



Full wwPDB EM Validation Report ⓘ

Mar 25, 2026 – 02:53 PM UTC

PDB ID : 3J7R / pdb_00003j7r
EMDB ID : EMD-2644
Title : Structure of the translating mammalian ribosome-Sec61 complex
Authors : Voorhees, R.M.; Fernandez, I.S.; Scheres, S.H.W.; Hegde, R.S.
Deposited on : 2014-08-01
Resolution : 3.90 Å (reported)
Based on initial models : 3J3D, 3J3F, 3J3A, 3J3B

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

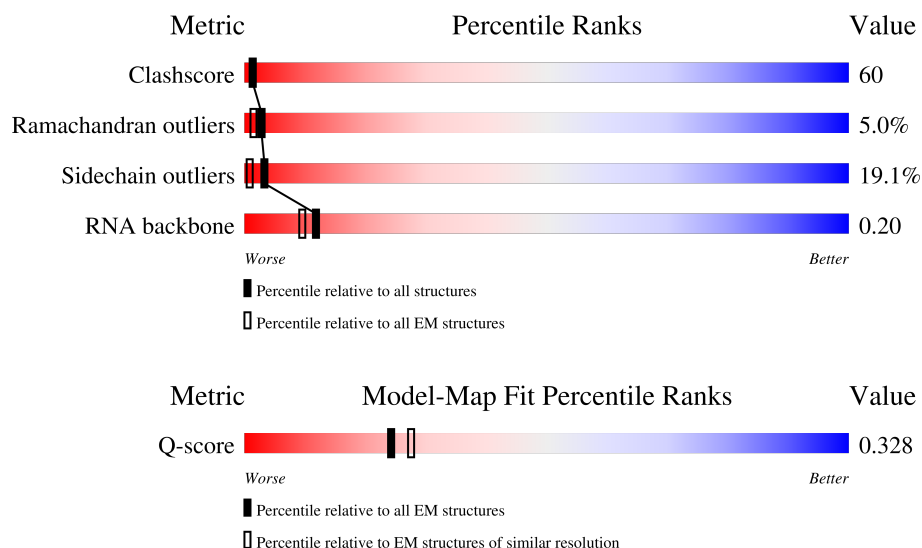
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.90 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.



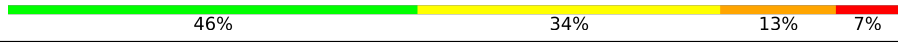
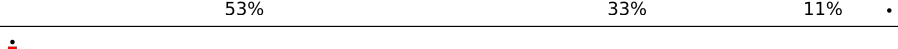
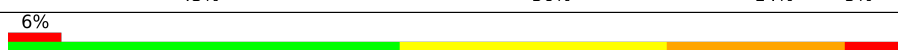
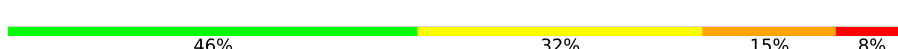
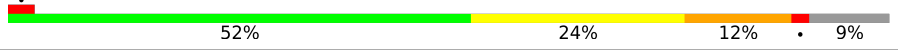
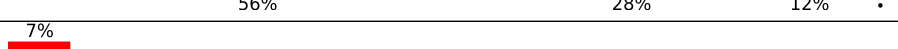
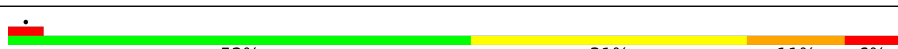
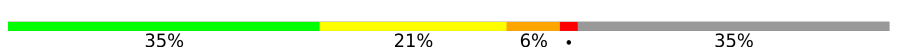
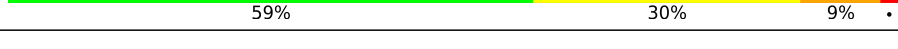
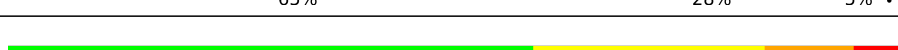
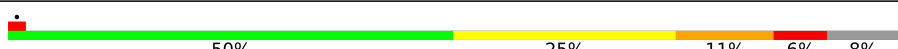
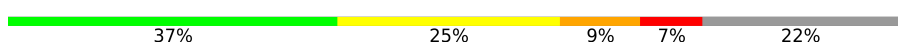
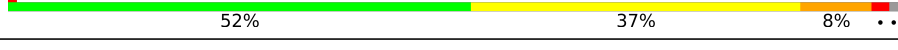
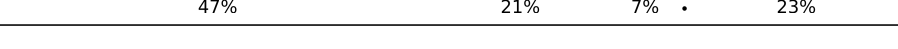
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	8855 (3.40 - 4.40)

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	5	3722	6% 8% 41% 33% 19%
2	7	120	18% 55% 19% 8%
3	8	156	5% 6% 48% 28% 17%

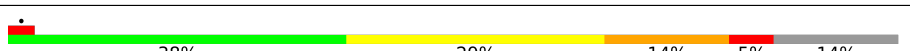
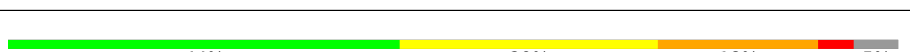
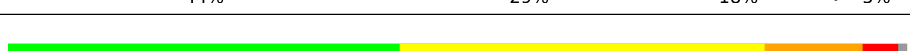
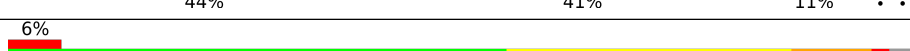
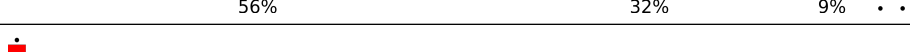
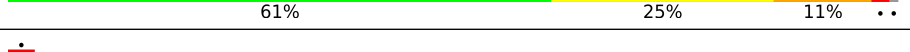
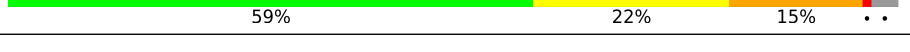
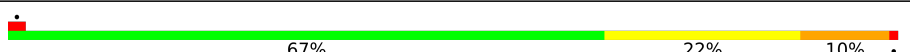
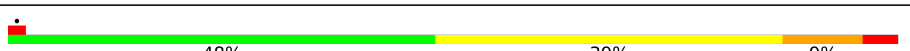
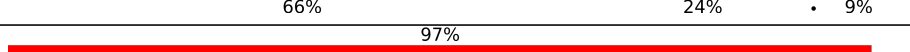
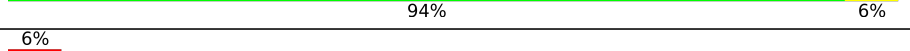
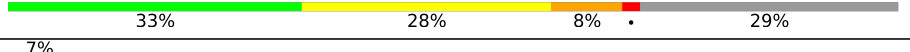
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Mol	Chain	Length	Quality of chain
4	A	257	
5	B	394	
6	C	367	
7	D	297	
8	E	236	
9	F	225	
10	G	266	
11	H	192	
12	I	213	
13	J	178	
14	L	211	
15	M	213	
16	N	204	
17	O	201	
18	P	153	
19	Q	188	
20	R	196	
21	S	224	
22	T	160	
23	U	128	
24	V	140	
25	W	157	
26	X	156	
27	Y	145	
28	Z	136	

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Mol	Chain	Length	Quality of chain
29	a	148	
30	b	160	
31	c	115	
32	d	125	
33	e	135	
34	f	110	
35	g	117	
36	h	123	
37	i	105	
38	j	86	
39	k	70	
40	l	51	
41	m	128	
42	n	25	
43	o	106	
44	p	91	
45	r	125	
46	z	217	
47	1	393	
48	2	68	
49	3	36	
50	S2	1742	
51	SA	295	
52	SB	264	
53	SC	218	

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Mol	Chain	Length	Quality of chain
54	SD	243	
55	SE	263	
56	SF	204	
57	SG	249	
58	SH	194	
59	SI	208	
60	SJ	194	
61	SK	165	
62	SL	158	
63	SM	124	
64	SN	151	
65	SO	151	
66	SP	145	
67	SQ	146	
68	SR	135	
69	SS	152	
70	ST	145	
71	SU	119	
72	SV	83	
73	SW	130	
74	SX	143	
75	SY	132	
76	SZ	125	
77	Sa	115	
78	Sb	84	

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Mol	Chain	Length	Quality of chain
79	Sc	69	
80	Sd	56	
81	Se	133	
82	Sf	156	
83	Sg	317	
84	S4	10	
85	S5	74	
86	S6	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
88	ZN	Sa	201	-	-	X	-
88	ZN	m	201	-	-	X	-
88	ZN	o	201	-	-	X	-

2 Entry composition

There are 88 unique types of molecules in this entry. The entry contains 222336 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 RNA chain called 28S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	5	3720	Total	C	N	O	P	0	0
			79736	35504	14597	25916	3719		

- Molecule 2 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	7	120	Total	C	N	O	P	0	0
			2558	1141	456	842	119		

- Molecule 3 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	8	156	Total	C	N	O	P	0	0
			3314	1480	585	1094	155		

- Molecule 4 is a protein called Ribosomal protein uL2.

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

- Molecule 5 is a protein called Ribosomal protein uL3.

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

There are 10 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
B	85	ILE	VAL	conflict	UNP A0A480L253
B	86	VAL	ILE	conflict	UNP A0A480L253
B	140	ALA	GLU	conflict	UNP A0A480L253

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Chain	Residue	Modelled	Actual	Comment	Reference
B	141	ALA	ASP	conflict	UNP A0A480L253
B	143	ALA	LYS	conflict	UNP A0A480L253
B	144	ALA	LYS	conflict	UNP A0A480L253
B	145	ALA	GLN	conflict	UNP A0A480L253
B	147	ALA	GLU	conflict	UNP A0A480L253
B	148	ALA	ARG	conflict	UNP A0A480L253
B	155	ALA	LYS	conflict	UNP A0A480L253

- Molecule 6 is a protein called Ribosomal protein uL4.

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

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	354	ALA	-	insertion	UNP A0A287AE76
C	355	ALA	-	insertion	UNP A0A287AE76
C	356	ALA	-	insertion	UNP A0A287AE76

- Molecule 7 is a protein called Ribosomal protein uL18.

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

- Molecule 8 is a protein called Ribosomal protein eL6.

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

There are 15 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	62	MET	LYS	conflict	UNP Q2YGT9
E	64	MET	LEU	conflict	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	SER	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9

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Chain	Residue	Modelled	Actual	Comment	Reference
E	?	-	VAL	deletion	UNP Q2YGT9
E	?	-	GLU	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	LYS	deletion	UNP Q2YGT9
E	?	-	VAL	deletion	UNP Q2YGT9
E	?	-	ARG	deletion	UNP Q2YGT9
E	176	VAL	SER	conflict	UNP Q2YGT9
E	206	LYS	GLU	conflict	UNP Q2YGT9

- Molecule 9 is a protein called Ribosomal protein uL30.

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
F	31	LYS	ARG	conflict	UNP A0A480W0U3

- Molecule 10 is a protein called Ribosomal protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	G	241	Total	C	N	O	S	0	0
			1934	1232	372	326	4		

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
G	53	ARG	CYS	conflict	UNP A0A4X1W808
G	172	ALA	SER	conflict	UNP A0A4X1W808
G	185	LYS	ASN	conflict	UNP A0A4X1W808
G	231	ASN	ASP	conflict	UNP A0A4X1W808

- Molecule 11 is a protein called Ribosomal protein uL6.

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

- Molecule 12 is a protein called Ribosomal protein uL16.

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

There are 9 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
I	49	GLY	CYS	conflict	UNP Q29195
I	82	ARG	LYS	conflict	UNP Q29195
I	87	MET	ILE	conflict	UNP Q29195
I	145	GLU	LYS	conflict	UNP Q29195
I	187	LYS	GLU	conflict	UNP Q29195
I	189	CYS	ARG	conflict	UNP Q29195
I	200	VAL	ILE	conflict	UNP Q29195
I	203	HIS	ARG	conflict	UNP Q29195
I	211	VAL	ALA	conflict	UNP Q29195

- Molecule 13 is a protein called Ribosomal protein uL5.

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

- Molecule 14 is a protein called Ribosomal protein eL13.

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

- Molecule 15 is a protein called Ribosomal protein eL14.

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

- Molecule 16 is a protein called Ribosomal protein eL15.

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

- Molecule 17 is a protein called Ribosomal protein uL13.

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

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
O	3	GLU	-	variant	UNP A0A480L469
O	4	GLY	-	variant	UNP A0A480L469

- Molecule 18 is a protein called Ribosomal protein uL22.

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

- Molecule 19 is a protein called Ribosomal protein eL18.

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

- Molecule 20 is a protein called Ribosomal protein eL19.

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
R	1	TYR	-	variant	UNP A0A480VXS3

- Molecule 21 is a protein called Ribosomal protein eL20.

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

- Molecule 22 is a protein called Ribosomal protein eL21.

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

- Molecule 23 is a protein called Ribosomal protein eL22.

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

- Molecule 24 is a protein called Ribosomal protein uL14.

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

- Molecule 25 is a protein called Ribosomal protein eL24.

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

- Molecule 26 is a protein called Ribosomal protein uL23.

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

- Molecule 27 is a protein called Ribosomal protein uL24.

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

- Molecule 28 is a protein called Ribosomal protein eL27.

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

- Molecule 29 is a protein called Ribosomal protein uL15.

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

- Molecule 30 is a protein called Ribosomal protein eL29.

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

- Molecule 31 is a protein called Ribosomal protein eL30.

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

- Molecule 32 is a protein called Ribosomal protein eL31.

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

- Molecule 33 is a protein called Ribosomal protein eL32.

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

- Molecule 34 is a protein called Ribosomal protein eL33.

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

- Molecule 35 is a protein called Ribosomal protein eL34.

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

- Molecule 36 is a protein called Ribosomal protein uL29.

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

- Molecule 37 is a protein called Ribosomal protein eL36.

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

- Molecule 38 is a protein called Ribosomal protein eL37.

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
j	82	ILE	THR	conflict	UNP A0A480UVT3

- Molecule 39 is a protein called Ribosomal protein eL38.

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

- Molecule 40 is a protein called Ribosomal protein eL39.

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

- Molecule 41 is a protein called Ribosomal protein eL40.

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

- Molecule 42 is a protein called Ribosomal protein eL41.

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

- Molecule 43 is a protein called Ribosomal protein eL42.

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

- 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		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
r	64	ILE	MET	conflict	UNP A0A480YX24

- Molecule 46 is a protein called Ribosomal protein uL1.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	z	217	Total	C	N	O	S	0	0
			1741	1113	312	307	9		

- Molecule 47 is a protein called Sec61 alpha subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	1	375	Total	C	N	O	S	0	0
			2914	1919	469	508	18		

There are 50 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
1	?	-	GLN	deletion	UNP A0A4X1TV07

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Chain	Residue	Modelled	Actual	Comment	Reference
1	?	-	ILE	deletion	UNP A0A4X1TV07
1	?	-	PRO	deletion	UNP A0A4X1TV07
1	?	-	LEU	deletion	UNP A0A4X1TV07
1	?	-	PHE	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	ILE	deletion	UNP A0A4X1TV07
1	?	-	MET	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	ASP	deletion	UNP A0A4X1TV07
1	?	-	THR	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	MET	deletion	UNP A0A4X1TV07
1	?	-	TYR	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	ASP	deletion	UNP A0A4X1TV07
1	?	-	PRO	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	GLU	deletion	UNP A0A4X1TV07
1	?	-	MET	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	ALA	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	ILE	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	ASN	deletion	UNP A0A4X1TV07
1	?	-	LEU	deletion	UNP A0A4X1TV07
1	?	-	LEU	deletion	UNP A0A4X1TV07
1	?	-	VAL	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	LEU	deletion	UNP A0A4X1TV07
1	?	-	LEU	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	THR	deletion	UNP A0A4X1TV07
1	?	-	TRP	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	ASP	deletion	UNP A0A4X1TV07
1	?	-	THR	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	SER	deletion	UNP A0A4X1TV07
1	?	-	GLY	deletion	UNP A0A4X1TV07

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Chain	Residue	Modelled	Actual	Comment	Reference
1	?	-	GLY	deletion	UNP A0A4X1TV07
1	?	-	PRO	deletion	UNP A0A4X1TV07
1	?	-	ALA	deletion	UNP A0A4X1TV07
1	?	-	ARG	deletion	UNP A0A4X1TV07
1	?	-	ALA	deletion	UNP A0A4X1TV07
1	?	-	TYR	deletion	UNP A0A4X1TV07
1	343	HIS	TYR	conflict	UNP A0A4X1TV07

- Molecule 48 is a protein called Sec61 gamma subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	2	62	Total	C	N	O	S	0	0
			494	326	86	79	3		

- Molecule 49 is a protein called Sec61 beta subunit.

Mol	Chain	Residues	Atoms				AltConf	Trace
49	3	36	Total	C	N	O	0	0
			180	108	36	36		

- Molecule 50 is a RNA chain called 18S ribosomal RNA.

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

There are 658 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
S2	1	U	-	variant	GB 37956930
S2	2	A	-	variant	GB 37956930
S2	3	C	-	variant	GB 37956930
S2	4	C	-	variant	GB 37956930
S2	5	U	-	variant	GB 37956930
S2	6	G	-	variant	GB 37956930
S2	7	G	-	variant	GB 37956930
S2	8	U	-	variant	GB 37956930
S2	9	U	-	variant	GB 37956930
S2	10	G	-	variant	GB 37956930
S2	11	A	-	variant	GB 37956930
S2	12	U	-	variant	GB 37956930
S2	13	C	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	14	C	-	variant	GB 37956930
S2	15	U	-	variant	GB 37956930
S2	16	G	-	variant	GB 37956930
S2	17	C	-	variant	GB 37956930
S2	18	C	-	variant	GB 37956930
S2	19	A	-	variant	GB 37956930
S2	20	G	-	variant	GB 37956930
S2	21	U	-	variant	GB 37956930
S2	22	A	-	variant	GB 37956930
S2	23	G	-	variant	GB 37956930
S2	24	C	-	variant	GB 37956930
S2	25	A	-	variant	GB 37956930
S2	26	U	-	variant	GB 37956930
S2	27	A	-	variant	GB 37956930
S2	28	U	-	variant	GB 37956930
S2	29	G	-	variant	GB 37956930
S2	30	C	-	variant	GB 37956930
S2	31	U	-	variant	GB 37956930
S2	32	U	-	variant	GB 37956930
S2	33	G	-	variant	GB 37956930
S2	34	U	-	variant	GB 37956930
S2	35	C	-	variant	GB 37956930
S2	36	U	-	variant	GB 37956930
S2	37	C	-	variant	GB 37956930
S2	38	A	-	variant	GB 37956930
S2	39	A	-	variant	GB 37956930
S2	40	A	-	variant	GB 37956930
S2	41	G	-	variant	GB 37956930
S2	42	A	-	variant	GB 37956930
S2	43	U	-	variant	GB 37956930
S2	44	U	-	variant	GB 37956930
S2	45	A	-	variant	GB 37956930
S2	46	A	-	variant	GB 37956930
S2	47	G	-	variant	GB 37956930
S2	48	C	-	variant	GB 37956930
S2	49	C	-	variant	GB 37956930
S2	50	A	-	variant	GB 37956930
S2	51	U	-	variant	GB 37956930
S2	52	G	-	variant	GB 37956930
S2	53	C	-	variant	GB 37956930
S2	54	A	-	variant	GB 37956930
S2	55	U	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	56	G	-	variant	GB 37956930
S2	57	U	-	variant	GB 37956930
S2	58	C	-	variant	GB 37956930
S2	59	U	-	variant	GB 37956930
S2	60	A	-	variant	GB 37956930
S2	61	A	-	variant	GB 37956930
S2	62	G	-	variant	GB 37956930
S2	63	U	-	variant	GB 37956930
S2	64	A	-	variant	GB 37956930
S2	65	C	-	variant	GB 37956930
S2	66	G	-	variant	GB 37956930
S2	67	C	-	variant	GB 37956930
S2	68	A	-	variant	GB 37956930
S2	69	C	-	variant	GB 37956930
S2	70	G	-	variant	GB 37956930
S2	71	G	-	variant	GB 37956930
S2	72	C	-	variant	GB 37956930
S2	73	C	-	variant	GB 37956930
S2	74	G	-	variant	GB 37956930
S2	75	G	-	variant	GB 37956930
S2	76	U	-	variant	GB 37956930
S2	77	A	-	variant	GB 37956930
S2	78	C	-	variant	GB 37956930
S2	79	A	-	variant	GB 37956930
S2	80	G	-	variant	GB 37956930
S2	81	U	-	variant	GB 37956930
S2	82	G	-	variant	GB 37956930
S2	83	A	-	variant	GB 37956930
S2	84	A	-	variant	GB 37956930
S2	85	A	-	variant	GB 37956930
S2	86	C	-	variant	GB 37956930
S2	87	U	-	variant	GB 37956930
S2	88	G	-	variant	GB 37956930
S2	89	C	-	variant	GB 37956930
S2	90	G	-	variant	GB 37956930
S2	91	A	-	variant	GB 37956930
S2	92	A	-	variant	GB 37956930
S2	93	U	-	variant	GB 37956930
S2	94	G	-	variant	GB 37956930
S2	95	G	-	variant	GB 37956930
S2	96	C	-	variant	GB 37956930
S2	97	U	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	98	C	-	variant	GB 37956930
S2	99	A	-	variant	GB 37956930
S2	100	U	-	variant	GB 37956930
S2	101	U	-	variant	GB 37956930
S2	102	A	-	variant	GB 37956930
S2	103	A	-	variant	GB 37956930
S2	104	A	-	variant	GB 37956930
S2	105	U	-	variant	GB 37956930
S2	106	C	-	variant	GB 37956930
S2	107	A	-	variant	GB 37956930
S2	108	G	-	variant	GB 37956930
S2	109	U	-	variant	GB 37956930
S2	110	U	-	variant	GB 37956930
S2	111	A	-	variant	GB 37956930
S2	112	U	-	variant	GB 37956930
S2	113	G	-	variant	GB 37956930
S2	114	G	-	variant	GB 37956930
S2	115	U	-	variant	GB 37956930
S2	116	U	-	variant	GB 37956930
S2	117	C	-	variant	GB 37956930
S2	118	C	-	variant	GB 37956930
S2	119	U	-	variant	GB 37956930
S2	120	U	-	variant	GB 37956930
S2	121	U	-	variant	GB 37956930
S2	122	G	-	variant	GB 37956930
S2	123	G	-	variant	GB 37956930
S2	124	U	-	variant	GB 37956930
S2	125	C	-	variant	GB 37956930
S2	126	G	-	variant	GB 37956930
S2	127	C	-	variant	GB 37956930
S2	128	U	-	variant	GB 37956930
S2	129	C	-	variant	GB 37956930
S2	130	G	-	variant	GB 37956930
S2	131	C	-	variant	GB 37956930
S2	132	U	-	variant	GB 37956930
S2	133	C	-	variant	GB 37956930
S2	134	C	-	variant	GB 37956930
S2	135	U	-	variant	GB 37956930
S2	136	C	-	variant	GB 37956930
S2	137	U	-	variant	GB 37956930
S2	138	C	-	variant	GB 37956930
S2	139	C	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	140	C	-	variant	GB 37956930
S2	141	A	-	variant	GB 37956930
S2	142	C	-	variant	GB 37956930
S2	143	U	-	variant	GB 37956930
S2	144	U	-	variant	GB 37956930
S2	145	G	-	variant	GB 37956930
S2	146	G	-	variant	GB 37956930
S2	147	A	-	variant	GB 37956930
S2	148	U	-	variant	GB 37956930
S2	149	A	-	variant	GB 37956930
S2	150	A	-	variant	GB 37956930
S2	151	C	-	variant	GB 37956930
S2	152	U	-	variant	GB 37956930
S2	153	G	-	variant	GB 37956930
S2	154	U	-	variant	GB 37956930
S2	155	G	-	variant	GB 37956930
S2	156	G	-	variant	GB 37956930
S2	157	U	-	variant	GB 37956930
S2	158	A	-	variant	GB 37956930
S2	159	A	-	variant	GB 37956930
S2	160	U	-	variant	GB 37956930
S2	161	U	-	variant	GB 37956930
S2	162	C	-	variant	GB 37956930
S2	163	U	-	variant	GB 37956930
S2	164	A	-	variant	GB 37956930
S2	165	G	-	variant	GB 37956930
S2	166	A	-	variant	GB 37956930
S2	167	G	-	variant	GB 37956930
S2	168	C	-	variant	GB 37956930
S2	169	U	-	variant	GB 37956930
S2	170	A	-	variant	GB 37956930
S2	171	A	-	variant	GB 37956930
S2	172	U	-	variant	GB 37956930
S2	173	A	-	variant	GB 37956930
S2	174	C	-	variant	GB 37956930
S2	175	A	-	variant	GB 37956930
S2	176	U	-	variant	GB 37956930
S2	177	G	-	variant	GB 37956930
S2	178	C	-	variant	GB 37956930
S2	179	C	-	variant	GB 37956930
S2	180	G	-	variant	GB 37956930
S2	181	A	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	182	C	-	variant	GB 37956930
S2	183	G	-	variant	GB 37956930
S2	184	G	-	variant	GB 37956930
S2	185	G	-	variant	GB 37956930
S2	186	C	-	variant	GB 37956930
S2	187	G	-	variant	GB 37956930
S2	188	C	-	variant	GB 37956930
S2	189	U	-	variant	GB 37956930
S2	190	G	-	variant	GB 37956930
S2	191	A	-	variant	GB 37956930
S2	192	C	-	variant	GB 37956930
S2	193	C	-	variant	GB 37956930
S2	194	C	-	variant	GB 37956930
S2	195	C	-	variant	GB 37956930
S2	196	C	-	variant	GB 37956930
S2	197	U	-	variant	GB 37956930
S2	198	U	-	variant	GB 37956930
S2	199	C	-	variant	GB 37956930
S2	200	G	-	variant	GB 37956930
S2	201	C	-	variant	GB 37956930
S2	202	G	-	variant	GB 37956930
S2	203	G	-	variant	GB 37956930
S2	204	G	-	variant	GB 37956930
S2	205	G	-	variant	GB 37956930
S2	206	G	-	variant	GB 37956930
S2	207	G	-	variant	GB 37956930
S2	208	G	-	variant	GB 37956930
S2	209	A	-	variant	GB 37956930
S2	210	U	-	variant	GB 37956930
S2	211	G	-	variant	GB 37956930
S2	212	C	-	variant	GB 37956930
S2	213	G	-	variant	GB 37956930
S2	214	U	-	variant	GB 37956930
S2	215	G	-	variant	GB 37956930
S2	216	C	-	variant	GB 37956930
S2	217	A	-	variant	GB 37956930
S2	218	U	-	variant	GB 37956930
S2	219	U	-	variant	GB 37956930
S2	220	U	-	variant	GB 37956930
S2	221	A	-	variant	GB 37956930
S2	222	U	-	variant	GB 37956930
S2	223	C	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	224	A	-	variant	GB 37956930
S2	225	G	-	variant	GB 37956930
S2	287	U	-	variant	GB 37956930
S2	288	G	-	variant	GB 37956930
S2	289	G	-	variant	GB 37956930
S2	290	U	-	variant	GB 37956930
S2	291	G	-	variant	GB 37956930
S2	292	A	-	variant	GB 37956930
S2	293	C	-	variant	GB 37956930
S2	294	U	-	variant	GB 37956930
S2	295	C	-	variant	GB 37956930
S2	296	U	-	variant	GB 37956930
S2	297	A	-	variant	GB 37956930
S2	298	G	-	variant	GB 37956930
S2	299	A	-	variant	GB 37956930
S2	300	U	-	variant	GB 37956930
S2	301	A	-	variant	GB 37956930
S2	302	A	-	variant	GB 37956930
S2	303	C	-	variant	GB 37956930
S2	304	C	-	variant	GB 37956930
S2	305	U	-	variant	GB 37956930
S2	306	C	-	variant	GB 37956930
S2	307	G	-	variant	GB 37956930
S2	308	G	-	variant	GB 37956930
S2	309	G	-	variant	GB 37956930
S2	310	C	-	variant	GB 37956930
S2	311	C	-	variant	GB 37956930
S2	312	G	-	variant	GB 37956930
S2	313	A	-	variant	GB 37956930
S2	314	U	-	variant	GB 37956930
S2	315	C	-	variant	GB 37956930
S2	316	G	-	variant	GB 37956930
S2	317	C	-	variant	GB 37956930
S2	318	A	-	variant	GB 37956930
S2	319	C	-	variant	GB 37956930
S2	320	G	-	variant	GB 37956930
S2	321	C	-	variant	GB 37956930
S2	322	C	-	variant	GB 37956930
S2	323	C	-	variant	GB 37956930
S2	324	C	-	variant	GB 37956930
S2	325	C	-	variant	GB 37956930
S2	326	C	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	327	G	-	variant	GB 37956930
S2	328	U	-	variant	GB 37956930
S2	329	G	-	variant	GB 37956930
S2	330	G	-	variant	GB 37956930
S2	331	C	-	variant	GB 37956930
S2	332	G	-	variant	GB 37956930
S2	333	G	-	variant	GB 37956930
S2	334	C	-	variant	GB 37956930
S2	335	G	-	variant	GB 37956930
S2	336	A	-	variant	GB 37956930
S2	337	C	-	variant	GB 37956930
S2	338	G	-	variant	GB 37956930
S2	339	A	-	variant	GB 37956930
S2	340	C	-	variant	GB 37956930
S2	341	C	-	variant	GB 37956930
S2	342	C	-	variant	GB 37956930
S2	343	A	-	variant	GB 37956930
S2	344	U	-	variant	GB 37956930
S2	345	U	-	variant	GB 37956930
S2	346	C	-	variant	GB 37956930
S2	347	G	-	variant	GB 37956930
S2	348	A	-	variant	GB 37956930
S2	349	A	-	variant	GB 37956930
S2	350	C	-	variant	GB 37956930
S2	351	G	-	variant	GB 37956930
S2	352	U	-	variant	GB 37956930
S2	353	C	-	variant	GB 37956930
S2	354	U	-	variant	GB 37956930
S2	355	G	-	variant	GB 37956930
S2	356	C	-	variant	GB 37956930
S2	357	C	-	variant	GB 37956930
S2	358	C	-	variant	GB 37956930
S2	359	U	-	variant	GB 37956930
S2	360	A	-	variant	GB 37956930
S2	361	U	-	variant	GB 37956930
S2	362	C	-	variant	GB 37956930
S2	363	A	-	variant	GB 37956930
S2	364	A	-	variant	GB 37956930
S2	365	C	-	variant	GB 37956930
S2	366	U	-	variant	GB 37956930
S2	367	U	-	variant	GB 37956930
S2	368	U	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	369	C	-	variant	GB 37956930
S2	370	G	-	variant	GB 37956930
S2	371	A	-	variant	GB 37956930
S2	372	U	-	variant	GB 37956930
S2	373	G	-	variant	GB 37956930
S2	374	G	-	variant	GB 37956930
S2	375	U	-	variant	GB 37956930
S2	376	A	-	variant	GB 37956930
S2	377	G	-	variant	GB 37956930
S2	378	U	-	variant	GB 37956930
S2	379	C	-	variant	GB 37956930
S2	380	G	-	variant	GB 37956930
S2	381	C	-	variant	GB 37956930
S2	382	C	-	variant	GB 37956930
S2	383	G	-	variant	GB 37956930
S2	384	U	-	variant	GB 37956930
S2	385	G	-	variant	GB 37956930
S2	386	C	-	variant	GB 37956930
S2	387	C	-	variant	GB 37956930
S2	388	U	-	variant	GB 37956930
S2	389	A	-	variant	GB 37956930
S2	390	C	-	variant	GB 37956930
S2	391	C	-	variant	GB 37956930
S2	392	A	-	variant	GB 37956930
S2	393	U	-	variant	GB 37956930
S2	394	G	-	variant	GB 37956930
S2	395	G	-	variant	GB 37956930
S2	396	U	-	variant	GB 37956930
S2	397	G	-	variant	GB 37956930
S2	398	A	-	variant	GB 37956930
S2	399	C	-	variant	GB 37956930
S2	400	C	-	variant	GB 37956930
S2	401	A	-	variant	GB 37956930
S2	402	C	-	variant	GB 37956930
S2	403	G	-	variant	GB 37956930
S2	404	G	-	variant	GB 37956930
S2	405	G	-	variant	GB 37956930
S2	406	U	-	variant	GB 37956930
S2	407	G	-	variant	GB 37956930
S2	408	A	-	variant	GB 37956930
S2	409	C	-	variant	GB 37956930
S2	410	G	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	411	G	-	variant	GB 37956930
S2	412	G	-	variant	GB 37956930
S2	413	G	-	variant	GB 37956930
S2	414	A	-	variant	GB 37956930
S2	415	A	-	variant	GB 37956930
S2	416	U	-	variant	GB 37956930
S2	417	C	-	variant	GB 37956930
S2	418	A	-	variant	GB 37956930
S2	419	G	-	variant	GB 37956930
S2	420	G	-	variant	GB 37956930
S2	421	G	-	variant	GB 37956930
S2	422	U	-	variant	GB 37956930
S2	423	U	-	variant	GB 37956930
S2	424	C	-	variant	GB 37956930
S2	425	G	-	variant	GB 37956930
S2	426	A	-	variant	GB 37956930
S2	427	U	-	variant	GB 37956930
S2	428	U	-	variant	GB 37956930
S2	429	C	-	variant	GB 37956930
S2	430	C	-	variant	GB 37956930
S2	431	G	-	variant	GB 37956930
S2	432	G	-	variant	GB 37956930
S2	433	A	-	variant	GB 37956930
S2	434	G	-	variant	GB 37956930
S2	435	A	-	variant	GB 37956930
S2	436	G	-	variant	GB 37956930
S2	437	G	-	variant	GB 37956930
S2	438	G	-	variant	GB 37956930
S2	439	A	-	variant	GB 37956930
S2	440	G	-	variant	GB 37956930
S2	441	C	-	variant	GB 37956930
S2	442	C	-	variant	GB 37956930
S2	443	U	-	variant	GB 37956930
S2	444	G	-	variant	GB 37956930
S2	445	A	-	variant	GB 37956930
S2	446	G	-	variant	GB 37956930
S2	447	A	-	variant	GB 37956930
S2	448	A	-	variant	GB 37956930
S2	449	A	-	variant	GB 37956930
S2	450	C	-	variant	GB 37956930
S2	451	G	-	variant	GB 37956930
S2	452	G	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	453	C	-	variant	GB 37956930
S2	454	U	-	variant	GB 37956930
S2	455	A	-	variant	GB 37956930
S2	456	C	-	variant	GB 37956930
S2	457	C	-	variant	GB 37956930
S2	458	A	-	variant	GB 37956930
S2	459	C	-	variant	GB 37956930
S2	460	A	-	variant	GB 37956930
S2	461	U	-	variant	GB 37956930
S2	462	C	-	variant	GB 37956930
S2	463	C	-	variant	GB 37956930
S2	464	A	-	variant	GB 37956930
S2	465	A	-	variant	GB 37956930
S2	466	G	-	variant	GB 37956930
S2	467	G	-	variant	GB 37956930
S2	468	A	-	variant	GB 37956930
S2	469	A	-	variant	GB 37956930
S2	470	G	-	variant	GB 37956930
S2	471	G	-	variant	GB 37956930
S2	472	C	-	variant	GB 37956930
S2	473	A	-	variant	GB 37956930
S2	474	G	-	variant	GB 37956930
S2	475	C	-	variant	GB 37956930
S2	476	A	-	variant	GB 37956930
S2	477	G	-	variant	GB 37956930
S2	478	G	-	variant	GB 37956930
S2	479	C	-	variant	GB 37956930
S2	480	G	-	variant	GB 37956930
S2	481	C	-	variant	GB 37956930
S2	482	G	-	variant	GB 37956930
S2	483	C	-	variant	GB 37956930
S2	484	A	-	variant	GB 37956930
S2	485	A	-	variant	GB 37956930
S2	486	A	-	variant	GB 37956930
S2	487	U	-	variant	GB 37956930
S2	488	U	-	variant	GB 37956930
S2	489	A	-	variant	GB 37956930
S2	490	C	-	variant	GB 37956930
S2	491	C	-	variant	GB 37956930
S2	492	C	-	variant	GB 37956930
S2	493	A	-	variant	GB 37956930
S2	494	C	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	495	U	-	variant	GB 37956930
S2	496	C	-	variant	GB 37956930
S2	497	C	-	variant	GB 37956930
S2	498	C	-	variant	GB 37956930
S2	499	G	-	variant	GB 37956930
S2	500	A	-	variant	GB 37956930
S2	501	C	-	variant	GB 37956930
S2	502	C	-	variant	GB 37956930
S2	503	C	-	variant	GB 37956930
S2	504	G	-	variant	GB 37956930
S2	505	G	-	variant	GB 37956930
S2	506	G	-	variant	GB 37956930
S2	507	G	-	variant	GB 37956930
S2	508	A	-	variant	GB 37956930
S2	509	G	-	variant	GB 37956930
S2	510	G	-	variant	GB 37956930
S2	511	U	-	variant	GB 37956930
S2	512	A	-	variant	GB 37956930
S2	513	G	-	variant	GB 37956930
S2	514	U	-	variant	GB 37956930
S2	515	G	-	variant	GB 37956930
S2	516	A	-	variant	GB 37956930
S2	517	C	-	variant	GB 37956930
S2	518	G	-	variant	GB 37956930
S2	519	A	-	variant	GB 37956930
S2	520	A	-	variant	GB 37956930
S2	521	A	-	variant	GB 37956930
S2	522	A	-	variant	GB 37956930
S2	523	A	-	variant	GB 37956930
S2	524	U	-	variant	GB 37956930
S2	525	A	-	variant	GB 37956930
S2	526	A	-	variant	GB 37956930
S2	527	C	-	variant	GB 37956930
S2	528	A	-	variant	GB 37956930
S2	529	A	-	variant	GB 37956930
S2	530	U	-	variant	GB 37956930
S2	531	A	-	variant	GB 37956930
S2	532	C	-	variant	GB 37956930
S2	533	A	-	variant	GB 37956930
S2	534	G	-	variant	GB 37956930
S2	535	G	-	variant	GB 37956930
S2	536	A	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	537	C	-	variant	GB 37956930
S2	538	U	-	variant	GB 37956930
S2	539	C	-	variant	GB 37956930
S2	540	U	-	variant	GB 37956930
S2	541	U	-	variant	GB 37956930
S2	542	U	-	variant	GB 37956930
S2	543	C	-	variant	GB 37956930
S2	544	G	-	variant	GB 37956930
S2	545	A	-	variant	GB 37956930
S2	546	G	-	variant	GB 37956930
S2	547	G	-	variant	GB 37956930
S2	548	C	-	variant	GB 37956930
S2	549	C	-	variant	GB 37956930
S2	550	C	-	variant	GB 37956930
S2	551	U	-	variant	GB 37956930
S2	552	G	-	variant	GB 37956930
S2	553	U	-	variant	GB 37956930
S2	554	A	-	variant	GB 37956930
S2	555	A	-	variant	GB 37956930
S2	556	U	-	variant	GB 37956930
S2	557	U	-	variant	GB 37956930
S2	558	G	-	variant	GB 37956930
S2	559	G	-	variant	GB 37956930
S2	560	A	-	variant	GB 37956930
S2	561	A	-	variant	GB 37956930
S2	562	U	-	variant	GB 37956930
S2	563	G	-	variant	GB 37956930
S2	564	A	-	variant	GB 37956930
S2	565	G	-	variant	GB 37956930
S2	566	U	-	variant	GB 37956930
S2	567	C	-	variant	GB 37956930
S2	568	C	-	variant	GB 37956930
S2	569	A	-	variant	GB 37956930
S2	570	C	-	variant	GB 37956930
S2	571	U	-	variant	GB 37956930
S2	572	U	-	variant	GB 37956930
S2	573	U	-	variant	GB 37956930
S2	574	A	-	variant	GB 37956930
S2	575	A	-	variant	GB 37956930
S2	576	A	-	variant	GB 37956930
S2	577	U	-	variant	GB 37956930
S2	578	C	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	579	C	-	variant	GB 37956930
S2	580	U	-	variant	GB 37956930
S2	581	U	-	variant	GB 37956930
S2	582	C	-	variant	GB 37956930
S2	583	C	-	variant	GB 37956930
S2	584	G	-	variant	GB 37956930
S2	585	C	-	variant	GB 37956930
S2	586	G	-	variant	GB 37956930
S2	587	A	-	variant	GB 37956930
S2	588	G	-	variant	GB 37956930
S2	589	G	-	variant	GB 37956930
S2	590	A	-	variant	GB 37956930
S2	591	U	-	variant	GB 37956930
S2	592	C	-	variant	GB 37956930
S2	593	C	-	variant	GB 37956930
S2	594	A	-	variant	GB 37956930
S2	595	U	-	variant	GB 37956930
S2	596	U	-	variant	GB 37956930
S2	597	G	-	variant	GB 37956930
S2	598	G	-	variant	GB 37956930
S2	599	A	-	variant	GB 37956930
S2	600	G	-	variant	GB 37956930
S2	601	G	-	variant	GB 37956930
S2	602	G	-	variant	GB 37956930
S2	603	C	-	variant	GB 37956930
S2	604	A	-	variant	GB 37956930
S2	605	A	-	variant	GB 37956930
S2	606	G	-	variant	GB 37956930
S2	607	U	-	variant	GB 37956930
S2	608	C	-	variant	GB 37956930
S2	609	U	-	variant	GB 37956930
S2	610	G	-	variant	GB 37956930
S2	611	G	-	variant	GB 37956930
S2	612	U	-	variant	GB 37956930
S2	613	G	-	variant	GB 37956930
S2	614	C	-	variant	GB 37956930
S2	615	C	-	variant	GB 37956930
S2	616	A	-	variant	GB 37956930
S2	617	G	-	variant	GB 37956930
S2	618	C	-	variant	GB 37956930
S2	619	A	-	variant	GB 37956930
S2	620	G	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	621	C	-	variant	GB 37956930
S2	622	C	-	variant	GB 37956930
S2	623	G	-	variant	GB 37956930
S2	624	C	-	variant	GB 37956930
S2	625	G	-	variant	GB 37956930
S2	626	G	-	variant	GB 37956930
S2	627	U	-	variant	GB 37956930
S2	628	A	-	variant	GB 37956930
S2	629	A	-	variant	GB 37956930
S2	630	U	-	variant	GB 37956930
S2	631	U	-	variant	GB 37956930
S2	632	C	-	variant	GB 37956930
S2	633	C	-	variant	GB 37956930
S2	634	A	-	variant	GB 37956930
S2	635	G	-	variant	GB 37956930
S2	636	C	-	variant	GB 37956930
S2	637	U	-	variant	GB 37956930
S2	638	C	-	variant	GB 37956930
S2	639	C	-	variant	GB 37956930
S2	640	A	-	variant	GB 37956930
S2	641	A	-	variant	GB 37956930
S2	642	U	-	variant	GB 37956930
S2	643	A	-	variant	GB 37956930
S2	644	G	-	variant	GB 37956930
S2	645	C	-	variant	GB 37956930
S2	646	G	-	variant	GB 37956930
S2	647	U	-	variant	GB 37956930
S2	648	A	-	variant	GB 37956930
S2	649	U	-	variant	GB 37956930
S2	650	A	-	variant	GB 37956930
S2	651	U	-	variant	GB 37956930
S2	652	U	-	variant	GB 37956930
S2	653	A	-	variant	GB 37956930
S2	654	A	-	variant	GB 37956930
S2	655	A	-	variant	GB 37956930
S2	656	G	-	variant	GB 37956930
S2	657	U	-	variant	GB 37956930
S2	658	U	-	variant	GB 37956930
S2	659	G	-	variant	GB 37956930
S2	660	C	-	variant	GB 37956930
S2	661	U	-	variant	GB 37956930
S2	662	G	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	663	C	-	variant	GB 37956930
S2	664	A	-	variant	GB 37956930
S2	665	G	-	variant	GB 37956930
S2	666	U	-	variant	GB 37956930
S2	667	U	-	variant	GB 37956930
S2	668	A	-	variant	GB 37956930
S2	669	A	-	variant	GB 37956930
S2	670	A	-	variant	GB 37956930
S2	671	A	-	variant	GB 37956930
S2	672	A	-	variant	GB 37956930
S2	673	G	-	variant	GB 37956930
S2	674	C	-	variant	GB 37956930
S2	675	U	-	variant	GB 37956930
S2	676	C	-	variant	GB 37956930
S2	677	G	-	variant	GB 37956930
S2	678	U	-	variant	GB 37956930
S2	679	A	-	variant	GB 37956930
S2	680	G	-	variant	GB 37956930
S2	681	U	-	variant	GB 37956930
S2	682	U	-	variant	GB 37956930
S2	683	G	-	variant	GB 37956930
S2	684	G	-	variant	GB 37956930
S2	685	A	-	variant	GB 37956930
S2	686	U	-	variant	GB 37956930
S2	687	C	-	variant	GB 37956930
S2	688	U	-	variant	GB 37956930
S2	689	U	-	variant	GB 37956930
S2	690	G	-	variant	GB 37956930
S2	691	G	-	variant	GB 37956930
S2	692	G	-	variant	GB 37956930
S2	693	A	-	variant	GB 37956930
S2	694	G	-	variant	GB 37956930
S2	695	C	-	variant	GB 37956930
S2	696	G	-	variant	GB 37956930
S2	697	G	-	variant	GB 37956930
S2	698	G	-	variant	GB 37956930
S2	730	C	-	variant	GB 37956930
S2	731	G	-	variant	GB 37956930
S2	732	U	-	variant	GB 37956930
S2	733	C	-	variant	GB 37956930
S2	734	C	-	variant	GB 37956930
S2	735	C	-	variant	GB 37956930

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Chain	Residue	Modelled	Actual	Comment	Reference
S2	736	C	-	variant	GB 37956930
S2	737	G	-	variant	GB 37956930
S2	738	C	-	variant	GB 37956930
S2	739	C	-	variant	GB 37956930
S2	744	G	-	variant	GB 37956930
S2	745	C	-	variant	GB 37956930
S2	746	C	-	variant	GB 37956930
S2	747	U	-	variant	GB 37956930
S2	748	C	-	variant	GB 37956930
S2	749	U	-	variant	GB 37956930
S2	750	C	-	variant	GB 37956930
S2	751	G	-	variant	GB 37956930
S2	752	G	-	variant	GB 37956930
S2	753	C	-	variant	GB 37956930
S2	798	A	G	conflict	GB 37956930

- Molecule 51 is a protein called Ribosomal protein uS2.

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

- Molecule 52 is a protein called Ribosomal protein eS1.

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

- Molecule 53 is a protein called Ribosomal protein uS5.

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

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SC	61	MET	LEU	conflict	UNP I3LJ87

- Molecule 54 is a protein called Ribosomal protein uS3.

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

- Molecule 55 is a protein called Ribosomal protein eS4.

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

- Molecule 56 is a protein called Ribosomal protein uS7.

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

- Molecule 57 is a protein called Ribosomal protein eS6.

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

- Molecule 58 is a protein called Ribosomal protein eS7.

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

- Molecule 59 is a protein called Ribosomal protein eS8.

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

- Molecule 60 is a protein called Ribosomal protein uS4.

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

- Molecule 61 is a protein called Ribosomal protein eS10.

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

- Molecule 62 is a protein called Ribosomal protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SL	156	Total	C	N	O	S	0	0
			1276	813	239	218	6		

- Molecule 63 is a protein called Ribosomal protein eS12.

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

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
SM	52	GLN	LEU	conflict	UNP P46405
SM	69	LEU	CYS	conflict	UNP P46405
SM	99	ASN	LYS	conflict	UNP P46405

- Molecule 64 is a protein called Ribosomal protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SN	150	Total	C	N	O	S	0	0
			1208	773	229	205	1		

- Molecule 65 is a protein called Ribosomal protein uS11.

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

- Molecule 66 is a protein called Ribosomal protein uS19.

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

- Molecule 67 is a protein called Ribosomal protein uS9.

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

- Molecule 68 is a protein called Ribosomal protein eS17.

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

- Molecule 69 is a protein called Ribosomal protein uS13.

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

- Molecule 70 is a protein called Ribosomal protein eS19.

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

- Molecule 71 is a protein called Ribosomal protein uS10.

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

- Molecule 72 is a protein called Ribosomal protein eS21.

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

- Molecule 73 is a protein called Ribosomal protein uS8.

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

- Molecule 74 is a protein called Ribosomal protein uS12.

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

- Molecule 75 is a protein called Ribosomal protein eS24.

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

- Molecule 76 is a protein called Ribosomal protein es25.

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

- Molecule 77 is a protein called Ribosomal protein eS26.

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

- Molecule 78 is a protein called Ribosomal protein eS27.

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

- Molecule 79 is a protein called Ribosomal protein eS28.

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

- Molecule 80 is a protein called Ribosomal protein uS14.

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

- Molecule 81 is a protein called Ribosomal protein eS30.

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

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
Se	-33	VAL	LEU	conflict	UNP A0A480W155
Se	-23	GLU	ASP	conflict	UNP A0A480W155
Se	-21	THR	ILE	conflict	UNP A0A480W155
Se	-11	THR	ARG	conflict	UNP A0A480W155

- Molecule 82 is a protein called Ribosomal protein eS31.

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

- Molecule 83 is a protein called Ribosomal protein RACK1.

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

- Molecule 84 is a RNA chain called Messenger RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	S4	10	Total	C	N	O	P	0	0
			201	91	23	78	9		

- Molecule 85 is a RNA chain called A/P tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	S5	74	Total	C	N	O	P	0	0
			1579	705	285	516	73		

- Molecule 86 is a RNA chain called P/E tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
86	S6	76	Total	C	N	O	P	0	0
			1622	723	291	532	76		

- Molecule 87 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
87	5	120	Total 120	Mg 120	0
87	7	5	Total 5	Mg 5	0
87	8	3	Total 3	Mg 3	0
87	P	1	Total 1	Mg 1	0
87	V	1	Total 1	Mg 1	0
87	S2	36	Total 36	Mg 36	0

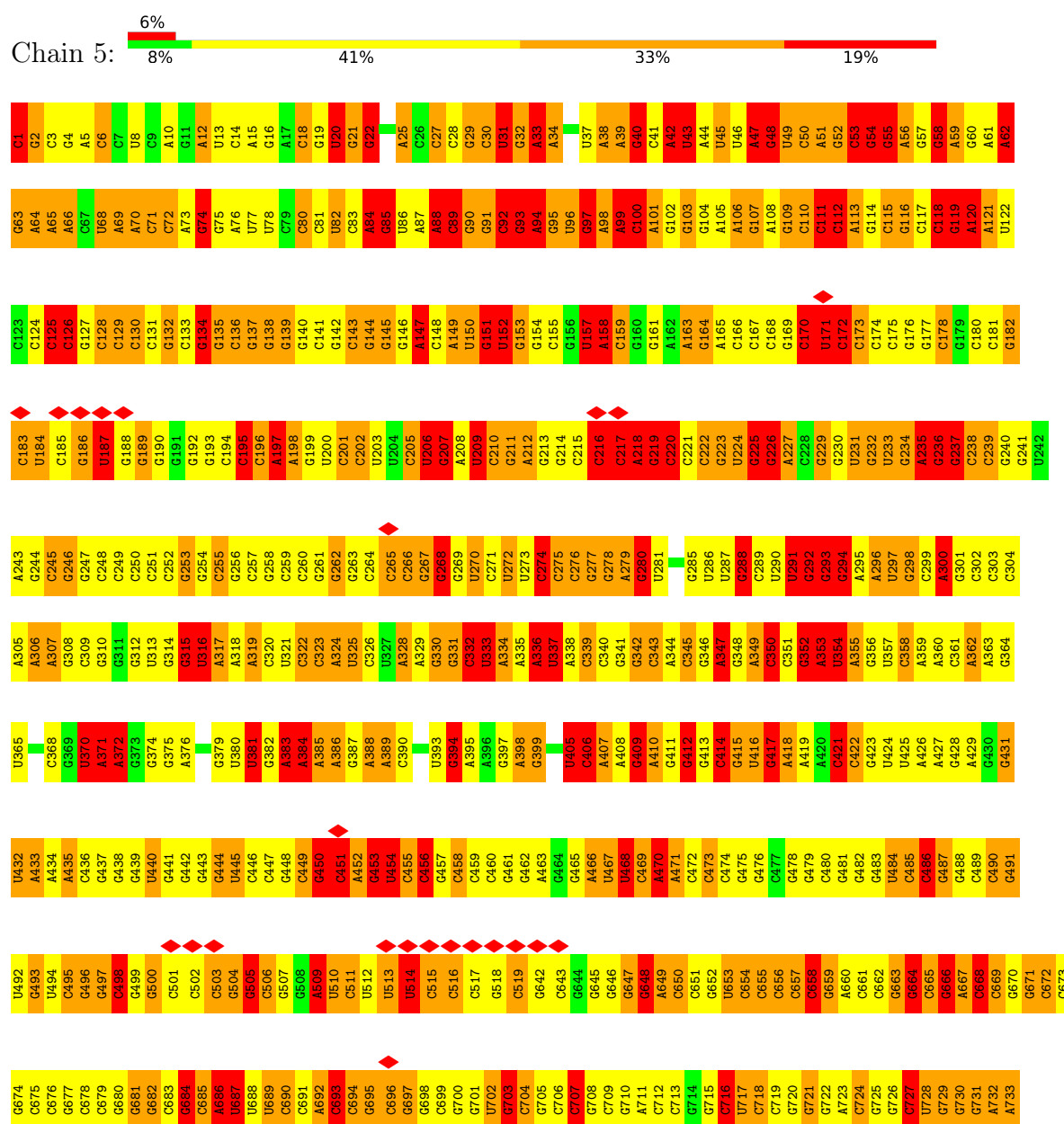
- Molecule 88 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
88	j	1	Total 1	Zn 1	0
88	m	1	Total 1	Zn 1	0
88	o	1	Total 1	Zn 1	0
88	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.

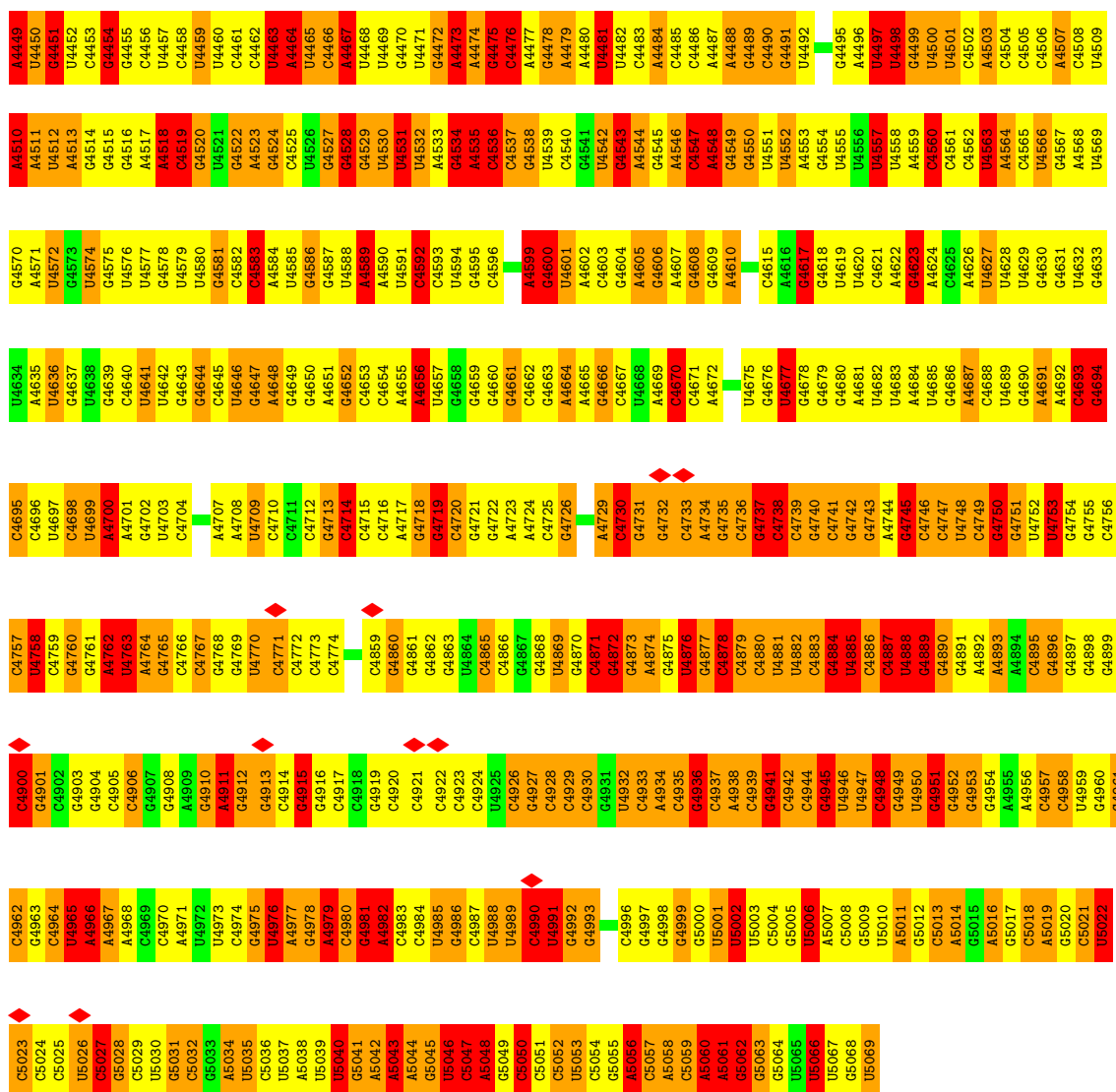
• Molecule 1: 28S ribosomal RNA



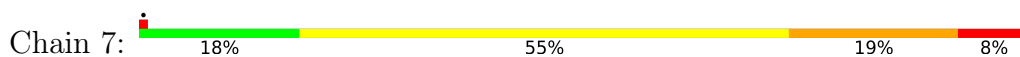


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G2735	G2736	G2737	G2738	G2739	G2740	G2741	G2742	G2743	G2744	G2745	G2746	G2747	G2748	G2749	G2750	G2751	G2752	G2753	G2754	G2755	G2756	G2757	G2758	G2759	G2760	G2761	G2762	G2763	G2764	G2765	G2766	G2767	G2768	G2769	G2770	G2771	G2772	G2773	G2774	G2775	G2776	G2777	G2778	G2779	G2780	G2781	G2782	G2783	G2784	G2785	G2786	G2787	G2788	G2789	G2790	G2791	G2792	G2793	G2794	G2795	G2796																																																																																																														
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C2364	C2365	C2366	C2367	C2368	C2369	C2370	C2371	C2372	C2373	C2374	C2375	C2376	C2377	C2378	C2379	C2380	C2381	C2382	C2383	C2384	C2385	C2386	C2387	C2388	C2389	C2390	C2391	C2392	C2393	C2394	C2395	C2396	C2397	C2398	C2399	C2400	C2401	C2402	C2403	C2404	C2405	C2406	C2407	C2408	C2409	C2410	C2411	C2412	C2413	C2414	C2415	C2416	C2417	C2418	C2419	C2420	C2421	C2422	C2423	C2424	C2425	C2426																																																																																																													
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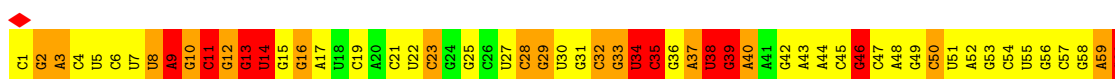
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A4323	A4324	A4325	A4326	A4327	A4328	A4329	A4330	A4331	A4332	A4333	A4334	A4335	A4336	A4337	A4338	A4339	A4340	A4341	A4342	A4343	A4344	A4345	A4346	A4347	A4348	A4349	A4350	A4351	A4352	A4353	A4354	A4355	A4356	U4360	U4361	U4362	U4363	U4364	U4365	U4366	U4367	U4368	U4369	U4370	U4371	U4372	U4373	U4374	U4375	U4376	U4377	U4378	U4379	U4380	U4381	U4382	U4383	U4384	U4385			
C4137	C4138	C4139	C4140	C4141	C4142	C4143	C4144	C4145	C4146	C4147	C4148	C4149	C4150	C4151	C4152	C4153	C4154	C4155	C4156	C4157	C4158	C4159	C4160	C4161	C4162	C4163	C4164	C4165	C4166	C4167	C4168	C4169	C4170	C4171	C4172	C4173	C4174	C4175	C4176	C4177	C4178	C4179	C4180	C4181	C4182	C4183	C4184	C4185	C4186	C4187	C4188	C4189	C4190	C4191	C4192	C4193	C4194	C4195	C4196	C4197		
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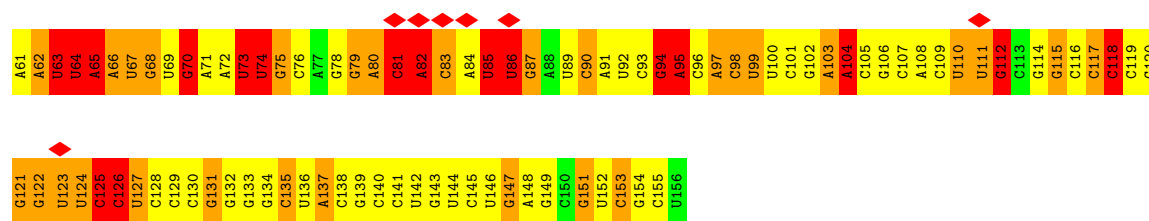


• Molecule 2: 5S ribosomal RNA

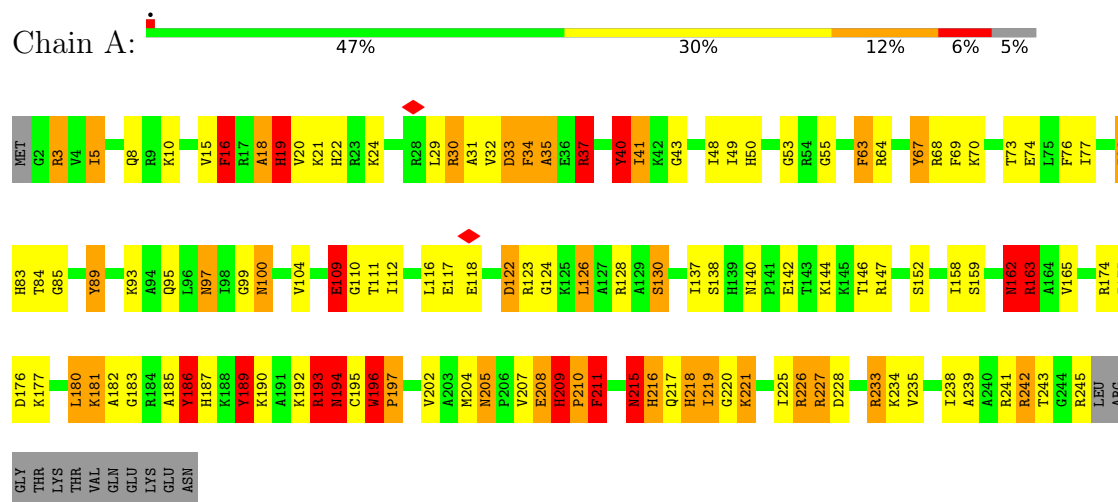


• Molecule 3: 5.8S ribosomal RNA

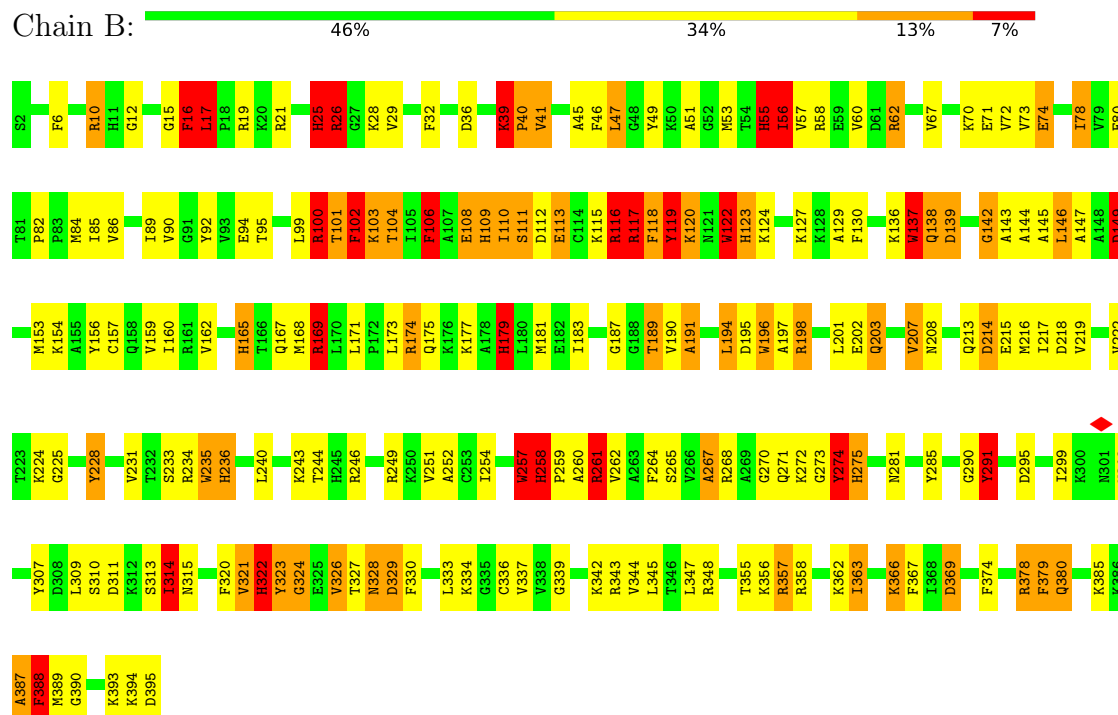




• Molecule 4: Ribosomal protein uL2

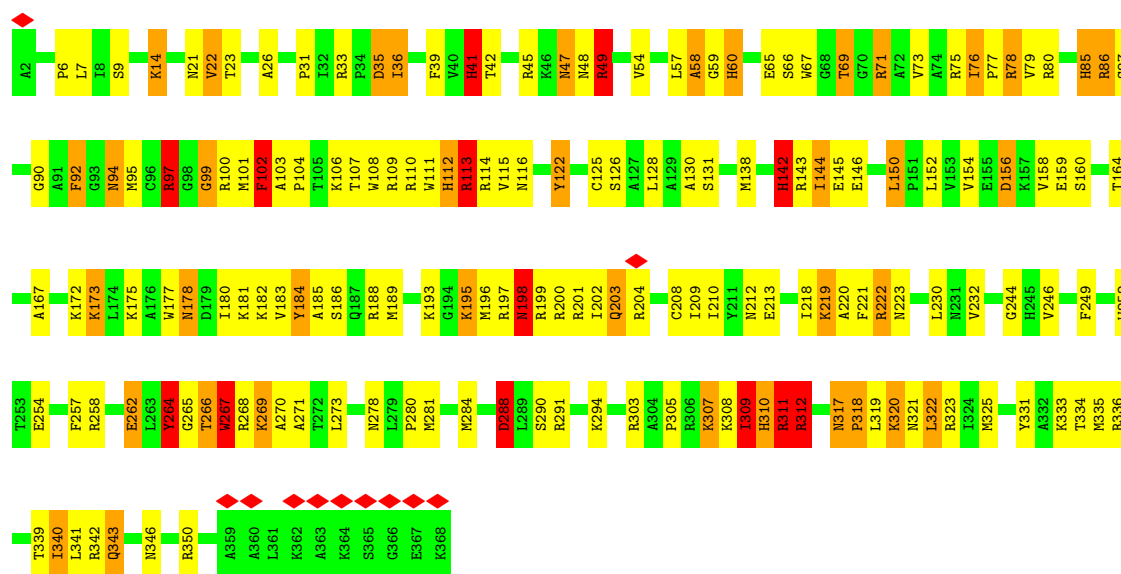


• Molecule 5: Ribosomal protein uL3

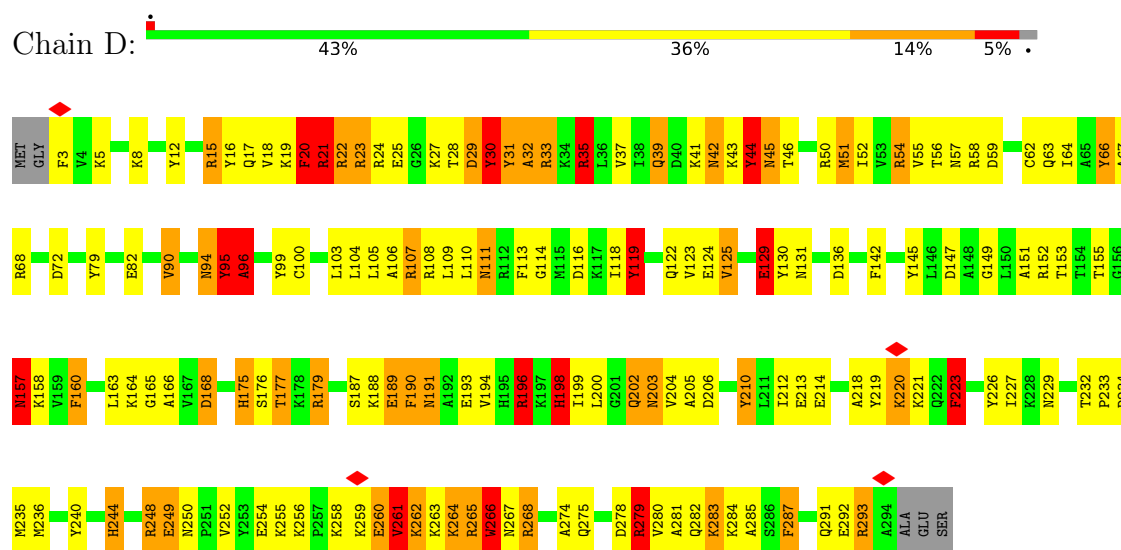


• Molecule 6: Ribosomal protein uL4

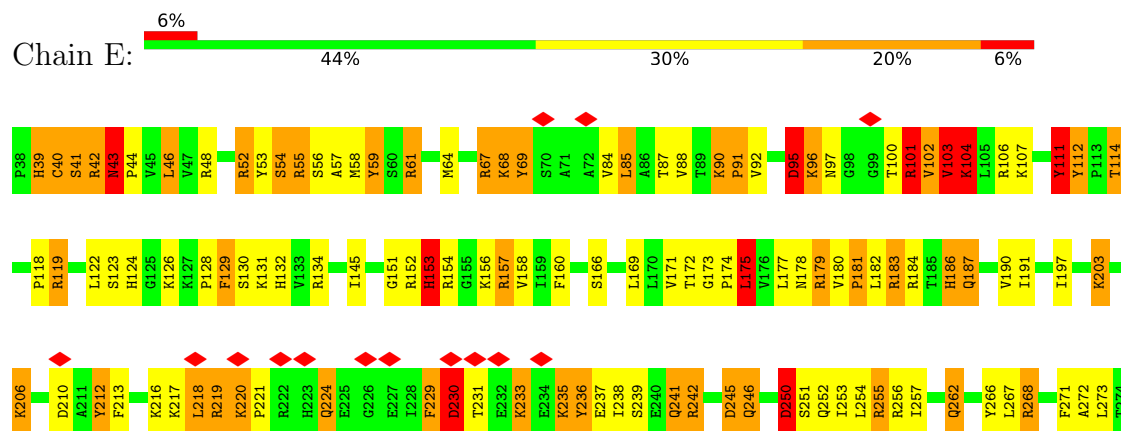




• Molecule 7: Ribosomal protein uL18



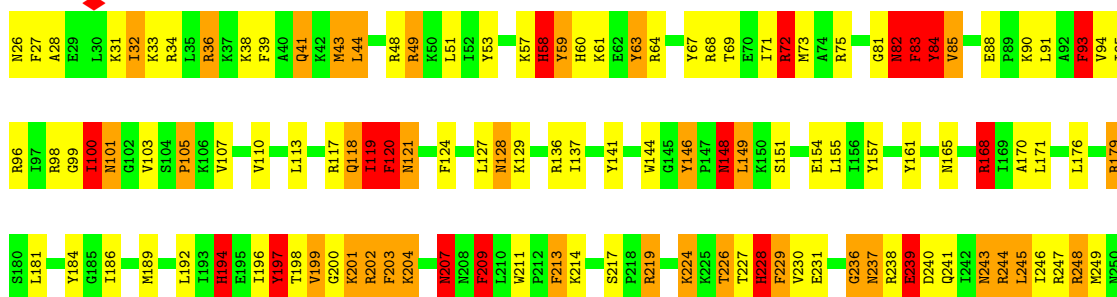
• Molecule 8: Ribosomal protein eL6





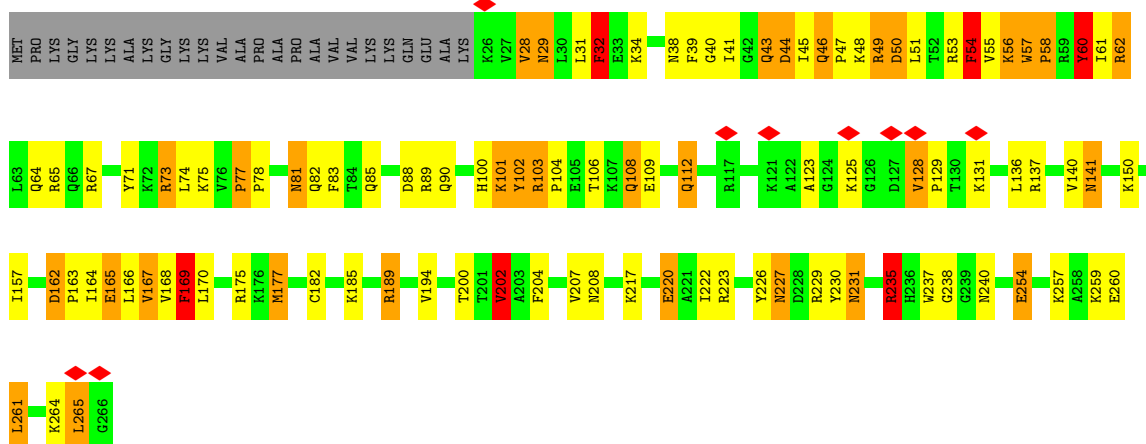
• Molecule 9: Ribosomal protein uL30

Chain F: 46% 32% 15% 8%



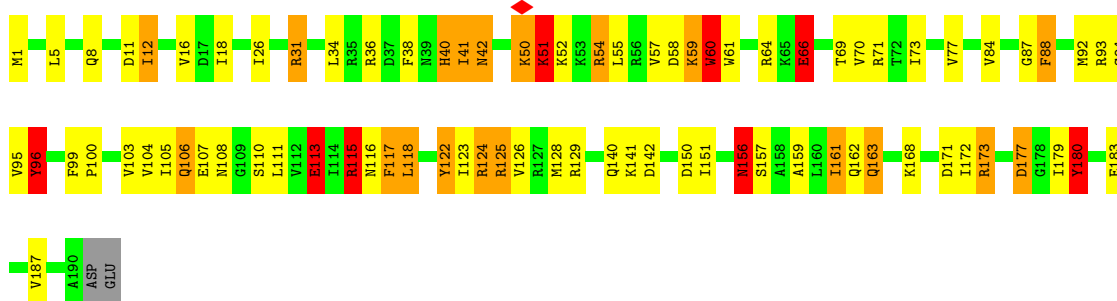
• Molecule 10: Ribosomal protein eL8

Chain G: 52% 24% 12% 9%



• Molecule 11: Ribosomal protein uL6

Chain H: 56% 29% 10%



• Molecule 12: Ribosomal protein uL16

Frequency	Percentage
Daily	56%
Weekly	28%
Monthly	12%
Other	4%



Frequency	Percentage
7%	7%
60%	60%
28%	28%
7%	7%
7%	7%



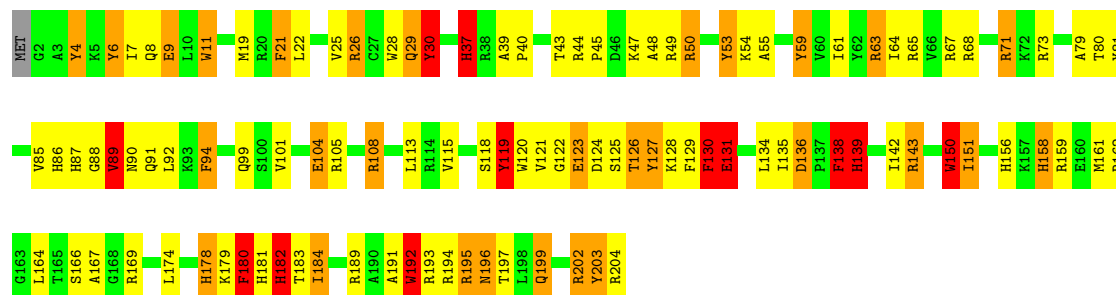
52% 31% 11% 6%



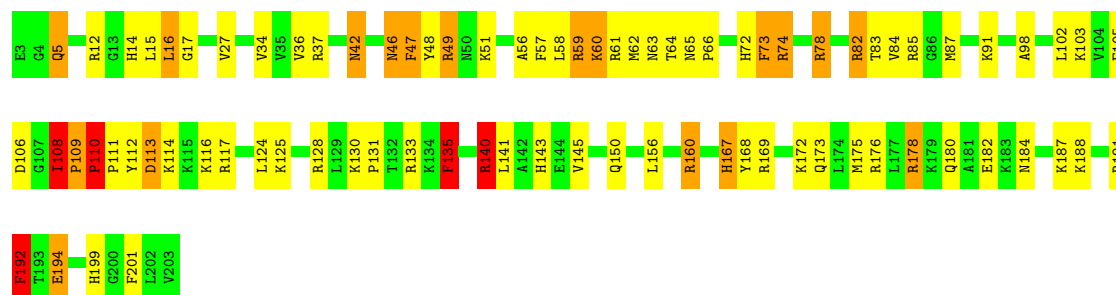
[: 35% 21% 6% • 35%



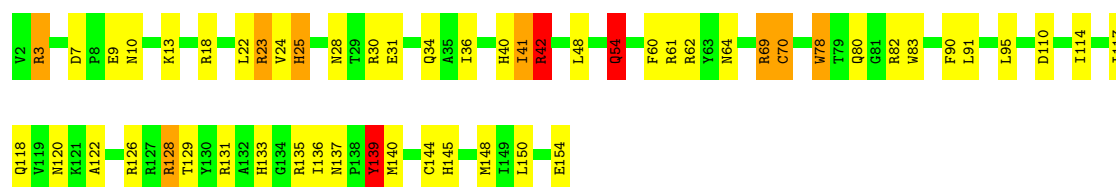
- Molecule 16: Ribosomal protein eL15



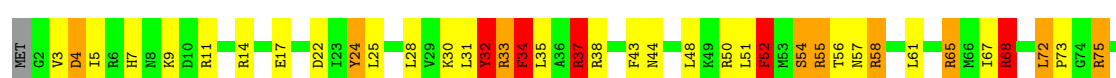
- Molecule 17: Ribosomal protein uL13

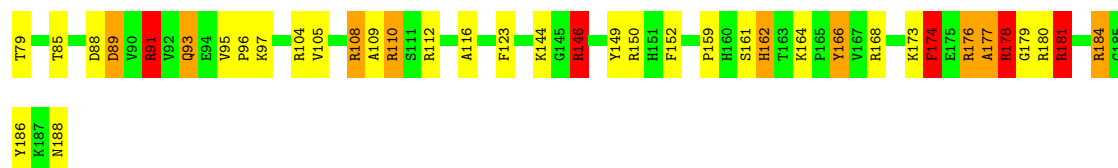


- Molecule 18: Ribosomal protein uL22

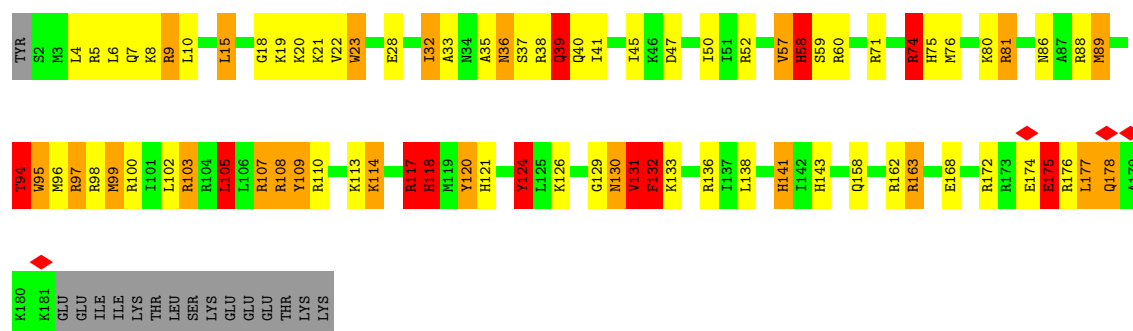


- Molecule 19: Ribosomal protein eL18

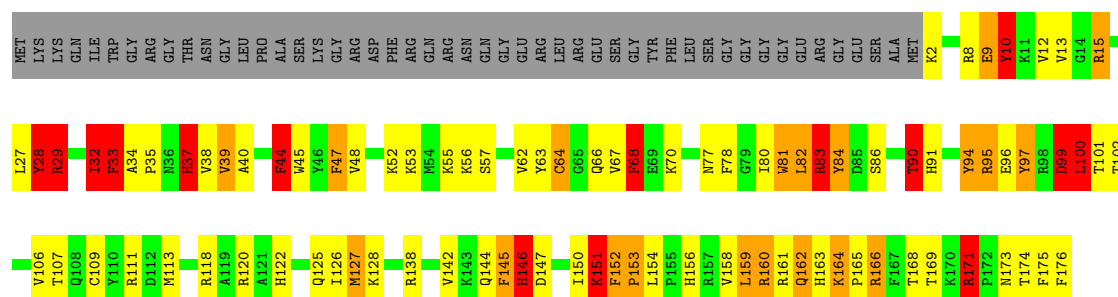




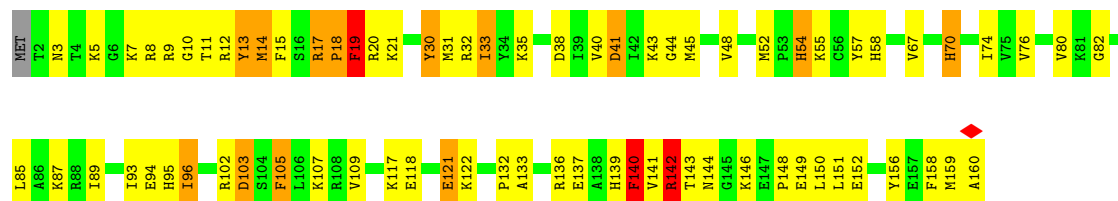
• Molecule 20: Ribosomal protein eL19



• Molecule 21: Ribosomal protein eL20

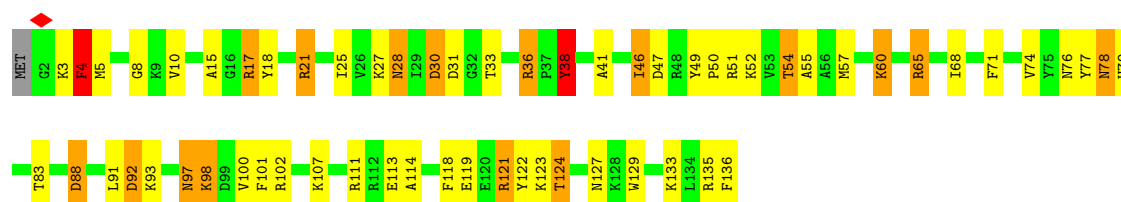


• Molecule 22: Ribosomal protein eL21

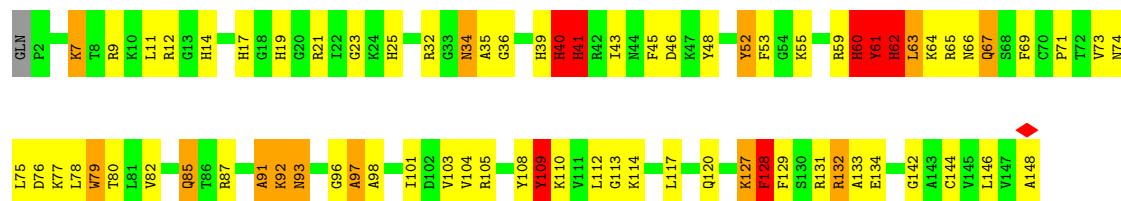


• Molecule 23: Ribosomal protein eL22

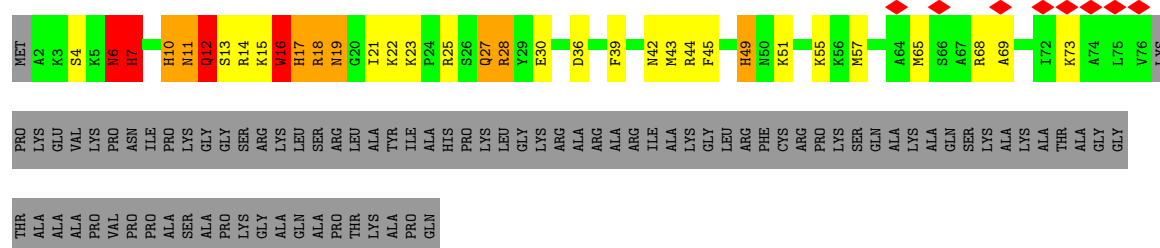
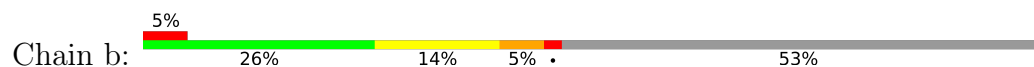




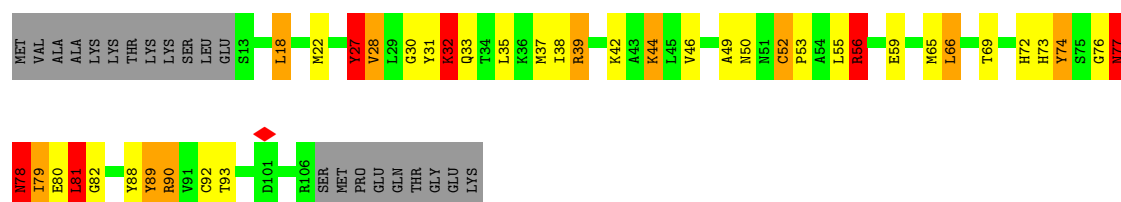
• Molecule 29: Ribosomal protein uL15



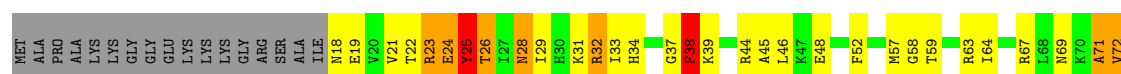
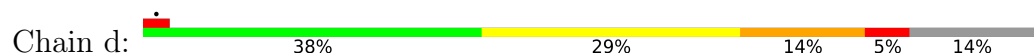
• Molecule 30: Ribosomal protein eL29

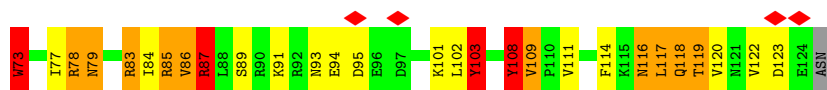


• Molecule 31: Ribosomal protein eL30

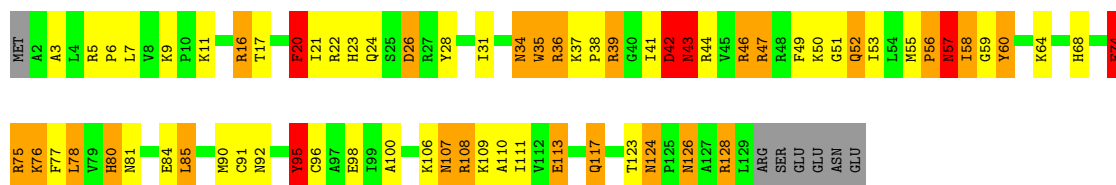


• Molecule 32: Ribosomal protein eL31

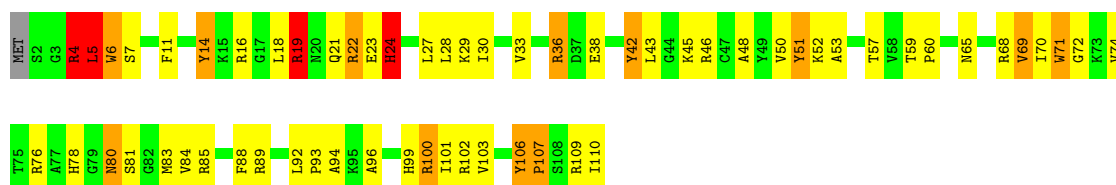




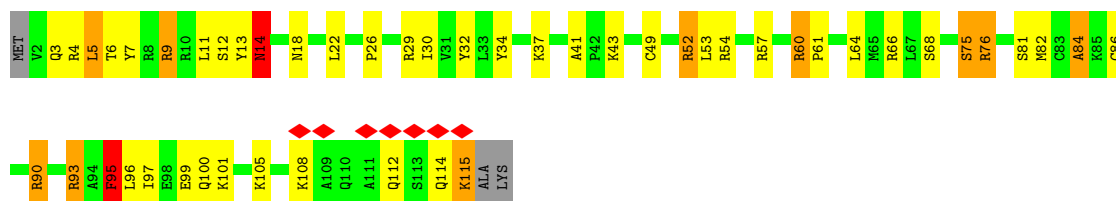
• Molecule 33: Ribosomal protein eL32



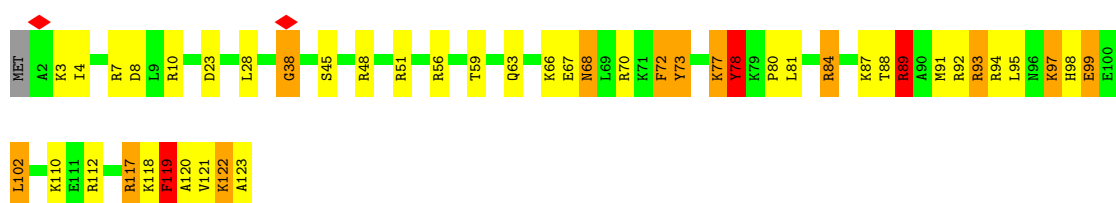
• Molecule 34: Ribosomal protein eL33



• Molecule 35: Ribosomal protein eL34

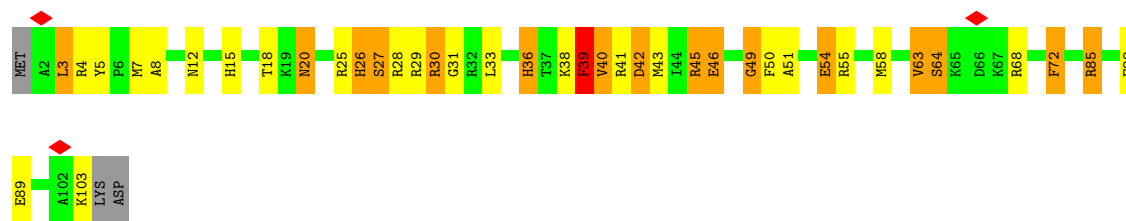


• Molecule 36: Ribosomal protein uL29

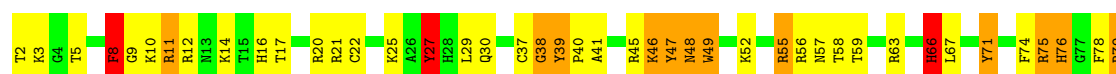


• Molecule 37: Ribosomal protein eL36





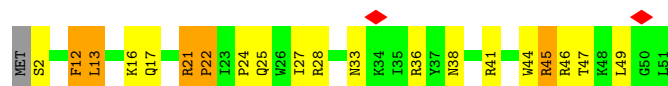
• Molecule 38: Ribosomal protein eL37



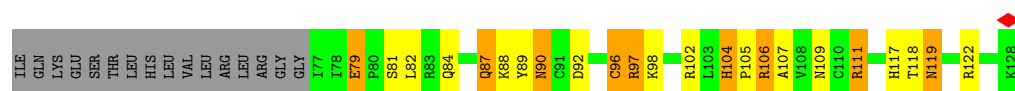
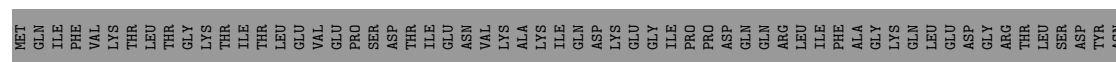
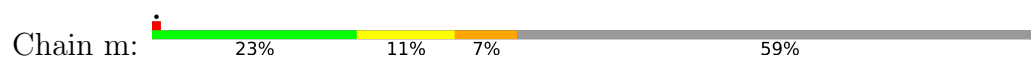
• Molecule 39: Ribosomal protein eL38



• Molecule 40: Ribosomal protein eL39



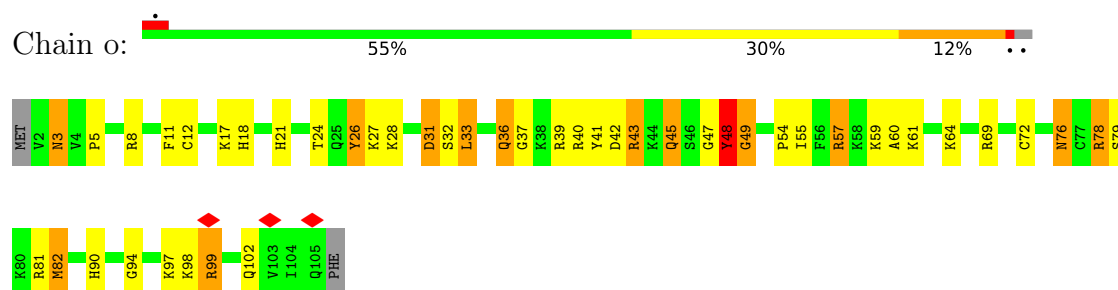
• Molecule 41: Ribosomal protein eL40



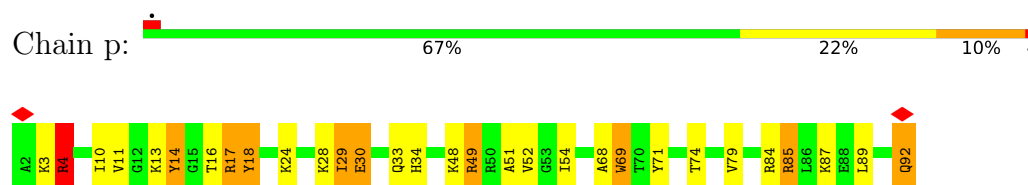
• Molecule 42: Ribosomal protein eL41



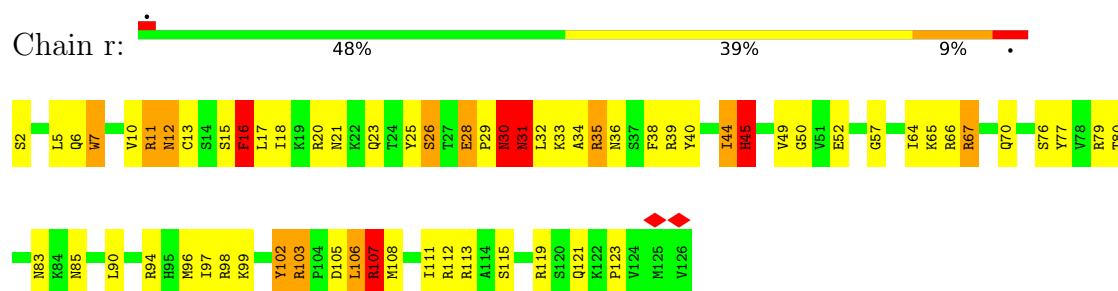
- Molecule 43: Ribosomal protein eL42



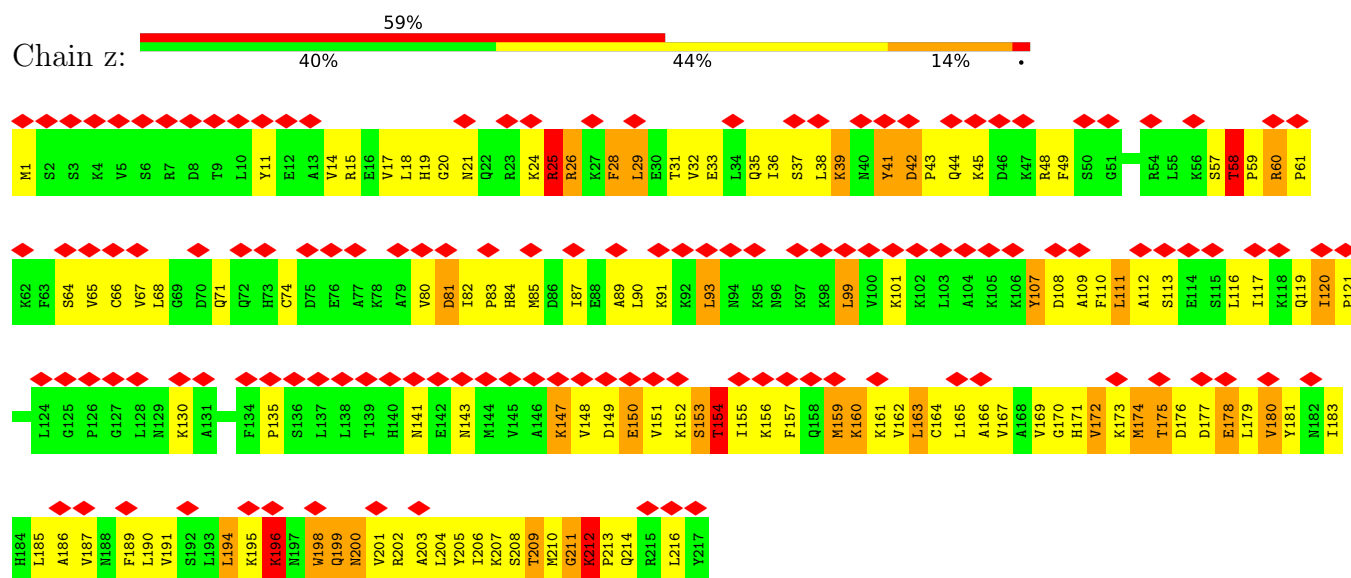
- Molecule 44: Ribosomal protein eL43



- Molecule 45: Ribosomal protein eL28

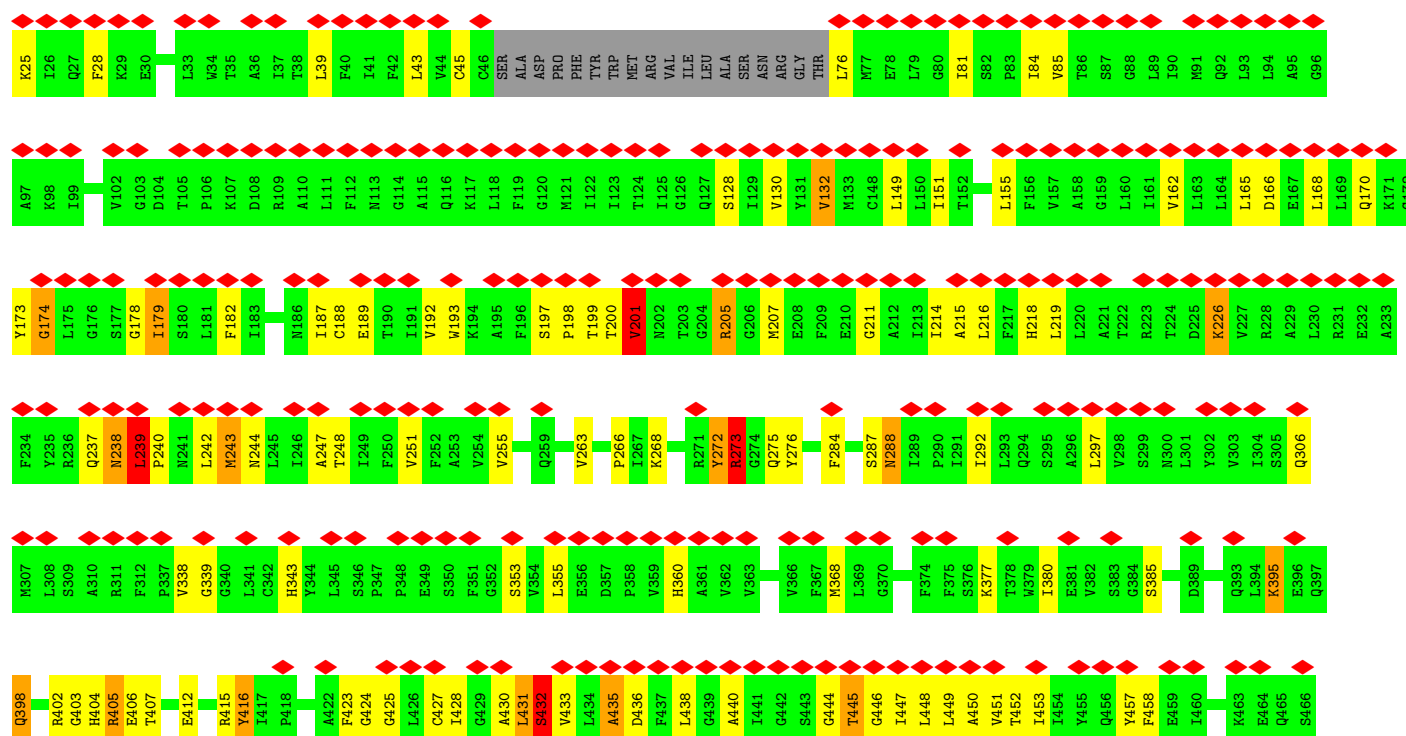


- Molecule 46: Ribosomal protein uL1



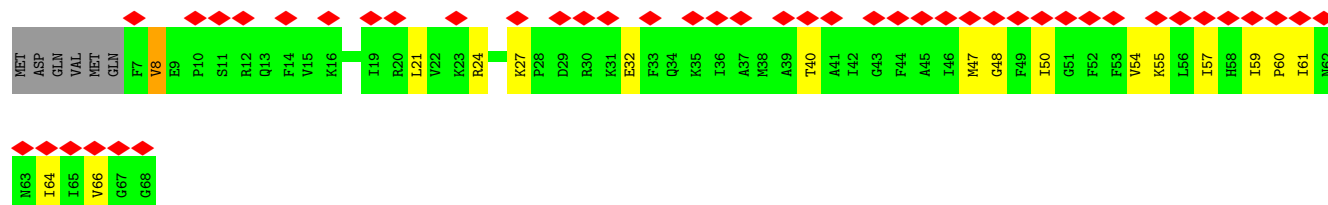
- Molecule 47: Sec61 alpha subunit

Chain 1: 

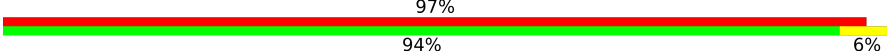


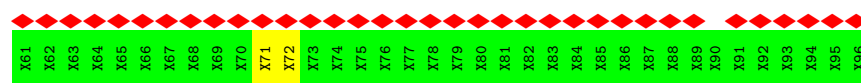
• Molecule 48: Sec61 gamma subunit

Chain 2: 



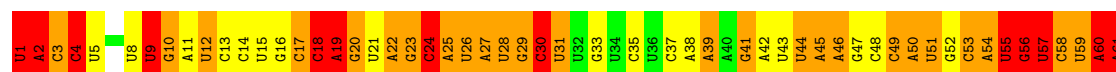
• Molecule 49: Sec61 beta subunit

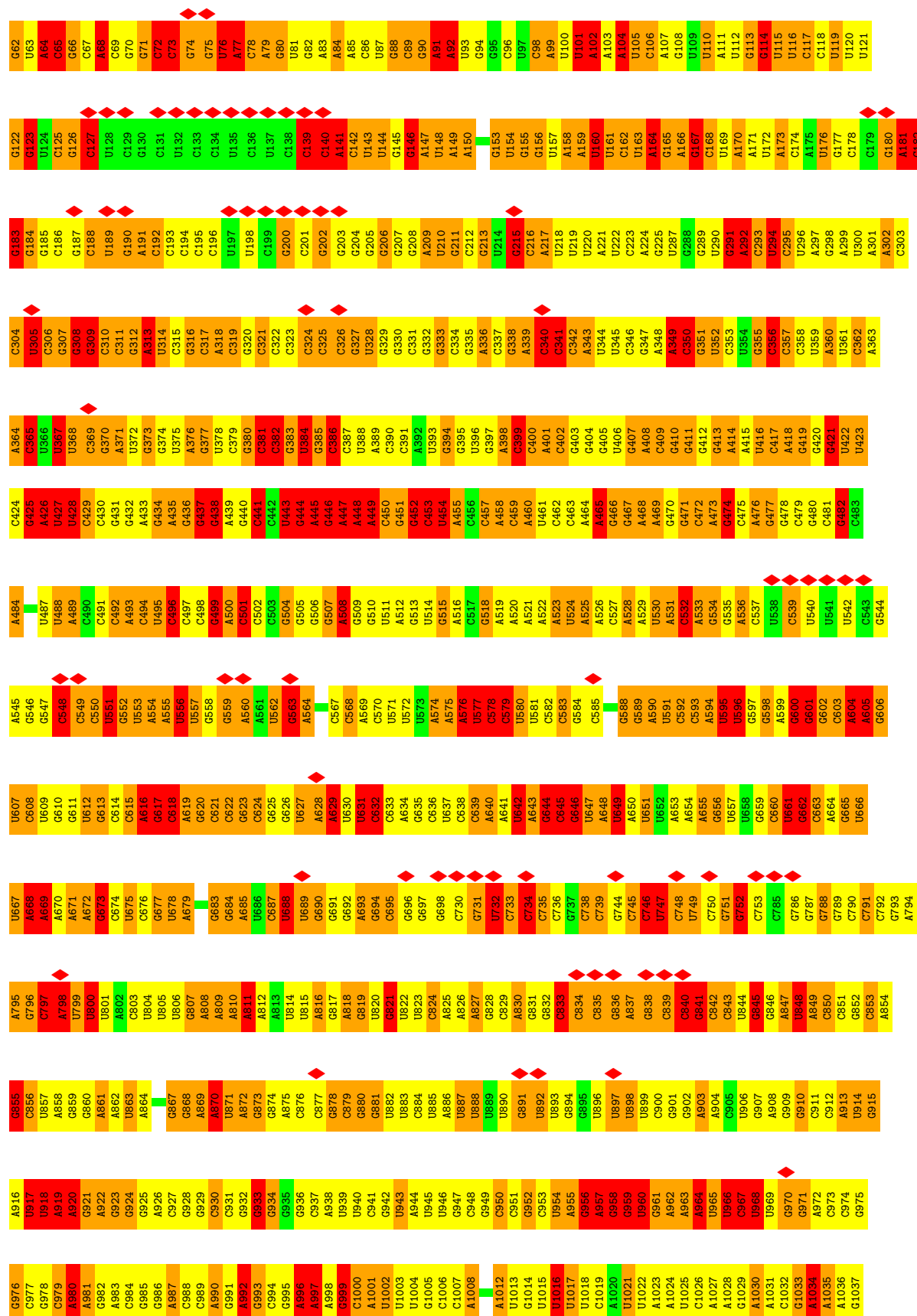
Chain 3: 



• Molecule 50: 18S ribosomal RNA

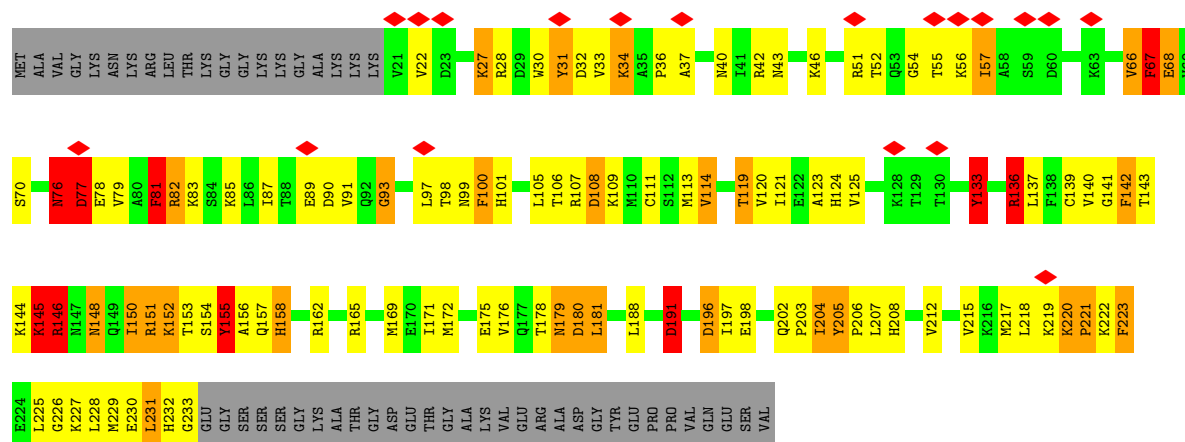
Chain S2: 



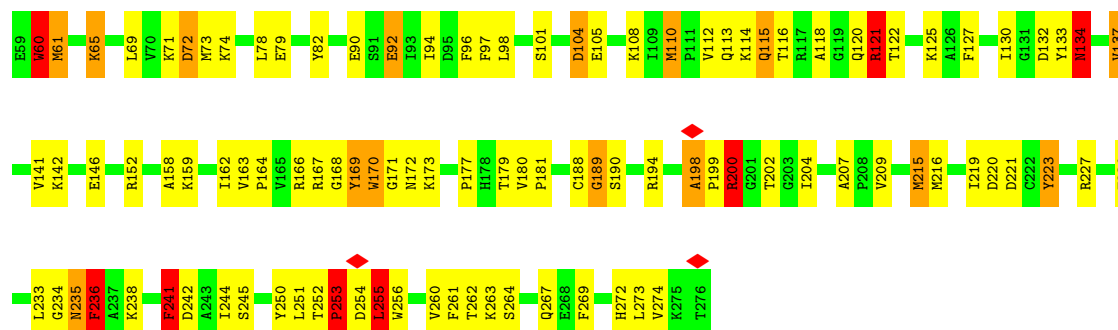


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U1827	G1707	C1644	U1584	G1524	C1342	G1281	G1221	U1160	A1100	G1040
C1828	U1707	C1645	U1585	C1525	U1343	U1282	G1222	U1161	U1101	G1041
G1829	C1708	C1646	U1586	G1526	A1344	C1283	A1223	C1162	G1102	A1042
U1830	G1709	A1647	G1587	G1527	G1345	U1284	G1224	C1163	C1103	G1043
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G1855	G1734	U1673	G1612	G1552	U1370	C1308	C1249	A1188	C1127	U1069
C1856	A1735	C1674	G1613	C1553	U1371	C1309	A1250	A1189	C1128	A1070
U1857	G1736	A1675	A1614	C1554	U1372	U1310	A1251	A1190	G1130	G1071
G1858	U1676	G1676	U1615	C1554	C1373	C1311	C1252	C1191	G1131	U1072
A1859	U1677	U1677	U1616	U1555	C1374	C1312	A1253	U1192	G1132	C1073
U1860	C1738	U1678	G1617	U1556	A1375	A1313	C1254	U1193	A1133	C1074
G1861	G1739	A1679	G1618	C1557	U1376	U1314	G1255	A1194	G1134	C1075
U1797	C1740	U1680	A1619	C1557	U1377	U1315	G1256	A1195	C1135	G1076
G1798	U1741	U1681	A1620	C1558	A1378	C1316	G1257	G1198	U1136	A1077
U1799	G1742	C1682	U1621	U1559	A1379	C1317	A1258	U1199	U1137	C1078
A1863	G1743	C1683	C1622	A1561	C1380	G1318	A1259	A1200	C1138	C1079
C1865	A1744	C1684	A1623	C1562	G1381	U1319	A1260	U1201	G1139	U1081
U1866	U1745	U1685	U1624	G1563	A1382	G1321	C1261	U1202	G1140	A1082
U1867	U1746	C1686	U1625	C1564	U1383	G1322	G1262	G1203	G1141	A1083
A1868	G1747	C1687	C1626	G1565	C1384	U1323	C1263	A1204	A1142	A1084
G1869	G1748	C1688	C1627	U1566	G1385	G1324	A1265	C1205	A1143	C1085
U1803	U1749	C1689	C1628	G1567	A1387	G1325	C1266	G1207	A1144	G1086
G1805	A1746	U1690	C1629	A1568	U1388	U1326	G1267	A1208	A1145	A1087
A1806	C1747	U1691	U1630	C1569	A1389	G1327	C1268	A1209	C1146	U1088
U1807	U1751	U1692	A1631	G1570	C1391	G1330	G1269	A1210	A1147	G1089
A1808	C1752	U1693	G1632	G1571	U1392	C1331	G1270	G1211	A1148	C1090
U1809	G1753	C1694	A1633	C1572	G1393	A1332	C1271	G1212	A1149	G1091
U1810	U1754	A1695	A1634	G1573	C1394	C1333	C1272	G1213	G1151	C1092
C1811	C1755	C1696	C1635	C1574	G1395	U1334	G1273	A1214	U1152	A1093
A1812	G1756	U1697	G1636	G1575	A1396	G1335	G1274	C1215	C1153	C1094
G1813	U1757	C1698	A1637	G1576	U1397	C1336	G1275	C1216	U1154	U1095
U1814	G1758	C1699	G1638	G1577	C1398	C1337	A1276	A1217	G1155	G1096
A1815	G1759	U1700	G1639	U1578	G1399	C1338	C1277	C1218	U1156	G1097
G1816	U1761	C1701	A1640	A1579	U1400	U1339	A1278			
U1817	C1762	G1702	A1641	C1581						
A1818	G1763									
U1819										
G1820										
U1821										
A1822										
A1823										
A1824										

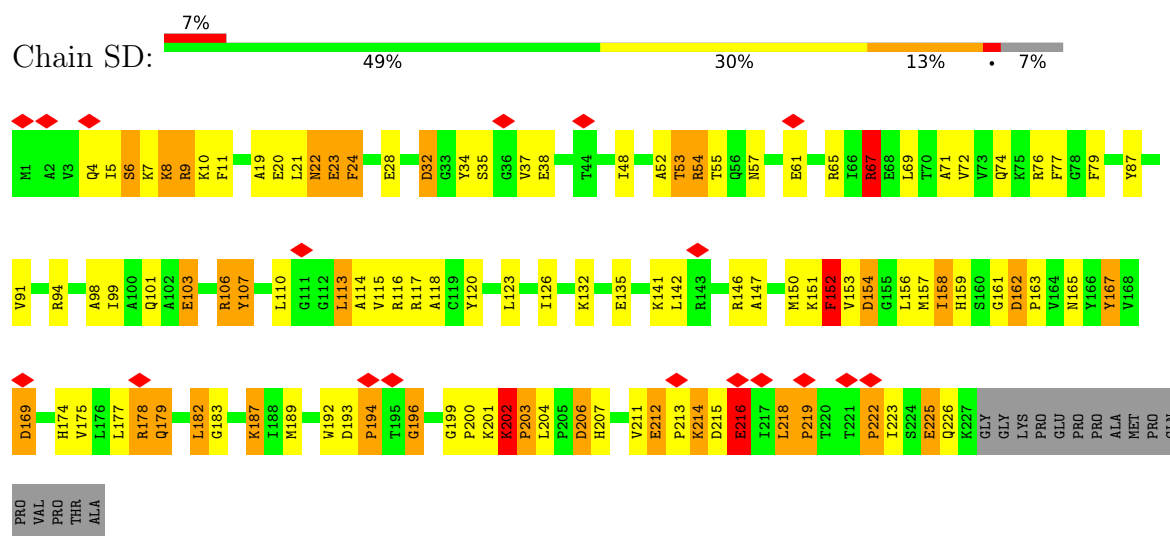
Chain SA: 33% 28% 8% 29%



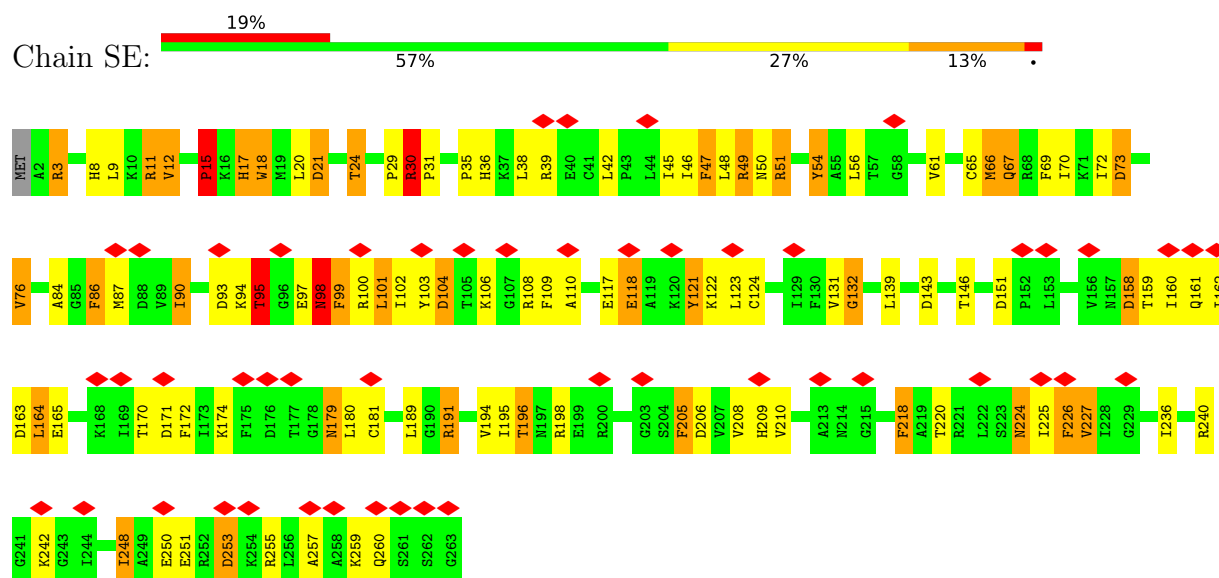
Chain SC: 52% 37% 7% 4%



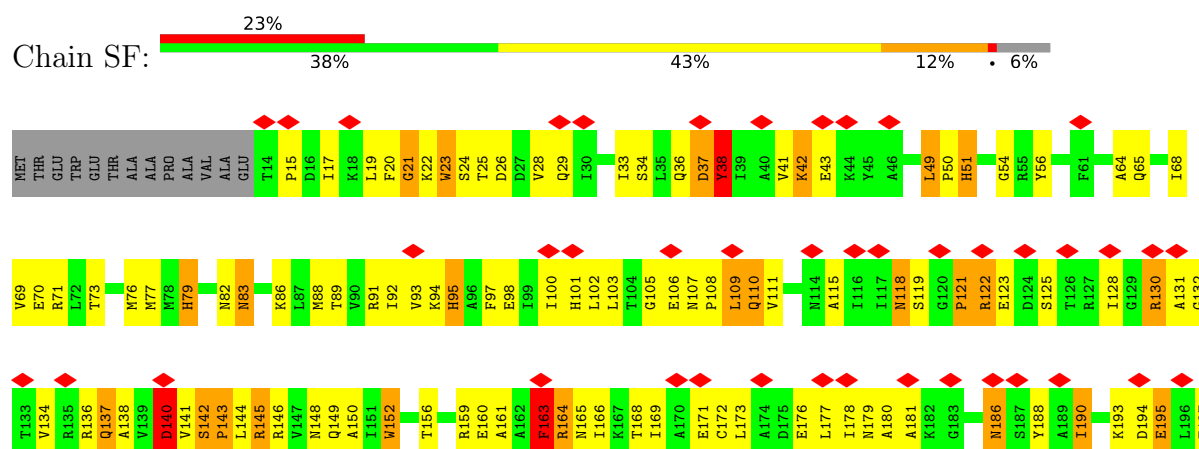
- Molecule 54: Ribosomal protein uS3

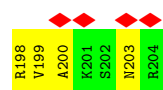


- Molecule 55: Ribosomal protein eS4

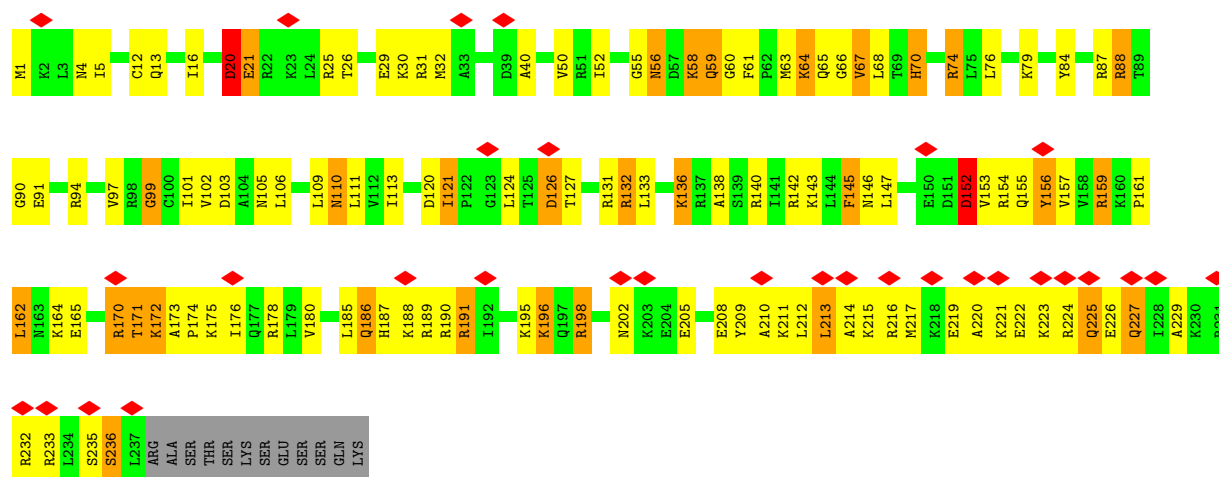


- Molecule 56: Ribosomal protein uS7

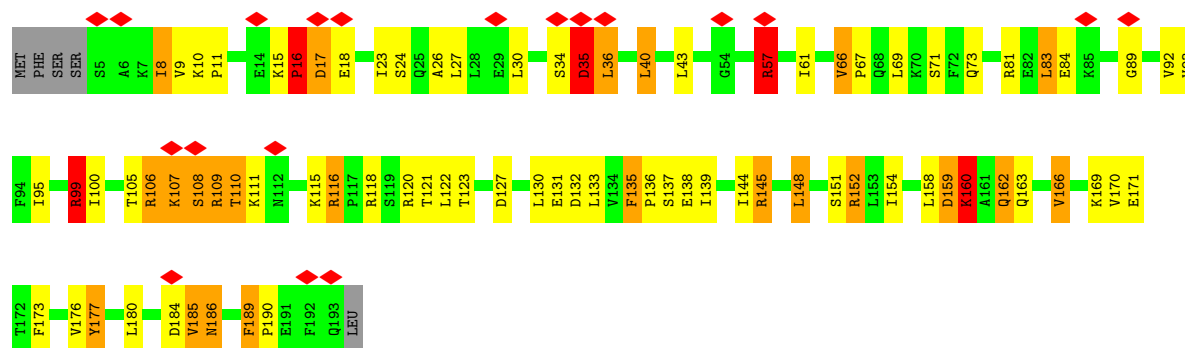




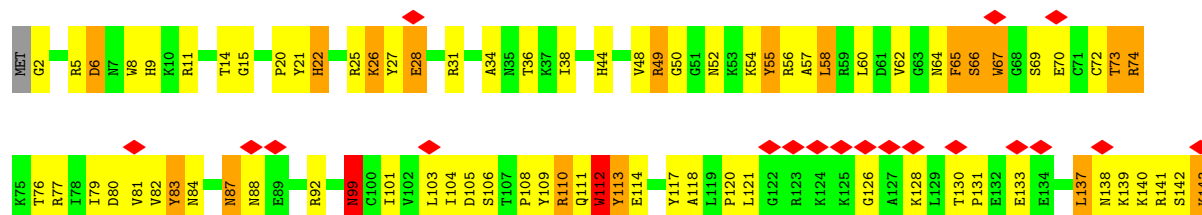
• Molecule 57: Ribosomal protein eS6

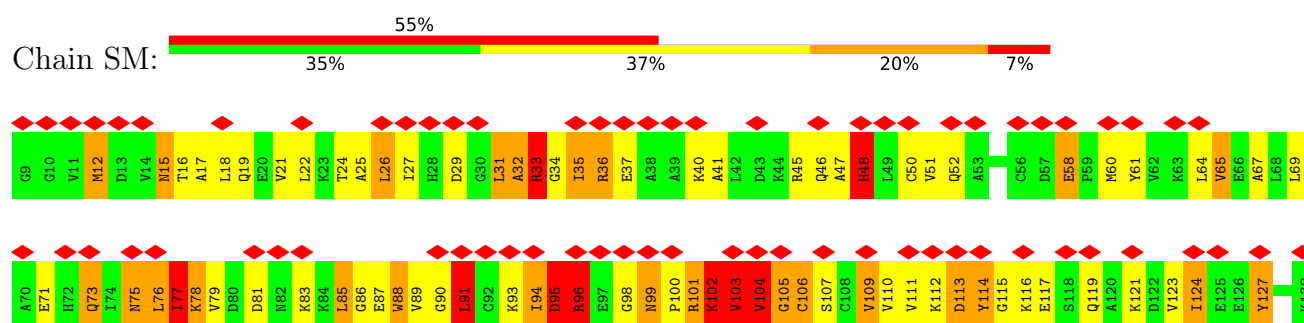


• Molecule 58: Ribosomal protein eS7

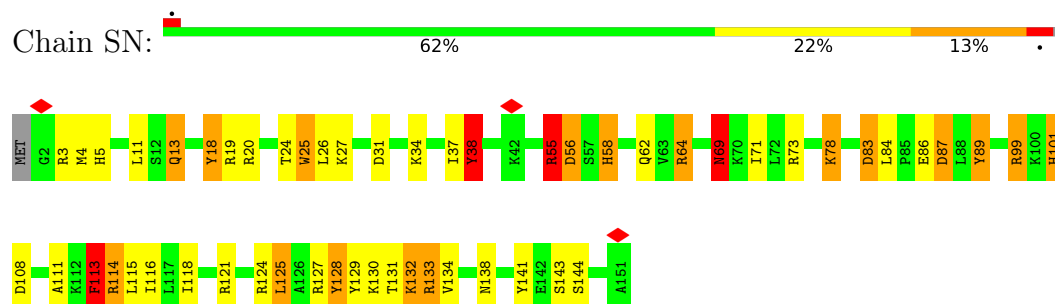


• Molecule 59: Ribosomal protein eS8

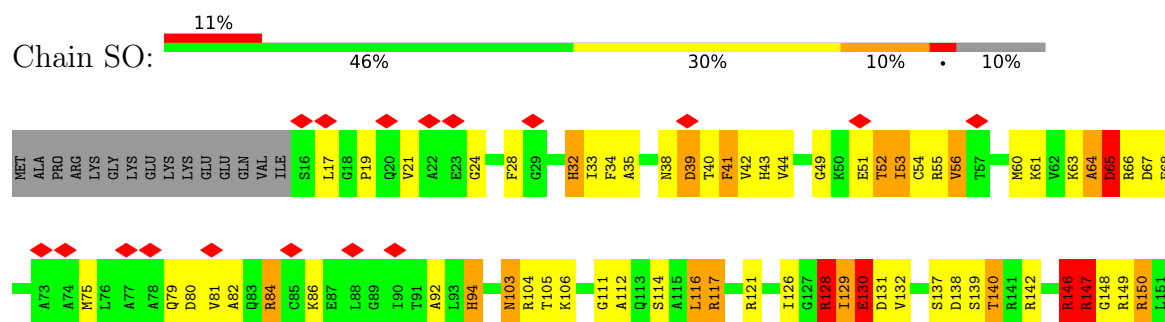




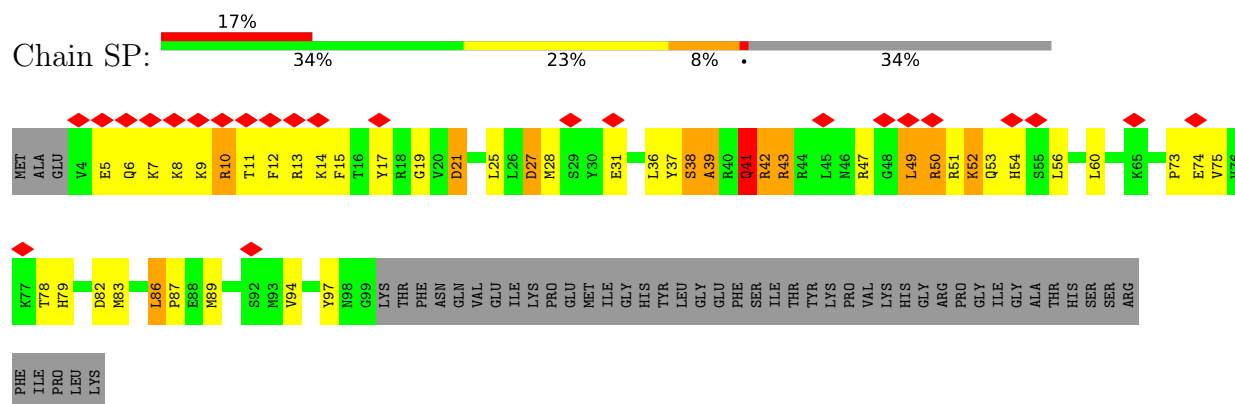
• Molecule 64: Ribosomal protein uS15



• Molecule 65: Ribosomal protein uS11

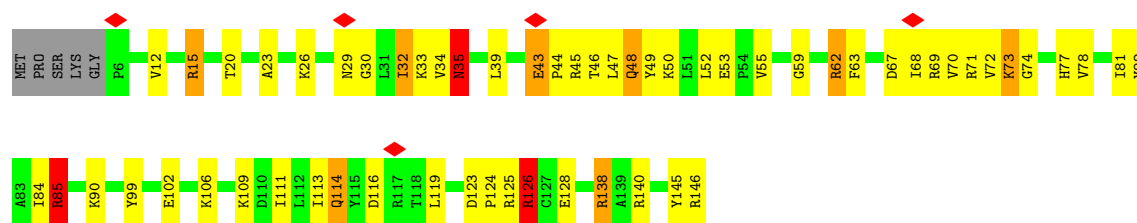


• Molecule 66: Ribosomal protein uS19

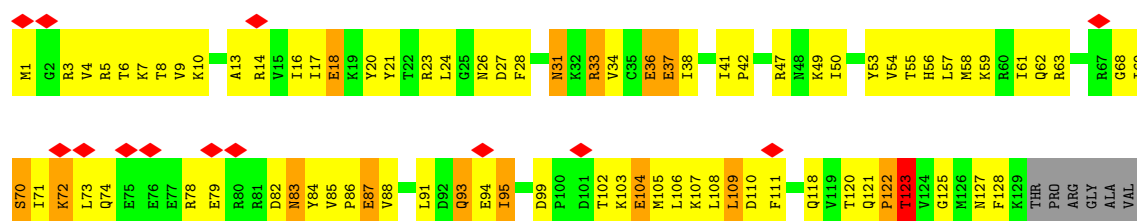


• Molecule 67: Ribosomal protein uS9

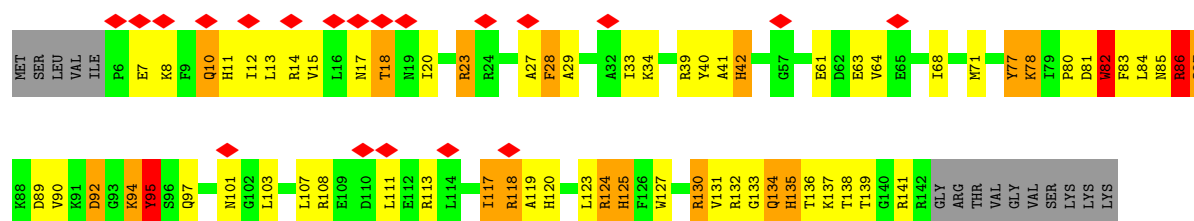




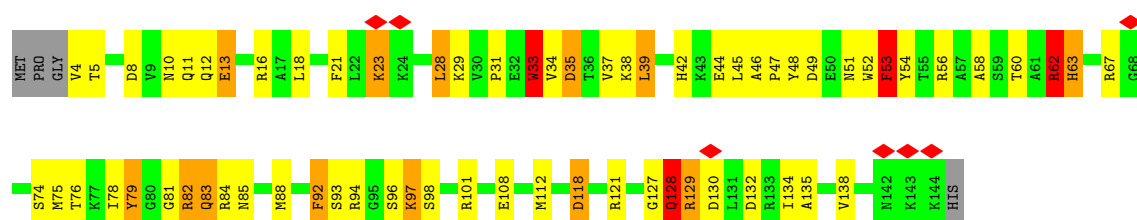
• Molecule 68: Ribosomal protein eS17



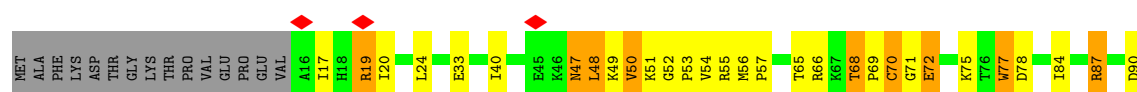
• Molecule 69: Ribosomal protein uS13

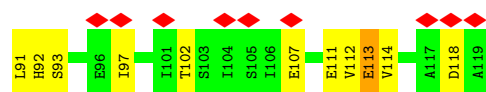


• Molecule 70: Ribosomal protein eS19

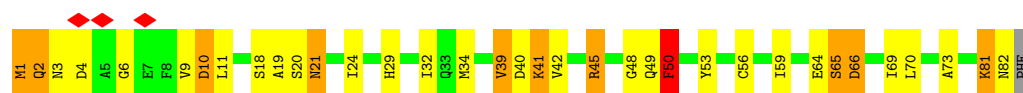


• Molecule 71: Ribosomal protein uS10





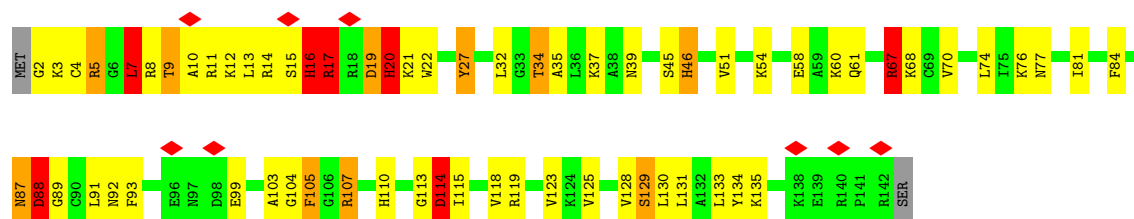
- Molecule 72: Ribosomal protein eS21



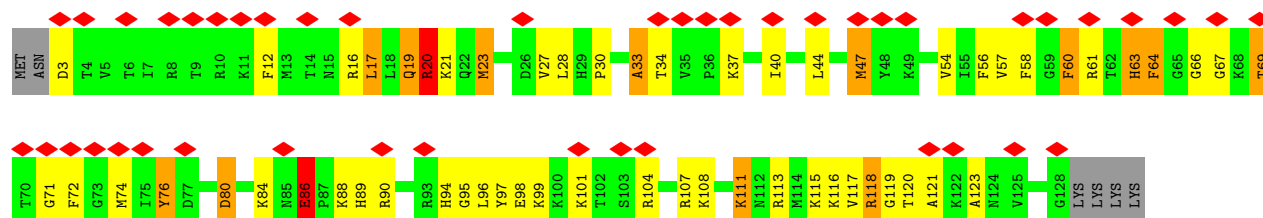
- Molecule 73: Ribosomal protein uS8



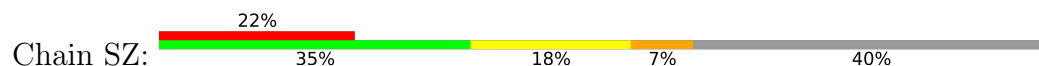
- Molecule 74: Ribosomal protein uS12



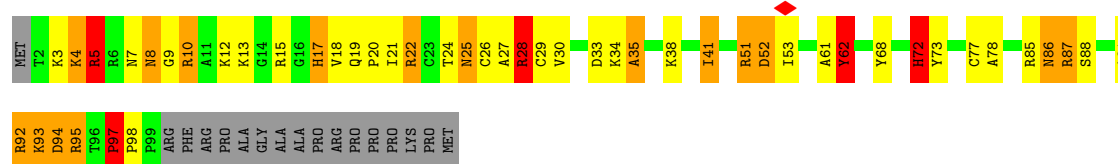
- Molecule 75: Ribosomal protein eS24



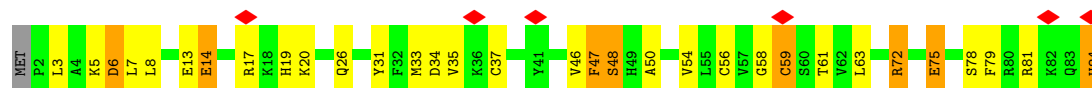
- Molecule 76: Ribosomal protein es25



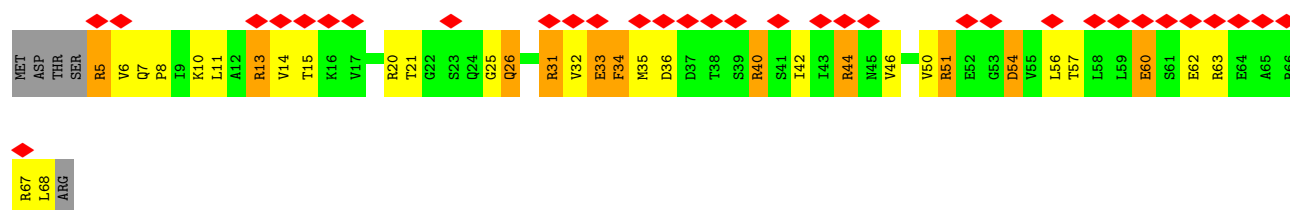
- Molecule 77: Ribosomal protein eS26



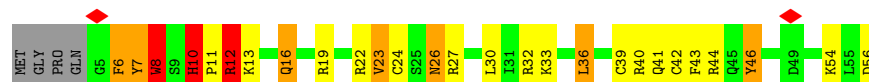
- Molecule 78: Ribosomal protein eS27



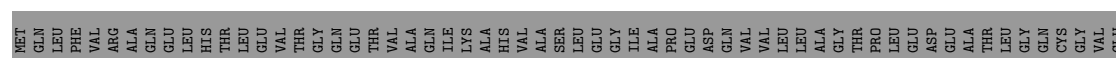
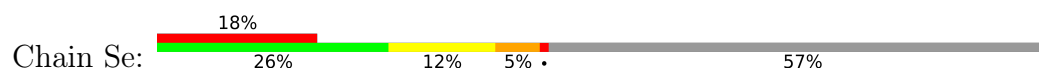
- Molecule 79: Ribosomal protein eS28

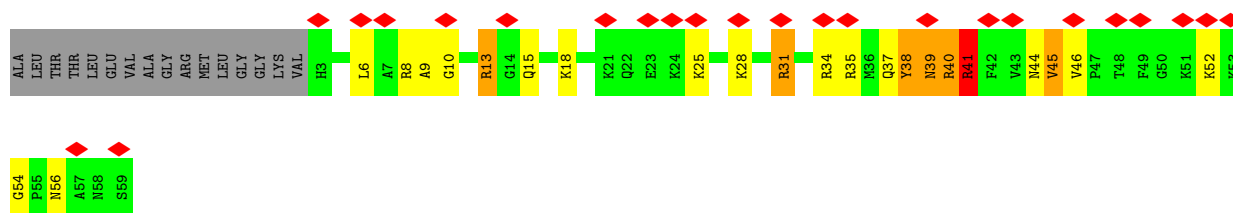


- Molecule 80: Ribosomal protein uS14

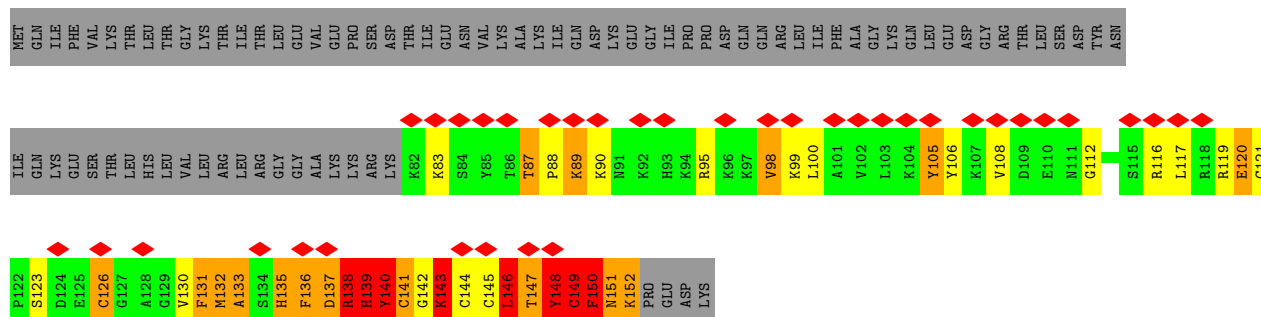
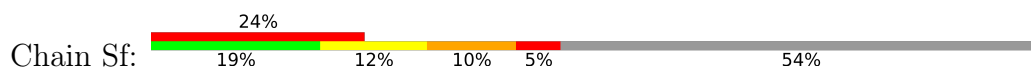


- Molecule 81: Ribosomal protein eS30

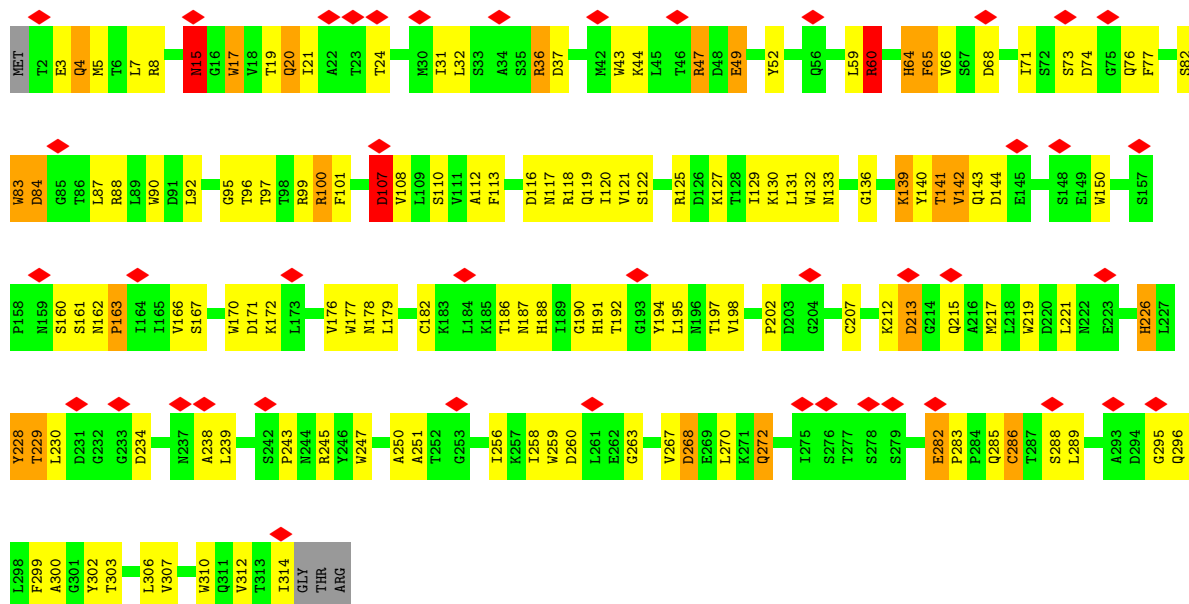




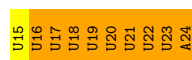
• Molecule 82: Ribosomal protein eS31



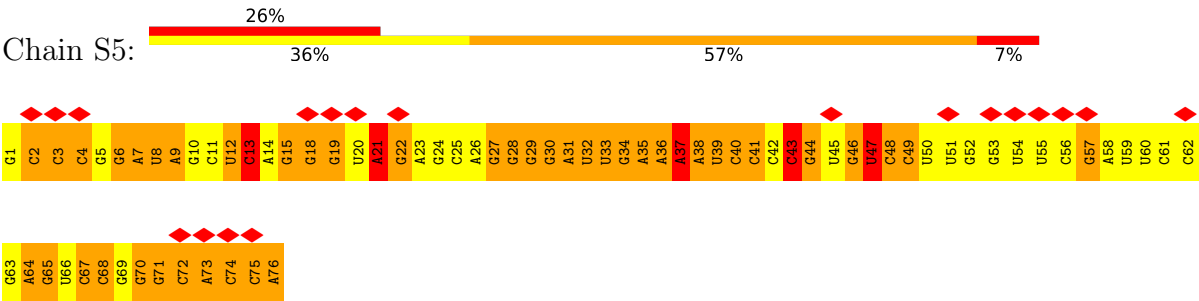
• Molecule 83: Ribosomal protein RACK1



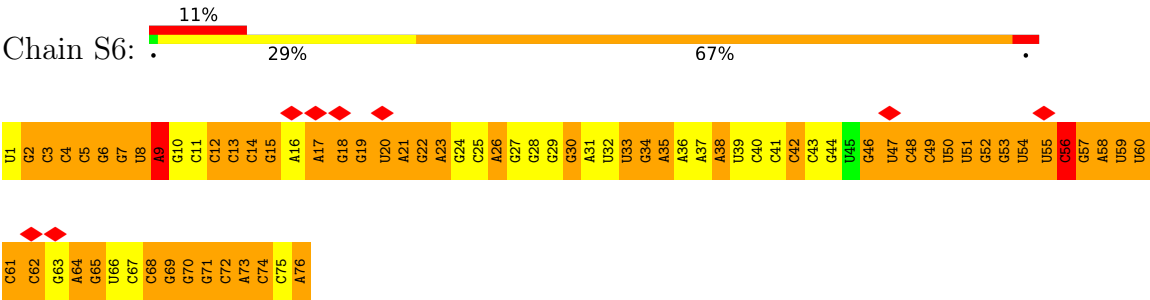
• Molecule 84: Messenger RNA



• Molecule 85: A/P tRNA



• Molecule 86: P/E tRNA



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	14723	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)	2500	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	104478	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.675	Depositor
Minimum map value	-0.394	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.022	Depositor
Recommended contour level	0.065	Depositor
Map size ($\text{\AA}$)	562.8, 562.8, 562.8	wwPDB
Map dimensions	420, 420, 420	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.3399999, 1.3399999, 1.3399999	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	5	0.63	26/89191 (0.0%)	1.27	1301/139124 (0.9%)
2	7	0.51	1/2858 (0.0%)	1.11	16/4455 (0.4%)
3	8	0.62	0/3701	1.30	63/5766 (1.1%)
4	A	1.06	8/1906 (0.4%)	1.40	32/2556 (1.3%)
5	B	1.02	11/3214 (0.3%)	1.30	32/4308 (0.7%)
6	C	0.95	3/2973 (0.1%)	1.24	19/3990 (0.5%)
7	D	0.95	9/2426 (0.4%)	1.39	30/3252 (0.9%)
8	E	0.99	7/1941 (0.4%)	1.39	19/2601 (0.7%)
9	F	1.03	2/1905 (0.1%)	1.51	36/2539 (1.4%)
10	G	0.90	4/1966 (0.2%)	1.25	15/2645 (0.6%)
11	H	0.90	2/1537 (0.1%)	1.29	11/2066 (0.5%)
12	I	0.84	2/1753 (0.1%)	1.28	21/2343 (0.9%)
13	J	0.77	1/1382 (0.1%)	1.10	8/1849 (0.4%)
14	L	0.93	3/1734 (0.2%)	1.26	15/2318 (0.6%)
15	M	0.92	2/1152 (0.2%)	1.27	12/1539 (0.8%)
16	N	1.01	5/1746 (0.3%)	1.50	30/2338 (1.3%)
17	O	0.93	2/1684 (0.1%)	1.30	14/2251 (0.6%)
18	P	0.96	1/1268 (0.1%)	1.21	8/1701 (0.5%)
19	Q	0.89	1/1530 (0.1%)	1.41	24/2041 (1.2%)
20	R	0.97	7/1524 (0.5%)	1.42	22/2013 (1.1%)
21	S	1.20	9/1493 (0.6%)	1.45	28/2002 (1.4%)
22	T	0.88	1/1326 (0.1%)	1.21	12/1770 (0.7%)
23	U	0.83	3/822 (0.4%)	1.12	3/1103 (0.3%)
24	V	1.08	5/993 (0.5%)	1.26	6/1332 (0.5%)
25	W	0.91	1/541 (0.2%)	1.28	0/720
26	X	0.86	3/993 (0.3%)	1.26	7/1334 (0.5%)
27	Y	0.94	3/1132 (0.3%)	1.32	15/1504 (1.0%)
28	Z	0.84	0/1130	1.21	6/1507 (0.4%)
29	a	1.20	7/1192 (0.6%)	1.57	20/1591 (1.3%)
30	b	0.99	3/620 (0.5%)	1.45	11/819 (1.3%)
31	c	0.94	3/742 (0.4%)	1.31	9/996 (0.9%)
32	d	1.08	6/903 (0.7%)	1.46	14/1216 (1.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	e	1.05	5/1071 (0.5%)	1.39	20/1429 (1.4%)
34	f	1.16	4/895 (0.4%)	1.37	16/1198 (1.3%)
35	g	0.87	0/916	1.23	8/1220 (0.7%)
36	h	0.82	2/1023 (0.2%)	1.26	9/1350 (0.7%)
37	i	0.85	2/843 (0.2%)	1.29	9/1115 (0.8%)
38	j	1.13	4/721 (0.6%)	1.57	16/953 (1.7%)
39	k	0.74	1/575 (0.2%)	1.16	3/761 (0.4%)
40	l	0.81	0/454	1.15	4/599 (0.7%)
41	m	0.77	0/435	1.14	1/575 (0.2%)
42	n	0.63	0/223	1.10	0/284
43	o	0.83	1/864 (0.1%)	1.34	8/1140 (0.7%)
44	p	0.80	0/718	1.22	7/953 (0.7%)
45	r	0.89	1/1017 (0.1%)	1.32	13/1365 (1.0%)
46	z	0.70	1/1768 (0.1%)	0.97	3/2368 (0.1%)
47	1	0.84	6/2969 (0.2%)	1.08	12/4014 (0.3%)
48	2	0.69	0/504	0.96	0/673
50	S2	0.62	15/41243 (0.0%)	1.26	589/64257 (0.9%)
51	SA	1.05	7/1679 (0.4%)	1.25	14/2283 (0.6%)
52	SB	2.12	7/1752 (0.4%)	1.90	24/2347 (1.0%)
53	SC	1.17	9/1726 (0.5%)	1.29	16/2332 (0.7%)
54	SD	1.18	6/1793 (0.3%)	1.18	11/2414 (0.5%)
55	SE	0.92	8/2118 (0.4%)	1.13	9/2849 (0.3%)
56	SF	0.96	2/1531 (0.1%)	1.26	10/2059 (0.5%)
57	SG	0.96	8/1946 (0.4%)	1.08	5/2590 (0.2%)
58	SH	0.91	2/1544 (0.1%)	1.18	9/2068 (0.4%)
59	SI	1.06	7/1715 (0.4%)	1.23	11/2287 (0.5%)
60	SJ	1.15	11/1550 (0.7%)	1.33	13/2069 (0.6%)
61	SK	0.93	1/851 (0.1%)	1.14	4/1147 (0.3%)
62	SL	1.03	5/1298 (0.4%)	1.30	19/1735 (1.1%)
63	SM	1.69	5/970 (0.5%)	1.38	9/1300 (0.7%)
64	SN	1.05	6/1232 (0.5%)	1.33	9/1656 (0.5%)
65	SO	1.19	5/1029 (0.5%)	1.32	6/1380 (0.4%)
66	SP	1.74	7/816 (0.9%)	1.22	5/1084 (0.5%)
67	SQ	0.87	3/1142 (0.3%)	1.11	3/1528 (0.2%)
68	SR	0.94	6/1060 (0.6%)	1.32	6/1421 (0.4%)
69	SS	0.91	2/1157 (0.2%)	1.29	12/1548 (0.8%)
70	ST	0.83	1/1119 (0.1%)	1.27	5/1499 (0.3%)
71	SU	0.95	3/828 (0.4%)	1.09	4/1112 (0.4%)
72	SV	0.91	0/631	1.10	2/844 (0.2%)
73	SW	1.32	4/1051 (0.4%)	1.28	7/1406 (0.5%)
74	SX	1.18	6/1118 (0.5%)	1.24	11/1493 (0.7%)
75	SY	1.25	5/1040 (0.5%)	1.22	10/1382 (0.7%)
76	SZ	0.85	0/604	1.11	4/810 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
77	Sa	1.06	2/794 (0.3%)	1.26	5/1065 (0.5%)
78	Sb	0.79	0/665	0.99	0/891
79	Sc	0.86	0/508	1.12	2/680 (0.3%)
80	Sd	1.01	3/445 (0.7%)	1.17	1/589 (0.2%)
81	Se	0.86	0/458	1.17	4/602 (0.7%)
82	Sf	1.45	9/593 (1.5%)	1.72	15/786 (1.9%)
83	Sg	0.93	11/2493 (0.4%)	1.02	10/3394 (0.3%)
84	S4	0.36	0/219	0.63	0/337
85	S5	1.03	1/1762 (0.1%)	0.92	8/2739 (0.3%)
86	S6	0.42	1/1812 (0.1%)	0.92	6/2823 (0.2%)
All	All	0.82	336/238566 (0.1%)	1.27	2866/350392 (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	5	1	157
2	7	0	2
3	8	0	11
4	A	0	6
5	B	0	13
6	C	0	5
7	D	0	8
8	E	0	12
9	F	0	5
10	G	0	3
11	H	0	3
12	I	0	5
13	J	0	2
14	L	0	5
15	M	0	4
16	N	0	10
17	O	0	3
18	P	0	1
19	Q	0	5
20	R	0	6
21	S	0	11
22	T	0	2
23	U	0	2
24	V	0	3

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Mol	Chain	#Chirality outliers	#Planarity outliers
25	W	0	1
26	X	0	1
27	Y	0	4
29	a	0	9
30	b	0	1
31	c	0	2
32	d	0	4
33	e	0	4
34	f	0	2
35	g	0	1
36	h	0	3
37	i	0	3
38	j	0	4
39	k	0	1
43	o	0	6
44	p	0	1
45	r	0	5
47	l	0	3
50	S2	1	62
51	SA	0	2
52	SB	0	5
53	SC	0	4
54	SD	0	2
55	SE	0	2
56	SF	0	1
58	SH	0	1
59	SI	0	6
60	SJ	0	2
61	SK	0	1
62	SL	0	4
63	SM	0	1
64	SN	0	1
65	SO	0	1
66	SP	0	1
67	SQ	0	1
68	SR	0	2
71	SU	0	1
72	SV	0	2
73	SW	0	2
74	SX	0	2
75	SY	0	1
76	SZ	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
77	Sa	0	1
78	Sb	0	1
80	Sd	0	2
82	Sf	0	4
All	All	2	455

All (336) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
52	SB	145	LYS	C-N	-73.16	0.31	1.33
1	5	2037	C	O3'-P	-54.60	0.79	1.61
85	S5	47	U	O3'-P	-39.49	1.01	1.61
63	SM	58	GLU	CD-OE1	37.52	1.96	1.25
66	SP	21	ASP	CG-OD1	37.40	1.96	1.25
50	S2	1373	C	O3'-P	34.46	2.12	1.61
1	5	1823	G	O3'-P	33.16	2.10	1.61
47	1	272	TYR	C-N	28.79	1.81	1.33
1	5	4116	C	O3'-P	-27.85	1.19	1.61
1	5	1566	C	O3'-P	27.68	2.02	1.61
52	SB	221	PRO	C-N	27.36	1.68	1.33
54	SD	216	GLU	CD-OE1	25.51	1.73	1.25
75	SY	86	GLU	CD-OE2	23.13	1.69	1.25
73	SW	117	ARG	NE-CZ	19.49	1.54	1.33
21	S	81	TRP	CA-CB	14.95	1.71	1.53
58	SH	132	ASP	CG-OD2	14.23	1.52	1.25
29	a	109	TYR	CA-CB	14.15	1.72	1.53
8	E	278	TYR	CA-CB	14.01	1.72	1.53
59	SI	111	GLN	CD-NE2	13.70	1.62	1.33
75	SY	86	GLU	CG-CD	13.51	1.85	1.52
24	V	97	TYR	CA-CB	12.44	1.72	1.53
57	SG	205	GLU	CD-OE1	12.39	1.48	1.25
74	SX	39	ASN	CG-ND2	11.96	1.58	1.33
74	SX	88	ASP	CG-OD2	11.60	1.47	1.25
65	SO	104	ARG	CZ-NH1	11.56	1.49	1.32
54	SD	162	ASP	CG-OD1	11.43	1.47	1.25
53	SC	220	ASP	CG-OD2	11.38	1.47	1.25
59	SI	99	ASN	CG-OD1	11.16	1.44	1.23
5	B	119	TYR	CA-CB	10.75	1.66	1.52
60	SJ	64	ASP	CG-OD2	10.63	1.45	1.25
51	SA	151	ASP	CB-CG	10.57	1.78	1.52
10	G	54	PHE	CA-CB	10.50	1.68	1.53
65	SO	130	GLU	CD-OE1	10.25	1.44	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
75	SY	118	ARG	CZ-NH1	10.09	1.46	1.32
60	SJ	158	ASP	CG-OD2	9.99	1.44	1.25
32	d	25	TYR	CA-CB	9.89	1.66	1.52
34	f	6	TRP	CA-CB	9.88	1.70	1.53
83	Sg	60	ARG	CZ-NH1	9.73	1.46	1.32
73	SW	120	HIS	CE1-NE2	9.65	1.42	1.32
21	S	10	TYR	CA-CB	9.64	1.67	1.52
10	G	109	GLU	CD-OE2	9.49	1.43	1.25
82	Sf	151	ASN	CA-C	9.45	1.67	1.53
60	SJ	59	GLU	CG-CD	9.41	1.75	1.52
12	I	171	TRP	CA-CB	9.34	1.64	1.52
11	H	66	GLU	CD-OE1	9.31	1.43	1.25
18	P	139	TYR	CA-CB	9.15	1.66	1.52
34	f	6	TRP	CB-CG	-9.14	1.22	1.50
54	SD	162	ASP	CG-OD2	9.14	1.42	1.25
60	SJ	104	ASP	CG-OD2	9.08	1.42	1.25
5	B	274	TYR	CA-CB	8.96	1.68	1.53
55	SE	104	ASP	CG-OD2	8.88	1.42	1.25
47	1	273	ARG	C-N	8.79	1.46	1.33
32	d	87	ARG	CA-CB	8.68	1.64	1.52
60	SJ	158	ASP	CG-OD1	8.65	1.41	1.25
53	SC	121	ARG	CZ-NH1	8.64	1.44	1.32
83	Sg	107	ASP	CB-CG	8.60	1.73	1.52
5	B	118	PHE	CA-C	8.58	1.59	1.52
57	SG	20	ASP	CG-OD2	8.56	1.41	1.25
53	SC	236	PHE	CA-CB	8.53	1.66	1.53
55	SE	251	GLU	CD-OE1	8.51	1.41	1.25
66	SP	27	ASP	CG-OD2	8.51	1.41	1.25
50	S2	1433	C	O3'-P	8.48	1.73	1.61
56	SF	130	ARG	CZ-NH1	8.45	1.44	1.32
82	Sf	149	CYS	N-CA	8.40	1.56	1.46
60	SJ	48	PHE	CA-CB	8.39	1.66	1.53
75	SY	80	ASP	CB-CG	8.25	1.72	1.52
51	SA	118	GLU	CG-CD	8.23	1.72	1.52
51	SA	33	GLN	CD-NE2	8.22	1.50	1.33
62	SL	100	ASN	CB-CG	8.20	1.72	1.52
20	R	132	PHE	CA-CB	8.18	1.65	1.53
7	D	44	TYR	CA-CB	8.16	1.67	1.53
74	SX	88	ASP	CG-OD1	8.14	1.40	1.25
71	SU	90	ASP	CB-CG	8.11	1.72	1.52
55	SE	104	ASP	CG-OD1	8.10	1.40	1.25
24	V	97	TYR	CB-CG	-8.04	1.33	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
53	SC	220	ASP	CG-OD1	8.04	1.40	1.25
57	SG	205	GLU	CD-OE2	7.97	1.40	1.25
55	SE	18	TRP	CA-CB	7.93	1.64	1.53
82	Sf	148	TYR	CA-C	7.88	1.63	1.52
60	SJ	34	GLU	CG-CD	7.87	1.71	1.52
21	S	29	ARG	CA-CB	7.87	1.64	1.53
36	h	78	TYR	CA-CB	7.85	1.63	1.52
30	b	16	TRP	CB-CG	-7.83	1.25	1.50
47	l	432	SER	C-N	7.83	1.44	1.33
13	J	99	PHE	CA-CB	7.83	1.62	1.52
62	SL	13	GLN	CD-NE2	7.78	1.49	1.33
83	Sg	187	ASN	CG-OD1	7.75	1.38	1.23
14	L	17	ASP	CG-OD2	7.71	1.40	1.25
74	SX	39	ASN	CG-OD1	7.70	1.38	1.23
66	SP	21	ASP	CB-CG	7.65	1.71	1.52
29	a	60	HIS	CA-C	-7.63	1.42	1.52
65	SO	130	GLU	CD-OE2	7.60	1.39	1.25
30	b	16	TRP	CA-CB	7.58	1.66	1.53
27	Y	81	TYR	CA-CB	7.58	1.64	1.53
50	S2	619	A	O3'-P	-7.57	1.49	1.61
68	SR	28	PHE	C-N	7.57	1.45	1.33
11	H	156	ASN	CA-C	7.56	1.62	1.52
66	SP	31	GLU	CD-OE2	7.56	1.39	1.25
7	D	21	ARG	N-CA	7.54	1.55	1.46
67	SQ	85	ARG	CZ-NH1	7.52	1.43	1.32
17	O	106	ASP	CG-OD2	7.49	1.39	1.25
66	SP	31	GLU	CD-OE1	7.43	1.39	1.25
60	SJ	38	ARG	CZ-NH1	7.42	1.43	1.32
24	V	97	TYR	N-CA	7.40	1.55	1.46
4	A	211	PHE	CA-CB	7.37	1.65	1.53
4	A	40	TYR	CA-CB	7.33	1.65	1.53
55	SE	121	TYR	CA-C	7.28	1.61	1.52
83	Sg	4	GLN	CD-OE1	7.26	1.37	1.23
15	M	6	PHE	CA-CB	7.24	1.65	1.53
64	SN	13	GLN	CD-NE2	7.23	1.48	1.33
51	SA	118	GLU	CD-OE2	7.21	1.39	1.25
71	SU	33	GLU	CD-OE1	7.18	1.39	1.25
4	A	209	HIS	CA-CB	7.17	1.65	1.52
10	G	54	PHE	N-CA	7.16	1.54	1.46
19	Q	34	PHE	CA-CB	7.16	1.64	1.53
53	SC	241	PHE	CA-CB	7.15	1.64	1.53
65	SO	104	ARG	NE-CZ	7.09	1.40	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	S2	1291	A	O3'-P	7.06	1.71	1.61
59	SI	99	ASN	CG-ND2	7.04	1.48	1.33
7	D	95	TYR	CA-CB	7.04	1.64	1.53
20	R	95	TRP	CB-CG	-7.01	1.28	1.50
33	e	35	TRP	CA-CB	6.99	1.64	1.53
86	S6	56	C	O3'-P	-6.96	1.50	1.61
1	5	4548	A	O5'-C5'	6.96	1.52	1.42
10	G	54	PHE	CB-CG	-6.95	1.34	1.50
9	F	228	HIS	CA-CB	6.93	1.65	1.53
77	Sa	22	ARG	CZ-NH1	6.92	1.42	1.32
7	D	29	ASP	CA-C	-6.92	1.43	1.52
68	SR	82	ASP	CG-OD1	6.90	1.38	1.25
29	a	79	TRP	CA-CB	6.80	1.65	1.53
20	R	118	HIS	CA-CB	6.80	1.64	1.53
82	Sf	146	LEU	CB-CG	6.77	1.67	1.53
24	V	97	TYR	CA-C	6.71	1.61	1.52
22	T	19	PHE	CA-C	-6.70	1.44	1.52
50	S2	427	U	O5'-C5'	6.70	1.52	1.42
53	SC	90	GLU	CD-OE1	6.70	1.38	1.25
43	o	48	TYR	CA-CB	6.66	1.62	1.52
1	5	4547	C	O3'-P	6.66	1.71	1.61
7	D	145	TYR	CA-CB	6.65	1.62	1.53
67	SQ	29	ASN	CG-ND2	6.64	1.47	1.33
50	S2	1292	C	O3'-P	6.63	1.71	1.61
74	SX	58	GLU	CD-OE1	6.63	1.38	1.25
66	SP	27	ASP	CG-OD1	6.60	1.37	1.25
52	SB	198	GLU	CG-CD	6.59	1.68	1.52
64	SN	83	ASP	CG-OD1	6.57	1.37	1.25
80	Sd	10	HIS	ND1-CE1	6.57	1.39	1.32
52	SB	155	TYR	CA-CB	6.55	1.63	1.53
4	A	186	TYR	CA-CB	6.54	1.63	1.53
34	f	4	ARG	CA-CB	6.54	1.64	1.53
17	O	106	ASP	CG-OD1	6.49	1.37	1.25
7	D	16	TYR	CA-CB	6.47	1.63	1.53
29	a	128	PHE	CA-CB	6.47	1.62	1.53
55	SE	250	GLU	CD-OE2	6.47	1.37	1.25
21	S	33	PHE	N-CA	-6.46	1.37	1.46
63	SM	104	VAL	N-CA	6.44	1.54	1.46
1	5	3652	A	O3'-P	6.42	1.70	1.61
59	SI	188	TYR	CE1-CZ	6.39	1.53	1.38
12	I	57	TYR	CA-CB	6.39	1.60	1.52
1	5	45	U	O3'-P	-6.38	1.51	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
4	A	89	TYR	CA-CB	6.37	1.61	1.53
60	SJ	104	ASP	CG-OD1	6.36	1.37	1.25
15	M	6	PHE	CB-CG	-6.35	1.36	1.50
8	E	250	ASP	CG-OD2	6.34	1.37	1.25
32	d	87	ARG	N-CA	6.31	1.55	1.46
25	W	21	TYR	CA-CB	6.31	1.63	1.53
59	SI	188	TYR	CG-CD1	6.30	1.52	1.39
50	S2	1309	C	O3'-P	6.27	1.70	1.61
83	Sg	116	ASP	CG-OD1	6.25	1.37	1.25
75	SY	80	ASP	CG-OD2	6.23	1.37	1.25
23	U	99	TRP	CA-C	6.22	1.60	1.52
82	Sf	146	LEU	CA-CB	6.20	1.68	1.53
69	SS	86	ARG	CA-CB	6.20	1.60	1.52
6	C	41	HIS	CA-CB	6.19	1.63	1.53
73	SW	120	HIS	CG-CD2	6.19	1.42	1.35
74	SX	17	ARG	N-CA	6.19	1.54	1.46
33	e	74	PHE	CA-CB	6.18	1.62	1.53
50	S2	1293	A	O5'-C5'	6.18	1.51	1.42
5	B	275	HIS	N-CA	6.14	1.53	1.46
9	F	209	PHE	CA-CB	6.13	1.63	1.53
5	B	119	TYR	N-CA	6.13	1.54	1.46
62	SL	89	ARG	CZ-NH1	6.13	1.41	1.32
47	1	425	GLY	C-N	6.12	1.42	1.33
7	D	210	TYR	CA-CB	6.11	1.63	1.53
38	j	66	HIS	CA-CB	6.11	1.63	1.53
82	Sf	139	HIS	CA-C	6.11	1.59	1.52
4	A	209	HIS	CB-CG	-6.09	1.41	1.50
82	Sf	140	TYR	N-CA	6.09	1.53	1.45
68	SR	122	PRO	CA-C	6.09	1.58	1.52
6	C	35	ASP	CG-OD1	6.08	1.36	1.25
57	SG	152	ASP	CG-OD2	6.08	1.36	1.25
26	X	117	TYR	CA-CB	6.07	1.61	1.53
37	i	39	PHE	CA-CB	6.05	1.62	1.53
68	SR	123	THR	N-CA	6.05	1.53	1.46
46	z	99	LEU	CA-C	6.05	1.55	1.52
83	Sg	285	GLN	CD-NE2	6.02	1.45	1.33
83	Sg	36	ARG	CZ-NH1	6.01	1.41	1.32
83	Sg	60	ARG	NE-CZ	6.00	1.39	1.33
16	N	119	TYR	CA-CB	6.00	1.63	1.53
8	E	97	ASN	CG-ND2	6.00	1.45	1.33
8	E	101	ARG	CZ-NH2	5.99	1.41	1.33
59	SI	188	TYR	CG-CD2	5.99	1.51	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	S2	1142	G	O3'-P	5.99	1.70	1.61
65	SO	130	GLU	CG-CD	5.98	1.67	1.52
73	SW	25	VAL	CA-C	-5.98	1.46	1.52
24	V	99	GLU	N-CA	5.97	1.53	1.46
21	S	94	TYR	CA-CB	5.95	1.61	1.53
33	e	35	TRP	CB-CG	-5.94	1.31	1.50
20	R	95	TRP	N-CA	5.93	1.53	1.46
4	A	209	HIS	CA-C	5.92	1.60	1.52
29	a	41	HIS	N-CA	-5.92	1.39	1.46
63	SM	103	VAL	CA-C	5.91	1.60	1.52
66	SP	41	GLN	CD-OE1	5.91	1.34	1.23
16	N	139	HIS	CA-CB	5.89	1.61	1.53
21	S	99	ASP	CG-OD1	5.89	1.36	1.25
57	SG	20	ASP	CG-OD1	5.89	1.36	1.25
20	R	95	TRP	CA-CB	5.89	1.62	1.53
60	SJ	64	ASP	CG-OD1	5.88	1.36	1.25
4	A	186	TYR	N-CA	5.88	1.53	1.46
57	SG	132	ARG	NE-CZ	5.87	1.39	1.33
1	5	4566	U	O3'-P	-5.87	1.52	1.61
70	ST	33	TRP	CA-CB	5.86	1.63	1.53
82	Sf	146	LEU	N-CA	5.86	1.54	1.46
16	N	180	PHE	CA-CB	5.85	1.63	1.53
54	SD	38	GLU	CD-OE2	5.80	1.36	1.25
5	B	311	ASP	CG-OD2	5.80	1.36	1.25
62	SL	92	TYR	CA-C	-5.80	1.45	1.52
77	Sa	97	PRO	CA-C	5.78	1.57	1.52
83	Sg	213	ASP	CG-OD1	5.75	1.36	1.25
53	SC	223	TYR	CA-CB	5.74	1.61	1.53
23	U	99	TRP	CA-CB	5.72	1.62	1.53
52	SB	205	TYR	CA-CB	5.72	1.62	1.53
1	5	2510	G	O3'-P	-5.70	1.52	1.61
60	SJ	95	ASP	CG-OD2	5.70	1.36	1.25
29	a	60	HIS	CA-CB	-5.69	1.43	1.53
37	i	26	HIS	CA-C	5.69	1.60	1.52
52	SB	157	GLN	CD-OE1	5.68	1.34	1.23
83	Sg	187	ASN	CG-ND2	5.65	1.45	1.33
32	d	86	VAL	CA-C	5.65	1.59	1.52
50	S2	1292	C	O5'-C5'	5.63	1.50	1.42
1	5	2361	G	O3'-P	5.63	1.69	1.61
71	SU	113	GLU	CD-OE2	5.59	1.35	1.25
27	Y	19	PHE	CA-CB	5.58	1.59	1.53
64	SN	18	TYR	CA-CB	5.58	1.62	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	5	1851	G	O3'-P	-5.58	1.52	1.61
80	Sd	46	TYR	CA-CB	5.57	1.61	1.53
53	SC	90	GLU	CG-CD	5.57	1.66	1.52
38	j	27	TYR	CA-CB	5.56	1.61	1.53
45	r	45	HIS	CA-CB	-5.55	1.44	1.53
67	SQ	123	ASP	CG-OD2	5.55	1.35	1.25
1	5	1849	U	O3'-P	-5.53	1.52	1.61
14	L	6	ASN	CA-C	-5.53	1.45	1.52
20	R	132	PHE	CB-CG	-5.51	1.38	1.50
68	SR	82	ASP	CG-OD2	5.51	1.35	1.25
56	SF	130	ARG	NE-CZ	5.51	1.39	1.33
82	Sf	149	CYS	CA-C	5.51	1.59	1.52
61	SK	37	ASP	CG-OD1	5.50	1.35	1.25
21	S	10	TYR	CB-CG	-5.50	1.39	1.51
59	SI	150	ASP	CG-OD1	5.50	1.35	1.25
50	S2	1839	U	O3'-P	5.49	1.69	1.61
80	Sd	10	HIS	CG-CD2	5.47	1.41	1.35
63	SM	104	VAL	CA-C	5.46	1.59	1.52
1	5	1364	U	O3'-P	5.46	1.69	1.61
68	SR	87	GLU	CD-OE1	5.44	1.35	1.25
16	N	192	TRP	CB-CG	-5.43	1.33	1.50
50	S2	1290	G	O3'-P	5.43	1.69	1.61
1	5	4693	C	O3'-P	5.42	1.69	1.61
57	SG	142	ARG	CZ-NH1	5.42	1.40	1.32
64	SN	141	TYR	CA-CB	-5.42	1.45	1.53
38	j	49	TRP	CA-CB	5.40	1.62	1.53
14	L	17	ASP	CG-OD1	5.39	1.35	1.25
8	E	278	TYR	CB-CG	-5.39	1.39	1.51
50	S2	1079	C	O3'-P	-5.37	1.53	1.61
1	5	514	U	O3'-P	5.36	1.69	1.61
20	R	94	THR	CA-C	5.35	1.60	1.52
1	5	2692	U	O3'-P	-5.35	1.53	1.61
5	B	267	ALA	N-CA	-5.34	1.39	1.46
55	SE	121	TYR	CA-CB	5.34	1.62	1.53
5	B	257	TRP	CA-CB	5.33	1.63	1.53
32	d	26	THR	N-CA	5.33	1.53	1.46
51	SA	116	PHE	CA-CB	-5.33	1.45	1.53
8	E	97	ASN	CG-OD1	5.32	1.33	1.23
7	D	119	TYR	CA-CB	5.31	1.60	1.53
1	5	964	A	O5'-C5'	5.31	1.50	1.42
1	5	3692	A	O3'-P	5.30	1.69	1.61
1	5	2053	C	O3'-P	-5.30	1.53	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	D	29	ASP	N-CA	5.28	1.52	1.46
34	f	6	TRP	CA-C	5.28	1.59	1.52
64	SN	83	ASP	CG-OD2	5.28	1.35	1.25
5	B	215	GLU	CD-OE1	5.28	1.35	1.25
64	SN	141	TYR	CA-C	-5.28	1.46	1.52
1	5	964	A	O3'-P	5.26	1.69	1.61
31	c	78	ASN	CA-CB	5.25	1.62	1.53
1	5	1522	G	O3'-P	5.24	1.69	1.61
16	N	138	PHE	CA-CB	5.22	1.60	1.53
31	c	78	ASN	CA-C	5.22	1.59	1.52
27	Y	61	HIS	CA-CB	5.21	1.61	1.53
1	5	4375	C	O3'-P	-5.21	1.53	1.61
21	S	9	GLU	CA-C	5.21	1.58	1.53
29	a	109	TYR	CB-CG	-5.21	1.40	1.51
2	7	90	A	O3'-P	-5.21	1.53	1.61
32	d	71	ALA	CA-CB	-5.21	1.45	1.53
83	Sg	107	ASP	CG-OD1	5.20	1.35	1.25
1	5	1912	G	O3'-P	-5.20	1.53	1.61
26	X	57	GLN	CD-OE1	5.20	1.33	1.23
30	b	16	TRP	N-CA	5.19	1.53	1.46
63	SM	105	GLY	N-CA	5.19	1.51	1.45
62	SL	93	LEU	N-CA	-5.18	1.39	1.46
5	B	137	TRP	CA-CB	5.16	1.62	1.53
1	5	2442	G	O3'-P	-5.15	1.53	1.61
33	e	56	PRO	N-CA	-5.13	1.41	1.47
50	S2	646	G	O3'-P	5.13	1.68	1.61
50	S2	1858	G	O3'-P	5.12	1.68	1.61
51	SA	151	ASP	CG-OD2	5.11	1.35	1.25
55	SE	250	GLU	CD-OE1	5.10	1.35	1.25
31	c	28	VAL	N-CA	-5.10	1.40	1.46
26	X	73	HIS	CA-CB	5.09	1.62	1.53
51	SA	116	PHE	CA-C	-5.09	1.45	1.52
39	k	43	TYR	CA-CB	5.08	1.60	1.53
47	1	226	LYS	CA-C	5.08	1.54	1.52
54	SD	5	ILE	N-CA	5.08	1.52	1.46
1	5	1669	A	O3'-P	-5.08	1.53	1.61
54	SD	216	GLU	CD-OE2	5.08	1.34	1.25
47	1	445	THR	C-N	-5.06	1.25	1.33
58	SH	145	ARG	CA-C	-5.06	1.46	1.53
33	e	36	ARG	N-CA	5.05	1.52	1.46
57	SG	208	GLU	CG-CD	5.05	1.64	1.52
5	B	55	HIS	CA-CB	5.05	1.61	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
38	j	76	HIS	N-CA	-5.05	1.39	1.46
69	SS	130	ARG	CZ-NH1	5.04	1.39	1.32
52	SB	157	GLN	CG-CD	5.04	1.64	1.52
21	S	32	ILE	CA-C	-5.03	1.47	1.53
6	C	198	ASN	N-CA	5.02	1.52	1.46
36	h	99	GLU	N-CA	-5.02	1.40	1.46
8	E	278	TYR	N-CA	5.02	1.51	1.46
23	U	90	TYR	CA-C	-5.01	1.46	1.52
53	SC	236	PHE	N-CA	5.01	1.52	1.46

All (2866) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4116	C	O3'-P-O5'	-35.13	51.30	104.00
52	SB	145	LYS	O-C-N	-33.31	78.29	122.59
52	SB	221	PRO	O-C-N	26.59	155.44	123.00
1	5	4116	C	P-O3'-C3'	26.13	159.40	120.20
52	SB	221	PRO	CA-C-N	-25.20	84.91	122.21
52	SB	221	PRO	C-N-CA	-25.20	84.91	122.21
47	1	432	SER	O-C-N	-24.78	89.63	122.59
52	SB	145	LYS	CA-C-N	-23.58	76.50	121.54
52	SB	145	LYS	C-N-CA	-23.58	76.50	121.54
8	E	278	TYR	CB-CA-C	21.51	129.80	110.44
1	5	1566	C	O3'-P-O5'	-21.26	72.11	104.00
86	S6	55	U	OP2-P-O3'	19.13	165.39	108.00
1	5	3942	A	O3'-P-O5'	18.86	132.29	104.00
86	S6	55	U	OP1-P-O3'	-18.45	52.66	108.00
17	O	135	PHE	N-CA-C	17.86	134.67	108.60
11	H	156	ASN	N-CA-C	-17.43	92.42	111.07
3	8	34	U	C4'-C3'-O3'	-16.91	87.63	113.00
50	S2	1373	C	O3'-P-O5'	-15.18	81.22	104.00
1	5	383	A	C1'-C2'-O2'	-15.04	89.24	111.80
1	5	4501	U	O3'-P-O5'	-14.81	81.78	104.00
1	5	1676	C	C1'-C2'-O2'	-14.78	89.63	111.80
20	R	132	PHE	N-CA-C	-14.78	88.88	109.71
1	5	1439	C	C4'-C3'-O3'	-14.28	91.58	113.00
50	S2	642	U	C4'-C3'-O3'	14.06	134.08	113.00
3	8	60	G	N9-C1'-C2'	14.01	135.01	114.00
1	5	4163	U	C4'-C3'-O3'	13.92	133.88	113.00
20	R	132	PHE	CB-CA-C	13.90	132.65	112.07
68	SR	28	PHE	O-C-N	-13.64	106.63	122.32
50	S2	291	G	C4'-C3'-O3'	-13.53	89.11	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1358	G	C4'-C3'-O3'	13.38	133.07	113.00
17	O	110	PRO	CA-C-N	12.67	135.68	119.84
17	O	110	PRO	C-N-CA	12.67	135.68	119.84
1	5	4528	G	C2'-C3'-O3'	12.62	132.64	113.70
1	5	1359	G	C4'-C3'-O3'	-12.44	94.34	113.00
50	S2	1433	C	C4'-C3'-O3'	12.42	131.62	113.00
1	5	1211	G	C2'-C3'-O3'	12.38	132.27	113.70
50	S2	495	U	C1'-C2'-O2'	-12.30	93.35	111.80
50	S2	24	C	C2'-C3'-O3'	12.25	132.08	113.70
1	5	1329	G	C2'-C3'-O3'	12.14	131.91	113.70
20	R	95	TRP	N-CA-CB	12.11	127.54	109.98
50	S2	60	A	C1'-C2'-O2'	-12.05	93.72	111.80
9	F	120	PHE	CB-CA-C	12.02	127.21	111.82
50	S2	1109	C	N1-C1'-C2'	12.02	130.03	112.00
1	5	2857	A	C1'-C2'-O2'	-11.99	93.82	111.80
86	S6	55	U	O3'-P-O5'	-11.96	86.06	104.00
1	5	2389	A	C2'-C3'-O3'	11.85	131.47	113.70
50	S2	61	A	C4'-C3'-O3'	-11.85	95.23	113.00
3	8	94	G	C2'-C3'-O3'	11.81	127.22	109.50
24	V	97	TYR	N-CA-C	-11.78	92.29	109.96
12	I	139	ARG	CG-CD-NE	11.64	137.61	112.00
1	5	4498	U	C1'-C2'-O2'	11.61	125.81	108.40
50	S2	1643	U	C1'-C2'-O2'	-11.59	94.42	111.80
82	Sf	133	ALA	N-CA-C	11.37	123.23	108.34
1	5	1642	A	C4'-C3'-O3'	-11.34	95.99	113.00
21	S	81	TRP	CB-CA-C	11.32	127.88	110.67
29	a	61	TYR	CA-CB-CG	11.32	134.27	113.90
16	N	131	GLU	CA-CB-CG	11.26	136.61	114.10
26	X	73	HIS	N-CA-C	-11.24	99.00	113.17
50	S2	1542	C	C1'-C2'-O2'	-11.23	94.96	111.80
47	1	432	SER	CA-C-N	-11.22	101.78	121.97
47	1	432	SER	C-N-CA	-11.22	101.78	121.97
1	5	4385	A	C2'-C3'-O3'	-11.19	96.92	113.70
50	S2	747	U	C2'-C3'-O3'	11.13	130.40	113.70
29	a	109	TYR	CA-CB-CG	-11.07	93.97	113.90
1	5	3880	G	C1'-C2'-O2'	-11.01	95.29	111.80
59	SI	197	PHE	CB-CA-C	-10.94	93.52	110.92
16	N	131	GLU	CB-CG-CD	-10.90	94.07	112.60
74	SX	9	THR	N-CA-C	-10.84	93.91	110.70
1	5	1479	G	C1'-C2'-O2'	-10.82	95.57	111.80
32	d	25	TYR	CA-CB-CG	-10.82	94.42	113.90
68	SR	28	PHE	CA-C-N	10.81	140.69	121.66

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
68	SR	28	PHE	C-N-CA	10.81	140.69	121.66
50	S2	1293	A	N9-C1'-C2'	10.81	128.21	112.00
8	E	278	TYR	CA-CB-CG	-10.79	94.49	113.90
20	R	95	TRP	N-CA-C	-10.78	99.07	111.03
1	5	3773	U	C4'-C3'-O3'	10.77	129.16	113.00
1	5	5061	A	C2'-C3'-O3'	10.76	125.65	109.50
1	5	2858	A	C1'-C2'-O2'	-10.76	95.66	111.80
1	5	5059	C	C2'-C3'-O3'	10.72	129.79	113.70
1	5	231	U	C4'-C3'-O3'	-10.71	96.94	113.00
16	N	192	TRP	CA-CB-CG	10.69	133.91	113.60
29	a	79	TRP	N-CA-C	-10.68	100.20	113.02
1	5	4084	G	C2'-C3'-O3'	10.65	125.48	109.50
50	S2	964	A	C1'-C2'-O2'	-10.65	95.83	111.80
82	Sf	146	LEU	CA-CB-CG	10.63	153.51	116.30
1	5	1481	C	C2'-C3'-O3'	10.62	125.44	109.50
9	F	58	HIS	CB-CA-C	-10.61	94.23	110.88
50	S2	441	C	C4'-C3'-O3'	-10.57	97.15	113.00
50	S2	1292	C	C4'-C3'-O3'	10.56	128.84	113.00
50	S2	1552	G	C2'-C3'-O3'	10.54	129.51	113.70
1	5	1474	C	C2'-C3'-O3'	10.54	129.50	113.70
43	o	31	ASP	CB-CA-C	10.53	127.63	110.78
50	S2	848	U	N1-C1'-C2'	10.46	127.69	112.00
50	S2	1588	A	C1'-C2'-O2'	-10.44	96.15	111.80
1	5	4125	C	C4'-C3'-O3'	-10.42	97.37	113.00
50	S2	1838	U	N1-C1'-C2'	10.41	129.62	114.00
1	5	2046	G	C2'-C3'-O3'	10.39	125.09	109.50
1	5	3942	A	OP2-P-O3'	-10.37	76.90	108.00
1	5	964	A	C4'-C3'-O3'	10.36	128.54	113.00
50	S2	1063	C	C1'-C2'-O2'	10.34	123.92	108.40
1	5	1214	C	N1-C1'-C2'	10.33	129.50	114.00
26	X	73	HIS	CB-CA-C	10.33	127.33	110.09
1	5	4965	U	C1'-C2'-O2'	10.30	123.85	108.40
1	5	936	C	C4'-C3'-O3'	10.29	124.83	109.40
58	SH	177	TYR	CB-CA-C	-10.28	93.67	110.74
1	5	2695	A	C2'-C3'-O3'	10.28	124.92	109.50
1	5	1	C	N1-C1'-C2'	10.25	129.38	114.00
50	S2	833	C	C2'-C3'-O3'	10.25	129.07	113.70
1	5	125	C	C2'-C3'-O3'	10.25	129.07	113.70
73	SW	117	ARG	NE-CZ-NH2	-10.25	109.98	119.20
50	S2	367	U	C1'-C2'-O2'	10.24	123.76	108.40
29	a	128	PHE	CB-CA-C	10.21	125.73	111.74
19	Q	33	ARG	N-CA-C	-10.18	98.89	111.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	62	A	N9-C1'-C2'	10.18	127.27	112.00
29	a	34	ASN	CB-CA-C	10.16	125.26	111.14
1	5	3735	G	C4'-C3'-O3'	-10.14	97.79	113.00
64	SN	113	PHE	CB-CA-C	-10.14	95.24	110.95
38	j	66	HIS	N-CA-CB	10.12	127.59	110.49
32	d	25	TYR	CB-CA-C	10.11	128.09	111.41
69	SS	42	HIS	CB-CA-C	-10.09	94.67	110.81
85	S5	37	A	C1'-C2'-O2'	10.08	123.52	108.40
1	5	977	C	C2'-C3'-O3'	10.08	128.82	113.70
1	5	1356	U	C2'-C3'-O3'	10.08	128.82	113.70
1	5	2511	A	C4'-C3'-O3'	-10.07	94.30	109.40
30	b	16	TRP	N-CA-C	-10.06	100.94	113.01
1	5	978	G	C2'-C3'-O3'	10.03	128.75	113.70
1	5	1359	G	C2'-C3'-O3'	9.99	128.69	113.70
50	S2	1404	U	C4'-C3'-O3'	-9.98	94.42	109.40
50	S2	1429	G	C2'-C3'-O3'	9.98	128.67	113.70
53	SC	241	PHE	N-CA-CB	9.98	124.48	109.91
1	5	3625	G	C4'-C3'-O3'	-9.96	98.06	113.00
1	5	2588	C	C4'-C3'-O3'	9.96	127.94	113.00
14	L	99	ASP	N-CA-C	-9.95	97.19	109.83
20	R	132	PHE	CA-CB-CG	-9.95	103.85	113.80
65	SO	147	ARG	CA-CB-CG	9.94	133.97	114.10
32	d	73	TRP	N-CA-CB	-9.90	97.79	111.65
1	5	1992	U	N1-C1'-C2'	9.89	126.84	112.00
1	5	215	C	C4'-C3'-O3'	-9.87	98.19	113.00
50	S2	1162	C	C1'-C2'-O2'	9.85	123.18	108.40
53	SC	236	PHE	N-CA-CB	9.83	124.26	109.91
1	5	927	G	C2'-C3'-O3'	9.81	124.21	109.50
50	S2	449	A	C2'-C3'-O3'	-9.80	99.01	113.70
50	S2	160	U	C2'-C3'-O3'	9.79	124.18	109.50
50	S2	110	U	C2'-C3'-O3'	9.78	128.38	113.70
3	8	14	U	N1-C1'-C2'	9.78	126.67	112.00
1	5	4693	C	N1-C1'-C2'	9.78	126.67	112.00
1	5	2468	U	C4'-C3'-O3'	9.75	124.03	109.40
38	j	66	HIS	CA-CB-CG	-9.74	104.06	113.80
1	5	4518	A	C2'-C3'-O3'	-9.70	94.95	109.50
1	5	2083	C	C2'-C3'-O3'	-9.69	99.17	113.70
9	F	209	PHE	N-CA-C	-9.68	100.81	111.36
1	5	4767	C	C3'-C2'-O2'	9.68	125.22	110.70
1	5	2588	C	C2'-C3'-O3'	-9.68	99.19	113.70
1	5	1724	G	O4'-C4'-C3'	-9.63	96.47	106.10
1	5	92	C	N1-C1'-C2'	-9.61	97.58	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1365	C	C4'-C3'-O3'	9.60	123.81	109.40
19	Q	174	PHE	CB-CA-C	9.60	126.28	112.07
9	F	194	HIS	CB-CA-C	-9.59	96.19	110.96
1	5	4373	G	N9-C1'-C2'	9.58	128.37	114.00
1	5	4119	C	C2'-C3'-O3'	9.58	128.06	113.70
29	a	128	PHE	CA-CB-CG	-9.58	104.22	113.80
60	SJ	48	PHE	N-CA-CB	9.57	124.37	109.82
50	S2	798	A	C2'-C3'-O3'	9.56	128.04	113.70
7	D	210	TYR	N-CA-CB	9.54	123.84	109.91
7	D	198	HIS	CB-CA-C	9.53	125.85	110.88
1	5	2511	A	C2'-C3'-O3'	9.51	123.76	109.50
3	8	85	U	C2'-C3'-O3'	9.51	127.96	113.70
1	5	1324	A	C1'-C2'-O2'	-9.50	97.55	111.80
1	5	3912	U	C1'-C2'-O2'	-9.49	94.16	108.40
1	5	1500	A	C4'-C3'-O3'	9.49	127.23	113.00
22	T	13	TYR	N-CA-CB	-9.48	96.59	110.53
15	M	95	ILE	N-CA-C	-9.46	99.74	110.05
1	5	4871	C	N1-C1'-C2'	9.46	128.19	114.00
1	5	1279	A	C2'-C3'-O3'	9.45	123.68	109.50
1	5	1357	C	C3'-C2'-O2'	9.45	124.87	110.70
51	SA	117	ARG	CG-CD-NE	9.43	132.74	112.00
82	Sf	140	TYR	N-CA-C	9.43	123.79	110.50
1	5	1938	C	N1-C1'-C2'	9.42	128.14	114.00
1	5	747	A	C2'-C3'-O3'	9.40	123.59	109.50
4	A	83	HIS	N-CA-C	-9.37	94.69	109.50
1	5	2272	C	C1'-C2'-O2'	-9.34	94.39	108.40
16	N	139	HIS	N-CA-CB	9.34	125.10	109.87
1	5	2107	C	C2'-C3'-O3'	9.34	123.51	109.50
19	Q	34	PHE	N-CA-CB	9.34	124.01	109.82
1	5	958	G	C2'-C3'-O3'	9.33	127.70	113.70
50	S2	594	A	C4'-C3'-O3'	9.31	123.37	109.40
1	5	664	G	C4'-C3'-O3'	9.31	123.37	109.40
1	5	961	G	C4'-C3'-O3'	9.29	123.33	109.40
3	8	94	G	C1'-C2'-O2'	-9.29	97.87	111.80
12	I	171	TRP	CA-CB-CG	-9.27	95.99	113.60
1	5	1866	U	C1'-C2'-O2'	-9.23	97.95	111.80
50	S2	574	A	C1'-C2'-O2'	-9.22	97.96	111.80
54	SD	216	GLU	CG-CD-OE1	-9.22	97.20	118.40
1	5	1685	G	N9-C1'-C2'	9.21	125.82	112.00
1	5	4693	C	C4'-C3'-O3'	-9.21	99.19	113.00
1	5	3726	A	C1'-C2'-O2'	-9.20	98.00	111.80
43	o	48	TYR	CB-CA-C	9.20	127.04	111.68

