53:S2:841:G:N2	53:S2:842:C:N1	2.42	0.67
53:S2:970:G:H3'	53:S2:971:G:H5'	1.77	0.67
53:S2:1378:A:H5''	53:S2:1378:A:C8	2.29	0.67
53:S2:1513:C:C2'	53:S2:1514:G:H5'	2.23	0.67
53:S2:1639:G:C2	53:S2:1640:A:C8	2.83	0.67
79:SS:16:LEU:HD22	79:SS:71:MET:HE2	1.76	0.67
32:5:287:U:C2	32:5:288:G:N7	2.62	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:370:U:C4	32:5:1637:A:N6	2.62	0.67
32:5:504:G:C2	32:5:505:G:C5	2.82	0.67
32:5:1465:G:C2	32:5:1466:G:H1'	2.29	0.67
32:5:1475:G:C2	32:5:1476:C:H5	2.07	0.67
32:5:1507:C:N3	32:5:1508:A:C8	2.62	0.67
32:5:1757:U:N3	32:5:1758:G:C8	2.62	0.67
32:5:2515:G:N7	32:5:2516:G:C8	2.62	0.67
32:5:2605:G:N2	32:5:2606:G:C4	2.62	0.67
32:5:3680:U:O2	32:5:3680:U:C2'	2.41	0.67
32:5:4275:G:O6	32:5:4276:G:C5	2.46	0.67
33:7:8:G:C5	33:7:9:C:C5	2.82	0.67
34:8:86:U:H3'	34:8:86:U:C6	2.30	0.67
48:z:366:GLN:OE1	48:z:367:GLU:N	2.27	0.67
49:3:31:C:C2	49:3:32:C:C6	2.83	0.67
53:S2:20:G:H4'	53:S2:620:G:N7	2.10	0.67
53:S2:457:C:C4	53:S2:458:A:N7	2.62	0.67
53:S2:977:C:C4	53:S2:978:G:N7	2.62	0.67
53:S2:1253:A:C2	53:S2:1666:C:O4'	2.46	0.67
53:S2:1280:G:C6	53:S2:1281:G:C8	2.82	0.67
53:S2:1293:A:O4'	85:Sf:150:PHE:CB	2.43	0.67
53:S2:1538:C:O2	53:S2:1538:C:C2'	2.42	0.67
53:S2:1784:G:C2'	53:S2:1785:C:H5'	2.24	0.67
85:Sf:138:ARG:HH11	85:Sf:138:ARG:HG3	1.59	0.67
1:A:33:ASP:O	1:A:34:PHE:C	2.36	0.67
1:A:34:PHE:CE2	32:5:4087:G:C5	2.83	0.67
3:G:56:LYS:HA	32:5:4085:A:N7	2.09	0.67
21:c:78:ASN:ND2	21:c:78:ASN:C	2.53	0.67
25:g:14:ASN:OD1	25:g:14:ASN:C	2.37	0.67
32:5:209:U:N3	32:5:233:U:C4	2.62	0.67
32:5:440:U:C2	32:5:441:G:N7	2.62	0.67
32:5:1296:G:O2'	32:5:1297:U:OP1	2.12	0.67
32:5:1299:G:C2	32:5:1300:G:C8	2.83	0.67
32:5:1846:G:N2	32:5:1847:C:C2	2.62	0.67
32:5:2270:G:C6	32:5:2271:C:N4	2.63	0.67
32:5:2593:C:N3	32:5:2594:C:C5	2.62	0.67
32:5:2689:C:N3	32:5:2690:C:C5	2.63	0.67
32:5:3591:C:H2'	32:5:3591:C:O2	1.94	0.67
32:5:3688:U:N3	32:5:3689:G:C8	2.62	0.67
32:5:3753:G:OP1	32:5:3777:G:C8	2.46	0.67
32:5:3782:C:C4	32:5:3809:G:C6	2.83	0.67
32:5:4094:G:C2'	32:5:4095:G:O4'	2.36	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
32:5:4242:U:O2	32:5:4279:A:H2	1.76	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
34:8:11:C:O2	34:8:11:C:C2'	2.42	0.67
34:8:13:G:C4	34:8:14:U:C4	2.83	0.67
34:8:42:G:C6	34:8:43:A:N7	2.63	0.67
34:8:74:U:H2'	34:8:74:U:O2	1.95	0.67
48:z:380:ASP:C	50:4:192:A:H61	2.02	0.67
53:S2:99:A:N1	53:S2:100:U:C5	2.62	0.67
53:S2:431:G:N1	53:S2:432:G:C5	2.63	0.67
53:S2:1032:C:C2	53:S2:1033:G:C8	2.82	0.67
53:S2:1102:G:N2	53:S2:1103:C:C2	2.63	0.67
53:S2:1368:U:N3	53:S2:1370:A:OP2	2.27	0.67
53:S2:1605:G:H2'	53:S2:1606:G:H1'	1.75	0.67
54:SA:198:MET:HE1	78:SR:86:PRO:O	1.91	0.67
55:SB:54:GLY:O	55:SB:55:THR:OG1	2.08	0.67
82:SZ:56:ASP:O	82:SZ:60:LYS:HG2	1.95	0.67
18:Z:76:ASN:ND2	18:Z:78:ASN:OD1	2.27	0.67
32:5:145:G:N1	32:5:146:G:C5	2.62	0.67
32:5:457:G:N1	32:5:458:C:C5	2.63	0.67
32:5:656:C:C2	32:5:657:C:C5	2.82	0.67
32:5:1617:G:C6	32:5:1618:G:N7	2.62	0.67
32:5:1634:A:C4	32:5:1635:C:C5	2.82	0.67
32:5:1843:A:C6	32:5:1844:G:N7	2.62	0.67
32:5:2390:G:N2	32:5:2391:G:H1'	2.09	0.67
32:5:2595:C:C2	32:5:2596:G:C8	2.82	0.67
32:5:2644:G:C6	32:5:2645:G:N7	2.62	0.67
32:5:3927:U:C4	32:5:4182:G:C2	2.83	0.67
32:5:4315:A:C2'	32:5:4316:G:H5'	2.23	0.67
32:5:4552:U:N3	32:5:4553:A:N7	2.42	0.67
32:5:4561:C:O2	32:5:4561:C:C2'	2.42	0.67
33:7:19:C:C2	33:7:20:U:C5	2.83	0.67
36:C:341:LEU:HD11	37:E:52:ARG:HD3	1.75	0.67
50:4:173:A:O2'	50:4:174:G:O4'	2.13	0.67
53:S2:1131:G:N1	53:S2:1132:C:C4	2.62	0.67
53:S2:1203:G:H3'	53:S2:1204:A:N7	2.10	0.67
53:S2:1786:U:C2	53:S2:1787:G:C8	2.83	0.67
82:SZ:50:PHE:CD2	82:SZ:58:LEU:HD11	2.29	0.67
17:Y:11:ARG:NH2	36:C:200:ARG:CZ	2.56	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)
32:5:456:C:O2	32:5:457:G:C8	2.48	0.67
32:5:483:G:C2	32:5:484:U:C6	2.83	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
32:5:1683:U:N3	32:5:1684:A:N7	2.42	0.67
32:5:2316:G:C6	32:5:2317:C:N4	2.63	0.67
32:5:2326:G:C2	32:5:2327:G:N9	2.62	0.67
32:5:2468:U:O4	32:5:2473:A:C2	2.48	0.67
32:5:2678:A:C2	32:5:2679:G:C8	2.83	0.67
32:5:2690:C:N3	32:5:2691:U:C5	2.63	0.67
32:5:3911:C:C2'	32:5:3912:U:O5'	2.43	0.67
32:5:4100:C:C2	32:5:4101:C:C5	2.82	0.67
32:5:4215:C:O2	32:5:4216:G:C8	2.47	0.67
32:5:4215:C:C4	32:5:4216:G:N7	2.62	0.67
32:5:4229:U:C4	32:5:4230:C:C6	2.80	0.67
32:5:4276:G:C5	32:5:4277:G:N7	2.63	0.67
32:5:4535:A:C6	32:5:4536:C:C6	2.83	0.67
32:5:4618:G:C2	32:5:4619:U:C5	2.83	0.67
32:5:4884:G:N2	32:5:4885:U:C6	2.63	0.67
34:8:100:U:N3	34:8:101:C:C5	2.63	0.67
35:B:55:HIS:ND1	35:B:369:ASP:OD2	2.27	0.67
35:B:258:HIS:O	35:B:260:ALA:N	2.28	0.67
36:C:106:LYS:HG2	36:C:108:TRP:CZ2	2.29	0.67
48:z:120:LYS:HD3	48:z:282:PHE:HE2	1.59	0.67
48:z:297:MET:HB3	48:z:353:PRO:CA	2.25	0.67
53:S2:357:C:C2	53:S2:358:C:C6	2.83	0.67
53:S2:469:A:H2'	53:S2:469:A:N3	2.10	0.67
53:S2:599:A:H1'	53:S2:605:A:N3	2.10	0.67
53:S2:863:U:C2	53:S2:864:A:C8	2.82	0.67
53:S2:927:C:O2	53:S2:928:G:C8	2.47	0.67
53:S2:1066:U:C4	53:S2:1067:C:C5	2.82	0.67
53:S2:1085:C:N4	53:S2:1087:A:H1'	2.10	0.67
53:S2:1149:A:C6	53:S2:1151:G:C4	2.83	0.67
32:5:28:C:O2	32:5:28:C:H2'	1.94	0.67
32:5:152:U:O2	32:5:153:G:H8	1.77	0.67
32:5:235:A:C6	32:5:238:C:C5	2.82	0.67
32:5:341:G:N1	32:5:342:G:C8	2.63	0.67
32:5:495:C:N3	32:5:496:G:C8	2.63	0.67
32:5:929:A:N1	32:5:930:G:H3'	2.10	0.67
32:5:1074:G:H2'	32:5:1075:G:H1'	1.76	0.67
32:5:1296:G:H1'	32:5:1297:U:OP2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1302:U:O2	32:5:1303:A:C8	2.47	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
32:5:2328:G:O2'	32:5:2329:U:H5'	1.94	0.67
32:5:2342:G:C6	32:5:2344:U:C4	2.83	0.67
32:5:2361:G:HO2'	32:5:3859:G:H1	1.40	0.67
32:5:2769:U:O2'	32:5:2770:C:C6	2.46	0.67
32:5:2783:A:C4	32:5:2784:C:C6	2.83	0.67
32:5:4096:C:N4	32:5:4097:G:N7	2.43	0.67
32:5:4233:A:O2'	32:5:4234:A:H3'	1.95	0.67
32:5:4268:A:H2'	32:5:4269:G:O4'	1.95	0.67
34:8:134:G:N1	34:8:135:C:C4	2.62	0.67
48:z:109:LEU:HD23	48:z:197:GLN:NE2	2.10	0.67
48:z:383:ASN:CB	50:4:209:G:P	2.83	0.67
53:S2:426:A:C2	53:S2:427:U:H5'	2.30	0.67
53:S2:436:G:O6	53:S2:458:A:C2	2.48	0.67
53:S2:656:G:H22	53:S2:662:G:C4'	2.07	0.67
53:S2:1052:A:C5	53:S2:1053:C:C5	2.82	0.67
10:Q:33:ARG:HH21	10:Q:48:LEU:HD11	1.59	0.67
11:R:95:TRP:NE1	32:5:1572:U:H4'	2.10	0.67
13:T:54:HIS:CD2	32:5:4301:U:H4'	2.30	0.67
32:5:189:G:C2	32:5:190:G:C5	2.83	0.67
32:5:212:A:H2'	32:5:213:G:C8	2.29	0.67
32:5:488:G:N1	32:5:489:C:C4	2.63	0.67
32:5:499:G:C2	32:5:500:G:C8	2.83	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
32:5:1297:U:OP2	32:5:1297:U:O4'	2.13	0.67
32:5:1934:A:C6	32:5:2048:U:C2	2.83	0.67
32:5:4070:U:C2	32:5:4071:U:C6	2.82	0.67
32:5:4078:C:C4	32:5:4079:C:C6	2.83	0.67
32:5:4099:G:C6	32:5:4100:C:C4	2.83	0.67
32:5:4279:A:C4	32:5:4281:A:N6	2.63	0.67
32:5:4344:U:C2	32:5:4345:C:H5	2.12	0.67
53:S2:77:A:O2'	58:SG:175:LYS:HA	1.95	0.67
53:S2:113:G:C2	53:S2:293:C:C4	2.83	0.67
53:S2:155:G:N2	53:S2:156:G:H1'	2.09	0.67
53:S2:158:A:N6	53:S2:466:G:C6	2.62	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:293:C:O2	53:S2:293:C:H2'	1.95	0.67
53:S2:379:C:C2	53:S2:380:G:N7	2.63	0.67
53:S2:415:A:H2'	53:S2:416:U:O4'	1.94	0.67
53:S2:1269:G:H2'	53:S2:1270:G:O4'	1.94	0.67
64:SO:116:LEU:HD22	69:Sa:53:ILE:HD11	1.77	0.67
2:D:44:TYR:N	2:D:44:TYR:CD1	2.63	0.67
23:e:89:LEU:HD13	23:e:118:LEU:HD22	1.76	0.67
32:5:106:A:H2'	32:5:107:G:O4'	1.95	0.67
32:5:288:G:C4	32:5:289:C:C5	2.83	0.67
32:5:293:G:C2'	32:5:297:U:O4'	2.43	0.67
32:5:416:U:H2'	32:5:417:G:O4'	1.95	0.67
32:5:701:G:C6	32:5:702:U:C5	2.83	0.67
32:5:732:A:C2	32:5:733:A:H1'	2.29	0.67
32:5:1264:C:C2'	32:5:1265:G:H5'	2.25	0.67
32:5:2319:C:O2	32:5:2319:C:H2'	1.94	0.67
32:5:2394:G:O2'	32:5:2819:U:O4	2.13	0.67
32:5:2453:A:C4	32:5:2507:A:C8	2.83	0.67
32:5:3636:C:N4	32:5:3637:U:C5	2.63	0.67
32:5:3821:A:C6	32:5:3822:U:C5	2.83	0.67
32:5:4174:U:O2	32:5:4174:U:H2'	1.94	0.67
32:5:4886:C:O2	32:5:4887:C:C6	2.48	0.67
34:8:9:A:N1	34:8:10:G:C5	2.62	0.67
35:B:116:ARG:HG3	35:B:177:LYS:HG3	1.77	0.67
48:z:327:PHE:CD2	48:z:428:ALA:CB	2.77	0.67
50:4:183:A:C3'	50:4:184:A:OP2	2.43	0.67
53:S2:996:A:N6	63:SN:113:PHE:CE2	2.63	0.67
53:S2:1052:A:C6	53:S2:1053:C:C5	2.83	0.67
53:S2:1366:G:N2	53:S2:1374:C:C2	2.62	0.67
53:S2:1407:U:O2	53:S2:1408:U:C5	2.48	0.67
60:SI:65:PHE:O	60:SI:109:TYR:OH	2.13	0.67
72:SD:150:MET:HB3	72:SD:152:PHE:HE1	1.59	0.67
78:SR:85:VAL:CG1	78:SR:86:PRO:HD2	2.24	0.67
79:SS:125:HIS:CE1	79:SS:131:VAL:HG21	2.29	0.67
82:SZ:46:ASN:HD22	82:SZ:78:LYS:C	2.02	0.67
1:A:204:MET:SD	32:5:1631:A:H2	2.18	0.67
18:Z:49:TYR:HE2	18:Z:133:LYS:HA	1.59	0.67
32:5:491:G:N2	32:5:492:U:C5	2.63	0.67
32:5:976:G:C5	32:5:977:C:C5	2.83	0.67
32:5:1534:A:O2'	32:5:1637:A:N3	2.20	0.67
32:5:1725:U:N3	32:5:1726:U:C5	2.63	0.67
32:5:2606:G:N3	32:5:2607:C:C6	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2857:A:N1	32:5:2858:A:C6	2.63	0.67
32:5:3654:G:O2'	32:5:3693:U:OP1	2.13	0.67
32:5:3694:U:C4	32:5:3695:U:C5	2.82	0.67
32:5:4078:C:N3	32:5:4079:C:C6	2.62	0.67
32:5:4081:G:N3	32:5:4082:G:C8	2.62	0.67
32:5:4097:G:C2	32:5:4098:A:N7	2.63	0.67
32:5:4228:G:O2'	32:5:4373:G:O6	2.11	0.67
32:5:4482:U:N3	32:5:4483:C:C5	2.59	0.67
32:5:4549:G:N1	32:5:4550:G:C5	2.63	0.67
32:5:4579:U:N3	32:5:4580:U:C5	2.63	0.67
34:8:37:A:O4'	34:8:39:G:H1'	1.95	0.67
48:z:381:SER:OG	50:4:207:C:H1'	1.94	0.67
50:4:15:C:O2'	50:4:39:C:OP2	2.12	0.67
53:S2:27:A:N1	53:S2:28:U:C5	2.63	0.67
53:S2:426:A:N1	53:S2:427:U:C6	2.63	0.67
53:S2:443:U:C5	53:S2:444:G:C8	2.82	0.67
53:S2:447:A:N6	53:S2:449:A:C5	2.62	0.67
53:S2:526:A:HO2'	61:SJ:125:HIS:HD1	1.43	0.67
53:S2:1111:U:O2	53:S2:1111:U:H2'	1.94	0.67
53:S2:1728:U:C4	53:S2:1729:U:C5	2.83	0.67
53:S2:1740:C:N3	53:S2:1741:U:C5	2.63	0.67
58:SG:41:LEU:HD13	58:SG:45:TRP:HZ3	1.59	0.67
73:SF:141:VAL:C	83:Sc:56:LEU:CD1	2.68	0.67
80:ST:62:ARG:HD2	80:ST:62:ARG:C	2.20	0.67
83:Sc:44:ARG:CG	83:Sc:58:LEU:CD1	2.65	0.67
5:J:75:ARG:HH12	33:7:42:A:C1'	2.07	0.66
18:Z:50:PRO:CG	18:Z:122:TYR:HE2	2.07	0.66
19:a:21:ARG:HD3	32:5:2282:A:H5''	1.77	0.66
32:5:747:A:H2'	32:5:749:G:C8	2.30	0.66
32:5:1479:G:C5	32:5:1487:G:N2	2.63	0.66
32:5:1936:C:O2	32:5:1936:C:H2'	1.95	0.66
32:5:2340:C:N3	32:5:2341:A:C8	2.63	0.66
32:5:2422:C:C6	32:5:2829:U:H1'	2.31	0.66
32:5:2612:G:C6	32:5:2613:C:C4	2.83	0.66
32:5:3772:U:C2'	32:5:3773:U:H5'	2.26	0.66
32:5:4548:A:H4'	32:5:4549:G:C5'	2.25	0.66
33:7:93:G:N3	33:7:94:C:C6	2.63	0.66
48:z:382:MET:O	50:4:208:A:C3'	2.43	0.66
53:S2:45:A:C2	53:S2:481:C:H1'	2.29	0.66
53:S2:315:C:O2	53:S2:316:G:C8	2.48	0.66
53:S2:439:A:N1	53:S2:455:A:C6	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:444:G:H22	53:S2:446:G:C5'	2.07	0.66
53:S2:696:G:C2	53:S2:735:C:C2	2.83	0.66
53:S2:1017:U:C2	53:S2:1018:U:C6	2.83	0.66
53:S2:1308:U:H2'	53:S2:1309:C:C6	2.29	0.66
53:S2:1454:A:N6	53:S2:1468:C:OP2	2.27	0.66
79:SS:8:LYS:HE3	79:SS:8:LYS:N	2.10	0.66
32:5:189:G:N2	32:5:190:G:C5	2.63	0.66
32:5:923:C:C4	32:5:924:C:C5	2.83	0.66
32:5:1663:C:O2	32:5:1664:U:C5	2.48	0.66
32:5:2097:U:O2	32:5:2097:U:H5'	1.95	0.66
32:5:2735:G:N1	32:5:2736:G:N7	2.42	0.66
32:5:3795:A:H5'	53:S2:1815:A:O2'	1.95	0.66
32:5:3857:G:C6	32:5:3858:C:C4	2.82	0.66
32:5:3873:G:H2'	32:5:3874:G:C1'	2.25	0.66
32:5:4228:G:O2'	32:5:4337:C:N4	2.28	0.66
32:5:4233:A:C2	32:5:4290:U:O4	2.44	0.66
33:7:56:G:H2'	33:7:57:C:O4'	1.95	0.66
38:F:168:ARG:HD2	38:F:211:TRP:CD1	2.30	0.66
48:z:357:THR:HG22	48:z:358:ASP:OD2	1.94	0.66
53:S2:118:C:N1	53:S2:445:A:C2	2.63	0.66
53:S2:695:C:C2	53:S2:696:G:C8	2.83	0.66
53:S2:974:C:N3	53:S2:975:G:N7	2.44	0.66
53:S2:1114:U:O4	53:S2:1119:A:C6	2.46	0.66
53:S2:1427:C:O2	53:S2:1428:G:C8	2.48	0.66
53:S2:1545:A:C4	53:S2:1588:A:N6	2.63	0.66
53:S2:1747:C:H2'	53:S2:1748:G:O4'	1.95	0.66
54:SA:117:ARG:HH11	54:SA:117:ARG:HG2	1.59	0.66
55:SB:39:PHE:CD2	55:SB:74:LEU:HD23	2.30	0.66
4:H:117:PHE:C	4:H:117:PHE:HD1	2.03	0.66
12:S:158:VAL:CB	32:5:2055:G:O6	2.41	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
32:5:1070:G:C2	32:5:1071:C:C6	2.83	0.66
32:5:1213:G:N7	32:5:1215:C:C6	2.63	0.66
32:5:1563:A:C6	53:S2:677:G:O2'	2.47	0.66
32:5:1846:G:H2'	32:5:1847:C:H6	1.60	0.66
32:5:2115:G:C8	32:5:2116:C:O4'	2.48	0.66
32:5:2745:A:O2'	32:5:2746:A:O5'	2.13	0.66
32:5:3655:C:N3	32:5:3656:A:N7	2.44	0.66
32:5:4233:A:N6	32:5:4290:U:N3	2.27	0.66
32:5:4735:G:C2	32:5:4736:C:C5	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:9:C:C4	33:7:10:C:C6	2.83	0.66
34:8:102:G:H3'	34:8:104:A:H2'	1.77	0.66
53:S2:12:U:C2	53:S2:13:C:C5	2.83	0.66
53:S2:51:U:N3	53:S2:52:G:C8	2.63	0.66
53:S2:92:A:N6	53:S2:447:A:C5	2.63	0.66
53:S2:164:A:O2'	53:S2:165:G:H5'	1.94	0.66
53:S2:436:G:H2'	53:S2:437:G:O5'	1.94	0.66
53:S2:994:C:C4	53:S2:995:G:N7	2.63	0.66
53:S2:1133:A:H2	53:S2:1134:G:C8	2.06	0.66
53:S2:1258:A:C2	53:S2:1663:A:C4	2.84	0.66
53:S2:1350:U:O3'	54:SA:110:ASN:OD1	2.13	0.66
53:S2:1852:C:C2	53:S2:1853:C:C5	2.83	0.66
73:SF:38:TYR:HD2	73:SF:143:PRO:HB2	1.60	0.66
77:SQ:44:PRO:HG2	77:SQ:81:ILE:HD11	1.75	0.66
87:S1:71:ARG:HG3	88:S4:80:GLN:HE22	1.60	0.66
15:V:98:PHE:CE1	41:W:22:ALA:HB3	2.29	0.66
32:5:196:C:H2'	32:5:196:C:O2	1.96	0.66
32:5:495:C:N3	32:5:496:G:N7	2.43	0.66
32:5:990:C:C4	32:5:1064:G:C2	2.84	0.66
32:5:1066:G:H2'	32:5:1067:G:O4'	1.95	0.66
32:5:1632:A:N6	32:5:1634:A:C1'	2.58	0.66
32:5:1673:U:C4	32:5:1674:C:N4	2.63	0.66
32:5:1777:C:C2	32:5:1778:C:C6	2.83	0.66
32:5:1982:G:O2'	32:5:2010:A:H5'	1.94	0.66
32:5:2020:U:N3	32:5:2021:G:N7	2.43	0.66
32:5:2325:C:O2	32:5:2325:C:C2'	2.42	0.66
32:5:2423:A:C2	32:5:2424:G:C4	2.84	0.66
32:5:2521:G:C2	32:5:2535:G:C2	2.83	0.66
32:5:2792:C:O2'	42:j:11:ARG:HD3	1.94	0.66
32:5:2842:G:C2	32:5:2843:U:C6	2.83	0.66
32:5:2842:G:C6	32:5:2843:U:C5	2.83	0.66
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
32:5:3848:U:C2	32:5:3849:A:C8	2.83	0.66
32:5:3859:G:H4'	40:P:139:TYR:CZ	2.29	0.66
32:5:3867:A:H3'	32:5:3868:G:H8	1.60	0.66
32:5:4071:U:C2	32:5:4072:C:C6	2.83	0.66
32:5:4217:G:C2'	32:5:4218:U:O5'	2.43	0.66
32:5:4297:G:C6	32:5:4298:A:N7	2.63	0.66
32:5:4297:G:C2	32:5:4298:A:C8	2.84	0.66
32:5:4323:A:C2	32:5:4324:A:C4	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4426:C:N4	32:5:4427:G:C5	2.64	0.66
32:5:5012:G:C2	32:5:5014:A:C8	2.83	0.66
32:5:5038:A:OP1	41:W:61:LYS:NZ	2.25	0.66
33:7:19:C:O2	33:7:19:C:H2'	1.93	0.66
33:7:59:G:C6	33:7:60:G:C5	2.83	0.66
33:7:111:C:N3	33:7:112:U:C5	2.63	0.66
46:K:35:LEU:HB3	50:4:36:A:C6	2.31	0.66
48:z:382:MET:C	50:4:208:A:C5'	2.69	0.66
53:S2:23:G:H2'	53:S2:24:C:O4'	1.94	0.66
53:S2:636:C:C4	53:S2:637:U:C5	2.83	0.66
53:S2:676:C:C2	53:S2:677:G:C8	2.83	0.66
53:S2:958:G:H2'	53:S2:958:G:N3	2.11	0.66
53:S2:1111:U:C2	53:S2:1112:U:C5	2.83	0.66
54:SA:90:PHE:C	54:SA:90:PHE:CD1	2.73	0.66
62:SL:82:MET:HB2	62:SL:85:THR:HG23	1.75	0.66
65:SV:53:TYR:OH	65:SV:72:LEU:C	2.38	0.66
32:5:294:G:C5'	32:5:296:A:H5''	2.23	0.66
32:5:642:G:N1	32:5:643:C:C4	2.63	0.66
32:5:674:G:N2	32:5:675:C:C2	2.63	0.66
32:5:701:G:O6	32:5:702:U:C5	2.48	0.66
32:5:1277:G:N1	32:5:1278:C:C4	2.63	0.66
32:5:1466:G:N2	32:5:1467:C:C2	2.63	0.66
32:5:1480:C:O2	32:5:1484:G:O6	2.13	0.66
32:5:1695:U:H2'	32:5:1696:C:O4'	1.95	0.66
32:5:1868:A:C8	32:5:1870:C:C6	2.84	0.66
32:5:2272:C:C2'	32:5:2273:G:O5'	2.42	0.66
32:5:2397:G:N7	32:5:2399:G:C8	2.64	0.66
32:5:2688:G:N1	32:5:2689:C:C4	2.64	0.66
32:5:2856:C:O2	32:5:2856:C:C2'	2.44	0.66
32:5:4270:C:H2'	32:5:4270:C:O2	1.95	0.66
48:z:340:MET:CA	48:z:343:GLY:H	2.09	0.66
49:3:34:A:N3	53:S2:1701:C:C5	2.63	0.66
53:S2:28:U:O2	53:S2:28:U:H2'	1.94	0.66
53:S2:50:A:C2	53:S2:488:U:O4	2.48	0.66
53:S2:440:G:N2	53:S2:454:U:C2	2.63	0.66
53:S2:803:C:C2	53:S2:804:U:C6	2.84	0.66
53:S2:1030:A:C2	53:S2:1031:A:C5	2.83	0.66
53:S2:1224:G:C2	53:S2:1643:U:C4	2.84	0.66
79:SS:15:VAL:HB	79:SS:20:ILE:HD12	1.77	0.66
18:Z:13:VAL:HG13	18:Z:75:TYR:HE1	1.59	0.66
22:d:71:ALA:HB3	22:d:108:TYR:CE2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:g:13:TYR:OH	32:5:2402:G:N2	2.28	0.66
32:5:120:A:C2	32:5:148:C:O2	2.49	0.66
32:5:270:U:N3	32:5:271:C:H5	1.90	0.66
32:5:480:C:C2	32:5:481:G:C8	2.84	0.66
32:5:1298:C:N3	32:5:1299:G:N7	2.44	0.66
32:5:1697:G:O2'	38:F:165:ASN:ND2	2.22	0.66
32:5:1900:C:C2	32:5:1901:C:C6	2.84	0.66
32:5:2251:G:C1'	32:5:2252:G:C2	2.78	0.66
32:5:2494:U:C2	32:5:2495:U:C6	2.84	0.66
32:5:2519:U:C2	32:5:2520:C:C5	2.82	0.66
32:5:3630:A:C2	32:5:3631:U:C6	2.84	0.66
32:5:4561:C:C2	32:5:4562:C:C5	2.83	0.66
32:5:4744:A:N1	32:5:4745:G:C6	2.64	0.66
32:5:4939:C:H1'	37:E:236:TYR:CD1	2.30	0.66
32:5:5006:U:C1'	32:5:5042:A:N7	2.58	0.66
32:5:5047:C:O4'	32:5:5048:A:N1	2.29	0.66
33:7:28:C:C5	33:7:29:C:C5	2.84	0.66
34:8:81:C:H3'	34:8:82:A:H4'	1.77	0.66
34:8:132:G:N3	34:8:133:G:C8	2.64	0.66
36:C:109:ARG:HD2	36:C:111:TRP:CZ3	2.31	0.66
47:q:108:PRO:CB	47:q:184:SER:HB2	2.24	0.66
53:S2:18:C:N3	53:S2:19:A:N7	2.43	0.66
53:S2:88:G:C2	53:S2:500:A:C2	2.83	0.66
53:S2:360:A:C2	53:S2:363:A:C8	2.83	0.66
53:S2:413:G:C5	53:S2:425:G:N2	2.63	0.66
53:S2:447:A:C5	53:S2:449:A:C8	2.83	0.66
53:S2:635:G:N3	53:S2:636:C:C6	2.64	0.66
53:S2:957:A:C4	53:S2:958:G:C6	2.83	0.66
53:S2:983:A:H2'	53:S2:984:C:O4'	1.96	0.66
53:S2:992:A:N6	53:S2:993:G:N7	2.43	0.66
53:S2:1308:U:H2'	53:S2:1309:C:H6	1.60	0.66
53:S2:1311:C:N3	53:S2:1314:U:C5	2.64	0.66
53:S2:1643:U:C2	53:S2:1644:C:C5	2.83	0.66
53:S2:1665:G:N7	80:ST:88:MET:HG2	2.09	0.66
53:S2:1687:C:N3	53:S2:1688:C:C5	2.64	0.66
53:S2:1835:A:O4'	53:S2:1863:A:C8	2.48	0.66
86:Sg:188:HIS:HB3	86:Sg:219:TRP:CZ3	2.31	0.66
1:A:186:TYR:N	1:A:196:TRP:HZ3	1.93	0.66
1:A:207:VAL:HG23	1:A:208:GLU:HG2	1.78	0.66
32:5:438:G:C6	32:5:439:G:N7	2.64	0.66
32:5:483:G:N3	32:5:484:U:C5	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1280:C:C4	32:5:1282:G:O6	2.49	0.66
32:5:1392:A:H2	32:5:1393:G:C5	2.06	0.66
32:5:1412:G:C2	32:5:1413:C:C6	2.84	0.66
32:5:1570:G:C6	32:5:1571:G:N7	2.64	0.66
32:5:1596:U:O2	40:P:131:ARG:NH2	2.28	0.66
32:5:1666:C:C2	32:5:2284:G:N2	2.64	0.66
32:5:1949:U:O2	32:5:1950:U:C5	2.48	0.66
32:5:1964:A:C6	32:5:1965:G:C8	2.83	0.66
32:5:2055:G:C5'	32:5:2056:G:H5'	2.26	0.66
32:5:2770:C:C4	32:5:2771:G:N7	2.63	0.66
32:5:2823:G:C6	32:5:2824:C:C5	2.83	0.66
32:5:3693:U:C4	32:5:3694:U:C4	2.82	0.66
48:z:219:TYR:CD1	48:z:236:PHE:CD1	2.84	0.66
53:S2:656:G:O4'	53:S2:662:G:N2	2.29	0.66
53:S2:1123:C:C4	53:S2:1124:C:H5	2.13	0.66
53:S2:1127:C:C2	53:S2:1128:C:C5	2.84	0.66
53:S2:1500:G:C5	53:S2:1501:C:C4	2.83	0.66
53:S2:1599:U:C5	73:SF:164:ARG:HA	2.30	0.66
53:S2:1640:A:C2	53:S2:1641:A:H1'	2.31	0.66
53:S2:1850:A:O2'	53:S2:1851:A:O4'	2.09	0.66
73:SF:71:ARG:NH1	73:SF:148:ASN:OD1	2.27	0.66
10:Q:73:PRO:O	32:5:1456:C:O2'	2.13	0.66
12:S:68:PHE:CZ	32:5:728:U:C4	2.84	0.66
20:b:12:GLN:NE2	32:5:1671:U:O2'	2.24	0.66
32:5:65:A:C2	32:5:76:A:H4'	2.31	0.66
32:5:88:A:H62	32:5:97:G:H21	1.44	0.66
32:5:299:C:N3	32:5:300:A:N7	2.44	0.66
32:5:931:C:O2'	32:5:932:A:O4'	2.14	0.66
32:5:1070:G:O6	37:E:42:ARG:NH1	2.28	0.66
32:5:1394:G:O2'	32:5:1395:U:O5'	2.14	0.66
32:5:1490:G:C2	32:5:1491:A:N7	2.64	0.66
32:5:1726:U:C2	32:5:1727:U:C6	2.84	0.66
32:5:2263:A:H5''	32:5:2263:A:C8	2.31	0.66
32:5:2279:A:N1	32:5:2280:G:C5	2.64	0.66
32:5:2315:G:C2	32:5:2316:G:C8	2.84	0.66
32:5:2463:G:C2	32:5:2464:C:N3	2.64	0.66
32:5:4315:A:H2'	32:5:4316:G:H5'	1.78	0.66
32:5:4413:C:H3'	32:5:4414:A:H8	1.60	0.66
32:5:4956:A:C6	32:5:4957:C:C5	2.84	0.66
32:5:5051:C:O2	32:5:5051:C:H2'	1.95	0.66
34:8:116:C:N3	34:8:117:C:C6	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:363:GLY:O	48:z:364:ASN:C	2.39	0.66
48:z:374:LYS:HG3	50:4:194:G:O3'	1.95	0.66
49:3:34:A:N1	53:S2:1701:C:H6	1.94	0.66
53:S2:10:G:C6	53:S2:11:A:N7	2.64	0.66
53:S2:909:G:C2	53:S2:910:G:N7	2.64	0.66
53:S2:973:C:C4	53:S2:974:C:C5	2.84	0.66
53:S2:1202:U:C2	53:S2:1203:G:C8	2.83	0.66
53:S2:1238:U:H2'	53:S2:1239:U:O4'	1.95	0.66
53:S2:1736:G:O6	53:S2:1798:C:N4	2.28	0.66
57:SE:182:MET:HE2	57:SE:192:ILE:HD11	1.77	0.66
16:X:119:ILE:HA	16:X:144:TYR:HE2	1.60	0.66
32:5:77:U:O4	32:5:335:A:C2	2.48	0.66
32:5:83:C:P	32:5:84:A:O2'	2.54	0.66
32:5:112:C:C5	32:5:157:U:C4	2.84	0.66
32:5:130:C:C2	32:5:139:G:C2	2.84	0.66
32:5:195:C:H2'	32:5:195:C:O2	1.96	0.66
32:5:674:G:N1	32:5:675:C:C4	2.64	0.66
32:5:910:G:C6	32:5:911:U:C5	2.84	0.66
32:5:1552:G:C2	32:5:1574:G:C2	2.84	0.66
32:5:1676:C:C2'	32:5:3914:U:O4	2.44	0.66
32:5:2366:A:H2'	32:5:2367:A:C5'	2.26	0.66
32:5:3656:A:C4'	32:5:3747:A:C2	2.79	0.66
32:5:3668:C:O2	32:5:3668:C:H2'	1.96	0.66
32:5:3731:C:O2	32:5:3732:A:H8	1.78	0.66
32:5:4124:G:O2'	32:5:4125:C:OP1	2.14	0.66
32:5:4484:A:C2	32:5:4485:C:C5	2.83	0.66
32:5:4510:A:H62	32:5:4592:C:C2'	2.08	0.66
32:5:4651:A:C6	32:5:4652:G:C8	2.83	0.66
32:5:4982:A:C2	32:5:4983:C:C1'	2.79	0.66
33:7:19:C:N3	33:7:20:U:C5	2.63	0.66
34:8:133:G:N2	34:8:134:G:N9	2.44	0.66
47:q:31:GLY:O	47:q:187:LEU:CA	2.39	0.66
49:3:31:C:H2'	49:3:32:C:C6	2.31	0.66
53:S2:635:G:C4	53:S2:636:C:C6	2.84	0.66
53:S2:868:G:N2	59:SH:115:LYS:HD2	2.11	0.66
53:S2:1040:G:C6	53:S2:1041:G:C5	2.84	0.66
53:S2:1099:G:C2	53:S2:1100:A:C8	2.83	0.66
53:S2:1292:C:C1'	85:Sf:148:TYR:HB3	2.26	0.66
55:SB:29:ASP:HB3	55:SB:51:ARG:HD2	1.77	0.66
55:SB:47:THR:HA	64:SO:46:ASP:OD2	1.95	0.66
55:SB:79:VAL:CB	55:SB:81:PHE:CZ	2.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Sc:14:VAL:CG2	83:Sc:32:VAL:CA	2.73	0.66
1:A:95:GLN:CB	32:5:4118:U:O4	2.44	0.66
4:H:41:ILE:HD11	4:H:69:THR:CB	2.26	0.66
7:M:17:PHE:HD1	32:5:1921:C:C5	2.14	0.66
32:5:152:U:O2	32:5:153:G:C8	2.48	0.66
32:5:212:A:C2	32:5:213:G:C5	2.84	0.66
32:5:293:G:C2'	32:5:297:U:C1'	2.74	0.66
32:5:302:C:C2	32:5:303:C:C5	2.84	0.66
32:5:986:C:C2	32:5:1068:G:C2	2.84	0.66
32:5:1081:C:C2	32:5:1220:G:C2	2.84	0.66
32:5:1185:G:C6	32:5:1186:U:C6	2.83	0.66
32:5:1280:C:N3	32:5:1282:G:C5	2.64	0.66
32:5:1613:A:N7	32:5:3637:U:O2	2.29	0.66
32:5:1816:C:O2	32:5:1816:C:H2'	1.95	0.66
32:5:1990:A:H2'	32:5:1991:A:O4'	1.95	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
32:5:2479:G:C6	32:5:2480:G:C5	2.82	0.66
32:5:2791:C:C2	32:5:2792:C:C5	2.84	0.66
32:5:2829:U:N3	32:5:2830:G:N7	2.44	0.66
32:5:3880:G:O2'	32:5:3881:G:H8	1.71	0.66
32:5:4097:G:N3	32:5:4098:A:C8	2.64	0.66
32:5:4949:G:N2	32:5:4950:U:H2'	2.11	0.66
53:S2:750:C:O2	53:S2:750:C:H2'	1.95	0.66
53:S2:870:A:N9	53:S2:915:G:N7	2.43	0.66
82:SZ:73:VAL:HG13	82:SZ:77:LEU:HD12	1.76	0.66
1:A:89:TYR:HB2	1:A:100:ASN:HD21	1.61	0.65
28:k:22:SER:HA	28:k:65:ALA:HB3	1.76	0.65
32:5:739:G:C6	32:5:740:G:N7	2.64	0.65
32:5:1336:G:H2'	32:5:1337:A:N7	2.11	0.65
32:5:1409:C:H2'	32:5:1411:C:C5	2.32	0.65
32:5:1619:G:C6	32:5:1620:U:C4	2.85	0.65
32:5:1634:A:C2	32:5:1635:C:N1	2.64	0.65
32:5:1674:C:O2	32:5:1675:C:C6	2.49	0.65
32:5:2399:G:N3	32:5:2400:G:C8	2.64	0.65
32:5:3863:C:O2	32:5:3864:C:C6	2.49	0.65
32:5:4081:G:C2	32:5:4082:G:C5	2.84	0.65
32:5:4743:G:N1	32:5:4744:A:C5	2.64	0.65
32:5:4920:C:H2'	32:5:4921:C:H6	1.60	0.65
34:8:28:C:C2	34:8:29:G:C8	2.84	0.65
48:z:482:UNK:O	48:z:483:UNK:N	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:3:31:C:C4	49:3:32:C:C4	2.84	0.65
53:S2:615:C:H2'	53:S2:616:A:O4'	1.97	0.65
53:S2:796:G:H3'	53:S2:797:C:H5''	1.76	0.65
53:S2:922:A:OP1	66:SW:28:ARG:NH2	2.29	0.65
53:S2:1202:U:C4	53:S2:1203:G:C8	2.84	0.65
53:S2:1683:C:O2	53:S2:1684:C:C6	2.48	0.65
10:Q:108:ARG:NH1	32:5:1355:G:OP1	2.23	0.65
11:R:151:ARG:NH1	62:SL:118:ARG:CD	2.54	0.65
11:R:166:THR:CB	53:S2:872:A:H3'	2.24	0.65
15:V:82:ILE:HG22	15:V:83:ARG:HG3	1.77	0.65
19:a:79:TRP:N	19:a:79:TRP:CD1	2.61	0.65
23:e:35:TRP:C	23:e:35:TRP:HD1	2.03	0.65
32:5:341:G:C6	32:5:342:G:N7	2.64	0.65
32:5:479:G:C6	32:5:480:C:C5	2.85	0.65
32:5:499:G:N2	32:5:656:C:C2	2.64	0.65
32:5:924:C:N3	32:5:925:C:C6	2.64	0.65
32:5:1261:G:C6	32:5:1262:G:N7	2.64	0.65
32:5:1685:G:C4	32:5:1686:C:C5	2.84	0.65
32:5:1945:G:C6	32:5:1946:G:N7	2.64	0.65
32:5:2577:C:N3	32:5:2578:G:N7	2.44	0.65
32:5:3655:C:C4	32:5:3656:A:N7	2.64	0.65
32:5:3693:U:O4	32:5:3694:U:C4	2.50	0.65
32:5:4509:U:H2'	32:5:4510:A:H2'	1.78	0.65
32:5:4511:A:H2'	32:5:4512:U:O4'	1.95	0.65
32:5:5031:G:N2	32:5:5032:C:C2	2.65	0.65
34:8:73:U:C4	34:8:74:U:C6	2.84	0.65
35:B:106:PHE:CE2	35:B:130:PHE:CZ	2.84	0.65
36:C:289:LEU:HG	45:r:4:HIS:CD2	2.30	0.65
48:z:377:THR:CG2	50:4:193:G:H2'	2.26	0.65
53:S2:309:G:C2	53:S2:310:C:C5	2.85	0.65
53:S2:338:G:C4	53:S2:339:A:C8	2.84	0.65
53:S2:436:G:C2	53:S2:437:G:C5	2.85	0.65
53:S2:648:A:C6	53:S2:649:U:C5	2.84	0.65
53:S2:879:C:C4	53:S2:880:G:C2	2.84	0.65
53:S2:965:U:H2'	53:S2:966:U:O4'	1.96	0.65
53:S2:1266:C:C2	53:S2:1267:C:C5	2.84	0.65
53:S2:1293:A:C4	85:Sf:152:LYS:N	2.64	0.65
11:R:117:ARG:NH2	11:R:117:ARG:HB2	2.11	0.65
32:5:55:G:C6	32:5:56:A:C8	2.84	0.65
32:5:127:G:N2	32:5:128:C:C2	2.64	0.65
32:5:223:G:H4'	32:5:225:G:N7	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:294:G:H3'	32:5:296:A:H5'	1.72	0.65
32:5:691:C:C2	32:5:692:A:C8	2.84	0.65
32:5:909:A:C2	32:5:910:G:N9	2.64	0.65
32:5:1261:G:N1	32:5:1262:G:C5	2.64	0.65
32:5:1441:C:OP1	32:5:2109:G:O3'	2.13	0.65
32:5:1676:C:O2'	32:5:3914:U:N3	2.29	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
32:5:2466:G:H2'	32:5:2467:U:C1'	2.26	0.65
32:5:2689:C:H2'	32:5:2689:C:O2	1.95	0.65
32:5:2751:G:C2	32:5:2752:G:C8	2.84	0.65
32:5:3621:A:C4	32:5:3622:C:C6	2.85	0.65
32:5:3935:C:C2	32:5:3936:A:C8	2.84	0.65
32:5:4101:C:C2	32:5:4109:G:C2	2.84	0.65
32:5:4197:G:N2	49:3:75:C:C4	2.64	0.65
32:5:4361:U:C2	32:5:4362:A:C8	2.83	0.65
32:5:4455:G:N3	32:5:4456:C:C6	2.65	0.65
32:5:4901:G:N2	32:5:4921:C:C2	2.63	0.65
32:5:4997:G:C2	32:5:4998:G:C8	2.84	0.65
32:5:5005:G:C5	41:W:51:TRP:HD1	2.15	0.65
34:8:125:C:C2	34:8:125:C:C5'	2.79	0.65
35:B:119:TYR:N	35:B:119:TYR:CD1	2.64	0.65
40:P:129:THR:HB	40:P:139:TYR:HB2	1.78	0.65
53:S2:182:C:C3'	53:S2:184:G:H1'	2.26	0.65
53:S2:185:G:C2	53:S2:186:C:C6	2.84	0.65
53:S2:404:G:C4	53:S2:405:G:C8	2.84	0.65
53:S2:1648:G:O2'	53:S2:1674:G:O6	2.04	0.65
53:S2:1658:G:H1	53:S2:1664:A:H62	1.43	0.65
2:D:44:TYR:CD2	32:5:1823:G:H4'	2.32	0.65
8:N:105:ARG:NE	32:5:2459:G:O6	2.29	0.65
10:Q:29:VAL:HG13	10:Q:33:ARG:HH22	1.61	0.65
32:5:247:G:N1	32:5:248:C:C4	2.64	0.65
32:5:1272:C:O2'	32:5:1273:G:N9	2.30	0.65
32:5:1278:C:C2	32:5:1279:A:H1'	2.31	0.65
32:5:1617:G:N1	32:5:1618:G:C5	2.63	0.65
32:5:3648:A:C8	32:5:3785:A:N6	2.65	0.65
32:5:3738:G:N7	32:5:3739:C:C6	2.65	0.65
32:5:3799:A:H2'	32:5:3800:A:C8	2.31	0.65
32:5:3873:G:N2	32:5:3883:U:N3	2.45	0.65
32:5:4099:G:C5	32:5:4100:C:C5	2.85	0.65
32:5:4441:A:H8	32:5:4441:A:H5''	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4579:U:H2'	32:5:4580:U:O4'	1.97	0.65
32:5:4660:G:C2	32:5:4661:G:N7	2.64	0.65
33:7:42:A:N1	33:7:43:U:C6	2.64	0.65
37:E:157:ARG:HD3	37:E:266:TYR:HE1	1.62	0.65
37:E:175:LEU:HB2	37:E:246:GLN:HE21	1.61	0.65
53:S2:99:A:C2	53:S2:100:U:N1	2.65	0.65
53:S2:123:G:H2'	53:S2:123:G:N3	2.10	0.65
53:S2:793:G:C6	53:S2:794:A:N7	2.63	0.65
53:S2:963:A:N1	53:S2:964:A:C6	2.63	0.65
53:S2:1053:C:O2	53:S2:1054:G:H8	1.79	0.65
53:S2:1142:G:N3	53:S2:1142:G:H2'	2.11	0.65
53:S2:1151:G:C6	53:S2:1152:U:C5	2.85	0.65
83:Sc:11:LEU:HB3	83:Sc:55:VAL:HG11	1.76	0.65
9:O:19:LEU:HD23	9:O:41:ILE:HD11	1.79	0.65
12:S:167:PHE:CD2	12:S:167:PHE:N	2.64	0.65
20:b:16:TRP:CD1	20:b:16:TRP:N	2.65	0.65
21:c:78:ASN:CG	21:c:79:ILE:N	2.55	0.65
32:5:1325:C:H4'	32:5:3901:A:C2	2.29	0.65
32:5:1410:U:C5	32:5:1815:G:N2	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
32:5:1945:G:N1	32:5:1946:G:C4	2.65	0.65
32:5:2108:G:N2	32:5:2125:C:C2	2.64	0.65
32:5:3805:U:N3	32:5:3806:G:N7	2.45	0.65
32:5:3859:G:C4'	40:P:139:TYR:CE1	2.79	0.65
32:5:4096:C:C5	32:5:4097:G:C8	2.85	0.65
32:5:4114:C:H3'	32:5:4115:G:O4'	1.95	0.65
32:5:4283:G:N3	32:5:4284:C:H6	1.89	0.65
32:5:4539:U:N3	32:5:4540:C:C5	2.64	0.65
32:5:4730:C:O2	32:5:4734:A:N7	2.29	0.65
32:5:5029:C:C2	32:5:5030:U:C6	2.85	0.65
35:B:367:PHE:HZ	35:B:369:ASP:HA	1.61	0.65
36:C:245:HIS:ND1	45:r:13:CYS:SG	2.62	0.65
37:E:43:ASN:ND2	37:E:43:ASN:C	2.53	0.65
45:r:45:HIS:CE1	45:r:103:ARG:NH1	2.64	0.65
48:z:106:PHE:CE2	48:z:188:ILE:HG23	2.31	0.65
50:4:59:A:C6	50:4:288:G:N3	2.64	0.65
53:S2:38:A:C2	53:S2:515:G:C2	2.84	0.65
53:S2:69:C:C2	53:S2:70:G:C8	2.85	0.65
53:S2:355:G:H5''	53:S2:356:C:OP2	1.97	0.65
53:S2:431:G:C6	53:S2:432:G:N7	2.65	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:598:G:C2	53:S2:639:C:N3	2.65	0.65
53:S2:636:C:N3	53:S2:637:U:C4	2.64	0.65
53:S2:1100:A:C2	53:S2:1101:U:C5	2.84	0.65
53:S2:1283:C:O2'	75:SM:91:LEU:HD22	1.96	0.65
53:S2:1294:G:N1	53:S2:1295:A:N7	2.44	0.65
57:SE:100:ARG:CZ	57:SE:121:TYR:OH	2.44	0.65
11:R:109:TYR:OH	32:5:3597:G:OP1	2.11	0.65
32:5:43:U:C4	32:5:44:A:C1'	2.77	0.65
32:5:229:G:C2	32:5:240:G:C2	2.84	0.65
32:5:473:C:O2	32:5:474:C:C6	2.49	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'	1.95	0.65
32:5:1302:U:O2	32:5:1303:A:H8	1.79	0.65
32:5:1310:C:O2	32:5:1310:C:H2'	1.95	0.65
32:5:1489:G:N3	32:5:1489:G:H2'	2.10	0.65
32:5:1774:C:C2	32:5:1775:A:C8	2.85	0.65
32:5:1807:C:C4	32:5:1808:C:C5	2.84	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
32:5:2362:U:O4	32:5:3859:G:C2	2.50	0.65
32:5:2422:C:N3	32:5:2423:A:N7	2.45	0.65
32:5:2658:G:N3	32:5:2675:G:N2	2.44	0.65
32:5:4404:U:C5	32:5:4436:U:O4	2.49	0.65
32:5:4528:G:C2	32:5:4529:G:C8	2.84	0.65
32:5:5003:U:O2'	32:5:5004:C:O4'	2.12	0.65
34:8:94:G:C8	34:8:94:G:C5'	2.76	0.65
38:F:148:ASN:HB3	38:F:243:ASN:ND2	2.11	0.65
41:W:55:TYR:CD1	41:W:55:TYR:C	2.75	0.65
53:S2:27:A:N1	53:S2:28:U:C6	2.65	0.65
53:S2:404:G:N2	53:S2:405:G:C4	2.65	0.65
53:S2:580:U:C4	53:S2:581:U:C5	2.85	0.65
53:S2:597:G:N2	53:S2:640:A:N3	2.45	0.65
53:S2:597:G:C2	53:S2:640:A:N1	2.64	0.65
53:S2:792:C:C4	53:S2:793:G:N7	2.65	0.65
53:S2:946:U:N3	53:S2:947:G:C8	2.65	0.65
53:S2:948:C:N3	53:S2:949:G:N7	2.44	0.65
53:S2:1134:G:C2	53:S2:1135:C:C4	2.85	0.65
53:S2:1539:U:O2	53:S2:1539:U:H2'	1.95	0.65
53:S2:1542:C:O2'	53:S2:1543:U:C6	2.49	0.65
74:SK:27:VAL:HG13	74:SK:43:LEU:HD23	1.78	0.65
2:D:94:ASN:C	2:D:94:ASN:HD22	2.04	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:118:ILE:HB	2:D:119:TYR:CE1	2.32	0.65
32:5:42:A:C5	32:5:4379:A:N1	2.64	0.65
32:5:744:G:H2'	32:5:745:G:H8	1.62	0.65
32:5:1260:G:C2	32:5:1261:G:C8	2.85	0.65
32:5:1272:C:O2'	32:5:1273:G:C1'	2.45	0.65
32:5:1474:C:C2	32:5:1475:G:C8	2.85	0.65
32:5:1627:G:H3'	32:5:1628:C:H6	1.62	0.65
32:5:1812:C:C2	32:5:1813:U:C5	2.85	0.65
32:5:1964:A:C2	32:5:1965:G:H1'	2.32	0.65
32:5:2736:G:C4	32:5:2737:C:C5	2.85	0.65
32:5:3793:U:O2	32:5:3794:C:C6	2.50	0.65
32:5:4078:C:N4	32:5:4079:C:C5	2.64	0.65
33:7:111:C:C2	33:7:112:U:C6	2.85	0.65
37:E:277:ILE:N	37:E:278:TYR:CE2	2.65	0.65
38:F:149:LEU:CB	38:F:197:TYR:OH	2.45	0.65
48:z:406:VAL:HA	50:4:207:C:O2'	1.97	0.65
53:S2:70:G:C4	53:S2:71:G:C8	2.84	0.65
53:S2:349:A:C4'	60:SI:27:TYR:OH	2.45	0.65
53:S2:394:G:N3	53:S2:395:G:C8	2.65	0.65
53:S2:1056:U:H2'	53:S2:1057:C:O4'	1.97	0.65
53:S2:1181:A:C2	53:S2:1182:A:C2	2.85	0.65
53:S2:1371:U:H2'	53:S2:1371:U:O2	1.95	0.65
53:S2:1563:G:C4	53:S2:1564:C:C5	2.84	0.65
59:SH:135:PHE:HD1	59:SH:135:PHE:C	2.05	0.65
60:SI:167:GLN:HG3	60:SI:168:GLN:N	2.11	0.65
2:D:282:GLN:HB3	32:5:1177:U:H4'	1.78	0.65
5:J:74:VAL:C	5:J:75:ARG:HG2	2.20	0.65
10:Q:177:ALA:O	10:Q:179:GLY:N	2.29	0.65
20:b:17:HIS:ND1	32:5:1724:G:C8	2.63	0.65
22:d:87:ARG:NH1	22:d:87:ARG:CA	2.60	0.65
32:5:88:A:C2'	32:5:89:C:O5'	2.45	0.65
32:5:301:G:C6	32:5:302:C:C4	2.85	0.65
32:5:976:G:C4	32:5:977:C:C6	2.84	0.65
32:5:1404:G:C2	32:5:1414:C:N3	2.64	0.65
32:5:1787:A:O2'	32:5:1788:A:N7	2.30	0.65
32:5:1885:G:C4	32:5:1895:G:N2	2.65	0.65
32:5:2363:A:C2	32:5:2364:G:H1'	2.31	0.65
32:5:2480:G:C6	32:5:2481:G:N7	2.65	0.65
32:5:2691:U:O2	32:5:2692:U:C6	2.49	0.65
32:5:2874:U:H5'	32:5:2874:U:C6	2.32	0.65
32:5:3629:A:C6	32:5:3630:A:C8	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3766:A:C1'	53:S2:1708:C:O2'	2.39	0.65
32:5:3905:A:N1	32:5:4449:A:C6	2.64	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	2.84	0.65
32:5:4990:C:O3'	32:5:4991:U:H4'	1.94	0.65
34:8:65:A:N1	34:8:66:A:C5	2.65	0.65
36:C:111:TRP:HB2	36:C:112:HIS:CD2	2.32	0.65
53:S2:360:A:N1	53:S2:363:A:N7	2.45	0.65
53:S2:532:C:N3	53:S2:533:A:N7	2.44	0.65
53:S2:574:A:O2'	53:S2:575:A:H8	1.78	0.65
53:S2:795:A:H2	53:S2:796:G:C6	2.15	0.65
53:S2:832:G:H2'	53:S2:833:C:O4'	1.96	0.65
53:S2:858:A:N3	53:S2:859:G:C8	2.64	0.65
53:S2:945:U:H2'	53:S2:946:U:C6	2.32	0.65
53:S2:1052:A:C4	53:S2:1053:C:C6	2.85	0.65
53:S2:1366:G:C2	53:S2:1374:C:N3	2.64	0.65
53:S2:1616:U:H2'	53:S2:1617:G:O4'	1.96	0.65
82:SZ:49:LEU:CD2	82:SZ:83:LEU:HD11	2.23	0.65
12:S:160:ARG:HB2	32:5:1921:C:O2	1.97	0.65
32:5:90:G:C8	32:5:92:C:C6	2.85	0.65
32:5:288:G:N2	32:5:289:C:C2	2.65	0.65
32:5:433:A:H2	32:5:3867:A:H4'	1.54	0.65
32:5:449:C:C2	32:5:450:G:C8	2.84	0.65
32:5:456:C:N3	32:5:457:G:N7	2.45	0.65
32:5:711:A:C2	32:5:712:C:C4	2.85	0.65
32:5:919:C:C4	32:5:920:C:C5	2.85	0.65
32:5:1258:G:C2	32:5:1259:G:C8	2.84	0.65
32:5:1348:U:O2	32:5:1349:G:C8	2.50	0.65
32:5:1355:G:C6	32:5:1385:G:C2	2.84	0.65
32:5:1412:G:C2	32:5:1413:C:C5	2.85	0.65
32:5:1441:C:C2	32:5:1442:C:C6	2.85	0.65
32:5:1542:U:OP1	32:5:2743:A:C8	2.50	0.65
32:5:1848:C:H6	32:5:1848:C:H5''	1.61	0.65
32:5:2034:G:C2	32:5:2035:C:N1	2.65	0.65
32:5:2594:C:C2	32:5:2595:C:C5	2.85	0.65
32:5:2605:G:N3	32:5:2606:G:C8	2.64	0.65
32:5:3756:A:H5''	32:5:3756:A:C8	2.29	0.65
32:5:3779:A:H2'	32:5:3780:G:O4'	1.97	0.65
32:5:4257:A:H2'	32:5:4258:C:C5	2.32	0.65
32:5:4551:U:C2	32:5:4552:U:H5	2.14	0.65
32:5:4691:A:C6	32:5:4692:A:C8	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:79:G:C4	34:8:80:A:C2	2.85	0.65
53:S2:744:G:H2'	53:S2:745:C:C6	2.31	0.65
53:S2:1310:U:C5'	85:Sf:143:LYS:HE3	2.27	0.65
53:S2:1342:U:C4	53:S2:1483:A:C5	2.85	0.65
53:S2:1411:G:H3'	53:S2:1412:C:H4'	1.76	0.65
53:S2:1772:C:C2	53:S2:1773:C:C5	2.84	0.65
83:Sc:10:LYS:HG2	83:Sc:36:ASP:OD2	1.96	0.65
83:Sc:33:GLU:OE1	83:Sc:33:GLU:HA	1.97	0.65
6:L:23:ALA:HB3	8:N:199:GLN:OE1	1.97	0.65
6:L:59:VAL:HG13	32:5:74:G:H5'	1.79	0.65
15:V:97:TYR:CE2	41:W:21:TYR:CE1	2.77	0.65
21:c:78:ASN:OD1	21:c:79:ILE:HG13	1.96	0.65
26:h:92:ARG:NH1	34:8:38:U:H3	1.95	0.65
32:5:78:U:O2	32:5:336:A:C6	2.50	0.65
32:5:1388:A:C6	32:5:1396:G:C2	2.84	0.65
32:5:1617:G:C2	32:5:1618:G:C8	2.85	0.65
32:5:1625:G:C5	32:5:1642:A:N1	2.64	0.65
32:5:1742:A:C2	32:5:1743:A:N7	2.64	0.65
32:5:1886:G:N2	32:5:1894:C:C4	2.65	0.65
32:5:2078:C:O2	32:5:2078:C:C2'	2.43	0.65
32:5:2108:G:C2	32:5:2125:C:N3	2.64	0.65
32:5:2423:A:C6	32:5:2424:G:C6	2.85	0.65
32:5:3642:A:HO2'	42:j:2:THR:N	1.95	0.65
32:5:4230:C:N3	32:5:4231:C:H5	1.95	0.65
32:5:4335:C:H2'	32:5:4336:A:C1'	2.27	0.65
32:5:4997:G:C2	32:5:4998:G:N9	2.65	0.65
34:8:122:G:H2'	34:8:123:U:O4'	1.96	0.65
50:4:58:G:N7	50:4:289:A:C2	2.64	0.65
53:S2:217:A:C2	53:S2:309:G:O6	2.50	0.65
53:S2:429:C:C2	53:S2:430:C:C5	2.85	0.65
53:S2:457:C:N4	53:S2:458:A:C5	2.65	0.65
53:S2:610:G:C2	53:S2:611:G:C8	2.85	0.65
53:S2:647:U:O2	53:S2:648:A:C8	2.50	0.65
53:S2:796:G:C2'	59:SH:111:LYS:HG3	2.26	0.65
53:S2:857:U:C2	53:S2:858:A:C8	2.84	0.65
53:S2:1018:U:O2	53:S2:1019:C:C5	2.49	0.65
53:S2:1224:G:N7	53:S2:1225:U:C5	2.64	0.65
53:S2:1284:A:O2'	75:SM:106:CYS:CA	2.38	0.65
53:S2:1294:G:C2	85:Sf:138:ARG:HG2	2.32	0.65
53:S2:1394:G:N1	53:S2:1395:C:C6	2.65	0.65
53:S2:1420:G:HO2'	80:ST:4:VAL:CA	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1708:C:N3	53:S2:1709:G:N7	2.45	0.65
3:G:81:ASN:HD21	3:G:238:GLY:CA	2.10	0.64
12:S:167:PHE:N	12:S:167:PHE:HD2	1.94	0.64
32:5:259:C:H2'	32:5:260:C:O4'	1.98	0.64
32:5:753:C:C4	32:5:754:U:C5	2.85	0.64
32:5:1190:C:O2	32:5:1191:C:C6	2.50	0.64
32:5:1481:C:O2'	32:5:1482:G:OP2	2.12	0.64
32:5:1516:G:C6	32:5:1518:A:C5	2.86	0.64
32:5:1598:C:C6	32:5:2798:A:N7	2.65	0.64
32:5:1926:C:C2	32:5:1927:U:C6	2.84	0.64
32:5:2341:A:C2	32:5:2342:G:C8	2.85	0.64
32:5:2745:A:C2	32:5:2746:A:C6	2.84	0.64
32:5:3711:A:C6	32:5:3712:A:N3	2.65	0.64
32:5:3819:G:C2	32:5:3820:G:C8	2.85	0.64
32:5:3909:C:C4	32:5:3910:C:H5	2.14	0.64
32:5:3935:C:C4	32:5:3936:A:N7	2.65	0.64
32:5:4134:C:O2	32:5:4135:G:C8	2.49	0.64
32:5:4385:A:N6	32:5:4531:U:H5'	2.12	0.64
32:5:4735:G:C2	32:5:4736:C:C4	2.85	0.64
48:z:415:ARG:HG3	48:z:419:GLU:OE1	1.96	0.64
53:S2:10:G:C2	53:S2:11:A:C8	2.85	0.64
53:S2:167:G:N1	53:S2:168:C:C4	2.65	0.64
53:S2:309:G:H2'	53:S2:310:C:H6	1.60	0.64
53:S2:403:G:N1	53:S2:404:G:C5	2.66	0.64
53:S2:444:G:H2'	53:S2:444:G:N3	2.12	0.64
53:S2:667:U:O4	53:S2:1144:A:N1	2.29	0.64
53:S2:823:U:N3	68:SY:64:PHE:HD2	1.95	0.64
53:S2:1307:U:H1'	85:Sf:133:ALA:HB2	1.78	0.64
53:S2:1315:U:N3	53:S2:1316:C:C6	2.65	0.64
53:S2:1407:U:H2'	53:S2:1408:U:C5	2.31	0.64
53:S2:1683:C:O2	53:S2:1683:C:H2'	1.95	0.64
67:SX:51:VAL:HG13	67:SX:70:VAL:HG13	1.79	0.64
82:SZ:50:PHE:CZ	82:SZ:79:ILE:HB	2.31	0.64
82:SZ:50:PHE:CG	82:SZ:79:ILE:HD13	2.32	0.64
87:S1:32:ARG:HD3	87:S1:35:ASP:OD2	1.97	0.64
4:H:113:GLU:OE2	4:H:113:GLU:HA	1.94	0.64
8:N:84:PRO:HA	8:N:87:HIS:CB	2.28	0.64
8:N:84:PRO:HA	8:N:87:HIS:HB2	1.78	0.64
21:c:30:GLY:O	21:c:93:THR:HB	1.96	0.64
32:5:27:C:C2	32:5:28:C:C5	2.84	0.64
32:5:211:G:N3	32:5:212:A:C8	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:300:A:N3	32:5:301:G:N7	2.44	0.64
32:5:383:A:O2'	32:5:384:A:O5'	2.15	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
32:5:2362:U:H2'	32:5:2362:U:O2	1.95	0.64
32:5:2371:U:O4	32:5:2825:A:H2	1.80	0.64
32:5:2424:G:H2'	32:5:2426:U:C5	2.32	0.64
32:5:2623:A:C2	32:5:2624:G:C5	2.85	0.64
32:5:2656:U:H3'	32:5:2657:G:H8	1.62	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
32:5:3870:C:H4'	35:B:261:ARG:HE	1.61	0.64
32:5:4241:C:O2	32:5:4241:C:C2'	2.44	0.64
32:5:4283:G:C4	32:5:4284:C:C5	2.85	0.64
32:5:4627:U:C2	32:5:4628:U:C6	2.85	0.64
32:5:4629:U:C2	32:5:4630:G:C8	2.84	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
48:z:114:LYS:O	48:z:118:CYS:SG	2.52	0.64
53:S2:58:C:H1'	53:S2:59:U:C5	2.32	0.64
53:S2:457:C:C4	53:S2:458:A:C8	2.85	0.64
53:S2:836:G:H2'	53:S2:837:A:H5'	1.77	0.64
53:S2:925:G:N2	53:S2:926:A:N9	2.45	0.64
53:S2:946:U:O2'	53:S2:1046:U:OP1	2.10	0.64
53:S2:1018:U:O2	53:S2:1018:U:H2'	1.96	0.64
3:G:235:ARG:HG3	3:G:235:ARG:HH11	1.62	0.64
4:H:60:TRP:HE1	12:S:153:PRO:HG3	1.62	0.64
4:H:61:TRP:CZ2	12:S:152:PHE:HE2	2.16	0.64
32:5:101:A:N1	32:5:102:G:C5	2.65	0.64
32:5:272:U:C2	32:5:273:U:H5	2.12	0.64
32:5:1427:A:H3'	32:5:1428:U:C6	2.28	0.64
32:5:2444:U:C5	32:5:2445:C:H5	2.15	0.64
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
32:5:4455:G:C6	32:5:4456:C:C5	2.84	0.64
32:5:4498:U:O2	32:5:4500:U:C5'	2.44	0.64
48:z:120:LYS:HG2	48:z:279:ILE:HA	1.78	0.64
53:S2:10:G:C8	53:S2:1697:A:N3	2.66	0.64
53:S2:29:G:N3	53:S2:30:C:C5	2.65	0.64
53:S2:58:C:C2	53:S2:500:A:C8	2.85	0.64
53:S2:84:A:O2'	68:SY:119:GLY:O	2.14	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:90:G:H2'	53:S2:91:A:O4'	1.97	0.64
53:S2:381:C:C5'	53:S2:381:C:C6	2.81	0.64
53:S2:403:G:C2	53:S2:404:G:N9	2.65	0.64
53:S2:609:U:N3	53:S2:610:G:N7	2.45	0.64
53:S2:678:U:C2	53:S2:679:A:C8	2.85	0.64
53:S2:1291:A:O4'	85:Sf:146:LEU:CB	2.45	0.64
53:S2:1330:G:N2	53:S2:1333:U:C4	2.65	0.64
53:S2:1547:C:H2'	53:S2:1548:G:O4'	1.97	0.64
53:S2:1562:C:C2	53:S2:1563:G:C8	2.84	0.64
53:S2:1641:A:N3	53:S2:1642:U:C6	2.65	0.64
53:S2:1709:G:C2	53:S2:1710:C:C6	2.86	0.64
73:SF:122:ARG:O	83:Sc:57:THR:HB	1.97	0.64
3:G:81:ASN:HD21	3:G:238:GLY:N	1.95	0.64
8:N:99:GLN:HG3	8:N:130:PHE:CD2	2.32	0.64
8:N:120:TRP:CZ2	8:N:123:GLU:HB3	2.32	0.64
11:R:124:TYR:OH	32:5:2665:U:C4	2.48	0.64
11:R:165:LYS:HD2	53:S2:907:G:OP2	1.96	0.64
21:c:28:VAL:CG1	21:c:33:GLN:HB3	2.27	0.64
32:5:1490:G:C2	32:5:1491:A:C5	2.86	0.64
32:5:1672:U:O2'	32:5:4304:A:OP1	2.10	0.64
32:5:2328:G:C6	32:5:2329:U:C4	2.85	0.64
32:5:2366:A:C2	32:5:3851:U:H1'	2.31	0.64
32:5:2400:G:C6	32:5:2401:A:N7	2.65	0.64
32:5:2480:G:C2	32:5:2481:G:C8	2.85	0.64
32:5:4176:C:C2	32:5:4177:C:C5	2.86	0.64
32:5:4199:C:C6	32:5:4199:C:O5'	2.50	0.64
32:5:4277:G:C2	32:5:4278:C:N1	2.66	0.64
32:5:4627:U:O2	32:5:4627:U:H2'	1.97	0.64
32:5:4761:G:H2'	32:5:4762:A:O4'	1.96	0.64
32:5:4981:G:C2	32:5:4982:A:N7	2.65	0.64
33:7:8:G:C6	33:7:9:C:C5	2.85	0.64
36:C:78:ARG:HH11	36:C:78:ARG:HG2	1.62	0.64
47:q:127:ASN:HB3	47:q:153:GLU:HG3	1.80	0.64
50:4:59:A:C2	50:4:60:U:H1'	2.32	0.64
53:S2:381:C:C4	60:SI:49:ARG:CG	2.71	0.64
53:S2:494:C:N4	53:S2:510:G:O4'	2.30	0.64
53:S2:600:G:C5	53:S2:631:U:O4	2.51	0.64
53:S2:961:G:C6	53:S2:962:A:C5	2.85	0.64
53:S2:1111:U:H3	53:S2:1112:U:H5	1.44	0.64
53:S2:1112:U:H2'	53:S2:1113:A:O4'	1.98	0.64
53:S2:1204:A:H2'	53:S2:1205:C:C2	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1419:C:O4'	80:ST:128:GLN:OE1	2.15	0.64
53:S2:1725:U:C2	53:S2:1726:G:C8	2.85	0.64
86:Sg:64:HIS:HB3	86:Sg:65:PHE:CD2	2.33	0.64
1:A:85:GLY:HA2	32:5:4121:G:N2	2.11	0.64
15:V:13:LYS:HG2	15:V:128:LEU:HD13	1.78	0.64
15:V:99:GLU:HG3	41:W:21:TYR:OH	1.97	0.64
32:5:29:G:C6	32:5:54:G:N3	2.65	0.64
32:5:209:U:C4	32:5:211:G:N9	2.66	0.64
32:5:662:C:O2	32:5:663:G:C8	2.51	0.64
32:5:731:G:N1	32:5:732:A:H1'	2.13	0.64
32:5:916:C:C4	32:5:917:A:C8	2.85	0.64
32:5:1250:C:C2	32:5:1261:G:C2	2.86	0.64
32:5:1320:U:H2'	32:5:1891:A:H61	1.63	0.64
32:5:1662:C:N3	32:5:1663:C:C5	2.65	0.64
32:5:1886:G:N1	32:5:1894:C:N4	2.45	0.64
32:5:2293:U:O2	32:5:2293:U:H2'	1.96	0.64
32:5:2439:G:C2	32:5:2440:U:C6	2.85	0.64
32:5:4089:G:C2	32:5:4161:G:C2	2.85	0.64
32:5:4222:G:C6	32:5:4223:C:C5	2.86	0.64
32:5:4284:C:O2	32:5:4284:C:H2'	1.96	0.64
32:5:4482:U:O2	32:5:4483:C:C6	2.50	0.64
32:5:4548:A:H4'	32:5:4549:G:OP2	1.98	0.64
32:5:4620:U:C4	32:5:4621:C:C5	2.84	0.64
32:5:4666:G:C6	32:5:4667:C:C4	2.85	0.64
32:5:4980:C:C5	32:5:4981:G:C4	2.86	0.64
32:5:4998:G:N1	32:5:4999:G:C5	2.66	0.64
37:E:43:ASN:HB3	37:E:58:MET:HE1	1.79	0.64
47:q:107:VAL:CG2	47:q:108:PRO:CD	2.70	0.64
48:z:140:PHE:CZ	48:z:194:ARG:NE	2.62	0.64
53:S2:14:C:O2	53:S2:668:A:H2	1.80	0.64
53:S2:71:G:H3'	53:S2:72:C:C5'	2.27	0.64
53:S2:119:U:N3	53:S2:120:U:C6	2.66	0.64
53:S2:377:G:N1	53:S2:378:U:C5	2.66	0.64
53:S2:532:C:H4'	53:S2:532:C:OP1	1.96	0.64
53:S2:579:C:N3	53:S2:580:U:C6	2.65	0.64
53:S2:604:A:H2'	53:S2:605:A:C8	2.33	0.64
53:S2:663:C:N3	53:S2:664:A:C8	2.66	0.64
53:S2:793:G:C6	53:S2:794:A:N9	2.64	0.64
53:S2:841:G:N2	53:S2:842:C:N3	2.45	0.64
53:S2:926:A:C2	53:S2:927:C:C6	2.85	0.64
53:S2:1077:A:C6	53:S2:1078:C:C5	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1500:G:H4'	72:SD:179:GLN:O	1.98	0.64
53:S2:1561:A:H2'	53:S2:1561:A:N3	2.11	0.64
53:S2:1643:U:C2	53:S2:1644:C:C4	2.86	0.64
53:S2:1648:G:C8	77:SQ:125:ARG:HB3	2.32	0.64
53:S2:1812:U:O2	53:S2:1813:A:C8	2.50	0.64
73:SF:140:ASP:HB2	83:Sc:56:LEU:CD2	2.28	0.64
83:Sc:14:VAL:CG1	83:Sc:31:ARG:CA	2.76	0.64
17:Y:10:ASP:O	17:Y:11:ARG:C	2.41	0.64
32:5:316:U:O2	32:5:316:U:H2'	1.98	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
32:5:1246:G:C5	32:5:1247:U:C5	2.86	0.64
32:5:1314:C:C2	32:5:1315:C:C5	2.86	0.64
32:5:1358:G:N1	32:5:1379:C:O2	2.30	0.64
32:5:1598:C:N3	32:5:1599:A:C8	2.66	0.64
32:5:1949:U:N3	32:5:1950:U:H5	1.96	0.64
32:5:2076:G:N1	32:5:2077:C:C2	2.65	0.64
32:5:2294:G:H2'	32:5:2295:C:H6	1.63	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
32:5:3754:G:C2	32:5:3755:G:N9	2.66	0.64
32:5:3829:G:C2	32:5:3830:A:C8	2.86	0.64
32:5:4416:G:N3	32:5:4417:C:C6	2.66	0.64
32:5:4754:G:C2	32:5:4880:C:N3	2.66	0.64
34:8:70:G:C6	34:8:87:G:C2	2.86	0.64
47:q:77:LYS:HG3	47:q:198:ILE:HD11	1.79	0.64
48:z:377:THR:CB	50:4:193:G:C2'	2.72	0.64
48:z:410:SER:CA	50:4:193:G:N2	2.50	0.64
49:3:24:A:H2'	49:3:25:C:O4'	1.98	0.64
50:4:284:G:N2	50:4:285:C:C2	2.66	0.64
53:S2:44:U:O2'	53:S2:45:A:H2'	1.97	0.64
53:S2:557:U:H2'	53:S2:558:G:O4'	1.96	0.64
53:S2:609:U:O2	53:S2:610:G:C8	2.51	0.64
53:S2:751:G:C2	53:S2:792:C:C2	2.86	0.64
53:S2:870:A:N7	53:S2:915:G:H8	1.84	0.64
53:S2:1050:A:C8	53:S2:1051:G:C8	2.84	0.64
53:S2:1159:G:H2'	53:S2:1160:U:O4'	1.98	0.64
53:S2:1215:C:N4	53:S2:1646:C:N4	2.45	0.64
53:S2:1308:U:N3	53:S2:1309:C:C4	2.66	0.64
53:S2:1412:C:HO2'	53:S2:1413:G:H8	1.45	0.64
53:S2:1432:U:H2'	53:S2:1432:U:O2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SB:62:LEU:HD13	55:SB:65:ARG:HH21	1.61	0.64
72:SD:152:PHE:N	72:SD:152:PHE:CD1	2.62	0.64
83:Sc:34:PHE:O	83:Sc:35:MET:HB3	1.97	0.64
8:N:120:TRP:HZ2	8:N:123:GLU:HB3	1.62	0.64
12:S:45:TRP:CE3	12:S:56:LYS:HA	2.31	0.64
26:h:94:ARG:NH2	32:5:135:G:N2	2.46	0.64
32:5:85:G:N3	32:5:97:G:C6	2.65	0.64
32:5:751:G:C2	32:5:752:G:C5	2.84	0.64
32:5:913:U:C2	32:5:914:U:C5	2.86	0.64
32:5:1260:G:N1	32:5:1261:G:C5	2.66	0.64
32:5:1506:G:O2'	36:C:116:ASN:OD1	2.09	0.64
32:5:1553:A:C2	32:5:1575:A:H1'	2.33	0.64
32:5:2035:C:H41	32:5:2036:C:N4	1.93	0.64
32:5:2341:A:N1	32:5:2342:G:C5	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
32:5:2605:G:N1	32:5:2606:G:C5	2.66	0.64
32:5:2840:A:C6	32:5:2841:G:N7	2.66	0.64
32:5:4332:C:O2	32:5:4333:C:H5	1.79	0.64
32:5:4734:A:C6	32:5:4735:G:C5	2.86	0.64
33:7:17:C:C2	33:7:18:C:C6	2.86	0.64
53:S2:297:A:C6	53:S2:298:G:C8	2.86	0.64
53:S2:494:C:O2	53:S2:494:C:C2'	2.46	0.64
53:S2:604:A:C8	61:SJ:20:PHE:CD2	2.86	0.64
53:S2:949:G:C5	53:S2:950:C:C5	2.86	0.64
53:S2:1040:G:C6	53:S2:1041:G:C8	2.86	0.64
60:SI:83:TYR:CD1	60:SI:83:TYR:C	2.75	0.64
77:SQ:71:ARG:HH11	77:SQ:71:ARG:HG2	1.62	0.64
19:a:62:HIS:CD2	19:a:62:HIS:C	2.75	0.64
32:5:195:C:N3	32:5:196:C:C5	2.66	0.64
32:5:1071:C:O2	32:5:1071:C:H2'	1.96	0.64
32:5:1543:G:N1	32:5:1544:G:C5	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
32:5:1983:A:C8	32:5:1987:C:OP2	2.51	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
32:5:2607:C:O2	32:5:2608:G:C8	2.51	0.64
32:5:2723:U:C2	32:5:2724:G:N7	2.66	0.64
32:5:2791:C:H2'	32:5:2791:C:O2	1.97	0.64
32:5:3723:A:H2'	32:5:3724:A:C8	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4224:A:C6	32:5:4225:G:C8	2.85	0.64
32:5:4653:C:C2	32:5:4654:C:H5	2.07	0.64
32:5:4677:U:H3	32:5:4713:G:H22	1.45	0.64
32:5:4911:A:H5''	35:B:100:ARG:HD3	1.78	0.64
34:8:131:G:C2	34:8:132:G:N9	2.65	0.64
48:z:124:TYR:OH	48:z:282:PHE:N	2.30	0.64
53:S2:415:A:H2'	53:S2:416:U:O5'	1.97	0.64
53:S2:617:G:C6	53:S2:618:C:C6	2.85	0.64
53:S2:870:A:C5	53:S2:915:G:C4	2.63	0.64
53:S2:1113:A:H2'	53:S2:1114:U:C3'	2.25	0.64
53:S2:1303:C:C6	53:S2:1304:U:C6	2.85	0.64
53:S2:1545:A:N6	53:S2:1588:A:C2	2.66	0.64
54:SA:200:ASP:HA	54:SA:203:PHE:CE1	2.33	0.64
63:SN:33:VAL:HG21	63:SN:66:VAL:HG11	1.80	0.64
8:N:63:ARG:CZ	8:N:63:ARG:HB2	2.27	0.64
19:a:132:ARG:HH11	19:a:132:ARG:CG	2.11	0.64
32:5:99:A:C6	32:5:100:C:N3	2.65	0.64
32:5:1289:C:N3	32:5:1290:G:N7	2.46	0.64
32:5:1367:C:H1'	32:5:1370:G:C8	2.33	0.64
32:5:1490:G:N1	32:5:1491:A:C5	2.66	0.64
32:5:1491:A:N3	32:5:1492:G:C8	2.66	0.64
32:5:1662:C:C2	32:5:1663:C:C6	2.86	0.64
32:5:1666:C:H2'	32:5:1667:G:O4'	1.98	0.64
32:5:1912:G:C2	32:5:1913:C:C4	2.86	0.64
32:5:2021:G:C5	32:5:2022:C:C5	2.85	0.64
32:5:2468:U:H2'	32:5:2506:G:C6	2.32	0.64
32:5:2634:C:C2	32:5:2635:U:C6	2.86	0.64
32:5:3674:G:N1	32:5:3675:G:C5	2.66	0.64
32:5:4079:C:C2	32:5:4080:C:C6	2.86	0.64
32:5:4229:U:H2'	32:5:4229:U:O2	1.97	0.64
32:5:4332:C:O2	32:5:4332:C:C2'	2.45	0.64
32:5:4976:U:H5'	32:5:4976:U:C6	2.32	0.64
32:5:4981:G:C2	32:5:4982:A:C8	2.86	0.64
32:5:5047:C:C5	32:5:5050:C:H5''	2.33	0.64
33:7:11:A:H4'	33:7:13:A:C8	2.33	0.64
44:p:68:ALA:HB1	44:p:69:TRP:CZ3	2.33	0.64
53:S2:10:G:C6	53:S2:1697:A:C2	2.86	0.64
53:S2:31:U:O2	53:S2:644:G:N2	2.31	0.64
53:S2:381:C:O2'	53:S2:382:C:C5'	2.45	0.64
53:S2:452:G:C4	53:S2:453:C:C6	2.84	0.64
53:S2:546:G:H2'	53:S2:547:G:O4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:669:A:H2'	53:S2:670:A:C8	2.33	0.64
53:S2:847:A:C5	53:S2:848:U:C6	2.86	0.64
53:S2:851:C:O2'	53:S2:852:G:N2	2.31	0.64
53:S2:950:C:O2	53:S2:950:C:H2'	1.97	0.64
53:S2:1271:C:C4	53:S2:1272:C:C5	2.86	0.64
53:S2:1292:C:N3	85:Sf:150:PHE:HB2	2.13	0.64
53:S2:1432:U:N3	53:S2:1433:C:C5	2.66	0.64
53:S2:1604:G:H2'	53:S2:1605:G:O4'	1.98	0.64
53:S2:1630:A:C2	53:S2:1631:U:C6	2.86	0.64
64:SO:146:ARG:C	64:SO:148:GLY:N	2.51	0.64
10:Q:34:PHE:HZ	10:Q:38:ARG:NE	1.95	0.64
32:5:27:C:O2	32:5:28:C:C5	2.51	0.64
32:5:237:G:O2'	32:5:238:C:P	2.56	0.64
32:5:731:G:C6	32:5:732:A:N9	2.67	0.64
32:5:1219:G:C2	32:5:1220:G:C8	2.85	0.64
32:5:1270:A:C5	32:5:1271:G:H1'	2.33	0.64
32:5:1287:G:N2	32:5:1289:C:C6	2.66	0.64
32:5:1554:A:C5	32:5:1555:G:C8	2.86	0.64
32:5:1696:C:C1'	32:5:1697:G:H5'	2.24	0.64
32:5:1771:U:N3	32:5:1772:C:C5	2.66	0.64
32:5:2108:G:C6	32:5:2125:C:N4	2.67	0.64
32:5:2603:C:C4	32:5:2604:C:C5	2.86	0.64
32:5:2646:C:O2	32:5:2646:C:H2'	1.97	0.64
32:5:3724:A:N6	32:5:3729:U:N3	2.46	0.64
32:5:3759:A:C6	53:S2:1709:G:C4'	2.62	0.64
32:5:3857:G:C5	32:5:3858:C:C6	2.87	0.64
32:5:4490:C:C2	32:5:4491:G:C8	2.85	0.64
32:5:4510:A:N6	32:5:4592:C:H4'	2.12	0.64
32:5:4552:U:C2	32:5:4553:A:C8	2.86	0.64
33:7:51:G:C2	33:7:52:C:C5	2.86	0.64
34:8:39:G:C2	34:8:104:A:C2	2.86	0.64
34:8:70:G:C2	34:8:87:G:N2	2.66	0.64
34:8:80:A:C6	34:8:81:C:C5	2.86	0.64
39:I:92:HIS:O	39:I:94:PHE:HB2	1.98	0.64
50:4:2:C:C2	50:4:3:C:C5	2.86	0.64
53:S2:53:C:N3	53:S2:54:A:C8	2.66	0.64
53:S2:85:A:N3	53:S2:86:C:C6	2.66	0.64
53:S2:122:G:C5	53:S2:123:G:C8	2.86	0.64
53:S2:309:G:C6	53:S2:310:C:N4	2.66	0.64
53:S2:447:A:N7	53:S2:449:A:C8	2.66	0.64
53:S2:493:A:C2	53:S2:494:C:H5	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:518:G:C2	53:S2:519:A:N7	2.65	0.64
53:S2:806:U:O2	53:S2:807:G:C8	2.51	0.64
53:S2:1571:G:C6	53:S2:1572:C:C4	2.86	0.64
53:S2:1759:G:C2	53:S2:1774:C:C2	2.86	0.64
56:SC:127:PHE:CE1	56:SC:234:GLY:HA2	2.33	0.64
72:SD:115:VAL:HG21	72:SD:142:LEU:HD11	1.79	0.64
73:SF:140:ASP:CG	83:Sc:58:LEU:CD2	2.56	0.64
73:SF:198:ARG:HD3	73:SF:198:ARG:C	2.23	0.64
12:S:95:ARG:NH2	32:5:1951:G:O2'	2.31	0.63
18:Z:38:TYR:OH	18:Z:76:ASN:N	2.31	0.63
18:Z:127:ASN:HD22	18:Z:127:ASN:N	1.96	0.63
32:5:482:G:H2'	32:5:483:G:C1'	2.28	0.63
32:5:673:C:C2	32:5:674:G:N7	2.66	0.63
32:5:755:C:N3	32:5:756:G:N7	2.46	0.63
32:5:1684:A:C2	32:5:1685:G:C8	2.86	0.63
32:5:1881:C:O4'	32:5:2281:U:C6	2.52	0.63
32:5:2485:U:C2	32:5:2486:G:N7	2.66	0.63
32:5:2592:U:C5	32:5:2593:C:C6	2.86	0.63
32:5:2685:C:H2'	32:5:2686:G:O4'	1.98	0.63
32:5:2734:U:N3	32:5:2735:G:N7	2.46	0.63
32:5:3688:U:O2	32:5:3689:G:C8	2.51	0.63
32:5:4127:A:N7	32:5:4156:G:N2	2.46	0.63
32:5:4230:C:O2	32:5:4230:C:H2'	1.98	0.63
32:5:4633:G:O2'	32:5:4635:A:OP2	2.09	0.63
32:5:4941:G:C2	32:5:4942:C:C4	2.85	0.63
32:5:5028:G:C4	32:5:5029:C:C5	2.85	0.63
32:5:5050:C:C4	32:5:5051:C:C5	2.87	0.63
38:F:120:PHE:HZ	38:F:217:SER:HA	1.63	0.63
48:z:377:THR:CB	50:4:193:G:O2'	2.45	0.63
53:S2:119:U:O2	53:S2:120:U:C6	2.51	0.63
53:S2:868:G:H21	59:SH:115:LYS:HA	1.60	0.63
53:S2:925:G:N3	53:S2:925:G:H2'	2.12	0.63
53:S2:1133:A:C2	53:S2:1134:G:H8	2.01	0.63
53:S2:1290:G:C2	85:Sf:146:LEU:HB2	2.32	0.63
53:S2:1309:C:O2	53:S2:1309:C:H2'	1.98	0.63
53:S2:1510:G:C2	53:S2:1511:U:C6	2.86	0.63
53:S2:1526:G:C6	53:S2:1527:C:C5	2.86	0.63
53:S2:1775:U:C2	53:S2:1776:G:C8	2.86	0.63
58:SG:209:TYR:HE2	58:SG:213:LEU:HD23	1.63	0.63
79:SS:86:ARG:HA	79:SS:86:ARG:NE	2.11	0.63
1:A:27:ALA:O	1:A:128:ARG:NH2	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:34:PHE:CE1	32:5:4087:G:C8	2.87	0.63
32:5:70:A:H1'	32:5:71:C:N4	2.12	0.63
32:5:120:A:O4'	32:5:121:A:N1	2.31	0.63
32:5:269:G:N1	32:5:270:U:C5	2.62	0.63
32:5:910:G:C5	32:5:911:U:C5	2.86	0.63
32:5:1085:C:C4	32:5:1086:C:C5	2.87	0.63
32:5:1334:A:C2	32:5:1335:G:C8	2.87	0.63
32:5:1458:C:H2'	32:5:1458:C:O2	1.99	0.63
32:5:1519:C:O2'	32:5:1520:C:O5'	2.15	0.63
32:5:1542:U:H5''	32:5:2743:A:N7	2.13	0.63
32:5:1843:A:N1	32:5:1844:G:C5	2.66	0.63
32:5:1846:G:H2'	32:5:1847:C:C6	2.32	0.63
32:5:1945:G:O6	32:5:1946:G:N7	2.30	0.63
32:5:2301:G:C6	32:5:2302:C:C5	2.86	0.63
32:5:2394:G:O6	32:5:2819:U:P	2.56	0.63
32:5:2422:C:H2'	32:5:2422:C:O2	1.98	0.63
32:5:2606:G:C2	32:5:2607:C:C4	2.87	0.63
32:5:2658:G:H22	32:5:2675:G:H2'	1.63	0.63
32:5:2746:A:H2'	32:5:2747:U:O4'	1.98	0.63
32:5:2861:C:O2	32:5:3626:G:H4'	1.98	0.63
32:5:4093:G:C3'	32:5:4094:G:H5'	2.28	0.63
32:5:4198:G:N2	49:3:74:C:C4	2.66	0.63
47:q:108:PRO:HA	47:q:109:ALA:C	2.23	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
50:4:57:G:N1	50:4:290:C:C2	2.66	0.63
53:S2:52:G:C5	53:S2:53:C:C5	2.86	0.63
53:S2:105:U:O2	53:S2:105:U:H2'	1.97	0.63
53:S2:622:C:C4	53:S2:623:G:H1'	2.32	0.63
53:S2:842:C:O2	53:S2:843:C:C6	2.52	0.63
53:S2:1135:C:N3	53:S2:1136:U:C4	2.66	0.63
53:S2:1293:A:H62	85:Sf:139:HIS:CB	2.12	0.63
53:S2:1294:G:C2	53:S2:1295:A:N7	2.65	0.63
53:S2:1561:A:C6	53:S2:1562:C:C6	2.86	0.63
53:S2:1754:G:C6	53:S2:1755:C:C4	2.87	0.63
53:S2:1842:C:H2'	53:S2:1843:G:O5'	1.99	0.63
56:SC:74:LYS:HG3	56:SC:269:PHE:CD2	2.32	0.63
62:SL:39:ASN:C	62:SL:39:ASN:OD1	2.40	0.63
23:e:126:ASN:C	23:e:126:ASN:HD22	2.06	0.63
24:f:38:GLU:HG3	37:E:280:HIS:CD2	2.32	0.63
32:5:145:G:C6	32:5:146:G:N7	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:168:C:C2	32:5:268:G:C2	2.86	0.63
32:5:436:C:O2	32:5:436:C:H2'	1.96	0.63
32:5:459:C:N3	32:5:460:C:C5	2.66	0.63
32:5:722:G:H21	36:C:343:GLN:NE2	1.96	0.63
32:5:982:U:C6	37:E:67:ARG:HG3	2.34	0.63
32:5:1091:C:C2	32:5:1092:G:C8	2.86	0.63
32:5:1188:C:O2	32:5:1189:G:C8	2.51	0.63
32:5:1583:A:C1'	32:5:2396:A:H62	2.08	0.63
32:5:1865:G:H22	32:5:1867:A:H3'	1.63	0.63
32:5:1902:G:H2'	32:5:1903:G:O5'	1.97	0.63
32:5:2090:U:P	32:5:2090:U:O4'	2.56	0.63
32:5:2326:G:N3	32:5:2327:G:C8	2.66	0.63
32:5:2770:C:N3	32:5:2771:G:C8	2.66	0.63
32:5:4216:G:H2'	32:5:4217:G:H5'	1.81	0.63
32:5:4619:U:C2	32:5:4620:U:C6	2.86	0.63
32:5:4904:G:N2	32:5:4905:C:C2	2.67	0.63
32:5:4998:G:C2	32:5:4999:G:N9	2.66	0.63
33:7:56:G:C2'	33:7:57:C:O5'	2.45	0.63
34:8:101:C:O2	34:8:101:C:H2'	1.98	0.63
48:z:17:LEU:HD11	48:z:31:MET:HE2	1.80	0.63
50:4:51:G:C2	50:4:296:C:C2	2.86	0.63
53:S2:532:C:O2	53:S2:533:A:C8	2.52	0.63
53:S2:632:C:C2	53:S2:633:C:C5	2.86	0.63
53:S2:636:C:N4	53:S2:637:U:O4	2.31	0.63
53:S2:650:A:C2'	53:S2:651:U:O5'	2.45	0.63
53:S2:926:A:C5	53:S2:927:C:C5	2.86	0.63
53:S2:1293:A:N3	85:Sf:152:LYS:N	2.45	0.63
53:S2:1302:G:C5	85:Sf:140:TYR:CZ	2.86	0.63
53:S2:1310:U:O2	53:S2:1310:U:H2'	1.97	0.63
53:S2:1568:C:OP1	80:ST:96:SER:OG	2.13	0.63
61:SJ:94:LEU:HD12	61:SJ:97:ILE:HD12	1.78	0.63
69:Sa:51:ARG:NH2	69:Sa:52:ASP:OD1	2.31	0.63
83:Sc:31:ARG:HH11	83:Sc:31:ARG:CG	2.11	0.63
1:A:186:TYR:N	1:A:196:TRP:CZ3	2.67	0.63
8:N:162:ARG:NH2	32:5:61:A:OP1	2.31	0.63
32:5:70:A:H4'	32:5:71:C:H5'	1.81	0.63
32:5:209:U:O4	32:5:211:G:H1'	1.98	0.63
32:5:345:C:O2	32:5:346:G:C8	2.51	0.63
32:5:486:C:O2	32:5:487:G:C8	2.51	0.63
32:5:659:G:C6	32:5:660:A:N7	2.66	0.63
32:5:731:G:O6	32:5:732:A:C4	2.51	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1491:A:C4	32:5:1492:G:C8	2.87	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
32:5:1933:G:H2'	32:5:1934:A:O4'	1.98	0.63
32:5:2106:G:O2'	32:5:2107:C:O4'	2.14	0.63
32:5:2468:U:N3	32:5:2473:A:C6	2.66	0.63
32:5:2612:G:C5	32:5:2613:C:C5	2.87	0.63
32:5:2773:G:N2	32:5:2774:C:C2	2.66	0.63
32:5:3729:U:H2'	32:5:3730:U:O4'	1.99	0.63
32:5:3774:A:OP1	32:5:3774:A:H8	1.81	0.63
32:5:3859:G:C4'	40:P:139:TYR:OH	2.47	0.63
32:5:4766:C:H2'	32:5:4767:C:O4'	1.99	0.63
33:7:9:C:O2	33:7:9:C:H2'	1.97	0.63
34:8:108:A:O2'	34:8:110:U:O4	2.15	0.63
48:z:270:ILE:HG22	48:z:285:PHE:CZ	2.33	0.63
48:z:341:LYS:O	48:z:345:PHE:CD1	2.51	0.63
50:4:57:G:N1	50:4:289:A:C2	2.66	0.63
50:4:147:G:N2	50:4:150:G:OP2	2.31	0.63
53:S2:377:G:C2	53:S2:378:U:C5	2.86	0.63
53:S2:447:A:C4	53:S2:449:A:H1'	2.33	0.63
53:S2:590:A:O2'	53:S2:591:U:O5'	2.16	0.63
53:S2:962:A:C6	53:S2:963:A:N7	2.67	0.63
53:S2:1151:G:N1	53:S2:1152:U:C5	2.67	0.63
53:S2:1419:C:C2	53:S2:1429:G:N2	2.67	0.63
54:SA:39:TYR:HE2	78:SR:105:MET:CA	2.12	0.63
63:SN:69:ASN:H	63:SN:69:ASN:HD22	1.44	0.63
67:SX:134:TYR:HE1	71:Se:13:ARG:NH2	1.95	0.63
8:N:26:ARG:O	8:N:30:TYR:HB2	1.97	0.63
12:S:94:TYR:OH	12:S:96:GLU:CG	2.45	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
32:5:85:G:C2	32:5:97:G:N7	2.66	0.63
32:5:330:G:N1	32:5:331:G:N7	2.47	0.63
32:5:662:C:O2	32:5:663:G:N7	2.31	0.63
32:5:1183:C:C2	32:5:1184:A:C8	2.86	0.63
32:5:1243:C:O2	32:5:1269:G:N3	2.32	0.63
32:5:1341:U:C2	32:5:1342:A:C8	2.86	0.63
32:5:1473:U:C4	32:5:1474:C:C5	2.86	0.63
32:5:1673:U:N3	32:5:1674:C:H5	1.91	0.63
32:5:2496:G:C6	32:5:2497:C:C4	2.86	0.63
32:5:2650:G:N2	32:5:2684:C:C2	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2829:U:N3	32:5:2830:G:C8	2.66	0.63
32:5:3724:A:N6	32:5:3725:G:C6	2.67	0.63
32:5:4152:G:N2	32:5:4153:C:C2	2.66	0.63
32:5:4479:A:C2	32:5:4480:A:H1'	2.33	0.63
33:7:8:G:C4	33:7:9:C:C6	2.87	0.63
47:q:32:ALA:CB	47:q:187:LEU:HD21	2.27	0.63
48:z:381:SER:CB	50:4:207:C:O2	2.46	0.63
48:z:414:THR:H	51:9:74:ARG:CG	2.12	0.63
53:S2:27:A:C2	53:S2:28:U:N1	2.66	0.63
53:S2:63:U:H5'	53:S2:64:A:OP2	1.98	0.63
53:S2:832:G:C6	53:S2:833:C:C4	2.87	0.63
53:S2:832:G:C6	53:S2:833:C:C6	2.87	0.63
53:S2:1284:A:C2'	75:SM:106:CYS:HA	2.28	0.63
53:S2:1414:A:C2	53:S2:1415:C:C6	2.87	0.63
53:S2:1590:C:C4	53:S2:1591:C:H1'	2.33	0.63
53:S2:1647:A:N6	53:S2:1675:A:C2	2.67	0.63
54:SA:50:ASN:N	78:SR:105:MET:HE1	2.08	0.63
55:SB:137:LEU:HD11	55:SB:176:VAL:HG21	1.80	0.63
81:SU:63:ILE:HG21	84:Sd:43:PHE:HE2	1.62	0.63
1:A:40:TYR:CE1	32:5:4117:U:O2	2.52	0.63
6:L:4:SER:C	6:L:5:ARG:HG3	2.22	0.63
32:5:158:A:C5	32:5:277:G:C6	2.86	0.63
32:5:211:G:N2	32:5:212:A:C8	2.66	0.63
32:5:225:G:O4'	32:5:243:A:H1'	1.99	0.63
32:5:246:G:N2	32:5:247:G:C4	2.67	0.63
32:5:457:G:C2	32:5:458:C:C5	2.86	0.63
32:5:911:U:C2	32:5:912:G:C8	2.87	0.63
32:5:1252:C:C2	32:5:1259:G:C2	2.86	0.63
32:5:1263:A:C5	32:5:1264:C:C5	2.86	0.63
32:5:1263:A:C4	32:5:1264:C:C6	2.87	0.63
32:5:1465:G:C5	32:5:1466:G:C8	2.86	0.63
32:5:1542:U:O2	32:5:1542:U:H2'	1.99	0.63
32:5:1642:A:H2'	32:5:1642:A:N3	2.13	0.63
32:5:1691:G:C5	32:5:1692:C:C6	2.86	0.63
32:5:1759:G:C6	32:5:1760:G:N7	2.67	0.63
32:5:1797:G:C2	32:5:1798:G:N7	2.66	0.63
32:5:2457:G:H2'	32:5:2458:C:O4'	1.99	0.63
32:5:2567:G:C4	32:5:2568:C:C6	2.87	0.63
32:5:2857:A:O2'	32:5:2858:A:P	2.55	0.63
32:5:3737:A:H2'	32:5:3738:G:C1'	2.29	0.63
32:5:3907:G:C1'	32:5:4449:A:H1'	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4243:C:H2'	32:5:4243:C:O2	1.97	0.63
32:5:4258:C:O2	32:5:4259:C:C6	2.52	0.63
32:5:4462:C:C2	32:5:4515:G:N2	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
32:5:5047:C:O2	32:5:5048:A:C6	2.51	0.63
32:5:5062:G:C2	32:5:5063:G:N7	2.66	0.63
33:7:42:A:N3	33:7:43:U:C6	2.67	0.63
34:8:34:U:O2	42:j:74:PHE:CG	2.52	0.63
43:n:11:ARG:HH12	53:S2:1844:U:H5''	1.63	0.63
53:S2:26:U:C2	53:S2:27:A:C8	2.87	0.63
53:S2:53:C:N3	53:S2:54:A:N7	2.46	0.63
53:S2:164:A:H2'	53:S2:165:G:N3	2.13	0.63
53:S2:219:U:C2	53:S2:220:U:C6	2.86	0.63
53:S2:574:A:O2'	53:S2:575:A:O5'	2.16	0.63
53:S2:623:G:C6	53:S2:624:C:C5	2.85	0.63
53:S2:668:A:OP2	89:S2:1923:MG:MG	1.40	0.63
53:S2:794:A:C5	53:S2:795:A:N7	2.67	0.63
53:S2:1097:G:C6	53:S2:1098:C:C5	2.86	0.63
53:S2:1131:G:C2	53:S2:1132:C:C6	2.86	0.63
53:S2:1427:C:C2	53:S2:1428:G:N7	2.67	0.63
53:S2:1466:G:N2	53:S2:1467:C:C2	2.67	0.63
53:S2:1571:G:C5	53:S2:1572:C:C5	2.87	0.63
54:SA:30:LEU:HD22	54:SA:47:TYR:CE2	2.33	0.63
56:SC:60:TRP:CZ2	56:SC:92:GLU:HB2	2.32	0.63
68:SY:20:ARG:HB3	68:SY:76:TYR:CD1	2.34	0.63
8:N:193:ARG:CZ	8:N:193:ARG:HB2	2.28	0.63
12:S:99:ASP:CG	12:S:100:LEU:N	2.57	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
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
32:5:89:C:O2'	32:5:90:G:H5'	1.98	0.63
32:5:114:G:C2'	32:5:115:C:H5'	2.29	0.63
32:5:375:G:OP2	42:j:52:LYS:NZ	2.31	0.63
32:5:1070:G:C5	32:5:1071:C:C5	2.87	0.63
32:5:1070:G:N2	32:5:1071:C:H1'	2.14	0.63
32:5:1215:C:N3	32:5:1216:C:C6	2.66	0.63
32:5:1268:G:N1	32:5:1270:A:C8	2.62	0.63
32:5:1313:C:C2	32:5:1323:A:C8	2.86	0.63
32:5:1563:A:H8	53:S2:678:U:H4'	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1617:G:C2	32:5:1618:G:N9	2.66	0.63
32:5:1843:A:C2	32:5:1844:G:N9	2.66	0.63
32:5:1910:G:N1	32:5:1911:C:C4	2.67	0.63
32:5:2080:U:N3	32:5:2081:C:N4	2.47	0.63
32:5:2261:G:O2'	32:5:2262:G:O5'	2.17	0.63
32:5:2390:G:C6	32:5:2391:G:C8	2.87	0.63
32:5:2561:C:C2	32:5:2562:G:C8	2.86	0.63
32:5:3636:C:O2	32:5:3636:C:H2'	1.98	0.63
32:5:3785:A:N1	32:5:4536:C:H1'	2.12	0.63
32:5:4369:A:C6	32:5:4370:G:N7	2.67	0.63
32:5:4453:C:C2	32:5:4529:G:C2	2.86	0.63
32:5:4737:G:C6	32:5:4738:C:N4	2.66	0.63
38:F:96:ARG:O	38:F:120:PHE:HA	1.98	0.63
46:K:142:ASN:OD1	46:K:143:VAL:N	2.31	0.63
53:S2:527:C:H2'	53:S2:528:A:C8	2.33	0.63
53:S2:552:G:C4	53:S2:553:U:C5	2.87	0.63
53:S2:1085:C:C4	53:S2:1087:A:C1'	2.82	0.63
53:S2:1307:U:C2	53:S2:1308:U:C1'	2.82	0.63
53:S2:1409:A:C2	53:S2:1438:A:C2	2.87	0.63
53:S2:1540:G:C2	53:S2:1541:G:N7	2.66	0.63
69:Sa:2:THR:O	69:Sa:2:THR:OG1	2.15	0.63
81:SU:61:LEU:HD22	84:Sd:34:TYR:OH	1.99	0.63
12:S:176:PHE:CE2	32:5:4871:C:C5	2.87	0.63
32:5:1214:C:C2'	32:5:2114:G:C2	2.81	0.63
32:5:1266:G:N2	32:5:1268:G:C6	2.67	0.63
32:5:1279:A:C2	32:5:1280:C:N3	2.67	0.63
32:5:1392:A:N3	32:5:1393:G:C8	2.66	0.63
32:5:1488:G:C2	32:5:1489:G:N9	2.67	0.63
32:5:2368:A:C6	32:5:2788:U:C4	2.87	0.63
32:5:2645:G:N2	32:5:2646:C:C2	2.66	0.63
32:5:2738:C:N3	32:5:2741:U:C4	2.67	0.63
32:5:2826:U:C1'	32:5:2827:G:N1	2.62	0.63
32:5:3605:C:C2	32:5:3606:U:C6	2.87	0.63
32:5:3656:A:H4'	32:5:3747:A:C2	2.34	0.63
32:5:4192:A:C2	32:5:4204:C:N3	2.67	0.63
32:5:4333:C:C2'	32:5:4334:U:O5'	2.47	0.63
32:5:4368:G:N1	32:5:4369:A:C8	2.66	0.63
32:5:4996:C:C4	32:5:4997:G:C8	2.87	0.63
34:8:132:G:N2	34:8:133:G:C4	2.67	0.63
37:E:52:ARG:NH2	37:E:53:TYR:CE1	2.66	0.63
50:4:33:G:N2	50:4:34:C:C2	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:54:A:C2	53:S2:451:G:C2	2.86	0.63
53:S2:809:A:H2'	53:S2:810:A:O4'	1.99	0.63
53:S2:876:C:C4	53:S2:878:G:C8	2.87	0.63
53:S2:1223:A:OP1	73:SF:79:HIS:HA	1.99	0.63
53:S2:1281:G:N2	53:S2:1315:U:O4	2.30	0.63
53:S2:1405:A:C1'	53:S2:1580:A:C6	2.81	0.63
53:S2:1538:C:C2	53:S2:1539:U:C5	2.87	0.63
53:S2:1551:U:H2'	53:S2:1552:G:N9	2.14	0.63
53:S2:1755:C:N3	53:S2:1756:C:C6	2.66	0.63
62:SL:35:ARG:NH2	62:SL:55:TYR:O	2.31	0.63
63:SN:101:HIS:C	63:SN:101:HIS:CD2	2.76	0.63
11:R:124:TYR:CE1	32:5:2665:U:O4	2.52	0.63
32:5:138:G:C2'	32:5:139:G:H5'	2.28	0.63
32:5:235:A:N6	32:5:238:C:C4	2.67	0.63
32:5:246:G:N1	32:5:247:G:N7	2.47	0.63
32:5:493:G:C6	32:5:494:U:C5	2.87	0.63
32:5:1291:G:C2	32:5:1292:C:C5	2.87	0.63
32:5:1466:G:C2	32:5:1467:C:C5	2.86	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
32:5:1567:U:N3	32:5:1568:C:C5	2.67	0.63
32:5:2289:C:O2	32:5:2289:C:H2'	1.98	0.63
32:5:2301:G:N2	32:5:2302:C:N1	2.46	0.63
32:5:2529:A:N7	32:5:2532:C:C5	2.67	0.63
32:5:3629:A:O2'	53:S2:1721:U:N3	2.30	0.63
32:5:3663:A:H4'	32:5:3664:G:OP2	1.96	0.63
32:5:3731:C:O2	32:5:3731:C:H2'	1.97	0.63
32:5:4552:U:C2	32:5:4553:A:N7	2.67	0.63
33:7:8:G:C6	33:7:9:C:C4	2.86	0.63
38:F:120:PHE:CZ	38:F:217:SER:HA	2.33	0.63
41:W:44:ARG:HH11	41:W:44:ARG:HG3	1.62	0.63
48:z:344:PRO:O	48:z:346:SER:HB3	1.99	0.63
53:S2:26:U:O2	53:S2:27:A:C8	2.48	0.63
53:S2:29:G:N2	53:S2:30:C:C2	2.67	0.63
53:S2:92:A:C5	53:S2:447:A:N3	2.66	0.63
53:S2:121:U:O2	53:S2:122:G:C8	2.52	0.63
53:S2:145:G:H2'	53:S2:146:G:O4'	1.98	0.63
53:S2:309:G:N3	53:S2:310:C:C6	2.67	0.63
53:S2:309:G:OP2	53:S2:309:G:H4'	1.96	0.63
53:S2:379:C:N3	53:S2:380:G:C5	2.67	0.63
53:S2:422:U:O2'	53:S2:423:U:O4'	2.08	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:475:C:N3	53:S2:476:A:N7	2.47	0.63
53:S2:672:A:O2'	53:S2:674:C:OP2	2.16	0.63
53:S2:805:U:C2	53:S2:806:U:C5	2.86	0.63
53:S2:996:A:N6	63:SN:113:PHE:CZ	2.65	0.63
53:S2:1126:G:N2	53:S2:1127:C:C2	2.66	0.63
53:S2:1292:C:C5	85:Sf:150:PHE:HB2	2.33	0.63
53:S2:1308:U:O2	53:S2:1309:C:C6	2.52	0.63
53:S2:1527:C:N4	53:S2:1528:G:C5	2.67	0.63
53:S2:1595:U:H3	53:S2:1596:U:H6	1.46	0.63
53:S2:1605:G:H3'	53:S2:1606:G:O4'	1.98	0.63
53:S2:1709:G:N1	53:S2:1710:C:C4	2.66	0.63
53:S2:1841:C:C2	53:S2:1842:C:H5	2.17	0.63
54:SA:200:ASP:OD2	78:SR:86:PRO:O	2.17	0.63
57:SE:161:GLN:HB3	57:SE:170:THR:O	1.99	0.63
60:SI:114:GLU:O	60:SI:136:ILE:HG21	1.99	0.63
75:SM:19:GLN:HG2	75:SM:88:TRP:CB	2.28	0.63
82:SZ:51:ASP:OD2	82:SZ:54:THR:HG23	1.99	0.63
23:e:35:TRP:HE1	23:e:37:LYS:HA	1.62	0.62
32:5:1251:C:N3	32:5:1252:C:C5	2.67	0.62
32:5:2021:G:C6	32:5:2022:C:C4	2.87	0.62
32:5:2690:C:N3	32:5:2691:U:C6	2.67	0.62
32:5:3621:A:H1'	32:5:4655:A:H2	1.64	0.62
32:5:4069:U:O2	32:5:4070:U:C5	2.52	0.62
32:5:4077:A:C8	32:5:4078:C:C6	2.87	0.62
32:5:4093:G:H2'	32:5:4094:G:C5'	2.29	0.62
32:5:4737:G:C5	32:5:4963:G:N2	2.67	0.62
32:5:5030:U:O2	32:5:5031:G:C8	2.52	0.62
33:7:17:C:O2	33:7:18:C:C6	2.51	0.62
39:I:76:MET:HE1	39:I:140:THR:HG21	1.79	0.62
53:S2:52:G:C4	53:S2:53:C:C6	2.86	0.62
53:S2:139:C:O2'	53:S2:140:C:O3'	2.17	0.62
53:S2:570:C:N3	53:S2:571:U:C5	2.66	0.62
53:S2:1149:A:C4	53:S2:1151:G:C8	2.86	0.62
53:S2:1316:C:O2	53:S2:1317:C:C5	2.50	0.62
53:S2:1593:C:N3	53:S2:1594:A:C8	2.67	0.62
53:S2:1742:C:C2	53:S2:1743:G:C8	2.87	0.62
53:S2:1841:C:O2	53:S2:1841:C:H2'	1.99	0.62
54:SA:32:PHE:C	54:SA:32:PHE:CD1	2.77	0.62
61:SJ:91:LYS:HG3	61:SJ:96:TYR:CE2	2.34	0.62
63:SN:128:TYR:C	63:SN:128:TYR:CD1	2.77	0.62
87:S1:5:GLN:O	87:S1:6:THR:CB	2.47	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:207:VAL:HG12	32:5:3919:C:H5'	1.81	0.62
9:O:91:LYS:HA	32:5:432:U:O4	1.99	0.62
24:f:76:ARG:HE	24:f:85:ARG:NH2	1.97	0.62
32:5:293:G:C8	32:5:297:U:H1'	2.34	0.62
32:5:422:C:N3	32:5:423:G:C8	2.67	0.62
32:5:1286:C:C2	32:5:1287:G:C8	2.86	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
32:5:1529:G:H21	42:j:49:TRP:HZ2	1.47	0.62
32:5:1556:C:N3	32:5:1557:C:H5	1.86	0.62
32:5:1669:A:H4'	32:5:1685:G:N2	2.14	0.62
32:5:1725:U:C6	32:5:1725:U:H5''	2.34	0.62
32:5:2277:C:O2	32:5:2277:C:C2'	2.46	0.62
32:5:2284:G:H2'	32:5:2285:A:O4'	1.98	0.62
32:5:2394:G:N2	32:5:2820:C:C5	2.67	0.62
32:5:2532:C:N3	32:5:2533:C:N4	2.46	0.62
32:5:2645:G:C6	32:5:2646:C:C5	2.87	0.62
32:5:4077:A:N7	32:5:4078:C:C6	2.66	0.62
32:5:4724:A:C6	32:5:4725:C:C4	2.87	0.62
32:5:4984:C:N3	32:5:4985:U:C5	2.67	0.62
37:E:184:ARG:NH2	37:E:210:ASP:OD1	2.32	0.62
49:3:16:U:H3	49:3:59:A:N6	1.97	0.62
53:S2:404:G:C2	53:S2:405:G:N9	2.66	0.62
53:S2:449:A:C2	53:S2:452:G:C8	2.85	0.62
53:S2:1099:G:N1	53:S2:1100:A:C8	2.67	0.62
53:S2:1144:A:H1'	53:S2:1199:A:O2'	1.99	0.62
53:S2:1204:A:C4	53:S2:1205:C:N3	2.67	0.62
53:S2:1249:C:C6	53:S2:1250:A:N7	2.60	0.62
53:S2:1434:C:C3'	53:S2:1435:C:O4'	2.47	0.62
53:S2:1537:A:O2'	53:S2:1604:G:H5'	1.99	0.62
53:S2:1599:U:P	82:SZ:80:ARG:NH1	2.56	0.62
58:SG:223:LYS:O	58:SG:227:GLN:N	2.32	0.62
32:5:37:U:C4	32:5:38:A:C5	2.87	0.62
32:5:187:U:C6	32:5:245:C:N3	2.68	0.62
32:5:288:G:C2	32:5:289:C:C6	2.87	0.62
32:5:977:C:N3	32:5:978:G:C5	2.66	0.62
32:5:1093:C:N3	32:5:1094:G:C8	2.67	0.62
32:5:1271:G:H5''	32:5:1272:C:O4'	1.99	0.62
32:5:1445:U:N3	32:5:1446:C:C5	2.67	0.62
32:5:1488:G:C5	32:5:1489:G:C8	2.87	0.62
32:5:1856:C:O2	32:5:1856:C:H2'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2508:U:O2	32:5:2508:U:H2'	1.99	0.62
32:5:2791:C:N3	32:5:2792:C:C5	2.68	0.62
32:5:3894:A:O4'	32:5:4979:A:N1	2.33	0.62
32:5:4093:G:H3'	32:5:4094:G:H5'	1.80	0.62
32:5:4344:U:O2	32:5:4344:U:H2'	1.99	0.62
32:5:4480:A:N1	32:5:4481:U:C6	2.67	0.62
32:5:4744:A:N1	32:5:4745:G:C5	2.66	0.62
48:z:160:TYR:CD2	48:z:179:PHE:HZ	2.16	0.62
48:z:194:ARG:HD2	48:z:195:HIS:CE1	2.34	0.62
53:S2:113:G:N3	53:S2:293:C:C5	2.67	0.62
53:S2:403:G:N1	53:S2:404:G:C8	2.67	0.62
53:S2:458:A:C2	53:S2:459:C:H1'	2.34	0.62
53:S2:842:C:N3	53:S2:843:C:C5	2.66	0.62
53:S2:1108:G:O2'	53:S2:1109:C:H5'	1.99	0.62
53:S2:1114:U:C4	53:S2:1119:A:C6	2.87	0.62
53:S2:1129:G:H3'	53:S2:1130:G:C8	2.34	0.62
53:S2:1131:G:N2	53:S2:1132:C:C2	2.67	0.62
53:S2:1189:A:C2	53:S2:1190:A:C5	2.87	0.62
53:S2:1287:A:C2	53:S2:1313:A:C4	2.87	0.62
53:S2:1294:G:H8	85:Sf:151:ASN:C	2.07	0.62
53:S2:1393:G:C2	53:S2:1394:G:N9	2.67	0.62
53:S2:1659:U:O2	53:S2:1659:U:H2'	1.99	0.62
53:S2:1831:A:C1'	53:S2:1851:A:H2'	2.29	0.62
79:SS:16:LEU:CD2	79:SS:71:MET:CE	2.77	0.62
32:5:145:G:N3	32:5:146:G:C8	2.67	0.62
32:5:181:C:C2	32:5:256:G:C2	2.87	0.62
32:5:1235:G:N2	32:5:1236:C:C5	2.67	0.62
32:5:1570:G:C6	32:5:1571:G:C8	2.87	0.62
32:5:1617:G:C4	32:5:1618:G:C8	2.87	0.62
32:5:1750:G:N1	32:5:1751:A:N7	2.48	0.62
32:5:1900:C:C2	32:5:1901:C:C5	2.88	0.62
32:5:2384:U:C2	32:5:2385:U:C5	2.87	0.62
32:5:3710:G:C5	32:5:3711:A:N1	2.67	0.62
32:5:3813:A:C2	32:5:4539:U:O4'	2.52	0.62
32:5:3914:U:C2	32:5:4378:A:N6	2.67	0.62
34:8:108:A:N3	34:8:112:G:C2	2.67	0.62
48:z:381:SER:CB	50:4:207:C:H1'	2.29	0.62
50:4:59:A:C5	50:4:288:G:N2	2.67	0.62
50:4:143:C:H42	50:4:154:G:H1	1.46	0.62
53:S2:42:A:N3	53:S2:426:A:C5	2.67	0.62
53:S2:477:G:C2	53:S2:478:G:C8	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:751:G:N1	53:S2:791:C:O2	2.33	0.62
53:S2:795:A:C2	53:S2:796:G:C6	2.87	0.62
53:S2:832:G:C5	53:S2:833:C:C5	2.88	0.62
53:S2:900:C:O2	53:S2:901:G:C8	2.53	0.62
53:S2:1261:C:C5	53:S2:1262:C:C5	2.88	0.62
53:S2:1307:U:C4	53:S2:1308:U:C6	2.88	0.62
53:S2:1588:A:C2	53:S2:1589:A:C6	2.88	0.62
57:SE:108:ARG:O	57:SE:108:ARG:HG3	1.98	0.62
69:Sa:74:CYS:SG	90:Sa:101:ZN:ZN	1.86	0.62
79:SS:62:ASP:O	79:SS:66:ARG:HG3	2.00	0.62
1:A:207:VAL:HG12	32:5:3919:C:C5'	2.28	0.62
8:N:199:GLN:OE1	8:N:199:GLN:HA	1.99	0.62
32:5:1049:C:C2	32:5:1050:C:C5	2.86	0.62
32:5:1277:G:C6	32:5:1278:C:C5	2.87	0.62
32:5:1987:C:O2	32:5:1987:C:H2'	1.99	0.62
32:5:2314:G:C6	32:5:2326:G:C5	2.88	0.62
32:5:2327:G:N2	32:5:2328:G:N9	2.48	0.62
32:5:2366:A:H2	32:5:3851:U:C1'	2.11	0.62
32:5:2521:G:H2'	32:5:2522:G:O4'	2.00	0.62
32:5:2567:G:N2	32:5:2568:C:C2	2.68	0.62
32:5:3763:A:H2'	32:5:3764:U:O4'	1.99	0.62
32:5:4269:G:C2	32:5:4270:C:N1	2.67	0.62
32:5:4997:G:C6	32:5:4998:G:C5	2.88	0.62
33:7:51:G:N1	33:7:52:C:C4	2.67	0.62
34:8:95:A:C6	34:8:96:C:C5	2.87	0.62
37:E:153:HIS:CE1	37:E:180:VAL:HG22	2.34	0.62
50:4:18:G:C4	50:4:19:C:C5	2.88	0.62
50:4:119[A]:A:N6	50:4:231[A]:A:H61	1.97	0.62
53:S2:501:C:O2	53:S2:501:C:H3'	1.98	0.62
53:S2:646:G:C5	53:S2:647:U:C5	2.88	0.62
53:S2:924:G:C6	53:S2:925:G:C8	2.88	0.62
53:S2:1590:C:C6	53:S2:1591:C:C6	2.88	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
13:T:158:PHE:CE1	13:T:160:ALA:HB2	2.35	0.62
16:X:117:TYR:O	16:X:119:ILE:CB	2.43	0.62
32:5:57:G:N2	32:5:58:G:C2	2.67	0.62
32:5:424:U:O2	32:5:424:U:H2'	1.97	0.62
32:5:494:U:C2	32:5:495:C:C6	2.87	0.62
32:5:713:C:H42	32:5:955:G:H1	1.48	0.62
32:5:722:G:H21	36:C:343:GLN:HE22	1.46	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:909:A:N1	32:5:910:G:N7	2.46	0.62
32:5:1204:C:O2	32:5:1205:G:C8	2.52	0.62
32:5:1211:G:C2	32:5:1212:G:C5	2.87	0.62
32:5:1515:A:C2	32:5:1516:G:H1'	2.34	0.62
32:5:1887:G:C6	32:5:1890:G:O6	2.53	0.62
32:5:1899:G:C8	32:5:2278:G:N2	2.67	0.62
32:5:2020:U:O2	32:5:2021:G:C8	2.53	0.62
32:5:2532:C:N3	32:5:2533:C:C5	2.67	0.62
32:5:2562:G:N2	32:5:2564:G:C8	2.68	0.62
32:5:3591:C:N4	32:5:3592:G:C8	2.68	0.62
32:5:3890:A:N7	32:5:4571:A:H1'	2.14	0.62
32:5:3894:A:C2	32:5:4567:G:C2	2.88	0.62
32:5:3911:C:H5''	32:5:4197:G:O2'	2.00	0.62
32:5:3938:G:C6	32:5:4077:A:C2	2.88	0.62
32:5:4079:C:O2	32:5:4079:C:H2'	1.98	0.62
32:5:4123:C:O2	32:5:4124:G:C8	2.52	0.62
32:5:4191:G:N2	32:5:4374:U:O4'	2.32	0.62
32:5:4314:C:C4	32:5:4315:A:N7	2.67	0.62
32:5:4550:G:N1	32:5:4551:U:C5	2.68	0.62
32:5:4742:G:C2	32:5:4743:G:C8	2.88	0.62
34:8:82:A:N1	34:8:83:C:H5''	2.15	0.62
35:B:58:ARG:HD3	35:B:285:TYR:CE1	2.34	0.62
35:B:92:TYR:CE2	35:B:101:THR:HB	2.35	0.62
37:E:95:ASP:OD1	37:E:96:LYS:N	2.32	0.62
48:z:69:LEU:C	48:z:71:LYS:H	2.07	0.62
50:4:235:G:O2'	50:4:236:U:O5'	2.18	0.62
53:S2:94:G:O2'	53:S2:508:A:O2'	2.13	0.62
53:S2:430:C:N3	53:S2:431:G:N7	2.47	0.62
53:S2:841:G:C6	53:S2:842:C:N4	2.67	0.62
53:S2:1270:G:H2'	53:S2:1271:C:O4'	2.00	0.62
53:S2:1568:C:H2'	53:S2:1569:A:C8	2.35	0.62
53:S2:1683:C:N3	53:S2:1684:C:C5	2.67	0.62
56:SC:230:THR:HG23	56:SC:236:PHE:CE2	2.35	0.62
73:SF:140:ASP:CG	83:Sc:56:LEU:HD21	2.25	0.62
75:SM:32:ALA:HB2	75:SM:112:LYS:HD3	1.80	0.62
79:SS:38:ARG:NH2	80:ST:45:LEU:HD13	2.13	0.62
84:Sd:41:GLN:OE1	84:Sd:41:GLN:N	2.33	0.62
7:M:17:PHE:CE1	32:5:1921:C:H2'	2.34	0.62
7:M:91:TRP:HE1	32:5:4871:C:H3'	1.65	0.62
9:O:16:LEU:HD11	9:O:83:THR:HG21	1.82	0.62
10:Q:37:ARG:HG2	10:Q:37:ARG:HH21	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:R:151:ARG:HH12	62:SL:118:ARG:CD	2.12	0.62
15:V:100:ASP:N	15:V:100:ASP:OD1	2.33	0.62
32:5:21:G:C6	34:8:36:G:C2	2.88	0.62
32:5:209:U:C2	32:5:233:U:N3	2.68	0.62
32:5:246:G:N3	32:5:247:G:C8	2.67	0.62
32:5:398:A:C2	32:5:399:G:C8	2.87	0.62
32:5:690:C:N3	32:5:691:C:C6	2.68	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
32:5:1316:G:C1'	32:5:2348:G:H21	2.13	0.62
32:5:1393:G:H2'	32:5:1394:G:C5'	2.29	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
32:5:1743:A:C6	32:5:1744:U:C5	2.87	0.62
32:5:1990:A:C2'	32:5:1991:A:C4'	2.67	0.62
32:5:2292:C:N3	32:5:2293:U:C5	2.67	0.62
32:5:2445:C:O2	32:5:2445:C:H2'	1.98	0.62
32:5:2496:G:C5	32:5:2497:C:C5	2.88	0.62
32:5:2498:C:C2	32:5:2499:C:C6	2.88	0.62
32:5:2540:C:C2	32:5:2541:G:C8	2.87	0.62
32:5:2758:G:H2'	32:5:2759:G:C8	2.34	0.62
32:5:3635:A:C6	32:5:3636:C:C1'	2.82	0.62
32:5:3656:A:O4'	32:5:3747:A:C2	2.53	0.62
32:5:3702:A:H2'	32:5:3702:A:N3	2.13	0.62
32:5:3724:A:C6	32:5:3725:G:C6	2.88	0.62
32:5:3724:A:N6	32:5:3729:U:H3	1.98	0.62
32:5:4322:G:N2	32:5:4326:G:C6	2.68	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
32:5:4759:C:H2'	32:5:4760:G:O4'	2.00	0.62
39:I:47:PRO:CA	39:I:171:TRP:HE1	2.13	0.62
48:z:377:THR:CG2	50:4:194:G:H5'	2.18	0.62
49:3:56:C:O3'	49:3:57:G:P	2.58	0.62
53:S2:12:U:H2'	53:S2:13:C:H6	1.65	0.62
53:S2:64:A:C6	53:S2:82:G:N1	2.67	0.62
53:S2:104:A:C5	53:S2:105:U:C6	2.88	0.62
53:S2:399:C:C4'	67:SX:11:ARG:NH1	2.63	0.62
53:S2:632:C:N3	53:S2:633:C:C5	2.68	0.62
53:S2:955:A:H61	53:S2:969:U:C5'	2.05	0.62
53:S2:1135:C:N3	53:S2:1136:U:C5	2.66	0.62
53:S2:1274:G:N7	74:SK:43:LEU:HD22	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:SZ:57:LYS:HA	82:SZ:60:LYS:HB2	1.80	0.62
1:A:40:TYR:CE1	32:5:4117:U:N3	2.67	0.62
5:J:75:ARG:NH1	33:7:42:A:N9	2.47	0.62
11:R:172:ARG:CD	53:S2:909:G:P	2.85	0.62
11:R:172:ARG:HG3	53:S2:909:G:OP1	1.98	0.62
32:5:55:G:C2	32:5:56:A:N9	2.67	0.62
32:5:199:G:C4	32:5:201:C:C5	2.87	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
32:5:1268:G:C2	32:5:1270:A:N7	2.65	0.62
32:5:2086:G:N2	32:5:2272:C:N3	2.48	0.62
32:5:2107:C:C5	32:5:2126:G:N2	2.68	0.62
32:5:2509:C:C2	32:5:2510:G:N7	2.68	0.62
32:5:2539:C:C2	32:5:2540:C:C5	2.88	0.62
32:5:3694:U:C2	32:5:3695:U:C6	2.87	0.62
32:5:3848:U:O2	32:5:3849:A:C8	2.52	0.62
32:5:4255:A:C6	32:5:4256:A:C2	2.87	0.62
32:5:4510:A:O2'	32:5:4511:A:C8	2.50	0.62
32:5:4647:G:C2	32:5:4648:A:C8	2.88	0.62
33:7:51:G:C6	33:7:52:C:N4	2.68	0.62
37:E:55:ARG:O	37:E:58:MET:O	2.17	0.62
39:I:101:LYS:HZ1	39:I:121:LYS:HE3	1.64	0.62
50:4:2:C:C2	50:4:3:C:C6	2.88	0.62
53:S2:309:G:N1	53:S2:310:C:C4	2.67	0.62
53:S2:468:A:C4	53:S2:469:A:C8	2.88	0.62
53:S2:923:G:C2	53:S2:924:G:C8	2.88	0.62
53:S2:961:G:N1	53:S2:962:A:C5	2.68	0.62
53:S2:1409:A:H5''	77:SQ:24:HIS:CE1	2.35	0.62
53:S2:1609:C:O2	53:S2:1610:G:N7	2.33	0.62
53:S2:1709:G:N2	53:S2:1710:C:C2	2.67	0.62
56:SC:200:ARG:HH21	56:SC:200:ARG:HG3	1.65	0.62
64:SO:117:ARG:HG2	83:Sc:62:GLU:OE2	2.00	0.62
83:Sc:14:VAL:CG2	83:Sc:32:VAL:HG12	2.14	0.62
2:D:123:VAL:HG13	2:D:248:ARG:HH22	1.65	0.62
8:N:162:ARG:NH1	32:5:56:A:O2'	2.33	0.62
12:S:120:ARG:HB2	12:S:122:HIS:HD2	1.64	0.62
32:5:187:U:C5	32:5:245:C:N3	2.68	0.62
32:5:491:G:N2	32:5:492:U:C4	2.67	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:992:C:O2	32:5:993:G:C8	2.53	0.62
32:5:1216:C:C2	32:5:1217:G:C8	2.88	0.62
32:5:1272:C:H5''	32:5:2122:G:C8	2.34	0.62
32:5:1308:C:N3	32:5:1309:C:C5	2.67	0.62
32:5:1465:G:C2	32:5:1466:G:C1'	2.83	0.62
32:5:1839:U:H3'	32:5:1840:G:H21	1.63	0.62
32:5:2279:A:N3	32:5:2279:A:H2'	2.14	0.62
32:5:2288:G:N3	32:5:2290:C:C6	2.67	0.62
32:5:3791:C:N3	32:5:3802:U:H6	1.98	0.62
32:5:4287:G:C6	32:5:4288:C:N4	2.68	0.62
32:5:4886:C:O2	32:5:4886:C:H2'	2.00	0.62
32:5:5000:G:C6	32:5:5001:U:C4	2.87	0.62
34:8:10:G:N1	34:8:11:C:C2	2.68	0.62
34:8:34:U:O2	34:8:34:U:O4'	2.14	0.62
35:B:388:PHE:O	35:B:390:GLY:N	2.33	0.62
45:r:7:TRP:CZ3	45:r:11:ARG:HA	2.35	0.62
48:z:24:ASN:OD1	48:z:26:GLU:N	2.33	0.62
48:z:381:SER:OG	50:4:193:G:C2	2.52	0.62
49:3:16:U:N3	49:3:60:A:C2	2.68	0.62
50:4:16:G:N3	50:4:33:G:C6	2.68	0.62
53:S2:210:U:C2	53:S2:211:G:C8	2.88	0.62
53:S2:750:C:O2	53:S2:750:C:C2'	2.48	0.62
53:S2:804:U:C2	53:S2:805:U:C5	2.87	0.62
53:S2:997:A:H2'	53:S2:998:A:O4'	2.00	0.62
53:S2:1099:G:C6	53:S2:1100:A:C8	2.87	0.62
53:S2:1168:G:C2	53:S2:1192:U:O2	2.53	0.62
53:S2:1253:A:OP2	53:S2:1526:G:N2	2.32	0.62
53:S2:1411:G:N7	53:S2:1412:C:H1'	2.15	0.62
53:S2:1426:U:C2	53:S2:1427:C:C6	2.87	0.62
53:S2:1794:C:C4	53:S2:1795:G:N7	2.68	0.62
53:S2:1795:G:C2	53:S2:1796:G:C8	2.88	0.62
54:SA:24:HIS:NE2	78:SR:102:THR:CG2	2.63	0.62
54:SA:158:ASP:OD1	54:SA:159:ILE:N	2.33	0.62
54:SA:205:ARG:NH1	78:SR:84:TYR:HD2	1.97	0.62
60:SI:25:ARG:C	60:SI:27:TYR:HB2	2.23	0.62
64:SO:139:SER:O	64:SO:140:THR:O	2.17	0.62
78:SR:57:LEU:HD23	78:SR:60:ARG:HD3	1.80	0.62
80:ST:56:ARG:HD3	80:ST:79:TYR:HE2	1.65	0.62
5:J:107:PHE:CE1	5:J:130:PHE:CB	2.83	0.62
7:M:17:PHE:CD2	7:M:17:PHE:C	2.78	0.62
16:X:73:HIS:N	16:X:73:HIS:CD2	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:347:A:C2	32:5:348:G:C5	2.87	0.62
32:5:991:C:C2	32:5:992:C:C6	2.88	0.62
32:5:1177:U:H2'	32:5:1178:G:H8	1.64	0.62
32:5:1270:A:C6	32:5:1271:G:H1'	2.35	0.62
32:5:1373:A:N3	32:5:1374:G:C8	2.67	0.62
32:5:1444:G:H2'	32:5:1445:U:H6	1.64	0.62
32:5:1488:G:C6	32:5:1489:G:C8	2.88	0.62
32:5:1577:G:O2'	32:5:1612:G:H4'	2.00	0.62
32:5:1857:C:H1'	32:5:1892:A:N3	2.15	0.62
32:5:1948:G:C6	32:5:1949:U:C4	2.88	0.62
32:5:2573:A:H2'	32:5:2574:G:O4'	2.00	0.62
32:5:2602:G:C6	32:5:2603:C:C4	2.88	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
32:5:3847:C:C4	32:5:3848:U:C5	2.88	0.62
32:5:4530:U:H2'	32:5:4531:U:N3	2.14	0.62
32:5:4544:A:C8	32:5:4545:G:H1'	2.35	0.62
32:5:4626:A:H5'	35:B:53:MET:HE3	1.82	0.62
32:5:4769:G:H2'	32:5:4770:U:O4'	1.99	0.62
32:5:4771:C:C6	32:5:4772:C:C6	2.88	0.62
34:8:130:C:C4	34:8:131:G:C8	2.88	0.62
39:I:100:ASN:O	39:I:100:ASN:ND2	2.32	0.62
46:K:9:GLU:OE1	46:K:11:LYS:CD	2.48	0.62
48:z:84:VAL:HA	48:z:291:ILE:CD1	2.30	0.62
48:z:340:MET:HB2	48:z:341:LYS:N	2.15	0.62
50:4:132:U:H3	50:4:165:G:H1	1.47	0.62
53:S2:399:C:C4'	67:SX:11:ARG:HH12	2.12	0.62
53:S2:414:A:N1	53:S2:424:C:C2	2.68	0.62
53:S2:666:U:H2'	53:S2:667:U:H6	1.64	0.62
53:S2:751:G:C2	53:S2:792:C:O2	2.53	0.62
53:S2:925:G:N1	53:S2:926:A:C8	2.64	0.62
53:S2:963:A:C2	53:S2:964:A:C4	2.88	0.62
53:S2:1233:G:C6	53:S2:1234:C:C5	2.87	0.62
53:S2:1401:A:H2'	53:S2:1402:A:C8	2.35	0.62
53:S2:1431:G:C2	53:S2:1432:U:H1'	2.35	0.62
53:S2:1528:G:N1	53:S2:1529:C:N4	2.48	0.62
53:S2:1576:G:C2	53:S2:1577:G:C8	2.88	0.62
3:G:169:PHE:CE2	8:N:6:TYR:CB	2.83	0.61
11:R:131:VAL:CB	11:R:132:PHE:CZ	2.82	0.61
20:b:28:ARG:HB3	32:5:1805:A:N7	2.14	0.61
32:5:60:G:C6	32:5:61:A:N7	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:322:C:H2'	32:5:322:C:O2	2.00	0.61
32:5:348:G:C2	32:5:350:C:C5	2.88	0.61
32:5:470:A:C6	32:5:471:A:N9	2.68	0.61
32:5:662:C:C2	32:5:663:G:N7	2.68	0.61
32:5:674:G:C2	32:5:675:C:C6	2.88	0.61
32:5:1074:G:C2	32:5:1238:A:N1	2.68	0.61
32:5:1204:C:C2	32:5:1205:G:C8	2.88	0.61
32:5:1387:A:C4	32:5:1397:A:N6	2.63	0.61
32:5:1441:C:C4	32:5:1442:C:C5	2.88	0.61
32:5:1628:C:O2	32:5:1628:C:C2'	2.48	0.61
32:5:1896:A:C5	38:F:101:ASN:ND2	2.68	0.61
32:5:1945:G:C5	32:5:1946:G:C8	2.87	0.61
32:5:2367:A:C2	32:5:2368:A:C8	2.88	0.61
32:5:2467:U:H5''	32:5:2468:U:OP1	2.00	0.61
32:5:2606:G:N1	32:5:2607:C:C4	2.68	0.61
32:5:3732:A:N1	32:5:3733:A:C5	2.68	0.61
32:5:4313:A:C2	32:5:4314:C:C6	2.88	0.61
32:5:4653:C:H2'	32:5:4654:C:H6	1.65	0.61
34:8:116:C:H2'	34:8:116:C:O2	2.00	0.61
34:8:137:A:C2	34:8:138:C:C5	2.87	0.61
53:S2:114:G:C2	53:S2:383:G:N2	2.68	0.61
53:S2:638:C:O2'	53:S2:639:C:C5'	2.47	0.61
53:S2:672:A:C2	53:S2:1162:C:O2'	2.45	0.61
53:S2:906:U:O2	53:S2:907:G:N7	2.33	0.61
53:S2:1162:C:O2	53:S2:1162:C:H2'	2.01	0.61
53:S2:1348:G:C2	53:S2:1349:G:C8	2.88	0.61
53:S2:1398:G:N3	53:S2:1398:G:H2'	2.13	0.61
53:S2:1500:G:C2	53:S2:1501:C:C2	2.88	0.61
53:S2:1665:G:N7	80:ST:88:MET:HG3	2.14	0.61
32:5:920:C:H2'	32:5:921:C:O4'	2.00	0.61
32:5:1279:A:C4	32:5:1280:C:N4	2.68	0.61
32:5:1316:G:C1'	32:5:2348:G:N2	2.63	0.61
32:5:1321:G:C1'	32:5:1891:A:H62	2.13	0.61
32:5:1324:A:C2	32:5:3876:A:C2'	2.82	0.61
32:5:1665:C:O2'	32:5:1666:C:H5'	2.00	0.61
32:5:1735:U:O2	32:5:1736:A:C8	2.53	0.61
32:5:1949:U:O2	32:5:1950:U:H6	1.79	0.61
32:5:1973:G:O6	32:5:2002:A:C8	2.52	0.61
32:5:2382:A:N7	32:5:2830:G:O2'	2.31	0.61
32:5:2401:A:C2	32:5:2402:G:N7	2.67	0.61
32:5:2678:A:N1	32:5:2679:G:C5	2.67	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2738:C:C2	32:5:2741:U:C5	2.88	0.61
32:5:3894:A:H2'	32:5:3895:G:O4'	2.00	0.61
32:5:3923:A:C2	32:5:3924:C:C4	2.88	0.61
32:5:4080:C:O2	32:5:4080:C:C2'	2.47	0.61
32:5:4091:G:C5	32:5:4092:G:C8	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
32:5:4463:U:C4	32:5:4488:A:C5	2.88	0.61
32:5:4563:U:C4	32:5:4564:A:N6	2.68	0.61
32:5:4583:C:N3	32:5:4718:G:C2	2.67	0.61
48:z:219:TYR:CE1	48:z:236:PHE:HD1	2.18	0.61
48:z:401:GLY:HA2	50:4:185:C:O2	2.00	0.61
50:4:6:G:H2'	50:4:7:C:C6	2.36	0.61
50:4:57:G:N2	50:4:289:A:C2	2.67	0.61
53:S2:220:U:N3	53:S2:221:A:C8	2.68	0.61
53:S2:799:U:C4'	59:SH:110:THR:CG2	2.78	0.61
53:S2:831:G:N2	53:S2:844:U:C4	2.68	0.61
53:S2:841:G:N2	53:S2:842:C:C6	2.67	0.61
53:S2:862:A:H2'	53:S2:862:A:N3	2.15	0.61
53:S2:958:G:O2'	53:S2:959:G:O4'	2.18	0.61
53:S2:1053:C:O2	53:S2:1053:C:H2'	2.00	0.61
53:S2:1860:A:N6	53:S2:1862:G:C6	2.68	0.61
54:SA:116:PHE:C	54:SA:116:PHE:CD1	2.78	0.61
54:SA:116:PHE:C	54:SA:116:PHE:HD1	2.08	0.61
74:SK:64:TRP:CZ3	84:Sd:23:VAL:HG22	2.36	0.61
9:O:27:VAL:HG12	9:O:98:ALA:HB1	1.82	0.61
11:R:74:ARG:NH1	32:5:2891:U:C5	2.68	0.61
31:o:26:TYR:C	31:o:26:TYR:CD1	2.78	0.61
32:5:101:A:N1	32:5:102:G:C8	2.68	0.61
32:5:288:G:C2	32:5:289:C:C5	2.88	0.61
32:5:371:A:O2'	32:5:372:A:C5'	2.49	0.61
32:5:1290:G:C2	32:5:1291:G:N7	2.68	0.61
32:5:1617:G:N3	32:5:2513:A:C2	2.68	0.61
32:5:1646:A:H1'	42:j:49:TRP:CH2	2.35	0.61
32:5:1720:C:H2'	32:5:1721:G:O4'	2.00	0.61
32:5:2055:G:H5'	32:5:2056:G:C5'	2.28	0.61
32:5:2576:G:C2	32:5:2577:C:N1	2.68	0.61
32:5:2622:G:C6	32:5:2623:A:N7	2.68	0.61
32:5:4092:G:C2	32:5:4158:C:C2	2.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4765:G:H22	32:5:4869:U:H3	1.45	0.61
33:7:59:G:N1	33:7:60:G:C8	2.68	0.61
33:7:111:C:H2'	33:7:111:C:O2	2.00	0.61
34:8:131:G:C5	34:8:132:G:C8	2.88	0.61
45:r:106:LEU:O	45:r:107:ARG:C	2.43	0.61
48:z:237:LYS:HE2	48:z:268:SER:CB	2.29	0.61
48:z:339:ILE:C	48:z:342:MET:H	2.08	0.61
48:z:412:VAL:C	51:9:74:ARG:CZ	2.73	0.61
52:6:83:GLN:OE1	52:6:125:ARG:NH1	2.33	0.61
53:S2:122:G:C6	53:S2:123:G:N7	2.68	0.61
53:S2:474:G:N3	53:S2:475:C:C6	2.68	0.61
53:S2:638:C:O2'	53:S2:639:C:H5'	1.99	0.61
53:S2:803:C:C4	53:S2:804:U:C5	2.88	0.61
53:S2:1134:G:C6	53:S2:1135:C:C5	2.88	0.61
53:S2:1268:C:H2'	53:S2:1269:G:O4'	1.99	0.61
54:SA:55:TRP:O	54:SA:56:GLU:C	2.41	0.61
54:SA:89:LYS:HB3	54:SA:202:TYR:CZ	2.35	0.61
61:SJ:20:PHE:N	61:SJ:20:PHE:HD1	1.98	0.61
82:SZ:46:ASN:ND2	82:SZ:78:LYS:HB3	2.14	0.61
86:Sg:152:SER:OG	86:Sg:168:CYS:SG	2.58	0.61
11:R:95:TRP:HB3	11:R:99:MET:SD	2.40	0.61
18:Z:41:ALA:HB2	18:Z:77:TYR:HE1	1.66	0.61
32:5:44:A:C2	32:5:45:U:N1	2.69	0.61
32:5:348:G:N3	32:5:350:C:C5	2.68	0.61
32:5:438:G:C2	32:5:439:G:C8	2.89	0.61
32:5:1216:C:C4	32:5:1217:G:N7	2.68	0.61
32:5:1320:U:H2'	32:5:1320:U:O2	1.99	0.61
32:5:1899:G:N1	32:5:1900:C:N4	2.47	0.61
32:5:1948:G:H1	32:5:2034:G:H1	1.48	0.61
32:5:3692:A:N7	32:5:3693:U:C6	2.68	0.61
32:5:3692:A:N7	32:5:3693:U:C5	2.68	0.61
32:5:3717:A:O2'	32:5:3718:A:C8	2.54	0.61
32:5:4070:U:N3	32:5:4071:U:C5	2.69	0.61
32:5:4335:C:C2'	32:5:4336:A:O4'	2.46	0.61
32:5:4483:C:N3	32:5:4484:A:N7	2.48	0.61
32:5:4895:C:O2	32:5:4896:G:C5	2.54	0.61
32:5:5050:C:N3	32:5:5051:C:C5	2.68	0.61
32:5:5052:C:C4	32:5:5053:U:C5	2.88	0.61
33:7:33:U:C2	33:7:34:C:C6	2.88	0.61
33:7:42:A:C2	33:7:43:U:C5	2.88	0.61
34:8:75:G:N2	34:8:76:C:C2	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:504:G:H2'	53:S2:505:G:O5'	2.00	0.61
53:S2:580:U:N3	53:S2:581:U:C6	2.69	0.61
53:S2:604:A:C5	61:SJ:20:PHE:CE2	2.88	0.61
53:S2:752:G:N2	53:S2:790:C:C2	2.69	0.61
53:S2:868:G:C6	59:SH:115:LYS:HE3	2.36	0.61
53:S2:948:C:O2	53:S2:949:G:C8	2.53	0.61
53:S2:993:G:O6	69:Sa:15:ARG:HG2	2.00	0.61
53:S2:1049:A:C6	53:S2:1070:A:N3	2.69	0.61
53:S2:1103:C:OP1	55:SB:157:GLN:NE2	2.27	0.61
53:S2:1262:C:H2'	53:S2:1263:U:O4'	1.99	0.61
53:S2:1293:A:O5'	85:Sf:150:PHE:CD1	2.54	0.61
53:S2:1294:G:O4'	85:Sf:151:ASN:O	2.18	0.61
53:S2:1860:A:C6	53:S2:1862:G:N7	2.69	0.61
54:SA:24:HIS:NE2	78:SR:102:THR:HG22	2.14	0.61
54:SA:110:ASN:O	54:SA:116:PHE:CD2	2.52	0.61
86:Sg:245:ARG:HD3	86:Sg:247:TRP:CE3	2.35	0.61
1:A:89:TYR:O	1:A:100:ASN:ND2	2.34	0.61
4:H:41:ILE:HD11	4:H:69:THR:HG21	1.82	0.61
12:S:29:ARG:CZ	12:S:29:ARG:HB3	2.30	0.61
18:Z:77:TYR:HB2	21:c:39:ARG:CD	2.29	0.61
32:5:99:A:C6	32:5:100:C:C2	2.88	0.61
32:5:436:C:C2	32:5:437:G:C8	2.87	0.61
32:5:755:C:N3	32:5:756:G:C8	2.67	0.61
32:5:976:G:H22	32:5:1277:G:H22	1.48	0.61
32:5:1202:C:O2	32:5:1203:G:C8	2.54	0.61
32:5:1291:G:C2	32:5:1292:C:C4	2.88	0.61
32:5:2086:G:C2	32:5:2272:C:N3	2.68	0.61
32:5:2497:C:C4	32:5:2498:C:C5	2.88	0.61
32:5:2612:G:H2'	32:5:2613:C:O4'	1.99	0.61
32:5:3652:A:N7	32:5:3691:G:C2	2.68	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
32:5:3740:G:C5	32:5:3741:C:C6	2.89	0.61
32:5:4230:C:N3	32:5:4231:C:C5	2.69	0.61
32:5:4501:U:C5	32:5:4502:C:C6	2.89	0.61
32:5:4977:A:C2	32:5:4978:G:C4	2.88	0.61
33:7:57:C:H2'	33:7:58:A:O4'	2.00	0.61
39:I:101:LYS:HD2	39:I:101:LYS:N	2.16	0.61
48:z:237:LYS:NZ	48:z:263:VAL:O	2.33	0.61
48:z:297:MET:HE2	48:z:355:PHE:CD1	2.27	0.61
53:S2:98:C:C2	53:S2:409:C:C5	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:172:U:C2'	53:S2:172:U:O2	2.48	0.61
53:S2:217:A:C6	53:S2:218:U:C5	2.88	0.61
53:S2:500:A:H3'	53:S2:501:C:C5	2.34	0.61
53:S2:834:C:C2	53:S2:841:G:C2	2.88	0.61
53:S2:1098:C:C2	53:S2:1099:G:C8	2.88	0.61
53:S2:1508:A:N7	53:S2:1510:G:C8	2.67	0.61
53:S2:1863:A:C2	69:Sa:76:SER:HA	2.36	0.61
79:SS:8:LYS:HE3	79:SS:8:LYS:H	1.65	0.61
82:SZ:50:PHE:CZ	82:SZ:58:LEU:CD1	2.82	0.61
82:SZ:57:LYS:O	82:SZ:61:GLU:CA	2.48	0.61
83:Sc:60:GLU:CG	83:Sc:63:ARG:HE	1.98	0.61
8:N:124:ASP:OD1	8:N:125:SER:N	2.34	0.61
22:d:28:ASN:OD1	22:d:28:ASN:C	2.44	0.61
25:g:76:ARG:NH1	32:5:2583:C:OP2	2.33	0.61
32:5:427:A:O2'	32:5:428:G:H5'	2.01	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
32:5:515:C:C2	32:5:647:G:C2	2.88	0.61
32:5:661:C:N3	32:5:662:C:C5	2.69	0.61
32:5:1279:A:N3	32:5:1280:C:C4	2.69	0.61
32:5:1598:C:N3	32:5:1599:A:N7	2.48	0.61
32:5:1634:A:C4	32:5:1635:C:C6	2.87	0.61
32:5:1894:C:H2'	32:5:1895:G:O5'	1.99	0.61
32:5:1899:G:N2	32:5:1900:C:N3	2.48	0.61
32:5:2056:G:C6	32:5:2058:G:C8	2.88	0.61
32:5:2421:G:OP2	32:5:2828:U:H1'	1.99	0.61
32:5:2438:A:N6	32:5:2441:C:C4	2.68	0.61
32:5:3694:U:C2	32:5:3695:U:C5	2.88	0.61
32:5:3717:A:O2'	32:5:3718:A:P	2.58	0.61
32:5:4143:G:C5	32:5:4145:C:C6	2.88	0.61
32:5:4165:C:O2	32:5:4166:G:C8	2.52	0.61
32:5:4167:G:C6	32:5:4168:G:N7	2.69	0.61
32:5:4199:C:O2	32:5:4199:C:C2'	2.47	0.61
32:5:4426:C:C4	32:5:4427:G:C5	2.89	0.61
32:5:4997:G:N2	32:5:4998:G:H1'	2.16	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
53:S2:350:C:C2	53:S2:351:G:C8	2.88	0.61
53:S2:475:C:H2'	53:S2:475:C:O2	1.98	0.61
53:S2:608:C:N3	53:S2:609:U:C6	2.69	0.61
53:S2:651:U:HO2'	53:S2:652:U:C5'	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:654:A:C5	53:S2:655:A:C2	2.88	0.61
53:S2:870:A:N7	53:S2:915:G:N9	2.47	0.61
53:S2:927:C:N3	53:S2:928:G:N7	2.48	0.61
53:S2:1283:C:O4'	75:SM:91:LEU:HD13	2.00	0.61
53:S2:1640:A:N1	53:S2:1641:A:H1'	2.16	0.61
54:SA:158:ASP:OD2	65:SV:34:MET:HE2	2.00	0.61
73:SF:187:SER:OG	73:SF:188:TYR:N	2.34	0.61
73:SF:198:ARG:NH1	73:SF:202:SER:OG	2.34	0.61
78:SR:69:ILE:HD13	78:SR:71:ILE:HD11	1.81	0.61
78:SR:94:GLU:O	78:SR:95:ILE:HB	1.99	0.61
80:ST:52:TRP:HE3	80:ST:53:PHE:N	1.98	0.61
8:N:101:VAL:HG12	8:N:105:ARG:HD2	1.81	0.61
8:N:126:THR:C	8:N:127:TYR:CD1	2.78	0.61
8:N:150:TRP:HE3	8:N:151:ILE:N	1.98	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
32:5:247:G:N3	32:5:248:C:C6	2.68	0.61
32:5:269:G:H2'	32:5:269:G:N3	2.13	0.61
32:5:271:C:C4	32:5:272:U:H5	2.19	0.61
32:5:293:G:C4'	32:5:294:G:H8	2.13	0.61
32:5:446:C:N3	32:5:447:C:C5	2.69	0.61
32:5:917:A:C5	32:5:919:C:N4	2.68	0.61
32:5:1238:A:H2'	32:5:1239:C:C5	2.35	0.61
32:5:1298:C:C4	32:5:1299:G:N7	2.69	0.61
32:5:1334:A:C6	32:5:1335:G:C5	2.89	0.61
32:5:1427:A:C8	32:5:1428:U:O4'	2.53	0.61
32:5:2335:C:H2'	32:5:2335:C:O2	2.00	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:C8	2.89	0.61
32:5:3721:U:O2	32:5:3721:U:H2'	2.01	0.61
32:5:3741:C:C2	32:5:3742:G:N7	2.58	0.61
32:5:3754:G:H2'	32:5:3755:G:C5'	2.30	0.61
32:5:3938:G:H5'	32:5:3938:G:N3	2.16	0.61
32:5:4099:G:C4	32:5:4100:C:C6	2.89	0.61
32:5:4482:U:O2	32:5:4482:U:H2'	1.99	0.61
33:7:18:C:C4	33:7:19:C:C5	2.79	0.61
34:8:101:C:C4	34:8:102:G:C5	2.89	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
48:z:193:GLY:HA2	48:z:201:LEU:HD11	1.80	0.61
53:S2:72:C:H4'	53:S2:73:C:OP1	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:340:C:C4	53:S2:341:C:C4	2.88	0.61
53:S2:491:C:C1'	53:S2:574:A:N6	2.61	0.61
53:S2:1073:U:C2	53:S2:1074:C:C5	2.89	0.61
53:S2:1113:A:C2'	53:S2:1114:U:H3'	2.28	0.61
53:S2:1149:A:N1	53:S2:1151:G:C4	2.69	0.61
53:S2:1174:U:C2	53:S2:1175:G:C8	2.89	0.61
53:S2:1206:G:N2	53:S2:1835:A:OP1	2.34	0.61
53:S2:1808:U:O2	53:S2:1809:A:C8	2.54	0.61
54:SA:43:SER:HB2	78:SR:123:THR:HG22	1.83	0.61
61:SJ:20:PHE:N	61:SJ:20:PHE:CD1	2.69	0.61
81:SU:66:ARG:HD2	81:SU:77:TRP:CD1	2.36	0.61
25:g:93:ARG:HD3	32:5:4122:G:O4'	2.01	0.61
26:h:119:PHE:N	26:h:119:PHE:CD1	2.69	0.61
32:5:44:A:C4	32:5:45:U:C5	2.89	0.61
32:5:60:G:C4	32:5:61:A:C8	2.88	0.61
32:5:964:A:C8	32:5:964:A:C3'	2.83	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
32:5:1443:A:H2'	32:5:1444:G:O4'	2.00	0.61
32:5:1498:G:N2	32:5:1499:C:C2	2.69	0.61
32:5:1694:C:N3	32:5:1695:U:C5	2.69	0.61
32:5:1912:G:C4	32:5:1913:C:C5	2.88	0.61
32:5:2362:U:C4	32:5:3859:G:C2	2.88	0.61
32:5:2428:A:C6	32:5:2789:A:C2	2.88	0.61
32:5:2589:C:N4	32:5:2590:G:C6	2.68	0.61
32:5:2676:A:C2	32:5:2677:G:H1'	2.36	0.61
32:5:2901:G:N2	32:5:2902:G:H22	1.99	0.61
32:5:4136:G:C6	32:5:4137:C:C4	2.87	0.61
32:5:4239:A:C6	32:5:4240:G:C5	2.88	0.61
32:5:4276:G:N1	32:5:4277:G:N9	2.48	0.61
32:5:4687:A:N7	32:5:4698:C:C6	2.68	0.61
48:z:401:GLY:CA	50:4:185:C:O2	2.48	0.61
53:S2:29:G:C6	53:S2:646:G:C4	2.89	0.61
53:S2:205:G:H2'	53:S2:206:G:O4'	2.00	0.61
53:S2:216:C:O2	53:S2:216:C:O4'	2.18	0.61
53:S2:379:C:N4	53:S2:380:G:O6	2.34	0.61
53:S2:447:A:N3	53:S2:449:A:H1'	2.14	0.61
53:S2:474:G:C2	53:S2:475:C:C5	2.88	0.61
53:S2:634:A:N1	53:S2:635:G:N7	2.48	0.61
53:S2:1018:U:N3	53:S2:1019:C:H5	1.93	0.61
53:S2:1144:A:C2'	53:S2:1199:A:O2'	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1603:G:O6	79:SS:28:PHE:CE1	2.54	0.61
56:SC:60:TRP:HB3	56:SC:62:PRO:HD3	1.83	0.61
56:SC:104:ASP:OD2	56:SC:130:ILE:HB	2.01	0.61
58:SG:226:GLU:HA	58:SG:229:ALA:HB3	1.82	0.61
1:A:117:GLU:OE2	1:A:163:ARG:HD3	2.00	0.61
2:D:72:ASP:OD1	33:7:7:G:O2'	2.13	0.61
12:S:29:ARG:HH12	13:T:150:LEU:HA	1.65	0.61
32:5:29:G:C6	32:5:54:G:C4	2.89	0.61
32:5:216:C:O4'	32:5:216:C:P	2.59	0.61
32:5:278:G:N2	32:5:330:G:C8	2.69	0.61
32:5:441:G:C2	32:5:442:G:C5	2.89	0.61
32:5:466:A:N1	32:5:467:U:C4	2.69	0.61
32:5:748:G:C6	32:5:918:G:H1'	2.36	0.61
32:5:1212:G:N3	32:5:1213:G:C8	2.69	0.61
32:5:1263:A:H2'	32:5:1264:C:O4'	2.00	0.61
32:5:1627:G:H3'	32:5:1628:C:C6	2.35	0.61
32:5:1899:G:C6	32:5:1900:C:C5	2.89	0.61
32:5:2399:G:C2	32:5:2400:G:N7	2.69	0.61
32:5:2567:G:C5	32:5:2568:C:C5	2.89	0.61
32:5:2744:A:C6	32:5:2745:A:N6	2.69	0.61
32:5:3621:A:N7	32:5:4642:U:O2'	2.34	0.61
32:5:3800:A:N3	32:5:4496:A:H1'	2.16	0.61
32:5:3884:U:H2'	32:5:3885:G:O4'	2.01	0.61
32:5:4628:U:N3	32:5:4629:U:C5	2.69	0.61
32:5:4737:G:C2	32:5:4738:C:N3	2.69	0.61
33:7:23:A:O2'	33:7:24:C:C6	2.54	0.61
33:7:60:G:N1	33:7:61:G:C8	2.69	0.61
33:7:112:U:O2	33:7:113:G:H8	1.83	0.61
34:8:55:U:O4	34:8:62:A:N1	2.34	0.61
34:8:127:U:H2'	34:8:128:C:O4'	2.00	0.61
34:8:135:C:N3	34:8:136:U:C4	2.69	0.61
38:F:93:PHE:HB2	38:F:124:PHE:CD1	2.36	0.61
53:S2:165:G:O2'	53:S2:166:A:H5'	2.00	0.61
53:S2:185:G:C2	53:S2:186:C:C5	2.89	0.61
53:S2:401:A:C8	53:S2:402:C:C6	2.89	0.61
53:S2:752:G:C2	53:S2:791:C:O2	2.54	0.61
53:S2:1112:U:C4	53:S2:1113:A:C5	2.88	0.61
53:S2:1405:A:C4	53:S2:1406:G:C8	2.89	0.61
53:S2:1406:G:C5	53:S2:1407:U:C6	2.89	0.61
53:S2:1488:C:O2	53:S2:1490:G:C8	2.54	0.61
53:S2:1498:A:C2	53:S2:1499:U:H1'	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SA:84:GLN:HE21	54:SA:100:ALA:HB1	1.65	0.61
63:SN:125:LEU:HD22	63:SN:129:TYR:CE2	2.35	0.61
68:SY:23:MET:SD	68:SY:23:MET:N	2.74	0.61
2:D:275:GLN:NE2	32:5:1175:A:H1'	2.16	0.61
7:M:17:PHE:C	7:M:17:PHE:HD2	2.09	0.61
20:b:12:GLN:O	20:b:15:LYS:N	2.33	0.61
25:g:13:TYR:O	25:g:14:ASN:C	2.43	0.61
32:5:88:A:N1	32:5:97:G:H1'	2.16	0.61
32:5:458:C:C4	32:5:459:C:C5	2.88	0.61
32:5:664:G:N2	32:5:667:A:C6	2.69	0.61
32:5:1299:G:C6	32:5:1300:G:N7	2.69	0.61
32:5:1406:G:C2	32:5:1409:C:N4	2.69	0.61
32:5:1555:G:C6	32:5:1556:C:C5	2.88	0.61
32:5:1671:U:O4	32:5:1853:G:O2'	2.14	0.61
32:5:1758:G:N3	32:5:1759:G:C8	2.69	0.61
32:5:1829:G:C2	32:5:1830:G:C4	2.89	0.61
32:5:2645:G:N1	32:5:2646:C:C4	2.69	0.61
32:5:2688:G:C2	32:5:2689:C:C6	2.89	0.61
32:5:2783:A:C5	32:5:2784:C:C5	2.89	0.61
32:5:3656:A:N3	32:5:3657:U:C6	2.69	0.61
32:5:3907:G:C6	32:5:3909:C:C4	2.89	0.61
32:5:4258:C:N3	32:5:4259:C:C5	2.69	0.61
32:5:4589:A:C8	32:5:4589:A:H5'	2.35	0.61
32:5:4735:G:C2	32:5:4736:C:C2	2.89	0.61
34:8:64:U:N3	34:8:65:A:N6	2.49	0.61
35:B:235:TRP:CD1	35:B:267:ALA:HA	2.36	0.61
46:K:48:LYS:HG2	46:K:52:ASP:OD2	2.01	0.61
46:K:107:ASP:HA	46:K:143:VAL:HG22	1.81	0.61
50:4:194:G:H22	50:4:205:A:H2	1.49	0.61
53:S2:56:G:N1	53:S2:90:G:N3	2.49	0.61
53:S2:634:A:C2	53:S2:635:G:N7	2.68	0.61
53:S2:690:G:C5	53:S2:691:G:H1'	2.35	0.61
53:S2:975:G:C6	53:S2:976:G:N7	2.69	0.61
53:S2:1074:C:C2	53:S2:1075:C:C6	2.86	0.61
53:S2:1102:G:N1	53:S2:1103:C:C4	2.69	0.61
53:S2:1290:G:C2	53:S2:1291:A:C8	2.88	0.61
53:S2:1292:C:C2	85:Sf:150:PHE:CD1	2.89	0.61
63:SN:128:TYR:C	63:SN:128:TYR:HD1	2.08	0.61
73:SF:43:GLU:HB2	73:SF:45:TYR:CD2	2.34	0.61
5:J:75:ARG:NH1	33:7:42:A:H1'	2.13	0.60
11:R:131:VAL:HB	11:R:132:PHE:CE1	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:X:60:TYR:OH	32:5:17:A:OP2	2.18	0.60
32:5:312:G:H2'	32:5:313:U:O4'	2.01	0.60
32:5:320:C:C4	32:5:321:U:C5	2.89	0.60
32:5:465:G:C2	32:5:466:A:C8	2.89	0.60
32:5:469:C:H2'	32:5:470:A:O4'	2.01	0.60
32:5:471:A:C6	32:5:472:C:C5	2.89	0.60
32:5:650:C:H2'	32:5:651:C:C6	2.36	0.60
32:5:671:G:C2	32:5:672:C:C6	2.88	0.60
32:5:1357:C:N4	32:5:1380:G:N7	2.48	0.60
32:5:1358:G:H2'	32:5:1359:G:C8	2.36	0.60
32:5:1410:U:C5	32:5:1815:G:C2	2.89	0.60
32:5:1682:A:H3'	32:5:1683:U:H6	1.64	0.60
32:5:1685:G:C6	32:5:1686:C:N4	2.69	0.60
32:5:2268:A:O4'	32:5:2270:G:N7	2.34	0.60
32:5:2361:G:H22	32:5:3859:G:H3'	1.65	0.60
32:5:3755:G:N2	32:5:3770:U:C2	2.69	0.60
32:5:3802:U:N3	32:5:4498:U:O2'	2.30	0.60
32:5:4627:U:C2'	35:B:55:HIS:CE1	2.83	0.60
32:5:4628:U:C2	32:5:4629:U:C5	2.89	0.60
32:5:4687:A:N1	32:5:4688:C:C5	2.69	0.60
32:5:4755:G:N1	32:5:4876:U:C4	2.69	0.60
32:5:4984:C:C4	32:5:4985:U:C5	2.88	0.60
33:7:17:C:O2	33:7:17:C:H2'	2.01	0.60
33:7:29:C:C2	33:7:30:C:C5	2.89	0.60
48:z:339:ILE:O	48:z:342:MET:N	2.34	0.60
48:z:408:ARG:NE	50:4:206:G:H4'	2.14	0.60
53:S2:83:A:N1	53:S2:84:A:H1'	2.15	0.60
53:S2:436:G:C6	53:S2:458:A:N3	2.69	0.60
53:S2:697:G:C2	53:S2:734:C:C2	2.89	0.60
53:S2:818:A:C5	53:S2:819:G:C8	2.89	0.60
53:S2:858:A:C2	53:S2:859:G:C5	2.88	0.60
53:S2:949:G:C4	53:S2:950:C:C6	2.88	0.60
53:S2:1073:U:C2	53:S2:1074:C:C6	2.89	0.60
53:S2:1175:G:C6	53:S2:1176:G:C5	2.89	0.60
53:S2:1709:G:N3	53:S2:1710:C:C6	2.68	0.60
53:S2:1771:G:N2	53:S2:1772:C:C2	2.69	0.60
73:SF:103:LEU:HD23	73:SF:178:ILE:HD13	1.82	0.60
19:a:40:HIS:NE2	32:5:39:A:C2	2.69	0.60
32:5:77:U:C4	32:5:335:A:C6	2.89	0.60
32:5:89:C:O2'	32:5:90:G:C5'	2.49	0.60
32:5:491:G:N2	32:5:663:G:C6	2.68	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:976:G:C2	32:5:977:C:N1	2.68	0.60
32:5:1211:G:C2	32:5:1212:G:N7	2.68	0.60
32:5:1291:G:N3	32:5:1292:C:C6	2.69	0.60
32:5:1398:A:H2'	32:5:1398:A:OP1	2.02	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
32:5:1599:A:H2'	32:5:1600:A:H5''	1.83	0.60
32:5:1781:U:C2	32:5:1782:U:C6	2.89	0.60
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
32:5:2020:U:C2	32:5:2021:G:C8	2.89	0.60
32:5:3785:A:C2	32:5:4536:C:C2'	2.84	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
32:5:4145:C:N3	32:5:4146:G:N7	2.48	0.60
32:5:4355:G:N1	32:5:4356:G:N7	2.48	0.60
32:5:4539:U:O2	32:5:4540:C:C6	2.54	0.60
33:7:59:G:N1	33:7:60:G:C4	2.69	0.60
33:7:93:G:C2	33:7:94:C:N1	2.69	0.60
49:3:19:U:C2	49:3:57:G:N2	2.69	0.60
50:4:22:C:O2'	50:4:58:G:N2	2.30	0.60
53:S2:310:C:N3	53:S2:311:C:C4	2.69	0.60
53:S2:340:C:C4	53:S2:341:C:N4	2.70	0.60
53:S2:409:C:O2	53:S2:409:C:H2'	2.01	0.60
53:S2:870:A:N6	53:S2:915:G:C2	2.69	0.60
53:S2:1434:C:H3'	53:S2:1435:C:O4'	2.01	0.60
53:S2:1508:A:C6	53:S2:1510:G:C8	2.89	0.60
53:S2:1717:C:C2	53:S2:1817:G:C2	2.89	0.60
53:S2:1808:U:C2	53:S2:1809:A:C8	2.89	0.60
53:S2:1850:A:H2'	53:S2:1851:A:C8	2.37	0.60
61:SJ:86:VAL:HG21	61:SJ:105:PHE:CE1	2.36	0.60
73:SF:140:ASP:HB2	83:Sc:56:LEU:HD21	1.83	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
18:Z:49:TYR:HB3	18:Z:50:PRO:HD2	1.83	0.60
32:5:54:G:C2	32:5:55:G:C1'	2.84	0.60
32:5:54:G:C2	32:5:55:G:H1'	2.35	0.60
32:5:91:G:C8	32:5:93:G:C6	2.89	0.60
32:5:167:C:C2	32:5:269:G:N2	2.69	0.60
32:5:425:U:O4	34:8:9:A:N1	2.34	0.60
32:5:925:C:H2'	32:5:925:C:O2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:973:G:O6	32:5:1282:G:C2	2.53	0.60
32:5:1093:C:C2	32:5:1094:G:C8	2.89	0.60
32:5:1189:G:C6	32:5:1190:C:C4	2.89	0.60
32:5:1264:C:N3	32:5:1265:G:N7	2.49	0.60
32:5:1566:C:H2'	32:5:1567:U:C6	2.36	0.60
32:5:1899:G:C8	32:5:2278:G:C6	2.85	0.60
32:5:2328:G:C2	32:5:2329:U:C2	2.89	0.60
32:5:2420:A:C2	32:5:2427:G:C2	2.89	0.60
32:5:2439:G:C8	32:5:2777:G:C6	2.89	0.60
32:5:2495:U:O2	32:5:2496:G:H8	1.83	0.60
32:5:2515:G:C6	32:5:2516:G:C4	2.89	0.60
32:5:2830:G:N3	32:5:2831:G:C8	2.70	0.60
32:5:2833:A:HO2'	32:5:2834:C:C4'	2.09	0.60
32:5:3672:G:N7	32:5:3674:G:H1'	2.17	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'	2.02	0.60
32:5:4216:G:N1	32:5:4217:G:C5	2.69	0.60
32:5:4399:U:C4	32:5:4400:G:N7	2.69	0.60
36:C:288:ASP:OD1	36:C:290:SER:N	2.34	0.60
48:z:43:ASP:CB	48:z:258:GLY:HA3	2.31	0.60
50:4:51:G:C5	50:4:52:C:C5	2.89	0.60
50:4:57:G:N1	50:4:289:A:C6	2.69	0.60
50:4:212:C:O2'	50:4:214:A:OP2	2.18	0.60
50:4:234:A:O2'	50:4:235:G:H5'	2.00	0.60
53:S2:185:G:N3	53:S2:186:C:C6	2.68	0.60
53:S2:428:U:H4'	53:S2:429:C:OP2	2.00	0.60
53:S2:618:C:C4	53:S2:619:A:C5	2.87	0.60
53:S2:923:G:C6	53:S2:924:G:N7	2.69	0.60
53:S2:950:C:N3	53:S2:951:C:C5	2.70	0.60
53:S2:1121:G:C4	53:S2:1122:A:C8	2.89	0.60
53:S2:1283:C:H2'	53:S2:1283:C:O2	2.00	0.60
53:S2:1292:C:H2'	53:S2:1292:C:O2	2.00	0.60
53:S2:1431:G:N3	53:S2:1432:U:H1'	2.16	0.60
53:S2:1513:C:HO2'	53:S2:1514:G:H5'	1.66	0.60
53:S2:1839:U:O2	53:S2:1840:U:C6	2.54	0.60
53:S2:1840:U:O2	53:S2:1840:U:H2'	2.01	0.60
56:SC:190:SER:OG	56:SC:191:VAL:N	2.32	0.60
11:R:7:GLN:N	11:R:7:GLN:OE1	2.35	0.60
13:T:82:GLY:HA3	20:b:16:TRP:HB2	1.82	0.60
23:e:38:PRO:HB2	23:e:43:ASN:OD1	2.02	0.60
32:5:70:A:C1'	32:5:71:C:N4	2.64	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:190:G:C2	32:5:252:C:O2	2.54	0.60
32:5:497:G:C2	32:5:657:C:C2	2.90	0.60
32:5:673:C:C2	32:5:674:G:C8	2.90	0.60
32:5:1487:G:C2	32:5:1488:G:C1'	2.84	0.60
32:5:1504:G:H2'	32:5:1505:C:O4'	2.02	0.60
32:5:1669:A:H2'	32:5:1670:G:O4'	2.01	0.60
32:5:1726:U:C4	32:5:1727:U:C5	2.90	0.60
32:5:1779:U:C2	32:5:1780:A:C8	2.88	0.60
32:5:1844:G:C6	32:5:1845:U:C4	2.90	0.60
32:5:2366:A:C2	32:5:3851:U:C1'	2.85	0.60
32:5:2376:A:H2'	32:5:2377:C:O4'	2.02	0.60
32:5:2505:C:H1'	32:5:2506:G:C6	2.37	0.60
32:5:2507:A:C6	32:5:2508:U:N1	2.69	0.60
32:5:2612:G:C4	32:5:2613:C:C6	2.89	0.60
32:5:2669:C:O2'	32:5:2670:C:H6	1.84	0.60
32:5:3629:A:H4'	53:S2:1721:U:N3	2.15	0.60
32:5:3632:C:C4	32:5:3633:C:C5	2.89	0.60
32:5:3741:C:C4	32:5:3742:G:N7	2.69	0.60
32:5:4455:G:C5	32:5:4456:C:C5	2.89	0.60
32:5:4700:A:N6	32:5:4701:A:N6	2.50	0.60
32:5:5031:G:N1	32:5:5032:C:C4	2.70	0.60
32:5:5055:G:C2	32:5:5056:A:C5	2.89	0.60
34:8:96:C:O2	34:8:96:C:H2'	2.00	0.60
50:4:51:G:C6	50:4:52:C:C5	2.89	0.60
53:S2:372:U:H2'	53:S2:373:G:O5'	2.01	0.60
53:S2:476:A:H2	53:S2:488:U:O2	1.84	0.60
53:S2:494:C:C2	53:S2:495:U:C5	2.89	0.60
53:S2:1121:G:C5	53:S2:1122:A:C8	2.89	0.60
53:S2:1310:U:O5'	85:Sf:143:LYS:HE2	2.00	0.60
53:S2:1644:C:O2'	53:S2:1645:C:O4'	2.19	0.60
53:S2:1739:C:N3	53:S2:1740:C:C5	2.70	0.60
66:SW:77:PRO:HD2	66:SW:79:PHE:CZ	2.36	0.60
86:Sg:188:HIS:HB3	86:Sg:219:TRP:CE3	2.37	0.60
6:L:18:TRP:CH2	6:L:19:GLN:HG2	2.36	0.60
19:a:63:LEU:HD21	19:a:65:ARG:HE	1.66	0.60
22:d:86:VAL:C	22:d:87:ARG:HH12	2.10	0.60
32:5:27:C:O2'	32:5:60:G:C2'	2.50	0.60
32:5:30:C:H2'	32:5:31:U:C6	2.37	0.60
32:5:259:C:C4	32:5:260:C:C5	2.89	0.60
32:5:445:U:H2'	32:5:446:C:O4'	2.01	0.60
32:5:702:U:H2'	32:5:703:G:H4'	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:933:G:C5	32:5:940:C:C4	2.90	0.60
32:5:1280:C:O2'	32:5:1281:G:H3'	2.01	0.60
32:5:1466:G:N1	32:5:1467:C:C4	2.70	0.60
32:5:1563:A:C8	53:S2:678:U:O4'	2.52	0.60
32:5:1684:A:C5	32:5:1685:G:C8	2.89	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
32:5:1973:G:C6	32:5:2002:A:N7	2.69	0.60
32:5:2004:U:H2'	32:5:2005:G:O4'	2.00	0.60
32:5:2409:U:O4	32:5:2783:A:C6	2.55	0.60
32:5:2417:A:C2	32:5:2418:A:N7	2.69	0.60
32:5:2477:A:H2'	32:5:2478:C:H6	1.65	0.60
32:5:2577:C:H2'	32:5:2577:C:O2	2.02	0.60
32:5:2805:C:C4	32:5:2806:A:N7	2.69	0.60
32:5:3767:C:C5'	53:S2:1849:G:N7	2.53	0.60
32:5:3943:A:C6	32:5:3944:G:C5	2.89	0.60
32:5:4077:A:H8	32:5:4077:A:O5'	1.85	0.60
32:5:4229:U:O4	32:5:4230:C:C4	2.54	0.60
32:5:4498:U:N3	32:5:4500:U:OP2	2.34	0.60
32:5:4651:A:C2	32:5:4652:G:H1'	2.36	0.60
32:5:4719:G:O2'	32:5:4720:C:H4'	2.01	0.60
32:5:5006:U:C5	41:W:50:ASN:HB2	2.37	0.60
33:7:93:G:C6	33:7:94:C:C4	2.89	0.60
34:8:99:U:N3	34:8:100:U:C5	2.69	0.60
50:4:51:G:C6	50:4:52:C:C4	2.90	0.60
53:S2:340:C:N3	53:S2:341:C:C5	2.69	0.60
53:S2:949:G:C6	53:S2:950:C:C4	2.89	0.60
53:S2:964:A:O2'	53:S2:965:U:O5'	2.14	0.60
53:S2:1034:A:C2	53:S2:1082:A:C2	2.88	0.60
53:S2:1661:A:OP2	84:Sd:32:ARG:NH2	2.34	0.60
53:S2:1776:G:N3	53:S2:1777:G:C8	2.69	0.60
53:S2:1868:U:C4'	53:S2:1869:A:OP2	2.47	0.60
57:SE:11:ARG:O	57:SE:12:VAL:HB	2.02	0.60
66:SW:80:ASP:N	66:SW:80:ASP:OD1	2.34	0.60
3:G:166:LEU:CD1	32:5:150:U:O2	2.49	0.60
4:H:88:PHE:CE2	4:H:151:ILE:HB	2.35	0.60
8:N:11:TRP:CE3	8:N:19:MET:HE2	2.36	0.60
16:X:73:HIS:O	16:X:116:LEU:HD11	2.00	0.60
32:5:100:C:C6	32:5:101:A:H8	2.11	0.60
32:5:744:G:C2	32:5:745:G:C5	2.89	0.60
32:5:1249:C:C4	32:5:1250:C:C5	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1370:G:O3'	32:5:1371:A:O4'	2.19	0.60
32:5:1394:G:HO2'	32:5:1395:U:C5'	2.15	0.60
32:5:1421:G:C2	32:5:1422:G:C5	2.90	0.60
32:5:1950:U:C2	32:5:1951:G:N7	2.69	0.60
32:5:2089:G:N1	32:5:2263:A:C5	2.67	0.60
32:5:2272:C:O2'	32:5:2273:G:O5'	2.19	0.60
32:5:2315:G:N2	32:5:2316:G:C4	2.69	0.60
32:5:2327:G:N2	32:5:2328:G:C8	2.70	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
32:5:4138:C:C2	32:5:4147:G:C2	2.89	0.60
32:5:4482:U:C2	32:5:4483:C:H5	2.20	0.60
32:5:4886:C:N3	32:5:4887:C:H5	1.99	0.60
32:5:5035:U:C4	32:5:5036:C:C5	2.89	0.60
48:z:344:PRO:O	48:z:346:SER:CB	2.50	0.60
48:z:405:ARG:O	50:4:207:C:O4'	2.18	0.60
53:S2:70:G:C6	53:S2:71:G:C5	2.89	0.60
53:S2:300:U:C2	53:S2:301:A:C8	2.90	0.60
53:S2:401:A:C8	53:S2:402:C:C5	2.89	0.60
53:S2:437:G:C2	53:S2:457:C:O2	2.55	0.60
53:S2:796:G:H3'	53:S2:797:C:C5'	2.32	0.60
53:S2:1291:A:O2'	85:Sf:141:CYS:O	2.12	0.60
53:S2:1378:A:N6	54:SA:105:PRO:HA	2.16	0.60
53:S2:1589:A:H2'	53:S2:1590:C:C6	2.36	0.60
53:S2:1595:U:H2'	53:S2:1595:U:O2	2.00	0.60
61:SJ:132:GLN:HB2	61:SJ:134:HIS:HD2	1.67	0.60
79:SS:11:HIS:O	79:SS:12:ILE:HB	2.01	0.60
16:X:155:ILE:O	16:X:156:ILE:HB	2.01	0.60
32:5:27:C:C2	32:5:28:C:C6	2.88	0.60
32:5:90:G:N7	32:5:92:C:N1	2.49	0.60
32:5:209:U:C2	32:5:233:U:C5	2.89	0.60
32:5:382:G:H2'	32:5:383:A:H2'	1.83	0.60
32:5:750:U:N3	32:5:751:G:C8	2.70	0.60
32:5:992:C:N3	32:5:993:G:N7	2.49	0.60
32:5:1070:G:C4	32:5:1071:C:C6	2.89	0.60
32:5:1204:C:N3	32:5:1205:G:N7	2.49	0.60
32:5:1263:A:C6	32:5:1264:C:C4	2.90	0.60
32:5:1412:G:C2	32:5:1413:C:C4	2.90	0.60
32:5:1572:U:H3'	32:5:1573:G:H8	1.64	0.60
32:5:1618:G:N3	32:5:1619:G:C8	2.68	0.60
32:5:1776:A:C5	32:5:1777:C:C5	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1891:A:H2'	32:5:1892:A:C8	2.36	0.60
32:5:2036:C:H42	32:5:2037:C:H41	1.48	0.60
32:5:2463:G:N2	32:5:2464:C:N3	2.49	0.60
32:5:4481:U:N3	32:5:4482:U:C5	2.68	0.60
32:5:4896:G:N1	32:5:4897:G:C5	2.70	0.60
32:5:4933:C:N4	32:5:4934:A:N7	2.50	0.60
32:5:5020:G:C6	32:5:5021:C:C4	2.90	0.60
34:8:101:C:C2	34:8:102:G:C8	2.90	0.60
34:8:108:A:H2'	34:8:109:C:O4'	2.01	0.60
35:B:100:ARG:HB3	35:B:100:ARG:CZ	2.31	0.60
53:S2:70:G:N1	53:S2:80:G:C2	2.70	0.60
53:S2:533:A:C6	53:S2:534:G:N7	2.69	0.60
53:S2:818:A:N6	53:S2:819:G:C5	2.70	0.60
53:S2:993:G:C6	53:S2:994:C:C4	2.90	0.60
53:S2:1283:C:O2	53:S2:1283:C:C2'	2.49	0.60
53:S2:1392:U:N3	53:S2:1393:G:C8	2.70	0.60
53:S2:1572:C:N3	53:S2:1573:G:C8	2.69	0.60
53:S2:1810:U:C2	53:S2:1811:C:C6	2.89	0.60
55:SB:58:ALA:O	55:SB:60:ASP:N	2.35	0.60
59:SH:177:TYR:HE2	59:SH:185:VAL:HG21	1.67	0.60
86:Sg:17:TRP:HB3	86:Sg:303:THR:CA	2.30	0.60
3:G:53:ARG:O	32:5:4164:C:H4'	2.02	0.60
6:L:47:ALA:HB3	6:L:48:PRO:HD3	1.82	0.60
11:R:148:ASP:O	11:R:152:LYS:HB2	2.01	0.60
16:X:117:TYR:HD1	16:X:153:ILE:HG22	1.62	0.60
32:5:104:G:HO2'	32:5:1361:G:HO2'	1.49	0.60
32:5:158:A:C6	32:5:277:G:C5	2.89	0.60
32:5:161:G:N2	32:5:275:C:N3	2.46	0.60
32:5:330:G:C2	32:5:331:G:C5	2.90	0.60
32:5:471:A:N6	32:5:472:C:C5	2.69	0.60
32:5:1171:G:C6	32:5:1172:C:C4	2.90	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
32:5:1619: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
32:5:1912:G:N1	32:5:1913:C:C4	2.70	0.60
32:5:1929:A:N6	32:5:2054:U:N3	2.37	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
32:5:4271:A:H3'	32:5:4272:G:H21	1.66	0.60
32:5:4281:A:C5	32:5:4283:G:C8	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4333:C:H2'	32:5:4334:U:O5'	2.02	0.60
32:5:4470:G:N2	32:5:4486:C:C2	2.70	0.60
32:5:4880:C:O2'	32:5:4881:U:H5'	2.00	0.60
32:5:4982:A:C5	32:5:4983:C:C6	2.90	0.60
34:8:134:G:C6	34:8:135:C:C4	2.90	0.60
46:K:2:PRO:HD3	46:K:6:ASP:HB2	1.83	0.60
48:z:250:LEU:HD11	48:z:273:ILE:CD1	2.31	0.60
48:z:412:VAL:C	51:9:74:ARG:NE	2.60	0.60
49:3:38:C:O2	49:3:39:G:C8	2.50	0.60
50:4:25:U:C5	88:S4:59:ARG:NH1	2.70	0.60
53:S2:69:C:H2'	53:S2:70:G:C8	2.37	0.60
53:S2:140:C:O2'	53:S2:141:A:O4'	2.17	0.60
53:S2:999:G:N1	53:S2:1000:C:C5	2.70	0.60
53:S2:1034:A:C2'	53:S2:1035:A:O5'	2.49	0.60
53:S2:1066:U:O4	53:S2:1067:C:C5	2.55	0.60
53:S2:1185:C:C4	53:S2:1186:U:C5	2.90	0.60
53:S2:1350:U:C3'	54:SA:110:ASN:OD1	2.49	0.60
53:S2:1524:G:C6	53:S2:1525:C:C5	2.89	0.60
73:SF:121:PRO:C	73:SF:146:ARG:HD2	2.27	0.60
78:SR:100:PRO:HD3	78:SR:119:VAL:CG1	2.16	0.60
2:D:94:ASN:C	2:D:94:ASN:ND2	2.60	0.60
5:J:119:TYR:HE1	79:SS:12:ILE:HG12	1.67	0.60
8:N:120:TRP:CD1	8:N:121:VAL:N	2.70	0.60
11:R:120:TYR:CD1	11:R:120:TYR:C	2.80	0.60
17:Y:5:PRO:O	17:Y:6:PHE:HB2	2.02	0.60
17:Y:11:ARG:NE	36:C:200:ARG:HH22	1.99	0.60
32:5:12:A:N1	32:5:14:C:C4	2.70	0.60
32:5:209:U:N3	32:5:233:U:C5	2.70	0.60
32:5:218:A:C8	36:C:181:LYS:HG3	2.37	0.60
32:5:660:A:N1	32:5:661:C:C5	2.70	0.60
32:5:717:U:C4	32:5:718:C:C5	2.90	0.60
32:5:965:G:H2'	32:5:965:G:N3	2.17	0.60
32:5:1075:G:C6	32:5:1076:C:C4	2.90	0.60
32:5:1421:G:N1	32:5:1422:G:C5	2.70	0.60
32:5:1760:G:C5	32:5:1761:G:C8	2.89	0.60
32:5:1819:G:N2	32:5:1820:C:C2	2.69	0.60
32:5:1828:C:C2	32:5:1829:G:C8	2.89	0.60
32:5:1944:A:N6	32:5:1945:G:C5	2.70	0.60
32:5:2036:C:N4	32:5:2037:C:H41	1.99	0.60
32:5:2041:A:HO2'	32:5:4464:A:H2	1.47	0.60
32:5:2451:A:C6	32:5:2452:G:N9	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2453:A:N6	32:5:2454:U:C4	2.70	0.60
32:5:2607:C:C2	32:5:2608:G:N7	2.69	0.60
32:5:3711:A:H3'	32:5:3712:A:C5'	2.32	0.60
32:5:3727:A:O2'	32:5:3728:A:C5'	2.50	0.60
32:5:3945:A:C2	32:5:3946:G:C5	2.90	0.60
32:5:4071:U:O2	32:5:4072:C:C6	2.55	0.60
32:5:4187:G:H2'	32:5:4188:U:O4'	2.01	0.60
32:5:4312:U:C2	32:5:4313:A:C8	2.89	0.60
32:5:4518:A:N9	35:B:257:TRP:CH2	2.68	0.60
38:F:41:GLN:HA	38:F:41:GLN:HE21	1.66	0.60
46:K:86:LYS:C	46:K:104:ILE:HG21	2.27	0.60
47:q:184:SER:O	47:q:185:PHE:HB2	2.00	0.60
50:4:186:C:H5''	50:4:187:G:OP2	2.01	0.60
53:S2:381:C:C6	53:S2:381:C:O5'	2.55	0.60
53:S2:386:C:N3	53:S2:387:C:H5	1.92	0.60
53:S2:388:U:C2	53:S2:389:A:N7	2.70	0.60
53:S2:440:G:N2	53:S2:454:U:N3	2.49	0.60
53:S2:656:G:H21	53:S2:663:C:H5'	1.67	0.60
53:S2:823:U:C5	53:S2:824:C:H5	2.19	0.60
53:S2:993:G:N2	53:S2:994:C:H1'	2.17	0.60
53:S2:1289:U:C4	53:S2:1290:G:C5	2.90	0.60
53:S2:1317:C:N3	53:S2:1318:G:C8	2.70	0.60
53:S2:1392:U:N3	53:S2:1393:G:N7	2.50	0.60
53:S2:1563:G:N2	53:S2:1564:C:C2	2.69	0.60
53:S2:1610:G:C2	53:S2:1611:G:C4	2.90	0.60
53:S2:1707:U:O2	53:S2:1849:G:N2	2.35	0.60
4:H:117:PHE:C	4:H:117:PHE:CD1	2.78	0.60
10:Q:104:ARG:NH2	32:5:1353:G:N7	2.50	0.60
23:e:50:LYS:HB2	32:5:1884:C:OP1	2.02	0.60
32:5:120:A:H2	32:5:148:C:O2	1.85	0.60
32:5:711:A:N3	32:5:712:C:C6	2.70	0.60
32:5:737:C:C4	32:5:738:C:C5	2.90	0.60
32:5:1601:A:N7	32:5:3643:A:C8	2.69	0.60
32:5:2282:A:H2'	32:5:2283:G:C5'	2.32	0.60
32:5:2438:A:C5	32:5:2441:C:C5	2.89	0.60
32:5:2567:G:N1	32:5:2568:C:C4	2.70	0.60
32:5:3723:A:C4	32:5:3724:A:N7	2.70	0.60
32:5:4112:C:C4	32:5:4113:U:C5	2.89	0.60
32:5:4323:A:H3'	32:5:4324:A:H8	1.67	0.60
32:5:4426:C:C4	32:5:4427:G:C8	2.90	0.60
32:5:4508:C:N3	32:5:4512:U:H5	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4723:A:N3	32:5:4724:A:C8	2.69	0.60
32:5:4733:C:N4	32:5:4734:A:O2'	2.35	0.60
34:8:118:C:C2	34:8:119:C:C6	2.89	0.60
34:8:133:G:N2	34:8:134:G:C8	2.67	0.60
38:F:101:ASN:OD1	38:F:101:ASN:N	2.34	0.60
48:z:339:ILE:C	48:z:342:MET:N	2.59	0.60
53:S2:74:G:N2	53:S2:77:A:OP2	2.35	0.60
53:S2:497:C:N3	53:S2:506:G:C2	2.70	0.60
53:S2:508:A:C6	53:S2:509:G:H1'	2.36	0.60
53:S2:806:U:N3	53:S2:807:G:C8	2.70	0.60
53:S2:875:A:C5	53:S2:876:C:H5	2.10	0.60
53:S2:999:G:C5	53:S2:1000:C:C5	2.89	0.60
53:S2:1039:C:N3	53:S2:1040:G:N7	2.49	0.60
53:S2:1061:U:O2	53:S2:1061:U:H2'	2.02	0.60
53:S2:1137:U:H3	53:S2:1148:A:N6	2.00	0.60
53:S2:1180:C:H2'	53:S2:1180:C:O2	2.02	0.60
53:S2:1287:A:C6	53:S2:1314:U:C4	2.90	0.60
53:S2:1309:C:C2	85:Sf:143:LYS:NZ	2.66	0.60
53:S2:1413:G:C6	53:S2:1414:A:C8	2.90	0.60
53:S2:1660:C:O4'	53:S2:1660:C:O2	2.18	0.60
53:S2:1709:G:C6	53:S2:1710:C:C5	2.90	0.60
55:SB:60:ASP:C	55:SB:62:LEU:H	2.10	0.60
82:SZ:50:PHE:CE1	82:SZ:58:LEU:CD1	2.85	0.60
22:d:78:ARG:NH1	32:5:4636:U:O4	2.35	0.59
32:5:235:A:N1	32:5:238:C:C5	2.70	0.59
32:5:293:G:H4'	32:5:294:G:H8	1.67	0.59
32:5:328:A:C2	32:5:329:A:C5	2.90	0.59
32:5:516:C:N3	32:5:646:G:C2	2.70	0.59
32:5:665:C:O2	32:5:665:C:C2'	2.50	0.59
32:5:724:C:HO2'	32:5:945:U:HO2'	1.50	0.59
32:5:1321:G:N2	32:5:3876:A:O4'	2.35	0.59
32:5:1421:G:N3	32:5:1422:G:C8	2.70	0.59
32:5:1688:G:N2	32:5:1849:U:O2	2.35	0.59
32:5:1780:A:C2	32:5:1781:U:H1'	2.37	0.59
32:5:1866:U:O2'	32:5:1867:A:H8	1.81	0.59
32:5:1960:A:C2	47:q:14:PHE:CE2	2.90	0.59
32:5:2065:G:H2'	32:5:2066:C:O4'	2.01	0.59
32:5:2314:G:C5	32:5:2326:G:C4	2.90	0.59
32:5:2445:C:C2	32:5:2446:C:C5	2.90	0.59
32:5:2453:A:C6	32:5:2454:U:C4	2.90	0.59
32:5:2597:G:N1	32:5:2749:C:C2	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2714:G:C2	32:5:2715:G:N7	2.69	0.59
32:5:2756:G:C2	32:5:2757:A:C5	2.90	0.59
32:5:2783:A:N3	32:5:2784:C:C6	2.69	0.59
32:5:5051:C:N3	32:5:5052:C:C5	2.70	0.59
35:B:291:TYR:CZ	35:B:327:THR:HA	2.37	0.59
45:r:7:TRP:CD1	45:r:38:PHE:CD1	2.91	0.59
49:3:31:C:H2'	49:3:32:C:H6	1.66	0.59
50:4:49:A:H2'	50:4:50:G:O4'	2.01	0.59
50:4:215:A:H8	50:4:215:A:O5'	1.85	0.59
53:S2:98:C:O2	53:S2:409:C:C6	2.54	0.59
53:S2:381:C:O2'	53:S2:382:C:C6	2.47	0.59
53:S2:426:A:C6	53:S2:427:U:C5	2.90	0.59
53:S2:504:G:O2'	53:S2:505:G:C5'	2.50	0.59
53:S2:793:G:O6	53:S2:794:A:C4	2.55	0.59
53:S2:909:G:N1	53:S2:910:G:C5	2.70	0.59
53:S2:955:A:C5	53:S2:969:U:C5	2.90	0.59
53:S2:964:A:C2	53:S2:965:U:O4	2.55	0.59
53:S2:1030:A:N3	53:S2:1031:A:C8	2.70	0.59
53:S2:1258:A:N1	53:S2:1663:A:C5	2.70	0.59
53:S2:1406:G:H2'	53:S2:1407:U:C1'	2.32	0.59
53:S2:1435:C:C4	53:S2:1436:C:C5	2.89	0.59
53:S2:1455:A:N3	53:S2:1455:A:H2'	2.17	0.59
53:S2:1563:G:N3	53:S2:1564:C:C6	2.70	0.59
53:S2:1741:U:C4	53:S2:1742:C:C5	2.90	0.59
53:S2:1757:G:C2	53:S2:1758:G:C8	2.90	0.59
55:SB:52:THR:O	55:SB:53:GLN:HB3	2.00	0.59
78:SR:10:LYS:HD3	78:SR:53:TYR:CE2	2.36	0.59
83:Sc:50:VAL:HG12	83:Sc:51:ARG:N	2.17	0.59
32:5:124:C:C2	32:5:125:C:C6	2.89	0.59
32:5:202:C:C2	32:5:214:G:C2	2.89	0.59
32:5:976:G:C6	32:5:977:C:C4	2.90	0.59
32:5:981:C:C4	37:E:69:TYR:CZ	2.90	0.59
32:5:984:C:N3	32:5:1070:G:C2	2.70	0.59
32:5:1387:A:N3	32:5:1397:A:N6	2.49	0.59
32:5:1683:U:O2	32:5:1683:U:C2'	2.50	0.59
32:5:1751:A:N6	32:5:1752:G:N7	2.49	0.59
32:5:1787:A:O2'	32:5:1788:A:C8	2.55	0.59
32:5:1902:G:C2'	32:5:1903:G:O5'	2.50	0.59
32:5:1936:C:C6	33:7:84:U:H6	2.15	0.59
32:5:2056:G:C6	32:5:2058:G:C5	2.90	0.59
32:5:2391:G:N3	32:5:2392:C:C6	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2597:G:C2	32:5:2749:C:O2	2.55	0.59
32:5:3724:A:N1	32:5:3729:U:C2	2.70	0.59
32:5:3736:A:O2'	32:5:3737:A:C8	2.50	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
32:5:4277:G:N1	32:5:4278:C:C5	2.69	0.59
32:5:4324:A:C2	32:5:4325:A:N7	2.70	0.59
32:5:4896:G:N2	32:5:4897:G:C4	2.70	0.59
34:8:82:A:C6	34:8:83:C:H5''	2.37	0.59
52:6:52:LEU:HD22	52:6:116:LEU:HB3	1.83	0.59
53:S2:17:C:C2	53:S2:18:C:C5	2.90	0.59
53:S2:92:A:C6	53:S2:447:A:C4	2.90	0.59
53:S2:367:U:H4'	53:S2:371:A:H8	1.67	0.59
53:S2:608:C:C4	53:S2:609:U:C5	2.91	0.59
53:S2:625:G:H4'	53:S2:629:A:C2	2.36	0.59
53:S2:832:G:C4	53:S2:833:C:C6	2.90	0.59
53:S2:1578:U:H6	72:SD:6:SER:CA	2.15	0.59
53:S2:1843:G:C2'	53:S2:1844:U:O5'	2.50	0.59
54:SA:121:LEU:HD12	54:SA:143:PRO:HB2	1.84	0.59
55:SB:27:LYS:CA	55:SB:51:ARG:NH1	2.64	0.59
61:SJ:136:ARG:HD2	61:SJ:160:SER:HA	1.83	0.59
11:R:118:HIS:HA	32:5:2663:G:OP1	2.01	0.59
32:5:38:A:C2	32:5:41:C:C4	2.90	0.59
32:5:123:C:H2'	32:5:123:C:O2	2.01	0.59
32:5:471:A:C2	32:5:472:C:C1'	2.85	0.59
32:5:1188:C:C2	32:5:1189:G:C8	2.89	0.59
32:5:1277:G:N3	32:5:1278:C:C6	2.69	0.59
32:5:1804:A:H4'	32:5:1805:A:O5'	2.02	0.59
32:5:2263:A:O3'	32:5:2264:C:H6	1.85	0.59
32:5:2438:A:C6	32:5:2441:C:C6	2.88	0.59
32:5:2477:A:H2'	32:5:2478:C:C6	2.37	0.59
32:5:2714:G:N3	32:5:2715:G:C8	2.70	0.59
32:5:3755:G:C5	32:5:3770:U:N3	2.70	0.59
32:5:4236:G:H4'	32:5:4328:G:O2'	2.02	0.59
32:5:4277:G:N3	32:5:4278:C:C6	2.70	0.59
32:5:4283:G:C6	32:5:4284:C:H5	2.19	0.59
32:5:4396:A:C2	32:5:4397:A:C8	2.90	0.59
47:q:66:ARG:HD2	47:q:69:LEU:HD22	1.83	0.59
53:S2:311:C:C3'	53:S2:312:G:H4'	2.32	0.59
53:S2:404:G:C2	53:S2:405:G:C4	2.90	0.59
53:S2:579:C:N4	53:S2:580:U:C4	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:633:C:N3	53:S2:634:A:N7	2.50	0.59
53:S2:910:G:C6	53:S2:911:C:C4	2.89	0.59
53:S2:960:U:O4	64:SO:66:ARG:HA	2.03	0.59
53:S2:1040:G:C5	53:S2:1041:G:C8	2.90	0.59
53:S2:1243:U:C2	53:S2:1265:A:C2	2.90	0.59
53:S2:1293:A:C1'	85:Sf:150:PHE:CD2	2.85	0.59
53:S2:1528:G:N2	53:S2:1529:C:N3	2.50	0.59
56:SC:199:PRO:CD	56:SC:223:TYR:OH	2.50	0.59
87:S1:46:LEU:C	87:S1:47:VAL:HG13	2.26	0.59
1:A:85:GLY:CA	32:5:4121:G:N2	2.65	0.59
2:D:51:MET:HE1	2:D:163:LEU:HA	1.84	0.59
6:L:18:TRP:CZ2	6:L:19:GLN:HG2	2.37	0.59
6:L:190:ARG:NH2	32:5:4352:U:OP1	2.34	0.59
14:U:97:ARG:O	14:U:98:ASP:HB2	2.03	0.59
25:g:9:ARG:HE	32:5:2441:C:H4'	1.67	0.59
32:5:99:A:C2	32:5:100:C:C2	2.91	0.59
32:5:165:A:H3'	32:5:166:C:H6	1.67	0.59
32:5:166:C:O2	32:5:166:C:H2'	2.01	0.59
32:5:451:C:C4	32:5:1295:C:H2'	2.38	0.59
32:5:699:C:C4	32:5:700:G:N7	2.70	0.59
32:5:950:G:N3	32:5:951:G:C8	2.70	0.59
32:5:1251:C:C2	32:5:1252:C:C6	2.90	0.59
32:5:1723:A:N1	32:5:1838:A:C2	2.71	0.59
32:5:2245:G:H2'	32:5:2246:C:O4'	2.02	0.59
32:5:2739:C:H4'	44:p:52:VAL:HG21	1.85	0.59
32:5:3668:C:N4	32:5:3669:G:C5	2.71	0.59
32:5:3690:U:C2	32:5:3691:G:C8	2.91	0.59
32:5:3807:A:C2	32:5:3808:C:C6	2.90	0.59
32:5:3857:G:C4	32:5:3858:C:C6	2.91	0.59
32:5:3888:G:O2'	32:5:3889:G:OP1	2.16	0.59
32:5:4139:G:C6	32:5:4140:C:C5	2.90	0.59
32:5:4652:G:C4	32:5:4653:C:C5	2.90	0.59
33:7:93:G:C4	33:7:94:C:C6	2.90	0.59
49:3:16:U:N3	49:3:59:A:C6	2.70	0.59
53:S2:56:G:O6	53:S2:90:G:C2	2.54	0.59
53:S2:1040:G:N1	53:S2:1041:G:C4	2.70	0.59
53:S2:1163:C:O2	53:S2:1164:G:N7	2.35	0.59
53:S2:1176:G:C6	53:S2:1177:U:C4	2.91	0.59
53:S2:1328:G:C2	53:S2:1502:C:C2	2.90	0.59
53:S2:1409:A:N3	53:S2:1410:C:C6	2.70	0.59
53:S2:1501:C:C4	53:S2:1502:C:C5	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1528:G:O2'	53:S2:1666:C:OP1	2.20	0.59
53:S2:1700:C:C2	53:S2:1834:A:N6	2.70	0.59
56:SC:170:TRP:CH2	66:SW:97:ARG:CD	2.85	0.59
75:SM:93:LYS:O	75:SM:94:ILE:HG22	2.02	0.59
78:SR:104:GLU:HA	78:SR:104:GLU:OE1	2.02	0.59
83:Sc:12:ALA:HB2	83:Sc:34:PHE:C	2.27	0.59
19:a:63:LEU:HD22	19:a:65:ARG:HH11	1.68	0.59
32:5:289:C:N4	32:5:290:U:O4	2.36	0.59
32:5:422:C:O2	32:5:423:G:C8	2.49	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
32:5:1171:G:C5	32:5:1172:C:C5	2.91	0.59
32:5:1188:C:N3	32:5:1189:G:C8	2.71	0.59
32:5:1203:G:C2	32:5:1204:C:C6	2.90	0.59
32:5:1310:C:O2	32:5:1311:G:C8	2.55	0.59
32:5:1846:G:N1	32:5:1847:C:C4	2.70	0.59
32:5:1945:G:C2	32:5:1946:G:N9	2.70	0.59
32:5:2079:G:N3	32:5:2080:U:C5	2.67	0.59
32:5:2316:G:N3	32:5:2317:C:C6	2.70	0.59
32:5:2439:G:C6	32:5:2440:U:C4	2.90	0.59
32:5:2448:G:O2'	32:5:2449:A:O4'	2.21	0.59
32:5:2712:G:C2	32:5:2713:C:C6	2.91	0.59
32:5:3689:G:C6	32:5:3690:U:C4	2.90	0.59
32:5:3846:C:N3	32:5:3847:C:C6	2.71	0.59
32:5:3862:A:C2	32:5:3863:C:H1'	2.38	0.59
32:5:3912:U:C2'	32:5:3913:G:H5'	2.32	0.59
32:5:4878:C:O2	32:5:4878:C:H2'	2.01	0.59
32:5:5050:C:C1'	35:B:374:PHE:CE2	2.86	0.59
38:F:248:ARG:CZ	38:F:248:ARG:HB3	2.31	0.59
41:W:50:ASN:HA	41:W:55:TYR:CE2	2.37	0.59
48:z:332:MET:SD	48:z:424:TYR:HA	2.42	0.59
49:3:27:U:C2	49:3:28:U:C5	2.90	0.59
53:S2:156:G:OP1	58:SG:2:LYS:NZ	2.36	0.59
53:S2:378:U:N3	53:S2:379:C:C4	2.69	0.59
53:S2:570:C:C2	53:S2:571:U:C6	2.90	0.59
53:S2:862:A:C5	53:S2:863:U:C5	2.90	0.59
53:S2:874:G:H3'	53:S2:875:A:H5''	1.83	0.59
53:S2:999:G:C6	53:S2:1000:C:C4	2.90	0.59
53:S2:1256:G:H2'	53:S2:1256:G:N3	2.15	0.59
53:S2:1526:G:C4	53:S2:1527:C:C6	2.91	0.59
55:SB:62:LEU:HD12	55:SB:62:LEU:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:ST:62:ARG:HG3	80:ST:62:ARG:HH21	1.67	0.59
83:Sc:11:LEU:HD22	83:Sc:57:THR:OG1	2.02	0.59
7:M:81:ASP:OD1	7:M:84:ALA:HB3	2.03	0.59
21:c:31:TYR:HD1	21:c:32:LYS:N	2.01	0.59
32:5:394:G:N3	32:5:394:G:H2'	2.18	0.59
32:5:978:G:C6	32:5:979:C:C4	2.90	0.59
32:5:1100:U:O2	32:5:1167:C:C6	2.56	0.59
32:5:1175:A:N1	32:5:1176:C:C5	2.71	0.59
32:5:1266:G:O2'	32:5:1267:C:H5'	2.02	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
32:5:1946:G:C2	32:5:2037:C:C2	2.91	0.59
32:5:2268:A:H4'	32:5:2269:C:H5'	1.84	0.59
32:5:2316:G:N1	32:5:2317:C:N4	2.50	0.59
32:5:2454:U:H2'	32:5:2454:U:O2	2.01	0.59
32:5:2657:G:H3'	32:5:2658:G:C8	2.37	0.59
32:5:3862:A:C5	32:5:3863:C:C6	2.91	0.59
32:5:4167:G:H21	32:5:4168:G:H1'	1.66	0.59
32:5:4194:U:O2'	32:5:4221:C:N4	2.35	0.59
32:5:4699:U:C4	32:5:4702:G:O6	2.55	0.59
32:5:5042:A:C6	32:5:5043:A:C6	2.90	0.59
33:7:8:G:C2	33:7:9:C:N1	2.71	0.59
34:8:131:G:O6	34:8:132:G:N7	2.33	0.59
39:I:9:TYR:HD2	39:I:97:ILE:CG1	2.12	0.59
48:z:409:GLY:HA3	50:4:207:C:C6	2.36	0.59
49:3:39:G:C5	49:3:40:C:C5	2.91	0.59
50:4:18:G:C6	50:4:19:C:N4	2.71	0.59
53:S2:10:G:C6	53:S2:11:A:C5	2.91	0.59
53:S2:1233:G:C5	53:S2:1234:C:C5	2.91	0.59
53:S2:1354:G:H2'	53:S2:1354:G:N3	2.18	0.59
53:S2:1542:C:O2'	53:S2:1543:U:O5'	2.21	0.59
53:S2:1826:G:C2	53:S2:1827:U:C5	2.91	0.59
61:SJ:47:LYS:HA	61:SJ:102:ILE:HD11	1.84	0.59
78:SR:98:VAL:O	78:SR:117:LEU:HD22	2.02	0.59
2:D:35:ARG:HH11	2:D:35:ARG:HG2	1.68	0.59
32:5:293:G:C4'	32:5:294:G:C8	2.85	0.59
32:5:479:G:C2	32:5:480:C:C6	2.91	0.59
32:5:1634:A:N6	32:5:1635:C:N4	2.51	0.59
32:5:1672:U:C2	32:5:1673:U:C6	2.80	0.59
32:5:1887:G:C2	32:5:1890:G:O6	2.55	0.59
32:5:2270:G:C2	32:5:2271:C:N3	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2496:G:C4	32:5:2497:C:C6	2.90	0.59
32:5:2586:G:N7	32:5:2587:A:C2	2.70	0.59
32:5:2593:C:C2	32:5:2594:C:C6	2.90	0.59
32:5:2656:U:H2'	32:5:2657:G:O4'	2.03	0.59
32:5:2735:G:N2	32:5:2736:G:C8	2.69	0.59
32:5:2841:G:N1	32:5:2842:G:C8	2.70	0.59
32:5:2844:A:C5	32:5:3839:G:C8	2.91	0.59
32:5:3702:A:N7	32:5:3774:A:N3	2.51	0.59
32:5:3833:C:C2	32:5:3834:C:C5	2.91	0.59
32:5:4199:C:N3	32:5:4200:G:H8	1.99	0.59
32:5:4330:G:C5	32:5:4331:G:C8	2.91	0.59
32:5:4406:U:N3	32:5:4407:G:N7	2.50	0.59
32:5:4426:C:N4	32:5:4427:G:C6	2.70	0.59
32:5:4975:G:C5	32:5:4977:A:C6	2.91	0.59
38:F:202:ARG:N	38:F:202:ARG:HD2	2.17	0.59
39:I:101:LYS:HZ3	39:I:121:LYS:HG3	1.61	0.59
53:S2:81:U:C5	53:S2:82:G:N7	2.71	0.59
53:S2:440:G:H2'	53:S2:441:C:O4'	2.03	0.59
53:S2:1102:G:N2	53:S2:1130:G:N2	2.51	0.59
53:S2:1122:A:N1	53:S2:1123:C:C6	2.71	0.59
53:S2:1781:A:C2	53:S2:1782:G:C6	2.91	0.59
57:SE:100:ARG:NH2	57:SE:121:TYR:OH	2.35	0.59
73:SF:128:ILE:HD11	83:Sc:68:LEU:CA	2.31	0.59
75:SM:87:GLU:HA	75:SM:91:LEU:HD11	1.82	0.59
79:SS:117:ILE:O	79:SS:119:ALA:N	2.35	0.59
86:Sg:83:TRP:HH2	86:Sg:125:ARG:HH22	1.48	0.59
10:Q:4:ASP:OD2	38:F:100:ILE:HG21	2.03	0.59
21:c:101:ASP:HB2	63:SN:43:LYS:HA	1.80	0.59
32:5:709:C:N3	32:5:710:G:C8	2.71	0.59
32:5:908:G:C6	32:5:909:A:N7	2.71	0.59
32:5:1487:G:C2	32:5:1488:G:H1'	2.37	0.59
32:5:1682:A:C5	32:5:1683:U:C5	2.91	0.59
32:5:1688:G:C2	32:5:1849:U:O2	2.56	0.59
32:5:1936:C:O2	32:5:1936:C:C2'	2.50	0.59
32:5:2250:C:C2	32:5:2252:G:H1'	2.37	0.59
32:5:2399:G:N1	32:5:2400:G:N7	2.50	0.59
32:5:2401:A:N3	32:5:2402:G:C8	2.70	0.59
32:5:2455:G:H2'	32:5:2456:G:O5'	2.03	0.59
32:5:2557:G:H2'	32:5:2558:C:O4'	2.02	0.59
32:5:2676:A:C5	32:5:2677:G:C8	2.91	0.59
32:5:2832:A:C2'	32:5:2833:A:H5''	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2905:C:C2	32:5:3590:G:N2	2.71	0.59
32:5:3634:G:N2	32:5:3636:C:H5'	2.18	0.59
32:5:3712:A:C6	32:5:3737:A:OP2	2.55	0.59
32:5:4237:C:H2'	32:5:4238:G:O4'	2.02	0.59
32:5:4255:A:C2	32:5:4256:A:N3	2.70	0.59
32:5:4281:A:C6	32:5:4283:G:C8	2.90	0.59
32:5:4414:A:C6	32:5:4427:G:C6	2.91	0.59
32:5:4548:A:H4'	32:5:4549:G:H5'	1.84	0.59
33:7:44:C:C2	33:7:45:U:C5	2.90	0.59
38:F:93:PHE:C	38:F:93:PHE:CD1	2.80	0.59
38:F:209:PHE:C	38:F:209:PHE:CD1	2.79	0.59
50:4:45:G:C6	50:4:46:C:C4	2.90	0.59
53:S2:52:G:C5	53:S2:53:C:C6	2.91	0.59
53:S2:99:A:C6	53:S2:100:U:C5	2.91	0.59
53:S2:105:U:N3	53:S2:106:C:C6	2.70	0.59
53:S2:182:C:H2'	53:S2:184:G:C1'	2.31	0.59
53:S2:310:C:HO2'	53:S2:339:A:HO2'	1.47	0.59
53:S2:568:C:C5	53:S2:569:A:C8	2.91	0.59
53:S2:624:C:H1'	53:S2:631:U:O2	2.02	0.59
53:S2:824:C:H2'	53:S2:825:A:O5'	2.03	0.59
53:S2:1126:G:N1	53:S2:1127:C:C4	2.70	0.59
53:S2:1203:G:H3'	53:S2:1204:A:H8	1.67	0.59
53:S2:1251:A:H2'	53:S2:1251:A:N3	2.17	0.59
53:S2:1280:G:C6	53:S2:1281:G:N7	2.71	0.59
53:S2:1294:G:O4'	85:Sf:152:LYS:HA	2.03	0.59
53:S2:1526:G:C2	53:S2:1527:C:C5	2.90	0.59
54:SA:10:MET:HE2	54:SA:15:VAL:HG22	1.84	0.59
78:SR:91:LEU:HD13	78:SR:93:GLN:H	1.67	0.59
80:ST:60:THR:HG23	80:ST:75:MET:HE2	1.84	0.59
82:SZ:57:LYS:CA	82:SZ:61:GLU:HG3	2.33	0.59
83:Sc:59:LEU:HB2	83:Sc:60:GLU:OE2	2.03	0.59
5:J:107:PHE:CE1	5:J:130:PHE:HB2	2.38	0.59
19:a:12:ARG:NH1	32:5:1660:U:O4	2.36	0.59
32:5:37:U:O4	32:5:38:A:C6	2.55	0.59
32:5:177:G:C6	32:5:178:C:C4	2.91	0.59
32:5:331:G:C2	32:5:332:C:C4	2.91	0.59
32:5:433:A:H2'	32:5:434:A:O4'	2.01	0.59
32:5:671:G:N1	32:5:672:C:C4	2.70	0.59
32:5:731:G:C5	32:5:732:A:C8	2.91	0.59
32:5:1287:G:N1	32:5:1289:C:C5	2.70	0.59
32:5:1509:C:O2	32:5:1510:G:C8	2.56	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
32:5:1979:A:H3'	32:5:1980:U:C5'	2.33	0.59
32:5:2035:C:C2	32:5:2036:C:C6	2.90	0.59
32:5:2399:G:C6	32:5:2400:G:N7	2.71	0.59
32:5:2438:A:N1	32:5:2441:C:C5	2.71	0.59
32:5:2712:G:N2	32:5:2713:C:C2	2.71	0.59
32:5:3773:U:O2	32:5:3776:G:N1	2.32	0.59
32:5:3842:C:OP2	32:5:3843:C:O2'	2.20	0.59
32:5:4441:A:H5''	32:5:4441:A:C8	2.38	0.59
32:5:4455:G:C4	32:5:4456:C:C6	2.91	0.59
32:5:4896:G:C2	32:5:4897:G:C4	2.90	0.59
33:7:21:G:H8	33:7:21:G:H5''	1.67	0.59
34:8:95:A:C6	34:8:96:C:C4	2.91	0.59
34:8:134:G:C2	34:8:135:C:C5	2.91	0.59
48:z:482:UNK:O	48:z:482:UNK:CA	2.42	0.59
53:S2:26:U:C2	53:S2:27:A:H8	2.21	0.59
53:S2:383:G:H2'	53:S2:384:U:H1'	1.85	0.59
53:S2:501:C:O2	53:S2:501:C:C2'	2.51	0.59
53:S2:561:A:O2'	61:SJ:134:HIS:NE2	2.31	0.59
53:S2:832:G:C2	53:S2:833:C:C1'	2.86	0.59
53:S2:875:A:C2	53:S2:876:C:C1'	2.85	0.59
53:S2:1224:G:C6	53:S2:1225:U:C2	2.91	0.59
53:S2:1394:G:O2'	77:SQ:124:PRO:O	2.14	0.59
53:S2:1860:A:C2	53:S2:1862:G:N7	2.71	0.59
60:SI:6:ASP:OD1	60:SI:6:ASP:N	2.36	0.59
65:SV:62:MET:SD	66:SW:20:ARG:NH1	2.76	0.59
79:SS:7:GLU:C	79:SS:8:LYS:HD3	2.28	0.59
1:A:3:ARG:HG3	1:A:3:ARG:HH11	1.68	0.59
6:L:14:PHE:HD1	6:L:18:TRP:CD1	2.21	0.59
15:V:39:ILE:HG23	15:V:61:VAL:HG13	1.85	0.59
17:Y:1:MET:HE2	32:5:1368:A:H1'	1.85	0.59
17:Y:11:ARG:O	17:Y:15:ARG:HG3	2.03	0.59
22:d:22:THR:HG22	22:d:89:SER:CB	2.32	0.59
28:k:11:PHE:O	28:k:15:ALA:N	2.32	0.59
32:5:56:A:N1	32:5:57:G:C4	2.70	0.59
32:5:56:A:C2	32:5:57:G:C5	2.90	0.59
32:5:96:U:C4	32:5:97:G:C4	2.91	0.59
32:5:132:G:C2	32:5:133:C:H1'	2.38	0.59
32:5:1079:C:N3	32:5:1080:C:C5	2.70	0.59
32:5:1186:U:C4	32:5:1187:G:C5	2.91	0.59
32:5:1268:G:C4	32:5:2111:G:C2	2.91	0.59

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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	0.59
32:5:1673:U:O2	32:5:1673:U:H2'	2.02	0.59
32:5:1726:U:N3	32:5:1727:U:C6	2.71	0.59
32:5:1756:U:O4	32:5:1775:A:C6	2.50	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
32:5:2089:G:O2'	32:5:2090:U:P	2.61	0.59
32:5:2107:C:O2'	32:5:2108:G:OP2	2.17	0.59
32:5:2592:U:C5	32:5:2593:C:C5	2.91	0.59
32:5:2853:C:C4	32:5:2854:G:C2	2.91	0.59
32:5:3795:A:C5	32:5:3796:U:C5	2.91	0.59
32:5:3910:C:C2	32:5:3911:C:H5	2.15	0.59
32:5:4085:A:C3'	32:5:4086:G:C5'	2.81	0.59
32:5:4132:C:C4	32:5:4133:C:C5	2.90	0.59
32:5:4285:U:H2'	32:5:4286:C:H6	1.67	0.59
32:5:4730:C:H5''	32:5:4965:U:O2	2.02	0.59
33:7:38:U:N3	33:7:40:U:OP2	2.35	0.59
34:8:42:G:C2	34:8:43:A:N9	2.71	0.59
34:8:68:G:N2	34:8:91:A:N3	2.50	0.59
39:I:47:PRO:HD2	39:I:141:LYS:HA	1.84	0.59
39:I:111:LEU:HD23	39:I:111:LEU:N	2.16	0.59
53:S2:92:A:C6	53:S2:447:A:N3	2.71	0.59
53:S2:112:U:C1'	53:S2:114:G:O6	2.48	0.59
53:S2:114:G:H2'	53:S2:114:G:N3	2.16	0.59
53:S2:332:G:O6	58:SG:186:GLN:NE2	2.35	0.59
53:S2:367:U:H4'	53:S2:371:A:C8	2.37	0.59
53:S2:371:A:C2	53:S2:372:U:C5	2.91	0.59
53:S2:387:C:O2	53:S2:388:U:C5	2.55	0.59
53:S2:429:C:C2	53:S2:430:C:C6	2.91	0.59
53:S2:793:G:C5	53:S2:794:A:N7	2.70	0.59
53:S2:804:U:H2'	53:S2:804:U:O2	2.02	0.59
53:S2:816:A:C5	53:S2:817:G:C8	2.91	0.59
53:S2:862:A:N1	53:S2:863:U:C6	2.71	0.59
53:S2:1167:G:C6	53:S2:1193:U:O2	2.55	0.59
53:S2:1220:A:N6	53:S2:1221:G:C6	2.71	0.59
53:S2:1371:U:OP2	53:S2:1372:U:H5	1.86	0.59
53:S2:1610:G:N1	53:S2:1611:G:C5	2.71	0.59
54:SA:200:ASP:OD2	78:SR:86:PRO:C	2.39	0.59
55:SB:27:LYS:HA	55:SB:51:ARG:HH12	1.67	0.59
57:SE:73:ASP:OD1	57:SE:73:ASP:N	2.36	0.59
64:SO:150:ARG:HG2	64:SO:150:ARG:HH21	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:a:7:LYS:NZ	32:5:2285:A:OP2	2.35	0.58
19:a:59:ARG:HB3	19:a:61:TYR:CD2	2.37	0.58
32:5:146:G:C2	32:5:147:A:C5	2.91	0.58
32:5:167:C:N3	32:5:168:C:C5	2.71	0.58
32:5:488:G:N3	32:5:489:C:C6	2.70	0.58
32:5:717:U:O4	32:5:718:C:C5	2.56	0.58
32:5:747:A:C2	32:5:918:G:O6	2.56	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
32:5:1366:G:C8	32:5:1367:C:O3'	2.56	0.58
32:5:1570:G:C5	32:5:1571:G:C8	2.91	0.58
32:5:1684:A:C2	32:5:1685:G:C1'	2.86	0.58
32:5:1856:C:N3	32:5:1857:C:C5	2.71	0.58
32:5:1939:A:N1	32:5:3874:G:C5'	2.60	0.58
32:5:2089:G:O6	32:5:2263:A:C5	2.56	0.58
32:5:2261:G:H2'	32:5:2262:G:N7	2.17	0.58
32:5:2328:G:C4	32:5:2329:U:C5	2.91	0.58
32:5:2438:A:C5	32:5:2441:C:C4	2.91	0.58
32:5:3844:U:N3	32:5:3845:A:C8	2.71	0.58
32:5:3846:C:N3	32:5:3847:C:H5	1.99	0.58
32:5:4136:G:C5	32:5:4137:C:C5	2.91	0.58
32:5:4281:A:H2'	32:5:4282:A:H2'	1.85	0.58
34:8:10:G:O6	34:8:11:C:C4	2.56	0.58
47:q:186:GLY:O	47:q:188:VAL:N	2.36	0.58
53:S2:37:C:N3	53:S2:38:A:C8	2.70	0.58
53:S2:73:C:O2'	53:S2:74:G:O5'	2.19	0.58
53:S2:418:A:C2	53:S2:419:G:C8	2.90	0.58
53:S2:445:A:C2'	53:S2:446:G:O5'	2.51	0.58
53:S2:475:C:C4	53:S2:476:A:N7	2.70	0.58
53:S2:476:A:C2	53:S2:488:U:O2	2.56	0.58
53:S2:635:G:C2	53:S2:636:C:C2	2.91	0.58
53:S2:824:C:C4	61:SJ:144:ILE:HG12	2.37	0.58
53:S2:875:A:N3	53:S2:876:C:H6	1.80	0.58
53:S2:1286:G:N2	75:SM:33:ARG:HG3	2.18	0.58
53:S2:1323:U:C2'	53:S2:1324:G:O4'	2.51	0.58
53:S2:1412:C:O2'	53:S2:1413:G:H8	1.85	0.58
53:S2:1454:A:OP1	78:SR:49:LYS:CE	2.51	0.58
55:SB:70:SER:OG	64:SO:128:ARG:NH1	2.35	0.58
62:SL:117:PHE:HZ	62:SL:144:LYS:HA	1.68	0.58
82:SZ:55:TYR:HE2	82:SZ:59:CYS:SG	2.15	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)
1:A:227:ARG:HB3	1:A:239:ALA:HB2	1.83	0.58
6:L:65:ARG:HB2	19:a:69:PHE:CD2	2.38	0.58
8:N:196:ASN:N	8:N:196:ASN:HD22	2.01	0.58
12:S:13:VAL:HG12	12:S:29:ARG:CA	2.33	0.58
13:T:158:PHE:C	13:T:158:PHE:CD1	2.79	0.58
20:b:36:ASP:OD1	20:b:39:PHE:HB2	2.03	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
32:5:919:C:H2'	32:5:920:C:O5'	2.03	0.58
32:5:1247:U:C2	32:5:1248:C:C5	2.89	0.58
32:5:1406:G:N2	32:5:1409:C:N4	2.51	0.58
32:5:1629:G:N1	32:5:1631:A:N1	2.50	0.58
32:5:2409:U:C4	32:5:2783:A:C2	2.91	0.58
32:5:2451:A:N7	32:5:2452:G:N7	2.52	0.58
32:5:3688:U:O2	32:5:3688:U:H2'	2.02	0.58
32:5:3714:G:C6	32:5:3715:U:C2	2.89	0.58
32:5:4146:G:C2	32:5:4147:G:C8	2.91	0.58
32:5:4467:A:C2	32:5:4468:U:C6	2.90	0.58
32:5:4535:A:N1	32:5:4536:C:C6	2.71	0.58
32:5:4888:U:O2'	32:5:4889:G:H8	1.84	0.58
34:8:139:G:C6	34:8:140:C:C4	2.91	0.58
35:B:257:TRP:O	35:B:257:TRP:CG	2.56	0.58
40:P:122:ALA:HA	40:P:145:HIS:HE1	1.68	0.58
43:n:10:MET:HE1	53:S2:1172:U:H4'	1.83	0.58
46:K:61:LYS:HE3	46:K:72:GLU:HB3	1.84	0.58
48:z:140:PHE:CZ	48:z:194:ARG:HG3	2.37	0.58
48:z:271:ILE:C	48:z:285:PHE:HD2	2.11	0.58
48:z:378:ILE:HD11	48:z:412:VAL:HG21	1.84	0.58
53:S2:46:A:C6	53:S2:99:A:N7	2.71	0.58
53:S2:155:G:N2	58:SG:56:ASN:OD1	2.36	0.58
53:S2:186:C:O2	53:S2:187:G:C8	2.56	0.58
53:S2:388:U:N3	53:S2:389:A:N7	2.51	0.58
53:S2:665:G:C2	53:S2:671:A:C8	2.90	0.58
53:S2:859:G:C2	53:S2:860:G:C8	2.91	0.58
53:S2:943:U:H2'	53:S2:944:A:O4'	2.03	0.58
53:S2:963:A:C6	53:S2:964:A:N6	2.70	0.58
53:S2:994:C:O2	53:S2:994:C:C2'	2.41	0.58
53:S2:1108:G:C2	53:S2:1125:C:C2	2.90	0.58
53:S2:1291:A:N1	85:Sf:140:TYR:CE2	2.71	0.58
53:S2:1315:U:C5	53:S2:1316:C:C6	2.91	0.58
53:S2:1434:C:H2'	53:S2:1435:C:C1'	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1453:C:H1'	78:SR:48:ASN:ND2	2.17	0.58
53:S2:1573:G:C5	53:S2:1574:C:C5	2.91	0.58
53:S2:1686:G:C2	53:S2:1687:C:C6	2.90	0.58
53:S2:1804:U:N3	53:S2:1805:G:C8	2.71	0.58
54:SA:50:ASN:CA	78:SR:105:MET:HE3	2.26	0.58
54:SA:205:ARG:HH12	78:SR:84:TYR:HD2	1.50	0.58
73:SF:122:ARG:CB	83:Sc:57:THR:HG21	2.18	0.58
19:a:25:HIS:ND1	32:5:1338:G:N2	2.51	0.58
19:a:61:TYR:CZ	32:5:294:G:C2	2.91	0.58
26:h:7:ARG:NE	34:8:86:U:O4	2.36	0.58
32:5:73:A:N3	32:5:74:G:C8	2.71	0.58
32:5:91:G:N7	32:5:93:G:C5	2.72	0.58
32:5:187:U:C5	32:5:245:C:N4	2.71	0.58
32:5:224:U:O4'	32:5:224:U:O2	2.22	0.58
32:5:672:C:C2	32:5:673:C:C6	2.91	0.58
32:5:731:G:N7	32:5:732:A:C8	2.71	0.58
32:5:917:A:C2	32:5:919:C:C6	2.90	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'	2.03	0.58
32:5:1213:G:O6	32:5:1215:C:C5	2.57	0.58
32:5:1602:U:H2'	32:5:1602:U:O2	2.01	0.58
32:5:1619:G:C4	32:5:1620:U:C6	2.92	0.58
32:5:1752:G:H2'	32:5:1753:G:O4'	2.04	0.58
32:5:1764:G:O6	32:5:1766:A:H5''	2.03	0.58
32:5:2482:C:N3	32:5:2483:G:C8	2.72	0.58
32:5:2735:G:N2	32:5:2736:G:C4	2.71	0.58
32:5:2744:A:N3	32:5:2745:A:C5	2.71	0.58
32:5:2744:A:N1	32:5:2745:A:C6	2.71	0.58
32:5:2816:G:C6	32:5:2817:C:C4	2.91	0.58
32:5:4343:U:O2	32:5:4343:U:H2'	2.03	0.58
32:5:4414:A:N3	32:5:4427:G:N2	2.50	0.58
32:5:4481:U:N3	32:5:4482:U:C4	2.72	0.58
32:5:4734:A:C2	32:5:4735:G:C4	2.91	0.58
32:5:4981:G:O6	32:5:4982:A:C4	2.56	0.58
33:7:27:G:H1'	33:7:56:G:H1	1.68	0.58
34:8:131:G:N1	34:8:132:G:N9	2.51	0.58
37:E:229:PHE:CE2	37:E:230:ASP:OD1	2.55	0.58
49:3:5:C:N3	49:3:6:C:C5	2.71	0.58
50:4:234:A:H2'	50:4:235:G:C8	2.38	0.58
53:S2:433:A:H2'	53:S2:434:G:C8	2.38	0.58
53:S2:882:U:H2'	53:S2:883:U:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:891:G:C2	53:S2:892:U:C6	2.91	0.58
53:S2:892:U:N3	53:S2:893:U:C5	2.71	0.58
53:S2:1059:G:O2'	53:S2:1060:A:H5'	2.03	0.58
53:S2:1176:G:C5	53:S2:1177:U:C5	2.92	0.58
53:S2:1283:C:H1'	75:SM:86:GLY:HA3	1.84	0.58
53:S2:1361:G:OP2	53:S2:1362:U:O2'	2.12	0.58
53:S2:1571:G:C4	53:S2:1572:C:C6	2.91	0.58
53:S2:1575:G:N2	53:S2:1576:G:C4	2.70	0.58
55:SB:49:VAL:HG11	55:SB:58:ALA:HB1	1.84	0.58
55:SB:150:ILE:HD12	78:SR:129:LYS:HZ1	0.77	0.58
56:SC:204:ILE:HD13	56:SC:215:MET:HE3	1.84	0.58
64:SO:113:GLN:OE1	69:Sa:46:GLU:HG3	2.03	0.58
73:SF:140:ASP:CB	83:Sc:56:LEU:HG	2.33	0.58
2:D:42:ASN:N	2:D:42:ASN:OD1	2.36	0.58
2:D:200:LEU:HB2	2:D:202:GLN:HE22	1.68	0.58
3:G:41:ILE:O	32:5:4117:U:C5	2.56	0.58
3:G:261:LEU:O	3:G:261:LEU:CD2	2.45	0.58
18:Z:4:PHE:N	18:Z:4:PHE:HD1	2.01	0.58
32:5:125:C:O2	32:5:125:C:H2'	2.00	0.58
32:5:145:G:C2	32:5:146:G:N9	2.71	0.58
32:5:199:G:C6	32:5:201:C:N4	2.71	0.58
32:5:460:C:O2	32:5:461:G:C8	2.57	0.58
32:5:985:C:C2	32:5:1069:G:C2	2.92	0.58
32:5:1277:G:C2	32:5:1278:C:C5	2.92	0.58
32:5:1498:G:C2	32:5:1499:C:C6	2.91	0.58
32:5:1789:C:O2'	32:5:1790:U:H5'	2.03	0.58
32:5:1808:C:C2	32:5:1831:G:C2	2.92	0.58
32:5:1899:G:C1'	32:5:2278:G:H22	2.15	0.58
32:5:3909:C:O2	32:5:3909:C:C2'	2.46	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
32:5:4561:C:C2	32:5:4562:C:H5	2.20	0.58
32:5:4578:G:C6	32:5:4579:U:C5	2.92	0.58
32:5:4735:G:C5	32:5:4736:C:C5	2.92	0.58
34:8:116:C:N3	34:8:117:C:C5	2.71	0.58
48:z:260:LEU:HD21	48:z:273:ILE:HD11	1.83	0.58
50:4:58:G:C5	50:4:289:A:N3	2.70	0.58
50:4:120:G:N2	50:4:230[B]:C:O2	2.37	0.58
53:S2:26:U:O2	53:S2:26:U:C2'	2.48	0.58
53:S2:56:G:N1	53:S2:90:G:N2	2.48	0.58
53:S2:488:U:H3'	53:S2:489:A:C5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:676:C:C4	53:S2:677:G:C5	2.92	0.58
53:S2:875:A:N6	53:S2:876:C:C4	2.70	0.58
53:S2:1052:A:C2	53:S2:1053:C:C6	2.90	0.58
53:S2:1110:G:HO2'	78:SR:122:PRO:HB3	1.64	0.58
53:S2:1273:C:C2	53:S2:1506:A:C2	2.86	0.58
53:S2:1378:A:C8	53:S2:1378:A:C5'	2.87	0.58
53:S2:1426:U:N3	53:S2:1427:C:C5	2.71	0.58
53:S2:1546:G:O2'	53:S2:1547:C:O5'	2.21	0.58
53:S2:1649:U:H2'	53:S2:1649:U:O2	2.03	0.58
54:SA:200:ASP:CB	78:SR:89:SER:HB2	2.34	0.58
57:SE:87:MET:HE1	57:SE:236:ILE:HD13	1.86	0.58
76:SP:53:GLN:HE21	76:SP:80:LEU:HD13	1.68	0.58
10:Q:33:ARG:NH2	10:Q:48:LEU:HD11	2.17	0.58
32:5:101:A:N6	32:5:102:G:C6	2.71	0.58
32:5:246:G:C2	32:5:247:G:C5	2.91	0.58
32:5:299:C:C2	32:5:300:A:C8	2.91	0.58
32:5:436:C:N3	32:5:437:G:N7	2.50	0.58
32:5:438:G:C6	32:5:439:G:C5	2.92	0.58
32:5:470:A:N6	37:E:101:ARG:NH2	2.51	0.58
32:5:698:G:C2	32:5:699:C:C6	2.91	0.58
32:5:1188:C:O2	32:5:1189:G:H8	1.85	0.58
32:5:1201:U:C2	32:5:1202:C:C5	2.91	0.58
32:5:1211:G:N2	32:5:1212:G:C4	2.72	0.58
32:5:1320:U:C2	32:5:1321:G:C8	2.92	0.58
32:5:1432:G:C2	32:5:1451:G:C2	2.92	0.58
32:5:1635:C:C2	32:5:1636:U:H5	2.19	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
32:5:2726:G:N3	32:5:2727:C:C6	2.71	0.58
32:5:2858:A:C4	32:5:2859:G:C6	2.91	0.58
32:5:3605:C:N3	32:5:3606:U:C5	2.72	0.58
32:5:3873:G:C2'	32:5:3874:G:O4'	2.48	0.58
32:5:3880:G:C2	32:5:3881:G:C6	2.91	0.58
32:5:4083:U:C2'	32:5:4084:G:O5'	2.52	0.58
32:5:4510:A:N6	32:5:4592:C:C4'	2.67	0.58
32:5:4510:A:N6	32:5:4592:C:C2'	2.67	0.58
32:5:4747:C:H2'	32:5:4748:U:C6	2.38	0.58
32:5:5000:G:C4	32:5:5001:U:C5	2.91	0.58
34:8:15:G:H2'	34:8:16:G:O4'	2.04	0.58
34:8:118:C:O2	34:8:119:C:C6	2.57	0.58
43:n:2:ARG:HD3	53:S2:1842:C:OP2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:230:GLU:HG3	48:z:262:ALA:HB1	1.85	0.58
50:4:187:G:H2'	50:4:188:G:C8	2.34	0.58
53:S2:165:G:N7	53:S2:166:A:N7	2.48	0.58
53:S2:166:A:N3	53:S2:167:G:C8	2.71	0.58
53:S2:403:G:C6	53:S2:404:G:C8	2.92	0.58
53:S2:436:G:C2'	53:S2:437:G:O5'	2.51	0.58
53:S2:452:G:O2'	53:S2:453:C:H5'	2.03	0.58
53:S2:1291:A:C6	85:Sf:140:TYR:CZ	2.91	0.58
53:S2:1293:A:N9	85:Sf:152:LYS:HB2	2.18	0.58
53:S2:1343:U:H2'	53:S2:1343:U:O2	2.04	0.58
53:S2:1508:A:N7	53:S2:1510:G:N7	2.51	0.58
53:S2:1573:G:C4	53:S2:1574:C:C6	2.91	0.58
53:S2:1784:G:N2	53:S2:1785:C:C2	2.71	0.58
53:S2:1836:G:O4'	53:S2:1837:G:N2	2.37	0.58
53:S2:1840:U:N3	53:S2:1841:C:H5	1.97	0.58
57:SE:67:GLN:HB3	57:SE:69:PHE:CE2	2.38	0.58
57:SE:121:TYR:HB2	57:SE:161:GLN:NE2	2.18	0.58
58:SG:52:ILE:HD11	58:SG:102:VAL:HG21	1.85	0.58
69:Sa:28:ARG:HH11	69:Sa:28:ARG:CG	2.15	0.58
72:SD:35:SER:O	72:SD:99:ILE:HD11	2.03	0.58
73:SF:203:ASN:O	73:SF:204:ARG:HB3	2.02	0.58
79:SS:12:ILE:HG23	79:SS:20:ILE:O	2.03	0.58
8:N:94:PHE:CE1	32:5:2460:A:O4'	2.57	0.58
12:S:10:TYR:OH	12:S:66:GLN:CG	2.50	0.58
32:5:125:C:C2	32:5:126:C:C6	2.91	0.58
32:5:211:G:N1	32:5:212:A:C5	2.72	0.58
32:5:270:U:C2	32:5:271:C:H5	2.22	0.58
32:5:301:G:C5	32:5:302:C:C5	2.91	0.58
32:5:732:A:C6	32:5:733:A:N3	2.71	0.58
32:5:991:C:C4	32:5:992:C:C4	2.92	0.58
32:5:1262:G:N1	32:5:1263:A:N7	2.51	0.58
32:5:1303:A:C2	32:5:1304:C:C6	2.92	0.58
32:5:1691:G:C6	32:5:1692:C:C4	2.91	0.58
32:5:1750:G:C6	32:5:1751:A:N7	2.72	0.58
32:5:1831:G:C5	32:5:1832:C:C5	2.92	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
32:5:2288:G:C6	32:5:2290:C:C5	2.91	0.58
32:5:2294:G:N3	32:5:2295:C:C5	2.70	0.58
32:5:2314:G:N2	32:5:2315:G:C4	2.66	0.58
32:5:2363:A:H1'	32:5:4560:C:H5	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3689:G:C5	32:5:3690:U:C5	2.91	0.58
32:5:3771:C:C4	32:5:3772:U:C4	2.91	0.58
32:5:3868:G:H22	32:5:3899:G:N2	2.02	0.58
32:5:4476:C:O2'	32:5:4478:G:OP2	2.20	0.58
32:5:4498:U:N3	32:5:4500:U:P	2.77	0.58
32:5:4724:A:C4	32:5:4725:C:C6	2.92	0.58
32:5:4767:C:H4'	32:5:4874:A:N1	2.17	0.58
32:5:5000:G:C5	32:5:5001:U:C5	2.91	0.58
33:7:110:G:C2	33:7:111:C:C4	2.91	0.58
36:C:178:ASN:ND2	36:C:178:ASN:N	2.51	0.58
42:j:22:CYS:SG	42:j:37:CYS:SG	3.01	0.58
53:S2:155:G:C2	53:S2:156:G:H1'	2.39	0.58
53:S2:403:G:N1	53:S2:404:G:C4	2.71	0.58
53:S2:493:A:C2	53:S2:494:C:C6	2.91	0.58
53:S2:519:A:C2	53:S2:520:A:N7	2.71	0.58
53:S2:521:A:O2'	53:S2:824:C:N4	2.37	0.58
53:S2:834:C:C4	53:S2:835:C:C6	2.92	0.58
53:S2:1233:G:C4	53:S2:1234:C:C6	2.92	0.58
53:S2:1290:G:H2'	85:Sf:146:LEU:H	1.68	0.58
53:S2:1299:A:C2'	53:S2:1301:A:H5'	2.33	0.58
53:S2:1303:C:O2	53:S2:1303:C:O4'	2.18	0.58
53:S2:1427:C:O2	53:S2:1428:G:N7	2.37	0.58
53:S2:1677:U:N3	53:S2:1678:A:C2	2.72	0.58
53:S2:1730:U:C4	53:S2:1731:A:N7	2.72	0.58
53:S2:1754:G:C5	53:S2:1755:C:C5	2.91	0.58
53:S2:1773:C:N3	53:S2:1774:C:C5	2.71	0.58
54:SA:33:GLN:HB3	54:SA:154:LEU:HD12	1.84	0.58
67:SX:74:LEU:HD21	67:SX:81:ILE:HD12	1.86	0.58
68:SY:58:PHE:CE1	68:SY:72:PHE:HB3	2.37	0.58
72:SD:6:SER:O	72:SD:10:LYS:N	2.35	0.58
78:SR:116:ASN:OD1	78:SR:116:ASN:N	2.36	0.58
3:G:57:TRP:N	3:G:57:TRP:CD1	2.65	0.58
4:H:5:LEU:HD13	4:H:60:TRP:CE3	2.39	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
11:R:71:ARG:NH1	32:5:3605:C:OP2	2.37	0.58
11:R:149:LYS:CA	11:R:150:ALA:N	2.64	0.58
15:V:82:ILE:HD12	15:V:104:VAL:HG13	1.86	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:NH2	2.52	0.58
32:5:172:C:C4	32:5:173:C:C4	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:209:U:O2	32:5:233:U:C4	2.55	0.58
32:5:459:C:C4	32:5:460:C:C5	2.90	0.58
32:5:732:A:N6	32:5:733:A:C5	2.72	0.58
32:5:754:U:C4	32:5:755:C:C5	2.91	0.58
32:5:1070:G:C6	32:5:1071:C:C4	2.91	0.58
32:5:1267:C:H5''	32:5:2110:C:O2'	2.04	0.58
32:5:1340:C:N3	32:5:1341:U:C4	2.72	0.58
32:5:1517:G:C2	32:5:1650:A:C5	2.92	0.58
32:5:1778:C:O2	32:5:1778:C:H2'	2.02	0.58
32:5:2034:G:N1	32:5:2035:C:C2	2.72	0.58
32:5:2108:G:N1	32:5:2125:C:C4	2.71	0.58
32:5:2851:G:O6	32:5:2852:U:C6	2.56	0.58
32:5:3596:A:C2	62:SL:2:ALA:HB2	2.32	0.58
32:5:3736:A:O2'	32:5:3737:A:P	2.62	0.58
32:5:3871:A:N1	32:5:3885:G:C2	2.71	0.58
32:5:4168:G:H2'	32:5:4169:G:O5'	2.03	0.58
32:5:4543:G:O2'	32:5:4544:A:C5'	2.51	0.58
32:5:4551:U:N3	32:5:4552:U:C5	2.72	0.58
33:7:110:G:N1	33:7:111:C:C5	2.72	0.58
35:B:235:TRP:HD1	35:B:267:ALA:HA	1.66	0.58
49:3:34:A:C4	53:S2:1701:C:C6	2.92	0.58
53:S2:46:A:C6	53:S2:99:A:C8	2.92	0.58
53:S2:338:G:C2	53:S2:339:A:C4	2.92	0.58
53:S2:454:U:C2'	53:S2:455:A:O5'	2.51	0.58
53:S2:637:U:N3	53:S2:638:C:C5	2.71	0.58
53:S2:752:G:N1	53:S2:791:C:O2	2.37	0.58
53:S2:832:G:C2	53:S2:843:C:C2	2.91	0.58
53:S2:982:G:O2'	53:S2:983:A:H5'	2.04	0.58
53:S2:1099:G:N2	53:S2:1100:A:H1'	2.18	0.58
53:S2:1141:G:C2	53:S2:1147:C:N3	2.72	0.58
53:S2:1351:G:C4'	54:SA:110:ASN:ND2	2.67	0.58
53:S2:1368:U:H1'	53:S2:1372:U:N3	2.19	0.58
53:S2:1453:C:N4	53:S2:1455:A:N9	2.52	0.58
53:S2:1594:A:C2	53:S2:1595:U:C5	2.90	0.58
53:S2:1641:A:C4	53:S2:1642:U:C5	2.91	0.58
53:S2:1786:U:N3	53:S2:1787:G:N7	2.52	0.58
54:SA:198:MET:CG	54:SA:199:PRO:HD2	2.34	0.58
72:SD:22:ASN:C	72:SD:22:ASN:ND2	2.58	0.58
73:SF:38:TYR:CD2	73:SF:143:PRO:HB2	2.38	0.58
74:SK:82:TYR:O	75:SM:27:ILE:HD11	2.03	0.58
83:Sc:60:GLU:CG	83:Sc:63:ARG:CD	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:N:94:PHE:O	32:5:300:A:O2'	2.19	0.58
12:S:9:GLU:OE1	12:S:33:PHE:CD1	2.57	0.58
32:5:29:G:C4	32:5:30:C:C5	2.91	0.58
32:5:163:A:C6	32:5:164:G:C8	2.91	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
32:5:1757:U:N3	32:5:1758:G:N7	2.52	0.58
32:5:2021:G:C4	32:5:2022:C:C6	2.91	0.58
32:5:2263:A:O2'	32:5:2265:G:C2'	2.51	0.58
32:5:2478:C:C2	32:5:2479:G:C8	2.91	0.58
32:5:2481:G:C6	32:5:2482:C:C4	2.92	0.58
32:5:2533:C:O2	32:5:2534:C:C5	2.57	0.58
32:5:2703:G:C6	32:5:2704:C:C5	2.92	0.58
32:5:3771:C:O2'	32:5:3772:U:O4'	2.18	0.58
32:5:3839:G:H1	32:5:3842:C:N4	2.01	0.58
32:5:3878:C:C5	32:5:4518:A:C2	2.92	0.58
32:5:4081:G:N1	32:5:4082:G:C5	2.72	0.58
32:5:4535:A:N6	32:5:4536:C:C5	2.72	0.58
32:5:4946:U:O2	32:5:4946:U:H2'	2.03	0.58
32:5:5043:A:O2'	32:5:5044:A:C5'	2.52	0.58
33:7:30:C:C2	33:7:48:G:C2	2.92	0.58
34:8:97:A:C4	34:8:98:C:C5	2.92	0.58
38:F:219:ARG:O	38:F:248:ARG:NH2	2.37	0.58
49:3:34:A:C4	53:S2:1701:C:C5	2.92	0.58
53:S2:220:U:N3	53:S2:221:A:N7	2.52	0.58
53:S2:403:G:C5	53:S2:404:G:N7	2.71	0.58
53:S2:452:G:C2	53:S2:453:C:C2	2.91	0.58
53:S2:495:U:O2'	53:S2:496:C:H5''	2.03	0.58
53:S2:517:C:C5	53:S2:518:G:C8	2.92	0.58
53:S2:910:G:C5	53:S2:911:C:C5	2.91	0.58
53:S2:1132:C:N4	53:S2:1133:A:C5	2.72	0.58
53:S2:1339:U:C2	53:S2:1340:U:C5	2.92	0.58
53:S2:1350:U:H2'	54:SA:110:ASN:OD1	2.03	0.58
53:S2:1667:U:O2	53:S2:1668:U:C6	2.56	0.58
53:S2:1777:G:C6	53:S2:1778:C:C4	2.92	0.58
69:Sa:18:VAL:HG21	69:Sa:33:ASP:OD2	2.03	0.58
1:A:204:MET:SD	32:5:1631:A:C2	2.97	0.58
6:L:176:PHE:C	6:L:176:PHE:CD1	2.81	0.58
15:V:85:ARG:NH1	32:5:2847:G:OP1	2.37	0.58
32:5:42:A:N6	32:5:4379:A:N3	2.51	0.58
32:5:90:G:N3	32:5:95:G:N1	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:307:A:H3'	32:5:308:G:H21	1.68	0.58
32:5:323:C:C2	32:5:324:A:C8	2.92	0.58
32:5:466:A:N3	32:5:467:U:C6	2.72	0.58
32:5:471:A:C2	32:5:472:C:O4'	2.57	0.58
32:5:486:C:N3	32:5:487:G:C8	2.70	0.58
32:5:1191:C:N3	32:5:1192:C:C5	2.72	0.58
32:5:1246:G:C6	32:5:1247:U:C4	2.91	0.58
32:5:1498:G:N1	32:5:1499:C:C4	2.72	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
32:5:1615:C:C4	32:5:1616:U:C6	2.92	0.58
32:5:1656:U:N3	32:5:1657:G:N7	2.52	0.58
32:5:1684:A:C2	32:5:1685:G:N9	2.72	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
32:5:2463:G:N1	32:5:2464:C:C4	2.71	0.58
32:5:2508:U:N3	32:5:2509:C:C5	2.71	0.58
32:5:2559:G:C6	32:5:2560:C:C5	2.92	0.58
32:5:2623:A:N3	32:5:2624:G:C8	2.72	0.58
32:5:2673:G:H5'	32:5:2674:A:H2'	1.86	0.58
32:5:2823:G:C2	32:5:2824:C:C6	2.91	0.58
32:5:3834:C:C2	32:5:3835:C:C5	2.91	0.58
32:5:4482:U:C2	32:5:4483:C:C5	2.92	0.58
32:5:4490:C:O2	32:5:4491:G:H8	1.86	0.58
32:5:4495:G:N2	32:5:4506:C:C2	2.72	0.58
32:5:4635:A:C2	32:5:4664:A:C5	2.91	0.58
32:5:4881:U:O2	32:5:4881:U:H2'	2.02	0.58
34:8:35:C:O2'	34:8:36:G:C5'	2.52	0.58
38:F:100:ILE:O	38:F:100:ILE:HG23	2.03	0.58
45:r:7:TRP:HZ3	45:r:11:ARG:HA	1.68	0.58
45:r:31:ASN:HD21	45:r:34:ALA:N	2.02	0.58
47:q:108:PRO:CA	47:q:109:ALA:HB3	2.34	0.58
53:S2:363:A:N6	53:S2:400:C:O2'	2.37	0.58
53:S2:794:A:C6	53:S2:795:A:C6	2.91	0.58
53:S2:841:G:C4	53:S2:842:C:H5	2.16	0.58
53:S2:880:G:N7	53:S2:881:G:C8	2.69	0.58
53:S2:907:G:H3'	53:S2:908:A:H8	1.68	0.58
53:S2:951:C:C2	53:S2:952:G:C8	2.92	0.58
53:S2:956:G:O6	53:S2:968:U:O2	2.22	0.58
53:S2:1162:C:C4	53:S2:1163:C:C5	2.92	0.58
53:S2:1224:G:N7	53:S2:1225:U:C6	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1232:U:N3	53:S2:1233:G:N7	2.52	0.58
53:S2:1248:U:C6	53:S2:1249:C:C2	2.91	0.58
53:S2:1249:C:N4	53:S2:1250:A:H62	1.98	0.58
53:S2:1363:C:N3	53:S2:1376:A:N1	2.51	0.58
53:S2:1612:G:C2	53:S2:1628:C:C2	2.92	0.58
53:S2:1648:G:H8	77:SQ:125:ARG:HB3	1.68	0.58
53:S2:1686:G:C2	53:S2:1687:C:C5	2.92	0.58
53:S2:1729:U:H2'	53:S2:1729:U:O2	2.04	0.58
53:S2:1730:U:C2	53:S2:1731:A:C8	2.91	0.58
58:SG:213:LEU:HD12	58:SG:214:ALA:N	2.19	0.58
77:SQ:8:GLN:HG2	77:SQ:95:TYR:CZ	2.39	0.58
82:SZ:57:LYS:C	82:SZ:61:GLU:H	1.97	0.58
5:J:125:ILE:HD11	79:SS:19:ASN:HD22	1.64	0.58
6:L:169:ILE:HD13	19:a:142:GLY:HA2	1.83	0.58
7:M:33:GLN:HA	7:M:33:GLN:HE21	1.67	0.58
23:e:108:ARG:NH1	23:e:128:ARG:HH22	2.02	0.58
32:5:106:A:C1'	32:5:336:A:H8	2.17	0.58
32:5:146:G:N2	32:5:147:A:C8	2.72	0.58
32:5:209:U:C2	32:5:233:U:O4	2.57	0.58
32:5:423:G:O6	34:8:10:G:O6	2.21	0.58
32:5:989:U:H2'	32:5:990:C:H5	1.68	0.58
32:5:1086:C:C2	32:5:1212:G:C2	2.91	0.58
32:5:1197:C:H2'	32:5:1198:G:O4'	2.04	0.58
32:5:1202:C:N3	32:5:1203:G:C8	2.72	0.58
32:5:1217:G:C2'	32:5:1218:G:H8	2.17	0.58
32:5:1268:G:C6	32:5:1270:A:N7	2.71	0.58
32:5:1618:G:N2	32:5:1619:G:C8	2.72	0.58
32:5:1719:A:O2'	32:5:1720:C:C6	2.56	0.58
32:5:1785:C:H1'	39:I:94:PHE:CE2	2.39	0.58
32:5:2408:U:H1'	32:5:2409:U:C5	2.39	0.58
32:5:2480:G:N1	32:5:2481: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
32:5:3622:C:C2	32:5:3623:C:C2	2.92	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
32:5:3944:G:N2	32:5:3945:A:C4	2.72	0.58
32:5:4277:G:C5	32:5:4278:C:C5	2.92	0.58
32:5:4277:G:N1	32:5:4278:C:C4	2.72	0.58
32:5:4277:G:C4	32:5:4278:C:C6	2.92	0.58
32:5:4605:A:H2'	32:5:4606:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:6:C:C4	33:7:7:G:C8	2.92	0.58
34:8:142:U:C2	34:8:143:G:C8	2.92	0.58
41:W:8:PHE:CD1	41:W:8:PHE:C	2.82	0.58
49:3:12:G:H2'	49:3:13:U:O4'	2.04	0.58
50:4:226:U:OP2	52:6:84:ARG:NH2	2.32	0.58
53:S2:52:G:H1	53:S2:474:G:H1	1.52	0.58
53:S2:933:G:C4	53:S2:1001:A:C8	2.92	0.58
53:S2:1315:U:C4	53:S2:1316:C:N1	2.71	0.58
53:S2:1399:C:N3	53:S2:1400:U:C5	2.72	0.58
53:S2:1551:U:C2'	53:S2:1552:G:O4'	2.52	0.58
53:S2:1606:G:H22	53:S2:1632:G:H2'	1.69	0.58
73:SF:136:ARG:HB2	73:SF:203:ASN:HD21	1.69	0.58
76:SP:81:ARG:HH11	76:SP:81:ARG:HG2	1.69	0.58
78:SR:62:GLN:HA	78:SR:62:GLN:OE1	2.04	0.58
81:SU:50:VAL:HA	81:SU:91:LEU:HD23	1.85	0.58
2:D:18:VAL:HG13	33:7:11:A:C8	2.39	0.57
5:J:126:TYR:N	5:J:126:TYR:CD1	2.71	0.57
6:L:63:THR:O	6:L:65:ARG:N	2.36	0.57
32:5:457:G:N2	32:5:458:C:C6	2.72	0.57
32:5:517:C:C2	32:5:645:G:C2	2.92	0.57
32:5:732:A:C2	32:5:733:A:C1'	2.86	0.57
32:5:1069:G:C6	32:5:1070:G:C8	2.92	0.57
32:5:1238:A:HO2'	32:5:1239:C:C5'	2.14	0.57
32:5:1380:G:C4	32:5:1382:G:C6	2.92	0.57
32:5:1850:A:H2'	32:5:1851:G:O5'	2.03	0.57
32:5:1855:G:C4	32:5:1856:C:C6	2.92	0.57
32:5:1857:C:C2	32:5:1858:A:C8	2.92	0.57
32:5:1946:G:N1	32:5:2037:C:N4	2.50	0.57
32:5:2004:U:C2	32:5:2005:G:C8	2.92	0.57
32:5:2037:C:O2	32:5:2037:C:C2'	2.51	0.57
32:5:2391:G:N2	32:5:2392:C:C2	2.71	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
32:5:2576:G:C2	32:5:2577:C:C6	2.91	0.57
32:5:2598:A:C2	32:5:2748:C:C2	2.92	0.57
32:5:2782:U:H2'	32:5:2782:U:O2	2.05	0.57
32:5:2804:C:O2	32:5:2804:C:H2'	2.04	0.57
32:5:3648:A:C2	32:5:3785:A:N7	2.72	0.57
32:5:4224:A:N6	32:5:4225:G:N7	2.52	0.57
32:5:4266:G:C6	32:5:4279:A:N7	2.72	0.57
32:5:4413:C:H3'	32:5:4414:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4489:G:C6	32:5:4490:C:C4	2.91	0.57
32:5:4652:G:N1	32:5:4653:C:C4	2.72	0.57
32:5:4996:C:C4	32:5:4997:G:N7	2.72	0.57
32:5:5061:A:H4'	32:5:5062:G:H5''	1.86	0.57
33:7:44:C:H2'	33:7:45:U:O5'	2.03	0.57
34:8:131:G:C6	34:8:132:G:C5	2.91	0.57
34:8:146:U:N3	34:8:147:G:C8	2.72	0.57
35:B:67:VAL:HG13	35:B:70:LYS:HB2	1.86	0.57
36:C:48:ASN:O	36:C:49:ARG:CB	2.51	0.57
36:C:318:PRO:O	36:C:320:LYS:N	2.37	0.57
38:F:197:TYR:O	38:F:199:VAL:N	2.36	0.57
47:q:11:SER:HA	47:q:14:PHE:CD2	2.39	0.57
53:S2:292:A:H4'	62:SL:40:ILE:O	2.03	0.57
53:S2:316:G:N3	53:S2:317:C:C6	2.72	0.57
53:S2:439:A:N1	53:S2:455:A:N1	2.52	0.57
53:S2:604:A:N7	61:SJ:20:PHE:CE2	2.72	0.57
53:S2:804:U:C2	53:S2:805:U:C6	2.92	0.57
53:S2:841:G:N2	53:S2:842:C:C4	2.72	0.57
53:S2:946:U:C4	53:S2:947:G:N7	2.72	0.57
53:S2:999:G:C4	53:S2:1000:C:C6	2.92	0.57
53:S2:1291:A:O5'	85:Sf:146:LEU:C	2.47	0.57
53:S2:1294:G:N1	53:S2:1295:A:C5	2.72	0.57
53:S2:1433:C:C2'	53:S2:1434:C:O4'	2.33	0.57
53:S2:1525:C:H2'	53:S2:1525:C:O2	2.03	0.57
53:S2:1591:C:N3	53:S2:1592:C:C6	2.72	0.57
53:S2:1596:U:N3	53:S2:1597:C:C6	2.72	0.57
54:SA:36:GLN:HA	54:SA:36:GLN:HE21	1.68	0.57
55:SB:205:TYR:O	55:SB:207:LEU:HG	2.04	0.57
59:SH:110:THR:O	59:SH:110:THR:HG23	2.04	0.57
64:SO:94:HIS:HB3	64:SO:128:ARG:HB2	1.84	0.57
9:O:37:ARG:NH2	32:5:4760:G:OP2	2.37	0.57
32:5:62:A:O2'	32:5:63:G:H5'	2.04	0.57
32:5:84:A:H4'	32:5:85:G:OP1	2.04	0.57
32:5:111:C:O2	32:5:111:C:H2'	2.04	0.57
32:5:197:A:H2'	32:5:198:A:C8	2.39	0.57
32:5:230:G:N2	32:5:239:C:C2	2.72	0.57
32:5:325:U:H2'	32:5:326:C:C6	2.39	0.57
32:5:468:U:O4	32:5:687:U:O4	2.21	0.57
32:5:494:U:C4	32:5:495:C:C5	2.93	0.57
32:5:655:C:O2	32:5:656:C:C6	2.56	0.57
32:5:725:G:H2'	32:5:726:G:O4'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1189:G:C5	32:5:1190:C:C5	2.92	0.57
32:5:1216:C:N3	32:5:1217:G:C8	2.72	0.57
32:5:1321:G:C2	32:5:3876:A:C4	2.91	0.57
32:5:2018:C:H2'	32:5:2019:C:O4'	2.04	0.57
32:5:2258:C:O2	32:5:2258:C:C2'	2.51	0.57
32:5:2352:U:C2	32:5:2353:U:C5	2.91	0.57
32:5:2407:G:O2'	32:5:2409:U:N3	2.36	0.57
32:5:2494:U:C4	32:5:2495:U:C5	2.92	0.57
32:5:2566:G:C2	32:5:2567:G:N7	2.72	0.57
32:5:2594:C:N3	32:5:2595:C:C5	2.71	0.57
32:5:2697:A:C2	32:5:2698:G:C8	2.92	0.57
32:5:2784:C:C2	32:5:2785:C:C6	2.75	0.57
32:5:2844:A:N6	32:5:3839:G:C8	2.72	0.57
32:5:3590:G:C6	32:5:3591:C:C4	2.92	0.57
32:5:3590:G:C5	32:5:3591:C:C5	2.92	0.57
32:5:3621:A:H8	32:5:4642:U:H1'	1.69	0.57
32:5:4238:G:C2	32:5:4287:G:C6	2.92	0.57
32:5:4273:A:H2'	32:5:4274:A:C1'	2.33	0.57
32:5:4344:U:N3	32:5:4345:C:H5	1.97	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
32:5:4742:G:N1	32:5:4743:G:C8	2.72	0.57
34:8:85:U:H2'	34:8:87:G:H8	1.68	0.57
35:B:91:GLY:HA3	35:B:153:MET:HE3	1.86	0.57
35:B:308:ASP:OD1	35:B:308:ASP:C	2.48	0.57
39:I:85:PHE:CD1	39:I:85:PHE:C	2.82	0.57
39:I:171:TRP:HB2	39:I:181:PHE:CD2	2.39	0.57
48:z:52:LEU:HD12	48:z:86:LEU:HD12	1.86	0.57
53:S2:31:U:C2	53:S2:644:G:N2	2.72	0.57
53:S2:53:C:O2	53:S2:54:A:H8	1.87	0.57
53:S2:166:A:C2	53:S2:167:G:C8	2.91	0.57
53:S2:211:G:C6	53:S2:212:C:C4	2.92	0.57
53:S2:436:G:C2	53:S2:437:G:C8	2.92	0.57
53:S2:555:A:C2	53:S2:557:U:C6	2.91	0.57
53:S2:1231:C:C4'	53:S2:1665:G:N2	2.66	0.57
53:S2:1590:C:C5	53:S2:1591:C:C1'	2.86	0.57
53:S2:1602:U:H4'	79:SS:24:ARG:NH2	2.19	0.57
53:S2:1860:A:C6	53:S2:1862:G:C6	2.92	0.57
66:SW:78:ARG:HD3	66:SW:126:LEU:HD23	1.85	0.57
12:S:44:PHE:C	12:S:44:PHE:CD1	2.83	0.57
12:S:166:ARG:C	12:S:167:PHE:HD2	2.12	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:69:A:C2	32:5:70:A:C5	2.91	0.57
32:5:211:G:C2	32:5:212:A:C5	2.92	0.57
32:5:1272:C:HO2'	32:5:1273:G:C1'	2.17	0.57
32:5:1382:G:O2'	32:5:1383:G:H5'	2.04	0.57
32:5:1487:G:H8	32:5:1487:G:O5'	1.86	0.57
32:5:1589:C:C2'	32:5:1590:C:O5'	2.51	0.57
32:5:1617:G:C5	32:5:1618:G:N7	2.73	0.57
32:5:1794:A:C8	32:5:4214:A:N6	2.72	0.57
32:5:1899:G:H1'	32:5:2278:G:H22	1.68	0.57
32:5:2401:A:N1	32:5:2402:G:N7	2.52	0.57
32:5:2519:U:C2	32:5:2520:C:C4	2.92	0.57
32:5:2793:G:C5	32:5:2797:C:N4	2.72	0.57
32:5:2805:C:C5	32:5:2806:A:N7	2.72	0.57
32:5:3732:A:N1	32:5:3733:A:N7	2.52	0.57
32:5:3833:C:C2	32:5:3834:C:C6	2.92	0.57
32:5:3898:G:H2'	32:5:3899:G:H5'	1.86	0.57
32:5:3937:C:O2	32:5:3937:C:H2'	2.03	0.57
32:5:4097:G:N1	32:5:4098:A:N7	2.52	0.57
32:5:4109:G:C6	32:5:4110:C:C4	2.93	0.57
32:5:4117:U:O2	32:5:4117:U:C2'	2.52	0.57
32:5:4277:G:N2	32:5:4278:C:C2	2.72	0.57
32:5:4876:U:H1'	32:5:4878:C:C5	2.39	0.57
32:5:4939:C:O2	32:5:4939:C:C2'	2.53	0.57
34:8:10:G:C5	34:8:11:C:C5	2.88	0.57
34:8:130:C:C4	34:8:131:G:N7	2.72	0.57
35:B:367:PHE:CZ	35:B:369:ASP:HA	2.38	0.57
37:E:102:VAL:HB	37:E:103:VAL:HG13	1.85	0.57
49:3:27:U:H2'	49:3:28:U:C6	2.39	0.57
53:S2:25:A:C6	53:S2:26:U:C5	2.92	0.57
53:S2:121:U:C4	53:S2:122:G:N7	2.73	0.57
53:S2:333:G:N7	58:SG:190:ARG:NH1	2.52	0.57
53:S2:625:G:O4'	53:S2:629:A:H2	1.87	0.57
53:S2:913:A:O2'	53:S2:914:U:OP1	2.17	0.57
53:S2:956:G:N3	53:S2:957:A:N7	2.52	0.57
53:S2:1203:G:C3'	53:S2:1204:A:C8	2.84	0.57
53:S2:1225:U:O4	53:S2:1226:G:N7	2.36	0.57
53:S2:1366:G:N1	53:S2:1374:C:N4	2.51	0.57
53:S2:1495:G:O2'	84:Sd:26:ASN:ND2	2.37	0.57
53:S2:1576:G:N1	53:S2:1577:G:C5	2.72	0.57
64:SO:146:ARG:HD3	69:Sa:29:CYS:CB	2.34	0.57
73:SF:128:ILE:CD1	83:Sc:68:LEU:CG	2.81	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SM:85:LEU:HA	75:SM:88:TRP:CZ2	2.39	0.57
2:D:284:LYS:HB3	39:I:209:TRP:CZ3	2.39	0.57
11:R:124:TYR:CZ	32:5:2665:U:C5	2.93	0.57
18:Z:4:PHE:N	18:Z:4:PHE:CD1	2.72	0.57
32:5:174:C:C2	32:5:263:G:C2	2.93	0.57
32:5:298:G:C6	32:5:299:C:C4	2.92	0.57
32:5:323:C:O2	32:5:323:C:H2'	2.04	0.57
32:5:504:G:H22	32:5:654:C:H1'	1.70	0.57
32:5:933:G:C2	32:5:940:C:C5	2.93	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
32:5:1075:G:N2	32:5:1076:C:C2	2.72	0.57
32:5:1212:G:C2	32:5:1213:G:N7	2.71	0.57
32:5:1261:G:C2	32:5:1262:G:N9	2.72	0.57
32:5:1297:U:O2	32:5:1298:C:C6	2.57	0.57
32:5:1301:C:O4'	32:5:1301:C:O2	2.18	0.57
32:5:1629:G:C2	32:5:1631:A:C5	2.93	0.57
32:5:1635:C:C2'	32:5:1636:U:H5'	2.25	0.57
32:5:1797:G:C2	32:5:1798:G:C8	2.93	0.57
32:5:2291:G:C2	32:5:2292:C:C5	2.92	0.57
32:5:2291:G:N1	32:5:2292:C:C5	2.72	0.57
32:5:2556:G:N2	32:5:2572:C:C2	2.72	0.57
32:5:2603:C:N3	32:5:2604:C:C5	2.72	0.57
32:5:2623:A:N1	32:5:2633:U:C4	2.72	0.57
32:5:2688:G:N3	32:5:2689:C:C6	2.72	0.57
32:5:4098:A:N1	32:5:4099:G:N7	2.53	0.57
32:5:4223:C:H5''	32:5:4224:A:OP2	2.05	0.57
33:7:22:A:C2	33:7:23:A:C6	2.91	0.57
35:B:114:CYS:SG	35:B:180:LEU:HD11	2.44	0.57
39:I:108:ALA:O	39:I:109:ASP:HB3	2.05	0.57
50:4:18:G:N2	50:4:19:C:C2	2.73	0.57
50:4:51:G:C2	50:4:52:C:C6	2.93	0.57
53:S2:81:U:C5	53:S2:82:G:C8	2.91	0.57
53:S2:190:G:O2'	53:S2:209:A:N6	2.37	0.57
53:S2:312:G:HO2'	53:S2:313:A:P	2.27	0.57
53:S2:376:A:C2	53:S2:377:G:H1'	2.39	0.57
53:S2:862:A:C2	53:S2:863:U:N1	2.72	0.57
53:S2:913:A:C2	59:SH:120:ARG:NH2	2.72	0.57
53:S2:961:G:C6	53:S2:962:A:N7	2.72	0.57
53:S2:1127:C:C2	53:S2:1128:C:C6	2.92	0.57
53:S2:1215:C:H42	53:S2:1221:G:H1	1.49	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1351:G:O4'	54:SA:110:ASN:ND2	2.34	0.57
53:S2:1776:G:N2	53:S2:1777:G:C4	2.73	0.57
68:SY:88:LYS:HE3	68:SY:97:TYR:OH	2.05	0.57
74:SK:11:ILE:HD12	74:SK:45:VAL:HG22	1.86	0.57
80:ST:34:VAL:HG13	80:ST:52:TRP:CH2	2.39	0.57
18:Z:46:ILE:HD12	18:Z:49:TYR:CD1	2.40	0.57
32:5:146:G:N2	32:5:147:A:C4	2.72	0.57
32:5:172:C:C2	32:5:173:C:C5	2.92	0.57
32:5:295:A:O3'	32:5:296:A:C8	2.57	0.57
32:5:448:G:N1	32:5:449:C:C6	2.73	0.57
32:5:470:A:N7	32:5:471:A:N7	2.53	0.57
32:5:916:C:C4	32:5:917:A:N7	2.72	0.57
32:5:1211:G:C2	32:5:1212:G:C8	2.93	0.57
32:5:1534:A:H1'	42:j:11:ARG:NH2	2.19	0.57
32:5:1534:A:N6	42:j:14:LYS:HA	2.19	0.57
32:5:1691:G:C4	32:5:1692:C:C6	2.92	0.57
32:5:2529:A:N6	32:5:2532:C:H1'	2.18	0.57
32:5:2589:C:N4	32:5:2590:G:C5	2.72	0.57
32:5:2700:G:H2'	32:5:2701:U:O4'	2.04	0.57
32:5:3703:G:C6	32:5:3704:U:C4	2.93	0.57
32:5:4271:A:N3	32:5:4271:A:H2'	2.20	0.57
32:5:4368:G:N2	32:5:4369:A:H1'	2.20	0.57
32:5:4563:U:N3	32:5:4564:A:C5	2.73	0.57
32:5:4652:G:N3	32:5:4653:C:C6	2.73	0.57
32:5:4984:C:N3	32:5:4985:U:C6	2.73	0.57
36:C:143:ARG:HH21	36:C:145:GLU:HG3	1.70	0.57
37:E:43:ASN:C	37:E:43:ASN:HD22	2.13	0.57
39:I:91:LEU:HD12	39:I:135:ILE:HG23	1.86	0.57
53:S2:49:C:H2'	53:S2:49:C:O2	2.05	0.57
53:S2:121:U:C2	53:S2:122:G:N7	2.70	0.57
53:S2:201:C:C4	53:S2:202:G:H1'	2.39	0.57
53:S2:340:C:N4	53:S2:341:C:N4	2.52	0.57
53:S2:1230:C:H2'	53:S2:1665:G:H22	1.69	0.57
53:S2:1759:G:N2	53:S2:1774:C:C2	2.72	0.57
55:SB:27:LYS:CA	55:SB:51:ARG:HH12	2.17	0.57
55:SB:107:ARG:HH11	55:SB:107:ARG:HB3	1.70	0.57
55:SB:150:ILE:HD13	78:SR:129:LYS:HZ2	1.62	0.57
57:SE:121:TYR:CE2	57:SE:122:LYS:HA	2.39	0.57
73:SF:140:ASP:CB	83:Sc:56:LEU:HD21	2.35	0.57
13:T:82:GLY:CA	20:b:16:TRP:HB2	2.35	0.57
18:Z:50:PRO:CG	18:Z:122:TYR:CE2	2.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Z:97:ASN:OD1	18:Z:98:LYS:N	2.37	0.57
32:5:1:C:C6	32:5:2:G:C8	2.93	0.57
32:5:101:A:C2	32:5:102:G:N9	2.73	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
32:5:321:U:O2	32:5:322:C:C6	2.57	0.57
32:5:358:C:C2	32:5:359:A:C8	2.92	0.57
32:5:426:A:C2	32:5:427:A:C5	2.92	0.57
32:5:491:G:N2	32:5:663:G:H1	2.02	0.57
32:5:708:G:C2	32:5:709:C:C6	2.92	0.57
32:5:962:C:P	32:5:2264:C:N3	2.77	0.57
32:5:1177:U:N3	32:5:1178:G:N7	2.52	0.57
32:5:1246:G:C4	32:5:1247:U:C6	2.93	0.57
32:5:1279:A:C2'	32:5:1280:C:C5	2.86	0.57
32:5:1291:G:C2	32:5:1292:C:C6	2.93	0.57
32:5:1624:G:C5	32:5:1643:A:C8	2.92	0.57
32:5:1778:C:O2	32:5:1779:U:H5	1.87	0.57
32:5:1910:G:C2	32:5:1911:C:C5	2.92	0.57
32:5:1944:A:C5	32:5:1945:G:C8	2.93	0.57
32:5:2089:G:O2'	32:5:2090:U:O2	2.23	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
32:5:2394:G:N2	32:5:2820:C:H5	2.03	0.57
32:5:2435:G:H21	32:5:2783:A:H1'	1.70	0.57
32:5:2481:G:C5	32:5:2482:C:C5	2.93	0.57
32:5:2557:G:C6	32:5:2558:C:C4	2.92	0.57
32:5:3793:U:C2	32:5:3794:C:C5	2.93	0.57
32:5:3869:C:C2	32:5:3870:C:C5	2.91	0.57
32:5:4102:C:C2	32:5:4108:G:C2	2.93	0.57
32:5:4958:C:H2'	32:5:4958:C:O2	2.04	0.57
32:5:4984:C:C2	32:5:4985:U:C6	2.93	0.57
32:5:4996:C:N3	32:5:4997:G:C8	2.73	0.57
33:7:43:U:O4	33:7:44:C:N4	2.38	0.57
35:B:51:ALA:HA	35:B:323:TYR:HE2	1.66	0.57
37:E:229:PHE:CD2	37:E:230:ASP:OD1	2.57	0.57
48:z:69:LEU:C	48:z:71:LYS:N	2.63	0.57
48:z:368:SER:HB3	48:z:477:UNK:CA	2.35	0.57
48:z:411:GLY:HA2	50:4:194:G:N2	2.19	0.57
49:3:18:G:H4'	49:3:60:A:C2	2.40	0.57
53:S2:291:G:H8	53:S2:291:G:O5'	1.87	0.57
53:S2:440:G:OP1	53:S2:1798:C:O2'	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:675:U:O2	53:S2:675:U:H2'	2.03	0.57
53:S2:1053:C:C2	53:S2:1054:G:C8	2.93	0.57
53:S2:1223:A:C2	53:S2:1644:C:N3	2.73	0.57
53:S2:1272:C:C4	53:S2:1273:C:C5	2.92	0.57
53:S2:1292:C:H6	85:Sf:149:CYS:CA	2.17	0.57
53:S2:1563:G:C6	53:S2:1564:C:C4	2.93	0.57
53:S2:1791:A:C6	53:S2:1792:G:H1'	2.39	0.57
53:S2:1797:U:O2'	53:S2:1798:C:O5'	2.17	0.57
54:SA:10:MET:HA	54:SA:55:TRP:CZ3	2.39	0.57
55:SB:49:VAL:CG2	55:SB:62:LEU:HD22	2.34	0.57
61:SJ:32:ILE:HD11	61:SJ:40:LYS:HD3	1.87	0.57
2:D:44:TYR:CE2	32:5:1823:G:H4'	2.40	0.57
10:Q:178:ARG:NH2	10:Q:186:TYR:HE1	2.01	0.57
11:R:131:VAL:CG2	11:R:132:PHE:CZ	2.87	0.57
32:5:102:G:C2'	32:5:103:G:O5'	2.53	0.57
32:5:426:A:O2'	32:5:427:A:H5'	2.05	0.57
32:5:483:G:N3	32:5:484:U:C6	2.73	0.57
32:5:676:C:C2	32:5:677:G:C8	2.92	0.57
32:5:751:G:C2	32:5:752:G:C8	2.91	0.57
32:5:1285:U:C4	32:5:1286:C:C5	2.93	0.57
32:5:1479:G:O2'	32:5:1480:C:O4'	2.20	0.57
32:5:1555:G:C4	32:5:1556:C:C6	2.92	0.57
32:5:1743:A:C5	32:5:1744:U:C5	2.93	0.57
32:5:1878:G:C6	32:5:1879:C:N4	2.73	0.57
32:5:2128:G:C6	32:5:2129:C:C4	2.93	0.57
32:5:2268:A:H4'	32:5:2269:C:O5'	2.05	0.57
32:5:2392:C:H2'	32:5:2392:C:O2	2.04	0.57
32:5:2634:C:N3	32:5:2635:U:C5	2.72	0.57
32:5:2745:A:O2'	32:5:2746:A:C5'	2.52	0.57
32:5:4095:G:N2	32:5:4096:C:C5	2.72	0.57
32:5:4330:G:C2	32:5:4331:G:H1'	2.39	0.57
32:5:4468:U:O2	32:5:4708:A:C8	2.57	0.57
32:5:4502:C:N4	32:5:4503:A:N7	2.52	0.57
32:5:5005:G:O6	41:W:51:TRP:CB	2.50	0.57
33:7:55:A:C2	33:7:56:G:C5	2.92	0.57
34:8:73:U:N3	34:8:74:U:H1'	2.19	0.57
39:I:76:MET:HE2	39:I:80:CYS:SG	2.45	0.57
47:q:124:PRO:O	47:q:126:GLN:N	2.37	0.57
47:q:161:ILE:HD11	47:q:171:GLU:HG3	1.85	0.57
47:q:167:VAL:HG21	47:q:183:PHE:CE2	2.40	0.57
50:4:45:G:C5	50:4:46:C:C5	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:4:114:G:H1	50:4:237:U:H3	1.52	0.57
50:4:120:G:N2	50:4:230[A]:C:O2	2.38	0.57
53:S2:522:A:OP2	61:SJ:45:ARG:NH1	2.34	0.57
53:S2:665:G:N2	53:S2:671:A:C8	2.73	0.57
53:S2:1109:C:H3'	53:S2:1109:C:OP2	2.04	0.57
53:S2:1290:G:C2'	85:Sf:146:LEU:H	2.17	0.57
53:S2:1293:A:C8	85:Sf:152:LYS:HB2	2.40	0.57
53:S2:1294:G:C8	85:Sf:151:ASN:C	2.82	0.57
53:S2:1449:G:H2'	53:S2:1450:G:O4'	2.04	0.57
53:S2:1573:G:C6	53:S2:1574:C:C4	2.93	0.57
53:S2:1683:C:C2	53:S2:1684:C:C5	2.92	0.57
82:SZ:49:LEU:HA	82:SZ:83:LEU:CD1	2.34	0.57
1:A:174:ARG:NH2	32:5:3684:G:OP1	2.38	0.57
9:O:160:ARG:NH2	32:5:4759:C:OP1	2.36	0.57
12:S:57:SER:OG	33:7:98:G:OP1	2.21	0.57
31:o:26:TYR:CD2	31:o:82:MET:HE3	2.40	0.57
32:5:29:G:N2	32:5:30:C:C2	2.73	0.57
32:5:98:A:C6	32:5:99:A:C4	2.92	0.57
32:5:288:G:C5	32:5:289:C:C5	2.93	0.57
32:5:291:U:C2'	32:5:292:G:C2'	2.74	0.57
32:5:388:A:C6	32:5:411:G:C6	2.91	0.57
32:5:438:G:N1	32:5:439:G:C5	2.73	0.57
32:5:728:U:O2'	32:5:729:G:OP1	2.19	0.57
32:5:1398:A:C2	32:5:1399:G:H1'	2.40	0.57
32:5:1615:C:C4	32:5:1616:U:C5	2.93	0.57
32:5:1632:A:O2'	32:5:3641:U:O2	2.22	0.57
32:5:1644:C:N3	32:5:1645:C:C5	2.73	0.57
32:5:1735:U:O2	32:5:1735:U:C2'	2.53	0.57
32:5:1877:G:N1	32:5:1878:G:C5	2.72	0.57
32:5:2549:G:N2	32:5:2770:C:N3	2.53	0.57
32:5:2727:C:C2	32:5:2728:U:C5	2.93	0.57
32:5:2860:C:H2'	32:5:2861:C:O4'	2.05	0.57
32:5:3612:C:H2'	32:5:3613:U:O4'	2.05	0.57
32:5:3718:A:H2'	32:5:3719:A:C1'	2.34	0.57
32:5:3764:U:H2'	32:5:3765:G:O4'	2.05	0.57
32:5:3863:C:O2	32:5:3864:C:C5	2.58	0.57
32:5:4091:G:C6	32:5:4092:G:C5	2.93	0.57
32:5:4142:C:C4	32:5:4143:G:N1	2.72	0.57
32:5:4177:C:C2	32:5:4178:A:C8	2.93	0.57
32:5:4336:A:C8	32:5:4336:A:H3'	2.40	0.57
32:5:4661:G:H2'	32:5:4662:C:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4881:U:O2'	32:5:4882:U:O4'	2.19	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
50:4:32:A:O2'	50:4:33:G:C8	2.58	0.57
53:S2:31:U:H2'	53:S2:32:U:C6	2.39	0.57
53:S2:467:G:C6	53:S2:468:A:C8	2.93	0.57
53:S2:963:A:N3	53:S2:964:A:C5	2.72	0.57
53:S2:980:A:C2	53:S2:981:A:C6	2.92	0.57
53:S2:1121:G:C5	53:S2:1122:A:N7	2.72	0.57
53:S2:1428:G:H2'	53:S2:1429:G:O4'	2.04	0.57
53:S2:1488:C:C2	53:S2:1490:G:N7	2.73	0.57
53:S2:1589:A:OP1	80:ST:81:GLY:N	2.38	0.57
59:SH:118:ARG:O	59:SH:121:THR:HG22	2.04	0.57
63:SN:34:LYS:O	63:SN:38:TYR:HB2	2.04	0.57
67:SX:88:ASP:OD1	67:SX:88:ASP:C	2.47	0.57
69:Sa:22:ARG:CZ	69:Sa:22:ARG:CB	2.82	0.57
83:Sc:6:VAL:HG12	83:Sc:8:PRO:HD3	1.87	0.57
9:O:114:LYS:CA	32:5:4757:C:O2	2.44	0.57
13:T:132:PRO:HG2	38:F:128:ASN:HD21	1.70	0.57
23:e:17:THR:HB	32:5:1302:U:H5'	1.87	0.57
32:5:77:U:C4	32:5:335:A:N6	2.73	0.57
32:5:515:C:C2	32:5:516:C:C5	2.93	0.57
32:5:712:C:N3	32:5:713:C:C5	2.73	0.57
32:5:1085:C:N3	32:5:1086:C:C6	2.72	0.57
32:5:1271:G:H3'	32:5:1272:C:C4'	2.35	0.57
32:5:1411:C:O2	32:5:1412:G:H8	1.80	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
32:5:1667:G:C6	32:5:2280:G:C4	2.93	0.57
32:5:1672:U:H2'	32:5:1673:U:C6	2.39	0.57
32:5:2441:C:H2'	32:5:2442:G:H8	1.69	0.57
32:5:2602:G:H1	32:5:2736:G:H1	1.50	0.57
32:5:3719:A:N7	32:5:3720:G:C8	2.72	0.57
32:5:4145:C:O2	32:5:4146:G:C8	2.57	0.57
32:5:4258:C:C2	32:5:4259:C:C6	2.93	0.57
32:5:4652:G:C2	32:5:4653:C:C5	2.93	0.57
32:5:4737:G:C4	32:5:4738:C:C4	2.93	0.57
32:5:4772:C:C2	32:5:4773:C:C5	2.93	0.57
32:5:5030:U:N3	32:5:5031:G:N7	2.53	0.57
34:8:9:A:N1	34:8:10:G:N7	2.52	0.57
34:8:66:A:H2'	34:8:67:U:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:134:LEU:HD12	48:z:159:PHE:CE1	2.39	0.57
48:z:340:MET:C	48:z:341:LYS:HA	2.22	0.57
48:z:383:ASN:HB2	50:4:209:G:P	2.44	0.57
53:S2:191:A:H3'	53:S2:192:C:H5''	1.87	0.57
53:S2:364:A:C2	53:S2:397:G:N3	2.73	0.57
53:S2:431:G:N3	53:S2:432:G:C8	2.73	0.57
53:S2:547:G:O2'	53:S2:548:C:O4'	2.20	0.57
53:S2:875:A:H2	53:S2:910:G:H22	1.50	0.57
53:S2:1291:A:C5	85:Sf:140:TYR:CE2	2.92	0.57
53:S2:1475:G:H1'	53:S2:1476:A:H5''	1.86	0.57
53:S2:1573:G:C6	53:S2:1574:C:C5	2.93	0.57
53:S2:1590:C:C5	53:S2:1591:C:H1'	2.39	0.57
53:S2:1686:G:C3'	53:S2:1687:C:P	2.93	0.57
53:S2:1741:U:C2	53:S2:1742:C:C6	2.92	0.57
58:SG:209:TYR:CE2	58:SG:213:LEU:HD23	2.39	0.57
61:SJ:114:VAL:HG12	61:SJ:120:ALA:HB2	1.86	0.57
62:SL:40:ILE:HD11	62:SL:68:ILE:HB	1.87	0.57
76:SP:37:TYR:HA	76:SP:42:ARG:HH22	1.69	0.57
5:J:125:ILE:HD13	79:SS:19:ASN:ND2	2.09	0.57
7:M:107:PHE:CD1	37:E:266:TYR:CD2	2.93	0.57
11:R:132:PHE:N	11:R:132:PHE:CD2	2.72	0.57
12:S:96:GLU:HB3	12:S:142:VAL:HG21	1.87	0.57
21:c:56:ARG:HG3	21:c:56:ARG:HH11	1.70	0.57
32:5:88:A:O2'	32:5:89:C:O5'	2.23	0.57
32:5:179:G:C6	32:5:180:C:C4	2.93	0.57
32:5:421:C:C4	32:5:422:C:C5	2.93	0.57
32:5:424:U:C2	32:5:425:U:C5	2.83	0.57
32:5:450:G:O6	32:5:1295:C:C4	2.58	0.57
32:5:662:C:H2'	32:5:663:G:C8	2.39	0.57
32:5:1267:C:O2'	32:5:1271:G:O6	2.22	0.57
32:5:1392:A:H2'	32:5:1393:G:C8	2.40	0.57
32:5:1582:U:O4	32:5:1583:A:C5	2.58	0.57
32:5:1831:G:C4	32:5:1832:C:C6	2.93	0.57
32:5:1936:C:C4	33:7:84:U:C5	2.92	0.57
32:5:2000:G:O2'	32:5:2017:A:N1	2.31	0.57
32:5:2282:A:C2'	32:5:2283:G:O5'	2.52	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:O2	2.57	0.57
32:5:2724:G:N3	32:5:2726:G:N7	2.47	0.57
32:5:2844:A:C2	32:5:3839:G:N7	2.72	0.57
32:5:3656:A:C2	32:5:3657:U:C5	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:4296:U:C4	32:5:4297:G:C8	2.93	0.57
32:5:4908:G:H1	32:5:4913:G:H21	1.52	0.57
32:5:5028:G:C6	32:5:5029:C:N4	2.73	0.57
32:5:5057:C:H2'	32:5:5058:A:C8	2.39	0.57
34:8:44:A:C4	34:8:45:C:C5	2.92	0.57
34:8:70:G:N2	34:8:87:G:O2'	2.38	0.57
34:8:79:G:C2	34:8:80:A:C6	2.93	0.57
34:8:125:C:C4'	34:8:126:C:H3'	2.35	0.57
38:F:58:HIS:O	38:F:61:LYS:N	2.38	0.57
38:F:248:ARG:HB3	38:F:248:ARG:NH1	2.20	0.57
45:r:30:ASN:HB3	45:r:50:GLY:HA3	1.86	0.57
47:q:109:ALA:O	47:q:110:ALA:HB3	2.05	0.57
53:S2:990:A:C2	53:S2:992:A:C5	2.92	0.57
53:S2:997:A:C2'	53:S2:998:A:O4'	2.53	0.57
53:S2:1038:U:H1'	53:S2:1181:A:N1	2.20	0.57
53:S2:1162:C:C2	53:S2:1163:C:C6	2.92	0.57
53:S2:1352:G:OP1	54:SA:109:THR:HG21	2.04	0.57
53:S2:1667:U:O2	53:S2:1667:U:H2'	2.03	0.57
55:SB:196:ASP:OD1	55:SB:196:ASP:C	2.47	0.57
57:SE:210:VAL:HB	57:SE:218:PHE:CE2	2.40	0.57
68:SY:58:PHE:CZ	68:SY:72:PHE:HB3	2.40	0.57
73:SF:95:HIS:CD2	82:SZ:108:ILE:HD11	2.37	0.57
10:Q:32:TYR:OH	10:Q:123:PHE:HD2	1.87	0.56
32:5:32:G:C8	32:5:48:G:N2	2.73	0.56
32:5:40:G:H2'	32:5:41:C:O4'	2.05	0.56
32:5:471:A:N1	32:5:472:C:H1'	2.20	0.56
32:5:488:G:C2	32:5:489:C:C5	2.93	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
32:5:715:G:H2'	32:5:716:C:O4'	2.05	0.56
32:5:750:U:C4	32:5:751:G:N7	2.73	0.56
32:5:1280:C:N4	32:5:1282:G:O6	2.38	0.56
32:5:1466:G:N2	32:5:1467:C:N1	2.53	0.56
32:5:1529:G:N2	42:j:49:TRP:HZ2	2.03	0.56
32:5:1663:C:O2	32:5:1664:U:C6	2.58	0.56
32:5:1697:G:H4'	32:5:1698:C:OP1	2.05	0.56
32:5:1844:G:C5	32:5:1845:U:C5	2.92	0.56
32:5:2601:A:C8	32:5:2743:A:OP1	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2603:C:H2'	32:5:2603:C:O2	2.03	0.56
32:5:2853:C:C5	32:5:2854:G:C4	2.93	0.56
32:5:3608:A:C2	32:5:3609:G:C5	2.94	0.56
32:5:3652:A:N6	32:5:3691:G:O2'	2.34	0.56
32:5:3670:C:O2'	32:5:3671:G:C8	2.57	0.56
32:5:3676:G:O2'	32:5:3677:U:C5'	2.53	0.56
32:5:3743:G:C2'	32:5:3744:G:H5'	2.31	0.56
32:5:3758:U:C4	32:5:3765:G:C6	2.93	0.56
32:5:4549:G:N3	32:5:4549:G:H2'	2.19	0.56
32:5:4744:A:N3	32:5:4745:G:C8	2.73	0.56
32:5:5028:G:N2	32:5:5029:C:C2	2.73	0.56
32:5:5029:C:N3	32:5:5030:U:C5	2.73	0.56
33:7:92:C:O2	33:7:93:G:C8	2.58	0.56
34:8:14:U:O2'	34:8:15:G:C5'	2.52	0.56
34:8:80:A:H3'	34:8:81:C:H4'	1.85	0.56
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
48:z:273:ILE:HD12	48:z:285:PHE:CE1	2.36	0.56
53:S2:119:U:C4	53:S2:120:U:C5	2.92	0.56
53:S2:377:G:C6	53:S2:378:U:C4	2.92	0.56
53:S2:550:C:C2	53:S2:551:U:C5	2.92	0.56
53:S2:1565:C:C2	53:S2:1571:G:N2	2.73	0.56
53:S2:1605:G:C3'	53:S2:1606:G:O4'	2.52	0.56
53:S2:1772:C:C2	53:S2:1773:C:C6	2.92	0.56
53:S2:1793:A:C2	53:S2:1794:C:C6	2.93	0.56
53:S2:1797:U:H2'	53:S2:1798:C:C6	2.39	0.56
57:SE:48:LEU:HD21	57:SE:70:ILE:HD11	1.86	0.56
5:J:98:ASN:OD1	5:J:98:ASN:N	2.37	0.56
32:5:100:C:O4'	32:5:100:C:O2	2.22	0.56
32:5:313:U:N3	32:5:314:G:C8	2.73	0.56
32:5:442:G:O2'	32:5:443:G:H5'	2.05	0.56
32:5:504:G:N1	32:5:654:C:O2	2.36	0.56
32:5:964:A:C8	32:5:964:A:C5'	2.88	0.56
32:5:1394:G:O2'	32:5:1395:U:H5'	2.05	0.56
32:5:1751:A:C5	32:5:1752:G:C8	2.93	0.56
32:5:1767:A:C2	32:5:1769:G:H1'	2.40	0.56
32:5:1929:A:C6	32:5:2054:U:O4	2.57	0.56
32:5:2614:C:H2'	32:5:2614:C:O2	2.04	0.56
32:5:2713:C:C2	32:5:2714:G:C8	2.93	0.56
32:5:4081:G:N2	32:5:4082:G:C4	2.73	0.56
32:5:4167:G:N2	32:5:4168:G:C1'	2.67	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:4341:C:N4	32:5:4342:C:C4	2.73	0.56
32:5:4479:A:N6	32:5:4480:A:C4	2.73	0.56
32:5:4731:G:C8	32:5:4732:G:C6	2.93	0.56
32:5:5061:A:C4'	32:5:5062:G:H5''	2.34	0.56
33:7:110:G:N2	33:7:111:C:N1	2.53	0.56
33:7:112:U:O2	33:7:112:U:H2'	2.04	0.56
35:B:58:ARG:NH2	35:B:60:VAL:HG22	2.20	0.56
53:S2:18:C:C4'	53:S2:1194:A:H62	2.17	0.56
53:S2:42:A:C6	53:S2:43:U:H5	2.23	0.56
53:S2:64:A:C5	53:S2:82:G:N1	2.73	0.56
53:S2:588:G:C1'	53:S2:589:G:H21	2.18	0.56
53:S2:752:G:C6	53:S2:791:C:N3	2.72	0.56
53:S2:946:U:N3	53:S2:947:G:N7	2.53	0.56
53:S2:962:A:N1	53:S2:963:A:C5	2.73	0.56
53:S2:1113:A:H2'	53:S2:1114:U:H2'	1.86	0.56
53:S2:1776:G:C2	53:S2:1777:G:N7	2.73	0.56
54:SA:43:SER:O	54:SA:45:GLY:N	2.38	0.56
60:SI:113:TYR:CD2	60:SI:121:LEU:HD21	2.40	0.56
78:SR:103:LYS:CB	78:SR:117:LEU:HD13	2.32	0.56
4:H:31:ARG:HH11	4:H:87:GLY:HA3	0.78	0.56
8:N:86:HIS:CD2	32:5:33:A:H5'	2.41	0.56
12:S:66:GLN:CD	12:S:68:PHE:HB3	2.30	0.56
12:S:91:HIS:HE1	32:5:2032:U:O2'	1.87	0.56
12:S:94:TYR:CE2	12:S:96:GLU:HG3	2.40	0.56
27:i:38:LYS:O	27:i:39:PHE:C	2.48	0.56
29:l:44:TRP:CZ3	29:l:45:ARG:HB2	2.40	0.56
32:5:29:G:C5	32:5:54:G:C2	2.93	0.56
32:5:57:G:C2	32:5:58:G:N1	2.74	0.56
32:5:59:A:C4	32:5:60:G:C8	2.94	0.56
32:5:84:A:C6	32:5:86:U:C5	2.93	0.56
32:5:84:A:C6	32:5:86:U:C4	2.94	0.56
32:5:127:G:N3	32:5:128:C:C6	2.73	0.56
32:5:270:U:O2	32:5:270:U:H2'	2.04	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
32:5:990:C:C4	32:5:991:C:C5	2.93	0.56
32:5:1091:C:N3	32:5:1092:G:C8	2.74	0.56
32:5:1091:C:N3	32:5:1092:G:N7	2.53	0.56
32:5:1100:U:C2	32:5:1167:C:C5	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1188:C:O2	32:5:1188:C:C2'	2.53	0.56
32:5:1282:G:C8	37:E:124:HIS:CE1	2.93	0.56
32:5:1285:U:C4	32:5:1286:C:C4	2.93	0.56
32:5:1368:A:O2'	32:5:1369:C:OP1	2.18	0.56
32:5:1440:U:C2	32:5:1441:C:C5	2.93	0.56
32:5:1464:C:O2	32:5:1464:C:H2'	2.06	0.56
32:5:1691:G:C2	32:5:1692:C:N1	2.74	0.56
32:5:1739:G:H2'	32:5:1740:C:C1'	2.36	0.56
32:5:1757:U:O2	32:5:1758:G:C8	2.58	0.56
32:5:1769:G:C2	32:5:1770:A:C5	2.93	0.56
32:5:1797:G:C2	32:5:1798:G:C5	2.93	0.56
32:5:1855:G:C6	32:5:1856:C:C4	2.93	0.56
32:5:1934:A:O2'	32:5:2059:C:OP1	2.20	0.56
32:5:1995:G:C4	32:5:1996:C:C5	2.94	0.56
32:5:2270:G:N2	32:5:2271:C:N3	2.53	0.56
32:5:2367:A:C8	32:5:2798:A:N3	2.72	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
32:5:2605:G:C2	32:5:2606:G:C5	2.92	0.56
32:5:2747:U:H2'	32:5:2748:C:O4'	2.05	0.56
32:5:2854:G:O6	32:5:2856:C:C6	2.58	0.56
32:5:3590:G:C4	32:5:3591:C:C6	2.93	0.56
32:5:3636:C:C4	32:5:3637:U:C5	2.93	0.56
32:5:3698:G:N1	32:5:3699:C:C4	2.74	0.56
32:5:3710:G:N2	32:5:3711:A:C5	2.73	0.56
32:5:3840:U:O2	32:5:3840:U:H2'	2.06	0.56
32:5:3848:U:N3	32:5:3849:A:N7	2.52	0.56
32:5:4072:C:C2	32:5:4073:A:N7	2.72	0.56
32:5:4075:U:H4'	32:5:4076:G:OP1	2.03	0.56
32:5:4091:G:C2	32:5:4159:C:C4	2.94	0.56
32:5:4297:G:N1	32:5:4298:A:C8	2.73	0.56
32:5:4332:C:O2	32:5:4333:C:C6	2.59	0.56
32:5:4346:U:H2'	32:5:4347:G:O5'	2.06	0.56
32:5:4425:G:C5	32:5:4426:C:C6	2.93	0.56
32:5:4462:C:C2	32:5:4515:G:C2	2.93	0.56
32:5:4580:U:N3	32:5:4581:G:N7	2.50	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
32:5:4714:C:O2	32:5:4714:C:H2'	2.04	0.56
32:5:4988:U:H2'	32:5:4988:U:O2	2.05	0.56
32:5:5003:U:OP2	35:B:378:ARG:NH2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:120:G:C6	34:8:121:G:N7	2.73	0.56
34:8:143:G:C2	34:8:144:U:C6	2.93	0.56
35:B:160:ILE:HD13	35:B:194:LEU:HD13	1.86	0.56
35:B:264:PHE:C	35:B:264:PHE:CD1	2.83	0.56
36:C:341:LEU:HD21	37:E:52:ARG:HD2	1.87	0.56
40:P:3:ARG:HG3	40:P:3:ARG:HH11	1.69	0.56
46:K:1:MET:H2	46:K:2:PRO:HD3	1.71	0.56
48:z:134:LEU:HB2	48:z:159:PHE:CD1	2.40	0.56
48:z:340:MET:O	48:z:341:LYS:O	2.23	0.56
49:3:5:C:C2	49:3:6:C:C5	2.93	0.56
49:3:49:C:O2	49:3:50:C:C6	2.58	0.56
50:4:53:U:O2	50:4:54:G:C8	2.58	0.56
51:9:53:CYS:O	51:9:56:VAL:HG12	2.06	0.56
53:S2:2:A:C8	56:SC:223:TYR:HB3	2.41	0.56
53:S2:194:C:C2	53:S2:206:G:N2	2.73	0.56
53:S2:333:G:H2'	53:S2:334:C:O4'	2.05	0.56
53:S2:367:U:C2'	53:S2:371:A:N7	2.66	0.56
53:S2:461:U:C2	53:S2:462:C:C6	2.94	0.56
53:S2:647:U:O2	53:S2:647:U:H2'	2.03	0.56
53:S2:675:U:N3	53:S2:676:C:C5	2.73	0.56
53:S2:695:C:N3	53:S2:696:G:C8	2.74	0.56
53:S2:969:U:C6	53:S2:971:G:N2	2.73	0.56
53:S2:976:G:C5	53:S2:977:C:C5	2.94	0.56
53:S2:1051:G:N1	53:S2:1052:A:C8	2.61	0.56
53:S2:1109:C:H1'	53:S2:1110:G:OP1	2.05	0.56
53:S2:1124:C:C4	53:S2:1125:C:C5	2.93	0.56
53:S2:1134:G:C6	53:S2:1135:C:C4	2.93	0.56
53:S2:1291:A:O4'	85:Sf:146:LEU:HA	2.06	0.56
53:S2:1294:G:N3	53:S2:1295:A:C8	2.72	0.56
53:S2:1308:U:N3	53:S2:1309:C:C5	2.72	0.56
53:S2:1512:C:O2	53:S2:1513:C:C6	2.56	0.56
53:S2:1532:C:H5''	53:S2:1533:A:O4'	2.05	0.56
53:S2:1551:U:H2'	53:S2:1552:G:O4'	2.04	0.56
53:S2:1576:G:N3	53:S2:1577:G:C8	2.73	0.56
53:S2:1718:G:C2	53:S2:1814:G:C2	2.93	0.56
53:S2:1735:A:H2'	53:S2:1736:G:O4'	2.06	0.56
53:S2:1865:C:O2'	69:Sa:95:ARG:NH1	2.37	0.56
53:S2:1868:U:H1'	69:Sa:97:PRO:HB2	1.88	0.56
55:SB:120:VAL:HG22	55:SB:142:PHE:HE1	1.69	0.56
57:SE:103:TYR:CE1	57:SE:189:LEU:HD11	2.40	0.56
61:SJ:39:ASN:OD1	61:SJ:41:ARG:N	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Sa:21:ILE:HG21	69:Sa:72:HIS:NE2	2.19	0.56
80:ST:56:ARG:HD3	80:ST:79:TYR:CE2	2.40	0.56
87:S1:53:THR:HG23	87:S1:54:ASP:H	1.70	0.56
10:Q:17:GLU:HA	10:Q:52:PHE:HE1	1.70	0.56
10:Q:34:PHE:C	10:Q:34:PHE:CD2	2.82	0.56
12:S:47:PHE:HE1	12:S:125:GLN:HG2	1.70	0.56
24:f:18:LEU:HB3	24:f:19:ARG:HH12	1.71	0.56
32:5:25:A:C4	32:5:341:G:C8	2.93	0.56
32:5:269:G:O6	32:5:270:U:C5	2.58	0.56
32:5:271:C:C2	32:5:272:U:C5	2.79	0.56
32:5:371:A:HO2'	32:5:372:A:C5'	2.18	0.56
32:5:691:C:C2	32:5:692:A:N7	2.74	0.56
32:5:993:G:C2	32:5:994:G:C8	2.92	0.56
32:5:1048:G:C6	32:5:1049:C:C4	2.93	0.56
32:5:1213:G:C5	32:5:1215:C:C1'	2.87	0.56
32:5:1308:C:C2	32:5:1309:C:C6	2.94	0.56
32:5:1373:A:C2	32:5:1374:G:C8	2.93	0.56
32:5:1582:U:C4	32:5:1583:A:N7	2.73	0.56
32:5:1616:U:O2	32:5:1617:G:H8	1.87	0.56
32:5:1692:C:N3	32:5:1693:U:H5	1.95	0.56
32:5:1751:A:N6	32:5:1752:G:C5	2.73	0.56
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
32:5:1983:A:N1	32:5:2010:A:OP2	2.39	0.56
32:5:2546:G:O2'	32:5:2547:G:H5''	2.05	0.56
32:5:2855:G:H22	32:5:2859:G:H22	1.52	0.56
32:5:4090:G:C5	32:5:4091:G:C8	2.94	0.56
32:5:4100:C:C4	32:5:4101:C:C5	2.93	0.56
32:5:4229:U:H3'	32:5:4230:C:H6	1.71	0.56
32:5:4230:C:O2	32:5:4231:C:H6	1.84	0.56
32:5:4518:A:C2'	35:B:257:TRP:CZ3	2.88	0.56
32:5:4957:C:O2	32:5:4957:C:H2'	2.04	0.56
33:7:104:C:N3	33:7:105:C:C5	2.74	0.56
34:8:10:G:C4	34:8:11:C:C6	2.93	0.56
38:F:100:ILE:C	38:F:101:ASN:OD1	2.49	0.56
39:I:98:ARG:CD	39:I:119:PHE:CE1	2.81	0.56
40:P:15:CYS:SG	40:P:150:LEU:HB2	2.46	0.56
40:P:114:ILE:HD12	40:P:148:MET:HE3	1.87	0.56
48:z:73:LYS:HD3	48:z:74:MET:N	2.21	0.56
50:4:29:C:OP1	88:S4:2:VAL:N	2.38	0.56
51:9:16:ILE:HD11	51:9:84:VAL:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:118:C:C4	53:S2:119:U:N1	2.73	0.56
53:S2:167:G:N2	53:S2:168:C:C2	2.74	0.56
53:S2:218:U:H2'	53:S2:219:U:C6	2.40	0.56
53:S2:404:G:C2	53:S2:405:G:C5	2.94	0.56
53:S2:443:U:H2'	53:S2:443:U:O2	2.06	0.56
53:S2:563:G:N2	53:S2:564:A:C8	2.74	0.56
53:S2:1037:G:C6	53:S2:1038:U:C5	2.93	0.56
53:S2:1073:U:H2'	53:S2:1073:U:O2	2.05	0.56
53:S2:1290:G:N2	53:S2:1291:A:C8	2.74	0.56
53:S2:1292:C:N4	85:Sf:132:MET:SD	2.79	0.56
53:S2:1457:U:C2	53:S2:1458:G:C8	2.93	0.56
53:S2:1552:G:H5''	53:S2:1553:C:H5''	1.87	0.56
53:S2:1568:C:O2'	53:S2:1569:A:O4'	2.24	0.56
53:S2:1642:U:O2	53:S2:1643:U:H5	1.86	0.56
53:S2:1858:G:C6	53:S2:1859:A:C8	2.94	0.56
54:SA:73:ASP:N	54:SA:73:ASP:OD1	2.37	0.56
58:SG:220:ALA:HA	58:SG:223:LYS:HB2	1.87	0.56
62:SL:13:GLN:OE1	62:SL:56:ILE:HD12	2.04	0.56
12:S:173:ASN:OD1	12:S:174:THR:N	2.38	0.56
30:m:119:ASN:OD1	30:m:119:ASN:C	2.48	0.56
32:5:127:G:N1	32:5:128:C:C4	2.74	0.56
32:5:154:G:N2	32:5:155:C:C2	2.72	0.56
32:5:209:U:C5	32:5:211:G:C5	2.93	0.56
32:5:269:G:C6	32:5:270:U:C6	2.90	0.56
32:5:288:G:C6	32:5:289:C:C4	2.93	0.56
32:5:294:G:C4'	32:5:296:A:H5''	2.34	0.56
32:5:486:C:C4	32:5:487:G:N7	2.74	0.56
32:5:500:G:C2	32:5:504:G:N7	2.73	0.56
32:5:982:U:H2'	32:5:983:C:H6	1.69	0.56
32:5:989:U:H2'	32:5:990:C:C5	2.39	0.56
32:5:1408:G:N3	32:5:1408:G:H2'	2.20	0.56
32:5:1618:G:N2	32:5:1619:G:N9	2.52	0.56
32:5:1677:U:H5''	32:5:1680:G:N2	2.19	0.56
32:5:1688:G:H2'	32:5:1689:G:O4'	2.04	0.56
32:5:2365:C:C2	32:5:2829:U:C5	2.92	0.56
32:5:2368:A:C6	32:5:2788:U:O4	2.59	0.56
32:5:2417:A:N1	32:5:2418:A:N7	2.52	0.56
32:5:2589:C:C5	32:5:2590:G:N7	2.74	0.56
32:5:2689:C:O2	32:5:2689:C:C2'	2.52	0.56
32:5:2840:A:C6	32:5:2841:G:C8	2.94	0.56
32:5:3621:A:C2	32:5:3622:C:C6	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3652:A:H3'	32:5:3653:A:C8	2.41	0.56
32:5:3738:G:C6	32:5:3739:C:N1	2.73	0.56
32:5:4090:G:C2	32:5:4160:C:N3	2.74	0.56
32:5:4091:G:C2	32:5:4159:C:C2	2.92	0.56
32:5:4152:G:N3	32:5:4153:C:C6	2.73	0.56
46:K:48:LYS:O	46:K:52:ASP:HB2	2.05	0.56
47:q:133:GLU:O	47:q:135:THR:HG23	2.06	0.56
48:z:363:GLY:C	48:z:365:GLU:N	2.58	0.56
50:4:50:G:N1	50:4:51:G:C5	2.73	0.56
53:S2:455:A:H2'	53:S2:456:C:O4'	2.05	0.56
53:S2:504:G:C2'	53:S2:505:G:O5'	2.54	0.56
53:S2:600:G:N2	53:S2:601:G:C5	2.73	0.56
53:S2:828:G:C2	53:S2:829:C:C6	2.93	0.56
53:S2:1100:A:C2	53:S2:1101:U:N1	2.72	0.56
53:S2:1181:A:O2'	53:S2:1182:A:C8	2.57	0.56
53:S2:1307:U:C1'	85:Sf:133:ALA:HB2	2.34	0.56
53:S2:1454:A:OP1	78:SR:49:LYS:NZ	2.38	0.56
53:S2:1500:G:C6	53:S2:1501:C:C4	2.94	0.56
53:S2:1754:G:C4	53:S2:1755:C:C6	2.94	0.56
58:SG:215:LYS:O	58:SG:219:GLU:N	2.36	0.56
74:SK:95:ARG:HE	74:SK:95:ARG:CA	2.15	0.56
77:SQ:12:VAL:HG11	77:SQ:90:LYS:HB3	1.88	0.56
78:SR:92:ASP:OD1	78:SR:93:GLN:NE2	2.39	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:83:ARG:HH22	13:T:156:TYR:HB2	1.70	0.56
23:e:24:GLN:HE21	32:5:2347:A:H61	1.52	0.56
32:5:90:G:O2'	32:5:94:A:N6	2.39	0.56
32:5:93:G:C2	32:5:94:A:C2	2.94	0.56
32:5:152:U:C2	32:5:153:G:C8	2.93	0.56
32:5:371:A:O2'	32:5:372:A:H5'	2.05	0.56
32:5:1212:G:C2	32:5:1213:G:C5	2.93	0.56
32:5:1598:C:C2	32:5:1599:A:C8	2.92	0.56
32:5:2079:G:C6	32:5:2080:U:C5	2.93	0.56
32:5:2300:A:C2	36:C:182:LYS:HA	2.41	0.56
32:5:2351:C:H2'	32:5:2351:C:O2	2.05	0.56
32:5:2484:A:H2'	32:5:2485:U:O4'	2.05	0.56
32:5:2595:C:O2	32:5:2596:G:C8	2.59	0.56
32:5:3875:G:O6	32:5:3877:A:H4'	2.05	0.56
32:5:3910:C:H2'	32:5:3911:C:H6	1.71	0.56
32:5:4093:G:C2'	32:5:4094:G:H5'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4283:G:N1	32:5:4284:C:N4	2.53	0.56
32:5:4467:A:C6	32:5:4468:U:C4	2.94	0.56
32:5:4467:A:C6	32:5:4468:U:C5	2.93	0.56
32:5:4534:G:C6	32:5:4535:A:N9	2.74	0.56
32:5:4990:C:O2	35:B:169:ARG:HD2	2.06	0.56
32:5:5042:A:C2	32:5:5043:A:C4	2.93	0.56
34:8:61:A:H8	34:8:61:A:O5'	1.89	0.56
36:C:164:THR:HG22	36:C:220:ALA:O	2.06	0.56
47:q:32:ALA:HB1	47:q:187:LEU:CD2	2.34	0.56
47:q:78:LEU:HD21	47:q:193:PHE:CD2	2.41	0.56
47:q:110:ALA:O	47:q:111:ALA:HB3	2.05	0.56
50:4:33:G:N1	50:4:34:C:C4	2.74	0.56
52:6:112:ASP:OD2	52:6:113:ASN:N	2.38	0.56
53:S2:122:G:C2	53:S2:123:G:C4	2.93	0.56
53:S2:377:G:N1	53:S2:378:U:C4	2.73	0.56
53:S2:436:G:N2	53:S2:437:G:C4	2.74	0.56
53:S2:447:A:N6	53:S2:449:A:C6	2.74	0.56
53:S2:469:A:N3	53:S2:469:A:C2'	2.67	0.56
53:S2:1122:A:C2	53:S2:1123:C:N1	2.73	0.56
53:S2:1266:C:O2	53:S2:1266:C:H2'	2.05	0.56
53:S2:1323:U:O2'	53:S2:1324:G:O4'	2.22	0.56
53:S2:1609:C:O2	53:S2:1609:C:H2'	2.03	0.56
53:S2:1758:G:N1	53:S2:1759:G:C5	2.74	0.56
69:Sa:10:ARG:NH1	69:Sa:12:LYS:HD3	2.20	0.56
83:Sc:14:VAL:CA	83:Sc:32:VAL:HA	2.36	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:99:ASP:OD1	12:S:100:LEU:CA	2.54	0.56
19:a:61:TYR:CZ	32:5:294:G:N2	2.73	0.56
21:c:89:TYR:CD1	32:5:2673:G:N2	2.73	0.56
23:e:51:GLY:O	23:e:52:GLN:OE1	2.23	0.56
32:5:27:C:O2'	32:5:60:G:H2'	2.06	0.56
32:5:87:A:C6	32:5:292:G:C6	2.93	0.56
32:5:503:C:OP2	32:5:505:G:OP2	2.24	0.56
32:5:931:C:O2'	32:5:932:A:OP1	2.24	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
32:5:1257:A:C2	32:5:1258:G:H1'	2.40	0.56
32:5:1421:G:C2	32:5:1422:G:N7	2.73	0.56
32:5:1617:G:N1	32:5:1618:G:C4	2.74	0.56
32:5:1635:C:O2	32:5:1636:U:C5	2.55	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:1947:U:O2	32:5:1947:U:H2'	2.06	0.56
32:5:2392:C:N3	32:5:2393:C:C5	2.74	0.56
32:5:2437:C:H5''	32:5:2782:U:O4	2.06	0.56
32:5:2468:U:C4	32:5:2473:A:C6	2.92	0.56
32:5:2614:C:O2	32:5:2726:G:C2	2.58	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:C1'	2.53	0.56
32:5:3696:C:C2	32:5:3697:U:C5	2.94	0.56
32:5:4152:G:N1	32:5:4153:C:C4	2.74	0.56
32:5:4169:G:H4'	32:5:4171:C:O2	2.04	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
32:5:4323:A:N3	32:5:4324:A:C8	2.74	0.56
32:5:4978:G:O2'	32:5:4979:A:H3'	2.06	0.56
33:7:59:G:O6	33:7:60:G:N7	2.38	0.56
34:8:63:U:C2'	34:8:63:U:O2	2.54	0.56
34:8:94:G:C5	42:j:79:ARG:HD2	2.41	0.56
38:F:149:LEU:N	38:F:197:TYR:OH	2.39	0.56
46:K:121:LEU:HD13	46:K:129:ILE:CD1	2.35	0.56
48:z:380:ASP:HB3	50:4:192:A:C6	2.37	0.56
48:z:408:ARG:CZ	50:4:206:G:C4'	2.81	0.56
48:z:408:ARG:NH2	50:4:207:C:OP1	2.38	0.56
53:S2:38:A:C6	53:S2:515:G:N1	2.74	0.56
53:S2:222:U:C2	53:S2:223:C:C6	2.94	0.56
53:S2:316:G:C4	53:S2:317:C:C5	2.94	0.56
53:S2:381:C:O2'	53:S2:382:C:H5'	2.05	0.56
53:S2:452:G:N2	53:S2:453:C:N3	2.53	0.56
53:S2:580:U:O2	53:S2:580:U:H2'	2.05	0.56
53:S2:631:U:H5'	53:S2:631:U:H6	1.71	0.56
53:S2:694:G:C4	53:S2:695:C:C5	2.94	0.56
53:S2:805:U:O2	53:S2:805:U:H2'	2.06	0.56
53:S2:832:G:C2	53:S2:833:C:N1	2.74	0.56
53:S2:854:A:H2'	53:S2:855:G:O4'	2.05	0.56
53:S2:933:G:C5	53:S2:1001:A:C5	2.94	0.56
53:S2:1122:A:H4'	55:SB:205:TYR:CZ	2.40	0.56
53:S2:1192:U:H2'	53:S2:1193:U:O4'	2.06	0.56
53:S2:1342:U:C5	53:S2:1483:A:C6	2.93	0.56
53:S2:1365:G:O6	53:S2:1375:G:N2	2.38	0.56
53:S2:1407:U:C2	53:S2:1408:U:C5	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1552:G:C8	53:S2:1578:U:O4	2.59	0.56
53:S2:1629:C:O2	53:S2:1629:C:H2'	2.04	0.56
53:S2:1667:U:N3	53:S2:1668:U:O4	2.39	0.56
53:S2:1729:U:O2	53:S2:1730:U:C5	2.58	0.56
53:S2:1756:C:H2'	53:S2:1756:C:O2	2.05	0.56
53:S2:1776:G:N1	53:S2:1777:G:C5	2.74	0.56
79:SS:36:VAL:HG22	79:SS:37:GLY:N	2.21	0.56
2:D:20:PHE:CZ	33:7:10:C:C4	2.94	0.56
3:G:141:ASN:ND2	32:5:151:G:O6	2.39	0.56
3:G:157:ILE:HG23	3:G:167:VAL:HG11	1.88	0.56
7:M:86:TRP:CD1	7:M:92:ALA:HB2	2.41	0.56
10:Q:37:ARG:NH1	32:5:2087:C:C5	2.73	0.56
13:T:156:TYR:OH	13:T:158:PHE:HB2	2.06	0.56
23:e:107:ASN:OD1	23:e:107:ASN:N	2.39	0.56
26:h:119:PHE:N	26:h:119:PHE:HD1	2.02	0.56
27:i:39:PHE:CZ	27:i:43:MET:CG	2.89	0.56
32:5:127:G:C2	32:5:128:C:C6	2.94	0.56
32:5:206:U:O2	32:5:208:A:H8	1.88	0.56
32:5:323:C:N3	32:5:324:A:N7	2.54	0.56
32:5:973:G:O6	32:5:1282:G:N2	2.39	0.56
32:5:1189:G:C4	32:5:1190:C:C6	2.94	0.56
32:5:1388:A:N1	32:5:1396:G:C2	2.73	0.56
32:5:1519:C:C2'	32:5:1520:C:O5'	2.53	0.56
32:5:1583:A:C6	32:5:1584:G:H1'	2.41	0.56
32:5:1725:U:C2	32:5:1726:U:C6	2.94	0.56
32:5:1873:A:C2	32:5:1874:A:C8	2.94	0.56
32:5:2391:G:C2	32:5:2392:C:C6	2.94	0.56
32:5:2485:U:C2	32:5:2486:G:C8	2.93	0.56
32:5:2507:A:C2	32:5:2508:U:H1'	2.40	0.56
32:5:2721:G:C2	32:5:2722:G:C8	2.93	0.56
32:5:2854:G:O6	32:5:2856:C:H6	1.89	0.56
32:5:2895:A:C2	32:5:2896:G:C8	2.94	0.56
32:5:3711:A:N6	32:5:3712:A:C2	2.73	0.56
32:5:3728:A:C8	32:5:3729:U:O4'	2.59	0.56
33:7:51:G:N3	33:7:52:C:C5	2.74	0.56
33:7:54:A:H2	33:7:55:A:C8	2.05	0.56
34:8:43:A:C6	34:8:44:A:N7	2.74	0.56
34:8:125:C:O4'	34:8:125:C:O2	2.23	0.56
39:I:100:ASN:N	39:I:100:ASN:HD22	2.04	0.56
46:K:30:PRO:O	46:K:32:ILE:N	2.39	0.56
48:z:160:TYR:HD2	48:z:179:PHE:HZ	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:374:LYS:HD2	50:4:195:U:OP1	2.06	0.56
50:4:284:G:N1	50:4:285:C:C4	2.74	0.56
53:S2:368:U:O2'	53:S2:369:C:H5''	2.06	0.56
53:S2:517:C:C4	53:S2:518:G:C8	2.94	0.56
53:S2:648:A:H1'	67:SX:46:HIS:NE2	2.20	0.56
53:S2:1250:A:N3	53:S2:1339:U:H4'	2.20	0.56
53:S2:1330:G:N7	53:S2:1492:U:H3'	2.21	0.56
53:S2:1606:G:C6	53:S2:1632:G:N1	2.74	0.56
53:S2:1696:C:N3	53:S2:1697:A:N7	2.53	0.56
53:S2:1709:G:C5	53:S2:1710:C:C5	2.94	0.56
59:SH:122:LEU:C	59:SH:122:LEU:HD13	2.30	0.56
60:SI:8:TRP:CD1	60:SI:9:HIS:N	2.73	0.56
79:SS:38:ARG:HH21	80:ST:45:LEU:CD2	2.19	0.56
80:ST:92:PHE:HD1	80:ST:93:SER:N	2.04	0.56
2:D:29:ASP:O	2:D:33:ARG:HB2	2.06	0.56
3:G:51:LEU:HD11	32:5:4086:G:N3	2.21	0.56
17:Y:3:PHE:HE2	36:C:222:ARG:HH21	1.54	0.56
17:Y:62:TYR:N	17:Y:62:TYR:CD1	2.74	0.56
20:b:6:ASN:N	20:b:6:ASN:ND2	2.53	0.56
31:o:54:PRO:CA	32:5:4379:A:C8	2.88	0.56
32:5:142:G:N2	32:5:144:G:C8	2.74	0.56
32:5:190:G:N1	32:5:252:C:C2	2.74	0.56
32:5:293:G:H4'	32:5:294:G:C8	2.41	0.56
32:5:492:U:N3	32:5:493:G:N7	2.53	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
32:5:976:G:C5	32:5:977:C:C6	2.93	0.56
32:5:1262:G:N1	32:5:1263:A:C5	2.74	0.56
32:5:1264:C:C4	32:5:1265:G:N7	2.74	0.56
32:5:1297:U:O2	32:5:1298:C:H6	1.88	0.56
32:5:1441:C:N3	32:5:1442:C:C5	2.73	0.56
32:5:1478:C:O2	32:5:1478:C:C2'	2.54	0.56
32:5:1490:G:N2	32:5:1491:A:C4	2.74	0.56
32:5:1541:C:C2	32:5:1542:U:C6	2.94	0.56
32:5:1685:G:N2	32:5:1686:C:C2	2.74	0.56
32:5:1886:G:N1	32:5:1894:C:C4	2.73	0.56
32:5:2408:U:C6	32:5:2409:U:O4	2.59	0.56
32:5:2480:G:C2	32:5:2499:C:C2	2.94	0.56
32:5:2498:C:C4	32:5:2499:C:C5	2.94	0.56
32:5:2561:C:N3	32:5:2562:G:N7	2.53	0.56
32:5:2805:C:N4	32:5:2806:A:C5	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3729:U:C4	32:5:3730:U:C4	2.94	0.56
32:5:3901:A:C8	32:5:4450:U:C6	2.94	0.56
32:5:3944:G:N1	32:5:3945:A:N7	2.53	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
32:5:4268:A:C2	32:5:4269:G:H1'	2.41	0.56
32:5:4480:A:N6	32:5:4481:U:C5	2.74	0.56
32:5:4490:C:N3	32:5:4491:G:H8	1.98	0.56
32:5:4510:A:H61	32:5:4592:C:C4'	2.18	0.56
34:8:42:G:N2	34:8:43:A:H1'	2.21	0.56
34:8:95:A:C5	34:8:96:C:C5	2.93	0.56
34:8:100:U:C2	34:8:101:C:C6	2.93	0.56
34:8:125:C:H4'	34:8:126:C:H3'	1.88	0.56
37:E:279:PRO:C	37:E:281:LYS:N	2.64	0.56
49:3:25:C:C4	49:3:26:G:N7	2.74	0.56
53:S2:452:G:C5	53:S2:453:C:C5	2.93	0.56
53:S2:648:A:N3	53:S2:648:A:H2'	2.20	0.56
53:S2:794:A:C6	53:S2:795:A:N7	2.74	0.56
53:S2:1073:U:O2	53:S2:1074:C:C6	2.58	0.56
53:S2:1313:A:O2'	75:SM:90:GLY:C	2.49	0.56
53:S2:1442:U:H2'	53:S2:1442:U:O2	2.05	0.56
53:S2:1510:G:H2'	53:S2:1510:G:N3	2.21	0.56
54:SA:41:ARG:HD3	54:SA:47:TYR:CZ	2.41	0.56
55:SB:99:ASN:O	55:SB:100:PHE:C	2.49	0.56
55:SB:133:TYR:CE2	55:SB:181:LEU:HG	2.41	0.56
72:SD:72:VAL:HG13	74:SK:68:TYR:HE2	1.71	0.56
81:SU:47:ASN:N	81:SU:47:ASN:HD22	2.04	0.56
83:Sc:34:PHE:HD1	83:Sc:36:ASP:HB2	1.71	0.56
83:Sc:44:ARG:HG3	83:Sc:44:ARG:NH2	2.12	0.56
84:Sd:40:ARG:CG	84:Sd:41:GLN:OE1	2.54	0.56
86:Sg:48:ASP:OD1	86:Sg:49:GLU:N	2.39	0.56
21:c:78:ASN:ND2	21:c:79:ILE:N	2.54	0.56
24:f:76:ARG:HE	24:f:85:ARG:HH21	1.53	0.56
26:h:7:ARG:HG2	34:8:86:U:O4	2.06	0.56
32:5:22:G:C2	34:8:35:C:N3	2.74	0.56
32:5:69:A:C2	32:5:70:A:C4	2.94	0.56
32:5:82:U:C4	32:5:83:C:C5	2.93	0.56
32:5:95:G:H2'	32:5:96:U:O4'	2.05	0.56
32:5:437:G:N1	32:5:438:G:C5	2.74	0.56
32:5:1090:G:C6	32:5:1091:C:C4	2.94	0.56
32:5:1277:G:N1	32:5:1278:C:C5	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1361:G:C6	32:5:1362:G:N7	2.74	0.56
32:5:1373:A:C4	32:5:1374:G:C8	2.94	0.56
32:5:1463:C:C2	32:5:1464:C:C6	2.94	0.56
32:5:1540:C:N3	32:5:1541:C:C5	2.73	0.56
32:5:1571:G:C5	32:5:1572:U:C5	2.93	0.56
32:5:1583:A:C6	32:5:1584:G:N9	2.74	0.56
32:5:1883:G:N2	32:5:1884:C:C2	2.74	0.56
32:5:1966:C:O2	32:5:1966:C:H2'	2.03	0.56
32:5:1971:C:O2	32:5:1971:C:H2'	2.06	0.56
32:5:2105:A:N1	32:5:2106:G:C5	2.74	0.56
32:5:2287:G:C2	32:5:2288:G:H1'	2.40	0.56
32:5:2307:A:N3	32:5:2333:G:O2'	2.39	0.56
32:5:2314:G:C8	32:5:2326:G:C2	2.94	0.56
32:5:2343:G:C2	36:C:101:MET:HE2	2.41	0.56
32:5:2644:G:C6	32:5:2645:G:C5	2.94	0.56
32:5:3606:U:O2	32:5:3606:U:H2'	2.06	0.56
32:5:3629:A:H4'	53:S2:1721:U:C2	2.41	0.56
32:5:3632:C:N3	32:5:3633:C:C5	2.74	0.56
32:5:3879:G:OP1	32:5:3879:G:O4'	2.23	0.56
32:5:3927:U:O4	32:5:4182:G:C2	2.59	0.56
32:5:4350:C:N3	32:5:4351:U:C5	2.74	0.56
32:5:4737:G:O2'	32:5:4738:C:O5'	2.24	0.56
32:5:4745:G:HO2'	32:5:4746:C:H6	0.74	0.56
32:5:4975:G:C2	32:5:4977:A:C8	2.94	0.56
33:7:45:U:H2'	33:7:46:C:O4'	2.06	0.56
34:8:127:U:C2'	34:8:128:C:O4'	2.54	0.56
45:r:106:LEU:O	45:r:108:MET:N	2.39	0.56
46:K:86:LYS:HE2	46:K:139:VAL:HG11	1.87	0.56
50:4:56:A:C2	50:4:57:G:C5	2.94	0.56
50:4:57:G:C2	50:4:289:A:N1	2.74	0.56
53:S2:93:U:H2'	53:S2:94:G:O4'	2.05	0.56
53:S2:310:C:H2'	53:S2:311:C:O4'	2.05	0.56
53:S2:410:G:C6	53:S2:411:G:N7	2.73	0.56
53:S2:488:U:H3'	53:S2:489:A:H5'	1.88	0.56
53:S2:1017:U:O2	53:S2:1017:U:C2'	2.54	0.56
53:S2:1031:A:C5	53:S2:1032:C:C5	2.94	0.56
53:S2:1083:A:N3	53:S2:1859:A:H1'	2.21	0.56
53:S2:1168:G:N2	53:S2:1192:U:O2	2.39	0.56
53:S2:1265:A:N3	53:S2:1266:C:C6	2.74	0.56
53:S2:1541:G:N3	53:S2:1542:C:C5	2.74	0.56
53:S2:1771:G:C2	53:S2:1772:C:C6	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1841:C:O2	53:S2:1842:C:C6	2.59	0.56
57:SE:31:PRO:HG2	57:SE:38:LEU:HD12	1.87	0.56
62:SL:62:PHE:N	62:SL:62:PHE:CD2	2.72	0.56
72:SD:150:MET:HB3	72:SD:152:PHE:CE1	2.40	0.56
79:SS:10:GLN:HB2	79:SS:57:GLY:C	2.30	0.56
80:ST:34:VAL:HG13	80:ST:52:TRP:HH2	1.71	0.56
2:D:20:PHE:HB3	2:D:30:TYR:OH	2.06	0.55
20:b:28:ARG:CB	32:5:1805:A:C8	2.89	0.55
32:5:209:U:O2	32:5:233:U:N3	2.39	0.55
32:5:422:C:C2	32:5:423:G:C8	2.94	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	2.75	0.55
32:5:483:G:N2	32:5:484:U:C4	2.74	0.55
32:5:642:G:C2	32:5:643:C:C4	2.94	0.55
32:5:1240:G:C6	32:5:1241:C:C4	2.94	0.55
32:5:1265:G:C5'	32:5:2115:G:N2	2.69	0.55
32:5:1570:G:N1	32:5:1571:G:C4	2.74	0.55
32:5:1954:U:H2'	32:5:1955:G:O4'	2.06	0.55
32:5:1996:C:OP2	46:K:124:GLU:OE2	2.24	0.55
32:5:2363:A:C1'	32:5:4560:C:H5	2.19	0.55
32:5:2410:C:C2	32:5:2411:C:C5	2.94	0.55
32:5:2578:G:C2	32:5:2579:G:C8	2.95	0.55
32:5:2645:G:N3	32:5:2646:C:C6	2.74	0.55
32:5:2712:G:N3	32:5:2713:C:C6	2.74	0.55
32:5:2735:G:N2	32:5:2736:G:N9	2.54	0.55
32:5:3644:U:O2	32:5:4554:G:O2'	2.23	0.55
32:5:3672:G:C5	32:5:3674:G:H1'	2.41	0.55
32:5:3747:A:C1'	32:5:3817:A:H2'	2.36	0.55
32:5:4326:G:H2'	32:5:4327:C:O4'	2.06	0.55
32:5:4466:C:N3	32:5:4467:A:N7	2.54	0.55
32:5:4755:G:C6	32:5:4876:U:C4	2.93	0.55
32:5:5021:C:C2	32:5:5022:U:C6	2.94	0.55
32:5:5037:U:C2	32:5:5038:A:C8	2.94	0.55
34:8:64:U:H2'	34:8:65:A:C8	2.41	0.55
49:3:5:C:C2	49:3:6:C:C6	2.94	0.55
50:4:295:U:C2	50:4:296:C:C6	2.94	0.55
53:S2:316:G:C6	53:S2:317:C:N4	2.74	0.55
53:S2:336:A:C5	53:S2:337:C:C5	2.94	0.55
53:S2:338:G:C6	53:S2:339:A:C5	2.95	0.55
53:S2:410:G:C6	53:S2:411:G:C5	2.94	0.55
53:S2:426:A:N3	53:S2:427:U:C4	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:666:U:H2'	53:S2:667:U:C6	2.39	0.55
53:S2:695:C:N3	53:S2:696:G:N7	2.53	0.55
53:S2:794:A:C2	53:S2:795:A:C5	2.94	0.55
53:S2:824:C:C2'	53:S2:825:A:O5'	2.53	0.55
53:S2:848:U:H2'	53:S2:849:A:H8	1.71	0.55
53:S2:993:G:N1	53:S2:994:C:C5	2.73	0.55
53:S2:1049:A:N3	53:S2:1070:A:C2	2.72	0.55
53:S2:1302:G:C6	85:Sf:140:TYR:CZ	2.94	0.55
53:S2:1576:G:C4	53:S2:1577:G:C8	2.94	0.55
53:S2:1823:A:H1'	53:S2:1824:A:O5'	2.06	0.55
54:SA:64:ALA:CB	65:SV:34:MET:HE1	2.36	0.55
55:SB:49:VAL:CG1	55:SB:58:ALA:HB1	2.36	0.55
55:SB:57:ILE:HG13	55:SB:58:ALA:N	2.21	0.55
56:SC:199:PRO:HD2	56:SC:223:TYR:OH	2.05	0.55
57:SE:29:PRO:HG2	57:SE:46:ILE:HD11	1.86	0.55
58:SG:55:GLY:N	58:SG:63:MET:SD	2.79	0.55
59:SH:66:VAL:HG22	59:SH:96:ALA:HB1	1.87	0.55
73:SF:20:PHE:HB3	73:SF:23:TRP:HB2	1.89	0.55
80:ST:52:TRP:O	80:ST:56:ARG:N	2.36	0.55
82:SZ:51:ASP:OD1	82:SZ:54:THR:OG1	2.24	0.55
1:A:85:GLY:N	32:5:4121:G:N2	2.53	0.55
2:D:119:TYR:N	2:D:119:TYR:CD1	2.73	0.55
3:G:50:ASP:OD1	3:G:50:ASP:C	2.50	0.55
31:o:40:ARG:CB	31:o:40:ARG:HH21	2.19	0.55
32:5:166:C:O2	32:5:167:C:C6	2.59	0.55
32:5:314:G:N2	32:5:4355:G:C5	2.74	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
32:5:486:C:C2	32:5:487:G:N7	2.70	0.55
32:5:660:A:N1	32:5:661:C:C4	2.75	0.55
32:5:1269:G:C4	32:5:2111:G:N1	2.74	0.55
32:5:1398:A:P	32:5:1420:A:H61	2.28	0.55
32:5:1581:G:C6	32:5:1610:C:N3	2.75	0.55
32:5:1650:A:N1	36:C:100:ARG:CZ	2.69	0.55
32:5:1684:A:C6	32:5:1685:G:C5	2.94	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
32:5:1831:G:C6	32:5:1832:C:C4	2.94	0.55
32:5:1994:C:O2	32:5:1995:G:C8	2.59	0.55
32:5:2113:G:OP1	32:5:2113:G:O4'	2.25	0.55
32:5:2248:C:O2	32:5:2248:C:C2'	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2290:C:H1'	32:5:2321:G:N3	2.21	0.55
32:5:2452:G:N2	32:5:2467:U:C4	2.74	0.55
32:5:2560:C:N3	32:5:2561:C:C5	2.74	0.55
32:5:2715:G:C4	32:5:2716:C:C5	2.94	0.55
32:5:2851:G:N2	32:5:2856:C:N4	2.55	0.55
32:5:3657:U:C2	32:5:3658:C:C6	2.94	0.55
32:5:3829:G:C6	32:5:3830:A:N7	2.74	0.55
32:5:3945:A:N3	32:5:3946:G:C8	2.74	0.55
32:5:4092:G:N1	32:5:4093:G:N3	2.53	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
32:5:4123:C:O2	32:5:4123:C:C2'	2.54	0.55
32:5:4324:A:N3	32:5:4325:A:N7	2.54	0.55
32:5:4347:G:H2'	32:5:4348:A:C8	2.41	0.55
32:5:4503:A:C4	32:5:4504:C:C5	2.95	0.55
32:5:4530:U:H5'	32:5:4531:U:OP2	2.05	0.55
32:5:4579:U:H2'	32:5:4580:U:H6	1.71	0.55
32:5:4739:C:C2'	32:5:4740:G:O4'	2.53	0.55
32:5:5020:G:C5	32:5:5021:C:C5	2.94	0.55
32:5:5029:C:C4	32:5:5030:U:C5	2.94	0.55
33:7:43:U:O2	33:7:43:U:H2'	2.06	0.55
33:7:82:G:N2	33:7:95:C:C2	2.74	0.55
36:C:325:MET:HA	36:C:325:MET:HE3	1.87	0.55
50:4:12:U:H2'	50:4:14:G:N7	2.22	0.55
53:S2:107:A:H2'	53:S2:108:G:C8	2.41	0.55
53:S2:155:G:C2	53:S2:164:A:C8	2.94	0.55
53:S2:188:C:N3	53:S2:189:U:C5	2.74	0.55
53:S2:533:A:C5	53:S2:534:G:C8	2.94	0.55
53:S2:537:C:C4	53:S2:538:U:C5	2.95	0.55
53:S2:596:U:O2'	53:S2:597:G:O5'	2.23	0.55
53:S2:597:G:H2'	53:S2:598:G:O4'	2.06	0.55
53:S2:752:G:C2	53:S2:790:C:N3	2.74	0.55
53:S2:926:A:C2	53:S2:927:C:N1	2.75	0.55
53:S2:976:G:C6	53:S2:977:C:C4	2.95	0.55
53:S2:993:G:N3	53:S2:994:C:C6	2.74	0.55
53:S2:994:C:N4	53:S2:995:G:O6	2.37	0.55
53:S2:1302:G:N7	85:Sf:140:TYR:CD2	2.74	0.55
53:S2:1306:U:H1'	85:Sf:135:HIS:HA	1.88	0.55
53:S2:1416:C:C2'	53:S2:1417:C:C6	2.87	0.55
53:S2:1431:G:C5	53:S2:1432:U:C6	2.94	0.55
53:S2:1528:G:C2	53:S2:1529:C:C6	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1805:G:C6	53:S2:1806:A:N7	2.74	0.55
77:SQ:70:VAL:HG11	77:SQ:84:ILE:HG22	1.87	0.55
79:SS:16:LEU:O	79:SS:17:ASN:HB2	2.06	0.55
6:L:74:ARG:HD2	6:L:99:ASP:HB2	1.89	0.55
8:N:63:ARG:HG3	8:N:131:GLU:HB3	1.87	0.55
9:O:156:LEU:HB3	32:5:4910:G:N7	2.22	0.55
12:S:27:LEU:C	12:S:28:TYR:CD1	2.83	0.55
32:5:321:U:C2	32:5:322:C:C5	2.93	0.55
32:5:1203:G:C4	32:5:1204:C:C6	2.94	0.55
32:5:1281:G:O4'	32:5:1281:G:N3	2.40	0.55
32:5:1475:G:N2	32:5:1476:C:C6	2.73	0.55
32:5:1583:A:N6	32:5:1584:G:C4	2.75	0.55
32:5:1650:A:H2	36:C:100:ARG:NH2	2.02	0.55
32:5:1751:A:C2	32:5:1752:G:H1'	2.41	0.55
32:5:1752:G:C6	32:5:1753:G:C5	2.94	0.55
32:5:1967:A:C2	32:5:1968:G:N7	2.75	0.55
32:5:2322:G:N1	32:5:2323:C:C2	2.75	0.55
32:5:2326:G:N2	32:5:2327:G:C4	2.74	0.55
32:5:2496:G:C2	32:5:2497:C:C2	2.94	0.55
32:5:2532:C:O2	32:5:2532:C:H2'	2.07	0.55
32:5:2557:G:C2	32:5:2571:C:C2	2.94	0.55
32:5:3595:U:OP1	32:5:3596:A:C8	2.59	0.55
32:5:3861:A:C2	32:5:3862:A:N9	2.74	0.55
32:5:3870:C:C2	32:5:3886:G:N2	2.74	0.55
32:5:4079:C:C4	32:5:4080:C:C5	2.95	0.55
32:5:4536:C:C2	32:5:4537:C:C5	2.93	0.55
34:8:31:G:H2'	34:8:32:C:O4'	2.07	0.55
34:8:34:U:C2	34:8:34:U:C5'	2.89	0.55
34:8:134:G:H21	34:8:135:C:H1'	1.71	0.55
34:8:152:U:H2'	34:8:153:C:O4'	2.05	0.55
47:q:6:ARG:HG2	47:q:10:LYS:HE3	1.88	0.55
48:z:380:ASP:CB	50:4:192:A:N1	2.51	0.55
50:4:51:G:C4	50:4:52:C:C6	2.94	0.55
53:S2:118:C:H1'	53:S2:445:A:N1	2.19	0.55
53:S2:139:C:O2'	53:S2:140:C:O5'	2.13	0.55
53:S2:581:U:O2	68:SY:33:ALA:HB1	2.06	0.55
53:S2:609:U:N3	53:S2:610:G:C8	2.75	0.55
53:S2:638:C:O2'	53:S2:639:C:O5'	2.23	0.55
53:S2:864:A:C2	53:S2:865:A:C5	2.94	0.55
53:S2:1233:G:C6	53:S2:1234:C:C4	2.95	0.55
53:S2:1310:U:O5'	85:Sf:143:LYS:CE	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1414:A:N1	53:S2:1415:C:C4	2.74	0.55
53:S2:1574:C:C2	53:S2:1575:G:C8	2.93	0.55
53:S2:1664:A:C5	53:S2:1666:C:C5	2.94	0.55
53:S2:1722:G:C6	53:S2:1723:G:N7	2.75	0.55
54:SA:53:ARG:HD3	65:SV:82:ASN:HB3	1.87	0.55
54:SA:205:ARG:NH1	78:SR:84:TYR:O	2.39	0.55
62:SL:124:ASP:OD1	62:SL:147:LYS:HA	2.05	0.55
66:SW:8:ALA:HA	66:SW:74:VAL:HG11	1.86	0.55
66:SW:11:LEU:HD11	66:SW:37:PHE:CE2	2.42	0.55
68:SY:35:VAL:HG21	68:SY:40:ILE:HD13	1.89	0.55
83:Sc:34:PHE:CD1	83:Sc:36:ASP:HB2	2.41	0.55
10:Q:34:PHE:CE2	10:Q:38:ARG:HG3	2.40	0.55
14:U:85:TYR:CD1	32:5:2632:U:C5	2.94	0.55
23:e:7:LEU:O	32:5:701:G:O2'	2.23	0.55
27:i:36:HIS:ND1	32:5:276:C:OP2	2.39	0.55
31:o:15:CYS:SG	90:o:201:ZN:ZN	1.78	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
32:5:80:C:C2	32:5:104:G:N2	2.74	0.55
32:5:248:C:C2	32:5:249:C:C5	2.94	0.55
32:5:302:C:N3	32:5:303:C:C5	2.75	0.55
32:5:751:G:N3	32:5:752:G:C8	2.75	0.55
32:5:1247:U:N3	32:5:1248:C:C6	2.72	0.55
32:5:1269:G:N7	32:5:2111:G:C6	2.74	0.55
32:5:1318:C:N4	32:5:1319:U:O2	2.39	0.55
32:5:1370:G:H4'	32:5:1371:A:H4'	1.89	0.55
32:5:1887:G:C6	32:5:1890:G:C6	2.94	0.55
32:5:1899:G:C5	32:5:1900:C:C5	2.94	0.55
32:5:1936:C:C4	32:5:1937:C:H5	2.25	0.55
32:5:2089:G:C5	32:5:2263:A:N7	2.75	0.55
32:5:2399:G:C2	32:5:2400:G:C5	2.95	0.55
32:5:2492:C:H2'	32:5:2493:G:O4'	2.07	0.55
32:5:2658:G:N1	32:5:2675:G:C6	2.74	0.55
32:5:2826:U:C2'	32:5:2826:U:O2	2.54	0.55
32:5:2832:A:H2'	32:5:2833:A:C5'	2.30	0.55
32:5:3629:A:HO2'	53:S2:1721:U:H3	1.51	0.55
32:5:4093:G:H2'	32:5:4094:G:H5''	1.89	0.55
32:5:4324:A:N1	32:5:4325:A:N6	2.54	0.55
32:5:4433:G:H2'	32:5:4434:C:C6	2.42	0.55
32:5:4451:G:H2'	32:5:4522:G:N1	2.22	0.55
32:5:4464:A:H5'	32:5:4464:A:N3	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4550:G:C6	32:5:4551:U:C6	2.94	0.55
32:5:4772:C:O2	32:5:4773:C:C6	2.59	0.55
32:5:4935:C:N4	37:E:179:ARG:CG	2.69	0.55
32:5:4999:G:C4	32:5:5000:G:C8	2.93	0.55
34:8:102:G:OP2	34:8:104:A:O2'	2.25	0.55
38:F:93:PHE:CE1	38:F:95:ILE:HG13	2.42	0.55
48:z:408:ARG:HH12	50:4:206:G:H5''	1.58	0.55
49:3:39:G:C4	49:3:40:C:C5	2.94	0.55
53:S2:549:C:N3	53:S2:550:C:C6	2.75	0.55
53:S2:551:U:O3'	71:Se:39:ASN:ND2	2.40	0.55
53:S2:694:G:N3	53:S2:695:C:C5	2.74	0.55
53:S2:933:G:C2	53:S2:1000:C:C2	2.94	0.55
53:S2:1101:U:H2'	53:S2:1102:G:H8	1.71	0.55
53:S2:1123:C:C2	53:S2:1124:C:C6	2.95	0.55
53:S2:1144:A:C1'	53:S2:1199:A:O2'	2.54	0.55
53:S2:1202:U:O4	53:S2:1203:G:N7	2.39	0.55
53:S2:1310:U:N3	53:S2:1311:C:H5	1.93	0.55
53:S2:1402:A:N6	53:S2:1441:U:C2	2.74	0.55
53:S2:1430:C:N3	53:S2:1431:G:N7	2.54	0.55
53:S2:1524:G:C2	53:S2:1525:C:N1	2.74	0.55
53:S2:1598:G:N2	73:SF:166:ILE:HG23	2.21	0.55
53:S2:1610:G:C4	53:S2:1611:G:C8	2.94	0.55
53:S2:1754:G:H2'	53:S2:1755:C:O4'	2.07	0.55
54:SA:39:TYR:HH	78:SR:104:GLU:CB	1.88	0.55
54:SA:158:ASP:OD2	65:SV:34:MET:HG3	2.06	0.55
56:SC:170:TRP:CZ3	66:SW:97:ARG:HD3	2.41	0.55
57:SE:85:GLY:N	57:SE:88:ASP:OD2	2.38	0.55
57:SE:130:PHE:CB	57:SE:138:HIS:HB2	2.37	0.55
72:SD:123:LEU:HD21	72:SD:154:ASP:HB3	1.88	0.55
1:A:40:TYR:HB3	1:A:93:LYS:HB2	1.88	0.55
3:G:169:PHE:CE2	8:N:6:TYR:HB2	2.41	0.55
32:5:12:A:N3	32:5:14:C:C6	2.75	0.55
32:5:44:A:C4	32:5:45:U:C6	2.94	0.55
32:5:154:G:N1	32:5:155:C:C4	2.74	0.55
32:5:172:C:O4'	32:5:172:C:OP1	2.23	0.55
32:5:218:A:H1'	32:5:219:G:H5''	1.88	0.55
32:5:288:G:H2'	32:5:289:C:H6	1.72	0.55
32:5:474:C:O2	32:5:475:G:C8	2.59	0.55
32:5:957:G:H5'	32:5:1284:G:N2	2.21	0.55
32:5:1245:C:C4	32:5:1269:G:O6	2.59	0.55
32:5:1346:C:C2	32:5:1347:G:C8	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1447:C:H1'	32:5:2098:G:N2	2.21	0.55
32:5:1467:C:H2'	32:5:1467:C:O2	2.06	0.55
32:5:1912:G:N3	32:5:1913:C:C6	2.74	0.55
32:5:1987:C:C4	32:5:1988:G:C8	2.95	0.55
32:5:2339:G:C6	32:5:2340:C:C5	2.95	0.55
32:5:2641:A:H2'	32:5:2642:A:O4'	2.07	0.55
32:5:2690:C:N4	32:5:2691:U:C4	2.75	0.55
32:5:2857:A:C2	32:5:2858:A:C4	2.94	0.55
32:5:2909:C:C2	32:5:3586:G:C2	2.95	0.55
32:5:3724:A:C2	32:5:3725:G:C4	2.95	0.55
32:5:3830:A:C6	32:5:3831:U:C5	2.93	0.55
32:5:3874:G:C6	32:5:3875:G:C4	2.95	0.55
32:5:3879:G:N7	32:5:3882:C:N4	2.54	0.55
32:5:3907:G:H1'	32:5:4449:A:C4	2.37	0.55
32:5:3907:G:C4	32:5:4449:A:H1'	2.41	0.55
32:5:4175:G:C6	32:5:4176:C:C4	2.95	0.55
32:5:4219:A:O2'	32:5:4220:A:C8	2.51	0.55
32:5:4362:A:C2	32:5:4363:A:C8	2.94	0.55
32:5:4397:A:H5'	49:3:76:A:C2	2.41	0.55
32:5:4476:C:O4'	32:5:4476:C:O2	2.21	0.55
32:5:4580:U:C4	32:5:4581:G:C8	2.93	0.55
32:5:4891:G:N2	32:5:4929:C:C2	2.75	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
34:8:39:G:N3	34:8:39:G:H2'	2.21	0.55
34:8:83:C:H4'	34:8:85:U:C2	2.41	0.55
34:8:89:U:H2'	34:8:90:C:C6	2.41	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
48:z:381:SER:HB3	50:4:207:C:H1'	1.89	0.55
49:3:38:C:C4'	53:S2:1058:A:C8	2.69	0.55
50:4:171:U:H1'	50:4:174:G:C6	2.41	0.55
53:S2:295:C:H2'	53:S2:296:U:O4'	2.06	0.55
53:S2:336:A:C4	53:S2:337:C:C6	2.95	0.55
53:S2:927:C:C2	53:S2:928:G:N7	2.74	0.55
53:S2:993:G:C5	53:S2:994:C:C6	2.95	0.55
53:S2:999:G:N3	53:S2:1000:C:C6	2.74	0.55
53:S2:1093:A:C2	53:S2:1094:C:C6	2.94	0.55
53:S2:1100:A:N1	53:S2:1101:U:C4	2.74	0.55
53:S2:1287:A:N6	53:S2:1314:U:C4	2.74	0.55
53:S2:1292:C:C5'	85:Sf:149:CYS:O	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1314:U:N3	53:S2:1315:U:C1'	2.69	0.55
53:S2:1314:U:O2	53:S2:1315:U:O4'	2.25	0.55
53:S2:1527:C:H2'	53:S2:1527:C:O2	2.04	0.55
53:S2:1591:C:C4	53:S2:1592:C:C6	2.95	0.55
53:S2:1687:C:C2	53:S2:1688:C:C6	2.95	0.55
53:S2:1775:U:O2	53:S2:1776:G:C8	2.58	0.55
55:SB:53:GLN:HG3	55:SB:56:LYS:CE	2.36	0.55
55:SB:150:ILE:HD13	78:SR:129:LYS:CG	2.24	0.55
79:SS:26:ILE:CD1	79:SS:54:LYS:HB2	2.34	0.55
11:R:172:ARG:CB	53:S2:909:G:OP2	2.51	0.55
32:5:60:G:C6	32:5:61:A:C5	2.94	0.55
32:5:70:A:C6	32:5:4355:G:O4'	2.60	0.55
32:5:88:A:C2	32:5:89:C:C4	2.94	0.55
32:5:1268:G:H5''	32:5:2109:G:O5'	2.07	0.55
32:5:1486:C:H2'	32:5:1487:G:O4'	2.06	0.55
32:5:1823:G:C3'	32:5:1825:A:P	2.94	0.55
32:5:1995:G:C6	32:5:1996:C:C4	2.95	0.55
32:5:2035:C:C2	32:5:2036:C:C5	2.94	0.55
32:5:2361:G:N2	32:5:3859:G:H3'	2.22	0.55
32:5:2438:A:C5	32:5:2441:C:N4	2.75	0.55
32:5:2451:A:C6	32:5:2452:G:C5	2.95	0.55
32:5:2602:G:C5	32:5:2603:C:C5	2.94	0.55
32:5:2714:G:N2	32:5:2715:G:C4	2.74	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
32:5:3859:G:N3	32:5:3859:G:H2'	2.21	0.55
32:5:3879:G:O6	32:5:3882:C:C4	2.59	0.55
32:5:3892:U:O2'	40:P:80:GLN:NE2	2.40	0.55
32:5:4097:G:C2	32:5:4098:A:C5	2.95	0.55
32:5:4108:G:C2	32:5:4109:G:C8	2.94	0.55
32:5:4143:G:C5	32:5:4145:C:C5	2.94	0.55
32:5:4299:U:O2	32:5:4300:U:C6	2.60	0.55
32:5:4303:C:O2	32:5:4303:C:H3'	2.07	0.55
32:5:4550:G:N2	32:5:4551:U:H1'	2.22	0.55
32:5:4755:G:C6	32:5:4876:U:O4	2.60	0.55
32:5:4896:G:C2	32:5:4897:G:C5	2.95	0.55
34:8:108:A:C2	34:8:112:G:C2	2.94	0.55
36:C:143:ARG:NH2	36:C:145:GLU:HG3	2.21	0.55
53:S2:18:C:H4'	53:S2:1194:A:H62	1.72	0.55
53:S2:119:U:N3	53:S2:120:U:H5	2.00	0.55
53:S2:321:C:C2	53:S2:322:C:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:529:A:C6	53:S2:530:U:C5	2.94	0.55
53:S2:636:C:C4	53:S2:637:U:C4	2.94	0.55
53:S2:792:C:C2	53:S2:793:G:H8	2.23	0.55
53:S2:1018:U:C2	53:S2:1019:C:H5	2.20	0.55
53:S2:1022:U:H1'	63:SN:128:TYR:CE2	2.41	0.55
53:S2:1114:U:N3	53:S2:1119:A:C6	2.74	0.55
53:S2:1292:C:C6	85:Sf:149:CYS:CA	2.89	0.55
53:S2:1368:U:H3	53:S2:1370:A:P	2.30	0.55
53:S2:1417:C:O2	53:S2:1419:C:H6	1.88	0.55
53:S2:1526:G:N1	53:S2:1527:C:C5	2.74	0.55
53:S2:1654:G:H2'	53:S2:1655:C:O4'	2.06	0.55
53:S2:1709:G:C6	53:S2:1710:C:C4	2.95	0.55
53:S2:1728:U:N3	53:S2:1729:U:C6	2.75	0.55
53:S2:1812:U:O2	53:S2:1812:U:H2'	2.05	0.55
55:SB:81:PHE:HB3	55:SB:109:LYS:HB2	1.88	0.55
56:SC:133:TYR:CD1	56:SC:216:MET:HA	2.41	0.55
56:SC:227:ARG:HD3	56:SC:227:ARG:C	2.32	0.55
59:SH:152:ARG:HB3	59:SH:152:ARG:NH1	2.21	0.55
73:SF:142:SER:O	73:SF:144:LEU:N	2.40	0.55
77:SQ:30:GLY:HA2	77:SQ:67:ASP:HA	1.88	0.55
78:SR:114:LEU:O	78:SR:115:SER:HB3	2.06	0.55
81:SU:47:ASN:HD22	81:SU:47:ASN:H	1.54	0.55
86:Sg:187:ASN:N	86:Sg:187:ASN:HD22	2.04	0.55
3:G:231:ASN:N	3:G:231:ASN:ND2	2.54	0.55
9:O:109:PRO:CA	32:5:4910:G:N2	2.69	0.55
23:e:35:TRP:N	32:5:2321:G:OP1	2.40	0.55
25:g:41:ALA:O	25:g:52:ARG:NH1	2.40	0.55
32:5:12:A:C2	32:5:14:C:C4	2.95	0.55
32:5:66:A:C8	32:5:328:A:H1'	2.42	0.55
32:5:69:A:O5'	32:5:100:C:O2'	2.25	0.55
32:5:183:C:H4'	32:5:184:U:C5	2.42	0.55
32:5:270:U:O2	32:5:271:C:C5	2.58	0.55
32:5:290:U:C2'	32:5:291:U:O5'	2.54	0.55
32:5:342:G:O2'	42:j:71:TYR:HE2	1.90	0.55
32:5:488:G:C6	32:5:489:C:C4	2.95	0.55
32:5:737:C:N3	32:5:738:C:C5	2.75	0.55
32:5:1085:C:C2	32:5:1086:C:C6	2.95	0.55
32:5:1263:A:C2	32:5:1264:C:C2	2.94	0.55
32:5:1545:G:C4	32:5:1546:C:C5	2.95	0.55
32:5:1671:U:O4	32:5:1853:G:C2'	2.55	0.55
32:5:1948:G:C5	32:5:1949:U:C5	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2056:G:C6	32:5:2058:G:C4	2.94	0.55
32:5:2448:G:O2'	32:5:2449:A:C8	2.60	0.55
32:5:2450:G:C2	32:5:2451:A:H1'	2.42	0.55
32:5:2543:A:C2	32:5:2773:G:N1	2.74	0.55
32:5:2612:G:C2	32:5:2613:C:C2	2.95	0.55
32:5:3698:G:N2	32:5:3699:C:C2	2.75	0.55
32:5:3725:G:H2'	32:5:3726:A:H2'	1.88	0.55
32:5:3790:U:H3	32:5:3792:G:C1'	2.18	0.55
32:5:3820:G:C5	32:5:3821:A:C8	2.95	0.55
32:5:3871:A:C5	32:5:3885:G:N2	2.74	0.55
32:5:4095:G:H22	32:5:4096:C:N4	2.05	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
32:5:4665:A:O2'	32:5:5047:C:N4	2.40	0.55
32:5:4750:G:O6	32:5:4949:G:C6	2.59	0.55
32:5:4885:U:C2	32:5:4886:C:C5	2.94	0.55
32:5:5000:G:H2'	32:5:5001:U:O5'	2.05	0.55
32:5:5044:A:HO2'	32:5:5045:G:H5'	1.68	0.55
33:7:93:G:N2	33:7:94:C:C2	2.75	0.55
37:E:145:ILE:HD11	37:E:267:LEU:HD21	1.88	0.55
48:z:401:GLY:HA3	50:4:185:C:H5'	1.88	0.55
49:3:39:G:N2	49:3:40:C:C1'	2.69	0.55
50:4:57:G:C6	50:4:289:A:N6	2.74	0.55
50:4:293:C:H2'	50:4:293:C:O2	2.06	0.55
53:S2:312:G:O2'	53:S2:313:A:P	2.65	0.55
53:S2:349:A:H4'	60:SI:27:TYR:CZ	2.41	0.55
53:S2:387:C:O2	53:S2:387:C:H2'	2.07	0.55
53:S2:449:A:H2'	53:S2:449:A:N3	2.21	0.55
53:S2:533:A:C6	53:S2:534:G:C8	2.94	0.55
53:S2:788:G:H2'	53:S2:789:G:C8	2.42	0.55
53:S2:799:U:C5'	59:SH:110:THR:CG2	2.78	0.55
53:S2:1182:A:C8	53:S2:1183:A:H1'	2.42	0.55
53:S2:1411:G:C8	53:S2:1412:C:H1'	2.41	0.55
53:S2:1438:A:H2'	53:S2:1439:A:O4'	2.06	0.55
53:S2:1502:C:N3	53:S2:1503:C:C5	2.74	0.55
53:S2:1599:U:H4'	53:S2:1599:U:OP1	2.07	0.55
53:S2:1835:A:N6	69:Sa:79:ILE:HG22	2.22	0.55
54:SA:200:ASP:CG	78:SR:85:VAL:HG12	2.31	0.55
54:SA:200:ASP:HA	54:SA:203:PHE:CZ	2.42	0.55
60:SI:87:ASN:OD1	60:SI:88:ASN:N	2.39	0.55
75:SM:99:ASN:N	75:SM:99:ASN:HD22	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SR:100:PRO:HA	78:SR:117:LEU:HD13	1.88	0.55
1:A:211:PHE:CZ	1:A:221:LYS:HD3	2.42	0.55
11:R:23:TRP:CZ3	11:R:51:ILE:HD12	2.41	0.55
22:d:22:THR:HG22	22:d:89:SER:HB2	1.88	0.55
22:d:29:ILE:CD1	22:d:84:ILE:HD12	2.37	0.55
23:e:108:ARG:NH2	32:5:2326:G:OP1	2.40	0.55
32:5:31:U:O2'	32:5:32:G:H5'	2.06	0.55
32:5:38:A:C6	32:5:41:C:H5	2.24	0.55
32:5:68:U:N3	32:5:69:A:H1'	2.22	0.55
32:5:153:G:N2	32:5:154:G:C4	2.74	0.55
32:5:370:U:C5	32:5:1637:A:C2	2.94	0.55
32:5:458:C:N3	32:5:459:C:C5	2.74	0.55
32:5:994:G:C6	32:5:995:C:C4	2.95	0.55
32:5:1412:G:C4	32:5:1413:C:C5	2.94	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
32:5:1661:C:H1'	32:5:2345:G:C2	2.42	0.55
32:5:1756:U:O4	32:5:1776:A:C2	2.59	0.55
32:5:1806:G:N1	32:5:1807:C:C5	2.75	0.55
32:5:1826:G:N2	32:5:1827:C:H1'	2.21	0.55
32:5:2400:G:N1	32:5:2401:A:N7	2.54	0.55
32:5:2436:U:C5	32:5:2783:A:C1'	2.90	0.55
32:5:2606:G:C2	32:5:2607:C:C5	2.95	0.55
32:5:2644:G:C2	32:5:2645:G:C8	2.95	0.55
32:5:2737:C:O2	32:5:2738:C:C6	2.59	0.55
32:5:2756:G:H2'	32:5:2757:A:C8	2.42	0.55
32:5:2841:G:N2	32:5:2842:G:H1'	2.21	0.55
32:5:3662:A:C6	32:5:3680:U:O4	2.51	0.55
32:5:3717:A:C5	32:5:3736:A:C6	2.95	0.55
32:5:3853:U:O2'	32:5:4979:A:H1'	2.06	0.55
32:5:4070:U:C4	32:5:4071:U:C5	2.94	0.55
32:5:4133:C:N3	32:5:4134:C:C5	2.75	0.55
32:5:4189:U:H1'	32:5:4380:A:N3	2.22	0.55
32:5:4473:A:C2	32:5:4474:A:C4	2.95	0.55
32:5:4481:U:C2'	32:5:4482:U:C6	2.83	0.55
32:5:4497:U:C5	32:5:4498:U:C6	2.95	0.55
32:5:5055:G:C2	32:5:5056:A:N7	2.75	0.55
43:n:7:LYS:NZ	53:S2:1843:G:C5'	2.43	0.55
43:n:8:LYS:CE	53:S2:1845:A:N7	2.69	0.55
53:S2:19:A:O3'	53:S2:620:G:H8	1.90	0.55
53:S2:28:U:OP1	53:S2:484:A:H4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:46:A:C2	53:S2:99:A:N9	2.75	0.55
53:S2:297:A:C5	53:S2:298:G:C8	2.95	0.55
53:S2:341:C:C2	53:S2:342:C:C6	2.94	0.55
53:S2:376:A:C5	53:S2:377:G:C8	2.95	0.55
53:S2:426:A:H2	53:S2:427:U:C5'	2.20	0.55
53:S2:469:A:C2	53:S2:470:G:O4'	2.52	0.55
53:S2:553:U:N3	53:S2:554:A:C5	2.74	0.55
53:S2:678:U:N3	53:S2:679:A:C8	2.74	0.55
53:S2:993:G:N1	53:S2:994:C:C6	2.74	0.55
53:S2:1137:U:O2'	53:S2:1138:C:OP1	2.25	0.55
53:S2:1161:U:C4	53:S2:1162:C:C5	2.95	0.55
53:S2:1212:G:N2	53:S2:1688:C:C2	2.75	0.55
53:S2:1278:A:C2	53:S2:1320:G:C2	2.94	0.55
53:S2:1293:A:C1'	85:Sf:150:PHE:HB3	2.36	0.55
53:S2:1409:A:P	53:S2:1409:A:H8	2.30	0.55
53:S2:1427:C:H2'	53:S2:1428:G:H8	1.72	0.55
53:S2:1574:C:O2	53:S2:1575:G:C8	2.60	0.55
53:S2:1729:U:O2	53:S2:1730:U:H5	1.90	0.55
54:SA:203:PHE:N	54:SA:203:PHE:CD1	2.75	0.55
59:SH:57:ARG:HA	59:SH:57:ARG:CZ	2.37	0.55
2:D:62:CYS:HB3	2:D:105:LEU:HD22	1.89	0.55
6:L:99:ASP:OD1	6:L:101:ARG:N	2.40	0.55
7:M:107:PHE:HD1	37:E:266:TYR:CD2	2.25	0.55
32:5:33:A:H5''	32:5:33:A:H8	1.71	0.55
32:5:118:C:N3	32:5:121:A:N7	2.53	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
32:5:1079:C:C4	32:5:1080:C:C5	2.95	0.55
32:5:1303:A:N1	32:5:1304:C:C4	2.75	0.55
32:5:1335:G:C6	32:5:1336:G:C5	2.95	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
32:5:1995:G:C2	32:5:1996:C:C2	2.95	0.55
32:5:2395:A:C2'	32:5:2806:A:HO2'	2.16	0.55
32:5:2669:C:O2'	32:5:2670:C:C6	2.60	0.55
32:5:3717:A:O2'	32:5:3718:A:C5'	2.55	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
32:5:4737:G:C5	32:5:4738:C:C4	2.94	0.55
32:5:4919:G:C6	32:5:4920:C:C4	2.95	0.55
33:7:58:A:C6	33:7:59:G:N7	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:110:G:C4	33:7:111:C:C5	2.94	0.55
34:8:106:G:N1	34:8:107:C:C4	2.74	0.55
34:8:144:U:C2	34:8:145:C:C5	2.94	0.55
48:z:42:ALA:O	48:z:43:ASP:HB2	2.07	0.55
48:z:69:LEU:O	48:z:71:LYS:N	2.38	0.55
50:4:3:C:C2	50:4:45:G:C2	2.95	0.55
53:S2:551:U:H2'	53:S2:552:G:H8	1.72	0.55
53:S2:656:G:H21	53:S2:663:C:C5'	2.20	0.55
53:S2:870:A:H4'	53:S2:871:U:O5'	2.07	0.55
53:S2:909:G:C6	53:S2:910:G:N7	2.74	0.55
53:S2:951:C:O2	53:S2:952:G:C8	2.60	0.55
53:S2:1117:C:O4'	53:S2:1117:C:O2	2.25	0.55
53:S2:1287:A:C6	53:S2:1314:U:N3	2.75	0.55
53:S2:1293:A:C2	85:Sf:151:ASN:HA	2.42	0.55
53:S2:1410:C:C2	53:S2:1411:G:N7	2.75	0.55
53:S2:1416:C:H2'	53:S2:1417:C:C5	2.42	0.55
53:S2:1730:U:N3	53:S2:1731:A:C8	2.75	0.55
53:S2:1775:U:N3	53:S2:1776:G:N7	2.55	0.55
57:SE:158:ASP:OD1	57:SE:158:ASP:N	2.39	0.55
59:SH:186:ASN:OD1	59:SH:186:ASN:N	2.40	0.55
73:SF:102:LEU:CD1	82:SZ:110:THR:CG2	2.80	0.55
83:Sc:34:PHE:HB3	83:Sc:37:ASP:O	2.07	0.55
86:Sg:36:ARG:HA	86:Sg:65:PHE:HA	1.88	0.55
86:Sg:244:ASN:HD21	86:Sg:245:ARG:NH1	2.05	0.55
5:J:15:LEU:HB3	5:J:165:TRP:CD1	2.41	0.55
6:L:167:ARG:NH1	6:L:173:GLU:OE1	2.40	0.55
9:O:12:ARG:HD3	9:O:37:ARG:NH2	2.22	0.55
9:O:109:PRO:O	9:O:113:ASP:OD1	2.25	0.55
18:Z:49:TYR:HB3	18:Z:50:PRO:CD	2.37	0.55
21:c:44:LYS:HA	21:c:69:THR:HG23	1.89	0.55
25:g:5:LEU:HD21	25:g:22:LEU:HD12	1.89	0.55
32:5:14:C:O2	32:5:15:A:C8	2.60	0.55
32:5:471:A:N6	32:5:472:C:C6	2.75	0.55
32:5:488:G:N2	32:5:489:C:N1	2.54	0.55
32:5:495:C:C4	32:5:496:G:N7	2.75	0.55
32:5:655:C:N3	32:5:656:C:C5	2.75	0.55
32:5:1170:G:C2	32:5:1171:G:C8	2.94	0.55
32:5:1367:C:C4	32:5:1369:C:OP2	2.59	0.55
32:5:1383:G:C5	32:5:1384:C:C4	2.95	0.55
32:5:1488:G:C4	32:5:1489:G:C8	2.93	0.55
32:5:1583:A:N7	32:5:1584:G:N7	2.55	0.55