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	P	54	GLN	CA-CB-CG	9.19	132.48	114.10
50	S2	1623	A	C2'-C3'-O3'	9.19	127.48	113.70
9	F	228	HIS	CA-CB-CG	-9.18	104.62	113.80
1	5	3913	G	C2'-C3'-O3'	9.18	123.27	109.50
36	h	78	TYR	CA-CB-CG	-9.16	97.42	113.90
1	5	316	U	C4'-C3'-O3'	-9.16	99.27	113.00
11	H	156	ASN	N-CA-CB	9.16	123.29	110.01
50	S2	1114	U	C2'-C3'-O3'	9.15	123.22	109.50
1	5	1733	G	C2'-C3'-O3'	-9.13	100.01	113.70
1	5	1636	U	C2'-C3'-O3'	-9.12	100.03	113.70
6	C	41	HIS	N-CA-CB	9.10	123.50	109.94
1	5	2513	A	N9-C1'-C2'	9.09	127.64	114.00
1	5	3635	A	C1'-C2'-O2'	9.09	122.03	108.40
1	5	4301	U	C4'-C3'-O3'	-9.07	99.39	113.00
1	5	2246	C	C2'-C3'-O3'	9.07	127.31	113.70
1	5	3735	G	C2'-C3'-O3'	9.07	127.31	113.70
29	a	61	TYR	N-CA-C	-9.07	96.11	109.63
36	h	78	TYR	CB-CA-C	9.06	126.90	111.68
3	8	34	U	C2'-C3'-O3'	9.06	127.29	113.70
5	B	25	HIS	CB-CA-C	9.05	120.83	109.16
7	D	54	ARG	CG-CD-NE	-9.05	92.09	112.00
5	B	258	HIS	CA-C-N	-9.05	108.53	119.84
5	B	258	HIS	C-N-CA	-9.05	108.53	119.84
50	S2	1114	U	N1-C1'-C2'	9.02	127.53	114.00
1	5	1920	C	C4'-C3'-O3'	9.01	122.92	109.40
12	I	171	TRP	N-CA-CB	9.01	124.11	109.88
6	C	267	TRP	CA-CB-CG	9.01	130.71	113.60
15	M	66	HIS	N-CA-C	9.01	123.57	113.21
50	S2	437	G	N9-C1'-C2'	9.00	125.50	112.00
1	5	2683	C	C2'-C3'-O3'	8.99	127.18	113.70
11	H	96	TYR	N-CA-C	8.97	122.24	108.42
1	5	3905	A	C2'-C3'-O3'	8.97	127.16	113.70
29	a	79	TRP	CA-CB-CG	-8.96	96.57	113.60
32	d	87	ARG	N-CA-C	-8.95	92.98	108.56
21	S	10	TYR	CA-CB-CG	-8.95	97.80	113.90
82	Sf	148	TYR	CA-C-N	8.95	135.07	122.72
82	Sf	148	TYR	C-N-CA	8.95	135.07	122.72
1	5	1724	G	C4'-C3'-O3'	-8.94	95.99	109.40
4	A	211	PHE	CB-CA-C	8.93	125.65	110.56
10	G	54	PHE	CA-CB-CG	-8.93	104.87	113.80
1	5	4885	U	C2'-C3'-O3'	8.92	127.08	113.70
62	SL	13	GLN	CA-C-N	-8.92	111.69	120.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
62	SL	13	GLN	C-N-CA	-8.92	111.69	120.52
1	5	1668	A	N9-C1'-C2'	8.91	125.37	112.00
29	a	109	TYR	CB-CA-C	8.91	124.81	111.17
37	i	39	PHE	N-CA-CB	8.91	123.42	110.06
1	5	2517	A	N9-C1'-C2'	8.89	125.33	112.00
47	1	436	ASP	N-CA-C	8.88	120.73	111.14
21	S	29	ARG	CA-CB-CG	8.87	131.84	114.10
26	X	117	TYR	N-CA-C	-8.87	102.55	112.57
50	S2	644	G	C3'-C2'-O2'	8.86	124.00	110.70
1	5	1696	C	C2'-C3'-O3'	8.86	122.79	109.50
50	S2	1838	U	O4'-C4'-C3'	-8.86	97.24	106.10
50	S2	1149	A	C3'-C2'-O2'	8.85	123.98	110.70
75	SY	86	GLU	CG-CD-OE2	-8.85	98.05	118.40
1	5	716	C	C4'-C3'-O3'	-8.85	99.73	113.00
4	A	209	HIS	CA-CB-CG	-8.85	104.95	113.80
1	5	31	U	N1-C1'-C2'	8.84	125.27	112.00
1	5	2446	C	N1-C1'-C2'	8.83	125.25	112.00
55	SE	18	TRP	N-CA-C	-8.83	100.93	112.41
1	5	3692	A	C2'-C3'-O3'	8.83	126.94	113.70
2	7	56	G	N9-C1'-C2'	8.83	125.25	112.00
1	5	4275	G	C1'-C2'-O2'	8.81	121.61	108.40
1	5	2782	U	C4'-C3'-O3'	8.79	126.18	113.00
21	S	81	TRP	N-CA-C	-8.78	96.51	109.15
7	D	210	TYR	N-CA-C	-8.77	101.41	110.97
50	S2	996	A	C1'-C2'-O2'	-8.77	98.65	111.80
1	5	2586	G	N9-C1'-C2'	8.76	127.14	114.00
50	S2	619	A	C2'-C3'-O3'	-8.75	100.58	113.70
69	SS	95	TYR	CA-CB-CG	8.75	129.64	113.90
1	5	668	C	C2'-C3'-O3'	8.74	126.81	113.70
1	5	2436	U	N1-C1'-C2'	8.73	127.09	114.00
74	SX	20	HIS	CA-CB-CG	-8.72	105.08	113.80
15	M	64	PHE	N-CA-C	-8.72	98.97	110.40
35	g	14	ASN	N-CA-C	-8.72	96.96	109.96
50	S2	958	G	C1'-C2'-O2'	-8.71	98.73	111.80
1	5	2407	G	C4'-C3'-O3'	-8.71	99.94	113.00
50	S2	1696	C	C2'-C3'-O3'	-8.70	100.65	113.70
1	5	1397	A	C3'-C2'-O2'	8.70	123.75	110.70
1	5	4563	U	N1-C1'-C2'	8.70	125.05	112.00
1	5	4228	G	C1'-C2'-O2'	8.69	121.44	108.40
50	S2	92	A	N9-C1'-C2'	8.69	127.04	114.00
1	5	2546	G	C3'-C2'-O2'	8.69	123.74	110.70
33	e	41	ILE	N-CA-C	-8.69	102.26	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1398	A	C2'-C3'-O3'	8.68	122.53	109.50
8	E	103	VAL	N-CA-C	8.68	119.41	108.82
1	5	1723	A	C4'-C3'-O3'	-8.68	99.98	113.00
1	5	2398	U	C2'-C3'-O3'	8.68	122.52	109.50
1	5	964	A	O4'-C1'-C2'	-8.67	98.93	107.60
1	5	209	U	C4'-C3'-O3'	8.65	125.98	113.00
1	5	716	C	C2'-C3'-O3'	8.65	126.68	113.70
1	5	962	C	C4'-C3'-O3'	-8.64	96.44	109.40
1	5	2118	G	C4'-C3'-O3'	8.64	125.96	113.00
50	S2	1315	U	C3'-C2'-O2'	8.63	123.64	110.70
1	5	4713	G	C4'-C3'-O3'	-8.63	100.06	113.00
1	5	88	A	C1'-C2'-O2'	-8.62	95.47	108.40
1	5	4199	C	C4'-C3'-O3'	8.62	125.93	113.00
1	5	1974	U	N1-C1'-C2'	8.62	126.92	114.00
4	A	67	TYR	CA-CB-CG	8.61	129.39	113.90
34	f	4	ARG	CA-CB-CG	8.61	131.32	114.10
38	j	39	TYR	CA-C-N	-8.61	109.50	119.32
38	j	39	TYR	C-N-CA	-8.61	109.50	119.32
1	5	1937	C	N1-C1'-C2'	8.61	124.91	112.00
1	5	1264	C	C3'-C2'-O2'	8.61	123.61	110.70
9	F	244	ARG	N-CA-C	-8.60	101.87	111.07
11	H	156	ASN	CA-CB-CG	-8.60	104.00	112.60
21	S	81	TRP	CA-CB-CG	-8.60	97.27	113.60
1	5	2268	A	C2'-C3'-O3'	8.59	122.39	109.50
50	S2	1181	A	C1'-C2'-O2'	-8.59	98.91	111.80
1	5	2546	G	C4'-C3'-O3'	8.59	125.88	113.00
50	S2	421	G	N9-C1'-C2'	8.58	124.87	112.00
1	5	119	G	O4'-C4'-C3'	-8.57	97.53	106.10
50	S2	1339	U	C1'-C2'-O2'	8.55	121.23	108.40
1	5	1368	A	C3'-C2'-O2'	8.55	123.52	110.70
1	5	2406	G	C1'-C2'-O2'	8.53	121.20	108.40
1	5	4448	G	C4'-C3'-O3'	8.53	122.19	109.40
50	S2	1407	U	N1-C1'-C2'	8.52	124.78	112.00
29	a	62	HIS	CA-CB-CG	-8.51	105.29	113.80
50	S2	428	U	N1-C1'-C2'	8.51	126.76	114.00
58	SH	177	TYR	CA-CB-CG	8.50	129.20	113.90
1	5	5040	U	C4'-C3'-O3'	-8.50	96.65	109.40
1	5	3656	A	C4'-C3'-O3'	-8.49	100.26	113.00
50	S2	919	A	C4'-C3'-O3'	8.46	122.09	109.40
4	A	186	TYR	N-CA-C	-8.45	102.01	111.14
1	5	4745	G	C1'-C2'-O2'	-8.45	95.72	108.40
1	5	2394	G	N9-C1'-C2'	-8.45	101.33	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	a	79	TRP	CB-CA-C	8.44	125.40	110.37
50	S2	18	C	C4'-C3'-O3'	-8.44	100.34	113.00
50	S2	1408	U	N1-C1'-C2'	8.43	124.64	112.00
33	e	35	TRP	CA-CB-CG	-8.41	97.62	113.60
1	5	2263	A	C2'-C3'-O3'	8.40	122.10	109.50
50	S2	381	C	N1-C1'-C2'	8.39	124.59	112.00
51	SA	9	GLN	CB-CG-CD	-8.39	98.34	112.60
1	5	2465	C	N1-C1'-C2'	8.39	124.58	112.00
1	5	1398	A	N9-C1'-C2'	8.38	126.57	114.00
50	S2	1395	C	C2'-C3'-O3'	8.37	126.25	113.70
1	5	53	C	C2'-C3'-O3'	8.36	126.24	113.70
2	7	23	A	C1'-C2'-O2'	-8.35	99.28	111.80
50	S2	349	A	C2'-C3'-O3'	8.34	126.21	113.70
3	8	81	C	C1'-C2'-O2'	8.34	120.91	108.40
16	N	37	HIS	N-CA-C	-8.34	99.85	110.19
19	Q	37	ARG	NE-CZ-NH2	8.34	126.70	119.20
33	e	47	ARG	N-CA-C	-8.33	97.15	109.15
50	S2	127	C	C4'-C3'-O3'	8.32	121.88	109.40
50	S2	1208	A	C4'-C3'-O3'	-8.32	100.52	113.00
36	h	117	ARG	CG-CD-NE	-8.32	93.70	112.00
1	5	1867	A	N9-C1'-C2'	8.31	124.47	112.00
7	D	210	TYR	CA-CB-CG	-8.30	98.96	113.90
1	5	4162	C	N1-C1'-C2'	8.30	126.45	114.00
4	A	193	ARG	CG-CD-NE	-8.30	93.75	112.00
50	S2	1664	A	C2'-C3'-O3'	8.29	126.14	113.70
1	5	1377	G	C2'-C3'-O3'	8.28	126.12	113.70
1	5	1671	U	O4'-C1'-C2'	-8.27	99.33	107.60
1	5	4275	G	N9-C1'-C2'	-8.27	99.59	112.00
1	5	4871	C	C4'-C3'-O3'	8.26	121.80	109.40
1	5	2109	G	C3'-C2'-O2'	8.26	123.09	110.70
1	5	2089	G	C1'-C2'-O2'	-8.26	99.41	111.80
1	5	2510	G	C4'-C3'-O3'	-8.26	100.61	113.00
1	5	5040	U	N1-C1'-C2'	8.26	126.39	114.00
1	5	943	A	C4'-C3'-O3'	8.25	121.78	109.40
5	B	102	PHE	CB-CA-C	-8.24	98.19	110.95
50	S2	102	A	C2'-C3'-O3'	8.23	121.85	109.50
50	S2	77	A	C1'-C2'-O2'	8.23	120.74	108.40
3	8	86	U	O4'-C1'-C2'	-8.22	99.38	107.60
50	S2	141	A	C2'-C3'-O3'	8.22	121.84	109.50
1	5	157	U	C3'-C2'-O2'	8.22	123.03	110.70
1	5	5046	U	C2'-C3'-O3'	8.22	126.03	113.70
1	5	1501	C	N1-C1'-C2'	8.21	126.31	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	88	A	C2'-C3'-O3'	-8.20	101.40	113.70
9	F	209	PHE	N-CA-CB	8.20	122.30	110.16
1	5	4518	A	C4'-C3'-O3'	8.19	121.69	109.40
1	5	1235	G	C2'-C3'-O3'	-8.18	101.43	113.70
50	S2	732	U	C2'-C3'-O3'	8.18	125.97	113.70
52	SB	81	PHE	N-CA-C	-8.17	100.64	110.44
1	5	2264	C	C2'-C3'-O3'	8.16	121.74	109.50
59	SI	28	GLU	N-CA-C	-8.16	97.38	109.62
1	5	4981	G	C1'-C2'-O2'	8.15	120.63	108.40
1	5	2361	G	N9-C1'-C2'	-8.15	99.77	112.00
45	r	31	ASN	CA-CB-CG	-8.15	104.45	112.60
13	J	99	PHE	CB-CA-C	8.15	123.91	110.88
35	g	14	ASN	N-CA-CB	8.15	122.38	109.51
1	5	930	G	C4'-C3'-O3'	8.14	121.61	109.40
1	5	2116	C	C2'-C3'-O3'	8.14	121.71	109.50
1	5	2769	U	C1'-C2'-O2'	8.13	120.59	108.40
1	5	291	U	C2'-C3'-O3'	-8.12	101.52	113.70
1	5	4888	U	C4'-C3'-O3'	8.12	121.58	109.40
1	5	4535	A	C2'-C3'-O3'	8.11	125.87	113.70
26	X	73	HIS	CA-CB-CG	-8.11	105.69	113.80
50	S2	968	U	C1'-C2'-O2'	8.10	120.56	108.40
1	5	172	C	C1'-C2'-O2'	8.10	120.55	108.40
1	5	3717	A	C1'-C2'-O2'	-8.10	96.25	108.40
56	SF	165	ASN	N-CA-CB	8.10	121.88	109.97
3	8	64	U	N1-C1'-C2'	8.09	124.13	112.00
7	D	44	TYR	CB-CA-C	8.08	126.51	110.42
9	F	228	HIS	N-CA-CB	8.05	124.10	110.49
50	S2	1198	G	C4'-C3'-O3'	-8.04	100.93	113.00
1	5	1445	U	C2'-C3'-O3'	8.04	125.75	113.70
8	E	278	TYR	N-CA-C	-8.03	92.84	108.59
1	5	2124	G	C2'-C3'-O3'	8.03	125.74	113.70
1	5	1266	G	C2'-C3'-O3'	8.03	125.74	113.70
1	5	1440	U	C2'-C3'-O3'	8.03	125.74	113.70
1	5	5066	U	N1-C1'-C2'	8.02	124.03	112.00
1	5	151	G	N9-C1'-C2'	-8.01	99.98	112.00
1	5	4592	C	C3'-C2'-O2'	8.01	122.71	110.70
16	N	139	HIS	CA-CB-CG	-8.00	105.80	113.80
1	5	1534	A	N9-C1'-C2'	8.00	126.00	114.00
50	S2	551	U	C1'-C2'-O2'	8.00	120.39	108.40
37	i	27	SER	N-CA-C	7.99	119.62	111.07
29	a	34	ASN	CA-CB-CG	-7.99	104.61	112.60
74	SX	20	HIS	CB-CA-C	7.98	124.62	110.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	1537	A	C3'-C2'-O2'	7.98	122.67	110.70
14	L	192	PHE	N-CA-CB	7.98	121.83	109.94
1	5	4287	G	C1'-C2'-O2'	-7.98	99.83	111.80
50	S2	798	A	C3'-C2'-O2'	7.97	122.66	110.70
1	5	979	C	C2'-C3'-O3'	7.97	125.65	113.70
1	5	2305	U	O4'-C4'-C3'	-7.97	98.13	106.10
1	5	2470	C	O4'-C1'-C2'	-7.96	99.64	107.60
50	S2	631	U	N1-C1'-C2'	7.95	125.93	114.00
19	Q	4	ASP	CA-CB-CG	-7.95	104.65	112.60
21	S	29	ARG	CG-CD-NE	-7.95	94.51	112.00
50	S2	917	U	C4'-C3'-O3'	-7.95	101.08	113.00
75	SY	20	ARG	N-CA-C	7.95	120.95	108.79
1	5	974	C	C2'-C3'-O3'	7.94	125.61	113.70
1	5	4400	G	C1'-C2'-O2'	7.93	120.29	108.40
31	c	89	TYR	N-CA-C	7.92	120.17	108.14
1	5	1575	A	N9-C1'-C2'	7.92	123.87	112.00
1	5	219	G	O4'-C1'-C2'	-7.91	99.69	107.60
50	S2	181	A	C4'-C3'-O3'	7.91	121.27	109.40
50	S2	1109	C	C1'-C2'-O2'	7.91	120.26	108.40
1	5	2553	A	N9-C1'-C2'	7.90	125.86	114.00
1	5	486	C	C2'-C3'-O3'	7.90	125.55	113.70
18	P	25	HIS	CB-CA-C	7.90	123.42	110.78
1	5	406	C	C2'-C3'-O3'	7.90	125.54	113.70
7	D	145	TYR	CB-CA-C	7.88	122.96	110.19
50	S2	1309	C	C4'-C3'-O3'	7.88	124.83	113.00
1	5	1916	G	N9-C1'-C2'	7.88	123.81	112.00
1	5	2079	G	C4'-C3'-O3'	-7.88	101.19	113.00
1	5	3727	A	C1'-C2'-O2'	-7.87	96.59	108.40
1	5	4737	G	N9-C1'-C2'	7.87	123.80	112.00
27	Y	18	HIS	CA-CB-CG	-7.86	105.94	113.80
1	5	1382	G	N9-C1'-C2'	7.86	123.78	112.00
50	S2	1578	U	N1-C1'-C2'	7.85	125.77	114.00
50	S2	1133	A	C1'-C2'-O2'	7.83	120.14	108.40
5	B	258	HIS	N-CA-C	7.82	127.09	109.81
50	S2	2	A	C4'-C3'-O3'	7.82	121.13	109.40
1	5	3596	A	C3'-C2'-O2'	7.82	122.43	110.70
1	5	85	G	C1'-C2'-O2'	7.81	123.52	111.80
1	5	2251	G	C4'-C3'-O3'	7.81	121.11	109.40
1	5	3739	C	O4'-C1'-C2'	-7.81	99.79	107.60
1	5	1378	C	N1-C1'-C2'	7.78	123.67	112.00
50	S2	1113	A	N9-C1'-C2'	7.78	123.67	112.00
44	p	14	TYR	N-CA-C	-7.78	102.43	112.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	427	U	N1-C1'-C2'	7.77	123.66	112.00
43	o	31	ASP	CA-CB-CG	-7.77	104.83	112.60
3	8	126	C	C2'-C3'-O3'	7.76	121.15	109.50
15	M	6	PHE	CA-CB-CG	-7.76	106.04	113.80
1	5	2053	C	C4'-C3'-O3'	-7.76	101.36	113.00
1	5	1396	G	C3'-C2'-O2'	7.76	122.33	110.70
1	5	2661	U	C2'-C3'-O3'	7.75	121.12	109.50
38	j	27	TYR	CA-CB-CG	-7.75	99.95	113.90
1	5	3871	A	N9-C1'-C2'	7.74	123.62	112.00
30	b	17	HIS	N-CA-C	7.74	123.04	112.90
1	5	686	A	C4'-C3'-O3'	7.73	121.00	109.40
65	SO	147	ARG	CG-CD-NE	-7.73	94.99	112.00
50	S2	64	A	C2'-C3'-O3'	-7.73	102.11	113.70
1	5	4464	A	N9-C1'-C2'	7.72	123.59	112.00
50	S2	642	U	N1-C1'-C2'	-7.72	100.42	112.00
1	5	2125	C	C1'-C2'-O2'	-7.72	100.22	111.80
52	SB	205	TYR	CA-CB-CG	-7.71	100.03	113.90
15	M	17	PHE	N-CA-C	7.71	118.78	108.38
16	N	143	ARG	CG-CD-NE	-7.71	95.05	112.00
1	5	4251	A	N9-C1'-C2'	7.70	123.56	112.00
4	A	211	PHE	N-CA-C	-7.70	103.44	112.92
1	5	4215	C	O4'-C1'-C2'	-7.69	99.91	107.60
1	5	147	A	N9-C1'-C2'	7.68	123.52	112.00
50	S2	215	G	C2'-C3'-O3'	7.68	121.02	109.50
7	D	31	TYR	N-CA-C	-7.67	97.81	110.17
1	5	5027	C	C2'-C3'-O3'	7.67	121.01	109.50
4	A	16	PHE	CB-CA-C	7.66	121.28	111.40
1	5	1637	A	N9-C1'-C2'	-7.65	102.52	114.00
8	E	59	TYR	N-CA-C	-7.65	94.51	110.80
1	5	2280	G	N9-C1'-C2'	7.65	123.47	112.00
1	5	747	A	C3'-C2'-O2'	7.64	126.07	114.60
1	5	4199	C	O4'-C1'-C2'	-7.64	99.96	107.60
43	o	48	TYR	CA-CB-CG	-7.64	100.14	113.90
50	S2	1246	A	C1'-C2'-O2'	7.64	119.86	108.40
1	5	3859	G	C4'-C3'-O3'	-7.64	101.54	113.00
29	a	62	HIS	N-CA-CB	7.64	123.39	110.49
1	5	1815	G	N9-C1'-C2'	7.63	125.44	114.00
50	S2	1088	U	N1-C1'-C2'	7.62	125.43	114.00
62	SL	92	TYR	N-CA-C	7.62	119.72	108.60
36	h	119	PHE	CB-CA-C	-7.61	95.27	110.42
55	SE	172	PHE	N-CA-C	7.61	119.71	108.60
1	5	1	C	C4'-C3'-O3'	7.61	120.81	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4966	A	N9-C1'-C2'	7.60	123.41	112.00
1	5	4414	A	C4'-C3'-O3'	-7.60	101.60	113.00
1	5	1998	A	N9-C1'-C2'	7.60	125.40	114.00
50	S2	919	A	C2'-C3'-O3'	-7.60	98.10	109.50
1	5	2464	C	C1'-C2'-O2'	-7.60	100.40	111.80
1	5	2324	C	C2'-C3'-O3'	7.58	125.08	113.70
60	SJ	48	PHE	N-CA-C	-7.58	101.77	111.02
1	5	2268	A	N9-C1'-C2'	7.58	125.37	114.00
8	E	275	ASN	N-CA-CB	7.58	121.14	109.85
59	SI	113	TYR	CA-CB-CG	7.58	127.54	113.90
50	S2	1432	U	C2'-C3'-O3'	-7.58	102.34	113.70
28	Z	38	TYR	CB-CA-C	7.57	123.83	110.36
1	5	170	C	C2'-C3'-O3'	7.57	120.85	109.50
50	S2	3	C	N1-C1'-C2'	7.56	125.34	114.00
1	5	2812	A	N9-C1'-C2'	7.56	123.34	112.00
66	SP	21	ASP	CB-CG-OD1	-7.55	101.02	118.40
1	5	4464	A	C2'-C3'-O3'	7.55	125.02	113.70
50	S2	601	G	C1'-C2'-O2'	-7.55	100.48	111.80
50	S2	1556	A	C4'-C3'-O3'	7.55	120.72	109.40
6	C	102	PHE	N-CA-CB	7.55	121.23	109.69
44	p	34	HIS	N-CA-C	-7.55	104.12	112.72
50	S2	1284	A	C1'-C2'-O2'	-7.54	100.48	111.80
1	5	3698	G	C4'-C3'-O3'	-7.54	101.69	113.00
86	S6	55	U	P-O3'-C3'	-7.53	108.90	120.20
1	5	514	U	C2'-C3'-O3'	7.53	124.99	113.70
50	S2	450	C	C4'-C3'-O3'	-7.52	101.71	113.00
1	5	1455	G	C2'-C3'-O3'	7.52	124.98	113.70
29	a	41	HIS	N-CA-C	-7.52	102.63	112.41
1	5	514	U	C4'-C3'-O3'	7.52	124.28	113.00
50	S2	1645	C	N1-C1'-C2'	7.51	123.27	112.00
4	A	189	TYR	CA-CB-CG	7.51	127.42	113.90
5	B	274	TYR	CA-CB-CG	-7.51	100.38	113.90
1	5	350	C	N1-C1'-C2'	7.50	123.25	112.00
1	5	29	G	N9-C1'-C2'	7.49	123.24	112.00
1	5	1075	G	C4'-C3'-O3'	-7.49	101.77	113.00
53	SC	241	PHE	CA-CB-CG	-7.49	106.31	113.80
1	5	1176	C	C3'-C2'-O2'	7.49	121.93	110.70
62	SL	100	ASN	OD1-CG-ND2	-7.49	115.11	122.60
4	A	211	PHE	CA-CB-CG	-7.48	106.32	113.80
1	5	2038	U	N1-C1'-C2'	7.48	123.22	112.00
1	5	4234	A	N9-C1'-C2'	7.48	125.22	114.00
50	S2	384	U	C2'-C3'-O3'	7.48	124.92	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	291	U	N1-C1'-C2'	7.48	123.22	112.00
1	5	1734	G	C2'-C3'-O3'	7.48	120.71	109.50
24	V	97	TYR	CA-CB-CG	-7.46	100.47	113.90
1	5	1355	G	N9-C1'-C2'	7.46	123.19	112.00
19	Q	4	ASP	CB-CA-C	7.46	122.73	111.70
1	5	30	C	N1-C1'-C2'	7.45	123.18	112.00
59	SI	198	TYR	N-CA-C	-7.45	103.18	111.82
50	S2	104	A	C2'-C3'-O3'	7.45	124.87	113.70
50	S2	863	U	N1-C1'-C2'	7.45	123.17	112.00
1	5	2851	G	C2'-C3'-O3'	7.44	124.86	113.70
1	5	4221	C	C2'-C3'-O3'	-7.44	102.55	113.70
27	Y	61	HIS	N-CA-CB	7.43	120.79	110.01
75	SY	86	GLU	CB-CG-CD	-7.43	99.96	112.60
1	5	2256	C	C2'-C3'-O3'	7.43	120.65	109.50
1	5	1214	C	C3'-C2'-O2'	-7.43	103.46	114.60
7	D	175	HIS	N-CA-C	-7.43	97.71	109.23
16	N	180	PHE	CB-CA-C	7.43	125.20	110.42
9	F	168	ARG	CG-CD-NE	-7.43	95.66	112.00
28	Z	38	TYR	N-CA-C	-7.43	99.22	110.14
50	S2	1109	C	O4'-C1'-N1	7.42	119.64	108.50
50	S2	1395	C	O4'-C1'-C2'	-7.42	100.18	107.60
1	5	1890	G	N9-C1'-C2'	-7.41	100.89	112.00
1	5	4677	U	C1'-C2'-O2'	7.40	119.50	108.40
6	C	41	HIS	CA-CB-CG	-7.40	106.40	113.80
50	S2	1719	A	C4'-C3'-O3'	-7.40	101.90	113.00
18	P	140	MET	N-CA-C	7.40	120.54	110.55
28	Z	54	THR	N-CA-C	7.39	122.03	113.38
50	S2	26	U	O4'-C1'-C2'	-7.39	100.21	107.60
1	5	2589	C	C2'-C3'-O3'	7.39	124.78	113.70
1	5	2091	C	C2'-C3'-O3'	7.39	120.58	109.50
47	1	416	TYR	N-CA-C	7.39	119.41	111.36
50	S2	645	C	N1-C1'-C2'	-7.39	100.92	112.00
34	f	4	ARG	CG-CD-NE	-7.38	95.76	112.00
50	S2	146	G	C3'-C2'-O2'	7.38	121.77	110.70
1	5	2509	C	C1'-C2'-O2'	-7.38	97.33	108.40
1	5	4745	G	C2'-C3'-O3'	-7.37	102.64	113.70
1	5	1729	A	C4'-C3'-O3'	-7.37	101.94	113.00
1	5	3645	U	C4'-C3'-O3'	-7.37	101.95	113.00
9	F	168	ARG	CB-CG-CD	7.37	128.24	111.30
1	5	3736	A	C1'-C2'-O2'	-7.36	97.36	108.40
1	5	1832	C	C2'-C3'-O3'	7.36	124.74	113.70
50	S2	923	G	C2'-C3'-O3'	7.36	124.74	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	332	C	N1-C1'-C2'	7.35	123.03	112.00
1	5	3676	G	C2'-C3'-O3'	-7.35	102.67	113.70
5	B	179	HIS	CA-CB-CG	-7.35	106.45	113.80
6	C	42	THR	N-CA-C	7.35	120.16	111.71
62	SL	120	VAL	N-CA-C	-7.35	102.04	110.05
34	f	4	ARG	N-CA-CB	7.34	122.90	110.49
50	S2	1452	A	C2'-C3'-O3'	7.34	120.52	109.50
64	SN	18	TYR	N-CA-CB	7.34	122.89	110.49
50	S2	1703	C	C1'-C2'-O2'	7.34	119.40	108.40
1	5	1484	G	O4'-C4'-C3'	-7.33	98.77	106.10
7	D	119	TYR	N-CA-C	-7.33	101.86	111.02
1	5	454	U	C2'-C3'-O3'	7.32	124.68	113.70
50	S2	353	C	C3'-C2'-O2'	7.32	121.68	110.70
50	S2	594	A	N9-C1'-C2'	-7.32	103.02	114.00
1	5	1887	G	N9-C1'-C2'	-7.32	101.02	112.00
1	5	4750	G	C3'-C2'-O2'	7.32	121.67	110.70
50	S2	1568	C	C1'-C2'-O2'	-7.32	100.83	111.80
1	5	3790	U	N1-C1'-C2'	7.31	124.97	114.00
45	r	21	ASN	CB-CA-C	7.31	121.58	111.63
1	5	1280	C	C4'-C3'-O3'	-7.31	102.03	113.00
38	j	71	TYR	CA-CB-CG	7.31	127.06	113.90
1	5	2797	C	N1-C1'-C2'	-7.31	103.04	114.00
23	U	90	TYR	CB-CA-C	-7.30	99.36	110.90
83	Sg	64	HIS	N-CA-C	7.30	120.02	109.14
1	5	4104	G	C1'-C2'-O2'	-7.30	100.85	111.80
10	G	54	PHE	CB-CA-C	7.29	122.77	111.02
33	e	60	TYR	N-CA-C	-7.29	101.49	110.61
32	d	86	VAL	N-CA-C	7.29	117.97	108.35
50	S2	1039	C	C2'-C3'-O3'	7.29	124.63	113.70
50	S2	1648	G	C2'-C3'-O3'	-7.29	98.56	109.50
50	S2	1836	G	C3'-C2'-O2'	-7.29	103.67	114.60
4	A	209	HIS	CA-C-N	7.29	128.95	119.84
4	A	209	HIS	C-N-CA	7.29	128.95	119.84
12	I	4	ARG	CG-CD-NE	-7.28	95.98	112.00
1	5	5001	U	N1-C1'-C2'	7.28	122.92	112.00
4	A	34	PHE	N-CA-CB	7.28	120.89	109.82
62	SL	99	TYR	N-CA-C	-7.28	101.48	110.65
45	r	31	ASN	N-CA-CB	7.28	122.17	110.16
50	S2	182	C	C2'-C3'-O3'	7.28	124.62	113.70
75	SY	76	TYR	CA-CB-CG	-7.28	100.80	113.90
50	S2	1205	C	C2'-C3'-O3'	-7.28	102.78	113.70
1	5	3804	G	C1'-C2'-O2'	7.28	119.31	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	8	64	U	C2'-C3'-O3'	7.27	124.61	113.70
32	d	73	TRP	N-CA-C	-7.27	101.53	110.61
50	S2	1012	A	C3'-C2'-O2'	7.26	121.60	110.70
50	S2	1648	G	C4'-C3'-O3'	7.26	120.30	109.40
1	5	2852	U	O4'-C1'-C2'	-7.25	100.35	107.60
50	S2	381	C	C1'-C2'-O2'	-7.25	97.53	108.40
1	5	2123	C	C2'-C3'-O3'	7.25	120.37	109.50
1	5	2329	U	C1'-C2'-O2'	-7.25	100.93	111.80
1	5	2325	C	O4'-C1'-C2'	-7.24	100.36	107.60
1	5	4331	G	C4'-C3'-O3'	-7.24	102.13	113.00
1	5	3625	G	C2'-C3'-O3'	7.24	124.56	113.70
60	SJ	48	PHE	CA-CB-CG	-7.24	106.56	113.80
1	5	2806	A	C1'-C2'-O2'	7.24	119.26	108.40
34	f	6	TRP	N-CA-C	-7.24	95.38	110.80
52	SB	220	LYS	N-CA-C	7.24	114.73	108.22
12	I	213	HIS	CB-CA-C	7.24	121.56	111.86
50	S2	1016	U	C2'-C3'-O3'	-7.24	102.85	113.70
50	S2	1282	A	C2'-C3'-O3'	-7.24	102.85	113.70
1	5	3692	A	C1'-C2'-O2'	7.23	119.25	108.40
1	5	2442	G	C4'-C3'-O3'	-7.23	102.16	113.00
50	S2	1688	C	C2'-C3'-O3'	-7.22	102.86	113.70
37	i	28	ARG	CG-CD-NE	-7.22	96.12	112.00
50	S2	1142	G	C1'-C2'-O2'	7.22	119.23	108.40
2	7	72	U	C2'-C3'-O3'	7.22	124.53	113.70
50	S2	445	A	C2'-C3'-O3'	-7.21	102.88	113.70
5	B	116	ARG	CG-CD-NE	7.21	127.86	112.00
50	S2	1863	A	C3'-C2'-O2'	-7.21	103.79	114.60
62	SL	62	PHE	CA-CB-CG	-7.21	106.59	113.80
50	S2	1198	G	C2'-C3'-O3'	7.21	124.51	113.70
1	5	2271	C	N1-C1'-C2'	7.20	122.80	112.00
1	5	956	A	C2'-C3'-O3'	7.20	120.30	109.50
57	SG	61	PHE	CB-CA-C	7.20	116.92	110.44
12	I	92	HIS	N-CA-C	-7.20	101.00	110.07
27	Y	81	TYR	CA-CB-CG	-7.19	100.95	113.90
1	5	3611	A	N9-C1'-C2'	7.19	122.79	112.00
1	5	3959	U	C4'-C3'-O3'	7.19	120.19	109.40
20	R	32	ILE	N-CA-C	-7.19	102.08	110.21
1	5	1292	C	C2'-C3'-O3'	7.19	124.48	113.70
53	SC	241	PHE	N-CA-C	-7.19	103.14	110.97
50	S2	294	U	N1-C1'-C2'	7.18	124.78	114.00
1	5	292	G	N9-C1'-C2'	7.18	124.77	114.00
50	S2	444	G	O4'-C1'-C2'	-7.18	100.42	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	596	U	N1-C1'-C2'	7.18	122.77	112.00
1	5	2666	U	N1-C1'-C2'	-7.17	101.24	112.00
50	S2	1433	C	C5'-C4'-C3'	7.17	126.75	116.00
1	5	1364	U	C2'-C3'-O3'	7.17	124.45	113.70
59	SI	55	TYR	CA-CB-CG	-7.17	101.00	113.90
1	5	2319	C	N1-C1'-C2'	7.17	122.75	112.00
50	S2	1	U	C5'-C4'-C3'	7.17	125.95	115.20
50	S2	451	G	C2'-C3'-O3'	-7.16	102.96	113.70
53	SC	236	PHE	CA-CB-CG	-7.16	106.64	113.80
50	S2	870	A	C4'-C3'-O3'	7.16	120.13	109.40
37	i	39	PHE	CA-CB-CG	-7.14	106.66	113.80
50	S2	426	A	C4'-C3'-O3'	7.14	123.71	113.00
50	S2	1546	G	C1'-C2'-O2'	-7.14	97.69	108.40
1	5	3882	C	N1-C1'-C2'	7.13	122.70	112.00
50	S2	399	C	N1-C1'-C2'	-7.13	103.30	114.00
50	S2	665	G	C4'-C3'-O3'	-7.13	102.31	113.00
50	S2	824	C	N1-C1'-C2'	7.13	122.69	112.00
1	5	2382	A	C2'-C3'-O3'	-7.13	103.01	113.70
1	5	4280	A	C2'-C3'-O3'	7.13	124.39	113.70
50	S2	139	C	C3'-C2'-O2'	7.13	121.39	110.70
3	8	38	U	C3'-C2'-O2'	7.12	121.39	110.70
38	j	27	TYR	N-CA-CB	7.12	120.77	109.51
50	S2	646	G	C1'-C2'-O2'	7.12	119.08	108.40
69	SS	86	ARG	CG-CD-NE	-7.12	96.33	112.00
1	5	2827	G	O4'-C4'-C3'	-7.11	98.99	106.10
27	Y	87	ARG	NE-CZ-NH2	7.11	125.60	119.20
50	S2	1309	C	C1'-C2'-O2'	7.11	119.06	108.40
1	5	4750	G	N9-C1'-C2'	-7.10	101.34	112.00
19	Q	35	LEU	N-CA-C	7.10	118.91	111.03
1	5	4325	A	N9-C1'-C2'	7.10	122.65	112.00
50	S2	532	C	C2'-C3'-O3'	7.10	124.35	113.70
50	S2	1667	U	N1-C1'-C2'	7.10	122.64	112.00
50	S2	1063	C	N1-C1'-C2'	-7.09	101.36	112.00
50	S2	367	U	N1-C1'-C2'	-7.09	101.36	112.00
1	5	1238	A	C3'-C2'-O2'	7.09	125.24	114.60
1	5	2347	A	C1'-C2'-O2'	7.09	122.44	111.80
1	5	4531	U	O4'-C4'-C3'	-7.09	99.01	106.10
9	F	83	PHE	N-CA-C	7.09	119.94	107.61
1	5	93	G	N9-C1'-C2'	7.08	124.62	114.00
50	S2	1275	G	C2'-C3'-O3'	-7.08	103.08	113.70
64	SN	18	TYR	CA-CB-CG	-7.08	101.15	113.90
1	5	4528	G	O4'-C1'-C2'	-7.08	100.52	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	1492	U	C1'-C2'-O2'	7.07	119.00	108.40
1	5	3938	G	N9-C1'-C2'	7.07	124.60	114.00
1	5	1650	A	O4'-C4'-C3'	-7.06	99.04	106.10
1	5	3883	U	N1-C1'-C2'	7.06	122.59	112.00
1	5	5048	A	C4'-C3'-O3'	-7.06	102.41	113.00
1	5	2122	G	C2'-C3'-O3'	7.05	120.08	109.50
1	5	353	A	N9-C1'-C2'	-7.05	103.42	114.00
1	5	4738	C	C4'-C3'-O3'	-7.05	102.42	113.00
1	5	5022	U	C2'-C3'-O3'	7.05	124.28	113.70
50	S2	1401	A	C2'-C3'-O3'	7.05	124.28	113.70
50	S2	918	U	C2'-C3'-O3'	7.05	120.07	109.50
1	5	4762	A	C4'-C3'-O3'	7.05	119.97	109.40
20	R	118	HIS	N-CA-C	-7.05	104.25	112.92
1	5	4693	C	C2'-C3'-O3'	7.04	124.25	113.70
52	SB	82	ARG	CG-CD-NE	-7.04	96.52	112.00
6	C	340	ILE	N-CA-C	-7.03	106.06	111.62
50	S2	923	G	C4'-C3'-O3'	-7.03	102.45	113.00
1	5	4463	U	O4'-C1'-C2'	-7.03	100.57	107.60
50	S2	1475	G	C4'-C3'-O3'	7.03	119.94	109.40
7	D	29	ASP	N-CA-C	-7.02	98.60	109.76
50	S2	1434	C	N1-C1'-C2'	7.02	122.53	112.00
1	5	4666	G	C4'-C3'-O3'	-7.02	102.47	113.00
50	S2	1394	G	C2'-C3'-O3'	7.02	124.23	113.70
1	5	4194	U	C3'-C2'-O2'	7.02	121.22	110.70
1	5	4677	U	N1-C1'-C2'	-7.02	101.48	112.00
64	SN	114	ARG	N-CA-C	-7.02	103.98	112.54
50	S2	501	C	O4'-C1'-C2'	-7.01	100.58	107.60
9	F	197	TYR	CB-CA-C	-7.01	96.47	110.42
1	5	2046	G	C3'-C2'-O2'	7.01	125.11	114.60
1	5	514	U	N1-C1'-C2'	-7.01	101.49	112.00
33	e	43	ASN	CB-CA-C	7.01	121.26	109.84
1	5	265	C	C4'-C3'-O3'	7.00	119.90	109.40
50	S2	1450	G	C3'-C2'-O2'	7.00	121.19	110.70
60	SJ	13	TYR	N-CA-C	7.00	119.39	108.96
30	b	6	ASN	CA-CB-CG	-6.99	105.61	112.60
1	5	187	U	C2'-C3'-O3'	6.99	124.18	113.70
1	5	384	A	N9-C1'-C2'	6.99	122.48	112.00
19	Q	34	PHE	CA-CB-CG	-6.99	106.81	113.80
24	V	97	TYR	CB-CA-C	6.99	121.07	109.89
1	5	4227	U	C2'-C3'-O3'	6.99	124.18	113.70
1	5	5043	A	N9-C1'-C2'	6.99	122.48	112.00
1	5	2847	G	C1'-C2'-O2'	6.98	118.88	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2851	G	C1'-C2'-O2'	6.98	118.88	108.40
1	5	505	G	C2'-C3'-O3'	6.98	124.17	113.70
12	I	35	ASP	N-CA-C	6.98	119.00	108.46
62	SL	100	ASN	N-CA-C	6.98	125.67	110.80
1	5	172	C	O4'-C1'-C2'	-6.98	100.62	107.60
50	S2	149	A	N9-C1'-C2'	6.97	122.46	112.00
50	S2	1394	G	O4'-C1'-C2'	-6.97	100.62	107.60
50	S2	1841	C	C3'-C2'-O2'	6.97	121.16	110.70
1	5	3908	A	N9-C1'-C2'	6.97	124.45	114.00
1	5	48	G	C2'-C3'-O3'	6.96	119.94	109.50
1	5	2075	G	C2'-C3'-O3'	6.96	124.13	113.70
1	5	2328	G	C3'-C2'-O2'	6.95	121.13	110.70
27	Y	81	TYR	CB-CA-C	6.95	123.17	111.22
50	S2	499	G	C2'-C3'-O3'	6.95	124.12	113.70
50	S2	1850	A	N9-C1'-C2'	6.94	122.42	112.00
1	5	4566	U	C4'-C3'-O3'	-6.94	102.58	113.00
1	5	307	A	N9-C1'-C2'	6.94	122.41	112.00
53	SC	198	ALA	CA-C-N	-6.94	113.16	120.03
53	SC	198	ALA	C-N-CA	-6.94	113.16	120.03
1	5	1573	G	N9-C1'-C2'	6.94	122.41	112.00
1	5	1887	G	C2'-C3'-O3'	6.93	124.10	113.70
1	5	43	U	C1'-C2'-O2'	6.93	118.80	108.40
1	5	55	G	C1'-C2'-O2'	6.92	118.79	108.40
1	5	2521	G	C3'-C2'-O2'	6.92	121.09	110.70
50	S2	402	C	C1'-C2'-O2'	6.92	118.79	108.40
1	5	279	A	C4'-C3'-O3'	-6.92	99.02	109.40
18	P	139	TYR	CA-CB-CG	-6.92	101.44	113.90
1	5	4464	A	C4'-C3'-O3'	-6.92	102.63	113.00
1	5	4762	A	C2'-C3'-O3'	-6.91	99.13	109.50
1	5	1572	U	N1-C1'-C2'	6.91	122.37	112.00
3	8	35	C	N1-C1'-C2'	6.91	122.36	112.00
63	SM	127	TYR	CA-CB-CG	6.91	126.33	113.90
82	Sf	151	ASN	N-CA-C	6.90	119.00	109.54
37	i	26	HIS	CA-CB-CG	-6.90	106.90	113.80
1	5	2490	U	C2'-C3'-O3'	6.89	119.84	109.50
1	5	2438	A	N9-C1'-C2'	-6.89	101.66	112.00
1	5	2714	G	C4'-C3'-O3'	-6.89	102.66	113.00
1	5	4078	C	C1'-C2'-O2'	6.89	118.73	108.40
52	SB	67	PHE	N-CA-CB	-6.89	100.10	111.74
80	Sd	12	ARG	N-CA-C	-6.89	105.67	112.97
1	5	1554	A	C1'-C2'-O2'	6.88	118.72	108.40
1	5	2665	U	C2'-C3'-O3'	6.88	124.02	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1358	G	O4'-C1'-C2'	-6.88	100.72	107.60
50	S2	398	A	C1'-C2'-O2'	-6.88	101.48	111.80
1	5	2581	A	N9-C1'-C2'	6.88	122.31	112.00
59	SI	66	SER	N-CA-C	6.88	119.86	109.41
52	SB	205	TYR	CB-CA-C	6.88	118.06	110.15
1	5	354	U	N1-C1'-C2'	-6.87	103.69	114.00
13	J	99	PHE	CA-CB-CG	-6.87	106.93	113.80
86	S6	56	C	P-O3'-C3'	-6.87	109.89	120.20
1	5	1632	A	C1'-C2'-O2'	6.87	118.70	108.40
7	D	54	ARG	CB-CG-CD	6.87	127.10	111.30
50	S2	1059	G	N9-C1'-C2'	6.87	122.30	112.00
50	S2	1851	A	N9-C1'-C2'	6.87	122.30	112.00
51	SA	33	GLN	OE1-CD-NE2	6.87	129.47	122.60
83	Sg	140	TYR	CA-CB-CG	-6.86	101.55	113.90
1	5	2649	G	N9-C1'-C2'	6.86	122.28	112.00
50	S2	1082	A	N9-C1'-C2'	6.86	122.28	112.00
1	5	4560	C	C4'-C3'-O3'	-6.85	99.13	109.40
9	F	58	HIS	N-CA-CB	6.85	119.94	110.01
1	5	4303	C	C3'-C2'-O2'	6.85	120.97	110.70
43	o	78	ARG	NE-CZ-NH2	6.85	125.36	119.20
50	S2	427	U	P-O5'-C5'	6.84	131.17	120.90
50	S2	964	A	N9-C1'-C2'	6.84	124.27	114.00
1	5	2263	A	C4'-C3'-O3'	-6.84	99.14	109.40
51	SA	9	GLN	CA-CB-CG	6.84	127.77	114.10
1	5	84	A	O4'-C4'-C3'	-6.83	99.27	106.10
1	5	4479	A	C1'-C2'-O2'	6.83	118.64	108.40
1	5	4280	A	N9-C1'-C2'	-6.83	101.76	112.00
1	5	4270	C	C4'-C3'-O3'	-6.83	102.76	113.00
1	5	4750	G	C2'-C3'-O3'	-6.83	103.46	113.70
1	5	294	G	N9-C1'-C2'	6.82	122.24	112.00
1	5	3615	G	C4'-C3'-O3'	6.82	119.63	109.40
1	5	1241	C	C2'-C3'-O3'	6.82	123.93	113.70
1	5	727	C	C2'-C3'-O3'	6.82	119.73	109.50
50	S2	76	U	C4'-C3'-O3'	-6.82	102.77	113.00
1	5	3868	G	N9-C1'-C2'	-6.82	103.77	114.00
36	h	101	ASN	N-CA-C	-6.82	104.27	112.59
7	D	44	TYR	CA-CB-CG	-6.82	101.63	113.90
67	SQ	85	ARG	CG-CD-NE	-6.81	97.02	112.00
1	5	2844	A	C4'-C3'-O3'	-6.81	102.79	113.00
1	5	3671	G	N9-C1'-C2'	6.81	122.21	112.00
1	5	82	U	C1'-C2'-O2'	6.81	118.61	108.40
1	5	4872	G	C2'-C3'-O3'	6.80	119.71	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	N	119	TYR	N-CA-C	-6.80	100.39	110.46
32	d	87	ARG	N-CA-CB	6.80	119.75	110.57
1	5	4519	C	C2'-C3'-O3'	6.80	123.89	113.70
58	SH	106	ARG	N-CA-C	-6.79	103.11	111.40
1	5	2088	A	C2'-C3'-O3'	6.79	123.88	113.70
1	5	1805	A	N9-C1'-C2'	6.79	124.18	114.00
1	5	2554	U	C2'-C3'-O3'	6.78	123.87	113.70
1	5	220	C	C4'-C3'-O3'	-6.78	102.83	113.00
50	S2	1249	C	C2'-C3'-O3'	6.78	123.87	113.70
1	5	2689	C	O4'-C1'-C2'	-6.78	100.82	107.60
1	5	4120	U	N1-C1'-C2'	-6.78	103.83	114.00
50	S2	1669	G	N9-C1'-C2'	6.78	122.17	112.00
1	5	1615	C	C2'-C3'-O3'	6.77	123.86	113.70
1	5	2395	A	C2'-C3'-O3'	6.77	119.65	109.50
1	5	703	G	C2'-C3'-O3'	-6.77	103.55	113.70
1	5	3859	G	C1'-C2'-O2'	6.77	118.55	108.40
50	S2	639	C	C3'-C2'-O2'	6.77	120.85	110.70
1	5	3663	A	O4'-C4'-C3'	-6.76	99.34	106.10
1	5	962	C	N1-C1'-C2'	6.76	124.14	114.00
1	5	3878	C	C4'-C3'-O3'	-6.75	99.27	109.40
21	S	47	PHE	N-CA-C	6.75	118.44	111.14
1	5	2281	U	C4'-C3'-O3'	-6.75	102.87	113.00
50	S2	1000	C	C1'-C2'-O2'	6.75	118.53	108.40
1	5	1533	A	C2'-C3'-O3'	6.75	119.62	109.50
1	5	4936	G	C4'-C3'-O3'	6.75	123.12	113.00
62	SL	17	PHE	N-CA-CB	6.75	120.10	109.71
1	5	2403	A	N9-C1'-C2'	6.74	122.12	112.00
8	E	217	LYS	N-CA-C	6.74	120.59	110.14
1	5	1671	U	C3'-C2'-O2'	-6.74	100.59	110.70
32	d	73	TRP	CA-CB-CG	6.74	126.41	113.60
1	5	38	A	C4'-C3'-O3'	-6.74	102.89	113.00
1	5	4045	G	C1'-C2'-O2'	6.74	118.51	108.40
19	Q	181	ARG	CA-CB-CG	6.74	127.58	114.10
50	S2	960	U	C2'-C3'-O3'	6.74	123.81	113.70
50	S2	1292	C	P-O5'-C5'	6.74	131.01	120.90
1	5	1522	G	C1'-C2'-O2'	6.74	118.50	108.40
1	5	3619	G	C4'-C3'-O3'	-6.73	102.91	113.00
62	SL	13	GLN	N-CA-C	-6.73	101.29	109.83
15	M	6	PHE	CB-CA-C	6.72	122.27	112.05
50	S2	496	C	C3'-C2'-O2'	6.72	120.79	110.70
81	Se	45	VAL	N-CA-C	-6.72	104.30	110.82
1	5	2082	G	N9-C1'-C2'	6.72	122.08	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1947	U	C4'-C3'-O3'	6.72	123.08	113.00
50	S2	1603	G	O4'-C4'-C3'	-6.71	99.39	106.10
50	S2	1090	C	C4'-C3'-O3'	-6.71	102.93	113.00
1	5	2406	G	N9-C1'-C2'	-6.71	101.94	112.00
7	D	145	TYR	CA-CB-CG	-6.71	101.82	113.90
50	S2	963	A	N9-C1'-C2'	6.71	122.06	112.00
50	S2	603	C	C4'-C3'-O3'	6.71	119.46	109.40
50	S2	1668	U	N1-C1'-C2'	6.71	122.06	112.00
55	SE	18	TRP	CB-CA-C	6.71	121.89	111.02
63	SM	73	GLN	N-CA-C	-6.71	101.97	111.56
1	5	4224	A	C1'-C2'-O2'	6.70	118.45	108.40
13	J	146	ARG	CG-CD-NE	-6.70	97.25	112.00
1	5	3832	U	C1'-C2'-O2'	6.70	118.45	108.40
1	5	4228	G	N9-C1'-C2'	-6.70	101.95	112.00
1	5	2675	G	C4'-C3'-O3'	-6.70	102.95	113.00
1	5	4476	C	C4'-C3'-O3'	-6.70	102.95	113.00
34	f	24	HIS	N-CA-C	-6.70	103.67	110.97
51	SA	10	MET	N-CA-C	6.70	118.58	111.28
50	S2	327	G	C2'-C3'-O3'	6.69	119.54	109.50
1	5	5056	A	N9-C1'-C2'	6.69	122.04	112.00
6	C	22	VAL	N-CA-C	6.69	117.67	111.45
35	g	95	PHE	CB-CA-C	-6.69	100.66	110.96
4	A	194	ASN	N-CA-C	6.69	120.16	108.52
1	5	2804	C	C1'-C2'-O2'	6.68	118.42	108.40
1	5	92	C	C1'-C2'-O2'	6.68	118.42	108.40
30	b	7	HIS	CB-CA-C	-6.68	97.13	110.42
1	5	4115	G	C4'-C3'-O3'	6.67	119.41	109.40
1	5	2846	G	C1'-C2'-O2'	6.67	118.41	108.40
50	S2	28	U	C4'-C3'-O3'	6.67	123.01	113.00
1	5	4700	A	C1'-C2'-O2'	6.67	118.40	108.40
1	5	3727	A	N9-C1'-C2'	6.66	122.00	112.00
20	R	94	THR	N-CA-C	6.66	121.42	113.16
50	S2	350	C	C1'-C2'-O2'	6.66	118.39	108.40
50	S2	683	G	C4'-C3'-O3'	-6.66	103.00	113.00
1	5	2658	G	N9-C1'-C2'	-6.66	102.01	112.00
1	5	4451	G	N9-C1'-C2'	6.66	121.99	112.00
3	8	74	U	O4'-C1'-C2'	-6.66	100.94	107.60
1	5	4880	C	N1-C1'-C2'	6.66	121.98	112.00
1	5	417	G	O4'-C1'-C2'	-6.65	100.95	107.60
1	5	4282	A	N9-C1'-C2'	6.65	123.98	114.00
21	S	29	ARG	CB-CA-C	6.65	120.71	109.80
50	S2	1442	U	O4'-C1'-C2'	-6.65	100.95	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1961	G	C2'-C3'-O3'	6.65	123.68	113.70
1	5	1633	G	C2'-C3'-O3'	-6.65	103.73	113.70
50	S2	309	G	C4'-C3'-O3'	-6.65	103.03	113.00
50	S2	1735	A	N9-C1'-C2'	6.64	121.97	112.00
1	5	5062	G	O4'-C1'-C2'	-6.64	100.96	107.60
1	5	3640	U	C3'-C2'-O2'	6.64	120.66	110.70
1	5	2818	C	C1'-C2'-O2'	6.63	118.35	108.40
50	S2	956	G	C2'-C3'-O3'	-6.63	103.75	113.70
1	5	4548	A	P-O5'-C5'	6.63	130.84	120.90
1	5	1317	U	C4'-C3'-O3'	-6.63	103.06	113.00
1	5	2474	G	C4'-C3'-O3'	-6.63	103.06	113.00
1	5	2790	U	N1-C1'-C2'	6.63	123.94	114.00
14	L	64	VAL	N-CA-C	6.63	123.13	109.34
1	5	220	C	C2'-C3'-O3'	6.63	123.64	113.70
1	5	4165	C	O4'-C1'-C2'	-6.62	100.97	107.60
3	8	104	A	O4'-C4'-C3'	-6.62	99.48	106.10
50	S2	980	A	C2'-C3'-O3'	6.62	123.64	113.70
3	8	66	A	N9-C1'-C2'	6.62	121.93	112.00
1	5	2370	A	C1'-C2'-O2'	-6.62	101.88	111.80
50	S2	1293	A	C4'-C3'-O3'	6.62	122.92	113.00
1	5	4279	A	N9-C1'-C2'	-6.61	104.08	114.00
50	S2	1838	U	O4'-C1'-N1	-6.61	98.28	108.20
54	SD	79	PHE	CB-CA-C	6.61	117.07	110.33
1	5	2761	U	C4'-C3'-O3'	6.61	119.31	109.40
1	5	707	C	C1'-C2'-O2'	6.61	118.31	108.40
50	S2	1404	U	O4'-C4'-C3'	-6.61	99.50	106.10
16	N	150	TRP	CA-CB-CG	6.60	126.14	113.60
75	SY	63	HIS	N-CA-CB	6.60	120.89	110.39
50	S2	675	U	C1'-C2'-O2'	6.60	118.30	108.40
50	S2	987	A	C2'-C3'-O3'	-6.60	103.80	113.70
1	5	968	C	C4'-C3'-O3'	6.60	119.30	109.40
50	S2	482	G	C1'-C2'-O2'	6.60	118.30	108.40
21	S	37	HIS	CB-CA-C	-6.60	100.48	110.90
50	S2	164	A	C3'-C2'-O2'	6.59	120.59	110.70
50	S2	1283	C	O4'-C1'-C2'	-6.59	101.01	107.60
16	N	130	PHE	CA-CB-CG	-6.59	107.21	113.80
50	S2	1701	C	N1-C1'-C2'	6.59	123.89	114.00
4	A	89	TYR	CB-CA-C	6.58	120.86	110.19
28	Z	65	ARG	CG-CD-NE	-6.58	97.52	112.00
1	5	1577	G	C1'-C2'-O2'	6.58	118.27	108.40
26	X	117	TYR	CB-CA-C	6.58	121.26	111.06
50	S2	1585	U	O4'-C4'-C3'	-6.58	99.52	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2363	A	C1'-C2'-O2'	6.58	118.26	108.40
1	5	1239	C	C2'-C3'-O3'	6.57	119.36	109.50
1	5	292	G	O4'-C4'-C3'	-6.56	99.54	106.10
50	S2	642	U	C1'-C2'-O2'	6.56	118.24	108.40
19	Q	24	TYR	N-CA-C	6.56	118.51	111.36
50	S2	999	G	O4'-C1'-C2'	-6.56	101.04	107.60
1	5	2854	G	C2'-C3'-O3'	6.56	123.54	113.70
50	S2	1436	C	C3'-C2'-O2'	6.56	120.53	110.70
1	5	300	A	C4'-C3'-O3'	-6.55	103.17	113.00
1	5	1376	C	C4'-C3'-O3'	-6.55	103.17	113.00
1	5	4991	U	C3'-C2'-O2'	6.55	120.53	110.70
1	5	1658	G	N9-C1'-C2'	6.55	121.83	112.00
1	5	4239	A	C2'-C3'-O3'	6.55	123.53	113.70
50	S2	840	C	C3'-C2'-O2'	6.55	120.53	110.70
1	5	1236	C	C3'-C2'-O2'	6.55	120.52	110.70
1	5	4986	G	N9-C1'-C2'	6.55	121.82	112.00
1	5	1271	G	C4'-C3'-O3'	6.54	122.82	113.00
1	5	1881	C	N1-C1'-C2'	6.54	123.82	114.00
74	SX	27	TYR	CA-CB-CG	6.54	125.68	113.90
50	S2	1284	A	C3'-C2'-O2'	-6.54	104.79	114.60
1	5	1379	C	P-O5'-C5'	6.54	130.71	120.90
50	S2	164	A	C1'-C2'-O2'	6.54	118.21	108.40
50	S2	1674	G	C1'-C2'-O2'	6.54	118.21	108.40
50	S2	123	G	C1'-C2'-O2'	6.54	118.20	108.40
27	Y	80	ILE	N-CA-C	6.54	118.92	108.85
50	S2	19	A	C2'-C3'-O3'	6.54	123.50	113.70
3	8	13	G	N9-C1'-C2'	6.53	121.80	112.00
50	S2	72	C	C4'-C3'-O3'	6.53	119.20	109.40
1	5	1380	G	C4'-C3'-O3'	6.53	119.20	109.40
1	5	2744	A	N9-C1'-C2'	6.53	121.80	112.00
1	5	4238	G	C1'-C2'-O2'	6.53	118.20	108.40
19	Q	33	ARG	CG-CD-NE	-6.53	97.64	112.00
21	S	151	LYS	N-CA-C	6.53	119.02	108.32
1	5	4385	A	N9-C1'-C2'	-6.52	102.22	112.00
1	5	4965	U	N1-C1'-C2'	-6.52	102.22	112.00
50	S2	1123	C	O4'-C1'-C2'	-6.52	101.08	107.60
1	5	2091	C	C4'-C3'-O3'	-6.52	99.62	109.40
73	SW	117	ARG	NH1-CZ-NH2	6.52	127.78	119.30
1	5	171	U	C4'-C3'-O3'	-6.52	99.62	109.40
3	8	63	U	O4'-C1'-C2'	-6.52	101.08	107.60
50	S2	617	G	C1'-C2'-O2'	6.52	118.18	108.40
50	S2	1604	G	C4'-C3'-O3'	-6.52	103.22	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2312	U	O4'-C1'-C2'	-6.51	101.09	107.60
7	D	198	HIS	CA-CB-CG	-6.51	107.29	113.80
45	r	45	HIS	CA-CB-CG	6.51	120.31	113.80
1	5	235	A	O4'-C1'-C2'	-6.51	101.09	107.60
50	S2	452	G	C3'-C2'-O2'	6.51	120.46	110.70
1	5	1681	G	C1'-C2'-O2'	6.51	118.16	108.40
50	S2	531	A	C2'-C3'-O3'	6.51	123.46	113.70
1	5	4948	C	C2'-C3'-O3'	6.50	123.46	113.70
1	5	451	C	C2'-C3'-O3'	6.50	119.25	109.50
52	SB	155	TYR	N-CA-C	-6.50	99.10	109.76
85	S5	19	G	C4'-C3'-O3'	-6.50	99.65	109.40
1	5	1211	G	O4'-C1'-C2'	-6.50	101.10	107.60
22	T	142	ARG	N-CA-C	6.50	118.92	107.61
1	5	187	U	C4'-C3'-O3'	6.50	122.74	113.00
1	5	207	G	C2'-C3'-O3'	-6.50	103.95	113.70
1	5	1488	G	C2'-C3'-O3'	6.50	123.44	113.70
50	S2	795	A	N9-C1'-C2'	6.50	121.75	112.00
81	Se	39	ASN	N-CA-C	-6.50	104.12	111.07
1	5	1614	C	C2'-C3'-O3'	6.49	123.44	113.70
1	5	4979	A	N9-C1'-C2'	6.49	121.74	112.00
1	5	1279	A	C3'-C2'-O2'	6.49	124.33	114.60
38	j	11	ARG	NE-CZ-NH2	-6.49	113.36	119.20
19	Q	33	ARG	N-CA-CB	6.49	119.61	109.94
1	5	2307	A	N9-C1'-C2'	6.49	121.73	112.00
1	5	2328	G	C1'-C2'-O2'	-6.49	98.67	108.40
1	5	151	G	C1'-C2'-O2'	6.48	118.12	108.40
22	T	13	TYR	CA-CB-CG	6.48	125.57	113.90
50	S2	1543	U	C4'-C3'-O3'	6.48	119.12	109.40
1	5	1397	A	C4'-C3'-O3'	-6.48	103.28	113.00
1	5	2373	C	N1-C1'-C2'	6.48	121.72	112.00
4	A	34	PHE	CB-CA-C	-6.48	100.62	110.92
1	5	47	A	C4'-C3'-O3'	6.48	119.12	109.40
50	S2	1542	C	N1-C1'-C2'	6.48	123.71	114.00
31	c	90	ARG	CA-CB-CG	6.47	127.05	114.10
1	5	2266	C	C2'-C3'-O3'	6.47	119.20	109.50
1	5	4557	U	C4'-C3'-O3'	-6.47	103.30	113.00
7	D	45	ASN	N-CA-C	6.47	118.41	111.36
1	5	2092	G	N9-C1'-C2'	6.47	123.70	114.00
1	5	1495	G	N9-C1'-C2'	6.46	121.70	112.00
1	5	1894	C	N1-C1'-C2'	6.46	121.70	112.00
82	Sf	150	PHE	CA-CB-CG	6.46	120.26	113.80
1	5	4212	A	N9-C1'-C2'	6.46	123.69	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	186	TYR	N-CA-CB	6.45	119.43	110.07
55	SE	121	TYR	N-CA-C	-6.45	101.85	110.24
50	S2	1419	C	C2'-C3'-O3'	6.45	123.38	113.70
50	S2	959	G	C2'-C3'-O3'	6.45	123.37	113.70
1	5	3843	C	C2'-C3'-O3'	6.45	119.17	109.50
50	S2	1232	U	C1'-C2'-O2'	6.45	118.07	108.40
1	5	1439	C	O4'-C1'-C2'	-6.45	101.16	107.60
1	5	40	G	N9-C1'-C2'	6.44	121.66	112.00
50	S2	9	U	C2'-C3'-O3'	6.44	123.36	113.70
50	S2	1298	G	C1'-C2'-O2'	-6.44	102.14	111.80
1	5	3896	C	C3'-C2'-O2'	6.44	120.36	110.70
1	5	4270	C	C2'-C3'-O3'	6.44	123.36	113.70
82	Sf	146	LEU	N-CA-CB	6.44	122.73	110.82
50	S2	448	A	N9-C1'-C2'	-6.43	104.35	114.00
56	SF	165	ASN	CA-CB-CG	-6.43	106.17	112.60
1	5	498	C	C4'-C3'-O3'	6.43	119.05	109.40
1	5	1616	U	O4'-C1'-C2'	-6.43	101.17	107.60
50	S2	524	U	C4'-C3'-O3'	-6.43	103.36	113.00
1	5	3663	A	C4'-C3'-O3'	-6.43	99.76	109.40
1	5	1624	G	C4'-C3'-O3'	6.42	119.04	109.40
17	O	192	PHE	N-CA-C	-6.42	103.33	112.13
32	d	87	ARG	CA-CB-CG	6.42	126.94	114.10
50	S2	687	C	C2'-C3'-O3'	6.42	119.13	109.50
53	SC	200	ARG	NE-CZ-NH2	6.42	124.98	119.20
5	B	149	ASP	N-CA-C	6.42	118.36	111.36
9	F	239	GLU	CA-CB-CG	6.42	126.94	114.10
1	5	1268	G	C4'-C3'-O3'	6.42	119.03	109.40
1	5	2090	U	C1'-C2'-O2'	-6.41	98.78	108.40
1	5	33	A	N9-C1'-C2'	6.41	121.62	112.00
30	b	6	ASN	CB-CA-C	6.41	121.21	110.44
50	S2	30	C	N1-C1'-C2'	6.41	121.61	112.00
50	S2	1844	U	C4'-C3'-O3'	-6.41	103.39	113.00
50	S2	1849	G	C1'-C2'-O2'	-6.41	102.19	111.80
1	5	4074	C	N1-C1'-C2'	6.41	121.61	112.00
1	5	4201	G	N9-C1'-C2'	6.41	121.61	112.00
55	SE	121	TYR	CA-CB-CG	-6.40	102.37	113.90
1	5	52	G	C2'-C3'-O3'	6.40	123.30	113.70
1	5	965	G	C4'-C3'-O3'	6.40	119.00	109.40
1	5	4878	C	C4'-C3'-O3'	-6.40	103.40	113.00
1	5	4936	G	C2'-C3'-O3'	-6.40	104.10	113.70
33	e	80	HIS	CB-CA-C	6.40	117.79	109.28
1	5	2110	C	C3'-C2'-O2'	-6.40	105.01	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2745	A	C1'-C2'-O2'	-6.39	98.81	108.40
50	S2	1858	G	C2'-C3'-O3'	6.39	123.29	113.70
1	5	3933	G	C1'-C2'-O2'	6.39	117.99	108.40
1	5	4117	U	O4'-C1'-C2'	-6.39	101.21	107.60
65	SO	146	ARG	NE-CZ-NH1	6.39	127.89	121.50
1	5	2460	A	C1'-C2'-O2'	6.39	117.98	108.40
50	S2	1045	U	O4'-C1'-C2'	-6.39	101.21	107.60
85	S5	12	U	C1'-C2'-O2'	6.38	117.97	108.40
2	7	58	A	C2'-C3'-O3'	6.37	123.26	113.70
5	B	26	ARG	CG-CD-NE	-6.37	97.98	112.00
1	5	2066	C	C3'-C2'-O2'	6.37	120.26	110.70
1	5	4531	U	N1-C1'-C2'	6.37	123.56	114.00
8	E	231	THR	N-CA-C	-6.37	105.33	113.23
1	5	943	A	N9-C1'-C2'	-6.37	104.44	114.00
1	5	1521	C	C1'-C2'-O2'	6.37	117.95	108.40
1	5	3843	C	N1-C1'-C2'	6.37	123.55	114.00
19	Q	184	ARG	CB-CG-CD	6.37	125.94	111.30
24	V	98	PHE	CA-CB-CG	-6.37	107.44	113.80
50	S2	454	U	N1-C1'-C2'	6.37	121.55	112.00
1	5	2081	C	C2'-C3'-O3'	-6.36	104.15	113.70
1	5	4481	U	N1-C1'-C2'	6.36	121.55	112.00
3	8	72	A	C1'-C2'-O2'	6.36	117.95	108.40
50	S2	1699	A	C2'-C3'-O3'	-6.36	104.16	113.70
21	S	160	ARG	N-CA-C	-6.36	100.15	109.63
1	5	1370	G	N9-C1'-C2'	6.36	123.54	114.00
21	S	97	TYR	CA-CB-CG	-6.36	102.46	113.90
27	Y	78	TYR	CB-CA-C	6.36	123.07	110.42
50	S2	1420	G	C2'-C3'-O3'	6.35	123.23	113.70
50	S2	1739	C	C1'-C2'-O2'	6.35	117.93	108.40
52	SB	151	ARG	N-CA-C	6.35	118.08	111.03
1	5	226	G	N9-C1'-C2'	-6.35	104.47	114.00
1	5	4283	G	O4'-C1'-C2'	-6.35	101.25	107.60
1	5	4075	U	C4'-C3'-O3'	6.35	118.92	109.40
50	S2	1857	G	C2'-C3'-O3'	6.35	123.22	113.70
21	S	146	HIS	N-CA-C	6.34	124.32	110.80
50	S2	1416	C	C2'-C3'-O3'	6.34	123.22	113.70
50	S2	1621	U	C1'-C2'-O2'	-6.34	102.28	111.80
1	5	1341	U	N1-C1'-C2'	6.34	121.51	112.00
1	5	337	U	C1'-C2'-O2'	6.34	117.91	108.40
50	S2	1115	U	N1-C1'-C2'	6.34	123.51	114.00
1	5	2089	G	C2'-C3'-O3'	6.34	119.01	109.50
1	5	4404	U	N1-C1'-C2'	-6.34	102.49	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	197	A	N9-C1'-C2'	6.33	121.50	112.00
16	N	118	SER	N-CA-C	6.33	119.58	108.75
27	Y	27	ARG	NE-CZ-NH2	6.33	124.90	119.20
50	S2	417	C	C2'-C3'-O3'	6.33	123.20	113.70
50	S2	1282	A	C4'-C3'-O3'	6.33	122.50	113.00
1	5	2000	G	C1'-C2'-O2'	6.33	117.90	108.40
1	5	5059	C	C4'-C3'-O3'	-6.33	103.50	113.00
50	S2	139	C	C4'-C3'-O3'	6.33	122.50	113.00
74	SX	7	LEU	N-CA-C	-6.33	99.32	109.96
82	Sf	148	TYR	CA-CB-CG	6.33	125.30	113.90
1	5	2279	A	C1'-C2'-O2'	6.33	117.89	108.40
1	5	2305	U	C2'-C3'-O3'	6.32	118.98	109.50
1	5	1980	U	O4'-C1'-C2'	-6.32	101.28	107.60
50	S2	640	A	C4'-C3'-O3'	-6.32	103.52	113.00
33	e	60	TYR	N-CA-CB	-6.32	102.80	111.65
31	c	78	ASN	CA-CB-CG	-6.32	106.28	112.60
50	S2	1544	C	C4'-C3'-O3'	-6.32	103.52	113.00
3	8	79	G	N9-C1'-C2'	6.31	121.47	112.00
50	S2	1078	C	C3'-C2'-O2'	6.31	120.16	110.70
50	S2	1612	G	C4'-C3'-O3'	-6.31	103.54	113.00
40	l	45	ARG	CB-CG-CD	6.31	125.81	111.30
50	S2	474	G	C2'-C3'-O3'	6.31	123.16	113.70
1	5	1823	G	O3'-P-O5'	6.30	113.45	104.00
1	5	2263	A	C5'-C4'-O4'	6.30	118.56	109.10
1	5	4880	C	C1'-C2'-O2'	-6.30	98.94	108.40
1	5	1676	C	C2'-C3'-O3'	6.30	118.95	109.50
1	5	2322	G	C2'-C3'-O3'	6.30	123.15	113.70
3	8	135	C	N1-C1'-C2'	6.30	121.45	112.00
1	5	4976	U	O4'-C4'-C3'	-6.30	99.80	106.10
10	G	77	PRO	N-CA-C	6.30	118.38	110.70
1	5	4519	C	O4'-C4'-C3'	-6.30	97.70	104.00
1	5	88	A	N9-C1'-C2'	6.29	121.44	112.00
1	5	236	G	N9-C1'-C2'	6.29	121.44	112.00
1	5	3674	G	C4'-C3'-O3'	-6.29	103.56	113.00
16	N	37	HIS	CA-CB-CG	-6.29	107.51	113.80
38	j	76	HIS	CB-CA-C	6.29	120.73	109.29
1	5	1631	A	C4'-C3'-O3'	-6.29	99.97	109.40
1	5	2307	A	C1'-C2'-O2'	-6.29	98.97	108.40
1	5	2687	U	C2'-C3'-O3'	-6.29	104.27	113.70
43	o	42	ASP	N-CA-CB	6.29	119.12	110.01
50	S2	446	G	C2'-C3'-O3'	6.29	123.13	113.70
50	S2	1649	U	C4'-C3'-O3'	-6.28	103.58	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2796	G	N9-C1'-C2'	6.28	123.42	114.00
1	5	4221	C	N1-C1'-C2'	-6.28	102.58	112.00
1	5	2395	A	N9-C1'-C2'	-6.28	104.58	114.00
62	SL	100	ASN	CA-CB-CG	-6.28	106.32	112.60
1	5	2282	A	N9-C1'-C2'	6.28	121.41	112.00
1	5	4229	U	O4'-C1'-C2'	-6.28	101.32	107.60
50	S2	618	C	C1'-C2'-O2'	6.28	117.81	108.40
57	SG	156	TYR	CA-CB-CG	-6.28	102.61	113.90
1	5	116	G	C4'-C3'-O3'	-6.27	103.59	113.00
1	5	2851	G	N9-C1'-C2'	-6.27	102.59	112.00
11	H	116	ASN	N-CA-C	6.27	120.51	112.86
1	5	3851	U	C1'-C2'-O2'	6.26	117.79	108.40
50	S2	26	U	C2'-C3'-O3'	6.26	123.09	113.70
50	S2	1842	C	N1-C1'-C2'	6.26	121.39	112.00
19	Q	91	ARG	NE-CZ-NH2	6.26	124.83	119.20
20	R	117	ARG	CB-CA-C	6.26	120.54	109.65
1	5	1487	G	C2'-C3'-O3'	6.25	123.08	113.70
1	5	352	G	N9-C1'-C2'	-6.25	102.62	112.00
50	S2	1309	C	C2'-C3'-O3'	-6.25	104.32	113.70
50	S2	1510	G	C3'-C2'-O2'	6.25	120.08	110.70
63	SM	33	ARG	CG-CD-NE	6.25	125.76	112.00
50	S2	504	G	N9-C1'-C2'	6.25	121.38	112.00
1	5	4519	C	C4'-C3'-C2'	-6.25	96.35	102.60
1	5	4884	G	O4'-C1'-C2'	-6.25	101.35	107.60
50	S2	841	G	O4'-C1'-C2'	-6.25	99.55	105.80
1	5	4318	C	C4'-C3'-O3'	-6.25	103.63	113.00
56	SF	38	TYR	N-CA-CB	6.25	119.40	110.16
1	5	1390	G	C1'-C2'-O2'	6.24	117.76	108.40
1	5	1650	A	C4'-C3'-O3'	-6.24	100.03	109.40
1	5	5044	A	C1'-C2'-O2'	-6.24	99.03	108.40
77	Sa	98	PRO	N-CA-C	6.24	118.32	110.70
1	5	113	A	C1'-C2'-O2'	6.24	117.76	108.40
1	5	1494	U	N1-C1'-C2'	6.24	121.36	112.00
3	8	39	G	C4'-C3'-O3'	-6.24	103.64	113.00
50	S2	1367	U	C2'-C3'-O3'	6.24	123.06	113.70
50	S2	1477	U	C2'-C3'-O3'	6.24	123.06	113.70
63	SM	124	ILE	N-CA-C	6.24	117.02	110.72
1	5	1621	A	C3'-C2'-O2'	6.24	120.05	110.70
1	5	2673	G	O4'-C1'-C2'	-6.24	99.56	105.80
3	8	81	C	C5'-C4'-C3'	6.23	125.35	116.00
19	Q	174	PHE	CA-CB-CG	-6.23	107.57	113.80
45	r	21	ASN	N-CA-CB	-6.23	102.68	112.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	G	54	PHE	N-CA-C	-6.23	104.99	112.59
1	5	126	C	O4'-C1'-C2'	-6.23	101.37	107.60
1	5	4948	C	C1'-C2'-O2'	-6.22	99.06	108.40
16	N	192	TRP	N-CA-CB	-6.22	100.98	110.01
1	5	1835	G	C4'-C3'-O3'	6.22	118.73	109.40
33	e	35	TRP	N-CA-CB	6.22	119.12	109.48
1	5	134	G	O4'-C4'-C3'	-6.22	99.88	106.10
50	S2	661	U	C1'-C2'-O2'	6.22	117.73	108.40
14	L	80	GLU	CB-CG-CD	-6.22	102.03	112.60
17	O	47	PHE	N-CA-CB	6.22	119.27	109.82
50	S2	382	C	N1-C1'-C2'	6.22	121.33	112.00
50	S2	1546	G	N9-C1'-C2'	6.22	121.33	112.00
62	SL	62	PHE	CB-CA-C	6.22	122.17	109.67
19	Q	52	PHE	N-CA-C	6.22	124.04	110.80
21	S	94	TYR	CA-CB-CG	-6.22	102.71	113.90
2	7	59	G	C3'-C2'-O2'	6.22	120.03	110.70
1	5	370	U	N1-C1'-C2'	6.21	121.32	112.00
1	5	657	C	C2'-C3'-O3'	6.21	123.02	113.70
33	e	60	TYR	CB-CA-C	6.21	122.04	111.35
1	5	4114	C	N1-C1'-C2'	6.21	121.32	112.00
1	5	429	A	C4'-C3'-O3'	-6.21	103.68	113.00
1	5	1733	G	N9-C1'-C2'	-6.21	102.69	112.00
1	5	490	C	N1-C1'-C2'	6.21	121.31	112.00
50	S2	1021	U	C2'-C3'-O3'	6.21	118.81	109.50
1	5	2836	A	C4'-C3'-O3'	-6.21	103.69	113.00
1	5	4589	A	O4'-C4'-C3'	-6.21	99.89	106.10
50	S2	1429	G	C3'-C2'-O2'	6.21	120.01	110.70
1	5	4670	C	O4'-C1'-C2'	-6.20	101.40	107.60
50	S2	548	C	C2'-C3'-O3'	6.20	123.01	113.70
85	S5	48	C	O5'-P-OP1	6.20	126.61	108.00
1	5	2509	C	C2'-C3'-O3'	-6.20	104.40	113.70
46	z	39	LYS	N-CA-C	6.20	119.67	108.69
50	S2	1850	A	C4'-C3'-O3'	-6.20	103.70	113.00
54	SD	216	GLU	CG-CD-OE2	6.20	132.66	118.40
77	Sa	28	ARG	NE-CZ-NH1	6.20	127.70	121.50
8	E	275	ASN	CA-CB-CG	-6.20	106.40	112.60
9	F	58	HIS	N-CA-C	-6.20	104.44	111.07
22	T	140	PHE	CB-CA-C	-6.20	99.73	110.45
71	SU	47	ASN	N-CA-C	6.20	118.30	110.24
16	N	130	PHE	CB-CA-C	6.19	120.69	110.78
31	c	32	LYS	N-CA-C	-6.19	97.61	110.80
65	SO	104	ARG	NE-CZ-NH2	-6.19	113.63	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	114	G	C1'-C2'-O2'	6.19	117.69	108.40
12	I	17	TYR	CA-C-N	-6.19	113.60	119.85
12	I	17	TYR	C-N-CA	-6.19	113.60	119.85
1	5	684	G	C3'-C2'-O2'	6.19	119.98	110.70
1	5	2666	U	C4'-C3'-C2'	-6.19	96.41	102.60
50	S2	1205	C	C4'-C3'-O3'	-6.18	103.72	113.00
1	5	967	C	O4'-C1'-C2'	-6.18	101.42	107.60
1	5	514	U	C4'-C3'-C2'	-6.17	96.42	102.60
50	S2	477	G	C4'-C3'-O3'	-6.17	103.74	113.00
50	S2	668	A	C4'-C3'-O3'	-6.17	103.74	113.00
3	8	12	G	C4'-C3'-O3'	-6.17	103.74	113.00
50	S2	922	A	C4'-C3'-O3'	-6.17	103.74	113.00
50	S2	649	U	N1-C1'-C2'	6.17	121.26	112.00
50	S2	976	G	C1'-C2'-O2'	6.17	117.65	108.40
50	S2	531	A	C4'-C3'-O3'	-6.16	103.75	113.00
16	N	180	PHE	CA-CB-CG	-6.16	107.64	113.80
50	S2	605	A	C4'-C3'-O3'	-6.16	103.76	113.00
50	S2	622	C	N1-C1'-C2'	-6.16	102.76	112.00
1	5	1932	A	N9-C1'-C2'	6.16	121.24	112.00
1	5	3909	C	O4'-C1'-C2'	-6.16	101.44	107.60
3	8	28	C	C1'-C2'-O2'	6.16	117.64	108.40
7	D	16	TYR	N-CA-CB	6.16	119.24	109.51
27	Y	18	HIS	N-CA-CB	6.16	120.89	110.49
1	5	4341	C	C1'-C2'-O2'	6.15	117.63	108.40
1	5	4951	G	C3'-C2'-O2'	6.15	123.83	114.60
50	S2	291	G	O4'-C4'-C3'	-6.15	99.95	106.10
1	5	4589	A	C4'-C3'-O3'	-6.15	100.18	109.40
50	S2	1291	A	C3'-C2'-O2'	6.15	119.93	110.70
50	S2	855	G	C2'-C3'-O3'	6.15	122.92	113.70
1	5	315	G	C1'-O4'-C4'	-6.15	103.55	109.70
1	5	4693	C	O4'-C1'-N1	-6.15	99.28	108.50
40	1	12	PHE	CB-CA-C	-6.15	101.15	110.92
50	S2	669	A	C4'-C3'-O3'	-6.15	103.78	113.00
1	5	3776	G	C2'-C3'-O3'	6.14	118.72	109.50
17	O	109	PRO	CA-C-N	6.14	126.71	120.38
17	O	109	PRO	C-N-CA	6.14	126.71	120.38
50	S2	474	G	C4'-C3'-O3'	-6.14	103.78	113.00
3	8	115	G	C2'-C3'-O3'	6.14	122.91	113.70
50	S2	1419	C	C3'-C2'-O2'	6.14	119.92	110.70
53	SC	219	ILE	N-CA-C	-6.14	101.62	109.30
1	5	1827	C	N1-C1'-C2'	6.14	121.21	112.00
1	5	2253	A	C2'-C3'-O3'	-6.14	104.49	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	850	C	C4'-C3'-O3'	-6.14	103.79	113.00
3	8	94	G	N9-C1'-C2'	6.14	123.20	114.00
13	J	170	HIS	CB-CA-C	6.14	120.54	110.17
1	5	1951	G	C3'-C2'-O2'	6.13	119.90	110.70
1	5	2093	A	C4'-C3'-O3'	6.13	118.60	109.40
16	N	182	HIS	N-CA-C	-6.13	97.73	110.80
50	S2	734	C	C4'-C3'-O3'	-6.13	103.80	113.00
1	5	4228	G	O4'-C1'-C2'	-6.13	101.47	107.60
1	5	2807	A	C2'-C3'-O3'	6.13	122.90	113.70
1	5	4338	G	N9-C1'-C2'	-6.13	104.81	114.00
56	SF	142	SER	N-CA-C	-6.13	101.93	109.65
5	B	137	TRP	CA-CB-CG	-6.12	101.97	113.60
50	S2	811	A	C4'-C3'-O3'	-6.12	103.81	113.00
1	5	1359	G	N9-C1'-C2'	6.12	121.18	112.00
21	S	77	ASN	CB-CA-C	6.12	120.76	111.76
1	5	4326	G	N9-C1'-C2'	6.12	121.18	112.00
1	5	223	G	C1'-C2'-O2'	6.12	117.58	108.40
70	ST	62	ARG	NE-CZ-NH2	6.12	124.71	119.20
1	5	237	G	C1'-C2'-O2'	-6.11	102.63	111.80
1	5	3653	A	C1'-C2'-O2'	6.11	117.57	108.40
45	r	45	HIS	CB-CA-C	-6.11	98.26	110.42
50	S2	1061	U	O4'-C1'-C2'	-6.11	101.49	107.60
63	SM	106	CYS	N-CA-C	6.11	118.36	109.07
1	5	2385	U	N1-C1'-C2'	6.11	121.17	112.00
1	5	4699	U	C4'-C3'-O3'	6.11	118.57	109.40
1	5	1625	G	N9-C1'-C2'	6.11	123.17	114.00
1	5	2360	A	C2'-C3'-O3'	6.11	118.67	109.50
1	5	3827	G	N9-C1'-C2'	-6.11	104.84	114.00
50	S2	1644	C	C1'-C2'-O2'	-6.11	99.23	108.40
1	5	1479	G	N9-C1'-C2'	6.11	123.16	114.00
50	S2	839	C	N1-C1'-C2'	6.11	121.16	112.00
50	S2	401	A	C1'-C2'-O2'	6.11	117.56	108.40
1	5	454	U	C3'-C2'-O2'	6.10	119.86	110.70
1	5	727	C	C3'-C2'-O2'	6.10	123.75	114.60
1	5	2328	G	C2'-C3'-O3'	-6.10	104.55	113.70
50	S2	824	C	C1'-C2'-O2'	-6.10	99.25	108.40
50	S2	1830	U	N1-C1'-C2'	-6.10	104.85	114.00
50	S2	933	G	C2'-C3'-O3'	-6.10	104.55	113.70
1	5	4978	G	N9-C1'-C2'	6.10	121.15	112.00
51	SA	90	PHE	N-CA-C	-6.10	104.55	111.07
1	5	1264	C	C2'-C3'-O3'	6.09	122.84	113.70
14	L	80	GLU	N-CA-C	6.09	119.54	111.75

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	294	G	C1'-O4'-C4'	-6.09	103.81	109.90
63	SM	33	ARG	CB-CA-C	6.09	120.08	111.74
1	5	398	A	N9-C1'-C2'	6.08	121.12	112.00
3	8	94	G	C5'-C4'-O4'	6.08	118.22	109.10
1	5	5047	C	C2'-C3'-O3'	6.08	118.62	109.50
70	ST	53	PHE	N-CA-CB	-6.08	101.18	110.12
13	J	54	ARG	N-CA-C	-6.08	103.98	111.40
1	5	4182	G	C4'-C3'-O3'	-6.08	103.88	113.00
7	D	145	TYR	N-CA-C	-6.08	98.82	108.73
16	N	30	TYR	N-CA-CB	-6.08	100.22	110.49
1	5	2766	A	C4'-C3'-O3'	-6.08	103.89	113.00
1	5	3817	A	N9-C1'-C2'	6.08	123.11	114.00
4	A	205	ASN	N-CA-C	-6.08	102.49	110.39
54	SD	202	LYS	CA-C-N	-6.08	112.25	119.84
54	SD	202	LYS	C-N-CA	-6.08	112.25	119.84
1	5	1438	U	C2'-C3'-O3'	6.07	122.81	113.70
1	5	1938	C	O4'-C4'-C3'	-6.07	100.03	106.10
50	S2	1073	U	C1'-C2'-O2'	6.07	117.51	108.40
5	B	324	GLY	N-CA-C	6.07	118.06	110.29
50	S2	31	U	N1-C1'-C2'	6.07	121.11	112.00
71	SU	72	GLU	N-CA-C	6.07	119.44	109.85
18	P	139	TYR	CB-CA-C	6.07	119.23	111.40
33	e	74	PHE	CB-CA-C	6.07	119.54	109.53
50	S2	1859	A	C1'-C2'-O2'	6.07	117.50	108.40
50	S2	629	A	C4'-C3'-O3'	-6.07	100.30	109.40
50	S2	1064	C	C1'-C2'-O2'	6.07	117.50	108.40
1	5	2119	C	C4'-C3'-O3'	6.06	118.49	109.40
1	5	2643	G	C2'-C3'-O3'	6.06	122.79	113.70
47	1	272	TYR	CA-C-N	-6.06	114.96	122.84
47	1	272	TYR	C-N-CA	-6.06	114.96	122.84
1	5	2803	U	C1'-C2'-O2'	6.06	117.48	108.40
1	5	3938	G	O4'-C4'-C3'	-6.06	100.04	106.10
38	j	39	TYR	CB-CA-C	-6.06	98.24	110.17
83	Sg	15	ASN	N-CA-C	-6.06	100.44	109.83
1	5	3673	C	C4'-C3'-O3'	-6.05	103.92	113.00
16	N	4	TYR	N-CA-C	6.05	119.50	111.75
1	5	2009	A	C3'-C2'-O2'	6.05	119.77	110.70
1	5	2087	C	N1-C1'-C2'	-6.05	102.93	112.00
33	e	95	TYR	N-CA-C	6.05	118.48	108.99
1	5	2348	G	C1'-C2'-O2'	-6.04	102.73	111.80
79	Sc	44	ARG	CG-CD-NE	6.04	125.30	112.00
1	5	3688	U	C1'-C2'-O2'	6.04	117.46	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	1715	A	C3'-C2'-O2'	6.04	119.76	110.70
1	5	4233	A	C3'-C2'-O2'	6.04	119.76	110.70
3	8	70	G	N9-C1'-C2'	-6.04	102.94	112.00
1	5	372	A	N9-C1'-C2'	6.04	121.06	112.00
8	E	111	TYR	N-CA-CB	6.03	118.99	110.36
77	Sa	10	ARG	CG-CD-NE	-6.03	98.73	112.00
1	5	4394	A	C1'-C2'-O2'	-6.03	102.75	111.80
1	5	4454	G	C1'-C2'-O2'	6.03	117.45	108.40
1	5	4265	U	N1-C1'-C2'	6.03	123.04	114.00
66	SP	86	LEU	CA-C-N	6.03	127.38	119.84
66	SP	86	LEU	C-N-CA	6.03	127.38	119.84
50	S2	1432	U	N1-C1'-C2'	6.03	121.04	112.00
1	5	3653	A	N9-C1'-C2'	-6.02	102.96	112.00
1	5	1326	A	C3'-C2'-O2'	6.02	119.73	110.70
47	1	398	GLN	N-CA-C	6.02	119.95	111.52
50	S2	1433	C	C4'-C3'-C2'	-6.02	96.58	102.60
1	5	3879	G	N9-C1'-C2'	-6.02	102.97	112.00
21	S	44	PHE	N-CA-C	-6.02	104.80	111.36
38	j	11	ARG	CG-CD-NE	-6.01	98.77	112.00
38	j	78	PHE	CB-CA-C	-6.01	103.35	111.89
3	8	68	G	N9-C1'-C2'	6.01	121.02	112.00
9	F	57	LYS	N-CA-C	6.01	118.79	111.82
60	SJ	18	ARG	CA-C-N	6.01	125.89	119.28
60	SJ	18	ARG	C-N-CA	6.01	125.89	119.28
1	5	226	G	C4'-C3'-O3'	6.01	118.42	109.40
39	k	61	PRO	N-CA-C	6.01	118.03	110.70
1	5	1588	U	N1-C1'-C2'	6.01	121.01	112.00
50	S2	1206	G	C2'-C3'-O3'	-6.01	104.69	113.70
1	5	333	U	C4'-C3'-O3'	6.01	122.01	113.00
14	L	103	ARG	CB-CA-C	6.01	119.65	109.80
50	S2	746	C	C2'-C3'-O3'	6.01	122.71	113.70
1	5	1539	G	C2'-C3'-O3'	6.00	122.70	113.70
1	5	3717	A	C2'-C3'-O3'	-6.00	104.69	113.70
4	A	163	ARG	CB-CA-C	6.00	119.57	109.48
14	L	6	ASN	N-CA-CB	6.00	120.64	110.49
1	5	1876	U	C2'-C3'-O3'	6.00	122.70	113.70
1	5	4589	A	N9-C1'-C2'	6.00	123.00	114.00
1	5	5062	G	P-O5'-C5'	6.00	129.90	120.90
50	S2	1243	U	C2'-C3'-O3'	6.00	122.70	113.70
1	5	4753	U	C2'-C3'-O3'	6.00	122.70	113.70
1	5	111	C	C1'-C2'-O2'	6.00	117.40	108.40
38	j	8	PHE	CA-CB-CG	-6.00	107.80	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	SH	185	VAL	N-CA-C	6.00	117.33	108.45
1	5	4745	G	N9-C1'-C2'	5.99	120.99	112.00
50	S2	308	G	C2'-C3'-O3'	-5.99	104.71	113.70
1	5	663	G	C4'-C3'-O3'	5.99	121.99	113.00
16	N	203	TYR	N-CA-CB	-5.99	102.61	110.88
17	O	140	ARG	NE-CZ-NH2	5.99	124.59	119.20
7	D	160	PHE	N-CA-C	-5.99	105.73	113.16
1	5	4498	U	N1-C1'-C2'	-5.99	103.02	112.00
1	5	4742	G	O4'-C1'-C2'	-5.99	101.61	107.60
1	5	2368	A	C2'-C3'-O3'	-5.99	104.72	113.70
22	T	57	TYR	CA-CB-CG	5.99	124.68	113.90
52	SB	165	ARG	NE-CZ-NH2	5.99	124.59	119.20
43	o	32	SER	N-CA-C	5.99	117.80	111.28
50	S2	1433	C	O4'-C4'-C3'	-5.99	98.01	104.00
1	5	294	G	C2'-C3'-O3'	-5.98	104.73	113.70
1	5	4617	G	C4'-C3'-O3'	-5.98	104.03	113.00
50	S2	1292	C	O4'-C1'-C2'	-5.98	101.62	107.60
50	S2	1666	C	N1-C1'-C2'	5.98	120.97	112.00
50	S2	920	A	C1'-C2'-O2'	-5.98	102.83	111.80
1	5	1215	C	O4'-C1'-C2'	-5.98	101.62	107.60
16	N	182	HIS	N-CA-CB	5.98	120.59	110.49
6	C	41	HIS	N-CA-C	-5.98	103.94	111.11
39	k	41	TYR	CB-CA-C	5.97	120.28	109.83
51	SA	103	PHE	CA-CB-CG	-5.97	107.83	113.80
1	5	1521	C	C2'-C3'-O3'	5.97	122.66	113.70
33	e	20	PHE	CA-CB-CG	-5.97	107.83	113.80
50	S2	1136	U	N1-C1'-C2'	5.97	120.96	112.00
1	5	3740	G	O4'-C1'-C2'	-5.97	101.63	107.60
1	5	4747	C	C3'-C2'-O2'	5.97	119.65	110.70
3	8	2	G	O4'-C1'-C2'	-5.97	101.63	107.60
50	S2	457	C	C1'-C2'-O2'	5.97	117.35	108.40
50	S2	553	U	N1-C1'-C2'	5.97	120.95	112.00
50	S2	1093	A	C4'-C3'-O3'	-5.97	104.05	113.00
60	SJ	49	THR	N-CA-C	5.97	117.79	111.28
82	Sf	136	PHE	N-CA-CB	5.97	117.03	110.35
1	5	1891	A	C2'-C3'-O3'	5.97	118.45	109.50
50	S2	55	U	N1-C1'-C2'	5.97	122.95	114.00
50	S2	1376	A	C2'-C3'-O3'	5.97	122.65	113.70
1	5	2487	G	C2'-C3'-O3'	5.96	122.65	113.70
9	F	83	PHE	N-CA-CB	-5.96	101.58	110.71
35	g	90	ARG	CG-CD-NE	-5.96	98.88	112.00
8	E	236	TYR	N-CA-C	-5.96	101.08	109.96

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	1	U	C5'-C4'-O4'	5.96	118.04	109.10
50	S2	1415	C	N1-C1'-C2'	5.96	120.94	112.00
9	F	94	VAL	CB-CA-C	-5.96	103.52	110.91
20	R	94	THR	CA-C-N	-5.96	112.53	120.63
20	R	94	THR	C-N-CA	-5.96	112.53	120.63
50	S2	1034	A	N9-C1'-C2'	5.96	120.94	112.00
50	S2	1247	C	N1-C1'-C2'	5.96	122.94	114.00
1	5	1885	G	C4'-C3'-O3'	5.96	121.93	113.00
62	SL	92	TYR	CA-CB-CG	5.96	124.62	113.90
1	5	2307	A	C2'-C3'-O3'	-5.96	104.77	113.70
1	5	118	C	C2'-C3'-O3'	5.95	122.62	113.70
1	5	1832	C	C4'-C3'-O3'	-5.95	104.07	113.00
4	A	34	PHE	N-CA-C	-5.95	103.76	111.02
10	G	235	ARG	CG-CD-NE	5.95	125.09	112.00
50	S2	56	G	N9-C1'-C2'	5.95	120.93	112.00
18	P	144	CYS	N-CA-C	5.95	118.74	109.52
1	5	2089	G	O4'-C4'-C3'	-5.95	100.15	106.10
1	5	4730	C	C2'-C3'-O3'	5.95	118.42	109.50
14	L	7	GLY	N-CA-C	-5.95	99.09	113.18
8	E	236	TYR	CA-CB-CG	-5.94	103.20	113.90
50	S2	453	C	C1'-C2'-O2'	-5.94	99.48	108.40
1	5	27	C	C1'-C2'-O2'	5.94	117.31	108.40
1	5	4767	C	C2'-C3'-O3'	5.94	122.61	113.70
50	S2	1194	A	N9-C1'-C2'	-5.94	105.09	114.00
31	c	39	ARG	CG-CD-NE	-5.94	98.93	112.00
2	7	42	A	O4'-C1'-C2'	-5.94	101.66	107.60
50	S2	438	G	N9-C1'-C2'	5.94	120.91	112.00
56	SF	164	ARG	CG-CD-NE	-5.94	98.94	112.00
1	5	1238	A	C2'-C3'-O3'	5.94	118.41	109.50
1	5	4274	A	C1'-C2'-O2'	5.94	117.31	108.40
4	A	163	ARG	N-CA-C	-5.94	100.02	109.76
1	5	212	A	N9-C1'-C2'	5.94	120.91	112.00
28	Z	38	TYR	N-CA-CB	-5.93	101.86	110.70
1	5	2474	G	C2'-C3'-O3'	5.93	122.60	113.70
5	B	380	GLN	N-CA-C	5.93	120.80	113.50
1	5	1534	A	P-O5'-C5'	5.93	129.80	120.90
1	5	1820	C	C3'-C2'-O2'	5.93	119.59	110.70
1	5	2806	A	N9-C1'-C2'	-5.93	103.10	112.00
7	D	223	PHE	CA-CB-CG	5.93	119.73	113.80
50	S2	683	G	C1'-C2'-O2'	5.93	117.29	108.40
1	5	957	G	C2'-C3'-O3'	5.93	118.39	109.50
11	H	113	GLU	CB-CG-CD	-5.93	102.53	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	N	21	PHE	N-CA-CB	5.93	118.83	110.12
50	S2	504	G	C1'-C2'-O2'	-5.93	99.51	108.40
50	S2	833	C	C4'-C3'-O3'	-5.93	104.11	113.00
1	5	3881	G	C1'-C2'-O2'	-5.92	102.92	111.80
12	I	139	ARG	CB-CG-CD	-5.92	97.68	111.30
62	SL	48	LYS	N-CA-C	-5.92	104.75	111.14
1	5	2272	C	C3'-C2'-O2'	5.92	119.57	110.70
50	S2	1428	G	C3'-C2'-O2'	5.92	119.57	110.70
1	5	4501	U	P-O3'-C3'	5.91	129.07	120.20
1	5	3635	A	N9-C1'-C2'	-5.91	103.14	112.00
50	S2	41	G	N9-C1'-C2'	-5.91	105.14	114.00
1	5	2260	C	C2'-C3'-O3'	5.91	118.36	109.50
1	5	2405	G	C1'-C2'-O2'	5.91	117.26	108.40
1	5	416	U	N1-C1'-C2'	5.90	120.86	112.00
3	8	11	C	O4'-C1'-C2'	-5.90	101.70	107.60
27	Y	25	ILE	CB-CA-C	-5.90	104.33	112.24
1	5	1292	C	C4'-C3'-O3'	-5.90	104.15	113.00
1	5	2857	A	C4'-C3'-O3'	5.90	118.25	109.40
7	D	196	ARG	N-CA-C	-5.90	103.82	111.02
12	I	92	HIS	CB-CA-C	5.90	117.19	108.87
18	P	7	ASP	CB-CA-C	5.90	117.94	109.26
50	S2	594	A	C2'-C3'-O3'	-5.90	100.65	109.50
31	c	78	ASN	N-CA-CB	5.90	120.46	110.49
1	5	1237	C	C4'-C3'-O3'	-5.90	104.16	113.00
1	5	4600	G	N9-C1'-C2'	-5.90	103.15	112.00
6	C	288	ASP	N-CA-CB	5.90	118.79	109.71
33	e	58	ILE	N-CA-C	5.90	116.64	110.62
28	Z	28	ASN	N-CA-C	-5.90	96.00	107.62
50	S2	73	C	C2'-C3'-O3'	5.90	118.34	109.50
50	S2	1476	A	O4'-C1'-C2'	-5.89	101.71	107.60
3	8	34	U	C5'-C4'-O4'	5.89	118.64	109.80
32	d	87	ARG	CG-CD-NE	-5.89	99.04	112.00
52	SB	220	LYS	CA-C-N	-5.89	114.20	120.03
52	SB	220	LYS	C-N-CA	-5.89	114.20	120.03
7	D	35	ARG	CG-CD-NE	5.89	124.96	112.00
50	S2	1447	G	C3'-C2'-O2'	5.89	119.54	110.70
1	5	1671	U	C1'-C2'-O2'	5.89	117.23	108.40
21	S	37	HIS	N-CA-CB	5.89	118.61	110.07
1	5	2263	A	O4'-C4'-C3'	-5.88	100.22	106.10
50	S2	336	A	C1'-C2'-O2'	5.88	117.22	108.40
1	5	4978	G	C1'-C2'-O2'	-5.88	99.58	108.40
21	S	83	ARG	CG-CD-NE	5.88	124.93	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	292	A	C2'-C3'-O3'	5.88	118.32	109.50
50	S2	1030	A	C3'-C2'-O2'	5.88	119.52	110.70
64	SN	113	PHE	N-CA-CB	5.88	118.50	109.98
1	5	4736	C	N1-C1'-C2'	5.88	120.81	112.00
19	Q	181	ARG	CG-CD-NE	-5.88	99.07	112.00
50	S2	1479	G	C3'-C2'-O2'	5.88	119.51	110.70
37	i	40	VAL	CB-CA-C	-5.87	104.47	111.81
1	5	63	G	N9-C1'-C2'	5.87	120.81	112.00
1	5	974	C	C4'-C3'-O3'	5.87	121.81	113.00
1	5	3719	A	C1'-C2'-O2'	5.87	117.21	108.40
37	i	26	HIS	N-CA-CB	5.87	120.30	110.32
1	5	2257	C	C2'-C3'-O3'	5.87	118.31	109.50
10	G	169	PHE	N-CA-C	5.87	119.26	111.75
50	S2	349	A	C4'-C3'-O3'	-5.87	104.20	113.00
1	5	5006	U	N1-C1'-C2'	-5.87	105.20	114.00
50	S2	1167	G	N9-C1'-C2'	5.87	120.80	112.00
1	5	1440	U	C4'-C3'-O3'	5.86	121.79	113.00
5	B	322	HIS	N-CA-CB	-5.86	104.65	114.27
16	N	143	ARG	CB-CG-CD	5.86	124.78	111.30
85	S5	43	C	C2'-C3'-O3'	-5.86	104.91	113.70
1	5	2360	A	C4'-C3'-O3'	-5.86	100.61	109.40
1	5	2597	G	N9-C1'-C2'	5.86	120.79	112.00
1	5	4197	G	C1'-C2'-O2'	5.86	117.19	108.40
3	8	82	A	O4'-C1'-C2'	-5.86	101.74	107.60
19	Q	33	ARG	CB-CG-CD	5.86	124.78	111.30
50	S2	1816	G	C4'-C3'-O3'	-5.86	104.21	113.00
1	5	1480	C	C2'-C3'-O3'	5.86	118.29	109.50
1	5	1410	U	C3'-C2'-O2'	5.86	119.48	110.70
1	5	1638	A	C2'-C3'-O3'	5.86	118.28	109.50
1	5	2044	U	C2'-C3'-O3'	-5.86	104.91	113.70
64	SN	25	TRP	N-CA-CB	5.86	118.85	110.06
1	5	3667	C	C2'-C3'-O3'	5.86	122.48	113.70
1	5	3861	A	C1'-C2'-O2'	5.86	117.19	108.40
1	5	4958	C	C4'-C3'-O3'	5.86	121.78	113.00
1	5	1725	U	O4'-C1'-C2'	-5.85	101.75	107.60
1	5	2443	G	N9-C1'-C2'	5.85	120.78	112.00
61	SK	2	LEU	CA-CB-CG	5.85	136.78	116.30
1	5	1394	G	N9-C1'-C2'	5.85	120.78	112.00
1	5	4330	G	C1'-C2'-O2'	5.85	117.17	108.40
74	SX	67	ARG	NE-CZ-NH2	5.85	124.47	119.20
1	5	4497	U	N1-C1'-C2'	-5.85	103.23	112.00
21	S	127	MET	N-CA-C	-5.85	104.54	111.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2785	C	C4'-C3'-O3'	-5.85	104.23	113.00
59	SI	112	TRP	CA-CB-CG	5.85	124.71	113.60
50	S2	1860	A	C4'-C3'-O3'	-5.84	104.23	113.00
14	L	147	ALA	N-CA-C	-5.84	104.70	112.94
1	5	106	A	C1'-C2'-O2'	5.84	117.16	108.40
1	5	2583	C	C2'-C3'-O3'	5.84	122.46	113.70
50	S2	563	G	C3'-C2'-O2'	5.84	119.46	110.70
1	5	4694	G	C2'-C3'-O3'	-5.84	104.94	113.70
50	S2	631	U	O4'-C4'-C3'	-5.84	100.26	106.10
1	5	421	C	C2'-C3'-O3'	5.84	122.46	113.70
36	h	89	ARG	CG-CD-NE	5.84	124.84	112.00
1	5	30	C	C1'-C2'-O2'	-5.84	99.64	108.40
1	5	4463	U	C3'-C2'-O2'	5.84	119.45	110.70
50	S2	4	C	C4'-C3'-O3'	-5.84	104.24	113.00
1	5	417	G	C3'-C2'-O2'	5.83	119.45	110.70
6	C	312	ARG	CG-CD-NE	-5.83	99.17	112.00
50	S2	445	A	C3'-C2'-O2'	5.83	119.45	110.70
50	S2	646	G	O4'-C1'-C2'	-5.83	101.77	107.60
52	SB	133	TYR	CA-CB-CG	5.83	124.40	113.90
83	Sg	84	ASP	CA-CB-CG	-5.83	106.77	112.60
50	S2	494	C	C2'-C3'-O3'	-5.83	104.96	113.70
1	5	3634	G	C2'-C3'-O3'	5.83	122.44	113.70
1	5	42	A	C1'-C2'-O2'	-5.83	103.06	111.80
1	5	4314	C	O4'-C1'-C2'	-5.83	101.78	107.60
1	5	4497	U	C1'-C2'-O2'	5.83	117.14	108.40
1	5	4911	A	C1'-O4'-C4'	-5.82	103.88	109.70
50	S2	1315	U	C2'-C3'-O3'	5.82	122.44	113.70
1	5	2667	C	C3'-C2'-O2'	5.82	119.43	110.70
1	5	3898	G	C2'-C3'-O3'	5.82	122.43	113.70
36	h	84	ARG	CG-CD-NE	-5.82	99.20	112.00
1	5	2710	C	C4'-C3'-O3'	5.82	121.72	113.00
1	5	218	A	C4'-C3'-O3'	5.82	118.12	109.40
1	5	3875	G	C2'-C3'-O3'	5.82	122.42	113.70
9	F	207	ASN	CA-CB-CG	-5.82	106.78	112.60
62	SL	62	PHE	N-CA-C	-5.81	105.28	112.90
50	S2	604	A	C2'-C3'-O3'	5.81	122.42	113.70
1	5	2323	C	C1'-C2'-O2'	5.81	117.12	108.40
16	N	182	HIS	CA-CB-CG	5.81	119.61	113.80
1	5	405	U	C1'-C2'-O2'	5.81	117.11	108.40
1	5	693	C	C2'-C3'-O3'	5.81	122.41	113.70
1	5	2319	C	O5'-C5'-C4'	-5.81	102.79	111.50
50	S2	1560	U	C3'-C2'-O2'	5.81	119.42	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1631	A	N9-C1'-C2'	5.81	122.71	114.00
8	E	277	ILE	N-CA-C	5.81	117.23	107.18
58	SH	189	PHE	CB-CA-C	5.81	121.92	111.12
5	B	119	TYR	CA-CB-CG	-5.81	103.45	113.90
1	5	272	U	N1-C1'-C2'	5.80	120.71	112.00
1	5	2305	U	N1-C1'-C2'	5.80	122.71	114.00
1	5	4900	C	C2'-C3'-O3'	5.80	118.21	109.50
45	r	45	HIS	N-CA-CB	-5.80	100.68	110.49
1	5	1850	A	N9-C1'-C2'	5.80	120.70	112.00
50	S2	122	G	C1'-C2'-O2'	5.80	117.10	108.40
1	5	2071	A	C4'-C3'-O3'	-5.80	104.30	113.00
1	5	4543	G	N9-C1'-C2'	5.80	120.70	112.00
50	S2	968	U	N1-C1'-C2'	-5.80	103.30	112.00
1	5	2676	A	C1'-C2'-O2'	5.80	117.10	108.40
1	5	4737	G	C1'-C2'-O2'	-5.80	99.70	108.40
4	A	209	HIS	N-CA-CB	5.80	118.90	110.32
50	S2	632	C	C3'-C2'-O2'	5.80	119.40	110.70
60	SJ	147	PHE	N-CA-C	-5.80	97.77	107.80
1	5	1852	U	C1'-C2'-O2'	5.80	117.09	108.40
27	Y	5	PRO	N-CA-C	-5.80	102.09	111.19
83	Sg	272	GLN	N-CA-C	-5.79	102.47	110.35
66	SP	39	ALA	N-CA-C	5.79	117.28	110.97
14	L	192	PHE	CA-CB-CG	-5.79	108.01	113.80
83	Sg	228	TYR	N-CA-C	5.79	117.34	108.42
1	5	4163	U	N1-C1'-C2'	-5.79	103.31	112.00
5	B	291	TYR	N-CA-CB	5.79	118.66	109.51
6	C	102	PHE	CA-CB-CG	-5.79	108.01	113.80
73	SW	56	HIS	N-CA-CB	-5.79	101.76	110.73
1	5	3917	A	C4'-C3'-O3'	-5.79	104.32	113.00
1	5	4644	G	C1'-C2'-O2'	5.79	117.08	108.40
1	5	3637	U	C1'-C2'-O2'	5.79	117.08	108.40
1	5	4079	C	O4'-C1'-C2'	-5.79	101.81	107.60
63	SM	85	LEU	N-CA-C	5.79	119.44	112.38
1	5	4517	A	C4'-C3'-O3'	-5.78	104.32	113.00
3	8	46	G	N9-C1'-C2'	5.78	120.67	112.00
1	5	4094	G	C4'-C3'-O3'	-5.78	104.33	113.00
50	S2	1253	A	C4'-C3'-O3'	5.78	118.07	109.40
1	5	1998	A	C1'-C2'-O2'	-5.78	103.13	111.80
34	f	51	TYR	N-CA-C	5.78	116.72	108.74
1	5	2785	C	N1-C1'-C2'	5.78	120.67	112.00
1	5	2025	A	C4'-C3'-O3'	5.78	118.06	109.40
1	5	4713	G	C2'-C3'-O3'	5.78	122.36	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4941	G	C4'-C3'-O3'	-5.78	104.34	113.00
29	a	65	ARG	CG-CD-NE	-5.77	99.30	112.00
1	5	3945	A	C2'-C3'-O3'	-5.77	105.04	113.70
1	5	4395	U	C4'-C3'-O3'	-5.77	104.34	113.00
19	Q	32	TYR	CA-CB-CG	5.77	124.29	113.90
7	D	30	TYR	CB-CA-C	5.77	122.93	110.41
50	S2	1597	C	C2'-C3'-O3'	5.77	118.16	109.50
1	5	58	G	N9-C1'-C2'	5.77	122.65	114.00
1	5	1211	G	C4'-C3'-O3'	5.77	121.65	113.00
30	b	11	ASN	N-CA-C	-5.77	104.19	111.11
8	E	153	HIS	N-CA-CB	-5.77	100.75	110.49
12	I	76	MET	N-CA-C	-5.77	101.09	110.20
1	5	112	C	O4'-C1'-C2'	-5.76	101.84	107.60
1	5	4478	G	C1'-C2'-O2'	5.76	117.04	108.40
1	5	4915	G	C2'-C3'-O3'	5.76	122.34	113.70
22	T	139	HIS	N-CA-C	-5.76	99.66	108.76
50	S2	578	C	C2'-C3'-O3'	5.76	122.34	113.70
56	SF	188	TYR	CA-CB-CG	-5.76	103.53	113.90
60	SJ	123	ILE	CB-CA-C	-5.76	103.23	112.16
69	SS	82	TRP	CA-CB-CG	5.76	124.55	113.60
74	SX	16	HIS	CA-CB-CG	-5.76	108.04	113.80
14	L	5	ARG	N-CA-C	5.76	119.19	111.24
50	S2	918	U	N1-C1'-C2'	5.76	122.64	114.00
1	5	293	G	C2'-C3'-O3'	5.76	122.34	113.70
1	5	294	G	C4'-C3'-O3'	5.76	121.64	113.00
1	5	3870	C	N1-C1'-C2'	5.76	120.64	112.00
1	5	4116	C	OP2-P-O3'	5.76	125.27	108.00
50	S2	1800	A	C3'-C2'-O2'	5.76	119.33	110.70
50	S2	410	G	C1'-C2'-O2'	5.75	117.03	108.40
67	SQ	126	ARG	NE-CZ-NH2	5.75	124.38	119.20
71	SU	68	THR	CA-C-N	-5.75	114.04	119.85
71	SU	68	THR	C-N-CA	-5.75	114.04	119.85
12	I	96	VAL	CB-CA-C	-5.75	103.67	111.15
14	L	82	ARG	CG-CD-NE	-5.75	99.35	112.00
50	S2	1452	A	N9-C1'-C2'	5.75	122.63	114.00
1	5	2014	C	C2'-C3'-O3'	5.75	122.32	113.70
41	m	118	THR	N-CA-C	5.75	118.01	111.11
50	S2	453	C	C3'-C2'-O2'	5.75	119.32	110.70
83	Sg	15	ASN	CB-CA-C	5.75	120.92	112.07
15	M	90	ARG	CG-CD-NE	-5.75	99.36	112.00
50	S2	24	C	C4'-C3'-O3'	-5.75	104.38	113.00
50	S2	1567	G	N9-C1'-C2'	5.75	120.62	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4750	G	C1'-O4'-C4'	-5.74	104.16	109.90
13	J	165	TRP	N-CA-C	-5.74	104.71	110.97
1	5	2046	G	C1'-O4'-C4'	-5.74	103.96	109.70
1	5	1534	A	C5'-C4'-O4'	5.74	117.71	109.10
1	5	4276	G	O4'-C1'-C2'	-5.74	101.86	107.60
50	S2	398	A	N9-C1'-C2'	-5.74	105.39	114.00
81	Se	41	ARG	CG-CD-NE	5.74	124.63	112.00
1	5	1667	G	C2'-C3'-O3'	5.74	122.30	113.70
29	a	40	HIS	N-CA-C	5.74	123.02	110.80
50	S2	1703	C	N1-C1'-C2'	-5.74	103.40	112.00
1	5	456	C	O4'-C1'-C2'	-5.73	101.87	107.60
50	S2	164	A	N9-C1'-C2'	-5.73	103.40	112.00
50	S2	1273	C	C1'-C2'-O2'	5.73	117.00	108.40
1	5	2631	U	C4'-C3'-O3'	-5.73	104.40	113.00
1	5	3839	G	O4'-C4'-C3'	-5.73	100.37	106.10
3	8	9	A	C1'-C2'-O2'	5.73	117.00	108.40
62	SL	16	ILE	CB-CA-C	5.73	117.02	111.23
1	5	1267	C	C2'-C3'-O3'	5.73	118.10	109.50
30	b	11	ASN	N-CA-CB	5.73	118.48	109.94
16	N	138	PHE	N-CA-C	-5.73	103.65	111.56
1	5	4548	A	O4'-C1'-C2'	-5.73	101.87	107.60
10	G	57	TRP	CB-CA-C	5.73	117.61	109.08
50	S2	1283	C	C4'-C3'-O3'	-5.73	104.41	113.00
1	5	2693	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	5	911	U	C2'-C3'-O3'	5.72	122.28	113.70
1	5	1296	G	C4'-C3'-O3'	5.72	117.98	109.40
1	5	1324	A	C3'-C2'-O2'	5.72	123.18	114.60
1	5	2422	C	C3'-C2'-O2'	5.72	119.28	110.70
54	SD	107	TYR	CB-CA-C	5.72	119.70	109.29
1	5	229	G	C3'-C2'-O2'	5.72	119.28	110.70
1	5	2675	G	C1'-C2'-O2'	5.72	116.97	108.40
1	5	3863	C	N1-C1'-C2'	5.72	120.58	112.00
50	S2	1216	C	C4'-C3'-O3'	-5.72	104.42	113.00
1	5	4215	C	C4'-C3'-O3'	-5.71	104.43	113.00
12	I	47	PRO	N-CA-C	5.71	124.24	112.47
50	S2	1818	A	C4'-C3'-O3'	-5.71	104.43	113.00
1	5	2056	G	O4'-C1'-C2'	-5.71	101.89	107.60
1	5	4283	G	C4'-C3'-O3'	-5.71	104.43	113.00
4	A	209	HIS	CB-CA-C	5.71	117.59	109.08
5	B	119	TYR	N-CA-CB	5.71	118.94	110.49
57	SG	145	PHE	CB-CA-C	-5.71	101.91	110.88
1	5	1455	G	C4'-C3'-O3'	-5.71	104.44	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	a	60	HIS	N-CA-C	-5.71	98.64	110.80
1	5	4463	U	N1-C1'-C2'	-5.71	103.44	112.00
1	5	2367	A	C3'-C2'-O2'	5.71	119.26	110.70
6	C	22	VAL	CB-CA-C	-5.71	104.44	111.92
1	5	1672	U	N1-C1'-C2'	5.71	120.56	112.00
50	S2	1292	C	C5'-C4'-C3'	5.71	124.56	116.00
1	5	2614	C	C3'-C2'-O2'	5.70	119.25	110.70
50	S2	399	C	C4'-C3'-O3'	5.70	117.95	109.40
1	5	2025	A	C2'-C3'-O3'	-5.70	100.95	109.50
16	N	53	TYR	N-CA-CB	5.70	118.75	109.69
1	5	85	G	O4'-C1'-C2'	-5.70	100.10	105.80
1	5	2533	C	N1-C1'-C2'	5.70	120.55	112.00
1	5	1408	G	C1'-C2'-O2'	5.69	116.94	108.40
1	5	1895	G	N9-C1'-C2'	5.69	120.54	112.00
74	SX	17	ARG	CG-CD-NE	-5.69	99.47	112.00
1	5	1564	A	C3'-C2'-O2'	5.69	119.24	110.70
1	5	1953	U	N1-C1'-C2'	5.69	120.54	112.00
1	5	3914	U	C2'-C3'-O3'	-5.69	105.16	113.70
50	S2	110	U	O4'-C1'-C2'	-5.69	101.91	107.60
68	SR	31	ASN	N-CA-C	-5.69	106.10	113.16
1	5	64	A	C4'-C3'-O3'	5.69	117.93	109.40
1	5	2118	G	O4'-C4'-C3'	-5.69	98.31	104.00
7	D	130	TYR	CA-CB-CG	-5.69	103.66	113.90
50	S2	677	G	C4'-C3'-O3'	-5.69	104.46	113.00
50	S2	1151	G	C4'-C3'-O3'	-5.69	104.47	113.00
1	5	4368	G	O4'-C1'-C2'	-5.69	101.91	107.60
1	5	1576	G	C2'-C3'-O3'	5.69	118.03	109.50
50	S2	140	C	C2'-C3'-O3'	5.69	118.03	109.50
1	5	74	G	N9-C1'-C2'	5.68	120.53	112.00
1	5	3676	G	C1'-C2'-O2'	-5.68	99.87	108.40
50	S2	166	A	C4'-C3'-O3'	-5.68	104.47	113.00
73	SW	3	ARG	CG-CD-NE	-5.68	99.50	112.00
1	5	3590	G	C2'-C3'-O3'	5.68	122.22	113.70
1	5	4887	C	C1'-C2'-O2'	-5.68	99.88	108.40
1	5	4982	A	C1'-C2'-O2'	5.68	116.92	108.40
5	B	119	TYR	CB-CA-C	5.68	121.22	111.68
6	C	317	ASN	N-CA-C	-5.68	101.95	109.84
44	p	14	TYR	CB-CA-C	5.68	121.96	110.38
50	S2	952	G	C1'-C2'-O2'	5.68	116.91	108.40
56	SF	140	ASP	N-CA-C	-5.68	102.36	110.59
50	S2	104	A	C1'-C2'-O2'	5.67	116.91	108.40
3	8	38	U	C1'-O4'-C4'	-5.67	104.23	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	972	C	C4'-C3'-O3'	-5.67	104.50	113.00
1	5	1591	U	N1-C1'-C2'	5.67	120.50	112.00
1	5	1930	U	N1-C1'-C2'	5.67	122.50	114.00
1	5	3753	G	C2'-C3'-O3'	5.67	122.20	113.70
1	5	1930	U	C4'-C3'-O3'	-5.67	100.90	109.40
11	H	180	TYR	CA-CB-CG	5.67	124.10	113.90
50	S2	1474	A	C2'-C3'-O3'	5.67	118.00	109.50
1	5	414	C	C3'-C2'-O2'	5.66	119.20	110.70
4	A	19	HIS	N-CA-CB	-5.66	100.92	110.49
50	S2	1623	A	O4'-C1'-C2'	-5.66	101.94	107.60
1	5	4170	A	C2'-C3'-O3'	5.66	117.99	109.50
55	SE	47	PHE	CB-CA-C	-5.66	101.44	110.84
1	5	43	U	N1-C1'-C2'	-5.66	103.51	112.00
1	5	84	A	C1'-C2'-O2'	-5.66	103.31	111.80
1	5	450	G	C1'-C2'-O2'	5.66	116.89	108.40
45	r	105	ASP	N-CA-C	-5.66	105.40	112.93
52	SB	100	PHE	N-CA-C	-5.66	101.81	110.30
16	N	151	ILE	N-CA-C	-5.66	104.83	111.00
3	8	118	C	O4'-C1'-C2'	-5.66	101.94	107.60
1	5	1334	A	C1'-C2'-O2'	5.65	116.88	108.40
1	5	2043	A	C4'-C3'-O3'	-5.65	104.52	113.00
50	S2	101	U	C2'-C3'-O3'	-5.65	105.23	113.70
1	5	97	G	C1'-C2'-O2'	5.65	116.87	108.40
1	5	2370	A	C3'-C2'-O2'	5.65	123.07	114.60
1	5	3913	G	C4'-C3'-O3'	-5.65	100.93	109.40
50	S2	1092	G	C1'-C2'-O2'	5.65	116.87	108.40
1	5	1379	C	C1'-O4'-C4'	-5.64	104.06	109.70
30	b	6	ASN	N-CA-C	-5.64	104.61	113.02
1	5	1379	C	N1-C1'-C2'	5.64	122.46	114.00
1	5	2277	C	O4'-C1'-C2'	-5.64	101.96	107.60
1	5	4464	A	C5'-C4'-O4'	5.64	118.26	109.80
1	5	2817	C	C2'-C3'-O3'	5.64	122.16	113.70
15	M	119	ARG	NE-CZ-NH2	5.64	124.28	119.20
1	5	2056	G	P-O5'-C5'	-5.64	112.44	120.90
5	B	363	ILE	N-CA-C	5.64	116.11	107.77
50	S2	465	A	C4'-C3'-O3'	5.64	117.86	109.40
1	5	157	U	C1'-O4'-C4'	-5.64	104.26	109.90
14	L	66	TYR	N-CA-CB	-5.64	103.50	111.00
3	8	125	C	O4'-C1'-C2'	-5.63	101.97	107.60
35	g	76	ARG	CB-CA-C	-5.63	100.96	110.43
50	S2	579	C	C1'-C2'-O2'	5.63	116.85	108.40
75	SY	76	TYR	CB-CA-C	5.63	118.94	109.48

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	E	69	TYR	N-CA-C	5.63	118.23	107.75
53	SC	170	TRP	N-CA-C	-5.63	104.83	110.97
1	5	2696	A	C1'-C2'-O2'	-5.63	103.35	111.80
11	H	115	ARG	N-CA-CB	5.63	118.41	110.36
62	SL	53	GLY	N-CA-C	5.63	118.52	112.33
83	Sg	83	TRP	CA-CB-CG	-5.63	102.90	113.60
1	5	1804	A	C4'-C3'-O3'	5.63	117.84	109.40
74	SX	16	HIS	N-CA-CB	5.63	118.14	109.98
1	5	381	U	N1-C1'-C2'	5.63	120.44	112.00
1	5	4497	U	C2'-C3'-O3'	5.63	122.14	113.70
50	S2	365	C	C1'-C2'-O2'	5.63	116.84	108.40
60	SJ	67	ASP	CB-CA-C	5.63	116.80	108.87
1	5	2077	C	C1'-C2'-O2'	5.62	116.84	108.40
1	5	4627	U	O4'-C1'-C2'	-5.62	101.97	107.60
1	5	1522	G	N9-C1'-C2'	-5.62	103.56	112.00
1	5	4194	U	N1-C1'-C2'	-5.62	103.57	112.00
1	5	2688	G	O4'-C1'-C2'	-5.62	101.98	107.60
1	5	4958	C	O4'-C1'-C2'	-5.62	101.98	107.60
1	5	2248	C	O4'-C1'-C2'	-5.62	101.98	107.60
1	5	3739	C	C2'-C3'-O3'	5.62	122.13	113.70
23	U	90	TYR	N-CA-CB	5.62	118.22	110.07
50	S2	356	C	C4'-C3'-O3'	-5.62	104.57	113.00
1	5	1390	G	C2'-C3'-O3'	5.62	122.12	113.70
1	5	1378	C	C4'-C3'-O3'	5.62	121.42	113.00
6	C	42	THR	CB-CA-C	-5.62	100.24	110.63
50	S2	923	G	O4'-C1'-C2'	-5.62	101.98	107.60
57	SG	156	TYR	CB-CA-C	5.62	120.79	112.03
1	5	931	C	C1'-C2'-O2'	-5.61	103.38	111.80
1	5	2507	A	O4'-C1'-C2'	-5.61	101.99	107.60
1	5	2577	C	O4'-C1'-C2'	-5.61	101.99	107.60
1	5	1832	C	O4'-C1'-C2'	-5.61	101.99	107.60
12	I	213	HIS	CA-CB-CG	-5.61	108.19	113.80
21	S	32	ILE	N-CA-C	-5.61	103.94	110.05
1	5	4324	A	N9-C1'-C2'	5.61	120.41	112.00
1	5	4719	G	C4'-C3'-O3'	5.61	117.81	109.40
52	SB	155	TYR	CB-CA-C	5.61	118.90	109.48
1	5	2077	C	O4'-C1'-C2'	-5.61	102.00	107.60
81	Se	38	TYR	CA-CB-CG	5.61	123.99	113.90
1	5	468	U	N1-C1'-C2'	5.60	120.41	112.00
1	5	4238	G	N9-C1'-C2'	-5.60	103.60	112.00
5	B	117	ARG	CG-CD-NE	-5.60	99.68	112.00
50	S2	484	A	C3'-C2'-O2'	5.60	119.10	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	1207	G	C3'-C2'-O2'	-5.60	106.20	114.60
1	5	406	C	C3'-C2'-O2'	5.60	119.09	110.70
27	Y	19	PHE	CB-CA-C	5.60	118.16	111.22
50	S2	1097	G	C2'-C3'-O3'	5.60	122.09	113.70
1	5	152	U	O4'-C1'-C2'	-5.59	102.01	107.60
1	5	209	U	C1'-C2'-O2'	5.59	116.79	108.40
65	SO	146	ARG	NE-CZ-NH2	-5.59	114.17	119.20
47	1	273	ARG	CA-C-N	-5.59	112.01	121.85
47	1	273	ARG	C-N-CA	-5.59	112.01	121.85
50	S2	368	U	C2'-C3'-O3'	5.59	122.09	113.70
83	Sg	140	TYR	N-CA-C	5.59	117.76	108.20
1	5	4979	A	C2'-C3'-O3'	-5.59	105.31	113.70
9	F	84	TYR	N-CA-CB	5.59	118.94	110.45
1	5	4198	G	O4'-C1'-C2'	-5.59	102.01	107.60
5	B	236	HIS	N-CA-CB	-5.59	103.98	112.47
55	SE	227	VAL	N-CA-C	5.59	116.14	110.05
1	5	963	G	C2'-C3'-O3'	-5.59	101.12	109.50
1	5	136	C	C3'-C2'-O2'	5.58	119.08	110.70
1	5	2795	A	C1'-C2'-O2'	-5.58	103.42	111.80
32	d	108	TYR	N-CA-C	5.58	117.94	110.35
9	F	119	ILE	N-CA-CB	5.58	117.18	110.31
50	S2	752	G	C4'-C3'-O3'	5.58	117.78	109.40
53	SC	172	ASN	N-CA-CB	5.58	118.97	109.87
3	8	112	G	C3'-C2'-O2'	5.58	119.07	110.70
64	SN	55	ARG	CG-CD-NE	5.58	124.28	112.00
79	Sc	44	ARG	NE-CZ-NH2	5.58	124.22	119.20
1	5	85	G	N9-C1'-C2'	-5.58	105.63	114.00
3	8	34	U	O4'-C1'-C2'	-5.58	102.02	107.60
7	D	283	LYS	N-CA-C	-5.58	101.06	109.60
1	5	2262	G	C4'-C3'-O3'	5.58	117.77	109.40
21	S	10	TYR	CB-CA-C	5.58	120.65	111.50
50	S2	821	G	O4'-C4'-C3'	-5.58	98.42	104.00
1	5	158	A	N9-C1'-C2'	-5.58	103.64	112.00
21	S	44	PHE	N-CA-CB	5.58	118.41	110.16
50	S2	65	C	C2'-C3'-O3'	5.58	122.06	113.70
1	5	1292	C	N1-C1'-C2'	5.57	120.36	112.00
1	5	2081	C	N1-C1'-C2'	5.57	120.36	112.00
5	B	39	LYS	CA-C-N	5.57	126.81	119.84
5	B	39	LYS	C-N-CA	5.57	126.81	119.84
9	F	203	PHE	N-CA-C	-5.57	104.90	110.97
50	S2	1337	C	C1'-C2'-O2'	5.57	116.76	108.40
1	5	4518	A	C3'-C2'-O2'	-5.57	106.24	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	651	U	N1-C1'-C2'	5.57	120.36	112.00
1	5	2467	U	C2'-C3'-O3'	-5.57	105.35	113.70
1	5	3773	U	C4'-C3'-C2'	-5.57	97.03	102.60
1	5	2424	G	N9-C1'-C2'	5.57	120.35	112.00
16	N	6	TYR	CA-CB-CG	-5.57	103.88	113.90
75	SY	63	HIS	CA-CB-CG	5.57	119.37	113.80
50	S2	1302	G	C1'-C2'-O2'	-5.57	103.45	111.80
1	5	1274	A	C2'-C3'-O3'	5.56	117.84	109.50
1	5	1478	C	N1-C1'-C2'	5.56	120.34	112.00
1	5	2270	G	N9-C1'-C2'	5.56	120.34	112.00
1	5	4623	G	C1'-C2'-O2'	5.56	116.74	108.40
9	F	237	ASN	N-CA-CB	5.56	118.30	109.51
12	I	111	LEU	N-CA-C	-5.56	102.05	110.28
22	T	103	ASP	N-CA-C	5.56	119.54	112.87
1	5	2670	C	N1-C1'-C2'	5.56	120.34	112.00
1	5	2753	G	C2'-C3'-O3'	5.56	122.04	113.70
50	S2	452	G	C1'-C2'-O2'	-5.56	100.06	108.40
50	S2	1062	A	C2'-C3'-O3'	-5.56	105.36	113.70
1	5	110	C	C1'-C2'-O2'	5.56	116.73	108.40
1	5	664	G	C1'-O4'-C4'	-5.56	104.14	109.70
50	S2	796	G	N9-C1'-C2'	5.56	120.34	112.00
50	S2	1014	G	C1'-C2'-O2'	5.56	116.74	108.40
50	S2	1296	U	N1-C1'-C2'	5.56	120.34	112.00
1	5	216	C	C2'-C3'-O3'	5.56	122.03	113.70
51	SA	54	THR	CB-CA-C	-5.56	101.92	110.81
1	5	977	C	C4'-C3'-C2'	-5.55	97.05	102.60
1	5	4693	C	O4'-C4'-C3'	-5.55	98.45	104.00
1	5	4976	U	N1-C1'-C2'	5.55	122.33	114.00
50	S2	1072	U	C1'-C2'-O2'	5.55	116.73	108.40
1	5	267	G	C2'-C3'-O3'	5.55	122.03	113.70
4	A	162	ASN	N-CA-CB	5.55	119.22	110.23
6	C	144	ILE	CB-CA-C	-5.55	103.47	111.19
44	p	34	HIS	CB-CA-C	5.55	120.10	110.94
1	5	4306	U	C1'-C2'-O2'	5.55	116.72	108.40
9	F	84	TYR	N-CA-C	5.55	118.04	110.55
1	5	1323	A	N9-C1'-C2'	5.55	120.32	112.00
1	5	2310	C	C2'-C3'-O3'	5.55	122.02	113.70
1	5	4045	G	N9-C1'-C2'	-5.55	103.68	112.00
1	5	4583	C	N1-C1'-C2'	-5.55	103.68	112.00
35	g	14	ASN	CA-CB-CG	-5.54	107.06	112.60
1	5	3626	G	C1'-C2'-O2'	5.54	116.72	108.40
45	r	30	ASN	CA-C-N	-5.54	114.37	122.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	r	30	ASN	C-N-CA	-5.54	114.37	122.19
50	S2	536	A	O4'-C1'-C2'	-5.54	102.06	107.60
1	5	2324	C	O4'-C1'-C2'	-5.54	102.06	107.60
1	5	3654	G	C1'-C2'-O2'	5.54	116.71	108.40
50	S2	1152	U	C2'-C3'-O3'	-5.54	105.39	113.70
1	5	1440	U	O4'-C1'-C2'	-5.54	102.06	107.60
44	p	18	TYR	CA-CB-CG	5.54	123.87	113.90
50	S2	1262	C	N1-C1'-C2'	5.54	120.31	112.00
56	SF	152	TRP	N-CA-CB	5.54	118.10	110.07
1	5	1523	A	C4'-C3'-O3'	-5.54	104.69	113.00
1	5	2325	C	C2'-C3'-O3'	5.54	122.00	113.70
9	F	197	TYR	N-CA-CB	5.54	119.84	110.49
1	5	153	G	C4'-C3'-O3'	-5.53	104.70	113.00
1	5	1280	C	C3'-C2'-O2'	5.53	119.00	110.70
45	r	16	PHE	N-CA-C	-5.53	106.11	112.92
1	5	170	C	C4'-C3'-O3'	5.53	117.69	109.40
1	5	2007	G	C1'-C2'-O2'	-5.53	103.50	111.80
9	F	136	ARG	CG-CD-NE	-5.53	99.83	112.00
35	g	76	ARG	N-CA-C	5.53	116.94	108.42
1	5	1343	A	C4'-C3'-O3'	-5.53	104.71	113.00
9	F	110	VAL	CB-CA-C	-5.53	104.81	111.88
10	G	57	TRP	CA-CB-CG	-5.53	103.10	113.60
1	5	514	U	O4'-C1'-C2'	-5.53	102.08	107.60
2	7	72	U	C3'-C2'-O2'	5.53	118.99	110.70
17	O	73	PHE	N-CA-CB	5.53	118.09	109.97
50	S2	91	A	C1'-C2'-O2'	5.53	116.69	108.40
69	SS	11	HIS	CB-CA-C	5.53	121.42	110.42
1	5	4165	C	C2'-C3'-O3'	5.52	121.98	113.70
1	5	222	C	C1'-C2'-O2'	5.52	116.69	108.40
1	5	1834	U	C4'-C3'-O3'	5.52	117.68	109.40
50	S2	1292	C	O4'-C4'-C3'	-5.52	98.48	104.00
33	e	57	ASN	N-CA-C	-5.52	100.90	109.24
1	5	4424	A	C1'-C2'-O2'	5.52	116.68	108.40
70	ST	83	GLN	CA-CB-CG	5.52	125.13	114.10
2	7	6	C	C2'-C3'-O3'	5.52	121.97	113.70
50	S2	351	G	C1'-C2'-O2'	5.52	116.67	108.40
1	5	2833	A	N9-C1'-C2'	5.51	120.27	112.00
20	R	97	ARG	CG-CD-NE	-5.51	99.87	112.00
33	e	74	PHE	CA-CB-CG	-5.51	108.29	113.80
1	5	1631	A	O4'-C4'-C3'	-5.51	100.59	106.10
50	S2	1714	U	C4'-C3'-O3'	-5.51	104.73	113.00
4	A	33	ASP	CA-C-O	-5.51	115.46	121.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	658	C	C2'-C3'-O3'	5.51	121.96	113.70
12	I	78	LYS	N-CA-C	-5.51	99.07	110.80
22	T	105	PHE	N-CA-C	-5.51	103.64	110.41
54	SD	67	ARG	CG-CD-NE	5.51	124.11	112.00
1	5	4281	A	C2'-C3'-O3'	-5.50	105.44	113.70
50	S2	1505	U	C3'-C2'-O2'	5.50	118.95	110.70
50	S2	1579	A	C2'-C3'-O3'	5.50	121.96	113.70
4	A	37	ARG	CG-CD-NE	-5.50	99.90	112.00
11	H	115	ARG	CA-CB-CG	5.50	125.10	114.10
38	j	39	TYR	N-CA-C	5.50	121.97	109.81
50	S2	999	G	C4'-C3'-O3'	-5.50	104.75	113.00
50	S2	9	U	N1-C1'-C2'	-5.50	103.75	112.00
1	5	405	U	C2'-C3'-O3'	5.50	121.95	113.70
1	5	2580	U	N1-C1'-C2'	5.50	120.25	112.00
50	S2	1040	G	O4'-C1'-C2'	-5.50	102.10	107.60
51	SA	151	ASP	CA-CB-CG	-5.50	107.10	112.60
3	8	38	U	O4'-C1'-C2'	-5.50	102.10	107.60
39	k	11	PHE	N-CA-CB	5.50	118.76	110.30
1	5	2323	C	C2'-C3'-O3'	5.50	121.94	113.70
1	5	4467	A	C4'-C3'-O3'	-5.50	104.76	113.00
2	7	65	G	C2'-C3'-O3'	5.50	121.94	113.70
22	T	14	MET	CB-CA-C	-5.50	102.50	110.96
43	o	42	ASP	CB-CA-C	-5.50	102.25	110.88
1	5	84	A	N9-C1'-C2'	5.49	122.24	114.00
1	5	4600	G	O4'-C1'-C2'	-5.49	102.11	107.60
50	S2	1288	U	C4'-C3'-O3'	-5.49	104.76	113.00
50	S2	1584	G	N9-C1'-C2'	5.49	122.24	114.00
1	5	2529	A	C2'-C3'-O3'	-5.49	105.46	113.70
1	5	2668	G	C3'-C2'-O2'	5.49	118.94	110.70
3	8	1	C	C5'-C4'-C3'	5.49	124.24	116.00
1	5	18	C	C4'-C3'-O3'	-5.49	104.77	113.00
1	5	4542	U	N1-C1'-C2'	5.49	120.23	112.00
1	5	4975	G	O4'-C1'-C2'	-5.49	102.11	107.60
1	5	4404	U	C1'-C2'-O2'	5.49	116.63	108.40
1	5	268	G	C2'-C3'-O3'	5.49	121.93	113.70
1	5	1818	G	C4'-C3'-O3'	-5.49	104.77	113.00
7	D	218	ALA	N-CA-C	-5.49	105.38	112.68
33	e	75	ARG	CG-CD-NE	-5.49	99.93	112.00
50	S2	443	U	C1'-C2'-O2'	5.49	116.63	108.40
73	SW	76	SER	N-CA-C	5.49	119.18	108.21
1	5	4764	A	C4'-C3'-O3'	-5.48	104.78	113.00
22	T	17	ARG	CB-CA-C	5.48	117.33	109.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	376	A	C1'-C2'-O2'	5.48	116.62	108.40
1	5	1214	C	C2'-C3'-O3'	-5.48	101.28	109.50
1	5	4449	A	C4'-C3'-O3'	5.48	121.22	113.00
50	S2	1142	G	N9-C1'-C2'	-5.48	103.78	112.00
62	SL	89	ARG	CG-CD-NE	-5.48	99.94	112.00
1	5	1722	C	C4'-C3'-O3'	-5.48	104.78	113.00
75	SY	61	ARG	CG-CD-NE	-5.48	99.95	112.00
56	SF	51	HIS	CA-CB-CG	-5.48	108.32	113.80
1	5	1847	C	N1-C1'-C2'	5.47	120.21	112.00
1	5	3776	G	N9-C1'-C2'	-5.47	105.79	114.00
4	A	195	CYS	N-CA-C	-5.47	101.43	109.81
1	5	1627	G	C1'-C2'-O2'	5.47	116.61	108.40
1	5	2289	C	C2'-C3'-O3'	-5.47	105.49	113.70
1	5	4320	G	N9-C1'-C2'	5.47	120.21	112.00
82	Sf	105	TYR	CB-CA-C	5.47	120.37	112.05
1	5	2090	U	N1-C1'-C2'	5.47	120.20	112.00
1	5	1735	U	C1'-C2'-O2'	5.47	116.60	108.40
9	F	136	ARG	CA-CB-CG	5.47	125.03	114.10
50	S2	1319	U	N1-C1'-C2'	5.46	120.20	112.00
50	S2	1597	C	N1-C1'-C2'	5.46	122.20	114.00
1	5	157	U	N1-C1'-C2'	-5.46	103.81	112.00
1	5	1373	A	C4'-C3'-O3'	-5.46	104.81	113.00
19	Q	176	ARG	CG-CD-NE	-5.46	99.98	112.00
1	5	4693	C	C5'-C4'-O4'	5.46	117.99	109.80
1	5	4699	U	C2'-C3'-O3'	-5.46	101.31	109.50
1	5	5044	A	N9-C1'-C2'	5.46	120.19	112.00
50	S2	1680	G	N9-C1'-C2'	5.46	120.19	112.00
1	5	1521	C	N1-C1'-C2'	-5.46	103.81	112.00
1	5	1945	G	C4'-C3'-O3'	-5.46	104.81	113.00
1	5	1724	G	N9-C1'-C2'	5.46	122.19	114.00
3	8	73	U	N1-C1'-C2'	-5.46	103.81	112.00
3	8	104	A	N9-C1'-C2'	5.46	122.19	114.00
50	S2	368	U	C3'-C2'-O2'	5.46	118.89	110.70
1	5	4223	C	C1'-C2'-O2'	5.46	116.58	108.40
1	5	4322	G	N9-C1'-C2'	-5.46	103.81	112.00
34	f	6	TRP	CB-CA-C	5.46	121.28	110.42
1	5	3938	G	C4'-C3'-O3'	-5.46	101.22	109.40
1	5	2344	U	C2'-C3'-O3'	-5.45	105.52	113.70
12	I	46	PHE	CB-CA-C	5.45	117.91	111.15
50	S2	688	U	C2'-C3'-O3'	5.45	117.68	109.50
50	S2	917	U	N1-C1'-C2'	5.45	120.18	112.00
50	S2	1503	C	N1-C1'-C2'	5.45	120.18	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	S2	1606	G	N9-C1'-C2'	-5.45	103.82	112.00
50	S2	1109	C	C4'-C3'-O3'	5.45	121.18	113.00
55	SE	86	PHE	N-CA-CB	5.45	117.98	109.97
1	5	2011	C	C3'-C2'-O2'	5.45	118.87	110.70
6	C	311	ARG	CG-CD-NE	-5.45	100.01	112.00
50	S2	384	U	N1-C1'-C2'	-5.45	103.83	112.00
1	5	3734	U	N1-C1'-C2'	5.45	120.17	112.00
27	Y	100	HIS	N-CA-CB	5.45	117.89	110.05
1	5	99	A	C1'-C2'-O2'	5.45	116.57	108.40
53	SC	223	TYR	N-CA-CB	5.45	119.14	110.16
1	5	509	A	C4'-C3'-O3'	-5.44	104.83	113.00
73	SW	55	ASP	N-CA-C	-5.44	103.31	110.33
1	5	1895	G	C2'-C3'-O3'	-5.44	105.54	113.70
4	A	194	ASN	N-CA-CB	5.44	118.42	110.58
58	SH	109	ARG	N-CA-C	5.44	117.92	109.60
1	5	3799	A	N9-C1'-C2'	5.44	120.16	112.00
3	8	104	A	P-O5'-C5'	5.44	129.06	120.90
50	S2	798	A	C4'-C3'-O3'	5.44	121.16	113.00
2	7	110	G	C4'-C3'-O3'	-5.44	104.85	113.00
1	5	1610	C	C4'-C3'-O3'	-5.43	104.85	113.00
1	5	2258	C	C4'-C3'-O3'	5.43	121.15	113.00
2	7	6	C	C4'-C3'-O3'	-5.43	104.85	113.00
3	8	115	G	C4'-C3'-O3'	-5.43	104.85	113.00
50	S2	1221	G	N9-C1'-C2'	5.43	120.15	112.00
51	SA	111	GLN	N-CA-C	-5.43	106.23	112.92
1	5	1534	A	C3'-C2'-O2'	-5.43	106.45	114.60
1	5	4497	U	O3'-P-O5'	5.43	112.15	104.00
27	Y	74	TYR	N-CA-CB	5.43	119.67	110.49
53	SC	110	MET	CA-C-N	-5.43	114.19	119.90
53	SC	110	MET	C-N-CA	-5.43	114.19	119.90
27	Y	61	HIS	CA-CB-CG	-5.43	108.37	113.80
1	5	4670	C	P-O5'-C5'	5.43	129.04	120.90
50	S2	678	U	C4'-C3'-O3'	-5.43	104.86	113.00
50	S2	798	A	C1'-C2'-O2'	-5.43	100.26	108.40
15	M	91	TRP	CB-CA-C	-5.43	102.29	110.92
1	5	2827	G	N9-C1'-C2'	5.43	122.14	114.00
1	5	3666	C	C2'-C3'-O3'	5.43	121.84	113.70
1	5	3880	G	N9-C1'-C2'	5.43	122.14	114.00
1	5	3594	C	N1-C1'-C2'	5.42	120.14	112.00
50	S2	632	C	C4'-C3'-O3'	-5.42	104.86	113.00
20	R	117	ARG	CB-CG-CD	5.42	123.77	111.30
1	5	934	C	O4'-C4'-C3'	-5.42	100.68	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	S	28	TYR	CA-CB-CG	5.42	123.66	113.90
44	p	14	TYR	CA-CB-CG	-5.42	104.14	113.90
1	5	470	A	O4'-C1'-C2'	-5.42	102.18	107.60
50	S2	1519	U	N1-C1'-C2'	5.42	122.13	114.00
1	5	3918	G	C1'-C2'-O2'	5.42	116.52	108.40
50	S2	1659	U	N1-C1'-C2'	-5.42	103.88	112.00
1	5	1361	G	C2'-C3'-O3'	5.42	121.82	113.70
1	5	4714	C	C3'-C2'-O2'	5.42	118.82	110.70
36	h	117	ARG	CB-CG-CD	5.42	123.75	111.30
1	5	2667	C	C2'-C3'-O3'	-5.41	105.58	113.70
1	5	4536	C	C1'-C2'-O2'	5.41	116.52	108.40
11	H	115	ARG	CG-CD-NE	-5.41	100.09	112.00
19	Q	178	ARG	CG-CD-NE	-5.41	100.09	112.00
50	S2	853	C	C2'-C3'-O3'	5.41	121.82	113.70
1	5	648	G	C2'-C3'-O3'	5.41	121.82	113.70
1	5	3813	A	O4'-C4'-C3'	-5.41	100.69	106.10
1	5	2674	A	O4'-C4'-C3'	-5.41	100.69	106.10
1	5	4763	U	O5'-C5'-C4'	-5.41	103.58	111.70
4	A	210	PRO	N-CA-C	5.41	123.61	112.47
1	5	2117	G	O4'-C4'-C3'	-5.41	98.59	104.00
1	5	4981	G	N9-C1'-C2'	-5.41	103.89	112.00
50	S2	620	G	C4'-C3'-O3'	-5.41	104.89	113.00
50	S2	167	G	N9-C1'-C2'	5.41	120.11	112.00
50	S2	447	A	C4'-C3'-O3'	5.41	117.51	109.40
50	S2	648	A	C4'-C3'-O3'	-5.41	104.89	113.00
50	S2	1210	G	O4'-C1'-C2'	-5.41	102.19	107.60
50	S2	1820	G	C3'-C2'-O2'	5.41	118.81	110.70
1	5	4280	A	C4'-C3'-C2'	-5.40	97.20	102.60
69	SS	11	HIS	CA-C-N	5.40	131.70	121.97
69	SS	11	HIS	C-N-CA	5.40	131.70	121.97
1	5	394	G	N9-C1'-C2'	-5.40	103.89	112.00
1	5	1734	G	N9-C1'-C2'	-5.40	105.89	114.00
1	5	1896	A	C1'-C2'-O2'	5.40	116.50	108.40
1	5	3844	U	C1'-C2'-O2'	5.40	116.50	108.40
50	S2	663	C	C4'-C3'-O3'	-5.40	104.90	113.00
1	5	1528	U	C4'-C3'-O3'	-5.40	104.90	113.00
1	5	4510	A	O4'-C4'-C3'	-5.40	100.70	106.10
45	r	77	TYR	N-CA-CB	-5.40	101.43	110.99
1	5	4234	A	C2'-C3'-O3'	5.40	117.60	109.50
50	S2	1249	C	N1-C1'-C2'	-5.40	103.90	112.00
1	5	1620	U	N1-C1'-C2'	5.40	120.10	112.00
1	5	2879	A	O4'-C4'-C3'	-5.40	100.70	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4434	C	N1-C1'-C2'	5.40	120.10	112.00
50	S2	576	A	C4'-C3'-O3'	-5.40	104.90	113.00
34	f	42	TYR	CA-CB-CG	-5.40	104.19	113.90
1	5	288	G	C1'-C2'-O2'	5.39	116.49	108.40
1	5	2859	G	C1'-C2'-O2'	-5.39	103.71	111.80
35	g	9	ARG	CG-CD-NE	-5.39	100.13	112.00
1	5	3627	G	C2'-C3'-O3'	5.39	121.79	113.70
1	5	4257	A	C1'-C2'-O2'	-5.39	103.71	111.80
1	5	4750	G	C4'-C3'-O3'	5.39	121.09	113.00
50	S2	1513	C	N1-C1'-C2'	5.39	120.09	112.00
1	5	1216	C	C2'-C3'-O3'	5.39	121.79	113.70
1	5	4915	G	C4'-C3'-O3'	-5.39	104.91	113.00
50	S2	1135	C	N1-C1'-C2'	5.39	120.09	112.00
76	SZ	105	ALA	N-CA-C	5.39	116.85	110.97
1	5	1067	G	C2'-C3'-O3'	5.39	121.78	113.70
1	5	1358	G	N9-C1'-C2'	5.39	120.08	112.00
1	5	2083	C	C4'-C3'-O3'	5.39	121.08	113.00
34	f	19	ARG	CA-CB-CG	5.39	124.88	114.10
52	SB	100	PHE	N-CA-CB	5.39	118.12	109.28
1	5	3595	U	C3'-C2'-O2'	5.39	118.78	110.70
38	j	46	LYS	N-CA-C	-5.38	102.19	109.95
1	5	2264	C	C3'-C2'-O2'	5.38	122.67	114.60
1	5	4307	A	C1'-C2'-O2'	5.38	116.47	108.40
1	5	5060	A	C4'-C3'-O3'	5.38	121.07	113.00
32	d	87	ARG	CB-CG-CD	5.38	123.68	111.30
1	5	1727	U	N1-C1'-C2'	5.38	120.07	112.00
1	5	1963	C	C2'-C3'-O3'	5.38	121.77	113.70
1	5	4183	G	O4'-C4'-C3'	-5.38	100.72	106.10
1	5	42	A	C1'-O4'-C4'	-5.38	104.32	109.70
1	5	956	A	N9-C1'-C2'	-5.38	105.93	114.00
1	5	2447	U	C1'-C2'-O2'	-5.38	103.73	111.80
1	5	2648	G	C2'-C3'-O3'	5.38	117.57	109.50
1	5	3846	C	C1'-C2'-O2'	5.38	116.47	108.40
9	F	36	ARG	NE-CZ-NH2	5.38	124.04	119.20
45	r	12	ASN	N-CA-C	-5.38	102.23	110.14
50	S2	595	U	C2'-C3'-O3'	5.38	117.57	109.50
1	5	2769	U	N1-C1'-C2'	-5.38	103.94	112.00
1	5	4398	C	C2'-C3'-O3'	5.38	121.77	113.70
3	8	29	G	C4'-C3'-O3'	-5.38	104.94	113.00
1	5	1930	U	O4'-C4'-C3'	-5.38	100.72	106.10
1	5	3679	U	O4'-C4'-C3'	-5.38	100.72	106.10
1	5	4889	G	C2'-C3'-O3'	5.38	117.56	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	C	142	HIS	CB-CA-C	5.38	119.81	110.94
20	R	175	GLU	N-CA-C	-5.38	104.31	111.24
1	5	5022	U	O4'-C1'-C2'	-5.37	102.23	107.60
50	S2	125	C	C3'-C2'-O2'	5.37	118.76	110.70
50	S2	524	U	C2'-C3'-O3'	5.37	121.76	113.70
3	8	14	U	C1'-C2'-O2'	-5.37	100.34	108.40
50	S2	68	A	N9-C1'-C2'	5.37	120.06	112.00
72	SV	50	PHE	N-CA-C	5.37	117.55	109.23
50	S2	616	A	C1'-C2'-O2'	5.37	116.45	108.40
1	5	55	G	N9-C1'-C2'	-5.37	103.95	112.00
1	5	450	G	N9-C1'-C2'	-5.37	103.95	112.00
1	5	2635	U	N1-C1'-C2'	5.37	120.05	112.00
1	5	3906	A	N9-C1'-C2'	-5.37	105.95	114.00
5	B	106	PHE	N-CA-CB	5.37	118.78	110.46
50	S2	1097	G	C4'-C3'-O3'	-5.37	104.95	113.00
50	S2	1623	A	N9-C1'-C2'	-5.37	103.95	112.00
1	5	2675	G	O4'-C1'-C2'	-5.37	102.23	107.60
6	C	159	GLU	N-CA-CB	5.37	118.48	110.22
50	S2	106	C	C2'-C3'-O3'	-5.37	105.65	113.70
1	5	1742	A	O4'-C1'-C2'	-5.36	102.24	107.60
1	5	3697	U	C3'-C2'-O2'	5.36	118.75	110.70
1	5	4558	U	C4'-C3'-O3'	-5.36	104.95	113.00
50	S2	1637	A	C4'-C3'-O3'	5.36	117.45	109.40
69	SS	82	TRP	N-CA-CB	5.36	119.55	110.49
1	5	54	G	C2'-C3'-O3'	5.36	121.74	113.70
1	5	2658	G	C1'-C2'-O2'	5.36	116.44	108.40
10	G	202	VAL	CB-CA-C	5.36	116.78	111.74
1	5	1601	A	N9-C1'-C2'	-5.36	103.96	112.00
1	5	2874	U	O4'-C4'-C3'	-5.36	100.74	106.10
1	5	4319	C	N1-C1'-C2'	5.36	120.04	112.00
50	S2	1604	G	N9-C1'-C2'	5.36	120.04	112.00
50	S2	1697	A	C4'-C3'-O3'	5.36	117.44	109.40
51	SA	90	PHE	N-CA-CB	5.36	117.78	110.01
7	D	20	PHE	CB-CA-C	5.36	121.08	110.42
50	S2	1645	C	C3'-C2'-O2'	5.36	118.74	110.70
1	5	53	C	C1'-C2'-O2'	5.36	116.44	108.40
1	5	664	G	O4'-C1'-N9	5.36	116.23	108.20
20	R	74	ARG	NE-CZ-NH1	-5.36	116.14	121.50
1	5	1929	A	N9-C1'-C2'	5.36	120.03	112.00
1	5	4464	A	O4'-C1'-N9	-5.36	100.47	108.50
21	S	145	PHE	CA-CB-CG	-5.36	108.44	113.80
50	S2	352	U	N1-C1'-C2'	5.36	120.03	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2305	U	C1'-C2'-O2'	-5.35	103.77	111.80
8	E	212	TYR	CA-CB-CG	5.35	123.54	113.90
1	5	5011	A	C2'-C3'-O3'	5.35	121.73	113.70
50	S2	376	A	C1'-C2'-O2'	5.35	116.43	108.40
50	S2	1486	A	N9-C1'-C2'	-5.35	103.97	112.00
1	5	1765	A	C2'-C3'-O3'	-5.35	105.68	113.70
1	5	4454	G	C2'-C3'-O3'	5.35	121.72	113.70
31	c	56	ARG	CD-NE-CZ	5.35	131.89	124.40
34	f	70	ILE	N-CA-C	-5.35	100.71	108.36
50	S2	673	G	C3'-C2'-O2'	5.35	118.72	110.70
63	SM	103	VAL	N-CA-C	5.35	120.46	109.34
31	c	27	TYR	N-CA-C	5.35	116.41	108.60
1	5	1864	G	C2'-C3'-O3'	5.34	121.72	113.70
50	S2	1444	U	C3'-C2'-O2'	5.34	118.72	110.70
1	5	1266	G	O4'-C1'-C2'	-5.34	102.26	107.60
1	5	2796	G	O4'-C4'-C3'	-5.34	100.76	106.10
1	5	97	G	N9-C1'-C2'	-5.34	103.99	112.00
1	5	1965	G	O4'-C1'-C2'	-5.34	102.26	107.60
1	5	4473	A	C2'-C3'-O3'	5.34	121.71	113.70
20	R	57	VAL	N-CA-C	5.34	116.47	109.21
46	z	25	ARG	N-CA-C	-5.34	105.12	111.69
1	5	100	C	C1'-C2'-O2'	5.34	116.41	108.40
1	5	977	C	C4'-C3'-O3'	-5.34	104.99	113.00
1	5	2275	G	C2'-C3'-O3'	5.33	121.70	113.70
1	5	3644	U	C2'-C3'-O3'	-5.33	105.70	113.70
1	5	4519	C	N1-C1'-C2'	-5.33	104.00	112.00
1	5	4519	C	O5'-C5'-C4'	-5.33	103.50	111.50
32	d	24	GLU	CA-CB-CG	5.33	124.77	114.10
50	S2	1174	U	C1'-C2'-O2'	5.33	116.40	108.40
50	S2	1836	G	C2'-C3'-O3'	-5.33	101.50	109.50
1	5	3714	G	N9-C1'-C2'	5.33	120.00	112.00
1	5	3801	U	C3'-C2'-O2'	5.33	118.70	110.70
1	5	4560	C	O4'-C4'-C3'	-5.33	100.77	106.10
52	SB	136	ARG	NE-CZ-NH2	5.33	124.00	119.20
1	5	2502	G	C3'-C2'-O2'	5.33	118.69	110.70
50	S2	1098	C	C1'-C2'-O2'	5.33	116.39	108.40
1	5	1555	G	C1'-C2'-O2'	5.33	116.39	108.40
30	b	49	HIS	CA-CB-CG	-5.33	108.47	113.80
50	S2	1291	A	C4'-C3'-O3'	-5.33	105.01	113.00
1	5	952	G	N9-C1'-C2'	5.33	119.99	112.00
6	C	232	VAL	N-CA-C	-5.33	106.50	111.45
50	S2	556	U	C2'-C3'-O3'	5.33	117.49	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2843	U	C2'-C3'-O3'	5.33	121.69	113.70
3	8	123	U	C3'-C2'-O2'	5.33	118.69	110.70
50	S2	1267	C	C3'-C2'-O2'	5.33	118.69	110.70
50	S2	1744	G	C2'-C3'-O3'	5.33	117.49	109.50
73	SW	44	HIS	N-CA-C	-5.33	104.05	110.44
1	5	745	G	N9-C1'-C2'	5.32	119.98	112.00
1	5	989	U	C3'-C2'-O2'	5.32	118.69	110.70
1	5	1244	G	C4'-C3'-O3'	5.32	117.39	109.40
1	5	1543	G	C1'-C2'-O2'	5.32	116.39	108.40
1	5	5002	U	C4'-C3'-O3'	-5.32	105.02	113.00
50	S2	1838	U	C5'-C4'-O4'	5.32	117.08	109.10
1	5	274	C	C3'-C2'-O2'	5.32	118.68	110.70
1	5	4123	C	O4'-C1'-C2'	-5.32	102.28	107.60
1	5	4269	G	C1'-C2'-O2'	5.32	116.38	108.40
51	SA	39	TYR	CA-CB-CG	5.32	123.48	113.90
1	5	2848	G	N9-C1'-C2'	-5.32	104.02	112.00
17	O	110	PRO	C-N-CD	-5.32	103.19	125.00
60	SJ	69	ARG	NE-CZ-NH2	5.32	123.99	119.20
1	5	68	U	C1'-C2'-O2'	5.32	116.37	108.40
38	j	67	LEU	N-CA-C	5.32	117.49	111.11
50	S2	1545	A	N9-C1'-C2'	5.32	121.97	114.00
50	S2	1814	G	C4'-C3'-O3'	-5.32	105.03	113.00
1	5	4270	C	C1'-C2'-O2'	5.31	116.37	108.40
1	5	143	C	O4'-C1'-C2'	-5.31	102.29	107.60
1	5	2272	C	C4'-C3'-O3'	5.31	120.97	113.00
1	5	2459	G	C1'-C2'-O2'	5.31	116.37	108.40
50	S2	383	G	N9-C1'-C2'	5.31	119.97	112.00
50	S2	1861	G	C3'-C2'-O2'	5.31	122.57	114.60
52	SB	157	GLN	CG-CD-NE2	-5.31	108.43	116.40
1	5	2745	A	N9-C1'-C2'	5.31	119.97	112.00
50	S2	607	U	C4'-C3'-O3'	-5.31	105.03	113.00
57	SG	67	VAL	N-CA-C	5.31	117.73	111.09
50	S2	1473	G	C3'-C2'-O2'	5.31	118.66	110.70
69	SS	86	ARG	NE-CZ-NH1	-5.31	116.19	121.50
1	5	1272	C	O4'-C1'-C2'	-5.30	100.50	105.80
1	5	1884	C	C3'-C2'-O2'	5.30	118.66	110.70
1	5	2652	G	C3'-C2'-O2'	5.30	118.66	110.70
50	S2	8	U	C1'-C2'-O2'	5.30	119.76	111.80
50	S2	1351	G	C1'-C2'-O2'	5.30	116.36	108.40
50	S2	1656	G	C3'-C2'-O2'	5.30	118.66	110.70
1	5	1961	G	C4'-C3'-C2'	-5.30	97.30	102.60
50	S2	1021	U	N1-C1'-C2'	5.30	121.95	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	SK	68	TYR	CA-CB-CG	-5.30	104.36	113.90
1	5	944	A	O4'-C1'-C2'	-5.30	102.30	107.60
1	5	1649	U	N1-C1'-C2'	5.30	121.95	114.00
1	5	4124	G	C3'-C2'-O2'	5.30	118.65	110.70
50	S2	54	A	C2'-C3'-O3'	-5.30	105.75	113.70
50	S2	639	C	C1'-C2'-O2'	-5.30	100.45	108.40
60	SJ	49	THR	CB-CA-C	-5.30	102.00	110.79
1	5	100	C	N1-C1'-C2'	-5.30	104.06	112.00
1	5	5031	G	C4'-C3'-O3'	-5.29	105.06	113.00
1	5	931	C	C2'-C3'-O3'	5.29	117.44	109.50
1	5	2417	A	O4'-C1'-C2'	-5.29	102.31	107.60
3	8	104	A	C1'-C2'-O2'	-5.29	103.86	111.80
10	G	49	ARG	CG-CD-NE	-5.29	100.35	112.00
5	B	56	ILE	N-CA-C	-5.29	100.98	108.65
33	e	80	HIS	N-CA-CB	-5.29	102.82	111.18
37	i	28	ARG	CB-CG-CD	5.29	123.47	111.30
50	S2	1605	G	C2'-C3'-O3'	5.29	121.64	113.70
50	S2	966	U	C2'-C3'-O3'	5.29	121.63	113.70
64	SN	25	TRP	CB-CA-C	-5.29	101.69	110.68
1	5	31	U	C1'-C2'-O2'	-5.29	100.47	108.40
3	8	81	C	C1'-O4'-C4'	-5.29	104.61	109.90
82	Sf	143	LYS	CD-CE-NZ	5.29	128.81	111.90
1	5	1637	A	C4'-C3'-O3'	5.28	117.32	109.40
50	S2	1865	C	C2'-C3'-O3'	5.28	117.42	109.50
1	5	2087	C	C1'-C2'-O2'	5.28	116.32	108.40
50	S2	386	C	O4'-C1'-C2'	-5.28	102.32	107.60
1	5	347	A	C4'-C3'-O3'	-5.28	105.08	113.00
1	5	4434	C	C4'-C3'-O3'	-5.28	105.08	113.00
64	SN	69	ASN	CA-CB-CG	5.28	117.88	112.60
30	b	17	HIS	CB-CA-C	-5.28	99.06	109.67
63	SM	58	GLU	OE1-CD-OE2	5.28	135.57	122.90
1	5	1925	G	O4'-C1'-C2'	-5.28	102.32	107.60
1	5	4169	G	N9-C1'-C2'	5.28	119.92	112.00
5	B	169	ARG	CG-CD-NE	5.28	123.61	112.00
17	O	135	PHE	CA-CB-CG	5.28	119.08	113.80
8	E	42	ARG	N-CA-C	5.28	122.04	110.80
1	5	4208	U	C2'-C3'-O3'	5.27	121.61	113.70
50	S2	1551	U	C4'-C3'-O3'	-5.27	105.09	113.00
50	S2	1848	U	C3'-C2'-O2'	5.27	118.61	110.70
15	M	91	TRP	N-CA-CB	5.27	117.83	109.82
50	S2	313	A	N9-C1'-C2'	5.27	121.91	114.00
50	S2	800	U	O4'-C4'-C3'	-5.27	98.73	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	405	U	O4'-C1'-C2'	-5.27	102.33	107.60
1	5	2529	A	C3'-C2'-O2'	5.27	118.61	110.70
50	S2	1091	C	C2'-C3'-O3'	5.27	121.61	113.70
1	5	4377	G	C4'-C3'-O3'	-5.27	105.10	113.00
9	F	237	ASN	CA-CB-CG	-5.27	107.33	112.60
50	S2	647	U	O4'-C1'-C2'	-5.27	102.33	107.60
50	S2	821	G	C4'-C3'-O3'	-5.27	105.10	113.00
50	S2	1339	U	N1-C1'-C2'	-5.27	104.10	112.00
59	SI	113	TYR	N-CA-C	-5.27	105.21	111.69
1	5	4086	G	O4'-C4'-C3'	5.27	109.27	104.00
50	S2	746	C	C3'-C2'-O2'	5.27	118.60	110.70
23	U	99	TRP	N-CA-C	-5.26	105.14	112.30
26	X	137	TYR	CA-CB-CG	5.26	123.38	113.90
1	5	1379	C	O4'-C1'-N1	5.26	116.09	108.20
1	5	4094	G	C2'-C3'-O3'	5.26	121.59	113.70
13	J	32	ARG	CG-CD-NE	-5.26	100.42	112.00
50	S2	57	U	C4'-C3'-O3'	-5.26	105.11	113.00
1	5	195	C	O4'-C1'-C2'	-5.26	102.34	107.60
1	5	3602	C	C4'-C3'-O3'	-5.26	105.11	113.00
50	S2	24	C	N1-C1'-C2'	-5.26	104.11	112.00
50	S2	1419	C	N1-C1'-C2'	-5.26	104.11	112.00
54	SD	106	ARG	CB-CG-CD	5.26	123.40	111.30
1	5	1643	A	C3'-C2'-O2'	5.26	118.59	110.70
47	1	435	ALA	N-CA-C	5.26	116.69	111.07
32	d	26	THR	N-CA-C	5.25	117.27	108.23
50	S2	807	G	N9-C1'-C2'	5.25	119.88	112.00
1	5	1211	G	C4'-C3'-C2'	-5.25	97.35	102.60
1	5	1628	C	O4'-C1'-C2'	-5.25	102.35	107.60
5	B	243	LYS	N-CA-C	5.25	118.95	112.54
50	S2	413	G	N9-C1'-C2'	5.25	119.88	112.00
58	SH	99	ARG	NE-CZ-NH2	5.25	123.93	119.20
85	S5	47	U	OP1-P-O3'	-5.25	92.24	108.00
50	S2	798	A	N9-C1'-C2'	-5.25	104.12	112.00
1	5	422	C	C2'-C3'-O3'	5.25	121.58	113.70
1	5	4765	G	C4'-C3'-O3'	-5.25	105.12	113.00
1	5	4876	U	N1-C1'-C2'	5.25	121.88	114.00
1	5	1687	U	C4'-C3'-O3'	5.25	120.87	113.00
19	Q	32	TYR	N-CA-CB	5.25	118.87	110.73
50	S2	956	G	N9-C1'-C2'	5.25	119.87	112.00
1	5	293	G	N9-C1'-C2'	5.25	119.87	112.00
12	I	213	HIS	N-CA-C	-5.25	104.18	111.52
50	S2	1062	A	C1'-C2'-O2'	5.25	116.27	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1370	G	C4'-C3'-O3'	5.24	117.27	109.40
10	G	32	PHE	N-CA-CB	5.24	117.78	109.71
33	e	20	PHE	CB-CA-C	5.24	119.74	111.72
50	S2	402	C	N1-C1'-C2'	-5.24	104.13	112.00
1	5	1823	G	C4'-C3'-O3'	-5.24	105.14	113.00
1	5	2370	A	O4'-C4'-C3'	-5.24	100.86	106.10
1	5	4490	C	C1'-C2'-O2'	5.24	116.26	108.40
3	8	67	U	N1-C1'-C2'	5.24	119.86	112.00
8	E	59	TYR	N-CA-CB	5.24	119.34	110.49
14	L	99	ASP	CA-CB-CG	-5.24	107.36	112.60
50	S2	28	U	C2'-C3'-O3'	-5.24	105.84	113.70
1	5	1806	G	C4'-C3'-O3'	-5.24	105.14	113.00
1	5	746	A	C3'-C2'-O2'	5.24	118.55	110.70
1	5	3860	A	C1'-C2'-O2'	5.24	116.25	108.40
50	S2	162	C	C2'-C3'-O3'	5.24	121.55	113.70
50	S2	1182	A	N9-C1'-C2'	5.24	119.85	112.00
82	Sf	147	THR	CB-CA-C	5.24	117.88	110.24
1	5	4475	G	C2'-C3'-O3'	-5.23	105.85	113.70
1	5	1946	G	N9-C1'-C2'	-5.23	104.15	112.00
1	5	2613	C	C1'-C2'-O2'	5.23	116.25	108.40
46	z	180	VAL	N-CA-C	5.23	116.70	111.00
50	S2	1859	A	C8-N9-C1'	-5.23	112.01	127.70
1	5	1853	G	C1'-C2'-O2'	5.23	116.24	108.40
1	5	4369	A	C4'-C3'-O3'	-5.23	105.16	113.00
1	5	2032	U	C3'-C2'-O2'	5.23	118.54	110.70
1	5	2527	A	C4'-C3'-O3'	-5.23	105.16	113.00
50	S2	425	G	C2'-C3'-O3'	5.23	121.54	113.70
59	SI	145	ILE	N-CA-C	5.23	117.62	111.09
50	S2	922	A	C2'-C3'-O3'	5.23	121.54	113.70
1	5	2744	A	C1'-C2'-O2'	-5.22	100.56	108.40
1	5	2833	A	C1'-C2'-O2'	-5.22	100.56	108.40
1	5	4599	A	N9-C1'-C2'	5.22	121.83	114.00
50	S2	1085	C	C1'-C2'-O2'	-5.22	103.96	111.80
50	S2	1092	G	C2'-C3'-O3'	5.22	121.54	113.70
1	5	412	G	C4'-C3'-O3'	5.22	117.23	109.40
1	5	1210	C	N1-C1'-C2'	5.22	121.83	114.00
1	5	1557	C	C1'-C2'-O2'	5.22	116.23	108.40
1	5	2669	C	C2'-C3'-O3'	5.22	117.33	109.50
26	X	79	PHE	N-CA-C	5.22	114.85	108.11
61	SK	95	ARG	N-CA-C	5.22	117.55	111.02
1	5	2836	A	C3'-C2'-O2'	5.22	118.53	110.70
1	5	4534	G	C1'-C2'-O2'	5.22	116.23	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	F	179	ARG	N-CA-C	5.22	116.97	111.28
10	G	81	ASN	CB-CA-C	-5.22	102.68	110.88
12	I	92	HIS	N-CA-CB	5.22	117.34	110.29
50	S2	1051	G	C2'-C3'-O3'	5.22	121.53	113.70
50	S2	1588	A	N9-C1'-C2'	5.22	121.83	114.00
1	5	3596	A	C2'-C3'-O3'	-5.22	105.87	113.70
3	8	34	U	C1'-C2'-O2'	5.22	116.22	108.40
5	B	261	ARG	N-CA-C	-5.22	101.14	109.23
50	S2	339	A	C1'-C2'-O2'	5.22	116.23	108.40
50	S2	448	A	C4'-C3'-O3'	5.22	117.23	109.40
50	S2	669	A	N9-C1'-C2'	5.22	119.83	112.00
50	S2	808	A	N9-C1'-C2'	5.22	119.83	112.00
1	5	2269	C	C2'-C3'-O3'	-5.21	105.88	113.70
1	5	3875	G	C1'-C2'-O2'	5.21	116.22	108.40
1	5	4887	C	C2'-C3'-O3'	5.21	121.52	113.70
36	h	119	PHE	N-CA-CB	5.21	119.30	110.49
50	S2	967	C	C2'-C3'-O3'	5.21	121.52	113.70
50	S2	1791	A	C1'-C2'-O2'	5.21	116.22	108.40
1	5	3657	U	C2'-C3'-O3'	5.21	121.52	113.70
50	S2	624	C	N1-C1'-C2'	5.21	119.82	112.00
1	5	237	G	O4'-C1'-C2'	5.21	111.01	105.80
1	5	1921	C	C4'-C3'-O3'	5.21	117.22	109.40
15	M	40	GLY	CA-C-N	5.21	124.39	118.97
15	M	40	GLY	C-N-CA	5.21	124.39	118.97
76	SZ	61	GLU	CA-C-N	5.21	123.52	120.24
76	SZ	61	GLU	C-N-CA	5.21	123.52	120.24
1	5	4510	A	C2'-C3'-O3'	5.21	117.32	109.50
34	f	51	TYR	CA-CB-CG	5.21	123.28	113.90
1	5	4275	G	C2'-C3'-O3'	5.21	121.51	113.70
1	5	4340	U	C1'-C2'-O2'	5.21	116.21	108.40
1	5	4719	G	C1'-C2'-O2'	-5.21	103.99	111.80
17	O	135	PHE	CB-CA-C	-5.21	100.96	111.17
50	S2	600	G	N9-C1'-C2'	5.21	119.81	112.00
1	5	2896	G	O4'-C1'-C2'	-5.21	102.39	107.60
50	S2	1169	G	C1'-C2'-O2'	5.21	116.21	108.40
1	5	3667	C	O4'-C1'-C2'	-5.21	102.39	107.60
50	S2	29	G	N9-C1'-C2'	5.21	119.81	112.00
50	S2	1333	U	C3'-C2'-O2'	5.20	118.50	110.70
67	SQ	126	ARG	NE-CZ-NH1	-5.20	116.30	121.50
50	S2	1530	U	C4'-C3'-O3'	-5.20	105.20	113.00
1	5	976	G	O4'-C1'-C2'	-5.20	102.40	107.60
1	5	1426	G	C4'-C3'-O3'	5.20	120.80	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	5048	A	O4'-C1'-C2'	-5.20	102.40	107.60
1	5	453	G	O4'-C1'-C2'	-5.20	102.40	107.60
1	5	1505	C	C1'-C2'-O2'	5.20	116.20	108.40
1	5	4385	A	C4'-C3'-O3'	5.20	120.80	113.00
2	7	55	A	N9-C1'-C2'	5.20	119.80	112.00
68	SR	4	VAL	N-CA-C	-5.20	100.99	108.89
1	5	2677	G	O4'-C1'-C2'	-5.20	102.40	107.60
50	S2	164	A	C4'-C3'-O3'	5.20	120.80	113.00
1	5	969	C	C3'-C2'-O2'	-5.20	106.81	114.60
29	a	40	HIS	CA-CB-CG	5.20	119.00	113.80
14	L	103	ARG	CA-CB-CG	5.19	124.49	114.10
20	R	141	HIS	CB-CA-C	-5.19	102.90	110.95
29	a	65	ARG	CB-CG-CD	5.19	123.24	111.30
1	5	978	G	C3'-C2'-O2'	5.19	118.49	110.70
1	5	3888	G	C3'-C2'-O2'	5.19	118.49	110.70
3	8	117	C	O4'-C1'-C2'	-5.19	102.41	107.60
47	1	198	PRO	N-CA-C	5.19	119.39	111.34
9	F	194	HIS	N-CA-CB	5.19	117.49	109.91
70	ST	46	ALA	CA-C-N	5.19	125.18	119.89
70	ST	46	ALA	C-N-CA	5.19	125.18	119.89
1	5	372	A	C4'-C3'-O3'	-5.19	105.22	113.00
1	5	4385	A	C1'-C2'-O2'	5.19	116.18	108.40
1	5	2250	C	C2'-C3'-O3'	5.19	121.48	113.70
1	5	2560	C	O4'-C1'-C2'	-5.19	102.41	107.60
62	SL	17	PHE	CA-CB-CG	-5.19	108.61	113.80
1	5	3679	U	C4'-C3'-O3'	-5.18	101.62	109.40
50	S2	1828	C	C3'-C2'-O2'	5.18	118.48	110.70
1	5	1921	C	C2'-C3'-O3'	5.18	117.28	109.50
1	5	1948	G	C2'-C3'-O3'	-5.18	105.93	113.70
1	5	4341	C	N1-C1'-C2'	-5.18	104.22	112.00
50	S2	73	C	N1-C1'-C2'	5.18	121.77	114.00
1	5	331	G	N9-C1'-C2'	5.18	119.77	112.00
1	5	3903	A	C3'-C2'-O2'	5.18	118.47	110.70
34	f	59	THR	CA-C-N	5.18	125.99	119.98
34	f	59	THR	C-N-CA	5.18	125.99	119.98
68	SR	33	ARG	CG-CD-NE	-5.18	100.60	112.00
75	SY	80	ASP	CA-CB-CG	-5.18	107.42	112.60
7	D	16	TYR	CA-CB-CG	-5.18	104.58	113.90
20	R	124	TYR	CA-CB-CG	5.18	123.22	113.90
1	5	4677	U	C3'-C2'-C1'	5.18	106.48	101.30
1	5	4936	G	C3'-C2'-O2'	5.18	118.47	110.70
50	S2	1207	G	C2'-C3'-O3'	-5.18	101.73	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	SO	49	GLY	N-CA-C	-5.18	107.73	113.79
1	5	2509	C	C3'-C2'-O2'	5.17	118.46	110.70
72	SV	66	ASP	N-CA-C	5.17	116.92	111.28
1	5	2305	U	C4'-C3'-O3'	-5.17	101.64	109.40
50	S2	1504	U	N1-C1'-C2'	5.17	119.76	112.00
1	5	3775	A	N9-C1'-C2'	5.17	119.76	112.00
1	5	4473	A	C4'-C3'-O3'	-5.17	105.24	113.00
50	S2	449	A	C3'-C2'-O2'	5.17	118.46	110.70
82	Sf	146	LEU	CB-CG-CD1	5.17	126.21	110.70
1	5	4501	U	OP2-P-O3'	5.17	123.51	108.00
10	G	57	TRP	N-CA-C	-5.17	103.26	109.72
29	a	60	HIS	CA-CB-CG	5.17	118.97	113.80
1	5	4527	G	C4'-C3'-O3'	5.17	117.15	109.40
50	S2	305	U	C4'-C3'-O3'	5.17	117.15	109.40
59	SI	55	TYR	CB-CA-C	5.17	120.31	111.68
60	SJ	43	VAL	N-CA-C	-5.17	105.29	110.30
1	5	1781	U	N1-C1'-C2'	5.17	119.75	112.00
1	5	3841	C	C3'-C2'-O2'	5.17	118.45	110.70
50	S2	160	U	C1'-C2'-O2'	-5.17	104.05	111.80
50	S2	1114	U	C1'-O4'-C4'	-5.17	104.53	109.70
1	5	2111	G	C1'-C2'-O2'	-5.17	104.05	111.80
1	5	2321	G	N9-C1'-C2'	5.17	119.75	112.00
1	5	3845	A	C1'-C2'-O2'	5.17	116.15	108.40
1	5	4276	G	C1'-C2'-O2'	5.17	116.15	108.40
52	SB	157	GLN	CB-CG-CD	-5.17	103.82	112.60
1	5	4543	G	C1'-C2'-O2'	-5.16	100.66	108.40
3	8	86	U	C2'-C3'-O3'	5.16	121.44	113.70
10	G	60	TYR	N-CA-CB	5.16	117.71	110.12
16	N	94	PHE	CA-CB-CG	-5.16	108.64	113.80
50	S2	1374	C	N1-C1'-C2'	5.16	119.74	112.00
1	5	32	G	C2'-C3'-O3'	5.16	121.44	113.70
1	5	1628	C	C2'-C3'-O3'	5.16	121.44	113.70
1	5	3636	C	O4'-C1'-C2'	-5.16	102.44	107.60
1	5	4291	G	N9-C1'-C2'	5.16	121.74	114.00
85	S5	21	A	C4'-C3'-O3'	-5.16	105.26	113.00
1	5	2701	U	C1'-C2'-O2'	5.16	116.14	108.40
50	S2	819	G	C1'-C2'-O2'	5.16	116.14	108.40
76	SZ	89	GLN	N-CA-C	-5.16	105.35	111.69
5	B	179	HIS	CB-CA-C	5.16	119.89	112.05
33	e	117	GLN	CB-CG-CD	-5.16	103.84	112.60
1	5	3901	A	P-O5'-C5'	5.15	128.63	120.90
12	I	96	VAL	N-CA-C	5.15	115.69	108.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1075	G	C2'-C3'-O3'	5.15	121.43	113.70
21	S	9	GLU	CA-CB-CG	5.15	124.41	114.10
16	N	59	TYR	CA-CB-CG	5.15	123.17	113.90
5	B	257	TRP	N-CA-CB	5.15	119.69	110.32
69	SS	42	HIS	CA-CB-CG	5.15	118.95	113.80
1	5	1632	A	C2'-C3'-O3'	5.15	121.42	113.70
1	5	2046	G	O4'-C1'-N9	5.15	115.92	108.20
2	7	82	G	C1'-C2'-O2'	5.15	116.12	108.40
9	F	59	TYR	N-CA-C	-5.15	106.69	112.87
74	SX	67	ARG	NE-CZ-NH1	-5.15	116.35	121.50
3	8	9	A	C4'-C3'-O3'	-5.15	105.28	113.00
1	5	3887	C	C3'-C2'-O2'	5.14	118.42	110.70
54	SD	165	ASN	N-CA-C	5.14	117.56	111.33
1	5	1552	G	N9-C1'-C2'	-5.14	104.29	112.00
1	5	3912	U	C3'-C2'-O2'	5.14	118.41	110.70
40	l	45	ARG	CG-CD-NE	-5.14	100.69	112.00
1	5	4163	U	C4'-C3'-C2'	-5.14	97.46	102.60
2	7	7	G	C1'-C2'-O2'	5.14	116.10	108.40
19	Q	178	ARG	CA-CB-CG	5.14	124.37	114.10
53	SC	61	MET	CA-C-N	-5.14	114.28	119.83
53	SC	61	MET	C-N-CA	-5.14	114.28	119.83
55	SE	218	PHE	N-CA-C	-5.14	101.27	109.23
56	SF	163	PHE	N-CA-CB	5.14	119.17	110.49
1	5	1528	U	C1'-C2'-O2'	5.13	116.10	108.40
1	5	2308	A	N9-C1'-C2'	5.13	119.70	112.00
50	S2	797	C	O4'-C1'-C2'	-5.13	100.67	105.80
1	5	4441	A	C2'-C3'-O3'	5.13	121.40	113.70
1	5	4945	G	C4'-C3'-O3'	-5.13	105.30	113.00
50	S2	1055	A	N9-C1'-C2'	5.13	119.70	112.00
50	S2	1140	G	C1'-C2'-O2'	5.13	116.10	108.40
66	SP	54	HIS	CB-CA-C	-5.13	102.32	110.84
69	SS	77	TYR	CA-CB-CG	-5.13	104.66	113.90
1	5	2509	C	C4'-C3'-O3'	5.13	120.69	113.00
1	5	235	A	N9-C1'-C2'	-5.13	104.31	112.00
1	5	328	A	N9-C1'-C2'	5.13	119.69	112.00
1	5	1516	G	C1'-C2'-O2'	5.13	116.09	108.40
1	5	4427	G	C4'-C3'-O3'	-5.13	105.31	113.00
44	p	71	TYR	N-CA-C	-5.13	105.60	111.14
50	S2	1157	G	N9-C1'-C2'	-5.13	104.31	112.00
85	S5	13	C	C3'-C2'-O2'	5.13	118.39	110.70
7	D	157	ASN	CB-CA-C	5.13	118.89	109.46
1	5	2096	G	C3'-C2'-O2'	5.12	118.39	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	J	64	ARG	NE-CZ-NH2	5.12	123.81	119.20
50	S2	1489	A	O4'-C4'-C3'	-5.12	100.98	106.10
1	5	206	U	C2'-C3'-O3'	5.12	121.38	113.70
1	5	1635	C	C4'-C3'-O3'	5.12	120.68	113.00
4	A	194	ASN	CA-CB-CG	-5.12	107.48	112.60
50	S2	313	A	C1'-O4'-C4'	-5.12	104.58	109.70
50	S2	371	A	C1'-C2'-O2'	5.12	116.08	108.40
50	S2	1368	U	C4'-C3'-O3'	5.12	120.68	113.00
1	5	336	A	C1'-O4'-C4'	-5.12	104.78	109.90
24	V	77	HIS	CB-CA-C	5.12	120.26	110.17
50	S2	340	C	C2'-C3'-O3'	5.12	121.38	113.70
1	5	4321	U	C3'-C2'-O2'	5.12	118.38	110.70
1	5	4879	C	N1-C1'-C2'	5.12	119.68	112.00
9	F	63	TYR	CA-CB-CG	-5.12	104.69	113.90
1	5	1529	G	C4'-C3'-O3'	-5.12	105.33	113.00
1	5	1980	U	C1'-O4'-C4'	-5.12	104.78	109.90
1	5	2247	C	C3'-C2'-O2'	5.12	118.38	110.70
1	5	4436	U	N1-C1'-C2'	-5.12	106.32	114.00
3	8	8	U	C1'-C2'-O2'	5.12	116.08	108.40
24	V	97	TYR	N-CA-CB	5.12	117.47	109.85
1	5	231	U	C2'-C3'-O3'	5.12	121.37	113.70
1	5	4510	A	C4'-C3'-O3'	-5.12	101.73	109.40
1	5	4510	A	N9-C1'-C2'	5.12	121.67	114.00
50	S2	1591	C	C2'-C3'-O3'	5.12	121.38	113.70
61	SK	57	TYR	CA-CB-CG	-5.12	104.69	113.90
1	5	4282	A	O4'-C4'-C3'	-5.11	100.99	106.10
50	S2	631	U	C2'-C3'-O3'	5.11	117.17	109.50
22	T	57	TYR	CB-CA-C	-5.11	101.53	110.17
1	5	2070	U	N1-C1'-C2'	5.11	121.67	114.00
1	5	3593	C	C4'-C3'-O3'	5.11	117.07	109.40
1	5	3676	G	C3'-C2'-O2'	5.11	118.37	110.70
1	5	4395	U	O4'-C1'-C2'	-5.11	102.49	107.60
1	5	2258	C	N1-C1'-C2'	5.11	119.66	112.00
1	5	2801	U	C3'-C2'-O2'	5.11	118.36	110.70
1	5	4698	C	C3'-C2'-O2'	5.11	118.36	110.70
20	R	23	TRP	CB-CA-C	-5.11	100.86	110.51
1	5	217	C	N1-C1'-C2'	5.11	119.66	112.00
4	A	163	ARG	CB-CG-CD	5.11	123.04	111.30
50	S2	444	G	C1'-C2'-O2'	5.11	116.06	108.40
50	S2	1307	U	C1'-C2'-O2'	5.11	116.06	108.40
1	5	917	A	C2'-C3'-O3'	5.10	117.16	109.50
1	5	4990	C	C3'-C2'-O2'	5.10	118.36	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1807	C	C2'-C3'-O3'	5.10	121.36	113.70
1	5	3639	U	N1-C1'-C2'	5.10	119.65	112.00
7	D	96	ALA	N-CA-C	5.10	121.67	110.80
1	5	90	G	C1'-C2'-O2'	5.10	116.05	108.40
1	5	2384	U	N1-C1'-C2'	5.10	119.65	112.00
1	5	3687	A	C1'-C2'-O2'	5.10	116.05	108.40
1	5	3774	A	N9-C1'-C2'	5.10	121.65	114.00
1	5	4270	C	N1-C1'-C2'	-5.10	104.35	112.00
5	B	17	LEU	N-CA-C	5.10	121.08	109.81
50	S2	997	A	C4'-C3'-O3'	5.10	120.65	113.00
50	S2	1091	C	C4'-C3'-O3'	-5.10	105.35	113.00
82	Sf	120	GLU	CB-CG-CD	-5.10	103.93	112.60
1	5	1213	G	C4'-C3'-O3'	-5.10	105.35	113.00
1	5	1887	G	C4'-C3'-C2'	-5.10	97.50	102.60
1	5	2257	C	C4'-C3'-O3'	5.10	117.05	109.40
50	S2	992	A	C1'-C2'-O2'	5.10	116.05	108.40
50	S2	1597	C	C1'-C2'-O2'	-5.10	104.16	111.80
50	S2	1859	A	C4-N9-C1'	5.10	141.59	126.30
1	5	1470	G	C1'-C2'-O2'	5.10	116.04	108.40
1	5	1566	C	OP2-P-O3'	5.10	123.29	108.00
50	S2	1671	G	N9-C1'-C2'	5.10	119.64	112.00
77	Sa	17	HIS	CA-CB-CG	-5.10	108.70	113.80
1	5	2533	C	C1'-C2'-O2'	-5.09	100.76	108.40
1	5	2793	G	C4'-C3'-O3'	-5.09	105.36	113.00
1	5	4241	C	O4'-C1'-C2'	-5.09	102.51	107.60
20	R	105	LEU	N-CA-C	-5.09	105.42	110.97
34	f	6	TRP	CA-CB-CG	-5.09	103.92	113.60
50	S2	1868	U	N1-C1'-C2'	5.09	121.64	114.00
69	SS	94	LYS	N-CA-C	-5.09	102.15	110.20
1	5	3686	G	C3'-C2'-O2'	5.09	118.34	110.70
1	5	3841	C	C4'-C3'-O3'	-5.09	105.36	113.00
1	5	4656	A	C2'-C3'-O3'	5.09	117.14	109.50
1	5	4758	U	N1-C1'-C2'	5.09	119.64	112.00
51	SA	107	THR	N-CA-C	-5.09	106.75	113.12
1	5	1324	A	N9-C1'-C2'	5.09	121.64	114.00
1	5	1615	C	C1'-C2'-O2'	5.09	116.03	108.40
1	5	2246	C	C3'-C2'-O2'	5.09	118.33	110.70
1	5	4240	G	C1'-C2'-O2'	5.09	116.03	108.40
2	7	7	G	O4'-C1'-C2'	-5.09	102.51	107.60
1	5	421	C	C1'-C2'-O2'	5.09	116.03	108.40
1	5	1534	A	O4'-C4'-C3'	-5.09	101.01	106.10
11	H	66	GLU	N-CA-C	-5.09	107.24	113.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	f	19	ARG	CG-CD-NE	-5.09	100.81	112.00
74	SX	39	ASN	OD1-CG-ND2	5.09	127.69	122.60
1	5	1952	G	N9-C1'-C2'	5.08	119.63	112.00
1	5	4337	C	N1-C1'-C2'	5.08	119.63	112.00
1	5	1501	C	O4'-C1'-N1	5.08	115.83	108.20
50	S2	341	C	C4'-C3'-O3'	5.08	120.62	113.00
50	S2	1561	A	C1'-C2'-O2'	5.08	116.03	108.40
1	5	226	G	C2'-C3'-O3'	5.08	117.12	109.50
1	5	2436	U	C1'-C2'-O2'	-5.08	104.18	111.80
50	S2	617	G	N9-C1'-C2'	-5.08	104.38	112.00
50	S2	1858	G	C4'-C3'-O3'	-5.08	105.38	113.00
1	5	986	C	C2'-C3'-O3'	5.08	121.32	113.70
51	SA	103	PHE	N-CA-CB	5.08	117.93	109.60
1	5	62	A	C1'-C2'-O2'	-5.08	100.78	108.40
1	5	353	A	C4'-C3'-O3'	5.08	117.02	109.40
1	5	2036	C	O4'-C1'-C2'	-5.08	102.52	107.60
9	F	148	ASN	N-CA-C	-5.08	102.27	110.14
50	S2	474	G	O4'-C1'-C2'	-5.08	102.52	107.60
50	S2	624	C	C5'-C4'-C3'	-5.08	108.38	116.00
40	l	13	LEU	N-CA-C	-5.08	105.45	111.69
50	S2	1845	A	C3'-C2'-O2'	5.08	118.32	110.70
1	5	2554	U	C3'-C2'-O2'	5.08	118.31	110.70
1	5	4239	A	C1'-C2'-O2'	5.08	116.01	108.40
50	S2	1679	A	C4'-C3'-O3'	5.08	120.61	113.00
1	5	4349	C	O4'-C4'-C3'	-5.07	101.03	106.10
21	S	171	ARG	CG-CD-NE	5.07	123.16	112.00
33	e	42	ASP	N-CA-CB	5.07	117.56	110.56
50	S2	1313	A	N9-C1'-C2'	5.07	121.61	114.00
1	5	1937	C	C4'-C3'-O3'	5.07	120.61	113.00
3	8	29	G	C2'-C3'-O3'	5.07	121.31	113.70
50	S2	1109	C	C1'-O4'-C4'	-5.07	104.83	109.90
1	5	3707	U	C3'-C2'-O2'	5.07	118.30	110.70
1	5	1380	G	O4'-C4'-C3'	-5.07	101.03	106.10
50	S2	73	C	O4'-C1'-C2'	-5.07	100.73	105.80
1	5	54	G	N9-C1'-C2'	-5.07	104.40	112.00
1	5	1359	G	O4'-C4'-C3'	-5.07	98.94	104.00
1	5	2515	G	C1'-C2'-O2'	5.07	116.00	108.40
50	S2	183	G	C2'-C3'-O3'	5.07	117.10	109.50
1	5	218	A	N9-C1'-C2'	-5.06	106.40	114.00
1	5	2782	U	C2'-C3'-O3'	-5.06	106.10	113.70
50	S2	434	G	C2'-C3'-O3'	-5.06	106.10	113.70
1	5	371	A	C1'-C2'-O2'	-5.06	100.81	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1293	G	N9-C1'-C2'	5.06	119.59	112.00
1	5	1381	U	C4'-C3'-O3'	-5.06	105.41	113.00
1	5	2369	U	C2'-C3'-O3'	5.06	117.09	109.50
50	S2	818	A	C1'-C2'-O2'	5.06	115.99	108.40
5	B	122	TRP	CA-CB-CG	5.06	123.21	113.60
1	5	1966	C	O4'-C1'-C2'	-5.06	102.54	107.60
54	SD	24	PHE	N-CA-CB	5.06	117.47	109.94
1	5	3693	U	O4'-C1'-C2'	-5.05	102.55	107.60
50	S2	1722	G	C4'-C3'-O3'	-5.05	105.42	113.00
58	SH	189	PHE	CA-CB-CG	-5.05	108.75	113.80
59	SI	111	GLN	OE1-CD-NE2	5.05	127.66	122.60
34	f	83	MET	N-CA-C	-5.05	103.04	110.52
1	5	1274	A	C3'-C2'-O2'	5.05	122.18	114.60
1	5	4307	A	C4'-C3'-O3'	-5.05	105.42	113.00
30	b	16	TRP	N-CA-CB	5.05	119.23	110.39
50	S2	119	U	O4'-C1'-C2'	-5.05	102.55	107.60
50	S2	577	U	C2'-C3'-O3'	5.05	121.28	113.70
83	Sg	15	ASN	N-CA-CB	-5.05	103.77	111.19
1	5	3901	A	C5'-C4'-O4'	5.05	116.67	109.10
18	P	42	ARG	CG-CD-NE	5.05	123.11	112.00
50	S2	1126	G	C1'-C2'-O2'	5.05	115.97	108.40
1	5	2268	A	O5'-C5'-C4'	-5.05	104.13	111.70
2	7	54	A	N9-C1'-C2'	5.05	119.57	112.00
1	5	1319	U	C2'-C3'-O3'	5.05	121.27	113.70
58	SH	8	ILE	N-CA-C	5.05	115.82	110.72
1	5	333	U	N1-C1'-C2'	5.04	119.57	112.00
75	SY	33	ALA	N-CA-C	5.04	116.74	108.52
1	5	1319	U	N1-C1'-C2'	-5.04	104.44	112.00
3	8	124	U	C2'-C3'-O3'	5.04	117.06	109.50
1	5	219	G	P-O5'-C5'	5.04	128.46	120.90
1	5	300	A	C1'-C2'-O2'	5.04	115.96	108.40
21	S	100	LEU	N-CA-C	5.04	118.31	112.97
50	S2	1392	U	C1'-C2'-O2'	5.04	115.96	108.40
77	Sa	22	ARG	CB-CA-C	5.04	118.07	109.80
1	5	4738	C	N1-C1'-C2'	5.04	119.56	112.00
1	5	5032	C	N1-C1'-C2'	5.04	119.56	112.00
3	8	95	A	C4'-C3'-O3'	-5.04	105.44	113.00
1	5	20	U	N1-C1'-C2'	-5.04	106.44	114.00
22	T	140	PHE	CA-CB-CG	5.04	118.84	113.80
50	S2	76	U	C3'-C2'-O2'	5.04	118.25	110.70
50	S2	1139	C	C4'-C3'-O3'	-5.04	105.44	113.00
1	5	666	G	C2'-C3'-O3'	5.04	121.25	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4457	U	N1-C1'-C2'	5.04	119.55	112.00
50	S2	798	A	C4'-C3'-C2'	-5.04	97.56	102.60
1	5	478	G	C2'-C3'-O3'	5.03	121.25	113.70
1	5	2787	A	N9-C1'-C2'	-5.03	106.45	114.00
50	S2	845	G	N9-C1'-C2'	5.03	119.55	112.00
1	5	2453	A	O4'-C1'-C2'	-5.03	102.57	107.60
1	5	4538	G	C4'-C3'-O3'	-5.03	105.45	113.00
31	c	79	ILE	CB-CA-C	-5.03	105.38	111.87
50	S2	77	A	N9-C1'-C2'	-5.03	104.45	112.00
50	S2	1694	U	N1-C1'-C2'	5.03	119.55	112.00
1	5	315	G	O4'-C1'-N9	5.03	115.74	108.20
3	8	94	G	P-O5'-C5'	5.03	128.44	120.90
1	5	334	A	N9-C1'-C2'	5.03	119.54	112.00
1	5	2448	G	N9-C1'-C2'	5.03	121.54	114.00
10	G	40	GLY	N-CA-C	-5.03	105.03	113.02
50	S2	22	A	C1'-C2'-O2'	5.03	115.94	108.40
1	5	4666	G	C2'-C3'-O3'	5.02	121.24	113.70
21	S	29	ARG	N-CA-C	-5.02	101.12	109.46
50	S2	1244	U	C2'-C3'-O3'	5.02	121.24	113.70
1	5	225	G	C1'-C2'-O2'	5.02	119.33	111.80
1	5	4726	G	C4'-C3'-O3'	-5.02	105.47	113.00
50	S2	12	U	N1-C1'-C2'	5.02	119.53	112.00
86	S6	9	A	C2'-C3'-O3'	-5.02	101.97	109.50
1	5	687	U	C1'-C2'-O2'	5.02	115.93	108.40
1	5	2487	G	O4'-C1'-C2'	-5.02	102.58	107.60
50	S2	1852	C	C4'-C3'-O3'	-5.02	105.47	113.00
1	5	422	C	O4'-C1'-C2'	-5.02	102.58	107.60
50	S2	104	A	N9-C1'-C2'	-5.02	104.47	112.00
50	S2	651	U	C1'-C2'-O2'	-5.02	100.87	108.40
50	S2	1206	G	C4'-C3'-O3'	-5.02	105.47	113.00
1	5	1440	U	C4'-C3'-C2'	-5.02	97.58	102.60
1	5	2431	A	C1'-C2'-O2'	5.02	115.93	108.40
1	5	4535	A	C4'-C3'-O3'	-5.02	105.47	113.00
20	R	58	HIS	CB-CA-C	-5.02	102.59	111.22
50	S2	992	A	N9-C1'-C2'	-5.02	104.47	112.00
1	5	1237	C	O4'-C4'-C3'	5.02	109.02	104.00
54	SD	152	PHE	N-CA-C	-5.02	99.24	108.02
1	5	22	G	C3'-C2'-O2'	5.01	118.22	110.70
1	5	279	A	C2'-C3'-O3'	5.01	117.02	109.50
1	5	4693	C	O4'-C1'-C2'	-5.01	102.59	107.60
37	i	72	PHE	N-CA-C	-5.01	105.50	110.97
1	5	1428	U	N1-C1'-C2'	5.01	119.52	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1723	A	C2'-C3'-O3'	5.01	121.22	113.70
1	5	1987	C	O4'-C1'-C2'	-5.01	102.59	107.60
1	5	4328	G	C1'-C2'-O2'	5.01	115.92	108.40
1	5	4122	G	C1'-C2'-O2'	5.01	115.92	108.40
1	5	4322	G	C1'-C2'-O2'	5.01	115.92	108.40
19	Q	68	ARG	CG-CD-NE	-5.01	100.97	112.00
50	S2	168	C	N1-C1'-C2'	5.01	119.52	112.00
1	5	42	A	O4'-C1'-N9	5.01	115.71	108.20
1	5	2791	C	C4'-C3'-O3'	-5.01	105.49	113.00
1	5	4213	A	C4'-C3'-O3'	-5.01	105.49	113.00
20	R	74	ARG	NE-CZ-NH2	5.01	123.71	119.20
50	S2	508	A	C1'-C2'-O2'	5.01	115.91	108.40
1	5	3870	C	C1'-C2'-O2'	-5.01	100.89	108.40
1	5	4122	G	C2'-C3'-O3'	5.01	121.21	113.70
9	F	93	PHE	CB-CA-C	5.01	118.58	110.22
1	5	2463	G	N9-C1'-C2'	5.00	119.51	112.00
8	E	54	SER	N-CA-C	5.00	116.76	108.20
1	5	5026	U	O4'-C1'-C2'	-5.00	102.60	107.60
17	O	108	ILE	CA-C-N	5.00	125.53	120.38
17	O	108	ILE	C-N-CA	5.00	125.53	120.38
50	S2	106	C	C1'-C2'-O2'	-5.00	100.89	108.40
1	5	409	G	C3'-C2'-O2'	5.00	118.20	110.70
50	S2	1726	G	C3'-C2'-O2'	5.00	118.20	110.70