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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	0.55
32:5:1774:C:N3	32:5:1775:A:N7	2.55	0.55
32:5:2076:G:O6	32:5:2077:C:C4	2.60	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
32:5:2441:C:N3	32:5:2442:G:N7	2.55	0.55
32:5:2575:U:O2	32:5:2758:G:N2	2.40	0.55
32:5:2627:C:O2	32:5:2627:C:O4'	2.25	0.55
32:5:2713:C:N3	32:5:2714:G:N7	2.55	0.55
32:5:2818:C:H2'	32:5:2818:C:O2	2.07	0.55
32:5:4467:A:O2'	32:5:4510:A:N3	2.34	0.55
32:5:4477:A:C2	32:5:4604:G:O4'	2.60	0.55
32:5:4593:C:C2	32:5:4594:U:C5	2.94	0.55
32:5:4607:A:C5	32:5:4608:G:H1'	2.42	0.55
32:5:4879:C:O2	32:5:4880:C:C6	2.60	0.55
32:5:4939:C:N4	37:E:215:LYS:HD2	2.22	0.55
32:5:5020:G:C2	32:5:5021:C:C2	2.94	0.55
32:5:5043:A:H2'	32:5:5044:A:C8	2.41	0.55
34:8:118:C:O2	34:8:118:C:H2'	2.06	0.55
34:8:145:C:C2	34:8:146:U:C6	2.95	0.55
36:C:103:ALA:O	36:C:104:PRO:C	2.49	0.55
44:p:85:ARG:HH11	44:p:85:ARG:HG2	1.72	0.55
48:z:297:MET:HB2	48:z:353:PRO:HA	1.88	0.55
53:S2:667:U:C4	53:S2:1144:A:N1	2.75	0.55
53:S2:893:U:C2	53:S2:894:G:C8	2.95	0.55
53:S2:996:A:N1	63:SN:113:PHE:CZ	2.75	0.55
53:S2:1021:U:H4'	53:S2:1022:U:O4'	2.07	0.55
53:S2:1049:A:C2	53:S2:1070:A:C2	2.94	0.55
53:S2:1092:G:C2	53:S2:1093:A:C8	2.94	0.55
53:S2:1143:A:H2'	53:S2:1144:A:O4'	2.06	0.55
53:S2:1221:G:C2'	53:S2:1222:G:O5'	2.55	0.55
53:S2:1293:A:H62	85:Sf:139:HIS:C	2.14	0.55
53:S2:1308:U:C4	53:S2:1309:C:N4	2.75	0.55
53:S2:1492:U:O2'	81:SU:70:CYS:SG	2.46	0.55
53:S2:1552:G:H5'	53:S2:1557:C:H5	1.71	0.55
53:S2:1643:U:N3	53:S2:1644:C:N4	2.54	0.55
53:S2:1709:G:C4	53:S2:1710:C:C6	2.95	0.55
54:SA:12:GLU:OE1	78:SR:111:PHE:CG	2.52	0.55
54:SA:42:LYS:HD3	78:SR:99:ASP:CG	2.27	0.55
59:SH:73:GLN:OE1	59:SH:135:PHE:CD2	2.60	0.55
3:G:227:ASN:N	3:G:227:ASN:HD22	2.04	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:34:VAL:HG11	9:O:112:TYR:CE1	2.42	0.54
10:Q:28:LEU:HB3	36:C:284:MET:HE3	1.89	0.54
19:a:40:HIS:CE1	32:5:39:A:H2	2.22	0.54
19:a:103:VAL:HG12	19:a:108:TYR:HB2	1.89	0.54
21:c:31:TYR:OH	21:c:59:GLU:OE1	2.25	0.54
23:e:95:TYR:HE2	45:r:23:GLN:HG2	1.72	0.54
32:5:98:A:H1'	32:5:292:G:O6	2.08	0.54
32:5:152:U:N3	32:5:153:G:C8	2.76	0.54
32:5:438:G:C5	32:5:439:G:N7	2.75	0.54
32:5:677:G:N2	32:5:678:C:C2	2.75	0.54
32:5:709:C:N3	32:5:710:G:N7	2.54	0.54
32:5:920:C:C4	32:5:921:C:C5	2.95	0.54
32:5:1076:C:N3	32:5:1077:C:C5	2.75	0.54
32:5:1170:G:N2	32:5:1192:C:C2	2.74	0.54
32:5:1269:G:C8	32:5:2111:G:C5	2.94	0.54
32:5:1278:C:H3'	32:5:1279:A:C4'	2.36	0.54
32:5:1279:A:H3'	32:5:1280:C:C6	2.42	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
32:5:1770:A:C6	32:5:1771:U:C4	2.95	0.54
32:5:1899:G:H1'	32:5:2278:G:N2	2.20	0.54
32:5:1925:G:C4	32:5:1926:C:C6	2.95	0.54
32:5:2082:G:C2	32:5:2275:G:C2	2.96	0.54
32:5:2103:G:C6	32:5:2104:G:C5	2.95	0.54
32:5:2104:G:C6	32:5:2105:A:N7	2.75	0.54
32:5:2122:G:O2'	32:5:2123:C:OP1	2.25	0.54
32:5:2279:A:H2'	32:5:2280:G:C8	2.41	0.54
32:5:2382:A:H62	32:5:2830:G:C1'	2.20	0.54
32:5:3687:A:C6	32:5:3688:U:C5	2.95	0.54
32:5:3773:U:HO2'	32:5:3774:A:P	2.29	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
32:5:3944:G:N3	32:5:3945:A:C8	2.75	0.54
32:5:4081:G:N1	32:5:4082:G:N7	2.55	0.54
32:5:4122:G:C6	32:5:4123:C:C5	2.95	0.54
32:5:4223:C:H2'	32:5:4223:C:O2	2.06	0.54
32:5:4318:C:N3	32:5:4319:C:C5	2.75	0.54
32:5:4963:G:H3'	32:5:4964:C:H5''	1.88	0.54
33:7:82:G:C2	33:7:95:C:C2	2.95	0.54
34:8:80:A:C8	34:8:81:C:H1'	2.42	0.54
34:8:86:U:C6	34:8:86:U:C3'	2.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:102:G:H2'	34:8:104:A:C8	2.42	0.54
46:K:134:GLY:O	46:K:137:GLN:HG3	2.06	0.54
48:z:429:GLN:O	48:z:432:LYS:HG2	2.06	0.54
53:S2:56:G:O2'	53:S2:57:U:C5'	2.55	0.54
53:S2:222:U:H2'	53:S2:222:U:O2	2.07	0.54
53:S2:291:G:O5'	53:S2:291:G:C8	2.60	0.54
53:S2:316:G:N3	53:S2:317:C:C5	2.75	0.54
53:S2:634:A:C2	53:S2:635:G:N9	2.75	0.54
53:S2:832:G:O6	53:S2:833:C:C4	2.60	0.54
53:S2:1052:A:N3	53:S2:1053:C:C6	2.75	0.54
53:S2:1265:A:N3	53:S2:1266:C:H6	2.05	0.54
53:S2:1302:G:O2'	85:Sf:146:LEU:HD13	2.07	0.54
53:S2:1407:U:C2'	53:S2:1408:U:C6	2.86	0.54
53:S2:1572:C:O2	53:S2:1572:C:H2'	2.07	0.54
53:S2:1622:U:C6	53:S2:1622:U:O5'	2.60	0.54
53:S2:1708:C:N3	53:S2:1709:G:C8	2.75	0.54
53:S2:1736:G:H2'	53:S2:1737:G:O4'	2.07	0.54
53:S2:1813:A:C4	53:S2:1814:G:C8	2.96	0.54
53:S2:1860:A:C5	53:S2:1862:G:N7	2.75	0.54
61:SJ:128:VAL:HG12	61:SJ:132:GLN:HG3	1.88	0.54
83:Sc:14:VAL:HG13	83:Sc:31:ARG:CA	2.36	0.54
4:H:63:ASN:N	4:H:66:GLU:OE2	2.40	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:62:VAL:HG11	38:F:83:PHE:CD2	2.42	0.54
19:a:21:ARG:NH1	32:5:1317:U:OP1	2.40	0.54
26:h:91:MET:HG3	26:h:94:ARG:NE	2.22	0.54
32:5:102:G:H2'	32:5:103:G:O5'	2.07	0.54
32:5:120:A:C5	32:5:149:A:C6	2.95	0.54
32:5:162:A:C2	32:5:274:C:N3	2.75	0.54
32:5:296:A:O5'	32:5:296:A:H8	1.89	0.54
32:5:330:G:N2	32:5:331:G:N9	2.54	0.54
32:5:425:U:C4	34:8:9:A:N1	2.75	0.54
32:5:466:A:N1	32:5:467:U:C5	2.76	0.54
32:5:660:A:C2	32:5:661:C:C5	2.95	0.54
32:5:671:G:N3	32:5:672:C:C6	2.76	0.54
32:5:754:U:N3	32:5:755:C:C6	2.75	0.54
32:5:1075:G:C4	32:5:1076:C:C5	2.95	0.54
32:5:1218:G:C6	32:5:1219:G:C1'	2.90	0.54
32:5:1240:G:OP1	32:5:1271:G:O2'	2.25	0.54
32:5:1302:U:O2	32:5:1302:U:H2'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1447:C:N3	32:5:2097:U:O4	2.40	0.54
32:5:1466:G:C4	32:5:1467:C:C5	2.95	0.54
32:5:1866:U:C5	32:5:4405:G:O4'	2.60	0.54
32:5:1983:A:N7	32:5:1987:C:H5'	2.22	0.54
32:5:2126:G:C1'	32:5:2127:C:C6	2.88	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
32:5:2361:G:O6	40:P:25:HIS:HB3	2.08	0.54
32:5:2678:A:C2	32:5:2679:G:C4	2.96	0.54
32:5:3867:A:H3'	32:5:3868:G:C8	2.40	0.54
32:5:3893:C:N3	32:5:4568:A:C2	2.75	0.54
32:5:4136:G:C4	32:5:4137:C:C6	2.95	0.54
32:5:4215:C:N3	32:5:4216:G:C5	2.75	0.54
32:5:4240:G:C2	32:5:4241:C:C2	2.95	0.54
32:5:4292:A:C2	32:5:4330:G:C4	2.95	0.54
32:5:4700:A:N6	32:5:4701:A:C6	2.75	0.54
32:5:4700:A:H2'	32:5:4700:A:N3	2.21	0.54
32:5:4730:C:H2'	32:5:4965:U:H3	1.72	0.54
33:7:42:A:N6	33:7:43:U:C4	2.76	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
48:z:297:MET:C	48:z:353:PRO:N	2.65	0.54
53:S2:410:G:N1	53:S2:411:G:C5	2.76	0.54
53:S2:583:C:C4	53:S2:584:G:C8	2.95	0.54
53:S2:899:U:C4	53:S2:900:C:C5	2.96	0.54
53:S2:976:G:C4	53:S2:977:C:C6	2.95	0.54
53:S2:1074:C:O2	53:S2:1075:C:C5	2.56	0.54
53:S2:1123:C:N4	53:S2:1124:C:C5	2.75	0.54
53:S2:1131:G:N3	53:S2:1132:C:C6	2.74	0.54
53:S2:1134:G:N1	53:S2:1135:C:C5	2.75	0.54
53:S2:1251:A:C6	53:S2:1252:C:C4	2.95	0.54
53:S2:1292:C:H1'	85:Sf:148:TYR:HB3	1.90	0.54
53:S2:1554:C:O4'	53:S2:1554:C:O2	2.24	0.54
53:S2:1715:A:C2	53:S2:1819:A:C2	2.96	0.54
55:SB:49:VAL:HG22	55:SB:62:LEU:HD22	1.88	0.54
63:SN:128:TYR:CD1	63:SN:129:TYR:N	2.75	0.54
66:SW:11:LEU:HD21	66:SW:37:PHE:CZ	2.42	0.54
66:SW:17:ALA:HB2	66:SW:25:VAL:HG11	1.89	0.54
73:SF:130:ARG:HD2	73:SF:135:ARG:HB2	1.88	0.54
75:SM:33:ARG:HH11	75:SM:33:ARG:HG2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:ST:52:TRP:CE3	80:ST:53:PHE:HB3	2.42	0.54
4:H:177:ASP:N	4:H:177:ASP:OD1	2.40	0.54
6:L:103:ARG:CZ	32:5:75:G:O6	2.56	0.54
12:S:90:THR:HG23	13:T:156:TYR:CD2	2.41	0.54
14:U:99:TRP:CD1	14:U:99:TRP:N	2.75	0.54
32:5:29:G:C8	32:5:54:G:N2	2.76	0.54
32:5:95:G:H2'	32:5:96:U:C5'	2.37	0.54
32:5:126:C:C2	32:5:127:G:N7	2.73	0.54
32:5:138:G:C3'	32:5:139:G:H5'	2.37	0.54
32:5:145:G:C4	32:5:146:G:C8	2.95	0.54
32:5:307:A:H3'	32:5:308:G:N2	2.22	0.54
32:5:728:U:C2'	32:5:729:G:OP1	2.55	0.54
32:5:1296:G:HO2'	32:5:1297:U:P	2.29	0.54
32:5:1326:A:H2'	32:5:1327:C:H6	1.70	0.54
32:5:1358:G:H3'	32:5:1358:G:H8	1.72	0.54
32:5:1395:U:O2'	32:5:1396:G:H5'	2.07	0.54
32:5:1625:G:C5	32:5:1642:A:C2	2.95	0.54
32:5:1826:G:C6	32:5:1827:C:C4	2.96	0.54
32:5:1877:G:C6	32:5:1878:G:C5	2.95	0.54
32:5:1976:G:OP1	32:5:1977:C:OP2	2.26	0.54
32:5:2128:G:H2'	32:5:2129:C:O4'	2.06	0.54
32:5:2270:G:N1	32:5:2271:C:N4	2.54	0.54
32:5:2723:U:C2	32:5:2724:G:C8	2.96	0.54
32:5:2725:A:H2'	32:5:2726:G:H5''	1.88	0.54
32:5:3802:U:H2'	32:5:3802:U:O2	2.06	0.54
32:5:3870:C:C2	32:5:3886:G:C2	2.96	0.54
32:5:4097:G:N2	32:5:4098:A:C4	2.76	0.54
32:5:4200:G:N2	32:5:4201:G:H1'	2.20	0.54
32:5:4287:G:C2	32:5:4288:C:N3	2.75	0.54
32:5:4640:C:C4	32:5:4641:U:C5	2.96	0.54
32:5:4975:G:H2'	32:5:4977:A:N7	2.23	0.54
34:8:53:G:C6	34:8:54:C:C4	2.96	0.54
47:q:22:ASP:OD1	47:q:66:ARG:NE	2.36	0.54
50:4:50:G:C6	50:4:51:G:N7	2.73	0.54
53:S2:52:G:C2	53:S2:53:C:N1	2.75	0.54
53:S2:386:C:O2	53:S2:386:C:H2'	2.07	0.54
53:S2:438:G:O2'	53:S2:439:A:H5'	2.07	0.54
53:S2:458:A:C5	53:S2:459:C:C6	2.90	0.54
53:S2:805:U:O2	53:S2:806:U:C6	2.60	0.54
53:S2:862:A:N3	53:S2:863:U:C6	2.75	0.54
53:S2:883:U:C2	53:S2:884:C:C6	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:951:C:N3	53:S2:952:G:N7	2.55	0.54
53:S2:956:G:N2	53:S2:957:A:C4	2.75	0.54
53:S2:1231:C:H3'	53:S2:1232:U:H6	1.71	0.54
53:S2:1258:A:H2	53:S2:1663:A:C4	2.23	0.54
53:S2:1307:U:O2'	85:Sf:132:MET:C	2.51	0.54
53:S2:1575:G:N3	53:S2:1576:G:N7	2.56	0.54
53:S2:1760:G:N2	53:S2:1773:C:C2	2.76	0.54
53:S2:1797:U:C2	53:S2:1798:C:C5	2.95	0.54
54:SA:50:ASN:N	78:SR:105:MET:HE3	2.21	0.54
54:SA:198:MET:HG2	54:SA:199:PRO:HD2	1.90	0.54
60:SI:8:TRP:CD1	60:SI:8:TRP:C	2.85	0.54
61:SJ:83:ARG:HD3	61:SJ:150:ARG:HH21	1.72	0.54
61:SJ:115:PHE:C	61:SJ:115:PHE:CD1	2.86	0.54
64:SO:137:SER:C	64:SO:138:ASP:OD1	2.51	0.54
75:SM:85:LEU:HA	75:SM:88:TRP:HH2	1.67	0.54
79:SS:10:GLN:HE21	79:SS:10:GLN:N	2.05	0.54
2:D:43:LYS:HB3	2:D:46:THR:CG2	2.38	0.54
2:D:164:LYS:O	2:D:168:ASP:HB2	2.06	0.54
3:G:162:ASP:HB3	3:G:163:PRO:CD	2.38	0.54
4:H:59:LYS:HB2	4:H:70:VAL:HG22	1.89	0.54
4:H:126:VAL:HG11	4:H:161:ILE:HG22	1.89	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
9:O:113:ASP:OD1	9:O:113:ASP:N	2.40	0.54
13:T:19:PHE:O	13:T:21:LYS:N	2.41	0.54
32:5:21:G:H3'	32:5:21:G:C8	2.42	0.54
32:5:90:G:N3	32:5:95:G:C2	2.75	0.54
32:5:125:C:O2	32:5:126:C:C6	2.56	0.54
32:5:710:G:H2'	32:5:711:A:C8	2.43	0.54
32:5:737:C:C2	32:5:738:C:C6	2.95	0.54
32:5:984:C:C2	32:5:1070:G:N2	2.76	0.54
32:5:1203:G:C5	32:5:1204:C:C5	2.95	0.54
32:5:1293:G:H5''	32:5:1293:G:H8	1.73	0.54
32:5:1365:C:H4'	32:5:1366:G:OP1	2.06	0.54
32:5:1374:G:C6	32:5:1375:C:C4	2.96	0.54
32:5:2065:G:C4	32:5:2066:C:C6	2.96	0.54
32:5:2413:U:C2	32:5:2414:G:C8	2.94	0.54
32:5:2528:G:H5''	32:5:2529:A:OP2	2.07	0.54
32:5:2567:G:C2	32:5:2568:C:N1	2.76	0.54
32:5:3668:C:C2	32:5:3669:G:C8	2.95	0.54
32:5:3911:C:N3	32:5:3912:U:C5	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4273:A:C2'	32:5:4274:A:O4'	2.48	0.54
32:5:4667:C:C4	32:5:4668:U:C5	2.95	0.54
32:5:5020:G:H2'	32:5:5021:C:O4'	2.07	0.54
36:C:209:ILE:HD13	36:C:221:PHE:CD2	2.43	0.54
45:r:45:HIS:NE2	45:r:103:ARG:NH1	2.56	0.54
50:4:51:G:C2	50:4:52:C:N1	2.75	0.54
50:4:183:A:O2'	50:4:184:A:H5'	2.07	0.54
53:S2:86:C:N4	53:S2:87:U:C4	2.76	0.54
53:S2:173:A:C2	53:S2:174:C:C6	2.95	0.54
53:S2:445:A:N6	53:S2:446:G:C2	2.75	0.54
53:S2:646:G:C6	53:S2:647:U:C5	2.96	0.54
53:S2:875:A:H2'	53:S2:876:C:C5'	2.37	0.54
53:S2:898:U:N3	53:S2:899:U:C5	2.75	0.54
53:S2:918:U:H2'	53:S2:919:A:C4	2.41	0.54
53:S2:1221:G:O2'	53:S2:1222:G:C5'	2.55	0.54
53:S2:1289:U:C1'	53:S2:1314:U:C5	2.90	0.54
53:S2:1371:U:O2	53:S2:1371:U:C2'	2.54	0.54
53:S2:1466:G:C4	53:S2:1467:C:C5	2.95	0.54
53:S2:1537:A:H3'	53:S2:1538:C:H6	1.72	0.54
53:S2:1608:U:C2	53:S2:1609:C:C6	2.96	0.54
53:S2:1839:U:N3	53:S2:1840:U:C5	2.76	0.54
53:S2:1862:G:H1	69:Sa:75:VAL:HB	1.73	0.54
59:SH:115:LYS:O	59:SH:116:ARG:HB2	2.06	0.54
62:SL:13:GLN:NE2	62:SL:13:GLN:HA	2.22	0.54
78:SR:109:LEU:HB3	78:SR:111:PHE:HD2	1.71	0.54
79:SS:31:THR:O	79:SS:36:VAL:CG1	2.55	0.54
82:SZ:103:HIS:O	82:SZ:104:ARG:C	2.50	0.54
86:Sg:16:GLY:N	86:Sg:305:ASN:OD1	2.40	0.54
5:J:74:VAL:C	5:J:75:ARG:CG	2.80	0.54
6:L:176:PHE:C	6:L:176:PHE:HD1	2.15	0.54
12:S:34:ALA:HB1	12:S:35:PRO:CD	2.37	0.54
24:f:68:ARG:HH22	32:5:443:G:P	2.31	0.54
32:5:29:G:N1	32:5:30:C:C4	2.76	0.54
32:5:748:G:O6	32:5:918:G:H1'	2.08	0.54
32:5:964:A:H1'	45:r:98:ARG:NH1	2.22	0.54
32:5:1048:G:C2	32:5:1049:C:C2	2.96	0.54
32:5:1280:C:C6	32:5:1280:C:H5''	2.42	0.54
32:5:1321:G:C2	32:5:3876:A:C2	2.95	0.54
32:5:1554:A:C2	32:5:1555:G:H1'	2.42	0.54
32:5:1811:G:N1	32:5:1812:C:C5	2.75	0.54
32:5:1850:A:C2'	32:5:1851:G:O5'	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1989:G:N2	32:5:1990:A:C5	2.76	0.54
32:5:2035:C:N4	32:5:2036:C:H41	2.00	0.54
32:5:2077:C:N3	32:5:2078:C:C6	2.76	0.54
32:5:2089:G:C5	32:5:2262:G:C2'	2.88	0.54
32:5:2245:G:C6	32:5:2246:C:C4	2.95	0.54
32:5:2263:A:H1'	32:5:2265:G:C5	2.42	0.54
32:5:2313:A:N7	34:8:9:A:O2'	2.36	0.54
32:5:2547:G:N2	32:5:2548:C:C2	2.75	0.54
32:5:2567:G:C6	32:5:2568:C:C4	2.96	0.54
32:5:3608:A:N3	32:5:3609:G:C8	2.76	0.54
32:5:3631:U:C2	32:5:3632:C:C6	2.95	0.54
32:5:3655:C:C2	32:5:3656:A:H8	2.24	0.54
32:5:3859:G:C4'	40:P:139:TYR:CZ	2.90	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
32:5:4194:U:C5	32:5:4197:G:H5''	2.43	0.54
32:5:4276:G:O6	32:5:4277:G:N7	2.35	0.54
32:5:4666:G:C5	32:5:4667:C:C5	2.95	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
34:8:34:U:C2	34:8:34:U:H5'	2.42	0.54
34:8:115:G:C6	34:8:116:C:C4	2.95	0.54
35:B:321:VAL:HG12	35:B:322:HIS:HB2	1.88	0.54
36:C:144:ILE:HD11	36:C:249:PHE:CD1	2.42	0.54
43:n:8:LYS:HE3	53:S2:1846:G:O6	2.08	0.54
46:K:103:ASN:C	46:K:104:ILE:HG13	2.32	0.54
48:z:71:LYS:O	48:z:74:MET:N	2.39	0.54
53:S2:604:A:C2	53:S2:605:A:C5	2.95	0.54
53:S2:619:A:H2'	53:S2:619:A:N3	2.22	0.54
53:S2:751:G:C6	53:S2:792:C:N3	2.75	0.54
53:S2:804:U:O2	53:S2:805:U:C6	2.61	0.54
53:S2:1098:C:O2	53:S2:1098:C:H2'	2.08	0.54
53:S2:1130:G:N2	53:S2:1131:G:C8	2.76	0.54
53:S2:1362:U:O2	53:S2:1362:U:O5'	2.24	0.54
53:S2:1551:U:O4	53:S2:1577:G:H2'	2.07	0.54
53:S2:1596:U:C2	53:S2:1597:C:C6	2.96	0.54
53:S2:1753:C:O2	53:S2:1754:G:C8	2.61	0.54
53:S2:1756:C:C2	53:S2:1777:G:C2	2.95	0.54
53:S2:1863:A:OP2	69:Sa:4:LYS:NZ	2.40	0.54
55:SB:62:LEU:HD13	55:SB:65:ARG:NE	2.23	0.54
60:SI:6:ASP:HB3	60:SI:28:GLU:HG2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SI:25:ARG:HB2	60:SI:27:TYR:HD2	1.72	0.54
66:SW:118:ARG:CZ	66:SW:118:ARG:HB2	2.38	0.54
79:SS:16:LEU:O	79:SS:16:LEU:HG	2.07	0.54
1:A:186:TYR:CA	1:A:196:TRP:HZ3	2.20	0.54
8:N:202:ARG:HE	36:C:112:HIS:CE1	2.26	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
18:Z:29:ILE:HB	18:Z:40:HIS:O	2.08	0.54
32:5:144:G:N2	32:5:145:G:C4	2.75	0.54
32:5:230:G:C2	32:5:239:C:C2	2.95	0.54
32:5:245:C:O2	32:5:245:C:O4'	2.26	0.54
32:5:292:G:H1'	32:5:293:G:H5'	1.90	0.54
32:5:320:C:H2'	32:5:321:U:O4'	2.06	0.54
32:5:325:U:H2'	32:5:326:C:H6	1.71	0.54
32:5:442:G:C2'	32:5:443:G:O5'	2.55	0.54
32:5:448:G:C2	32:5:449:C:H1'	2.43	0.54
32:5:466:A:C2	32:5:467:U:C4	2.95	0.54
32:5:675:C:N3	32:5:676:C:C5	2.76	0.54
32:5:693:C:C2	32:5:694:C:C5	2.95	0.54
32:5:747:A:C2	32:5:918:G:C6	2.96	0.54
32:5:1344:C:C2	32:5:1345:A:C8	2.96	0.54
32:5:1625:G:C8	32:5:1642:A:C2	2.94	0.54
32:5:1752:G:C4	32:5:1753:G:C8	2.95	0.54
32:5:1834:U:H2'	32:5:1834:U:O2	2.08	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
32:5:2315:G:C2	32:5:2316:G:C4	2.96	0.54
32:5:2361:G:O2'	32:5:2362:U:P	2.66	0.54
32:5:2455:G:H2'	32:5:2456:G:C5'	2.37	0.54
32:5:2478:C:N3	32:5:2479:G:C5	2.76	0.54
32:5:2612:G:N1	32:5:2613:C:C2	2.75	0.54
32:5:2726:G:N1	32:5:2727:C:N4	2.56	0.54
32:5:2744:A:H2'	32:5:2745:A:C8	2.43	0.54
32:5:2898:G:C6	32:5:2899:C:C4	2.96	0.54
32:5:3629:A:C2	32:5:3630:A:H1'	2.42	0.54
32:5:3662:A:H61	32:5:3680:U:H3	1.33	0.54
32:5:3663:A:N6	32:5:4080:C:O4'	2.41	0.54
32:5:3742:G:C2	32:5:3743:G:N7	2.75	0.54
32:5:3783:A:H2	32:5:3789:C:N4	2.02	0.54
32:5:3891:A:H2'	32:5:3892:U:O4'	2.07	0.54
32:5:4269:G:C2	32:5:4270:C:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4406:U:N3	32:5:4407:G:C8	2.76	0.54
32:5:4683:U:C4	32:5:4707:A:C6	2.96	0.54
32:5:4748:U:H2'	32:5:4749:C:O4'	2.07	0.54
34:8:43:A:C2	34:8:44:A:C5	2.95	0.54
34:8:44:A:C2	34:8:45:C:C2	2.95	0.54
34:8:44:A:C6	34:8:45:C:C4	2.95	0.54
34:8:138:C:O2	34:8:139:G:C8	2.61	0.54
37:E:277:ILE:C	37:E:278:TYR:CD2	2.86	0.54
47:q:50:LYS:NZ	47:q:93:GLU:OE2	2.34	0.54
48:z:51:GLN:HA	48:z:54:GLU:HG2	1.90	0.54
48:z:297:MET:CB	48:z:353:PRO:CA	2.83	0.54
53:S2:84:A:C6	53:S2:85:A:C5	2.95	0.54
53:S2:165:G:O2'	53:S2:166:A:C5'	2.55	0.54
53:S2:298:G:C6	53:S2:299:A:N7	2.76	0.54
53:S2:311:C:H3'	53:S2:312:G:H4'	1.88	0.54
53:S2:447:A:N6	53:S2:449:A:C4	2.75	0.54
53:S2:859:G:C6	53:S2:860:G:N7	2.75	0.54
53:S2:870:A:C8	53:S2:915:G:N7	2.64	0.54
53:S2:1315:U:O4	53:S2:1316:C:C2	2.60	0.54
53:S2:1318:G:C6	53:S2:1319:U:C4	2.95	0.54
53:S2:1459:G:C6	53:S2:1460:C:C4	2.95	0.54
53:S2:1514:G:H2'	53:S2:1515:G:O4'	2.08	0.54
53:S2:1526:G:C5	53:S2:1527:C:C5	2.96	0.54
53:S2:1721:U:H5'	53:S2:1721:U:C6	2.43	0.54
53:S2:1773:C:C2	53:S2:1774:C:C5	2.96	0.54
53:S2:1776:G:C2	53:S2:1777:G:C5	2.95	0.54
58:SG:224:ARG:HA	58:SG:227:GLN:HB2	1.89	0.54
62:SL:44:PHE:CE2	62:SL:143:LEU:HD23	2.43	0.54
63:SN:55:ARG:NH1	70:Sb:47:PHE:CE2	2.76	0.54
4:H:156:ASN:OD1	4:H:156:ASN:C	2.51	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
8:N:120:TRP:HE3	32:5:280:G:C5'	2.20	0.54
12:S:80:ILE:HG22	12:S:95:ARG:O	2.08	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
32:5:99:A:N1	32:5:100:C:C2	2.75	0.54
32:5:127:G:C6	32:5:128:C:C4	2.95	0.54
32:5:259:C:C2	32:5:260:C:C6	2.95	0.54
32:5:294:G:C5'	32:5:296:A:C5'	2.63	0.54
32:5:313:U:H2'	32:5:314:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:370:U:C4	32:5:1637:A:C5	2.95	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
32:5:672:C:N3	32:5:673:C:C5	2.76	0.54
32:5:685:C:C2'	32:5:685:C:O2	2.56	0.54
32:5:753:C:C2	32:5:754:U:H6	2.24	0.54
32:5:1545:G:N2	32:5:1546:C:C2	2.75	0.54
32:5:1778:C:C2	32:5:1779:U:H5	2.26	0.54
32:5:1857:C:C2	32:5:1858:A:N7	2.76	0.54
32:5:1870:C:O2	32:5:1870:C:H2'	2.08	0.54
32:5:1906:U:H2'	32:5:1907:A:H5'	1.89	0.54
32:5:1925:G:C6	32:5:1926:C:C5	2.95	0.54
32:5:1937:C:C3'	32:5:1938:C:H2'	2.37	0.54
32:5:1987:C:N4	32:5:1988:G:N7	2.56	0.54
32:5:2000:G:H3'	32:5:2000:G:N3	2.23	0.54
32:5:2340:C:C4	32:5:2341:A:N7	2.76	0.54
32:5:2438:A:N6	32:5:2441:C:C5	2.76	0.54
32:5:2468:U:C2	32:5:2473:A:N6	2.75	0.54
32:5:2569:G:C6	32:5:2570:U:C4	2.95	0.54
32:5:2734:U:O2	32:5:2734:U:H2'	2.08	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
32:5:4091:G:N1	32:5:4159:C:C4	2.75	0.54
32:5:4152:G:C2	32:5:4153:C:C6	2.96	0.54
32:5:4233:A:C8	32:5:4235:G:C8	2.96	0.54
32:5:4283:G:C5	32:5:4284:C:C5	2.96	0.54
32:5:4343:U:N3	32:5:4344:U:C4	2.73	0.54
32:5:4363:A:C2	32:5:4364:G:C8	2.96	0.54
32:5:4455:G:C2	32:5:4456:C:N1	2.76	0.54
32:5:4548:A:C4'	32:5:4549:G:OP2	2.56	0.54
32:5:4549:G:N2	32:5:4550:G:N9	2.55	0.54
33:7:62:U:O2	33:7:64:G:C8	2.61	0.54
34:8:12:G:N3	34:8:13:G:C8	2.70	0.54
34:8:28:C:N3	34:8:29:G:C8	2.76	0.54
34:8:70:G:C4	34:8:87:G:N2	2.76	0.54
34:8:131:G:N2	34:8:132:G:C1'	2.69	0.54
37:E:47:VAL:O	37:E:48:ARG:C	2.51	0.54
39:I:171:TRP:CB	39:I:181:PHE:CE2	2.91	0.54
50:4:59:A:N6	50:4:288:G:C4	2.76	0.54
53:S2:52:G:C6	53:S2:53:C:C4	2.96	0.54
53:S2:399:C:H4'	67:SX:11:ARG:NH1	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:505:G:H2'	53:S2:506:G:O4'	2.07	0.54
53:S2:579:C:C5	53:S2:580:U:C5	2.96	0.54
53:S2:606:G:C5	53:S2:608:C:C5	2.96	0.54
53:S2:615:C:C2'	53:S2:616:A:O4'	2.56	0.54
53:S2:656:G:C5'	53:S2:662:G:N2	2.71	0.54
53:S2:694:G:N2	53:S2:695:C:N1	2.54	0.54
53:S2:744:G:H1'	59:SH:107:LYS:HB3	1.89	0.54
53:S2:947:G:C5	53:S2:948:C:C5	2.96	0.54
53:S2:1133:A:C2	53:S2:1134:G:N9	2.66	0.54
53:S2:1140:G:H2'	53:S2:1141:G:O4'	2.08	0.54
53:S2:1405:A:C2'	53:S2:1406:G:O4'	2.41	0.54
53:S2:1508:A:N6	53:S2:1510:G:N9	2.56	0.54
53:S2:1578:U:C6	72:SD:6:SER:N	2.76	0.54
53:S2:1668:U:C2	53:S2:1669:G:N7	2.76	0.54
53:S2:1723:G:C2	53:S2:1724:A:C8	2.96	0.54
54:SA:2:SER:O	54:SA:4:ALA:N	2.40	0.54
63:SN:54:LEU:HB3	63:SN:60:VAL:HG22	1.89	0.54
68:SY:76:TYR:CE2	68:SY:86:GLU:HG2	2.42	0.54
72:SD:11:PHE:CE2	81:SU:84:ILE:HD13	2.43	0.54
2:D:266:TRP:CH2	33:7:22:A:C4	2.95	0.54
8:N:120:TRP:HZ3	32:5:280:G:C8	2.26	0.54
8:N:120:TRP:HZ3	32:5:280:G:H8	1.55	0.54
32:5:181:C:C4	32:5:256:G:N1	2.76	0.54
32:5:250:C:H2'	32:5:251:C:O4'	2.07	0.54
32:5:291:U:O2	32:5:293:G:H3'	2.08	0.54
32:5:345:C:C2	32:5:346:G:C8	2.95	0.54
32:5:720:G:C6	32:5:721:G:N7	2.76	0.54
32:5:916:C:N4	32:5:917:A:N7	2.56	0.54
32:5:967:C:H2'	32:5:969:C:OP1	2.07	0.54
32:5:986:C:C4	32:5:1068:G:N1	2.76	0.54
32:5:1438:U:C2	32:5:2099:G:O6	2.60	0.54
32:5:1635:C:H2'	32:5:1636:U:C5'	2.29	0.54
32:5:1743:A:C6	32:5:1744:U:C6	2.95	0.54
32:5:1776:A:C4	32:5:1777:C:C6	2.95	0.54
32:5:1898:C:C5	32:5:2279:A:C1'	2.91	0.54
32:5:2065:G:C5	32:5:2066:C:C5	2.95	0.54
32:5:2468:U:H2'	32:5:2506:G:O6	2.08	0.54
32:5:2678:A:N3	32:5:2679:G:C8	2.76	0.54
32:5:2818:C:C2'	32:5:4644:G:O2'	2.56	0.54
32:5:3656:A:N1	32:5:3657:U:C4	2.76	0.54
32:5:3846:C:C4	32:5:3847:C:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:8:139:G:C5	34:8:140:C:C5	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
48:z:374:LYS:HE3	50:4:195:U:C5'	2.37	0.54
50:4:58:G:O6	50:4:289:A:C5	2.61	0.54
53:S2:54:A:C4	53:S2:451:G:N2	2.76	0.54
53:S2:62:G:H1'	53:S2:172:U:O2	2.06	0.54
53:S2:339:A:C2'	53:S2:340:C:C6	2.85	0.54
53:S2:470:G:H2'	53:S2:471:G:C8	2.43	0.54
53:S2:1016:U:O2	70:Sb:28:PRO:HG3	2.07	0.54
53:S2:1381:G:C2	53:S2:1382:A:C8	2.96	0.54
53:S2:1528:G:C2	53:S2:1529:C:N3	2.76	0.54
53:S2:1744:G:C2	53:S2:1789:G:C2	2.96	0.54
53:S2:1804:U:N3	53:S2:1805:G:N7	2.55	0.54
84:Sd:23:VAL:HG21	84:Sd:42:CYS:HB3	1.90	0.54
4:H:61:TRP:CH2	7:M:33:GLN:HG2	2.43	0.54
6:L:186:ARG:HH12	32:5:1394:G:H5''	1.73	0.54
26:h:27:GLU:OE2	48:z:21:THR:O	2.25	0.54
32:5:2:G:N2	32:5:3:C:C2	2.76	0.54
32:5:43:U:O4	32:5:44:A:H1'	2.08	0.54
32:5:109:G:N2	32:5:333:U:C2	2.76	0.54
32:5:193:G:C6	32:5:194:C:C4	2.96	0.54
32:5:504:G:O6	32:5:654:C:N3	2.41	0.54
32:5:659:G:N1	32:5:660:A:C5	2.76	0.54
32:5:909:A:N1	32:5:910:G:C5	2.76	0.54
32:5:936:C:O4'	32:5:936:C:O2	2.26	0.54
32:5:976:G:H3'	32:5:977:C:H6	1.72	0.54
32:5:978:G:C2	32:5:979:C:C2	2.96	0.54
32:5:1049:C:O2	32:5:1050:C:C6	2.60	0.54
32:5:1187:G:H21	32:5:1188:C:H41	1.56	0.54
32:5:1215:C:N3	32:5:1216:C:H5	2.03	0.54
32:5:1234:G:H2'	32:5:1235:G:C8	2.42	0.54
32:5:1269:G:N7	32:5:2111:G:C5	2.75	0.54
32:5:1271:G:C3'	32:5:1272:C:C5'	2.83	0.54
32:5:1463:C:N3	32:5:1464:C:C5	2.76	0.54
32:5:1479:G:O2'	32:5:1480:C:O5'	2.26	0.54
32:5:1534:A:C2'	32:5:1637:A:C2	2.91	0.54
32:5:1544:G:C2	32:5:1545:G:N7	2.76	0.54
32:5:1761:G:C6	32:5:1762:C:C4	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1945:G:N1	32:5:1946:G:C8	2.76	0.54
32:5:2479:G:C2	32:5:2480:G:C4	2.96	0.54
32:5:2522:G:C2	32:5:2534:C:N3	2.76	0.54
32:5:2590:G:N2	32:5:2754:G:O2'	2.40	0.54
32:5:2605:G:C2	32:5:2606:G:N7	2.76	0.54
32:5:2607:C:H2'	32:5:2608:G:H8	1.73	0.54
32:5:2880:U:N3	32:5:3625:G:C8	2.76	0.54
32:5:3711:A:C8	32:5:3712:A:H4'	2.43	0.54
32:5:3736:A:C2	32:5:3737:A:C2	2.94	0.54
32:5:4142:C:C5	32:5:4143:G:C6	2.95	0.54
32:5:4147:G:C6	32:5:4148:C:C4	2.95	0.54
32:5:4316:G:C6	32:5:4317:A:N7	2.75	0.54
32:5:4322:G:C2	32:5:4326:G:C6	2.96	0.54
32:5:4758:U:O2	32:5:4758:U:O4'	2.24	0.54
32:5:5021:C:N3	32:5:5022:U:C5	2.75	0.54
33:7:59:G:C2	33:7:60:G:C8	2.95	0.54
34:8:70:G:O2'	34:8:88:A:N6	2.40	0.54
34:8:139:G:C2	34:8:140:C:C2	2.96	0.54
42:j:16:HIS:HA	42:j:27:TYR:O	2.08	0.54
43:n:10:MET:HE1	53:S2:1172:U:H5''	0.54	0.54
46:K:117:ARG:N	46:K:117:ARG:HE	2.06	0.54
50:4:140:C:H2'	50:4:141:C:C6	2.43	0.54
53:S2:30:C:O2'	53:S2:31:U:C5'	2.55	0.54
53:S2:222:U:O2	53:S2:223:C:C6	2.61	0.54
53:S2:311:C:H3'	53:S2:312:G:C4'	2.38	0.54
53:S2:328:U:H2'	53:S2:329:G:C8	2.43	0.54
53:S2:364:A:C2	53:S2:397:G:C2	2.95	0.54
53:S2:372:U:C2	53:S2:373:G:C8	2.96	0.54
53:S2:403:G:N3	53:S2:403:G:H2'	2.22	0.54
53:S2:673:G:H1'	53:S2:1084:A:C2	2.42	0.54
53:S2:752:G:O6	53:S2:791:C:N3	2.41	0.54
53:S2:794:A:N6	53:S2:795:A:C6	2.76	0.54
53:S2:926:A:C6	53:S2:927:C:C4	2.95	0.54
53:S2:961:G:H2'	53:S2:961:G:N3	2.23	0.54
53:S2:984:C:O2	64:SO:138:ASP:OD2	2.25	0.54
53:S2:1122:A:N1	53:S2:1123:C:C5	2.75	0.54
53:S2:1146:C:H2'	53:S2:1147:C:H6	1.73	0.54
53:S2:1356:G:H2'	53:S2:1357:A:C8	2.43	0.54
53:S2:1553:C:H5'	53:S2:1556:A:H61	1.72	0.54
53:S2:1568:C:C2'	53:S2:1569:A:C8	2.90	0.54
53:S2:1573:G:C5	53:S2:1574:C:C6	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1590:C:C5	53:S2:1591:C:N1	2.75	0.54
55:SB:53:GLN:HG2	55:SB:56:LYS:HE2	1.90	0.54
55:SB:125:VAL:HG22	55:SB:169:MET:HG3	1.89	0.54
66:SW:11:LEU:HD21	66:SW:37:PHE:CE2	2.42	0.54
67:SX:68:LYS:HB3	67:SX:91:LEU:HD22	1.89	0.54
75:SM:22:LEU:HD23	75:SM:111:VAL:HG22	1.90	0.54
79:SS:38:ARG:HH21	80:ST:45:LEU:HD13	1.73	0.54
80:ST:31:PRO:HB2	80:ST:33:TRP:CZ3	2.42	0.54
10:Q:68:ARG:NH1	32:5:1501:C:O2'	2.40	0.54
25:g:112:GLN:NE2	32:5:4096:C:O2'	2.33	0.54
26:h:89:ARG:HH11	26:h:89:ARG:HG2	1.72	0.54
32:5:47:A:C8	32:5:49:U:C4	2.96	0.54
32:5:91:G:C8	32:5:93:G:C5	2.96	0.54
32:5:397:G:N2	40:P:22:LEU:HD22	2.24	0.54
32:5:717:U:C4	32:5:718:C:C6	2.96	0.54
32:5:1176:C:C2	32:5:1177:U:C6	2.96	0.54
32:5:1268:G:H4'	32:5:1269:G:OP1	2.08	0.54
32:5:1268:G:O4'	32:5:2111:G:C8	2.61	0.54
32:5:1309:C:N3	32:5:1310:C:C6	2.75	0.54
32:5:1440:U:O2	32:5:1440:U:C2'	2.54	0.54
32:5:1466:G:C6	32:5:1467:C:C4	2.96	0.54
32:5:1590:C:H5''	32:5:1591:U:O5'	2.08	0.54
32:5:1692:C:O2	32:5:1692:C:C2'	2.56	0.54
32:5:1776:A:C6	32:5:1777:C:C5	2.96	0.54
32:5:1813:U:H2'	32:5:1814:C:C6	2.43	0.54
32:5:1877:G:C2	32:5:1878:G:N9	2.76	0.54
32:5:1893:C:C2	32:5:1894:C:C5	2.96	0.54
32:5:1958:A:C2	32:5:2026:A:C6	2.96	0.54
32:5:2085:G:C2	32:5:2273:G:C6	2.96	0.54
32:5:2367:A:N3	32:5:2368:A:C8	2.76	0.54
32:5:2406:G:N2	32:5:2785:C:C2	2.76	0.54
32:5:2465:C:O2'	32:5:2466:G:O4'	2.25	0.54
32:5:2466:G:H2'	32:5:2467:U:H1'	1.90	0.54
32:5:2482:C:C2	32:5:2483:G:C8	2.96	0.54
32:5:2891:U:O2	32:5:3611:A:C2	2.60	0.54
32:5:3615:G:H1'	41:W:44:ARG:HD3	1.90	0.54
32:5:3833:C:O2	32:5:3834:C:C6	2.61	0.54
32:5:3857:G:C2	32:5:3858:C:N1	2.76	0.54
32:5:4242:U:O2	32:5:4279:A:C2	2.59	0.54
32:5:4293:U:O4	32:5:4329:G:H8	1.90	0.54
32:5:4455:G:C6	32:5:4456:C:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4502:C:C4	32:5:4503:A:N7	2.75	0.54
32:5:4652:G:C2	32:5:4653:C:C6	2.96	0.54
34:8:3:A:C4	34:8:4:C:C5	2.96	0.54
34:8:10:G:C6	34:8:11:C:C4	2.94	0.54
34:8:85:U:H2'	34:8:87:G:C8	2.43	0.54
39:I:112:GLN:C	39:I:113:THR:HG1	2.05	0.54
42:j:20:ARG:HD3	42:j:39:TYR:OH	2.08	0.54
45:r:49:VAL:HG11	45:r:97:ILE:HD11	1.89	0.54
47:q:63:LYS:HD2	47:q:82:ILE:HD11	1.90	0.54
53:S2:43:U:O2	53:S2:484:A:C2	2.61	0.54
53:S2:84:A:C2	53:S2:85:A:C8	2.97	0.54
53:S2:341:C:O2	53:S2:342:C:H1'	2.08	0.54
53:S2:858:A:N1	53:S2:859:G:N7	2.56	0.54
53:S2:1122:A:C6	53:S2:1123:C:C6	2.96	0.54
53:S2:1131:G:C6	53:S2:1132:C:C5	2.96	0.54
53:S2:1283:C:C4	75:SM:103:VAL:HA	2.43	0.54
53:S2:1289:U:H1'	53:S2:1314:U:C5	2.43	0.54
53:S2:1538:C:O5'	53:S2:1538:C:C6	2.61	0.54
53:S2:1551:U:H2'	53:S2:1552:G:H1'	1.87	0.54
53:S2:1862:G:O6	69:Sa:34:LYS:HE2	2.07	0.54
57:SE:48:LEU:HD21	57:SE:70:ILE:CD1	2.38	0.54
58:SG:162:LEU:HD11	58:SG:165:GLU:CD	2.33	0.54
62:SL:77:VAL:HG22	62:SL:86:ILE:HD12	1.89	0.54
62:SL:126:VAL:HG23	62:SL:145:VAL:HG22	1.89	0.54
63:SN:18:TYR:CZ	66:SW:56:HIS:HB2	2.43	0.54
79:SS:12:ILE:HA	79:SS:22:GLY:N	2.21	0.54
79:SS:132:ARG:O	79:SS:134:GLN:N	2.40	0.54
82:SZ:56:ASP:O	82:SZ:60:LYS:CG	2.55	0.54
88:S4:85:ASN:N	88:S4:85:ASN:HD22	2.05	0.54
2:D:31:TYR:CD1	2:D:31:TYR:C	2.85	0.53
4:H:60:TRP:CE3	4:H:60:TRP:HA	2.43	0.53
10:Q:11:ARG:NH2	32:5:1690:C:OP2	2.41	0.53
11:R:131:VAL:HG23	11:R:132:PHE:CZ	2.43	0.53
32:5:272:U:O2	32:5:273:U:C6	2.58	0.53
32:5:293:G:O2'	32:5:297:U:H6	1.92	0.53
32:5:348:G:N1	32:5:350:C:C4	2.76	0.53
32:5:405:U:H5'	32:5:406:C:OP2	2.08	0.53
32:5:489:C:C4	32:5:490:C:C5	2.96	0.53
32:5:735:G:C4	32:5:736:C:C5	2.96	0.53
32:5:964:A:H8	32:5:964:A:H5''	1.71	0.53
32:5:1079:C:C2	32:5:1080:C:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1080:C:C2	32:5:1221:G:N2	2.76	0.53
32:5:1085:C:N3	32:5:1086:C:C5	2.76	0.53
32:5:1092:G:C6	32:5:1093:C:C4	2.96	0.53
32:5:1212:G:N1	32:5:1213:G:C5	2.77	0.53
32:5:1349:G:C6	32:5:1350:C:C4	2.96	0.53
32:5:1368:A:HO2'	32:5:1369:C:P	2.31	0.53
32:5:1550:G:C2	32:5:1579:C:O2	2.61	0.53
32:5:1629:G:C5	32:5:1631:A:N6	2.76	0.53
32:5:1682:A:C4	32:5:1683:U:C6	2.96	0.53
32:5:1796:U:N3	32:5:1797:G:C8	2.77	0.53
32:5:1858:A:C2	32:5:1859:C:C6	2.96	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
32:5:2128:G:C2	32:5:2129:C:C2	2.96	0.53
32:5:2277:C:N3	32:5:2278:G:N7	2.56	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
32:5:2506:G:H4'	32:5:2507:A:OP1	2.07	0.53
32:5:2827:G:H2'	32:5:2827:G:N3	2.23	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
32:5:4091:G:C2	32:5:4092:G:H1'	2.43	0.53
32:5:4132:C:C2	32:5:4133:C:C6	2.95	0.53
32:5:4486:C:H2'	32:5:4487:A:O4'	2.08	0.53
32:5:4652:G:C2	32:5:4653:C:C4	2.96	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
33:7:104:C:C2	33:7:105:C:C6	2.95	0.53
37:E:280:HIS:CE1	37:E:281:LYS:HB2	2.43	0.53
48:z:383:ASN:HB2	50:4:209:G:OP1	2.09	0.53
49:3:65:G:C6	49:3:66:C:C4	2.96	0.53
53:S2:46:A:C5	53:S2:473:A:C2	2.96	0.53
53:S2:118:C:C4	53:S2:119:U:C5	2.95	0.53
53:S2:310:C:H2'	53:S2:311:C:H6	1.63	0.53
53:S2:338:G:H3'	53:S2:339:A:H8	1.74	0.53
53:S2:443:U:O4	53:S2:444:G:C5	2.61	0.53
53:S2:549:C:N4	53:S2:550:C:C5	2.76	0.53
53:S2:797:C:OP1	59:SH:111:LYS:HA	2.08	0.53
53:S2:998:A:C8	53:S2:998:A:H3'	2.43	0.53
53:S2:1293:A:N6	85:Sf:140:TYR:HA	2.22	0.53
53:S2:1335:G:H2'	53:S2:1336:C:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1754:G:C2	53:S2:1755:C:C2	2.96	0.53
53:S2:1866:A:C2	69:Sa:87:ARG:NH2	2.76	0.53
55:SB:120:VAL:HG11	55:SB:122:GLU:OE1	2.09	0.53
56:SC:170:TRP:HD1	56:SC:198:ALA:C	2.16	0.53
62:SL:17:PHE:CZ	62:SL:19:ASN:HB2	2.43	0.53
62:SL:117:PHE:CZ	62:SL:144:LYS:HA	2.42	0.53
72:SD:167:TYR:OH	72:SD:202:LYS:O	2.25	0.53
79:SS:11:HIS:C	79:SS:12:ILE:HD12	2.33	0.53
83:Sc:11:LEU:O	83:Sc:35:MET:CG	2.56	0.53
9:O:66:PRO:HD2	35:B:264:PHE:HD2	1.73	0.53
12:S:68:PHE:CE1	32:5:728:U:C4	2.96	0.53
27:i:30:ARG:NH2	32:5:277:G:O2'	2.40	0.53
32:5:124:C:N3	32:5:125:C:C6	2.77	0.53
32:5:319:A:H2'	32:5:320:C:O4'	2.08	0.53
32:5:752:G:O6	32:5:753:C:C4	2.61	0.53
32:5:975:C:H2'	32:5:976:G:C1'	2.38	0.53
32:5:1272:C:H3'	32:5:2122:G:O2'	2.08	0.53
32:5:1692:C:C4	32:5:1693:U:C5	2.95	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
32:5:1896:A:C6	38:F:101:ASN:ND2	2.76	0.53
32:5:1924:C:N4	32:5:1925:G:N7	2.56	0.53
32:5:1944:A:C6	32:5:1945:G:C8	2.96	0.53
32:5:1964:A:C6	32:5:1965:G:C5	2.96	0.53
32:5:2107:C:C4	32:5:2126:G:C2	2.95	0.53
32:5:2424:G:N2	32:5:2426:U:O2	2.41	0.53
32:5:2497:C:N3	32:5:2498:C:H5	1.98	0.53
32:5:2614:C:C2	32:5:2726:G:C2	2.96	0.53
32:5:2816:G:C5	32:5:2817:C:C5	2.96	0.53
32:5:3663:A:H5'	32:5:3663:A:C4	2.42	0.53
32:5:3667:C:O2	32:5:3667:C:H2'	2.08	0.53
32:5:3740:G:C5	32:5:3741:C:C5	2.96	0.53
32:5:3856:A:C6	32:5:3857:G:C5	2.97	0.53
32:5:4069:U:O2	32:5:4069:U:H2'	2.08	0.53
32:5:4079:C:N3	32:5:4080:C:C6	2.77	0.53
32:5:4109:G:C5	32:5:4110:C:C5	2.96	0.53
32:5:4131:G:C6	32:5:4132:C:C4	2.96	0.53
32:5:4320:G:H2'	32:5:4321:U:O4'	2.09	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
32:5:4713:G:C5	32:5:4714:C:C5	2.96	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
33:7:24:C:H2'	33:7:25:G:O5'	2.09	0.53
49:3:11:U:H2'	49:3:12:G:C8	2.43	0.53
53:S2:149:A:H2'	53:S2:150:A:O4'	2.07	0.53
53:S2:379:C:O2	53:S2:380:G:C8	2.61	0.53
53:S2:452:G:C6	53:S2:453:C:N4	2.77	0.53
53:S2:573:U:H2'	53:S2:574:A:H2'	1.90	0.53
53:S2:599:A:C4'	53:S2:605:A:C2	2.90	0.53
53:S2:828:G:C5	53:S2:829:C:C5	2.96	0.53
53:S2:1022:U:H1'	63:SN:128:TYR:CD2	2.42	0.53
53:S2:1045:U:H2'	53:S2:1045:U:O2	2.07	0.53
53:S2:1238:U:O2	53:S2:1520:G:C2	2.61	0.53
53:S2:1250:A:H2	53:S2:1339:U:HO2'	0.63	0.53
53:S2:1293:A:C4'	85:Sf:151:ASN:H	2.21	0.53
53:S2:1294:G:H1'	85:Sf:152:LYS:C	2.33	0.53
53:S2:1317:C:C2	53:S2:1318:G:H8	2.25	0.53
53:S2:1455:A:N1	53:S2:1456:G:C5	2.76	0.53
53:S2:1711:U:C2	53:S2:1712:A:N7	2.76	0.53
56:SC:94:ILE:HD11	56:SC:98:LEU:HD12	1.90	0.53
64:SO:64:ALA:O	64:SO:66:ARG:N	2.40	0.53
82:SZ:50:PHE:CZ	82:SZ:79:ILE:HD13	2.44	0.53
12:S:39:VAL:HG12	38:F:230:VAL:HA	1.90	0.53
13:T:70:HIS:N	13:T:70:HIS:CD2	2.77	0.53
32:5:219:G:OP1	32:5:219:G:H4'	2.07	0.53
32:5:258:G:C6	32:5:259:C:C4	2.96	0.53
32:5:470:A:C6	32:5:471:A:N7	2.75	0.53
32:5:642:G:C2	32:5:643:C:C5	2.96	0.53
32:5:1066:G:C2	32:5:1067:G:C4	2.96	0.53
32:5:1279:A:C4	32:5:1280:C:C4	2.96	0.53
32:5:1291:G:C4	32:5:1292:C:C5	2.97	0.53
32:5:1334:A:N1	32:5:1335:G:C5	2.76	0.53
32:5:1359:G:C2'	32:5:1360:G:O4'	2.54	0.53
32:5:1379:C:O3'	32:5:1380:G:H8	1.91	0.53
32:5:1473:U:C2	32:5:1474:C:C6	2.96	0.53
32:5:1483:C:H2'	32:5:1483:C:OP2	2.07	0.53
32:5:1584:G:C4	32:5:1585:C:C5	2.96	0.53
32:5:1609:U:C2	32:5:1610:C:C6	2.96	0.53
32:5:1629:G:N2	32:5:1631:A:C4	2.77	0.53
32:5:1632:A:C6	32:5:1634:A:C1'	2.92	0.53
32:5:1894:C:C2'	32:5:1895:G:O5'	2.57	0.53
32:5:2058:G:H21	32:5:2059:C:H1'	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2059:C:C2	32:5:2060:G:H8	2.20	0.53
32:5:2081:C:C2	32:5:2082:G:N7	2.75	0.53
32:5:2290:C:C4	32:5:2291:G:N7	2.77	0.53
32:5:2442:G:H2'	32:5:2443:G:H5''	1.90	0.53
32:5:2593:C:C2	32:5:2594:C:C5	2.96	0.53
32:5:2698:G:C6	32:5:2699:C:C4	2.97	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
32:5:2825:A:H4'	32:5:2826:U:O5'	2.07	0.53
32:5:2830:G:C2	32:5:2831:G:C5	2.95	0.53
32:5:3603:G:H2'	32:5:3604:A:N3	2.24	0.53
32:5:3696:C:N3	32:5:3697:U:C5	2.76	0.53
32:5:3714:G:H2'	32:5:3714:G:N3	2.21	0.53
32:5:4175:G:C6	32:5:4176:C:C5	2.96	0.53
32:5:4224:A:N6	32:5:4225:G:C5	2.77	0.53
32:5:4322:G:N2	32:5:4326:G:C5	2.77	0.53
32:5:4342:C:O2	32:5:4342:C:H2'	2.08	0.53
32:5:4479:A:N7	32:5:4480:A:C8	2.76	0.53
32:5:4547:C:N3	32:5:4549:G:N7	2.57	0.53
32:5:4868:G:H3'	32:5:4869:U:H5''	1.89	0.53
32:5:4879:C:N3	32:5:4880:C:C5	2.76	0.53
32:5:4975:G:C6	32:5:4977:A:C6	2.95	0.53
33:7:21:G:N1	33:7:58:A:C2	2.77	0.53
33:7:43:U:N3	33:7:44:C:H5	1.93	0.53
33:7:56:G:H2'	33:7:57:C:C6	2.43	0.53
34:8:117:C:N4	34:8:118:C:C5	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
41:W:55:TYR:C	41:W:55:TYR:HD1	2.14	0.53
53:S2:100:U:O2	53:S2:100:U:C2'	2.57	0.53
53:S2:431:G:N1	53:S2:432:G:N7	2.56	0.53
53:S2:875:A:N1	53:S2:876:C:C2	2.76	0.53
53:S2:1100:A:C5	53:S2:1101:U:C5	2.95	0.53
53:S2:1304:U:O2	53:S2:1304:U:H2'	2.06	0.53
53:S2:1309:C:H2'	85:Sf:143:LYS:HD3	1.89	0.53
53:S2:1412:C:O2'	53:S2:1413:G:C8	2.61	0.53
53:S2:1415:C:H2'	53:S2:1416:C:C4'	2.39	0.53
53:S2:1526:G:C2	53:S2:1527:C:N1	2.77	0.53
53:S2:1669:G:C4	53:S2:1670:C:C5	2.96	0.53
63:SN:122:ILE:HD13	63:SN:141:TYR:CE2	2.43	0.53
67:SX:21:LYS:HD2	67:SX:27:TYR:CZ	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Sc:13:ARG:H	83:Sc:13:ARG:CD	2.13	0.53
1:A:40:TYR:CE1	32:5:4117:U:C2	2.94	0.53
6:L:5:ARG:HA	19:a:48:TYR:CE2	2.43	0.53
8:N:6:TYR:CZ	27:i:40:VAL:HG22	2.43	0.53
9:O:49:ARG:HH22	32:5:1929:A:H2'	1.73	0.53
11:R:81:ARG:HG3	11:R:88:ARG:NE	2.23	0.53
22:d:83:ARG:NH2	32:5:5046:U:OP1	2.40	0.53
23:e:35:TRP:CH2	23:e:56:PRO:HD3	2.43	0.53
32:5:65:A:H61	32:5:75:G:H1'	1.73	0.53
32:5:126:C:O2	32:5:127:G:H8	1.89	0.53
32:5:163:A:C6	32:5:164:G:N7	2.77	0.53
32:5:246:G:N2	32:5:247:G:C5	2.76	0.53
32:5:688:U:C2	32:5:689:U:C6	2.96	0.53
32:5:1264:C:H2'	32:5:1265:G:O4'	2.08	0.53
32:5:1267:C:C5'	32:5:2110:C:O2'	2.57	0.53
32:5:1358:G:H3'	32:5:1358:G:C8	2.44	0.53
32:5:1367:C:N3	32:5:1369:C:OP2	2.41	0.53
32:5:1581:G:C6	32:5:1610:C:C4	2.97	0.53
32:5:1682:A:C5	32:5:1683:U:C6	2.95	0.53
32:5:1684:A:C4	32:5:1685:G:C8	2.96	0.53
32:5:1744:U:C4	32:5:1745:G:N7	2.76	0.53
32:5:1816:C:H2'	32:5:1817:U:H5'	1.90	0.53
32:5:2334:C:H2'	32:5:2334:C:O2	2.09	0.53
32:5:2688:G:C2	32:5:2689:C:C5	2.97	0.53
32:5:2843:U:O2	32:5:2843:U:H2'	2.08	0.53
32:5:3653:A:H2'	32:5:3653:A:N3	2.21	0.53
32:5:3665:G:N2	32:5:3685:C:O2'	2.42	0.53
32:5:3672:G:N7	32:5:3674:G:O4'	2.41	0.53
32:5:3722:G:N1	32:5:3723:A:C5	2.76	0.53
32:5:3795:A:C4	32:5:3796:U:C6	2.96	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
32:5:4100:C:O2	32:5:4101:C:C6	2.61	0.53
32:5:4194:U:O4'	32:5:4194:U:O2	2.25	0.53
32:5:4416:G:C6	32:5:4417:C:C5	2.96	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
32:5:4939:C:C4	37:E:215:LYS:HD3	2.43	0.53
32:5:5020:G:C4	32:5:5021:C:C6	2.97	0.53
34:8:33:G:O4'	34:8:34:U:O4	2.26	0.53
34:8:82:A:N3	34:8:82:A:C2'	2.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:297:MET:HE1	48:z:355:PHE:CG	2.39	0.53
48:z:398:LYS:C	50:4:184:A:H8	2.15	0.53
53:S2:166:A:C2	53:S2:167:G:C5	2.96	0.53
53:S2:200:G:C6	53:S2:201:C:C4	2.96	0.53
53:S2:289:G:N2	53:S2:295:C:C2	2.77	0.53
53:S2:387:C:C2	53:S2:388:U:C6	2.91	0.53
53:S2:415:A:C2'	53:S2:416:U:O5'	2.56	0.53
53:S2:499:G:N2	53:S2:504:G:N1	2.57	0.53
53:S2:601:G:N1	53:S2:622:C:C2	2.77	0.53
53:S2:637:U:H2'	53:S2:638:C:O5'	2.08	0.53
53:S2:886:A:H2'	53:S2:887:U:O4'	2.08	0.53
53:S2:1068:G:O2'	53:S2:1069:U:H6	1.91	0.53
53:S2:1094:C:C2	53:S2:1095:U:C6	2.96	0.53
53:S2:1098:C:N3	53:S2:1099:G:C8	2.77	0.53
53:S2:1105:G:C6	53:S2:1106:C:C4	2.97	0.53
53:S2:1299:A:OP2	76:SP:59:ARG:NH1	2.41	0.53
53:S2:1310:U:C4'	85:Sf:143:LYS:HE3	2.39	0.53
53:S2:1319:U:H2'	53:S2:1320:G:C8	2.44	0.53
53:S2:1393:G:N1	53:S2:1394:G:C5	2.76	0.53
53:S2:1409:A:H8	53:S2:1409:A:O5'	1.91	0.53
53:S2:1791:A:C5	53:S2:1792:G:H1'	2.43	0.53
53:S2:1852:C:N3	53:S2:1853:C:C5	2.77	0.53
72:SD:35:SER:HB2	72:SD:91:VAL:HG21	1.90	0.53
72:SD:76:ARG:CZ	74:SK:66:HIS:CE1	2.91	0.53
78:SR:72:LYS:O	78:SR:76:GLU:HG3	2.08	0.53
86:Sg:59:LEU:HB3	86:Sg:90:TRP:CE3	2.44	0.53
1:A:24:LYS:HG3	1:A:49:ILE:HG21	1.91	0.53
7:M:3:PHE:CE2	32:5:4763:U:O2	2.62	0.53
8:N:138:PHE:HB3	8:N:143:ARG:NH2	2.19	0.53
32:5:273:U:O2'	32:5:274:C:O5'	2.21	0.53
32:5:279:A:H3'	32:5:279:A:OP1	2.09	0.53
32:5:388:A:C6	32:5:411:G:C5	2.97	0.53
32:5:506:C:C2	32:5:507:G:N7	2.77	0.53
32:5:512:U:C3'	32:5:513:U:H5''	2.39	0.53
32:5:908:G:C2	32:5:909:A:C8	2.96	0.53
32:5:1254:A:H2'	32:5:1256:G:N7	2.24	0.53
32:5:1367:C:H6	32:5:1367:C:H5''	1.73	0.53
32:5:1521:C:C4	32:5:1522:G:C8	2.97	0.53
32:5:1617:G:N2	32:5:1618:G:H1'	2.23	0.53
32:5:1751:A:C2	32:5:1752:G:C1'	2.91	0.53
32:5:1753:G:N3	32:5:1755:C:H5''	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1811:G:C2	32:5:1812:C:C4	2.97	0.53
32:5:1827:C:C2	32:5:1828:C:C5	2.96	0.53
32:5:1893:C:O2	32:5:1894:C:C5	2.62	0.53
32:5:2081:C:C2	32:5:2082:G:C8	2.97	0.53
32:5:2082:G:C2	32:5:2083:C:N3	2.77	0.53
32:5:2279:A:C2	32:5:2280:G:C4	2.94	0.53
32:5:2312:U:O2	32:5:2312:U:H2'	2.07	0.53
32:5:2316:G:C2	32:5:2317:C:N3	2.76	0.53
32:5:2351:C:N3	32:5:2352:U:C5	2.77	0.53
32:5:2555:G:O6	32:5:2572:C:N4	2.42	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
32:5:2841:G:C2	32:5:2842:G:C8	2.97	0.53
32:5:2844:A:O2'	32:5:4631:G:H4'	2.07	0.53
32:5:3782:C:C4	32:5:3809:G:C5	2.96	0.53
32:5:3839:G:N1	32:5:3842:C:N4	2.57	0.53
32:5:3845:A:H2'	32:5:3845:A:N3	2.24	0.53
32:5:4082:G:C2	32:5:4083:U:C4	2.96	0.53
32:5:4381:A:C6	32:5:4382:G:N7	2.77	0.53
32:5:4397:A:O4'	49:3:76:A:N3	2.41	0.53
32:5:4747:C:H2'	32:5:4748:U:C5	2.43	0.53
33:7:42:A:C4	33:7:43:U:C5	2.97	0.53
34:8:53:G:C5	34:8:54:C:C5	2.96	0.53
34:8:131:G:C2	34:8:132:G:C1'	2.92	0.53
34:8:139:G:C4	34:8:140:C:C6	2.97	0.53
46:K:131:GLU:O	46:K:135:THR:HG23	2.09	0.53
48:z:408:ARG:CZ	50:4:206:G:H4'	2.37	0.53
49:3:62:C:C2	49:3:63:G:C8	2.96	0.53
53:S2:70:G:N2	53:S2:80:G:N3	2.57	0.53
53:S2:202:G:C2	53:S2:203:G:C8	2.97	0.53
53:S2:349:A:H2'	53:S2:350:C:C6	2.43	0.53
53:S2:794:A:N6	53:S2:795:A:N6	2.56	0.53
53:S2:1180:C:O2	53:S2:1180:C:C2'	2.56	0.53
53:S2:1202:U:N3	53:S2:1203:G:N7	2.56	0.53
53:S2:1271:C:C4	53:S2:1272:C:C6	2.97	0.53
53:S2:1292:C:O5'	85:Sf:149:CYS:O	2.26	0.53
53:S2:1533:A:N1	53:S2:1537:A:H1'	2.24	0.53
53:S2:1673:U:C5	53:S2:1674:G:C8	2.97	0.53
53:S2:1842:C:C2'	53:S2:1843:G:O5'	2.56	0.53
55:SB:58:ALA:C	55:SB:61:GLY:H	2.10	0.53
61:SJ:29:LEU:HD11	71:Se:37:GLN:HG2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SF:99:ILE:CG2	82:SZ:67:LEU:HD23	2.39	0.53
76:SP:42:ARG:CZ	76:SP:42:ARG:HB2	2.39	0.53
77:SQ:41:MET:HE3	80:ST:10:ASN:OD1	2.08	0.53
2:D:204:VAL:HG12	2:D:236:MET:HE1	1.90	0.53
7:M:109:ARG:HH21	7:M:109:ARG:CB	2.20	0.53
9:O:83:THR:HG22	32:5:2052:G:OP1	2.08	0.53
22:d:118:GLN:HA	22:d:118:GLN:OE1	2.08	0.53
23:e:58:ILE:C	23:e:60:TYR:H	2.11	0.53
23:e:80:HIS:HB3	23:e:84:GLU:OE2	2.09	0.53
25:g:50:PRO:HG3	32:5:2652:G:C2	2.43	0.53
31:o:26:TYR:HE2	32:5:4368:G:H21	1.56	0.53
32:5:127:G:C4	32:5:128:C:C5	2.96	0.53
32:5:174:C:C2	32:5:263:G:N2	2.76	0.53
32:5:207:G:N2	32:5:383:A:C8	2.76	0.53
32:5:1329:G:C2	32:5:3865:A:H1'	2.44	0.53
32:5:1836:G:N1	32:5:1837:A:N7	2.56	0.53
32:5:1886:G:C5	32:5:1887:G:C8	2.97	0.53
32:5:1910:G:C2	32:5:1911:C:C4	2.96	0.53
32:5:1936:C:N3	32:5:1937:C:C6	2.77	0.53
32:5:1967:A:N1	32:5:1968:G:C5	2.77	0.53
32:5:2037:C:N3	32:5:2038:U:C5	2.77	0.53
32:5:2065:G:C6	32:5:2066:C:C4	2.95	0.53
32:5:2115:G:H8	32:5:2116:C:C6	2.26	0.53
32:5:2480:G:C4	32:5:2481:G:C8	2.97	0.53
32:5:2559:G:C6	32:5:2560:C:C4	2.96	0.53
32:5:3830:A:C2	32:5:3831:U:C6	2.97	0.53
32:5:3862:A:N1	32:5:3863:C:H1'	2.23	0.53
32:5:3898:G:C2'	32:5:3899:G:H5'	2.38	0.53
32:5:4113:U:C2'	32:5:4114:C:O4'	2.47	0.53
32:5:4124:G:H2'	32:5:4124:G:N3	2.24	0.53
32:5:4171:C:H2'	32:5:4172:A:O4'	2.08	0.53
32:5:4174:U:O2	32:5:4174:U:C2'	2.56	0.53
32:5:4474:A:H2'	32:5:4474:A:N3	2.24	0.53
32:5:4758:U:C2'	32:5:4759:C:O5'	2.56	0.53
35:B:323:TYR:CD1	35:B:324:GLY:N	2.77	0.53
36:C:213:GLU:N	36:C:213:GLU:OE1	2.42	0.53
38:F:149:LEU:CA	38:F:197:TYR:OH	2.57	0.53
46:K:16:ARG:HH12	46:K:28:LEU:C	2.17	0.53
48:z:341:LYS:O	48:z:345:PHE:CE1	2.62	0.53
50:4:57:G:C2	50:4:290:C:O2	2.62	0.53
53:S2:53:C:C2	53:S2:54:A:H8	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:212:C:N3	53:S2:213:G:C8	2.76	0.53
53:S2:344:U:C2	53:S2:345:U:C6	2.97	0.53
53:S2:427:U:H5''	53:S2:428:U:OP1	2.08	0.53
53:S2:447:A:C6	53:S2:449:A:C5	2.97	0.53
53:S2:534:G:C2	53:S2:535:G:C8	2.97	0.53
53:S2:881:G:C2	53:S2:882:U:C6	2.96	0.53
53:S2:947:G:C6	53:S2:948:C:C4	2.96	0.53
53:S2:949:G:C6	53:S2:950:C:C5	2.96	0.53
53:S2:962:A:C2	53:S2:963:A:N9	2.76	0.53
53:S2:992:A:C2	53:S2:993:G:C8	2.96	0.53
53:S2:1405:A:C6	53:S2:1406:G:C6	2.97	0.53
53:S2:1593:C:N3	53:S2:1594:A:N7	2.56	0.53
56:SC:68:ARG:O	56:SC:72:ASP:OD1	2.27	0.53
59:SH:146:VAL:HG21	66:SW:50:PHE:CZ	2.43	0.53
63:SN:89:TYR:C	63:SN:89:TYR:CD1	2.87	0.53
67:SX:19:ASP:OD1	67:SX:19:ASP:N	2.42	0.53
68:SY:20:ARG:NH1	68:SY:74:MET:HE2	2.22	0.53
79:SS:6:PRO:HB2	82:SZ:49:LEU:HD13	1.89	0.53
86:Sg:112:ALA:HB1	86:Sg:156:PHE:HB2	1.90	0.53
1:A:180:LEU:HG	44:p:18:TYR:CE1	2.44	0.53
1:A:186:TYR:CD2	32:5:1613:A:H4'	2.44	0.53
2:D:20:PHE:HD2	2:D:30:TYR:OH	1.92	0.53
6:L:59:VAL:HG13	32:5:74:G:C5'	2.38	0.53
11:R:166:THR:CG2	53:S2:872:A:H2'	2.37	0.53
11:R:173:ARG:CZ	53:S2:910:G:OP2	2.57	0.53
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
24:f:43:LEU:HD22	24:f:76:ARG:HA	1.90	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
32:5:93:G:N2	32:5:94:A:C2	2.76	0.53
32:5:198:A:H1'	32:5:222:C:H1'	1.91	0.53
32:5:247:G:C2	32:5:248:C:C6	2.97	0.53
32:5:288:G:C2	32:5:289:C:C4	2.96	0.53
32:5:423:G:C5	32:5:424:U:C5	2.97	0.53
32:5:431:G:O4'	32:5:3889:G:N2	2.41	0.53
32:5:1203:G:C6	32:5:1204:C:C4	2.97	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	2.44	0.53
32:5:1685:G:C2	32:5:1686:C:C2	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1928:C:H1'	32:5:1929:A:C6	2.44	0.53
32:5:2351:C:C2	32:5:2352:U:C5	2.97	0.53
32:5:2463:G:C2	32:5:2464:C:C5	2.96	0.53
32:5:2481:G:C4	32:5:2482:C:C6	2.97	0.53
32:5:2485:U:N3	32:5:2486:G:N7	2.57	0.53
32:5:2562:G:H22	32:5:2564:G:H3'	1.73	0.53
32:5:2592:U:C4	32:5:2593:C:C6	2.97	0.53
32:5:2615:C:O2	32:5:2615:C:H2'	2.08	0.53
32:5:2702:C:O2	32:5:2715:G:C2	2.62	0.53
32:5:3590:G:C2	32:5:3591:C:N1	2.76	0.53
32:5:3879:G:C5	32:5:3882:C:N4	2.76	0.53
32:5:3938:G:N3	32:5:3938:G:C5'	2.72	0.53
32:5:4142:C:H2'	32:5:4143:G:C1'	2.37	0.53
32:5:4167:G:N1	32:5:4168:G:C5	2.76	0.53
32:5:4260:U:H2'	32:5:4261:C:C6	2.43	0.53
32:5:4269:G:C4	32:5:4270:C:C6	2.97	0.53
32:5:4281:A:C4	32:5:4283:G:N7	2.76	0.53
32:5:4364:G:C4	32:5:4365:C:C5	2.97	0.53
32:5:4974:C:H2'	32:5:4975:G:C1'	2.39	0.53
32:5:4979:A:C2'	32:5:4980:C:O5'	2.57	0.53
36:C:339:THR:HA	36:C:342:ARG:HB3	1.90	0.53
42:j:39:TYR:HB3	42:j:40:PRO:CD	2.39	0.53
47:q:32:ALA:HA	47:q:187:LEU:HD23	1.80	0.53
49:3:38:C:N4	49:3:39:G:N7	2.54	0.53
50:4:231[B]:A:H3'	50:4:232[B]:G:O4'	2.09	0.53
53:S2:68:A:C4	53:S2:69:C:C5	2.97	0.53
53:S2:299:A:C2	53:S2:300:U:C6	2.97	0.53
53:S2:339:A:N1	53:S2:340:C:N4	2.56	0.53
53:S2:442:C:H5'	53:S2:443:U:OP2	2.08	0.53
53:S2:695:C:C4	53:S2:696:G:N7	2.76	0.53
53:S2:793:G:C6	53:S2:794:A:C5	2.96	0.53
53:S2:923:G:N1	53:S2:924:G:C5	2.77	0.53
53:S2:926:A:C4	53:S2:927:C:C6	2.96	0.53
53:S2:956:G:C2	53:S2:957:A:N7	2.76	0.53
53:S2:978:G:C6	53:S2:979:C:C4	2.97	0.53
53:S2:995:G:N2	53:S2:997:A:O5'	2.41	0.53
53:S2:1290:G:H3'	85:Sf:146:LEU:CG	2.37	0.53
53:S2:1294:G:N3	85:Sf:137:ASP:OD2	2.42	0.53
53:S2:1301:A:H2'	53:S2:1303:C:O2	2.08	0.53
53:S2:1316:C:O2	53:S2:1316:C:H2'	2.09	0.53
53:S2:1390:U:H2'	53:S2:1391:C:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1708:C:C2	53:S2:1709:G:C8	2.96	0.53
53:S2:1792:G:C2	53:S2:1793:A:C8	2.95	0.53
55:SB:148:ASN:O	55:SB:148:ASN:CG	2.51	0.53
86:Sg:49:GLU:N	86:Sg:49:GLU:OE1	2.42	0.53
86:Sg:83:TRP:CH2	86:Sg:125:ARG:NH2	2.75	0.53
3:G:74:LEU:HG	32:5:4076:G:N2	2.24	0.53
3:G:169:PHE:CE2	8:N:6:TYR:HB3	2.44	0.53
9:O:87:MET:SD	32:5:1912:G:N2	2.82	0.53
11:R:149:LYS:O	11:R:153:LYS:N	2.31	0.53
12:S:15:ARG:HH21	13:T:141:VAL:HG13	1.73	0.53
18:Z:123:LYS:O	18:Z:124:THR:HG23	2.09	0.53
22:d:33:ILE:HD11	22:d:45:ALA:HB2	1.90	0.53
22:d:87:ARG:CZ	22:d:109:VAL:HG22	2.39	0.53
32:5:70:A:N6	32:5:314:G:O2'	2.42	0.53
32:5:111:C:C2	32:5:331:G:C2	2.97	0.53
32:5:347:A:C2	32:5:348:G:N7	2.77	0.53
32:5:963:G:N3	32:5:963:G:H2'	2.24	0.53
32:5:990:C:C2	32:5:991:C:C6	2.97	0.53
32:5:1214:C:C4'	32:5:1215:C:O5'	2.52	0.53
32:5:1264:C:H2'	32:5:1265:G:H5'	1.89	0.53
32:5:1466:G:C6	32:5:1467:C:C5	2.97	0.53
32:5:1900:C:C4	32:5:1901:C:C5	2.96	0.53
32:5:1925:G:N2	32:5:1926:C:H1'	2.23	0.53
32:5:2440:U:N3	32:5:2519:U:C5	2.77	0.53
32:5:3656:A:O4'	32:5:3747:A:H2	1.91	0.53
32:5:3696:C:C2	32:5:3697:U:C6	2.97	0.53
32:5:3869:C:O2	32:5:3870:C:C6	2.62	0.53
32:5:3875:G:H2'	32:5:3875:G:N3	2.24	0.53
32:5:3910:C:N3	32:5:3911:C:C5	2.76	0.53
32:5:4090:G:C6	32:5:4091:G:C5	2.97	0.53
32:5:4167:G:N2	32:5:4168:G:H1'	2.23	0.53
32:5:4355:G:N2	32:5:4356:G:C8	2.76	0.53
32:5:4355:G:N1	32:5:4356:G:C5	2.77	0.53
32:5:4400:G:C6	32:5:4401:G:N7	2.76	0.53
32:5:4467:A:C5	32:5:4468:U:C5	2.97	0.53
32:5:4527:G:C5	32:5:4556:U:C4	2.97	0.53
32:5:4746:C:C4	32:5:4747:C:C5	2.96	0.53
32:5:4937:C:H5'	37:E:179:ARG:HD2	1.91	0.53
32:5:4998:G:N3	32:5:4999:G:C8	2.77	0.53
32:5:5047:C:N3	32:5:5048:A:N6	2.56	0.53
34:8:41:A:N7	34:8:42:G:C8	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:54:C:C4	34:8:55:U:C5	2.97	0.53
34:8:94:G:C4'	34:8:95:A:OP1	2.56	0.53
34:8:118:C:N3	34:8:119:C:C6	2.76	0.53
45:r:16:PHE:N	45:r:16:PHE:CD1	2.75	0.53
45:r:103:ARG:NH2	45:r:106:LEU:HD21	2.24	0.53
48:z:412:VAL:O	51:9:74:ARG:NE	2.42	0.53
50:4:20:G:C6	50:4:21:C:C4	2.97	0.53
53:S2:27:A:N3	53:S2:28:U:C6	2.76	0.53
53:S2:75:G:O2'	53:S2:76:U:H6	1.89	0.53
53:S2:193:C:C2	53:S2:207:G:C2	2.96	0.53
53:S2:402:C:N4	53:S2:403:G:C5	2.76	0.53
53:S2:462:C:C4	53:S2:463:C:C5	2.97	0.53
53:S2:549:C:C4	53:S2:550:C:C5	2.97	0.53
53:S2:898:U:C4	53:S2:899:U:C5	2.97	0.53
53:S2:906:U:O2	53:S2:907:G:C8	2.62	0.53
53:S2:917:U:H2'	53:S2:918:U:C6	2.44	0.53
53:S2:957:A:H4'	53:S2:973:C:O2'	2.09	0.53
53:S2:999:G:N1	53:S2:1000:C:C4	2.76	0.53
53:S2:1109:C:H1'	53:S2:1110:G:O5'	2.09	0.53
53:S2:1251:A:C2	53:S2:1252:C:C6	2.97	0.53
53:S2:1409:A:N1	53:S2:1438:A:N1	2.56	0.53
53:S2:1420:G:O2'	80:ST:4:VAL:N	2.39	0.53
54:SA:55:TRP:O	54:SA:58:LEU:N	2.42	0.53
54:SA:147:LEU:HD11	54:SA:174:MET:HB3	1.91	0.53
72:SD:218:LEU:HD23	72:SD:218:LEU:O	2.09	0.53
78:SR:88:VAL:HG12	78:SR:91:LEU:H	1.74	0.53
78:SR:120:THR:HG22	78:SR:121:GLN:N	2.23	0.53
79:SS:12:ILE:HG22	79:SS:13:LEU:N	2.24	0.53
4:H:69:THR:HG22	32:5:4700:A:H2	1.74	0.53
11:R:98:ARG:NH1	11:R:133:LYS:HB2	2.24	0.53
11:R:173:ARG:NH2	53:S2:910:G:OP2	2.42	0.53
32:5:1:C:C5	32:5:2:G:C8	2.97	0.53
32:5:66:A:C6	32:5:328:A:C5	2.97	0.53
32:5:177:G:C5	32:5:178:C:C5	2.96	0.53
32:5:275:C:O2'	32:5:276:C:OP1	2.26	0.53
32:5:737:C:H2'	32:5:738:C:O4'	2.09	0.53
32:5:978:G:C5	32:5:979:C:C5	2.96	0.53
32:5:1398:A:H61	32:5:1419:G:C2'	2.22	0.53
32:5:1448:G:C4	32:5:1449:C:C5	2.97	0.53
32:5:1644:C:C2	32:5:1645:C:C5	2.96	0.53
32:5:2034:G:C6	32:5:2035:C:C6	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2058:G:C6	32:5:2059:C:H5	2.24	0.53
32:5:2076:G:C6	32:5:2077:C:C4	2.97	0.53
32:5:2244:C:O2	32:5:2245:G:C8	2.62	0.53
32:5:2314:G:C2	32:5:2315:G:C8	2.76	0.53
32:5:2367:A:N9	32:5:2798:A:C2	2.77	0.53
32:5:2521:G:N1	32:5:2535:G:C2	2.76	0.53
32:5:2866:C:C4	32:5:2867:C:C5	2.97	0.53
32:5:3757:G:C5	32:5:3758:U:C5	2.97	0.53
32:5:4364:G:C6	32:5:4365:C:C4	2.97	0.53
32:5:4464:A:H5'	32:5:4464:A:C4	2.44	0.53
32:5:4579:U:O2	32:5:4580:U:C6	2.61	0.53
32:5:4608:G:C6	32:5:4609:G:C4	2.96	0.53
32:5:5019:A:C2	32:5:5020:G:C5	2.97	0.53
32:5:5042:A:N3	32:5:5043:A:C8	2.77	0.53
33:7:58:A:C5	33:7:59:G:N7	2.76	0.53
34:8:78:G:H2'	34:8:79:G:O4'	2.08	0.53
34:8:134:G:N2	34:8:135:C:H1'	2.24	0.53
35:B:19:ARG:NE	35:B:235:TRP:CZ3	2.77	0.53
37:E:129:PHE:O	37:E:132:HIS:HB2	2.09	0.53
38:F:197:TYR:C	38:F:199:VAL:H	2.16	0.53
53:S2:2:A:H1'	53:S2:3:C:OP1	2.08	0.53
53:S2:90:G:C6	53:S2:91:A:C4	2.97	0.53
53:S2:533:A:C6	53:S2:534:G:C5	2.97	0.53
53:S2:581:U:N3	53:S2:582:C:C6	2.77	0.53
53:S2:910:G:C4	53:S2:911:C:C5	2.96	0.53
53:S2:1017:U:O2'	63:SN:52:VAL:N	2.41	0.53
53:S2:1025:U:H2'	53:S2:1026:C:O4'	2.08	0.53
53:S2:1041:G:C6	53:S2:1042:A:N7	2.77	0.53
53:S2:1291:A:H1'	85:Sf:142:GLY:HA2	1.91	0.53
53:S2:1293:A:N3	85:Sf:151:ASN:C	2.67	0.53
53:S2:1364:U:O2	53:S2:1364:U:O4'	2.27	0.53
53:S2:1508:A:C6	53:S2:1510:G:N9	2.77	0.53
53:S2:1565:C:N3	53:S2:1571:G:C2	2.77	0.53
53:S2:1613:G:C2	53:S2:1627:C:C2	2.96	0.53
53:S2:1644:C:O2'	53:S2:1645:C:H5'	2.07	0.53
53:S2:1743:G:H2'	53:S2:1744:G:C8	2.44	0.53
56:SC:254:ASP:OD2	65:SV:1:MET:HG3	2.09	0.53
58:SG:64:LYS:HG2	58:SG:97:VAL:HG11	1.90	0.53
62:SL:93:LEU:HB3	62:SL:102:PHE:HB3	1.91	0.53
72:SD:40:ARG:NH2	81:SU:107:GLU:O	2.37	0.53
73:SF:152:TRP:O	73:SF:156:THR:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SR:98:VAL:HB	78:SR:117:LEU:CD2	2.39	0.53
80:ST:38:LYS:NZ	80:ST:43:LYS:O	2.42	0.53
1:A:128:ARG:HD3	32:5:3681:G:OP2	2.08	0.53
6:L:90:VAL:HG12	6:L:94:ILE:HD12	1.91	0.53
9:O:84:VAL:HG11	9:O:102:LEU:HD22	1.91	0.53
32:5:65:A:O2'	32:5:66:A:H4'	2.10	0.53
32:5:742:G:C2	32:5:743:G:C5	2.97	0.53
32:5:1075:G:C2	32:5:1076:C:C2	2.96	0.53
32:5:1092:G:C5	32:5:1093:C:C5	2.96	0.53
32:5:1171:G:C4	32:5:1172:C:C6	2.96	0.53
32:5:1215:C:H2'	32:5:1215:C:O2	2.08	0.53
32:5:1483:C:OP2	32:5:1484:G:N1	2.42	0.53
32:5:1758:G:C2	32:5:1759:G:C8	2.97	0.53
32:5:1759:G:C2	32:5:1760:G:N9	2.77	0.53
32:5:1761:G:C4	32:5:1762:C:C5	2.97	0.53
32:5:1865:G:N2	32:5:1867:A:H3'	2.23	0.53
32:5:2104:G:C4	32:5:2105:A:C8	2.97	0.53
32:5:2107:C:O2'	32:5:2107:C:O2	2.26	0.53
32:5:2367:A:N3	32:5:2368:A:N7	2.56	0.53
32:5:2400:G:N1	32:5:2401:A:C5	2.77	0.53
32:5:2422:C:N3	32:5:2423:A:C8	2.77	0.53
32:5:2468:U:C4	32:5:2473:A:N6	2.77	0.53
32:5:2524:U:H5''	32:5:2711:G:C2	2.43	0.53
32:5:2547:G:C2	32:5:2548:C:C6	2.97	0.53
32:5:2639:U:H2'	32:5:2694:G:H1	1.73	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
32:5:3629:A:H4'	53:S2:1721:U:O2	2.09	0.53
32:5:3846:C:C4	32:5:3847:C:H5	2.27	0.53
32:5:3906:A:C6	36:C:75:ARG:NH1	2.77	0.53
32:5:4089:G:H2'	32:5:4090:G:O4'	2.08	0.53
32:5:4159:C:C2	32:5:4160:C:C5	2.97	0.53
32:5:4194:U:C4	32:5:4197:G:H5''	2.43	0.53
32:5:4221:C:N3	39:I:116:ARG:HD3	2.24	0.53
32:5:4381:A:C2	32:5:4382:G:C8	2.97	0.53
32:5:4452:U:C2	32:5:4452:U:H5''	2.43	0.53
32:5:4599:A:N6	32:5:4610:A:C8	2.77	0.53
32:5:4737:G:C6	32:5:4963:G:N2	2.77	0.53
32:5:4898:G:C2	32:5:4923:C:C2	2.96	0.53
32:5:4997:G:C4	32:5:4998:G:C8	2.97	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)
37:E:158:VAL:HG22	37:E:180:VAL:HG21	1.91	0.53
38:F:124:PHE:HD2	38:F:196:ILE:HG23	1.74	0.53
39:I:9:TYR:CD1	39:I:9:TYR:N	2.77	0.53
47:q:99:ARG:HE	47:q:103:ARG:NH2	2.07	0.53
50:4:148:G:H4'	51:9:15:PHE:O	2.09	0.53
52:6:111:THR:OG1	52:6:112:ASP:N	2.42	0.53
53:S2:356:C:O4'	53:S2:356:C:O2	2.26	0.53
53:S2:379:C:N3	53:S2:380:G:N7	2.57	0.53
53:S2:474:G:N1	53:S2:475:C:C5	2.77	0.53
53:S2:501:C:O2	53:S2:501:C:C3'	2.57	0.53
53:S2:796:G:N3	59:SH:111:LYS:HE2	2.23	0.53
53:S2:891:G:C6	53:S2:892:U:C5	2.96	0.53
53:S2:986:G:H2'	53:S2:986:G:N3	2.24	0.53
53:S2:1063:C:C2'	53:S2:1838:U:C5	2.87	0.53
53:S2:1124:C:OP1	55:SB:150:ILE:HG22	2.09	0.53
53:S2:1212:G:C2	53:S2:1688:C:C2	2.96	0.53
53:S2:1241:A:H2'	53:S2:1242:U:O4'	2.08	0.53
53:S2:1290:G:N1	53:S2:1291:A:C8	2.77	0.53
53:S2:1393:G:N1	53:S2:1394:G:N7	2.57	0.53
60:SI:66:SER:HB3	60:SI:73:THR:HB	1.90	0.53
61:SJ:147:PHE:C	61:SJ:147:PHE:CD1	2.87	0.53
2:D:20:PHE:HD2	2:D:30:TYR:HH	1.54	0.52
19:a:59:ARG:NH2	31:o:36:GLN:OE1	2.42	0.52
23:e:58:ILE:HG23	23:e:59:GLY:N	2.23	0.52
32:5:29:G:O6	32:5:54:G:C4	2.62	0.52
32:5:112:C:C2	32:5:113:A:C8	2.97	0.52
32:5:303:C:C2	32:5:304:C:C6	2.97	0.52
32:5:435:A:H2'	32:5:435:A:N3	2.23	0.52
32:5:460:C:C2	32:5:461:G:C8	2.97	0.52
32:5:754:U:O2	32:5:755:C:C6	2.62	0.52
32:5:1168:G:C2	32:5:1169:G:C8	2.97	0.52
32:5:1209:U:O3'	38:F:72:ARG:NH1	2.42	0.52
32:5:1342:A:C4	32:5:1343:A:C8	2.98	0.52
32:5:1404:G:C6	32:5:1405:C:C4	2.97	0.52
32:5:1448:G:H2'	32:5:1449:C:H6	1.74	0.52
32:5:1509:C:N3	32:5:1510:G:N7	2.56	0.52
32:5:1687:U:O2	32:5:1850:A:N1	2.41	0.52
32:5:1858:A:C2	32:5:1859:C:C4	2.97	0.52
32:5:1869:G:C8	32:5:3877:A:C6	2.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2295:C:O2	32:5:2296:G:N7	2.41	0.52
32:5:2633:U:C4	32:5:2634:C:C5	2.97	0.52
32:5:2643:G:C6	32:5:2644:G:N7	2.78	0.52
32:5:2715:G:C6	32:5:2716:C:C4	2.97	0.52
32:5:2851:G:O6	32:5:2852:U:H1'	2.09	0.52
32:5:3586:G:C6	32:5:3587:C:C4	2.97	0.52
32:5:3692:A:C6	32:5:3693:U:N1	2.77	0.52
32:5:3773:U:O2	32:5:3776:G:C4	2.62	0.52
32:5:4333:C:O2'	32:5:4334:U:H5'	2.08	0.52
32:5:4368:G:C6	32:5:4369:A:C8	2.97	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
32:5:4569:U:H1'	40:P:69:ARG:NH2	2.24	0.52
32:5:4635:A:C2	32:5:4664:A:C4	2.97	0.52
32:5:4651:A:C5	32:5:4652:G:C8	2.97	0.52
32:5:4896:G:C2	32:5:4897:G:C8	2.97	0.52
32:5:5055:G:N2	32:5:5056:A:C5	2.77	0.52
33:7:18:C:H42	33:7:19:C:H41	1.57	0.52
34:8:130:C:N4	34:8:131:G:N7	2.58	0.52
39:I:99:ILE:HG22	39:I:123:GLN:HB2	1.90	0.52
49:3:31:C:C2'	49:3:32:C:O4'	2.52	0.52
50:4:292:C:C2	50:4:293:C:C6	2.98	0.52
50:4:166:U:H5	52:6:142:ARG:NH2	2.07	0.52
53:S2:5:U:O2	53:S2:5:U:H2'	2.09	0.52
53:S2:42:A:C1'	53:S2:426:A:N7	2.65	0.52
53:S2:75:G:O2'	53:S2:76:U:H3'	2.09	0.52
53:S2:92:A:N6	53:S2:447:A:C4	2.77	0.52
53:S2:211:G:C2	53:S2:212:C:C2	2.97	0.52
53:S2:418:A:C5	53:S2:419:G:N7	2.77	0.52
53:S2:426:A:C2	53:S2:427:U:C5'	2.92	0.52
53:S2:569:A:C6	53:S2:570:C:C5	2.97	0.52
53:S2:635:G:N2	53:S2:636:C:C2	2.78	0.52
53:S2:1008:A:H1'	63:SN:101:HIS:CE1	2.44	0.52
53:S2:1097:G:C6	53:S2:1098:C:C4	2.97	0.52
53:S2:1552:G:OP2	72:SD:9:ARG:NH2	2.42	0.52
53:S2:1596:U:C4	53:S2:1597:C:C4	2.96	0.52
55:SB:79:VAL:HG21	55:SB:81:PHE:CE1	2.43	0.52
60:SI:104:ILE:O	60:SI:170:LYS:HA	2.09	0.52
61:SJ:115:PHE:C	61:SJ:115:PHE:HD1	2.17	0.52
62:SL:13:GLN:O	62:SL:16:ILE:HD13	2.08	0.52
62:SL:99:TYR:O	62:SL:101:ARG:N	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:209:HIS:CE1	1:A:235:VAL:HG11	2.44	0.52
3:G:73:ARG:HH11	3:G:73:ARG:HB2	1.75	0.52
3:G:102:TYR:OH	3:G:207:VAL:CA	2.57	0.52
8:N:8:GLN:HE21	8:N:50:ARG:NH2	2.07	0.52
8:N:63:ARG:HG3	8:N:131:GLU:CB	2.39	0.52
13:T:19:PHE:O	13:T:20:ARG:C	2.52	0.52
17:Y:4:ASN:OD1	17:Y:4:ASN:C	2.52	0.52
32:5:38:A:C2	32:5:41:C:N4	2.77	0.52
32:5:120:A:O4'	32:5:121:A:C6	2.62	0.52
32:5:292:G:H1'	32:5:293:G:C5'	2.40	0.52
32:5:711:A:N3	32:5:712:C:C5	2.77	0.52
32:5:951:G:C2	32:5:952:G:C5	2.98	0.52
32:5:981:C:C4	37:E:69:TYR:CE1	2.97	0.52
32:5:1249:C:N3	32:5:1250:C:C6	2.77	0.52
32:5:1308:C:C2	32:5:1309:C:C5	2.97	0.52
32:5:1379:C:O2	32:5:1380:G:N7	2.42	0.52
32:5:1380:G:C2	32:5:1382:G:C2	2.96	0.52
32:5:1466:G:C2	32:5:1467:C:N1	2.77	0.52
32:5:1563:A:H61	53:S2:1028:A:H61	1.57	0.52
32:5:2307:A:O2'	32:5:2308:A:H5'	2.08	0.52
32:5:2439:G:C2	32:5:2440:U:C5	2.97	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
32:5:3621:A:C2	32:5:3622:C:C1'	2.93	0.52
32:5:3720:G:C5	32:5:3721:U:C5	2.97	0.52
32:5:3801:U:O2'	32:5:3802:U:H5'	2.08	0.52
32:5:3879:G:N1	32:5:3882:C:C5	2.77	0.52
32:5:4123:C:N4	32:5:4124:G:N7	2.57	0.52
32:5:4222:G:C6	32:5:4223:C:C4	2.96	0.52
32:5:4274:A:H2'	32:5:4275:G:O4'	2.09	0.52
32:5:4277:G:C6	32:5:4278:C:C4	2.97	0.52
32:5:4383:U:C2	32:5:4384:U:C5	2.98	0.52
32:5:4423:U:O2	32:5:4423:U:H3'	2.10	0.52
32:5:4509:U:H2'	32:5:4510:A:C2'	2.38	0.52
32:5:4677:U:O2'	35:B:352:LEU:CD1	2.57	0.52
32:5:4749:C:O4'	32:5:4749:C:O2	2.26	0.52
33:7:22:A:N1	33:7:23:A:C6	2.77	0.52
33:7:51:G:C4	33:7:52:C:C5	2.97	0.52
34:8:40:A:C8	34:8:102:G:N2	2.76	0.52
34:8:64:U:O2	34:8:64:U:C2'	2.57	0.52
34:8:116:C:N4	34:8:117:C:C5	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:121:G:H2'	34:8:122:G:O5'	2.08	0.52
34:8:135:C:C4	34:8:136:U:C4	2.97	0.52
35:B:62:ARG:HH11	35:B:62:ARG:HG3	1.74	0.52
39:I:101:LYS:HZ1	39:I:121:LYS:HG2	1.54	0.52
53:S2:333:G:C6	53:S2:334:C:C4	2.97	0.52
53:S2:377:G:N3	53:S2:378:U:C6	2.77	0.52
53:S2:436:G:C5	53:S2:458:A:C2	2.98	0.52
53:S2:437:G:N1	53:S2:457:C:C2	2.77	0.52
53:S2:443:U:H4'	58:SG:90:GLY:HA3	1.91	0.52
53:S2:618:C:N3	53:S2:619:A:N9	2.58	0.52
53:S2:837:A:H62	68:SY:47:MET:HB3	1.72	0.52
53:S2:1126:G:C2	53:S2:1127:C:C6	2.97	0.52
53:S2:1292:C:C3'	85:Sf:150:PHE:HD1	2.22	0.52
53:S2:1841:C:N3	53:S2:1842:C:C5	2.77	0.52
54:SA:42:LYS:HD2	78:SR:99:ASP:OD2	2.02	0.52
54:SA:111:GLN:HA	54:SA:116:PHE:CE2	2.43	0.52
54:SA:138:SER:HB3	54:SA:156:TYR:CE1	2.44	0.52
55:SB:53:GLN:CG	55:SB:56:LYS:CE	2.85	0.52
56:SC:209:VAL:HG21	56:SC:233:LEU:HD13	1.90	0.52
67:SX:84:PHE:C	67:SX:84:PHE:CD1	2.86	0.52
68:SY:20:ARG:HB3	68:SY:76:TYR:HD1	1.71	0.52
73:SF:50:PRO:HB2	73:SF:73:THR:HG21	1.90	0.52
73:SF:141:VAL:O	83:Sc:56:LEU:HD11	2.00	0.52
79:SS:55:ARG:CD	79:SS:55:ARG:N	2.73	0.52
1:A:211:PHE:CD1	1:A:219:ILE:HG23	2.45	0.52
4:H:96:TYR:CZ	4:H:100:PRO:HA	2.44	0.52
21:c:28:VAL:HG13	21:c:33:GLN:HB3	1.90	0.52
23:e:46:ARG:NH2	32:5:2281:U:H4'	2.25	0.52
32:5:37:U:O4	32:5:38:A:C5	2.62	0.52
32:5:69:A:H3'	32:5:70:A:C8	2.43	0.52
32:5:244:G:C2	32:5:246:G:N9	2.78	0.52
32:5:303:C:N3	32:5:304:C:C5	2.77	0.52
32:5:647:G:C5	32:5:648:G:C8	2.97	0.52
32:5:750:U:N3	32:5:751:G:N7	2.56	0.52
32:5:751:G:N2	32:5:752:G:C4	2.78	0.52
32:5:916:C:N4	32:5:917:A:C5	2.78	0.52
32:5:919:C:H2'	32:5:920:C:C5'	2.39	0.52
32:5:1168:G:C2	32:5:1169:G:C5	2.98	0.52
32:5:1339:U:O2	32:5:1339:U:C2'	2.57	0.52
32:5:1447:C:O2	32:5:2098:G:C2	2.62	0.52
32:5:1569:U:C2	32:5:1570:G:C8	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2325:C:O2	32:5:2326:G:H8	1.91	0.52
32:5:2401:A:C2	32:5:2402:G:C5	2.98	0.52
32:5:2480:G:C2	32:5:2481:G:N9	2.78	0.52
32:5:2643:G:C6	32:5:2644:G:C5	2.98	0.52
32:5:2645:G:C2	32:5:2646:C:N1	2.77	0.52
32:5:2668:G:C2'	32:5:2669:C:H5'	2.34	0.52
32:5:3635:A:C5	32:5:3636:C:C6	2.97	0.52
32:5:3711:A:H3'	32:5:3712:A:H4'	1.92	0.52
32:5:3795:A:O2'	53:S2:1815:A:H1'	2.10	0.52
32:5:3927:U:C4	32:5:4182:G:N2	2.77	0.52
32:5:4205:A:C2	32:5:4206:C:C6	2.97	0.52
32:5:4223:C:H4'	39:I:119:PHE:CD2	2.44	0.52
32:5:4269:G:N1	32:5:4270:C:C2	2.78	0.52
32:5:4916:G:C6	32:5:4917:C:C4	2.98	0.52
32:5:4982:A:N3	32:5:4982:A:H2'	2.25	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
40:P:23:ARG:HH11	40:P:23:ARG:HG2	1.75	0.52
48:z:140:PHE:HE1	48:z:194:ARG:CZ	2.23	0.52
50:4:58:G:O6	50:4:288:G:N3	2.42	0.52
50:4:59:A:C5	50:4:60:U:C6	2.98	0.52
53:S2:53:C:O2	53:S2:53:C:C2'	2.55	0.52
53:S2:344:U:N3	53:S2:345:U:C5	2.78	0.52
53:S2:452:G:C2	53:S2:453:C:N3	2.76	0.52
53:S2:659:G:N3	53:S2:659:G:H2'	2.23	0.52
53:S2:751:G:O6	53:S2:791:C:C4	2.63	0.52
53:S2:1109:C:C2	53:S2:1110:G:O4'	2.62	0.52
53:S2:1272:C:C2	53:S2:1273:C:C6	2.97	0.52
53:S2:1292:C:O4'	85:Sf:148:TYR:CA	2.58	0.52
60:SI:193:LYS:O	60:SI:194:GLU:C	2.51	0.52
77:SQ:47:LEU:O	77:SQ:49:TYR:N	2.42	0.52
83:Sc:11:LEU:CB	83:Sc:55:VAL:CG1	2.80	0.52
3:G:199:CYS:SG	3:G:201:THR:O	2.67	0.52
4:H:41:ILE:HD11	4:H:69:THR:CG2	2.40	0.52
8:N:150:TRP:HE3	8:N:150:TRP:C	2.17	0.52
10:Q:4:ASP:CG	38:F:100:ILE:HG13	2.35	0.52
10:Q:152:PHE:CE2	32:5:1847:C:C4'	2.91	0.52
12:S:81:TRP:HZ2	12:S:94:TYR:CE1	2.27	0.52
16:X:45:THR:HG23	32:5:4085:A:OP1	2.10	0.52
24:f:96:ALA:O	24:f:99:HIS:HB2	2.08	0.52
32:5:83:C:O2	32:5:83:C:H2'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:319:A:H1'	32:5:3726:A:C2	2.44	0.52
32:5:467:U:C2	32:5:468:U:C6	2.97	0.52
32:5:469:C:O2	32:5:688:U:C1'	2.40	0.52
32:5:472:C:O2	32:5:473:C:C6	2.61	0.52
32:5:517:C:C2	32:5:645:G:N2	2.78	0.52
32:5:744:G:H2'	32:5:745:G:C8	2.42	0.52
32:5:917:A:C2	32:5:919:C:C4	2.98	0.52
32:5:973:G:O6	32:5:1282:G:N3	2.42	0.52
32:5:1169:G:C2	32:5:1193:C:C2	2.96	0.52
32:5:1355:G:H2'	32:5:1356:U:C6	2.45	0.52
32:5:1373:A:OP1	36:C:47:ASN:ND2	2.43	0.52
32:5:1827:C:O2	32:5:1827:C:H2'	2.09	0.52
32:5:1829:G:N1	32:5:1830:G:C5	2.77	0.52
32:5:1990:A:H2	32:5:1992:U:OP1	1.90	0.52
32:5:2015:U:N3	32:5:2016:C:C5	2.77	0.52
32:5:2091:C:OP2	32:5:2259:G:C8	2.63	0.52
32:5:2093:A:H5''	32:5:2093:A:N3	2.24	0.52
32:5:2352:U:N3	32:5:2353:U:C5	2.77	0.52
32:5:2401:A:N1	32:5:2402:G:C5	2.78	0.52
32:5:2714:G:C2	32:5:2715:G:C5	2.97	0.52
32:5:3795:A:C6	32:5:3796:U:C4	2.98	0.52
32:5:3946:G:C2	32:5:3947:A:C8	2.98	0.52
32:5:4139:G:C6	32:5:4140:C:C4	2.98	0.52
32:5:4287:G:O2'	32:5:4288:C:O5'	2.27	0.52
32:5:4333:C:O2	32:5:4334:U:C5	2.62	0.52
32:5:4395:U:H2'	32:5:4395:U:O2	2.08	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
32:5:4691:A:C6	32:5:4692:A:N7	2.77	0.52
34:8:135:C:C2	34:8:136:U:C6	2.97	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
38:F:139:GLU:OE2	38:F:228:HIS:NE2	2.42	0.52
45:r:2:SER:O	45:r:6:GLN:HG2	2.09	0.52
47:q:108:PRO:HA	47:q:109:ALA:CB	2.28	0.52
48:z:140:PHE:CE2	48:z:194:ARG:HG3	2.45	0.52
50:4:196:C:H1'	50:4:204:G:N2	2.24	0.52
53:S2:42:A:C4	53:S2:426:A:N6	2.67	0.52
53:S2:104:A:C5	53:S2:105:U:C5	2.96	0.52
53:S2:221:A:C5	53:S2:222:U:C5	2.97	0.52
53:S2:341:C:H2'	53:S2:342:C:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:350:C:N3	53:S2:351:G:C8	2.78	0.52
53:S2:667:U:N3	53:S2:1144:A:H2	2.06	0.52
53:S2:672:A:H3'	53:S2:673:G:H5''	1.91	0.52
53:S2:875:A:H2'	53:S2:876:C:O4'	2.09	0.52
53:S2:978:G:C5	53:S2:979:C:C5	2.98	0.52
53:S2:1029:G:N2	53:S2:1030:A:H1'	2.25	0.52
53:S2:1118:C:O4'	53:S2:1118:C:O2	2.26	0.52
53:S2:1135:C:C2	53:S2:1136:U:C6	2.98	0.52
53:S2:1294:G:N2	53:S2:1295:A:N9	2.58	0.52
53:S2:1448:A:C2	53:S2:1449:G:C1'	2.91	0.52
53:S2:1455:A:C6	53:S2:1456:G:C8	2.95	0.52
53:S2:1687:C:C2	53:S2:1688:C:C5	2.97	0.52
53:S2:1694:U:H2'	53:S2:1696:C:H5	1.73	0.52
53:S2:1739:C:C2	53:S2:1740:C:C6	2.97	0.52
55:SB:141:GLY:HA3	55:SB:168:MET:HE1	1.91	0.52
56:SC:198:ALA:HB3	56:SC:221:ASP:HB2	1.92	0.52
62:SL:44:PHE:HE2	62:SL:143:LEU:HD23	1.75	0.52
1:A:97:ASN:OD1	1:A:97:ASN:N	2.42	0.52
2:D:29:ASP:OD1	32:5:4280:A:N6	2.38	0.52
9:O:109:PRO:N	32:5:4910:G:N2	2.57	0.52
26:h:7:ARG:CZ	34:8:86:U:O4	2.57	0.52
26:h:52:LYS:NZ	34:8:62:A:OP1	2.36	0.52
32:5:33:A:C6	32:5:50:C:N3	2.78	0.52
32:5:149:A:H4'	32:5:151:G:C8	2.45	0.52
32:5:211:G:N2	32:5:212:A:N9	2.58	0.52
32:5:317:A:C2	32:5:4361:U:H1'	2.44	0.52
32:5:330:G:N1	32:5:331:G:C5	2.78	0.52
32:5:450:G:N2	32:5:1294:A:H2'	2.25	0.52
32:5:473:C:C2	32:5:474:C:C6	2.97	0.52
32:5:474:C:C2	32:5:475:G:C8	2.97	0.52
32:5:731:G:C6	32:5:732:A:H1'	2.44	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
32:5:1491:A:N1	32:5:1492:G:C6	2.77	0.52
32:5:1558:A:C2	32:5:1559:G:C4	2.97	0.52
32:5:1561:G:C2'	32:5:1562:G:H5'	2.40	0.52
32:5:1661:C:C2	32:5:1662:C:H5	2.25	0.52
32:5:1693:U:N3	32:5:1694:C:C6	2.78	0.52
32:5:1740:C:H1'	32:5:1742:A:N6	2.25	0.52
32:5:1760:G:N2	32:5:1761:G:H1'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1918:U:C2	32:5:1920:C:C5	2.98	0.52
32:5:1925:G:C2	32:5:1926:C:C6	2.97	0.52
32:5:1989:G:C2	32:5:1990:A:C5	2.98	0.52
32:5:2104:G:H2'	32:5:2105:A:O4'	2.09	0.52
32:5:2283:G:O2'	32:5:2284:G:H5'	2.10	0.52
32:5:2362:U:C5	32:5:3859:G:C2	2.96	0.52
32:5:2448:G:O6	32:5:2511:A:C5	2.63	0.52
32:5:2726:G:C2	32:5:2727:C:N3	2.77	0.52
32:5:2891:U:C2	32:5:3611:A:C2	2.97	0.52
32:5:3632:C:C2	32:5:3633:C:C6	2.98	0.52
32:5:3635:A:C8	32:5:3635:A:H3'	2.44	0.52
32:5:3710:G:C4	32:5:3711:A:N1	2.77	0.52
32:5:3831:U:N3	32:5:3832:U:C5	2.78	0.52
32:5:4142:C:C2	32:5:4143:G:C2	2.97	0.52
32:5:4161:G:H2'	32:5:4162:C:H3'	1.90	0.52
32:5:4275:G:C5	32:5:4276:G:C8	2.98	0.52
32:5:4276:G:H2'	32:5:4276:G:N3	2.23	0.52
32:5:4712:C:O2	32:5:4712:C:H2'	2.09	0.52
32:5:4948:C:O2'	32:5:4949:G:H5'	2.09	0.52
33:7:60:G:C6	33:7:61:G:C8	2.97	0.52
38:F:149:LEU:HB2	38:F:197:TYR:HH	1.71	0.52
39:I:111:LEU:N	39:I:111:LEU:CD2	2.73	0.52
46:K:37:LEU:CD2	46:K:68:GLN:OE1	2.49	0.52
53:S2:80:G:C6	53:S2:81:U:C4	2.98	0.52
53:S2:118:C:C2	53:S2:445:A:C2	2.97	0.52
53:S2:218:U:C2	53:S2:219:U:C5	2.98	0.52
53:S2:300:U:N3	53:S2:301:A:N7	2.58	0.52
53:S2:445:A:H2'	53:S2:446:G:C5'	2.39	0.52
53:S2:875:A:N6	53:S2:876:C:N4	2.57	0.52
53:S2:883:U:N3	53:S2:884:C:C5	2.77	0.52
53:S2:1259:A:H5''	53:S2:1260:A:OP2	2.10	0.52
53:S2:1448:A:C2	53:S2:1449:G:H1'	2.44	0.52
53:S2:1511:U:C4	53:S2:1512:C:C5	2.97	0.52
53:S2:1596:U:OP2	82:SZ:85:ARG:NH1	2.43	0.52
53:S2:1679:A:OP1	73:SF:60:ARG:NH2	2.42	0.52
53:S2:1757:G:N1	53:S2:1758:G:C5	2.78	0.52
53:S2:1777:G:C5	53:S2:1778:C:C5	2.98	0.52
53:S2:1820:G:H2'	53:S2:1821:U:O4'	2.09	0.52
58:SG:217:MET:O	58:SG:221:LYS:N	2.42	0.52
69:Sa:41:ILE:HG12	69:Sa:41:ILE:O	2.09	0.52
79:SS:124:ARG:HH11	79:SS:124:ARG:HG2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:18:ALA:O	1:A:20:VAL:HG13	2.09	0.52
4:H:65:LYS:HG2	32:5:4700:A:O2'	2.09	0.52
5:J:107:PHE:CE1	5:J:130:PHE:HB3	2.43	0.52
8:N:138:PHE:N	8:N:138:PHE:HD1	2.06	0.52
17:Y:18:HIS:HB3	17:Y:19:PHE:CE1	2.45	0.52
32:5:102:G:C2	32:5:103:G:C5	2.97	0.52
32:5:146:G:N2	32:5:147:A:C5	2.77	0.52
32:5:258:G:N2	32:5:259:C:C2	2.76	0.52
32:5:296:A:C5'	32:5:296:A:C8	2.93	0.52
32:5:437:G:C6	32:5:438:G:N7	2.77	0.52
32:5:910:G:C6	32:5:911:U:C4	2.97	0.52
32:5:977:C:C2	32:5:978:G:N7	2.51	0.52
32:5:1206:C:C2	32:5:1207:C:C5	2.97	0.52
32:5:1261:G:C4	32:5:1262:G:C8	2.98	0.52
32:5:1275:G:C6	32:5:1276:C:C4	2.98	0.52
32:5:1279:A:H2'	32:5:1280:C:C6	2.43	0.52
32:5:1290:G:N2	32:5:1291:G:C5	2.78	0.52
32:5:1440:U:O2	32:5:1441:C:C5	2.63	0.52
32:5:1442:C:O2	32:5:1443:A:C8	2.61	0.52
32:5:1487:G:N1	32:5:1488:G:C8	2.78	0.52
32:5:1910:G:C2	32:5:1911:C:C6	2.98	0.52
32:5:2059:C:N3	32:5:2060:G:C8	2.70	0.52
32:5:2243:C:C2	32:5:2244:C:C5	2.98	0.52
32:5:2260:C:H2'	32:5:2261:G:C8	2.45	0.52
32:5:2301:G:C2	32:5:2302:C:N1	2.77	0.52
32:5:2446:C:O2'	32:5:2447:U:H5'	2.09	0.52
32:5:2450:G:O6	32:5:2451:A:C5	2.63	0.52
32:5:2496:G:C6	32:5:2497:C:C5	2.97	0.52
32:5:2534:C:O2'	32:5:2535:G:C5'	2.54	0.52
32:5:2577:C:N3	32:5:2578:G:C8	2.77	0.52
32:5:2723:U:H2'	32:5:2724:G:C8	2.44	0.52
32:5:3938:G:N1	32:5:4077:A:C2	2.78	0.52
32:5:4082:G:C4	32:5:4083:U:C5	2.97	0.52
32:5:4236:G:O2'	32:5:4237:C:O5'	2.26	0.52
32:5:4298:A:C6	32:5:4299:U:C5	2.98	0.52
32:5:4323:A:N1	32:5:4324:A:C5	2.78	0.52
32:5:4484:A:C2	32:5:4485:C:C4	2.98	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
32:5:4653:C:C2	32:5:4654:C:C6	2.85	0.52
32:5:5031:G:N3	32:5:5032:C:C6	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:5042:A:N3	32:5:5042:A:H2'	2.25	0.52
34:8:28:C:N3	34:8:29:G:N7	2.57	0.52
35:B:103:LYS:HD3	35:B:149:ASP:OD1	2.10	0.52
48:z:120:LYS:HD3	48:z:282:PHE:CE2	2.44	0.52
50:4:62:G:C6	50:4:63:C:C4	2.97	0.52
53:S2:88:G:N2	53:S2:500:A:C4	2.78	0.52
53:S2:153:G:H2'	58:SG:13:GLN:HE22	1.74	0.52
53:S2:386:C:C4	53:S2:387:C:H5	2.24	0.52
53:S2:412:G:C2	53:S2:429:C:C2	2.97	0.52
53:S2:474:G:C6	53:S2:475:C:C5	2.98	0.52
53:S2:552:G:C2	53:S2:553:U:C4	2.98	0.52
53:S2:752:G:C6	53:S2:790:C:C4	2.97	0.52
53:S2:819:G:H22	53:S2:828:G:H22	1.57	0.52
53:S2:832:G:N1	53:S2:843:C:C4	2.78	0.52
53:S2:878:G:C6	53:S2:879:C:C5	2.98	0.52
53:S2:1033:G:N1	53:S2:1080:A:O2'	2.33	0.52
53:S2:1046:U:C4	53:S2:1047:C:C4	2.98	0.52
53:S2:1093:A:C6	53:S2:1094:C:C6	2.98	0.52
53:S2:1224:G:C2	53:S2:1643:U:N3	2.76	0.52
53:S2:1351:G:H4'	54:SA:110:ASN:ND2	2.24	0.52
53:S2:1500:G:C4	53:S2:1501:C:C6	2.98	0.52
53:S2:1524:G:C6	53:S2:1525:C:C4	2.98	0.52
53:S2:1589:A:H2'	53:S2:1590:C:O5'	2.09	0.52
69:Sa:87:ARG:HD3	69:Sa:92:ARG:HA	1.92	0.52
1:A:211:PHE:HE1	1:A:219:ILE:HG23	1.71	0.52
2:D:287:PHE:C	2:D:287:PHE:CD1	2.87	0.52
6:L:179:PHE:CE2	19:a:131:ARG:HB2	2.45	0.52
7:M:104:MET:HE2	9:O:199:HIS:HB2	1.90	0.52
18:Z:4:PHE:CZ	21:c:67:ALA:HB2	2.45	0.52
25:g:13:TYR:N	25:g:13:TYR:CD1	2.77	0.52
32:5:86:U:C4	32:5:97:G:N1	2.77	0.52
32:5:98:A:C2	32:5:99:A:H1'	2.45	0.52
32:5:261:G:H2'	32:5:262:G:O4'	2.10	0.52
32:5:294:G:C3'	32:5:296:A:C5'	2.56	0.52
32:5:484:U:O4	32:5:486:C:C5	2.61	0.52
32:5:661:C:C4	32:5:662:C:C4	2.98	0.52
32:5:696:C:H5''	32:5:697:G:H5'	1.91	0.52
32:5:718:C:N3	32:5:719:C:C5	2.78	0.52
32:5:734:G:H22	32:5:929:A:H61	1.58	0.52
32:5:945:U:C5	38:F:67:TYR:CZ	2.98	0.52
32:5:1313:C:O2	32:5:1323:A:H1'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1354:A:C8	32:5:1503:A:N1	2.78	0.52
32:5:1375:C:N3	32:5:1376:C:C5	2.78	0.52
32:5:1411:C:O2	32:5:1411:C:H2'	2.08	0.52
32:5:1547:A:C6	32:5:1582:U:H1'	2.43	0.52
32:5:1563:A:C8	53:S2:678:U:C5'	2.93	0.52
32:5:1671:U:O2	32:5:1672:U:H6	1.92	0.52
32:5:1723:A:N1	32:5:1838:A:N1	2.57	0.52
32:5:1949:U:O2	32:5:1949:U:H2'	2.09	0.52
32:5:2396:A:O5'	32:5:2806:A:N1	2.43	0.52
32:5:2658:G:N2	32:5:2675:G:N2	2.58	0.52
32:5:2724:G:N2	32:5:2726:G:N7	2.43	0.52
32:5:2844:A:C2	32:5:3839:G:C5	2.98	0.52
32:5:3635:A:N1	32:5:3636:C:H1'	2.25	0.52
32:5:3703:G:C5	32:5:3704:U:C5	2.98	0.52
32:5:3712:A:N6	32:5:3737:A:P	2.82	0.52
32:5:3729:U:C2	32:5:3730:U:C6	2.98	0.52
32:5:4133:C:C2	32:5:4134:C:C5	2.98	0.52
32:5:4168:G:C2'	32:5:4169:G:O5'	2.58	0.52
32:5:4215:C:O2	32:5:4215:C:H2'	2.09	0.52
32:5:4382:G:C6	32:5:4383:U:C4	2.98	0.52
32:5:4433:G:N2	32:5:4434:C:C2	2.78	0.52
32:5:4534:G:O6	32:5:4535:A:C4	2.63	0.52
32:5:4601:U:H2'	32:5:4601:U:O2	2.09	0.52
34:8:106:G:C2	34:8:107:C:N3	2.77	0.52
34:8:111:U:H2'	34:8:112:G:OP2	2.10	0.52
34:8:115:G:C2	34:8:116:C:N1	2.77	0.52
36:C:104:PRO:O	36:C:106:LYS:HD2	2.09	0.52
41:W:4:GLU:CD	41:W:30:GLN:HE21	2.17	0.52
48:z:363:GLY:C	48:z:365:GLU:H	2.17	0.52
48:z:381:SER:O	50:4:207:C:H2'	2.08	0.52
48:z:381:SER:HB3	50:4:207:C:C2'	2.40	0.52
49:3:49:C:N3	49:3:50:C:C5	2.77	0.52
50:4:45:G:C6	50:4:46:C:C5	2.97	0.52
50:4:59:A:C6	50:4:288:G:C2	2.97	0.52
53:S2:70:G:H3'	53:S2:71:G:H8	1.74	0.52
53:S2:196:C:C2	53:S2:204:G:C2	2.98	0.52
53:S2:494:C:N3	53:S2:495:U:C5	2.78	0.52
53:S2:552:G:N2	53:S2:553:U:C2	2.77	0.52
53:S2:563:G:H2'	53:S2:563:G:N3	2.24	0.52
53:S2:821:G:O6	61:SJ:150:ARG:CD	2.50	0.52
53:S2:909:G:N2	53:S2:910:G:C8	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:932:G:C2	53:S2:934:G:C8	2.98	0.52
53:S2:992:A:N1	53:S2:993:G:N9	2.57	0.52
53:S2:1082:A:C5	53:S2:1084:A:H1'	2.45	0.52
53:S2:1100:A:C6	53:S2:1101:U:C4	2.98	0.52
53:S2:1184:G:C6	53:S2:1185:C:C4	2.97	0.52
53:S2:1229:G:C6	53:S2:1230:C:C4	2.98	0.52
53:S2:1419:C:N3	53:S2:1429:G:C2	2.78	0.52
53:S2:1474:A:O2'	53:S2:1475:G:O5'	2.26	0.52
53:S2:1624:U:O2	53:S2:1624:U:O4'	2.25	0.52
57:SE:43:PRO:O	57:SE:44:LEU:C	2.52	0.52
60:SI:113:TYR:HD2	60:SI:121:LEU:HD21	1.74	0.52
68:SY:77:ASP:OD1	68:SY:77:ASP:N	2.43	0.52
72:SD:24:PHE:CZ	72:SD:25:LEU:HD22	2.45	0.52
72:SD:163:PRO:HA	72:SD:166:TYR:CE1	2.45	0.52
79:SS:12:ILE:HD12	79:SS:12:ILE:N	2.25	0.52
82:SZ:51:ASP:OD1	82:SZ:51:ASP:N	2.28	0.52
85:Sf:138:ARG:NH2	85:Sf:149:CYS:SG	2.82	0.52
4:H:117:PHE:CD1	4:H:118:LEU:HB2	2.44	0.52
19:a:132:ARG:CG	19:a:132:ARG:NH1	2.72	0.52
32:5:87:A:H2'	32:5:87:A:N3	2.24	0.52
32:5:126:C:O2	32:5:126:C:H2'	2.10	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
32:5:247:G:C2	32:5:248:C:C4	2.98	0.52
32:5:423:G:H2'	40:P:118:GLN:HE21	1.75	0.52
32:5:497:G:H3'	32:5:498:C:H5''	1.91	0.52
32:5:951:G:H2'	32:5:952:G:H5''	1.91	0.52
32:5:1266:G:H22	32:5:2111:G:N2	2.06	0.52
32:5:1374:G:C5	32:5:1375:C:C5	2.98	0.52
32:5:1474:C:N3	32:5:1475:G:C5	2.78	0.52
32:5:1555:G:C2	32:5:1556:C:H1'	2.44	0.52
32:5:1885:G:H2'	32:5:1886:G:O4'	2.10	0.52
32:5:1987:C:C4	32:5:1988:G:N7	2.77	0.52
32:5:2076:G:C2	32:5:2077:C:H1'	2.45	0.52
32:5:2332:A:N3	32:5:2333:G:H1'	2.24	0.52
32:5:2581:A:H1'	32:5:2654:C:O2'	2.10	0.52
32:5:2606:G:H2'	32:5:2607:C:H6	1.75	0.52
32:5:2607:C:C2	32:5:2608:G:C8	2.98	0.52
32:5:2752:G:C2	32:5:2753:G:H1'	2.45	0.52
32:5:3887:C:O2	32:5:3888:G:C8	2.63	0.52
32:5:4093:G:H2'	32:5:4094:G:H5'	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4152:G:C4	32:5:4153:C:C5	2.98	0.52
32:5:4283:G:N2	32:5:4284:C:N3	2.56	0.52
32:5:4455:G:N1	32:5:4456:C:C4	2.77	0.52
32:5:4565:C:H1'	35:B:262:VAL:CG2	2.39	0.52
32:5:4579:U:H2'	32:5:4580:U:C6	2.45	0.52
32:5:4644:G:N2	32:5:4654:C:C2	2.78	0.52
32:5:4737:G:C2	32:5:4738:C:C2	2.98	0.52
32:5:4885:U:O2	32:5:4886:C:C6	2.62	0.52
32:5:4950:U:N3	32:5:4952:G:H1'	2.25	0.52
33:7:30:C:C4	33:7:48:G:N1	2.78	0.52
34:8:13:G:H2'	34:8:14:U:O5'	2.10	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:398:LYS:O	50:4:184:A:C8	2.63	0.52
49:3:21:A:H2'	49:3:22:U:H5''	1.91	0.52
49:3:27:U:H2'	49:3:28:U:H6	1.75	0.52
49:3:74:C:H2'	49:3:74:C:O2	2.09	0.52
53:S2:1:U:O4'	53:S2:1:U:O2	2.24	0.52
53:S2:18:C:O2	53:S2:18:C:H2'	2.08	0.52
53:S2:53:C:C2	53:S2:54:A:C8	2.97	0.52
53:S2:70:G:C2	53:S2:80:G:N2	2.77	0.52
53:S2:394:G:C2	53:S2:395:G:C5	2.97	0.52
53:S2:404:G:C2	53:S2:405:G:N7	2.77	0.52
53:S2:851:C:H5''	53:S2:852:G:H5'	1.92	0.52
53:S2:908:A:C2	53:S2:909:G:C5	2.97	0.52
53:S2:923:G:C2	53:S2:924:G:C4	2.98	0.52
53:S2:1518:C:O4'	53:S2:1518:C:O2	2.25	0.52
53:S2:1540:G:N2	53:S2:1541:G:N9	2.56	0.52
53:S2:1622:U:C4	79:SS:120:HIS:CE1	2.96	0.52
54:SA:130:ASP:OD1	54:SA:130:ASP:N	2.40	0.52
56:SC:188:CYS:SG	56:SC:235:ASN:HB3	2.50	0.52
57:SE:112:HIS:CD2	57:SE:112:HIS:C	2.87	0.52
79:SS:8:LYS:N	79:SS:8:LYS:CD	2.73	0.52
84:Sd:45:GLN:HB3	84:Sd:46:TYR:CD1	2.45	0.52
87:S1:7:TRP:C	87:S1:9:GLU:H	2.18	0.52
8:N:193:ARG:HD3	32:5:27:C:OP1	2.10	0.52
9:O:168:TYR:OH	9:O:172:LYS:HD3	2.09	0.52
11:R:172:ARG:HH11	53:S2:908:A:H5''	1.74	0.52
13:T:89:ILE:HG22	32:5:4300:U:H4'	1.92	0.52
24:f:57:THR:HG21	24:f:68:ARG:HD3	1.91	0.52
27:i:15:HIS:CG	32:5:72:C:O2	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:45:U:C2	32:5:46:U:C5	2.98	0.52
32:5:515:C:O2	32:5:515:C:H2'	2.09	0.52
32:5:1168:G:C2	32:5:1169:G:N7	2.77	0.52
32:5:1189:G:C2	32:5:1190:C:C2	2.97	0.52
32:5:1203:G:N2	32:5:1204:C:C2	2.77	0.52
32:5:1213:G:H3'	32:5:1215:C:O4'	2.10	0.52
32:5:1355:G:H2'	32:5:1356:U:O5'	2.10	0.52
32:5:1549:G:C2	32:5:1580:C:C2	2.98	0.52
32:5:1552:G:O2'	32:5:1574:G:N2	2.43	0.52
32:5:2085:G:N2	32:5:2273:G:C5	2.78	0.52
32:5:2108:G:H2'	32:5:2109:G:H4'	1.91	0.52
32:5:2245:G:C2	32:5:2246:C:C2	2.98	0.52
32:5:2335:C:O2	32:5:2336:G:C8	2.63	0.52
32:5:2507:A:N6	32:5:2508:U:C2	2.78	0.52
32:5:2555:G:C2	32:5:2573:A:C2	2.98	0.52
32:5:2617:G:C6	32:5:2618:G:C8	2.97	0.52
32:5:2658:G:O6	32:5:2675:G:C6	2.63	0.52
32:5:2823:G:C2	32:5:2824:C:N1	2.78	0.52
32:5:2831:G:C2	32:5:2832:A:C5	2.98	0.52
32:5:2874:U:H4'	32:5:2875:C:OP2	2.10	0.52
32:5:2895:A:C2	32:5:2896:G:N9	2.78	0.52
32:5:3650:C:H2'	32:5:3651:A:O4'	2.10	0.52
32:5:3734:U:H2'	32:5:3735:G:C8	2.45	0.52
32:5:3742:G:N3	32:5:3743:G:C8	2.77	0.52
32:5:3847:C:C4	32:5:3848:U:H5	2.28	0.52
32:5:3867:A:C3'	32:5:3868:G:H8	2.23	0.52
32:5:4215:C:C2	32:5:4216:G:N7	2.72	0.52
32:5:4413:C:O4'	32:5:4413:C:O2	2.25	0.52
32:5:4455:G:N2	32:5:4456:C:C2	2.77	0.52
32:5:4478:G:H2'	32:5:4479:A:O4'	2.09	0.52
32:5:4490:C:O2	32:5:4491:G:C8	2.63	0.52
32:5:4527:G:C6	32:5:4556:U:C5	2.98	0.52
32:5:4561:C:N3	32:5:4562:C:C5	2.78	0.52
32:5:4592:C:O2	32:5:4592:C:H2'	2.10	0.52
32:5:4730:C:O2	32:5:4730:C:O4'	2.27	0.52
32:5:4952:G:H5''	32:5:4952:G:C8	2.45	0.52
32:5:4956:A:C6	32:5:4957:C:C6	2.97	0.52
32:5:5042:A:N1	32:5:5043:A:C5	2.78	0.52
33:7:115:A:H5'	33:7:115:A:H8	1.75	0.52
36:C:100:ARG:HD3	36:C:100:ARG:N	2.25	0.52
48:z:379:MET:HA	48:z:382:MET:HG3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:4:52:C:H2'	50:4:52:C:O2	2.10	0.52
50:4:58:G:C6	50:4:289:A:N3	2.78	0.52
50:4:136:G:N2	50:4:161:C:O2	2.43	0.52
53:S2:75:G:H21	53:S2:77:A:P	2.27	0.52
53:S2:344:U:C2	53:S2:345:U:C5	2.98	0.52
53:S2:499:G:C2	53:S2:504:G:C2	2.98	0.52
53:S2:608:C:O2	53:S2:608:C:H2'	2.10	0.52
53:S2:633:C:C4	53:S2:634:A:N7	2.78	0.52
53:S2:647:U:O2	53:S2:647:U:C2'	2.58	0.52
53:S2:818:A:H2'	53:S2:818:A:N3	2.24	0.52
53:S2:832:G:C2	53:S2:843:C:C4	2.98	0.52
53:S2:1450:G:O2'	86:Sg:64:HIS:HE1	1.92	0.52
53:S2:1511:U:C2	53:S2:1512:C:H6	2.28	0.52
53:S2:1524:G:C5	53:S2:1525:C:C5	2.98	0.52
53:S2:1540:G:C5	53:S2:1541:G:N7	2.77	0.52
53:S2:1593:C:O2	53:S2:1593:C:C2'	2.58	0.52
53:S2:1617:G:C5	53:S2:1619:A:OP2	2.63	0.52
55:SB:33:VAL:HG11	55:SB:67:PHE:CZ	2.45	0.52
55:SB:158:HIS:CD2	55:SB:158:HIS:C	2.88	0.52
56:SC:163:VAL:HB	56:SC:164:PRO:HD2	1.92	0.52
60:SI:134:GLU:HA	60:SI:137:LEU:HB2	1.92	0.52
77:SQ:138:ARG:HG3	77:SQ:138:ARG:HH11	1.74	0.52
78:SR:120:THR:HG22	78:SR:121:GLN:HG2	1.92	0.52
79:SS:8:LYS:N	79:SS:8:LYS:CE	2.73	0.52
83:Sc:20:ARG:CG	83:Sc:28:THR:HG22	2.36	0.52
10:Q:56:THR:HB	10:Q:146:ARG:HH21	1.75	0.52
17:Y:121:ARG:CZ	17:Y:121:ARG:HB3	2.40	0.52
18:Z:15:ALA:HB3	18:Z:79:HIS:HB3	1.92	0.52
24:f:110:ILE:HD12	37:E:191:ILE:HG23	1.92	0.52
31:o:26:TYR:HD1	31:o:27:LYS:N	2.07	0.52
32:5:30:C:O2'	32:5:31:U:H5'	2.10	0.52
32:5:50:C:O2'	32:5:51:A:H5'	2.10	0.52
32:5:101:A:C5	32:5:102:G:N7	2.78	0.52
32:5:437:G:N3	32:5:438:G:C8	2.78	0.52
32:5:472:C:H2'	32:5:473:C:O4'	2.10	0.52
32:5:479:G:C2	32:5:480:C:N1	2.78	0.52
32:5:1092:G:C4	32:5:1093:C:C6	2.97	0.52
32:5:1261:G:N1	32:5:1262:G:N7	2.58	0.52
32:5:1281:G:C4	32:5:1281:G:O5'	2.63	0.52
32:5:1563:A:H2'	32:5:1564:A:C8	2.44	0.52
32:5:1812:C:H2'	32:5:1812:C:O2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1912:G:C6	32:5:1913:C:N4	2.78	0.52
32:5:1970:A:C2	32:5:2016:C:C4	2.98	0.52
32:5:2104:G:C6	32:5:2105:A:C5	2.98	0.52
32:5:2417:A:N1	32:5:2418:A:C5	2.78	0.52
32:5:2612:G:C6	32:5:2613:C:N3	2.78	0.52
32:5:2683:C:C2'	32:5:2684:C:O5'	2.57	0.52
32:5:2784:C:N3	32:5:2785:C:C4	2.78	0.52
32:5:3672:G:C8	32:5:3674:G:O4'	2.63	0.52
32:5:3791:C:C2	32:5:3802:U:C6	2.98	0.52
32:5:3872:A:O2'	32:5:3873:G:H5'	2.10	0.52
32:5:4175:G:C5	32:5:4176:C:C5	2.98	0.52
32:5:4213:A:N6	32:5:4218:U:N3	2.34	0.52
32:5:4230:C:O2	32:5:4230:C:C2'	2.57	0.52
32:5:4313:A:C2	32:5:4314:C:N1	2.78	0.52
32:5:4525:C:OP1	35:B:246:ARG:NH2	2.43	0.52
32:5:4699:U:O2	32:5:4701:A:C5	2.63	0.52
32:5:4713:G:C4	32:5:4714:C:C6	2.97	0.52
32:5:4743:G:C2	32:5:4744:A:N7	2.79	0.52
32:5:4872:G:O2'	32:5:4873:G:OP1	2.22	0.52
32:5:5034:A:C2	32:5:5035:U:C6	2.98	0.52
34:8:60:G:N2	34:8:64:U:H1'	2.24	0.52
34:8:64:U:H3	34:8:65:A:N6	2.08	0.52
34:8:81:C:O2	34:8:83:C:OP1	2.28	0.52
35:B:57:VAL:HG22	35:B:73:VAL:HG12	1.90	0.52
35:B:235:TRP:HA	35:B:235:TRP:CE3	2.45	0.52
41:W:31:PHE:CD2	41:W:37:GLU:HA	2.45	0.52
46:K:142:ASN:OD1	46:K:143:VAL:HG23	2.10	0.52
47:q:99:ARG:HD3	47:q:103:ARG:HH21	1.74	0.52
48:z:377:THR:CB	50:4:194:G:O4'	2.58	0.52
51:9:68:TYR:HB3	51:9:71:GLU:HB2	1.92	0.52
53:S2:70:G:C2	53:S2:71:G:C4	2.98	0.52
53:S2:85:A:N3	53:S2:86:C:C5	2.78	0.52
53:S2:154:U:O2	53:S2:154:U:H2'	2.09	0.52
53:S2:191:A:P	60:SI:141:ARG:HD2	2.50	0.52
53:S2:574:A:H4'	68:SY:89:HIS:HB3	1.91	0.52
53:S2:622:C:C4	53:S2:623:G:C1'	2.93	0.52
53:S2:1292:C:H2'	85:Sf:150:PHE:CD1	2.45	0.52
53:S2:1306:U:C4	53:S2:1307:U:C6	2.98	0.52
53:S2:1402:A:H2'	53:S2:1405:A:H62	1.73	0.52
53:S2:1431:G:H5''	53:S2:1432:U:OP2	2.10	0.52
53:S2:1435:C:H2'	53:S2:1436:C:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1507:G:O2'	53:S2:1508:A:H5'	2.10	0.52
53:S2:1740:C:C2	53:S2:1741:U:C6	2.98	0.52
53:S2:1741:U:N3	53:S2:1742:C:C5	2.77	0.52
54:SA:200:ASP:CG	78:SR:89:SER:CB	2.70	0.52
55:SB:53:GLN:CG	55:SB:56:LYS:NZ	2.73	0.52
64:SO:42:VAL:O	64:SO:55:ARG:O	2.28	0.52
75:SM:51:VAL:HG12	75:SM:109:VAL:HG22	1.91	0.52
83:Sc:44:ARG:CZ	83:Sc:58:LEU:HD22	2.20	0.52
3:G:53:ARG:HB3	3:G:54:PHE:HZ	1.74	0.51
3:G:169:PHE:CD2	8:N:6:TYR:CB	2.92	0.51
7:M:3:PHE:HZ	32:5:4763:U:H1'	1.75	0.51
9:O:108:ILE:CD1	9:O:117:ARG:HE	2.23	0.51
16:X:72:ASP:OD1	16:X:72:ASP:N	2.43	0.51
19:a:73:VAL:CG2	19:a:108:TYR:CG	2.93	0.51
32:5:164:G:C6	32:5:165:A:C5	2.98	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
32:5:423:G:H2'	40:P:118:GLN:NE2	2.26	0.51
32:5:667:A:H2'	32:5:668:C:O4'	2.09	0.51
32:5:733:A:C5	32:5:734:G:N7	2.78	0.51
32:5:945:U:C5	38:F:67:TYR:CE2	2.98	0.51
32:5:977:C:C2'	32:5:978:G:H5'	2.40	0.51
32:5:1213:G:C6	32:5:1215:C:C5	2.98	0.51
32:5:1235:G:C2	32:5:1236:C:C6	2.99	0.51
32:5:1262:G:C2	32:5:1263:A:N7	2.78	0.51
32:5:1279:A:H3'	32:5:1280:C:H5	1.74	0.51
32:5:1380:G:N1	32:5:1382:G:C2	2.77	0.51
32:5:1616:U:O2	32:5:1616:U:H2'	2.10	0.51
32:5:1617:G:C2	32:5:1618:G:C4	2.98	0.51
32:5:1675:C:C2	32:5:1681:G:N2	2.78	0.51
32:5:1758:G:C2	32:5:1759:G:N7	2.79	0.51
32:5:1904:G:C2	32:5:2073:C:C2	2.98	0.51
32:5:2058:G:C5	32:5:2059:C:C5	2.96	0.51
32:5:2818:C:O2'	32:5:4644:G:O2'	2.26	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
32:5:3804:G:C5	32:5:3805:U:C5	2.98	0.51
32:5:3856:A:N6	32:5:3857:G:C5	2.78	0.51
32:5:3913:G:N1	32:5:4390:A:C2	2.77	0.51
32:5:4091:G:N1	32:5:4092:G:C4	2.78	0.51
32:5:4229:U:H3'	32:5:4230:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B:89:ILE:CD1	35:B:153:MET:HE1	2.40	0.51
46:K:117:ARG:NE	46:K:117:ARG:HA	2.25	0.51
48:z:120:LYS:CD	48:z:282:PHE:HE2	2.23	0.51
48:z:273:ILE:CD1	48:z:285:PHE:HE1	2.20	0.51
50:4:18:G:C2	50:4:19:C:C4	2.98	0.51
53:S2:77:A:O2'	58:SG:175:LYS:CA	2.58	0.51
53:S2:92:A:H5''	53:S2:92:A:N3	2.25	0.51
53:S2:127:C:OP1	53:S2:180:G:N2	2.43	0.51
53:S2:217:A:C2	53:S2:218:U:O4'	2.63	0.51
53:S2:386:C:C2	53:S2:387:C:H6	2.21	0.51
53:S2:552:G:N3	53:S2:553:U:C6	2.78	0.51
53:S2:1087:A:N6	53:S2:1861:G:N7	2.58	0.51
53:S2:1189:A:H2'	53:S2:1190:A:C8	2.46	0.51
53:S2:1393:G:C4	53:S2:1394:G:C8	2.98	0.51
53:S2:1512:C:C2	53:S2:1513:C:H5	2.27	0.51
53:S2:1523:C:N4	79:SS:137:LYS:O	2.43	0.51
53:S2:1535:U:O2'	73:SF:88:MET:SD	2.65	0.51
53:S2:1589:A:C2'	53:S2:1590:C:O5'	2.58	0.51
53:S2:1589:A:O2'	53:S2:1590:C:O4'	2.28	0.51
53:S2:1794:C:N3	53:S2:1795:G:N7	2.58	0.51
54:SA:80:ARG:NH1	54:SA:82:THR:OG1	2.28	0.51
59:SH:154:ILE:HB	59:SH:185:VAL:HG22	1.92	0.51
70:Sb:19:HIS:HB3	70:Sb:22:LYS:HG3	1.92	0.51
79:SS:16:LEU:HD22	79:SS:71:MET:CE	2.36	0.51
80:ST:13:GLU:HA	80:ST:16:ARG:HG3	1.92	0.51
83:Sc:14:VAL:HG13	83:Sc:31:ARG:CB	2.40	0.51
3:G:34:LYS:O	32:5:4128:A:N3	2.43	0.51
3:G:53:ARG:NH2	32:5:4088:C:C4	2.78	0.51
3:G:55:VAL:HG22	16:X:44:PRO:HA	1.91	0.51
3:G:77:PRO:HA	3:G:237:TRP:CE3	2.44	0.51
5:J:142:ALA:HB2	5:J:151:ILE:HD11	1.93	0.51
7:M:107:PHE:HA	37:E:266:TYR:CE2	2.45	0.51
10:Q:3:VAL:C	10:Q:4:ASP:OD2	2.53	0.51
11:R:120:TYR:O	11:R:121:HIS:C	2.52	0.51
12:S:91:HIS:CE1	32:5:2032:U:O2'	2.62	0.51
20:b:42:ASN:ND2	20:b:42:ASN:C	2.67	0.51
23:e:43:ASN:HD21	23:e:45:VAL:HB	1.74	0.51
27:i:29:ARG:HG3	27:i:29:ARG:O	2.09	0.51
32:5:32:G:N7	32:5:48:G:C2	2.78	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:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1189:G:C6	32:5:1190:C:C5	2.97	0.51
32:5:1367:C:N1	32:5:1370:G:H2'	2.25	0.51
32:5:1543:G:N1	32:5:1544:G:C8	2.75	0.51
32:5:1584:G:C5	32:5:1585:C:C5	2.99	0.51
32:5:1632:A:C6	32:5:1634:A:N9	2.62	0.51
32:5:1683:U:C2	32:5:1684:A:N7	2.78	0.51
32:5:1961:G:OP2	47:q:57:LYS:HD2	2.11	0.51
32:5:1965:G:C4	32:5:1966:C:C5	2.98	0.51
32:5:1985:G:H2'	32:5:1986:U:C6	2.45	0.51
32:5:2287:G:C6	32:5:2288:G:C8	2.98	0.51
32:5:2315:G:C4	32:5:2316:G:C8	2.98	0.51
32:5:2456:G:O2'	32:5:2457:G:H5'	2.10	0.51
32:5:2613:C:C4	32:5:2614:C:H5	2.25	0.51
32:5:2837:U:C4	32:5:2838:G:C8	2.99	0.51
32:5:2839:U:C2	32:5:2840:A:C8	2.98	0.51
32:5:3754:G:N2	32:5:3755:G:C4	2.79	0.51
32:5:4581:G:N2	32:5:4582:C:C5	2.79	0.51
32:5:4667:C:N4	32:5:4668:U:C4	2.78	0.51
34:8:53:G:C4	34:8:54:C:C6	2.98	0.51
34:8:68:G:N1	34:8:91:A:C2	2.77	0.51
34:8:145:C:N3	34:8:146:U:C5	2.79	0.51
35:B:116:ARG:HB3	35:B:177:LYS:HA	1.92	0.51
35:B:258:HIS:O	35:B:259:PRO:C	2.49	0.51
37:E:54:SER:O	37:E:56:SER:N	2.43	0.51
38:F:201:LYS:C	38:F:202:ARG:HD2	2.35	0.51
47:q:99:ARG:NE	47:q:103:ARG:HH21	2.08	0.51
48:z:56:VAL:HG22	48:z:82:GLU:HG3	1.92	0.51
48:z:84:VAL:CA	48:z:291:ILE:HD13	2.40	0.51
48:z:134:LEU:HB2	48:z:159:PHE:CE1	2.45	0.51
49:3:38:C:N4	49:3:39:G:C5	2.78	0.51
53:S2:378:U:O2	53:S2:378:U:H2'	2.09	0.51
53:S2:403:G:C4	53:S2:404:G:C8	2.98	0.51
53:S2:478:G:H2'	53:S2:479:C:H6	1.74	0.51
53:S2:638:C:C2'	53:S2:639:C:O5'	2.57	0.51
53:S2:832:G:N3	53:S2:833:C:H1'	2.25	0.51
53:S2:862:A:H2'	66:SW:105:THR:OG1	2.11	0.51
53:S2:862:A:N1	53:S2:863:U:C5	2.77	0.51
53:S2:996:A:O2'	53:S2:997:A:O5'	2.28	0.51
53:S2:1126:G:N3	53:S2:1127:C:C6	2.78	0.51
53:S2:1136:U:C2	53:S2:1137:U:C5	2.98	0.51
53:S2:1233:G:C2	53:S2:1234:C:N1	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1250:A:C2	53:S2:1339:U:C2'	2.94	0.51
53:S2:1551:U:C6	53:S2:1577:G:C2	2.98	0.51
53:S2:1728:U:C4	53:S2:1729:U:C6	2.98	0.51
54:SA:32:PHE:C	54:SA:32:PHE:HD1	2.18	0.51
54:SA:38:ILE:C	54:SA:50:ASN:HD21	2.18	0.51
59:SH:115:LYS:O	59:SH:116:ARG:CB	2.58	0.51
62:SL:99:TYR:CE2	67:SX:13:LEU:HB3	2.45	0.51
64:SO:44:VAL:HG11	64:SO:85:CYS:SG	2.50	0.51
79:SS:63:GLU:N	79:SS:63:GLU:OE1	2.43	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
4:H:113:GLU:OE2	4:H:124:ARG:O	2.29	0.51
8:N:204:ARG:NH1	32:5:1342:A:OP1	2.43	0.51
10:Q:32:TYR:O	10:Q:48:LEU:HD13	2.11	0.51
18:Z:74:VAL:HG23	18:Z:101:PHE:CE2	2.46	0.51
21:c:28:VAL:HG11	21:c:33:GLN:HB3	1.91	0.51
26:h:77:LYS:HA	32:5:136:C:H41	1.75	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
32:5:484:U:O4	32:5:486:C:C4	2.64	0.51
32:5:708:G:C6	32:5:709:C:C5	2.98	0.51
32:5:977:C:O2	32:5:977:C:C2'	2.59	0.51
32:5:1076:C:C2	32:5:1077:C:C6	2.98	0.51
32:5:1213:G:C2	32:5:1215:C:O2	2.63	0.51
32:5:1260:G:C2	32:5:1261:G:C4	2.98	0.51
32:5:1341:U:N3	32:5:1342:A:N7	2.58	0.51
32:5:1391:A:C8	32:5:1392:A:N7	2.77	0.51
32:5:1404:G:C6	32:5:1405:C:C5	2.98	0.51
32:5:1689:G:C6	32:5:1690:C:C4	2.98	0.51
32:5:1770:A:C2	32:5:1771:U:C2	2.99	0.51
32:5:1855:G:C6	32:5:1856:C:C5	2.98	0.51
32:5:2757:A:O2'	32:5:2758:G:O5'	2.27	0.51
32:5:4146:G:N3	32:5:4147:G:C8	2.78	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
32:5:4239:A:N1	32:5:4240:G:N9	2.57	0.51
33:7:92:C:C2	33:7:93:G:C8	2.97	0.51
37:E:277:ILE:HD11	37:E:282:LEU:HD22	1.91	0.51
43:n:11:ARG:HD2	53:S2:1183:A:H5'	1.92	0.51
43:n:21:ARG:HD2	53:S2:1718:G:OP1	2.10	0.51
50:4:6:G:C2	50:4:22:C:C2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:4:8:G:C6	50:4:9:C:C4	2.98	0.51
53:S2:18:C:N3	53:S2:19:A:C8	2.78	0.51
53:S2:188:C:N3	53:S2:189:U:C6	2.79	0.51
53:S2:294:U:H4'	53:S2:295:C:OP2	2.10	0.51
53:S2:343:A:C6	53:S2:344:U:C5	2.99	0.51
53:S2:936:G:C6	53:S2:937:C:C4	2.98	0.51
53:S2:975:G:C2	53:S2:976:G:C8	2.98	0.51
53:S2:1050:A:C6	53:S2:1051:G:C1'	2.92	0.51
53:S2:1276:A:C2	53:S2:1277:C:H1'	2.44	0.51
53:S2:1291:A:O2'	85:Sf:148:TYR:O	2.27	0.51
58:SG:141:ILE:HG21	58:SG:153:VAL:HG13	1.92	0.51
58:SG:213:LEU:O	58:SG:217:MET:N	2.43	0.51
60:SI:112:TRP:O	60:SI:116:HIS:HB2	2.11	0.51
74:SK:21:MET:HE1	74:SK:49:MET:HG3	1.91	0.51
83:Sc:20:ARG:CD	83:Sc:28:THR:HG22	2.41	0.51
84:Sd:45:GLN:HB3	84:Sd:46:TYR:CE1	2.44	0.51
86:Sg:31:ILE:HG23	86:Sg:43:TRP:HB2	1.92	0.51
4:H:41:ILE:HG21	4:H:73:ILE:HD11	1.91	0.51
7:M:42:CYS:HG	7:M:77:TRP:CG	2.27	0.51
10:Q:37:ARG:HH11	32:5:2087:C:H5	1.54	0.51
12:S:90:THR:HG23	13:T:156:TYR:CE2	2.45	0.51
12:S:120:ARG:HB2	12:S:122:HIS:CD2	2.43	0.51
17:Y:8:THR:O	32:5:347:A:OP1	2.29	0.51
23:e:59:GLY:HA3	32:5:1899:G:H1'	1.93	0.51
25:g:13:TYR:OH	32:5:2802:C:O2	2.27	0.51
32:5:29:G:N7	32:5:54:G:C2	2.78	0.51
32:5:126:C:N3	32:5:127:G:C8	2.77	0.51
32:5:182:G:H1	32:5:254:G:H1	1.58	0.51
32:5:341:G:N2	32:5:342:G:C1'	2.73	0.51
32:5:388:A:N6	32:5:411:G:C4	2.79	0.51
32:5:505:G:C4	32:5:506:C:C5	2.99	0.51
32:5:660:A:N3	32:5:661:C:C6	2.78	0.51
32:5:939:G:H2'	32:5:939:G:N3	2.25	0.51
32:5:951:G:N2	32:5:952:G:C8	2.78	0.51
32:5:987:C:C2	32:5:1067:G:N2	2.78	0.51
32:5:1270:A:C8	32:5:1271:G:C8	2.98	0.51
32:5:1380:G:H4'	32:5:1381:U:OP1	2.10	0.51
32:5:1416:G:C6	32:5:1417:C:C4	2.98	0.51
32:5:1570:G:C2	32:5:1571:G:H1'	2.45	0.51
32:5:1634:A:C6	32:5:1635:C:N4	2.78	0.51
32:5:1901:C:O2	32:5:1902:G:N7	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1925:G:C6	32:5:1926:C:C4	2.99	0.51
32:5:2058:G:N2	32:5:2059:C:C1'	2.73	0.51
32:5:2290:C:N3	32:5:2291:G:N7	2.58	0.51
32:5:2316:G:N2	32:5:2317:C:N3	2.58	0.51
32:5:2669:C:O2'	32:5:2670:C:P	2.68	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
32:5:4173:G:C6	32:5:4174:U:C4	2.98	0.51
32:5:4283:G:N2	32:5:4284:C:C4	2.78	0.51
32:5:4415:A:N1	32:5:4416:G:H1'	2.25	0.51
32:5:4698:C:O2	32:5:4698:C:C2'	2.59	0.51
32:5:4966:A:H2'	32:5:4967:A:C8	2.46	0.51
33:7:110:G:C6	33:7:111:C:C5	2.98	0.51
37:E:54:SER:O	37:E:55:ARG:C	2.53	0.51
37:E:276:GLY:C	37:E:278:TYR:HE2	2.19	0.51
39:I:85:PHE:C	39:I:85:PHE:HD1	2.17	0.51
48:z:194:ARG:HD2	48:z:195:HIS:NE2	2.24	0.51
48:z:381:SER:C	50:4:207:C:O2'	2.49	0.51
49:3:18:G:H4'	49:3:60:A:N1	2.26	0.51
49:3:41:G:C2	49:3:42:A:C8	2.99	0.51
50:4:14:G:N2	50:4:37:C:C4	2.78	0.51
50:4:199:A:OP1	50:4:199:A:H8	1.94	0.51
53:S2:29:G:C5	53:S2:646:G:C2	2.99	0.51
53:S2:350:C:O2'	53:S2:383:G:N1	2.43	0.51
53:S2:351:G:C2	53:S2:352:U:C6	2.99	0.51
53:S2:372:U:C2'	53:S2:373:G:O5'	2.57	0.51
53:S2:381:C:N4	60:SI:49:ARG:NE	2.56	0.51
53:S2:414:A:N1	53:S2:424:C:N3	2.58	0.51
53:S2:436:G:N2	53:S2:437:G:C5	2.78	0.51
53:S2:616:A:N7	53:S2:617:G:N9	2.58	0.51
53:S2:616:A:N7	53:S2:617:G:C1'	2.73	0.51
53:S2:636:C:O2	53:S2:637:U:C6	2.63	0.51
53:S2:637:U:C2	53:S2:638:C:C6	2.98	0.51
53:S2:1079:C:H2'	53:S2:1080:A:O4'	2.11	0.51
53:S2:1139:C:O4'	53:S2:1139:C:O2	2.26	0.51
53:S2:1332:A:O2'	72:SD:141:LYS:NZ	2.31	0.51
53:S2:1409:A:C5'	77:SQ:24:HIS:CE1	2.93	0.51
53:S2:1466:G:C2	53:S2:1467:C:C4	2.99	0.51
53:S2:1478:U:C2	53:S2:1479:G:C8	2.99	0.51
53:S2:1533:A:C2	53:S2:1537:A:O4'	2.64	0.51
53:S2:1608:U:C4	53:S2:1609:C:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1839:U:H2'	53:S2:1840:U:C6	2.45	0.51
53:S2:1868:U:O5'	53:S2:1869:A:OP2	2.29	0.51
54:SA:134:LEU:HD22	54:SA:144:THR:HG21	1.92	0.51
54:SA:199:PRO:O	54:SA:201:LEU:N	2.42	0.51
56:SC:170:TRP:CD1	56:SC:198:ALA:C	2.89	0.51
58:SG:218:LYS:HA	58:SG:221:LYS:HB2	1.92	0.51
69:Sa:95:ARG:O	69:Sa:95:ARG:HG2	2.10	0.51
73:SF:128:ILE:HD13	83:Sc:68:LEU:HB2	1.78	0.51
75:SM:56:CYS:SG	75:SM:62:VAL:HG13	2.50	0.51
79:SS:33:ILE:O	79:SS:36:VAL:CG1	2.45	0.51
79:SS:124:ARG:HD3	79:SS:131:VAL:HA	1.92	0.51
12:S:28:TYR:HB3	13:T:149:GLU:O	2.11	0.51
15:V:82:ILE:CD1	15:V:104:VAL:HG13	2.41	0.51
24:f:74:VAL:HG13	24:f:84:VAL:CG1	2.41	0.51
32:5:130:C:C2	32:5:139:G:N2	2.79	0.51
32:5:370:U:C5	32:5:1637:A:C5	2.99	0.51
32:5:370:U:N3	32:5:1637:A:N6	2.58	0.51
32:5:425:U:O2	32:5:425:U:H2'	2.09	0.51
32:5:709:C:C4	32:5:710:G:N7	2.78	0.51
32:5:726:G:H2'	32:5:727:C:O4'	2.09	0.51
32:5:950:G:C2	32:5:951:G:C5	2.99	0.51
32:5:1477:C:C2	32:5:1478:C:C6	2.99	0.51
32:5:1818:G:H8	32:5:1821:G:C6	2.29	0.51
32:5:1840:G:O3'	32:5:1842:G:P	2.69	0.51
32:5:2450:G:C6	32:5:2451:A:N7	2.77	0.51
32:5:2465:C:C2'	32:5:2466:G:O4'	2.59	0.51
32:5:2577:C:C2	32:5:2578:G:C8	2.98	0.51
32:5:2603:C:N3	32:5:2604:C:C6	2.78	0.51
32:5:4073:A:C6	32:5:4074:C:N4	2.78	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
32:5:4462:C:H2'	32:5:4463:U:O4'	2.11	0.51
32:5:4549:G:C2	32:5:4550:G:N9	2.76	0.51
32:5:4734:A:C2	32:5:4735:G:N9	2.79	0.51
32:5:4754:G:N1	32:5:4880:C:C4	2.79	0.51
32:5:5017:G:C6	32:5:5018:C:C4	2.98	0.51
32:5:5043:A:O2'	32:5:5044:A:O5'	2.28	0.51
32:5:5047:C:C1'	32:5:5048:A:N1	2.73	0.51
33:7:42:A:C2	33:7:43:U:N1	2.78	0.51
33:7:55:A:C2	33:7:56:G:C8	2.99	0.51
34:8:132:G:C2	34:8:133:G:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:133:G:C2	34:8:134:G:N9	2.74	0.51
34:8:134:G:C2	34:8:135:C:C2	2.98	0.51
37:E:102:VAL:HG23	37:E:103:VAL:HG22	1.92	0.51
37:E:197:ILE:HD11	37:E:256:ARG:HB2	1.93	0.51
40:P:42:ARG:HH11	40:P:42:ARG:HG3	1.75	0.51
44:p:33:GLN:HG2	44:p:34:HIS:NE2	2.26	0.51
48:z:413:SER:HA	51:9:74:ARG:HE	1.70	0.51
50:4:2:C:O2	50:4:3:C:C6	2.64	0.51
53:S2:81:U:O4	53:S2:82:G:C5	2.64	0.51
53:S2:166:A:C2	53:S2:167:G:N7	2.79	0.51
53:S2:194:C:C2	53:S2:206:G:C2	2.99	0.51
53:S2:460:A:H2'	53:S2:460:A:N3	2.24	0.51
53:S2:623:G:C2	53:S2:624:C:N1	2.78	0.51
53:S2:1000:C:O2	53:S2:1000:C:C2'	2.44	0.51
53:S2:1015:U:O2'	63:SN:55:ARG:NH2	2.39	0.51
53:S2:1093:A:C5	53:S2:1094:C:C5	2.98	0.51
53:S2:1156:U:C2'	53:S2:1157:G:H21	2.24	0.51
53:S2:1287:A:H2'	53:S2:1315:U:C6	2.45	0.51
53:S2:1414:A:C2	53:S2:1415:C:C4	2.99	0.51
53:S2:1475:G:H1'	53:S2:1476:A:C5'	2.40	0.51
53:S2:1563:G:C2	53:S2:1564:C:C2	2.98	0.51
53:S2:1613:G:OP2	76:SP:39:ALA:HB2	2.10	0.51
56:SC:253:PRO:HA	56:SC:256:TRP:CG	2.45	0.51
57:SE:15:PRO:HB2	57:SE:18:TRP:CZ2	2.44	0.51
59:SH:144:ILE:HB	66:SW:52:ILE:HG12	1.92	0.51
86:Sg:18:VAL:HG21	86:Sg:307:VAL:HG22	1.92	0.51
86:Sg:171:ASP:O	86:Sg:172:LYS:HB3	2.09	0.51
4:H:41:ILE:HD11	4:H:69:THR:OG1	2.10	0.51
5:J:22:LEU:HD22	5:J:130:PHE:CE1	2.46	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	2.43	0.51
30:m:110:CYS:SG	30:m:111:ARG:N	2.83	0.51
32:5:21:G:C2	34:8:36:G:C2	2.99	0.51
32:5:84:A:C5	32:5:86:U:C5	2.99	0.51
32:5:190:G:C2	32:5:252:C:C2	2.98	0.51
32:5:290:U:H2'	32:5:291:U:O5'	2.11	0.51
32:5:754:U:C2	32:5:755:C:C5	2.99	0.51
32:5:924:C:O2	32:5:925:C:C6	2.64	0.51
32:5:1214:C:O2'	32:5:2114:G:C6	2.54	0.51
32:5:1288:G:O2'	37:E:128:PRO:HB2	2.10	0.51
32:5:1358:G:C6	32:5:1379:C:N3	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1380:G:H2'	32:5:1382:G:N7	2.25	0.51
32:5:1522:G:C6	32:5:1653:A:C5	2.98	0.51
32:5:1811:G:C4	32:5:1812:C:C5	2.98	0.51
32:5:2270:G:C2	32:5:2271:C:C2	2.99	0.51
32:5:2299:G:C6	32:5:2301:G:C8	2.98	0.51
32:5:2307:A:C8	32:5:2332:A:C2	2.97	0.51
32:5:2336:G:C6	32:5:2337:C:C4	2.98	0.51
32:5:2391:G:N1	32:5:2392:C:C4	2.78	0.51
32:5:2440:U:O2'	32:5:2441:C:OP1	2.24	0.51
32:5:2509:C:O2'	32:5:2510:G:H5'	2.10	0.51
32:5:2538:U:C2	32:5:2539:C:C5	2.99	0.51
32:5:2555:G:C6	32:5:2573:A:C6	2.99	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
32:5:2702:C:C2	32:5:2715:G:C2	2.99	0.51
32:5:2829:U:C4	32:5:2830:G:N7	2.79	0.51
32:5:3702:A:C8	32:5:3774:A:N9	2.78	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
32:5:3819:G:C2	32:5:3820:G:N7	2.79	0.51
32:5:4101:C:C4	32:5:4102:C:C5	2.99	0.51
32:5:4297:G:N3	32:5:4297:G:H2'	2.25	0.51
32:5:4530:U:H2'	32:5:4530:U:O2	2.09	0.51
32:5:4652:G:C6	32:5:4653:C:N4	2.79	0.51
32:5:4773:C:C2	32:5:4863:G:C2	2.97	0.51
32:5:4896:G:N3	32:5:4897:G:C8	2.79	0.51
33:7:11:A:C2	33:7:67:C:O4'	2.63	0.51
34:8:39:G:C2	34:8:104:A:N1	2.79	0.51
34:8:129:C:C4	34:8:130:C:C5	2.98	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
48:z:140:PHE:CE2	48:z:192:SER:HB2	2.46	0.51
53:S2:74:G:O6	58:SG:171:THR:OG1	2.26	0.51
53:S2:201:C:C5	53:S2:202:G:C8	2.98	0.51
53:S2:381:C:O2'	53:S2:382:C:O5'	2.28	0.51
53:S2:518:G:N1	53:S2:519:A:N7	2.59	0.51
53:S2:823:U:H5	53:S2:824:C:C5	2.27	0.51
53:S2:831:G:C2	53:S2:844:U:O4	2.63	0.51
53:S2:999:G:N2	53:S2:1000:C:C2	2.79	0.51
53:S2:1126:G:C6	53:S2:1127:C:C4	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1203:G:C3'	53:S2:1204:A:H8	2.22	0.51
53:S2:1293:A:H1'	85:Sf:150:PHE:HD2	1.75	0.51
53:S2:1332:A:C2	53:S2:1500:G:H1'	2.46	0.51
53:S2:1394:G:H2'	53:S2:1394:G:N3	2.26	0.51
53:S2:1406:G:C2	53:S2:1407:U:C2	2.98	0.51
53:S2:1524:G:C4	53:S2:1525:C:C6	2.98	0.51
53:S2:1594:A:N3	53:S2:1594:A:H2'	2.24	0.51
53:S2:1781:A:C2	53:S2:1782:G:N7	2.79	0.51
54:SA:85:ARG:NH2	78:SR:82:ASP:O	2.44	0.51
60:SI:113:TYR:HE2	60:SI:121:LEU:HD11	1.74	0.51
68:SY:81:TYR:O	68:SY:84:LYS:HB3	2.10	0.51
78:SR:71:ILE:HG22	78:SR:72:LYS:N	2.26	0.51
82:SZ:57:LYS:O	82:SZ:61:GLU:CB	2.58	0.51
2:D:249:GLU:OE1	2:D:250:ASN:N	2.44	0.51
3:G:55:VAL:CB	3:G:57:TRP:HE1	2.21	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'	2.10	0.51
8:N:89:VAL:CG1	32:5:3928:A:H5'	2.41	0.51
11:R:95:TRP:CG	11:R:99:MET:HE2	2.45	0.51
13:T:142:ARG:HB3	38:F:82:ASN:HD21	1.76	0.51
18:Z:17:ARG:NH2	32:5:2577:C:C4	2.79	0.51
19:a:17:HIS:CE1	32:5:1338:G:C8	2.99	0.51
32:5:43:U:C6	32:5:44:A:H8	2.23	0.51
32:5:73:A:C2	32:5:74:G:C5	2.98	0.51
32:5:84:A:C5	32:5:86:U:C6	2.99	0.51
32:5:166:C:C2	32:5:167:C:H5	2.29	0.51
32:5:206:U:O2	32:5:208:A:C8	2.63	0.51
32:5:246:G:N2	32:5:247:G:N9	2.59	0.51
32:5:297:U:C4	32:5:298:G:C8	2.98	0.51
32:5:483:G:N2	32:5:484:U:C2	2.78	0.51
32:5:952:G:N2	32:5:953:C:C2	2.79	0.51
32:5:965:G:N2	37:E:85:LEU:O	2.44	0.51
32:5:1086:C:H2'	32:5:1086:C:O2	2.10	0.51
32:5:1092:G:C2	32:5:1093:C:N1	2.79	0.51
32:5:1186:U:C2	32:5:1187:G:C8	2.98	0.51
32:5:1189:G:C2	32:5:1190:C:N1	2.78	0.51
32:5:1198:G:N2	32:5:1199:G:C6	2.79	0.51
32:5:1210:C:H2'	32:5:1210:C:O2	2.09	0.51
32:5:1325:C:O2'	32:5:3879:G:OP2	2.27	0.51
32:5:1336:G:H2'	32:5:1337:A:C8	2.45	0.51
32:5:1466:G:C5	32:5:1467:C:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1558:A:C2	32:5:1559:G:C5	2.98	0.51
32:5:1617:G:N3	32:5:1618:G:C8	2.79	0.51
32:5:1691:G:C6	32:5:1692:C:C6	2.98	0.51
32:5:1843:A:N1	32:5:1844:G:N7	2.59	0.51
32:5:2090:U:H1'	36:C:305:PRO:HG2	1.92	0.51
32:5:2124:G:N2	38:F:32:ILE:HG13	2.26	0.51
32:5:2339:G:C2	32:5:2340:C:N1	2.79	0.51
32:5:2393:C:H1'	32:5:2398:U:C2	2.46	0.51
32:5:3795:A:H4'	53:S2:1815:A:C1'	2.39	0.51
32:5:4136:G:C2	32:5:4137:C:C2	2.99	0.51
32:5:4271:A:C2	32:5:4272:G:C4	2.99	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
32:5:4530:U:H3'	32:5:4531:U:H2'	1.92	0.51
32:5:4629:U:H2'	32:5:4630:G:O4'	2.11	0.51
32:5:4683:U:C5	32:5:4707:A:C6	2.98	0.51
32:5:4707:A:C2'	32:5:4708:A:O5'	2.58	0.51
32:5:4709:U:C4	32:5:4710:C:C4	2.99	0.51
32:5:4713:G:C6	32:5:4714:C:C4	2.98	0.51
32:5:4747:C:O2'	32:5:4748:U:H5'	2.10	0.51
33:7:58:A:N6	33:7:59:G:C6	2.79	0.51
33:7:93:G:N1	33:7:94:C:C4	2.79	0.51
34:8:68:G:C2	34:8:91:A:N3	2.78	0.51
41:W:50:ASN:OD1	41:W:50:ASN:N	2.43	0.51
49:3:64:G:H2'	49:3:65:G:O4'	2.10	0.51
50:4:59:A:OP1	87:S1:52:LYS:NZ	2.44	0.51
50:4:193:G:H2'	50:4:194:G:O4'	2.11	0.51
51:9:33:ARG:NH1	51:9:35:ILE:O	2.42	0.51
53:S2:42:A:C5	53:S2:43:U:C5	2.98	0.51
53:S2:70:G:N2	53:S2:71:G:H1'	2.26	0.51
53:S2:443:U:C4	53:S2:444:G:C5	2.99	0.51
53:S2:476:A:C6	53:S2:477:G:C5	2.98	0.51
53:S2:601:G:C2	53:S2:622:C:O2	2.64	0.51
53:S2:849:A:H2'	53:S2:850:C:H6	1.76	0.51
53:S2:910:G:C4	53:S2:911:C:C6	2.98	0.51
53:S2:956:G:C2	53:S2:957:A:C6	2.99	0.51
53:S2:1045:U:O2	53:S2:1046:U:C6	2.63	0.51
53:S2:1116:C:O2	53:S2:1116:C:O4'	2.27	0.51
53:S2:1189:A:H2'	53:S2:1190:A:H8	1.76	0.51
53:S2:1287:A:C4	53:S2:1313:A:C6	2.99	0.51
53:S2:1315:U:C4	53:S2:1316:C:C5	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1315:U:O4'	53:S2:1315:U:O2	2.28	0.51
53:S2:1345:G:O5'	53:S2:1371:U:O4	2.29	0.51
53:S2:1381:G:N1	53:S2:1382:A:C8	2.79	0.51
53:S2:1707:U:C5	53:S2:1708:C:C5	2.99	0.51
53:S2:1711:U:O2	53:S2:1712:A:C8	2.64	0.51
53:S2:1772:C:O2	53:S2:1773:C:C6	2.64	0.51
55:SB:55:THR:C	55:SB:56:LYS:HG3	2.36	0.51
55:SB:145:LYS:HE3	78:SR:128:PHE:HE2	1.73	0.51
56:SC:183:LYS:HG2	66:SW:95:PRO:HA	1.93	0.51
78:SR:33:ARG:HH12	86:Sg:83:TRP:HZ3	1.57	0.51
86:Sg:166:VAL:HB	86:Sg:198:VAL:HG11	1.92	0.51
1:A:174:ARG:HB3	1:A:174:ARG:NH1	2.26	0.51
1:A:186:TYR:CE2	32:5:1613:A:H4'	2.45	0.51
7:M:36:ALA:HB2	7:M:52:PHE:HE1	1.75	0.51
18:Z:92:ASP:OD1	18:Z:92:ASP:C	2.53	0.51
29:l:2:SER:N	32:5:2406:G:N7	2.59	0.51
32:5:77:U:H3	32:5:335:A:N6	2.04	0.51
32:5:99:A:N6	32:5:100:C:C4	2.79	0.51
32:5:674:G:C2	32:5:675:C:C5	2.99	0.51
32:5:712:C:C2	32:5:713:C:C6	2.98	0.51
32:5:719:C:O2	32:5:720:G:C8	2.63	0.51
32:5:1454:G:C2	32:5:1455:G:C8	2.99	0.51
32:5:1483:C:OP2	32:5:1484:G:C6	2.63	0.51
32:5:1534:A:O2'	32:5:1637:A:C2	2.58	0.51
32:5:1555:G:C6	32:5:1556:C:C4	2.99	0.51
32:5:1584:G:N3	32:5:1585:C:C6	2.79	0.51
32:5:1666:C:H2'	32:5:1667:G:O5'	2.11	0.51
32:5:1672:U:N3	32:5:1673:U:C4	2.78	0.51
32:5:1780:A:N6	32:5:1781:U:C5	2.79	0.51
32:5:1875:C:H2'	32:5:1876:U:O4'	2.11	0.51
32:5:1965:G:C6	32:5:1966:C:C4	2.98	0.51
32:5:2126:G:O3'	32:5:2127:C:O4'	2.29	0.51
32:5:2519:U:H1'	32:5:2520:C:C6	2.46	0.51
32:5:2557:G:C5	32:5:2558:C:C5	2.99	0.51
32:5:2851:G:C6	32:5:2852:U:H1'	2.46	0.51
32:5:3914:U:N3	32:5:4378:A:C6	2.77	0.51
32:5:3939:G:N2	32:5:4075:U:C2	2.79	0.51
32:5:4172:A:N3	32:5:4173:G:C8	2.78	0.51
32:5:4336:A:H5'	32:5:4337:C:O5'	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4474:A:C5	32:5:4476:C:C2	2.99	0.51
32:5:4563:U:C2	32:5:4564:A:C8	2.97	0.51
32:5:4583:C:N3	32:5:4718:G:N2	2.58	0.51
32:5:4599:A:H4'	32:5:4600:G:OP1	2.11	0.51
32:5:4891:G:C2	32:5:4929:C:C2	2.99	0.51
32:5:4981:G:C6	32:5:4982:A:C4	2.99	0.51
32:5:4999:G:C5	32:5:5000:G:N7	2.77	0.51
32:5:5006:U:O4'	32:5:5042:A:N6	2.43	0.51
34:8:42:G:N1	34:8:43:A:C5	2.79	0.51
35:B:41:VAL:HG12	35:B:187:GLY:HA3	1.93	0.51
36:C:76:ILE:HG22	36:C:77:PRO:HD2	1.92	0.51
36:C:92:PHE:C	36:C:100:ARG:NH1	2.69	0.51
38:F:161:TYR:HE2	38:F:168:ARG:NH2	2.04	0.51
53:S2:394:G:N2	53:S2:395:G:C8	2.79	0.51
53:S2:403:G:N2	53:S2:404:G:C1'	2.73	0.51
53:S2:458:A:C2	53:S2:459:C:C6	2.97	0.51
53:S2:547:G:H2'	53:S2:548:C:H5''	1.93	0.51
53:S2:582:C:H4'	68:SY:33:ALA:HB2	1.93	0.51
53:S2:610:G:C6	53:S2:611:G:N7	2.79	0.51
53:S2:876:C:N4	53:S2:878:G:C8	2.78	0.51
53:S2:932:G:N2	53:S2:934:G:C8	2.78	0.51
53:S2:989:C:O2	53:S2:1001:A:C6	2.63	0.51
53:S2:1134:G:C2	53:S2:1135:C:C2	2.99	0.51
53:S2:1224:G:C6	53:S2:1225:U:N1	2.78	0.51
53:S2:1291:A:N1	85:Sf:140:TYR:CD2	2.78	0.51
53:S2:1302:G:C4	85:Sf:140:TYR:CE2	2.98	0.51
53:S2:1432:U:C2'	53:S2:1433:C:O5'	2.59	0.51
53:S2:1777:G:C2	53:S2:1778:C:C2	2.99	0.51
55:SB:56:LYS:CD	55:SB:57:ILE:N	2.73	0.51
55:SB:59:SER:O	55:SB:91:VAL:HG21	2.09	0.51
65:SV:9:VAL:HG12	65:SV:10:ASP:H	1.75	0.51
83:Sc:45:ASN:HD22	83:Sc:68:LEU:CD2	2.13	0.51
1:A:64:ARG:HD3	32:5:4124:G:O6	2.11	0.51
2:D:22:ARG:HE	2:D:27:LYS:HD3	1.76	0.51
4:H:88:PHE:CZ	4:H:151:ILE:HB	2.46	0.51
30:m:111:ARG:NH2	32:5:4698:C:C2	2.79	0.51
32:5:145:G:N1	32:5:146:G:N7	2.59	0.51
32:5:189:G:C2	32:5:190:G:C8	2.98	0.51
32:5:275:C:H2'	32:5:276:C:H5''	1.93	0.51
32:5:405:U:O4	32:5:407:A:OP2	2.29	0.51
32:5:435:A:N6	32:5:436:C:C5	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:505:G:C6	32:5:506:C:C4	2.98	0.51
32:5:642:G:N3	32:5:643:C:C6	2.79	0.51
32:5:735:G:C6	32:5:736:C:C4	2.99	0.51
32:5:985:C:C2	32:5:1069:G:N2	2.79	0.51
32:5:1069:G:C5	32:5:1070:G:C8	2.99	0.51
32:5:1197:C:C2	32:5:1198:G:C8	2.99	0.51
32:5:1260:G:N3	32:5:1261:G:C8	2.79	0.51
32:5:1404:G:N1	32:5:1414:C:C4	2.79	0.51
32:5:1448:G:N2	32:5:1449:C:C2	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
32:5:1570:G:C6	32:5:1571:G:C5	2.99	0.51
32:5:1797:G:N2	32:5:1798:G:C4	2.79	0.51
32:5:1848:C:H5'	32:5:1849:U:OP2	2.11	0.51
32:5:2315:G:N3	32:5:2316:G:C8	2.79	0.51
32:5:2440:U:O2'	32:5:2441:C:P	2.69	0.51
32:5:2743:A:H2'	32:5:2744:A:C8	2.46	0.51
32:5:3655:C:C4	32:5:3656:A:C8	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
32:5:3925:U:H2'	32:5:3926:C:O4'	2.10	0.51
32:5:4165:C:O2	32:5:4165:C:C2'	2.59	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	1.94	0.51
32:5:4323:A:C4	32:5:4324:A:C8	2.99	0.51
32:5:4490:C:O2	32:5:4490:C:C2'	2.56	0.51
32:5:4592:C:C2	32:5:4593:C:C5	2.98	0.51
32:5:4619:U:N3	32:5:4620:U:C5	2.79	0.51
32:5:4651:A:C6	32:5:4652:G:N7	2.79	0.51
32:5:4989:U:O2	32:5:4989:U:O4'	2.26	0.51
32:5:5042:A:N1	32:5:5043:A:C6	2.79	0.51
33:7:22:A:N3	33:7:22:A:H2'	2.25	0.51
34:8:13:G:C2'	34:8:14:U:O5'	2.59	0.51
34:8:137:A:C2	34:8:138:C:C6	2.99	0.51
35:B:256:ALA:C	35:B:258:HIS:H	2.19	0.51
36:C:219:LYS:HA	36:C:222:ARG:HH11	1.76	0.51
37:E:177:LEU:HD11	37:E:257:ILE:HD12	1.93	0.51
37:E:184:ARG:HD3	37:E:213:PHE:CB	2.40	0.51
38:F:194:HIS:C	38:F:196:ILE:H	2.18	0.51
39:I:14:ASN:N	39:I:14:ASN:OD1	2.44	0.51
39:I:101:LYS:C	39:I:102:MET:SD	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:17:LEU:HD12	45:r:36:ASN:HD21	1.75	0.51
48:z:126:GLN:HE22	48:z:157:ILE:CG1	2.24	0.51
50:4:119[B]:A:N1	50:4:233[B]:U:N3	2.58	0.51
53:S2:81:U:C4	53:S2:82:G:N7	2.79	0.51
53:S2:142:C:O4'	53:S2:142:C:O2	2.28	0.51
53:S2:187:G:C6	53:S2:188:C:C4	2.99	0.51
53:S2:443:U:C5	53:S2:444:G:N7	2.78	0.51
53:S2:584:G:C6	53:S2:585:C:C4	2.98	0.51
53:S2:641:A:H2'	53:S2:642:U:O4'	2.09	0.51
53:S2:830:A:H2'	53:S2:831:G:O4'	2.10	0.51
53:S2:1040:G:C2	53:S2:1041:G:N9	2.79	0.51
53:S2:1111:U:O2	53:S2:1112:U:H6	1.91	0.51
53:S2:1115:U:O4'	53:S2:1115:U:O2	2.26	0.51
53:S2:1292:C:O4'	85:Sf:149:CYS:N	2.44	0.51
53:S2:1294:G:H1'	85:Sf:137:ASP:OD2	2.11	0.51
53:S2:1319:U:H2'	53:S2:1320:G:O4'	2.10	0.51
53:S2:1333:U:O2	53:S2:1333:U:H2'	2.11	0.51
53:S2:1335:G:C6	53:S2:1336:C:C4	2.99	0.51
53:S2:1339:U:O2	53:S2:1340:U:C6	2.63	0.51
53:S2:1354:G:H5'	53:S2:1355:C:OP2	2.10	0.51
53:S2:1379:A:H2'	53:S2:1380:C:C6	2.46	0.51
53:S2:1419:C:C2	53:S2:1429:G:C2	2.98	0.51
53:S2:1456:G:C4	53:S2:1457:U:C5	2.99	0.51
53:S2:1457:U:C2	53:S2:1458:G:N7	2.79	0.51
53:S2:1466:G:C6	53:S2:1467:C:N4	2.78	0.51
53:S2:1526:G:C6	53:S2:1527:C:C4	2.99	0.51
53:S2:1610:G:H2'	53:S2:1611:G:O4'	2.11	0.51
53:S2:1753:C:C2	53:S2:1754:G:C8	2.99	0.51
53:S2:1795:G:N1	53:S2:1796:G:C5	2.78	0.51
55:SB:157:GLN:HB2	55:SB:160:GLN:HG3	1.92	0.51
66:SW:43:LYS:HB2	66:SW:44:HIS:CE1	2.46	0.51
67:SX:93:PHE:CZ	67:SX:133:LEU:HB3	2.46	0.51
79:SS:20:ILE:HG22	79:SS:21:ASP:N	2.26	0.51
79:SS:81:ASP:O	79:SS:87:GLN:NE2	2.42	0.51
82:SZ:48:VAL:HG12	82:SZ:83:LEU:CD1	2.36	0.51
83:Sc:13:ARG:HG3	83:Sc:54:ASP:O	2.09	0.51
87:S1:7:TRP:CG	87:S1:8:GLU:H	2.28	0.51
1:A:216:HIS:CD2	1:A:216:HIS:N	2.79	0.51
4:H:61:TRP:HE1	12:S:152:PHE:HD2	1.59	0.51
24:f:48:ALA:HB2	24:f:71:TRP:CZ3	2.46	0.51
32:5:45:U:N3	32:5:46:U:C4	2.79	0.51

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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	0.51
32:5:96:U:C6	32:5:97:G:C8	2.99	0.51
32:5:292:G:HO2'	32:5:293:G:P	2.29	0.51
32:5:342:G:N2	32:5:343:C:C2	2.78	0.51
32:5:368:C:C2	32:5:374:G:C2	2.99	0.51
32:5:450:G:C6	32:5:1295:C:N3	2.79	0.51
32:5:486:C:N3	32:5:487:G:C5	2.78	0.51
32:5:1171:G:C6	32:5:1172:C:C5	2.99	0.51
32:5:1280:C:C2	32:5:1282:G:C8	2.98	0.51
32:5:1397:A:O2'	32:5:1398:A:C5'	2.59	0.51
32:5:1585:C:N3	32:5:1586:G:C8	2.79	0.51
32:5:1867:A:H2'	32:5:1868:A:C8	2.46	0.51
32:5:2395:A:OP1	32:5:2395:A:H4'	2.10	0.51
32:5:2483:G:C6	32:5:2484:A:N7	2.79	0.51
32:5:2495:U:C2	32:5:2496:G:N7	2.78	0.51
32:5:2555:G:H2'	32:5:2556:G:O4'	2.11	0.51
32:5:2613:C:N4	32:5:2614:C:C5	2.79	0.51
32:5:2773:G:C2	32:5:2774:C:C6	2.99	0.51
32:5:3648:A:N9	32:5:3785:A:N6	2.58	0.51
32:5:3703:G:C4	32:5:3704:U:C5	2.99	0.51
32:5:3754:G:C8	32:5:3754:G:C5'	2.85	0.51
32:5:3796:U:C2	32:5:3797:C:C5	2.99	0.51
32:5:3805:U:N3	32:5:3806:G:C8	2.79	0.51
32:5:3893:C:C4	32:5:4568:A:C2	2.99	0.51
32:5:4239:A:N1	32:5:4240:G:C8	2.78	0.51
32:5:4405:G:C5	32:5:4406:U:C6	2.99	0.51
32:5:4538:G:C5	32:5:4539:U:C5	3.00	0.51
32:5:4697:U:H5'	32:5:4698:C:OP2	2.11	0.51
32:5:4878:C:N3	32:5:4879:C:C5	2.79	0.51
32:5:5035:U:N3	32:5:5036:C:C5	2.79	0.51
32:5:5050:C:H1'	35:B:374:PHE:CD2	2.46	0.51
34:8:63:U:O2	34:8:63:U:H2'	2.11	0.51
34:8:64:U:C4	34:8:65:A:N6	2.78	0.51
34:8:103:A:N7	34:8:104:A:N7	2.58	0.51
34:8:142:U:N3	34:8:143:G:C8	2.79	0.51
35:B:115:LYS:HB3	35:B:119:TYR:OH	2.11	0.51
48:z:135:ILE:HD12	48:z:189:VAL:HG22	1.92	0.51
48:z:344:PRO:O	48:z:345:PHE:C	2.53	0.51
50:4:51:G:N2	50:4:52:C:H1'	2.26	0.51
53:S2:302:A:O2'	60:SI:64:ASN:ND2	2.43	0.51
53:S2:449:A:N1	53:S2:452:G:C5	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:522:A:O2'	61:SJ:131:ARG:NH2	2.44	0.51
53:S2:551:U:H2'	53:S2:552:G:C8	2.46	0.51
53:S2:570:C:C2	53:S2:571:U:C5	2.98	0.51
53:S2:793:G:C6	53:S2:794:A:C4	2.99	0.51
53:S2:828:G:C4	53:S2:829:C:C6	2.99	0.51
53:S2:967:C:C6	53:S2:967:C:H3'	2.45	0.51
53:S2:978:G:C4	53:S2:979:C:C6	2.98	0.51
53:S2:1024:A:H2'	53:S2:1025:U:O4'	2.11	0.51
53:S2:1032:C:C4	53:S2:1033:G:N7	2.79	0.51
53:S2:1034:A:C5	53:S2:1082:A:C6	2.98	0.51
53:S2:1058:A:C2	53:S2:1059:G:C6	2.99	0.51
53:S2:1083:A:C8	53:S2:1861:G:C6	2.99	0.51
53:S2:1105:G:C5	53:S2:1106:C:C5	2.99	0.51
53:S2:1111:U:N3	53:S2:1112:U:C5	2.69	0.51
53:S2:1123:C:P	55:SB:205:TYR:HH	2.25	0.51
53:S2:1157:G:C6	66:SW:75:ILE:HD12	2.46	0.51
53:S2:1232:U:C2	53:S2:1233:G:C8	2.93	0.51
53:S2:1309:C:H2'	85:Sf:143:LYS:HG2	1.91	0.51
53:S2:1341:C:H4'	53:S2:1342:U:OP1	2.11	0.51
53:S2:1422:G:H22	53:S2:1424:G:H3'	1.75	0.51
53:S2:1531:A:H2'	53:S2:1532:C:O4'	2.11	0.51
53:S2:1574:C:N3	53:S2:1575:G:C8	2.79	0.51
53:S2:1596:U:N3	53:S2:1597:C:C5	2.79	0.51
54:SA:200:ASP:CG	78:SR:85:VAL:CG1	2.79	0.51
55:SB:76:ASN:O	55:SB:77:ASP:OD1	2.29	0.51
56:SC:260:VAL:O	56:SC:261:PHE:HB2	2.10	0.51
83:Sc:31:ARG:HG2	83:Sc:31:ARG:NH1	2.14	0.51
1:A:207:VAL:CG1	32:5:3919:C:H5'	2.41	0.50
3:G:77:PRO:HA	3:G:237:TRP:CZ3	2.46	0.50
3:G:162:ASP:HB3	3:G:163:PRO:HD3	1.93	0.50
6:L:34:ARG:HD3	34:8:31:G:OP1	2.12	0.50
19:a:63:LEU:C	19:a:63:LEU:CD2	2.78	0.50
23:e:6:PRO:HA	23:e:74:PHE:HE1	1.75	0.50
23:e:81:ASN:OD1	23:e:81:ASN:C	2.54	0.50
32:5:118:C:H42	32:5:121:A:H62	1.57	0.50
32:5:142:G:C6	32:5:144:G:N7	2.80	0.50
32:5:211:G:N3	32:5:211:G:H2'	2.26	0.50
32:5:483:G:N1	32:5:484:U:C5	2.78	0.50
32:5:674:G:C6	32:5:675:C:C5	3.00	0.50
32:5:1098:G:C2	32:5:1099:C:C2	2.99	0.50
32:5:1190:C:C4	32:5:1191:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1200:G:C6	32:5:1201:U:C4	2.99	0.50
32:5:1260:G:C6	32:5:1261:G:N7	2.79	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
32:5:1391:A:C2	32:5:4364:G:N3	2.79	0.50
32:5:1550:G:N2	32:5:1579:C:H1'	2.26	0.50
32:5:1556:C:O2	32:5:1557:C:H6	1.80	0.50
32:5:1685:G:C2	32:5:1686:C:C4	2.99	0.50
32:5:1819:G:C6	32:5:1820:C:C4	2.99	0.50
32:5:2441:C:C2	32:5:2442:G:C8	2.87	0.50
32:5:3733:A:C6	32:5:3734:U:C4	2.98	0.50
32:5:3848:U:C2	32:5:3849:A:N7	2.79	0.50
32:5:4183:G:H2'	32:5:4183:G:N3	2.25	0.50
32:5:4234:A:H4'	32:5:4235:G:OP1	2.11	0.50
32:5:4239:A:N6	32:5:4240:G:C6	2.79	0.50
32:5:4271:A:N6	32:5:4336:A:H61	2.08	0.50
32:5:4278:C:H1'	32:5:4282:A:N3	2.27	0.50
32:5:4279:A:C1'	32:5:4281:A:C5	2.94	0.50
32:5:4289:U:H2'	32:5:4290:U:C6	2.46	0.50
32:5:4324:A:C6	32:5:4325:A:N6	2.79	0.50
32:5:4735:G:C6	32:5:4736:C:C4	2.99	0.50
32:5:5011:A:C2	32:5:5012:G:C8	2.99	0.50
34:8:145:C:C2	34:8:146:U:C5	2.99	0.50
42:j:39:TYR:HB3	42:j:40:PRO:HD3	1.93	0.50
46:K:126:SER:O	46:K:128:THR:N	2.44	0.50
49:3:39:G:C2	49:3:40:C:C2	2.95	0.50
49:3:65:G:C2	49:3:66:C:C6	2.99	0.50
53:S2:378:U:O4	53:S2:379:C:C4	2.61	0.50
53:S2:478:G:C4	53:S2:479:C:C5	2.99	0.50
53:S2:498:C:H2'	53:S2:499:G:O4'	2.11	0.50
53:S2:676:C:N4	53:S2:677:G:C6	2.79	0.50
53:S2:803:C:O2	53:S2:803:C:H2'	2.11	0.50
53:S2:869:A:C5	59:SH:114:GLN:HB3	2.46	0.50
53:S2:929:G:N2	53:S2:1104:G:H4'	2.25	0.50
53:S2:1067:C:H2'	53:S2:1067:C:O2	2.10	0.50
53:S2:1123:C:H2'	53:S2:1123:C:O2	2.11	0.50
53:S2:1139:C:N4	53:S2:1148:A:C5	2.78	0.50
53:S2:1302:G:C5	85:Sf:138:ARG:NH1	2.79	0.50
53:S2:1408:U:O4	53:S2:1439:A:C6	2.62	0.50
53:S2:1542:C:O2'	53:S2:1543:U:H6	1.91	0.50
64:SO:128:ARG:HA	69:Sa:62:TYR:OH	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SX:67:ARG:HG2	67:SX:115:ILE:HD13	1.91	0.50
68:SY:88:LYS:CE	68:SY:97:TYR:OH	2.59	0.50
75:SM:16:THR:HA	75:SM:19:GLN:CG	2.40	0.50
83:Sc:13:ARG:N	83:Sc:13:ARG:CD	2.73	0.50
86:Sg:60:ARG:O	86:Sg:62:HIS:N	2.44	0.50
88:S4:92:ASP:OD1	88:S4:92:ASP:N	2.44	0.50
1:A:193:ARG:HH22	32:5:3686:G:P	2.33	0.50
11:R:95:TRP:O	11:R:97:ARG:N	2.45	0.50
12:S:166:ARG:HB2	32:5:1919:G:N2	2.26	0.50
14:U:56:LEU:HD13	14:U:61:VAL:HG23	1.93	0.50
28:k:11:PHE:HZ	28:k:56:LEU:HD11	1.76	0.50
32:5:273:U:C2'	32:5:274:C:O5'	2.60	0.50
32:5:449:C:N3	32:5:450:G:N7	2.59	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
32:5:962:C:OP1	32:5:2264:C:N4	2.43	0.50
32:5:1170:G:N1	32:5:1171:G:C5	2.79	0.50
32:5:1263:A:C2	32:5:1264:C:N1	2.79	0.50
32:5:1266:G:H4'	32:5:2112:G:C4	2.46	0.50
32:5:1280:C:O2	32:5:1282:G:C8	2.65	0.50
32:5:1446:C:C4	32:5:1447:C:C5	2.99	0.50
32:5:1509:C:C2	32:5:1510:G:C8	2.99	0.50
32:5:1871:A:C6	32:5:1872:G:C5	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	3.00	0.50
32:5:2065:G:C6	32:5:2066:C:C5	2.99	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
32:5:2339:G:C6	32:5:2340:C:C4	2.99	0.50
32:5:2454:U:N3	32:5:2455:G:C8	2.79	0.50
32:5:2482:C:N3	32:5:2483:G:N7	2.60	0.50
32:5:2521:G:C2	32:5:2535:G:N2	2.80	0.50
32:5:2589:C:C4	32:5:2590:G:C4	2.99	0.50
32:5:2857:A:C6	32:5:2858:A:C6	2.99	0.50
32:5:3722:G:C6	32:5:3723:A:C5	2.99	0.50
32:5:4093:G:C5	32:5:4094:G:N7	2.79	0.50
32:5:4142:C:C4	32:5:4143:G:C6	2.99	0.50
32:5:4251:A:H2'	32:5:4252:C:C6	2.46	0.50
32:5:4510:A:C2	32:5:4511:A:C2	2.99	0.50
32:5:4551:U:H2'	32:5:4552:U:H6	1.76	0.50
32:5:4687:A:C8	32:5:4698:C:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4734:A:N3	32:5:4735:G:C8	2.80	0.50
32:5:4734:A:N1	32:5:4735:G:C4	2.79	0.50
32:5:4904:G:N1	32:5:4905:C:C4	2.80	0.50
38:F:229:PHE:CD2	38:F:238:ARG:HB3	2.46	0.50
39:I:75:TYR:CE2	39:I:150:GLU:HB3	2.46	0.50
46:K:147:HIS:N	46:K:147:HIS:CD2	2.79	0.50
47:q:96:THR:HG22	47:q:97:GLU:H	1.76	0.50
48:z:271:ILE:C	48:z:285:PHE:CD2	2.89	0.50
49:3:10:G:C2	49:3:11:U:C5	2.98	0.50
49:3:38:C:N3	49:3:39:G:C5	2.77	0.50
50:4:45:G:C4	50:4:46:C:C6	2.99	0.50
52:6:218:THR:OG1	52:6:221:GLN:OE1	2.24	0.50
53:S2:52:G:H22	53:S2:474:G:H22	1.59	0.50
53:S2:418:A:H2'	53:S2:418:A:N3	2.25	0.50
53:S2:476:A:C5	53:S2:477:G:C8	2.98	0.50
53:S2:519:A:N3	53:S2:520:A:C8	2.80	0.50
53:S2:525:A:N6	53:S2:588:G:H22	2.09	0.50
53:S2:531:A:C5	53:S2:532:C:C6	2.98	0.50
53:S2:569:A:C6	53:S2:570:C:C4	2.99	0.50
53:S2:581:U:C2	53:S2:582:C:C6	3.00	0.50
53:S2:955:A:N6	53:S2:969:U:C5'	2.70	0.50
53:S2:992:A:C5	53:S2:993:G:C8	2.98	0.50
53:S2:1113:A:H2'	53:S2:1114:U:C2'	2.40	0.50
53:S2:1234:C:C2	53:S2:1235:G:C8	2.99	0.50
53:S2:1284:A:C6	75:SM:109:VAL:HG12	2.47	0.50
53:S2:1404:U:H5'	53:S2:1404:U:C6	2.46	0.50
53:S2:1408:U:O4	53:S2:1439:A:C2	2.55	0.50
53:S2:1495:G:C2	53:S2:1496:U:H1'	2.46	0.50
53:S2:1859:A:C4	53:S2:1860:A:C8	3.00	0.50
60:SI:65:PHE:CZ	60:SI:104:ILE:HG21	2.46	0.50
76:SP:43:ARG:HD3	76:SP:47:ARG:HG3	1.93	0.50
80:ST:92:PHE:CD1	80:ST:92:PHE:C	2.90	0.50
2:D:82:GLU:OE2	2:D:108:ARG:NH1	2.44	0.50
11:R:8:LYS:HG3	11:R:22:VAL:HG11	1.93	0.50
21:c:89:TYR:CZ	32:5:2673:G:N1	2.79	0.50
25:g:4:ARG:NH2	32:5:2397:G:O6	2.37	0.50
25:g:64:LEU:HD23	32:5:2749:C:O2'	2.12	0.50
32:5:209:U:O2	32:5:233:U:C2	2.65	0.50
32:5:218:A:N7	36:C:181:LYS:HG2	2.25	0.50
32:5:674:G:C6	32:5:675:C:C4	2.99	0.50
32:5:692:A:N3	32:5:693:C:C5	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1394:G:C2'	32:5:1395:U:O5'	2.58	0.50
32:5:1598:C:C4	32:5:2798:A:N7	2.79	0.50
32:5:1785:C:OP1	39:I:133:GLN:NE2	2.44	0.50
32:5:1806:G:N2	32:5:1807:C:N1	2.60	0.50
32:5:2311:C:O2	32:5:2311:C:H2'	2.11	0.50
32:5:2326:G:N2	32:5:2327:G:H1'	2.26	0.50
32:5:2363:A:O2'	32:5:4560:C:N4	2.45	0.50
32:5:2539:C:C2	32:5:2540:C:C6	3.00	0.50
32:5:2656:U:C4	32:5:2657:G:C5	3.00	0.50
32:5:2844:A:N1	32:5:3839:G:C5	2.80	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
32:5:3717:A:N1	32:5:3736:A:N1	2.59	0.50
32:5:3847:C:O2	32:5:3847:C:H2'	2.11	0.50
32:5:3855:C:H2'	32:5:3855:C:O2	2.10	0.50
32:5:3899:G:C5'	35:B:257:TRP:HD1	2.25	0.50
32:5:4538:G:C6	32:5:4539:U:C4	2.99	0.50
32:5:4585:U:C2	32:5:4586:G:C8	2.99	0.50
32:5:4628:U:O2	32:5:4629:U:C6	2.65	0.50
32:5:4881:U:O2'	32:5:4882:U:C6	2.64	0.50
32:5:4932:U:H2'	32:5:4933:C:C1'	2.41	0.50
34:8:64:U:O2	34:8:65:A:C5	2.60	0.50
34:8:79:G:N2	34:8:80:A:C6	2.79	0.50
36:C:122:TYR:HB2	36:C:280:PRO:HG3	1.92	0.50
40:P:67:VAL:HG13	40:P:82:ARG:HG3	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
50:4:60:U:C2	50:4:61:C:C6	3.00	0.50
50:4:140:C:H2'	50:4:141:C:H6	1.76	0.50
51:9:100:SER:O	51:9:103:SER:OG	2.21	0.50
53:S2:46:A:C2	53:S2:99:A:C8	3.00	0.50
53:S2:88:G:H2'	53:S2:89:C:O4'	2.10	0.50
53:S2:310:C:C2	53:S2:311:C:C4	3.00	0.50
53:S2:381:C:C6	53:S2:381:C:H5'	2.46	0.50
53:S2:399:C:O4'	67:SX:11:ARG:NH1	2.38	0.50
53:S2:413:G:H2'	53:S2:414:A:O5'	2.12	0.50
53:S2:832:G:N2	53:S2:833:C:H1'	2.27	0.50
53:S2:909:G:N3	53:S2:910:G:C8	2.78	0.50
53:S2:962:A:N3	53:S2:963:A:C8	2.79	0.50
53:S2:1045:U:C2	53:S2:1046:U:C6	2.99	0.50
53:S2:1108:G:H2'	53:S2:1109:C:H3'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1234:C:O2	53:S2:1234:C:C2'	2.55	0.50
53:S2:1291:A:N3	85:Sf:140:TYR:CD2	2.78	0.50
53:S2:1372:U:C2	53:S2:1373:C:C5	2.99	0.50
53:S2:1410:C:C4	53:S2:1411:G:C5	2.99	0.50
53:S2:1431:G:C5	53:S2:1432:U:C5	3.00	0.50
53:S2:1510:G:N1	53:S2:1511:U:C6	2.79	0.50
53:S2:1590:C:H3'	53:S2:1591:C:H6	1.76	0.50
53:S2:1643:U:N3	53:S2:1644:C:C4	2.80	0.50
53:S2:1859:A:C6	53:S2:1860:A:N7	2.80	0.50
60:SI:101:ILE:HG13	60:SI:198:TYR:CD2	2.45	0.50
62:SL:112:HIS:HB3	62:SL:141:ASN:OD1	2.10	0.50
77:SQ:102:GLU:OE2	77:SQ:102:GLU:N	2.45	0.50
78:SR:18:GLU:CG	78:SR:70:SER:HB2	2.42	0.50
79:SS:71:MET:HE3	79:SS:99:LEU:HD13	1.94	0.50
82:SZ:46:ASN:HD21	82:SZ:78:LYS:CD	2.23	0.50
82:SZ:58:LEU:HA	82:SZ:62:VAL:HG23	1.93	0.50
86:Sg:16:GLY:HA3	86:Sg:36:ARG:HB2	1.92	0.50
87:S1:4:TYR:HB2	87:S1:10:PHE:HB2	1.93	0.50
3:G:53:ARG:HG3	34:8:150:C:N4	2.26	0.50
3:G:74:LEU:HG	32:5:4076:G:H21	1.76	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	2.45	0.50
9:O:140:ARG:HH21	9:O:140:ARG:HG3	1.76	0.50
12:S:13:VAL:HG22	12:S:63:TYR:HB3	1.94	0.50
17:Y:61:HIS:HD1	17:Y:62:TYR:HB3	1.77	0.50
23:e:124:ASN:OD1	23:e:124:ASN:N	2.44	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
30:m:97:ARG:HD2	30:m:122:ARG:HD2	1.94	0.50
32:5:290:U:N3	32:5:291:U:C4	2.79	0.50
32:5:385:A:C2	32:5:386:A:C5	2.99	0.50
32:5:455:C:N3	32:5:456:C:C6	2.79	0.50
32:5:747:A:O2'	32:5:748:G:OP2	2.22	0.50
32:5:917:A:N1	32:5:919:C:C5	2.75	0.50
32:5:961:G:C4'	32:5:962:C:OP1	2.60	0.50
32:5:1072:C:C2'	32:5:1072:C:O2	2.60	0.50
32:5:1247:U:O2	32:5:1248:C:C6	2.64	0.50
32:5:1290:G:C2	32:5:1291:G:C8	3.00	0.50
32:5:1464:C:C4	32:5:1465:G:C8	2.99	0.50
32:5:1751:A:N6	32:5:1752:G:C8	2.79	0.50
32:5:1826:G:C2	32:5:1827:C:N1	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1839:U:H3'	32:5:1840:G:N2	2.26	0.50
32:5:1946:G:N2	32:5:1948:G:C8	2.79	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
32:5:2368:A:N6	32:5:2827:G:O2'	2.44	0.50
32:5:2368:A:N1	32:5:2788:U:C4	2.80	0.50
32:5:2391:G:C4	32:5:2392:C:C5	3.00	0.50
32:5:2438:A:N1	32:5:2441:C:C6	2.79	0.50
32:5:2503:G:H5'	32:5:2504:C:O5'	2.12	0.50
32:5:2507:A:N7	32:5:2508:U:C5	2.80	0.50
32:5:2591:A:H62	32:5:2753:G:N2	2.09	0.50
32:5:2645:G:C5	32:5:2646:C:C5	3.00	0.50
32:5:2674:A:H3'	32:5:2675:G:O4'	2.11	0.50
32:5:2908:U:N3	32:5:2909:C:C5	2.80	0.50
32:5:3597:G:C2	32:5:3598:C:C2	3.00	0.50
32:5:4236:G:C2	32:5:4289:U:O2	2.65	0.50
32:5:4401:G:C6	32:5:4402:C:C4	2.99	0.50
32:5:4977:A:C4	32:5:4978:G:C2	2.99	0.50
33:7:110:G:C6	33:7:111:C:C4	2.99	0.50
34:8:141:C:H2'	34:8:142:U:H6	1.76	0.50
35:B:254:ILE:HG23	35:B:266:VAL:HG11	1.93	0.50
36:C:41:HIS:C	36:C:41:HIS:CD2	2.89	0.50
39:I:109:ASP:CG	39:I:110:ARG:N	2.63	0.50
47:q:24:TYR:HB3	47:q:90:PHE:HB3	1.92	0.50
49:3:65:G:N1	49:3:66:C:C4	2.79	0.50
50:4:45:G:C2	50:4:46:C:N1	2.80	0.50
53:S2:83:A:C5	53:S2:84:A:C8	3.00	0.50
53:S2:88:G:N3	53:S2:500:A:C2	2.80	0.50
53:S2:141:A:N6	53:S2:177:G:N2	2.60	0.50
53:S2:452:G:C2'	53:S2:453:C:O5'	2.59	0.50
53:S2:453:C:HO2'	53:S2:454:U:P	2.32	0.50
53:S2:599:A:C1'	53:S2:605:A:N3	2.73	0.50
53:S2:947:G:C4	53:S2:948:C:C6	2.99	0.50
53:S2:962:A:C4	53:S2:963:A:C8	3.00	0.50
53:S2:1107:G:C2	53:S2:1108:G:C8	2.99	0.50
53:S2:1226:G:N2	53:S2:1639:G:C5	2.79	0.50
53:S2:1310:U:O2	53:S2:1310:U:C2'	2.59	0.50
53:S2:1449:G:C2	53:S2:1450:G:C4	3.00	0.50
54:SA:53:ARG:HD3	65:SV:82:ASN:CB	2.41	0.50
60:SI:25:ARG:HB2	60:SI:27:TYR:CD2	2.46	0.50
73:SF:194:ASP:OD1	73:SF:194:ASP:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SR:103:LYS:CG	78:SR:117:LEU:HD11	2.41	0.50
83:Sc:46:VAL:HG22	83:Sc:56:LEU:CD2	2.42	0.50
1:A:182:ALA:HB2	32:5:3652:A:O2'	2.11	0.50
3:G:61:ILE:O	3:G:62:ARG:C	2.53	0.50
6:L:74:ARG:NH2	32:5:76:A:C8	2.79	0.50
7:M:3:PHE:CZ	32:5:4763:U:H1'	2.47	0.50
9:O:66:PRO:HD2	35:B:264:PHE:CD2	2.47	0.50
11:R:130:ASN:O	11:R:130:ASN:CG	2.54	0.50
14:U:113:ARG:NH1	32:5:2703:G:OP1	2.44	0.50
25:g:83:CYS:O	25:g:85:LYS:N	2.44	0.50
30:m:98:LYS:HD3	30:m:118:THR:HG21	1.93	0.50
32:5:98:A:C5	32:5:99:A:C8	2.99	0.50
32:5:237:G:O2'	32:5:238:C:OP2	2.27	0.50
32:5:467:U:C4	32:5:468:U:C5	2.99	0.50
32:5:500:G:N2	32:5:504:G:C5	2.79	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
32:5:994:G:C2	32:5:995:C:C2	3.00	0.50
32:5:1218:G:C6	32:5:1219:G:H1'	2.46	0.50
32:5:1268:G:C1'	32:5:2111:G:C5	2.95	0.50
32:5:1359:G:H2'	32:5:1360:G:N9	2.27	0.50
32:5:1367:C:H3'	32:5:1368:A:H5''	1.93	0.50
32:5:1427:A:H2'	32:5:1428:U:O5'	2.12	0.50
32:5:1609:U:C4	32:5:1610:C:C4	3.00	0.50
32:5:1609:U:O4	32:5:1610:C:C4	2.65	0.50
32:5:1671:U:O2	32:5:1672:U:C6	2.64	0.50
32:5:1943:A:C5	32:5:1944:A:H1'	2.47	0.50
32:5:1987:C:O2	32:5:1987:C:C2'	2.57	0.50
32:5:1993:C:N3	32:5:1994:C:C5	2.79	0.50
32:5:2089:G:HO2'	32:5:2090:U:P	2.34	0.50
32:5:2128:G:C5	32:5:2129:C:C5	3.00	0.50
32:5:2273:G:C2	32:5:2274:C:C2	3.00	0.50
32:5:2318:G:N2	32:5:2322:G:N3	2.59	0.50
32:5:2325:C:C2	32:5:2326:G:C8	2.99	0.50
32:5:2342:G:N2	32:5:2344:U:O4'	2.45	0.50
32:5:2399:G:N2	32:5:2400:G:C4	2.80	0.50
32:5:2783:A:C5	32:5:2784:C:C4	3.00	0.50
32:5:2805:C:C4	32:5:2806:A:C5	3.00	0.50
32:5:3604:A:C5	32:5:3605:C:C6	3.00	0.50
32:5:3858:C:N3	32:5:3859:G:N9	2.59	0.50
32:5:3862:A:C5	32:5:3863:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3936:A:C6	32:5:3937:C:C5	3.00	0.50
32:5:4066:U:H2'	32:5:4067:U:O4'	2.12	0.50
32:5:4479:A:C6	32:5:4480:A:H1'	2.47	0.50
32:5:4526:U:H2'	32:5:4527:G:O4'	2.11	0.50
32:5:4600:G:C2	32:5:4609:G:C6	2.99	0.50
32:5:4649:G:H2'	32:5:4650:G:O4'	2.12	0.50
32:5:4978:G:O2'	32:5:4979:A:O5'	2.22	0.50
32:5:4981:G:N1	32:5:4982:A:C5	2.80	0.50
32:5:5006:U:C1'	32:5:5042:A:C5	2.91	0.50
33:7:30:C:C4	33:7:48:G:C2	3.00	0.50
33:7:69:U:N3	33:7:70:G:N7	2.59	0.50
34:8:9:A:N3	34:8:10:G:C8	2.80	0.50
34:8:143:G:C6	34:8:144:U:C5	3.00	0.50
39:I:171:TRP:HE3	39:I:181:PHE:HB2	1.77	0.50
42:j:58:THR:O	42:j:59:THR:C	2.54	0.50
48:z:274:GLY:HA2	48:z:282:PHE:CD1	2.47	0.50
49:3:25:C:C4	49:3:26:G:C8	2.99	0.50
50:4:50:G:C4	50:4:51:G:C8	3.00	0.50
53:S2:27:A:C2	53:S2:28:U:C1'	2.94	0.50
53:S2:104:A:C6	53:S2:105:U:C6	2.99	0.50
53:S2:339:A:H2'	53:S2:340:C:H6	1.73	0.50
53:S2:367:U:O2'	53:S2:371:A:C5	2.48	0.50
53:S2:466:G:H3'	53:S2:466:G:N3	2.26	0.50
53:S2:477:G:N2	53:S2:478:G:C4	2.79	0.50
53:S2:527:C:H2'	53:S2:528:A:H8	1.76	0.50
53:S2:664:A:C2	53:S2:665:G:C8	3.00	0.50
53:S2:841:G:N1	53:S2:842:C:C5	2.65	0.50
53:S2:870:A:C6	53:S2:915:G:N9	2.63	0.50
53:S2:902:G:C2	53:S2:903:A:C4	3.00	0.50
53:S2:970:G:H4'	53:S2:971:G:OP2	2.10	0.50
53:S2:990:A:H2'	53:S2:990:A:N3	2.27	0.50
53:S2:999:G:N2	53:S2:1000:C:N1	2.59	0.50
53:S2:1039:C:O2	53:S2:1039:C:H2'	2.11	0.50
53:S2:1180:C:H2'	53:S2:1181:A:C8	2.46	0.50
53:S2:1184:G:C6	53:S2:1185:C:C5	2.99	0.50
53:S2:1508:A:C6	53:S2:1510:G:H1'	2.46	0.50
53:S2:1573:G:C2	53:S2:1574:C:C2	3.00	0.50
53:S2:1594:A:C2	53:S2:1595:U:N1	2.79	0.50
53:S2:1771:G:N1	53:S2:1772:C:C4	2.80	0.50
53:S2:1793:A:C2	53:S2:1794:C:C4	2.99	0.50
53:S2:1797:U:H2'	53:S2:1798:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SB:67:PHE:HB3	55:SB:86:LEU:O	2.11	0.50
57:SE:54:TYR:CD1	68:SY:17:LEU:HD11	2.46	0.50
73:SF:91:ARG:O	73:SF:92:ILE:C	2.54	0.50
73:SF:112:LEU:HA	73:SF:177:LEU:HD22	1.93	0.50
77:SQ:34:VAL:O	77:SQ:36:GLY:N	2.45	0.50
78:SR:85:VAL:HG12	78:SR:86:PRO:N	2.27	0.50
86:Sg:32:LEU:HD13	86:Sg:92:LEU:HD11	1.93	0.50
86:Sg:87:LEU:HD11	86:Sg:122:SER:HB3	1.94	0.50
86:Sg:131:LEU:HD22	86:Sg:139:LYS:HB3	1.92	0.50
1:A:64:ARG:NH1	32:5:4124:G:C2	2.80	0.50
1:A:209:HIS:HE1	1:A:211:PHE:HD2	1.58	0.50
2:D:222:GLN:O	33:7:48:G:O2'	2.26	0.50
9:O:133:ARG:HD2	32:5:1928:C:N3	2.27	0.50
10:Q:37:ARG:NH1	32:5:2087:C:H5	2.10	0.50
18:Z:127:ASN:N	18:Z:127:ASN:ND2	2.58	0.50
19:a:110:LYS:CG	19:a:128:PHE:O	2.55	0.50
20:b:28:ARG:HB3	32:5:1805:A:C8	2.46	0.50
23:e:57:ASN:ND2	32:5:1899:G:O2'	2.44	0.50
26:h:89:ARG:HA	26:h:92:ARG:HH21	1.76	0.50
32:5:139:G:H2'	32:5:140:G:O4'	2.12	0.50
32:5:208:A:C4'	32:5:232:G:H22	2.20	0.50
32:5:293:G:C1'	32:5:297:U:O4'	2.60	0.50
32:5:370:U:C4	32:5:371:A:C6	3.00	0.50
32:5:476:G:C6	32:5:477:C:C4	2.99	0.50
32:5:1048:G:C5	32:5:1049:C:C5	3.00	0.50
32:5:1196:G:C2	32:5:1197:C:C2	3.00	0.50
32:5:1268:G:H1'	32:5:2111:G:C6	2.47	0.50
32:5:1390:G:C2	32:5:1394:G:O6	2.63	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
32:5:1566:C:H2'	32:5:1567:U:H6	1.76	0.50
32:5:1621:A:O2'	32:5:1622:U:H5'	2.10	0.50
32:5:1776:A:N3	32:5:1777:C:C6	2.79	0.50
32:5:1895:G:H2'	32:5:1896:A:O5'	2.12	0.50
32:5:1895:G:C5	32:5:1896:A:N3	2.79	0.50
32:5:1906:U:C2'	32:5:1907:A:H5'	2.42	0.50
32:5:2267:U:H3'	32:5:2268:A:H5''	1.94	0.50
32:5:2453:A:N1	32:5:2454:U:C5	2.77	0.50
32:5:2453:A:C5	32:5:2507:A:C8	2.99	0.50
32:5:2479:G:C2	32:5:2480:G:C8	3.00	0.50
32:5:2496:G:C2	32:5:2497:C:N1	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2576:G:N1	32:5:2577:C:C5	2.79	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
32:5:2783:A:C2	32:5:2784:C:N1	2.80	0.50
32:5:3593:C:C4'	32:5:3594:C:OP2	2.55	0.50
32:5:3655:C:N4	32:5:3656:A:N7	2.60	0.50
32:5:3837:C:H2'	32:5:3838:U:C1'	2.42	0.50
32:5:4287:G:C4	32:5:4288:C:C5	3.00	0.50
32:5:4314:C:H2'	32:5:4314:C:O2	2.12	0.50
32:5:4527:G:C5	32:5:4556:U:C5	3.00	0.50
32:5:4771:C:H6	32:5:4772:C:C6	2.29	0.50
32:5:4883:C:HO2'	32:5:4884:G:P	2.28	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
32:5:5050:C:C2	32:5:5051:C:C6	3.00	0.50
34:8:70:G:N3	34:8:87:G:N2	2.59	0.50
34:8:80:A:C5	34:8:81:C:C6	2.99	0.50
48:z:90:GLY:O	48:z:287:THR:HG21	2.12	0.50
49:3:9:A:O4'	49:3:46:G:N2	2.45	0.50
50:4:30:C:C2	50:4:42:G:C2	3.00	0.50
50:4:51:G:N2	50:4:296:C:C2	2.79	0.50
53:S2:31:U:O2	53:S2:644:G:C2	2.65	0.50
53:S2:373:G:H4'	62:SL:85:THR:HG21	1.93	0.50
53:S2:377:G:C5	53:S2:378:U:C5	3.00	0.50
53:S2:497:C:N3	53:S2:506:G:N2	2.59	0.50
53:S2:579:C:H2'	53:S2:579:C:O2	2.10	0.50
53:S2:952:G:H2'	53:S2:953:C:O4'	2.12	0.50
53:S2:957:A:O2'	53:S2:958:G:N2	2.45	0.50
53:S2:1029:G:C6	53:S2:1030:A:N7	2.79	0.50
53:S2:1184:G:C5	53:S2:1185:C:C5	2.99	0.50
53:S2:1291:A:O2'	85:Sf:148:TYR:C	2.55	0.50
53:S2:1292:C:C5	85:Sf:150:PHE:N	2.79	0.50
53:S2:1500:G:C5	53:S2:1501:C:C5	3.00	0.50
53:S2:1828:C:C2'	53:S2:1829:G:O4'	2.56	0.50
53:S2:1840:U:C4	53:S2:1841:C:C5	2.98	0.50
57:SE:72:ILE:HG22	57:SE:73:ASP:OD1	2.11	0.50
57:SE:121:TYR:HB2	57:SE:161:GLN:HE21	1.74	0.50
58:SG:57:ASP:HB3	58:SG:58:LYS:O	2.11	0.50
72:SD:103:GLU:OE1	72:SD:106:ARG:NH2	2.45	0.50
75:SM:19:GLN:CG	75:SM:88:TRP:HB3	2.42	0.50
80:ST:52:TRP:HE3	80:ST:53:PHE:H	1.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:SZ:49:LEU:HA	82:SZ:83:LEU:HD13	1.92	0.50
86:Sg:239:LEU:HD23	86:Sg:250:ALA:HA	1.93	0.50
6:L:69:LYS:HA	6:L:159:ASN:HD21	1.76	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
22:d:34:HIS:CD2	32:5:5048:A:N9	2.79	0.50
32:5:57:G:N2	32:5:58:G:N2	2.59	0.50
32:5:68:U:C4	32:5:69:A:N9	2.80	0.50
32:5:265:C:H4'	32:5:266:C:OP1	2.12	0.50
32:5:268:G:C6	32:5:269:G:N7	2.80	0.50
32:5:271:C:C2	32:5:272:U:H6	2.24	0.50
32:5:518:G:C6	32:5:519:C:C4	3.00	0.50
32:5:671:G:C6	32:5:672:C:C4	3.00	0.50
32:5:698:G:C6	32:5:699:C:C5	2.99	0.50
32:5:722:G:N2	36:C:343:GLN:HE22	2.08	0.50
32:5:738:C:O2	32:5:739:G:C8	2.65	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
32:5:1367:C:C2	32:5:1370:G:C2'	2.92	0.50
32:5:1368:A:O2'	32:5:1369:C:P	2.70	0.50
32:5:1374:G:C4	32:5:1375:C:C6	3.00	0.50
32:5:1491:A:C2	32:5:1492:G:C8	3.00	0.50
32:5:1755:C:C3'	32:5:1756:U:H5''	2.38	0.50
32:5:1816:C:O2	32:5:1816:C:C2'	2.60	0.50
32:5:1910:G:N3	32:5:1911:C:C6	2.79	0.50
32:5:1983:A:C2	32:5:2008:U:C5	2.95	0.50
32:5:2021:G:C2	32:5:2022:C:N1	2.80	0.50
32:5:2446:C:O2'	32:5:2447:U:C5'	2.60	0.50
32:5:2458:C:H1'	32:5:3672:G:H21	1.76	0.50
32:5:2503:G:H22	32:5:4084:G:H5'	1.75	0.50
32:5:2507:A:H2'	32:5:2507:A:N3	2.26	0.50
32:5:2509:C:N3	32:5:2510:G:C6	2.79	0.50
32:5:2529:A:C8	32:5:2532:C:N4	2.80	0.50
32:5:2609:G:N1	32:5:2731:C:C2	2.79	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
32:5:2711:G:H5''	32:5:2712:G:H5''	1.92	0.50
32:5:3651:A:H2'	32:5:3652:A:O4'	2.12	0.50
32:5:3652:A:C3'	32:5:3653:A:C8	2.95	0.50
32:5:3862:A:C2	32:5:3863:C:C1'	2.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3878:C:C2	32:5:4518:A:C6	2.99	0.50
32:5:3879:G:O6	32:5:3882:C:C5	2.64	0.50
32:5:4238:G:N2	32:5:4287:G:C5	2.80	0.50
32:5:4275:G:C6	32:5:4276:G:N7	2.80	0.50
32:5:4405:G:H4'	39:I:4:ARG:HD3	1.92	0.50
32:5:4591:U:H2'	32:5:4592:C:C6	2.47	0.50
32:5:4879:C:C2	32:5:4880:C:C6	3.00	0.50
33:7:8:G:C2	33:7:9:C:C6	3.00	0.50
34:8:5:U:H2'	34:8:6:C:C6	2.47	0.50
34:8:80:A:C5	34:8:81:C:C5	2.98	0.50
34:8:84:A:H5'	34:8:85:U:C6	2.46	0.50
35:B:240:LEU:HB3	35:B:244:THR:HG21	1.92	0.50
38:F:124:PHE:CD2	38:F:196:ILE:CG2	2.95	0.50
39:I:4:ARG:NH2	39:I:9:TYR:OH	2.43	0.50
48:z:24:ASN:OD1	48:z:24:ASN:C	2.54	0.50
48:z:134:LEU:HD23	48:z:188:ILE:HB	1.93	0.50
49:3:39:G:C4	49:3:40:C:C6	2.99	0.50
50:4:173:A:H2'	50:4:173:A:OP2	2.11	0.50
50:4:201:A:C5	50:4:202:C:H1'	2.46	0.50
53:S2:29:G:C4	53:S2:30:C:C5	2.99	0.50
53:S2:51:U:O2	53:S2:52:G:C8	2.63	0.50
53:S2:59:U:H2'	53:S2:60:A:H2'	1.94	0.50
53:S2:84:A:C4	53:S2:85:A:C8	3.00	0.50
53:S2:336:A:C6	53:S2:337:C:C4	2.99	0.50
53:S2:457:C:C4	53:S2:458:A:C5	3.00	0.50
53:S2:649:U:O2	53:S2:649:U:C2'	2.50	0.50
53:S2:662:G:O5'	53:S2:662:G:C8	2.65	0.50
53:S2:751:G:N1	53:S2:791:C:C2	2.80	0.50
53:S2:1064:C:N3	53:S2:1065:G:C8	2.79	0.50
53:S2:1077:A:C2	53:S2:1078:C:C6	3.00	0.50
53:S2:1082:A:H2'	53:S2:1084:A:O5'	2.12	0.50
53:S2:1083:A:N3	53:S2:1859:A:C2'	2.75	0.50
53:S2:1083:A:N7	53:S2:1861:G:C6	2.80	0.50
53:S2:1134:G:N3	53:S2:1135:C:C5	2.74	0.50
53:S2:1310:U:H4'	85:Sf:143:LYS:HG3	1.94	0.50
53:S2:1551:U:H3'	53:S2:1552:G:C8	2.46	0.50
56:SC:209:VAL:HG21	56:SC:233:LEU:CD1	2.42	0.50
57:SE:11:ARG:HH21	57:SE:20:LEU:HB3	1.77	0.50
57:SE:195:ILE:O	57:SE:196:THR:CB	2.59	0.50
73:SF:166:ILE:O	73:SF:166:ILE:CG2	2.60	0.50
6:L:38:ALA:O	6:L:39:ARG:C	2.54	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:N:93:LYS:NZ	32:5:4177:C:OP1	2.43	0.50
9:O:58:LEU:HD11	9:O:145:VAL:HG13	1.94	0.50
15:V:14:PHE:CE2	15:V:91:LYS:HG3	2.47	0.50
27:i:38:LYS:O	27:i:42:ASP:OD1	2.29	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
32:5:112:C:N3	32:5:113:A:C8	2.80	0.50
32:5:298:G:C2	32:5:299:C:N1	2.80	0.50
32:5:479:G:C6	32:5:480:C:C4	3.00	0.50
32:5:1097:C:H42	32:5:1198:G:H1	1.60	0.50
32:5:1098:G:C6	32:5:1099:C:C4	2.99	0.50
32:5:1362:G:C6	32:5:1363:C:C4	2.99	0.50
32:5:1378:C:H5''	32:5:1379:C:C3'	2.42	0.50
32:5:1394:G:H2'	32:5:1395:U:C5	2.47	0.50
32:5:1430:C:C4	32:5:1431:C:C5	2.99	0.50
32:5:1541:C:H1'	32:5:2449:A:N3	2.27	0.50
32:5:1575:A:H2'	32:5:1576:G:C8	2.47	0.50
32:5:1598:C:O2	32:5:1599:A:C8	2.47	0.50
32:5:1848:C:H5''	32:5:1848:C:C6	2.46	0.50
32:5:1895:G:C6	32:5:1896:A:N3	2.80	0.50
32:5:2089:G:C6	32:5:2262:G:O2'	2.61	0.50
32:5:2250:C:C2	32:5:2253:A:C6	2.99	0.50
32:5:2603:C:C2	32:5:2604:C:C6	2.99	0.50
32:5:3645:U:OP1	32:5:3646:A:OP2	2.30	0.50
32:5:3692:A:N1	32:5:3693:U:H1'	2.27	0.50
32:5:3709:U:C3'	32:5:3710:G:C5'	2.88	0.50
32:5:4096:C:C4	32:5:4097:G:N9	2.80	0.50
32:5:4139:G:C2	32:5:4140:C:N1	2.79	0.50
32:5:4194:U:O4	32:5:4197:G:H5''	2.12	0.50
32:5:4562:C:O2	32:5:4563:U:C6	2.65	0.50
32:5:4723:A:C4	32:5:4724:A:C8	2.99	0.50
32:5:4731:G:N7	32:5:4732:G:C6	2.80	0.50
32:5:4735:G:C6	32:5:4736:C:C5	3.00	0.50
32:5:4950:U:C5	32:5:4952:G:C8	2.99	0.50
34:8:46:G:C4	34:8:47:C:C5	3.00	0.50
39:I:61:SER:HA	39:I:126:VAL:HG22	1.92	0.50
40:P:57:CYS:HB3	40:P:72:GLN:HB2	1.92	0.50
41:W:8:PHE:C	41:W:8:PHE:HD1	2.19	0.50
43:n:2:ARG:CG	53:S2:1842:C:OP2	2.57	0.50
46:K:162:CYS:N	46:K:163:PRO:HD3	2.27	0.50
48:z:283:GLU:OE2	48:z:347:GLN:HB2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:4:20:G:C2	50:4:21:C:C2	3.00	0.50
53:S2:30:C:H2'	53:S2:31:U:C6	2.47	0.50
53:S2:43:U:O2	53:S2:484:A:H2	1.95	0.50
53:S2:43:U:C2	53:S2:484:A:H2	2.30	0.50
53:S2:70:G:C6	53:S2:71:G:C6	3.00	0.50
53:S2:74:G:H5'	53:S2:75:G:OP2	2.11	0.50
53:S2:306:C:H3'	53:S2:307:G:H5'	1.94	0.50
53:S2:328:U:H2'	53:S2:329:G:O4'	2.11	0.50
53:S2:351:G:N1	53:S2:352:U:C5	2.79	0.50
53:S2:452:G:H2'	53:S2:453:C:O5'	2.12	0.50
53:S2:648:A:C2	53:S2:649:U:N1	2.77	0.50
53:S2:673:G:C6	53:S2:674:C:C4	3.00	0.50
53:S2:905:C:H2'	53:S2:906:U:O4'	2.12	0.50
53:S2:957:A:O2'	53:S2:958:G:C2	2.63	0.50
53:S2:1053:C:C2	53:S2:1054:G:N7	2.80	0.50
53:S2:1292:C:O5'	85:Sf:149:CYS:CA	2.59	0.50
53:S2:1404:U:C4'	53:S2:1581:C:O2	2.60	0.50
53:S2:1433:C:C2'	53:S2:1434:C:C1'	2.86	0.50
53:S2:1466:G:N1	53:S2:1467:C:C4	2.79	0.50
53:S2:1784:G:C6	53:S2:1785:C:C4	3.00	0.50
54:SA:11:LYS:O	78:SR:111:PHE:CE1	2.65	0.50
57:SE:99:PHE:N	57:SE:99:PHE:CD1	2.78	0.50
57:SE:224:ASN:OD1	57:SE:224:ASN:N	2.45	0.50
59:SH:19:PHE:CZ	59:SH:50:GLU:HB2	2.46	0.50
61:SJ:130:ILE:HG12	61:SJ:135:ILE:HD11	1.94	0.50
83:Sc:60:GLU:HG2	83:Sc:63:ARG:HD3	1.89	0.50
1:A:242:ARG:HH11	1:A:242:ARG:HB2	1.77	0.50
1:A:242:ARG:CG	1:A:243:THR:N	2.73	0.50
5:J:154:LYS:O	5:J:155:HIS:HB2	2.11	0.50
8:N:120:TRP:HE1	8:N:122:GLY:C	2.19	0.50
22:d:23:ARG:NH2	32:5:5057:C:O3'	2.44	0.50
32:5:30:C:H2'	32:5:31:U:O5'	2.12	0.50
32:5:57:G:C2'	32:5:58:G:O5'	2.59	0.50
32:5:101:A:N1	32:5:102:G:N7	2.60	0.50
32:5:247:G:C2	32:5:248:C:C5	3.00	0.50
32:5:254:G:C6	32:5:255:C:C5	2.99	0.50
32:5:314:G:C2	32:5:4355:G:C5	2.99	0.50
32:5:331:G:N2	32:5:332:C:C4	2.79	0.50
32:5:731:G:C6	32:5:732:A:C4	3.00	0.50
32:5:986:C:H2'	32:5:987:C:O4'	2.11	0.50
32:5:1248:C:C4	32:5:1249:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1476:C:C4	32:5:1477:C:H5	2.27	0.50
32:5:1522:G:H2'	32:5:1522:G:N3	2.27	0.50
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
32:5:1958:A:N1	32:5:2026:A:C6	2.80	0.50
32:5:1991:A:C8	32:5:1992:U:O2	2.65	0.50
32:5:2090:U:O4'	32:5:2090:U:OP2	2.29	0.50
32:5:2095:A:H61	38:F:41:GLN:HG2	1.77	0.50
32:5:2110:C:C6	32:5:2110:C:P	3.05	0.50
32:5:2408:U:N1	32:5:2409:U:O4	2.44	0.50
32:5:2452:G:N2	32:5:2467:U:N3	2.59	0.50
32:5:2556:G:C2	32:5:2572:C:N3	2.79	0.50
32:5:2594:C:O2	32:5:2595:C:C6	2.64	0.50
32:5:2602:G:C4	32:5:2603:C:C6	3.00	0.50
32:5:2678:A:C6	32:5:2679:G:N7	2.80	0.50
32:5:3689:G:C6	32:5:3690:U:C5	3.00	0.50
32:5:4082:G:N1	32:5:4083:U:C4	2.80	0.50
32:5:4098:A:C6	32:5:4099:G:N7	2.80	0.50
32:5:4107:G:C2	32:5:4108:G:C8	2.99	0.50
32:5:4257:A:C2'	32:5:4258:C:H6	2.20	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
32:5:4700:A:C6	32:5:4701:A:C5	2.99	0.50
32:5:5052:C:N3	32:5:5053:U:C6	2.80	0.50
34:8:108:A:N3	34:8:112:G:N1	2.60	0.50
35:B:314:ILE:HD13	35:B:326:VAL:CG1	2.42	0.50
35:B:314:ILE:HD12	35:B:314:ILE:N	2.27	0.50
36:C:178:ASN:N	36:C:178:ASN:HD22	2.09	0.50
47:q:18:ILE:CG1	47:q:66:ARG:HD3	2.42	0.50
50:4:54:G:N2	50:4:293:C:H1'	2.26	0.50
53:S2:316:G:C2	53:S2:317:C:C6	3.00	0.50
53:S2:631:U:H5'	53:S2:631:U:C6	2.47	0.50
53:S2:635:G:C2	53:S2:636:C:C6	3.00	0.50
53:S2:828:G:C6	53:S2:829:C:C4	3.00	0.50
53:S2:841:G:O2'	53:S2:842:C:C6	2.65	0.50
53:S2:923:G:N2	53:S2:924:G:C4	2.80	0.50
53:S2:994:C:C2	53:S2:995:G:H8	2.23	0.50
53:S2:1039:C:C4	53:S2:1040:G:N7	2.80	0.50
53:S2:1058:A:N3	53:S2:1058:A:H2'	2.26	0.50
53:S2:1109:C:C1'	53:S2:1110:G:P	2.99	0.50
53:S2:1715:A:N1	53:S2:1819:A:C2	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SE:253:ASP:OD1	57:SE:253:ASP:C	2.55	0.50
60:SI:70:GLU:HB3	60:SI:112:TRP:HH2	1.77	0.50
64:SO:121:ARG:HH11	64:SO:121:ARG:HG2	1.77	0.50
66:SW:78:ARG:HD3	66:SW:126:LEU:CD2	2.41	0.50
83:Sc:14:VAL:HG21	83:Sc:30:VAL:CB	2.40	0.50
7:M:116:ARG:NH2	9:O:201:PHE:CE2	2.80	0.49
17:Y:49:ILE:HD13	17:Y:80:ILE:HD13	1.93	0.49
32:5:12:A:N3	32:5:14:C:C5	2.80	0.49
32:5:25:A:C5	32:5:341:G:C8	3.00	0.49
32:5:144:G:N2	32:5:145:G:C5	2.79	0.49
32:5:247:G:C6	32:5:248:C:C4	3.00	0.49
32:5:288:G:C4	32:5:289:C:C6	3.00	0.49
32:5:970:G:H2'	32:5:971:U:C4'	2.42	0.49
32:5:978:G:C4	32:5:979:C:C6	3.00	0.49
32:5:1092:G:H2'	32:5:1093:C:O4'	2.10	0.49
32:5:1168:G:N2	32:5:1169:G:C4	2.80	0.49
32:5:1262:G:N3	32:5:1263:A:C8	2.80	0.49
32:5:1391:A:C4	32:5:1392:A:C8	3.00	0.49
32:5:1441:C:H2'	32:5:1442:C:O4'	2.12	0.49
32:5:1519:C:HO2'	36:C:102:PHE:HZ	1.59	0.49
32:5:1617:G:N3	32:5:1617:G:H2'	2.26	0.49
32:5:1770:A:H2'	32:5:1771:U:O4'	2.12	0.49
32:5:1829:G:C4	32:5:1830:G:C8	3.00	0.49
32:5:1895:G:C6	32:5:1896:A:C2	2.99	0.49
32:5:1948:G:C4	32:5:1949:U:C5	3.00	0.49
32:5:2082:G:C6	32:5:2083:C:N4	2.80	0.49
32:5:2083:C:H3'	32:5:2084:C:H5''	1.94	0.49
32:5:2496:G:N3	32:5:2497:C:C6	2.80	0.49
32:5:2644:G:N2	32:5:2645:G:H1'	2.26	0.49
32:5:2704:C:H2'	32:5:2704:C:O2	2.12	0.49
32:5:2733:C:C4	32:5:2734:U:C5	2.99	0.49
32:5:2772:C:C2	32:5:2773:G:C8	3.00	0.49
32:5:3621:A:C8	32:5:4642:U:O2	2.64	0.49
32:5:3811:G:C2	32:5:3814:U:C4	3.00	0.49
32:5:4109:G:C4	32:5:4110:C:C6	3.00	0.49
32:5:4269:G:C6	32:5:4270:C:C4	3.00	0.49
32:5:4281:A:N3	32:5:4283:G:C5	2.79	0.49
32:5:4456:C:H2'	32:5:4456:C:O2	2.11	0.49
32:5:4915:G:C2	32:5:4916:G:C8	3.00	0.49
32:5:4982:A:C2	32:5:4983:C:N1	2.79	0.49
32:5:5028:G:C2	32:5:5029:C:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:54:A:N3	33:7:55:A:H8	2.01	0.49
33:7:66:G:C6	33:7:67:C:C4	3.01	0.49
34:8:95:A:C2	34:8:96:C:N1	2.80	0.49
38:F:181:LEU:HD21	38:F:206:ALA:HA	1.94	0.49
39:I:12:CYS:SG	39:I:59:GLN:HG2	2.52	0.49
41:W:4:GLU:OE2	41:W:30:GLN:NE2	2.45	0.49
46:K:14:TYR:CD2	46:K:63:THR:OG1	2.65	0.49
49:3:31:C:C4	49:3:32:C:C5	3.00	0.49
50:4:51:G:N3	50:4:52:C:C6	2.80	0.49
53:S2:142:C:N3	58:SG:185:LEU:HD22	2.27	0.49
53:S2:299:A:C6	53:S2:300:U:C5	2.99	0.49
53:S2:309:G:C2	53:S2:310:C:C2	3.00	0.49
53:S2:828:G:C6	53:S2:829:C:C6	2.99	0.49
53:S2:834:C:H5'	53:S2:835:C:O5'	2.12	0.49
53:S2:998:A:OP2	53:S2:999:G:C8	2.64	0.49
53:S2:1107:G:N1	53:S2:1108:G:C5	2.80	0.49
53:S2:1182:A:H2'	53:S2:1183:A:O4'	2.12	0.49
53:S2:1374:C:O2'	53:S2:1375:G:H5'	2.12	0.49
53:S2:1435:C:C2	53:S2:1436:C:C6	3.00	0.49
53:S2:1481:G:H2'	53:S2:1482:C:O4'	2.12	0.49
53:S2:1589:A:C2'	53:S2:1590:C:O4'	2.60	0.49
53:S2:1678:A:C5	53:S2:1679:A:C8	3.00	0.49
53:S2:1710:C:C4	53:S2:1711:U:C5	3.00	0.49
55:SB:145:LYS:CE	78:SR:128:PHE:CE2	2.79	0.49
57:SE:11:ARG:NH1	57:SE:24:THR:OG1	2.45	0.49
64:SO:103:ASN:HB3	64:SO:142:ARG:HB2	1.94	0.49
80:ST:33:TRP:N	80:ST:33:TRP:CE3	2.80	0.49
7:M:46:ARG:NH1	32:5:936:C:H2'	2.25	0.49
9:O:168:TYR:CG	32:5:4758:U:C2	3.00	0.49
11:R:4:LEU:HD21	11:R:33:ALA:HB2	1.93	0.49
28:k:11:PHE:HA	28:k:14:THR:HG22	1.94	0.49
32:5:125:C:N3	32:5:126:C:H5	2.09	0.49
32:5:144:G:N2	32:5:145:G:N9	2.60	0.49
32:5:164:G:C6	32:5:165:A:N7	2.80	0.49
32:5:176:G:H2'	32:5:177:G:O4'	2.12	0.49
32:5:226:G:O2'	32:5:227:A:OP2	2.16	0.49
32:5:468:U:O2	32:5:469:C:C1'	2.60	0.49
32:5:471:A:C5	32:5:472:C:C5	2.99	0.49
32:5:943:A:H4'	32:5:944:A:OP2	2.12	0.49
32:5:986:C:C4	32:5:1068:G:C2	2.99	0.49
32:5:1049:C:C4	32:5:1050:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1065:G:C2	32:5:1066:G:C4	3.00	0.49
32:5:1372:A:H2'	32:5:1372:A:N3	2.27	0.49
32:5:1550:G:N1	32:5:1579:C:C2	2.80	0.49
32:5:1620:U:C2	32:5:1621:A:N7	2.80	0.49
32:5:1684:A:N1	32:5:1685:G:C8	2.79	0.49
32:5:1776:A:C2	32:5:1777:C:N1	2.80	0.49
32:5:1777:C:C4	32:5:1778:C:C5	3.00	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'	2.11	0.49
32:5:1938:C:H4'	32:5:1939:A:O5'	2.11	0.49
32:5:1999:A:C2'	32:5:2000:G:O4'	2.60	0.49
32:5:2020:U:O2	32:5:2020:U:H2'	2.12	0.49
32:5:2021:G:C6	32:5:2022:C:C5	3.00	0.49
32:5:2319:C:H2'	32:5:2320:G:H5'	1.95	0.49
32:5:2455:G:C2'	32:5:2456:G:O5'	2.60	0.49
32:5:2646:C:O2	32:5:2646:C:C2'	2.59	0.49
32:5:2712:G:C6	32:5:2713:C:C5	3.00	0.49
32:5:2768:C:O2	32:5:2768:C:O4'	2.29	0.49
32:5:3642:A:C4	42:j:3:LYS:HB3	2.46	0.49
32:5:3711:A:H2'	32:5:3713:U:OP2	2.11	0.49
32:5:3847:C:O2	32:5:3848:U:C6	2.65	0.49
32:5:4122:G:H2'	32:5:4122:G:N3	2.26	0.49
32:5:4175:G:N1	32:5:4176:C:C4	2.79	0.49
32:5:4296:U:C4	32:5:4297:G:N7	2.80	0.49
32:5:4454:G:N3	32:5:4454:G:H2'	2.27	0.49
32:5:4463:U:C5	32:5:4488:A:N7	2.80	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
32:5:4723:A:H2'	32:5:4724:A:H8	1.78	0.49
32:5:5001:U:H2'	32:5:5002:U:O4'	2.11	0.49
32:5:5050:C:N3	32:5:5051:C:C6	2.80	0.49
33:7:33:U:C2	33:7:34:C:C5	3.00	0.49
34:8:85:U:C5	34:8:87:G:C5	3.00	0.49
34:8:118:C:C2	34:8:119:C:C5	2.99	0.49
34:8:123:U:O2	34:8:125:C:O2	2.29	0.49
36:C:180:ILE:O	36:C:184:TYR:HB2	2.12	0.49
46:K:117:ARG:HE	46:K:117:ARG:CA	2.25	0.49
48:z:152:ALA:CB	48:z:159:PHE:CE2	2.83	0.49
48:z:270:ILE:HG22	48:z:285:PHE:CD2	2.46	0.49
48:z:363:GLY:O	48:z:366:GLN:N	2.44	0.49
48:z:380:ASP:O	50:4:192:A:N6	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:122:G:N1	53:S2:123:G:C5	2.80	0.49
53:S2:164:A:C2	53:S2:165:G:C4	3.00	0.49
53:S2:185:G:C2	53:S2:186:C:C4	3.00	0.49
53:S2:402:C:H2'	53:S2:402:C:O2	2.10	0.49
53:S2:440:G:C2	53:S2:454:U:N3	2.80	0.49
53:S2:496:C:O2'	53:S2:497:C:O5'	2.30	0.49
53:S2:522:A:O3'	61:SJ:131:ARG:NH2	2.45	0.49
53:S2:828:G:N1	53:S2:829:C:C6	2.80	0.49
53:S2:837:A:H61	68:SY:47:MET:C	2.20	0.49
53:S2:849:A:C4	53:S2:850:C:C5	3.00	0.49
53:S2:922:A:OP1	66:SW:28:ARG:CZ	2.60	0.49
53:S2:973:C:N3	53:S2:974:C:C6	2.80	0.49
53:S2:1049:A:C5	53:S2:1070:A:C2	3.00	0.49
53:S2:1315:U:C5	53:S2:1316:C:H1'	2.47	0.49
53:S2:1327:G:C2	53:S2:1503:C:C2	2.99	0.49
53:S2:1510:G:C6	53:S2:1511:U:C6	3.00	0.49
53:S2:1551:U:H4'	53:S2:1558:C:H1'	1.94	0.49
53:S2:1610:G:C2	53:S2:1611:G:C8	3.00	0.49
61:SJ:158:ASP:OD1	61:SJ:159:PHE:N	2.45	0.49
68:SY:20:ARG:CZ	68:SY:74:MET:HE2	2.42	0.49
68:SY:82:ALA:O	68:SY:86:GLU:HB2	2.11	0.49
73:SF:115:ALA:O	73:SF:119:SER:N	2.46	0.49
74:SK:81:ASP:OD1	74:SK:81:ASP:C	2.54	0.49
82:SZ:85:ARG:O	82:SZ:89:GLN:OE1	2.29	0.49
13:T:141:VAL:HG12	13:T:142:ARG:N	2.27	0.49
20:b:10:HIS:N	20:b:12:GLN:HG3	2.27	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
32:5:88:A:N6	32:5:97:G:H21	2.07	0.49
32:5:187:U:C5	32:5:245:C:C4	3.01	0.49
32:5:371:A:H2'	32:5:372:A:C8	2.47	0.49
32:5:710:G:C2	32:5:711:A:C5	3.01	0.49
32:5:1090:G:C2	32:5:1091:C:C2	3.01	0.49
32:5:1217:G:N3	32:5:1218:G:N7	2.60	0.49
32:5:1233:G:N2	32:5:1234:G:C4	2.80	0.49
32:5:1234:G:C2	32:5:1235:G:C4	3.01	0.49
32:5:1276:C:O2	32:5:1276:C:H2'	2.12	0.49
32:5:1390:G:H3'	32:5:1390:G:C8	2.47	0.49
32:5:1392:A:H2'	32:5:1393:G:H8	1.77	0.49
32:5:1435:G:C6	32:5:1436:C:C4	2.99	0.49
32:5:1479:G:O2'	32:5:1480:C:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1492:G:C2	32:5:1493:G:C4	3.00	0.49
32:5:1517:G:N2	32:5:1650:A:C6	2.81	0.49
32:5:1563:A:N7	53:S2:678:U:H5'	2.26	0.49
32:5:1667:G:C6	32:5:2280:G:N3	2.80	0.49
32:5:1860:U:N3	32:5:1861:U:C5	2.80	0.49
32:5:1871:A:N1	32:5:1872:G:C5	2.81	0.49
32:5:1876:U:O2	32:5:1876:U:H2'	2.12	0.49
32:5:2342:G:C2	32:5:2344:U:C5	3.00	0.49
32:5:2367:A:C8	32:5:2798:A:C4	3.00	0.49
32:5:2599:G:N2	32:5:2747:U:C4	2.81	0.49
32:5:2634:C:O2	32:5:2635:U:C6	2.64	0.49
32:5:2645:G:C6	32:5:2646:C:C4	3.01	0.49
32:5:2664:G:C2	32:5:2671:C:N3	2.80	0.49
32:5:2853:C:N4	32:5:2854:G:C2	2.80	0.49
32:5:2853:C:H5'	32:5:4500:U:OP1	2.11	0.49
32:5:3590:G:C5	32:5:3591:C:C6	3.01	0.49
32:5:3629:A:C5	32:5:3630:A:C8	3.01	0.49
32:5:3657:U:C4	32:5:3658:C:C5	2.99	0.49
32:5:3668:C:C4	32:5:3669:G:C8	3.00	0.49
32:5:4159:C:H2'	32:5:4160:C:H6	1.76	0.49
32:5:4202:U:O2	32:5:4204:C:C4	2.65	0.49
32:5:4565:C:H1'	35:B:262:VAL:HG21	1.93	0.49
32:5:4897:G:C4	32:5:4898:G:C8	3.00	0.49
32:5:4950:U:O2	32:5:4950:U:O4'	2.29	0.49
33:7:33:U:O2	33:7:34:C:C6	2.65	0.49
33:7:36:C:C2	33:7:37:G:C8	3.00	0.49
33:7:114:U:H2'	33:7:115:A:C5'	2.42	0.49
34:8:45:C:C2'	34:8:46:G:O5'	2.60	0.49
34:8:72:A:N7	34:8:73:U:C6	2.80	0.49
34:8:129:C:N3	34:8:130:C:C5	2.81	0.49
35:B:46:PHE:HD1	35:B:47:LEU:N	2.10	0.49
36:C:212:ASN:HD22	36:C:255:SER:HB2	1.77	0.49
46:K:121:LEU:CD1	46:K:129:ILE:HD13	2.39	0.49
48:z:283:GLU:OE2	48:z:347:GLN:CB	2.61	0.49
48:z:413:SER:N	51:9:74:ARG:NE	2.60	0.49
52:6:203:PHE:HB3	52:6:236:ILE:HG12	1.94	0.49
53:S2:10:G:N2	53:S2:11:A:H1'	2.27	0.49
53:S2:41:G:C8	53:S2:485:A:C8	3.01	0.49
53:S2:439:A:H4'	53:S2:1799:G:H4'	1.94	0.49
53:S2:976:G:C2	53:S2:977:C:C2	3.00	0.49
53:S2:1112:U:C4	53:S2:1113:A:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1220:A:H2'	53:S2:1221:G:H5''	1.95	0.49
53:S2:1292:C:C6	85:Sf:150:PHE:N	2.80	0.49
53:S2:1520:G:OP2	53:S2:1520:G:C8	2.65	0.49
53:S2:1629:C:N3	53:S2:1630:A:C8	2.80	0.49
53:S2:1771:G:C6	53:S2:1772:C:C4	3.00	0.49
54:SA:189:ILE:HD11	54:SA:195:TRP:CZ2	2.48	0.49
60:SI:55:TYR:CD2	60:SI:55:TYR:N	2.81	0.49
61:SJ:67:ASP:OD1	61:SJ:67:ASP:C	2.56	0.49
62:SL:89:ARG:HE	62:SL:106:HIS:CD2	2.30	0.49
63:SN:128:TYR:HD1	63:SN:129:TYR:N	2.08	0.49
68:SY:27:VAL:HB	68:SY:69:THR:HG23	1.94	0.49
79:SS:6:PRO:HD2	82:SZ:50:PHE:O	2.11	0.49
79:SS:12:ILE:CG2	79:SS:13:LEU:N	2.74	0.49
86:Sg:219:TRP:N	86:Sg:219:TRP:CD1	2.80	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
3:G:137:ARG:O	3:G:202:VAL:HA	2.12	0.49
11:R:166:THR:HG21	53:S2:872:A:H3'	0.52	0.49
20:b:13:SER:HA	20:b:16:TRP:CZ2	2.47	0.49
22:d:116:ASN:ND2	22:d:116:ASN:C	2.70	0.49
32:5:262:G:C6	32:5:263:G:N7	2.80	0.49
32:5:436:C:O2	32:5:437:G:H8	1.94	0.49
32:5:472:C:N3	32:5:473:C:C4	2.81	0.49
32:5:1290:G:N2	32:5:1291:G:C8	2.80	0.49
32:5:1310:C:N4	32:5:1311:G:N7	2.59	0.49
32:5:1444:G:N2	32:5:1445:U:C4	2.80	0.49
32:5:1445:U:N3	32:5:1446:C:C6	2.80	0.49
32:5:1549:G:N2	32:5:1580:C:C2	2.79	0.49
32:5:1697:G:C4'	32:5:1698:C:OP1	2.59	0.49
32:5:1725:U:C4	32:5:1726:U:C5	3.00	0.49
32:5:1745:G:C6	32:5:1746:A:N7	2.80	0.49
32:5:1780:A:N3	39:I:198:LYS:NZ	2.61	0.49
32:5:1899:G:C6	32:5:1900:C:C4	2.99	0.49
32:5:2115:G:C8	32:5:2116:C:C1'	2.96	0.49
32:5:2253:A:H2	32:5:2260:C:N4	2.09	0.49
32:5:2385:U:H2'	32:5:2386:U:C6	2.47	0.49
32:5:2594:C:C2	32:5:2595:C:C6	3.01	0.49
32:5:2606:G:C6	32:5:2607:C:N4	2.80	0.49
32:5:3692:A:N6	32:5:3693:U:C2	2.81	0.49
32:5:3723:A:N3	32:5:3724:A:C5	2.70	0.49
32:5:3780:G:O6	32:5:3815:G:C2	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3785:A:H2	32:5:4536:C:C1'	2.20	0.49
32:5:3859:G:C4'	40:P:139:TYR:HE1	2.24	0.49
32:5:3907:G:C5	32:5:3909:C:N4	2.80	0.49
32:5:3923:A:C8	32:5:4381:A:C4	3.00	0.49
32:5:4098:A:C2	32:5:4099:G:C4	3.00	0.49
32:5:4154:G:N2	32:5:4155:C:C2	2.80	0.49
32:5:4430:G:O2'	39:I:158:LYS:O	2.26	0.49
32:5:4517:A:OP2	35:B:2:SER:N	2.45	0.49
32:5:4518:A:O2'	35:B:257:TRP:CZ3	2.56	0.49
32:5:5021:C:C2	32:5:5022:U:C5	3.00	0.49
34:8:115:G:C5	34:8:116:C:C5	2.99	0.49
38:F:155:LEU:HD23	38:F:250:ASN:HD21	1.77	0.49
39:I:171:TRP:HB3	39:I:181:PHE:CE2	2.47	0.49
43:n:5:TRP:CZ3	53:S2:1844:U:O4	2.65	0.49
43:n:9:ARG:NH2	53:S2:1851:A:OP1	2.45	0.49
46:K:21:GLU:OE2	46:K:21:GLU:HA	2.12	0.49
49:3:16:U:C2	49:3:60:A:C2	3.01	0.49
50:4:195:U:H2'	50:4:196:C:H6	1.73	0.49
53:S2:30:C:O2'	53:S2:31:U:H5'	2.11	0.49
53:S2:187:G:C2	53:S2:188:C:C2	3.00	0.49
53:S2:339:A:N3	53:S2:340:C:C4	2.77	0.49
53:S2:381:C:H5'	60:SI:49:ARG:HB3	1.94	0.49
53:S2:474:G:N2	53:S2:475:C:N1	2.60	0.49
53:S2:569:A:C5	53:S2:570:C:C5	3.00	0.49
53:S2:616:A:N3	71:Se:12:VAL:HG21	2.27	0.49
53:S2:694:G:C6	53:S2:695:C:N4	2.80	0.49
53:S2:1018:U:C2	53:S2:1019:C:C6	2.93	0.49
53:S2:1058:A:C2	53:S2:1059:G:C4	3.00	0.49
53:S2:1075:C:C2	53:S2:1076:G:C8	3.00	0.49
53:S2:1232:U:C2	53:S2:1233:G:N7	2.80	0.49
53:S2:1249:C:C4	53:S2:1250:A:C5	3.01	0.49
53:S2:1270:G:C2	53:S2:1271:C:C6	3.00	0.49
53:S2:1293:A:C1'	85:Sf:150:PHE:HD2	2.25	0.49
53:S2:1520:G:N3	53:S2:1520:G:H2'	2.27	0.49
53:S2:1578:U:O2'	72:SD:4:GLN:O	2.17	0.49
53:S2:1779:G:C2	53:S2:1780:G:C8	3.00	0.49
53:S2:1786:U:O2	53:S2:1787:G:C8	2.65	0.49
53:S2:1841:C:O2	53:S2:1841:C:C2'	2.60	0.49
53:S2:1860:A:C4	53:S2:1862:G:N7	2.81	0.49
67:SX:61:GLN:CD	67:SX:61:GLN:C	2.80	0.49
78:SR:69:ILE:HG12	78:SR:70:SER:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SR:106:LEU:O	78:SR:109:LEU:HB2	2.12	0.49
79:SS:30:ILE:CD1	79:SS:45:LEU:CD2	2.84	0.49
83:Sc:11:LEU:O	83:Sc:35:MET:HG2	2.13	0.49
6:L:176:PHE:CE1	6:L:178:ALA:HA	2.48	0.49
8:N:181:HIS:CE1	32:5:99:A:H4'	2.47	0.49
12:S:35:PRO:HD2	12:S:39:VAL:HG21	1.94	0.49
21:c:50:ASN:OD1	21:c:76:GLY:C	2.55	0.49
32:5:179:G:C2	32:5:180:C:C2	3.00	0.49
32:5:244:G:N1	32:5:246:G:N7	2.57	0.49
32:5:247:G:C2	32:5:248:C:C2	3.00	0.49
32:5:504:G:O6	32:5:654:C:C4	2.64	0.49
32:5:981:C:C2	37:E:69:TYR:CE2	3.00	0.49
32:5:1205:G:N2	32:5:1206:C:C2	2.81	0.49
32:5:1250:C:C2	32:5:1261:G:N2	2.80	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
32:5:1372:A:C2	32:5:1373:A:C1'	2.96	0.49
32:5:1390:G:O2'	32:5:1470:G:H4'	2.13	0.49
32:5:1475:G:N3	32:5:1476:C:C6	2.80	0.49
32:5:1516:G:C6	32:5:1518:A:C4	3.01	0.49
32:5:1547:A:C5	32:5:1582:U:H1'	2.47	0.49
32:5:1858:A:N3	32:5:1859:C:C6	2.81	0.49
32:5:1965:G:C5	32:5:1966:C:C5	3.01	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
32:5:2353:U:C2	32:5:2354:G:C8	3.01	0.49
32:5:2370:A:O2'	32:5:2826:U:N3	2.28	0.49
32:5:2454:U:C2	32:5:2455:G:C8	3.00	0.49
32:5:2529:A:C4	32:5:2532:C:C5	2.99	0.49
32:5:2674:A:C3'	32:5:2675:G:H5'	2.43	0.49
32:5:2678:A:C4	32:5:2679:G:C8	3.01	0.49
32:5:3701:C:N4	32:5:3745:U:H2'	2.27	0.49
32:5:3842:C:H3'	32:5:3843:C:H2'	1.93	0.49
32:5:4104:G:H3'	32:5:4105:A:C8	2.48	0.49
32:5:4133:C:O2	32:5:4133:C:H2'	2.11	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
32:5:4399:U:O2'	32:5:4518:A:H1'	2.12	0.49
32:5:4767:C:H4'	32:5:4874:A:C2	2.47	0.49
32:5:4881:U:O2'	32:5:4882:U:O5'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4884:G:H2'	32:5:4884:G:N3	2.28	0.49
32:5:4907:G:C2	32:5:4915:G:C2	3.00	0.49
32:5:4942:C:O2	32:5:4942:C:O4'	2.30	0.49
33:7:24:C:C2'	33:7:25:G:O5'	2.60	0.49
33:7:58:A:C5	33:7:59:G:C8	3.00	0.49
33:7:62:U:N3	33:7:64:G:N7	2.61	0.49
34:8:54:C:C5	34:8:55:U:C5	3.01	0.49
34:8:79:G:H2'	34:8:80:A:N3	2.27	0.49
35:B:208:ASN:OD1	35:B:208:ASN:N	2.42	0.49
36:C:341:LEU:HD11	37:E:52:ARG:CD	2.40	0.49
48:z:383:ASN:HB3	50:4:209:G:P	2.52	0.49
49:3:65:G:N3	49:3:66:C:C6	2.80	0.49
50:4:17:C:O2	50:4:18:G:C8	2.64	0.49
52:6:54:ILE:HB	52:6:177:GLU:HB3	1.95	0.49
53:S2:47:G:C6	53:S2:48:C:C4	3.00	0.49
53:S2:64:A:N6	53:S2:82:G:C4	2.80	0.49
53:S2:219:U:C4	53:S2:220:U:C5	3.01	0.49
53:S2:321:C:H2'	53:S2:322:C:C6	2.47	0.49
53:S2:502:C:H2'	53:S2:503:C:C5	2.48	0.49
53:S2:555:A:C2	53:S2:557:U:C4	3.01	0.49
53:S2:583:C:O2	53:S2:583:C:H2'	2.13	0.49
53:S2:681:U:H2'	53:S2:682:U:O4'	2.12	0.49
53:S2:887:U:O4'	53:S2:887:U:O2	2.29	0.49
53:S2:900:C:C2	53:S2:901:G:C8	3.00	0.49
53:S2:999:G:N2	53:S2:1000:C:H1'	2.28	0.49
53:S2:1040:G:N1	53:S2:1041:G:C5	2.80	0.49
53:S2:1101:U:H2'	53:S2:1102:G:C8	2.46	0.49
53:S2:1217:A:H2'	53:S2:1218:C:H6	1.77	0.49
53:S2:1404:U:H4'	53:S2:1581:C:O2	2.12	0.49
53:S2:1405:A:H1'	53:S2:1580:A:N1	2.26	0.49
53:S2:1667:U:C4	53:S2:1668:U:O4	2.66	0.49
54:SA:158:ASP:OD1	54:SA:158:ASP:C	2.56	0.49
57:SE:54:TYR:O	68:SY:15:ASN:ND2	2.45	0.49
66:SW:14:ILE:HD11	66:SW:41:MET:HE1	1.95	0.49
69:Sa:51:ARG:HH12	83:Sc:40:ARG:HD2	1.69	0.49
79:SS:10:GLN:N	79:SS:10:GLN:NE2	2.60	0.49
79:SS:11:HIS:C	79:SS:12:ILE:CD1	2.85	0.49
83:Sc:11:LEU:HB3	83:Sc:55:VAL:HG12	1.86	0.49
2:D:21:ARG:HA	2:D:24:ARG:HE	1.78	0.49
2:D:155:THR:OG1	2:D:179:ARG:NH1	2.46	0.49
2:D:282:GLN:HE21	32:5:1185:G:N2	2.09	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:100:HIS:HA	3:G:103:ARG:HD2	1.94	0.49
7:M:72:TYR:CD2	32:5:920:C:H5'	2.47	0.49
9:O:130:LYS:HG3	9:O:131:PRO:HD2	1.95	0.49
19:a:73:VAL:CG2	19:a:108:TYR:CD2	2.95	0.49
21:c:31:TYR:HE1	21:c:35:LEU:HD22	1.76	0.49
27:i:30:ARG:NH1	32:5:328:A:OP2	2.46	0.49
27:i:39:PHE:CZ	27:i:43:MET:HG2	2.47	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
32:5:66:A:C5	32:5:328:A:C8	3.01	0.49
32:5:141:C:C2	32:5:142:G:C8	3.00	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
32:5:331: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
32:5:467:U:H2'	32:5:467:U:O2	2.12	0.49
32:5:479:G:C5	32:5:480:C:C5	3.00	0.49
32:5:675:C:C2	32:5:676:C:C6	3.01	0.49
32:5:719:C:N3	32:5:720:G:C8	2.78	0.49
32:5:976:G:C2	32:5:977:C:C2	3.01	0.49
32:5:1085:C:O2	32:5:1213:G:C2	2.66	0.49
32:5:1218:G:C6	32:5:1219:G:C8	3.00	0.49
32:5:1268:G:N1	32:5:1270:A:C5	2.79	0.49
32:5:1491:A:C6	32:5:1492:G:C5	3.01	0.49
32:5:1522:G:C6	32:5:1653:A:N6	2.81	0.49
32:5:1522:G:O6	32:5:1653:A:C5	2.66	0.49
32:5:1529:G:C6	32:5:1530:G:N7	2.81	0.49
32:5:1632:A:H3'	32:5:1632:A:N3	2.27	0.49
32:5:2382:A:N3	32:5:2382:A:C2'	2.74	0.49
32:5:2710:C:H3'	32:5:2711:G:C5'	2.42	0.49
32:5:2796:G:H4'	32:5:2797:C:OP2	2.12	0.49
32:5:3652:A:C5	32:5:3691:G:N2	2.81	0.49
32:5:3721:U:C2	32:5:3722:G:H8	2.23	0.49
32:5:3739:C:C6	32:5:3739:C:C4'	2.94	0.49
32:5:4159:C:H2'	32:5:4160:C:C6	2.47	0.49
32:5:4175:G:N2	32:5:4176:C:C2	2.80	0.49
32:5:4337:C:O2'	32:5:4338:G:C5'	2.61	0.49
32:5:4595:G:C6	32:5:4596:C:C4	3.01	0.49
32:5:4683:U:C4	32:5:4707:A:C5	3.01	0.49
32:5:4724:A:H4'	35:B:102:PHE:O	2.13	0.49