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	5	1992	U	C1'
50	S2	1109	C	C1'

All (455) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
47	1	273	ARG	Mainchain
47	1	405	ARG	Sidechain
47	1	432	SER	Mainchain
1	5	100	C	Sidechain
1	5	103	G	Sidechain
1	5	1167	C	Sidechain
1	5	120	A	Sidechain
1	5	1214	C	Sidechain
1	5	1281	G	Sidechain

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Mol	Chain	Res	Type	Group
1	5	1319	U	Sidechain
1	5	1324	A	Sidechain
1	5	1355	G	Sidechain
1	5	1398	A	Sidechain
1	5	147	A	Sidechain
1	5	1501	C	Sidechain
1	5	151	G	Sidechain
1	5	1522	G	Sidechain
1	5	1534	A	Sidechain
1	5	1539	G	Sidechain
1	5	157	U	Sidechain
1	5	1625	G	Sidechain
1	5	1627	G	Sidechain
1	5	1631	A	Sidechain
1	5	1658	G	Sidechain
1	5	1668	A	Sidechain
1	5	1671	U	Sidechain
1	5	1676	C	Sidechain
1	5	172	C	Sidechain
1	5	1733	G	Sidechain
1	5	1887	G	Sidechain
1	5	1894	C	Sidechain
1	5	1938	C	Sidechain
1	5	2037	C	Sidechain
1	5	2046	G	Sidechain
1	5	2056	G	Sidechain
1	5	2077	C	Sidechain
1	5	2082	G	Sidechain
1	5	2087	C	Sidechain
1	5	22	G	Sidechain
1	5	2263	A	Sidechain
1	5	2268	A	Sidechain
1	5	2271	C	Sidechain
1	5	2305	U	Sidechain
1	5	2325	C	Sidechain
1	5	235	A	Sidechain
1	5	2360	A	Sidechain
1	5	2361	G	Sidechain
1	5	2394	G	Sidechain
1	5	2403	A	Sidechain
1	5	2406	G	Sidechain
1	5	2436	U	Sidechain

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Mol	Chain	Res	Type	Group
1	5	2438	A	Sidechain
1	5	2446	C	Sidechain
1	5	2450	G	Sidechain
1	5	2465	C	Sidechain
1	5	2511	A	Sidechain
1	5	2513	A	Sidechain
1	5	2515	G	Sidechain
1	5	2517	A	Sidechain
1	5	2553	A	Sidechain
1	5	2581	A	Sidechain
1	5	2649	G	Sidechain
1	5	2666	U	Sidechain
1	5	2675	G	Sidechain
1	5	2769	U	Sidechain
1	5	2796	G	Sidechain
1	5	280	G	Sidechain
1	5	2812	A	Sidechain
1	5	2827	G	Sidechain
1	5	2851	G	Sidechain
1	5	2858	A	Sidechain
1	5	291	U	Sidechain
1	5	292	G	Sidechain
1	5	293	G	Sidechain
1	5	294	G	Sidechain
1	5	31	U	Sidechain
1	5	315	G	Sidechain
1	5	332	C	Sidechain
1	5	336	A	Sidechain
1	5	352	G	Sidechain
1	5	354	U	Sidechain
1	5	3621	A	Sidechain
1	5	3635	A	Sidechain
1	5	3648	A	Sidechain
1	5	3653	A	Sidechain
1	5	3692	A	Sidechain
1	5	3726	A	Sidechain
1	5	3774	A	Sidechain
1	5	3790	U	Sidechain
1	5	3791	C	Sidechain
1	5	383	A	Sidechain
1	5	384	A	Sidechain
1	5	3843	C	Sidechain

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Mol	Chain	Res	Type	Group
1	5	3844	U	Sidechain
1	5	3871	A	Sidechain
1	5	3880	G	Sidechain
1	5	3881	G	Sidechain
1	5	3901	A	Sidechain
1	5	3938	G	Sidechain
1	5	405	U	Sidechain
1	5	4076	G	Sidechain
1	5	4162	C	Sidechain
1	5	417	G	Sidechain
1	5	42	A	Sidechain
1	5	4228	G	Sidechain
1	5	4229	U	Sidechain
1	5	4234	A	Sidechain
1	5	4239	A	Sidechain
1	5	4270	C	Sidechain
1	5	4275	G	Sidechain
1	5	4280	A	Sidechain
1	5	4282	A	Sidechain
1	5	43	U	Sidechain
1	5	4330	G	Sidechain
1	5	4341	C	Sidechain
1	5	4371	G	Sidechain
1	5	4373	G	Sidechain
1	5	4385	A	Sidechain
1	5	4463	U	Sidechain
1	5	4464	A	Sidechain
1	5	4497	U	Sidechain
1	5	4498	U	Sidechain
1	5	4510	A	Sidechain
1	5	4519	C	Sidechain
1	5	4528	G	Sidechain
1	5	4531	U	Sidechain
1	5	4548	A	Sidechain
1	5	4563	U	Sidechain
1	5	4564	A	Sidechain
1	5	4589	A	Sidechain
1	5	4600	G	Sidechain
1	5	4670	C	Sidechain
1	5	4677	U	Sidechain
1	5	4693	C	Sidechain
1	5	4763	U	Sidechain

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Mol	Chain	Res	Type	Group
1	5	4871	C	Sidechain
1	5	4911	A	Sidechain
1	5	4965	U	Sidechain
1	5	4966	A	Sidechain
1	5	4976	U	Sidechain
1	5	4981	G	Sidechain
1	5	5006	U	Sidechain
1	5	5040	U	Sidechain
1	5	5043	A	Sidechain
1	5	5050	C	Sidechain
1	5	5066	U	Sidechain
1	5	514	U	Sidechain
1	5	53	C	Sidechain
1	5	54	G	Sidechain
1	5	62	A	Sidechain
1	5	664	G	Sidechain
1	5	84	A	Sidechain
1	5	85	G	Sidechain
1	5	89	C	Sidechain
1	5	92	C	Sidechain
1	5	93	G	Sidechain
1	5	94	A	Sidechain
1	5	964	A	Sidechain
1	5	97	G	Sidechain
1	5	99	A	Sidechain
2	7	42	A	Sidechain
2	7	56	G	Sidechain
3	8	104	A	Sidechain
3	8	14	U	Sidechain
3	8	34	U	Sidechain
3	8	35	C	Sidechain
3	8	38	U	Sidechain
3	8	39	G	Sidechain
3	8	60	G	Sidechain
3	8	65	A	Sidechain
3	8	73	U	Sidechain
3	8	9	A	Sidechain
3	8	94	G	Sidechain
4	A	18	ALA	Peptide
4	A	194	ASN	Peptide
4	A	196	TRP	Peptide
4	A	209	HIS	Sidechain

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Mol	Chain	Res	Type	Group
4	A	211	PHE	Sidechain
4	A	215	ASN	Peptide
5	B	100	ARG	Sidechain
5	B	102	PHE	Peptide
5	B	117	ARG	Sidechain
5	B	119	TYR	Sidechain
5	B	142	GLY	Peptide
5	B	15	GLY	Peptide
5	B	16	PHE	Peptide
5	B	179	HIS	Sidechain
5	B	274	TYR	Sidechain
5	B	322	HIS	Peptide
5	B	379	PHE	Peptide
5	B	387	ALA	Peptide
5	B	388	PHE	Peptide
6	C	102	PHE	Sidechain
6	C	113	ARG	Peptide
6	C	264	TYR	Peptide
6	C	309	ILE	Peptide
6	C	41	HIS	Sidechain
7	D	129	GLU	Peptide
7	D	190	PHE	Peptide
7	D	198	HIS	Sidechain
7	D	20	PHE	Peptide
7	D	261	VAL	Peptide
7	D	266	TRP	Peptide
7	D	30	TYR	Peptide
7	D	44	TYR	Sidechain
8	E	102	VAL	Peptide
8	E	103	VAL	Peptide
8	E	111	TYR	Peptide
8	E	123	SER	Peptide
8	E	152	ARG	Peptide
8	E	177	LEU	Peptide
8	E	216	LYS	Peptide
8	E	224	GLN	Peptide
8	E	230	ASP	Peptide
8	E	235	LYS	Peptide
8	E	278	TYR	Sidechain
8	E	41	SER	Peptide
9	F	127	LEU	Peptide
9	F	197	TYR	Peptide

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Mol	Chain	Res	Type	Group
9	F	228	HIS	Sidechain
9	F	81	GLY	Peptide
9	F	82	ASN	Peptide
10	G	101	LYS	Peptide
10	G	261	LEU	Peptide
10	G	54	PHE	Sidechain
11	H	156	ASN	Peptide,Sidechain
11	H	50	LYS	Peptide
12	I	113	THR	Peptide
12	I	139	ARG	Sidechain
12	I	158	LYS	Peptide
12	I	77	VAL	Peptide
12	I	93	PRO	Peptide
13	J	87	LEU	Peptide
13	J	99	PHE	Sidechain
14	L	146	LEU	Peptide
14	L	147	ALA	Peptide
14	L	192	PHE	Sidechain
14	L	62	PRO	Peptide
14	L	66	TYR	Peptide
15	M	6	PHE	Sidechain
15	M	65	PRO	Peptide
15	M	79	LYS	Peptide
15	M	94	LYS	Peptide
16	N	119	TYR	Sidechain
16	N	130	PHE	Sidechain
16	N	131	GLU	Sidechain
16	N	138	PHE	Peptide
16	N	139	HIS	Sidechain
16	N	180	PHE	Sidechain
16	N	184	ILE	Peptide
16	N	202	ARG	Peptide
16	N	37	HIS	Sidechain
16	N	90	ASN	Peptide
17	O	110	PRO	Peptide
17	O	117	ARG	Peptide
17	O	135	PHE	Sidechain
18	P	139	TYR	Sidechain
19	Q	161	SER	Peptide
19	Q	162	HIS	Peptide
19	Q	174	PHE	Sidechain
19	Q	32	TYR	Peptide

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Mol	Chain	Res	Type	Group
19	Q	34	PHE	Sidechain
20	R	118	HIS	Sidechain
20	R	132	PHE	Sidechain
20	R	174	GLU	Peptide
20	R	19	LYS	Peptide
20	R	57	VAL	Peptide
20	R	94	THR	Peptide
21	S	10	TYR	Sidechain
21	S	145	PHE	Peptide,Sidechain
21	S	152	PHE	Peptide
21	S	154	LEU	Peptide
21	S	159	LEU	Peptide
21	S	164	LYS	Peptide
21	S	32	ILE	Peptide
21	S	33	PHE	Peptide
21	S	68	PHE	Peptide
21	S	90	THR	Peptide
50	S2	1034	A	Sidechain
50	S2	104	A	Sidechain
50	S2	1045	U	Sidechain
50	S2	1063	C	Sidechain
50	S2	1085	C	Sidechain
50	S2	1088	U	Sidechain
50	S2	1109	C	Sidechain
50	S2	114	G	Sidechain
50	S2	1142	G	Sidechain
50	S2	1150	A	Sidechain
50	S2	1167	G	Sidechain
50	S2	1181	A	Sidechain
50	S2	1249	C	Sidechain
50	S2	1283	C	Sidechain
50	S2	1315	U	Sidechain
50	S2	1565	C	Sidechain
50	S2	1578	U	Sidechain
50	S2	1603	G	Sidechain
50	S2	1606	G	Sidechain
50	S2	1623	A	Sidechain
50	S2	1659	U	Sidechain
50	S2	1663	A	Sidechain
50	S2	1703	C	Sidechain
50	S2	1838	U	Sidechain
50	S2	1849	G	Sidechain

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Mol	Chain	Res	Type	Group
50	S2	1850	A	Sidechain
50	S2	1851	A	Sidechain
50	S2	1860	A	Sidechain
50	S2	294	U	Sidechain
50	S2	30	C	Sidechain
50	S2	313	A	Sidechain
50	S2	367	U	Sidechain
50	S2	381	C	Sidechain
50	S2	384	U	Sidechain
50	S2	399	C	Sidechain
50	S2	421	G	Sidechain
50	S2	423	U	Sidechain
50	S2	426	A	Sidechain
50	S2	427	U	Sidechain
50	S2	428	U	Sidechain
50	S2	437	G	Sidechain
50	S2	444	G	Sidechain
50	S2	447	A	Sidechain
50	S2	482	G	Sidechain
50	S2	601	G	Sidechain
50	S2	617	G	Sidechain
50	S2	631	U	Sidechain
50	S2	642	U	Sidechain
50	S2	645	C	Sidechain
50	S2	646	G	Sidechain
50	S2	661	U	Sidechain
50	S2	662	G	Sidechain
50	S2	685	A	Sidechain
50	S2	821	G	Sidechain
50	S2	848	U	Sidechain
50	S2	849	A	Sidechain
50	S2	918	U	Sidechain
50	S2	92	A	Sidechain
50	S2	957	A	Sidechain
50	S2	958	G	Sidechain
50	S2	964	A	Sidechain
50	S2	999	G	Sidechain
51	SA	103	PHE	Sidechain
51	SA	131	HIS	Peptide
52	SB	141	GLY	Peptide
52	SB	145	LYS	Mainchain
52	SB	40	ASN	Peptide

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Mol	Chain	Res	Type	Group
52	SB	66	VAL	Peptide
52	SB	76	ASN	Peptide
53	SC	168	GLY	Peptide
53	SC	236	PHE	Sidechain
53	SC	241	PHE	Sidechain
53	SC	60	TRP	Peptide
54	SD	196	GLY	Peptide
54	SD	203	PRO	Peptide
55	SE	17	HIS	Peptide
55	SE	205	PHE	Peptide
56	SF	43	GLU	Peptide
58	SH	108	SER	Peptide
59	SI	149	TYR	Peptide
59	SI	153	LYS	Peptide
59	SI	155	ASN	Peptide
59	SI	26	LYS	Peptide
59	SI	65	PHE	Peptide
59	SI	99	ASN	Sidechain
60	SJ	165	TYR	Peptide
60	SJ	48	PHE	Sidechain
61	SK	29	MET	Peptide
62	SL	147	LYS	Peptide
62	SL	15	THR	Peptide
62	SL	151	THR	Peptide
62	SL	62	PHE	Sidechain
63	SM	32	ALA	Peptide
64	SN	113	PHE	Peptide
65	SO	147	ARG	Sidechain
66	SP	11	THR	Peptide
67	SQ	43	GLU	Peptide
68	SR	108	LEU	Peptide
68	SR	125	GLY	Peptide
71	SU	71	GLY	Peptide
72	SV	32	ILE	Peptide
72	SV	48	GLY	Peptide
73	SW	54	ASP	Peptide
73	SW	76	SER	Peptide
74	SX	16	HIS	Sidechain
74	SX	20	HIS	Sidechain
75	SY	86	GLU	Sidechain
76	SZ	108	ILE	Peptide
77	Sa	17	HIS	Sidechain

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Mol	Chain	Res	Type	Group
78	Sb	81	ARG	Peptide
80	Sd	10	HIS	Peptide
80	Sd	8	TRP	Peptide
82	Sf	132	MET	Peptide
82	Sf	135	HIS	Peptide
82	Sf	138	ARG	Peptide
82	Sf	139	HIS	Peptide
22	T	140	PHE	Sidechain
22	T	142	ARG	Peptide
23	U	110	TYR	Peptide
23	U	55	ASN	Peptide
24	V	108	ASN	Peptide
24	V	97	TYR	Sidechain
24	V	98	PHE	Sidechain
25	W	27	LYS	Peptide
26	X	73	HIS	Sidechain
27	Y	18	HIS	Sidechain
27	Y	61	HIS	Sidechain
27	Y	62	TYR	Peptide
27	Y	81	TYR	Sidechain
29	a	109	TYR	Sidechain
29	a	128	PHE	Sidechain
29	a	34	ASN	Sidechain
29	a	39	HIS	Peptide
29	a	60	HIS	Sidechain
29	a	61	TYR	Peptide,Sidechain
29	a	62	HIS	Sidechain
29	a	91	ALA	Peptide
30	b	6	ASN	Sidechain
31	c	77	ASN	Peptide
31	c	78	ASN	Sidechain
32	d	103	TYR	Peptide
32	d	108	TYR	Peptide
32	d	25	TYR	Sidechain
32	d	72	VAL	Peptide
33	e	20	PHE	Sidechain
33	e	3	ALA	Peptide
33	e	74	PHE	Sidechain
33	e	76	LYS	Peptide
34	f	100	ARG	Peptide
34	f	53	ALA	Peptide
35	g	6	THR	Peptide

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Mol	Chain	Res	Type	Group
36	h	121	VAL	Peptide
36	h	78	TYR	Sidechain
36	h	97	LYS	Peptide
37	i	26	HIS	Sidechain
37	i	39	PHE	Sidechain
37	i	49	GLY	Peptide
38	j	46	LYS	Peptide
38	j	48	ASN	Peptide
38	j	66	HIS	Sidechain
38	j	8	PHE	Sidechain
39	k	28	ASN	Peptide
43	o	31	ASP	Peptide,Sidechain
43	o	43	ARG	Peptide
43	o	47	GLY	Peptide
43	o	48	TYR	Sidechain
43	o	76	ASN	Peptide
44	p	17	ARG	Peptide
45	r	30	ASN	Peptide
45	r	31	ASN	Sidechain
45	r	45	HIS	Sidechain
45	r	70	GLN	Peptide
45	r	76	SER	Peptide

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	5	79736	0	40287	11027	0
2	7	2558	0	1296	305	0
3	8	3314	0	1683	505	0
4	A	1868	0	1959	167	0
5	B	3147	0	3280	223	0
6	C	2919	0	3100	177	0
7	D	2380	0	2412	181	0
8	E	1904	0	2055	147	0
9	F	1870	0	1996	177	0
10	G	1934	0	2086	133	0
11	H	1518	0	1601	86	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
12	I	1713	0	1751	92	0
13	J	1359	0	1390	74	0
14	L	1703	0	1818	104	0
15	M	1131	0	1209	76	0
16	N	1701	0	1749	128	0
17	O	1651	0	1786	90	0
18	P	1242	0	1269	56	0
19	Q	1506	0	1623	79	0
20	R	1508	0	1664	109	0
21	S	1454	0	1496	124	0
22	T	1298	0	1366	82	0
23	U	808	0	831	26	0
24	V	979	0	1039	60	0
25	W	528	0	541	52	0
26	X	976	0	1053	51	0
27	Y	1115	0	1205	64	0
28	Z	1107	0	1182	56	0
29	a	1163	0	1211	107	0
30	b	610	0	650	49	0
31	c	732	0	769	40	0
32	d	888	0	930	63	0
33	e	1053	0	1147	92	0
34	f	876	0	912	57	0
35	g	906	0	1001	76	0
36	h	1015	0	1149	57	0
37	i	832	0	917	29	0
38	j	706	0	743	54	0
39	k	569	0	637	21	0
40	l	444	0	483	41	0
41	m	429	0	466	28	0
42	n	222	0	262	22	0
43	o	851	0	922	55	0
44	p	708	0	760	49	0
45	r	1001	0	1062	74	0
46	z	1741	0	1848	313	0
47	1	2914	0	3025	212	0
48	2	494	0	527	17	0
49	3	180	0	41	1	0
50	S2	36900	0	18591	5965	0
51	SA	1642	0	1646	155	0
52	SB	1725	0	1794	244	0
53	SC	1690	0	1777	97	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
54	SD	1765	0	1863	124	0
55	SE	2076	0	2177	82	0
56	SF	1509	0	1563	72	0
57	SG	1923	0	2089	99	0
58	SH	1521	0	1616	89	0
59	SI	1686	0	1772	101	0
60	SJ	1525	0	1640	104	0
61	SK	827	0	854	56	0
62	SL	1276	0	1353	88	0
63	SM	960	0	989	113	0
64	SN	1208	0	1294	65	0
65	SO	1016	0	1039	76	0
66	SP	805	0	861	27	0
67	SQ	1124	0	1193	52	0
68	SR	1047	0	1103	175	0
69	SS	1139	0	1189	84	0
70	ST	1101	0	1135	74	0
71	SU	818	0	883	28	0
72	SV	625	0	628	27	0
73	SW	1034	0	1080	59	0
74	SX	1099	0	1159	160	0
75	SY	1023	0	1090	61	0
76	SZ	598	0	656	16	0
77	Sa	781	0	828	78	0
78	Sb	651	0	672	18	0
79	Sc	506	0	536	39	0
80	Sd	434	0	427	41	0
81	Se	452	0	494	45	0
82	Sf	581	0	599	219	0
83	Sg	2436	0	2393	121	0
84	S4	201	0	101	74	0
85	S5	1579	0	797	464	0
86	S6	1622	0	815	671	0
87	5	120	0	0	0	0
87	7	5	0	0	0	0
87	8	3	0	0	0	0
87	P	1	0	0	0	0
87	S2	36	0	0	0	0
87	V	1	0	0	0	0
88	Sa	1	0	0	3	0
88	j	1	0	0	1	0
88	m	1	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
88	o	1	0	0	2	0
All	All	222336	0	164885	23168	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 60.