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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	0.49
32:5:4979:A:H2'	32:5:4980:C:O4'	2.13	0.49
32:5:5028:G:C2	32:5:5029:C:C2	3.01	0.49
33:7:7:G:C6	33:7:8:G:N7	2.81	0.49
34:8:29:G:C2	34:8:30:U:C6	3.01	0.49
39:I:101:LYS:HE2	39:I:121:LYS:N	2.27	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:344:PRO:C	48:z:346:SER:CB	2.85	0.49
50:4:235:G:O2'	50:4:236:U:P	2.71	0.49
53:S2:92:A:C5	53:S2:447:A:C2	3.00	0.49
53:S2:195:C:C2	53:S2:205:G:C2	3.00	0.49
53:S2:499:G:N1	53:S2:501:C:H1'	2.27	0.49
53:S2:551:U:O2'	71:Se:44:ASN:CG	2.51	0.49
53:S2:609:U:O2	53:S2:609:U:H2'	2.11	0.49
53:S2:616:A:C5	53:S2:617:G:C1'	2.93	0.49
53:S2:803:C:N3	53:S2:804:U:C5	2.80	0.49
53:S2:869:A:N7	59:SH:115:LYS:HB3	2.25	0.49
53:S2:1205:C:O2	53:S2:1205:C:O4'	2.29	0.49
53:S2:1294:G:N2	53:S2:1295:A:C8	2.81	0.49
53:S2:1351:G:C2	53:S2:1379:A:C5	3.00	0.49
53:S2:1405:A:C6	53:S2:1406:G:C5	3.01	0.49
53:S2:1590:C:H5'	80:ST:82:ARG:HD3	1.94	0.49
53:S2:1735:A:C4	53:S2:1800:A:C2	3.01	0.49
53:S2:1782:G:C2	53:S2:1784:G:C8	3.00	0.49
53:S2:1821:U:H2'	53:S2:1822:A:O4'	2.13	0.49
54:SA:70:ASN:HB3	54:SA:73:ASP:OD1	2.12	0.49
55:SB:50:THR:O	55:SB:58:ALA:HB2	2.12	0.49
56:SC:133:TYR:HD1	56:SC:216:MET:HA	1.77	0.49
59:SH:35:ASP:OD1	59:SH:35:ASP:C	2.56	0.49
73:SF:165:ASN:OD1	73:SF:167:LYS:N	2.46	0.49
79:SS:8:LYS:N	79:SS:8:LYS:HD3	2.27	0.49
3:G:29:ASN:OD1	3:G:31:LEU:HD22	2.13	0.49
3:G:78:PRO:HD3	3:G:237:TRP:CE3	2.47	0.49
4:H:54:ARG:HG3	4:H:54:ARG:HH11	1.76	0.49
4:H:60:TRP:NE1	12:S:153:PRO:CG	2.75	0.49
10:Q:125:GLN:NE2	36:C:285:LEU:HD12	2.28	0.49
13:T:87:LYS:HZ1	32:5:4301:U:P	2.35	0.49
15:V:48:ARG:HH21	15:V:48:ARG:HG3	1.77	0.49
17:Y:18:HIS:C	17:Y:20:ASN:H	2.21	0.49
19:a:109:TYR:O	19:a:110:LYS:CB	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:f:34:TYR:HA	24:f:81:SER:O	2.13	0.49
31:o:3:ASN:OD1	31:o:4:VAL:N	2.46	0.49
32:5:2:G:C4	32:5:3:C:C5	3.00	0.49
32:5:95:G:C6	32:5:96:U:C2	3.01	0.49
32:5:222:C:H2'	32:5:223:G:O4'	2.11	0.49
32:5:423:G:C2'	40:P:118:GLN:HE21	2.24	0.49
32:5:642:G:C2	32:5:643:C:C6	3.00	0.49
32:5:738:C:N3	32:5:739:G:C5	2.81	0.49
32:5:1196:G:C6	32:5:1197:C:C4	3.01	0.49
32:5:1212:G:N2	32:5:1213:G:C4	2.80	0.49
32:5:1261:G:N3	32:5:1262:G:C8	2.81	0.49
32:5:1360:G:C6	32:5:1361:G:C4	3.00	0.49
32:5:1421:G:C2	32:5:1422:G:C4	3.00	0.49
32:5:1449:C:H2'	32:5:1450:C:O4'	2.12	0.49
32:5:1570:G:N2	32:5:1571:G:H1'	2.27	0.49
32:5:1735:U:N3	32:5:1736:A:N7	2.61	0.49
32:5:1871:A:C6	32:5:1872:G:N7	2.81	0.49
32:5:1984:A:H62	32:5:2011:C:C2'	2.26	0.49
32:5:2009:A:O2'	32:5:2010:A:OP1	2.27	0.49
32:5:2037:C:C2	32:5:2038:U:C5	3.00	0.49
32:5:2263:A:H4'	32:5:2264:C:OP1	2.11	0.49
32:5:2293:U:O2	32:5:2293:U:C2'	2.61	0.49
32:5:2744:A:HO2'	32:5:2745:A:H8	1.57	0.49
32:5:2842:G:C5	32:5:2843:U:C5	3.01	0.49
32:5:4222:G:C5	32:5:4223:C:C5	3.01	0.49
32:5:4236:G:H22	32:5:4289:U:H1'	1.77	0.49
32:5:4283:G:C5	32:5:4284:C:H5	2.30	0.49
32:5:4484:A:O2'	32:5:4485:C:H5'	2.13	0.49
32:5:4519:C:H5''	32:5:4520:G:OP1	2.13	0.49
32:5:4594:U:O2	32:5:4595:G:C8	2.66	0.49
32:5:4651:A:C2	32:5:4652:G:C1'	2.96	0.49
32:5:4665:A:C5	32:5:4666:G:C8	3.01	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
33:7:70: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
34:8:117:C:C2	34:8:118:C:H6	2.31	0.49
34:8:134:G:N2	34:8:135:C:N1	2.60	0.49
35:B:29:VAL:HG23	35:B:346:THR:HG21	1.93	0.49
35:B:45:ALA:HB3	35:B:183:ILE:HG23	1.95	0.49
35:B:288:GLY:HA3	35:B:330:PHE:CZ	2.48	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
39:I:36:LEU:HD22	39:I:73:ASN:HD21	1.76	0.49
40:P:114:ILE:HD11	40:P:117:ILE:HD12	1.93	0.49
44:p:33:GLN:CG	44:p:34:HIS:NE2	2.75	0.49
48:z:392:GLY:O	48:z:396:PHE:HD1	1.95	0.49
48:z:402:ARG:HG2	50:4:184:A:C3'	2.32	0.49
53:S2:74:G:C2	53:S2:75:G:H1'	2.48	0.49
53:S2:367:U:C2'	53:S2:371:A:C8	2.96	0.49
53:S2:394:G:N3	53:S2:394:G:H2'	2.27	0.49
53:S2:403:G:C5	53:S2:404:G:C8	3.00	0.49
53:S2:452:G:C6	53:S2:453:C:C4	3.00	0.49
53:S2:641:A:C5	53:S2:642:U:H1'	2.48	0.49
53:S2:669:A:C2	53:S2:670:A:C6	3.01	0.49
53:S2:691:G:C6	53:S2:692:G:N7	2.80	0.49
53:S2:752:G:C2	53:S2:790:C:C4	3.00	0.49
53:S2:828:G:C5	53:S2:829:C:C6	3.00	0.49
53:S2:1249:C:N4	53:S2:1250:A:C5	2.81	0.49
53:S2:1652:G:N1	53:S2:1673:U:C2	2.81	0.49
55:SB:30:TRP:HD1	64:SO:19:PRO:CD	2.25	0.49
59:SH:130:LEU:HD11	59:SH:177:TYR:OH	2.12	0.49
67:SX:28:LYS:HG2	67:SX:32:LEU:HD12	1.94	0.49
73:SF:193:LYS:O	73:SF:197:GLU:HG3	2.11	0.49
87:S1:7:TRP:HZ3	87:S1:10:PHE:HD2	1.61	0.49
1:A:202:VAL:HG23	32:5:3689:G:OP1	2.13	0.49
2:D:284:LYS:HD2	39:I:209:TRP:HZ3	1.78	0.49
10:Q:88:ASP:OD2	10:Q:108:ARG:HD3	2.12	0.49
17:Y:22:PRO:HD2	17:Y:25:ILE:HD12	1.94	0.49
18:Z:4:PHE:CE2	21:c:66:LEU:HB3	2.47	0.49
20:b:11:ASN:O	20:b:13:SER:N	2.45	0.49
32:5:29:G:C2	32:5:30:C:C2	3.00	0.49
32:5:31:U:O2'	32:5:32:G:C5'	2.60	0.49
32:5:113:A:C2	32:5:114:G:H1'	2.48	0.49
32:5:212:A:C4	32:5:213:G:N7	2.81	0.49
32:5:322:C:C4	32:5:323:C:C5	3.01	0.49
32:5:474:C:C2	32:5:475:G:N7	2.80	0.49
32:5:1257:A:C6	32:5:1258:G:C4	3.00	0.49
32:5:1325:C:O4'	32:5:3901:A:N1	2.44	0.49
32:5:1349:G:C5	32:5:1350:C:C5	3.01	0.49
32:5:1366:G:N7	32:5:1367:C:O3'	2.45	0.49
32:5:1374:G:C2	32:5:1375:C:C2	3.01	0.49
32:5:1541:C:N4	32:5:1542:U:C4	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1696:C:O2'	32:5:2084:C:N4	2.45	0.49
32:5:1877:G:N1	32:5:1878:G:C8	2.81	0.49
32:5:1946:G:C6	32:5:2037:C:C4	2.97	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
32:5:2126: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
32:5:2515:G:O6	32:5:2516:G:C5	2.65	0.49
32:5:2517:A:N3	32:5:2539:C:O2'	2.43	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
32:5:2686:G:H5'	32:5:2687:U:OP1	2.12	0.49
32:5:2720:C:N3	32:5:2721:G:C8	2.81	0.49
32:5:2909:C:O2	32:5:3586:G:C2	2.66	0.49
32:5:3709:U:O2	32:5:3709:U:O2'	2.24	0.49
32:5:4143:G:C8	32:5:4145:C:C5	3.01	0.49
32:5:4269:G:H22	32:5:4277:G:N2	2.04	0.49
32:5:4682:U:H2'	32:5:4682:U:O2	2.12	0.49
32:5:4723:A:O2'	35:B:101:THR:HG23	2.12	0.49
32:5:4724:A:C4	32:5:4725:C:C5	3.01	0.49
32:5:4987:C:H2'	35:B:123:HIS:CD2	2.47	0.49
32:5:5004:C:C3'	32:5:5005:G:O4'	2.61	0.49
32:5:5036:C:C2	32:5:5037:U:C6	3.01	0.49
33:7:55:A:H2'	33:7:56:G:O5'	2.12	0.49
34:8:2:G:C6	34:8:3:A:N7	2.81	0.49
34:8:9:A:C6	34:8:10:G:C5	3.01	0.49
34:8:44:A:C5	34:8:45:C:C5	3.01	0.49
34:8:73:U:C4	34:8:74:U:C1'	2.95	0.49
34:8:132:G:C2	34:8:133:G:C5	3.00	0.49
35:B:74:GLU:HG2	35:B:334:LYS:HE3	1.95	0.49
35:B:89:ILE:HG21	35:B:197:ALA:HB1	1.93	0.49
35:B:256:ALA:O	35:B:258:HIS:N	2.45	0.49
40:P:64:ASN:HB2	40:P:80:GLN:OE1	2.13	0.49
48:z:109:LEU:CA	48:z:197:GLN:NE2	2.73	0.49
48:z:401:GLY:HA3	50:4:185:C:O2	2.12	0.49
49:3:38:C:C4	49:3:39:G:C5	3.00	0.49
50:4:8:G:H2'	50:4:9:C:O4'	2.12	0.49
50:4:127:A:O2'	50:4:173:A:N1	2.42	0.49
53:S2:29:G:C2	53:S2:30:C:C5	3.01	0.49
53:S2:337:C:O2	53:S2:338:G:H8	1.86	0.49
53:S2:360:A:C2	53:S2:363:A:N7	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:437:G:H2'	53:S2:438:G:N3	2.28	0.49
53:S2:532:C:C2	53:S2:533:A:N7	2.80	0.49
53:S2:658:U:H1'	67:SX:17:ARG:NH2	2.28	0.49
53:S2:658:U:N3	67:SX:20:HIS:O	2.46	0.49
53:S2:696:G:N2	53:S2:735:C:H1'	2.28	0.49
53:S2:1038:U:C2	53:S2:1039:C:C5	3.00	0.49
53:S2:1126:G:C4	53:S2:1127:C:C5	3.00	0.49
53:S2:1131:G:C6	53:S2:1132:C:C4	3.00	0.49
53:S2:1253:A:N3	53:S2:1666:C:O4'	2.46	0.49
53:S2:1293:A:P	85:Sf:150:PHE:HA	2.53	0.49
53:S2:1432:U:H2'	53:S2:1433:C:O5'	2.13	0.49
53:S2:1449:G:C4	53:S2:1450:G:C8	3.00	0.49
53:S2:1495:G:C5	53:S2:1496:U:C6	3.00	0.49
56:SC:142:LYS:HB3	56:SC:154:ALA:HB2	1.95	0.49
66:SW:11:LEU:HD22	66:SW:72:CYS:SG	2.52	0.49
67:SX:61:GLN:O	67:SX:63:ASN:N	2.46	0.49
75:SM:19:GLN:CG	75:SM:88:TRP:CB	2.91	0.49
75:SM:64:LEU:HD21	85:Sf:108:VAL:HG22	1.95	0.49
82:SZ:52:LYS:HD3	82:SZ:53:ALA:N	2.28	0.49
2:D:279:ARG:HA	2:D:282:GLN:HB2	1.95	0.49
4:H:18:ILE:HG22	4:H:27:VAL:HG22	1.94	0.49
12:S:44:PHE:C	12:S:44:PHE:HD1	2.21	0.49
13:T:102:ARG:O	13:T:105:PHE:O	2.30	0.49
16:X:122:ALA:HB3	16:X:139:ARG:HG3	1.94	0.49
17:Y:100:HIS:HD2	32:5:231:U:H4'	1.76	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
32:5:120:A:H1'	32:5:121:A:H2	1.67	0.49
32:5:189:G:N2	32:5:190:G:C4	2.81	0.49
32:5:247:G:C5	32:5:248:C:C5	3.01	0.49
32:5:424:U:O2	32:5:424:U:C2'	2.61	0.49
32:5:435:A:C6	32:5:436:C:C5	3.01	0.49
32:5:446:C:C4	32:5:447:C:C5	3.00	0.49
32:5:712:C:C4	32:5:713:C:C5	3.01	0.49
32:5:722:G:H2'	32:5:723:A:C8	2.47	0.49
32:5:952:G:C6	32:5:953:C:C4	3.01	0.49
32:5:1066:G:C4	32:5:1067:G:C8	3.01	0.49
32:5:1090:G:C5	32:5:1091:C:C5	3.00	0.49
32:5:1398:A:C4	32:5:1399:G:C8	3.01	0.49
32:5:1477:C:O2	32:5:1478:C:C1'	2.59	0.49
32:5:1541:C:N3	32:5:1542:U:C6	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1577:G:H3'	32:5:1577:G:N3	2.28	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
32:5:1993:C:O2'	46:K:135:THR:HG21	2.13	0.49
32:5:2023:C:H3'	32:5:2024:G:C8	2.48	0.49
32:5:2079:G:C4	32:5:2080:U:C5	3.00	0.49
32:5:2095:A:C2	38:F:41:GLN:OE1	2.61	0.49
32:5:2108:G:C4	32:5:2109:G:H1'	2.48	0.49
32:5:2289:C:O2	45:r:22:LYS:HD2	2.12	0.49
32:5:2314:G:C5	32:5:2326:G:C5	3.00	0.49
32:5:2315:G:N1	32:5:2316:G:C5	2.81	0.49
32:5:2366:A:H2'	32:5:2367:A:H5''	1.95	0.49
32:5:2445:C:O2	32:5:2446:C:C5	2.66	0.49
32:5:2503:G:H3'	32:5:2504:C:C4'	2.42	0.49
32:5:2563:C:H2'	32:5:2564:G:C8	2.48	0.49
32:5:2738:C:O2	32:5:2741:U:C5	2.66	0.49
32:5:2831:G:N3	32:5:2832:A:C8	2.81	0.49
32:5:3591:C:O2	32:5:3591:C:C2'	2.58	0.49
32:5:3705:G:C2	32:5:3706:C:C2	3.01	0.49
32:5:3731:C:O2	32:5:3731:C:C2'	2.61	0.49
32:5:3751:G:C6	32:5:3752:C:C4	3.01	0.49
32:5:3813:A:C2	32:5:4539:U:C1'	2.96	0.49
32:5:3845:A:C2	32:5:3846:C:C6	3.01	0.49
32:5:4278:C:O2	32:5:4278:C:H2'	2.13	0.49
32:5:4433:G:C4	32:5:4434:C:C5	3.01	0.49
32:5:4463:U:C4	32:5:4488:A:C6	3.00	0.49
32:5:4602:A:H2'	32:5:4602:A:N3	2.27	0.49
32:5:4660:G:C2	32:5:4661:G:C8	3.00	0.49
32:5:4768:G:H3'	32:5:4769:G:H8	1.77	0.49
32:5:5055:G:N2	32:5:5056:A:C4	2.81	0.49
34:8:112:G:H2'	34:8:113:C:O5'	2.13	0.49
34:8:141:C:H2'	34:8:142:U:C6	2.48	0.49
37:E:197:ILE:CD1	37:E:257:ILE:HG23	2.43	0.49
43:n:5:TRP:CZ3	53:S2:1845:A:N6	2.81	0.49
48:z:97:THR:HB	48:z:102:ASN:HD22	1.77	0.49
48:z:327:PHE:CD2	48:z:428:ALA:HA	2.48	0.49
48:z:373:LYS:O	48:z:377:THR:HG23	2.13	0.49
49:3:73:A:O5'	49:3:74:C:OP1	2.31	0.49
53:S2:2:A:C8	56:SC:223:TYR:HB2	2.47	0.49
53:S2:517:C:N4	53:S2:518:G:C5	2.81	0.49
53:S2:682:U:O2'	53:S2:1159:G:H4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:794:A:C4	53:S2:795:A:N7	2.80	0.49
53:S2:827:A:N7	53:S2:828:G:N7	2.60	0.49
53:S2:828:G:N2	53:S2:829:C:H1'	2.28	0.49
53:S2:1215:C:C4	53:S2:1645:C:C6	3.01	0.49
53:S2:1309:C:H5''	75:SM:36:ARG:CZ	2.42	0.49
53:S2:1410:C:O2	53:S2:1410:C:C2'	2.60	0.49
53:S2:1478:U:O2	53:S2:1478:U:H2'	2.13	0.49
53:S2:1610:G:N2	53:S2:1611:G:C4	2.81	0.49
53:S2:1630:A:C6	53:S2:1631:U:C5	3.01	0.49
53:S2:1666:C:O2	53:S2:1666:C:H2'	2.13	0.49
53:S2:1752:C:C2	53:S2:1753:C:C6	3.01	0.49
53:S2:1771:G:N3	53:S2:1772:C:C6	2.81	0.49
53:S2:1810:U:N3	53:S2:1811:C:C5	2.81	0.49
53:S2:1839:U:H2'	53:S2:1840:U:H6	1.78	0.49
55:SB:126:ASP:OD1	55:SB:136:ARG:HG3	2.13	0.49
56:SC:60:TRP:CZ2	56:SC:92:GLU:CB	2.95	0.49
57:SE:159:THR:HG23	57:SE:227:VAL:HG22	1.95	0.49
58:SG:215:LYS:HA	58:SG:218:LYS:HB2	1.94	0.49
65:SV:20:SER:HB3	65:SV:59:ILE:HD11	1.94	0.49
66:SW:101:PHE:HB2	66:SW:129:PHE:CE1	2.47	0.49
86:Sg:244:ASN:HD21	86:Sg:245:ARG:HH12	1.59	0.49
1:A:34:PHE:O	1:A:35:ALA:C	2.55	0.49
1:A:40:TYR:CE2	32:5:4118:U:C2	3.01	0.49
1:A:186:TYR:CA	1:A:196:TRP:CZ3	2.95	0.49
2:D:111:ASN:C	2:D:111:ASN:ND2	2.71	0.49
6:L:49:ARG:HA	26:h:119:PHE:O	2.13	0.49
7:M:36:ALA:HB2	7:M:52:PHE:CZ	2.47	0.49
8:N:94:PHE:CZ	32:5:2460:A:H1'	2.48	0.49
12:S:81:TRP:CD2	12:S:81:TRP:N	2.81	0.49
13:T:34:TYR:HD1	13:T:98:HIS:CE1	2.31	0.49
13:T:127:GLN:OE1	13:T:127:GLN:HA	2.11	0.49
20:b:15:LYS:C	20:b:17:HIS:N	2.66	0.49
28:k:31:ASN:O	28:k:47:ILE:O	2.31	0.49
32:5:84:A:C8	32:5:84:A:C5'	2.96	0.49
32:5:296:A:C5'	32:5:296:A:H8	2.25	0.49
32:5:704:C:C6	32:5:704:C:H5''	2.48	0.49
32:5:966:A:C2	37:E:84:VAL:HB	2.48	0.49
32:5:993:G:N1	32:5:994:G:C5	2.81	0.49
32:5:1187:G:HO2'	32:5:1188:C:H6	1.59	0.49
32:5:1378:C:H5''	32:5:1379:C:H3'	1.95	0.49
32:5:1455:G:C2	32:5:1456:C:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1602:U:N3	32:5:1603:C:C5	2.81	0.49
32:5:1669:A:H1'	32:5:1852:U:O2'	2.13	0.49
32:5:1770:A:C5	32:5:1771:U:C5	3.01	0.49
32:5:1806:G:C6	32:5:1807:C:C5	3.00	0.49
32:5:1943:A:C8	32:5:1944:A:C1'	2.96	0.49
32:5:2052:G:N2	32:5:2053:C:C2	2.81	0.49
32:5:2478:C:H2'	32:5:2479:G:C8	2.48	0.49
32:5:2605:G:C2	32:5:2606:G:C4	3.01	0.49
32:5:2752:G:C4	32:5:2753:G:C8	3.01	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
32:5:3804:G:H2'	32:5:3804:G:N3	2.28	0.49
32:5:3811:G:H4'	32:5:3812:C:OP2	2.13	0.49
32:5:3861:A:N3	32:5:3862:A:C8	2.81	0.49
32:5:4074:C:O2'	32:5:4075:U:C5'	2.61	0.49
32:5:4094:G:H2'	32:5:4095:G:C1'	2.39	0.49
32:5:4222:G:C5	32:5:4223:C:C6	3.00	0.49
32:5:4505:C:H2'	32:5:4506:C:H6	1.77	0.49
32:5:4547:C:O2	32:5:4549:G:C8	2.66	0.49
32:5:4564:A:H2'	32:5:4565:C:C6	2.48	0.49
32:5:4578:G:C2	32:5:4579:U:C6	3.01	0.49
32:5:4592:C:O2	32:5:4593:C:C6	2.66	0.49
32:5:5004:C:O2	32:5:5044:A:C2	2.66	0.49
32:5:5031:G:C4	32:5:5032:C:C5	3.00	0.49
33:7:29:C:O2	33:7:30:C:C5	2.66	0.49
33:7:93:G:C4	33:7:94:C:C5	3.01	0.49
34:8:18:U:H2'	34:8:19:C:O4'	2.13	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
34:8:117:C:O2	34:8:117:C:H2'	2.13	0.49
38:F:168:ARG:HD2	38:F:211:TRP:HD1	1.77	0.49
38:F:219:ARG:HH11	38:F:219:ARG:HB3	1.77	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
39:I:184:MET:HB3	39:I:190:LEU:HD12	1.95	0.49
47:q:107:VAL:O	47:q:109:ALA:HB3	2.12	0.49
49:3:39:G:C2	49:3:40:C:C4	2.98	0.49
49:3:40:C:C2	49:3:41:G:C8	3.01	0.49
50:4:58:G:C8	50:4:289:A:C2	3.00	0.49
53:S2:1005:G:C6	53:S2:1006:C:C4	3.01	0.49
53:S2:1050:A:C5	53:S2:1051:G:N9	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1105:G:C2	53:S2:1128:C:C2	3.01	0.49
53:S2:1110:G:C4	53:S2:1111:U:C6	3.01	0.49
53:S2:1207:G:C2	53:S2:1837:G:N7	2.81	0.49
53:S2:1222:G:C2'	53:S2:1223:A:O4'	2.60	0.49
53:S2:1229:G:C5	53:S2:1230:C:C5	3.01	0.49
53:S2:1234:C:N3	53:S2:1235:G:C8	2.81	0.49
53:S2:1271:C:N3	53:S2:1272:C:C6	2.81	0.49
53:S2:1528:G:H2'	53:S2:1529:C:H6	1.78	0.49
53:S2:1630:A:H5''	79:SS:36:VAL:O	2.12	0.49
53:S2:1662:U:H5''	53:S2:1663:A:OP2	2.12	0.49
53:S2:1670:C:H2'	53:S2:1671:G:C8	2.47	0.49
53:S2:1741:U:N3	53:S2:1742:C:C6	2.80	0.49
53:S2:1869:A:C6	55:SB:115:LYS:CG	2.86	0.49
59:SH:76:GLN:HB3	59:SH:135:PHE:CE2	2.48	0.49
70:Sb:47:PHE:C	70:Sb:47:PHE:CD1	2.90	0.49
76:SP:56:LEU:HD22	76:SP:78:THR:HG22	1.95	0.49
86:Sg:17:TRP:CB	86:Sg:303:THR:HG22	2.43	0.49
6:L:103:ARG:NH1	32:5:75:G:O6	2.46	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
18:Z:18:TYR:CE2	18:Z:47:ASP:OD1	2.65	0.48
21:c:91:VAL:O	21:c:91:VAL:HG23	2.12	0.48
32:5:145:G:C2	32:5:146:G:C4	3.01	0.48
32:5:153:G:N2	32:5:154:G:C5	2.81	0.48
32:5:193:G:C5	32:5:194:C:C5	3.01	0.48
32:5:287:U:O2	32:5:287:U:H2'	2.13	0.48
32:5:328:A:C2	32:5:329:A:C6	3.01	0.48
32:5:422:C:O2	32:5:422:C:C2'	2.50	0.48
32:5:677:G:H2'	32:5:678:C:C6	2.48	0.48
32:5:692:A:N1	32:5:693:C:C4	2.81	0.48
32:5:909:A:C6	32:5:910:G:C8	3.00	0.48
32:5:950:G:N2	32:5:951:G:C4	2.81	0.48
32:5:961:G:C6	32:5:969:C:C6	3.00	0.48
32:5:1339:U:N3	32:5:1340:C:H5	1.99	0.48
32:5:1421:G:N1	32:5:1422:G:N7	2.59	0.48
32:5:1488:G:C2	32:5:1489:G:C8	3.01	0.48
32:5:1543:G:N2	32:5:1544:G:N9	2.61	0.48
32:5:1835:G:O2'	32:5:1836:G:OP2	2.26	0.48
32:5:1899:G:H1	32:5:2076:G:H1	1.60	0.48
32:5:1994:C:C2	32:5:1995:G:N7	2.81	0.48
32:5:2082:G:C2	32:5:2083:C:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2481:G:C2	32:5:2482:C:C2	3.01	0.48
32:5:2529:A:H61	32:5:2532:C:H1'	1.78	0.48
32:5:2590:G:N2	32:5:2754:G:C2	2.78	0.48
32:5:2617:G:C5	32:5:2618:G:C8	3.00	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	1.96	0.48
32:5:2792:C:O2	42:j:8:PHE:O	2.31	0.48
32:5:3871:A:C6	32:5:3885:G:N2	2.81	0.48
32:5:3876:A:O2'	32:5:3877:A:P	2.71	0.48
32:5:4095:G:H2'	32:5:4096:C:C6	2.48	0.48
32:5:4106:G:C5	32:5:4107:G:H1'	2.47	0.48
32:5:4239:A:H5'	32:5:4240:G:OP2	2.13	0.48
32:5:4266:G:C6	32:5:4279:A:C5	3.01	0.48
32:5:4416:G:C2	32:5:4417:C:C4	3.00	0.48
32:5:4458:C:C2	32:5:4459:U:C5	3.00	0.48
32:5:4480:A:N1	32:5:4481:U:N1	2.61	0.48
32:5:4481:U:C2	32:5:4482:U:C4	2.99	0.48
32:5:4627:U:O2'	35:B:54:THR:HA	2.12	0.48
32:5:4652:G:C6	32:5:4653:C:C4	3.00	0.48
34:8:73:U:O4	34:8:74:U:C2	2.65	0.48
34:8:133:G:C2	34:8:134:G:C5	2.99	0.48
47:q:106:LYS:C	47:q:107:VAL:CG1	2.69	0.48
50:4:292:C:N3	50:4:293:C:C5	2.80	0.48
50:4:235:G:H2'	50:4:236:U:C6	2.48	0.48
53:S2:320:G:N2	53:S2:321:C:H1'	2.28	0.48
53:S2:340:C:O2	53:S2:341:C:C6	2.66	0.48
53:S2:477:G:C2	53:S2:478:G:N7	2.81	0.48
53:S2:595:U:H5'	53:S2:595:U:C6	2.48	0.48
53:S2:648:A:N1	53:S2:649:U:C4	2.81	0.48
53:S2:1052:A:C6	53:S2:1053:C:C4	3.01	0.48
53:S2:1103:C:C2	53:S2:1104:G:C8	3.01	0.48
53:S2:1142:G:N2	53:S2:1145:A:OP2	2.46	0.48
53:S2:1298:G:O2'	53:S2:1299:A:O5'	2.30	0.48
53:S2:1381:G:N2	53:S2:1382:A:H1'	2.27	0.48
53:S2:1398:G:N2	53:S2:1399:C:C5	2.75	0.48
53:S2:1860:A:N6	53:S2:1862:G:O6	2.46	0.48
55:SB:33:VAL:HG21	55:SB:67:PHE:HZ	1.78	0.48
66:SW:11:LEU:HD11	66:SW:37:PHE:HE2	1.79	0.48
82:SZ:50:PHE:CZ	82:SZ:79:ILE:CD1	2.96	0.48
1:A:89:TYR:CB	1:A:100:ASN:HD21	2.25	0.48
1:A:209:HIS:HE1	1:A:211:PHE:CD2	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:48:LYS:HB3	16:X:42:THR:HG23	1.93	0.48
4:H:89:ARG:HG3	4:H:145:ILE:HG23	1.94	0.48
6:L:22:VAL:CG1	8:N:200:LEU:HD12	2.44	0.48
7:M:29:ASP:OD1	7:M:30:VAL:N	2.46	0.48
9:O:12:ARG:NH1	12:S:171:ARG:NH2	2.60	0.48
11:R:95:TRP:HZ2	32:5:1572:U:C5'	2.24	0.48
11:R:130:ASN:C	11:R:131:VAL:HG22	2.38	0.48
12:S:160:ARG:HB2	32:5:1921:C:H1'	1.95	0.48
18:Z:4:PHE:HE2	21:c:66:LEU:HB3	1.77	0.48
18:Z:78:ASN:OD1	18:Z:78:ASN:N	2.41	0.48
24:f:14:TYR:OH	24:f:94:ALA:HB2	2.14	0.48
24:f:74:VAL:HG13	24:f:84:VAL:HG13	1.95	0.48
31:o:89:LYS:O	31:o:90:HIS:HB2	2.13	0.48
32:5:77:U:N3	32:5:336:A:C6	2.81	0.48
32:5:226:G:C4	32:5:236:G:C8	3.01	0.48
32:5:289:C:H2'	32:5:289:C:O2	2.12	0.48
32:5:296:A:C8	32:5:296:A:P	3.06	0.48
32:5:300:A:N1	32:5:301:G:O6	2.47	0.48
32:5:1075:G:N3	32:5:1076:C:C6	2.80	0.48
32:5:1079:C:C5	32:5:1233:G:C2	3.00	0.48
32:5:1177:U:H2'	32:5:1178:G:C8	2.48	0.48
32:5:1316:G:O4'	32:5:2348:G:C2	2.63	0.48
32:5:1388:A:N6	32:5:1396:G:H22	2.06	0.48
32:5:1395:U:C2'	32:5:1396:G:O5'	2.61	0.48
32:5:1581:G:N7	32:5:1610:C:N4	2.60	0.48
32:5:1748:U:H2'	32:5:1749:A:O4'	2.12	0.48
32:5:1840:G:OP1	38:F:115:ARG:HD3	2.13	0.48
32:5:1843:A:N1	32:5:1844:G:C8	2.81	0.48
32:5:1953:U:H2'	32:5:1954:U:C6	2.48	0.48
32:5:2071:A:C2	32:5:2072:C:C5	3.00	0.48
32:5:2089:G:C8	32:5:2262:G:H3'	2.48	0.48
32:5:2314:G:N1	32:5:2326:G:C8	2.81	0.48
32:5:2417:A:H2'	32:5:2417:A:N3	2.27	0.48
32:5:2491:C:H2'	32:5:2492:C:O4'	2.13	0.48
32:5:2497:C:N3	32:5:2498:C:C4	2.78	0.48
32:5:2546:G:O2'	32:5:2547:G:C5'	2.60	0.48
32:5:2567:G:C2	32:5:2568:C: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
32:5:2732:G:H2'	32:5:2733:C:O4'	2.13	0.48
32:5:3832:U:C4	32:5:3833:C:C5	3.00	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:4068:U:C4	32:5:4069:U:C6	3.01	0.48
32:5:4153:C:O2	32:5:4154:G:C8	2.66	0.48
32:5:4164:C:O2	32:5:4164:C:H2'	2.13	0.48
32:5:4283:G:H1	32:5:4284:C:N4	2.09	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
32:5:4482:U:O2	32:5:4482:U:C2'	2.61	0.48
32:5:4510:A:C4	32:5:4511:A:C6	3.01	0.48
32:5:4564:A:H2'	32:5:4565:C:H6	1.77	0.48
32:5:4758:U:H2'	32:5:4759:C:O5'	2.13	0.48
32:5:4871:C:H4'	32:5:4872:G:O5'	2.13	0.48
32:5:4933:C:C2	32:5:4934:A:C8	3.00	0.48
32:5:4997:G:N1	32:5:4998:G:C4	2.81	0.48
32:5:5031:G:C2	32:5:5032:C:C5	3.01	0.48
32:5:5031:G:C2	32:5:5032:C:C6	3.01	0.48
32:5:5042:A:C6	32:5:5043:A:N6	2.81	0.48
33:7:17:C:N3	33:7:18:C:H5	2.02	0.48
35:B:85:ILE:HB	35:B:165:HIS:CD2	2.48	0.48
36:C:35:ASP:OD1	36:C:36:ILE:N	2.46	0.48
48:z:197:GLN:CD	48:z:201:LEU:HD12	2.37	0.48
48:z:398:LYS:C	50:4:184:A:C8	2.92	0.48
50:4:6:G:C6	50:4:7:C:C4	3.01	0.48
53:S2:27:A:H2	53:S2:28:U:H1'	1.77	0.48
53:S2:50:A:C6	53:S2:51:U:H1'	2.48	0.48
53:S2:69:C:H2'	53:S2:70:G:O4'	2.13	0.48
53:S2:312:G:O2'	53:S2:313:A:OP2	2.27	0.48
53:S2:323:C:H3'	53:S2:324:C:C5'	2.43	0.48
53:S2:436:G:N3	53:S2:437:G:C8	2.81	0.48
53:S2:596:U:O2'	53:S2:597:G:C5'	2.61	0.48
53:S2:661:U:O2	53:S2:661:U:H2'	2.13	0.48
53:S2:673:G:C8	53:S2:1084:A:C6	3.01	0.48
53:S2:957:A:C5	53:S2:958:G:O6	2.66	0.48
53:S2:961:G:N2	53:S2:962:A:H1'	2.28	0.48
53:S2:1278:A:C5	53:S2:1279:C:C5	3.00	0.48
53:S2:1306:U:C5	53:S2:1307:U:C6	3.01	0.48
53:S2:1352:G:C6	53:S2:1353:A:N7	2.81	0.48
53:S2:1501:C:O2	53:S2:1502:C:C6	2.66	0.48
53:S2:1539:U:O2	53:S2:1539:U:C2'	2.61	0.48
56:SC:267:GLN:HE21	65:SV:50:PHE:HE2	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SG:120:ASP:OD1	58:SG:120:ASP:N	2.45	0.48
58:SG:216:ARG:HA	58:SG:219:GLU:HB2	1.95	0.48
59:SH:61:ILE:CD1	59:SH:93:VAL:HG13	2.40	0.48
61:SJ:36:GLY:O	61:SJ:111:GLN:NE2	2.46	0.48
69:Sa:34:LYS:O	69:Sa:35:ALA:HB3	2.12	0.48
77:SQ:27:ARG:HH11	77:SQ:27:ARG:HG3	1.79	0.48
86:Sg:247:TRP:HE1	86:Sg:267:VAL:HG21	1.78	0.48
3:G:43:GLN:O	32:5:4124:G:N2	2.46	0.48
7:M:46:ARG:NE	32:5:938:C:H5	2.12	0.48
8:N:192:TRP:O	8:N:193:ARG:C	2.56	0.48
12:S:68:PHE:N	12:S:68:PHE:CD1	2.81	0.48
13:T:121:GLU:OE2	13:T:122:LYS:HG3	2.13	0.48
18:Z:28:ASN:O	18:Z:28:ASN:CG	2.56	0.48
28:k:41:TYR:HB3	28:k:43:TYR:CE1	2.47	0.48
31:o:61:LYS:NZ	32:5:4373:G:N7	2.60	0.48
32:5:29:G:C5	32:5:54:G:N3	2.82	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
32:5:166: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
32:5:295:A:O3'	32:5:296:A:N7	2.46	0.48
32:5:301:G:C2	32:5:302:C:C2	3.00	0.48
32:5:505:G:C2	32:5:506:C:C2	3.01	0.48
32:5:992:C:C2	32:5:993:G:N7	2.81	0.48
32:5:1200:G:C5	32:5:1201:U:C5	3.01	0.48
32:5:1754:U:O4'	32:5:1754:U:O2	2.31	0.48
32:5:1758:G:N1	32:5:1759:G:C5	2.81	0.48
32:5:1899:G:N2	32:5:1900:C:C4	2.77	0.48
32:5:1918:U:O2	32:5:1920:C:C5	2.66	0.48
32:5:1966:C:N3	32:5:1967:A:N7	2.61	0.48
32:5:2495:U:O2	32:5:2495:U:H2'	2.13	0.48
32:5:2560:C:C4	32:5:2561:C:C5	3.02	0.48
32:5:2586:G:C8	32:5:2770:C:H1'	2.48	0.48
32:5:2612:G:C5	32:5:2613:C:C6	3.01	0.48
32:5:2632:U:N3	32:5:2633:U:C5	2.81	0.48
32:5:2703:G:C6	32:5:2704:C:C4	3.02	0.48
32:5:2732:G:C6	32:5:2733:C:C4	3.02	0.48
32:5:2817:C:N3	32:5:2818:C:C5	2.82	0.48
32:5:3630:A:C6	32:5:3631:U:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3754:G:H2'	32:5:3755:G:H5''	1.95	0.48
32:5:4114:C:H3'	32:5:4115:G:C4'	2.43	0.48
32:5:4238:G:C5	32:5:4239:A:C8	3.02	0.48
32:5:4248:A:H2'	32:5:4249:G:O4'	2.13	0.48
32:5:4269:G:N2	32:5:4277:G:H22	2.05	0.48
32:5:4346:U:C2'	32:5:4347:G:O5'	2.61	0.48
32:5:4453:C:H1'	32:5:4529:G:N2	2.28	0.48
32:5:4581:G:C2	32:5:4582:C:C6	3.01	0.48
33:7:59:G:C2	33:7:60:G:C4	3.01	0.48
34:8:3:A:C6	34:8:4:C:C4	3.01	0.48
34:8:74:U:O2	34:8:74:U:C2'	2.56	0.48
34:8:119:C:O2	34:8:119:C:H2'	2.12	0.48
35:B:122:TRP:CD1	35:B:122:TRP:C	2.91	0.48
39:I:209:TRP:HE1	39:I:213:HIS:CD2	2.32	0.48
48:z:219:TYR:CE1	48:z:236:PHE:CD1	3.01	0.48
50:4:57:G:C6	50:4:289:A:N1	2.81	0.48
53:S2:20:G:C4'	53:S2:620:G:N7	2.75	0.48
53:S2:60:A:O2'	53:S2:61:A:H5''	2.11	0.48
53:S2:72:C:O2	53:S2:73:C:N1	2.46	0.48
53:S2:118:C:C1'	53:S2:445:A:C4	2.95	0.48
53:S2:192:C:H4'	53:S2:192:C:OP1	2.12	0.48
53:S2:381:C:O5'	53:S2:381:C:H6	1.95	0.48
53:S2:438:G:C2'	53:S2:439:A:O5'	2.61	0.48
53:S2:563:G:N1	53:S2:564:A:N7	2.61	0.48
53:S2:693:A:H2'	53:S2:694:G:O4'	2.13	0.48
53:S2:857:U:N3	53:S2:858:A:N7	2.62	0.48
53:S2:1238:U:O2	53:S2:1520:G:N2	2.46	0.48
53:S2:1648:G:C8	77:SQ:125:ARG:CB	2.96	0.48
53:S2:1758:G:C2	53:S2:1759:G:C8	3.01	0.48
53:S2:1812:U:O2	53:S2:1813:A:H8	1.95	0.48
53:S2:1845:A:C2	53:S2:1855:G:C6	3.01	0.48
64:SO:149:ARG:HH11	64:SO:149:ARG:HG2	1.78	0.48
72:SD:115:VAL:CG2	72:SD:142:LEU:HD11	2.41	0.48
78:SR:91:LEU:HD12	78:SR:91:LEU:C	2.36	0.48
78:SR:114:LEU:O	78:SR:115:SER:CB	2.61	0.48
79:SS:30:ILE:CD1	79:SS:45:LEU:CG	2.91	0.48
79:SS:80:PRO:HG2	79:SS:82:TRP:CD1	2.48	0.48
2:D:20:PHE:CD2	2:D:30:TYR:OH	2.66	0.48
17:Y:59:ARG:HG3	17:Y:103:LYS:HD2	1.94	0.48
19:a:79:TRP:CZ2	19:a:101:ILE:HD11	2.48	0.48
19:a:85:GLN:NE2	32:5:510:U:O4'	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:g:69:LYS:HG3	25:g:73:HIS:CE1	2.48	0.48
32:5:85:G:C2	32:5:97:G:C5	3.00	0.48
32:5:125:C:O2	32:5:125:C:C2'	2.62	0.48
32:5:133:C:H2'	32:5:133:C:O2	2.12	0.48
32:5:196:C:O2	32:5:196:C:C2'	2.60	0.48
32:5:258:G:N1	32:5:259:C:C4	2.81	0.48
32:5:455:C:C4	32:5:456:C:C5	3.01	0.48
32:5:668:C:C2	32:5:669:C:C6	3.00	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	2.82	0.48
32:5:1205:G:C6	32:5:1206:C:C4	3.00	0.48
32:5:1214:C:N3	32:5:2116:C:N4	2.60	0.48
32:5:1477:C:N4	32:5:1478:C:C5	2.81	0.48
32:5:1656:U:C2	32:5:1657:G:C8	3.01	0.48
32:5:1838:A:C2	32:5:1839: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
32:5:2095:A:C6	38:F:41:GLN:OE1	2.64	0.48
32:5:2263:A:O3'	32:5:2264:C:H2'	2.13	0.48
32:5:2292:C:C4	32:5:2293:U:C5	3.01	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
32:5:2445:C:N3	32:5:2446:C:C5	2.82	0.48
32:5:2567:G:C4	32:5:2568:C:C5	3.02	0.48
32:5:2606:G:C2	32:5:2607:C:C2	3.01	0.48
32:5:2643:G:C6	32:5:2644:G:C8	3.01	0.48
32:5:2712:G:C6	32:5:2713:C:C4	3.02	0.48
32:5:2786:C:H5''	32:5:2787:A:OP1	2.13	0.48
32:5:3911:C:H2'	32:5:3912:U:O5'	2.12	0.48
32:5:4088:C:H2'	32:5:4089:G:C8	2.48	0.48
32:5:4189:U:O4'	32:5:4380:A:C2	2.65	0.48
32:5:4234:A:N1	32:5:4271:A:H1'	2.28	0.48
32:5:4518:A:C3'	32:5:4519:C:H5'	2.44	0.48
32:5:4895:C:O2	32:5:4896:G:N7	2.46	0.48
43:n:7:LYS:NZ	53:S2:1843:G:H5''	2.29	0.48
47:q:99:ARG:CZ	47:q:103:ARG:CZ	2.91	0.48
48:z:194:ARG:CD	48:z:195:HIS:CE1	2.96	0.48
48:z:297:MET:C	48:z:353:PRO:CG	2.87	0.48
50:4:56:A:N1	50:4:57:G:C5	2.82	0.48
50:4:284:G:N3	50:4:285:C:C6	2.81	0.48
50:4:143:C:N4	50:4:154:G:H1	2.09	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:25:A:C4	53:S2:650:A:N6	2.81	0.48
53:S2:47:G:H2'	53:S2:48:C:O4'	2.14	0.48
53:S2:54:A:N3	53:S2:451:G:C2	2.81	0.48
53:S2:58:C:C2	53:S2:500:A:N7	2.82	0.48
53:S2:176:U:H2'	53:S2:177:G:C8	2.49	0.48
53:S2:380:G:N2	53:S2:382:C:H2'	2.28	0.48
53:S2:477:G:N3	53:S2:478:G:C8	2.82	0.48
53:S2:576:A:H2'	53:S2:577:U:O4'	2.12	0.48
53:S2:624:C:N4	67:SX:63:ASN:OD1	2.46	0.48
53:S2:634:A:C4	53:S2:635:G:C8	3.01	0.48
53:S2:805:U:N3	53:S2:806:U:H5	2.10	0.48
53:S2:921:G:C6	66:SW:28:ARG:HG3	2.48	0.48
53:S2:933:G:C8	53:S2:1001:A:C4	3.01	0.48
53:S2:963:A:C6	53:S2:964:A:C6	3.01	0.48
53:S2:1154:U:O4'	53:S2:1154:U:O2	2.29	0.48
53:S2:1553:C:O2	53:S2:1553:C:O4'	2.29	0.48
53:S2:1748:G:O6	53:S2:1786:U:O4	2.32	0.48
53:S2:1838:U:H2'	53:S2:1838:U:O5'	2.13	0.48
64:SO:103:ASN:OD1	64:SO:103:ASN:N	2.44	0.48
78:SR:119:VAL:HG23	78:SR:119:VAL:O	2.13	0.48
80:ST:53:PHE:C	80:ST:53:PHE:CD1	2.91	0.48
80:ST:112:MET:HA	80:ST:127:GLY:HA3	1.94	0.48
86:Sg:68:ASP:HB2	86:Sg:110:SER:HA	1.95	0.48
4:H:54:ARG:HH11	4:H:54:ARG:CG	2.26	0.48
5:J:12:MET:HE1	33:7:29:C:H4'	1.94	0.48
6:L:148:THR:O	26:h:120:ALA:HB1	2.14	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
17:Y:61:HIS:ND1	17:Y:62:TYR:HB3	2.29	0.48
22:d:87:ARG:NH1	22:d:87:ARG:CB	2.76	0.48
24:f:36:ARG:HH11	24:f:36:ARG:HG2	1.79	0.48
27:i:63:VAL:O	27:i:64:SER:C	2.57	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
32:5:106:A:C1'	32:5:336:A:C8	2.89	0.48
32:5:165:A:C5	32:5:166:C:C5	3.02	0.48
32:5:438:G:C2	32:5:439:G:N9	2.82	0.48
32:5:479:G:C4	32:5:480:C:C6	3.01	0.48
32:5:518:G:H2'	32:5:519:C:O4'	2.12	0.48
32:5:1194:G:C2	32:5:1195:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1268:G:C2	32:5:2111:G:C2	3.02	0.48
32:5:1327:C:H4'	32:5:4448:G:H2'	1.94	0.48
32:5:1423:U:C2	32:5:1424:G:C8	3.02	0.48
32:5:1438:U:O2	32:5:2099:G:C6	2.65	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
32:5:1658:G:H4'	32:5:2348:G:O2'	2.14	0.48
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
32:5:1886:G:O2'	32:5:1909:G:O2'	2.16	0.48
32:5:2082:G:C2'	32:5:2083:C:O5'	2.61	0.48
32:5:2102:G:N1	32:5:2103:G:C5	2.81	0.48
32:5:2266:C:H4'	32:5:2267:U:O5'	2.14	0.48
32:5:2368:A:N6	32:5:2827:G:C1'	2.76	0.48
32:5:2556:G:N2	32:5:2572:C:N3	2.61	0.48
32:5:2678:A:C2	32:5:2679:G:C5	3.00	0.48
32:5:2736:G:C2'	32:5:2737:C:H5'	2.44	0.48
32:5:2753:G:H3'	32:5:2754:G:O4'	2.14	0.48
32:5:3734:U:O2'	32:5:3735:G:O5'	2.31	0.48
32:5:4147:G:N2	32:5:4148:C:C2	2.82	0.48
32:5:4238:G:H2'	32:5:4239:A:O4'	2.13	0.48
32:5:4293:U:O2	32:5:4293:U:H2'	2.12	0.48
32:5:4627:U:O4	32:5:4672:A:H2	1.96	0.48
32:5:4746:C:C2	32:5:4747:C:C6	3.01	0.48
32:5:4877:G:O2'	32:5:4878:C:P	2.72	0.48
32:5:5004:C:C5	32:5:5005:G:C4	3.01	0.48
34:8:27:U:C2	34:8:28:C:C6	3.01	0.48
35:B:102:PHE:HB3	35:B:103:LYS:HB2	1.95	0.48
35:B:224:LYS:HG3	35:B:340:THR:HB	1.96	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
50:4:196:C:N4	50:4:197:G:O6	2.47	0.48
51:9:24:ASN:HD21	51:9:43:ASN:HA	1.78	0.48
52:6:117:LEU:O	52:6:121:MET:HG2	2.13	0.48
53:S2:10:G:C6	53:S2:1697:A:H2	2.32	0.48
53:S2:217:A:C2	53:S2:218:U:C6	3.01	0.48
53:S2:309:G:C2	53:S2:310:C:N3	2.81	0.48
53:S2:380:G:N2	53:S2:382:C:C3'	2.71	0.48
53:S2:793:G:N1	53:S2:794:A:H1'	2.28	0.48
53:S2:848:U:H2'	53:S2:849:A:C8	2.49	0.48
53:S2:1093:A:N6	53:S2:1094:C:C4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1135:C:O2	53:S2:1136:U:C6	2.66	0.48
53:S2:1156:U:H2'	53:S2:1157:G:H21	1.77	0.48
53:S2:1224:G:O6	53:S2:1225:U:C2	2.66	0.48
53:S2:1248:U:C5	53:S2:1249:C:N3	2.81	0.48
53:S2:1496:U:H2'	53:S2:1496:U:O2	2.12	0.48
53:S2:1510:G:O6	53:S2:1511:U:C4	2.66	0.48
53:S2:1594:A:N1	53:S2:1595:U:C4	2.81	0.48
53:S2:1696:C:O2	53:S2:1697:A:C8	2.67	0.48
60:SI:62:VAL:HG12	60:SI:77:ARG:HA	1.96	0.48
61:SJ:147:PHE:C	61:SJ:147:PHE:HD1	2.21	0.48
75:SM:31:LEU:HD12	75:SM:33:ARG:HB3	1.94	0.48
76:SP:18:ARG:NH1	79:SS:90:VAL:HG22	2.28	0.48
77:SQ:62:ARG:HH11	77:SQ:62:ARG:HA	1.78	0.48
78:SR:121:GLN:HA	78:SR:121:GLN:NE2	2.28	0.48
79:SS:26:ILE:CD1	79:SS:54:LYS:O	2.55	0.48
80:ST:14:PHE:CE2	80:ST:135:ALA:HB2	2.49	0.48
86:Sg:17:TRP:CH2	86:Sg:36:ARG:HD2	2.48	0.48
86:Sg:88:ARG:HG2	86:Sg:100:ARG:HB2	1.96	0.48
87:S1:7:TRP:CG	87:S1:8:GLU:N	2.81	0.48
2:D:20:PHE:CD1	33:7:10:C:C2	3.01	0.48
2:D:66:TYR:CD1	2:D:66:TYR:C	2.91	0.48
9:O:36:VAL:HG11	9:O:108:ILE:HD12	1.95	0.48
13:T:19:PHE:HB3	13:T:20:ARG:HG3	1.95	0.48
17:Y:91:ASN:OD1	17:Y:91:ASN:N	2.45	0.48
19:a:70:CYS:HA	19:a:109:TYR:HB2	1.95	0.48
23:e:58:ILE:O	23:e:60:TYR:N	2.41	0.48
27:i:26:HIS:O	27:i:26:HIS:CD2	2.66	0.48
27:i:43:MET:HA	27:i:46:GLU:OE2	2.12	0.48
31:o:40:ARG:HH21	31:o:40:ARG:HB3	1.78	0.48
32:5:29:G:N3	32:5:30:C:C6	2.81	0.48
32:5:60:G:N1	32:5:61:A:C5	2.82	0.48
32:5:168:C:N3	32:5:268:G:C2	2.81	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
32:5:233:U:O2'	32:5:234:G:N2	2.46	0.48
32:5:481:G:C2	32:5:482:G:N7	2.80	0.48
32:5:958:G:H2'	32:5:959:G:O4'	2.13	0.48
32:5:983:C:C2	32:5:984:C:H6	2.10	0.48
32:5:1084:C:H2'	32:5:1084:C:O2	2.13	0.48
32:5:1264:C:HO2'	32:5:2114:G:P	2.36	0.48
32:5:1303:A:C2	32:5:1304:C:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1358:G:OP1	32:5:1506:G:O2'	2.31	0.48
32:5:1362:G:C2	32:5:1363:C:C6	3.02	0.48
32:5:1380:G:C2	32:5:1382:G:C4	3.01	0.48
32:5:1492:G:C4	32:5:1493:G:C8	3.01	0.48
32:5:1594:C:N4	32:5:1595:G:C5	2.81	0.48
32:5:1667:G:C2	32:5:2283:G:C6	3.01	0.48
32:5:1819:G:C2	32:5:1820:C:C6	3.02	0.48
32:5:1967:A:N3	32:5:1968:G:C8	2.81	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
32:5:2341: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
32:5:2391:G:C4	32:5:2392:C:C6	3.02	0.48
32:5:2479:G:C2	32:5:2480:G:N9	2.82	0.48
32:5:2494:U:N3	32:5:2495:U:C5	2.82	0.48
32:5:2581:A:H2'	32:5:2582:A:C8	2.48	0.48
32:5:2823:G:C4	32:5:2824:C:C6	3.01	0.48
32:5:3594:C:O2	32:5:3594:C:C2'	2.62	0.48
32:5:3702:A:N7	32:5:3774:A:C4	2.81	0.48
32:5:3718:A:N1	32:5:3933:G:O2'	2.43	0.48
32:5:4210:U:C4	32:5:4211:C:N4	2.81	0.48
32:5:4321:U:H2'	32:5:4322:G:O4'	2.13	0.48
32:5:4461:C:O2	32:5:4516:G:C2	2.66	0.48
32:5:4489:G:C5	32:5:4490:C:C5	3.02	0.48
32:5:4568:A:H4'	35:B:21:ARG:HH21	1.78	0.48
32:5:4617:G:OP1	35:B:65:SER:HB2	2.14	0.48
32:5:4655:A:N6	32:5:4658:G:C8	2.81	0.48
32:5:4754:G:C2	32:5:4880:C:C2	3.02	0.48
32:5:4898:G:C2	32:5:4899:G:C5	3.01	0.48
32:5:4919:G:C4	32:5:4920:C:C5	3.01	0.48
34:8:95:A:H2'	34:8:95:A:N3	2.29	0.48
34:8:142:U:C4	34:8:143:G:N7	2.82	0.48
43:n:5:TRP:CH2	53:S2:1844:U:O4	2.67	0.48
49:3:50:C:C2	49:3:65:G:C2	3.02	0.48
53:S2:29:G:C8	53:S2:646:G:N2	2.82	0.48
53:S2:42:A:C5	53:S2:426:A:N6	2.78	0.48
53:S2:91:A:C6	58:SG:88:ARG:NH2	2.82	0.48
53:S2:200:G:C2	53:S2:201:C:C2	3.01	0.48
53:S2:403:G:O6	53:S2:404:G:C6	2.66	0.48
53:S2:452:G:N1	53:S2:453:C:N4	2.61	0.48
53:S2:478:G:H1'	88:S4:81:MET:SD	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:493:A:N3	53:S2:493:A:H2'	2.29	0.48
53:S2:945:U:H2'	53:S2:946:U:O4'	2.13	0.48
53:S2:951:C:O2	53:S2:951:C:H2'	2.12	0.48
53:S2:962:A:C6	53:S2:963:A:C5	3.02	0.48
53:S2:978:G:C2	53:S2:979:C:C2	3.02	0.48
53:S2:1094:C:O2	53:S2:1094:C:H2'	2.13	0.48
53:S2:1263:U:O4	53:S2:1517:G:O6	2.30	0.48
53:S2:1278:A:C6	53:S2:1279:C:C4	3.00	0.48
53:S2:1302:G:O2'	85:Sf:146:LEU:CD1	2.61	0.48
53:S2:1316:C:C2	53:S2:1317:C:C6	2.90	0.48
53:S2:1376:A:N6	53:S2:1377:U:H1'	2.27	0.48
53:S2:1594:A:OP2	82:SZ:104:ARG:CB	2.59	0.48
53:S2:1641:A:C2	53:S2:1642:U:C6	3.02	0.48
54:SA:39:TYR:CE2	78:SR:105:MET:HA	2.41	0.48
57:SE:98:ASN:OD1	57:SE:98:ASN:N	2.45	0.48
58:SG:210:ALA:O	58:SG:214:ALA:HB3	2.12	0.48
75:SM:90:GLY:C	75:SM:91:LEU:HG	2.38	0.48
1:A:83:HIS:C	1:A:83:HIS:CD2	2.92	0.48
2:D:16:TYR:CE2	2:D:18:VAL:HA	2.48	0.48
10:Q:37:ARG:HD3	32:5:2087:C:OP2	2.13	0.48
24:f:21:GLN:HE22	32:5:1309:C:H2'	1.78	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
32:5:98:A:N6	32:5:99:A:C4	2.81	0.48
32:5:99:A:C4	32:5:100:C:O2	2.67	0.48
32:5:259:C:N3	32:5:260:C:C5	2.81	0.48
32:5:273:U:H2'	32:5:274:C:O4'	2.13	0.48
32:5:293:G:H1'	32:5:297:U:O4'	2.14	0.48
32:5:301:G:C4	32:5:302:C:C6	3.01	0.48
32:5:356:G:O2'	34:8:25:G:N3	2.46	0.48
32:5:388:A:C5	32:5:411:G:N1	2.82	0.48
32:5:471:A:C2	32:5:472:C:H1'	2.48	0.48
32:5:479:G:N2	32:5:480:C:C2	2.81	0.48
32:5:708:G:N2	32:5:709:C:H1'	2.28	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
32:5:1203: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
32:5:1260:G:C4	32:5:1261:G:C8	3.01	0.48
32:5:1268:G:N2	32:5:1270:A:C1'	2.76	0.48
32:5:1269:G:O5'	32:5:2111:G:O6	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1308:C:O2	32:5:1308:C:H2'	2.13	0.48
32:5:1478:C:O2	32:5:1478:C:H2'	2.13	0.48
32:5:1533:A:N6	32:5:1627:G:O2'	2.46	0.48
32:5:1534:A:C6	42:j:14:LYS:HA	2.48	0.48
32:5:1584:G:C2	32:5:1585:C:C2	3.01	0.48
32:5:1663:C:O2'	32:5:1664:U:H5'	2.13	0.48
32:5:1674:C:C4	32:5:1675:C:C5	3.01	0.48
32:5:2126:G:H1'	32:5:2127:C:C5	2.48	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
32:5:2439:G:N7	32:5:2777:G:C6	2.82	0.48
32:5:2703:G:H1'	32:5:2714:G:N2	2.28	0.48
32:5:3621:A:N3	32:5:3622:C:C6	2.82	0.48
32:5:3669:G:C2	32:5:3671:G:OP2	2.65	0.48
32:5:3714:G:C4	32:5:3715:U:O2	2.66	0.48
32:5:4152:G:C6	32:5:4153:C:C4	3.02	0.48
32:5:4172:A:C2	32:5:4173:G:N9	2.81	0.48
32:5:4356:G:C2	32:5:4357:G:C8	3.02	0.48
32:5:4635:A:N1	32:5:4664:A:C4	2.82	0.48
32:5:5010:U:N3	32:5:5011:A:N7	2.62	0.48
33:7:83:A:N1	33:7:85:G:C8	2.82	0.48
34:8:73:U:C5	34:8:74:U:C5	3.00	0.48
34:8:132:G:C4	34:8:133:G:C8	3.01	0.48
35:B:106:PHE:CD2	35:B:130:PHE:CE2	3.01	0.48
39:I:86:HIS:HD2	39:I:139:ARG:HH12	1.61	0.48
53:S2:11:A:N1	53:S2:12:U:C6	2.80	0.48
53:S2:122:G:C6	53:S2:123:G:C8	3.02	0.48
53:S2:167:G:C6	53:S2:168:C:C5	3.02	0.48
53:S2:172:U:O2	53:S2:172:U:H2'	2.12	0.48
53:S2:496:C:O2'	53:S2:497:C:C5'	2.62	0.48
53:S2:522:A:H4'	61:SJ:131:ARG:HH22	1.79	0.48
53:S2:600:G:C4	53:S2:631:U:O4	2.66	0.48
53:S2:649:U:O2	53:S2:650:A:H8	1.94	0.48
53:S2:818:A:H5'	53:S2:819:G:OP2	2.14	0.48
53:S2:825:A:O2'	53:S2:826:A:H5'	2.13	0.48
53:S2:974:C:C4	53:S2:975:G:N7	2.81	0.48
53:S2:987:A:H2	55:SB:114:VAL:HG21	1.78	0.48
53:S2:987:A:H2'	53:S2:988:C:O4'	2.14	0.48
53:S2:993:G:C6	53:S2:994:C:C6	2.98	0.48
53:S2:1052:A:C2	53:S2:1053:C:N1	2.82	0.48
53:S2:1141:G:N1	53:S2:1147:C:C4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1190:A:H2'	53:S2:1191:C:O4'	2.13	0.48
53:S2:1236:G:O6	79:SS:137:LYS:HE3	2.14	0.48
53:S2:1287:A:N1	53:S2:1314:U:C2	2.82	0.48
53:S2:1393:G:N1	53:S2:1394:G:C8	2.81	0.48
53:S2:1394:G:H3'	53:S2:1394:G:C4	2.49	0.48
53:S2:1496:U:C4	53:S2:1498:A:N7	2.81	0.48
53:S2:1557:C:O4'	53:S2:1557:C:O2	2.30	0.48
53:S2:1561:A:C5	53:S2:1562:C:C5	3.02	0.48
53:S2:1570:G:C6	53:S2:1571:G:N7	2.81	0.48
58:SG:162:LEU:HD11	58:SG:165:GLU:OE1	2.13	0.48
73:SF:165:ASN:CG	73:SF:166:ILE:N	2.71	0.48
75:SM:77:ILE:HG23	75:SM:78:LYS:H	1.79	0.48
1:A:40:TYR:HE1	32:5:4117:U:N3	2.06	0.48
2:D:43:LYS:N	2:D:44:TYR:CE1	2.81	0.48
3:G:136:LEU:HD21	3:G:204:PHE:HE1	1.77	0.48
8:N:125:SER:HB3	32:5:3937:C:H1'	1.94	0.48
9:O:114:LYS:HA	32:5:4757:C:C2	2.42	0.48
9:O:130:LYS:HD3	32:5:2055:G:H1'	1.95	0.48
10:Q:4:ASP:OD1	38:F:117:ARG:C	2.56	0.48
12:S:176:PHE:CD2	32:5:4871:C:C5	3.02	0.48
22:d:25:TYR:CZ	22:d:119:THR:HG22	2.49	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
31:o:45:GLN:HA	31:o:45:GLN:NE2	2.26	0.48
32:5:169:G:C2	32:5:170:C:C2	3.02	0.48
32:5:177:G:C4	32:5:178:C:C6	3.01	0.48
32:5:243:A:C6	32:5:244:G:C4	3.02	0.48
32:5:328:A:C6	32:5:329:A:N6	2.82	0.48
32:5:713:C:N4	32:5:955:G:H1	2.11	0.48
32:5:907:C:N3	32:5:908:G:N7	2.62	0.48
32:5:1251:C:C2	32:5:1252:C:C5	3.02	0.48
32:5:1277:G:C6	32:5:1278:C:C4	3.01	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
32:5:1487:G:O5'	32:5:1487:G:C8	2.67	0.48
32:5:1545:G:H2'	32:5:1546:C:C6	2.48	0.48
32:5:1625:G:C4	32:5:1642:A:C2	3.02	0.48
32:5:1655:C:H2'	32:5:1655:C:O2	2.13	0.48
32:5:2092:G:N1	36:C:305:PRO:O	2.44	0.48
32:5:2281:U:O2	32:5:2282:A:C8	2.66	0.48
32:5:2363:A:O4'	32:5:4560:C:C5	2.67	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2409:U:O4	32:5:2783:A:N1	2.46	0.48
32:5:2478:C:H2'	32:5:2479:G:O4'	2.14	0.48
32:5:2480:G:N2	32:5:2499:C:C2	2.82	0.48
32:5:2496:G:C2	32:5:2497:C:C6	3.02	0.48
32:5:2535:G:H2'	32:5:2536:A:O4'	2.13	0.48
32:5:2605:G:N2	32:5:2606:G:N9	2.62	0.48
32:5:2606:G:C2	32:5:2607:C:C6	3.02	0.48
32:5:2677:G:O6	32:5:2678:A:C5	2.67	0.48
32:5:3653:A:H8	32:5:3653:A:P	2.37	0.48
32:5:3723:A:H2	32:5:3724:A:C6	2.21	0.48
32:5:3770:U:OP1	49:3:24:A:O2'	2.29	0.48
32:5:4095:G:C2	32:5:4096:C:N4	2.82	0.48
32:5:4992:G:H2'	32:5:4993:G:C8	2.49	0.48
33:7:7:G:H2'	33:7:7:G:N3	2.29	0.48
33:7:15:C:C2	33:7:16:A:C8	3.02	0.48
34:8:64:U:C2	34:8:65:A:C5	3.01	0.48
34:8:73:U:C4	34:8:74:U:H1'	2.48	0.48
34:8:106:G:N3	34:8:107:C:C5	2.81	0.48
36:C:94:ASN:HA	36:C:100:ARG:O	2.13	0.48
38:F:194:HIS:O	38:F:196:ILE:N	2.46	0.48
46:K:126:SER:C	46:K:130:LYS:HG3	2.39	0.48
49:3:49:C:O2	49:3:50:C:C5	2.66	0.48
49:3:55:U:O2	49:3:57:G:C8	2.67	0.48
49:3:65:G:N2	49:3:66:C:C2	2.82	0.48
53:S2:81:U:C4	53:S2:82:G:C5	3.02	0.48
53:S2:118:C:N3	53:S2:119:U:C1'	2.77	0.48
53:S2:431:G:C4	53:S2:432:G:C8	3.02	0.48
53:S2:474:G:H5''	53:S2:474:G:C8	2.49	0.48
53:S2:591:U:H5''	53:S2:593:C:H5	1.79	0.48
53:S2:678:U:N3	53:S2:679:A:N7	2.62	0.48
53:S2:684:G:H2'	53:S2:685:A:O4'	2.13	0.48
53:S2:1124:C:O2'	78:SR:123:THR:O	2.31	0.48
53:S2:1130:G:H2'	53:S2:1130:G:N3	2.29	0.48
53:S2:1169:G:N2	53:S2:1191:C:N4	2.61	0.48
53:S2:1293:A:H2'	85:Sf:151:ASN:C	2.38	0.48
53:S2:1420:G:O2'	80:ST:4:VAL:CA	2.62	0.48
53:S2:1561:A:N1	53:S2:1562:C:H1'	2.29	0.48
53:S2:1648:G:N3	53:S2:1674:G:C6	2.82	0.48
53:S2:1793:A:N1	53:S2:1794:C:C4	2.82	0.48
53:S2:1810:U:H2'	53:S2:1811:C:O4'	2.14	0.48
54:SA:204:TYR:C	54:SA:204:TYR:CD1	2.91	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SM:21:VAL:HG22	75:SM:121:LYS:HG3	1.96	0.48
2:D:52:ILE:HG23	2:D:54:ARG:NH2	2.29	0.48
7:M:5:ARG:NH2	7:M:59:ASP:OD1	2.42	0.48
12:S:15:ARG:HH21	13:T:141:VAL:HG22	1.79	0.48
23:e:44:ARG:O	23:e:47:ARG:O	2.32	0.48
29:l:44:TRP:NE1	32:5:2409:U:O4'	2.46	0.48
32:5:55:G:N1	32:5:56:A:C5	2.81	0.48
32:5:59:A:C5	32:5:60:G:C8	3.02	0.48
32:5:247:G:C4	32:5:248:C:C6	3.01	0.48
32:5:497:G:N1	32:5:499:G:C5	2.82	0.48
32:5:506:C:C2	32:5:507:G:C8	3.02	0.48
32:5:661:C:N4	32:5:662:C:N4	2.62	0.48
32:5:744:G:C2	32:5:921:C:O2	2.67	0.48
32:5:976:G:C2	32:5:977:C:C6	3.02	0.48
32:5:1358:G:H2'	32:5:1359:G:H8	1.78	0.48
32:5:1391:A:C5	32:5:1392:A:C8	3.02	0.48
32:5:1392:A:N1	32:5:1393:G:O6	2.46	0.48
32:5:1444:G:N2	32:5:1445:U:O4	2.46	0.48
32:5:1544:G:N3	32:5:1545:G:C8	2.82	0.48
32:5:1557:C:C2	32:5:1558:A:C8	3.01	0.48
32:5:1560:A:H2'	32:5:1561:G:H8	1.78	0.48
32:5:1759:G:N1	32:5:1760:G:C8	2.81	0.48
32:5:1759:G:N1	32:5:1760:G:C5	2.82	0.48
32:5:1774:C:N3	32:5:1775:A:C8	2.82	0.48
32:5:1829:G:C2	32:5:1830:G:C5	3.02	0.48
32:5:2086:G:N1	32:5:2087:C:C2	2.82	0.48
32:5:2089:G:C2	32:5:2263:A:C6	2.98	0.48
32:5:2591:A:N6	32:5:2753:G:H21	2.12	0.48
32:5:2804:C:C4	32:5:2805:C:C5	3.02	0.48
32:5:2852:U:O2	32:5:2852:U:H2'	2.14	0.48
32:5:3738:G:N1	32:5:3739:C:H1'	2.29	0.48
32:5:3741:C:N3	32:5:3742:G:C5	2.78	0.48
32:5:3820:G:C4	32:5:3821:A:C8	3.02	0.48
32:5:3856:A:C5	32:5:3857:G:C8	3.01	0.48
32:5:4114:C:H2'	32:5:4115:G:H1'	1.96	0.48
32:5:4518:A:H3'	32:5:4519:C:H5'	1.95	0.48
32:5:4725:C:O2	32:5:4725:C:H2'	2.14	0.48
32:5:4981:G:O2'	40:P:69:ARG:HB3	2.14	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
32:5:5063:G:C2	32:5:5064:G:N7	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:8:G:C2	33:7:9:C:C2	3.02	0.48
34:8:41:A:C6	34:8:42:G:H1'	2.48	0.48
34:8:65:A:C2	34:8:66:A:C4	3.00	0.48
34:8:103:A:H3'	34:8:104:A:C5'	2.44	0.48
34:8:131:G:O6	34:8:132:G:C5	2.67	0.48
41:W:1:MET:HE1	41:W:3:VAL:HG13	1.95	0.48
46:K:123:ARG:CB	46:K:129:ILE:CD1	2.88	0.48
50:4:12:U:C4	50:4:14:G:OP2	2.66	0.48
50:4:50:G:C6	50:4:51:G:C5	3.02	0.48
51:9:53:CYS:HB3	51:9:60:VAL:HG11	1.95	0.48
53:S2:22:A:C2	53:S2:653:A:N3	2.82	0.48
53:S2:443:U:C4	53:S2:444:G:C4	3.02	0.48
53:S2:443:U:C4	53:S2:444:G:N9	2.82	0.48
53:S2:454:U:OP1	58:SG:94:ARG:N	2.46	0.48
53:S2:478:G:N1	53:S2:479:C:C4	2.81	0.48
53:S2:497:C:O2'	53:S2:498:C:C5'	2.61	0.48
53:S2:665:G:O4'	53:S2:670:A:C2	2.67	0.48
53:S2:830:A:N1	53:S2:844:U:C4	2.79	0.48
53:S2:896:U:H2'	53:S2:897:U:O4'	2.13	0.48
53:S2:1097:G:C5	53:S2:1098:C:C5	3.02	0.48
53:S2:1113:A:O2'	53:S2:1114:U:H5'	2.14	0.48
53:S2:1203:G:C5	53:S2:1204:A:C5	3.01	0.48
53:S2:1450:G:H2'	53:S2:1451:G:O4'	2.14	0.48
53:S2:1508:A:N6	53:S2:1510:G:H1'	2.29	0.48
53:S2:1545:A:C2	53:S2:1546:G:C2	3.01	0.48
53:S2:1568:C:O2'	53:S2:1569:A:C8	2.64	0.48
53:S2:1588:A:H4'	80:ST:92:PHE:CE2	2.49	0.48
53:S2:1643:U:C4	53:S2:1644:C:N4	2.82	0.48
55:SB:32:ASP:HB2	55:SB:94:LYS:O	2.14	0.48
55:SB:70:SER:HA	55:SB:83:LYS:HA	1.95	0.48
59:SH:135:PHE:CD1	59:SH:136:PRO:N	2.69	0.48
61:SJ:44:TRP:HA	61:SJ:47:LYS:HB3	1.94	0.48
72:SD:97:CYS:SG	72:SD:98:ALA:N	2.87	0.48
75:SM:75:ASN:CG	75:SM:76:LEU:N	2.72	0.48
78:SR:85:VAL:CG1	78:SR:86:PRO:CD	2.91	0.48
80:ST:78:ILE:HG23	80:ST:79:TYR:CE1	2.49	0.48
2:D:55:VAL:HG21	2:D:158:LYS:HB2	1.96	0.48
17:Y:10:ASP:OD1	36:C:198:ASN:OD1	2.31	0.48
17:Y:121:ARG:HB3	17:Y:121:ARG:NH1	2.29	0.48
19:a:25:HIS:CE1	32:5:1338:G:H22	2.32	0.48
19:a:63:LEU:HD23	19:a:64:LYS:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:40:G:C6	32:5:4378:A:C4	3.02	0.48
32:5:98:A:N9	32:5:292:G:O6	2.47	0.48
32:5:292:G:C2'	32:5:293:G:O5'	2.61	0.48
32:5:297:U:C4	32:5:298:G:N7	2.82	0.48
32:5:322:C:O2	32:5:4356:G:C2	2.67	0.48
32:5:438:G:N3	32:5:439:G:C8	2.81	0.48
32:5:483:G:N1	32:5:484:U:O4	2.47	0.48
32:5:677:G:C4	32:5:678:C:C5	3.02	0.48
32:5:908:G:C2	32:5:909:A:N9	2.82	0.48
32:5:978:G:H5''	37:E:41:SER:O	2.14	0.48
32:5:1048:G:C4	32:5:1049:C:C6	3.01	0.48
32:5:1955:G:C5	32:5:1956:A:C8	3.01	0.48
32:5:2081:C:O2'	32:5:2082:G:C5'	2.61	0.48
32:5:2247:C:H5''	32:5:2248:C:O5'	2.14	0.48
32:5:2256:C:O2	32:5:2256:C:C2'	2.60	0.48
32:5:2326:G:N2	32:5:2327:G:C1'	2.77	0.48
32:5:2622:G:N1	32:5:2623:A:C8	2.82	0.48
32:5:2792:C:C2	32:5:2793:G:C8	3.02	0.48
32:5:2805:C:O2	32:5:2805:C:H2'	2.14	0.48
32:5:2833:A:O2'	32:5:2834:C:C4'	2.61	0.48
32:5:3907:G:C2	32:5:3909:C:C5	3.01	0.48
32:5:4152:G:C2	32:5:4153:C:C5	3.02	0.48
32:5:4269:G:O6	32:5:4277:G:O6	2.31	0.48
32:5:4276:G:C6	32:5:4277:G:C4	3.02	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
32:5:4595:G:C4	32:5:4596:C:C5	3.02	0.48
32:5:4627:U:O4'	35:B:53:MET:HB2	2.13	0.48
32:5:4659:G:C2	32:5:4660:G:C4	3.02	0.48
32:5:4677:U:O2'	35:B:352:LEU:HD12	2.14	0.48
32:5:4683:U:H2'	32:5:4684:A:O5'	2.14	0.48
33:7:28:C:O2	33:7:28:C:H2'	2.14	0.48
34:8:46:G:N2	34:8:47:C:C2	2.82	0.48
38:F:146:TYR:CE2	38:F:239:GLU:HA	2.48	0.48
40:P:82:ARG:HA	40:P:83:TRP:HE3	1.77	0.48
48:z:408:ARG:NH1	50:4:206:G:H4'	2.07	0.48
49:3:31:C:C5'	53:S2:1640:A:C2	2.94	0.48
53:S2:51:U:C4	53:S2:52:G:N7	2.81	0.48
53:S2:119:U:C4	53:S2:120:U:H5	2.31	0.48
53:S2:121:U:N3	53:S2:122:G:C5	2.81	0.48
53:S2:217:A:N3	53:S2:217:A:H2'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:552:G:N1	53:S2:553:U:C4	2.82	0.48
53:S2:618:C:C5	53:S2:619:A:N7	2.80	0.48
53:S2:646:G:N1	53:S2:647:U:H1'	2.29	0.48
53:S2:825:A:H2'	53:S2:826:A:C8	2.48	0.48
53:S2:905:C:C4	53:S2:906:U:C5	3.02	0.48
53:S2:1022:U:H6	63:SN:128:TYR:HE2	1.62	0.48
53:S2:1047:C:H2'	53:S2:1048:G:O4'	2.13	0.48
53:S2:1175:G:C6	53:S2:1176:G:N7	2.82	0.48
53:S2:1225:U:C4	53:S2:1226:G:C5	2.99	0.48
53:S2:1294:G:C6	53:S2:1295:A:N7	2.82	0.48
53:S2:1337:C:O2	53:S2:1337:C:C2'	2.61	0.48
53:S2:1432:U:C2	53:S2:1433:C:C5	3.02	0.48
53:S2:1459:G:C2	53:S2:1468:C:C2	3.01	0.48
53:S2:1526:G:C4	53:S2:1527:C:C5	3.02	0.48
53:S2:1545:A:C4	53:S2:1546:G:C5	3.02	0.48
53:S2:1728:U:H5'	53:S2:1729:U:OP2	2.14	0.48
53:S2:1858:G:C6	53:S2:1859:A:N7	2.81	0.48
63:SN:89:TYR:C	63:SN:89:TYR:HD1	2.22	0.48
72:SD:72:VAL:HG13	74:SK:68:TYR:CE2	2.47	0.48
74:SK:53:LYS:N	74:SK:58:VAL:HG12	2.29	0.48
78:SR:73:LEU:HD23	78:SR:76:GLU:OE1	2.13	0.48
83:Sc:44:ARG:HD2	83:Sc:65:ALA:H	1.78	0.48
86:Sg:191:HIS:CG	86:Sg:195:LEU:HD21	2.49	0.48
3:G:108:GLN:O	3:G:112:GLN:NE2	2.47	0.47
5:J:42:GLN:OE1	5:J:117:ILE:HG23	2.14	0.47
11:R:69:ALA:HB1	11:R:74:ARG:HB2	1.95	0.47
11:R:124:TYR:C	11:R:124:TYR:CD1	2.92	0.47
30:m:79:GLU:OE1	30:m:81:SER:N	2.47	0.47
32:5:116:G:C6	32:5:117:C:C4	3.01	0.47
32:5:448:G:C6	32:5:449:C:C6	3.01	0.47
32:5:483:G:N2	32:5:484:U:N3	2.62	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
32:5:1092:G:C2	32:5:1093:C:C2	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
32:5:1212:G:N1	32:5:1213:G:N7	2.61	0.47
32:5:1216:C:H2'	32:5:1217:G:O4'	2.14	0.47
32:5:1272:C:O2'	32:5:1273:G:C4	2.65	0.47
32:5:1439:C:H5'	38:F:36:ARG:NH1	2.16	0.47
32:5:1444:G:C2'	32:5:1445:U:C6	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1857:C:C1'	32:5:1892:A:C2	2.97	0.47
32:5:1896:A:O5'	32:5:1896:A:H8	1.97	0.47
32:5:1912:G:C2	32:5:1913:C:C5	3.01	0.47
32:5:2019:C:C4	32:5:2020:U:C5	3.02	0.47
32:5:2104:G:C5	32:5:2105:A:C8	3.02	0.47
32:5:2123:C:O2'	32:5:2124:G:OP2	2.16	0.47
32:5:2249:C:H2'	32:5:2249:C:O2	2.12	0.47
32:5:2324:C:H2'	32:5:2324:C:O2	2.12	0.47
32:5:2457:G:N1	32:5:2465:C:N4	2.62	0.47
32:5:2540:C:N3	32:5:2541:G:N7	2.62	0.47
32:5:2567:G:N1	32:5:2568:C:C5	2.82	0.47
32:5:2688:G:C4	32:5:2689:C:C5	3.02	0.47
32:5:2736:G:N1	32:5:2737:C:N4	2.62	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
32:5:3829:G:N3	32:5:3829:G:H2'	2.28	0.47
32:5:4287:G:C2	32:5:4288:C:C2	3.02	0.47
32:5:4338:G:O2'	32:5:4372:U:O4	2.31	0.47
32:5:4628:U:O2	32:5:4628:U:H2'	2.13	0.47
32:5:5028:G:C6	32:5:5029:C:C4	3.02	0.47
32:5:5031:G:C2	32:5:5032:C:C4	3.02	0.47
33:7:22:A:N1	33:7:23:A:N6	2.62	0.47
33:7:31:G:C2	33:7:47:G:C2	3.02	0.47
33:7:66:G:C2	33:7:67:C:C2	3.02	0.47
34:8:127:U:O2'	34:8:128:C:O4'	2.32	0.47
36:C:33:ARG:HH11	36:C:122:TYR:HH	1.61	0.47
36:C:269:LYS:O	36:C:278:ASN:ND2	2.47	0.47
36:C:326:LEU:HD11	36:C:333:LYS:HG2	1.95	0.47
44:p:68:ALA:HB1	44:p:69:TRP:CE3	2.48	0.47
48:z:140:PHE:HZ	48:z:194:ARG:HE	1.58	0.47
53:S2:26:U:C2	53:S2:26:U:H3'	2.49	0.47
53:S2:29:G:N2	53:S2:30:C:N3	2.62	0.47
53:S2:122:G:C6	53:S2:123:G:C5	3.02	0.47
53:S2:292:A:O2'	53:S2:293:C:OP2	2.22	0.47
53:S2:307:G:OP2	53:S2:307:G:O3'	2.31	0.47
53:S2:380:G:H21	53:S2:382:C:H6	1.62	0.47
53:S2:418:A:N6	53:S2:419:G:C6	2.81	0.47
53:S2:438:G:H2'	53:S2:439:A:O5'	2.14	0.47
53:S2:448:A:H4'	53:S2:449:A:H5'	1.96	0.47
53:S2:569:A:C2	53:S2:570:C:C6	3.02	0.47
53:S2:634:A:C2	53:S2:635:G:C5	3.00	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1016:U:C5	70:Sb:32:PHE:CE1	3.01	0.47
53:S2:1154:U:H1'	53:S2:1156:U:O4	2.14	0.47
53:S2:1157:G:N7	66:SW:75:ILE:HG23	2.29	0.47
53:S2:1291:A:O3'	85:Sf:148:TYR:C	2.57	0.47
53:S2:1502:C:C2	53:S2:1503:C:C6	3.02	0.47
53:S2:1563:G:C8	53:S2:1563:G:H5''	2.49	0.47
53:S2:1576:G:C6	53:S2:1577:G:N7	2.82	0.47
55:SB:172:MET:HE3	55:SB:212:VAL:HG12	1.96	0.47
56:SC:69:LEU:HG	56:SC:273:LEU:HD21	1.95	0.47
63:SN:18:TYR:CE1	66:SW:56:HIS:HB2	2.49	0.47
76:SP:42:ARG:CZ	76:SP:42:ARG:CB	2.92	0.47
79:SS:30:ILE:HB	79:SS:41:ALA:HB1	1.95	0.47
8:N:63:ARG:HA	8:N:131:GLU:HB2	1.95	0.47
8:N:65:ARG:HH21	8:N:127:TYR:HE2	1.63	0.47
8:N:135:ILE:CG2	8:N:142:ILE:HD13	2.44	0.47
11:R:45:ILE:HG12	11:R:50:ILE:HD11	1.96	0.47
11:R:172:ARG:HD2	53:S2:909:G:P	2.54	0.47
13:T:19:PHE:CG	13:T:20:ARG:HG3	2.49	0.47
15:V:48:ARG:HD2	15:V:51:ARG:NH2	2.29	0.47
15:V:97:TYR:CZ	41:W:21:TYR:HD1	2.22	0.47
32:5:68:U:O4	32:5:69:A:C4	2.67	0.47
32:5:238:C:C2	32:5:239:C:C5	3.02	0.47
32:5:296:A:H8	32:5:296:A:P	2.36	0.47
32:5:328:A:N1	32:5:329:A:C6	2.82	0.47
32:5:358:C:O2	32:5:359:A:C8	2.67	0.47
32:5:394:G:C6	32:5:396:A:OP2	2.68	0.47
32:5:735:G:C2	32:5:736:C:C2	3.01	0.47
32:5:739:G:C5	32:5:740:G:C8	3.02	0.47
32:5:910:G:C2	32:5:911:U:C6	3.02	0.47
32:5:1203:G:N3	32:5:1204:C:C6	2.82	0.47
32:5:1237:C:O4'	32:5:1237:C:O2	2.27	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
32:5:1377:G:H3'	32:5:1377:G:C8	2.49	0.47
32:5:1395:U:O2'	32:5:1396:G:C5'	2.62	0.47
32:5:1465:G:C6	32:5:1466:G:N7	2.82	0.47
32:5:1567:U:C2	32:5:1568:C:C5	3.01	0.47
32:5:1899:G:C4	32:5:1900:C:H5	2.25	0.47
32:5:2043:A:C2	32:5:4516:G:O4'	2.67	0.47
32:5:2391:G:C5	32:5:2392:C:C5	3.02	0.47
32:5:2408:U:C1'	32:5:2409:U:C4	2.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2409:U:C4	32:5:2783:A:C6	3.01	0.47
32:5:2417:A:N3	32:5:2418:A:C8	2.81	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
32:5:2712:G:C5	32:5:2713:C:C5	3.02	0.47
32:5:2823:G:H2'	32:5:2824:C:O4'	2.14	0.47
32:5:3594:C:O2	32:5:3594:C:H2'	2.13	0.47
32:5:3636:C:O2	32:5:3636:C:C2'	2.60	0.47
32:5:3715:U:C2'	32:5:3716:C:O5'	2.62	0.47
32:5:4074:C:HO2'	32:5:4075:U:C5'	2.27	0.47
32:5:4091:G:C4	32:5:4092:G:C8	3.02	0.47
32:5:4097:G:N2	32:5:4098:A:N9	2.62	0.47
32:5:4175:G:C2	32:5:4176:C:C6	3.02	0.47
32:5:4216:G:N3	32:5:4217:G:C8	2.81	0.47
32:5:4284:C:O2	32:5:4285:U:H6	1.92	0.47
32:5:4425:G:C6	32:5:4426:C:C5	3.02	0.47
32:5:4474:A:N7	32:5:4476:C:C2	2.82	0.47
32:5:4574:U:O2	32:5:4574:U:H2'	2.14	0.47
32:5:4602:A:H3'	32:5:4603:C:H6	1.79	0.47
32:5:4627:U:O2	32:5:4627:U:C2'	2.60	0.47
32:5:4702:G:C6	32:5:4703:U:C6	3.02	0.47
32:5:4743:G:N3	32:5:4744:A:C8	2.82	0.47
47:q:10:LYS:C	47:q:14:PHE:CE1	2.93	0.47
47:q:65:ILE:HA	47:q:68:HIS:CD2	2.49	0.47
47:q:99:ARG:CD	47:q:103:ARG:HH21	2.27	0.47
53:S2:106:C:H2'	53:S2:107:A:H8	1.78	0.47
53:S2:415:A:C2'	53:S2:416:U:O4'	2.63	0.47
53:S2:467:G:C2	53:S2:468:A:H1'	2.49	0.47
53:S2:747:U:H3'	53:S2:748:C:C6	2.48	0.47
53:S2:824:C:H2'	53:S2:825:A:C8	2.49	0.47
53:S2:897:U:N3	53:S2:898:U:C6	2.82	0.47
53:S2:964:A:HO2'	53:S2:965:U:C5'	2.24	0.47
53:S2:978:G:N3	53:S2:979:C:C6	2.82	0.47
53:S2:1123:C:N4	53:S2:1124:C:N4	2.62	0.47
53:S2:1220:A:C6	53:S2:1221:G:C6	3.02	0.47
53:S2:1595:U:O2	53:S2:1595:U:C2'	2.62	0.47
63:SN:54:LEU:HB3	63:SN:60:VAL:CG2	2.45	0.47
72:SD:68:GLU:OE1	74:SK:70:TYR:CD1	2.67	0.47
75:SM:17:ALA:HB1	75:SM:124:ILE:HG23	1.97	0.47
84:Sd:8:TRP:HA	84:Sd:8:TRP:CE3	2.49	0.47
85:Sf:130:VAL:HG21	85:Sf:141:CYS:SG	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
87:S1:28:VAL:HG22	87:S1:41:LYS:HB3	1.95	0.47
9:O:63:ASN:HB3	32:5:2044:U:O2'	2.14	0.47
11:R:39:GLN:NE2	32:5:2710:C:OP1	2.46	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
15:V:52:LEU:HD21	32:5:2850:A:O2'	2.14	0.47
18:Z:88:ASP:OD1	18:Z:88:ASP:N	2.46	0.47
20:b:14:ARG:HA	32:5:1724:G:O6	2.15	0.47
25:g:25:THR:HB	25:g:26:PRO:HD2	1.96	0.47
32:5:69:A:N1	32:5:70:A:C6	2.82	0.47
32:5:77:U:O4	32:5:335:A:C6	2.63	0.47
32:5:120:A:C5	32:5:149:A:N6	2.83	0.47
32:5:120:A:N7	32:5:149:A:C6	2.82	0.47
32:5:158:A:N1	32:5:277:G:C5	2.83	0.47
32:5:172:C:C4	32:5:173:C:C5	3.01	0.47
32:5:268:G:C2	32:5:269:G:N9	2.82	0.47
32:5:302:C:C2	32:5:303:C:C6	3.02	0.47
32:5:423:G:H22	34:8:10:G:H22	1.62	0.47
32:5:687:U:C5	32:5:688:U:C5	3.03	0.47
32:5:723:A:N1	32:5:943:A:N1	2.62	0.47
32:5:952:G:N1	32:5:953:C:C4	2.82	0.47
32:5:1219:G:N3	32:5:1220:G:C8	2.82	0.47
32:5:1240:G:C5	32:5:1241:C:C5	3.02	0.47
32:5:1582:U:H5	32:5:1610:C:O2	1.97	0.47
32:5:1667:G:H2'	32:5:2280:G:H22	1.79	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
32:5:1886:G:C6	32:5:1894:C:N4	2.82	0.47
32:5:2036:C:H2'	32:5:2036:C:O2	2.14	0.47
32:5:2071:A:N3	32:5:2072:C:C5	2.83	0.47
32:5:2095:A:N6	38:F:41:GLN:HG2	2.29	0.47
32:5:2110:C:C4	32:5:2120:G:C5	3.03	0.47
32:5:2367:A:H62	32:5:2798:A:C4'	2.27	0.47
32:5:2438:A:H1'	32:5:2531:C:O4'	2.14	0.47
32:5:2600:A:C1'	32:5:2601:A:C6	2.98	0.47
32:5:3633:C:N3	32:5:3634:G:N7	2.63	0.47
32:5:3719:A:C5	32:5:3720:G:C8	3.02	0.47
32:5:3782:C:C5	32:5:3809:G:C6	3.01	0.47
32:5:3907:G:C5	32:5:3909:C:C4	3.03	0.47
32:5:3919:C:N3	32:5:3920:U:C5	2.82	0.47
32:5:3927:U:N3	32:5:4182:G:N2	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3935:C:C4	32:5:3936:A:C8	3.02	0.47
32:5:4095:G:C2	32:5:4096:C:C4	2.96	0.47
32:5:4147:G:N1	32:5:4148:C:C4	2.82	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
32:5:4723:A:H2'	32:5:4724:A:C8	2.49	0.47
32:5:4737:G:O2'	32:5:4738:C:O4'	2.30	0.47
32:5:4762:A:C3'	32:5:4763:U:C5'	2.93	0.47
32:5:4896:G:C4	32:5:4897:G:C8	3.03	0.47
32:5:4981:G:O4'	32:5:4981:G:N3	2.48	0.47
34:8:131:G:N1	34:8:132:G:C4	2.82	0.47
39:I:78:LYS:O	39:I:80:CYS:N	2.48	0.47
45:r:10:VAL:HG12	45:r:10:VAL:O	2.14	0.47
45:r:11:ARG:CZ	45:r:11:ARG:HB2	2.44	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	2.87	0.47
49:3:51:C:H2'	49:3:52:G:C8	2.50	0.47
50:4:3:C:C2	50:4:45:G:N2	2.83	0.47
53:S2:43:U:H3	53:S2:484:A:H2	1.62	0.47
53:S2:103:A:OP2	53:S2:356:C:N4	2.47	0.47
53:S2:168:C:O2'	58:SG:133:LEU:O	2.27	0.47
53:S2:418:A:C4	53:S2:419:G:C8	3.02	0.47
53:S2:432:G:H2'	53:S2:432:G:N3	2.29	0.47
53:S2:511:U:C2	53:S2:512:A:C8	3.02	0.47
53:S2:533:A:N1	53:S2:534:G:C4	2.82	0.47
53:S2:682:U:O2	53:S2:1024:A:C2	2.68	0.47
53:S2:818:A:C6	53:S2:819:G:N7	2.81	0.47
53:S2:862:A:C2	53:S2:863:U:H1'	2.49	0.47
53:S2:880:G:C8	53:S2:881:G:N7	2.79	0.47
53:S2:1157:G:H1'	67:SX:5:ARG:HE	1.78	0.47
53:S2:1290:G:C4	85:Sf:146:LEU:HD23	2.49	0.47
53:S2:1440:C:H2'	53:S2:1441:U:C6	2.49	0.47
53:S2:1450:G:C6	53:S2:1451:G:C5	3.02	0.47
53:S2:1534:C:H1'	53:S2:1536:G:C4	2.49	0.47
53:S2:1563:G:C6	53:S2:1564:C:N4	2.82	0.47
53:S2:1571:G:C2	53:S2:1572:C:C2	3.02	0.47
53:S2:1577:G:O2'	53:S2:1579:A:N3	2.42	0.47
53:S2:1718:G:C6	53:S2:1814:G:C6	3.03	0.47
53:S2:1781:A:N3	53:S2:1782:G:N7	2.62	0.47
53:S2:1784:G:N1	53:S2:1785:C:C4	2.82	0.47
53:S2:1795:G:N3	53:S2:1796:G:C8	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SA:82:THR:HA	54:SA:204:TYR:CD2	2.49	0.47
55:SB:118:GLN:HG3	55:SB:142:PHE:CZ	2.50	0.47
55:SB:150:ILE:CD1	78:SR:129:LYS:CE	2.86	0.47
58:SG:209:TYR:O	58:SG:213:LEU:N	2.46	0.47
59:SH:135:PHE:HD1	59:SH:136:PRO:CA	2.27	0.47
73:SF:194:ASP:OD1	73:SF:195:GLU:OE1	2.31	0.47
75:SM:17:ALA:HB1	75:SM:124:ILE:CG2	2.44	0.47
77:SQ:8:GLN:HG3	77:SQ:99:TYR:CZ	2.49	0.47
78:SR:85:VAL:HG12	78:SR:86:PRO:O	2.14	0.47
82:SZ:46:ASN:HB3	82:SZ:78:LYS:O	2.15	0.47
1:A:21:LYS:NZ	32:5:2448:G:O3'	2.46	0.47
1:A:209:HIS:CE1	1:A:211:PHE:HD2	2.33	0.47
9:O:66:PRO:CD	35:B:264:PHE:HD2	2.28	0.47
10:Q:31:LEU:O	10:Q:31:LEU:HD23	2.15	0.47
12:S:161:ARG:HD2	12:S:164:LYS:HB2	1.97	0.47
21:c:89:TYR:CD1	32:5:2673:G:C2	3.02	0.47
32:5:54:G:N3	32:5:54:G:H2'	2.29	0.47
32:5:157:U:O2'	32:5:158:A:C8	2.63	0.47
32:5:364:G:N7	42:j:55:ARG:NH2	2.63	0.47
32:5:365:U:H2'	32:5:365:U:O2	2.13	0.47
32:5:370:U:C6	32:5:1637:A:C2	3.03	0.47
32:5:489:C:N3	32:5:490:C:C5	2.81	0.47
32:5:951:G:N2	32:5:952:G:C5	2.82	0.47
32:5:956:A:H3'	32:5:957:G:C5	2.49	0.47
32:5:975:C:H2'	32:5:976:G:H1'	1.97	0.47
32:5:1174:G:C2	32:5:1175:A:N7	2.67	0.47
32:5:1241:C:O2	32:5:1241:C:H2'	2.13	0.47
32:5:1522:G:N1	32:5:1653:A:C6	2.83	0.47
32:5:1566:C:O2'	32:5:1567:U:H5'	2.14	0.47
32:5:1665:C:H2'	32:5:1666:C:O5'	2.15	0.47
32:5:1744:U:N3	32:5:1745:G:N7	2.61	0.47
32:5:1778:C:C2	32:5:1779:U:C5	3.00	0.47
32:5:1806:G:C2	32:5:1807:C:C4	3.02	0.47
32:5:1862:U:H2'	32:5:1863:U:C6	2.49	0.47
32:5:1889:U:H3'	32:5:1890:G:C8	2.49	0.47
32:5:1983:A:H2	32:5:2008:U:C5	2.33	0.47
32:5:2282:A:O2'	32:5:2283:G:H5'	2.14	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
32:5:2399:G:C2	32:5:2400:G:N9	2.82	0.47
32:5:2439:G:C8	32:5:2777:G:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2549:G:N1	32:5:2770:C:N4	2.63	0.47
32:5:3671:G:O2'	32:5:3672:G:O4'	2.31	0.47
32:5:3706:C:H2'	32:5:3707:U:O4'	2.14	0.47
32:5:3806:G:C6	32:5:3807:A:C5	3.02	0.47
32:5:3837:C:H2'	32:5:3838:U:O4'	2.14	0.47
32:5:3945:A:H5'	55:SB:54:GLY:HA3	1.95	0.47
32:5:4092:G:N3	32:5:4092:G:H2'	2.30	0.47
32:5:4397:A:C5'	49:3:76:A:N1	2.76	0.47
32:5:4499:G:H3'	32:5:4500:U:H5''	1.96	0.47
32:5:4510:A:N6	32:5:4592:C:O2'	2.36	0.47
32:5:4880:C:O2'	32:5:4881:U:C5'	2.62	0.47
32:5:4895:C:C2	32:5:4896:G:N7	2.83	0.47
32:5:4982:A:C2	32:5:4983:C:H1'	2.47	0.47
32:5:5006:U:O2	32:5:5042:A:C8	2.67	0.47
33:7:75:G:N2	33:7:100:A:OP2	2.44	0.47
33:7:82:G:N1	33:7:95:C:C4	2.83	0.47
34:8:101:C:N4	34:8:102:G:C6	2.82	0.47
35:B:367:PHE:CZ	35:B:369:ASP:CA	2.97	0.47
37:E:53:TYR:CE2	37:E:61:ARG:CZ	2.96	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:171:TRP:CE3	39:I:181:PHE:HB2	2.49	0.47
39:I:178:ALA:C	39:I:180:GLU:H	2.22	0.47
45:r:31:ASN:CG	45:r:32:LEU:N	2.72	0.47
46:K:81:ILE:O	46:K:85:LEU:N	2.48	0.47
48:z:408:ARG:NH2	50:4:206:G:O3'	2.42	0.47
53:S2:29:G:C6	53:S2:30:C:N4	2.83	0.47
53:S2:323:C:H3'	53:S2:324:C:H5''	1.96	0.47
53:S2:413:G:N2	53:S2:425:G:H1'	2.29	0.47
53:S2:444:G:H5''	53:S2:445:A:OP2	2.14	0.47
53:S2:524:U:O2	53:S2:594:A:N7	2.47	0.47
53:S2:862:A:C4	53:S2:863:U:C6	3.02	0.47
53:S2:976:G:C6	53:S2:977:C:C5	3.02	0.47
53:S2:1016:U:O2	53:S2:1016:U:O4'	2.31	0.47
53:S2:1036:A:C5	53:S2:1037:G:C8	3.02	0.47
53:S2:1110:G:O2'	78:SR:122:PRO:HB2	2.11	0.47
53:S2:1123:C:N4	53:S2:1124:C:C4	2.82	0.47
53:S2:1363:C:O5'	53:S2:1363:C:H6	1.97	0.47
53:S2:1406:G:N1	53:S2:1407:U:C2	2.82	0.47
53:S2:1433:C:C4	53:S2:1434:C:C5	3.02	0.47
53:S2:1563:G:N1	53:S2:1564:C:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1685:U:H2'	53:S2:1686:G:O4'	2.14	0.47
56:SC:134:ASN:HD22	56:SC:134:ASN:C	2.21	0.47
59:SH:133:LEU:HD22	59:SH:173:PHE:HD1	1.79	0.47
61:SJ:125:HIS:O	61:SJ:129:LEU:N	2.42	0.47
66:SW:30:CYS:SG	66:SW:31:SER:N	2.86	0.47
78:SR:41:ILE:HG21	78:SR:47:ARG:HA	1.96	0.47
78:SR:83:ASN:ND2	78:SR:83:ASN:O	2.47	0.47
78:SR:120:THR:O	78:SR:121:GLN:HB2	2.14	0.47
79:SS:7:GLU:HA	79:SS:9:PHE:CE2	2.50	0.47
79:SS:55:ARG:N	79:SS:55:ARG:HD3	2.29	0.47
82:SZ:51:ASP:N	82:SZ:54:THR:OG1	2.47	0.47
1:A:182:ALA:O	1:A:183:GLY:C	2.56	0.47
2:D:94:ASN:O	2:D:95:TYR:C	2.57	0.47
3:G:140:VAL:HG12	8:N:3:ALA:HB2	1.96	0.47
6:L:60:ARG:CD	32:5:72:C:C5	2.96	0.47
7:M:15:VAL:HG22	7:M:50:MET:HE1	1.96	0.47
7:M:91:TRP:HE1	32:5:4871:C:C3'	2.27	0.47
12:S:33:PHE:CZ	12:S:106:VAL:HB	2.49	0.47
12:S:175:PHE:C	12:S:175:PHE:CD1	2.92	0.47
13:T:12:ARG:HD2	32:5:4275:G:H4'	1.95	0.47
25:g:5:LEU:HD21	25:g:22:LEU:CD1	2.43	0.47
29:l:27:ILE:O	29:l:33:ASN:ND2	2.47	0.47
32:5:218:A:C8	36:C:181:LYS:CG	2.97	0.47
32:5:686:A:C3'	32:5:687:U:H5'	2.43	0.47
32:5:701:G:N1	32:5:702:U:C6	2.82	0.47
32:5:731:G:C2	32:5:732:A:H1'	2.49	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
32:5:1260:G:N2	32:5:1261:G:C4	2.83	0.47
32:5:1265:G:N2	32:5:2111:G:O3'	2.48	0.47
32:5:1265:G:C3'	32:5:1266:G:H5'	2.44	0.47
32:5:1310:C:O2	32:5:1310:C:C2'	2.63	0.47
32:5:1402:C:C2	32:5:1416:G:C2	3.02	0.47
32:5:1626:G:C2	32:5:1627:G:H1'	2.49	0.47
32:5:1949:U:C2	32:5:1950:U:C6	2.94	0.47
32:5:2341:A:C2	32:5:2342:G:C4	3.03	0.47
32:5:2399:G:N2	32:5:2400:G:N9	2.63	0.47
32:5:2844:A:N1	32:5:3839:G:N7	2.63	0.47
32:5:4068:U:N3	32:5:4069:U:H1'	2.29	0.47
32:5:4229:U:C2	32:5:4230:C:H6	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4583:C:O2	32:5:4719:G:O6	2.32	0.47
32:5:4978:G:C2'	32:5:4979:A:O5'	2.62	0.47
33:7:114:U:H2'	33:7:115:A:H5''	1.96	0.47
34:8:13:G:C5	34:8:14:U:O4	2.67	0.47
34:8:30:U:C2	34:8:31:G:C8	3.02	0.47
34:8:68:G:C6	34:8:91:A:N1	2.82	0.47
34:8:112:G:C2'	34:8:113:C:O5'	2.63	0.47
34:8:120:G:N1	34:8:121:G:C5	2.83	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
35:B:67:VAL:HG12	35:B:67:VAL:O	2.14	0.47
40:P:54:GLN:HB3	40:P:83:TRP:HD1	1.73	0.47
46:K:10:ILE:HG22	46:K:65:GLN:C	2.40	0.47
46:K:117:ARG:HG3	46:K:133:LEU:HD11	1.95	0.47
49:3:39:G:H21	49:3:40:C:C1'	2.27	0.47
49:3:75:C:C6	49:3:75:C:C3'	2.98	0.47
50:4:16:G:C2	50:4:33:G:O6	2.68	0.47
50:4:28:U:C2	50:4:29:C:C5	3.02	0.47
50:4:130:A:H1'	50:4:168:G:N2	2.30	0.47
53:S2:159:A:O2'	53:S2:160:U:H5'	2.14	0.47
53:S2:563:G:C2	53:S2:564:A:N7	2.83	0.47
53:S2:863:U:O2	53:S2:863:U:H2'	2.15	0.47
53:S2:955:A:C6	53:S2:969:U:H5''	2.48	0.47
53:S2:1294:G:C5	85:Sf:138:ARG:CD	2.95	0.47
53:S2:1309:C:C2	85:Sf:143:LYS:CE	2.97	0.47
53:S2:1496:U:N3	53:S2:1498:A:N7	2.63	0.47
53:S2:1537:A:H3'	53:S2:1538:C:C6	2.50	0.47
53:S2:1541:G:C2	53:S2:1542:C:C6	3.02	0.47
53:S2:1576:G:C2	53:S2:1577:G:C4	3.01	0.47
53:S2:1601:A:H61	53:S2:1635:C:H3'	1.78	0.47
53:S2:1610:G:C6	53:S2:1611:G:N7	2.83	0.47
53:S2:1701:C:O2	53:S2:1701:C:C2'	2.61	0.47
53:S2:1813:A:C6	53:S2:1814:G:C5	3.01	0.47
53:S2:1819:A:H2'	53:S2:1820:G:O4'	2.13	0.47
54:SA:53:ARG:NH1	54:SA:53:ARG:HB2	2.28	0.47
55:SB:30:TRP:CE3	55:SB:48:LEU:HB3	2.49	0.47
56:SC:223:TYR:N	56:SC:223:TYR:CD1	2.80	0.47
57:SE:86:PHE:HE2	57:SE:87:MET:HE2	1.80	0.47
62:SL:57:ASP:OD2	62:SL:60:CYS:N	2.47	0.47
65:SV:24:ILE:HD11	65:SV:56:CYS:HA	1.96	0.47
72:SD:24:PHE:CE2	72:SD:25:LEU:HD22	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:SP:30:TYR:CD1	76:SP:30:TYR:C	2.92	0.47
86:Sg:129:ILE:HG23	86:Sg:154:VAL:HG11	1.96	0.47
86:Sg:297:THR:HG23	86:Sg:311:GLN:HG2	1.97	0.47
2:D:72:ASP:N	33:7:7:G:O2'	2.47	0.47
2:D:142:PHE:HD2	32:5:1819:G:C8	2.33	0.47
6:L:94:ILE:HG22	6:L:94:ILE:O	2.15	0.47
15:V:95:PHE:CZ	32:5:4629:U:O4'	2.67	0.47
23:e:31:ILE:HD11	32:5:2347:A:N7	2.30	0.47
25:g:13:TYR:CE2	32:5:2513:A:N7	2.82	0.47
25:g:76:ARG:NH1	32:5:2582:A:OP1	2.47	0.47
31:o:45:GLN:HE21	31:o:45:GLN:CA	2.26	0.47
32:5:27:C:O2	32:5:27:C:C2'	2.43	0.47
32:5:289:C:N3	32:5:290:U:C6	2.74	0.47
32:5:418:A:N6	34:8:16:G:O2'	2.48	0.47
32:5:423:G:H3'	32:5:424:U:C6	2.50	0.47
32:5:504:G:O2'	32:5:505:G:O4'	2.31	0.47
32:5:504:G:N2	32:5:654:C:H1'	2.29	0.47
32:5:512:U:H2'	32:5:513:U:H5''	1.95	0.47
32:5:913:U:O2	32:5:914:U:C5	2.67	0.47
32:5:969:C:C2'	32:5:970:G:N3	2.77	0.47
32:5:1189:G:C2	32:5:1190:C:C6	3.02	0.47
32:5:1262:G:C6	32:5:1263:A:N7	2.83	0.47
32:5:1478:C:H2'	32:5:1479:G:C8	2.50	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
32:5:1554:A:N6	32:5:1555:G:C4	2.83	0.47
32:5:1667:G:C4	32:5:2280:G:C2	3.03	0.47
32:5:1760:G:C6	32:5:1761:G:C8	3.02	0.47
32:5:1778:C:O2	32:5:1778:C:C2'	2.62	0.47
32:5:1872:G:C2	32:5:1873:A:N7	2.82	0.47
32:5:1995:G:C5	32:5:1996:C:C4	3.02	0.47
32:5:2288:G:C2	32:5:2290:C:N1	2.82	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
32:5:3699:C:O2	32:5:3699:C:H2'	2.14	0.47
32:5:3860:A:C2	32:5:3861:A:C1'	2.95	0.47
32:5:4082:G:C2	32:5:4083:U:C5	3.02	0.47
32:5:4142:C:C2	32:5:4143:G:N2	2.82	0.47
32:5:4406:U:C4	32:5:4407:G:N7	2.82	0.47
32:5:4478:G:O2'	32:5:4602:A:N1	2.47	0.47
32:5:4744:A:C2	32:5:4745:G:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4876:U:O2	32:5:4876:U:O4'	2.30	0.47
32:5:4885:U:C4	32:5:4886:C:C5	3.03	0.47
32:5:4958:C:O2	32:5:4958:C:C2'	2.63	0.47
32:5:5044:A:H2'	32:5:5045:G:H5'	1.90	0.47
33:7:9:C:O2	33:7:9:C:C2'	2.62	0.47
33:7:38:U:C2	33:7:40:U:OP2	2.68	0.47
33:7:43:U:C4	33:7:44:C:H5	2.30	0.47
33:7:50:A:C6	33:7:51:G:N7	2.82	0.47
34:8:69:U:H2'	34:8:70:G:O4'	2.15	0.47
34:8:75:G:N1	34:8:76:C:C4	2.82	0.47
35:B:235:TRP:HA	35:B:235:TRP:HE3	1.79	0.47
36:C:58:ALA:O	36:C:60:HIS:HB2	2.13	0.47
38:F:41:GLN:HE21	38:F:41:GLN:CA	2.28	0.47
48:z:115:THR:HG21	48:z:144:ALA:HB1	1.95	0.47
48:z:125:TYR:HB2	48:z:132:THR:HG21	1.95	0.47
50:4:6:G:H2'	50:4:7:C:H6	1.78	0.47
50:4:12:U:O2	50:4:14:G:C8	2.68	0.47
50:4:18:G:N1	50:4:19:C:C4	2.83	0.47
53:S2:69:C:C2	53:S2:70:G:N7	2.82	0.47
53:S2:87:U:O2'	53:S2:88:G:H5'	2.14	0.47
53:S2:308:G:H5'	53:S2:309:G:H5'	1.97	0.47
53:S2:355:G:C5'	53:S2:356:C:OP2	2.63	0.47
53:S2:436:G:O6	53:S2:458:A:N1	2.47	0.47
53:S2:475:C:O2'	53:S2:507:G:N3	2.41	0.47
53:S2:478:G:C6	53:S2:479:C:C4	3.02	0.47
53:S2:499:G:C6	53:S2:501:C:C1'	2.95	0.47
53:S2:554:A:H2'	53:S2:555:A:C8	2.49	0.47
53:S2:751:G:C6	53:S2:792:C:C4	3.02	0.47
53:S2:878:G:C6	53:S2:879:C:C6	3.02	0.47
53:S2:902:G:C5	53:S2:903:A:C2	3.02	0.47
53:S2:929:G:C6	53:S2:930:C:C4	3.02	0.47
53:S2:950:C:C2	53:S2:951:C:C6	3.02	0.47
53:S2:1284:A:N6	75:SM:33:ARG:CD	2.77	0.47
53:S2:1306:U:H2'	53:S2:1307:U:H5'	1.95	0.47
53:S2:1310:U:O5'	85:Sf:143:LYS:CG	2.63	0.47
53:S2:1315:U:C2	53:S2:1316:C:C6	3.03	0.47
53:S2:1432:U:O2	53:S2:1433:C:C6	2.67	0.47
53:S2:1524:G:C2	53:S2:1525:C:C2	3.03	0.47
53:S2:1527:C:O2	53:S2:1527:C:C2'	2.62	0.47
53:S2:1560:U:O2	53:S2:1560:U:H2'	2.13	0.47
53:S2:1594:A:H5''	82:SZ:104:ARG:HG2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1677:U:C2	53:S2:1678:A:C2	3.02	0.47
53:S2:1739:C:O2	53:S2:1739:C:H2'	2.13	0.47
63:SN:128:TYR:O	63:SN:131:THR:N	2.47	0.47
64:SO:116:LEU:HD22	69:Sa:53:ILE:CD1	2.45	0.47
72:SD:162:ASP:N	72:SD:163:PRO:HD2	2.29	0.47
73:SF:92:ILE:O	73:SF:96:ALA:N	2.46	0.47
86:Sg:294:ASP:HB3	86:Sg:296:GLN:HB3	1.96	0.47
1:A:34:PHE:CE2	32:5:4087:G:C6	3.03	0.47
1:A:67:TYR:HE1	32:5:4086:G:C8	2.24	0.47
4:H:60:TRP:NE1	12:S:153:PRO:HG3	2.29	0.47
4:H:117:PHE:HD1	4:H:118:LEU:HB2	1.80	0.47
6:L:60:ARG:NH1	6:L:70:VAL:HG22	2.30	0.47
8:N:11:TRP:CZ3	8:N:19:MET:HE2	2.50	0.47
8:N:28:TRP:CE3	8:N:29:GLN:HA	2.50	0.47
8:N:31:ARG:NH1	8:N:124:ASP:OD2	2.47	0.47
8:N:196:ASN:N	8:N:196:ASN:ND2	2.62	0.47
12:S:33:PHE:CE2	12:S:106:VAL:HB	2.49	0.47
17:Y:121:ARG:NH2	32:5:194:C:O2'	2.47	0.47
18:Z:100:VAL:CG1	18:Z:107:LYS:HA	2.45	0.47
19:a:43:ILE:HG23	32:5:4304:A:C2	2.49	0.47
19:a:52:TYR:C	19:a:52:TYR:HD1	2.22	0.47
20:b:44:ARG:HG2	20:b:44:ARG:HH11	1.80	0.47
20:b:57:MET:HE3	32:5:1812:C:H1'	1.95	0.47
23:e:28:TYR:HB2	23:e:31:ILE:HD12	1.96	0.47
23:e:47:ARG:O	23:e:49:PHE:N	2.48	0.47
24:f:49:TYR:C	24:f:49:TYR:CD1	2.91	0.47
25:g:21:ARG:NH2	32:5:2641:A:OP1	2.47	0.47
26:h:58:LEU:HB3	34:8:60:G:N7	2.30	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
32:5:49:U:H2'	32:5:50:C:O5'	2.15	0.47
32:5:112:C:C4	32:5:157:U:C4	3.02	0.47
32:5:145:G:N2	32:5:146:G:C4	2.83	0.47
32:5:177:G:C2	32:5:178:C:C2	3.03	0.47
32:5:310:G:H2'	32:5:311:G:O5'	2.15	0.47
32:5:342:G:C2	32:5:343:C:C2	3.03	0.47
32:5:431:G:C4	32:5:3889:G:C6	3.02	0.47
32:5:460:C:C2	32:5:461:G:N7	2.83	0.47
32:5:497:G:N1	32:5:657:C:C4	2.83	0.47
32:5:512:U:H3'	32:5:513:U:H5''	1.97	0.47
32:5:731:G:C6	32:5:732:A:Cl'	2.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:940:C:H2'	32:5:941:C:C6	2.50	0.47
32:5:964:A:C8	32:5:964:A:C4'	2.98	0.47
32:5:1092:G:C2	32:5:1093:C:C6	3.02	0.47
32:5:1185:G:C6	32:5:1186:U:C5	3.03	0.47
32:5:1213:G:C2	32:5:1215:C:C2	3.02	0.47
32:5:1266:G:H5''	32:5:2112:G:N2	2.29	0.47
32:5:1266:G:C5'	32:5:2112:G:C2	2.94	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
32:5:1355:G:O2'	32:5:1356:U:H5'	2.14	0.47
32:5:1358:G:N2	32:5:1359:G:C6	2.82	0.47
32:5:1381:U:O2	32:5:1381:U:O4'	2.33	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
32:5:1436:C:O5'	32:5:1437:C:OP2	2.33	0.47
32:5:1465:G:N1	32:5:1466:G:N9	2.63	0.47
32:5:1468:C:H2'	32:5:1469:C:C6	2.48	0.47
32:5:1479:G:H2'	32:5:1480:C:C6	2.49	0.47
32:5:1484:G:O4'	32:5:1485:C:P	2.72	0.47
32:5:1541:C:C4	32:5:1542:U:C4	3.03	0.47
32:5:1572:U:O2	32:5:1572:U:H2'	2.14	0.47
32:5:1573:G:H2'	32:5:1574:G:C8	2.49	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
32:5:1682:A:H3'	32:5:1683:U:C6	2.47	0.47
32:5:1725:U:O2'	38:F:110:VAL:HG22	2.14	0.47
32:5:1743:A:N6	32:5:1744:U:C4	2.83	0.47
32:5:1831:G:C6	32:5:1832:C:C5	3.02	0.47
32:5:1862:U:H2'	32:5:1863:U:H6	1.80	0.47
32:5:1864:G:C6	32:5:1865:G:C4	3.02	0.47
32:5:1933:G:H2'	32:5:1934:A:C1'	2.44	0.47
32:5:1975:G:O4'	32:5:1976:G:OP2	2.33	0.47
32:5:1986:U:O2	32:5:2007:G:O6	2.33	0.47
32:5:1993:C:C2	32:5:1994:C:C6	3.03	0.47
32:5:2076:G:C5	32:5:2077:C:C5	3.02	0.47
32:5:2294:G:C5	32:5:2295:C:C5	3.03	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
32:5:2367:A:H62	32:5:2798:A:C1'	2.28	0.47
32:5:2396:A:N3	32:5:2396:A:O4'	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2453:A:H1'	32:5:2507:A:C5	2.49	0.47
32:5:2509:C:C2	32:5:2510:G:C5	3.02	0.47
32:5:2512:A:H3'	32:5:2513:A:C5'	2.43	0.47
32:5:2602:G:C4	32:5:2742:G:C6	3.02	0.47
32:5:2606:G:N3	32:5:2607:C:C5	2.83	0.47
32:5:2658:G:N2	32:5:2675:G:N3	2.62	0.47
32:5:2712:G:C4	32:5:2713:C:C6	3.03	0.47
32:5:2759:G:H2'	32:5:2760:G:C1'	2.45	0.47
32:5:2852:U:H3'	32:5:2852:U:C2	2.49	0.47
32:5:3604:A:C6	32:5:3605:C:C5	3.02	0.47
32:5:3709:U:H4'	32:5:3710:G:OP2	2.15	0.47
32:5:3911:C:C2	32:5:3912:U:C6	3.03	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
32:5:4216:G:C6	32:5:4217:G:N7	2.83	0.47
32:5:4299:U:N3	32:5:4300:U:C5	2.82	0.47
32:5:4341:C:O2	32:5:4341:C:H2'	2.14	0.47
32:5:4413:C:H4'	39:I:157:PHE:CD2	2.49	0.47
32:5:4433:G:H2'	32:5:4434:C:H6	1.79	0.47
32:5:4458:C:OP1	35:B:11:HIS:NE2	2.47	0.47
32:5:4470:G:C2	32:5:4486:C:N3	2.83	0.47
32:5:4535:A:C2	32:5:4536:C:C6	3.02	0.47
32:5:4677:U:O2	32:5:4677:U:C2'	2.54	0.47
32:5:4677:U:C6	32:5:4677:U:H5''	2.49	0.47
32:5:4687:A:N1	32:5:4688:C:C4	2.83	0.47
32:5:4771:C:C5	32:5:4772:C:C6	3.02	0.47
32:5:4933:C:C4	32:5:4934:A:N7	2.83	0.47
32:5:4981:G:O6	32:5:4982:A:N9	2.46	0.47
32:5:4996:C:N4	32:5:4997:G:C5	2.82	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
33:7:111:C:O2	33:7:111:C:C2'	2.62	0.47
34:8:42:G:N1	34:8:43:A:C8	2.81	0.47
34:8:70:G:O6	34:8:87:G:C6	2.68	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
35:B:388:PHE:HE2	41:W:11:TYR:CD1	2.33	0.47
37:E:184:ARG:HD3	37:E:213:PHE:HB3	1.95	0.47
40:P:41:ILE:HD11	40:P:150:LEU:CD1	2.42	0.47
48:z:95:THR:N	48:z:96:PRO:CD	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:293:LYS:HE2	48:z:351:MET:HB2	1.66	0.47
49:3:65:G:C4	49:3:66:C:C5	3.02	0.47
50:4:196:C:O2'	51:9:69:SER:HA	2.14	0.47
53:S2:68:A:H2'	53:S2:69:C:O4'	2.15	0.47
53:S2:71:G:HO2'	53:S2:72:C:C1'	2.27	0.47
53:S2:193:C:C2	53:S2:207:G:N2	2.82	0.47
53:S2:223:C:C2	53:S2:224:A:C8	3.03	0.47
53:S2:318:A:C2	53:S2:333:G:C2	3.03	0.47
53:S2:352:U:H5''	62:SL:139:ARG:HD3	1.95	0.47
53:S2:379:C:N4	53:S2:380:G:C6	2.83	0.47
53:S2:386:C:O2	53:S2:387:C:H6	1.87	0.47
53:S2:447:A:C4	53:S2:449:A:C1'	2.98	0.47
53:S2:454:U:H2'	53:S2:455:A:O5'	2.15	0.47
53:S2:459:C:C4	53:S2:460:A:C5	2.97	0.47
53:S2:518:G:N2	53:S2:519:A:C8	2.83	0.47
53:S2:524:U:C2	53:S2:594:A:C6	2.97	0.47
53:S2:637:U:O2	53:S2:638:C:C6	2.68	0.47
53:S2:693:A:C4	53:S2:694:G:C8	3.03	0.47
53:S2:732:U:N3	53:S2:733:C:C5	2.83	0.47
53:S2:752:G:C6	53:S2:791:C:C2	3.02	0.47
53:S2:849:A:C6	53:S2:850:C:N4	2.83	0.47
53:S2:853:C:O2	53:S2:853:C:O4'	2.33	0.47
53:S2:873:G:H2'	53:S2:874:G:C8	2.50	0.47
53:S2:910:G:N3	53:S2:911:C:C6	2.83	0.47
53:S2:988:C:C4	53:S2:989:C:C4	3.03	0.47
53:S2:993:G:N3	53:S2:993:G:H2'	2.30	0.47
53:S2:1038:U:N3	53:S2:1039:C:C5	2.82	0.47
53:S2:1045:U:C2	53:S2:1046:U:C5	3.03	0.47
53:S2:1066:U:N3	53:S2:1067:C:C5	2.82	0.47
53:S2:1119:A:C5	53:S2:1120:U:H1'	2.50	0.47
53:S2:1122:A:C5	53:S2:1123:C:C5	3.02	0.47
53:S2:1131:G:C5	53:S2:1132:C:C5	3.02	0.47
53:S2:1203:G:H2'	53:S2:1204:A:C8	2.50	0.47
53:S2:1208:A:H2'	53:S2:1209:A:O4'	2.15	0.47
53:S2:1226:G:O6	53:S2:1638:G:C8	2.55	0.47
53:S2:1284:A:N6	75:SM:33:ARG:HD3	2.30	0.47
53:S2:1287:A:H2'	53:S2:1315:U:C5	2.50	0.47
53:S2:1289:U:H5'	53:S2:1315:U:O2'	2.15	0.47
53:S2:1292:C:O4'	85:Sf:148:TYR:HB3	2.14	0.47
53:S2:1308:U:H2'	53:S2:1308:U:O2	2.13	0.47
53:S2:1341:C:H42	53:S2:1484:A:N6	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1360:U:O2'	53:S2:1379:A:OP1	2.33	0.47
53:S2:1386:A:H3'	53:S2:1387:G:H8	1.79	0.47
53:S2:1410:C:N4	53:S2:1411:G:C6	2.82	0.47
53:S2:1442:U:O2	53:S2:1443:C:C5	2.67	0.47
53:S2:1456:G:C6	53:S2:1457:U:C4	3.03	0.47
53:S2:1541:G:N2	53:S2:1542:C:C5	2.82	0.47
53:S2:1551:U:C3'	53:S2:1552:G:O4'	2.63	0.47
53:S2:1563:G:C5	53:S2:1564:C:C5	3.02	0.47
53:S2:1649:U:O2	53:S2:1650:A:C8	2.68	0.47
53:S2:1683:C:N3	53:S2:1684:C:H5	2.10	0.47
53:S2:1685:U:C2	53:S2:1686:G:C8	3.03	0.47
53:S2:1796:G:C4	53:S2:1797:U:C5	3.02	0.47
53:S2:1864:U:C4	69:Sa:9:GLY:HA3	2.50	0.47
54:SA:24:HIS:NE2	78:SR:102:THR:HG21	2.30	0.47
54:SA:24:HIS:HB3	54:SA:51:LEU:HD21	1.96	0.47
56:SC:130:ILE:HG22	56:SC:158:ALA:HB1	1.96	0.47
57:SE:18:TRP:HB3	57:SE:46:ILE:HD13	1.96	0.47
59:SH:60:ILE:CG2	59:SH:92:VAL:HG22	2.45	0.47
59:SH:158:LEU:HD11	59:SH:187:PHE:CD2	2.50	0.47
61:SJ:13:TYR:C	61:SJ:13:TYR:CD1	2.92	0.47
66:SW:81:VAL:HG22	66:SW:89:TRP:HE1	1.79	0.47
68:SY:97:TYR:C	68:SY:97:TYR:CD1	2.92	0.47
75:SM:113:ASP:O	75:SM:115:GLY:N	2.47	0.47
78:SR:61:ILE:HA	78:SR:64:GLY:O	2.14	0.47
78:SR:94:GLU:O	78:SR:95:ILE:CB	2.62	0.47
78:SR:126:MET:O	78:SR:127:ASN:ND2	2.47	0.47
79:SS:14:ARG:NH1	79:SS:18:THR:C	2.73	0.47
80:ST:132:ASP:O	80:ST:135:ALA:HB3	2.14	0.47
81:SU:82:MET:HE3	84:Sd:52:PHE:CE1	2.50	0.47
83:Sc:60:GLU:CD	83:Sc:60:GLU:N	2.73	0.47
86:Sg:129:ILE:HD12	86:Sg:142:VAL:HG11	1.95	0.47
1:A:140:ASN:OD1	1:A:142:GLU:O	2.32	0.47
9:O:36:VAL:CG1	9:O:108:ILE:HB	2.44	0.47
17:Y:10:ASP:HB3	17:Y:13:LYS:HB2	1.96	0.47
25:g:75:SER:C	25:g:76:ARG:HG2	2.39	0.47
26:h:93:ARG:CG	26:h:93:ARG:HH11	2.27	0.47
32:5:29:G:C5	32:5:30:C:C5	3.03	0.47
32:5:153:G:N1	32:5:154:G:C5	2.82	0.47
32:5:154:G:C2	32:5:155:C:C4	3.02	0.47
32:5:288:G:C6	32:5:289:C:N4	2.83	0.47
32:5:293:G:H4'	32:5:294:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:342:G:C6	32:5:343:C:C4	3.03	0.47
32:5:417:G:H1'	34:8:17:A:N6	2.29	0.47
32:5:671:G:C2	32:5:672:C:C5	3.02	0.47
32:5:934:C:H4'	32:5:935:A:OP2	2.15	0.47
32:5:952:G:C8	32:5:952:G:H5'	2.50	0.47
32:5:1094:G:C2	32:5:1095:A:C8	3.02	0.47
32:5:1183:C:N3	32:5:1184:A:C8	2.83	0.47
32:5:1268:G:C2	32:5:2111:G:N2	2.82	0.47
32:5:1280:C:C4	32:5:1282:G:C6	3.01	0.47
32:5:1289:C:O2	32:5:1290:G:C8	2.68	0.47
32:5:1448:G:C6	32:5:1449:C:C4	3.02	0.47
32:5:1492:G:C2	32:5:1493:G:C5	3.03	0.47
32:5:1529:G:C2'	42:j:47:TYR:OH	2.63	0.47
32:5:1556:C:H2'	32:5:1557:C:H6	1.79	0.47
32:5:1563:A:C8	53:S2:678:U:H5'	2.50	0.47
32:5:1582:U:O4	32:5:1583:A:N7	2.47	0.47
32:5:1626:G:C5	32:5:1627:G:C8	3.02	0.47
32:5:1629:G:N3	32:5:1631:A:C5	2.83	0.47
32:5:1826:G:C5	32:5:1827:C:C5	3.03	0.47
32:5:2096:G:O2'	32:5:2097:U:OP2	2.28	0.47
32:5:2128:G:C4	32:5:2129:C:C6	3.02	0.47
32:5:2244:C:C2	32:5:2245:G:C8	3.03	0.47
32:5:2248:C:OP1	38:F:26:ASN:N	2.47	0.47
32:5:2294:G:N2	32:5:2295:C:N1	2.63	0.47
32:5:2301:G:C6	32:5:2302:C:C4	3.02	0.47
32:5:2314:G:C2	32:5:2315:G:C5	2.78	0.47
32:5:2314:G:N3	32:5:2314:G:C2'	2.76	0.47
32:5:2390:G:C6	32:5:2391:G:N7	2.83	0.47
32:5:2461:G:N2	32:5:2462:C:C5	2.83	0.47
32:5:2496:G:N2	32:5:2497:C:C2	2.83	0.47
32:5:2515:G:C6	32:5:2516:G:N9	2.83	0.47
32:5:2550:G:C2	32:5:2551:A:C8	3.02	0.47
32:5:2597:G:C6	32:5:2749:C:N3	2.83	0.47
32:5:2662:G:H2'	32:5:2663:G:O5'	2.15	0.47
32:5:2735:G:C6	32:5:2736:G:N7	2.83	0.47
32:5:2743:A:H2'	32:5:2744:A:H8	1.79	0.47
32:5:2844:A:C6	32:5:3839:G:N7	2.80	0.47
32:5:3653:A:C2	32:5:3692:A:C4'	2.97	0.47
32:5:3654:G:C6	32:5:3655:C:C5	3.03	0.47
32:5:3755:G:N1	32:5:3770:U:C2	2.68	0.47
32:5:3832:U:C2	32:5:3833:C:C5	3.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4078:C:N4	32:5:4079:C:C4	2.82	0.47
32:5:4109:G:C2	32:5:4110:C:C2	3.03	0.47
32:5:4145:C:C2	32:5:4146:G:N7	2.83	0.47
32:5:4416:G:N2	32:5:4417:C:C6	2.79	0.47
32:5:4451:G:H2'	32:5:4522:G:C2	2.49	0.47
32:5:4862:G:C6	32:5:4863:G:N7	2.82	0.47
33:7:51:G:N3	33:7:52:C:C6	2.83	0.47
33:7:93:G:N2	33:7:94:C:H1'	2.29	0.47
33:7:110:G:C4	33:7:111:C:C6	3.03	0.47
34:8:10:G:N3	34:8:10:G:H2'	2.28	0.47
34:8:112:G:H2'	34:8:113:C:O4'	2.14	0.47
36:C:78:ARG:HH11	36:C:78:ARG:CG	2.26	0.47
36:C:102:PHE:O	36:C:103:ALA:C	2.58	0.47
47:q:63:LYS:CD	47:q:82:ILE:HD11	2.45	0.47
48:z:140:PHE:CE1	48:z:194:ARG:CG	2.97	0.47
48:z:362:LYS:C	48:z:364:ASN:N	2.72	0.47
49:3:26:G:C5	49:3:27:U:C5	3.02	0.47
49:3:38:C:C2'	49:3:39:G:O5'	2.63	0.47
50:4:284:G:C6	50:4:285:C:C4	3.03	0.47
50:4:143:C:N3	50:4:154:G:N2	2.58	0.47
53:S2:25:A:H1'	53:S2:650:A:N1	2.30	0.47
53:S2:64:A:N1	53:S2:82:G:C2	2.82	0.47
53:S2:68:A:C2	53:S2:69:C:C2	3.03	0.47
53:S2:149:A:H2'	53:S2:150:A:C8	2.50	0.47
53:S2:302:A:N3	53:S2:303:C:C6	2.82	0.47
53:S2:349:A:H4'	60:SI:27:TYR:CE1	2.50	0.47
53:S2:387:C:O2	53:S2:388:U:H6	1.88	0.47
53:S2:443:U:C4	53:S2:444:G:N7	2.83	0.47
53:S2:444:G:N3	53:S2:444:G:C2'	2.78	0.47
53:S2:583:C:C4	53:S2:584:G:N7	2.83	0.47
53:S2:665:G:C2	53:S2:671:A:C5	3.03	0.47
53:S2:856:C:H2'	53:S2:856:C:O2	2.15	0.47
53:S2:952:G:C6	53:S2:953:C:C4	3.03	0.47
53:S2:978:G:N2	53:S2:979:C:C2	2.83	0.47
53:S2:1031:A:C6	53:S2:1032:C:C4	3.03	0.47
53:S2:1107:G:C6	53:S2:1108:G:N7	2.83	0.47
53:S2:1227:G:N3	53:S2:1227:G:H2'	2.30	0.47
53:S2:1275:G:H5'	53:S2:1276:A:C5'	2.45	0.47
53:S2:1348:G:C2	53:S2:1349:G:N7	2.82	0.47
53:S2:1348:G:H2'	53:S2:1348:G:N3	2.29	0.47
53:S2:1387:G:N1	72:SD:206:ASP:OD2	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1578:U:C4'	53:S2:1579:A:O5'	2.51	0.47
53:S2:1645:C:O2'	53:S2:1646:C:O5'	2.32	0.47
55:SB:58:ALA:C	55:SB:60:ASP:N	2.72	0.47
55:SB:100:PHE:C	55:SB:100:PHE:CD2	2.92	0.47
61:SJ:39:ASN:OD1	61:SJ:39:ASN:C	2.58	0.47
61:SJ:136:ARG:CD	61:SJ:160:SER:HA	2.45	0.47
62:SL:96:ILE:HD12	62:SL:96:ILE:N	2.30	0.47
83:Sc:14:VAL:HG21	83:Sc:31:ARG:CA	2.36	0.47
86:Sg:170:TRP:CD1	86:Sg:194:TYR:HB2	2.50	0.47
12:S:101:THR:O	12:S:102:THR:C	2.58	0.47
18:Z:135:ARG:HB3	32:5:4123:C:O2'	2.15	0.47
19:a:52:TYR:C	19:a:52:TYR:CD1	2.93	0.47
22:d:83:ARG:HB3	22:d:114:PHE:CE2	2.50	0.47
32:5:61:A:C6	32:5:62:A:C5	3.02	0.47
32:5:88:A:H2'	32:5:89:C:O5'	2.14	0.47
32:5:111:C:O2	32:5:331:G:C2	2.67	0.47
32:5:181:C:C4	32:5:256:G:C2	3.02	0.47
32:5:214:G:C6	32:5:215:C:C4	3.03	0.47
32:5:244:G:N2	32:5:246:G:C1'	2.74	0.47
32:5:300:A:N3	32:5:301:G:C8	2.83	0.47
32:5:505:G:N2	32:5:506:C:C2	2.82	0.47
32:5:668:C:H2'	32:5:669:C:O4'	2.15	0.47
32:5:1217:G:C2'	32:5:1218:G:C8	2.97	0.47
32:5:1243:C:H2'	32:5:1244:G:N7	2.30	0.47
32:5:1359:G:C2'	32:5:1360:G:C8	2.89	0.47
32:5:1429:C:N3	32:5:1430:C:C5	2.83	0.47
32:5:1473:U:N3	32:5:1474:C:C5	2.83	0.47
32:5:1507:C:O2	32:5:1508:A:C8	2.68	0.47
32:5:1721:G:C2	32:5:1722:C:C2	3.03	0.47
32:5:1813:U:H2'	32:5:1814:C:H6	1.79	0.47
32:5:2032:U:H2'	32:5:2033:A:O4'	2.15	0.47
32:5:2034:G:N2	32:5:2035:C:H1'	2.30	0.47
32:5:2290:C:H1'	32:5:2321:G:H1'	1.97	0.47
32:5:2336:G:C4	32:5:2337:C:C5	3.03	0.47
32:5:2547:G:N1	32:5:2548:C:C4	2.83	0.47
32:5:2549:G:N2	32:5:2550:G:H1'	2.30	0.47
32:5:2559:G:H1	32:5:2567:G:H1	1.63	0.47
32:5:2726:G:C6	32:5:2727:C:C4	3.03	0.47
32:5:2767:U:H3'	32:5:2769:U:H6	1.80	0.47
32:5:3597:G:P	32:5:3597:G:O4'	2.72	0.47
32:5:3611:A:N3	32:5:5016:A:H8	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:3761:C:O2	32:5:3761:C:O4'	2.29	0.47
32:5:3804:G:C6	32:5:3805:U:C5	3.03	0.47
32:5:3894:A:H4'	32:5:4979:A:C2	2.50	0.47
32:5:3928:A:H3'	32:5:3929:G:H8	1.80	0.47
32:5:4091:G:C6	32:5:4092:G:N7	2.82	0.47
32:5:4129:G:C6	32:5:4130:C:C4	3.03	0.47
32:5:4243:C:H1'	32:5:4268:A:C2	2.49	0.47
32:5:4285:U:N3	32:5:4286:C:C4	2.83	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
32:5:4536:C:N3	32:5:4537:C:C6	2.78	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
34:8:46:G:C6	34:8:47:C:N4	2.83	0.47
34:8:146:U:H2'	34:8:147:G:O4'	2.15	0.47
47:q:50:LYS:HG2	47:q:99:ARG:CD	2.44	0.47
50:4:18:G:C6	50:4:19:C:C4	3.02	0.47
50:4:56:A:H61	50:4:290:C:H42	1.62	0.47
50:4:117:U:H2'	50:4:118[B]:A:O4'	2.15	0.47
50:4:183:A:C4'	50:4:184:A:P	2.98	0.47
50:4:215:A:H2'	50:4:216:A:O4'	2.14	0.47
53:S2:171:A:N7	53:S2:173:A:C5	2.83	0.47
53:S2:181:A:OP2	53:S2:182:C:OP1	2.33	0.47
53:S2:591:U:H5''	53:S2:593:C:C5	2.50	0.47
53:S2:604:A:C6	53:S2:605:A:C6	3.03	0.47
53:S2:957:A:C2	53:S2:958:G:N7	2.83	0.47
53:S2:999:G:N1	53:S2:1000:C:C6	2.82	0.47
53:S2:1008:A:H1'	63:SN:101:HIS:ND1	2.30	0.47
53:S2:1141:G:C2	53:S2:1147:C:C2	3.03	0.47
53:S2:1269:G:C2	53:S2:1514:G:C6	3.02	0.47
53:S2:1293:A:N6	85:Sf:140:TYR:CA	2.78	0.47
53:S2:1457:U:O2	53:S2:1458:G:C8	2.67	0.47
53:S2:1526:G:C2	53:S2:1527:C:C2	3.03	0.47
53:S2:1661:A:H2'	53:S2:1662:U:O4'	2.15	0.47
53:S2:1722:G:C6	53:S2:1723:G:C8	3.03	0.47
57:SE:28:ALA:HB1	57:SE:29:PRO:HD3	1.96	0.47
57:SE:84:ALA:HB1	57:SE:101:LEU:CD1	2.45	0.47
58:SG:20:ASP:OD1	58:SG:20:ASP:N	2.47	0.47
86:Sg:18:VAL:HG21	86:Sg:307:VAL:CG2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:G:39:PHE:CE2	3:G:47:PRO:HG3	2.50	0.47
6:L:82:ARG:O	6:L:83:VAL:HG23	2.15	0.47
15:V:48:ARG:HG3	15:V:49:LEU:N	2.29	0.47
22:d:69:ASN:ND2	32:5:2373:C:H1'	2.30	0.47
23:e:98:GLU:CD	23:e:123:THR:HG1	2.13	0.47
32:5:62:A:C2	32:5:77:U:O2	2.67	0.47
32:5:320:C:N4	32:5:321:U:C4	2.83	0.47
32:5:474:C:N3	32:5:475:G:N7	2.63	0.47
32:5:982:U:C5'	37:E:69:TYR:OH	2.63	0.47
32:5:1410:U:C4	32:5:1815:G:N2	2.83	0.47
32:5:1627:G:C3'	32:5:1628:C:H6	2.28	0.47
32:5:1666:C:H2'	32:5:1667:G:C5'	2.45	0.47
32:5:1692:C:C2	32:5:1693:U:C5	3.01	0.47
32:5:1812:C:N3	32:5:1813:U:C5	2.83	0.47
32:5:2089:G:O6	32:5:2263:A:O5'	2.32	0.47
32:5:2509:C:C4	32:5:2510:G:O6	2.68	0.47
32:5:2543:A:H2	32:5:2773:G:N1	2.12	0.47
32:5:2613:C:N4	32:5:2614:C:N4	2.63	0.47
32:5:2866:C:C2	32:5:2867:C:C6	3.03	0.47
32:5:3586:G:C4	32:5:3587:C:C5	3.03	0.47
32:5:3623:C:C5	32:5:3624:A:C5	2.98	0.47
32:5:3666:C:C4	32:5:3667:C:C6	3.03	0.47
32:5:3751:G:H21	32:5:3775:A:H8	1.62	0.47
32:5:3775:A:H2'	32:5:3776:G:C1'	2.45	0.47
32:5:3794:C:O2	32:5:3794:C:H2'	2.15	0.47
32:5:3858:C:C5	32:5:3859:G:N7	2.82	0.47
32:5:3878:C:C5	32:5:4400:G:H4'	2.50	0.47
32:5:4091:G:N2	32:5:4159:C:N3	2.63	0.47
32:5:4455:G:C4	32:5:4456:C:C5	3.03	0.47
32:5:4465:U:C4	32:5:4487:A:C6	3.03	0.47
32:5:4525:C:O2'	35:B:244:THR:HG22	2.14	0.47
32:5:4566:U:O2'	35:B:234:ARG:NH2	2.48	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
32:5:4692:A:H3'	32:5:4693:C:H2'	1.97	0.47
32:5:4726:G:C4'	35:B:130:PHE:CE1	2.95	0.47
32:5:5004:C:C5	32:5:5005:G:N9	2.82	0.47
33:7:93:G:N2	33:7:94:C:N1	2.62	0.47
36:C:325:MET:HE1	38:F:157:TYR:CZ	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
39:I:101:LYS:CG	39:I:121:LYS:HG3	2.44	0.47
42:j:17:THR:HG21	42:j:29:LEU:HD21	1.96	0.47
50:4:15:C:O2	50:4:34:C:O2	2.33	0.47
50:4:33:G:C6	50:4:34:C:C4	3.03	0.47
50:4:58:G:C6	50:4:289:A:C5	3.03	0.47
53:S2:4:C:H2'	53:S2:4:C:O2	2.14	0.47
53:S2:310:C:C4	53:S2:311:C:N4	2.83	0.47
53:S2:443:U:N3	53:S2:444:G:N9	2.63	0.47
53:S2:521:A:H2'	53:S2:522:A:O4'	2.14	0.47
53:S2:533:A:C2	53:S2:534:G:H1'	2.50	0.47
53:S2:615:C:O2'	53:S2:616:A:O4'	2.31	0.47
53:S2:651:U:O2'	53:S2:652:U:C5'	2.63	0.47
53:S2:842:C:O2	53:S2:843:C:C5	2.65	0.47
53:S2:875:A:C3'	53:S2:876:C:H5''	2.45	0.47
53:S2:955:A:N6	53:S2:971:G:O4'	2.47	0.47
53:S2:1028:A:N7	53:S2:1029:G:C8	2.83	0.47
53:S2:1290:G:C4	85:Sf:146:LEU:CD2	2.98	0.47
53:S2:1349:G:H2'	53:S2:1350:U:O4'	2.15	0.47
53:S2:1399:C:O2	53:S2:1400:U:C6	2.68	0.47
53:S2:1408:U:H2'	53:S2:1409:A:O4'	2.15	0.47
53:S2:1690:U:O3'	53:S2:1691:U:P	2.73	0.47
53:S2:1709:G:C4	53:S2:1710:C:C5	3.03	0.47
55:SB:27:LYS:HB3	55:SB:51:ARG:HH12	1.79	0.47
55:SB:60:ASP:OD1	55:SB:63:LYS:CD	2.63	0.47
55:SB:191:ASP:OD1	55:SB:191:ASP:N	2.48	0.47
56:SC:192:LEU:HD12	56:SC:192:LEU:C	2.40	0.47
58:SG:212:LEU:O	58:SG:216:ARG:N	2.41	0.47
60:SI:47:ARG:NH1	60:SI:48:VAL:O	2.48	0.47
62:SL:13:GLN:N	62:SL:13:GLN:CD	2.73	0.47
64:SO:142:ARG:HB3	69:Sa:22:ARG:HH22	1.80	0.47
75:SM:104:VAL:HG13	75:SM:105:GLY:N	2.30	0.47
78:SR:84:TYR:C	78:SR:85:VAL:HG23	2.40	0.47
78:SR:100:PRO:O	78:SR:103:LYS:HB3	2.15	0.47
1:A:117:GLU:OE1	1:A:122:ASP:N	2.48	0.46
1:A:196:TRP:CZ2	32:5:3653:A:OP1	2.68	0.46
2:D:233:PRO:O	2:D:235:MET:N	2.46	0.46
11:R:107:ARG:HH11	11:R:107:ARG:HB3	1.80	0.46
19:a:132:ARG:HB2	32:5:1397:A:OP1	2.14	0.46
20:b:40:LEU:O	20:b:41:ARG:C	2.57	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:f:6:TRP:O	24:f:6:TRP:CD2	2.68	0.46
24:f:60:PRO:CD	32:5:4945:G:O6	2.63	0.46
25:g:12:SER:C	25:g:13:TYR:CD1	2.93	0.46
32:5:20:U:C5	34:8:37:A:N1	2.83	0.46
32:5:90:G:N2	32:5:95:G:N1	2.60	0.46
32:5:95:G:H2'	32:5:96:U:C4'	2.45	0.46
32:5:97:G:H5'	32:5:292:G:OP1	2.15	0.46
32:5:181:C:N4	32:5:256:G:C6	2.83	0.46
32:5:446:C:C2	32:5:447:C:C6	3.03	0.46
32:5:462:G:C2	32:5:694:C:C2	3.03	0.46
32:5:468:U:O2	32:5:468:U:H2'	2.15	0.46
32:5:746:A:O2'	32:5:747:A:O5'	2.29	0.46
32:5:753:C:O2	32:5:754:U:C6	2.67	0.46
32:5:962:C:N4	45:r:112:ARG:HD2	2.30	0.46
32:5:1090:G:H2'	32:5:1091:C:O4'	2.15	0.46
32:5:1198:G:C2'	32:5:1199:G:C8	2.89	0.46
32:5:1490:G:C2	32:5:1491:A:C4	3.03	0.46
32:5:1491:A:C5	32:5:1492:G:N7	2.83	0.46
32:5:1540:C:N3	32:5:1541:C:C6	2.84	0.46
32:5:1697:G:H8	38:F:165:ASN:HA	1.80	0.46
32:5:1727:U:N3	32:5:1728:U:C5	2.83	0.46
32:5:1739:G:C2'	32:5:1740:C:O4'	2.46	0.46
32:5:2015:U:C2	32:5:2016:C:C6	3.03	0.46
32:5:2103:G:C4	32:5:2104:G:C8	3.03	0.46
32:5:2297:G:C2	32:5:2338:C:C2	3.03	0.46
32:5:2391:G:C2	32:5:2392:C:C2	3.03	0.46
32:5:2413:U:N3	32:5:2414:G:N7	2.62	0.46
32:5:2448:G:C2'	32:5:2449:A:C8	2.98	0.46
32:5:2487:G:C2'	32:5:2488:C:OP1	2.63	0.46
32:5:2614:C:O2	32:5:2614:C:C2'	2.63	0.46
32:5:2632:U:C2'	32:5:2633:U:H6	2.27	0.46
32:5:2746:A:H2'	32:5:2747:U:O5'	2.15	0.46
32:5:2766:A:H5''	32:5:2766:A:N3	2.30	0.46
32:5:2835:A:H1'	32:5:4979:A:H5'	1.97	0.46
32:5:3586:G:C2	32:5:3587:C:C2	3.03	0.46
32:5:3600:G:C6	32:5:3601:C:C4	3.02	0.46
32:5:3621:A:C2	32:5:3622:C:N1	2.83	0.46
32:5:3621:A:H3'	32:5:3622:C:C6	2.49	0.46
32:5:3693:U:O2	32:5:3693:U:H2'	2.15	0.46
32:5:3755:G:N1	32:5:3770:U:C6	2.81	0.46
32:5:4241:C:C4	32:5:4242:U:H5	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4269:G:C2	32:5:4270:C:C1'	2.98	0.46
32:5:4620:U:N3	32:5:4621:C:C5	2.82	0.46
32:5:4690:G:N2	32:5:4691:A:N7	2.63	0.46
32:5:4691:A:C5	32:5:4692:A:C8	3.02	0.46
32:5:4699:U:C4	32:5:4702:G:C5	3.02	0.46
32:5:4724:A:C2	32:5:4725:C:C2	3.03	0.46
32:5:4979:A:H2'	32:5:4980:C:O5'	2.15	0.46
33:7:55:A:C2	33:7:56:G:N7	2.83	0.46
36:C:22:VAL:HG13	36:C:258:ARG:HE	1.78	0.46
46:K:29:ALA:N	46:K:30:PRO:HD2	2.30	0.46
46:K:35:LEU:HB3	50:4:36:A:C5	2.50	0.46
49:3:75:C:H6	49:3:75:C:H3'	1.79	0.46
50:4:38:U:O2	50:4:38:U:C2'	2.64	0.46
50:4:282:U:C2	50:4:283:A:C8	3.03	0.46
52:6:112:ASP:OD1	52:6:114:ARG:NH1	2.47	0.46
53:S2:56:G:H2'	53:S2:57:U:C6	2.50	0.46
53:S2:116:U:C2	53:S2:117:C:C6	3.03	0.46
53:S2:321:C:H2'	53:S2:322:C:H6	1.80	0.46
53:S2:424:C:H2'	53:S2:425:G:O4'	2.15	0.46
53:S2:519:A:N1	53:S2:520:A:N7	2.63	0.46
53:S2:582:C:H2'	53:S2:582:C:O2	2.15	0.46
53:S2:623:G:C6	53:S2:624:C:C4	3.03	0.46
53:S2:694:G:C6	53:S2:695:C:C4	3.03	0.46
53:S2:834:C:H3'	53:S2:835:C:C4'	2.45	0.46
53:S2:959:G:O6	64:SO:65:ASP:HB3	2.16	0.46
53:S2:970:G:C3'	53:S2:971:G:H5'	2.44	0.46
53:S2:991:G:C6	69:Sa:95:ARG:NH2	2.83	0.46
53:S2:1031:A:C4	53:S2:1032:C:C6	3.02	0.46
53:S2:1041:G:N2	53:S2:1075:C:C2	2.83	0.46
53:S2:1063:C:O2	53:S2:1063:C:H2'	1.99	0.46
53:S2:1185:C:O2	53:S2:1185:C:H2'	2.15	0.46
53:S2:1293:A:N3	85:Sf:151:ASN:HA	2.24	0.46
53:S2:1293:A:C2'	85:Sf:152:LYS:HB2	2.45	0.46
53:S2:1306:U:C5	53:S2:1307:U:C5	3.03	0.46
53:S2:1399:C:C2	53:S2:1400:U:C6	3.03	0.46
53:S2:1426:U:O2	53:S2:1427:C:C6	2.68	0.46
53:S2:1449:G:C2	53:S2:1450:G:N9	2.83	0.46
53:S2:1545:A:C5	53:S2:1546:G:C6	3.03	0.46
53:S2:1563:G:C2	53:S2:1564:C:C6	3.03	0.46
53:S2:1595:U:N3	53:S2:1596:U:H6	2.13	0.46
53:S2:1679:A:C8	53:S2:1679:A:O5'	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1722:G:C2	53:S2:1723:G:C8	3.03	0.46
56:SC:256:TRP:CZ2	66:SW:68:ARG:HB3	2.50	0.46
57:SE:11:ARG:O	57:SE:12:VAL:CB	2.63	0.46
62:SL:84:ARG:HH12	62:SL:115:PRO:HG3	1.80	0.46
73:SF:45:TYR:CE1	77:SQ:114:GLN:O	2.68	0.46
73:SF:137:GLN:HE21	73:SF:137:GLN:HA	1.80	0.46
83:Sc:31:ARG:HH12	83:Sc:41:SER:CB	2.16	0.46
3:G:165:GLU:OE1	8:N:19:MET:HE1	2.14	0.46
4:H:180:TYR:CD2	4:H:180:TYR:N	2.83	0.46
6:L:60:ARG:NE	32:5:72:C:C4	2.83	0.46
7:M:3:PHE:CZ	32:5:4763:U:O2	2.67	0.46
8:N:143:ARG:HB3	26:h:99:GLU:OE1	2.15	0.46
18:Z:40:HIS:C	18:Z:77:TYR:OH	2.59	0.46
22:d:64:ILE:HG13	22:d:68:LEU:HD23	1.97	0.46
23:e:23:HIS:CD2	23:e:24:GLN:HG3	2.51	0.46
28:k:19:ASP:OD1	28:k:19:ASP:C	2.58	0.46
31:o:105:GLN:OE1	31:o:105:GLN:N	2.46	0.46
32:5:101:A:N3	32:5:102:G:C8	2.81	0.46
32:5:104:G:O2'	32:5:1361:G:O2'	2.17	0.46
32:5:341:G:H2'	32:5:341:G:N3	2.30	0.46
32:5:348:G:C4	32:5:350:C:C5	3.03	0.46
32:5:481:G:N1	32:5:482:G:N7	2.64	0.46
32:5:489:C:C2	32:5:490:C:C6	3.04	0.46
32:5:717:U:N3	32:5:718:C:C6	2.84	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
32:5:994:G:C5	32:5:995:C:C5	3.03	0.46
32:5:1218:G:N1	32:5:1219:G:C1'	2.77	0.46
32:5:1484:G:O3'	32:5:1485:C:H4'	2.15	0.46
32:5:1584:G:C4	32:5:1585:C:C6	3.03	0.46
32:5:1650:A:C3'	32:5:1651:G:H5''	2.45	0.46
32:5:1674:C:O2'	32:5:1675:C:H5'	2.16	0.46
32:5:1721:G:C6	32:5:1722:C:C4	3.03	0.46
32:5:1960:A:N1	47:q:14:PHE:CE2	2.83	0.46
32:5:1992:U:O4	32:5:2002:A:H3'	2.15	0.46
32:5:1999:A:H2'	32:5:2000:G:N3	2.30	0.46
32:5:2104:G:C2	32:5:2105:A:N9	2.83	0.46
32:5:2322:G:C6	32:5:2323:C:C4	3.04	0.46
32:5:2424:G:H2'	32:5:2426:U:C4	2.50	0.46
32:5:3630:A:C2	32:5:3631:U:C5	3.03	0.46
32:5:3702:A:C8	32:5:3774:A:C1'	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3723:A:N1	32:5:3729:U:O4	2.48	0.46
32:5:3753:G:N7	32:5:3776:G:C4	2.83	0.46
32:5:4135:G:N1	32:5:4136:G:C5	2.82	0.46
32:5:4271:A:C5	32:5:4272:G:C2	3.03	0.46
32:5:4342:C:C2	32:5:4343:U:H6	2.27	0.46
32:5:4405:G:C5	32:5:4406:U:C5	3.03	0.46
32:5:4563:U:H2'	32:5:4564:A:C8	2.50	0.46
32:5:4916:G:C2	32:5:4917:C:C2	3.03	0.46
32:5:4966:A:C2	32:5:5067:U:N3	2.80	0.46
32:5:5011:A:N1	32:5:5012:G:C5	2.84	0.46
33:7:28:C:C4	33:7:29:C:C5	3.02	0.46
33:7:112:U:O2	33:7:112:U:C2'	2.62	0.46
33:7:117:G:C6	33:7:118:C:C4	3.03	0.46
34:8:97:A:C6	34:8:98:C:C4	3.04	0.46
34:8:100:U:N3	34:8:101:C:C6	2.83	0.46
35:B:315:ASN:HA	35:B:320:PHE:CE2	2.50	0.46
36:C:122:TYR:CB	36:C:280:PRO:HG3	2.45	0.46
39:I:12:CYS:HB2	39:I:57:TYR:HE2	1.80	0.46
39:I:86:HIS:HD2	39:I:139:ARG:NH1	2.14	0.46
40:P:126:ARG:HA	40:P:140:MET:HG2	1.96	0.46
43:n:11:ARG:CD	53:S2:1183:A:H5'	2.45	0.46
50:4:149:A:P	51:9:101:ARG:HH21	2.39	0.46
52:6:150:ARG:HH12	52:6:153:LYS:NZ	2.13	0.46
53:S2:77:A:H1'	58:SG:176:ILE:HD12	1.98	0.46
53:S2:201:C:N3	53:S2:202:G:H1'	2.30	0.46
53:S2:217:A:C6	53:S2:218:U:C6	3.03	0.46
53:S2:300:U:N3	53:S2:301:A:C8	2.83	0.46
53:S2:550:C:H2'	53:S2:550:C:O2	2.15	0.46
53:S2:832:G:N1	53:S2:833:C:N1	2.63	0.46
53:S2:839:C:C6	53:S2:841:G:C5	3.04	0.46
53:S2:934:G:C2	53:S2:935:G:C8	3.03	0.46
53:S2:978:G:C6	53:S2:979:C:C5	3.03	0.46
53:S2:996:A:N6	63:SN:113:PHE:CD2	2.83	0.46
53:S2:1017:U:H5'	53:S2:1018:U:OP2	2.16	0.46
53:S2:1018:U:O2	53:S2:1018:U:C2'	2.63	0.46
53:S2:1099:G:C6	53:S2:1100:A:C5	3.03	0.46
53:S2:1100:A:C4	53:S2:1101:U:C6	3.03	0.46
53:S2:1261:C:C5	53:S2:1262:C:C4	3.02	0.46
53:S2:1293:A:H2'	85:Sf:152:LYS:HB2	1.97	0.46
53:S2:1294:G:O2'	85:Sf:137:ASP:CG	2.59	0.46
53:S2:1327:G:N1	53:S2:1328:G:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1427:C:H2'	53:S2:1428:G:C8	2.49	0.46
53:S2:1514:G:C2'	53:S2:1515:G:O4'	2.63	0.46
53:S2:1708:C:H2'	53:S2:1708:C:O2	2.14	0.46
53:S2:1811:C:C2	53:S2:1812:U:C6	3.03	0.46
54:SA:132:GLN:O	54:SA:135:THR:N	2.49	0.46
58:SG:63:MET:HE3	58:SG:106:LEU:CD2	2.46	0.46
61:SJ:39:ASN:CG	61:SJ:40:LYS:N	2.73	0.46
63:SN:56:ASP:O	70:Sb:46:VAL:HA	2.15	0.46
72:SD:76:ARG:NH2	74:SK:66:HIS:NE2	2.63	0.46
73:SF:198:ARG:C	73:SF:198:ARG:CD	2.86	0.46
77:SQ:115:TYR:O	77:SQ:116:ASP:C	2.58	0.46
78:SR:56:HIS:O	78:SR:60:ARG:HG3	2.16	0.46
78:SR:120:THR:CG2	78:SR:121:GLN:N	2.78	0.46
82:SZ:46:ASN:CG	82:SZ:78:LYS:HB3	2.40	0.46
1:A:68:ARG:C	3:G:45:ILE:HD11	2.40	0.46
2:D:190:PHE:HB3	2:D:192:ALA:N	2.31	0.46
4:H:31:ARG:HG3	4:H:85:THR:O	2.16	0.46
6:L:60:ARG:HD2	32:5:72:C:C5	2.50	0.46
7:M:11:ARG:HG2	7:M:57:LEU:HB2	1.97	0.46
15:V:57:VAL:HG23	15:V:84:GLN:CG	2.41	0.46
16:X:146:ALA:HA	16:X:149:VAL:HG12	1.97	0.46
19:a:62:HIS:HB2	32:5:315:G:C6	2.50	0.46
21:c:18:LEU:HD23	21:c:22:MET:HE3	1.97	0.46
23:e:35:TRP:HE1	23:e:36:ARG:C	2.23	0.46
24:f:3:GLY:O	24:f:4:ARG:O	2.33	0.46
26:h:78:TYR:HE2	32:5:16:G:O3'	1.97	0.46
32:5:46:U:H3'	32:5:47:A:H2'	1.97	0.46
32:5:90:G:C5	32:5:92:C:C1'	2.94	0.46
32:5:289:C:O2	32:5:290:U:C6	2.68	0.46
32:5:475:G:H2'	32:5:476:G:O4'	2.15	0.46
32:5:656:C:C2	32:5:657:C:C6	3.03	0.46
32:5:747:A:C2'	32:5:749:G:C8	2.97	0.46
32:5:1203:G:H2'	32:5:1204:C:O4'	2.15	0.46
32:5:1475:G:C2	32:5:1476:C:C6	2.98	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
32:5:1567:U:C2	32:5:1568:C:C6	3.03	0.46
32:5:1596:U:O2'	40:P:131:ARG:NH2	2.47	0.46
32:5:1694:C:O2	32:5:1694:C:H2'	2.14	0.46
32:5:1696:C:O2'	32:5:1697:G:OP2	2.29	0.46
32:5:1846:G:C2	32:5:1847:C:N3	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1854:G:C5	32:5:4394:A:C6	3.03	0.46
32:5:1953:U:H2'	32:5:1954:U:O4'	2.15	0.46
32:5:1955:G:C6	32:5:1956:A:C5	3.03	0.46
32:5:1964:A:C6	32:5:1965:G:C4	3.03	0.46
32:5:2034:G:O6	32:5:2035:C:C4	2.67	0.46
32:5:2060:G:C6	32:5:2061:U:C4	3.03	0.46
32:5:2243:C:O2	32:5:2243:C:H2'	2.15	0.46
32:5:2268:A:C8	32:5:2270:G:C5	3.03	0.46
32:5:2293:U:C2	32:5:2294:G:N7	2.82	0.46
32:5:2384:U:C2	32:5:2385:U:C6	3.04	0.46
32:5:2405:G:O2'	32:5:2791:C:O2'	2.31	0.46
32:5:2606:G:C4	32:5:2607:C:C6	3.03	0.46
32:5:3775:A:H2'	32:5:3776:G:H1'	1.97	0.46
32:5:3843:C:O2	32:5:3844:U:H1'	2.14	0.46
32:5:3861:A:C4	32:5:3862:A:C8	3.02	0.46
32:5:3944:G:N2	32:5:3945:A:C8	2.81	0.46
32:5:4205:A:N3	32:5:4206:C:C6	2.83	0.46
32:5:4458:C:H2'	32:5:4459:U:C6	2.49	0.46
32:5:4564:A:H2'	32:5:4565:C:O4'	2.15	0.46
32:5:5014:A:OP1	32:5:5014:A:H3'	2.16	0.46
34:8:3:A:N3	34:8:4:C:C6	2.83	0.46
34:8:9:A:N3	34:8:9:A:H2'	2.29	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
36:C:186:SER:O	36:C:188:ARG:NH1	2.48	0.46
43:n:5:TRP:CZ2	53:S2:1854:U:O4	2.69	0.46
47:q:68:HIS:O	47:q:70:GLU:N	2.37	0.46
48:z:332:MET:SD	48:z:424:TYR:HD1	2.38	0.46
50:4:59:A:H2'	50:4:60:U:O4'	2.15	0.46
50:4:295:U:O2	50:4:296:C:C6	2.68	0.46
52:6:194:GLN:HB3	52:6:196:TRP:CZ2	2.50	0.46
53:S2:120:U:C4	53:S2:121:U:C4	3.02	0.46
53:S2:429:C:O2'	53:S2:811:A:N1	2.43	0.46
53:S2:474:G:C6	53:S2:475:C:C4	3.03	0.46
53:S2:478:G:N2	53:S2:479:C:C2	2.84	0.46
53:S2:552:G:H2'	53:S2:553:U:C6	2.50	0.46
53:S2:618:C:N4	67:SX:114:ASP:OD2	2.48	0.46
53:S2:910:G:C2	53:S2:911:C:C2	3.03	0.46
53:S2:973:C:O2	53:S2:973:C:H2'	2.15	0.46
53:S2:1049:A:C2	53:S2:1070:A:C4	3.03	0.46
53:S2:1102:G:C2	53:S2:1103:C:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1126:G:C2	53:S2:1127:C:C5	3.03	0.46
53:S2:1236:G:C4	53:S2:1237:C:C5	3.03	0.46
53:S2:1243:U:C2	53:S2:1265:A:N1	2.83	0.46
53:S2:1272:C:OP1	53:S2:1303:C:O4'	2.32	0.46
53:S2:1293:A:C2	85:Sf:151:ASN:N	2.75	0.46
53:S2:1308:U:O2'	85:Sf:131:PHE:O	2.30	0.46
53:S2:1336:C:H2'	53:S2:1337:C:O4'	2.15	0.46
53:S2:1412:C:O2	53:S2:1413:G:C5	2.62	0.46
53:S2:1826:G:N3	53:S2:1826:G:H2'	2.31	0.46
55:SB:153:THR:HB	55:SB:155:TYR:CE1	2.50	0.46
56:SC:183:LYS:HE2	66:SW:94:LEU:O	2.15	0.46
59:SH:109:ARG:HG3	59:SH:110:THR:N	2.29	0.46
59:SH:111:LYS:C	59:SH:112:ASN:ND2	2.73	0.46
72:SD:70:THR:HG22	72:SD:86:LEU:HD13	1.97	0.46
77:SQ:63:PHE:N	77:SQ:63:PHE:CD1	2.83	0.46
78:SR:74:GLN:O	78:SR:78:ARG:HG2	2.16	0.46
81:SU:48:LEU:CD2	81:SU:97:ILE:HD13	2.45	0.46
2:D:226:TYR:CE2	2:D:236:MET:HE2	2.50	0.46
5:J:154:LYS:NZ	33:7:55:A:OP1	2.47	0.46
6:L:146:LEU:CD1	26:h:120:ALA:HB3	2.46	0.46
8:N:89:VAL:HG13	32:5:3928:A:H5'	1.97	0.46
10:Q:68:ARG:CZ	10:Q:68:ARG:HB3	2.43	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:119:ILE:HD12	16:X:149:VAL:HG21	1.97	0.46
32:5:25:A:C6	32:5:341:G:C5	3.04	0.46
32:5:79:C:C2	32:5:105:A:C2	3.04	0.46
32:5:313:U:C4	32:5:314:G:N7	2.83	0.46
32:5:325:U:C2	32:5:326:C:C5	3.04	0.46
32:5:453:G:H22	32:5:1294:A:H62	1.63	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
32:5:657:C:C2	32:5:658:C:C6	3.04	0.46
32:5:661:C:N3	32:5:662:C:C6	2.83	0.46
32:5:951:G:N3	32:5:952:G:C8	2.83	0.46
32:5:1250:C:C2	32:5:1251:C:C6	3.04	0.46
32:5:1444:G:C2	32:5:1445:U:C4	3.04	0.46
32:5:1581:G:C5	32:5:1610:C:C4	3.03	0.46
32:5:1761:G:C2	32:5:1762:C:C2	3.03	0.46
32:5:1761:G:C5	32:5:1762:C:C5	3.04	0.46
32:5:2539:C:N3	32:5:2540:C:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2590:G:C6	32:5:2754:G:C6	3.03	0.46
32:5:2606:G:C6	32:5:2607:C:C4	3.03	0.46
32:5:2632:U:C2	32:5:2633:U:C4	3.02	0.46
32:5:2644:G:N1	32:5:2645:G:C5	2.84	0.46
32:5:2676:A:C6	32:5:2677:G:C4	3.03	0.46
32:5:2736:G:C6	32:5:2737:C:N4	2.83	0.46
32:5:2823:G:C5	32:5:2824:C:C5	3.02	0.46
32:5:3622:C:C2	32:5:3623:C:N3	2.83	0.46
32:5:3629:A:C1'	53:S2:1721:U:H3	2.29	0.46
32:5:3687:A:C6	32:5:3688:U:C6	3.04	0.46
32:5:3696:C:C4	32:5:3697:U:C4	3.04	0.46
32:5:3802:U:H3	32:5:4498:U:C2'	2.28	0.46
32:5:4147:G:N3	32:5:4148:C:C6	2.83	0.46
32:5:4275:G:C6	32:5:4276:G:C8	3.03	0.46
32:5:5000:G:C2'	32:5:5001:U:O5'	2.64	0.46
34:8:86:U:OP1	34:8:87:G:OP1	2.33	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
36:C:47:ASN:OD1	36:C:47:ASN:N	2.48	0.46
50:4:8:G:C2	50:4:9:C:C2	3.04	0.46
50:4:14:G:C6	50:4:15:C:C4	3.03	0.46
53:S2:122:G:C4	53:S2:123:G:C8	3.02	0.46
53:S2:215:G:O2'	53:S2:216:C:O5'	2.31	0.46
53:S2:555:A:N1	53:S2:557:U:C5	2.83	0.46
53:S2:572:U:H2'	53:S2:573:U:O4'	2.16	0.46
53:S2:637:U:N3	53:S2:638:C:C4	2.83	0.46
53:S2:671:A:C6	53:S2:1089:G:C8	3.03	0.46
53:S2:1009:A:O2'	63:SN:114:ARG:HG3	2.16	0.46
53:S2:1050:A:C5	53:S2:1051:G:C1'	2.98	0.46
53:S2:1267:C:C2	53:S2:1268:C:C5	3.03	0.46
53:S2:1302:G:C4	85:Sf:140:TYR:CZ	3.02	0.46
53:S2:1323:U:H2'	53:S2:1324:G:C8	2.50	0.46
53:S2:1393:G:N3	53:S2:1393:G:H2'	2.31	0.46
53:S2:1495:G:H1'	84:Sd:41:GLN:CD	2.40	0.46
53:S2:1524:G:C2	53:S2:1525:C:C6	3.04	0.46
53:S2:1540:G:C5	53:S2:1541:G:C8	3.03	0.46
55:SB:55:THR:C	55:SB:57:ILE:N	2.72	0.46
55:SB:171:ILE:O	55:SB:175:GLU:OE2	2.34	0.46
55:SB:202:GLN:N	55:SB:203:PRO:HD2	2.30	0.46
60:SI:66:SER:CB	60:SI:73:THR:HB	2.46	0.46
73:SF:43:GLU:N	73:SF:43:GLU:OE1	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SR:83:ASN:ND2	78:SR:83:ASN:C	2.73	0.46
86:Sg:226:HIS:CE1	86:Sg:228:TYR:HA	2.50	0.46
4:H:61:TRP:HZ2	12:S:152:PHE:CE2	2.24	0.46
4:H:153:LEU:HA	4:H:156:ASN:ND2	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
22:d:119:THR:HG23	32:5:4996:C:O2'	2.16	0.46
26:h:98:HIS:CE1	32:5:176:G:H5''	2.51	0.46
32:5:66:A:N7	32:5:328:A:H1'	2.30	0.46
32:5:88:A:O2'	32:5:89:C:C5'	2.63	0.46
32:5:180:C:C2	32:5:181:C:C5	3.03	0.46
32:5:289:C:C4	32:5:290:U:C4	3.04	0.46
32:5:434:A:N7	32:5:435:A:C8	2.84	0.46
32:5:516:C:C4	32:5:646:G:N1	2.84	0.46
32:5:1214:C:H42	38:F:58:HIS:CE1	2.34	0.46
32:5:1237:C:C2	37:E:55:ARG:HD3	2.51	0.46
32:5:1311:G:C6	32:5:1312:A:C5	3.04	0.46
32:5:1323:A:N3	32:5:1324:A:C8	2.83	0.46
32:5:1397:A:N3	32:5:1499:C:C1'	2.77	0.46
32:5:1452:A:C2	32:5:1453:G:H1'	2.50	0.46
32:5:1466:G:C4	32:5:1467:C:C6	3.04	0.46
32:5:1528:U:H2'	32:5:1529:G:O4'	2.15	0.46
32:5:1584:G:N2	32:5:1585:C:C2	2.84	0.46
32:5:1589:C:O2'	32:5:1590:C:O5'	2.31	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
32:5:1797:G:N3	32:5:1798:G:C8	2.84	0.46
32:5:1821:G:O2'	32:5:1822:U:OP1	2.33	0.46
32:5:1840:G:C2'	32:5:1842:G:O5'	2.63	0.46
32:5:1855:G:C2	32:5:1856:C:N1	2.84	0.46
32:5:1886:G:C2	32:5:1894:C:C2	2.92	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
32:5:2614:C:C2	32:5:2726:G:N1	2.83	0.46
32:5:2614:C:H1'	32:5:2726:G:N2	2.30	0.46
32:5:2618:G:N2	32:5:2619:G:H1'	2.31	0.46
32:5:2703:G:C2	32:5:2704:C:N1	2.83	0.46
32:5:2830:G:N1	32:5:2831:G:C5	2.84	0.46
32:5:3702:A:N1	32:5:3703:G:C5	2.79	0.46
32:5:4240:G:N3	32:5:4241:C:H1'	2.30	0.46
32:5:4323:A:N3	32:5:4323:A:H2'	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4462:C:N3	32:5:4515:G:C2	2.83	0.46
32:5:4660:G:N2	32:5:4661:G:C5	2.84	0.46
32:5:4667:C:C4	32:5:4668:U:C4	3.04	0.46
32:5:4688:C:C2	32:5:4689:U:C6	3.03	0.46
32:5:4737:G:C5	32:5:4738:C:N4	2.84	0.46
32:5:4986:G:C2	32:5:4987:C:C2	3.04	0.46
32:5:5048:A:O4'	32:5:5048:A:N3	2.48	0.46
33:7:11:A:O2'	33:7:12:U:H5''	2.16	0.46
33:7:43:U:O2	33:7:44:C:H6	1.96	0.46
34:8:53:G:C2	34:8:54:C:C2	3.03	0.46
34:8:56:G:C6	34:8:57:C:C4	3.04	0.46
34:8:106:G:N1	34:8:107:C:N4	2.64	0.46
35:B:78:ILE:CD1	35:B:320:PHE:CE1	2.98	0.46
35:B:320:PHE:O	35:B:321:VAL:C	2.58	0.46
35:B:369:ASP:OD1	35:B:369:ASP:C	2.58	0.46
36:C:122:TYR:HB2	36:C:280:PRO:CG	2.46	0.46
37:E:230:ASP:OD1	37:E:230:ASP:N	2.49	0.46
40:P:26:PHE:CD1	40:P:26:PHE:C	2.94	0.46
41:W:8:PHE:HE1	41:W:51:TRP:CZ3	2.34	0.46
45:r:12:ASN:HD21	45:r:19:LYS:NZ	2.13	0.46
48:z:148:LEU:O	48:z:152:ALA:HB2	2.15	0.46
50:4:45:G:C2	50:4:46:C:C6	3.04	0.46
50:4:119[B]:A:O2'	50:4:120:G:OP1	2.32	0.46
53:S2:29:G:C2	53:S2:30:C:N3	2.83	0.46
53:S2:83:A:C6	53:S2:84:A:H1'	2.50	0.46
53:S2:185:G:C4	53:S2:186:C:C5	3.02	0.46
53:S2:308:G:H5'	53:S2:309:G:C5'	2.46	0.46
53:S2:529:A:N1	53:S2:555:A:N1	2.63	0.46
53:S2:839:C:C5	53:S2:841:G:N7	2.84	0.46
53:S2:992:A:H62	69:Sa:15:ARG:HH11	1.62	0.46
53:S2:1123:C:O2'	55:SB:148:ASN:ND2	2.48	0.46
53:S2:1131:G:N1	53:S2:1132:C:C5	2.84	0.46
53:S2:1154:U:O2'	56:SC:194:ARG:HD2	2.16	0.46
53:S2:1190:A:H2'	53:S2:1191:C:O5'	2.15	0.46
53:S2:1201:U:C2	53:S2:1202:U:C6	3.04	0.46
53:S2:1289:U:C4	53:S2:1290:G:C4	3.04	0.46
53:S2:1561:A:O4'	53:S2:1583:C:H4'	2.16	0.46
53:S2:1588:A:O2'	53:S2:1589:A:C8	2.68	0.46
53:S2:1668:U:C2	53:S2:1669:G:C8	3.03	0.46
53:S2:1712:A:H2'	53:S2:1713:C:C6	2.49	0.46
53:S2:1777:G:C4	53:S2:1778:C:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SA:186:ARG:HD2	54:SA:187:GLY:HA2	1.97	0.46
54:SA:204:TYR:C	54:SA:204:TYR:HD1	2.24	0.46
55:SB:79:VAL:CG2	55:SB:81:PHE:CZ	2.98	0.46
55:SB:117:TRP:CE2	55:SB:152:LYS:HE3	2.50	0.46
61:SJ:61:LEU:HA	61:SJ:70:ARG:HH22	1.79	0.46
72:SD:17:PHE:CE1	72:SD:21:LEU:HD11	2.50	0.46
73:SF:60:ARG:HD3	73:SF:61:PHE:CE2	2.50	0.46
75:SM:21:VAL:HG21	75:SM:124:ILE:HD11	1.98	0.46
78:SR:99:ASP:N	78:SR:99:ASP:OD1	2.47	0.46
85:Sf:88:PRO:O	85:Sf:90:LYS:N	2.49	0.46
1:A:15:VAL:HG13	32:5:1539:G:H1'	1.98	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
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
6:L:80:GLU:HG2	6:L:110:LEU:HD12	1.97	0.46
6:L:125:ILE:HD12	6:L:125:ILE:N	2.31	0.46
8:N:192:TRP:C	8:N:192:TRP:HE3	2.24	0.46
9:O:199:HIS:ND1	9:O:199:HIS:N	2.64	0.46
14:U:70:ILE:HD12	14:U:70:ILE:N	2.31	0.46
32:5:30:C:C2'	32:5:31:U:O5'	2.63	0.46
32:5:123:C:N3	32:5:124:C:C6	2.84	0.46
32:5:422:C:N3	32:5:423:G:N7	2.63	0.46
32:5:458:C:C2	32:5:459:C:C5	3.02	0.46
32:5:975:C:C2	36:C:323:ARG:NH1	2.84	0.46
32:5:1189:G:N3	32:5:1190:C:C6	2.84	0.46
32:5:1279:A:C3'	32:5:1280:C:C5	2.96	0.46
32:5:1280:C:O2'	32:5:1282:G:P	2.74	0.46
32:5:1301:C:N4	32:5:1302:U:N1	2.63	0.46
32:5:1330:A:C8	32:5:3864:C:C4	3.03	0.46
32:5:1362:G:C5	32:5:1363:C:C5	3.03	0.46
32:5:1394:G:C2	32:5:1395:U:C2	3.03	0.46
32:5:1603:C:H2'	32:5:1604:G:H8	1.80	0.46
32:5:1620:U:O2	32:5:1621:A:C8	2.68	0.46
32:5:1804:A:O4'	32:5:1806:G:C8	2.68	0.46
32:5:1836:G:C2	32:5:1837:A:N7	2.84	0.46
32:5:1943:A:N7	32:5:1944:A:H1'	2.30	0.46
32:5:2058:G:C6	32:5:2059:C:C4	2.99	0.46
32:5:2270:G:H2'	32:5:2271:C:C6	2.51	0.46
32:5:2494:U:N3	32:5:2495:U:C6	2.84	0.46
32:5:2739:C:H4'	44:p:52:VAL:CG2	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2851:G:O2'	32:5:3841:C:O4'	2.30	0.46
32:5:3802:U:O2	32:5:4498:U:C4'	2.64	0.46
32:5:3901:A:H5'	32:5:3901:A:N3	2.30	0.46
32:5:3930:U:C2	32:5:3931:C:C5	3.04	0.46
32:5:4111:U:C4	32:5:4112:C:C5	3.04	0.46
32:5:4166:G:N2	32:5:4167:G:C1'	2.78	0.46
32:5:4200:G:C6	32:5:4201:G:C5	3.04	0.46
32:5:4237:C:H4'	32:5:4327:C:O2	2.16	0.46
32:5:4255:A:C5	32:5:4256:A:C2	3.04	0.46
32:5:4487:A:O2'	32:5:4708:A:N1	2.46	0.46
32:5:4509:U:C2'	32:5:4510:A:H2'	2.44	0.46
32:5:4524:G:N2	32:5:4525:C:C2	2.84	0.46
32:5:4688:C:N4	32:5:4699:U:H5	2.13	0.46
32:5:4690:G:C6	32:5:4697:U:C5	3.04	0.46
32:5:4695:C:O2'	32:5:4696:C:H5'	2.15	0.46
32:5:4920:C:C2	32:5:4921:C:C5	3.03	0.46
32:5:5006:U:C5	41:W:50:ASN:ND2	2.83	0.46
32:5:5006:U:O4	41:W:50:ASN:O	2.33	0.46
33:7:19:C:C2	33:7:60:G:C2	3.04	0.46
34:8:62:A:H4'	34:8:63:U:O5'	2.16	0.46
39:I:99:ILE:HG12	39:I:100:ASN:O	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:48:LEU:HD11	48:z:86:LEU:HD22	1.98	0.46
48:z:138:ASP:OD2	48:z:148:LEU:HD11	2.16	0.46
48:z:374:LYS:HE2	48:z:412:VAL:HG23	1.96	0.46
49:3:14:A:C2	49:3:22:U:H1'	2.51	0.46
50:4:35:U:H4'	50:4:37:C:H5	1.80	0.46
50:4:62:G:C2	50:4:63:C:C2	3.04	0.46
53:S2:19:A:C4	53:S2:20:G:C8	3.03	0.46
53:S2:50:A:C2	88:S4:81:MET:HE2	2.51	0.46
53:S2:375:U:H2'	53:S2:376:A:O4'	2.16	0.46
53:S2:380:G:OP2	60:SI:181:GLN:NE2	2.49	0.46
53:S2:462:C:N3	53:S2:463:C:C5	2.84	0.46
53:S2:554:A:C2	53:S2:555:A:C6	3.04	0.46
53:S2:842:C:C2	53:S2:843:C:C6	3.01	0.46
53:S2:949:G:C2	53:S2:950:C:C2	3.03	0.46
53:S2:952:G:C2	53:S2:953:C:C2	3.04	0.46
53:S2:964:A:N3	53:S2:965:U:C5	2.84	0.46
53:S2:1120:U:C4	53:S2:1121:G:C4	3.04	0.46
53:S2:1228:A:H2'	53:S2:1229:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1292:C:O2	85:Sf:150:PHE:CD1	2.68	0.46
53:S2:1371:U:OP2	53:S2:1372:U:C5	2.68	0.46
53:S2:1431:G:C4	53:S2:1432:U:C6	3.04	0.46
53:S2:1553:C:H5'	53:S2:1556:A:N6	2.31	0.46
53:S2:1657:G:C5	53:S2:1658:G:C8	3.04	0.46
53:S2:1866:A:C6	69:Sa:87:ARG:HD2	2.51	0.46
53:S2:1866:A:N6	69:Sa:87:ARG:HD2	2.30	0.46
55:SB:53:GLN:HG2	55:SB:56:LYS:CE	2.45	0.46
55:SB:150:ILE:O	78:SR:129:LYS:HB2	2.15	0.46
57:SE:80:ILE:HG13	57:SE:81:THR:HG23	1.97	0.46
61:SJ:54:ARG:NH2	61:SJ:54:ARG:HB3	2.31	0.46
73:SF:52:SER:O	73:SF:53:ALA:C	2.59	0.46
73:SF:141:VAL:HG21	73:SF:146:ARG:HG3	1.97	0.46
75:SM:36:ARG:HD3	85:Sf:143:LYS:HZ1	1.80	0.46
79:SS:33:ILE:HD12	79:SS:71:MET:HE1	1.97	0.46
83:Sc:56:LEU:HG	83:Sc:57:THR:N	2.31	0.46
8:N:94:PHE:CE1	32:5:2460:A:C1'	2.99	0.46
9:O:156:LEU:HD13	32:5:4910:G:C8	2.51	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
24:f:32:GLY:HA3	37:E:278:TYR:HB3	1.97	0.46
32:5:10:A:H1'	32:5:2472:A:C6	2.50	0.46
32:5:95:G:H3'	32:5:95:G:C8	2.50	0.46
32:5:270:U:C2	32:5:271:C:C6	2.92	0.46
32:5:742:G:N3	32:5:742:G:H2'	2.31	0.46
32:5:908:G:N2	32:5:909:A:H1'	2.31	0.46
32:5:985:C:N3	32:5:986:C:C5	2.84	0.46
32:5:1205:G:C2	32:5:1206:C:C2	3.04	0.46
32:5:1329:G:N2	32:5:3865:A:H1'	2.31	0.46
32:5:1340:C:C4	32:5:1341:U:C5	3.02	0.46
32:5:1367:C:N3	32:5:1369:C:P	2.89	0.46
32:5:1380:G:N2	32:5:1382:G:C4	2.84	0.46
32:5:1429:C:C2	32:5:1430:C:C6	3.04	0.46
32:5:1477:C:N3	32:5:1478:C:H6	2.04	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
32:5:1663:C:H2'	32:5:1664:U:H6	1.78	0.46
32:5:1695:U:C2'	32:5:1696:C:H5'	2.46	0.46
32:5:1882:U:O2	32:5:1883:G:N7	2.48	0.46
32:5:1977:C:OP1	46:K:79:ALA:HB3	2.16	0.46
32:5:2294:G:C4	32:5:2295:C:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2328:G:C6	32:5:2329:U:O4	2.69	0.46
32:5:2393:C:OP2	32:5:2394:G:N7	2.49	0.46
32:5:2446:C:H2'	32:5:2447:U:C5	2.48	0.46
32:5:2450:G:O6	32:5:2451:A:N7	2.49	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
32:5:2538:U:O2	32:5:2539:C:C6	2.67	0.46
32:5:2671:C:O2'	32:5:2672:C:H5'	2.15	0.46
32:5:2698:G:C5	32:5:2699:C:C5	3.04	0.46
32:5:2708:U:H2'	32:5:2709:C:C6	2.51	0.46
32:5:2724:G:N1	32:5:2726:G:N7	2.59	0.46
32:5:2752:G:H3'	32:5:2753:G:H8	1.81	0.46
32:5:2805:C:N4	32:5:2806:A:C6	2.84	0.46
32:5:2866:C:N3	32:5:2867:C:C5	2.84	0.46
32:5:3596:A:C2	62:SL:2:ALA:CB	2.96	0.46
32:5:3623:C:C5	32:5:3624:A:C4	3.04	0.46
32:5:3629:A:C6	32:5:3630:A:N7	2.83	0.46
32:5:3715:U:H2'	32:5:3716:C:O5'	2.16	0.46
32:5:3759:A:C2	53:S2:1709:G:H4'	2.36	0.46
32:5:3834:C:N3	32:5:3835:C:C5	2.83	0.46
32:5:3859:G:O5'	40:P:139:TYR:OH	2.33	0.46
32:5:4092:G:C6	32:5:4093:G:N2	2.84	0.46
32:5:4147:G:C4	32:5:4148:C:C5	3.03	0.46
32:5:4175:G:C4	32:5:4176:C:C6	3.04	0.46
32:5:4198:G:C5	32:5:4199:C:C5	3.04	0.46
32:5:4201:G:C2	32:5:4202:U:C4	3.04	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
32:5:4401:G:N1	32:5:4402:C:C4	2.84	0.46
34:8:56:G:C2	34:8:57:C:C2	3.04	0.46
34:8:73:U:O4	34:8:74:U:N1	2.48	0.46
34:8:97:A:C6	34:8:98:C:N4	2.84	0.46
35:B:323:TYR:CD1	35:B:323:TYR:C	2.93	0.46
37:E:277:ILE:C	37:E:278:TYR:CE2	2.93	0.46
46:K:160:VAL:HG12	46:K:160:VAL:O	2.15	0.46
48:z:44:VAL:HG22	48:z:261:SER:CB	2.45	0.46
48:z:107:VAL:CG2	48:z:205:MET:HE2	2.46	0.46
53:S2:39:A:C8	53:S2:517:C:C4	3.04	0.46
53:S2:120:U:C2	53:S2:121:U:C5	3.01	0.46
53:S2:221:A:C2	53:S2:222:U:C6	3.03	0.46
53:S2:453:C:O2'	53:S2:454:U:C5'	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:599:A:C1'	53:S2:605:A:C2	2.99	0.46
53:S2:602:G:N2	53:S2:621:C:C2	2.84	0.46
53:S2:673:G:H2'	53:S2:674:C:O4'	2.16	0.46
53:S2:821:G:C5'	53:S2:821:G:C4	2.98	0.46
53:S2:832:G:C2	53:S2:833:C:C2	3.04	0.46
53:S2:839:C:C2'	53:S2:841:G:O4'	2.64	0.46
53:S2:998:A:N7	53:S2:999:G:C4'	2.78	0.46
53:S2:1065:G:C6	53:S2:1066:U:C5	3.03	0.46
53:S2:1134:G:C2	53:S2:1135:C:N1	2.83	0.46
53:S2:1135:C:O2	53:S2:1135:C:H2'	2.16	0.46
53:S2:1220:A:H2'	53:S2:1221:G:C5'	2.46	0.46
53:S2:1290:G:C2	85:Sf:146:LEU:CB	2.92	0.46
53:S2:1300:U:O2	53:S2:1300:U:O4'	2.33	0.46
53:S2:1573:G:N3	53:S2:1574:C:H1'	2.30	0.46
53:S2:1578:U:H6	72:SD:6:SER:N	2.11	0.46
53:S2:1664:A:C6	53:S2:1666:C:C5	3.04	0.46
53:S2:1669:G:C2	53:S2:1670:C:C2	3.03	0.46
53:S2:1808:U:N3	53:S2:1809:A:N7	2.63	0.46
55:SB:52:THR:CG2	55:SB:57:ILE:HB	2.41	0.46
58:SG:67:VAL:HG23	58:SG:99:GLY:HA2	1.98	0.46
59:SH:111:LYS:O	59:SH:112:ASN:ND2	2.49	0.46
75:SM:85:LEU:HD22	75:SM:107:SER:O	2.15	0.46
78:SR:41:ILE:HG21	78:SR:47:ARG:CA	2.45	0.46
78:SR:101:ASP:O	78:SR:104:GLU:HB2	2.15	0.46
79:SS:36:VAL:CG1	79:SS:37:GLY:H	2.05	0.46
80:ST:6:VAL:HG21	80:ST:65:TYR:CD2	2.51	0.46
80:ST:113:VAL:HA	80:ST:123:LEU:HA	1.96	0.46
85:Sf:119:ARG:HH11	85:Sf:119:ARG:HG3	1.80	0.46
86:Sg:289:LEU:HA	86:Sg:300:ALA:HA	1.96	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:220:GLU:CD	3:G:220:GLU:C	2.84	0.46
7:M:86:TRP:NE1	7:M:92:ALA:HB2	2.30	0.46
8:N:140:LYS:HB3	8:N:144:ARG:HE	1.81	0.46
11:R:117:ARG:HB2	11:R:117:ARG:HH21	1.81	0.46
12:S:171:ARG:HH11	12:S:171:ARG:HG3	1.81	0.46
30:m:111:ARG:NH2	32:5:4698:C:N3	2.63	0.46
32:5:111:C:C2	32:5:331:G:N1	2.83	0.46
32:5:169:G:C6	32:5:170:C:C4	3.04	0.46
32:5:173:C:N3	32:5:174:C:H5	2.03	0.46
32:5:278:G:H4'	32:5:279:A:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:317:A:N1	32:5:4361:U:H1'	2.30	0.46
32:5:677:G:C2	32:5:678:C:C2	3.03	0.46
32:5:982:U:H5''	37:E:69:TYR:OH	2.16	0.46
32:5:984:C:C4	32:5:1070:G:N1	2.83	0.46
32:5:1086:C:H42	32:5:1211:G:H1	1.63	0.46
32:5:1210:C:O2	32:5:1210:C:C2'	2.64	0.46
32:5:1268:G:O4'	32:5:2111:G:N7	2.49	0.46
32:5:1301:C:C2	32:5:1302:U:C5	3.04	0.46
32:5:1339:U:O2	32:5:1340:C:H6	1.92	0.46
32:5:1348:U:C2	32:5:1349:G:C8	3.03	0.46
32:5:1355:G:H2'	32:5:1356:U:O4'	2.15	0.46
32:5:1611:C:O4'	32:5:1612:G:N7	2.48	0.46
32:5:1684:A:N1	32:5:1685:G:C4	2.84	0.46
32:5:1691:G:C2	32:5:1692:C:H1'	2.51	0.46
32:5:1761:G:N3	32:5:1762:C:C6	2.84	0.46
32:5:1819:G:C4	32:5:1820:C:C5	3.04	0.46
32:5:1994:C:N3	32:5:1995:G:N7	2.64	0.46
32:5:2093:A:H4'	32:5:2095:A:N7	2.31	0.46
32:5:2305:U:H5'	32:5:2305:U:C6	2.51	0.46
32:5:2551:A:H2'	32:5:2552:G:H5'	1.96	0.46
32:5:2736:G:C6	32:5:2737:C:C4	3.03	0.46
32:5:3714:G:C4	32:5:3715:U:C2	3.04	0.46
32:5:3794:C:C4	32:5:3795:A:N7	2.83	0.46
32:5:3820:G:C5	32:5:3821:A:N7	2.84	0.46
32:5:3913:G:C2	32:5:4390:A:N3	2.84	0.46
32:5:4129:G:H2'	32:5:4130:C:O4'	2.16	0.46
32:5:4208:U:O2'	32:5:4274:A:N3	2.45	0.46
32:5:4250:G:N2	32:5:4259:C:C2	2.84	0.46
32:5:4433:G:C6	32:5:4434:C:N4	2.83	0.46
32:5:4473:A:C4	32:5:4474:A:C8	3.04	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
32:5:4640:C:C2	32:5:4641:U:C6	3.04	0.46
32:5:4977:A:O2'	32:5:4978:G:H5'	2.15	0.46
32:5:4982:A:C2	32:5:4983:C:H6	2.22	0.46
34:8:103:A:H3'	34:8:104:A:H5'	1.96	0.46
34:8:135:C:C4	34:8:136:U:O4	2.69	0.46
36:C:139:SER:HA	45:r:16:PHE:CZ	2.51	0.46
37:E:218:LEU:HD21	37:E:230:ASP:OD2	2.15	0.46
38:F:73:MET:O	38:F:76:MET:HB3	2.16	0.46
39:I:9:TYR:CD2	39:I:97:ILE:HG12	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K:117:ARG:NE	46:K:117:ARG:CA	2.79	0.46
48:z:202:PHE:CZ	48:z:236:PHE:CZ	3.03	0.46
53:S2:29:G:N7	53:S2:646:G:C2	2.84	0.46
53:S2:51:U:O2	53:S2:51:U:H2'	2.16	0.46
53:S2:302:A:C4	53:S2:303:C:C5	3.04	0.46
53:S2:403:G:O6	53:S2:404:G:C5	2.69	0.46
53:S2:445:A:C2'	53:S2:446:G:O4'	2.57	0.46
53:S2:600:G:O2'	53:S2:601:G:H5'	2.15	0.46
53:S2:616:A:C4	53:S2:617:G:H1'	2.51	0.46
53:S2:632:C:O2	53:S2:633:C:C6	2.68	0.46
53:S2:820:U:O2	53:S2:820:U:H2'	2.14	0.46
53:S2:914:U:O2	53:S2:914:U:O4'	2.31	0.46
53:S2:996:A:C2	53:S2:997:A:C2	3.03	0.46
53:S2:1053:C:O2	53:S2:1053:C:C2'	2.63	0.46
53:S2:1122:A:C6	53:S2:1123:C:C4	3.03	0.46
53:S2:1174:U:N3	53:S2:1175:G:N7	2.64	0.46
53:S2:1290:G:C3'	85:Sf:146:LEU:HG	2.41	0.46
53:S2:1366:G:H2'	53:S2:1367:U:O4'	2.15	0.46
53:S2:1776:G:N1	53:S2:1777:G:N7	2.64	0.46
53:S2:1784:G:C2	53:S2:1785:C:C6	3.04	0.46
54:SA:32:PHE:CE1	54:SA:33:GLN:NE2	2.83	0.46
57:SE:102:ILE:HG23	57:SE:182:MET:HE1	1.98	0.46
58:SG:98:ARG:NH1	58:SG:101:ILE:O	2.46	0.46
69:Sa:38:LYS:O	69:Sa:71:LEU:O	2.34	0.46
75:SM:99:ASN:N	75:SM:99:ASN:ND2	2.63	0.46
78:SR:91:LEU:HD12	78:SR:93:GLN:N	2.23	0.46
79:SS:30:ILE:HD11	79:SS:45:LEU:CG	2.45	0.46
79:SS:40:TYR:OH	79:SS:71:MET:O	2.34	0.46
80:ST:30:VAL:HA	80:ST:53:PHE:CE2	2.50	0.46
82:SZ:50:PHE:HZ	82:SZ:79:ILE:HG21	1.80	0.46
2:D:17:GLN:HG3	13:T:20:ARG:CA	2.43	0.46
2:D:219:TYR:O	2:D:220:LYS:CB	2.61	0.46
2:D:284:LYS:CB	39:I:209:TRP:CZ3	2.99	0.46
3:G:81:ASN:ND2	3:G:238:GLY:HA3	2.30	0.46
16:X:79:PHE:N	16:X:79:PHE:CD1	2.84	0.46
19:a:102:ASP:OD2	19:a:125:LYS:HD2	2.15	0.46
32:5:12:A:C4	32:5:14:C:C5	3.04	0.46
32:5:290:U:H2'	32:5:291:U:C6	2.51	0.46
32:5:489:C:N3	32:5:490:C:C6	2.83	0.46
32:5:667:A:C2	32:5:668:C:C5	3.04	0.46
32:5:687:U:C4	32:5:688:U:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:720:G:N1	32:5:721:G:C5	2.84	0.46
32:5:730:G:N2	32:5:939:G:C2	2.82	0.46
32:5:1171:G:N2	32:5:1191:C:C2	2.84	0.46
32:5:1246:G:H2'	32:5:1247:U:O4'	2.16	0.46
32:5:1277:G:C5	32:5:1278:C:C5	3.04	0.46
32:5:1400:G:C2	32:5:1418:C:C2	3.04	0.46
32:5:1474:C:C4	32:5:1475:G:N7	2.84	0.46
32:5:1516:G:C6	32:5:1518:A:C8	3.04	0.46
32:5:1545:G:C5	32:5:1546:C:N4	2.83	0.46
32:5:1671:U:O4	32:5:1853:G:C1'	2.64	0.46
32:5:1699:A:P	38:F:179:ARG:HH22	2.39	0.46
32:5:1904:G:C2	32:5:2073:C:N3	2.83	0.46
32:5:1912:G:N3	32:5:1913:C:C5	2.84	0.46
32:5:2289:C:O2	32:5:2289:C:C2'	2.63	0.46
32:5:2327:G:C4	32:5:2328:G:C8	3.02	0.46
32:5:2347:A:O5'	32:5:2347:A:H2'	2.16	0.46
32:5:2371:U:O4	32:5:2825:A:C2	2.65	0.46
32:5:2506:G:H2'	32:5:2506:G:N3	2.30	0.46
32:5:2643:G:O6	32:5:2644:G:C5	2.69	0.46
32:5:2848:G:C2	32:5:3838:U:C4	3.04	0.46
32:5:3736:A:C5	32:5:3737:A:C6	3.04	0.46
32:5:4147:G:C2	32:5:4148:C:C2	3.04	0.46
32:5:4202:U:O2	32:5:4204:C:C5	2.69	0.46
32:5:4277:G:C2	32:5:4278:C:C5	3.04	0.46
32:5:4367:G:C6	32:5:4368:G:N7	2.84	0.46
32:5:4408:G:C6	32:5:4409:C:C4	3.03	0.46
32:5:4414:A:H3'	32:5:4422:A:C2	2.50	0.46
32:5:4505:C:C2	32:5:4506:C:C5	3.03	0.46
32:5:4563:U:O4	32:5:4564:A:N6	2.48	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
32:5:4743:G:C2	32:5:4744:A:C5	3.04	0.46
32:5:4966:A:H2'	32:5:4967:A:C1'	2.46	0.46
32:5:4969:C:C4	32:5:4970:C:C5	3.04	0.46
32:5:4982:A:C4	32:5:4983:C:C6	3.04	0.46
32:5:5017:G:C5	32:5:5018:C:C5	3.04	0.46
33:7:69:U:C2	33:7:70:G:C8	3.04	0.46
34:8:95:A:N3	34:8:96:C:C6	2.84	0.46
36:C:322:LEU:O	36:C:325:MET:HB3	2.15	0.46
37:E:148:ILE:HD13	37:E:185:THR:HG21	1.98	0.46
38:F:93:PHE:CB	38:F:124:PHE:CD1	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:F:151:SER:OG	38:F:246:ILE:HD13	2.16	0.46
46:K:16:ARG:HG3	46:K:17:CYS:N	2.31	0.46
47:q:10:LYS:O	47:q:14:PHE:CD1	2.68	0.46
50:4:151:C:OP1	50:4:204:G:H4'	2.16	0.46
53:S2:458:A:C2	53:S2:459:C:O4'	2.69	0.46
53:S2:664:A:N1	53:S2:665:G:C5	2.84	0.46
53:S2:693:A:C2	53:S2:694:G:C5	3.04	0.46
53:S2:978:G:C2	53:S2:979:C:C6	3.03	0.46
53:S2:1149:A:C2	53:S2:1151:G:C8	3.03	0.46
53:S2:1284:A:C6	75:SM:33:ARG:HD3	2.50	0.46
53:S2:1306:U:C6	85:Sf:135:HIS:CE1	3.04	0.46
53:S2:1589:A:H2'	53:S2:1590:C:O4'	2.16	0.46
53:S2:1648:G:N2	53:S2:1674:G:C5	2.84	0.46
53:S2:1657:G:C6	53:S2:1658:G:C5	3.04	0.46
53:S2:1804:U:C4	53:S2:1805:G:N7	2.84	0.46
55:SB:60:ASP:C	55:SB:62:LEU:N	2.73	0.46
56:SC:127:PHE:CZ	56:SC:234:GLY:HA2	2.50	0.46
60:SI:87:ASN:OD1	60:SI:87:ASN:C	2.59	0.46
75:SM:51:VAL:HG22	75:SM:85:LEU:HD21	1.97	0.46
75:SM:85:LEU:C	75:SM:88:TRP:CH2	2.94	0.46
78:SR:91:LEU:HD12	78:SR:92:ASP:H	1.72	0.46
79:SS:80:PRO:HG2	79:SS:82:TRP:NE1	2.31	0.46
82:SZ:50:PHE:CD1	82:SZ:79:ILE:HD13	2.50	0.46
87:S1:55:GLN:O	87:S1:57:GLN:N	2.44	0.46
3:G:82:GLN:HG3	3:G:83:PHE:CD1	2.51	0.46
6:L:25:TRP:CZ3	32:5:1360:G:H5''	2.51	0.46
8:N:182:HIS:CD2	8:N:182:HIS:H	2.34	0.46
9:O:62:MET:HG2	32:5:2045:G:O6	2.16	0.46
9:O:64:THR:O	35:B:264:PHE:N	2.47	0.46
11:R:3:MET:HE3	32:5:2426:U:H5''	1.98	0.46
11:R:124:TYR:CZ	32:5:2665:U:O4	2.67	0.46
15:V:49:LEU:HD11	35:B:6:PHE:HB3	1.97	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:18:LEU:HD11	32:5:1915:C:C6	2.51	0.46
24:f:100:ARG:HG3	32:5:4751:G:H5'	1.97	0.46
31:o:10:THR:HA	31:o:18:HIS:CD2	2.51	0.46
31:o:104:ILE:HB	49:3:56:C:C4	2.51	0.46
32:5:94:A:C2'	32:5:95:G:C4'	2.93	0.46
32:5:254:G:C6	32:5:255:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:735:G:C6	32:5:736:C:N4	2.84	0.46
32:5:938:C:H2'	32:5:939:G:H8	1.80	0.46
32:5:1322:A:C6	32:5:1326:A:N7	2.84	0.46
32:5:1334:A:C5	32:5:1335:G:N7	2.83	0.46
32:5:1355:G:N1	32:5:1385:G:C2	2.84	0.46
32:5:1597:G:O2'	32:5:1598:C:C4	2.69	0.46
32:5:1618:G:N3	32:5:1618:G:H2'	2.30	0.46
32:5:1634:A:C2	32:5:1635:C:C2	3.04	0.46
32:5:1842:G:C6	32:5:1843:A:N7	2.84	0.46
32:5:1842:G:N1	32:5:1843:A:C5	2.84	0.46
32:5:1891:A:C2'	32:5:1892:A:C8	2.99	0.46
32:5:1899:G:N9	32:5:2278:G:N2	2.64	0.46
32:5:1913:C:H2'	32:5:1914:C:O5'	2.16	0.46
32:5:2076:G:C2	32:5:2077:C:N1	2.83	0.46
32:5:2104:G:C2	32:5:2105:A:C4	3.04	0.46
32:5:2436:U:O4	32:5:2783:A:N9	2.46	0.46
32:5:2463:G:H2'	32:5:2464:C:C6	2.51	0.46
32:5:2569:G:C5	32:5:2570:U:C5	3.04	0.46
32:5:2614:C:H42	32:5:2724:G:H1	1.64	0.46
32:5:2658:G:O6	32:5:2675:G:O6	2.34	0.46
32:5:2666:U:C6	32:5:2669:C:N4	2.84	0.46
32:5:3597:G:C6	32:5:3598:C:C4	3.04	0.46
32:5:3621:A:C4	32:5:3622:C:C5	3.04	0.46
32:5:3642:A:C2	42:j:3:LYS:HB3	2.51	0.46
32:5:4271:A:C6	32:5:4272:G:C6	3.04	0.46
32:5:4318:C:C2	32:5:4319:C:C6	3.04	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
32:5:4637:G:H2'	32:5:4638:U:C6	2.51	0.46
32:5:5030:U:C2	32:5:5031:G:N7	2.84	0.46
32:5:5047:C:O2'	32:5:5050:C:OP2	2.30	0.46
33:7:11:A:O2'	33:7:13:A:OP2	2.34	0.46
33:7:110:G:C2	33:7:111:C:N1	2.82	0.46
34:8:68:G:N1	34:8:91:A:N1	2.64	0.46
34:8:118:C:O2	34:8:119:C:H6	1.97	0.46
35:B:19:ARG:HB2	35:B:234:ARG:HH12	1.79	0.46
36:C:26:ALA:O	36:C:27:VAL:C	2.57	0.46
37:E:113:PRO:O	45:r:112:ARG:NE	2.38	0.46
37:E:197:ILE:HD12	37:E:257:ILE:CG2	2.43	0.46
38:F:98:ARG:HD2	38:F:141:TYR:CD2	2.51	0.46
45:r:37:SER:OG	45:r:38:PHE:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:q:133:GLU:O	47:q:135:THR:N	2.48	0.46
49:3:9:A:H5'	49:3:46:G:N3	2.31	0.46
49:3:39:G:H21	49:3:40:C:H1'	1.81	0.46
50:4:9:C:C4	50:4:10:G:C8	3.04	0.46
50:4:284:G:C2	50:4:285:C:C6	3.04	0.46
50:4:236:U:H2'	50:4:237:U:H6	1.81	0.46
51:9:52:VAL:HG11	51:9:112:ILE:HA	1.98	0.46
53:S2:14:C:C2	53:S2:1198:G:C2	3.04	0.46
53:S2:37:C:C4	53:S2:38:A:C5	3.04	0.46
53:S2:105:U:C5	53:S2:106:C:C6	3.02	0.46
53:S2:518:G:H2'	53:S2:518:G:N3	2.30	0.46
53:S2:746:C:C4	53:S2:747:U:C5	3.04	0.46
53:S2:793:G:N1	53:S2:794:A:N9	2.64	0.46
53:S2:964:A:O2'	53:S2:965:U:C6	2.69	0.46
53:S2:998:A:H8	53:S2:999:G:O4'	1.88	0.46
53:S2:1105:G:C4	53:S2:1106:C:C6	3.03	0.46
53:S2:1110:G:HO2'	78:SR:122:PRO:CB	2.24	0.46
53:S2:1137:U:C2'	53:S2:1138:C:H5''	2.46	0.46
53:S2:1576:G:N2	53:S2:1577:G:C4	2.84	0.46
53:S2:1588:A:C6	53:S2:1589:A:N6	2.84	0.46
53:S2:1750:C:C4	53:S2:1751:C:C6	3.03	0.46
53:S2:1782:G:C2	53:S2:1784:G:C5	3.04	0.46
53:S2:1826:G:N1	53:S2:1827:U:C4	2.84	0.46
61:SJ:31:LEU:HD21	61:SJ:103:GLU:OE2	2.16	0.46
72:SD:200:PRO:C	72:SD:202:LYS:H	2.23	0.46
86:Sg:21:ILE:HG22	86:Sg:31:ILE:HD11	1.97	0.46
86:Sg:150:TRP:HB2	86:Sg:170:TRP:CB	2.44	0.46
87:S1:18:TYR:OH	87:S1:73:MET:HG2	2.16	0.46
1:A:49:ILE:HG22	1:A:50:HIS:N	2.30	0.45
3:G:45:ILE:HG21	32:5:4125:C:H4'	1.97	0.45
5:J:60:PHE:HE2	32:5:4257:A:C5	2.34	0.45
10:Q:55:ARG:HH22	32:5:1352:C:N4	2.15	0.45
15:V:25:VAL:HB	15:V:36:ASN:HD22	1.80	0.45
18:Z:17:ARG:HG2	18:Z:18:TYR:CE1	2.51	0.45
18:Z:41:ALA:HB2	18:Z:77:TYR:CE1	2.49	0.45
19:a:130:SER:HA	32:5:1396:G:OP2	2.16	0.45
32:5:36:U:C4	32:5:37:U:C5	3.04	0.45
32:5:154:G:C6	32:5:155:C:N4	2.83	0.45
32:5:171:U:O2	32:5:266:C:N4	2.49	0.45
32:5:211:G:N2	32:5:212:A: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)
32:5:345:C:C2	32:5:346:G:N7	2.84	0.45
32:5:739:G:C6	32:5:740:G:C8	3.04	0.45
32:5:1070:G:N3	32:5:1071:C:C6	2.85	0.45
32:5:1171:G:C2	32:5:1172:C:C2	3.04	0.45
32:5:1426:G:O2'	32:5:1459:A:N6	2.46	0.45
32:5:1443:A:C4	32:5:1444:G:C8	3.03	0.45
32:5:1540:C:O2	32:5:1540:C:H2'	2.15	0.45
32:5:1637:A:H2	42:j:11:ARG:HH22	1.64	0.45
32:5:1682:A:N6	32:5:1683:U:C4	2.83	0.45
32:5:1936:C:C4	32:5:1937:C:C5	3.03	0.45
32:5:2019:C:N3	32:5:2020:U:C6	2.84	0.45
32:5:2085:G:C2	32:5:2273:G:N1	2.84	0.45
32:5:2245:G:C5	32:5:2246:C:C5	3.04	0.45
32:5:2295:C:C2	32:5:2296:G:N7	2.84	0.45
32:5:2422:C:C4	32:5:2423:A:N7	2.83	0.45
32:5:2432:U:H2'	32:5:2433:G:O4'	2.16	0.45
32:5:2586:G:C8	32:5:2587:A:C4	3.04	0.45
32:5:2656:U:C4	32:5:2657:G:C4	3.04	0.45
32:5:2657:G:C2	32:5:2658:G:C4	3.05	0.45
32:5:2669:C:O2'	32:5:2670:C:OP2	2.31	0.45
32:5:2891:U:H2'	32:5:2892:C:O4'	2.16	0.45
32:5:3604:A:C5	32:5:3605:C:C5	3.04	0.45
32:5:3686:G:N3	32:5:3686:G:H2'	2.30	0.45
32:5:3710:G:C2	32:5:3711:A:C5	3.04	0.45
32:5:3791:C:C2	32:5:3802:U:H6	2.34	0.45
32:5:3791:C:O2	32:5:3791:C:O4'	2.30	0.45
32:5:3879:G:C5	32:5:3882:C:C4	3.04	0.45
32:5:3910:C:N3	32:5:3911:C:C4	2.84	0.45
32:5:4098:A:N1	32:5:4099:G:C6	2.83	0.45
32:5:4104:G:O2'	32:5:4106:G:C6	2.68	0.45
32:5:4106:G:C2	32:5:4107:G:C8	3.05	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
32:5:4372:U:O2	32:5:4377:G:H1'	2.15	0.45
32:5:4608:G:H3'	32:5:4609:G:H8	1.81	0.45
32:5:4999:G:C2	32:5:5000:G:N9	2.82	0.45
33:7:70:G:C2	33:7:71:G:C8	3.04	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
34:8:130:C:N3	34:8:131:G:N7	2.61	0.45
34:8:137:A:C2	34:8:138:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:146:U:C2	34:8:147:G:C8	3.04	0.45
35:B:116:ARG:HD3	35:B:122:TRP:CZ3	2.52	0.45
38:F:194:HIS:C	38:F:196:ILE:N	2.73	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
48:z:271:ILE:HG22	48:z:272:PHE:CD2	2.50	0.45
50:4:38:U:O2	50:4:38:U:H2'	2.15	0.45
50:4:57:G:N2	50:4:290:C:H1'	2.31	0.45
50:4:283:A:C2	50:4:284:G:C8	3.04	0.45
53:S2:167:G:C5	53:S2:168:C:C5	3.04	0.45
53:S2:340:C:C2'	53:S2:341:C:H6	2.25	0.45
53:S2:341:C:O5'	53:S2:342:C:OP2	2.34	0.45
53:S2:431:G:N3	53:S2:431:G:H2'	2.30	0.45
53:S2:457:C:N3	53:S2:458:A:C8	2.84	0.45
53:S2:468:A:H3'	53:S2:469:A:H8	1.81	0.45
53:S2:554:A:N1	53:S2:555:A:C6	2.85	0.45
53:S2:596:U:O2'	53:S2:597:G:O4'	2.27	0.45
53:S2:598:G:N2	53:S2:639:C:N3	2.63	0.45
53:S2:859:G:C6	53:S2:860:G:C5	3.03	0.45
53:S2:993:G:N2	53:S2:994:C:C1'	2.79	0.45
53:S2:1265:A:C2	53:S2:1266:C:C6	3.04	0.45
53:S2:1306:U:O4	85:Sf:140:TYR:HD1	1.95	0.45
53:S2:1421:A:H5'	80:ST:4:VAL:HG22	1.97	0.45
53:S2:1576:G:C2	53:S2:1577:G:C5	3.04	0.45
53:S2:1702:G:C6	53:S2:1703:C:C4	3.03	0.45
58:SG:13:GLN:N	58:SG:13:GLN:OE1	2.48	0.45
60:SI:60:LEU:HD23	60:SI:185:ALA:HB2	1.97	0.45
63:SN:55:ARG:HD3	63:SN:56:ASP:OD2	2.16	0.45
67:SX:134:TYR:CD1	71:Se:13:ARG:NH2	2.79	0.45
77:SQ:32:ILE:HG21	77:SQ:39:LEU:HD11	1.97	0.45
77:SQ:35:ASN:OD1	77:SQ:35:ASN:N	2.49	0.45
82:SZ:50:PHE:CE2	82:SZ:79:ILE:CD1	2.97	0.45
83:Sc:34:PHE:HB2	83:Sc:40:ARG:HB2	1.98	0.45
1:A:186:TYR:C	1:A:186:TYR:CD1	2.93	0.45
8:N:150:TRP:C	8:N:150:TRP:CE3	2.94	0.45
9:O:65:ASN:HD21	9:O:67:SER:N	2.14	0.45
9:O:65:ASN:ND2	9:O:67:SER:OG	2.49	0.45
18:Z:18:TYR:CD2	18:Z:47:ASP:OD1	2.69	0.45
25:g:23:SER:OG	25:g:33:LEU:HD12	2.16	0.45
32:5:40:G:C4	32:5:4378:A:C6	3.03	0.45
32:5:123:C:C4	32:5:124:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:127:G:C2	32:5:128:C:C2	3.05	0.45
32:5:184:U:C2	32:5:254:G:C2	3.05	0.45
32:5:209:U:C6	32:5:211:G:C8	3.03	0.45
32:5:689:U:C2	32:5:690:C:C6	3.04	0.45
32:5:700:G:C6	32:5:701:G:N7	2.84	0.45
32:5:707:C:C2	32:5:708:G:C8	3.04	0.45
32:5:738:C:C4	32:5:739:G:N7	2.83	0.45
32:5:1074:G:C2'	32:5:1075:G:O4'	2.63	0.45
32:5:1075:G:C6	32:5:1076:C:N4	2.84	0.45
32:5:1201:U:O2	32:5:1202:C:C6	2.69	0.45
32:5:1215:C:C2	32:5:1216:C:H6	2.34	0.45
32:5:1358:G:N3	32:5:1359:G:N7	2.63	0.45
32:5:1362:G:C6	32:5:1363:C:C5	3.03	0.45
32:5:1444:G:C2	32:5:1445:U:O4	2.68	0.45
32:5:1448:G:C6	32:5:1449:C:N4	2.85	0.45
32:5:1570:G:N1	32:5:1571:G:C5	2.85	0.45
32:5:1612:G:C8	32:5:1612:G:H5''	2.51	0.45
32:5:1620:U:OP2	42:j:30:GLN:HG2	2.16	0.45
32:5:1743:A:C5	32:5:1744:U:C6	3.05	0.45
32:5:1750:G:N1	32:5:1751:A:C8	2.83	0.45
32:5:1752:G:C5	32:5:1753:G:C8	3.05	0.45
32:5:1759:G:N1	32:5:1760:G:N7	2.64	0.45
32:5:2086:G:C2	32:5:2087:C:C2	3.04	0.45
32:5:2361:G:O6	40:P:25:HIS:CB	2.63	0.45
32:5:2436:U:C4	32:5:2783:A:C1'	2.99	0.45
32:5:2505:C:O4'	32:5:2505:C:O2	2.30	0.45
32:5:2538:U:H2'	32:5:2539:C:H6	1.80	0.45
32:5:2606:G:C5	32:5:2607:C:C5	3.03	0.45
32:5:2811:G:H22	32:5:2813:A:C3'	2.28	0.45
32:5:3725:G:N2	32:5:3727:A:H3'	2.31	0.45
32:5:3806:G:C4	32:5:3807:A:C8	3.04	0.45
32:5:3879:G:N2	32:5:3881:G:C8	2.85	0.45
32:5:4082:G:C6	32:5:4083:U:O4	2.70	0.45
32:5:4189:U:H2'	32:5:4190:U:O4'	2.16	0.45
32:5:4315:A:N1	32:5:4316:G:N7	2.65	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
32:5:4433:G:N1	32:5:4434:C:C4	2.84	0.45
32:5:4479:A:C5	32:5:4480:A:N9	2.84	0.45
32:5:4592:C:H2'	32:5:4593:C:H6	1.80	0.45
32:5:4617:G:N2	32:5:4618:G:H1'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4659:G:C6	32:5:4660:G:C5	3.04	0.45
32:5:4687:A:C6	32:5:4688:C:C5	3.05	0.45
32:5:4744:A:C2	32:5:4745:G:N7	2.85	0.45
32:5:4744:A:C6	32:5:4745:G:O6	2.69	0.45
32:5:4981:G:H5'	32:5:4982:A:OP2	2.17	0.45
32:5:5050:C:O2'	35:B:321:VAL:HA	2.16	0.45
33:7:44:C:N3	33:7:45:U:C5	2.84	0.45
34:8:5:U:OP2	40:P:62:ARG:CZ	2.64	0.45
36:C:144:ILE:HD11	36:C:249:PHE:CG	2.50	0.45
41:W:8:PHE:CE1	41:W:51:TRP:CZ3	3.04	0.45
42:j:20:ARG:CD	42:j:39:TYR:OH	2.63	0.45
50:4:18:G:H2'	50:4:19:C:H6	1.81	0.45
53:S2:70:G:C5	53:S2:71:G:C5	3.03	0.45
53:S2:411:G:C2	53:S2:430:C:C2	3.04	0.45
53:S2:444:G:N2	53:S2:447:A:OP2	2.49	0.45
53:S2:750:C:O2	53:S2:751:G:N7	2.49	0.45
53:S2:1005:G:C2	53:S2:1006:C:C2	3.04	0.45
53:S2:1034:A:H2'	53:S2:1035:A:C5'	2.46	0.45
53:S2:1123:C:C2'	55:SB:148:ASN:HD21	2.28	0.45
53:S2:1125:C:C2	53:S2:1126:G:C8	3.05	0.45
53:S2:1131:G:C4	53:S2:1132:C:C6	3.04	0.45
53:S2:1280:G:N2	53:S2:1281:G:H1'	2.31	0.45
53:S2:1351:G:N2	53:S2:1352:G:H1'	2.31	0.45
53:S2:1406:G:C4	53:S2:1407:U:C1'	2.93	0.45
53:S2:1593:C:C4	53:S2:1594:A:N7	2.85	0.45
53:S2:1752:C:N3	53:S2:1753:C:C5	2.84	0.45
53:S2:1828:C:H2'	53:S2:1829:G:C1'	2.47	0.45
53:S2:1859:A:C6	53:S2:1860:A:C5	3.04	0.45
55:SB:146:ARG:O	55:SB:148:ASN:N	2.49	0.45
60:SI:82:VAL:HG11	60:SI:202:ILE:HD11	1.97	0.45
70:Sb:31:TYR:CD2	70:Sb:81:ARG:CZ	2.99	0.45
72:SD:17:PHE:CD1	72:SD:17:PHE:C	2.94	0.45
72:SD:28:GLU:OE1	72:SD:28:GLU:HA	2.15	0.45
78:SR:100:PRO:HD2	78:SR:119:VAL:HG12	1.87	0.45
80:ST:65:TYR:CD2	80:ST:65:TYR:C	2.94	0.45
2:D:202:GLN:HA	2:D:205:ALA:HB3	1.98	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
9:O:116:LYS:CE	12:S:169:THR:HG21	2.43	0.45
11:R:88:ARG:HH11	11:R:88:ARG:HG2	1.80	0.45
12:S:13:VAL:HG12	12:S:29:ARG:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:c:82:GLY:HA3	21:c:89:TYR:O	2.16	0.45
23:e:6:PRO:CA	23:e:74:PHE:HE1	2.29	0.45
24:f:60:PRO:HD2	32:5:4945:G:O6	2.16	0.45
26:h:10:ARG:NH2	34:8:65:A:O2'	2.50	0.45
27:i:12:ASN:ND2	27:i:12:ASN:O	2.50	0.45
27:i:72:PHE:CD2	27:i:72:PHE:C	2.94	0.45
32:5:21:G:C4	34:8:36:G:N2	2.85	0.45
32:5:29:G:C6	32:5:30:C:N4	2.83	0.45
32:5:134:G:H5'	32:5:134:G:C8	2.51	0.45
32:5:199:G:C2	32:5:201:C:C4	3.05	0.45
32:5:255:C:O2	32:5:255:C:C2'	2.57	0.45
32:5:269:G:N3	32:5:269:G:C2'	2.80	0.45
32:5:462:G:N2	32:5:694:C:C2	2.84	0.45
32:5:933:G:N1	32:5:940:C:C6	2.84	0.45
32:5:957:G:P	32:5:1284:G:C2	3.09	0.45
32:5:1085:C:C2	32:5:1213:G:N1	2.84	0.45
32:5:1171:G:C2	32:5:1172:C:N1	2.84	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
32:5:1358:G:C3'	32:5:1358:G:C8	3.00	0.45
32:5:1431:C:C2	32:5:1454:G:C2	3.04	0.45
32:5:1491:A:C4	32:5:1492:G:N7	2.84	0.45
32:5:1507:C:O2	32:5:1507:C:H2'	2.15	0.45
32:5:1570:G:C2	32:5:1571:G:C4	3.04	0.45
32:5:1682:A:C2	32:5:1683:U:H1'	2.52	0.45
32:5:1942:A:H5''	33:7:88:A:C5	2.52	0.45
32:5:2122:G:H1'	32:5:2123:C:OP2	2.17	0.45
32:5:2453:A:H1'	32:5:2507:A:C4	2.51	0.45
32:5:2566:G:N3	32:5:2567:G:C8	2.84	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
32:5:3801:U:O2'	32:5:3802:U:C5'	2.64	0.45
32:5:4119:C:O2	32:5:4119:C:O4'	2.35	0.45
32:5:4158:C:O2	32:5:4158:C:H2'	2.16	0.45
32:5:4176:C:H2'	32:5:4177:C:H6	1.82	0.45
32:5:4219:A:O2'	32:5:4220:A:O5'	2.34	0.45
32:5:4298:A:C2	32:5:4299:U:C6	3.04	0.45
32:5:4425:G:N2	32:5:4426:C:H1'	2.32	0.45
32:5:4655:A:C6	32:5:4658:G:C8	3.04	0.45
32:5:4714:C:O2	32:5:4714:C:C2'	2.64	0.45
32:5:4734:A:C6	32:5:4735:G:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4737:G:H2'	32:5:4738:C:H6	1.81	0.45
32:5:4936:G:C2	32:5:4938:A:C8	3.04	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
34:8:65:A:C4	34:8:66:A:C8	3.04	0.45
37:E:182:LEU:O	37:E:183:ARG:O	2.34	0.45
39:I:76:MET:HB3	39:I:85:PHE:CD2	2.50	0.45
39:I:98:ARG:HD3	39:I:119:PHE:CE1	2.37	0.45
40:P:82:ARG:HA	40:P:83:TRP:CE3	2.50	0.45
47:q:40:MET:O	47:q:44:ARG:HG2	2.16	0.45
53:S2:61:A:H2	53:S2:334:C:H2'	1.81	0.45
53:S2:217:A:C5	53:S2:218:U:C5	3.05	0.45
53:S2:220:U:C4	53:S2:221:A:N7	2.85	0.45
53:S2:428:U:C5	61:SJ:7:TRP:CZ2	3.04	0.45
53:S2:491:C:H1'	53:S2:574:A:H62	1.78	0.45
53:S2:578:C:N4	53:S2:579:C:C5	2.85	0.45
53:S2:660:C:C5	53:S2:661:U:C5	3.04	0.45
53:S2:750:C:O2	53:S2:751:G:H8	1.95	0.45
53:S2:869:A:N7	59:SH:115:LYS:N	2.64	0.45
53:S2:953:C:OP1	55:SB:28:ARG:NH2	2.49	0.45
53:S2:1031:A:C6	53:S2:1032:C:C5	3.04	0.45
53:S2:1044:G:N2	53:S2:1070:A:OP2	2.42	0.45
53:S2:1049:A:N1	53:S2:1070:A:N3	2.65	0.45
53:S2:1093:A:C6	53:S2:1094:C:C4	3.04	0.45
53:S2:1203:G:C2'	53:S2:1204:A:C8	2.99	0.45
53:S2:1291:A:H2'	85:Sf:149:CYS:HB3	1.98	0.45
53:S2:1309:C:C3'	85:Sf:143:LYS:HE2	2.46	0.45
53:S2:1310:U:H6	85:Sf:143:LYS:CE	2.30	0.45
53:S2:1335:G:C2	53:S2:1336:C:C2	3.04	0.45
53:S2:1414:A:N1	53:S2:1415:C:C5	2.85	0.45
53:S2:1417:C:O2	53:S2:1419:C:C6	2.68	0.45
53:S2:1542:C:H3'	80:ST:62:ARG:NH1	2.31	0.45
53:S2:1668:U:O2	53:S2:1669:G:C8	2.69	0.45
53:S2:1709:G:C2	53:S2:1710:C:C2	3.04	0.45
53:S2:1722:G:N2	53:S2:1723:G:C1'	2.75	0.45
53:S2:1849:G:O2'	53:S2:1850:A:H5'	2.16	0.45
54:SA:12:GLU:OE1	78:SR:111:PHE:HB3	2.17	0.45
56:SC:72:ASP:OD1	56:SC:72:ASP:N	2.49	0.45
56:SC:187:ARG:HB3	56:SC:192:LEU:HB2	1.98	0.45
59:SH:114:GLN:O	59:SH:115:LYS:C	2.59	0.45
62:SL:82:MET:CB	62:SL:85:THR:HG23	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:SR:109:LEU:O	78:SR:110:ASP:HB3	2.17	0.45
84:Sd:24:CYS:SG	84:Sd:39:CYS:SG	3.14	0.45
1:A:34:PHE:CZ	32:5:4087:G:C8	3.04	0.45
2:D:193:GLU:HA	2:D:196:ARG:HB2	1.97	0.45
7:M:92:ALA:O	7:M:95:ILE:O	2.33	0.45
10:Q:175:GLU:HA	19:a:51:GLY:O	2.17	0.45
23:e:37:LYS:HB3	23:e:39:ARG:HH22	1.81	0.45
25:g:49:CYS:HG	25:g:83:CYS:HG	1.64	0.45
29:l:38:ASN:C	29:l:38:ASN:OD1	2.60	0.45
32:5:54:G:N1	32:5:55:G:C4	2.84	0.45
32:5:62:A:H2	32:5:77:U:O2	1.99	0.45
32:5:211:G:N1	32:5:212:A:N7	2.64	0.45
32:5:225:G:C2	32:5:243:A:C2	3.04	0.45
32:5:371:A:O2'	32:5:372:A:O5'	2.35	0.45
32:5:647:G:H2'	32:5:647:G:N3	2.31	0.45
32:5:673:C:O2	32:5:674:G:C8	2.69	0.45
32:5:990:C:N3	32:5:991:C:C6	2.84	0.45
32:5:1084:C:N3	32:5:1085:C:H5	2.08	0.45
32:5:1300:G:O3'	32:5:1301:C:O2	2.34	0.45
32:5:1442:C:C4	32:5:1443:A:N7	2.84	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
32:5:1856:C:O2	32:5:1856:C:C2'	2.65	0.45
32:5:1899:G:N7	32:5:2278:G:O6	2.48	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
32:5:2371:U:H2'	32:5:2372:U:H5'	1.99	0.45
32:5:2557:G:C4	32:5:2558:C:C6	3.04	0.45
32:5:2599:G:C8	32:5:2600:A:C8	3.04	0.45
32:5:2646:C:N4	32:5:2686:G:N7	2.61	0.45
32:5:2744:A:C2'	32:5:2745:A:C8	3.00	0.45
32:5:2783:A:C6	32:5:2784:C:C4	3.04	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
32:5:3611:A:H2'	32:5:3612:C:O4'	2.16	0.45
32:5:3635:A:C8	32:5:3635:A:C3'	3.00	0.45
32:5:3695:U:O4	32:5:3696:C:C5	2.69	0.45
32:5:3871:A:H2'	32:5:3872:A:C8	2.51	0.45
32:5:4099:G:H2'	32:5:4100:C:O4'	2.17	0.45
32:5:4135:G:C4	32:5:4136:G:C8	3.04	0.45
32:5:4576:U:H2'	32:5:4577:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4659:G:C4	32:5:4660:G:C8	3.04	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
32:5:5003:U:N3	32:5:5045:G:N2	2.63	0.45
32:5:5006:U:H1'	32:5:5042:A:C8	2.51	0.45
34:8:9:A:C2	34:8:10:G:N7	2.82	0.45
35:B:106:PHE:N	35:B:106:PHE:CD1	2.84	0.45
38:F:39:PHE:C	38:F:41:GLN:N	2.73	0.45
38:F:146:TYR:HE2	38:F:239:GLU:HB3	1.81	0.45
39:I:171:TRP:CB	39:I:181:PHE:CD2	2.99	0.45
48:z:126:GLN:NE2	48:z:157:ILE:HG12	2.29	0.45
48:z:377:THR:HB	50:4:194:G:O4'	2.17	0.45
50:4:13:G:H2'	50:4:14:G:O4'	2.16	0.45
50:4:183:A:C3'	50:4:184:A:O5'	2.63	0.45
50:4:234:A:H2'	50:4:235:G:H8	1.77	0.45
53:S2:164:A:C5	53:S2:165:G:C2	3.04	0.45
53:S2:337:C:O2	53:S2:337:C:H2'	2.16	0.45
53:S2:517:C:N4	53:S2:518:G:C4	2.85	0.45
53:S2:746:C:C2'	59:SH:111:LYS:NZ	2.69	0.45
53:S2:839:C:C6	53:S2:841:G:C8	3.04	0.45
53:S2:939:U:C2	53:S2:940:U:C5	3.04	0.45
53:S2:1160:U:OP2	67:SX:4:CYS:O	2.34	0.45
53:S2:1186:U:O2	53:S2:1186:U:H2'	2.15	0.45
53:S2:1327:G:C2	53:S2:1328:G:C8	3.03	0.45
53:S2:1380:C:H2'	53:S2:1381:G:O4'	2.17	0.45
53:S2:1402:A:N7	53:S2:1441:U:C4	2.85	0.45
53:S2:1562:C:O2	53:S2:1562:C:H2'	2.16	0.45
53:S2:1798:C:H2'	53:S2:1799:G:O4'	2.15	0.45
74:SK:61:GLN:OE1	74:SK:61:GLN:HA	2.14	0.45
78:SR:18:GLU:CB	78:SR:70:SER:CB	2.90	0.45
78:SR:66:VAL:CG2	78:SR:69:ILE:HD12	2.46	0.45
78:SR:70:SER:C	78:SR:71:ILE:HG13	2.42	0.45
85:Sf:133:ALA:CB	85:Sf:139:HIS:HA	2.41	0.45
2:D:138:GLN:OE1	2:D:138:GLN:HA	2.15	0.45
4:H:68:ALA:O	32:5:4691:A:O2'	2.35	0.45
21:c:31:TYR:HE2	21:c:56:ARG:HD2	1.80	0.45
24:f:88:PHE:CE1	24:f:92:LEU:HD11	2.51	0.45
32:5:169:G:N2	32:5:170:C:C2	2.85	0.45
32:5:257:C:C2	32:5:258:G:C8	3.04	0.45
32:5:289:C:N4	32:5:290:U:C4	2.85	0.45
32:5:301:G:C4	32:5:302:C:C5	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
32:5:659:G:C2	32:5:660:A:N9	2.84	0.45
32:5:661:C:N4	32:5:662:C:C4	2.84	0.45
32:5:711:A:N1	32:5:712:C:C5	2.85	0.45
32:5:1218:G:C6	32:5:1219:G:N9	2.84	0.45
32:5:1292:C:H3'	32:5:1293:G:H5''	1.97	0.45
32:5:1483:C:H5'	32:5:1483:C:H6	1.80	0.45
32:5:1554:A:C6	32:5:1555:G:C4	3.04	0.45
32:5:1584:G:C2	32:5:1585:C:C6	3.03	0.45
32:5:1726:U:O2	32:5:1726:U:H2'	2.16	0.45
32:5:1758:G:C2	32:5:1759:G:C4	3.04	0.45
32:5:1776:A:C2	32:5:1777:C:C2	3.05	0.45
32:5:1857:C:H2'	32:5:1858:A:H8	1.81	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:C4	32:5:2078:C:H5	2.32	0.45
32:5:2290:C:C1'	32:5:2321:G:N3	2.79	0.45
32:5:2301:G:C4	32:5:2302:C:C6	3.05	0.45
32:5:2371:U:C2'	32:5:2372:U:H5'	2.47	0.45
32:5:2443:G:H2'	32:5:2444:U:O4'	2.15	0.45
32:5:2445:C:C2	32:5:2446:C:H5	2.34	0.45
32:5:2698:G:C2	32:5:2699:C:C2	3.05	0.45
32:5:2746:A:C2'	32:5:2747:U:O5'	2.64	0.45
32:5:2793:G:C6	32:5:2797:C:N4	2.84	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
32:5:3621:A:N3	32:5:3621:A:H2'	2.30	0.45
32:5:3740:G:H2'	32:5:3740:G:N3	2.30	0.45
32:5:3841:C:O2	32:5:3841:C:H2'	2.17	0.45
32:5:3878:C:N4	32:5:4518:A:N3	2.64	0.45
32:5:4091:G:N1	32:5:4159:C:N4	2.65	0.45
32:5:4099:G:C2	32:5:4100:C:N1	2.84	0.45
32:5:4342:C:C4	32:5:4343:U:H5	2.26	0.45
32:5:4590:A:C5	32:5:4591:U:C5	3.04	0.45
32:5:4594:U:C2	32:5:4595:G:C8	3.05	0.45
32:5:4670:C:H5'	32:5:4670:C:C6	2.52	0.45
32:5:4986:G:C6	32:5:4987:C:C4	3.04	0.45
32:5:5063:G:N3	32:5:5064:G:C8	2.85	0.45
35:B:138:GLN:O	35:B:139:ASP:HB3	2.17	0.45
36:C:245:HIS:CE1	45:r:13:CYS:HG	2.25	0.45
38:F:245:LEU:HD22	38:F:249:MET:SD	2.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:74:PHE:O	42:j:77:GLY:N	2.49	0.45
45:r:39:ARG:HB3	45:r:40:TYR:CD1	2.52	0.45
48:z:133:CYS:SG	48:z:184:PHE:CD1	3.10	0.45
48:z:160:TYR:HD2	48:z:179:PHE:CZ	2.28	0.45
50:4:18:G:H2'	50:4:19:C:C6	2.52	0.45
51:9:23:LEU:HB2	51:9:44:PRO:HG3	1.98	0.45
51:9:29:ILE:HG13	51:9:33:ARG:NH2	2.32	0.45
52:6:79:CYS:HB3	52:6:125:ARG:HG3	1.99	0.45
53:S2:122:G:H2'	53:S2:123:G:C1'	2.46	0.45
53:S2:297:A:C6	53:S2:298:G:N7	2.84	0.45
53:S2:310:C:C2	53:S2:311:C:C5	3.05	0.45
53:S2:520:A:O2'	53:S2:825:A:H1'	2.16	0.45
53:S2:555:A:N1	53:S2:557:U:C4	2.84	0.45
53:S2:947:G:C2	53:S2:948:C:C2	3.04	0.45
53:S2:993:G:N2	53:S2:994:C:N1	2.65	0.45
53:S2:1006:C:N3	53:S2:1007:C:C5	2.85	0.45
53:S2:1219:C:C5	53:S2:1220:A:N6	2.85	0.45
53:S2:1272:C:N3	53:S2:1273:C:C5	2.84	0.45
53:S2:1286:G:C2	75:SM:33:ARG:O	2.70	0.45
53:S2:1410:C:N3	53:S2:1411:G:N7	2.64	0.45
53:S2:1455:A:C6	53:S2:1456:G:C5	3.04	0.45
53:S2:1541:G:N2	53:S2:1542:C:C4	2.84	0.45
53:S2:1645:C:O2'	53:S2:1646:C:P	2.74	0.45
58:SG:145:PHE:N	58:SG:145:PHE:CD1	2.84	0.45
60:SI:88:ASN:OD1	60:SI:205:ARG:NH1	2.49	0.45
63:SN:57:SER:HA	70:Sb:54:VAL:HG13	1.99	0.45
64:SO:41:PHE:N	64:SO:41:PHE:CD1	2.83	0.45
68:SY:60:PHE:HA	68:SY:70:THR:O	2.15	0.45
78:SR:100:PRO:HD2	78:SR:119:VAL:CG1	2.38	0.45
83:Sc:30:VAL:HG12	83:Sc:32:VAL:HG13	1.94	0.45
1:A:34:PHE:CZ	32:5:4087:G:C5	3.04	0.45
1:A:174:ARG:HH22	32:5:3684:G:P	2.39	0.45
2:D:94:ASN:HD21	2:D:96:ALA:HB3	1.82	0.45
8:N:127:TYR:CD1	8:N:127:TYR:N	2.85	0.45
13:T:34:TYR:CD1	13:T:98:HIS:CE1	3.05	0.45
13:T:142:ARG:CB	38:F:82:ASN:HD21	2.30	0.45
25:g:63:VAL:HG22	25:g:66:ARG:NH2	2.32	0.45
32:5:45:U:C4	32:5:46:U:O4	2.69	0.45
32:5:46:U:OP2	32:5:47:A:O2'	2.31	0.45
32:5:132:G:N2	32:5:133:C:H1'	2.31	0.45
32:5:163:A:C5	32:5:164:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:258:G:N3	32:5:259:C:C6	2.85	0.45
32:5:288:G:H2'	32:5:289:C:C6	2.52	0.45
32:5:345:C:N3	32:5:346:G:N7	2.65	0.45
32:5:424:U:N3	32:5:425:U:H5	2.15	0.45
32:5:672:C:N4	32:5:673:C:C5	2.85	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
32:5:1085:C:C2	32:5:1213:G:C2	3.05	0.45
32:5:1211:G:N3	32:5:1212:G:C8	2.84	0.45
32:5:1368:A:H2'	32:5:1369:C:C6	2.51	0.45
32:5:1371:A:H61	34:8:28:C:C2'	2.29	0.45
32:5:1411:C:N3	32:5:1412:G:N7	2.65	0.45
32:5:1427:A:C8	32:5:1428:U:C1'	2.99	0.45
32:5:1806:G:C6	32:5:1807:C:C4	3.04	0.45
32:5:1967:A:C2	32:5:1968:G:C5	3.04	0.45
32:5:2261:G:O2'	32:5:2262:G:O4'	2.34	0.45
32:5:2294:G:C6	32:5:2295:C:N4	2.85	0.45
32:5:2440:U:C2	32:5:2519:U:C6	3.04	0.45
32:5:3599:A:H2'	32:5:3600:G:C8	2.52	0.45
32:5:3640:U:H3'	32:5:3646:A:N6	2.32	0.45
32:5:3733:A:C5	32:5:3734:U:C5	3.05	0.45
32:5:3750:G:C2	32:5:3751:G:C8	3.04	0.45
32:5:3864:C:O2'	32:5:3866:C:OP2	2.26	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
32:5:4095:G:N3	32:5:4096:C:H5	2.12	0.45
32:5:4140:C:C5	32:5:4141:G:C8	3.04	0.45
32:5:4147:G:C2	32:5:4148:C:C6	3.05	0.45
32:5:4251:A:O2'	32:5:4252:C:C5'	2.65	0.45
32:5:4620:U:C2	32:5:4621:C:C6	3.05	0.45
32:5:4860:G:C2	32:5:4861:G:C8	3.05	0.45
32:5:4997:G:C5	32:5:4998:G:N7	2.85	0.45
33:7:55:A:N3	33:7:56:G:C8	2.85	0.45
34:8:135:C:N3	34:8:136:U:C5	2.84	0.45
35:B:217:ILE:HD11	35:B:333:LEU:HD11	1.98	0.45
35:B:256:ALA:C	35:B:258:HIS:N	2.74	0.45
36:C:138:MET:O	36:C:141:GLY:N	2.49	0.45
37:E:90:LYS:N	37:E:91:PRO:CD	2.79	0.45
37:E:268:ARG:HH11	37:E:268:ARG:HB3	1.81	0.45
43:n:2:ARG:CD	53:S2:1842:C:OP2	2.65	0.45
47:q:205:ASP:O	47:q:206:ILE:HB	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:147:GLN:O	48:z:151:ASN:ND2	2.49	0.45
49:3:38:C:H2'	49:3:39:G:O5'	2.16	0.45
50:4:6:G:C2	50:4:7:C:C2	3.04	0.45
50:4:60:U:C2	50:4:61:C:C5	3.05	0.45
50:4:163:A:H3'	50:4:164:G:C8	2.52	0.45
53:S2:45:A:C2	53:S2:481:C:C1'	2.99	0.45
53:S2:49:C:O2	53:S2:478:G:C2	2.70	0.45
53:S2:70:G:C5	53:S2:71:G:N7	2.85	0.45
53:S2:99:A:C2	53:S2:100:U:C1'	3.00	0.45
53:S2:153:G:C6	53:S2:154:U:C5	3.05	0.45
53:S2:616:A:N6	53:S2:617:G:N3	2.64	0.45
53:S2:646:G:H5'	53:S2:647:U:OP2	2.17	0.45
53:S2:963:A:H2'	53:S2:964:A:H8	1.79	0.45
53:S2:976:G:H2'	53:S2:977:C:O4'	2.17	0.45
53:S2:998:A:C8	53:S2:998:A:C3'	2.99	0.45
53:S2:1019:C:OP2	63:SN:70:LYS:HD3	2.17	0.45
53:S2:1076:G:C2	53:S2:1077:A:C8	3.05	0.45
53:S2:1521:C:OP2	79:SS:136:THR:OG1	2.33	0.45
53:S2:1537:A:N3	53:S2:1537:A:H2'	2.32	0.45
53:S2:1610:G:N3	53:S2:1611:G:C8	2.85	0.45
53:S2:1673:U:C4	53:S2:1674:G:C4	3.05	0.45
53:S2:1729:U:O2	53:S2:1729:U:C2'	2.64	0.45
54:SA:30:LEU:HD21	54:SA:35:GLU:HG2	1.99	0.45
54:SA:59:LEU:HD23	54:SA:181:GLU:HG2	1.98	0.45
54:SA:84:GLN:HE22	54:SA:101:GLY:HA2	1.81	0.45
54:SA:155:ARG:HB3	54:SA:156:TYR:HD2	1.81	0.45
55:SB:43:ASN:OD1	55:SB:43:ASN:C	2.60	0.45
56:SC:61:MET:HE3	56:SC:61:MET:HA	1.98	0.45
59:SH:111:LYS:CG	59:SH:112:ASN:HD22	2.21	0.45
60:SI:65:PHE:HB2	60:SI:187:GLY:N	2.31	0.45
75:SM:98:GLY:C	75:SM:99:ASN:HD22	2.23	0.45
79:SS:26:ILE:CD1	79:SS:54:LYS:C	2.90	0.45
86:Sg:125:ARG:HD3	86:Sg:150:TRP:CD2	2.51	0.45
1:A:5:ILE:HG23	1:A:8:GLN:HG2	1.99	0.45
1:A:202:VAL:HG12	1:A:217:GLN:HG2	1.98	0.45
3:G:62:ARG:HH22	32:5:4085:A:N6	2.15	0.45
8:N:150:TRP:CD1	32:5:332:C:H4'	2.52	0.45
8:N:188:ARG:NH2	32:5:298:G:O2'	2.50	0.45
12:S:81:TRP:CZ2	12:S:94:TYR:CE1	3.04	0.45
20:b:12:GLN:C	20:b:16:TRP:HE1	2.24	0.45
23:e:77:PHE:HE1	45:r:20:ARG:HD2	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:25:A:H2'	32:5:26:C:O5'	2.17	0.45
32:5:273:U:N3	32:5:274:C:C4	2.84	0.45
32:5:288:G:C6	32:5:289:C:C5	3.04	0.45
32:5:322:C:C2	32:5:4356:G:C2	3.05	0.45
32:5:453:G:H2'	32:5:453:G:N3	2.31	0.45
32:5:735:G:H2'	32:5:736:C:C6	2.51	0.45
32:5:746:A:N1	32:5:916:C:OP2	2.50	0.45
32:5:957:G:P	32:5:1284:G:N3	2.90	0.45
32:5:1236:C:N3	32:5:1238:A:N6	2.65	0.45
32:5:1258:G:N3	32:5:1259:G:C8	2.85	0.45
32:5:1367:C:N3	32:5:1370:G:H3'	2.32	0.45
32:5:1393:G:C2'	32:5:1394:G:H5'	2.45	0.45
32:5:1507:C:C4	32:5:1508:A:N7	2.84	0.45
32:5:1552:G:N2	32:5:1574:G:C2	2.84	0.45
32:5:1572:U:H3'	32:5:1573:G:C8	2.48	0.45
32:5:1665:C:C2'	32:5:1666:C:O5'	2.64	0.45
32:5:1818:G:N7	32:5:1821:G:O6	2.47	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
32:5:1936:C:C4	33:7:84:U:H5	2.33	0.45
32:5:1944:A:C6	32:5:1945:G:C5	3.05	0.45
32:5:1960:A:N1	47:q:14:PHE:HD2	2.11	0.45
32:5:1971:C:N3	32:5:1972:G:N7	2.65	0.45
32:5:2014:C:C4	32:5:2015:U:C5	3.05	0.45
32:5:2082:G:O2'	32:5:2083:C:H5'	2.16	0.45
32:5:2399:G:C2	32:5:2400:G:C4	3.05	0.45
32:5:2557:G:N1	32:5:2558:C:C2	2.85	0.45
32:5:2561:C:C4	32:5:2562:G:N7	2.85	0.45
32:5:2600:A:H1'	32:5:2601:A:C6	2.52	0.45
32:5:2647:A:H2'	32:5:2648:G:H5'	1.99	0.45
32:5:2678:A:C2	32:5:2679:G:N9	2.85	0.45
32:5:2756:G:O2'	32:5:2757:A:O5'	2.34	0.45
32:5:2773:G:C6	32:5:2774:C:C4	3.05	0.45
32:5:2874:U:C6	32:5:2874:U:C5'	3.00	0.45
32:5:3738:G:N7	32:5:3739:C:C5	2.85	0.45
32:5:3847:C:C2	32:5:3848:U:H6	2.31	0.45
32:5:4094:G:C6	32:5:4095:G:C6	3.04	0.45
32:5:4284:C:C2	32:5:4285:U:C6	2.87	0.45
32:5:4292:A:OP2	32:5:4330:G:O2'	2.32	0.45
32:5:4292:A:O4'	32:5:4330:G:H1'	2.16	0.45
32:5:4337:C:O2'	32:5:4338:G:H5'	2.17	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
32:5:4528:G:N3	32:5:4529:G:C8	2.85	0.45
32:5:4618:G:N1	32:5:4619:U:C5	2.85	0.45
32:5:4620:U:N3	32:5:4621:C:C6	2.84	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
32:5:4745:G:O2'	32:5:4746:C:C6	2.45	0.45
32:5:4922:C:C2	32:5:4923:C:C6	3.04	0.45
32:5:4935:C:H3'	37:E:179:ARG:NH2	2.31	0.45
32:5:5007:A:C5	32:5:5040:U:O4	2.69	0.45
32:5:5031:G:C6	32:5:5032:C:C4	3.05	0.45
33:7:50:A:N1	33:7:51:G:C8	2.84	0.45
33:7:55:A:N1	33:7:56:G:C5	2.85	0.45
33:7:110:G:C5	33:7:111:C:C5	3.05	0.45
33:7:116:G:C2	33:7:117:G:C8	3.05	0.45
34:8:31:G:C6	34:8:32:C:C4	3.04	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
34:8:101:C:N3	34:8:102:G:C8	2.85	0.45
35:B:100:ARG:HH21	35:B:101:THR:C	2.23	0.45
35:B:235:TRP:HD1	35:B:267:ALA:CA	2.29	0.45
37:E:253:ILE:O	37:E:255:ARG:N	2.49	0.45
38:F:94:VAL:HG22	38:F:144:TRP:HB3	1.99	0.45
46:K:123:ARG:HB2	46:K:129:ILE:CD1	2.47	0.45
47:q:127:ASN:HB3	47:q:153:GLU:CG	2.45	0.45
48:z:357:THR:HG22	48:z:358:ASP:CG	2.41	0.45
49:3:34:A:N3	53:S2:1701:C:H5	2.11	0.45
50:4:187:G:H8	50:4:187:G:O5'	1.99	0.45
51:9:107:TYR:CZ	51:9:111:MET:HG3	2.51	0.45
53:S2:81:U:O4	53:S2:82:G:C4	2.70	0.45
53:S2:119:U:C2	53:S2:120:U:H6	2.29	0.45
53:S2:140:C:O2	53:S2:141:A:C8	2.70	0.45
53:S2:144:U:OP2	58:SG:139:SER:OG	2.33	0.45
53:S2:200:G:C5	53:S2:201:C:C5	3.04	0.45
53:S2:298:G:N1	53:S2:299:A:N7	2.65	0.45
53:S2:309:G:C2	53:S2:310:C:C6	3.05	0.45
53:S2:383:G:H4'	62:SL:132:ARG:HD2	1.99	0.45
53:S2:474:G:C2	53:S2:475:C:N1	2.84	0.45
53:S2:501:C:H3'	53:S2:501:C:C2	2.51	0.45
53:S2:635:G:C2	53:S2:636:C:N1	2.85	0.45
53:S2:646:G:C6	53:S2:647:U:N1	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:732:U:C2	53:S2:733:C:C6	3.05	0.45
53:S2:815:U:C4	53:S2:816:A:N7	2.85	0.45
53:S2:849:A:H2'	53:S2:850:C:C6	2.52	0.45
53:S2:859:G:N1	53:S2:860:G:C5	2.85	0.45
53:S2:903:A:N7	53:S2:904:A:C8	2.85	0.45
53:S2:957:A:N3	53:S2:958:G:C5	2.84	0.45
53:S2:963:A:N3	53:S2:964:A:N7	2.65	0.45
53:S2:979:C:O2	53:S2:979:C:H2'	2.17	0.45
53:S2:998:A:C8	53:S2:999:G:C4'	3.00	0.45
53:S2:1037:G:H4'	53:S2:1845:A:H4'	1.99	0.45
53:S2:1367:U:H4'	53:S2:1465:A:C2	2.52	0.45
53:S2:1397:U:C5	77:SQ:11:GLN:O	2.70	0.45
53:S2:1410:C:N3	53:S2:1411:G:C5	2.84	0.45
53:S2:1497:G:O6	74:SK:25:LYS:NZ	2.50	0.45
53:S2:1500:G:C6	53:S2:1501:C:N3	2.85	0.45
53:S2:1709:G:C2	53:S2:1710:C:C5	3.04	0.45
53:S2:1788:A:H2'	53:S2:1789:G:O4'	2.16	0.45
53:S2:1807:C:C2	53:S2:1808:U:C6	3.04	0.45
53:S2:1838:U:H6	53:S2:1838:U:C5'	2.30	0.45
55:SB:52:THR:CG2	55:SB:57:ILE:CB	2.88	0.45
55:SB:139:CYS:HB2	55:SB:172:MET:HE1	1.98	0.45
59:SH:181:THR:OG1	59:SH:182:GLY:N	2.50	0.45
61:SJ:109:ARG:HH11	61:SJ:109:ARG:HB3	1.81	0.45
62:SL:40:ILE:HG21	62:SL:62:PHE:HZ	1.82	0.45
66:SW:106:THR:O	66:SW:108:ALA:N	2.49	0.45
72:SD:23:GLU:O	72:SD:24:PHE:C	2.59	0.45
74:SK:11:ILE:CD1	74:SK:45:VAL:HG22	2.46	0.45
76:SP:9:LYS:O	76:SP:10:ARG:HG3	2.16	0.45
77:SQ:113:ILE:HG22	77:SQ:113:ILE:O	2.16	0.45
78:SR:17:ILE:HG23	78:SR:58:MET:HE1	1.98	0.45
80:ST:79:TYR:N	80:ST:79:TYR:CD1	2.84	0.45
86:Sg:35:SER:OG	86:Sg:36:ARG:N	2.50	0.45
86:Sg:51:ASN:ND2	86:Sg:53:GLY:O	2.50	0.45
86:Sg:184:LEU:HD13	86:Sg:187:ASN:HD21	1.82	0.45
1:A:67:TYR:CD1	32:5:4086:G:C5	3.04	0.45
1:A:215:ASN:ND2	32:5:4545:G:N7	2.65	0.45
6:L:13:HIS:CE1	32:5:85:G:C5	3.05	0.45
6:L:192:PHE:CD2	6:L:192:PHE:C	2.95	0.45
7:M:107:PHE:CE2	7:M:111:LYS:CE	2.99	0.45
10:Q:154:LYS:O	10:Q:155:ALA:HB2	2.17	0.45
13:T:41:ASP:OD1	13:T:41:ASP:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:f:33:VAL:HG23	24:f:38:GLU:HB3	1.97	0.45
32:5:219:G:C8	32:5:220:C:C5	3.04	0.45
32:5:254:G:C2	32:5:255:C:C2	3.05	0.45
32:5:294:G:N2	32:5:316:U:O4'	2.49	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
32:5:447:C:C4	32:5:448:G:N7	2.85	0.45
32:5:476:G:C2	32:5:679:C:C2	3.05	0.45
32:5:499:G:C2	32:5:656:C:N3	2.85	0.45
32:5:691:C:H2'	32:5:692:A:C8	2.52	0.45
32:5:731:G:H5''	32:5:732:A:OP2	2.16	0.45
32:5:1096:C:C2	32:5:1097:C:C6	3.04	0.45
32:5:1217:G:N2	32:5:1219:G:N7	2.65	0.45
32:5:1394:G:N2	32:5:1395:U:O2	2.49	0.45
32:5:1521:C:C5	32:5:1522:G:C8	3.04	0.45
32:5:1558:A:H2'	32:5:1559:G:C8	2.52	0.45
32:5:1598:C:C6	32:5:2798:A:C8	3.05	0.45
32:5:1643:A:C6	32:5:1644:C:C4	3.04	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
32:5:1829:G:N2	32:5:1830:G:C4	2.85	0.45
32:5:1926:C:O2	32:5:1927:U:H6	1.95	0.45
32:5:1967:A:N1	32:5:1968:G:N7	2.64	0.45
32:5:2436:U:C5	32:5:2783:A:H1'	2.52	0.45
32:5:2522:G:O2'	32:5:2697:A:O2'	2.34	0.45
32:5:2552:G:N2	32:5:2764:A:N7	2.64	0.45
32:5:2703:G:C5	32:5:2704:C:C5	3.05	0.45
32:5:2791:C:O2	32:5:2792:C:C6	2.70	0.45
32:5:2823:G:N2	32:5:2824:C:C2	2.84	0.45
32:5:2824:C:H3'	32:5:2825:A:H8	1.80	0.45
32:5:3724:A:C4	32:5:3725:G:C8	3.05	0.45
32:5:3868:G:C5	32:5:4562:C:H1'	2.51	0.45
32:5:3869:C:C2	32:5:3870:C:C6	3.04	0.45
32:5:4090:G:C2	32:5:4091:G:H1'	2.52	0.45
32:5:4153:C:C2	32:5:4154:G:C8	3.05	0.45
32:5:4169:G:H4'	32:5:4171:C:C2	2.51	0.45
32:5:4340:U:C5	32:5:4341:C:C5	3.04	0.45
32:5:4595:G:C5	32:5:4596:C:C5	3.04	0.45
32:5:4598:C:OP2	32:5:4599:A:O2'	2.22	0.45
32:5:4686:G:C6	32:5:4687:A:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4738:C:H2'	32:5:4739:C:O4'	2.16	0.45
32:5:4749:C:C5	32:5:4750:G:C2	3.04	0.45
32:5:4916:G:C5	32:5:4917:C:C5	3.04	0.45
32:5:4975:G:C6	32:5:4977:A:C5	3.05	0.45
33:7:19:C:C2	33:7:20:U:H5	2.34	0.45
33:7:114:U:C2'	33:7:115:A:H5''	2.46	0.45
34:8:13:G:N2	34:8:14:U:C2	2.84	0.45
34:8:99:U:C2	34:8:100:U:C6	3.04	0.45
34:8:143:G:C6	34:8:144:U:C4	3.05	0.45
36:C:209:ILE:HD13	36:C:221:PHE:CE2	2.52	0.45
38:F:92:ALA:HA	38:F:147:PRO:HD3	1.99	0.45
38:F:98:ARG:HG3	38:F:141:TYR:HD2	1.82	0.45
38:F:161:TYR:CD1	38:F:170:ALA:HA	2.50	0.45
39:I:101:LYS:CE	39:I:121:LYS:N	2.80	0.45
46:K:10:ILE:HB	46:K:67:ARG:H	1.80	0.45
47:q:161:ILE:HD13	47:q:167:VAL:HG22	1.98	0.45
48:z:18:SER:O	48:z:19:ASN:HB3	2.17	0.45
48:z:133:CYS:HB3	48:z:179:PHE:CD1	2.51	0.45
48:z:134:LEU:HD23	48:z:188:ILE:CG2	2.47	0.45
48:z:340:MET:O	48:z:343:GLY:N	2.48	0.45
48:z:343:GLY:C	48:z:346:SER:HB2	2.14	0.45
48:z:374:LYS:CE	50:4:195:U:C5'	2.94	0.45
49:3:25:C:N3	49:3:26:G:C8	2.85	0.45
50:4:130:A:H2'	50:4:131:A:H8	1.81	0.45
53:S2:5:U:O2'	53:S2:602:G:H4'	2.16	0.45
53:S2:10:G:N1	53:S2:11:A:C5	2.85	0.45
53:S2:50:A:OP2	53:S2:472:C:N4	2.44	0.45
53:S2:66:G:C5	53:S2:68:A:N7	2.84	0.45
53:S2:158:A:H2'	53:S2:159:A:C8	2.52	0.45
53:S2:457:C:C5	53:S2:458:A:N7	2.85	0.45
53:S2:583:C:N4	53:S2:584:G:C5	2.85	0.45
53:S2:898:U:C2	53:S2:899:U:C6	3.05	0.45
53:S2:1114:U:C4	53:S2:1119:A:N6	2.85	0.45
53:S2:1301:A:P	84:Sd:7:TYR:OH	2.75	0.45
53:S2:1302:G:C6	85:Sf:140:TYR:CD1	3.05	0.45
53:S2:1546:G:O2'	53:S2:1547:C:C5'	2.64	0.45
53:S2:1698:C:O2	53:S2:1698:C:O4'	2.35	0.45
53:S2:1796:G:H2'	53:S2:1797:U:C6	2.52	0.45
54:SA:24:HIS:CD2	54:SA:25:LEU:HD12	2.52	0.45
57:SE:67:GLN:CB	57:SE:69:PHE:CE2	3.00	0.45
58:SG:147:LEU:HD21	58:SG:156:TYR:CB	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SN:52:VAL:O	63:SN:53:ILE:C	2.59	0.45
72:SD:16:ILE:HD13	84:Sd:22:ARG:NH2	2.32	0.45
73:SF:39:ILE:HG21	73:SF:113:VAL:HG23	1.98	0.45
76:SP:82:ASP:OD1	76:SP:82:ASP:C	2.60	0.45
77:SQ:53:GLU:OE2	77:SQ:117:ARG:NH2	2.50	0.45
78:SR:103:LYS:CG	78:SR:117:LEU:CD1	2.94	0.45
82:SZ:66:LYS:O	82:SZ:110:THR:HA	2.17	0.45
6:L:27:ASN:O	6:L:28:GLN:C	2.60	0.45
8:N:137:PRO:O	8:N:152:THR:HG22	2.17	0.45
18:Z:73:LYS:HA	18:Z:101:PHE:HZ	1.82	0.45
23:e:20:PHE:HZ	23:e:60:TYR:OH	1.98	0.45
24:f:4:ARG:O	24:f:6:TRP:CD1	2.70	0.45
24:f:18:LEU:HD21	32:5:1915:C:C5	2.52	0.45
24:f:93:PRO:O	24:f:94:ALA:HB3	2.16	0.45
32:5:122:U:H2'	32:5:123:C:O4'	2.17	0.45
32:5:504:G:N1	32:5:505:G:C6	2.85	0.45
32:5:721:G:C2	32:5:948:C:C2	3.05	0.45
32:5:1178:G:C5	32:5:1179:U:C6	3.05	0.45
32:5:1277:G:C2	32:5:1278:C:N1	2.84	0.45
32:5:1383:G:H2'	32:5:1384:C:O4'	2.16	0.45
32:5:1444:G:C2'	32:5:1445:U:H6	2.30	0.45
32:5:1449:C:C2	32:5:1450:C:C6	3.04	0.45
32:5:1513:U:H2'	32:5:1514:U:O4'	2.16	0.45
32:5:1555:G:C6	32:5:1556:C:C6	3.04	0.45
32:5:1619:G:C5	32:5:1620:U:C4	3.05	0.45
32:5:1629:G:N2	32:5:1631:A:N3	2.65	0.45
32:5:1684:A:H2	32:5:1685:G:H1'	1.78	0.45
32:5:1757:U:H2'	32:5:1758:G:O4'	2.17	0.45
32:5:1770:A:C4	32:5:1771:U:C6	3.05	0.45
32:5:1811:G:C4	32:5:1812:C:C6	3.04	0.45
32:5:1820:C:HO2'	32:5:1821:G:P	2.37	0.45
32:5:1831:G:C2	32:5:1832:C:C2	3.05	0.45
32:5:2021:G:C2	32:5:2022:C:C2	3.05	0.45
32:5:2052:G:C6	32:5:2053:C:C4	3.04	0.45
32:5:2074:C:H2'	32:5:2075:G:O4'	2.17	0.45
32:5:2077:C:C2	32:5:2078:C:C6	3.04	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
32:5:2468:U:O4	32:5:2473:A:C6	2.61	0.45
32:5:2602:G:C1'	32:5:2742:G:C4	2.98	0.45
32:5:2609:G:C2	32:5:2731:C:O2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2816:G:C4	32:5:2817:C:C6	3.04	0.45
32:5:2862:G:N3	32:5:3624:A:H2'	2.32	0.45
32:5:3607:U:H2'	32:5:3608:A:H8	1.82	0.45
32:5:3657:U:C2	32:5:3658:C:C5	3.04	0.45
32:5:4092:G:N1	32:5:4093:G:C4	2.85	0.45
32:5:4251:A:O2'	32:5:4252:C:O4'	2.33	0.45
32:5:4281:A:N3	32:5:4283:G:N7	2.64	0.45
32:5:4699:U:C5	32:5:4702:G:O6	2.70	0.45
32:5:4725:C:C2	32:5:4726:G:C8	2.98	0.45
32:5:4919:G:C2	32:5:4920:C:C2	3.04	0.45
33:7:27:G:C6	33:7:28:C:C5	3.05	0.45
33:7:42:A:C5	33:7:43:U:H5	2.29	0.45
34:8:60:G:C2	34:8:64:U:H1'	2.51	0.45
35:B:257:TRP:O	35:B:257:TRP:CD1	2.70	0.45
35:B:379:PHE:N	35:B:379:PHE:CD1	2.85	0.45
39:I:100:ASN:ND2	39:I:100:ASN:C	2.73	0.45
46:K:86:LYS:HA	46:K:104:ILE:HG12	1.97	0.45
48:z:16:SER:O	48:z:20:ALA:HB2	2.16	0.45
48:z:365:GLU:OE2	48:z:369:MET:HE2	2.16	0.45
48:z:420:LEU:HD23	48:z:420:LEU:C	2.42	0.45
53:S2:46:A:N1	53:S2:99:A:C8	2.85	0.45
53:S2:404:G:N2	53:S2:405:G:N9	2.65	0.45
53:S2:588:G:O4'	53:S2:589:G:N2	2.41	0.45
53:S2:646:G:N3	53:S2:646:G:H2'	2.31	0.45
53:S2:690:G:C2	53:S2:691:G:C8	3.05	0.45
53:S2:823:U:C2	68:SY:64:PHE:HD2	2.35	0.45
53:S2:825:A:O2'	53:S2:826:A:C5'	2.65	0.45
53:S2:839:C:H2'	53:S2:841:G:O4'	2.17	0.45
53:S2:957:A:C6	53:S2:967:C:O2	2.68	0.45
53:S2:1110:G:C5	53:S2:1111:U:C5	3.05	0.45
53:S2:1233:G:C2	53:S2:1234:C:C2	3.05	0.45
53:S2:1316:C:O2	53:S2:1317:C:H6	1.88	0.45
53:S2:1317:C:O2	53:S2:1318:G:H8	1.97	0.45
53:S2:1332:A:C2	53:S2:1333:U:H1'	2.52	0.45
53:S2:1338:G:C5	53:S2:1339:U:C5	3.04	0.45
53:S2:1358:U:C4	53:S2:1359:U:C5	3.05	0.45
53:S2:1379:A:OP2	53:S2:1379:A:C8	2.70	0.45
53:S2:1446:A:H5'	81:SU:57:PRO:HA	1.99	0.45
53:S2:1525:C:O2	53:S2:1525:C:C2'	2.62	0.45
53:S2:1537:A:O2'	53:S2:1604:G:C5'	2.65	0.45
53:S2:1543:U:H4'	53:S2:1544:C:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1709:G:C2	53:S2:1710:C:N1	2.85	0.45
53:S2:1714:U:H2'	53:S2:1715:A:C8	2.52	0.45
53:S2:1862:G:O2'	69:Sa:5:ARG:NH2	2.50	0.45
55:SB:27:LYS:CB	55:SB:51:ARG:HH12	2.30	0.45
60:SI:80:ASP:OD1	60:SI:80:ASP:C	2.59	0.45
75:SM:77:ILE:HG23	75:SM:78:LYS:N	2.31	0.45
83:Sc:27:CYS:HA	83:Sc:46:VAL:O	2.17	0.45
87:S1:48:CYS:C	87:S1:49:LEU:CG	2.90	0.45
1:A:192:LYS:C	1:A:193:ARG:HD3	2.41	0.45
2:D:29:ASP:CB	2:D:32:ALA:HB3	2.40	0.45
2:D:44:TYR:HD2	32:5:1823:G:H4'	1.80	0.45
12:S:158:VAL:CG1	32:5:2055:G:O6	2.64	0.45
13:T:80:VAL:HG21	32:5:4305:G:O6	2.16	0.45
15:V:92:ASP:OD1	15:V:92:ASP:N	2.47	0.45
16:X:42:THR:O	32:5:4086:G:N2	2.50	0.45
19:a:111:VAL:C	19:a:112:LEU:HD23	2.41	0.45
25:g:13:TYR:CD2	32:5:2513:A:C5	3.05	0.45
29:l:43:HIS:O	29:l:44:TRP:C	2.58	0.45
31:o:18:HIS:ND1	32:5:4318:C:O2'	2.45	0.45
31:o:26:TYR:HD2	31:o:82:MET:HE3	1.81	0.45
32:5:83:C:O5'	32:5:84:A:H2'	2.16	0.45
32:5:96:U:C4	32:5:97:G:N9	2.85	0.45
32:5:258:G:C2	32:5:259:C:C6	3.05	0.45
32:5:272:U:O2	32:5:272:U:H2'	2.17	0.45
32:5:290:U:H2'	32:5:291:U:H6	1.81	0.45
32:5:471:A:N6	32:5:472:C:C4	2.85	0.45
32:5:957:G:H3'	32:5:2077:C:OP1	2.17	0.45
32:5:1069:G:N3	32:5:1070:G:H1'	2.32	0.45
32:5:1090:G:C4	32:5:1091:C:C6	3.04	0.45
32:5:1282:G:N7	37:E:124:HIS:ND1	2.64	0.45
32:5:1320:U:N3	32:5:1321:G:N7	2.65	0.45
32:5:1559:G:N1	32:5:1560:A:C5	2.85	0.45
32:5:1570:G:H2'	32:5:1571:G:O4'	2.17	0.45
32:5:1696:C:O2	32:5:1697:G:C5'	2.63	0.45
32:5:1822:U:O2	32:5:1822:U:O4'	2.35	0.45
32:5:1932:A:H2'	32:5:1933:G:C8	2.51	0.45
32:5:2087:C:C6	32:5:2087:C:C3'	3.00	0.45
32:5:2100:A:C8	32:5:2101:C:C6	3.04	0.45
32:5:2301:G:C5	32:5:2302:C:C5	3.04	0.45
32:5:2368:A:C2	32:5:2788:U:C5	3.05	0.45
32:5:2509:C:N4	32:5:2510:G:O6	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2578:G:N1	32:5:2579:G:C5	2.84	0.45
32:5:2649:G:N1	32:5:2685:C:C2	2.85	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
32:5:3723:A:H2	32:5:3724:A:C5	2.22	0.45
32:5:3754:G:H21	32:5:3755:G:H1'	1.82	0.45
32:5:3759:A:H2	53:S2:1709:G:O4'	1.83	0.45
32:5:3857:G:N2	32:5:3858:C:H1'	2.32	0.45
32:5:3868:G:N1	32:5:4562:C:H1'	2.31	0.45
32:5:3943:A:C5	32:5:3944:G:C8	3.05	0.45
32:5:4479:A:C6	32:5:4480:A:C4	3.05	0.45
32:5:4616:A:H2'	32:5:4617:G:O4'	2.17	0.45
32:5:4707:A:O2'	32:5:4708:A:O5'	2.33	0.45
32:5:4724:A:N3	32:5:4725:C:C6	2.85	0.45
32:5:4741:C:H2'	32:5:4741:C:O2	2.17	0.45
32:5:4862:G:C2	32:5:4863:G:N9	2.85	0.45
32:5:4879:C:H2'	32:5:4880:C:H6	1.81	0.45
32:5:4939:C:C4	37:E:215:LYS:CD	3.00	0.45
32:5:5018:C:H6	32:5:5018:C:H5''	1.80	0.45
32:5:5042:A:C2	32:5:5043:A:C8	3.05	0.45
33:7:22:A:N3	33:7:23:A:N7	2.64	0.45
34:8:65:A:N1	34:8:66:A:N7	2.63	0.45
34:8:101:C:C4	34:8:102:G:N7	2.85	0.45
34:8:117:C:C4	34:8:118:C:H5	2.28	0.45
39:I:9:TYR:N	39:I:9:TYR:HD1	2.15	0.45
48:z:364:ASN:O	48:z:367:GLU:CA	2.64	0.45
48:z:427:PHE:O	48:z:431:VAL:HG23	2.17	0.45
50:4:284:G:C4	50:4:285:C:C5	3.05	0.45
50:4:216:A:H8	50:4:216:A:O5'	2.00	0.45
53:S2:10:G:H8	53:S2:1697:A:O2'	2.00	0.45
53:S2:20:G:C5'	53:S2:620:G:N7	2.80	0.45
53:S2:144:U:C2	53:S2:145:G:C8	3.05	0.45
53:S2:316:G:N1	53:S2:317:C:N4	2.65	0.45
53:S2:458:A:N3	53:S2:458:A:H2'	2.31	0.45
53:S2:459:C:N3	53:S2:460:A:N9	2.62	0.45
53:S2:507:G:H4'	53:S2:509:G:N7	2.32	0.45
53:S2:575:A:H2'	53:S2:576:A:O5'	2.17	0.45
53:S2:639:C:O2'	53:S2:640:A:C5'	2.65	0.45
53:S2:642:U:P	61:SJ:39:ASN:HD21	2.40	0.45
53:S2:786:G:C8	58:SG:236:SER:O	2.70	0.45
53:S2:793:G:N3	53:S2:793:G:H2'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:831:G:N2	53:S2:844:U:N3	2.65	0.45
53:S2:941:C:H2'	53:S2:942:G:H8	1.82	0.45
53:S2:987:A:C2	55:SB:114:VAL:HG21	2.52	0.45
53:S2:1051:G:N3	53:S2:1052:A:C8	2.83	0.45
53:S2:1276:A:N6	53:S2:1321:G:O2'	2.49	0.45
53:S2:1439:A:O2'	53:S2:1440:C:O4'	2.33	0.45
53:S2:1441:U:H1'	53:S2:1442:U:O4	2.17	0.45
53:S2:1500:G:C4	53:S2:1501:C:C5	3.05	0.45
53:S2:1538:C:O2	53:S2:1539:U:C5	2.70	0.45
54:SA:109:THR:O	54:SA:110:ASN:HB2	2.17	0.45
57:SE:101:LEU:HD23	57:SE:101:LEU:HA	1.87	0.45
58:SG:76:LEU:HD13	58:SG:92:ARG:HD2	1.99	0.45
65:SV:53:TYR:OH	65:SV:72:LEU:HB3	2.17	0.45
67:SX:46:HIS:N	67:SX:46:HIS:CD2	2.84	0.45
1:A:209:HIS:NE2	1:A:235:VAL:HG11	2.32	0.44
2:D:287:PHE:C	2:D:287:PHE:HD1	2.23	0.44
4:H:41:ILE:CD1	4:H:69:THR:HG21	2.45	0.44
9:O:109:PRO:HG3	32:5:4911:A:H62	1.82	0.44
11:R:81:ARG:CG	11:R:88:ARG:NE	2.79	0.44
13:T:17:ARG:HG3	13:T:18:PRO:CD	2.47	0.44
16:X:117:TYR:C	16:X:119:ILE:N	2.75	0.44
21:c:22:MET:SD	21:c:27:TYR:CE2	3.10	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
32:5:2:G:C2	32:5:3:C:C2	3.05	0.44
32:5:25:A:C2'	32:5:26:C:O5'	2.66	0.44
32:5:44:A:N3	32:5:44:A:H2'	2.32	0.44
32:5:52:G:H8	32:5:52:G:O5'	1.99	0.44
32:5:194:C:N4	32:5:195:C:C5	2.85	0.44
32:5:258:G:C2	32:5:259:C:C2	3.05	0.44
32:5:344:A:C6	32:5:345:C:C5	3.04	0.44
32:5:476:G:C2	32:5:477:C:C2	3.06	0.44
32:5:500:G:H5''	32:5:501:C:C6	2.52	0.44
32:5:951:G:C2'	32:5:952:G:H5''	2.47	0.44
32:5:1290:G:N2	32:5:1291:G:N7	2.65	0.44
32:5:1404:G:H2'	32:5:1405:C:O4'	2.17	0.44
32:5:1406:G:C2	32:5:1412:G:C5	3.05	0.44
32:5:1412:G:C6	32:5:1413:C:C4	3.05	0.44
32:5:1453:G:N1	32:5:1454:G:C5	2.85	0.44
32:5:1458:C:O2	32:5:1458:C:C2'	2.65	0.44
32:5:1479:G:C6	32:5:1487:G:N3	2.84	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1509:C:C2	32:5:1510:G:N7	2.85	0.44
32:5:1543:G:N3	32:5:1544:G:C8	2.83	0.44
32:5:1568:C:H2'	32:5:1569:U:C6	2.52	0.44
32:5:1750:G:H2'	32:5:1750:G:N3	2.32	0.44
32:5:1859:C:C4	32:5:1860:U:C4	3.05	0.44
32:5:1927:U:O2	32:5:1928:C:C6	2.70	0.44
32:5:2060:G:C5	32:5:2061:U:C5	3.05	0.44
32:5:2096:G:H3'	32:5:2096:G:N3	2.31	0.44
32:5:2339:G:C5	32:5:2340:C:C5	3.05	0.44
32:5:2384:U:O2	32:5:2385:U:C6	2.70	0.44
32:5:2441:C:H2'	32:5:2442:G:C8	2.52	0.44
32:5:2483:G:N1	32:5:2484:A:C5	2.85	0.44
32:5:2507:A:C5	32:5:2508:U:C5	3.04	0.44
32:5:2555:G:C2	32:5:2573:A:N3	2.85	0.44
32:5:2569:G:C2	32:5:2570:U:C2	3.05	0.44
32:5:2573:A:H2'	32:5:2574:G:C5'	2.46	0.44
32:5:2585:C:N3	32:5:2588:C:N4	2.59	0.44
32:5:2677:G:C6	32:5:2678:A:N9	2.85	0.44
32:5:2688:G:C6	32:5:2689:C:C4	3.04	0.44
32:5:2725:A:H2'	32:5:2726:G:C5'	2.48	0.44
32:5:3656:A:H2'	32:5:3657:U:H6	1.82	0.44
32:5:3802:U:O2	32:5:4498:U:H4'	2.17	0.44
32:5:3871:A:H2'	32:5:3872:A:O5'	2.17	0.44
32:5:3942:A:C2	32:5:3943:A:C4	3.04	0.44
32:5:3944:G:N2	32:5:3945:A:N9	2.66	0.44
32:5:4131:G:C2	32:5:4132:C:C2	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
32:5:4311:A:C2	32:5:4312:U:C6	3.05	0.44
32:5:4323:A:C2	32:5:4324:A:C8	3.05	0.44
32:5:4401:G:N2	32:5:4402:C:C2	2.85	0.44
32:5:4415:A:OP2	32:5:4422:A:C2	2.70	0.44
32:5:4547:C:C2	32:5:4549:G:C8	3.05	0.44
32:5:4558:U:OP2	35:B:246:ARG:NH1	2.50	0.44
32:5:4703:U:N3	32:5:4704:C:C5	2.85	0.44
32:5:4957:C:O2	32:5:4957:C:C2'	2.65	0.44
32:5:4996:C:O2	32:5:4996:C:H2'	2.16	0.44
32:5:5034:A:C5	32:5:5035:U:H1'	2.53	0.44
33:7:22:A:C2	33:7:23:A:N7	2.84	0.44
33:7:44:C:N3	33:7:45:U:C4	2.85	0.44
33:7:71:G:C2	33:7:105:C:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:41:A:C5	34:8:42:G:C8	3.05	0.44
34:8:64:U:N3	34:8:65:A:C6	2.85	0.44
34:8:93:C:O3'	34:8:94:G:H8	2.00	0.44
34:8:101:C:N4	34:8:102:G:C5	2.85	0.44
36:C:67:TRP:CD1	36:C:71:ARG:HE	2.35	0.44
39:I:100:ASN:HD22	39:I:100:ASN:C	2.24	0.44
41:W:27:LYS:HG3	41:W:29:PHE:CZ	2.53	0.44
43:n:12:ARG:NH2	53:S2:1846:G:N7	2.65	0.44
46:K:107:ASP:OD2	46:K:143:VAL:HG13	2.16	0.44
47:q:14:PHE:CD1	47:q:14:PHE:N	2.83	0.44
49:3:15:G:C2	49:3:59:A:N1	2.85	0.44
49:3:26:G:N2	49:3:27:U:H1'	2.31	0.44
50:4:214:A:H5''	50:4:215:A:OP1	2.16	0.44
51:9:14:ARG:HA	51:9:14:ARG:HD2	1.83	0.44
53:S2:113:G:N3	53:S2:293:C:C4	2.85	0.44
53:S2:118:C:N4	53:S2:119:U:C2	2.84	0.44
53:S2:185:G:C6	53:S2:186:C:C4	3.05	0.44
53:S2:191:A:H3'	53:S2:192:C:C5'	2.46	0.44
53:S2:475:C:O2	53:S2:475:C:C2'	2.63	0.44
53:S2:523:A:OP2	61:SJ:38:ARG:HD3	2.18	0.44
53:S2:532:C:OP1	53:S2:532:C:C4'	2.63	0.44
53:S2:536:A:C6	53:S2:537:C:C5	3.04	0.44
53:S2:862:A:H2	53:S2:863:U:H1'	1.82	0.44
53:S2:882:U:C2	53:S2:883:U:C6	3.05	0.44
53:S2:923:G:C6	53:S2:924:G:C8	3.05	0.44
53:S2:1175:G:C4	53:S2:1176:G:C8	3.05	0.44
53:S2:1250:A:H1'	53:S2:1339:U:H4'	1.99	0.44
53:S2:1311:C:H2'	53:S2:1312:G:O5'	2.17	0.44
53:S2:1433:C:H2'	53:S2:1434:C:C4'	2.42	0.44
53:S2:1478:U:C2	53:S2:1479:G:N7	2.85	0.44
53:S2:1538:C:C2	53:S2:1539:U:H5	2.25	0.44
53:S2:1551:U:C1'	53:S2:1558:C:O2	2.64	0.44
53:S2:1565:C:C4	53:S2:1571:G:N1	2.85	0.44
53:S2:1603:G:N1	80:ST:48:TYR:OH	2.49	0.44
53:S2:1857:G:C8	64:SO:146:ARG:NH2	2.68	0.44
57:SE:139:LEU:HD13	57:SE:160:ILE:CD1	2.47	0.44
62:SL:37:TYR:CE2	62:SL:51:ILE:HG23	2.52	0.44
64:SO:40:THR:HG21	64:SO:111:GLY:HA3	1.99	0.44
66:SW:113:HIS:C	66:SW:113:HIS:CD2	2.94	0.44
67:SX:83:ALA:HA	67:SX:120:PHE:O	2.16	0.44
72:SD:123:LEU:HD21	72:SD:154:ASP:CB	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SF:140:ASP:CB	83:Sc:56:LEU:CD2	2.94	0.44
74:SK:22:VAL:HG12	74:SK:68:TYR:CE2	2.51	0.44
78:SR:109:LEU:HB3	78:SR:111:PHE:CD2	2.51	0.44
79:SS:38:ARG:NH2	80:ST:45:LEU:HD22	2.28	0.44
82:SZ:55:TYR:CD2	82:SZ:55:TYR:C	2.95	0.44
82:SZ:98:LYS:HB2	82:SZ:113:THR:HG23	1.97	0.44
1:A:3:ARG:HH11	1:A:3:ARG:CG	2.29	0.44
1:A:15:VAL:HG13	32:5:1539:G:C1'	2.47	0.44
1:A:186:TYR:HA	1:A:196:TRP:CE3	2.52	0.44
2:D:123:VAL:HG22	2:D:248:ARG:NH2	2.31	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
4:H:40:HIS:CD2	4:H:40:HIS:N	2.85	0.44
8:N:127:TYR:HD1	8:N:127:TYR:N	2.15	0.44
11:R:50:ILE:HD12	11:R:50:ILE:C	2.43	0.44
12:S:34:ALA:HB3	12:S:40:ALA:HB2	2.00	0.44
12:S:163:HIS:HD2	12:S:166:ARG:HG3	1.81	0.44
14:U:85:TYR:CE1	32:5:2632:U:C6	3.05	0.44
32:5:94:A:C2'	32:5:95:G:O4'	2.49	0.44
32:5:134:G:H4'	32:5:135:G:O5'	2.16	0.44
32:5:254:G:C4	32:5:255:C:C6	3.05	0.44
32:5:468:U:O4	32:5:685:C:N3	2.50	0.44
32:5:654:C:O2	32:5:654:C:H2'	2.17	0.44
32:5:740:G:C2	32:5:925:C:C2	3.06	0.44
32:5:984:C:N4	32:5:1070:G:C6	2.85	0.44
32:5:1214:C:H4'	32:5:1215:C:H4'	1.99	0.44
32:5:1240:G:C2	32:5:1241:C:C2	3.04	0.44
32:5:1253:G:O2'	32:5:1257:A:N6	2.49	0.44
32:5:1273:G:H5'	32:5:2123:C:H4'	1.99	0.44
32:5:1317:U:H2'	32:5:1318:C:C6	2.53	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
32:5:1590:C:H2'	32:5:1592:G:O4'	2.18	0.44
32:5:1899:G:C5	32:5:1900:C:H5	2.35	0.44
32:5:2065:G:C2	32:5:2066:C:N1	2.85	0.44
32:5:2347:A:C2'	32:5:2348:G:N7	2.78	0.44
32:5:2576:G:N1	32:5:2577:C:C4	2.85	0.44
32:5:2576:G:N1	32:5:2577:C:C6	2.85	0.44
32:5:2577:C:O2	32:5:2577:C:C2'	2.64	0.44
32:5:3710:G:H1	32:5:3711:A:N6	2.14	0.44
32:5:3794:C:O2	32:5:3795:A:C8	2.69	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3820:G:C6	32:5:3821:A:N7	2.85	0.44
32:5:4199:C:O5'	32:5:4199:C:H6	1.96	0.44
32:5:4209:G:C5	32:5:4210:U:C5	3.05	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
32:5:4655:A:C2	32:5:4658:G:H1'	2.52	0.44
32:5:4890:G:C2	32:5:4930:C:C2	3.05	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
32:5:5001:U:H2'	32:5:5002:U:C6	2.52	0.44
33:7:22:A:C6	33:7:23:A:N6	2.85	0.44
34:8:9:A:C2	34:8:10:G:N9	2.84	0.44
34:8:65:A:N1	34:8:66:A:C6	2.85	0.44
34:8:106:G:N2	34:8:107:C:N3	2.65	0.44
38:F:228:HIS:HE2	38:F:236:GLY:HA3	1.83	0.44
39:I:146:GLU:N	39:I:146:GLU:OE2	2.50	0.44
47:q:18:ILE:HG13	47:q:66:ARG:HD3	1.99	0.44
47:q:69:LEU:HB3	47:q:71:ASN:HB2	1.98	0.44
48:z:126:GLN:NE2	48:z:132:THR:OG1	2.50	0.44
53:S2:118:C:N3	53:S2:119:U:H1'	2.32	0.44
53:S2:313:A:O5'	58:SG:195:LYS:NZ	2.50	0.44
53:S2:413:G:C5	53:S2:425:G:C2	3.05	0.44
53:S2:449:A:C5	53:S2:452:G:C5	2.87	0.44
53:S2:457:C:N4	53:S2:458:A:C6	2.85	0.44
53:S2:476:A:C4	53:S2:477:G:C8	3.06	0.44
53:S2:477:G:C2	53:S2:478:G:C5	3.06	0.44
53:S2:478:G:H2'	53:S2:479:C:C6	2.52	0.44
53:S2:501:C:O2	53:S2:501:C:H2'	2.17	0.44
53:S2:579:C:N4	53:S2:580:U:C5	2.85	0.44
53:S2:870:A:N3	53:S2:915:G:N7	2.53	0.44
53:S2:898:U:N3	53:S2:899:U:C6	2.86	0.44
53:S2:992:A:C2	53:S2:993:G:C1'	3.01	0.44
53:S2:1041:G:C2	53:S2:1075:C:C2	3.05	0.44
53:S2:1050:A:C6	53:S2:1069:U:C5	3.05	0.44
53:S2:1293:A:N6	85:Sf:139:HIS:C	2.76	0.44
53:S2:1293:A:H1'	85:Sf:150:PHE:CD2	2.52	0.44
53:S2:1298:G:O2'	53:S2:1299:A:C8	2.64	0.44
53:S2:1301:A:OP1	84:Sd:7:TYR:OH	2.34	0.44
53:S2:1318:G:C5	53:S2:1319:U:C5	3.05	0.44
53:S2:1341:C:N4	53:S2:1484:A:N6	2.65	0.44
53:S2:1606:G:N3	53:S2:1632:G:N2	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1731:A:N1	53:S2:1732:G:C5	2.85	0.44
73:SF:39:ILE:HG23	73:SF:68:ILE:HG21	1.99	0.44
73:SF:114:ASN:O	73:SF:181:ALA:HA	2.16	0.44
76:SP:17:TYR:OH	76:SP:38:SER:HB3	2.16	0.44
78:SR:79:GLU:CD	78:SR:79:GLU:C	2.85	0.44
78:SR:92:ASP:C	78:SR:93:GLN:CD	2.85	0.44
79:SS:25:LYS:HB3	79:SS:28:PHE:CD1	2.52	0.44
81:SU:24:LEU:HB3	81:SU:32:LEU:HD11	1.99	0.44
83:Sc:14:VAL:HG22	83:Sc:32:VAL:HA	1.96	0.44
1:A:64:ARG:HD3	32:5:4124:G:C6	2.52	0.44
2:D:99:TYR:CD1	2:D:165:GLY:HA2	2.52	0.44
7:M:110:TYR:HE2	37:E:262:GLN:HE22	1.65	0.44
9:O:134:LYS:O	9:O:135:PHE:HB3	2.18	0.44
14:U:39:PHE:CD1	14:U:90:TYR:CE2	3.05	0.44
14:U:82:TYR:HE1	32:5:2631:U:O4'	1.95	0.44
16:X:117:TYR:O	16:X:119:ILE:CA	2.65	0.44
16:X:137:TYR:CD1	16:X:137:TYR:N	2.85	0.44
23:e:42:ASP:N	23:e:42:ASP:OD1	2.49	0.44
27:i:15:HIS:ND1	32:5:72:C:O2	2.50	0.44
27:i:70:LEU:HB3	27:i:87:ARG:HD3	1.97	0.44
31:o:40:ARG:NH1	32:5:92:C:H41	2.15	0.44
32:5:33:A:C5	32:5:50:C:N3	2.86	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
32:5:437:G:C2	32:5:438:G:N9	2.85	0.44
32:5:450:G:O2'	32:5:453:G:OP1	2.34	0.44
32:5:488:G:N2	32:5:668:C:N3	2.66	0.44
32:5:699:C:N3	32:5:700:G:N7	2.66	0.44
32:5:1349:G:C2	32:5:1350:C:C6	3.05	0.44
32:5:1435:G:C2	32:5:1436:C:C2	3.05	0.44
32:5:1614:C:H3'	32:5:1614:C:C6	2.52	0.44
32:5:1811:G:C6	32:5:1812:C:C4	3.05	0.44
32:5:2041:A:C4	32:5:4464:A:C6	3.04	0.44
32:5:2076:G:N1	32:5:2077:C:N1	2.66	0.44
32:5:2282:A:C2'	32:5:2283:G:C5'	2.95	0.44
32:5:2307:A:C2'	32:5:2308:A:O5'	2.65	0.44
32:5:2338:C:H5''	45:r:12:ASN:HD22	1.82	0.44
32:5:2392:C:C2	32:5:2393:C:C5	3.06	0.44
32:5:2529:A:C8	32:5:2532:C:C4	3.04	0.44
32:5:2618:G:C6	32:5:2619:G:N7	2.86	0.44
32:5:2624:G:C5	32:5:2625:U:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2666:U:C4	32:5:2669:C:C5	3.05	0.44
32:5:2724:G:N2	32:5:2726:G:N9	2.64	0.44
32:5:2727:C:H2'	32:5:2728:U:C6	2.53	0.44
32:5:2851:G:N2	32:5:2856:C:C4	2.85	0.44
32:5:2898:G:C2	32:5:3602:C:C2	3.06	0.44
32:5:3714:G:OP2	32:5:3714:G:C8	2.70	0.44
32:5:3846:C:C2'	32:5:4632:U:O2'	2.66	0.44
32:5:3856:A:N6	32:5:3857:G:C6	2.85	0.44
32:5:3909:C:C4	32:5:3910:C:C5	2.91	0.44
32:5:3945:A:C2	32:5:3946:G:C4	3.06	0.44
32:5:4136:G:C2	32:5:4137:C:N1	2.86	0.44
32:5:4142:C:C5	32:5:4143:G:C5	3.06	0.44
32:5:4343:U:C4	32:5:4344:U:C4	3.05	0.44
32:5:4369:A:C2	32:5:4370:G:N9	2.80	0.44
32:5:4425:G:C2	32:5:4426:C:C1'	2.96	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
32:5:4628:U:H4'	41:W:17:HIS:HB3	2.00	0.44
32:5:4982:A:C4	32:5:4983:C:H6	2.35	0.44
33:7:8:G:N3	33:7:9:C:C6	2.85	0.44
33:7:16:A:C5	33:7:17:C:C5	3.06	0.44
33:7:117:G:C2	33:7:118:C:C2	3.05	0.44
34:8:13:G:N3	34:8:14:U:C6	2.85	0.44
34:8:44:A:C4	34:8:45:C:C6	3.06	0.44
34:8:115:G:C4	34:8:116:C:C6	3.04	0.44
35:B:88:GLY:O	35:B:163:ILE:N	2.50	0.44
35:B:113:GLU:OE2	35:B:169:ARG:HB3	2.17	0.44
37:E:271:PHE:O	37:E:272:ALA:HB2	2.18	0.44
48:z:374:LYS:HE3	50:4:195:U:H5'	1.98	0.44
49:3:10:G:H2'	49:3:10:G:N3	2.33	0.44
49:3:39:G:C6	49:3:40:C:N4	2.85	0.44
53:S2:42:A:C6	53:S2:43:U:C5	3.05	0.44
53:S2:167:G:C6	53:S2:168:C:C4	3.05	0.44
53:S2:167:G:C4	53:S2:168:C:C6	3.06	0.44
53:S2:333:G:C2	53:S2:334:C:C2	3.05	0.44
53:S2:617:G:C6	53:S2:618:C:C5	3.06	0.44
53:S2:813:A:H2'	53:S2:814:U:O4'	2.18	0.44
53:S2:870:A:N6	53:S2:915:G:N9	2.55	0.44
53:S2:1050:A:C5	53:S2:1051:G:C8	3.05	0.44
53:S2:1067:C:N4	53:S2:1068:G:C5	2.86	0.44
53:S2:1206:G:C2	53:S2:1208:A:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1248:U:H2'	53:S2:1249:C:O4'	2.16	0.44
53:S2:1253:A:H4'	53:S2:1254:C:H5''	2.00	0.44
53:S2:1286:G:N2	75:SM:33:ARG:HD2	2.26	0.44
53:S2:1293:A:O5'	85:Sf:150:PHE:CG	2.71	0.44
53:S2:1418:C:C2	53:S2:1420:G:C8	3.03	0.44
53:S2:1575:G:N1	53:S2:1576:G:C6	2.85	0.44
53:S2:1644:C:O2'	53:S2:1645:C:C4'	2.64	0.44
53:S2:1648:G:N3	53:S2:1674:G:O6	2.50	0.44
53:S2:1687:C:O2	53:S2:1688:C:C6	2.70	0.44
53:S2:1710:C:C4	53:S2:1711:U:H5	2.36	0.44
55:SB:66:VAL:HG22	55:SB:87:ILE:HG22	1.97	0.44
58:SG:70:HIS:CD2	58:SG:103:ASP:OD2	2.69	0.44
60:SI:8:TRP:NE1	60:SI:9:HIS:HB3	2.31	0.44
73:SF:56:TYR:CD2	73:SF:66:CYS:HB2	2.53	0.44
81:SU:40:ILE:HD11	81:SU:53:PRO:CG	2.47	0.44
82:SZ:61:GLU:HA	82:SZ:64:ASN:ND2	2.33	0.44
2:D:191:ASN:HB3	2:D:194:VAL:HG23	1.99	0.44
6:L:74:ARG:NH2	32:5:76:A:N7	2.64	0.44
7:M:6:PHE:N	7:M:6:PHE:CD2	2.86	0.44
8:N:9:GLU:OE2	27:i:41:ARG:NE	2.48	0.44
8:N:30:TYR:CZ	8:N:63:ARG:HD2	2.50	0.44
11:R:95:TRP:CE2	32:5:1572:U:H4'	2.52	0.44
13:T:40:VAL:HG13	13:T:96:ILE:HG23	2.00	0.44
15:V:77:HIS:O	15:V:77:HIS:ND1	2.48	0.44
19:a:63:LEU:HD23	19:a:63:LEU:O	2.17	0.44
19:a:75:LEU:O	19:a:76:ASP:C	2.61	0.44
23:e:35:TRP:CE3	23:e:56:PRO:HG3	2.53	0.44
32:5:69:A:N1	32:5:70:A:C5	2.85	0.44
32:5:154:G:C4	32:5:155:C:C5	3.05	0.44
32:5:165:A:C6	32:5:166:C:C4	3.06	0.44
32:5:199:G:C2	32:5:220:C:O2	2.70	0.44
32:5:246:G:N1	32:5:247:G:C5	2.85	0.44
32:5:261:G:C6	32:5:262:G:C5	3.06	0.44
32:5:514:U:C6	32:5:514:U:H3'	2.52	0.44
32:5:674:G:C5	32:5:675:C:C5	3.05	0.44
32:5:698:G:N1	32:5:699:C:C6	2.86	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
32:5:1396:G:H3'	32:5:1396:G:C8	2.52	0.44
32:5:1629:G:C2	32:5:1631:A:C2	3.05	0.44
32:5:1665:C:OP1	32:5:2278:G:H1'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1780:A:C2	32:5:1781:U:C1'	3.00	0.44
32:5:1795:A:C5	32:5:1796:U:C6	3.06	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
32:5:2065:G:C2	32:5:2066:C:C2	3.05	0.44
32:5:2397:G:N7	32:5:2399:G:N9	2.66	0.44
32:5:2460:A:C6	32:5:2461:G:C4	3.05	0.44
32:5:2499:C:O2	32:5:2499:C:H2'	2.17	0.44
32:5:2559:G:C2	32:5:2560:C:N1	2.86	0.44
32:5:2559:G:C2	32:5:2560:C:C2	3.05	0.44
32:5:2602:G:C2	32:5:2603:C:C2	3.05	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
32:5:4381:A:C2	32:5:4382:G:N9	2.86	0.44
32:5:4544:A:N7	32:5:4545:G:H1'	2.31	0.44
33:7:60:G:H2'	33:7:60:G:N3	2.31	0.44
33:7:82:G:N2	33:7:95:C:N1	2.65	0.44
34:8:35:C:H6	34:8:35:C:O5'	2.01	0.44
34:8:133:G:N2	34:8:134:G:C4	2.86	0.44
36:C:237:ILE:H	36:C:237:ILE:HD12	1.82	0.44
39:I:181:PHE:O	39:I:182:GLU:C	2.60	0.44
46:K:110:VAL:HG12	46:K:114:ARG:HD3	1.99	0.44
48:z:402:ARG:CG	50:4:185:C:OP2	2.24	0.44
50:4:236:U:H2'	50:4:237:U:C6	2.53	0.44
52:6:108:ASP:OD1	52:6:108:ASP:N	2.49	0.44
53:S2:10:G:C5	53:S2:11:A:N7	2.86	0.44
53:S2:71:G:H2'	53:S2:72:C:N1	2.32	0.44
53:S2:92:A:C4	53:S2:446:G:C6	3.05	0.44
53:S2:119:U:O2	53:S2:119:U:H2'	2.15	0.44
53:S2:403:G:N1	53:S2:404:G:N7	2.66	0.44
53:S2:656:G:H22	53:S2:662:G:H4'	1.82	0.44
53:S2:961:G:N3	53:S2:962:A:C8	2.85	0.44
53:S2:1032:C:N3	53:S2:1033:G:C8	2.85	0.44
53:S2:1037:G:C2	53:S2:1038:U:C6	3.06	0.44
53:S2:1208:A:H5'	53:S2:1208:A:H8	1.81	0.44
53:S2:1293:A:N6	85:Sf:139:HIS:CB	2.80	0.44
53:S2:1406:G:H2'	53:S2:1407:U:H1'	1.99	0.44
53:S2:1466:G:N3	53:S2:1467:C:C6	2.85	0.44
53:S2:1561:A:N6	53:S2:1573:G:H1	2.15	0.44
53:S2:1610:G:C2	53:S2:1611:G:C5	3.05	0.44
53:S2:1629:C:C4	53:S2:1630:A:N7	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SA:103:PHE:CE2	54:SA:104:THR:O	2.70	0.44
54:SA:111:GLN:HB3	56:SC:63:VAL:CG2	2.47	0.44
54:SA:132:GLN:O	54:SA:133:PRO:C	2.58	0.44
56:SC:82:TYR:CE1	56:SC:164:PRO:HD3	2.53	0.44
59:SH:169:LYS:O	59:SH:171:GLU:N	2.49	0.44
60:SI:139:LYS:HD2	60:SI:145:ILE:HD12	2.00	0.44
61:SJ:83:ARG:CD	61:SJ:150:ARG:HH21	2.31	0.44
67:SX:5:ARG:HH21	67:SX:5:ARG:HB2	1.83	0.44
69:Sa:91:ALA:O	69:Sa:92:ARG:C	2.58	0.44
70:Sb:20:LYS:HA	70:Sb:23:ARG:HD2	1.98	0.44
72:SD:202:LYS:O	72:SD:203:PRO:C	2.58	0.44
73:SF:194:ASP:CG	73:SF:195:GLU:CD	2.85	0.44
77:SQ:7:LEU:HD22	77:SQ:27:ARG:HB3	2.00	0.44
79:SS:8:LYS:CD	82:SZ:49:LEU:HB2	2.43	0.44
79:SS:120:HIS:CD2	79:SS:124:ARG:HD2	2.53	0.44
1:A:7:GLY:O	32:5:3667:C:H4'	2.18	0.44
5:J:54:ARG:HH11	5:J:54:ARG:HG2	1.82	0.44
9:O:65:ASN:ND2	9:O:65:ASN:C	2.76	0.44
13:T:87:LYS:NZ	32:5:4301:U:P	2.89	0.44
18:Z:38:TYR:CE2	18:Z:76:ASN:CG	2.93	0.44
20:b:9:THR:C	20:b:12:GLN:HG3	2.43	0.44
20:b:27:GLN:HA	32:5:1805:A:N6	2.33	0.44
21:c:32:LYS:HB3	32:5:2675:G:O6	2.17	0.44
25:g:60:ARG:HG3	25:g:61:PRO:HD2	1.99	0.44
32:5:59:A:C5	32:5:60:G:N7	2.85	0.44
32:5:61:A:C2	32:5:62:A:C4	3.06	0.44
32:5:88:A:C6	32:5:97:G:N3	2.76	0.44
32:5:281:U:H2'	32:5:281:U:O2	2.17	0.44
32:5:292:G:H2'	32:5:292:G:O5'	2.17	0.44
32:5:324:A:C4	32:5:325:U:C5	3.05	0.44
32:5:405:U:H2'	32:5:407:A:N7	2.32	0.44
32:5:424:U:O2	32:5:425:U:H6	1.92	0.44
32:5:459:C:N3	32:5:460:C:C6	2.85	0.44
32:5:473:C:O2	32:5:473:C:H2'	2.17	0.44
32:5:506:C:O2	32:5:507:G:C8	2.70	0.44
32:5:973:G:H1	32:5:1282:G:H1'	1.83	0.44
32:5:1236:C:O2'	32:5:1237:C:O5'	2.29	0.44
32:5:1336:G:C2'	32:5:1337:A:C8	3.00	0.44
32:5:1448:G:C2	32:5:2097:U:C4	3.06	0.44
32:5:1474:C:H2'	32:5:1475:G:O4'	2.17	0.44
32:5:1559:G:C2	32:5:1560:A:C8	3.06	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
32:5:1819:G:N3	32:5:1820:C:C6	2.86	0.44
32:5:1866:U:C5	32:5:4405:G:C1'	3.01	0.44
32:5:2291:G:N2	32:5:2292:C:C6	2.84	0.44
32:5:2316:G:C2	32:5:2324:C:O2	2.71	0.44
32:5:2372:U:H2'	32:5:2373:C:H6	1.81	0.44
32:5:2557:G:C2	32:5:2558:C:C2	3.05	0.44
32:5:2773:G:C2	32:5:2774:C:C5	3.05	0.44
32:5:3690:U:C4	32:5:3691:G:C5	3.06	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
32:5:4230:C:C2	32:5:4231:C:C5	3.05	0.44
32:5:4355:G:N2	32:5:4356:G:N9	2.66	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
33:7:110:G:C2	33:7:111:C:C2	3.05	0.44
34:8:10:G:C5	34:8:11:C:H6	2.27	0.44
39:I:6:ALA:O	39:I:7:ARG:C	2.60	0.44
40:P:115:GLU:HG3	40:P:116:HIS:N	2.32	0.44
45:r:16:PHE:HD2	45:r:28:GLU:HB3	1.82	0.44
50:4:6:G:C4	50:4:7:C:C5	3.06	0.44
50:4:143:C:OP1	51:9:36:PRO:HG3	2.17	0.44
52:6:151:LEU:HD23	52:6:189:LEU:HA	1.99	0.44
53:S2:4:C:C2	53:S2:5:U:C5	3.05	0.44
53:S2:71:G:O2'	53:S2:72:C:C2	2.70	0.44
53:S2:167:G:C2	53:S2:168:C:C2	3.06	0.44
53:S2:297:A:N6	53:S2:298:G:C5	2.85	0.44
53:S2:394:G:N1	53:S2:395:G:C5	2.85	0.44
53:S2:401:A:C5	53:S2:402:C:N1	2.86	0.44
53:S2:431:G:C2	53:S2:432:G:N7	2.86	0.44
53:S2:448:A:H8	60:SI:25:ARG:C	2.26	0.44
53:S2:522:A:C3'	61:SJ:131:ARG:HH22	2.30	0.44
53:S2:549:C:H2'	53:S2:549:C:O2	2.17	0.44
53:S2:618:C:N4	53:S2:619:A:C6	2.85	0.44
53:S2:831:G:C6	53:S2:832:G:C5	3.05	0.44
53:S2:867:G:H2'	53:S2:868:G:C8	2.52	0.44
53:S2:1006:C:C2	53:S2:1007:C:C6	3.06	0.44
53:S2:1121:G:N2	53:S2:1122:A:H1'	2.32	0.44
53:S2:1131:G:C2	53:S2:1132:C:C5	3.05	0.44
53:S2:1228:A:C2	53:S2:1531:A:C2	3.05	0.44
53:S2:1232:U:O2'	53:S2:1253:A:C8	2.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1278:A:C4	53:S2:1279:C:C6	3.05	0.44
53:S2:1280:G:N1	53:S2:1281:G:C8	2.86	0.44
53:S2:1442:U:O2	53:S2:1442:U:C2'	2.65	0.44
53:S2:1502:C:C2	53:S2:1503:C:C5	3.05	0.44
53:S2:1534:C:O2	53:S2:1536:G:C2	2.71	0.44
53:S2:1568:C:H2'	53:S2:1569:A:N7	2.32	0.44
53:S2:1591:C:N4	53:S2:1592:C:C5	2.86	0.44
53:S2:1594:A:P	82:SZ:104:ARG:CG	3.05	0.44
56:SC:179:THR:OG1	56:SC:180:VAL:N	2.50	0.44
60:SI:155:ASN:HB3	62:SL:22:ARG:HD3	2.00	0.44
62:SL:84:ARG:NH1	62:SL:115:PRO:HG3	2.32	0.44
63:SN:69:ASN:H	63:SN:69:ASN:ND2	2.13	0.44
64:SO:146:ARG:C	64:SO:146:ARG:HD2	2.43	0.44
64:SO:146:ARG:O	64:SO:147:ARG:C	2.60	0.44
65:SV:47:ASN:HD22	65:SV:48:GLY:N	2.15	0.44
66:SW:37:PHE:CD1	66:SW:103:VAL:HG11	2.53	0.44
67:SX:17:ARG:HA	67:SX:17:ARG:NE	2.32	0.44
68:SY:12:PHE:HD1	68:SY:23:MET:HB3	1.82	0.44
68:SY:20:ARG:HE	68:SY:76:TYR:HE1	1.65	0.44
69:Sa:36:ILE:HD12	69:Sa:36:ILE:N	2.33	0.44
72:SD:68:GLU:OE1	74:SK:70:TYR:HD1	2.01	0.44
73:SF:99:ILE:CG2	82:SZ:67:LEU:CD2	2.95	0.44
76:SP:49:LEU:O	76:SP:50:ARG:C	2.61	0.44
78:SR:84:TYR:CD2	78:SR:84:TYR:C	2.95	0.44
81:SU:68:THR:HG22	81:SU:69:PRO:O	2.17	0.44
86:Sg:11:LEU:HB3	86:Sg:43:TRP:CZ3	2.53	0.44
1:A:27:ALA:HB1	1:A:77:ILE:HG13	1.99	0.44
2:D:33:ARG:HD2	33:7:7:G:OP1	2.18	0.44
2:D:203:ASN:OD1	2:D:203:ASN:N	2.44	0.44
5:J:75:ARG:HD2	33:7:40:U:O2	2.17	0.44
9:O:26:GLN:OE1	12:S:167:PHE:HZ	2.01	0.44
10:Q:42:THR:HG21	32:5:1428:U:OP1	2.18	0.44
10:Q:55:ARG:HH22	32:5:1352:C:H41	1.66	0.44
12:S:99:ASP:OD1	12:S:100:LEU:C	2.60	0.44
15:V:98:PHE:O	15:V:100:ASP:N	2.50	0.44
17:Y:11:ARG:NH1	17:Y:15:ARG:HD2	2.18	0.44
21:c:101:ASP:CG	63:SN:43:LYS:HA	2.40	0.44
22:d:63:ARG:HD3	22:d:103:TYR:CE1	2.53	0.44
32:5:21:G:C8	32:5:21:G:C3'	3.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:179:G:C5	32:5:180:C:C5	3.06	0.44
32:5:206:U:O2	32:5:206:U:H2'	2.17	0.44
32:5:278:G:N1	32:5:330:G:C8	2.85	0.44
32:5:289:C:N3	32:5:290:U:C4	2.82	0.44
32:5:290:U:O2	32:5:291:U:C5	2.68	0.44
32:5:346:G:C4	32:5:347:A:C8	3.05	0.44
32:5:488:G:C2	32:5:489:C:N1	2.85	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
32:5:689:U:C4	32:5:690:C:C5	3.06	0.44
32:5:702:U:C2'	32:5:703:G:H4'	2.48	0.44
32:5:982:U:C2	32:5:983:C:C5	3.06	0.44
32:5:1321:G:N1	32:5:3876:A:C2	2.85	0.44
32:5:1424:G:H2'	32:5:1425:G:O4'	2.18	0.44
32:5:1453:G:C2	32:5:1454:G:C4	3.06	0.44
32:5:1516:G:C4	32:5:1518:A:N7	2.85	0.44
32:5:1699:A:H4'	32:5:1718:C:P	2.58	0.44
32:5:1780:A:C5	32:5:1781:U:C6	3.06	0.44
32:5:1819:G:N1	32:5:1820:C:C4	2.85	0.44
32:5:1877:G:C4	32:5:1878:G:C8	3.06	0.44
32:5:1878:G:C2	32:5:1879:C:C2	3.05	0.44
32:5:1972:G:C2	32:5:1973:G:C8	3.06	0.44
32:5:2124:G:H22	38:F:32:ILE:CG1	2.30	0.44
32:5:2482:C:O2	32:5:2482:C:H2'	2.16	0.44
32:5:2613:C:O2	32:5:2613:C:H2'	2.17	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
32:5:3679:U:O2	32:5:3679:U:O4'	2.33	0.44
32:5:3785:A:C2	32:5:4536:C:O2'	2.65	0.44
32:5:3899:G:H5''	35:B:257:TRP:HD1	1.81	0.44
32:5:4109:G:C4	32:5:4110:C:C5	3.05	0.44
32:5:4109:G:N3	32:5:4110:C:C6	2.85	0.44
32:5:4154:G:N1	32:5:4155:C:C4	2.85	0.44
32:5:4768:G:H3'	32:5:4769:G:C8	2.52	0.44
32:5:5013:C:O2	32:5:5013:C:O2'	2.28	0.44
34:8:85:U:C6	34:8:87:G:C8	3.06	0.44
40:P:116:HIS:ND1	40:P:116:HIS:C	2.75	0.44
44:p:10:ILE:HG12	44:p:30:GLU:HB3	1.99	0.44
47:q:47:LEU:HD22	47:q:99:ARG:NH1	2.32	0.44
48:z:271:ILE:HG22	48:z:272:PHE:CE2	2.52	0.44
48:z:402:ARG:N	50:4:185:C:C5'	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:3:31:C:H4'	53:S2:1640:A:N3	2.09	0.44
53:S2:27:A:C6	53:S2:28:U:C6	3.05	0.44
53:S2:52:G:C2	53:S2:53:C:H1'	2.53	0.44
53:S2:152:U:C4	53:S2:153:G:C8	3.06	0.44
53:S2:155:G:C6	53:S2:156:G:C8	3.06	0.44
53:S2:211:G:C5	53:S2:212:C:C5	3.06	0.44
53:S2:218:U:H2'	53:S2:219:U:H6	1.82	0.44
53:S2:338:G:C5	53:S2:339:A:N7	2.85	0.44
53:S2:381:C:C2'	53:S2:382:C:C5	3.01	0.44
53:S2:439:A:O2'	53:S2:440:G:H5'	2.17	0.44
53:S2:550:C:C2	53:S2:551:U:C6	3.05	0.44
53:S2:600:G:C2'	53:S2:601:G:O5'	2.66	0.44
53:S2:666:U:O4'	53:S2:1088:U:O4	2.36	0.44
53:S2:907:G:H3'	53:S2:908:A:C8	2.51	0.44
53:S2:981:A:H2'	53:S2:982:G:O4'	2.17	0.44
53:S2:990:A:N1	53:S2:992:A:C4	2.86	0.44
53:S2:1133:A:N3	53:S2:1134:G:H8	2.05	0.44
53:S2:1289:U:H3'	53:S2:1290:G:C8	2.36	0.44
53:S2:1335:G:C5	53:S2:1336:C:C5	3.05	0.44
53:S2:1612:G:C2	53:S2:1613:G:C8	3.06	0.44
53:S2:1612:G:N2	53:S2:1628:C:C2	2.86	0.44
53:S2:1644:C:HO2'	53:S2:1645:C:C1'	2.31	0.44
53:S2:1728:U:C5'	53:S2:1729:U:OP2	2.66	0.44
53:S2:1758:G:C2	53:S2:1759:G:C4	3.06	0.44
53:S2:1782:G:N3	53:S2:1784:G:C8	2.86	0.44
57:SE:86:PHE:CE2	57:SE:87:MET:HG2	2.52	0.44
63:SN:18:TYR:C	63:SN:18:TYR:CD2	2.94	0.44
73:SF:140:ASP:CG	83:Sc:56:LEU:CD2	2.80	0.44
74:SK:39:ASN:HD22	74:SK:39:ASN:N	2.16	0.44
79:SS:26:ILE:HD11	79:SS:54:LYS:C	2.42	0.44
79:SS:111:LEU:HD13	79:SS:125:HIS:CD2	2.53	0.44
86:Sg:202:PRO:HG3	86:Sg:243:PRO:HA	2.00	0.44
86:Sg:217:MET:HB2	86:Sg:219:TRP:HE1	1.83	0.44
2:D:280:VAL:O	2:D:280:VAL:HG23	2.18	0.44
7:M:4:ARG:NH2	32:5:4870:G:O6	2.51	0.44
9:O:76:PRO:HB3	9:O:138:LEU:HD23	1.99	0.44
12:S:29:ARG:O	12:S:29:ARG:NH1	2.51	0.44
16:X:151:ASN:N	16:X:151:ASN:OD1	2.51	0.44
16:X:152:LYS:HB3	48:z:69:LEU:HD22	1.99	0.44
17:Y:11:ARG:CZ	36:C:200:ARG:HH12	2.30	0.44
21:c:31:TYR:CE1	21:c:35:LEU:HD22	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:c:50:ASN:O	21:c:51:ASN:HB2	2.18	0.44
24:f:48:ALA:HB2	24:f:71:TRP:HZ3	1.83	0.44
32:5:88:A:O2'	32:5:89:C:H5'	2.18	0.44
32:5:154:G:C6	32:5:155:C:C4	3.05	0.44
32:5:481:G:N2	32:5:482:G:C4	2.86	0.44
32:5:660:A:C5	32:5:661:C:C5	3.05	0.44
32:5:691:C:N3	32:5:692:A:C5	2.86	0.44
32:5:694:C:H2'	32:5:695:G:O4'	2.17	0.44
32:5:731:G:C5	32:5:732:A:N9	2.85	0.44
32:5:742:G:N1	32:5:743:G:C5	2.86	0.44
32:5:949:G:N1	32:5:950:G:N7	2.66	0.44
32:5:962:C:C5	45:r:112:ARG:NH2	2.85	0.44
32:5:963:G:O3'	45:r:107:ARG:NH2	2.50	0.44
32:5:1075:G:C2	32:5:1076:C:C6	3.06	0.44
32:5:1201:U:C4	32:5:1202:C:C5	3.06	0.44
32:5:1272:C:O2'	32:5:1273:G:O4'	2.35	0.44
32:5:1277:G:C4	32:5:1278:C:C6	3.06	0.44
32:5:1387:A:H1'	32:5:1397:A:N6	2.33	0.44
32:5:1602:U:O2	32:5:1603:C:C6	2.71	0.44
32:5:1619:G:N3	32:5:1620:U:C6	2.86	0.44
32:5:1631:A:H5'	32:5:1632:A:C4	2.53	0.44
32:5:1941:A:O2'	32:5:1942:A:O5'	2.35	0.44
32:5:2290:C:O2	32:5:2290:C:H2'	2.15	0.44
32:5:2314:G:C4	32:5:2326:G:C4	3.06	0.44
32:5:2315:G:C6	32:5:2316:G:N7	2.86	0.44
32:5:2428:A:N7	32:5:2789:A:C2	2.84	0.44
32:5:2435:G:O4'	32:5:2527:A:C2	2.70	0.44
32:5:2546:G:H4'	32:5:2547:G:OP1	2.17	0.44
32:5:2715:G:C5	32:5:2716:C:C5	3.05	0.44
32:5:2767:U:H3'	32:5:2769:U:C6	2.52	0.44
32:5:2824:C:H3'	32:5:2825:A:C8	2.52	0.44
32:5:2840:A:C2	32:5:2841:G:C8	3.06	0.44
32:5:3603:G:H2'	32:5:3604:A:C2	2.53	0.44
32:5:3604:A:N7	32:5:3605:C:C6	2.86	0.44
32:5:3657:U:O2	32:5:3657:U:H2'	2.17	0.44
32:5:3672:G:C6	32:5:3674:G:H1'	2.53	0.44
32:5:3698:G:C6	32:5:3699:C:C4	3.05	0.44
32:5:3703:G:N3	32:5:3704:U:C6	2.85	0.44
32:5:3724:A:C2	32:5:3729:U:O2	2.69	0.44
32:5:3725:G:N2	32:5:3727:A:H2'	2.33	0.44
32:5:3851:U:C4	32:5:3852:A:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3857:G:C6	32:5:3858:C:C6	3.05	0.44
32:5:4139:G:C2	32:5:4140:C:C6	3.05	0.44
32:5:4192:A:H2'	32:5:4193:C:O4'	2.17	0.44
32:5:4316:G:C4	32:5:4317:A:C8	3.06	0.44
32:5:4543:G:H2'	32:5:4544:A:C8	2.53	0.44
32:5:4544:A:C8	32:5:4545:G:C1'	3.00	0.44
32:5:4627:U:C2'	35:B:55:HIS:NE2	2.81	0.44
32:5:4686:G:N2	32:5:4687:A:H1'	2.33	0.44
32:5:4887:C:O2'	32:5:4888:U:H5'	2.17	0.44
32:5:4995:U:H2'	32:5:4996:C:O4'	2.18	0.44
34:8:83:C:H4'	34:8:85:U:O2	2.17	0.44
34:8:134:G:C4	34:8:135:C:C5	3.06	0.44
38:F:144:TRP:CZ3	38:F:237:ASN:HB2	2.52	0.44
47:q:47:LEU:HD22	47:q:99:ARG:HH12	1.83	0.44
48:z:338:ASN:O	48:z:342:MET:CG	2.49	0.44
50:4:50:G:C2	50:4:51:G:C8	3.05	0.44
53:S2:107:A:H2'	53:S2:108:G:O4'	2.17	0.44
53:S2:184:G:N3	53:S2:185:G:C8	2.85	0.44
53:S2:340:C:C4	53:S2:341:C:C5	3.05	0.44
53:S2:433:A:C2	53:S2:434:G:C5	3.06	0.44
53:S2:456:C:H2'	53:S2:457:C:O4'	2.18	0.44
53:S2:493:A:N7	53:S2:574:A:N7	2.66	0.44
53:S2:505:G:O2'	53:S2:506:G:H5'	2.16	0.44
53:S2:601:G:O2'	53:S2:602:G:H8	1.88	0.44
53:S2:632:C:O2	53:S2:632:C:C2'	2.61	0.44
53:S2:635:G:N1	53:S2:636:C:C4	2.86	0.44
53:S2:674:C:C2	53:S2:675:U:C6	3.06	0.44
53:S2:745:C:H1'	59:SH:108:SER:HA	1.98	0.44
53:S2:975:G:C6	53:S2:976:G:C5	3.06	0.44
53:S2:1010:G:H2'	53:S2:1011:A:H8	1.82	0.44
53:S2:1016:U:H5	70:Sb:32:PHE:CE1	2.36	0.44
53:S2:1453:C:C6	78:SR:28:PHE:CE2	3.05	0.44
53:S2:1563:G:C4	53:S2:1564:C:C6	3.06	0.44
53:S2:1564:C:N3	53:S2:1565:C:H5	2.05	0.44
53:S2:1588:A:O2'	53:S2:1589:A:P	2.76	0.44
53:S2:1686:G:H3'	53:S2:1687:C:P	2.58	0.44
53:S2:1784:G:C4	53:S2:1785:C:C5	3.06	0.44
53:S2:1860:A:C2	53:S2:1862:G:N9	2.85	0.44
55:SB:79:VAL:HG21	55:SB:81:PHE:CZ	2.53	0.44
58:SG:216:ARG:O	58:SG:220:ALA:HB3	2.18	0.44
62:SL:92:TYR:O	62:SL:104:LYS:HA	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SN:125:LEU:O	63:SN:126:ALA:C	2.60	0.44
79:SS:33:ILE:CD1	79:SS:71:MET:HE1	2.47	0.44
83:Sc:10:LYS:HA	83:Sc:36:ASP:OD2	2.17	0.44
88:S4:77:ASN:OD1	88:S4:77:ASN:N	2.50	0.44
1:A:218:HIS:ND1	1:A:218:HIS:C	2.74	0.44
1:A:225:ILE:HD11	1:A:233:ARG:HB3	2.00	0.44
8:N:192:TRP:NE1	32:5:48:G:H5'	2.23	0.44
9:O:44:SER:HB3	9:O:129:LEU:HD11	2.00	0.44
11:R:15:LEU:HB3	11:R:52:ARG:NH2	2.32	0.44
11:R:21:LYS:NZ	32:5:2821:U:OP1	2.34	0.44
15:V:128:LEU:HG	15:V:129:TRP:CD1	2.53	0.44
20:b:12:GLN:C	20:b:16:TRP:NE1	2.75	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
32:5:98:A:C1'	32:5:292:G:O6	2.66	0.44
32:5:129:C:C2	32:5:130:C:C5	3.06	0.44
32:5:343:C:C2	32:5:344:A:C8	3.06	0.44
32:5:479:G:N1	32:5:480:C:C4	2.86	0.44
32:5:663:G:H2'	32:5:664:G:H5''	2.00	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
32:5:952:G:C2	32:5:953:C:C2	3.06	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
32:5:1176:C:C4	32:5:1177:U:C5	3.06	0.44
32:5:1398:A:O2'	32:5:1399:G:OP2	2.16	0.44
32:5:1570:G:C2	32:5:1571:G:C1'	3.01	0.44
32:5:1583:A:C6	32:5:1584:G:C1'	3.00	0.44
32:5:1671:U:O4	32:5:1853:G:H1'	2.18	0.44
32:5:1725:U:O2	32:5:1725:U:H2'	2.18	0.44
32:5:2108:G:C2	32:5:2125:C:C4	3.05	0.44
32:5:2263:A:O3'	32:5:2264:C:C6	2.68	0.44
32:5:2305:U:H4'	32:5:2306:G:OP2	2.18	0.44
32:5:2318:G:C2	32:5:2322:G:N3	2.86	0.44
32:5:2330:G:H2'	32:5:2331:G:O4'	2.17	0.44
32:5:2390:G:N1	32:5:2391:G:C8	2.86	0.44
32:5:2418:A:C6	32:5:2419:C:C4	3.06	0.44
32:5:2423:A:C2	32:5:2424:G:C5	3.06	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
32:5:2613:C:H42	32:5:2614:C:N4	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2640:G:H2'	32:5:2641:A:C8	2.53	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
32:5:3668:C:C4	32:5:3669:G:C5	3.05	0.44
32:5:3711:A:C8	32:5:3712:A:O3'	2.70	0.44
32:5:3807:A:C6	32:5:3808:C:C5	3.05	0.44
32:5:3901:A:N7	32:5:4450:U:C6	2.86	0.44
32:5:4092:G:C6	32:5:4093:G:N3	2.86	0.44
32:5:4136:G:C2	32:5:4149:C:C2	3.06	0.44
32:5:4241:C:N3	32:5:4242:U:C6	2.84	0.44
32:5:4277:G:C2	32:5:4278:C:C2	3.06	0.44
32:5:4591:U:C2	32:5:4592:C:C5	3.06	0.44
32:5:4619:U:C2	32:5:4620:U:C5	3.06	0.44
32:5:4744:A:N3	32:5:4745:G:N7	2.66	0.44
32:5:4754:G:C6	32:5:4880:C:N4	2.86	0.44
32:5:4904:G:C2	32:5:4905:C:C2	3.06	0.44
32:5:4967:A:C2	32:5:4968:A:C5	3.06	0.44
32:5:5001:U:H2'	32:5:5002:U:O5'	2.17	0.44
32:5:5036:C:C2	32:5:5037:U:C5	3.05	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
33:7:42:A:C4	33:7:43:U:C6	3.06	0.44
33:7:51:G:C2	33:7:52:C:C6	3.06	0.44
33:7:69:U:H2'	33:7:69:U:O2	2.17	0.44
34:8:3:A:C5	34:8:4:C:C5	3.05	0.44
34:8:69:U:H2'	34:8:70:G:C1'	2.48	0.44
34:8:78:G:C2	34:8:79:G:C4	3.05	0.44
36:C:210:ILE:HD13	36:C:252:TRP:CZ3	2.53	0.44
42:j:26:ALA:O	42:j:34:CYS:O	2.35	0.44
46:K:9:GLU:OE1	46:K:11:LYS:HD2	2.17	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
49:3:57:G:H2'	49:3:58:A:H5'	1.99	0.44
50:4:177:G:N2	50:4:221:C:H1'	2.33	0.44
50:4:193:G:C6	50:4:194:G:C4	3.06	0.44
53:S2:68:A:C6	53:S2:69:C:C4	3.06	0.44
53:S2:71:G:C2'	53:S2:72:C:O4'	2.66	0.44
53:S2:140:C:O2	53:S2:141:A:N7	2.51	0.44
53:S2:182:C:O3'	53:S2:184:G:H1'	2.16	0.44
53:S2:447:A:C2	53:S2:449:A:H1'	2.53	0.44
53:S2:449:A:N7	53:S2:452:G:C6	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:578:C:C5	53:S2:579:C:C6	3.06	0.44
53:S2:651:U:O2'	53:S2:652:U:H5'	2.18	0.44
53:S2:693:A:C2	53:S2:694:G:C4	3.06	0.44
53:S2:823:U:C5	53:S2:824:C:C5	3.05	0.44
53:S2:835:C:OP1	53:S2:835:C:H4'	2.18	0.44
53:S2:942:G:H2'	53:S2:943:U:C6	2.53	0.44
53:S2:982:G:N3	53:S2:1045:U:H1'	2.33	0.44
53:S2:1015:U:O2	53:S2:1017:U:C5	2.70	0.44
53:S2:1029:G:N1	53:S2:1030:A:C8	2.85	0.44
53:S2:1093:A:N1	53:S2:1094:C:C6	2.86	0.44
53:S2:1266:C:O2	53:S2:1266:C:C2'	2.66	0.44
53:S2:1284:A:N1	75:SM:33:ARG:O	2.50	0.44
53:S2:1287:A:C6	53:S2:1313:A:N7	2.86	0.44
53:S2:1335:G:C4	53:S2:1336:C:C6	3.06	0.44
53:S2:1459:G:C2	53:S2:1460:C:C2	3.05	0.44
53:S2:1508:A:C6	53:S2:1510:G:C1'	3.00	0.44
53:S2:1528:G:H2'	53:S2:1529:C:C6	2.53	0.44
53:S2:1630:A:C6	53:S2:1631:U:C4	3.06	0.44
53:S2:1654:G:N2	53:S2:1671:G:C2	2.86	0.44
61:SJ:132:GLN:CB	61:SJ:134:HIS:HD2	2.29	0.44
72:SD:28:GLU:OE1	74:SK:61:GLN:NE2	2.45	0.44
77:SQ:41:MET:SD	77:SQ:41:MET:N	2.91	0.44
79:SS:30:ILE:CD1	79:SS:45:LEU:HG	2.48	0.44
83:Sc:12:ALA:HB2	83:Sc:34:PHE:O	2.18	0.44
83:Sc:60:GLU:OE2	83:Sc:60:GLU:N	2.51	0.44
1:A:128:ARG:HA	1:A:169:VAL:HG21	2.00	0.44
2:D:95:TYR:C	2:D:95:TYR:CD1	2.94	0.44
6:L:94:ILE:O	6:L:94:ILE:CG2	2.66	0.44
6:L:191:LEU:O	6:L:192:PHE:C	2.60	0.44
21:c:31:TYR:CD1	21:c:32:LYS:N	2.83	0.44
26:h:93:ARG:HH11	26:h:93:ARG:HG3	1.82	0.44
32:5:55:G:N2	32:5:56:A:N9	2.66	0.44
32:5:69:A:C6	32:5:70:A:C6	3.06	0.44
32:5:99:A:N3	32:5:99:A:H2'	2.31	0.44
32:5:145:G:N2	32:5:146:G:N9	2.66	0.44
32:5:235:A:C5	32:5:238:C:C4	2.99	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
32:5:447:C:N3	32:5:448:G:C8	2.82	0.44
32:5:449:C:O2	32:5:449:C:C2'	2.64	0.44
32:5:488:G:C4	32:5:489:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:500:G:C2	32:5:655:C:C2	3.06	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
32:5:1100: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
32:5:1563:A:N7	53:S2:678:U:C5'	2.81	0.44
32:5:1676:C:C5	32:5:4374:U:O2	2.71	0.44
32:5:1811:G:N2	32:5:1812:C:N1	2.65	0.44
32:5:1895:G:C5	32:5:1896:A:C4	3.06	0.44
32:5:1963:C:C4	32:5:1964:A:C8	3.06	0.44
32:5:2294:G:N1	32:5:2295:C:C5	2.78	0.44
32:5:2361:G:C6	40:P:25:HIS:HD2	2.34	0.44
32:5:2496:G:C4	32:5:2497:C:C5	3.06	0.44
32:5:2522:G:C2	32:5:2534:C:C2	3.06	0.44
32:5:2721:G:C2'	32:5:2722:G:H5'	2.47	0.44
32:5:3615:G:H1'	41:W:44:ARG:CD	2.47	0.44
32:5:3674:G:N3	32:5:3675:G:C8	2.85	0.44
32:5:3692:A:C6	32:5:3693:U:C6	3.05	0.44
32:5:3695:U:C4	32:5:3696:C:H5	2.30	0.44
32:5:3777:G:N2	32:5:3815:G:H2'	2.33	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
32:5:4139:G:C2	32:5:4140:C:C2	3.06	0.44
32:5:4146:G:C2	32:5:4147:G:C5	3.06	0.44
32:5:4404:U:C4	32:5:4436:U:C4	3.06	0.44
32:5:4404:U:C4	32:5:4436:U:N3	2.86	0.44
32:5:4411:G:C6	32:5:4412:C:C4	3.06	0.44
32:5:4414:A:H3'	32:5:4422:A:N1	2.33	0.44
32:5:4520:G:O2'	35:B:256:ALA:HB1	2.18	0.44
32:5:4592:C:C2'	32:5:4592:C:O2	2.62	0.44
32:5:4666:G:C2	32:5:4667:C:C2	3.05	0.44
32:5:4666:G:C4	32:5:4667:C:C6	3.06	0.44
32:5:4892:A:C2	32:5:4893:A:H1'	2.53	0.44
32:5:4977:A:C2'	32:5:4978:G:H5'	2.48	0.44
32:5:4996:C:C2	32:5:4997:G:C8	3.06	0.44
32:5:5018:C:H5''	32:5:5018:C:C6	2.53	0.44
32:5:5043:A:C2'	32:5:5044:A:O5'	2.66	0.44
33:7:17:C:C4	33:7:18:C:C5	3.04	0.44
33:7:59:G:C4	33:7:60:G:C8	3.06	0.44
34:8:31:G:C2	34:8:32:C:C2	3.06	0.44
34:8:49:G:C6	34:8:50:C:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:53:G:N3	34:8:54:C:C6	2.86	0.44
34:8:116:C:C2	34:8:117:C:C6	3.06	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
46:K:10:ILE:HG22	46:K:65:GLN:O	2.18	0.44
48:z:208:VAL:HG13	48:z:212:ILE:HD12	1.99	0.44
48:z:232:GLN:HB3	48:z:236:PHE:HE2	1.83	0.44
48:z:297:MET:CE	48:z:355:PHE:HD1	1.87	0.44
48:z:354:GLY:HA2	48:z:465:UNK:CB	2.43	0.44
48:z:366:GLN:CD	48:z:366:GLN:C	2.85	0.44
48:z:374:LYS:NZ	50:4:195:U:H5''	2.33	0.44
48:z:383:ASN:HB3	50:4:209:G:OP2	2.17	0.44
48:z:408:ARG:HB2	50:4:206:G:O2'	2.15	0.44
50:4:284:G:C2	50:4:285:C:C2	3.05	0.44
53:S2:2:A:C1'	53:S2:3:C:OP1	2.66	0.44
53:S2:98:C:C4	53:S2:409:C:C5	3.05	0.44
53:S2:99:A:N3	53:S2:100:U:C6	2.84	0.44
53:S2:101:U:H3	53:S2:409:C:HO2'	1.64	0.44
53:S2:144:U:H2'	53:S2:145:G:H8	1.83	0.44
53:S2:431:G:C2	53:S2:432:G:N9	2.86	0.44
53:S2:455:A:H2'	53:S2:456:C:C6	2.53	0.44
53:S2:483:C:C5	67:SX:44:ALA:HB1	2.53	0.44
53:S2:672:A:C2'	53:S2:674:C:OP2	2.65	0.44
53:S2:793:G:N1	53:S2:794:A:C1'	2.81	0.44
53:S2:892:U:C2	53:S2:893:U:C5	3.05	0.44
53:S2:936:G:C2	53:S2:937:C:C2	3.06	0.44
53:S2:958:G:H1'	53:S2:959:G:O4'	2.18	0.44
53:S2:983:A:H2'	53:S2:984:C:C6	2.52	0.44
53:S2:1040:G:C2	53:S2:1041:G:H1'	2.53	0.44
53:S2:1292:C:H5''	85:Sf:149:CYS:O	2.18	0.44
53:S2:1425:G:C6	53:S2:1426:U:H1'	2.53	0.44
53:S2:1431:G:C6	53:S2:1432:U:C6	3.06	0.44
53:S2:1559:C:O2	53:S2:1577:G:C2	2.71	0.44
53:S2:1630:A:C2	53:S2:1631:U:C5	3.06	0.44
53:S2:1808:U:C2	53:S2:1809:A:N7	2.86	0.44
53:S2:1834:A:H2	53:S2:1837:G:N1	2.12	0.44
53:S2:1862:G:N1	69:Sa:75:VAL:HB	2.33	0.44
55:SB:158:HIS:O	55:SB:161:VAL:HB	2.17	0.44
56:SC:170:TRP:CD1	56:SC:199:PRO:N	2.85	0.44
59:SH:76:GLN:HE22	59:SH:94:PHE:HB2	1.83	0.44
64:SO:26:ASN:N	64:SO:26:ASN:HD22	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67: SX:34: THR: OG1	67: SX:35: ALA: N	2.50	0.44
73: SF:102: LEU: HD13	82: SZ:110: THR: HG22	1.93	0.44
78: SR:99: ASP: N	78: SR:102: THR: OG1	2.51	0.44
79: SS:8: LYS: O	79: SS:11: HIS: CE1	2.70	0.44
79: SS:12: ILE: HA	79: SS:22: GLY: HA3	2.00	0.44
80: ST:14: PHE: HE2	80: ST:135: ALA: HB2	1.83	0.44
82: SZ:50: PHE: CE2	82: SZ:79: ILE: CG1	3.00	0.44
83: Sc:31: ARG: NH1	83: Sc:31: ARG: CG	2.73	0.44
86: Sg:120: ILE: HB	86: Sg:132: TRP: O	2.18	0.44
3: G:107: LYS: O	3: G:108: GLN: HB2	2.18	0.43
4: H:171: ASP: OD2	32: 5:4476: C: C6	2.71	0.43
8: N:179: LYS: HD3	32: 5:298: G: OP1	2.18	0.43
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:192: PHE: N	9: O:192: PHE: HD1	2.15	0.43
10: Q:18: PRO: HD2	10: Q:26: ARG: NH2	2.33	0.43
11: R:32: ILE: O	11: R:33: ALA: HB3	2.18	0.43
11: R:52: ARG: CZ	11: R:52: ARG: HB2	2.48	0.43
11: R:151: ARG: HH12	62: SL:118: ARG: NE	2.16	0.43
14: U:104: ALA: HA	14: U:110: TYR: HD1	1.83	0.43
19: a:55: LYS: HZ3	32: 5:92: C: H42	1.66	0.43
19: a:73: VAL: HG22	19: a:108: TYR: CG	2.53	0.43
22: d:34: HIS: CD2	32: 5:5048: A: N7	2.83	0.43
30: m:122: ARG: HE	32: 5:4424: A: H5'	1.83	0.43
32: 5:258: G: C5	32: 5:259: C: C5	3.06	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: 5:469: C: C4	32: 5:470: A: N7	2.86	0.43
32: 5:672: C: H2'	32: 5:673: C: O4'	2.17	0.43
32: 5:709: C: H4'	37: E:186: HIS: HE1	1.83	0.43
32: 5:922: C: N3	32: 5:923: C: C5	2.86	0.43
32: 5:1372: A: C4	32: 5:1373: A: C8	3.06	0.43
32: 5:1463: C: N3	32: 5:1464: C: C6	2.85	0.43
32: 5:1568: C: OP2	44: p:2: ALA: HB3	2.17	0.43
32: 5:1575: A: H2	44: p:13: LYS: HA	1.81	0.43
32: 5:1806: G: C4	32: 5:1807: C: C5	3.05	0.43
32: 5:1870: C: C4	32: 5:1871: A: N7	2.85	0.43
32: 5:1871: A: C2	32: 5:1872: G: C8	3.05	0.43
32: 5:1884: C: N4	32: 5:1896: A: H2	2.00	0.43
32: 5:1922: G: C2	32: 5:1923: A: C8	3.06	0.43
32: 5:2406: G: H5''	32: 5:2407: G: OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2431:A:C6	32:5:2432:U:C4	3.06	0.43
32:5:2452:G:N3	32:5:2467:U:O4	2.48	0.43
32:5:2560:C:C2	32:5:2561:C:C6	3.06	0.43
32:5:2595:C:C2	32:5:2596:G:N7	2.86	0.43
32:5:2610:G:H2'	32:5:2611:A:O4'	2.17	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
32:5:2786:C:C4'	32:5:2787:A:C8	3.01	0.43
32:5:2898:G:C4	32:5:2899:C:C5	3.06	0.43
32:5:3594:C:H2'	32:5:3597:G:H1'	2.00	0.43
32:5:3621:A:C8	32:5:4642:U:C2'	3.01	0.43
32:5:3702:A:C6	32:5:3703:G:C8	2.89	0.43
32:5:3711:A:H8	32:5:3712:A:O3'	2.01	0.43
32:5:3899:G:H5''	35:B:257:TRP:CD1	2.53	0.43
32:5:3946:G:N1	32:5:3947:A:C5	2.86	0.43
32:5:4131:G:C5	32:5:4132:C:C5	3.05	0.43
32:5:4154:G:C6	32:5:4155:C:C4	3.05	0.43
32:5:4196:G:N3	32:5:4396:A:H1'	2.33	0.43
32:5:4236:G:N2	32:5:4289:U:H1'	2.34	0.43
32:5:4276:G:O6	32:5:4277:G:C4	2.70	0.43
32:5:4364:G:C5	32:5:4365:C:C5	3.05	0.43
32:5:4480:A:C2	32:5:4481:U:H1'	2.50	0.43
32:5:4635:A:H3'	32:5:4636:U:H4'	1.99	0.43
32:5:4741:C:N3	32:5:4742:G:H8	2.15	0.43
32:5:4869:U:H5'	32:5:4870:G:N2	2.33	0.43
32:5:5000:G:C4	32:5:5001:U:C6	3.06	0.43
33:7:11:A:N1	33:7:66:G:O2'	2.51	0.43
33:7:34:C:N3	33:7:35:U:C5	2.86	0.43
34:8:82:A:H3'	34:8:82:A:C4	2.53	0.43
35:B:367:PHE:HZ	35:B:369:ASP:CA	2.30	0.43
35:B:371:THR:HG21	41:W:17:HIS:HE1	1.83	0.43
36:C:27:VAL:HG21	36:C:264:TYR:CE1	2.53	0.43
39:I:46:PHE:CZ	39:I:85:PHE:HA	2.53	0.43
41:W:50:ASN:CA	41:W:55:TYR:CE2	3.00	0.43
47:q:88:PHE:HB2	47:q:90:PHE:CZ	2.52	0.43
47:q:99:ARG:O	47:q:103:ARG:HG3	2.18	0.43
49:3:50:C:C2	49:3:65:G:N2	2.86	0.43
50:4:33:G:C2	50:4:34:C:C2	3.05	0.43
52:6:151:LEU:HB3	52:6:189:LEU:HD13	1.99	0.43
53:S2:20:G:P	53:S2:620:G:H8	2.41	0.43
53:S2:27:A:C4	53:S2:28:U:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:43:U:N3	53:S2:484:A:H2	2.16	0.43
53:S2:46:A:N1	53:S2:99:A:C5	2.86	0.43
53:S2:173:A:C5	53:S2:174:C:C5	3.05	0.43
53:S2:376:A:C6	53:S2:377:G:N7	2.86	0.43
53:S2:672:A:N1	53:S2:1162:C:H4'	2.33	0.43
53:S2:832:G:H3'	53:S2:833:C:H5''	1.99	0.43
53:S2:837:A:N3	53:S2:837:A:C2'	2.76	0.43
53:S2:859:G:N2	53:S2:860:G:H1'	2.33	0.43
53:S2:862:A:C2	53:S2:863:U:C1'	3.01	0.43
53:S2:909:G:N2	53:S2:910:G:N9	2.65	0.43
53:S2:967:C:C6	53:S2:967:C:C3'	3.01	0.43
53:S2:968:U:O2	53:S2:968:U:H2'	2.18	0.43
53:S2:1133:A:N3	53:S2:1133:A:H2'	2.33	0.43
53:S2:1292:C:C5'	85:Sf:148:TYR:HA	2.47	0.43
53:S2:1405:A:C1'	53:S2:1580:A:N1	2.80	0.43
53:S2:1545:A:N6	53:S2:1588:A:C6	2.84	0.43
53:S2:1666:C:H2'	53:S2:1667:U:C6	2.53	0.43
53:S2:1710:C:C2	53:S2:1711:U:C6	3.05	0.43
53:S2:1784:G:C2	53:S2:1785:C:C2	3.06	0.43
54:SA:138:SER:CB	54:SA:156:TYR:CE1	3.01	0.43
57:SE:191:ARG:NE	57:SE:218:PHE:CD1	2.86	0.43
75:SM:12:MET:HG2	75:SM:123:VAL:HG11	2.00	0.43
82:SZ:50:PHE:CD1	82:SZ:58:LEU:CD1	3.00	0.43
1:A:185:ALA:O	1:A:186:TYR:C	2.59	0.43
3:G:53:ARG:CB	3:G:54:PHE:CZ	2.95	0.43
5:J:26:VAL:O	5:J:28:GLU:N	2.51	0.43
13:T:66:ASN:OD1	20:b:35:VAL:HA	2.18	0.43
19:a:148:ALA:HA	27:i:8:ALA:HB2	1.99	0.43
21:c:28:VAL:CG1	21:c:33:GLN:CB	2.94	0.43
26:h:81:LEU:HA	26:h:84:ARG:HG3	2.00	0.43
31:o:82:MET:CE	32:5:4345:C:H1'	2.48	0.43
32:5:90:G:C8	32:5:92:C:C1'	3.01	0.43
32:5:112:C:C5	32:5:157:U:O4	2.71	0.43
32:5:278:G:N2	32:5:330:G:N9	2.66	0.43
32:5:330:G:N2	32:5:331:G:C5	2.86	0.43
32:5:423:G:C4	32:5:424:U:C6	3.06	0.43
32:5:1185:G:C5	32:5:1186:U:C6	3.06	0.43
32:5:1394:G:C4	32:5:1395:U:N3	2.86	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
32:5:1551:C:H3'	32:5:1552:G:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1632:A:H62	32:5:1634:A:H1'	1.82	0.43
32:5:1808:C:N3	32:5:1809:C:C5	2.86	0.43
32:5:1960:A:C5	47:q:14:PHE:CE2	3.06	0.43
32:5:1993:C:O2'	46:K:135:THR:CG2	2.66	0.43
32:5:2322:G:C2	32:5:2323:C:C2	3.06	0.43
32:5:2463:G:N3	32:5:2464:C:C6	2.86	0.43
32:5:2701:U:N3	32:5:2702:C:C5	2.86	0.43
32:5:2711:G:P	32:5:2711:G:H8	2.41	0.43
32:5:2832:A:N6	32:5:2833:A:N6	2.66	0.43
32:5:3615:G:N3	32:5:3615:G:C2'	2.81	0.43
32:5:3693:U:C2	32:5:3694:U:C5	2.98	0.43
32:5:3732:A:C4	32:5:3733:A:C8	3.06	0.43
32:5:3804:G:C6	32:5:3805:U:C4	3.05	0.43
32:5:3845:A:C5	32:5:3846:C:C5	3.06	0.43
32:5:4108:G:N1	32:5:4109:G:C5	2.86	0.43
32:5:4279:A:N3	32:5:4281:A:N6	2.66	0.43
32:5:4283:G:H21	32:5:4284:C:C1'	2.31	0.43
32:5:4284:C:N3	32:5:4285:U:C4	2.82	0.43
32:5:4479:A:C5	32:5:4480:A:C8	3.06	0.43
32:5:4530:U:C2'	32:5:4531:U:C2	2.93	0.43
32:5:4550:G:N2	32:5:4551:U:C1'	2.82	0.43
32:5:4631:G:H2'	32:5:4632:U:O4'	2.18	0.43
32:5:4730:C:H2'	32:5:4965:U:N3	2.33	0.43
32:5:4939:C:C2'	37:E:242:ARG:HH22	2.31	0.43
32:5:5004:C:H3'	32:5:5005:G:O4'	2.18	0.43
32:5:5012:G:N2	32:5:5014:A:N7	2.62	0.43
34:8:63:U:O2	34:8:63:U:H3'	2.18	0.43
34:8:106:G:C4	34:8:107:C:C5	3.06	0.43
34:8:120:G:C2	34:8:121:G:N9	2.85	0.43
34:8:139:G:H2'	34:8:140:C:O4'	2.18	0.43
35:B:56:ILE:O	35:B:73:VAL:HA	2.18	0.43
35:B:285:TYR:CE2	35:B:334:LYS:HB2	2.53	0.43
38:F:59:TYR:CE2	38:F:194:HIS:CD2	3.06	0.43
39:I:36:LEU:HD11	39:I:69:ARG:HD2	2.01	0.43
39:I:101:LYS:C	39:I:102:MET:HG2	2.44	0.43
42:j:27:TYR:OH	42:j:39:TYR:HB3	2.19	0.43
47:q:106:LYS:HA	47:q:106:LYS:HD3	1.78	0.43
48:z:377:THR:OG1	50:4:194:G:O4'	2.36	0.43
48:z:381:SER:CB	50:4:207:C:O2'	2.55	0.43
49:3:50:C:N3	49:3:65:G:C2	2.86	0.43
50:4:50:G:C2	50:4:51:G:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:4:58:G:N7	50:4:289:A:N1	2.65	0.43
50:4:201:A:H2'	50:4:202:C:O4'	2.18	0.43
52:6:90:LEU:HD22	52:6:115:TYR:CE1	2.53	0.43
53:S2:302:A:N1	53:S2:303:C:C4	2.86	0.43
53:S2:443:U:O4	53:S2:444:G:C4	2.71	0.43
53:S2:524:U:C4	53:S2:594:A:C6	2.95	0.43
53:S2:533:A:C2	53:S2:534:G:N9	2.85	0.43
53:S2:637:U:C2'	53:S2:638:C:O5'	2.66	0.43
53:S2:667:U:H5''	53:S2:1087:A:N1	2.31	0.43
53:S2:683:G:H2'	53:S2:683:G:N3	2.33	0.43
53:S2:832:G:C6	53:S2:833:C:C2	3.05	0.43
53:S2:985:G:C2	53:S2:1002:U:C6	3.05	0.43
53:S2:1016:U:OP2	63:SN:14:SER:HA	2.17	0.43
53:S2:1029:G:N1	53:S2:1030:A:N7	2.66	0.43
53:S2:1055:A:H2	53:S2:1063:C:H41	1.63	0.43
53:S2:1131:G:C2	53:S2:1132:C:N1	2.86	0.43
53:S2:1306:U:O4	85:Sf:140:TYR:CE1	2.71	0.43
53:S2:1393:G:C6	53:S2:1394:G:C8	3.06	0.43
53:S2:1654:G:C2	53:S2:1655:C:C2	3.05	0.43
53:S2:1668:U:C5'	81:SU:77:TRP:CH2	2.99	0.43
53:S2:1727:G:C5	53:S2:1728:U:C5	3.06	0.43
53:S2:1732:G:H2'	53:S2:1732:G:N3	2.32	0.43
53:S2:1735:A:C6	53:S2:1800:A:C4	3.06	0.43
56:SC:65:LYS:HB2	56:SC:273:LEU:HD22	2.00	0.43
61:SJ:29:LEU:HD22	71:Se:38:TYR:HB2	1.99	0.43
61:SJ:102:ILE:O	61:SJ:103:GLU:C	2.61	0.43
67:SX:7:LEU:HD13	67:SX:7:LEU:O	2.18	0.43
69:Sa:86:ASN:O	69:Sa:86:ASN:CG	2.60	0.43
72:SD:106:ARG:HH21	72:SD:107:TYR:HB2	1.83	0.43
73:SF:113:VAL:HG13	73:SF:114:ASN:ND2	2.33	0.43
76:SP:28:MET:HE1	76:SP:36:LEU:CD1	2.48	0.43
79:SS:10:GLN:NE2	79:SS:10:GLN:CA	2.80	0.43
86:Sg:17:TRP:HB3	86:Sg:303:THR:HG22	2.00	0.43
86:Sg:178:ASN:O	86:Sg:182:CYS:HA	2.17	0.43
2:D:284:LYS:HB2	39:I:209:TRP:CH2	2.53	0.43
3:G:108:GLN:HG3	32:5:143:C:O2	2.18	0.43
4:H:156:ASN:O	4:H:160:LEU:N	2.48	0.43
6:L:94:ILE:HA	26:h:119:PHE:CZ	2.53	0.43
9:O:167:HIS:CD2	9:O:167:HIS:C	2.96	0.43
10:Q:37:ARG:HH21	10:Q:37:ARG:CG	2.31	0.43
11:R:124:TYR:CE2	32:5:2665:U:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:V:97:TYR:OH	41:W:37:GLU:HG2	2.18	0.43
16:X:127:LEU:HD21	16:X:135:LYS:HE3	2.00	0.43
20:b:18:ARG:NH1	32:5:1668:A:OP1	2.51	0.43
22:d:25:TYR:CE2	22:d:119:THR:HG22	2.52	0.43
24:f:22:ARG:HG3	24:f:22:ARG:HH11	1.82	0.43
24:f:45:LYS:HA	24:f:107:PRO:HG2	2.00	0.43
26:h:9:LEU:O	26:h:10:ARG:C	2.60	0.43
28:k:17:ARG:NH1	32:5:2772:C:O2'	2.51	0.43
29:l:4:HIS:HB3	32:5:2512:A:C5	2.54	0.43
32:5:136:C:O2'	32:5:137:G:H8	2.00	0.43
32:5:145:G:N2	32:5:146:G:H1'	2.31	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
32:5:399:G:N2	40:P:101:ASN:OD1	2.51	0.43
32:5:426:A:C2	32:5:427:A:C6	3.06	0.43
32:5:695:G:H3'	32:5:696:C:C5'	2.47	0.43
32:5:914:U:H2'	32:5:915:A:C1'	2.47	0.43
32:5:951:G:N2	32:5:952:G:C4	2.86	0.43
32:5:1072:C:N4	32:5:1239:C:C4	2.86	0.43
32:5:1189:G:N2	32:5:1190:C:C2	2.86	0.43
32:5:1218:G:H2'	32:5:1218:G:N3	2.33	0.43
32:5:1337:A:C2	32:5:1659:U:O4'	2.72	0.43
32:5:1390:G:C8	32:5:1390:G:C3'	3.01	0.43
32:5:1463:C:O2	32:5:1463:C:H2'	2.17	0.43
32:5:1474:C:H2'	32:5:1475:G:C8	2.54	0.43
32:5:1504:G:H2'	32:5:1505:C:C6	2.53	0.43
32:5:2050:G:C6	32:5:2051:C:C4	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
32:5:2340:C:N3	32:5:2341:A:N7	2.66	0.43
32:5:2420:A:N3	32:5:2427:G:C2	2.85	0.43
32:5:2576:G:C6	32:5:2577:C:C6	3.06	0.43
32:5:2617:G:C6	32:5:2618:G:N7	2.86	0.43
32:5:2623:A:C2	32:5:2624:G:N7	2.86	0.43
32:5:2835:A:C1'	32:5:4979:A:H5'	2.48	0.43
32:5:2852:U:C2	32:5:2852:U:C3'	3.01	0.43
32:5:3600:G:N2	32:5:3601:C:C2	2.86	0.43
32:5:3754:G:C2	32:5:3755:G:C4	3.06	0.43
32:5:3819:G:H2'	32:5:3819:G:N3	2.33	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)
32:5:3870:C:N3	32:5:3886:G:C2	2.86	0.43
32:5:4143:G:N7	32:5:4145:C:C4	2.86	0.43
32:5:4181:U:C4	32:5:4182:G:C5	3.05	0.43
32:5:4183:G:C4	32:5:4183:G:H5''	2.53	0.43
32:5:4209:G:C6	32:5:4210:U:C4	3.06	0.43
32:5:4251:A:O2'	32:5:4252:C:O5'	2.37	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
32:5:4440:G:OP1	39:I:108:ALA:O	2.36	0.43
32:5:4455:G:N1	32:5:4456:C:C5	2.86	0.43
32:5:4958:C:H2'	32:5:4959:U:OP1	2.17	0.43
32:5:4959:U:O2	32:5:4959:U:H2'	2.18	0.43
32:5:4997:G:C5	32:5:4998:G:C8	3.06	0.43
32:5:5050:C:N1	35:B:374:PHE:CE2	2.86	0.43
35:B:254:ILE:HG21	35:B:262:VAL:CG1	2.48	0.43
35:B:288:GLY:HA3	35:B:330:PHE:CE2	2.53	0.43
38:F:73:MET:CB	38:F:84:TYR:HE2	2.28	0.43
38:F:237:ASN:HD21	38:F:238:ARG:C	2.26	0.43
39:I:39:LYS:HB3	39:I:86:HIS:CE1	2.53	0.43
40:P:30:ARG:HH22	40:P:62:ARG:NH2	2.16	0.43
48:z:381:SER:C	50:4:208:A:C4'	2.91	0.43
48:z:383:ASN:CB	50:4:208:A:O3'	2.66	0.43
53:S2:18:C:C4	53:S2:19:A:N7	2.85	0.43
53:S2:38:A:N1	53:S2:515:G:N2	2.55	0.43
53:S2:84:A:C2	53:S2:85:A:N9	2.86	0.43
53:S2:116:U:N3	53:S2:117:C:C5	2.87	0.43
53:S2:364:A:N1	53:S2:397:G:C2	2.86	0.43
53:S2:478:G:C2	53:S2:479:C:C2	3.05	0.43
53:S2:666:U:C2	53:S2:667:U:C4	3.07	0.43
53:S2:673:G:C2	53:S2:674:C:C2	3.06	0.43
53:S2:818:A:C6	53:S2:819:G:C5	3.06	0.43
53:S2:818:A:C2	53:S2:819:G:C1'	3.01	0.43
53:S2:947:G:C6	53:S2:948:C:C5	3.06	0.43
53:S2:950:C:O2	53:S2:950:C:C2'	2.62	0.43
53:S2:973:C:N3	64:SO:55:ARG:NH1	2.67	0.43
53:S2:1042:A:N3	53:S2:1042:A:H2'	2.32	0.43
53:S2:1236:G:C2	53:S2:1237:C:C2	3.05	0.43
53:S2:1236:G:C6	53:S2:1237:C:N4	2.87	0.43
53:S2:1310:U:C4'	85:Sf:143:LYS:CD	2.96	0.43
53:S2:1422:G:N3	53:S2:1422:G:H2'	2.33	0.43
53:S2:1491:G:H2'	53:S2:1492:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1508:A:N6	53:S2:1510:G:C4	2.86	0.43
54:SA:105:PRO:O	54:SA:106:GLY:C	2.61	0.43
56:SC:108:LYS:HB3	56:SC:233:LEU:HD23	2.00	0.43
57:SE:56:LEU:HD11	68:SY:74:MET:HE1	2.00	0.43
59:SH:131:GLU:OE2	59:SH:139:ILE:HD12	2.18	0.43
60:SI:65:PHE:CE2	60:SI:104:ILE:HG21	2.54	0.43
61:SJ:32:ILE:HA	61:SJ:37:LEU:HB2	1.99	0.43
76:SP:43:ARG:HB3	76:SP:47:ARG:HD3	2.00	0.43
82:SZ:45:ASN:OD1	82:SZ:45:ASN:N	2.51	0.43
86:Sg:146:SER:HA	86:Sg:177:TRP:CZ2	2.53	0.43
1:A:158:ILE:CG2	1:A:162:ASN:OD1	2.67	0.43
4:H:95:VAL:HG22	30:m:82:LEU:HD22	2.01	0.43
7:M:39:ASP:OD1	7:M:39:ASP:C	2.60	0.43
8:N:68:ARG:HG3	32:5:302:C:OP1	2.18	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
12:S:28:TYR:CD1	12:S:28:TYR:N	2.86	0.43
18:Z:17:ARG:NH2	32:5:2577:C:C5	2.86	0.43
19:a:91:ALA:HB2	19:a:120:GLN:OE1	2.18	0.43
20:b:44:ARG:HH11	20:b:44:ARG:CG	2.31	0.43
32:5:65:A:N7	32:5:67:C:C2	2.86	0.43
32:5:127:G:C6	32:5:128:C:N4	2.86	0.43
32:5:183:C:H1'	32:5:184:U:C4	2.54	0.43
32:5:194:C:C4	32:5:195:C:C6	3.06	0.43
32:5:210:C:C4	32:5:231:U:N3	2.86	0.43
32:5:935:A:O2'	32:5:937:U:OP2	2.27	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
32:5:979:C:C4	32:5:980:U:C5	3.06	0.43
32:5:1285:U:C5	32:5:1286:C:C5	3.06	0.43
32:5:1311:G:N2	32:5:1312:A:H1'	2.34	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
32:5:1789:C:C2'	32:5:1790:U:O5'	2.66	0.43
32:5:1851:G:H2'	32:5:1852:U:O4'	2.18	0.43
32:5:2065:G:N2	32:5:2066:C:H1'	2.33	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
32:5:2417:A:C6	32:5:2418:A:N7	2.86	0.43
32:5:2576:G:N3	32:5:2576:G:H2'	2.32	0.43
32:5:2591:A:N6	32:5:2753:G:N2	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2632:U:C2	32:5:2633:U:H5	2.23	0.43
32:5:2765:A:H5''	32:5:2766:A:H2	1.83	0.43
32:5:2820:C:H2'	32:5:2820:C:O2	2.17	0.43
32:5:3605:C:H2'	32:5:3605:C:O2	2.16	0.43
32:5:3654:G:C5	32:5:3655:C:C5	3.06	0.43
32:5:3717:A:N6	32:5:3736:A:C4	2.86	0.43
32:5:3727:A:C2'	32:5:3728:A:C8	3.01	0.43
32:5:3756:A:H2'	32:5:3757:G:C8	2.53	0.43
32:5:4093:G:O6	32:5:4094:G:C5	2.72	0.43
32:5:4094:G:C2	32:5:4095:G:C4	3.07	0.43
32:5:4129:G:C2	32:5:4130:C:C2	3.06	0.43
32:5:4399:U:O4	32:5:4400:G:C5	2.71	0.43
32:5:4577:U:O2'	32:5:4967:A:O2'	2.21	0.43
32:5:4742:G:N1	32:5:4743:G:N7	2.65	0.43
32:5:4899:G:C2	32:5:4922:C:C2	3.06	0.43
32:5:4985:U:O2	32:5:4986:G:C8	2.72	0.43
34:8:42:G:N1	34:8:43:A:N7	2.66	0.43
34:8:69:U:H3'	34:8:70:G:C8	2.53	0.43
35:B:237:THR:HG22	35:B:238:LYS:H	1.83	0.43
39:I:59:GLN:HB3	39:I:126:VAL:HG11	2.00	0.43
45:r:12:ASN:O	45:r:13:CYS:HB3	2.18	0.43
46:K:1:MET:SD	46:K:1:MET:N	2.92	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
49:3:67:G:N1	49:3:68:G:C5	2.86	0.43
50:4:18:G:C2	50:4:19:C:C2	3.07	0.43
50:4:18:G:N3	50:4:19:C:C6	2.86	0.43
50:4:33:G:C2	50:4:34:C:C6	3.06	0.43
50:4:49:A:C4	50:4:50:G:C8	3.06	0.43
50:4:51:G:N1	50:4:52:C:C4	2.87	0.43
53:S2:17:C:O5'	53:S2:657:U:O2	2.35	0.43
53:S2:145:G:N7	58:SG:178:ARG:NH1	2.67	0.43
53:S2:380:G:H21	53:S2:382:C:H2'	1.83	0.43
53:S2:439:A:C2	53:S2:455:A:C6	3.04	0.43
53:S2:698:G:N1	53:S2:733:C:C2	2.87	0.43
53:S2:847:A:C2	53:S2:848:U:C1'	2.95	0.43
53:S2:909:G:N3	53:S2:909:G:H2'	2.33	0.43
53:S2:1229:G:C4	53:S2:1230:C:C6	3.06	0.43
53:S2:1266:C:C2	53:S2:1267:C:H5	2.36	0.43
53:S2:1307:U:N3	53:S2:1308:U:C6	2.86	0.43
53:S2:1310:U:C5'	85:Sf:143:LYS:CE	2.94	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1328:G:N2	53:S2:1502:C:C2	2.86	0.43
53:S2:1365:G:C6	53:S2:1375:G:N2	2.86	0.43
53:S2:1407:U:O2	53:S2:1408:U:C4	2.71	0.43
53:S2:1449:G:N1	53:S2:1450:G:C5	2.86	0.43
53:S2:1495:G:N9	84:Sd:41:GLN:HG2	2.33	0.43
53:S2:1592:C:N4	53:S2:1593:C:C5	2.85	0.43
53:S2:1609:C:O2	53:S2:1609:C:C2'	2.64	0.43
53:S2:1654:G:C2	53:S2:1671:G:N1	2.86	0.43
53:S2:1784:G:N3	53:S2:1785:C:C6	2.86	0.43
53:S2:1825:A:O2'	53:S2:1826:G:P	2.76	0.43
54:SA:169:HIS:CD2	54:SA:203:PHE:CE2	3.06	0.43
55:SB:65:ARG:HD3	64:SO:50:LYS:HE2	1.99	0.43
61:SJ:120:ALA:O	61:SJ:121:LYS:CB	2.66	0.43
66:SW:26:LEU:C	66:SW:26:LEU:HD12	2.43	0.43
75:SM:34:GLY:O	75:SM:36:ARG:N	2.52	0.43
77:SQ:23:ALA:HA	77:SQ:70:VAL:HA	2.01	0.43
77:SQ:116:ASP:O	77:SQ:119:LEU:HD12	2.19	0.43
86:Sg:241:PHE:CE1	86:Sg:248:LEU:HD13	2.54	0.43
88:S4:9:PHE:CE1	88:S4:69:THR:HG22	2.53	0.43
2:D:265:ARG:HH11	2:D:265:ARG:CG	2.31	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
12:S:32:ILE:HG13	12:S:44:PHE:HB3	1.99	0.43
12:S:168:THR:OG1	12:S:169:THR:N	2.50	0.43
13:T:43:LYS:HA	13:T:58:HIS:CE1	2.53	0.43
16:X:48:ARG:HH22	32:5:11:G:H4'	1.84	0.43
19:a:74:ASN:HB3	19:a:114:LYS:HB3	1.99	0.43
25:g:78:TYR:CE1	32:5:2752:G:H4'	2.53	0.43
31:o:75:PRO:C	31:o:76:ASN:ND2	2.76	0.43
32:5:98:A:H1'	32:5:292:G:C6	2.53	0.43
32:5:101:A:N6	32:5:102:G:C5	2.85	0.43
32:5:458:C:C4	32:5:459:C:C4	3.05	0.43
32:5:493:G:C6	32:5:494:U:C6	3.06	0.43
32:5:723:A:H2	32:5:943:A:C2	2.36	0.43
32:5:987:C:H2'	32:5:988:C:C6	2.54	0.43
32:5:1263:A:C6	32:5:1264:C:C5	3.06	0.43
32:5:1322:A:N1	32:5:1326:A:C8	2.86	0.43
32:5:1348:U:N3	32:5:1349:G:N7	2.66	0.43
32:5:1466:G:N1	32:5:1467:C:C5	2.86	0.43
32:5:1492:G:N1	32:5:1493:G:C5	2.86	0.43
32:5:1516:G:N1	32:5:1518:A:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1627:G:N7	32:5:1628:C:C5	2.86	0.43
32:5:1628:C:C2	32:5:1629:G:H8	2.04	0.43
32:5:1682:A:C6	32:5:1683:U:C4	3.06	0.43
32:5:1756:U:O4	32:5:1776:A:N1	2.51	0.43
32:5:1758:G:N3	32:5:1758:G:H2'	2.34	0.43
32:5:1811:G:C5	32:5:1812:C:C5	3.06	0.43
32:5:1990:A:C2'	32:5:1991:A:O4'	2.66	0.43
32:5:2044:U:O2	32:5:2044:U:C2'	2.64	0.43
32:5:2325:C:C2	32:5:2326:G:H8	2.37	0.43
32:5:2365:C:C2	32:5:2829:U:H5	2.34	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
32:5:2624:G:C6	32:5:2625:U:C4	3.07	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
32:5:2783:A:C2	32:5:2784:C:C6	3.07	0.43
32:5:2835:A:N7	32:5:3852:A:C2	2.86	0.43
32:5:2895:A:C6	32:5:2896:G:C8	3.06	0.43
32:5:3645:U:C2	32:5:4534:G:H1'	2.54	0.43
32:5:3714:G:C5'	32:5:3715:U:OP2	2.66	0.43
32:5:3722:G:N3	32:5:3723:A:C8	2.87	0.43
32:5:3803:A:H2'	32:5:3803:A:N3	2.32	0.43
32:5:3806:G:C6	32:5:3807:A:N7	2.87	0.43
32:5:4083:U:H2'	32:5:4084:G:H3'	2.01	0.43
32:5:4243:C:O2	32:5:4243:C:C2'	2.63	0.43
32:5:4275:G:H3'	32:5:4275:G:C8	2.53	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
32:5:4621:C:C2	32:5:4622:A:C8	3.06	0.43
32:5:4873:G:C8	32:5:4875:G:C6	3.06	0.43
32:5:4878:C:O2	32:5:4878:C:C2'	2.64	0.43
33:7:23:A:O2'	33:7:24:C:P	2.77	0.43
34:8:13:G:C2	34:8:14:U:N3	2.86	0.43
34:8:108:A:N3	34:8:112:G:N2	2.66	0.43
34:8:148:A:H2'	34:8:149:G:C8	2.54	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:148:ASN:HB3	38:F:243:ASN:HD22	1.80	0.43
39:I:46:PHE:N	39:I:47:PRO:HD3	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:3:75:C:C6	49:3:75:C:OP2	2.70	0.43
50:4:31:C:C2	50:4:41:G:C2	3.06	0.43
50:4:136:G:O2'	50:4:214:A:N1	2.49	0.43
53:S2:20:G:H5'	53:S2:620:G:N7	2.34	0.43
53:S2:56:G:O2'	53:S2:57:U:H5'	2.18	0.43
53:S2:145:G:C2	53:S2:146:G:C5	3.06	0.43
53:S2:164:A:C4	53:S2:165:G:C2	3.06	0.43
53:S2:413:G:C4	53:S2:425:G:N2	2.86	0.43
53:S2:525:A:N6	53:S2:588:G:N2	2.66	0.43
53:S2:539:C:C4	53:S2:540:U:C5	3.06	0.43
53:S2:582:C:O2	53:S2:583:C:C6	2.72	0.43
53:S2:583:C:N3	53:S2:584:G:C8	2.87	0.43
53:S2:623:G:C5	53:S2:624:C:C5	3.07	0.43
53:S2:634:A:C2	53:S2:635:G:C4	3.06	0.43
53:S2:672:A:H2	53:S2:1162:C:HO2'	1.46	0.43
53:S2:696:G:C2	53:S2:735:C:O2	2.71	0.43
53:S2:697:G:C2	53:S2:734:C:O2	2.71	0.43
53:S2:848:U:N3	53:S2:849:A:N7	2.64	0.43
53:S2:965:U:O2	53:S2:1066:U:H1'	2.18	0.43
53:S2:985:G:C6	53:S2:1002:U:C5	3.06	0.43
53:S2:1034:A:C6	53:S2:1082:A:C5	3.06	0.43
53:S2:1121:G:C6	53:S2:1122:A:N7	2.86	0.43
53:S2:1151:G:N3	53:S2:1152:U:C6	2.86	0.43
53:S2:1452:A:C5	53:S2:1475:G:C2	3.06	0.43
53:S2:1513:C:OP1	84:Sd:9:SER:N	2.49	0.43
53:S2:1514:G:O2'	53:S2:1515:G:O4'	2.37	0.43
53:S2:1596:U:O2	53:S2:1596:U:C2'	2.63	0.43
53:S2:1607:A:N6	53:S2:1632:G:H1'	2.34	0.43
55:SB:82:ARG:NH1	55:SB:188:LEU:O	2.52	0.43
58:SG:52:ILE:O	58:SG:52:ILE:HG23	2.18	0.43
75:SM:50:CYS:SG	75:SM:51:VAL:N	2.90	0.43
1:A:83:HIS:HD1	44:p:41:PHE:HE2	1.65	0.43
2:D:125:VAL:O	2:D:196:ARG:NH2	2.52	0.43
6:L:28:GLN:HG2	8:N:202:ARG:HH11	1.82	0.43
8:N:34:SER:C	8:N:65:ARG:HH11	2.26	0.43
9:O:167:HIS:O	9:O:168:TYR:C	2.61	0.43
14:U:56:LEU:HD13	14:U:61:VAL:CG2	2.49	0.43
22:d:29:ILE:CG2	22:d:33:ILE:HD12	2.48	0.43
22:d:73:TRP:HE1	32:5:2372:U:C1'	2.27	0.43
24:f:76:ARG:NE	24:f:85:ARG:HH21	2.14	0.43
31:o:57:ARG:HH11	31:o:57:ARG:HG3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:193:G:C5	32:5:194:C:C6	3.07	0.43
32:5:320:C:C5	32:5:321:U:C5	3.07	0.43
32:5:482:G:C2'	32:5:483:G:O4'	2.67	0.43
32:5:487:G:C4	32:5:488:G:C8	3.06	0.43
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
32:5:964:A:C2	32:5:2252:G:O6	2.71	0.43
32:5:1167:C:H1'	32:5:1195:G:N2	2.33	0.43
32:5:1199:G:C6	32:5:1200:G:C5	3.07	0.43
32:5:1219:G:N1	32:5:1220:G:C5	2.85	0.43
32:5:1268:G:N2	32:5:1270:A:O4'	2.52	0.43
32:5:1334:A:N6	32:5:1335:G:C6	2.87	0.43
32:5:1384:C:O2'	32:5:1505:C:OP1	2.36	0.43
32:5:1482:G:H21	32:5:1484:G:H22	1.62	0.43
32:5:1542:U:O2	32:5:1543:G:H8	1.81	0.43
32:5:1632:A:H62	32:5:1634:A:C1'	2.31	0.43
32:5:1859:C:C5	32:5:1860:U:C5	3.06	0.43
32:5:1895:G:O6	32:5:1896:A:C2	2.71	0.43
32:5:1965:G:H1	32:5:2021:G:H1	1.67	0.43
32:5:2082:G:O2'	32:5:2083:C:C5'	2.66	0.43
32:5:2084:C:H6	32:5:2084:C:OP1	2.02	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
32:5:2270:G:C6	32:5:2271:C:C4	3.05	0.43
32:5:2339:G:C4	32:5:2340:C:C6	3.07	0.43
32:5:2614:C:O2'	32:5:2808:G:OP1	2.20	0.43
32:5:2657:G:C3'	32:5:2658:G:H8	2.30	0.43
32:5:2666:U:C5	32:5:2669:C:N4	2.87	0.43
32:5:2762:G:H1'	32:5:2763:U:O4'	2.19	0.43
32:5:2827:G:C4	32:5:2827:G:H5'	2.53	0.43
32:5:2852:U:O2	32:5:2852:U:H3'	2.18	0.43
32:5:2889:G:C2	32:5:2890:C:C2	3.06	0.43
32:5:3697:U:O2'	32:5:3698:G:OP2	2.27	0.43
32:5:3754:G:N2	32:5:3755:G:N9	2.66	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
32:5:3792:G:C4	32:5:3793:U:C5	3.06	0.43
32:5:4166:G:N2	32:5:4167:G:C4	2.87	0.43
32:5:4173:G:C6	32:5:4174:U:C5	3.07	0.43
32:5:4175:G:N3	32:5:4176:C:C6	2.87	0.43
32:5:4198:G:N2	49:3:74:C:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4361:U:N3	32:5:4362:A:N7	2.66	0.43
32:5:4401:G:C8	32:5:4401:G:H5''	2.54	0.43
32:5:4499:G:O2'	32:5:4528:G:N3	2.47	0.43
32:5:4530:U:C6	32:5:4530:U:H5''	2.53	0.43
32:5:4709:U:C2	32:5:4710:C:C6	3.07	0.43
32:5:4899:G:C2	32:5:4922:C:O2	2.72	0.43
32:5:4950:U:C4	32:5:4952:G:H1'	2.54	0.43
32:5:4970:C:C2	32:5:4971:A:C8	3.06	0.43
33:7:20:U:C2	33:7:21:G:N7	2.87	0.43
33:7:34:C:H2'	33:7:34:C:O2	2.19	0.43
33:7:44:C:C2	33:7:45:U:C6	3.07	0.43
34:8:49:G:C2	34:8:50:C:C2	3.07	0.43
37:E:224:GLN:HA	37:E:229:PHE:HD1	1.84	0.43
38:F:98:ARG:CD	38:F:141:TYR:CD2	3.02	0.43
39:I:98:ARG:HD2	39:I:119:PHE:CE1	2.53	0.43
39:I:101:LYS:HZ1	39:I:121:LYS:CG	1.91	0.43
48:z:105:MET:HE1	48:z:189:VAL:HG11	2.00	0.43
48:z:218:VAL:HG11	48:z:246:ILE:CD1	2.49	0.43
49:3:16:U:HO2'	49:3:17:G:H8	1.61	0.43
49:3:61:C:N3	49:3:62:C:C5	2.86	0.43
50:4:14:G:C2	50:4:15:C:C2	3.06	0.43
50:4:119[B]:A:H5''	52:6:78:TYR:HE1	1.83	0.43
50:4:151:C:H41	51:9:34:ARG:NH2	2.17	0.43
53:S2:85:A:N1	53:S2:86:C:C5	2.86	0.43
53:S2:200:G:H2'	53:S2:201:C:O4'	2.18	0.43
53:S2:339:A:C2'	53:S2:340:C:H6	2.30	0.43
53:S2:341:C:H3'	53:S2:342:C:H5''	2.01	0.43
53:S2:426:A:N3	53:S2:426:A:C3'	2.79	0.43
53:S2:457:C:H4'	53:S2:1801:A:O3'	2.19	0.43
53:S2:662:G:H4'	53:S2:663:C:OP1	2.18	0.43
53:S2:863:U:O2	53:S2:864:A:H8	1.89	0.43
53:S2:969:U:OP1	53:S2:970:G:O2'	2.23	0.43
53:S2:1099:G:C2	53:S2:1100:A:N9	2.86	0.43
53:S2:1380:C:H2'	53:S2:1381:G:C8	2.54	0.43
53:S2:1535:U:O2	53:S2:1535:U:O4'	2.37	0.43
53:S2:1594:A:N3	53:S2:1595:U:C6	2.85	0.43
53:S2:1735:A:C2'	53:S2:1736:G:O4'	2.66	0.43
53:S2:1838:U:O5'	53:S2:1838:U:C2'	2.67	0.43
53:S2:1842:C:O2'	53:S2:1843:G:H5'	2.19	0.43
54:SA:32:PHE:CD1	54:SA:33:GLN:N	2.87	0.43
59:SH:144:ILE:HG21	59:SH:152:ARG:HH12	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SI:44:HIS:CD2	60:SI:58:LEU:HD11	2.54	0.43
66:SW:66:THR:OG1	66:SW:68:ARG:HG3	2.18	0.43
68:SY:22:GLN:HB2	68:SY:74:MET:HE3	2.00	0.43
74:SK:40:VAL:HG13	74:SK:40:VAL:O	2.19	0.43
79:SS:14:ARG:HH11	79:SS:18:THR:C	2.26	0.43
79:SS:20:ILE:CG2	79:SS:21:ASP:N	2.81	0.43
82:SZ:68:ILE:O	82:SZ:69:THR:HG23	2.19	0.43
8:N:4:TYR:CE2	8:N:49:ARG:HD3	2.53	0.43
11:R:93:VAL:HG12	11:R:97:ARG:HG3	2.00	0.43
12:S:84:TYR:C	12:S:84:TYR:CD1	2.97	0.43
22:d:44:ARG:HH11	22:d:44:ARG:HG3	1.84	0.43
23:e:43:ASN:C	23:e:43:ASN:ND2	2.65	0.43
24:f:21:GLN:HE22	32:5:1309:C:C2'	2.32	0.43
32:5:40:G:H4'	32:5:3914:U:H2'	2.00	0.43
32:5:127:G:C2	32:5:128:C:C4	3.07	0.43
32:5:193:G:C4	32:5:194:C:C6	3.07	0.43
32:5:209:U:C4	32:5:211:G:H1'	2.54	0.43
32:5:728:U:H5''	38:F:78:ARG:HD3	2.01	0.43
32:5:1070:G:C2	32:5:1071:C:C2	3.06	0.43
32:5:1084:C:O2	32:5:1085:C:C6	2.72	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
32:5:1271:G:O6	32:5:2109:G:O6	2.37	0.43
32:5:1354:A:H4'	32:5:1355:G:O5'	2.17	0.43
32:5:1481:C:O2	32:5:1481:C:O4'	2.36	0.43
32:5:1673:U:N3	32:5:1674:C:N4	2.66	0.43
32:5:1742:A:H2	32:5:1743:A:N7	2.15	0.43
32:5:1744:U:H2'	32:5:1745:G:O4'	2.19	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
32:5:1887: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
32:5:1964:A:C6	32:5:1965:G:N7	2.86	0.43
32:5:1983:A:C8	32:5:1987:C:C5	3.07	0.43
32:5:2427:G:O2'	32:5:2428:A:H2'	2.18	0.43
32:5:2481:G:C6	32:5:2482:C:C5	3.06	0.43
32:5:2533:C:O2'	32:5:2534:C:O5'	2.36	0.43
32:5:2559:G:H22	32:5:2567:G:H22	1.67	0.43
32:5:2569:G:H2'	32:5:2570:U:H6	1.84	0.43
32:5:2622:G:N2	32:5:2623:A:H1'	2.34	0.43
32:5:2823:G:C6	32:5:2824:C:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2830:G:N2	32:5:2831:G:C4	2.87	0.43
32:5:2844:A:N1	32:5:3839:G:C8	2.83	0.43
32:5:2853:C:H2'	32:5:2854:G:O4'	2.18	0.43
32:5:3605:C:N3	32:5:3606:U:C6	2.87	0.43
32:5:3609:G:O2'	32:5:3610:A:H5'	2.19	0.43
32:5:3741:C:C2	32:5:3742:G:H8	2.26	0.43
32:5:3757:G:C6	32:5:3758:U:C4	3.07	0.43
32:5:4075:U:C4'	32:5:4076:G:OP1	2.67	0.43
32:5:4122:G:N7	32:5:4123:C:C5	2.86	0.43
32:5:4130:C:C2	32:5:4131:G:C8	3.06	0.43
32:5:4219:A:O2'	32:5:4220:A:C5'	2.67	0.43
32:5:4277:G:N2	32:5:4278:C:N1	2.67	0.43
32:5:4281:A:N1	32:5:4283:G:C4	2.87	0.43
32:5:4422:A:C5	32:5:4423:U:C5	3.07	0.43
32:5:4455:G:C2	32:5:4456:C:C5	3.07	0.43
32:5:4504:C:C2	32:5:4505:C:C6	3.06	0.43
32:5:4560:C:H5'	32:5:4560:C:C2	2.53	0.43
34:8:4:C:C2	34:8:5:U:C6	3.06	0.43
34:8:13:G:H2'	34:8:14:U:C6	2.54	0.43
34:8:137:A:N3	34:8:138:C:C6	2.87	0.43
35:B:26:ARG:HB2	35:B:344:VAL:HG11	2.01	0.43
37:E:277:ILE:N	37:E:278:TYR:HE2	2.12	0.43
41:W:21:TYR:HB2	41:W:31:PHE:CE2	2.54	0.43
41:W:31:PHE:HB3	41:W:36:CYS:HB2	2.01	0.43
46:K:55:GLY:O	46:K:56:LEU:HD23	2.19	0.43
47:q:108:PRO:CA	47:q:109:ALA:C	2.90	0.43
49:3:19:U:H3'	49:3:20:U:O4'	2.17	0.43
50:4:52:C:N3	50:4:53:U:C5	2.86	0.43
50:4:55:G:C2	50:4:56:A:C5	3.06	0.43
50:4:205:A:H2'	50:4:206:G:O4'	2.19	0.43
50:4:221:C:H6	50:4:221:C:O5'	2.01	0.43
53:S2:104:A:N7	53:S2:105:U:C5	2.86	0.43
53:S2:343:A:C5	53:S2:344:U:C5	3.06	0.43
53:S2:394:G:N1	53:S2:395:G:N7	2.67	0.43
53:S2:411:G:N2	53:S2:430:C:C2	2.87	0.43
53:S2:468:A:H2'	53:S2:468:A:N3	2.32	0.43
53:S2:571:U:C2	53:S2:572:U:C6	3.07	0.43
53:S2:616:A:C8	53:S2:617:G:C1'	3.01	0.43
53:S2:633:C:C2	53:S2:634:A:H8	2.35	0.43
53:S2:694:G:N1	53:S2:695:C:C5	2.81	0.43
53:S2:737:G:C6	53:S2:738:C:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:832:G:N3	53:S2:833:C:C1'	2.82	0.43
53:S2:862:A:C8	66:SW:107:SER:N	2.87	0.43
53:S2:936:G:C5	53:S2:937:C:C5	3.06	0.43
53:S2:969:U:O2	53:S2:969:U:O2'	2.23	0.43
53:S2:999:G:C2	53:S2:1000:C:C2	3.07	0.43
53:S2:1004:U:C2	53:S2:1005:G:C8	3.06	0.43
53:S2:1163:C:O2'	53:S2:1164:G:H5'	2.19	0.43
53:S2:1172:U:C5	53:S2:1187:G:N2	2.87	0.43
53:S2:1251:A:H2'	53:S2:1252:C:O5'	2.18	0.43
53:S2:1277:C:H2'	53:S2:1278:A:C8	2.53	0.43
53:S2:1277:C:H5'	74:SK:51:SER:HA	2.00	0.43
53:S2:1359:U:C2	53:S2:1360:U:C5	3.07	0.43
53:S2:1548:G:C8	53:S2:1656:G:O2'	2.71	0.43
55:SB:29:ASP:CG	55:SB:51:ARG:HG3	2.44	0.43
57:SE:130:PHE:HB2	57:SE:138:HIS:HB2	2.00	0.43
57:SE:253:ASP:O	57:SE:257:ALA:N	2.49	0.43
58:SG:156:TYR:N	58:SG:156:TYR:CD1	2.86	0.43
72:SD:71:ALA:O	72:SD:75:LYS:HG2	2.19	0.43
73:SF:83:ASN:N	73:SF:83:ASN:ND2	2.61	0.43
74:SK:66:HIS:HB3	74:SK:68:TYR:HE1	1.83	0.43
77:SQ:22:VAL:O	77:SQ:71:ARG:NH1	2.52	0.43
78:SR:20:TYR:HB3	78:SR:23:ARG:HB2	2.00	0.43
83:Sc:26:GLN:HE21	83:Sc:26:GLN:HA	1.84	0.43
85:Sf:118:ARG:HB2	85:Sf:131:PHE:CZ	2.53	0.43
2:D:18:VAL:O	2:D:19:LYS:O	2.37	0.43
2:D:72:ASP:OD1	33:7:7:G:H4'	2.19	0.43
3:G:41:ILE:O	3:G:43:GLN:N	2.52	0.43
3:G:65:ARG:NE	34:8:151:G:OP2	2.51	0.43
10:Q:93:GLN:CB	19:a:87:ARG:HH12	2.32	0.43
19:a:25:HIS:CE1	32:5:1338:G:N2	2.87	0.43
19:a:105:ARG:NH1	32:5:509:A:N3	2.67	0.43
21:c:37:MET:HB3	21:c:43:ALA:HB2	2.00	0.43
30:m:88:LYS:HA	30:m:92:ASP:OD1	2.19	0.43
30:m:122:ARG:HE	32:5:4424:A:C5'	2.32	0.43
31:o:76:ASN:ND2	31:o:76:ASN:N	2.65	0.43
32:5:2:G:N3	32:5:3:C:C6	2.87	0.43
32:5:21:G:H2'	32:5:22:G:O4'	2.19	0.43
32:5:85:G:C4	32:5:97:G:O6	2.72	0.43
32:5:173:C:C4	32:5:174:C:C5	3.02	0.43
32:5:212:A:C2'	32:5:213:G:H8	2.26	0.43
32:5:449:C:H3'	32:5:450:G:H5''	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:479:G:N3	32:5:480:C:C6	2.87	0.43
32:5:518:G:C2	32:5:519:C:C2	3.07	0.43
32:5:688:U:C4	32:5:689:U:C6	3.04	0.43
32:5:739:G:C2	32:5:740:G:N9	2.86	0.43
32:5:907:C:N3	32:5:908:G:C8	2.87	0.43
32:5:919:C:C4	32:5:920:C:C4	3.07	0.43
32:5:1240:G:C4	32:5:1241:C:C6	3.07	0.43
32:5:1240:G:H3'	32:5:1241:C:H6	1.84	0.43
32:5:1267:C:O2'	32:5:2109:G:N7	2.52	0.43
32:5:1384:C:H2'	32:5:1385:G:O4'	2.18	0.43
32:5:1443:A:C5	32:5:1444:G:C5	3.07	0.43
32:5:1590:C:C5'	32:5:1591:U:O5'	2.67	0.43
32:5:1629:G:N1	32:5:1631:A:C6	2.87	0.43
32:5:1631:A:O2'	32:5:3650:C:H4'	2.19	0.43
32:5:1644:C:C2	32:5:1645:C:C6	3.06	0.43
32:5:1949:U:C2	32:5:1950:U:H5	2.25	0.43
32:5:2101:C:N3	32:5:2102:G:N7	2.67	0.43
32:5:2107:C:C5	32:5:2126:G:N1	2.86	0.43
32:5:2363:A:C1'	32:5:4560:C:C5	2.99	0.43
32:5:2395:A:OP1	32:5:2395:A:C4'	2.66	0.43
32:5:2402:G:C2	32:5:2403:A:C8	3.07	0.43
32:5:2502:G:H4'	32:5:2503:G:OP1	2.17	0.43
32:5:2649:G:C2	32:5:2685:C:O2	2.72	0.43
32:5:2683:C:H2'	32:5:2684:C:O5'	2.17	0.43
32:5:2736:G:C5	32:5:2737:C:C5	3.07	0.43
32:5:2794:C:N4	40:P:134:GLY:O	2.52	0.43
32:5:3672:G:C5	32:5:3674:G:C1'	3.01	0.43
32:5:3819:G:N2	32:5:3820:G:C4	2.87	0.43
32:5:3846:C:H2'	32:5:4632:U:O2'	2.18	0.43
32:5:3945:A:C2	32:5:3946:G:N7	2.87	0.43
32:5:4096:C:N4	32:5:4097:G:N9	2.66	0.43
32:5:4137:C:N3	32:5:4138:C:C5	2.87	0.43
32:5:4199:C:C3'	32:5:4199:C:C2	3.00	0.43
32:5:4593:C:N3	32:5:4594:U:C5	2.87	0.43
32:5:4715:C:O2'	35:B:16:PHE:HE1	2.01	0.43
32:5:4727:A:C2'	32:5:4728:U:O5'	2.67	0.43
32:5:4913:G:C2'	32:5:4914:C:O4'	2.66	0.43
32:5:5022:U:O2	32:5:5022:U:H2'	2.17	0.43
34:8:53:G:C4	34:8:54:C:C5	3.06	0.43
35:B:311:ASP:O	35:B:311:ASP:OD1	2.37	0.43
36:C:26:ALA:HB3	36:C:266:THR:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K:37:LEU:CD2	46:K:37:LEU:C	2.81	0.43
46:K:104:ILE:O	46:K:106:PHE:CD1	2.72	0.43
47:q:29:ILE:HG23	47:q:86:VAL:CG1	2.49	0.43
47:q:29:ILE:HG23	47:q:86:VAL:HG13	2.01	0.43
48:z:368:SER:HB3	48:z:477:UNK:HA	2.00	0.43
51:9:24:ASN:ND2	51:9:44:PRO:HD2	2.33	0.43
53:S2:5:U:O2	53:S2:6:G:C8	2.72	0.43
53:S2:222:U:C2	53:S2:223:C:C5	3.06	0.43
53:S2:437:G:C6	53:S2:457:C:N3	2.87	0.43
53:S2:447:A:C6	53:S2:449:A:N3	2.85	0.43
53:S2:600:G:H2'	53:S2:601:G:O5'	2.18	0.43
53:S2:688:U:H1'	53:S2:689:U:C6	2.54	0.43
53:S2:797:C:C4'	59:SH:109:ARG:NH1	2.82	0.43
53:S2:967:C:N4	53:S2:968:U:N1	2.66	0.43
53:S2:999:G:N3	53:S2:999:G:H2'	2.33	0.43
53:S2:1176:G:C4	53:S2:1177:U:C6	3.07	0.43
53:S2:1204:A:C2	53:S2:1205:C:N4	2.85	0.43
53:S2:1236:G:N2	53:S2:1237:C:C2	2.87	0.43
53:S2:1266:C:O2	53:S2:1267:C:C6	2.72	0.43
53:S2:1289:U:O4'	53:S2:1314:U:C5	2.72	0.43
53:S2:1292:C:N3	85:Sf:150:PHE:CG	2.87	0.43
53:S2:1434:C:H2'	53:S2:1435:C:O4'	2.18	0.43
53:S2:1459:G:C5	53:S2:1460:C:C5	3.07	0.43
53:S2:1667:U:O2	53:S2:1667:U:C2'	2.67	0.43
57:SE:85:GLY:O	57:SE:86:PHE:C	2.60	0.43
57:SE:86:PHE:CD2	57:SE:87:MET:N	2.87	0.43
59:SH:145:ARG:NH2	66:SW:49:GLU:HG3	2.33	0.43
59:SH:158:LEU:HB2	59:SH:189:PHE:CZ	2.54	0.43
60:SI:112:TRP:C	60:SI:112:TRP:CE3	2.96	0.43
60:SI:113:TYR:CE2	60:SI:121:LEU:HD11	2.52	0.43
67:SX:84:PHE:CE1	67:SX:86:PRO:HA	2.53	0.43
68:SY:22:GLN:CB	68:SY:74:MET:HE3	2.48	0.43
69:Sa:14:GLY:C	69:Sa:15:ARG:HG3	2.43	0.43
69:Sa:28:ARG:CG	69:Sa:28:ARG:NH1	2.78	0.43
72:SD:52:ALA:O	72:SD:91:VAL:HG23	2.19	0.43
74:SK:95:ARG:HA	74:SK:95:ARG:NE	2.17	0.43
81:SU:61:LEU:HA	84:Sd:34:TYR:OH	2.19	0.43
82:SZ:50:PHE:CE1	82:SZ:79:ILE:HG12	2.53	0.43
82:SZ:51:ASP:CG	82:SZ:54:THR:CG2	2.91	0.43
82:SZ:73:VAL:HG12	82:SZ:79:ILE:HG21	2.00	0.43
83:Sc:42:ILE:N	83:Sc:42:ILE:CD1	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:Sg:226:HIS:HE1	86:Sg:228:TYR:HA	1.82	0.43
86:Sg:291:TRP:CZ2	86:Sg:298:LEU:HD22	2.53	0.43
86:Sg:302:TYR:N	86:Sg:302:TYR:CD1	2.87	0.43
87:S1:28:VAL:HG12	88:S4:29:THR:HG22	2.00	0.43
87:S1:48:CYS:C	87:S1:49:LEU:CD2	2.71	0.43
1:A:34:PHE:CZ	32:5:4087:G:C4	3.07	0.43
2:D:204:VAL:CG1	2:D:236:MET:HE1	2.48	0.43
2:D:210:TYR:C	2:D:210:TYR:CD1	2.92	0.43
6:L:14:PHE:CD1	6:L:18:TRP:CD1	3.05	0.43
8:N:67:ARG:HD3	32:5:2458:C:H5'	2.00	0.43
8:N:178:HIS:CD2	8:N:178:HIS:C	2.97	0.43
11:R:171:LYS:O	11:R:175:GLU:HB3	2.18	0.43
18:Z:114:ALA:HB1	18:Z:118:PHE:HE2	1.84	0.43
22:d:75:LYS:HB2	22:d:79:ASN:O	2.18	0.43
24:f:50:VAL:HG22	24:f:69:VAL:CG1	2.49	0.43
26:h:81:LEU:O	26:h:82:ASP:C	2.62	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
31:o:37:GLY:HA3	32:5:4343:U:OP1	2.18	0.43
32:5:87:A:C6	32:5:292:G:O6	2.71	0.43
32:5:90:G:C6	32:5:92:C:H1'	2.54	0.43
32:5:106:A:H1'	32:5:336:A:N7	2.34	0.43
32:5:170:C:H4'	32:5:171:U:OP1	2.18	0.43
32:5:383:A:O2'	32:5:384:A:C5'	2.67	0.43
32:5:397:G:C6	32:5:398:A:H1'	2.54	0.43
32:5:448:G:H3'	32:5:449:C:H4'	2.01	0.43
32:5:674:G:C2	32:5:675:C:C2	3.07	0.43
32:5:735:G:C5	32:5:736:C:C4	3.06	0.43
32:5:967:C:H5	32:5:968:C:O2	2.00	0.43
32:5:1183:C:N3	32:5:1184:A:N7	2.66	0.43
32:5:1213:G:N9	32:5:1215:C:H1'	2.26	0.43
32:5:1216:C:C4	32:5:1217:G:C8	3.06	0.43
32:5:1268:G:N1	32:5:2111:G:N2	2.67	0.43
32:5:1291:G:C6	32:5:1292:C:C4	3.07	0.43
32:5:1438:U:O2	32:5:2099:G:N7	2.52	0.43
32:5:1806:G:C2	32:5:1807:C:N1	2.86	0.43
32:5:1858:A:N3	32:5:1859:C:C5	2.85	0.43
32:5:1877:G:N1	32:5:1878:G:N7	2.66	0.43
32:5:1885:G:C6	32:5:1895:G:N1	2.87	0.43
32:5:1887:G:C6	32:5:1890:G:C5	3.07	0.43
32:5:2034:G:C2	32:5:2035:C:C2	3.07	0.43