All (23168) 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)
1:5:3967:G:H1'	46:z:162:VAL:CG2	1.22	1.62
50:S2:460:A:C2	50:S2:461:U:C5	1.85	1.62
52:SB:97:LEU:CB	52:SB:228:LEU:HD11	1.27	1.61
1:5:4097:G:C5'	35:g:115:LYS:HB3	1.25	1.58
1:5:3967:G:C1'	46:z:162:VAL:CG2	1.80	1.58
50:S2:1640:A:H4'	86:S6:41:C:C1'	1.31	1.58
60:SJ:59:GLU:CG	60:SJ:59:GLU:CD	1.75	1.58
1:5:4054:C:H5''	46:z:205:TYR:CE2	1.42	1.54
1:5:4097:G:H5''	35:g:115:LYS:CB	1.10	1.54
1:5:1560:A:C2	1:5:1561:G:C5	1.92	1.54
51:SA:151:ASP:CB	51:SA:151:ASP:CG	1.78	1.54
1:5:1560:A:N1	1:5:1561:G:C6	1.78	1.52
50:S2:1453:C:C4	50:S2:1455:A:H1'	1.43	1.52
1:5:100:C:C5	1:5:101:A:C8	2.00	1.49
50:S2:1834:A:H2	50:S2:1836:G:C4	1.26	1.49
52:SB:221:PRO:C	52:SB:222:LYS:N	1.68	1.49
50:S2:1640:A:C4'	86:S6:41:C:H1'	1.42	1.49
1:5:2037:C:C2	1:5:2038:U:C5	2.00	1.48
62:SL:103:GLU:CG	74:SX:11:ARG:HB2	1.05	1.47
1:5:4054:C:O3'	46:z:205:TYR:CE1	1.67	1.46
1:5:3759:A:C6	50:S2:1709:G:H4'	1.51	1.46
75:SY:86:GLU:CG	75:SY:86:GLU:CD	1.85	1.45
62:SL:103:GLU:HG3	74:SX:11:ARG:CB	1.44	1.45
50:S2:460:A:C2	50:S2:461:U:C6	2.03	1.44
44:p:92:GLN:HG2	52:SB:219:LYS:NZ	1.31	1.43
40:l:21:ARG:HH21	40:l:24:PRO:CD	1.28	1.43
1:5:3967:G:C2'	46:z:162:VAL:CG2	1.95	1.42
1:5:4054:C:H4'	46:z:205:TYR:CG	1.54	1.42
53:SC:146:GLU:CG	54:SD:116:ARG:HH22	1.32	1.42
68:SR:17:ILE:CD1	68:SR:57:LEU:HB2	1.46	1.42
46:z:44:GLN:HE22	86:S6:53:G:N2	1.06	1.41
52:SB:42:ARG:NH1	52:SB:232:HIS:C	1.75	1.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1266:G:N2	1:5:2111:G:N3	1.67	1.41
1:5:3974:G:O2'	46:z:210:MET:CE	1.65	1.41
85:S5:47:U:O3'	85:S5:48:C:P	1.01	1.41
1:5:4055:U:P	46:z:205:TYR:CE1	2.14	1.41
1:5:2037:C:N3	1:5:2038:U:C5	1.89	1.40
50:S2:1416:C:H2'	50:S2:1417:C:C6	1.55	1.40
44:p:92:GLN:CG	52:SB:219:LYS:HZ2	1.31	1.40
1:5:1174:G:N2	1:5:1175:A:N7	1.67	1.40
50:S2:42:A:C6	50:S2:43:U:H5	1.37	1.40
85:S5:60:U:C3'	85:S5:61:C:H5	1.31	1.40
50:S2:460:A:N1	50:S2:461:U:C5	1.88	1.39
1:5:1560:A:C2	1:5:1561:G:C6	2.08	1.39
47:1:272:TYR:C	47:1:273:ARG:N	1.81	1.39
47:1:448:LEU:CA	47:1:451:VAL:HG22	1.53	1.38
68:SR:17:ILE:HD13	68:SR:57:LEU:CB	1.51	1.38
62:SL:103:GLU:CG	74:SX:11:ARG:CB	1.88	1.38
86:S6:1:U:C2	86:S6:73:A:H2	1.40	1.38
1:5:2361:G:O6	18:P:25:HIS:CD2	1.74	1.38
85:S5:12:U:O4'	85:S5:24:G:N2	1.57	1.37
50:S2:1538:C:N3	50:S2:1539:U:H5	1.18	1.37
86:S6:1:U:C2	86:S6:73:A:C2	2.12	1.37
1:5:4283:G:C2	1:5:4284:C:C6	2.13	1.37
50:S2:618:C:OP1	74:SX:87:ASN:CA	1.71	1.37
1:5:3763:A:N1	50:S2:1710:C:H5'	1.37	1.36
52:SB:97:LEU:HA	52:SB:232:HIS:NE2	1.39	1.36
68:SR:17:ILE:HD12	68:SR:57:LEU:CD1	1.54	1.36
1:5:4096:C:O3'	35:g:112:GLN:CB	1.71	1.34
85:S5:60:U:H3'	85:S5:61:C:C5	1.62	1.34
3:8:11:C:N3	3:8:12:G:N7	1.70	1.34
74:SX:4:CYS:SG	74:SX:9:THR:HG21	1.68	1.34
1:5:977:C:C2	1:5:978:G:C8	2.14	1.34
1:5:2078:C:N3	1:5:2079:G:N7	1.76	1.34
1:5:2367:A:N1	1:5:2788:U:O4	1.56	1.34
2:7:54:A:C2	2:7:55:A:N7	1.96	1.34
1:5:3759:A:N6	50:S2:1709:G:H4'	1.38	1.34
1:5:4283:G:C2	1:5:4284:C:C5	2.15	1.34
84:S4:18:U:O4	86:S6:37:A:N6	1.60	1.34
85:S5:10:G:N2	85:S5:25:C:N3	1.73	1.33
1:5:3759:A:C6	50:S2:1709:G:C4'	2.12	1.33
50:S2:1231:C:O4'	50:S2:1665:G:N2	1.61	1.33
1:5:4055:U:H5''	46:z:37:SER:CB	1.56	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1640:A:C5'	86:S6:41:C:H4'	1.57	1.33
62:SL:99:TYR:CD2	74:SX:13:LEU:HB3	1.63	1.33
75:SY:86:GLU:CD	75:SY:86:GLU:OE2	1.69	1.33
1:5:3974:G:P	46:z:28:PHE:HB3	1.68	1.32
40:l:21:ARG:NH2	40:l:24:PRO:CD	1.92	1.32
1:5:3967:G:O2'	46:z:162:VAL:HG23	1.16	1.32
2:7:18:C:N3	2:7:19:C:C5	1.96	1.32
50:S2:1640:A:H4'	86:S6:41:C:O4'	1.29	1.32
24:V:97:TYR:OH	25:W:21:TYR:HA	1.29	1.32
50:S2:42:A:N3	50:S2:426:A:N7	1.77	1.32
50:S2:359:U:OP1	74:SX:22:TRP:NE1	1.62	1.32
52:SB:89:GLU:HB3	52:SB:223:PHE:CE2	1.64	1.32
1:5:1388:A:C6	1:5:1396:G:N2	1.95	1.32
1:5:983:C:O2	1:5:984:C:C6	1.81	1.31
47:1:268:LYS:HD2	47:1:276:TYR:CZ	1.64	1.31
50:S2:1539:U:N3	50:S2:1540:G:N7	1.74	1.31
52:SB:90:ASP:OD1	52:SB:225:LEU:CD2	1.76	1.31
13:J:119:TYR:CE1	69:SS:101:ASN:HB2	1.48	1.31
85:S5:47:U:C3'	85:S5:48:C:P	2.17	1.31
1:5:4213:A:N1	1:5:4218:U:O4	1.60	1.31
1:5:4892:A:N1	1:5:4927:G:O6	1.62	1.31
50:S2:1834:A:C2	50:S2:1836:G:C4	2.17	1.31
54:SD:216:GLU:CD	54:SD:216:GLU:OE1	1.73	1.31
86:S6:13:C:H2'	86:S6:14:C:C6	1.64	1.31
50:S2:1822:A:C2	50:S2:1823:A:N6	1.97	1.31
50:S2:1832:A:C2	50:S2:1833:C:C5	2.19	1.31
50:S2:1133:A:C2	50:S2:1134:G:C8	2.19	1.30
1:5:1983:A:N7	1:5:1987:C:OP2	1.64	1.30
1:5:3967:G:C2'	46:z:162:VAL:HG23	1.53	1.30
85:S5:48:C:C5	85:S5:59:U:C4	2.18	1.30
1:5:1964:A:C5	1:5:1965:G:C8	2.20	1.30
50:S2:647:U:O2	50:S2:648:A:C8	1.83	1.30
50:S2:1114:U:O4	50:S2:1119:A:N1	1.65	1.30
50:S2:1212:G:N2	50:S2:1688:C:C2	1.99	1.30
50:S2:1342:U:C5	50:S2:1483:A:C5	2.20	1.30
40:l:21:ARG:NH2	40:l:24:PRO:CG	1.94	1.29
50:S2:524:U:N3	50:S2:594:A:N6	1.77	1.29
50:S2:1192:U:P	74:SX:119:ARG:HH22	1.52	1.29
50:S2:1200:A:C2	50:S2:1201:U:C5	2.20	1.29
50:S2:1834:A:C2	50:S2:1836:G:C5	2.20	1.29
68:SR:21:TYR:CE1	68:SR:61:ILE:HG21	1.66	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4233:A:N1	1:5:4290:U:O4	1.63	1.29
50:S2:1204:A:C2	50:S2:1205:C:C2	2.20	1.29
52:SB:42:ARG:CZ	52:SB:232:HIS:O	1.80	1.29
84:S4:16:U:C4	84:S4:17:U:C4	2.20	1.29
85:S5:13:C:N3	85:S5:22:G:N1	1.77	1.29
85:S5:21:A:C5	85:S5:48:C:C5	2.19	1.29
1:5:1245:C:O2	1:5:1246:G:C8	1.85	1.29
50:S2:618:C:P	74:SX:87:ASN:HA	1.72	1.29
1:5:1478:C:O2	1:5:1479:G:N7	1.62	1.28
1:5:977:C:N3	1:5:978:G:N7	1.81	1.28
47:1:448:LEU:HA	47:1:451:VAL:CG2	1.63	1.28
1:5:3974:G:C2'	46:z:210:MET:HE1	1.62	1.28
50:S2:1640:A:C4'	86:S6:41:C:C1'	2.03	1.28
50:S2:56:G:C6	50:S2:90:G:N2	2.02	1.28
50:S2:1342:U:C5	50:S2:1483:A:C6	2.22	1.28
62:SL:103:GLU:CB	74:SX:11:ARG:HB3	1.62	1.28
68:SR:17:ILE:CD1	68:SR:57:LEU:CB	2.07	1.28
1:5:1964:A:N7	1:5:1965:G:N7	1.78	1.27
52:SB:42:ARG:HH12	52:SB:232:HIS:C	1.33	1.27
86:S6:53:G:C4	86:S6:54:U:C5	2.22	1.27
50:S2:1834:A:H2	50:S2:1836:G:C5	1.49	1.27
1:5:4053:A:OP1	46:z:1:MET:CB	1.65	1.26
50:S2:830:A:N6	50:S2:844:U:H3	1.30	1.26
50:S2:1192:U:OP2	74:SX:119:ARG:NH1	1.67	1.26
50:S2:1284:A:O2'	63:SM:106:CYS:HA	1.17	1.26
50:S2:1539:U:O2	50:S2:1540:G:C8	1.88	1.26
1:5:5005:G:O6	25:W:51:TRP:HB3	1.32	1.26
50:S2:551:U:O2	50:S2:552:G:C8	1.88	1.26
50:S2:1342:U:C6	50:S2:1483:A:C6	2.21	1.26
50:S2:460:A:N1	50:S2:461:U:C4	2.03	1.26
50:S2:1433:C:H2'	50:S2:1434:C:C1'	1.65	1.26
1:5:1936:C:C5	2:7:84:U:C5	2.22	1.26
1:5:2743:A:C2	1:5:2744:A:C5	2.24	1.25
52:SB:97:LEU:HA	52:SB:232:HIS:CE1	1.70	1.25
1:5:1672:U:C2	1:5:1673:U:C5	2.23	1.25
1:5:3806:G:O2'	50:S2:1719:A:H1'	1.19	1.25
50:S2:1860:A:C2	50:S2:1862:G:C8	2.23	1.25
50:S2:165:G:C8	50:S2:166:A:N7	2.05	1.25
50:S2:469:A:N1	50:S2:470:G:C8	2.04	1.25
1:5:3702:A:C2	1:5:3703:G:C8	2.24	1.25
40:l:21:ARG:NH2	40:l:24:PRO:HG3	1.48	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1561:G:C2	1:5:1567:U:O2	1.88	1.24
50:S2:1693:G:N7	50:S2:1694:U:C4	2.05	1.24
1:5:3969:G:C1'	46:z:166:ALA:HB3	1.67	1.24
50:S2:50:A:N6	50:S2:488:U:H3	1.36	1.24
50:S2:1408:U:O4	50:S2:1439:A:N1	1.67	1.24
52:SB:97:LEU:CA	52:SB:232:HIS:NE2	2.00	1.24
65:SO:117:ARG:NH2	79:Sc:62:GLU:CD	1.95	1.24
68:SR:26:ASN:OD1	68:SR:59:LYS:HE3	1.34	1.24
1:5:2036:C:C2	1:5:2037:C:C5	2.25	1.24
67:SQ:146:ARG:NH1	86:S6:35:A:OP1	1.70	1.24
50:S2:50:A:N1	50:S2:488:U:O4	1.69	1.23
1:5:1899:G:C2	1:5:1900:C:C5	2.27	1.23
46:z:44:GLN:NE2	86:S6:53:G:H21	1.35	1.23
86:S6:2:G:O6	86:S6:72:C:N4	1.72	1.23
20:R:131:VAL:HB	20:R:132:PHE:CZ	1.74	1.22
86:S6:1:U:N3	86:S6:73:A:C2	2.06	1.22
1:5:1268:G:C2	1:5:1270:A:C8	2.28	1.22
50:S2:1417:C:N3	50:S2:1419:C:H5	1.36	1.22
50:S2:1538:C:N3	50:S2:1539:U:C5	2.06	1.22
50:S2:1641:A:O2'	86:S6:31:A:O3'	1.55	1.22
47:1:447:ILE:O	47:1:451:VAL:N	1.73	1.22
1:5:3944:G:C6	1:5:3945:A:N7	2.06	1.21
50:S2:1273:C:O2	50:S2:1506:A:H2	1.21	1.21
85:S5:60:U:C2'	85:S5:61:C:H5	1.53	1.21
1:5:2037:C:C2	1:5:2038:U:C6	2.28	1.21
1:5:2361:G:O6	18:P:25:HIS:HD2	1.04	1.21
1:5:2497:C:N3	1:5:2498:C:C5	2.08	1.21
1:5:2784:C:C2	1:5:2785:C:C5	2.28	1.21
1:5:3791:C:H5'	1:5:3791:C:C6	1.75	1.21
1:5:2314:G:C2	1:5:2315:G:N7	2.09	1.21
1:5:4056:A:P	46:z:39:LYS:NZ	2.13	1.21
50:S2:1192:U:OP1	74:SX:119:ARG:NH2	1.70	1.20
62:SL:103:GLU:HB3	74:SX:10:ALA:C	1.67	1.20
62:SL:103:GLU:CB	74:SX:11:ARG:CB	2.17	1.20
68:SR:17:ILE:HD11	68:SR:57:LEU:HB2	1.22	1.20
68:SR:18:GLU:OE2	68:SR:69:ILE:HA	1.37	1.20
1:5:1279:A:H2'	1:5:1280:C:C5	1.76	1.20
1:5:4283:G:N1	1:5:4284:C:C5	2.09	1.20
50:S2:42:A:C6	50:S2:43:U:C5	2.29	1.20
50:S2:1539:U:C2	50:S2:1540:G:C8	2.28	1.20
52:SB:221:PRO:C	52:SB:222:LYS:CA	2.12	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:1:448:LEU:HG	47:1:451:VAL:CG2	1.69	1.20
54:SD:211:VAL:HG22	68:SR:38:ILE:O	1.40	1.20
1:5:964:A:N6	1:5:966:A:N7	1.87	1.19
1:5:3960:A:N3	1:5:4045:G:O2'	1.74	1.19
3:8:12:G:C2	3:8:13:G:C8	2.28	1.19
24:V:97:TYR:OH	25:W:21:TYR:CA	1.89	1.19
1:5:4068:U:H2'	1:5:4069:U:C5'	1.72	1.19
20:R:163:ARG:CD	50:S2:871:U:O2	1.91	1.19
1:5:208:A:O4'	1:5:232:G:N2	1.73	1.19
46:z:44:GLN:NE2	86:S6:53:G:N2	1.89	1.19
50:S2:795:A:C2	50:S2:796:G:C5	2.28	1.19
85:S5:60:U:C3'	85:S5:61:C:C5	2.19	1.19
1:5:106:A:H1'	1:5:336:A:C8	1.76	1.19
1:5:207:G:N2	1:5:383:A:N7	1.90	1.19
62:SL:99:TYR:OH	74:SX:17:ARG:HD2	1.43	1.19
85:S5:21:A:C4	85:S5:48:C:C4	2.29	1.19
1:5:4055:U:H5''	46:z:37:SER:HB2	1.21	1.18
3:8:119:C:N3	3:8:120:G:N7	1.92	1.18
1:5:4054:C:H4'	46:z:205:TYR:CD2	1.79	1.18
50:S2:821:G:O6	60:SJ:150:ARG:HD2	1.40	1.18
50:S2:830:A:N6	50:S2:844:U:N3	1.88	1.18
50:S2:1109:C:H41	68:SR:122:PRO:C	1.50	1.18
50:S2:1433:C:H3'	50:S2:1433:C:OP2	1.38	1.18
52:SB:89:GLU:CB	52:SB:223:PHE:HE2	1.54	1.18
52:SB:97:LEU:HB3	52:SB:228:LEU:CD1	1.71	1.18
1:5:4276:G:C6	1:5:4277:G:C8	2.32	1.18
50:S2:1552:G:O6	50:S2:1578:U:C2	1.96	1.18
1:5:2362:U:C4	1:5:3859:G:N2	2.12	1.18
3:8:64:U:C2	3:8:65:A:N7	2.12	1.18
86:S6:15:G:N2	86:S6:21:A:N3	1.91	1.18
1:5:469:C:O2	1:5:688:U:H1'	1.36	1.18
1:5:1213:G:C4	1:5:1215:C:H1'	1.77	1.18
1:5:1566:C:O3'	1:5:1567:U:P	2.02	1.18
50:S2:1211:G:O6	50:S2:1212:G:C6	1.97	1.18
50:S2:994:C:N3	50:S2:995:G:N7	1.93	1.17
50:S2:1273:C:O2	50:S2:1506:A:C2	1.96	1.17
50:S2:1309:C:O2	82:Sf:143:LYS:HD3	1.00	1.17
52:SB:90:ASP:OD1	52:SB:225:LEU:HD23	1.43	1.17
85:S5:2:C:H42	85:S5:71:G:N2	1.42	1.17
1:5:2856:C:O2	1:5:2857:A:C8	1.98	1.17
2:7:54:A:C2	2:7:55:A:C8	2.33	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:260:GLU:OE1	52:SB:57:ILE:CA	1.86	1.17
1:5:2856:C:C2	1:5:2857:A:N7	2.13	1.17
1:5:3974:G:O2'	46:z:210:MET:HE1	1.01	1.17
47:1:284:PHE:CD1	47:1:428:ILE:HD11	1.78	1.17
52:SB:97:LEU:HD22	52:SB:232:HIS:CG	1.79	1.17
1:5:1245:C:C5	1:5:1269:G:C6	2.33	1.17
1:5:1563:A:N6	50:S2:1028:A:H61	1.41	1.17
1:5:1936:C:C5	2:7:84:U:C6	2.33	1.17
50:S2:1316:C:N3	50:S2:1317:C:C5	2.13	1.17
50:S2:1484:A:C4	50:S2:1485:U:C5	2.33	1.17
1:5:2724:G:C2	1:5:2726:G:N7	2.13	1.17
1:5:4053:A:OP1	46:z:1:MET:HB2	1.44	1.17
3:8:96:C:C2	3:8:97:A:C8	2.33	1.17
85:S5:12:U:C1'	85:S5:24:G:N2	2.06	1.17
1:5:4767:C:O2'	1:5:4874:A:N6	1.79	1.16
50:S2:26:U:N3	50:S2:27:A:C8	2.12	1.16
50:S2:426:A:C2	50:S2:427:U:C5	2.33	1.16
1:5:166:C:O2	1:5:167:C:C5	1.98	1.16
1:5:484:U:C4	1:5:486:C:C5	2.32	1.16
1:5:1560:A:N1	1:5:1561:G:O6	1.78	1.16
1:5:1561:G:N2	1:5:1567:U:O2	1.77	1.16
10:G:264:LYS:CD	52:SB:31:TYR:OH	1.93	1.16
1:5:4054:C:C5'	46:z:205:TYR:CE2	2.27	1.16
1:5:4119:C:N4	35:g:100:GLN:OE1	1.79	1.16
10:G:264:LYS:HD2	52:SB:31:TYR:OH	1.00	1.16
50:S2:1308:U:H2'	50:S2:1309:C:C6	1.79	1.16
1:5:100:C:C4	1:5:101:A:N7	2.14	1.16
1:5:1378:C:H3'	1:5:1379:C:C5'	1.73	1.16
50:S2:1283:C:O2'	63:SM:91:LEU:HD22	1.46	1.16
2:7:18:C:O2	2:7:19:C:C6	1.98	1.16
86:S6:51:U:N3	86:S6:52:G:N7	1.93	1.16
1:5:161:G:N2	1:5:275:C:O2	1.80	1.15
50:S2:649:U:O2	50:S2:650:A:C8	1.98	1.15
86:S6:63:G:C4	86:S6:64:A:C8	2.33	1.15
1:5:1358:G:H2'	1:5:1359:G:O4'	1.45	1.15
85:S5:11:C:O2	85:S5:24:G:N1	1.74	1.15
1:5:1683:U:O2	1:5:1684:A:C8	1.99	1.15
1:5:2532:C:C2	1:5:2533:C:C5	2.34	1.15
50:S2:1361:G:H21	50:S2:1380:C:N4	1.45	1.15
50:S2:1640:A:H5''	86:S6:41:C:H4'	1.25	1.15
52:SB:144:LYS:C	52:SB:145:LYS:N	2.05	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:13:C:C2'	86:S6:14:C:C6	2.28	1.15
1:5:1358:G:C2'	1:5:1359:G:O4'	1.95	1.15
1:5:4055:U:P	46:z:205:TYR:CZ	2.39	1.15
50:S2:1249:C:C4	50:S2:1250:A:N7	2.15	1.15
86:S6:33:U:C5	86:S6:35:A:H5'	1.82	1.15
1:5:1628:C:N3	1:5:1629:G:N7	1.94	1.15
1:5:2326:G:C2	1:5:2327:G:C8	2.34	1.15
1:5:3945:A:N6	1:5:4069:U:N3	1.94	1.15
1:5:2080:U:C2	1:5:2081:C:C5	2.34	1.14
1:5:2508:U:O2	1:5:2509:C:C6	1.99	1.14
1:5:3972:A:C2	1:5:4040:C:O2	1.99	1.14
9:F:161:TYR:CE2	9:F:168:ARG:NH2	2.15	1.14
50:S2:339:A:H2'	50:S2:340:C:C6	1.81	1.14
50:S2:349:A:H4'	59:SI:27:TYR:OH	1.43	1.14
50:S2:444:G:N2	50:S2:446:G:C8	2.15	1.14
50:S2:1109:C:H41	68:SR:123:THR:N	1.45	1.14
50:S2:1213:C:C5	50:S2:1682:C:C4	2.36	1.14
1:5:1598:C:C5	1:5:2798:A:N7	2.16	1.14
1:5:1964:A:C8	1:5:1965:G:N7	2.14	1.14
1:5:2468:U:O4	1:5:2473:A:N1	1.80	1.14
1:5:3944:G:O6	1:5:4069:U:N3	1.81	1.14
1:5:4055:U:C5'	46:z:37:SER:CB	2.24	1.14
85:S5:48:C:C4	85:S5:59:U:N3	2.16	1.14
1:5:4055:U:C5'	46:z:37:SER:HB2	1.77	1.14
1:5:4280:A:H61	7:D:29:ASP:CA	1.59	1.14
1:5:4757:C:O2	17:O:114:LYS:HA	1.42	1.14
50:S2:383:G:H2'	50:S2:384:U:O4'	1.45	1.14
50:S2:1693:G:C8	50:S2:1694:U:C5	2.35	1.14
1:5:3967:G:C1'	46:z:162:VAL:HG22	1.50	1.14
1:5:3973:G:O3'	46:z:28:PHE:CD1	2.01	1.14
1:5:4055:U:H5''	46:z:37:SER:OG	1.46	1.14
50:S2:1203:G:H2'	50:S2:1204:A:H8	1.03	1.14
52:SB:97:LEU:CB	52:SB:228:LEU:CD1	2.22	1.14
68:SR:18:GLU:O	68:SR:71:ILE:CD1	1.95	1.14
86:S6:51:U:C2	86:S6:52:G:C8	2.35	1.13
1:5:2277:C:O2	1:5:2278:G:C8	2.02	1.13
1:5:2293:U:O2	1:5:2294:G:C8	2.00	1.13
50:S2:1372:U:H2'	50:S2:1373:C:H6	1.13	1.13
84:S4:16:U:C2'	84:S4:17:U:H5'	1.78	1.13
1:5:3702:A:N1	1:5:3703:G:C8	2.17	1.13
1:5:4055:U:OP1	46:z:205:TYR:HE1	1.32	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:121:PRO:HD2	69:SS:17:ASN:HB3	1.31	1.13
50:S2:925:G:C2	50:S2:926:A:C8	2.36	1.13
68:SR:17:ILE:CD1	68:SR:57:LEU:CD1	2.27	1.13
68:SR:18:GLU:CD	68:SR:69:ILE:HA	1.74	1.13
1:5:1214:C:O2'	1:5:2114:G:N1	1.82	1.13
1:5:1724:G:N7	30:b:17:HIS:ND1	1.96	1.13
1:5:2314:G:N2	1:5:2315:G:C8	2.17	1.13
68:SR:17:ILE:HD12	68:SR:57:LEU:HD12	1.21	1.13
85:S5:28:G:C4	85:S5:29:G:C8	2.36	1.13
1:5:208:A:C1'	1:5:232:G:N2	2.12	1.13
1:5:1966:C:N3	1:5:1967:A:N7	1.97	1.12
1:5:4518:A:C8	5:B:257:TRP:CH2	2.37	1.13
1:5:4056:A:P	46:z:39:LYS:HZ3	1.71	1.12
20:R:158:GLN:O	20:R:162:ARG:HG2	1.49	1.12
50:S2:1640:A:H5'	86:S6:41:C:H4'	1.31	1.12
52:SB:36:PRO:CB	52:SB:231:LEU:HD21	1.79	1.12
52:SB:97:LEU:HB3	52:SB:232:HIS:CD2	1.82	1.12
47:1:449:LEU:HA	47:1:452:THR:HB	1.15	1.12
1:5:4054:C:C5'	46:z:205:TYR:CD2	2.32	1.12
13:J:121:PRO:CD	69:SS:17:ASN:HB3	1.79	1.12
85:S5:48:C:H2'	85:S5:59:U:H1'	1.15	1.12
1:5:84:A:N6	1:5:98:A:C8	2.17	1.12
1:5:3808:C:H5'	50:S2:1816:G:O2'	1.49	1.12
1:5:4094:G:H2'	1:5:4095:G:O4'	1.50	1.12
1:5:5048:A:C8	32:d:34:HIS:CD2	2.37	1.12
46:z:67:VAL:HG23	46:z:82:ILE:HD13	1.30	1.12
50:S2:426:A:N1	50:S2:427:U:C5	2.18	1.12
50:S2:1688:C:H6	50:S2:1688:C:H5''	1.15	1.12
1:5:1560:A:C6	1:5:1561:G:O6	2.02	1.12
1:5:1598:C:C6	1:5:2798:A:N7	2.18	1.12
3:8:74:U:O4	27:Y:74:TYR:CD1	2.02	1.12
50:S2:1192:U:P	74:SX:119:ARG:NH2	2.22	1.12
50:S2:1309:C:O2	82:Sf:143:LYS:CD	1.96	1.12
50:S2:1309:C:C2	82:Sf:143:LYS:HD3	1.83	1.12
50:S2:1407:U:H2'	50:S2:1408:U:C6	1.84	1.12
1:5:1269:G:H3'	1:5:2111:G:O6	1.51	1.11
1:5:491:G:N2	1:5:663:G:N1	1.98	1.11
1:5:3943:A:C2	1:5:3944:G:C5	2.39	1.11
1:5:3967:G:C1'	46:z:162:VAL:HG21	1.62	1.11
13:J:119:TYR:CE1	69:SS:101:ASN:CB	2.31	1.11
46:z:161:LYS:HG2	86:S6:55:U:H5'	1.24	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:837:A:C2	50:S2:838:G:N7	2.18	1.11
62:SL:103:GLU:HB2	74:SX:11:ARG:HB3	1.29	1.11
85:S5:60:U:C2'	85:S5:61:C:C5	2.33	1.11
86:S6:41:C:H2'	86:S6:42:C:H6	1.04	1.11
1:5:28:C:N3	1:5:29:G:N7	1.97	1.11
1:5:1358:G:N2	1:5:1359:G:O6	1.83	1.11
1:5:4052:C:H1'	46:z:209:THR:O	1.49	1.11
2:7:18:C:C2	2:7:19:C:C6	2.38	1.11
50:S2:1832:A:C2	50:S2:1833:C:C6	2.37	1.11
1:5:1325:C:H4'	1:5:3901:A:N1	1.65	1.11
1:5:3974:G:C1'	46:z:210:MET:CE	2.28	1.11
50:S2:795:A:C2	50:S2:796:G:N7	2.19	1.11
50:S2:1206:G:C5	50:S2:1208:A:N7	2.19	1.11
50:S2:1453:C:C4	50:S2:1455:A:C1'	2.34	1.11
50:S2:1640:A:C5'	86:S6:41:C:C4'	2.27	1.11
50:S2:1832:A:N1	50:S2:1833:C:C4	2.18	1.11
1:5:1379:C:H4'	1:5:1380:G:C8	1.85	1.10
1:5:1899:G:C8	1:5:2278:G:N1	2.19	1.10
47:1:248:THR:OG1	47:1:440:ALA:HB1	1.52	1.10
50:S2:1100:A:C2	50:S2:1101:U:C6	2.39	1.10
50:S2:1123:C:N3	50:S2:1124:C:C5	2.18	1.10
50:S2:1211:G:C6	50:S2:1212:G:C5	2.39	1.10
50:S2:1402:A:N6	50:S2:1441:U:N3	1.96	1.10
1:5:3909:C:N3	1:5:3910:C:C5	2.19	1.10
50:S2:1206:G:N3	50:S2:1208:A:C8	2.18	1.10
50:S2:1860:A:C6	50:S2:1862:G:N7	2.19	1.10
1:5:84:A:N6	1:5:98:A:N7	1.99	1.10
1:5:1248:C:N3	1:5:1249:C:C5	2.18	1.10
1:5:4276:G:C6	1:5:4277:G:N7	2.18	1.10
1:5:4280:A:H61	7:D:29:ASP:HA	1.10	1.10
10:G:264:LYS:CE	52:SB:91:VAL:HG12	1.80	1.10
43:o:55:ILE:HG22	86:S6:75:C:C4'	1.82	1.10
50:S2:1206:G:C2	50:S2:1208:A:C8	2.38	1.10
50:S2:1641:A:H4'	86:S6:31:A:O2'	1.51	1.10
85:S5:28:G:N3	85:S5:29:G:C8	2.20	1.10
3:8:96:C:N3	3:8:97:A:N7	2.00	1.10
50:S2:386:C:N3	50:S2:387:C:C5	2.20	1.10
50:S2:1834:A:N1	50:S2:1836:G:C2	2.19	1.10
86:S6:48:C:C5	86:S6:59:U:C6	2.39	1.10
1:5:161:G:N2	1:5:275:C:C2	2.19	1.10
1:5:291:U:H2'	1:5:292:G:H2'	1.28	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2079:G:C2	1:5:2080:U:C5	2.40	1.10
1:5:2367:A:N6	1:5:2788:U:H3	1.50	1.10
1:5:3766:A:H2	50:S2:1827:U:O2	1.34	1.10
1:5:4068:U:C2'	1:5:4069:U:H5'	1.80	1.10
20:R:36:ASN:HD21	47:1:407:THR:CG2	1.64	1.09
50:S2:60:A:O2'	50:S2:61:A:H5''	1.52	1.09
50:S2:449:A:C6	50:S2:452:G:C5	2.40	1.09
50:S2:858:A:C2	50:S2:859:G:N7	2.19	1.09
50:S2:1211:G:N1	50:S2:1212:G:C4	2.20	1.09
84:S4:19:U:N3	86:S6:36:A:N1	1.98	1.09
86:S6:51:U:C2	86:S6:52:G:N7	2.20	1.09
1:5:1475:G:C2	1:5:1476:C:C5	2.39	1.09
1:5:1624:G:N2	1:5:1642:A:O2'	1.85	1.09
1:5:2105:A:C2	1:5:2106:G:C8	2.40	1.09
3:8:64:U:O2	3:8:65:A:C8	2.05	1.09
42:n:5:TRP:CD1	50:S2:1852:C:OP2	2.05	1.09
86:S6:41:C:C2	86:S6:42:C:C5	2.40	1.09
1:5:166:C:O2	1:5:167:C:C6	2.05	1.09
1:5:1628:C:O2	1:5:1629:G:C8	2.06	1.09
1:5:1823:G:O3'	1:5:1825:A:P	2.10	1.09
1:5:3952:A:C2	1:5:3953:G:C8	2.40	1.09
50:S2:1204:A:N3	50:S2:1205:C:C6	2.19	1.09
50:S2:1316:C:O2	50:S2:1317:C:C6	2.05	1.09
50:S2:1834:A:C2	50:S2:1836:G:C6	2.39	1.09
86:S6:33:U:C4	86:S6:35:A:H5'	1.87	1.09
1:5:2037:C:H2'	1:5:2038:U:H6	1.14	1.09
1:5:3974:G:C2'	46:z:210:MET:CE	2.23	1.09
1:5:4041:C:C5	1:5:4042:G:N7	2.20	1.09
50:S2:436:G:C8	50:S2:471:G:N2	2.20	1.09
50:S2:1203:G:N3	50:S2:1204:A:C8	2.20	1.09
50:S2:1641:A:C4'	86:S6:31:A:O2'	2.01	1.09
50:S2:1832:A:N3	50:S2:1833:C:C6	2.20	1.09
1:5:88:A:N6	1:5:97:G:N3	2.01	1.09
1:5:2078:C:C2	1:5:2079:G:C8	2.40	1.09
84:S4:19:U:N3	86:S6:36:A:C2	2.21	1.09
86:S6:53:G:N3	86:S6:54:U:C6	2.20	1.09
1:5:100:C:N4	1:5:101:A:N7	2.01	1.08
50:S2:599:A:O4'	50:S2:605:A:C2	2.05	1.08
50:S2:795:A:N3	50:S2:796:G:C8	2.20	1.08
50:S2:958:G:O2'	50:S2:959:G:O4'	1.69	1.08
63:SM:58:GLU:OE1	63:SM:58:GLU:CD	1.96	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:21:A:C6	85:S5:48:C:C6	2.41	1.08
86:S6:13:C:H2'	86:S6:14:C:N1	1.66	1.08
1:5:28:C:O2	1:5:29:G:H8	1.36	1.08
1:5:4725:C:O2	1:5:4726:G:C8	2.07	1.08
3:8:43:A:C2	3:8:44:A:C8	2.42	1.08
50:S2:469:A:C2	50:S2:470:G:C8	2.40	1.08
50:S2:1200:A:C2	50:S2:1201:U:C6	2.40	1.08
50:S2:1290:G:N3	82:Sf:146:LEU:HB3	1.66	1.08
50:S2:1314:U:N3	50:S2:1315:U:H1'	1.68	1.08
63:SM:85:LEU:HA	63:SM:88:TRP:CH2	1.87	1.08
68:SR:13:ALA:HB1	68:SR:53:TYR:HB2	1.17	1.08
84:S4:19:U:C4	86:S6:36:A:N1	2.21	1.08
85:S5:61:C:H2'	85:S5:62:C:C5	1.88	1.08
1:5:983:C:N3	1:5:984:C:C5	2.22	1.08
1:5:3763:A:N1	50:S2:1710:C:C5'	2.16	1.08
1:5:3969:G:H1'	46:z:166:ALA:HB3	1.36	1.08
50:S2:841:G:C2	50:S2:842:C:C5	2.42	1.08
85:S5:31:A:N7	85:S5:32:U:C5	2.20	1.08
86:S6:66:U:H2'	86:S6:67:C:H6	1.04	1.08
1:5:424:U:O2	1:5:425:U:C5	2.05	1.08
1:5:2347:A:O2'	1:5:2348:G:N7	1.84	1.08
50:S2:469:A:C2	50:S2:470:G:H8	1.71	1.08
50:S2:1101:U:O2	50:S2:1102:G:C8	2.07	1.08
50:S2:1204:A:C4	50:S2:1205:C:C5	2.41	1.08
50:S2:1513:C:H2'	50:S2:1514:G:H5'	1.35	1.08
86:S6:5:C:C2	86:S6:6:G:C8	2.41	1.08
86:S6:72:C:O2'	86:S6:73:A:H5'	1.51	1.08
1:5:3785:A:C2	1:5:4536:C:H1'	1.88	1.08
1:5:3975:C:H5''	46:z:25:ARG:HH22	1.13	1.08
1:5:4096:C:C4	1:5:4097:G:C8	2.41	1.08
1:5:4283:G:N1	1:5:4284:C:C4	2.21	1.08
1:5:4537:C:N3	1:5:4538:G:N7	2.01	1.08
10:G:264:LYS:NZ	52:SB:31:TYR:CE2	2.21	1.08
50:S2:994:C:C2	50:S2:995:G:C8	2.42	1.08
50:S2:1342:U:C6	50:S2:1483:A:N1	2.20	1.08
77:Sa:87:ARG:NH1	77:Sa:91:ALA:O	1.87	1.08
1:5:424:U:O2	1:5:425:U:C6	2.07	1.07
1:5:2314:G:N2	1:5:2315:G:N7	2.01	1.07
1:5:3969:G:H1'	46:z:166:ALA:CB	1.82	1.07
11:H:156:ASN:OD1	11:H:156:ASN:C	1.96	1.07
46:z:161:LYS:HE3	86:S6:55:U:OP1	1.54	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:339:A:C2	50:S2:340:C:C4	2.43	1.07
50:S2:458:A:C6	50:S2:459:C:C6	2.41	1.07
50:S2:1074:C:C2	50:S2:1075:C:C5	2.42	1.07
50:S2:1212:G:N2	50:S2:1688:C:N3	1.99	1.07
50:S2:1693:G:C8	50:S2:1694:U:C4	2.42	1.07
50:S2:1834:A:C2	50:S2:1836:G:C2	2.42	1.07
85:S5:10:G:H1	85:S5:25:C:N4	1.49	1.07
85:S5:33:U:H2'	85:S5:34:G:H5''	1.35	1.07
86:S6:22:G:C4	86:S6:23:A:C2	2.41	1.07
1:5:28:C:O2	1:5:29:G:C8	2.06	1.07
1:5:88:A:N6	1:5:97:G:C2	2.23	1.07
1:5:982:U:H2'	1:5:983:C:C6	1.90	1.07
1:5:1556:C:O2	1:5:1557:C:C6	2.06	1.07
2:7:43:U:N3	2:7:44:C:C5	2.22	1.07
50:S2:1206:G:C6	50:S2:1208:A:N7	2.21	1.07
50:S2:1293:A:N3	82:Sf:152:LYS:N	2.02	1.07
66:SP:21:ASP:CG	66:SP:21:ASP:OD1	1.96	1.07
86:S6:34:G:N2	86:S6:35:A:C2	2.23	1.07
1:5:77:U:H3	1:5:335:A:N6	1.51	1.07
1:5:917:A:C2	1:5:919:C:C5	2.42	1.07
1:5:2468:U:N3	1:5:2473:A:N6	2.03	1.07
1:5:2508:U:O2	1:5:2509:C:C5	2.07	1.07
1:5:2604:C:O2	1:5:2605:G:C8	2.07	1.07
1:5:3974:G:O2'	46:z:210:MET:SD	2.12	1.07
2:7:18:C:C2	2:7:19:C:C5	2.42	1.07
43:o:55:ILE:HG22	86:S6:75:C:H4'	1.12	1.07
68:SR:17:ILE:CD1	68:SR:57:LEU:HD12	1.84	1.07
84:S4:16:U:H2'	84:S4:17:U:H5'	1.08	1.07
85:S5:11:C:C2	85:S5:24:G:N1	2.02	1.07
1:5:173:C:N3	1:5:174:C:C5	2.23	1.07
1:5:2055:G:O6	21:S:158:VAL:HB	1.53	1.07
43:o:55:ILE:CG2	86:S6:75:C:H4'	1.82	1.07
50:S2:121:U:C2	50:S2:122:G:C8	2.42	1.07
50:S2:1355:C:O2'	53:SC:238:LYS:NZ	1.88	1.07
50:S2:1433:C:H2'	50:S2:1434:C:H1'	1.34	1.07
85:S5:5:G:N1	85:S5:69:G:C6	2.23	1.07
1:5:2095:A:C6	9:F:41:GLN:OE1	2.06	1.07
1:5:4097:G:H5''	35:g:115:LYS:HB2	1.32	1.07
3:8:10:G:C6	3:8:11:C:C5	2.43	1.07
50:S2:494:C:C2	50:S2:495:U:C5	2.42	1.07
68:SR:21:TYR:CE1	68:SR:61:ILE:CG2	2.36	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4052:C:H2'	46:z:207:LYS:NZ	1.68	1.06
1:5:4280:A:N6	7:D:29:ASP:HA	1.68	1.06
65:SO:117:ARG:CZ	79:Sc:62:GLU:OE2	2.03	1.06
84:S4:19:U:H2'	84:S4:20:U:H5'	1.33	1.06
1:5:48:G:H5'	16:N:192:TRP:HE1	1.16	1.06
50:S2:1063:C:C4'	50:S2:1838:U:O4	2.02	1.06
50:S2:1212:G:H2'	50:S2:1213:C:H5'	1.33	1.06
1:5:1188:C:N3	1:5:1189:G:N7	2.02	1.06
3:8:96:C:O2	3:8:97:A:C8	2.07	1.06
50:S2:1111:U:N3	50:S2:1112:U:C5	2.23	1.06
50:S2:1373:C:O3'	50:S2:1374:C:P	2.12	1.06
50:S2:1539:U:C2	50:S2:1540:G:N7	2.24	1.06
86:S6:4:C:H3'	86:S6:5:C:H5''	1.37	1.06
1:5:4069:U:H4'	1:5:4070:U:OP1	1.19	1.06
1:5:4113:U:H2'	1:5:4114:C:O4'	1.56	1.06
40:l:21:ARG:HB2	47:1:273:ARG:NH1	1.71	1.06
50:S2:633:C:H5''	74:SX:134:TYR:OH	1.56	1.06
52:SB:144:LYS:O	52:SB:145:LYS:N	1.88	1.06
52:SB:217:MET:HE3	52:SB:220:LYS:HE2	1.32	1.06
86:S6:5:C:C4	86:S6:6:G:N7	2.23	1.06
1:5:271:C:N3	1:5:272:U:C5	2.24	1.06
1:5:3966:A:C2	1:5:3967:G:N7	2.24	1.06
1:5:3967:G:N3	46:z:162:VAL:HG21	1.69	1.06
50:S2:1063:C:H4'	50:S2:1838:U:O4	1.56	1.06
52:SB:36:PRO:HB3	52:SB:231:LEU:HD21	1.37	1.06
86:S6:63:G:C5	86:S6:64:A:C8	2.44	1.06
1:5:1556:C:N3	1:5:1557:C:C5	2.23	1.05
1:5:4213:A:N6	1:5:4218:U:H3	1.54	1.05
50:S2:339:A:C2	50:S2:340:C:N4	2.24	1.05
50:S2:1292:C:C4	82:Sf:150:PHE:HB2	1.91	1.05
50:S2:1594:A:C2	50:S2:1595:U:C6	2.44	1.05
50:S2:1640:A:O4'	86:S6:41:C:H1'	1.53	1.05
50:S2:1863:A:OP2	77:Sa:4:LYS:NZ	1.90	1.05
1:5:3739:C:N3	1:5:3740:G:C8	2.24	1.05
1:5:3806:G:O2'	50:S2:1719:A:C1'	2.04	1.05
1:5:4229:U:C4	1:5:4230:C:C5	2.44	1.05
50:S2:1310:U:O4'	82:Sf:143:LYS:HD2	1.57	1.05
50:S2:1484:A:C4	50:S2:1485:U:H5	1.73	1.05
50:S2:1552:G:N7	50:S2:1578:U:O4	1.90	1.05
74:SX:91:LEU:CD2	81:Se:6:LEU:HD22	1.86	1.05
85:S5:52:G:C6	85:S5:53:G:N7	2.25	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:5:C:N4	86:S6:69:G:O6	1.88	1.05
86:S6:34:G:H2'	86:S6:35:A:C8	1.91	1.05
1:5:1929:A:N6	1:5:2054:U:H3	1.52	1.05
1:5:2659:A:N6	1:5:2675:G:O2'	1.89	1.05
1:5:4097:G:H5'	35:g:112:GLN:HA	1.38	1.05
2:7:59:G:C6	2:7:60:G:N7	2.24	1.05
50:S2:618:C:OP1	74:SX:87:ASN:HA	0.88	1.05
50:S2:1594:A:C6	50:S2:1595:U:C5	2.44	1.05
86:S6:1:U:N3	86:S6:73:A:N1	2.04	1.05
1:5:4054:C:O3'	46:z:205:TYR:CD1	2.09	1.05
33:e:35:TRP:C	33:e:35:TRP:CD1	2.31	1.05
47:1:449:LEU:HA	47:1:452:THR:CB	1.87	1.05
50:S2:26:U:N3	50:S2:27:A:N7	2.05	1.05
50:S2:1373:C:OP1	68:SR:7:LYS:N	1.88	1.05
62:SL:99:TYR:HD2	74:SX:13:LEU:CB	1.67	1.05
68:SR:17:ILE:HD13	68:SR:57:LEU:HB3	1.30	1.05
1:5:1929:A:N1	1:5:2054:U:O4	1.90	1.05
1:5:1964:A:N7	1:5:1965:G:C8	2.18	1.05
1:5:2260:C:H2'	1:5:2261:G:N7	1.71	1.05
1:5:2417:A:C2	1:5:2418:A:C8	2.45	1.05
1:5:3969:G:N2	46:z:33:GLU:OE1	1.87	1.05
1:5:4653:C:C2	1:5:4654:C:C5	2.45	1.05
50:S2:1840:U:N3	50:S2:1841:C:C5	2.25	1.05
1:5:3759:A:N6	50:S2:1709:G:C4'	2.14	1.04
50:S2:1310:U:O4'	82:Sf:143:LYS:CD	2.05	1.04
50:S2:1316:C:C2	50:S2:1317:C:C5	2.44	1.04
52:SB:221:PRO:CA	52:SB:222:LYS:N	2.18	1.04
68:SR:13:ALA:HB1	68:SR:53:TYR:CB	1.86	1.04
1:5:1444:G:H2'	1:5:1445:U:C6	1.90	1.04
1:5:4055:U:C5'	46:z:37:SER:OG	2.06	1.04
1:5:4392:G:O2'	1:5:4395:U:O4	1.76	1.04
40:l:21:ARG:HH21	40:l:24:PRO:HD3	0.89	1.04
42:n:5:TRP:HD1	50:S2:1852:C:OP2	1.39	1.04
85:S5:65:G:H2'	85:S5:66:U:C6	1.92	1.04
1:5:77:U:N3	1:5:335:A:N6	2.06	1.04
1:5:1561:G:N1	1:5:1567:U:O2	1.90	1.04
1:5:1566:C:H2'	1:5:1567:U:O4'	1.57	1.04
1:5:1939:A:N1	1:5:3874:G:H5'	1.71	1.04
1:5:2078:C:N3	1:5:2079:G:C8	2.25	1.04
1:5:2691:U:O2	1:5:2692:U:C5	2.11	1.04
1:5:3806:G:C4'	50:S2:1719:A:O2'	2.06	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3967:G:C4	46:z:162:VAL:HG21	1.93	1.04
1:5:4284:C:C2	1:5:4285:U:C5	2.45	1.04
68:SR:13:ALA:CB	68:SR:53:TYR:HD2	1.70	1.04
1:5:1966:C:N3	1:5:1967:A:C8	2.26	1.04
1:5:2105:A:C2	1:5:2106:G:N7	2.25	1.04
1:5:3910:C:O2	1:5:3911:C:C5	2.11	1.04
1:5:3912:U:O2'	1:5:3913:G:C5'	2.05	1.04
1:5:4071:U:H2'	1:5:4072:C:H5'	1.40	1.04
1:5:4257:A:H2'	1:5:4258:C:C6	1.91	1.04
3:8:119:C:C2	3:8:120:G:C8	2.45	1.04
10:G:257:LYS:HE2	52:SB:54:GLY:O	1.55	1.04
40:l:21:ARG:HD2	47:1:273:ARG:HD3	1.33	1.04
42:n:17:ARG:NH1	50:S2:1173:A:H5'	1.71	1.04
47:1:448:LEU:HG	47:1:451:VAL:HG23	1.36	1.04
50:S2:1249:C:C5	50:S2:1250:A:N7	2.25	1.04
50:S2:1419:C:OP2	70:ST:129:ARG:HA	1.57	1.04
50:S2:1534:C:N4	50:S2:1600:G:O6	1.89	1.04
84:S4:19:U:O4	86:S6:36:A:N1	1.89	1.04
85:S5:28:G:C4	85:S5:29:G:N7	2.25	1.04
85:S5:67:C:H3'	85:S5:68:C:H5''	1.39	1.04
1:5:3767:C:H5''	50:S2:1849:G:C6	1.92	1.04
1:5:4100:C:H4'	52:SB:227:LYS:HB2	1.37	1.04
3:8:94:G:C8	3:8:94:G:H5'	1.92	1.04
47:1:43:LEU:HB3	48:2:54:VAL:HG21	1.39	1.04
68:SR:17:ILE:HG21	68:SR:61:ILE:HD11	1.37	1.04
1:5:471:A:C6	1:5:472:C:C6	2.46	1.03
1:5:957:G:O5'	1:5:1284:G:C2	2.11	1.03
1:5:2854:G:O6	1:5:2856:C:H6	1.40	1.03
50:S2:797:C:O4'	58:SH:109:ARG:NH1	1.89	1.03
86:S6:53:G:H2'	86:S6:54:U:H6	1.21	1.03
1:5:1556:C:C2	1:5:1557:C:C5	2.47	1.03
1:5:2856:C:N3	1:5:2857:A:N7	2.06	1.03
1:5:2858:A:O2'	1:5:2859:G:O5'	1.77	1.03
26:X:84:GLU:CB	47:1:404:HIS:ND1	2.22	1.03
50:S2:384:U:C5	50:S2:386:C:C5	2.46	1.03
52:SB:89:GLU:CB	52:SB:223:PHE:CE2	2.35	1.03
86:S6:41:C:H2'	86:S6:42:C:C6	1.91	1.03
1:5:1632:A:C6	1:5:1634:A:C8	2.47	1.03
1:5:1964:A:N7	1:5:1965:G:C5	2.26	1.03
1:5:2109:G:O6	1:5:2122:G:O6	1.74	1.03
1:5:3972:A:H2	1:5:4040:C:C2	1.76	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4276:G:O6	1:5:4277:G:C5	2.11	1.03
13:J:105:PHE:CE1	13:J:132:VAL:HB	1.93	1.03
20:R:36:ASN:HD21	47:1:407:THR:HG21	1.23	1.03
50:S2:996:A:C6	64:SN:113:PHE:CZ	2.46	1.03
50:S2:1352:G:H2'	50:S2:1353:A:H5''	1.40	1.03
1:5:3759:A:N6	50:S2:1709:G:C5'	2.21	1.03
32:d:25:TYR:OH	32:d:119:THR:HB	1.56	1.03
52:SB:97:LEU:CB	52:SB:232:HIS:NE2	2.22	1.03
86:S6:50:U:H2'	86:S6:51:U:C6	1.93	1.03
1:5:173:C:C2	1:5:174:C:C5	2.45	1.03
1:5:2109:G:C6	1:5:2122:G:O6	2.11	1.03
50:S2:1643:U:O2'	50:S2:1644:C:O5'	1.77	1.03
86:S6:72:C:O2'	86:S6:73:A:C5'	2.07	1.03
1:5:1560:A:H2'	1:5:1561:G:C8	1.95	1.02
1:5:1683:U:O2	1:5:1684:A:H8	1.34	1.02
1:5:1899:G:C2	1:5:1900:C:C6	2.47	1.02
1:5:3597:G:OP1	20:R:109:TYR:OH	1.77	1.02
1:5:3967:G:O2'	46:z:162:VAL:CG2	2.03	1.02
1:5:4983:C:C2	1:5:4984:C:C5	2.47	1.02
50:S2:524:U:N3	50:S2:594:A:C6	2.26	1.02
1:5:1245:C:C2	1:5:1246:G:N7	2.26	1.02
50:S2:75:G:O2'	50:S2:76:U:H6	1.42	1.02
50:S2:998:A:N7	50:S2:999:G:O4'	1.93	1.02
50:S2:1206:G:C4	50:S2:1208:A:C8	2.46	1.02
50:S2:1292:C:P	82:Sf:149:CYS:H	1.82	1.02
50:S2:1315:U:N3	50:S2:1316:C:C5	2.27	1.02
68:SR:17:ILE:HD12	68:SR:57:LEU:HD13	1.42	1.02
86:S6:53:G:C6	86:S6:62:C:C4	2.46	1.02
1:5:1190:C:N3	1:5:1191:C:C5	2.28	1.02
1:5:2037:C:N3	1:5:2038:U:C4	2.27	1.02
1:5:2497:C:C2	1:5:2498:C:C6	2.48	1.02
1:5:4055:U:OP2	46:z:205:TYR:OH	1.77	1.02
40:l:21:ARG:HB2	47:1:273:ARG:HH11	1.16	1.02
46:z:161:LYS:HE2	86:S6:55:U:C5'	1.90	1.02
50:S2:998:A:N7	50:S2:999:G:C1'	2.22	1.02
50:S2:1213:C:C5	50:S2:1682:C:C5	2.48	1.02
50:S2:1273:C:C2	50:S2:1506:A:H2	1.78	1.02
50:S2:1294:G:C2	50:S2:1295:A:C8	2.48	1.02
50:S2:1417:C:N3	50:S2:1419:C:C5	2.28	1.02
50:S2:1693:G:H3'	50:S2:1694:U:H6	1.20	1.02
50:S2:1832:A:N1	50:S2:1833:C:C5	2.28	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SL:99:TYR:HD2	74:SX:13:LEU:HB3	0.86	1.02
86:S6:1:U:O2	86:S6:73:A:H2	1.41	1.02
86:S6:23:A:C8	86:S6:24:G:C8	2.48	1.02
1:5:1392:A:C2	1:5:1393:G:C5	2.48	1.02
1:5:1724:G:N7	30:b:17:HIS:CE1	2.28	1.02
1:5:2327:G:C2	1:5:2328:G:C8	2.48	1.02
1:5:4064:C:C2	1:5:4065:G:C8	2.47	1.02
50:S2:458:A:N6	50:S2:459:C:C5	2.28	1.02
50:S2:1433:C:OP2	50:S2:1434:C:P	2.18	1.02
50:S2:1644:C:O2'	50:S2:1645:C:O4'	1.78	1.02
72:SV:1:MET:N	72:SV:1:MET:SD	2.30	1.02
86:S6:37:A:H2'	86:S6:38:A:C2	1.93	1.02
1:5:48:G:O2'	1:5:49:U:OP2	1.78	1.02
1:5:1378:C:C3'	1:5:1379:C:H5'	1.90	1.02
1:5:3859:G:O4'	18:P:139:TYR:OH	1.78	1.02
1:5:3910:C:C2	1:5:3911:C:C5	2.48	1.02
1:5:4080:C:N3	1:5:4081:G:N7	2.06	1.02
3:8:133:G:C2	3:8:134:G:C8	2.47	1.02
68:SR:14:ARG:HD2	68:SR:68:GLY:O	1.59	1.02
1:5:1378:C:H3'	1:5:1379:C:H5'	1.05	1.01
1:5:1598:C:O2	1:5:1599:A:H8	1.39	1.01
1:5:2646:C:O2	1:5:2647:A:H8	1.42	1.01
1:5:3791:C:H5'	1:5:3791:C:H6	0.86	1.01
1:5:3974:G:C4'	46:z:210:MET:HE3	1.90	1.01
1:5:4284:C:N3	1:5:4285:U:C5	2.28	1.01
3:8:118:C:N3	3:8:119:C:C5	2.28	1.01
3:8:119:C:N3	3:8:120:G:C8	2.28	1.01
50:S2:1109:C:C2	50:S2:1110:G:O4'	2.13	1.01
50:S2:1291:A:C6	82:Sf:140:TYR:CE2	2.48	1.01
50:S2:1538:C:O2	50:S2:1539:U:H6	1.42	1.01
52:SB:97:LEU:HB2	52:SB:228:LEU:HD11	1.35	1.01
68:SR:24:LEU:HD13	68:SR:54:VAL:HG13	1.41	1.01
85:S5:21:A:C2	85:S5:48:C:C2	2.48	1.01
86:S6:63:G:C6	86:S6:64:A:C5	2.48	1.01
1:5:983:C:C2	1:5:984:C:C6	2.48	1.01
46:z:44:GLN:NE2	86:S6:53:G:C2	2.28	1.01
47:1:447:ILE:O	47:1:450:ALA:HB3	1.60	1.01
50:S2:387:C:N3	50:S2:388:U:C5	2.28	1.01
50:S2:1641:A:C4'	86:S6:31:A:HO2'	1.71	1.01
86:S6:19:G:H1'	86:S6:57:G:N1	1.75	1.01
86:S6:66:U:H2'	86:S6:67:C:C6	1.93	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1899:G:N3	1:5:1900:C:C6	2.29	1.01
1:5:2078:C:O2	1:5:2079:G:C8	2.12	1.01
1:5:2314:G:N2	1:5:2315:G:C5	2.28	1.01
1:5:2409:U:C4	1:5:2783:A:N1	2.28	1.01
2:7:42:A:C2	2:7:43:U:C6	2.48	1.01
50:S2:378:U:C2	50:S2:379:C:C6	2.48	1.01
50:S2:848:U:C2	50:S2:849:A:N7	2.29	1.01
50:S2:1111:U:O2	50:S2:1112:U:C6	2.13	1.01
50:S2:1204:A:H2'	50:S2:1205:C:H6	1.22	1.01
50:S2:1204:A:H2'	50:S2:1205:C:C6	1.96	1.01
51:SA:48:ILE:HG22	68:SR:105:MET:HE3	1.42	1.01
86:S6:13:C:C3'	86:S6:14:C:C6	2.42	1.01
1:5:1936:C:N3	1:5:1937:C:C5	2.27	1.01
1:5:4283:G:N3	1:5:4284:C:C6	2.28	1.01
1:5:4745:G:O2'	1:5:4746:C:C6	2.13	1.01
50:S2:1332:A:N6	50:S2:1493:C:N3	2.09	1.01
68:SR:24:LEU:HB2	68:SR:58:MET:CE	1.90	1.01
85:S5:2:C:N4	85:S5:71:G:H22	1.58	1.01
85:S5:47:U:HO3'	85:S5:48:C:P	1.13	1.01
86:S6:66:U:C2	86:S6:67:C:C5	2.48	1.01
1:5:173:C:O2	1:5:174:C:C6	2.13	1.01
1:5:209:U:C2	1:5:233:U:C4	2.49	1.01
1:5:470:A:C5	1:5:471:A:C8	2.47	1.01
1:5:1267:C:H5''	1:5:2110:C:O2	1.61	1.01
1:5:1556:C:C2	1:5:1557:C:C6	2.48	1.01
1:5:3969:G:O4'	46:z:166:ALA:HB3	1.58	1.01
1:5:4531:U:C4	85:S5:76:A:C2	2.49	1.01
3:8:130:C:N3	3:8:131:G:C8	2.28	1.01
33:e:35:TRP:CZ3	33:e:56:PRO:HD3	1.96	1.01
50:S2:1293:A:N3	82:Sf:151:ASN:CA	2.24	1.01
50:S2:1330:G:O6	50:S2:1492:U:H2'	1.59	1.01
51:SA:176:TRP:CZ3	51:SA:199:PRO:HG3	1.95	1.01
85:S5:68:C:H2'	85:S5:69:G:C8	1.95	1.01
86:S6:6:G:N1	86:S6:7:G:N3	2.08	1.01
1:5:166:C:C2	1:5:167:C:H5	1.78	1.00
1:5:1266:G:H5''	1:5:2112:G:N3	1.75	1.00
1:5:1628:C:C2	1:5:1629:G:C8	2.49	1.00
1:5:1965:G:O6	1:5:2021:G:O6	1.78	1.00
1:5:2367:A:H61	1:5:2788:U:H3	1.03	1.00
1:5:3723:A:C2	1:5:3724:A:N7	2.29	1.00
1:5:3959:U:O2'	1:5:3960:A:C8	2.14	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3974:G:P	46:z:28:PHE:CB	2.48	1.00
50:S2:1416:C:C2'	50:S2:1417:C:C6	2.44	1.00
53:SC:146:GLU:HG3	54:SD:116:ARG:NH2	1.07	1.00
1:5:1618:G:C2	1:5:1619:G:C8	2.48	1.00
1:5:2033:A:C2	1:5:2034:G:N7	2.30	1.00
1:5:2079:G:C2	1:5:2080:U:C6	2.49	1.00
2:7:54:A:N3	2:7:55:A:C8	2.30	1.00
50:S2:551:U:C2	50:S2:552:G:N7	2.28	1.00
50:S2:1386:A:C2'	50:S2:1387:G:H5'	1.89	1.00
50:S2:1540:G:C2	50:S2:1541:G:C8	2.48	1.00
1:5:4069:U:C4'	1:5:4070:U:OP1	2.09	1.00
1:5:4071:U:C2'	1:5:4072:C:H5'	1.91	1.00
1:5:4730:C:O5'	1:5:4731:G:N2	1.94	1.00
13:J:119:TYR:HE1	69:SS:101:ASN:CB	1.69	1.00
50:S2:1203:G:H2'	50:S2:1204:A:C8	1.96	1.00
50:S2:1512:C:O2	50:S2:1513:C:C5	2.14	1.00
50:S2:1513:C:C2'	50:S2:1514:G:H5'	1.91	1.00
68:SR:13:ALA:CB	68:SR:53:TYR:HB2	1.90	1.00
68:SR:24:LEU:HD22	68:SR:54:VAL:HG11	1.44	1.00
1:5:1561:G:N1	1:5:1567:U:C2	2.30	1.00
1:5:4080:C:C2	1:5:4081:G:C8	2.49	1.00
1:5:4095:G:N2	1:5:4096:C:C4	2.29	1.00
1:5:4165:C:N3	1:5:4166:G:C8	2.29	1.00
2:7:17:C:N3	2:7:18:C:C5	2.30	1.00
40:l:21:ARG:HH22	40:l:24:PRO:CG	1.59	1.00
1:5:2127:C:H2'	1:5:2128:G:C8	1.97	1.00
1:5:5005:G:N7	25:W:51:TRP:CD1	2.29	1.00
50:S2:337:C:C2	50:S2:338:G:C8	2.49	1.00
1:5:1601:A:C8	1:5:3643:A:C8	2.50	1.00
1:5:3971:G:H21	1:5:4050:A:H62	1.10	1.00
40:l:21:ARG:NH1	47:1:273:ARG:HG2	1.76	1.00
50:S2:1212:G:C2'	50:S2:1213:C:H5'	1.90	1.00
50:S2:1453:C:C5	50:S2:1455:A:H1'	1.96	1.00
1:5:3974:G:C1'	46:z:210:MET:HE3	1.92	1.00
1:5:4061:G:C2	1:5:4062:A:C8	2.50	1.00
20:R:163:ARG:NE	50:S2:871:U:O2	1.93	1.00
50:S2:146:G:O2'	50:S2:147:A:H5'	1.62	1.00
50:S2:1402:A:C5	50:S2:1441:U:O4	2.14	1.00
1:5:27:C:H2'	1:5:27:C:O2	1.62	0.99
1:5:2428:A:C5	1:5:2789:A:C2	2.50	0.99
1:5:3879:G:C6	1:5:3882:C:C5	2.49	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4165:C:N3	1:5:4166:G:N7	2.10	0.99
1:5:4233:A:N6	1:5:4290:U:H3	1.58	0.99
13:J:121:PRO:HG3	69:SS:101:ASN:HB3	1.42	0.99
50:S2:42:A:C5	50:S2:426:A:N6	2.30	0.99
50:S2:1383:A:H2'	50:S2:1384:C:H6	1.21	0.99
68:SR:18:GLU:O	68:SR:71:ILE:HD11	1.60	0.99
1:5:4283:G:N2	1:5:4284:C:C2	2.29	0.99
7:D:42:ASN:HA	7:D:44:TYR:OH	1.61	0.99
50:S2:993:G:C6	50:S2:994:C:C5	2.50	0.99
1:5:4055:U:C4'	46:z:37:SER:OG	2.10	0.99
1:5:291:U:C2'	1:5:292:G:H2'	1.92	0.99
1:5:2508:U:C2	1:5:2509:C:C5	2.50	0.99
1:5:330:G:C2	1:5:331:G:C8	2.50	0.99
1:5:1672:U:O2	1:5:1673:U:C5	2.15	0.99
1:5:1899:G:N2	1:5:1900:C:C2	2.31	0.99
1:5:4069:U:O2'	1:5:4070:U:H6	1.46	0.99
1:5:4166:G:C2	1:5:4167:G:C8	2.51	0.99
1:5:4499:G:H5''	1:5:4500:U:OP2	1.60	0.99
1:5:4983:C:O2	1:5:4984:C:C6	2.15	0.99
50:S2:1385:G:OP1	54:SD:159:HIS:N	1.96	0.99
50:S2:1552:G:O6	50:S2:1578:U:N3	1.95	0.99
1:5:1076:C:O3'	1:5:2114:G:O6	1.81	0.99
1:5:1358:G:N2	1:5:1359:G:C6	2.29	0.99
1:5:1390:G:N2	1:5:1394:G:C5	2.31	0.99
1:5:4100:C:N3	1:5:4101:C:C5	2.31	0.99
1:5:4283:G:N2	1:5:4284:C:N1	2.10	0.99
3:8:64:U:N3	3:8:65:A:C6	2.31	0.99
50:S2:493:A:C8	50:S2:574:A:C8	2.50	0.99
68:SR:24:LEU:CB	68:SR:58:MET:HE3	1.91	0.99
86:S6:63:G:C5	86:S6:64:A:N7	2.31	0.99
1:5:1324:A:O2'	1:5:1326:A:OP1	1.79	0.99
1:5:4053:A:O3'	46:z:213:PRO:HG3	1.63	0.99
1:5:4174:U:N3	1:5:4175:G:N7	2.10	0.99
50:S2:94:G:HO2'	50:S2:508:A:HO2'	1.02	0.99
50:S2:1540:G:N1	50:S2:1541:G:C5	2.30	0.99
1:5:1485:C:O2	1:5:4349:C:C5	2.15	0.99
1:5:1629:G:C2	1:5:1631:A:C6	2.51	0.99
1:5:4414:A:C2	1:5:4427:G:N2	2.31	0.99
47:1:248:THR:N	47:1:440:ALA:CB	2.26	0.99
74:SX:134:TYR:O	81:Se:13:ARG:NH2	1.94	0.99
85:S5:2:C:N4	85:S5:71:G:H1	1.60	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3956:G:N1	1:5:3966:A:C8	2.30	0.99
47:1:263:VAL:HG11	47:1:416:TYR:CE2	1.98	0.99
50:S2:506:G:OP1	75:SY:108:LYS:NZ	1.95	0.99
68:SR:18:GLU:HG3	68:SR:69:ILE:HG13	1.40	0.99
1:5:85:G:O2'	1:5:97:G:O6	1.79	0.99
1:5:1248:C:C2	1:5:1249:C:C6	2.51	0.99
1:5:1899:G:N1	1:5:1900:C:C4	2.30	0.99
1:5:2590:G:C2	1:5:2754:G:C2	2.51	0.99
1:5:2673:G:O4'	1:5:2675:G:H1'	1.63	0.99
1:5:2784:C:O2	1:5:2785:C:C6	2.16	0.99
1:5:3912:U:O2'	1:5:3913:G:H5'	1.59	0.99
33:e:35:TRP:HE1	33:e:36:ARG:C	1.71	0.99
50:S2:1308:U:H2'	50:S2:1309:C:H6	1.25	0.99
52:SB:90:ASP:OD1	52:SB:223:PHE:CZ	2.15	0.99
2:7:42:A:C6	2:7:43:U:C5	2.51	0.98
3:8:94:G:HO2'	3:8:95:A:H8	1.03	0.98
50:S2:636:C:N3	50:S2:637:U:C5	2.31	0.98
50:S2:923:G:N2	50:S2:1022:U:C4	2.31	0.98
50:S2:1133:A:N1	50:S2:1134:G:N7	2.10	0.98
1:5:1269:G:C8	1:5:2111:G:C6	2.52	0.98
1:5:2668:G:H2'	1:5:2669:C:H5'	1.45	0.98
50:S2:923:G:N2	50:S2:1022:U:O4	1.96	0.98
50:S2:1209:A:H2'	50:S2:1210:G:H5''	1.45	0.98
1:5:484:U:N3	1:5:486:C:C6	2.31	0.98
1:5:4117:U:N3	4:A:40:TYR:CE1	2.31	0.98
47:1:449:LEU:CA	47:1:452:THR:HB	1.93	0.98
50:S2:830:A:N1	50:S2:844:U:O4	1.96	0.98
50:S2:1206:G:C4	50:S2:1208:A:N7	2.30	0.98
84:S4:16:U:C4	84:S4:17:U:O4	2.15	0.98
1:5:1248:C:C2	1:5:1249:C:C5	2.51	0.98
1:5:1560:A:C2	1:5:1561:G:C4	2.51	0.98
1:5:1899:G:C2	1:5:1900:C:C4	2.51	0.98
1:5:2325:C:N3	1:5:2326:G:N7	2.12	0.98
3:8:11:C:N3	3:8:12:G:C8	2.30	0.98
77:Sa:77:CYS:SG	88:Sa:201:ZN:ZN	1.50	0.98
1:5:470:A:C6	1:5:471:A:C8	2.52	0.98
1:5:1078:A:H2	1:5:1079:C:H41	1.01	0.98
1:5:1840:G:O3'	1:5:1842:G:P	2.21	0.98
1:5:1217:G:H2'	1:5:1218:G:H8	1.28	0.98
1:5:2743:A:N3	1:5:2744:A:N7	2.11	0.98
1:5:3791:C:H6	1:5:3791:C:C5'	1.77	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4052:C:O2'	46:z:211:GLY:C	2.07	0.98
1:5:4280:A:N6	7:D:29:ASP:CA	2.25	0.98
50:S2:1372:U:H2'	50:S2:1373:C:C6	1.98	0.98
1:5:2058:G:C2	1:5:2059:C:C6	2.52	0.98
1:5:3675:G:C2	1:5:3676:G:N7	2.31	0.98
50:S2:848:U:N3	50:S2:849:A:C6	2.30	0.98
50:S2:1249:C:C5	50:S2:1250:A:C8	2.52	0.98
50:S2:1415:C:H2'	50:S2:1416:C:O4'	1.63	0.98
85:S5:12:U:N1	85:S5:24:G:C2	2.32	0.98
1:5:4056:A:P	46:z:39:LYS:HZ1	1.84	0.98
3:8:64:U:C2	3:8:65:A:C5	2.50	0.98
52:SB:99:ASN:ND2	52:SB:231:LEU:HD13	1.77	0.98
86:S6:62:C:H2'	86:S6:63:G:C5	1.99	0.98
1:5:293:G:H2'	1:5:297:U:C6	1.97	0.98
1:5:2087:C:C5	19:Q:37:ARG:NH1	2.32	0.98
1:5:3702:A:N1	1:5:3703:G:N7	2.10	0.98
1:5:3766:A:C2	50:S2:1827:U:O2	2.16	0.98
1:5:3945:A:N6	1:5:4069:U:C4	2.31	0.98
15:M:33:GLN:HA	15:M:33:GLN:NE2	1.77	0.98
50:S2:1342:U:H6	50:S2:1483:A:C6	1.81	0.98
1:5:4174:U:O2	1:5:4175:G:C8	2.17	0.98
2:7:18:C:N3	2:7:19:C:H5	1.58	0.98
50:S2:1204:A:N1	50:S2:1693:G:O6	1.97	0.98
50:S2:1378:A:N6	51:SA:136:GLU:HG3	1.79	0.98
85:S5:7:A:C2	85:S5:67:C:N3	2.32	0.98
1:5:1074:G:C2	1:5:1238:A:C2	2.52	0.97
1:5:4982:A:C6	1:5:4983:C:C5	2.52	0.97
25:W:50:ASN:HB3	25:W:55:TYR:CE2	1.98	0.97
50:S2:1051:G:C2	50:S2:1052:A:C8	2.52	0.97
86:S6:57:G:H3'	86:S6:58:A:O4'	1.63	0.97
1:5:4167:G:C2	1:5:4168:G:C8	2.51	0.97
1:5:4531:U:C4	85:S5:76:A:N1	2.32	0.97
3:8:64:U:O2	3:8:65:A:N7	1.96	0.97
52:SB:97:LEU:CD1	52:SB:228:LEU:HD12	1.93	0.97
1:5:3974:G:C1'	46:z:210:MET:HE1	1.87	0.97
1:5:4054:C:C4'	46:z:205:TYR:CD2	2.47	0.97
1:5:4223:C:H4'	12:I:119:PHE:HE2	1.29	0.97
50:S2:378:U:N3	50:S2:379:C:C5	2.31	0.97
50:S2:974:C:C2	50:S2:975:G:C8	2.53	0.97
50:S2:1409:A:C2	50:S2:1410:C:C6	2.53	0.97
1:5:1340:C:N3	1:5:1341:U:C5	2.32	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4069:U:HO2'	1:5:4070:U:H6	1.09	0.97
10:G:264:LYS:HD2	52:SB:31:TYR:CZ	1.97	0.97
1:5:1899:G:C8	1:5:2278:G:C2	2.52	0.97
10:G:264:LYS:HZ1	52:SB:91:VAL:CG1	1.75	0.97
50:S2:56:G:C6	50:S2:90:G:C2	2.52	0.97
50:S2:77:A:O2'	57:SG:175:LYS:HA	1.65	0.97
86:S6:13:C:C2	86:S6:14:C:C5	2.40	0.97
1:5:3694:U:N3	1:5:3695:U:C5	2.33	0.97
50:S2:524:U:C4	50:S2:594:A:N6	2.32	0.97
50:S2:1192:U:OP2	74:SX:119:ARG:CZ	2.12	0.97
50:S2:1200:A:N1	50:S2:1201:U:C5	2.32	0.97
50:S2:1642:U:H5'	86:S6:32:U:H5''	1.45	0.97
1:5:1269:G:C5	1:5:2111:G:C2	2.52	0.97
1:5:3740:G:C6	1:5:3741:C:C6	2.52	0.97
1:5:3939:G:H3'	1:5:3940:U:P	2.04	0.97
15:M:7:VAL:HB	21:S:152:PHE:HB2	1.44	0.97
51:SA:139:TYR:O	72:SV:29:HIS:HB3	1.63	0.97
85:S5:2:C:N4	85:S5:71:G:N2	2.13	0.97
3:8:74:U:C4	27:Y:74:TYR:CE1	2.53	0.97
50:S2:1342:U:H5	50:S2:1483:A:C5	1.73	0.97
50:S2:1387:G:N1	54:SD:206:ASP:OD2	1.97	0.97
86:S6:4:C:O2	86:S6:70:G:N2	1.97	0.97
1:5:2037:C:C4	1:5:2038:U:C5	2.51	0.97
1:5:3717:A:O2'	1:5:3718:A:O5'	1.81	0.97
1:5:4481:U:C2	1:5:4482:U:C5	2.52	0.97
47:1:431:LEU:O	47:1:433:VAL:N	1.98	0.97
47:1:447:ILE:O	47:1:450:ALA:CA	2.13	0.97
52:SB:97:LEU:HD22	52:SB:232:HIS:CD2	2.00	0.97
86:S6:27:G:H2'	86:S6:28:G:H8	1.29	0.97
50:S2:998:A:C8	50:S2:999:G:O4'	2.16	0.97
50:S2:1386:A:H2'	50:S2:1387:G:H5'	1.46	0.97
50:S2:1693:G:H3'	50:S2:1694:U:C6	1.99	0.97
1:5:27:C:O2	1:5:28:C:H6	1.48	0.96
1:5:1269:G:C6	1:5:2111:G:C2	2.53	0.96
1:5:2433:G:OP1	47:1:268:LYS:NZ	1.97	0.96
1:5:2832:A:H2'	1:5:2833:A:H5''	1.44	0.96
86:S6:53:G:C4	86:S6:54:U:C6	2.53	0.96
1:5:1560:A:H2'	1:5:1561:G:H8	1.27	0.96
1:5:4283:G:N2	1:5:4284:C:C6	2.31	0.96
50:S2:349:A:C4'	59:SI:27:TYR:OH	2.13	0.96
50:S2:1857:G:N7	65:SO:146:ARG:NH2	2.12	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:28:G:C2	85:S5:29:G:C5	2.53	0.96
1:5:375:G:OP2	38:j:52:LYS:NZ	1.98	0.96
1:5:2658:G:C2	1:5:2675:G:C2	2.53	0.96
1:5:3702:A:C6	1:5:3703:G:N7	2.33	0.96
1:5:3731:C:N3	1:5:3732:A:N7	2.13	0.96
3:8:132:G:C2	3:8:133:G:C8	2.52	0.96
9:F:149:LEU:HB2	9:F:197:TYR:OH	1.64	0.96
50:S2:1315:U:C4	50:S2:1316:C:C6	2.52	0.96
1:5:957:G:O5'	1:5:1284:G:N2	1.98	0.96
1:5:1561:G:H22	1:5:1567:U:H1'	1.28	0.96
1:5:1724:G:N7	30:b:17:HIS:CG	2.33	0.96
1:5:2437:C:H5''	1:5:2782:U:O4	1.63	0.96
1:5:2857:A:O2'	1:5:2858:A:O5'	1.82	0.96
1:5:3721:U:O2	1:5:3722:G:C8	2.18	0.96
1:5:3972:A:H2	1:5:4040:C:O2	1.39	0.96
50:S2:1292:C:O5'	82:Sf:149:CYS:N	1.96	0.96
1:5:970:G:O6	1:5:2256:C:N4	1.97	0.96
50:S2:121:U:N3	50:S2:122:G:N7	2.13	0.96
50:S2:1345:G:C5	50:S2:1346:U:C5	2.54	0.96
50:S2:1545:A:C5	50:S2:1588:A:C6	2.52	0.96
86:S6:53:G:C5	86:S6:62:C:C4	2.54	0.96
86:S6:57:G:OP2	86:S6:58:A:C2	2.19	0.96
1:5:289:C:N3	1:5:290:U:C5	2.34	0.96
1:5:1240:G:OP1	1:5:1271:G:O2'	1.84	0.96
1:5:1672:U:O2	1:5:1673:U:C6	2.19	0.96
1:5:2453:A:C6	1:5:2454:U:C5	2.53	0.96
1:5:3974:G:O4'	46:z:210:MET:HE3	1.64	0.96
1:5:4518:A:C8	5:B:257:TRP:CZ2	2.53	0.96
1:5:4966:A:H2'	1:5:4967:A:O4'	1.65	0.96
50:S2:99:A:C2	50:S2:100:U:C6	2.53	0.96
50:S2:217:A:N3	50:S2:309:G:C6	2.34	0.96
1:5:483:G:C2	1:5:484:U:C5	2.53	0.96
1:5:2279:A:C2	1:5:2280:G:C5	2.54	0.96
1:5:2743:A:C2	1:5:2744:A:C6	2.53	0.96
1:5:4215:C:C2	1:5:4216:G:C8	2.53	0.96
3:8:85:U:H2'	3:8:87:G:C8	2.00	0.96
50:S2:797:C:C2	58:SH:109:ARG:NH2	2.33	0.96
1:5:2726:G:C2	1:5:2727:C:C4	2.54	0.96
1:5:4724:A:HO2'	5:B:104:THR:HG1	1.13	0.96
33:e:35:TRP:CE3	33:e:56:PRO:HD3	2.01	0.96
50:S2:620:G:N2	50:S2:620:G:OP1	1.97	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1382:A:C2	50:S2:1383:A:C8	2.53	0.96
50:S2:1398:G:C2	50:S2:1399:C:C5	2.54	0.96
1:5:1983:A:C8	1:5:1987:C:OP2	2.19	0.96
3:8:74:U:O4	27:Y:74:TYR:CE1	2.18	0.96
50:S2:119:U:N3	50:S2:120:U:C5	2.34	0.96
50:S2:339:A:H2'	50:S2:340:C:C5	2.00	0.96
1:5:472:C:C2	1:5:473:C:C6	2.53	0.96
1:5:969:C:O2'	1:5:970:G:N3	1.98	0.96
1:5:2036:C:N3	1:5:2037:C:C5	2.33	0.96
1:5:2099:G:C2	1:5:2100:A:C8	2.53	0.96
1:5:2743:A:C2	1:5:2744:A:N7	2.34	0.96
3:8:119:C:O2	3:8:120:G:C8	2.19	0.96
46:z:161:LYS:CG	86:S6:55:U:H5'	1.94	0.96
50:S2:1248:U:H2'	50:S2:1249:C:O4'	1.66	0.96
50:S2:1609:C:O2	50:S2:1610:G:C8	2.19	0.96
86:S6:46:G:O2'	86:S6:47:U:C5'	2.13	0.96
1:5:1936:C:C6	2:7:84:U:C6	2.54	0.95
1:5:4258:C:C2	1:5:4259:C:C5	2.53	0.95
50:S2:588:G:N3	50:S2:589:G:N2	2.14	0.95
50:S2:909:G:C2	50:S2:910:G:C8	2.54	0.95
50:S2:1132:C:C4	50:S2:1133:A:C8	2.54	0.95
50:S2:1832:A:C2	50:S2:1833:C:C4	2.52	0.95
1:5:2532:C:O2	1:5:2533:C:C6	2.18	0.95
1:5:4068:U:H2'	1:5:4069:U:H5'	0.96	0.95
1:5:4096:C:O3'	35:g:112:GLN:HB3	0.88	0.95
3:8:11:C:C2	3:8:12:G:C8	2.54	0.95
47:1:424:GLY:O	47:1:428:ILE:HG12	1.66	0.95
50:S2:42:A:N1	50:S2:43:U:H5	1.63	0.95
50:S2:120:U:C4	50:S2:121:U:C5	2.53	0.95
50:S2:793:G:C5	50:S2:794:A:C8	2.54	0.95
50:S2:1095:U:N3	50:S2:1149:A:N6	2.12	0.95
50:S2:1284:A:O2'	63:SM:106:CYS:CA	2.13	0.95
50:S2:1314:U:H3	50:S2:1315:U:H1'	1.25	0.95
52:SB:221:PRO:C	52:SB:222:LYS:HA	1.89	0.95
86:S6:5:C:C2'	86:S6:6:G:H5'	1.96	0.95
1:5:3905:A:C2	1:5:4449:A:N6	2.34	0.95
1:5:4285:U:C2	1:5:4286:C:C5	2.54	0.95
1:5:4414:A:N1	1:5:4427:G:C2	2.34	0.95
16:N:30:TYR:CE1	16:N:63:ARG:HD2	2.01	0.95
50:S2:1250:A:C2	50:S2:1339:U:O2'	2.19	0.95
50:S2:1388:A:H61	54:SD:161:GLY:HA3	1.31	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:340:C:C2	50:S2:341:C:C5	2.54	0.95
50:S2:1232:U:O2	50:S2:1233:G:C8	2.18	0.95
50:S2:1430:C:N3	50:S2:1431:G:C8	2.35	0.95
1:5:977:C:N3	1:5:978:G:C8	2.26	0.95
1:5:1280:C:C2	1:5:1282:G:N7	2.34	0.95
1:5:1984:A:N6	1:5:2011:C:O2'	1.99	0.95
1:5:2851:G:C5	1:5:2852:U:C6	2.54	0.95
1:5:2854:G:O6	1:5:2856:C:C6	2.19	0.95
1:5:4080:C:O2	1:5:4081:G:C8	2.20	0.95
1:5:4999:G:C2	1:5:5000:G:C8	2.55	0.95
20:R:163:ARG:HD2	50:S2:871:U:O2	1.64	0.95
50:S2:862:A:C2	50:S2:863:U:C6	2.54	0.95
1:5:484:U:C2	1:5:486:C:C6	2.54	0.95
1:5:486:C:C2	1:5:487:G:C8	2.53	0.95
1:5:3971:G:N2	1:5:4040:C:O2'	1.98	0.95
50:S2:648:A:C2	50:S2:649:U:C6	2.54	0.95
50:S2:1591:C:C4	50:S2:1592:C:C5	2.54	0.95
68:SR:13:ALA:CB	68:SR:53:TYR:CD2	2.49	0.95
1:5:977:C:O2	1:5:978:G:C8	2.16	0.95
1:5:4563:U:C2	1:5:4564:A:N7	2.35	0.95
50:S2:26:U:C4	50:S2:27:A:N7	2.34	0.95
74:SX:91:LEU:HD21	81:Se:6:LEU:HD13	1.46	0.95
1:5:92:C:OP2	1:5:4341:C:O2'	1.84	0.95
1:5:1340:C:C2	1:5:1341:U:C6	2.55	0.95
1:5:2089:G:C4	1:5:2262:G:H2'	2.02	0.95
1:5:3726:A:O2'	1:5:3727:A:C8	2.19	0.95
1:5:4055:U:OP1	46:z:205:TYR:CE1	2.10	0.95
21:S:45:TRP:CZ3	21:S:56:LYS:HA	2.00	0.95
50:S2:444:G:N2	50:S2:446:G:H8	1.64	0.95
50:S2:1408:U:N3	50:S2:1439:A:H2	1.64	0.95
50:S2:1832:A:C6	50:S2:1833:C:C5	2.55	0.95
68:SR:10:LYS:HA	68:SR:53:TYR:CE2	2.01	0.95
1:5:1358:G:O2'	1:5:1359:G:O4'	1.84	0.95
1:5:2497:C:C2	1:5:2498:C:C5	2.55	0.95
1:5:2646:C:O2	1:5:2647:A:C8	2.19	0.95
1:5:3790:U:N3	1:5:3792:G:O4'	2.00	0.95
1:5:3806:G:H4'	50:S2:1719:A:O2'	1.65	0.95
5:B:118:PHE:HB2	5:B:119:TYR:CE1	2.02	0.95
50:S2:1402:A:C6	50:S2:1441:U:C4	2.55	0.95
50:S2:1402:A:C6	50:S2:1441:U:N3	2.35	0.95
50:S2:1540:G:C6	50:S2:1541:G:N7	2.35	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1541:G:C2	50:S2:1542:C:C5	2.54	0.95
85:S5:8:U:O2'	85:S5:48:C:O2	1.83	0.95
1:5:983:C:C2	1:5:984:C:C5	2.55	0.95
1:5:1217:G:H2'	1:5:1218:G:C8	2.01	0.95
1:5:1238:A:O2'	1:5:1239:C:O5'	1.83	0.95
1:5:2127:C:H2'	1:5:2128:G:N7	1.82	0.95
1:5:4054:C:C4'	46:z:205:TYR:CG	2.50	0.95
1:5:4194:U:O2'	1:5:4221:C:N4	2.00	0.95
1:5:4414:A:C2	1:5:4427:G:C2	2.55	0.95
1:5:4518:A:N7	5:B:257:TRP:CZ2	2.33	0.95
50:S2:43:U:C2	50:S2:484:A:H2	1.85	0.95
50:S2:1109:C:N3	50:S2:1110:G:O4'	2.00	0.95
50:S2:1793:A:C2	50:S2:1794:C:C5	2.55	0.95
1:5:909:A:C2	1:5:910:G:C8	2.55	0.94
1:5:1198:G:H2'	1:5:1199:G:C8	2.02	0.94
1:5:4056:A:OP1	46:z:39:LYS:NZ	1.95	0.94
1:5:4379:A:C8	43:o:54:PRO:HA	2.02	0.94
3:8:11:C:O2	3:8:12:G:H8	1.48	0.94
50:S2:647:U:O2	50:S2:648:A:H8	1.45	0.94
52:SB:97:LEU:CD1	52:SB:228:LEU:CD1	2.45	0.94
86:S6:53:G:C5	86:S6:54:U:C5	2.54	0.94
1:5:4729:A:H4'	1:5:4965:U:O2'	1.68	0.94
50:S2:908:A:C2	50:S2:909:G:N7	2.35	0.94
50:S2:1095:U:O4	50:S2:1149:A:N1	2.00	0.94
50:S2:1266:C:O2	50:S2:1267:C:C5	2.20	0.94
1:5:917:A:C6	1:5:919:C:C4	2.55	0.94
1:5:1245:C:C6	1:5:1269:G:C6	2.55	0.94
1:5:1390:G:C2	1:5:1394:G:C6	2.55	0.94
1:5:3789:C:H5'	85:S5:73:A:OP1	1.68	0.94
8:E:184:ARG:NH2	8:E:210:ASP:OD1	2.00	0.94
50:S2:1205:C:C2	50:S2:1693:G:O6	2.20	0.94
50:S2:1593:C:O2'	70:ST:12:GLN:OE1	1.84	0.94
1:5:4985:U:H4'	5:B:175:GLN:OE1	1.67	0.94
50:S2:848:U:C2	50:S2:849:A:C5	2.55	0.94
50:S2:1433:C:H2'	50:S2:1434:C:O4'	1.67	0.94
50:S2:1552:G:C6	50:S2:1578:U:N3	2.35	0.94
85:S5:13:C:N3	85:S5:22:G:C6	2.34	0.94
1:5:208:A:C1'	1:5:232:G:H21	1.78	0.94
1:5:3737:A:H2'	1:5:3738:G:O4'	1.68	0.94
50:S2:381:C:N4	59:SI:49:ARG:HD3	1.83	0.94
84:S4:16:U:C5	84:S4:17:U:C4	2.54	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:21:A:N1	85:S5:48:C:C2	2.36	0.94
86:S6:5:C:C5	86:S6:6:G:N7	2.35	0.94
86:S6:37:A:H2'	86:S6:38:A:N3	1.81	0.94
86:S6:51:U:C4	86:S6:52:G:N7	2.36	0.94
1:5:471:A:C5	1:5:472:C:C6	2.55	0.94
1:5:2080:U:O2	1:5:2081:C:C6	2.21	0.94
1:5:3617:G:O2'	1:5:3620:G:N7	2.00	0.94
1:5:3741:C:C2	1:5:3742:G:C8	2.55	0.94
10:G:260:GLU:OE1	52:SB:57:ILE:HA	1.12	0.94
1:5:43:U:C5	1:5:44:A:C8	2.55	0.94
1:5:975:C:OP1	9:F:49:ARG:NH1	2.01	0.94
1:5:1427:A:H3'	1:5:1428:U:H6	1.30	0.94
1:5:2504:C:O2	1:5:2505:C:C5	2.21	0.94
1:5:4098:A:C2	1:5:4099:G:C8	2.55	0.94
50:S2:42:A:N1	50:S2:43:U:C5	2.35	0.94
50:S2:75:G:H21	50:S2:77:A:P	1.89	0.94
50:S2:333:G:N7	57:SG:190:ARG:NH1	2.15	0.94
84:S4:18:U:O4	86:S6:37:A:C6	2.14	0.94
85:S5:60:U:H2'	85:S5:61:C:C5	2.00	0.94
86:S6:34:G:O2'	86:S6:35:A:OP1	1.85	0.94
1:5:120:A:H1'	1:5:121:A:C2	2.02	0.94
1:5:246:G:C2	1:5:247:G:C8	2.55	0.94
1:5:514:U:H5	1:5:515:C:O4'	1.48	0.94
1:5:1247:U:C2	1:5:1248:C:C6	2.55	0.94
1:5:1476:C:N3	1:5:1477:C:C5	2.35	0.94
1:5:1560:A:N3	1:5:1561:G:C5	2.33	0.94
1:5:2304:U:O2	1:5:2332:A:N6	2.01	0.94
1:5:2326:G:N1	1:5:2327:G:N7	2.16	0.94
1:5:2509:C:O2'	1:5:2510:G:O5'	1.85	0.94
1:5:2843:U:C2	1:5:2844:A:C8	2.56	0.94
1:5:4257:A:H2'	1:5:4258:C:H6	1.32	0.94
1:5:4601:U:C4	1:5:4609:G:N2	2.36	0.94
50:S2:310:C:H2'	50:S2:311:C:C6	2.03	0.94
50:S2:1053:C:N3	50:S2:1054:G:N7	2.14	0.94
50:S2:1406:G:H2'	50:S2:1407:U:C1'	1.98	0.94
50:S2:1408:U:H3	50:S2:1439:A:H2	0.96	0.94
50:S2:1545:A:C6	50:S2:1588:A:C6	2.54	0.94
52:SB:90:ASP:OD1	52:SB:225:LEU:HD21	1.66	0.94
85:S5:12:U:C1'	85:S5:24:G:C2	2.50	0.94
86:S6:50:U:O2'	86:S6:51:U:O5'	1.85	0.94
1:5:1217:G:N2	1:5:1218:G:O6	2.01	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4165:C:C2	1:5:4166:G:C8	2.55	0.94
38:j:22:CYS:SG	88:j:101:ZN:ZN	1.55	0.94
50:S2:378:U:C4	50:S2:379:C:C5	2.56	0.94
50:S2:992:A:N7	77:Sa:15:ARG:NH1	2.14	0.94
1:5:42:A:N6	1:5:4379:A:C2	2.36	0.94
1:5:1438:U:O2	1:5:2099:G:O6	1.86	0.94
1:5:2736:G:C2	1:5:2737:C:C5	2.56	0.94
1:5:4563:U:N3	1:5:4564:A:C6	2.35	0.94
50:S2:989:C:N3	50:S2:1001:A:N1	2.16	0.94
50:S2:1293:A:N9	82:Sf:150:PHE:HB3	1.83	0.94
50:S2:1332:A:O2'	54:SD:141:LYS:NZ	2.01	0.94
86:S6:19:G:O2'	86:S6:20:U:OP1	1.85	0.94
86:S6:37:A:O2'	86:S6:38:A:O5'	1.85	0.94
1:5:208:A:H1'	1:5:232:G:N2	1.83	0.93
1:5:2859:G:N2	1:5:3837:C:O2	2.01	0.93
1:5:3907:G:N9	1:5:4449:A:H1'	1.82	0.93
1:5:3966:A:C2	1:5:3967:G:C5	2.56	0.93
1:5:3973:G:O3'	46:z:28:PHE:CG	2.19	0.93
1:5:4095:G:C2	1:5:4096:C:C5	2.56	0.93
32:d:24:GLU:OE1	32:d:87:ARG:NH2	2.01	0.93
50:S2:1345:G:C4	50:S2:1346:U:C5	2.56	0.93
50:S2:1830:U:O4	84:S4:19:U:H4'	1.67	0.93
1:5:100:C:C4	1:5:101:A:C8	2.52	0.93
1:5:1671:U:N3	1:5:1672:U:H5	1.66	0.93
1:5:4745:G:HO2'	1:5:4746:C:H6	1.16	0.93
10:G:264:LYS:NZ	52:SB:91:VAL:CG1	2.32	0.93
50:S2:458:A:C6	50:S2:459:C:C5	2.55	0.93
50:S2:795:A:N3	50:S2:796:G:N7	2.15	0.93
50:S2:963:A:H2'	50:S2:964:A:C8	2.03	0.93
50:S2:1693:G:N7	50:S2:1694:U:O4	2.00	0.93
1:5:1635:C:H2'	1:5:1636:U:H5'	1.46	0.93
1:5:1667:G:N2	1:5:2283:G:O6	2.01	0.93
1:5:4097:G:C5'	35:g:115:LYS:CB	2.03	0.93
1:5:4744:A:C2	1:5:4745:G:C5	2.55	0.93
1:5:4988:U:H4'	1:5:4989:U:O2	1.66	0.93
1:5:5005:G:O6	25:W:51:TRP:CB	2.17	0.93
50:S2:43:U:N3	50:S2:484:A:H2	1.67	0.93
50:S2:1412:C:H2'	50:S2:1413:G:C8	2.02	0.93
1:5:747:A:H2'	1:5:749:G:C8	2.04	0.93
1:5:1217:G:C2'	1:5:1218:G:H8	1.80	0.93
1:5:1408:G:O2'	1:5:1411:C:N4	2.02	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2735:G:C2	1:5:2736:G:C8	2.57	0.93
1:5:2784:C:O2	1:5:2785:C:C5	2.22	0.93
1:5:4080:C:N3	1:5:4081:G:C8	2.35	0.93
1:5:4697:U:H4'	41:m:104:HIS:CD2	2.04	0.93
1:5:4725:C:O2	1:5:4726:G:H8	1.45	0.93
1:5:4983:C:N3	1:5:4984:C:C5	2.36	0.93
50:S2:165:G:C8	50:S2:166:A:C8	2.56	0.93
50:S2:641:A:H2'	50:S2:642:U:O4'	1.68	0.93
50:S2:1101:U:O2	50:S2:1102:G:N7	1.99	0.93
52:SB:36:PRO:CA	52:SB:231:LEU:HD21	1.99	0.93
85:S5:49:C:H2'	85:S5:50:U:C6	2.02	0.93
1:5:3960:A:N6	1:5:3965:A:N7	2.16	0.93
1:5:4324:A:C2	1:5:4325:A:C5	2.57	0.93
40:l:21:ARG:HH22	40:l:24:PRO:HG3	1.14	0.93
50:S2:384:U:C5	50:S2:386:C:C6	2.57	0.93
50:S2:551:U:C2	50:S2:552:G:C8	2.56	0.93
52:SB:90:ASP:OD1	52:SB:223:PHE:HZ	1.51	0.93
1:5:1981:G:O2'	1:5:1982:G:O4'	1.85	0.93
1:5:2604:C:O2	1:5:2605:G:H8	1.51	0.93
50:S2:428:U:H5	60:SJ:7:TRP:CZ2	1.86	0.93
50:S2:628:A:N1	54:SD:179:GLN:OE1	2.01	0.93
50:S2:1310:U:C1'	82:Sf:143:LYS:HD2	1.97	0.93
50:S2:1825:A:H2	84:S4:22:U:O2	1.51	0.93
85:S5:2:C:N4	85:S5:71:G:N1	2.16	0.93
1:5:1264:C:C2	1:5:1265:G:C8	2.57	0.93
1:5:3731:C:C2	1:5:3732:A:C8	2.57	0.93
1:5:3956:G:N2	1:5:3966:A:C1'	2.32	0.93
1:5:5044:A:C2'	1:5:5045:G:H5'	1.98	0.93
50:S2:341:C:C4	50:S2:342:C:C5	2.57	0.93
50:S2:75:G:N2	50:S2:77:A:OP1	2.02	0.93
50:S2:1050:A:N7	50:S2:1051:G:C8	2.37	0.93
50:S2:1592:C:C4	50:S2:1593:C:C5	2.56	0.93
50:S2:1860:A:N1	50:S2:1862:G:C5	2.37	0.93
1:5:1371:A:N6	3:8:28:C:O2'	2.02	0.93
1:5:1739:G:H2'	1:5:1740:C:O4'	1.69	0.93
1:5:4053:A:OP1	46:z:1:MET:CG	2.16	0.93
10:G:55:VAL:HB	10:G:57:TRP:HE1	1.34	0.93
50:S2:792:C:N3	50:S2:793:G:C8	2.36	0.93
85:S5:33:U:C2'	85:S5:34:G:H5''	1.99	0.93
1:5:1280:C:O4'	6:C:323:ARG:NH2	2.02	0.93
1:5:2851:G:H1'	1:5:3840:U:O2	1.67	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4053:A:O3'	46:z:213:PRO:CG	2.16	0.93
1:5:4275:G:O6	1:5:4276:G:C5	2.22	0.93
27:Y:15:ARG:HH12	27:Y:19:PHE:HE2	1.09	0.93
50:S2:618:C:N3	50:S2:619:A:C8	2.37	0.93
50:S2:1822:A:C2	50:S2:1823:A:C6	2.56	0.93
85:S5:50:U:O4	85:S5:64:A:N6	2.01	0.93
1:5:27:C:N3	1:5:28:C:C5	2.37	0.92
1:5:2613:C:N3	1:5:2614:C:C5	2.37	0.92
1:5:4883:C:O2'	1:5:4884:G:OP2	1.87	0.92
50:S2:118:C:C4	50:S2:119:U:C6	2.57	0.92
50:S2:994:C:N3	50:S2:995:G:C8	2.37	0.92
50:S2:1111:U:N3	50:S2:1112:U:H5	1.62	0.92
1:5:4888:U:HO2'	1:5:4889:G:H8	1.12	0.92
1:5:4911:A:C5'	5:B:100:ARG:HD3	1.99	0.92
1:5:4981:G:C6	1:5:4982:A:C8	2.57	0.92
3:8:73:U:C5	3:8:74:U:C6	2.56	0.92
50:S2:1017:U:N3	50:S2:1018:U:C5	2.37	0.92
50:S2:1290:G:C4	82:Sf:146:LEU:HB3	2.04	0.92
1:5:424:U:C2	1:5:425:U:H5	1.87	0.92
1:5:2251:G:H1'	1:5:2252:G:C2	2.04	0.92
1:5:2446:C:H2'	1:5:2447:U:C6	2.04	0.92
50:S2:1133:A:N1	50:S2:1134:G:C8	2.38	0.92
50:S2:1204:A:C2	50:S2:1205:C:N1	2.36	0.92
50:S2:1538:C:O2	50:S2:1539:U:C6	2.22	0.92
50:S2:1594:A:N1	50:S2:1595:U:C5	2.38	0.92
86:S6:1:U:C4	86:S6:73:A:N1	2.38	0.92
86:S6:34:G:N2	86:S6:35:A:C6	2.38	0.92
1:5:173:C:C2	1:5:174:C:C6	2.57	0.92
1:5:3939:G:N3	1:5:4076:G:O6	2.02	0.92
26:X:84:GLU:HB2	47:1:404:HIS:ND1	1.81	0.92
50:S2:1111:U:C2	50:S2:1112:U:C5	2.57	0.92
50:S2:1822:A:H2	50:S2:1823:A:N6	1.46	0.92
85:S5:48:C:C2'	85:S5:59:U:H1'	1.98	0.92
86:S6:53:G:C6	86:S6:62:C:C5	2.56	0.92
1:5:969:C:O2'	1:5:970:G:O4'	1.86	0.92
50:S2:120:U:N3	50:S2:121:U:C5	2.38	0.92
50:S2:1224:G:N2	50:S2:1643:U:C2	2.38	0.92
50:S2:1291:A:C5'	82:Sf:146:LEU:HD12	2.00	0.92
50:S2:1834:A:C2	50:S2:1836:G:N3	2.37	0.92
85:S5:21:A:C2	85:S5:48:C:N3	2.38	0.92
1:5:272:U:C2	1:5:273:U:C5	2.58	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:658:C:C2	1:5:659:G:C8	2.58	0.92
1:5:1248:C:O2	1:5:1249:C:C6	2.23	0.92
1:5:2561:C:N3	1:5:2562:G:C8	2.36	0.92
1:5:2604:C:N3	1:5:2605:G:N7	2.16	0.92
1:5:3591:C:N4	1:5:3592:G:N7	2.17	0.92
10:G:53:ARG:NH2	10:G:54:PHE:HZ	1.67	0.92
46:z:44:GLN:NE2	86:S6:53:G:N3	2.17	0.92
50:S2:974:C:N3	50:S2:975:G:C8	2.38	0.92
50:S2:1344:A:O2'	50:S2:1345:G:OP2	1.85	0.92
65:SO:147:ARG:CB	65:SO:147:ARG:CZ	2.46	0.92
1:5:2326:G:C6	1:5:2327:G:N7	2.38	0.92
1:5:4097:G:C2	1:5:4098:A:C8	2.57	0.92
8:E:157:ARG:HD2	8:E:266:TYR:CD1	2.04	0.92
20:R:109:TYR:CE1	20:R:114:LYS:HD2	2.04	0.92
50:S2:993:G:C2	50:S2:994:C:C6	2.56	0.92
68:SR:24:LEU:HB2	68:SR:58:MET:HE3	0.96	0.92
1:5:210:C:N4	1:5:231:U:C2	2.38	0.92
1:5:1310:C:N3	1:5:1311:G:C8	2.37	0.92
1:5:1695:U:H2'	1:5:1696:C:H5'	1.52	0.92
1:5:1750:G:C2	1:5:1751:A:C8	2.58	0.92
1:5:4998:G:C2	1:5:4999:G:C8	2.57	0.92
26:X:84:GLU:HA	47:1:404:HIS:CE1	2.05	0.92
50:S2:599:A:H1'	50:S2:605:A:N3	1.84	0.92
50:S2:804:U:N3	50:S2:805:U:C5	2.38	0.92
50:S2:1398:G:C2	50:S2:1399:C:C6	2.57	0.92
85:S5:48:C:C5	85:S5:59:U:N3	2.36	0.92
86:S6:53:G:C5	86:S6:54:U:C4	2.57	0.92
1:5:144:G:C2	1:5:145:G:C8	2.57	0.92
1:5:701:G:C6	1:5:702:U:C6	2.58	0.92
1:5:4063:U:C2	1:5:4064:C:C5	2.58	0.92
1:5:4063:U:O2	1:5:4064:C:C5	2.23	0.92
50:S2:880:G:C8	50:S2:881:G:C8	2.58	0.92
50:S2:1691:U:H2'	50:S2:1692:U:H5'	1.48	0.92
85:S5:11:C:O2	85:S5:24:G:C2	2.22	0.92
86:S6:51:U:H2'	86:S6:52:G:H8	1.33	0.92
1:5:86:U:O2	1:5:87:A:C8	2.22	0.92
1:5:983:C:O2	1:5:984:C:H6	1.48	0.92
1:5:2533:C:OP1	26:X:139:ARG:NH2	2.01	0.92
1:5:2851:G:C6	1:5:2852:U:C6	2.58	0.92
1:5:3905:A:C6	1:5:4449:A:C6	2.58	0.92
3:8:40:A:N7	3:8:102:G:N2	2.17	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:60:A:O2'	50:S2:61:A:C5'	2.18	0.92
50:S2:460:A:N3	50:S2:461:U:C6	2.37	0.92
50:S2:999:G:C6	50:S2:1000:C:C5	2.58	0.92
1:5:730:G:N2	1:5:939:G:N2	2.18	0.91
1:5:1999:A:O2'	1:5:2000:G:O4'	1.88	0.91
1:5:3945:A:N6	1:5:4069:U:H3	1.67	0.91
10:G:264:LYS:NZ	52:SB:91:VAL:HG12	1.83	0.91
33:e:35:TRP:CD1	33:e:36:ARG:N	2.37	0.91
50:S2:27:A:C6	50:S2:28:U:C5	2.58	0.91
50:S2:1202:U:C2	50:S2:1203:G:C8	2.57	0.91
65:SO:147:ARG:CZ	65:SO:147:ARG:HB2	2.00	0.91
1:5:469:C:O2	1:5:688:U:C1'	2.17	0.91
1:5:1632:A:N6	1:5:1634:A:C8	2.38	0.91
1:5:2095:A:N1	9:F:41:GLN:OE1	2.02	0.91
2:7:94:C:C2	2:7:95:C:C5	2.57	0.91
3:8:12:G:N2	3:8:13:G:H1'	1.84	0.91
10:G:264:LYS:HD2	52:SB:31:TYR:HH	1.28	0.91
50:S2:337:C:N3	50:S2:338:G:N7	2.18	0.91
50:S2:1149:A:C2	50:S2:1151:G:C5	2.58	0.91
50:S2:1203:G:H4'	53:SC:116:THR:HA	1.51	0.91
50:S2:1290:G:H3'	82:Sf:146:LEU:HG	1.50	0.91
62:SL:99:TYR:OH	74:SX:17:ARG:CD	2.17	0.91
65:SO:146:ARG:HG3	65:SO:146:ARG:HH11	1.35	0.91
68:SR:26:ASN:OD1	68:SR:59:LYS:CE	2.19	0.91
86:S6:16:A:C2	86:S6:60:U:N3	2.37	0.91
1:5:272:U:O2	1:5:273:U:C5	2.23	0.91
1:5:1245:C:N3	1:5:1246:G:N7	2.18	0.91
1:5:2108:G:N2	1:5:2125:C:N3	2.18	0.91
1:5:3739:C:C4	1:5:3740:G:N7	2.39	0.91
1:5:3740:G:C6	1:5:3741:C:C5	2.59	0.91
47:1:447:ILE:O	47:1:450:ALA:CB	2.18	0.91
50:S2:551:U:H2'	50:S2:552:G:H8	1.36	0.91
50:S2:1595:U:N3	50:S2:1596:U:C6	2.38	0.91
52:SB:90:ASP:CG	52:SB:225:LEU:CD2	2.43	0.91
68:SR:17:ILE:CG2	68:SR:61:ILE:HD11	2.00	0.91
1:5:962:C:OP2	1:5:2264:C:N3	2.03	0.91
1:5:1695:U:C2'	1:5:1696:C:H5'	2.01	0.91
1:5:3739:C:N4	1:5:3740:G:N7	2.19	0.91
3:8:10:G:C6	3:8:11:C:C6	2.57	0.91
3:8:131:G:C6	3:8:132:G:N7	2.39	0.91
50:S2:1434:C:H3'	50:S2:1435:C:O4'	1.71	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1455:A:C2	50:S2:1456:G:C8	2.58	0.91
86:S6:11:C:H2'	86:S6:12:C:C6	2.05	0.91
1:5:451:C:N4	1:5:1295:C:H2'	1.86	0.91
1:5:1176:C:O2	7:D:282:GLN:NE2	2.03	0.91
1:5:1247:U:N3	1:5:1248:C:C5	2.38	0.91
1:5:2294:G:C2	1:5:2295:C:C5	2.57	0.91
1:5:4627:U:N3	1:5:4628:U:C5	2.38	0.91
50:S2:1273:C:C2	50:S2:1506:A:C2	2.56	0.91
50:S2:1383:A:H4'	54:SD:156:LEU:HD23	1.52	0.91
52:SB:36:PRO:HA	52:SB:231:LEU:CD2	2.00	0.91
86:S6:53:G:C6	86:S6:54:U:C4	2.59	0.91
1:5:1696:C:H1'	1:5:1697:G:H5'	1.53	0.91
1:5:4531:U:N3	85:S5:76:A:C2	2.38	0.91
5:B:203:GLN:HA	5:B:203:GLN:HE21	1.34	0.91
42:n:21:ARG:HH22	50:S2:1175:G:P	1.94	0.91
50:S2:27:A:C2	50:S2:28:U:C6	2.59	0.91
50:S2:744:G:H2'	50:S2:745:C:C6	2.06	0.91
52:SB:34:LYS:HB2	52:SB:232:HIS:CE1	2.06	0.91
1:5:466:A:C2	1:5:467:U:C5	2.58	0.91
1:5:1268:G:N1	1:5:1270:A:N7	2.18	0.91
1:5:1987:C:N3	1:5:1988:G:C8	2.39	0.91
1:5:2081:C:H2'	1:5:2082:G:O5'	1.70	0.91
1:5:4055:U:H5''	46:z:37:SER:HG	1.23	0.91
8:E:181:PRO:HA	8:E:246:GLN:HE22	1.34	0.91
50:S2:428:U:C5	60:SJ:7:TRP:CZ2	2.59	0.91
50:S2:1378:A:H4'	50:S2:1379:A:O5'	1.70	0.91
85:S5:48:C:C4	85:S5:59:U:C4	2.58	0.91
86:S6:6:G:C2'	86:S6:7:G:H5'	2.00	0.91
1:5:27:C:O2	1:5:28:C:C6	2.23	0.91
1:5:2007:G:O2'	1:5:2008:U:O4'	1.88	0.91
1:5:2538:U:OP1	39:k:41:TYR:OH	1.88	0.91
1:5:2856:C:N4	1:5:2857:A:N6	2.18	0.91
47:1:284:PHE:HD1	47:1:428:ILE:HD11	1.17	0.91
50:S2:933:G:C2	50:S2:1000:C:N3	2.38	0.91
50:S2:1693:G:C5	50:S2:1694:U:C4	2.59	0.91
50:S2:1839:U:O4	77:Sa:28:ARG:NH2	2.03	0.91
1:5:106:A:H1'	1:5:336:A:H8	1.15	0.91
1:5:1778:C:O2	1:5:1779:U:C5	2.24	0.91
1:5:2382:A:N6	1:5:2830:G:O4'	2.04	0.91
1:5:2604:C:C2	1:5:2605:G:C8	2.58	0.91
1:5:2613:C:C4	1:5:2614:C:C5	2.58	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3956:G:C2	1:5:3966:A:C8	2.59	0.91
50:S2:377:G:C2	50:S2:378:U:C6	2.58	0.91
50:S2:633:C:N3	50:S2:634:A:C8	2.39	0.91
50:S2:1109:C:N3	50:S2:1110:G:C1'	2.34	0.91
86:S6:13:C:C3'	86:S6:14:C:H6	1.83	0.91
86:S6:53:G:C8	86:S6:53:G:H5''	2.06	0.91
86:S6:69:G:C2	86:S6:70:G:N7	2.39	0.91
1:5:983:C:N3	1:5:984:C:H5	1.65	0.91
1:5:1562:G:H1	1:5:1566:C:N4	1.68	0.91
1:5:2126:G:H1'	1:5:2127:C:C6	2.05	0.91
1:5:2724:G:N2	1:5:2726:G:C5	2.39	0.91
1:5:4878:C:C2	1:5:4879:C:C5	2.58	0.91
50:S2:1030:A:C2	50:S2:1031:A:N7	2.39	0.91
61:SK:8:ARG:HD3	61:SK:12:TYR:CE1	2.06	0.91
85:S5:14:A:N6	85:S5:21:A:C2	2.39	0.91
85:S5:48:C:P	85:S5:59:U:H5'	2.11	0.91
1:5:1563:A:H61	50:S2:1028:A:H61	1.15	0.90
1:5:2106:G:N2	1:5:2107:C:C5	2.39	0.90
1:5:2724:G:C2	1:5:2726:G:C5	2.59	0.90
1:5:4242:U:O2	1:5:4279:A:H2	1.54	0.90
50:S2:56:G:C5	50:S2:90:G:N2	2.38	0.90
50:S2:524:U:C2	50:S2:594:A:N6	2.39	0.90
50:S2:1640:A:H5'	86:S6:41:C:C4'	1.93	0.90
82:Sf:133:ALA:HB3	82:Sf:139:HIS:HA	1.51	0.90
1:5:489:C:N4	1:5:664:G:O6	2.04	0.90
1:5:753:C:N3	1:5:754:U:C5	2.39	0.90
1:5:1673:U:C2	1:5:1674:C:C5	2.59	0.90
1:5:1818:G:C8	1:5:1821:G:O6	2.24	0.90
42:n:17:ARG:HH11	50:S2:1173:A:H5'	1.36	0.90
50:S2:337:C:N3	50:S2:338:G:C8	2.39	0.90
50:S2:1293:A:N3	82:Sf:151:ASN:N	2.19	0.90
50:S2:1382:A:C6	50:S2:1383:A:N7	2.39	0.90
1:5:100:C:C5	1:5:101:A:N7	2.37	0.90
1:5:1669:A:H4'	1:5:1685:G:N2	1.85	0.90
1:5:4172:A:C2	1:5:4173:G:C8	2.60	0.90
50:S2:51:U:N3	50:S2:52:G:N7	2.19	0.90
52:SB:89:GLU:CA	52:SB:223:PHE:HE2	1.84	0.90
1:5:1807:C:N3	1:5:1808:C:C6	2.40	0.90
50:S2:388:U:C2	50:S2:389:A:C8	2.59	0.90
50:S2:597:G:C2	50:S2:640:A:C2	2.59	0.90
50:S2:1755:C:N3	50:S2:1756:C:C5	2.39	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:144:LYS:HG3	52:SB:145:LYS:N	1.84	0.90
85:S5:28:G:C5	85:S5:29:G:N7	2.40	0.90
86:S6:3:C:C5	86:S6:4:C:C4	2.58	0.90
1:5:1266:G:N2	1:5:1268:G:C5	2.39	0.90
1:5:1475:G:N2	1:5:1476:C:C5	2.40	0.90
1:5:2529:A:C5	1:5:2532:C:C5	2.59	0.90
1:5:3974:G:H1'	46:z:210:MET:CE	2.02	0.90
1:5:4123:C:N3	1:5:4124:G:C8	2.40	0.90
1:5:4213:A:H61	1:5:4218:U:H3	0.95	0.90
50:S2:1351:G:H1	50:S2:1360:U:H3	1.20	0.90
50:S2:1361:G:H21	50:S2:1380:C:H42	0.92	0.90
52:SB:97:LEU:HD13	52:SB:228:LEU:CD1	2.01	0.90
85:S5:5:G:N1	85:S5:69:G:N1	2.20	0.90
1:5:106:A:C1'	1:5:336:A:H8	1.85	0.90
1:5:977:C:C4	1:5:978:G:N7	2.38	0.90
1:5:2037:C:C2	1:5:2038:U:H5	1.83	0.90
1:5:2089:G:O6	1:5:2263:A:C5'	2.20	0.90
1:5:4273:A:H2'	1:5:4274:A:O4'	1.70	0.90
1:5:4355:G:C2	1:5:4356:G:N7	2.40	0.90
39:k:40:ARG:HB3	39:k:41:TYR:HD1	1.32	0.90
50:S2:623:G:C2	50:S2:624:C:C6	2.59	0.90
1:5:754:U:N3	1:5:755:C:C5	2.40	0.90
3:8:12:G:N1	3:8:13:G:N7	2.19	0.90
50:S2:649:U:O2	50:S2:650:A:H8	1.49	0.90
86:S6:51:U:H2'	86:S6:52:G:C8	2.06	0.90
1:5:2565:A:N7	1:5:2566:G:H1'	1.85	0.90
1:5:3941:G:N2	1:5:4072:C:C2	2.34	0.90
44:p:92:GLN:HG2	52:SB:219:LYS:HZ2	0.74	0.90
50:S2:974:C:N3	50:S2:975:G:N7	2.19	0.90
50:S2:1317:C:C2	50:S2:1318:G:C8	2.60	0.90
85:S5:7:A:H3'	85:S5:8:U:H6	1.34	0.90
85:S5:31:A:C8	85:S5:32:U:C5	2.59	0.90
85:S5:37:A:C5	85:S5:38:A:C4	2.60	0.90
1:5:1174:G:N2	1:5:1175:A:C8	2.40	0.90
1:5:1542:U:OP1	1:5:2743:A:C8	2.24	0.90
1:5:1632:A:N6	1:5:1634:A:N9	2.19	0.90
29:a:36:GLY:O	29:a:41:HIS:HB2	1.71	0.90
50:S2:414:A:C2	50:S2:424:C:O2	2.24	0.90
50:S2:1433:C:OP2	50:S2:1433:C:C3'	2.19	0.90
1:5:54:G:C6	1:5:55:G:C8	2.58	0.90
1:5:1563:A:H2'	1:5:1564:A:C8	2.07	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2614:C:O2'	1:5:2808:G:OP1	1.88	0.90
1:5:3899:G:P	5:B:257:TRP:HB2	2.12	0.90
50:S2:1484:A:C5	50:S2:1485:U:C5	2.60	0.90
86:S6:50:U:H2'	86:S6:51:U:H6	1.31	0.90
1:5:3743:G:H2'	1:5:3744:G:H5'	1.54	0.89
47:1:255:VAL:HG22	47:1:431:LEU:HD11	1.53	0.89
50:S2:415:A:H2'	50:S2:416:U:O4'	1.70	0.89
50:S2:1840:U:C2	50:S2:1841:C:C6	2.61	0.89
50:S2:1860:A:N1	50:S2:1862:G:N7	2.19	0.89
68:SR:18:GLU:OE2	68:SR:69:ILE:CA	2.19	0.89
77:Sa:86:ASN:O	77:Sa:86:ASN:ND2	2.04	0.89
1:5:1936:C:H5	2:7:84:U:C5	1.86	0.89
1:5:2447:U:O2'	1:5:2448:G:O5'	1.89	0.89
1:5:2568:C:C2	1:5:2569:G:C8	2.59	0.89
1:5:3723:A:C2	1:5:3724:A:C5	2.59	0.89
1:5:3960:A:C2	1:5:4045:G:O2'	2.12	0.89
1:5:4054:C:H5''	46:z:205:TYR:CD2	1.97	0.89
1:5:4054:C:H1'	46:z:35:GLN:CD	1.97	0.89
8:E:157:ARG:HD3	8:E:266:TYR:CE1	2.07	0.89
50:S2:43:U:O2	50:S2:484:A:C2	2.25	0.89
50:S2:186:C:O2	50:S2:187:G:C8	2.25	0.89
50:S2:291:G:O5'	50:S2:291:G:C8	2.25	0.89
50:S2:449:A:C6	50:S2:452:G:C6	2.60	0.89
50:S2:1317:C:O2	50:S2:1318:G:C8	2.25	0.89
50:S2:1512:C:C2	50:S2:1513:C:C5	2.60	0.89
50:S2:1640:A:O2'	86:S6:40:C:O2	1.89	0.89
85:S5:68:C:H2'	85:S5:69:G:H8	1.30	0.89
1:5:352:G:O2'	3:8:22:U:O4	1.89	0.89
1:5:445:U:H1'	1:5:2313:A:C2	2.07	0.89
1:5:1235:G:C2	1:5:1236:C:C5	2.61	0.89
1:5:1271:G:H3'	1:5:1272:C:H5'	1.54	0.89
1:5:1966:C:C2	1:5:1967:A:C8	2.60	0.89
1:5:3952:A:C6	1:5:3953:G:N7	2.41	0.89
1:5:4697:U:H4'	41:m:104:HIS:HD2	1.35	0.89
3:8:119:C:C2	3:8:120:G:H8	1.88	0.89
40:l:21:ARG:NH2	40:l:24:PRO:N	2.20	0.89
50:S2:56:G:N1	50:S2:90:G:C2	2.39	0.89
50:S2:114:G:HO2'	50:S2:382:C:HO2'	0.95	0.89
50:S2:1834:A:H2	50:S2:1836:G:N3	1.69	0.89
86:S6:3:C:N3	86:S6:71:G:N3	2.20	0.89
1:5:1671:U:H3	1:5:1672:U:H5	1.09	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2293:U:O2	1:5:2294:G:H8	1.45	0.89
47:1:248:THR:N	47:1:440:ALA:HB2	1.87	0.89
50:S2:1206:G:C2	50:S2:1208:A:N7	2.41	0.89
50:S2:1220:A:N6	50:S2:1221:G:O6	2.04	0.89
50:S2:1378:A:N6	51:SA:136:GLU:OE2	2.04	0.89
50:S2:1414:A:C2	50:S2:1415:C:C5	2.61	0.89
68:SR:26:ASN:HD21	68:SR:59:LYS:HE2	1.37	0.89
86:S6:23:A:N7	86:S6:24:G:C5	2.40	0.89
1:5:172:C:C2	1:5:173:C:C6	2.61	0.89
1:5:1245:C:C2	1:5:1246:G:C8	2.61	0.89
1:5:1563:A:N6	50:S2:1028:A:N6	2.20	0.89
1:5:4053:A:H4'	46:z:213:PRO:HD3	1.53	0.89
50:S2:309:G:N2	50:S2:310:C:C2	2.40	0.89
50:S2:1420:G:HO2'	70:ST:4:VAL:N	1.69	0.89
50:S2:1834:A:C2	50:S2:1836:G:N1	2.41	0.89
1:5:4068:U:O4	1:5:4069:U:C5	2.26	0.89
1:5:4548:A:C8	1:5:4548:A:C5'	2.55	0.89
7:D:210:TYR:OH	7:D:214:GLU:HG3	1.71	0.89
50:S2:51:U:C2	50:S2:52:G:C8	2.60	0.89
50:S2:340:C:N3	50:S2:341:C:C4	2.41	0.89
50:S2:1532:C:H5''	50:S2:1533:A:O4'	1.73	0.89
50:S2:1551:U:O4'	50:S2:1558:C:O2	1.90	0.89
68:SR:10:LYS:HA	68:SR:53:TYR:HE2	1.33	0.89
1:5:28:C:C2	1:5:29:G:C8	2.60	0.89
1:5:2328:G:O2'	1:5:2329:U:O5'	1.88	0.89
1:5:2724:G:C2	1:5:2726:G:C8	2.61	0.89
1:5:4228:G:H5''	1:5:4229:U:O4'	1.73	0.89
1:5:4580:U:N3	1:5:4581:G:C8	2.41	0.89
2:7:94:C:N3	2:7:95:C:C5	2.40	0.89
50:S2:553:U:C2	50:S2:554:A:C8	2.61	0.89
50:S2:579:C:C4	50:S2:580:U:C5	2.60	0.89
50:S2:821:G:O6	60:SJ:150:ARG:CD	2.19	0.89
50:S2:1124:C:N3	50:S2:1125:C:C5	2.41	0.89
50:S2:1562:C:O2	50:S2:1563:G:C8	2.26	0.89
85:S5:61:C:H2'	85:S5:62:C:C6	2.07	0.89
85:S5:63:G:O2'	85:S5:64:A:OP2	1.88	0.89
1:5:211:G:C2	1:5:212:A:C8	2.60	0.89
1:5:3967:G:N9	46:z:162:VAL:HG21	1.88	0.89
1:5:4281:A:C2	1:5:4283:G:C5	2.60	0.89
1:5:4579:U:C2	1:5:4580:U:C6	2.61	0.89
50:S2:384:U:H5	50:S2:386:C:C5	1.91	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:387:C:C2	50:S2:388:U:C5	2.59	0.89
50:S2:419:G:N2	50:S2:661:U:O2	2.06	0.89
50:S2:1109:C:N4	68:SR:122:PRO:C	2.30	0.89
86:S6:48:C:C2	86:S6:59:U:H1'	2.07	0.89
1:5:445:U:C1'	1:5:2313:A:C2	2.56	0.89
1:5:2037:C:H2'	1:5:2038:U:C6	2.07	0.89
1:5:2449:A:C8	1:5:2450:G:H1'	2.08	0.89
1:5:3693:U:C4	1:5:3694:U:C5	2.61	0.89
1:5:4241:C:N3	1:5:4242:U:C5	2.41	0.89
3:8:11:C:O2	3:8:12:G:C8	2.26	0.89
50:S2:792:C:C2	50:S2:793:G:C8	2.61	0.89
50:S2:1095:U:C4	50:S2:1149:A:N1	2.40	0.89
50:S2:1114:U:H3	50:S2:1119:A:N6	1.71	0.89
50:S2:1149:A:C2	50:S2:1151:G:N7	2.41	0.89
50:S2:1382:A:N1	50:S2:1383:A:N7	2.20	0.89
50:S2:1540:G:N3	50:S2:1541:G:C8	2.41	0.89
50:S2:1782:G:C2	50:S2:1784:G:N7	2.41	0.89
85:S5:2:C:O2'	85:S5:3:C:OP1	1.90	0.89
1:5:271:C:C2	1:5:272:U:C6	2.60	0.89
1:5:733:A:C8	1:5:734:G:C8	2.61	0.89
1:5:1284:G:O6	6:C:312:ARG:NH2	2.06	0.89
1:5:2078:C:O2	1:5:2079:G:H8	1.56	0.89
1:5:2468:U:H3	1:5:2473:A:N6	1.67	0.89
1:5:3783:A:H2	1:5:3789:C:H42	1.17	0.89
1:5:4269:G:H1	1:5:4277:G:H1	1.17	0.89
1:5:4518:A:HO2'	5:B:257:TRP:HZ3	0.93	0.89
1:5:4934:A:C6	1:5:4935:C:C5	2.61	0.89
1:5:5003:U:C2	1:5:5045:G:N2	2.41	0.89
46:z:161:LYS:HG2	86:S6:55:U:C5'	2.02	0.89
50:S2:1151:G:C2	50:S2:1152:U:C6	2.60	0.89
52:SB:97:LEU:HB3	52:SB:232:HIS:NE2	1.84	0.89
1:5:294:G:C2	29:a:61:TYR:CE2	2.61	0.88
1:5:1175:A:C2	1:5:1176:C:C6	2.61	0.88
1:5:2463:G:C2	1:5:2464:C:C4	2.60	0.88
1:5:2497:C:O2	1:5:2498:C:C6	2.26	0.88
1:5:3878:C:O2	5:B:258:HIS:HE1	1.54	0.88
1:5:4229:U:N3	1:5:4230:C:C6	2.40	0.88
47:1:292:ILE:HG23	47:1:449:LEU:HD13	1.55	0.88
50:S2:1307:U:H1'	82:Sf:133:ALA:HB2	1.54	0.88
52:SB:150:ILE:HG12	68:SR:128:PHE:CD1	2.08	0.88
86:S6:13:C:H3'	86:S6:14:C:C6	2.06	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:751:G:C2	1:5:752:G:N7	2.42	0.88
35:g:11:LEU:HB3	35:g:18:ASN:HD21	1.35	0.88
86:S6:22:G:N9	86:S6:23:A:H2	1.72	0.88
1:5:1340:C:C2	1:5:1341:U:C5	2.61	0.88
1:5:4233:A:H61	1:5:4290:U:H3	1.07	0.88
50:S2:341:C:N4	50:S2:342:C:C5	2.41	0.88
74:SX:89:GLY:HA3	81:Se:10:GLY:H	1.38	0.88
1:5:504:G:N1	1:5:654:C:C2	2.41	0.88
1:5:1245:C:C5	1:5:1269:G:O6	2.25	0.88
1:5:1475:G:N2	1:5:1476:C:C4	2.41	0.88
1:5:1478:C:O2	1:5:1479:G:C8	2.26	0.88
7:D:22:ARG:HH11	7:D:22:ARG:HG3	1.38	0.88
12:I:104:SER:OG	85:S5:3:C:OP1	1.90	0.88
50:S2:1862:G:O2'	77:Sa:5:ARG:NH2	2.06	0.88
1:5:294:G:C6	29:a:61:TYR:CD2	2.61	0.88
1:5:751:G:N2	1:5:752:G:C5	2.42	0.88
1:5:1213:G:C5	1:5:1215:C:C6	2.62	0.88
1:5:1929:A:H61	1:5:2054:U:H3	0.89	0.88
1:5:2325:C:N3	1:5:2326:G:C8	2.41	0.88
1:5:3940:U:H3	1:5:4073:A:N6	1.72	0.88
47:1:263:VAL:HG11	47:1:416:TYR:CD2	2.08	0.88
50:S2:1688:C:H5''	50:S2:1688:C:C6	2.07	0.88
84:S4:16:U:H2'	84:S4:17:U:C5'	2.00	0.88
1:5:1411:C:O2	1:5:1412:G:C8	2.27	0.88
1:5:1950:U:C2	1:5:1951:G:C8	2.62	0.88
1:5:3680:U:H2'	1:5:3680:U:O2	1.71	0.88
1:5:3944:G:C5	1:5:3945:A:N7	2.41	0.88
42:n:20:MET:HE3	50:S2:1817:G:O2'	1.73	0.88
50:S2:555:A:C2	50:S2:557:U:C5	2.61	0.88
50:S2:600:G:C8	50:S2:631:U:C5	2.61	0.88
52:SB:36:PRO:HB3	52:SB:231:LEU:CD2	2.03	0.88
1:5:1049:C:N3	1:5:1050:C:C5	2.41	0.88
1:5:2089:G:C5	1:5:2262:G:H2'	2.08	0.88
1:5:2327:G:C2	1:5:2328:G:N7	2.42	0.88
1:5:2851:G:C5	1:5:2852:U:H6	1.90	0.88
1:5:3974:G:H1'	46:z:210:MET:HE1	1.56	0.88
1:5:4098:A:N1	1:5:4099:G:C5	2.41	0.88
50:S2:618:C:C4	50:S2:619:A:C8	2.61	0.88
50:S2:1213:C:N4	50:S2:1682:C:C2	2.41	0.88
68:SR:13:ALA:HB3	68:SR:53:TYR:HD2	1.37	0.88
85:S5:52:G:C5	85:S5:53:G:N7	2.40	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:34:G:N2	86:S6:35:A:N1	2.21	0.88
1:5:1324:A:C2	1:5:3876:A:H2'	2.09	0.88
1:5:4563:U:C2	1:5:4564:A:C5	2.61	0.88
1:5:4884:G:C2	1:5:4885:U:C6	2.61	0.88
1:5:197:A:H5'	1:5:197:A:H8	1.38	0.88
1:5:689:U:N3	1:5:690:C:C5	2.42	0.88
1:5:1269:G:C3'	1:5:2111:G:O6	2.20	0.88
1:5:1560:A:N3	1:5:1561:G:N7	2.20	0.88
1:5:1965:G:C2	1:5:1966:C:C6	2.61	0.88
1:5:2294:G:C2	1:5:2295:C:C6	2.62	0.88
1:5:2844:A:C6	1:5:3839:G:C8	2.61	0.88
1:5:3789:C:C5'	85:S5:73:A:OP1	2.22	0.88
1:5:5047:C:C2	1:5:5048:A:C6	2.62	0.88
50:S2:1702:G:OP1	84:S4:20:U:O2'	1.90	0.88
84:S4:16:U:C4	84:S4:17:U:N3	2.41	0.88
85:S5:21:A:C4	85:S5:48:C:C5	2.57	0.88
1:5:189:G:C2	1:5:190:G:N7	2.42	0.88
1:5:1074:G:N2	1:5:1238:A:C2	2.41	0.88
1:5:4096:C:C2	35:g:112:GLN:NE2	2.23	0.88
50:S2:618:C:C4	50:S2:619:A:N7	2.42	0.88
50:S2:1592:C:N3	50:S2:1593:C:C6	2.42	0.88
50:S2:1864:U:O4	77:Sa:9:GLY:HA3	1.73	0.88
1:5:662:C:H2'	1:5:663:G:H8	1.39	0.87
1:5:3629:A:H1'	50:S2:1721:U:C4	2.07	0.87
1:5:3629:A:H4'	50:S2:1721:U:O2	1.74	0.87
1:5:3662:A:N6	1:5:3680:U:H3	1.71	0.87
1:5:4561:C:O2	1:5:4561:C:H2'	1.73	0.87
3:8:86:U:O4	36:h:7:ARG:HG2	1.72	0.87
13:J:99:PHE:CE2	13:J:105:PHE:HB3	2.09	0.87
86:S6:53:G:H2'	86:S6:54:U:C6	2.07	0.87
1:5:77:U:O4	1:5:335:A:N1	2.06	0.87
1:5:270:U:N3	1:5:271:C:C5	2.42	0.87
1:5:1188:C:O2	1:5:1189:G:C8	2.27	0.87
1:5:1359:G:H2'	1:5:1360:G:C8	2.09	0.87
1:5:2465:C:H2'	1:5:2466:G:C8	2.08	0.87
1:5:4315:A:C2	1:5:4316:G:C8	2.62	0.87
1:5:4481:U:H2'	1:5:4482:U:H6	1.37	0.87
1:5:5062:G:N2	1:5:5063:G:C8	2.41	0.87
10:G:264:LYS:CE	52:SB:31:TYR:HE2	1.87	0.87
50:S2:309:G:C2	50:S2:310:C:C4	2.62	0.87
50:S2:452:G:N2	50:S2:453:C:C2	2.42	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1101:U:C2	50:S2:1102:G:N7	2.42	0.87
50:S2:1378:A:OP2	51:SA:102:ARG:NH2	2.06	0.87
55:SE:191:ARG:HD2	55:SE:218:PHE:CE1	2.09	0.87
86:S6:69:G:C2	86:S6:70:G:C8	2.61	0.87
1:5:1279:A:H2'	1:5:1280:C:C4	2.09	0.87
1:5:4123:C:C2	1:5:4124:G:C8	2.63	0.87
47:1:435:ALA:HB2	47:1:448:LEU:HD13	1.55	0.87
50:S2:386:C:C2	50:S2:387:C:C6	2.61	0.87
50:S2:751:G:C6	50:S2:791:C:N3	2.43	0.87
50:S2:1017:U:O2	50:S2:1017:U:H2'	1.74	0.87
50:S2:1122:A:C6	50:S2:1123:C:C5	2.62	0.87
50:S2:1860:A:N3	50:S2:1862:G:C8	2.42	0.87
1:5:964:A:H8	1:5:964:A:C5'	1.86	0.87
1:5:1757:U:C2	1:5:1758:G:C8	2.62	0.87
1:5:4230:C:N3	1:5:4231:C:H5	1.71	0.87
74:SX:135:LYS:HA	81:Se:13:ARG:HH22	1.38	0.87
1:5:126:C:N3	1:5:127:G:N7	2.22	0.87
1:5:425:U:N3	1:5:426:A:N7	2.22	0.87
1:5:1566:C:O3'	1:5:1567:U:H5'	1.74	0.87
1:5:1687:U:O2	1:5:1850:A:C6	2.26	0.87
1:5:1983:A:C2	1:5:2010:A:H5''	2.10	0.87
1:5:2110:C:C6	1:5:2110:C:OP1	2.28	0.87
1:5:3808:C:C5'	50:S2:1816:G:O2'	2.22	0.87
10:G:264:LYS:HZ2	52:SB:31:TYR:HE2	1.13	0.87
50:S2:71:G:H2'	50:S2:72:C:C6	2.10	0.87
50:S2:1310:U:N3	50:S2:1311:C:H5	1.71	0.87
55:SE:100:ARG:NH1	55:SE:121:TYR:OH	2.08	0.87
61:SK:8:ARG:HD3	61:SK:12:TYR:HE1	1.38	0.87
1:5:1866:U:O2'	1:5:1867:A:O5'	1.93	0.87
1:5:1964:A:C8	1:5:1965:G:C8	2.60	0.87
1:5:1964:A:C6	1:5:1965:G:N9	2.43	0.87
1:5:2784:C:N3	1:5:2785:C:C5	2.42	0.87
1:5:4055:U:P	46:z:205:TYR:OH	2.33	0.87
1:5:4550:G:C6	1:5:4551:U:C5	2.62	0.87
1:5:4885:U:C2	1:5:4886:C:C6	2.63	0.87
3:8:60:G:O6	36:h:59:THR:HA	1.74	0.87
47:1:284:PHE:CD1	47:1:428:ILE:CD1	2.58	0.87
50:S2:806:U:C2	50:S2:807:G:C8	2.62	0.87
50:S2:823:U:C4	75:SY:64:PHE:CE2	2.63	0.87
50:S2:1203:G:C4	50:S2:1204:A:N7	2.42	0.87
85:S5:69:G:H2'	85:S5:70:G:C8	2.09	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1724:G:H21	9:F:105:PRO:HB3	1.39	0.87
1:5:2328:G:HO2'	1:5:2329:U:C5'	1.88	0.87
1:5:2568:C:O2	1:5:2569:G:C8	2.26	0.87
1:5:4093:G:H2'	1:5:4094:G:H5''	1.55	0.87
1:5:4269:G:H22	1:5:4277:G:H22	1.18	0.87
1:5:4333:C:C2	1:5:4334:U:C5	2.63	0.87
1:5:488:G:C2	1:5:489:C:C6	2.63	0.87
1:5:1174:G:C2	1:5:1175:A:N7	2.42	0.87
1:5:2361:G:C6	18:P:25:HIS:HD2	1.93	0.87
1:5:3907:G:C8	1:5:4449:A:H1'	2.09	0.87
1:5:4332:C:N3	1:5:4333:C:H5	1.73	0.87
21:S:29:ARG:CZ	21:S:29:ARG:HB3	2.03	0.87
42:n:17:ARG:HH11	50:S2:1173:A:C5'	1.87	0.87
50:S2:995:G:H22	50:S2:997:A:H3'	1.38	0.87
50:S2:1206:G:N3	50:S2:1208:A:H8	1.70	0.87
50:S2:1310:U:O4'	82:Sf:143:LYS:HE3	1.74	0.87
50:S2:1398:G:N2	50:S2:1399:C:C6	2.43	0.87
50:S2:1832:A:C4	50:S2:1833:C:C5	2.63	0.87
86:S6:34:G:O2'	86:S6:35:A:O4'	1.91	0.87
1:5:1447:C:N3	1:5:2097:U:O4	2.08	0.87
1:5:1598:C:C2	1:5:1599:A:H8	1.93	0.87
1:5:1699:A:O5'	9:F:179:ARG:NH2	2.07	0.87
1:5:4054:C:C1'	46:z:35:GLN:OE1	2.22	0.87
1:5:4092:G:C6	1:5:4093:G:C2	2.63	0.87
3:8:39:G:O2'	3:8:103:A:N6	2.08	0.87
47:1:447:ILE:HA	47:1:450:ALA:HB3	1.56	0.87
50:S2:1284:A:N6	63:SM:33:ARG:HD3	1.89	0.87
50:S2:1383:A:H2'	50:S2:1384:C:C6	2.08	0.87
52:SB:144:LYS:C	52:SB:145:LYS:CA	2.48	0.87
84:S4:19:U:C2'	84:S4:20:U:H5'	2.05	0.87
85:S5:3:C:C2	85:S5:4:C:C5	2.62	0.87
1:5:2613:C:C2	1:5:2614:C:C6	2.62	0.86
1:5:4510:A:N6	1:5:4592:C:H4'	1.90	0.86
2:7:59:G:C6	2:7:60:G:C8	2.63	0.86
50:S2:1310:U:O2	50:S2:1311:C:H6	1.57	0.86
84:S4:20:U:O2'	84:S4:21:U:OP1	1.92	0.86
1:5:723:A:C2	1:5:943:A:N1	2.43	0.86
1:5:1625:G:C5	1:5:1642:A:N1	2.42	0.86
1:5:1726:U:N3	1:5:1727:U:C5	2.43	0.86
1:5:2011:C:H2'	1:5:2012:A:O4'	1.75	0.86
1:5:3973:G:O3'	46:z:28:PHE:HB3	1.73	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4174:U:C2	1:5:4175:G:C8	2.63	0.86
50:S2:1204:A:C2	50:S2:1205:C:N3	2.42	0.86
1:5:1485:C:O2	1:5:4349:C:C4	2.29	0.86
1:5:1967:A:C2	1:5:1968:G:C8	2.63	0.86
1:5:2509:C:O2'	1:5:2510:G:C5'	2.23	0.86
1:5:2576:G:C6	1:5:2577:C:C5	2.63	0.86
1:5:3912:U:O2'	1:5:3913:G:H5''	1.76	0.86
1:5:4314:C:N3	1:5:4315:A:C8	2.44	0.86
2:7:23:A:O2'	2:7:24:C:O5'	1.94	0.86
50:S2:475:C:N3	50:S2:476:A:C8	2.42	0.86
50:S2:551:U:N3	50:S2:552:G:N7	2.23	0.86
50:S2:1310:U:O2	50:S2:1311:C:C6	2.29	0.86
50:S2:1430:C:C4	50:S2:1431:G:N7	2.43	0.86
50:S2:1666:C:C2	50:S2:1667:U:C5	2.63	0.86
86:S6:46:G:O2'	86:S6:47:U:H5''	1.75	0.86
1:5:1899:G:N3	1:5:1900:C:C5	2.40	0.86
1:5:2279:A:C2	1:5:2280:G:N7	2.43	0.86
1:5:4339:A:O2'	19:Q:178:ARG:NH1	2.08	0.86
1:5:4983:C:O2	1:5:4984:C:C5	2.28	0.86
7:D:250:ASN:HD21	7:D:252:VAL:HG12	1.39	0.86
50:S2:459:C:N3	50:S2:460:A:C8	2.44	0.86
50:S2:999:G:C2	50:S2:1000:C:C6	2.63	0.86
50:S2:1073:U:N3	50:S2:1074:C:C5	2.42	0.86
50:S2:1345:G:H2'	50:S2:1346:U:H6	1.40	0.86
85:S5:6:G:O2'	85:S5:7:A:O5'	1.91	0.86
1:5:738:C:N3	1:5:739:G:N7	2.23	0.86
1:5:4215:C:N3	1:5:4216:G:N7	2.24	0.86
3:8:65:A:N3	3:8:66:A:C8	2.43	0.86
50:S2:26:U:C2	50:S2:27:A:C8	2.63	0.86
50:S2:536:A:C6	50:S2:537:C:C6	2.63	0.86
50:S2:634:A:C2	50:S2:635:G:C8	2.63	0.86
50:S2:1383:A:H4'	54:SD:156:LEU:CD2	2.05	0.86
74:SX:135:LYS:HA	81:Se:13:ARG:NH2	1.88	0.86
1:5:1552:G:O2'	1:5:1575:A:N6	2.09	0.86
1:5:2689:C:N3	1:5:2690:C:H5	1.72	0.86
1:5:2843:U:N3	1:5:2844:A:N7	2.24	0.86
1:5:4052:C:O2'	46:z:212:LYS:N	2.09	0.86
1:5:4934:A:C2	1:5:4935:C:C6	2.63	0.86
13:J:99:PHE:CE2	13:J:105:PHE:CB	2.58	0.86
50:S2:1213:C:H5	50:S2:1682:C:C5	1.90	0.86
50:S2:1402:A:N6	50:S2:1441:U:C2	2.43	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1402:A:C2	50:S2:1405:A:C6	2.63	0.86
52:SB:225:LEU:O	52:SB:229:MET:HG2	1.75	0.86
1:5:237:G:O2'	1:5:238:C:OP2	1.94	0.86
1:5:1476:C:C2	1:5:1477:C:C6	2.63	0.86
1:5:1583:A:H1'	1:5:2396:A:N6	1.91	0.86
1:5:1667:G:C2	1:5:2283:G:O6	2.29	0.86
1:5:4240:G:C6	1:5:4241:C:C5	2.63	0.86
28:Z:28:ASN:O	28:Z:28:ASN:ND2	2.07	0.86
50:S2:1528:G:C2	50:S2:1529:C:C4	2.64	0.86
86:S6:59:U:H2'	86:S6:60:U:C6	2.10	0.86
1:5:102:G:HO2'	1:5:1381:U:HO2'	1.23	0.86
1:5:1213:G:C4	1:5:1215:C:C1'	2.58	0.86
1:5:1477:C:N3	1:5:1478:C:C6	2.43	0.86
1:5:2639:U:H2'	1:5:2694:G:H1	1.40	0.86
1:5:2736:G:N2	1:5:2737:C:C2	2.44	0.86
50:S2:499:G:C2	50:S2:504:G:N1	2.44	0.86
50:S2:1074:C:O2	50:S2:1075:C:C6	2.27	0.86
50:S2:1293:A:N3	82:Sf:151:ASN:C	2.33	0.86
50:S2:1316:C:N3	50:S2:1317:C:H5	1.69	0.86
50:S2:1511:U:N3	50:S2:1512:C:C6	2.44	0.86
50:S2:1755:C:C2	50:S2:1756:C:C6	2.63	0.86
85:S5:70:G:H2'	85:S5:71:G:C8	2.11	0.86
1:5:86:U:O2	1:5:86:U:H2'	1.76	0.86
1:5:106:A:C1'	1:5:336:A:C8	2.57	0.86
1:5:1215:C:N3	1:5:1216:C:C6	2.43	0.86
50:S2:575:A:H2'	50:S2:576:A:O4'	1.75	0.86
50:S2:1303:C:C5	50:S2:1304:U:C6	2.63	0.86
50:S2:1484:A:O2'	50:S2:1485:U:H5'	1.76	0.86
50:S2:1508:A:C5	50:S2:1510:G:C8	2.64	0.86
1:5:291:U:H2'	1:5:292:G:C2'	2.05	0.86
1:5:470:A:N6	1:5:471:A:C5	2.44	0.86
1:5:1240:G:N7	1:5:1271:G:H4'	1.91	0.86
1:5:1598:C:O2	1:5:1598:C:H2'	1.74	0.86
1:5:3622:C:O2	1:5:3623:C:C2	2.29	0.86
1:5:3718:A:H2'	1:5:3719:A:O4'	1.76	0.86
1:5:4481:U:H2'	1:5:4482:U:C6	2.10	0.86
3:8:12:G:H21	3:8:13:G:H1'	1.37	0.86
3:8:134:G:C2	3:8:135:C:C6	2.64	0.86
50:S2:314:U:OP1	57:SG:191:ARG:NH2	2.09	0.86
50:S2:339:A:N3	50:S2:340:C:C5	2.44	0.86
50:S2:381:C:H41	59:SI:49:ARG:HD3	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1224:G:N2	50:S2:1643:U:N3	2.23	0.86
50:S2:1611:G:O2'	69:SS:86:ARG:NH1	2.09	0.86
1:5:2513:A:N7	35:g:13:TYR:CD2	2.44	0.85
1:5:3721:U:O2	1:5:3722:G:H8	1.55	0.85
1:5:3767:C:H5''	50:S2:1849:G:O6	1.75	0.85
1:5:4095:G:N3	1:5:4096:C:C5	2.44	0.85
1:5:4239:A:N6	1:5:4240:G:C5	2.43	0.85
1:5:4414:A:C6	1:5:4427:G:N1	2.44	0.85
3:8:81:C:O2	3:8:81:C:H2'	1.75	0.85
4:A:89:TYR:HB2	4:A:100:ASN:HD21	1.41	0.85
8:E:157:ARG:CD	8:E:266:TYR:CE1	2.59	0.85
47:1:268:LYS:HD2	47:1:276:TYR:CE1	2.10	0.85
50:S2:459:C:C4	50:S2:460:A:N7	2.43	0.85
83:Sg:17:TRP:HB3	83:Sg:303:THR:HA	1.54	0.85
85:S5:8:U:O2'	85:S5:48:C:O2'	1.93	0.85
85:S5:47:U:H3'	85:S5:48:C:C5'	2.05	0.85
86:S6:6:G:H2'	86:S6:7:G:O4'	1.77	0.85
1:5:244:G:C6	1:5:246:G:N7	2.45	0.85
1:5:1538:U:O2'	1:5:1629:G:OP1	1.94	0.85
1:5:3675:G:N2	1:5:3676:G:C5	2.44	0.85
1:5:3967:G:H2'	46:z:162:VAL:CG2	2.04	0.85
1:5:4165:C:C4	1:5:4166:G:N7	2.45	0.85
1:5:4276:G:N1	1:5:4277:G:C8	2.44	0.85
1:5:4335:C:H2'	1:5:4336:A:O4'	1.77	0.85
3:8:125:C:H4'	3:8:126:C:H3'	1.58	0.85
13:J:119:TYR:HE1	69:SS:101:ASN:HB2	0.82	0.85
50:S2:841:G:N3	50:S2:842:C:C5	2.43	0.85
50:S2:1402:A:N6	50:S2:1441:U:C4	2.44	0.85
86:S6:10:G:C4	86:S6:11:C:C5	2.64	0.85
1:5:1214:C:O2'	1:5:2114:G:C2	2.25	0.85
1:5:1598:C:N3	1:5:1599:A:C8	2.45	0.85
1:5:2529:A:C6	1:5:2532:C:C6	2.64	0.85
1:5:2568:C:N3	1:5:2569:G:N7	2.23	0.85
1:5:3717:A:C6	1:5:3736:A:C6	2.63	0.85
1:5:5044:A:H2'	1:5:5045:G:H5'	1.58	0.85
50:S2:447:A:C6	50:S2:449:A:C4	2.64	0.85
50:S2:925:G:N1	50:S2:926:A:N7	2.23	0.85
50:S2:1018:U:C2	50:S2:1019:C:C5	2.64	0.85
50:S2:1205:C:O2	50:S2:1693:G:O6	1.94	0.85
50:S2:1410:C:C2	50:S2:1411:G:C8	2.65	0.85
50:S2:1416:C:H2'	50:S2:1417:C:C5	2.11	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:97:LEU:CB	52:SB:232:HIS:CD2	2.57	0.85
68:SR:17:ILE:HG21	68:SR:61:ILE:CD1	2.05	0.85
86:S6:6:G:O6	86:S6:68:C:N4	2.08	0.85
1:5:196:C:N3	1:5:243:A:N6	2.24	0.85
1:5:1949:U:O2	1:5:1950:U:C6	2.30	0.85
1:5:2726:G:C6	1:5:2727:C:N4	2.45	0.85
1:5:2848:G:O2'	1:5:3838:U:O4	1.94	0.85
1:5:3662:A:H61	1:5:3680:U:H3	1.23	0.85
1:5:3731:C:N3	1:5:3732:A:C8	2.44	0.85
1:5:3967:G:C2'	46:z:162:VAL:HG21	1.88	0.85
1:5:4064:C:O2	1:5:4065:G:C8	2.28	0.85
50:S2:499:G:N2	50:S2:504:G:C2	2.44	0.85
50:S2:1303:C:C4	50:S2:1304:U:C5	2.65	0.85
50:S2:1591:C:N4	50:S2:1592:C:C4	2.45	0.85
50:S2:1828:C:H2'	50:S2:1829:G:O4'	1.75	0.85
1:5:703:G:O6	1:5:706:C:N4	2.09	0.85
1:5:1427:A:H3'	1:5:1428:U:C6	2.11	0.85
1:5:2495:U:N3	1:5:2496:G:N7	2.24	0.85
1:5:3943:A:C2	1:5:3944:G:N7	2.45	0.85
12:I:80:CYS:SG	12:I:144:ASN:ND2	2.50	0.85
46:z:18:LEU:HD11	46:z:180:VAL:HB	1.56	0.85
50:S2:1345:G:O2'	50:S2:1346:U:H5'	1.77	0.85
50:S2:1540:G:C4	50:S2:1541:G:C8	2.64	0.85
50:S2:1642:U:O2	50:S2:1643:U:C5	2.29	0.85
1:5:1634:A:C2	1:5:1635:C:C6	2.65	0.85
1:5:1992:U:O4	1:5:2002:A:H3'	1.75	0.85
1:5:4052:C:C2'	46:z:207:LYS:NZ	2.38	0.85
1:5:4230:C:O2	1:5:4231:C:C6	2.30	0.85
16:N:138:PHE:HB3	16:N:143:ARG:HH22	1.40	0.85
50:S2:1361:G:N2	50:S2:1380:C:H42	1.74	0.85
50:S2:1603:G:N7	69:SS:28:PHE:CE2	2.44	0.85
50:S2:1667:U:C2	50:S2:1668:U:C5	2.64	0.85
84:S4:22:U:O4	85:S5:36:A:N6	2.10	0.85
86:S6:63:G:C6	86:S6:64:A:N7	2.42	0.85
1:5:1249:C:N3	1:5:1250:C:C5	2.44	0.85
1:5:1266:G:H5''	1:5:2112:G:C2	2.10	0.85
1:5:1625:G:C4	1:5:1642:A:N1	2.45	0.85
1:5:2457:G:N2	1:5:2465:C:C2	2.44	0.85
1:5:4055:U:OP2	46:z:205:TYR:CZ	2.28	0.85
1:5:4100:C:C2	1:5:4101:C:C6	2.65	0.85
1:5:4983:C:C2	1:5:4984:C:H5	1.92	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:112:U:O2	2:7:113:G:C8	2.28	0.85
50:S2:105:U:C4	50:S2:106:C:C5	2.65	0.85
50:S2:474:G:C2	50:S2:475:C:C6	2.64	0.85
50:S2:499:G:N2	50:S2:504:G:N1	2.23	0.85
50:S2:1204:A:H2	50:S2:1205:C:C2	1.95	0.85
50:S2:1291:A:H5''	82:Sf:146:LEU:HD12	1.57	0.85
54:SD:106:ARG:HG3	54:SD:174:HIS:O	1.77	0.85
1:5:27:C:N3	1:5:28:C:H5	1.75	0.85
1:5:982:U:H2'	1:5:983:C:H6	1.40	0.85
1:5:1339:U:O2	1:5:1340:C:C6	2.29	0.85
1:5:1650:A:C2	6:C:100:ARG:NH2	2.43	0.85
1:5:2036:C:C2	1:5:2037:C:H5	1.94	0.85
1:5:4223:C:H4'	12:I:119:PHE:CE2	2.10	0.85
1:5:4344:U:C2	1:5:4345:C:C5	2.65	0.85
50:S2:387:C:O2	50:S2:388:U:C6	2.29	0.85
50:S2:1203:G:O2'	50:S2:1204:A:H5'	1.76	0.85
85:S5:7:A:H5''	85:S5:8:U:H5	1.41	0.85
86:S6:75:C:O2'	86:S6:76:A:OP2	1.95	0.85
1:5:1439:C:C5'	9:F:36:ARG:HH12	1.88	0.85
1:5:2508:U:C2	1:5:2509:C:H5	1.93	0.85
1:5:3653:A:N1	1:5:3692:A:H4'	1.92	0.85
1:5:4757:C:O2	17:O:114:LYS:CA	2.25	0.85
44:p:28:LYS:NZ	50:S2:1040:G:H2'	1.92	0.85
50:S2:841:G:C2	50:S2:842:C:C4	2.65	0.85
50:S2:1434:C:H2'	50:S2:1435:C:C1'	2.06	0.85
54:SD:158:ILE:H	54:SD:158:ILE:HD13	1.42	0.85
1:5:957:G:P	1:5:1284:G:N2	2.50	0.85
1:5:1776:A:OP1	85:S5:53:G:OP2	1.94	0.85
1:5:1886:G:N2	1:5:1894:C:C2	2.45	0.85
1:5:1887:G:O6	1:5:1890:G:N7	2.09	0.85
1:5:1965:G:C2	1:5:1966:C:C5	2.65	0.85
1:5:2034:G:C4	1:5:2035:C:C6	2.64	0.85
1:5:3717:A:O2'	1:5:3718:A:C5'	2.25	0.85
1:5:4601:U:O4	1:5:4609:G:N2	2.10	0.85
1:5:4935:C:N4	8:E:179:ARG:HG2	1.90	0.85
2:7:43:U:C2	2:7:44:C:C5	2.65	0.85
2:7:114:U:H2'	2:7:115:A:H5''	1.59	0.85
50:S2:70:G:C2	50:S2:80:G:C2	2.65	0.85
50:S2:1109:C:N4	68:SR:123:THR:N	2.24	0.85
50:S2:1380:C:O4'	51:SA:113:GLN:NE2	2.10	0.85
50:S2:1408:U:N3	50:S2:1439:A:C2	2.42	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:ST:56:ARG:HD3	70:ST:79:TYR:CE2	2.12	0.85
86:S6:22:G:C4	86:S6:23:A:H2	1.94	0.85
1:5:1753:G:O6	1:5:1776:A:N6	2.09	0.84
1:5:1764:G:C6	1:5:1766:A:OP2	2.29	0.84
1:5:2294:G:N2	1:5:2295:C:C2	2.44	0.84
9:F:161:TYR:CD2	9:F:168:ARG:NH2	2.44	0.84
11:H:61:TRP:HZ2	21:S:152:PHE:HE2	1.22	0.84
50:S2:42:A:C2	50:S2:426:A:N7	2.44	0.84
50:S2:53:C:N3	50:S2:54:A:N7	2.25	0.84
50:S2:623:G:N1	50:S2:624:C:C5	2.45	0.84
50:S2:933:G:N2	50:S2:1000:C:C4	2.45	0.84
50:S2:992:A:C6	50:S2:993:G:C8	2.65	0.84
50:S2:1316:C:C2	50:S2:1317:C:C6	2.64	0.84
50:S2:1352:G:C2'	50:S2:1353:A:H5''	2.07	0.84
50:S2:1382:A:N1	50:S2:1383:A:C5	2.45	0.84
86:S6:2:G:O6	86:S6:71:G:N2	2.10	0.84
86:S6:63:G:H2'	86:S6:64:A:H5''	1.58	0.84
1:5:94:A:H2'	1:5:95:G:O4'	1.77	0.84
1:5:753:C:C2	1:5:754:U:C6	2.65	0.84
1:5:1177:U:C2	1:5:1178:G:C8	2.64	0.84
1:5:1218:G:N1	1:5:1219:G:H1'	1.92	0.84
1:5:1245:C:O2	1:5:1246:G:N7	2.09	0.84
1:5:1847:C:H4'	19:Q:152:PHE:CE2	2.12	0.84
1:5:2370:A:HO2'	1:5:2826:U:H3	1.21	0.84
1:5:2568:C:C2	1:5:2569:G:N7	2.45	0.84
1:5:4548:A:C8	1:5:4548:A:H5'	2.12	0.84
47:1:255:VAL:HG22	47:1:431:LEU:CD1	2.07	0.84
50:S2:28:U:O2	50:S2:29:G:C8	2.30	0.84
50:S2:1292:C:C1'	82:Sf:148:TYR:HB3	2.07	0.84
50:S2:1839:U:C2	50:S2:1840:U:C6	2.65	0.84
1:5:100:C:C5	1:5:101:A:H8	1.96	0.84
1:5:1188:C:C2	1:5:1189:G:C8	2.64	0.84
1:5:1964:A:N1	1:5:4694:G:C5	2.45	0.84
1:5:1991:A:C8	1:5:1992:U:O2	2.30	0.84
1:5:2329:U:O2'	1:5:2330:G:C5'	2.25	0.84
1:5:2586:G:N7	1:5:2587:A:C2	2.46	0.84
1:5:3726:A:O2'	1:5:3727:A:N7	2.09	0.84
1:5:4241:C:O2	1:5:4241:C:H2'	1.77	0.84
2:7:22:A:C2	2:7:23:A:C5	2.65	0.84
50:S2:880:G:N7	50:S2:881:G:N7	2.24	0.84
50:S2:1226:G:O6	50:S2:1638:G:H8	1.61	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1484:A:H2'	50:S2:1485:U:C6	2.10	0.84
50:S2:1592:C:C2	50:S2:1593:C:C6	2.65	0.84
1:5:172:C:O4'	1:5:172:C:P	2.35	0.84
1:5:736:C:H2'	1:5:737:C:O4'	1.77	0.84
1:5:2452:G:N1	1:5:2467:U:C4	2.44	0.84
1:5:4052:C:H2'	46:z:207:LYS:HZ3	1.42	0.84
1:5:4490:C:N3	1:5:4491:G:C8	2.46	0.84
1:5:4982:A:C6	1:5:4983:C:C6	2.64	0.84
3:8:134:G:C6	3:8:135:C:C5	2.66	0.84
20:R:36:ASN:ND2	47:1:407:THR:CG2	2.41	0.84
85:S5:5:G:C6	85:S5:69:G:N1	2.44	0.84
86:S6:10:G:C2	86:S6:11:C:C5	2.65	0.84
1:5:300:A:C2	1:5:301:G:N7	2.45	0.84
1:5:514:U:C5	1:5:515:C:O4'	2.30	0.84
1:5:2282:A:H2'	1:5:2283:G:O5'	1.76	0.84
1:5:4100:C:C4'	52:SB:227:LYS:HB2	2.07	0.84
2:7:43:U:C2	2:7:44:C:C6	2.65	0.84
3:8:38:U:N3	36:h:92:ARG:NH1	2.24	0.84
7:D:17:GLN:HG3	22:T:20:ARG:HA	1.60	0.84
21:S:83:ARG:NH2	22:T:156:TYR:HB2	1.93	0.84
50:S2:25:A:H61	50:S2:648:A:H61	1.22	0.84
50:S2:1857:G:C8	65:SO:146:ARG:NH2	2.46	0.84
73:SW:77:PRO:HD2	73:SW:79:PHE:CZ	2.12	0.84
85:S5:27:G:H1	85:S5:43:C:H5	1.21	0.84
1:5:153:G:C2	1:5:154:G:C8	2.65	0.84
1:5:457:G:C2	1:5:458:C:C6	2.66	0.84
1:5:970:G:H2'	1:5:971:U:O4'	1.78	0.84
1:5:2108:G:N1	1:5:2125:C:N4	2.25	0.84
1:5:2495:U:O2	1:5:2496:G:C8	2.31	0.84
1:5:2532:C:N3	1:5:2533:C:C5	2.46	0.84
50:S2:1123:C:C4	50:S2:1124:C:C5	2.65	0.84
50:S2:1431:G:C6	50:S2:1432:U:C5	2.66	0.84
50:S2:1564:C:N3	50:S2:1565:C:C5	2.46	0.84
68:SR:33:ARG:NH1	83:Sg:107:ASP:OD2	2.11	0.84
77:Sa:5:ARG:HG3	77:Sa:5:ARG:HH11	1.42	0.84
1:5:1683:U:N3	1:5:1684:A:N7	2.25	0.84
1:5:1916:G:N2	1:5:2067:C:O2	2.10	0.84
1:5:3974:G:H2'	1:5:3975:C:C6	2.13	0.84
1:5:4275:G:C6	1:5:4276:G:C5	2.65	0.84
50:S2:600:G:C5	50:S2:631:U:C4	2.66	0.84
50:S2:1484:A:C5	50:S2:1485:U:H5	1.93	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1691:U:C4	50:S2:1692:U:C4	2.66	0.84
85:S5:28:G:H2'	85:S5:29:G:H8	1.40	0.84
1:5:216:C:O4'	1:5:216:C:P	2.35	0.84
1:5:1388:A:C5	1:5:1396:G:N2	2.33	0.84
1:5:2107:C:C5	1:5:2126:G:C2	2.64	0.84
1:5:2294:G:N1	1:5:2295:C:C4	2.46	0.84
1:5:3759:A:C5	50:S2:1709:G:H4'	2.13	0.84
1:5:4117:U:C6	10:G:41:ILE:O	2.31	0.84
18:P:41:ILE:HD11	18:P:150:LEU:HD13	1.59	0.84
40:l:21:ARG:NH2	40:l:24:PRO:HD3	1.71	0.84
47:1:248:THR:N	47:1:440:ALA:HB1	1.93	0.84
50:S2:1114:U:C4	50:S2:1119:A:N1	2.46	0.84
50:S2:1123:C:N3	50:S2:1124:C:C6	2.46	0.84
74:SX:91:LEU:HD23	81:Se:6:LEU:HD22	1.60	0.84
1:5:278:G:C2	1:5:330:G:C8	2.66	0.84
1:5:2633:U:N3	1:5:2634:C:C5	2.46	0.84
1:5:3692:A:C5	1:5:3693:U:C6	2.66	0.84
3:8:102:G:P	3:8:104:A:O2'	2.35	0.84
50:S2:158:A:N6	50:S2:466:G:O6	2.11	0.84
50:S2:305:U:O3'	50:S2:306:C:O4'	1.96	0.84
50:S2:341:C:C4	50:S2:342:C:C6	2.65	0.84
50:S2:794:A:C2	50:S2:795:A:C4	2.65	0.84
50:S2:858:A:C2	50:S2:859:G:C8	2.66	0.84
50:S2:1133:A:C6	50:S2:1134:G:N7	2.45	0.84
50:S2:1200:A:N3	50:S2:1201:U:C6	2.44	0.84
50:S2:1317:C:N3	50:S2:1318:G:N7	2.25	0.84
1:5:146:G:C2	1:5:147:A:C8	2.65	0.84
1:5:747:A:O2'	1:5:748:G:H5'	1.78	0.84
1:5:1671:U:N3	1:5:1672:U:C5	2.44	0.84
1:5:2468:U:H2'	1:5:2506:G:C6	2.13	0.84
1:5:3759:A:N6	50:S2:1709:G:H5''	1.91	0.84
1:5:4054:C:H4'	46:z:205:TYR:CD1	2.13	0.84
2:7:54:A:C2	2:7:55:A:C5	2.64	0.84
50:S2:805:U:N3	50:S2:806:U:C5	2.45	0.84
1:5:1909:G:OP1	2:7:84:U:O2	1.95	0.83
1:5:2055:G:O6	21:S:158:VAL:CB	2.25	0.83
1:5:2089:G:O6	1:5:2263:A:H5''	1.75	0.83
1:5:2736:G:N1	1:5:2737:C:C4	2.46	0.83
1:5:3975:C:H5''	46:z:25:ARG:NH2	1.93	0.83
1:5:4653:C:O2	1:5:4654:C:C5	2.30	0.83
33:e:98:GLU:OE1	33:e:123:THR:OG1	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:o:12:CYS:HG	88:o:201:ZN:ZN	0.51	0.83
50:S2:42:A:C5	50:S2:43:U:H5	1.96	0.83
50:S2:1286:G:N2	63:SM:33:ARG:HG3	1.92	0.83
50:S2:1455:A:C6	50:S2:1456:G:N7	2.46	0.83
50:S2:1552:G:N7	50:S2:1578:U:C4	2.46	0.83
86:S6:7:G:N2	86:S6:68:C:N3	2.26	0.83
1:5:89:C:O2'	1:5:90:G:H5'	1.78	0.83
1:5:246:G:C2	1:5:247:G:N7	2.46	0.83
1:5:1213:G:C6	1:5:1215:C:C2	2.65	0.83
1:5:4145:C:C2	1:5:4146:G:C8	2.66	0.83
1:5:5005:G:N7	25:W:51:TRP:HD1	1.71	0.83
16:N:138:PHE:N	16:N:138:PHE:CD1	2.43	0.83
50:S2:1049:A:C4	50:S2:1070:A:C2	2.66	0.83
50:S2:1100:A:C6	50:S2:1101:U:C5	2.66	0.83
50:S2:1306:U:O4	82:Sf:140:TYR:HD1	1.60	0.83
50:S2:1310:U:H3	50:S2:1311:C:H5	1.18	0.83
50:S2:1345:G:C6	50:S2:1346:U:C4	2.66	0.83
56:SF:51:HIS:ND1	67:SQ:82:TYR:OH	2.11	0.83
74:SX:89:GLY:HA3	81:Se:10:GLY:N	1.94	0.83
86:S6:23:A:C8	86:S6:24:G:N7	2.46	0.83
1:5:1994:C:C2	1:5:1995:G:C8	2.66	0.83
1:5:4230:C:O2	1:5:4231:C:H6	1.60	0.83
6:C:325:MET:HE1	9:F:157:TYR:CE2	2.13	0.83
50:S2:339:A:C2'	50:S2:340:C:C6	2.61	0.83
50:S2:851:C:O2'	50:S2:852:G:N2	2.12	0.83
50:S2:1292:C:O4'	82:Sf:148:TYR:HB3	1.78	0.83
50:S2:1781:A:C2	50:S2:1782:G:C5	2.67	0.83
86:S6:16:A:C2	86:S6:60:U:C4	2.65	0.83
86:S6:20:U:H2'	86:S6:21:A:H4'	1.57	0.83
1:5:244:G:C6	1:5:246:G:C8	2.66	0.83
1:5:348:G:C2	1:5:350:C:C4	2.67	0.83
1:5:755:C:C2	1:5:756:G:C8	2.67	0.83
1:5:1273:G:N7	8:E:69:TYR:N	2.25	0.83
1:5:1439:C:H5'	9:F:36:ARG:HH12	1.40	0.83
1:5:1560:A:C4	1:5:1561:G:N7	2.45	0.83
1:5:1673:U:N3	1:5:1674:C:C5	2.47	0.83
1:5:1683:U:C2	1:5:1684:A:C8	2.66	0.83
1:5:2078:C:C2	1:5:2079:G:H8	1.94	0.83
1:5:2080:U:O2	1:5:2081:C:C5	2.28	0.83
1:5:2301:G:C2	1:5:2302:C:C6	2.66	0.83
1:5:2451:A:C5	1:5:2452:G:C8	2.67	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2498:C:N3	1:5:2499:C:C5	2.46	0.83
1:5:2743:A:N1	1:5:2744:A:C6	2.47	0.83
1:5:3847:C:N3	1:5:3848:U:C5	2.47	0.83
1:5:5062:G:C2	1:5:5063:G:C8	2.65	0.83
30:b:36:ASP:OD1	30:b:39:PHE:HB2	1.78	0.83
50:S2:1203:G:C4	50:S2:1204:A:C8	2.66	0.83
50:S2:1292:C:H3'	82:Sf:150:PHE:HA	1.60	0.83
50:S2:1407:U:H2'	50:S2:1408:U:C5	2.13	0.83
50:S2:1840:U:C2	50:S2:1841:C:C5	2.66	0.83
85:S5:61:C:H2'	85:S5:62:C:H5	1.37	0.83
86:S6:5:C:O2'	86:S6:6:G:H5'	1.78	0.83
1:5:1598:C:N3	1:5:1599:A:N7	2.27	0.83
1:5:2113:G:C8	1:5:2115:G:H1'	2.12	0.83
1:5:2397:G:C8	1:5:2399:G:C8	2.67	0.83
1:5:3693:U:N3	1:5:3694:U:C5	2.47	0.83
1:5:4100:C:H4'	52:SB:227:LYS:CB	2.07	0.83
1:5:4100:C:H5''	52:SB:227:LYS:HD3	1.60	0.83
1:5:4879:C:C2	1:5:4880:C:C5	2.66	0.83
3:8:83:C:H4'	3:8:85:U:C2	2.13	0.83
10:G:53:ARG:HB3	10:G:54:PHE:CZ	2.14	0.83
44:p:29:ILE:HG23	44:p:69:TRP:CD1	2.13	0.83
50:S2:1095:U:H3	50:S2:1149:A:N6	1.75	0.83
68:SR:17:ILE:CG2	68:SR:61:ILE:CD1	2.55	0.83
68:SR:24:LEU:HD22	68:SR:54:VAL:CG1	2.08	0.83
86:S6:13:C:O2	86:S6:14:C:N3	2.10	0.83
1:5:1215:C:N3	1:5:1216:C:C5	2.46	0.83
1:5:1995:G:O6	1:5:2000:G:N2	2.11	0.83
1:5:2325:C:O2	1:5:2325:C:H2'	1.79	0.83
1:5:2326:G:N1	1:5:2327:G:C5	2.46	0.83
45:r:80:THR:HG21	45:r:96:MET:HE1	1.61	0.83
47:1:447:ILE:O	47:1:450:ALA:C	2.21	0.83
50:S2:164:A:H2'	50:S2:165:G:H21	1.40	0.83
50:S2:618:C:N4	50:S2:619:A:C5	2.45	0.83
50:S2:669:A:H2'	50:S2:670:A:C8	2.13	0.83
50:S2:1204:A:C6	50:S2:1205:C:C4	2.67	0.83
1:5:497:G:N2	1:5:657:C:C2	2.47	0.83
1:5:1876:U:C2	1:5:1877:G:C8	2.67	0.83
1:5:1895:G:H2'	1:5:1896:A:O4'	1.79	0.83
1:5:1983:A:C2	1:5:2010:A:C5'	2.62	0.83
1:5:2099:G:N2	1:5:2100:A:C8	2.46	0.83
1:5:2107:C:C4	1:5:2126:G:C2	2.66	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4076:G:H21	10:G:74:LEU:HG	1.42	0.83
1:5:4884:G:C2	1:5:4885:U:C5	2.67	0.83
46:z:85:MET:HB3	46:z:89:ALA:HB2	1.59	0.83
52:SB:97:LEU:HB3	52:SB:228:LEU:HD11	0.84	0.83
85:S5:31:A:N7	85:S5:32:U:H5	1.75	0.83
85:S5:31:A:C5	85:S5:32:U:C5	2.67	0.83
86:S6:19:G:N3	86:S6:57:G:O6	2.12	0.83
86:S6:61:C:H3'	86:S6:62:C:H5'	1.60	0.83
1:5:1268:G:N2	1:5:1270:A:C8	2.46	0.83
1:5:1338:G:H22	29:a:25:HIS:CE1	1.96	0.83
1:5:3910:C:O2	1:5:3911:C:C6	2.32	0.83
1:5:3974:G:P	46:z:28:PHE:CD1	2.72	0.83
1:5:4325:A:H2'	1:5:4326:G:O4'	1.79	0.83
3:8:119:C:O2	3:8:120:G:H8	1.58	0.83
9:F:149:LEU:CB	9:F:197:TYR:OH	2.26	0.83
11:H:156:ASN:OD1	11:H:157:SER:HA	1.77	0.83
31:c:31:TYR:HE2	31:c:56:ARG:NE	1.77	0.83
43:o:12:CYS:SG	88:o:201:ZN:ZN	1.66	0.83
50:S2:1206:G:N1	50:S2:1208:A:N7	2.25	0.83
50:S2:1294:G:O5'	82:Sf:151:ASN:O	1.95	0.83
50:S2:1414:A:C2	50:S2:1415:C:C6	2.67	0.83
50:S2:1666:C:C2	50:S2:1667:U:C6	2.65	0.83
70:ST:23:LYS:HE2	70:ST:51:ASN:HD22	1.42	0.83
84:S4:16:U:C5	84:S4:17:U:O4	2.31	0.83
85:S5:21:A:C5	85:S5:48:C:C6	2.65	0.83
1:5:1387:A:C4	1:5:1397:A:N6	2.45	0.83
1:5:1965:G:N3	1:5:1966:C:C6	2.46	0.83
1:5:2268:A:H4'	1:5:2269:C:C5'	2.09	0.83
1:5:2395:A:O2'	1:5:2806:A:N3	2.11	0.83
1:5:3591:C:C4	1:5:3592:G:C8	2.66	0.83
1:5:4280:A:H61	7:D:29:ASP:N	1.75	0.83
50:S2:105:U:C4	50:S2:106:C:C6	2.67	0.83
50:S2:1254:C:O2	50:S2:1255:G:C8	2.32	0.83
50:S2:1382:A:C2	50:S2:1383:A:N7	2.47	0.83
68:SR:10:LYS:HD3	68:SR:53:TYR:OH	1.79	0.83
77:Sa:18:VAL:HG21	77:Sa:33:ASP:OD2	1.79	0.83
86:S6:9:A:C4	86:S6:46:G:C2	2.67	0.83
1:5:83:C:OP2	1:5:84:A:O2'	1.96	0.83
1:5:504:G:N2	1:5:654:C:H1'	1.94	0.83
1:5:1280:C:N3	1:5:1282:G:C6	2.45	0.83
1:5:1379:C:C4'	1:5:1380:G:C8	2.62	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1979:A:H3'	1:5:1980:U:H5'	1.61	0.83
1:5:2293:U:N3	1:5:2294:G:N7	2.26	0.83
1:5:4055:U:H4'	46:z:37:SER:OG	1.79	0.83
1:5:4416:G:N2	1:5:4417:C:C2	2.46	0.83
1:5:4601:U:O4	1:5:4609:G:C2	2.32	0.83
1:5:4772:C:N3	1:5:4773:C:C5	2.47	0.83
10:G:264:LYS:NZ	52:SB:31:TYR:HE2	1.67	0.83
32:d:85:ARG:HG3	32:d:85:ARG:HH11	1.44	0.83
47:1:244:ASN:HB3	47:1:440:ALA:C	2.04	0.83
50:S2:449:A:C2	50:S2:452:G:N7	2.46	0.83
50:S2:1354:G:N1	50:S2:1358:U:C4	2.47	0.83
50:S2:1383:A:O3'	54:SD:156:LEU:HD21	1.78	0.83
50:S2:1434:C:C3'	50:S2:1435:C:O4'	2.27	0.83
50:S2:1453:C:N4	50:S2:1455:A:H1'	1.94	0.83
68:SR:21:TYR:OH	68:SR:62:GLN:OE1	1.96	0.83
1:5:4549:G:C2	1:5:4550:G:C8	2.66	0.82
50:S2:460:A:H2	50:S2:461:U:C6	1.94	0.82
50:S2:1860:A:C6	50:S2:1862:G:C5	2.66	0.82
86:S6:66:U:N3	86:S6:67:C:C5	2.47	0.82
1:5:100:C:H5	1:5:101:A:C8	1.90	0.82
1:5:961:G:H2'	1:5:961:G:N3	1.94	0.82
1:5:2366:A:C2	1:5:3851:U:H1'	2.14	0.82
1:5:3759:A:H61	50:S2:1709:G:C5'	1.90	0.82
1:5:4064:C:N3	1:5:4065:G:N7	2.27	0.82
1:5:4933:C:N3	1:5:4934:A:C8	2.46	0.82
5:B:321:VAL:HG12	5:B:322:HIS:HB2	1.61	0.82
50:S2:494:C:O2	50:S2:495:U:C6	2.32	0.82
50:S2:806:U:N3	50:S2:807:G:N7	2.27	0.82
50:S2:1249:C:N4	50:S2:1250:A:C6	2.47	0.82
50:S2:1639:G:H1'	86:S6:42:C:H4'	1.61	0.82
50:S2:1830:U:O4	84:S4:19:U:C4'	2.27	0.82
85:S5:28:G:N1	85:S5:29:G:C5	2.47	0.82
1:5:43:U:C4	1:5:44:A:C8	2.66	0.82
1:5:987:C:H2'	1:5:988:C:O4'	1.78	0.82
1:5:1442:C:C2	1:5:1443:A:C8	2.67	0.82
1:5:1632:A:N1	1:5:1634:A:C8	2.47	0.82
1:5:2329:U:O2'	1:5:2330:G:O5'	1.97	0.82
1:5:4623:G:H4'	5:B:16:PHE:HE2	1.43	0.82
47:1:430:ALA:O	47:1:433:VAL:HB	1.78	0.82
50:S2:994:C:C4	50:S2:995:G:N7	2.47	0.82
50:S2:1361:G:N2	50:S2:1380:C:N4	2.27	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:20:U:O2'	86:S6:21:A:H5'	1.80	0.82
86:S6:53:G:O6	86:S6:61:C:N4	2.12	0.82
1:5:1478:C:C2	1:5:1479:G:N7	2.47	0.82
1:5:1676:C:O2'	1:5:3914:U:N3	2.02	0.82
1:5:2743:A:N1	1:5:2744:A:N6	2.26	0.82
1:5:3732:A:C2	1:5:3733:A:C8	2.66	0.82
1:5:4046:A:H2'	1:5:4047:A:C8	2.14	0.82
1:5:4080:C:C2	1:5:4081:G:H8	1.96	0.82
3:8:10:G:C2	3:8:11:C:H1'	2.15	0.82
4:A:174:ARG:HA	44:p:69:TRP:CH2	2.14	0.82
44:p:92:GLN:HG3	52:SB:219:LYS:HG3	1.59	0.82
50:S2:476:A:C2	50:S2:488:U:O2	2.33	0.82
50:S2:1018:U:N3	50:S2:1019:C:C5	2.47	0.82
50:S2:1545:A:O2'	50:S2:1546:G:C8	2.30	0.82
1:5:42:A:C6	1:5:4379:A:C2	2.67	0.82
1:5:166:C:N3	1:5:167:C:H5	1.78	0.82
1:5:321:U:N3	1:5:322:C:C5	2.48	0.82
1:5:383:A:O2'	1:5:384:A:C8	2.32	0.82
1:5:1572:U:H4'	20:R:95:TRP:HE1	1.43	0.82
1:5:1771:U:H2'	1:5:1772:C:O4'	1.79	0.82
1:5:2566:G:C2	1:5:2567:G:C8	2.67	0.82
10:G:264:LYS:HZ1	52:SB:91:VAL:HG13	1.45	0.82
50:S2:182:C:H2'	50:S2:184:G:H1'	1.61	0.82
50:S2:1114:U:O4	50:S2:1119:A:C2	2.32	0.82
50:S2:1595:U:N3	50:S2:1596:U:C5	2.47	0.82
69:SS:86:ARG:HD3	69:SS:89:ASP:HB2	1.62	0.82
86:S6:6:G:O2'	86:S6:7:G:H5'	1.79	0.82
86:S6:22:G:C5	86:S6:23:A:N1	2.48	0.82
1:5:166:C:C2	1:5:167:C:C5	2.59	0.82
1:5:1265:G:H5''	1:5:2115:G:N2	1.94	0.82
1:5:2251:G:C1'	1:5:2252:G:N2	2.43	0.82
1:5:2457:G:OP1	16:N:65:ARG:NH1	2.12	0.82
1:5:2632:U:C2	1:5:2633:U:C5	2.68	0.82
1:5:3796:U:HO2'	50:S2:1720:U:HO2'	1.01	0.82
3:8:10:G:C5	3:8:11:C:C6	2.67	0.82
47:1:431:LEU:C	47:1:433:VAL:H	1.88	0.82
50:S2:1018:U:O2	50:S2:1019:C:C6	2.32	0.82
50:S2:1099:G:C6	50:S2:1100:A:N7	2.48	0.82
50:S2:1290:G:H2'	82:Sf:146:LEU:CA	2.09	0.82
85:S5:21:A:C6	85:S5:48:C:N1	2.46	0.82
1:5:287:U:N3	1:5:288:G:N7	2.28	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:690:C:N3	1:5:691:C:C5	2.48	0.82
1:5:957:G:P	1:5:1284:G:H21	2.02	0.82
1:5:1660:U:C4	29:a:12:ARG:NH1	2.48	0.82
1:5:1671:U:H2'	1:5:1671:U:O2	1.79	0.82
1:5:2107:C:C4	1:5:2126:G:N2	2.48	0.82
3:8:95:A:C2	3:8:96:C:C6	2.68	0.82
11:H:156:ASN:OD1	11:H:157:SER:N	2.12	0.82
50:S2:349:A:O3'	59:SI:27:TYR:OH	1.98	0.82
50:S2:1539:U:O2	50:S2:1540:G:H8	1.62	0.82
50:S2:1860:A:C5	50:S2:1862:G:N7	2.48	0.82
85:S5:21:A:C6	85:S5:48:C:C5	2.66	0.82
1:5:1280:C:C2	1:5:1282:G:C5	2.67	0.82
1:5:1751:A:C6	1:5:1752:G:C8	2.67	0.82
1:5:2327:G:N1	1:5:2328:G:C5	2.47	0.82
1:5:3911:C:C2	1:5:3912:U:C5	2.68	0.82
3:8:12:G:N1	3:8:13:G:C8	2.48	0.82
11:H:61:TRP:CZ2	21:S:152:PHE:HE2	1.98	0.82
18:P:54:GLN:HB3	18:P:83:TRP:HD1	1.44	0.82
50:S2:996:A:N6	64:SN:113:PHE:CZ	2.47	0.82
50:S2:1035:A:H2'	50:S2:1036:A:O4'	1.80	0.82
50:S2:1249:C:N4	50:S2:1250:A:C5	2.46	0.82
50:S2:1594:A:N1	50:S2:1595:U:C6	2.48	0.82
1:5:1340:C:O2	1:5:1341:U:C6	2.33	0.82
1:5:1465:G:C2	1:5:1466:G:H1'	2.14	0.82
1:5:2590:G:C2	1:5:2754:G:N2	2.48	0.82
1:5:3674:G:C2	1:5:3675:G:C8	2.68	0.82
1:5:4096:C:O3'	35:g:112:GLN:CA	2.28	0.82
1:5:4581:G:C2	1:5:4582:C:C5	2.67	0.82
50:S2:426:A:C2	50:S2:427:U:C4	2.66	0.82
50:S2:439:A:C2	50:S2:455:A:C2	2.67	0.82
50:S2:751:G:O6	50:S2:791:C:N3	2.13	0.82
50:S2:868:G:N2	58:SH:115:LYS:HA	1.95	0.82
55:SE:18:TRP:HB3	55:SE:46:ILE:HD13	1.61	0.82
68:SR:13:ALA:HB3	68:SR:53:TYR:CD2	2.15	0.82
86:S6:19:G:C1'	86:S6:57:G:H1	1.92	0.82
1:5:2826:U:H1'	1:5:2827:G:N1	1.95	0.82
1:5:3621:A:H8	1:5:4642:U:H1'	1.45	0.82
4:A:202:VAL:HG12	4:A:217:GLN:HG2	1.60	0.82
34:f:6:TRP:HB2	34:f:102:ARG:HB3	1.58	0.82
47:1:435:ALA:HB2	47:1:448:LEU:CD1	2.09	0.82
50:S2:862:A:C6	50:S2:863:U:C5	2.66	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1528:G:N2	50:S2:1529:C:C2	2.48	0.82
50:S2:1850:A:O2'	50:S2:1851:A:O4'	1.96	0.82
1:5:94:A:H2'	1:5:95:G:C4'	2.09	0.81
1:5:662:C:O2	1:5:663:G:C8	2.33	0.81
1:5:728:U:OP1	1:5:728:U:H3'	1.80	0.81
1:5:1517:G:N2	1:5:1650:A:N1	2.28	0.81
1:5:2018:C:H2'	1:5:2019:C:O4'	1.78	0.81
1:5:2769:U:O2'	1:5:2770:C:O5'	1.98	0.81
3:8:125:C:C4'	3:8:126:C:H3'	2.09	0.81
16:N:199:GLN:HA	16:N:199:GLN:OE1	1.79	0.81
50:S2:452:G:N3	50:S2:453:C:C6	2.48	0.81
50:S2:452:G:C2	50:S2:453:C:C5	2.68	0.81
50:S2:1292:C:O4'	82:Sf:148:TYR:C	2.23	0.81
50:S2:1372:U:O2'	50:S2:1373:C:O4'	1.97	0.81
50:S2:1575:G:C2	50:S2:1576:G:N7	2.47	0.81
1:5:370:U:C5	1:5:1637:A:C6	2.68	0.81
1:5:723:A:H2	1:5:943:A:N1	1.78	0.81
1:5:1076:C:C4	1:5:1077:C:C5	2.68	0.81
1:5:1238:A:H2'	1:5:1239:C:C6	2.14	0.81
1:5:1566:C:O3'	1:5:1567:U:C5'	2.28	0.81
1:5:1625:G:C8	1:5:1642:A:H2	1.99	0.81
1:5:2784:C:C2	1:5:2785:C:H5	1.97	0.81
1:5:3873:G:H2'	1:5:3874:G:O4'	1.79	0.81
3:8:94:G:C8	3:8:94:G:C5'	2.62	0.81
31:c:28:VAL:HG11	31:c:33:GLN:HB3	1.62	0.81
46:z:161:LYS:CE	86:S6:55:U:OP1	2.28	0.81
50:S2:120:U:N3	50:S2:121:U:C6	2.49	0.81
50:S2:795:A:H2'	50:S2:796:G:H8	1.45	0.81
50:S2:1306:U:O2	82:Sf:133:ALA:HB1	1.80	0.81
50:S2:1418:C:C2	50:S2:1420:G:N7	2.48	0.81
85:S5:14:A:N6	85:S5:21:A:H2	1.77	0.81
85:S5:37:A:C8	85:S5:38:A:C5	2.67	0.81
85:S5:66:U:H2'	85:S5:67:C:C6	2.16	0.81
86:S6:63:G:H2'	86:S6:64:A:C5'	2.10	0.81
1:5:120:A:C1'	1:5:121:A:N1	2.43	0.81
1:5:907:C:C2	1:5:908:G:C8	2.69	0.81
1:5:1213:G:N1	1:5:1215:C:C2	2.48	0.81
1:5:1280:C:O2'	1:5:1281:G:H3'	1.80	0.81
1:5:2507:A:C5	1:5:2508:U:C6	2.67	0.81
1:5:3846:C:N3	1:5:3847:C:C5	2.48	0.81
50:S2:994:C:H2'	50:S2:994:C:O2	1.78	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1360:U:O2'	50:S2:1379:A:OP2	1.98	0.81
50:S2:1422:G:N2	50:S2:1424:G:C8	2.48	0.81
50:S2:1496:U:N3	50:S2:1498:A:C8	2.48	0.81
50:S2:1601:A:H1'	50:S2:1604:G:O6	1.80	0.81
52:SB:97:LEU:HD12	52:SB:228:LEU:HD12	1.61	0.81
74:SX:9:THR:O	74:SX:13:LEU:HG	1.80	0.81
84:S4:19:U:O4	86:S6:36:A:C6	2.33	0.81
85:S5:31:A:C8	85:S5:32:U:H5	1.97	0.81
86:S6:49:C:O2'	86:S6:50:U:O4'	1.97	0.81
1:5:470:A:C5	1:5:471:A:N7	2.48	0.81
1:5:2734:U:C2	1:5:2735:G:C8	2.68	0.81
1:5:2744:A:C2	1:5:2745:A:C6	2.67	0.81
1:5:3686:G:P	4:A:193:ARG:HH22	2.04	0.81
1:5:3967:G:N3	46:z:162:VAL:HG11	1.96	0.81
1:5:4283:G:C6	1:5:4284:C:C5	2.69	0.81
50:S2:173:A:C6	50:S2:174:C:C5	2.69	0.81
50:S2:459:C:C2	50:S2:460:A:C8	2.69	0.81
50:S2:1134:G:N2	50:S2:1135:C:C2	2.49	0.81
50:S2:1200:A:O2'	50:S2:1201:U:H5'	1.81	0.81
50:S2:1204:A:N1	50:S2:1205:C:N3	2.27	0.81
50:S2:1222:G:H2'	50:S2:1223:A:O4'	1.81	0.81
50:S2:1430:C:C2	50:S2:1431:G:C8	2.69	0.81
86:S6:53:G:C2	86:S6:54:U:C2	2.69	0.81
1:5:54:G:C6	1:5:55:G:N7	2.49	0.81
1:5:463:A:N1	1:5:692:A:C2	2.49	0.81
1:5:2438:A:C6	1:5:2441:C:C5	2.69	0.81
1:5:2532:C:O2	1:5:2533:C:C5	2.32	0.81
1:5:2753:G:H3'	1:5:2754:G:H8	1.46	0.81
1:5:4745:G:O2'	1:5:4746:C:H6	1.55	0.81
2:7:42:A:Cl'	13:J:75:ARG:NH1	2.43	0.81
20:R:117:ARG:NH2	20:R:117:ARG:HB2	1.96	0.81
50:S2:1051:G:N1	50:S2:1052:A:N7	2.27	0.81
50:S2:1402:A:C5	50:S2:1441:U:C4	2.66	0.81
50:S2:1537:A:H4'	50:S2:1604:G:H4'	1.61	0.81
1:5:1628:C:O2	1:5:1629:G:H8	1.62	0.81
1:5:2272:C:O2'	1:5:2273:G:H5'	1.80	0.81
1:5:2294:G:N3	1:5:2295:C:C6	2.48	0.81
1:5:2409:U:C5	1:5:2783:A:C2	2.69	0.81
1:5:2736:G:C2	1:5:2737:C:C6	2.67	0.81
1:5:3956:G:N2	1:5:3966:A:C8	2.49	0.81
1:5:3956:G:N2	1:5:3966:A:O4'	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5047:C:O4'	1:5:5048:A:C2	2.33	0.81
24:V:97:TYR:CZ	25:W:21:TYR:HA	2.15	0.81
30:b:13:SER:HA	30:b:16:TRP:CH2	2.14	0.81
33:e:35:TRP:C	33:e:35:TRP:HD1	1.87	0.81
47:1:248:THR:H	47:1:440:ALA:CB	1.92	0.81
50:S2:221:A:C6	50:S2:222:U:C5	2.69	0.81
50:S2:380:G:N2	50:S2:382:C:H3'	1.94	0.81
68:SR:26:ASN:CG	68:SR:59:LYS:HE3	2.04	0.81
80:Sd:40:ARG:HG2	80:Sd:41:GLN:OE1	1.81	0.81
86:S6:5:C:H2'	86:S6:6:G:H8	1.45	0.81
1:5:504:G:C2	1:5:654:C:O2	2.34	0.81
1:5:690:C:C2	1:5:691:C:C6	2.69	0.81
1:5:753:C:N3	1:5:754:U:C6	2.48	0.81
1:5:1857:C:O2	1:5:1858:A:C8	2.34	0.81
1:5:2691:U:C2	1:5:2692:U:C5	2.68	0.81
1:5:3791:C:C6	1:5:3791:C:C5'	2.56	0.81
1:5:4079:C:N3	1:5:4080:C:C5	2.49	0.81
1:5:4653:C:O2	1:5:4654:C:C6	2.34	0.81
46:z:67:VAL:HG13	46:z:111:LEU:HD13	1.62	0.81
50:S2:120:U:C2	50:S2:121:U:C6	2.68	0.81
50:S2:339:A:N3	50:S2:340:C:C4	2.49	0.81
50:S2:964:A:O2'	50:S2:965:U:O5'	1.97	0.81
50:S2:1290:G:H2'	82:Sf:146:LEU:N	1.96	0.81
86:S6:6:G:C2	86:S6:7:G:H1'	2.16	0.81
86:S6:27:G:H2'	86:S6:28:G:C8	2.14	0.81
1:5:93:G:C2	1:5:94:A:C2	2.69	0.81
1:5:422:C:O2	1:5:423:G:H8	1.64	0.81
1:5:484:U:N3	1:5:486:C:C5	2.46	0.81
1:5:1245:C:C6	1:5:1269:G:C5	2.69	0.81
1:5:1310:C:C2	1:5:1311:G:C8	2.69	0.81
1:5:1406:G:O6	1:5:1408:G:O2'	1.97	0.81
1:5:2495:U:C2	1:5:2496:G:C8	2.68	0.81
1:5:3789:C:C1'	85:S5:72:C:OP1	2.29	0.81
31:c:31:TYR:HD1	31:c:32:LYS:N	1.77	0.81
50:S2:581:U:C4	50:S2:582:C:C5	2.68	0.81
50:S2:792:C:N3	50:S2:793:G:N7	2.29	0.81
50:S2:1306:U:O4	82:Sf:140:TYR:CD1	2.33	0.81
50:S2:1782:G:N2	50:S2:1784:G:C5	2.49	0.81
51:SA:111:GLN:HA	51:SA:116:PHE:CE2	2.15	0.81
62:SL:103:GLU:HB3	74:SX:10:ALA:O	1.81	0.81
1:5:1049:C:C2	1:5:1050:C:C6	2.69	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1392:A:C2	1:5:1393:G:C6	2.68	0.81
1:5:1967:A:C2	1:5:1968:G:N7	2.48	0.81
1:5:2812:A:H2'	1:5:2813:A:C8	2.16	0.81
1:5:3731:C:O2	1:5:3732:A:C8	2.34	0.81
1:5:4344:U:O2	1:5:4345:C:C6	2.34	0.81
1:5:4731:G:O4'	1:5:4732:G:N2	2.13	0.81
50:S2:1291:A:C2	82:Sf:140:TYR:CD2	2.69	0.81
74:SX:91:LEU:HD21	81:Se:6:LEU:CD1	2.11	0.81
80:Sd:26:ASN:ND2	80:Sd:39:CYS:SG	2.53	0.81
86:S6:61:C:H3'	86:S6:62:C:C5'	2.10	0.81
1:5:424:U:O2	1:5:425:U:H6	1.64	0.81
1:5:1438:U:C2	1:5:2099:G:O6	2.33	0.81
1:5:1926:C:N3	1:5:1927:U:C5	2.49	0.81
1:5:2504:C:O2	1:5:2505:C:C6	2.34	0.81
1:5:3974:G:C4'	46:z:210:MET:CE	2.59	0.81
1:5:4416:G:N1	1:5:4417:C:C4	2.49	0.81
1:5:4580:U:C4	1:5:4581:G:N7	2.48	0.81
1:5:4999:G:C6	1:5:5000:G:N7	2.48	0.81
1:5:5045:G:H2'	1:5:5046:U:O4'	1.80	0.81
11:H:113:GLU:OE2	11:H:113:GLU:HA	1.81	0.81
28:Z:77:TYR:HB3	31:c:39:ARG:HD3	1.63	0.81
50:S2:1051:G:C6	50:S2:1052:A:N7	2.48	0.81
68:SR:21:TYR:HE1	68:SR:61:ILE:CG2	1.94	0.81
1:5:2553:A:N1	1:5:2763:U:C5	2.49	0.80
1:5:3759:A:H61	50:S2:1709:G:H5''	1.42	0.80
1:5:3972:A:C2	1:5:4040:C:C2	2.61	0.80
1:5:4276:G:C5	1:5:4277:G:C8	2.69	0.80
50:S2:618:C:H2'	50:S2:618:C:O2	1.79	0.80
50:S2:1293:A:C4	82:Sf:150:PHE:HB3	2.15	0.80
50:S2:1314:U:C2	50:S2:1315:U:H1'	2.16	0.80
51:SA:48:ILE:CG2	68:SR:105:MET:HE3	2.11	0.80
61:SK:2:LEU:HB3	61:SK:8:ARG:NH2	1.96	0.80
85:S5:47:U:O2'	85:S5:48:C:OP1	1.98	0.80
1:5:424:U:N3	1:5:425:U:H5	1.79	0.80
1:5:1269:G:C6	1:5:2111:G:N2	2.49	0.80
1:5:1967:A:C2	1:5:1968:G:C5	2.69	0.80
1:5:3695:U:C4	1:5:3696:C:C5	2.69	0.80
1:5:3759:A:O2'	50:S2:1826:G:O2'	1.71	0.80
1:5:4332:C:O2	1:5:4333:C:C6	2.34	0.80
8:E:153:HIS:CE1	8:E:180:VAL:HG22	2.16	0.80
44:p:28:LYS:HZ3	50:S2:1040:G:C2'	1.95	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:165:G:C2'	50:S2:166:A:H8	1.94	0.80
50:S2:1212:G:C2	50:S2:1688:C:N3	2.48	0.80
50:S2:1258:A:N7	50:S2:1659:U:O2	2.14	0.80
1:5:1441:C:OP1	1:5:2109:G:O3'	2.00	0.80
1:5:1687:U:C2	1:5:1850:A:N6	2.49	0.80
1:5:1963:C:C4	1:5:1964:A:C8	2.69	0.80
1:5:2690:C:C2	1:5:2691:U:C6	2.69	0.80
1:5:3739:C:C4	1:5:3740:G:C8	2.70	0.80
1:5:4257:A:H2'	1:5:4258:C:C5	2.16	0.80
8:E:197:ILE:HD12	8:E:257:ILE:HG23	1.63	0.80
42:n:21:ARG:NH2	50:S2:1175:G:OP1	2.14	0.80
47:1:449:LEU:O	47:1:453:ILE:HG13	1.82	0.80
50:S2:452:G:N1	50:S2:453:C:C4	2.50	0.80
50:S2:460:A:C2	50:S2:461:U:C4	2.58	0.80
50:S2:648:A:C6	50:S2:649:U:C5	2.69	0.80
50:S2:1074:C:N3	50:S2:1075:C:C5	2.48	0.80
50:S2:1146:C:C2	50:S2:1147:C:C5	2.70	0.80
84:S4:18:U:O2	86:S6:37:A:H2	1.57	0.80
1:5:146:G:C2	1:5:147:A:N7	2.50	0.80
1:5:967:C:H5	1:5:968:C:O2	1.63	0.80
1:5:1070:G:C6	1:5:1071:C:C5	2.69	0.80
1:5:1174:G:N2	1:5:1175:A:C5	2.49	0.80
1:5:1279:A:H3'	1:5:1280:C:C5	2.16	0.80
1:5:2277:C:O2	1:5:2278:G:H8	1.60	0.80
1:5:3668:C:O2	1:5:3668:C:H2'	1.80	0.80
1:5:3969:G:H1'	46:z:166:ALA:HB1	1.63	0.80
1:5:5012:G:N2	1:5:5014:A:C8	2.50	0.80
3:8:64:U:H2'	3:8:65:A:C8	2.15	0.80
50:S2:495:U:O2'	50:S2:496:C:O4'	1.98	0.80
50:S2:1008:A:H1'	64:SN:101:HIS:CE1	2.16	0.80
50:S2:1034:A:H2'	50:S2:1035:A:O5'	1.81	0.80
50:S2:1156:U:O4	53:SC:194:ARG:NH1	2.15	0.80
50:S2:1433:C:C2'	50:S2:1434:C:C1'	2.56	0.80
50:S2:1755:C:C4	50:S2:1756:C:C5	2.70	0.80
50:S2:1786:U:C2	50:S2:1787:G:C8	2.69	0.80
52:SB:133:TYR:CE2	52:SB:181:LEU:HD12	2.16	0.80
1:5:473:C:N3	1:5:474:C:C5	2.50	0.80
1:5:1338:G:N2	29:a:25:HIS:CE1	2.49	0.80
1:5:1756:U:C4	1:5:1776:A:C2	2.70	0.80
1:5:3611:A:O3'	59:SI:92:ARG:NH1	2.14	0.80
1:5:3969:G:C1'	46:z:166:ALA:CB	2.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4063:U:O2	1:5:4064:C:C6	2.34	0.80
1:5:4233:A:O2'	1:5:4234:A:H3'	1.82	0.80
1:5:4256:A:N7	13:J:60:PHE:CE1	2.50	0.80
3:8:120:G:C2	3:8:121:G:C8	2.69	0.80
47:1:448:LEU:HD23	47:1:452:THR:OG1	1.79	0.80
50:S2:220:U:C2	50:S2:221:A:C8	2.70	0.80
50:S2:604:A:C8	60:SJ:20:PHE:CD2	2.68	0.80
50:S2:1132:C:N4	50:S2:1133:A:N7	2.29	0.80
50:S2:1203:G:C2	50:S2:1204:A:C5	2.69	0.80
50:S2:1293:A:O4'	82:Sf:150:PHE:CG	2.34	0.80
86:S6:19:G:C1'	86:S6:57:G:N1	2.43	0.80
1:5:1190:C:C2	1:5:1191:C:C6	2.69	0.80
1:5:2079:G:N1	1:5:2080:U:C4	2.50	0.80
1:5:4426:C:C2	1:5:4427:G:C8	2.69	0.80
1:5:4976:U:O4	5:B:342:LYS:HD2	1.81	0.80
2:7:50:A:C2	2:7:51:G:C8	2.69	0.80
22:T:82:GLY:CA	30:b:16:TRP:HB2	2.12	0.80
50:S2:71:G:H3'	50:S2:72:C:H5''	1.64	0.80
50:S2:119:U:C2	50:S2:120:U:C6	2.69	0.80
50:S2:164:A:H2'	50:S2:165:G:N2	1.96	0.80
50:S2:1315:U:N3	50:S2:1316:C:C6	2.47	0.80
50:S2:1345:G:C4	50:S2:1346:U:C6	2.70	0.80
50:S2:1408:U:C4	50:S2:1439:A:N1	2.50	0.80
56:SF:79:HIS:O	56:SF:83:ASN:ND2	2.14	0.80
68:SR:17:ILE:HD13	68:SR:57:LEU:HB2	1.18	0.80
84:S4:19:U:O4	86:S6:36:A:N6	2.13	0.80
85:S5:70:G:H2'	85:S5:71:G:N7	1.97	0.80
1:5:33:A:H2'	1:5:34:A:C8	2.16	0.80
1:5:1572:U:H4'	20:R:95:TRP:NE1	1.97	0.80
1:5:2515:G:N7	1:5:2516:G:N7	2.28	0.80
1:5:3629:A:H1'	50:S2:1721:U:O4	1.81	0.80
1:5:4064:C:C2	1:5:4065:G:N7	2.49	0.80
1:5:4276:G:O6	1:5:4277:G:N7	2.12	0.80
1:5:4280:A:N6	7:D:29:ASP:OD1	2.14	0.80
1:5:4579:U:N3	1:5:4580:U:C5	2.49	0.80
2:7:42:A:C6	2:7:43:U:C4	2.69	0.80
3:8:81:C:O2	3:8:83:C:OP1	1.99	0.80
50:S2:580:U:O4	50:S2:581:U:C5	2.35	0.80
50:S2:996:A:C6	64:SN:113:PHE:CE2	2.70	0.80
50:S2:1134:G:N1	50:S2:1135:C:C4	2.49	0.80
50:S2:1157:G:H1'	74:SX:5:ARG:HE	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1231:C:C1'	50:S2:1665:G:N2	2.43	0.80
77:Sa:87:ARG:HH11	77:Sa:91:ALA:C	1.90	0.80
1:5:2037:C:C4	1:5:2038:U:H5	1.99	0.80
1:5:3593:C:H4'	1:5:3594:C:OP2	1.79	0.80
1:5:4078:C:O2'	1:5:4172:A:N6	2.14	0.80
1:5:4258:C:O2	1:5:4259:C:C6	2.34	0.80
1:5:4277:G:C2	1:5:4278:C:C6	2.69	0.80
1:5:4510:A:N6	1:5:4592:C:C4'	2.44	0.80
1:5:4772:C:C2	1:5:4773:C:C6	2.70	0.80
18:P:30:ARG:HD3	18:P:30:ARG:C	2.06	0.80
50:S2:22:A:C2	50:S2:653:A:C2	2.70	0.80
50:S2:107:A:H2'	50:S2:108:G:C8	2.17	0.80
50:S2:750:C:O2	50:S2:751:G:C8	2.35	0.80
50:S2:1063:C:C1'	50:S2:1838:U:O4	2.30	0.80
50:S2:1394:G:C6	50:S2:1395:C:H5	1.99	0.80
55:SE:18:TRP:CB	55:SE:46:ILE:HD13	2.12	0.80
85:S5:40:C:O2'	85:S5:41:C:H5'	1.82	0.80
1:5:738:C:C4	1:5:739:G:N7	2.50	0.80
1:5:2658:G:H22	1:5:2675:G:H2'	1.45	0.80
3:8:64:U:O2	3:8:65:A:C5	2.35	0.80
3:8:65:A:C2	3:8:66:A:C5	2.69	0.80
10:G:264:LYS:HD3	52:SB:93:GLY:HA2	1.62	0.80
31:c:28:VAL:CG1	31:c:33:GLN:HB3	2.11	0.80
50:S2:1039:C:N3	50:S2:1040:G:C8	2.50	0.80
50:S2:1595:U:C4	50:S2:1596:U:C5	2.70	0.80
51:SA:138:SER:HB3	51:SA:156:TYR:CE1	2.16	0.80
85:S5:21:A:N3	85:S5:48:C:C4	2.49	0.80
1:5:504:G:C2	1:5:505:G:C5	2.70	0.80
1:5:1268:G:C2	1:5:2111:G:C2	2.70	0.80
1:5:2089:G:C6	1:5:2263:A:C5	2.70	0.80
1:5:2279:A:N3	1:5:2280:G:C8	2.49	0.80
1:5:3648:A:C4	1:5:3785:A:N6	2.50	0.80
1:5:3741:C:N3	1:5:3742:G:N7	2.29	0.80
1:5:4097:G:C5'	35:g:112:GLN:HA	2.12	0.80
50:S2:43:U:C2	50:S2:484:A:C2	2.69	0.80
50:S2:332:G:O6	57:SG:186:GLN:NE2	2.15	0.80
50:S2:1111:U:O2	50:S2:1112:U:H6	1.64	0.80
50:S2:1367:U:N3	50:S2:1372:U:O4	2.14	0.80
68:SR:17:ILE:CD1	68:SR:57:LEU:CG	2.60	0.80
86:S6:54:U:H2'	86:S6:55:U:C6	2.17	0.80
1:5:194:C:O2'	27:Y:121:ARG:NH2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:486:C:N3	1:5:487:G:N7	2.30	0.79
1:5:504:G:H22	1:5:654:C:H1'	1.43	0.79
1:5:4990:C:O3'	1:5:4991:U:H4'	1.82	0.79
3:8:96:C:N3	3:8:97:A:C8	2.47	0.79
5:B:119:TYR:N	5:B:119:TYR:CD1	2.46	0.79
50:S2:636:C:C2	50:S2:637:U:C6	2.69	0.79
50:S2:848:U:H2'	50:S2:849:A:C8	2.16	0.79
50:S2:1053:C:O2	50:S2:1054:G:C8	2.36	0.79
50:S2:1203:G:C2	50:S2:1204:A:C8	2.69	0.79
50:S2:1291:A:C5	82:Sf:140:TYR:CE2	2.70	0.79
50:S2:1292:C:N4	82:Sf:132:MET:SD	2.55	0.79
50:S2:1342:U:H6	50:S2:1483:A:N1	1.65	0.79
86:S6:1:U:O2	86:S6:73:A:C2	2.23	0.79
86:S6:53:G:N1	86:S6:62:C:C5	2.51	0.79
86:S6:57:G:H5''	86:S6:57:G:C8	2.17	0.79
1:5:235:A:C6	1:5:238:C:C4	2.70	0.79
1:5:2277:C:N3	1:5:2278:G:N7	2.30	0.79
1:5:4096:C:N4	1:5:4097:G:C5	2.50	0.79
1:5:4269:G:C6	1:5:4270:C:C5	2.71	0.79
3:8:11:C:O2	3:8:11:C:H2'	1.82	0.79
6:C:143:ARG:NH2	6:C:145:GLU:HG3	1.96	0.79
46:z:82:ILE:HD12	46:z:147:LYS:CD	2.13	0.79
50:S2:38:A:C2	50:S2:515:G:N2	2.50	0.79
50:S2:1246:A:N6	50:S2:1247:C:H41	1.81	0.79
50:S2:1290:G:H2'	82:Sf:146:LEU:CB	2.12	0.79
50:S2:1409:A:C2	50:S2:1410:C:C5	2.70	0.79
50:S2:1413:G:C2	50:S2:1414:A:H1'	2.17	0.79
77:Sa:41:ILE:HG22	77:Sa:68:TYR:CD1	2.17	0.79
86:S6:15:G:C2	86:S6:21:A:N3	2.50	0.79
1:5:66:A:C2	1:5:312:G:O4'	2.36	0.79
1:5:70:A:C2	1:5:4355:G:O4'	2.35	0.79
1:5:2505:C:H1'	1:5:2506:G:C5	2.17	0.79
1:5:3971:G:H5'	46:z:31:THR:HG21	1.64	0.79
1:5:4098:A:N3	1:5:4099:G:C8	2.49	0.79
1:5:4239:A:C6	1:5:4240:G:C8	2.70	0.79
3:8:96:C:C2	3:8:97:A:H8	1.99	0.79
50:S2:691:G:C2	50:S2:692:G:C8	2.71	0.79
50:S2:933:G:N2	50:S2:1000:C:N3	2.30	0.79
74:SX:7:LEU:HD13	74:SX:8:ARG:N	1.98	0.79
1:5:425:U:O2	1:5:426:A:C8	2.35	0.79
1:5:440:U:C2	1:5:441:G:C8	2.70	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1080:C:N3	1:5:1081:C:C5	2.50	0.79
1:5:1247:U:C4	1:5:1248:C:C5	2.70	0.79
1:5:1348:U:O2	1:5:1349:G:C8	2.36	0.79
1:5:1662:C:C2	1:5:1663:C:C5	2.71	0.79
1:5:1806:G:N2	1:5:1807:C:C2	2.51	0.79
1:5:2452:G:C2	1:5:2467:U:C4	2.70	0.79
1:5:3767:C:O2'	50:S2:1828:C:H4'	1.82	0.79
1:5:4301:U:H4'	22:T:54:HIS:CD2	2.17	0.79
1:5:4627:U:C2	1:5:4628:U:C5	2.70	0.79
3:8:102:G:OP2	3:8:104:A:O2'	2.00	0.79
19:Q:37:ARG:HG3	19:Q:38:ARG:N	1.95	0.79
26:X:84:GLU:HB3	47:1:403:GLY:O	1.81	0.79
50:S2:623:G:N1	50:S2:624:C:C4	2.51	0.79
50:S2:1211:G:O6	50:S2:1212:G:C5	2.34	0.79
50:S2:1310:U:O4'	82:Sf:143:LYS:CE	2.29	0.79
52:SB:82:ARG:NH1	52:SB:188:LEU:O	2.15	0.79
86:S6:66:U:C2	86:S6:67:C:C6	2.70	0.79
1:5:982:U:H5'	8:E:69:TYR:OH	1.83	0.79
1:5:1388:A:N6	1:5:1396:G:N2	2.30	0.79
1:5:1886:G:C2	1:5:1894:C:N3	2.50	0.79
1:5:2090:U:O2'	1:5:2091:C:O5'	2.00	0.79
1:5:2533:C:C2	1:5:2534:C:C5	2.71	0.79
3:8:131:G:C6	3:8:132:G:C8	2.71	0.79
14:L:35:ARG:C	14:L:39:ARG:HH12	1.91	0.79
50:S2:19:A:OP1	74:SX:107:ARG:HD3	1.81	0.79
50:S2:445:A:H2'	50:S2:446:G:O4'	1.81	0.79
50:S2:469:A:N1	50:S2:470:G:H8	1.57	0.79
50:S2:751:G:C2	50:S2:792:C:C2	2.71	0.79
50:S2:977:C:C2	50:S2:978:G:C8	2.71	0.79
50:S2:1100:A:N1	50:S2:1101:U:C5	2.51	0.79
50:S2:1207:G:P	50:S2:1207:G:H3'	2.22	0.79
50:S2:1248:U:H2'	50:S2:1249:C:C1'	2.11	0.79
50:S2:1785:C:C2	50:S2:1786:U:C5	2.70	0.79
50:S2:1831:A:H1'	50:S2:1851:A:H2'	1.63	0.79
68:SR:14:ARG:HD2	68:SR:68:GLY:C	2.07	0.79
1:5:212:A:H2'	1:5:213:G:H8	1.47	0.79
1:5:662:C:H2'	1:5:663:G:C8	2.16	0.79
1:5:1836:G:C2	1:5:1837:A:C8	2.71	0.79
1:5:2367:A:N1	1:5:2788:U:C4	2.51	0.79
1:5:2632:U:O2	1:5:2632:U:H2'	1.83	0.79
1:5:3595:U:O2'	20:R:114:LYS:HG3	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3695:U:N3	1:5:3696:C:C5	2.51	0.79
1:5:4332:C:O2	1:5:4333:C:C5	2.35	0.79
45:r:107:ARG:C	45:r:107:ARG:HD2	2.06	0.79
47:1:255:VAL:CG2	47:1:431:LEU:HD11	2.12	0.79
50:S2:795:A:C4	50:S2:796:G:N7	2.50	0.79
50:S2:863:U:O2	50:S2:864:A:C8	2.35	0.79
50:S2:1597:C:O2'	50:S2:1598:G:O4'	1.99	0.79
50:S2:1605:G:H2'	50:S2:1606:G:H1'	1.63	0.79
50:S2:1648:G:C8	67:SQ:125:ARG:HB3	2.17	0.79
85:S5:6:G:N2	85:S5:68:C:O2	2.15	0.79
85:S5:28:G:C2	85:S5:29:G:C4	2.69	0.79
1:5:70:A:N1	1:5:4355:G:O4'	2.16	0.79
1:5:1964:A:C2	1:5:4694:G:C4	2.71	0.79
1:5:3806:G:O4'	50:S2:1719:A:O2'	1.95	0.79
1:5:3944:G:C2	1:5:3945:A:C8	2.71	0.79
1:5:4053:A:H2	46:z:35:GLN:HE22	1.29	0.79
3:8:12:G:N2	3:8:13:G:N9	2.30	0.79
3:8:65:A:C2	3:8:66:A:N7	2.50	0.79
11:H:96:TYR:CE2	11:H:100:PRO:HA	2.17	0.79
50:S2:340:C:C2	50:S2:341:C:C6	2.71	0.79
50:S2:1135:C:C2	50:S2:1136:U:C5	2.71	0.79
50:S2:1696:C:H6	50:S2:1696:C:C5'	1.95	0.79
62:SL:103:GLU:HB3	74:SX:11:ARG:N	1.98	0.79
82:Sf:105:TYR:O	82:Sf:116:ARG:NH1	2.16	0.79
86:S6:41:C:C2	86:S6:42:C:H5	1.99	0.79
86:S6:62:C:H2'	86:S6:63:G:N7	1.98	0.79
1:5:153:G:C2	1:5:154:G:N7	2.51	0.79
1:5:1270:A:H2'	1:5:1271:G:O5'	1.83	0.79
1:5:1866:U:O2'	1:5:1867:A:C8	2.36	0.79
1:5:4737:G:C6	1:5:4963:G:C2	2.70	0.79
3:8:37:A:O4'	3:8:39:G:H1'	1.82	0.79
5:B:51:ALA:HA	5:B:323:TYR:CE2	2.18	0.79
32:d:87:ARG:N	32:d:87:ARG:HH12	1.81	0.79
50:S2:649:U:O2	50:S2:650:A:N7	2.16	0.79
50:S2:1484:A:N3	50:S2:1485:U:C6	2.51	0.79
50:S2:1545:A:C6	50:S2:1588:A:N1	2.51	0.79
1:5:92:C:N4	43:o:40:ARG:HH11	1.80	0.79
1:5:422:C:O2	1:5:423:G:C8	2.35	0.79
1:5:1899:G:N7	1:5:2278:G:C6	2.51	0.79
1:5:2328:G:O2'	1:5:2329:U:C5'	2.30	0.79
1:5:4744:A:C2	1:5:4745:G:C4	2.71	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:1:248:THR:H	47:1:440:ALA:HB1	1.45	0.79
50:S2:42:A:C2	50:S2:43:U:C6	2.71	0.79
50:S2:338:G:C4	50:S2:339:A:C8	2.71	0.79
50:S2:618:C:P	74:SX:87:ASN:CA	2.58	0.79
50:S2:1093:A:N6	50:S2:1151:G:O6	2.16	0.79
1:5:1279:A:C2'	1:5:1280:C:C5	2.62	0.79
1:5:3717:A:O2'	1:5:3718:A:O4'	2.00	0.79
1:5:4888:U:O2'	1:5:4889:G:H8	1.65	0.79
2:7:30:C:C2	2:7:48:G:N2	2.51	0.79
50:S2:449:A:N1	50:S2:452:G:N7	2.31	0.79
50:S2:599:A:C1'	50:S2:605:A:N3	2.45	0.79
50:S2:1383:A:C2	50:S2:1384:C:C4	2.71	0.79
50:S2:1551:U:H2'	50:S2:1552:G:C1'	2.13	0.79
1:5:269:G:C6	1:5:270:U:C5	2.71	0.78
1:5:1177:U:O2	1:5:1178:G:C8	2.36	0.78
1:5:1358:G:C3'	6:C:114:ARG:HH12	1.96	0.78
1:5:1896:A:C5	9:F:101:ASN:ND2	2.51	0.78
1:5:2079:G:N3	1:5:2080:U:C6	2.52	0.78
1:5:2428:A:C5	1:5:2789:A:H2	2.00	0.78
1:5:3739:C:C5'	1:5:3739:C:C6	2.66	0.78
1:5:3939:G:C3'	1:5:3940:U:P	2.71	0.78
1:5:4040:C:C5	1:5:4041:C:H1'	2.18	0.78
1:5:4719:G:O2'	1:5:4720:C:H4'	1.83	0.78
1:5:4886:C:N3	1:5:4887:C:H5	1.81	0.78
47:1:447:ILE:CA	47:1:450:ALA:HB3	2.13	0.78
50:S2:53:C:O2	50:S2:54:A:H8	1.66	0.78
50:S2:165:G:O2'	50:S2:166:A:O4'	2.00	0.78
50:S2:475:C:C2	50:S2:476:A:C8	2.71	0.78
50:S2:554:A:C2	50:S2:555:A:C5	2.71	0.78
50:S2:992:A:N1	50:S2:993:G:C8	2.51	0.78
50:S2:1094:C:N3	50:S2:1095:U:C5	2.51	0.78
50:S2:1419:C:O2'	70:ST:132:ASP:HB3	1.83	0.78
50:S2:1484:A:H2'	50:S2:1485:U:H6	1.47	0.78
69:SS:10:GLN:HG2	69:SS:13:LEU:HD21	1.62	0.78
86:S6:5:C:N1	86:S6:6:G:C8	2.50	0.78
1:5:152:U:N3	1:5:153:G:N7	2.30	0.78
1:5:1177:U:H1'	7:D:282:GLN:NE2	1.98	0.78
1:5:1684:A:C6	1:5:1685:G:C8	2.72	0.78
1:5:1898:C:C5	1:5:2279:A:H1'	2.17	0.78
1:5:2441:C:H4'	35:g:9:ARG:HE	1.45	0.78
1:5:3655:C:N3	1:5:3656:A:C8	2.52	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4537:C:O2	1:5:4538:G:C8	2.35	0.78
3:8:117:C:N3	3:8:118:C:C5	2.51	0.78
10:G:53:ARG:CZ	10:G:54:PHE:HZ	1.95	0.78
10:G:264:LYS:CE	52:SB:31:TYR:CE2	2.65	0.78
12:I:9:TYR:HD2	12:I:97:ILE:HG12	1.48	0.78
22:T:82:GLY:HA3	30:b:16:TRP:HB2	1.65	0.78
42:n:17:ARG:NH1	50:S2:1173:A:C5'	2.46	0.78
46:z:68:LEU:HD13	46:z:90:LEU:HD21	1.64	0.78
47:1:268:LYS:CD	47:1:276:TYR:CZ	2.57	0.78
50:S2:460:A:C6	50:S2:461:U:C5	2.70	0.78
50:S2:494:C:O2	50:S2:495:U:C5	2.36	0.78
50:S2:821:G:C8	50:S2:821:G:H5'	2.18	0.78
50:S2:1294:G:C5	82:Sf:138:ARG:HD3	2.17	0.78
77:Sa:5:ARG:HG3	77:Sa:5:ARG:NH1	1.97	0.78
86:S6:41:C:N3	86:S6:42:C:C5	2.50	0.78
1:5:425:U:C2	1:5:426:A:C8	2.71	0.78
1:5:917:A:N1	1:5:919:C:C4	2.52	0.78
1:5:1438:U:O2	1:5:2099:G:C6	2.36	0.78
1:5:1735:U:H2'	1:5:1735:U:O2	1.84	0.78
1:5:1791:U:H4'	22:T:19:PHE:CZ	2.19	0.78
1:5:1858:A:C2	1:5:1859:C:C5	2.71	0.78
1:5:2690:C:C4	1:5:2691:U:C5	2.72	0.78
1:5:2691:U:C2	1:5:2692:U:H5	2.01	0.78
1:5:3794:C:C2	1:5:3795:A:C8	2.71	0.78
1:5:3905:A:C5	1:5:4449:A:N1	2.51	0.78
1:5:3945:A:O2'	1:5:3946:G:O4'	2.00	0.78
1:5:3973:G:O3'	46:z:28:PHE:CB	2.31	0.78
1:5:4098:A:C2	1:5:4099:G:C5	2.70	0.78
1:5:5066:U:H2'	1:5:5067:U:C6	2.17	0.78
9:F:120:PHE:CZ	9:F:217:SER:HA	2.18	0.78
50:S2:986:G:C8	65:SO:137:SER:HA	2.18	0.78
50:S2:1266:C:C2	50:S2:1267:C:C5	2.70	0.78
50:S2:1271:C:C4	50:S2:1272:C:C5	2.71	0.78
50:S2:1353:A:H5'	50:S2:1353:A:H8	1.47	0.78
50:S2:1640:A:C4'	86:S6:41:C:O4'	2.19	0.78
50:S2:1832:A:C5	50:S2:1833:C:C5	2.71	0.78
53:SC:146:GLU:CG	54:SD:116:ARG:NH2	2.01	0.78
84:S4:16:U:C2'	84:S4:17:U:C5'	2.60	0.78
85:S5:37:A:H2'	85:S5:38:A:O4'	1.82	0.78
85:S5:52:G:C4	85:S5:53:G:C8	2.71	0.78
1:5:483:G:C2	1:5:484:U:C4	2.72	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:688:U:N3	1:5:689:U:C6	2.50	0.78
1:5:982:U:C5'	8:E:69:TYR:OH	2.31	0.78
1:5:1398:A:H2'	1:5:1398:A:OP1	1.84	0.78
1:5:1811:G:N1	1:5:1812:C:C4	2.52	0.78
1:5:2361:G:O6	18:P:25:HIS:CG	2.37	0.78
1:5:2463:G:N2	1:5:2464:C:C2	2.51	0.78
1:5:2713:C:O2	1:5:2714:G:C8	2.36	0.78
1:5:3941:G:N2	1:5:4072:C:O2	2.17	0.78
1:5:4302:U:H5	1:5:4303:C:C5	2.01	0.78
1:5:5047:C:O2	1:5:5048:A:C5	2.37	0.78
6:C:210:ILE:HD13	6:C:252:TRP:CH2	2.18	0.78
9:F:41:GLN:HA	9:F:41:GLN:HE21	1.48	0.78
10:G:169:PHE:CD2	16:N:6:TYR:HB3	2.19	0.78
35:g:75:SER:O	35:g:76:ARG:HG2	1.84	0.78
44:p:68:ALA:HB1	44:p:69:TRP:CZ3	2.19	0.78
50:S2:52:G:C6	50:S2:53:C:C5	2.72	0.78
50:S2:794:A:C6	50:S2:795:A:C5	2.70	0.78
50:S2:1100:A:C2	50:S2:1101:U:C5	2.70	0.78
50:S2:1540:G:C2	50:S2:1541:G:N9	2.50	0.78
85:S5:48:C:P	85:S5:59:U:C5'	2.71	0.78
86:S6:10:G:C5	86:S6:11:C:H5	2.00	0.78
1:5:83:C:O2	1:5:99:A:N6	2.12	0.78
1:5:917:A:C2	1:5:919:C:C6	2.71	0.78
1:5:964:A:C2	1:5:2252:G:O6	2.36	0.78
1:5:1382:G:OP1	14:L:65:ARG:NH1	2.16	0.78
1:5:1734:G:H3'	22:T:13:TYR:CE2	2.18	0.78
1:5:2724:G:N3	1:5:2726:G:C8	2.52	0.78
1:5:3759:A:C6	50:S2:1709:G:C5'	2.64	0.78
1:5:4052:C:H2'	46:z:207:LYS:HZ1	1.49	0.78
26:X:84:GLU:HB3	47:1:404:HIS:ND1	1.96	0.78
50:S2:1209:A:H2'	50:S2:1210:G:C5'	2.13	0.78
50:S2:1301:A:P	80:Sd:7:TYR:OH	2.42	0.78
50:S2:1310:U:N3	50:S2:1311:C:C5	2.48	0.78
50:S2:1569:A:C8	50:S2:1570:G:H1'	2.19	0.78
61:SK:27:VAL:HG13	61:SK:43:LEU:HD23	1.65	0.78
85:S5:37:A:C2	85:S5:38:A:H1'	2.18	0.78
1:5:100:C:C6	1:5:101:A:C8	2.70	0.78
1:5:125:C:N3	1:5:126:C:C5	2.52	0.78
1:5:4076:G:N2	10:G:74:LEU:HG	1.98	0.78
1:5:4284:C:O2	1:5:4285:U:C6	2.36	0.78
1:5:4563:U:C4	1:5:4564:A:N6	2.51	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:163:ARG:CZ	4:A:163:ARG:HB2	2.14	0.78
21:S:94:TYR:OH	21:S:96:GLU:HG2	1.84	0.78
47:1:284:PHE:CE1	47:1:428:ILE:CD1	2.67	0.78
50:S2:553:U:C2	50:S2:554:A:N7	2.51	0.78
50:S2:563:G:C2	50:S2:564:A:C8	2.71	0.78
50:S2:1134:G:N3	50:S2:1135:C:C6	2.51	0.78
50:S2:1193:U:C5	74:SX:110:HIS:CE1	2.71	0.78
50:S2:1378:A:N7	51:SA:136:GLU:OE2	2.16	0.78
50:S2:1411:G:C5	50:S2:1412:C:H1'	2.18	0.78
50:S2:1433:C:C2'	50:S2:1434:C:O4'	2.32	0.78
50:S2:1547:C:H2'	50:S2:1548:G:O4'	1.83	0.78
50:S2:1592:C:N3	50:S2:1593:C:C5	2.51	0.78
50:S2:1772:C:N3	50:S2:1773:C:C5	2.51	0.78
50:S2:1860:A:C2	50:S2:1862:G:N7	2.52	0.78
1:5:101:A:C2	1:5:102:G:C8	2.72	0.78
1:5:1213:G:C5	1:5:1215:C:N1	2.51	0.78
1:5:2054:U:H4'	1:5:2056:G:C1'	2.13	0.78
1:5:2108:G:C2	1:5:2125:C:N3	2.52	0.78
1:5:2665:U:OP2	20:R:120:TYR:OH	2.02	0.78
1:5:4352:U:OP1	14:L:190:ARG:NH2	2.17	0.78
1:5:4880:C:C2'	1:5:4881:U:H5'	2.14	0.78
24:V:20:LEU:HD21	24:V:101:ASN:HD22	1.47	0.78
42:n:21:ARG:HH12	50:S2:1174:U:H5''	1.48	0.78
50:S2:75:G:HO2'	50:S2:76:U:H6	1.28	0.78
50:S2:414:A:C2	50:S2:424:C:C2	2.72	0.78
50:S2:608:C:N3	50:S2:609:U:C5	2.50	0.78
50:S2:1211:G:C6	50:S2:1212:G:C6	2.68	0.78
85:S5:47:U:O3'	85:S5:48:C:OP2	2.00	0.78
86:S6:59:U:H2'	86:S6:60:U:H6	1.47	0.78
1:5:1238:A:HO2'	1:5:1239:C:C5'	1.95	0.78
1:5:1339:U:C2	1:5:1340:C:C5	2.71	0.78
1:5:1598:C:C2	1:5:1599:A:C8	2.72	0.78
1:5:1965:G:N2	1:5:1966:C:C2	2.52	0.78
1:5:2077:C:H2'	1:5:2077:C:O2	1.82	0.78
1:5:2327:G:N1	1:5:2328:G:N7	2.32	0.78
1:5:2509:C:O2'	1:5:2510:G:H5'	1.83	0.78
1:5:3607:U:C2	1:5:3608:A:C8	2.72	0.78
1:5:4097:G:OP1	35:g:115:LYS:C	2.27	0.78
1:5:4332:C:O2	1:5:4332:C:H2'	1.82	0.78
3:8:117:C:N3	3:8:118:C:C6	2.51	0.78
7:D:94:ASN:C	7:D:94:ASN:HD22	1.91	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:81:ASN:HD21	10:G:238:GLY:HA3	1.49	0.78
50:S2:341:C:N3	50:S2:342:C:C6	2.52	0.78
50:S2:637:U:C2	50:S2:638:C:C5	2.72	0.78
50:S2:848:U:N3	50:S2:849:A:C5	2.51	0.78
62:SL:61:PRO:HG2	62:SL:62:PHE:CE2	2.19	0.78
62:SL:103:GLU:HG3	74:SX:11:ARG:CG	2.13	0.78
85:S5:40:C:C2	85:S5:41:C:C6	2.71	0.78
85:S5:41:C:C2	85:S5:42:C:C5	2.72	0.78
1:5:223:G:H4'	1:5:225:G:N7	1.99	0.78
1:5:1214:C:C2'	1:5:2114:G:C2	2.66	0.78
1:5:1277:G:C2	1:5:1278:C:C6	2.72	0.78
1:5:1791:U:H4'	22:T:19:PHE:CE2	2.18	0.78
1:5:1811:G:N2	1:5:1812:C:C2	2.51	0.78
1:5:1899:G:C4	1:5:1900:C:C5	2.71	0.78
1:5:2037:C:N4	1:5:2038:U:O4	2.17	0.78
1:5:2367:A:C2	1:5:2788:U:O4	2.37	0.78
1:5:3953:G:C6	1:5:3954:A:N7	2.52	0.78
2:7:21:G:C6	2:7:58:A:C2	2.72	0.78
3:8:64:U:N3	3:8:65:A:C5	2.52	0.78
26:X:84:GLU:HB3	47:1:404:HIS:CG	2.18	0.78
34:f:76:ARG:HE	34:f:85:ARG:NH2	1.81	0.78
50:S2:75:G:O2'	50:S2:76:U:C6	2.34	0.78
50:S2:222:U:N3	50:S2:223:C:C5	2.51	0.78
50:S2:493:A:C8	50:S2:574:A:N7	2.52	0.78
50:S2:494:C:N3	50:S2:495:U:C5	2.51	0.78
50:S2:998:A:N7	50:S2:999:G:H1'	1.97	0.78
52:SB:90:ASP:CG	52:SB:225:LEU:HD23	2.08	0.78
86:S6:72:C:H1'	86:S6:73:A:H5''	1.66	0.78
1:5:86:U:C4	1:5:97:G:C2	2.72	0.78
1:5:1806:G:N1	1:5:1807:C:C4	2.52	0.78
1:5:2037:C:O2	1:5:2038:U:C6	2.36	0.78
1:5:2567:G:C2	1:5:2568:C:C6	2.71	0.78
1:5:3621:A:C8	1:5:4642:U:H1'	2.19	0.78
1:5:3738:G:C5	1:5:3739:C:C6	2.72	0.78
1:5:3739:C:H6	1:5:3739:C:H5''	1.47	0.78
1:5:3971:G:H4'	46:z:31:THR:OG1	1.83	0.78
1:5:4426:C:C4	1:5:4427:G:N7	2.52	0.78
1:5:4723:A:C2	1:5:4724:A:C5	2.72	0.78
32:d:87:ARG:N	32:d:87:ARG:NH1	2.32	0.78
50:S2:1433:C:C2'	50:S2:1434:C:H1'	2.12	0.78
1:5:54:G:O6	1:5:55:G:N7	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:124:C:N3	1:5:125:C:C5	2.52	0.77
1:5:977:C:C2	1:5:978:G:H8	1.96	0.77
1:5:3944:G:C6	1:5:3945:A:C5	2.71	0.77
1:5:4093:G:C6	1:5:4115:G:O6	2.37	0.77
1:5:4117:U:N3	4:A:40:TYR:HE1	1.81	0.77
1:5:4481:U:C2	1:5:4482:U:C6	2.73	0.77
31:c:31:TYR:HE2	31:c:56:ARG:CD	1.97	0.77
33:e:35:TRP:NE1	33:e:36:ARG:C	2.42	0.77
50:S2:148:U:C2	50:S2:170:A:N6	2.52	0.77
50:S2:383:G:H2'	50:S2:384:U:C1'	2.13	0.77
50:S2:928:G:H2'	50:S2:929:G:C8	2.18	0.77
50:S2:1114:U:H3	50:S2:1119:A:H61	1.31	0.77
50:S2:1124:C:C2	50:S2:1125:C:C6	2.72	0.77
50:S2:1533:A:N1	50:S2:1537:A:H1'	1.99	0.77
50:S2:1540:G:C2	50:S2:1541:G:C4	2.71	0.77
50:S2:1552:G:O6	50:S2:1578:U:O2	2.01	0.77
52:SB:79:VAL:HB	52:SB:81:PHE:CZ	2.18	0.77
74:SX:135:LYS:CA	81:Se:13:ARG:HH22	1.96	0.77
85:S5:48:C:C5	85:S5:59:U:C5	2.71	0.77
86:S6:53:G:C4	86:S6:62:C:N3	2.53	0.77
1:5:1502:G:OP1	19:Q:65:ARG:NH1	2.17	0.77
1:5:1561:G:N2	1:5:1567:U:H1'	1.99	0.77
1:5:2277:C:O2	1:5:2278:G:N7	2.17	0.77
1:5:2277:C:C2	1:5:2278:G:N7	2.53	0.77
1:5:2438:A:C6	1:5:2441:C:C4	2.72	0.77
1:5:2724:G:N2	1:5:2726:G:C4	2.52	0.77
1:5:3799:A:H2'	1:5:3800:A:C8	2.18	0.77
1:5:3943:A:C2	1:5:3944:G:C6	2.71	0.77
1:5:4535:A:C6	1:5:4536:C:C5	2.72	0.77
1:5:4908:G:H1	1:5:4913:G:H21	1.31	0.77
3:8:15:G:H2'	3:8:16:G:C1'	2.14	0.77
13:J:121:PRO:CG	69:SS:101:ASN:HB3	2.14	0.77
16:N:179:LYS:HB2	16:N:180:PHE:CE2	2.18	0.77
47:1:248:THR:OG1	47:1:440:ALA:CB	2.32	0.77
50:S2:15:U:H2'	50:S2:16:G:O4'	1.84	0.77
50:S2:381:C:C6	50:S2:381:C:O5'	2.36	0.77
50:S2:1495:G:C2	50:S2:1496:U:H1'	2.19	0.77
68:SR:24:LEU:HD12	68:SR:58:MET:HE2	1.66	0.77
84:S4:21:U:H3	85:S5:37:A:H2	1.30	0.77
86:S6:4:C:H2'	86:S6:5:C:O4'	1.84	0.77
1:5:274:C:O2'	1:5:275:C:O5'	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:425:U:C2	1:5:426:A:N7	2.52	0.77
1:5:1724:G:C8	30:b:17:HIS:CE1	2.72	0.77
1:5:2087:C:H5	19:Q:37:ARG:NH1	1.80	0.77
1:5:2264:C:O2'	1:5:2265:G:O5'	2.02	0.77
1:5:2291:G:C2	1:5:2292:C:C6	2.73	0.77
1:5:3961:G:C6	1:5:3963:A:H5''	2.18	0.77
1:5:4213:A:C2	1:5:4218:U:O4	2.37	0.77
1:5:4216:G:C2	1:5:4217:G:C8	2.72	0.77
11:H:41:ILE:HD11	11:H:69:THR:CB	2.12	0.77
51:SA:110:ASN:O	51:SA:116:PHE:HD2	1.66	0.77
74:SX:134:TYR:O	81:Se:13:ARG:CZ	2.32	0.77
1:5:300:A:O2'	16:N:94:PHE:O	2.02	0.77
1:5:966:A:H61	1:5:2252:G:H8	1.29	0.77
1:5:1672:U:N3	1:5:1673:U:C5	2.51	0.77
1:5:1781:U:C2	1:5:1782:U:C6	2.72	0.77
1:5:1807:C:N3	1:5:1808:C:C5	2.52	0.77
1:5:2726:G:N3	1:5:2727:C:C5	2.52	0.77
1:5:4114:C:H3'	1:5:4115:G:O4'	1.83	0.77
1:5:4982:A:N1	1:5:4983:C:C6	2.53	0.77
3:8:81:C:H3'	3:8:82:A:H4'	1.66	0.77
3:8:127:U:H2'	3:8:128:C:O4'	1.84	0.77
50:S2:217:A:C2	50:S2:309:G:O6	2.38	0.77
50:S2:298:G:C2	50:S2:299:A:C8	2.73	0.77
50:S2:491:C:H1'	50:S2:574:A:N6	1.99	0.77
50:S2:609:U:C2	50:S2:610:G:C8	2.72	0.77
50:S2:1109:C:N3	50:S2:1110:G:H1'	1.99	0.77
50:S2:1121:G:C6	50:S2:1122:A:C5	2.72	0.77
50:S2:1212:G:N2	50:S2:1688:C:O2	2.16	0.77
50:S2:1400:U:H2'	50:S2:1401:A:O4'	1.85	0.77
50:S2:1486:A:O2'	50:S2:1487:A:O4'	2.03	0.77
85:S5:7:A:N1	85:S5:67:C:N3	2.32	0.77
1:5:195:C:N3	1:5:196:C:C5	2.52	0.77
1:5:321:U:C2	1:5:322:C:C6	2.73	0.77
1:5:458:C:C2	1:5:459:C:C6	2.73	0.77
1:5:1949:U:N3	1:5:1950:U:C5	2.53	0.77
1:5:2293:U:C2	1:5:2294:G:C8	2.73	0.77
1:5:2468:U:C4	1:5:2473:A:N1	2.51	0.77
1:5:4276:G:C6	1:5:4277:G:C5	2.70	0.77
1:5:4343:U:N3	1:5:4344:U:C5	2.53	0.77
1:5:4416:G:C2	1:5:4417:C:C6	2.73	0.77
1:5:4551:U:C2	1:5:4552:U:C5	2.72	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:130:C:C2	3:8:131:G:C8	2.72	0.77
5:B:378:ARG:HD3	25:W:32:LEU:HD21	1.65	0.77
6:C:111:TRP:HB2	6:C:112:HIS:HD2	1.48	0.77
18:P:54:GLN:HB3	18:P:83:TRP:CD1	2.18	0.77
50:S2:923:G:C2	50:S2:1022:U:O4	2.37	0.77
50:S2:1510:G:C5	50:S2:1511:U:C5	2.73	0.77
50:S2:1527:C:C4	50:S2:1528:G:N7	2.53	0.77
50:S2:1839:U:C2	50:S2:1840:U:C5	2.73	0.77
85:S5:38:A:H3'	85:S5:39:U:C6	2.19	0.77
1:5:197:A:H5'	1:5:197:A:C8	2.19	0.77
1:5:424:U:C2	1:5:425:U:C5	2.67	0.77
1:5:1262:G:C2	1:5:1263:A:C8	2.72	0.77
1:5:2127:C:C2'	1:5:2128:G:C8	2.68	0.77
1:5:2305:U:H5'	1:5:2305:U:C6	2.20	0.77
2:7:111:C:C4	2:7:112:U:C5	2.73	0.77
36:h:73:TYR:CD2	36:h:80:PRO:HD3	2.20	0.77
50:S2:70:G:C6	50:S2:71:G:C5	2.72	0.77
50:S2:185:G:N2	50:S2:186:C:C2	2.53	0.77
50:S2:1202:U:N3	50:S2:1203:G:C8	2.52	0.77
50:S2:1378:A:H62	51:SA:136:GLU:CD	1.92	0.77
50:S2:1540:G:N1	50:S2:1541:G:N7	2.31	0.77
86:S6:16:A:H2	86:S6:60:U:N3	1.82	0.77
1:5:244:G:N1	1:5:246:G:C8	2.53	0.77
1:5:701:G:O6	1:5:702:U:C5	2.38	0.77
1:5:1302:U:C2	1:5:1303:A:C8	2.73	0.77
1:5:1674:C:N3	1:5:1675:C:C5	2.53	0.77
1:5:4332:C:C2	1:5:4333:C:H5	2.03	0.77
1:5:4510:A:H61	1:5:4592:C:H4'	1.50	0.77
1:5:4560:C:H2'	1:5:4560:C:O2	1.84	0.77
1:5:4761:G:H2'	1:5:4762:A:O4'	1.83	0.77
2:7:111:C:N3	2:7:112:U:C6	2.53	0.77
3:8:86:U:OP1	3:8:87:G:OP1	2.00	0.77
6:C:197:ARG:C	6:C:198:ASN:ND2	2.43	0.77
7:D:284:LYS:HB3	12:I:209:TRP:CZ3	2.20	0.77
50:S2:636:C:C2	50:S2:637:U:C5	2.72	0.77
50:S2:1210:G:H21	50:S2:1690:U:H1'	1.50	0.77
52:SB:97:LEU:CG	52:SB:228:LEU:HD11	2.15	0.77
82:Sf:138:ARG:NH2	82:Sf:149:CYS:SG	2.56	0.77
86:S6:48:C:H2'	86:S6:59:U:O4'	1.85	0.77
1:5:135:G:N2	36:h:94:ARG:NH2	2.33	0.77
1:5:145:G:C2	1:5:146:G:C8	2.73	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:287:U:C2	1:5:288:G:C8	2.73	0.77
1:5:1213:G:N3	1:5:1215:C:H1'	2.00	0.77
1:5:1367:C:C2	1:5:1370:G:H2'	2.20	0.77
1:5:1781:U:N3	1:5:1782:U:C5	2.53	0.77
1:5:2033:A:N1	1:5:2034:G:N7	2.33	0.77
1:5:2041:A:C2	1:5:4464:A:C6	2.73	0.77
1:5:4283:G:C2	1:5:4284:C:C4	2.70	0.77
1:5:4739:C:H2'	1:5:4740:G:O4'	1.85	0.77
1:5:4892:A:C2	1:5:4927:G:O6	2.36	0.77
3:8:10:G:N2	3:8:11:C:H1'	2.00	0.77
50:S2:804:U:C2	50:S2:805:U:C6	2.73	0.77
50:S2:1204:A:N3	50:S2:1205:C:C5	2.49	0.77
50:S2:1283:C:N4	63:SM:104:VAL:O	2.17	0.77
50:S2:1351:G:C2	50:S2:1379:A:C5	2.72	0.77
50:S2:1575:G:C2	50:S2:1576:G:C5	2.72	0.77
50:S2:1658:G:H1	50:S2:1664:A:N6	1.83	0.77
85:S5:10:G:H22	85:S5:25:C:N4	1.83	0.77
1:5:120:A:H1'	1:5:121:A:N1	1.98	0.77
1:5:208:A:H1'	1:5:232:G:C2	2.18	0.77
1:5:667:A:H2'	1:5:668:C:O4'	1.85	0.77
1:5:1175:A:H1'	7:D:275:GLN:NE2	2.00	0.77
1:5:1634:A:N3	1:5:1635:C:C6	2.53	0.77
1:5:1696:C:O2'	1:5:2084:C:N4	2.18	0.77
1:5:1950:U:N3	1:5:1951:G:N7	2.32	0.77
1:5:2663:G:H4'	20:R:117:ARG:HH12	1.49	0.77
1:5:2753:G:H3'	1:5:2754:G:C8	2.19	0.77
1:5:4998:G:C6	1:5:4999:G:N7	2.53	0.77
3:8:103:A:C8	3:8:104:A:N7	2.53	0.77
7:D:41:LYS:HG3	22:T:93:ILE:HD11	1.67	0.77
50:S2:386:C:C4	50:S2:387:C:C5	2.73	0.77
50:S2:494:C:N3	50:S2:495:U:C4	2.53	0.77
50:S2:1243:U:C2	50:S2:1265:A:N1	2.53	0.77
50:S2:1406:G:H2'	50:S2:1407:U:O4'	1.84	0.77
53:SC:199:PRO:HD2	53:SC:223:TYR:OH	1.84	0.77
1:5:664:G:N2	1:5:667:A:C6	2.53	0.77
1:5:702:U:O2	1:5:703:G:O2'	2.00	0.77
1:5:1078:A:H2	1:5:1079:C:N4	1.82	0.77
1:5:1289:C:C2	1:5:1290:G:C8	2.73	0.77
1:5:1363:C:OP2	14:L:36:ARG:NH2	2.18	0.77
1:5:1458:C:H2'	1:5:1458:C:O2	1.84	0.77
1:5:1866:U:O4	1:5:4405:G:C8	2.38	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2433:G:P	47:1:268:LYS:NZ	2.58	0.77
1:5:3702:A:C2	1:5:3703:G:H8	2.02	0.77
1:5:4532:U:H5	1:5:4554:G:H21	1.32	0.77
50:S2:42:A:C4	50:S2:426:A:N6	2.53	0.77
50:S2:378:U:N3	50:S2:379:C:C6	2.52	0.77
50:S2:388:U:O2	50:S2:389:A:C8	2.37	0.77
50:S2:598:G:N2	50:S2:639:C:C2	2.53	0.77
50:S2:908:A:N3	50:S2:909:G:C8	2.53	0.77
56:SF:50:PRO:HB2	56:SF:73:THR:HG21	1.67	0.77
85:S5:6:G:O4'	85:S5:7:A:H5'	1.85	0.77
1:5:62:A:H2	1:5:77:U:O2	1.67	0.76
1:5:964:A:H3'	1:5:964:A:C8	2.19	0.76
1:5:1202:C:C2	1:5:1203:G:C8	2.74	0.76
1:5:1650:A:N1	6:C:100:ARG:NH2	2.33	0.76
1:5:2689:C:H2'	1:5:2689:C:O2	1.84	0.76
1:5:3692:A:N7	1:5:3693:U:C5	2.53	0.76
1:5:3767:C:C5'	50:S2:1849:G:C6	2.68	0.76
1:5:3863:C:C2	1:5:3864:C:C5	2.73	0.76
1:5:3974:G:P	46:z:28:PHE:HD1	2.05	0.76
1:5:4341:C:C4	1:5:4342:C:C5	2.73	0.76
1:5:4343:U:C2	1:5:4344:U:C6	2.73	0.76
1:5:4735:G:N3	1:5:4736:C:C6	2.52	0.76
9:F:93:PHE:HB2	9:F:124:PHE:CD1	2.21	0.76
50:S2:45:A:C2	50:S2:481:C:H1'	2.20	0.76
50:S2:337:C:C2	50:S2:338:G:H8	2.03	0.76
50:S2:476:A:H2	50:S2:488:U:O2	1.66	0.76
50:S2:595:U:O2'	50:S2:596:U:C6	2.38	0.76
50:S2:653:A:H2'	50:S2:654:A:O4'	1.85	0.76
50:S2:1017:U:O2	50:S2:1018:U:C6	2.38	0.76
50:S2:1030:A:C2	50:S2:1031:A:C8	2.72	0.76
50:S2:1564:C:C2	50:S2:1565:C:C5	2.73	0.76
62:SL:103:GLU:HB3	74:SX:11:ARG:CB	2.13	0.76
68:SR:34:VAL:HG22	83:Sg:150:TRP:CH2	2.20	0.76
1:5:237:G:O2'	1:5:238:C:P	2.43	0.76
1:5:1217:G:C2'	1:5:1218:G:C8	2.65	0.76
1:5:1316:G:O4'	1:5:2348:G:N2	2.17	0.76
1:5:1421:G:C2	1:5:1422:G:C8	2.72	0.76
1:5:4055:U:C5'	46:z:37:SER:HG	1.91	0.76
1:5:4055:U:H5'	46:z:37:SER:HB2	1.65	0.76
1:5:4275:G:O6	1:5:4276:G:C6	2.38	0.76
1:5:4750:G:O6	1:5:4949:G:O6	2.02	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:42:A:C5	2:7:43:U:C5	2.72	0.76
3:8:38:U:H3	36:h:92:ARG:NH1	1.83	0.76
9:F:120:PHE:HZ	9:F:217:SER:HA	1.48	0.76
50:S2:474:G:N2	50:S2:475:C:C2	2.52	0.76
50:S2:1256:G:C8	80:Sd:40:ARG:HD2	2.20	0.76
50:S2:1291:A:O4'	82:Sf:146:LEU:CB	2.32	0.76
50:S2:1293:A:O4'	82:Sf:150:PHE:CD2	2.37	0.76
50:S2:1603:G:N7	69:SS:28:PHE:CZ	2.52	0.76
1:5:271:C:C4	1:5:272:U:C5	2.74	0.76
1:5:1370:G:H4'	1:5:1371:A:H4'	1.66	0.76
1:5:1628:C:O2	1:5:1628:C:H2'	1.84	0.76
1:5:1796:U:C4	1:5:1797:G:C8	2.73	0.76
1:5:2107:C:C5	1:5:2126:G:N1	2.53	0.76
1:5:4095:G:N2	1:5:4096:C:N4	2.32	0.76
1:5:4345:C:N3	1:5:4346:U:C5	2.54	0.76
1:5:5005:G:O2'	1:5:5042:A:N6	2.18	0.76
13:J:121:PRO:HG2	69:SS:17:ASN:O	1.84	0.76
44:p:92:GLN:CG	52:SB:219:LYS:NZ	2.12	0.76
50:S2:980:A:H2'	50:S2:981:A:C8	2.19	0.76
50:S2:1229:G:H2'	50:S2:1230:C:O4'	1.84	0.76
50:S2:1293:A:N3	82:Sf:151:ASN:HA	2.01	0.76
50:S2:1405:A:C2	50:S2:1406:G:C4	2.74	0.76
50:S2:1412:C:O2	50:S2:1413:G:N7	2.18	0.76
50:S2:1527:C:N3	50:S2:1528:G:C8	2.54	0.76
1:5:182:G:H22	1:5:254:G:H22	1.32	0.76
1:5:210:C:N4	1:5:231:U:N3	2.33	0.76
1:5:709:C:C2	1:5:710:G:C8	2.72	0.76
1:5:752:G:C6	1:5:753:C:C6	2.73	0.76
1:5:957:G:C5'	1:5:1284:G:N2	2.48	0.76
1:5:1216:C:C2	1:5:1217:G:C8	2.73	0.76
1:5:1598:C:O2	1:5:1599:A:C8	2.32	0.76
1:5:1967:A:N3	1:5:1968:G:C8	2.53	0.76
1:5:1985:G:O2'	1:5:2003:G:OP2	2.01	0.76
1:5:2261:G:H2'	1:5:2262:G:C8	2.21	0.76
1:5:2327:G:N3	1:5:2328:G:C8	2.53	0.76
1:5:4123:C:C4	1:5:4124:G:N7	2.53	0.76
1:5:4269:G:C5	1:5:4270:C:C6	2.73	0.76
1:5:4271:A:H3'	1:5:4272:G:H21	1.51	0.76
1:5:4562:C:N3	1:5:4563:U:C6	2.53	0.76
1:5:4920:C:H2'	1:5:4921:C:H6	1.50	0.76
2:7:33:U:N3	2:7:34:C:C5	2.53	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:131:VAL:CB	20:R:132:PHE:CZ	2.64	0.76
24:V:98:PHE:CZ	25:W:22:ALA:HB3	2.20	0.76
50:S2:148:U:N3	50:S2:170:A:N6	2.33	0.76
50:S2:217:A:C2	50:S2:309:G:C6	2.73	0.76
50:S2:367:U:O2'	50:S2:371:A:N7	2.18	0.76
50:S2:1302:G:O2'	82:Sf:146:LEU:HD13	1.85	0.76
50:S2:1378:A:N6	51:SA:136:GLU:CG	2.47	0.76
50:S2:1405:A:N6	50:S2:1441:U:O4	2.18	0.76
86:S6:23:A:H3'	86:S6:24:G:H8	1.51	0.76
1:5:125:C:N3	1:5:126:C:C6	2.54	0.76
1:5:752:G:C5	1:5:753:C:C6	2.74	0.76
1:5:1279:A:H3'	1:5:1280:C:H5	1.51	0.76
1:5:1965:G:H1	1:5:2021:G:H1	1.33	0.76
1:5:2101:C:C2	1:5:2102:G:C8	2.73	0.76
1:5:2124:G:N2	9:F:32:ILE:HG13	2.01	0.76
1:5:2792:C:O2'	38:j:11:ARG:HD3	1.85	0.76
1:5:3952:A:N1	1:5:3953:G:C5	2.53	0.76
1:5:4098:A:C2	1:5:4099:G:N7	2.53	0.76
36:h:73:TYR:HD2	36:h:80:PRO:HD3	1.47	0.76
50:S2:158:A:N6	50:S2:466:G:C6	2.54	0.76
50:S2:474:G:C2	50:S2:475:C:C5	2.74	0.76
50:S2:858:A:C2	50:S2:859:G:C5	2.74	0.76
50:S2:1224:G:C5	50:S2:1225:U:C6	2.73	0.76
76:SZ:97:ILE:HD12	76:SZ:109:TYR:CE2	2.20	0.76
84:S4:16:U:O4	84:S4:17:U:O4	2.02	0.76
1:5:1534:A:N6	38:j:14:LYS:HA	2.01	0.76
1:5:1893:C:H2'	1:5:1893:C:O2	1.84	0.76
1:5:1945:G:C6	1:5:1946:G:C8	2.73	0.76
1:5:1964:A:C5	1:5:1965:G:N9	2.53	0.76
1:5:2251:G:O4'	1:5:2252:G:N2	2.18	0.76
1:5:2453:A:C2	1:5:2454:U:C6	2.74	0.76
1:5:3721:U:C2	1:5:3722:G:C8	2.74	0.76
1:5:3974:G:H4'	46:z:210:MET:SD	2.26	0.76
1:5:4215:C:N3	1:5:4216:G:C8	2.54	0.76
2:7:6:C:N4	2:7:7:G:C8	2.54	0.76
50:S2:337:C:O2	50:S2:338:G:C8	2.37	0.76
50:S2:694:G:C2	50:S2:695:C:C5	2.73	0.76
50:S2:1284:A:H61	63:SM:33:ARG:HB2	1.51	0.76
50:S2:1353:A:H8	50:S2:1353:A:C5'	1.98	0.76
50:S2:1545:A:C5	50:S2:1588:A:N6	2.54	0.76
60:SJ:136:ARG:HD3	60:SJ:160:SER:HA	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SN:18:TYR:CE1	73:SW:56:HIS:HB2	2.19	0.76
86:S6:53:G:C2	86:S6:54:U:C6	2.74	0.76
1:5:88:A:H62	1:5:97:G:N2	1.82	0.76
1:5:495:C:N3	1:5:496:G:C8	2.54	0.76
1:5:497:G:C2	1:5:657:C:N3	2.53	0.76
1:5:665:C:O2	1:5:665:C:H2'	1.85	0.76
1:5:752:G:C6	1:5:753:C:C5	2.74	0.76
1:5:919:C:C4	1:5:920:C:C5	2.74	0.76
1:5:1625:G:C8	1:5:1642:A:C2	2.74	0.76
1:5:1870:C:N3	1:5:1871:A:N7	2.33	0.76
1:5:2479:G:C6	1:5:2480:G:N7	2.53	0.76
1:5:2513:A:N7	35:g:13:TYR:CG	2.54	0.76
1:5:3732:A:C2	1:5:3733:A:N7	2.54	0.76
1:5:3971:G:N2	1:5:4050:A:H62	1.83	0.76
1:5:3975:C:OP1	46:z:25:ARG:NH1	2.18	0.76
1:5:4054:C:H1'	46:z:35:GLN:OE1	1.84	0.76
1:5:4199:C:N3	1:5:4200:G:C8	2.54	0.76
1:5:5012:G:C2	1:5:5014:A:N7	2.53	0.76
47:1:448:LEU:CG	47:1:451:VAL:CG2	2.59	0.76
50:S2:98:C:N3	50:S2:409:C:C5	2.54	0.76
50:S2:925:G:N2	50:S2:926:A:C8	2.54	0.76
50:S2:961:G:C2	50:S2:962:A:C8	2.73	0.76
50:S2:1134:G:C2	50:S2:1135:C:C5	2.74	0.76
52:SB:144:LYS:O	52:SB:145:LYS:CA	2.34	0.76
86:S6:5:C:C4	86:S6:6:G:C5	2.73	0.76
86:S6:33:U:C6	86:S6:35:A:H5'	2.20	0.76
1:5:21:G:C5	3:8:36:G:N2	2.54	0.76
1:5:209:U:C4	1:5:211:G:C8	2.74	0.76
1:5:1625:G:H2'	16:N:81:TYR:OH	1.85	0.76
1:5:1720:C:H2'	1:5:1721:G:O4'	1.86	0.76
1:5:1878:G:N2	1:5:1879:C:C2	2.54	0.76
1:5:2279:A:C2	1:5:2280:G:C8	2.73	0.76
1:5:2851:G:N7	1:5:2852:U:C5	2.54	0.76
1:5:3899:G:OP1	5:B:257:TRP:HB2	1.85	0.76
33:e:26:ASP:OD1	33:e:26:ASP:N	2.19	0.76
47:1:288:ASN:CG	47:1:428:ILE:HG13	2.10	0.76
47:1:447:ILE:C	47:1:450:ALA:HB3	2.11	0.76
50:S2:1289:U:H5'	50:S2:1315:U:O2'	1.86	0.76
50:S2:1735:A:N6	50:S2:1799:G:O2'	2.17	0.76
50:S2:1855:G:OP2	65:SO:147:ARG:NH2	2.19	0.76
86:S6:53:G:C2	86:S6:54:U:N1	2.54	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:466:A:C2	1:5:467:U:C6	2.73	0.76
1:5:642:G:N2	1:5:643:C:C2	2.53	0.76
1:5:1213:G:O6	1:5:1215:C:C4	2.39	0.76
1:5:1440:U:H2'	1:5:1440:U:O2	1.86	0.76
1:5:1629:G:N1	4:A:208:GLU:OE1	2.18	0.76
1:5:1964:A:C4	1:5:1965:G:C8	2.72	0.76
1:5:2079:G:N1	1:5:2080:U:C5	2.53	0.76
1:5:2105:A:N3	1:5:2106:G:C8	2.53	0.76
1:5:2479:G:N1	1:5:2480:G:C5	2.54	0.76
1:5:2743:A:H2	1:5:2744:A:C5	2.01	0.76
1:5:3693:U:C2	1:5:3694:U:C6	2.74	0.76
1:5:4563:U:O2	1:5:4564:A:C8	2.38	0.76
21:S:29:ARG:CZ	21:S:29:ARG:CB	2.63	0.76
50:S2:29:G:C2	50:S2:30:C:C4	2.73	0.76
50:S2:827:A:C5	50:S2:828:G:C8	2.74	0.76
50:S2:993:G:C2	50:S2:994:C:N1	2.53	0.76
50:S2:996:A:O2'	50:S2:997:A:O5'	2.04	0.76
50:S2:1290:G:N3	82:Sf:146:LEU:CB	2.46	0.76
50:S2:1405:A:H2'	50:S2:1406:G:O4'	1.85	0.76
50:S2:1545:A:N6	50:S2:1588:A:C2	2.53	0.76
52:SB:217:MET:HE3	52:SB:220:LYS:CE	2.14	0.76
1:5:914:U:H2'	1:5:915:A:O4'	1.86	0.76
1:5:986:C:C2	1:5:1068:G:N2	2.54	0.76
1:5:1596:U:O2	18:P:131:ARG:NH2	2.19	0.76
1:5:2479:G:C6	1:5:2480:G:C5	2.73	0.76
1:5:2613:C:N3	1:5:2614:C:C6	2.54	0.76
1:5:3717:A:C5	1:5:3736:A:N6	2.54	0.76
1:5:3956:G:C2	1:5:3966:A:H8	2.04	0.76
1:5:4355:G:C2	1:5:4356:G:C8	2.73	0.76
3:8:133:G:N1	3:8:134:G:C5	2.54	0.76
12:I:47:PRO:CA	12:I:171:TRP:HE1	1.98	0.76
50:S2:458:A:N1	50:S2:459:C:C6	2.54	0.76
50:S2:1687:C:N3	50:S2:1688:C:C5	2.54	0.76
52:SB:97:LEU:HD23	52:SB:232:HIS:CE1	2.21	0.76
68:SR:18:GLU:O	68:SR:71:ILE:CG1	2.34	0.76
86:S6:48:C:N1	86:S6:59:U:H1'	1.99	0.76
86:S6:53:G:N3	86:S6:62:C:C2	2.54	0.76
1:5:90:G:C8	1:5:92:C:C6	2.74	0.75
1:5:1190:C:C2	1:5:1191:C:C5	2.73	0.75
1:5:1214:C:HO2'	1:5:2114:G:H1	1.26	0.75
1:5:1491:A:C2	1:5:1492:G:C4	2.75	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1984:A:N7	1:5:2011:C:H4'	2.01	0.75
1:5:2036:C:N4	1:5:2037:C:H41	1.84	0.75
1:5:2078:C:O2	1:5:2078:C:H2'	1.85	0.75
1:5:3657:U:N3	1:5:3658:C:C5	2.54	0.75
1:5:4117:U:C2	4:A:40:TYR:CE1	2.74	0.75
1:5:4416:G:C2	1:5:4417:C:C5	2.73	0.75
1:5:4563:U:N3	1:5:4564:A:C5	2.53	0.75
3:8:79:G:C4	3:8:80:A:C2	2.74	0.75
50:S2:182:C:C2'	50:S2:184:G:H1'	2.16	0.75
50:S2:848:U:O2	50:S2:849:A:C8	2.39	0.75
50:S2:1315:U:C2	50:S2:1316:C:C5	2.74	0.75
50:S2:1348:G:H2'	50:S2:1348:G:N3	1.99	0.75
50:S2:1540:G:N2	50:S2:1541:G:C4	2.54	0.75
50:S2:1569:A:N7	50:S2:1570:G:H1'	2.01	0.75
83:Sg:142:VAL:HG13	83:Sg:177:TRP:CZ3	2.20	0.75
84:S4:18:U:O2	86:S6:37:A:C2	2.39	0.75
86:S6:46:G:C2'	86:S6:47:U:H5'	2.16	0.75
1:5:166:C:O2	1:5:167:C:H6	1.69	0.75
1:5:470:A:N6	1:5:471:A:C4	2.55	0.75
1:5:730:G:N2	1:5:939:G:H22	1.82	0.75
1:5:1566:C:C2'	1:5:1567:U:O4'	2.35	0.75
1:5:3727:A:O2'	1:5:3728:A:O5'	2.04	0.75
1:5:3939:G:O3'	1:5:3940:U:P	2.44	0.75
1:5:4213:A:N1	1:5:4218:U:C4	2.51	0.75
10:G:264:LYS:HZ1	52:SB:91:VAL:HG12	1.42	0.75
50:S2:106:C:O2	50:S2:107:A:C8	2.38	0.75
50:S2:452:G:C2	50:S2:453:C:C6	2.75	0.75
50:S2:957:A:C2	50:S2:967:C:O2	2.40	0.75
50:S2:1122:A:O3'	52:SB:205:TYR:OH	2.04	0.75
50:S2:1538:C:O2	50:S2:1538:C:H2'	1.84	0.75
50:S2:1545:A:C4	50:S2:1588:A:N6	2.54	0.75
68:SR:10:LYS:CD	68:SR:53:TYR:OH	2.33	0.75
86:S6:51:U:C2'	86:S6:52:G:H8	1.99	0.75
86:S6:73:A:C2'	86:S6:74:C:H5'	2.16	0.75
1:5:967:C:C5	1:5:968:C:O2	2.38	0.75
1:5:1268:G:C2	1:5:1270:A:N7	2.52	0.75
1:5:1280:C:N4	1:5:1282:G:O6	2.19	0.75
1:5:1447:C:H1'	1:5:2098:G:N2	2.01	0.75
1:5:2316:G:C2	1:5:2317:C:C4	2.74	0.75
1:5:2507:A:C6	1:5:2508:U:C6	2.74	0.75
1:5:3717:A:OP2	1:5:3735:G:N2	2.19	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4097:G:N1	1:5:4098:A:C5	2.55	0.75
2:7:56:G:H2'	2:7:57:C:O5'	1.86	0.75
3:8:70:G:N2	3:8:87:G:O2'	2.18	0.75
10:G:264:LYS:CE	52:SB:91:VAL:CG1	2.64	0.75
19:Q:89:ASP:OD1	19:Q:91:ARG:NH2	2.19	0.75
50:S2:452:G:C2	50:S2:453:C:C4	2.74	0.75
50:S2:857:U:C2	50:S2:858:A:C8	2.74	0.75
50:S2:1832:A:N3	50:S2:1833:C:C5	2.46	0.75
86:S6:4:C:H3'	86:S6:5:C:C5'	2.16	0.75
1:5:1410:U:C5	1:5:1815:G:C2	2.74	0.75
1:5:2058:G:N2	1:5:2059:C:C2	2.55	0.75
1:5:2081:C:C2'	1:5:2082:G:O5'	2.35	0.75
1:5:2251:G:O6	45:r:99:LYS:HA	1.87	0.75
1:5:4164:C:N3	1:5:4165:C:C5	2.54	0.75
1:5:4240:G:C5	1:5:4241:C:C5	2.74	0.75
1:5:4362:A:C2	1:5:4363:A:C8	2.75	0.75
1:5:4531:U:C2	85:S5:76:A:H2	2.05	0.75
50:S2:56:G:C2'	50:S2:57:U:O5'	2.33	0.75
50:S2:579:C:C4	50:S2:580:U:C6	2.73	0.75
50:S2:745:C:H1'	58:SH:108:SER:HA	1.67	0.75
50:S2:1000:C:H2'	50:S2:1000:C:O2	1.86	0.75
50:S2:1066:U:N3	50:S2:1067:C:C6	2.55	0.75
50:S2:1342:U:H5	50:S2:1483:A:C6	1.85	0.75
50:S2:1432:U:N3	50:S2:1433:C:C5	2.54	0.75
74:SX:4:CYS:SG	74:SX:9:THR:CG2	2.63	0.75
1:5:319:A:H2'	1:5:320:C:O4'	1.86	0.75
1:5:661:C:C4	1:5:662:C:C5	2.74	0.75
1:5:1079:C:C4	1:5:1080:C:C5	2.74	0.75
1:5:1261:G:C2	1:5:1262:G:C8	2.75	0.75
1:5:1966:C:C2	1:5:1967:A:H8	2.05	0.75
1:5:2097:U:O2	1:5:2097:U:H5'	1.87	0.75
1:5:2362:U:H2'	1:5:2362:U:O2	1.86	0.75
1:5:4054:C:O3'	46:z:205:TYR:CZ	2.36	0.75
1:5:4229:U:C5	1:5:4230:C:C5	2.75	0.75
1:5:4920:C:H2'	1:5:4921:C:C6	2.21	0.75
3:8:106:G:C2	3:8:107:C:C4	2.74	0.75
28:Z:77:TYR:CB	31:c:39:ARG:HD3	2.17	0.75
33:e:110:ALA:HA	33:e:113:GLU:OE2	1.85	0.75
50:S2:381:C:H2'	50:S2:382:C:C5	2.22	0.75
50:S2:449:A:N1	50:S2:452:G:C8	2.54	0.75
50:S2:1294:G:O4'	82:Sf:151:ASN:O	2.04	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1489:A:N1	54:SD:146:ARG:NH2	2.34	0.75
52:SB:217:MET:CE	52:SB:220:LYS:HG2	2.17	0.75
68:SR:24:LEU:HD12	68:SR:58:MET:CE	2.16	0.75
86:S6:53:G:N1	86:S6:62:C:C6	2.54	0.75
1:5:422:C:O2	1:5:422:C:H2'	1.85	0.75
1:5:1265:G:C2'	1:5:1266:G:H5'	2.16	0.75
1:5:1490:G:C2	1:5:1491:A:C8	2.74	0.75
1:5:1598:C:C6	1:5:2798:A:C8	2.74	0.75
1:5:1811:G:C2	1:5:1812:C:C6	2.74	0.75
1:5:1885:G:C2	1:5:1895:G:C2	2.74	0.75
1:5:1899:G:N7	1:5:2278:G:N1	2.33	0.75
1:5:1987:C:C4	1:5:1988:G:C8	2.75	0.75
1:5:3909:C:C4	1:5:3910:C:C5	2.74	0.75
1:5:4092:G:C5	1:5:4093:G:N2	2.54	0.75
1:5:4735:G:N2	1:5:4736:C:C2	2.55	0.75
1:5:4886:C:O2	1:5:4887:C:C6	2.39	0.75
1:5:5047:C:H5''	1:5:5050:C:H5	1.51	0.75
21:S:33:PHE:HE2	21:S:106:VAL:HG11	1.50	0.75
28:Z:49:TYR:CE2	28:Z:133:LYS:HA	2.22	0.75
50:S2:835:C:N3	50:S2:837:A:H4'	2.02	0.75
50:S2:1045:U:N3	50:S2:1046:U:C5	2.55	0.75
50:S2:1210:G:C5'	50:S2:1210:G:H8	1.99	0.75
50:S2:1291:A:O4'	82:Sf:146:LEU:HB2	1.86	0.75
60:SJ:124:HIS:HB3	81:Se:31:ARG:NH2	2.01	0.75
62:SL:99:TYR:HH	74:SX:17:ARG:HD2	1.49	0.75
86:S6:53:G:C2	86:S6:62:C:C6	2.74	0.75
1:5:142:G:C2	1:5:144:G:C8	2.74	0.75
1:5:450:G:O2'	1:5:452:A:H4'	1.87	0.75
1:5:1271:G:H3'	1:5:1272:C:C5'	2.16	0.75
1:5:1359:G:H2'	1:5:1360:G:O4'	1.86	0.75
1:5:1757:U:N3	1:5:1758:G:C8	2.55	0.75
1:5:1823:G:H4'	7:D:44:TYR:HD2	1.50	0.75
1:5:1929:A:N1	1:5:2054:U:C4	2.55	0.75
1:5:3721:U:N3	1:5:3722:G:N7	2.35	0.75
1:5:3807:A:O2'	50:S2:1816:G:H1'	1.87	0.75
1:5:4217:G:C2'	1:5:4218:U:O5'	2.35	0.75
29:a:127:LYS:CG	29:a:128:PHE:CE2	2.69	0.75
50:S2:474:G:N1	50:S2:475:C:C4	2.54	0.75
50:S2:625:G:C4'	50:S2:629:A:C2	2.70	0.75
50:S2:637:U:N3	50:S2:638:C:C5	2.54	0.75
50:S2:1074:C:O2	50:S2:1075:C:C5	2.39	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1253:A:C2	50:S2:1666:C:O4'	2.39	0.75
50:S2:1408:U:H2'	50:S2:1409:A:C8	2.22	0.75
84:S4:20:U:OP2	84:S4:20:U:H2'	1.86	0.75
86:S6:63:G:C2	86:S6:64:A:N9	2.54	0.75
1:5:348:G:C6	1:5:350:C:N4	2.55	0.75
1:5:490:C:H2'	1:5:491:G:C8	2.22	0.75
1:5:688:U:C4	1:5:689:U:C5	2.75	0.75
1:5:916:C:C4	1:5:917:A:C8	2.75	0.75
1:5:977:C:N3	1:5:978:G:C5	2.55	0.75
1:5:1280:C:N3	1:5:1282:G:C5	2.55	0.75
1:5:1977:C:O2	1:5:1990:A:N1	2.20	0.75
1:5:2101:C:O2	1:5:2102:G:C8	2.40	0.75
1:5:2857:A:C2	1:5:2858:A:C6	2.74	0.75
1:5:3794:C:N3	1:5:3795:A:N7	2.34	0.75
1:5:3952:A:C2	1:5:3953:G:N9	2.54	0.75
1:5:3954:A:C2	1:5:3955:G:C5	2.75	0.75
1:5:4878:C:O2	1:5:4879:C:C5	2.40	0.75
1:5:5005:G:C6	25:W:51:TRP:HB3	2.21	0.75
3:8:85:U:H2'	3:8:87:G:H8	1.48	0.75
10:G:53:ARG:NH2	10:G:54:PHE:CZ	2.53	0.75
15:M:3:PHE:HB2	15:M:6:PHE:CZ	2.20	0.75
21:S:10:TYR:OH	21:S:66:GLN:HG3	1.85	0.75
50:S2:1208:A:H2'	50:S2:1208:A:N3	2.02	0.75
50:S2:1383:A:N3	50:S2:1384:C:C6	2.55	0.75
50:S2:1386:A:N1	68:SR:7:LYS:NZ	2.34	0.75
50:S2:1781:A:C2	50:S2:1782:G:C6	2.75	0.75
86:S6:23:A:C5	86:S6:24:G:N7	2.54	0.75
1:5:211:G:C2	1:5:212:A:N7	2.55	0.75
1:5:438:G:OP1	33:e:16:ARG:NH1	2.19	0.75
1:5:909:A:C6	1:5:910:G:N7	2.54	0.75
1:5:1445:U:N3	1:5:1446:C:C5	2.54	0.75
1:5:1485:C:O2	1:5:4349:C:C6	2.40	0.75
1:5:1560:A:C6	1:5:1561:G:C6	2.63	0.75
1:5:2037:C:C4	1:5:2038:U:C4	2.75	0.75
1:5:2347:A:C2	1:5:2348:G:N1	2.54	0.75
1:5:2362:U:C5	1:5:3859:G:N2	2.54	0.75
1:5:3642:A:HO2'	38:j:2:THR:N	1.85	0.75
1:5:3858:C:N4	1:5:3859:G:C5	2.55	0.75
50:S2:549:C:C4	50:S2:550:C:C6	2.74	0.75
50:S2:1100:A:N3	50:S2:1101:U:C6	2.54	0.75
50:S2:1134:G:C2	50:S2:1135:C:C6	2.74	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1455:A:N1	50:S2:1456:G:C8	2.55	0.75
60:SJ:18:ARG:HG2	60:SJ:21:GLU:HG2	1.67	0.75
1:5:144:G:C2	1:5:145:G:N7	2.54	0.74
1:5:1287:G:C2	1:5:1289:C:C6	2.74	0.74
1:5:1811:G:C2	1:5:1812:C:C5	2.75	0.74
1:5:1823:G:H4'	7:D:44:TYR:CD2	2.22	0.74
1:5:1884:C:H42	1:5:1896:A:H2	1.34	0.74
1:5:3739:C:C6	1:5:3739:C:H5''	2.22	0.74
1:5:4490:C:O2	1:5:4490:C:H2'	1.87	0.74
1:5:4933:C:C4	1:5:4934:A:C8	2.74	0.74
8:E:280:HIS:HD2	34:f:38:GLU:HG3	1.52	0.74
40:l:21:ARG:NH1	47:1:273:ARG:CG	2.50	0.74
45:r:7:TRP:HZ3	45:r:11:ARG:HA	1.52	0.74
50:S2:340:C:C4	50:S2:341:C:N4	2.55	0.74
50:S2:665:G:O4'	50:S2:670:A:C2	2.40	0.74
51:SA:2:SER:O	51:SA:4:ALA:N	2.20	0.74
1:5:89:C:O2'	1:5:90:G:C5'	2.34	0.74
1:5:431:G:O4'	1:5:3889:G:N2	2.20	0.74
1:5:489:C:C4	1:5:490:C:C5	2.75	0.74
1:5:655:C:C2	1:5:656:C:C5	2.75	0.74
1:5:989:U:H2'	1:5:990:C:H5	1.52	0.74
1:5:1271:G:C3'	1:5:1272:C:H5'	2.16	0.74
1:5:1317:U:OP1	29:a:21:ARG:NH1	2.20	0.74
1:5:1877:G:C6	1:5:1878:G:N7	2.55	0.74
1:5:1900:C:N3	1:5:1901:C:C5	2.55	0.74
1:5:2314:G:C2	1:5:2315:G:C8	2.67	0.74
1:5:3676:G:O2'	1:5:3677:U:C5'	2.35	0.74
1:5:4425:G:C6	1:5:4426:C:C6	2.75	0.74
2:7:42:A:N9	13:J:75:ARG:NH1	2.36	0.74
9:F:82:ASN:HD21	22:T:142:ARG:CB	2.00	0.74
19:Q:34:PHE:CE2	19:Q:38:ARG:HG3	2.22	0.74
20:R:36:ASN:ND2	47:1:407:THR:HG21	2.00	0.74
39:k:40:ARG:HB3	39:k:41:TYR:CD1	2.20	0.74
50:S2:1243:U:O2	50:S2:1265:A:C2	2.39	0.74
50:S2:1316:C:O2	50:S2:1317:C:H6	1.70	0.74
50:S2:1454:A:C8	50:S2:1476:A:H1'	2.22	0.74
50:S2:1514:G:H2'	50:S2:1515:G:O4'	1.87	0.74
50:S2:1595:U:C4	50:S2:1596:U:H5	2.05	0.74
85:S5:2:C:N4	85:S5:71:G:C2	2.46	0.74
85:S5:40:C:H2'	85:S5:41:C:H6	1.52	0.74
86:S6:53:G:C4	86:S6:62:C:C2	2.74	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2524:U:H5''	1:5:2711:G:N2	2.02	0.74
3:8:64:U:C4	3:8:65:A:N6	2.55	0.74
3:8:132:G:N1	3:8:133:G:C5	2.55	0.74
50:S2:51:U:N3	50:S2:52:G:C8	2.55	0.74
50:S2:69:C:C2	50:S2:70:G:C8	2.76	0.74
50:S2:121:U:O2	50:S2:122:G:C8	2.40	0.74
50:S2:378:U:C4	50:S2:379:C:C4	2.74	0.74
50:S2:809:A:H2'	50:S2:810:A:O4'	1.87	0.74
50:S2:1342:U:C6	50:S2:1483:A:C2	2.75	0.74
50:S2:1366:G:H2'	50:S2:1367:U:O4'	1.87	0.74
52:SB:99:ASN:HD21	52:SB:231:LEU:HD13	1.52	0.74
53:SC:199:PRO:CD	53:SC:223:TYR:OH	2.34	0.74
54:SD:192:TRP:CD1	54:SD:196:GLY:HA2	2.23	0.74
1:5:114:G:H2'	1:5:115:C:H5'	1.69	0.74
1:5:516:C:C2	1:5:646:G:C2	2.76	0.74
1:5:964:A:C5'	1:5:964:A:C8	2.69	0.74
1:5:1074:G:H2'	1:5:1075:G:O4'	1.87	0.74
1:5:1269:G:C5	1:5:2111:G:N1	2.56	0.74
1:5:1358:G:N3	1:5:1359:G:N7	2.34	0.74
1:5:1758:G:C2	1:5:1759:G:C5	2.74	0.74
1:5:2301:G:N1	1:5:2302:C:C4	2.56	0.74
1:5:2689:C:N3	1:5:2690:C:C5	2.55	0.74
1:5:3591:C:N4	1:5:3592:G:C8	2.55	0.74
1:5:3968:U:H4'	1:5:3969:G:OP1	1.87	0.74
1:5:4200:G:N2	1:5:4201:G:H1'	2.03	0.74
1:5:4426:C:N3	1:5:4427:G:C8	2.56	0.74
1:5:4885:U:N3	1:5:4886:C:C5	2.55	0.74
1:5:5047:C:O4'	1:5:5048:A:N1	2.20	0.74
3:8:10:G:C2	3:8:11:C:N1	2.55	0.74
10:G:264:LYS:HE3	52:SB:91:VAL:HG12	1.66	0.74
11:H:95:VAL:HG22	41:m:82:LEU:HD22	1.69	0.74
50:S2:436:G:N7	50:S2:471:G:N2	2.30	0.74
50:S2:550:C:H2'	50:S2:551:U:H6	1.52	0.74
50:S2:794:A:N1	50:S2:795:A:C4	2.56	0.74
50:S2:1431:G:C2	50:S2:1432:U:H1'	2.22	0.74
68:SR:21:TYR:CD1	68:SR:61:ILE:HG21	2.20	0.74
86:S6:6:G:N1	86:S6:7:G:C4	2.55	0.74
86:S6:52:G:H1	86:S6:63:G:H1	1.35	0.74
1:5:1776:A:OP1	85:S5:53:G:P	2.45	0.74
1:5:2401:A:C2	1:5:2402:G:C8	2.76	0.74
1:5:3783:A:H2	1:5:3789:C:N4	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4054:C:H1'	46:z:35:GLN:HB3	1.68	0.74
1:5:4257:A:C2'	1:5:4258:C:H6	2.00	0.74
1:5:4258:C:N3	1:5:4259:C:C5	2.55	0.74
1:5:4606:G:H2'	1:5:4607:A:C8	2.22	0.74
50:S2:54:A:C2	50:S2:451:G:C2	2.75	0.74
50:S2:64:A:C6	50:S2:82:G:C2	2.75	0.74
50:S2:1204:A:C2	50:S2:1205:C:C4	2.75	0.74
50:S2:1623:A:N6	50:S2:1625:U:OP2	2.20	0.74
85:S5:70:G:C6	85:S5:71:G:O6	2.41	0.74
86:S6:16:A:N6	86:S6:21:A:H1'	2.02	0.74
86:S6:53:G:C2	86:S6:62:C:N1	2.55	0.74
1:5:467:U:N3	1:5:468:U:C5	2.56	0.74
1:5:701:G:C6	1:5:702:U:C5	2.76	0.74
1:5:754:U:C2	1:5:755:C:C6	2.75	0.74
1:5:1438:U:O2	1:5:2099:G:N7	2.21	0.74
1:5:2290:C:C2	1:5:2291:G:C8	2.76	0.74
1:5:4093:G:H2'	1:5:4094:G:C5'	2.16	0.74
1:5:4120:U:O4	35:g:97:ILE:HA	1.88	0.74
1:5:4223:C:H5'	12:I:119:PHE:HD2	1.53	0.74
1:5:4744:A:N1	1:5:4745:G:C6	2.55	0.74
2:7:51:G:N2	2:7:52:C:C2	2.55	0.74
3:8:12:G:N2	3:8:13:G:C1'	2.50	0.74
11:H:156:ASN:CG	11:H:157:SER:N	2.45	0.74
46:z:44:GLN:HE22	86:S6:53:G:H21	0.75	0.74
46:z:82:ILE:HD12	46:z:147:LYS:HD2	1.67	0.74
47:1:431:LEU:C	47:1:433:VAL:N	2.39	0.74
50:S2:10:G:H1'	53:SC:115:GLN:NE2	2.01	0.74
50:S2:42:A:C5	50:S2:43:U:C5	2.73	0.74
50:S2:402:C:C4	50:S2:403:G:N7	2.55	0.74
50:S2:623:G:N2	50:S2:624:C:C2	2.55	0.74
50:S2:968:U:O2'	50:S2:972:A:H1'	1.88	0.74
50:S2:1017:U:C2	50:S2:1018:U:C5	2.76	0.74
50:S2:1507:G:O2'	50:S2:1508:A:H5'	1.87	0.74
85:S5:12:U:C2	85:S5:24:G:C2	2.76	0.74
86:S6:34:G:N2	86:S6:35:A:C5	2.55	0.74
1:5:331:G:C2	1:5:332:C:C5	2.75	0.74
1:5:348:G:N2	1:5:350:C:C2	2.56	0.74
1:5:472:C:N3	1:5:473:C:C5	2.56	0.74
1:5:1201:U:C2	1:5:1202:C:C6	2.76	0.74
1:5:1390:G:N7	1:5:1392:A:OP2	2.20	0.74
1:5:1663:C:C2	1:5:1664:U:C5	2.76	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2270:G:C2	1:5:2271:C:C4	2.76	0.74
1:5:2561:C:C2	1:5:2562:G:C8	2.76	0.74
1:5:4242:U:O2	1:5:4279:A:C2	2.41	0.74
1:5:4627:U:O2	1:5:4628:U:C6	2.39	0.74
20:R:131:VAL:HB	20:R:132:PHE:CE2	2.23	0.74
50:S2:449:A:C5	50:S2:452:G:C6	2.75	0.74
50:S2:1146:C:O2	50:S2:1147:C:C6	2.41	0.74
50:S2:1434:C:H2'	50:S2:1435:C:O4'	1.87	0.74
62:SL:99:TYR:O	62:SL:101:ARG:N	2.20	0.74
1:5:60:G:C5	1:5:61:A:N7	2.56	0.74
1:5:1266:G:O2'	1:5:1267:C:H5'	1.87	0.74
1:5:1542:U:C2	1:5:1543:G:C8	2.75	0.74
1:5:2036:C:C2	1:5:2037:C:C6	2.76	0.74
1:5:2605:G:C2	1:5:2606:G:C8	2.75	0.74
1:5:2830:G:C2	1:5:2831:G:C8	2.76	0.74
1:5:2856:C:O2	1:5:2856:C:H2'	1.87	0.74
1:5:4502:C:C4	1:5:4503:A:C8	2.75	0.74
1:5:4549:G:C6	1:5:4550:G:N7	2.56	0.74
3:8:55:U:H3	3:8:62:A:H2	1.34	0.74
3:8:133:G:C6	3:8:134:G:N7	2.56	0.74
50:S2:1149:A:N1	50:S2:1151:G:C5	2.55	0.74
50:S2:1289:U:H3'	50:S2:1290:G:H8	1.51	0.74
50:S2:1431:G:C5	50:S2:1432:U:C5	2.75	0.74
51:SA:138:SER:HB3	51:SA:156:TYR:CD1	2.23	0.74
63:SM:16:THR:HA	63:SM:19:GLN:HG3	1.70	0.74
74:SX:89:GLY:CA	81:Se:10:GLY:H	2.00	0.74
85:S5:36:A:C8	85:S5:37:A:C8	2.75	0.74
86:S6:34:G:N2	86:S6:35:A:C4	2.56	0.74
1:5:473:C:C2	1:5:474:C:C5	2.74	0.74
1:5:660:A:C2	1:5:661:C:C6	2.75	0.74
1:5:1661:C:O2	1:5:1662:C:C6	2.41	0.74
1:5:1696:C:H1'	1:5:1697:G:C5'	2.17	0.74
1:5:2108:G:N2	1:5:2125:C:C2	2.56	0.74
1:5:2263:A:O3'	1:5:2264:C:C6	2.40	0.74
1:5:2366:A:H2	1:5:3851:U:H1'	1.50	0.74
1:5:4275:G:C5	1:5:4276:G:C8	2.76	0.74
1:5:4341:C:C4	1:5:4342:C:C6	2.75	0.74
1:5:4406:U:C2	1:5:4407:G:C8	2.76	0.74
1:5:4580:U:C2	1:5:4581:G:C8	2.76	0.74
50:S2:53:C:O2	50:S2:54:A:C8	2.41	0.74
50:S2:377:G:C2	50:S2:378:U:C5	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:647:U:C2	50:S2:648:A:N7	2.55	0.74
50:S2:1307:U:H1'	82:Sf:133:ALA:CB	2.17	0.74
83:Sg:125:ARG:HD3	83:Sg:150:TRP:CD2	2.23	0.74
1:5:1353:G:N7	19:Q:104:ARG:NH2	2.35	0.74
1:5:1965:G:C4	1:5:1966:C:C5	2.75	0.74
1:5:2282:A:C2'	1:5:2283:G:O5'	2.36	0.74
1:5:2793:G:C6	1:5:2797:C:C4	2.76	0.74
1:5:3958:G:H5'	86:S6:19:G:OP2	1.86	0.74
1:5:4166:G:N1	1:5:4167:G:C5	2.55	0.74
1:5:4981:G:N1	1:5:4982:A:N7	2.36	0.74
4:A:163:ARG:HB2	4:A:163:ARG:NH1	2.02	0.74
5:B:258:HIS:O	5:B:260:ALA:N	2.21	0.74
21:S:10:TYR:CZ	21:S:66:GLN:HG3	2.22	0.74
29:a:61:TYR:O	29:a:62:HIS:C	2.31	0.74
47:1:430:ALA:O	47:1:433:VAL:CG2	2.36	0.74
50:S2:316:G:N2	50:S2:317:C:C2	2.56	0.74
50:S2:1053:C:C2	50:S2:1054:G:C8	2.75	0.74
50:S2:1694:U:H5''	50:S2:1695:A:OP1	1.87	0.74
85:S5:6:G:H1'	85:S5:7:A:O4'	1.87	0.74
85:S5:21:A:N7	85:S5:48:C:C5	2.56	0.74
86:S6:21:A:N6	86:S6:46:G:C5	2.55	0.74
1:5:93:G:O2'	1:5:94:A:N7	2.19	0.73
1:5:450:G:N2	1:5:1294:A:H2'	2.02	0.73
1:5:491:G:N2	1:5:663:G:C2	2.56	0.73
1:5:509:A:H2	29:a:105:ARG:NE	1.86	0.73
1:5:516:C:C2	1:5:646:G:N2	2.56	0.73
1:5:1214:C:N3	1:5:2116:C:N4	2.35	0.73
1:5:1442:C:N3	1:5:1443:A:C8	2.55	0.73
1:5:1818:G:C8	1:5:1821:G:C6	2.75	0.73
1:5:2485:U:O2	1:5:2486:G:C8	2.41	0.73
1:5:2532:C:N3	1:5:2533:C:C4	2.56	0.73
1:5:3873:G:N2	1:5:3883:U:C2	2.56	0.73
1:5:4041:C:H5	1:5:4042:G:N7	1.78	0.73
1:5:4499:G:H3'	1:5:4500:U:H5''	1.69	0.73
2:7:112:U:O2	2:7:113:G:H8	1.69	0.73
16:N:99:GLN:HG3	16:N:130:PHE:CD2	2.22	0.73
50:S2:29:G:N2	50:S2:30:C:C2	2.56	0.73
50:S2:1213:C:C4	50:S2:1682:C:C4	2.76	0.73
50:S2:1407:U:C2'	50:S2:1408:U:C6	2.69	0.73
50:S2:1666:C:N3	50:S2:1667:U:C5	2.56	0.73
84:S4:23:U:O4	85:S5:35:A:N6	2.17	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:7:A:H2	85:S5:67:C:N3	1.86	0.73
85:S5:31:A:N1	85:S5:40:C:C4	2.56	0.73
86:S6:48:C:H2'	86:S6:59:U:C1'	2.18	0.73
86:S6:49:C:H2'	86:S6:50:U:C6	2.21	0.73
1:5:39:A:C2	29:a:40:HIS:CE1	2.76	0.73
1:5:690:C:C4	1:5:691:C:C5	2.77	0.73
1:5:1076:C:N3	1:5:1077:C:C6	2.56	0.73
1:5:1080:C:C2	1:5:1081:C:C6	2.76	0.73
1:5:1091:C:C2	1:5:1092:G:C8	2.76	0.73
1:5:1216:C:H2'	1:5:1217:G:O4'	1.86	0.73
1:5:1268:G:N2	1:5:1270:A:N9	2.36	0.73
1:5:1965:G:C6	1:5:2021:G:O6	2.41	0.73
1:5:3736:A:O2'	1:5:3737:A:O5'	2.05	0.73
1:5:3759:A:N6	1:5:3765:G:H1'	2.02	0.73
1:5:4053:A:O2'	46:z:207:LYS:HD3	1.88	0.73
1:5:4563:U:H2'	1:5:4564:A:C8	2.24	0.73
1:5:4910:G:H8	1:5:4910:G:O5'	1.71	0.73
1:5:5030:U:C2	1:5:5031:G:C8	2.76	0.73
46:z:120:ILE:HG23	46:z:121:PRO:HD2	1.71	0.73
50:S2:436:G:H8	50:S2:471:G:N2	1.85	0.73
50:S2:444:G:H22	50:S2:446:G:H3'	1.51	0.73
50:S2:1249:C:C4	50:S2:1250:A:C5	2.76	0.73
50:S2:1408:U:C4	50:S2:1439:A:C2	2.76	0.73
50:S2:1832:A:C4	50:S2:1833:C:C6	2.76	0.73
52:SB:36:PRO:HA	52:SB:231:LEU:HD21	1.66	0.73
52:SB:217:MET:HE1	52:SB:220:LYS:HG2	1.70	0.73
52:SB:221:PRO:HA	52:SB:222:LYS:N	2.03	0.73
59:SI:101:ILE:HG13	59:SI:198:TYR:CD2	2.23	0.73
68:SR:37:GLU:HG3	83:Sg:150:TRP:HE1	1.53	0.73
85:S5:33:U:C3'	85:S5:34:G:H5''	2.18	0.73
1:5:1070:G:C2	1:5:1071:C:C6	2.76	0.73
1:5:1555:G:C5	1:5:1556:C:C5	2.77	0.73
1:5:1951:G:O2'	21:S:95:ARG:NH2	2.22	0.73
1:5:2842:G:C6	1:5:2843:U:C5	2.75	0.73
1:5:3868:G:C6	1:5:4562:C:H1'	2.24	0.73
1:5:4068:U:C2'	1:5:4069:U:C5'	2.53	0.73
1:5:4097:G:O5'	35:g:115:LYS:HB3	1.87	0.73
1:5:4531:U:O4	85:S5:76:A:N1	2.21	0.73
1:5:4707:A:C2'	1:5:4708:A:O5'	2.36	0.73
3:8:102:G:O5'	3:8:104:A:O2'	2.06	0.73
3:8:117:C:C4	3:8:118:C:C5	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:95:TRP:O	20:R:98:ARG:N	2.20	0.73
50:S2:604:A:C5	60:SJ:20:PHE:CE2	2.75	0.73
50:S2:975:G:H4'	65:SO:32:HIS:CD2	2.23	0.73
50:S2:1776:G:C2	50:S2:1777:G:C8	2.75	0.73
68:SR:21:TYR:HA	68:SR:58:MET:HE1	1.70	0.73
85:S5:37:A:N7	85:S5:38:A:C5	2.56	0.73
86:S6:15:G:N1	86:S6:21:A:N3	2.35	0.73
86:S6:23:A:N7	86:S6:24:G:N7	2.37	0.73
1:5:75:G:O6	14:L:103:ARG:NH2	2.20	0.73
1:5:187:U:C6	1:5:245:C:N3	2.56	0.73
1:5:495:C:C2	1:5:496:G:C8	2.76	0.73
1:5:1185:G:C6	1:5:1186:U:C6	2.76	0.73
1:5:1988:G:C2	1:5:1989:G:C8	2.76	0.73
1:5:2058:G:N2	1:5:2059:C:N1	2.37	0.73
1:5:2452:G:C2	1:5:2467:U:O4	2.41	0.73
1:5:2714:G:C2	1:5:2715:G:C8	2.76	0.73
1:5:3944:G:O6	1:5:4069:U:C2	2.41	0.73
1:5:4093:G:O6	1:5:4115:G:C6	2.42	0.73
1:5:4233:A:N1	1:5:4290:U:C4	2.56	0.73
1:5:4687:A:C2	1:5:4688:C:C5	2.75	0.73
8:E:184:ARG:HD3	8:E:213:PHE:CB	2.19	0.73
50:S2:185:G:N1	50:S2:186:C:C4	2.55	0.73
50:S2:996:A:C5	64:SN:113:PHE:CE2	2.77	0.73
50:S2:1204:A:C2	50:S2:1205:C:C6	2.74	0.73
50:S2:1294:G:C8	82:Sf:151:ASN:HA	2.23	0.73
54:SD:11:PHE:CE2	71:SU:84:ILE:HD13	2.24	0.73
1:5:218:A:N6	6:C:185:ALA:HB2	2.03	0.73
1:5:370:U:C4	1:5:1637:A:C6	2.76	0.73
1:5:1404:G:C2	1:5:1414:C:C2	2.76	0.73
1:5:1474:C:C2	1:5:1475:G:C8	2.77	0.73
1:5:1759:G:C2	1:5:1760:G:C8	2.77	0.73
1:5:2034:G:N2	1:5:2035:C:H1'	2.02	0.73
1:5:2368:A:N1	1:5:2788:U:C4	2.57	0.73
1:5:3590:G:C6	1:5:3591:C:C5	2.75	0.73
1:5:3943:A:H2'	1:5:3944:G:C8	2.23	0.73
1:5:4100:C:C2	1:5:4101:C:C5	2.76	0.73
1:5:4510:A:H61	1:5:4592:C:C4'	2.02	0.73
1:5:4733:C:N4	1:5:4734:A:O2'	2.21	0.73
1:5:4880:C:H2'	1:5:4881:U:H5'	1.69	0.73
31:c:78:ASN:OD1	31:c:79:ILE:HG13	1.89	0.73
33:e:35:TRP:HE1	33:e:37:LYS:N	1.85	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:105:U:C5	50:S2:106:C:C5	2.76	0.73
50:S2:309:G:C2	50:S2:310:C:C5	2.76	0.73
50:S2:458:A:N6	50:S2:459:C:C4	2.56	0.73
50:S2:493:A:H8	50:S2:574:A:C8	2.05	0.73
50:S2:989:C:O2	50:S2:1001:A:N6	2.22	0.73
51:SA:137:ALA:O	51:SA:140:VAL:O	2.06	0.73
51:SA:198:MET:HG3	51:SA:199:PRO:HD2	1.69	0.73
52:SB:36:PRO:CA	52:SB:231:LEU:CD2	2.61	0.73
55:SE:36:HIS:HE1	55:SE:143:ASP:HB2	1.53	0.73
68:SR:69:ILE:O	68:SR:70:SER:HB3	1.88	0.73
85:S5:41:C:H2'	85:S5:42:C:H6	1.52	0.73
1:5:447:C:N3	1:5:448:G:N7	2.36	0.73
1:5:657:C:H2'	1:5:658:C:O4'	1.88	0.73
1:5:1545:G:C6	1:5:1546:C:N4	2.56	0.73
1:5:1982:G:O2'	1:5:2010:A:H5'	1.89	0.73
1:5:2105:A:N1	1:5:2106:G:N7	2.37	0.73
1:5:2270:G:N2	1:5:2271:C:C2	2.56	0.73
1:5:4070:U:C2	1:5:4071:U:C6	2.77	0.73
1:5:4166:G:C6	1:5:4167:G:N7	2.57	0.73
1:5:4531:U:N3	85:S5:76:A:H2	1.86	0.73
1:5:4686:G:C6	1:5:4687:A:C8	2.76	0.73
7:D:29:ASP:O	7:D:33:ARG:HB2	1.89	0.73
19:Q:56:THR:HB	19:Q:146:ARG:HH21	1.53	0.73
33:e:38:PRO:HB2	33:e:43:ASN:OD1	1.88	0.73
46:z:161:LYS:CE	86:S6:55:U:H5'	2.17	0.73
47:1:292:ILE:HG12	47:1:449:LEU:HD22	1.70	0.73
50:S2:37:C:C4	50:S2:38:A:C8	2.77	0.73
50:S2:633:C:C2	50:S2:634:A:C8	2.77	0.73
50:S2:1330:G:C6	50:S2:1492:U:C2	2.77	0.73
50:S2:1408:U:H3'	50:S2:1409:A:C8	2.23	0.73
50:S2:1578:U:H6	54:SD:6:SER:CA	2.02	0.73
1:5:1899:G:N1	1:5:1900:C:C5	2.54	0.73
1:5:3606:U:N3	1:5:3607:U:C5	2.56	0.73
1:5:3759:A:C6	50:S2:1709:G:O4'	2.41	0.73
1:5:3806:G:C2'	50:S2:1719:A:H1'	2.18	0.73
1:5:4344:U:N3	1:5:4345:C:C5	2.56	0.73
50:S2:524:U:O2	50:S2:594:A:N7	2.21	0.73
50:S2:647:U:C2	50:S2:648:A:C8	2.73	0.73
50:S2:1224:G:C2	50:S2:1643:U:C4	2.76	0.73
50:S2:1430:C:C4	50:S2:1431:G:C8	2.76	0.73
86:S6:9:A:C6	86:S6:46:G:N1	2.57	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:126:C:O2	1:5:127:G:C8	2.41	0.73
1:5:269:G:N1	1:5:270:U:C6	2.57	0.73
1:5:1265:G:O2'	1:5:2112:G:H3'	1.87	0.73
1:5:1390:G:C2	1:5:1394:G:C5	2.74	0.73
1:5:1726:U:C2	1:5:1727:U:C6	2.76	0.73
1:5:1872:G:C2	1:5:1873:A:C8	2.76	0.73
1:5:1936:C:O2	1:5:1936:C:H2'	1.88	0.73
1:5:2281:U:O2	1:5:2281:U:H2'	1.88	0.73
1:5:2327:G:C2	1:5:2328:G:C5	2.76	0.73
1:5:4537:C:C2	1:5:4538:G:C8	2.77	0.73
1:5:5047:C:C2	1:5:5048:A:N6	2.57	0.73
1:5:5063:G:C2	1:5:5064:G:C8	2.77	0.73
32:d:114:PHE:HA	32:d:117:LEU:HD23	1.71	0.73
50:S2:599:A:O4'	50:S2:605:A:H2	1.64	0.73
50:S2:1294:G:N1	50:S2:1295:A:N7	2.37	0.73
50:S2:1398:G:N1	50:S2:1399:C:C5	2.56	0.73
85:S5:1:G:N2	85:S5:73:A:C8	2.57	0.73
1:5:504:G:C6	1:5:654:C:C2	2.77	0.73
1:5:950:G:C2	1:5:951:G:C8	2.77	0.73
1:5:1268:G:H1'	1:5:2111:G:C5	2.24	0.73
1:5:1542:U:H5''	1:5:2743:A:N7	2.03	0.73
1:5:1634:A:C6	1:5:1635:C:C4	2.77	0.73
1:5:2250:C:OP2	1:5:2250:C:H4'	1.88	0.73
1:5:2264:C:O2'	1:5:2265:G:H2'	1.88	0.73
1:5:2463:G:C6	1:5:2464:C:N4	2.57	0.73
1:5:3736:A:O2'	1:5:3737:A:C5'	2.37	0.73
1:5:4093:G:C3'	1:5:4094:G:C5'	2.67	0.73
1:5:4455:G:C2	1:5:4456:C:C6	2.77	0.73
5:B:235:TRP:CD1	5:B:267:ALA:HA	2.23	0.73
6:C:106:LYS:HG2	6:C:108:TRP:CZ2	2.24	0.73
50:S2:56:G:H2'	50:S2:57:U:O5'	1.89	0.73
50:S2:379:C:C2	50:S2:380:G:C8	2.77	0.73
50:S2:434:G:H2'	50:S2:435:A:C8	2.24	0.73
50:S2:848:U:H2'	50:S2:849:A:H8	1.54	0.73
50:S2:908:A:C2	50:S2:909:G:C8	2.75	0.73
50:S2:933:G:N2	50:S2:1000:C:C2	2.56	0.73
50:S2:1151:G:C2	50:S2:1152:U:C5	2.77	0.73
50:S2:1538:C:C2	50:S2:1539:U:C5	2.76	0.73
50:S2:1574:C:N3	50:S2:1575:G:N7	2.37	0.73
50:S2:1665:G:N7	70:ST:88:MET:CG	2.52	0.73
85:S5:7:A:H3'	85:S5:8:U:C6	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:10:G:C5	86:S6:11:C:C5	2.77	0.73
86:S6:33:U:H5	86:S6:36:A:OP2	1.72	0.73
1:5:85:G:N2	1:5:97:G:C5	2.57	0.73
1:5:1092:G:C6	1:5:1093:C:C5	2.77	0.73
1:5:1212:G:C2	1:5:1213:G:C8	2.76	0.73
1:5:1965:G:N1	1:5:1966:C:C4	2.57	0.73
1:5:2033:A:C2	1:5:2034:G:C8	2.77	0.73
1:5:2251:G:C1'	1:5:2252:G:C2	2.71	0.73
1:5:2590:G:N1	1:5:2754:G:C2	2.57	0.73
1:5:2632:U:N3	1:5:2633:U:C5	2.57	0.73
1:5:2645:G:C2	1:5:2646:C:C6	2.77	0.73
1:5:2843:U:O2	1:5:2844:A:C8	2.42	0.73
1:5:3676:G:O2'	1:5:3677:U:H5'	1.89	0.73
1:5:3793:U:N3	1:5:3794:C:C5	2.57	0.73
1:5:4055:U:O3'	46:z:39:LYS:NZ	2.17	0.73
1:5:4537:C:O2	1:5:4537:C:H2'	1.87	0.73
2:7:94:C:O2	2:7:95:C:C6	2.42	0.73
3:8:133:G:N1	3:8:134:G:N7	2.37	0.73
8:E:278:TYR:CD2	8:E:278:TYR:N	2.57	0.73
50:S2:42:A:C4	50:S2:426:A:N7	2.57	0.73
50:S2:50:A:N1	50:S2:488:U:C4	2.57	0.73
50:S2:832:G:H2'	50:S2:833:C:O4'	1.88	0.73
50:S2:1294:G:N3	82:Sf:137:ASP:OD2	2.21	0.73
50:S2:1394:G:C6	50:S2:1395:C:C5	2.76	0.73
50:S2:1406:G:N3	50:S2:1407:U:H1'	2.04	0.73
58:SH:145:ARG:HD2	73:SW:51:GLU:HG2	1.69	0.73
1:5:90:G:C2	1:5:95:G:C6	2.77	0.72
1:5:1618:G:N1	1:5:1619:G:N7	2.37	0.72
1:5:2570:U:C2	1:5:2571:C:C5	2.77	0.72
1:5:3967:G:N3	46:z:162:VAL:CG2	2.50	0.72
1:5:3967:G:N2	46:z:164:CYS:SG	2.61	0.72
1:5:4199:C:O2	1:5:4199:C:H2'	1.88	0.72
15:M:11:ARG:HH22	15:M:61:ILE:HG23	1.53	0.72
50:S2:388:U:N3	50:S2:389:A:N7	2.36	0.72
50:S2:426:A:N1	50:S2:427:U:H5	1.80	0.72
50:S2:637:U:O2	81:Se:56:ASN:ND2	2.21	0.72
50:S2:1308:U:C2'	50:S2:1309:C:H6	2.02	0.72
50:S2:1526:G:C6	50:S2:1527:C:C5	2.77	0.72
82:Sf:147:THR:HG22	82:Sf:148:TYR:CD1	2.24	0.72
85:S5:65:G:O2'	85:S5:66:U:O4'	2.07	0.72
1:5:12:A:C2	1:5:14:C:C5	2.77	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:440:U:O2	1:5:441:G:C8	2.42	0.72
1:5:753:C:C4	1:5:754:U:C5	2.77	0.72
1:5:1085:C:C4	1:5:1086:C:C5	2.78	0.72
1:5:1269:G:C8	1:5:2111:G:C5	2.76	0.72
1:5:1339:U:O2	1:5:1339:U:H2'	1.89	0.72
1:5:1887:G:N1	1:5:1890:G:C6	2.58	0.72
1:5:1990:A:H2'	1:5:1991:A:C4'	2.19	0.72
1:5:3694:U:C2	1:5:3695:U:C5	2.78	0.72
1:5:3732:A:N3	1:5:3733:A:C8	2.56	0.72
1:5:3879:G:C6	1:5:3882:C:C4	2.76	0.72
1:5:4982:A:C2	1:5:4983:C:C6	2.77	0.72
8:E:175:LEU:HB2	8:E:246:GLN:HE21	1.52	0.72
11:H:117:PHE:C	11:H:117:PHE:HD1	1.97	0.72
20:R:162:ARG:HG3	62:SL:157:LYS:C	2.15	0.72
47:1:449:LEU:C	47:1:450:ALA:N	2.47	0.72
50:S2:1283:C:HO2'	63:SM:91:LEU:HD22	1.53	0.72
50:S2:1291:A:C8	82:Sf:146:LEU:HB2	2.24	0.72
1:5:270:U:C2	1:5:271:C:C5	2.76	0.72
1:5:659:G:C2	1:5:660:A:C8	2.77	0.72
1:5:1625:G:N7	1:5:1642:A:C2	2.58	0.72
1:5:2113:G:H8	1:5:2115:G:H1'	1.53	0.72
1:5:2364:G:C2	1:5:2365:C:C5	2.76	0.72
1:5:2459:G:N7	16:N:105:ARG:NH2	2.37	0.72
1:5:3653:A:N1	1:5:3692:A:C4'	2.53	0.72
1:5:4124:G:O6	4:A:64:ARG:HD3	1.88	0.72
1:5:4561:C:O2	1:5:4562:C:C5	2.42	0.72
1:5:4981:G:C6	1:5:4982:A:N9	2.56	0.72
1:5:4981:G:N1	1:5:4982:A:C8	2.58	0.72
1:5:5006:U:H1'	1:5:5042:A:C5	2.23	0.72
2:7:42:A:H1'	13:J:75:ARG:NH1	2.04	0.72
50:S2:647:U:O2	50:S2:648:A:N7	2.20	0.72
50:S2:973:C:C4	50:S2:974:C:C6	2.76	0.72
50:S2:1293:A:C8	82:Sf:150:PHE:HB3	2.24	0.72
50:S2:1510:G:C6	50:S2:1511:U:C5	2.77	0.72
51:SA:205:ARG:HH12	68:SR:84:TYR:HB2	1.53	0.72
84:S4:16:U:O4	84:S4:17:U:C4	2.43	0.72
1:5:85:G:N2	1:5:97:G:N7	2.38	0.72
1:5:916:C:N3	1:5:917:A:C8	2.57	0.72
1:5:2091:C:C2	1:5:2257:C:O2'	2.41	0.72
1:5:2108:G:C6	1:5:2125:C:N4	2.58	0.72
1:5:2322:G:H2'	1:5:2323:C:O4'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2606:G:N2	1:5:2607:C:C2	2.58	0.72
1:5:2631:U:O4'	23:U:82:TYR:CE1	2.41	0.72
1:5:3688:U:C2	1:5:3689:G:C8	2.77	0.72
1:5:4053:A:H4'	46:z:213:PRO:CD	2.18	0.72
1:5:4942:C:O2	1:5:4942:C:O5'	2.07	0.72
3:8:43:A:N1	3:8:44:A:N7	2.38	0.72
30:b:12:GLN:HB2	30:b:16:TRP:HZ2	1.55	0.72
32:d:71:ALA:CB	32:d:108:TYR:HE2	2.01	0.72
50:S2:436:G:C2	50:S2:437:G:C5	2.78	0.72
50:S2:518:G:C2	50:S2:519:A:C8	2.78	0.72
50:S2:796:G:C6	58:SH:109:ARG:NH2	2.58	0.72
50:S2:842:C:C2	50:S2:843:C:C5	2.78	0.72
50:S2:1294:G:C2	82:Sf:138:ARG:HG2	2.25	0.72
50:S2:1322:G:H2'	50:S2:1323:U:C6	2.23	0.72
50:S2:1607:A:N6	50:S2:1632:G:H1'	2.04	0.72
1:5:90:G:N2	1:5:95:G:C6	2.57	0.72
1:5:181:C:C2	1:5:256:G:N2	2.57	0.72
1:5:1412:G:N2	1:5:1413:C:C2	2.58	0.72
1:5:1560:A:N3	1:5:1561:G:C8	2.58	0.72
1:5:1755:C:H3'	1:5:1756:U:H5''	1.68	0.72
1:5:1926:C:C2	1:5:1927:U:C5	2.77	0.72
1:5:2452:G:C6	1:5:2467:U:C5	2.76	0.72
1:5:2857:A:C2	1:5:2858:A:C5	2.77	0.72
1:5:3702:A:H2'	1:5:3702:A:N3	2.03	0.72
1:5:3974:G:H2'	1:5:3975:C:H6	1.51	0.72
1:5:4284:C:C2	1:5:4285:U:C6	2.77	0.72
1:5:4730:C:O2	1:5:4734:A:N7	2.23	0.72
1:5:4742:G:C6	1:5:4743:G:N7	2.58	0.72
2:7:110:G:N2	2:7:111:C:C2	2.56	0.72
20:R:158:GLN:O	20:R:162:ARG:CG	2.34	0.72
26:X:84:GLU:CA	47:1:404:HIS:CE1	2.72	0.72
46:z:161:LYS:HE2	86:S6:55:U:H5'	1.71	0.72
47:1:423:PHE:CE2	47:1:427:CYS:SG	2.82	0.72
50:S2:70:G:C6	50:S2:71:G:C6	2.78	0.72
50:S2:620:G:OP1	50:S2:620:G:C2	2.43	0.72
50:S2:647:U:O2	50:S2:647:U:H2'	1.88	0.72
50:S2:752:G:N1	50:S2:790:C:C4	2.56	0.72
50:S2:1310:U:P	82:Sf:143:LYS:HE2	2.30	0.72
50:S2:1640:A:H5''	86:S6:41:C:C4'	2.04	0.72
50:S2:1832:A:C5	50:S2:1833:C:H5	2.07	0.72
71:SU:78:ASP:OD2	80:Sd:44:ARG:NH1	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:6:G:C6	86:S6:7:G:C4	2.78	0.72
1:5:100:C:N4	1:5:101:A:C5	2.56	0.72
1:5:212:A:H2'	1:5:213:G:C8	2.25	0.72
1:5:660:A:C6	1:5:661:C:C5	2.77	0.72
1:5:751:G:C2	1:5:752:G:C5	2.77	0.72
1:5:976:G:C6	1:5:977:C:C5	2.77	0.72
1:5:1213:G:C6	1:5:1215:C:C6	2.78	0.72
1:5:1249:C:C2	1:5:1250:C:C6	2.78	0.72
1:5:1561:G:N2	1:5:1567:U:C2	2.58	0.72
1:5:4053:A:OP1	46:z:1:MET:HG3	1.89	0.72
1:5:4166:G:N1	1:5:4167:G:N7	2.37	0.72
1:5:5062:G:C2	1:5:5063:G:N7	2.57	0.72
4:A:140:ASN:OD1	4:A:142:GLU:O	2.06	0.72
24:V:35:LYS:HD2	50:S2:1803:U:OP1	1.90	0.72
35:g:41:ALA:O	35:g:52:ARG:NH1	2.23	0.72
47:1:447:ILE:HA	47:1:450:ALA:CB	2.18	0.72
47:1:447:ILE:HG22	47:1:451:VAL:HG13	1.71	0.72
50:S2:599:A:C1'	50:S2:605:A:C2	2.72	0.72
50:S2:1248:U:O2	86:S6:34:G:C1'	2.37	0.72
50:S2:1527:C:C4	50:S2:1528:G:C8	2.78	0.72
50:S2:1545:A:HO2'	50:S2:1546:G:H8	1.26	0.72
75:SY:86:GLU:CD	75:SY:86:GLU:CB	2.63	0.72
1:5:88:A:N6	1:5:97:G:N2	2.36	0.72
1:5:447:C:C2	1:5:448:G:C8	2.78	0.72
1:5:658:C:O2	1:5:659:G:C8	2.43	0.72
1:5:1177:U:C2	1:5:1178:G:N7	2.58	0.72
1:5:1358:G:O3'	6:C:114:ARG:NH1	2.21	0.72
1:5:1560:A:C2	1:5:1561:G:N7	2.54	0.72
1:5:2735:G:N3	1:5:2736:G:C8	2.57	0.72
1:5:2736:G:C2	1:5:2737:C:C4	2.77	0.72
1:5:4579:U:H2'	1:5:4580:U:O4'	1.88	0.72
2:7:51:G:C2	2:7:52:C:C4	2.77	0.72
5:B:100:ARG:HH21	5:B:101:THR:C	1.98	0.72
28:Z:38:TYR:CE2	28:Z:76:ASN:OD1	2.42	0.72
50:S2:106:C:C2	50:S2:107:A:N7	2.58	0.72
50:S2:597:G:C2	50:S2:640:A:N1	2.58	0.72
50:S2:604:A:H2'	50:S2:605:A:C8	2.24	0.72
50:S2:618:C:C2	50:S2:619:A:C8	2.77	0.72
50:S2:1308:U:H2'	50:S2:1309:C:C5	2.24	0.72
86:S6:68:C:N4	86:S6:69:G:O6	2.22	0.72
1:5:423:G:H1'	18:P:120:ASN:OD1	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1217:G:O2'	1:5:1218:G:H8	1.72	0.72
1:5:1451:G:OP1	1:5:1718:C:N4	2.22	0.72
1:5:1927:U:H4'	1:5:2035:C:O2'	1.90	0.72
1:5:2858:A:O2'	1:5:2859:G:C8	2.39	0.72
1:5:4061:G:N1	1:5:4062:A:C5	2.58	0.72
1:5:4195:G:N3	1:5:4195:G:H5''	2.05	0.72
1:5:4759:C:H2'	1:5:4760:G:O4'	1.89	0.72
1:5:4939:C:O2'	8:E:242:ARG:NH2	2.23	0.72
3:8:34:U:O4'	3:8:34:U:O2	1.97	0.72
24:V:57:VAL:HG23	24:V:84:GLN:HG2	1.71	0.72
50:S2:42:A:C2	50:S2:43:U:H6	2.07	0.72
50:S2:316:G:C2	50:S2:317:C:C4	2.77	0.72
50:S2:499:G:N2	50:S2:504:G:C6	2.57	0.72
50:S2:597:G:N2	50:S2:640:A:C2	2.57	0.72
50:S2:1307:U:H2'	50:S2:1308:U:H4'	1.72	0.72
50:S2:1528:G:N1	50:S2:1529:C:C4	2.57	0.72
86:S6:5:C:C6	86:S6:6:G:N7	2.58	0.72
86:S6:9:A:C5	86:S6:46:G:C2	2.77	0.72
1:5:1442:C:N3	1:5:1443:A:N7	2.38	0.72
1:5:1631:A:H2	4:A:204:MET:SD	2.12	0.72
1:5:1964:A:N6	1:5:1965:G:C4	2.57	0.72
1:5:2691:U:O2	1:5:2692:U:C6	2.41	0.72
9:F:144:TRP:CH2	9:F:237:ASN:HB2	2.25	0.72
50:S2:94:G:O2'	50:S2:508:A:O2'	1.98	0.72
50:S2:672:A:C2	50:S2:1162:C:O2'	2.37	0.72
52:SB:231:LEU:C	52:SB:231:LEU:HD23	2.14	0.72
85:S5:53:G:C2	85:S5:54:U:C6	2.77	0.72
86:S6:27:G:C4	86:S6:28:G:C8	2.77	0.72
1:5:255:C:O2	1:5:255:C:H2'	1.88	0.72
1:5:300:A:C2	1:5:301:G:C8	2.78	0.72
1:5:493:G:C6	1:5:494:U:C5	2.78	0.72
1:5:917:A:C6	1:5:919:C:N4	2.57	0.72
1:5:1390:G:N2	1:5:1394:G:C4	2.57	0.72
1:5:4285:U:O2	1:5:4286:C:C6	2.43	0.72
1:5:4455:G:C6	1:5:4456:C:C5	2.78	0.72
1:5:4767:C:H4'	1:5:4874:A:N1	2.04	0.72
3:8:80:A:H3'	3:8:81:C:H4'	1.72	0.72
16:N:30:TYR:CE1	16:N:63:ARG:CD	2.72	0.72
45:r:16:PHE:HD2	45:r:28:GLU:HB3	1.54	0.72
47:1:448:LEU:CB	47:1:451:VAL:HG22	2.20	0.72
50:S2:842:C:H2'	50:S2:843:C:O5'	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1102:G:H22	50:S2:1130:G:N2	1.88	0.72
50:S2:1291:A:C6	82:Sf:140:TYR:CD2	2.78	0.72
50:S2:1418:C:N4	50:S2:1421:A:H62	1.88	0.72
50:S2:1597:C:H2'	50:S2:1598:G:C8	2.24	0.72
50:S2:1691:U:H2'	50:S2:1692:U:C5'	2.20	0.72
50:S2:1691:U:C2'	50:S2:1692:U:H5'	2.18	0.72
52:SB:36:PRO:CB	52:SB:231:LEU:CD2	2.63	0.72
52:SB:36:PRO:HA	52:SB:231:LEU:HD23	1.72	0.72
52:SB:97:LEU:CD2	52:SB:232:HIS:CD2	2.72	0.72
65:SO:94:HIS:HB3	65:SO:128:ARG:HB2	1.72	0.72
66:SP:39:ALA:HA	66:SP:42:ARG:NH2	2.05	0.72
77:Sa:26:CYS:SG	88:Sa:201:ZN:ZN	1.77	0.72
1:5:3941:G:C5	1:5:4073:A:N1	2.34	0.71
1:5:4123:C:N3	1:5:4124:G:N7	2.38	0.71
1:5:4239:A:C5	1:5:4240:G:C8	2.78	0.71
1:5:4240:G:C5	1:5:4241:C:C6	2.77	0.71
1:5:4463:U:C4	1:5:4488:A:C5	2.78	0.71
1:5:4726:G:H4'	5:B:130:PHE:CE1	2.24	0.71
2:7:18:C:O2	2:7:19:C:H6	1.71	0.71
3:8:10:G:N1	3:8:11:C:C6	2.58	0.71
9:F:248:ARG:CZ	9:F:248:ARG:HB3	2.20	0.71
26:X:84:GLU:N	47:1:403:GLY:O	2.22	0.71
46:z:41:TYR:OH	46:z:48:ARG:HA	1.90	0.71
50:S2:66:G:C5	50:S2:68:A:C8	2.78	0.71
50:S2:123:G:H2'	50:S2:123:G:N3	2.02	0.71
50:S2:793:G:C6	50:S2:794:A:C8	2.78	0.71
50:S2:1122:A:C2	50:S2:1123:C:C6	2.78	0.71
50:S2:1351:G:C6	50:S2:1352:G:N7	2.58	0.71
52:SB:97:LEU:CD2	52:SB:232:HIS:CE1	2.73	0.71
74:SX:67:ARG:HG2	74:SX:115:ILE:HD13	1.70	0.71
85:S5:6:G:H4'	85:S5:7:A:OP1	1.89	0.71
86:S6:17:A:H4'	86:S6:18:G:OP1	1.90	0.71
1:5:424:U:H3	1:5:425:U:H5	1.36	0.71
1:5:1203:G:C6	1:5:1204:C:C5	2.78	0.71
1:5:1671:U:O2'	30:b:12:GLN:NE2	2.22	0.71
1:5:2058:G:C2	1:5:2059:C:C5	2.78	0.71
1:5:2058:G:N1	1:5:2059:C:C5	2.58	0.71
1:5:2080:U:N3	1:5:2081:C:C5	2.58	0.71
1:5:2734:U:O2	1:5:2735:G:C8	2.43	0.71
1:5:2743:A:H2'	1:5:2744:A:C8	2.24	0.71
1:5:4055:U:P	46:z:205:TYR:HE1	1.80	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4652:G:N2	1:5:4653:C:C2	2.58	0.71
3:8:65:A:C2	3:8:66:A:C8	2.78	0.71
3:8:132:G:C6	3:8:133:G:N7	2.58	0.71
46:z:161:LYS:CE	86:S6:55:U:C5'	2.68	0.71
47:1:81:ILE:HG22	47:1:85:VAL:HG23	1.71	0.71
50:S2:112:U:H1'	50:S2:114:G:O6	1.91	0.71
50:S2:381:C:N4	59:SI:49:ARG:CD	2.53	0.71
50:S2:1308:U:C2'	50:S2:1309:C:C6	2.68	0.71
50:S2:1641:A:O2'	86:S6:31:A:O2'	2.07	0.71
50:S2:1849:G:H2'	50:S2:1850:A:N7	2.05	0.71
85:S5:48:C:H2'	85:S5:59:U:C1'	2.09	0.71
85:S5:48:C:C6	85:S5:59:U:C6	2.79	0.71
1:5:183:C:O2'	1:5:189:G:N7	2.23	0.71
1:5:1280:C:C5'	1:5:1280:C:C6	2.73	0.71
1:5:1392:A:N3	1:5:1393:G:N7	2.38	0.71
1:5:1843:A:C2	1:5:1844:G:C8	2.79	0.71
1:5:1936:C:N3	1:5:1937:C:H5	1.89	0.71
1:5:2449:A:C8	1:5:2450:G:C1'	2.73	0.71
1:5:2533:C:O2	1:5:2534:C:C5	2.42	0.71
1:5:2842:G:C2	1:5:2843:U:C6	2.78	0.71
1:5:3940:U:N3	1:5:4073:A:N6	2.37	0.71
1:5:4054:C:H5''	46:z:205:TYR:CZ	2.21	0.71
1:5:4093:G:C2'	1:5:4094:G:H5''	2.21	0.71
1:5:4562:C:N3	1:5:4563:U:C5	2.58	0.71
1:5:4743:G:C2	1:5:4744:A:C8	2.79	0.71
1:5:4871:C:O2	1:5:4871:C:H5''	1.90	0.71
1:5:4906:C:C2	1:5:4916:G:C2	2.78	0.71
50:S2:148:U:N3	50:S2:149:A:N7	2.39	0.71
50:S2:379:C:C2	50:S2:380:G:N7	2.59	0.71
50:S2:993:G:C5	50:S2:994:C:C5	2.79	0.71
50:S2:1258:A:H62	50:S2:1659:U:H3	1.38	0.71
50:S2:1352:G:H2'	50:S2:1353:A:C5'	2.17	0.71
50:S2:1453:C:N4	50:S2:1455:A:C1'	2.53	0.71
50:S2:1562:C:O2	50:S2:1563:G:H8	1.70	0.71
50:S2:1804:U:C2	50:S2:1805:G:C8	2.78	0.71
1:5:300:A:C2	1:5:301:G:C5	2.79	0.71
1:5:330:G:N3	1:5:331:G:C8	2.59	0.71
1:5:989:U:H2'	1:5:990:C:C5	2.26	0.71
1:5:1692:C:N3	1:5:1693:U:C5	2.58	0.71
1:5:2856:C:N3	1:5:2857:A:C5	2.58	0.71
1:5:3607:U:O2	1:5:3608:A:C8	2.43	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3907:G:H1'	1:5:4449:A:C8	2.24	0.71
1:5:4314:C:C2	1:5:4315:A:C8	2.78	0.71
1:5:4508:C:N3	1:5:4512:U:H5	1.86	0.71
1:5:4771:C:C6	1:5:4772:C:C6	2.78	0.71
1:5:5001:U:C2'	1:5:5002:U:O5'	2.38	0.71
2:7:43:U:O2	2:7:44:C:C6	2.43	0.71
3:8:86:U:H3'	3:8:86:U:C6	2.25	0.71
7:D:17:GLN:HG3	22:T:20:ARG:CA	2.20	0.71
8:E:280:HIS:CE1	8:E:281:LYS:HB2	2.25	0.71
50:S2:386:C:N3	50:S2:387:C:C6	2.55	0.71
50:S2:996:A:N6	64:SN:113:PHE:CE2	2.59	0.71
50:S2:1204:A:C5	50:S2:1205:C:C4	2.78	0.71
50:S2:1408:U:O4	50:S2:1439:A:C2	2.42	0.71
50:S2:1596:U:C4	50:S2:1597:C:C5	2.79	0.71
1:5:27:C:C2	1:5:28:C:C6	2.78	0.71
1:5:44:A:C6	1:5:45:U:C4	2.78	0.71
1:5:126:C:C2	1:5:127:G:C8	2.78	0.71
1:5:153:G:N3	1:5:154:G:C8	2.58	0.71
1:5:489:C:N3	1:5:490:C:C5	2.58	0.71
1:5:1628:C:C2	1:5:1629:G:N7	2.55	0.71
1:5:1727:U:C2	1:5:1728:U:C5	2.78	0.71
1:5:1839:U:H3'	1:5:1840:G:H21	1.54	0.71
1:5:1971:C:C2	1:5:1972:G:C8	2.78	0.71
1:5:2326:G:N1	1:5:2327:G:C8	2.57	0.71
1:5:2453:A:N1	1:5:2454:U:C6	2.58	0.71
1:5:4687:A:C2	1:5:4688:C:C6	2.78	0.71
1:5:4871:C:H4'	1:5:4872:G:O5'	1.91	0.71
3:8:74:U:H2'	3:8:74:U:O2	1.90	0.71
8:E:43:ASN:ND2	8:E:43:ASN:C	2.48	0.71
11:H:61:TRP:HZ2	21:S:152:PHE:CE2	2.08	0.71
47:1:84:ILE:HD13	47:1:162:VAL:HG11	1.72	0.71
47:1:447:ILE:O	47:1:450:ALA:N	2.23	0.71
50:S2:530:U:C2	50:S2:531:A:C8	2.79	0.71
50:S2:832:G:N1	50:S2:833:C:C2	2.58	0.71
50:S2:1160:U:OP2	74:SX:4:CYS:O	2.08	0.71
50:S2:1294:G:C4	82:Sf:138:ARG:HD3	2.25	0.71
69:SS:81:ASP:O	69:SS:87:GLN:NE2	2.24	0.71
86:S6:6:G:N1	86:S6:7:G:C2	2.57	0.71
86:S6:68:C:H2'	86:S6:69:G:H8	1.53	0.71
86:S6:69:G:N1	86:S6:70:G:C5	2.58	0.71
1:5:93:G:O2'	1:5:94:A:C8	2.44	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1358:G:N3	1:5:1359:G:C5	2.59	0.71
1:5:1601:A:N7	1:5:3643:A:C8	2.59	0.71
1:5:2366:A:C2	1:5:3851:U:C1'	2.73	0.71
1:5:2590:G:C6	1:5:2754:G:N1	2.59	0.71
50:S2:38:A:N1	50:S2:515:G:C2	2.59	0.71
50:S2:666:U:C2	50:S2:667:U:C5	2.79	0.71
50:S2:1207:G:H3'	50:S2:1207:G:OP2	1.91	0.71
50:S2:1383:A:C2	50:S2:1384:C:C5	2.79	0.71
50:S2:1434:C:C2'	50:S2:1435:C:O4'	2.39	0.71
50:S2:1642:U:O2	50:S2:1643:U:H5	1.74	0.71
86:S6:11:C:H2'	86:S6:12:C:H6	1.53	0.71
86:S6:29:G:H22	86:S6:42:C:H1'	1.56	0.71
1:5:167:C:C2	1:5:269:G:C2	2.79	0.71
1:5:423:G:H1	3:8:10:G:H1	1.39	0.71
1:5:1183:C:C2	1:5:1184:A:C8	2.78	0.71
1:5:1238:A:H2'	1:5:1239:C:C5	2.25	0.71
1:5:2290:C:N3	1:5:2291:G:C8	2.58	0.71
1:5:3945:A:N3	1:5:3946:G:C8	2.58	0.71
1:5:4096:C:C5	1:5:4097:G:C8	2.79	0.71
1:5:4151:G:C2	1:5:4152:G:C8	2.79	0.71
2:7:25:G:H2'	2:7:26:C:O4'	1.90	0.71
2:7:42:A:H1'	13:J:75:ARG:HH12	1.56	0.71
4:A:137:ILE:CG2	50:S2:948:C:O2'	2.39	0.71
15:M:3:PHE:HB2	15:M:6:PHE:HZ	1.53	0.71
21:S:95:ARG:HH11	21:S:97:TYR:HH	1.37	0.71
47:1:268:LYS:CD	47:1:276:TYR:CE1	2.74	0.71
50:S2:426:A:C2	50:S2:427:U:C6	2.78	0.71
57:SG:209:TYR:CE2	57:SG:213:LEU:HD23	2.26	0.71
85:S5:12:U:H1'	85:S5:24:G:C2	2.26	0.71
85:S5:40:C:H2'	85:S5:41:C:O4'	1.91	0.71
86:S6:6:G:N2	86:S6:7:G:H1'	2.05	0.71
1:5:662:C:C2	1:5:663:G:N7	2.58	0.71
1:5:936:C:H2'	15:M:46:ARG:NH1	2.03	0.71
1:5:1264:C:N3	1:5:1265:G:C8	2.58	0.71
1:5:1637:A:H2	38:j:11:ARG:HH22	1.39	0.71
1:5:2058:G:N1	1:5:2059:C:C4	2.59	0.71
1:5:2534:C:O2'	1:5:2535:G:H5'	1.90	0.71
1:5:3762:U:H2'	1:5:3763:A:O4'	1.91	0.71
1:5:4765:G:H22	1:5:4869:U:H3	1.38	0.71
2:7:19:C:O2	2:7:19:C:H2'	1.91	0.71
2:7:33:U:C2	2:7:34:C:C6	2.79	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:52:GLU:OE1	45:r:79:ARG:NH2	2.24	0.71
50:S2:52:G:C2	50:S2:53:C:H1'	2.25	0.71
50:S2:53:C:C2	50:S2:54:A:C8	2.79	0.71
50:S2:1204:A:C2	50:S2:1693:G:O6	2.43	0.71
50:S2:1205:C:N3	50:S2:1693:G:O6	2.22	0.71
50:S2:1224:G:C2	50:S2:1643:U:N3	2.58	0.71
50:S2:1396:A:H2'	50:S2:1398:G:N7	2.05	0.71
50:S2:1417:C:O2	50:S2:1419:C:C6	2.44	0.71
50:S2:1593:C:O2	50:S2:1593:C:H2'	1.91	0.71
50:S2:1622:U:C4	69:SS:120:HIS:CE1	2.78	0.71
50:S2:1691:U:C5	50:S2:1692:U:C5	2.79	0.71
50:S2:1692:U:H5'	50:S2:1692:U:H6	1.56	0.71
86:S6:50:U:C2	86:S6:51:U:C5	2.79	0.71
86:S6:69:G:C2	86:S6:70:G:C5	2.78	0.71
86:S6:73:A:H2'	86:S6:74:C:H5'	1.72	0.71
1:5:18:C:H4'	16:N:138:PHE:CE2	2.25	0.71
1:5:171:U:O2	1:5:266:C:N4	2.23	0.71
1:5:497:G:H3'	1:5:498:C:H5''	1.71	0.71
1:5:738:C:C2	1:5:739:G:C8	2.79	0.71
1:5:1358:G:H2'	1:5:1359:G:C8	2.26	0.71
1:5:1635:C:C2	1:5:1636:U:C5	2.78	0.71
1:5:1672:U:N3	1:5:1673:U:C4	2.59	0.71
1:5:2497:C:C4	1:5:2498:C:C5	2.78	0.71
1:5:3833:C:N3	1:5:3834:C:C5	2.59	0.71
1:5:3944:G:O6	1:5:3945:A:N6	2.24	0.71
1:5:4069:U:O2'	1:5:4070:U:C6	2.26	0.71
1:5:4196:G:H2'	1:5:4197:G:O4'	1.90	0.71
1:5:4285:U:H2'	1:5:4286:C:H6	1.55	0.71
1:5:4744:A:C6	1:5:4745:G:C6	2.79	0.71
3:8:81:C:O2	3:8:83:C:P	2.49	0.71
3:8:95:A:C6	3:8:96:C:C5	2.79	0.71
11:H:156:ASN:OD1	11:H:157:SER:CA	2.38	0.71
50:S2:114:G:O4'	62:SL:132:ARG:HD2	1.90	0.71
50:S2:119:U:N3	50:S2:120:U:C6	2.58	0.71
50:S2:551:U:H2'	50:S2:552:G:C8	2.22	0.71
50:S2:620:G:N2	50:S2:620:G:P	2.63	0.71
50:S2:1123:C:O2'	52:SB:148:ASN:ND2	2.24	0.71
65:SO:147:ARG:HB2	65:SO:147:ARG:NH1	2.05	0.71
74:SX:91:LEU:HD21	81:Se:6:LEU:HD22	1.71	0.71
84:S4:19:U:N3	86:S6:36:A:H2	1.84	0.71
86:S6:52:G:N2	86:S6:63:G:H22	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:86:U:O2	1:5:86:U:C2'	2.38	0.71
1:5:102:G:O2'	1:5:1381:U:O2'	2.03	0.71
1:5:330:G:N2	1:5:331:G:C4	2.58	0.71
1:5:348:G:C2	1:5:350:C:C5	2.79	0.71
1:5:986:C:C2	1:5:1068:G:C2	2.79	0.71
1:5:1246:G:C5	1:5:1247:U:C5	2.78	0.71
1:5:2054:U:H4'	1:5:2056:G:H1'	1.71	0.71
1:5:2289:C:O2	1:5:2289:C:H2'	1.89	0.71
1:5:4117:U:C2	4:A:40:TYR:HE1	2.08	0.71
1:5:4729:A:C4'	1:5:4965:U:O2'	2.38	0.71
1:5:4884:G:N1	1:5:4885:U:C5	2.59	0.71
16:N:6:TYR:OH	37:i:40:VAL:HG22	1.91	0.71
35:g:76:ARG:HH22	35:g:84:ALA:HB2	1.54	0.71
40:l:21:ARG:CB	47:1:273:ARG:NH1	2.50	0.71
50:S2:497:C:C2	50:S2:506:G:N2	2.58	0.71
50:S2:1110:G:H4'	68:SR:122:PRO:HB2	1.73	0.71
50:S2:1345:G:N3	50:S2:1346:U:C6	2.58	0.71
50:S2:1405:A:C6	50:S2:1406:G:C5	2.78	0.71
50:S2:1701:C:H5'	84:S4:20:U:O4	1.89	0.71
50:S2:1772:C:C2	50:S2:1773:C:C5	2.79	0.71
53:SC:230:THR:HG23	53:SC:236:PHE:CD2	2.25	0.71
70:ST:82:ARG:CZ	70:ST:82:ARG:HB2	2.20	0.71
1:5:235:A:C6	1:5:238:C:C5	2.79	0.70
1:5:1310:C:N3	1:5:1311:G:N7	2.39	0.70
1:5:1465:G:N2	1:5:1466:G:H1'	2.06	0.70
1:5:1561:G:H22	1:5:1567:U:C1'	2.02	0.70
1:5:1564:A:H2'	1:5:1565:A:C8	2.25	0.70
1:5:2055:G:C5'	1:5:2056:G:H5'	2.21	0.70
1:5:2457:G:C2	1:5:2465:C:N3	2.59	0.70
1:5:2515:G:O6	1:5:2516:G:C4	2.44	0.70
1:5:2726:G:C4	1:5:2727:C:C5	2.79	0.70
1:5:3591:C:H2'	1:5:3591:C:O2	1.91	0.70
1:5:3974:G:H4'	46:z:210:MET:HE3	1.71	0.70
1:5:4093:G:H3'	1:5:4094:G:H5'	1.72	0.70
1:5:4561:C:C2	1:5:4562:C:C5	2.79	0.70
1:5:5003:U:H2'	1:5:5004:C:O4'	1.92	0.70
2:7:59:G:N1	2:7:60:G:C5	2.59	0.70
14:L:64:VAL:HA	14:L:67:HIS:HD2	1.55	0.70
50:S2:525:A:N6	50:S2:588:G:H22	1.87	0.70
50:S2:842:C:N3	50:S2:843:C:C5	2.59	0.70
50:S2:924:G:C5	50:S2:925:G:C8	2.79	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1095:U:C4	50:S2:1149:A:C6	2.79	0.70
50:S2:1265:A:N3	50:S2:1266:C:H6	1.89	0.70
50:S2:1562:C:N3	50:S2:1563:G:N7	2.39	0.70
50:S2:1793:A:C2	50:S2:1794:C:C6	2.78	0.70
85:S5:48:C:H3'	85:S5:59:U:O4'	1.91	0.70
1:5:69:A:H3'	1:5:70:A:H8	1.54	0.70
1:5:158:A:C6	1:5:277:G:C6	2.78	0.70
1:5:161:G:N2	1:5:275:C:N3	2.35	0.70
1:5:189:G:N2	1:5:190:G:C5	2.59	0.70
1:5:289:C:C2	1:5:290:U:C5	2.79	0.70
1:5:433:A:C2	1:5:3867:A:H4'	2.27	0.70
1:5:473:C:O2	1:5:474:C:C6	2.44	0.70
1:5:488:G:N2	1:5:489:C:C2	2.59	0.70
1:5:920:C:H2'	1:5:921:C:O4'	1.90	0.70
1:5:1074:G:H2'	1:5:1075:G:C1'	2.21	0.70
1:5:1280:C:C4	1:5:1282:G:O6	2.44	0.70
1:5:1358:G:C2	1:5:1359:G:C6	2.79	0.70
1:5:2105:A:C2	1:5:2106:G:C5	2.79	0.70
1:5:2362:U:O4	1:5:3859:G:N2	2.22	0.70
1:5:2507:A:N1	1:5:2508:U:H1'	2.05	0.70
1:5:2508:U:N3	1:5:2509:C:C5	2.59	0.70
1:5:2851:G:H2'	1:5:2851:G:N3	2.06	0.70
1:5:3695:U:C2	1:5:3696:C:C6	2.79	0.70
1:5:3789:C:OP1	85:S5:73:A:OP1	2.09	0.70
1:5:3944:G:N1	1:5:3945:A:N7	2.39	0.70
1:5:4342:C:O2	1:5:4370:G:N2	2.18	0.70
1:5:4414:A:N6	1:5:4427:G:C6	2.59	0.70
1:5:4932:U:H2'	1:5:4933:C:O4'	1.90	0.70
2:7:43:U:C4	2:7:44:C:C5	2.78	0.70
2:7:59:G:N1	2:7:60:G:C8	2.59	0.70
29:a:79:TRP:N	29:a:79:TRP:CD1	2.58	0.70
50:S2:908:A:C2	50:S2:909:G:C5	2.79	0.70
50:S2:1201:U:H2'	50:S2:1202:U:H6	1.54	0.70
50:S2:1452:A:H4'	50:S2:1453:C:O4'	1.90	0.70
50:S2:1640:A:H4'	86:S6:41:C:C4'	2.20	0.70
1:5:942:G:OP2	9:F:244:ARG:NH1	2.23	0.70
1:5:1066:G:H2'	1:5:1067:G:O4'	1.91	0.70
1:5:1516:G:C5	1:5:1518:A:C8	2.79	0.70
1:5:1866:U:C4	1:5:4405:G:O4'	2.44	0.70
1:5:2690:C:N3	1:5:2691:U:C5	2.59	0.70
1:5:3695:U:N3	1:5:3696:C:C6	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3858:C:H2'	1:5:3858:C:O2	1.92	0.70
1:5:4121:G:H22	4:A:84:THR:HB	1.55	0.70
2:7:58:A:C6	2:7:59:G:C5	2.79	0.70
3:8:82:A:C6	3:8:83:C:H5''	2.26	0.70
3:8:106:G:C6	3:8:107:C:N4	2.59	0.70
50:S2:70:G:C4	50:S2:71:G:C8	2.80	0.70
50:S2:466:G:O2'	57:SG:59:GLN:NE2	2.23	0.70
50:S2:600:G:N7	50:S2:631:U:C4	2.59	0.70
50:S2:600:G:N7	50:S2:631:U:C5	2.59	0.70
50:S2:1211:G:C2	50:S2:1212:G:C4	2.79	0.70
50:S2:1248:U:O2	86:S6:34:G:O4'	2.08	0.70
50:S2:1526:G:C2	50:S2:1527:C:C6	2.79	0.70
50:S2:1606:G:C2	50:S2:1632:G:N2	2.58	0.70
50:S2:1747:C:H2'	50:S2:1748:G:O4'	1.91	0.70
50:S2:1842:C:H2'	50:S2:1843:G:O5'	1.91	0.70
58:SH:154:ILE:HB	58:SH:185:VAL:HG22	1.72	0.70
85:S5:7:A:C5'	85:S5:8:U:H5	2.03	0.70
85:S5:37:A:H2'	85:S5:38:A:C8	2.26	0.70
86:S6:16:A:H61	86:S6:21:A:H1'	1.56	0.70
1:5:489:C:C2	1:5:490:C:C6	2.79	0.70
1:5:512:U:H2'	1:5:513:U:H5''	1.73	0.70
1:5:2124:G:H22	9:F:32:ILE:HG13	1.56	0.70
1:5:2784:C:C2	1:5:2785:C:C6	2.78	0.70
1:5:3789:C:H5'	85:S5:73:A:P	2.31	0.70
1:5:4093:G:O6	1:5:4115:G:O6	2.09	0.70
1:5:4315:A:H2'	1:5:4316:G:H5'	1.72	0.70
3:8:15:G:H2'	3:8:16:G:H1'	1.74	0.70
10:G:81:ASN:HD21	10:G:238:GLY:CA	2.04	0.70
47:1:268:LYS:HG2	47:1:275:GLN:O	1.90	0.70
50:S2:86:C:C4	50:S2:87:U:C5	2.79	0.70
50:S2:184:G:C2	50:S2:185:G:C8	2.79	0.70
50:S2:436:G:C2	50:S2:437:G:C8	2.79	0.70
50:S2:493:A:N7	50:S2:574:A:N7	2.39	0.70
50:S2:654:A:C5	50:S2:655:A:C2	2.79	0.70
50:S2:795:A:C4	50:S2:796:G:C8	2.79	0.70
50:S2:1200:A:N1	50:S2:1201:U:C4	2.60	0.70
50:S2:1484:A:C4	50:S2:1485:U:C6	2.79	0.70
50:S2:1691:U:C5	50:S2:1692:U:C4	2.79	0.70
52:SB:221:PRO:C	52:SB:223:PHE:H	1.98	0.70
56:SF:91:ARG:O	56:SF:95:HIS:HB2	1.91	0.70
86:S6:63:G:N1	86:S6:64:A:C4	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:259:C:C4	1:5:260:C:C5	2.79	0.70
1:5:488:G:N2	1:5:489:C:N1	2.40	0.70
1:5:737:C:H2'	1:5:738:C:O4'	1.91	0.70
1:5:1213:G:C6	1:5:1215:C:N1	2.59	0.70
1:5:1265:G:H2'	1:5:1266:G:H5'	1.73	0.70
1:5:1339:U:O2	1:5:1340:C:C5	2.45	0.70
1:5:1755:C:O2'	1:5:1756:U:OP1	2.10	0.70
1:5:2441:C:H4'	35:g:9:ARG:NE	2.06	0.70
1:5:2589:C:C4	1:5:2590:G:C5	2.79	0.70
1:5:2770:C:C2	1:5:2771:G:C8	2.80	0.70
1:5:3729:U:C4	1:5:3730:U:C5	2.79	0.70
1:5:3759:A:N7	50:S2:1709:G:O2'	2.23	0.70
1:5:4236:G:O2'	1:5:4237:C:O4'	2.08	0.70
1:5:4277:G:C6	1:5:4278:C:C5	2.79	0.70
1:5:5010:U:C2	1:5:5011:A:C8	2.80	0.70
2:7:17:C:C2	2:7:18:C:C6	2.79	0.70
12:I:76:MET:HE2	12:I:80:CYS:SG	2.31	0.70
14:L:55:LEU:C	14:L:56:ARG:HG2	2.16	0.70
18:P:64:ASN:HB2	18:P:80:GLN:OE1	1.91	0.70
31:c:31:TYR:HE1	31:c:35:LEU:HD22	1.55	0.70
50:S2:551:U:O2'	81:Se:44:ASN:OD1	2.10	0.70
50:S2:882:U:H2'	50:S2:883:U:O4'	1.91	0.70
50:S2:1688:C:H6	50:S2:1688:C:C5'	1.98	0.70
83:Sg:88:ARG:HG2	83:Sg:100:ARG:HB2	1.73	0.70
1:5:92:C:H41	43:o:40:ARG:HH11	1.37	0.70
1:5:1444:G:H2'	1:5:1445:U:C5	2.25	0.70
1:5:1724:G:N2	9:F:105:PRO:HB3	2.06	0.70
1:5:1828:C:C2	1:5:1829:G:C8	2.79	0.70
1:5:1950:U:O2	1:5:1951:G:C8	2.44	0.70
1:5:2080:U:N3	1:5:2081:C:C4	2.59	0.70
1:5:2089:G:C6	1:5:2263:A:N7	2.60	0.70
1:5:2658:G:C6	1:5:2675:G:C6	2.78	0.70
1:5:3591:C:N3	1:5:3592:G:C8	2.60	0.70
1:5:3789:C:H1'	85:S5:72:C:OP1	1.90	0.70
1:5:4355:G:C2	1:5:4356:G:C5	2.79	0.70
1:5:5031:G:N2	1:5:5032:C:C2	2.59	0.70
10:G:231:ASN:HD22	10:G:231:ASN:N	1.88	0.70
12:I:47:PRO:HA	12:I:171:TRP:HE1	1.56	0.70
33:e:43:ASN:HD22	33:e:43:ASN:C	2.00	0.70
46:z:44:GLN:HA	86:S6:54:U:H5'	1.73	0.70
50:S2:10:G:O4'	50:S2:1697:A:O2'	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:118:C:C5	50:S2:119:U:C5	2.80	0.70
50:S2:449:A:N1	50:S2:452:G:C5	2.60	0.70
50:S2:804:U:C2	50:S2:805:U:C5	2.80	0.70
50:S2:859:G:C2	50:S2:860:G:C8	2.80	0.70
50:S2:898:U:C4	50:S2:899:U:C5	2.79	0.70
50:S2:926:A:C2	50:S2:927:C:C6	2.80	0.70
50:S2:996:A:O2'	50:S2:997:A:C5'	2.40	0.70
50:S2:1501:C:C2	50:S2:1502:C:C6	2.80	0.70
50:S2:1643:U:C2	50:S2:1644:C:C4	2.80	0.70
50:S2:1693:G:N9	50:S2:1694:U:C5	2.59	0.70
86:S6:23:A:H2'	86:S6:24:G:C8	2.25	0.70
86:S6:31:A:C2	86:S6:40:C:C2	2.79	0.70
1:5:738:C:C2	1:5:739:G:N7	2.60	0.70
1:5:964:A:C8	1:5:964:A:C3'	2.74	0.70
1:5:1475:G:N2	1:5:1489:G:H1	1.89	0.70
1:5:1629:G:C4	1:5:1631:A:N6	2.60	0.70
1:5:1673:U:N3	1:5:1682:A:C2	2.59	0.70
1:5:2266:C:O2'	1:5:2267:U:OP2	2.09	0.70
1:5:2314:G:N3	1:5:2314:G:H2'	2.05	0.70
1:5:3880:G:O2'	1:5:3881:G:C8	2.42	0.70
1:5:4053:A:O3'	46:z:213:PRO:HG2	1.91	0.70
1:5:5025:C:H2'	1:5:5028:G:O4'	1.90	0.70
17:O:73:PHE:HB2	17:O:78:ARG:HB3	1.74	0.70
26:X:119:ILE:HD12	26:X:149:VAL:HG21	1.73	0.70
50:S2:18:C:O4'	50:S2:1194:A:N6	2.25	0.70
50:S2:118:C:H1'	50:S2:445:A:C2	2.26	0.70
50:S2:378:U:C2	50:S2:379:C:C5	2.77	0.70
50:S2:470:G:H2'	50:S2:471:G:C8	2.26	0.70
50:S2:636:C:C4	50:S2:637:U:C5	2.79	0.70
50:S2:792:C:C4	50:S2:793:G:N7	2.60	0.70
50:S2:1363:C:N3	50:S2:1375:G:N2	2.38	0.70
56:SF:121:PRO:C	56:SF:146:ARG:HD2	2.15	0.70
1:5:752:G:C5	1:5:753:C:C5	2.80	0.70
1:5:944:A:C2'	6:C:335:MET:HE1	2.20	0.70
1:5:1167:C:C2	1:5:1195:G:C2	2.80	0.70
1:5:1476:C:C2	1:5:1477:C:C5	2.79	0.70
1:5:1780:A:C2	1:5:1781:U:H1'	2.27	0.70
1:5:1876:U:N3	1:5:1877:G:C8	2.60	0.70
1:5:2058:G:C6	1:5:2059:C:C5	2.80	0.70
1:5:2347:A:N3	1:5:2348:G:C6	2.60	0.70
1:5:2713:C:C2	1:5:2714:G:C8	2.79	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3693:U:N3	1:5:3694:U:C6	2.59	0.70
1:5:4229:U:C4	1:5:4230:C:C6	2.78	0.70
1:5:4342:C:C4	1:5:4343:U:C5	2.80	0.70
1:5:4483:C:C2	1:5:4484:A:C8	2.80	0.70
24:V:97:TYR:OH	25:W:21:TYR:N	2.24	0.70
29:a:61:TYR:O	29:a:62:HIS:O	2.10	0.70
50:S2:2:A:C8	53:SC:223:TYR:HB3	2.27	0.70
50:S2:122:G:C5	50:S2:123:G:C8	2.80	0.70
50:S2:925:G:N1	50:S2:926:A:C8	2.59	0.70
50:S2:1146:C:N3	50:S2:1147:C:C5	2.60	0.70
50:S2:1204:A:N3	50:S2:1205:C:N1	2.39	0.70
50:S2:1383:A:O2'	50:S2:1384:C:H5'	1.92	0.70
50:S2:1834:A:N1	50:S2:1836:G:N1	2.40	0.70
62:SL:112:HIS:HB3	62:SL:141:ASN:OD1	1.90	0.70
70:ST:52:TRP:CZ3	70:ST:53:PHE:HB2	2.27	0.70
86:S6:20:U:C2'	86:S6:21:A:H5'	2.21	0.70
1:5:692:A:C2	1:5:693:C:C5	2.79	0.70
1:5:1368:A:H1'	27:Y:1:MET:HE2	1.74	0.70
1:5:2277:C:O2	1:5:2277:C:H2'	1.89	0.70
1:5:2314:G:N2	1:5:2315:G:C4	2.60	0.70
1:5:2823:G:C6	1:5:2824:C:C5	2.80	0.70
1:5:4509:U:H2'	1:5:4510:A:H2'	1.74	0.70
1:5:5029:C:C2	1:5:5030:U:C6	2.79	0.70
2:7:114:U:C2'	2:7:115:A:H5''	2.21	0.70
6:C:210:ILE:HD13	6:C:252:TRP:CZ3	2.26	0.70
7:D:123:VAL:HG13	7:D:248:ARG:HH22	1.56	0.70
25:W:44:ARG:HH11	25:W:44:ARG:HG3	1.55	0.70
33:e:28:TYR:HB2	33:e:31:ILE:HD12	1.73	0.70
34:f:18:LEU:HG	34:f:19:ARG:HH22	1.56	0.70
44:p:28:LYS:HZ3	50:S2:1040:G:H2'	1.55	0.70
46:z:60:ARG:HB2	46:z:174:MET:HE1	1.73	0.70
50:S2:167:G:N1	50:S2:168:C:C4	2.60	0.70
50:S2:404:G:C2	50:S2:405:G:C8	2.80	0.70
50:S2:1112:U:C4	50:S2:1113:A:C5	2.79	0.70
50:S2:1192:U:OP2	74:SX:119:ARG:NH2	2.22	0.70
50:S2:1378:A:H61	51:SA:136:GLU:HG3	1.57	0.70
50:S2:1786:U:N3	50:S2:1787:G:N7	2.40	0.70
1:5:189:G:C2	1:5:190:G:C5	2.80	0.70
1:5:208:A:H3'	1:5:209:U:H5''	1.73	0.70
1:5:231:U:H4'	27:Y:100:HIS:CD2	2.26	0.70
1:5:472:C:C2	1:5:473:C:C5	2.80	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:990:C:N3	1:5:991:C:C5	2.59	0.70
1:5:1070:G:C2	1:5:1071:C:N1	2.60	0.70
1:5:1266:G:N2	1:5:1268:G:C6	2.59	0.70
1:5:1733:G:O2'	1:5:4214:A:O2'	2.10	0.70
1:5:1867:A:OP1	12:I:13:LYS:NZ	2.24	0.70
1:5:2367:A:C2	1:5:2368:A:C5	2.79	0.70
1:5:2685:C:H2'	1:5:2686:G:O4'	1.91	0.70
1:5:3794:C:N3	1:5:3795:A:C8	2.60	0.70
1:5:4240:G:C6	1:5:4241:C:C4	2.80	0.70
1:5:4735:G:N1	1:5:4736:C:C4	2.60	0.70
7:D:21:ARG:HH12	7:D:22:ARG:HG2	1.55	0.70
20:R:108:ARG:HH11	20:R:108:ARG:HG2	1.57	0.70
50:S2:42:A:C2	50:S2:43:U:C5	2.80	0.70
50:S2:403:G:C6	50:S2:404:G:N7	2.60	0.70
50:S2:1354:G:H5'	50:S2:1355:C:OP2	1.91	0.70
85:S5:60:U:O5'	85:S5:61:C:N4	2.25	0.70
86:S6:13:C:H3'	86:S6:14:C:H6	1.44	0.70
1:5:445:U:H2'	1:5:446:C:O4'	1.92	0.69
1:5:459:C:C2	1:5:460:C:C6	2.79	0.69
1:5:491:G:N2	1:5:663:G:H1	1.89	0.69
1:5:917:A:N1	1:5:919:C:C5	2.60	0.69
1:5:1628:C:N3	1:5:1629:G:C8	2.58	0.69
1:5:1629:G:H2'	1:5:1631:A:N7	2.07	0.69
1:5:1899:G:C1'	1:5:2278:G:N2	2.55	0.69
1:5:2318:G:N2	1:5:2320:G:O2'	2.25	0.69
1:5:2481:G:C2	1:5:2498:C:C2	2.80	0.69
1:5:2623:A:C2	1:5:2624:G:C8	2.80	0.69
1:5:3732:A:C2	1:5:3733:A:C5	2.80	0.69
1:5:3945:A:C2	1:5:3946:G:C5	2.80	0.69
1:5:4240:G:C4	1:5:4241:C:C6	2.79	0.69
1:5:4536:C:N3	1:5:4537:C:C5	2.59	0.69
1:5:4561:C:O2	1:5:4561:C:C2'	2.39	0.69
10:G:102:TYR:OH	10:G:207:VAL:HA	1.91	0.69
24:V:82:ILE:HG22	24:V:83:ARG:HG3	1.73	0.69
29:a:127:LYS:HG3	29:a:128:PHE:CE2	2.27	0.69
50:S2:64:A:H2	50:S2:83:A:H62	1.38	0.69
50:S2:495:U:O2'	50:S2:496:C:C5'	2.40	0.69
50:S2:863:U:C2	50:S2:864:A:C8	2.80	0.69
50:S2:1573:G:C6	50:S2:1574:C:C5	2.80	0.69
50:S2:1693:G:C5	50:S2:1694:U:N3	2.60	0.69
51:SA:136:GLU:HA	51:SA:139:TYR:HD2	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:21:A:N6	86:S6:46:G:C6	2.60	0.69
1:5:272:U:C2	1:5:273:U:H5	2.10	0.69
1:5:472:C:C4	1:5:473:C:C5	2.80	0.69
1:5:1264:C:N3	1:5:1265:G:N7	2.40	0.69
1:5:1543:G:C2	1:5:1544:G:C8	2.80	0.69
1:5:1724:G:H21	9:F:105:PRO:CB	2.03	0.69
1:5:1780:A:C6	1:5:1781:U:C6	2.80	0.69
1:5:2086:G:H2'	1:5:2087:C:O4'	1.92	0.69
1:5:2529:A:N7	1:5:2532:C:C5	2.60	0.69
1:5:4229:U:C2	1:5:4230:C:C6	2.80	0.69
1:5:4281:A:H2'	1:5:4282:A:H2'	1.74	0.69
1:5:4484:A:C2	1:5:4485:C:C5	2.79	0.69
9:F:197:TYR:C	9:F:199:VAL:H	2.00	0.69
16:N:124:ASP:OD1	16:N:125:SER:N	2.25	0.69
50:S2:219:U:N3	50:S2:220:U:C5	2.60	0.69
50:S2:594:A:H8	50:S2:594:A:O5'	1.75	0.69
50:S2:632:C:C2	50:S2:633:C:C5	2.80	0.69
50:S2:752:G:C6	50:S2:790:C:N4	2.60	0.69
50:S2:794:A:C2	50:S2:795:A:N9	2.60	0.69
50:S2:863:U:C2	50:S2:864:A:N7	2.60	0.69
50:S2:1422:G:H22	50:S2:1424:G:H3'	1.57	0.69
50:S2:1537:A:O2'	50:S2:1604:G:H5'	1.92	0.69
50:S2:1545:A:O2'	50:S2:1546:G:H8	1.73	0.69
50:S2:1794:C:C2	50:S2:1795:G:C8	2.79	0.69
74:SX:54:LYS:HB3	81:Se:6:LEU:HD11	1.73	0.69
85:S5:37:A:C6	85:S5:38:A:N3	2.60	0.69
1:5:1218:G:C6	1:5:1219:G:C1'	2.75	0.69
1:5:1447:C:C2	1:5:2098:G:C2	2.80	0.69
1:5:1994:C:N3	1:5:1995:G:N7	2.41	0.69
1:5:2424:G:H2'	1:5:2426:U:C5	2.27	0.69
1:5:2529:A:C5	1:5:2532:C:C6	2.79	0.69
1:5:2552:G:OP2	1:5:2553:A:H2'	1.91	0.69
1:5:3621:A:C5	1:5:3622:C:C5	2.80	0.69
1:5:4579:U:C2	1:5:4580:U:C5	2.79	0.69
1:5:4743:G:N1	1:5:4744:A:C5	2.61	0.69
1:5:5021:C:N3	1:5:5022:U:C5	2.59	0.69
3:8:13:G:C2	3:8:14:U:C2	2.80	0.69
7:D:210:TYR:OH	7:D:214:GLU:CG	2.40	0.69
11:H:41:ILE:HD11	11:H:69:THR:OG1	1.92	0.69
47:1:430:ALA:O	47:1:433:VAL:CB	2.40	0.69
50:S2:557:U:H2'	50:S2:558:G:O4'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:830:A:N6	50:S2:844:U:C2	2.60	0.69
50:S2:951:C:C2	50:S2:952:G:C8	2.80	0.69
50:S2:1073:U:C2	50:S2:1074:C:C6	2.79	0.69
50:S2:1427:C:O2	50:S2:1428:G:C8	2.45	0.69
50:S2:1641:A:O2'	86:S6:31:A:C3'	2.39	0.69
50:S2:1740:C:N3	50:S2:1741:U:C5	2.60	0.69
50:S2:1746:U:H4'	57:SG:65:GLN:HE22	1.56	0.69
53:SC:170:TRP:CD1	53:SC:198:ALA:C	2.70	0.69
53:SC:170:TRP:HD1	53:SC:198:ALA:C	2.00	0.69
74:SX:7:LEU:HD12	74:SX:8:ARG:HG3	1.73	0.69
79:Sc:6:VAL:HG12	79:Sc:8:PRO:HD3	1.74	0.69
85:S5:28:G:C2	85:S5:29:G:C8	2.79	0.69
85:S5:67:C:H5''	85:S5:68:C:OP2	1.92	0.69
1:5:48:G:H5'	16:N:192:TRP:NE1	2.01	0.69
1:5:469:C:H2'	1:5:470:A:O4'	1.93	0.69
1:5:1313:C:N3	1:5:1323:A:C8	2.60	0.69
1:5:1410:U:H5	1:5:1815:G:C2	2.08	0.69
1:5:1876:U:N3	1:5:1877:G:N7	2.41	0.69
1:5:1999:A:O4'	1:5:2019:C:O2'	2.10	0.69
1:5:2301:G:N2	1:5:2302:C:C2	2.60	0.69
1:5:3878:C:O2	5:B:258:HIS:CE1	2.43	0.69
1:5:4230:C:N3	1:5:4231:C:C5	2.57	0.69
1:5:4561:C:O2	1:5:4562:C:C6	2.45	0.69
3:8:11:C:C2	3:8:12:G:H8	2.01	0.69
18:P:54:GLN:CB	18:P:83:TRP:CD1	2.75	0.69
21:S:99:ASP:OD1	21:S:100:LEU:N	2.25	0.69
50:S2:50:A:N6	50:S2:488:U:N3	2.10	0.69
50:S2:65:C:O2'	57:SG:172:LYS:NZ	2.15	0.69
50:S2:309:G:N1	50:S2:310:C:C4	2.60	0.69
50:S2:321:C:C2	50:S2:322:C:C5	2.80	0.69
50:S2:383:G:C2'	50:S2:384:U:O4'	2.33	0.69
50:S2:428:U:H5	60:SJ:7:TRP:CH2	2.10	0.69
50:S2:925:G:N3	50:S2:925:G:H2'	2.08	0.69
50:S2:993:G:H1	50:S2:999:G:H1	1.38	0.69
50:S2:1687:C:C2	50:S2:1688:C:C5	2.81	0.69
50:S2:1739:C:N3	50:S2:1740:C:C5	2.60	0.69
50:S2:1760:G:C2	50:S2:1773:C:C2	2.81	0.69
61:SK:64:TRP:CZ3	80:Sd:23:VAL:HG22	2.27	0.69
65:SO:150:ARG:HG2	65:SO:150:ARG:HH21	1.58	0.69
71:SU:65:THR:O	71:SU:77:TRP:HB3	1.92	0.69
86:S6:9:A:N1	86:S6:46:G:C6	2.60	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:46:G:C3'	86:S6:47:U:H5'	2.22	0.69
86:S6:50:U:O2'	86:S6:51:U:O4'	2.10	0.69
86:S6:51:U:N1	86:S6:52:G:C8	2.60	0.69
86:S6:62:C:H2'	86:S6:63:G:C8	2.27	0.69
1:5:60:G:C4	1:5:61:A:C8	2.80	0.69
1:5:70:A:C2	1:5:4355:G:C1'	2.75	0.69
1:5:86:U:O4	1:5:97:G:C2	2.44	0.69
1:5:125:C:C2	1:5:126:C:C6	2.81	0.69
1:5:208:A:H1'	1:5:232:G:H21	1.48	0.69
1:5:244:G:N2	1:5:246:G:H1'	2.07	0.69
1:5:1049:C:C2	1:5:1050:C:C5	2.79	0.69
1:5:1219:G:C2	1:5:1220:G:C8	2.81	0.69
1:5:1598:C:O2	1:5:1598:C:C2'	2.39	0.69
1:5:1634:A:N1	1:5:1635:C:C4	2.60	0.69
1:5:2371:U:H2'	1:5:2372:U:H5'	1.73	0.69
1:5:2632:U:O2	1:5:2633:U:C6	2.45	0.69
1:5:2721:G:H2'	1:5:2722:G:H5'	1.75	0.69
1:5:2735:G:C2	1:5:2736:G:N7	2.61	0.69
1:5:3656:A:O4'	1:5:3747:A:C2	2.45	0.69
3:8:100:U:N3	3:8:101:C:C5	2.61	0.69
15:M:36:ALA:HB2	15:M:52:PHE:CE1	2.27	0.69
26:X:73:HIS:O	26:X:116:LEU:HD11	1.92	0.69
36:h:89:ARG:HH11	36:h:89:ARG:HG2	1.56	0.69
50:S2:68:A:H2'	50:S2:69:C:O4'	1.92	0.69
50:S2:608:C:C2	50:S2:609:U:C6	2.80	0.69
50:S2:841:G:N2	50:S2:842:C:C4	2.61	0.69
50:S2:974:C:C4	50:S2:975:G:N7	2.59	0.69
50:S2:1302:G:C6	82:Sf:140:TYR:CE1	2.80	0.69
62:SL:103:GLU:HG3	74:SX:11:ARG:HB2	0.70	0.69
84:S4:23:U:O2'	84:S4:24:A:OP2	2.07	0.69
86:S6:13:C:N1	86:S6:14:C:C5	2.60	0.69
1:5:330:G:C2	1:5:331:G:N7	2.59	0.69
1:5:924:C:H2'	1:5:925:C:O4'	1.92	0.69
1:5:1216:C:C4	1:5:1217:G:N7	2.61	0.69
1:5:1688:G:N2	1:5:1849:U:O2	2.25	0.69
1:5:1771:U:C2	1:5:1772:C:C6	2.81	0.69
1:5:2494:U:C2	1:5:2495:U:C6	2.81	0.69
1:5:2726:G:N2	1:5:2727:C:C2	2.60	0.69
1:5:2741:U:O2'	4:A:50:HIS:HB3	1.93	0.69
1:5:3653:A:C2	1:5:3692:A:H4'	2.27	0.69
1:5:3910:C:C2	1:5:3911:C:H5	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3967:G:H2'	46:z:162:VAL:HG23	1.65	0.69
1:5:4284:C:C2	1:5:4285:U:H5	2.07	0.69
1:5:4549:G:N1	1:5:4550:G:N7	2.40	0.69
1:5:4629:U:C2	1:5:4630:G:C8	2.80	0.69
1:5:4878:C:O2	1:5:4879:C:C6	2.45	0.69
7:D:94:ASN:C	7:D:94:ASN:ND2	2.48	0.69
46:z:64:SER:O	46:z:108:ASP:N	2.23	0.69
50:S2:309:G:N3	50:S2:310:C:C5	2.60	0.69
50:S2:381:C:O5'	50:S2:381:C:H6	1.76	0.69
50:S2:440:G:OP1	50:S2:1798:C:O2'	2.11	0.69
50:S2:443:U:C4	50:S2:444:G:C8	2.80	0.69
50:S2:926:A:C6	50:S2:927:C:C4	2.80	0.69
50:S2:977:C:N3	50:S2:978:G:C8	2.60	0.69
50:S2:1093:A:H4'	73:SW:3:ARG:HH22	1.58	0.69
50:S2:1540:G:C2	50:S2:1541:G:C5	2.81	0.69
52:SB:228:LEU:HD13	52:SB:228:LEU:C	2.17	0.69
68:SR:83:ASN:C	68:SR:83:ASN:HD22	2.00	0.69
85:S5:41:C:C2	85:S5:42:C:C6	2.80	0.69
85:S5:47:U:H2'	85:S5:50:U:OP1	1.92	0.69
86:S6:52:G:N3	86:S6:52:G:H2'	2.08	0.69
86:S6:59:U:C2'	86:S6:60:U:H6	2.04	0.69
1:5:146:G:N3	1:5:147:A:C8	2.60	0.69
1:5:290:U:C2	1:5:291:U:C5	2.81	0.69
1:5:483:G:N1	1:5:484:U:C4	2.61	0.69
1:5:494:U:N3	1:5:495:C:C5	2.61	0.69
1:5:1629:G:C2	1:5:1631:A:N1	2.61	0.69
1:5:1667:G:N2	1:5:2283:G:C6	2.60	0.69
1:5:2713:C:N3	1:5:2714:G:N7	2.40	0.69
1:5:3656:A:C4'	1:5:3747:A:C2	2.76	0.69
1:5:3909:C:N3	1:5:3910:C:C6	2.61	0.69
1:5:3966:A:N3	1:5:3967:G:N7	2.41	0.69
21:S:95:ARG:NH1	21:S:97:TYR:OH	2.21	0.69
47:1:268:LYS:HD2	47:1:276:TYR:CE2	2.26	0.69
50:S2:19:A:OP1	74:SX:107:ARG:CD	2.39	0.69
50:S2:43:U:N3	50:S2:484:A:C2	2.50	0.69
50:S2:444:G:C6	50:S2:446:G:OP2	2.45	0.69
50:S2:588:G:O4'	50:S2:589:G:N2	2.24	0.69
50:S2:625:G:O4'	50:S2:629:A:C2	2.46	0.69
50:S2:1137:U:H3	50:S2:1148:A:N6	1.89	0.69
50:S2:1231:C:O4'	50:S2:1665:G:C2	2.45	0.69
50:S2:1863:A:P	77:Sa:4:LYS:HZ1	2.13	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SD:67:ARG:HH11	54:SD:67:ARG:HG3	1.57	0.69
62:SL:44:PHE:CE2	62:SL:143:LEU:HD23	2.27	0.69
86:S6:5:C:N3	86:S6:6:G:N7	2.41	0.69
86:S6:53:G:C5	86:S6:62:C:N3	2.59	0.69
86:S6:68:C:C2	86:S6:69:G:N7	2.60	0.69
1:5:90:G:N7	1:5:92:C:N1	2.41	0.69
1:5:195:C:H2'	1:5:195:C:O2	1.92	0.69
1:5:468:U:O2	1:5:469:C:O4'	2.10	0.69
1:5:1084:C:N3	1:5:1085:C:C5	2.61	0.69
1:5:1188:C:O2	1:5:1189:G:H8	1.72	0.69
1:5:1506:G:O2'	6:C:116:ASN:OD1	2.06	0.69
1:5:1545:G:C2	1:5:1546:C:C4	2.81	0.69
1:5:1625:G:C5	1:5:1642:A:C2	2.80	0.69
1:5:1964:A:C6	1:5:1965:G:C1'	2.76	0.69
1:5:3773:U:H3	1:5:3774:A:H2'	1.58	0.69
1:5:3909:C:O2	1:5:3909:C:H2'	1.93	0.69
1:5:4063:U:H2'	1:5:4064:C:H6	1.58	0.69
1:5:4096:C:N4	1:5:4097:G:C8	2.61	0.69
1:5:4099:G:C6	1:5:4100:C:C4	2.81	0.69
1:5:4277:G:N3	1:5:4278:C:C6	2.61	0.69
1:5:4707:A:H2'	1:5:4708:A:O5'	1.93	0.69
2:7:56:G:H2'	2:7:57:C:O4'	1.92	0.69
7:D:29:ASP:HB3	7:D:31:TYR:O	1.92	0.69
9:F:209:PHE:C	9:F:209:PHE:CD1	2.70	0.69
32:d:87:ARG:NH1	32:d:87:ARG:CA	2.56	0.69
50:S2:83:A:C2	50:S2:84:A:H1'	2.27	0.69
50:S2:349:A:H4'	59:SI:27:TYR:CZ	2.28	0.69
50:S2:475:C:C4	50:S2:476:A:N7	2.61	0.69
50:S2:477:G:C2	50:S2:478:G:C8	2.80	0.69
50:S2:598:G:C2	50:S2:639:C:N3	2.61	0.69
50:S2:848:U:O2	50:S2:849:A:C5	2.45	0.69
50:S2:862:A:C8	73:SW:107:SER:HA	2.27	0.69
50:S2:994:C:O2	50:S2:995:G:C8	2.45	0.69
50:S2:1030:A:C2	50:S2:1031:A:C5	2.81	0.69
50:S2:1295:A:C5	50:S2:1296:U:H1'	2.27	0.69
50:S2:1401:A:H2'	50:S2:1402:A:C8	2.28	0.69
50:S2:1569:A:C8	50:S2:1570:G:C1'	2.75	0.69
50:S2:1805:G:C2	50:S2:1806:A:C8	2.80	0.69
50:S2:1839:U:N3	50:S2:1840:U:C5	2.60	0.69
52:SB:34:LYS:HB2	52:SB:232:HIS:HE1	1.58	0.69
52:SB:90:ASP:CG	52:SB:225:LEU:HD22	2.18	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SS:124:ARG:HH11	69:SS:124:ARG:HG2	1.58	0.69
74:SX:88:ASP:OD1	74:SX:88:ASP:C	2.35	0.69
86:S6:33:U:C4	86:S6:35:A:C5'	2.71	0.69
1:5:278:G:N1	1:5:330:G:C8	2.61	0.69
1:5:642:G:N1	1:5:643:C:C4	2.61	0.69
1:5:1188:C:N3	1:5:1189:G:C8	2.60	0.69
1:5:1204:C:C2	1:5:1205:G:C8	2.81	0.69
1:5:1632:A:N6	1:5:1634:A:C4	2.61	0.69
1:5:1878:G:C2	1:5:1879:C:C4	2.80	0.69
1:5:1899:G:N2	1:5:1900:C:N1	2.40	0.69
1:5:2294:G:C2	1:5:2295:C:C4	2.80	0.69
1:5:2529:A:N7	1:5:2532:C:C4	2.61	0.69
1:5:3635:A:N7	1:5:3636:C:C6	2.61	0.69
1:5:3730:U:N3	1:5:3731:C:C5	2.61	0.69
1:5:3857:G:C6	1:5:3858:C:C4	2.81	0.69
1:5:4199:C:C6	1:5:4199:C:O5'	2.45	0.69
1:5:4229:U:C4	1:5:4230:C:C4	2.80	0.69
1:5:4345:C:C2	1:5:4346:U:C5	2.81	0.69
1:5:4871:C:C5	21:S:176:PHE:CE2	2.81	0.69
4:A:209:HIS:NE2	4:A:235:VAL:HG11	2.08	0.69
9:F:149:LEU:CA	9:F:197:TYR:OH	2.41	0.69
22:T:82:GLY:HA3	30:b:16:TRP:CB	2.23	0.69
25:W:4:GLU:CD	25:W:30:GLN:HE21	2.00	0.69
39:k:22:SER:HA	39:k:65:ALA:HB3	1.74	0.69
46:z:24:LYS:HD3	46:z:172:VAL:HG11	1.74	0.69
50:S2:43:U:O2	50:S2:484:A:N1	2.26	0.69
50:S2:339:A:N1	50:S2:340:C:N4	2.41	0.69
50:S2:453:C:HO2'	50:S2:454:U:C5'	2.06	0.69
50:S2:1701:C:H5'	84:S4:20:U:C4	2.28	0.69
53:SC:199:PRO:HD2	53:SC:223:TYR:HH	1.58	0.69
73:SW:88:LYS:O	73:SW:92:ASN:OD1	2.10	0.69
81:Se:41:ARG:HG3	81:Se:41:ARG:HH11	1.58	0.69
86:S6:3:C:H5	86:S6:4:C:N4	1.90	0.69
1:5:66:A:C2	1:5:312:G:C1'	2.76	0.69
1:5:422:C:C2	1:5:423:G:C8	2.81	0.69
1:5:491:G:N2	1:5:663:G:C6	2.60	0.69
1:5:1093:C:C2	1:5:1094:G:C8	2.81	0.69
1:5:1282:G:N7	8:E:124:HIS:CE1	2.61	0.69
1:5:1759:G:C6	1:5:1760:G:N7	2.61	0.69
1:5:1840:G:C2'	1:5:1842:G:O5'	2.41	0.69
1:5:1934:A:O2'	1:5:2059:C:OP1	2.11	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2089:G:O2'	1:5:2090:U:O2	2.11	0.69
1:5:2744:A:H2'	1:5:2745:A:C8	2.28	0.69
1:5:3692:A:N7	1:5:3693:U:C6	2.61	0.69
1:5:3811:G:H4'	1:5:3812:C:OP2	1.93	0.69
1:5:3956:G:N1	1:5:3966:A:H8	1.89	0.69
1:5:4167:G:N1	1:5:4168:G:N7	2.41	0.69
1:5:4735:G:C2	1:5:4736:C:C6	2.81	0.69
1:5:4871:C:C4	21:S:176:PHE:CD2	2.81	0.69
1:5:5005:G:C5	25:W:51:TRP:HD1	2.11	0.69
3:8:14:U:H2'	3:8:15:G:C8	2.28	0.69
5:B:118:PHE:CB	5:B:119:TYR:CE1	2.75	0.69
11:H:117:PHE:CD1	11:H:118:LEU:HB2	2.28	0.69
47:1:239:LEU:HD13	47:1:243:MET:HE2	1.74	0.69
50:S2:220:U:N3	50:S2:221:A:C8	2.61	0.69
50:S2:436:G:C2	50:S2:437:G:N7	2.61	0.69
50:S2:999:G:C2	50:S2:1000:C:N1	2.61	0.69
50:S2:1063:C:O4'	50:S2:1838:U:O4	2.08	0.69
50:S2:1397:U:C5	50:S2:1442:U:H4'	2.28	0.69
50:S2:1413:G:C6	50:S2:1414:A:C8	2.80	0.69
50:S2:1565:C:C2	50:S2:1571:G:C2	2.81	0.69
50:S2:1692:U:C5'	50:S2:1692:U:H6	2.06	0.69
65:SO:117:ARG:HH22	79:Sc:62:GLU:CD	1.95	0.69
1:5:73:A:C2	1:5:74:G:C8	2.81	0.68
1:5:287:U:O2	1:5:288:G:C8	2.47	0.68
1:5:491:G:C2	1:5:492:U:C5	2.80	0.68
1:5:656:C:N3	1:5:657:C:C5	2.61	0.68
1:5:719:C:C2	1:5:720:G:C8	2.81	0.68
1:5:909:A:N1	1:5:910:G:C8	2.62	0.68
1:5:992:C:C2	1:5:993:G:C8	2.81	0.68
1:5:1243:C:O2	1:5:1269:G:N3	2.26	0.68
1:5:1554:A:OP2	44:p:4:ARG:NH1	2.26	0.68
1:5:1751:A:H2'	1:5:1752:G:H5'	1.73	0.68
1:5:2036:C:H2'	1:5:2037:C:H6	1.56	0.68
1:5:2077:C:N3	1:5:2078:C:C5	2.61	0.68
1:5:2270:G:C4	1:5:2271:C:C5	2.82	0.68
1:5:2445:C:O2	1:5:2445:C:H2'	1.93	0.68
1:5:2743:A:N3	1:5:2744:A:C8	2.60	0.68
1:5:3952:A:N1	1:5:3953:G:N7	2.40	0.68
1:5:4050:A:C5	1:5:4051:C:C5	2.81	0.68
1:5:4152:G:N2	1:5:4153:C:C2	2.61	0.68
1:5:4302:U:C5	1:5:4303:C:C6	2.80	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:110:G:C2	2:7:111:C:C6	2.81	0.68
7:D:223:PHE:HB2	7:D:226:TYR:HB2	1.73	0.68
10:G:136:LEU:HD21	10:G:204:PHE:CE1	2.28	0.68
50:S2:81:U:C4	50:S2:82:G:C8	2.81	0.68
50:S2:623:G:C6	50:S2:624:C:C5	2.81	0.68
50:S2:828:G:C6	50:S2:829:C:C5	2.81	0.68
50:S2:951:C:N3	50:S2:952:G:N7	2.42	0.68
50:S2:993:G:C4	50:S2:994:C:C6	2.81	0.68
50:S2:1126:G:N2	50:S2:1127:C:C2	2.61	0.68
50:S2:1232:U:O2'	50:S2:1253:A:N7	2.24	0.68
50:S2:1303:C:C5	50:S2:1304:U:C5	2.80	0.68
50:S2:1356:G:O2'	50:S2:1357:A:H5''	1.94	0.68
50:S2:1775:U:C2	50:S2:1776:G:C8	2.81	0.68
77:Sa:10:ARG:NH1	77:Sa:12:LYS:HD3	2.09	0.68
86:S6:62:C:C2	86:S6:63:G:C6	2.80	0.68
1:5:909:A:C2	1:5:910:G:N9	2.61	0.68
1:5:917:A:C5	1:5:919:C:N4	2.62	0.68
1:5:938:C:H2'	1:5:939:G:C8	2.27	0.68
1:5:1249:C:C2	1:5:1262:G:C2	2.81	0.68
1:5:1338:G:N2	29:a:25:HIS:ND1	2.40	0.68
1:5:1346:C:C2	1:5:1347:G:C8	2.80	0.68
1:5:2279:A:N3	1:5:2279:A:H2'	2.08	0.68
1:5:2316:G:N2	1:5:2317:C:C2	2.61	0.68
1:5:2498:C:C2	1:5:2499:C:C6	2.81	0.68
1:5:3736:A:O2'	1:5:3737:A:O4'	2.11	0.68
1:5:4056:A:C6	1:5:4057:C:C5	2.81	0.68
1:5:4550:G:C2	1:5:4551:U:C6	2.80	0.68
2:7:60:G:C6	2:7:61:G:N7	2.61	0.68
6:C:9:SER:HA	6:C:21:ASN:OD1	1.92	0.68
10:G:169:PHE:CE2	16:N:6:TYR:CB	2.75	0.68
40:I:21:ARG:HH21	40:I:24:PRO:N	1.83	0.68
47:1:244:ASN:HB3	47:1:440:ALA:CA	2.20	0.68
50:S2:340:C:H2'	50:S2:341:C:C6	2.28	0.68
50:S2:580:U:O2	50:S2:580:U:H2'	1.92	0.68
50:S2:600:G:C2	50:S2:601:G:C5	2.80	0.68
50:S2:649:U:O2	50:S2:649:U:H2'	1.91	0.68
50:S2:1093:A:C6	50:S2:1094:C:C5	2.81	0.68
50:S2:1202:U:N3	50:S2:1203:G:N7	2.40	0.68
50:S2:1250:A:H2	50:S2:1339:U:O2'	1.76	0.68
50:S2:1330:G:O2'	50:S2:1331:C:OP2	2.11	0.68
50:S2:1406:G:H2'	50:S2:1407:U:C4'	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SN:38:TYR:OH	64:SN:78:LYS:HG3	1.92	0.68
85:S5:70:G:C2	85:S5:71:G:C6	2.81	0.68
86:S6:23:A:C3'	86:S6:24:G:H8	2.06	0.68
86:S6:52:G:C6	86:S6:64:A:N1	2.61	0.68
1:5:33:A:N6	1:5:50:C:C2	2.62	0.68
1:5:209:U:C5	1:5:211:G:C8	2.82	0.68
1:5:930:G:N3	1:5:931:C:C6	2.61	0.68
1:5:961:G:N3	1:5:961:G:C2'	2.55	0.68
1:5:1269:G:C4	1:5:2111:G:N1	2.61	0.68
1:5:1936:C:C4	2:7:84:U:C5	2.81	0.68
1:5:2095:A:N6	9:F:41:GLN:OE1	2.25	0.68
1:5:2524:U:H5''	1:5:2711:G:C2	2.28	0.68
1:5:2627:C:C5	1:5:2628:U:C5	2.81	0.68
1:5:2633:U:C2	1:5:2634:C:C6	2.81	0.68
1:5:2904:U:O2	1:5:2905:C:C6	2.46	0.68
1:5:3789:C:C5'	85:S5:73:A:P	2.81	0.68
33:e:80:HIS:HB3	33:e:84:GLU:OE2	1.93	0.68
50:S2:140:C:N4	50:S2:176:U:O2	2.18	0.68
50:S2:806:U:O2	50:S2:807:G:C8	2.45	0.68
50:S2:1052:A:C5	50:S2:1053:C:C5	2.82	0.68
50:S2:1417:C:O2	50:S2:1419:C:H6	1.75	0.68
56:SF:71:ARG:NH1	56:SF:148:ASN:OD1	2.25	0.68
86:S6:5:C:H2'	86:S6:6:G:H5'	1.75	0.68
86:S6:17:A:O3'	86:S6:18:G:H4'	1.92	0.68
1:5:99:A:C2	1:5:100:C:C2	2.82	0.68
1:5:187:U:C5	1:5:245:C:N3	2.61	0.68
1:5:481:G:C2	1:5:482:G:C8	2.82	0.68
1:5:659:G:C6	1:5:660:A:N7	2.62	0.68
1:5:1269:G:N7	1:5:2111:G:C5	2.61	0.68
1:5:1412:G:C2	1:5:1413:C:C6	2.81	0.68
1:5:2041:A:C2	1:5:4464:A:C5	2.82	0.68
1:5:2282:A:H2'	1:5:2283:G:C5'	2.22	0.68
1:5:2485:U:C2	1:5:2486:G:C8	2.82	0.68
1:5:2688:G:N1	1:5:2689:C:C4	2.61	0.68
1:5:3905:A:C6	1:5:4449:A:N1	2.61	0.68
1:5:4256:A:N7	13:J:60:PHE:CZ	2.60	0.68
3:8:9:A:C2	3:8:10:G:C8	2.80	0.68
5:B:175:GLN:HE21	5:B:179:HIS:HE1	1.41	0.68
7:D:125:VAL:O	7:D:196:ARG:NH2	2.27	0.68
13:J:121:PRO:HD3	69:SS:17:ASN:HB3	1.72	0.68
50:S2:302:A:O2'	59:SI:64:ASN:ND2	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:452:G:C4	50:S2:453:C:C5	2.82	0.68
50:S2:797:C:H4'	50:S2:798:A:OP1	1.91	0.68
50:S2:950:C:N3	50:S2:951:C:C5	2.61	0.68
50:S2:1049:A:C6	50:S2:1070:A:N3	2.62	0.68
50:S2:1291:A:C2	82:Sf:140:TYR:CG	2.81	0.68
50:S2:1342:U:C5	50:S2:1483:A:C4	2.82	0.68
50:S2:1755:C:N3	50:S2:1756:C:C6	2.61	0.68
59:SI:34:ALA:HB2	59:SI:56:ARG:HD3	1.74	0.68
85:S5:60:U:P	85:S5:61:C:N4	2.67	0.68
1:5:289:C:C2	1:5:290:U:C6	2.81	0.68
1:5:316:U:O2	1:5:316:U:H2'	1.94	0.68
1:5:916:C:C4	1:5:917:A:N7	2.62	0.68
1:5:1267:C:C5'	1:5:2110:C:O2	2.39	0.68
1:5:1358:G:C4	1:5:1359:G:N7	2.62	0.68
1:5:1595:G:C2	1:5:4557:U:H4'	2.28	0.68
1:5:1811:G:N3	1:5:1812:C:C6	2.62	0.68
1:5:1973:G:O6	1:5:2002:A:C8	2.46	0.68
1:5:3688:U:N3	1:5:3689:G:N7	2.41	0.68
1:5:3802:U:O4'	1:5:3802:U:O2	2.09	0.68
1:5:3971:G:N2	1:5:4040:C:HO2'	1.90	0.68
1:5:4052:C:C2'	46:z:207:LYS:HZ1	2.05	0.68
1:5:4093:G:H3'	1:5:4094:G:C5'	2.24	0.68
1:5:4095:G:H2'	1:5:4096:C:H6	1.58	0.68
1:5:4112:C:C4	1:5:4113:U:C5	2.82	0.68
1:5:4879:C:O2	1:5:4880:C:C6	2.45	0.68
1:5:5035:U:C4	1:5:5036:C:C5	2.81	0.68
3:8:68:G:H2'	3:8:69:U:O4'	1.93	0.68
16:N:162:ARG:HH21	16:N:164:LEU:HD11	1.58	0.68
23:U:38:ASN:O	23:U:90:TYR:OH	2.10	0.68
47:1:284:PHE:CE1	47:1:428:ILE:HD13	2.28	0.68
50:S2:579:C:N3	50:S2:580:U:C6	2.61	0.68
50:S2:638:C:C2	50:S2:639:C:C5	2.81	0.68
50:S2:1201:U:H1'	50:S2:1357:A:C2	2.28	0.68
50:S2:1412:C:H2'	50:S2:1413:G:H8	1.58	0.68
50:S2:1484:A:N3	50:S2:1485:U:C5	2.61	0.68
65:SO:117:ARG:NH2	79:Sc:62:GLU:OE1	2.26	0.68
86:S6:3:C:C4	86:S6:71:G:C2	2.82	0.68
86:S6:50:U:N3	86:S6:51:U:C4	2.61	0.68
1:5:28:C:N3	1:5:29:G:C8	2.62	0.68
1:5:424:U:O2	1:5:424:U:H2'	1.93	0.68
1:5:442:G:H2'	1:5:443:G:O5'	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:465:G:C2	1:5:466:A:C8	2.82	0.68
1:5:488:G:N1	1:5:489:C:C4	2.61	0.68
1:5:658:C:N3	1:5:659:G:N7	2.41	0.68
1:5:1297:U:O4'	1:5:1297:U:OP2	2.11	0.68
1:5:1358:G:C2	1:5:1359:G:O6	2.47	0.68
1:5:1421:G:N2	1:5:1422:G:C4	2.62	0.68
1:5:1939:A:C2	1:5:3874:G:OP1	2.47	0.68
1:5:2076:G:C6	1:5:2077:C:C5	2.81	0.68
1:5:2305:U:H4'	1:5:2306:G:OP2	1.92	0.68
1:5:2714:G:C2	1:5:2715:G:N7	2.62	0.68
1:5:2891:U:C5	20:R:74:ARG:NH1	2.61	0.68
1:5:4258:C:C2	1:5:4259:C:C6	2.82	0.68
1:5:4763:U:O2	15:M:3:PHE:CE2	2.46	0.68
14:L:167:ARG:O	29:a:97:ALA:O	2.11	0.68
16:N:138:PHE:HB3	16:N:143:ARG:NH2	2.08	0.68
50:S2:588:G:C1'	50:S2:589:G:H21	2.05	0.68
50:S2:794:A:C4	50:S2:795:A:C8	2.82	0.68
50:S2:927:C:O2	50:S2:928:G:C8	2.46	0.68
50:S2:1049:A:C5	50:S2:1070:A:C2	2.81	0.68
50:S2:1224:G:N7	50:S2:1225:U:C5	2.61	0.68
50:S2:1295:A:C4	50:S2:1296:U:H1'	2.29	0.68
50:S2:1308:U:C2	50:S2:1309:C:C5	2.82	0.68
50:S2:1382:A:N6	50:S2:1383:A:H62	1.91	0.68
50:S2:1512:C:O2	50:S2:1513:C:C6	2.46	0.68
50:S2:1606:G:C2	50:S2:1632:G:C2	2.81	0.68
85:S5:8:U:C2'	85:S5:48:C:HO2'	2.05	0.68
85:S5:48:C:C6	85:S5:59:U:C5	2.82	0.68
1:5:750:U:C2	1:5:751:G:C8	2.82	0.68
1:5:1080:C:C4	1:5:1081:C:C5	2.82	0.68
1:5:1744:U:C2	1:5:1745:G:C8	2.81	0.68
1:5:2316:G:N1	1:5:2317:C:C4	2.61	0.68
1:5:2567:G:N2	1:5:2568:C:C2	2.62	0.68
1:5:3967:G:H21	46:z:164:CYS:CB	2.05	0.68
1:5:4034:G:C2	1:5:4035:G:C8	2.82	0.68
1:5:4054:C:H5'	46:z:205:TYR:CD2	2.29	0.68
1:5:4056:A:C2	1:5:4057:C:C6	2.81	0.68
1:5:4286:C:O2	1:5:4287:G:N7	2.27	0.68
1:5:4287:G:O2'	1:5:4288:C:O5'	2.10	0.68
1:5:4983:C:N3	1:5:4984:C:H5	1.82	0.68
1:5:5021:C:C2	1:5:5022:U:C6	2.82	0.68
3:8:125:C:C5'	3:8:125:C:C2	2.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:134:G:N2	3:8:135:C:H1'	2.09	0.68
8:E:145:ILE:HD11	8:E:267:LEU:HD21	1.76	0.68
10:G:227:ASN:N	10:G:227:ASN:HD22	1.91	0.68
14:L:69:LYS:HA	14:L:159:ASN:HD21	1.59	0.68
32:d:87:ARG:NH1	32:d:87:ARG:CB	2.57	0.68
50:S2:52:G:C5	50:S2:53:C:C6	2.81	0.68
50:S2:81:U:C4	50:S2:82:G:C5	2.81	0.68
50:S2:164:A:O2'	50:S2:165:G:H5'	1.93	0.68
50:S2:358:C:O3'	74:SX:22:TRP:HZ2	1.76	0.68
50:S2:965:U:O2	50:S2:1066:U:H1'	1.94	0.68
50:S2:1111:U:C2	50:S2:1112:U:H5	2.05	0.68
50:S2:1630:A:C2	50:S2:1631:U:C6	2.82	0.68
50:S2:1665:G:N7	70:ST:88:MET:HG3	2.09	0.68
85:S5:12:U:H1'	85:S5:24:G:N3	2.09	0.68
85:S5:41:C:N3	85:S5:42:C:C5	2.61	0.68
1:5:21:G:C6	3:8:36:G:N2	2.62	0.68
1:5:43:U:OP1	16:N:85:VAL:HG23	1.94	0.68
1:5:445:U:O4'	1:5:2313:A:C2	2.47	0.68
1:5:509:A:C2	29:a:105:ARG:NE	2.61	0.68
1:5:1807:C:C2	1:5:1808:C:C6	2.81	0.68
1:5:2000:G:O2'	1:5:2017:A:N6	2.27	0.68
1:5:2093:A:H5''	1:5:2093:A:N3	2.09	0.68
1:5:2463:G:N3	1:5:2464:C:C5	2.62	0.68
1:5:3635:A:C6	1:5:3636:C:H1'	2.28	0.68
1:5:4039:G:C2	1:5:4040:C:C6	2.82	0.68
1:5:4189:U:H1'	1:5:4380:A:C2	2.28	0.68
1:5:4490:C:N3	1:5:4491:G:N7	2.42	0.68
1:5:4945:G:O6	34:f:60:PRO:CD	2.41	0.68
2:7:22:A:C2	2:7:23:A:N7	2.61	0.68
3:8:94:G:H4'	3:8:95:A:OP1	1.93	0.68
3:8:106:G:N2	3:8:107:C:C2	2.62	0.68
46:z:67:VAL:CG2	46:z:82:ILE:HD13	2.18	0.68
50:S2:104:A:C5	50:S2:105:U:C6	2.82	0.68
50:S2:377:G:N1	50:S2:378:U:C5	2.62	0.68
50:S2:797:C:C2	50:S2:798:A:O2'	2.40	0.68
50:S2:1022:U:H6	64:SN:128:TYR:HE2	1.39	0.68
50:S2:1209:A:C2'	50:S2:1210:G:H5''	2.20	0.68
50:S2:1280:G:C6	50:S2:1281:G:C8	2.81	0.68
50:S2:1394:G:O2'	67:SQ:124:PRO:O	2.11	0.68
50:S2:1658:G:N1	50:S2:1664:A:N6	2.42	0.68
50:S2:1832:A:N1	50:S2:1833:C:N4	2.42	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:37:ALA:N	52:SB:231:LEU:O	2.27	0.68
62:SL:99:TYR:HB3	74:SX:13:LEU:HD13	1.76	0.68
67:SQ:70:VAL:HG11	67:SQ:84:ILE:HG22	1.75	0.68
85:S5:6:G:O2'	85:S5:7:A:H2'	1.94	0.68
86:S6:16:A:H1'	86:S6:17:A:C5	2.28	0.68
1:5:65:A:C2	1:5:76:A:H4'	2.29	0.68
1:5:247:G:N2	1:5:248:C:C2	2.62	0.68
1:5:1287:G:C2	1:5:1289:C:C5	2.82	0.68
1:5:1562:G:N1	1:5:1566:C:N4	2.41	0.68
1:5:1631:A:C2	4:A:204:MET:SD	2.87	0.68
1:5:1877:G:C2	1:5:1878:G:C8	2.82	0.68
1:5:2108:G:H2'	1:5:2109:G:H4'	1.76	0.68
1:5:2248:C:O2	1:5:2248:C:H2'	1.92	0.68
1:5:2314:G:C2	1:5:2315:G:C5	2.80	0.68
1:5:2366:A:H2'	1:5:2367:A:C5'	2.24	0.68
1:5:2726:G:C2	1:5:2727:C:C5	2.82	0.68
1:5:2745:A:O2'	1:5:2746:A:O5'	2.12	0.68
1:5:2874:U:H5'	1:5:2874:U:C6	2.29	0.68
1:5:3670:C:O2'	1:5:3671:G:C8	2.46	0.68
1:5:3953:G:N2	1:5:3954:A:H1'	2.08	0.68
1:5:4062:A:C6	1:5:4063:U:C4	2.82	0.68
1:5:4097:G:P	35:g:112:GLN:HA	2.34	0.68
1:5:5028:G:C4	1:5:5029:C:C5	2.82	0.68
2:7:110:G:N1	2:7:111:C:C4	2.62	0.68
2:7:112:U:O2	2:7:112:U:H2'	1.94	0.68
3:8:11:C:C4	3:8:12:G:N7	2.59	0.68
3:8:43:A:C2	3:8:44:A:N7	2.62	0.68
6:C:325:MET:HA	6:C:325:MET:HE3	1.76	0.68
50:S2:119:U:C4	50:S2:120:U:C5	2.82	0.68
50:S2:436:G:C6	50:S2:458:A:C2	2.82	0.68
50:S2:1067:C:C4	50:S2:1068:G:C5	2.82	0.68
50:S2:1666:C:O2	50:S2:1667:U:C6	2.47	0.68
50:S2:1822:A:C2	50:S2:1823:A:N1	2.62	0.68
50:S2:1860:A:C4	50:S2:1862:G:C8	2.82	0.68
56:SF:91:ARG:HD2	67:SQ:46:THR:HG22	1.76	0.68
85:S5:71:G:C8	85:S5:71:G:OP2	2.47	0.68
1:5:122:U:H1'	1:5:152:U:O2	1.93	0.68
1:5:976:G:C4	1:5:977:C:C6	2.82	0.68
1:5:1170:G:C2	1:5:1192:C:C2	2.82	0.68
1:5:1172:C:C2	1:5:1173:G:C8	2.82	0.68
1:5:1272:C:O2'	1:5:1273:G:C4	2.46	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1744:U:N3	1:5:1745:G:C8	2.62	0.68
1:5:1961:G:O2'	1:5:2025:A:N6	2.26	0.68
1:5:3730:U:C2	1:5:3731:C:C6	2.82	0.68
1:5:3968:U:H1'	46:z:164:CYS:SG	2.34	0.68
1:5:4091:G:C6	1:5:4092:G:N7	2.62	0.68
1:5:4285:U:N3	1:5:4286:C:C5	2.62	0.68
2:7:17:C:C2	2:7:18:C:C5	2.81	0.68
2:7:59:G:C2	2:7:60:G:N9	2.62	0.68
3:8:35:C:H6	3:8:35:C:O5'	1.77	0.68
3:8:125:C:C2	3:8:125:C:H5''	2.28	0.68
5:B:323:TYR:HB3	5:B:342:LYS:HG2	1.74	0.68
40:l:44:TRP:CZ3	40:l:45:ARG:HB2	2.29	0.68
42:n:2:ARG:NH1	50:S2:1841:C:OP2	2.27	0.68
46:z:17:VAL:HG22	46:z:206:ILE:HG21	1.75	0.68
50:S2:580:U:C4	50:S2:581:U:C5	2.82	0.68
50:S2:695:C:C2	50:S2:696:G:C8	2.81	0.68
50:S2:926:A:C5	50:S2:927:C:C5	2.82	0.68
50:S2:956:G:C2	50:S2:957:A:C5	2.82	0.68
50:S2:1273:C:N3	50:S2:1506:A:N3	2.41	0.68
50:S2:1302:G:C6	82:Sf:138:ARG:NH1	2.61	0.68
50:S2:1331:C:C2	50:S2:1489:A:C5	2.81	0.68
50:S2:1332:A:N1	50:S2:1333:U:C6	2.62	0.68
52:SB:144:LYS:C	52:SB:145:LYS:HB2	2.19	0.68
86:S6:19:G:H5'	86:S6:20:U:O4	1.94	0.68
1:5:86:U:O2	1:5:87:A:N7	2.27	0.67
1:5:669:C:C2	1:5:670:G:C8	2.81	0.67
1:5:1171:G:C2	1:5:1191:C:C2	2.82	0.67
1:5:1201:U:N3	1:5:1202:C:C5	2.62	0.67
1:5:1277:G:C6	1:5:1278:C:C5	2.82	0.67
1:5:1413:C:C2	1:5:1414:C:C5	2.82	0.67
1:5:1694:C:N3	1:5:1695:U:C5	2.62	0.67
1:5:1848:C:H6	1:5:1848:C:H5''	1.59	0.67
1:5:2513:A:H62	35:g:13:TYR:HE2	1.41	0.67
1:5:2811:G:N2	1:5:2813:A:C8	2.63	0.67
1:5:3878:C:C4	1:5:4518:A:C2	2.83	0.67
1:5:4121:G:N2	4:A:85:GLY:N	2.42	0.67
1:5:4627:U:C2	1:5:4628:U:C6	2.82	0.67
2:7:56:G:C2'	2:7:57:C:O5'	2.42	0.67
3:8:12:G:N2	3:8:13:G:C8	2.62	0.67
3:8:115:G:C6	3:8:116:C:C5	2.83	0.67
5:B:235:TRP:HD1	5:B:267:ALA:HA	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:316:G:N1	50:S2:317:C:C4	2.62	0.67
50:S2:460:A:N3	50:S2:461:U:C5	2.55	0.67
50:S2:648:A:N1	50:S2:649:U:C5	2.62	0.67
50:S2:831:G:C2	50:S2:844:U:C4	2.82	0.67
50:S2:1034:A:C2'	50:S2:1035:A:O5'	2.42	0.67
50:S2:1353:A:H5'	50:S2:1353:A:C8	2.29	0.67
50:S2:1591:C:N3	50:S2:1592:C:C6	2.62	0.67
58:SH:177:TYR:CE2	58:SH:185:VAL:HG21	2.27	0.67
64:SN:128:TYR:C	64:SN:128:TYR:HD1	2.01	0.67
77:Sa:21:ILE:HD13	77:Sa:72:HIS:CE1	2.29	0.67
84:S4:19:U:H3	86:S6:36:A:H2	1.26	0.67
85:S5:41:C:H2'	85:S5:42:C:C6	2.28	0.67
1:5:99:A:H4'	16:N:181:HIS:ND1	2.09	0.67
1:5:207:G:N2	1:5:383:A:C8	2.61	0.67
1:5:701:G:O2'	33:e:7:LEU:O	2.11	0.67
1:5:711:A:C2	1:5:712:C:C5	2.82	0.67
1:5:1491:A:C4	1:5:1492:G:C8	2.83	0.67
1:5:1672:U:C2	1:5:1673:U:H5	2.10	0.67
1:5:1916:G:H21	1:5:2067:C:H1'	1.59	0.67
1:5:1967:A:N1	1:5:1968:G:C5	2.62	0.67
1:5:2458:C:H5'	16:N:67:ARG:HD3	1.76	0.67
1:5:3967:G:O6	1:5:4054:C:N4	2.27	0.67
1:5:4075:U:O2	1:5:4076:G:N7	2.27	0.67
1:5:4745:G:C2'	1:5:4746:C:C6	2.77	0.67
2:7:18:C:C4	2:7:19:C:H5	2.12	0.67
8:E:157:ARG:HD2	8:E:266:TYR:CE1	2.27	0.67
32:d:25:TYR:OH	32:d:119:THR:CB	2.39	0.67
50:S2:1206:G:H1'	50:S2:1834:A:C8	2.29	0.67
85:S5:38:A:H8	85:S5:38:A:H5''	1.57	0.67
86:S6:48:C:C4	86:S6:59:U:C2	2.83	0.67
1:5:440:U:N3	1:5:441:G:N7	2.41	0.67
1:5:451:C:C4	1:5:1295:C:H2'	2.29	0.67
1:5:957:G:OP2	1:5:1284:G:N2	2.23	0.67
1:5:1267:C:O2'	1:5:1271:G:O6	2.13	0.67
1:5:1553:A:C2	1:5:1575:A:H1'	2.28	0.67
1:5:1839:U:H3'	1:5:1840:G:N2	2.10	0.67
1:5:2078:C:C4	1:5:2079:G:N7	2.60	0.67
1:5:2258:C:H2'	1:5:2258:C:O2	1.95	0.67
1:5:2612:G:H2'	1:5:2613:C:O4'	1.95	0.67
1:5:3807:A:O2'	50:S2:1816:G:C1'	2.42	0.67
1:5:4123:C:H2'	1:5:4123:C:O2	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4460:U:OP1	5:B:10:ARG:NH1	2.27	0.67
1:5:4623:G:H4'	5:B:16:PHE:CE2	2.28	0.67
1:5:4911:A:H5''	5:B:100:ARG:HD3	1.77	0.67
1:5:4985:U:O2	5:B:174:ARG:NH1	2.28	0.67
6:C:128:LEU:HD12	6:C:264:TYR:OH	1.94	0.67
7:D:29:ASP:HB3	7:D:32:ALA:HB3	1.76	0.67
47:1:205:ARG:HD2	47:1:242:LEU:HD13	1.76	0.67
50:S2:436:G:N3	50:S2:437:G:C8	2.62	0.67
50:S2:982:G:N3	50:S2:1045:U:H1'	2.10	0.67
50:S2:993:G:N1	50:S2:994:C:C5	2.62	0.67
50:S2:1051:G:N1	50:S2:1052:A:C5	2.62	0.67
50:S2:1606:G:N1	50:S2:1632:G:C2	2.61	0.67
68:SR:18:GLU:O	68:SR:71:ILE:HG12	1.94	0.67
86:S6:5:C:C2'	86:S6:6:G:H8	2.06	0.67
86:S6:53:G:C2'	86:S6:54:U:H6	2.04	0.67
1:5:1186:U:C4	1:5:1187:G:C5	2.83	0.67
1:5:1387:A:N3	1:5:1397:A:N6	2.42	0.67
1:5:1411:C:C2	1:5:1412:G:C8	2.82	0.67
1:5:1489:G:C6	1:5:1490:G:C8	2.83	0.67
1:5:1758:G:N2	1:5:1759:G:C4	2.63	0.67
1:5:1887:G:N1	1:5:1890:G:O6	2.27	0.67
1:5:2274:C:H5'	6:C:312:ARG:HB3	1.77	0.67
1:5:2745:A:O2'	1:5:2746:A:C5'	2.43	0.67
1:5:2857:A:N3	1:5:2858:A:C5	2.62	0.67
1:5:3759:A:C5	50:S2:1709:G:C4'	2.75	0.67
1:5:3767:C:OP1	50:S2:1849:G:N7	2.27	0.67
1:5:3907:G:C4	1:5:4449:A:H1'	2.28	0.67
1:5:3912:U:C2'	1:5:3913:G:H5'	2.24	0.67
1:5:4055:U:O3'	46:z:37:SER:OG	2.12	0.67
1:5:4174:U:O2	1:5:4175:G:H8	1.76	0.67
1:5:4280:A:N6	7:D:29:ASP:N	2.37	0.67
1:5:4355:G:N2	1:5:4356:G:C5	2.62	0.67
1:5:4729:A:C5'	1:5:4965:U:O2'	2.43	0.67
31:c:31:TYR:HD1	31:c:32:LYS:H	1.43	0.67
31:c:78:ASN:ND2	31:c:78:ASN:C	2.52	0.67
47:1:292:ILE:CG1	47:1:449:LEU:HD22	2.24	0.67
50:S2:53:C:O2	50:S2:53:C:H2'	1.93	0.67
50:S2:56:G:N1	50:S2:90:G:N2	2.37	0.67
50:S2:154:U:H1'	57:SG:13:GLN:HG2	1.76	0.67
50:S2:386:C:O2	50:S2:387:C:C6	2.47	0.67
50:S2:449:A:C2	50:S2:452:G:C8	2.81	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1133:A:N1	50:S2:1134:G:C5	2.62	0.67
50:S2:1200:A:C2	50:S2:1201:U:C4	2.82	0.67
50:S2:1248:U:C2'	50:S2:1249:C:O4'	2.42	0.67
50:S2:1528:G:C2	50:S2:1529:C:C5	2.83	0.67
50:S2:1575:G:N2	50:S2:1576:G:C5	2.62	0.67
57:SG:215:LYS:O	57:SG:219:GLU:N	2.27	0.67
70:ST:13:GLU:HA	70:ST:16:ARG:HG3	1.75	0.67
85:S5:4:C:H2'	85:S5:5:G:C8	2.29	0.67
86:S6:68:C:N3	86:S6:69:G:N7	2.43	0.67
86:S6:71:G:O2'	86:S6:72:C:OP1	2.12	0.67
1:5:699:C:N3	1:5:700:G:C8	2.62	0.67
1:5:1175:A:C6	1:5:1176:C:C5	2.81	0.67
1:5:1245:C:C4	1:5:1269:G:O6	2.47	0.67
1:5:1271:G:H3'	1:5:1272:C:O4'	1.94	0.67
1:5:1412:G:N3	1:5:1413:C:C6	2.62	0.67
1:5:2056:G:N1	1:5:2058:G:C5	2.62	0.67
1:5:2453:A:C6	1:5:2454:U:C6	2.82	0.67
1:5:2522:G:N2	1:5:2534:C:C2	2.63	0.67
1:5:3740:G:O6	1:5:3741:C:C5	2.46	0.67
1:5:3857:G:C6	1:5:3858:C:C5	2.82	0.67
1:5:4124:G:N2	10:G:43:GLN:O	2.28	0.67
1:5:4276:G:C5	1:5:4277:G:N7	2.63	0.67
1:5:4314:C:N3	1:5:4315:A:N7	2.43	0.67
1:5:4984:C:N3	1:5:4985:U:C5	2.63	0.67
3:8:81:C:O2	3:8:82:A:O3'	2.13	0.67
3:8:83:C:H4'	3:8:85:U:O2	1.95	0.67
47:1:431:LEU:HD21	47:1:452:THR:HG23	1.76	0.67
50:S2:26:U:C2	50:S2:27:A:H8	2.13	0.67
50:S2:532:C:C2	50:S2:533:A:C8	2.83	0.67
50:S2:633:C:N3	50:S2:634:A:N7	2.42	0.67
50:S2:640:A:O2'	50:S2:641:A:O4'	2.09	0.67
50:S2:1123:C:C2	50:S2:1124:C:C6	2.83	0.67
50:S2:1427:C:C2	50:S2:1428:G:N7	2.62	0.67
50:S2:1508:A:N7	50:S2:1510:G:N7	2.43	0.67
50:S2:1542:C:O2'	50:S2:1543:U:O5'	2.12	0.67
57:SG:5:ILE:HD12	57:SG:16:ILE:HD13	1.76	0.67
68:SR:69:ILE:O	68:SR:70:SER:CB	2.42	0.67
86:S6:3:C:N3	86:S6:71:G:C2	2.62	0.67
1:5:38:A:C6	1:5:41:C:C5	2.83	0.67
1:5:50:C:H2'	1:5:51:A:O5'	1.94	0.67
1:5:951:G:C2	1:5:952:G:N7	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1218:G:C6	1:5:1219:G:H1'	2.30	0.67
1:5:1266:G:H4'	1:5:2112:G:C4	2.28	0.67
1:5:1273:G:N7	8:E:68:LYS:C	2.52	0.67
1:5:1408:G:N3	1:5:1408:G:H2'	2.10	0.67
1:5:1629:G:N2	1:5:1631:A:C2	2.63	0.67
1:5:2688:G:N2	1:5:2689:C:C2	2.63	0.67
1:5:3943:A:N3	1:5:3944:G:C8	2.63	0.67
1:5:4562:C:C2	1:5:4563:U:C6	2.83	0.67
2:7:8:G:OP1	7:D:33:ARG:NH2	2.28	0.67
2:7:19:C:N3	2:7:20:U:C5	2.62	0.67
3:8:64:U:N3	3:8:65:A:N6	2.43	0.67
45:r:7:TRP:CD1	45:r:38:PHE:CD1	2.82	0.67
50:S2:98:C:C2	50:S2:409:C:C5	2.82	0.67
50:S2:118:C:C5	50:S2:119:U:C6	2.82	0.67
50:S2:149:A:H2'	50:S2:150:A:O4'	1.94	0.67
50:S2:550:C:C2	50:S2:551:U:C5	2.83	0.67
50:S2:552:G:C4	50:S2:553:U:C5	2.82	0.67
50:S2:1017:U:C2	50:S2:1018:U:C6	2.82	0.67
50:S2:1063:C:O2	50:S2:1063:C:H2'	1.90	0.67
50:S2:1137:U:H3	50:S2:1148:A:H61	1.41	0.67
50:S2:1203:G:C2	50:S2:1204:A:C4	2.83	0.67
50:S2:1348:G:C2	50:S2:1349:G:C8	2.82	0.67
50:S2:1435:C:C4	50:S2:1436:C:C5	2.83	0.67
50:S2:1501:C:N3	50:S2:1502:C:C5	2.62	0.67
50:S2:1825:A:C2	84:S4:22:U:O2	2.41	0.67
50:S2:1861:G:H4'	50:S2:1862:G:OP2	1.95	0.67
51:SA:138:SER:CB	51:SA:156:TYR:CE1	2.77	0.67
85:S5:48:C:C6	85:S5:59:U:C2	2.83	0.67
1:5:125:C:C2	1:5:126:C:H6	2.12	0.67
1:5:449:C:N3	1:5:450:G:C8	2.62	0.67
1:5:673:C:H2'	1:5:674:G:C8	2.30	0.67
1:5:1069:G:C2	1:5:1070:G:H1'	2.30	0.67
1:5:1241:C:N4	1:5:1270:A:O2'	2.27	0.67
1:5:1395:U:O2	1:5:1469:C:H4'	1.94	0.67
1:5:1563:A:H62	50:S2:1028:A:H61	1.40	0.67
1:5:1991:A:H3'	1:5:1992:U:H1'	1.74	0.67
1:5:2263:A:O3'	1:5:2264:C:H6	1.74	0.67
1:5:2480:G:C2	1:5:2481:G:C8	2.83	0.67
1:5:2567:G:N3	1:5:2568:C:C6	2.63	0.67
1:5:3962:A:N7	1:5:4038:C:O2'	2.25	0.67
1:5:4051:C:H2'	1:5:4052:C:C5	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4136:G:C6	1:5:4137:C:C4	2.83	0.67
1:5:4413:C:H3'	1:5:4414:A:H8	1.60	0.67
1:5:4490:C:C2	1:5:4491:G:H8	2.13	0.67
1:5:4735:G:C4	1:5:4736:C:C6	2.82	0.67
1:5:4956:A:C6	1:5:4957:C:C5	2.83	0.67
3:8:91:A:H2'	3:8:92:U:O4'	1.94	0.67
4:A:89:TYR:CB	4:A:100:ASN:HD21	2.06	0.67
50:S2:16:G:H2'	50:S2:17:C:O4'	1.95	0.67
50:S2:71:G:H3'	50:S2:72:C:C5'	2.24	0.67
50:S2:114:G:H2'	50:S2:114:G:N3	2.09	0.67
50:S2:795:A:C2	50:S2:796:G:C8	2.76	0.67
50:S2:995:G:N2	50:S2:996:A:O2'	2.28	0.67
50:S2:1209:A:H2'	50:S2:1210:G:O4'	1.94	0.67
50:S2:1256:G:N7	80:Sd:40:ARG:HD2	2.08	0.67
50:S2:1453:C:N3	50:S2:1455:A:H1'	2.05	0.67
50:S2:1495:G:C5	50:S2:1496:U:C6	2.83	0.67
50:S2:1860:A:N1	50:S2:1862:G:C8	2.57	0.67
52:SB:66:VAL:HG22	52:SB:87:ILE:HG22	1.77	0.67
52:SB:89:GLU:CA	52:SB:223:PHE:CE2	2.74	0.67
56:SF:160:GLU:HA	56:SF:163:PHE:CE1	2.30	0.67
58:SH:145:ARG:CD	73:SW:51:GLU:HG2	2.24	0.67
60:SJ:111:GLN:HE21	60:SJ:127:ARG:HB2	1.59	0.67
74:SX:8:ARG:C	74:SX:10:ALA:H	2.03	0.67
85:S5:6:G:C2	85:S5:7:A:C2	2.82	0.67
85:S5:28:G:N1	85:S5:29:G:C6	2.63	0.67
1:5:650:C:H2'	1:5:651:C:C6	2.30	0.67
1:5:1260:G:N1	1:5:1261:G:C5	2.63	0.67
1:5:1263:A:C5	1:5:1264:C:C5	2.83	0.67
1:5:1725:U:N3	1:5:1726:U:C5	2.63	0.67
1:5:1764:G:O6	1:5:1766:A:H5''	1.93	0.67
1:5:2077:C:C4	1:5:2078:C:C5	2.83	0.67
1:5:2428:A:C4	1:5:2789:A:H2	2.12	0.67
1:5:2457:G:N2	1:5:2465:C:N3	2.43	0.67
1:5:2856:C:C2	1:5:2857:A:C8	2.69	0.67
1:5:3674:G:C6	1:5:3675:G:N7	2.63	0.67
1:5:3899:G:H5''	5:B:257:TRP:CD1	2.30	0.67
1:5:4223:C:H5'	12:I:119:PHE:CD2	2.30	0.67
1:5:4228:G:C5'	1:5:4229:U:O4'	2.43	0.67
1:5:5001:U:O2'	1:5:5002:U:O5'	2.11	0.67
3:8:73:U:C4	3:8:74:U:C6	2.82	0.67
8:E:157:ARG:CD	8:E:266:TYR:CD1	2.78	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:20:LEU:HD21	24:V:101:ASN:ND2	2.09	0.67
50:S2:300:U:C2	50:S2:301:A:C8	2.83	0.67
50:S2:663:C:N3	50:S2:664:A:C8	2.62	0.67
50:S2:752:G:N1	50:S2:791:C:C2	2.62	0.67
50:S2:795:A:C2	50:S2:796:G:C6	2.83	0.67
50:S2:795:A:N1	50:S2:796:G:C6	2.63	0.67
50:S2:858:A:N3	50:S2:859:G:C8	2.63	0.67
50:S2:1110:G:H4'	68:SR:122:PRO:CB	2.24	0.67
50:S2:1203:G:C2	50:S2:1204:A:N7	2.63	0.67
50:S2:1332:A:C6	50:S2:1333:U:C6	2.83	0.67
50:S2:1538:C:C2	50:S2:1539:U:C6	2.83	0.67
50:S2:1840:U:O2	50:S2:1841:C:C6	2.47	0.67
50:S2:1840:U:C4	50:S2:1841:C:C5	2.83	0.67
85:S5:28:G:C2'	85:S5:29:G:H8	2.07	0.67
1:5:68:U:C4	1:5:69:A:C8	2.83	0.67
1:5:270:U:O2	1:5:271:C:C6	2.47	0.67
1:5:957:G:P	1:5:1284:G:C2	2.88	0.67
1:5:1079:C:N3	1:5:1080:C:C5	2.63	0.67
1:5:1191:C:N3	1:5:1192:C:C5	2.63	0.67
1:5:1542:U:N3	1:5:1543:G:C8	2.63	0.67
1:5:2325:C:O2	1:5:2326:G:H8	1.77	0.67
1:5:2739:C:H4'	44:p:52:VAL:HG21	1.77	0.67
1:5:3953:G:C2	1:5:3954:A:N9	2.63	0.67
1:5:4174:U:C2	1:5:4175:G:N7	2.62	0.67
1:5:4698:C:H2'	1:5:4698:C:O2	1.93	0.67
1:5:4745:G:H21	1:5:4746:C:N4	1.93	0.67
1:5:4939:C:H2'	1:5:4939:C:O2	1.94	0.67
1:5:5046:U:OP1	32:d:83:ARG:NH2	2.28	0.67
3:8:80:A:H2'	3:8:81:C:O2'	1.94	0.67
4:A:3:ARG:HG3	4:A:3:ARG:HH11	1.59	0.67
4:A:211:PHE:CE1	4:A:219:ILE:HG23	2.29	0.67
7:D:29:ASP:CB	7:D:32:ALA:HB3	2.25	0.67
10:G:55:VAL:HB	10:G:57:TRP:NE1	2.09	0.67
10:G:264:LYS:NZ	52:SB:91:VAL:HG13	2.06	0.67
31:c:31:TYR:CE2	31:c:56:ARG:NE	2.55	0.67
50:S2:444:G:N2	50:S2:446:G:H3'	2.10	0.67
50:S2:580:U:N3	50:S2:581:U:C6	2.63	0.67
50:S2:616:A:C5	50:S2:617:G:H1'	2.30	0.67
50:S2:675:U:N3	50:S2:676:C:C5	2.63	0.67
50:S2:854:A:H2'	50:S2:855:G:O4'	1.94	0.67
50:S2:870:A:H4'	50:S2:871:U:O5'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1441:U:H1'	50:S2:1442:U:O4	1.95	0.67
50:S2:1540:G:C5	50:S2:1541:G:N7	2.63	0.67
85:S5:69:G:H2'	85:S5:70:G:H8	1.58	0.67
86:S6:34:G:C2	86:S6:35:A:C5	2.83	0.67
1:5:218:A:H1'	1:5:219:G:H5''	1.76	0.67
1:5:456:C:C2	1:5:457:G:C8	2.83	0.67
1:5:661:C:C2	1:5:662:C:C6	2.82	0.67
1:5:973:G:O6	1:5:1282:G:C2	2.48	0.67
1:5:1268:G:C2	1:5:2111:G:N2	2.63	0.67
1:5:2367:A:N6	1:5:2788:U:N3	2.26	0.67
1:5:2736:G:N3	1:5:2737:C:C6	2.62	0.67
1:5:3772:U:N3	1:5:3773:U:C5	2.63	0.67
1:5:3879:G:N7	1:5:3882:C:N4	2.43	0.67
1:5:4745:G:N2	1:5:4746:C:N4	2.43	0.67
2:7:62:U:C2	2:7:64:G:C8	2.83	0.67
3:8:73:U:C4	3:8:74:U:N1	2.62	0.67
3:8:117:C:C2	3:8:118:C:C6	2.83	0.67
48:2:47:MET:HA	48:2:50:ILE:HD12	1.77	0.67
50:S2:155:G:C2	50:S2:156:G:H1'	2.29	0.67
50:S2:185:G:C2	50:S2:186:C:C5	2.83	0.67
50:S2:436:G:N2	50:S2:437:G:C4	2.63	0.67
50:S2:439:A:C2	50:S2:455:A:N1	2.63	0.67
50:S2:623:G:C2	50:S2:624:C:C5	2.82	0.67
50:S2:1112:U:H2'	50:S2:1113:A:O4'	1.95	0.67
50:S2:1287:A:C6	50:S2:1314:U:C4	2.83	0.67
50:S2:1794:C:N3	50:S2:1795:G:C8	2.62	0.67
50:S2:1821:U:H2'	50:S2:1822:A:O4'	1.95	0.67
50:S2:1849:G:H2'	50:S2:1850:A:C8	2.30	0.67
50:S2:1860:A:N6	50:S2:1862:G:O6	2.28	0.67
52:SB:37:ALA:HB2	52:SB:231:LEU:O	1.95	0.67
68:SR:26:ASN:HD21	68:SR:59:LYS:CE	2.06	0.67
83:Sg:150:TRP:HB2	83:Sg:170:TRP:HB2	1.77	0.67
84:S4:18:U:H6	84:S4:18:U:O5'	1.78	0.67
1:5:152:U:O2	1:5:152:U:H2'	1.94	0.66
1:5:193:G:H2'	1:5:194:C:O4'	1.95	0.66
1:5:504:G:C6	1:5:654:C:N3	2.63	0.66
1:5:1479:G:C6	1:5:1487:G:C2	2.83	0.66
1:5:1830:G:C2	1:5:1831:G:C8	2.83	0.66
1:5:1999:A:H4'	1:5:2019:C:H4'	1.76	0.66
1:5:2253:A:C8	1:5:2254:G:H1'	2.30	0.66
1:5:2279:A:N3	1:5:2280:G:N7	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2362:U:O4	1:5:3859:G:C2	2.48	0.66
1:5:2422:C:C2	1:5:2423:A:C8	2.83	0.66
1:5:2673:G:C2	31:c:89:TYR:CE1	2.83	0.66
1:5:2904:U:O2	1:5:2905:C:H6	1.77	0.66
1:5:4345:C:O2'	43:o:82:MET:HE1	1.95	0.66
1:5:4511:A:H2'	1:5:4512:U:O4'	1.95	0.66
1:5:4627:U:O2	1:5:4627:U:H2'	1.94	0.66
2:7:94:C:C2	2:7:95:C:C6	2.83	0.66
3:8:73:U:P	27:Y:75:ARG:HD2	2.35	0.66
3:8:101:C:O2	3:8:101:C:H2'	1.95	0.66
24:V:77:HIS:ND1	24:V:77:HIS:O	2.28	0.66
50:S2:50:A:C6	50:S2:51:U:H1'	2.30	0.66
50:S2:355:G:OP2	62:SL:107:LYS:NZ	2.28	0.66
50:S2:394:G:C2	50:S2:395:G:C8	2.83	0.66
50:S2:396:U:H2'	50:S2:397:G:O5'	1.95	0.66
50:S2:535:G:N2	50:S2:536:A:N7	2.43	0.66
50:S2:637:U:C2	50:S2:638:C:C6	2.82	0.66
50:S2:1293:A:C2	82:Sf:151:ASN:HA	2.29	0.66
50:S2:1432:U:C2	50:S2:1433:C:C5	2.83	0.66
50:S2:1568:C:H2'	50:S2:1569:A:C8	2.30	0.66
50:S2:1841:C:C2	50:S2:1842:C:C5	2.82	0.66
54:SD:192:TRP:CG	54:SD:196:GLY:HA2	2.30	0.66
1:5:28:C:C2	1:5:29:G:N7	2.63	0.66
1:5:1217:G:O2'	1:5:1218:G:C8	2.47	0.66
1:5:1355:G:C6	1:5:1385:G:C2	2.83	0.66
1:5:1380:G:H2'	1:5:1382:G:N7	2.09	0.66
1:5:2108:G:C4	1:5:2109:G:H1'	2.29	0.66
1:5:2293:U:O2	1:5:2293:U:H2'	1.95	0.66
1:5:2689:C:O2	1:5:2689:C:C2'	2.43	0.66
1:5:3730:U:C4	1:5:3731:C:C5	2.83	0.66
1:5:3731:C:C2	1:5:3732:A:H8	2.14	0.66
1:5:3740:G:N1	1:5:3741:C:C6	2.64	0.66
1:5:4054:C:O2'	46:z:35:GLN:HB3	1.94	0.66
1:5:4095:G:C2	1:5:4096:C:C4	2.80	0.66
1:5:4134:C:O2	1:5:4135:G:C8	2.47	0.66
1:5:4896:G:N1	1:5:4897:G:C5	2.63	0.66
1:5:4999:G:N1	1:5:5000:G:N7	2.43	0.66
3:8:42:G:C2	3:8:43:A:C8	2.84	0.66
9:F:148:ASN:HB3	9:F:243:ASN:ND2	2.10	0.66
50:S2:439:A:H4'	50:S2:1799:G:H4'	1.75	0.66
50:S2:604:A:N7	60:SJ:20:PHE:CE2	2.62	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:618:C:OP1	74:SX:87:ASN:CB	2.42	0.66
50:S2:1050:A:C6	50:S2:1051:G:H1'	2.30	0.66
50:S2:1149:A:C5	50:S2:1151:G:C8	2.83	0.66
50:S2:1234:C:H2'	50:S2:1234:C:O2	1.95	0.66
50:S2:1742:C:C2	50:S2:1743:G:C8	2.83	0.66
53:SC:146:GLU:OE1	54:SD:120:TYR:OH	2.13	0.66
68:SR:13:ALA:HB2	68:SR:53:TYR:HD2	1.58	0.66
86:S6:3:C:H5	86:S6:4:C:C4	2.12	0.66
1:5:91:G:N7	1:5:93:G:C6	2.63	0.66
1:5:101:A:C6	1:5:102:G:N7	2.63	0.66
1:5:196:C:H2'	1:5:196:C:O2	1.95	0.66
1:5:294:G:N1	29:a:61:TYR:CD2	2.63	0.66
1:5:332:C:H4'	16:N:150:TRP:CD1	2.30	0.66
1:5:976:G:C5	1:5:977:C:C5	2.84	0.66
1:5:1172:C:N3	1:5:1173:G:C8	2.64	0.66
1:5:1298:C:C2	1:5:1299:G:C8	2.83	0.66
1:5:1517:G:N2	1:5:1650:A:C6	2.64	0.66
1:5:1774:C:C2	1:5:1775:A:C8	2.83	0.66
1:5:1966:C:C4	1:5:1967:A:N7	2.62	0.66
1:5:2279:A:N1	1:5:2280:G:C5	2.63	0.66
1:5:2905:C:C2	1:5:3590:G:C2	2.84	0.66
1:5:3890:A:N7	1:5:4571:A:H1'	2.10	0.66
3:8:95:A:C5	3:8:96:C:C5	2.83	0.66
9:F:230:VAL:HA	21:S:39:VAL:HG12	1.78	0.66
21:S:44:PHE:C	21:S:44:PHE:CD1	2.74	0.66
23:U:33:ILE:HD11	23:U:96:LEU:HD22	1.76	0.66
50:S2:310:C:H2'	50:S2:311:C:H6	1.61	0.66
50:S2:358:C:H2'	50:S2:358:C:O2	1.94	0.66
50:S2:581:U:N3	50:S2:582:C:C6	2.64	0.66
50:S2:837:A:H2'	50:S2:837:A:N3	2.10	0.66
50:S2:1029:G:C2	50:S2:1030:A:C8	2.83	0.66
50:S2:1283:C:H2'	50:S2:1283:C:O2	1.92	0.66
50:S2:1431:G:C5	50:S2:1432:U:C6	2.84	0.66
50:S2:1495:G:O2'	80:Sd:26:ASN:ND2	2.28	0.66
68:SR:34:VAL:CG2	83:Sg:150:TRP:CH2	2.78	0.66
73:SW:30:CYS:SG	73:SW:31:SER:N	2.69	0.66
83:Sg:36:ARG:HA	83:Sg:65:PHE:HA	1.77	0.66
85:S5:6:G:HO2'	85:S5:7:A:C5'	2.08	0.66
85:S5:37:A:N3	85:S5:38:A:H1'	2.11	0.66
85:S5:67:C:C3'	85:S5:68:C:H5''	2.20	0.66
1:5:237:G:HO2'	1:5:238:C:P	2.17	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:484:U:C4	1:5:486:C:C4	2.83	0.66
1:5:1268:G:OP2	1:5:2109:G:H3'	1.95	0.66
1:5:1321:G:N2	1:5:3876:A:C4	2.63	0.66
1:5:1438:U:O2	1:5:2099:G:C5	2.49	0.66
1:5:1672:U:H2'	1:5:1673:U:H6	1.58	0.66
1:5:2307:A:C8	1:5:2332:A:C2	2.83	0.66
1:5:2368:A:C6	1:5:2788:U:C4	2.84	0.66
1:5:2441:C:O2	1:5:2442:G:C8	2.49	0.66
1:5:2773:G:N1	1:5:2774:C:C4	2.64	0.66
1:5:2811:G:H22	1:5:2813:A:H3'	1.60	0.66
1:5:3728:A:N7	1:5:3729:U:H1'	2.11	0.66
1:5:4653:C:N3	1:5:4654:C:C5	2.62	0.66
1:5:4693:C:H5'	1:5:4693:C:C6	2.30	0.66
1:5:4884:G:N2	1:5:4885:U:C6	2.64	0.66
2:7:59:G:H4'	7:D:267:ASN:HD21	1.61	0.66
2:7:110:G:N3	2:7:111:C:C6	2.63	0.66
3:8:118:C:N3	3:8:119:C:H5	1.90	0.66
9:F:168:ARG:HD2	9:F:211:TRP:CD1	2.30	0.66
14:L:39:ARG:HB2	14:L:39:ARG:NH1	2.10	0.66
38:j:39:TYR:O	38:j:40:PRO:C	2.34	0.66
50:S2:121:U:C2	50:S2:122:G:N7	2.58	0.66
50:S2:618:C:OP1	74:SX:87:ASN:CG	2.38	0.66
50:S2:1114:U:N3	50:S2:1119:A:N6	2.40	0.66
50:S2:1215:C:H42	50:S2:1221:G:H1	1.44	0.66
50:S2:1406:G:H2'	50:S2:1407:U:H1'	1.76	0.66
50:S2:1589:A:H2'	50:S2:1590:C:C6	2.29	0.66
52:SB:139:CYS:HB2	52:SB:172:MET:HE1	1.76	0.66
65:SO:147:ARG:CZ	65:SO:147:ARG:HB3	2.26	0.66
85:S5:21:A:C4	85:S5:48:C:N4	2.63	0.66
85:S5:47:U:O3'	85:S5:48:C:O5'	2.11	0.66
1:5:44:A:C5	1:5:45:U:C5	2.83	0.66
1:5:500:G:H5''	1:5:501:C:C6	2.30	0.66
1:5:1091:C:N3	1:5:1092:G:N7	2.43	0.66
1:5:1245:C:O2	1:5:1246:G:H8	1.73	0.66
1:5:1827:C:C2	1:5:1828:C:C5	2.84	0.66
1:5:1840:G:C3'	1:5:1842:G:P	2.83	0.66
1:5:1876:U:C4	1:5:1877:G:N7	2.64	0.66
1:5:2480:G:C6	1:5:2481:G:N7	2.64	0.66
1:5:2561:C:N3	1:5:2562:G:N7	2.43	0.66
1:5:2605:G:N3	1:5:2606:G:C8	2.63	0.66