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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	0.43
32:5:2347:A:N3	32:5:2348:G:N1	2.67	0.43
32:5:2481:G:N3	32:5:2482:C:C6	2.87	0.43
32:5:2493:G:N2	32:5:2494:U:H1'	2.34	0.43
32:5:2542:G:C2	32:5:2775:C:C2	3.07	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
32:5:2645:G:C2	32:5:2646:C:C2	3.06	0.43
32:5:2893:U:H2'	32:5:2894:A:O4'	2.19	0.43
32:5:3698:G:C2	32:5:3699:C:C6	3.07	0.43
32:5:3698:G:H1'	32:5:3778:U:C2	2.54	0.43
32:5:3831:U:H2'	32:5:3831:U:O2	2.19	0.43
32:5:3863:C:H2'	32:5:3864:C:H6	1.84	0.43
32:5:4146:G:N1	32:5:4147:G:C5	2.87	0.43
32:5:4147:G:C5	32:5:4148:C:C5	3.07	0.43
32:5:4148:C:N3	32:5:4149:C:C5	2.87	0.43
32:5:4214:A:H8	32:5:4214:A:O5'	2.02	0.43
32:5:4426:C:O2	32:5:4426:C:H2'	2.19	0.43
32:5:4595:G:C2	32:5:4596:C:C2	3.06	0.43
32:5:4712:C:N3	32:5:4713:G:C8	2.87	0.43
32:5:4884:G:C6	32:5:4885:U:C5	3.06	0.43
32:5:4919:G:N2	32:5:4920:C:C2	2.87	0.43
32:5:4949:G:H3'	32:5:4950:U:H5''	2.01	0.43
33:7:114:U:C2	33:7:115:A:C8	3.07	0.43
34:8:2:G:C2	34:8:3:A:C8	3.07	0.43
35:B:78:ILE:HD11	35:B:320:PHE:CE1	2.54	0.43
35:B:337:VAL:HG21	35:B:345:LEU:HD21	2.01	0.43
38:F:95:ILE:HD13	38:F:249:MET:HE1	2.00	0.43
46:K:162:CYS:N	46:K:163:PRO:CD	2.82	0.43
48:z:73:LYS:C	48:z:73:LYS:CD	2.85	0.43
48:z:133:CYS:SG	48:z:184:PHE:CG	3.11	0.43
48:z:347:GLN:O	48:z:351:MET:HG3	2.18	0.43
48:z:377:THR:HG21	50:4:193:G:C2'	2.42	0.43
48:z:405:ARG:CB	50:4:207:C:H4'	2.48	0.43
48:z:430:MET:HA	48:z:433:LYS:HB3	2.00	0.43
49:3:40:C:O2	53:S2:1640:A:O2'	2.36	0.43
50:4:122:U:H2'	50:4:123:C:C6	2.54	0.43
52:6:150:ARG:HH11	52:6:153:LYS:HD3	1.82	0.43
53:S2:127:C:H5''	53:S2:312:G:C2	2.54	0.43
53:S2:201:C:C6	53:S2:202:G:C8	3.07	0.43
53:S2:322:C:H2'	53:S2:323:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:344:U:O2'	53:S2:345:U:H5'	2.19	0.43
53:S2:530:U:N3	53:S2:531:A:N7	2.66	0.43
53:S2:550:C:N3	53:S2:551:U:C5	2.86	0.43
53:S2:665:G:N2	53:S2:671:A:C5	2.87	0.43
53:S2:1067:C:N4	53:S2:1068:G:C6	2.87	0.43
53:S2:1112:U:C2	53:S2:1113:A:C8	3.07	0.43
53:S2:1395:C:C6	53:S2:1395:C:C5'	3.02	0.43
53:S2:1410:C:O2	53:S2:1411:G:C8	2.71	0.43
53:S2:1429:G:H2'	53:S2:1430:C:H6	1.79	0.43
53:S2:1630:A:N1	53:S2:1631:U:C4	2.87	0.43
53:S2:1633:A:C2	53:S2:1634:A:C5	3.07	0.43
53:S2:1669:G:C6	53:S2:1670:C:N4	2.87	0.43
55:SB:36:PRO:HA	55:SB:232:HIS:CE1	2.54	0.43
55:SB:48:LEU:HD12	64:SO:51:GLU:HG2	2.00	0.43
56:SC:204:ILE:CD1	56:SC:215:MET:HE3	2.49	0.43
62:SL:89:ARG:NE	62:SL:106:HIS:CD2	2.87	0.43
71:Se:46:VAL:HG22	71:Se:46:VAL:O	2.18	0.43
78:SR:85:VAL:HG12	78:SR:86:PRO:CD	2.48	0.43
79:SS:10:GLN:CB	79:SS:57:GLY:C	2.92	0.43
2:D:15:ARG:NH2	32:5:1743:A:O2'	2.52	0.43
2:D:267:ASN:CG	33:7:59:G:HO2'	2.18	0.43
4:H:66:GLU:N	4:H:66:GLU:OE1	2.52	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
8:N:143:ARG:HD3	26:h:95:LEU:CD2	2.46	0.43
8:N:178:HIS:HA	8:N:181:HIS:NE2	2.34	0.43
11:R:15:LEU:HB3	11:R:52:ARG:HH21	1.83	0.43
12:S:43:ARG:HA	12:S:43:ARG:HD2	1.89	0.43
13:T:59:GLY:HA3	32:5:1732:C:O2'	2.19	0.43
32:5:25:A:O2'	32:5:26:C:H5'	2.19	0.43
32:5:29:G:C2	32:5:30:C:C4	3.07	0.43
32:5:93:G:C4	32:5:94:A:C6	3.07	0.43
32:5:113:A:N3	32:5:113:A:H2'	2.32	0.43
32:5:167:C:C4	32:5:269:G:N1	2.87	0.43
32:5:192:G:N2	32:5:250:C:C2	2.87	0.43
32:5:219:G:C5'	32:5:219:G:C4	3.02	0.43
32:5:244:G:N1	32:5:246:G:C5	2.87	0.43
32:5:496:G:H2'	32:5:497:G:O4'	2.19	0.43
32:5:642:G:C4	32:5:643:C:C5	3.07	0.43
32:5:699:C:C4	32:5:700:G:C8	3.07	0.43
32:5:742:G:N2	32:5:743:G:C4	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:1269:G:N1	32:5:2111:G:N2	2.67	0.43
32:5:1288:G:HO2'	32:5:1289:C:P	2.42	0.43
32:5:1380:G:N3	32:5:1382:G:C5	2.87	0.43
32:5:1400:G:H2'	32:5:1401:C:O4'	2.19	0.43
32:5:1404:G:C2	32:5:1405:C:C2	3.07	0.43
32:5:1444:G:N3	32:5:1445:U:C5	2.87	0.43
32:5:1522:G:H5''	32:5:1523:A:OP1	2.19	0.43
32:5:1544:G:N2	32:5:1545:G:C4	2.86	0.43
32:5:1567:U:C4	32:5:1568:C:C5	3.07	0.43
32:5:1656:U:C4	32:5:1657:G:N7	2.87	0.43
32:5:1776:A:C4	32:5:1777:C:C5	3.07	0.43
32:5:1819:G:C2	32:5:1820:C:C2	3.06	0.43
32:5:2041:A:C2	32:5:4464:A:N6	2.87	0.43
32:5:2100:A:C8	32:5:2101:C:C5	3.07	0.43
32:5:2125:C:HO2'	32:5:2126:G:C5'	2.26	0.43
32:5:2273:G:C5	32:5:2274:C:C4	3.07	0.43
32:5:2362:U:O4	32:5:3859:G:N3	2.52	0.43
32:5:2399:G:C6	32:5:2400:G:C5	3.07	0.43
32:5:2507:A:N1	32:5:2508:U:C1'	2.70	0.43
32:5:2628:U:N3	32:5:2629:C:C5	2.87	0.43
32:5:2756:G:C2	32:5:2757:A:C6	3.07	0.43
32:5:3593:C:H2'	32:5:3595:U:C5	2.54	0.43
32:5:3631:U:C4	32:5:3632:C:C5	3.07	0.43
32:5:3802:U:O2	32:5:3802:U:C2'	2.67	0.43
32:5:3805:U:O2	32:5:3806:G:C8	2.72	0.43
32:5:3860:A:C6	32:5:3861:A:C8	3.07	0.43
32:5:3883:U:O2'	32:5:3884:U:O4'	2.35	0.43
32:5:4073:A:N1	32:5:4074:C:C4	2.87	0.43
32:5:4092:G:C5	32:5:4093:G:C2	3.03	0.43
32:5:4208:U:C2	32:5:4209:G:C8	3.07	0.43
32:5:4266:G:O6	32:5:4279:A:C8	2.72	0.43
32:5:4269:G:N2	32:5:4270:C:H1'	2.34	0.43
32:5:4563:U:N3	32:5:4564:A:C6	2.87	0.43
32:5:4593:C:C2	32:5:4594:U:C6	3.07	0.43
32:5:4651:A:C2	32:5:4652:G:N9	2.87	0.43
32:5:4667:C:C2	32:5:4668:U:C6	3.06	0.43
32:5:4882:U:O2'	32:5:4883:C:H2'	2.18	0.43
32:5:4941:G:C2	32:5:4942:C:N4	2.86	0.43
33:7:93:G:C2	33:7:94:C:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:57:C:H4'	34:8:63:U:C5	2.54	0.43
35:B:54:THR:OG1	35:B:55:HIS:N	2.50	0.43
35:B:367:PHE:CZ	35:B:368:ILE:C	2.97	0.43
36:C:337:ARG:HD3	37:E:51:GLY:O	2.19	0.43
41:W:33:ASN:OD1	41:W:33:ASN:N	2.51	0.43
45:r:39:ARG:HB3	45:r:40:TYR:HD1	1.84	0.43
46:K:47:ALA:HB2	46:K:72:GLU:HG2	2.00	0.43
46:K:147:HIS:HB2	46:K:149:HIS:CD2	2.54	0.43
47:q:123:VAL:HG13	47:q:180:ILE:HD12	1.99	0.43
48:z:338:ASN:O	48:z:342:MET:N	2.51	0.43
48:z:408:ARG:HD2	50:4:206:G:H5'	1.97	0.43
50:4:180:G:C6	50:4:181:U:C4	3.07	0.43
51:9:32:GLY:HA2	51:9:70:ARG:HH11	1.84	0.43
53:S2:37:C:C2	53:S2:38:A:C8	3.07	0.43
53:S2:39:A:H5'	61:SJ:7:TRP:HE1	1.83	0.43
53:S2:292:A:C4'	62:SL:40:ILE:O	2.67	0.43
53:S2:333:G:N1	53:S2:334:C:C2	2.87	0.43
53:S2:447:A:N1	53:S2:449:A:N3	2.66	0.43
53:S2:635:G:H2'	53:S2:636:C:H6	1.84	0.43
53:S2:827:A:N7	53:S2:828:G:C8	2.86	0.43
53:S2:892:U:C2	53:S2:893:U:C6	3.07	0.43
53:S2:948:C:C2	53:S2:949:G:N7	2.86	0.43
53:S2:992:A:N3	53:S2:992:A:H2'	2.33	0.43
53:S2:1314:U:O2'	74:SK:3:MET:N	2.51	0.43
53:S2:1347:U:C2	53:S2:1348:G:C8	3.07	0.43
53:S2:1431:G:C6	53:S2:1432:U:C4	3.07	0.43
53:S2:1570:G:O2'	53:S2:1614:A:O2'	2.31	0.43
53:S2:1574:C:O2	53:S2:1575:G:H8	2.01	0.43
53:S2:1596:U:O4	53:S2:1597:C:C4	2.72	0.43
55:SB:79:VAL:CG2	55:SB:81:PHE:CE1	3.02	0.43
56:SC:127:PHE:CZ	56:SC:234:GLY:CA	3.02	0.43
64:SO:44:VAL:HG23	64:SO:81:VAL:HG11	2.01	0.43
64:SO:95:ILE:HB	64:SO:129:ILE:HD13	2.00	0.43
77:SQ:63:PHE:N	77:SQ:63:PHE:HD1	2.17	0.43
78:SR:92:ASP:O	78:SR:93:GLN:HG2	2.18	0.43
79:SS:82:TRP:CD1	79:SS:82:TRP:H	2.37	0.43
82:SZ:99:LEU:HD23	82:SZ:109:TYR:CD1	2.53	0.43
1:A:18:ALA:HB3	32:5:3677:U:OP1	2.19	0.42
1:A:174:ARG:HA	44:p:69:TRP:HH2	1.75	0.42
1:A:215:ASN:ND2	32:5:4546:A:N7	2.67	0.42
3:G:32:PHE:CD2	18:Z:55:ALA:HB2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:53:ARG:NH2	3:G:54:PHE:CE2	2.84	0.42
4:H:60:TRP:CZ2	12:S:153:PRO:HD3	2.53	0.42
5:J:99:PHE:CD2	5:J:105:PHE:HB2	2.53	0.42
6:L:176:PHE:CE2	27:i:5:TYR:HD2	2.37	0.42
9:O:81:TRP:NE1	9:O:99:LEU:HD22	2.34	0.42
11:R:58:HIS:HA	32:5:4646:U:OP1	2.18	0.42
11:R:134:ASN:O	11:R:135:LYS:C	2.62	0.42
12:S:39:VAL:O	12:S:43:ARG:N	2.49	0.42
16:X:72:ASP:HA	16:X:73:HIS:NE2	2.33	0.42
20:b:15:LYS:C	20:b:17:HIS:H	2.27	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
25:g:9:ARG:HE	32:5:2441:C:H5''	1.83	0.42
26:h:84:ARG:HB2	34:8:38:U:C5	2.54	0.42
32:5:2:G:N1	32:5:3:C:C4	2.87	0.42
32:5:38:A:N1	32:5:41:C:C4	2.87	0.42
32:5:199:G:C2	32:5:201:C:C2	3.07	0.42
32:5:229:G:H2'	32:5:230:G:O4'	2.18	0.42
32:5:270:U:O2	32:5:270:U:C2'	2.67	0.42
32:5:307:A:H2'	32:5:308:G:N3	2.34	0.42
32:5:472:C:C4	32:5:473:C:C4	3.07	0.42
32:5:479:G:C2	32:5:480:C:C2	3.07	0.42
32:5:671:G:C4	32:5:672:C:C5	3.07	0.42
32:5:994:G:C4	32:5:995:C:C6	3.07	0.42
32:5:1268:G:N3	32:5:2111:G:N1	2.67	0.42
32:5:1367:C:H2'	32:5:1368:A:O5'	2.19	0.42
32:5:1404:G:C2	32:5:1405:C:N1	2.87	0.42
32:5:1442:C:C2	32:5:1443:A:H8	2.28	0.42
32:5:1556:C:O2	32:5:1556:C:H2'	2.18	0.42
32:5:1560:A:H2'	32:5:1561:G:C8	2.53	0.42
32:5:1761:G:C2	32:5:1772:C:C2	3.07	0.42
32:5:1988:G:N1	32:5:1989:G:C5	2.87	0.42
32:5:2325:C:C2	32:5:2325:C:H3'	2.54	0.42
32:5:2326:G:C4	32:5:2327:G:C8	3.06	0.42
32:5:2529:A:N6	32:5:2532:C:N1	2.67	0.42
32:5:2707:U:H2'	32:5:2707:U:O2	2.18	0.42
32:5:3641:U:O4	32:5:3645:U:H2'	2.18	0.42
32:5:3694:U:C4	32:5:3695:U:C4	3.07	0.42
32:5:3742:G:N2	32:5:3743:G:C4	2.87	0.42
32:5:3896:C:O2'	35:B:268:ARG:NH2	2.51	0.42
32:5:4082:G:N3	32:5:4083:U:C5	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4091:G:C2	32:5:4092:G:N9	2.87	0.42
32:5:4150:G:C6	32:5:4151:G:C5	3.07	0.42
32:5:4236:G:O2'	32:5:4237:C:O4'	2.28	0.42
32:5:4439:U:C2	32:5:4440:G:C8	3.07	0.42
32:5:4549:G:N3	32:5:4550:G:C8	2.82	0.42
32:5:4652:G:C2	32:5:4653:C:C2	3.07	0.42
32:5:4734:A:C5	32:5:4735:G:N7	2.86	0.42
32:5:4769:G:N2	32:5:4865:C: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
34:8:74:U:C2	34:8:74:U:H3'	2.53	0.42
35:B:10:ARG:HD2	35:B:12:GLY:O	2.18	0.42
35:B:117:ARG:HD2	35:B:178:ALA:O	2.19	0.42
39:I:47:PRO:CB	39:I:171:TRP:NE1	2.77	0.42
46:K:111:ASN:HA	46:K:114:ARG:HE	1.83	0.42
47:q:178:LEU:O	47:q:179:ASN:HB2	2.19	0.42
50:4:16:G:C2	50:4:33:G:C6	3.07	0.42
53:S2:37:C:C5	53:S2:38:A:N7	2.87	0.42
53:S2:200:G:C4	53:S2:201:C:C6	3.07	0.42
53:S2:885:U:H2'	53:S2:886:A:H8	1.84	0.42
53:S2:933:G:C5	53:S2:1001:A:N7	2.87	0.42
53:S2:1287:A:N6	53:S2:1314:U:C5	2.87	0.42
53:S2:1309:C:OP1	85:Sf:116:ARG:NH2	2.42	0.42
53:S2:1528:G:C6	53:S2:1529:C:C4	3.06	0.42
53:S2:1589:A:N3	53:S2:1653:U:O2'	2.50	0.42
53:S2:1605:G:H2'	53:S2:1606:G:C1'	2.45	0.42
53:S2:1641:A:C4	53:S2:1642:U:C6	3.06	0.42
53:S2:1869:A:N1	55:SB:115:LYS:NZ	2.34	0.42
54:SA:176:TRP:HE1	54:SA:195:TRP:HE3	1.66	0.42
55:SB:30:TRP:HD1	64:SO:19:PRO:HD2	1.84	0.42
57:SE:87:MET:CE	57:SE:236:ILE:HD13	2.47	0.42
62:SL:12:LYS:O	62:SL:14:PRO:HD3	2.19	0.42
67:SX:102:VAL:CG1	67:SX:120:PHE:HB3	2.49	0.42
69:Sa:73:TYR:CD2	69:Sa:83:VAL:HG21	2.54	0.42
72:SD:37:VAL:HG12	72:SD:50:ILE:HD13	2.00	0.42
75:SM:101:ARG:HA	75:SM:101:ARG:NH1	2.34	0.42
78:SR:88:VAL:HG12	78:SR:91:LEU:N	2.33	0.42
83:Sc:44:ARG:CG	83:Sc:44:ARG:NH2	2.72	0.42
87:S1:74:VAL:HG21	88:S4:76:VAL:CG1	2.48	0.42
1:A:19:HIS:HB2	1:A:193:ARG:HA	2.01	0.42
1:A:85:GLY:HA2	32:5:4121:G:C2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:54:PHE:HB3	32:5:4086:G:H4'	2.02	0.42
5:J:54:ARG:HH11	5:J:54:ARG:CG	2.31	0.42
6:L:120:TYR:O	6:L:121:ARG:C	2.62	0.42
8:N:44:ARG:HD2	8:N:119:TYR:HB2	2.01	0.42
8:N:65:ARG:HD2	8:N:127:TYR:CD2	2.54	0.42
8:N:198:LEU:HD13	8:N:200:LEU:HD21	2.00	0.42
10:Q:30:LYS:HE2	32:5:2268:A:O3'	2.20	0.42
12:S:38:VAL:HG22	38:F:239:GLU:HG2	2.00	0.42
12:S:154:LEU:HD13	12:S:157:ARG:NH2	2.34	0.42
13:T:132:PRO:HG2	38:F:128:ASN:ND2	2.32	0.42
14:U:27:HIS:N	14:U:28:PRO:HD2	2.34	0.42
20:b:12:GLN:CA	20:b:16:TRP:HE1	2.32	0.42
23:e:26:ASP:OD2	32:5:436:C:H4'	2.20	0.42
31:o:5:PRO:HD3	32:5:4232:U:C2	2.53	0.42
32:5:123:C:C2	32:5:124:C:C6	3.07	0.42
32:5:289:C:C4	32:5:290:U:H5	2.31	0.42
32:5:302:C:N3	32:5:303:C:C4	2.87	0.42
32:5:322:C:C2	32:5:4356:G:N1	2.87	0.42
32:5:324:A:C2'	32:5:325:U:H5'	2.49	0.42
32:5:369:G:C6	32:5:371:A:OP2	2.72	0.42
32:5:423:G:H3'	32:5:424:U:H6	1.85	0.42
32:5:469:C:C4	32:5:470:A:C5	3.07	0.42
32:5:660:A:C6	32:5:661:C:C4	3.06	0.42
32:5:698:G:N1	32:5:699:C:C5	2.88	0.42
32:5:742:G:C2	32:5:743:G:C8	3.07	0.42
32:5:910:G:N2	32:5:911:U:H1'	2.34	0.42
32:5:989:U:H2'	32:5:989:U:O2	2.18	0.42
32:5:1273:G:H21	32:5:2123:C:P	2.42	0.42
32:5:1321:G:C2	32:5:3876:A:N3	2.86	0.42
32:5:1351:G:C6	32:5:1352:C:C4	3.07	0.42
32:5:1390:G:N3	32:5:1394:G:N1	2.68	0.42
32:5:1475:G:H2'	32:5:1476:C:H6	1.84	0.42
32:5:1795:A:N3	33:7:79:U:O2'	2.52	0.42
32:5:1817:U:C2'	32:5:1818:G:O5'	2.66	0.42
32:5:1878:G:C5	32:5:1879:C:C5	3.07	0.42
32:5:1965:G:C2	32:5:1966:C:C6	3.07	0.42
32:5:1973:G:O6	32:5:2002:A:N7	2.52	0.42
32:5:2103:G:C5	32:5:2104:G:C8	3.08	0.42
32:5:2104:G:N1	32:5:2105:A:C4	2.87	0.42
32:5:2245:G:C4	32:5:2246:C:C6	3.07	0.42
32:5:2256:C:H4'	32:5:2257:C:O5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2288:G:C6	32:5:2290:C:C4	3.06	0.42
32:5:2294:G:C2	32:5:2295:C:C2	3.07	0.42
32:5:2294:G:C6	32:5:2295:C:C5	3.08	0.42
32:5:2324:C:C4	32:5:2325:C:C5	3.06	0.42
32:5:2586:G:C8	32:5:2587:A:C5	3.07	0.42
32:5:2703:G:C2	32:5:2704:C:C2	3.07	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
32:5:3694:U:N3	32:5:3695:U:C4	2.87	0.42
32:5:3806:G:C2	32:5:3807:A:C8	3.07	0.42
32:5:3857:G:C2	32:5:3858:C:H1'	2.53	0.42
32:5:3875:G:C6	32:5:3877:A:H4'	2.54	0.42
32:5:3918:G:C5	32:5:3919:C:C5	3.07	0.42
32:5:4136:G:C4	32:5:4137:C:C5	3.07	0.42
32:5:4143:G:C6	32:5:4145:C:C6	3.06	0.42
32:5:4193:C:H3'	32:5:4194:U:O2	2.18	0.42
32:5:4201:G:C6	32:5:4202:U:O4	2.72	0.42
32:5:4435:U:H2'	32:5:4436:U:N1	2.34	0.42
32:5:4503:A:C2	32:5:4504:C:C2	3.08	0.42
32:5:4742:G:N1	32:5:4743:G:C5	2.86	0.42
34:8:133:G:C4	34:8:134:G:C8	3.07	0.42
35:B:14:LEU:O	35:B:16:PHE:N	2.52	0.42
35:B:82:PRO:HG3	35:B:171:LEU:HD21	2.00	0.42
37:E:280:HIS:HE1	37:E:281:LYS:HD3	1.84	0.42
39:I:101:LYS:HG3	39:I:121:LYS:HG3	2.01	0.42
41:W:22:ALA:HB2	41:W:28:VAL:HG13	2.01	0.42
46:K:142:ASN:CG	46:K:143:VAL:N	2.66	0.42
52:6:190:ARG:HD3	52:6:198:ALA:HB1	2.01	0.42
53:S2:100:U:H2'	53:S2:101:U:O5'	2.19	0.42
53:S2:123:G:N3	53:S2:123:G:C2'	2.81	0.42
53:S2:333:G:C5	53:S2:334:C:C5	3.07	0.42
53:S2:378:U:C4	53:S2:379:C:N4	2.84	0.42
53:S2:440:G:N1	53:S2:441:C:C2	2.87	0.42
53:S2:445:A:C6	53:S2:446:G:C2	3.08	0.42
53:S2:604:A:C6	53:S2:605:A:N6	2.87	0.42
53:S2:638:C:C2	53:S2:639:C:C5	3.07	0.42
53:S2:672:A:N3	53:S2:672:A:O4'	2.50	0.42
53:S2:675:U:C2	53:S2:676:C:C6	3.07	0.42
53:S2:849:A:C2	53:S2:850:C:C4	3.07	0.42
53:S2:976:G:N2	53:S2:977:C:C2	2.87	0.42
53:S2:1032:C:C4	53:S2:1033:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1074:C:C2	53:S2:1075:C:H5	2.30	0.42
53:S2:1258:A:HO2'	53:S2:1259:A:P	2.42	0.42
53:S2:1275:G:H5'	53:S2:1276:A:H5''	2.01	0.42
53:S2:1287:A:C2	53:S2:1313:A:C5	3.07	0.42
53:S2:1315:U:C4	53:S2:1316:C:C2	3.07	0.42
53:S2:1343:U:C2	53:S2:1344:A:C8	3.07	0.42
53:S2:1394:G:N3	53:S2:1394:G:C2'	2.81	0.42
53:S2:1398:G:N2	53:S2:1399:C:N1	2.67	0.42
53:S2:1409:A:C8	53:S2:1409:A:O5'	2.72	0.42
53:S2:1559:C:N3	53:S2:1560:U:H1'	2.34	0.42
53:S2:1647:A:H4'	53:S2:1648:G:O5'	2.19	0.42
53:S2:1740:C:C2	53:S2:1741:U:C5	3.07	0.42
53:S2:1771:G:C2	53:S2:1772:C:C2	3.07	0.42
54:SA:39:TYR:C	54:SA:39:TYR:CD1	2.97	0.42
58:SG:70:HIS:N	58:SG:70:HIS:ND1	2.67	0.42
58:SG:211:LYS:O	58:SG:215:LYS:N	2.45	0.42
63:SN:105:ASN:N	63:SN:105:ASN:OD1	2.52	0.42
67:SX:5:ARG:HA	67:SX:5:ARG:HD3	1.95	0.42
71:Se:45:VAL:O	71:Se:46:VAL:C	2.62	0.42
79:SS:123:LEU:O	79:SS:127:TRP:CD1	2.72	0.42
86:Sg:152:SER:OG	86:Sg:195:LEU:O	2.37	0.42
87:S1:6:THR:O	87:S1:51:TYR:HE1	1.99	0.42
1:A:53:GLY:HA2	1:A:192:LYS:HD3	2.01	0.42
1:A:242:ARG:HH11	1:A:242:ARG:CB	2.31	0.42
2:D:66:TYR:C	2:D:66:TYR:HD1	2.27	0.42
3:G:53:ARG:CB	3:G:54:PHE:CE2	3.02	0.42
6:L:9:ILE:HD13	6:L:9:ILE:HA	1.93	0.42
7:M:3:PHE:HB2	7:M:6:PHE:CE2	2.53	0.42
14:U:23:LEU:HA	14:U:110:TYR:O	2.19	0.42
16:X:155:ILE:O	16:X:156:ILE:CB	2.66	0.42
18:Z:36:ARG:C	18:Z:38:TYR:H	2.27	0.42
21:c:79:ILE:O	21:c:81:LEU:N	2.52	0.42
21:c:101:ASP:CG	63:SN:42:LYS:HG2	2.44	0.42
25:g:95:PHE:HB3	25:g:96:LEU:HD23	2.01	0.42
26:h:110:LYS:NZ	32:5:111:C:OP1	2.45	0.42
32:5:92:C:O2	32:5:92:C:C2'	2.63	0.42
32:5:187:U:H5	32:5:245:C:C4	2.36	0.42
32:5:208:A:C6	32:5:233:U:C2	3.07	0.42
32:5:330:G:N2	32:5:331:G:C8	2.84	0.42
32:5:482:G:C2	32:5:483:G:C4	3.06	0.42
32:5:707:C:C2'	32:5:4944:C:N4	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:739:G:C6	32:5:740:G:C5	3.07	0.42
32:5:963:G:N3	32:5:963:G:C2'	2.81	0.42
32:5:1086:C:H1'	32:5:1212:G:N2	2.33	0.42
32:5:1341:U:H2'	32:5:1342:A:H8	1.84	0.42
32:5:1397:A:C2	32:5:1499:C:O4'	2.72	0.42
32:5:1400:G:C2	32:5:1418:C:O2	2.72	0.42
32:5:1404:G:C2	32:5:1414:C:C4	3.06	0.42
32:5:1449:C:N3	32:5:1450:C:C5	2.87	0.42
32:5:1583:A:C2	32:5:1584:G:H1'	2.54	0.42
32:5:1627:G:C6	32:5:1628:C:C2	3.07	0.42
32:5:1676:C:N4	32:5:4374:U:C2	2.87	0.42
32:5:1756:U:H2'	32:5:1757:U:O4'	2.19	0.42
32:5:1777:C:C2	32:5:1778:C:C5	3.07	0.42
32:5:1887:G:N3	32:5:1887:G:H2'	2.34	0.42
32:5:1888:A:N6	32:5:3873:G:O2'	2.50	0.42
32:5:1899:G:H2'	32:5:1900:C:H6	1.85	0.42
32:5:1934:A:N7	32:5:2048:U:H1'	2.34	0.42
32:5:1942:A:C2	32:5:4433:G:H1'	2.54	0.42
32:5:1966:C:O2	32:5:1966:C:C2'	2.67	0.42
32:5:2090:U:O2	32:5:2090:U:OP2	2.37	0.42
32:5:2308:A:N3	34:8:19:C:O2'	2.45	0.42
32:5:2364:G:N3	32:5:2365:C:C5	2.87	0.42
32:5:2435:G:N2	32:5:2783:A:H1'	2.33	0.42
32:5:2639:U:H2'	32:5:2694:G:N1	2.34	0.42
32:5:2715:G:C2	32:5:2716:C:C2	3.07	0.42
32:5:2823:G:N1	32:5:2824:C:C4	2.87	0.42
32:5:2852:U:O2	32:5:2852:U:C3'	2.67	0.42
32:5:2908:U:C2	32:5:2909:C:C6	3.07	0.42
32:5:3638:G:C6	32:5:3651:A:C2	3.07	0.42
32:5:3700:C:O2'	32:5:3774:A:N3	2.44	0.42
32:5:3724:A:N1	32:5:3725:G:C4	2.87	0.42
32:5:3821:A:C6	32:5:3822:U:C6	3.08	0.42
32:5:3871:A:C2'	32:5:3872:A:O5'	2.67	0.42
32:5:3889:G:H4'	32:5:3890:A:OP1	2.19	0.42
32:5:3907:G:H5''	32:5:4448:G:H5''	2.02	0.42
32:5:3945:A:N1	32:5:3946:G:C5	2.87	0.42
32:5:4091:G:C6	32:5:4092:G:C8	3.07	0.42
32:5:4126:C:H3'	32:5:4127:A:C5'	2.49	0.42
32:5:4151:G:C2	32:5:4152:G:N7	2.86	0.42
32:5:4592:C:N3	32:5:4593:C:C5	2.87	0.42
32:5:4628:U:O4'	35:B:55:HIS:NE2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4723:A:C2	32:5:4724:A:N7	2.87	0.42
32:5:4877:G:O2'	32:5:4878:C:O5'	2.34	0.42
33:7:19:C:C4	33:7:60:G:N1	2.87	0.42
34:8:2:G:H2'	34:8:2:G:N3	2.34	0.42
34:8:106:G:C2'	34:8:107:C:O5'	2.67	0.42
35:B:46:PHE:CE2	35:B:207:VAL:HG13	2.54	0.42
35:B:100:ARG:HB3	35:B:100:ARG:NH1	2.33	0.42
39:I:21:ARG:HD3	39:I:22:PHE:CE2	2.55	0.42
42:j:39:TYR:O	42:j:40:PRO:C	2.58	0.42
48:z:44:VAL:HG22	48:z:261:SER:OG	2.19	0.42
48:z:273:ILE:HB	48:z:285:PHE:CE1	2.54	0.42
48:z:412:VAL:HA	50:4:195:U:H4'	2.01	0.42
50:4:59:A:N6	50:4:60:U:C4	2.87	0.42
53:S2:66:G:N7	53:S2:68:A:N7	2.67	0.42
53:S2:70:G:N1	53:S2:71:G:C4	2.87	0.42
53:S2:478:G:N3	53:S2:479:C:C6	2.87	0.42
53:S2:599:A:H2'	53:S2:606:G:N2	2.34	0.42
53:S2:604:A:N1	53:S2:605:A:C6	2.87	0.42
53:S2:636:C:O2	53:S2:636:C:H2'	2.18	0.42
53:S2:818:A:C2	53:S2:819:G:H1'	2.54	0.42
53:S2:875:A:H2'	53:S2:876:C:H5''	2.00	0.42
53:S2:1167:G:O6	53:S2:1193:U:C2	2.73	0.42
53:S2:1223:A:O2'	53:S2:1651:A:H4'	2.19	0.42
53:S2:1293:A:H62	85:Sf:139:HIS:CA	2.32	0.42
53:S2:1296:U:C4	53:S2:1297:U:C4	3.07	0.42
53:S2:1466:G:C2	53:S2:1467:C:C2	3.07	0.42
53:S2:1559:C:C2	53:S2:1577:G:C2	3.07	0.42
53:S2:1658:G:C5	53:S2:1659:U:C6	3.06	0.42
53:S2:1710:C:N3	53:S2:1711:U:H5	2.11	0.42
53:S2:1757:G:C2	53:S2:1758:G:N7	2.87	0.42
57:SE:121:TYR:CD2	57:SE:122:LYS:N	2.87	0.42
60:SI:72:CYS:HB3	60:SI:112:TRP:CZ2	2.55	0.42
60:SI:76:THR:HG21	60:SI:105:ASP:O	2.18	0.42
61:SJ:159:PHE:CE1	61:SJ:165:TYR:HD2	2.37	0.42
64:SO:41:PHE:N	64:SO:41:PHE:HD1	2.18	0.42
66:SW:85:ASP:OD1	66:SW:85:ASP:N	2.52	0.42
76:SP:30:TYR:CD1	76:SP:31:GLU:N	2.88	0.42
81:SU:48:LEU:CD1	81:SU:91:LEU:HD22	2.49	0.42
82:SZ:79:ILE:HG23	82:SZ:84:ALA:HB2	2.01	0.42
83:Sc:11:LEU:CB	83:Sc:55:VAL:HG11	2.46	0.42
86:Sg:60:ARG:HA	86:Sg:60:ARG:NE	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
88:S4:30:LEU:HD13	88:S4:58:LEU:HD13	2.00	0.42
1:A:120:PRO:HA	1:A:162:ASN:HB3	2.02	0.42
2:D:56:THR:HG21	33:7:26:C:H5'	2.01	0.42
5:J:146:ARG:HG2	5:J:147:ARG:N	2.34	0.42
6:L:76:PHE:CE2	6:L:117:LEU:HG	2.55	0.42
6:L:176:PHE:HD1	6:L:177:LYS:N	2.18	0.42
7:M:17:PHE:CD1	32:5:1921:C:C5	3.02	0.42
7:M:39:ASP:OD2	7:M:70:GLN:NE2	2.52	0.42
10:Q:24:TYR:HE1	45:r:5:LEU:HD11	1.85	0.42
12:S:47:PHE:CE1	12:S:125:GLN:HG2	2.52	0.42
13:T:19:PHE:C	13:T:21:LYS:N	2.75	0.42
14:U:90:TYR:O	14:U:93:LYS:N	2.53	0.42
25:g:13:TYR:HE2	32:5:2513:A:H62	1.66	0.42
32:5:102:G:N3	32:5:103:G:C8	2.87	0.42
32:5:210:C:H6	32:5:210:C:O5'	2.03	0.42
32:5:228:C:C2'	32:5:229:G:H5'	2.49	0.42
32:5:268:G:C4	32:5:269:G:C8	3.08	0.42
32:5:293:G:O2'	32:5:297:U:O4'	2.36	0.42
32:5:341:G:H2'	32:5:342:G:H5'	2.00	0.42
32:5:652:G:C2	32:5:653:U:H1'	2.54	0.42
32:5:718:C:N3	32:5:719:C:C6	2.88	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
32:5:931:C:C6	32:5:932:A:N7	2.88	0.42
32:5:1084:C:C2	32:5:1085:C:C5	3.08	0.42
32:5:1091:C:C4	32:5:1092:G:N7	2.87	0.42
32:5:1199:G:C4	32:5:1200:G:C8	3.08	0.42
32:5:1273:G:C8	37:E:69:TYR:C	2.97	0.42
32:5:1277:G:N2	32:5:1278:C:N1	2.67	0.42
32:5:1291:G:C6	32:5:1292:C:N4	2.88	0.42
32:5:1357:C:HO2'	32:5:1506:G:H4'	1.84	0.42
32:5:1360:G:C2	32:5:1361:G:H1'	2.55	0.42
32:5:1370:G:O3'	32:5:1371:A:C4'	2.68	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'	2.35	0.42
32:5:1667:G:H1'	32:5:2283:G:H22	1.83	0.42
32:5:1760:G:C6	32:5:1761:G:C5	3.07	0.42
32:5:1836:G:N2	32:5:1837:A:C8	2.87	0.42
32:5:1996:C:C4	32:5:1997:U:H1'	2.53	0.42
32:5:2008:U:N3	32:5:2010:A:OP2	2.52	0.42
32:5:2069:A:C5	32:5:2071:A:C8	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2264:C:O2'	32:5:2265:G:O5'	2.27	0.42
32:5:2314:G:C2	32:5:2326:G:C8	3.07	0.42
32:5:2318:G:N1	32:5:2322:G:C2	2.88	0.42
32:5:2326:G:C2	32:5:2327:G:C4	3.07	0.42
32:5:2461:G:N2	32:5:2462:C:C4	2.88	0.42
32:5:2509:C:O2'	32:5:2510:G:P	2.77	0.42
32:5:2509:C:O2	32:5:2510:G:C8	2.73	0.42
32:5:2867:C:O2	32:5:2867:C:H2'	2.18	0.42
32:5:3635:A:N6	32:5:3636:C:N1	2.68	0.42
32:5:3656:A:C6	32:5:3657:U:C5	3.07	0.42
32:5:3694:U:O2	32:5:3695:U:C6	2.73	0.42
32:5:3730:U:O2	32:5:3730:U:H2'	2.18	0.42
32:5:4156:G:OP2	32:5:4157:A:O2'	2.30	0.42
32:5:4273:A:N6	32:5:4335:C:N4	2.67	0.42
32:5:4292:A:O4'	32:5:4330:G:C1'	2.67	0.42
32:5:4313:A:C6	32:5:4314:C:C6	3.07	0.42
32:5:4504:C:O2	32:5:4505:C:C6	2.73	0.42
32:5:4511:A:H2'	32:5:4512:U:C1'	2.49	0.42
32:5:4536:C:N4	32:5:4537:C:N4	2.67	0.42
32:5:4563:U:C2	32:5:4564:A:C5	3.06	0.42
32:5:4595:G:C4	32:5:4596:C:C6	3.08	0.42
32:5:4600:G:C2	32:5:4609:G:C5	3.08	0.42
32:5:4916:G:C4	32:5:4917:C:C6	3.07	0.42
32:5:4997:G:N3	32:5:4997:G:H2'	2.35	0.42
32:5:5017:G:C4	32:5:5018:C:C6	3.08	0.42
38:F:168:ARG:CD	38:F:211:TRP:CD1	3.01	0.42
39:I:35:ASP:HB2	39:I:86:HIS:HE1	1.85	0.42
48:z:52:LEU:HD12	48:z:86:LEU:CD1	2.49	0.42
48:z:133:CYS:SG	48:z:184:PHE:CD2	3.11	0.42
48:z:223:ALA:HB2	48:z:250:LEU:HD23	2.02	0.42
49:3:9:A:H62	49:3:23:C:H5	1.67	0.42
51:9:85:GLN:NE2	51:9:94:CYS:SG	2.93	0.42
53:S2:196:C:C2	53:S2:204:G:N2	2.87	0.42
53:S2:212:C:C2	53:S2:213:G:C8	3.08	0.42
53:S2:445:A:C5	53:S2:446:G:C4	3.07	0.42
53:S2:499:G:N2	53:S2:504:G:C6	2.88	0.42
53:S2:534:G:N3	53:S2:535:G:C8	2.87	0.42
53:S2:617:G:C2	53:S2:618:C:H1'	2.55	0.42
53:S2:803:C:N3	53:S2:804:U:C6	2.88	0.42
53:S2:862:A:C6	53:S2:863:U:C4	3.05	0.42
53:S2:867:G:H3'	53:S2:868:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:929:G:C2	53:S2:930:C:C2	3.08	0.42
53:S2:947:G:H2'	53:S2:948:C:O4'	2.20	0.42
53:S2:993:G:C2	53:S2:994:C:C2	3.07	0.42
53:S2:1072:U:C5	53:S2:1073:U:C5	3.08	0.42
53:S2:1145:A:C6	53:S2:1146:C:H1'	2.55	0.42
53:S2:1154:U:O4'	53:S2:1156:U:N3	2.53	0.42
53:S2:1255:G:OP1	53:S2:1256:G:H1'	2.20	0.42
53:S2:1307:U:H2'	53:S2:1308:U:C1'	2.49	0.42
53:S2:1325:G:C2	53:S2:1327:G:C5	3.07	0.42
53:S2:1466:G:C6	53:S2:1467:C:C4	3.07	0.42
53:S2:1526:G:N2	53:S2:1527:C:N1	2.66	0.42
53:S2:1531:A:H2'	53:S2:1532:C:C6	2.55	0.42
53:S2:1605:G:O5'	53:S2:1606:G:OP2	2.37	0.42
53:S2:1731:A:C2	53:S2:1732:G:C4	3.07	0.42
53:S2:1807:C:H2'	53:S2:1808:U:O4'	2.19	0.42
54:SA:117:ARG:C	54:SA:119:PRO:HD3	2.45	0.42
55:SB:134:LEU:HB3	55:SB:218:LEU:HD12	2.00	0.42
55:SB:137:LEU:CD1	55:SB:176:VAL:HG21	2.45	0.42
57:SE:28:ALA:HB1	57:SE:29:PRO:CD	2.49	0.42
57:SE:181:CYS:SG	57:SE:195:ILE:HG13	2.60	0.42
60:SI:34:ALA:HB2	60:SI:56:ARG:HD3	2.01	0.42
65:SV:65:SER:O	65:SV:69:ILE:N	2.53	0.42
73:SF:91:ARG:HD2	73:SF:91:ARG:HA	1.72	0.42
75:SM:19:GLN:HG2	75:SM:88:TRP:HB2	2.00	0.42
78:SR:88:VAL:CG2	78:SR:91:LEU:HD23	2.49	0.42
79:SS:25:LYS:HB3	79:SS:28:PHE:HD1	1.84	0.42
80:ST:78:ILE:HG23	80:ST:79:TYR:CD1	2.54	0.42
83:Sc:34:PHE:O	83:Sc:35:MET:CB	2.62	0.42
86:Sg:245:ARG:CD	86:Sg:247:TRP:CZ3	2.95	0.42
1:A:233:ARG:O	1:A:235:VAL:N	2.53	0.42
2:D:107:ARG:NH2	2:D:116:ASP:OD1	2.53	0.42
2:D:223:PHE:N	2:D:223:PHE:CD1	2.87	0.42
2:D:267:ASN:HD21	33:7:59:G:H4'	1.84	0.42
4:H:180:TYR:N	4:H:180:TYR:HD2	2.18	0.42
5:J:31:ASP:O	5:J:32:ARG:HB2	2.19	0.42
6:L:83:VAL:HG11	6:L:114:VAL:HG21	2.00	0.42
8:N:181:HIS:ND1	32:5:99:A:H4'	2.34	0.42
9:O:108:ILE:HD11	9:O:117:ARG:HE	1.83	0.42
9:O:109:PRO:N	32:5:4910:G:H22	2.16	0.42
10:Q:4:ASP:OD1	38:F:117:ARG:O	2.37	0.42
10:Q:166:TYR:CD1	10:Q:166:TYR:N	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:R:163:ARG:HD2	53:S2:871:U:H2'	2.01	0.42
15:V:99:GLU:CG	41:W:21:TYR:OH	2.67	0.42
18:Z:76:ASN:HB2	18:Z:79:HIS:CD2	2.54	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
26:h:89:ARG:CA	26:h:92:ARG:HH21	2.33	0.42
28:k:11:PHE:C	28:k:11:PHE:CD1	2.97	0.42
29:l:28:ARG:NH1	32:5:412:G:N2	2.67	0.42
32:5:40:G:C2	32:5:4378:A:N7	2.87	0.42
32:5:89:C:N3	32:5:96:U:O2	2.52	0.42
32:5:158:A:N6	32:5:277:G:C4	2.87	0.42
32:5:182:G:H2'	32:5:182:G:N3	2.34	0.42
32:5:199:G:H2'	32:5:237:G:O2'	2.20	0.42
32:5:460:C:H2'	32:5:461:G:H8	1.84	0.42
32:5:506:C:H2'	32:5:507:G:H8	1.84	0.42
32:5:515:C:C2	32:5:647:G:N2	2.88	0.42
32:5:1281:G:H1'	36:C:322:LEU:N	2.35	0.42
32:5:1289:C:OP1	37:E:130:SER:HB3	2.19	0.42
32:5:1349:G:N2	32:5:1350:C:C2	2.87	0.42
32:5:1362:G:N2	32:5:1363:C:C2	2.88	0.42
32:5:1401:C:H2'	32:5:1402:C:C6	2.55	0.42
32:5:1404:G:C5	32:5:1405:C:C5	3.07	0.42
32:5:1490:G:C4	32:5:1491:A:C8	3.08	0.42
32:5:1537:A:H2'	32:5:1538:U:O4'	2.19	0.42
32:5:1603:C:H2'	32:5:1604:G:C8	2.55	0.42
32:5:1627:G:C4	32:5:1628:C:C6	3.06	0.42
32:5:1749:A:C2	32:5:1750:G:C4	3.08	0.42
32:5:1964:A:C4	32:5:1965:G:C8	3.08	0.42
32:5:2312:U:O2	32:5:2312:U:C2'	2.65	0.42
32:5:2340:C:O2	32:5:2340:C:C2'	2.57	0.42
32:5:2385:U:C2	32:5:2386:U:C5	3.06	0.42
32:5:2438:A:N6	32:5:2441:C:C6	2.88	0.42
32:5:2457:G:N2	32:5:3672:G:N2	2.68	0.42
32:5:2793:G:C2	32:5:2797:C:C2	3.08	0.42
32:5:3587:C:H2'	32:5:3588:C:C6	2.54	0.42
32:5:3654:G:N3	32:5:3654:G:H2'	2.33	0.42
32:5:3694:U:O2	32:5:3694:U:H2'	2.20	0.42
32:5:3724:A:C5	32:5:3725:G:N7	2.88	0.42
32:5:3733:A:C4	32:5:3734:U:C5	3.08	0.42
32:5:3845:A:C6	32:5:3846:C:C6	3.07	0.42
32:5:3911:C:O2	32:5:3912:U:C6	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4099:G:C6	32:5:4100:C:C5	3.07	0.42
32:5:4240:G:C2	32:5:4241:C:C6	3.07	0.42
32:5:4293:U:N3	32:5:4294:C:C5	2.88	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
32:5:4597:U:H2'	32:5:4598:C:O4'	2.19	0.42
32:5:4598:C:H2'	32:5:4611:A:H61	1.84	0.42
32:5:4600:G:O2'	32:5:4601:U:OP2	2.37	0.42
32:5:4619:U:C4	32:5:4620:U:C5	3.08	0.42
32:5:4960:G:C2'	32:5:4961:G:H5'	2.49	0.42
32:5:4982:A:N1	32:5:4983:C:N1	2.64	0.42
32:5:4986:G:H2'	32:5:4987:C:O5'	2.19	0.42
34:8:78:G:C4	34:8:79:G:C8	3.07	0.42
34:8:118:C:C4	34:8:119:C:C5	3.04	0.42
34:8:135:C:O2	34:8:136:U:C6	2.73	0.42
34:8:137:A:N3	34:8:137:A:H2'	2.35	0.42
35:B:321:VAL:O	35:B:322:HIS:HB3	2.20	0.42
40:P:62:ARG:HG2	40:P:63:TYR:CE1	2.54	0.42
46:K:65:GLN:O	46:K:66:ASN:OD1	2.38	0.42
48:z:273:ILE:O	48:z:282:PHE:HA	2.19	0.42
49:3:15:G:N1	49:3:59:A:C2	2.88	0.42
49:3:75:C:C3'	49:3:75:C:H6	2.32	0.42
50:4:53:U:C2	50:4:54:G:C8	3.07	0.42
50:4:289:A:H8	50:4:289:A:O5'	2.02	0.42
50:4:166:U:C5	52:6:142:ARG:NH2	2.87	0.42
50:4:172:A:C6	50:4:173:A:N6	2.88	0.42
53:S2:54:A:C2	53:S2:451:G:N3	2.87	0.42
53:S2:74:G:O6	58:SG:171:THR:N	2.52	0.42
53:S2:78:C:H2'	53:S2:79:A:H4'	2.01	0.42
53:S2:86:C:C4	53:S2:87:U:C4	3.07	0.42
53:S2:294:U:O4	62:SL:14:PRO:HB2	2.19	0.42
53:S2:311:C:C2	53:S2:312:G:C1'	3.00	0.42
53:S2:358:C:N3	53:S2:359:U:C5	2.87	0.42
53:S2:384:U:C6	53:S2:386:C:H5	2.38	0.42
53:S2:431:G:N2	53:S2:432:G:C4	2.88	0.42
53:S2:445:A:H2'	53:S2:446:G:C4'	2.48	0.42
53:S2:497:C:O2'	53:S2:498:C:H5'	2.19	0.42
53:S2:600:G:C6	53:S2:631:U:C4	3.05	0.42
53:S2:678:U:C4	53:S2:679:A:N7	2.87	0.42
53:S2:925:G:C6	53:S2:926:A:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:949:G:C2	53:S2:950:C:N1	2.87	0.42
53:S2:1250:A:N3	53:S2:1339:U:O3'	2.52	0.42
53:S2:1256:G:N7	84:Sd:40:ARG:HD2	2.34	0.42
53:S2:1259:A:O2'	53:S2:1263:U:O2	2.37	0.42
53:S2:1268:C:H2'	53:S2:1269:G:C5'	2.49	0.42
53:S2:1293:A:N6	85:Sf:140:TYR:N	2.67	0.42
53:S2:1339:U:O2	53:S2:1340:U:C5	2.72	0.42
53:S2:1439:A:O2'	53:S2:1440:C:H5'	2.20	0.42
53:S2:1520:G:OP1	79:SS:135:HIS:HB3	2.20	0.42
53:S2:1573:G:C2	53:S2:1574:C:N1	2.87	0.42
53:S2:1731:A:C4	53:S2:1732:G:C8	3.07	0.42
54:SA:200:ASP:OD1	78:SR:89:SER:CA	2.65	0.42
55:SB:27:LYS:C	55:SB:51:ARG:NH1	2.78	0.42
55:SB:85:LYS:HG3	55:SB:102:GLY:HA3	2.01	0.42
59:SH:43:LEU:HD21	59:SH:71:SER:HB3	2.01	0.42
59:SH:184:ASP:OD1	59:SH:184:ASP:N	2.53	0.42
73:SF:123:GLU:HG2	83:Sc:59:LEU:HG	1.72	0.42
73:SF:152:TRP:O	73:SF:153:LEU:C	2.63	0.42
78:SR:79:GLU:OE1	78:SR:80:ARG:N	2.53	0.42
78:SR:88:VAL:HB	78:SR:91:LEU:CG	2.47	0.42
79:SS:135:HIS:CD2	79:SS:135:HIS:N	2.87	0.42
81:SU:61:LEU:HB3	84:Sd:34:TYR:CE2	2.55	0.42
82:SZ:56:ASP:O	82:SZ:60:LYS:CB	2.68	0.42
86:Sg:162:ASN:OD1	86:Sg:178:ASN:ND2	2.52	0.42
1:A:40:TYR:CE2	32:5:4118:U:N3	2.88	0.42
2:D:30:TYR:CB	2:D:33:ARG:HB2	2.49	0.42
2:D:54:ARG:HH21	33:7:6:C:H5''	1.85	0.42
2:D:223:PHE:N	2:D:223:PHE:HD1	2.18	0.42
3:G:58:PRO:CG	16:X:46:PHE:HD2	2.33	0.42
11:R:95:TRP:HZ3	11:R:98:ARG:HH21	1.67	0.42
13:T:142:ARG:HA	38:F:82:ASN:HD21	1.85	0.42
15:V:57:VAL:HG21	15:V:88:TYR:HE2	1.83	0.42
19:a:80:THR:O	19:a:81:LEU:C	2.63	0.42
19:a:89:ASN:O	19:a:90:ALA:HB3	2.19	0.42
20:b:17:HIS:CD2	20:b:21:ILE:HD12	2.55	0.42
21:c:99:PRO:HG3	21:c:105:ILE:HD12	2.00	0.42
23:e:118:LEU:CD1	23:e:120:ILE:HD12	2.49	0.42
24:f:16:ARG:HD3	32:5:1916:G:C8	2.54	0.42
24:f:18:LEU:HG	24:f:19:ARG:HH22	1.85	0.42
26:h:62:ASN:HD22	34:8:97:A:H5'	1.84	0.42
27:i:58:MET:HE3	27:i:94:LEU:HD13	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:i:63:VAL:O	27:i:63:VAL:HG12	2.19	0.42
32:5:262:G:C2	32:5:263:G:N9	2.87	0.42
32:5:396:A:C2	32:5:397:G:C8	3.07	0.42
32:5:512:U:C2'	32:5:513:U:H5''	2.50	0.42
32:5:663:G:H3'	32:5:664:G:C5'	2.49	0.42
32:5:975:C:H2'	32:5:976:G:O4'	2.19	0.42
32:5:985:C:C2	32:5:986:C:C5	3.07	0.42
32:5:1077:C:O2	32:5:1077:C:H2'	2.19	0.42
32:5:1085:C:N3	32:5:1213:G:C6	2.88	0.42
32:5:1205:G:C4	32:5:1206:C:C5	3.08	0.42
32:5:1257:A:C5	32:5:1258:G:C8	3.07	0.42
32:5:1258:G:C2	32:5:1259:G:N9	2.87	0.42
32:5:1279:A:N3	32:5:1280:C:N3	2.68	0.42
32:5:1388:A:N6	32:5:1396:G:C2	2.81	0.42
32:5:1459:A:H2'	32:5:1460:C:O4'	2.20	0.42
32:5:1478:C:C2	32:5:1479:G:N7	2.67	0.42
32:5:1504:G:C2	32:5:1505:C:C2	3.07	0.42
32:5:1554:A:C6	32:5:1555:G:N9	2.88	0.42
32:5:1667:G:C4	32:5:2280:G:N2	2.87	0.42
32:5:1895:G:C4	32:5:1896:A:H1'	2.54	0.42
32:5:1964:A:C5	32:5:1965:G:N7	2.86	0.42
32:5:2399:G:C4	32:5:2400:G:C8	3.08	0.42
32:5:2426:U:O2'	32:5:2427:G:H5'	2.18	0.42
32:5:2457:G:C2	32:5:2465:C:C4	3.08	0.42
32:5:2598:A:N1	32:5:2748:C:N3	2.68	0.42
32:5:2606:G:H2'	32:5:2607:C:C6	2.55	0.42
32:5:2738:C:H1'	32:5:2740:U:C5	2.54	0.42
32:5:2787:A:N3	32:5:2787:A:H2'	2.33	0.42
32:5:2833:A:O2'	32:5:2834:C:O5'	2.37	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
32:5:3721:U:N3	32:5:3722:G:C8	2.88	0.42
32:5:3751:G:C5	32:5:3752:C:C5	3.08	0.42
32:5:3795:A:H4'	53:S2:1815:A:H1'	2.01	0.42
32:5:3814:U:H2'	32:5:3815:G:O5'	2.19	0.42
32:5:4097:G:C6	32:5:4098:A:N7	2.87	0.42
32:5:4269:G:H2'	32:5:4270:C:O4'	2.19	0.42
32:5:4326:G:C2	32:5:4327:C:C2	3.07	0.42
32:5:4509:U:O2	32:5:4510:A:O2'	2.36	0.42
32:5:4602:A:H3'	32:5:4603:C:C6	2.54	0.42
32:5:4737:G:N1	32:5:4963:G:N3	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4982:A:N6	32:5:4983:C:C4	2.87	0.42
32:5:5002:U:H4'	35:B:374:PHE:O	2.20	0.42
32:5:5047:C:C6	32:5:5050:C:H6	2.37	0.42
33:7:37:G:C2	33:7:38:U:C6	3.07	0.42
33:7:93:G:N1	33:7:94:C:C5	2.86	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
34:8:99: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:12:CYS:SG	39:I:57:TYR:CE2	3.13	0.42
39:I:171:TRP:HB2	39:I:181:PHE:CE2	2.52	0.42
48:z:368:SER:CB	48:z:477:UNK:H2	2.32	0.42
49:3:5:C:H2'	49:3:6:C:H6	1.84	0.42
50:4:45:G:C2	50:4:46:C:C2	3.07	0.42
50:4:51:G:C2	50:4:296:C:N3	2.87	0.42
53:S2:19:A:C6	53:S2:20:G:N7	2.88	0.42
53:S2:29:G:C5	53:S2:646:G:N3	2.88	0.42
53:S2:56:G:O2'	53:S2:57:U:O5'	2.38	0.42
53:S2:173:A:C6	53:S2:174:C:C4	3.08	0.42
53:S2:352:U:H2'	53:S2:353:C:C6	2.55	0.42
53:S2:357:C:O2	53:S2:358:C:C6	2.73	0.42
53:S2:418:A:H3'	53:S2:419:G:H8	1.84	0.42
53:S2:431:G:C2	53:S2:432:G:C5	3.08	0.42
53:S2:440:G:OP1	60:SI:24:LYS:HE3	2.20	0.42
53:S2:453:C:C2	53:S2:454:U:C5	3.08	0.42
53:S2:461:U:O2	53:S2:461:U:H2'	2.19	0.42
53:S2:507:G:P	68:SY:104:ARG:HH22	2.43	0.42
53:S2:511:U:O2'	53:S2:576:A:N6	2.52	0.42
53:S2:531:A:C2	53:S2:532:C:H1'	2.54	0.42
53:S2:793:G:N1	53:S2:794:A:C8	2.86	0.42
53:S2:917:U:O5'	53:S2:917:U:H6	2.02	0.42
53:S2:950:C:C4	53:S2:951:C:C5	3.07	0.42
53:S2:993:G:N1	53:S2:994:C:C4	2.87	0.42
53:S2:1173:A:H2'	53:S2:1174:U:O4'	2.18	0.42
53:S2:1174:U:N3	53:S2:1175:G:C8	2.87	0.42
53:S2:1292:C:H3'	85:Sf:150:PHE:CA	2.42	0.42
53:S2:1606:G:C4	53:S2:1632:G:N2	2.88	0.42
53:S2:1607:A:H1'	53:S2:1633:A:C6	2.54	0.42
53:S2:1679:A:O5'	53:S2:1679:A:H8	2.02	0.42
53:S2:1710:C:O2	53:S2:1710:C:H2'	2.18	0.42
53:S2:1749:G:O6	53:S2:1784:G:O6	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1809:A:H2'	53:S2:1810:U:O4'	2.19	0.42
53:S2:1852:C:O2	53:S2:1853:C:C6	2.72	0.42
55:SB:29:ASP:OD2	55:SB:51:ARG:HG3	2.19	0.42
56:SC:203:GLY:O	56:SC:221:ASP:HA	2.19	0.42
56:SC:255:LEU:O	56:SC:257:LYS:N	2.53	0.42
57:SE:68:ARG:NH1	57:SE:76:VAL:HG11	2.35	0.42
61:SJ:94:LEU:HD12	61:SJ:97:ILE:CD1	2.48	0.42
69:Sa:26:CYS:SG	69:Sa:28:ARG:HB3	2.59	0.42
78:SR:71:ILE:CG2	78:SR:72:LYS:N	2.82	0.42
86:Sg:125:ARG:CZ	86:Sg:150:TRP:CZ3	3.03	0.42
1:A:85:GLY:N	32:5:4121:G:H22	2.17	0.42
2:D:64:ILE:HG22	2:D:75:VAL:HG12	2.01	0.42
3:G:108:GLN:CG	32:5:143:C:O2	2.68	0.42
7:M:86:TRP:O	7:M:87:ALA:CB	2.67	0.42
9:O:125:LYS:HD3	9:O:126:VAL:N	2.35	0.42
10:Q:29:VAL:HG13	10:Q:33:ARG:NH2	2.31	0.42
12:S:81:TRP:CZ2	12:S:94:TYR:CD1	3.07	0.42
12:S:81:TRP:HE3	12:S:128:LYS:CD	2.33	0.42
19:a:29:PRO:O	32:5:39:A:N7	2.53	0.42
23:e:44:ARG:NH2	32:5:1312:A:O2'	2.53	0.42
24:f:28:LEU:HG	24:f:101:ILE:HD11	2.01	0.42
26:h:35:LYS:HA	26:h:44:LEU:HD21	2.02	0.42
26:h:70:ARG:NH1	32:5:134:G:C6	2.76	0.42
32:5:15:A:H2'	32:5:16:G:O4'	2.19	0.42
32:5:45:U:H2'	32:5:46:U:O5'	2.19	0.42
32:5:128:C:C2	32:5:129:C:C6	3.07	0.42
32:5:219:G:H8	32:5:220:C:C5	2.37	0.42
32:5:426:A:N1	32:5:427:A:C6	2.87	0.42
32:5:447:C:O2	32:5:448:G:C8	2.73	0.42
32:5:450:G:C6	32:5:1295:C:C4	3.07	0.42
32:5:1096:C:N3	32:5:1097:C:C5	2.87	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
32:5:1261:G:C2	32:5:1262:G:C4	3.08	0.42
32:5:1264:C:O2'	32:5:2114:G:P	2.78	0.42
32:5:1343:A:C5	32:5:1344:C:C5	3.07	0.42
32:5:1554:A:N6	32:5:1573:G:H1'	2.35	0.42
32:5:1671:U:N3	32:5:1672:U:C5	2.60	0.42
32:5:1685:G:C2	32:5:1686:C:N3	2.87	0.42
32:5:1750:G:N2	32:5:1751:A:N9	2.67	0.42
32:5:1761:G:N2	32:5:1762:C:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1786:A:H2'	32:5:1789:C:C5	2.55	0.42
32:5:1827:C:N3	32:5:1828:C:C5	2.88	0.42
32:5:1828:C:N3	32:5:1829:G:N7	2.67	0.42
32:5:1927:U:H4'	32:5:2035:C:H2'	2.01	0.42
32:5:1948:G:C2	32:5:1949:U:C6	3.08	0.42
32:5:2270:G:C2	32:5:2271:C:C6	3.07	0.42
32:5:2480:G:N3	32:5:2481:G:C8	2.88	0.42
32:5:2590:G:C2	32:5:2756:G:O6	2.73	0.42
32:5:2632:U:N3	32:5:2633:U:C4	2.88	0.42
32:5:3610:A:H2'	32:5:3611:A:H8	1.85	0.42
32:5:3721:U:O2	32:5:3721:U:C2'	2.63	0.42
32:5:3779:A:C2	32:5:3816:A:C6	3.07	0.42
32:5:3795:A:C4	32:5:3796:U:C5	3.08	0.42
32:5:3814:U:H6	32:5:3814:U:O5'	2.02	0.42
32:5:3887:C:O2	32:5:3887:C:H2'	2.19	0.42
32:5:3923:A:C4	32:5:4381:A:C8	3.07	0.42
32:5:4085:A:C6	32:5:4164:C:C6	3.07	0.42
32:5:4099:G:C4	32:5:4100:C:C5	3.07	0.42
32:5:4101:C:N3	32:5:4102:C:C6	2.87	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
32:5:4683:U:C2'	32:5:4684:A:O5'	2.68	0.42
32:5:4966:A:C2'	32:5:4967:A:O4'	2.63	0.42
32:5:4981:G:C4	32:5:4982:A:C8	3.06	0.42
33:7:34:C:C2	33:7:35:U:C5	3.07	0.42
34:8:101:C:O2	34:8:101:C:C2'	2.62	0.42
34:8:149:G:C2	34:8:151:G:C5	3.08	0.42
36:C:195:LYS:HA	36:C:200:ARG:HA	2.01	0.42
36:C:253:THR:O	36:C:254:GLU:C	2.63	0.42
39:I:99:ILE:HG13	39:I:100:ASN:O	2.20	0.42
40:P:52:THR:HG23	40:P:85:LYS:HG3	2.01	0.42
48:z:36:CYS:HB2	48:z:49:VAL:HG13	2.02	0.42
48:z:409:GLY:HA3	50:4:207:C:H1'	1.98	0.42
49:3:26:G:C4	49:3:27:U:C6	3.08	0.42
50:4:49:A:C6	50:4:50:G:C5	3.07	0.42
53:S2:12:U:C4	53:S2:13:C:N4	2.87	0.42
53:S2:23:G:O2'	53:S2:416:U:OP1	2.29	0.42
53:S2:62:G:C1'	53:S2:172:U:O2	2.67	0.42
53:S2:316:G:N2	53:S2:317:C:N3	2.66	0.42
53:S2:340:C:H2'	53:S2:341:C:O4'	2.19	0.42
53:S2:636:C:N4	53:S2:637:U:C4	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:663:C:C2	53:S2:664:A:C8	3.07	0.42
53:S2:862:A:C8	66:SW:107:SER:HA	2.54	0.42
53:S2:931:C:H2'	53:S2:932:G:C8	2.54	0.42
53:S2:1182:A:C8	53:S2:1183:A:C1'	3.03	0.42
53:S2:1190:A:H2'	53:S2:1191:C:C5'	2.50	0.42
53:S2:1193:U:C5	67:SX:110:HIS:CE1	3.07	0.42
53:S2:1291:A:H8	85:Sf:146:LEU:HB2	1.85	0.42
53:S2:1292:C:C5	85:Sf:141:CYS:HB3	2.55	0.42
53:S2:1299:A:H2'	53:S2:1301:A:H5'	2.01	0.42
53:S2:1391:C:C4	53:S2:1392:U:C6	3.07	0.42
53:S2:1404:U:H5''	53:S2:1581:C:O2	2.19	0.42
53:S2:1595:U:N3	53:S2:1596:U:C6	2.77	0.42
53:S2:1751:C:H2'	53:S2:1751:C:O2	2.19	0.42
53:S2:1777:G:H2'	53:S2:1778:C:O4'	2.20	0.42
54:SA:120:ARG:HH12	56:SC:267:GLN:HA	1.84	0.42
62:SL:11:GLN:C	62:SL:56:ILE:HD13	2.44	0.42
68:SY:37:LYS:HA	68:SY:40:ILE:HG22	2.00	0.42
72:SD:162:ASP:O	72:SD:163:PRO:C	2.63	0.42
72:SD:193:ASP:HB3	72:SD:194:PRO:CD	2.49	0.42
83:Sc:14:VAL:CG1	83:Sc:31:ARG:HB3	2.46	0.42
85:Sf:147:THR:C	85:Sf:148:TYR:HD1	2.28	0.42
86:Sg:226:HIS:ND1	86:Sg:226:HIS:C	2.78	0.42
1:A:40:TYR:HD1	32:5:4117:U:H3	1.57	0.42
1:A:178:PRO:HD2	44:p:26:VAL:HG22	2.00	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	2.19	0.42
8:N:93:LYS:HB3	32:5:300:A:O2'	2.19	0.42
9:O:48:TYR:O	9:O:49:ARG:C	2.63	0.42
9:O:109:PRO:HA	32:5:4910:G:N2	2.34	0.42
11:R:165:LYS:HD3	53:S2:907:G:OP2	2.19	0.42
13:T:105:PHE:CD2	32:5:1802:A:H5'	2.55	0.42
15:V:30:ASP:OD1	15:V:104:VAL:HG12	2.20	0.42
21:c:27:TYR:N	21:c:27:TYR:CD1	2.87	0.42
32:5:17:A:C2	32:5:18:C:H1'	2.55	0.42
32:5:98:A:C5	32:5:99:A:N9	2.88	0.42
32:5:158:A:C5	32:5:277:G:N1	2.88	0.42
32:5:243:A:N6	32:5:244:G:C6	2.88	0.42
32:5:262:G:N1	32:5:263:G:C5	2.88	0.42
32:5:294:G:HO2'	32:5:295:A:P	2.28	0.42
32:5:385:A:C2	32:5:386:A:N7	2.88	0.42
32:5:423:G:H1'	40:P:120:ASN:OD1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:457:G:N2	32:5:458:C:N1	2.67	0.42
32:5:465:G:N2	32:5:466:A:H1'	2.34	0.42
32:5:481:G:N1	32:5:482:G:C5	2.88	0.42
32:5:949:G:N2	32:5:950:G:C4	2.88	0.42
32:5:952:G:H5'	32:5:952:G:H8	1.83	0.42
32:5:966:A:N6	32:5:2252:G:C8	2.86	0.42
32:5:1068:G:N1	32:5:1069:G:C5	2.88	0.42
32:5:1075:G:N1	32:5:1076:C:C4	2.88	0.42
32:5:1185:G:C2	32:5:1186:U:H1'	2.55	0.42
32:5:1214:C:OP1	32:5:1215:C:O2'	2.19	0.42
32:5:1233:G:C2	32:5:1234:G:C5	3.08	0.42
32:5:1379:C:H4'	32:5:1380:G:N9	2.28	0.42
32:5:1584:G:C2	32:5:1585:C:N1	2.87	0.42
32:5:1634:A:C5	32:5:1635:C:H5	2.32	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
32:5:1789:C:H2'	32:5:1790:U:O5'	2.20	0.42
32:5:1879:C:H2'	32:5:1880:G:O5'	2.20	0.42
32:5:1899:G:H22	32:5:2076:G:H22	1.68	0.42
32:5:1921:C:O2'	32:5:1922:G:OP1	2.31	0.42
32:5:2276:A:H3'	32:5:2277:C:H6	1.85	0.42
32:5:2330:G:C2'	32:5:2331:G:O4'	2.68	0.42
32:5:2339:G:C2	32:5:2340:C:C2	3.07	0.42
32:5:2410:C:O2	32:5:2411:C:C6	2.73	0.42
32:5:2415:U:H2'	32:5:2416:G:C8	2.54	0.42
32:5:2436:U:H4'	32:5:2437:C:OP2	2.20	0.42
32:5:2518:G:H4'	32:5:2538:U:O2'	2.20	0.42
32:5:2576:G:N2	32:5:2577:C:C2	2.87	0.42
32:5:2840:A:N1	32:5:2841:G:C8	2.88	0.42
32:5:3688:U:O2	32:5:3688:U:C2'	2.68	0.42
32:5:3729:U:C5	32:5:3730:U:C5	3.07	0.42
32:5:3755:G:C4	32:5:3770:U:N3	2.87	0.42
32:5:3907:G:N7	32:5:4447:C:H1'	2.34	0.42
32:5:3910:C:N3	32:5:3911:C:N4	2.68	0.42
32:5:4152:G:C2	32:5:4153:C:C2	3.08	0.42
32:5:4316:G:C5	32:5:4317:A:C8	3.08	0.42
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
32:5:4608:G:C4	32:5:4609:G:C8	3.08	0.42
32:5:4741:C:N3	32:5:4742:G:C8	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4872:G:O2'	32:5:4873:G:P	2.78	0.42
32:5:5062:G:N2	32:5:5063:G:N7	2.68	0.42
33:7:27:G:C5	33:7:28:C:C5	3.07	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
35:B:167:GLN:HE22	35:B:204:GLN:HE22	1.68	0.42
37:E:219:ARG:HA	37:E:219:ARG:HD2	1.91	0.42
39:I:35:ASP:HB2	39:I:86:HIS:CE1	2.55	0.42
41:W:9:SER:OG	41:W:11:TYR:HB2	2.19	0.42
42:j:74:PHE:O	42:j:75:ARG:C	2.62	0.42
45:r:7:TRP:CD1	45:r:38:PHE:HD1	2.37	0.42
46:K:147:HIS:HB2	46:K:149:HIS:HB2	2.01	0.42
48:z:91:VAL:O	48:z:92:LYS:C	2.62	0.42
48:z:409:GLY:C	50:4:194:G:C2	2.98	0.42
50:4:58:G:C4	50:4:289:A:C2	3.07	0.42
53:S2:30:C:O2'	53:S2:31:U:O5'	2.38	0.42
53:S2:122:G:H2'	53:S2:123:G:H1'	2.01	0.42
53:S2:537:C:C2	53:S2:538:U:C6	3.08	0.42
53:S2:663:C:C4	53:S2:664:A:N7	2.88	0.42
53:S2:847:A:H2'	53:S2:847:A:N3	2.35	0.42
53:S2:974:C:O2	53:S2:974:C:H2'	2.19	0.42
53:S2:1132:C:N3	53:S2:1133:A:N9	2.67	0.42
53:S2:1338:G:C4	53:S2:1339:U:C6	3.08	0.42
53:S2:1354:G:C6	53:S2:1356:G:OP2	2.73	0.42
53:S2:1407:U:C2'	53:S2:1408:U:H6	2.32	0.42
53:S2:1447:G:C6	53:S2:1448:A:C5	3.07	0.42
53:S2:1450:G:C4	53:S2:1451:G:C8	3.07	0.42
53:S2:1591:C:C5	53:S2:1592:C:C5	3.08	0.42
53:S2:1712:A:H2'	53:S2:1713:C:H6	1.85	0.42
53:S2:1847:G:N2	53:S2:1853:C:C2	2.87	0.42
59:SH:126:HIS:HB3	59:SH:181:THR:HG21	2.02	0.42
61:SJ:119:LEU:HG	61:SJ:159:PHE:CE2	2.55	0.42
63:SN:125:LEU:HD22	63:SN:129:TYR:HE2	1.81	0.42
64:SO:121:ARG:HG3	83:Sc:62:GLU:HG3	2.02	0.42
76:SP:81:ARG:HH11	76:SP:81:ARG:CG	2.31	0.42
77:SQ:81:ILE:HA	77:SQ:84:ILE:HG12	2.00	0.42
80:ST:31:PRO:HD3	80:ST:53:PHE:HE2	1.84	0.42
83:Sc:44:ARG:HA	83:Sc:65:ALA:HB3	2.02	0.42
86:Sg:292:SER:HB2	86:Sg:299:PHE:CZ	2.55	0.42
1:A:22:HIS:CD2	32:5:2742:G:H4'	2.54	0.42
2:D:20:PHE:CE1	33:7:10:C:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:39:GLN:HA	2:D:39:GLN:OE1	2.20	0.42
4:H:12:ILE:HD11	4:H:16:VAL:HB	2.01	0.42
5:J:125:ILE:CD1	79:SS:19:ASN:HD22	2.24	0.42
8:N:119:TYR:HE1	8:N:131:GLU:CG	2.31	0.42
10:Q:57:ASN:HD21	32:5:1692:C:H4'	1.85	0.42
19:a:32:ARG:HD2	32:5:37:U:H5''	2.01	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
26:h:94:ARG:NH2	32:5:135:G:C2	2.88	0.42
32:5:31:U:C2	32:5:52:G:N2	2.88	0.42
32:5:165:A:C4	32:5:166:C:C6	3.08	0.42
32:5:190:G:N2	32:5:252:C:H1'	2.34	0.42
32:5:470:A:N6	32:5:471:A:C8	2.82	0.42
32:5:497:G:C2	32:5:657:C:C4	3.07	0.42
32:5:739:G:H2'	32:5:740:G:O4'	2.20	0.42
32:5:934:C:C6	32:5:934:C:H5''	2.54	0.42
32:5:952:G:C5	32:5:953:C:C5	3.08	0.42
32:5:993:G:C4	32:5:994:G:C8	3.08	0.42
32:5:993:G:N3	32:5:994:G:C8	2.88	0.42
32:5:1073:G:N2	32:5:1239:C:N3	2.67	0.42
32:5:1084:C:C2	32:5:1085:C:C6	3.07	0.42
32:5:1093:C:O2	32:5:1093:C:H2'	2.19	0.42
32:5:1234:G:C6	32:5:1235:G:C6	3.08	0.42
32:5:1243:C:N3	32:5:1269:G:N2	2.54	0.42
32:5:1383:G:C6	32:5:1384:C:C4	3.08	0.42
32:5:1394:G:C4	32:5:1395:U:C4	3.08	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
32:5:1581:G:C5	32:5:1610:C:N4	2.87	0.42
32:5:1588:U:O2'	32:5:1589:C:H5'	2.19	0.42
32:5:1729:A:H2'	32:5:1730:U:O4'	2.20	0.42
32:5:1857:C:C1'	32:5:1892:A:N3	2.81	0.42
32:5:1866:U:O4	32:5:4405:G:O4'	2.27	0.42
32:5:1973:G:H4'	46:K:121:LEU:HD23	2.01	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
32:5:2320:G:O2'	32:5:2321:G:P	2.77	0.42
32:5:2327:G:C2	32:5:2328:G:C4	3.08	0.42
32:5:2369:U:C5	32:5:4656:A:C2	3.08	0.42
32:5:2532:C:C4	32:5:2533:C:N4	2.88	0.42
32:5:2551:A:C6	32:5:2552:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2561:C:H2'	32:5:2561:C:O2	2.18	0.42
32:5:2567:G:H2'	32:5:2568:C:O4'	2.20	0.42
32:5:2831:G:C2	32:5:2832:A:C8	3.07	0.42
32:5:3714:G:O5'	32:5:3715:U:OP2	2.37	0.42
32:5:3778:U:O2	32:5:3778:U:H2'	2.18	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
32:5:3942:A:C6	32:5:3943:A:C5	3.07	0.42
32:5:4276:G:C4	32:5:4277:G:C8	3.06	0.42
32:5:4283:G:C4	32:5:4284:C:C6	2.97	0.42
32:5:4637:G:C6	32:5:4663:G:C2	3.08	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
32:5:4895:C:H1'	32:5:4896:G:C8	2.54	0.42
32:5:4973:U:H1'	32:5:4986:G:N1	2.34	0.42
32:5:4986:G:OP1	35:B:176:LYS:HB2	2.20	0.42
32:5:4998:G:N2	32:5:4999:G:C1'	2.82	0.42
32:5:5042:A:C4	32:5:5043:A:N7	2.87	0.42
34:8:144:U:N3	34:8:145:C:C5	2.87	0.42
35:B:145:ALA:C	35:B:146:LEU:HD13	2.45	0.42
36:C:78:ARG:HG2	36:C:78:ARG:NH1	2.31	0.42
38:F:77:ALA:HB1	38:F:83:PHE:N	2.35	0.42
38:F:238:ARG:O	38:F:239:GLU:C	2.61	0.42
45:r:16:PHE:HE2	45:r:43:LEU:HD11	1.85	0.42
48:z:377:THR:O	48:z:380:ASP:HB2	2.20	0.42
53:S2:56:G:OP1	68:SY:111:LYS:NZ	2.46	0.42
53:S2:211:G:C4	53:S2:212:C:C5	3.08	0.42
53:S2:217:A:N1	53:S2:218:U:C6	2.88	0.42
53:S2:289:G:N2	53:S2:295:C:O2	2.52	0.42
53:S2:396:U:O2'	53:S2:397:G:H5'	2.19	0.42
53:S2:461:U:N3	53:S2:462:C:H5	2.12	0.42
53:S2:478:G:C5	53:S2:479:C:C5	3.07	0.42
53:S2:605:A:H8	53:S2:605:A:O5'	2.02	0.42
53:S2:841:G:C5	53:S2:842:C:C5	3.06	0.42
53:S2:848:U:O2	53:S2:848:U:H2'	2.19	0.42
53:S2:923:G:N1	53:S2:924:G:C8	2.87	0.42
53:S2:925:G:O2'	63:SN:87:ASP:HA	2.20	0.42
53:S2:940:U:H2'	53:S2:941:C:H6	1.85	0.42
53:S2:1112:U:C5	53:S2:1113:A:C5	3.08	0.42
53:S2:1141:G:C2	53:S2:1142:G:H1'	2.55	0.42
53:S2:1332:A:C6	53:S2:1333:U:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1351:G:H2'	53:S2:1378:A:H2	1.84	0.42
53:S2:1378:A:H61	54:SA:105:PRO:HA	1.80	0.42
53:S2:1409:A:H2'	53:S2:1410:C:C4'	2.50	0.42
53:S2:1500:G:H3'	53:S2:1501:C:H6	1.85	0.42
53:S2:1518:C:P	53:S2:1519:U:H2'	2.59	0.42
53:S2:1561:A:C6	53:S2:1562:C:N1	2.87	0.42
53:S2:1578:U:H6	72:SD:6:SER:CB	2.32	0.42
53:S2:1587:G:N3	53:S2:1587:G:C2'	2.82	0.42
53:S2:1773:C:C2	53:S2:1774:C:C6	3.08	0.42
53:S2:1791:A:O2'	58:SG:67:VAL:HA	2.20	0.42
54:SA:63:ARG:NH2	65:SV:39:VAL:HG13	2.35	0.42
56:SC:180:VAL:HG12	56:SC:181:PRO:HD2	2.02	0.42
57:SE:36:HIS:HD2	57:SE:84:ALA:C	2.28	0.42
57:SE:52:LEU:HD11	57:SE:99:PHE:HE2	1.85	0.42
58:SG:145:PHE:N	58:SG:145:PHE:HD1	2.18	0.42
63:SN:99:ARG:HH21	63:SN:115:LEU:HD21	1.84	0.42
67:SX:61:GLN:O	67:SX:62:PRO:C	2.61	0.42
73:SF:97:PHE:CZ	73:SF:112:LEU:HD12	2.53	0.42
75:SM:85:LEU:CA	75:SM:88:TRP:CH2	2.96	0.42
75:SM:123:VAL:O	75:SM:127:TYR:HB3	2.20	0.42
79:SS:14:ARG:CZ	79:SS:17:ASN:C	2.93	0.42
86:Sg:17:TRP:CB	86:Sg:303:THR:HA	2.41	0.42
86:Sg:20:GLN:HA	86:Sg:288:SER:CB	2.49	0.42
1:A:29:LEU:HA	1:A:76:PHE:HE2	1.85	0.42
1:A:219:ILE:HG22	1:A:220:GLY:N	2.34	0.42
2:D:103:LEU:O	2:D:107:ARG:HG2	2.20	0.42
3:G:164:ILE:O	3:G:168:VAL:HG23	2.20	0.42
4:H:42:ASN:HB3	32:5:4763:U:H5	1.85	0.42
4:H:113:GLU:CD	4:H:125:ARG:HB3	2.44	0.42
7:M:52:PHE:O	12:S:157:ARG:NH2	2.53	0.42
8:N:21:PHE:CD2	8:N:21:PHE:C	2.98	0.42
11:R:95:TRP:HZ2	32:5:1572:U:H5'	1.84	0.42
15:V:77:HIS:CE1	15:V:105:ILE:HG23	2.55	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
26:h:21:LEU:HB2	26:h:57:VAL:HG11	2.02	0.42
31:o:11:PHE:HA	31:o:18:HIS:HA	2.02	0.42
32:5:93:G:C2	32:5:94:A:N1	2.88	0.42
32:5:370:U:C4	32:5:371:A:N6	2.88	0.42
32:5:437:G:C4	32:5:438:G:C8	3.08	0.42
32:5:468:U:O2'	32:5:469:C:H4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:673:C:N3	32:5:674:G:C5	2.88	0.42
32:5:933:G:C2	32:5:939:G:C2	3.08	0.42
32:5:972:C:C6	32:5:1283:G:O6	2.73	0.42
32:5:1215:C:O2	32:5:1215:C:C2'	2.68	0.42
32:5:1397:A:O2'	32:5:1398:A:O5'	2.38	0.42
32:5:1421:G:C5	32:5:1465:G:C2	3.07	0.42
32:5:1490:G:N2	32:5:1491:A:N9	2.68	0.42
32:5:1619:G:C2	32:5:1620:U:C2	3.07	0.42
32:5:1779:U:H2'	32:5:1780:A:H8	1.84	0.42
32:5:1830:G:C6	32:5:1831:G:N7	2.88	0.42
32:5:1879:C:C2	32:5:1880:G:C8	3.08	0.42
32:5:1902:G:C5	32:5:2075:G:N2	2.88	0.42
32:5:1980:U:O3'	32:5:1981:G:H2'	2.20	0.42
32:5:2091:C:C2	32:5:2257:C:O2'	2.67	0.42
32:5:2341:A:N3	32:5:2341:A:H2'	2.34	0.42
32:5:2364:G:C2	32:5:2365:C:C6	3.08	0.42
32:5:2453:A:C8	32:5:2507:A:N7	2.87	0.42
32:5:2545:U:C5	32:5:2546:G:H4'	2.54	0.42
32:5:2569:G:C5	32:5:2570:U:C4	3.07	0.42
32:5:2666:U:O4	32:5:2668:G:O5'	2.38	0.42
32:5:2723:U:O2	32:5:2724:G:N7	2.52	0.42
32:5:2744:A:O2'	32:5:2745:A:O5'	2.37	0.42
32:5:3625:G:H2'	32:5:3625:G:N3	2.35	0.42
32:5:3692:A:H5''	32:5:3693:U:OP2	2.20	0.42
32:5:4283:G:H21	32:5:4284:C:H1'	1.84	0.42
32:5:4455:G:N2	32:5:4456:C:N1	2.68	0.42
32:5:4563:U:O2	32:5:4563:U:H2'	2.19	0.42
33:7:94:C:N3	33:7:95:C:C4	2.85	0.42
34:8:94:G:HO2'	34:8:95:A:H8	1.62	0.42
34:8:137:A:N1	34:8:138:C:C4	2.88	0.42
35:B:77:THR:HG21	35:B:337:VAL:HG22	2.02	0.42
45:r:30:ASN:OD1	45:r:77:TYR:OH	2.37	0.42
46:K:118:HIS:O	46:K:118:HIS:ND1	2.53	0.42
47:q:99:ARG:NE	47:q:103:ARG:CZ	2.83	0.42
53:S2:84:A:C5	53:S2:85:A:N7	2.88	0.42
53:S2:114:G:N2	53:S2:383:G:N2	2.68	0.42
53:S2:122:G:C2	53:S2:123:G:N9	2.88	0.42
53:S2:316:G:C2	53:S2:317:C:N3	2.88	0.42
53:S2:507:G:H3'	53:S2:508:A:H5''	2.01	0.42
53:S2:550:C:O2	53:S2:551:U:C6	2.73	0.42
53:S2:575:A:C2'	53:S2:576:A:O4'	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:578:C:C4	53:S2:579:C:C5	3.08	0.42
53:S2:616:A:H5''	53:S2:617:G:OP2	2.20	0.42
53:S2:693:A:N1	53:S2:694:G:C5	2.88	0.42
53:S2:798:A:O5'	53:S2:800:U:P	2.78	0.42
53:S2:1142:G:N2	53:S2:1144:A:H3'	2.35	0.42
53:S2:1149:A:N3	53:S2:1151:G:N7	2.66	0.42
53:S2:1188:A:C6	53:S2:1189:A:C5	3.08	0.42
53:S2:1226:G:N3	53:S2:1226:G:H2'	2.34	0.42
53:S2:1251:A:C2	53:S2:1252:C:C5	3.08	0.42
53:S2:1562:C:C2	53:S2:1563:G:N7	2.84	0.42
53:S2:1570:G:H2'	53:S2:1571:G:O4'	2.20	0.42
53:S2:1732:G:C6	53:S2:1733:U:C4	3.08	0.42
53:S2:1759:G:C6	53:S2:1760:G:N7	2.88	0.42
53:S2:1843:G:C2	53:S2:1857:G:C2	3.08	0.42
55:SB:100:PHE:CE1	55:SB:102:GLY:N	2.88	0.42
55:SB:123:ALA:HB2	55:SB:165:ARG:HG3	2.02	0.42
56:SC:66:LEU:O	56:SC:70:VAL:HG23	2.19	0.42
57:SE:23:LEU:O	57:SE:24:THR:OG1	2.33	0.42
62:SL:97:ARG:O	62:SL:98:LYS:C	2.63	0.42
63:SN:16:LEU:HB3	63:SN:17:PRO:HD2	2.02	0.42
64:SO:72:TYR:CE1	73:SF:204:ARG:HA	2.55	0.42
68:SY:58:PHE:CE2	68:SY:90:ARG:NH1	2.88	0.42
69:Sa:36:ILE:HG21	69:Sa:83:VAL:HG11	2.02	0.42
73:SF:20:PHE:HB3	73:SF:23:TRP:CB	2.50	0.42
80:ST:97:LYS:O	80:ST:98:SER:C	2.62	0.42
81:SU:53:PRO:HB2	81:SU:55:ARG:NH2	2.35	0.42
81:SU:78:ASP:OD2	84:Sd:44:ARG:NH1	2.53	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:103:LEU:CD2	2:D:244:HIS:HB3	2.50	0.41
4:H:156:ASN:CG	4:H:157:SER:N	2.75	0.41
7:M:56:GLN:HE21	7:M:56:GLN:HB3	1.69	0.41
9:O:108:ILE:HG23	9:O:160:ARG:CD	2.50	0.41
10:Q:65:ARG:NE	32:5:1459:A:OP1	2.45	0.41
12:S:118:ARG:HD3	32:5:2034:G:O3'	2.20	0.41
13:T:46:GLY:O	13:T:47:THR:C	2.63	0.41
17:Y:62:TYR:N	17:Y:62:TYR:HD1	2.15	0.41
17:Y:100:HIS:NE2	32:5:231:U:H4'	2.34	0.41
18:Z:11:VAL:HG11	18:Z:80:LEU:HD22	2.00	0.41
18:Z:74:VAL:C	18:Z:75:TYR:HD2	2.28	0.41
26:h:72:PHE:HB3	26:h:73:TYR:HD1	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:42:A:C8	32:5:4379:A:N6	2.88	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
32:5:96:U:C5	32:5:97:G:N7	2.88	0.41
32:5:167:C:C2	32:5:168:C:C6	3.07	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
32:5:314:G:N2	32:5:4355:G:C8	2.88	0.41
32:5:674:G:C4	32:5:675:C:C5	3.08	0.41
32:5:933:G:C5	32:5:940:C:N4	2.87	0.41
32:5:1065:G:C2	32:5:1066:G:C5	3.08	0.41
32:5:1076:C:N4	32:5:1077:C:C5	2.88	0.41
32:5:1279:A:C2'	32:5:1280:C:H5''	2.50	0.41
32:5:1280:C:O2'	32:5:1282:G:OP2	2.38	0.41
32:5:1290:G:C2'	32:5:1291:G:H5'	2.49	0.41
32:5:1463:C:C4	32:5:1464:C:C5	3.08	0.41
32:5:1543:G:N3	32:5:1543:G:H2'	2.35	0.41
32:5:1661:C:C5	32:5:2345:G:C6	3.09	0.41
32:5:1665:C:N3	32:5:2285:A:C2	2.88	0.41
32:5:1727:U:H2'	32:5:1727:U:O2	2.19	0.41
32:5:1826:G:C2	32:5:1827:C:C6	3.08	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
32:5:1938:C:C5	32:5:1939:A:C5	3.07	0.41
32:5:2260:C:O2'	32:5:2261:G:OP1	2.38	0.41
32:5:2296:G:C6	32:5:2339:G:C2	3.08	0.41
32:5:2299:G:C6	32:5:2301:G:N7	2.87	0.41
32:5:2328:G:N1	32:5:2329:U:N3	2.68	0.41
32:5:2448:G:C2	32:5:2511:A:N1	2.88	0.41
32:5:2453:A:H1'	32:5:2507:A:C6	2.55	0.41
32:5:2670:C:O2'	32:5:2671:C:C5'	2.68	0.41
32:5:2688:G:C2	32:5:2689:C:C4	3.08	0.41
32:5:3628:G:C2	32:5:3629:A:C8	3.08	0.41
32:5:3684:G:C2	32:5:3685:C:C2	3.08	0.41
32:5:3692:A:C6	32:5:3693:U:C1'	3.03	0.41
32:5:3693:U:O4	32:5:3694:U:O4	2.38	0.41
32:5:3739:C:C2	32:5:3740:G:C8	3.01	0.41
32:5:3770:U:O2	32:5:3770:U:H2'	2.20	0.41
32:5:3936:A:C2	32:5:3937:C:C6	3.07	0.41
32:5:3942:A:N1	32:5:3943:A:C5	2.89	0.41
32:5:4269:G:N1	32:5:4270:C:N1	2.67	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
32:5:4368:G:C6	32:5:4369:A:C5	3.08	0.41
32:5:4583:C:N4	32:5:4718:G:N1	2.66	0.41
32:5:4661:G:C2	32:5:4662:C:C2	3.07	0.41
32:5:4767:C:C2	32:5:4868:G:C2	3.08	0.41
32:5:4956:A:C2	32:5:4957:C:C6	3.08	0.41
32:5:4957:C:O2	32:5:4958:C:C6	2.73	0.41
33:7:42:A:N1	33:7:43:U:C4	2.87	0.41
33:7:66:G:C4	33:7:67:C:C5	3.08	0.41
33:7:93:G:C2	33:7:94:C:C5	3.07	0.41
34:8:43:A:C2	34:8:44:A:N9	2.84	0.41
35:B:90:VAL:HB	35:B:104:THR:HG23	2.01	0.41
40:P:95:LEU:HD13	40:P:148:MET:HE1	2.01	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
49:3:54:U:H2'	49:3:55:U:O4'	2.20	0.41
50:4:32:A:O2'	50:4:33:G:H8	2.01	0.41
50:4:54:G:C2	50:4:55:G:C8	3.07	0.41
53:S2:12:U:N3	53:S2:13:C:C4	2.87	0.41
53:S2:219:U:C2	53:S2:220:U:C5	3.08	0.41
53:S2:310:C:O2'	53:S2:339:A:O2'	2.30	0.41
53:S2:336:A:C2	53:S2:337:C:C2	3.08	0.41
53:S2:401:A:N7	53:S2:402:C:C5	2.88	0.41
53:S2:417:C:O2	53:S2:421:G:O6	2.38	0.41
53:S2:595:U:O4	53:S2:642:U:O2	2.37	0.41
53:S2:631:U:H2'	53:S2:631:U:OP2	2.19	0.41
53:S2:924:G:C6	53:S2:925:G:C4	3.08	0.41
53:S2:1031:A:H2'	53:S2:1032:C:O4'	2.19	0.41
53:S2:1049:A:C2	53:S2:1070:A:N3	2.88	0.41
53:S2:1120:U:C6	53:S2:1121:G:C8	3.07	0.41
53:S2:1166:G:C2	53:S2:1167:G:C8	3.08	0.41
53:S2:1175:G:C5	53:S2:1176:G:N7	2.88	0.41
53:S2:1239:U:O2	53:S2:1242:U:O2	2.38	0.41
53:S2:1292:C:C2	85:Sf:150:PHE:CG	3.08	0.41
53:S2:1292:C:OP2	85:Sf:149:CYS:SG	2.74	0.41
53:S2:1353:A:C6	53:S2:1354:G:C5	3.08	0.41
53:S2:1393:G:C2	53:S2:1394:G:C4	3.08	0.41
53:S2:1478:U:N3	53:S2:1479:G:N7	2.67	0.41
57:SE:136:ILE:HG22	57:SE:138:HIS:CE1	2.55	0.41
63:SN:55:ARG:NH1	63:SN:55:ARG:HG3	2.34	0.41
65:SV:46:PHE:CD1	65:SV:46:PHE:C	2.97	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:Sa:18:VAL:O	69:Sa:19:GLN:C	2.64	0.41
73:SF:28:VAL:CG2	73:SF:107:ASN:HD22	2.33	0.41
79:SS:63:GLU:O	79:SS:66:ARG:HB2	2.20	0.41
83:Sc:46:VAL:HG22	83:Sc:56:LEU:HD21	2.02	0.41
2:D:60:ILE:HD13	2:D:98:ALA:HB2	2.01	0.41
3:G:46:GLN:HG2	32:5:4087:G:H1	1.85	0.41
3:G:53:ARG:NH2	32:5:4088:C:N3	2.68	0.41
5:J:119:TYR:CE1	79:SS:12:ILE:HG12	2.53	0.41
5:J:127:GLY:C	32:5:4251:A:N6	2.78	0.41
8:N:41:ARG:C	8:N:61:ILE:HD11	2.45	0.41
10:Q:79:THR:HG22	10:Q:99:LYS:HD2	2.02	0.41
11:R:95:TRP:CZ2	32:5:1572:U:H5'	2.55	0.41
15:V:96:LEU:HD12	41:W:20:ARG:O	2.19	0.41
21:c:27:TYR:N	21:c:27:TYR:HD1	2.18	0.41
22:d:32:ARG:NH2	32:5:4996:C:OP1	2.53	0.41
32:5:330:G:C2	32:5:331:G:N9	2.87	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
32:5:691:C:O2	32:5:692:A:C8	2.73	0.41
32:5:715:G:N2	32:5:954:C:C2	2.88	0.41
32:5:980:U:H2'	32:5:981:C:C6	2.54	0.41
32:5:987:C:C2	32:5:1067:G:C2	3.08	0.41
32:5:1072:C:H1'	32:5:1073:G:C8	2.55	0.41
32:5:1211:G:N2	32:5:1212:G:C5	2.89	0.41
32:5:1253:G:N2	32:5:1256:G:C8	2.88	0.41
32:5:1273:G:N2	32:5:2123:C:OP1	2.37	0.41
32:5:1540:C:C4	32:5:1541:C:C5	3.08	0.41
32:5:1806:G:C4	32:5:1807:C:C6	3.08	0.41
32:5:1870:C:O2'	32:5:4442:U:H4'	2.20	0.41
32:5:2275:G:H5''	32:5:2275:G:H8	1.85	0.41
32:5:2314:G:N7	32:5:2326:G:C2	2.89	0.41
32:5:2385:U:H2'	32:5:2386:U:H6	1.85	0.41
32:5:2581:A:O2'	32:5:2582:A:O5'	2.39	0.41
32:5:2644:G:N2	32:5:2690:C:C2	2.88	0.41
32:5:2712:G:C2	32:5:2713:C:C5	3.08	0.41
32:5:2713:C:O2	32:5:2714:G:H8	1.96	0.41
32:5:2715:G:C6	32:5:2716:C:N4	2.88	0.41
32:5:2794:C:O2	40:P:136:ILE:HD12	2.20	0.41
32:5:2898:G:C5	32:5:2899:C:C5	3.08	0.41
32:5:3614:G:C6	32:5:3617:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3643:A:C2	42:j:3:LYS:CE	3.03	0.41
32:5:3659:G:H2'	32:5:3660:C:O4'	2.20	0.41
32:5:3667:C:N3	32:5:3668:C:C6	2.88	0.41
32:5:3734:U:O2'	32:5:3735:G:H5'	2.20	0.41
32:5:4565:C:O2'	32:5:4566:U:H5'	2.20	0.41
32:5:4586:G:H8	32:5:4586:G:H5''	1.84	0.41
32:5:4602:A:H5''	32:5:4603:C:OP2	2.19	0.41
32:5:4645:C:O2	32:5:4645:C:H2'	2.19	0.41
34:8:56:G:H2'	34:8:57:C:O4'	2.20	0.41
40:P:19:GLY:C	40:P:22:LEU:HD21	2.45	0.41
45:r:107:ARG:HH11	45:r:107:ARG:CG	2.33	0.41
46:K:53:TRP:O	46:K:54:LYS:HB2	2.20	0.41
47:q:133:GLU:O	47:q:152:ILE:HD11	2.20	0.41
48:z:107:VAL:HB	48:z:219:TYR:CD1	2.55	0.41
48:z:412:VAL:HG22	48:z:416:ASP:OD2	2.20	0.41
49:3:11:U:H2'	49:3:12:G:H8	1.85	0.41
50:4:16:G:O6	50:4:17:C:H1'	2.20	0.41
50:4:119[B]:A:O2'	50:4:120:G:P	2.78	0.41
53:S2:10:G:C2	53:S2:11:A:N9	2.87	0.41
53:S2:36:U:C4	53:S2:37:C:C5	3.08	0.41
53:S2:47:G:C5	53:S2:48:C:C5	3.07	0.41
53:S2:54:A:H3'	53:S2:451:G:H22	1.84	0.41
53:S2:218:U:H2'	53:S2:219:U:O4'	2.20	0.41
53:S2:364:A:H2'	53:S2:365:C:O4'	2.20	0.41
53:S2:387:C:O2	53:S2:387:C:C2'	2.68	0.41
53:S2:538:U:C4	53:S2:539:C:C5	3.08	0.41
53:S2:616:A:N7	53:S2:617:G:H1'	2.34	0.41
53:S2:850:C:O2'	53:S2:851:C:H5'	2.20	0.41
53:S2:875:A:N1	53:S2:876:C:N3	2.68	0.41
53:S2:976:G:C2	53:S2:977:C:N1	2.88	0.41
53:S2:979:C:N3	53:S2:980:A:N7	2.68	0.41
53:S2:1093:A:N6	53:S2:1094:C:C5	2.87	0.41
53:S2:1121:G:N1	53:S2:1122:A:C4	2.88	0.41
53:S2:1247:C:O4'	53:S2:1251:A:C8	2.74	0.41
53:S2:1284:A:H4'	53:S2:1286:G:H4'	2.01	0.41
53:S2:1308:U:C4	53:S2:1309:C:C4	3.07	0.41
53:S2:1338:G:H2'	53:S2:1339:U:O4'	2.19	0.41
53:S2:1432:U:N3	53:S2:1433:C:H5	2.13	0.41
53:S2:1456:G:N3	53:S2:1457:U:C6	2.89	0.41
53:S2:1537:A:N1	53:S2:1596:U:C4	2.89	0.41
53:S2:1588:A:O2'	53:S2:1589:A:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1599:U:OP2	82:SZ:80:ARG:NE	2.53	0.41
53:S2:1654:G:C2	53:S2:1671:G:C2	3.09	0.41
53:S2:1659:U:H5''	53:S2:1660:C:OP2	2.20	0.41
53:S2:1664:A:C6	53:S2:1666:C:C6	3.09	0.41
54:SA:15:VAL:HG12	54:SA:19:LEU:HD12	2.02	0.41
57:SE:21:ASP:OD1	57:SE:21:ASP:C	2.63	0.41
57:SE:120:LYS:O	57:SE:121:TYR:C	2.63	0.41
62:SL:17:PHE:HZ	62:SL:19:ASN:HB2	1.84	0.41
62:SL:117:PHE:HD1	62:SL:117:PHE:HA	1.74	0.41
63:SN:113:PHE:O	63:SN:115:LEU:N	2.52	0.41
73:SF:179:ASN:HD22	73:SF:186:ASN:HB3	1.85	0.41
79:SS:14:ARG:NH1	79:SS:17:ASN:C	2.78	0.41
79:SS:30:ILE:CD1	79:SS:45:LEU:HD11	2.49	0.41
1:A:33:ASP:C	1:A:37:ARG:HH21	2.28	0.41
3:G:247:VAL:HA	3:G:250:ILE:HG22	2.01	0.41
4:H:151:ILE:HG23	4:H:152:GLU:N	2.35	0.41
5:J:62:ILE:C	5:J:63:ARG:HG2	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
23:e:58:ILE:C	23:e:60:TYR:N	2.78	0.41
31:o:48:TYR:OH	32:5:3927:U:H5'	2.20	0.41
32:5:80:C:C2	32:5:104:G:C2	3.08	0.41
32:5:91:G:C5	32:5:93:G:O6	2.72	0.41
32:5:299:C:N4	32:5:300:A:N7	2.69	0.41
32:5:440:U:O2	32:5:440:U:H2'	2.20	0.41
32:5:677:G:H2'	32:5:678:C:H6	1.85	0.41
32:5:732:A:N6	32:5:733:A:C4	2.88	0.41
32:5:743:G:N3	32:5:744:G:N7	2.69	0.41
32:5:1249:C:C2	32:5:1262:G:N2	2.88	0.41
32:5:1266:G:H21	32:5:2111:G:H1'	1.84	0.41
32:5:1412:G:C4	32:5:1413:C:C6	3.08	0.41
32:5:1446:C:N3	32:5:1447:C:C6	2.88	0.41
32:5:1447:C:H2'	32:5:1448:G:C8	2.55	0.41
32:5:1477:C:C4	32:5:1478:C:C6	3.06	0.41
32:5:1691:G:N2	32:5:1692:C:H1'	2.35	0.41
32:5:1811:G:C2	32:5:1812:C:C2	3.08	0.41
32:5:1825:A:C6	32:5:1826:G:C5	3.08	0.41
32:5:1844:G:C4	32:5:1845:U:C5	3.08	0.41
32:5:2071:A:C6	32:5:2072:C:N4	2.88	0.41
32:5:2124:G:H22	38:F:32:ILE:HG13	1.85	0.41
32:5:2477:A:C2	32:5:2501:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2529:A:C8	32:5:2532:C:C5	3.08	0.41
32:5:2590:G:O6	32:5:2754:G:C6	2.74	0.41
32:5:2857:A:C4	32:5:2858:A:C5	3.08	0.41
32:5:3625:G:N2	32:5:3627:G:H5'	2.35	0.41
32:5:3630:A:N1	32:5:3631:U:C4	2.88	0.41
32:5:3635:A:C8	32:5:3692:A:C1'	3.00	0.41
32:5:3772:U:HO2'	32:5:3773:U:H5'	1.81	0.41
32:5:3792:G:H2'	32:5:3792:G:N3	2.35	0.41
32:5:3877:A:N1	32:5:4444:C:H1'	2.36	0.41
32:5:3899:G:C2	32:5:3900:G:C8	3.08	0.41
32:5:4084:G:O3'	32:5:4085:A:H4'	2.21	0.41
32:5:4098:A:C2	32:5:4099:G:N9	2.88	0.41
32:5:4139:G:C5	32:5:4140:C:C5	3.08	0.41
32:5:4232:U:C1'	32:5:4233:A:OP2	2.69	0.41
32:5:4382:G:C5	32:5:4383:U:C5	3.08	0.41
32:5:4404:U:C5	32:5:4436:U:C4	3.08	0.41
32:5:4742:G:H2'	32:5:4742:G:N3	2.35	0.41
32:5:4922:C:N3	32:5:4923:C:C5	2.88	0.41
32:5:4979:A:O2'	32:5:4980:C:O5'	2.36	0.41
32:5:5020:G:O6	32:5:5028:G:O6	2.38	0.41
32:5:5046:U:C5'	32:5:5047:C:P	3.08	0.41
33:7:21:G:H5''	33:7:21:G:C8	2.53	0.41
33:7:113:G:C2	33:7:114:U:C4	3.08	0.41
34:8:102:G:H3'	34:8:104:A:C2'	2.49	0.41
35:B:116:ARG:CG	35:B:177:LYS:HG3	2.47	0.41
42:j:8:PHE:HA	42:j:11:ARG:HD2	2.02	0.41
43:n:9:ARG:NH1	53:S2:1851:A:OP1	2.54	0.41
47:q:77:LYS:HG3	47:q:198:ILE:CD1	2.50	0.41
48:z:71:LYS:O	48:z:72:ARG:C	2.63	0.41
48:z:327:PHE:O	48:z:424:TYR:OH	2.36	0.41
48:z:405:ARG:CA	50:4:207:C:C5'	2.98	0.41
49:3:65:G:C2	49:3:66:C:C2	3.09	0.41
50:4:6:G:C6	50:4:7:C:N4	2.88	0.41
50:4:9:C:N3	50:4:10:G:C8	2.89	0.41
50:4:35:U:H1'	50:4:37:C:H41	1.85	0.41
50:4:62:G:C5	50:4:63:C:C5	3.07	0.41
51:9:24:ASN:ND2	51:9:43:ASN:HA	2.35	0.41
53:S2:103:A:N6	53:S2:355:G:C5	2.88	0.41
53:S2:120:U:O4	53:S2:121:U:C4	2.74	0.41
53:S2:221:A:C6	53:S2:222:U:C4	3.09	0.41
53:S2:648:A:C4	53:S2:649:U:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:676:C:O2	53:S2:676:C:H2'	2.19	0.41
53:S2:833:C:H2'	53:S2:834:C:O4'	2.19	0.41
53:S2:864:A:C4	53:S2:865:A:C8	3.07	0.41
53:S2:978:G:N1	53:S2:979:C:C4	2.88	0.41
53:S2:999:G:H21	53:S2:1000:C:H1'	1.86	0.41
53:S2:1094:C:N3	53:S2:1095:U:C6	2.88	0.41
53:S2:1107:G:C2	53:S2:1108:G:N9	2.89	0.41
53:S2:1289:U:C5	53:S2:1290:G:N7	2.88	0.41
53:S2:1415:C:H2'	53:S2:1416:C:C5'	2.51	0.41
53:S2:1486:A:H2'	53:S2:1487:A:O4'	2.21	0.41
53:S2:1489:A:N1	72:SD:146:ARG:NH2	2.68	0.41
53:S2:1495:G:N3	84:Sd:41:GLN:CB	2.84	0.41
53:S2:1627:C:N3	53:S2:1628:C:C5	2.89	0.41
53:S2:1683:C:O2	53:S2:1684:C:C5	2.73	0.41
53:S2:1782:G:N2	53:S2:1784:G:N7	2.68	0.41
53:S2:1791:A:N7	53:S2:1792:G:C8	2.88	0.41
55:SB:100:PHE:CZ	55:SB:102:GLY:HA2	2.56	0.41
56:SC:153:GLY:O	56:SC:156:ILE:HG22	2.20	0.41
56:SC:274:VAL:O	56:SC:274:VAL:HG13	2.20	0.41
57:SE:47:PHE:HE1	57:SE:101:LEU:HD21	1.85	0.41
57:SE:120:LYS:C	57:SE:121:TYR:O	2.63	0.41
58:SG:153:VAL:O	58:SG:154:ARG:C	2.63	0.41
58:SG:190:ARG:O	58:SG:193:ALA:HB3	2.19	0.41
61:SJ:13:TYR:C	61:SJ:13:TYR:HD1	2.26	0.41
62:SL:18:GLN:O	62:SL:19:ASN:OD1	2.39	0.41
62:SL:76:VAL:O	62:SL:88:ILE:HA	2.20	0.41
63:SN:113:PHE:O	63:SN:115:LEU:C	2.63	0.41
64:SO:49:GLY:O	64:SO:50:LYS:C	2.64	0.41
81:SU:94:PRO:HD2	81:SU:97:ILE:HD12	2.02	0.41
82:SZ:49:LEU:CA	82:SZ:83:LEU:CD1	2.98	0.41
86:Sg:48:ASP:CG	86:Sg:49:GLU:N	2.78	0.41
2:D:18:VAL:HG13	33:7:11:A:N7	2.36	0.41
2:D:282:GLN:C	2:D:283:LYS:O	2.61	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
7:M:75:LYS:O	7:M:76:ALA:HB3	2.20	0.41
10:Q:101:CYS:SG	10:Q:121:LEU:HB2	2.60	0.41
15:V:20:LEU:HD23	15:V:20:LEU:HA	1.94	0.41
15:V:95:PHE:CE2	32:5:4629:U:H1'	2.55	0.41
21:c:73:HIS:CD2	21:c:73:HIS:N	2.89	0.41
32:5:65:A:C8	32:5:67:C:N1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:68:U:O2	32:5:68:U:H2'	2.20	0.41
32:5:199:G:C2	32:5:201:C:N3	2.89	0.41
32:5:238:C:C2'	32:5:239:C:H5'	2.49	0.41
32:5:341:G:N1	32:5:342:G:N7	2.67	0.41
32:5:709:C:H2'	32:5:710:G:O4'	2.20	0.41
32:5:734:G:N3	32:5:735:G:C8	2.88	0.41
32:5:743:G:N2	32:5:744:G:C4	2.88	0.41
32:5:752:G:C2	32:5:753:C:C1'	3.04	0.41
32:5:930:G:C4	32:5:931:C:C5	3.08	0.41
32:5:993:G:C6	32:5:994:G:N7	2.88	0.41
32:5:1251:C:O2	32:5:1252:C:C6	2.74	0.41
32:5:1259:G:N1	32:5:1260:G:C5	2.88	0.41
32:5:1260:G:C2	32:5:1261:G:C5	3.07	0.41
32:5:1365:C:C4'	32:5:1366:G:OP1	2.68	0.41
32:5:1428:U:H3'	32:5:1429:C:C5	2.55	0.41
32:5:1492:G:N3	32:5:1493:G:C8	2.88	0.41
32:5:1543:G:C2	32:5:1544:G:N9	2.88	0.41
32:5:1596:U:O2'	32:5:1597:G:P	2.78	0.41
32:5:1650:A:H3'	32:5:1651:G:H5''	2.03	0.41
32:5:1728:U:C2	32:5:1729:A:C8	3.08	0.41
32:5:1735:U:C2	32:5:1736:A:C8	3.09	0.41
32:5:1759:G:N2	32:5:1760:G:H1'	2.35	0.41
32:5:1775:A:C4	32:5:1776:A:C8	3.07	0.41
32:5:1775:A:H3'	32:5:1776:A:H8	1.85	0.41
32:5:1775:A:H2'	32:5:1776:A:O4'	2.21	0.41
32:5:1819:G:N2	32:5:1820:C:N1	2.68	0.41
32:5:1819:G:C6	32:5:1820:C:N4	2.88	0.41
32:5:1899:G:C4	32:5:1900:C:C6	2.93	0.41
32:5:1943:A:C8	32:5:1944:A:H1'	2.55	0.41
32:5:1945:G:O6	32:5:1946:G:C5	2.73	0.41
32:5:1987:C:C2	32:5:1988:G:C8	3.08	0.41
32:5:1991:A:C3'	32:5:1992:U:H2'	2.47	0.41
32:5:2007:G:C3'	32:5:2008:U:H5''	2.51	0.41
32:5:2023:C:O2	32:5:2023:C:H2'	2.21	0.41
32:5:2079:G:N3	32:5:2079:G:H2'	2.35	0.41
32:5:2246:C:H2'	32:5:2247:C:O4'	2.21	0.41
32:5:2271:C:C2	32:5:2272:C:C5	3.09	0.41
32:5:2395:A:C5	32:5:2807:A:C8	3.08	0.41
32:5:2400:G:N1	32:5:2401:A:C8	2.88	0.41
32:5:2419:C:H2'	32:5:2420:A:O5'	2.19	0.41
32:5:2480:G:C6	32:5:2481:G:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:5:2771:G:C5	32:5:2772:C:C6	3.08	0.41
32:5:2782:U:H4'	32:5:2783:A:OP2	2.20	0.41
32:5:2784:C:N3	32:5:2785:C:N4	2.68	0.41
32:5:3591:C:C4	32:5:3592:G:N7	2.87	0.41
32:5:3623:C:H5	32:5:3624:A:C6	2.38	0.41
32:5:3717:A:O2'	32:5:3718:A:O4'	2.38	0.41
32:5:3744:G:H2'	32:5:3745:U:O4'	2.20	0.41
32:5:3771:C:C4	32:5:3772:U:O4	2.74	0.41
32:5:3794:C:C2	32:5:3795:A:H8	2.35	0.41
32:5:3914:U:O4	32:5:4378:A:C2	2.69	0.41
32:5:4073:A:C6	32:5:4074:C:C4	3.08	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:C6	2.88	0.41
32:5:4203:A:C5	32:5:4221:C:O4'	2.74	0.41
32:5:4224:A:N6	32:5:4225:G:C8	2.87	0.41
32:5:4278:C:H1'	32:5:4282:A:C2	2.55	0.41
32:5:4360:U:C5	32:5:4361:U:C5	3.08	0.41
32:5:4373:G:H1'	32:5:4375:C:N4	2.35	0.41
32:5:4433:G:C2	32:5:4434:C:C4	3.07	0.41
32:5:4551:U:H2'	32:5:4552:U:C6	2.55	0.41
32:5:4697:U:C5'	32:5:4698:C:OP2	2.68	0.41
32:5:4712:C:C2	32:5:4713:G:C8	3.09	0.41
32:5:4874:A:N3	32:5:4874:A:H2'	2.36	0.41
32:5:4934:A:C6	32:5:4935:C:C6	3.03	0.41
32:5:5066:U:C2'	32:5:5067:U:C6	2.98	0.41
33:7:25:G:C2	33:7:26:C:C2	3.08	0.41
34:8:76:C:H2'	34:8:77:A:O4'	2.20	0.41
35:B:231:VAL:CG2	35:B:267:ALA:HB1	2.50	0.41
38:F:32:ILE:N	38:F:32:ILE:CD1	2.83	0.41
39:I:95:HIS:CE1	39:I:97:ILE:HD12	2.55	0.41
39:I:105:CYS:HB2	39:I:109:ASP:HB2	2.02	0.41
40:P:30:ARG:NE	40:P:34:GLN:OE1	2.53	0.41
48:z:218:VAL:HG11	48:z:246:ILE:HD12	2.02	0.41
48:z:293:LYS:HG2	48:z:351:MET:HA	1.96	0.41
49:3:67:G:C2	49:3:68:G:C5	3.09	0.41
50:4:197:G:H2'	50:4:198:G:O4'	2.19	0.41
53:S2:19:A:C2	53:S2:20:G:C8	3.08	0.41
53:S2:22:A:N1	53:S2:653:A:C2	2.89	0.41
53:S2:29:G:H2'	53:S2:30:C:H6	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:64:A:N1	53:S2:82:G:N2	2.68	0.41
53:S2:68:A:H2'	53:S2:69:C:H6	1.85	0.41
53:S2:70:G:C6	53:S2:80:G:N1	2.88	0.41
53:S2:83:A:C2	53:S2:84:A:H1'	2.55	0.41
53:S2:173:A:N6	53:S2:174:C:C4	2.89	0.41
53:S2:337:C:C4	53:S2:338:G:N7	2.86	0.41
53:S2:341:C:C2	53:S2:342:C:C1'	3.04	0.41
53:S2:367:U:C4'	53:S2:371:A:C8	3.02	0.41
53:S2:378:U:C2	53:S2:379:C:H6	2.26	0.41
53:S2:381:C:N4	60:SI:49:ARG:HD3	2.31	0.41
53:S2:439:A:H2'	53:S2:440:G:O4'	2.21	0.41
53:S2:548:C:C5	53:S2:549:C:O4'	2.73	0.41
53:S2:589:G:O3'	53:S2:590:A:H2'	2.20	0.41
53:S2:589:G:O2'	53:S2:590:A:O2'	2.38	0.41
53:S2:878:G:C2	53:S2:909:G:C2	3.08	0.41
53:S2:952:G:H2'	53:S2:953:C:C6	2.55	0.41
53:S2:975:G:N1	53:S2:976:G:C5	2.89	0.41
53:S2:1022:U:C6	63:SN:128:TYR:HE2	2.37	0.41
53:S2:1028:A:C8	53:S2:1029:G:C8	3.08	0.41
53:S2:1040:G:C2	53:S2:1041:G:C4	3.08	0.41
53:S2:1102:G:H22	53:S2:1130:G:N2	2.15	0.41
53:S2:1106:C:O2	53:S2:1106:C:H2'	2.20	0.41
53:S2:1135:C:C4	53:S2:1136:U:C4	3.08	0.41
53:S2:1224:G:H3'	53:S2:1224:G:C8	2.55	0.41
53:S2:1233:G:C2	53:S2:1234:C:C6	3.08	0.41
53:S2:1236:G:C6	53:S2:1237:C:C4	3.09	0.41
53:S2:1277:C:H2'	53:S2:1278:A:O4'	2.19	0.41
53:S2:1292:C:H2'	85:Sf:150:PHE:HD1	1.84	0.41
53:S2:1352:G:C6	53:S2:1353:A:C5	3.08	0.41
53:S2:1404:U:C5'	53:S2:1581:C:O2	2.68	0.41
53:S2:1551:U:O4'	53:S2:1551:U:O2	2.38	0.41
53:S2:1813:A:C5	53:S2:1814:G:N7	2.88	0.41
53:S2:1864:U:O4	69:Sa:9:GLY:HA3	2.21	0.41
54:SA:83:GLY:O	54:SA:84:GLN:C	2.63	0.41
54:SA:141:ASN:ND2	54:SA:141:ASN:N	2.67	0.41
56:SC:209:VAL:N	56:SC:210:PRO:HD2	2.35	0.41
58:SG:220:ALA:O	58:SG:224:ARG:N	2.53	0.41
59:SH:122:LEU:HD11	59:SH:126:HIS:NE2	2.35	0.41
61:SJ:29:LEU:O	61:SJ:30:LYS:C	2.62	0.41
68:SY:124:ASN:OD1	68:SY:124:ASN:N	2.53	0.41
78:SR:17:ILE:HD11	78:SR:54:VAL:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:SS:40:TYR:CE2	79:SS:97:GLN:CD	2.99	0.41
83:Sc:50:VAL:CG1	83:Sc:51:ARG:N	2.83	0.41
87:S1:47:VAL:O	87:S1:48:CYS:SG	2.79	0.41
1:A:69:PHE:CD2	32:5:4125:C:C5	3.09	0.41
6:L:46:ILE:O	6:L:47:ALA:C	2.63	0.41
7:M:17:PHE:CD1	32:5:1921:C:C6	3.08	0.41
8:N:120:TRP:CD1	8:N:120:TRP:C	2.92	0.41
16:X:83:THR:HG21	32:5:2434:G:O3'	2.21	0.41
22:d:67:ARG:HE	22:d:67:ARG:HB3	1.57	0.41
23:e:20:PHE:HZ	23:e:60:TYR:CE2	2.38	0.41
24:f:6:TRP:CE3	24:f:102:ARG:HG2	2.55	0.41
32:5:39:A:C6	32:5:1654:G:C2	3.09	0.41
32:5:55:G:N2	32:5:56:A:C4	2.88	0.41
32:5:61:A:C6	32:5:62:A:C6	3.08	0.41
32:5:99:A:C6	32:5:100:C:C4	3.09	0.41
32:5:117:C:C4	32:5:118:C:C5	3.08	0.41
32:5:286:U:H2'	32:5:287:U:C6	2.55	0.41
32:5:351:C:C2	34:8:25:G:C2	3.08	0.41
32:5:449:C:O2	32:5:449:C:H2'	2.20	0.41
32:5:642:G:C2	32:5:643:C:C2	3.08	0.41
32:5:656:C:O2	32:5:657:C:C6	2.74	0.41
32:5:739:G:C2	32:5:740:G:C4	3.08	0.41
32:5:950:G:N1	32:5:951:G:N7	2.68	0.41
32:5:1214:C:N4	38:F:58:HIS:ND1	2.68	0.41
32:5:1273:G:N7	37:E:68:LYS:C	2.78	0.41
32:5:1464:C:N3	32:5:1465:G:C8	2.89	0.41
32:5:1601:A:N7	32:5:3643:A:N9	2.69	0.41
32:5:1631:A:H5'	32:5:1632:A:C5	2.55	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
32:5:2316: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
32:5:2557:G:N2	32:5:2571:C:C2	2.89	0.41
32:5:2602:G:H22	32:5:2736:G:H22	1.67	0.41
32:5:2634:C:N3	32:5:2635:U:C4	2.88	0.41
32:5:2669:C:O5'	32:5:2669:C:H6	2.04	0.41
32:5:3597:G:C4	32:5:3598:C:C5	3.09	0.41
32:5:3683:C:H4'	32:5:3684:G:OP2	2.21	0.41
32:5:3694:U:O4	32:5:3695:U:O4	2.38	0.41
32:5:3710:G:N2	32:5:3711:A:C4	2.89	0.41
32:5:3861:A:H4'	40:P:137:ASN:ND2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3868:G:H22	32:5:3899:G:H21	1.66	0.41
32:5:4132:C:N3	32:5:4133:C:C5	2.88	0.41
32:5:4142:C:C6	32:5:4143:G:C4	3.09	0.41
32:5:4287:G:O2'	32:5:4288:C:C6	2.68	0.41
32:5:4376:A:O5'	32:5:4376:A:H8	2.04	0.41
32:5:4456:C:N4	32:5:4521:U:H3	2.17	0.41
32:5:4538:G:C4	32:5:4539:U:C5	3.08	0.41
32:5:4586:G:C8	32:5:4586:G:H5''	2.55	0.41
32:5:4658:G:C4	32:5:4659:G:C8	3.09	0.41
33:7:35:U:H2'	33:7:36:C:O4'	2.20	0.41
35:B:59:GLU:HG2	35:B:366:LYS:HE2	2.02	0.41
35:B:108:GLU:C	35:B:109:HIS:O	2.63	0.41
35:B:116:ARG:C	35:B:118:PHE:H	2.28	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
46:K:104:ILE:HD11	46:K:139:VAL:HG12	2.02	0.41
49:3:4:U:N3	49:3:5:C:C5	2.89	0.41
50:4:53:U:O2	50:4:53:U:H2'	2.20	0.41
50:4:157:A:H2'	50:4:158:C:O4'	2.20	0.41
51:9:19:TYR:CE2	51:9:68:TYR:HA	2.55	0.41
53:S2:14:C:OP2	56:SC:232:THR:HG21	2.19	0.41
53:S2:76:U:O2'	53:S2:77:A:O5'	2.35	0.41
53:S2:105:U:O2	53:S2:410:G:H1'	2.20	0.41
53:S2:350:C:N3	53:S2:351:G:N7	2.69	0.41
53:S2:569:A:C2	53:S2:570:C:N1	2.89	0.41
53:S2:600:G:N3	53:S2:601:G:N7	2.68	0.41
53:S2:610:G:N2	53:S2:611:G:H1'	2.35	0.41
53:S2:617:G:C5	53:S2:618:C:C6	3.08	0.41
53:S2:663:C:C4	53:S2:664:A:C8	3.08	0.41
53:S2:673:G:C5	53:S2:674:C:C5	3.08	0.41
53:S2:828:G:N1	53:S2:829:C:C5	2.88	0.41
53:S2:924:G:C2	53:S2:925:G:H1'	2.55	0.41
53:S2:940:U:H2'	53:S2:941:C:C6	2.54	0.41
53:S2:989:C:H6	53:S2:989:C:O5'	2.03	0.41
53:S2:990:A:C6	53:S2:992:A:C4	3.09	0.41
53:S2:993:G:H21	53:S2:994:C:H1'	1.83	0.41
53:S2:1049:A:N1	53:S2:1070:A:C4	2.89	0.41
53:S2:1102:G:C6	53:S2:1103:C:C4	3.08	0.41
53:S2:1107:G:H2'	53:S2:1108:G:O4'	2.20	0.41
53:S2:1177:U:N3	53:S2:1178:U:C5	2.88	0.41
53:S2:1184:G:C4	53:S2:1185:C:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1225:U:C6	53:S2:1225:U:H3'	2.55	0.41
53:S2:1291:A:O5'	85:Sf:146:LEU:HD12	2.20	0.41
53:S2:1293:A:C2	85:Sf:151:ASN:CA	2.96	0.41
53:S2:1415:C:C2'	53:S2:1416:C:H5'	2.51	0.41
53:S2:1419:C:H5''	80:ST:128:GLN:HB3	2.03	0.41
53:S2:1548:G:H8	53:S2:1656:G:O2'	2.03	0.41
53:S2:1551:U:C4'	53:S2:1558:C:H1'	2.49	0.41
53:S2:1589:A:C5	53:S2:1590:C:C4	3.08	0.41
53:S2:1722:G:C2	53:S2:1723:G:N9	2.89	0.41
53:S2:1846:G:C6	53:S2:1847:G:N7	2.89	0.41
54:SA:39:TYR:CD1	54:SA:40:LYS:HG2	2.56	0.41
54:SA:169:HIS:CD2	54:SA:203:PHE:CD2	3.09	0.41
55:SB:133:TYR:HB3	55:SB:220:LYS:HA	2.03	0.41
56:SC:198:ALA:HA	56:SC:223:TYR:OH	2.20	0.41
59:SH:36:LEU:CD1	59:SH:40:LEU:HD12	2.50	0.41
66:SW:51:GLU:OE1	70:Sb:8:LEU:HD13	2.20	0.41
67:SX:76:LYS:HG3	67:SX:77:ASN:OD1	2.20	0.41
69:Sa:74:CYS:SG	69:Sa:77:CYS:SG	3.19	0.41
73:SF:34:SER:HB3	83:Sc:55:VAL:HB	2.03	0.41
74:SK:16:PHE:CD2	74:SK:79:LEU:HB2	2.55	0.41
82:SZ:51:ASP:CG	82:SZ:54:THR:HG23	2.45	0.41
1:A:163:ARG:HB2	1:A:163:ARG:HH11	1.82	0.41
2:D:278:ASP:O	2:D:279:ARG:C	2.63	0.41
3:G:108:GLN:N	3:G:108:GLN:HE21	2.18	0.41
6:L:76:PHE:HD2	6:L:80:GLU:OE1	2.03	0.41
15:V:77:HIS:ND1	15:V:77:HIS:C	2.79	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
21:c:78:ASN:HD21	21:c:79:ILE:HA	1.86	0.41
30:m:87:GLN:HE21	30:m:87:GLN:HB3	1.71	0.41
31:o:11:PHE:CD2	32:5:4294:C:H1'	2.55	0.41
32:5:20:U:C4	34:8:37:A:C5	3.08	0.41
32:5:21:G:C5	32:5:22:G:C8	3.09	0.41
32:5:153:G:H2'	32:5:154:G:H8	1.85	0.41
32:5:218:A:N6	36:C:185:ALA:HB2	2.36	0.41
32:5:293:G:O4'	32:5:294:G:C8	2.74	0.41
32:5:362:A:C2	34:8:53:G:H1'	2.55	0.41
32:5:450:G:N2	32:5:1294:A:O2'	2.53	0.41
32:5:700:G:C5	32:5:701:G:C8	3.08	0.41
32:5:718:C:C2	32:5:719:C:C6	3.09	0.41
32:5:911:U:O2	32:5:911:U:H2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1081:C:H1'	32:5:1220:G:N2	2.35	0.41
32:5:1172:C:N3	32:5:1173:G:C8	2.89	0.41
32:5:1213:G:N1	32:5:1215:C:O2	2.52	0.41
32:5:1313:C:N4	32:5:3882:C:H1'	2.34	0.41
32:5:1382:G:C2	32:5:1383:G:C5	3.09	0.41
32:5:1544:G:C2	32:5:1545:G:C5	3.09	0.41
32:5:1552:G:HO2'	32:5:1575:A:N6	2.18	0.41
32:5:1565:A:H2'	32:5:1566:C:C4'	2.50	0.41
32:5:1571:G:C4	32:5:1572:U:C6	3.08	0.41
32:5:1663:C:O2'	32:5:2319:C:N4	2.54	0.41
32:5:1734:G:C2	32:5:1793:A:C6	3.08	0.41
32:5:1756:U:O4	32:5:1775:A:C2	2.56	0.41
32:5:1797:G:N2	32:5:1798:G:C5	2.88	0.41
32:5:1830:G:N3	32:5:1830:G:H2'	2.36	0.41
32:5:2263:A:H5'	45:r:39:ARG:HH22	1.86	0.41
32:5:2368:A:O2'	32:5:2369:U:P	2.79	0.41
32:5:2438:A:N6	32:5:2441:C:C2	2.89	0.41
32:5:2560:C:O2	32:5:2560:C:H2'	2.20	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
32:5:2702:C:C2	32:5:2715:G:N1	2.89	0.41
32:5:2732:G:C5	32:5:2733:C:C5	3.09	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
32:5:3656:A:C4	32:5:3657:U:C6	3.09	0.41
32:5:3720:G:C6	32:5:3721:U:C4	3.09	0.41
32:5:3720:G:C6	32:5:3721:U:C5	3.09	0.41
32:5:3754:G:C2'	32:5:3755:G:O5'	2.69	0.41
32:5:3806:G:N1	32:5:3807:A:C5	2.88	0.41
32:5:3813:A:H2	32:5:4538:G:N3	2.18	0.41
32:5:3858:C:O3'	40:P:139:TYR:OH	2.38	0.41
32:5:3909:C:C2	32:5:3910:C:H6	2.26	0.41
32:5:4283:G:N3	32:5:4283:G:H2'	2.35	0.41
32:5:4314:C:C2	32:5:4315:A:H8	2.34	0.41
32:5:4405:G:C4	32:5:4406:U:C6	3.09	0.41
32:5:4408:G:C2	32:5:4409:C:C2	3.08	0.41
32:5:4480:A:N1	32:5:4481:U:C1'	2.84	0.41
32:5:4489:G:N2	32:5:4490:C:C2	2.88	0.41
32:5:4489:G:O5'	32:5:4490:C:OP2	2.38	0.41
32:5:4934:A:N6	32:5:4935:C:C5	2.89	0.41
32:5:5004:C:C6	32:5:5005:G:H1'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:5028:G:N1	32:5:5029:C:C4	2.89	0.41
32:5:5042:A:C2	32:5:5043:A:N7	2.89	0.41
33:7:21:G:C2	33:7:58:A:N3	2.88	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	3.08	0.41
34:8:63:U:H3'	34:8:63:U:C2	2.56	0.41
35:B:10:ARG:NH2	35:B:10:ARG:HB2	2.35	0.41
35:B:46:PHE:CD1	35:B:47:LEU:N	2.88	0.41
35:B:213:GLN:NE2	35:B:214:ASP:N	2.69	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	2.90	0.41
45:r:65:LYS:N	45:r:102:TYR:OH	2.53	0.41
45:r:107:ARG:C	45:r:107:ARG:CD	2.88	0.41
48:z:82:GLU:OE1	48:z:82:GLU:HA	2.21	0.41
48:z:381:SER:HB3	50:4:207:C:C1'	2.50	0.41
49:3:56:C:HO3'	49:3:57:G:P	2.42	0.41
50:4:16:G:O2'	50:4:40:G:N7	2.54	0.41
50:4:59:A:C2	50:4:60:U:C1'	3.03	0.41
50:4:61:C:C2	50:4:62:G:C8	3.08	0.41
50:4:175:G:N2	50:4:221:C:O2	2.53	0.41
52:6:217:PHE:HB3	52:6:221:GLN:HB2	2.02	0.41
53:S2:77:A:O3'	58:SG:173:ALA:HB3	2.19	0.41
53:S2:195:C:C2	53:S2:205:G:N2	2.89	0.41
53:S2:347:G:C6	53:S2:348:A:C5	3.09	0.41
53:S2:436:G:N7	53:S2:471:G:N2	2.68	0.41
53:S2:447:A:C5	53:S2:449:A:C4	3.03	0.41
53:S2:618:C:OP1	67:SX:87:ASN:HA	2.21	0.41
53:S2:818:A:O2'	61:SJ:72:PHE:CZ	2.72	0.41
53:S2:832:G:H5''	53:S2:833:C:OP2	2.20	0.41
53:S2:837:A:N6	68:SY:47:MET:HB3	2.36	0.41
53:S2:936:G:C2	53:S2:1007:C:C2	3.08	0.41
53:S2:961:G:N1	53:S2:962:A:N7	2.69	0.41
53:S2:973:C:N4	53:S2:974:C:C5	2.88	0.41
53:S2:1050:A:C5	53:S2:1069:U:C4	3.08	0.41
53:S2:1110:G:H3'	53:S2:1111:U:C6	2.29	0.41
53:S2:1283:C:H5'	53:S2:1283:C:C2	2.56	0.41
53:S2:1292:C:C4'	85:Sf:148:TYR:HA	2.51	0.41
53:S2:1306:U:H2'	53:S2:1307:U:C5'	2.51	0.41
53:S2:1372:U:O2'	53:S2:1373:C:O4'	2.38	0.41
53:S2:1422:G:C2	53:S2:1424:G:C8	3.08	0.41
53:S2:1512:C:N3	53:S2:1513:C:N4	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1575:G:N3	53:S2:1576:G:C8	2.88	0.41
53:S2:1669:G:C6	53:S2:1670:C:C4	3.08	0.41
53:S2:1684:C:O2	53:S2:1684:C:H2'	2.21	0.41
53:S2:1684:C:C2	53:S2:1685:U:C6	3.08	0.41
53:S2:1806:A:C2	53:S2:1807:C:C6	3.09	0.41
56:SC:170:TRP:HH2	66:SW:97:ARG:CD	2.32	0.41
57:SE:48:LEU:HD22	57:SE:61:VAL:HG13	2.02	0.41
57:SE:100:ARG:HG2	57:SE:102:ILE:HG13	2.03	0.41
58:SG:209:TYR:CD2	58:SG:213:LEU:HG	2.55	0.41
64:SO:99:ALA:N	64:SO:133:THR:HG22	2.36	0.41
66:SW:41:MET:HG3	66:SW:129:PHE:CD2	2.55	0.41
68:SY:70:THR:HG22	68:SY:71:GLY:N	2.36	0.41
69:Sa:18:VAL:O	69:Sa:18:VAL:HG23	2.21	0.41
75:SM:19:GLN:HG2	75:SM:88:TRP:CG	2.56	0.41
81:SU:25:THR:HG22	81:SU:86:LYS:HD2	2.02	0.41
2:D:21:ARG:NH2	33:7:7:G:O6	2.54	0.41
3:G:53:ARG:HB3	3:G:53:ARG:CZ	2.51	0.41
3:G:61:ILE:HA	3:G:64:GLN:HG2	2.03	0.41
4:H:36:ARG:HD3	4:H:38:PHE:CE1	2.56	0.41
5:J:107:PHE:CZ	5:J:130:PHE:CB	3.03	0.41
6:L:28:GLN:CG	8:N:202:ARG:HH11	2.34	0.41
12:S:161:ARG:HG2	32:5:1921:C:C6	2.55	0.41
13:T:30:TYR:CD1	13:T:30:TYR:N	2.88	0.41
13:T:80:VAL:O	13:T:81:LYS:C	2.63	0.41
21:c:74:TYR:CD1	21:c:74:TYR:C	2.99	0.41
22:d:68:LEU:HA	22:d:108:TYR:CE2	2.56	0.41
24:f:106:TYR:HB2	37:E:189:PHE:HD2	1.85	0.41
32:5:184:U:O2	32:5:254:G:C2	2.73	0.41
32:5:228:C:O2'	32:5:229:G:H5'	2.20	0.41
32:5:353:A:C2	32:5:379:G:C8	3.09	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
32:5:438:G:C2	32:5:439:G:C4	3.08	0.41
32:5:483:G:C4	32:5:484:U:C5	3.09	0.41
32:5:497:G:C2	32:5:499:G:C8	3.09	0.41
32:5:660:A:C2	32:5:661:C:N1	2.89	0.41
32:5:668:C:C4	32:5:669:C:C5	3.09	0.41
32:5:677:G:C2	32:5:678:C:C4	3.09	0.41
32:5:1274:A:H5''	32:5:2123:C:C6	2.55	0.41
32:5:1412:G:N3	32:5:1413:C:C5	2.89	0.41
32:5:1473:U:H2'	32:5:1474:C:O4'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1477:C:O2	32:5:1477:C:H2'	2.21	0.41
32:5:1594:C:C4	32:5:1595:G:C8	3.09	0.41
32:5:1663:C:H2'	32:5:1664:U:C6	2.55	0.41
32:5:1687:U:C2'	32:5:1688:G:O5'	2.69	0.41
32:5:1727:U:C2	32:5:1728:U:C6	3.09	0.41
32:5:1732:C:C2	32:5:1798:G:C2	3.09	0.41
32:5:1885:G:C5	32:5:1895:G:N2	2.88	0.41
32:5:1988:G:H2'	32:5:1988:G:N3	2.36	0.41
32:5:2056:G:N2	32:5:2058:G:O6	2.54	0.41
32:5:2274:C:H5'	32:5:2275:G:OP2	2.20	0.41
32:5:2314:G:C6	32:5:2326:G:N7	2.88	0.41
32:5:2329:U:O2'	32:5:2330:G:H8	1.99	0.41
32:5:2419:C:C2'	32:5:2420:A:O5'	2.69	0.41
32:5:2453:A:N9	32:5:2507:A:C5	2.89	0.41
32:5:2455:G:O2'	32:5:2456:G:H5'	2.20	0.41
32:5:2712:G:C2	32:5:2713:C:C2	3.08	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
32:5:2770:C:C4	32:5:2771:G:C8	3.08	0.41
32:5:2842:G:C4	32:5:2843:U:C6	3.09	0.41
32:5:3628:G:C6	32:5:3629:A:N7	2.88	0.41
32:5:3629:A:H1'	53:S2:1721:U:C4	2.50	0.41
32:5:3636:C:C6	32:5:3636:C:O5'	2.74	0.41
32:5:3668:C:O2	32:5:3668:C:C2'	2.64	0.41
32:5:3734:U:C2'	32:5:3735:G:O5'	2.68	0.41
32:5:3832:U:O2	32:5:3833:C:C6	2.74	0.41
32:5:3872:A:O2'	32:5:3873:G:C5'	2.68	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
32:5:4202:U:C2	32:5:4204:C:C4	3.09	0.41
32:5:4229:U:C5	32:5:4230:C:H5	2.31	0.41
32:5:4371:G:O2'	32:5:4372:U:OP2	2.32	0.41
32:5:4400:G:C2	32:5:4401:G:C8	3.09	0.41
32:5:4422:A:N7	32:5:4423:U:C4	2.88	0.41
32:5:4479:A:C6	32:5:4480:A:N9	2.89	0.41
32:5:4594:U:H2'	32:5:4595:G:H8	1.86	0.41
32:5:4717:A:O4'	35:B:18:PRO:HG2	2.20	0.41
32:5:5008:C:H2'	32:5:5009:G:O4'	2.21	0.41
32:5:5061:A:O4'	32:5:5062:G:H5''	2.21	0.41
33:7:8:G:N2	33:7:9:C:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:60:G:N1	33:7:61:G:N7	2.68	0.41
34:8:66:A:C2	34:8:67:U:C4	3.09	0.41
34:8:78:G:H2'	34:8:79:G:C1'	2.50	0.41
35:B:19:ARG:HB2	35:B:234:ARG:NH1	2.36	0.41
35:B:29:VAL:HB	35:B:32:PHE:CE1	2.55	0.41
35:B:106:PHE:CD2	35:B:130:PHE:CZ	3.08	0.41
38:F:69:THR:O	38:F:73:MET:HG3	2.21	0.41
38:F:107:VAL:HG11	38:F:141:TYR:HE1	1.75	0.41
39:I:46:PHE:CD2	39:I:139:ARG:HD2	2.56	0.41
46:K:123:ARG:HB2	46:K:129:ILE:HD11	1.98	0.41
47:q:108:PRO:C	47:q:184:SER:CB	2.92	0.41
47:q:109:ALA:O	47:q:184:SER:HB3	2.21	0.41
48:z:108:GLY:O	48:z:197:GLN:NE2	2.53	0.41
49:3:51:C:N3	49:3:63:G:O6	2.53	0.41
49:3:65:G:C5	49:3:66:C:C5	3.08	0.41
51:9:34:ARG:HH11	51:9:34:ARG:HG2	1.86	0.41
53:S2:66:G:N3	53:S2:66:G:H2'	2.35	0.41
53:S2:84:A:C6	53:S2:85:A:N7	2.89	0.41
53:S2:102:A:H5''	53:S2:104:A:H1'	2.03	0.41
53:S2:118:C:N3	53:S2:119:U:C6	2.86	0.41
53:S2:122:G:N1	53:S2:123:G:C4	2.89	0.41
53:S2:125:C:OP2	58:SG:198:ARG:HD3	2.21	0.41
53:S2:311:C:N4	53:S2:312:G:C8	2.89	0.41
53:S2:357:C:C4	53:S2:358:C:C5	3.08	0.41
53:S2:633:C:N4	53:S2:634:A:N7	2.69	0.41
53:S2:646:G:N7	53:S2:647:U:C5	2.89	0.41
53:S2:679:A:N3	53:S2:679:A:H2'	2.36	0.41
53:S2:899:U:C5	53:S2:900:C:C5	3.09	0.41
53:S2:961:G:O6	53:S2:962:A:C6	2.74	0.41
53:S2:964:A:C4	53:S2:965:U:C4	3.08	0.41
53:S2:1041:G:N3	53:S2:1041:G:H2'	2.36	0.41
53:S2:1063:C:C5	53:S2:1064:C:C6	3.09	0.41
53:S2:1093:A:N3	53:S2:1093:A:H2'	2.36	0.41
53:S2:1130:G:N1	53:S2:1131:G:C8	2.87	0.41
53:S2:1132:C:C4	53:S2:1133:A:N7	2.68	0.41
53:S2:1224:G:OP1	73:SF:80:GLY:HA3	2.20	0.41
53:S2:1275:G:N1	53:S2:1506:A:H2'	2.36	0.41
53:S2:1294:G:N2	53:S2:1295:A:C4	2.89	0.41
53:S2:1394:G:O6	53:S2:1395:C:C5	2.73	0.41
53:S2:1406:G:H2'	53:S2:1407:U:C4'	2.51	0.41
53:S2:1411:G:N7	53:S2:1412:C:C1'	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1500:G:H2'	53:S2:1501:C:C6	2.55	0.41
53:S2:1520:G:N3	53:S2:1520:G:C2'	2.84	0.41
53:S2:1774:C:C2	53:S2:1775:U:C6	3.09	0.41
53:S2:1792:G:N1	53:S2:1793:A:C5	2.88	0.41
53:S2:1869:A:C5	55:SB:115:LYS:HG2	2.50	0.41
55:SB:52:THR:HG22	55:SB:57:ILE:HA	1.99	0.41
55:SB:56:LYS:C	55:SB:57:ILE:HG12	2.45	0.41
56:SC:108:LYS:CB	56:SC:233:LEU:HD23	2.50	0.41
56:SC:146:GLU:HG2	56:SC:149:THR:H	1.86	0.41
58:SG:145:PHE:O	58:SG:146:ASN:HB2	2.19	0.41
61:SJ:41:ARG:O	61:SJ:44:TRP:N	2.54	0.41
66:SW:42:MET:HE2	66:SW:49:GLU:HA	2.02	0.41
77:SQ:71:ARG:HG3	77:SQ:73:LYS:HE2	2.02	0.41
78:SR:93:GLN:HG2	78:SR:94:GLU:N	2.36	0.41
82:SZ:63:PRO:O	82:SZ:111:ARG:NH1	2.54	0.41
86:Sg:302:TYR:OH	86:Sg:308:ARG:HD2	2.21	0.41
2:D:265:ARG:HH11	2:D:265:ARG:HG3	1.86	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
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
10:Q:33:ARG:NH1	10:Q:33:ARG:HG2	2.36	0.41
11:R:165:LYS:HG3	53:S2:907:G:OP1	2.20	0.41
12:S:13:VAL:HG23	12:S:62:VAL:HB	2.02	0.41
17:Y:49:ILE:HG21	17:Y:80:ILE:HG21	2.02	0.41
22:d:24:GLU:HG2	22:d:120:VAL:HB	2.03	0.41
22:d:93:ASN:C	22:d:93:ASN:HD22	2.29	0.41
23:e:57:ASN:OD1	32:5:1899:G:O2'	2.39	0.41
23:e:126:ASN:C	23:e:126:ASN:ND2	2.78	0.41
24:f:50:VAL:HG22	24:f:69:VAL:HG12	2.03	0.41
32:5:120:A:C6	32:5:149:A:C5	3.09	0.41
32:5:169:G:N1	32:5:170:C:C4	2.89	0.41
32:5:274:C:HO2'	32:5:275:C:C5'	2.25	0.41
32:5:341:G:C6	32:5:342:G:C8	3.08	0.41
32:5:342:G:N1	32:5:343:C:C4	2.89	0.41
32:5:364:G:O6	42:j:52:LYS:HE3	2.21	0.41
32:5:410:A:N3	32:5:410:A:H2'	2.35	0.41
32:5:455:C:C2	32:5:456:C:C6	3.08	0.41
32:5:671:G:N2	32:5:672:C:N1	2.67	0.41
32:5:677:G:C6	32:5:678:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:716:C:H6	32:5:716:C:H5''	1.85	0.41
32:5:949:G:N1	32:5:950:G:C5	2.89	0.41
32:5:1235:G:N1	32:5:1236:C:C5	2.88	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
32:5:1270:A:C5	32:5:1271:G:C1'	3.03	0.41
32:5:1276:C:O2	32:5:1276:C:C2'	2.66	0.41
32:5:1358:G:N1	32:5:1379:C:C2	2.85	0.41
32:5:1379:C:H4'	32:5:1380:G:H8	1.70	0.41
32:5:1487:G:C2	32:5:1488:G:N9	2.89	0.41
32:5:1740:C:C4	32:5:1785:C:C4	3.08	0.41
32:5:1769:G:C2	32:5:1770:A:N7	2.89	0.41
32:5:1917:A:C2'	32:5:1918:U:H5''	2.51	0.41
32:5:1971:C:C4	32:5:1972:G:N7	2.89	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
32:5:2276:A:C2	32:5:2277:C:H1'	2.56	0.41
32:5:2353:U:N3	32:5:2354:G:N7	2.68	0.41
32:5:2361:G:C2'	32:5:2362:U:OP2	2.69	0.41
32:5:2364:G:C2	32:5:2365:C:C4	3.08	0.41
32:5:2422:C:O2	32:5:2422:C:C2'	2.64	0.41
32:5:2481:G:C2	32:5:2482:C:N1	2.89	0.41
32:5:2553:A:C6	32:5:2763:U:C5	3.08	0.41
32:5:2570:U:C2	32:5:2571:C:C6	3.08	0.41
32:5:2628:U:C4	32:5:2629:C:C5	3.09	0.41
32:5:2673:G:H4'	32:5:2675:G:H1'	1.97	0.41
32:5:2682:G:C2	32:5:2683:C:C2	3.09	0.41
32:5:2690:C:C2	32:5:2691:U:C5	3.06	0.41
32:5:2703:G:C2	32:5:2704:C:C6	3.08	0.41
32:5:2889:G:H21	32:5:5034:A:H8	1.69	0.41
32:5:3584:C:O2	32:5:3584:C:H2'	2.20	0.41
32:5:3659:G:C6	32:5:3660:C:C4	3.09	0.41
32:5:4077:A:C5	32:5:4078:C:N1	2.88	0.41
32:5:4158:C:O2	32:5:4159:C:C6	2.74	0.41
32:5:4199:C:C2	32:5:4199:C:H3'	2.55	0.41
32:5:4480:A:C5	32:5:4481:U:C6	3.09	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
33:7:28:C:H1'	33:7:55:A:N6	2.35	0.41
33:7:43:U:O2	33:7:43:U:C2'	2.69	0.41
34:8:106:G:C2	34:8:107:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:133:G:C6	34:8:134:G:C5	3.05	0.41
34:8:151:G:OP1	34:8:151:G:H8	2.03	0.41
35:B:136:LYS:HB3	35:B:146:LEU:HD11	2.03	0.41
39:I:36:LEU:N	39:I:36:LEU:HD12	2.36	0.41
42:j:48:ASN:HD22	42:j:48:ASN:HA	1.69	0.41
46:K:119:ARG:O	46:K:121:LEU:N	2.54	0.41
48:z:409:GLY:CA	50:4:207:C:C6	3.02	0.41
50:4:17:C:O2	50:4:17:C:H2'	2.21	0.41
50:4:173:A:O2'	50:4:174:G:O5'	2.38	0.41
50:4:192:A:N6	50:4:207:C:O2	2.53	0.41
53:S2:70:G:C4	53:S2:71:G:N7	2.88	0.41
53:S2:302:A:C2'	60:SI:64:ASN:HD21	2.34	0.41
53:S2:338:G:H2'	53:S2:339:A:C1'	2.50	0.41
53:S2:351:G:N3	53:S2:351:G:H2'	2.36	0.41
53:S2:409:C:C2	53:S2:432:G:C2	3.08	0.41
53:S2:498:C:C2	53:S2:505:G:N2	2.89	0.41
53:S2:501:C:C3'	53:S2:501:C:C2	3.02	0.41
53:S2:518:G:N3	53:S2:519:A:C8	2.88	0.41
53:S2:633:C:O2	53:S2:633:C:H2'	2.21	0.41
53:S2:862:A:C8	66:SW:107:SER:CA	3.04	0.41
53:S2:878:G:N2	53:S2:879:C:H1'	2.36	0.41
53:S2:924:G:C6	53:S2:925:G:C5	3.09	0.41
53:S2:924:G:C2	53:S2:1019:C:C2	3.09	0.41
53:S2:961:G:C2	53:S2:962:A:N9	2.88	0.41
53:S2:1067:C:C2	53:S2:1068:G:C8	3.07	0.41
53:S2:1078:C:H2'	53:S2:1078:C:O2	2.21	0.41
53:S2:1099:G:C5	53:S2:1100:A:C8	3.09	0.41
53:S2:1136:U:O2'	53:S2:1137:U:H5'	2.20	0.41
53:S2:1281:G:C2	53:S2:1315:U:O4	2.74	0.41
53:S2:1292:C:C2'	85:Sf:150:PHE:HD1	2.34	0.41
53:S2:1392:U:O2	53:S2:1392:U:H2'	2.20	0.41
53:S2:1590:C:H2'	53:S2:1591:C:H5'	2.02	0.41
53:S2:1591:C:C2	53:S2:1592:C:C6	3.09	0.41
53:S2:1610:G:C2	53:S2:1611:G:N9	2.87	0.41
53:S2:1666:C:N3	53:S2:1667:U:C4	2.88	0.41
53:S2:1738:C:O2	53:S2:1738:C:H2'	2.20	0.41
53:S2:1739:C:C4	53:S2:1740:C:C5	3.08	0.41
53:S2:1777:G:C4	53:S2:1778:C:C5	3.08	0.41
54:SA:173:LEU:O	54:SA:176:TRP:HB3	2.21	0.41
55:SB:54:GLY:C	55:SB:55:THR:HG23	2.44	0.41
55:SB:100:PHE:CE1	55:SB:102:GLY:CA	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SE:102:ILE:CG2	57:SE:182:MET:HE1	2.51	0.41
58:SG:121:ILE:HG13	58:SG:122:PRO:HD2	2.02	0.41
62:SL:42:LEU:N	62:SL:42:LEU:HD22	2.35	0.41
64:SO:146:ARG:O	64:SO:148:GLY:N	2.53	0.41
68:SY:58:PHE:CD2	68:SY:58:PHE:N	2.89	0.41
68:SY:60:PHE:HD1	68:SY:71:GLY:HA3	1.85	0.41
72:SD:4:GLN:HE21	72:SD:4:GLN:HB2	1.72	0.41
80:ST:63:HIS:CE1	80:ST:78:ILE:HG12	2.56	0.41
83:Sc:11:LEU:O	83:Sc:35:MET:HB2	2.11	0.41
85:Sf:118:ARG:N	85:Sf:131:PHE:HZ	2.19	0.41
86:Sg:63:SER:HB2	86:Sg:84:ASP:HB3	2.02	0.41
86:Sg:208:ALA:HB2	86:Sg:241:PHE:HZ	1.84	0.41
1:A:54:ARG:NH1	32:5:3680:U:H5'	2.36	0.41
2:D:191:ASN:CB	2:D:194:VAL:HG23	2.51	0.41
3:G:58:PRO:HD2	3:G:61:ILE:HD12	2.03	0.41
3:G:60:TYR:CD1	3:G:61:ILE:HG13	2.56	0.41
3:G:73:ARG:HH11	3:G:73:ARG:CB	2.32	0.41
5:J:119:TYR:CE1	79:SS:12:ILE:CB	3.04	0.41
6:L:183:ARG:HA	6:L:183:ARG:HD2	1.89	0.41
7:M:110:TYR:OH	7:M:114:LYS:HE2	2.20	0.41
8:N:158:HIS:HB3	8:N:161:MET:HG2	2.03	0.41
8:N:192:TRP:C	8:N:192:TRP:CE3	2.99	0.41
11:R:124:TYR:C	11:R:124:TYR:HD1	2.27	0.41
12:S:8:ARG:HB2	12:S:10:TYR:CE2	2.56	0.41
13:T:54:HIS:CD2	32:5:4301:U:C5'	3.04	0.41
17:Y:14:ASN:OD1	17:Y:14:ASN:N	2.53	0.41
19:a:112:LEU:CD2	32:5:1396:G:N7	2.81	0.41
22:d:29:ILE:HD12	22:d:84:ILE:HD12	2.02	0.41
23:e:43:ASN:HD22	23:e:44:ARG:N	2.17	0.41
24:f:30:ILE:HB	24:f:33:VAL:HG11	2.01	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
31:o:93:LEU:O	31:o:94:GLY:C	2.63	0.41
32:5:53:C:C6	32:5:53:C:H3'	2.55	0.41
32:5:57:G:C2	32:5:58:G:C2	3.09	0.41
32:5:83:C:O5'	32:5:84:A:C2'	2.68	0.41
32:5:91:G:C5	32:5:93:G:N1	2.89	0.41
32:5:91:G:C6	32:5:93:G:N1	2.89	0.41
32:5:164:G:N2	32:5:165:A:H1'	2.36	0.41
32:5:167:C:N1	32:5:269:G:N2	2.69	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)
32:5:214:G:O2'	32:5:215:C:H5'	2.21	0.41
32:5:277:G:O2'	32:5:278:G:OP2	2.36	0.41
32:5:318:A:H2'	32:5:319:A:C8	2.56	0.41
32:5:428:G:N2	34:8:7:U:C2	2.89	0.41
32:5:481:G:N3	32:5:482:G:C8	2.88	0.41
32:5:483:G:N2	32:5:484:U:C6	2.89	0.41
32:5:488:G:C6	32:5:489:C:C5	3.09	0.41
32:5:491:G:N2	32:5:663:G:C2	2.87	0.41
32:5:700:G:C4	32:5:701:G:C8	3.09	0.41
32:5:906:C:C2	32:5:907:C:C6	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
32:5:965:G:O2'	37:E:84:VAL:HG11	2.21	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
32:5:1072:C:O2	32:5:1072:C:H2'	2.21	0.41
32:5:1078:A:H2	32:5:1079:C:H41	1.63	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
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
32:5:1220:G:C2	32:5:1221:G:C8	3.09	0.41
32:5:1261:G:N1	32:5:1262:G:C8	2.88	0.41
32:5:1266:G:C5'	32:5:2112:G:N3	2.70	0.41
32:5:1275:G:C2	32:5:1276:C:C2	3.09	0.41
32:5:1302:U:O4	32:5:1303:A:N7	2.51	0.41
32:5:1316:G:H1'	32:5:2348:G:H21	1.84	0.41
32:5:1316:G:H2'	32:5:1317:U:O4'	2.21	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
32:5:1399:G:C2	32:5:1400:G:C8	3.09	0.41
32:5:1404:G:N1	32:5:1405:C:C2	2.89	0.41
32:5:1434:G:H2'	32:5:1435:G:O4'	2.21	0.41
32:5:1613:A:C6	32:5:3637:U:C2	2.95	0.41
32:5:1614:C:C6	32:5:1614:C:C3'	3.03	0.41
32:5:1631:A:H8	32:5:1631:A:O5'	2.04	0.41
32:5:1663:C:C2	32:5:1664:U:H5	2.30	0.41
32:5:1667:G:N3	32:5:2283:G:N1	2.69	0.41
32:5:1697:G:H4'	32:5:1697:G:OP2	2.21	0.41
32:5:1726:U:O2	32:5:1727:U:C6	2.74	0.41
32:5:1769:G:N2	32:5:1770:A:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1804:A:C4'	32:5:1805:A:O5'	2.69	0.41
32:5:1808:C:O2	32:5:1808:C:H2'	2.20	0.41
32:5:1810:G:C4	32:5:1811:G:C8	3.09	0.41
32:5:1846:G:C6	32:5:1847:C:C4	3.09	0.41
32:5:1854:G:N7	32:5:4394:A:N6	2.69	0.41
32:5:1878:G:C2	32:5:1879:C:N3	2.89	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
32:5:1912:G:C6	32:5:1913:C:C4	3.08	0.41
32:5:1966:C:N3	32:5:1967:A:C8	2.89	0.41
32:5:2005:G:C2	32:5:2006:U:C6	3.09	0.41
32:5:2243:C:O2	32:5:2244:C:C6	2.74	0.41
32:5:2320:G:N3	32:5:2321:G:C6	2.89	0.41
32:5:2367:A:N6	32:5:2798:A:C1'	2.84	0.41
32:5:2367:A:N6	32:5:2798:A:O4'	2.39	0.41
32:5:2418:A:C2	32:5:2419:C:C6	3.09	0.41
32:5:2448:G:N1	32:5:2511:A:C6	2.89	0.41
32:5:2463:G:C2	32:5:2464:C:C2	3.09	0.41
32:5:2470:C:C3'	32:5:2470:C:C6	3.03	0.41
32:5:2498:C:N3	32:5:2499:C:C6	2.87	0.41
32:5:2556:G:H2'	32:5:2557:G:O4'	2.21	0.41
32:5:2606:G:C2	32:5:2607:C:N3	2.89	0.41
32:5:2663:G:N2	32:5:2672:C:C2	2.89	0.41
32:5:2695:A:C5	32:5:2697:A:C5	3.09	0.41
32:5:2757:A:O2'	32:5:2758:G:C5'	2.68	0.41
32:5:2786:C:H5''	32:5:2787:A:P	2.61	0.41
32:5:2798:A:O2'	32:5:2799:G:H5'	2.21	0.41
32:5:2842:G:N3	32:5:2843:U:C6	2.89	0.41
32:5:2905:C:C4	32:5:3590:G:N1	2.89	0.41
32:5:3589:G:H2'	32:5:3590:G:O4'	2.21	0.41
32:5:3711:A:H3'	32:5:3712:A:H5''	2.03	0.41
32:5:3719:A:C8	32:5:3720:G:C8	3.08	0.41
32:5:3732:A:C6	32:5:3733:A:N7	2.89	0.41
32:5:3754:G:N1	32:5:3755:G:C5	2.89	0.41
32:5:3833:C:O2	32:5:3833:C:H2'	2.19	0.41
32:5:3874:G:N7	32:5:3875:G:C8	2.89	0.41
32:5:4094:G:C4	32:5:4095:G:C8	3.09	0.41
32:5:4142:C:H2'	32:5:4143:G:H1'	2.02	0.41
32:5:4166:G:N3	32:5:4166:G:H2'	2.36	0.41
32:5:4254:G:N3	32:5:4254:G:H2'	2.36	0.41
32:5:4277:G:N2	32:5:4278:C:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4308:C:C2	32:5:4309:G:C8	3.09	0.41
32:5:4403:U:H2'	32:5:4404:U:O4'	2.20	0.41
32:5:4581:G:C2	32:5:4582:C:C4	3.09	0.41
32:5:4630:G:H5'	41:W:19:ARG:NH2	2.36	0.41
32:5:4652:G:N3	32:5:4653:C:C5	2.87	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
32:5:4723:A:C4	32:5:4724:A:N7	2.88	0.41
32:5:4975:G:N7	32:5:4977:A:N6	2.69	0.41
32:5:4997:G:C6	32:5:4998:G:C8	3.08	0.41
32:5:4998:G:C6	32:5:4999:G:C8	3.04	0.41
32:5:5004:C:H2'	32:5:5005:G:O4'	2.21	0.41
33:7:103:A:C5	33:7:104:C:C6	3.09	0.41
34:8:31:G:C5	34:8:32:C:C5	3.09	0.41
34:8:64:U:N3	34:8:65:A:C5	2.89	0.41
34:8:75:G:C2	34:8:76:C:C2	3.09	0.41
34:8:120:G:N1	34:8:121:G:N7	2.69	0.41
35:B:52:GLY:O	35:B:53:MET:HG2	2.21	0.41
35:B:190:VAL:O	35:B:191:ALA:CB	2.69	0.41
35:B:371:THR:HG21	41:W:17:HIS:CE1	2.54	0.41
36:C:91:ALA:O	36:C:92:PHE:C	2.63	0.41
37:E:108:MET:O	45:r:87:ARG:HD3	2.20	0.41
38:F:124:PHE:HE2	38:F:152:VAL:HG22	1.86	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
48:z:145:PHE:HA	48:z:148:LEU:HD12	2.03	0.41
48:z:344:PRO:HB2	48:z:345:PHE:H	1.69	0.41
50:4:183:A:O3'	50:4:184:A:C5'	2.69	0.41
50:4:183:A:C8	50:4:186:C:OP1	2.73	0.41
50:4:183:A:H8	50:4:186:C:OP1	2.04	0.41
51:9:33:ARG:CZ	51:9:37:ILE:HG13	2.51	0.41
53:S2:4:C:O2	53:S2:5:U:C6	2.74	0.41
53:S2:41:G:H1'	53:S2:485:A:C6	2.56	0.41
53:S2:50:A:C4	88:S4:81:MET:HE2	2.56	0.41
53:S2:53:C:O2	53:S2:54:A:C8	2.70	0.41
53:S2:54:A:C2	53:S2:451:G:C4	3.09	0.41
53:S2:86:C:C2	53:S2:87:U:C6	3.09	0.41
53:S2:103:A:C6	53:S2:355:G:C6	3.09	0.41
53:S2:155:G:N1	53:S2:156:G:C4	2.89	0.41
53:S2:180:G:H3'	53:S2:181:A:H3'	2.03	0.41
53:S2:221:A:C4	53:S2:222:U:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:305:U:C2'	53:S2:306:C:OP1	2.68	0.41
53:S2:349:A:H2'	53:S2:350:C:H6	1.83	0.41
53:S2:404:G:C5	53:S2:405:G:N7	2.88	0.41
53:S2:410:G:C2	53:S2:411:G:N9	2.89	0.41
53:S2:411:G:C6	53:S2:412:G:N7	2.89	0.41
53:S2:447:A:C6	53:S2:449:A:N9	2.80	0.41
53:S2:452:G:O2'	53:S2:453:C:C5'	2.69	0.41
53:S2:561:A:H2'	53:S2:562:U:O4'	2.21	0.41
53:S2:569:A:C4	53:S2:570:C:C6	3.09	0.41
53:S2:600:G:N3	53:S2:601:G:C8	2.89	0.41
53:S2:604:A:C2	53:S2:605:A:C4	3.08	0.41
53:S2:623:G:C2	53:S2:624:C:C4	3.04	0.41
53:S2:673:G:C4	53:S2:674:C:C6	3.09	0.41
53:S2:816:A:C6	53:S2:817:G:C4	3.09	0.41
53:S2:868:G:H4'	53:S2:869:A:OP2	2.20	0.41
53:S2:875:A:C2'	53:S2:876:C:O5'	2.69	0.41
53:S2:875:A:O2'	53:S2:876:C:P	2.78	0.41
53:S2:956:G:N2	53:S2:957:A:C6	2.88	0.41
53:S2:993:G:N2	53:S2:994:C:C2	2.89	0.41
53:S2:1029:G:C2	53:S2:1030:A:N9	2.88	0.41
53:S2:1097:G:C5	53:S2:1098:C:C6	3.08	0.41
53:S2:1134:G:C6	53:S2:1135:C:N4	2.88	0.41
53:S2:1181:A:C4	53:S2:1182:A:C6	3.09	0.41
53:S2:1210:G:C6	53:S2:1211:G:C5	3.09	0.41
53:S2:1221:G:O2'	53:S2:1222:G:O5'	2.38	0.41
53:S2:1250:A:N1	53:S2:1340:U:H5'	2.36	0.41
53:S2:1251:A:N1	53:S2:1252:C:C4	2.89	0.41
53:S2:1310:U:O5'	85:Sf:143:LYS:HG2	2.21	0.41
53:S2:1368:U:O2	53:S2:1370:A:O5'	2.39	0.41
53:S2:1395:C:C6	53:S2:1395:C:C4'	3.04	0.41
53:S2:1449:G:C6	53:S2:1450:G:C5	3.09	0.41
53:S2:1488:C:O2	53:S2:1490:G:N7	2.54	0.41
53:S2:1510:G:C4	53:S2:1511:U:C5	3.08	0.41
53:S2:1594:A:N1	53:S2:1595:U:C6	2.73	0.41
53:S2:1648:G:O6	77:SQ:16:LYS:HE3	2.21	0.41
53:S2:1709:G:N1	53:S2:1710:C:C5	2.89	0.41
53:S2:1720:U:N3	53:S2:1722:G:O4'	2.54	0.41
53:S2:1826:G:C2	53:S2:1827:U:C4	3.09	0.41
53:S2:1837:G:H5''	53:S2:1838:U:C2'	2.51	0.41
53:S2:1839:U:C2'	53:S2:1840:U:H6	2.34	0.41
53:S2:1865:C:H3'	53:S2:1866:A:H5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SA:15:VAL:HG12	54:SA:19:LEU:CD1	2.50	0.41
54:SA:176:TRP:CZ3	54:SA:199:PRO:HB3	2.56	0.41
54:SA:198:MET:HG3	54:SA:199:PRO:HD2	2.03	0.41
55:SB:133:TYR:CD1	55:SB:221:PRO:HD3	2.55	0.41
56:SC:110:MET:HE3	56:SC:125:LYS:HD3	2.02	0.41
56:SC:183:LYS:HA	56:SC:195:LEU:O	2.21	0.41
57:SE:11:ARG:HD2	57:SE:20:LEU:HB3	2.02	0.41
57:SE:47:PHE:CZ	57:SE:90:ILE:HD12	2.56	0.41
57:SE:67:GLN:HG2	57:SE:69:PHE:CE2	2.56	0.41
57:SE:208:VAL:HB	57:SE:225:ILE:HD12	2.02	0.41
59:SH:162:GLN:HA	59:SH:162:GLN:OE1	2.21	0.41
59:SH:189:PHE:HA	59:SH:190:PRO:HD3	1.94	0.41
61:SJ:14:VAL:HG12	61:SJ:15:THR:O	2.21	0.41
62:SL:40:ILE:HB	62:SL:62:PHE:CZ	2.56	0.41
62:SL:44:PHE:N	62:SL:44:PHE:CD1	2.89	0.41
62:SL:91:ASP:C	62:SL:92:TYR:HD1	2.28	0.41
63:SN:101:HIS:C	63:SN:101:HIS:HD2	2.26	0.41
66:SW:41:MET:CG	66:SW:129:PHE:CD2	3.04	0.41
67:SX:71:ARG:HA	67:SX:81:ILE:O	2.21	0.41
69:Sa:16:GLY:O	69:Sa:17:HIS:C	2.63	0.41
70:Sb:64:CYS:SG	70:Sb:73:LEU:HD23	2.61	0.41
72:SD:66:ILE:O	72:SD:70:THR:HG23	2.21	0.41
73:SF:91:ARG:O	73:SF:95:HIS:N	2.51	0.41
73:SF:115:ALA:HA	73:SF:181:ALA:HA	2.03	0.41
78:SR:51:ALA:HA	78:SR:54:VAL:HB	2.02	0.41
79:SS:31:THR:O	79:SS:36:VAL:HG13	2.21	0.41
82:SZ:50:PHE:CE1	82:SZ:79:ILE:HD13	2.56	0.41
1:A:205:ASN:O	1:A:207:VAL:N	2.54	0.41
2:D:99:TYR:HD2	2:D:199:ILE:HG23	1.85	0.41
2:D:158:LYS:HE2	33:7:47:G:OP2	2.21	0.41
3:G:140:VAL:HG23	32:5:150:U:H5'	2.02	0.41
3:G:169:PHE:N	3:G:169:PHE:CD1	2.89	0.41
4:H:113:GLU:OE2	4:H:125:ARG:HA	2.21	0.41
10:Q:42:THR:O	10:Q:45:GLN:HB2	2.21	0.41
12:S:28:TYR:HD1	12:S:28:TYR:N	2.19	0.41
12:S:84:TYR:C	12:S:84:TYR:HD1	2.28	0.41
12:S:100:LEU:HD23	12:S:101:THR:HG22	2.03	0.41
13:T:144:ASN:OD1	13:T:144:ASN:N	2.54	0.41
13:T:158:PHE:HE1	13:T:160:ALA:HB2	1.85	0.41
18:Z:136:PHE:CD1	18:Z:136:PHE:N	2.88	0.41
25:g:10:ARG:O	32:5:2402:G:O2'	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:g:60:ARG:HH22	32:5:2599:G:H5'	1.86	0.41
32:5:12:A:C6	32:5:14:C:N4	2.89	0.41
32:5:86:U:O2	32:5:87:A:H8	1.94	0.41
32:5:167:C:N3	32:5:269:G:C2	2.89	0.41
32:5:267:G:C6	32:5:268:G:C5	3.08	0.41
32:5:279:A:H5'	32:5:329:A:N3	2.36	0.41
32:5:284:G:C2	32:5:304:C:C2	3.09	0.41
32:5:324:A:C2	32:5:325:U:C2	3.09	0.41
32:5:350:C:OP1	32:5:2294:G:O2'	2.37	0.41
32:5:482:G:H2'	32:5:483:G:C8	2.56	0.41
32:5:732:A:N1	32:5:733:A:N9	2.70	0.41
32:5:1083:U:N3	32:5:1084:C:C5	2.89	0.41
32:5:1200:G:C2	32:5:1201:U:C6	3.08	0.41
32:5:1210:C:O2'	32:5:1211:G:OP1	2.36	0.41
32:5:1272:C:H2'	32:5:1272:C:OP2	2.20	0.41
32:5:1286:C:N3	32:5:1287:G:N7	2.69	0.41
32:5:1345:A:H2'	32:5:1346:C:C6	2.56	0.41
32:5:1358:G:O5'	36:C:114:ARG:NH2	2.53	0.41
32:5:1362:G:C2	32:5:1363:C:N1	2.89	0.41
32:5:1374:G:C2	32:5:1375:C:N1	2.89	0.41
32:5:1384:C:O2	32:5:1505:C:H4'	2.20	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
32:5:1489:G:C6	32:5:1490:G:N7	2.89	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
32:5:1691:G:N1	32:5:1692:C:C2	2.90	0.41
32:5:1724:G:C2	38:F:105:PRO:HB3	2.56	0.41
32:5:1826:G:C2	32:5:1827:C:H1'	2.56	0.41
32:5:1844:G:C4	32:5:1845:U:C6	3.09	0.41
32:5:2108:G:H2'	32:5:2109:G:C4'	2.51	0.41
32:5:2261:G:O2'	32:5:2262:G:C8	2.71	0.41
32:5:2353:U:C2	32:5:2354:G:N7	2.89	0.41
32:5:2465:C:H2'	32:5:2466:G:O4'	2.21	0.41
32:5:2470:C:C6	32:5:2470:C:H3'	2.56	0.41
32:5:2497:C:N4	32:5:2498:C:H41	2.19	0.41
32:5:2503:G:H3'	32:5:2504:C:H4'	2.03	0.41
32:5:2666:U:O4	32:5:2668:G:P	2.79	0.41
32:5:2851:G:N2	32:5:2856:C:C5	2.86	0.41
32:5:2852:U:O2	32:5:2853:C:H3'	2.21	0.41
32:5:3605:C:C4	32:5:3606:U:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3608:A:C2	32:5:3609:G:C4	3.08	0.41
32:5:3629:A:C2'	53:S2:1721:U:H3	2.33	0.41
32:5:3659:G:C2	32:5:3660:C:C2	3.08	0.41
32:5:3689:G:C2	32:5:3690:U:C6	3.09	0.41
32:5:3709:U:O2	32:5:3709:U:C2'	2.69	0.41
32:5:3742:G:C2	32:5:3743:G:C5	3.08	0.41
32:5:3829:G:N1	32:5:3830:A:N7	2.69	0.41
32:5:3862:A:H2'	32:5:3862:A:N3	2.36	0.41
32:5:3894:A:C4'	32:5:4979:A:N1	2.84	0.41
32:5:4085:A:C3'	32:5:4086:G:H5'	2.35	0.41
32:5:4120:U:O2	32:5:4120:U:O4'	2.38	0.41
32:5:4152:G:C2	32:5:4153:C:C4	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
32:5:4324:A:H2'	32:5:4325:A:C8	2.56	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
32:5:4538:G:C4	32:5:4539:U:C6	3.09	0.41
32:5:4685:U:H2'	32:5:4686:G:O4'	2.22	0.41
32:5:4892:A:C2	32:5:4927:G:O6	2.63	0.41
32:5:4946:U:O2	32:5:4946:U:C2'	2.69	0.41
32:5:4979:A:O5'	32:5:4979:A:H8	2.04	0.41
32:5:5015:G:C2	32:5:5033:G:C2	3.09	0.41
32:5:5062:G:N2	32:5:5063:G:N9	2.68	0.41
34:8:96:C:O2	34:8:96:C:C2'	2.62	0.41
34:8:111:U:C2'	34:8:112:G:OP2	2.69	0.41
34:8:139:G:C4	34:8:140:C:C5	3.09	0.41
36:C:36:ILE:O	36:C:37:VAL:C	2.64	0.41
38:F:120:PHE:CD1	38:F:120:PHE:O	2.74	0.41
39:I:148:VAL:O	39:I:149:ILE:C	2.64	0.41
42:j:7:SER:C	42:j:9:GLY:N	2.79	0.41
47:q:15:LEU:HA	47:q:18:ILE:HG22	2.03	0.41
48:z:195:HIS:HB2	48:z:197:GLN:HA	2.02	0.41
48:z:270:ILE:CG2	48:z:285:PHE:CZ	3.02	0.41
49:3:20:U:C3'	49:3:21:A:H5'	2.51	0.41
49:3:20:U:H3'	49:3:21:A:H5'	2.03	0.41
50:4:188:G:H1	50:4:211:U:H3	1.68	0.41
53:S2:75:G:C5	58:SG:171:THR:OG1	2.74	0.41
53:S2:185:G:C2	53:S2:186:C:C2	3.09	0.41
53:S2:187:G:C4	53:S2:188:C:C5	3.09	0.41
53:S2:309:G:C6	53:S2:310:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:358:C:C2	53:S2:405:G:C2	3.09	0.41
53:S2:410:G:N1	53:S2:411:G:C4	2.88	0.41
53:S2:563:G:N2	53:S2:564:A:N9	2.69	0.41
53:S2:751:G:O6	53:S2:792:C:C4	2.74	0.41
53:S2:859:G:C2	53:S2:860:G:N9	2.89	0.41
53:S2:885:U:O2	53:S2:886:A:C8	2.74	0.41
53:S2:973:C:C5	53:S2:974:C:C5	3.09	0.41
53:S2:1377:U:O2	53:S2:1379:A:O3'	2.39	0.41
53:S2:1531:A:H2'	53:S2:1532:C:C1'	2.51	0.41
53:S2:1542:C:O2'	53:S2:1543:U:C5'	2.68	0.41
53:S2:1545:A:C4	53:S2:1546:G:C6	3.09	0.41
53:S2:1567:G:C5	53:S2:1568:C:C4	3.09	0.41
53:S2:1589:A:H2'	53:S2:1590:C:H6	1.82	0.41
53:S2:1639:G:N3	53:S2:1639:G:H2'	2.35	0.41
53:S2:1824:A:H2	53:S2:1825:A:N7	2.18	0.41
58:SG:197:GLN:O	58:SG:201:LYS:HG2	2.21	0.41
60:SI:51:GLY:O	60:SI:52:ASN:O	2.38	0.41
60:SI:162:LEU:HD11	60:SI:191:GLU:HG2	2.03	0.41
72:SD:175:VAL:CG1	72:SD:182:LEU:HB2	2.51	0.41
74:SK:64:TRP:O	74:SK:65:ARG:C	2.63	0.41
79:SS:123:LEU:O	79:SS:127:TRP:HD1	2.04	0.41
80:ST:76:THR:HG21	80:ST:97:LYS:HG3	2.02	0.41
82:SZ:57:LYS:HB3	82:SZ:61:GLU:CD	2.45	0.41
86:Sg:296:GLN:O	86:Sg:312:VAL:HG23	2.21	0.41
87:S1:32:ARG:HB3	87:S1:37:ASN:OD1	2.21	0.41
87:S1:73:MET:HE1	88:S4:30:LEU:HG	2.03	0.41
2:D:284:LYS:CD	39:I:209:TRP:HZ3	2.34	0.40
3:G:108:GLN:N	3:G:108:GLN:NE2	2.69	0.40
3:G:128:VAL:N	3:G:129:PRO:CD	2.84	0.40
7:M:81:ASP:OD1	7:M:81:ASP:C	2.64	0.40
7:M:109:ARG:NH1	37:E:282:LEU:HD12	2.36	0.40
10:Q:43:PHE:CD1	10:Q:43:PHE:C	2.99	0.40
10:Q:166:TYR:N	10:Q:166:TYR:HD1	2.19	0.40
10:Q:186:TYR:CD2	32:5:4307:A:H4'	2.56	0.40
16:X:142:PRO:C	16:X:144:TYR:H	2.29	0.40
18:Z:136:PHE:N	18:Z:136:PHE:HD1	2.19	0.40
22:d:46:LEU:HD23	22:d:64:ILE:HD13	2.03	0.40
24:f:4:ARG:O	24:f:5:LEU:HB2	2.21	0.40
32:5:45:U:C2	32:5:46:U:C4	3.09	0.40
32:5:126:C:O2	32:5:126:C:C2'	2.69	0.40
32:5:470:A:N6	32:5:471:A:N9	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:488:G:C2	32:5:489:C:C2	3.09	0.40
32:5:678:C:C2	32:5:679:C:C5	3.08	0.40
32:5:688:U:O4	32:5:689:U:C5	2.72	0.40
32:5:693:C:H2'	32:5:694:C:H6	1.85	0.40
32:5:920:C:C2	32:5:921:C:C6	3.09	0.40
32:5:986:C:C2	32:5:987:C:C6	3.09	0.40
32:5:1192:C:C4	32:5:1193:C:C5	3.09	0.40
32:5:1205:G:N1	32:5:1206:C:C4	2.89	0.40
32:5:1361:G:C6	32:5:1362:G:C5	3.09	0.40
32:5:1367:C:H5''	32:5:1367:C:C6	2.55	0.40
32:5:1471:U:C4	32:5:1472:C:C5	3.09	0.40
32:5:1486:C:O5'	32:5:1486:C:H6	2.04	0.40
32:5:1570:G:C4	32:5:1571:G:C8	3.08	0.40
32:5:1633:G:N2	32:5:1642:A:C8	2.89	0.40
32:5:1666:C:N3	32:5:2284:G:C2	2.89	0.40
32:5:1751:A:H2'	32:5:1752:G:H5'	2.03	0.40
32:5:1870:C:O2	32:5:1870:C:C2'	2.69	0.40
32:5:1896:A:H3'	32:5:1896:A:C8	2.56	0.40
32:5:2020:U:N3	32:5:2021:G:C8	2.89	0.40
32:5:2103:G:C2	32:5:2104:G:N9	2.89	0.40
32:5:2484:A:C2	32:5:2485:U:C2	3.09	0.40
32:5:2534:C:H2'	32:5:2535:G:O5'	2.21	0.40
32:5:2552:G:OP2	32:5:2553:A:H2'	2.21	0.40
32:5:2612:G:C5	32:5:2613:C:C4	3.10	0.40
32:5:2721:G:C6	32:5:2722:G:N7	2.90	0.40
32:5:2726:G:C2	32:5:2727:C:C6	3.09	0.40
32:5:3608:A:C2	32:5:3609:G:C8	3.09	0.40
32:5:3658:C:H2'	32:5:3659:G:H8	1.85	0.40
32:5:3698:G:N3	32:5:3699:C:C6	2.90	0.40
32:5:3742:G:N1	32:5:3743:G:N7	2.69	0.40
32:5:3859:G:C8	32:5:3859:G:H5''	2.56	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
32:5:4175:G:C2	32:5:4176:C:C2	3.08	0.40
32:5:4415:A:C6	32:5:4416:G:H1'	2.57	0.40
32:5:4499:G:N3	32:5:4529:G:H1'	2.36	0.40
32:5:4868:G:C3'	32:5:4869:U:H5''	2.50	0.40
32:5:5019:A:C2	32:5:5020:G:C8	3.09	0.40
33:7:12:U:C4'	33:7:108:G:H21	2.34	0.40
33:7:62:U:C2	33:7:64:G:N7	2.88	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:94:C:H2'	33:7:95:C:H6	1.85	0.40
34:8:43:A:N3	34:8:43:A:H2'	2.35	0.40
35:B:317:LEU:HD22	35:B:382:VAL:CG2	2.51	0.40
36:C:178:ASN:HA	36:C:181:LYS:HB3	2.04	0.40
36:C:183:VAL:HG22	36:C:204:ARG:HB2	2.03	0.40
38:F:165:ASN:O	38:F:165:ASN:CG	2.63	0.40
39:I:46:PHE:CE1	39:I:140:THR:HA	2.56	0.40
39:I:171:TRP:CZ3	39:I:178:ALA:O	2.73	0.40
47:q:60:MET:C	47:q:62:ARG:H	2.29	0.40
48:z:106:PHE:CB	48:z:118:CYS:SG	3.09	0.40
48:z:346:SER:OG	48:z:369:MET:CE	2.57	0.40
50:4:218:U:H2'	50:4:219:C:C6	2.56	0.40
53:S2:19:A:H2'	53:S2:20:G:O4'	2.20	0.40
53:S2:104:A:H5'	53:S2:105:U:OP2	2.21	0.40
53:S2:119:U:O2	53:S2:120:U:H6	2.00	0.40
53:S2:376:A:N6	53:S2:377:G:C5	2.89	0.40
53:S2:502:C:O2	53:S2:502:C:C2'	2.68	0.40
53:S2:536:A:N6	53:S2:537:C:C5	2.89	0.40
53:S2:584:G:C5	53:S2:585:C:C5	3.09	0.40
53:S2:598:G:N1	53:S2:639:C:C4	2.90	0.40
53:S2:751:G:C6	53:S2:792:C:C2	3.09	0.40
53:S2:875:A:N6	53:S2:876:C:C5	2.80	0.40
53:S2:926:A:N3	53:S2:927:C:C6	2.89	0.40
53:S2:976:G:N3	53:S2:977:C:C6	2.89	0.40
53:S2:1200:A:H2'	53:S2:1200:A:N3	2.36	0.40
53:S2:1202:U:C2	53:S2:1203:G:H8	2.37	0.40
53:S2:1267:C:HO2'	53:S2:1268:C:P	2.39	0.40
53:S2:1293:A:C4	85:Sf:150:PHE:CB	2.94	0.40
53:S2:1314:U:C2	53:S2:1315:U:C1'	3.04	0.40
53:S2:1336:C:C4	53:S2:1337:C:C5	3.10	0.40
53:S2:1382:A:N3	53:S2:1383:A:C8	2.89	0.40
53:S2:1434:C:C2'	53:S2:1435:C:O4'	2.69	0.40
53:S2:1567:G:N9	53:S2:1568:C:C5	2.89	0.40
53:S2:1588:A:C2	53:S2:1589:A:N1	2.89	0.40
53:S2:1606:G:C6	53:S2:1632:G:C2	3.09	0.40
53:S2:1843:G:H2'	53:S2:1844:U:O4'	2.20	0.40
53:S2:1869:A:N6	55:SB:115:LYS:CG	2.78	0.40
54:SA:28:THR:HA	54:SA:45:GLY:O	2.21	0.40
55:SB:29:ASP:CB	55:SB:51:ARG:HD2	2.50	0.40
58:SG:207:ALA:HA	58:SG:210:ALA:HB3	2.02	0.40
59:SH:158:LEU:HD12	59:SH:189:PHE:CE1	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SO:61:LYS:HD2	64:SO:76:LEU:HB3	2.02	0.40
67:SX:67:ARG:NH2	67:SX:114:ASP:OD2	2.54	0.40
73:SF:61:PHE:HB3	83:Sc:51:ARG:CZ	2.51	0.40
78:SR:53:TYR:O	78:SR:54:VAL:C	2.63	0.40
86:Sg:230:LEU:HD22	86:Sg:259:TRP:CE3	2.56	0.40
2:D:145:TYR:HB3	32:5:4325:A:H5'	2.04	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
7:M:107:PHE:CD1	37:E:266:TYR:HD2	2.39	0.40
8:N:114:ARG:HD3	8:N:157:LYS:HA	2.03	0.40
10:Q:26:ARG:NH1	32:5:2269:C:O2	2.54	0.40
10:Q:176:ARG:NH2	32:5:1497:A:H62	2.14	0.40
18:Z:117:LYS:HA	18:Z:120:GLU:HG2	2.02	0.40
19:a:78:LEU:C	19:a:80:THR:N	2.79	0.40
21:c:62:TYR:CD1	21:c:62:TYR:C	2.99	0.40
22:d:33:ILE:HD11	22:d:45:ALA:CB	2.51	0.40
23:e:36:ARG:HD2	32:5:1661:C:OP1	2.22	0.40
23:e:60:TYR:HB2	32:5:1900:C:C4'	2.50	0.40
24:f:27:LEU:HD22	24:f:78:HIS:CD2	2.56	0.40
30:m:111:ARG:HD2	32:5:4699:U:OP2	2.22	0.40
32:5:286:U:C2	32:5:287:U:C5	3.08	0.40
32:5:288:G:C2	32:5:289:C:C2	3.10	0.40
32:5:303:C:H2'	32:5:304:C:O4'	2.21	0.40
32:5:332:C:H2'	32:5:333:U:C6	2.56	0.40
32:5:394:G:C2	32:5:398:A:N6	2.89	0.40
32:5:465:G:C2	32:5:466:A:N9	2.90	0.40
32:5:470:A:H61	37:E:101:ARG:NH2	2.19	0.40
32:5:483:G:N2	32:5:484:U:C5	2.85	0.40
32:5:686:A:H8	37:E:95:ASP:HA	1.87	0.40
32:5:708:G:N1	32:5:709:C:C6	2.89	0.40
32:5:933:G:N1	32:5:940:C:C5	2.89	0.40
32:5:961:G:C2	37:E:119:ARG:CZ	3.04	0.40
32:5:971:U:O2	32:5:971:U:H2'	2.21	0.40
32:5:1212:G:C4	32:5:1213:G:C8	3.10	0.40
32:5:1259:G:C2	32:5:1260:G:C4	3.08	0.40
32:5:1265:G:O5'	32:5:2115:G:N2	2.54	0.40
32:5:1349:G:N3	32:5:1350:C:C6	2.90	0.40
32:5:1355:G:N1	32:5:1385:G:N3	2.69	0.40
32:5:1676:C:C4	32:5:4374:U:O2	2.75	0.40
32:5:1761:G:C4	32:5:1762:C:C6	3.09	0.40
32:5:1806:G:C5	32:5:1807:C:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1846:G:N3	32:5:1847:C:C6	2.89	0.40
32:5:2086:G:C2	32:5:2272:C:C2	3.06	0.40
32:5:2445:C:O2	32:5:2446:C:C6	2.74	0.40
32:5:2453:A:C6	32:5:2454:U:C6	2.98	0.40
32:5:2484:A:C6	32:5:2485:U:C4	3.10	0.40
32:5:2721:G:H2'	32:5:2722:G:H5'	2.02	0.40
32:5:2836:A:C2	32:5:3895:G:H4'	2.56	0.40
32:5:2895:A:N1	32:5:2896:G:C8	2.89	0.40
32:5:3643:A:C2	42:j:3:LYS:HE3	2.56	0.40
32:5:3694:U:N3	32:5:3695:U:C6	2.85	0.40
32:5:3731:C:C4	32:5:3732:A:N7	2.86	0.40
32:5:3902:A:C6	32:5:4523:A:C5	3.10	0.40
32:5:4111:U:N3	32:5:4112:C:C5	2.90	0.40
32:5:4146:G:N2	32:5:4147:G:C4	2.89	0.40
32:5:4389:C:O2'	32:5:4390:A:H5'	2.21	0.40
32:5:4499:G:H5''	32:5:4500:U:OP2	2.21	0.40
32:5:4502:C:N4	32:5:4503:A:C5	2.89	0.40
32:5:4540:C:C2	32:5:4541:G:C8	3.09	0.40
32:5:4627:U:O4'	35:B:53:MET:CB	2.69	0.40
32:5:4734:A:N6	32:5:4735:G:C6	2.89	0.40
32:5:4934:A:C2	32:5:4935:C:N1	2.88	0.40
32:5:5043:A:O2'	32:5:5044:A:O4'	2.31	0.40
32:5:5067:U:C2'	32:5:5068:G:O5'	2.69	0.40
33:7:70:G:C6	33:7:71:G:N7	2.90	0.40
33:7:113:G:N2	33:7:114:U:C2	2.90	0.40
34:8:3:A:C2	34:8:4:C:C6	3.09	0.40
34:8:31:G:C4	34:8:32:C:C6	3.09	0.40
34:8:121:G:C2'	34:8:122:G:O5'	2.69	0.40
34:8:133:G:C5	34:8:134:G:N7	2.89	0.40
34:8:149:G:N2	34:8:151:G:C5	2.89	0.40
36:C:59:GLY:HA3	36:C:99:GLY:O	2.22	0.40
36:C:113:ARG:C	36:C:114:ARG:HG2	2.46	0.40
36:C:140:LYS:NZ	36:C:242:PRO:HG2	2.37	0.40
38:F:244:ARG:HH11	38:F:244:ARG:HG2	1.87	0.40
38:F:248:ARG:CZ	38:F:248:ARG:CB	2.98	0.40
43:n:10:MET:HE3	53:S2:1172:U:C5'	2.18	0.40
48:z:124:TYR:CZ	48:z:282:PHE:HB2	2.57	0.40
50:4:51:G:C2	50:4:52:C:C2	3.09	0.40
50:4:117:U:H6	50:4:117:U:O5'	2.03	0.40
50:4:178:G:H2'	50:4:179:G:O4'	2.21	0.40
52:6:224:LEU:HD12	52:6:224:LEU:HA	1.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:70:G:N3	53:S2:71:G:C8	2.89	0.40
53:S2:72:C:C4'	53:S2:73:C:OP1	2.69	0.40
53:S2:118:C:H1'	53:S2:445:A:C6	2.56	0.40
53:S2:223:C:C2	53:S2:224:A:N7	2.89	0.40
53:S2:435:A:OP2	53:S2:435:A:H8	2.05	0.40
53:S2:452:G:C6	53:S2:453:C:C5	3.09	0.40
53:S2:474:G:C5	53:S2:475:C:C5	3.09	0.40
53:S2:494:C:N4	53:S2:510:G:C1'	2.84	0.40
53:S2:613:G:H2'	53:S2:627:U:C5	2.56	0.40
53:S2:635:G:C6	53:S2:636:C:N4	2.88	0.40
53:S2:645:C:C6	53:S2:645:C:H3'	2.56	0.40
53:S2:789:G:H2'	53:S2:790:C:C6	2.56	0.40
53:S2:815:U:C2	53:S2:816:A:C8	3.09	0.40
53:S2:850:C:H2'	53:S2:851:C:O4'	2.20	0.40
53:S2:868:G:C2	59:SH:115:LYS:CD	2.89	0.40
53:S2:868:G:N1	59:SH:115:LYS:CE	2.84	0.40
53:S2:1110:G:H5''	53:S2:1110:G:C8	2.56	0.40
53:S2:1280:G:C2	53:S2:1318:G:C5	3.09	0.40
53:S2:1314:U:C2	53:S2:1315:U:H1'	2.53	0.40
53:S2:1474:A:O2'	53:S2:1475:G:P	2.79	0.40
53:S2:1501:C:N3	53:S2:1502:C:C4	2.89	0.40
53:S2:1570:G:C4	53:S2:1571:G:C8	3.09	0.40
53:S2:1838:U:O5'	53:S2:1838:U:H6	2.04	0.40
55:SB:49:VAL:HG21	55:SB:62:LEU:HD22	2.02	0.40
55:SB:56:LYS:HD2	55:SB:57:ILE:CA	2.51	0.40
64:SO:41:PHE:CG	64:SO:57:THR:HG22	2.56	0.40
65:SV:53:TYR:OH	65:SV:73:ALA:N	2.54	0.40
67:SX:105:PHE:HB3	67:SX:112:VAL:CG2	2.52	0.40
75:SM:94:ILE:O	75:SM:95:ASP:C	2.63	0.40
76:SP:41:GLN:O	76:SP:42:ARG:C	2.64	0.40
81:SU:82:MET:HB2	84:Sd:52:PHE:CD1	2.56	0.40
82:SZ:84:ALA:O	82:SZ:88:LEU:HG	2.20	0.40
1:A:19:HIS:CE1	32:5:1540:C:OP1	2.74	0.40
2:D:12:TYR:CE2	2:D:16:TYR:HB2	2.56	0.40
2:D:147:ASP:OD1	2:D:147:ASP:C	2.65	0.40
2:D:208:MET:HA	2:D:223:PHE:HZ	1.86	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
8:N:119:TYR:CE1	8:N:131:GLU:O	2.75	0.40
9:O:36:VAL:HG12	9:O:37:ARG:HB2	2.04	0.40
9:O:64:THR:HG21	35:B:261:ARG:NH1	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:T:57:TYR:CD2	13:T:57:TYR:N	2.88	0.40
15:V:82:ILE:HG23	15:V:121:VAL:HA	2.02	0.40
17:Y:27:ARG:CG	17:Y:27:ARG:HH21	2.35	0.40
18:Z:32:GLY:O	18:Z:33:THR:CB	2.70	0.40
23:e:51:GLY:O	32:5:437:G:H1'	2.21	0.40
28:k:30:ASP:OD1	28:k:31:ASN:N	2.55	0.40
32:5:8:U:H2'	32:5:9:C:O4'	2.22	0.40
32:5:199:G:C2	32:5:220:C:C2	3.09	0.40
32:5:259:C:N3	32:5:260:C:C6	2.89	0.40
32:5:323:C:O2	32:5:323:C:C2'	2.69	0.40
32:5:347:A:N3	32:5:348:G:C8	2.90	0.40
32:5:487:G:C6	32:5:488:G:C5	3.09	0.40
32:5:642:G:C6	32:5:643:C:C4	3.09	0.40
32:5:645:G:H2'	32:5:646:G:O4'	2.20	0.40
32:5:686:A:H3'	32:5:687:U:H5'	2.02	0.40
32:5:689:U:O2	32:5:689:U:H2'	2.21	0.40
32:5:925:C:O2	32:5:925:C:C2'	2.62	0.40
32:5:947:C:H2'	32:5:948:C:C6	2.56	0.40
32:5:1048:G:H2'	32:5:1049:C:O4'	2.22	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
32:5:1398:A:C6	32:5:1399:G:C4	3.10	0.40
32:5:1422:G:C2	32:5:1423:U:C5	3.09	0.40
32:5:1545:G:C2'	32:5:1546:C:O5'	2.70	0.40
32:5:1545:G:N1	32:5:1546:C:C4	2.89	0.40
32:5:1617:G:O6	32:5:1618:G:C6	2.75	0.40
32:5:1786:A:H2'	32:5:1789:C:H5	1.86	0.40
32:5:1806:G:C2	32:5:1807:C:C2	3.09	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
32:5:1982:G:O2'	32:5:2010:A:C4'	2.70	0.40
32:5:2089:G:C6	32:5:2262:G:C2'	3.04	0.40
32:5:2097:U:O2	32:5:2097:U:C5'	2.66	0.40
32:5:2302:C:C2	32:5:2303:C:C5	3.09	0.40
32:5:2481:G:C4	32:5:2482:C:C5	3.09	0.40
32:5:2645:G:C2	32:5:2646:C:C5	3.09	0.40
32:5:2666:U:C4	32:5:2668:G:OP2	2.74	0.40
32:5:2852:U:O2	32:5:2853:C:O5'	2.39	0.40
32:5:2858:A:C5	32:5:2859:G:O6	2.75	0.40
32:5:2869:U:O2	32:5:2869:U:H2'	2.21	0.40
32:5:2904:U:P	32:5:2905:C:H41	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3667:C:N3	32:5:3668:C:C5	2.89	0.40
32:5:3738:G:C6	32:5:3739:C:C6	3.09	0.40
32:5:3751:G:C2	32:5:3752:C:C2	3.09	0.40
32:5:3758:U:C4	32:5:3765:G:C5	3.10	0.40
32:5:3857:G:C2	32:5:3858:C:C2	3.10	0.40
32:5:4177:C:N3	32:5:4178:A:N7	2.69	0.40
32:5:4234:A:H2	32:5:4271:A:C8	2.30	0.40
32:5:4343:U:N3	32:5:4344:U:C6	2.65	0.40
32:5:4681:A:H2'	32:5:4682:U:O4'	2.21	0.40
32:5:4730:C:C2	32:5:4734:A:N7	2.89	0.40
32:5:4735:G:O2'	32:5:4736:C:O4'	2.37	0.40
32:5:4919:G:C6	32:5:4920:C:N4	2.90	0.40
32:5:4997:G:N1	32:5:4998:G:C8	2.90	0.40
32:5:5063:G:N2	32:5:5064:G:C4	2.89	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
33:7:105:C:O2	33:7:105:C:H2'	2.19	0.40
34:8:4:C:C2	34:8:5:U:C5	3.09	0.40
35:B:49:TYR:OH	35:B:168:MET:SD	2.78	0.40
37:E:129:PHE:O	37:E:130:SER:C	2.63	0.40
37:E:153:HIS:HE2	37:E:180:VAL:HA	1.86	0.40
39:I:11:TYR:C	39:I:59:GLN:HG3	2.46	0.40
39:I:153:ARG:HA	39:I:165:ILE:HD11	2.04	0.40
46:K:28:LEU:HG	46:K:44:ASP:HB2	2.03	0.40
46:K:141:CYS:HA	46:K:148:PRO:HD3	2.02	0.40
47:q:51:ALA:HB1	47:q:89:VAL:HG12	2.02	0.40
48:z:106:PHE:CD2	48:z:188:ILE:HG23	2.56	0.40
48:z:202:PHE:HZ	48:z:236:PHE:CZ	2.38	0.40
48:z:327:PHE:CD2	48:z:428:ALA:CA	3.03	0.40
49:3:9:A:C4'	49:3:46:G:N3	2.85	0.40
49:3:37:A:C5	49:3:38:C:C6	3.09	0.40
50:4:5:G:C2	50:4:23:U:O2	2.74	0.40
50:4:179:G:C2	50:4:219:C:C2	3.09	0.40
53:S2:31:U:O2'	53:S2:32:U:C5'	2.69	0.40
53:S2:80:G:C2	53:S2:81:U:C2	3.09	0.40
53:S2:155:G:C2	53:S2:156:G:C1'	3.04	0.40
53:S2:357:C:C2	53:S2:358:C:C5	3.09	0.40
53:S2:468:A:C2	53:S2:469:A:N9	2.89	0.40
53:S2:476:A:N6	53:S2:477:G:C5	2.88	0.40
53:S2:554:A:C6	53:S2:555:A:N6	2.89	0.40
53:S2:675:U:O2'	63:SN:113:PHE:CZ	2.73	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:916:A:C2	63:SN:73:ARG:HD3	2.56	0.40
53:S2:978:G:C2	53:S2:979:C:N1	2.89	0.40
53:S2:1066:U:O2	53:S2:1066:U:H2'	2.21	0.40
53:S2:1123:C:C2'	55:SB:148:ASN:ND2	2.85	0.40
53:S2:1144:A:N1	53:S2:1145:A:C6	2.89	0.40
53:S2:1175:G:N2	53:S2:1176:G:H1'	2.35	0.40
53:S2:1203:G:N2	53:S2:1204:A:H1'	2.36	0.40
53:S2:1271:C:N4	53:S2:1272:C:C4	2.90	0.40
53:S2:1274:G:H2'	53:S2:1274:G:N3	2.35	0.40
53:S2:1291:A:C3'	85:Sf:149:CYS:HB3	2.52	0.40
53:S2:1342:U:C6	53:S2:1483:A:C6	3.09	0.40
53:S2:1366:G:C6	53:S2:1374:C:N4	2.89	0.40
53:S2:1442:U:C2	53:S2:1443:C:C5	3.10	0.40
53:S2:1563:G:C2	53:S2:1564:C:C4	3.09	0.40
53:S2:1574:C:O2	53:S2:1574:C:C2'	2.55	0.40
53:S2:1585:U:H4'	53:S2:1586:U:OP2	2.21	0.40
53:S2:1758:G:C6	53:S2:1759:G:N7	2.88	0.40
57:SE:30:ARG:HH11	57:SE:30:ARG:CG	2.34	0.40
58:SG:74:ARG:NH1	58:SG:96:SER:OG	2.55	0.40
59:SH:66:VAL:CG2	59:SH:96:ALA:HB1	2.50	0.40
61:SJ:44:TRP:HA	61:SJ:47:LYS:CB	2.51	0.40
61:SJ:54:ARG:HB3	61:SJ:54:ARG:CZ	2.51	0.40
72:SD:162:ASP:N	72:SD:163:PRO:CD	2.85	0.40
72:SD:177:LEU:HD23	72:SD:182:LEU:HD23	2.03	0.40
79:SS:16:LEU:HD23	79:SS:71:MET:CE	2.50	0.40
83:Sc:44:ARG:CB	83:Sc:58:LEU:HD11	2.52	0.40
86:Sg:32:LEU:HD13	86:Sg:92:LEU:CD1	2.52	0.40
86:Sg:132:TRP:CD1	86:Sg:132:TRP:N	2.89	0.40
1:A:29:LEU:HA	1:A:76:PHE:CE2	2.56	0.40
1:A:104:VAL:HA	1:A:107:MET:HE3	2.03	0.40
1:A:142:GLU:C	1:A:144:LYS:H	2.30	0.40
1:A:174:ARG:HB3	1:A:174:ARG:CZ	2.51	0.40
2:D:20:PHE:HD2	2:D:30:TYR:CZ	2.40	0.40
2:D:250:ASN:ND2	2:D:252:VAL:HG12	2.29	0.40
4:H:92:MET:SD	4:H:161:ILE:HD11	2.61	0.40
7:M:6:PHE:O	7:M:7:VAL:C	2.64	0.40
10:Q:30:LYS:HB3	32:5:2088:A:N6	2.37	0.40
12:S:29:ARG:NH1	12:S:29:ARG:CG	2.83	0.40
13:T:14:MET:HE3	13:T:58:HIS:CG	2.57	0.40
17:Y:34:LEU:HD11	17:Y:47:MET:HB2	2.03	0.40
21:c:28:VAL:HG21	21:c:37:MET:HG2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:e:85:LEU:HD11	23:e:115:ALA:HB2	2.03	0.40
25:g:26:PRO:HG2	32:5:2521:G:O2'	2.21	0.40
27:i:36:HIS:CD2	27:i:36:HIS:C	3.00	0.40
32:5:22:G:N2	34:8:35:C:C2	2.89	0.40
32:5:39:A:C5	32:5:1654:G:C6	3.09	0.40
32:5:167:C:C2	32:5:168:C:C5	3.09	0.40
32:5:199:G:C6	32:5:220:C:N3	2.89	0.40
32:5:268:G:N1	32:5:269:G:C5	2.90	0.40
32:5:931:C:O2'	32:5:932:A:P	2.79	0.40
32:5:932:A:N3	32:5:932:A:C2'	2.84	0.40
32:5:971:U:C6	37:E:122:LEU:HD13	2.56	0.40
32:5:1267:C:O5'	32:5:1267:C:H6	2.04	0.40
32:5:1275:G:C5	32:5:1276:C:C5	3.09	0.40
32:5:1286:C:C4	32:5:1287:G:N7	2.89	0.40
32:5:1286:C:N3	32:5:1287:G:C8	2.90	0.40
32:5:1287:G:N2	32:5:1289:C:N1	2.70	0.40
32:5:1364:U:C6	32:5:1364:U:H3'	2.55	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
32:5:1755:C:O2'	32:5:1756:U:O4'	2.39	0.40
32:5:1843:A:N3	32:5:1844:G:C8	2.87	0.40
32:5:1877:G:C5	32:5:1878:G:N7	2.90	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
32:5:1942: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
32:5:2100:A:C6	32:5:2101:C:H1'	2.56	0.40
32:5:2459:G:C2	32:5:2463:G:O6	2.74	0.40
32:5:2477:A:C4	32:5:2478:C:C5	3.10	0.40
32:5:2555:G:C4	32:5:2573:A:C2	3.09	0.40
32:5:2566:G:C2	32:5:2567:G:C5	3.09	0.40
32:5:2576:G:C4	32:5:2577:C:C6	3.10	0.40
32:5:2643:G:C5	32:5:2644:G:C8	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
32:5:2867: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
32:5:3714:G:C5	32:5:3715:U:C2	3.09	0.40
32:5:3738:G:O6	32:5:3739:C:C2	2.74	0.40
32:5:3944:G:C2	32:5:3945:A:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4231:C:C2'	32:5:4232:U:H5''	2.50	0.40
32:5:4236:G:C2'	32:5:4237:C:O5'	2.70	0.40
32:5:4238:G:C6	32:5:4239:A:C4	3.09	0.40
32:5:4275:G:C6	32:5:4276:G:C4	3.09	0.40
32:5:4281:A:C2'	32:5:4282:A:H2'	2.50	0.40
32:5:4368:G:N3	32:5:4368:G:H2'	2.37	0.40
32:5:4468:U:O2	32:5:4708:A:N7	2.53	0.40
32:5:4504:C:N3	32:5:4505:C:C4	2.89	0.40
32:5:4564:A:C4	32:5:4565:C:C5	3.09	0.40
32:5:4587:G:C2	32:5:4716:C:C2	3.10	0.40
32:5:4629:U:N3	32:5:4630:G:C8	2.89	0.40
32:5:4661:G:H8	32:5:4661:G:C5'	2.35	0.40
32:5:4724:A:C6	32:5:4725:C:C5	3.09	0.40
32:5:4753:U:N3	32:5:4881:U:C5	2.90	0.40
32:5:4890:G:C2	32:5:4930:C:O2	2.75	0.40
32:5:5036:C:C4	32:5:5037:U:C5	3.10	0.40
32:5:5051:C:C4	32:5:5052:C:C5	3.10	0.40
33:7:42:A:N3	33:7:42:A:H2'	2.36	0.40
34:8:13:G:C6	34:8:14:U:C4	3.10	0.40
34:8:129:C:C2	34:8:130:C:C6	3.09	0.40
34:8:144:U:O2	34:8:145:C:C6	2.74	0.40
34:8:144:U:H2'	34:8:145:C:H6	1.87	0.40
35:B:17:LEU:C	35:B:17:LEU:HD13	2.46	0.40
35:B:25:HIS:ND1	35:B:25:HIS:C	2.80	0.40
36:C:65:GLU:O	36:C:66:SER:CB	2.69	0.40
38:F:41:GLN:CA	38:F:41:GLN:NE2	2.83	0.40
48:z:10:ILE:HG23	48:z:35:VAL:HG22	2.03	0.40
48:z:101:GLN:NE2	48:z:179:PHE:O	2.48	0.40
48:z:123:TYR:CE1	48:z:155:ALA:CB	3.05	0.40
48:z:374:LYS:CE	50:4:195:U:P	2.64	0.40
50:4:49:A:C2	50:4:50:G:C4	3.08	0.40
53:S2:182:C:H5'	53:S2:183:G:P	2.61	0.40
53:S2:306:C:H5	53:S2:308:G:N7	2.19	0.40
53:S2:407:G:N3	53:S2:407:G:H2'	2.36	0.40
53:S2:419:G:C6	53:S2:420:G:C5	3.10	0.40
53:S2:532:C:N3	53:S2:552:G:O6	2.55	0.40
53:S2:651:U:O2'	53:S2:652:U:O5'	2.40	0.40
53:S2:658:U:O2	67:SX:17:ARG:NH2	2.55	0.40
53:S2:673:G:C1'	53:S2:1084:A:C2	3.04	0.40
53:S2:685:A:C2	53:S2:918:U:O2	2.75	0.40
53:S2:1046:U:C4	53:S2:1047:C:N4	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1126:G:C2	53:S2:1127:C:C4	3.09	0.40
53:S2:1258:A:N1	53:S2:1663:A:N7	2.69	0.40
53:S2:1273:C:O2	53:S2:1273:C:C2'	2.65	0.40
53:S2:1302:G:N7	85:Sf:138:ARG:NH2	2.69	0.40
53:S2:1343:U:O2	53:S2:1343:U:C2'	2.69	0.40
53:S2:1396:A:C2'	53:S2:1398:G:N7	2.73	0.40
53:S2:1421:A:C2	53:S2:1422:G:H1'	2.55	0.40
53:S2:1510:G:N1	53:S2:1511:U:N1	2.70	0.40
53:S2:1722:G:N1	53:S2:1723:G:C8	2.89	0.40
54:SA:145:ILE:HD12	54:SA:159:ILE:HG22	2.04	0.40
56:SC:78:LEU:N	56:SC:97:PHE:CE2	2.90	0.40
64:SO:72:TYR:CZ	73:SF:204:ARG:HA	2.57	0.40
66:SW:28:ARG:N	66:SW:29:PRO:CD	2.83	0.40
66:SW:31:SER:OG	66:SW:32:LYS:N	2.55	0.40
67:SX:67:ARG:CG	67:SX:115:ILE:HD13	2.51	0.40
73:SF:20:PHE:HZ	73:SF:69:VAL:HG11	1.86	0.40
73:SF:204:ARG:HD3	83:Sc:63:ARG:HG2	2.03	0.40
83:Sc:42:ILE:HG22	83:Sc:43:ILE:N	2.35	0.40
86:Sg:64:HIS:HB3	86:Sg:83:TRP:HB2	2.04	0.40
87:S1:18:TYR:OH	87:S1:73:MET:CG	2.70	0.40
88:S4:17:PHE:CE1	88:S4:26:VAL:HG11	2.56	0.40
4:H:94:SER:OG	4:H:142:ASP:HB3	2.21	0.40
4:H:120:GLU:HG2	32:5:4611:A:H2	1.86	0.40
9:O:118:MET:C	9:O:119:VAL:HG23	2.47	0.40
10:Q:22:ASP:CB	36:C:33:ARG:HH21	2.34	0.40
12:S:81:TRP:HZ2	12:S:94:TYR:HE1	1.69	0.40
19:a:43:ILE:HG23	32:5:4304:A:H2	1.86	0.40
22:d:87:ARG:CB	22:d:87:ARG:HH11	2.34	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	1.86	0.40
31:o:41:TYR:CD2	31:o:41:TYR:O	2.75	0.40
32:5:158:A:C4	32:5:277:G:O6	2.75	0.40
32:5:423:G:OP1	40:P:63:TYR:OH	2.38	0.40
32:5:423:G:C3'	32:5:424:U:H6	2.35	0.40
32:5:463:A:N1	32:5:692:A:N1	2.70	0.40
32:5:1070:G:C5	32:5:1071:C:C6	3.08	0.40
32:5:1169:G:C2	32:5:1193:C:O2	2.74	0.40
32:5:1246:G:C5	32:5:1247:U:C6	3.10	0.40
32:5:1265:G:H5''	32:5:2115:G:C2	2.55	0.40
32:5:1348:U:O2	32:5:1348:U:H2'	2.21	0.40
32:5:1388:A:N1	32:5:1396:G:N2	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1396:G:C8	32:5:1396:G:C3'	3.05	0.40
32:5:1465:G:N1	32:5:1466:G:C8	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
32:5:1779:U:N3	32:5:1780:A:N7	2.70	0.40
32:5:1820:C:O2'	32:5:1821:G:O5'	2.21	0.40
32:5:1942:A:C2	32:5:4433:G:C1'	3.05	0.40
32:5:1966:C:C2	32:5:1967:A:C8	3.09	0.40
32:5:1968:G:C4	32:5:1969:G:C8	3.10	0.40
32:5:1972:G:C2	32:5:1973:G:N7	2.89	0.40
32:5:2390:G:C2	32:5:2391:G:C1'	3.05	0.40
32:5:2391:G:C2	32:5:2392:C:N1	2.89	0.40
32:5:2452:G:C2'	32:5:2453:A:O5'	2.70	0.40
32:5:2484:A:C5	32:5:2485:U:C5	3.10	0.40
32:5:2497:C:H42	32:5:2498:C:N4	2.19	0.40
32:5:2623:A:C2	32:5:2624:G:C8	3.09	0.40
32:5:2787:A:C2	32:5:2791:C:C4	3.09	0.40
32:5:2816:G:C2	32:5:2817:C:C2	3.09	0.40
32:5:2823:G:N3	32:5:2824:C:C6	2.90	0.40
32:5:2831:G:N1	32:5:2832:A:C5	2.89	0.40
32:5:2871:A:H2'	32:5:2872:C:O4'	2.21	0.40
32:5:3703:G:C2	32:5:3704:U:C6	3.09	0.40
32:5:3715:U:O2	32:5:3715:U:O4'	2.36	0.40
32:5:3772:U:H2'	32:5:3773:U:C6	2.57	0.40
32:5:3773:U:H1'	32:5:3776:G:C6	2.56	0.40
32:5:3797:C:O2	32:5:3801:U:O4	2.39	0.40
32:5:3863:C:N3	32:5:3864:C:C5	2.90	0.40
32:5:4111:U:N3	32:5:4112:C:C6	2.89	0.40
32:5:4201:G:C4	32:5:4202:U:C5	3.10	0.40
32:5:4283:G:C8	32:5:4283:G:H5'	2.56	0.40
32:5:4332:C:N3	32:5:4333:C:C5	2.78	0.40
32:5:4350:C:O2	32:5:4350:C:H2'	2.20	0.40
32:5:4363:A:C6	32:5:4364:G:N7	2.89	0.40
32:5:4425:G:O6	32:5:4426:C:C5	2.75	0.40
32:5:4574:U:N3	32:5:4576:U:OP2	2.54	0.40
32:5:4589:A:H4'	32:5:4590:A:H4'	2.03	0.40
32:5:4660:G:C2	32:5:4661:G:C5	3.09	0.40
32:5:4700:A:N1	32:5:4701:A:C5	2.90	0.40
32:5:4955:A:C6	32:5:4956:A:N7	2.89	0.40
32:5:4988:U:O2	32:5:4988:U:C2'	2.70	0.40
32:5:5042:A:N3	32:5:5043:A:N7	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:56:G:H2'	33:7:57:C:C5'	2.51	0.40
34:8:54:C:C2	34:8:55:U:C6	3.09	0.40
34:8:70:G:C6	34:8:87:G:C6	3.10	0.40
34:8:115:G:C2	34:8:116:C:C2	3.09	0.40
35:B:110:ILE:HG21	35:B:115:LYS:HD3	2.02	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
39:I:181:PHE:CE1	39:I:190:LEU:HD13	2.57	0.40
44:p:14:TYR:N	44:p:14:TYR:CD1	2.89	0.40
48:z:44:VAL:HG13	48:z:48:LEU:HD23	2.03	0.40
48:z:61:ASP:OD1	48:z:61:ASP:N	2.55	0.40
48:z:297:MET:C	48:z:353:PRO:HB3	2.46	0.40
48:z:342:MET:O	48:z:345:PHE:HB2	2.21	0.40
48:z:352:ILE:HG23	48:z:353:PRO:HD2	2.04	0.40
48:z:409:GLY:O	50:4:194:G:C2	2.75	0.40
49:3:16:U:N3	49:3:60:A:N3	2.69	0.40
49:3:75:C:C6	49:3:75:C:C5'	3.02	0.40
50:4:119[B]:A:HO2'	50:4:120:G:P	2.44	0.40
53:S2:27:A:N3	53:S2:28:U:H1'	2.37	0.40
53:S2:67:C:H4'	53:S2:68:A:OP1	2.22	0.40
53:S2:99:A:C2	53:S2:100:U:H1'	2.56	0.40
53:S2:114:G:O2'	53:S2:383:G:O4'	2.40	0.40
53:S2:155:G:C6	53:S2:156:G:C5	3.09	0.40
53:S2:418:A:N1	53:S2:419:G:C4	2.90	0.40
53:S2:448:A:H8	60:SI:26:LYS:N	2.19	0.40
53:S2:462:C:C2	53:S2:463:C:C6	3.10	0.40
53:S2:518:G:N2	53:S2:519:A:N9	2.69	0.40
53:S2:532:C:O2	53:S2:532:C:H2'	2.20	0.40
53:S2:585:C:N4	53:S2:586:G:C5	2.88	0.40
53:S2:609:U:C2	53:S2:610:G:H8	2.35	0.40
53:S2:623:G:C4	53:S2:624:C:C5	3.09	0.40
53:S2:880:G:C5	53:S2:881:G:N7	2.89	0.40
53:S2:1088:U:H4'	53:S2:1089:G:OP2	2.21	0.40
53:S2:1097:G:C4	53:S2:1098:C:C6	3.10	0.40
53:S2:1105:G:C2	53:S2:1106:C:C2	3.09	0.40
53:S2:1131:G:C2	53:S2:1132:C:C2	3.09	0.40
53:S2:1167:G:C6	53:S2:1193:U:C2	3.10	0.40
53:S2:1258:A:N3	53:S2:1663:A:C6	2.90	0.40
53:S2:1302:G:C8	85:Sf:140:TYR:CE2	3.10	0.40
53:S2:1445:U:H2'	53:S2:1446:A:O4'	2.21	0.40
53:S2:1616:U:OP2	76:SP:47:ARG:NH1	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:S2:1666:C:H2'	53:S2:1667:U:H6	1.87	0.40
53:S2:1739:C:C2	53:S2:1740:C:C5	3.09	0.40
53:S2:1792:G:H5''	53:S2:1793:A:OP2	2.21	0.40
54:SA:106:GLY:O	54:SA:109:THR:O	2.39	0.40
55:SB:54:GLY:O	55:SB:55:THR:CB	2.69	0.40
56:SC:74:LYS:HG3	56:SC:269:PHE:CE2	2.57	0.40
63:SN:18:TYR:CZ	66:SW:56:HIS:CB	3.04	0.40
64:SO:65:ASP:OD1	64:SO:65:ASP:N	2.55	0.40
64:SO:107:THR:HG22	69:Sa:69:VAL:HG21	2.02	0.40
72:SD:84:VAL:O	72:SD:84:VAL:HG13	2.22	0.40
72:SD:195:THR:HA	72:SD:202:LYS:HE2	2.04	0.40
72:SD:224:SER:HB3	86:Sg:226:HIS:HB2	2.03	0.40
73:SF:72:LEU:O	73:SF:72:LEU:HD23	2.21	0.40
75:SM:101:ARG:HA	75:SM:101:ARG:CZ	2.51	0.40
78:SR:109:LEU:O	78:SR:110:ASP:CB	2.70	0.40
79:SS:34:LYS:HB3	79:SS:103:LEU:HD21	2.04	0.40
84:Sd:21:CYS:HG	84:Sd:39:CYS:H	1.70	0.40
86:Sg:60:ARG:HA	86:Sg:60:ARG:HE	1.87	0.40
86:Sg:249:CYS:HB2	86:Sg:291:TRP:HE1	1.87	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
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	348 (87%)	30 (8%)	21 (5%)	1	16
51	9	103/105 (98%)	96 (93%)	7 (7%)	0	100	100
52	6	175/179 (98%)	168 (96%)	7 (4%)	0	100	100
54	SA	206/208 (99%)	163 (79%)	29 (14%)	14 (7%)	1	12
55	SB	211/213 (99%)	154 (73%)	36 (17%)	21 (10%)	0	7
56	SC	216/218 (99%)	182 (84%)	27 (12%)	7 (3%)	3	24
57	SE	260/262 (99%)	198 (76%)	44 (17%)	18 (7%)	1	12
58	SG	235/237 (99%)	195 (83%)	32 (14%)	8 (3%)	3	23
59	SH	187/189 (99%)	140 (75%)	30 (16%)	17 (9%)	0	8
60	SI	204/206 (99%)	165 (81%)	30 (15%)	9 (4%)	2	19
61	SJ	183/185 (99%)	134 (73%)	34 (19%)	15 (8%)	0	9
62	SL	150/152 (99%)	122 (81%)	22 (15%)	6 (4%)	2	20
63	SN	147/149 (99%)	115 (78%)	28 (19%)	4 (3%)	4	26
64	SO	134/136 (98%)	99 (74%)	21 (16%)	14 (10%)	0	6
65	SV	80/82 (98%)	58 (72%)	15 (19%)	7 (9%)	0	8
66	SW	127/129 (98%)	108 (85%)	16 (13%)	3 (2%)	4	28
67	SX	139/141 (99%)	109 (78%)	26 (19%)	4 (3%)	3	25
68	SY	124/126 (98%)	101 (82%)	16 (13%)	7 (6%)	1	15
69	Sa	96/98 (98%)	69 (72%)	18 (19%)	9 (9%)	0	8
70	Sb	81/83 (98%)	61 (75%)	16 (20%)	4 (5%)	1	17
71	Se	55/57 (96%)	41 (74%)	12 (22%)	2 (4%)	2	21
72	SD	225/227 (99%)	174 (77%)	41 (18%)	10 (4%)	2	19
73	SF	189/191 (99%)	146 (77%)	33 (18%)	10 (5%)	1	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
74	SK	96/98 (98%)	58 (60%)	26 (27%)	12 (12%)	0	4
75	SM	122/124 (98%)	78 (64%)	24 (20%)	20 (16%)	0	2
76	SP	94/96 (98%)	67 (71%)	17 (18%)	10 (11%)	0	6
77	SQ	139/141 (99%)	111 (80%)	20 (14%)	8 (6%)	1	14
78	SR	127/129 (98%)	111 (87%)	11 (9%)	5 (4%)	2	20
79	SS	135/137 (98%)	114 (84%)	12 (9%)	9 (7%)	1	13
80	ST	139/141 (99%)	115 (83%)	18 (13%)	6 (4%)	2	19
81	SU	102/104 (98%)	83 (81%)	13 (13%)	6 (6%)	1	14
82	SZ	73/75 (97%)	59 (81%)	9 (12%)	5 (7%)	1	12
83	Sc	60/64 (94%)	47 (78%)	12 (20%)	1 (2%)	7	33
84	Sd	50/52 (96%)	36 (72%)	11 (22%)	3 (6%)	1	14
85	Sf	69/71 (97%)	42 (61%)	15 (22%)	12 (17%)	0	2
86	Sg	311/313 (99%)	240 (77%)	56 (18%)	15 (5%)	2	17
87	S1	72/74 (97%)	61 (85%)	6 (8%)	5 (7%)	1	12
88	S4	72/76 (95%)	68 (94%)	4 (6%)	0	100	100
All	All	12314/12513 (98%)	9837 (80%)	1799 (15%)	678 (6%)	2	15

All (678) 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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
48	z	360	MET
48	z	363	GLY
48	z	364	ASN
54	SA	44	ASP
54	SA	200	ASP
55	SB	53	GLN
55	SB	56	LYS
55	SB	59	SER
55	SB	147	ASN
55	SB	152	LYS
55	SB	179	ASN
55	SB	191	ASP
55	SB	223	PHE
56	SC	264	SER
57	SE	95	THR

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Mol	Chain	Res	Type
57	SE	98	ASN
57	SE	101	LEU
57	SE	109	PHE
57	SE	196	THR
58	SG	99	GLY
58	SG	146	ASN
59	SH	16	PRO
59	SH	17	ASP
59	SH	18	GLU
59	SH	66	VAL
59	SH	115	LYS
59	SH	116	ARG
59	SH	170	VAL
60	SI	52	ASN
60	SI	138	ASN
60	SI	155	ASN
61	SJ	3	VAL
61	SJ	22	LYS
61	SJ	119	LEU
61	SJ	121	LYS
62	SL	100	ASN
62	SL	147	LYS
63	SN	108	ASP
63	SN	143	SER
64	SO	56	VAL
64	SO	65	ASP
64	SO	105	THR
64	SO	140	THR
65	SV	41	LYS
65	SV	65	SER
66	SW	107	SER
67	SX	34	THR
68	SY	60	PHE
68	SY	95	GLY
69	Sa	72	HIS
70	Sb	4	ALA
72	SD	5	ILE
72	SD	202	LYS
72	SD	223	ILE
73	SF	34	SER
73	SF	68	ILE
74	SK	30	PRO

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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
54	SA	3	GLY
54	SA	187	GLY
55	SB	54	GLY
55	SB	57	ILE
55	SB	83	LYS
55	SB	93	GLY
55	SB	151	ARG
56	SC	189	GLY
56	SC	255	LEU
57	SE	12	VAL
57	SE	76	VAL
57	SE	163	ASP

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Mol	Chain	Res	Type
57	SE	164	LEU
57	SE	171	ASP
57	SE	195	ILE
58	SG	105	ASN
58	SG	124	LEU
59	SH	160	LYS
60	SI	27	TYR
60	SI	126	GLY
60	SI	137	LEU
61	SJ	39	ASN
61	SJ	89	GLU
61	SJ	92	MET
61	SJ	118	GLY
64	SO	32	HIS
66	SW	77	PRO
67	SX	113	GLY
67	SX	129	SER
69	Sa	8	ASN
69	Sa	97	PRO
70	Sb	58	GLY
72	SD	178	ARG
72	SD	196	GLY
72	SD	219	PRO
73	SF	43	GLU
73	SF	121	PRO
73	SF	132	GLY
73	SF	166	ILE
74	SK	3	MET
74	SK	58	VAL
74	SK	63	ALA
74	SK	65	ARG
74	SK	92	ALA
75	SM	30	GLY
75	SM	35	ILE
75	SM	79	VAL
76	SP	12	PHE
76	SP	14	LYS
77	SQ	32	ILE
77	SQ	77	HIS
78	SR	95	ILE
78	SR	115	SER
80	ST	28	LEU

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Mol	Chain	Res	Type
80	ST	39	LEU
81	SU	52	GLY
82	SZ	104	ARG
82	SZ	112	ASN
84	Sd	10	HIS
85	Sf	89	LYS
85	Sf	100	LEU
85	Sf	137	ASP
85	Sf	148	TYR
86	Sg	65	PHE
86	Sg	142	VAL
86	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
36	C	310	HIS
37	E	40	CYS
37	E	92	VAL
37	E	95	ASP
37	E	115	GLU
37	E	206	LYS

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Mol	Chain	Res	Type
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
54	SA	105	PRO
54	SA	191	ARG
55	SB	24	PRO
55	SB	67	PHE
57	SE	38	LEU
57	SE	68	ARG
58	SG	20	ASP
58	SG	122	PRO
59	SH	112	ASN
59	SH	113	LYS
59	SH	159	ASP
59	SH	190	PRO
60	SI	143	LYS
61	SJ	4	ALA
62	SL	8	ARG
62	SL	19	ASN
62	SL	28	THR
64	SO	117	ARG
64	SO	128	ARG
64	SO	129	ILE
64	SO	147	ARG
65	SV	3	ASN
67	SX	99	GLU
68	SY	30	PRO

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Mol	Chain	Res	Type
68	SY	84	LYS
68	SY	118	ARG
69	Sa	10	ARG
69	Sa	62	TYR
70	Sb	59	CYS
73	SF	21	GLY
73	SF	143	PRO
74	SK	84	HIS
75	SM	85	LEU
75	SM	96	ARG
75	SM	116	LYS
76	SP	18	ARG
79	SS	7	GLU
81	SU	51	LYS
81	SU	118	ASP
84	Sd	7	TYR
84	Sd	8	TRP
85	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
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
21	c	77	ASN
22	d	102	LEU
24	f	106	TYR
26	h	119	PHE
26	h	122	LYS
27	i	25	ARG

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Mol	Chain	Res	Type
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
54	SA	43	SER
54	SA	110	ASN
54	SA	186	ARG
54	SA	207	PRO
55	SB	190	PRO
55	SB	204	ILE
56	SC	171	GLY
56	SC	190	SER
58	SG	152	ASP
59	SH	107	LYS
60	SI	20	PRO
61	SJ	18	ARG
61	SJ	96	TYR
61	SJ	120	ALA
62	SL	69	ARG
64	SO	146	ARG
68	SY	103	SER
69	Sa	15	ARG
69	Sa	61	ALA
72	SD	48	ILE
72	SD	218	LEU
73	SF	163	PHE

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Mol	Chain	Res	Type
74	SK	31	LYS
75	SM	117	GLU
75	SM	119	GLN
76	SP	75	VAL
78	SR	127	ASN
79	SS	88	LYS
81	SU	106	ILE
85	Sf	83	LYS
85	Sf	87	THR
85	Sf	110	GLU
86	Sg	49	GLU
86	Sg	97	THR
86	Sg	163	PRO
86	Sg	172	LYS
86	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
6	L	82	ARG
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	58	LYS
31	o	77	CYS
35	B	38	SER
35	B	110	ILE
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

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Mol	Chain	Res	Type
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
55	SB	86	LEU
55	SB	108	ASP
55	SB	207	LEU
56	SC	134	ASN
56	SC	256	TRP
57	SE	15	PRO
57	SE	30	ARG
59	SH	6	ALA
59	SH	100	ILE
60	SI	21	TYR
61	SJ	103	GLU
63	SN	28	LEU
64	SO	24	GLY
64	SO	33	ILE
65	SV	42	VAL
65	SV	45	ARG
65	SV	53	TYR
66	SW	29	PRO
69	Sa	46	GLU
70	Sb	48	SER
72	SD	130	GLY
74	SK	34	GLU
75	SM	94	ILE
76	SP	87	PRO
77	SQ	47	LEU
77	SQ	80	GLN
79	SS	92	ASP
80	ST	128	GLN
82	SZ	108	ILE
87	S1	45	ASP
2	D	263	LYS

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Mol	Chain	Res	Type
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
54	SA	42	LYS
59	SH	10	LYS
61	SJ	169	ARG
64	SO	54	CYS
64	SO	64	ALA
65	SV	10	ASP
68	SY	6	THR
71	Se	26	LYS
74	SK	43	LEU
75	SM	78	LYS
75	SM	81	ASP
76	SP	37	TYR
76	SP	54	HIS
78	SR	52	GLY
85	Sf	99	LYS
85	Sf	122	PRO
85	Sf	145	CYS
86	Sg	190	GLY
5	J	27	GLY
18	Z	95	VAL
48	z	158	PRO
48	z	213	GLN
54	SA	45	GLY
55	SB	22	VAL
57	SE	90	ILE
57	SE	131	VAL
59	SH	176	VAL
74	SK	41	PRO
74	SK	90	VAL

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Mol	Chain	Res	Type
77	SQ	43	GLU
78	SR	121	GLN
79	SS	117	ILE
12	S	5	GLY
35	B	259	PRO
47	q	142	GLY
58	SG	182	PRO
63	SN	52	VAL
72	SD	222	PRO
75	SM	65	VAL
75	SM	89	VAL
83	Sc	7	GLN
4	H	104	VAL
5	J	127	GLY
14	U	27	HIS
35	B	17	LEU
38	F	105	PRO
39	I	149	ILE
48	z	161	GLY
69	Sa	98	PRO
71	Se	54	GLY
75	SM	104	VAL
5	J	174	ILE
8	N	52	GLY
47	q	84	GLY
54	SA	106	GLY
54	SA	199	PRO
57	SE	64	ILE
61	SJ	36	GLY
73	SF	92	ILE
79	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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	187/187 (100%)	136 (73%)	51 (27%)	0	3
2	D	246/247 (100%)	182 (74%)	64 (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%)	130 (76%)	41 (24%)	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
30	m	48/48 (100%)	33 (69%)	15 (31%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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%)	318 (94%)	22 (6%)	15	41
51	9	92/94 (98%)	87 (95%)	5 (5%)	20	45
52	6	157/157 (100%)	151 (96%)	6 (4%)	29	52
54	SA	174/174 (100%)	130 (75%)	44 (25%)	0	4
55	SB	194/194 (100%)	155 (80%)	39 (20%)	1	8
56	SC	184/184 (100%)	147 (80%)	37 (20%)	1	8
57	SE	224/224 (100%)	173 (77%)	51 (23%)	1	5
58	SG	207/207 (100%)	158 (76%)	49 (24%)	1	5
59	SH	169/169 (100%)	145 (86%)	24 (14%)	3	17
60	SI	178/178 (100%)	148 (83%)	30 (17%)	2	13
61	SJ	161/161 (100%)	116 (72%)	45 (28%)	0	2
62	SL	136/136 (100%)	100 (74%)	36 (26%)	0	3
63	SN	130/130 (100%)	100 (77%)	30 (23%)	1	5
64	SO	106/106 (100%)	74 (70%)	32 (30%)	0	2
65	SV	66/66 (100%)	52 (79%)	14 (21%)	1	7
66	SW	112/112 (100%)	89 (80%)	23 (20%)	1	8
67	SX	113/113 (100%)	99 (88%)	14 (12%)	4	21

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
68	SY	108/108 (100%)	83 (77%)	25 (23%)	1	5
69	Sa	85/85 (100%)	73 (86%)	12 (14%)	3	18
70	Sb	75/75 (100%)	62 (83%)	13 (17%)	2	12
71	Se	46/46 (100%)	34 (74%)	12 (26%)	0	4
72	SD	190/190 (100%)	145 (76%)	45 (24%)	1	5
73	SF	161/161 (100%)	120 (74%)	41 (26%)	0	4
74	SK	89/89 (100%)	68 (76%)	21 (24%)	1	5
75	SM	104/104 (100%)	75 (72%)	29 (28%)	0	2
76	SP	88/88 (100%)	71 (81%)	17 (19%)	1	9
77	SQ	117/117 (100%)	91 (78%)	26 (22%)	1	6
78	SR	117/117 (100%)	102 (87%)	15 (13%)	4	20
79	SS	119/119 (100%)	101 (85%)	18 (15%)	3	16
80	ST	112/112 (100%)	82 (73%)	30 (27%)	0	3
81	SU	94/94 (100%)	79 (84%)	15 (16%)	2	14
82	SZ	66/66 (100%)	56 (85%)	10 (15%)	3	16
83	Sc	57/57 (100%)	45 (79%)	12 (21%)	1	7
84	Sd	45/45 (100%)	31 (69%)	14 (31%)	0	1
85	Sf	64/64 (100%)	44 (69%)	20 (31%)	0	1
86	Sg	272/272 (100%)	236 (87%)	36 (13%)	4	19
87	S1	67/67 (100%)	54 (81%)	13 (19%)	1	9
88	S4	69/69 (100%)	59 (86%)	10 (14%)	3	17
All	All	10728/10733 (100%)	8480 (79%)	2248 (21%)	3	7

All (2248) 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
1	A	37	ARG
1	A	40	TYR
1	A	41	ILE

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Mol	Chain	Res	Type
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
1	A	233	ARG
1	A	242	ARG
1	A	243	THR

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Mol	Chain	Res	Type
2	D	9	ASN
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
2	D	213	GLU
2	D	219	TYR

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Mol	Chain	Res	Type
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
3	G	85	GLN
3	G	88	ASP

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Mol	Chain	Res	Type
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
4	H	52	LYS
4	H	54	ARG

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Mol	Chain	Res	Type
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
5	J	63	ARG
5	J	71	HIS

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Mol	Chain	Res	Type
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
6	L	80	GLU
6	L	82	ARG

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Mol	Chain	Res	Type
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
7	M	89	THR
7	M	90	ARG

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Mol	Chain	Res	Type
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	30	TYR
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
8	N	193	ARG

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Mol	Chain	Res	Type
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
10	Q	32	TYR

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Mol	Chain	Res	Type
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
11	R	74	ARG

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Mol	Chain	Res	Type
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
12	S	84	TYR

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Mol	Chain	Res	Type
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
13	T	152	GLU

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Mol	Chain	Res	Type
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
15	V	100	ASP

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Mol	Chain	Res	Type
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
17	Y	87	ARG

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Mol	Chain	Res	Type
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
19	a	46	ASP

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Mol	Chain	Res	Type
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
21	c	73	HIS

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Mol	Chain	Res	Type
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
23	e	21	ILE

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Mol	Chain	Res	Type
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
25	g	12	SER

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Mol	Chain	Res	Type
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
27	i	33	LEU

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Mol	Chain	Res	Type
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
30	m	109	ASN

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Mol	Chain	Res	Type
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
35	B	62	ARG

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Mol	Chain	Res	Type
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
35	B	309	LEU

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Mol	Chain	Res	Type
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
36	C	97	ARG

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Mol	Chain	Res	Type
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
36	C	310	HIS

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Mol	Chain	Res	Type
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
37	E	212	TYR

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Mol	Chain	Res	Type
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
38	F	137	ILE

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Mol	Chain	Res	Type
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
39	I	85	PHE

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Mol	Chain	Res	Type
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
40	P	54	GLN

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Mol	Chain	Res	Type
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
43	n	21	ARG

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Mol	Chain	Res	Type
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
46	K	111	ASN

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Mol	Chain	Res	Type
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
47	q	202	GLU

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Mol	Chain	Res	Type
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	360	MET
48	z	361	SER
48	z	362	LYS
48	z	383	ASN
48	z	394	LYS
48	z	412	VAL
51	9	16	ILE
51	9	72	TRP
51	9	77	GLN
51	9	79	ARG
51	9	89	GLU
52	6	84	ARG
52	6	91	ASN
52	6	108	ASP
52	6	118	LEU
52	6	122	ASP
52	6	142	ARG
54	SA	6	ASP
54	SA	8	LEU
54	SA	9	GLN
54	SA	10	MET
54	SA	11	LYS
54	SA	32	PHE
54	SA	36	GLN

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Mol	Chain	Res	Type
54	SA	39	TYR
54	SA	44	ASP
54	SA	53	ARG
54	SA	56	GLU
54	SA	58	LEU
54	SA	60	LEU
54	SA	70	ASN
54	SA	73	ASP
54	SA	75	SER
54	SA	81	ASN
54	SA	84	GLN
54	SA	90	PHE
54	SA	97	THR
54	SA	99	ILE
54	SA	102	ARG
54	SA	105	PRO
54	SA	111	GLN
54	SA	116	PHE
54	SA	117	ARG
54	SA	120	ARG
54	SA	130	ASP
54	SA	131	HIS
54	SA	135	THR
54	SA	140	VAL
54	SA	141	ASN
54	SA	142	LEU
54	SA	151	ASP
54	SA	158	ASP
54	SA	169	HIS
54	SA	181	GLU
54	SA	185	MET
54	SA	186	ARG
54	SA	195	TRP
54	SA	203	PHE
54	SA	204	TYR
54	SA	206	ASP
54	SA	208	GLU
55	SB	27	LYS
55	SB	28	ARG
55	SB	30	TRP
55	SB	31	TYR
55	SB	34	LYS

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Mol	Chain	Res	Type
55	SB	43	ASN
55	SB	49	VAL
55	SB	51	ARG
55	SB	52	THR
55	SB	53	GLN
55	SB	56	LYS
55	SB	65	ARG
55	SB	68	GLU
55	SB	81	PHE
55	SB	88	THR
55	SB	104	ASP
55	SB	105	LEU
55	SB	107	ARG
55	SB	111	CYS
55	SB	119	THR
55	SB	122	GLU
55	SB	129	THR
55	SB	133	TYR
55	SB	136	ARG
55	SB	138	PHE
55	SB	146	ARG
55	SB	148	ASN
55	SB	150	ILE
55	SB	155	TYR
55	SB	157	GLN
55	SB	158	HIS
55	SB	163	GLN
55	SB	165	ARG
55	SB	181	LEU
55	SB	191	ASP
55	SB	196	ASP
55	SB	205	TYR
55	SB	208	HIS
55	SB	224	GLU
56	SC	60	TRP
56	SC	61	MET
56	SC	65	LYS
56	SC	68	ARG
56	SC	71	LYS
56	SC	72	ASP
56	SC	78	LEU
56	SC	79	GLU

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Mol	Chain	Res	Type
56	SC	97	PHE
56	SC	101	SER
56	SC	104	ASP
56	SC	110	MET
56	SC	115	GLN
56	SC	120	GLN
56	SC	121	ARG
56	SC	123	ARG
56	SC	137	VAL
56	SC	142	LYS
56	SC	143	CYS
56	SC	146	GLU
56	SC	152	ARG
56	SC	156	ILE
56	SC	167	ARG
56	SC	169	TYR
56	SC	183	LYS
56	SC	192	LEU
56	SC	200	ARG
56	SC	206	SER
56	SC	215	MET
56	SC	221	ASP
56	SC	223	TYR
56	SC	227	ARG
56	SC	242	ASP
56	SC	248	TYR
56	SC	255	LEU
56	SC	262	THR
56	SC	272	HIS
57	SE	3	ARG
57	SE	8	HIS
57	SE	9	LEU
57	SE	11	ARG
57	SE	18	TRP
57	SE	21	ASP
57	SE	30	ARG
57	SE	39	ARG
57	SE	42	LEU
57	SE	49	ARG
57	SE	51	ARG
57	SE	54	TYR
57	SE	67	GLN

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Mol	Chain	Res	Type
57	SE	73	ASP
57	SE	87	MET
57	SE	93	ASP
57	SE	95	THR
57	SE	98	ASN
57	SE	99	PHE
57	SE	100	ARG
57	SE	103	TYR
57	SE	106	LYS
57	SE	108	ARG
57	SE	112	HIS
57	SE	115	THR
57	SE	117	GLU
57	SE	118	GLU
57	SE	122	LYS
57	SE	148	ARG
57	SE	158	ASP
57	SE	162	ILE
57	SE	164	LEU
57	SE	165	GLU
57	SE	174	LYS
57	SE	179	ASN
57	SE	180	LEU
57	SE	188	ASN
57	SE	191	ARG
57	SE	198	ARG
57	SE	205	PHE
57	SE	220	THR
57	SE	221	ARG
57	SE	224	ASN
57	SE	226	PHE
57	SE	235	TRP
57	SE	240	ARG
57	SE	242	LYS
57	SE	245	ARG
57	SE	253	ASP
57	SE	259	LYS
57	SE	260	GLN
58	SG	16	ILE
58	SG	20	ASP
58	SG	21	GLU
58	SG	27	PHE

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Mol	Chain	Res	Type
58	SG	29	GLU
58	SG	30	LYS
58	SG	31	ARG
58	SG	32	MET
58	SG	56	ASN
58	SG	58	LYS
58	SG	59	GLN
58	SG	64	LYS
58	SG	65	GLN
58	SG	70	HIS
58	SG	76	LEU
58	SG	79	LYS
58	SG	85	ARG
58	SG	87	ARG
58	SG	88	ARG
58	SG	98	ARG
58	SG	109	LEU
58	SG	110	ASN
58	SG	120	ASP
58	SG	121	ILE
58	SG	124	LEU
58	SG	126	ASP
58	SG	133	LEU
58	SG	136	LYS
58	SG	140	ARG
58	SG	143	LYS
58	SG	145	PHE
58	SG	152	ASP
58	SG	155	GLN
58	SG	159	ARG
58	SG	162	LEU
58	SG	164	LYS
58	SG	165	GLU
58	SG	170	ARG
58	SG	172	LYS
58	SG	175	LYS
58	SG	190	ARG
58	SG	191	ARG
58	SG	196	LYS
58	SG	198	ARG
58	SG	213	LEU
58	SG	224	ARG

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Mol	Chain	Res	Type
58	SG	225	GLN
58	SG	227	GLN
58	SG	236	SER
59	SH	16	PRO
59	SH	23	ILE
59	SH	35	ASP
59	SH	36	LEU
59	SH	40	LEU
59	SH	46	THR
59	SH	57	ARG
59	SH	66	VAL
59	SH	81	ARG
59	SH	83	LEU
59	SH	126	HIS
59	SH	129	ILE
59	SH	135	PHE
59	SH	138	GLU
59	SH	148	LEU
59	SH	159	ASP
59	SH	160	LYS
59	SH	162	GLN
59	SH	166	VAL
59	SH	177	TYR
59	SH	184	ASP
59	SH	186	ASN
59	SH	190	PRO
59	SH	191	GLU
60	SI	5	ARG
60	SI	6	ASP
60	SI	8	TRP
60	SI	22	HIS
60	SI	25	ARG
60	SI	52	ASN
60	SI	58	LEU
60	SI	67	TRP
60	SI	73	THR
60	SI	74	ARG
60	SI	83	TYR
60	SI	86	SER
60	SI	87	ASN
60	SI	110	ARG
60	SI	111	GLN

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Mol	Chain	Res	Type
60	SI	112	TRP
60	SI	113	TYR
60	SI	116	HIS
60	SI	123	ARG
60	SI	128	LYS
60	SI	140	LYS
60	SI	143	LYS
60	SI	145	ILE
60	SI	149	TYR
60	SI	155	ASN
60	SI	174	CYS
60	SI	178	ARG
60	SI	191	GLU
60	SI	196	GLU
60	SI	203	LYS
61	SJ	5	ARG
61	SJ	9	CYS
61	SJ	10	ARG
61	SJ	13	TYR
61	SJ	18	ARG
61	SJ	20	PHE
61	SJ	26	ASP
61	SJ	29	LEU
61	SJ	35	TYR
61	SJ	37	LEU
61	SJ	39	ASN
61	SJ	42	GLU
61	SJ	44	TRP
61	SJ	54	ARG
61	SJ	67	ASP
61	SJ	69	ARG
61	SJ	70	ARG
61	SJ	83	ARG
61	SJ	88	ASP
61	SJ	91	LYS
61	SJ	95	ASP
61	SJ	96	TYR
61	SJ	101	LYS
61	SJ	108	ARG
61	SJ	109	ARG
61	SJ	110	LEU
61	SJ	115	PHE

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Mol	Chain	Res	Type
61	SJ	116	LYS
61	SJ	119	LEU
61	SJ	123	ILE
61	SJ	124	HIS
61	SJ	125	HIS
61	SJ	127	ARG
61	SJ	131	ARG
61	SJ	136	ARG
61	SJ	138	ARG
61	SJ	139	LYS
61	SJ	147	PHE
61	SJ	150	ARG
61	SJ	158	ASP
61	SJ	162	ARG
61	SJ	165	TYR
61	SJ	169	ARG
61	SJ	172	ARG
61	SJ	174	LYS
62	SL	4	ILE
62	SL	7	GLU
62	SL	8	ARG
62	SL	13	GLN
62	SL	16	ILE
62	SL	20	LYS
62	SL	22	ARG
62	SL	25	LEU
62	SL	27	GLU
62	SL	31	GLU
62	SL	35	ARG
62	SL	39	ASN
62	SL	40	ILE
62	SL	42	LEU
62	SL	44	PHE
62	SL	57	ASP
62	SL	65	ASN
62	SL	66	VAL
62	SL	69	ARG
62	SL	74	SER
62	SL	76	VAL
62	SL	85	THR
62	SL	89	ARG
62	SL	90	ARG

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Mol	Chain	Res	Type
62	SL	91	ASP
62	SL	92	TYR
62	SL	97	ARG
62	SL	103	GLU
62	SL	108	ASN
62	SL	113	LEU
62	SL	117	PHE
62	SL	121	GLN
62	SL	124	ASP
62	SL	131	CYS
62	SL	132	ARG
62	SL	143	LEU
63	SN	3	ARG
63	SN	5	HIS
63	SN	13	GLN
63	SN	14	SER
63	SN	20	ARG
63	SN	27	LYS
63	SN	31	ASP
63	SN	38	TYR
63	SN	55	ARG
63	SN	56	ASP
63	SN	58	HIS
63	SN	62	GLN
63	SN	64	ARG
63	SN	69	ASN
63	SN	78	LYS
63	SN	84	LEU
63	SN	86	GLU
63	SN	87	ASP
63	SN	89	TYR
63	SN	99	ARG
63	SN	101	HIS
63	SN	105	ASN
63	SN	113	PHE
63	SN	125	LEU
63	SN	127	ARG
63	SN	128	TYR
63	SN	132	LYS
63	SN	134	VAL
63	SN	139	TRP
63	SN	141	TYR

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Mol	Chain	Res	Type
64	SO	17	LEU
64	SO	20	GLN
64	SO	21	VAL
64	SO	26	ASN
64	SO	32	HIS
64	SO	34	PHE
64	SO	37	PHE
64	SO	41	PHE
64	SO	43	HIS
64	SO	46	ASP
64	SO	50	LYS
64	SO	51	GLU
64	SO	53	ILE
64	SO	60	MET
64	SO	62	VAL
64	SO	63	LYS
64	SO	65	ASP
64	SO	66	ARG
64	SO	80	ASP
64	SO	84	ARG
64	SO	86	LYS
64	SO	94	HIS
64	SO	103	ASN
64	SO	106	LYS
64	SO	116	LEU
64	SO	121	ARG
64	SO	128	ARG
64	SO	130	GLU
64	SO	146	ARG
64	SO	147	ARG
64	SO	149	ARG
64	SO	150	ARG
65	SV	1	MET
65	SV	2	GLN
65	SV	4	ASP
65	SV	11	LEU
65	SV	18	SER
65	SV	21	ASN
65	SV	39	VAL
65	SV	46	PHE
65	SV	49	GLN
65	SV	50	PHE

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Mol	Chain	Res	Type
65	SV	53	TYR
65	SV	67	ASP
65	SV	81	LYS
65	SV	82	ASN
66	SW	12	LYS
66	SW	15	ASN
66	SW	18	GLU
66	SW	24	GLN
66	SW	28	ARG
66	SW	36	ARG
66	SW	37	PHE
66	SW	52	ILE
66	SW	56	HIS
66	SW	57	ARG
66	SW	70	ASN
66	SW	74	VAL
66	SW	80	ASP
66	SW	83	LEU
66	SW	84	LYS
66	SW	85	ASP
66	SW	98	GLN
66	SW	105	THR
66	SW	111	MET
66	SW	113	HIS
66	SW	114	GLU
66	SW	117	ARG
66	SW	120	HIS
67	SX	5	ARG
67	SX	9	THR
67	SX	17	ARG
67	SX	19	ASP
67	SX	32	LEU
67	SX	46	HIS
67	SX	67	ARG
67	SX	81	ILE
67	SX	84	PHE
67	SX	88	ASP
67	SX	105	PHE
67	SX	114	ASP
67	SX	115	ILE
67	SX	131	LEU
68	SY	16	ARG

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Mol	Chain	Res	Type
68	SY	17	LEU
68	SY	19	GLN
68	SY	20	ARG
68	SY	22	GLN
68	SY	23	MET
68	SY	34	THR
68	SY	39	GLU
68	SY	47	MET
68	SY	54	VAL
68	SY	61	ARG
68	SY	63	HIS
68	SY	69	THR
68	SY	72	PHE
68	SY	74	MET
68	SY	77	ASP
68	SY	81	TYR
68	SY	96	LEU
68	SY	98	GLU
68	SY	99	LYS
68	SY	102	THR
68	SY	107	ARG
68	SY	111	LYS
68	SY	122	LYS
68	SY	124	ASN
69	Sa	8	ASN
69	Sa	22	ARG
69	Sa	28	ARG
69	Sa	30	VAL
69	Sa	41	ILE
69	Sa	51	ARG
69	Sa	52	ASP
69	Sa	86	ASN
69	Sa	87	ARG
69	Sa	88	SER
69	Sa	94	ASP
69	Sa	95	ARG
70	Sb	14	GLU
70	Sb	20	LYS
70	Sb	23	ARG
70	Sb	32	PHE
70	Sb	33	MET
70	Sb	34	ASP

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Mol	Chain	Res	Type
70	Sb	37	CYS
70	Sb	62	VAL
70	Sb	72	ARG
70	Sb	75	GLU
70	Sb	78	SER
70	Sb	83	GLN
70	Sb	84	HIS
71	Se	13	ARG
71	Se	15	GLN
71	Se	18	LYS
71	Se	23	GLU
71	Se	25	LYS
71	Se	26	LYS
71	Se	28	LYS
71	Se	31	ARG
71	Se	37	GLN
71	Se	40	ARG
71	Se	41	ARG
71	Se	52	LYS
72	SD	4	GLN
72	SD	5	ILE
72	SD	6	SER
72	SD	8	LYS
72	SD	9	ARG
72	SD	17	PHE
72	SD	20	GLU
72	SD	22	ASN
72	SD	24	PHE
72	SD	28	GLU
72	SD	32	ASP
72	SD	40	ARG
72	SD	42	THR
72	SD	53	THR
72	SD	56	GLN
72	SD	67	ARG
72	SD	87	TYR
72	SD	94	ARG
72	SD	103	GLU
72	SD	106	ARG
72	SD	107	TYR
72	SD	113	LEU
72	SD	135	GLU

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Mol	Chain	Res	Type
72	SD	141	LYS
72	SD	148	LYS
72	SD	152	PHE
72	SD	156	LEU
72	SD	158	ILE
72	SD	159	HIS
72	SD	162	ASP
72	SD	163	PRO
72	SD	165	ASN
72	SD	167	TYR
72	SD	169	ASP
72	SD	177	LEU
72	SD	178	ARG
72	SD	182	LEU
72	SD	187	LYS
72	SD	206	ASP
72	SD	207	HIS
72	SD	212	GLU
72	SD	214	LYS
72	SD	216	GLU
72	SD	218	LEU
72	SD	225	GLU
73	SF	23	TRP
73	SF	27	ASP
73	SF	29	GLN
73	SF	37	ASP
73	SF	42	LYS
73	SF	43	GLU
73	SF	49	LEU
73	SF	55	ARG
73	SF	63	LYS
73	SF	68	ILE
73	SF	79	HIS
73	SF	82	ASN
73	SF	83	ASN
73	SF	88	MET
73	SF	94	LYS
73	SF	101	HIS
73	SF	106	GLU
73	SF	109	LEU
73	SF	110	GLN
73	SF	114	ASN

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Mol	Chain	Res	Type
73	SF	118	ASN
73	SF	122	ARG
73	SF	123	GLU
73	SF	130	ARG
73	SF	136	ARG
73	SF	137	GLN
73	SF	140	ASP
73	SF	144	LEU
73	SF	145	ARG
73	SF	152	TRP
73	SF	164	ARG
73	SF	168	THR
73	SF	171	GLU
73	SF	172	CYS
73	SF	176	GLU
73	SF	184	SER
73	SF	186	ASN
73	SF	187	SER
73	SF	190	ILE
73	SF	194	ASP
73	SF	195	GLU
74	SK	1	MET
74	SK	2	LEU
74	SK	5	LYS
74	SK	8	ARG
74	SK	16	PHE
74	SK	32	HIS
74	SK	37	ASP
74	SK	39	ASN
74	SK	43	LEU
74	SK	46	MET
74	SK	54	SER
74	SK	61	GLN
74	SK	65	ARG
74	SK	66	HIS
74	SK	70	TYR
74	SK	74	GLU
74	SK	80	ARG
74	SK	81	ASP
74	SK	89	ILE
74	SK	95	ARG
74	SK	96	ARG

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Mol	Chain	Res	Type
75	SM	12	MET
75	SM	18	LEU
75	SM	20	GLU
75	SM	26	LEU
75	SM	29	ASP
75	SM	31	LEU
75	SM	33	ARG
75	SM	43	ASP
75	SM	45	ARG
75	SM	48	HIS
75	SM	49	LEU
75	SM	52	GLN
75	SM	72	HIS
75	SM	77	ILE
75	SM	83	LYS
75	SM	85	LEU
75	SM	88	TRP
75	SM	89	VAL
75	SM	91	LEU
75	SM	92	CYS
75	SM	95	ASP
75	SM	96	ARG
75	SM	99	ASN
75	SM	101	ARG
75	SM	102	LYS
75	SM	109	VAL
75	SM	113	ASP
75	SM	114	TYR
75	SM	127	TYR
76	SP	7	LYS
76	SP	10	ARG
76	SP	18	ARG
76	SP	27	ASP
76	SP	30	TYR
76	SP	40	ARG
76	SP	41	GLN
76	SP	42	ARG
76	SP	43	ARG
76	SP	44	ARG
76	SP	50	ARG
76	SP	51	ARG
76	SP	52	LYS

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Mol	Chain	Res	Type
76	SP	79	HIS
76	SP	81	ARG
76	SP	82	ASP
76	SP	86	LEU
77	SQ	8	GLN
77	SQ	15	ARG
77	SQ	26	LYS
77	SQ	27	ARG
77	SQ	35	ASN
77	SQ	40	GLU
77	SQ	41	MET
77	SQ	45	ARG
77	SQ	50	LYS
77	SQ	63	PHE
77	SQ	69	ARG
77	SQ	71	ARG
77	SQ	72	VAL
77	SQ	73	LYS
77	SQ	77	HIS
77	SQ	84	ILE
77	SQ	99	TYR
77	SQ	107	GLU
77	SQ	114	GLN
77	SQ	116	ASP
77	SQ	117	ARG
77	SQ	119	LEU
77	SQ	128	GLU
77	SQ	138	ARG
77	SQ	140	ARG
77	SQ	145	TYR
78	SR	1	MET
78	SR	3	ARG
78	SR	6	THR
78	SR	31	ASN
78	SR	33	ARG
78	SR	37	GLU
78	SR	49	LYS
78	SR	50	ILE
78	SR	56	HIS
78	SR	58	MET
78	SR	99	ASP
78	SR	102	THR

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Mol	Chain	Res	Type
78	SR	105	MET
78	SR	116	ASN
78	SR	127	ASN
79	SS	7	GLU
79	SS	8	LYS
79	SS	10	GLN
79	SS	42	HIS
79	SS	63	GLU
79	SS	78	LYS
79	SS	81	ASP
79	SS	82	TRP
79	SS	85	ASN
79	SS	86	ARG
79	SS	87	GLN
79	SS	95	TYR
79	SS	108	ARG
79	SS	113	ARG
79	SS	118	ARG
79	SS	124	ARG
79	SS	134	GLN
79	SS	135	HIS
80	ST	8	ASP
80	ST	11	GLN
80	ST	13	GLU
80	ST	16	ARG
80	ST	23	LYS
80	ST	28	LEU
80	ST	35	ASP
80	ST	37	VAL
80	ST	42	HIS
80	ST	52	TRP
80	ST	53	PHE
80	ST	56	ARG
80	ST	62	ARG
80	ST	63	HIS
80	ST	67	ARG
80	ST	74	SER
80	ST	79	TYR
80	ST	82	ARG
80	ST	83	GLN
80	ST	84	ARG
80	ST	90	SER

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Mol	Chain	Res	Type
80	ST	92	PHE
80	ST	94	ARG
80	ST	97	LYS
80	ST	102	ARG
80	ST	108	GLU
80	ST	118	ASP
80	ST	121	ARG
80	ST	128	GLN
80	ST	129	ARG
81	SU	19	ARG
81	SU	47	ASN
81	SU	48	LEU
81	SU	49	LYS
81	SU	55	ARG
81	SU	56	MET
81	SU	61	LEU
81	SU	62	ARG
81	SU	64	THR
81	SU	74	SER
81	SU	79	ARG
81	SU	84	ILE
81	SU	87	ARG
81	SU	93	SER
81	SU	111	GLU
82	SZ	44	LEU
82	SZ	45	ASN
82	SZ	51	ASP
82	SZ	64	ASN
82	SZ	69	THR
82	SZ	90	GLU
82	SZ	94	LYS
82	SZ	97	ILE
82	SZ	110	THR
82	SZ	114	LYS
83	Sc	5	ARG
83	Sc	7	GLN
83	Sc	13	ARG
83	Sc	21	THR
83	Sc	24	GLN
83	Sc	26	GLN
83	Sc	31	ARG
83	Sc	42	ILE

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Mol	Chain	Res	Type
83	Sc	54	ASP
83	Sc	60	GLU
83	Sc	62	GLU
83	Sc	67	ARG
84	Sd	6	PHE
84	Sd	8	TRP
84	Sd	9	SER
84	Sd	12	ARG
84	Sd	16	GLN
84	Sd	23	VAL
84	Sd	26	ASN
84	Sd	30	LEU
84	Sd	34	TYR
84	Sd	36	LEU
84	Sd	43	PHE
84	Sd	53	ILE
84	Sd	54	LYS
84	Sd	56	ASP
85	Sf	87	THR
85	Sf	89	LYS
85	Sf	95	ARG
85	Sf	98	VAL
85	Sf	104	LYS
85	Sf	106	TYR
85	Sf	119	ARG
85	Sf	121	CYS
85	Sf	126	CYS
85	Sf	131	PHE
85	Sf	138	ARG
85	Sf	139	HIS
85	Sf	140	TYR
85	Sf	141	CYS
85	Sf	143	LYS
85	Sf	146	LEU
85	Sf	147	THR
85	Sf	148	TYR
85	Sf	149	CYS
85	Sf	150	PHE
86	Sg	8	ARG
86	Sg	15	ASN
86	Sg	17	TRP
86	Sg	20	GLN

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Mol	Chain	Res	Type
86	Sg	24	THR
86	Sg	36	ARG
86	Sg	44	LYS
86	Sg	47	ARG
86	Sg	48	ASP
86	Sg	49	GLU
86	Sg	59	LEU
86	Sg	65	PHE
86	Sg	84	ASP
86	Sg	100	ARG
86	Sg	118	ARG
86	Sg	143	GLN
86	Sg	186	THR
86	Sg	187	ASN
86	Sg	194	TYR
86	Sg	213	ASP
86	Sg	215	GLN
86	Sg	226	HIS
86	Sg	229	THR
86	Sg	234	ASP
86	Sg	237	ASN
86	Sg	240	CYS
86	Sg	258	ILE
86	Sg	268	ASP
86	Sg	269	GLU
86	Sg	273	GLU
86	Sg	294	ASP
86	Sg	297	THR
86	Sg	298	LEU
86	Sg	299	PHE
86	Sg	302	TYR
86	Sg	306	LEU
87	S1	2	PRO
87	S1	7	TRP
87	S1	11	SER
87	S1	27	VAL
87	S1	28	VAL
87	S1	38	LEU
87	S1	46	LEU
87	S1	50	VAL
87	S1	59	VAL
87	S1	62	ILE

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Mol	Chain	Res	Type
87	S1	67	SER
87	S1	68	GLN
87	S1	71	ARG
88	S4	4	LEU
88	S4	7	GLU
88	S4	8	GLN
88	S4	32	LYS
88	S4	34	ASP
88	S4	77	ASN
88	S4	85	ASN
88	S4	92	ASP
88	S4	94	LEU
88	S4	95	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (296) 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	81	HIS
2	D	94	ASN
2	D	191	ASN
2	D	195	HIS
2	D	202	GLN
2	D	244	HIS
2	D	250	ASN
3	G	43	GLN
3	G	64	GLN
3	G	81	ASN
3	G	108	GLN
3	G	112	GLN
3	G	231	ASN
4	H	40	HIS

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Mol	Chain	Res	Type
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	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	93	ASN
16	X	125	ASN
17	Y	24	HIS

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Mol	Chain	Res	Type
17	Y	72	GLN
17	Y	86	GLN
18	Z	28	ASN
18	Z	79	HIS
18	Z	127	ASN
19	a	19	HIS
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
31	o	21	HIS
31	o	25	GLN
31	o	45	GLN
31	o	76	ASN
35	B	167	GLN

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Mol	Chain	Res	Type
35	B	179	HIS
35	B	203	GLN
35	B	258	HIS
35	B	289	GLN
35	B	376	HIS
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	82	ASN
38	F	128	ASN
38	F	174	ASN
38	F	194	HIS
38	F	250	ASN
39	I	51	HIS
39	I	73	ASN
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

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Mol	Chain	Res	Type
40	P	133	HIS
40	P	145	HIS
41	W	17	HIS
42	j	16	HIS
42	j	48	ASN
42	j	66	HIS
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	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
54	SA	29	ASN
54	SA	33	GLN
54	SA	36	GLN
54	SA	84	GLN
54	SA	132	GLN
54	SA	169	HIS
55	SB	53	GLN
55	SB	75	GLN
55	SB	124	HIS
55	SB	148	ASN
55	SB	158	HIS
55	SB	232	HIS
56	SC	115	GLN
56	SC	134	ASN
57	SE	36	HIS

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Mol	Chain	Res	Type
57	SE	112	HIS
57	SE	138	HIS
57	SE	142	HIS
57	SE	188	ASN
58	SG	59	GLN
58	SG	65	GLN
58	SG	70	HIS
58	SG	110	ASN
58	SG	163	ASN
59	SH	112	ASN
59	SH	114	GLN
60	SI	44	HIS
60	SI	64	ASN
60	SI	155	ASN
60	SI	168	GLN
61	SJ	111	GLN
62	SL	65	ASN
62	SL	106	HIS
63	SN	5	HIS
63	SN	13	GLN
63	SN	62	GLN
63	SN	69	ASN
64	SO	26	ASN
64	SO	43	HIS
64	SO	79	GLN
64	SO	94	HIS
65	SV	33	GLN
65	SV	47	ASN
66	SW	44	HIS
66	SW	64	ASN
66	SW	82	GLN
66	SW	90	GLN
66	SW	91	ASN
66	SW	98	GLN
66	SW	113	HIS
67	SX	20	HIS
67	SX	23	HIS
67	SX	61	GLN
68	SY	94	HIS
68	SY	112	ASN
69	Sa	72	HIS
70	Sb	9	HIS

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Mol	Chain	Res	Type
70	Sb	49	HIS
71	Se	37	GLN
71	Se	58	ASN
72	SD	4	GLN
72	SD	22	ASN
72	SD	56	GLN
73	SF	29	GLN
73	SF	65	GLN
73	SF	82	ASN
73	SF	83	ASN
73	SF	101	HIS
73	SF	137	GLN
73	SF	186	ASN
73	SF	203	ASN
74	SK	28	HIS
74	SK	39	ASN
74	SK	44	HIS
74	SK	66	HIS
75	SM	52	GLN
75	SM	99	ASN
76	SP	35	GLN
76	SP	46	ASN
77	SQ	24	HIS
77	SQ	80	GLN
77	SQ	97	GLN
77	SQ	142	GLN
78	SR	29	HIS
78	SR	48	ASN
78	SR	74	GLN
78	SR	83	ASN
78	SR	118	GLN
78	SR	121	GLN
79	SS	10	GLN
79	SS	17	ASN
79	SS	19	ASN
79	SS	120	HIS
79	SS	125	HIS
79	SS	135	HIS
80	ST	11	GLN
80	ST	63	HIS
81	SU	47	ASN
81	SU	81	GLN

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Mol	Chain	Res	Type
81	SU	92	HIS
82	SZ	46	ASN
82	SZ	64	ASN
82	SZ	89	GLN
82	SZ	103	HIS
83	Sc	7	GLN
83	Sc	26	GLN
83	Sc	45	ASN
84	Sd	26	ASN
85	Sf	111	ASN
86	Sg	62	HIS
86	Sg	64	HIS
86	Sg	133	ASN
86	Sg	187	ASN
86	Sg	215	GLN
87	S1	3	GLN
87	S1	5	GLN
88	S4	54	ASN
88	S4	85	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
32	5	3646/3658 (99%)	1720 (47%)	665 (18%)
33	7	119/120 (99%)	39 (32%)	13 (10%)
34	8	155/156 (99%)	65 (41%)	29 (18%)
49	3	74/76 (97%)	30 (40%)	5 (6%)
50	4	197/206 (95%)	45 (22%)	10 (5%)
53	S2	1715/1742 (98%)	861 (50%)	303 (17%)
All	All	5906/5958 (99%)	2760 (46%)	1025 (17%)

All (2760) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
32	5	2	G
32	5	8	U
32	5	12	A
32	5	13	U
32	5	20	U
32	5	21	G
32	5	25	A

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Mol	Chain	Res	Type
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
32	5	95	G
32	5	96	U
32	5	98	A
32	5	99	A
32	5	100	C
32	5	101	A

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Mol	Chain	Res	Type
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
32	5	178	C
32	5	182	G
32	5	183	C
32	5	184	U
32	5	185	C
32	5	186	G

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Mol	Chain	Res	Type
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
32	5	239	C
32	5	245	C
32	5	246	G
32	5	255	C
32	5	257	C
32	5	262	G

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Mol	Chain	Res	Type
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
32	5	330	G
32	5	334	A
32	5	336	A
32	5	339	C
32	5	340	C
32	5	342	G

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Mol	Chain	Res	Type
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
32	5	415	G
32	5	417	G
32	5	418	A
32	5	424	U
32	5	431	G
32	5	432	U

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Mol	Chain	Res	Type
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
32	5	647	G
32	5	648	G
32	5	649	A
32	5	650	C
32	5	653	U
32	5	654	C

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Mol	Chain	Res	Type
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
32	5	731	G
32	5	732	A
32	5	737	C
32	5	742	G
32	5	743	G
32	5	745	G

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Mol	Chain	Res	Type
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
32	5	958	G
32	5	959	G
32	5	960	A
32	5	961	G
32	5	962	C
32	5	963	G

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Mol	Chain	Res	Type
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
32	5	1210	C
32	5	1211	G
32	5	1212	G
32	5	1214	C
32	5	1215	C
32	5	1216	C

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Mol	Chain	Res	Type
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
32	5	1289	C
32	5	1290	G
32	5	1291	G
32	5	1293	G
32	5	1294	A
32	5	1295	C

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Mol	Chain	Res	Type
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
32	5	1370	G
32	5	1371	A
32	5	1372	A
32	5	1377	G
32	5	1378	C
32	5	1379	C

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Mol	Chain	Res	Type
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
32	5	1454	G
32	5	1455	G
32	5	1456	C
32	5	1457	G
32	5	1463	C
32	5	1465	G

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Mol	Chain	Res	Type
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
32	5	1547	A
32	5	1562	G
32	5	1563	A
32	5	1564	A
32	5	1566	C
32	5	1571	G

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Mol	Chain	Res	Type
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
32	5	1671	U
32	5	1673	U
32	5	1676	C
32	5	1678	C
32	5	1679	A
32	5	1680	G

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Mol	Chain	Res	Type
32	5	1681	G
32	5	1684	A
32	5	1685	G
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	2710	C
32	5	2711	G
32	5	2712	G
32	5	2713	C
32	5	2716	C
32	5	2721	G
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	4337	C
32	5	4339	A
32	5	4344	U
32	5	4348	A
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	117	C

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Mol	Chain	Res	Type
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
49	3	2	U
49	3	6	C
49	3	8	U
49	3	9	A
49	3	10	G
49	3	17	G
49	3	18	G
49	3	19	U
49	3	20	U
49	3	21	A
49	3	22	U
49	3	33	U
49	3	37	A
49	3	39	G
49	3	40	C
49	3	42	A
49	3	46	G
49	3	48	C
49	3	51	C
49	3	52	G
49	3	56	C
49	3	57	G
49	3	59	A
49	3	60	A
49	3	61	C
49	3	69	A
49	3	73	A
49	3	74	C
49	3	75	C
49	3	76	A
50	4	4	G

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Mol	Chain	Res	Type
50	4	12	U
50	4	24	G
50	4	28	U
50	4	29	C
50	4	32	A
50	4	33	G
50	4	35	U
50	4	36	A
50	4	38	U
50	4	39	C
50	4	40	G
50	4	45	G
50	4	46	C
50	4	47	U
50	4	48	G
50	4	53	U
50	4	54	G
50	4	65	U
50	4	287	A
50	4	115	A
50	4	116	C
50	4	120	G
50	4	139	A
50	4	144	C
50	4	151	C
50	4	170	C
50	4	172	A
50	4	173	A
50	4	174	G
50	4	175	G
50	4	176	A
50	4	177	G
50	4	178	G
50	4	183	A
50	4	186	C
50	4	190	C
50	4	191	C
50	4	206	G
50	4	212	C
50	4	215	A
50	4	227	G
50	4	234	A

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Mol	Chain	Res	Type
50	4	235	G
50	4	236	U
53	S2	3	C
53	S2	4	C
53	S2	5	U
53	S2	9	U
53	S2	10	G
53	S2	17	C
53	S2	18	C
53	S2	20	G
53	S2	21	U
53	S2	26	U
53	S2	28	U
53	S2	33	G
53	S2	37	C
53	S2	42	A
53	S2	44	U
53	S2	46	A
53	S2	49	C
53	S2	51	U
53	S2	53	C
53	S2	54	A
53	S2	56	G
53	S2	57	U
53	S2	58	C
53	S2	59	U
53	S2	60	A
53	S2	61	A
53	S2	62	G
53	S2	63	U
53	S2	64	A
53	S2	65	C
53	S2	66	G
53	S2	67	C
53	S2	68	A
53	S2	72	C
53	S2	73	C
53	S2	74	G
53	S2	75	G
53	S2	77	A
53	S2	78	C
53	S2	79	A

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Mol	Chain	Res	Type
53	S2	80	G
53	S2	81	U
53	S2	84	A
53	S2	89	C
53	S2	92	A
53	S2	93	U
53	S2	98	C
53	S2	99	A
53	S2	101	U
53	S2	103	A
53	S2	104	A
53	S2	105	U
53	S2	111	A
53	S2	113	G
53	S2	114	G
53	S2	115	U
53	S2	116	U
53	S2	123	G
53	S2	124	U
53	S2	125	C
53	S2	126	G
53	S2	127	C
53	S2	140	C
53	S2	141	A
53	S2	142	C
53	S2	144	U
53	S2	146	G
53	S2	147	A
53	S2	148	U
53	S2	153	G
53	S2	154	U
53	S2	155	G
53	S2	158	A
53	S2	159	A
53	S2	160	U
53	S2	161	U
53	S2	162	C
53	S2	163	U
53	S2	164	A
53	S2	165	G
53	S2	167	G
53	S2	168	C

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Mol	Chain	Res	Type
53	S2	169	U
53	S2	170	A
53	S2	171	A
53	S2	172	U
53	S2	173	A
53	S2	180	G
53	S2	181	A
53	S2	182	C
53	S2	183	G
53	S2	184	G
53	S2	188	C
53	S2	189	U
53	S2	191	A
53	S2	192	C
53	S2	200	G
53	S2	202	G
53	S2	206	G
53	S2	208	G
53	S2	209	A
53	S2	213	G
53	S2	214	U
53	S2	215	G
53	S2	216	C
53	S2	217	A
53	S2	290	U
53	S2	291	G
53	S2	292	A
53	S2	293	C
53	S2	294	U
53	S2	295	C
53	S2	297	A
53	S2	302	A
53	S2	305	U
53	S2	306	C
53	S2	307	G
53	S2	308	G
53	S2	309	G
53	S2	310	C
53	S2	311	C
53	S2	312	G
53	S2	313	A
53	S2	314	U

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Mol	Chain	Res	Type
53	S2	315	C
53	S2	317	C
53	S2	319	C
53	S2	321	C
53	S2	323	C
53	S2	324	C
53	S2	325	C
53	S2	326	C
53	S2	327	G
53	S2	328	U
53	S2	334	C
53	S2	335	G
53	S2	338	G
53	S2	340	C
53	S2	341	C
53	S2	342	C
53	S2	343	A
53	S2	346	C
53	S2	347	G
53	S2	350	C
53	S2	355	G
53	S2	356	C
53	S2	357	C
53	S2	360	A
53	S2	361	U
53	S2	362	C
53	S2	364	A
53	S2	365	C
53	S2	366	U
53	S2	367	U
53	S2	368	U
53	S2	369	C
53	S2	370	G
53	S2	372	U
53	S2	373	G
53	S2	380	G
53	S2	381	C
53	S2	382	C
53	S2	383	G
53	S2	384	U
53	S2	385	G
53	S2	386	C

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Mol	Chain	Res	Type
53	S2	387	C
53	S2	393	U
53	S2	394	G
53	S2	395	G
53	S2	398	A
53	S2	399	C
53	S2	400	C
53	S2	401	A
53	S2	407	G
53	S2	408	A
53	S2	409	C
53	S2	411	G
53	S2	413	G
53	S2	414	A
53	S2	416	U
53	S2	417	C
53	S2	418	A
53	S2	419	G
53	S2	421	G
53	S2	422	U
53	S2	425	G
53	S2	426	A
53	S2	427	U
53	S2	428	U
53	S2	429	C
53	S2	435	A
53	S2	436	G
53	S2	437	G
53	S2	438	G
53	S2	441	C
53	S2	442	C
53	S2	443	U
53	S2	444	G
53	S2	445	A
53	S2	446	G
53	S2	447	A
53	S2	448	A
53	S2	449	A
53	S2	450	C
53	S2	453	C
53	S2	454	U
53	S2	455	A

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Mol	Chain	Res	Type
53	S2	457	C
53	S2	458	A
53	S2	459	C
53	S2	460	A
53	S2	464	A
53	S2	465	A
53	S2	466	G
53	S2	467	G
53	S2	469	A
53	S2	471	G
53	S2	472	C
53	S2	473	A
53	S2	474	G
53	S2	475	C
53	S2	476	A
53	S2	482	G
53	S2	485	A
53	S2	487	U
53	S2	489	A
53	S2	492	C
53	S2	493	A
53	S2	496	C
53	S2	504	G
53	S2	507	G
53	S2	508	A
53	S2	516	A
53	S2	518	G
53	S2	523	A
53	S2	525	A
53	S2	528	A
53	S2	530	U
53	S2	532	C
53	S2	533	A
53	S2	534	G
53	S2	540	U
53	S2	542	U
53	S2	544	G
53	S2	548	C
53	S2	549	C
53	S2	550	C
53	S2	551	U
53	S2	552	G

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Mol	Chain	Res	Type
53	S2	554	A
53	S2	556	U
53	S2	557	U
53	S2	559	G
53	S2	560	A
53	S2	563	G
53	S2	564	A
53	S2	568	C
53	S2	569	A
53	S2	575	A
53	S2	576	A
53	S2	578	C
53	S2	579	C
53	S2	580	U
53	S2	583	C
53	S2	588	G
53	S2	589	G
53	S2	590	A
53	S2	591	U
53	S2	592	C
53	S2	593	C
53	S2	595	U
53	S2	596	U
53	S2	597	G
53	S2	598	G
53	S2	600	G
53	S2	601	G
53	S2	602	G
53	S2	604	A
53	S2	605	A
53	S2	607	U
53	S2	608	C
53	S2	612	U
53	S2	613	G
53	S2	614	C
53	S2	616	A
53	S2	617	G
53	S2	620	G
53	S2	621	C
53	S2	623	G
53	S2	624	C
53	S2	626	G

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Mol	Chain	Res	Type
53	S2	627	U
53	S2	628	A
53	S2	629	A
53	S2	630	U
53	S2	631	U
53	S2	634	A
53	S2	639	C
53	S2	640	A
53	S2	642	U
53	S2	643	A
53	S2	644	G
53	S2	645	C
53	S2	646	G
53	S2	647	U
53	S2	649	U
53	S2	651	U
53	S2	655	A
53	S2	656	G
53	S2	657	U
53	S2	660	C
53	S2	664	A
53	S2	666	U
53	S2	668	A
53	S2	669	A
53	S2	671	A
53	S2	672	A
53	S2	673	G
53	S2	679	A
53	S2	682	U
53	S2	683	G
53	S2	684	G
53	S2	687	C
53	S2	688	U
53	S2	689	U
53	S2	690	G
53	S2	693	A
53	S2	694	G
53	S2	698	G
53	S2	731	G
53	S2	733	C
53	S2	734	C
53	S2	735	C

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Mol	Chain	Res	Type
53	S2	738	C
53	S2	739	C
53	S2	746	C
53	S2	747	U
53	S2	748	C
53	S2	749	U
53	S2	751	G
53	S2	752	G
53	S2	753	C
53	S2	788	G
53	S2	791	C
53	S2	793	G
53	S2	794	A
53	S2	797	C
53	S2	798	A
53	S2	799	U
53	S2	800	U
53	S2	807	G
53	S2	810	A
53	S2	811	A
53	S2	812	A
53	S2	820	U
53	S2	821	G
53	S2	822	U
53	S2	825	A
53	S2	827	A
53	S2	829	C
53	S2	830	A
53	S2	833	C
53	S2	834	C
53	S2	835	C
53	S2	836	G
53	S2	837	A
53	S2	838	G
53	S2	839	C
53	S2	840	C
53	S2	841	G
53	S2	842	C
53	S2	843	C
53	S2	845	G
53	S2	846	G
53	S2	847	A

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Mol	Chain	Res	Type
53	S2	848	U
53	S2	853	C
53	S2	859	G
53	S2	862	A
53	S2	864	A
53	S2	867	G
53	S2	868	G
53	S2	869	A
53	S2	870	A
53	S2	871	U
53	S2	872	A
53	S2	873	G
53	S2	875	A
53	S2	876	C
53	S2	877	C
53	S2	878	G
53	S2	879	C
53	S2	880	G
53	S2	881	G
53	S2	887	U
53	S2	888	U
53	S2	890	U
53	S2	891	G
53	S2	892	U
53	S2	893	U
53	S2	897	U
53	S2	898	U
53	S2	903	A
53	S2	913	A
53	S2	914	U
53	S2	918	U
53	S2	919	A
53	S2	920	A
53	S2	921	G
53	S2	930	C
53	S2	933	G
53	S2	934	G
53	S2	938	A
53	S2	943	U
53	S2	946	U
53	S2	955	A
53	S2	956	G

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Mol	Chain	Res	Type
53	S2	957	A
53	S2	958	G
53	S2	959	G
53	S2	960	U
53	S2	961	G
53	S2	962	A
53	S2	963	A
53	S2	964	A
53	S2	965	U
53	S2	968	U
53	S2	969	U
53	S2	971	G
53	S2	974	C
53	S2	975	G
53	S2	979	C
53	S2	980	A
53	S2	981	A
53	S2	989	C
53	S2	990	A
53	S2	991	G
53	S2	992	A
53	S2	994	C
53	S2	996	A
53	S2	997	A
53	S2	999	G
53	S2	1001	A
53	S2	1002	U
53	S2	1008	A
53	S2	1016	U
53	S2	1017	U
53	S2	1018	U
53	S2	1023	A
53	S2	1024	A
53	S2	1030	A
53	S2	1033	G
53	S2	1034	A
53	S2	1035	A
53	S2	1039	C
53	S2	1040	G
53	S2	1041	G
53	S2	1042	A
53	S2	1044	G

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Mol	Chain	Res	Type
53	S2	1045	U
53	S2	1049	A
53	S2	1050	A
53	S2	1060	A
53	S2	1062	A
53	S2	1070	A
53	S2	1072	U
53	S2	1073	U
53	S2	1077	A
53	S2	1078	C
53	S2	1083	A
53	S2	1084	A
53	S2	1085	C
53	S2	1087	A
53	S2	1088	U
53	S2	1089	G
53	S2	1093	A
53	S2	1096	G
53	S2	1099	G
53	S2	1100	A
53	S2	1108	G
53	S2	1109	C
53	S2	1110	G
53	S2	1111	U
53	S2	1113	A
53	S2	1114	U
53	S2	1115	U
53	S2	1116	C
53	S2	1118	C
53	S2	1120	U
53	S2	1121	G
53	S2	1122	A
53	S2	1123	C
53	S2	1124	C
53	S2	1130	G
53	S2	1131	G
53	S2	1133	A
53	S2	1138	C
53	S2	1139	C
53	S2	1142	G
53	S2	1143	A
53	S2	1144	A

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Mol	Chain	Res	Type
53	S2	1146	C
53	S2	1148	A
53	S2	1149	A
53	S2	1150	A
53	S2	1151	G
53	S2	1153	C
53	S2	1154	U
53	S2	1157	G
53	S2	1165	G
53	S2	1166	G
53	S2	1180	C
53	S2	1182	A
53	S2	1191	C
53	S2	1194	A
53	S2	1195	A
53	S2	1199	A
53	S2	1200	A
53	S2	1201	U
53	S2	1203	G
53	S2	1204	A
53	S2	1205	C
53	S2	1206	G
53	S2	1207	G
53	S2	1208	A
53	S2	1210	G
53	S2	1211	G
53	S2	1214	A
53	S2	1215	C
53	S2	1216	C
53	S2	1217	A
53	S2	1221	G
53	S2	1222	G
53	S2	1224	G
53	S2	1234	C
53	S2	1240	A
53	S2	1242	U
53	S2	1243	U
53	S2	1245	G
53	S2	1247	C
53	S2	1248	U
53	S2	1249	C
53	S2	1250	A

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Mol	Chain	Res	Type
53	S2	1251	A
53	S2	1252	C
53	S2	1253	A
53	S2	1254	C
53	S2	1256	G
53	S2	1257	G
53	S2	1258	A
53	S2	1259	A
53	S2	1264	C
53	S2	1265	A
53	S2	1266	C
53	S2	1267	C
53	S2	1268	C
53	S2	1269	G
53	S2	1271	C
53	S2	1273	C
53	S2	1274	G
53	S2	1275	G
53	S2	1276	A
53	S2	1280	G
53	S2	1282	A
53	S2	1283	C
53	S2	1284	A
53	S2	1285	G
53	S2	1286	G
53	S2	1288	U
53	S2	1289	U
53	S2	1292	C
53	S2	1293	A
53	S2	1296	U
53	S2	1298	G
53	S2	1299	A
53	S2	1301	A
53	S2	1302	G
53	S2	1303	C
53	S2	1304	U
53	S2	1305	C
53	S2	1306	U
53	S2	1308	U
53	S2	1309	C
53	S2	1312	G
53	S2	1313	A

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Mol	Chain	Res	Type
53	S2	1314	U
53	S2	1315	U
53	S2	1316	C
53	S2	1322	G
53	S2	1324	G
53	S2	1326	U
53	S2	1331	C
53	S2	1332	A
53	S2	1337	C
53	S2	1339	U
53	S2	1340	U
53	S2	1341	C
53	S2	1342	U
53	S2	1343	U
53	S2	1344	A
53	S2	1345	G
53	S2	1347	U
53	S2	1348	G
53	S2	1349	G
53	S2	1350	U
53	S2	1351	G
53	S2	1352	G
53	S2	1353	A
53	S2	1354	G
53	S2	1355	C
53	S2	1356	G
53	S2	1357	A
53	S2	1358	U
53	S2	1364	U
53	S2	1367	U
53	S2	1368	U
53	S2	1369	A
53	S2	1370	A
53	S2	1371	U
53	S2	1372	U
53	S2	1373	C
53	S2	1374	C
53	S2	1378	A
53	S2	1379	A
53	S2	1380	C
53	S2	1385	G
53	S2	1394	G

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Mol	Chain	Res	Type
53	S2	1395	C
53	S2	1396	A
53	S2	1397	U
53	S2	1398	G
53	S2	1401	A
53	S2	1402	A
53	S2	1403	C
53	S2	1404	U
53	S2	1405	A
53	S2	1407	U
53	S2	1408	U
53	S2	1410	C
53	S2	1411	G
53	S2	1412	C
53	S2	1413	G
53	S2	1414	A
53	S2	1417	C
53	S2	1418	C
53	S2	1419	C
53	S2	1420	G
53	S2	1423	C
53	S2	1424	G
53	S2	1425	G
53	S2	1426	U
53	S2	1429	G
53	S2	1430	C
53	S2	1432	U
53	S2	1433	C
53	S2	1434	C
53	S2	1435	C
53	S2	1437	C
53	S2	1438	A
53	S2	1439	A
53	S2	1441	U
53	S2	1442	U
53	S2	1444	U
53	S2	1446	A
53	S2	1447	G
53	S2	1449	G
53	S2	1452	A
53	S2	1453	C
53	S2	1454	A

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Mol	Chain	Res	Type
53	S2	1455	A
53	S2	1462	U
53	S2	1463	U
53	S2	1464	C
53	S2	1465	A
53	S2	1466	G
53	S2	1473	G
53	S2	1475	G
53	S2	1476	A
53	S2	1477	U
53	S2	1478	U
53	S2	1488	C
53	S2	1489	A
53	S2	1490	G
53	S2	1493	C
53	S2	1494	U
53	S2	1495	G
53	S2	1496	U
53	S2	1497	G
53	S2	1501	C
53	S2	1507	G
53	S2	1508	A
53	S2	1509	U
53	S2	1510	G
53	S2	1511	U
53	S2	1512	C
53	S2	1513	C
53	S2	1514	G
53	S2	1515	G
53	S2	1516	G
53	S2	1520	G
53	S2	1521	C
53	S2	1522	A
53	S2	1523	C
53	S2	1525	C
53	S2	1527	C
53	S2	1531	A
53	S2	1533	A
53	S2	1534	C
53	S2	1535	U
53	S2	1537	A
53	S2	1540	G

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Mol	Chain	Res	Type
53	S2	1541	G
53	S2	1543	U
53	S2	1544	C
53	S2	1545	A
53	S2	1546	G
53	S2	1547	C
53	S2	1548	G
53	S2	1550	G
53	S2	1551	U
53	S2	1552	G
53	S2	1553	C
53	S2	1555	U
53	S2	1556	A
53	S2	1557	C
53	S2	1558	C
53	S2	1560	U
53	S2	1563	G
53	S2	1567	G
53	S2	1568	C
53	S2	1569	A
53	S2	1570	G
53	S2	1574	C
53	S2	1578	U
53	S2	1579	A
53	S2	1580	A
53	S2	1581	C
53	S2	1582	C
53	S2	1585	U
53	S2	1586	U
53	S2	1587	G
53	S2	1588	A
53	S2	1589	A
53	S2	1590	C
53	S2	1593	C
53	S2	1594	A
53	S2	1595	U
53	S2	1598	G
53	S2	1599	U
53	S2	1600	G
53	S2	1601	A
53	S2	1602	U
53	S2	1603	G

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Mol	Chain	Res	Type
53	S2	1604	G
53	S2	1605	G
53	S2	1606	G
53	S2	1607	A
53	S2	1609	C
53	S2	1610	G
53	S2	1621	U
53	S2	1622	U
53	S2	1623	A
53	S2	1624	U
53	S2	1625	U
53	S2	1632	G
53	S2	1633	A
53	S2	1634	A
53	S2	1637	A
53	S2	1638	G
53	S2	1641	A
53	S2	1644	C
53	S2	1645	C
53	S2	1646	C
53	S2	1647	A
53	S2	1648	G
53	S2	1649	U
53	S2	1654	G
53	S2	1659	U
53	S2	1660	C
53	S2	1663	A
53	S2	1664	A
53	S2	1665	G
53	S2	1666	C
53	S2	1667	U
53	S2	1668	U
53	S2	1669	G
53	S2	1674	G
53	S2	1678	A
53	S2	1679	A
53	S2	1680	G
53	S2	1682	C
53	S2	1683	C
53	S2	1684	C
53	S2	1688	C
53	S2	1689	C

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Mol	Chain	Res	Type
53	S2	1695	A
53	S2	1698	C
53	S2	1700	C
53	S2	1701	C
53	S2	1702	G
53	S2	1714	U
53	S2	1720	U
53	S2	1721	U
53	S2	1722	G
53	S2	1724	A
53	S2	1725	U
53	S2	1726	G
53	S2	1727	G
53	S2	1729	U
53	S2	1730	U
53	S2	1734	G
53	S2	1737	G
53	S2	1745	A
53	S2	1746	U
53	S2	1751	C
53	S2	1753	C
53	S2	1757	G
53	S2	1760	G
53	S2	1761	U
53	S2	1779	G
53	S2	1783	C
53	S2	1784	G
53	S2	1785	C
53	S2	1786	U
53	S2	1792	G
53	S2	1795	G
53	S2	1797	U
53	S2	1798	C
53	S2	1805	G
53	S2	1810	U
53	S2	1817	G
53	S2	1819	A
53	S2	1823	A
53	S2	1824	A
53	S2	1825	A
53	S2	1826	G
53	S2	1827	U

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Mol	Chain	Res	Type
53	S2	1830	U
53	S2	1831	A
53	S2	1835	A
53	S2	1836	G
53	S2	1837	G
53	S2	1838	U
53	S2	1839	U
53	S2	1840	U
53	S2	1841	C
53	S2	1844	U
53	S2	1847	G
53	S2	1850	A
53	S2	1852	C
53	S2	1857	G
53	S2	1858	G
53	S2	1860	A
53	S2	1861	G
53	S2	1862	G
53	S2	1863	A
53	S2	1864	U
53	S2	1865	C
53	S2	1868	U
53	S2	1869	A

All (1025) 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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	42	A
33	7	49	A
33	7	56	G
33	7	57	C
33	7	58	A
33	7	59	G
33	7	60	G
33	7	72	U
33	7	75	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

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Mol	Chain	Res	Type
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
49	3	9	A
49	3	17	G
49	3	19	U
49	3	60	A
49	3	75	C
50	4	10	G
50	4	35	U
50	4	37	C
50	4	38	U
50	4	39	C
50	4	45	G
50	4	47	U
50	4	176	A
50	4	234	A
50	4	235	G
53	S2	2	A
53	S2	3	C
53	S2	9	U
53	S2	19	A
53	S2	25	A
53	S2	27	A
53	S2	37	C

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Mol	Chain	Res	Type
53	S2	55	U
53	S2	61	A
53	S2	65	C
53	S2	67	C
53	S2	72	C
53	S2	73	C
53	S2	74	G
53	S2	91	A
53	S2	98	C
53	S2	102	A
53	S2	104	A
53	S2	105	U
53	S2	110	U
53	S2	113	G
53	S2	126	G
53	S2	127	C
53	S2	139	C
53	S2	140	C
53	S2	141	A
53	S2	158	A
53	S2	160	U
53	S2	163	U
53	S2	171	A
53	S2	180	G
53	S2	181	A
53	S2	182	C
53	S2	183	G
53	S2	190	G
53	S2	215	G
53	S2	291	G
53	S2	294	U
53	S2	297	A
53	S2	305	U
53	S2	312	G
53	S2	313	A
53	S2	325	C
53	S2	327	G
53	S2	334	C
53	S2	340	C
53	S2	357	C
53	S2	360	A
53	S2	366	U

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Mol	Chain	Res	Type
53	S2	367	U
53	S2	368	U
53	S2	369	C
53	S2	376	A
53	S2	377	G
53	S2	384	U
53	S2	393	U
53	S2	394	G
53	S2	398	A
53	S2	399	C
53	S2	402	C
53	S2	409	C
53	S2	413	G
53	S2	421	G
53	S2	426	A
53	S2	428	U
53	S2	437	G
53	S2	442	C
53	S2	443	U
53	S2	444	G
53	S2	446	G
53	S2	447	A
53	S2	448	A
53	S2	452	G
53	S2	453	C
53	S2	457	C
53	S2	465	A
53	S2	468	A
53	S2	470	G
53	S2	473	A
53	S2	474	G
53	S2	499	G
53	S2	505	G
53	S2	515	G
53	S2	532	C
53	S2	550	C
53	S2	559	G
53	S2	577	U
53	S2	578	C
53	S2	579	C
53	S2	596	U
53	S2	604	A

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Mol	Chain	Res	Type
53	S2	607	U
53	S2	608	C
53	S2	613	G
53	S2	617	G
53	S2	639	C
53	S2	641	A
53	S2	642	U
53	S2	643	A
53	S2	645	C
53	S2	649	U
53	S2	650	A
53	S2	656	G
53	S2	687	C
53	S2	688	U
53	S2	732	U
53	S2	734	C
53	S2	746	C
53	S2	747	U
53	S2	752	G
53	S2	797	C
53	S2	798	A
53	S2	799	U
53	S2	800	U
53	S2	802	A
53	S2	807	G
53	S2	810	A
53	S2	811	A
53	S2	815	U
53	S2	818	A
53	S2	821	G
53	S2	822	U
53	S2	829	C
53	S2	833	C
53	S2	841	G
53	S2	842	C
53	S2	868	G
53	S2	870	A
53	S2	871	U
53	S2	875	A
53	S2	913	A
53	S2	914	U
53	S2	918	U

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Mol	Chain	Res	Type
53	S2	919	A
53	S2	920	A
53	S2	924	G
53	S2	955	A
53	S2	959	G
53	S2	960	U
53	S2	962	A
53	S2	964	A
53	S2	967	C
53	S2	968	U
53	S2	975	G
53	S2	980	A
53	S2	991	G
53	S2	993	G
53	S2	999	G
53	S2	1001	A
53	S2	1016	U
53	S2	1036	A
53	S2	1037	G
53	S2	1050	A
53	S2	1063	C
53	S2	1087	A
53	S2	1088	U
53	S2	1092	G
53	S2	1093	A
53	S2	1096	G
53	S2	1098	C
53	S2	1099	G
53	S2	1107	G
53	S2	1109	C
53	S2	1110	G
53	S2	1113	A
53	S2	1114	U
53	S2	1115	U
53	S2	1121	G
53	S2	1132	C
53	S2	1137	U
53	S2	1141	G
53	S2	1142	G
53	S2	1153	C
53	S2	1165	G
53	S2	1194	A

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Mol	Chain	Res	Type
53	S2	1199	A
53	S2	1204	A
53	S2	1207	G
53	S2	1221	G
53	S2	1223	A
53	S2	1224	G
53	S2	1225	U
53	S2	1226	G
53	S2	1244	U
53	S2	1247	C
53	S2	1249	C
53	S2	1250	A
53	S2	1253	A
53	S2	1265	A
53	S2	1273	C
53	S2	1274	G
53	S2	1283	C
53	S2	1288	U
53	S2	1289	U
53	S2	1292	C
53	S2	1298	G
53	S2	1302	G
53	S2	1312	G
53	S2	1313	A
53	S2	1315	U
53	S2	1341	C
53	S2	1342	U
53	S2	1350	U
53	S2	1352	G
53	S2	1355	C
53	S2	1362	U
53	S2	1363	C
53	S2	1367	U
53	S2	1368	U
53	S2	1370	A
53	S2	1372	U
53	S2	1373	C
53	S2	1378	A
53	S2	1379	A
53	S2	1386	A
53	S2	1391	C
53	S2	1395	C

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Mol	Chain	Res	Type
53	S2	1396	A
53	S2	1401	A
53	S2	1418	C
53	S2	1419	C
53	S2	1421	A
53	S2	1423	C
53	S2	1429	G
53	S2	1430	C
53	S2	1433	C
53	S2	1438	A
53	S2	1440	C
53	S2	1441	U
53	S2	1442	U
53	S2	1446	A
53	S2	1452	A
53	S2	1454	A
53	S2	1462	U
53	S2	1463	U
53	S2	1474	A
53	S2	1475	G
53	S2	1477	U
53	S2	1480	A
53	S2	1488	C
53	S2	1489	A
53	S2	1495	G
53	S2	1512	C
53	S2	1515	G
53	S2	1521	C
53	S2	1522	A
53	S2	1524	G
53	S2	1533	A
53	S2	1534	C
53	S2	1537	A
53	S2	1540	G
53	S2	1543	U
53	S2	1546	G
53	S2	1551	U
53	S2	1552	G
53	S2	1556	A
53	S2	1568	C
53	S2	1571	G
53	S2	1578	U

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Mol	Chain	Res	Type
53	S2	1579	A
53	S2	1581	C
53	S2	1591	C
53	S2	1597	C
53	S2	1598	G
53	S2	1599	U
53	S2	1601	A
53	S2	1603	G
53	S2	1605	G
53	S2	1617	G
53	S2	1621	U
53	S2	1623	A
53	S2	1629	C
53	S2	1637	A
53	S2	1639	G
53	S2	1641	A
53	S2	1644	C
53	S2	1645	C
53	S2	1657	G
53	S2	1659	U
53	S2	1664	A
53	S2	1668	U
53	S2	1678	A
53	S2	1679	A
53	S2	1682	C
53	S2	1695	A
53	S2	1697	A
53	S2	1700	C
53	S2	1726	G
53	S2	1804	U
53	S2	1821	U
53	S2	1823	A
53	S2	1824	A
53	S2	1825	A
53	S2	1826	G
53	S2	1830	U
53	S2	1837	G
53	S2	1838	U
53	S2	1843	G
53	S2	1849	G
53	S2	1857	G
53	S2	1858	G

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Mol	Chain	Res	Type
53	S2	1863	A
53	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
53	S2	6
48	z	5
50	4	3
49	3	3
46	K	2

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Mol	Chain	Number of breaks
37	E	1
88	S4	1
52	6	1
83	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	141.53
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	S2	698:G	O3'	730:C	P	20.30
1	z	465:UNK	C	477:UNK	N	19.07
1	z	434:MET	C	455:UNK	N	18.79
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	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
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	3.44
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

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
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

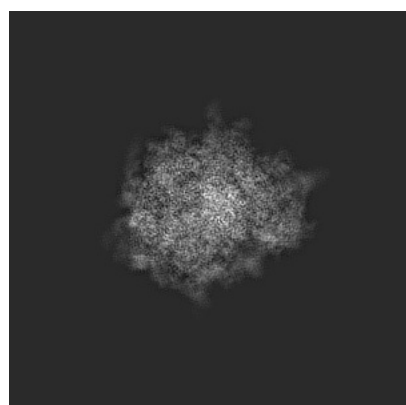
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3045. These allow visual inspection of the internal detail of the map and identification of artifacts.

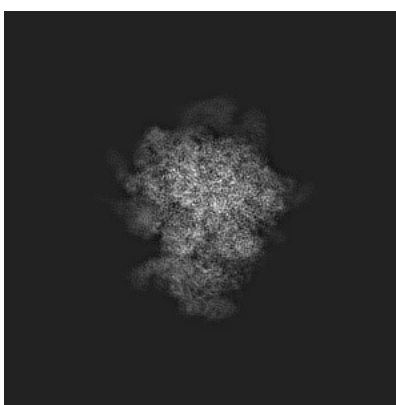
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

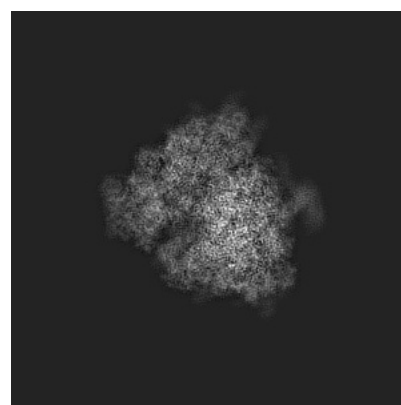
6.1.1 Primary map



X



Y

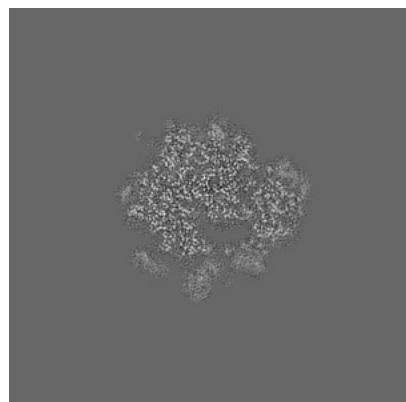


Z

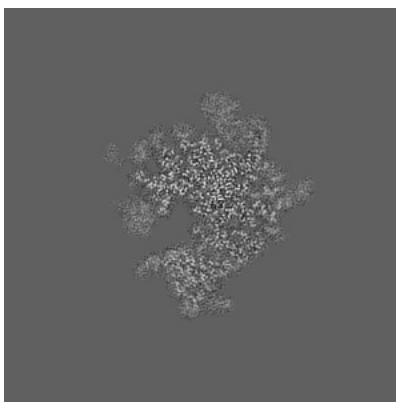
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

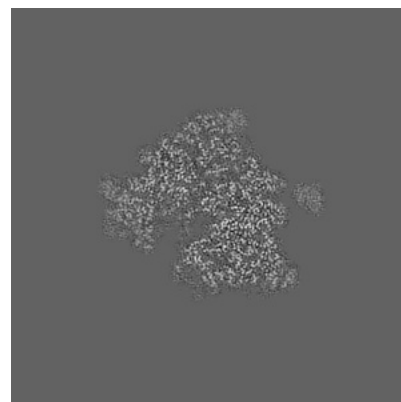
6.2.1 Primary map



X Index: 210



Y Index: 210

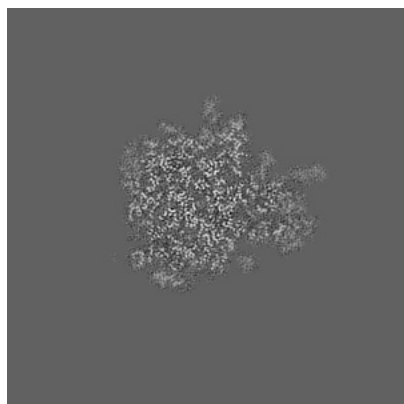


Z Index: 210

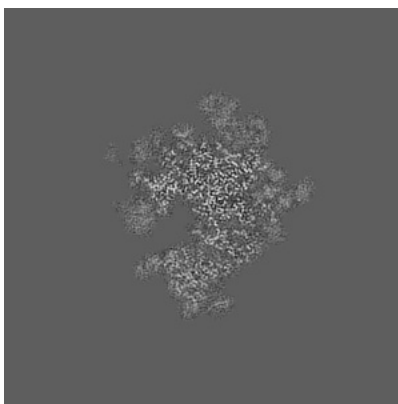
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

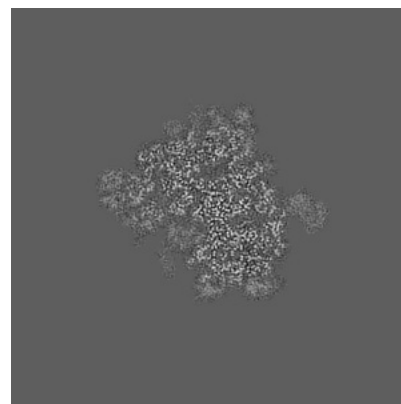
6.3.1 Primary map



X Index: 230



Y Index: 211

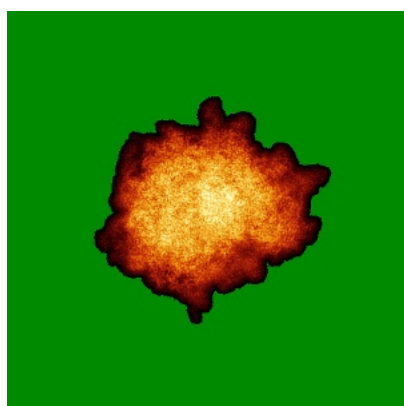


Z Index: 227

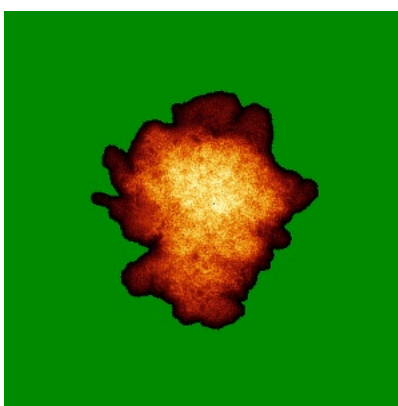
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

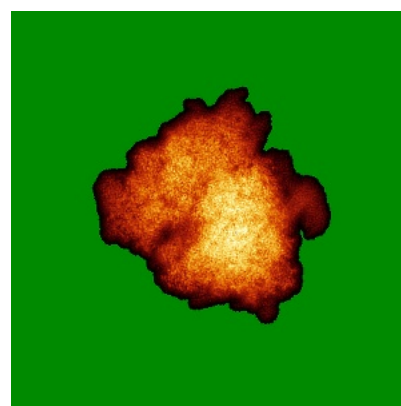
6.4.1 Primary map



X



Y

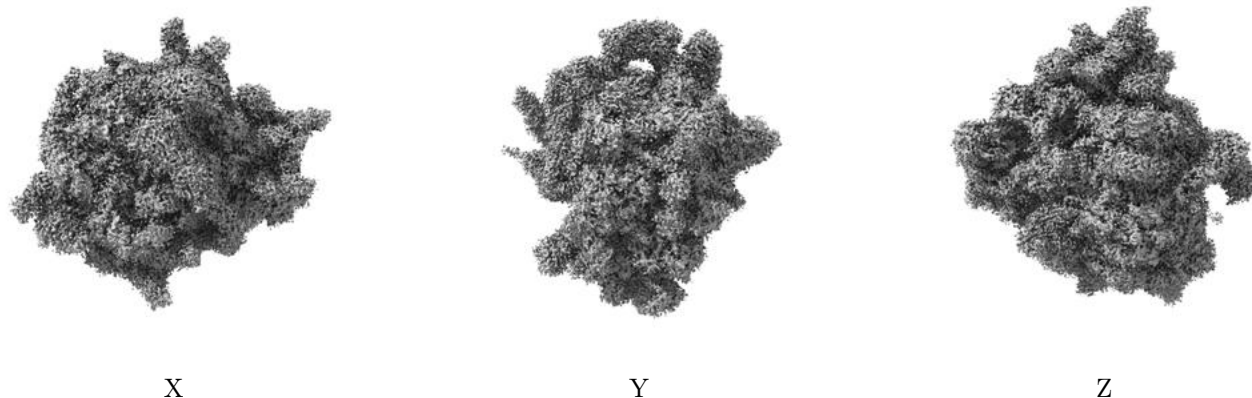


Z

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.

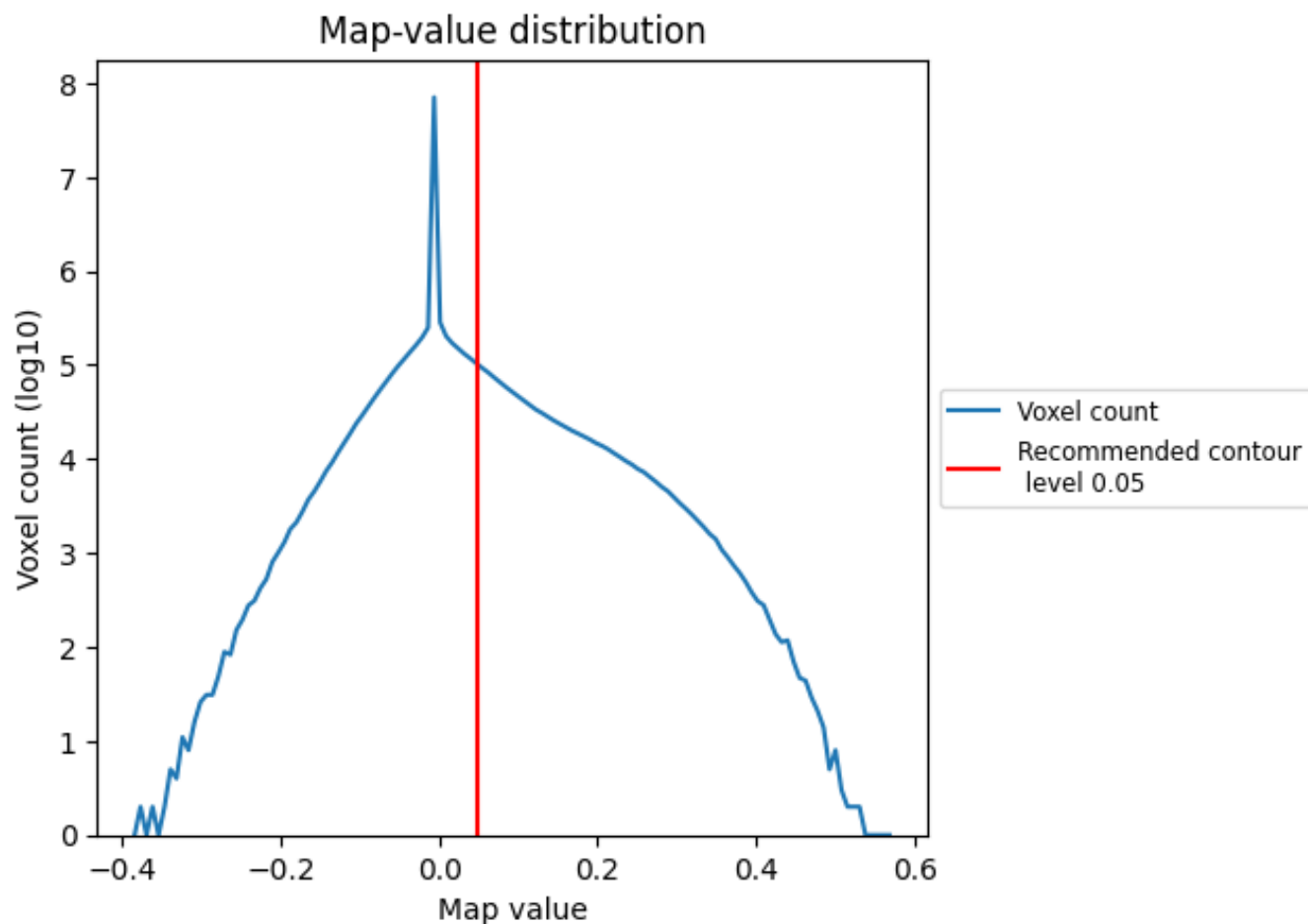
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

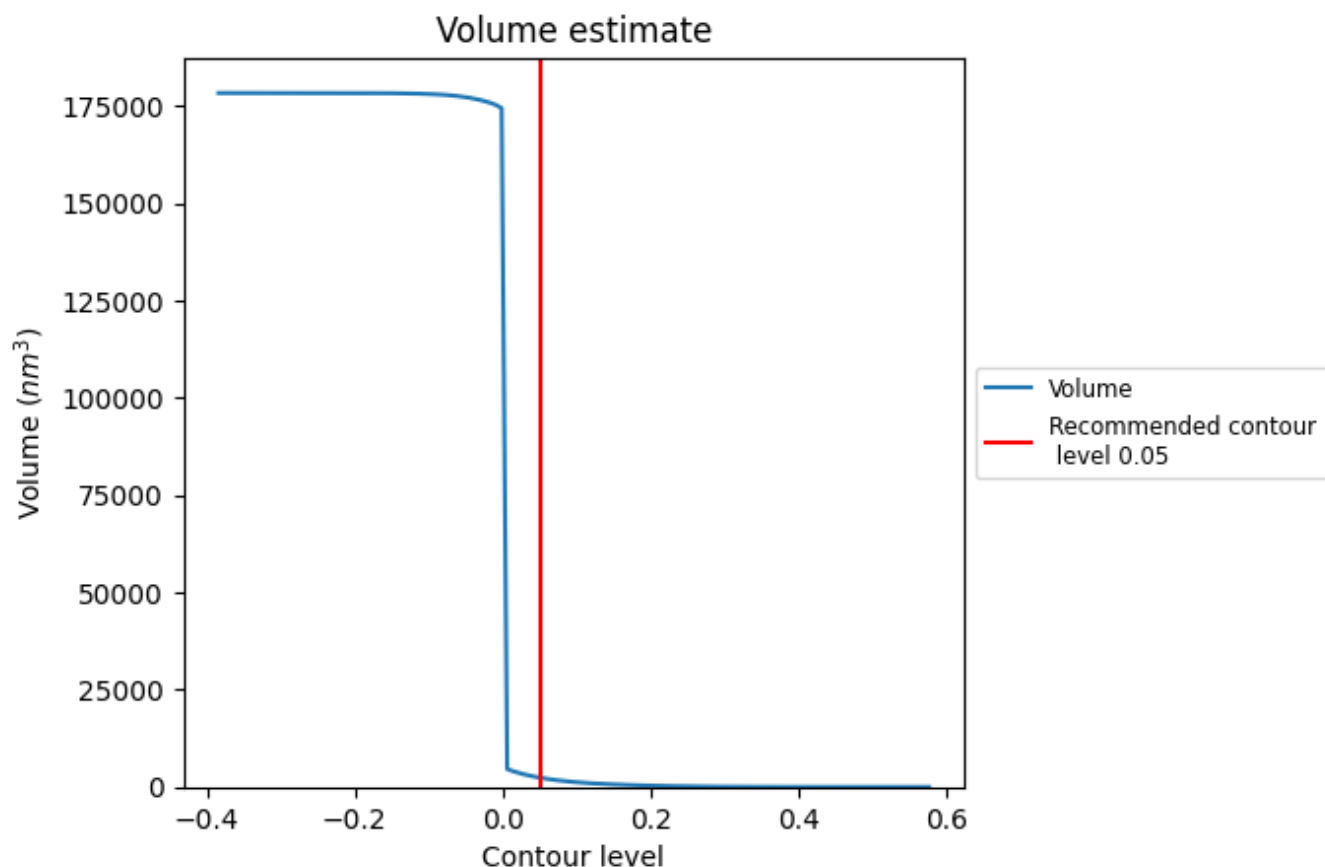
This section contains the results of statistical analysis of the map.

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.

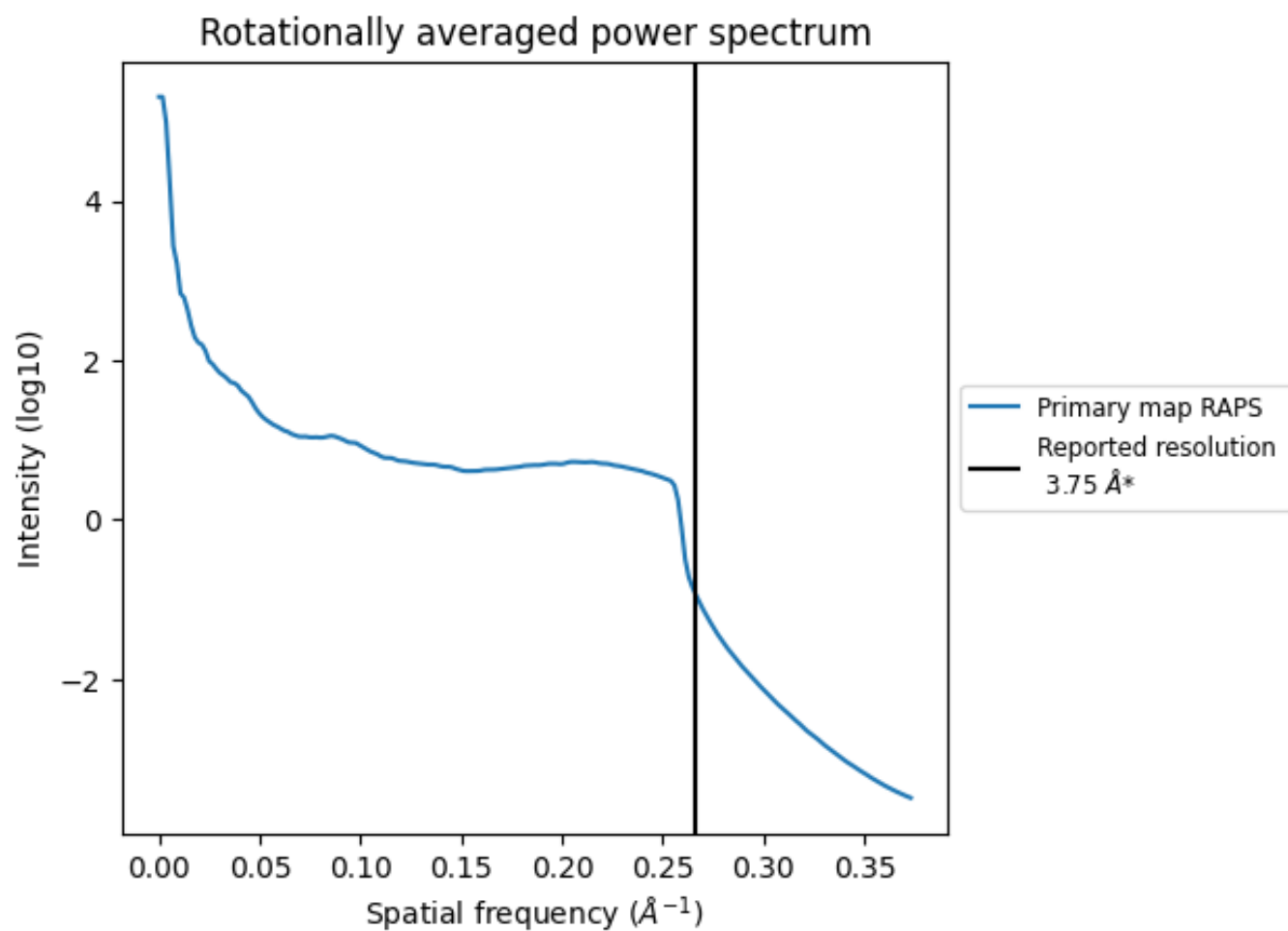
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2397 nm³; this corresponds to an approximate mass of 2166 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

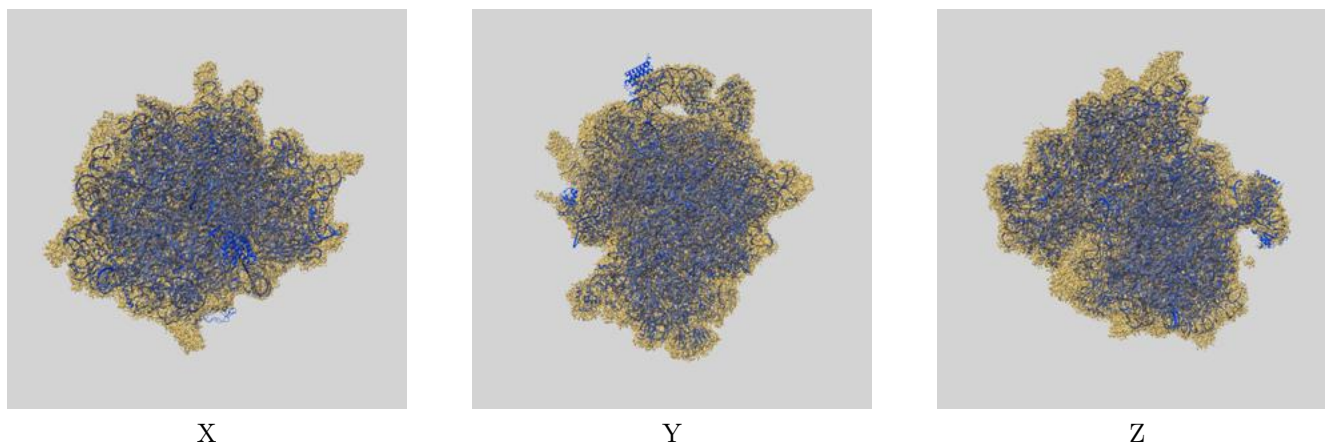
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit [i](#)

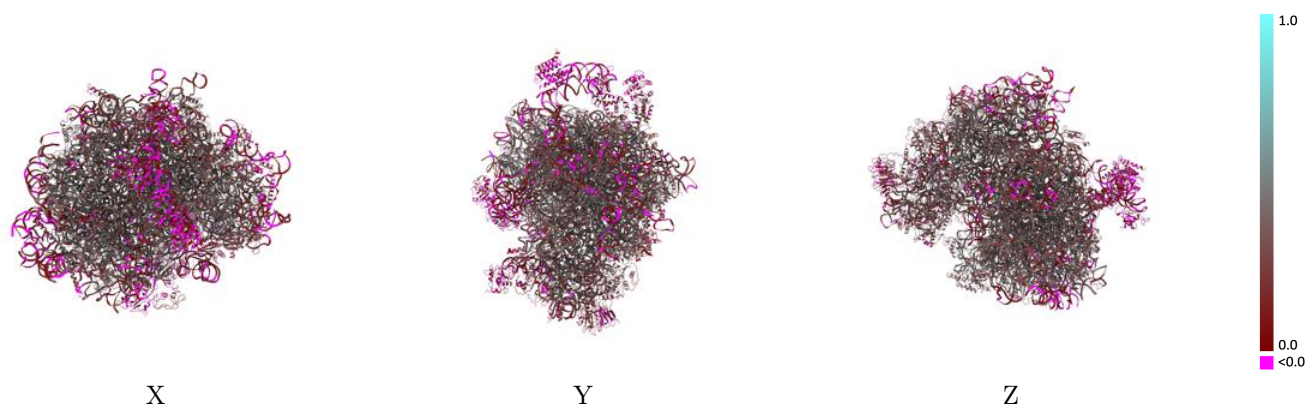
This section contains information regarding the fit between EMDB map EMD-3045 and PDB model 3JAN. Per-residue inclusion information can be found in section 3 on page 21.

9.1 Map-model overlay [i](#)



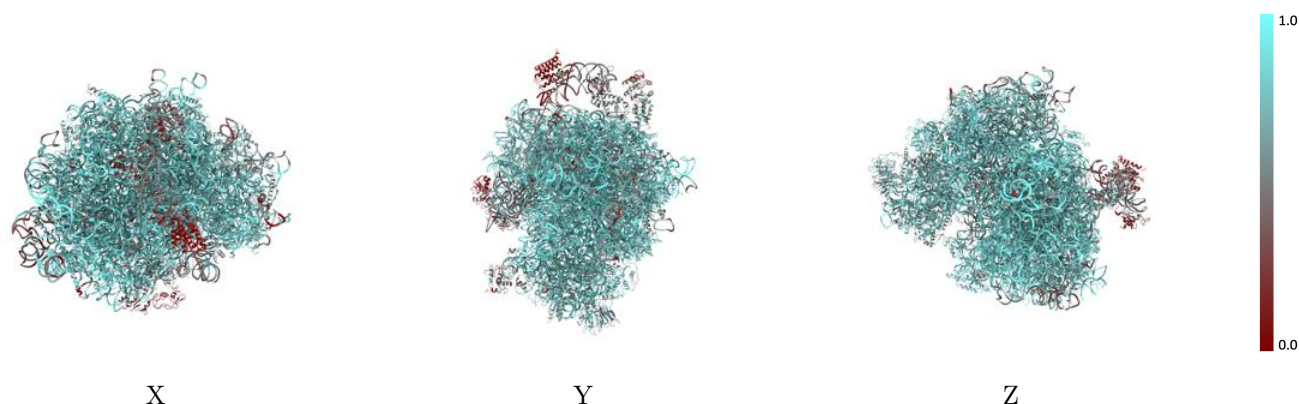
The images above show the 3D surface view of the map at the recommended contour level 0.05 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



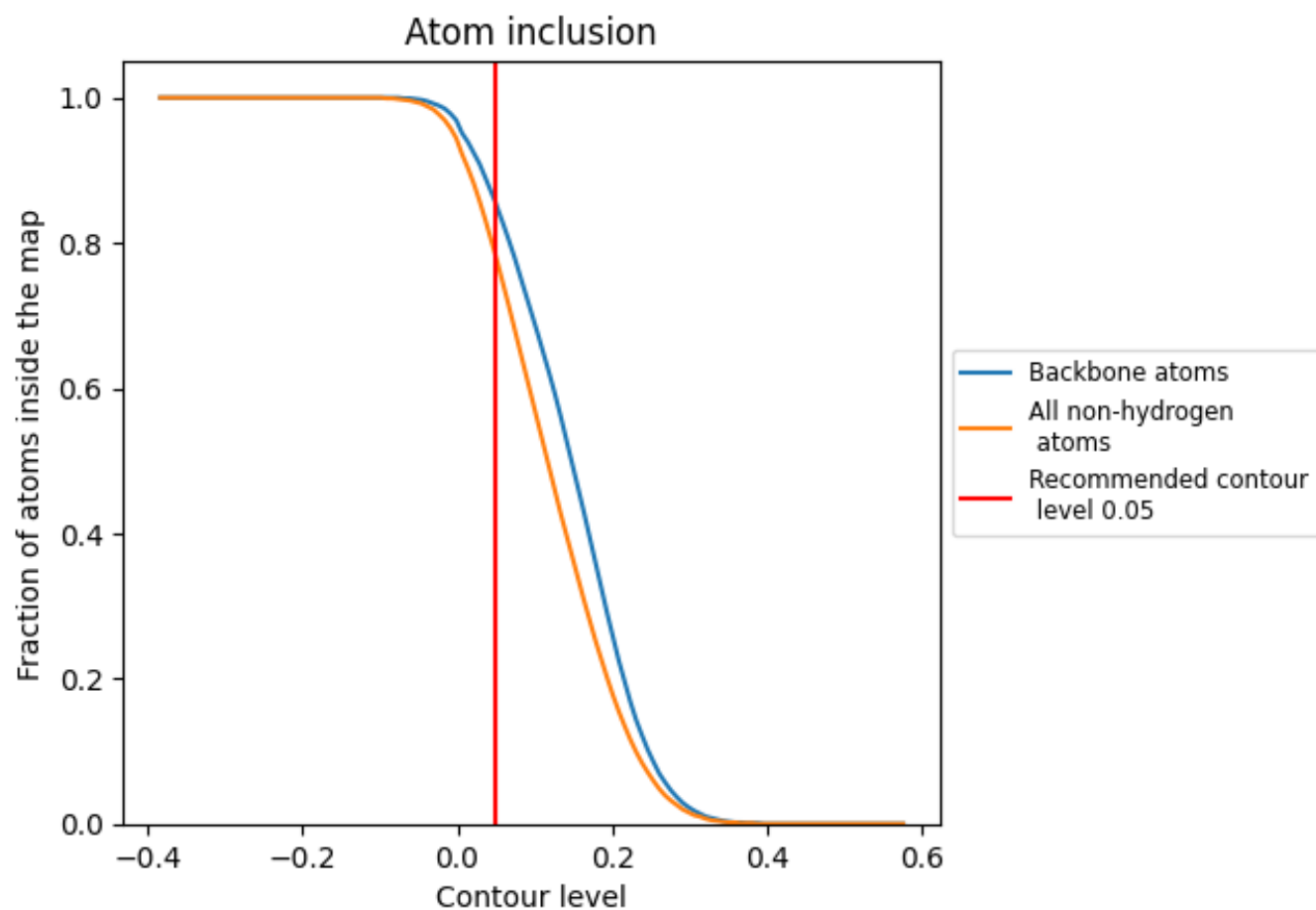
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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, 85% of all backbone atoms, 78% 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	 0.7810	 0.3100
3	 0.6100	 0.2280
4	 0.4710	 0.0380
5	 0.8340	 0.3180
6	 0.1320	 -0.0170
7	 0.9190	 0.3910
8	 0.8530	 0.3370
9	 0.2290	 0.0070
A	 0.8070	 0.4030
B	 0.8300	 0.4050
C	 0.8150	 0.3970
D	 0.8160	 0.3580
E	 0.7530	 0.3300
F	 0.8200	 0.4010
G	 0.7650	 0.3270
H	 0.8110	 0.3960
I	 0.8110	 0.3990
J	 0.7920	 0.3570
K	 0.2840	 0.0300
L	 0.8020	 0.3780
M	 0.8110	 0.3860
N	 0.8240	 0.4030
O	 0.8200	 0.3970
P	 0.8080	 0.4020
Q	 0.8350	 0.4290
R	 0.7760	 0.3180
S	 0.8450	 0.4160
S1	 0.4960	 0.1160
S2	 0.8390	 0.3050
S4	 0.5350	 0.1840
SA	 0.7930	 0.3490
SB	 0.7830	 0.3560
SC	 0.8070	 0.3740
SD	 0.6840	 0.2600
SE	 0.7960	 0.3680



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Chain	Atom inclusion	Q-score
SF	 0.6790	 0.2380
SG	 0.6990	 0.2550
SH	 0.7120	 0.2850
SI	 0.7650	 0.3370
SJ	 0.8080	 0.3600
SK	 0.6520	 0.1880
SL	 0.7490	 0.3590
SM	 0.3470	 0.0280
SN	 0.7970	 0.3810
SO	 0.7920	 0.3700
SP	 0.6360	 0.1910
SQ	 0.7300	 0.2920
SR	 0.6950	 0.2680
SS	 0.7380	 0.2770
ST	 0.7540	 0.2710
SU	 0.6900	 0.2620
SV	 0.7900	 0.3450
SW	 0.8190	 0.3930
SX	 0.8080	 0.4050
SY	 0.7460	 0.3210
SZ	 0.6960	 0.2200
Sa	 0.8350	 0.4050
Sb	 0.7780	 0.3510
Sc	 0.6630	 0.2580
Sd	 0.7810	 0.3360
Se	 0.6980	 0.2810
Sf	 0.3380	 0.0080
Sg	 0.6310	 0.1620
T	 0.8100	 0.4050
U	 0.7390	 0.2920
V	 0.8040	 0.4050
W	 0.7900	 0.3870
X	 0.7810	 0.3700
Y	 0.7750	 0.3520
Z	 0.8030	 0.3530
a	 0.8360	 0.4230
b	 0.7360	 0.3130
c	 0.7890	 0.3550
d	 0.7850	 0.3600
e	 0.8320	 0.4190
f	 0.8410	 0.4190
g	 0.7750	 0.3580

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Chain	Atom inclusion	Q-score
h	 0.7650	 0.3490
i	 0.8200	 0.3780
j	 0.8560	 0.4180
k	 0.7400	 0.2830
l	 0.7730	 0.3740
m	 0.8340	 0.4170
n	 0.7910	 0.3390
o	 0.8180	 0.4060
p	 0.7940	 0.3960
q	 0.2150	 0.0080
r	 0.8380	 0.4080
z	 0.4250	 0.0860