1:5:2744:A:C2	1:5:2745:A:C5	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2826:U:O2	1:5:2826:U:H2'	1.95	0.66
1:5:4097:G:N3	1:5:4098:A:C8	2.63	0.66
1:5:4199:C:O2	1:5:4199:C:C2'	2.42	0.66
1:5:4208:U:O2'	1:5:4275:G:H1'	1.95	0.66
1:5:4904:G:N2	1:5:4905:C:C2	2.64	0.66
3:8:131:G:N2	3:8:132:G:H1'	2.09	0.66
3:8:132:G:N1	3:8:133:G:N7	2.42	0.66
3:8:134:G:C2	3:8:135:C:N1	2.64	0.66
9:F:73:MET:HB3	9:F:84:TYR:HE2	1.60	0.66
21:S:9:GLU:OE1	21:S:33:PHE:CD1	2.49	0.66
38:j:22:CYS:HG	38:j:37:CYS:HG	1.24	0.66
44:p:28:LYS:NZ	50:S2:1040:G:C2'	2.56	0.66
50:S2:64:A:C6	50:S2:82:G:N1	2.64	0.66
50:S2:461:U:C2	50:S2:462:C:C5	2.83	0.66
50:S2:632:C:H2'	50:S2:632:C:O2	1.95	0.66
50:S2:793:G:C5	50:S2:794:A:N7	2.63	0.66
50:S2:836:G:H2'	50:S2:837:A:H5''	1.77	0.66
50:S2:933:G:C2	50:S2:1000:C:C2	2.84	0.66
50:S2:1059:G:C2'	50:S2:1060:A:H5'	2.26	0.66
50:S2:1126:G:N1	50:S2:1127:C:C4	2.63	0.66
50:S2:1291:A:N1	82:Sf:140:TYR:CD2	2.64	0.66
50:S2:1292:C:N4	50:S2:1293:A:N7	2.43	0.66
50:S2:1641:A:O3'	86:S6:32:U:H5'	1.95	0.66
85:S5:58:A:C6	85:S5:61:C:H1'	2.30	0.66
86:S6:41:C:C2	86:S6:42:C:C6	2.83	0.66
1:5:1214:C:N3	1:5:2116:C:N3	2.42	0.66
1:5:1697:G:O2'	9:F:165:ASN:ND2	2.28	0.66
1:5:1868:A:C8	1:5:1870:C:C6	2.83	0.66
1:5:2115:G:C8	1:5:2116:C:O4'	2.49	0.66
1:5:2253:A:H2	1:5:2260:C:H42	1.43	0.66
1:5:2293:U:C2	1:5:2294:G:N7	2.64	0.66
1:5:2367:A:C5	1:5:2798:A:N3	2.63	0.66
1:5:2673:G:C4'	1:5:2675:G:H1'	2.25	0.66
1:5:3621:A:N7	1:5:4642:U:O2'	2.24	0.66
1:5:3907:G:H1'	1:5:4449:A:N9	2.10	0.66
5:B:10:ARG:HD2	5:B:12:GLY:O	1.95	0.66
5:B:116:ARG:HG3	5:B:177:LYS:HG3	1.78	0.66
8:E:184:ARG:HD3	8:E:213:PHE:HB3	1.76	0.66
20:R:120:TYR:CD1	20:R:120:TYR:C	2.74	0.66
42:n:17:ARG:HH12	50:S2:1173:A:H5'	1.61	0.66
50:S2:404:G:N1	50:S2:405:G:C5	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:591:U:H5''	50:S2:593:C:C5	2.30	0.66
50:S2:618:C:C4	50:S2:619:A:C5	2.84	0.66
50:S2:621:C:OP1	74:SX:113:GLY:N	2.27	0.66
50:S2:832:G:C5	50:S2:833:C:C6	2.83	0.66
50:S2:842:C:C2'	50:S2:843:C:O5'	2.43	0.66
50:S2:892:U:C2	50:S2:893:U:C5	2.84	0.66
50:S2:1215:C:N4	50:S2:1646:C:N4	2.43	0.66
50:S2:1351:G:H1'	51:SA:110:ASN:HD21	1.60	0.66
50:S2:1442:U:H2'	50:S2:1442:U:O2	1.95	0.66
50:S2:1454:A:C8	50:S2:1476:A:C1'	2.79	0.66
51:SA:38:ILE:HD11	51:SA:150:THR:HG22	1.78	0.66
54:SD:34:TYR:CE1	54:SD:37:VAL:HG13	2.31	0.66
65:SO:117:ARG:NH2	79:Sc:62:GLU:OE2	2.13	0.66
85:S5:30:G:C2'	85:S5:31:A:H5'	2.26	0.66
1:5:98:A:H1'	1:5:292:G:N7	2.11	0.66
1:5:288:G:N2	1:5:289:C:C2	2.64	0.66
1:5:315:G:C6	29:a:62:HIS:HB2	2.31	0.66
1:5:727:C:O2'	1:5:728:U:OP1	2.10	0.66
1:5:1268:G:O4'	1:5:2111:G:C8	2.49	0.66
1:5:1742:A:C2	1:5:1743:A:N7	2.63	0.66
1:5:1798:G:O4'	1:5:4215:C:C6	2.49	0.66
1:5:2036:C:N3	1:5:2037:C:C4	2.64	0.66
1:5:2463:G:C4	1:5:2464:C:C5	2.83	0.66
1:5:3857:G:C5	1:5:3858:C:C6	2.84	0.66
1:5:4062:A:C4	1:5:4063:U:C5	2.83	0.66
1:5:4266:G:C2	1:5:4279:A:C6	2.83	0.66
1:5:4285:U:C2	1:5:4286:C:C6	2.83	0.66
1:5:4466:C:C2	1:5:4467:A:C8	2.82	0.66
2:7:11:A:C8	7:D:18:VAL:HG13	2.30	0.66
9:F:248:ARG:HB3	9:F:248:ARG:NH1	2.11	0.66
20:R:130:ASN:O	20:R:131:VAL:HG22	1.96	0.66
22:T:158:PHE:CZ	22:T:160:ALA:HB2	2.31	0.66
43:o:41:TYR:OH	43:o:45:GLN:HG2	1.96	0.66
50:S2:217:A:C6	50:S2:218:U:C5	2.84	0.66
50:S2:404:G:C6	50:S2:405:G:N7	2.63	0.66
50:S2:459:C:C4	50:S2:460:A:C8	2.84	0.66
50:S2:793:G:C6	50:S2:794:A:C5	2.84	0.66
50:S2:892:U:N3	50:S2:893:U:C5	2.63	0.66
50:S2:1083:A:N3	50:S2:1859:A:O2'	2.22	0.66
50:S2:1405:A:O4'	50:S2:1580:A:C5	2.48	0.66
50:S2:1418:C:C2	50:S2:1420:G:C8	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1599:U:C5	56:SF:164:ARG:HA	2.30	0.66
54:SD:219:PRO:HA	83:Sg:192:THR:HG21	1.78	0.66
60:SJ:115:PHE:C	60:SJ:115:PHE:CD1	2.73	0.66
79:Sc:60:GLU:CD	79:Sc:60:GLU:H	2.03	0.66
85:S5:38:A:H3'	85:S5:39:U:H6	1.60	0.66
86:S6:19:G:H5'	86:S6:20:U:C4	2.30	0.66
86:S6:46:G:O2'	86:S6:47:U:H5'	1.95	0.66
1:5:66:A:N3	1:5:312:G:H1'	2.11	0.66
1:5:280:G:C8	16:N:120:TRP:HZ3	2.13	0.66
1:5:980:U:H2'	1:5:981:C:C6	2.31	0.66
1:5:1878:G:C4	1:5:1879:C:C5	2.84	0.66
1:5:1973:G:C6	1:5:2002:A:N7	2.64	0.66
1:5:2071:A:C2	1:5:2072:C:C4	2.84	0.66
1:5:2325:C:C2	1:5:2326:G:C8	2.83	0.66
1:5:2428:A:N7	1:5:2789:A:C2	2.64	0.66
1:5:2736:G:H2'	1:5:2737:C:H5'	1.78	0.66
1:5:3727:A:O2'	1:5:3728:A:C5'	2.44	0.66
1:5:3800:A:C2	1:5:4496:A:O4'	2.48	0.66
1:5:3845:A:C6	1:5:3846:C:C5	2.83	0.66
1:5:3919:C:C5'	4:A:207:VAL:HG12	2.26	0.66
1:5:4053:A:H2	46:z:35:GLN:NE2	1.94	0.66
1:5:4693:C:C6	1:5:4693:C:C5'	2.79	0.66
2:7:30:C:N3	2:7:48:G:C2	2.64	0.66
45:r:7:TRP:CZ3	45:r:11:ARG:HB3	2.30	0.66
50:S2:440:G:H2'	50:S2:441:C:O4'	1.94	0.66
50:S2:604:A:N7	60:SJ:20:PHE:CD2	2.64	0.66
50:S2:609:U:N3	50:S2:610:G:N7	2.43	0.66
50:S2:981:A:H2'	50:S2:982:G:C8	2.31	0.66
50:S2:1099:G:C2	50:S2:1100:A:C8	2.83	0.66
50:S2:1263:U:O4	50:S2:1517:G:O6	2.13	0.66
50:S2:1293:A:H62	82:Sf:140:TYR:HA	1.60	0.66
50:S2:1309:C:C2	82:Sf:143:LYS:CD	2.68	0.66
50:S2:1595:U:O4	50:S2:1596:U:C5	2.49	0.66
52:SB:97:LEU:HB2	52:SB:228:LEU:CD1	2.10	0.66
61:SK:76:ILE:O	61:SK:80:ARG:HB3	1.96	0.66
1:5:471:A:C6	1:5:472:C:C5	2.83	0.66
1:5:656:C:C2	1:5:657:C:C5	2.84	0.66
1:5:671:G:N2	1:5:672:C:C2	2.64	0.66
1:5:711:A:C2	1:5:712:C:C6	2.84	0.66
1:5:1260:G:C2	1:5:1261:G:C8	2.84	0.66
1:5:1280:C:C6	1:5:1280:C:H5''	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1513:U:H2'	1:5:1514:U:O4'	1.96	0.66
1:5:1998:A:O2'	1:5:1999:A:O4'	2.14	0.66
1:5:2301:G:N1	1:5:2302:C:C5	2.63	0.66
1:5:2327:G:N2	1:5:2328:G:C4	2.64	0.66
1:5:2410:C:C2	1:5:2411:C:C5	2.84	0.66
1:5:2634:C:C2	1:5:2635:U:C5	2.84	0.66
1:5:2650:G:H2'	1:5:2651:C:O4'	1.96	0.66
1:5:3680:U:O2	1:5:3680:U:C2'	2.44	0.66
1:5:4081:G:C2	1:5:4082:G:C8	2.84	0.66
1:5:4361:U:C2	1:5:4362:A:C8	2.84	0.66
1:5:4504:C:H2'	1:5:4505:C:H6	1.60	0.66
1:5:4536:C:C2	1:5:4537:C:C6	2.84	0.66
1:5:4628:U:H4'	25:W:17:HIS:HB3	1.77	0.66
1:5:4981:G:C5	1:5:4982:A:C8	2.84	0.66
3:8:10:G:C2	3:8:11:C:C1'	2.79	0.66
24:V:100:ASP:N	24:V:100:ASP:OD1	2.26	0.66
26:X:119:ILE:HA	26:X:144:TYR:HE2	1.60	0.66
43:o:45:GLN:NE2	43:o:45:GLN:HA	2.11	0.66
46:z:66:CYS:HB2	46:z:107:TYR:CG	2.31	0.66
50:S2:27:A:C2	50:S2:28:U:N1	2.63	0.66
50:S2:796:G:C5	58:SH:109:ARG:NH2	2.63	0.66
50:S2:1135:C:N3	50:S2:1136:U:C4	2.64	0.66
50:S2:1301:A:OP1	80:Sd:7:TYR:OH	2.13	0.66
50:S2:1378:A:H8	51:SA:132:GLN:OE1	1.78	0.66
50:S2:1410:C:C2	50:S2:1411:G:N7	2.64	0.66
50:S2:1527:C:N4	50:S2:1528:G:N7	2.44	0.66
50:S2:1528:G:C6	50:S2:1529:C:N4	2.64	0.66
60:SJ:115:PHE:C	60:SJ:115:PHE:HD1	2.03	0.66
85:S5:14:A:H62	85:S5:21:A:H2	1.43	0.66
86:S6:48:C:C5	86:S6:59:U:N1	2.63	0.66
1:5:499:G:C2	1:5:656:C:C2	2.84	0.66
1:5:956:A:H3'	1:5:957:G:C5	2.31	0.66
1:5:1478:C:H2'	1:5:1479:G:C8	2.31	0.66
1:5:1635:C:N3	1:5:1636:U:C5	2.64	0.66
1:5:1750:G:N1	1:5:1751:A:N7	2.44	0.66
1:5:1787:A:O2'	1:5:1788:A:C8	2.49	0.66
1:5:1912:G:N2	1:5:1913:C:C2	2.64	0.66
1:5:1987:C:N4	1:5:1988:G:N7	2.43	0.66
1:5:2058:G:N3	1:5:2059:C:C6	2.64	0.66
1:5:2076:G:C5	1:5:2077:C:C6	2.83	0.66
1:5:2567:G:C6	1:5:2568:C:C5	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3975:C:C5'	46:z:25:ARG:HH22	2.01	0.66
1:5:4255:A:C6	1:5:4256:A:C2	2.83	0.66
1:5:4280:A:C2	7:D:23:ARG:NE	2.64	0.66
1:5:4981:G:O6	1:5:4982:A:C4	2.49	0.66
3:8:127:U:C2'	3:8:128:C:O4'	2.44	0.66
6:C:48:ASN:O	6:C:48:ASN:CG	2.39	0.66
9:F:73:MET:HB3	9:F:84:TYR:CE2	2.30	0.66
21:S:27:LEU:C	21:S:28:TYR:HD1	2.04	0.66
50:S2:70:G:C2	50:S2:71:G:C4	2.84	0.66
50:S2:311:C:H2'	50:S2:312:G:H1'	1.78	0.66
50:S2:530:U:C4	50:S2:531:A:N7	2.64	0.66
50:S2:609:U:N3	50:S2:610:G:C8	2.64	0.66
50:S2:962:A:C2	50:S2:963:A:C8	2.84	0.66
50:S2:1319:U:H2'	50:S2:1320:G:C8	2.30	0.66
50:S2:1510:G:C6	50:S2:1511:U:C6	2.83	0.66
50:S2:1693:G:C3'	50:S2:1694:U:H6	2.04	0.66
52:SB:150:ILE:CD1	68:SR:128:PHE:HA	2.25	0.66
1:5:42:A:N7	1:5:4379:A:C6	2.64	0.65
1:5:168:C:C2	1:5:268:G:N2	2.65	0.65
1:5:275:C:O2'	1:5:276:C:O4'	2.11	0.65
1:5:287:U:C2	1:5:288:G:N7	2.63	0.65
1:5:422:C:C2	1:5:423:G:H8	2.12	0.65
1:5:755:C:N3	1:5:756:G:N7	2.44	0.65
1:5:1272:C:O2'	1:5:1273:G:N9	2.30	0.65
1:5:1692:C:O2	1:5:1692:C:H2'	1.95	0.65
1:5:1865:G:H22	1:5:1867:A:H3'	1.61	0.65
1:5:2712:G:C2	1:5:2713:C:C6	2.84	0.65
1:5:2826:U:O2	1:5:2826:U:C2'	2.43	0.65
1:5:3621:A:C4	1:5:3622:C:C6	2.84	0.65
1:5:3636:C:O2	1:5:3636:C:H2'	1.95	0.65
1:5:3717:A:N6	1:5:3736:A:C6	2.64	0.65
1:5:3743:G:C2'	1:5:3744:G:H5'	2.25	0.65
1:5:3975:C:OP1	46:z:25:ARG:CZ	2.43	0.65
1:5:4053:A:C2	46:z:35:GLN:NE2	2.62	0.65
1:5:4081:G:C2	1:5:4082:G:N7	2.64	0.65
1:5:4355:G:N2	1:5:4356:G:C4	2.64	0.65
1:5:4396:A:C2	1:5:4397:A:C8	2.84	0.65
1:5:4757:C:C2	17:O:114:LYS:HA	2.29	0.65
1:5:4998:G:N1	1:5:4999:G:N7	2.44	0.65
1:5:5051:C:O2	1:5:5051:C:H2'	1.97	0.65
3:8:13:G:C5	3:8:14:U:C4	2.84	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:130:C:C4	3:8:131:G:N7	2.65	0.65
19:Q:181:ARG:NH2	19:Q:181:ARG:HB3	2.11	0.65
32:d:22:THR:HG22	32:d:89:SER:HB2	1.76	0.65
50:S2:26:U:O4	50:S2:27:A:N7	2.27	0.65
50:S2:525:A:H62	50:S2:588:G:H22	1.42	0.65
50:S2:1039:C:C2	50:S2:1040:G:C8	2.83	0.65
50:S2:1100:A:N1	50:S2:1101:U:C4	2.65	0.65
50:S2:1134:G:C2	50:S2:1135:C:C4	2.84	0.65
50:S2:1292:C:H2'	82:Sf:150:PHE:CD1	2.31	0.65
50:S2:1431:G:C4	50:S2:1432:U:C6	2.84	0.65
50:S2:1654:G:H2'	50:S2:1655:C:O4'	1.97	0.65
61:SK:95:ARG:HA	61:SK:95:ARG:NE	2.10	0.65
62:SL:99:TYR:CD2	74:SX:13:LEU:HD13	2.30	0.65
64:SN:13:GLN:O	78:Sb:20:LYS:NZ	2.29	0.65
86:S6:10:G:C4	86:S6:11:C:H5	2.09	0.65
86:S6:57:G:C3'	86:S6:58:A:O4'	2.43	0.65
1:5:165:A:H3'	1:5:166:C:H6	1.61	0.65
1:5:348:G:N3	1:5:350:C:C5	2.64	0.65
1:5:510:U:O4'	29:a:85:GLN:NE2	2.24	0.65
1:5:908:G:C6	1:5:909:A:N7	2.64	0.65
1:5:1264:C:C2'	1:5:1265:G:H5'	2.27	0.65
1:5:1583:A:C5	1:5:1584:G:C8	2.84	0.65
1:5:2108:G:N1	1:5:2125:C:C4	2.65	0.65
1:5:2299:G:N7	6:C:204:ARG:NH1	2.44	0.65
1:5:2724:G:N3	1:5:2726:G:N7	2.44	0.65
1:5:3611:A:N3	1:5:5016:A:H8	1.94	0.65
1:5:3952:A:N1	1:5:3953:G:C8	2.64	0.65
1:5:3968:U:H2'	1:5:3969:G:C8	2.30	0.65
1:5:4059:C:N3	1:5:4060:U:C5	2.64	0.65
1:5:4096:C:N4	1:5:4097:G:C4	2.64	0.65
1:5:4269:G:C6	1:5:4270:C:C6	2.83	0.65
1:5:4754:G:N2	1:5:4880:C:C2	2.64	0.65
1:5:4998:G:N1	1:5:4999:G:C5	2.64	0.65
1:5:5003:U:C2'	1:5:5004:C:O4'	2.44	0.65
33:e:126:ASN:C	33:e:126:ASN:HD22	2.04	0.65
50:S2:70:G:N2	50:S2:71:G:H1'	2.10	0.65
50:S2:616:A:H2'	74:SX:88:ASP:OD2	1.95	0.65
50:S2:793:G:O6	50:S2:794:A:C5	2.49	0.65
50:S2:806:U:N3	50:S2:807:G:C8	2.64	0.65
50:S2:1109:C:O2	50:S2:1110:G:H8	1.78	0.65
50:S2:1123:C:C4	50:S2:1124:C:H5	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1250:A:C2	50:S2:1339:U:C2'	2.79	0.65
50:S2:1378:A:C8	51:SA:132:GLN:OE1	2.50	0.65
50:S2:1409:A:C2	50:S2:1438:A:N1	2.64	0.65
50:S2:1594:A:C2	50:S2:1595:U:N1	2.65	0.65
50:S2:1640:A:C4'	86:S6:41:C:C4'	2.74	0.65
62:SL:99:TYR:HB3	74:SX:13:LEU:CD1	2.27	0.65
64:SN:128:TYR:C	64:SN:128:TYR:CD1	2.73	0.65
86:S6:5:C:C2	86:S6:6:G:N7	2.65	0.65
86:S6:27:G:N3	86:S6:28:G:C8	2.63	0.65
86:S6:63:G:C2	86:S6:64:A:C4	2.84	0.65
1:5:288:G:C4	1:5:289:C:C5	2.84	0.65
1:5:1309:C:N3	1:5:1310:C:C5	2.64	0.65
1:5:1336:G:H2'	1:5:1337:A:N7	2.11	0.65
1:5:1542:U:O2	1:5:1543:G:C8	2.49	0.65
1:5:1778:C:C2	1:5:1779:U:C5	2.85	0.65
1:5:2384:U:C2	1:5:2385:U:C5	2.83	0.65
1:5:3821:A:C6	1:5:3822:U:C5	2.85	0.65
1:5:3945:A:H62	1:5:4069:U:H3	1.42	0.65
1:5:4698:C:N3	41:m:111:ARG:NH2	2.45	0.65
1:5:5012:G:C2	1:5:5014:A:C8	2.85	0.65
3:8:95:A:C6	3:8:96:C:C4	2.84	0.65
8:E:236:TYR:HE2	8:E:238:ILE:HA	1.62	0.65
14:L:28:GLN:HG2	16:N:202:ARG:HH11	1.61	0.65
16:N:196:ASN:N	16:N:196:ASN:HD22	1.94	0.65
21:S:94:TYR:OH	21:S:96:GLU:CG	2.44	0.65
47:1:284:PHE:HE1	47:1:428:ILE:HD13	1.60	0.65
50:S2:18:C:C2	50:S2:19:A:C8	2.84	0.65
50:S2:387:C:C2	50:S2:388:U:C6	2.82	0.65
50:S2:618:C:OP1	74:SX:87:ASN:OD1	2.15	0.65
50:S2:696:G:C2	50:S2:735:C:C2	2.84	0.65
50:S2:862:A:C5	50:S2:863:U:C5	2.84	0.65
50:S2:994:C:C2	50:S2:995:G:H8	2.09	0.65
50:S2:1309:C:O2	50:S2:1309:C:H2'	1.96	0.65
50:S2:1394:G:H4'	67:SQ:126:ARG:NH1	2.10	0.65
50:S2:1410:C:H2'	50:S2:1410:C:O2	1.95	0.65
50:S2:1487:A:O2'	53:SC:118:ALA:HB1	1.96	0.65
51:SA:89:LYS:HB3	51:SA:202:TYR:CZ	2.31	0.65
51:SA:151:ASP:CG	51:SA:151:ASP:CA	2.69	0.65
85:S5:48:C:C2	85:S5:59:U:C2	2.83	0.65
86:S6:26:A:C6	86:S6:27:G:N7	2.64	0.65
1:5:182:G:N2	1:5:254:G:H22	1.94	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:197:A:H2'	1:5:198:A:C8	2.30	0.65
1:5:294:G:O6	29:a:61:TYR:HB2	1.96	0.65
1:5:662:C:O2	1:5:663:G:N7	2.28	0.65
1:5:691:C:C2	1:5:692:A:C8	2.84	0.65
1:5:1177:U:H2'	1:5:1178:G:H8	1.61	0.65
1:5:1848:C:H5'	1:5:1849:U:OP2	1.97	0.65
1:5:2307:A:H2'	1:5:2308:A:O5'	1.96	0.65
1:5:2455:G:H2'	1:5:2456:G:O5'	1.97	0.65
1:5:2746:A:H2'	1:5:2747:U:O4'	1.97	0.65
1:5:2856:C:H42	1:5:2857:A:N6	1.92	0.65
1:5:3941:G:N2	1:5:4073:A:N3	2.37	0.65
1:5:4217:G:O2'	1:5:4218:U:O5'	2.14	0.65
1:5:4233:A:N6	1:5:4290:U:N3	2.27	0.65
1:5:4510:A:O2'	1:5:4511:A:C8	2.46	0.65
1:5:4548:A:C8	1:5:4548:A:P	2.89	0.65
1:5:4698:C:C2	41:m:111:ARG:NH2	2.65	0.65
1:5:4934:A:N1	1:5:4935:C:C6	2.64	0.65
1:5:4937:C:H5'	8:E:179:ARG:HD2	1.79	0.65
40:l:21:ARG:HH22	40:l:24:PRO:CB	2.08	0.65
50:S2:70:G:N1	50:S2:80:G:C2	2.65	0.65
50:S2:402:C:C4	50:S2:403:G:C8	2.84	0.65
50:S2:646:G:N3	50:S2:646:G:H2'	2.11	0.65
50:S2:793:G:C6	50:S2:794:A:C4	2.84	0.65
50:S2:1111:U:O2	50:S2:1111:U:H2'	1.95	0.65
50:S2:1204:A:C4	50:S2:1205:C:C6	2.75	0.65
53:SC:252:THR:O	53:SC:253:PRO:C	2.40	0.65
83:Sg:83:TRP:CZ2	83:Sg:125:ARG:NH2	2.64	0.65
85:S5:10:G:H1	85:S5:25:C:H42	0.73	0.65
85:S5:34:G:O2'	85:S5:35:A:OP1	2.11	0.65
85:S5:38:A:C8	85:S5:38:A:H5''	2.31	0.65
1:5:31:U:H2'	1:5:32:G:C8	2.31	0.65
1:5:101:A:C6	1:5:102:G:C5	2.85	0.65
1:5:145:G:N1	1:5:146:G:C5	2.64	0.65
1:5:445:U:O4'	1:5:2313:A:N1	2.30	0.65
1:5:954:C:H2'	1:5:955:G:O4'	1.96	0.65
1:5:1617:G:C6	1:5:1618:G:C5	2.84	0.65
1:5:1666:C:O2'	1:5:1688:G:OP1	2.14	0.65
1:5:1684:A:C6	1:5:1685:G:N7	2.65	0.65
1:5:2106:G:O2'	1:5:2107:C:O4'	2.11	0.65
1:5:2367:A:O2'	1:5:2368:A:O5'	2.14	0.65
1:5:2562:G:H22	1:5:2564:G:H3'	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2857:A:O2'	1:5:2858:A:C8	2.49	0.65
1:5:3873:G:N2	1:5:3883:U:N3	2.45	0.65
1:5:3974:G:H5'	46:z:28:PHE:HD1	1.59	0.65
1:5:4633:G:O2'	1:5:4635:A:OP2	2.11	0.65
1:5:4920:C:C2	1:5:4921:C:C5	2.85	0.65
1:5:4982:A:C5	1:5:4983:C:C5	2.83	0.65
3:8:55:U:O4	3:8:62:A:N1	2.29	0.65
3:8:121:G:H2'	3:8:122:G:O5'	1.96	0.65
3:8:131:G:N1	3:8:132:G:C8	2.64	0.65
21:S:83:ARG:HH22	22:T:156:TYR:HB2	1.58	0.65
28:Z:15:ALA:HB3	28:Z:79:HIS:HB3	1.78	0.65
34:f:22:ARG:HG3	34:f:22:ARG:HH11	1.61	0.65
50:S2:309:G:C6	50:S2:310:C:N4	2.65	0.65
50:S2:357:C:N3	50:S2:358:C:C5	2.65	0.65
50:S2:379:C:N3	50:S2:380:G:C5	2.64	0.65
50:S2:388:U:C2	50:S2:389:A:N7	2.64	0.65
50:S2:551:U:H1'	81:Se:44:ASN:OD1	1.96	0.65
50:S2:600:G:C2	50:S2:601:G:N7	2.65	0.65
50:S2:1232:U:O2'	50:S2:1253:A:C8	2.48	0.65
50:S2:1412:C:C2'	50:S2:1413:G:C8	2.78	0.65
50:S2:1508:A:N7	50:S2:1510:G:C8	2.65	0.65
50:S2:1537:A:C6	50:S2:1538:C:C5	2.83	0.65
50:S2:1830:U:C4	84:S4:19:U:H4'	2.31	0.65
52:SB:97:LEU:CD2	52:SB:232:HIS:CG	2.70	0.65
57:SG:162:LEU:HG	57:SG:170:ARG:HB2	1.78	0.65
62:SL:103:GLU:CB	74:SX:10:ALA:O	2.44	0.65
85:S5:12:U:N1	85:S5:24:G:N2	2.39	0.65
85:S5:13:C:N3	85:S5:22:G:O6	2.29	0.65
85:S5:71:G:O5'	85:S5:71:G:H8	1.78	0.65
1:5:91:G:C8	1:5:93:G:C5	2.85	0.65
1:5:134:G:H5'	1:5:134:G:C8	2.32	0.65
1:5:246:G:N2	1:5:247:G:C4	2.65	0.65
1:5:1216:C:N3	1:5:1217:G:C8	2.64	0.65
1:5:1439:C:C5'	9:F:36:ARG:NH1	2.58	0.65
1:5:1609:U:C4	1:5:1610:C:C5	2.84	0.65
1:5:1760:G:C2	1:5:1761:G:H1'	2.31	0.65
1:5:1899:G:N1	1:5:1900:C:N4	2.45	0.65
1:5:1936:C:C6	2:7:84:U:H6	2.13	0.65
1:5:2041:A:N3	1:5:4464:A:C6	2.65	0.65
1:5:2390:G:N2	1:5:2391:G:H1'	2.10	0.65
1:5:2445:C:N3	1:5:2446:C:C5	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2562:G:N2	1:5:2564:G:C8	2.65	0.65
1:5:3717:A:N6	1:5:3736:A:C5	2.65	0.65
1:5:3805:U:C2	1:5:3806:G:C8	2.85	0.65
1:5:4373:G:OP2	1:5:4374:U:O2'	2.13	0.65
1:5:4480:A:C6	1:5:4481:U:C6	2.85	0.65
1:5:4482:U:N3	1:5:4483:C:C5	2.64	0.65
1:5:4561:C:C2	1:5:4562:C:H5	2.13	0.65
1:5:4945:G:N3	34:f:69:VAL:HG13	2.12	0.65
11:H:117:PHE:C	11:H:117:PHE:CD1	2.73	0.65
13:J:105:PHE:HE1	13:J:132:VAL:HB	1.54	0.65
43:o:21:HIS:HD2	43:o:72:CYS:HA	1.61	0.65
47:1:239:LEU:HB2	47:1:240:PRO:CD	2.26	0.65
50:S2:18:C:C4'	50:S2:1194:A:N6	2.59	0.65
50:S2:42:A:C4	50:S2:426:A:C5	2.84	0.65
50:S2:656:G:H21	50:S2:663:C:H5''	1.60	0.65
50:S2:832:G:N2	50:S2:843:C:C2	2.65	0.65
50:S2:999:G:N1	50:S2:1000:C:C5	2.64	0.65
50:S2:1017:U:O2	50:S2:1017:U:C2'	2.43	0.65
50:S2:1050:A:C8	50:S2:1051:G:C8	2.83	0.65
50:S2:1061:U:H3	50:S2:1848:U:HO2'	1.44	0.65
50:S2:1693:G:H5'	50:S2:1694:U:OP2	1.96	0.65
50:S2:1839:U:H2'	50:S2:1840:U:O4'	1.95	0.65
52:SB:42:ARG:NH1	52:SB:232:HIS:O	0.52	0.65
53:SC:104:ASP:OD2	53:SC:130:ILE:HB	1.96	0.65
60:SJ:32:ILE:HG21	81:Se:34:ARG:HG2	1.77	0.65
74:SX:91:LEU:CD2	81:Se:6:LEU:HD13	2.22	0.65
85:S5:21:A:N6	85:S5:48:C:C6	2.64	0.65
85:S5:36:A:C8	85:S5:37:A:N7	2.65	0.65
85:S5:36:A:N7	85:S5:37:A:N7	2.45	0.65
86:S6:56:C:O2'	86:S6:57:G:OP2	2.11	0.65
1:5:120:A:C1'	1:5:121:A:C2	2.77	0.65
1:5:294:G:H5''	43:o:43:ARG:HH22	1.60	0.65
1:5:471:A:C2	1:5:472:C:C1'	2.80	0.65
1:5:938:C:H5	15:M:46:ARG:HE	1.45	0.65
1:5:951:G:H2'	1:5:952:G:H5''	1.79	0.65
1:5:1268:G:N1	1:5:1270:A:C5	2.65	0.65
1:5:1290:G:N2	1:5:1291:G:C5	2.65	0.65
1:5:1325:C:C4'	1:5:3901:A:N1	2.52	0.65
1:5:1964:A:C2	1:5:4694:G:C5	2.84	0.65
1:5:2468:U:N3	1:5:2473:A:C6	2.64	0.65
1:5:3888:G:O2'	1:5:3889:G:OP1	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4879:C:N3	1:5:4880:C:C5	2.65	0.65
1:5:4881:U:O2'	1:5:4882:U:C6	2.49	0.65
1:5:4885:U:C2	1:5:4886:C:C5	2.85	0.65
7:D:249:GLU:C	7:D:249:GLU:OE1	2.39	0.65
11:H:88:PHE:CE2	11:H:151:ILE:HB	2.31	0.65
20:R:131:VAL:HB	20:R:132:PHE:CE1	2.31	0.65
47:1:244:ASN:CB	47:1:440:ALA:CA	2.75	0.65
50:S2:826:A:N7	50:S2:827:A:H1'	2.11	0.65
50:S2:863:U:N3	50:S2:864:A:N7	2.45	0.65
50:S2:868:G:C2	58:SH:115:LYS:HA	2.31	0.65
50:S2:993:G:H22	50:S2:999:G:H22	1.42	0.65
50:S2:1211:G:N1	50:S2:1212:G:C5	2.54	0.65
50:S2:1211:G:N1	50:S2:1212:G:N3	2.44	0.65
50:S2:1253:A:C2	50:S2:1666:C:C1'	2.80	0.65
85:S5:32:U:H3	85:S5:38:A:H61	1.45	0.65
85:S5:37:A:H3'	85:S5:38:A:H5''	1.77	0.65
86:S6:5:C:H2'	86:S6:6:G:C8	2.29	0.65
86:S6:10:G:C6	86:S6:11:C:C5	2.85	0.65
1:5:307:A:H3'	1:5:308:G:N2	2.11	0.65
1:5:489:C:N3	1:5:490:C:C6	2.65	0.65
1:5:1298:C:N3	1:5:1299:G:N7	2.45	0.65
1:5:1404:G:N2	1:5:1414:C:C2	2.65	0.65
1:5:1618:G:C6	1:5:1619:G:N7	2.65	0.65
1:5:1686:C:H2'	1:5:1687:U:H5'	1.78	0.65
1:5:1767:A:C2	1:5:1769:G:H1'	2.31	0.65
1:5:1845:U:O2	1:5:1846:G:C8	2.49	0.65
1:5:1987:C:C4	1:5:1988:G:N7	2.65	0.65
1:5:2106:G:C2	1:5:2107:C:C5	2.84	0.65
1:5:2243:C:C2	1:5:2244:C:C5	2.85	0.65
1:5:2279:A:N1	1:5:2280:G:C6	2.65	0.65
1:5:2509:C:C2'	1:5:2510:G:O5'	2.44	0.65
1:5:2567:G:N1	1:5:2568:C:C4	2.65	0.65
1:5:2658:G:C2	1:5:2675:G:N2	2.65	0.65
1:5:2736:G:N2	1:5:2737:C:N1	2.45	0.65
1:5:2851:G:N7	1:5:2852:U:C6	2.64	0.65
1:5:3606:U:O2	1:5:3607:U:C6	2.50	0.65
1:5:3723:A:C2	1:5:3724:A:C8	2.85	0.65
1:5:3846:C:O2	1:5:3846:C:H2'	1.97	0.65
1:5:4079:C:O2	1:5:4079:C:H2'	1.96	0.65
1:5:4518:A:O2'	5:B:257:TRP:HZ3	1.73	0.65
1:5:4628:U:C2	1:5:4629:U:C5	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4772:C:C2	1:5:4773:C:C5	2.85	0.65
1:5:4896:G:C2	1:5:4897:G:C4	2.84	0.65
3:8:118:C:C2	3:8:119:C:C6	2.85	0.65
3:8:133:G:N3	3:8:134:G:C8	2.65	0.65
6:C:318:PRO:O	6:C:320:LYS:N	2.29	0.65
50:S2:384:U:C4	50:S2:386:C:C6	2.84	0.65
50:S2:449:A:N6	50:S2:452:G:C5	2.65	0.65
50:S2:530:U:N3	50:S2:531:A:C8	2.64	0.65
50:S2:1306:U:H1'	82:Sf:135:HIS:HA	1.78	0.65
50:S2:1419:C:O2'	70:ST:132:ASP:CB	2.44	0.65
50:S2:1640:A:H5'	86:S6:41:C:O2'	1.97	0.65
51:SA:39:TYR:HB2	51:SA:50:ASN:OD1	1.97	0.65
52:SB:228:LEU:HD13	52:SB:232:HIS:HD2	1.62	0.65
53:SC:267:GLN:NE2	72:SV:50:PHE:HE2	1.94	0.65
73:SW:27:ILE:HD11	73:SW:61:ILE:HD12	1.79	0.65
86:S6:12:C:H3'	86:S6:13:C:H5''	1.78	0.65
86:S6:53:G:H5''	86:S6:53:G:H8	1.58	0.65
1:5:320:C:H2'	1:5:321:U:O4'	1.97	0.65
1:5:470:A:C6	1:5:471:A:N9	2.65	0.65
1:5:1175:A:N1	1:5:1176:C:C5	2.65	0.65
1:5:1366:G:C8	1:5:1367:C:O3'	2.50	0.65
1:5:1602:U:H2'	1:5:1602:U:O2	1.96	0.65
1:5:1840:G:H2'	1:5:1842:G:O5'	1.96	0.65
1:5:2392:C:N3	1:5:2393:C:C5	2.65	0.65
1:5:4094:G:C2'	1:5:4095:G:O4'	2.38	0.65
1:5:4901:G:N2	1:5:4921:C:C2	2.65	0.65
19:Q:17:GLU:HA	19:Q:52:PHE:CE1	2.31	0.65
24:V:70:PRO:CG	50:S2:1724:A:OP1	2.45	0.65
46:z:80:VAL:HG11	46:z:147:LYS:HB3	1.79	0.65
46:z:150:GLU:HA	46:z:154:THR:HG22	1.77	0.65
50:S2:623:G:N2	50:S2:624:C:N1	2.44	0.65
50:S2:750:C:O2	50:S2:750:C:H2'	1.96	0.65
50:S2:970:G:O3'	50:S2:971:G:O4'	2.14	0.65
50:S2:1149:A:C4	50:S2:1151:G:C8	2.85	0.65
50:S2:1280:G:C6	50:S2:1281:G:N7	2.64	0.65
58:SH:135:PHE:C	58:SH:135:PHE:CD1	2.74	0.65
62:SL:17:PHE:CZ	62:SL:19:ASN:HB2	2.31	0.65
86:S6:48:C:C6	86:S6:59:U:C6	2.85	0.65
1:5:1211:G:C2	1:5:1212:G:C5	2.85	0.65
1:5:1388:A:C6	1:5:1396:G:C2	2.81	0.65
1:5:1885:G:C4	1:5:1895:G:N2	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2305:U:C6	1:5:2305:U:C5'	2.80	0.65
1:5:2463:G:H2'	1:5:2464:C:C6	2.32	0.65
1:5:2478:C:C2	1:5:2479:G:C8	2.84	0.65
1:5:2644:G:C6	1:5:2645:G:C5	2.85	0.65
1:5:3847:C:C2	1:5:3848:U:C6	2.84	0.65
1:5:3857:G:C5	1:5:3858:C:C5	2.85	0.65
1:5:4547:C:O3'	1:5:4548:A:C8	2.50	0.65
1:5:4896:G:N2	1:5:4897:G:C4	2.65	0.65
3:8:64:U:H2'	3:8:65:A:H8	1.59	0.65
16:N:120:TRP:CD1	16:N:121:VAL:N	2.64	0.65
20:R:7:GLN:N	20:R:7:GLN:OE1	2.30	0.65
47:1:239:LEU:HB2	47:1:240:PRO:HD2	1.79	0.65
47:1:248:THR:CB	47:1:440:ALA:HB1	2.25	0.65
50:S2:62:G:H1'	50:S2:172:U:O2	1.97	0.65
50:S2:553:U:N3	50:S2:554:A:C5	2.65	0.65
50:S2:609:U:O2	50:S2:610:G:C8	2.50	0.65
50:S2:833:C:C2	50:S2:834:C:C6	2.85	0.65
50:S2:856:C:C4	50:S2:857:U:C5	2.84	0.65
50:S2:964:A:C2	50:S2:965:U:C4	2.85	0.65
50:S2:1052:A:C6	50:S2:1053:C:C5	2.85	0.65
50:S2:1409:A:N1	50:S2:1410:C:C5	2.64	0.65
50:S2:1832:A:C6	50:S2:1833:C:C4	2.83	0.65
68:SR:16:ILE:CD1	68:SR:50:ILE:CG2	2.75	0.65
74:SX:10:ALA:O	74:SX:11:ARG:HB3	1.97	0.65
1:5:259:C:H2'	1:5:260:C:O4'	1.97	0.64
1:5:276:C:OP2	37:i:36:HIS:ND1	2.30	0.64
1:5:459:C:N3	1:5:460:C:C5	2.65	0.64
1:5:466:A:N1	1:5:467:U:C4	2.65	0.64
1:5:494:U:C2	1:5:495:C:C6	2.85	0.64
1:5:515:C:C2	1:5:647:G:C2	2.85	0.64
1:5:704:C:C6	1:5:704:C:H5''	2.31	0.64
1:5:1246:G:C6	1:5:1247:U:C4	2.86	0.64
1:5:1445:U:C2	1:5:1446:C:C6	2.85	0.64
1:5:1566:C:O3'	1:5:1567:U:O5'	2.16	0.64
1:5:1608:G:O4'	1:5:3828:A:C2	2.50	0.64
1:5:1926:C:C2	1:5:1927:U:C6	2.85	0.64
1:5:1949:U:C2	1:5:1950:U:C5	2.85	0.64
1:5:2361:G:HO2'	1:5:3859:G:H1	1.44	0.64
1:5:2371:U:O4	1:5:2825:A:H2	1.79	0.64
1:5:2546:G:O2'	1:5:2547:G:H5''	1.96	0.64
1:5:2603:C:N3	1:5:2604:C:C5	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2606:G:N3	1:5:2607:C:C6	2.65	0.64
1:5:2645:G:C6	1:5:2646:C:C5	2.86	0.64
1:5:2859:G:O2'	1:5:2860:C:O5'	2.15	0.64
1:5:3971:G:H21	1:5:4050:A:N6	1.91	0.64
1:5:4052:C:HO2'	46:z:212:LYS:N	1.94	0.64
1:5:4053:A:C3'	46:z:213:PRO:HG3	2.27	0.64
1:5:4275:G:C6	1:5:4276:G:N7	2.65	0.64
1:5:4532:U:OP2	1:5:4554:G:N2	2.30	0.64
1:5:5029:C:C4	1:5:5030:U:C5	2.85	0.64
2:7:93:G:C2	2:7:94:C:C6	2.85	0.64
6:C:112:HIS:CE1	16:N:202:ARG:HE	2.14	0.64
12:I:47:PRO:CB	12:I:171:TRP:HE1	2.10	0.64
50:S2:121:U:C4	50:S2:122:G:N7	2.66	0.64
50:S2:387:C:N3	50:S2:388:U:H5	1.92	0.64
50:S2:837:A:H2	50:S2:838:G:N7	1.89	0.64
50:S2:909:G:N1	50:S2:910:G:N7	2.44	0.64
50:S2:927:C:C2	50:S2:928:G:C8	2.85	0.64
50:S2:977:C:N3	50:S2:978:G:N7	2.45	0.64
50:S2:1061:U:O2	50:S2:1061:U:H2'	1.97	0.64
50:S2:1134:G:C4	50:S2:1135:C:C5	2.85	0.64
50:S2:1177:U:C2	50:S2:1178:U:C5	2.84	0.64
50:S2:1454:A:O4'	50:S2:1476:A:H1'	1.97	0.64
50:S2:1511:U:C4	50:S2:1512:C:C5	2.84	0.64
50:S2:1578:U:C6	54:SD:6:SER:N	2.65	0.64
51:SA:32:PHE:C	51:SA:32:PHE:CD1	2.74	0.64
85:S5:28:G:C2	85:S5:29:G:N7	2.64	0.64
1:5:246:G:N1	1:5:247:G:N7	2.45	0.64
1:5:247:G:N1	1:5:248:C:C4	2.65	0.64
1:5:271:C:N3	1:5:272:U:C6	2.60	0.64
1:5:422:C:N3	1:5:423:G:C8	2.66	0.64
1:5:457:G:N1	1:5:458:C:C5	2.64	0.64
1:5:911:U:C2	1:5:912:G:C8	2.85	0.64
1:5:913:U:C2	1:5:914:U:C5	2.85	0.64
1:5:1204:C:N3	1:5:1205:G:N7	2.46	0.64
1:5:1684:A:C2	1:5:1685:G:H1'	2.32	0.64
1:5:2050:G:H2'	1:5:2051:C:O4'	1.97	0.64
1:5:2281:U:H4'	33:e:46:ARG:NH2	2.12	0.64
1:5:2394:G:O6	1:5:2819:U:P	2.55	0.64
1:5:2399:G:C2	1:5:2400:G:C8	2.85	0.64
1:5:2768:C:O4'	1:5:2768:C:O2	2.14	0.64
1:5:3938:G:C6	1:5:4077:A:H2	2.14	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4114:C:H2'	1:5:4115:G:H1'	1.80	0.64
1:5:4215:C:O2	1:5:4216:G:C8	2.49	0.64
3:8:134:G:H21	3:8:135:C:H1'	1.62	0.64
16:N:158:HIS:HB3	16:N:161:MET:HG2	1.79	0.64
16:N:181:HIS:C	16:N:182:HIS:O	2.38	0.64
24:V:48:ARG:HH21	24:V:48:ARG:HG3	1.61	0.64
50:S2:29:G:C6	50:S2:30:C:N4	2.64	0.64
50:S2:52:G:C5	50:S2:53:C:C5	2.85	0.64
50:S2:81:U:C4	50:S2:82:G:N7	2.65	0.64
50:S2:173:A:C2	50:S2:174:C:C6	2.84	0.64
50:S2:676:C:C2	50:S2:677:G:C8	2.85	0.64
50:S2:1382:A:N3	50:S2:1383:A:C8	2.64	0.64
62:SL:57:ASP:OD2	62:SL:60:CYS:N	2.30	0.64
64:SN:128:TYR:CD1	64:SN:129:TYR:N	2.65	0.64
1:5:98:A:C1'	1:5:292:G:O6	2.45	0.64
1:5:295:A:N7	1:5:316:U:O2'	2.29	0.64
1:5:695:G:H3'	1:5:696:C:H5'	1.77	0.64
1:5:1261:G:N1	1:5:1262:G:C5	2.65	0.64
1:5:1412:G:N1	1:5:1413:C:C4	2.64	0.64
1:5:1507:C:C2	1:5:1508:A:C8	2.86	0.64
1:5:1673:U:O4	1:5:1682:A:N1	2.30	0.64
1:5:2037:C:C2'	1:5:2038:U:H6	2.02	0.64
1:5:2703:G:C6	1:5:2704:C:C5	2.86	0.64
1:5:2858:A:O2'	1:5:2859:G:C5'	2.44	0.64
1:5:3652:A:C8	1:5:3691:G:N2	2.65	0.64
1:5:4099:G:C5	1:5:4100:C:C5	2.85	0.64
3:8:21:C:OP1	6:C:195:LYS:NZ	2.31	0.64
3:8:70:G:C2	3:8:87:G:C2	2.86	0.64
3:8:94:G:C5	38:j:79:ARG:HD2	2.33	0.64
3:8:122:G:H2'	3:8:123:U:O4'	1.96	0.64
29:a:63:LEU:C	29:a:63:LEU:HD23	2.22	0.64
46:z:67:VAL:HG23	46:z:82:ILE:CD1	2.17	0.64
50:S2:377:G:C6	50:S2:378:U:C5	2.86	0.64
50:S2:616:A:O2'	74:SX:88:ASP:CG	2.40	0.64
50:S2:632:C:N3	50:S2:633:C:C5	2.65	0.64
50:S2:673:G:H1'	50:S2:1084:A:C2	2.32	0.64
50:S2:841:G:N3	50:S2:842:C:C6	2.65	0.64
50:S2:842:C:C2	50:S2:843:C:C6	2.85	0.64
50:S2:910:G:C6	50:S2:911:C:C4	2.85	0.64
50:S2:1132:C:N3	50:S2:1133:A:C8	2.66	0.64
50:S2:1204:A:N1	50:S2:1205:C:C4	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1209:A:C2	50:S2:1691:U:C2	2.85	0.64
50:S2:1265:A:N3	50:S2:1266:C:C6	2.65	0.64
50:S2:1292:C:C2	82:Sf:150:PHE:CD1	2.86	0.64
50:S2:1294:G:C2	50:S2:1295:A:N7	2.65	0.64
50:S2:1355:C:H1'	53:SC:188:CYS:SG	2.37	0.64
50:S2:1552:G:H4'	50:S2:1557:C:H41	1.61	0.64
50:S2:1574:C:O2	50:S2:1574:C:H2'	1.97	0.64
50:S2:1640:A:H5'	86:S6:41:C:C3'	2.28	0.64
50:S2:1642:U:OP1	86:S6:32:U:H4'	1.97	0.64
52:SB:97:LEU:CD1	52:SB:229:MET:SD	2.86	0.64
52:SB:217:MET:CE	52:SB:220:LYS:HE2	2.20	0.64
86:S6:10:G:N3	86:S6:11:C:C6	2.66	0.64
1:5:453:G:H22	1:5:1294:A:H62	1.46	0.64
1:5:492:U:C2	1:5:493:G:C8	2.85	0.64
1:5:661:C:N3	1:5:662:C:C5	2.66	0.64
1:5:984:C:C2	1:5:1070:G:C2	2.86	0.64
1:5:1177:U:N3	1:5:1178:G:N7	2.46	0.64
1:5:1323:A:C2	1:5:1324:A:C4	2.84	0.64
1:5:1380:G:C2	1:5:1382:G:C2	2.85	0.64
1:5:1529:G:H21	38:j:49:TRP:HZ2	1.43	0.64
1:5:1542:U:N3	1:5:1543:G:N7	2.46	0.64
1:5:1867:A:N3	1:5:4403:U:O2'	2.27	0.64
1:5:1920:C:H4'	1:5:1921:C:OP2	1.97	0.64
1:5:1928:C:H1'	1:5:1929:A:C6	2.33	0.64
1:5:2292:C:C2	1:5:2293:U:C6	2.85	0.64
1:5:4343:U:C2	1:5:4344:U:C5	2.86	0.64
1:5:4404:U:C5	1:5:4436:U:O4	2.50	0.64
1:5:4482:U:O2	1:5:4483:C:C6	2.49	0.64
1:5:4547:C:O2	1:5:4549:G:C8	2.51	0.64
1:5:4935:C:H3'	8:E:179:ARG:NH2	2.13	0.64
1:5:5029:C:N3	1:5:5030:U:C5	2.66	0.64
3:8:103:A:N7	3:8:104:A:N7	2.45	0.64
6:C:54:VAL:HG21	6:C:101:MET:HE3	1.80	0.64
6:C:200:ARG:NH2	27:Y:11:ARG:HD2	2.11	0.64
46:z:18:LEU:HD13	46:z:176:ASP:O	1.97	0.64
46:z:161:LYS:HE2	86:S6:55:U:H5''	1.75	0.64
50:S2:52:G:N2	50:S2:53:C:H1'	2.12	0.64
50:S2:578:C:C4	50:S2:579:C:C6	2.85	0.64
50:S2:634:A:N3	50:S2:635:G:C8	2.66	0.64
50:S2:1127:C:C2	50:S2:1128:C:C5	2.85	0.64
50:S2:1496:U:C4	50:S2:1498:A:N7	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1603:G:N7	69:SS:28:PHE:HE2	1.90	0.64
86:S6:13:C:O2	86:S6:14:C:C2	2.50	0.64
86:S6:59:U:C2	86:S6:60:U:C5	2.86	0.64
86:S6:71:G:H2'	86:S6:72:C:C5	2.32	0.64
1:5:42:A:N6	1:5:4379:A:N3	2.46	0.64
1:5:76:A:C8	14:L:74:ARG:NH2	2.66	0.64
1:5:289:C:C4	1:5:290:U:C5	2.86	0.64
1:5:1085:C:N3	1:5:1086:C:C6	2.65	0.64
1:5:1325:C:H4'	1:5:3901:A:C2	2.32	0.64
1:5:1475:G:N3	1:5:1476:C:C5	2.64	0.64
1:5:1517:G:C2	1:5:1650:A:C6	2.86	0.64
1:5:1673:U:N3	1:5:1674:C:C4	2.66	0.64
1:5:1936:C:O2	1:5:1936:C:C2'	2.46	0.64
1:5:2033:A:C2	1:5:2034:G:C5	2.85	0.64
1:5:2079:G:N2	1:5:2080:U:C2	2.65	0.64
1:5:2407:G:O2'	1:5:2409:U:N3	2.30	0.64
1:5:2570:U:N3	1:5:2571:C:C5	2.66	0.64
1:5:2665:U:C4	20:R:124:TYR:CZ	2.85	0.64
1:5:3694:U:C4	1:5:3695:U:C5	2.85	0.64
1:5:3759:A:HO2'	50:S2:1826:G:C2'	2.08	0.64
1:5:3767:C:O2'	50:S2:1828:C:C5'	2.46	0.64
1:5:4070:U:C2	1:5:4071:U:C5	2.86	0.64
1:5:4097:G:P	35:g:112:GLN:CA	2.85	0.64
1:5:4463:U:C5	1:5:4488:A:N7	2.66	0.64
1:5:4482:U:N3	1:5:4483:C:H5	1.94	0.64
1:5:4510:A:H62	1:5:4592:C:C2'	2.11	0.64
1:5:4652:G:C4	1:5:4653:C:C5	2.86	0.64
1:5:4766:C:H2'	1:5:4767:C:O4'	1.98	0.64
4:A:34:PHE:O	4:A:35:ALA:C	2.41	0.64
8:E:43:ASN:HB3	8:E:58:MET:HE1	1.80	0.64
50:S2:218:U:H2'	50:S2:219:U:O4'	1.98	0.64
50:S2:694:G:C2	50:S2:695:C:C6	2.85	0.64
50:S2:960:U:O4	65:SO:66:ARG:HA	1.97	0.64
50:S2:1074:C:H2'	50:S2:1075:C:H6	1.61	0.64
50:S2:1292:C:C5	82:Sf:150:PHE:HB2	2.31	0.64
50:S2:1309:C:H2'	82:Sf:143:LYS:CD	2.26	0.64
50:S2:1310:U:OP2	63:SM:36:ARG:NH1	2.29	0.64
50:S2:1317:C:N3	50:S2:1318:G:C8	2.63	0.64
50:S2:1345:G:C6	50:S2:1346:U:C5	2.86	0.64
50:S2:1412:C:H2'	50:S2:1413:G:N7	2.11	0.64
50:S2:1546:G:O2'	50:S2:1547:C:C5'	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1551:U:O4'	50:S2:1558:C:C2	2.50	0.64
50:S2:1825:A:N6	85:S5:37:A:H4'	2.13	0.64
74:SX:67:ARG:CG	74:SX:115:ILE:HD13	2.27	0.64
86:S6:34:G:C2'	86:S6:35:A:C8	2.76	0.64
1:5:86:U:O2	1:5:87:A:H8	1.76	0.64
1:5:88:A:C2	1:5:89:C:C4	2.85	0.64
1:5:144:G:N3	1:5:145:G:C8	2.65	0.64
1:5:206:U:O2	1:5:208:A:C8	2.51	0.64
1:5:211:G:N3	1:5:212:A:C8	2.66	0.64
1:5:246:G:N3	1:5:247:G:C8	2.66	0.64
1:5:288:G:H2'	1:5:289:C:C6	2.32	0.64
1:5:690:C:N3	1:5:691:C:C6	2.66	0.64
1:5:1198:G:H2'	1:5:1199:G:H8	1.59	0.64
1:5:1261:G:C6	1:5:1262:G:N7	2.65	0.64
1:5:1357:C:O2'	1:5:1358:G:H5'	1.96	0.64
1:5:1516:G:C5	1:5:1518:A:N7	2.66	0.64
1:5:1891:A:H2'	1:5:1892:A:C8	2.33	0.64
1:5:1921:C:C6	21:S:161:ARG:HG2	2.33	0.64
1:5:2272:C:O2'	1:5:2273:G:C5'	2.45	0.64
1:5:2861:C:O2	1:5:3626:G:H4'	1.98	0.64
1:5:3741:C:O2	1:5:3742:G:C8	2.49	0.64
1:5:4251:A:H2'	1:5:4252:C:C6	2.31	0.64
1:5:4966:A:H2'	1:5:4967:A:C1'	2.27	0.64
3:8:118:C:O2	3:8:119:C:C6	2.51	0.64
12:I:9:TYR:HD2	12:I:97:ILE:CG1	2.11	0.64
50:S2:625:G:H4'	50:S2:629:A:C2	2.32	0.64
50:S2:751:G:O6	50:S2:791:C:C4	2.51	0.64
50:S2:837:A:C2	50:S2:838:G:C8	2.86	0.64
50:S2:948:C:C2	50:S2:949:G:C8	2.85	0.64
50:S2:1266:C:C2	50:S2:1267:C:H5	2.15	0.64
50:S2:1409:A:H2'	50:S2:1410:C:O4'	1.97	0.64
50:S2:1415:C:H2'	50:S2:1416:C:C4'	2.26	0.64
50:S2:1455:A:C6	50:S2:1456:G:C8	2.86	0.64
50:S2:1781:A:H2'	50:S2:1782:G:H8	1.62	0.64
50:S2:1786:U:O2	50:S2:1787:G:C8	2.49	0.64
56:SF:88:MET:HE1	56:SF:92:ILE:HD11	1.79	0.64
57:SG:180:VAL:HG13	57:SG:185:LEU:HD21	1.80	0.64
74:SX:61:GLN:HE22	84:S4:23:U:H5''	1.61	0.64
86:S6:16:A:H4'	86:S6:17:A:OP1	1.96	0.64
86:S6:59:U:C3'	86:S6:60:U:H6	2.11	0.64
1:5:293:G:H4'	1:5:294:G:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:293:G:H5''	1:5:294:G:H8	1.61	0.64
1:5:364:G:O6	38:j:52:LYS:HE3	1.97	0.64
1:5:484:U:O4	1:5:486:C:C4	2.51	0.64
1:5:491:G:N2	1:5:492:U:C5	2.66	0.64
1:5:699:C:C2	1:5:700:G:C8	2.86	0.64
1:5:1292:C:H3'	1:5:1293:G:H5''	1.80	0.64
1:5:1554:A:C5	1:5:1555:G:C8	2.86	0.64
1:5:1646:A:H1'	38:j:49:TRP:CH2	2.32	0.64
1:5:1683:U:O2	1:5:1683:U:H2'	1.96	0.64
1:5:1807:C:C4	1:5:1808:C:C5	2.85	0.64
1:5:1900:C:C2	1:5:1901:C:C6	2.85	0.64
1:5:1934:A:C6	1:5:2048:U:C2	2.85	0.64
1:5:2326:G:C2	1:5:2327:G:N9	2.65	0.64
1:5:2829:U:C2	1:5:2830:G:C8	2.86	0.64
1:5:3629:A:C6	1:5:3630:A:C8	2.85	0.64
1:5:3722:G:N1	1:5:3723:A:C5	2.65	0.64
1:5:3742:G:C2	1:5:3743:G:C8	2.85	0.64
1:5:3806:G:H1'	50:S2:1719:A:N3	2.12	0.64
1:5:4061:G:N3	1:5:4062:A:C8	2.65	0.64
1:5:4091:G:C5	1:5:4092:G:C8	2.85	0.64
1:5:4097:G:C2	1:5:4098:A:N7	2.65	0.64
1:5:4379:A:C8	43:o:54:PRO:CA	2.80	0.64
1:5:4723:A:N3	1:5:4724:A:C8	2.65	0.64
4:A:211:PHE:CD1	4:A:219:ILE:HG23	2.33	0.64
15:M:11:ARG:NH2	15:M:61:ILE:HG23	2.13	0.64
24:V:97:TYR:OH	25:W:21:TYR:CB	2.45	0.64
50:S2:85:A:N1	50:S2:86:C:C4	2.65	0.64
50:S2:92:A:C6	50:S2:447:A:C2	2.85	0.64
50:S2:104:A:N6	50:S2:105:U:C4	2.66	0.64
50:S2:358:C:O3'	74:SX:22:TRP:CZ2	2.51	0.64
50:S2:500:A:H3'	50:S2:501:C:C5	2.33	0.64
50:S2:617:G:O3'	74:SX:88:ASP:N	2.30	0.64
50:S2:957:A:O2'	50:S2:958:G:O5'	2.15	0.64
50:S2:1030:A:N3	50:S2:1031:A:C8	2.66	0.64
50:S2:1211:G:C6	50:S2:1212:G:C4	2.80	0.64
50:S2:1254:C:O2	50:S2:1254:C:H2'	1.96	0.64
50:S2:1254:C:O2	50:S2:1255:G:H8	1.80	0.64
50:S2:1310:U:H4'	82:Sf:143:LYS:HG3	1.80	0.64
50:S2:1432:U:N3	50:S2:1433:C:H5	1.93	0.64
50:S2:1573:G:C5	50:S2:1574:C:C6	2.85	0.64
50:S2:1710:C:N3	50:S2:1711:U:C5	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1759:G:C2	50:S2:1774:C:C2	2.85	0.64
50:S2:1791:A:C6	50:S2:1792:G:H1'	2.31	0.64
51:SA:55:TRP:C	51:SA:55:TRP:CD1	2.74	0.64
55:SE:11:ARG:HD2	55:SE:20:LEU:HB3	1.80	0.64
68:SR:18:GLU:O	68:SR:71:ILE:HD13	1.92	0.64
69:SS:33:ILE:HD13	69:SS:71:MET:HE1	1.79	0.64
85:S5:48:C:C6	85:S5:59:U:C4	2.85	0.64
86:S6:15:G:H2'	86:S6:16:A:H5'	1.77	0.64
1:5:176:G:H5''	36:h:98:HIS:CE1	2.32	0.64
1:5:238:C:C2	1:5:239:C:C5	2.86	0.64
1:5:298:G:C6	1:5:299:C:C5	2.85	0.64
1:5:964:A:H8	1:5:964:A:O5'	1.80	0.64
1:5:978:G:H5''	8:E:41:SER:O	1.97	0.64
1:5:1079:C:N3	1:5:1080:C:C6	2.66	0.64
1:5:1245:C:C6	1:5:1269:G:O6	2.49	0.64
1:5:1476:C:C4	1:5:1477:C:C5	2.86	0.64
1:5:1476:C:O2	1:5:1477:C:C6	2.51	0.64
1:5:1632:A:O2'	1:5:3641:U:O2	2.14	0.64
1:5:1696:C:O2	1:5:1697:G:H5'	1.97	0.64
1:5:1878:G:C2	1:5:1879:C:C5	2.86	0.64
1:5:1963:C:O2'	1:5:2027:U:O2'	2.16	0.64
1:5:2079:G:C2	1:5:2080:U:C4	2.85	0.64
1:5:2409:U:O4	1:5:2783:A:C6	2.51	0.64
1:5:2451:A:C5	1:5:2452:G:N7	2.66	0.64
1:5:2496:G:C6	1:5:2497:C:C4	2.86	0.64
1:5:3779:A:H2'	1:5:3780:G:O4'	1.98	0.64
1:5:3912:U:HO2'	1:5:3913:G:H5''	1.63	0.64
1:5:3938:G:H4'	1:5:3939:G:O5'	1.97	0.64
1:5:4080:C:O2	1:5:4081:G:H8	1.69	0.64
1:5:4478:G:O2'	1:5:4602:A:N1	2.26	0.64
1:5:4886:C:O2	1:5:4887:C:H6	1.80	0.64
1:5:5031:G:N1	1:5:5032:C:C4	2.65	0.64
2:7:17:C:H2'	2:7:17:C:O2	1.97	0.64
21:S:15:ARG:HH21	22:T:141:VAL:HG22	1.61	0.64
31:c:31:TYR:CD1	31:c:32:LYS:N	2.64	0.64
46:z:206:ILE:HB	46:z:216:LEU:HD23	1.79	0.64
50:S2:98:C:C2	50:S2:409:C:C6	2.85	0.64
50:S2:185:G:N3	50:S2:186:C:C6	2.66	0.64
50:S2:649:U:C2	50:S2:650:A:N7	2.64	0.64
50:S2:892:U:C2	50:S2:893:U:C6	2.86	0.64
50:S2:926:A:C6	50:S2:927:C:C5	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1032:C:C2	50:S2:1033:G:C8	2.86	0.64
50:S2:1253:A:OP2	50:S2:1526:G:N2	2.30	0.64
50:S2:1402:A:C2	50:S2:1405:A:N1	2.65	0.64
50:S2:1526:G:C4	50:S2:1527:C:C6	2.86	0.64
50:S2:1792:G:C2	50:S2:1793:A:C8	2.85	0.64
52:SB:97:LEU:HD13	52:SB:228:LEU:HD12	1.63	0.64
75:SY:20:ARG:HB3	75:SY:76:TYR:HD1	1.63	0.64
83:Sg:130:LYS:HA	83:Sg:141:THR:HA	1.78	0.64
1:5:50:C:C2'	1:5:51:A:O5'	2.46	0.64
1:5:75:G:O6	14:L:103:ARG:NH1	2.30	0.64
1:5:347:A:C2	1:5:348:G:C5	2.86	0.64
1:5:471:A:C5	1:5:472:C:C5	2.85	0.64
1:5:1314:C:C2	1:5:1315:C:C5	2.85	0.64
1:5:1391:A:C5	1:5:1392:A:N7	2.66	0.64
1:5:1877:G:N2	1:5:1878:G:H1'	2.11	0.64
1:5:1997:U:H2'	1:5:1998:A:H3'	1.80	0.64
1:5:2326:G:N2	1:5:2327:G:N9	2.46	0.64
1:5:2690:C:N3	1:5:2691:U:C6	2.66	0.64
1:5:3621:A:C2	1:5:3622:C:C6	2.86	0.64
1:5:3622:C:N3	1:5:3623:C:N3	2.45	0.64
1:5:4093:G:C2'	1:5:4094:G:C5'	2.75	0.64
1:5:4158:C:O2	1:5:4158:C:H2'	1.97	0.64
1:5:4342:C:N3	1:5:4343:U:C6	2.66	0.64
8:E:280:HIS:CD2	34:f:38:GLU:HG3	2.32	0.64
26:X:84:GLU:CB	47:1:403:GLY:O	2.45	0.64
47:1:244:ASN:CB	47:1:440:ALA:C	2.71	0.64
50:S2:42:A:C4	50:S2:426:A:C6	2.86	0.64
50:S2:752:G:C2	50:S2:791:C:O2	2.51	0.64
50:S2:909:G:C6	50:S2:910:G:N7	2.65	0.64
50:S2:995:G:N2	50:S2:997:A:H3'	2.12	0.64
50:S2:1213:C:C6	50:S2:1682:C:N4	2.66	0.64
50:S2:1220:A:N6	50:S2:1221:G:C6	2.65	0.64
50:S2:1276:A:C2	50:S2:1277:C:H1'	2.33	0.64
50:S2:1294:G:O4'	82:Sf:151:ASN:C	2.41	0.64
50:S2:1332:A:C6	50:S2:1333:U:C5	2.85	0.64
50:S2:1344:A:H8	50:S2:1344:A:OP2	1.80	0.64
50:S2:1363:C:N4	50:S2:1375:G:H1	1.95	0.64
50:S2:1408:U:H3'	50:S2:1409:A:H8	1.63	0.64
50:S2:1408:U:C2'	50:S2:1409:A:C8	2.81	0.64
50:S2:1466:G:N2	50:S2:1467:C:C2	2.65	0.64
51:SA:110:ASN:O	51:SA:116:PHE:CD2	2.50	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:97:LEU:HD22	52:SB:232:HIS:ND1	2.11	0.64
61:SK:2:LEU:CB	61:SK:8:ARG:NH2	2.61	0.64
69:SS:86:ARG:NH1	69:SS:86:ARG:HA	2.13	0.64
74:SX:115:ILE:HG22	74:SX:118:VAL:HB	1.80	0.64
80:Sd:40:ARG:CG	80:Sd:41:GLN:OE1	2.46	0.64
86:S6:33:U:C5	86:S6:36:A:OP2	2.51	0.64
1:5:54:G:N1	1:5:55:G:C8	2.66	0.64
1:5:181:C:C2	1:5:256:G:C2	2.86	0.64
1:5:235:A:C5	1:5:238:C:N4	2.66	0.64
1:5:1167:C:H1'	1:5:1195:G:N2	2.13	0.64
1:5:1258:G:C2	1:5:1259:G:C8	2.86	0.64
1:5:1878:G:N1	1:5:1879:C:C4	2.66	0.64
1:5:2399:G:N1	1:5:2400:G:C5	2.66	0.64
1:5:2769:U:HO2'	1:5:2770:C:H6	1.46	0.64
1:5:3606:U:C2	1:5:3607:U:C5	2.85	0.64
1:5:3960:A:C2	1:5:4045:G:C2'	2.80	0.64
1:5:4275:G:C6	1:5:4276:G:C8	2.85	0.64
1:5:4426:C:C4	1:5:4427:G:C5	2.86	0.64
1:5:4480:A:C2	1:5:4481:U:C1'	2.81	0.64
3:8:82:A:H2'	3:8:82:A:N3	2.12	0.64
50:S2:27:A:C5	50:S2:28:U:C5	2.85	0.64
50:S2:75:G:N2	50:S2:77:A:P	2.68	0.64
50:S2:77:A:O2'	57:SG:175:LYS:CA	2.44	0.64
50:S2:360:A:C2	50:S2:363:A:C8	2.86	0.64
50:S2:554:A:C2	50:S2:555:A:N7	2.65	0.64
50:S2:848:U:C2	50:S2:849:A:C8	2.86	0.64
50:S2:963:A:C2	50:S2:964:A:C5	2.84	0.64
50:S2:1229:G:C5	50:S2:1230:C:C5	2.86	0.64
50:S2:1405:A:C4	50:S2:1406:G:C8	2.85	0.64
50:S2:1448:A:C6	50:S2:1449:G:C8	2.86	0.64
50:S2:1502:C:N3	50:S2:1503:C:C5	2.64	0.64
50:S2:1528:G:C4	50:S2:1529:C:C5	2.86	0.64
50:S2:1562:C:C2	50:S2:1563:G:C8	2.86	0.64
50:S2:1831:A:C1'	50:S2:1851:A:H2'	2.27	0.64
63:SM:33:ARG:HH11	63:SM:33:ARG:HG2	1.62	0.64
64:SN:128:TYR:HD1	64:SN:129:TYR:N	1.96	0.64
69:SS:86:ARG:HA	69:SS:86:ARG:CZ	2.27	0.64
86:S6:22:G:C5	86:S6:23:A:C2	2.85	0.64
1:5:27:C:C2	1:5:28:C:H6	2.16	0.63
1:5:83:C:P	1:5:84:A:O2'	2.55	0.63
1:5:280:G:H8	16:N:120:TRP:CZ3	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:315:G:N1	29:a:62:HIS:CG	2.66	0.63
1:5:1267:C:H2'	1:5:2121:C:H41	1.63	0.63
1:5:1439:C:H5''	9:F:36:ARG:NH1	2.12	0.63
1:5:1447:C:C1'	1:5:2098:G:N2	2.61	0.63
1:5:1966:C:O2	1:5:1966:C:H2'	1.98	0.63
1:5:2089:G:C5	1:5:2262:G:C2'	2.79	0.63
1:5:2090:U:N3	6:C:307:LYS:HE3	2.13	0.63
1:5:3689:G:C5	1:5:3690:U:C5	2.87	0.63
1:5:3689:G:C6	1:5:3690:U:C4	2.87	0.63
1:5:3709:U:C5	50:S2:970:G:N2	2.66	0.63
1:5:3974:G:OP1	46:z:26:ARG:HG3	1.99	0.63
1:5:4139:G:C6	1:5:4140:C:C5	2.85	0.63
1:5:4241:C:O2	1:5:4241:C:C2'	2.40	0.63
1:5:4255:A:C2	1:5:4256:A:N3	2.66	0.63
1:5:4528:G:C2	1:5:4529:G:C8	2.85	0.63
4:A:186:TYR:N	4:A:196:TRP:CZ3	2.66	0.63
32:d:71:ALA:CB	32:d:108:TYR:CE2	2.80	0.63
32:d:87:ARG:CZ	32:d:109:VAL:HG22	2.28	0.63
44:p:28:LYS:HZ2	50:S2:1040:G:H2'	1.62	0.63
50:S2:52:G:C2	50:S2:53:C:N1	2.66	0.63
50:S2:113:G:C2	50:S2:293:C:C4	2.86	0.63
50:S2:340:C:C4	50:S2:341:C:C4	2.85	0.63
50:S2:796:G:H3'	50:S2:797:C:H5''	1.78	0.63
50:S2:1746:U:H4'	57:SG:65:GLN:NE2	2.13	0.63
60:SJ:86:VAL:HG21	60:SJ:105:PHE:CE1	2.32	0.63
74:SX:8:ARG:C	74:SX:10:ALA:N	2.52	0.63
74:SX:15:SER:O	74:SX:19:ASP:OD1	2.16	0.63
85:S5:31:A:C2	85:S5:40:C:C2	2.85	0.63
1:5:65:A:H2	1:5:76:A:H4'	1.63	0.63
1:5:106:A:H2'	1:5:107:G:O4'	1.98	0.63
1:5:189:G:C2	1:5:190:G:C8	2.85	0.63
1:5:911:U:N3	1:5:912:G:N7	2.46	0.63
1:5:1176:C:O2'	7:D:279:ARG:HG2	1.98	0.63
1:5:1411:C:N3	1:5:1412:G:N7	2.45	0.63
1:5:1509:C:N3	1:5:1510:G:N7	2.47	0.63
1:5:1933:G:H2'	1:5:1934:A:O4'	1.98	0.63
1:5:1984:A:N6	1:5:2011:C:HO2'	1.96	0.63
1:5:2316:G:C4	1:5:2317:C:C5	2.86	0.63
1:5:2422:C:H2'	1:5:2422:C:O2	1.96	0.63
1:5:2453:A:N6	1:5:2454:U:C4	2.67	0.63
1:5:2540:C:C2	1:5:2541:G:C8	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2612:G:C6	1:5:2613:C:C4	2.86	0.63
1:5:3728:A:C8	1:5:3729:U:H1'	2.32	0.63
1:5:3767:C:C5'	50:S2:1849:G:O6	2.46	0.63
1:5:3858:C:C4	1:5:3859:G:C8	2.86	0.63
1:5:3899:G:H5''	5:B:257:TRP:HD1	1.63	0.63
1:5:3927:U:C4	1:5:4182:G:C2	2.87	0.63
1:5:3974:G:H5'	46:z:28:PHE:CD1	2.32	0.63
1:5:4091:G:C4	1:5:4092:G:C8	2.86	0.63
1:5:4145:C:N3	1:5:4146:G:N7	2.46	0.63
1:5:4371:G:C8	86:S6:76:A:N6	2.66	0.63
1:5:4490:C:C2	1:5:4491:G:C8	2.86	0.63
3:8:63:U:C2'	3:8:63:U:O2	2.45	0.63
47:1:251:VAL:CG1	47:1:438:LEU:HD12	2.28	0.63
50:S2:37:C:C4	50:S2:38:A:N7	2.66	0.63
50:S2:550:C:H2'	50:S2:551:U:C6	2.32	0.63
50:S2:851:C:C2'	50:S2:852:G:H21	2.10	0.63
50:S2:1126:G:C2	50:S2:1127:C:C6	2.86	0.63
50:S2:1277:C:H5'	61:SK:51:SER:HA	1.79	0.63
50:S2:1417:C:C2	50:S2:1419:C:H5	2.14	0.63
50:S2:1591:C:N4	50:S2:1592:C:C5	2.66	0.63
54:SD:24:PHE:HB2	61:SK:63:ALA:HB1	1.79	0.63
59:SI:139:LYS:HD2	59:SI:145:ILE:HD12	1.80	0.63
85:S5:2:C:H6	85:S5:2:C:H5''	1.63	0.63
85:S5:9:A:OP2	85:S5:13:C:N4	2.31	0.63
1:5:1091:C:N3	1:5:1092:G:C8	2.66	0.63
1:5:1202:C:N3	1:5:1203:G:N7	2.47	0.63
1:5:1246:G:C4	1:5:1247:U:C6	2.87	0.63
1:5:1439:C:C2	9:F:36:ARG:NH1	2.67	0.63
1:5:1661:C:O2	1:5:1662:C:C5	2.51	0.63
1:5:2433:G:P	47:1:268:LYS:HZ1	2.19	0.63
1:5:2441:C:H2'	1:5:2442:G:C8	2.34	0.63
1:5:2449:A:N7	1:5:2450:G:H1'	2.13	0.63
1:5:2453:A:C5	1:5:2454:U:C5	2.86	0.63
1:5:2485:U:C2	1:5:2486:G:N7	2.67	0.63
1:5:2549:G:N2	1:5:2770:C:N3	2.46	0.63
1:5:2589:C:H3'	1:5:2590:G:H8	1.63	0.63
1:5:3723:A:N3	1:5:3724:A:C8	2.66	0.63
1:5:3806:G:C1'	50:S2:1719:A:HO2'	2.10	0.63
1:5:4426:C:N4	1:5:4427:G:C6	2.66	0.63
1:5:4453:C:C2	1:5:4529:G:C2	2.86	0.63
1:5:4472:G:C6	1:5:4473:A:C8	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:11:C:O2	3:8:11:C:C2'	2.47	0.63
5:B:53:MET:HE1	5:B:336:CYS:HB3	1.80	0.63
7:D:223:PHE:CB	7:D:226:TYR:HB2	2.28	0.63
10:G:169:PHE:CE2	16:N:6:TYR:HB2	2.32	0.63
25:W:55:TYR:CD1	25:W:55:TYR:C	2.76	0.63
29:a:62:HIS:C	29:a:62:HIS:CD2	2.77	0.63
50:S2:113:G:N3	50:S2:293:C:C5	2.66	0.63
50:S2:925:G:N2	50:S2:926:A:N9	2.46	0.63
50:S2:1204:A:O2'	50:S2:1205:C:H5'	1.98	0.63
50:S2:1492:U:HO2'	71:SU:70:CYS:HG	1.43	0.63
50:S2:1729:U:O2	50:S2:1730:U:C5	2.51	0.63
50:S2:1741:U:C2	50:S2:1742:C:C6	2.86	0.63
58:SH:158:LEU:HB2	58:SH:189:PHE:CZ	2.33	0.63
85:S5:70:G:C2	85:S5:71:G:C5	2.85	0.63
1:5:30:C:C2'	1:5:31:U:O5'	2.47	0.63
1:5:107:G:C6	14:L:56:ARG:NH1	2.66	0.63
1:5:292:G:O2'	1:5:293:G:O5'	2.15	0.63
1:5:312:G:H2'	1:5:313:U:O4'	1.99	0.63
1:5:748:G:C6	1:5:918:G:H1'	2.34	0.63
1:5:930:G:C4	1:5:931:C:C5	2.86	0.63
1:5:979:C:H2'	1:5:980:U:O4'	1.98	0.63
1:5:1066:G:C4	1:5:1067:G:C8	2.87	0.63
1:5:1093:C:N3	1:5:1094:G:C8	2.66	0.63
1:5:1661:C:C2	1:5:1662:C:C5	2.86	0.63
1:5:1843:A:C6	1:5:1844:G:N7	2.66	0.63
1:5:1987:C:O2	1:5:1987:C:H2'	1.99	0.63
1:5:2056:G:C6	1:5:2058:G:C5	2.86	0.63
1:5:2275:G:H5''	1:5:2275:G:H8	1.64	0.63
1:5:2327:G:C6	1:5:2328:G:N7	2.67	0.63
1:5:2577:C:H2'	1:5:2577:C:O2	1.96	0.63
1:5:2606:G:C4	1:5:2607:C:C5	2.87	0.63
1:5:2659:A:N6	1:5:2675:G:HO2'	1.96	0.63
1:5:3665:G:H2'	1:5:3666:C:O4'	1.98	0.63
1:5:3674:G:N1	1:5:3675:G:C5	2.67	0.63
1:5:3966:A:N3	1:5:3967:G:C8	2.67	0.63
1:5:3974:G:OP1	46:z:28:PHE:CD1	2.52	0.63
1:5:4101:C:C2	1:5:4109:G:C2	2.86	0.63
1:5:4119:C:O2	1:5:4119:C:O5'	2.17	0.63
1:5:4169:G:H4'	1:5:4171:C:O2	1.98	0.63
1:5:4406:U:N3	1:5:4407:G:N7	2.47	0.63
1:5:4583:C:C4	1:5:4718:G:N1	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4929:C:H6	1:5:4929:C:H5''	1.63	0.63
5:B:106:PHE:CE2	5:B:130:PHE:CZ	2.87	0.63
5:B:337:VAL:HG21	5:B:345:LEU:HD21	1.81	0.63
14:L:169:ILE:HD13	29:a:142:GLY:HA2	1.79	0.63
29:a:104:VAL:HG13	29:a:109:TYR:OH	1.98	0.63
47:1:339:GLY:HA2	47:1:343:HIS:HB2	1.79	0.63
50:S2:69:C:H2'	50:S2:70:G:C8	2.32	0.63
50:S2:100:U:O4	50:S2:409:C:H1'	1.99	0.63
50:S2:221:A:C5	50:S2:222:U:C5	2.87	0.63
50:S2:493:A:N3	50:S2:493:A:H2'	2.14	0.63
50:S2:635:G:C6	50:S2:636:C:C4	2.86	0.63
50:S2:957:A:H4'	50:S2:973:C:O2'	1.99	0.63
50:S2:993:G:N3	50:S2:994:C:C6	2.67	0.63
50:S2:1291:A:O2'	82:Sf:148:TYR:C	2.40	0.63
50:S2:1310:U:C4'	82:Sf:143:LYS:HG3	2.27	0.63
50:S2:1728:U:C4	50:S2:1729:U:C6	2.87	0.63
50:S2:1793:A:N1	50:S2:1794:C:C4	2.66	0.63
50:S2:1804:U:N3	50:S2:1805:G:N7	2.47	0.63
63:SM:35:ILE:HB	63:SM:61:TYR:CE1	2.34	0.63
86:S6:50:U:H4'	86:S6:51:U:OP1	1.97	0.63
86:S6:53:G:C2	86:S6:62:C:C2	2.85	0.63
1:5:44:A:C2	1:5:45:U:C6	2.86	0.63
1:5:209:U:C5	1:5:211:G:N7	2.66	0.63
1:5:1251:C:N3	1:5:1252:C:C5	2.67	0.63
1:5:1382:G:O2'	1:5:1383:G:H5'	1.98	0.63
1:5:1990:A:H2'	1:5:1991:A:H4'	1.80	0.63
1:5:2301:G:C6	1:5:2302:C:C5	2.85	0.63
1:5:3590:G:C5	1:5:3591:C:C5	2.87	0.63
1:5:3625:G:N2	1:5:3627:G:H5'	2.13	0.63
1:5:3974:G:C4	1:5:3975:C:C5	2.85	0.63
1:5:4070:U:H2'	1:5:4071:U:H6	1.63	0.63
1:5:4194:U:O4	1:5:4197:G:H5''	1.98	0.63
1:5:4384:U:O2'	1:5:4386:C:OP1	2.11	0.63
1:5:4583:C:N4	1:5:4718:G:C6	2.67	0.63
2:7:8:G:C6	2:7:9:C:C4	2.87	0.63
2:7:42:A:C8	13:J:75:ARG:NH1	2.67	0.63
3:8:135:C:C2	3:8:136:U:C5	2.86	0.63
45:r:33:LYS:HD2	45:r:40:TYR:CE2	2.34	0.63
50:S2:43:U:H3	50:S2:484:A:H2	1.22	0.63
50:S2:386:C:C2	50:S2:387:C:C5	2.83	0.63
50:S2:475:C:N3	50:S2:476:A:N7	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:579:C:N4	50:S2:580:U:C4	2.66	0.63
50:S2:751:G:C6	50:S2:792:C:C4	2.87	0.63
50:S2:1271:C:N3	50:S2:1272:C:C6	2.66	0.63
50:S2:1283:C:H1'	63:SM:86:GLY:HA3	1.79	0.63
50:S2:1325:G:C2	50:S2:1327:G:C5	2.87	0.63
50:S2:1568:C:O2'	50:S2:1569:A:O4'	2.16	0.63
50:S2:1834:A:N3	50:S2:1836:G:C5	2.63	0.63
58:SH:57:ARG:HA	58:SH:57:ARG:NE	2.13	0.63
75:SY:76:TYR:HE2	75:SY:86:GLU:OE2	1.81	0.63
85:S5:21:A:N3	85:S5:48:C:N3	2.47	0.63
86:S6:19:G:H1'	86:S6:57:G:C6	2.33	0.63
1:5:730:G:H22	1:5:939:G:N2	1.94	0.63
1:5:916:C:N4	1:5:917:A:N7	2.46	0.63
1:5:1321:G:O4'	1:5:1891:A:N6	2.32	0.63
1:5:1441:C:C2	1:5:1442:C:C6	2.86	0.63
1:5:1556:C:H2'	1:5:1557:C:H6	1.64	0.63
1:5:1560:A:H2	1:5:1561:G:C4	2.11	0.63
1:5:1634:A:C2	1:5:1635:C:N1	2.67	0.63
1:5:1870:C:C2	1:5:1871:A:C8	2.87	0.63
1:5:2056:G:C5	1:5:2058:G:C8	2.87	0.63
1:5:2270:G:N1	1:5:2271:C:C4	2.66	0.63
1:5:2483:G:C2	1:5:2484:A:C8	2.86	0.63
1:5:2526:C:C5	47:1:405:ARG:NE	2.67	0.63
1:5:2688:G:C2	1:5:2689:C:C6	2.86	0.63
1:5:3753:G:C6	1:5:3754:G:N7	2.66	0.63
1:5:3956:G:N2	1:5:3966:A:N9	2.45	0.63
1:5:4091:G:C6	1:5:4092:G:C5	2.86	0.63
1:5:4189:U:C1'	1:5:4380:A:C2	2.81	0.63
1:5:4215:C:C4	1:5:4216:G:N7	2.66	0.63
1:5:4277:G:N2	1:5:4278:C:C2	2.67	0.63
1:5:4479:A:C2	1:5:4480:A:H1'	2.32	0.63
1:5:4735:G:C4	1:5:4736:C:C5	2.87	0.63
1:5:4746:C:C4	1:5:4747:C:C5	2.86	0.63
1:5:5001:U:H2'	1:5:5002:U:O4'	1.99	0.63
2:7:42:A:N1	2:7:43:U:C5	2.66	0.63
3:8:132:G:N3	3:8:133:G:C8	2.66	0.63
19:Q:178:ARG:NH2	19:Q:186:TYR:CE1	2.66	0.63
50:S2:419:G:N2	50:S2:661:U:C2	2.67	0.63
50:S2:1162:C:O2	50:S2:1162:C:H2'	1.97	0.63
50:S2:1223:A:C2	50:S2:1644:C:N3	2.67	0.63
50:S2:1311:C:H2'	50:S2:1312:G:O4'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1383:A:N3	50:S2:1384:C:C5	2.66	0.63
50:S2:1591:C:C4	50:S2:1592:C:C6	2.86	0.63
50:S2:1823:A:OP1	74:SX:60:LYS:HG2	1.98	0.63
85:S5:66:U:H2'	85:S5:67:C:C5	2.33	0.63
1:5:294:G:N1	29:a:61:TYR:CE2	2.67	0.63
1:5:1250:C:C2	1:5:1261:G:C2	2.86	0.63
1:5:1379:C:O3'	1:5:1380:G:H8	1.81	0.63
1:5:1771:U:N3	1:5:1772:C:C5	2.66	0.63
1:5:2126:G:C1'	1:5:2127:C:C6	2.80	0.63
1:5:2294:G:C4	1:5:2295:C:C5	2.87	0.63
1:5:2496:G:C5	1:5:2497:C:C5	2.87	0.63
1:5:2657:G:C6	1:5:2658:G:C6	2.86	0.63
1:5:2726:G:N1	1:5:2727:C:C4	2.67	0.63
1:5:3763:A:H2'	1:5:3764:U:O4'	1.98	0.63
1:5:3789:C:O4'	85:S5:72:C:OP1	2.17	0.63
1:5:4518:A:N9	5:B:257:TRP:CH2	2.65	0.63
1:5:4562:C:C4	1:5:4563:U:C5	2.86	0.63
1:5:4591:U:H2'	1:5:4592:C:C6	2.34	0.63
1:5:4724:A:C5	1:5:4725:C:C5	2.86	0.63
3:8:10:G:O6	3:8:11:C:C5	2.51	0.63
3:8:12:G:C6	3:8:13:G:N7	2.67	0.63
4:A:5:ILE:HG13	4:A:209:HIS:HD2	1.64	0.63
6:C:111:TRP:HB2	6:C:112:HIS:CD2	2.31	0.63
9:F:219:ARG:HH11	9:F:219:ARG:HB3	1.63	0.63
10:G:57:TRP:HE3	10:G:61:ILE:HG21	1.62	0.63
15:M:36:ALA:HB2	15:M:52:PHE:CZ	2.34	0.63
20:R:36:ASN:ND2	47:1:407:THR:HG23	2.13	0.63
28:Z:78:ASN:N	28:Z:78:ASN:OD1	2.32	0.63
45:r:7:TRP:CZ3	45:r:11:ARG:HA	2.33	0.63
50:S2:54:A:C4	50:S2:451:G:N2	2.67	0.63
50:S2:61:A:C2	50:S2:335:G:H1'	2.33	0.63
50:S2:85:A:C2	50:S2:86:C:C5	2.87	0.63
50:S2:114:G:H1'	50:S2:383:G:O4'	1.98	0.63
50:S2:341:C:H3'	50:S2:342:C:H5''	1.81	0.63
50:S2:384:U:C5	50:S2:386:C:H5	2.16	0.63
50:S2:529:A:C6	50:S2:530:U:C5	2.87	0.63
50:S2:906:U:O2	50:S2:907:G:N7	2.31	0.63
50:S2:1058:A:C2	50:S2:1059:G:C5	2.87	0.63
50:S2:1208:A:OP2	50:S2:1208:A:H4'	1.99	0.63
50:S2:1290:G:H2'	82:Sf:146:LEU:HB3	1.80	0.63
50:S2:1417:C:C2	50:S2:1419:C:C5	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1451:G:O2'	50:S2:1474:A:N6	2.32	0.63
73:SW:101:PHE:HB2	73:SW:129:PHE:CE1	2.34	0.63
85:S5:52:G:C2	85:S5:53:G:C8	2.87	0.63
86:S6:53:G:N2	86:S6:54:U:H1'	2.14	0.63
1:5:52:G:H8	1:5:52:G:O5'	1.82	0.63
1:5:1264:C:O2'	1:5:2114:G:P	2.57	0.63
1:5:2329:U:O2'	1:5:2330:G:O4'	2.16	0.63
1:5:2826:U:H1'	1:5:2827:G:H1	1.64	0.63
1:5:3879:G:OP1	1:5:3879:G:O4'	2.16	0.63
1:5:4132:C:C4	1:5:4133:C:C5	2.87	0.63
1:5:4286:C:C2	1:5:4287:G:N7	2.67	0.63
1:5:4345:C:C2	1:5:4346:U:C6	2.87	0.63
2:7:60:G:C2	2:7:61:G:C8	2.86	0.63
10:G:264:LYS:HE3	52:SB:31:TYR:HE2	1.62	0.63
20:R:95:TRP:HZ3	20:R:98:ARG:HH21	1.44	0.63
50:S2:80:G:C6	50:S2:81:U:C4	2.87	0.63
50:S2:185:G:C2	50:S2:186:C:C4	2.87	0.63
50:S2:399:C:H6	74:SX:11:ARG:HH12	1.47	0.63
50:S2:469:A:N1	50:S2:470:G:N7	2.44	0.63
50:S2:942:G:H2'	50:S2:943:U:C6	2.34	0.63
50:S2:1073:U:H2'	50:S2:1073:U:O2	1.98	0.63
50:S2:1095:U:O4	50:S2:1149:A:C6	2.51	0.63
50:S2:1142:G:N3	50:S2:1142:G:H2'	2.13	0.63
50:S2:1208:A:N6	50:S2:1692:U:H3	1.97	0.63
50:S2:1250:A:C2	50:S2:1339:U:H1'	2.34	0.63
50:S2:1283:C:O2	50:S2:1283:C:C2'	2.46	0.63
50:S2:1294:G:H8	82:Sf:151:ASN:CA	2.12	0.63
50:S2:1345:G:C6	50:S2:1385:G:C2	2.87	0.63
50:S2:1383:A:C4	50:S2:1384:C:C5	2.86	0.63
50:S2:1387:G:N2	68:SR:8:THR:HG21	2.14	0.63
50:S2:1608:U:C2	50:S2:1609:C:C6	2.87	0.63
54:SD:150:MET:HB3	54:SD:152:PHE:HE1	1.64	0.63
55:SE:67:GLN:HB3	55:SE:69:PHE:CE2	2.34	0.63
57:SG:198:ARG:NH1	57:SG:202:ASN:OD1	2.32	0.63
85:S5:37:A:C8	85:S5:38:A:N7	2.67	0.63
85:S5:48:C:P	85:S5:59:U:O5'	2.57	0.63
86:S6:63:G:H8	86:S6:63:G:O5'	1.81	0.63
1:5:112:C:H2'	1:5:112:C:O2	1.99	0.63
1:5:986:C:N3	1:5:1068:G:C2	2.67	0.63
1:5:1248:C:C4	1:5:1249:C:C5	2.86	0.63
1:5:1334:A:C6	1:5:1335:G:N7	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1560:A:N6	1:5:1561:G:O6	2.31	0.63
1:5:1562:G:H1	1:5:1566:C:H42	1.43	0.63
1:5:1965:G:C2	1:5:1966:C:C4	2.87	0.63
1:5:2099:G:H2'	1:5:2100:A:O4'	1.98	0.63
1:5:2253:A:H2	1:5:2260:C:N4	1.97	0.63
1:5:2423:A:C2	1:5:2424:G:C4	2.86	0.63
1:5:2451:A:C6	1:5:2452:G:C4	2.87	0.63
1:5:2639:U:H2'	1:5:2694:G:N1	2.12	0.63
1:5:3622:C:C2	1:5:3623:C:C2	2.87	0.63
1:5:3689:G:C6	1:5:3690:U:C5	2.87	0.63
3:8:81:C:O2	3:8:81:C:C2'	2.45	0.63
5:B:100:ARG:HB3	5:B:100:ARG:CZ	2.29	0.63
7:D:249:GLU:OE1	7:D:250:ASN:N	2.32	0.63
47:1:395:LYS:HD3	47:1:395:LYS:O	1.99	0.63
50:S2:496:C:H5'	55:SE:29:PRO:HA	1.81	0.63
50:S2:1036:A:N3	50:S2:1844:U:O2'	2.30	0.63
50:S2:1046:U:C4	50:S2:1047:C:N4	2.67	0.63
50:S2:1111:U:C2	50:S2:1112:U:C6	2.81	0.63
50:S2:1293:A:O4'	82:Sf:150:PHE:CB	2.47	0.63
50:S2:1376:A:N7	50:S2:1377:U:C5	2.66	0.63
50:S2:1380:C:C1'	51:SA:113:GLN:NE2	2.62	0.63
50:S2:1573:G:C2	50:S2:1574:C:H1'	2.34	0.63
50:S2:1841:C:O2	50:S2:1842:C:C5	2.52	0.63
52:SB:42:ARG:HH12	52:SB:233:GLY:N	1.93	0.63
60:SJ:48:PHE:CZ	60:SJ:52:LYS:HG3	2.33	0.63
83:Sg:21:ILE:HD13	83:Sg:307:VAL:HG13	1.80	0.63
85:S5:9:A:C8	85:S5:11:C:N4	2.67	0.63
86:S6:23:A:C2'	86:S6:24:G:H8	2.12	0.63
86:S6:53:G:H21	86:S6:54:U:H1'	1.64	0.63
1:5:31:U:O2'	1:5:32:G:H5'	1.98	0.62
1:5:465:G:C6	1:5:466:A:N7	2.67	0.62
1:5:468:U:O4	1:5:687:U:O4	2.18	0.62
1:5:470:A:N6	8:E:101:ARG:NH2	2.46	0.62
1:5:672:C:C4	1:5:673:C:C5	2.86	0.62
1:5:698:G:C2	1:5:699:C:C6	2.86	0.62
1:5:973:G:N2	1:5:1282:G:O2'	2.32	0.62
1:5:1190:C:O2	1:5:1191:C:C6	2.52	0.62
1:5:1304:C:HO2'	3:8:8:U:HO2'	1.46	0.62
1:5:1642:A:H2'	1:5:1642:A:N3	2.14	0.62
1:5:2096:G:H3'	1:5:2096:G:N3	2.13	0.62
1:5:2441:C:C2	1:5:2442:G:N7	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2506:G:H4'	1:5:2507:A:OP1	1.97	0.62
1:5:2644:G:C6	1:5:2645:G:N7	2.67	0.62
1:5:2724:G:N2	1:5:2726:G:C8	2.66	0.62
1:5:3643:A:C2	38:j:3:LYS:HE3	2.34	0.62
1:5:3858:C:C4	1:5:3859:G:N7	2.67	0.62
1:5:4481:U:N3	1:5:4482:U:C4	2.67	0.62
1:5:4702:G:C6	1:5:4703:U:C5	2.87	0.62
1:5:4730:C:H5''	1:5:4965:U:O2	1.98	0.62
1:5:4744:A:N1	1:5:4745:G:C5	2.67	0.62
1:5:4987:C:H2'	5:B:123:HIS:CD2	2.34	0.62
2:7:59:G:C2	2:7:60:G:C8	2.86	0.62
3:8:34:U:C2	3:8:34:U:C5'	2.82	0.62
5:B:264:PHE:N	17:O:64:THR:O	2.32	0.62
10:G:50:ASP:HB2	26:X:40:ILE:HB	1.81	0.62
11:H:172:ILE:HD11	41:m:102:ARG:HH22	1.64	0.62
13:J:15:LEU:HB3	13:J:165:TRP:CD1	2.34	0.62
50:S2:402:C:N3	50:S2:403:G:C8	2.67	0.62
50:S2:449:A:N6	50:S2:452:G:C6	2.66	0.62
50:S2:690:G:C5	50:S2:691:G:H1'	2.34	0.62
50:S2:693:A:H2'	50:S2:694:G:O4'	1.99	0.62
50:S2:835:C:H5'	50:S2:836:G:OP2	1.98	0.62
50:S2:906:U:O2	50:S2:907:G:C8	2.51	0.62
50:S2:1394:G:N1	50:S2:1395:C:C5	2.67	0.62
50:S2:1397:U:O4	67:SQ:12:VAL:HA	1.99	0.62
53:SC:200:ARG:HH21	53:SC:200:ARG:HG3	1.64	0.62
1:5:149:A:H4'	1:5:151:G:C8	2.35	0.62
1:5:199:G:C4	1:5:201:C:C5	2.88	0.62
1:5:450:G:O6	1:5:1295:C:C4	2.52	0.62
1:5:1243:C:H2'	1:5:1244:G:N7	2.14	0.62
1:5:1563:A:H61	50:S2:1028:A:N6	1.90	0.62
1:5:1758:G:N3	1:5:1759:G:C8	2.67	0.62
1:5:1885:G:N1	1:5:1895:G:C2	2.67	0.62
1:5:1886:G:N2	1:5:1894:C:N3	2.47	0.62
1:5:2321:G:OP1	33:e:35:TRP:N	2.32	0.62
1:5:2340:C:N3	1:5:2341:A:C8	2.66	0.62
1:5:2408:U:H5'	40:l:44:TRP:HD1	1.64	0.62
1:5:2450:G:C6	1:5:2451:A:C8	2.87	0.62
1:5:3631:U:N3	1:5:3632:C:C5	2.68	0.62
1:5:3759:A:N1	50:S2:1709:G:H5'	2.14	0.62
1:5:3937:C:O2	1:5:3937:C:H2'	1.99	0.62
1:5:4117:U:H2'	1:5:4117:U:O2	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4481:U:O2	1:5:4482:U:C6	2.52	0.62
1:5:4481:U:C2'	1:5:4482:U:H6	2.10	0.62
1:5:4874:A:H2'	1:5:4874:A:N3	2.14	0.62
1:5:4997:G:C6	1:5:4998:G:N7	2.66	0.62
1:5:5047:C:C1'	1:5:5048:A:C2	2.83	0.62
2:7:42:A:N1	2:7:43:U:C6	2.67	0.62
19:Q:32:TYR:OH	19:Q:123:PHE:HD2	1.82	0.62
24:V:97:TYR:HE2	25:W:21:TYR:CD1	2.18	0.62
33:e:44:ARG:O	33:e:47:ARG:O	2.17	0.62
39:k:37:ARG:HG3	39:k:38:CYS:N	2.13	0.62
46:z:155:ILE:HD12	46:z:167:VAL:HG21	1.81	0.62
46:z:194:LEU:HD23	46:z:200:ASN:ND2	2.14	0.62
46:z:204:LEU:HD22	46:z:216:LEU:HD11	1.81	0.62
50:S2:10:G:N2	53:SC:114:LYS:HA	2.14	0.62
50:S2:81:U:O4	50:S2:82:G:C5	2.52	0.62
50:S2:311:C:C4	50:S2:312:G:C8	2.87	0.62
50:S2:338:G:C6	50:S2:339:A:C5	2.87	0.62
50:S2:339:A:C2'	50:S2:340:C:H6	2.10	0.62
50:S2:821:G:C8	50:S2:821:G:C5'	2.82	0.62
50:S2:880:G:C8	50:S2:881:G:N7	2.66	0.62
50:S2:1249:C:H42	50:S2:1250:A:N6	1.97	0.62
51:SA:39:TYR:OH	68:SR:104:GLU:HB2	1.99	0.62
86:S6:60:U:O2'	86:S6:61:C:O5'	2.16	0.62
1:5:99:A:C6	1:5:100:C:N3	2.68	0.62
1:5:911:U:N3	1:5:912:G:C8	2.67	0.62
1:5:983:C:O2	1:5:984:C:C5	2.44	0.62
1:5:1089:G:H5'	22:T:140:PHE:CE1	2.33	0.62
1:5:1211:G:C2	1:5:1212:G:N7	2.66	0.62
1:5:1268:G:C6	1:5:1270:A:N7	2.67	0.62
1:5:1296:G:O2'	1:5:1297:U:OP1	2.14	0.62
1:5:1479:G:O2'	1:5:1480:C:C5'	2.47	0.62
1:5:2452:G:N1	1:5:2467:U:C5	2.67	0.62
1:5:3759:A:O2'	50:S2:1826:G:C2'	2.47	0.62
1:5:3859:G:OP2	18:P:25:HIS:NE2	2.31	0.62
1:5:4100:C:C4	1:5:4101:C:C5	2.87	0.62
1:5:4234:A:C2	1:5:4271:A:C8	2.88	0.62
1:5:4270:C:O2	1:5:4270:C:H2'	1.98	0.62
1:5:4324:A:N1	1:5:4325:A:C6	2.68	0.62
1:5:4341:C:N4	86:S6:76:A:C2	2.67	0.62
1:5:4687:A:N7	1:5:4698:C:C6	2.67	0.62
2:7:22:A:N3	2:7:22:A:H2'	2.13	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:59:G:C5	2:7:60:G:C8	2.87	0.62
3:8:101:C:C2	3:8:102:G:C8	2.86	0.62
8:E:55:ARG:O	8:E:58:MET:O	2.17	0.62
24:V:26:ILE:HG22	24:V:101:ASN:HB3	1.81	0.62
25:W:50:ASN:HB3	25:W:55:TYR:HE2	1.60	0.62
27:Y:11:ARG:HH22	27:Y:15:ARG:HG3	1.63	0.62
46:z:111:LEU:HD12	46:z:143:ASN:HB2	1.80	0.62
50:S2:220:U:N3	50:S2:221:A:N7	2.48	0.62
50:S2:299:A:C6	50:S2:300:U:C5	2.87	0.62
50:S2:309:G:C4	50:S2:310:C:C5	2.87	0.62
50:S2:616:A:H2'	74:SX:88:ASP:CG	2.25	0.62
50:S2:856:C:H2'	50:S2:856:C:O2	1.98	0.62
50:S2:1004:U:C2	50:S2:1005:G:C8	2.87	0.62
50:S2:1045:U:H2'	50:S2:1045:U:O2	1.97	0.62
50:S2:1066:U:C4	50:S2:1067:C:C5	2.87	0.62
50:S2:1095:U:N3	50:S2:1149:A:C6	2.67	0.62
50:S2:1102:G:H22	50:S2:1130:G:H22	1.46	0.62
50:S2:1213:C:C4	50:S2:1682:C:N3	2.67	0.62
52:SB:221:PRO:C	52:SB:223:PHE:N	2.57	0.62
54:SD:22:ASN:HD22	54:SD:22:ASN:C	2.07	0.62
54:SD:201:LYS:O	54:SD:203:PRO:HD2	1.99	0.62
60:SJ:20:PHE:N	60:SJ:20:PHE:CD1	2.67	0.62
65:SO:146:ARG:C	65:SO:148:GLY:N	2.54	0.62
68:SR:24:LEU:CD1	68:SR:54:VAL:HG13	2.23	0.62
83:Sg:113:PHE:CE2	83:Sg:117:ASN:HA	2.33	0.62
1:5:28:C:O2	1:5:28:C:H2'	1.97	0.62
1:5:60:G:C6	1:5:61:A:N7	2.68	0.62
1:5:62:A:H2'	1:5:63:G:C8	2.34	0.62
1:5:99:A:N3	1:5:99:A:H2'	2.13	0.62
1:5:112:C:N3	1:5:113:A:C8	2.67	0.62
1:5:197:A:N3	1:5:222:C:O2'	2.26	0.62
1:5:1266:G:H5'	1:5:1266:G:H8	1.65	0.62
1:5:1298:C:N3	1:5:1299:G:C8	2.67	0.62
1:5:1550:G:N2	1:5:1579:C:H1'	2.15	0.62
1:5:1899:G:C8	1:5:2278:G:C6	2.87	0.62
1:5:2368:A:N6	1:5:2827:G:H1'	2.14	0.62
1:5:2714:G:N3	1:5:2715:G:C8	2.66	0.62
1:5:3606:U:C2	1:5:3607:U:C6	2.87	0.62
1:5:4243:C:H2'	1:5:4243:C:O2	1.99	0.62
1:5:4504:C:H2'	1:5:4505:C:C6	2.34	0.62
1:5:4896:G:C2	1:5:4897:G:C5	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4935:C:N4	8:E:179:ARG:CG	2.62	0.62
7:D:177:THR:HB	7:D:190:PHE:CE2	2.35	0.62
27:Y:59:ARG:HG3	27:Y:103:LYS:HD2	1.80	0.62
37:i:45:ARG:NH2	37:i:50:PHE:CE1	2.67	0.62
50:S2:10:G:C2	50:S2:11:A:C8	2.86	0.62
50:S2:377:G:N1	50:S2:378:U:C4	2.68	0.62
50:S2:499:G:C2	50:S2:504:G:C6	2.87	0.62
50:S2:1220:A:C6	50:S2:1221:G:C6	2.87	0.62
50:S2:1284:A:C6	63:SM:33:ARG:HD3	2.34	0.62
50:S2:1406:G:C4	50:S2:1407:U:H1'	2.34	0.62
55:SE:29:PRO:HG2	55:SE:46:ILE:HD11	1.81	0.62
60:SJ:59:GLU:CD	60:SJ:59:GLU:CB	2.68	0.62
68:SR:5:ARG:HG3	68:SR:49:LYS:CE	2.29	0.62
68:SR:83:ASN:C	68:SR:83:ASN:ND2	2.55	0.62
85:S5:12:U:C6	85:S5:24:G:C2	2.88	0.62
85:S5:13:C:C2	85:S5:22:G:N1	2.11	0.62
86:S6:63:G:C2	86:S6:64:A:H1'	2.34	0.62
1:5:688:U:C4	1:5:689:U:C6	2.87	0.62
1:5:966:A:N6	1:5:2252:G:C8	2.56	0.62
1:5:1213:G:N7	1:5:1215:C:C6	2.66	0.62
1:5:1534:A:C6	38:j:14:LYS:HA	2.34	0.62
1:5:1634:A:C4	1:5:1635:C:C5	2.87	0.62
1:5:1672:U:C2	1:5:1673:U:C4	2.87	0.62
1:5:1685:G:C4	1:5:1686:C:C5	2.87	0.62
1:5:1896:A:N7	9:F:101:ASN:ND2	2.47	0.62
1:5:2444:U:C5	1:5:2445:C:H5	2.17	0.62
1:5:2533:C:N3	1:5:2534:C:N4	2.48	0.62
1:5:2645:G:N2	1:5:2646:C:C2	2.68	0.62
1:5:2856:C:N4	1:5:2857:A:H62	1.94	0.62
1:5:3648:A:C5	1:5:3785:A:N6	2.67	0.62
1:5:3656:A:H4'	1:5:3747:A:C2	2.35	0.62
1:5:3765:G:O2'	1:5:3766:A:C8	2.52	0.62
1:5:4054:C:H1'	46:z:35:GLN:CB	2.28	0.62
1:5:4093:G:C5	1:5:4094:G:C8	2.88	0.62
2:7:119:U:O4	7:D:258:LYS:NZ	2.32	0.62
3:8:133:G:C2	3:8:134:G:N7	2.67	0.62
3:8:134:G:N2	3:8:135:C:C2	2.67	0.62
6:C:22:VAL:HG11	6:C:257:PHE:HD2	1.64	0.62
7:D:42:ASN:CA	7:D:44:TYR:OH	2.44	0.62
7:D:204:VAL:HG12	7:D:236:MET:HE1	1.81	0.62
17:O:116:LYS:HE3	21:S:169:THR:HG21	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:d:28:ASN:OD1	32:d:28:ASN:C	2.43	0.62
32:d:118:GLN:HA	32:d:118:GLN:OE1	2.00	0.62
47:1:197:SER:HA	48:2:55:LYS:HG2	1.79	0.62
47:1:449:LEU:O	47:1:453:ILE:CG1	2.43	0.62
50:S2:74:G:H5'	50:S2:75:G:OP2	1.99	0.62
50:S2:460:A:N1	50:S2:461:U:O4	2.33	0.62
50:S2:590:A:O2'	50:S2:591:U:O5'	2.18	0.62
50:S2:751:G:N1	50:S2:791:C:O2	2.32	0.62
50:S2:848:U:N3	50:S2:849:A:N6	2.46	0.62
50:S2:1331:C:O5'	50:S2:1489:A:H1'	1.99	0.62
50:S2:1431:G:C6	50:S2:1432:U:C4	2.87	0.62
50:S2:1603:G:C8	69:SS:28:PHE:HE2	2.16	0.62
50:S2:1746:U:O4	50:S2:1789:G:N2	2.32	0.62
50:S2:1859:A:N1	50:S2:1860:A:C6	2.68	0.62
85:S5:38:A:H3'	85:S5:39:U:C5	2.35	0.62
86:S6:23:A:C2'	86:S6:24:G:C8	2.82	0.62
86:S6:68:C:C4	86:S6:69:G:N7	2.68	0.62
1:5:55:G:N1	1:5:56:A:N7	2.47	0.62
1:5:168:C:C2	1:5:268:G:C2	2.87	0.62
1:5:172:C:C4	1:5:173:C:C4	2.87	0.62
1:5:962:C:OP1	1:5:2264:C:N4	2.31	0.62
1:5:1070:G:C5	1:5:1071:C:C5	2.87	0.62
1:5:1263:A:C6	1:5:1264:C:C4	2.87	0.62
1:5:1480:C:O2	1:5:1484:G:O6	2.16	0.62
1:5:1671:U:O2	1:5:1671:U:C2'	2.45	0.62
1:5:1845:U:O2	1:5:1846:G:N7	2.32	0.62
1:5:2000:G:H3'	1:5:2000:G:N3	2.15	0.62
1:5:2292:C:N3	1:5:2293:U:C5	2.68	0.62
1:5:2463:G:C2	1:5:2464:C:N3	2.67	0.62
1:5:2590:G:N1	1:5:2754:G:N1	2.46	0.62
1:5:2606:G:N1	1:5:2607:C:C4	2.67	0.62
1:5:2734:U:N3	1:5:2735:G:C8	2.68	0.62
1:5:3767:C:OP1	50:S2:1849:G:C8	2.52	0.62
1:5:3901:A:O2'	1:5:4450:U:O3'	2.17	0.62
1:5:4059:C:C4	1:5:4060:U:C5	2.88	0.62
1:5:4233:A:C2	1:5:4290:U:O4	2.48	0.62
1:5:4464:A:H5'	1:5:4464:A:N3	2.15	0.62
1:5:4737:G:C5	1:5:4963:G:N2	2.67	0.62
3:8:13:G:C4	3:8:14:U:C5	2.88	0.62
5:B:116:ARG:HB3	5:B:177:LYS:HA	1.82	0.62
7:D:27:LYS:HE3	13:J:147:ARG:NH2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:73:MET:CB	9:F:84:TYR:HE2	2.13	0.62
9:F:85:VAL:HG13	21:S:62:VAL:HA	1.82	0.62
44:p:24:LYS:NZ	50:S2:1180:C:C5	2.67	0.62
50:S2:148:U:O4	50:S2:170:A:N7	2.33	0.62
50:S2:149:A:H2'	50:S2:150:A:C8	2.34	0.62
50:S2:166:A:C2	50:S2:167:G:C8	2.87	0.62
50:S2:376:A:C6	50:S2:377:G:C8	2.87	0.62
50:S2:376:A:C6	50:S2:377:G:N7	2.67	0.62
50:S2:383:G:O2'	62:SL:133:PRO:O	2.16	0.62
50:S2:1132:C:N4	50:S2:1133:A:C8	2.67	0.62
50:S2:1206:G:C1'	50:S2:1834:A:C8	2.83	0.62
50:S2:1537:A:C5	50:S2:1538:C:C5	2.87	0.62
50:S2:1561:A:H2'	50:S2:1561:A:N3	2.13	0.62
50:S2:1574:C:C2	50:S2:1575:G:C8	2.87	0.62
50:S2:1590:C:C4	50:S2:1591:C:H1'	2.34	0.62
50:S2:1741:U:N3	50:S2:1742:C:C5	2.67	0.62
50:S2:1781:A:H2'	50:S2:1782:G:C8	2.34	0.62
63:SM:87:GLU:HA	63:SM:91:LEU:HD11	1.80	0.62
68:SR:53:TYR:O	68:SR:54:VAL:C	2.43	0.62
70:ST:60:THR:HG23	70:ST:75:MET:HE2	1.82	0.62
74:SX:9:THR:O	74:SX:13:LEU:CG	2.48	0.62
86:S6:9:A:C2	86:S6:46:G:C6	2.87	0.62
86:S6:63:G:N2	86:S6:64:A:H1'	2.15	0.62
1:5:10:A:H1'	1:5:2472:A:N1	2.14	0.62
1:5:33:A:C6	1:5:50:C:C2	2.88	0.62
1:5:83:C:P	1:5:84:A:HO2'	2.22	0.62
1:5:166:C:N3	1:5:167:C:C5	2.64	0.62
1:5:751:G:N3	1:5:752:G:C8	2.67	0.62
1:5:1266:G:H21	1:5:2111:G:H1'	1.65	0.62
1:5:1396:G:N7	29:a:112:LEU:HD22	2.14	0.62
1:5:2506:G:H2'	1:5:2506:G:N3	2.15	0.62
1:5:2744:A:N3	1:5:2745:A:C5	2.68	0.62
1:5:3703:G:C6	1:5:3704:U:C4	2.88	0.62
1:5:4081:G:C2	1:5:4082:G:C5	2.88	0.62
1:5:4093:G:C3'	1:5:4094:G:H5'	2.30	0.62
1:5:4468:U:O2	1:5:4708:A:C8	2.53	0.62
1:5:4518:A:C8	5:B:257:TRP:CZ3	2.88	0.62
1:5:4651:A:C6	1:5:4652:G:C8	2.88	0.62
3:8:95:A:H2'	36:h:63:GLN:HE22	1.63	0.62
3:8:138:C:C2	3:8:139:G:C8	2.88	0.62
10:G:169:PHE:CD2	16:N:6:TYR:CB	2.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:113:GLU:HB3	11:H:115:ARG:HH22	1.63	0.62
24:V:98:PHE:CE1	25:W:22:ALA:HB3	2.34	0.62
27:Y:15:ARG:NH1	27:Y:19:PHE:HE2	1.89	0.62
31:c:82:GLY:HA3	31:c:89:TYR:O	1.99	0.62
34:f:36:ARG:HH11	34:f:36:ARG:HG2	1.64	0.62
50:S2:90:G:H2'	50:S2:91:A:O4'	1.99	0.62
50:S2:551:U:O2'	81:Se:44:ASN:CG	2.43	0.62
50:S2:582:C:H4'	75:SY:33:ALA:HB2	1.80	0.62
50:S2:1204:A:C4	50:S2:1205:C:C4	2.88	0.62
50:S2:1208:A:O2'	50:S2:1835:A:N7	2.31	0.62
50:S2:1303:C:O2	50:S2:1303:C:O4'	2.18	0.62
50:S2:1433:C:O3'	50:S2:1434:C:O4'	2.17	0.62
66:SP:17:TYR:HB3	66:SP:25:LEU:HD11	1.81	0.62
82:Sf:138:ARG:HH11	82:Sf:138:ARG:HG3	1.64	0.62
83:Sg:125:ARG:HD3	83:Sg:150:TRP:CE2	2.34	0.62
86:S6:9:A:C2	86:S6:46:G:C5	2.88	0.62
1:5:270:U:C2	1:5:271:C:C6	2.88	0.62
1:5:383:A:O2'	1:5:384:A:O5'	2.18	0.62
1:5:479:G:C2	1:5:480:C:C6	2.87	0.62
1:5:1247:U:C2	1:5:1248:C:C5	2.87	0.62
1:5:1267:C:H5''	1:5:2110:C:O2'	2.00	0.62
1:5:1302:U:N3	1:5:1303:A:C8	2.68	0.62
1:5:1371:A:H61	3:8:28:C:C2'	2.13	0.62
1:5:1599:A:H2'	1:5:1600:A:H5''	1.82	0.62
1:5:1676:C:C2'	1:5:3914:U:O4	2.48	0.62
1:5:1760:G:C5	1:5:1761:G:C8	2.88	0.62
1:5:1878:G:N3	1:5:1879:C:C6	2.68	0.62
1:5:1899:G:N2	1:5:1900:C:C6	2.68	0.62
1:5:1965:G:N2	1:5:1966:C:N1	2.47	0.62
1:5:2441:C:H2'	1:5:2442:G:H8	1.64	0.62
1:5:2560:C:N3	1:5:2561:C:C5	2.67	0.62
1:5:2769:U:O2'	1:5:2770:C:H6	1.82	0.62
1:5:2802:C:O2	35:g:13:TYR:OH	2.17	0.62
1:5:3590:G:C6	1:5:3591:C:C4	2.88	0.62
1:5:3911:C:O2'	1:5:3912:U:O5'	2.13	0.62
1:5:4426:C:N4	1:5:4427:G:C5	2.68	0.62
1:5:4652:G:N3	1:5:4653:C:C6	2.68	0.62
1:5:5047:C:O2	1:5:5048:A:C6	2.53	0.62
2:7:51:G:C6	2:7:52:C:N4	2.68	0.62
3:8:10:G:C5	3:8:11:C:C5	2.87	0.62
3:8:64:U:C2'	3:8:65:A:C8	2.83	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:171:LEU:HB3	9:F:189:MET:HE1	1.80	0.62
43:o:36:GLN:HA	43:o:36:GLN:HE21	1.64	0.62
50:S2:70:G:N1	50:S2:71:G:C4	2.68	0.62
50:S2:104:A:N7	50:S2:105:U:C5	2.68	0.62
50:S2:579:C:H2'	50:S2:579:C:O2	2.00	0.62
50:S2:1205:C:O2'	50:S2:1206:G:O5'	2.17	0.62
50:S2:1229:G:C4	50:S2:1230:C:C6	2.88	0.62
50:S2:1291:A:N6	82:Sf:140:TYR:CZ	2.68	0.62
50:S2:1304:U:O2	50:S2:1305:C:C5	2.52	0.62
86:S6:5:C:N3	86:S6:70:G:C6	2.68	0.62
86:S6:10:G:N3	86:S6:11:C:C5	2.67	0.62
86:S6:65:G:C6	86:S6:66:U:C4	2.87	0.62
1:5:295:A:OP2	43:o:39:ARG:NH1	2.33	0.62
1:5:330:G:N1	1:5:331:G:N7	2.48	0.62
1:5:449:C:C2	1:5:450:G:C8	2.88	0.62
1:5:692:A:C2	1:5:693:C:C4	2.87	0.62
1:5:964:A:C8	1:5:964:A:C4'	2.82	0.62
1:5:1299:G:C6	1:5:1300:G:N7	2.68	0.62
1:5:1358:G:O5'	6:C:114:ARG:NH2	2.33	0.62
1:5:1752:G:C4	1:5:1753:G:C8	2.87	0.62
1:5:2326:G:N3	1:5:2327:G:C8	2.67	0.62
1:5:2773:G:N2	1:5:2774:C:C2	2.68	0.62
1:5:2856:C:O2	1:5:2857:A:H8	1.75	0.62
1:5:3590:G:C4	1:5:3591:C:C6	2.88	0.62
1:5:3943:A:C4	1:5:3944:G:C8	2.88	0.62
1:5:3974:G:H4'	46:z:210:MET:CE	2.26	0.62
1:5:4304:A:C2	29:a:43:ILE:HG23	2.35	0.62
1:5:4462:C:C2	1:5:4515:G:N2	2.68	0.62
1:5:4747:C:H2'	1:5:4748:U:C6	2.35	0.62
1:5:4771:C:H6	1:5:4772:C:C6	2.17	0.62
1:5:5050:C:N3	1:5:5051:C:C5	2.68	0.62
1:5:5051:C:N3	1:5:5052:C:C5	2.68	0.62
2:7:18:C:C2	2:7:19:C:H6	2.11	0.62
3:8:3:A:O3'	18:P:61:ARG:HD3	2.00	0.62
7:D:35:ARG:HH11	7:D:35:ARG:HG2	1.63	0.62
10:G:81:ASN:HD21	10:G:238:GLY:N	1.98	0.62
47:1:248:THR:CA	47:1:440:ALA:HB1	2.30	0.62
50:S2:52:G:C4	50:S2:53:C:C6	2.88	0.62
50:S2:99:A:C6	50:S2:100:U:C5	2.87	0.62
50:S2:165:G:N7	50:S2:166:A:N7	2.46	0.62
50:S2:616:A:C2'	74:SX:88:ASP:CG	2.73	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:794:A:N1	50:S2:795:A:C5	2.68	0.62
50:S2:804:U:O2	50:S2:805:U:C6	2.52	0.62
50:S2:1022:U:H1'	64:SN:128:TYR:CD2	2.35	0.62
50:S2:1332:A:C2	50:S2:1333:U:H1'	2.35	0.62
50:S2:1353:A:C5'	50:S2:1353:A:C8	2.82	0.62
50:S2:1741:U:C4	50:S2:1742:C:C5	2.87	0.62
50:S2:1771:G:C2	50:S2:1772:C:C6	2.88	0.62
50:S2:1832:A:C6	50:S2:1833:C:H5	2.17	0.62
51:SA:10:MET:HA	51:SA:55:TRP:CZ3	2.35	0.62
52:SB:228:LEU:HD13	52:SB:228:LEU:O	2.00	0.62
60:SJ:69:ARG:O	60:SJ:71:LEU:N	2.33	0.62
63:SM:51:VAL:HG12	63:SM:109:VAL:HG22	1.81	0.62
1:5:86:U:N3	1:5:97:G:N2	2.48	0.62
1:5:499:G:N2	1:5:656:C:C2	2.67	0.62
1:5:931:C:O2'	1:5:932:A:O4'	2.12	0.62
1:5:1174:G:C2	1:5:1175:A:C8	2.87	0.62
1:5:1279:A:C3'	1:5:1280:C:C5	2.83	0.62
1:5:1550:G:C2	1:5:1579:C:C2	2.88	0.62
1:5:1635:C:H2'	1:5:1636:U:C5'	2.26	0.62
1:5:1668:A:C8	1:5:1881:C:N4	2.68	0.62
1:5:1781:U:C2	1:5:1782:U:C5	2.88	0.62
1:5:1797:G:C2	1:5:1798:G:N7	2.67	0.62
1:5:1805:A:N7	30:b:28:ARG:HB3	2.15	0.62
1:5:1867:A:O2'	1:5:1868:A:O4'	2.15	0.62
1:5:1928:C:C4	17:O:133:ARG:NH1	2.68	0.62
1:5:2046:G:O2'	1:5:2047:A:OP2	2.11	0.62
1:5:2340:C:H2'	1:5:2340:C:O2	2.00	0.62
1:5:2342:G:C2	1:5:2344:U:C6	2.87	0.62
1:5:2409:U:O4'	40:l:44:TRP:NE1	2.33	0.62
1:5:2480:G:N1	1:5:2481:G:C5	2.68	0.62
1:5:2602:G:H1'	1:5:2742:G:C4	2.34	0.62
1:5:2743:A:H2'	1:5:2744:A:H8	1.62	0.62
1:5:3712:A:H3'	1:5:3713:U:H5''	1.80	0.62
1:5:3741:C:C2	1:5:3742:G:N7	2.68	0.62
1:5:3840:U:O2	1:5:3840:U:H2'	1.99	0.62
1:5:3859:G:H4'	18:P:139:TYR:CZ	2.35	0.62
1:5:4055:U:C3'	46:z:37:SER:OG	2.48	0.62
1:5:4196:G:N3	1:5:4396:A:H1'	2.15	0.62
1:5:4978:G:O2'	1:5:4979:A:H3'	2.00	0.62
1:5:5020:G:C6	1:5:5021:C:C4	2.88	0.62
2:7:9:C:C5	2:7:10:C:C5	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:96:C:O2	3:8:97:A:H8	1.73	0.62
7:D:155:THR:OG1	7:D:179:ARG:NH1	2.33	0.62
10:G:77:PRO:HA	10:G:237:TRP:CZ3	2.34	0.62
26:X:145:ASP:HB3	26:X:148:ASP:OD1	1.99	0.62
41:m:96:CYS:SG	88:m:201:ZN:ZN	1.89	0.62
50:S2:431:G:C6	50:S2:432:G:N7	2.68	0.62
50:S2:909:G:N1	50:S2:910:G:C5	2.67	0.62
50:S2:964:A:HO2'	50:S2:965:U:C5'	2.13	0.62
50:S2:1063:C:C2'	50:S2:1838:U:O4	2.47	0.62
50:S2:1109:C:O2	50:S2:1110:G:C8	2.52	0.62
50:S2:1209:A:C2	50:S2:1691:U:N3	2.68	0.62
50:S2:1290:G:C3'	82:Sf:146:LEU:HG	2.25	0.62
50:S2:1293:A:C4	82:Sf:152:LYS:N	2.68	0.62
61:SK:82:TYR:O	63:SM:27:ILE:HD11	2.00	0.62
64:SN:38:TYR:OH	64:SN:78:LYS:HE3	2.00	0.62
86:S6:17:A:H1'	86:S6:18:G:H4'	1.82	0.62
1:5:68:U:C5	1:5:69:A:C8	2.88	0.61
1:5:183:C:O2	1:5:253:G:O6	2.17	0.61
1:5:288:G:N1	1:5:289:C:C4	2.68	0.61
1:5:1267:C:C5'	1:5:2110:C:O2'	2.48	0.61
1:5:1430:C:N3	1:5:1431:C:C5	2.68	0.61
1:5:1752:G:C6	1:5:1753:G:C5	2.88	0.61
1:5:1881:C:O4'	1:5:2281:U:C6	2.53	0.61
1:5:1937:C:H3'	1:5:1938:C:H2'	1.80	0.61
1:5:2363:A:C2	1:5:2364:G:H1'	2.34	0.61
1:5:2367:A:N7	1:5:2798:A:C4	2.69	0.61
1:5:2712:G:N2	1:5:2713:C:C2	2.67	0.61
1:5:2784:C:H2'	1:5:2785:C:H6	1.65	0.61
1:5:2856:C:C4	1:5:2857:A:N6	2.67	0.61
1:5:2857:A:C6	1:5:2858:A:N6	2.68	0.61
1:5:3728:A:C8	1:5:3729:U:C1'	2.83	0.61
1:5:3905:A:N1	1:5:4449:A:C6	2.67	0.61
1:5:4097:G:N1	1:5:4098:A:N7	2.47	0.61
1:5:4734:A:C6	1:5:4735:G:C5	2.88	0.61
1:5:4933:C:N4	1:5:4934:A:N7	2.48	0.61
2:7:55:A:H2'	2:7:56:G:O5'	1.99	0.61
5:B:10:ARG:NH2	5:B:10:ARG:HB2	2.14	0.61
13:J:107:PHE:CE1	13:J:130:PHE:CB	2.82	0.61
41:m:96:CYS:HG	88:m:201:ZN:ZN	1.11	0.61
45:r:7:TRP:CD1	45:r:38:PHE:HD1	2.18	0.61
50:S2:37:C:N4	50:S2:38:A:C5	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:118:C:C1'	50:S2:445:A:C2	2.83	0.61
50:S2:340:C:N4	50:S2:341:C:N4	2.48	0.61
50:S2:474:G:N2	50:S2:475:C:N1	2.48	0.61
50:S2:832:G:C6	50:S2:833:C:C5	2.88	0.61
50:S2:950:C:C4	50:S2:951:C:C5	2.88	0.61
50:S2:1405:A:H1'	50:S2:1580:A:N1	2.15	0.61
50:S2:1527:C:N4	50:S2:1528:G:C5	2.68	0.61
50:S2:1612:G:C2	50:S2:1628:C:C2	2.87	0.61
50:S2:1757:G:C2	50:S2:1758:G:C8	2.87	0.61
53:SC:253:PRO:O	53:SC:255:LEU:N	2.33	0.61
85:S5:7:A:N1	85:S5:67:C:C4	2.67	0.61
85:S5:31:A:C2	85:S5:40:C:N3	2.68	0.61
85:S5:52:G:C6	85:S5:53:G:C5	2.88	0.61
86:S6:27:G:C2	86:S6:28:G:C4	2.88	0.61
86:S6:71:G:H8	86:S6:71:G:O5'	1.82	0.61
1:5:55:G:C2	1:5:56:A:C8	2.88	0.61
1:5:62:A:C2	1:5:77:U:O2	2.52	0.61
1:5:114:G:C2'	1:5:115:C:H5'	2.29	0.61
1:5:202:C:C2	1:5:214:G:C2	2.87	0.61
1:5:280:G:C5'	16:N:120:TRP:HE3	2.13	0.61
1:5:288:G:H2'	1:5:289:C:H6	1.64	0.61
1:5:323:C:N3	1:5:324:A:N7	2.47	0.61
1:5:472:C:H2'	1:5:473:C:O4'	2.00	0.61
1:5:1089:G:H5'	22:T:140:PHE:HE1	1.65	0.61
1:5:1218:G:C6	1:5:1219:G:N9	2.68	0.61
1:5:1268:G:C4	1:5:2111:G:C2	2.88	0.61
1:5:1394:G:H5''	14:L:186:ARG:HH12	1.65	0.61
1:5:1669:A:H4'	1:5:1685:G:H21	1.65	0.61
1:5:1785:C:H1'	12:I:94:PHE:CE2	2.34	0.61
1:5:1986:U:O2	1:5:2007:G:O6	2.17	0.61
1:5:2106:G:N2	1:5:2107:C:H5	1.98	0.61
1:5:2647:A:H2'	1:5:2648:G:H5'	1.82	0.61
1:5:2833:A:O2'	1:5:2834:C:O4'	2.16	0.61
1:5:2856:C:O2	1:5:2856:C:C2'	2.47	0.61
1:5:3717:A:C6	1:5:3736:A:N1	2.69	0.61
1:5:3793:U:C2	1:5:3794:C:C6	2.88	0.61
1:5:3847:C:N3	1:5:3848:U:C6	2.68	0.61
1:5:4058:U:N3	1:5:4059:C:C5	2.68	0.61
1:5:4085:A:N6	10:G:62:ARG:HH22	1.98	0.61
1:5:4219:A:O2'	1:5:4220:A:O5'	2.19	0.61
1:5:4233:A:C8	1:5:4235:G:C8	2.87	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4618:G:C2	1:5:4619:U:C5	2.88	0.61
1:5:4744:A:N3	1:5:4745:G:C8	2.68	0.61
3:8:10:G:N1	3:8:11:C:N1	2.48	0.61
3:8:111:U:H3'	3:8:111:U:O2	2.00	0.61
42:n:24:SER:HB3	50:S2:1719:A:H5'	1.82	0.61
50:S2:43:U:O2	50:S2:43:U:C2'	2.47	0.61
50:S2:68:A:C2	50:S2:69:C:C2	2.88	0.61
50:S2:164:A:O2'	50:S2:165:G:O4'	2.17	0.61
50:S2:413:G:H2'	50:S2:414:A:O5'	2.01	0.61
50:S2:452:G:C2'	50:S2:453:C:O5'	2.48	0.61
50:S2:961:G:C6	50:S2:962:A:C5	2.88	0.61
50:S2:1273:C:N3	50:S2:1506:A:C2	2.67	0.61
50:S2:1402:A:N7	50:S2:1441:U:O4	2.32	0.61
50:S2:1552:G:H5'	50:S2:1557:C:H5	1.65	0.61
50:S2:1701:C:H4'	84:S4:20:U:C5	2.36	0.61
53:SC:134:ASN:HD22	53:SC:134:ASN:C	2.08	0.61
64:SN:20:ARG:HD3	73:SW:56:HIS:NE2	2.15	0.61
67:SQ:53:GLU:OE1	67:SQ:85:ARG:NH2	2.27	0.61
83:Sg:226:HIS:ND1	83:Sg:226:HIS:C	2.58	0.61
85:S5:21:A:N1	85:S5:48:C:N1	2.46	0.61
85:S5:69:G:C3'	85:S5:70:G:H8	2.13	0.61
1:5:112:C:C5	1:5:157:U:C4	2.88	0.61
1:5:272:U:O2	1:5:273:U:C6	2.52	0.61
1:5:301:G:C6	1:5:302:C:C4	2.88	0.61
1:5:370:U:C6	1:5:1637:A:N1	2.69	0.61
1:5:1066:G:C2	1:5:1067:G:C4	2.87	0.61
1:5:1266:G:H22	1:5:2111:G:N2	1.98	0.61
1:5:1552:G:H2'	1:5:1574:G:H22	1.64	0.61
1:5:1725:U:OP1	1:5:1725:U:H4'	1.99	0.61
1:5:1894:C:H2'	1:5:1895:G:O5'	1.99	0.61
1:5:2478:C:N3	1:5:2479:G:C5	2.69	0.61
1:5:3694:U:C2	1:5:3695:U:C6	2.88	0.61
1:5:3907:G:C1'	1:5:4449:A:N9	2.64	0.61
1:5:3969:G:N1	1:5:4053:A:C2	2.69	0.61
1:5:4039:G:O2'	1:5:4050:A:C1'	2.48	0.61
1:5:4097:G:C4'	35:g:115:LYS:CB	2.76	0.61
1:5:4229:U:O4	1:5:4230:C:C4	2.53	0.61
1:5:4240:G:C2	1:5:4241:C:N1	2.68	0.61
1:5:4341:C:N4	1:5:4342:C:C5	2.68	0.61
1:5:4737:G:C6	1:5:4738:C:N4	2.68	0.61
1:5:4737:G:C4	1:5:4738:C:C5	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:150:TRP:HE3	16:N:151:ILE:N	1.99	0.61
50:S2:377:G:N3	50:S2:378:U:C6	2.69	0.61
50:S2:447:A:C5	50:S2:449:A:C8	2.88	0.61
50:S2:836:G:H2'	50:S2:837:A:C5'	2.30	0.61
50:S2:1203:G:N1	50:S2:1204:A:C5	2.69	0.61
50:S2:1344:A:HO2'	50:S2:1345:G:P	2.18	0.61
50:S2:1552:G:H5'	50:S2:1557:C:C5	2.35	0.61
50:S2:1730:U:N3	50:S2:1731:A:C8	2.68	0.61
86:S6:31:A:N1	86:S6:40:C:C4	2.68	0.61
1:5:269:G:H2'	1:5:269:G:N3	2.16	0.61
1:5:950:G:C2	1:5:951:G:N7	2.68	0.61
1:5:1074:G:N2	1:5:1238:A:N3	2.49	0.61
1:5:1189:G:C6	1:5:1190:C:C4	2.88	0.61
1:5:1265:G:C6	1:5:1266:G:C6	2.88	0.61
1:5:1268:G:OP2	1:5:2110:C:H2'	2.00	0.61
1:5:1366:G:N7	1:5:1367:C:O3'	2.33	0.61
1:5:1885:G:C2	1:5:1895:G:N3	2.68	0.61
1:5:2295:C:O2	1:5:2296:G:C8	2.53	0.61
1:5:2301:G:N3	1:5:2302:C:C6	2.69	0.61
1:5:2325:C:C2	1:5:2326:G:H8	2.19	0.61
1:5:2409:U:C4	1:5:2783:A:C2	2.88	0.61
1:5:2451:A:N6	1:5:2452:G:C5	2.69	0.61
1:5:3633:C:C2	1:5:3634:G:C8	2.88	0.61
1:5:3676:G:O2'	1:5:3677:U:O5'	2.18	0.61
1:5:3785:A:N1	1:5:4536:C:H1'	2.14	0.61
1:5:4273:A:H2'	1:5:4274:A:C1'	2.29	0.61
1:5:4277:G:N1	1:5:4278:C:C4	2.69	0.61
1:5:4287:G:O2'	1:5:4288:C:C5'	2.48	0.61
2:7:18:C:C4	2:7:19:C:C5	2.85	0.61
2:7:93:G:C5	2:7:94:C:C5	2.88	0.61
3:8:131:G:C6	3:8:132:G:C5	2.89	0.61
6:C:94:ASN:HA	6:C:100:ARG:O	2.00	0.61
15:M:3:PHE:CB	15:M:6:PHE:HZ	2.13	0.61
24:V:97:TYR:CE2	25:W:21:TYR:CD1	2.89	0.61
50:S2:426:A:H2'	50:S2:426:A:N3	2.15	0.61
50:S2:457:C:C4	50:S2:458:A:C8	2.88	0.61
50:S2:474:G:N1	50:S2:475:C:C5	2.68	0.61
50:S2:695:C:C4	50:S2:696:G:N7	2.68	0.61
50:S2:958:G:HO2'	50:S2:959:G:C4'	2.06	0.61
50:S2:1059:G:H2'	50:S2:1060:A:H5'	1.83	0.61
50:S2:1133:A:H2'	50:S2:1133:A:N3	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1206:G:H22	50:S2:1693:G:H1'	1.65	0.61
50:S2:1258:A:N6	50:S2:1659:U:H3	1.98	0.61
50:S2:1272:C:OP1	50:S2:1303:C:O4'	2.19	0.61
50:S2:1351:G:N2	50:S2:1379:A:C8	2.68	0.61
50:S2:1500:G:H3'	50:S2:1501:C:H6	1.65	0.61
50:S2:1605:G:C3'	50:S2:1606:G:O4'	2.48	0.61
50:S2:1730:U:C4	50:S2:1731:A:N7	2.67	0.61
50:S2:1822:A:H2	50:S2:1823:A:H61	1.04	0.61
75:SY:76:TYR:CE2	75:SY:86:GLU:OE2	2.54	0.61
85:S5:69:G:C2'	85:S5:70:G:H8	2.14	0.61
86:S6:29:G:N1	86:S6:42:C:N3	2.47	0.61
86:S6:72:C:O2'	86:S6:73:A:H5''	1.99	0.61
1:5:152:U:C2	1:5:153:G:C8	2.88	0.61
1:5:181:C:N3	1:5:256:G:C2	2.68	0.61
1:5:209:U:C4	1:5:211:G:N9	2.68	0.61
1:5:1214:C:N4	9:F:58:HIS:CE1	2.68	0.61
1:5:1264:C:C4	1:5:1265:G:N7	2.69	0.61
1:5:1277:G:N3	1:5:1278:C:C6	2.69	0.61
1:5:1665:C:H2'	1:5:1666:C:O5'	2.00	0.61
1:5:1693:U:C4	1:5:1694:C:C5	2.89	0.61
1:5:2261:G:O2'	1:5:2262:G:O5'	2.18	0.61
1:5:2371:U:C2'	1:5:2372:U:H5'	2.30	0.61
1:5:2382:A:H62	1:5:2830:G:C1'	2.12	0.61
1:5:2479:G:C5	1:5:2480:G:N7	2.68	0.61
1:5:3636:C:C4	1:5:3637:U:C5	2.89	0.61
1:5:3672:G:N7	1:5:3674:G:C1'	2.63	0.61
1:5:3674:G:N1	1:5:3675:G:N7	2.49	0.61
1:5:3739:C:C2	1:5:3740:G:C8	2.89	0.61
1:5:3965:A:C6	1:5:4047:A:C6	2.88	0.61
1:5:3970:G:O2'	46:z:31:THR:HG21	1.99	0.61
1:5:4041:C:C5	1:5:4042:G:C8	2.87	0.61
1:5:4166:G:C2	1:5:4167:G:N7	2.69	0.61
2:7:8:G:C5	2:7:9:C:C5	2.88	0.61
2:7:42:A:C1'	13:J:75:ARG:HH12	2.12	0.61
3:8:30:U:C2	3:8:31:G:C8	2.89	0.61
9:F:100:ILE:O	9:F:100:ILE:HG23	2.00	0.61
50:S2:54:A:N3	50:S2:451:G:C2	2.69	0.61
50:S2:480:G:H2'	50:S2:481:C:O4'	2.00	0.61
50:S2:497:C:N3	50:S2:506:G:C2	2.68	0.61
50:S2:533:A:C5	50:S2:534:G:C8	2.88	0.61
50:S2:570:C:C2	50:S2:571:U:C6	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1056:U:H2'	50:S2:1057:C:O4'	2.00	0.61
50:S2:1094:C:C2	50:S2:1095:U:C6	2.89	0.61
50:S2:1203:G:C2'	50:S2:1204:A:H5'	2.29	0.61
50:S2:1249:C:N4	50:S2:1250:A:N6	2.48	0.61
50:S2:1314:U:C2	50:S2:1315:U:C1'	2.84	0.61
50:S2:1374:C:H2'	50:S2:1375:G:O5'	2.01	0.61
50:S2:1379:A:O2'	51:SA:105:PRO:HB2	1.99	0.61
50:S2:1588:A:H4'	70:ST:92:PHE:CE2	2.34	0.61
52:SB:106:THR:OG1	52:SB:108:ASP:OD1	2.16	0.61
63:SM:22:LEU:HD22	63:SM:89:VAL:HG22	1.83	0.61
75:SY:88:LYS:HE3	75:SY:97:TYR:OH	2.00	0.61
84:S4:16:U:N3	84:S4:17:U:N3	2.47	0.61
1:5:164:G:C6	1:5:165:A:C5	2.89	0.61
1:5:208:A:C1'	1:5:232:G:C2	2.82	0.61
1:5:719:C:N3	1:5:720:G:N7	2.49	0.61
1:5:1252:C:C2	1:5:1259:G:C2	2.89	0.61
1:5:1634:A:C2	1:5:1635:C:C5	2.89	0.61
1:5:1899:G:N2	1:5:1900:C:N3	2.48	0.61
1:5:1964:A:C6	1:5:1965:G:H1'	2.36	0.61
1:5:2037:C:C4	1:5:2038:U:O4	2.54	0.61
1:5:2059:C:N3	1:5:2060:G:N7	2.49	0.61
1:5:2368:A:C6	1:5:2788:U:O4	2.53	0.61
1:5:3772:U:C2	1:5:3773:U:C6	2.88	0.61
1:5:3953:G:C2	1:5:3954:A:H1'	2.36	0.61
1:5:4085:A:N7	10:G:56:LYS:HA	2.14	0.61
1:5:4221:C:N3	12:I:116:ARG:HD3	2.15	0.61
1:5:4342:C:N3	1:5:4343:U:C5	2.68	0.61
1:5:4477:A:C2	1:5:4604:G:O4'	2.54	0.61
1:5:4510:A:N6	1:5:4592:C:C2'	2.64	0.61
2:7:56:G:H2'	2:7:57:C:C6	2.36	0.61
3:8:63:U:O2	3:8:63:U:H2'	1.98	0.61
3:8:74:U:C4	27:Y:74:TYR:CD1	2.86	0.61
3:8:130:C:C4	3:8:131:G:C8	2.89	0.61
8:E:111:TYR:OH	45:r:119:ARG:HG2	2.00	0.61
9:F:149:LEU:HB2	9:F:197:TYR:HH	1.62	0.61
13:J:119:TYR:O	69:SS:101:ASN:ND2	2.33	0.61
22:T:17:ARG:HH12	22:T:45:MET:HE2	1.66	0.61
34:f:76:ARG:NE	34:f:85:ARG:NH2	2.48	0.61
35:g:11:LEU:HB3	35:g:18:ASN:ND2	2.13	0.61
50:S2:75:G:C6	57:SG:171:THR:HB	2.35	0.61
50:S2:300:U:N3	50:S2:301:A:N7	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:301:A:N3	59:SI:73:THR:HG21	2.15	0.61
50:S2:338:G:C5	50:S2:339:A:N7	2.69	0.61
50:S2:474:G:N3	50:S2:475:C:C6	2.69	0.61
50:S2:1018:U:O2	50:S2:1019:C:C5	2.52	0.61
50:S2:1124:C:C4	50:S2:1125:C:C5	2.88	0.61
50:S2:1310:U:H6	82:Sf:143:LYS:CE	2.12	0.61
50:S2:1455:A:C6	50:S2:1456:G:C5	2.88	0.61
50:S2:1526:G:N3	50:S2:1527:C:C6	2.69	0.61
50:S2:1552:G:C8	50:S2:1578:U:O4	2.54	0.61
50:S2:1609:C:O2	50:S2:1610:G:N7	2.34	0.61
50:S2:1772:C:C2	50:S2:1773:C:C6	2.88	0.61
50:S2:1795:G:C2	50:S2:1796:G:C8	2.89	0.61
55:SE:98:ASN:C	55:SE:99:PHE:HD1	2.09	0.61
55:SE:99:PHE:N	55:SE:99:PHE:CD1	2.69	0.61
63:SM:16:THR:HA	63:SM:19:GLN:CG	2.30	0.61
63:SM:85:LEU:O	63:SM:85:LEU:HD23	2.01	0.61
73:SW:90:GLN:HB2	73:SW:94:LEU:HD12	1.83	0.61
85:S5:65:G:H2'	85:S5:66:U:N1	2.14	0.61
86:S6:53:G:N9	86:S6:54:U:C5	2.68	0.61
86:S6:71:G:H8	86:S6:71:G:P	2.24	0.61
1:5:127:G:N2	1:5:128:C:C2	2.69	0.61
1:5:130:C:C2	1:5:139:G:C2	2.88	0.61
1:5:422:C:N3	1:5:423:G:N7	2.48	0.61
1:5:488:G:N3	1:5:489:C:C6	2.68	0.61
1:5:668:C:H2'	1:5:669:C:O4'	2.01	0.61
1:5:1185:G:C2	1:5:1186:U:H1'	2.35	0.61
1:5:1251:C:C2	1:5:1252:C:C6	2.89	0.61
1:5:1280:C:C2	1:5:1282:G:C8	2.89	0.61
1:5:1361:G:C6	1:5:1362:G:N7	2.69	0.61
1:5:1380:G:C4	1:5:1382:G:C6	2.89	0.61
1:5:1437:C:C2	1:5:2098:G:N7	2.68	0.61
1:5:1634:A:C5	1:5:1635:C:C5	2.88	0.61
1:5:1672:U:C2	1:5:1673:U:C6	2.77	0.61
1:5:1673:U:C4	1:5:1674:C:N4	2.68	0.61
1:5:1689:G:H2'	1:5:1690:C:O4'	1.99	0.61
1:5:2079:G:N2	1:5:2080:U:C6	2.68	0.61
1:5:2394:G:N2	1:5:2820:C:C5	2.69	0.61
1:5:2451:A:C4	1:5:2452:G:C8	2.89	0.61
1:5:2723:U:H2'	1:5:2724:G:C8	2.36	0.61
1:5:3643:A:C2	38:j:3:LYS:CE	2.84	0.61
1:5:3656:A:O4'	1:5:3747:A:H2	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4055:U:OP1	46:z:203:ALA:CB	2.49	0.61
1:5:4281:A:C6	1:5:4283:G:C8	2.87	0.61
1:5:4479:A:N7	1:5:4480:A:C8	2.68	0.61
1:5:4745:G:C2'	1:5:4746:C:C5	2.83	0.61
1:5:4934:A:N1	1:5:4935:C:C5	2.68	0.61
3:8:45:C:C2	3:8:46:G:C8	2.88	0.61
6:C:222:ARG:HH21	27:Y:3:PHE:HE2	1.46	0.61
16:N:65:ARG:HG2	16:N:129:PHE:CE2	2.36	0.61
17:O:128:ARG:HE	21:S:162:GLN:HE22	1.49	0.61
50:S2:64:A:C5	50:S2:82:G:N1	2.69	0.61
50:S2:139:C:O2'	50:S2:140:C:O3'	2.15	0.61
50:S2:139:C:O2'	50:S2:140:C:O5'	2.19	0.61
50:S2:608:C:N3	50:S2:609:U:C6	2.68	0.61
50:S2:839:C:C6	50:S2:841:G:C5	2.89	0.61
50:S2:961:G:H2'	50:S2:961:G:N3	2.15	0.61
50:S2:992:A:H2'	50:S2:992:A:N3	2.16	0.61
50:S2:1123:C:H2'	50:S2:1123:C:O2	2.00	0.61
50:S2:1291:A:O2'	82:Sf:148:TYR:O	2.18	0.61
50:S2:1292:C:O4'	82:Sf:148:TYR:CB	2.48	0.61
50:S2:1351:G:N2	50:S2:1379:A:C5	2.69	0.61
50:S2:1409:A:H2	50:S2:1438:A:N1	1.98	0.61
50:S2:1611:G:C1'	69:SS:86:ARG:HH12	2.13	0.61
74:SX:89:GLY:CA	81:Se:10:GLY:N	2.61	0.61
77:Sa:28:ARG:HG3	77:Sa:28:ARG:HH11	1.65	0.61
85:S5:47:U:C3'	85:S5:48:C:O5'	2.49	0.61
86:S6:65:G:N1	86:S6:66:U:C4	2.69	0.61
1:5:90:G:N2	1:5:95:G:C5	2.69	0.61
1:5:99:A:H4'	16:N:181:HIS:CE1	2.36	0.61
1:5:209:U:C5	1:5:211:G:C5	2.89	0.61
1:5:323:C:O2	1:5:324:A:C8	2.54	0.61
1:5:348:G:N1	1:5:350:C:C4	2.69	0.61
1:5:470:A:N7	1:5:471:A:N7	2.48	0.61
1:5:1916:G:O6	34:f:18:LEU:HB2	2.01	0.61
1:5:2361:G:O2'	1:5:2362:U:OP2	2.19	0.61
1:5:2400:G:C2	1:5:2401:A:C8	2.88	0.61
1:5:2517:A:H2'	1:5:2518:G:C8	2.36	0.61
1:5:3698:G:N2	1:5:3699:C:C2	2.69	0.61
1:5:3805:U:N3	1:5:3806:G:N7	2.47	0.61
1:5:3858:C:N3	1:5:3859:G:C8	2.68	0.61
1:5:3940:U:C4	1:5:4073:A:N6	2.69	0.61
1:5:4187:G:H2'	1:5:4188:U:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4243:C:H1'	1:5:4268:A:C2	2.36	0.61
1:5:4277:G:C4	1:5:4278:C:C6	2.89	0.61
1:5:4742:G:C2	1:5:4743:G:C8	2.89	0.61
2:7:110:G:C2	2:7:111:C:C5	2.89	0.61
3:8:134:G:N1	3:8:135:C:C5	2.69	0.61
6:C:76:ILE:HG22	6:C:77:PRO:HD2	1.83	0.61
9:F:219:ARG:O	9:F:248:ARG:NH2	2.34	0.61
18:P:3:ARG:HG3	18:P:3:ARG:HH11	1.66	0.61
36:h:38:GLY:CA	47:1:266:PRO:HB3	2.31	0.61
41:m:119:ASN:OD1	41:m:119:ASN:C	2.43	0.61
44:p:28:LYS:CE	50:S2:1040:G:O2'	2.49	0.61
44:p:85:ARG:HH11	44:p:85:ARG:HG2	1.65	0.61
50:S2:51:U:C4	50:S2:52:G:N7	2.68	0.61
50:S2:53:C:N3	50:S2:54:A:C8	2.69	0.61
50:S2:99:A:N1	50:S2:100:U:C5	2.69	0.61
50:S2:536:A:N6	50:S2:537:C:C5	2.69	0.61
50:S2:558:G:H2'	50:S2:559:G:C8	2.36	0.61
50:S2:618:C:OP1	74:SX:87:ASN:N	2.32	0.61
50:S2:950:C:C2	50:S2:951:C:C6	2.89	0.61
50:S2:963:A:H2'	50:S2:964:A:H8	1.63	0.61
50:S2:1093:A:C5	50:S2:1094:C:C5	2.89	0.61
50:S2:1095:U:O4	50:S2:1149:A:C2	2.53	0.61
50:S2:1102:G:N2	50:S2:1130:G:H22	1.99	0.61
50:S2:1640:A:H5'	86:S6:41:C:C2'	2.31	0.61
51:SA:12:GLU:OE1	68:SR:111:PHE:CD1	2.54	0.61
55:SE:99:PHE:HD1	55:SE:99:PHE:N	1.98	0.61
68:SR:24:LEU:CD1	68:SR:58:MET:HE2	2.30	0.61
1:5:57:G:N2	1:5:58:G:C2	2.69	0.61
1:5:446:C:N3	1:5:447:C:C5	2.68	0.61
1:5:480:C:OP1	45:r:66:ARG:O	2.18	0.61
1:5:1340:C:C4	1:5:1341:U:C5	2.89	0.61
1:5:1929:A:N6	1:5:2054:U:N3	2.33	0.61
1:5:1983:A:N3	1:5:2010:A:O3'	2.34	0.61
1:5:2106:G:C2	1:5:2107:C:H5	2.19	0.61
1:5:2272:C:C2'	1:5:2273:G:O5'	2.49	0.61
1:5:2282:A:H5''	29:a:21:ARG:HD3	1.81	0.61
1:5:2428:A:C8	1:5:2789:A:H2	2.18	0.61
1:5:2584:G:C6	1:5:2585:C:C5	2.89	0.61
1:5:2664:G:N2	1:5:2671:C:C2	2.69	0.61
1:5:4112:C:O3'	52:SB:222:LYS:NZ	2.33	0.61
1:5:4138:C:C2	1:5:4147:G:C2	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4143:G:C5	1:5:4145:C:C6	2.89	0.61
1:5:4539:U:C2	1:5:4540:C:C5	2.89	0.61
1:5:4547:C:C2	1:5:4549:G:N7	2.69	0.61
1:5:5003:U:O2'	1:5:5004:C:O4'	2.18	0.61
2:7:6:C:C4	2:7:7:G:C8	2.89	0.61
2:7:58:A:N6	2:7:59:G:C6	2.69	0.61
2:7:59:G:C6	2:7:60:G:C5	2.89	0.61
3:8:102:G:P	3:8:104:A:HO2'	2.20	0.61
3:8:116:C:C4	3:8:117:C:C5	2.88	0.61
12:I:35:ASP:HB2	12:I:86:HIS:HE1	1.66	0.61
29:a:127:LYS:HG2	29:a:128:PHE:HE2	1.66	0.61
46:z:116:LEU:O	46:z:120:ILE:HG22	2.00	0.61
47:1:448:LEU:HA	47:1:451:VAL:HG22	0.69	0.61
50:S2:340:C:N3	50:S2:341:C:C5	2.67	0.61
50:S2:381:C:C2'	50:S2:382:C:C5	2.84	0.61
50:S2:396:U:C2'	50:S2:397:G:O5'	2.49	0.61
50:S2:477:G:C2	50:S2:478:G:N7	2.69	0.61
50:S2:850:C:O2'	50:S2:851:C:H5'	2.00	0.61
50:S2:903:A:N7	50:S2:904:A:C8	2.69	0.61
50:S2:1055:A:H2	50:S2:1063:C:H41	1.49	0.61
50:S2:1200:A:C6	50:S2:1201:U:C5	2.89	0.61
50:S2:1215:C:C5	50:S2:1645:C:H2'	2.36	0.61
50:S2:1571:G:C6	50:S2:1572:C:C4	2.89	0.61
54:SD:6:SER:O	54:SD:10:LYS:N	2.34	0.61
58:SH:110:THR:O	58:SH:110:THR:HG23	1.99	0.61
59:SI:83:TYR:CD1	59:SI:83:TYR:C	2.79	0.61
63:SM:101:ARG:C	63:SM:102:LYS:HG2	2.25	0.61
85:S5:70:G:N1	85:S5:71:G:C6	2.68	0.61
86:S6:5:C:H2'	86:S6:6:G:O4'	2.01	0.61
86:S6:37:A:C2'	86:S6:38:A:N3	2.60	0.61
1:5:69:A:O5'	1:5:100:C:O2'	2.19	0.61
1:5:91:G:C8	1:5:93:G:C6	2.89	0.61
1:5:145:G:C6	1:5:146:G:N7	2.69	0.61
1:5:325:U:H2'	1:5:326:C:C6	2.36	0.61
1:5:930:G:N3	1:5:931:C:H6	1.99	0.61
1:5:1268:G:N1	1:5:2111:G:N2	2.49	0.61
1:5:1290:G:C2	1:5:1291:G:N7	2.69	0.61
1:5:1367:C:N4	1:5:1369:C:OP2	2.34	0.61
1:5:1392:A:N1	1:5:1393:G:C6	2.69	0.61
1:5:1447:C:H2'	1:5:1448:G:C8	2.35	0.61
1:5:1615:C:C4	1:5:1616:U:C5	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1936:C:C4	1:5:1937:C:C5	2.88	0.61
1:5:1947:U:O2	1:5:1947:U:H2'	2.01	0.61
1:5:1949:U:C2	1:5:1950:U:C6	2.89	0.61
1:5:1966:C:O2	1:5:1967:A:C8	2.53	0.61
1:5:2104:G:C6	1:5:2105:A:N7	2.69	0.61
1:5:2335:C:H2'	1:5:2335:C:O2	2.00	0.61
1:5:2448:G:C6	1:5:2511:A:C6	2.89	0.61
1:5:2454:U:N3	1:5:2455:G:N7	2.49	0.61
1:5:3711:A:N6	1:5:3712:A:H1'	2.16	0.61
1:5:3909:C:N3	1:5:3910:C:H5	1.92	0.61
1:5:4059:C:N3	1:5:4060:U:C6	2.69	0.61
1:5:4176:C:C2	1:5:4177:C:C5	2.88	0.61
1:5:4313:A:C6	1:5:4314:C:C5	2.88	0.61
1:5:4724:A:C6	1:5:4725:C:C4	2.88	0.61
40:l:21:ARG:CD	47:1:273:ARG:HD3	2.21	0.61
45:r:16:PHE:N	45:r:16:PHE:CD1	2.67	0.61
46:z:67:VAL:CG1	46:z:111:LEU:HD13	2.31	0.61
50:S2:18:C:O3'	74:SQ:107:ARG:NH2	2.31	0.61
50:S2:28:U:O2	50:S2:28:U:H2'	2.01	0.61
50:S2:149:A:H2'	50:S2:150:A:H8	1.66	0.61
50:S2:167:G:N2	50:S2:168:C:C2	2.69	0.61
50:S2:315:C:O2	50:S2:316:G:C8	2.54	0.61
50:S2:371:A:C2	50:S2:372:U:C4	2.89	0.61
50:S2:615:C:H2'	50:S2:616:A:O4'	2.01	0.61
50:S2:879:C:C4	50:S2:880:G:C2	2.89	0.61
50:S2:957:A:N1	50:S2:967:C:C2	2.69	0.61
50:S2:1217:A:H2'	50:S2:1218:C:C6	2.36	0.61
50:S2:1231:C:OP2	69:SS:139:THR:HG21	2.01	0.61
50:S2:1287:A:C2	50:S2:1313:A:C4	2.89	0.61
50:S2:1596:U:N3	50:S2:1597:C:C5	2.69	0.61
50:S2:1754:G:C6	50:S2:1755:C:C4	2.89	0.61
67:SQ:55:VAL:HA	67:SQ:63:PHE:CE1	2.35	0.61
67:SQ:146:ARG:HE	86:S6:35:A:H4'	1.65	0.61
85:S5:8:U:H2'	85:S5:8:U:O2	2.01	0.61
1:5:21:G:C6	3:8:36:G:C2	2.89	0.60
1:5:291:U:O2	1:5:293:G:H3'	2.01	0.60
1:5:495:C:N3	1:5:496:G:N7	2.48	0.60
1:5:745:G:H2'	1:5:746:A:O4'	2.00	0.60
1:5:1067:G:H2'	1:5:1068:G:O4'	2.01	0.60
1:5:1394:G:H2'	1:5:1395:U:C6	2.36	0.60
1:5:1487:G:N2	1:5:1488:G:H1'	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1613:A:H4'	4:A:186:TYR:CD2	2.36	0.60
1:5:1816:C:O2	1:5:1816:C:H2'	2.00	0.60
1:5:1852:U:OP1	29:a:23:GLY:N	2.30	0.60
1:5:1964:A:C6	1:5:4694:G:C5	2.88	0.60
1:5:2363:A:H1'	1:5:4560:C:H5	1.66	0.60
1:5:2612:G:C5	1:5:2613:C:C5	2.89	0.60
1:5:3969:G:H4'	46:z:166:ALA:O	2.01	0.60
1:5:4040:C:C5	1:5:4041:C:C1'	2.83	0.60
1:5:4061:G:C6	1:5:4062:A:N7	2.68	0.60
1:5:4441:A:H8	1:5:4441:A:H5''	1.65	0.60
1:5:4750:G:O6	1:5:4949:G:C6	2.54	0.60
4:A:186:TYR:HE1	4:A:190:LYS:HG3	1.65	0.60
6:C:102:PHE:O	6:C:103:ALA:C	2.43	0.60
7:D:103:LEU:CD2	7:D:244:HIS:HB3	2.31	0.60
8:E:197:ILE:HD11	8:E:256:ARG:HB2	1.83	0.60
15:M:6:PHE:N	15:M:6:PHE:CD2	2.67	0.60
40:l:21:ARG:HH12	47:1:273:ARG:HG2	1.66	0.60
43:o:36:GLN:O	43:o:36:GLN:NE2	2.34	0.60
50:S2:360:A:N1	50:S2:363:A:N7	2.49	0.60
50:S2:379:C:N4	50:S2:380:G:O6	2.34	0.60
50:S2:429:C:H2'	50:S2:429:C:O2	2.00	0.60
50:S2:461:U:O2	50:S2:462:C:C5	2.54	0.60
50:S2:533:A:C6	50:S2:534:G:N7	2.68	0.60
50:S2:570:C:N3	50:S2:571:U:C5	2.69	0.60
50:S2:1181:A:O2'	50:S2:1182:A:C8	2.43	0.60
50:S2:1210:G:H8	50:S2:1210:G:H5'	1.65	0.60
50:S2:1315:U:C4	50:S2:1316:C:N1	2.68	0.60
50:S2:1378:A:C5	51:SA:136:GLU:OE2	2.54	0.60
50:S2:1406:G:C2	50:S2:1407:U:C2	2.89	0.60
50:S2:1542:C:H2'	50:S2:1543:U:C6	2.35	0.60
50:S2:1607:A:H61	50:S2:1632:G:H1'	1.64	0.60
50:S2:1693:G:C3'	50:S2:1694:U:C6	2.80	0.60
50:S2:1860:A:C2	50:S2:1862:G:N9	2.69	0.60
54:SD:150:MET:HB3	54:SD:152:PHE:CE1	2.36	0.60
63:SM:51:VAL:HG13	63:SM:85:LEU:HD21	1.83	0.60
68:SR:34:VAL:HA	83:Sg:150:TRP:HZ2	1.66	0.60
85:S5:15:G:H22	85:S5:59:U:H3	1.47	0.60
1:5:42:A:C5	1:5:4379:A:N1	2.69	0.60
1:5:56:A:N1	1:5:57:G:C6	2.69	0.60
1:5:259:C:C2	1:5:260:C:C6	2.89	0.60
1:5:371:A:O2'	1:5:372:A:C5'	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1277:G:N2	1:5:1278:C:C2	2.69	0.60
1:5:2110:C:N3	1:5:2121:C:N4	2.48	0.60
1:5:2290:C:N3	1:5:2291:G:N7	2.49	0.60
1:5:2319:C:O2	1:5:2319:C:H2'	1.99	0.60
1:5:2428:A:C4	1:5:2789:A:C2	2.88	0.60
1:5:2468:U:C2	1:5:2473:A:N6	2.70	0.60
1:5:2566:G:C2	1:5:2567:G:N7	2.69	0.60
1:5:2874:U:O2'	1:5:2876:G:N7	2.33	0.60
1:5:3961:G:O6	1:5:3963:A:C5'	2.48	0.60
1:5:4117:U:C5	10:G:41:ILE:O	2.55	0.60
1:5:4198:G:C5	1:5:4199:C:C5	2.89	0.60
1:5:4332:C:O2	1:5:4333:C:H6	1.81	0.60
3:8:134:G:N3	3:8:135:C:C6	2.69	0.60
9:F:93:PHE:C	9:F:93:PHE:CD1	2.79	0.60
17:O:58:LEU:HD11	17:O:145:VAL:HG13	1.83	0.60
20:R:95:TRP:O	20:R:96:MET:C	2.44	0.60
50:S2:185:G:C2	50:S2:186:C:C6	2.88	0.60
50:S2:323:C:H3'	50:S2:324:C:H5''	1.83	0.60
50:S2:349:A:C3'	59:SI:27:TYR:OH	2.49	0.60
50:S2:535:G:N2	50:S2:536:A:C8	2.69	0.60
50:S2:581:U:C2	50:S2:582:C:C6	2.90	0.60
50:S2:608:C:C4	50:S2:609:U:C5	2.89	0.60
50:S2:891:G:C2	50:S2:892:U:C6	2.89	0.60
50:S2:975:G:C6	50:S2:976:G:N7	2.69	0.60
50:S2:1284:A:H2	63:SM:34:GLY:HA2	1.66	0.60
50:S2:1291:A:O5'	82:Sf:146:LEU:HD12	2.01	0.60
50:S2:1527:C:H2'	50:S2:1527:C:O2	2.01	0.60
52:SB:77:ASP:O	52:SB:77:ASP:OD1	2.19	0.60
70:ST:85:ASN:HB2	70:ST:88:MET:HB2	1.83	0.60
79:Sc:32:VAL:HG11	79:Sc:56:LEU:HD22	1.81	0.60
85:S5:53:G:C2	85:S5:54:U:C5	2.89	0.60
86:S6:23:A:C8	86:S6:24:G:C5	2.87	0.60
1:5:388:A:C6	1:5:411:G:C6	2.90	0.60
1:5:488:G:C6	1:5:489:C:C4	2.89	0.60
1:5:642:G:C2	1:5:643:C:C4	2.89	0.60
1:5:667:A:C2	1:5:668:C:C5	2.89	0.60
1:5:957:G:P	1:5:1284:G:N3	2.74	0.60
1:5:1277:G:N1	1:5:1278:C:C4	2.69	0.60
1:5:1324:A:C2	1:5:3876:A:C2'	2.84	0.60
1:5:1354:A:C5	1:5:1503:A:C2	2.88	0.60
1:5:1769:G:C2	1:5:1770:A:C5	2.88	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1945:G:C6	1:5:1946:G:N7	2.69	0.60
1:5:1983:A:N1	1:5:2010:A:OP2	2.35	0.60
1:5:2263:A:O2'	1:5:2265:G:H2'	2.00	0.60
1:5:2294:G:N3	1:5:2295:C:C5	2.69	0.60
1:5:2301:G:C2	1:5:2302:C:C5	2.89	0.60
1:5:2304:U:OP1	1:5:2305:U:O2'	2.12	0.60
1:5:2309:G:H2'	1:5:2310:C:O4'	2.02	0.60
1:5:2468:U:O4	1:5:2473:A:C2	2.53	0.60
1:5:3648:A:C8	1:5:3785:A:N6	2.69	0.60
1:5:3759:A:H62	50:S2:1709:G:H4'	1.57	0.60
1:5:3871:A:C6	1:5:3885:G:C2	2.90	0.60
1:5:3894:A:H2'	1:5:3895:G:O4'	2.01	0.60
1:5:3909:C:C4	1:5:3910:C:H5	2.19	0.60
1:5:4191:G:N2	1:5:4374:U:O4'	2.34	0.60
1:5:4455:G:C5	1:5:4456:C:C5	2.89	0.60
1:5:4733:C:H41	1:5:4734:A:H1'	1.66	0.60
1:5:4977:A:O2'	1:5:4978:G:H5'	2.01	0.60
1:5:5047:C:Cl'	1:5:5048:A:N1	2.64	0.60
2:7:29:C:C2	2:7:30:C:C5	2.89	0.60
2:7:42:A:N6	2:7:43:U:C4	2.69	0.60
3:8:42:G:C6	3:8:43:A:N7	2.69	0.60
3:8:142:U:C2	3:8:143:G:C8	2.89	0.60
12:I:171:TRP:CB	12:I:181:PHE:CE2	2.83	0.60
20:R:132:PHE:N	20:R:132:PHE:CD2	2.70	0.60
21:S:94:TYR:CE2	21:S:96:GLU:HG3	2.37	0.60
28:Z:36:ARG:HG3	28:Z:36:ARG:HH11	1.65	0.60
29:a:131:ARG:O	29:a:134:GLU:HB3	2.02	0.60
34:f:27:LEU:HD22	34:f:78:HIS:CD2	2.36	0.60
47:1:247:ALA:HB3	47:1:440:ALA:HB2	1.83	0.60
47:1:292:ILE:CD1	47:1:449:LEU:HD22	2.30	0.60
50:S2:751:G:N1	50:S2:791:C:C2	2.69	0.60
50:S2:805:U:C2	50:S2:806:U:C5	2.89	0.60
50:S2:924:G:C6	50:S2:925:G:C8	2.89	0.60
50:S2:1310:U:O2	50:S2:1310:U:H2'	2.01	0.60
50:S2:1568:C:C2'	50:S2:1569:A:C8	2.84	0.60
50:S2:1642:U:H5'	86:S6:32:U:C5'	2.28	0.60
50:S2:1784:G:H2'	50:S2:1785:C:H5'	1.83	0.60
50:S2:1797:U:O2'	50:S2:1798:C:O5'	2.13	0.60
62:SL:116:CYS:SG	62:SL:117:PHE:N	2.74	0.60
77:Sa:51:ARG:HH11	79:Sc:40:ARG:HH11	1.50	0.60
1:5:189:G:N2	1:5:190:G:C4	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1177:U:H1'	7:D:282:GLN:CD	2.26	0.60
1:5:1179:U:C4	1:5:1181:C:OP2	2.54	0.60
1:5:1264:C:H2'	1:5:1265:G:O4'	2.02	0.60
1:5:1439:C:O2	9:F:36:ARG:NH1	2.34	0.60
1:5:1682:A:H3'	1:5:1683:U:H6	1.66	0.60
1:5:1806:G:C2	1:5:1807:C:C5	2.90	0.60
1:5:2498:C:C4	1:5:2499:C:C5	2.88	0.60
1:5:2830:G:C2	1:5:2831:G:N7	2.69	0.60
1:5:3738:G:C6	1:5:3739:C:C6	2.90	0.60
1:5:3943:A:N3	1:5:3944:G:N7	2.49	0.60
1:5:4080:C:O2	1:5:4080:C:H2'	2.02	0.60
1:5:4109:G:C6	1:5:4110:C:C4	2.90	0.60
1:5:4301:U:H4'	22:T:54:HIS:HD2	1.61	0.60
1:5:4945:G:O6	34:f:60:PRO:HD3	2.00	0.60
3:8:70:G:C6	3:8:87:G:N1	2.69	0.60
4:A:209:HIS:HE1	4:A:211:PHE:HD2	1.47	0.60
13:J:99:PHE:CZ	13:J:105:PHE:HB2	2.37	0.60
47:1:423:PHE:CD2	47:1:427:CYS:SG	2.95	0.60
50:S2:166:A:N3	50:S2:167:G:C8	2.69	0.60
50:S2:222:U:C2	50:S2:223:C:C6	2.90	0.60
50:S2:639:C:O2'	50:S2:640:A:H5'	2.01	0.60
50:S2:798:A:N6	58:SH:106:ARG:HB2	2.16	0.60
50:S2:886:A:H2'	50:S2:887:U:O4'	2.02	0.60
50:S2:1022:U:H1'	64:SN:128:TYR:CE2	2.36	0.60
50:S2:1278:A:C2	50:S2:1320:G:C2	2.89	0.60
50:S2:1293:A:O4'	82:Sf:150:PHE:HB3	2.01	0.60
50:S2:1293:A:C1'	82:Sf:150:PHE:CD2	2.85	0.60
50:S2:1422:G:C6	50:S2:1424:G:OP2	2.55	0.60
50:S2:1433:C:OP2	50:S2:1433:C:O3'	2.18	0.60
50:S2:1476:A:N3	50:S2:1476:A:H5'	2.16	0.60
50:S2:1526:G:N2	50:S2:1527:C:C2	2.69	0.60
50:S2:1641:A:C2'	86:S6:31:A:O2'	2.49	0.60
50:S2:1730:U:C2	50:S2:1731:A:C8	2.90	0.60
54:SD:158:ILE:H	54:SD:158:ILE:CD1	2.13	0.60
58:SH:8:ILE:HG23	58:SH:9:VAL:HG13	1.83	0.60
58:SH:177:TYR:HE2	58:SH:185:VAL:HG21	1.66	0.60
60:SJ:110:LEU:HD12	60:SJ:142:VAL:HG11	1.84	0.60
85:S5:52:G:C5	85:S5:53:G:C8	2.89	0.60
86:S6:6:G:H2'	86:S6:7:G:H5'	1.81	0.60
86:S6:48:C:C5	86:S6:59:U:C5	2.89	0.60
1:5:88:A:C2'	1:5:89:C:O5'	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:182:G:H22	1:5:254:G:N2	1.98	0.60
1:5:325:U:H2'	1:5:326:C:H6	1.67	0.60
1:5:332:C:H4'	16:N:150:TRP:NE1	2.17	0.60
1:5:479:G:C6	1:5:480:C:C5	2.89	0.60
1:5:483:G:C2	1:5:484:U:C6	2.90	0.60
1:5:1281:G:O4'	1:5:1281:G:N3	2.34	0.60
1:5:1341:U:C2	1:5:1342:A:N7	2.69	0.60
1:5:1392:A:H2'	1:5:1393:G:C8	2.37	0.60
1:5:1410:U:H5	1:5:1815:G:N1	1.99	0.60
1:5:1964:A:C2	1:5:4694:G:C2	2.90	0.60
1:5:1972:G:C2	1:5:1973:G:C5	2.89	0.60
1:5:2294:G:N2	1:5:2295:C:N1	2.49	0.60
1:5:2577:C:C4	28:Z:17:ARG:NH2	2.69	0.60
1:5:2589:C:N4	1:5:2590:G:C6	2.69	0.60
1:5:3590:G:C5	1:5:3591:C:C6	2.90	0.60
1:5:3846:C:C2	1:5:3847:C:C6	2.89	0.60
1:5:4077:A:H8	1:5:4077:A:O5'	1.84	0.60
1:5:4549:G:N1	1:5:4550:G:C8	2.69	0.60
1:5:4887:C:O2'	1:5:4888:U:H5'	2.00	0.60
1:5:4979:A:C2'	1:5:4980:C:O5'	2.49	0.60
2:7:93:G:N3	2:7:94:C:C6	2.70	0.60
3:8:134:G:C4	3:8:135:C:C6	2.90	0.60
4:A:186:TYR:CA	4:A:196:TRP:HZ3	2.13	0.60
44:p:33:GLN:OE1	44:p:49:ARG:NH2	2.34	0.60
50:S2:221:A:C2	50:S2:222:U:C6	2.89	0.60
50:S2:624:C:H1'	50:S2:631:U:O2	2.01	0.60
50:S2:891:G:C6	50:S2:892:U:C5	2.89	0.60
50:S2:992:A:C6	50:S2:993:G:N7	2.69	0.60
50:S2:1133:A:C2	50:S2:1134:G:N9	2.67	0.60
50:S2:1342:U:O4	50:S2:1482:C:C5	2.54	0.60
50:S2:1526:G:N1	50:S2:1527:C:C4	2.69	0.60
50:S2:1540:G:C2	50:S2:1541:G:N7	2.70	0.60
50:S2:1643:U:C2	50:S2:1644:C:C5	2.89	0.60
53:SC:122:THR:O	53:SC:122:THR:HG23	2.00	0.60
55:SE:161:GLN:HB3	55:SE:170:THR:O	2.01	0.60
62:SL:39:ASN:C	62:SL:39:ASN:OD1	2.43	0.60
64:SN:125:LEU:HD22	64:SN:129:TYR:CE2	2.37	0.60
70:ST:78:ILE:HG23	70:ST:79:TYR:CE1	2.36	0.60
71:SU:102:THR:HG21	71:SU:114:VAL:HG21	1.83	0.60
85:S5:37:A:C2'	85:S5:38:A:C8	2.85	0.60
1:5:30:C:H2'	1:5:31:U:O5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:152:U:O2	1:5:153:G:C8	2.55	0.60
1:5:486:C:C4	1:5:487:G:N7	2.69	0.60
1:5:747:A:H2'	1:5:749:G:N7	2.16	0.60
1:5:976:G:H22	1:5:1277:G:H22	1.49	0.60
1:5:1619:G:C5	1:5:1620:U:C5	2.90	0.60
1:5:1685:G:C6	1:5:1686:C:N4	2.70	0.60
1:5:1878:G:OP2	30:b:14:ARG:NH1	2.34	0.60
1:5:1936:C:C5	2:7:84:U:H5	2.12	0.60
1:5:2034:G:C5	1:5:2035:C:C5	2.89	0.60
1:5:2034:G:C2	1:5:2035:C:H1'	2.36	0.60
1:5:2076:G:N1	1:5:2077:C:C2	2.70	0.60
1:5:2105:A:N1	1:5:2106:G:C5	2.70	0.60
1:5:2256:C:O2	1:5:2256:C:H2'	2.01	0.60
1:5:2423:A:C6	1:5:2424:G:C6	2.90	0.60
1:5:2559:G:C6	1:5:2560:C:C5	2.90	0.60
1:5:3711:A:N1	1:5:3712:A:N3	2.49	0.60
1:5:3935:C:N3	1:5:3936:A:C8	2.69	0.60
1:5:3965:A:C2	1:5:4047:A:N1	2.70	0.60
1:5:3965:A:C8	1:5:3965:A:H5'	2.37	0.60
1:5:4052:C:O2	46:z:207:LYS:NZ	2.35	0.60
1:5:4078:C:C4	1:5:4079:C:C5	2.89	0.60
1:5:4269:G:H22	1:5:4277:G:N2	1.94	0.60
1:5:4653:C:C2	1:5:4654:C:H5	2.13	0.60
1:5:4984:C:C2	1:5:4985:U:C6	2.89	0.60
5:B:314:ILE:HD12	5:B:314:ILE:N	2.16	0.60
9:F:244:ARG:NH1	9:F:244:ARG:HG2	2.16	0.60
15:M:6:PHE:HB3	21:S:151:LYS:CG	2.31	0.60
16:N:138:PHE:N	16:N:138:PHE:HD1	1.96	0.60
28:Z:38:TYR:CZ	28:Z:76:ASN:OD1	2.55	0.60
32:d:32:ARG:HG2	32:d:48:GLU:HG2	1.84	0.60
32:d:83:ARG:HB2	32:d:114:PHE:CD2	2.36	0.60
50:S2:70:G:C5	50:S2:71:G:C5	2.88	0.60
50:S2:672:A:N1	50:S2:1162:C:C1'	2.65	0.60
50:S2:751:G:C6	50:S2:791:C:C2	2.90	0.60
50:S2:848:U:C4	50:S2:849:A:N6	2.70	0.60
50:S2:1131:G:N1	50:S2:1132:C:C4	2.69	0.60
50:S2:1294:G:H1'	82:Sf:137:ASP:OD2	2.01	0.60
50:S2:1331:C:C2	50:S2:1489:A:N7	2.70	0.60
50:S2:1378:A:H62	51:SA:136:GLU:CG	2.14	0.60
50:S2:1418:C:O2	50:S2:1420:G:C8	2.55	0.60
50:S2:1532:C:OP1	50:S2:1604:G:O2'	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1561:A:C5	50:S2:1562:C:C6	2.90	0.60
50:S2:1573:G:N3	50:S2:1574:C:H1'	2.16	0.60
68:SR:26:ASN:ND2	68:SR:59:LYS:CE	2.64	0.60
79:Sc:20:ARG:NH2	79:Sc:25:GLY:O	2.35	0.60
80:Sd:22:ARG:NE	80:Sd:36:LEU:O	2.33	0.60
85:S5:7:A:C8	85:S5:49:C:C4	2.89	0.60
86:S6:34:G:C2	86:S6:35:A:C6	2.89	0.60
1:5:293:G:C4'	1:5:294:G:C8	2.84	0.60
1:5:665:C:O2	1:5:665:C:C2'	2.49	0.60
1:5:919:C:C2	1:5:920:C:C6	2.90	0.60
1:5:1217:G:N3	1:5:1218:G:N7	2.48	0.60
1:5:1465:G:C6	1:5:1466:G:C8	2.89	0.60
1:5:1921:C:O2	21:S:160:ARG:HB2	2.01	0.60
1:5:1965:G:N3	1:5:1966:C:C5	2.70	0.60
1:5:2006:U:H2'	1:5:2007:G:O4'	2.01	0.60
1:5:2367:A:C2	1:5:2368:A:N7	2.69	0.60
1:5:2766:A:H5''	1:5:2766:A:N3	2.16	0.60
1:5:3721:U:C2	1:5:3722:G:H8	2.18	0.60
1:5:3754:G:C6	1:5:3755:G:C8	2.90	0.60
1:5:4058:U:C4	1:5:4059:C:C5	2.89	0.60
1:5:4229:U:H2'	1:5:4229:U:O2	2.01	0.60
1:5:4544:A:C8	1:5:4545:G:H1'	2.37	0.60
1:5:4878:C:C2	1:5:4879:C:H5	2.18	0.60
1:5:4913:G:O2'	1:5:4914:C:O4'	2.19	0.60
1:5:4977:A:C4	1:5:4978:G:C2	2.90	0.60
3:8:134:G:C5	3:8:135:C:C5	2.90	0.60
3:8:141:C:H2'	3:8:142:U:H6	1.67	0.60
5:B:217:ILE:HD11	5:B:333:LEU:HD11	1.84	0.60
9:F:128:ASN:HD21	22:T:132:PRO:HG2	1.67	0.60
18:P:129:THR:HB	18:P:139:TYR:HB2	1.82	0.60
20:R:105:LEU:O	20:R:109:TYR:HB2	2.01	0.60
50:S2:190:G:O2'	50:S2:209:A:N6	2.35	0.60
50:S2:744:G:H1'	58:SH:107:LYS:HB3	1.82	0.60
50:S2:816:A:C5	50:S2:817:G:C8	2.89	0.60
50:S2:849:A:C6	50:S2:850:C:N4	2.69	0.60
50:S2:1040:G:C6	50:S2:1041:G:N7	2.70	0.60
50:S2:1229:G:C6	50:S2:1230:C:C4	2.89	0.60
50:S2:1467:C:OP1	68:SR:1:MET:N	2.30	0.60
50:S2:1698:C:H3'	50:S2:1699:A:C5'	2.31	0.60
50:S2:1739:C:C2	50:S2:1740:C:C6	2.89	0.60
51:SA:10:MET:HE1	51:SA:51:LEU:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:222:LYS:HG2	52:SB:222:LYS:O	2.01	0.60
56:SF:20:PHE:CZ	56:SF:69:VAL:HG11	2.37	0.60
86:S6:17:A:H1'	86:S6:18:G:O3'	2.02	0.60
86:S6:75:C:O2'	86:S6:76:A:P	2.60	0.60
1:5:166:C:O2	1:5:166:C:H2'	2.02	0.60
1:5:509:A:O2'	14:L:163:ARG:HB2	2.02	0.60
1:5:1379:C:H4'	1:5:1380:G:N9	2.15	0.60
1:5:1404:G:C6	1:5:1405:C:C5	2.90	0.60
1:5:1582:U:C4	1:5:1583:A:C8	2.89	0.60
1:5:1634:A:C6	1:5:1635:C:C5	2.90	0.60
1:5:1898:C:N4	1:5:2279:A:O2'	2.35	0.60
1:5:2089:G:O6	1:5:2263:A:C8	2.54	0.60
1:5:2277:C:O2	1:5:2277:C:C2'	2.49	0.60
1:5:2405:G:HO2'	1:5:2791:C:HO2'	1.49	0.60
1:5:2603:C:C2	1:5:2604:C:C6	2.89	0.60
1:5:2645:G:N1	1:5:2646:C:C4	2.70	0.60
1:5:2769:U:O2'	1:5:2770:C:C6	2.54	0.60
1:5:3945:A:C6	1:5:4069:U:N3	2.69	0.60
1:5:3974:G:O3'	46:Z:210:MET:SD	2.59	0.60
1:5:4046:A:O2'	86:S6:56:C:P	2.59	0.60
1:5:4315:A:C2'	1:5:4316:G:H5'	2.31	0.60
1:5:4416:G:N2	1:5:4417:C:N1	2.50	0.60
1:5:4489:G:C6	1:5:4490:C:C4	2.90	0.60
1:5:4543:G:O2'	1:5:4544:A:C5'	2.50	0.60
1:5:4746:C:C2	1:5:4747:C:C6	2.90	0.60
1:5:4747:C:O2'	1:5:4748:U:H5'	2.01	0.60
3:8:68:G:C2	3:8:91:A:C2	2.89	0.60
3:8:79:G:N3	3:8:80:A:C2	2.70	0.60
4:A:186:TYR:CA	4:A:196:TRP:CZ3	2.85	0.60
5:B:198:ARG:HB2	5:B:198:ARG:NH1	2.16	0.60
14:L:94:ILE:HA	36:h:119:PHE:CZ	2.37	0.60
25:W:50:ASN:CB	25:W:55:TYR:CE2	2.81	0.60
25:W:55:TYR:C	25:W:55:TYR:HD1	2.09	0.60
26:X:84:GLU:CB	47:1:404:HIS:CE1	2.85	0.60
44:p:89:LEU:O	52:SB:219:LYS:NZ	2.35	0.60
47:1:263:VAL:CG1	47:1:416:TYR:CE2	2.82	0.60
47:1:449:LEU:CA	47:1:452:THR:CB	2.65	0.60
50:S2:26:U:O2	50:S2:26:U:H2'	2.02	0.60
50:S2:309:G:N3	50:S2:310:C:C6	2.70	0.60
50:S2:431:G:C2	50:S2:432:G:C8	2.89	0.60
50:S2:452:G:H2'	50:S2:453:C:O5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:841:G:C2	50:S2:842:C:C6	2.90	0.60
50:S2:1266:C:O2	50:S2:1267:C:C6	2.55	0.60
50:S2:1317:C:C2	50:S2:1318:G:H8	2.15	0.60
50:S2:1608:U:C4	50:S2:1609:C:C5	2.89	0.60
53:SC:133:TYR:HD1	53:SC:216:MET:HA	1.66	0.60
68:SR:17:ILE:HD11	68:SR:57:LEU:HD12	1.81	0.60
86:S6:27:G:O2'	86:S6:28:G:H5'	2.01	0.60
86:S6:29:G:N2	86:S6:42:C:H1'	2.16	0.60
1:5:371:A:O2'	1:5:372:A:O5'	2.20	0.60
1:5:460:C:H2'	1:5:461:G:H8	1.65	0.60
1:5:1268:G:N3	1:5:2111:G:C2	2.70	0.60
1:5:1280:C:H5'	1:5:1280:C:H6	1.65	0.60
1:5:1437:C:O2	1:5:2097:U:C2	2.54	0.60
1:5:1723:A:N1	1:5:1838:A:C2	2.70	0.60
1:5:2033:A:N1	1:5:2034:G:C5	2.70	0.60
1:5:2108:G:C2	1:5:2125:C:C4	2.89	0.60
1:5:2367:A:N6	1:5:2798:A:O4'	2.30	0.60
1:5:2594:C:N3	1:5:2595:C:C5	2.69	0.60
1:5:2633:U:C2	1:5:2634:C:C5	2.89	0.60
1:5:2823:G:C2	1:5:2824:C:C6	2.90	0.60
1:5:3693:U:C4	1:5:3694:U:C4	2.88	0.60
1:5:3952:A:N3	1:5:3953:G:C8	2.70	0.60
1:5:4332:C:C2	1:5:4333:C:C5	2.85	0.60
1:5:4647:G:H4'	20:R:59:SER:HB3	1.82	0.60
1:5:4999:G:N1	1:5:5000:G:C5	2.69	0.60
1:5:5030:U:N3	1:5:5031:G:N7	2.50	0.60
3:8:28:C:C2	3:8:29:G:C8	2.90	0.60
3:8:102:G:H3'	3:8:104:A:H2'	1.83	0.60
6:C:336:ARG:O	6:C:340:ILE:HG12	2.02	0.60
7:D:67:ALA:HB1	22:T:31:MET:HE1	1.83	0.60
47:1:449:LEU:N	47:1:450:ALA:N	2.50	0.60
50:S2:900:C:O2	50:S2:901:G:C8	2.55	0.60
50:S2:1202:U:C4	50:S2:1203:G:N7	2.69	0.60
50:S2:1272:C:N3	50:S2:1273:C:C5	2.69	0.60
50:S2:1345:G:C2'	50:S2:1346:U:H5'	2.30	0.60
50:S2:1528:G:N3	50:S2:1529:C:C5	2.70	0.60
50:S2:1575:G:N2	50:S2:1576:G:C4	2.69	0.60
50:S2:1596:U:C2	50:S2:1597:C:C6	2.90	0.60
68:SR:71:ILE:O	68:SR:73:LEU:N	2.35	0.60
74:SX:91:LEU:HD21	81:Se:6:LEU:CD2	2.31	0.60
86:S6:62:C:C2'	86:S6:63:G:C8	2.85	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:20:U:C4	3:8:37:A:C6	2.90	0.60
1:5:225:G:C2	1:5:243:A:C2	2.90	0.60
1:5:299:C:H2'	1:5:299:C:O2	2.01	0.60
1:5:726:G:H2'	1:5:727:C:O4'	2.02	0.60
1:5:1065:G:C2	1:5:1066:G:C4	2.89	0.60
1:5:1327:C:H4'	1:5:4448:G:H2'	1.84	0.60
1:5:1516:G:C6	1:5:1518:A:C5	2.90	0.60
1:5:1629:G:N3	1:5:1631:A:C6	2.70	0.60
1:5:1672:U:H2'	1:5:1673:U:C6	2.36	0.60
1:5:1692:C:H4'	19:Q:57:ASN:HD21	1.67	0.60
1:5:1928:C:C4	17:O:133:ARG:CZ	2.85	0.60
1:5:2457:G:N2	1:5:3672:G:N2	2.50	0.60
1:5:2841:G:C6	1:5:2842:G:N7	2.69	0.60
1:5:2852:U:C2'	1:5:2852:U:O2	2.50	0.60
1:5:3953:G:C4	1:5:3954:A:C8	2.90	0.60
1:5:4064:C:H2'	1:5:4065:G:H8	1.66	0.60
1:5:4236:G:H4'	1:5:4328:G:O2'	2.00	0.60
1:5:4239:A:C6	1:5:4240:G:N7	2.69	0.60
1:5:4281:A:C2	1:5:4283:G:C6	2.90	0.60
1:5:4331:G:N3	1:5:4331:G:H2'	2.16	0.60
1:5:4561:C:N3	1:5:4562:C:C5	2.70	0.60
32:d:71:ALA:HB2	32:d:108:TYR:HE2	1.65	0.60
38:j:16:HIS:HA	38:j:27:TYR:O	2.02	0.60
43:o:26:TYR:C	43:o:26:TYR:HD1	2.09	0.60
45:r:106:LEU:O	45:r:107:ARG:C	2.45	0.60
46:z:181:TYR:O	46:z:185:LEU:HG	2.02	0.60
50:S2:333:G:H2'	50:S2:334:C:O4'	2.02	0.60
50:S2:453:C:O2'	50:S2:454:U:C5'	2.50	0.60
50:S2:570:C:C2	50:S2:571:U:C5	2.89	0.60
50:S2:582:C:O2	50:S2:583:C:C5	2.54	0.60
50:S2:591:U:H5''	50:S2:593:C:H5	1.65	0.60
50:S2:979:C:N3	50:S2:980:A:N7	2.50	0.60
50:S2:1018:U:O2	50:S2:1018:U:H2'	2.01	0.60
50:S2:1038:U:H1'	50:S2:1181:A:N1	2.17	0.60
50:S2:1223:A:O2'	50:S2:1651:A:C5'	2.50	0.60
50:S2:1270:G:C2	50:S2:1271:C:C6	2.90	0.60
50:S2:1347:U:O4	50:S2:1362:U:O4	2.20	0.60
50:S2:1542:C:C2'	50:S2:1543:U:O5'	2.49	0.60
50:S2:1545:A:C5	50:S2:1588:A:C5	2.90	0.60
50:S2:1552:G:C5	50:S2:1578:U:N3	2.68	0.60
50:S2:1687:C:N3	50:S2:1688:C:H5	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SS:82:TRP:C	69:SS:84:LEU:H	2.10	0.60
72:SV:64:GLU:O	72:SV:65:SER:C	2.44	0.60
83:Sg:131:LEU:HD22	83:Sg:139:LYS:HB3	1.84	0.60
85:S5:47:U:C2'	85:S5:48:C:P	2.90	0.60
86:S6:24:G:H2'	86:S6:25:C:H6	1.67	0.60
86:S6:37:A:H2'	86:S6:38:A:C4	2.36	0.60
86:S6:63:G:N1	86:S6:64:A:C5	2.70	0.60
1:5:30:C:H2'	1:5:31:U:C6	2.37	0.59
1:5:49:U:H2'	1:5:50:C:O5'	2.01	0.59
1:5:509:A:N3	29:a:105:ARG:NH1	2.48	0.59
1:5:1075:G:C6	1:5:1076:C:C4	2.90	0.59
1:5:1684:A:C5	1:5:1685:G:C8	2.90	0.59
1:5:1751:A:C2	1:5:1752:G:O4'	2.55	0.59
1:5:1972:G:C2	1:5:1973:G:N7	2.70	0.59
1:5:2055:G:O6	21:S:158:VAL:CG1	2.49	0.59
1:5:2061:U:O2	21:S:111:ARG:HD3	2.02	0.59
1:5:2279:A:C2	1:5:2280:G:C4	2.90	0.59
1:5:2559:G:H1	1:5:2567:G:H1	1.50	0.59
1:5:2657:G:H3'	1:5:2658:G:H8	1.66	0.59
1:5:2712:G:N1	1:5:2713:C:C4	2.70	0.59
1:5:2848:G:C2	1:5:3838:U:C5	2.90	0.59
1:5:3675:G:N2	1:5:3676:G:C8	2.70	0.59
1:5:4234:A:C6	1:5:4271:A:H1'	2.37	0.59
1:5:4653:C:H2'	1:5:4654:C:H6	1.66	0.59
1:5:4735:G:C5	1:5:4736:C:C5	2.90	0.59
2:7:58:A:C5	2:7:59:G:N7	2.69	0.59
10:G:54:PHE:CD2	10:G:54:PHE:N	2.70	0.59
10:G:261:LEU:HD22	10:G:265:LEU:HD23	1.82	0.59
16:N:6:TYR:CZ	37:i:40:VAL:HG22	2.37	0.59
36:h:81:LEU:HA	36:h:84:ARG:HG3	1.84	0.59
50:S2:218:U:C2	50:S2:219:U:C5	2.89	0.59
50:S2:440:G:N2	50:S2:454:U:C2	2.70	0.59
50:S2:530:U:N3	50:S2:531:A:N7	2.50	0.59
50:S2:1448:A:C2	50:S2:1449:G:H1'	2.38	0.59
50:S2:1551:U:H3'	50:S2:1552:G:C8	2.37	0.59
50:S2:1792:G:C6	50:S2:1793:A:N7	2.70	0.59
58:SH:57:ARG:HA	58:SH:57:ARG:CZ	2.32	0.59
1:5:245:C:O2	1:5:245:C:O4'	2.17	0.59
1:5:459:C:C4	1:5:460:C:C5	2.91	0.59
1:5:460:C:O2	1:5:461:G:C8	2.55	0.59
1:5:466:A:C2	1:5:467:U:C4	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:655:C:O2	1:5:656:C:C6	2.55	0.59
1:5:1271:G:N2	1:5:2122:G:OP2	2.35	0.59
1:5:1339:U:N3	1:5:1340:C:C5	2.70	0.59
1:5:1378:C:H5''	1:5:1379:C:H3'	1.83	0.59
1:5:1857:C:O4'	1:5:1892:A:C2	2.55	0.59
1:5:1929:A:C2	1:5:2054:U:O4	2.55	0.59
1:5:2055:G:H5'	1:5:2056:G:H5'	1.82	0.59
1:5:2307:A:C2'	1:5:2308:A:O5'	2.50	0.59
1:5:2316:G:C6	1:5:2317:C:N4	2.70	0.59
1:5:2325:C:O2	1:5:2325:C:C2'	2.45	0.59
1:5:2367:A:C8	1:5:2798:A:C2	2.89	0.59
1:5:2422:C:C6	1:5:2829:U:H1'	2.37	0.59
1:5:2447:U:O2'	1:5:2448:G:C5'	2.50	0.59
1:5:2496:G:C4	1:5:2497:C:C6	2.90	0.59
1:5:3739:C:N4	1:5:3740:G:C5	2.70	0.59
1:5:4269:G:C2	1:5:4270:C:N1	2.70	0.59
1:5:4763:U:O2	15:M:3:PHE:HE2	1.85	0.59
1:5:4952:G:H5''	1:5:4952:G:C8	2.37	0.59
46:z:147:LYS:HE2	46:z:147:LYS:HA	1.84	0.59
50:S2:426:A:C6	50:S2:427:U:C5	2.88	0.59
50:S2:616:A:OP1	74:SX:68:LYS:HE3	2.02	0.59
50:S2:732:U:C2	50:S2:733:C:C6	2.89	0.59
50:S2:752:G:C6	50:S2:790:C:C4	2.91	0.59
50:S2:752:G:C6	50:S2:791:C:N3	2.70	0.59
50:S2:795:A:N1	50:S2:796:G:C5	2.69	0.59
50:S2:837:A:H62	75:SY:47:MET:HB3	1.67	0.59
50:S2:851:C:H5''	50:S2:852:G:H5'	1.84	0.59
50:S2:973:C:C4	50:S2:974:C:C5	2.90	0.59
50:S2:1095:U:O2	50:S2:1095:U:H2'	2.03	0.59
50:S2:1149:A:C6	50:S2:1151:G:C4	2.90	0.59
50:S2:1266:C:O2	50:S2:1266:C:H2'	2.01	0.59
50:S2:1302:G:N7	82:Sf:140:TYR:CD2	2.70	0.59
50:S2:1593:C:N3	50:S2:1594:A:N7	2.49	0.59
50:S2:1611:G:H1'	69:SS:86:ARG:HH12	1.66	0.59
58:SH:138:GLU:HG2	64:SN:19:ARG:HD3	1.84	0.59
59:SI:99:ASN:HA	59:SI:174:CYS:SG	2.42	0.59
61:SK:64:TRP:CH2	80:Sd:23:VAL:HG22	2.37	0.59
86:S6:63:G:C2	86:S6:64:A:C1'	2.86	0.59
86:S6:66:U:N3	86:S6:67:C:C4	2.70	0.59
1:5:86:U:C4	1:5:97:G:N2	2.70	0.59
1:5:111:C:O2	1:5:111:C:H2'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:296:A:C8	1:5:296:A:P	2.95	0.59
1:5:296:A:O5'	1:5:296:A:H8	1.85	0.59
1:5:323:C:C2	1:5:324:A:C8	2.90	0.59
1:5:944:A:H2'	6:C:335:MET:HE1	1.85	0.59
1:5:1266:G:C5'	1:5:2112:G:C2	2.84	0.59
1:5:1278:C:C2	1:5:1279:A:H1'	2.37	0.59
1:5:1280:C:C5'	1:5:1280:C:H6	2.15	0.59
1:5:1342:A:OP1	16:N:204:ARG:NH1	2.35	0.59
1:5:1529:G:N2	38:j:49:TRP:HZ2	2.00	0.59
1:5:1673:U:C4	1:5:1682:A:N1	2.70	0.59
1:5:2308:A:H2'	1:5:2309:G:O4'	2.02	0.59
1:5:2343:G:C2	6:C:101:MET:HE2	2.37	0.59
1:5:2633:U:O2	1:5:2634:C:C6	2.56	0.59
1:5:2746:A:C2'	1:5:2747:U:O5'	2.50	0.59
1:5:3607:U:N3	1:5:3608:A:N7	2.50	0.59
1:5:3720:G:C5	1:5:3721:U:C5	2.90	0.59
1:5:3900:G:C6	1:5:3902:A:H1'	2.38	0.59
1:5:3953:G:C2	1:5:3954:A:C8	2.89	0.59
1:5:4078:C:N3	1:5:4079:C:C6	2.69	0.59
1:5:4152:G:N1	1:5:4153:C:C4	2.70	0.59
1:5:4470:G:N2	1:5:4486:C:C2	2.70	0.59
1:5:4532:U:H5	1:5:4554:G:N2	2.00	0.59
1:5:4647:G:C2	1:5:4648:A:C8	2.90	0.59
1:5:4946:U:O2	1:5:4946:U:H2'	2.01	0.59
9:F:244:ARG:HG2	9:F:244:ARG:HH11	1.66	0.59
14:L:4:SER:C	14:L:5:ARG:HG3	2.27	0.59
16:N:63:ARG:CZ	16:N:63:ARG:HB2	2.32	0.59
16:N:150:TRP:CZ3	16:N:151:ILE:HG12	2.36	0.59
17:O:36:VAL:HG11	17:O:108:ILE:HD12	1.84	0.59
47:1:205:ARG:HG2	47:1:242:LEU:HB2	1.84	0.59
50:S2:27:A:C2	50:S2:28:U:H1'	2.37	0.59
50:S2:69:C:C2	50:S2:70:G:N7	2.70	0.59
50:S2:350:C:O2'	50:S2:383:G:N1	2.34	0.59
50:S2:457:C:C4	50:S2:458:A:N7	2.69	0.59
50:S2:617:G:C6	50:S2:618:C:C6	2.90	0.59
50:S2:644:G:H2'	50:S2:645:C:O4'	2.03	0.59
50:S2:1040:G:C6	50:S2:1041:G:C8	2.90	0.59
50:S2:1415:C:C2	50:S2:1416:C:H1'	2.37	0.59
50:S2:1756:C:H2'	50:S2:1756:C:O2	2.01	0.59
50:S2:1793:A:C2	50:S2:1794:C:C4	2.90	0.59
50:S2:1833:C:H5''	50:S2:1834:A:OP2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:123:VAL:HG13	51:SA:145:ILE:HB	1.83	0.59
84:S4:21:U:H5'	84:S4:22:U:OP2	2.02	0.59
85:S5:28:G:C6	85:S5:29:G:C5	2.91	0.59
86:S6:48:C:C6	86:S6:59:U:C1'	2.85	0.59
1:5:75:G:O6	14:L:103:ARG:CZ	2.51	0.59
1:5:94:A:H2'	1:5:95:G:C5'	2.32	0.59
1:5:986:C:H2'	1:5:987:C:O4'	2.02	0.59
1:5:1444:G:C2	1:5:1445:U:C4	2.89	0.59
1:5:1631:A:O2'	1:5:3650:C:H4'	2.02	0.59
1:5:1634:A:C2	1:5:1635:C:C2	2.90	0.59
1:5:1696:C:O2'	1:5:1697:G:OP2	2.21	0.59
1:5:1778:C:O2	1:5:1779:U:C6	2.55	0.59
1:5:1984:A:H62	1:5:2011:C:C1'	2.15	0.59
1:5:2320:G:O2'	1:5:2321:G:P	2.61	0.59
1:5:2433:G:P	47:1:268:LYS:HZ3	2.26	0.59
1:5:2485:U:N3	1:5:2486:G:N7	2.50	0.59
1:5:2658:G:C6	1:5:2675:G:N1	2.71	0.59
1:5:3724:A:C6	1:5:3725:G:C5	2.90	0.59
1:5:3909:C:O2	1:5:3909:C:C2'	2.50	0.59
1:5:4166:G:N3	1:5:4167:G:C8	2.69	0.59
1:5:4172:A:C2	1:5:4173:G:N7	2.70	0.59
1:5:4230:C:O2	1:5:4230:C:H2'	2.01	0.59
1:5:4466:C:N3	1:5:4467:A:C8	2.70	0.59
2:7:54:A:N1	2:7:55:A:N7	2.46	0.59
3:8:33:G:H4'	3:8:34:U:C4	2.38	0.59
9:F:101:ASN:OD1	9:F:101:ASN:N	2.35	0.59
11:H:8:GLN:HE22	11:H:71:ARG:HD2	1.67	0.59
25:W:50:ASN:HB3	25:W:55:TYR:CZ	2.37	0.59
30:b:11:ASN:OD1	30:b:12:GLN:N	2.36	0.59
33:e:108:ARG:HD3	33:e:128:ARG:HH21	1.66	0.59
50:S2:12:U:H2'	50:S2:13:C:C6	2.37	0.59
50:S2:29:G:C4	50:S2:30:C:C5	2.89	0.59
50:S2:142:C:N3	57:SG:185:LEU:HD22	2.17	0.59
50:S2:433:A:H2'	50:S2:434:G:C8	2.36	0.59
50:S2:447:A:N3	50:S2:449:A:H1'	2.17	0.59
50:S2:453:C:O2'	50:S2:454:U:H5'	2.02	0.59
50:S2:696:G:N2	50:S2:735:C:H1'	2.17	0.59
50:S2:862:A:C2	50:S2:863:U:N1	2.69	0.59
50:S2:862:A:H2'	50:S2:862:A:N3	2.17	0.59
50:S2:881:G:C2	50:S2:882:U:C6	2.90	0.59
50:S2:1228:A:H2'	50:S2:1229:G:C8	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1290:G:O2'	82:Sf:145:CYS:SG	2.59	0.59
50:S2:1643:U:N3	50:S2:1644:C:N4	2.49	0.59
50:S2:1644:C:O2'	50:S2:1645:C:C5'	2.50	0.59
50:S2:1696:C:H6	50:S2:1696:C:H5'	1.67	0.59
64:SN:128:TYR:O	64:SN:131:THR:N	2.35	0.59
82:Sf:147:THR:HG22	82:Sf:148:TYR:CE1	2.37	0.59
82:Sf:149:CYS:SG	82:Sf:149:CYS:O	2.60	0.59
85:S5:28:G:C6	85:S5:29:G:N7	2.70	0.59
86:S6:6:G:C2	86:S6:7:G:N3	2.70	0.59
1:5:54:G:O6	1:5:55:G:C5	2.56	0.59
1:5:174:C:C2	1:5:263:G:C2	2.91	0.59
1:5:279:A:H5'	1:5:329:A:N3	2.18	0.59
1:5:466:A:N3	1:5:467:U:C6	2.71	0.59
1:5:942:G:P	9:F:244:ARG:HH12	2.25	0.59
1:5:976:G:C6	1:5:977:C:C4	2.91	0.59
1:5:1172:C:N3	1:5:1173:G:N7	2.50	0.59
1:5:1489:G:N2	1:5:1490:G:H1'	2.16	0.59
1:5:1617:G:C4	1:5:1618:G:C8	2.91	0.59
1:5:1900:C:C4	1:5:1901:C:C5	2.90	0.59
1:5:1992:U:H5	1:5:2002:A:N3	1.99	0.59
1:5:2059:C:C2	1:5:2060:G:C8	2.90	0.59
1:5:2294:G:N1	1:5:2295:C:C5	2.70	0.59
1:5:2406:G:N2	1:5:2785:C:C2	2.71	0.59
1:5:2438:A:C5	1:5:2441:C:N4	2.70	0.59
1:5:2477:A:C2	1:5:2478:C:C4	2.91	0.59
1:5:2734:U:N3	1:5:2735:G:N7	2.51	0.59
1:5:2773:G:C2	1:5:2774:C:C6	2.91	0.59
1:5:3704:U:C2	1:5:3705:G:C8	2.90	0.59
1:5:3789:C:H5''	85:S5:73:A:P	2.43	0.59
1:5:3911:C:H5''	1:5:4197:G:O2'	2.01	0.59
1:5:3945:A:C2	1:5:3946:G:N7	2.70	0.59
1:5:4548:A:P	1:5:4548:A:N7	2.76	0.59
1:5:4772:C:O2	1:5:4773:C:C6	2.55	0.59
3:8:132:G:C2	3:8:133:G:N9	2.69	0.59
6:C:122:TYR:HB2	6:C:280:PRO:HG3	1.85	0.59
7:D:20:PHE:HB3	7:D:30:TYR:OH	2.02	0.59
9:F:96:ARG:O	9:F:120:PHE:HA	2.02	0.59
20:R:163:ARG:CZ	50:S2:871:U:O2	2.51	0.59
28:Z:88:ASP:OD1	28:Z:88:ASP:N	2.35	0.59
46:z:116:LEU:HG	46:z:119:GLN:HE22	1.68	0.59
48:2:24:ARG:O	48:2:24:ARG:HD2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:610:G:C2	50:S2:611:G:C8	2.90	0.59
50:S2:910:G:C5	50:S2:911:C:C5	2.90	0.59
50:S2:975:G:C2	50:S2:976:G:C8	2.91	0.59
50:S2:1031:A:C5	50:S2:1032:C:C5	2.90	0.59
50:S2:1293:A:O5'	82:Sf:150:PHE:CD1	2.56	0.59
50:S2:1590:C:H5'	70:ST:82:ARG:HD3	1.84	0.59
68:SR:14:ARG:CD	68:SR:68:GLY:O	2.45	0.59
86:S6:6:G:C6	86:S6:7:G:C2	2.91	0.59
86:S6:24:G:H2'	86:S6:25:C:C6	2.38	0.59
86:S6:29:G:N1	86:S6:42:C:C2	2.69	0.59
1:5:238:C:C2'	1:5:239:C:H5'	2.33	0.59
1:5:504:G:H2'	1:5:505:G:H8	1.67	0.59
1:5:1100:U:C2	1:5:1167:C:C5	2.91	0.59
1:5:1247:U:N3	1:5:1248:C:C6	2.67	0.59
1:5:1280:C:O2'	1:5:1281:G:C3'	2.49	0.59
1:5:1347:G:C5	1:5:1348:U:C5	2.90	0.59
1:5:1413:C:N3	1:5:1414:C:C5	2.71	0.59
1:5:1794:A:C8	1:5:4214:A:N6	2.70	0.59
1:5:2560:C:C4	1:5:2561:C:C5	2.91	0.59
1:5:2561:C:C4	1:5:2562:G:N7	2.70	0.59
1:5:2736:G:C2'	1:5:2737:C:H5'	2.31	0.59
1:5:3677:U:H2'	1:5:3678:G:C8	2.37	0.59
1:5:3722:G:C2	1:5:3723:A:C8	2.91	0.59
1:5:4053:A:O2'	46:z:207:LYS:CD	2.50	0.59
1:5:4286:C:O2	1:5:4287:G:C8	2.55	0.59
1:5:4342:C:C2	1:5:4343:U:C6	2.90	0.59
1:5:4467:A:C2	1:5:4468:U:C6	2.91	0.59
1:5:4879:C:C2	1:5:4880:C:C6	2.89	0.59
1:5:4984:C:H4'	5:B:25:HIS:CD2	2.38	0.59
6:C:210:ILE:HG21	6:C:252:TRP:HZ3	1.67	0.59
8:E:184:ARG:HD3	8:E:213:PHE:HB2	1.83	0.59
9:F:41:GLN:HA	9:F:41:GLN:NE2	2.18	0.59
9:F:83:PHE:HE2	21:S:13:VAL:HG21	1.68	0.59
9:F:168:ARG:HD2	9:F:211:TRP:NE1	2.17	0.59
14:L:166:ALA:CB	29:a:97:ALA:HB1	2.33	0.59
31:c:52:CYS:HB2	31:c:92:CYS:SG	2.41	0.59
43:o:40:ARG:HB3	43:o:40:ARG:HH21	1.66	0.59
46:z:152:LYS:O	46:z:153:SER:HB3	2.02	0.59
47:1:449:LEU:CA	47:1:450:ALA:N	2.66	0.59
50:S2:11:A:C2	50:S2:12:U:C6	2.90	0.59
50:S2:399:C:O3'	74:SX:11:ARG:NH2	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:444:G:H2'	50:S2:444:G:N3	2.17	0.59
50:S2:582:C:C4'	75:SY:33:ALA:HB2	2.32	0.59
50:S2:994:C:O2	50:S2:994:C:C2'	2.47	0.59
50:S2:1039:C:H3'	50:S2:1040:G:H5''	1.85	0.59
50:S2:1139:C:H2'	50:S2:1140:G:O4'	2.02	0.59
50:S2:1283:C:C5	63:SM:103:VAL:HA	2.37	0.59
50:S2:1411:G:H3'	50:S2:1412:C:H4'	1.85	0.59
50:S2:1414:A:N1	50:S2:1415:C:C5	2.70	0.59
50:S2:1533:A:C2	50:S2:1537:A:O4'	2.55	0.59
50:S2:1616:U:H2'	50:S2:1617:G:O4'	2.03	0.59
50:S2:1640:A:H1'	86:S6:30:G:C2	2.36	0.59
51:SA:158:ASP:CG	51:SA:159:ILE:N	2.61	0.59
53:SC:170:TRP:CD1	53:SC:199:PRO:N	2.71	0.59
70:ST:52:TRP:CE3	70:ST:53:PHE:HB2	2.37	0.59
77:Sa:87:ARG:O	77:Sa:92:ARG:NH1	2.34	0.59
84:S4:21:U:N3	85:S5:37:A:H2	1.99	0.59
85:S5:52:G:C6	85:S5:63:G:C6	2.91	0.59
1:5:54:G:H2'	1:5:54:G:N3	2.17	0.59
1:5:98:A:C5	1:5:99:A:C8	2.90	0.59
1:5:180:C:C2	1:5:181:C:C5	2.90	0.59
1:5:183:C:O2	1:5:189:G:O6	2.21	0.59
1:5:978:G:C6	1:5:979:C:C4	2.91	0.59
1:5:1070:G:C4	1:5:1071:C:C6	2.90	0.59
1:5:1201:U:C2	1:5:1202:C:C5	2.90	0.59
1:5:1479:G:O2'	1:5:1480:C:H5'	2.03	0.59
1:5:1925:G:C5	1:5:1926:C:C5	2.91	0.59
1:5:1966:C:C6	1:5:1966:C:O5'	2.55	0.59
1:5:2261:G:O2'	1:5:2262:G:O4'	2.20	0.59
1:5:2478:C:H2'	1:5:2479:G:C8	2.38	0.59
1:5:2736:G:N3	1:5:2737:C:C5	2.71	0.59
1:5:3611:A:C2	1:5:5016:A:C8	2.91	0.59
1:5:3833:C:C2	1:5:3834:C:C5	2.90	0.59
1:5:3966:A:C2	1:5:3967:G:C8	2.90	0.59
1:5:4053:A:H1'	46:z:207:LYS:HE2	1.84	0.59
1:5:4096:C:N4	1:5:4097:G:N7	2.50	0.59
1:5:4463:U:C4	1:5:4488:A:C6	2.90	0.59
1:5:5044:A:O2'	1:5:5045:G:H5'	2.03	0.59
3:8:70:G:N1	3:8:87:G:C2	2.71	0.59
3:8:134:G:N1	3:8:135:C:C4	2.70	0.59
7:D:265:ARG:HH11	7:D:265:ARG:HG2	1.68	0.59
31:c:22:MET:SD	31:c:27:TYR:CE2	2.95	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:e:107:ASN:OD1	33:e:107:ASN:N	2.36	0.59
50:S2:157:U:H4'	57:SG:59:GLN:C	2.28	0.59
50:S2:848:U:O2	50:S2:849:A:C4	2.56	0.59
50:S2:921:G:C6	73:SW:28:ARG:HG3	2.38	0.59
50:S2:980:A:H2'	50:S2:981:A:H8	1.67	0.59
50:S2:1046:U:C4	50:S2:1047:C:C4	2.90	0.59
50:S2:1272:C:C2	50:S2:1273:C:C6	2.91	0.59
50:S2:1305:C:H42	82:Sf:138:ARG:HG3	1.67	0.59
50:S2:1385:G:H5''	50:S2:1385:G:H8	1.67	0.59
50:S2:1420:G:HO2'	70:ST:4:VAL:CA	2.16	0.59
50:S2:1542:C:O2'	50:S2:1543:U:C5'	2.50	0.59
50:S2:1839:U:O2	50:S2:1840:U:C6	2.54	0.59
65:SO:137:SER:C	65:SO:138:ASP:OD1	2.46	0.59
74:SX:7:LEU:O	74:SX:8:ARG:HB2	2.02	0.59
86:S6:62:C:H2'	86:S6:63:G:C4	2.37	0.59
1:5:90:G:C5	1:5:92:C:H1'	2.38	0.59
1:5:219:G:H5'	1:5:219:G:C4	2.37	0.59
1:5:458:C:C4	1:5:459:C:C5	2.91	0.59
1:5:964:A:H1'	45:r:98:ARG:NH1	2.18	0.59
1:5:1188:C:O2	1:5:1188:C:H2'	2.01	0.59
1:5:1296:G:H1'	1:5:1297:U:OP2	2.03	0.59
1:5:1430:C:C2	1:5:1431:C:C6	2.91	0.59
1:5:1509:C:O2	1:5:1510:G:C8	2.56	0.59
1:5:1629:G:N1	1:5:1631:A:N1	2.51	0.59
1:5:1936:C:C4	2:7:84:U:H5	2.20	0.59
1:5:1984:A:N6	1:5:2011:C:C2'	2.65	0.59
1:5:2417:A:C2	1:5:2418:A:N7	2.69	0.59
1:5:2657:G:H3'	1:5:2658:G:C8	2.38	0.59
1:5:2714:G:C2	1:5:2715:G:C5	2.91	0.59
1:5:3630:A:C2	1:5:3631:U:C6	2.90	0.59
1:5:3723:A:N3	1:5:3724:A:N7	2.51	0.59
1:5:3944:G:N1	1:5:3945:A:C8	2.71	0.59
1:5:3953:G:C5	1:5:3954:A:C8	2.90	0.59
1:5:3956:G:H22	1:5:3966:A:C1'	2.16	0.59
1:5:4076:G:H21	10:G:74:LEU:CG	2.13	0.59
1:5:4277:G:C5	1:5:4278:C:C5	2.90	0.59
1:5:4333:C:O2	1:5:4334:U:C5	2.56	0.59
1:5:4881:U:O2'	1:5:4882:U:O4'	2.18	0.59
3:8:79:G:C2	3:8:80:A:N1	2.71	0.59
8:E:157:ARG:HB3	8:E:267:LEU:HD23	1.85	0.59
9:F:58:HIS:O	9:F:61:LYS:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:83:PHE:CE2	21:S:13:VAL:HG21	2.38	0.59
20:R:4:LEU:HD21	20:R:33:ALA:HB2	1.83	0.59
50:S2:376:A:C5	50:S2:377:G:C8	2.90	0.59
50:S2:537:C:H42	50:S2:546:G:H1	1.48	0.59
50:S2:872:A:H61	50:S2:914:U:H6	1.46	0.59
50:S2:943:U:H2'	50:S2:944:A:O4'	2.02	0.59
50:S2:993:G:N1	50:S2:994:C:C6	2.70	0.59
50:S2:1408:U:C3'	50:S2:1409:A:C8	2.85	0.59
50:S2:1866:A:N1	77:Sa:87:ARG:HD2	2.18	0.59
52:SB:228:LEU:CD1	52:SB:232:HIS:CD2	2.86	0.59
56:SF:119:SER:OG	56:SF:180:ALA:HB1	2.01	0.59
62:SL:61:PRO:HD3	62:SL:141:ASN:HD21	1.68	0.59
67:SQ:44:PRO:HG2	67:SQ:81:ILE:HD11	1.84	0.59
83:Sg:119:GLN:HE22	83:Sg:131:LEU:CD2	2.16	0.59
83:Sg:191:HIS:CG	83:Sg:195:LEU:HD21	2.38	0.59
86:S6:33:U:H2'	86:S6:34:G:O3'	2.02	0.59
1:5:104:G:O2'	1:5:1361:G:O2'	2.06	0.59
1:5:303:C:N3	1:5:304:C:C5	2.71	0.59
1:5:423:G:C5	1:5:424:U:C5	2.91	0.59
1:5:423:G:O6	3:8:10:G:O6	2.21	0.59
1:5:456:C:O2	1:5:457:G:C8	2.55	0.59
1:5:722:G:H21	6:C:343:GLN:NE2	2.00	0.59
1:5:936:C:O2'	15:M:46:ARG:CZ	2.50	0.59
1:5:1670:G:OP2	30:b:11:ASN:ND2	2.20	0.59
1:5:1674:C:C2	1:5:1675:C:C6	2.91	0.59
1:5:1724:G:N7	30:b:17:HIS:CD2	2.70	0.59
1:5:1751:A:C5	1:5:1752:G:C8	2.91	0.59
1:5:1813:U:H4'	30:b:49:HIS:O	2.02	0.59
1:5:1898:C:H1'	1:5:2070:U:O2	2.02	0.59
1:5:1965:G:C6	1:5:1966:C:C4	2.91	0.59
1:5:2056:G:N1	1:5:2058:G:C6	2.71	0.59
1:5:2593:C:N3	1:5:2594:C:C5	2.71	0.59
1:5:2604:C:N3	1:5:2605:G:C8	2.70	0.59
1:5:2746:A:H2'	1:5:2747:U:O5'	2.02	0.59
1:5:2791:C:C2	1:5:2792:C:C5	2.90	0.59
1:5:2794:C:C2	18:P:136:ILE:HD12	2.37	0.59
1:5:3919:C:H5''	4:A:207:VAL:HG12	1.85	0.59
1:5:4070:U:N3	1:5:4071:U:C5	2.71	0.59
1:5:4098:A:C2	1:5:4099:G:C4	2.91	0.59
1:5:4136:G:C5	1:5:4137:C:C5	2.90	0.59
1:5:4236:G:H2'	1:5:4237:C:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4302:U:H5	1:5:4303:C:C6	2.17	0.59
1:5:4414:A:N3	1:5:4427:G:N2	2.51	0.59
1:5:4536:C:C4	1:5:4537:C:C5	2.91	0.59
1:5:4628:U:N3	1:5:4629:U:C5	2.70	0.59
1:5:4878:C:N3	1:5:4879:C:C5	2.70	0.59
1:5:4982:A:N6	1:5:4983:C:C5	2.70	0.59
1:5:5047:C:C5	1:5:5050:C:H6	2.20	0.59
5:B:203:GLN:HA	5:B:203:GLN:NE2	2.12	0.59
21:S:13:VAL:HG22	21:S:63:TYR:HB3	1.84	0.59
28:Z:97:ASN:OD1	28:Z:98:LYS:N	2.36	0.59
35:g:9:ARG:NH1	35:g:34:TYR:CD2	2.71	0.59
50:S2:50:A:C2	50:S2:488:U:O4	2.53	0.59
50:S2:104:A:C5	50:S2:105:U:C5	2.90	0.59
50:S2:165:G:HO2'	50:S2:166:A:H8	1.51	0.59
50:S2:166:A:H2'	50:S2:167:G:H5''	1.85	0.59
50:S2:321:C:H2'	50:S2:322:C:H6	1.68	0.59
50:S2:529:A:N1	50:S2:555:A:N1	2.51	0.59
50:S2:794:A:C6	50:S2:795:A:C6	2.91	0.59
50:S2:1082:A:C5	50:S2:1084:A:H1'	2.37	0.59
50:S2:1141:G:H5'	50:S2:1142:G:OP2	2.03	0.59
50:S2:1228:A:C2	50:S2:1531:A:C2	2.91	0.59
50:S2:1278:A:C5	50:S2:1279:C:C5	2.91	0.59
50:S2:1292:C:O4'	82:Sf:148:TYR:CA	2.51	0.59
50:S2:1428:G:O2'	67:SQ:33:LYS:NZ	2.35	0.59
50:S2:1741:U:N3	50:S2:1742:C:C6	2.71	0.59
67:SQ:12:VAL:HG11	67:SQ:90:LYS:HB3	1.84	0.59
68:SR:26:ASN:CG	68:SR:59:LYS:CE	2.73	0.59
85:S5:6:G:C1'	85:S5:7:A:C8	2.85	0.59
86:S6:63:G:C6	86:S6:64:A:C8	2.89	0.59
1:5:70:A:C2	1:5:4355:G:H1'	2.37	0.59
1:5:167:C:N3	1:5:168:C:C5	2.71	0.59
1:5:235:A:N6	1:5:238:C:C4	2.71	0.59
1:5:280:G:C8	16:N:120:TRP:CZ3	2.91	0.59
1:5:405:U:O4	1:5:407:A:OP2	2.21	0.59
1:5:494:U:C4	1:5:495:C:C5	2.91	0.59
1:5:1203:G:C2	1:5:1204:C:C6	2.90	0.59
1:5:1367:C:N1	1:5:1370:G:H2'	2.18	0.59
1:5:1398:A:H61	1:5:1419:G:C2'	2.15	0.59
1:5:1520:C:H4'	6:C:94:ASN:HD21	1.68	0.59
1:5:1667:G:C5	1:5:2280:G:C2	2.91	0.59
1:5:1939:A:N1	1:5:3874:G:C5'	2.59	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1991:A:C3'	1:5:1992:U:H1'	2.32	0.59
1:5:2404:A:H2'	1:5:2405:G:O4'	2.03	0.59
1:5:2479:G:C4	1:5:2480:G:C8	2.90	0.59
1:5:2595:C:C2	1:5:2596:G:C8	2.90	0.59
1:5:3732:A:N1	1:5:3733:A:C5	2.71	0.59
1:5:3764:U:H2'	1:5:3765:G:O4'	2.01	0.59
1:5:3943:A:H2'	1:5:3944:G:O4'	2.03	0.59
1:5:3953:G:C6	1:5:3954:A:C5	2.91	0.59
1:5:4137:C:H2'	1:5:4138:C:H6	1.67	0.59
1:5:4895:C:O2	1:5:4896:G:C5	2.56	0.59
1:5:4988:U:H2'	1:5:4988:U:O2	2.01	0.59
2:7:44:C:C2	2:7:45:U:C5	2.90	0.59
3:8:9:A:C6	3:8:10:G:N7	2.71	0.59
5:B:103:LYS:HD3	5:B:149:ASP:OD1	2.01	0.59
6:C:142:HIS:O	6:C:144:ILE:HG13	2.02	0.59
9:F:100:ILE:HG21	19:Q:4:ASP:OD1	2.03	0.59
42:n:14:LYS:HE3	50:S2:1173:A:OP2	2.02	0.59
50:S2:66:G:C6	50:S2:68:A:C8	2.91	0.59
50:S2:316:G:C6	50:S2:317:C:N4	2.71	0.59
50:S2:413:G:C6	50:S2:425:G:C2	2.91	0.59
50:S2:439:A:N1	50:S2:455:A:C6	2.71	0.59
50:S2:622:C:N4	50:S2:623:G:H1'	2.17	0.59
50:S2:796:G:H3'	50:S2:797:C:C5'	2.32	0.59
50:S2:1052:A:C4	50:S2:1053:C:C6	2.91	0.59
50:S2:1291:A:P	82:Sf:146:LEU:HG	2.43	0.59
50:S2:1436:C:N3	50:S2:1438:A:C8	2.71	0.59
50:S2:1526:G:C5	50:S2:1527:C:C5	2.91	0.59
50:S2:1832:A:C6	50:S2:1833:C:N4	2.71	0.59
60:SJ:32:ILE:HD11	60:SJ:40:LYS:HD3	1.85	0.59
62:SL:55:TYR:OH	62:SL:116:CYS:HB3	2.02	0.59
62:SL:117:PHE:CZ	62:SL:144:LYS:HA	2.38	0.59
63:SM:64:LEU:HD21	82:Sf:108:VAL:HG22	1.85	0.59
66:SP:56:LEU:HD22	66:SP:78:THR:HG22	1.85	0.59
85:S5:18:G:O2'	85:S5:57:G:N2	2.31	0.59
85:S5:40:C:C2	85:S5:41:C:C5	2.91	0.59
85:S5:66:U:O2'	85:S5:67:C:O5'	2.21	0.59
86:S6:57:G:C8	86:S6:57:G:C5'	2.85	0.59
1:5:90:G:C2	1:5:95:G:N1	2.71	0.58
1:5:291:U:O2	1:5:292:G:O2'	2.21	0.58
1:5:964:A:H8	1:5:964:A:H5''	1.65	0.58
1:5:1245:C:H1'	1:5:2111:G:H2'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1299:G:C2	1:5:1300:G:C8	2.91	0.58
1:5:1441:C:C4	1:5:1442:C:C5	2.90	0.58
1:5:1583:A:H1'	1:5:2396:A:C6	2.38	0.58
1:5:1894:C:O2'	1:5:1895:G:H5'	2.03	0.58
1:5:2081:C:O2'	1:5:2082:G:H5'	2.03	0.58
1:5:2125:C:O5'	1:5:2125:C:H6	1.86	0.58
1:5:2282:A:O2'	1:5:2283:G:H5'	2.01	0.58
1:5:2372:U:H1'	32:d:73:TRP:HE1	1.66	0.58
1:5:2459:G:O6	16:N:105:ARG:NE	2.36	0.58
1:5:2751:G:C2	1:5:2752:G:C8	2.90	0.58
1:5:3663:A:N3	1:5:3663:A:H2'	2.18	0.58
1:5:3859:G:N3	1:5:3859:G:H2'	2.18	0.58
1:5:3913:G:C2	1:5:4390:A:C2	2.90	0.58
1:5:3965:A:C2	1:5:4047:A:C2	2.91	0.58
1:5:4425:G:C2	1:5:4426:C:H1'	2.37	0.58
1:5:4476:C:O2'	1:5:4478:G:OP2	2.17	0.58
1:5:5047:C:C6	1:5:5050:C:H6	2.20	0.58
5:B:55:HIS:CE1	5:B:369:ASP:OD2	2.56	0.58
5:B:222:VAL:HG11	5:B:274:TYR:CZ	2.38	0.58
28:Z:30:ASP:OD1	28:Z:31:ASP:HB2	2.02	0.58
44:p:28:LYS:NZ	50:S2:1040:G:O2'	2.35	0.58
50:S2:121:U:N3	50:S2:122:G:C5	2.71	0.58
50:S2:122:G:C6	50:S2:123:G:N7	2.71	0.58
50:S2:211:G:C6	50:S2:212:C:C4	2.91	0.58
50:S2:444:G:N1	50:S2:446:G:OP2	2.36	0.58
50:S2:452:G:N3	50:S2:453:C:C5	2.71	0.58
50:S2:553:U:O2	50:S2:554:A:C8	2.55	0.58
50:S2:816:A:C2	50:S2:817:G:H1'	2.38	0.58
50:S2:1100:A:C2	50:S2:1101:U:N1	2.70	0.58
50:S2:1136:U:O2'	50:S2:1137:U:H5'	2.03	0.58
50:S2:1332:A:C2	50:S2:1333:U:C1'	2.85	0.58
50:S2:1415:C:C4	50:S2:1416:C:C2	2.90	0.58
50:S2:1860:A:N6	50:S2:1862:G:C6	2.70	0.58
52:SB:191:ASP:OD1	52:SB:191:ASP:N	2.36	0.58
53:SC:170:TRP:CZ3	73:SW:97:ARG:HD3	2.38	0.58
85:S5:21:A:C2	85:S5:48:C:C4	2.88	0.58
85:S5:48:C:OP1	85:S5:59:U:H5'	2.03	0.58
1:5:916:C:N4	1:5:917:A:C5	2.70	0.58
1:5:976:G:C2	1:5:977:C:N1	2.71	0.58
1:5:1217:G:N2	1:5:1218:G:C6	2.67	0.58
1:5:1233:G:C2	1:5:1234:G:C8	2.90	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1265:G:N2	1:5:2111:G:O3'	2.37	0.58
1:5:1309:C:C2	1:5:1310:C:C6	2.90	0.58
1:5:1437:C:N3	1:5:2098:G:N7	2.51	0.58
1:5:1572:U:C5'	20:R:95:TRP:HZ2	2.16	0.58
1:5:2034:G:H2'	1:5:2035:C:H6	1.67	0.58
1:5:2376:A:H2'	1:5:2377:C:O4'	2.03	0.58
1:5:2481:G:C6	1:5:2482:C:C4	2.91	0.58
1:5:2783:A:C4	1:5:2784:C:C5	2.91	0.58
1:5:3796:U:C2	1:5:3797:C:C5	2.91	0.58
1:5:3967:G:C2	46:z:162:VAL:HG11	2.37	0.58
1:5:4099:G:C4	1:5:4100:C:C6	2.92	0.58
1:5:4416:G:C2	1:5:4417:C:C4	2.91	0.58
1:5:4482:U:C2	1:5:4483:C:C5	2.90	0.58
1:5:4628:U:O2	1:5:4629:U:C6	2.55	0.58
1:5:4759:C:OP1	17:O:160:ARG:NH2	2.33	0.58
1:5:4874:A:H1'	17:O:175:MET:SD	2.42	0.58
2:7:21:G:H8	2:7:21:G:H5''	1.68	0.58
3:8:53:G:C6	3:8:54:C:C4	2.91	0.58
5:B:307:TYR:CD2	5:B:366:LYS:HD2	2.38	0.58
7:D:111:ASN:C	7:D:111:ASN:ND2	2.60	0.58
8:E:218:LEU:HD21	8:E:230:ASP:OD2	2.03	0.58
13:J:107:PHE:CE1	13:J:130:PHE:HB2	2.38	0.58
24:V:14:PHE:CE2	24:V:91:LYS:HG3	2.38	0.58
33:e:58:ILE:C	33:e:60:TYR:H	2.11	0.58
50:S2:380:G:H22	50:S2:382:C:H3'	1.63	0.58
50:S2:525:A:H62	50:S2:588:G:N2	2.01	0.58
50:S2:532:C:N3	50:S2:533:A:N7	2.51	0.58
50:S2:620:G:N3	50:S2:620:G:O5'	2.36	0.58
50:S2:910:G:C4	50:S2:911:C:C5	2.91	0.58
50:S2:1039:C:N3	50:S2:1040:G:N7	2.50	0.58
50:S2:1109:C:O2	50:S2:1109:C:O2'	2.21	0.58
50:S2:1221:G:O2'	50:S2:1222:G:H5'	2.03	0.58
50:S2:1337:C:O2	50:S2:1337:C:H2'	2.01	0.58
50:S2:1414:A:N1	50:S2:1415:C:C4	2.70	0.58
50:S2:1665:G:N7	70:ST:88:MET:HG2	2.17	0.58
52:SB:99:ASN:ND2	52:SB:231:LEU:CD1	2.59	0.58
54:SD:152:PHE:N	54:SD:152:PHE:CD1	2.71	0.58
83:Sg:3:GLU:OE2	83:Sg:245:ARG:NE	2.35	0.58
85:S5:15:G:N2	85:S5:48:C:C4	2.70	0.58
86:S6:53:G:H1	86:S6:61:C:H42	1.52	0.58
1:5:212:A:C2	1:5:213:G:C5	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:218:A:C1'	1:5:219:G:H5''	2.33	0.58
1:5:910:G:C6	1:5:911:U:C5	2.91	0.58
1:5:962:C:P	1:5:2264:C:N3	2.76	0.58
1:5:1170:G:C2	1:5:1171:G:C8	2.91	0.58
1:5:1326:A:P	1:5:3901:A:H61	2.25	0.58
1:5:1378:C:H2'	1:5:1378:C:O2	2.03	0.58
1:5:1421:G:N3	1:5:1422:G:C8	2.71	0.58
1:5:1440:U:C2	1:5:1441:C:C5	2.91	0.58
1:5:1618:G:C2	1:5:1619:G:N7	2.71	0.58
1:5:1628:C:C2	1:5:1629:G:H8	2.13	0.58
1:5:2004:U:H2'	1:5:2005:G:O4'	2.03	0.58
1:5:2036:C:C4	1:5:2037:C:C5	2.90	0.58
1:5:2078:C:O2	1:5:2078:C:C2'	2.51	0.58
1:5:2270:G:C6	1:5:2271:C:N4	2.72	0.58
1:5:2328:G:O2'	1:5:2329:U:H5'	2.01	0.58
1:5:2369:U:C5	1:5:4656:A:C2	2.92	0.58
1:5:2395:A:C2'	1:5:2806:A:HO2'	2.16	0.58
1:5:2497:C:N3	1:5:2498:C:C4	2.70	0.58
1:5:3590:G:C2	1:5:3591:C:N1	2.71	0.58
1:5:3763:A:C2	50:S2:1710:C:C5'	2.84	0.58
1:5:3863:C:O2	1:5:3864:C:C6	2.56	0.58
1:5:3960:A:N3	1:5:4045:G:C2'	2.66	0.58
1:5:4057:C:C4	1:5:4058:U:C5	2.91	0.58
1:5:4087:G:C5	4:A:34:PHE:CE2	2.91	0.58
1:5:4268:A:H2'	1:5:4269:G:O4'	2.03	0.58
1:5:4276:G:N1	1:5:4277:G:N9	2.51	0.58
1:5:4404:U:O4	1:5:4436:U:C4	2.56	0.58
1:5:4626:A:H5'	5:B:53:MET:HE3	1.85	0.58
1:5:4724:A:C4	1:5:4725:C:C6	2.92	0.58
2:7:17:C:O2	2:7:18:C:C6	2.56	0.58
8:E:197:ILE:CD1	8:E:257:ILE:HG23	2.32	0.58
9:F:161:TYR:CD1	9:F:170:ALA:HA	2.37	0.58
9:F:243:ASN:N	9:F:243:ASN:OD1	2.37	0.58
21:S:80:ILE:HD11	21:S:126:ILE:HD12	1.85	0.58
50:S2:536:A:C6	50:S2:537:C:C5	2.91	0.58
50:S2:647:U:N3	50:S2:648:A:N7	2.52	0.58
50:S2:648:A:N3	50:S2:649:U:C6	2.71	0.58
50:S2:663:C:C2	50:S2:664:A:C8	2.91	0.58
50:S2:793:G:C4	50:S2:794:A:C8	2.91	0.58
50:S2:832:G:C2	50:S2:843:C:N3	2.71	0.58
50:S2:1142:G:H22	50:S2:1144:A:H3'	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1409:A:N3	50:S2:1410:C:C6	2.71	0.58
50:S2:1750:C:C4	50:S2:1751:C:C6	2.91	0.58
55:SE:181:CYS:SG	55:SE:195:ILE:HG13	2.43	0.58
67:SQ:138:ARG:HG3	67:SQ:138:ARG:HH11	1.68	0.58
86:S6:20:U:H2'	86:S6:21:A:C4'	2.30	0.58
86:S6:34:G:H2'	86:S6:35:A:H8	1.64	0.58
1:5:153:G:N1	1:5:154:G:C5	2.72	0.58
1:5:174:C:C2	1:5:263:G:N2	2.71	0.58
1:5:218:A:N7	6:C:181:LYS:HG2	2.19	0.58
1:5:247:G:N3	1:5:248:C:C6	2.71	0.58
1:5:488:G:C2	1:5:489:C:C5	2.91	0.58
1:5:909:A:N1	1:5:910:G:N7	2.51	0.58
1:5:1206:C:C2	1:5:1207:C:C5	2.92	0.58
1:5:1213:G:O6	1:5:1215:C:C5	2.55	0.58
1:5:1263:A:C4	1:5:1264:C:C6	2.90	0.58
1:5:1492:G:N1	1:5:1493:G:C5	2.71	0.58
1:5:1616:U:O2	1:5:1617:G:C8	2.56	0.58
1:5:1725:U:C6	1:5:1725:U:H5''	2.38	0.58
1:5:2128:G:C6	1:5:2129:C:C4	2.91	0.58
1:5:2260:C:C2'	1:5:2261:G:N7	2.57	0.58
1:5:2268:A:H4'	1:5:2269:C:H5'	1.85	0.58
1:5:2857:A:HO2'	1:5:2858:A:H8	1.44	0.58
1:5:3766:A:N1	50:S2:1827:U:H1'	2.17	0.58
1:5:4283:G:C4	1:5:4284:C:C5	2.91	0.58
1:5:4480:A:C2	1:5:4481:U:O4'	2.57	0.58
1:5:4539:U:N3	1:5:4540:C:C5	2.71	0.58
1:5:4660:G:C2	1:5:4661:G:N7	2.71	0.58
1:5:4734:A:C4	1:5:4735:G:C8	2.91	0.58
1:5:4896:G:N3	1:5:4897:G:C8	2.71	0.58
1:5:4957:C:N3	1:5:4958:C:H5	2.00	0.58
2:7:30:C:C2	2:7:48:G:C2	2.91	0.58
2:7:55:A:C2	2:7:56:G:C5	2.91	0.58
3:8:10:G:N1	3:8:11:C:C2	2.71	0.58
3:8:70:G:C5'	27:Y:27:ARG:HH11	2.16	0.58
3:8:73:U:C5	3:8:74:U:C5	2.92	0.58
4:A:186:TYR:N	4:A:196:TRP:HZ3	2.01	0.58
5:B:264:PHE:HD2	17:O:66:PRO:CD	2.16	0.58
5:B:302:ASN:HD22	5:B:330:PHE:HE2	1.51	0.58
12:I:146:GLU:N	12:I:146:GLU:OE2	2.36	0.58
14:L:179:PHE:CD2	29:a:131:ARG:HB2	2.39	0.58
24:V:97:TYR:CE2	25:W:21:TYR:HD1	2.22	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:115:SER:HA	24:V:135:ASN:HD21	1.68	0.58
32:d:24:GLU:HG2	32:d:120:VAL:HB	1.84	0.58
50:S2:83:A:N1	50:S2:84:A:H1'	2.18	0.58
50:S2:449:A:C5	50:S2:452:G:O6	2.56	0.58
50:S2:857:U:N3	50:S2:858:A:N7	2.52	0.58
50:S2:1036:A:C5	50:S2:1037:G:C8	2.92	0.58
50:S2:1045:U:O4	50:S2:1046:U:C4	2.57	0.58
50:S2:1098:C:C2	50:S2:1099:G:C8	2.91	0.58
50:S2:1211:G:N2	50:S2:1212:G:H1'	2.18	0.58
50:S2:1270:G:H1'	50:S2:1298:G:O6	2.02	0.58
50:S2:1431:G:N3	50:S2:1432:U:H1'	2.18	0.58
50:S2:1728:U:C4	50:S2:1729:U:C5	2.91	0.58
50:S2:1728:U:N3	50:S2:1729:U:C6	2.72	0.58
52:SB:144:LYS:C	52:SB:145:LYS:CB	2.76	0.58
53:SC:137:VAL:HG21	53:SC:244:ILE:HD12	1.84	0.58
53:SC:146:GLU:CD	54:SD:120:TYR:OH	2.46	0.58
55:SE:54:TYR:CD1	75:SY:17:LEU:HD11	2.39	0.58
55:SE:86:PHE:CE2	55:SE:87:MET:HG2	2.39	0.58
77:Sa:20:PRO:HB2	77:Sa:29:CYS:SG	2.44	0.58
1:5:28:C:C2	1:5:29:G:H8	2.09	0.58
1:5:421:C:C4	1:5:422:C:C5	2.91	0.58
1:5:436:C:H4'	33:e:26:ASP:OD2	2.03	0.58
1:5:982:U:C2'	1:5:983:C:C6	2.77	0.58
1:5:1265:G:C5'	1:5:2115:G:N2	2.64	0.58
1:5:1301:C:O4'	1:5:1301:C:O2	2.20	0.58
1:5:1489:G:N3	1:5:1489:G:H2'	2.18	0.58
1:5:1507:C:N3	1:5:1508:A:C8	2.70	0.58
1:5:1755:C:H41	1:5:1778:C:C4'	2.16	0.58
1:5:2036:C:N3	1:5:2037:C:H5	1.98	0.58
1:5:2089:G:C6	1:5:2262:G:O2'	2.57	0.58
1:5:2089:G:C2	1:5:2263:A:C6	2.92	0.58
1:5:2261:G:C2'	1:5:2262:G:C8	2.86	0.58
1:5:2508:U:N3	1:5:2509:C:H5	1.97	0.58
1:5:2515:G:O6	1:5:2516:G:C5	2.57	0.58
1:5:2532:C:C2	1:5:2533:C:H5	2.13	0.58
1:5:3767:C:OP1	50:S2:1849:G:C5	2.57	0.58
1:5:4314:C:C4	1:5:4315:A:N7	2.72	0.58
1:5:5021:C:C2	1:5:5022:U:C5	2.91	0.58
2:7:28:C:C4	2:7:29:C:C6	2.92	0.58
3:8:130:C:N3	3:8:131:G:N7	2.51	0.58
9:F:100:ILE:C	9:F:101:ASN:OD1	2.46	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:166:ALA:HB1	29:a:97:ALA:HB1	1.85	0.58
14:L:179:PHE:CE2	29:a:131:ARG:HB2	2.38	0.58
16:N:11:TRP:CE3	16:N:19:MET:HE2	2.38	0.58
31:c:78:ASN:CG	31:c:79:ILE:N	2.61	0.58
43:o:26:TYR:C	43:o:26:TYR:CD1	2.81	0.58
43:o:37:GLY:HA2	43:o:40:ARG:HH22	1.67	0.58
50:S2:458:A:C2	50:S2:459:C:C1'	2.87	0.58
50:S2:659:G:N3	50:S2:659:G:H2'	2.19	0.58
50:S2:837:A:C2	50:S2:838:G:C5	2.91	0.58
50:S2:989:C:H5'	50:S2:990:A:C8	2.39	0.58
50:S2:1053:C:O2	50:S2:1053:C:H2'	2.03	0.58
50:S2:1123:C:P	52:SB:205:TYR:OH	2.61	0.58
50:S2:1126:G:C2	50:S2:1127:C:C5	2.91	0.58
50:S2:1204:A:C5	50:S2:1205:C:C5	2.90	0.58
50:S2:1206:G:C2	50:S2:1693:G:C4	2.91	0.58
50:S2:1213:C:C5	50:S2:1682:C:N4	2.70	0.58
50:S2:1596:U:O2	50:S2:1596:U:H2'	2.04	0.58
50:S2:1824:A:H4'	74:SX:61:GLN:HG2	1.86	0.58
56:SF:110:GLN:NE2	56:SF:110:GLN:HA	2.19	0.58
64:SN:114:ARG:O	64:SN:118:ILE:HD12	2.03	0.58
68:SR:18:GLU:OE2	68:SR:68:GLY:O	2.22	0.58
86:S6:5:C:C6	86:S6:6:G:C8	2.92	0.58
86:S6:13:C:H2'	86:S6:14:C:C1'	2.32	0.58
86:S6:23:A:N9	86:S6:24:G:C8	2.70	0.58
86:S6:75:C:HO2'	86:S6:76:A:P	2.25	0.58
1:5:88:A:C6	1:5:97:G:N3	2.71	0.58
1:5:1368:A:O2'	1:5:1369:C:OP1	2.19	0.58
1:5:1572:U:H5'	20:R:95:TRP:CZ2	2.38	0.58
1:5:1755:C:C2	7:D:3:PHE:HB2	2.38	0.58
1:5:2013:A:H2'	1:5:2014:C:O4'	2.04	0.58
1:5:2113:G:OP1	1:5:2113:G:O4'	2.21	0.58
1:5:2128:G:H2'	1:5:2129:C:O4'	2.04	0.58
1:5:2263:A:OP2	45:r:39:ARG:NH2	2.36	0.58
1:5:2265:G:H1'	1:5:2266:C:OP1	2.03	0.58
1:5:2313:A:O2'	1:5:2314:G:OP1	2.17	0.58
1:5:2319:C:H41	33:e:58:ILE:HD12	1.68	0.58
1:5:2468:U:OP2	1:5:2506:G:N2	2.36	0.58
1:5:3800:A:C2	1:5:4496:A:C1'	2.87	0.58
1:5:3812:C:OP1	1:5:3813:A:O2'	2.21	0.58
1:5:3892:U:O2'	18:P:80:GLN:NE2	2.37	0.58
1:5:3953:G:C6	1:5:3954:A:C8	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4096:C:O2	35:g:112:GLN:CD	2.46	0.58
1:5:4287:G:C6	1:5:4288:C:N4	2.71	0.58
1:5:4315:A:N1	1:5:4316:G:N7	2.52	0.58
1:5:4531:U:H5'	1:5:4531:U:C6	2.38	0.58
2:7:58:A:C6	2:7:59:G:N7	2.72	0.58
3:8:94:G:C6	38:j:79:ARG:HD2	2.39	0.58
3:8:97:A:C4	3:8:98:C:C5	2.91	0.58
3:8:144:U:C2	3:8:145:C:C5	2.90	0.58
6:C:138:MET:O	45:r:16:PHE:HZ	1.84	0.58
15:M:104:MET:HE2	17:O:199:HIS:HB3	1.84	0.58
19:Q:146:ARG:HH11	19:Q:146:ARG:CB	2.16	0.58
21:S:12:VAL:HG13	21:S:64:CYS:HB2	1.85	0.58
29:a:127:LYS:HG2	29:a:128:PHE:CE2	2.38	0.58
29:a:129:PHE:CE2	29:a:144:CYS:HB3	2.38	0.58
37:i:29:ARG:HG3	37:i:29:ARG:O	2.04	0.58
50:S2:42:A:N3	50:S2:426:A:C5	2.68	0.58
50:S2:210:U:C2	50:S2:211:G:C8	2.91	0.58
50:S2:378:U:O4	50:S2:379:C:N4	2.37	0.58
50:S2:635:G:C5	50:S2:636:C:C5	2.91	0.58
50:S2:907:G:H3'	50:S2:908:A:H8	1.67	0.58
50:S2:1097:G:H4'	51:SA:32:PHE:CD2	2.38	0.58
50:S2:1123:C:OP1	52:SB:205:TYR:OH	2.20	0.58
50:S2:1160:U:P	74:SX:4:CYS:O	2.62	0.58
50:S2:1246:A:O2'	71:SU:72:GLU:OE1	2.21	0.58
50:S2:1286:G:C2	50:S2:1312:G:C6	2.91	0.58
50:S2:1290:G:H2'	82:Sf:146:LEU:H	1.66	0.58
50:S2:1399:C:C2	50:S2:1400:U:C5	2.92	0.58
50:S2:1402:A:N3	50:S2:1405:A:C6	2.71	0.58
50:S2:1565:C:C2	50:S2:1571:G:N2	2.71	0.58
50:S2:1605:G:H3'	50:S2:1606:G:O4'	2.03	0.58
51:SA:29:ASN:HB3	51:SA:151:ASP:OD2	2.04	0.58
51:SA:134:LEU:HD22	51:SA:144:THR:HG21	1.85	0.58
57:SG:4:ASN:HB3	57:SG:110:ASN:HB3	1.85	0.58
68:SR:71:ILE:O	68:SR:74:GLN:N	2.36	0.58
83:Sg:64:HIS:HB3	83:Sg:83:TRP:CB	2.33	0.58
86:S6:15:G:N2	86:S6:21:A:H2'	2.17	0.58
1:5:151:G:C6	10:G:141:ASN:ND2	2.72	0.58
1:5:167:C:C2	1:5:269:G:N2	2.72	0.58
1:5:488:G:C2	1:5:489:C:N1	2.72	0.58
1:5:490:C:H3'	1:5:491:G:H8	1.68	0.58
1:5:919:C:C4	1:5:920:C:C4	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:981:C:C4	8:E:69:TYR:CE1	2.92	0.58
1:5:1270:A:C5	1:5:1271:G:H1'	2.38	0.58
1:5:1543:G:C6	1:5:1544:G:N7	2.72	0.58
1:5:1618:G:N1	1:5:1619:G:C5	2.72	0.58
1:5:1686:C:H2'	1:5:1687:U:C5'	2.34	0.58
1:5:1757:U:N3	1:5:1758:G:N7	2.51	0.58
1:5:1758:G:N1	1:5:1759:G:C5	2.72	0.58
1:5:1770:A:C6	1:5:1771:U:C4	2.92	0.58
1:5:2098:G:H2'	1:5:2099:G:O4'	2.03	0.58
1:5:2126:G:H1'	1:5:2127:C:C5	2.38	0.58
1:5:2480:G:C4	1:5:2481:G:C8	2.92	0.58
1:5:3654:G:O2'	1:5:3693:U:OP1	2.21	0.58
1:5:3868:G:H22	1:5:3899:G:N2	2.01	0.58
1:5:4539:U:C2	1:5:4540:C:C6	2.92	0.58
1:5:4977:A:C2	1:5:4978:G:C4	2.92	0.58
1:5:4999:G:N3	1:5:5000:G:C8	2.72	0.58
2:7:93:G:C4	2:7:94:C:C6	2.92	0.58
3:8:5:U:OP2	18:P:62:ARG:NH1	2.37	0.58
6:C:325:MET:CE	9:F:157:TYR:CE2	2.86	0.58
12:I:209:TRP:HE1	12:I:213:HIS:CD2	2.22	0.58
13:J:154:LYS:O	13:J:155:HIS:HB2	2.04	0.58
14:L:176:PHE:C	14:L:176:PHE:CD1	2.81	0.58
16:N:37:HIS:CD2	16:N:37:HIS:C	2.80	0.58
28:Z:74:VAL:HG23	28:Z:101:PHE:CE2	2.38	0.58
50:S2:316:G:C2	50:S2:317:C:C5	2.92	0.58
50:S2:926:A:C2	50:S2:927:C:N1	2.72	0.58
50:S2:1193:U:C4	74:SX:110:HIS:NE2	2.72	0.58
50:S2:1201:U:C2	50:S2:1202:U:C6	2.92	0.58
50:S2:1378:A:C8	51:SA:132:GLN:NE2	2.72	0.58
50:S2:1428:G:H2'	50:S2:1429:G:O4'	2.04	0.58
50:S2:1842:C:C2'	50:S2:1843:G:O5'	2.52	0.58
69:SS:123:LEU:O	69:SS:127:TRP:CD1	2.57	0.58
73:SW:98:GLN:HE21	73:SW:98:GLN:HA	1.67	0.58
74:SX:91:LEU:CD2	81:Se:6:LEU:CD2	2.72	0.58
85:S5:61:C:C2'	85:S5:62:C:C6	2.85	0.58
85:S5:71:G:C8	85:S5:71:G:O5'	2.55	0.58
86:S6:4:C:H5''	86:S6:5:C:OP2	2.03	0.58
86:S6:55:U:P	86:S6:55:U:H6	2.26	0.58
1:5:436:C:O2	1:5:436:C:H2'	2.03	0.58
1:5:731:G:C5	1:5:732:A:C8	2.91	0.58
1:5:1212:G:N3	1:5:1213:G:C8	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1215:C:C4	1:5:1216:C:C5	2.91	0.58
1:5:1326:A:H2'	1:5:1327:C:C6	2.38	0.58
1:5:1491:A:C2	1:5:1492:G:C5	2.92	0.58
1:5:1582:U:H5	1:5:1610:C:O2	1.87	0.58
1:5:1676:C:O2'	1:5:3914:U:C4	2.50	0.58
1:5:1866:U:C4	1:5:4405:G:C1'	2.87	0.58
1:5:3909:C:C2	1:5:3910:C:C6	2.91	0.58
1:5:4050:A:N7	1:5:4051:C:C5	2.72	0.58
1:5:4054:C:C1'	46:z:35:GLN:HB3	2.33	0.58
1:5:4079:C:C2	1:5:4080:C:C6	2.92	0.58
1:5:4086:G:H4'	10:G:54:PHE:HB3	1.86	0.58
1:5:4269:G:N2	1:5:4277:G:H22	1.95	0.58
1:5:4416:G:N3	1:5:4417:C:C6	2.70	0.58
1:5:4608:G:C6	1:5:4609:G:C4	2.92	0.58
1:5:5038:A:OP1	25:W:61:LYS:NZ	2.34	0.58
24:V:14:PHE:CZ	24:V:91:LYS:HD2	2.38	0.58
29:a:104:VAL:HG22	29:a:109:TYR:CE2	2.39	0.58
36:h:38:GLY:N	47:1:266:PRO:HB3	2.19	0.58
50:S2:105:U:N3	50:S2:106:C:C6	2.71	0.58
50:S2:171:A:N7	50:S2:173:A:C5	2.71	0.58
50:S2:504:G:C2'	50:S2:505:G:O5'	2.52	0.58
50:S2:676:C:C4	50:S2:677:G:C5	2.91	0.58
50:S2:750:C:C2	50:S2:751:G:C8	2.91	0.58
50:S2:899:U:C4	50:S2:900:C:C5	2.91	0.58
50:S2:916:A:C2	64:SN:73:ARG:HD3	2.38	0.58
50:S2:949:G:C5	50:S2:950:C:C5	2.91	0.58
50:S2:1052:A:C2	50:S2:1053:C:C6	2.92	0.58
50:S2:1294:G:C8	82:Sf:151:ASN:CA	2.87	0.58
50:S2:1360:U:HO2'	50:S2:1379:A:P	2.26	0.58
50:S2:1402:A:C4	50:S2:1405:A:N6	2.72	0.58
50:S2:1526:G:C2	50:S2:1527:C:N1	2.72	0.58
50:S2:1667:U:O2	50:S2:1668:U:C6	2.57	0.58
51:SA:19:LEU:HD23	51:SA:24:HIS:HE1	1.68	0.58
64:SN:4:MET:HE2	64:SN:124:ARG:HD3	1.85	0.58
68:SR:21:TYR:HE1	68:SR:61:ILE:CB	2.16	0.58
69:SS:80:PRO:HG2	69:SS:82:TRP:CD1	2.38	0.58
73:SW:37:PHE:CD1	73:SW:103:VAL:HG11	2.37	0.58
1:5:490:C:C2'	1:5:491:G:C8	2.87	0.58
1:5:1254:A:H2'	1:5:1256:G:N7	2.19	0.58
1:5:1270:A:C2'	1:5:1271:G:O5'	2.52	0.58
1:5:1441:C:N3	1:5:1442:C:C5	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1570:G:C6	1:5:1571:G:N7	2.72	0.58
1:5:1572:U:H4'	20:R:95:TRP:CE2	2.38	0.58
1:5:1617:G:N3	1:5:2513:A:C2	2.72	0.58
1:5:1755:C:H5	1:5:1778:C:HI'	1.69	0.58
1:5:1806:G:C2	1:5:1807:C:C6	2.92	0.58
1:5:1887:G:C2	1:5:1890:G:O6	2.57	0.58
1:5:2076:G:C6	1:5:2077:C:C6	2.92	0.58
1:5:2085:G:C2	1:5:2273:G:C6	2.92	0.58
1:5:2316:G:C2	1:5:2317:C:C5	2.92	0.58
1:5:2417:A:N1	1:5:2418:A:N7	2.51	0.58
1:5:2438:A:N6	1:5:2441:C:C4	2.71	0.58
1:5:2783:A:C4	1:5:2784:C:C6	2.92	0.58
1:5:3665:G:N2	1:5:3685:C:O2'	2.36	0.58
1:5:4061:G:N1	1:5:4062:A:N7	2.51	0.58
1:5:4070:U:O2'	1:5:4071:U:OP1	2.18	0.58
1:5:4455:G:N3	1:5:4456:C:C6	2.72	0.58
1:5:5007:A:N7	1:5:5040:U:O4	2.36	0.58
1:5:5052:C:C4	1:5:5053:U:C5	2.91	0.58
2:7:17:C:C4	2:7:18:C:C5	2.92	0.58
2:7:93:G:C6	2:7:94:C:C4	2.92	0.58
3:8:66:A:H2'	3:8:67:U:C6	2.38	0.58
3:8:131:G:C2	3:8:132:G:C8	2.92	0.58
5:B:17:LEU:HD13	5:B:17:LEU:C	2.28	0.58
5:B:51:ALA:HA	5:B:323:TYR:HE2	1.66	0.58
45:r:33:LYS:HD2	45:r:40:TYR:HE2	1.69	0.58
46:z:117:ILE:O	46:z:121:PRO:HD2	2.03	0.58
50:S2:16:G:H2'	50:S2:17:C:C1'	2.34	0.58
50:S2:70:G:N2	50:S2:80:G:N3	2.51	0.58
50:S2:458:A:N1	50:S2:459:C:N1	2.52	0.58
50:S2:501:C:C2'	50:S2:501:C:O2	2.52	0.58
50:S2:1151:G:N1	50:S2:1152:U:C5	2.71	0.58
50:S2:1274:G:N7	61:SK:43:LEU:HD22	2.19	0.58
50:S2:1290:G:C2'	82:Sf:146:LEU:H	2.17	0.58
50:S2:1304:U:C2	50:S2:1305:C:C5	2.91	0.58
63:SM:33:ARG:NH2	63:SM:90:GLY:O	2.37	0.58
68:SR:33:ARG:HG2	68:SR:36:GLU:HG2	1.85	0.58
86:S6:6:G:C2	86:S6:7:G:C1'	2.85	0.58
1:5:83:C:O5'	1:5:84:A:H2'	2.04	0.58
1:5:125:C:O2	1:5:126:C:C6	2.57	0.58
1:5:158:A:C5	1:5:277:G:C6	2.92	0.58
1:5:919:C:N4	1:5:920:C:N4	2.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:951:G:C2	1:5:952:G:C8	2.92	0.58
1:5:1048:G:C6	1:5:1049:C:C4	2.91	0.58
1:5:1177:U:H4'	7:D:282:GLN:HB3	1.85	0.58
1:5:1918:U:C2	1:5:1920:C:C5	2.92	0.58
1:5:2253:A:H8	1:5:2254:G:HO2'	1.51	0.58
1:5:2347:A:C4	1:5:2348:G:C6	2.91	0.58
1:5:2362:U:C4	1:5:3859:G:C2	2.90	0.58
1:5:2508:U:O2	1:5:2509:C:H6	1.75	0.58
1:5:2578:G:C2	1:5:2579:G:C8	2.92	0.58
1:5:2663:G:OP1	20:R:118:HIS:HA	2.03	0.58
1:5:2844:A:O2'	1:5:4631:G:H4'	2.04	0.58
1:5:3782:C:C4	1:5:3809:G:C6	2.92	0.58
1:5:3785:A:H2	1:5:4536:C:H1'	1.63	0.58
1:5:3967:G:H1'	46:z:162:VAL:HG22	0.60	0.58
1:5:4124:G:H21	10:G:44:ASP:HA	1.69	0.58
1:5:4199:C:N3	1:5:4200:G:H8	2.02	0.58
1:5:4235:G:H2'	1:5:4236:G:O5'	2.04	0.58
1:5:4323:A:C2	1:5:4324:A:C4	2.92	0.58
1:5:4537:C:C2	1:5:4538:G:N7	2.68	0.58
1:5:4700:A:H2	11:H:69:THR:HG22	1.69	0.58
1:5:4911:A:C5'	5:B:100:ARG:CD	2.77	0.58
1:5:4976:U:C4	5:B:342:LYS:HD2	2.38	0.58
2:7:116:G:C2	2:7:117:G:C8	2.92	0.58
4:A:40:TYR:O	4:A:40:TYR:CG	2.56	0.58
8:E:43:ASN:ND2	8:E:44:PRO:O	2.37	0.58
9:F:184:TYR:HB3	9:F:202:ARG:HG2	1.85	0.58
12:I:36:LEU:HD22	12:I:73:ASN:ND2	2.19	0.58
13:J:15:LEU:HB3	13:J:165:TRP:HD1	1.69	0.58
21:S:8:ARG:HB2	21:S:10:TYR:HE2	1.67	0.58
21:S:95:ARG:NH1	21:S:97:TYR:HH	1.99	0.58
27:Y:10:ASP:O	27:Y:11:ARG:C	2.45	0.58
29:a:127:LYS:CG	29:a:128:PHE:HE2	2.16	0.58
44:p:89:LEU:O	52:SB:219:LYS:CE	2.51	0.58
50:S2:81:U:C5	50:S2:82:G:N7	2.72	0.58
50:S2:164:A:O2'	50:S2:165:G:N3	2.37	0.58
50:S2:495:U:OP1	55:SE:49:ARG:NH1	2.31	0.58
50:S2:499:G:C6	50:S2:501:C:H1'	2.39	0.58
50:S2:636:C:N3	50:S2:637:U:C4	2.72	0.58
50:S2:646:G:C6	50:S2:647:U:C6	2.92	0.58
50:S2:663:C:C4	50:S2:664:A:N7	2.72	0.58
50:S2:676:C:N4	50:S2:677:G:C6	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:794:A:N6	50:S2:795:A:C6	2.72	0.58
50:S2:993:G:C6	50:S2:994:C:C4	2.92	0.58
50:S2:993:G:N2	50:S2:994:C:H1'	2.18	0.58
50:S2:1073:U:C4	50:S2:1074:C:C5	2.92	0.58
50:S2:1280:G:H5'	63:SM:96:ARG:HG2	1.86	0.58
50:S2:1293:A:N3	82:Sf:150:PHE:C	2.62	0.58
50:S2:1293:A:N1	82:Sf:138:ARG:HD2	2.19	0.58
50:S2:1433:C:P	50:S2:1434:C:OP1	2.62	0.58
50:S2:1589:A:O2'	50:S2:1590:C:O4'	2.19	0.58
50:S2:1667:U:N3	50:S2:1668:U:C4	2.72	0.58
50:S2:1771:G:N2	50:S2:1772:C:C2	2.72	0.58
50:S2:1864:U:C4	77:Sa:9:GLY:HA3	2.39	0.58
59:SI:197:PHE:CZ	62:SL:5:GLN:HG3	2.39	0.58
60:SJ:111:GLN:NE2	60:SJ:127:ARG:HB2	2.19	0.58
70:ST:31:PRO:HB3	70:ST:33:TRP:CH2	2.39	0.58
75:SY:27:VAL:HG12	75:SY:28:LEU:O	2.03	0.58
85:S5:37:A:N6	85:S5:38:A:C2	2.72	0.58
86:S6:10:G:N1	86:S6:11:C:C5	2.72	0.58
86:S6:54:U:C2'	86:S6:55:U:C6	2.85	0.58
1:5:12:A:C2	1:5:14:C:C6	2.92	0.57
1:5:29:G:C6	1:5:30:C:C4	2.92	0.57
1:5:488:G:C6	1:5:489:C:C5	2.92	0.57
1:5:732:A:C6	1:5:733:A:C4	2.92	0.57
1:5:991:C:C2	1:5:992:C:C6	2.92	0.57
1:5:1392:A:C2	1:5:1393:G:N7	2.71	0.57
1:5:1437:C:N4	1:5:2098:G:O6	2.35	0.57
1:5:1491:A:N1	1:5:1492:G:C5	2.72	0.57
1:5:1847:C:C4'	19:Q:152:PHE:CE2	2.86	0.57
1:5:1857:C:C2	1:5:1858:A:C8	2.91	0.57
1:5:1878:G:C6	1:5:1879:C:N4	2.72	0.57
1:5:2026:A:H2'	1:5:2027:U:O4'	2.04	0.57
1:5:2439:G:C2	1:5:2440:U:C6	2.92	0.57
1:5:2481:G:C5	1:5:2482:C:C5	2.92	0.57
1:5:2612:G:C4	1:5:2613:C:C6	2.91	0.57
1:5:2793:G:C5	1:5:2797:C:N4	2.72	0.57
1:5:2851:G:O2'	1:5:3841:C:C4'	2.51	0.57
1:5:3596:A:O3'	20:R:143:HIS:CE1	2.56	0.57
1:5:3621:A:C8	1:5:4642:U:O2	2.56	0.57
1:5:3759:A:N1	50:S2:1709:G:C4'	2.63	0.57
1:5:3793:U:O2	1:5:3794:C:C6	2.57	0.57
1:5:3965:A:N1	1:5:4047:A:C6	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4064:C:N3	1:5:4065:G:C5	2.72	0.57
1:5:4096:C:O2	35:g:112:GLN:NE2	2.35	0.57
1:5:4537:C:O2	1:5:4538:G:H8	1.85	0.57
1:5:4737:G:C2	1:5:4738:C:N3	2.72	0.57
1:5:4750:G:HO2'	1:5:4751:G:P	2.27	0.57
6:C:33:ARG:HH11	6:C:122:TYR:HH	1.52	0.57
13:J:99:PHE:CE2	13:J:105:PHE:HB2	2.36	0.57
24:V:98:PHE:CZ	25:W:22:ALA:CB	2.86	0.57
30:b:27:GLN:N	30:b:27:GLN:HE21	2.02	0.57
42:n:2:ARG:NH1	50:S2:1841:C:P	2.77	0.57
45:r:45:HIS:CE1	45:r:103:ARG:NH1	2.71	0.57
47:1:447:ILE:C	47:1:451:VAL:H	2.02	0.57
50:S2:12:U:C2	50:S2:13:C:C5	2.92	0.57
50:S2:99:A:N1	50:S2:100:U:C6	2.72	0.57
50:S2:143:U:N3	50:S2:315:C:OP1	2.33	0.57
50:S2:186:C:C2	50:S2:187:G:C8	2.92	0.57
50:S2:309:G:H2'	50:S2:310:C:C6	2.39	0.57
50:S2:431:G:N1	50:S2:432:G:C5	2.72	0.57
50:S2:477:G:N3	50:S2:478:G:C8	2.72	0.57
50:S2:898:U:N3	50:S2:899:U:C5	2.72	0.57
50:S2:963:A:C2	50:S2:964:A:C6	2.92	0.57
50:S2:1101:U:H2'	50:S2:1102:G:H8	1.68	0.57
50:S2:1189:A:C2	50:S2:1190:A:C5	2.92	0.57
50:S2:1199:A:N6	50:S2:1200:A:C6	2.72	0.57
50:S2:1382:A:C2	50:S2:1383:A:C5	2.92	0.57
50:S2:1538:C:O2	50:S2:1538:C:C2'	2.51	0.57
53:SC:230:THR:HG23	53:SC:236:PHE:CE2	2.38	0.57
54:SD:35:SER:CB	54:SD:91:VAL:HG21	2.34	0.57
55:SE:11:ARG:NH1	55:SE:24:THR:OG1	2.37	0.57
63:SM:26:LEU:HG	63:SM:90:GLY:HA3	1.86	0.57
74:SX:92:ASN:H	81:Se:9:ALA:HB1	1.67	0.57
85:S5:53:G:H2'	85:S5:53:G:N3	2.17	0.57
1:5:448:G:C6	1:5:449:C:C6	2.92	0.57
1:5:456:C:N3	1:5:457:G:N7	2.52	0.57
1:5:752:G:O6	1:5:753:C:C4	2.57	0.57
1:5:985:C:N3	1:5:986:C:C5	2.72	0.57
1:5:1190:C:C4	1:5:1191:C:C5	2.92	0.57
1:5:1261:G:C2	1:5:1262:G:N9	2.72	0.57
1:5:1545:G:N2	1:5:1546:C:C2	2.71	0.57
1:5:1598:C:C4	1:5:2798:A:N7	2.71	0.57
1:5:1752:G:H2'	1:5:1753:G:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1888:A:N6	1:5:3873:G:O2'	2.36	0.57
1:5:1959:U:C1'	1:5:1961:G:H1'	2.33	0.57
1:5:2440:U:O2'	1:5:2441:C:P	2.62	0.57
1:5:2461:G:C2	1:5:2462:C:C5	2.92	0.57
1:5:2770:C:C4	1:5:2771:G:N7	2.72	0.57
1:5:2796:G:H4'	1:5:2797:C:OP2	2.04	0.57
1:5:3698:G:N1	1:5:3699:C:C4	2.72	0.57
1:5:4060:U:C2	1:5:4061:G:C8	2.93	0.57
1:5:4355:G:N3	1:5:4356:G:C8	2.73	0.57
1:5:4537:C:O2	1:5:4537:C:C2'	2.51	0.57
1:5:4548:A:N7	1:5:4548:A:OP1	2.37	0.57
1:5:4607:A:C5	1:5:4608:G:H1'	2.39	0.57
1:5:4683:U:C4	1:5:4707:A:C6	2.92	0.57
1:5:4735:G:C2	1:5:4736:C:C5	2.92	0.57
1:5:4915:G:C2	1:5:4916:G:C8	2.93	0.57
2:7:11:A:H4'	2:7:13:A:C8	2.39	0.57
3:8:152:U:H2'	3:8:153:C:O4'	2.03	0.57
9:F:239:GLU:C	9:F:241:GLN:H	2.12	0.57
16:N:68:ARG:HH12	16:N:123:GLU:HG3	1.68	0.57
16:N:143:ARG:HD3	36:h:95:LEU:CD2	2.35	0.57
25:W:50:ASN:HA	25:W:55:TYR:CD2	2.39	0.57
29:a:78:LEU:C	29:a:80:THR:H	2.13	0.57
47:1:288:ASN:OD1	47:1:428:ILE:HG13	2.04	0.57
50:S2:27:A:C6	50:S2:28:U:C4	2.92	0.57
50:S2:647:U:O2	50:S2:647:U:C2'	2.51	0.57
50:S2:649:U:N3	50:S2:650:A:N7	2.53	0.57
50:S2:926:A:N3	50:S2:927:C:C6	2.72	0.57
50:S2:1092:G:C2	50:S2:1093:A:C8	2.91	0.57
50:S2:1121:G:C4	50:S2:1122:A:C8	2.92	0.57
50:S2:1412:C:C2'	50:S2:1413:G:H8	2.16	0.57
50:S2:1459:G:C6	50:S2:1460:C:C4	2.93	0.57
50:S2:1590:C:C6	50:S2:1591:C:C6	2.92	0.57
85:S5:6:G:C4	85:S5:7:A:C5	2.93	0.57
85:S5:12:U:C6	85:S5:24:G:N2	2.72	0.57
86:S6:29:G:H22	86:S6:42:C:C1'	2.17	0.57
86:S6:69:G:H2'	86:S6:69:G:N3	2.19	0.57
86:S6:71:G:H4'	86:S6:72:C:OP1	2.04	0.57
1:5:258:G:N1	1:5:259:C:C4	2.73	0.57
1:5:691:C:C2	1:5:692:A:N7	2.72	0.57
1:5:1269:G:N7	1:5:2111:G:C4	2.72	0.57
1:5:1379:C:O3'	1:5:1380:G:O4'	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1556:C:N3	1:5:1557:C:H5	1.98	0.57
1:5:1777:C:C2	1:5:1778:C:C6	2.92	0.57
1:5:1948:G:C6	1:5:1949:U:C4	2.93	0.57
1:5:2466:G:H2'	1:5:2467:U:C1'	2.34	0.57
1:5:2604:C:C2	1:5:2605:G:N7	2.71	0.57
1:5:2857:A:O2'	1:5:2858:A:P	2.61	0.57
1:5:3967:G:N2	46:z:164:CYS:CB	2.68	0.57
1:5:4269:G:C4	1:5:4270:C:C6	2.91	0.57
1:5:4304:A:H2	29:a:43:ILE:HG23	1.69	0.57
1:5:4644:G:N2	1:5:4654:C:C2	2.73	0.57
3:8:43:A:N1	3:8:44:A:C5	2.72	0.57
4:A:186:TYR:HA	4:A:196:TRP:CE3	2.39	0.57
5:B:367:PHE:HZ	5:B:380:GLN:HE22	1.49	0.57
7:D:94:ASN:HD21	7:D:96:ALA:HB3	1.69	0.57
17:O:49:ARG:HH11	17:O:49:ARG:HG2	1.69	0.57
19:Q:34:PHE:CZ	19:Q:38:ARG:HG3	2.39	0.57
20:R:117:ARG:HB2	20:R:117:ARG:CZ	2.33	0.57
24:V:39:ILE:HG23	24:V:61:VAL:HG13	1.85	0.57
26:X:73:HIS:N	26:X:73:HIS:CD2	2.72	0.57
29:a:62:HIS:O	29:a:62:HIS:CD2	2.57	0.57
30:b:12:GLN:CB	30:b:16:TRP:HZ2	2.17	0.57
40:l:27:ILE:O	40:l:33:ASN:ND2	2.37	0.57
50:S2:52:G:C6	50:S2:53:C:C4	2.93	0.57
50:S2:84:A:O2'	75:SY:119:GLY:O	2.21	0.57
50:S2:105:U:H4'	59:SI:21:TYR:OH	2.04	0.57
50:S2:144:U:H2'	50:S2:145:G:H8	1.69	0.57
50:S2:665:G:C2	50:S2:671:A:N7	2.72	0.57
50:S2:816:A:N1	50:S2:817:G:H1'	2.18	0.57
50:S2:1111:U:O2	50:S2:1112:U:C5	2.48	0.57
50:S2:1224:G:N1	50:S2:1643:U:C4	2.72	0.57
50:S2:1225:U:C4	50:S2:1226:G:N7	2.72	0.57
50:S2:1378:A:C6	51:SA:136:GLU:OE2	2.57	0.57
50:S2:1432:U:H2'	50:S2:1432:U:O2	2.04	0.57
50:S2:1640:A:C4'	86:S6:41:C:C2'	2.80	0.57
50:S2:1794:C:N3	50:S2:1795:G:N7	2.53	0.57
51:SA:59:LEU:HD23	51:SA:181:GLU:HG2	1.85	0.57
52:SB:89:GLU:HG3	52:SB:223:PHE:CD2	2.39	0.57
85:S5:5:G:C6	85:S5:69:G:C6	2.90	0.57
86:S6:54:U:H2'	86:S6:55:U:N1	2.18	0.57
1:5:504:G:N1	1:5:505:G:C6	2.72	0.57
1:5:907:C:N3	1:5:908:G:N7	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:978:G:H2'	1:5:979:C:O4'	2.04	0.57
1:5:1175:A:C2	1:5:1176:C:C5	2.91	0.57
1:5:1456:C:O2'	19:Q:73:PRO:O	2.21	0.57
1:5:1539:G:H4'	4:A:194:ASN:HD22	1.69	0.57
1:5:1785:C:OP1	12:I:133:GLN:NE2	2.37	0.57
1:5:1811:G:C2	1:5:1812:C:C4	2.92	0.57
1:5:1882:U:H1'	1:5:1883:G:C8	2.40	0.57
1:5:1921:C:H1'	21:S:160:ARG:HB2	1.86	0.57
1:5:1926:C:O2	1:5:1927:U:C6	2.57	0.57
1:5:1948:G:C5	1:5:1949:U:C5	2.92	0.57
1:5:2365:C:O2	1:5:2829:U:C5	2.57	0.57
1:5:2419:C:H2'	1:5:2420:A:O5'	2.05	0.57
1:5:3907:G:C2	1:5:3909:C:C5	2.92	0.57
1:5:4063:U:C2	1:5:4064:C:H5	2.21	0.57
1:5:4081:G:N1	1:5:4082:G:C5	2.72	0.57
2:7:43:U:O4	2:7:44:C:N4	2.37	0.57
13:J:164:ARG:O	13:J:164:ARG:NH2	2.38	0.57
26:X:117:TYR:N	26:X:117:TYR:CD1	2.69	0.57
50:S2:579:C:N4	50:S2:580:U:C5	2.72	0.57
50:S2:951:C:O2	50:S2:952:G:C8	2.57	0.57
50:S2:1153:C:O4'	50:S2:1153:C:O2	2.20	0.57
50:S2:1210:G:C5'	50:S2:1210:G:C8	2.85	0.57
50:S2:1232:U:C2	50:S2:1233:G:C8	2.91	0.57
50:S2:1261:C:C5	50:S2:1262:C:C5	2.93	0.57
50:S2:1291:A:O3'	82:Sf:149:CYS:N	2.37	0.57
50:S2:1432:U:O2	50:S2:1433:C:C6	2.58	0.57
50:S2:1453:C:N4	50:S2:1455:A:N9	2.51	0.57
50:S2:1502:C:C2	50:S2:1503:C:C6	2.92	0.57
50:S2:1508:A:O4'	50:S2:1508:A:OP2	2.23	0.57
50:S2:1550:G:OP2	54:SD:8:LYS:NZ	2.35	0.57
50:S2:1564:C:O2	50:S2:1565:C:C6	2.58	0.57
50:S2:1571:G:C5	50:S2:1572:C:C5	2.92	0.57
50:S2:1641:A:H1'	86:S6:31:A:H4'	1.85	0.57
50:S2:1782:G:C2	50:S2:1784:G:C8	2.93	0.57
58:SH:123:THR:O	58:SH:127:ASP:OD1	2.22	0.57
59:SI:197:PHE:O	59:SI:201:LYS:N	2.36	0.57
61:SK:8:ARG:NH1	61:SK:12:TYR:OH	2.37	0.57
68:SR:9:VAL:HG21	68:SR:49:LYS:HE3	1.85	0.57
70:ST:76:THR:HG21	70:ST:97:LYS:HG3	1.87	0.57
86:S6:10:G:H2'	86:S6:11:C:H6	1.69	0.57
1:5:60:G:C2	1:5:61:A:C8	2.91	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:92:C:H41	43:o:40:ARG:NH1	2.01	0.57
1:5:299:C:C2	1:5:300:A:C8	2.92	0.57
1:5:307:A:H2'	1:5:308:G:N3	2.19	0.57
1:5:499:G:C2	1:5:500:G:C8	2.92	0.57
1:5:670:G:H2'	1:5:671:G:H8	1.68	0.57
1:5:687:U:C4	1:5:688:U:C5	2.93	0.57
1:5:754:U:C4	1:5:755:C:C5	2.93	0.57
1:5:755:C:N3	1:5:756:G:C8	2.72	0.57
1:5:950:G:N3	1:5:951:G:C8	2.73	0.57
1:5:1079:C:C2	1:5:1080:C:C6	2.93	0.57
1:5:1081:C:C2	1:5:1220:G:C2	2.92	0.57
1:5:1257:A:C2	1:5:1258:G:H1'	2.39	0.57
1:5:1268:G:C1'	1:5:2111:G:C5	2.87	0.57
1:5:1444:G:C2	1:5:1445:U:O4	2.58	0.57
1:5:1477:C:O2	1:5:1478:C:H1'	2.04	0.57
1:5:1566:C:HO3'	1:5:1567:U:H5'	1.67	0.57
1:5:2244:C:O2	1:5:2245:G:C8	2.57	0.57
1:5:2363:A:O2'	1:5:4560:C:N4	2.37	0.57
1:5:2478:C:H2'	1:5:2479:G:O4'	2.04	0.57
1:5:2656:U:H2'	1:5:2657:G:O4'	2.04	0.57
1:5:3777:G:N2	1:5:3815:G:H2'	2.19	0.57
1:5:3974:G:O3'	46:z:26:ARG:HD2	2.04	0.57
1:5:4070:U:HO2'	1:5:4071:U:P	2.27	0.57
1:5:4100:C:O2	1:5:4101:C:C6	2.57	0.57
1:5:4480:A:C6	1:5:4481:U:C5	2.92	0.57
3:8:31:G:H2'	3:8:32:C:O4'	2.04	0.57
3:8:70:G:H5''	27:Y:27:ARG:HH11	1.69	0.57
3:8:118:C:O2	3:8:118:C:H2'	2.03	0.57
4:A:192:LYS:HB3	4:A:193:ARG:HD3	1.86	0.57
5:B:53:MET:HE1	5:B:336:CYS:CB	2.33	0.57
9:F:33:LYS:HA	9:F:36:ARG:HE	1.69	0.57
13:J:105:PHE:CE1	13:J:132:VAL:CB	2.81	0.57
14:L:78:LEU:O	14:L:82:ARG:NH2	2.38	0.57
14:L:126:LEU:HD11	36:h:117:ARG:HG3	1.86	0.57
17:O:113:ASP:N	17:O:113:ASP:OD1	2.38	0.57
21:S:27:LEU:C	21:S:28:TYR:CD1	2.81	0.57
32:d:46:LEU:HD23	32:d:64:ILE:HD13	1.87	0.57
50:S2:10:G:C6	50:S2:11:A:N7	2.72	0.57
50:S2:85:A:C2	50:S2:86:C:C4	2.93	0.57
50:S2:144:U:C2	50:S2:145:G:C8	2.92	0.57
50:S2:380:G:H21	50:S2:382:C:H6	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:529:A:N1	50:S2:555:A:C2	2.73	0.57
50:S2:581:U:O2	75:SY:33:ALA:HB1	2.04	0.57
50:S2:832:G:C2	50:S2:833:C:H1'	2.38	0.57
50:S2:920:A:O2'	50:S2:922:A:O5'	2.23	0.57
50:S2:924:G:H2'	50:S2:924:G:N3	2.19	0.57
50:S2:1045:U:N3	50:S2:1046:U:C6	2.73	0.57
50:S2:1123:C:C2'	52:SB:148:ASN:HD21	2.17	0.57
50:S2:1203:G:C5	50:S2:1204:A:N7	2.72	0.57
50:S2:1281:G:N2	50:S2:1315:U:O4	2.32	0.57
50:S2:1377:U:H2'	51:SA:102:ARG:HH21	1.69	0.57
50:S2:1537:A:O2'	50:S2:1604:G:C5'	2.52	0.57
50:S2:1540:G:C6	50:S2:1541:G:C5	2.87	0.57
50:S2:1578:U:H6	54:SD:6:SER:N	2.02	0.57
50:S2:1782:G:N2	50:S2:1784:G:N7	2.49	0.57
56:SF:141:VAL:HG21	56:SF:146:ARG:HG3	1.84	0.57
73:SW:57:ARG:HG3	73:SW:57:ARG:HH11	1.68	0.57
85:S5:2:C:C5	85:S5:3:C:N4	2.73	0.57
85:S5:28:G:H2'	85:S5:29:G:C8	2.31	0.57
86:S6:10:G:C6	86:S6:11:C:N4	2.73	0.57
86:S6:66:U:C4	86:S6:67:C:N4	2.73	0.57
1:5:124:C:C2	1:5:125:C:C6	2.92	0.57
1:5:144:G:N2	1:5:145:G:C4	2.73	0.57
1:5:199:G:C6	1:5:201:C:N4	2.73	0.57
1:5:296:A:C8	1:5:296:A:C5'	2.88	0.57
1:5:301:G:C5	1:5:302:C:C5	2.92	0.57
1:5:322:C:H2'	1:5:322:C:O2	2.04	0.57
1:5:479:G:N2	1:5:480:C:C2	2.73	0.57
1:5:486:C:N3	1:5:487:G:C8	2.71	0.57
1:5:642:G:C2	1:5:643:C:C5	2.93	0.57
1:5:910:G:C5	1:5:911:U:C5	2.92	0.57
1:5:1186:U:C2	1:5:1187:G:C8	2.93	0.57
1:5:1491:A:H2'	1:5:1492:G:O4'	2.05	0.57
1:5:1619:G:H2'	1:5:1620:U:O5'	2.05	0.57
1:5:1804:A:H4'	1:5:1805:A:O5'	2.05	0.57
1:5:1940:G:H2'	1:5:1941:A:H5''	1.87	0.57
1:5:2081:C:C2	1:5:2082:G:C8	2.93	0.57
1:5:2089:G:N1	1:5:2263:A:C6	2.73	0.57
1:5:2385:U:H2'	1:5:2386:U:C6	2.39	0.57
1:5:2604:C:C2	1:5:2605:G:H8	2.10	0.57
1:5:2688:G:N3	1:5:2689:C:C6	2.72	0.57
1:5:3867:A:C2	1:5:3880:G:O6	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4109:G:C5	1:5:4110:C:C5	2.93	0.57
1:5:4228:G:O2'	1:5:4373:G:O6	2.21	0.57
1:5:4455:G:C4	1:5:4456:C:C6	2.93	0.57
1:5:4636:U:O4	32:d:78:ARG:NH1	2.38	0.57
1:5:4742:G:N1	1:5:4743:G:C8	2.73	0.57
3:8:29:G:C2	3:8:30:U:C6	2.93	0.57
4:A:82:ILE:HD11	4:A:99:GLY:HA3	1.85	0.57
5:B:106:PHE:CD2	5:B:130:PHE:CE2	2.93	0.57
10:G:264:LYS:HD3	52:SB:93:GLY:CA	2.33	0.57
12:I:171:TRP:HB3	12:I:181:PHE:CE2	2.38	0.57
21:S:81:TRP:CZ2	21:S:94:TYR:CD1	2.92	0.57
22:T:19:PHE:O	22:T:20:ARG:C	2.46	0.57
50:S2:20:G:P	50:S2:620:G:H8	2.27	0.57
50:S2:122:G:H2'	50:S2:123:G:C1'	2.35	0.57
50:S2:127:C:OP2	50:S2:312:G:N3	2.38	0.57
50:S2:217:A:N3	50:S2:309:G:O6	2.34	0.57
50:S2:223:C:H2'	50:S2:224:A:H8	1.69	0.57
50:S2:343:A:C6	50:S2:344:U:C5	2.92	0.57
50:S2:458:A:C5	50:S2:459:C:C6	2.92	0.57
50:S2:958:G:O2'	50:S2:959:G:C4'	2.51	0.57
50:S2:1045:U:C4	50:S2:1046:U:C5	2.92	0.57
50:S2:1099:G:C6	50:S2:1100:A:C8	2.92	0.57
50:S2:1397:U:C5	50:S2:1442:U:C4'	2.87	0.57
50:S2:1554:C:O4'	50:S2:1554:C:O2	2.23	0.57
50:S2:1735:A:H2'	50:S2:1736:G:O4'	2.04	0.57
50:S2:1849:G:O2'	50:S2:1850:A:H5'	2.03	0.57
50:S2:1865:C:O2'	77:Sa:95:ARG:NH1	2.38	0.57
51:SA:158:ASP:OD2	51:SA:159:ILE:HB	2.05	0.57
52:SB:42:ARG:HH12	52:SB:233:GLY:CA	2.17	0.57
52:SB:87:ILE:HD13	52:SB:220:LYS:HZ3	1.70	0.57
62:SL:13:GLN:HB2	62:SL:16:ILE:HD12	1.85	0.57
63:SM:32:ALA:HB2	63:SM:112:LYS:HD3	1.86	0.57
64:SN:113:PHE:O	64:SN:116:ILE:N	2.38	0.57
66:SP:43:ARG:HD3	66:SP:47:ARG:HG3	1.86	0.57
70:ST:31:PRO:HB2	70:ST:33:TRP:CZ2	2.39	0.57
83:Sg:32:LEU:HD13	83:Sg:92:LEU:HD11	1.86	0.57
83:Sg:176:VAL:HG23	83:Sg:188:HIS:CD2	2.40	0.57
85:S5:6:G:H1'	85:S5:7:A:C8	2.40	0.57
85:S5:37:A:C4	85:S5:38:A:N9	2.72	0.57
1:5:98:A:N6	1:5:99:A:C5	2.72	0.57
1:5:243:A:H2'	1:5:244:G:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:271:C:O2	1:5:272:U:C6	2.57	0.57
1:5:300:A:N3	1:5:301:G:C8	2.72	0.57
1:5:661:C:C4	1:5:662:C:C4	2.91	0.57
1:5:685:C:C2'	1:5:685:C:O2	2.53	0.57
1:5:965:G:N2	8:E:85:LEU:O	2.38	0.57
1:5:1269:G:N1	1:5:2111:G:N2	2.53	0.57
1:5:1273:G:H5'	1:5:2123:C:H4'	1.86	0.57
1:5:1281:G:C4	1:5:1281:G:O5'	2.58	0.57
1:5:1465:G:C5	1:5:1466:G:C8	2.93	0.57
1:5:1618:G:N3	1:5:1619:G:C8	2.73	0.57
1:5:1632:A:C6	1:5:1634:A:N9	2.69	0.57
1:5:1893:C:C2	1:5:1894:C:C5	2.93	0.57
1:5:2324:C:H2'	1:5:2324:C:O2	2.04	0.57
1:5:2515:G:C6	1:5:2516:G:C4	2.92	0.57
1:5:3656:A:N1	1:5:3657:U:C4	2.73	0.57
1:5:3858:C:C4	1:5:3859:G:C5	2.93	0.57
1:5:3974:G:P	46:z:28:PHE:CG	2.97	0.57
1:5:4301:U:C5'	22:T:54:HIS:CD2	2.88	0.57
1:5:4341:C:N4	1:5:4342:C:C4	2.73	0.57
1:5:4695:C:O2'	1:5:4696:C:H5'	2.05	0.57
1:5:4734:A:C2	1:5:4735:G:C4	2.92	0.57
1:5:4951:G:O2'	1:5:4952:G:P	2.62	0.57
1:5:5050:C:C4	1:5:5051:C:C5	2.93	0.57
3:8:75:G:N2	3:8:76:C:C2	2.73	0.57
3:8:86:U:C6	3:8:86:U:C3'	2.87	0.57
6:C:79:VAL:HG21	6:C:86:ARG:HE	1.70	0.57
7:D:287:PHE:C	7:D:287:PHE:CD1	2.83	0.57
10:G:51:LEU:O	10:G:55:VAL:HG23	2.03	0.57
10:G:162:ASP:HB3	10:G:163:PRO:CD	2.34	0.57
20:R:110:ARG:HH11	20:R:120:TYR:HE2	1.52	0.57
28:Z:46:ILE:HD12	28:Z:49:TYR:CD1	2.39	0.57
35:g:37:LYS:HB2	35:g:60:ARG:HE	1.69	0.57
50:S2:105:U:O2	50:S2:105:U:H2'	2.03	0.57
50:S2:310:C:H2'	50:S2:311:C:O4'	2.04	0.57
50:S2:551:U:O2	50:S2:552:G:N7	2.18	0.57
50:S2:830:A:OP2	50:S2:846:G:N2	2.37	0.57
50:S2:1021:U:H4'	50:S2:1022:U:O4'	2.04	0.57
50:S2:1224:G:N2	50:S2:1643:U:C4	2.72	0.57
50:S2:1293:A:C1'	82:Sf:150:PHE:HB3	2.34	0.57
50:S2:1415:C:C2'	50:S2:1416:C:O4'	2.47	0.57
50:S2:1419:C:OP2	70:ST:129:ARG:CA	2.43	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1500:G:H3'	50:S2:1501:C:C6	2.39	0.57
50:S2:1511:U:C2	50:S2:1512:C:C6	2.92	0.57
50:S2:1538:C:H1'	50:S2:1603:G:H21	1.69	0.57
50:S2:1661:A:OP1	80:Sd:19:ARG:NH2	2.38	0.57
50:S2:1693:G:C5'	50:S2:1694:U:OP2	2.53	0.57
60:SJ:132:GLN:HB2	60:SJ:134:HIS:HD2	1.69	0.57
77:Sa:28:ARG:HH11	77:Sa:28:ARG:CG	2.17	0.57
83:Sg:245:ARG:NH1	83:Sg:295:GLY:O	2.34	0.57
85:S5:37:A:C5	85:S5:38:A:N3	2.73	0.57
85:S5:71:G:C8	85:S5:71:G:P	2.97	0.57
1:5:77:U:C2	1:5:335:A:N6	2.72	0.57
1:5:150:U:O2	10:G:166:LEU:HD11	2.03	0.57
1:5:463:A:N1	1:5:692:A:H2	2.00	0.57
1:5:483:G:N3	1:5:484:U:C5	2.72	0.57
1:5:486:C:N3	1:5:487:G:C5	2.73	0.57
1:5:701:G:N1	1:5:702:U:C6	2.72	0.57
1:5:931:C:C6	1:5:932:A:N7	2.72	0.57
1:5:1444:G:C2'	1:5:1445:U:C6	2.78	0.57
1:5:1446:C:C4	1:5:1447:C:C5	2.92	0.57
1:5:1465:G:C2	1:5:1466:G:C1'	2.88	0.57
1:5:1797:G:C2	1:5:1798:G:C5	2.92	0.57
1:5:2458:C:H1'	1:5:3672:G:H21	1.69	0.57
1:5:2673:G:C1'	1:5:2675:G:H1'	2.35	0.57
1:5:3652:A:N7	1:5:3691:G:N2	2.53	0.57
1:5:3693:U:O4	1:5:3694:U:C4	2.58	0.57
1:5:3894:A:O4'	1:5:4979:A:N1	2.37	0.57
1:5:3923:A:C2	1:5:3924:C:C4	2.93	0.57
1:5:4098:A:N1	1:5:4099:G:N7	2.51	0.57
1:5:4236:G:H22	1:5:4289:U:H1'	1.69	0.57
1:5:4898:G:C2	1:5:4923:C:C2	2.93	0.57
1:5:4910:G:O5'	1:5:4910:G:C8	2.56	0.57
1:5:4982:A:C5	1:5:4983:C:C6	2.92	0.57
3:8:40:A:C8	3:8:102:G:N2	2.72	0.57
3:8:44:A:C2	3:8:45:C:C2	2.93	0.57
3:8:120:G:C6	3:8:121:G:N7	2.73	0.57
17:O:130:LYS:HG3	17:O:131:PRO:HD2	1.87	0.57
29:a:67:GLN:HA	29:a:67:GLN:HE21	1.70	0.57
46:z:204:LEU:HD23	46:z:205:TYR:N	2.20	0.57
50:S2:325:C:O2	50:S2:326:C:C6	2.58	0.57
50:S2:447:A:N6	50:S2:449:A:C5	2.73	0.57
50:S2:449:A:C6	50:S2:452:G:N7	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:493:A:C1'	50:S2:574:A:H5'	2.35	0.57
50:S2:526:A:O2'	60:SJ:125:HIS:ND1	2.22	0.57
50:S2:532:C:O2	50:S2:533:A:C8	2.58	0.57
50:S2:533:A:C6	50:S2:534:G:C5	2.92	0.57
50:S2:1201:U:C1'	50:S2:1357:A:C2	2.88	0.57
50:S2:1204:A:C6	50:S2:1205:C:N4	2.73	0.57
50:S2:1223:A:H2	50:S2:1644:C:N3	2.02	0.57
50:S2:1284:A:C2	63:SM:34:GLY:HA2	2.40	0.57
50:S2:1294:G:N3	50:S2:1295:A:C8	2.73	0.57
50:S2:1325:G:N2	50:S2:1327:G:C4	2.72	0.57
50:S2:1606:G:O2'	50:S2:1633:A:N6	2.35	0.57
50:S2:1777:G:C6	50:S2:1778:C:C4	2.92	0.57
51:SA:198:MET:CE	68:SR:85:VAL:HG11	2.35	0.57
56:SF:28:VAL:HA	56:SF:110:GLN:OE1	2.04	0.57
58:SH:83:LEU:HD13	58:SH:92:VAL:HG21	1.87	0.57
70:ST:56:ARG:HD3	70:ST:79:TYR:HE2	1.69	0.57
74:SX:54:LYS:HB3	81:Se:6:LEU:CD1	2.35	0.57
86:S6:37:A:O2'	86:S6:38:A:O4'	2.21	0.57
1:5:43:U:C4	1:5:44:A:N9	2.72	0.57
1:5:99:A:N1	1:5:100:C:C2	2.72	0.57
1:5:100:C:O4'	1:5:100:C:O2	2.22	0.57
1:5:209:U:O4	1:5:211:G:H1'	2.05	0.57
1:5:258:G:N2	1:5:259:C:C2	2.72	0.57
1:5:517:C:C2	1:5:645:G:C2	2.92	0.57
1:5:956:A:H3'	1:5:957:G:C4	2.40	0.57
1:5:1204:C:O2	1:5:1205:G:C8	2.58	0.57
1:5:1268:G:N3	1:5:2111:G:N1	2.52	0.57
1:5:1324:A:H2'	1:5:1326:A:N7	2.20	0.57
1:5:1341:U:O2	1:5:1342:A:C8	2.58	0.57
1:5:1781:U:C4	1:5:1782:U:C5	2.92	0.57
1:5:1846:G:N2	1:5:1847:C:C2	2.72	0.57
1:5:1895:G:H2'	1:5:1896:A:O5'	2.04	0.57
1:5:2044:U:O2'	17:O:63:ASN:HB3	2.04	0.57
1:5:2581:A:H2'	1:5:2582:A:C8	2.39	0.57
1:5:3605:C:C2	1:5:3606:U:C6	2.93	0.57
1:5:3676:G:C2'	1:5:3677:U:O5'	2.53	0.57
1:5:3694:U:N3	1:5:3695:U:C4	2.73	0.57
1:5:3724:A:N6	1:5:3725:G:C6	2.72	0.57
1:5:3829:G:C2	1:5:3830:A:C8	2.93	0.57
1:5:3846:C:C4	1:5:3847:C:C5	2.93	0.57
1:5:3848:U:C2	1:5:3849:A:C8	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3893:C:N3	1:5:4568:A:C2	2.73	0.57
1:5:3958:G:O5'	86:S6:19:G:N7	2.22	0.57
1:5:4194:U:C2'	1:5:4221:C:H41	2.18	0.57
1:5:4219:A:O2'	1:5:4220:A:C8	2.52	0.57
1:5:4566:U:O2'	5:B:234:ARG:NH2	2.38	0.57
1:5:4583:C:C2	1:5:4718:G:N2	2.73	0.57
1:5:4878:C:O2	1:5:4878:C:H2'	2.04	0.57
1:5:4958:C:H2'	1:5:4958:C:O2	2.04	0.57
2:7:7:G:C2	2:7:8:G:C8	2.93	0.57
2:7:69:U:C2	2:7:70:G:C8	2.92	0.57
3:8:131:G:C2	3:8:132:G:N9	2.73	0.57
4:A:109:GLU:CD	50:S2:979:C:O3'	2.48	0.57
4:A:242:ARG:HH11	4:A:242:ARG:HB2	1.69	0.57
5:B:169:ARG:HH11	5:B:169:ARG:HG2	1.69	0.57
5:B:175:GLN:HE21	5:B:179:HIS:CE1	2.22	0.57
26:X:155:ILE:O	26:X:156:ILE:HB	2.04	0.57
47:1:244:ASN:C	47:1:440:ALA:O	2.47	0.57
50:S2:311:C:C3'	50:S2:312:G:H4'	2.34	0.57
50:S2:403:G:C6	50:S2:404:G:C5	2.93	0.57
50:S2:429:C:N3	50:S2:430:C:C5	2.72	0.57
50:S2:805:U:O2	50:S2:806:U:C6	2.58	0.57
50:S2:940:U:H2'	50:S2:941:C:H6	1.70	0.57
50:S2:1034:A:C6	50:S2:1082:A:C5	2.91	0.57
50:S2:1157:G:H1'	74:SX:5:ARG:NE	2.17	0.57
50:S2:1293:A:N6	82:Sf:140:TYR:HA	2.20	0.57
50:S2:1293:A:N6	82:Sf:140:TYR:N	2.53	0.57
50:S2:1545:A:N7	50:S2:1588:A:C5	2.73	0.57
51:SA:73:ASP:N	51:SA:73:ASP:OD1	2.36	0.57
52:SB:158:HIS:CD2	52:SB:158:HIS:C	2.82	0.57
55:SE:11:ARG:O	55:SE:12:VAL:HB	2.04	0.57
68:SR:27:ASP:O	68:SR:55:THR:HG22	2.05	0.57
83:Sg:64:HIS:HB2	83:Sg:83:TRP:C	2.29	0.57
84:S4:18:U:C4	86:S6:37:A:N6	2.59	0.57
85:S5:6:G:N2	85:S5:7:A:C2	2.73	0.57
85:S5:34:G:N2	85:S5:35:A:C2	2.73	0.57
86:S6:5:C:N4	86:S6:6:G:O6	2.38	0.57
86:S6:8:U:H2'	86:S6:8:U:O2	2.05	0.57
86:S6:9:A:C5	86:S6:46:G:N2	2.73	0.57
86:S6:16:A:C4	86:S6:17:A:N6	2.73	0.57
1:5:45:U:H2'	1:5:46:U:O5'	2.05	0.57
1:5:80:C:C2	1:5:104:G:N2	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:153:G:C2	1:5:154:G:C5	2.93	0.57
1:5:225:G:O4'	1:5:243:A:H1'	2.04	0.57
1:5:463:A:N1	1:5:692:A:N1	2.52	0.57
1:5:490:C:C3'	1:5:491:G:H8	2.17	0.57
1:5:916:C:N3	1:5:918:G:O6	2.38	0.57
1:5:1070:G:N2	1:5:1071:C:H1'	2.20	0.57
1:5:1560:A:C2	1:5:1561:G:N1	2.70	0.57
1:5:1846:G:H2'	1:5:1847:C:C6	2.39	0.57
1:5:1964:A:N1	1:5:4694:G:C4	2.73	0.57
1:5:2036:C:H6	1:5:2036:C:O5'	1.87	0.57
1:5:2451:A:C6	1:5:2452:G:C8	2.93	0.57
1:5:2463:G:N2	1:5:2464:C:N3	2.52	0.57
1:5:2577:C:N4	28:Z:17:ARG:NH2	2.53	0.57
1:5:2880:U:N3	1:5:3625:G:C8	2.73	0.57
1:5:3694:U:O4	1:5:3695:U:O4	2.23	0.57
1:5:4054:C:O4'	46:z:35:GLN:OE1	2.22	0.57
1:5:4198:G:O6	12:I:112:GLN:CD	2.48	0.57
1:5:4321:U:H2'	1:5:4322:G:O4'	2.05	0.57
1:5:4455:G:C2	1:5:4456:C:N1	2.73	0.57
1:5:4563:U:H2'	1:5:4564:A:H8	1.67	0.57
1:5:4583:C:N3	1:5:4718:G:C2	2.73	0.57
1:5:4652:G:N1	1:5:4653:C:C4	2.73	0.57
1:5:4730:C:C2	1:5:4734:A:N7	2.73	0.57
1:5:4886:C:O2	1:5:4887:C:C5	2.57	0.57
1:5:4981:G:C6	1:5:4982:A:C4	2.93	0.57
3:8:10:G:C4	3:8:11:C:C6	2.92	0.57
4:A:37:ARG:CZ	4:A:37:ARG:HB2	2.32	0.57
9:F:203:PHE:CE1	9:F:207:ASN:HB2	2.40	0.57
16:N:143:ARG:HB3	36:h:99:GLU:OE1	2.05	0.57
50:S2:291:G:C8	50:S2:291:G:C5'	2.88	0.57
50:S2:299:A:C2	50:S2:300:U:C6	2.92	0.57
50:S2:340:C:H2'	50:S2:341:C:O4'	2.04	0.57
50:S2:414:A:O2'	50:S2:415:A:O5'	2.23	0.57
50:S2:494:C:C2	50:S2:495:U:H5	2.14	0.57
50:S2:832:G:C6	50:S2:833:C:C4	2.92	0.57
50:S2:898:U:N3	50:S2:899:U:C6	2.73	0.57
50:S2:992:A:H62	77:Sa:15:ARG:HH11	1.52	0.57
50:S2:999:G:C5	50:S2:1000:C:C5	2.93	0.57
50:S2:1203:G:N2	50:S2:1204:A:C4	2.73	0.57
50:S2:1211:G:O6	50:S2:1212:G:O6	2.21	0.57
50:S2:1287:A:N1	50:S2:1314:U:C2	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1332:A:N6	50:S2:1333:U:C5	2.73	0.57
50:S2:1385:G:H5''	50:S2:1385:G:C8	2.39	0.57
50:S2:1387:G:H21	68:SR:8:THR:HG21	1.67	0.57
50:S2:1433:C:P	50:S2:1434:C:P	3.03	0.57
50:S2:1533:A:N1	50:S2:1537:A:C1'	2.67	0.57
50:S2:1773:C:C2	50:S2:1774:C:C5	2.93	0.57
52:SB:228:LEU:CD1	52:SB:232:HIS:HD2	2.17	0.57
54:SD:212:GLU:C	68:SR:20:TYR:OH	2.47	0.57
55:SE:118:GLU:HG2	55:SE:121:TYR:CE1	2.40	0.57
56:SF:179:ASN:ND2	56:SF:186:ASN:HB3	2.19	0.57
69:SS:111:LEU:HD22	69:SS:125:HIS:HD2	1.70	0.57
85:S5:10:G:N7	85:S5:45:U:H6	2.02	0.57
85:S5:28:G:O2'	85:S5:29:G:O4'	2.14	0.57
85:S5:40:C:N3	85:S5:41:C:C5	2.73	0.57
85:S5:46:G:H3'	85:S5:47:U:C5'	2.35	0.57
85:S5:63:G:N2	85:S5:64:A:C2	2.73	0.57
86:S6:28:G:N2	86:S6:29:G:C4	2.73	0.57
86:S6:38:A:N1	86:S6:39:U:O4	2.38	0.57
86:S6:65:G:N2	86:S6:66:U:C2	2.73	0.57
1:5:158:A:C6	1:5:277:G:C5	2.93	0.56
1:5:209:U:N3	1:5:233:U:C4	2.73	0.56
1:5:663:G:H3'	1:5:664:G:C5'	2.35	0.56
1:5:977:C:O2	1:5:977:C:H2'	2.04	0.56
1:5:1090:G:C6	1:5:1091:C:C4	2.93	0.56
1:5:1447:C:O2	1:5:2098:G:C2	2.57	0.56
1:5:1507:C:N3	1:5:1508:A:N7	2.53	0.56
1:5:1724:G:N3	9:F:105:PRO:HB3	2.20	0.56
1:5:1806:G:C2	1:5:1807:C:C4	2.93	0.56
1:5:1979:A:H3'	1:5:1980:U:C5'	2.33	0.56
1:5:2036:C:C4	1:5:2037:C:H5	2.23	0.56
1:5:2312:U:O2	1:5:2312:U:H2'	2.04	0.56
1:5:2463:G:N1	1:5:2464:C:C4	2.73	0.56
1:5:2830:G:N3	1:5:2831:G:C8	2.73	0.56
1:5:2854:G:C8	1:5:2854:G:H3'	2.40	0.56
1:5:2857:A:O2'	1:5:2858:A:H8	1.87	0.56
1:5:3635:A:C5	1:5:3636:C:C6	2.93	0.56
1:5:3688:U:N3	1:5:3689:G:C8	2.72	0.56
1:5:3898:G:C2'	1:5:3899:G:H5'	2.34	0.56
1:5:4060:U:C2	1:5:4061:G:H8	2.22	0.56
1:5:4232:U:O2	43:o:5:PRO:HG3	2.05	0.56
1:5:4349:C:H3'	1:5:4350:C:C5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4510:A:H62	1:5:4592:C:HO2'	1.51	0.56
1:5:5030:U:O2	1:5:5031:G:C8	2.57	0.56
1:5:5035:U:N3	1:5:5036:C:C5	2.73	0.56
2:7:22:A:N3	2:7:23:A:N7	2.53	0.56
2:7:33:U:C2	2:7:34:C:C5	2.93	0.56
2:7:111:C:N4	2:7:112:U:C5	2.73	0.56
3:8:101:C:C4	3:8:102:G:C5	2.92	0.56
7:D:278:ASP:O	7:D:282:GLN:HG2	2.05	0.56
14:L:63:THR:O	14:L:65:ARG:N	2.37	0.56
29:a:128:PHE:CZ	37:i:8:ALA:HB3	2.40	0.56
47:1:431:LEU:HD21	47:1:452:THR:CG2	2.34	0.56
50:S2:55:U:H3	50:S2:91:A:HO2'	1.52	0.56
50:S2:68:A:C6	50:S2:69:C:C4	2.92	0.56
50:S2:443:U:C5	50:S2:444:G:C8	2.93	0.56
50:S2:550:C:O2	50:S2:551:U:C6	2.59	0.56
50:S2:1243:U:C2	50:S2:1265:A:C2	2.93	0.56
50:S2:1256:G:N2	50:S2:1658:G:O2'	2.37	0.56
50:S2:1293:A:H2'	82:Sf:151:ASN:C	2.30	0.56
50:S2:1344:A:OP1	50:S2:1370:A:H5'	2.05	0.56
50:S2:1405:A:C1'	50:S2:1580:A:C6	2.87	0.56
50:S2:1501:C:C2	50:S2:1502:C:C5	2.93	0.56
50:S2:1539:U:C4	50:S2:1540:G:N7	2.66	0.56
50:S2:1564:C:C2	50:S2:1565:C:C6	2.93	0.56
50:S2:1609:C:O2	50:S2:1609:C:H2'	2.04	0.56
50:S2:1794:C:C4	50:S2:1795:G:N7	2.73	0.56
51:SA:90:PHE:HB2	51:SA:179:ALA:HB2	1.87	0.56
52:SB:97:LEU:HD11	52:SB:229:MET:SD	2.44	0.56
65:SO:139:SER:O	65:SO:140:THR:O	2.21	0.56
67:SQ:62:ARG:HH11	67:SQ:62:ARG:HA	1.70	0.56
77:Sa:51:ARG:NH1	79:Sc:40:ARG:NH1	2.53	0.56
85:S5:6:G:N3	85:S5:7:A:C4	2.73	0.56
85:S5:39:U:C2'	85:S5:40:C:H5'	2.35	0.56
85:S5:47:U:C3'	85:S5:48:C:C5'	2.82	0.56
86:S6:19:G:N2	86:S6:56:C:O2	2.38	0.56
86:S6:46:G:H3'	86:S6:47:U:H5'	1.86	0.56
86:S6:49:C:O2'	86:S6:50:U:H5'	2.05	0.56
86:S6:55:U:C2'	86:S6:56:C:H6	2.18	0.56
86:S6:71:G:C2	86:S6:72:C:N4	2.73	0.56
1:5:30:C:O2'	1:5:31:U:H5'	2.05	0.56
1:5:153:G:N1	1:5:154:G:N7	2.53	0.56
1:5:358:C:C2	1:5:359:A:C8	2.92	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:470:A:C6	1:5:471:A:C5	2.92	0.56
1:5:482:G:H2'	1:5:483:G:O4'	2.04	0.56
1:5:919:C:H2'	1:5:920:C:O5'	2.06	0.56
1:5:933:G:C2	1:5:939:G:N1	2.73	0.56
1:5:936:C:C2'	15:M:46:ARG:NH1	2.68	0.56
1:5:1379:C:H1'	1:5:1380:G:C8	2.40	0.56
1:5:1558:A:C2	1:5:1559:G:C4	2.93	0.56
1:5:1760:G:N2	1:5:1761:G:H1'	2.19	0.56
1:5:1843:A:N1	1:5:1844:G:C5	2.72	0.56
1:5:1918:U:O2	1:5:1920:C:C5	2.58	0.56
1:5:1963:C:N4	1:5:1964:A:N7	2.53	0.56
1:5:2342:G:C6	1:5:2344:U:C4	2.92	0.56
1:5:2391:G:N2	1:5:2392:C:C2	2.72	0.56
1:5:2634:C:C2	1:5:2635:U:C6	2.93	0.56
1:5:3621:A:H1'	1:5:4655:A:H2	1.70	0.56
1:5:3688:U:H2'	1:5:3688:U:O2	2.05	0.56
1:5:3943:A:H2'	1:5:3944:G:H8	1.67	0.56
1:5:4053:A:O2'	46:z:207:LYS:CE	2.53	0.56
1:5:4216:G:N1	1:5:4217:G:C5	2.74	0.56
1:5:4324:A:C2	1:5:4325:A:N7	2.73	0.56
1:5:4413:C:H2'	1:5:4414:A:O4'	2.05	0.56
1:5:4499:G:H3'	1:5:4500:U:C5'	2.34	0.56
1:5:4605:A:H2'	1:5:4606:G:C8	2.40	0.56
1:5:4660:G:C2	1:5:4661:G:C8	2.93	0.56
3:8:108:A:C2	3:8:112:G:C6	2.93	0.56
5:B:41:VAL:HG12	5:B:187:GLY:HA3	1.87	0.56
7:D:107:ARG:HD3	7:D:248:ARG:HG3	1.85	0.56
12:I:28:ASP:HB2	85:S5:64:A:O2'	2.06	0.56
23:U:99:TRP:CD1	23:U:99:TRP:N	2.73	0.56
47:1:43:LEU:HD13	48:2:54:VAL:HG22	1.87	0.56
50:S2:144:U:H2'	50:S2:145:G:C8	2.40	0.56
50:S2:187:G:C6	50:S2:188:C:C4	2.93	0.56
50:S2:379:C:O2	50:S2:380:G:C8	2.58	0.56
50:S2:1292:C:C3'	82:Sf:150:PHE:HD1	2.18	0.56
50:S2:1303:C:C6	50:S2:1304:U:C6	2.93	0.56
50:S2:1387:G:H2'	50:S2:1388:A:O4'	2.04	0.56
50:S2:1482:C:C2'	50:S2:1483:A:H5'	2.35	0.56
50:S2:1757:G:N1	50:S2:1758:G:C5	2.73	0.56
54:SD:216:GLU:OE1	54:SD:216:GLU:CG	2.52	0.56
56:SF:179:ASN:HD22	56:SF:186:ASN:HB3	1.70	0.56
86:S6:41:C:C2'	86:S6:42:C:H6	1.96	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:48:G:HO2'	1:5:49:U:P	2.19	0.56
1:5:190:G:C2	1:5:252:C:O2	2.57	0.56
1:5:246:G:C2	1:5:247:G:C5	2.93	0.56
1:5:275:C:O2'	1:5:276:C:OP1	2.23	0.56
1:5:314:G:C2	1:5:4355:G:N7	2.73	0.56
1:5:486:C:C2	1:5:487:G:N7	2.72	0.56
1:5:497:G:C2	1:5:657:C:C2	2.94	0.56
1:5:516:C:N3	1:5:646:G:C2	2.73	0.56
1:5:655:C:N3	1:5:656:C:C5	2.73	0.56
1:5:1093:C:N3	1:5:1094:G:N7	2.54	0.56
1:5:1189:G:C5	1:5:1190:C:C5	2.93	0.56
1:5:1248:C:N3	1:5:1249:C:C4	2.72	0.56
1:5:1270:A:C6	1:5:1271:G:HI'	2.40	0.56
1:5:1298:C:C4	1:5:1299:G:N7	2.73	0.56
1:5:1310:C:C4	1:5:1311:G:N7	2.73	0.56
1:5:1544:G:C2	1:5:1545:G:C8	2.94	0.56
1:5:1555:G:C6	1:5:1556:C:C5	2.93	0.56
1:5:1661:C:HI'	1:5:2345:G:N2	2.20	0.56
1:5:1846:G:C2	1:5:1847:C:C4	2.93	0.56
1:5:1887:G:C6	1:5:1890:G:O6	2.59	0.56
1:5:1899:G:HI'	1:5:2278:G:N2	2.19	0.56
1:5:2034:G:C4	1:5:2035:C:C5	2.93	0.56
1:5:2086:G:N2	1:5:2272:C:C2	2.73	0.56
1:5:2090:U:O2'	1:5:2091:C:C5'	2.53	0.56
1:5:2110:C:C6	1:5:2110:C:P	2.97	0.56
1:5:2124:G:H22	9:F:32:ILE:CG1	2.17	0.56
1:5:2292:C:C2	1:5:2293:U:C5	2.92	0.56
1:5:2339:G:C6	1:5:2340:C:C4	2.93	0.56
1:5:2465:C:O2'	1:5:2466:G:O4'	2.23	0.56
1:5:2505:C:HI'	1:5:2506:G:C4	2.40	0.56
1:5:2577:C:N3	1:5:2578:G:N7	2.54	0.56
1:5:2668:G:C2'	1:5:2669:C:H5'	2.28	0.56
1:5:2675:G:H2'	1:5:2675:G:N3	2.18	0.56
1:5:2712:G:C6	1:5:2713:C:C5	2.93	0.56
1:5:2844:A:C5	1:5:3839:G:C8	2.93	0.56
1:5:3652:A:N7	1:5:3691:G:C2	2.74	0.56
1:5:3655:C:C2	1:5:3656:A:C8	2.94	0.56
1:5:3731:C:O2	1:5:3732:A:H8	1.88	0.56
1:5:3755:G:C6	1:5:3756:A:N7	2.73	0.56
1:5:3767:C:O2'	50:S2:1828:C:C4'	2.51	0.56
1:5:4058:U:C2	1:5:4059:C:C6	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4062:A:N3	1:5:4063:U:C6	2.74	0.56
1:5:4100:C:H4'	52:SB:227:LYS:CA	2.35	0.56
1:5:4105:A:H1'	1:5:4106:G:N2	2.20	0.56
1:5:4192:A:C2	1:5:4204:C:N3	2.73	0.56
1:5:4258:C:H2'	1:5:4259:C:H6	1.70	0.56
1:5:4413:C:H4'	12:I:157:PHE:CD2	2.40	0.56
1:5:4433:G:H2'	1:5:4434:C:C6	2.40	0.56
1:5:4455:G:C6	1:5:4456:C:C4	2.94	0.56
1:5:4476:C:O4'	1:5:4476:C:O2	2.22	0.56
1:5:4549:G:N1	1:5:4550:G:C5	2.73	0.56
1:5:4698:C:O2	1:5:4698:C:C2'	2.53	0.56
1:5:4730:C:H2'	1:5:4965:U:H3	1.69	0.56
1:5:4767:C:O3'	1:5:4874:A:N1	2.38	0.56
1:5:4897:G:C4	1:5:4898:G:C8	2.94	0.56
1:5:4911:A:H5''	5:B:100:ARG:CD	2.35	0.56
1:5:4942:C:H5'	8:E:151:GLY:HA2	1.87	0.56
1:5:5020:G:C2	1:5:5021:C:C2	2.93	0.56
1:5:5020:G:H2'	1:5:5021:C:O4'	2.05	0.56
2:7:69:U:N3	2:7:70:G:N7	2.53	0.56
2:7:82:G:C2	2:7:95:C:C2	2.93	0.56
2:7:93:G:C6	2:7:94:C:C5	2.94	0.56
3:8:37:A:OP2	36:h:89:ARG:HD3	2.05	0.56
3:8:53:G:C5	3:8:54:C:C5	2.94	0.56
3:8:89:U:H2'	3:8:90:C:C6	2.40	0.56
5:B:137:TRP:CZ2	5:B:146:LEU:HG	2.41	0.56
5:B:138:GLN:O	5:B:139:ASP:HB3	2.05	0.56
5:B:314:ILE:HD13	5:B:326:VAL:HG12	1.88	0.56
8:E:102:VAL:HB	8:E:103:VAL:HG13	1.87	0.56
10:G:50:ASP:OD1	10:G:50:ASP:C	2.48	0.56
11:H:31:ARG:NH2	11:H:187:VAL:HG21	2.20	0.56
15:M:3:PHE:CB	15:M:6:PHE:CZ	2.89	0.56
21:S:44:PHE:C	21:S:44:PHE:HD1	2.13	0.56
29:a:132:ARG:HH11	29:a:132:ARG:HB3	1.70	0.56
30:b:12:GLN:O	30:b:13:SER:C	2.48	0.56
31:c:31:TYR:CE1	31:c:35:LEU:HD22	2.40	0.56
32:d:33:ILE:HD11	32:d:45:ALA:HB2	1.86	0.56
32:d:87:ARG:CA	32:d:87:ARG:CZ	2.83	0.56
38:j:20:ARG:CD	38:j:39:TYR:OH	2.54	0.56
47:1:247:ALA:C	47:1:440:ALA:HB2	2.29	0.56
50:S2:35:C:O2	50:S2:520:A:N1	2.39	0.56
50:S2:68:A:C4	50:S2:69:C:C6	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:106:C:O2	50:S2:107:A:N7	2.38	0.56
50:S2:120:U:C4	50:S2:121:U:C4	2.93	0.56
50:S2:127:C:OP1	50:S2:180:G:N2	2.38	0.56
50:S2:172:U:O2	50:S2:172:U:C2'	2.52	0.56
50:S2:297:A:C6	50:S2:298:G:C8	2.93	0.56
50:S2:675:U:C2	50:S2:676:C:C6	2.93	0.56
50:S2:823:U:C4	75:SY:64:PHE:HE2	2.22	0.56
50:S2:862:A:N7	73:SW:107:SER:HA	2.20	0.56
50:S2:921:G:O6	73:SW:28:ARG:HG3	2.05	0.56
50:S2:978:G:N2	50:S2:979:C:C2	2.73	0.56
50:S2:1099:G:N1	50:S2:1100:A:C8	2.73	0.56
50:S2:1148:A:O4'	50:S2:1149:A:C8	2.59	0.56
50:S2:1184:G:C5	50:S2:1185:C:C5	2.93	0.56
50:S2:1210:G:C8	50:S2:1210:G:H3'	2.40	0.56
50:S2:1225:U:N3	50:S2:1226:G:C8	2.73	0.56
50:S2:1241:A:H2'	50:S2:1242:U:O4'	2.05	0.56
50:S2:1259:A:H3'	50:S2:1259:A:N3	2.19	0.56
50:S2:1259:A:O2'	50:S2:1263:U:O2	2.22	0.56
50:S2:1291:A:C6	82:Sf:140:TYR:CZ	2.93	0.56
50:S2:1293:A:H62	82:Sf:139:HIS:C	2.13	0.56
50:S2:1382:A:H61	50:S2:1383:A:H62	1.53	0.56
50:S2:1402:A:C6	50:S2:1441:U:O4	2.53	0.56
50:S2:1488:C:O2	50:S2:1490:G:C8	2.58	0.56
50:S2:1639:G:C2	50:S2:1640:A:C8	2.93	0.56
50:S2:1644:C:HO2'	50:S2:1645:C:C1'	2.19	0.56
50:S2:1691:U:O2'	77:Sa:88:SER:HB3	2.05	0.56
50:S2:1775:U:N3	50:S2:1776:G:N7	2.52	0.56
54:SD:107:TYR:HA	54:SD:110:LEU:HB3	1.88	0.56
55:SE:51:ARG:HA	55:SE:51:ARG:HE	1.69	0.56
59:SI:87:ASN:OD1	59:SI:87:ASN:C	2.47	0.56
71:SU:66:ARG:HD2	71:SU:77:TRP:CD1	2.41	0.56
79:Sc:26:GLN:HE21	79:Sc:26:GLN:HA	1.70	0.56
85:S5:38:A:C3'	85:S5:39:U:H6	2.17	0.56
85:S5:43:C:O4'	85:S5:43:C:O2	2.20	0.56
85:S5:67:C:N4	85:S5:68:C:C4	2.73	0.56
86:S6:9:A:C8	86:S6:46:G:N2	2.73	0.56
86:S6:12:C:H5'	86:S6:13:C:OP2	2.05	0.56
86:S6:29:G:N2	86:S6:42:C:C2	2.73	0.56
86:S6:29:G:O6	86:S6:42:C:N4	2.38	0.56
86:S6:57:G:H5''	86:S6:57:G:H8	1.68	0.56
86:S6:69:G:N2	86:S6:70:G:C8	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:183:C:H1'	1:5:184:U:N3	2.21	0.56
1:5:288:G:C2	1:5:289:C:C4	2.93	0.56
1:5:470:A:C6	1:5:471:A:N7	2.70	0.56
1:5:494:U:N3	1:5:495:C:C6	2.73	0.56
1:5:1049:C:O2	1:5:1050:C:C6	2.59	0.56
1:5:1218:G:C6	1:5:1219:G:C8	2.93	0.56
1:5:1547:A:C6	1:5:1582:U:H1'	2.41	0.56
1:5:1724:G:C8	30:b:17:HIS:NE2	2.73	0.56
1:5:1750:G:C6	1:5:1751:A:N7	2.73	0.56
1:5:1776:A:C5	1:5:1777:C:C5	2.94	0.56
1:5:1812:C:C2	1:5:1813:U:C5	2.94	0.56
1:5:1831:G:C6	1:5:1832:C:C5	2.93	0.56
1:5:1899:G:H1'	33:e:59:GLY:HA3	1.88	0.56
1:5:1995:G:C4	1:5:1996:C:C5	2.93	0.56
1:5:2079:G:N2	1:5:2080:U:N1	2.53	0.56
1:5:2084:C:H3'	1:5:2085:G:C5'	2.36	0.56
1:5:2097:U:O2	1:5:2097:U:C5'	2.52	0.56
1:5:2692:U:H2'	1:5:2693:G:H5'	1.87	0.56
1:5:2723:U:C2	1:5:2724:G:N7	2.74	0.56
1:5:4241:C:N3	1:5:4242:U:H5	2.03	0.56
1:5:4297:G:C2	1:5:4298:A:C8	2.93	0.56
1:5:4343:U:C4	1:5:4344:U:C5	2.93	0.56
1:5:4413:C:H3'	1:5:4414:A:C8	2.39	0.56
1:5:4498:U:C4	1:5:4500:U:OP2	2.58	0.56
1:5:4518:A:C2'	5:B:257:TRP:CZ3	2.89	0.56
1:5:4666:G:C6	1:5:4667:C:C4	2.93	0.56
1:5:4896:G:C2	1:5:4897:G:C8	2.93	0.56
2:7:34:C:C2	2:7:35:U:C5	2.93	0.56
3:8:10:G:C6	3:8:11:C:C4	2.93	0.56
5:B:323:TYR:CB	5:B:342:LYS:HG2	2.35	0.56
25:W:50:ASN:HA	25:W:55:TYR:CE2	2.40	0.56
28:Z:21:ARG:HH11	28:Z:21:ARG:HG3	1.71	0.56
28:Z:41:ALA:HB2	28:Z:77:TYR:CE1	2.40	0.56
46:z:150:GLU:CA	46:z:154:THR:HG22	2.36	0.56
50:S2:1:U:O4'	50:S2:1:U:O2	2.22	0.56
50:S2:118:C:N1	50:S2:445:A:C2	2.73	0.56
50:S2:194:C:C2	50:S2:206:G:C2	2.94	0.56
50:S2:625:G:O4'	50:S2:629:A:H2	1.87	0.56
50:S2:749:U:C5	50:S2:750:C:C6	2.94	0.56
50:S2:945:U:O2	50:S2:1045:U:O2'	2.23	0.56
50:S2:1563:G:N2	50:S2:1564:C:C2	2.73	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1592:C:N4	50:S2:1593:C:C5	2.73	0.56
50:S2:1773:C:N3	50:S2:1774:C:C5	2.73	0.56
50:S2:1776:G:N3	50:S2:1777:G:C8	2.74	0.56
60:SJ:120:ALA:O	60:SJ:121:LYS:CB	2.54	0.56
64:SN:18:TYR:C	64:SN:18:TYR:CD2	2.83	0.56
72:SV:64:GLU:O	72:SV:66:ASP:N	2.37	0.56
85:S5:28:G:N2	85:S5:29:G:C4	2.73	0.56
85:S5:37:A:N9	85:S5:38:A:C8	2.73	0.56
86:S6:54:U:C3'	86:S6:55:U:C6	2.88	0.56
86:S6:65:G:H2'	86:S6:66:U:C6	2.40	0.56
1:5:78:U:C2	1:5:336:A:N6	2.73	0.56
1:5:133:C:H2'	1:5:133:C:O2	2.05	0.56
1:5:247:G:C2	1:5:248:C:C6	2.93	0.56
1:5:269:G:C2	1:5:270:U:C6	2.93	0.56
1:5:370:U:C5	1:5:1637:A:N1	2.74	0.56
1:5:505:G:N2	1:5:506:C:C2	2.74	0.56
1:5:1348:U:C2	1:5:1349:G:C8	2.94	0.56
1:5:1562:G:N1	1:5:1566:C:C4	2.72	0.56
1:5:1570:G:C5	1:5:1571:G:C8	2.93	0.56
1:5:1582:U:O4	1:5:1583:A:C5	2.59	0.56
1:5:1755:C:C3'	1:5:1756:U:H5''	2.36	0.56
1:5:1846:G:H2'	1:5:1847:C:H6	1.70	0.56
1:5:1860:U:N3	1:5:1861:U:C5	2.73	0.56
1:5:1882:U:O2	1:5:1883:G:N7	2.38	0.56
1:5:1946:G:C2	1:5:1948:G:C8	2.94	0.56
1:5:2315:G:C2	1:5:2316:G:C8	2.94	0.56
1:5:2490:U:H2'	1:5:2491:C:C6	2.40	0.56
1:5:2569:G:C6	1:5:2570:U:C4	2.94	0.56
1:5:3834:C:C2	1:5:3835:C:C5	2.94	0.56
1:5:3954:A:C2	1:5:3955:G:N7	2.73	0.56
1:5:3972:A:C2	1:5:4040:C:N3	2.74	0.56
1:5:4057:C:C2	1:5:4058:U:C6	2.94	0.56
1:5:4113:U:C2'	1:5:4114:C:O4'	2.42	0.56
1:5:4482:U:O2	1:5:4482:U:H2'	2.04	0.56
1:5:4504:C:C2	1:5:4505:C:C5	2.94	0.56
1:5:4530:U:N3	1:5:4531:U:O2'	2.38	0.56
1:5:4535:A:H2'	1:5:4535:A:N3	2.21	0.56
1:5:4937:C:OP1	8:E:179:ARG:NE	2.31	0.56
1:5:5019:A:C2	1:5:5020:G:C5	2.94	0.56
5:B:90:VAL:HB	5:B:104:THR:HG23	1.86	0.56
9:F:71:ILE:HG22	9:F:75:ARG:HD2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:107:PHE:CZ	13:J:130:PHE:CB	2.89	0.56
27:Y:11:ARG:NH2	27:Y:15:ARG:HD3	2.20	0.56
32:d:37:GLY:O	32:d:38:PHE:HB2	2.05	0.56
39:k:22:SER:O	39:k:23:VAL:C	2.48	0.56
50:S2:45:A:C2	50:S2:481:C:C1'	2.89	0.56
50:S2:77:A:OP1	57:SG:157:VAL:HG11	2.05	0.56
50:S2:211:G:C2	50:S2:212:C:C2	2.94	0.56
50:S2:221:A:C6	50:S2:222:U:C4	2.94	0.56
50:S2:958:G:O2'	50:S2:959:G:C5'	2.54	0.56
50:S2:1283:C:C4	63:SM:103:VAL:HA	2.41	0.56
50:S2:1354:G:N2	50:S2:1358:U:C6	2.73	0.56
50:S2:1386:A:O2'	50:S2:1387:G:H5'	2.05	0.56
50:S2:1426:U:C2	50:S2:1427:C:C6	2.94	0.56
50:S2:1435:C:H2'	50:S2:1436:C:O4'	2.06	0.56
50:S2:1539:U:C2	50:S2:1540:G:H8	2.12	0.56
69:SS:34:LYS:HB3	69:SS:103:LEU:HD21	1.88	0.56
78:Sb:46:VAL:HG22	78:Sb:54:VAL:HG11	1.87	0.56
80:Sd:23:VAL:HG21	80:Sd:42:CYS:HB3	1.88	0.56
83:Sg:49:GLU:N	83:Sg:49:GLU:OE1	2.38	0.56
85:S5:4:C:H2'	85:S5:5:G:H8	1.68	0.56
86:S6:7:G:N2	86:S6:68:C:C4	2.73	0.56
86:S6:20:U:H2'	86:S6:21:A:C5'	2.35	0.56
86:S6:20:U:H6	86:S6:20:U:H3'	1.71	0.56
86:S6:65:G:H2'	86:S6:66:U:H6	1.69	0.56
86:S6:69:G:N2	86:S6:70:G:C4	2.73	0.56
1:5:42:A:C6	1:5:4379:A:N1	2.73	0.56
1:5:85:G:C6	14:L:13:HIS:CE1	2.93	0.56
1:5:388:A:C6	1:5:411:G:C5	2.93	0.56
1:5:443:G:P	34:f:68:ARG:HH22	2.28	0.56
1:5:469:C:C4	1:5:470:A:C5	2.93	0.56
1:5:471:A:N6	1:5:472:C:C5	2.73	0.56
1:5:481:G:OP1	45:r:67:ARG:NH1	2.39	0.56
1:5:932:A:H2'	1:5:932:A:N3	2.20	0.56
1:5:969:C:C2'	1:5:970:G:N3	2.69	0.56
1:5:1070:G:C6	1:5:1071:C:C4	2.92	0.56
1:5:1213:G:C5	1:5:1215:C:C1'	2.89	0.56
1:5:1219:G:N1	1:5:1220:G:C5	2.72	0.56
1:5:1359:G:C2'	1:5:1360:G:C8	2.87	0.56
1:5:1377:G:C8	1:5:1378:C:H4'	2.40	0.56
1:5:1390:G:N3	1:5:1394:G:C6	2.73	0.56
1:5:1464:C:H2'	1:5:1464:C:O2	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1554:A:C2	1:5:1555:G:H1'	2.40	0.56
1:5:2058:G:C2	1:5:2059:C:N1	2.72	0.56
1:5:2090:U:H1'	6:C:305:PRO:HG2	1.88	0.56
1:5:2422:C:N3	1:5:2423:A:N7	2.54	0.56
1:5:2433:G:O3'	47:1:402:ARG:O	2.24	0.56
1:5:2451:A:C6	1:5:2452:G:C5	2.94	0.56
1:5:2454:U:H2'	1:5:2454:U:O2	2.04	0.56
1:5:2557:G:C6	1:5:2558:C:C4	2.93	0.56
1:5:2715:G:C4	1:5:2716:C:C5	2.93	0.56
1:5:2909:C:C2	1:5:3586:G:C2	2.93	0.56
1:5:3721:U:O2	1:5:3721:U:H2'	2.05	0.56
1:5:3871:A:H2'	1:5:3872:A:O5'	2.06	0.56
1:5:4213:A:N6	1:5:4218:U:N3	2.30	0.56
1:5:4222:G:C6	1:5:4223:C:C4	2.94	0.56
1:5:4276:G:H2'	1:5:4276:G:N3	2.20	0.56
1:5:4301:U:OP2	22:T:87:LYS:NZ	2.39	0.56
1:5:4735:G:C2	1:5:4736:C:C2	2.94	0.56
1:5:4988:U:H3'	1:5:4988:U:OP2	2.05	0.56
2:7:59:G:N1	2:7:60:G:N7	2.52	0.56
4:A:186:TYR:C	4:A:186:TYR:CD1	2.84	0.56
5:B:62:ARG:HH11	5:B:62:ARG:HG3	1.70	0.56
20:R:89:MET:HE1	20:R:97:ARG:HD2	1.87	0.56
28:Z:28:ASN:O	28:Z:28:ASN:CG	2.48	0.56
38:j:20:ARG:HD3	38:j:39:TYR:OH	2.05	0.56
45:r:39:ARG:HB3	45:r:40:TYR:HD1	1.71	0.56
46:z:65:VAL:HG22	46:z:109:ALA:HB3	1.87	0.56
50:S2:312:G:HO2'	50:S2:313:A:P	2.28	0.56
50:S2:634:A:C6	50:S2:635:G:N7	2.73	0.56
50:S2:898:U:C2	50:S2:899:U:C6	2.94	0.56
50:S2:989:C:N3	50:S2:1001:A:C2	2.72	0.56
50:S2:1115:U:O4'	50:S2:1115:U:O2	2.24	0.56
50:S2:1278:A:C6	50:S2:1279:C:C4	2.94	0.56
50:S2:1302:G:C4	82:Sf:140:TYR:CZ	2.93	0.56
50:S2:1588:A:O2'	50:S2:1589:A:C5'	2.54	0.56
50:S2:1622:U:C4	69:SS:120:HIS:HE1	2.22	0.56
50:S2:1639:G:C1'	86:S6:42:C:H4'	2.26	0.56
50:S2:1753:C:O2	50:S2:1754:G:C8	2.59	0.56
50:S2:1776:G:C2	50:S2:1777:G:N7	2.74	0.56
55:SE:47:PHE:CE1	55:SE:101:LEU:HD21	2.41	0.56
60:SJ:69:ARG:HD2	60:SJ:73:GLU:HG3	1.88	0.56
64:SN:99:ARG:HH21	64:SN:115:LEU:HD11	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sa:5:ARG:HH11	77:Sa:5:ARG:CG	2.16	0.56
85:S5:10:G:N2	85:S5:25:C:C4	2.44	0.56
1:5:165:A:H3'	1:5:166:C:C6	2.40	0.56
1:5:177:G:C6	1:5:178:C:C4	2.94	0.56
1:5:183:C:H4'	1:5:184:U:C5	2.40	0.56
1:5:471:A:C2	1:5:472:C:H1'	2.40	0.56
1:5:499:G:H2'	1:5:499:G:N3	2.20	0.56
1:5:1279:A:H2'	1:5:1280:C:C6	2.35	0.56
1:5:1334:A:C6	1:5:1335:G:C5	2.93	0.56
1:5:1380:G:H2'	1:5:1382:G:C5	2.41	0.56
1:5:1398:A:C2	1:5:1399:G:H1'	2.41	0.56
1:5:1410:U:C5	1:5:1815:G:N1	2.73	0.56
1:5:1478:C:H2'	1:5:1479:G:H8	1.70	0.56
1:5:1479:G:C2'	1:5:1480:C:O5'	2.54	0.56
1:5:1697:G:C4'	1:5:1698:C:OP1	2.54	0.56
1:5:1743:A:O4'	7:D:15:ARG:HD3	2.04	0.56
1:5:2009:A:O2'	1:5:2010:A:OP1	2.20	0.56
1:5:2494:U:C4	1:5:2495:U:C5	2.94	0.56
1:5:2772:C:C2	1:5:2773:G:C8	2.94	0.56
1:5:3703:G:C5	1:5:3704:U:C5	2.93	0.56
1:5:3958:G:O6	86:S6:56:C:O2	2.24	0.56
1:5:3974:G:C4'	46:z:210:MET:SD	2.94	0.56
1:5:4133:C:O2	1:5:4134:C:C6	2.59	0.56
1:5:4152:G:N3	1:5:4153:C:C6	2.74	0.56
1:5:4189:U:H1'	1:5:4380:A:N3	2.20	0.56
1:5:4479:A:N6	1:5:4480:A:C4	2.74	0.56
1:5:4945:G:H21	34:f:69:VAL:N	2.04	0.56
1:5:4976:U:O4	5:B:342:LYS:CD	2.52	0.56
1:5:5028:G:N2	1:5:5029:C:C2	2.73	0.56
6:C:213:GLU:N	6:C:213:GLU:OE1	2.39	0.56
8:E:95:ASP:OD1	8:E:96:LYS:N	2.38	0.56
14:L:36:ARG:HB2	14:L:36:ARG:HH11	1.70	0.56
26:X:122:ALA:HB3	26:X:139:ARG:HG3	1.87	0.56
27:Y:62:TYR:N	27:Y:62:TYR:CD1	2.74	0.56
27:Y:62:TYR:OH	27:Y:97:VAL:HB	2.06	0.56
34:f:43:LEU:HD22	34:f:76:ARG:HA	1.87	0.56
50:S2:120:U:O4	50:S2:121:U:C4	2.59	0.56
50:S2:648:A:C2	50:S2:649:U:N1	2.72	0.56
50:S2:923:G:C2	50:S2:924:G:N9	2.73	0.56
50:S2:1121:G:C5	50:S2:1122:A:N7	2.74	0.56
50:S2:1232:U:O2	50:S2:1232:U:H2'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1408:U:H2'	50:S2:1409:A:N9	2.20	0.56
50:S2:1429:G:H2'	50:S2:1430:C:C6	2.41	0.56
50:S2:1585:U:H5'	50:S2:1585:U:C6	2.40	0.56
50:S2:1595:U:N3	50:S2:1596:U:H6	2.02	0.56
50:S2:1692:U:H5'	50:S2:1692:U:C6	2.40	0.56
53:SC:74:LYS:HG3	53:SC:269:PHE:CD2	2.41	0.56
63:SM:101:ARG:HA	63:SM:101:ARG:NH1	2.20	0.56
84:S4:22:U:C2'	84:S4:23:U:H5'	2.36	0.56
85:S5:2:C:C5	85:S5:3:C:C4	2.93	0.56
86:S6:53:G:C6	86:S6:61:C:N4	2.72	0.56
1:5:465:G:N2	1:5:466:A:H1'	2.21	0.56
1:5:515:C:O2	1:5:515:C:H2'	2.04	0.56
1:5:671:G:N1	1:5:672:C:C4	2.74	0.56
1:5:964:A:H2	1:5:2252:G:C6	2.24	0.56
1:5:994:G:C6	1:5:995:C:C4	2.94	0.56
1:5:1048:G:C2	1:5:1049:C:C2	2.94	0.56
1:5:1173:G:C6	1:5:1174:G:C5	2.94	0.56
1:5:1273:G:N2	1:5:2123:C:OP1	2.31	0.56
1:5:1368:A:HO2'	1:5:1369:C:P	2.28	0.56
1:5:1388:A:N1	1:5:1396:G:N2	2.48	0.56
1:5:1539:G:H1'	4:A:15:VAL:HG13	1.87	0.56
1:5:1984:A:H62	1:5:2011:C:C2'	2.19	0.56
1:5:1995:G:C2	1:5:1996:C:C2	2.94	0.56
1:5:2400:G:C6	1:5:2401:A:N7	2.74	0.56
1:5:2439:G:C6	1:5:2440:U:C4	2.94	0.56
1:5:2444:U:C5	1:5:2445:C:C5	2.94	0.56
1:5:2494:U:N3	1:5:2495:U:C5	2.74	0.56
1:5:2515:G:O2'	1:5:2745:A:N1	2.35	0.56
1:5:2589:C:H5''	1:5:2590:G:OP2	2.06	0.56
1:5:2714:G:N2	1:5:2715:G:C4	2.73	0.56
1:5:2725:A:N6	20:R:88:ARG:O	2.38	0.56
1:5:2726:G:N1	1:5:2727:C:N4	2.53	0.56
1:5:3756:A:C2	1:5:3757:G:C4	2.94	0.56
1:5:4152:G:C2	1:5:4153:C:C5	2.94	0.56
1:5:4205:A:C2	1:5:4206:C:C6	2.93	0.56
1:5:4269:G:C5	1:5:4270:C:C5	2.93	0.56
1:5:4280:A:H61	7:D:28:THR:C	2.13	0.56
1:5:4324:A:C2	1:5:4325:A:C6	2.94	0.56
1:5:4714:C:O2	1:5:4714:C:H2'	2.05	0.56
1:5:5043:A:O2'	1:5:5044:A:C5'	2.54	0.56
3:8:141:C:H2'	3:8:142:U:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:148:ASN:HB3	9:F:243:ASN:HD22	1.71	0.56
10:G:108:GLN:CA	10:G:108:GLN:HE21	2.19	0.56
14:L:5:ARG:HA	29:a:48:TYR:CE2	2.41	0.56
14:L:9:ILE:O	14:L:10:LEU:HB2	2.05	0.56
14:L:58:VAL:HG13	14:L:70:VAL:CG1	2.36	0.56
26:X:116:LEU:HB2	26:X:117:TYR:CE1	2.41	0.56
40:l:21:ARG:HH22	40:l:24:PRO:CA	2.19	0.56
50:S2:51:U:O2	50:S2:52:G:C8	2.58	0.56
50:S2:75:G:H1	57:SG:159:ARG:HE	1.53	0.56
50:S2:351:G:N1	50:S2:352:U:C5	2.73	0.56
50:S2:376:A:C2	50:S2:377:G:N9	2.74	0.56
50:S2:402:C:N4	50:S2:403:G:N7	2.54	0.56
50:S2:449:A:N6	50:S2:452:G:C4	2.74	0.56
50:S2:449:A:H2'	50:S2:449:A:N3	2.20	0.56
50:S2:562:U:H2'	50:S2:563:G:C8	2.40	0.56
50:S2:834:C:H5'	50:S2:835:C:O5'	2.05	0.56
50:S2:856:C:N3	50:S2:857:U:C5	2.74	0.56
50:S2:927:C:C2	50:S2:928:G:N7	2.74	0.56
50:S2:956:G:O6	50:S2:968:U:C2	2.59	0.56
50:S2:1160:U:O4	74:SX:2:GLY:N	2.39	0.56
50:S2:1292:C:C6	82:Sf:149:CYS:HA	2.41	0.56
50:S2:1563:G:C6	50:S2:1564:C:C4	2.94	0.56
50:S2:1563:G:C4	50:S2:1564:C:C5	2.93	0.56
50:S2:1622:U:C5	69:SS:120:HIS:CE1	2.93	0.56
50:S2:1781:A:N3	50:S2:1782:G:N7	2.54	0.56
51:SA:111:GLN:N	51:SA:111:GLN:OE1	2.38	0.56
56:SF:122:ARG:HG2	79:Sc:57:THR:HG21	1.88	0.56
57:SG:26:THR:HG21	57:SG:40:ALA:HB3	1.86	0.56
59:SI:6:ASP:OD1	59:SI:6:ASP:N	2.38	0.56
63:SM:25:ALA:CB	63:SM:111:VAL:HG13	2.36	0.56
83:Sg:162:ASN:OD1	83:Sg:178:ASN:ND2	2.39	0.56
85:S5:21:A:C5	85:S5:48:C:C4	2.67	0.56
86:S6:4:C:C3'	86:S6:5:C:H5''	2.24	0.56
86:S6:5:C:N4	86:S6:6:G:C6	2.73	0.56
1:5:12:A:N1	1:5:14:C:C4	2.74	0.56
1:5:15:A:H2'	1:5:16:G:O4'	2.06	0.56
1:5:290:U:H2'	1:5:291:U:O5'	2.06	0.56
1:5:677:G:N2	1:5:678:C:C2	2.74	0.56
1:5:696:C:H5''	1:5:697:G:H5'	1.86	0.56
1:5:733:A:N7	1:5:734:G:C8	2.74	0.56
1:5:973:G:O6	1:5:1282:G:N2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1177:U:C1'	7:D:282:GLN:NE2	2.67	0.56
1:5:1380:G:N1	1:5:1382:G:C2	2.74	0.56
1:5:1473:U:C4	1:5:1474:C:C5	2.94	0.56
1:5:1479:G:C5	1:5:1487:G:N2	2.74	0.56
1:5:1596:U:O2'	1:5:1597:G:P	2.64	0.56
1:5:1661:C:H2'	1:5:1662:C:H6	1.71	0.56
1:5:1857:C:H2'	1:5:1858:A:H8	1.71	0.56
1:5:1868:A:C5	1:5:1870:C:H1'	2.41	0.56
1:5:2092:G:H1'	1:5:2093:A:C2	2.41	0.56
1:5:2479:G:C2	1:5:2480:G:C4	2.93	0.56
1:5:2645:G:C2	1:5:2646:C:N1	2.74	0.56
1:5:2744:A:O2'	1:5:2745:A:O5'	2.24	0.56
1:5:2783:A:C5	1:5:2784:C:C5	2.94	0.56
1:5:3754:G:N1	1:5:3755:G:C8	2.74	0.56
1:5:3796:U:O2'	50:S2:1720:U:O2'	1.92	0.56
1:5:4039:G:O2'	1:5:4050:A:H1'	2.06	0.56
1:5:4068:U:C4	1:5:4069:U:C5	2.94	0.56
1:5:4217:G:H2'	1:5:4218:U:O5'	2.05	0.56
1:5:4239:A:N6	1:5:4240:G:N7	2.54	0.56
1:5:4473:A:C2	1:5:4474:A:C4	2.93	0.56
1:5:4483:C:N3	1:5:4484:A:N7	2.54	0.56
1:5:4628:U:O2	1:5:4628:U:H2'	2.06	0.56
1:5:4684:A:H2'	1:5:4685:U:O4'	2.06	0.56
1:5:4957:C:O2	1:5:4958:C:C6	2.59	0.56
2:7:7:G:OP1	7:D:33:ARG:HD2	2.06	0.56
2:7:8:G:C4	2:7:9:C:C6	2.94	0.56
3:8:37:A:C4'	3:8:39:G:H1'	2.34	0.56
3:8:139:G:C6	3:8:140:C:C4	2.94	0.56
4:A:118:GLU:HB3	4:A:126:LEU:HD21	1.88	0.56
7:D:163:LEU:HD21	7:D:175:HIS:HB3	1.87	0.56
16:N:9:GLU:OE2	37:i:41:ARG:NE	2.37	0.56
29:a:91:ALA:HB2	29:a:120:GLN:OE1	2.06	0.56
33:e:22:ARG:NH2	33:e:36:ARG:HG3	2.21	0.56
33:e:81:ASN:OD1	33:e:81:ASN:C	2.49	0.56
47:1:84:ILE:HD13	47:1:162:VAL:CG1	2.36	0.56
47:1:292:ILE:HD13	47:1:449:LEU:HD22	1.88	0.56
50:S2:20:G:P	50:S2:620:G:C8	2.99	0.56
50:S2:27:A:N1	50:S2:28:U:C5	2.74	0.56
50:S2:77:A:O3'	57:SG:173:ALA:HB3	2.06	0.56
50:S2:193:C:C2	50:S2:207:G:C2	2.94	0.56
50:S2:294:U:H4'	50:S2:295:C:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:323:C:H3'	50:S2:324:C:C5'	2.35	0.56
50:S2:340:C:C2	50:S2:341:C:C4	2.90	0.56
50:S2:414:A:O2'	50:S2:415:A:C5'	2.54	0.56
50:S2:574:A:O2'	50:S2:575:A:O5'	2.24	0.56
50:S2:618:C:N3	50:S2:619:A:N9	2.53	0.56
50:S2:637:U:O2	50:S2:638:C:C6	2.59	0.56
50:S2:639:C:O2'	50:S2:640:A:C5'	2.53	0.56
50:S2:943:U:C2	50:S2:944:A:C8	2.94	0.56
50:S2:1097:G:H4'	51:SA:32:PHE:CE2	2.41	0.56
50:S2:1126:G:N3	50:S2:1127:C:C6	2.73	0.56
50:S2:1233:G:C6	50:S2:1234:C:C5	2.94	0.56
50:S2:1302:G:C6	82:Sf:140:TYR:CD1	2.94	0.56
50:S2:1309:C:H2'	82:Sf:143:LYS:CG	2.35	0.56
50:S2:1382:A:H61	50:S2:1383:A:N6	2.04	0.56
50:S2:1776:G:N2	50:S2:1777:G:C4	2.73	0.56
50:S2:1811:C:C2	50:S2:1812:U:C6	2.93	0.56
52:SB:33:VAL:HG21	52:SB:67:PHE:HZ	1.71	0.56
57:SG:70:HIS:CD2	57:SG:103:ASP:OD2	2.59	0.56
83:Sg:31:ILE:HG23	83:Sg:43:TRP:HB2	1.88	0.56
85:S5:10:G:N2	85:S5:25:C:N4	2.50	0.56
86:S6:1:U:C2	86:S6:73:A:N1	2.60	0.56
86:S6:51:U:N3	86:S6:52:G:C5	2.73	0.56
86:S6:69:G:N1	86:S6:70:G:N7	2.53	0.56
1:5:711:A:N1	1:5:712:C:C4	2.73	0.56
1:5:964:A:C2	1:5:2252:G:N7	2.74	0.56
1:5:1260:G:C2	1:5:1261:G:C4	2.94	0.56
1:5:1269:G:N7	1:5:2111:G:C6	2.74	0.56
1:5:1281:G:H1'	6:C:322:LEU:N	2.21	0.56
1:5:1282:G:C8	8:E:124:HIS:CE1	2.94	0.56
1:5:2453:A:H1'	1:5:2507:A:C6	2.41	0.56
1:5:2735:G:N1	1:5:2736:G:C5	2.73	0.56
1:5:3675:G:C2	1:5:3676:G:C8	2.94	0.56
1:5:3753:G:C2	1:5:3754:G:C8	2.95	0.56
1:5:3858:C:C2	1:5:3859:G:C8	2.93	0.56
1:5:3870:C:C2	1:5:3886:G:C2	2.94	0.56
1:5:3944:G:C4	1:5:3945:A:C8	2.94	0.56
1:5:3956:G:N2	1:5:3966:A:H1'	2.19	0.56
1:5:4235:G:O5'	1:5:4331:G:O2'	2.24	0.56
1:5:4999:G:N1	1:5:5000:G:C8	2.73	0.56
1:5:5036:C:N3	1:5:5037:U:C5	2.74	0.56
2:7:19:C:C2	2:7:20:U:C5	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:317:ASN:HD21	6:C:320:LYS:HG3	1.71	0.56
29:a:67:GLN:HA	29:a:67:GLN:NE2	2.21	0.56
36:h:119:PHE:N	36:h:119:PHE:CD1	2.74	0.56
50:S2:96:C:O2	50:S2:473:A:O2'	2.24	0.56
50:S2:171:A:C5	50:S2:173:A:C5	2.94	0.56
50:S2:185:G:C4	50:S2:186:C:C5	2.94	0.56
50:S2:357:C:C2	50:S2:358:C:C6	2.94	0.56
50:S2:477:G:N2	50:S2:478:G:C4	2.74	0.56
50:S2:672:A:N1	50:S2:1162:C:H1'	2.20	0.56
50:S2:1053:C:O2	50:S2:1054:G:H8	1.87	0.56
50:S2:1109:C:N4	68:SR:123:THR:OG1	2.38	0.56
50:S2:1294:G:H1'	82:Sf:152:LYS:C	2.30	0.56
50:S2:1301:A:H2'	50:S2:1303:C:O2	2.06	0.56
50:S2:1338:G:C5	50:S2:1339:U:C5	2.94	0.56
50:S2:1410:C:N3	50:S2:1411:G:C5	2.74	0.56
50:S2:1466:G:N1	50:S2:1467:C:C4	2.74	0.56
50:S2:1533:A:H2	50:S2:1536:G:N3	2.03	0.56
59:SI:11:ARG:HD3	59:SI:15:GLY:O	2.06	0.56
59:SI:62:VAL:HG12	59:SI:77:ARG:HA	1.88	0.56
1:5:29:G:N2	1:5:30:C:C2	2.74	0.55
1:5:291:U:O2	1:5:293:G:H8	1.88	0.55
1:5:331:G:C2	1:5:332:C:C4	2.94	0.55
1:5:450:G:C6	1:5:1295:C:N3	2.74	0.55
1:5:486:C:O2	1:5:487:G:C8	2.56	0.55
1:5:495:C:C4	1:5:496:G:N7	2.74	0.55
1:5:504:G:C2	1:5:654:C:C2	2.92	0.55
1:5:693:C:C2	1:5:694:C:C5	2.94	0.55
1:5:990:C:C4	1:5:1064:G:C2	2.94	0.55
1:5:1249:C:C2	1:5:1250:C:C5	2.94	0.55
1:5:1271:G:C3'	1:5:1272:C:C5'	2.81	0.55
1:5:1287:G:N1	1:5:1289:C:C5	2.74	0.55
1:5:1358:G:C2	1:5:1359:G:C5	2.94	0.55
1:5:1634:A:C4	1:5:1635:C:C6	2.94	0.55
1:5:1691:G:C6	1:5:1692:C:C5	2.93	0.55
1:5:1749:A:H4'	12:I:35:ASP:OD2	2.05	0.55
1:5:1945:G:N2	1:5:1946:G:H1'	2.21	0.55
1:5:1992:U:C5	1:5:2002:A:N3	2.74	0.55
1:5:2606:G:C2	1:5:2607:C:C5	2.94	0.55
1:5:2650:G:N2	1:5:2684:C:C2	2.74	0.55
1:5:2686:G:H5'	1:5:2687:U:OP1	2.07	0.55
1:5:2857:A:N1	1:5:2858:A:C6	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3720:G:C6	1:5:3721:U:C5	2.94	0.55
1:5:3734:U:C2'	1:5:3735:G:O5'	2.55	0.55
1:5:3873:G:H2'	1:5:3874:G:C1'	2.35	0.55
1:5:3965:A:C8	1:5:3965:A:C5'	2.90	0.55
1:5:3974:G:C6	1:5:3975:C:N4	2.73	0.55
1:5:4099:G:C2	1:5:4100:C:C2	2.93	0.55
1:5:4152:G:C2	1:5:4153:C:C6	2.93	0.55
1:5:4723:A:C4	1:5:4724:A:C8	2.94	0.55
1:5:4749:C:O4'	1:5:4749:C:O2	2.23	0.55
1:5:5037:U:C2	1:5:5038:A:C8	2.94	0.55
1:5:5039:U:H5''	1:5:5040:U:H2'	1.88	0.55
1:5:5061:A:C4'	1:5:5062:G:H5''	2.35	0.55
1:5:5061:A:H4'	1:5:5062:G:H5''	1.87	0.55
3:8:116:C:N3	3:8:117:C:C6	2.74	0.55
16:N:126:THR:C	16:N:127:TYR:HD1	2.14	0.55
19:Q:32:TYR:HH	19:Q:123:PHE:HD2	1.52	0.55
21:S:90:THR:HG23	22:T:156:TYR:CD2	2.40	0.55
26:X:83:THR:HG23	47:1:403:GLY:HA3	1.88	0.55
31:c:44:LYS:HA	31:c:69:THR:HG23	1.87	0.55
50:S2:56:G:N1	50:S2:90:G:N3	2.54	0.55
50:S2:122:G:H2'	50:S2:123:G:H1'	1.88	0.55
50:S2:360:A:H4'	50:S2:361:U:H3'	1.87	0.55
50:S2:413:G:C2'	50:S2:414:A:O5'	2.54	0.55
50:S2:518:G:C2	50:S2:519:A:N7	2.74	0.55
50:S2:862:A:C6	50:S2:863:U:C4	2.94	0.55
50:S2:925:G:O2'	64:SN:87:ASP:HA	2.06	0.55
50:S2:1085:C:C4	50:S2:1087:A:H1'	2.41	0.55
50:S2:1115:U:H4'	50:S2:1116:C:OP1	2.06	0.55
50:S2:1210:G:H21	50:S2:1690:U:C1'	2.18	0.55
50:S2:1293:A:C4'	82:Sf:151:ASN:H	2.19	0.55
50:S2:1294:G:N1	50:S2:1295:A:C5	2.74	0.55
50:S2:1406:G:C5	50:S2:1407:U:C6	2.94	0.55
50:S2:1691:U:H4'	77:Sa:88:SER:HB3	1.89	0.55
50:S2:1804:U:N3	50:S2:1805:G:C8	2.74	0.55
53:SC:163:VAL:HG22	53:SC:241:PHE:HZ	1.70	0.55
56:SF:83:ASN:N	56:SF:83:ASN:HD22	2.04	0.55
86:S6:10:G:C2	86:S6:11:C:C6	2.94	0.55
86:S6:66:U:C4	86:S6:67:C:C5	2.94	0.55
1:5:76:A:N7	14:L:74:ARG:NH2	2.54	0.55
1:5:125:C:O2	1:5:125:C:H2'	2.05	0.55
1:5:165:A:C5	1:5:166:C:C5	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:471:A:C6	1:5:472:C:N1	2.74	0.55
1:5:471:A:C2	1:5:472:C:O4'	2.59	0.55
1:5:659:G:N1	1:5:660:A:C5	2.74	0.55
1:5:688:U:O4	1:5:689:U:C5	2.60	0.55
1:5:1288:G:HO2'	1:5:1289:C:P	2.30	0.55
1:5:1340:C:N3	1:5:1341:U:C4	2.73	0.55
1:5:1589:C:C2'	1:5:1590:C:O5'	2.54	0.55
1:5:2463:G:H2'	1:5:2464:C:H6	1.71	0.55
1:5:2521:G:C2	1:5:2535:G:C2	2.94	0.55
1:5:2582:A:OP1	35:g:76:ARG:NH1	2.39	0.55
1:5:2658:G:N1	1:5:2675:G:C2	2.74	0.55
1:5:3594:C:H2'	1:5:3597:G:H1'	1.86	0.55
1:5:3944:G:C6	1:5:3945:A:C8	2.92	0.55
1:5:3967:G:H2'	46:z:162:VAL:HG21	1.72	0.55
1:5:4164:C:C4	1:5:4165:C:C5	2.94	0.55
1:5:4652:G:C2	1:5:4653:C:C5	2.94	0.55
1:5:4670:C:O2	24:V:15:ARG:NH2	2.39	0.55
1:5:4737:G:O2'	1:5:4738:C:O5'	2.23	0.55
1:5:4872:G:O2'	1:5:4873:G:OP1	2.20	0.55
2:7:82:G:N2	2:7:95:C:C2	2.74	0.55
4:A:226:ARG:NH1	4:A:226:ARG:HB2	2.21	0.55
6:C:270:ALA:HA	6:C:278:ASN:HD21	1.71	0.55
7:D:42:ASN:N	7:D:42:ASN:OD1	2.37	0.55
25:W:50:ASN:OD1	25:W:50:ASN:N	2.40	0.55
36:h:72:PHE:HB3	36:h:73:TYR:HD1	1.71	0.55
50:S2:71:G:O2'	50:S2:79:A:N6	2.36	0.55
50:S2:140:C:O2'	50:S2:141:A:O4'	2.23	0.55
50:S2:580:U:C4	50:S2:581:U:C6	2.94	0.55
50:S2:616:A:O2'	74:SX:88:ASP:OD2	2.23	0.55
50:S2:828:G:C5	50:S2:829:C:C5	2.94	0.55
50:S2:1119:A:C5	50:S2:1120:U:H1'	2.41	0.55
50:S2:1151:G:C6	50:S2:1152:U:C5	2.94	0.55
50:S2:1315:U:O4	50:S2:1316:C:C2	2.59	0.55
50:S2:1405:A:N1	50:S2:1406:G:C4	2.75	0.55
50:S2:1408:U:H2'	50:S2:1409:A:C1'	2.36	0.55
50:S2:1450:G:O2'	83:Sg:64:HIS:CE1	2.60	0.55
50:S2:1453:C:C4	50:S2:1455:A:N9	2.75	0.55
50:S2:1658:G:H1	50:S2:1664:A:H62	1.50	0.55
50:S2:1753:C:C2	50:S2:1754:G:C8	2.94	0.55
50:S2:1776:G:C2	50:S2:1777:G:C5	2.94	0.55
50:S2:1779:G:C2	50:S2:1780:G:C8	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1863:A:H5''	50:S2:1863:A:H8	1.71	0.55
52:SB:97:LEU:CG	52:SB:228:LEU:CD1	2.82	0.55
52:SB:133:TYR:CE1	52:SB:221:PRO:HD3	2.41	0.55
53:SC:166:ARG:HH22	72:SV:1:MET:HE3	1.69	0.55
61:SK:11:ILE:HD12	61:SK:45:VAL:HG22	1.88	0.55
61:SK:61:GLN:HA	61:SK:61:GLN:OE1	2.05	0.55
85:S5:34:G:C6	85:S5:35:A:N6	2.73	0.55
85:S5:52:G:H5''	85:S5:52:G:H8	1.69	0.55
1:5:66:A:C2	1:5:312:G:H1'	2.40	0.55
1:5:211:G:N2	1:5:212:A:C8	2.74	0.55
1:5:302:C:C2	1:5:303:C:C5	2.94	0.55
1:5:405:U:H2'	1:5:405:U:O2	2.07	0.55
1:5:450:G:HO2'	1:5:452:A:H4'	1.72	0.55
1:5:751:G:C2	1:5:752:G:C8	2.94	0.55
1:5:949:G:C2	1:5:950:G:C8	2.94	0.55
1:5:1269:G:N9	1:5:2111:G:C6	2.75	0.55
1:5:1273:G:C8	8:E:69:TYR:C	2.84	0.55
1:5:1279:A:O2'	1:5:1280:C:H5''	2.05	0.55
1:5:1552:G:C2	1:5:1574:G:C2	2.94	0.55
1:5:1563:A:H62	50:S2:1028:A:N6	1.97	0.55
1:5:1572:U:C4'	20:R:95:TRP:HE1	2.18	0.55
1:5:1582:U:C4	1:5:1583:A:N7	2.74	0.55
1:5:1688:G:C2	1:5:1849:U:O2	2.59	0.55
1:5:1725:U:C4	1:5:1726:U:C5	2.95	0.55
1:5:1850:A:H2'	1:5:1851:G:O5'	2.05	0.55
1:5:1864:G:C6	1:5:1865:G:C4	2.94	0.55
1:5:1873:A:C2	1:5:1874:A:C8	2.94	0.55
1:5:1937:C:OP2	1:5:1938:C:O2'	2.22	0.55
1:5:2104:G:N1	1:5:2105:A:C5	2.75	0.55
1:5:2382:A:H2'	1:5:2382:A:N3	2.21	0.55
1:5:2468:U:C4	1:5:2473:A:C6	2.95	0.55
1:5:2496:G:C2	1:5:2497:C:C2	2.94	0.55
1:5:2726:G:C2	1:5:2727:C:N3	2.74	0.55
1:5:2857:A:O2'	1:5:2858:A:C5'	2.54	0.55
1:5:2866:C:C4	1:5:2867:C:C5	2.95	0.55
1:5:3778:U:H2'	1:5:3778:U:O2	2.06	0.55
1:5:4173:G:C2	1:5:4174:U:C6	2.94	0.55
1:5:4560:C:H5'	1:5:4560:C:C2	2.42	0.55
2:7:54:A:H2	2:7:55:A:C5	2.19	0.55
2:7:89:G:H2'	2:7:90:A:C8	2.41	0.55
2:7:111:C:H2'	2:7:111:C:O2	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:35:PRO:HD2	21:S:39:VAL:HG21	1.87	0.55
47:1:248:THR:CA	47:1:440:ALA:CB	2.84	0.55
50:S2:180:G:H3'	50:S2:181:A:H3'	1.89	0.55
50:S2:466:G:H3'	50:S2:466:G:N3	2.21	0.55
50:S2:600:G:C5	50:S2:631:U:O4	2.59	0.55
50:S2:678:U:N3	50:S2:679:A:C8	2.75	0.55
50:S2:695:C:N3	50:S2:696:G:C8	2.74	0.55
50:S2:824:C:H2'	50:S2:825:A:C8	2.41	0.55
50:S2:892:U:O2	50:S2:893:U:C6	2.59	0.55
50:S2:926:A:C4	50:S2:927:C:C6	2.94	0.55
50:S2:1371:U:OP2	50:S2:1372:U:H5	1.90	0.55
50:S2:1405:A:C6	50:S2:1406:G:C6	2.94	0.55
50:S2:1426:U:N3	50:S2:1427:C:C5	2.75	0.55
50:S2:1433:C:C3'	50:S2:1434:C:O4'	2.55	0.55
50:S2:1573:G:C6	50:S2:1574:C:C4	2.94	0.55
50:S2:1722:G:N2	50:S2:1723:G:H1'	2.20	0.55
51:SA:99:ILE:HG12	51:SA:117:ARG:NH2	2.22	0.55
59:SI:110:ARG:NH1	59:SI:121:LEU:HB2	2.21	0.55
62:SL:103:GLU:HB2	74:SX:11:ARG:CB	2.10	0.55
66:SP:9:LYS:O	66:SP:10:ARG:HG3	2.07	0.55
69:SS:86:ARG:HA	69:SS:86:ARG:NE	2.22	0.55
73:SW:17:ALA:HB2	73:SW:25:VAL:HG11	1.87	0.55
85:S5:34:G:H4'	85:S5:35:A:OP1	2.04	0.55
85:S5:47:U:H3'	85:S5:48:C:H5''	1.84	0.55
86:S6:63:G:N3	86:S6:64:A:C8	2.72	0.55
1:5:42:A:N7	1:5:4379:A:N6	2.55	0.55
1:5:49:U:C2'	1:5:50:C:O5'	2.55	0.55
1:5:98:A:C6	1:5:99:A:C4	2.94	0.55
1:5:145:G:C2	1:5:146:G:N9	2.75	0.55
1:5:656:C:C2	1:5:657:C:C6	2.95	0.55
1:5:712:C:N3	1:5:713:C:C5	2.75	0.55
1:5:737:C:C4	1:5:738:C:C5	2.94	0.55
1:5:1286:C:C2	1:5:1287:G:C8	2.93	0.55
1:5:1437:C:O2	1:5:2098:G:N7	2.40	0.55
1:5:1447:C:C2	1:5:2098:G:N1	2.74	0.55
1:5:1509:C:C2	1:5:1510:G:C8	2.95	0.55
1:5:1691:G:C6	1:5:1692:C:C4	2.94	0.55
1:5:1912:G:C4	1:5:1913:C:C5	2.94	0.55
1:5:2082:G:C2'	1:5:2083:C:O5'	2.55	0.55
1:5:2291:G:N1	1:5:2292:C:C5	2.75	0.55
1:5:2404:A:H61	1:5:2787:A:N6	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2436:U:H4'	1:5:2437:C:OP2	2.06	0.55
1:5:2480:G:C2	1:5:2499:C:C2	2.94	0.55
1:5:2482:C:C2	1:5:2483:G:C8	2.95	0.55
1:5:2567:G:C4	1:5:2568:C:C6	2.94	0.55
1:5:2611:A:H5'	1:5:2688:G:H4'	1.88	0.55
1:5:2677:G:C5	1:5:2678:A:C8	2.94	0.55
1:5:2840:A:C6	1:5:2841:G:N7	2.74	0.55
1:5:2852:U:H3'	1:5:2852:U:C2	2.41	0.55
1:5:2904:U:P	1:5:2905:C:H41	2.29	0.55
1:5:3593:C:C4'	1:5:3594:C:OP2	2.54	0.55
1:5:3709:U:C4	50:S2:970:G:N2	2.74	0.55
1:5:3727:A:O2'	1:5:3728:A:O4'	2.23	0.55
1:5:3857:G:N1	1:5:3858:C:C2	2.74	0.55
1:5:3879:G:C6	1:5:3882:C:C6	2.94	0.55
1:5:3880:G:O2'	1:5:3881:G:O5'	2.24	0.55
1:5:4091:G:C2	1:5:4092:G:N9	2.74	0.55
1:5:4174:U:O2	1:5:4174:U:H2'	2.05	0.55
1:5:4194:U:O4'	1:5:4194:U:O2	2.23	0.55
1:5:4484:A:C2	1:5:4485:C:C4	2.95	0.55
1:5:4490:C:O2	1:5:4491:G:H8	1.89	0.55
1:5:4563:U:C4	1:5:4564:A:C6	2.94	0.55
1:5:4620:U:C4	1:5:4621:C:C5	2.94	0.55
1:5:4768:G:H3'	1:5:4769:G:H8	1.72	0.55
1:5:4885:U:O2	1:5:4886:C:C6	2.59	0.55
1:5:5031:G:C2	1:5:5032:C:C5	2.95	0.55
3:8:39:G:C2	3:8:104:A:C2	2.95	0.55
5:B:46:PHE:CE2	5:B:207:VAL:HG13	2.42	0.55
5:B:86:VAL:HG13	5:B:162:VAL:HG13	1.88	0.55
8:E:277:ILE:N	8:E:278:TYR:CE2	2.74	0.55
24:V:35:LYS:NZ	50:S2:1804:U:OP1	2.39	0.55
32:d:83:ARG:CB	32:d:114:PHE:CD2	2.89	0.55
50:S2:29:G:H2'	50:S2:30:C:C6	2.42	0.55
50:S2:70:G:C2	50:S2:71:G:N9	2.75	0.55
50:S2:85:A:C2	50:S2:86:C:C6	2.94	0.55
50:S2:170:A:H4'	57:SG:136:LYS:HD2	1.89	0.55
50:S2:447:A:C5	50:S2:449:A:N9	2.74	0.55
50:S2:455:A:O2'	50:S2:1735:A:O2'	2.24	0.55
50:S2:633:C:C4	50:S2:634:A:N7	2.74	0.55
50:S2:816:A:C6	50:S2:817:G:C4	2.95	0.55
50:S2:834:C:C2	50:S2:841:G:C2	2.95	0.55
50:S2:927:C:N3	50:S2:928:G:N7	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:957:A:O2'	50:S2:958:G:N3	2.37	0.55
50:S2:999:G:C6	50:S2:1000:C:C4	2.95	0.55
50:S2:1124:C:C2	50:S2:1125:C:C5	2.93	0.55
50:S2:1171:G:O2'	50:S2:1172:U:OP2	2.25	0.55
50:S2:1250:A:C2	50:S2:1339:U:C1'	2.89	0.55
50:S2:1378:A:N6	51:SA:136:GLU:CD	2.57	0.55
50:S2:1380:C:H2'	50:S2:1381:G:O4'	2.07	0.55
50:S2:1432:U:C2	50:S2:1433:C:H5	2.22	0.55
50:S2:1502:C:C2	50:S2:1503:C:C5	2.94	0.55
50:S2:1556:A:O5'	80:Sd:13:LYS:HA	2.06	0.55
50:S2:1630:A:C6	50:S2:1631:U:C5	2.95	0.55
50:S2:1739:C:C2	50:S2:1740:C:C5	2.94	0.55
51:SA:56:GLU:OE1	72:SV:82:ASN:ND2	2.38	0.55
63:SM:15:ASN:O	63:SM:19:GLN:HG3	2.06	0.55
65:SO:146:ARG:HG2	77:Sa:29:CYS:HB2	1.88	0.55
74:SX:7:LEU:HD13	74:SX:8:ARG:H	1.71	0.55
83:Sg:176:VAL:HG21	83:Sg:221:LEU:CD1	2.37	0.55
83:Sg:247:TRP:NE1	83:Sg:267:VAL:HG21	2.20	0.55
85:S5:7:A:C5'	85:S5:8:U:C5	2.86	0.55
1:5:39:A:C2	29:a:40:HIS:NE2	2.74	0.55
1:5:172:C:O4'	1:5:172:C:OP1	2.24	0.55
1:5:184:U:C2	1:5:254:G:N2	2.74	0.55
1:5:258:G:C6	1:5:259:C:C4	2.94	0.55
1:5:266:C:H1'	36:h:112:ARG:NH1	2.21	0.55
1:5:288:G:N3	1:5:289:C:C6	2.75	0.55
1:5:332:C:C2'	1:5:333:U:O5'	2.55	0.55
1:5:483:G:N3	1:5:484:U:C6	2.75	0.55
1:5:497:G:N1	1:5:657:C:C4	2.75	0.55
1:5:961:G:O6	1:5:969:C:C5	2.59	0.55
1:5:1214:C:N4	9:F:58:HIS:ND1	2.54	0.55
1:5:1393:G:H2'	1:5:1394:G:C5'	2.37	0.55
1:5:1629:G:C2	1:5:1631:A:C5	2.93	0.55
1:5:1756:U:H3	1:5:1775:A:H2	1.53	0.55
1:5:2089:G:N1	1:5:2263:A:C5	2.74	0.55
1:5:2104:G:H2'	1:5:2105:A:O4'	2.07	0.55
1:5:2253:A:H8	1:5:2254:G:H1'	1.72	0.55
1:5:2328:G:C5	1:5:2329:U:C4	2.94	0.55
1:5:2390:G:C6	1:5:2391:G:C8	2.94	0.55
1:5:2394:G:N2	1:5:2820:C:H5	2.04	0.55
1:5:2721:G:C2'	1:5:2722:G:H5'	2.36	0.55
1:5:2791:C:H2'	1:5:2791:C:O2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3717:A:O2'	1:5:3718:A:C4'	2.54	0.55
1:5:3797:C:O2	1:5:3801:U:O4	2.25	0.55
1:5:4046:A:C2	86:S6:56:C:N4	2.74	0.55
1:5:4108:G:C2	1:5:4109:G:C8	2.95	0.55
1:5:4164:C:C2	1:5:4165:C:C6	2.95	0.55
1:5:4370:G:C5	86:S6:76:A:C6	2.94	0.55
1:5:4490:C:O2	1:5:4490:C:C2'	2.54	0.55
1:5:4531:U:C2	85:S5:76:A:C2	2.88	0.55
1:5:4735:G:C6	1:5:4736:C:C5	2.94	0.55
1:5:4911:A:N6	17:O:105:PHE:CD1	2.73	0.55
1:5:4998:G:C2	1:5:4999:G:N9	2.74	0.55
3:8:38:U:H2'	3:8:38:U:O2	2.05	0.55
6:C:78:ARG:HH11	6:C:78:ARG:HG2	1.70	0.55
6:C:284:MET:HE3	19:Q:28:LEU:HB3	1.88	0.55
6:C:331:TYR:O	6:C:331:TYR:CG	2.59	0.55
6:C:334:THR:HG21	9:F:53:TYR:OH	2.06	0.55
7:D:27:LYS:CE	13:J:147:ARG:NH2	2.69	0.55
17:O:16:LEU:HD11	17:O:83:THR:HG21	1.89	0.55
17:O:84:VAL:HG11	17:O:102:LEU:HD22	1.88	0.55
27:Y:5:PRO:O	27:Y:6:PHE:HB2	2.05	0.55
50:S2:11:A:C6	50:S2:12:U:C5	2.95	0.55
50:S2:223:C:H2'	50:S2:224:A:C8	2.42	0.55
50:S2:298:G:C6	50:S2:299:A:N7	2.74	0.55
50:S2:348:A:C2'	50:S2:349:A:H5'	2.36	0.55
50:S2:447:A:N6	50:S2:449:A:C6	2.74	0.55
50:S2:623:G:N2	50:S2:624:C:H1'	2.22	0.55
50:S2:752:G:N2	50:S2:790:C:C2	2.75	0.55
50:S2:949:G:C6	50:S2:950:C:C4	2.93	0.55
50:S2:1029:G:N2	50:S2:1030:A:H1'	2.21	0.55
50:S2:1100:A:C5	50:S2:1101:U:C5	2.95	0.55
50:S2:1202:U:H2'	50:S2:1202:U:O2	2.06	0.55
50:S2:1204:A:C2	50:S2:1205:C:C5	2.92	0.55
50:S2:1293:A:N6	82:Sf:140:TYR:CA	2.70	0.55
50:S2:1294:G:C6	50:S2:1295:A:N7	2.75	0.55
50:S2:1315:U:C5	50:S2:1316:C:C6	2.95	0.55
50:S2:1485:U:H2'	50:S2:1485:U:O2	2.04	0.55
50:S2:1574:C:N3	50:S2:1575:G:C8	2.74	0.55
50:S2:1738:C:C4	50:S2:1739:C:C5	2.95	0.55
50:S2:1852:C:C2	50:S2:1853:C:C5	2.93	0.55
63:SM:90:GLY:C	63:SM:91:LEU:HG	2.30	0.55
65:SO:117:ARG:NH1	79:Sc:62:GLU:OE2	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Sg:83:TRP:HZ2	83:Sg:125:ARG:NH2	2.04	0.55
85:S5:32:U:H2'	85:S5:32:U:O2	2.07	0.55
86:S6:19:G:HO2'	86:S6:20:U:P	2.27	0.55
86:S6:69:G:N3	86:S6:70:G:C8	2.74	0.55
1:5:126:C:C2	1:5:127:G:N7	2.73	0.55
1:5:460:C:C2	1:5:461:G:N7	2.74	0.55
1:5:470:A:C6	1:5:471:A:C4	2.95	0.55
1:5:661:C:N4	1:5:662:C:N4	2.55	0.55
1:5:909:A:C6	1:5:910:G:C8	2.94	0.55
1:5:977:C:C2'	1:5:978:G:H5'	2.36	0.55
1:5:1203:G:C2	1:5:1204:C:N1	2.75	0.55
1:5:1214:C:H42	9:F:58:HIS:CE1	2.24	0.55
1:5:1215:C:C4	1:5:1216:C:H5	2.25	0.55
1:5:1378:C:H5''	1:5:1379:C:C3'	2.37	0.55
1:5:1413:C:O2	1:5:1414:C:C6	2.60	0.55
1:5:1774:C:N3	1:5:1775:A:N7	2.54	0.55
1:5:1819:G:H2'	1:5:1819:G:N3	2.21	0.55
1:5:1878:G:N3	1:5:1879:C:C5	2.75	0.55
1:5:1898:C:H5	1:5:2279:A:H1'	1.66	0.55
1:5:1932:A:H2'	1:5:1933:G:C8	2.42	0.55
1:5:2367:A:N3	1:5:2368:A:C8	2.75	0.55
1:5:2368:A:N1	1:5:2788:U:C5	2.75	0.55
1:5:2392:C:H2'	1:5:2392:C:O2	2.05	0.55
1:5:2409:U:O4	1:5:2783:A:N1	2.39	0.55
1:5:2519:U:C2	1:5:2520:C:C4	2.95	0.55
1:5:2606:G:C2	1:5:2607:C:C4	2.95	0.55
1:5:3607:U:C2	1:5:3608:A:N7	2.74	0.55
1:5:3656:A:N3	1:5:3657:U:C6	2.75	0.55
1:5:3662:A:N6	1:5:3680:U:N3	2.40	0.55
1:5:3741:C:N3	1:5:3742:G:C5	2.74	0.55
1:5:3759:A:N1	50:S2:1709:G:O4'	2.39	0.55
1:5:3962:A:N6	1:5:4038:C:H4'	2.21	0.55
1:5:4052:C:O2	46:z:207:LYS:CE	2.54	0.55
1:5:4083:U:H5'	4:A:31:ALA:HB2	1.88	0.55
1:5:4145:C:O2	1:5:4146:G:C8	2.60	0.55
1:5:4260:U:H2'	1:5:4261:C:C6	2.41	0.55
1:5:4277:G:C2	1:5:4278:C:N1	2.75	0.55
1:5:4293:U:O4	1:5:4329:G:H8	1.89	0.55
1:5:4333:C:N3	1:5:4334:U:C4	2.75	0.55
1:5:4548:A:C8	1:5:4548:A:C4'	2.89	0.55
1:5:4700:A:H2'	1:5:4700:A:N3	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4747:C:H2'	1:5:4748:U:C5	2.42	0.55
1:5:5020:G:C5	1:5:5021:C:C5	2.94	0.55
1:5:5057:C:O3'	32:d:23:ARG:NH2	2.39	0.55
2:7:19:C:C2	2:7:60:G:C2	2.94	0.55
2:7:59:G:O6	2:7:60:G:N7	2.37	0.55
3:8:134:G:C6	3:8:135:C:C4	2.94	0.55
7:D:44:TYR:N	7:D:44:TYR:CD1	2.69	0.55
9:F:82:ASN:HD21	22:T:142:ARG:HB3	1.70	0.55
9:F:107:VAL:HG11	9:F:141:TYR:CE1	2.42	0.55
14:L:23:ALA:HB3	16:N:199:GLN:OE1	2.07	0.55
16:N:126:THR:C	16:N:127:TYR:CD1	2.85	0.55
21:S:120:ARG:HB2	21:S:122:HIS:CD2	2.41	0.55
28:Z:21:ARG:HG3	28:Z:21:ARG:NH1	2.22	0.55
29:a:109:TYR:CD1	29:a:109:TYR:N	2.74	0.55
44:p:92:GLN:HG2	52:SB:219:LYS:HZ3	1.58	0.55
46:z:157:PHE:HB2	46:z:165:LEU:HD11	1.87	0.55
50:S2:19:A:O3'	50:S2:620:G:H8	1.89	0.55
50:S2:142:C:O4'	50:S2:142:C:O2	2.24	0.55
50:S2:149:A:C2'	50:S2:150:A:O4'	2.54	0.55
50:S2:164:A:H2'	50:S2:165:G:C2	2.41	0.55
50:S2:182:C:H2'	50:S2:184:G:C1'	2.36	0.55
50:S2:623:G:N3	50:S2:624:C:C6	2.74	0.55
50:S2:672:A:N3	50:S2:672:A:O4'	2.40	0.55
50:S2:837:A:N6	75:SY:47:MET:HB3	2.22	0.55
50:S2:903:A:C5	50:S2:904:A:C8	2.94	0.55
50:S2:949:G:C6	50:S2:950:C:C5	2.95	0.55
50:S2:999:G:N1	50:S2:1000:C:C6	2.75	0.55
50:S2:1074:C:C2	50:S2:1075:C:H5	2.15	0.55
50:S2:1149:A:C2	50:S2:1151:G:C6	2.94	0.55
50:S2:1233:G:C6	50:S2:1234:C:C4	2.94	0.55
50:S2:1263:U:H5''	80:Sd:27:ARG:HH12	1.72	0.55
50:S2:1292:C:C4'	82:Sf:148:TYR:HB3	2.36	0.55
50:S2:1332:A:N6	50:S2:1493:C:C2	2.73	0.55
50:S2:1442:U:O2	50:S2:1442:U:C2'	2.54	0.55
50:S2:1659:U:O2	50:S2:1659:U:H2'	2.07	0.55
50:S2:1691:U:O5'	50:S2:1691:U:H6	1.88	0.55
50:S2:1758:G:N1	50:S2:1759:G:C5	2.75	0.55
53:SC:253:PRO:O	53:SC:256:TRP:HB2	2.07	0.55
71:SU:93:SER:HB2	71:SU:97:ILE:HB	1.89	0.55
77:Sa:18:VAL:HG23	77:Sa:18:VAL:O	2.05	0.55
85:S5:1:G:C2	85:S5:73:A:C8	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:12:U:H1'	85:S5:24:G:N2	2.15	0.55
86:S6:35:A:H8	86:S6:35:A:H5''	1.72	0.55
1:5:60:G:N3	1:5:61:A:C8	2.74	0.55
1:5:69:A:H3'	1:5:70:A:C8	2.40	0.55
1:5:90:G:N7	1:5:92:C:C1'	2.70	0.55
1:5:144:G:N1	1:5:145:G:N7	2.54	0.55
1:5:299:C:C4	1:5:300:A:N7	2.74	0.55
1:5:675:C:N3	1:5:676:C:C5	2.75	0.55
1:5:711:A:N3	1:5:712:C:C6	2.75	0.55
1:5:919:C:H2'	1:5:920:C:O4'	2.07	0.55
1:5:1076:C:C2	1:5:1077:C:C6	2.94	0.55
1:5:1080:C:N3	1:5:1081:C:C6	2.74	0.55
1:5:1215:C:H2'	1:5:1216:C:H5'	1.89	0.55
1:5:1266:G:C2	1:5:1268:G:C6	2.95	0.55
1:5:1444:G:H2'	1:5:1445:U:H6	1.57	0.55
1:5:1627:G:H3'	1:5:1628:C:H6	1.72	0.55
1:5:1877:G:C6	1:5:1878:G:C5	2.94	0.55
1:5:1937:C:C3'	1:5:1938:C:H2'	2.37	0.55
1:5:2088:A:N6	19:Q:30:LYS:HB3	2.21	0.55
1:5:2319:C:H2'	1:5:2320:G:H5'	1.89	0.55
1:5:2690:C:C4	1:5:2691:U:C4	2.95	0.55
1:5:3943:A:C4	1:5:3944:G:N7	2.75	0.55
1:5:4053:A:O2'	46:z:207:LYS:HE2	2.07	0.55
1:5:4060:U:N3	1:5:4061:G:C8	2.75	0.55
1:5:4081:G:N3	1:5:4082:G:C8	2.74	0.55
1:5:4095:G:N2	1:5:4096:C:C5	2.69	0.55
1:5:4222:G:C6	1:5:4223:C:C5	2.94	0.55
1:5:4413:C:O4'	1:5:4413:C:O2	2.23	0.55
1:5:4687:A:N1	1:5:4688:C:C5	2.75	0.55
1:5:4888:U:O2'	1:5:4889:G:C8	2.50	0.55
2:7:33:U:O2	2:7:34:C:C6	2.60	0.55
4:A:234:LYS:HG2	4:A:238:ILE:HD12	1.88	0.55
5:B:264:PHE:C	5:B:264:PHE:CD1	2.85	0.55
16:N:85:VAL:HA	43:o:49:GLY:HA2	1.89	0.55
25:W:28:VAL:HG12	25:W:30:GLN:OE1	2.05	0.55
28:Z:36:ARG:HD2	28:Z:38:TYR:CE1	2.41	0.55
43:o:55:ILE:HG22	86:S6:75:C:C5'	2.37	0.55
46:z:161:LYS:CD	86:S6:55:U:H5'	2.36	0.55
50:S2:27:A:C4	50:S2:28:U:C6	2.95	0.55
50:S2:29:G:C2	50:S2:30:C:N3	2.75	0.55
50:S2:106:C:H2'	50:S2:107:A:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:167:G:H2'	50:S2:168:C:O4'	2.07	0.55
50:S2:212:C:N3	50:S2:213:G:C8	2.75	0.55
50:S2:219:U:C2	50:S2:220:U:C6	2.94	0.55
50:S2:387:C:C2	50:S2:388:U:H5	2.20	0.55
50:S2:628:A:C6	54:SD:179:GLN:OE1	2.60	0.55
50:S2:1325:G:N1	50:S2:1327:G:C5	2.75	0.55
50:S2:1457:U:C2	50:S2:1458:G:C8	2.95	0.55
50:S2:1495:G:H1'	80:Sd:41:GLN:CD	2.32	0.55
50:S2:1831:A:C2	50:S2:1832:A:C8	2.95	0.55
52:SB:89:GLU:HB3	52:SB:223:PHE:CZ	2.35	0.55
56:SF:86:LYS:HA	56:SF:89:THR:HG22	1.88	0.55
62:SL:99:TYR:HD2	74:SX:13:LEU:CG	2.19	0.55
68:SR:16:ILE:CD1	68:SR:50:ILE:HG21	2.37	0.55
75:SY:60:PHE:HD1	75:SY:71:GLY:HA3	1.72	0.55
86:S6:4:C:H2'	86:S6:5:C:C4'	2.37	0.55
86:S6:26:A:C5	86:S6:27:G:N7	2.75	0.55
1:5:105:A:H2'	1:5:106:A:O4'	2.07	0.55
1:5:293:G:H2'	1:5:297:U:N1	2.21	0.55
1:5:448:G:N1	1:5:449:C:C6	2.74	0.55
1:5:497:G:C2	1:5:657:C:C4	2.94	0.55
1:5:672:C:N3	1:5:673:C:C6	2.75	0.55
1:5:1272:C:H3'	1:5:2122:G:O2'	2.07	0.55
1:5:1404:G:C6	1:5:1405:C:C4	2.95	0.55
1:5:1475:G:H22	1:5:1489:G:H1	1.54	0.55
1:5:1667:G:C2	1:5:2283:G:C6	2.94	0.55
1:5:1684:A:C2	1:5:1685:G:C1'	2.90	0.55
1:5:1950:U:C2	1:5:1951:G:N7	2.74	0.55
1:5:1966:C:O2	1:5:1967:A:H8	1.89	0.55
1:5:2128:G:C2	1:5:2129:C:C2	2.94	0.55
1:5:2129:C:C2	1:5:2130:G:C8	2.95	0.55
1:5:2853:C:H2'	1:5:2854:G:O4'	2.07	0.55
1:5:2878:G:OP2	1:5:2879:A:O2'	2.18	0.55
1:5:4039:G:N1	1:5:4040:C:C5	2.75	0.55
1:5:4054:C:C3'	46:z:205:TYR:CD1	2.89	0.55
1:5:4092:G:N1	1:5:4093:G:N3	2.54	0.55
1:5:4102:C:C2	1:5:4108:G:C2	2.94	0.55
1:5:4215:C:N3	1:5:4216:G:C5	2.74	0.55
1:5:4275:G:C6	1:5:4276:G:C4	2.95	0.55
1:5:4405:G:C5	1:5:4406:U:C6	2.94	0.55
1:5:4601:U:H2'	1:5:4601:U:O2	2.07	0.55
1:5:4979:A:H2'	1:5:4980:C:O5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4998:G:N1	1:5:4999:G:C8	2.74	0.55
1:5:5048:A:N7	32:d:34:HIS:CD2	2.73	0.55
3:8:74:U:N3	27:Y:74:TYR:CE1	2.75	0.55
4:A:163:ARG:NH1	4:A:163:ARG:CB	2.69	0.55
17:O:167:HIS:CD2	17:O:167:HIS:C	2.85	0.55
19:Q:181:ARG:HB3	19:Q:181:ARG:HH21	1.71	0.55
36:h:119:PHE:N	36:h:119:PHE:HD1	2.04	0.55
42:n:2:ARG:HH11	50:S2:1841:C:P	2.30	0.55
50:S2:27:A:N3	50:S2:28:U:C6	2.74	0.55
50:S2:46:A:C5	50:S2:473:A:C2	2.95	0.55
50:S2:68:A:C5	50:S2:69:C:C5	2.94	0.55
50:S2:172:U:O2	50:S2:172:U:O2'	2.23	0.55
50:S2:194:C:C2	50:S2:206:G:N2	2.75	0.55
50:S2:338:G:C2	50:S2:339:A:C4	2.95	0.55
50:S2:407:G:H2'	50:S2:407:G:N3	2.22	0.55
50:S2:519:A:C2	50:S2:520:A:C8	2.95	0.55
50:S2:622:C:C4	50:S2:623:G:H1'	2.42	0.55
50:S2:635:G:C2	50:S2:636:C:C2	2.95	0.55
50:S2:1073:U:C2	50:S2:1074:C:C5	2.93	0.55
50:S2:1077:A:C6	50:S2:1078:C:C5	2.95	0.55
50:S2:1226:G:N2	50:S2:1639:G:C5	2.75	0.55
50:S2:1248:U:O2	86:S6:34:G:H1'	2.06	0.55
50:S2:1253:A:H4'	50:S2:1254:C:H5''	1.89	0.55
50:S2:1319:U:H2'	50:S2:1320:G:H8	1.71	0.55
50:S2:1342:U:C5	50:S2:1483:A:N6	2.73	0.55
50:S2:1427:C:H2'	50:S2:1428:G:H8	1.72	0.55
50:S2:1430:C:N4	50:S2:1431:G:N7	2.54	0.55
50:S2:1431:G:N2	50:S2:1432:U:H1'	2.22	0.55
50:S2:1454:A:N7	50:S2:1476:A:C4	2.74	0.55
50:S2:1467:C:C2	50:S2:1468:C:C6	2.95	0.55
50:S2:1589:A:C2'	50:S2:1590:C:O4'	2.55	0.55
50:S2:1609:C:O2	50:S2:1610:G:H8	1.82	0.55
50:S2:1729:U:O2	50:S2:1729:U:H2'	2.07	0.55
52:SB:133:TYR:CE2	52:SB:181:LEU:CD1	2.88	0.55
54:SD:99:ILE:O	54:SD:103:GLU:HB2	2.06	0.55
55:SE:18:TRP:HB3	55:SE:46:ILE:HG21	1.87	0.55
60:SJ:63:LEU:HD11	60:SJ:69:ARG:HH22	1.72	0.55
62:SL:15:THR:HG22	62:SL:15:THR:O	2.07	0.55
70:ST:23:LYS:CE	70:ST:51:ASN:HD22	2.14	0.55
73:SW:51:GLU:OE1	78:Sb:8:LEU:HD13	2.06	0.55
84:S4:15:U:O2	84:S4:15:U:H2'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S4:16:U:C3'	84:S4:17:U:H5'	2.35	0.55
1:5:74:G:C5'	14:L:59:VAL:HG13	2.37	0.55
1:5:93:G:N2	1:5:94:A:C2	2.75	0.55
1:5:172:C:C2	1:5:173:C:C5	2.95	0.55
1:5:293:G:C5'	1:5:294:G:H8	2.20	0.55
1:5:388:A:N6	1:5:411:G:C4	2.75	0.55
1:5:515:C:C2	1:5:516:C:C5	2.95	0.55
1:5:723:A:N1	1:5:943:A:N1	2.54	0.55
1:5:754:U:C2	1:5:755:C:C5	2.95	0.55
1:5:972:C:C6	1:5:1283:G:O6	2.59	0.55
1:5:992:C:O2	1:5:993:G:C8	2.60	0.55
1:5:1086:C:H2'	1:5:1086:C:O2	2.05	0.55
1:5:1211:G:N2	1:5:1212:G:C4	2.75	0.55
1:5:1249:C:C4	1:5:1250:C:C5	2.95	0.55
1:5:1534:A:C2'	1:5:1637:A:C2	2.89	0.55
1:5:1726:U:N3	1:5:1727:U:C6	2.75	0.55
1:5:1726:U:C4	1:5:1727:U:C5	2.94	0.55
1:5:1885:G:H2'	1:5:1886:G:O4'	2.07	0.55
1:5:1959:U:O4'	1:5:1961:G:H1'	2.07	0.55
1:5:2417:A:N3	1:5:2418:A:C8	2.75	0.55
1:5:2688:G:C2	1:5:2689:C:C5	2.95	0.55
1:5:2855:G:N2	1:5:2859:G:H22	2.04	0.55
1:5:3773:U:O2	1:5:3775:A:N1	2.40	0.55
1:5:3859:G:C4'	18:P:139:TYR:OH	2.55	0.55
1:5:3898:G:H2'	1:5:3899:G:H5'	1.88	0.55
1:5:4433:G:N2	1:5:4434:C:C2	2.75	0.55
1:5:4481:U:N3	1:5:4482:U:C5	2.74	0.55
1:5:4572:U:C2	1:5:4720:C:C5	2.94	0.55
1:5:4949:G:N2	1:5:4950:U:H2'	2.22	0.55
3:8:42:G:N1	3:8:43:A:C5	2.75	0.55
12:I:100:ASN:C	12:I:102:MET:H	2.15	0.55
14:L:59:VAL:HG21	14:L:73:GLY:HA3	1.89	0.55
46:z:14:VAL:HB	46:z:180:VAL:HG23	1.89	0.55
46:z:74:CYS:HA	46:z:84:HIS:CE1	2.42	0.55
46:z:112:ALA:CB	46:z:120:ILE:HG21	2.36	0.55
50:S2:92:A:C5	50:S2:447:A:N3	2.74	0.55
50:S2:527:C:H2'	50:S2:528:A:C8	2.42	0.55
50:S2:574:A:C2'	50:S2:575:A:C8	2.90	0.55
50:S2:893:U:C2	50:S2:894:G:C8	2.95	0.55
50:S2:910:G:C2	50:S2:911:C:C2	2.95	0.55
50:S2:949:G:C4	50:S2:950:C:C6	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1034:A:C5	50:S2:1082:A:C6	2.95	0.55
50:S2:1040:G:C5	50:S2:1041:G:C8	2.95	0.55
50:S2:1248:U:C2	86:S6:34:G:O4'	2.60	0.55
50:S2:1265:A:H2'	50:S2:1266:C:C6	2.42	0.55
50:S2:1271:C:N4	50:S2:1272:C:C4	2.75	0.55
50:S2:1284:A:N6	63:SM:33:ARG:HB2	2.20	0.55
50:S2:1291:A:N1	82:Sf:140:TYR:CG	2.75	0.55
50:S2:1398:G:N3	50:S2:1398:G:H2'	2.21	0.55
50:S2:1528:G:N3	50:S2:1529:C:C6	2.75	0.55
50:S2:1535:U:H1'	56:SF:88:MET:SD	2.47	0.55
50:S2:1550:G:H3'	50:S2:1579:A:H61	1.71	0.55
50:S2:1622:U:O4	69:SS:120:HIS:CE1	2.59	0.55
50:S2:1833:C:C2	50:S2:1836:G:C6	2.95	0.55
51:SA:155:ARG:HB3	51:SA:156:TYR:HD2	1.72	0.55
51:SA:205:ARG:NH1	68:SR:84:TYR:HB2	2.21	0.55
52:SB:89:GLU:N	52:SB:89:GLU:OE2	2.39	0.55
52:SB:137:LEU:HD23	52:SB:215:VAL:HG22	1.88	0.55
52:SB:228:LEU:HD11	52:SB:232:HIS:CD2	2.41	0.55
54:SD:35:SER:O	54:SD:99:ILE:HD11	2.07	0.55
77:Sa:34:LYS:O	77:Sa:35:ALA:HB3	2.07	0.55
83:Sg:296:GLN:OE1	83:Sg:312:VAL:HB	2.06	0.55
85:S5:49:C:C2'	85:S5:50:U:C6	2.86	0.55
1:5:29:G:N1	1:5:30:C:C4	2.75	0.55
1:5:164:G:C6	1:5:165:A:N7	2.75	0.55
1:5:184:U:C2	1:5:254:G:C2	2.95	0.55
1:5:208:A:C4'	1:5:232:G:N2	2.68	0.55
1:5:219:G:C8	1:5:220:C:H5	2.24	0.55
1:5:460:C:C2	1:5:461:G:C8	2.95	0.55
1:5:1260:G:C6	1:5:1261:G:N7	2.75	0.55
1:5:1380:G:C2	1:5:1382:G:C4	2.95	0.55
1:5:1411:C:O2	1:5:1412:G:H8	1.88	0.55
1:5:1726:U:O2	1:5:1727:U:C6	2.60	0.55
1:5:1884:C:OP1	33:e:50:LYS:HB2	2.07	0.55
1:5:1893:C:O2	1:5:1893:C:C2'	2.55	0.55
1:5:1946:G:C2	1:5:1948:G:N7	2.75	0.55
1:5:1964:A:C6	1:5:4694:G:C6	2.95	0.55
1:5:2103:G:C6	1:5:2104:G:C5	2.95	0.55
1:5:2436:U:O4	1:5:2783:A:C8	2.60	0.55
1:5:2546:G:O2'	1:5:2547:G:C5'	2.55	0.55
1:5:2607:C:C2	1:5:2608:G:N7	2.75	0.55
1:5:2733:C:C4	1:5:2734:U:C5	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2743:A:C6	1:5:2744:A:N6	2.75	0.55
1:5:3771:C:H2'	1:5:3772:U:C6	2.42	0.55
1:5:3773:U:N3	1:5:3774:A:H2'	2.21	0.55
1:5:3832:U:N3	1:5:3833:C:C5	2.75	0.55
1:5:4096:C:C4	1:5:4097:G:N9	2.75	0.55
1:5:4175:G:C6	1:5:4176:C:C4	2.95	0.55
1:5:4251:A:N6	13:J:127:GLY:O	2.39	0.55
1:5:4344:U:O2	1:5:4345:C:C5	2.54	0.55
1:5:4562:C:C2	1:5:4563:U:H6	2.24	0.55
1:5:4910:G:N2	17:O:109:PRO:CA	2.70	0.55
1:5:4983:C:O2	1:5:4984:C:H6	1.86	0.55
1:5:5043:A:H2'	1:5:5044:A:C8	2.42	0.55
2:7:111:C:C2	2:7:112:U:C6	2.94	0.55
9:F:197:TYR:O	9:F:199:VAL:N	2.40	0.55
12:I:99:ILE:HG22	12:I:123:GLN:HB2	1.88	0.55
22:T:143:THR:OG1	22:T:146:LYS:O	2.18	0.55
43:o:36:GLN:HE21	43:o:36:GLN:CA	2.20	0.55
46:z:43:PRO:HB2	46:z:161:LYS:HA	1.88	0.55
50:S2:52:G:C6	50:S2:53:C:C6	2.95	0.55
50:S2:305:U:OP2	50:S2:306:C:C2	2.60	0.55
50:S2:635:G:C4	50:S2:636:C:C5	2.95	0.55
50:S2:830:A:N1	50:S2:844:U:C4	2.73	0.55
50:S2:841:G:N2	50:S2:842:C:C5	2.73	0.55
50:S2:862:A:N1	50:S2:863:U:C6	2.74	0.55
50:S2:1388:A:N6	54:SD:161:GLY:HA3	2.14	0.55
50:S2:1518:C:O4'	50:S2:1518:C:O2	2.24	0.55
50:S2:1551:U:H2'	50:S2:1552:G:N9	2.22	0.55
50:S2:1609:C:C2	50:S2:1610:G:N7	2.75	0.55
50:S2:1776:G:N1	50:S2:1777:G:C5	2.74	0.55
53:SC:267:GLN:HE22	72:SV:50:PHE:HE2	1.55	0.55
55:SE:67:GLN:HG2	55:SE:69:PHE:CZ	2.42	0.55
55:SE:87:MET:HE1	55:SE:236:ILE:HD13	1.88	0.55
58:SH:10:LYS:NZ	58:SH:15:LYS:O	2.37	0.55
64:SN:89:TYR:C	64:SN:89:TYR:CD1	2.85	0.55
70:ST:47:PRO:HG2	70:ST:52:TRP:CD1	2.42	0.55
85:S5:48:C:N4	85:S5:59:U:H3	2.06	0.55
86:S6:10:G:N1	86:S6:11:C:C4	2.75	0.55
86:S6:61:C:C3'	86:S6:62:C:C5'	2.84	0.55
1:5:83:C:O2	1:5:83:C:H2'	2.07	0.54
1:5:231:U:H4'	27:Y:100:HIS:NE2	2.22	0.54
1:5:246:G:N2	1:5:247:G:C8	2.74	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:299:C:N3	1:5:300:A:C8	2.75	0.54
1:5:365:U:H2'	1:5:365:U:O2	2.06	0.54
1:5:1089:G:C5'	22:T:140:PHE:CE1	2.89	0.54
1:5:1202:C:N3	1:5:1203:G:C8	2.75	0.54
1:5:1309:C:C4	1:5:1310:C:C5	2.94	0.54
1:5:1577:G:H3'	1:5:1577:G:N3	2.22	0.54
1:5:1629:G:N2	1:5:1631:A:C4	2.75	0.54
1:5:1699:A:N6	1:5:2094:G:O2'	2.40	0.54
1:5:1761:G:C6	1:5:1762:C:C4	2.95	0.54
1:5:1899:G:C6	1:5:1900:C:N4	2.75	0.54
1:5:2081:C:C2	1:5:2082:G:N7	2.75	0.54
1:5:2128:G:C5	1:5:2129:C:C5	2.96	0.54
1:5:2426:U:O2'	1:5:2427:G:H5'	2.07	0.54
1:5:2784:C:N3	1:5:2785:C:C4	2.75	0.54
1:5:2792:C:C2	1:5:2793:G:C8	2.95	0.54
1:5:2852:U:O2	1:5:2852:U:H2'	2.06	0.54
1:5:3738:G:H8	1:5:3738:G:O5'	1.89	0.54
1:5:3816:A:OP1	1:5:3818:U:H5	1.89	0.54
1:5:3910:C:H2'	1:5:3911:C:H6	1.70	0.54
1:5:3935:C:C2	1:5:3936:A:C8	2.94	0.54
1:5:3951:G:O2'	1:5:3952:A:H8	1.90	0.54
1:5:4071:U:H2'	1:5:4071:U:O2	2.07	0.54
1:5:4098:A:C6	1:5:4099:G:N7	2.74	0.54
1:5:4104:G:O2'	1:5:4105:A:H8	1.89	0.54
1:5:4271:A:C3'	1:5:4272:G:H21	2.19	0.54
1:5:4403:U:H2'	1:5:4404:U:O4'	2.07	0.54
1:5:4495:G:N2	1:5:4506:C:C2	2.75	0.54
1:5:4550:G:N1	1:5:4551:U:C6	2.75	0.54
1:5:4896:G:C4	1:5:4897:G:C8	2.95	0.54
1:5:4956:A:C6	1:5:4957:C:C6	2.95	0.54
1:5:4997:G:C2	1:5:4998:G:N9	2.75	0.54
1:5:5050:C:O2'	5:B:321:VAL:HA	2.07	0.54
2:7:51:G:N1	2:7:52:C:C4	2.75	0.54
3:8:43:A:N3	3:8:44:A:C8	2.73	0.54
3:8:95:A:N3	3:8:96:C:C6	2.75	0.54
3:8:125:C:O4'	3:8:125:C:O2	2.21	0.54
6:C:35:ASP:OD1	6:C:36:ILE:N	2.41	0.54
7:D:107:ARG:HD3	7:D:248:ARG:CG	2.36	0.54
8:E:266:TYR:CD2	15:M:107:PHE:CD1	2.95	0.54
18:P:82:ARG:HA	18:P:83:TRP:HE3	1.72	0.54
24:V:70:PRO:HG3	50:S2:1724:A:OP1	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:10:VAL:HG12	45:r:10:VAL:O	2.07	0.54
46:z:208:SER:O	46:z:209:THR:C	2.49	0.54
50:S2:122:G:C6	50:S2:123:G:C5	2.95	0.54
50:S2:381:C:O2'	50:S2:382:C:C5'	2.55	0.54
50:S2:794:A:N3	50:S2:795:A:C8	2.75	0.54
50:S2:1142:G:N2	50:S2:1144:A:H3'	2.22	0.54
50:S2:1224:G:C6	50:S2:1225:U:C2	2.95	0.54
50:S2:1287:A:C6	50:S2:1314:U:N3	2.75	0.54
50:S2:1358:U:O2	50:S2:1358:U:H2'	2.07	0.54
50:S2:1410:C:N4	50:S2:1411:G:C6	2.75	0.54
54:SD:115:VAL:CG2	54:SD:142:LEU:HD11	2.37	0.54
58:SH:105:THR:OG1	58:SH:108:SER:N	2.36	0.54
1:5:32:G:N1	1:5:48:G:O2'	2.40	0.54
1:5:44:A:C6	1:5:45:U:C5	2.95	0.54
1:5:447:C:N3	1:5:448:G:C8	2.74	0.54
1:5:909:A:N1	1:5:910:G:C5	2.75	0.54
1:5:1558:A:H2'	1:5:1559:G:C8	2.42	0.54
1:5:1725:U:O2	1:5:1725:U:H2'	2.07	0.54
1:5:1871:A:N1	1:5:1872:G:C5	2.76	0.54
1:5:1906:U:H2'	1:5:1907:A:H5'	1.89	0.54
1:5:1965:G:H2'	1:5:1966:C:H6	1.72	0.54
1:5:2021:G:C6	1:5:2022:C:C5	2.94	0.54
1:5:2100:A:C8	1:5:2101:C:C5	2.95	0.54
1:5:2126:G:C1'	1:5:2127:C:C5	2.90	0.54
1:5:2450:G:C5	1:5:2451:A:C8	2.95	0.54
1:5:2543:A:C2	1:5:2773:G:N1	2.74	0.54
1:5:2567:G:C2	1:5:2568:C:C5	2.95	0.54
1:5:2567:G:C5	1:5:2568:C:C5	2.95	0.54
1:5:2594:C:C2	1:5:2595:C:C6	2.95	0.54
1:5:3738:G:N7	1:5:3739:C:C6	2.75	0.54
1:5:3753:G:C5	1:5:3776:G:C6	2.95	0.54
1:5:3879:G:O6	1:5:3882:C:C4	2.60	0.54
1:5:3967:G:N3	46:z:162:VAL:CG1	2.69	0.54
1:5:4061:G:N2	1:5:4062:A:N9	2.55	0.54
1:5:4097:G:N2	1:5:4098:A:C4	2.75	0.54
1:5:4098:A:N1	1:5:4099:G:C6	2.75	0.54
1:5:4133:C:C2	1:5:4134:C:C5	2.96	0.54
1:5:4140:C:C5	1:5:4141:G:C8	2.94	0.54
1:5:4745:G:C2'	1:5:4746:C:H6	2.17	0.54
2:7:59:G:N1	2:7:60:G:C4	2.76	0.54
4:A:48:ILE:HG22	44:p:54:ILE:HD12	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:307:TYR:HD2	5:B:366:LYS:HD2	1.71	0.54
7:D:119:TYR:N	7:D:119:TYR:CD1	2.72	0.54
10:G:235:ARG:HG3	10:G:235:ARG:HH11	1.73	0.54
10:G:264:LYS:HE3	52:SB:91:VAL:CG1	2.33	0.54
12:I:66:GLU:OE1	12:I:69:ARG:NH1	2.40	0.54
19:Q:159:PRO:HA	19:Q:188:ASN:HD22	1.71	0.54
39:k:11:PHE:HZ	39:k:56:LEU:HD11	1.71	0.54
50:S2:107:A:H2'	50:S2:108:G:H8	1.66	0.54
50:S2:328:U:H2'	50:S2:329:G:C8	2.42	0.54
50:S2:491:C:C1'	50:S2:574:A:N6	2.70	0.54
50:S2:583:C:C4	50:S2:584:G:N7	2.76	0.54
50:S2:798:A:OP1	50:S2:798:A:O3'	2.24	0.54
50:S2:1205:C:O2	50:S2:1693:G:C6	2.60	0.54
50:S2:1210:G:C8	50:S2:1210:G:C3'	2.89	0.54
50:S2:1231:C:H3'	50:S2:1232:U:H6	1.73	0.54
50:S2:1231:C:H2'	50:S2:1232:U:O4'	2.07	0.54
50:S2:1283:C:C1'	63:SM:91:LEU:HD13	2.37	0.54
50:S2:1496:U:H2'	50:S2:1496:U:O2	2.07	0.54
51:SA:116:PHE:C	51:SA:117:ARG:HG3	2.32	0.54
61:SK:52:LEU:HD11	61:SK:79:LEU:HD21	1.88	0.54
68:SR:17:ILE:HD11	68:SR:57:LEU:CB	2.04	0.54
80:Sd:39:CYS:HG	80:Sd:42:CYS:HG	1.54	0.54
83:Sg:130:LYS:HG2	83:Sg:141:THR:HG23	1.88	0.54
85:S5:6:G:H1'	85:S5:7:A:N9	2.23	0.54
85:S5:15:G:N2	85:S5:59:U:H3	2.05	0.54
86:S6:65:G:C4	86:S6:66:U:C5	2.95	0.54
1:5:100:C:C6	1:5:101:A:H8	2.19	0.54
1:5:112:C:C2	1:5:113:A:C8	2.96	0.54
1:5:460:C:H2'	1:5:461:G:C8	2.42	0.54
1:5:736:C:C2'	1:5:737:C:O4'	2.53	0.54
1:5:908:G:C2	1:5:909:A:C8	2.96	0.54
1:5:1268:G:H4'	1:5:1269:G:OP1	2.06	0.54
1:5:1289:C:N3	1:5:1290:G:N7	2.56	0.54
1:5:1583:A:N7	1:5:1584:G:C8	2.74	0.54
1:5:1583:A:N1	1:5:1584:G:H1'	2.23	0.54
1:5:1723:A:N1	1:5:1838:A:N1	2.55	0.54
1:5:1763:C:N4	1:5:1764:G:C4	2.76	0.54
1:5:1857:C:C2	1:5:1858:A:N7	2.75	0.54
1:5:1970:A:C2	1:5:2016:C:C5	2.95	0.54
1:5:1994:C:O2	1:5:1995:G:C8	2.60	0.54
1:5:2080:U:N3	1:5:2081:C:N4	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2559:G:C6	1:5:2560:C:C4	2.96	0.54
1:5:2576:G:C2	1:5:2577:C:N1	2.75	0.54
1:5:3656:A:C2	1:5:3657:U:C6	2.95	0.54
1:5:3657:U:O2	1:5:3657:U:H2'	2.08	0.54
1:5:3687:A:C6	1:5:3688:U:C5	2.95	0.54
1:5:3804:G:H1'	1:5:3832:U:O2'	2.07	0.54
1:5:3971:G:H5'	46:z:31:THR:CG2	2.36	0.54
1:5:4085:A:H3'	1:5:4086:G:C5'	2.38	0.54
1:5:4097:G:C2	1:5:4098:A:C5	2.95	0.54
1:5:4239:A:C6	1:5:4240:G:C5	2.95	0.54
1:5:4531:U:N3	85:S5:76:A:N1	2.48	0.54
1:5:4651:A:C2	1:5:4652:G:H1'	2.43	0.54
1:5:4707:A:O2'	1:5:4708:A:O5'	2.26	0.54
1:5:4771:C:C5	1:5:4772:C:C6	2.96	0.54
1:5:4984:C:C4	1:5:4985:U:C5	2.95	0.54
1:5:5028:G:C6	1:5:5029:C:N4	2.76	0.54
1:5:5043:A:O2'	1:5:5044:A:H5'	2.07	0.54
3:8:12:G:N2	3:8:13:G:C4	2.75	0.54
3:8:78:G:H2'	3:8:79:G:O4'	2.07	0.54
3:8:139:G:C5	3:8:140:C:C5	2.95	0.54
4:A:29:LEU:HD13	4:A:163:ARG:HH12	1.73	0.54
7:D:109:LEU:HD21	7:D:142:PHE:CZ	2.43	0.54
7:D:123:VAL:HG22	7:D:248:ARG:NH2	2.22	0.54
12:I:73:ASN:O	12:I:76:MET:O	2.25	0.54
18:P:30:ARG:HH22	18:P:62:ARG:NH2	2.06	0.54
29:a:79:TRP:CE3	29:a:87:ARG:HG3	2.43	0.54
47:1:449:LEU:C	47:1:452:THR:HB	2.30	0.54
50:S2:23:G:H2'	50:S2:24:C:O4'	2.07	0.54
50:S2:85:A:N3	50:S2:86:C:C6	2.75	0.54
50:S2:164:A:C2	50:S2:165:G:C4	2.95	0.54
50:S2:165:G:H5''	57:SG:110:ASN:HB2	1.88	0.54
50:S2:956:G:C2	50:S2:957:A:N7	2.75	0.54
50:S2:961:G:N1	50:S2:962:A:C5	2.76	0.54
50:S2:1039:C:C4	50:S2:1040:G:N7	2.76	0.54
50:S2:1112:U:C4	50:S2:1113:A:C4	2.96	0.54
50:S2:1134:G:C5	50:S2:1135:C:C5	2.95	0.54
50:S2:1250:A:N3	50:S2:1339:U:H4'	2.21	0.54
50:S2:1302:G:C5	82:Sf:140:TYR:CE2	2.94	0.54
50:S2:1311:C:N3	50:S2:1314:U:H5	2.06	0.54
50:S2:1588:A:H4'	70:ST:92:PHE:HE2	1.71	0.54
50:S2:1643:U:C4	50:S2:1644:C:N4	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:97:LEU:CD2	52:SB:232:HIS:ND1	2.69	0.54
52:SB:120:VAL:HG13	52:SB:142:PHE:HE1	1.72	0.54
52:SB:217:MET:HE3	52:SB:220:LYS:HG2	1.89	0.54
60:SJ:20:PHE:N	60:SJ:20:PHE:HD1	2.05	0.54
63:SM:21:VAL:HG22	63:SM:121:LYS:HG3	1.89	0.54
68:SR:34:VAL:HA	83:Sg:150:TRP:CZ2	2.41	0.54
86:S6:50:U:C2	86:S6:51:U:C6	2.95	0.54
1:5:210:C:H6	1:5:210:C:O5'	1.91	0.54
1:5:409:G:N2	1:5:2329:U:H4'	2.22	0.54
1:5:448:G:C2	1:5:449:C:H1'	2.43	0.54
1:5:470:A:C4	1:5:471:A:C8	2.95	0.54
1:5:514:U:C6	1:5:514:U:H3'	2.42	0.54
1:5:908:G:N2	1:5:909:A:H1'	2.23	0.54
1:5:1075:G:C4	1:5:1076:C:C5	2.95	0.54
1:5:1352:C:O2'	1:5:1356:U:OP1	2.25	0.54
1:5:1358:G:OP2	6:C:114:ARG:NH2	2.40	0.54
1:5:1758:G:C2	1:5:1759:G:C4	2.96	0.54
1:5:1759:G:C2	1:5:1760:G:N9	2.75	0.54
1:5:1759:G:N1	1:5:1760:G:C8	2.74	0.54
1:5:1846:G:C6	1:5:1847:C:N4	2.74	0.54
1:5:1855:G:C6	1:5:1856:C:C4	2.96	0.54
1:5:1856:C:O2	1:5:1892:A:H2	1.89	0.54
1:5:2106:G:HO2'	1:5:2107:C:C1'	2.18	0.54
1:5:2712:G:N3	1:5:2713:C:C6	2.76	0.54
1:5:2743:A:H1'	4:A:21:LYS:HE3	1.90	0.54
1:5:3595:U:OP1	1:5:3596:A:C8	2.60	0.54
1:5:3605:C:N3	1:5:3606:U:C5	2.75	0.54
1:5:3767:C:O2'	50:S2:1828:C:H5'	2.06	0.54
1:5:3921:U:OP2	1:5:4183:G:O2'	2.20	0.54
1:5:4065:G:C6	1:5:4066:U:C4	2.95	0.54
1:5:4101:C:C4	1:5:4102:C:C5	2.96	0.54
1:5:4211:C:O5'	1:5:4211:C:H6	1.90	0.54
1:5:4579:U:N3	1:5:4580:U:C4	2.75	0.54
1:5:4735:G:C6	1:5:4736:C:C4	2.95	0.54
1:5:4750:G:H2'	1:5:4751:G:O5'	2.07	0.54
1:5:4881:U:O2	1:5:4881:U:H2'	2.05	0.54
1:5:4942:C:O2	1:5:4942:C:O4'	2.23	0.54
1:5:5039:U:C5'	1:5:5040:U:H2'	2.37	0.54
2:7:28:C:C5	2:7:29:C:C5	2.95	0.54
5:B:168:MET:HE3	5:B:171:LEU:HD12	1.89	0.54
12:I:100:ASN:O	12:I:102:MET:N	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:175:GLU:OE1	20:R:176:ARG:HA	2.07	0.54
21:S:83:ARG:HH21	21:S:83:ARG:HG3	1.72	0.54
42:n:21:ARG:NH2	50:S2:1175:G:P	2.74	0.54
44:p:92:GLN:HG3	52:SB:219:LYS:HZ2	1.53	0.54
46:z:113:SER:HB3	46:z:116:LEU:HD13	1.89	0.54
50:S2:378:U:O2	50:S2:379:C:C6	2.60	0.54
50:S2:579:C:C5	50:S2:580:U:C5	2.95	0.54
50:S2:823:U:C5	75:SY:64:PHE:HE2	2.26	0.54
50:S2:828:G:C2	50:S2:829:C:N1	2.76	0.54
50:S2:847:A:N1	50:S2:848:U:H1'	2.22	0.54
50:S2:1121:G:C5	50:S2:1122:A:C8	2.95	0.54
50:S2:1133:A:N3	50:S2:1134:G:C8	2.73	0.54
50:S2:1193:U:C4	74:SX:110:HIS:CE1	2.95	0.54
50:S2:1262:C:O2'	80:Sd:12:ARG:NH1	2.40	0.54
50:S2:1593:C:O2'	70:ST:12:GLN:CD	2.49	0.54
50:S2:1602:U:H2'	50:S2:1603:G:H3'	1.90	0.54
50:S2:1695:A:H4'	50:S2:1696:C:OP2	2.07	0.54
51:SA:198:MET:HE2	68:SR:85:VAL:HG11	1.88	0.54
66:SP:19:GLY:CA	69:SS:92:ASP:HA	2.37	0.54
67:SQ:146:ARG:NH1	86:S6:34:G:O2'	2.40	0.54
69:SS:23:ARG:CZ	69:SS:23:ARG:HB2	2.38	0.54
69:SS:111:LEU:HD22	69:SS:125:HIS:CD2	2.42	0.54
73:SW:8:ALA:HA	73:SW:74:VAL:HG11	1.89	0.54
73:SW:11:LEU:HD11	73:SW:37:PHE:HE2	1.71	0.54
74:SX:67:ARG:NH2	74:SX:114:ASP:OD2	2.38	0.54
84:S4:21:U:H2'	84:S4:21:U:O2	2.07	0.54
1:5:194:C:N4	1:5:195:C:C5	2.75	0.54
1:5:288:G:C6	1:5:289:C:N4	2.76	0.54
1:5:504:G:C2	1:5:505:G:C6	2.95	0.54
1:5:668:C:C2	1:5:669:C:C6	2.96	0.54
1:5:917:A:C2	1:5:918:G:N1	2.76	0.54
1:5:1273:G:H21	1:5:2123:C:P	2.30	0.54
1:5:1277:G:N1	1:5:1278:C:C5	2.75	0.54
1:5:1323:A:N3	1:5:1324:A:C8	2.75	0.54
1:5:1398:A:O2'	1:5:1399:G:OP2	2.13	0.54
1:5:1555:G:C5	1:5:1556:C:C6	2.95	0.54
1:5:1569:U:C2	1:5:1570:G:C8	2.96	0.54
1:5:1572:U:H3'	1:5:1573:G:H8	1.73	0.54
1:5:1753:G:N3	1:5:1755:C:H5''	2.22	0.54
1:5:1778:C:C2	1:5:1779:U:H5	2.25	0.54
1:5:1786:A:H2'	1:5:1789:C:C5	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1912:G:N2	17:O:87:MET:SD	2.81	0.54
1:5:2021:G:C6	1:5:2022:C:C4	2.96	0.54
1:5:2258:C:O2	1:5:2258:C:C2'	2.55	0.54
1:5:2282:A:C2'	1:5:2283:G:C5'	2.86	0.54
1:5:2605:G:N1	1:5:2606:G:C5	2.75	0.54
1:5:2769:U:O2'	1:5:2770:C:C5'	2.56	0.54
1:5:3741:C:C4	1:5:3742:G:N7	2.75	0.54
1:5:3753:G:N1	1:5:3754:G:C5	2.75	0.54
1:5:3877:A:N1	1:5:4444:C:H1'	2.22	0.54
1:5:4053:A:O2'	46:z:213:PRO:HG3	2.08	0.54
1:5:4172:A:N3	1:5:4173:G:C8	2.75	0.54
1:5:4183:G:H2'	1:5:4183:G:N3	2.23	0.54
1:5:4277:G:C2	1:5:4278:C:C5	2.96	0.54
1:5:4550:G:N2	1:5:4551:U:H1'	2.22	0.54
1:5:4618:G:C2	1:5:4619:U:C6	2.96	0.54
1:5:4652:G:C2	1:5:4653:C:C6	2.95	0.54
1:5:5035:U:O2	1:5:5035:U:H2'	2.08	0.54
2:7:69:U:O4	2:7:106:G:O6	2.26	0.54
10:G:137:ARG:O	10:G:202:VAL:HA	2.07	0.54
12:I:159:PHE:HB3	12:I:163:GLN:HE22	1.71	0.54
15:M:6:PHE:O	15:M:8:GLU:N	2.41	0.54
20:R:88:ARG:HH11	20:R:88:ARG:HG2	1.72	0.54
25:W:31:PHE:CD2	25:W:37:GLU:HA	2.43	0.54
35:g:5:LEU:HD21	35:g:22:LEU:HD12	1.87	0.54
46:z:29:LEU:HD21	46:z:173:LYS:HB2	1.90	0.54
47:1:343:HIS:CD2	47:1:360:HIS:CE1	2.95	0.54
50:S2:18:C:H4'	50:S2:1194:A:N6	2.23	0.54
50:S2:70:G:C5	50:S2:71:G:N7	2.75	0.54
50:S2:155:G:N2	50:S2:156:G:H1'	2.22	0.54
50:S2:200:G:C6	50:S2:201:C:C4	2.95	0.54
50:S2:325:C:O2	50:S2:326:C:C5	2.61	0.54
50:S2:351:G:C2	50:S2:352:U:C6	2.94	0.54
50:S2:384:U:C4	50:S2:386:C:H6	2.24	0.54
50:S2:395:G:N2	59:SI:14:THR:O	2.40	0.54
50:S2:409:C:O2	50:S2:409:C:H2'	2.06	0.54
50:S2:414:A:C2'	50:S2:415:A:O5'	2.56	0.54
50:S2:545:A:C2	50:S2:546:G:C5	2.95	0.54
50:S2:583:C:C4	50:S2:584:G:C8	2.95	0.54
50:S2:999:G:N2	50:S2:1000:C:H1'	2.22	0.54
50:S2:1041:G:C6	50:S2:1042:A:N7	2.76	0.54
50:S2:1233:G:C5	50:S2:1234:C:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1286:G:C2	50:S2:1312:G:N1	2.76	0.54
50:S2:1482:C:O2'	50:S2:1483:A:H5'	2.07	0.54
50:S2:1595:U:C2	50:S2:1596:U:H6	2.26	0.54
50:S2:1605:G:H2'	50:S2:1606:G:C1'	2.34	0.54
50:S2:1701:C:P	86:S6:34:G:O6	2.65	0.54
50:S2:1701:C:O5'	86:S6:34:G:O6	2.24	0.54
50:S2:1721:U:H5'	50:S2:1721:U:C6	2.43	0.54
50:S2:1792:G:C2	50:S2:1793:A:N9	2.75	0.54
51:SA:203:PHE:N	51:SA:203:PHE:CD1	2.73	0.54
55:SE:45:ILE:O	55:SE:49:ARG:HG3	2.08	0.54
55:SE:47:PHE:HE1	55:SE:101:LEU:HD21	1.73	0.54
70:ST:52:TRP:CE3	70:ST:53:PHE:N	2.76	0.54
72:SV:2:GLN:HB3	72:SV:6:GLY:HA2	1.89	0.54
75:SY:57:VAL:HG11	75:SY:60:PHE:CZ	2.43	0.54
85:S5:7:A:H4'	85:S5:8:U:OP2	2.06	0.54
86:S6:53:G:H1	86:S6:61:C:N4	2.05	0.54
1:5:82:U:C4	1:5:83:C:C5	2.96	0.54
1:5:127:G:C6	1:5:128:C:C4	2.95	0.54
1:5:211:G:C2	1:5:212:A:C5	2.95	0.54
1:5:290:U:C2'	1:5:291:U:O5'	2.55	0.54
1:5:425:U:O4	1:5:426:A:N6	2.41	0.54
1:5:471:A:N6	1:5:472:C:C4	2.75	0.54
1:5:686:A:C3'	1:5:687:U:H5'	2.38	0.54
1:5:933:G:C5	1:5:940:C:C4	2.96	0.54
1:5:1210:C:H2'	1:5:1210:C:O2	2.06	0.54
1:5:1267:C:O5'	1:5:1267:C:H6	1.90	0.54
1:5:1390:G:H3'	1:5:1390:G:C8	2.42	0.54
1:5:1590:C:H5''	1:5:1591:U:O5'	2.07	0.54
1:5:1816:C:H2'	1:5:1817:U:H5'	1.88	0.54
1:5:1828:C:N3	1:5:1829:G:N7	2.55	0.54
1:5:1999:A:C2'	1:5:2000:G:O4'	2.56	0.54
1:5:2014:C:C4	1:5:2015:U:C5	2.95	0.54
1:5:2291:G:C2	1:5:2292:C:C5	2.96	0.54
1:5:2576:G:C6	1:5:2577:C:C4	2.95	0.54
1:5:2632:U:O2	1:5:2633:U:C5	2.61	0.54
1:5:2656:U:H3'	1:5:2657:G:H8	1.72	0.54
1:5:3586:G:C6	1:5:3587:C:C4	2.96	0.54
1:5:4059:C:C2	1:5:4060:U:C6	2.95	0.54
1:5:4142:C:C4	1:5:4143:G:N1	2.76	0.54
1:5:4183:G:C4	1:5:4183:G:H5''	2.42	0.54
1:5:4886:C:C2	1:5:4887:C:H5	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4916:G:C6	1:5:4917:C:C4	2.96	0.54
1:5:5019:A:C2	1:5:5020:G:C8	2.95	0.54
2:7:27:G:H1'	2:7:56:G:H1	1.73	0.54
3:8:132:G:N2	3:8:133:G:C4	2.75	0.54
6:C:178:ASN:ND2	6:C:178:ASN:N	2.55	0.54
14:L:65:ARG:HB2	29:a:69:PHE:CD2	2.42	0.54
47:1:128:SER:O	47:1:132:VAL:HG13	2.07	0.54
50:S2:312:G:O2'	50:S2:313:A:OP2	2.26	0.54
50:S2:447:A:N7	50:S2:449:A:C8	2.76	0.54
50:S2:511:U:C2	50:S2:512:A:C8	2.95	0.54
50:S2:601:G:N1	50:S2:622:C:C2	2.75	0.54
50:S2:620:G:C2	50:S2:620:G:P	3.01	0.54
50:S2:851:C:C2'	50:S2:852:G:N2	2.70	0.54
50:S2:1222:G:C2'	50:S2:1223:A:O4'	2.54	0.54
50:S2:1232:U:O2	50:S2:1233:G:H8	1.86	0.54
50:S2:1754:G:H2'	50:S2:1755:C:O4'	2.08	0.54
52:SB:36:PRO:HB3	52:SB:231:LEU:CG	2.37	0.54
56:SF:20:PHE:HB3	56:SF:23:TRP:HB2	1.89	0.54
71:SU:48:LEU:CD2	71:SU:97:ILE:HD13	2.38	0.54
80:Sd:41:GLN:OE1	80:Sd:41:GLN:N	2.39	0.54
85:S5:50:U:O2	85:S5:50:U:H2'	2.07	0.54
86:S6:53:G:C5	86:S6:62:C:N4	2.76	0.54
1:5:124:C:O2	1:5:124:C:H2'	2.07	0.54
1:5:286:U:C2	1:5:287:U:C6	2.95	0.54
1:5:488:G:N1	1:5:489:C:C5	2.76	0.54
1:5:994:G:C2	1:5:1050:C:C2	2.95	0.54
1:5:1071:C:O2	1:5:1071:C:C2'	2.52	0.54
1:5:1666:C:H2'	1:5:1667:G:O4'	2.08	0.54
1:5:1695:U:O2'	1:5:1696:C:H5'	2.06	0.54
1:5:1699:A:H4'	1:5:1718:C:P	2.48	0.54
1:5:1813:U:H2'	1:5:1814:C:C6	2.42	0.54
1:5:1870:C:N3	1:5:1871:A:C8	2.75	0.54
1:5:1871:A:C6	1:5:1872:G:N7	2.76	0.54
1:5:1899:G:H1'	1:5:2278:G:H22	1.73	0.54
1:5:2341:A:N1	1:5:2342:G:C5	2.75	0.54
1:5:2632:U:C5	23:U:85:TYR:CD1	2.96	0.54
1:5:2702:C:O2	1:5:2715:G:C2	2.61	0.54
1:5:3657:U:C4	1:5:3658:C:C5	2.96	0.54
1:5:3668:C:C4	1:5:3669:G:N7	2.75	0.54
1:5:3756:A:H2'	1:5:3757:G:O4'	2.07	0.54
1:5:3870:C:C2	1:5:3886:G:N2	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3875:G:O6	1:5:3877:A:H4'	2.08	0.54
1:5:3945:A:H2'	1:5:3946:G:H8	1.71	0.54
1:5:3961:G:O6	1:5:3963:A:H5''	2.08	0.54
1:5:4090:G:C6	1:5:4091:G:C5	2.95	0.54
1:5:4146:G:H2'	1:5:4147:G:H8	1.72	0.54
1:5:4154:G:N2	1:5:4155:C:C2	2.76	0.54
1:5:4173:G:C6	1:5:4174:U:C4	2.96	0.54
1:5:4269:G:H2'	1:5:4270:C:O4'	2.07	0.54
1:5:4499:G:C5'	1:5:4500:U:OP2	2.45	0.54
1:5:4543:G:O2'	1:5:4544:A:O5'	2.26	0.54
3:8:83:C:H4'	3:8:85:U:N3	2.23	0.54
4:A:177:LYS:HD2	44:p:29:ILE:HG21	1.90	0.54
7:D:52:ILE:HG23	7:D:54:ARG:NH2	2.23	0.54
9:F:161:TYR:CD2	9:F:168:ARG:CZ	2.91	0.54
26:X:84:GLU:HG2	47:1:404:HIS:HA	1.88	0.54
45:r:17:LEU:HD12	45:r:36:ASN:HD21	1.72	0.54
50:S2:69:C:H2'	50:S2:70:G:O4'	2.08	0.54
50:S2:81:U:N3	50:S2:82:G:C8	2.76	0.54
50:S2:98:C:O2	50:S2:409:C:C6	2.60	0.54
50:S2:386:C:O2	50:S2:386:C:H2'	2.08	0.54
50:S2:656:G:H21	50:S2:663:C:C5'	2.21	0.54
50:S2:882:U:C2	50:S2:883:U:C6	2.96	0.54
50:S2:1134:G:C4	50:S2:1135:C:C6	2.96	0.54
50:S2:1210:G:N2	50:S2:1690:U:C6	2.76	0.54
50:S2:1213:C:O2'	50:S2:1214:A:H5'	2.08	0.54
50:S2:1330:G:C6	50:S2:1492:U:H2'	2.40	0.54
50:S2:1352:G:O2'	50:S2:1353:A:H5''	2.07	0.54
50:S2:1411:G:N7	50:S2:1412:C:H1'	2.23	0.54
50:S2:1640:A:O4'	86:S6:41:C:C1'	2.39	0.54
50:S2:1660:C:O4'	50:S2:1660:C:O2	2.23	0.54
51:SA:39:TYR:C	51:SA:39:TYR:HD1	2.16	0.54
52:SB:81:PHE:HB3	52:SB:109:LYS:HB2	1.89	0.54
56:SF:137:GLN:HE21	56:SF:137:GLN:HA	1.73	0.54
60:SJ:67:ASP:OD1	60:SJ:67:ASP:C	2.50	0.54
61:SK:57:TYR:HB3	61:SK:75:GLY:HA2	1.90	0.54
85:S5:52:G:N1	85:S5:63:G:C6	2.76	0.54
1:5:211:G:N1	1:5:212:A:C5	2.76	0.54
1:5:473:C:C2	1:5:474:C:C6	2.95	0.54
1:5:728:U:C2'	1:5:729:G:OP1	2.56	0.54
1:5:919:C:H2'	1:5:920:C:C5'	2.38	0.54
1:5:1066:G:N1	1:5:1067:G:C5	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1214:C:N3	1:5:2116:C:C4	2.75	0.54
1:5:1234:G:C2	1:5:1235:G:C4	2.96	0.54
1:5:1297:U:O2	1:5:1298:C:C6	2.61	0.54
1:5:1377:G:C8	1:5:1377:G:H3'	2.43	0.54
1:5:1479:G:C6	1:5:1487:G:N2	2.76	0.54
1:5:1482:G:N2	1:5:1484:G:H22	2.06	0.54
1:5:1682:A:C5	1:5:1683:U:C5	2.95	0.54
1:5:1719:A:O2'	1:5:1720:C:C6	2.58	0.54
1:5:1724:G:H21	9:F:105:PRO:CG	2.21	0.54
1:5:1789:C:C2'	1:5:1790:U:O5'	2.55	0.54
1:5:2113:G:C8	1:5:2115:G:N3	2.76	0.54
1:5:2328:G:C2	1:5:2329:U:C2	2.96	0.54
1:5:2526:C:C5	47:1:405:ARG:CZ	2.90	0.54
1:5:2605:G:N2	1:5:2606:G:C4	2.76	0.54
1:5:2852:U:N3	1:5:2854:G:OP2	2.37	0.54
1:5:3656:A:C2	1:5:3657:U:C5	2.96	0.54
1:5:3790:U:H3	1:5:3792:G:C1'	2.20	0.54
1:5:4060:U:O2	1:5:4061:G:C8	2.60	0.54
1:5:4345:C:O2	1:5:4346:U:C6	2.60	0.54
1:5:4404:U:C4	1:5:4436:U:C4	2.96	0.54
1:5:4424:A:H5'	41:m:122:ARG:HE	1.73	0.54
1:5:4592:C:H2'	1:5:4593:C:H6	1.72	0.54
1:5:4880:C:O2'	1:5:4881:U:H5'	2.08	0.54
1:5:4997:G:C6	1:5:4998:G:C5	2.96	0.54
4:A:180:LEU:HG	44:p:18:TYR:CE1	2.43	0.54
5:B:222:VAL:HG11	5:B:274:TYR:CE2	2.43	0.54
9:F:63:TYR:HD2	9:F:149:LEU:HD21	1.73	0.54
9:F:228:HIS:O	9:F:229:PHE:C	2.51	0.54
10:G:102:TYR:OH	10:G:207:VAL:CA	2.56	0.54
11:H:59:LYS:O	11:H:60:TRP:CB	2.55	0.54
13:J:107:PHE:CE1	13:J:130:PHE:HB3	2.42	0.54
16:N:88:GLY:CA	43:o:48:TYR:HD2	2.21	0.54
24:V:30:ASP:OD1	24:V:104:VAL:HG12	2.08	0.54
27:Y:18:HIS:HB3	27:Y:19:PHE:CE1	2.43	0.54
40:l:21:ARG:NH2	40:l:24:PRO:CA	2.71	0.54
50:S2:104:A:C6	50:S2:105:U:C6	2.96	0.54
50:S2:118:C:H1'	50:S2:445:A:C6	2.43	0.54
50:S2:311:C:C2	50:S2:312:G:H1'	2.43	0.54
50:S2:460:A:C6	50:S2:461:U:H5	2.24	0.54
50:S2:553:U:N3	50:S2:554:A:N7	2.56	0.54
50:S2:574:A:O2'	50:S2:575:A:C8	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:584:G:C6	50:S2:585:C:C4	2.96	0.54
50:S2:810:A:H5'	50:S2:811:A:OP2	2.08	0.54
50:S2:979:C:O2	50:S2:979:C:H2'	2.08	0.54
50:S2:992:A:N6	50:S2:993:G:N7	2.56	0.54
50:S2:1074:C:H2'	50:S2:1075:C:C6	2.42	0.54
50:S2:1204:A:N1	50:S2:1205:C:C2	2.67	0.54
50:S2:1207:G:C5	50:S2:1837:G:C6	2.96	0.54
50:S2:1256:G:H2'	50:S2:1256:G:N3	2.22	0.54
50:S2:1407:U:O2	50:S2:1408:U:C5	2.60	0.54
50:S2:1408:U:H2'	50:S2:1409:A:O4'	2.08	0.54
50:S2:1508:A:C6	50:S2:1510:G:N9	2.76	0.54
50:S2:1537:A:N6	50:S2:1538:C:C4	2.76	0.54
50:S2:1568:C:OP1	70:ST:96:SER:OG	2.18	0.54
50:S2:1578:U:H2'	54:SD:4:GLN:HG2	1.90	0.54
50:S2:1588:A:C2	50:S2:1589:A:C6	2.96	0.54
50:S2:1756:C:C2	50:S2:1777:G:C2	2.96	0.54
58:SH:135:PHE:HD1	58:SH:136:PRO:N	2.05	0.54
74:SX:134:TYR:O	81:Se:13:ARG:NH1	2.41	0.54
86:S6:29:G:C2	86:S6:42:C:C2	2.95	0.54
1:5:206:U:O2	1:5:208:A:H8	1.91	0.54
1:5:209:U:N3	1:5:233:U:C5	2.76	0.54
1:5:1337:A:C5'	6:C:102:PHE:HD2	2.21	0.54
1:5:1359:G:C2'	1:5:1360:G:O4'	2.55	0.54
1:5:1394:G:O2'	1:5:1395:U:H5'	2.08	0.54
1:5:1458:C:O2	1:5:1458:C:C2'	2.54	0.54
1:5:1591:U:N3	1:5:4555:U:OP1	2.40	0.54
1:5:1751:A:C2'	1:5:1752:G:H5'	2.38	0.54
1:5:1802:A:H5'	22:T:105:PHE:CD2	2.43	0.54
1:5:1936:C:N3	1:5:1937:C:C6	2.76	0.54
1:5:2090:U:N3	6:C:307:LYS:CE	2.71	0.54
1:5:2116:C:H4'	1:5:2117:G:O4'	2.08	0.54
1:5:2285:A:OP2	29:a:7:LYS:NZ	2.41	0.54
1:5:2394:G:O2'	1:5:2819:U:O4	2.23	0.54
1:5:2438:A:N1	1:5:2441:C:C5	2.75	0.54
1:5:2593:C:C2	1:5:2594:C:C6	2.95	0.54
1:5:2677:G:C6	1:5:2678:A:C8	2.96	0.54
1:5:3690:U:C2	1:5:3691:G:C8	2.96	0.54
1:5:3694:U:C4	1:5:3695:U:C4	2.95	0.54
1:5:3910:C:H2'	1:5:3911:C:C6	2.43	0.54
1:5:4041:C:C4	1:5:4042:G:N7	2.75	0.54
1:5:4054:C:C4'	46:z:205:TYR:CD1	2.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4061:G:C2	1:5:4062:A:N9	2.76	0.54
1:5:4202:U:O2	1:5:4204:C:C4	2.61	0.54
1:5:4205:A:O4'	1:5:4375:C:H2'	2.08	0.54
1:5:4297:G:C6	1:5:4298:A:N7	2.76	0.54
1:5:4363:A:C2	1:5:4364:G:C8	2.95	0.54
1:5:4467:A:C6	1:5:4468:U:C5	2.96	0.54
1:5:4560:C:O2	1:5:4560:C:C2'	2.55	0.54
1:5:4579:U:C4	1:5:4580:U:C5	2.96	0.54
1:5:4763:U:C6	11:H:42:ASN:ND2	2.76	0.54
1:5:4767:C:H4'	1:5:4874:A:C2	2.42	0.54
1:5:4767:C:HO2'	1:5:4874:A:H61	1.45	0.54
1:5:4991:U:H2'	1:5:4992:G:H8	1.73	0.54
3:8:95:A:C2	3:8:96:C:N1	2.75	0.54
7:D:21:ARG:HA	7:D:24:ARG:HE	1.72	0.54
22:T:105:PHE:HE1	22:T:109:VAL:CG2	2.21	0.54
30:b:12:GLN:C	30:b:16:TRP:CZ2	2.86	0.54
47:1:187:ILE:CG2	47:1:450:ALA:HB1	2.38	0.54
50:S2:69:C:N3	50:S2:70:G:C5	2.75	0.54
50:S2:70:G:C4	50:S2:71:G:N7	2.76	0.54
50:S2:618:C:C5	50:S2:619:A:N7	2.76	0.54
50:S2:635:G:C4	50:S2:636:C:C6	2.96	0.54
50:S2:974:C:H4'	65:SO:41:PHE:CE2	2.43	0.54
50:S2:996:A:C2	50:S2:997:A:C2	2.95	0.54
50:S2:1292:C:H2'	82:Sf:150:PHE:HD1	1.73	0.54
50:S2:1302:G:C5	82:Sf:140:TYR:CZ	2.96	0.54
50:S2:1395:C:C5'	50:S2:1395:C:C6	2.91	0.54
50:S2:1448:A:C2	50:S2:1449:G:C1'	2.91	0.54
50:S2:1451:G:H2'	50:S2:1452:A:H2'	1.90	0.54
50:S2:1537:A:C6	50:S2:1538:C:C4	2.96	0.54
50:S2:1576:G:C4	50:S2:1577:G:C8	2.96	0.54
50:S2:1580:A:H2'	50:S2:1580:A:OP1	2.08	0.54
50:S2:1698:C:C3'	50:S2:1699:A:C5'	2.85	0.54
50:S2:1744:G:C2	50:S2:1789:G:C2	2.96	0.54
50:S2:1775:U:O2	50:S2:1776:G:C8	2.59	0.54
50:S2:1839:U:N3	50:S2:1840:U:C4	2.76	0.54
51:SA:55:TRP:O	51:SA:56:GLU:C	2.51	0.54
65:SO:117:ARG:HH22	79:Sc:62:GLU:CG	2.21	0.54
69:SS:82:TRP:O	69:SS:84:LEU:N	2.39	0.54
74:SX:54:LYS:CB	81:Se:6:LEU:HD11	2.38	0.54
77:Sa:92:ARG:NH1	77:Sa:92:ARG:HG3	2.21	0.54
85:S5:5:G:O2'	85:S5:6:G:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:33:U:C3'	85:S5:34:G:C5'	2.85	0.54
85:S5:39:U:H2'	85:S5:39:U:O2	2.08	0.54
85:S5:64:A:H2'	85:S5:65:G:H5'	1.89	0.54
86:S6:20:U:C2'	86:S6:21:A:C5'	2.85	0.54
1:5:27:C:C2	1:5:28:C:C5	2.96	0.54
1:5:180:C:O2	1:5:181:C:C6	2.61	0.54
1:5:190:G:N1	1:5:252:C:C2	2.77	0.54
1:5:208:A:H1'	1:5:232:G:N3	2.23	0.54
1:5:259:C:N3	1:5:260:C:C5	2.76	0.54
1:5:291:U:O2'	1:5:292:G:H2'	2.07	0.54
1:5:713:C:H42	1:5:955:G:H1	1.55	0.54
1:5:751:G:N2	1:5:752:G:C4	2.76	0.54
1:5:1329:G:C2	1:5:3865:A:H1'	2.43	0.54
1:5:1355:G:H2'	1:5:1356:U:O5'	2.07	0.54
1:5:1492:G:C4	1:5:1493:G:C8	2.97	0.54
1:5:1539:G:C1'	4:A:15:VAL:HG13	2.38	0.54
1:5:1557:C:H2'	1:5:1557:C:O2	2.07	0.54
1:5:1566:C:H2'	1:5:1567:U:C1'	2.38	0.54
1:5:1744:U:C4	1:5:1745:G:N7	2.75	0.54
1:5:1750:G:N1	1:5:1751:A:C5	2.76	0.54
1:5:1844:G:C6	1:5:1845:U:C4	2.95	0.54
1:5:1867:A:H2'	1:5:1868:A:C8	2.42	0.54
1:5:2021:G:C5	1:5:2022:C:C5	2.96	0.54
1:5:2054:U:C4'	1:5:2056:G:H1'	2.38	0.54
1:5:2347:A:N7	33:e:31:ILE:HD11	2.23	0.54
1:5:2352:U:C2	1:5:2353:U:C5	2.96	0.54
1:5:2484:A:H2'	1:5:2485:U:O4'	2.08	0.54
1:5:3668:C:N4	1:5:3669:G:C5	2.76	0.54
1:5:3832:U:C2	1:5:3833:C:C6	2.96	0.54
1:5:3974:G:C3'	46:z:210:MET:SD	2.96	0.54
1:5:4085:A:OP1	26:X:45:THR:HG23	2.08	0.54
1:5:4093:G:N7	1:5:4094:G:C8	2.76	0.54
1:5:4117:U:O2	1:5:4117:U:C2'	2.55	0.54
1:5:4146:G:N3	1:5:4147:G:C8	2.76	0.54
1:5:4750:G:C2'	1:5:4751:G:O5'	2.56	0.54
1:5:4948:C:O2'	1:5:4949:G:H5'	2.07	0.54
1:5:4988:U:N3	1:5:5060:A:O3'	2.38	0.54
3:8:64:U:C2	3:8:95:A:N1	2.76	0.54
3:8:99:U:N3	3:8:100:U:C5	2.76	0.54
4:A:97:ASN:O	4:A:100:ASN:HB2	2.08	0.54
17:O:109:PRO:O	17:O:113:ASP:OD1	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:8:LYS:HG3	20:R:22:VAL:HG11	1.90	0.54
21:S:81:TRP:CZ2	21:S:94:TYR:CE1	2.96	0.54
23:U:97:ARG:O	23:U:98:ASP:HB2	2.08	0.54
24:V:97:TYR:C	24:V:97:TYR:CD2	2.85	0.54
28:Z:50:PRO:CG	28:Z:122:TYR:CE2	2.91	0.54
29:a:103:VAL:HG12	29:a:108:TYR:HB2	1.89	0.54
37:i:51:ALA:HB3	37:i:54:GLU:OE1	2.08	0.54
50:S2:70:G:C2	50:S2:80:G:N3	2.76	0.54
50:S2:73:C:H1'	50:S2:74:G:O4'	2.07	0.54
50:S2:92:A:C5	50:S2:447:A:C2	2.95	0.54
50:S2:375:U:O4'	62:SL:7:GLU:OE1	2.26	0.54
50:S2:385:G:H2'	50:S2:385:G:N3	2.23	0.54
50:S2:576:A:H2'	50:S2:577:U:O4'	2.07	0.54
50:S2:623:G:H21	50:S2:624:C:H1'	1.71	0.54
50:S2:634:A:N1	50:S2:635:G:C5	2.76	0.54
50:S2:734:C:C6	50:S2:734:C:H5''	2.43	0.54
50:S2:835:C:C2	50:S2:837:A:H4'	2.43	0.54
50:S2:909:G:N3	50:S2:910:G:C8	2.76	0.54
50:S2:996:A:N6	64:SN:113:PHE:CE1	2.76	0.54
50:S2:1074:C:C2	50:S2:1075:C:C6	2.87	0.54
50:S2:1094:C:N3	50:S2:1095:U:C6	2.76	0.54
50:S2:1209:A:H2'	50:S2:1210:G:C4'	2.38	0.54
50:S2:1290:G:N2	82:Sf:145:CYS:O	2.41	0.54
50:S2:1310:U:C2	50:S2:1311:C:C5	2.95	0.54
50:S2:1351:G:C2	50:S2:1379:A:C6	2.96	0.54
50:S2:1551:U:C6	50:S2:1577:G:C2	2.95	0.54
50:S2:1735:A:C4	50:S2:1800:A:C2	2.95	0.54
50:S2:1863:A:H8	50:S2:1863:A:C5'	2.21	0.54
51:SA:33:GLN:HB3	51:SA:154:LEU:HD12	1.88	0.54
51:SA:176:TRP:HE1	51:SA:195:TRP:HE3	1.55	0.54
52:SB:120:VAL:HG13	52:SB:142:PHE:CE1	2.43	0.54
52:SB:205:TYR:CD1	52:SB:206:PRO:HD2	2.43	0.54
54:SD:34:TYR:HE1	54:SD:37:VAL:HG13	1.71	0.54
77:Sa:52:ASP:OD1	79:Sc:62:GLU:OE2	2.25	0.54
86:S6:2:G:C6	86:S6:71:G:N2	2.75	0.54
86:S6:4:C:C3'	86:S6:5:C:C5'	2.85	0.54
86:S6:59:U:H2'	86:S6:59:U:O2	2.08	0.54
86:S6:60:U:O2'	86:S6:60:U:O2	2.12	0.54
1:5:330:G:N2	1:5:331:G:N9	2.56	0.53
1:5:479:G:N1	1:5:480:C:C4	2.76	0.53
1:5:491:G:N2	1:5:492:U:C4	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:750:U:C4	1:5:751:G:N7	2.76	0.53
1:5:970:G:C2'	1:5:971:U:O4'	2.55	0.53
1:5:1183:C:N3	1:5:1184:A:C8	2.76	0.53
1:5:1237:C:O4'	1:5:1237:C:O2	2.25	0.53
1:5:1335:G:C6	1:5:1336:G:C5	2.96	0.53
1:5:1665:C:O2'	1:5:1666:C:H5'	2.08	0.53
1:5:1938:C:H4'	1:5:1939:A:O5'	2.08	0.53
1:5:1992:U:H6	1:5:2002:A:H2	1.53	0.53
1:5:2104:G:C6	1:5:2105:A:C5	2.96	0.53
1:5:2270:G:N3	1:5:2271:C:C6	2.76	0.53
1:5:2314:G:N2	1:5:2315:G:N9	2.56	0.53
1:5:2326:G:N2	1:5:2327:G:H1'	2.23	0.53
1:5:2417:A:N1	1:5:2418:A:C5	2.76	0.53
1:5:2439:G:N3	1:5:2439:G:H2'	2.23	0.53
1:5:3594:C:H2'	1:5:3594:C:O2	2.08	0.53
1:5:3635:A:C8	1:5:3692:A:H1'	2.42	0.53
1:5:3638:G:C6	1:5:3651:A:C2	2.96	0.53
1:5:3685:C:H5''	4:A:193:ARG:NH2	2.22	0.53
1:5:3754:G:C6	1:5:3755:G:N7	2.76	0.53
1:5:4100:C:O2'	52:SB:226:GLY:C	2.51	0.53
1:5:4214:A:H8	1:5:4214:A:O5'	1.91	0.53
1:5:4960:G:C2'	1:5:4961:G:H5'	2.38	0.53
1:5:5022:U:C4	1:5:5024:C:C4	2.96	0.53
1:5:5047:C:O2'	1:5:5050:C:OP2	2.15	0.53
1:5:5055:G:C2	1:5:5056:A:C5	2.96	0.53
2:7:9:C:O2	2:7:9:C:H2'	2.08	0.53
2:7:43:U:N3	2:7:44:C:C4	2.75	0.53
3:8:10:G:C2	3:8:11:C:C6	2.96	0.53
3:8:81:C:H3'	3:8:82:A:C4'	2.38	0.53
3:8:132:G:N2	3:8:133:G:N9	2.55	0.53
8:E:119:ARG:HG3	8:E:119:ARG:HH11	1.72	0.53
15:M:6:PHE:HA	21:S:152:PHE:O	2.08	0.53
16:N:143:ARG:HD3	36:h:95:LEU:HD23	1.91	0.53
43:o:26:TYR:CD2	43:o:82:MET:HE3	2.43	0.53
46:z:186:ALA:O	46:z:190:LEU:HG	2.08	0.53
48:2:59:ILE:HG23	48:2:60:PRO:HD3	1.90	0.53
50:S2:99:A:C2	50:S2:100:U:N1	2.77	0.53
50:S2:222:U:O2	50:S2:223:C:C6	2.61	0.53
50:S2:297:A:C5	50:S2:298:G:C8	2.95	0.53
50:S2:341:C:H3'	50:S2:342:C:C5'	2.37	0.53
50:S2:449:A:H4'	55:SE:3:ARG:HE	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:678:U:C2	50:S2:679:A:C8	2.95	0.53
50:S2:860:G:OP1	58:SH:107:LYS:NZ	2.39	0.53
50:S2:872:A:N1	50:S2:914:U:H5	2.06	0.53
50:S2:910:G:C4	50:S2:911:C:C6	2.95	0.53
50:S2:956:G:N2	50:S2:957:A:C5	2.77	0.53
50:S2:1097:G:C6	50:S2:1098:C:C5	2.96	0.53
50:S2:1206:G:C6	50:S2:1693:G:C5	2.96	0.53
50:S2:1302:G:C4	82:Sf:140:TYR:CE2	2.95	0.53
50:S2:1302:G:C5	82:Sf:138:ARG:NH1	2.77	0.53
50:S2:1407:U:H2'	50:S2:1408:U:H6	1.65	0.53
50:S2:1410:C:C4	50:S2:1411:G:C5	2.96	0.53
50:S2:1511:U:N3	50:S2:1512:C:C5	2.76	0.53
50:S2:1566:G:N7	70:ST:101:ARG:NH2	2.56	0.53
50:S2:1621:U:HO2'	50:S2:1622:U:H6	1.56	0.53
50:S2:1754:G:C5	50:S2:1755:C:C5	2.96	0.53
52:SB:37:ALA:CB	52:SB:231:LEU:O	2.56	0.53
53:SC:166:ARG:NH2	72:SV:10:ASP:OD2	2.41	0.53
55:SE:86:PHE:CD2	55:SE:87:MET:HG2	2.44	0.53
57:SG:229:ALA:HB1	57:SG:233:ARG:NH2	2.23	0.53
59:SI:38:ILE:HD11	59:SI:81:VAL:HG23	1.90	0.53
63:SM:85:LEU:HA	63:SM:88:TRP:CZ2	2.38	0.53
85:S5:37:A:N7	85:S5:38:A:C6	2.76	0.53
86:S6:61:C:H2'	86:S6:61:C:O2	2.08	0.53
1:5:99:A:H4'	16:N:181:HIS:HD1	1.71	0.53
1:5:120:A:O4'	1:5:121:A:C6	2.61	0.53
1:5:209:U:C6	1:5:211:G:N7	2.77	0.53
1:5:981:C:C2	8:E:69:TYR:CE2	2.96	0.53
1:5:1198:G:C2'	1:5:1199:G:C8	2.86	0.53
1:5:1302:U:H4'	33:e:17:THR:O	2.07	0.53
1:5:1758:G:C2	1:5:1759:G:C8	2.97	0.53
1:5:1872:G:C2	1:5:1873:A:N7	2.76	0.53
1:5:1875:C:H2'	1:5:1876:U:O4'	2.08	0.53
1:5:1894:C:C2'	1:5:1895:G:O5'	2.56	0.53
1:5:1978:C:N3	1:5:1988:G:O6	2.41	0.53
1:5:2079:G:H1	1:5:2276:A:H61	1.54	0.53
1:5:2107:C:N4	1:5:2126:G:C2	2.75	0.53
1:5:2335:C:O2	1:5:2336:G:C8	2.62	0.53
1:5:2457:G:H21	1:5:3672:G:N2	2.06	0.53
1:5:2539:C:C2	1:5:2540:C:C5	2.95	0.53
1:5:2658:G:N3	1:5:2675:G:N2	2.56	0.53
1:5:3612:C:H2'	1:5:3613:U:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3657:U:C2	1:5:3658:C:C6	2.96	0.53
1:5:3731:C:O2	1:5:3731:C:H2'	2.06	0.53
1:5:3925:U:H2'	1:5:3926:C:O4'	2.08	0.53
1:5:4093:G:C6	1:5:4094:G:N7	2.75	0.53
1:5:4370:G:C6	86:S6:76:A:C2	2.96	0.53
1:5:4441:A:H5''	1:5:4441:A:C8	2.43	0.53
1:5:4997:G:N2	1:5:4998:G:H1'	2.23	0.53
1:5:5006:U:C1'	1:5:5042:A:C5	2.91	0.53
2:7:58:A:C5	2:7:59:G:C8	2.95	0.53
5:B:323:TYR:CD1	5:B:324:GLY:N	2.76	0.53
8:E:54:SER:O	8:E:55:ARG:C	2.51	0.53
9:F:168:ARG:HD2	9:F:211:TRP:HE1	1.73	0.53
14:L:82:ARG:CZ	14:L:82:ARG:HB3	2.36	0.53
21:S:8:ARG:HB2	21:S:10:TYR:CE2	2.42	0.53
35:g:93:ARG:HB2	35:g:93:ARG:HH11	1.72	0.53
36:h:93:ARG:CG	36:h:93:ARG:HH11	2.21	0.53
38:j:39:TYR:HB3	38:j:40:PRO:CD	2.37	0.53
50:S2:2:A:C8	53:SC:223:TYR:CB	2.91	0.53
50:S2:316:G:C4	50:S2:317:C:C5	2.96	0.53
50:S2:410:G:C6	50:S2:411:G:C5	2.96	0.53
50:S2:548:C:H41	50:S2:549:C:H1'	1.73	0.53
50:S2:666:U:H2'	50:S2:667:U:H6	1.73	0.53
50:S2:976:G:C5	50:S2:977:C:C5	2.97	0.53
50:S2:998:A:C8	50:S2:998:A:H3'	2.43	0.53
50:S2:1048:G:H2'	50:S2:1068:G:N2	2.24	0.53
50:S2:1113:A:H2'	50:S2:1114:U:C3'	2.39	0.53
50:S2:1206:G:C6	50:S2:1208:A:C5	2.95	0.53
50:S2:1274:G:H2'	50:S2:1274:G:N3	2.23	0.53
50:S2:1323:U:O2'	50:S2:1324:G:O4'	2.25	0.53
50:S2:1526:G:C6	50:S2:1527:C:C4	2.96	0.53
50:S2:1594:A:N1	50:S2:1595:U:C4	2.76	0.53
50:S2:1618:C:H5	80:Sd:11:PRO:HG3	1.72	0.53
50:S2:1754:G:C2	50:S2:1755:C:C2	2.96	0.53
52:SB:42:ARG:HH12	52:SB:233:GLY:HA3	1.72	0.53
55:SE:248:ILE:HD12	60:SJ:72:PHE:CD2	2.43	0.53
60:SJ:83:ARG:HD3	60:SJ:150:ARG:NH2	2.23	0.53
61:SK:15:LEU:HD13	61:SK:21:MET:HE3	1.89	0.53
62:SL:89:ARG:HE	62:SL:106:HIS:CD2	2.27	0.53
65:SO:146:ARG:HG2	77:Sa:29:CYS:CB	2.38	0.53
66:SP:49:LEU:O	66:SP:50:ARG:C	2.51	0.53
67:SQ:109:LYS:HG2	67:SQ:113:ILE:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:ST:33:TRP:O	70:ST:35:ASP:N	2.41	0.53
74:SX:61:GLN:NE2	84:S4:23:U:H5''	2.24	0.53
81:Se:37:GLN:O	81:Se:41:ARG:HG2	2.09	0.53
85:S5:48:C:C4	85:S5:59:U:C2	2.94	0.53
1:5:73:A:C2	1:5:74:G:N7	2.77	0.53
1:5:102:G:C2'	1:5:103:G:O5'	2.56	0.53
1:5:319:A:H1'	1:5:3726:A:C2	2.44	0.53
1:5:924:C:C2	1:5:925:C:C6	2.96	0.53
1:5:976:G:H3'	1:5:977:C:H6	1.72	0.53
1:5:1278:C:C3'	1:5:1279:A:H4'	2.38	0.53
1:5:1297:U:O2	1:5:1298:C:H6	1.91	0.53
1:5:1442:C:C4	1:5:1443:A:N7	2.76	0.53
1:5:1445:U:N3	1:5:1446:C:C6	2.76	0.53
1:5:1776:A:C6	1:5:1777:C:C4	2.96	0.53
1:5:1866:U:C5	1:5:4405:G:O4'	2.61	0.53
1:5:2244:C:C2	1:5:2245:G:C8	2.96	0.53
1:5:2451:A:N6	1:5:2452:G:C4	2.77	0.53
1:5:2493:G:O2'	3:8:127:U:OP2	2.20	0.53
1:5:2614:C:O2	1:5:2614:C:H2'	2.09	0.53
1:5:2614:C:O2	1:5:2726:G:C2	2.61	0.53
1:5:2698:G:C6	1:5:2699:C:C4	2.97	0.53
1:5:2835:A:N3	5:B:228:TYR:HD2	2.07	0.53
1:5:3622:C:O2	1:5:3623:C:O2	2.26	0.53
1:5:3714:G:C2	1:5:3715:U:C2	2.96	0.53
1:5:4131:G:C6	1:5:4132:C:C4	2.96	0.53
1:5:4198:G:O6	12:I:112:GLN:NE2	2.42	0.53
1:5:4223:C:H2'	1:5:4223:C:O2	2.08	0.53
1:5:4416:G:N1	1:5:4417:C:C5	2.77	0.53
1:5:4884:G:H2'	1:5:4884:G:N3	2.23	0.53
1:5:4999:G:C4	1:5:5000:G:C8	2.97	0.53
1:5:5042:A:C2	1:5:5043:A:C5	2.96	0.53
3:8:118:C:C2	3:8:119:C:C5	2.95	0.53
8:E:277:ILE:HD11	8:E:282:LEU:HD13	1.90	0.53
10:G:165:GLU:OE1	16:N:22:LEU:HD13	2.07	0.53
12:I:171:TRP:CB	12:I:181:PHE:CD2	2.91	0.53
14:L:47:ALA:HB3	14:L:48:PRO:HD3	1.90	0.53
16:N:178:HIS:HA	16:N:181:HIS:NE2	2.22	0.53
32:d:25:TYR:N	32:d:25:TYR:CD1	2.76	0.53
32:d:87:ARG:NH1	32:d:109:VAL:HG22	2.23	0.53
46:z:49:PHE:CD2	46:z:165:LEU:HD22	2.43	0.53
47:1:162:VAL:HG13	47:1:182:PHE:CZ	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:291:G:C5'	50:S2:291:G:H8	2.22	0.53
50:S2:1184:G:C6	50:S2:1185:C:C4	2.96	0.53
50:S2:1280:G:N1	50:S2:1281:G:C8	2.76	0.53
50:S2:1294:G:C8	82:Sf:151:ASN:C	2.86	0.53
50:S2:1308:U:N3	50:S2:1309:C:C4	2.76	0.53
50:S2:1629:C:O2'	69:SS:82:TRP:O	2.26	0.53
50:S2:1689:C:O2'	50:S2:1690:U:H5'	2.07	0.53
50:S2:1805:G:C6	50:S2:1806:A:N7	2.75	0.53
56:SF:19:LEU:HD22	56:SF:24:SER:HA	1.90	0.53
58:SH:133:LEU:HD21	58:SH:176:VAL:HG11	1.90	0.53
62:SL:80:MET:HG2	62:SL:86:ILE:CG2	2.38	0.53
65:SO:35:ALA:CB	65:SO:112:ALA:HB2	2.38	0.53
77:Sa:92:ARG:HH11	77:Sa:92:ARG:CG	2.21	0.53
85:S5:37:A:N7	85:S5:38:A:C4	2.76	0.53
86:S6:22:G:O2'	86:S6:23:A:P	2.67	0.53
86:S6:48:C:C4	86:S6:59:U:N1	2.77	0.53
1:5:92:C:N4	43:o:40:ARG:NH1	2.55	0.53
1:5:235:A:N1	1:5:238:C:C5	2.77	0.53
1:5:471:A:N1	1:5:472:C:H1'	2.24	0.53
1:5:648:G:C2	1:5:649:A:C8	2.96	0.53
1:5:967:C:H2'	1:5:969:C:OP1	2.08	0.53
1:5:976:G:H1	1:5:1277:G:H1	1.57	0.53
1:5:976:G:H2'	1:5:977:C:O4'	2.09	0.53
1:5:1065:G:C2	1:5:1066:G:C5	2.96	0.53
1:5:1092:G:C2	1:5:1093:C:C6	2.97	0.53
1:5:1185:G:N2	7:D:282:GLN:NE2	2.56	0.53
1:5:1272:C:H5''	1:5:2122:G:C8	2.43	0.53
1:5:1280:C:N3	1:5:1282:G:O6	2.42	0.53
1:5:1337:A:H2	1:5:1658:G:N3	2.06	0.53
1:5:1348:U:N3	1:5:1349:G:N7	2.56	0.53
1:5:1359:G:H2'	1:5:1360:G:N9	2.22	0.53
1:5:1394:G:O2'	1:5:1395:U:C5'	2.57	0.53
1:5:1397:A:O2'	1:5:1398:A:C5'	2.56	0.53
1:5:1987:C:O2	1:5:1987:C:C2'	2.55	0.53
1:5:2020:U:H2'	1:5:2020:U:O2	2.08	0.53
1:5:2089:G:C6	1:5:2263:A:C8	2.96	0.53
1:5:2243:C:O2	1:5:2244:C:C6	2.61	0.53
1:5:2284:G:H2'	1:5:2285:A:O4'	2.08	0.53
1:5:2368:A:N6	1:5:2827:G:O2'	2.41	0.53
1:5:4062:A:C5	1:5:4063:U:C5	2.96	0.53
1:5:4078:C:C2	1:5:4079:C:C6	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4167:G:N1	1:5:4168:G:C8	2.76	0.53
1:5:4285:U:H2'	1:5:4286:C:C6	2.40	0.53
1:5:4308:C:O2'	1:5:4338:G:H4'	2.07	0.53
1:5:4881:U:O2'	1:5:4882:U:O5'	2.27	0.53
1:5:4928:C:H2'	1:5:4929:C:H5''	1.90	0.53
1:5:4975:G:C5	1:5:4977:A:C6	2.96	0.53
1:5:4981:G:C2	1:5:4982:A:C8	2.96	0.53
1:5:5000:G:C6	1:5:5001:U:C4	2.96	0.53
1:5:5031:G:N3	1:5:5032:C:C6	2.77	0.53
1:5:5048:A:C8	32:d:34:HIS:CG	2.96	0.53
6:C:341:LEU:HD21	8:E:52:ARG:HD2	1.90	0.53
10:G:100:HIS:HA	10:G:103:ARG:HD2	1.89	0.53
10:G:254:GLU:OE1	10:G:257:LYS:HD2	2.08	0.53
14:L:28:GLN:HG2	16:N:202:ARG:NH1	2.23	0.53
15:M:118:MET:HG3	17:O:192:PHE:HE2	1.73	0.53
16:N:39:ALA:HB2	16:N:63:ARG:HH21	1.74	0.53
17:O:14:HIS:CD2	17:O:124:LEU:HD12	2.44	0.53
45:r:2:SER:O	45:r:6:GLN:HG2	2.09	0.53
50:S2:166:A:C2	50:S2:167:G:N7	2.77	0.53
50:S2:360:A:C2	50:S2:363:A:N7	2.76	0.53
50:S2:376:A:C6	50:S2:377:G:C5	2.96	0.53
50:S2:632:C:O2	50:S2:633:C:C6	2.62	0.53
50:S2:697:G:C2	50:S2:734:C:C2	2.97	0.53
50:S2:816:A:N6	50:S2:817:G:C4	2.76	0.53
50:S2:955:A:N6	50:S2:971:G:O2'	2.42	0.53
50:S2:1162:C:C4	50:S2:1163:C:C5	2.96	0.53
50:S2:1181:A:C2	50:S2:1182:A:C2	2.97	0.53
50:S2:1286:G:N2	63:SM:33:ARG:HD2	2.23	0.53
50:S2:1307:U:H2'	50:S2:1308:U:C4'	2.39	0.53
50:S2:1364:U:O4'	50:S2:1364:U:O2	2.27	0.53
50:S2:1540:G:N2	50:S2:1541:G:N9	2.55	0.53
52:SB:120:VAL:HG22	52:SB:142:PHE:CE1	2.43	0.53
53:SC:72:ASP:OD1	53:SC:72:ASP:N	2.42	0.53
57:SG:210:ALA:O	57:SG:214:ALA:HB3	2.08	0.53
68:SR:54:VAL:O	68:SR:58:MET:HG2	2.07	0.53
77:Sa:5:ARG:O	77:Sa:8:ASN:N	2.29	0.53
86:S6:33:U:C6	86:S6:35:A:C5'	2.90	0.53
86:S6:55:U:H3'	86:S6:56:C:C5'	2.39	0.53
1:5:46:U:OP2	1:5:47:A:O2'	2.19	0.53
1:5:345:C:O2	1:5:346:G:C8	2.62	0.53
1:5:424:U:O2	1:5:424:U:C2'	2.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:426:A:C2	1:5:427:A:C5	2.96	0.53
1:5:505:G:C6	1:5:506:C:C4	2.97	0.53
1:5:670:G:H2'	1:5:671:G:C8	2.43	0.53
1:5:907:C:N3	1:5:908:G:C8	2.77	0.53
1:5:908:G:C2	1:5:909:A:N9	2.77	0.53
1:5:1167:C:O2	1:5:1195:G:C2	2.61	0.53
1:5:1662:C:O2	1:5:1663:C:C6	2.62	0.53
1:5:1670:G:O5'	1:5:1671:U:H6	1.92	0.53
1:5:1835:G:O2'	1:5:1836:G:OP2	2.22	0.53
1:5:1961:G:C2	1:5:2024:G:C2	2.97	0.53
1:5:2245:G:C6	1:5:2246:C:C4	2.96	0.53
1:5:2246:C:H2'	1:5:2247:C:O4'	2.09	0.53
1:5:2439:G:C8	1:5:2777:G:C6	2.96	0.53
1:5:2481:G:C4	1:5:2482:C:C6	2.96	0.53
1:5:2565:A:N7	1:5:2566:G:C1'	2.65	0.53
1:5:2605:G:C2	1:5:2606:G:C5	2.96	0.53
1:5:2669:C:O2'	1:5:2670:C:OP2	2.25	0.53
1:5:3692:A:C6	1:5:3693:U:N1	2.76	0.53
1:5:3742:G:N3	1:5:3743:G:C8	2.77	0.53
1:5:3820:G:C6	1:5:3821:A:C5	2.97	0.53
1:5:3837:C:H2'	1:5:3838:U:C1'	2.39	0.53
1:5:3858:C:N4	1:5:3859:G:C6	2.76	0.53
1:5:4132:C:C2	1:5:4133:C:C6	2.96	0.53
1:5:4136:G:C2	1:5:4137:C:C2	2.97	0.53
1:5:4215:C:O2	1:5:4215:C:H2'	2.07	0.53
1:5:4216:G:H2'	1:5:4217:G:H5'	1.90	0.53
1:5:4236:G:N2	1:5:4289:U:H1'	2.23	0.53
1:5:4275:G:H3'	1:5:4275:G:C8	2.43	0.53
1:5:4283:G:N3	1:5:4284:C:C5	2.63	0.53
1:5:4400:G:N3	1:5:4400:G:H2'	2.23	0.53
1:5:4401:G:C6	1:5:4402:C:C4	2.97	0.53
1:5:4730:C:H2'	1:5:4965:U:N3	2.23	0.53
1:5:4763:U:O2	15:M:3:PHE:CZ	2.61	0.53
1:5:5000:G:C5	1:5:5001:U:C5	2.96	0.53
1:5:5005:G:C5	25:W:51:TRP:CD1	2.91	0.53
1:5:5028:G:C2	1:5:5029:C:C2	2.97	0.53
5:B:100:ARG:NH2	5:B:101:THR:C	2.65	0.53
7:D:31:TYR:CD1	7:D:31:TYR:C	2.87	0.53
7:D:95:TYR:HA	7:D:158:LYS:HG2	1.89	0.53
7:D:99:TYR:HD2	7:D:199:ILE:HG23	1.74	0.53
10:G:108:GLN:HE21	10:G:108:GLN:HA	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:88:PHE:CZ	11:H:151:ILE:HB	2.43	0.53
12:I:184:MET:CB	12:I:190:LEU:HD12	2.38	0.53
17:O:143:HIS:ND1	17:O:150:GLN:OE1	2.37	0.53
30:b:13:SER:N	30:b:16:TRP:CZ2	2.77	0.53
33:e:77:PHE:HE2	45:r:25:TYR:HD2	1.57	0.53
41:m:79:GLU:OE1	41:m:81:SER:N	2.42	0.53
45:r:7:TRP:CE3	45:r:11:ARG:HB3	2.43	0.53
45:r:103:ARG:CZ	45:r:106:LEU:HD21	2.39	0.53
46:z:15:ARG:HA	46:z:18:LEU:CD1	2.38	0.53
47:1:81:ILE:CG2	47:1:85:VAL:HG23	2.39	0.53
47:1:272:TYR:C	47:1:273:ARG:CA	2.76	0.53
50:S2:58:C:H1'	50:S2:59:U:C5	2.43	0.53
50:S2:100:U:H2'	50:S2:101:U:O5'	2.09	0.53
50:S2:121:U:N3	50:S2:122:G:C8	2.67	0.53
50:S2:380:G:N2	50:S2:382:C:H2'	2.23	0.53
50:S2:840:C:H2'	75:SY:12:PHE:CD2	2.44	0.53
50:S2:859:G:N1	50:S2:860:G:C5	2.76	0.53
50:S2:862:A:N3	50:S2:863:U:C6	2.76	0.53
50:S2:997:A:H2'	50:S2:998:A:O4'	2.07	0.53
50:S2:1191:C:H2'	50:S2:1192:U:O4'	2.08	0.53
50:S2:1272:C:OP1	50:S2:1303:C:C1'	2.56	0.53
50:S2:1292:C:H2'	50:S2:1292:C:O2	2.07	0.53
50:S2:1309:C:H5''	63:SM:36:ARG:CZ	2.39	0.53
50:S2:1315:U:C2	50:S2:1316:C:C6	2.94	0.53
50:S2:1405:A:C2'	50:S2:1406:G:H5'	2.39	0.53
50:S2:1510:G:H2'	50:S2:1510:G:N3	2.23	0.53
50:S2:1541:G:C2	50:S2:1542:C:C4	2.97	0.53
50:S2:1587:G:O6	70:ST:67:ARG:HG2	2.08	0.53
50:S2:1640:A:C1'	86:S6:41:C:H1'	2.38	0.53
50:S2:1732:G:C6	50:S2:1733:U:C5	2.96	0.53
50:S2:1868:U:H4'	50:S2:1869:A:OP2	2.08	0.53
51:SA:10:MET:O	51:SA:55:TRP:CZ3	2.62	0.53
53:SC:170:TRP:CH2	73:SW:97:ARG:HD2	2.43	0.53
54:SD:202:LYS:O	54:SD:203:PRO:C	2.50	0.53
55:SE:48:LEU:HD21	55:SE:70:ILE:HD11	1.89	0.53
57:SG:64:LYS:HG2	57:SG:97:VAL:HG11	1.91	0.53
58:SH:35:ASP:OD1	58:SH:36:LEU:N	2.41	0.53
58:SH:135:PHE:HD1	58:SH:136:PRO:CA	2.22	0.53
58:SH:177:TYR:O	58:SH:180:LEU:N	2.41	0.53
61:SK:52:LEU:HD12	61:SK:57:TYR:HB2	1.91	0.53
63:SM:101:ARG:HA	63:SM:101:ARG:CZ	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:SS:130:ARG:HG3	69:SS:136:THR:CG2	2.39	0.53
85:S5:10:G:H2'	85:S5:11:C:C6	2.43	0.53
85:S5:12:U:C6	85:S5:24:G:N1	2.77	0.53
85:S5:62:C:H2'	85:S5:62:C:O2	2.09	0.53
1:5:70:A:N1	1:5:4355:G:C1'	2.72	0.53
1:5:84:A:C8	1:5:84:A:H5'	2.44	0.53
1:5:127:G:N1	1:5:128:C:C4	2.77	0.53
1:5:127:G:C4	1:5:128:C:C5	2.96	0.53
1:5:145:G:N3	1:5:146:G:C8	2.76	0.53
1:5:244:G:O6	1:5:246:G:N7	2.41	0.53
1:5:322:C:O2	1:5:4356:G:C2	2.61	0.53
1:5:754:U:O2	1:5:755:C:C6	2.61	0.53
1:5:1092:G:C2	1:5:1093:C:N1	2.76	0.53
1:5:1215:C:C2	1:5:1216:C:H6	2.27	0.53
1:5:1235:G:N2	1:5:1236:C:C5	2.77	0.53
1:5:1260:G:C4	1:5:1261:G:C8	2.97	0.53
1:5:1351:G:OP1	6:C:33:ARG:NH1	2.36	0.53
1:5:1473:U:C2	1:5:1474:C:C6	2.96	0.53
1:5:1549:G:N2	1:5:1580:C:C2	2.76	0.53
1:5:1609:U:N3	1:5:1610:C:C5	2.77	0.53
1:5:1609:U:C2	1:5:1610:C:C6	2.97	0.53
1:5:1949:U:O2	1:5:1949:U:H2'	2.09	0.53
1:5:2061:U:O2	21:S:111:ARG:CD	2.57	0.53
1:5:2529:A:N6	1:5:2532:C:H1'	2.23	0.53
1:5:2549:G:N1	1:5:2770:C:N4	2.57	0.53
1:5:3635:A:C6	1:5:3636:C:C1'	2.91	0.53
1:5:3667:C:H2'	1:5:3667:C:O2	2.08	0.53
1:5:3857:G:C4	1:5:3858:C:C6	2.96	0.53
1:5:4276:G:O6	1:5:4277:G:C6	2.61	0.53
1:5:4498:U:O2	1:5:4498:U:H2'	2.03	0.53
1:5:4640:C:C4	1:5:4641:U:C5	2.97	0.53
1:5:4737:G:C5	1:5:4738:C:C4	2.97	0.53
1:5:4904:G:N1	1:5:4905:C:C4	2.77	0.53
1:5:4963:G:H3'	1:5:4964:C:H5''	1.90	0.53
3:8:80:A:C5	3:8:81:C:C6	2.96	0.53
4:A:209:HIS:HE1	4:A:211:PHE:CD2	2.26	0.53
5:B:160:ILE:HD13	5:B:194:LEU:HD13	1.90	0.53
7:D:43:LYS:HB3	7:D:46:THR:CG2	2.38	0.53
7:D:99:TYR:CE1	7:D:165:GLY:HA2	2.42	0.53
10:G:57:TRP:N	10:G:57:TRP:CD1	2.75	0.53
15:M:17:PHE:CD1	15:M:17:PHE:C	2.86	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:82:ARG:HA	18:P:83:TRP:CE3	2.44	0.53
25:W:8:PHE:CD1	25:W:8:PHE:C	2.87	0.53
33:e:6:PRO:HA	33:e:74:PHE:HE1	1.74	0.53
45:r:7:TRP:HE1	45:r:38:PHE:HB2	1.74	0.53
50:S2:118:C:C4	50:S2:119:U:C5	2.97	0.53
50:S2:217:A:C2	50:S2:218:U:C6	2.97	0.53
50:S2:415:A:C2'	50:S2:416:U:O4'	2.52	0.53
50:S2:436:G:C6	50:S2:458:A:N3	2.76	0.53
50:S2:477:G:C2	50:S2:478:G:C5	2.97	0.53
50:S2:567:C:H2'	50:S2:568:C:H5''	1.89	0.53
50:S2:643:A:OP2	60:SJ:38:ARG:NH2	2.41	0.53
50:S2:880:G:N7	50:S2:881:G:C8	2.73	0.53
50:S2:964:A:N3	50:S2:965:U:C4	2.76	0.53
50:S2:997:A:C2'	50:S2:998:A:O5'	2.56	0.53
50:S2:999:G:C4	50:S2:1000:C:C6	2.97	0.53
50:S2:1278:A:C4	50:S2:1279:C:C6	2.97	0.53
50:S2:1291:A:C5	82:Sf:140:TYR:CD2	2.96	0.53
50:S2:1325:G:C2	50:S2:1327:G:C8	2.97	0.53
50:S2:1351:G:C5	50:S2:1352:G:N7	2.77	0.53
50:S2:1410:C:N3	50:S2:1411:G:N7	2.57	0.53
50:S2:1510:G:C5	50:S2:1511:U:C6	2.96	0.53
50:S2:1545:A:H4'	67:SQ:74:GLY:HA2	1.90	0.53
50:S2:1575:G:C2	50:S2:1576:G:C8	2.96	0.53
50:S2:1606:G:C2'	50:S2:1633:A:H62	2.22	0.53
50:S2:1760:G:N2	50:S2:1773:C:C2	2.76	0.53
50:S2:1823:A:H2'	50:S2:1823:A:N3	2.22	0.53
51:SA:53:ARG:CZ	51:SA:53:ARG:HB2	2.39	0.53
59:SI:149:TYR:HA	59:SI:152:ARG:HB2	1.91	0.53
60:SJ:69:ARG:O	60:SJ:70:ARG:C	2.52	0.53
68:SR:13:ALA:CB	68:SR:53:TYR:CB	2.65	0.53
68:SR:104:GLU:HA	68:SR:104:GLU:OE1	2.09	0.53
69:SS:40:TYR:CE2	69:SS:97:GLN:CD	2.87	0.53
85:S5:13:C:C4	85:S5:22:G:O6	2.61	0.53
86:S6:30:G:N2	86:S6:31:A:C4	2.77	0.53
86:S6:57:G:C5'	86:S6:57:G:H8	2.21	0.53
1:5:69:A:C2	1:5:70:A:C4	2.97	0.53
1:5:91:G:N7	1:5:93:G:C5	2.77	0.53
1:5:209:U:C2	1:5:233:U:C5	2.95	0.53
1:5:219:G:C8	1:5:220:C:C5	2.97	0.53
1:5:313:U:C2	1:5:314:G:C8	2.96	0.53
1:5:328:A:C2	1:5:329:A:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:426:A:O2'	1:5:427:A:H5'	2.09	0.53
1:5:437:G:H5'	33:e:53:ILE:HG22	1.91	0.53
1:5:687:U:O2'	8:E:101:ARG:HG2	2.09	0.53
1:5:1098:G:C6	1:5:1099:C:C4	2.96	0.53
1:5:1098:G:C2	1:5:1099:C:C2	2.97	0.53
1:5:1191:C:C2	1:5:1192:C:C6	2.97	0.53
1:5:1260:G:C2	1:5:1261:G:N9	2.77	0.53
1:5:1492:G:H5'	30:b:45:PHE:HZ	1.74	0.53
1:5:1561:G:N1	1:5:1567:U:N3	2.53	0.53
1:5:1651:G:H8	1:5:1651:G:O5'	1.92	0.53
1:5:1752:G:C2	1:5:1753:G:C4	2.97	0.53
1:5:1806:G:N3	1:5:1807:C:C6	2.77	0.53
1:5:1907:A:H2'	1:5:1908:A:C8	2.44	0.53
1:5:2037:C:O2'	1:5:2038:U:H5'	2.09	0.53
1:5:2316:G:N3	1:5:2317:C:C6	2.77	0.53
1:5:2463:G:C2	1:5:2464:C:C5	2.97	0.53
1:5:2492:C:H2'	1:5:2493:G:O4'	2.08	0.53
1:5:2497:C:N4	1:5:2498:C:H41	2.07	0.53
1:5:2586:G:N7	1:5:2587:A:N1	2.57	0.53
1:5:4061:G:C2	1:5:4062:A:N7	2.76	0.53
1:5:4479:A:N1	1:5:4480:A:H1'	2.23	0.53
1:5:4703:U:N3	1:5:4704:C:C5	2.76	0.53
1:5:4886:C:O2	1:5:4886:C:H2'	2.08	0.53
1:5:4967:A:H2'	1:5:4968:A:C8	2.44	0.53
3:8:9:A:N1	3:8:10:G:C5	2.77	0.53
3:8:79:G:C2	3:8:80:A:C6	2.97	0.53
4:A:40:TYR:O	4:A:40:TYR:CD1	2.62	0.53
5:B:92:TYR:CE2	5:B:101:THR:HB	2.43	0.53
6:C:317:ASN:OD1	6:C:317:ASN:C	2.52	0.53
11:H:113:GLU:OE2	11:H:124:ARG:O	2.27	0.53
21:S:45:TRP:CE3	21:S:56:LYS:HA	2.43	0.53
23:U:106:SER:HG	23:U:109:SER:HG	1.57	0.53
31:c:56:ARG:HG3	31:c:56:ARG:HH11	1.74	0.53
33:e:35:TRP:CZ3	33:e:55:MET:HA	2.43	0.53
42:n:14:LYS:HG2	50:S2:1173:A:OP1	2.09	0.53
42:n:17:ARG:HH11	50:S2:1173:A:H5''	1.68	0.53
44:p:92:GLN:CD	52:SB:219:LYS:NZ	2.67	0.53
47:1:448:LEU:CD2	47:1:452:THR:OG1	2.53	0.53
50:S2:60:A:HO2'	50:S2:61:A:H5''	1.66	0.53
50:S2:219:U:H4'	59:SI:182:CYS:SG	2.48	0.53
50:S2:321:C:H2'	50:S2:322:C:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:383:G:H4'	62:SL:132:ARG:HD2	1.91	0.53
50:S2:404:G:C4	50:S2:405:G:C8	2.96	0.53
50:S2:447:A:C6	50:S2:449:A:C5	2.97	0.53
50:S2:589:G:O2'	50:S2:590:A:H2'	2.09	0.53
50:S2:610:G:C6	50:S2:611:G:N7	2.77	0.53
50:S2:751:G:N1	50:S2:792:C:C2	2.77	0.53
50:S2:902:G:C2	50:S2:903:A:C4	2.97	0.53
50:S2:999:G:N1	50:S2:1000:C:C4	2.77	0.53
50:S2:1094:C:C2	50:S2:1095:U:H6	2.27	0.53
50:S2:1118:C:O4'	50:S2:1118:C:O2	2.22	0.53
50:S2:1248:U:C5	50:S2:1249:C:C2	2.96	0.53
50:S2:1250:A:H2	50:S2:1339:U:H1'	1.73	0.53
50:S2:1345:G:N1	50:S2:1346:U:C4	2.77	0.53
50:S2:1348:G:C2	50:S2:1349:G:N7	2.76	0.53
50:S2:1356:G:H2'	50:S2:1357:A:H5'	1.91	0.53
50:S2:1431:G:C2	50:S2:1432:U:N1	2.77	0.53
50:S2:1484:A:C2	50:S2:1485:U:C5	2.96	0.53
50:S2:1561:A:C6	50:S2:1562:C:C6	2.97	0.53
50:S2:1842:C:O2'	50:S2:1843:G:H5'	2.08	0.53
50:S2:1843:G:H2'	50:S2:1844:U:O4'	2.09	0.53
50:S2:1860:A:C4	50:S2:1862:G:N7	2.76	0.53
51:SA:84:GLN:HE21	51:SA:100:ALA:HB1	1.73	0.53
52:SB:113:MET:O	52:SB:142:PHE:HE2	1.92	0.53
53:SC:199:PRO:CD	53:SC:223:TYR:HH	2.20	0.53
53:SC:274:VAL:O	53:SC:274:VAL:HG13	2.08	0.53
56:SF:36:GLN:O	56:SF:37:ASP:HB2	2.07	0.53
59:SI:67:TRP:HB2	59:SI:72:CYS:SG	2.48	0.53
69:SS:15:VAL:HG13	69:SS:68:ILE:HD11	1.90	0.53
83:Sg:99:ARG:NH1	83:Sg:99:ARG:HA	2.23	0.53
1:5:450:G:H21	1:5:1294:A:H2'	1.74	0.53
1:5:962:C:C5	45:r:112:ARG:NH2	2.76	0.53
1:5:964:A:N3	1:5:2252:G:O6	2.42	0.53
1:5:1090:G:C2	1:5:1091:C:C2	2.97	0.53
1:5:1092:G:C6	1:5:1093:C:C4	2.96	0.53
1:5:1214:C:H2'	1:5:2114:G:C2	2.41	0.53
1:5:1379:C:O2	1:5:1380:G:N7	2.42	0.53
1:5:1388:A:N1	1:5:1396:G:C2	2.77	0.53
1:5:1516:G:N7	1:5:1518:A:C8	2.77	0.53
1:5:1541:C:C4	1:5:1542:U:C5	2.97	0.53
1:5:1555:G:N2	1:5:1556:C:H1'	2.24	0.53
1:5:1698:C:OP2	1:5:1698:C:C6	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1770:A:C5	1:5:1771:U:C5	2.97	0.53
1:5:1831:G:C5	1:5:1832:C:C5	2.97	0.53
1:5:2260:C:H2'	1:5:2261:G:C8	2.41	0.53
1:5:2505:C:H4'	1:5:2506:G:H5'	1.90	0.53
1:5:2569:G:C4	1:5:2570:U:C5	2.97	0.53
1:5:2604:C:O2	1:5:2604:C:H2'	2.09	0.53
1:5:2645:G:C6	1:5:2646:C:C4	2.97	0.53
1:5:2737:C:C2	1:5:2738:C:C5	2.97	0.53
1:5:3742:G:C2	1:5:3743:G:N7	2.77	0.53
1:5:3879:G:C5	1:5:3882:C:C4	2.96	0.53
1:5:4039:G:C2	1:5:4040:C:C5	2.96	0.53
1:5:4068:U:O4	1:5:4069:U:C4	2.61	0.53
1:5:4083:U:H2'	1:5:4084:G:H3'	1.90	0.53
1:5:4687:A:C8	1:5:4698:C:C6	2.97	0.53
1:5:4690:G:N2	1:5:4691:A:N7	2.57	0.53
1:5:4731:G:C8	1:5:4732:G:C6	2.97	0.53
1:5:4750:G:O2'	1:5:4751:G:P	2.67	0.53
1:5:4957:C:O2	1:5:4957:C:H2'	2.08	0.53
1:5:4981:G:C2	1:5:4982:A:N7	2.77	0.53
1:5:5031:G:C2	1:5:5032:C:C4	2.96	0.53
2:7:11:A:C2	2:7:67:C:O4'	2.62	0.53
4:A:68:ARG:C	10:G:45:ILE:HD11	2.34	0.53
5:B:39:LYS:O	5:B:40:PRO:O	2.27	0.53
5:B:57:VAL:HG22	5:B:73:VAL:HG12	1.91	0.53
5:B:118:PHE:CB	5:B:119:TYR:HE1	2.21	0.53
9:F:171:LEU:CB	9:F:189:MET:HE1	2.38	0.53
9:F:202:ARG:N	9:F:202:ARG:HD2	2.23	0.53
14:L:94:ILE:HG22	14:L:94:ILE:O	2.09	0.53
43:o:55:ILE:HG22	86:S6:75:C:C3'	2.37	0.53
45:r:16:PHE:CD2	45:r:28:GLU:HB3	2.40	0.53
50:S2:64:A:N6	50:S2:82:G:C4	2.77	0.53
50:S2:112:U:H1'	50:S2:114:G:C6	2.43	0.53
50:S2:118:C:H1'	50:S2:445:A:C4	2.44	0.53
50:S2:155:G:C2	50:S2:164:A:C8	2.96	0.53
50:S2:218:U:C2	50:S2:219:U:C6	2.97	0.53
50:S2:367:U:H4'	50:S2:371:A:C8	2.43	0.53
50:S2:378:U:O4	50:S2:379:C:C4	2.61	0.53
50:S2:437:G:C2	50:S2:457:C:O2	2.61	0.53
50:S2:555:A:C2	50:S2:557:U:C6	2.95	0.53
50:S2:648:A:C2	50:S2:649:U:C5	2.97	0.53
50:S2:887:U:C5	50:S2:888:U:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:976:G:C6	50:S2:977:C:C4	2.97	0.53
50:S2:987:A:C2	52:SB:114:VAL:HG21	2.43	0.53
50:S2:1094:C:N3	50:S2:1095:U:H5	2.02	0.53
50:S2:1110:G:C4	50:S2:1111:U:C6	2.96	0.53
50:S2:1117:C:O4'	50:S2:1117:C:O2	2.27	0.53
50:S2:1156:U:H2'	50:S2:1157:G:H21	1.74	0.53
50:S2:1286:G:H21	63:SM:33:ARG:HD2	1.73	0.53
50:S2:1292:C:C5	82:Sf:150:PHE:N	2.77	0.53
50:S2:1342:U:C6	50:S2:1483:A:N6	2.73	0.53
50:S2:1467:C:N3	50:S2:1468:C:C5	2.77	0.53
50:S2:1529:C:H2'	50:S2:1530:U:C6	2.43	0.53
50:S2:1859:A:C2	50:S2:1860:A:C5	2.97	0.53
74:SX:61:GLN:NE2	74:SX:61:GLN:O	2.42	0.53
84:S4:16:U:O4	84:S4:17:U:N3	2.41	0.53
85:S5:28:G:C6	85:S5:29:G:C6	2.96	0.53
86:S6:15:G:H2'	86:S6:16:A:C5'	2.39	0.53
1:5:21:G:N1	3:8:36:G:C2	2.77	0.53
1:5:60:G:C6	1:5:61:A:C5	2.96	0.53
1:5:303:C:C2	1:5:304:C:C6	2.97	0.53
1:5:330:G:C2	1:5:331:G:C5	2.97	0.53
1:5:427:A:O2'	1:5:428:G:H5'	2.08	0.53
1:5:732:A:C5	1:5:733:A:C2	2.96	0.53
1:5:964:A:C8	1:5:964:A:O5'	2.61	0.53
1:5:965:G:H2'	1:5:965:G:N3	2.23	0.53
1:5:1189:G:C2	1:5:1190:C:N1	2.77	0.53
1:5:1260:G:N3	1:5:1261:G:C8	2.77	0.53
1:5:1266:G:C5'	1:5:2112:G:N3	2.60	0.53
1:5:1367:C:N3	1:5:1369:C:P	2.82	0.53
1:5:1490:G:N1	1:5:1491:A:C5	2.77	0.53
1:5:1889:U:H3'	1:5:1890:G:C8	2.43	0.53
1:5:1928:C:N3	17:O:133:ARG:HD2	2.23	0.53
1:5:2076:G:C6	1:5:2077:C:C4	2.97	0.53
1:5:2092:G:N1	6:C:305:PRO:O	2.37	0.53
1:5:2104:G:C4	1:5:2105:A:C8	2.96	0.53
1:5:2468:U:H2'	1:5:2506:G:O6	2.09	0.53
1:5:2735:G:N1	1:5:2736:G:N7	2.57	0.53
1:5:2819:U:HO2'	20:R:58:HIS:CD2	2.24	0.53
1:5:3653:A:C2	1:5:3692:A:C4'	2.91	0.53
1:5:3668:C:N3	1:5:3669:G:C8	2.77	0.53
1:5:3909:C:C2	1:5:3910:C:C5	2.96	0.53
1:5:4228:G:H5''	1:5:4229:U:C4'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4277:G:N1	1:5:4278:C:C5	2.77	0.53
1:5:4297:G:N3	1:5:4297:G:H2'	2.23	0.53
1:5:4518:A:C4'	1:5:4519:C:H5'	2.39	0.53
1:5:4640:C:N3	1:5:4641:U:C5	2.77	0.53
1:5:4932:U:H2'	1:5:4933:C:C1'	2.39	0.53
1:5:4989:U:O2	1:5:4989:U:O4'	2.23	0.53
1:5:5019:A:C2	1:5:5020:G:N7	2.77	0.53
2:7:73:U:O2	2:7:102:U:O4	2.26	0.53
3:8:142:U:N3	3:8:143:G:C8	2.77	0.53
6:C:54:VAL:HG21	6:C:101:MET:CE	2.39	0.53
8:E:273:LEU:HB2	34:f:4:ARG:CG	2.39	0.53
12:I:95:HIS:CE1	12:I:97:ILE:HD12	2.44	0.53
14:L:176:PHE:C	14:L:176:PHE:HD1	2.17	0.53
26:X:79:PHE:N	26:X:79:PHE:CD1	2.77	0.53
50:S2:73:C:C6	50:S2:74:G:C8	2.96	0.53
50:S2:83:A:C5	50:S2:84:A:C8	2.97	0.53
50:S2:158:A:H2'	50:S2:159:A:C8	2.43	0.53
50:S2:616:A:O2'	74:SX:88:ASP:OD1	2.27	0.53
50:S2:650:A:H2'	50:S2:651:U:O5'	2.08	0.53
50:S2:675:U:O2	50:S2:675:U:H2'	2.09	0.53
50:S2:793:G:C2	50:S2:794:A:H1'	2.43	0.53
50:S2:989:C:N4	50:S2:1001:A:C2	2.77	0.53
50:S2:1022:U:C6	64:SN:128:TYR:HE2	2.23	0.53
50:S2:1419:C:O4'	70:ST:128:GLN:OE1	2.27	0.53
50:S2:1729:U:O2	50:S2:1730:U:H5	1.91	0.53
50:S2:1759:G:N2	50:S2:1774:C:C2	2.76	0.53
50:S2:1771:G:N3	50:S2:1772:C:C6	2.77	0.53
52:SB:144:LYS:O	52:SB:145:LYS:HA	2.09	0.53
52:SB:144:LYS:CG	52:SB:145:LYS:N	2.64	0.53
68:SR:21:TYR:CD1	68:SR:61:ILE:HD13	2.44	0.53
85:S5:34:G:C2	85:S5:35:A:N1	2.77	0.53
86:S6:23:A:N6	86:S6:24:G:O6	2.42	0.53
1:5:31:U:O2'	1:5:32:G:C5'	2.57	0.53
1:5:101:A:N6	1:5:102:G:C6	2.77	0.53
1:5:258:G:C2	1:5:259:C:C6	2.97	0.53
1:5:258:G:N3	1:5:259:C:C6	2.77	0.53
1:5:286:U:N3	1:5:287:U:C5	2.77	0.53
1:5:666:G:C2	1:5:666:G:OP2	2.62	0.53
1:5:936:C:O4'	1:5:936:C:O2	2.27	0.53
1:5:1090:G:H2'	1:5:1091:C:O4'	2.09	0.53
1:5:1168:G:C2	1:5:1169:G:N7	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1348:U:O2	1:5:1348:U:H2'	2.09	0.53
1:5:1373:A:C2	1:5:1374:G:C8	2.97	0.53
1:5:1545:G:C2	1:5:1546:C:N3	2.77	0.53
1:5:1682:A:C4	1:5:1683:U:C6	2.97	0.53
1:5:1836:G:N1	1:5:1837:A:N7	2.57	0.53
1:5:1871:A:C6	1:5:1872:G:C5	2.97	0.53
1:5:1878:G:C2	1:5:1879:C:C6	2.97	0.53
1:5:1912:G:N1	1:5:1913:C:C4	2.77	0.53
1:5:2079:G:C4	1:5:2080:U:C5	2.98	0.53
1:5:2080:U:C4	1:5:2081:C:N4	2.77	0.53
1:5:2319:C:C5	33:e:58:ILE:HG13	2.44	0.53
1:5:2480:G:C2	1:5:2481:G:N9	2.77	0.53
1:5:2521:G:O2'	35:g:26:PRO:HG2	2.09	0.53
1:5:2583:C:OP1	35:g:54:ARG:HB2	2.08	0.53
1:5:2605:G:C2	1:5:2606:G:N7	2.77	0.53
1:5:2682:G:H2'	1:5:2683:C:C6	2.43	0.53
1:5:2725:A:H2'	1:5:2726:G:C5'	2.38	0.53
1:5:2859:G:O2'	1:5:2860:C:C5'	2.57	0.53
1:5:3703:G:C2	1:5:3704:U:C6	2.96	0.53
1:5:4279:A:O4'	1:5:4281:A:C8	2.62	0.53
3:8:53:G:C4	3:8:54:C:C6	2.97	0.53
7:D:265:ARG:HH11	7:D:265:ARG:CG	2.22	0.53
13:J:121:PRO:HG3	69:SS:101:ASN:CB	2.28	0.53
16:N:191:ALA:O	16:N:194:ARG:HB3	2.09	0.53
16:N:196:ASN:N	16:N:196:ASN:ND2	2.54	0.53
17:O:34:VAL:HG11	17:O:112:TYR:CE2	2.44	0.53
19:Q:58:ARG:HH11	19:Q:58:ARG:HB2	1.72	0.53
50:S2:10:G:H21	53:SC:114:LYS:HA	1.72	0.53
50:S2:38:A:N1	50:S2:515:G:N2	2.57	0.53
50:S2:52:G:C2	50:S2:53:C:C1'	2.91	0.53
50:S2:113:G:C2	50:S2:293:C:C5	2.97	0.53
50:S2:430:C:C2	50:S2:431:G:C8	2.97	0.53
50:S2:553:U:H2'	50:S2:554:A:C8	2.44	0.53
50:S2:583:C:N3	50:S2:584:G:C8	2.77	0.53
50:S2:823:U:C5	60:SJ:144:ILE:HD13	2.43	0.53
50:S2:1050:A:C5	50:S2:1051:G:C8	2.97	0.53
50:S2:1149:A:N3	50:S2:1151:G:N7	2.57	0.53
50:S2:1210:G:N2	50:S2:1690:U:C1'	2.72	0.53
55:SE:48:LEU:HD22	55:SE:61:VAL:HG13	1.91	0.53
55:SE:224:ASN:OD1	55:SE:224:ASN:N	2.41	0.53
70:ST:5:THR:HA	70:ST:132:ASP:OD2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:7:A:P	85:S5:8:U:C5	3.02	0.53
86:S6:55:U:H2'	86:S6:56:C:H6	1.73	0.53
1:5:84:A:H4'	1:5:85:G:OP1	2.08	0.52
1:5:271:C:C2	1:5:272:U:C5	2.86	0.52
1:5:990:C:C2	1:5:991:C:C6	2.96	0.52
1:5:1075:G:C2	1:5:1076:C:C2	2.97	0.52
1:5:1265:G:H5''	1:5:2115:G:C2	2.43	0.52
1:5:1572:U:C5'	20:R:95:TRP:CZ2	2.92	0.52
1:5:1595:G:N1	1:5:4557:U:H5'	2.23	0.52
1:5:1601:A:N7	1:5:3643:A:N9	2.57	0.52
1:5:1619:G:C6	1:5:1620:U:C4	2.97	0.52
1:5:1663:C:H2'	1:5:1664:U:H6	1.74	0.52
1:5:1667:G:C6	1:5:2280:G:C4	2.96	0.52
1:5:1685:G:C2	1:5:1686:C:C2	2.97	0.52
1:5:1691:G:C5	1:5:1692:C:C5	2.97	0.52
1:5:2538:U:H2'	1:5:2539:C:C6	2.44	0.52
1:5:2567:G:C2	1:5:2568:C:N1	2.76	0.52
1:5:2577:C:C5	28:Z:17:ARG:NH2	2.77	0.52
1:5:2594:C:C2	1:5:2595:C:C5	2.97	0.52
1:5:2678:A:N1	1:5:2679:G:C5	2.77	0.52
1:5:3753:G:C6	1:5:3776:G:N1	2.77	0.52
1:5:4114:C:H3'	1:5:4115:G:C4'	2.39	0.52
1:5:4344:U:O2	1:5:4344:U:H2'	2.10	0.52
1:5:4580:U:C4	1:5:4581:G:C8	2.96	0.52
1:5:4617:G:C2	1:5:4618:G:C8	2.97	0.52
1:5:4697:U:C4'	41:m:104:HIS:HD2	2.15	0.52
1:5:4885:U:C4	1:5:4886:C:C5	2.96	0.52
1:5:4951:G:HO2'	1:5:4952:G:P	2.33	0.52
2:7:114:U:C2	2:7:115:A:C8	2.97	0.52
3:8:80:A:C8	3:8:81:C:H1'	2.44	0.52
4:A:16:PHE:CE1	4:A:194:ASN:HB3	2.44	0.52
6:C:22:VAL:HG13	6:C:258:ARG:HE	1.74	0.52
6:C:200:ARG:NH2	27:Y:11:ARG:CD	2.72	0.52
9:F:124:PHE:CD2	9:F:196:ILE:CG2	2.92	0.52
10:G:48:LYS:HB3	26:X:42:THR:HG23	1.90	0.52
20:R:117:ARG:HD3	20:R:118:HIS:CE1	2.43	0.52
21:S:29:ARG:HH12	22:T:150:LEU:HA	1.74	0.52
50:S2:18:C:N3	50:S2:19:A:N7	2.57	0.52
50:S2:29:G:N3	50:S2:30:C:C5	2.77	0.52
50:S2:54:A:C2	50:S2:451:G:N3	2.77	0.52
50:S2:165:G:H2'	50:S2:166:A:H8	1.68	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:574:A:H2'	50:S2:575:A:C8	2.43	0.52
50:S2:605:A:H8	50:S2:605:A:O5'	1.91	0.52
50:S2:609:U:C2	50:S2:610:G:H8	2.27	0.52
50:S2:993:G:N2	50:S2:994:C:N1	2.56	0.52
50:S2:1126:G:C6	50:S2:1127:C:C4	2.97	0.52
50:S2:1185:C:H2'	50:S2:1185:C:O2	2.09	0.52
50:S2:1206:G:C1'	50:S2:1834:A:H8	2.21	0.52
50:S2:1287:A:C4	50:S2:1313:A:C6	2.97	0.52
50:S2:1294:G:H8	82:Sf:151:ASN:C	2.17	0.52
50:S2:1372:U:P	50:S2:1385:G:H22	2.32	0.52
50:S2:1551:U:C1'	50:S2:1558:C:C2	2.92	0.52
50:S2:1552:G:H5''	50:S2:1553:C:H5''	1.91	0.52
50:S2:1572:C:N3	50:S2:1573:G:C8	2.77	0.52
50:S2:1668:U:H5'	71:SU:77:TRP:CH2	2.44	0.52
51:SA:103:PHE:CD2	51:SA:103:PHE:C	2.87	0.52
53:SC:146:GLU:CD	54:SD:120:TYR:HH	2.13	0.52
55:SE:121:TYR:HB2	55:SE:161:GLN:HE21	1.74	0.52
62:SL:73:LEU:HD12	62:SL:140:PHE:CE2	2.45	0.52
68:SR:18:GLU:CG	68:SR:69:ILE:HA	2.39	0.52
69:SS:92:ASP:O	69:SS:94:LYS:N	2.37	0.52
80:Sd:8:TRP:HA	80:Sd:8:TRP:CE3	2.44	0.52
85:S5:37:A:C4	85:S5:38:A:C4	2.96	0.52
85:S5:38:A:C3'	85:S5:39:U:C6	2.92	0.52
85:S5:47:U:H3'	85:S5:48:C:O5'	2.09	0.52
86:S6:14:C:O2	86:S6:14:C:H2'	2.07	0.52
1:5:65:A:O2'	1:5:66:A:H4'	2.08	0.52
1:5:422:C:O2	1:5:422:C:C2'	2.54	0.52
1:5:667:A:C2'	1:5:668:C:O4'	2.55	0.52
1:5:981:C:C4	8:E:69:TYR:CZ	2.97	0.52
1:5:992:C:N3	1:5:993:G:N7	2.57	0.52
1:5:1048:G:C5	1:5:1049:C:C5	2.97	0.52
1:5:1066:G:C6	1:5:1067:G:C5	2.98	0.52
1:5:1211:G:N2	1:5:1212:G:C5	2.78	0.52
1:5:1287:G:N2	1:5:1289:C:C6	2.77	0.52
1:5:1293:G:H5''	1:5:1293:G:H8	1.74	0.52
1:5:1347:G:C6	1:5:1348:U:C5	2.97	0.52
1:5:1404:G:C2	1:5:1414:C:N3	2.76	0.52
1:5:1487:G:C6	1:5:1488:G:C8	2.97	0.52
1:5:1543:G:N1	1:5:1544:G:C5	2.76	0.52
1:5:1687:U:O2	1:5:1850:A:N1	2.42	0.52
1:5:1782:U:O2	1:5:1783:C:C6	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1797:G:C2	1:5:1798:G:C8	2.97	0.52
1:5:1902:G:C6	1:5:2075:G:C2	2.98	0.52
1:5:1955:G:C5	1:5:1956:A:C8	2.97	0.52
1:5:2044:U:O2'	17:O:63:ASN:CB	2.57	0.52
1:5:2080:U:C2	1:5:2081:C:H5	2.17	0.52
1:5:2085:G:C2	1:5:2273:G:N1	2.76	0.52
1:5:2090:U:HO2'	1:5:2091:C:P	2.32	0.52
1:5:2301:G:N2	1:5:2302:C:N1	2.56	0.52
1:5:2316:G:N3	1:5:2317:C:C5	2.77	0.52
1:5:2453:A:C4	1:5:2507:A:C8	2.98	0.52
1:5:2503:G:H3'	1:5:2504:C:C5'	2.40	0.52
1:5:2526:C:N4	47:1:405:ARG:HG2	2.25	0.52
1:5:2567:G:C6	1:5:2568:C:C4	2.97	0.52
1:5:2567:G:N1	1:5:2568:C:C5	2.78	0.52
1:5:3623:C:H5	1:5:3624:A:C5	2.28	0.52
1:5:3738:G:C6	1:5:3739:C:N1	2.77	0.52
1:5:3800:A:N3	1:5:4496:A:H1'	2.25	0.52
1:5:3893:C:C4	1:5:4568:A:C2	2.97	0.52
1:5:3962:A:C6	1:5:4038:C:H4'	2.45	0.52
1:5:3977:C:C2	1:5:4035:G:N1	2.77	0.52
1:5:4236:G:C2	1:5:4289:U:O2	2.62	0.52
1:5:4399:U:C4	1:5:4400:G:N7	2.76	0.52
1:5:4733:C:C5	1:5:4734:A:O4'	2.63	0.52
2:7:104:C:N3	2:7:105:C:C5	2.77	0.52
4:A:89:TYR:O	4:A:100:ASN:ND2	2.42	0.52
5:B:251:VAL:HG21	5:B:267:ALA:HB3	1.91	0.52
5:B:388:PHE:O	5:B:390:GLY:N	2.42	0.52
9:F:93:PHE:CE1	9:F:95:ILE:HG13	2.44	0.52
9:F:117:ARG:O	19:Q:4:ASP:OD2	2.27	0.52
12:I:171:TRP:HB2	12:I:181:PHE:CD2	2.44	0.52
15:M:11:ARG:CZ	15:M:11:ARG:HB2	2.38	0.52
21:S:45:TRP:CZ3	21:S:56:LYS:CA	2.84	0.52
47:1:447:ILE:C	47:1:450:ALA:N	2.67	0.52
50:S2:53:C:C2	50:S2:54:A:H8	2.20	0.52
50:S2:72:C:O2	50:S2:73:C:N1	2.43	0.52
50:S2:436:G:N1	50:S2:437:G:C5	2.76	0.52
50:S2:673:G:C8	50:S2:1084:A:C6	2.96	0.52
50:S2:933:G:C4	50:S2:1001:A:C8	2.97	0.52
50:S2:948:C:N3	50:S2:949:G:N7	2.57	0.52
50:S2:992:A:C2	50:S2:993:G:C8	2.97	0.52
50:S2:1025:U:H2'	50:S2:1026:C:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1233:G:C4	50:S2:1234:C:C6	2.97	0.52
50:S2:1563:G:C2	50:S2:1564:C:C2	2.98	0.52
50:S2:1640:A:O4'	86:S6:41:C:O2'	2.23	0.52
50:S2:1696:C:C5'	50:S2:1696:C:C6	2.85	0.52
50:S2:1850:A:H2'	50:S2:1851:A:C8	2.45	0.52
52:SB:172:MET:HE3	52:SB:212:VAL:HG12	1.91	0.52
60:SJ:114:VAL:HG12	60:SJ:120:ALA:HB2	1.91	0.52
83:Sg:17:TRP:HB3	83:Sg:303:THR:CA	2.33	0.52
83:Sg:176:VAL:HG23	83:Sg:188:HIS:HD2	1.75	0.52
86:S6:29:G:N1	86:S6:42:C:C4	2.77	0.52
86:S6:53:G:N2	86:S6:62:C:C1'	2.73	0.52
86:S6:53:G:C6	86:S6:62:C:N4	2.78	0.52
1:5:397:G:N2	18:P:22:LEU:HD22	2.24	0.52
1:5:712:C:C4	1:5:713:C:C5	2.98	0.52
1:5:939:G:H5'	1:5:940:C:OP2	2.10	0.52
1:5:993:G:C2	1:5:994:G:C8	2.97	0.52
1:5:1272:C:O3'	1:5:1273:G:O4'	2.25	0.52
1:5:1308:C:C2	1:5:1309:C:C5	2.97	0.52
1:5:1362:G:C2	1:5:1363:C:C6	2.97	0.52
1:5:1474:C:N3	1:5:1475:G:C5	2.77	0.52
1:5:1549:G:C2	1:5:1580:C:C2	2.97	0.52
1:5:1554:A:C6	1:5:1555:G:C4	2.97	0.52
1:5:1617:G:C5	1:5:1618:G:N7	2.77	0.52
1:5:1624:G:C5	1:5:1643:A:C8	2.98	0.52
1:5:1673:U:O2	1:5:1674:C:C6	2.62	0.52
1:5:1902:G:H2'	1:5:1903:G:O5'	2.09	0.52
1:5:2288:G:C2	1:5:2290:C:C5	2.98	0.52
1:5:2320:G:O2'	1:5:2321:G:C8	2.57	0.52
1:5:2592:U:C5	1:5:2593:C:C6	2.98	0.52
1:5:3722:G:C2	1:5:3723:A:C4	2.98	0.52
1:5:3728:A:C8	1:5:3729:U:O4'	2.62	0.52
1:5:3858:C:O2	1:5:3858:C:C2'	2.55	0.52
1:5:3952:A:C6	1:5:3953:G:C5	2.98	0.52
1:5:4058:U:N3	1:5:4059:C:C6	2.77	0.52
1:5:4173:G:C5	1:5:4174:U:C5	2.98	0.52
1:5:4284:C:N3	1:5:4285:U:C4	2.76	0.52
1:5:4301:U:P	22:T:87:LYS:HZ3	2.32	0.52
1:5:4773:C:C2	1:5:4863:G:C2	2.98	0.52
1:5:4965:U:O2	1:5:4965:U:H2'	2.04	0.52
1:5:4966:A:C2'	1:5:4967:A:O4'	2.47	0.52
9:F:59:TYR:O	9:F:63:TYR:HB2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:156:ASN:HD21	11:H:157:SER:HB3	1.74	0.52
12:I:39:LYS:HB3	12:I:86:HIS:CE1	2.44	0.52
13:J:98:ASN:OD1	13:J:98:ASN:N	2.43	0.52
14:L:81:LEU:O	14:L:83:VAL:N	2.42	0.52
16:N:115:VAL:HA	16:N:134:LEU:HD23	1.91	0.52
23:U:42:PHE:CD2	23:U:90:TYR:CE1	2.98	0.52
27:Y:81:TYR:CD2	27:Y:96:HIS:HB2	2.44	0.52
33:e:77:PHE:HE2	45:r:25:TYR:CD2	2.27	0.52
46:z:29:LEU:HD12	46:z:171:HIS:HB3	1.90	0.52
50:S2:166:A:C2	50:S2:167:G:C5	2.97	0.52
50:S2:318:A:C2	50:S2:332:G:N2	2.77	0.52
50:S2:340:C:C2'	50:S2:341:C:C6	2.91	0.52
50:S2:403:G:C2	50:S2:404:G:C8	2.97	0.52
50:S2:459:C:N3	50:S2:460:A:N7	2.55	0.52
50:S2:582:C:O2	50:S2:582:C:H2'	2.09	0.52
50:S2:613:G:H2'	50:S2:627:U:C5	2.43	0.52
50:S2:646:G:H5'	50:S2:647:U:OP2	2.09	0.52
50:S2:661:U:H3'	50:S2:662:G:H8	1.75	0.52
50:S2:752:G:C2	50:S2:790:C:N3	2.77	0.52
50:S2:858:A:N1	50:S2:859:G:N7	2.56	0.52
50:S2:983:A:H2'	50:S2:984:C:O4'	2.09	0.52
50:S2:1040:G:C6	50:S2:1041:G:C5	2.97	0.52
50:S2:1201:U:C2	50:S2:1202:U:C5	2.97	0.52
50:S2:1271:C:C4	50:S2:1272:C:C6	2.97	0.52
50:S2:1311:C:OP2	63:SM:37:GLU:OE2	2.28	0.52
50:S2:1344:A:H61	50:S2:1386:A:H5''	1.75	0.52
50:S2:1345:G:C2	50:S2:1346:U:C6	2.98	0.52
50:S2:1351:G:N2	50:S2:1379:A:C4	2.77	0.52
50:S2:1407:U:O2	50:S2:1408:U:C4	2.62	0.52
50:S2:1408:U:H4'	67:SQ:71:ARG:HH21	1.73	0.52
50:S2:1489:A:N1	54:SD:146:ARG:CZ	2.72	0.52
50:S2:1791:A:C5	50:S2:1792:G:H1'	2.44	0.52
50:S2:1838:U:C5'	50:S2:1838:U:C6	2.92	0.52
50:S2:1862:G:O3'	50:S2:1863:A:H3'	2.10	0.52
54:SD:20:GLU:HG2	61:SK:64:TRP:CD2	2.45	0.52
54:SD:193:ASP:HB3	54:SD:194:PRO:CD	2.39	0.52
62:SL:124:ASP:OD1	62:SL:147:LYS:HB3	2.08	0.52
63:SM:36:ARG:HD3	82:Sf:143:LYS:HZ1	1.74	0.52
68:SR:16:ILE:HG22	68:SR:24:LEU:HD11	1.91	0.52
76:SZ:68:ILE:O	76:SZ:69:THR:HG23	2.09	0.52
85:S5:3:C:O2'	85:S5:4:C:H5''	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:10:G:N2	85:S5:25:C:H42	2.06	0.52
1:5:54:G:N1	1:5:55:G:N9	2.58	0.52
1:5:118:C:H2'	1:5:118:C:O2	2.09	0.52
1:5:138:G:C3'	1:5:139:G:H5'	2.40	0.52
1:5:328:A:OP2	37:i:30:ARG:NH1	2.42	0.52
1:5:394:G:N3	1:5:394:G:H2'	2.25	0.52
1:5:1092:G:H2'	1:5:1093:C:O4'	2.09	0.52
1:5:1219:G:N3	1:5:1220:G:C8	2.77	0.52
1:5:1270:A:C8	1:5:1271:G:C8	2.97	0.52
1:5:1429:C:C2	1:5:1430:C:C6	2.98	0.52
1:5:1555:G:C4	1:5:1556:C:C6	2.97	0.52
1:5:1682:A:C5	1:5:1683:U:C6	2.98	0.52
1:5:1959:U:H1'	1:5:1961:G:H1'	1.91	0.52
1:5:2090:U:P	1:5:2090:U:O4'	2.66	0.52
1:5:2103:G:C6	1:5:2104:G:N7	2.77	0.52
1:5:2128:G:C4	1:5:2129:C:C6	2.97	0.52
1:5:2300:A:C2	6:C:182:LYS:HA	2.45	0.52
1:5:2424:G:N2	1:5:2426:U:O2	2.43	0.52
1:5:2555:G:H2'	1:5:2556:G:O4'	2.09	0.52
1:5:2573:A:H2'	1:5:2574:G:O4'	2.09	0.52
1:5:2715:G:C6	1:5:2716:C:C4	2.98	0.52
1:5:2723:U:O2	1:5:2724:G:C8	2.62	0.52
1:5:2736:G:C4	1:5:2737:C:C5	2.98	0.52
1:5:2786:C:H4'	1:5:2787:A:C8	2.44	0.52
1:5:2843:U:N3	1:5:2844:A:C8	2.75	0.52
1:5:2908:U:N3	1:5:2909:C:C5	2.78	0.52
1:5:3719:A:C5	1:5:3720:G:C8	2.98	0.52
1:5:3808:C:H5'	50:S2:1816:G:HO2'	1.71	0.52
1:5:3856:A:C6	1:5:3857:G:C5	2.97	0.52
1:5:4087:G:H3'	1:5:4087:G:H8	1.74	0.52
1:5:4124:G:N1	4:A:64:ARG:NH1	2.57	0.52
1:5:4201:G:C2	1:5:4202:U:C4	2.97	0.52
1:5:4314:C:H2'	1:5:4314:C:O2	2.09	0.52
1:5:4745:G:H2'	1:5:4746:C:C5	2.44	0.52
1:5:4859:C:C2	1:5:4860:G:C8	2.97	0.52
1:5:4874:A:O2'	17:O:175:MET:HE3	2.09	0.52
2:7:92:C:C2	2:7:93:G:C8	2.98	0.52
3:8:139:G:C4	3:8:140:C:C6	2.98	0.52
4:A:158:ILE:CG2	4:A:162:ASN:OD1	2.57	0.52
6:C:33:ARG:HH21	19:Q:22:ASP:HB3	1.75	0.52
10:G:57:TRP:CE3	10:G:61:ILE:HG21	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:172:ILE:HD12	41:m:90:ASN:HB3	1.91	0.52
13:J:32:ARG:CZ	13:J:32:ARG:HB3	2.39	0.52
25:W:8:PHE:C	25:W:8:PHE:HD1	2.17	0.52
31:c:35:LEU:HD23	31:c:39:ARG:HH12	1.75	0.52
34:f:14:TYR:OH	34:f:94:ALA:HB2	2.09	0.52
47:1:216:LEU:HD13	47:1:242:LEU:HD12	1.92	0.52
50:S2:196:C:C2	50:S2:204:G:C2	2.98	0.52
50:S2:293:C:O2	50:S2:293:C:H2'	2.09	0.52
50:S2:443:U:O4	50:S2:444:G:C5	2.63	0.52
50:S2:493:A:N3	50:S2:493:A:C2'	2.73	0.52
50:S2:533:A:C4	50:S2:534:G:C8	2.98	0.52
50:S2:582:C:H2'	50:S2:583:C:H6	1.75	0.52
50:S2:597:G:N2	50:S2:640:A:N3	2.57	0.52
50:S2:833:C:N3	50:S2:834:C:C5	2.77	0.52
50:S2:909:G:C2	50:S2:910:G:N7	2.76	0.52
50:S2:989:C:C2	50:S2:1001:A:N1	2.76	0.52
50:S2:989:C:C4	50:S2:1001:A:C2	2.97	0.52
50:S2:1061:U:O2	50:S2:1848:U:H4'	2.10	0.52
50:S2:1378:A:H62	51:SA:136:GLU:HG3	1.67	0.52
50:S2:1393:G:C6	50:S2:1394:G:N7	2.77	0.52
50:S2:1571:G:C4	50:S2:1572:C:C6	2.98	0.52
50:S2:1595:U:O4	50:S2:1596:U:H5	1.88	0.52
50:S2:1630:A:N1	50:S2:1631:U:C4	2.77	0.52
50:S2:1792:G:N1	50:S2:1793:A:C5	2.78	0.52
58:SH:92:VAL:O	58:SH:169:LYS:NZ	2.41	0.52
64:SN:34:LYS:O	64:SN:38:TYR:HB2	2.10	0.52
74:SX:88:ASP:OD1	74:SX:89:GLY:N	2.41	0.52
85:S5:2:C:H5	85:S5:3:C:N4	2.07	0.52
85:S5:67:C:O5'	85:S5:67:C:H6	1.91	0.52
85:S5:72:C:C3'	85:S5:73:A:H5''	2.40	0.52
86:S6:5:C:N3	86:S6:6:G:C8	2.76	0.52
1:5:61:A:OP1	16:N:162:ARG:NH2	2.42	0.52
1:5:127:G:C2	1:5:128:C:C6	2.97	0.52
1:5:370:U:C4	1:5:1637:A:N6	2.78	0.52
1:5:689:U:C2	1:5:690:C:C6	2.98	0.52
1:5:942:G:P	9:F:244:ARG:NH1	2.82	0.52
1:5:984:C:N3	1:5:1070:G:C2	2.78	0.52
1:5:986:C:C4	1:5:1068:G:N1	2.78	0.52
1:5:1072:C:C2'	1:5:1072:C:O2	2.57	0.52
1:5:1074:G:H2'	1:5:1075:G:H1'	1.91	0.52
1:5:1170:G:N1	1:5:1171:G:C5	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1203:G:C4	1:5:1204:C:C6	2.97	0.52
1:5:1388:A:H2'	1:5:1389:U:O4'	2.09	0.52
1:5:1395:U:H2'	1:5:1396:G:O5'	2.09	0.52
1:5:1561:G:O2'	1:5:1562:G:H5'	2.09	0.52
1:5:1831:G:C6	1:5:1832:C:C4	2.98	0.52
1:5:1866:U:O4	1:5:4405:G:N9	2.41	0.52
1:5:2249:C:H2'	1:5:2249:C:O2	2.09	0.52
1:5:2311:C:C4	1:5:2312:U:C5	2.98	0.52
1:5:2448:G:C6	1:5:2511:A:C5	2.98	0.52
1:5:2494:U:H2'	1:5:2495:U:O4'	2.08	0.52
1:5:2560:C:C2	1:5:2561:C:C6	2.98	0.52
1:5:2590:G:C6	1:5:2754:G:C6	2.98	0.52
1:5:2606:G:C2	1:5:2607:C:C6	2.97	0.52
1:5:2898:G:C6	1:5:2899:C:C4	2.98	0.52
1:5:3650:C:H2'	1:5:3651:A:O4'	2.10	0.52
1:5:3846:C:N3	1:5:3847:C:C6	2.77	0.52
1:5:3899:G:C5'	5:B:257:TRP:HD1	2.22	0.52
1:5:4091:G:N1	1:5:4092:G:C5	2.77	0.52
1:5:4097:G:C6	1:5:4098:A:N7	2.78	0.52
1:5:4139:G:C2	1:5:4140:C:N1	2.78	0.52
1:5:4238:G:C2	1:5:4287:G:C6	2.97	0.52
1:5:4455:G:N1	1:5:4456:C:C4	2.78	0.52
3:8:10:G:O6	3:8:11:C:C4	2.63	0.52
3:8:13:G:C4	3:8:14:U:C4	2.97	0.52
5:B:45:ALA:HB3	5:B:183:ILE:HG23	1.90	0.52
7:D:22:ARG:HG3	7:D:22:ARG:NH1	2.14	0.52
11:H:177:ASP:N	11:H:177:ASP:OD1	2.42	0.52
20:R:35:ALA:O	20:R:37:SER:N	2.42	0.52
38:j:76:HIS:O	38:j:79:ARG:NH1	2.43	0.52
50:S2:56:G:H2'	50:S2:57:U:C6	2.44	0.52
50:S2:74:G:C6	57:SG:171:THR:OG1	2.55	0.52
50:S2:205:G:H2'	50:S2:206:G:O4'	2.09	0.52
50:S2:313:A:O5'	57:SG:195:LYS:NZ	2.42	0.52
50:S2:375:U:H2'	50:S2:376:A:O4'	2.10	0.52
50:S2:619:A:H2'	50:S2:619:A:N3	2.24	0.52
50:S2:752:G:C2	50:S2:791:C:C2	2.97	0.52
50:S2:1236:G:C4	50:S2:1237:C:C5	2.98	0.52
50:S2:1318:G:C6	50:S2:1319:U:C4	2.97	0.52
50:S2:1510:G:C6	50:S2:1511:U:C4	2.97	0.52
50:S2:1743:G:H2'	50:S2:1744:G:C8	2.44	0.52
51:SA:10:MET:HA	51:SA:55:TRP:CE3	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:176:TRP:CH2	51:SA:199:PRO:HG3	2.45	0.52
51:SA:199:PRO:HB2	51:SA:203:PHE:HZ	1.74	0.52
55:SE:17:HIS:O	55:SE:18:TRP:CD1	2.62	0.52
58:SH:176:VAL:O	58:SH:177:TYR:C	2.52	0.52
77:Sa:51:ARG:NH1	79:Sc:40:ARG:HH11	2.08	0.52
86:S6:50:U:C2	86:S6:51:U:C4	2.98	0.52
86:S6:54:U:H2'	86:S6:54:U:O2	2.08	0.52
1:5:98:A:C6	1:5:99:A:N9	2.78	0.52
1:5:127:G:N3	1:5:128:C:C6	2.77	0.52
1:5:146:G:C2	1:5:147:A:C5	2.97	0.52
1:5:219:G:C4	1:5:219:G:C5'	2.93	0.52
1:5:219:G:H8	1:5:220:C:C5	2.28	0.52
1:5:691:C:H2'	1:5:692:A:C8	2.45	0.52
1:5:1189:G:C4	1:5:1190:C:C6	2.97	0.52
1:5:1203:G:C5	1:5:1204:C:C5	2.98	0.52
1:5:1271:G:H5''	1:5:1272:C:O4'	2.10	0.52
1:5:1275:G:C6	1:5:1276:C:C4	2.97	0.52
1:5:1393:G:H2'	1:5:1394:G:H5'	1.91	0.52
1:5:1412:G:C2	1:5:1413:C:C5	2.97	0.52
1:5:1774:C:N3	1:5:1775:A:C8	2.77	0.52
1:5:1846:G:C4	1:5:1847:C:C5	2.98	0.52
1:5:1877:G:C4	1:5:1878:G:C8	2.97	0.52
1:5:2033:A:N3	1:5:2034:G:C8	2.77	0.52
1:5:2089:G:O6	1:5:2263:A:O5'	2.27	0.52
1:5:2367:A:C2	1:5:2368:A:C8	2.98	0.52
1:5:2557:G:C2	1:5:2571:C:C2	2.97	0.52
1:5:2769:U:OP1	35:g:68:SER:HA	2.10	0.52
1:5:2851:G:C6	1:5:2852:U:H1'	2.44	0.52
1:5:3611:A:C2	1:5:5016:A:H8	2.27	0.52
1:5:3755:G:O6	1:5:3769:C:N4	2.42	0.52
1:5:3911:C:N3	1:5:3912:U:C5	2.77	0.52
1:5:4175:G:C6	1:5:4176:C:C5	2.98	0.52
1:5:4284:C:N3	1:5:4285:U:H5	1.99	0.52
1:5:4510:A:N6	1:5:4592:C:O2'	2.39	0.52
1:5:4608:G:H3'	1:5:4609:G:H8	1.74	0.52
1:5:4619:U:C2	1:5:4620:U:C6	2.98	0.52
1:5:4872:G:O2'	1:5:4873:G:P	2.67	0.52
2:7:110:G:C4	2:7:111:C:C5	2.97	0.52
3:8:79:G:H2'	3:8:80:A:N3	2.25	0.52
3:8:80:A:C3'	3:8:81:C:H4'	2.39	0.52
3:8:130:C:N4	3:8:131:G:N7	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:89:TYR:HB2	4:A:100:ASN:ND2	2.17	0.52
5:B:119:TYR:OH	5:B:129:ALA:HB3	2.10	0.52
9:F:146:TYR:CE2	9:F:239:GLU:HB3	2.45	0.52
13:J:19:LYS:HD2	13:J:21:CYS:SG	2.50	0.52
13:J:104:ASN:OD1	13:J:133:VAL:HA	2.10	0.52
13:J:107:PHE:CZ	13:J:130:PHE:HB2	2.45	0.52
20:R:126:LYS:HB3	20:R:132:PHE:CE2	2.44	0.52
27:Y:15:ARG:HB3	27:Y:15:ARG:CZ	2.40	0.52
29:a:110:LYS:HG2	29:a:112:LEU:HD21	1.92	0.52
47:1:84:ILE:CD1	47:1:162:VAL:HG11	2.40	0.52
50:S2:70:G:N3	50:S2:71:G:C8	2.77	0.52
50:S2:122:G:C2	50:S2:123:G:C4	2.97	0.52
50:S2:402:C:N4	50:S2:403:G:C5	2.77	0.52
50:S2:415:A:H2	50:S2:423:U:O2	1.93	0.52
50:S2:532:C:C2	50:S2:533:A:N7	2.78	0.52
50:S2:617:G:C6	50:S2:618:C:C5	2.97	0.52
50:S2:828:G:C6	50:S2:829:C:C4	2.97	0.52
50:S2:959:G:C8	50:S2:959:G:H3'	2.45	0.52
50:S2:1067:C:H2'	50:S2:1067:C:O2	2.08	0.52
50:S2:1109:C:N4	68:SR:123:THR:CA	2.71	0.52
50:S2:1112:U:C5	50:S2:1113:A:C5	2.98	0.52
50:S2:1137:U:O2'	50:S2:1138:C:OP1	2.15	0.52
50:S2:1171:G:O2'	50:S2:1187:G:O6	2.24	0.52
50:S2:1292:C:H6	82:Sf:149:CYS:HA	1.74	0.52
50:S2:1292:C:H6	82:Sf:149:CYS:CA	2.23	0.52
50:S2:1294:G:C5'	82:Sf:151:ASN:O	2.57	0.52
50:S2:1348:G:N3	50:S2:1348:G:C2'	2.71	0.52
50:S2:1350:U:O2	51:SA:110:ASN:OD1	2.28	0.52
50:S2:1387:G:H21	68:SR:8:THR:CG2	2.22	0.52
50:S2:1573:G:H5'	50:S2:1574:C:OP2	2.10	0.52
50:S2:1589:A:H4'	70:ST:82:ARG:HG2	1.91	0.52
50:S2:1699:A:N1	53:SC:115:GLN:CG	2.73	0.52
50:S2:1771:G:C6	50:S2:1772:C:C4	2.98	0.52
54:SD:222:PRO:HB2	83:Sg:226:HIS:HE2	1.74	0.52
55:SE:21:ASP:OD1	55:SE:21:ASP:C	2.52	0.52
55:SE:139:LEU:HD13	55:SE:160:ILE:CD1	2.40	0.52
63:SM:17:ALA:HB1	63:SM:124:ILE:HG23	1.92	0.52
70:ST:31:PRO:CB	70:ST:33:TRP:CZ2	2.93	0.52
86:S6:63:G:N3	86:S6:64:A:C1'	2.73	0.52
1:5:137:G:H4'	36:h:98:HIS:HD2	1.73	0.52
1:5:230:G:N2	1:5:239:C:C2	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:247:G:C4	1:5:248:C:C5	2.98	0.52
1:5:321:U:H2'	1:5:322:C:O4'	2.08	0.52
1:5:687:U:C5	1:5:688:U:C5	2.97	0.52
1:5:1189:G:C2	1:5:1190:C:C2	2.98	0.52
1:5:1203:G:C6	1:5:1204:C:C4	2.98	0.52
1:5:1360:G:H5''	14:L:25:TRP:CZ3	2.45	0.52
1:5:1441:C:H2'	1:5:1442:C:O4'	2.09	0.52
1:5:1540:C:H5''	4:A:19:HIS:CD2	2.44	0.52
1:5:1570:G:C6	1:5:1571:G:C8	2.98	0.52
1:5:1629:G:C5	1:5:1631:A:N6	2.78	0.52
1:5:1655:C:H4'	1:5:1679:A:C2	2.45	0.52
1:5:1899:G:N2	1:5:1900:C:C4	2.78	0.52
1:5:1965:G:C6	1:5:1966:C:N4	2.77	0.52
1:5:2328:G:C4	1:5:2329:U:C5	2.98	0.52
1:5:2556:G:N2	1:5:2572:C:C2	2.78	0.52
1:5:2753:G:H3'	1:5:2754:G:O4'	2.09	0.52
1:5:2805:C:N4	1:5:2806:A:C6	2.78	0.52
1:5:3775:A:H3'	1:5:3776:G:O4'	2.09	0.52
1:5:3833:C:O2	1:5:3834:C:C6	2.63	0.52
1:5:4092:G:C6	1:5:4093:G:N2	2.77	0.52
1:5:4109:G:C4	1:5:4110:C:C6	2.98	0.52
1:5:4479:A:C5	1:5:4480:A:C8	2.98	0.52
1:5:4502:C:N3	1:5:4503:A:C8	2.78	0.52
1:5:4518:A:O2'	5:B:257:TRP:CZ3	2.54	0.52
1:5:4730:C:N3	1:5:4734:A:N7	2.58	0.52
1:5:5063:G:C2	1:5:5064:G:N7	2.78	0.52
3:8:115:G:C2	3:8:116:C:C6	2.98	0.52
4:A:196:TRP:CG	4:A:197:PRO:N	2.78	0.52
5:B:116:ARG:CG	5:B:177:LYS:HG3	2.39	0.52
6:C:209:ILE:HD13	6:C:221:PHE:CD2	2.45	0.52
8:E:129:PHE:CD1	8:E:129:PHE:C	2.88	0.52
9:F:59:TYR:CD2	9:F:194:HIS:CD2	2.98	0.52
14:L:178:ALA:HB3	29:a:134:GLU:OE1	2.10	0.52
20:R:162:ARG:NE	62:SL:157:LYS:O	2.42	0.52
22:T:3:ASN:HB3	22:T:9:ARG:NH1	2.25	0.52
22:T:105:PHE:CE1	22:T:109:VAL:CG2	2.92	0.52
35:g:37:LYS:HB2	35:g:60:ARG:NE	2.24	0.52
47:1:343:HIS:O	47:1:360:HIS:NE2	2.43	0.52
50:S2:56:G:O2'	50:S2:57:U:O5'	2.28	0.52
50:S2:127:C:C5	50:S2:181:A:C6	2.98	0.52
50:S2:171:A:N7	50:S2:173:A:C6	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:359:U:OP1	74:SX:22:TRP:CE2	2.53	0.52
50:S2:381:C:O2'	50:S2:382:C:H5'	2.09	0.52
50:S2:413:G:C5	50:S2:425:G:N2	2.78	0.52
50:S2:428:U:C5	60:SJ:7:TRP:CH2	2.93	0.52
50:S2:568:C:C5	50:S2:569:A:C8	2.98	0.52
50:S2:646:G:C5	50:S2:647:U:C6	2.97	0.52
50:S2:805:U:O2	50:S2:805:U:H2'	2.09	0.52
50:S2:823:U:O2	50:S2:823:U:O4'	2.27	0.52
50:S2:962:A:C6	50:S2:963:A:N7	2.78	0.52
50:S2:1004:U:O2	50:S2:1005:G:C8	2.63	0.52
50:S2:1193:U:O4	74:SX:110:HIS:CD2	2.63	0.52
50:S2:1272:C:C4	50:S2:1273:C:C5	2.98	0.52
50:S2:1343:U:H2'	50:S2:1343:U:O2	2.08	0.52
50:S2:1435:C:C2	50:S2:1436:C:C6	2.97	0.52
50:S2:1683:C:N3	50:S2:1684:C:C5	2.77	0.52
50:S2:1691:U:C2'	50:S2:1692:U:C5'	2.85	0.52
51:SA:116:PHE:C	51:SA:117:ARG:CG	2.82	0.52
55:SE:159:THR:HG23	55:SE:227:VAL:HG22	1.92	0.52
63:SM:113:ASP:O	63:SM:115:GLY:N	2.43	0.52
70:ST:92:PHE:HD1	70:ST:93:SER:N	2.07	0.52
86:S6:26:A:C4	86:S6:27:G:C8	2.98	0.52
86:S6:52:G:N2	86:S6:53:G:C1'	2.73	0.52
1:5:56:A:C2	1:5:57:G:C5	2.97	0.52
1:5:102:G:H2'	1:5:103:G:O5'	2.10	0.52
1:5:154:G:N2	1:5:155:C:C2	2.77	0.52
1:5:223:G:H21	6:C:223:ASN:HB3	1.75	0.52
1:5:672:C:H2'	1:5:673:C:O4'	2.09	0.52
1:5:1277:G:C5	1:5:1278:C:C5	2.98	0.52
1:5:1467:C:N3	1:5:1468:C:C5	2.78	0.52
1:5:1490:G:N3	1:5:1491:A:C8	2.77	0.52
1:5:1497:A:H1'	19:Q:164:LYS:HG2	1.91	0.52
1:5:1552:G:O2'	1:5:1574:G:N2	2.43	0.52
1:5:1683:U:C2	1:5:1684:A:N7	2.77	0.52
1:5:1776:A:C4	1:5:1777:C:C6	2.98	0.52
1:5:1855:G:C5	1:5:1856:C:C5	2.98	0.52
1:5:1965:G:C5	1:5:1966:C:C5	2.97	0.52
1:5:1968:G:C2	1:5:1969:G:C4	2.98	0.52
1:5:1990:A:H2'	1:5:1991:A:O4'	2.10	0.52
1:5:2055:G:C1'	17:O:130:LYS:HD3	2.40	0.52
1:5:2366:A:H2	1:5:3851:U:C1'	2.14	0.52
1:5:2428:A:C8	1:5:2789:A:C2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2570:U:C2	1:5:2571:C:C6	2.97	0.52
1:5:2607:C:O2	1:5:2608:G:C8	2.63	0.52
1:5:2648:G:O2'	1:5:2649:G:P	2.68	0.52
1:5:2851:G:O2'	1:5:3841:C:O4'	2.23	0.52
1:5:3630:A:N1	1:5:3631:U:C4	2.78	0.52
1:5:3652:A:N6	1:5:3691:G:O2'	2.43	0.52
1:5:3656:A:H2'	1:5:3657:U:H6	1.75	0.52
1:5:3710:G:N3	1:5:3710:G:H2'	2.24	0.52
1:5:4062:A:N1	1:5:4063:U:C4	2.78	0.52
1:5:4068:U:C4	1:5:4069:U:C6	2.98	0.52
1:5:4123:C:O2'	28:Z:135:ARG:HB3	2.10	0.52
1:5:4136:G:C4	1:5:4137:C:C6	2.97	0.52
1:5:4462:C:C2	1:5:4515:G:C2	2.98	0.52
1:5:4652:G:C2	1:5:4653:C:C4	2.98	0.52
1:5:4675:U:OP1	5:B:358:ARG:NH2	2.43	0.52
1:5:4737:G:C2	1:5:4738:C:C2	2.98	0.52
1:5:5057:C:H2'	1:5:5058:A:C8	2.45	0.52
1:5:5062:G:N2	1:5:5063:G:N7	2.58	0.52
3:8:131:G:C5	3:8:132:G:C8	2.97	0.52
8:E:153:HIS:HD2	8:E:183:ARG:NH1	2.08	0.52
15:M:25:VAL:CG1	15:M:38:VAL:HG22	2.40	0.52
27:Y:22:PRO:HD2	27:Y:25:ILE:HD12	1.91	0.52
32:d:33:ILE:HD11	32:d:45:ALA:CB	2.40	0.52
50:S2:56:G:O6	50:S2:90:G:C2	2.61	0.52
50:S2:72:C:H4'	50:S2:73:C:OP1	2.10	0.52
50:S2:113:G:C2	50:S2:292:A:H1'	2.45	0.52
50:S2:148:U:C2	50:S2:149:A:C8	2.98	0.52
50:S2:292:A:H4'	62:SL:40:ILE:O	2.10	0.52
50:S2:425:G:H5''	50:S2:425:G:H8	1.74	0.52
50:S2:608:C:O2	50:S2:608:C:H2'	2.08	0.52
50:S2:636:C:C4	50:S2:637:U:C4	2.97	0.52
50:S2:1029:G:C6	50:S2:1030:A:N7	2.77	0.52
50:S2:1121:G:N1	50:S2:1122:A:C4	2.77	0.52
50:S2:1132:C:N4	50:S2:1133:A:C5	2.78	0.52
50:S2:1140:G:H2'	50:S2:1141:G:O4'	2.10	0.52
50:S2:1307:U:C4	50:S2:1308:U:C6	2.97	0.52
50:S2:1386:A:C3'	50:S2:1387:G:H5'	2.40	0.52
50:S2:1568:C:O2'	50:S2:1569:A:C8	2.60	0.52
50:S2:1777:G:C5	50:S2:1778:C:C5	2.97	0.52
52:SB:97:LEU:CD2	52:SB:232:HIS:NE2	2.73	0.52
58:SH:130:LEU:HD11	58:SH:177:TYR:OH	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SX:9:THR:O	74:SX:13:LEU:CD1	2.58	0.52
79:Sc:13:ARG:HH11	79:Sc:33:GLU:HB3	1.75	0.52
1:5:382:G:H2'	1:5:383:A:H2'	1.91	0.52
1:5:991:C:C4	1:5:992:C:C4	2.98	0.52
1:5:1183:C:N3	1:5:1184:A:N7	2.58	0.52
1:5:1197:C:C2	1:5:1198:G:C8	2.98	0.52
1:5:1432:G:C2	1:5:1451:G:C2	2.98	0.52
1:5:1779:U:C2	1:5:1780:A:C8	2.98	0.52
1:5:2123:C:O2'	1:5:2124:G:OP2	2.15	0.52
1:5:2347:A:H61	33:e:24:GLN:HE21	1.58	0.52
1:5:2495:U:C2	1:5:2496:G:N7	2.76	0.52
1:5:2534:C:H2'	1:5:2535:G:O5'	2.09	0.52
1:5:2645:G:N3	1:5:2646:C:C6	2.76	0.52
1:5:3597:G:C2	1:5:3598:C:C2	2.98	0.52
1:5:3634:G:N2	1:5:3636:C:H5'	2.24	0.52
1:5:3969:G:C6	1:5:4053:A:C2	2.98	0.52
1:5:4255:A:C2	1:5:4256:A:C4	2.97	0.52
1:5:4266:G:C6	1:5:4279:A:N7	2.78	0.52
1:5:4341:C:N3	1:5:4342:C:C6	2.78	0.52
1:5:4399:U:C4	1:5:4400:G:C8	2.97	0.52
1:5:4980:C:C5	1:5:4981:G:C4	2.98	0.52
1:5:5031:G:C2	1:5:5032:C:C6	2.98	0.52
3:8:73:U:O4	3:8:74:U:C2	2.63	0.52
3:8:79:G:H3'	3:8:80:A:N3	2.25	0.52
3:8:117:C:O2	3:8:117:C:H2'	2.09	0.52
3:8:132:G:C2	3:8:133:G:N7	2.76	0.52
3:8:135:C:C2	3:8:136:U:C6	2.98	0.52
3:8:135:C:C4	3:8:136:U:C4	2.98	0.52
5:B:67:VAL:HG12	5:B:67:VAL:O	2.10	0.52
5:B:118:PHE:HB2	5:B:119:TYR:HE1	1.68	0.52
7:D:164:LYS:O	7:D:168:ASP:HB2	2.09	0.52
8:E:175:LEU:HD11	8:E:179:ARG:HH11	1.75	0.52
10:G:81:ASN:ND2	10:G:238:GLY:HA3	2.21	0.52
21:S:10:TYR:HB2	21:S:40:ALA:CB	2.39	0.52
28:Z:68:ILE:HG22	28:Z:119:GLU:HG3	1.92	0.52
33:e:51:GLY:C	33:e:52:GLN:OE1	2.53	0.52
44:p:29:ILE:CG2	44:p:69:TRP:CD1	2.89	0.52
45:r:29:PRO:C	45:r:30:ASN:OD1	2.53	0.52
50:S2:68:A:C4	50:S2:69:C:C5	2.98	0.52
50:S2:165:G:H8	50:S2:166:A:C8	2.23	0.52
50:S2:414:A:N1	50:S2:424:C:C2	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:426:A:C5	50:S2:427:U:O4	2.63	0.52
50:S2:833:C:H2'	50:S2:834:C:O4'	2.10	0.52
50:S2:903:A:C8	50:S2:904:A:C8	2.98	0.52
50:S2:931:C:H2'	50:S2:932:G:C8	2.45	0.52
50:S2:985:G:O4'	65:SO:138:ASP:OD2	2.28	0.52
50:S2:1005:G:H2'	50:S2:1006:C:C6	2.45	0.52
50:S2:1045:U:C2	50:S2:1046:U:C6	2.97	0.52
50:S2:1052:A:C6	50:S2:1053:C:C4	2.98	0.52
50:S2:1100:A:C6	50:S2:1101:U:C4	2.98	0.52
50:S2:1289:U:C4	50:S2:1290:G:C5	2.98	0.52
50:S2:1308:U:C2	50:S2:1309:C:C6	2.98	0.52
50:S2:1405:A:H1'	50:S2:1580:A:C6	2.44	0.52
50:S2:1541:G:N2	50:S2:1542:C:C5	2.78	0.52
57:SG:224:ARG:HA	57:SG:227:GLN:HB2	1.92	0.52
61:SK:21:MET:HE1	61:SK:49:MET:HE3	1.92	0.52
67:SQ:32:ILE:HG23	67:SQ:68:ILE:HB	1.92	0.52
74:SX:10:ALA:C	74:SX:12:LYS:H	2.18	0.52
85:S5:15:G:N2	85:S5:48:C:N4	2.58	0.52
85:S5:57:G:H5''	85:S5:57:G:H8	1.73	0.52
1:5:12:A:C2	1:5:14:C:C4	2.98	0.52
1:5:70:A:N6	1:5:314:G:O2'	2.42	0.52
1:5:244:G:C2	1:5:246:G:C8	2.98	0.52
1:5:385:A:C2	1:5:386:A:C5	2.98	0.52
1:5:661:C:N4	1:5:662:C:C4	2.78	0.52
1:5:975:C:H2'	1:5:976:G:C1'	2.40	0.52
1:5:976:G:C2	1:5:977:C:C2	2.98	0.52
1:5:1069:G:C6	1:5:1070:G:C8	2.98	0.52
1:5:1073:G:N2	1:5:1239:C:N3	2.58	0.52
1:5:1196:G:C6	1:5:1197:C:C4	2.98	0.52
1:5:1218:G:N1	1:5:1219:G:C1'	2.71	0.52
1:5:1262:G:N1	1:5:1263:A:C5	2.78	0.52
1:5:1268:G:C4	1:5:2111:G:C4	2.98	0.52
1:5:1936:C:C2	1:5:1937:C:C5	2.97	0.52
1:5:2089:G:C6	1:5:2262:G:H2'	2.44	0.52
1:5:2643:G:C6	1:5:2644:G:N7	2.77	0.52
1:5:2874:U:H4'	1:5:2875:C:OP2	2.10	0.52
1:5:3621:A:N3	1:5:3622:C:C6	2.78	0.52
1:5:3730:U:N3	1:5:3731:C:C6	2.78	0.52
1:5:3804:G:C6	1:5:3805:U:C5	2.98	0.52
1:5:3848:U:N3	1:5:3849:A:N7	2.57	0.52
1:5:4104:G:O2'	1:5:4106:G:C6	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4139:G:C6	1:5:4140:C:C4	2.97	0.52
1:5:4336:A:C8	1:5:4336:A:H3'	2.45	0.52
1:5:4490:C:O2	1:5:4491:G:C8	2.63	0.52
1:5:4563:U:O2	1:5:4564:A:C5	2.64	0.52
1:5:4719:G:H8	1:5:4719:G:O5'	1.92	0.52
20:R:109:TYR:CD1	20:R:114:LYS:HD2	2.45	0.52
28:Z:18:TYR:CD2	28:Z:47:ASP:OD1	2.63	0.52
33:e:16:ARG:CD	33:e:60:TYR:OH	2.58	0.52
34:f:45:LYS:HA	34:f:107:PRO:HG2	1.92	0.52
36:h:118:LYS:C	36:h:119:PHE:CD1	2.88	0.52
45:r:103:ARG:NH2	45:r:106:LEU:HD21	2.24	0.52
50:S2:59:U:H2'	50:S2:60:A:H2'	1.92	0.52
50:S2:186:C:C2	50:S2:187:G:N7	2.78	0.52
50:S2:350:C:C2	50:S2:351:G:C8	2.97	0.52
50:S2:376:A:N1	50:S2:377:G:C4	2.78	0.52
50:S2:601:G:C2	50:S2:622:C:O2	2.63	0.52
50:S2:1200:A:C2'	50:S2:1201:U:H5'	2.40	0.52
50:S2:1206:G:C4	50:S2:1208:A:H8	2.08	0.52
50:S2:1232:U:N3	50:S2:1233:G:N7	2.57	0.52
50:S2:1292:C:C2'	82:Sf:150:PHE:HD1	2.23	0.52
50:S2:1410:C:O2	50:S2:1411:G:C8	2.62	0.52
50:S2:1498:A:C2	50:S2:1499:U:H1'	2.44	0.52
51:SA:141:ASN:N	51:SA:141:ASN:HD22	2.08	0.52
51:SA:181:GLU:OE1	51:SA:184:ARG:HB2	2.10	0.52
83:Sg:47:ARG:HB2	83:Sg:52:TYR:CE1	2.45	0.52
85:S5:40:C:H2'	85:S5:41:C:C6	2.38	0.52
85:S5:52:G:N3	85:S5:53:G:C8	2.78	0.52
86:S6:53:G:N2	86:S6:54:U:C2	2.78	0.52
1:5:59:A:C4	1:5:60:G:C8	2.98	0.51
1:5:98:A:H1'	1:5:292:G:O6	2.09	0.51
1:5:106:A:OP1	14:L:39:ARG:NH2	2.43	0.51
1:5:111:C:OP1	36:h:110:LYS:NZ	2.38	0.51
1:5:302:C:N3	1:5:303:C:C5	2.78	0.51
1:5:442:G:O2'	1:5:443:G:H5'	2.10	0.51
1:5:474:C:C2	1:5:475:G:C8	2.98	0.51
1:5:518:G:C6	1:5:519:C:C4	2.99	0.51
1:5:709:C:H4'	8:E:186:HIS:HE1	1.73	0.51
1:5:961:G:H5'	8:E:119:ARG:HH11	1.75	0.51
1:5:964:A:C2	1:5:2252:G:C6	2.98	0.51
1:5:1424:G:H2'	1:5:1425:G:O4'	2.10	0.51
1:5:1479:G:H2'	1:5:1480:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1662:C:N3	1:5:1663:C:C5	2.78	0.51
1:5:1669:A:H2'	1:5:1670:G:O4'	2.10	0.51
1:5:1672:U:N3	1:5:1673:U:O4	2.43	0.51
1:5:2022:C:O2	1:5:2022:C:H2'	2.09	0.51
1:5:2056:G:C6	1:5:2058:G:C4	2.99	0.51
1:5:2065:G:C6	1:5:2066:C:C4	2.97	0.51
1:5:2079:G:N3	1:5:2080:U:C5	2.70	0.51
1:5:2082:G:H2'	1:5:2083:C:C6	2.45	0.51
1:5:2553:A:C6	1:5:2763:U:C5	2.98	0.51
1:5:2611:A:H2'	1:5:2612:G:C8	2.45	0.51
1:5:2704:C:H2'	1:5:2704:C:O2	2.10	0.51
1:5:2736:G:N2	1:5:2737:C:C6	2.78	0.51
1:5:2804:C:O2	1:5:2804:C:H2'	2.08	0.51
1:5:3702:A:N1	1:5:3703:G:C5	2.77	0.51
1:5:3703:G:C4	1:5:3704:U:C5	2.98	0.51
1:5:3772:U:C4	1:5:3773:U:C5	2.98	0.51
1:5:3954:A:H2'	1:5:3954:A:N3	2.25	0.51
1:5:4142:C:C2	1:5:4143:G:C2	2.99	0.51
1:5:4168:G:H2'	1:5:4169:G:O5'	2.10	0.51
1:5:4453:C:H1'	1:5:4529:G:N2	2.26	0.51
1:5:4483:C:N3	1:5:4484:A:C8	2.77	0.51
1:5:4744:A:C6	1:5:4745:G:O6	2.63	0.51
1:5:4744:A:C4	1:5:4745:G:N7	2.78	0.51
1:5:4910:G:C2	17:O:109:PRO:HA	2.44	0.51
1:5:4951:G:O2'	1:5:4952:G:OP1	2.23	0.51
2:7:55:A:H2'	2:7:56:G:C5'	2.41	0.51
2:7:94:C:N3	2:7:95:C:H5	2.06	0.51
3:8:43:A:C6	3:8:44:A:N7	2.77	0.51
5:B:78:ILE:HD11	5:B:320:PHE:CE1	2.45	0.51
6:C:210:ILE:HG21	6:C:252:TRP:CZ3	2.45	0.51
7:D:42:ASN:HA	7:D:44:TYR:CZ	2.44	0.51
12:I:59:GLN:NE2	12:I:126:VAL:HG11	2.25	0.51
43:o:41:TYR:CZ	43:o:45:GLN:HG2	2.44	0.51
47:1:187:ILE:HD13	47:1:450:ALA:HA	1.92	0.51
50:S2:70:G:C6	50:S2:80:G:N1	2.77	0.51
50:S2:119:U:O2	50:S2:120:U:C6	2.63	0.51
50:S2:348:A:C6	50:S2:349:A:C5	2.98	0.51
50:S2:494:C:O2	50:S2:494:C:H2'	2.09	0.51
50:S2:494:C:H2'	50:S2:495:U:O5'	2.09	0.51
50:S2:549:C:N4	50:S2:550:C:C5	2.78	0.51
50:S2:563:G:N2	50:S2:564:A:C8	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:747:U:H3'	50:S2:748:C:C6	2.46	0.51
50:S2:750:C:N3	50:S2:751:G:N7	2.58	0.51
50:S2:902:G:C5	50:S2:903:A:C2	2.98	0.51
50:S2:925:G:C6	50:S2:926:A:N7	2.77	0.51
50:S2:1102:G:N2	50:S2:1103:C:C2	2.78	0.51
50:S2:1134:G:N1	50:S2:1135:C:C5	2.78	0.51
50:S2:1224:G:C5	50:S2:1225:U:C5	2.98	0.51
50:S2:1236:G:C2	50:S2:1237:C:C2	2.98	0.51
50:S2:1267:C:C2	50:S2:1268:C:C5	2.97	0.51
50:S2:1345:G:H2'	50:S2:1346:U:C6	2.32	0.51
50:S2:1453:C:N4	50:S2:1455:A:C4	2.78	0.51
50:S2:1589:A:H2'	50:S2:1590:C:O4'	2.10	0.51
50:S2:1807:C:C2	50:S2:1808:U:C5	2.98	0.51
50:S2:1808:U:C2	50:S2:1809:A:C8	2.98	0.51
51:SA:59:LEU:CD2	51:SA:181:GLU:HG2	2.40	0.51
53:SC:74:LYS:HG3	53:SC:269:PHE:CE2	2.45	0.51
58:SH:61:ILE:HD12	58:SH:93:VAL:HG13	1.92	0.51
59:SI:54:LYS:HD3	59:SI:181:GLN:NE2	2.25	0.51
60:SJ:5:ARG:HB2	60:SJ:7:TRP:CH2	2.45	0.51
84:S4:22:U:O2'	84:S4:23:U:H5'	2.09	0.51
85:S5:48:C:N4	85:S5:59:U:O4	2.43	0.51
1:5:261:G:H2'	1:5:262:G:O4'	2.11	0.51
1:5:966:A:C2	8:E:84:VAL:HB	2.45	0.51
1:5:976:G:C5	1:5:977:C:C6	2.99	0.51
1:5:983:C:C2	1:5:984:C:H6	2.10	0.51
1:5:1070:G:O6	8:E:42:ARG:NH1	2.40	0.51
1:5:1205:G:C6	1:5:1206:C:C4	2.98	0.51
1:5:1302:U:C2	1:5:1303:A:H8	2.24	0.51
1:5:1374:G:C6	1:5:1375:C:C4	2.98	0.51
1:5:1443:A:H2'	1:5:1444:G:O4'	2.09	0.51
1:5:1663:C:O2	1:5:1664:U:C5	2.63	0.51
1:5:1689:G:C6	1:5:1690:C:C4	2.98	0.51
1:5:1699:A:C2	9:F:179:ARG:O	2.63	0.51
1:5:1750:G:H2'	1:5:1750:G:N3	2.25	0.51
1:5:1945:G:C5	1:5:1946:G:C8	2.98	0.51
1:5:2032:U:O2'	21:S:91:HIS:CE1	2.63	0.51
1:5:2036:C:C4	1:5:2037:C:N4	2.78	0.51
1:5:2409:U:C4	1:5:2783:A:C6	2.98	0.51
1:5:2448:G:H2'	1:5:2449:A:C8	2.45	0.51
1:5:2627:C:O2	1:5:2627:C:O4'	2.28	0.51
1:5:2658:G:N1	1:5:2675:G:N1	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4040:C:C4	1:5:4041:C:H1'	2.46	0.51
1:5:4068:U:C3'	1:5:4069:U:C5'	2.89	0.51
1:5:4167:G:C6	1:5:4168:G:N7	2.77	0.51
1:5:4229:U:H3'	1:5:4230:C:H6	1.74	0.51
1:5:4248:A:H2'	1:5:4249:G:O4'	2.10	0.51
1:5:4313:A:C2	1:5:4314:C:C6	2.98	0.51
1:5:4323:A:N3	1:5:4324:A:C8	2.79	0.51
1:5:4405:G:C5	1:5:4406:U:C5	2.98	0.51
1:5:4593:C:O2	1:5:4594:U:C6	2.63	0.51
1:5:4750:G:C6	1:5:4949:G:O6	2.61	0.51
1:5:4927:G:H1'	15:M:121:ARG:CD	2.40	0.51
1:5:5051:C:N3	1:5:5052:C:C6	2.78	0.51
3:8:35:C:O2'	3:8:36:G:H5'	2.10	0.51
4:A:63:PHE:N	4:A:63:PHE:CD1	2.77	0.51
5:B:201:LEU:O	5:B:202:GLU:HB2	2.09	0.51
5:B:379:PHE:HE2	5:B:385:LYS:CG	2.23	0.51
10:G:162:ASP:HB3	10:G:163:PRO:HD3	1.92	0.51
14:L:56:ARG:O	14:L:116:ARG:NH2	2.40	0.51
16:N:120:TRP:HE1	16:N:122:GLY:C	2.17	0.51
21:S:161:ARG:HD2	21:S:164:LYS:HB2	1.91	0.51
27:Y:121:ARG:CZ	27:Y:121:ARG:HB3	2.40	0.51
32:d:69:ASN:O	32:d:73:TRP:HB3	2.09	0.51
50:S2:53:C:O2	50:S2:53:C:C2'	2.58	0.51
50:S2:143:U:O4	50:S2:315:C:P	2.68	0.51
50:S2:187:G:C2	50:S2:188:C:C2	2.97	0.51
50:S2:311:C:H2'	50:S2:312:G:C1'	2.41	0.51
50:S2:374:G:OP1	62:SL:59:LYS:NZ	2.41	0.51
50:S2:421:G:C2	50:S2:422:U:N3	2.78	0.51
50:S2:469:A:H2'	50:S2:469:A:N3	2.25	0.51
50:S2:488:U:H3'	50:S2:489:A:C5'	2.40	0.51
50:S2:873:G:H2'	50:S2:874:G:C8	2.46	0.51
50:S2:1180:C:H2'	50:S2:1180:C:O2	2.10	0.51
50:S2:1184:G:H2'	50:S2:1185:C:O4'	2.10	0.51
50:S2:1206:G:N1	50:S2:1693:G:C5	2.78	0.51
50:S2:1248:U:H2'	50:S2:1249:C:H1'	1.92	0.51
50:S2:1302:G:N7	82:Sf:138:ARG:NH2	2.58	0.51
50:S2:1345:G:C5	50:S2:1346:U:H5	2.25	0.51
50:S2:1459:G:C2	50:S2:1468:C:C2	2.99	0.51
50:S2:1595:U:C2	50:S2:1596:U:C6	2.99	0.51
50:S2:1678:A:OP1	56:SF:145:ARG:NH2	2.43	0.51
50:S2:1707:U:C5	50:S2:1708:C:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1807:C:C2	50:S2:1808:U:C6	2.98	0.51
53:SC:169:TYR:CE2	53:SC:173:LYS:HA	2.45	0.51
55:SE:195:ILE:O	55:SE:196:THR:CB	2.59	0.51
58:SH:135:PHE:CD1	58:SH:136:PRO:N	2.78	0.51
62:SL:84:ARG:NH1	62:SL:115:PRO:HG3	2.24	0.51
80:Sd:26:ASN:OD1	80:Sd:26:ASN:N	2.44	0.51
85:S5:6:G:HO2'	85:S5:7:A:P	2.27	0.51
86:S6:23:A:H3'	86:S6:24:G:C8	2.39	0.51
1:5:48:G:C5'	16:N:192:TRP:HE1	2.05	0.51
1:5:91:G:C5	1:5:93:G:C6	2.98	0.51
1:5:146:G:N2	1:5:147:A:C4	2.78	0.51
1:5:186:G:H1'	1:5:187:U:H1'	1.93	0.51
1:5:466:A:N1	1:5:467:U:C5	2.79	0.51
1:5:718:C:N3	1:5:719:C:C5	2.79	0.51
1:5:747:A:N7	1:5:915:A:C2	2.78	0.51
1:5:930:G:C4	1:5:931:C:H5	2.29	0.51
1:5:930:G:H4'	1:5:931:C:O5'	2.09	0.51
1:5:1236:C:H2'	8:E:56:SER:OG	2.11	0.51
1:5:1416:G:C6	1:5:1417:C:C4	2.98	0.51
1:5:1421:G:C2	1:5:1422:G:C5	2.99	0.51
1:5:1724:G:C2	9:F:105:PRO:HB3	2.45	0.51
1:5:1970:A:O2'	1:5:2017:A:N6	2.43	0.51
1:5:1973:G:O6	1:5:2002:A:N7	2.44	0.51
1:5:1995:G:C6	1:5:1996:C:C4	2.98	0.51
1:5:2089:G:C2	1:5:2263:A:N6	2.78	0.51
1:5:2245:G:C2	1:5:2246:C:C2	2.98	0.51
1:5:2434:G:O3'	26:X:83:THR:HG21	2.10	0.51
1:5:2482:C:N3	1:5:2483:G:C8	2.78	0.51
1:5:2669:C:C6	1:5:2669:C:O5'	2.64	0.51
1:5:2757:A:O2'	1:5:2758:G:C5'	2.58	0.51
1:5:3591:C:O2	1:5:3591:C:C2'	2.56	0.51
1:5:3697:U:O2'	1:5:3698:G:OP2	2.20	0.51
1:5:3754:G:C2	1:5:3755:G:N9	2.78	0.51
1:5:3960:A:H5''	1:5:3961:G:OP2	2.10	0.51
1:5:4091:G:C2	1:5:4092:G:C4	2.99	0.51
1:5:4143:G:C5	1:5:4145:C:C5	2.99	0.51
1:5:4147:G:C6	1:5:4148:C:C4	2.97	0.51
1:5:4459:U:H5''	5:B:10:ARG:HH22	1.75	0.51
1:5:4510:A:N6	1:5:4592:C:HO2'	2.06	0.51
1:5:4536:C:C2	1:5:4537:C:C5	2.99	0.51
1:5:5042:A:C2	1:5:5043:A:C4	2.97	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:42:A:H2'	2:7:42:A:N3	2.26	0.51
3:8:100:U:C2	3:8:101:C:C6	2.98	0.51
5:B:49:TYR:CE1	5:B:171:LEU:HD11	2.45	0.51
9:F:82:ASN:HD21	22:T:142:ARG:CA	2.22	0.51
9:F:118:GLN:HB3	9:F:121:ASN:OD1	2.10	0.51
11:H:96:TYR:CZ	11:H:100:PRO:HA	2.46	0.51
18:P:42:ARG:HH11	18:P:42:ARG:HG3	1.76	0.51
19:Q:34:PHE:C	19:Q:34:PHE:CD2	2.88	0.51
21:S:81:TRP:CE2	21:S:94:TYR:HD1	2.27	0.51
23:U:26:THR:HA	23:U:68:SER:HB3	1.91	0.51
25:W:4:GLU:OE1	25:W:30:GLN:NE2	2.29	0.51
31:c:18:LEU:HD23	31:c:22:MET:HE3	1.93	0.51
46:z:120:ILE:HG23	46:z:121:PRO:CD	2.39	0.51
50:S2:27:A:N1	50:S2:28:U:C6	2.78	0.51
50:S2:84:A:C6	50:S2:85:A:C5	2.98	0.51
50:S2:191:A:H3'	50:S2:192:C:H5''	1.92	0.51
50:S2:291:G:O5'	50:S2:291:G:H8	1.89	0.51
50:S2:501:C:O2	50:S2:501:C:H2'	2.10	0.51
50:S2:551:U:C1'	81:Se:44:ASN:OD1	2.58	0.51
50:S2:604:A:C2	50:S2:605:A:C5	2.98	0.51
50:S2:805:U:C2	50:S2:806:U:C6	2.99	0.51
50:S2:956:G:C6	50:S2:968:U:O2	2.63	0.51
50:S2:999:G:N3	50:S2:1000:C:C6	2.79	0.51
50:S2:1042:A:C6	50:S2:1043:G:C5	2.98	0.51
50:S2:1112:U:C2	50:S2:1113:A:C8	2.98	0.51
50:S2:1159:G:OP2	74:SX:5:ARG:HG2	2.10	0.51
50:S2:1243:U:C4	50:S2:1244:U:H1'	2.46	0.51
50:S2:1280:G:C2	50:S2:1318:G:C5	2.99	0.51
50:S2:1307:U:O2'	82:Sf:132:MET:O	2.21	0.51
50:S2:1387:G:H22	54:SD:206:ASP:HB3	1.74	0.51
50:S2:1466:G:C4	50:S2:1467:C:C5	2.97	0.51
50:S2:1481:G:H2'	50:S2:1482:C:O4'	2.10	0.51
50:S2:1567:G:H1'	69:SS:82:TRP:CH2	2.46	0.51
50:S2:1590:C:C5	50:S2:1591:C:N1	2.79	0.51
50:S2:1670:C:H2'	50:S2:1671:G:C8	2.45	0.51
51:SA:116:PHE:C	51:SA:116:PHE:CD1	2.88	0.51
51:SA:198:MET:HE3	68:SR:85:VAL:CG1	2.39	0.51
54:SD:113:LEU:HD21	54:SD:117:ARG:HB3	1.93	0.51
57:SG:217:MET:O	57:SG:221:LYS:N	2.43	0.51
66:SP:17:TYR:OH	66:SP:38:SER:HB3	2.10	0.51
67:SQ:126:ARG:HH21	67:SQ:126:ARG:HG3	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:S4:22:U:H2'	84:S4:23:U:H5'	1.93	0.51
85:S5:21:A:C6	85:S5:48:C:C2	2.95	0.51
85:S5:31:A:C2	85:S5:40:C:C4	2.97	0.51
86:S6:6:G:C6	86:S6:7:G:N3	2.79	0.51
1:5:45:U:C2'	1:5:46:U:O5'	2.58	0.51
1:5:49:U:H5'	16:N:192:TRP:CZ2	2.45	0.51
1:5:85:G:C5	14:L:13:HIS:CE1	2.98	0.51
1:5:111:C:C2	1:5:331:G:C2	2.99	0.51
1:5:247:G:C6	1:5:248:C:C4	2.99	0.51
1:5:248:C:C2	1:5:249:C:C5	2.98	0.51
1:5:269:G:N1	1:5:270:U:C5	2.78	0.51
1:5:307:A:H3'	1:5:308:G:H21	1.74	0.51
1:5:715:G:H2'	1:5:716:C:O4'	2.10	0.51
1:5:739:G:N1	1:5:740:G:C5	2.78	0.51
1:5:1090:G:C5	1:5:1091:C:C5	2.98	0.51
1:5:1177:U:H2'	1:5:1178:G:C8	2.44	0.51
1:5:1266:G:H8	1:5:1266:G:C5'	2.22	0.51
1:5:1289:C:O2	1:5:1290:G:C8	2.63	0.51
1:5:1302:U:C4'	33:e:17:THR:O	2.58	0.51
1:5:1543:G:N3	1:5:2513:A:C2	2.79	0.51
1:5:1571:G:C5	1:5:1572:U:C5	2.98	0.51
1:5:1945:G:C2	1:5:1946:G:N9	2.79	0.51
1:5:1994:C:N3	1:5:1995:G:C8	2.78	0.51
1:5:2004:U:C2	1:5:2005:G:C8	2.99	0.51
1:5:2245:G:H2'	1:5:2246:C:O4'	2.10	0.51
1:5:2323:C:H2'	1:5:2324:C:O4'	2.10	0.51
1:5:2441:C:H4'	35:g:9:ARG:CD	2.41	0.51
1:5:2497:C:H42	1:5:2498:C:N4	2.08	0.51
1:5:2532:C:O2'	26:X:93:ASN:ND2	2.44	0.51
1:5:2740:U:O4'	1:5:2740:U:O2	2.24	0.51
1:5:2844:A:N6	1:5:3839:G:C8	2.78	0.51
1:5:3643:A:C2	38:j:3:LYS:HE2	2.45	0.51
1:5:3710:G:C2	1:5:3711:A:C2	2.99	0.51
1:5:3909:C:N4	1:5:3910:C:N4	2.59	0.51
1:5:4137:C:N3	1:5:4138:C:C5	2.79	0.51
1:5:4142:C:H2'	1:5:4143:G:C1'	2.41	0.51
1:5:4167:G:N2	1:5:4168:G:N9	2.59	0.51
1:5:4189:U:O4'	1:5:4380:A:C2	2.63	0.51
1:5:4194:U:O4	1:5:4197:G:C5'	2.57	0.51
1:5:4271:A:N6	1:5:4336:A:H61	2.08	0.51
1:5:4283:G:N1	1:5:4284:C:N4	2.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4324:A:N3	1:5:4325:A:N7	2.58	0.51
1:5:4581:G:C2	1:5:4582:C:C6	2.98	0.51
1:5:4724:A:C2	1:5:4725:C:C2	2.98	0.51
1:5:4911:A:H5'	5:B:100:ARG:HD3	1.89	0.51
1:5:5004:C:H2'	1:5:5005:G:O4'	2.10	0.51
1:5:5006:U:C5	25:W:50:ASN:ND2	2.78	0.51
2:7:21:G:N1	2:7:58:A:C2	2.78	0.51
2:7:43:U:C4	2:7:44:C:C4	2.99	0.51
2:7:56:G:H2'	2:7:57:C:H6	1.75	0.51
3:8:129:C:N3	3:8:130:C:C5	2.79	0.51
4:A:137:ILE:HG21	50:S2:948:C:O2'	2.09	0.51
5:B:67:VAL:HG13	5:B:70:LYS:HB2	1.91	0.51
5:B:260:ALA:C	5:B:261:ARG:HD3	2.35	0.51
6:C:122:TYR:CD1	6:C:122:TYR:O	2.63	0.51
6:C:290:SER:O	6:C:294:LYS:HG2	2.10	0.51
9:F:248:ARG:CZ	9:F:248:ARG:CB	2.87	0.51
21:S:9:GLU:HB3	21:S:67:VAL:HG12	1.91	0.51
21:S:13:VAL:HG12	21:S:29:ARG:HA	1.92	0.51
40:I:44:TRP:CE3	40:I:45:ARG:N	2.79	0.51
50:S2:46:A:C2	50:S2:99:A:N9	2.78	0.51
50:S2:70:G:C2	50:S2:80:G:N2	2.78	0.51
50:S2:171:A:C5	50:S2:173:A:N7	2.79	0.51
50:S2:431:G:C4	50:S2:432:G:C8	2.99	0.51
50:S2:460:A:N3	50:S2:460:A:H2'	2.25	0.51
50:S2:618:C:O2	50:S2:618:C:C2'	2.51	0.51
50:S2:678:U:C4	50:S2:679:A:N7	2.78	0.51
50:S2:828:G:C2	50:S2:829:C:C6	2.98	0.51
50:S2:956:G:O6	50:S2:968:U:O2	2.28	0.51
50:S2:958:G:C6	50:S2:959:G:N2	2.78	0.51
50:S2:993:G:N1	50:S2:994:C:C4	2.79	0.51
50:S2:1136:U:O2'	50:S2:1137:U:C5'	2.58	0.51
50:S2:1357:A:H5'	50:S2:1357:A:H8	1.76	0.51
50:S2:1402:A:N7	50:S2:1441:U:C4	2.77	0.51
50:S2:1407:U:C2'	50:S2:1408:U:C5	2.91	0.51
50:S2:1422:G:C2	50:S2:1424:G:C8	2.98	0.51
50:S2:1455:A:N3	50:S2:1455:A:H2'	2.26	0.51
50:S2:1686:G:C6	50:S2:1687:C:C4	2.97	0.51
50:S2:1739:C:O2	50:S2:1739:C:H2'	2.09	0.51
50:S2:1812:U:H2'	50:S2:1812:U:O2	2.11	0.51
59:SI:113:TYR:CD2	59:SI:121:LEU:HD21	2.45	0.51
66:SP:43:ARG:HB3	66:SP:47:ARG:HD3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:139:G:H2'	1:5:140:G:O4'	2.11	0.51
1:5:181:C:H42	1:5:255:C:H42	1.59	0.51
1:5:238:C:N3	1:5:239:C:C5	2.78	0.51
1:5:288:G:C6	1:5:289:C:C4	2.98	0.51
1:5:292:G:N2	1:5:293:G:C2	2.79	0.51
1:5:484:U:O5'	1:5:485:C:O5'	2.29	0.51
1:5:660:A:N1	1:5:661:C:C5	2.79	0.51
1:5:691:C:H2'	1:5:692:A:H8	1.75	0.51
1:5:908:G:C6	1:5:909:A:C8	2.98	0.51
1:5:914:U:H2'	1:5:915:A:C1'	2.40	0.51
1:5:918:G:H2'	1:5:918:G:N3	2.25	0.51
1:5:971:U:H2'	1:5:972:C:H5'	1.93	0.51
1:5:1213:G:C2	1:5:1215:C:O2	2.64	0.51
1:5:1337:A:C2	1:5:1659:U:O4'	2.64	0.51
1:5:1516:G:C6	1:5:1518:A:C4	2.98	0.51
1:5:2021:G:C4	1:5:2022:C:C6	2.99	0.51
1:5:2046:G:C4	17:O:60:LYS:HD3	2.45	0.51
1:5:2071:A:C2	1:5:2072:C:C5	2.99	0.51
1:5:2088:A:H61	19:Q:30:LYS:HB3	1.75	0.51
1:5:2248:C:O2	1:5:2248:C:C2'	2.56	0.51
1:5:2612:G:C2	1:5:2613:C:C2	2.98	0.51
1:5:2632:U:O2	1:5:2632:U:C2'	2.52	0.51
1:5:2823:G:N2	1:5:2824:C:H1'	2.24	0.51
1:5:3740:G:C5	1:5:3741:C:C6	2.97	0.51
1:5:3829:G:N3	1:5:3829:G:H2'	2.24	0.51
1:5:3937:C:H1'	16:N:125:SER:HB3	1.93	0.51
1:5:4063:U:H2'	1:5:4064:C:C6	2.43	0.51
1:5:4096:C:O2	35:g:112:GLN:OE1	2.29	0.51
1:5:4142:C:C5	1:5:4143:G:C6	2.98	0.51
1:5:4198:G:C5	1:5:4199:C:C6	2.99	0.51
1:5:4287:G:C2	1:5:4288:C:N3	2.79	0.51
1:5:4737:G:C4	1:5:4738:C:C4	2.99	0.51
1:5:4737:G:H5''	1:5:5069:U:C4	2.45	0.51
1:5:5020:G:C4	1:5:5021:C:C6	2.99	0.51
2:7:54:A:H2	2:7:55:A:C8	2.15	0.51
3:8:42:G:C2	3:8:43:A:N9	2.78	0.51
3:8:54:C:C4	3:8:55:U:C5	2.99	0.51
3:8:103:A:C8	3:8:104:A:C8	2.98	0.51
3:8:110:U:O3'	3:8:111:U:H4'	2.11	0.51
5:B:62:ARG:HH11	5:B:62:ARG:CG	2.23	0.51
6:C:197:ARG:O	6:C:199:ARG:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:236:TYR:C	8:E:236:TYR:CD2	2.89	0.51
9:F:243:ASN:O	9:F:247:ARG:HG2	2.11	0.51
10:G:264:LYS:HE2	52:SB:91:VAL:HG12	1.83	0.51
12:I:95:HIS:ND1	12:I:95:HIS:C	2.69	0.51
13:J:74:VAL:C	13:J:75:ARG:HG2	2.35	0.51
28:Z:123:LYS:O	28:Z:124:THR:OG1	2.25	0.51
34:f:74:VAL:HG13	34:f:84:VAL:CG1	2.41	0.51
47:1:192:VAL:HG21	48:2:48:GLY:HA2	1.93	0.51
50:S2:403:G:N3	50:S2:403:G:H2'	2.26	0.51
50:S2:524:U:C2	50:S2:594:A:C6	2.94	0.51
50:S2:642:U:HO2'	50:S2:644:G:HO2'	1.59	0.51
50:S2:841:G:N2	50:S2:842:C:C2	2.79	0.51
50:S2:887:U:O4'	50:S2:887:U:O2	2.26	0.51
50:S2:977:C:C4	50:S2:978:G:N7	2.78	0.51
50:S2:999:G:N2	50:S2:1000:C:N1	2.59	0.51
50:S2:1122:A:N1	50:S2:1123:C:C6	2.78	0.51
50:S2:1223:A:O2'	50:S2:1651:A:H4'	2.09	0.51
50:S2:1283:C:N4	63:SM:103:VAL:HA	2.26	0.51
50:S2:1513:C:O2'	50:S2:1514:G:H5'	2.11	0.51
50:S2:1576:G:N1	50:S2:1577:G:C5	2.79	0.51
50:S2:1833:C:H3'	50:S2:1836:G:N7	2.25	0.51
51:SA:12:GLU:OE1	68:SR:111:PHE:HD1	1.91	0.51
53:SC:133:TYR:CD1	53:SC:216:MET:HA	2.45	0.51
56:SF:97:PHE:HB3	56:SF:108:PRO:HG2	1.92	0.51
58:SH:118:ARG:O	58:SH:121:THR:HG22	2.11	0.51
75:SY:119:GLY:O	75:SY:121:ALA:N	2.44	0.51
84:S4:23:U:H3	85:S5:34:G:H22	1.58	0.51
85:S5:6:G:H1'	85:S5:7:A:C1'	2.40	0.51
85:S5:9:A:OP2	85:S5:46:G:N2	2.43	0.51
85:S5:28:G:H2'	85:S5:29:G:H5''	1.92	0.51
86:S6:33:U:H2'	86:S6:34:G:C3'	2.41	0.51
1:5:68:U:N3	1:5:69:A:H1'	2.26	0.51
1:5:91:G:OP2	1:5:92:C:H5''	2.11	0.51
1:5:152:U:N3	1:5:153:G:C8	2.78	0.51
1:5:371:A:HO2'	1:5:372:A:C5'	2.23	0.51
1:5:458:C:N3	1:5:459:C:C5	2.79	0.51
1:5:504:G:O2'	1:5:505:G:O4'	2.26	0.51
1:5:977:C:C2	1:5:978:G:N7	2.42	0.51
1:5:1234:G:H2'	1:5:1235:G:C8	2.46	0.51
1:5:1267:C:O2'	1:5:2109:G:N7	2.42	0.51
1:5:1380:G:C2	1:5:1382:G:N3	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1382:G:H2'	1:5:1383:G:O5'	2.11	0.51
1:5:1475:G:N3	1:5:1476:C:C6	2.79	0.51
1:5:1517:G:N2	1:5:1650:A:C2	2.79	0.51
1:5:1550:G:C2	1:5:1579:C:O2	2.63	0.51
1:5:2040:A:H4'	1:5:2041:A:O5'	2.11	0.51
1:5:2391:G:N1	1:5:2392:C:C4	2.78	0.51
1:5:2408:U:H1'	1:5:2409:U:C5	2.45	0.51
1:5:2440:U:N3	1:5:2519:U:C5	2.79	0.51
1:5:2682:G:C6	1:5:2683:C:N4	2.79	0.51
1:5:2703:G:C2	1:5:2704:C:N1	2.79	0.51
1:5:2851:G:C6	1:5:2852:U:H6	2.17	0.51
1:5:3648:A:N9	1:5:3785:A:N6	2.58	0.51
1:5:3971:G:C5'	46:z:31:THR:OG1	2.58	0.51
1:5:4071:U:O2'	1:5:4072:C:H5'	2.10	0.51
1:5:4093:G:C2'	1:5:4094:G:H5'	2.41	0.51
1:5:4124:G:H2'	1:5:4124:G:N3	2.25	0.51
1:5:4277:G:C6	1:5:4278:C:C4	2.98	0.51
1:5:4489:G:C5	1:5:4490:C:C5	2.98	0.51
1:5:4535:A:C6	1:5:4536:C:C6	2.98	0.51
1:5:4626:A:OP2	5:B:224:LYS:NZ	2.32	0.51
1:5:4754:G:C2	1:5:4880:C:N3	2.78	0.51
1:5:4884:G:N1	1:5:4885:U:C4	2.78	0.51
1:5:4977:A:C2'	1:5:4978:G:H5'	2.41	0.51
2:7:18:C:O2	2:7:18:C:H2'	2.11	0.51
3:8:80:A:C6	3:8:81:C:C5	2.98	0.51
19:Q:67:ILE:HD12	19:Q:96:PRO:HD2	1.91	0.51
20:R:4:LEU:HD22	20:R:32:ILE:HG22	1.93	0.51
32:d:83:ARG:HB2	32:d:114:PHE:HD2	1.74	0.51
35:g:9:ARG:NH1	35:g:34:TYR:CG	2.74	0.51
45:r:103:ARG:NH2	45:r:106:LEU:HD11	2.26	0.51
50:S2:140:C:O2'	50:S2:141:A:O5'	2.29	0.51
50:S2:497:C:N3	50:S2:506:G:N2	2.57	0.51
50:S2:522:A:N1	50:S2:643:A:H5'	2.26	0.51
50:S2:620:G:P	50:S2:620:G:H21	2.33	0.51
50:S2:832:G:C2	50:S2:843:C:C2	2.99	0.51
50:S2:903:A:C5	50:S2:904:A:N7	2.79	0.51
50:S2:1045:U:C4	50:S2:1046:U:C4	2.98	0.51
50:S2:1149:A:C6	50:S2:1151:G:C8	2.99	0.51
50:S2:1206:G:O6	50:S2:1208:A:N6	2.43	0.51
50:S2:1286:G:N2	50:S2:1312:G:C4	2.79	0.51
50:S2:1533:A:C2	50:S2:1536:G:N3	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:79:VAL:CB	52:SB:81:PHE:CZ	2.90	0.51
52:SB:150:ILE:HD11	68:SR:128:PHE:HA	1.91	0.51
53:SC:82:TYR:CE1	53:SC:164:PRO:HD3	2.46	0.51
58:SH:186:ASN:OD1	58:SH:186:ASN:N	2.44	0.51
75:SY:86:GLU:CD	75:SY:90:ARG:HD2	2.36	0.51
83:Sg:166:VAL:HG21	83:Sg:207:CYS:SG	2.51	0.51
84:S4:19:U:C2'	84:S4:20:U:C5'	2.85	0.51
85:S5:69:G:C2'	85:S5:70:G:C8	2.85	0.51
85:S5:71:G:N7	85:S5:71:G:OP2	2.43	0.51
1:5:135:G:C2	36:h:94:ARG:NH2	2.78	0.51
1:5:158:A:H5''	1:5:159:C:C6	2.45	0.51
1:5:189:G:N3	1:5:190:G:C8	2.79	0.51
1:5:216:C:O4'	1:5:216:C:OP2	2.29	0.51
1:5:217:C:O2	6:C:172:LYS:HE2	2.11	0.51
1:5:222:C:H2'	1:5:223:G:O4'	2.11	0.51
1:5:226:G:O2'	1:5:227:A:OP2	2.21	0.51
1:5:449:C:C4	1:5:450:G:N7	2.79	0.51
1:5:512:U:C2'	1:5:513:U:H5''	2.39	0.51
1:5:957:G:H1'	1:5:958:G:OP2	2.11	0.51
1:5:1194:G:C2	1:5:1195:G:C8	2.99	0.51
1:5:1563:A:H2'	1:5:1564:A:N7	2.26	0.51
1:5:1743:A:C6	1:5:1744:U:C5	2.99	0.51
1:5:1758:G:C2	1:5:1759:G:N7	2.79	0.51
1:5:1924:C:N3	1:5:1925:G:C8	2.79	0.51
1:5:1927:U:H5'	1:5:2034:G:N2	2.25	0.51
1:5:1936:C:C4	1:5:1937:C:H5	2.26	0.51
1:5:2033:A:C6	1:5:2034:G:N7	2.79	0.51
1:5:2055:G:H1'	17:O:130:LYS:HD3	1.91	0.51
1:5:2325:C:O2'	33:e:98:GLU:OE2	2.20	0.51
1:5:2363:A:C1'	1:5:4560:C:C5	2.94	0.51
1:5:2522:G:HO2'	1:5:2697:A:HO2'	1.55	0.51
1:5:2555:G:O6	1:5:2572:C:N4	2.43	0.51
1:5:2634:C:N3	1:5:2635:U:C5	2.79	0.51
1:5:2852:U:O2	1:5:2853:C:H3'	2.11	0.51
1:5:3862:A:H2'	1:5:3862:A:N3	2.25	0.51
1:5:3874:G:C6	1:5:3875:G:C4	2.99	0.51
1:5:3930:U:C2	1:5:3931:C:C5	2.99	0.51
1:5:3944:G:N1	1:5:3945:A:C5	2.78	0.51
1:5:3945:A:C2	1:5:3946:G:C8	2.99	0.51
1:5:4082:G:C4	1:5:4083:U:C5	2.98	0.51
1:5:4122:G:C5	1:5:4123:C:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4230:C:C2	1:5:4231:C:C5	2.99	0.51
1:5:4574:U:O2	1:5:4574:U:H2'	2.11	0.51
1:5:4886:C:C2	1:5:4887:C:C5	2.99	0.51
1:5:4901:G:C2	1:5:4921:C:N3	2.78	0.51
1:5:5034:A:C2	1:5:5035:U:C6	2.99	0.51
2:7:59:G:H4'	7:D:267:ASN:ND2	2.25	0.51
3:8:103:A:H3'	3:8:104:A:C5'	2.41	0.51
5:B:17:LEU:HD21	5:B:264:PHE:CE1	2.46	0.51
5:B:19:ARG:NE	5:B:235:TRP:CZ3	2.78	0.51
5:B:321:VAL:O	5:B:322:HIS:CB	2.59	0.51
6:C:58:ALA:O	6:C:60:HIS:HB2	2.10	0.51
9:F:128:ASN:ND2	22:T:132:PRO:HG2	2.25	0.51
15:M:7:VAL:N	21:S:152:PHE:O	2.44	0.51
20:R:10:LEU:HD23	20:R:41:ILE:HD12	1.92	0.51
21:S:33:PHE:CZ	21:S:106:VAL:HB	2.46	0.51
22:T:70:HIS:N	22:T:70:HIS:CD2	2.79	0.51
24:V:35:LYS:CD	50:S2:1803:U:OP1	2.56	0.51
31:c:49:ALA:HB2	31:c:81:LEU:HD12	1.92	0.51
36:h:78:TYR:N	36:h:78:TYR:CD1	2.78	0.51
43:o:55:ILE:CG2	86:S6:75:C:C5'	2.89	0.51
50:S2:105:U:H5''	50:S2:106:C:OP2	2.11	0.51
50:S2:191:A:P	59:SI:141:ARG:HD2	2.51	0.51
50:S2:309:G:C2	50:S2:310:C:C6	2.98	0.51
50:S2:428:U:H5	60:SJ:7:TRP:CE2	2.28	0.51
50:S2:441:C:C6	50:S2:448:A:H2	2.29	0.51
50:S2:552:G:C2	50:S2:553:U:C4	2.99	0.51
50:S2:1037:G:C6	50:S2:1038:U:C5	2.99	0.51
50:S2:1048:G:H2'	50:S2:1068:G:H22	1.76	0.51
50:S2:1123:C:O2	50:S2:1123:C:C2'	2.58	0.51
50:S2:1134:G:C6	50:S2:1135:C:C4	2.99	0.51
50:S2:1221:G:O2'	50:S2:1222:G:C5'	2.59	0.51
50:S2:1291:A:C4	82:Sf:140:TYR:CD2	2.99	0.51
50:S2:1316:C:C2	50:S2:1317:C:H5	2.06	0.51
50:S2:1563:G:N3	50:S2:1564:C:C6	2.79	0.51
50:S2:1610:G:N1	50:S2:1611:G:C5	2.78	0.51
50:S2:1669:G:C4	50:S2:1670:C:C5	2.97	0.51
51:SA:141:ASN:N	51:SA:141:ASN:ND2	2.58	0.51
52:SB:32:ASP:OD1	52:SB:46:LYS:CD	2.58	0.51
57:SG:173:ALA:HB1	57:SG:174:PRO:CD	2.41	0.51
59:SI:69:SER:HA	62:SL:20:LYS:HE2	1.93	0.51
60:SJ:54:ARG:NH2	60:SJ:54:ARG:HB3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:SN:19:ARG:NH1	78:Sb:84:HIS:CE1	2.79	0.51
65:SO:137:SER:C	65:SO:138:ASP:CG	2.78	0.51
65:SO:147:ARG:NH2	65:SO:150:ARG:HH11	2.08	0.51
85:S5:49:C:C2	85:S5:65:G:N1	2.53	0.51
86:S6:6:G:C2	86:S6:7:G:C4	2.99	0.51
1:5:70:A:H1'	1:5:71:C:N4	2.26	0.51
1:5:142:G:N2	1:5:144:G:C8	2.78	0.51
1:5:386:A:H2	1:5:405:U:O4'	1.93	0.51
1:5:483:G:N2	1:5:484:U:C2	2.78	0.51
1:5:675:C:C2	1:5:676:C:C6	2.98	0.51
1:5:676:C:C2	1:5:677:G:C8	2.99	0.51
1:5:1091:C:C4	1:5:1092:G:N7	2.78	0.51
1:5:1268:G:C2	1:5:2111:G:N1	2.78	0.51
1:5:1280:C:H2'	1:5:1282:G:OP2	2.10	0.51
1:5:1320:U:H2'	1:5:1891:A:H61	1.76	0.51
1:5:1344:C:C2	1:5:1345:A:C8	2.98	0.51
1:5:1365:C:H4'	1:5:1366:G:OP1	2.11	0.51
1:5:1387:A:H1'	1:5:1397:A:N6	2.26	0.51
1:5:1727:U:N3	1:5:1728:U:C5	2.79	0.51
1:5:1748:U:C2	1:5:1749:A:C8	2.98	0.51
1:5:1912:G:N3	1:5:1913:C:C6	2.79	0.51
1:5:2104:G:C2	1:5:2105:A:C4	2.99	0.51
1:5:2247:C:H5''	1:5:2248:C:O5'	2.11	0.51
1:5:2307:A:O2'	1:5:2308:A:H5'	2.11	0.51
1:5:2532:C:O2	1:5:2532:C:H2'	2.10	0.51
1:5:3711:A:C6	1:5:3712:A:N3	2.79	0.51
1:5:4068:U:H2'	1:5:4069:U:H5''	1.84	0.51
1:5:4116:C:O2	1:5:4116:C:O2'	2.29	0.51
1:5:4175:G:C5	1:5:4176:C:C5	2.99	0.51
1:5:4240:G:C6	1:5:4241:C:C6	2.97	0.51
1:5:4414:A:C6	1:5:4427:G:C6	2.97	0.51
1:5:4579:U:O2	1:5:4580:U:C6	2.63	0.51
1:5:4735:G:C2	1:5:4736:C:C4	2.98	0.51
2:7:42:A:N3	2:7:43:U:C6	2.79	0.51
3:8:5:U:H2'	3:8:6:C:C6	2.46	0.51
5:B:122:TRP:NE1	5:B:127:LYS:HE3	2.26	0.51
7:D:51:MET:HE1	7:D:163:LEU:HA	1.92	0.51
14:L:146:LEU:CD1	36:h:120:ALA:HB3	2.41	0.51
20:R:28:GLU:O	20:R:32:ILE:HD12	2.10	0.51
21:S:99:ASP:CG	21:S:100:LEU:N	2.69	0.51
23:U:27:HIS:O	23:U:114:TYR:OH	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:77:TYR:HB3	31:c:39:ARG:CD	2.39	0.51
32:d:22:THR:HG22	32:d:89:SER:CB	2.39	0.51
36:h:89:ARG:HA	36:h:92:ARG:HH21	1.76	0.51
50:S2:86:C:N4	50:S2:87:U:C4	2.79	0.51
50:S2:88:G:C2	50:S2:500:A:C2	2.99	0.51
50:S2:177:G:HO2'	50:S2:178:C:H6	1.57	0.51
50:S2:320:G:N2	50:S2:321:C:H1'	2.26	0.51
50:S2:340:C:C2'	50:S2:341:C:H6	2.24	0.51
50:S2:665:G:H1'	50:S2:670:A:N3	2.25	0.51
50:S2:868:G:N2	58:SH:115:LYS:CA	2.71	0.51
50:S2:976:G:C4	50:S2:977:C:C6	2.99	0.51
50:S2:997:A:C2'	50:S2:998:A:O4'	2.59	0.51
50:S2:1052:A:N3	50:S2:1053:C:C6	2.79	0.51
50:S2:1109:C:O2	50:S2:1109:C:C2'	2.57	0.51
50:S2:1132:C:C4	50:S2:1133:A:N7	2.76	0.51
50:S2:1209:A:C2'	50:S2:1210:G:C5'	2.85	0.51
50:S2:1212:G:C3'	50:S2:1213:C:H5'	2.40	0.51
50:S2:1304:U:C2	50:S2:1305:C:H5	2.29	0.51
50:S2:1667:U:O2	50:S2:1668:U:C5	2.64	0.51
50:S2:1690:U:H2'	50:S2:1690:U:O2	2.10	0.51
50:S2:1841:C:O2	50:S2:1842:C:C6	2.63	0.51
52:SB:228:LEU:HD13	52:SB:232:HIS:CD2	2.45	0.51
57:SG:66:GLY:O	57:SG:68:LEU:HD22	2.11	0.51
62:SL:55:TYR:CD2	62:SL:115:PRO:HG2	2.46	0.51
63:SM:89:VAL:HB	63:SM:91:LEU:HD21	1.93	0.51
63:SM:101:ARG:C	63:SM:102:LYS:CG	2.83	0.51
65:SO:65:ASP:N	65:SO:65:ASP:OD1	2.44	0.51
70:ST:4:VAL:HA	70:ST:8:ASP:HB3	1.93	0.51
70:ST:132:ASP:O	70:ST:135:ALA:HB3	2.10	0.51
84:S4:21:U:N3	85:S5:37:A:C2	2.71	0.51
86:S6:22:G:N9	86:S6:23:A:C2	2.57	0.51
1:5:44:A:C4	1:5:45:U:C5	2.98	0.51
1:5:165:A:C4	1:5:166:C:C6	2.99	0.51
1:5:313:U:H2'	1:5:314:G:O4'	2.11	0.51
1:5:446:C:C2	1:5:447:C:C6	2.99	0.51
1:5:518:G:H2'	1:5:519:C:O4'	2.09	0.51
1:5:720:G:C6	1:5:721:G:N7	2.78	0.51
1:5:978:G:C2	1:5:979:C:C2	2.98	0.51
1:5:1049:C:C4	1:5:1050:C:C5	2.99	0.51
1:5:1169:G:C2	1:5:1170:G:C8	2.98	0.51
1:5:1374:G:C5	1:5:1375:C:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1721:G:C6	1:5:1840:G:N7	2.78	0.51
1:5:1929:A:C6	1:5:2054:U:O4	2.62	0.51
1:5:1945:G:N1	1:5:1946:G:C4	2.79	0.51
1:5:1975:G:C6	1:5:1984:A:C4	2.99	0.51
1:5:2089:G:C5	1:5:2263:A:N7	2.79	0.51
1:5:2442:G:H2'	1:5:2443:G:H5''	1.91	0.51
1:5:2745:A:C2	1:5:2746:A:C6	2.99	0.51
1:5:2762:G:H1'	1:5:2763:U:O4'	2.11	0.51
1:5:3625:G:H2'	1:5:3625:G:N3	2.25	0.51
1:5:3707:U:O2'	4:A:241:ARG:HG2	2.10	0.51
1:5:3879:G:C5	1:5:3882:C:N4	2.79	0.51
1:5:3907:G:N9	1:5:4449:A:C1'	2.65	0.51
1:5:3950:U:C5	1:5:3951:G:C8	2.98	0.51
1:5:4062:A:C2	1:5:4063:U:C2	2.99	0.51
1:5:4136:G:N2	1:5:4137:C:H1'	2.26	0.51
1:5:4255:A:C5	1:5:4256:A:C2	2.99	0.51
1:5:4323:A:H3'	1:5:4324:A:H8	1.76	0.51
1:5:4362:A:N1	1:5:4363:A:C5	2.79	0.51
1:5:4525:C:OP1	5:B:246:ARG:NH2	2.44	0.51
1:5:4594:U:O2	1:5:4595:G:C8	2.64	0.51
2:7:112:U:O2	2:7:112:U:C2'	2.58	0.51
3:8:12:G:OP1	18:P:3:ARG:NH1	2.43	0.51
3:8:133:G:N2	3:8:134:G:N9	2.59	0.51
5:B:168:MET:CE	5:B:171:LEU:HD12	2.40	0.51
8:E:145:ILE:HD11	8:E:267:LEU:CD2	2.40	0.51
9:F:229:PHE:CD2	9:F:238:ARG:HB3	2.46	0.51
12:I:47:PRO:HA	12:I:171:TRP:NE1	2.25	0.51
19:Q:88:ASP:OD2	19:Q:108:ARG:HD3	2.10	0.51
19:Q:177:ALA:O	19:Q:179:GLY:N	2.43	0.51
21:S:175:PHE:C	21:S:175:PHE:CD1	2.89	0.51
26:X:48:ARG:HG3	26:X:48:ARG:HH11	1.75	0.51
27:Y:15:ARG:HH11	27:Y:15:ARG:HG2	1.75	0.51
27:Y:18:HIS:NE2	27:Y:29:ILE:HD13	2.26	0.51
33:e:20:PHE:HZ	33:e:60:TYR:OH	1.93	0.51
33:e:23:HIS:CD2	33:e:24:GLN:HG3	2.46	0.51
44:p:10:ILE:HG12	44:p:30:GLU:HB3	1.92	0.51
50:S2:43:U:O2	50:S2:43:U:H2'	2.09	0.51
50:S2:87:U:H4'	50:S2:173:A:O4'	2.10	0.51
50:S2:574:A:H4'	75:SY:89:HIS:HB3	1.93	0.51
50:S2:832:G:C6	50:S2:833:C:C6	2.98	0.51
50:S2:850:C:H2'	50:S2:851:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1315:U:O4'	50:S2:1315:U:O2	2.27	0.51
50:S2:1356:G:O3'	53:SC:125:LYS:NZ	2.37	0.51
50:S2:1612:G:N2	50:S2:1628:C:C2	2.79	0.51
50:S2:1812:U:O2	50:S2:1813:A:C8	2.64	0.51
50:S2:1849:G:O2'	50:S2:1850:A:C5'	2.59	0.51
54:SD:35:SER:HB2	54:SD:91:VAL:HG21	1.92	0.51
54:SD:72:VAL:HG22	61:SK:20:VAL:HG21	1.91	0.51
54:SD:141:LYS:HA	54:SD:147:ALA:HA	1.93	0.51
55:SE:210:VAL:HB	55:SE:218:PHE:CE2	2.45	0.51
57:SG:58:LYS:C	57:SG:60:GLY:H	2.19	0.51
58:SH:130:LEU:HD21	58:SH:177:TYR:CZ	2.46	0.51
59:SI:55:TYR:CD2	59:SI:55:TYR:N	2.79	0.51
59:SI:83:TYR:HD1	59:SI:84:ASN:N	2.09	0.51
62:SL:99:TYR:CB	74:SX:13:LEU:HD13	2.40	0.51
63:SM:22:LEU:HD23	63:SM:111:VAL:HG22	1.93	0.51
63:SM:77:ILE:HG23	63:SM:78:LYS:H	1.76	0.51
74:SX:84:PHE:HD2	74:SX:105:PHE:HZ	1.58	0.51
83:Sg:171:ASP:O	83:Sg:172:LYS:HB3	2.11	0.51
85:S5:8:U:O2'	85:S5:48:C:H1'	2.10	0.51
1:5:331:G:N3	1:5:332:C:C5	2.78	0.51
1:5:1092:G:C5	1:5:1093:C:C5	2.98	0.51
1:5:1267:C:C4'	1:5:2110:C:O2'	2.59	0.51
1:5:1277:G:C2	1:5:1278:C:C5	2.98	0.51
1:5:1412:G:C4	1:5:1413:C:C6	2.99	0.51
1:5:1748:U:H2'	1:5:1749:A:O4'	2.10	0.51
1:5:1818:G:H2'	1:5:1819:G:H5'	1.93	0.51
1:5:1884:C:HO2'	1:5:1885:G:C5'	2.24	0.51
1:5:2322:G:OP1	33:e:36:ARG:NH1	2.43	0.51
1:5:2328:G:C2'	1:5:2329:U:O5'	2.58	0.51
1:5:2366:A:H2'	1:5:2367:A:H5'	1.91	0.51
1:5:2391:G:N3	1:5:2392:C:C6	2.79	0.51
1:5:2440:U:O2'	1:5:2441:C:OP1	2.26	0.51
1:5:2477:A:H2'	1:5:2478:C:H6	1.74	0.51
1:5:2721:G:C2	1:5:2722:G:C8	2.99	0.51
1:5:3738:G:N7	1:5:3739:C:C5	2.79	0.51
1:5:3744:G:C2'	1:5:3745:U:O5'	2.59	0.51
1:5:3842:C:H3'	1:5:3843:C:H2'	1.93	0.51
1:5:3859:G:C1'	18:P:139:TYR:OH	2.58	0.51
1:5:3870:C:H4'	5:B:261:ARG:HE	1.76	0.51
1:5:3951:G:OP2	46:z:11:TYR:OH	2.29	0.51
1:5:3969:G:H2'	1:5:3970:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4126:C:H3'	1:5:4127:A:C5'	2.41	0.51
1:5:4136:G:C2	1:5:4137:C:N1	2.79	0.51
1:5:4145:C:C2	1:5:4146:G:N7	2.79	0.51
1:5:4332:C:N3	1:5:4333:C:C5	2.65	0.51
1:5:4723:A:H2'	1:5:4724:A:H8	1.75	0.51
1:5:5020:G:O6	1:5:5028:G:O6	2.28	0.51
3:8:12:G:N1	3:8:13:G:C5	2.78	0.51
3:8:64:U:O2	3:8:65:A:C4	2.63	0.51
5:B:85:ILE:HB	5:B:165:HIS:CD2	2.45	0.51
5:B:323:TYR:CD1	5:B:323:TYR:C	2.89	0.51
6:C:59:GLY:HA3	6:C:99:GLY:O	2.10	0.51
8:E:54:SER:O	8:E:56:SER:N	2.44	0.51
11:H:5:LEU:HD13	11:H:60:TRP:CE3	2.45	0.51
12:I:46:PHE:N	12:I:47:PRO:HD3	2.26	0.51
13:J:26:VAL:HG22	13:J:28:GLU:HG3	1.91	0.51
14:L:65:ARG:HB2	29:a:69:PHE:CG	2.46	0.51
14:L:83:VAL:HG11	14:L:114:VAL:HG21	1.92	0.51
20:R:163:ARG:CZ	50:S2:871:U:H3	2.24	0.51
46:z:82:ILE:HD12	46:z:147:LYS:HD3	1.91	0.51
47:1:205:ARG:HB3	47:1:214:ILE:HG23	1.93	0.51
50:S2:10:G:H2'	50:S2:10:G:N3	2.26	0.51
50:S2:49:C:H2'	50:S2:49:C:O2	2.11	0.51
50:S2:836:G:H3'	50:S2:837:A:H5'	1.92	0.51
50:S2:880:G:N7	50:S2:881:G:C5	2.79	0.51
50:S2:959:G:H3'	50:S2:959:G:H8	1.76	0.51
50:S2:1031:A:C4	50:S2:1032:C:C6	2.99	0.51
50:S2:1122:A:C5	50:S2:1123:C:C5	2.99	0.51
50:S2:1127:C:N3	50:S2:1128:C:C5	2.79	0.51
50:S2:1130:G:H8	50:S2:1130:G:O5'	1.94	0.51
50:S2:1294:G:C6	82:Sf:138:ARG:HD3	2.46	0.51
50:S2:1405:A:N6	50:S2:1406:G:C6	2.79	0.51
50:S2:1495:G:H1'	80:Sd:41:GLN:CG	2.41	0.51
50:S2:1546:G:O2'	50:S2:1547:C:O4'	2.29	0.51
50:S2:1573:G:N1	50:S2:1574:C:C2	2.78	0.51
50:S2:1708:C:N3	50:S2:1709:G:N7	2.59	0.51
50:S2:1736:G:O6	50:S2:1798:C:N4	2.44	0.51
50:S2:1841:C:N3	50:S2:1842:C:C5	2.79	0.51
54:SD:157:MET:HE1	54:SD:187:LYS:O	2.11	0.51
58:SH:145:ARG:NE	73:SW:51:GLU:HG2	2.26	0.51
61:SK:40:VAL:HG13	61:SK:40:VAL:O	2.10	0.51
64:SN:56:ASP:HB3	78:Sb:50:ALA:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SQ:23:ALA:HA	67:SQ:70:VAL:HA	1.93	0.51
71:SU:17:ILE:HG22	71:SU:92:HIS:HB3	1.92	0.51
85:S5:38:A:H5'	85:S5:39:U:OP2	2.11	0.51
85:S5:48:C:OP1	85:S5:59:U:C5'	2.58	0.51
85:S5:49:C:H2'	85:S5:50:U:H6	1.70	0.51
85:S5:53:G:N1	85:S5:54:U:C4	2.79	0.51
1:5:40:G:C6	1:5:4378:A:C4	2.98	0.50
1:5:130:C:C2	1:5:139:G:N2	2.80	0.50
1:5:255:C:O2	1:5:255:C:C2'	2.55	0.50
1:5:463:A:C2	1:5:692:A:H2	2.29	0.50
1:5:723:A:H2	1:5:943:A:C2	2.29	0.50
1:5:913:U:O2	1:5:914:U:C5	2.64	0.50
1:5:973:G:O6	1:5:1282:G:N3	2.44	0.50
1:5:994:G:C2	1:5:995:C:C2	2.99	0.50
1:5:1048:G:C4	1:5:1049:C:C6	2.99	0.50
1:5:1193:C:N3	1:5:1194:G:C8	2.78	0.50
1:5:1203:G:H2'	1:5:1204:C:O4'	2.11	0.50
1:5:1271:G:H3'	1:5:1272:C:C4'	2.41	0.50
1:5:1309:C:H2'	34:f:21:GLN:HE22	1.76	0.50
1:5:1421:G:C2	1:5:1422:G:N7	2.79	0.50
1:5:1522:G:C6	1:5:1653:A:C6	2.99	0.50
1:5:1632:A:H3'	1:5:1632:A:N3	2.27	0.50
1:5:1651:G:O5'	1:5:1651:G:C8	2.64	0.50
1:5:1663:C:O2	1:5:1664:U:C6	2.65	0.50
1:5:1877:G:C2	1:5:1878:G:N9	2.79	0.50
1:5:1886:G:C5	1:5:1887:G:C8	2.98	0.50
1:5:1898:C:C5	1:5:2279:A:C1'	2.91	0.50
1:5:2034:G:C2'	1:5:2035:C:H6	2.24	0.50
1:5:2268:A:O4'	1:5:2270:G:N7	2.44	0.50
1:5:2325:C:O2	1:5:2326:G:C8	2.61	0.50
1:5:2435:G:N2	1:5:2783:A:H1'	2.26	0.50
1:5:2662:G:H2'	1:5:2663:G:O4'	2.11	0.50
1:5:2724:G:N1	1:5:2726:G:C5	2.79	0.50
1:5:2851:G:O6	1:5:2852:U:C6	2.63	0.50
1:5:4100:C:N3	1:5:4101:C:C4	2.79	0.50
1:5:4147:G:N1	1:5:4148:C:C4	2.79	0.50
1:5:4301:U:P	22:T:87:LYS:NZ	2.84	0.50
1:5:4426:C:C4	1:5:4427:G:C8	2.99	0.50
1:5:4456:C:H2'	1:5:4456:C:O2	2.11	0.50
1:5:4730:C:O2	1:5:4730:C:O4'	2.27	0.50
1:5:4883:C:HO2'	1:5:4884:G:P	2.33	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5028:G:C6	1:5:5029:C:C4	2.99	0.50
2:7:22:A:C4	7:D:266:TRP:CH2	2.99	0.50
2:7:26:C:H5''	7:D:56:THR:HG21	1.93	0.50
3:8:82:A:N3	3:8:82:A:C2'	2.74	0.50
3:8:115:G:C6	3:8:116:C:C4	2.99	0.50
5:B:264:PHE:HD2	17:O:66:PRO:HD2	1.76	0.50
6:C:178:ASN:N	6:C:178:ASN:HD22	2.08	0.50
8:E:129:PHE:O	8:E:130:SER:C	2.52	0.50
15:M:5:ARG:N	15:M:6:PHE:CE2	2.79	0.50
20:R:81:ARG:HG3	20:R:88:ARG:NE	2.26	0.50
23:U:96:LEU:O	23:U:100:LEU:HB2	2.11	0.50
46:z:153:SER:O	46:z:154:THR:C	2.54	0.50
50:S2:29:G:N1	50:S2:30:C:C4	2.79	0.50
50:S2:52:G:N1	50:S2:53:C:C2	2.78	0.50
50:S2:306:C:H5	50:S2:308:G:N7	2.10	0.50
50:S2:393:U:O2	50:S2:394:G:C8	2.64	0.50
50:S2:595:U:O2'	50:S2:596:U:P	2.69	0.50
50:S2:616:A:OP1	74:SX:68:LYS:CE	2.59	0.50
50:S2:732:U:N3	50:S2:733:C:C5	2.80	0.50
50:S2:746:C:H2'	50:S2:747:U:O4'	2.11	0.50
50:S2:1121:G:O6	50:S2:1122:A:C6	2.63	0.50
50:S2:1293:A:N6	82:Sf:139:HIS:C	2.68	0.50
50:S2:1293:A:H3'	82:Sf:151:ASN:C	2.36	0.50
50:S2:1309:C:C3'	82:Sf:143:LYS:HE2	2.40	0.50
50:S2:1394:G:H2'	50:S2:1394:G:N3	2.26	0.50
50:S2:1575:G:N3	50:S2:1576:G:C8	2.78	0.50
51:SA:136:GLU:HA	51:SA:139:TYR:CD2	2.41	0.50
55:SE:208:VAL:HB	55:SE:225:ILE:HD12	1.93	0.50
60:SJ:5:ARG:HB2	60:SJ:7:TRP:CZ2	2.46	0.50
62:SL:62:PHE:N	62:SL:62:PHE:CD2	2.78	0.50
69:SS:132:ARG:O	69:SS:134:GLN:N	2.44	0.50
85:S5:5:G:C2	85:S5:69:G:C6	2.99	0.50
1:5:1:C:O2	1:5:1:C:O2'	2.26	0.50
1:5:55:G:C6	1:5:56:A:N7	2.79	0.50
1:5:56:A:N1	1:5:57:G:C5	2.79	0.50
1:5:56:A:C2	1:5:57:G:C4	2.99	0.50
1:5:101:A:N1	1:5:102:G:C5	2.79	0.50
1:5:125:C:O2	1:5:126:C:H6	1.91	0.50
1:5:145:G:C4	1:5:146:G:C8	2.99	0.50
1:5:345:C:C2	1:5:346:G:C8	2.99	0.50
1:5:455:C:N3	1:5:456:C:C6	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:470:A:H61	8:E:101:ARG:NH2	2.09	0.50
1:5:505:G:C2	1:5:506:C:C2	2.99	0.50
1:5:654:C:O2	1:5:654:C:H2'	2.11	0.50
1:5:709:C:N3	1:5:710:G:C8	2.80	0.50
1:5:739:G:H2'	1:5:740:G:O4'	2.10	0.50
1:5:929:A:N1	1:5:930:G:H3'	2.26	0.50
1:5:978:G:C5	1:5:979:C:C5	3.00	0.50
1:5:1196:G:C2	1:5:1197:C:C2	2.99	0.50
1:5:1325:C:O3'	1:5:3901:A:N6	2.43	0.50
1:5:1540:C:O2	1:5:1540:C:H2'	2.11	0.50
1:5:2347:A:N7	33:e:31:ILE:CD1	2.74	0.50
1:5:2371:U:O4	1:5:2825:A:C2	2.61	0.50
1:5:2408:U:C1'	1:5:2409:U:C4	2.94	0.50
1:5:2590:G:N2	1:5:2754:G:C2	2.79	0.50
1:5:2612:G:N1	1:5:2613:C:C2	2.79	0.50
1:5:2690:C:N4	1:5:2691:U:C4	2.78	0.50
1:5:2745:A:HO2'	1:5:2746:A:C5'	2.22	0.50
1:5:2837:U:C4	1:5:2838:G:C8	2.98	0.50
1:5:3636:C:O2	1:5:3636:C:C2'	2.59	0.50
1:5:3642:A:C4	38:j:3:LYS:HB3	2.46	0.50
1:5:3653:A:O2'	4:A:180:LEU:O	2.22	0.50
1:5:3660:C:OP2	4:A:241:ARG:NH2	2.44	0.50
1:5:3720:G:C6	1:5:3721:U:C4	2.99	0.50
1:5:3767:C:H5''	50:S2:1849:G:C5	2.45	0.50
1:5:3847:C:C4	1:5:3848:U:C5	2.99	0.50
1:5:4097:G:H5''	35:g:115:LYS:HB3	0.52	0.50
1:5:4152:G:C4	1:5:4153:C:C5	2.99	0.50
1:5:4440:G:H8	1:5:4440:G:H5''	1.76	0.50
1:5:4511:A:H2'	1:5:4512:U:C1'	2.42	0.50
1:5:4538:G:C5	1:5:4539:U:C5	2.99	0.50
1:5:4702:G:N2	1:5:4703:U:H1'	2.25	0.50
1:5:4724:A:C4	1:5:4725:C:C5	2.99	0.50
1:5:4734:A:N1	1:5:4735:G:C4	2.79	0.50
1:5:4910:G:N2	17:O:109:PRO:N	2.59	0.50
1:5:4997:G:C4	1:5:4998:G:C8	3.00	0.50
2:7:33:U:O2	2:7:33:U:H2'	2.09	0.50
2:7:58:A:C4	2:7:59:G:C8	2.99	0.50
2:7:85:G:OP1	9:F:224:LYS:NZ	2.43	0.50
3:8:86:U:O4	36:h:7:ARG:NE	2.44	0.50
3:8:94:G:O2'	3:8:95:A:H8	1.81	0.50
4:A:33:ASP:O	4:A:34:PHE:C	2.53	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:102:PHE:HB3	5:B:103:LYS:HB2	1.92	0.50
8:E:111:TYR:OH	45:r:119:ARG:CG	2.59	0.50
13:J:31:ASP:O	13:J:32:ARG:HB2	2.10	0.50
26:X:79:PHE:N	26:X:79:PHE:HD1	2.08	0.50
50:S2:17:C:C2	50:S2:18:C:C5	2.99	0.50
50:S2:28:U:O2	50:S2:29:G:N7	2.44	0.50
50:S2:338:G:H3'	50:S2:339:A:H8	1.76	0.50
50:S2:923:G:N1	50:S2:924:G:C5	2.79	0.50
50:S2:978:G:C6	50:S2:979:C:C4	2.98	0.50
50:S2:1094:C:O2	50:S2:1095:U:C6	2.65	0.50
50:S2:1131:G:N2	50:S2:1132:C:C2	2.78	0.50
50:S2:1135:C:C4	50:S2:1136:U:O4	2.65	0.50
50:S2:1231:C:C4'	50:S2:1665:G:N2	2.69	0.50
50:S2:1417:C:H42	50:S2:1419:C:H41	1.59	0.50
50:S2:1433:C:O3'	50:S2:1434:C:C4'	2.59	0.50
50:S2:1455:A:N6	50:S2:1456:G:C5	2.79	0.50
50:S2:1560:U:H2'	50:S2:1560:U:O2	2.11	0.50
50:S2:1561:A:N6	50:S2:1574:C:N3	2.58	0.50
50:S2:1565:C:N3	50:S2:1571:G:C2	2.80	0.50
50:S2:1613:G:C2	50:S2:1627:C:C2	2.99	0.50
50:S2:1740:C:C2	50:S2:1741:U:C6	2.99	0.50
50:S2:1805:G:N1	50:S2:1806:A:C8	2.80	0.50
51:SA:81:ASN:HB2	51:SA:204:TYR:CE2	2.46	0.50
57:SG:162:LEU:HD11	57:SG:165:GLU:CD	2.35	0.50
58:SH:43:LEU:HD21	58:SH:71:SER:HB3	1.92	0.50
60:SJ:13:TYR:HA	60:SJ:48:PHE:HB3	1.92	0.50
63:SM:98:GLY:C	63:SM:99:ASN:HD22	2.19	0.50
66:SP:53:GLN:HG2	66:SP:83:MET:SD	2.51	0.50
68:SR:24:LEU:CD1	68:SR:58:MET:CE	2.86	0.50
73:SW:44:HIS:O	73:SW:46:TYR:N	2.45	0.50
75:SY:20:ARG:HB3	75:SY:76:TYR:CD1	2.46	0.50
83:Sg:21:ILE:CD1	83:Sg:307:VAL:HG13	2.41	0.50
83:Sg:256:ILE:HD11	83:Sg:300:ALA:CB	2.41	0.50
85:S5:48:C:N4	85:S5:59:U:C4	2.79	0.50
86:S6:55:U:O2'	86:S6:56:C:C6	2.54	0.50
1:5:69:A:C2	1:5:70:A:C5	2.99	0.50
1:5:205:C:N3	1:5:209:U:C5	2.79	0.50
1:5:353:A:C2	1:5:379:G:C8	3.00	0.50
1:5:354:U:O4	1:5:1334:A:H1'	2.10	0.50
1:5:364:G:N7	38:j:55:ARG:NH2	2.59	0.50
1:5:388:A:C5	1:5:411:G:N1	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:751:G:H2'	1:5:752:G:H8	1.77	0.50
1:5:964:A:C8	1:5:964:A:H5''	2.43	0.50
1:5:964:A:H5'	45:r:94:ARG:HH11	1.76	0.50
1:5:1215:C:H2'	1:5:1215:C:O2	2.10	0.50
1:5:1266:G:H5''	1:5:2112:G:N2	2.26	0.50
1:5:1279:A:C2	1:5:1280:C:N3	2.79	0.50
1:5:1440:U:C4'	1:5:2109:G:O2'	2.59	0.50
1:5:1570:G:C6	1:5:1571:G:C5	3.00	0.50
1:5:1620:U:C2	1:5:1621:A:N7	2.79	0.50
1:5:1751:A:N6	1:5:1752:G:C8	2.79	0.50
1:5:1755:C:H41	1:5:1778:C:H4'	1.75	0.50
1:5:1758:G:N1	1:5:1759:G:C6	2.80	0.50
1:5:1944:A:C5	1:5:1945:G:C8	2.99	0.50
1:5:1987:C:O2'	1:5:4420:U:O3'	2.15	0.50
1:5:1989:G:C2	1:5:1990:A:C5	2.99	0.50
1:5:2065:G:C5	1:5:2066:C:C5	2.99	0.50
1:5:2436:U:C4	1:5:2783:A:C8	3.00	0.50
1:5:2466:G:H2'	1:5:2467:U:O4'	2.11	0.50
1:5:2496:G:C2	1:5:2497:C:N1	2.80	0.50
1:5:2601:A:C8	1:5:2743:A:OP1	2.63	0.50
1:5:2666:U:C5	1:5:2669:C:N4	2.80	0.50
1:5:2836:A:C2	1:5:3895:G:H4'	2.46	0.50
1:5:2905:C:C2	1:5:3590:G:N2	2.80	0.50
1:5:3590:G:C2	1:5:3591:C:H1'	2.46	0.50
1:5:3771:C:O2	1:5:3771:C:O5'	2.28	0.50
1:5:4097:G:N2	1:5:4098:A:N9	2.58	0.50
1:5:4118:U:O4	4:A:95:GLN:HB3	2.11	0.50
1:5:4124:G:C2	4:A:64:ARG:NH1	2.79	0.50
1:5:4137:C:C2	1:5:4138:C:C5	2.98	0.50
1:5:4455:G:N2	1:5:4456:C:C2	2.79	0.50
1:5:4730:C:P	1:5:4731:G:N2	2.85	0.50
1:5:4743:G:C2	1:5:4744:A:C5	2.99	0.50
1:5:4905:C:N3	1:5:4906:C:C6	2.80	0.50
1:5:4960:G:H2'	1:5:4961:G:H5'	1.93	0.50
3:8:23:C:OP1	27:Y:15:ARG:NH2	2.29	0.50
4:A:3:ARG:HG3	4:A:3:ARG:NH1	2.27	0.50
4:A:216:HIS:CD2	4:A:216:HIS:N	2.78	0.50
17:O:12:ARG:NH1	21:S:171:ARG:NH2	2.60	0.50
22:T:74:ILE:HG23	22:T:89:ILE:HG13	1.93	0.50
31:c:28:VAL:CG1	31:c:33:GLN:CB	2.86	0.50
33:e:124:ASN:OD1	33:e:124:ASN:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:f:88:PHE:CE2	34:f:92:LEU:HD11	2.47	0.50
44:p:68:ALA:HB1	44:p:69:TRP:CE3	2.47	0.50
46:z:143:ASN:HA	46:z:147:LYS:N	2.26	0.50
50:S2:340:C:O2	50:S2:341:C:C6	2.64	0.50
50:S2:344:U:C2	50:S2:345:U:C5	2.99	0.50
50:S2:371:A:N3	50:S2:372:U:C5	2.79	0.50
50:S2:443:U:H4'	57:SG:90:GLY:HA3	1.93	0.50
50:S2:978:G:C2	50:S2:979:C:C2	2.99	0.50
50:S2:1135:C:C4	50:S2:1136:U:C4	2.98	0.50
50:S2:1383:A:N1	50:S2:1384:C:C4	2.79	0.50
50:S2:1541:G:C2	50:S2:1542:C:C6	2.98	0.50
50:S2:1567:G:H2'	50:S2:1568:C:O5'	2.11	0.50
50:S2:1777:G:C2	50:S2:1778:C:C2	3.00	0.50
50:S2:1811:C:C4	50:S2:1812:U:C5	2.99	0.50
50:S2:1831:A:OP2	50:S2:1837:G:OP2	2.28	0.50
56:SF:97:PHE:HB3	56:SF:108:PRO:CG	2.42	0.50
58:SH:127:ASP:O	58:SH:130:LEU:HB2	2.10	0.50
59:SI:87:ASN:OD1	59:SI:88:ASN:N	2.45	0.50
59:SI:196:GLU:OE2	59:SI:197:PHE:N	2.44	0.50
68:SR:16:ILE:HD11	68:SR:50:ILE:HG21	1.93	0.50
70:ST:47:PRO:CG	70:ST:52:TRP:CD1	2.94	0.50
85:S5:5:G:C2	85:S5:69:G:N1	2.79	0.50
86:S6:21:A:N6	86:S6:46:G:C4	2.80	0.50
1:5:190:G:C2	1:5:252:C:C2	3.00	0.50
1:5:316:U:O2	1:5:316:U:C2'	2.57	0.50
1:5:441:G:C2	1:5:442:G:C5	2.99	0.50
1:5:1187:G:H4'	7:D:274:ALA:CB	2.41	0.50
1:5:1203:G:N2	1:5:1204:C:C2	2.79	0.50
1:5:1235:G:C2	1:5:1236:C:C4	2.99	0.50
1:5:1247:U:O2	1:5:1248:C:C6	2.64	0.50
1:5:1484:G:H5''	1:5:1484:G:C8	2.47	0.50
1:5:1584:G:C6	1:5:1585:C:C4	2.99	0.50
1:5:1666:C:C2	1:5:2284:G:N2	2.80	0.50
1:5:1725:U:C2	1:5:1726:U:C6	2.99	0.50
1:5:1890:G:H22	1:5:1938:C:N4	2.09	0.50
1:5:2547:G:H2'	1:5:2547:G:N3	2.26	0.50
1:5:2823:G:C2	1:5:2824:C:N1	2.79	0.50
1:5:3589:G:H2'	1:5:3590:G:O4'	2.11	0.50
1:5:3597:G:P	20:R:109:TYR:OH	2.67	0.50
1:5:3763:A:C2	50:S2:1710:C:H5''	2.46	0.50
1:5:4046:A:O2'	86:S6:56:C:O5'	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4055:U:OP1	46:z:203:ALA:HB3	2.10	0.50
1:5:4433:G:C6	1:5:4434:C:N4	2.80	0.50
1:5:4479:A:C6	1:5:4480:A:H1'	2.46	0.50
1:5:4537:C:N3	1:5:4538:G:C8	2.71	0.50
1:5:4545:G:N7	4:A:215:ASN:ND2	2.59	0.50
1:5:4744:A:N3	1:5:4745:G:N7	2.60	0.50
1:5:5003:U:N3	1:5:5045:G:C2	2.80	0.50
1:5:5048:A:N9	32:d:34:HIS:CD2	2.76	0.50
2:7:92:C:O2	2:7:93:G:C8	2.65	0.50
3:8:30:U:O2	3:8:31:G:C8	2.65	0.50
3:8:65:A:OP1	36:h:56:ARG:HG3	2.12	0.50
3:8:99:U:C2	3:8:100:U:C5	3.00	0.50
3:8:151:G:OP2	10:G:65:ARG:NE	2.43	0.50
10:G:53:ARG:CZ	10:G:54:PHE:CZ	2.85	0.50
16:N:178:HIS:CD2	16:N:178:HIS:C	2.88	0.50
19:Q:75:ARG:HH11	19:Q:75:ARG:HG3	1.76	0.50
19:Q:176:ARG:O	19:Q:177:ALA:HB2	2.10	0.50
21:S:171:ARG:HH11	21:S:171:ARG:HG3	1.76	0.50
25:W:57:ARG:HH11	25:W:57:ARG:HG2	1.76	0.50
50:S2:188:C:N3	50:S2:189:U:C6	2.80	0.50
50:S2:192:C:C2	50:S2:193:C:C5	3.00	0.50
50:S2:348:A:H2'	50:S2:349:A:H5'	1.93	0.50
50:S2:552:G:N1	50:S2:553:U:C4	2.78	0.50
50:S2:618:C:N4	50:S2:619:A:C6	2.79	0.50
50:S2:1074:C:N3	50:S2:1075:C:C4	2.80	0.50
50:S2:1139:C:O4'	50:S2:1139:C:O2	2.28	0.50
50:S2:1290:G:C4	82:Sf:146:LEU:HD23	2.46	0.50
50:S2:1310:U:C2	50:S2:1311:C:C6	2.99	0.50
50:S2:1355:C:H2'	50:S2:1356:G:O4'	2.12	0.50
50:S2:1495:G:N1	50:S2:1496:U:H1'	2.26	0.50
50:S2:1552:G:C5'	50:S2:1557:C:H5	2.24	0.50
50:S2:1596:U:N3	50:S2:1597:C:C6	2.80	0.50
50:S2:1630:A:C6	50:S2:1631:U:C4	2.99	0.50
50:S2:1666:C:N3	50:S2:1667:U:C4	2.80	0.50
50:S2:1683:C:O2	50:S2:1684:C:C6	2.63	0.50
50:S2:1693:G:C8	50:S2:1694:U:O4	2.52	0.50
54:SD:113:LEU:HD22	54:SD:118:ALA:HB2	1.93	0.50
56:SF:110:GLN:HA	56:SF:110:GLN:HE21	1.77	0.50
61:SK:43:LEU:HD12	61:SK:44:HIS:CD2	2.46	0.50
61:SK:53:LYS:N	61:SK:58:VAL:HG12	2.27	0.50
73:SW:27:ILE:HG12	73:SW:61:ILE:HB	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74: SX:54: LYS:HD2	81: Se:6: LEU:HD13	1.92	0.50
75: SY:58: PHE:CE1	75: SY:72: PHE:HB3	2.46	0.50
86: S6:48: C:N1	86: S6:59: U:C1'	2.73	0.50
1:5:165: A:C6	1:5:166: C:C4	2.99	0.50
1:5:247: G:C5	1:5:248: C:C5	3.00	0.50
1:5:292: G:C2	1:5:293: G:N1	2.79	0.50
1:5:321: U:O2	1:5:322: C:C6	2.64	0.50
1:5:416: U:H2'	1:5:417: G:O4'	2.12	0.50
1:5:446: C:O2'	1:5:2314: G:H4'	2.11	0.50
1:5:457: G:C2	1:5:458: C:C5	3.00	0.50
1:5:471: A:N1	1:5:472: C:C1'	2.74	0.50
1:5:658: C:H2'	1:5:659: G:O4'	2.11	0.50
1:5:1277: G:C2	1:5:1278: C:N1	2.80	0.50
1:5:1472: C:C4	1:5:1473: U:C5	2.99	0.50
1:5:1508: A:C6	1:5:1509: C:C5	3.00	0.50
1:5:1633: G:N2	1:5:1642: A:C8	2.79	0.50
1:5:1811: G:N1	1:5:1812: C:C5	2.78	0.50
1:5:1831: G:C4	1:5:1832: C:C6	2.99	0.50
1:5:1870: C:O2	1:5:1870: C:H2'	2.10	0.50
1:5:1885: G:H2'	1:5:1886: G:O5'	2.11	0.50
1:5:1893: C:O2	1:5:1894: C:C5	2.64	0.50
1:5:1968: G:C4	1:5:1969: G:C8	3.00	0.50
1:5:1983: A:H2	1:5:2008: U:C5	2.28	0.50
1:5:2015: U:N3	1:5:2016: C:C5	2.80	0.50
1:5:2089: G:C6	1:5:2262: G:C2'	2.95	0.50
1:5:2100: A:C8	1:5:2101: C:C6	3.00	0.50
1:5:2119: C:O2'	1:5:2120: G:OP2	2.16	0.50
1:5:2257: C:O2'	1:5:2258: C:O5'	2.30	0.50
1:5:2270: G:C2	1:5:2271: C:N3	2.79	0.50
1:5:2270: G:N3	1:5:2271: C:C5	2.80	0.50
1:5:2295: C:H5'	6: C:199: ARG:HH21	1.76	0.50
1:5:2315: G:C6	1:5:2316: G:N7	2.80	0.50
1:5:2644: G:N1	1:5:2645: G:C5	2.80	0.50
1:5:3666: C:C4	1:5:3667: C:C6	3.00	0.50
1:5:3693: U:O2	1:5:3693: U:H2'	2.12	0.50
1:5:3819: G:C2	1:5:3820: G:C8	2.99	0.50
1:5:3878: C:C5	1:5:4518: A:C2	2.99	0.50
1:5:3967: G:N3	46: z:162: VAL:CB	2.75	0.50
1:5:4164: C:N3	1:5:4165: C:C6	2.78	0.50
1:5:4702: G:C6	1:5:4703: U:C6	3.00	0.50
1:5:4758: U:H2'	1:5:4759: C:O5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4961:G:H2'	1:5:4962:C:O4'	2.11	0.50
3:8:35:C:H2'	3:8:36:G:O5'	2.11	0.50
3:8:63:U:H3'	3:8:63:U:C2	2.46	0.50
3:8:99:U:C2	3:8:100:U:C6	3.00	0.50
5:B:291:TYR:CZ	5:B:327:THR:HA	2.47	0.50
20:R:76:MET:O	20:R:81:ARG:NH1	2.44	0.50
27:Y:91:ASN:OD1	27:Y:91:ASN:N	2.44	0.50
31:c:30:GLY:O	31:c:93:THR:HB	2.12	0.50
43:o:26:TYR:HD1	43:o:27:LYS:N	2.09	0.50
47:1:43:LEU:HD11	48:2:50:ILE:CG2	2.41	0.50
50:S2:339:A:C2'	50:S2:340:C:C5	2.87	0.50
50:S2:436:G:N7	50:S2:471:G:C2	2.79	0.50
50:S2:589:G:H4'	50:S2:589:G:OP1	2.12	0.50
50:S2:804:U:C4	50:S2:805:U:C5	2.99	0.50
50:S2:978:G:C4	50:S2:979:C:C5	3.00	0.50
50:S2:986:G:H2'	50:S2:986:G:N3	2.27	0.50
50:S2:1210:G:C6	50:S2:1211:G:C5	3.00	0.50
50:S2:1236:G:C6	50:S2:1237:C:C4	2.99	0.50
50:S2:1331:C:O2	50:S2:1489:A:C6	2.64	0.50
50:S2:1449:G:C2	50:S2:1450:G:C4	2.99	0.50
50:S2:1459:G:C5	50:S2:1460:C:C5	2.99	0.50
50:S2:1534:C:O4'	50:S2:1536:G:H1'	2.11	0.50
50:S2:1792:G:C4	50:S2:1793:A:C8	3.00	0.50
50:S2:1808:U:O2	50:S2:1809:A:C8	2.64	0.50
50:S2:1811:C:N3	50:S2:1812:U:C5	2.79	0.50
52:SB:205:TYR:O	52:SB:207:LEU:HG	2.10	0.50
52:SB:221:PRO:C	52:SB:222:LYS:C	2.78	0.50
53:SC:60:TRP:CZ2	53:SC:92:GLU:HB3	2.47	0.50
57:SG:188:LYS:HA	57:SG:191:ARG:HD3	1.93	0.50
59:SI:65:PHE:O	59:SI:109:TYR:OH	2.30	0.50
59:SI:174:CYS:HB3	59:SI:188:TYR:CE1	2.46	0.50
67:SQ:146:ARG:CZ	86:S6:35:A:OP1	2.54	0.50
69:SS:87:GLN:HA	69:SS:95:TYR:HB3	1.92	0.50
74:SX:74:LEU:HG	74:SX:81:ILE:HD12	1.92	0.50
79:Sc:50:VAL:HG12	79:Sc:51:ARG:N	2.27	0.50
83:Sg:125:ARG:CZ	83:Sg:150:TRP:CZ3	2.94	0.50
85:S5:21:A:C8	85:S5:48:C:C5	2.99	0.50
85:S5:48:C:C6	85:S5:59:U:N3	2.79	0.50
1:5:132:G:C2	1:5:133:C:H1'	2.46	0.50
1:5:193:G:C6	1:5:194:C:C4	3.00	0.50
1:5:258:G:C5	1:5:259:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:660:A:N1	1:5:661:C:C4	2.79	0.50
1:5:930:G:N3	1:5:931:C:C5	2.79	0.50
1:5:990:C:C4	1:5:991:C:C5	2.99	0.50
1:5:1178:G:C5	1:5:1179:U:C6	3.00	0.50
1:5:1362:G:C6	1:5:1363:C:C4	3.00	0.50
1:5:1856:C:N3	1:5:1857:C:C5	2.79	0.50
1:5:2036:C:N3	1:5:2037:C:N4	2.60	0.50
1:5:2366:A:C2'	1:5:2367:A:C5'	2.89	0.50
1:5:2414:G:H4'	47:1:398:GLN:HE22	1.76	0.50
1:5:2468:U:C4	1:5:2473:A:N6	2.77	0.50
1:5:2496:G:C6	1:5:2497:C:C5	3.00	0.50
1:5:2499:C:O2	1:5:2499:C:H2'	2.11	0.50
1:5:2559:G:H22	1:5:2567:G:H22	1.60	0.50
1:5:2645:G:N1	1:5:2646:C:C5	2.80	0.50
1:5:3965:A:C2	1:5:4047:A:C6	3.00	0.50
1:5:4087:G:C8	4:A:34:PHE:CE1	2.99	0.50
1:5:4107:G:C2	1:5:4108:G:C8	3.00	0.50
1:5:4133:C:N3	1:5:4134:C:C5	2.80	0.50
1:5:4467:A:O2'	1:5:4510:A:N3	2.41	0.50
1:5:4651:A:C5	1:5:4652:G:C8	3.00	0.50
3:8:144:U:C2	3:8:145:C:C6	3.00	0.50
6:C:218:ILE:HD12	6:C:222:ARG:HD2	1.93	0.50
7:D:66:TYR:CD1	7:D:66:TYR:C	2.90	0.50
7:D:287:PHE:C	7:D:287:PHE:HD1	2.20	0.50
11:H:103:VAL:HA	11:H:113:GLU:O	2.12	0.50
12:I:184:MET:HB3	12:I:190:LEU:HD12	1.93	0.50
12:I:191:ILE:HD12	12:I:200:VAL:HG11	1.94	0.50
44:p:10:ILE:HG23	44:p:11:VAL:HG13	1.94	0.50
45:r:90:LEU:HG	45:r:111:ILE:HG23	1.93	0.50
46:z:189:PHE:O	46:z:190:LEU:C	2.54	0.50
50:S2:71:G:C2'	50:S2:72:C:O4'	2.59	0.50
50:S2:300:U:N3	50:S2:301:A:C8	2.79	0.50
50:S2:378:U:N3	50:S2:379:C:C4	2.78	0.50
50:S2:399:C:C6	74:SX:11:ARG:NH1	2.66	0.50
50:S2:404:G:N3	50:S2:405:G:C8	2.80	0.50
50:S2:452:G:O2'	50:S2:453:C:H5'	2.12	0.50
50:S2:499:G:N1	50:S2:504:G:C6	2.79	0.50
50:S2:793:G:N7	50:S2:794:A:N7	2.59	0.50
50:S2:794:A:C5	50:S2:795:A:N7	2.80	0.50
50:S2:936:G:C6	50:S2:937:C:C4	3.00	0.50
50:S2:1377:U:O2'	50:S2:1378:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1610:G:C2	50:S2:1611:G:C4	3.00	0.50
50:S2:1643:U:N3	50:S2:1644:C:C4	2.79	0.50
50:S2:1698:C:H4'	50:S2:1699:A:OP2	2.11	0.50
51:SA:39:TYR:C	51:SA:39:TYR:CD1	2.89	0.50
52:SB:133:TYR:CD1	52:SB:221:PRO:HD3	2.47	0.50
53:SC:177:PRO:HD3	72:SV:9:VAL:HG11	1.93	0.50
55:SE:191:ARG:CD	55:SE:218:PHE:CE1	2.91	0.50
56:SF:49:LEU:HD13	56:SF:50:PRO:HD2	1.93	0.50
57:SG:211:LYS:O	57:SG:215:LYS:N	2.37	0.50
60:SJ:69:ARG:O	60:SJ:72:PHE:N	2.41	0.50
73:SW:111:MET:HE3	73:SW:116:ALA:HA	1.94	0.50
1:5:99:A:C6	1:5:100:C:C2	3.00	0.50
1:5:183:C:H1'	1:5:184:U:C4	2.46	0.50
1:5:493:G:C6	1:5:494:U:C6	3.00	0.50
1:5:695:G:C3'	1:5:696:C:H5'	2.42	0.50
1:5:931:C:C6	1:5:932:A:C8	3.00	0.50
1:5:936:C:C5	15:M:46:ARG:HA	2.47	0.50
1:5:1188:C:C2	1:5:1189:G:H8	2.23	0.50
1:5:1202:C:O2	1:5:1203:G:C8	2.65	0.50
1:5:1358:G:H2'	1:5:1359:G:H8	1.72	0.50
1:5:1358:G:O6	1:5:1379:C:N3	2.45	0.50
1:5:1671:U:O4	1:5:1853:G:H1'	2.10	0.50
1:5:1780:A:N1	1:5:1781:U:H1'	2.27	0.50
1:5:1805:A:C8	30:b:28:ARG:CB	2.95	0.50
1:5:1808:C:C2	1:5:1831:G:C2	3.00	0.50
1:5:1872:G:N3	1:5:4219:A:H2	2.10	0.50
1:5:1895:G:C6	1:5:1896:A:C2	2.99	0.50
1:5:1899:G:H1	1:5:2076:G:H1	1.60	0.50
1:5:2056:G:N2	1:5:2058:G:O6	2.45	0.50
1:5:2089:G:C8	1:5:2262:G:H3'	2.47	0.50
1:5:2104:G:C5	1:5:2105:A:C8	3.00	0.50
1:5:2339:G:C6	1:5:2340:C:C5	2.99	0.50
1:5:2463:G:N1	1:5:2464:C:N4	2.60	0.50
1:5:2540:C:N3	1:5:2541:G:N7	2.59	0.50
1:5:2833:A:HO2'	1:5:2834:C:C4'	2.24	0.50
1:5:3621:A:H1'	1:5:4655:A:C2	2.45	0.50
1:5:3705:G:C6	1:5:3706:C:C4	3.00	0.50
1:5:3721:U:N3	1:5:3722:G:C8	2.79	0.50
1:5:3753:G:C4	1:5:3776:G:C6	3.00	0.50
1:5:3795:A:C5	1:5:3796:U:C5	3.00	0.50
1:5:3832:U:H2'	1:5:3833:C:H6	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3958:G:O5'	86:S6:19:G:C5	2.64	0.50
1:5:4038:C:N3	1:5:4039:G:H1'	2.27	0.50
1:5:4060:U:O2	1:5:4060:U:H2'	2.10	0.50
1:5:4285:U:N3	1:5:4286:C:C4	2.80	0.50
1:5:4355:G:N1	1:5:4356:G:N7	2.59	0.50
1:5:4543:G:H2'	1:5:4544:A:C8	2.46	0.50
1:5:4731:G:N7	1:5:4732:G:C6	2.79	0.50
1:5:4910:G:H4'	1:5:4911:A:OP2	2.10	0.50
1:5:4913:G:C2'	1:5:4914:C:O4'	2.59	0.50
1:5:4930:C:OP1	8:E:262:GLN:N	2.44	0.50
1:5:4945:G:N7	34:f:60:PRO:HD2	2.27	0.50
1:5:4957:C:O2	1:5:4958:C:H6	1.94	0.50
2:7:38:U:N3	2:7:40:U:OP2	2.45	0.50
2:7:60:G:H2'	2:7:60:G:N3	2.25	0.50
3:8:4:C:C2	3:8:5:U:C6	3.00	0.50
4:A:209:HIS:CE1	4:A:235:VAL:HG11	2.46	0.50
8:E:279:PRO:C	8:E:281:LYS:N	2.69	0.50
11:H:59:LYS:O	11:H:60:TRP:HB2	2.00	0.50
12:I:47:PRO:HD2	12:I:141:LYS:HA	1.94	0.50
23:U:28:PRO:HA	23:U:114:TYR:OH	2.12	0.50
34:f:5:LEU:O	34:f:6:TRP:C	2.54	0.50
45:r:39:ARG:HB3	45:r:40:TYR:CD1	2.46	0.50
47:1:268:LYS:HD2	47:1:276:TYR:OH	2.07	0.50
50:S2:636:C:N4	50:S2:637:U:O4	2.45	0.50
50:S2:1449:G:H2'	50:S2:1450:G:O4'	2.12	0.50
50:S2:1471:C:H2'	50:S2:1472:C:C6	2.47	0.50
50:S2:1540:G:C5	50:S2:1541:G:C8	2.98	0.50
50:S2:1617:G:N7	66:SP:47:ARG:NH2	2.59	0.50
50:S2:1710:C:C4	50:S2:1711:U:C5	3.00	0.50
50:S2:1840:U:N3	50:S2:1859:A:C2	2.80	0.50
51:SA:28:THR:HA	51:SA:45:GLY:O	2.10	0.50
60:SJ:120:ALA:O	60:SJ:121:LYS:HB3	2.12	0.50
63:SM:60:MET:HB3	82:Sf:108:VAL:HG21	1.92	0.50
70:ST:62:ARG:HG3	70:ST:63:HIS:N	2.26	0.50
83:Sg:120:ILE:HB	83:Sg:132:TRP:HB2	1.92	0.50
85:S5:3:C:O2'	85:S5:4:C:H6	1.95	0.50
85:S5:67:C:H2'	85:S5:68:C:O4'	2.11	0.50
86:S6:53:G:C2'	86:S6:54:U:C6	2.85	0.50
86:S6:65:G:C2	86:S6:66:U:C2	2.99	0.50
1:5:29:G:C4	1:5:30:C:C5	2.99	0.50
1:5:77:U:C4	1:5:335:A:N1	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:467:U:C2	1:5:468:U:C6	3.00	0.50
1:5:482:G:H2'	1:5:483:G:C1'	2.41	0.50
1:5:1185:G:C5	1:5:1186:U:C6	3.00	0.50
1:5:1250:C:C2	1:5:1261:G:N2	2.79	0.50
1:5:1320:U:H2'	1:5:1320:U:O2	2.11	0.50
1:5:1329:G:N2	1:5:3865:A:H1'	2.27	0.50
1:5:1616:U:O2	1:5:1616:U:H2'	2.11	0.50
1:5:1627:G:C5	1:5:1628:C:C6	3.00	0.50
1:5:1724:G:C8	30:b:17:HIS:CD2	2.99	0.50
1:5:1751:A:N6	1:5:1752:G:C5	2.80	0.50
1:5:1961:G:C6	1:5:2024:G:C6	3.00	0.50
1:5:2007:G:C3'	1:5:2008:U:H5''	2.42	0.50
1:5:2016:C:C2	1:5:2017:A:C8	3.00	0.50
1:5:2261:G:H2'	1:5:2262:G:N7	2.26	0.50
1:5:2385:U:H2'	1:5:2386:U:H6	1.77	0.50
1:5:2503:G:H3'	1:5:2504:C:C4'	2.41	0.50
1:5:2556:G:H2'	1:5:2557:G:O4'	2.12	0.50
1:5:2645:G:C5	1:5:2646:C:C5	3.00	0.50
1:5:2658:G:N2	1:5:2675:G:C2	2.78	0.50
1:5:2669:C:O2'	1:5:2670:C:P	2.70	0.50
1:5:2745:A:O2'	1:5:2746:A:H5'	2.12	0.50
1:5:2907:G:H2'	1:5:2908:U:O4'	2.12	0.50
1:5:3902:A:C2	1:5:3903:A:C8	3.00	0.50
1:5:3946:G:C2	1:5:3947:A:C8	3.00	0.50
1:5:3974:G:C2	1:5:3975:C:C2	3.00	0.50
1:5:4046:A:H2'	1:5:4047:A:H8	1.67	0.50
1:5:4054:C:C3'	46:z:205:TYR:CE1	2.87	0.50
1:5:4755:G:N1	1:5:4876:U:C4	2.80	0.50
1:5:4886:C:N3	1:5:4887:C:C5	2.71	0.50
1:5:5043:A:C2'	1:5:5044:A:O5'	2.60	0.50
3:8:31:G:C6	3:8:32:C:C4	3.00	0.50
5:B:116:ARG:C	5:B:118:PHE:H	2.20	0.50
5:B:378:ARG:CD	25:W:32:LEU:HD21	2.39	0.50
6:C:341:LEU:HD11	8:E:52:ARG:HD2	1.94	0.50
7:D:39:GLN:HA	7:D:39:GLN:OE1	2.11	0.50
7:D:200:LEU:HB2	7:D:202:GLN:HE22	1.75	0.50
7:D:278:ASP:O	7:D:280:VAL:N	2.44	0.50
9:F:58:HIS:HB2	9:F:59:TYR:HD1	1.77	0.50
19:Q:22:ASP:OD1	19:Q:25:LEU:HB3	2.12	0.50
27:Y:15:ARG:NH1	27:Y:15:ARG:CG	2.70	0.50
29:a:82:VAL:HG21	29:a:101:ILE:HG12	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:k:30:ASP:OD1	39:k:31:ASN:N	2.44	0.50
46:z:59:PRO:HA	46:z:170:GLY:HA2	1.92	0.50
50:S2:20:G:H4'	50:S2:620:G:N7	2.27	0.50
50:S2:341:C:C2	50:S2:342:C:C6	2.99	0.50
50:S2:376:A:C2	50:S2:377:G:H1'	2.47	0.50
50:S2:656:G:H5'	50:S2:662:G:N2	2.27	0.50
50:S2:689:U:H2'	50:S2:690:G:C1'	2.41	0.50
50:S2:973:C:N3	65:SO:55:ARG:NH1	2.59	0.50
50:S2:1102:G:N1	50:S2:1103:C:C4	2.80	0.50
50:S2:1392:U:C2	50:S2:1393:G:C8	2.99	0.50
50:S2:1434:C:H3'	50:S2:1435:C:C4'	2.41	0.50
50:S2:1434:C:H3'	50:S2:1435:C:C5'	2.42	0.50
50:S2:1454:A:C8	50:S2:1476:A:N9	2.80	0.50
50:S2:1546:G:O2'	50:S2:1547:C:O5'	2.29	0.50
50:S2:1630:A:C2	50:S2:1631:U:C5	3.00	0.50
50:S2:1648:G:O2'	50:S2:1674:G:O6	2.15	0.50
50:S2:1793:A:N3	50:S2:1794:C:C5	2.79	0.50
50:S2:1828:C:H2'	50:S2:1829:G:C1'	2.41	0.50
52:SB:89:GLU:CG	52:SB:223:PHE:CE2	2.93	0.50
53:SC:69:LEU:HG	53:SC:273:LEU:HD21	1.94	0.50
56:SF:128:ILE:HD12	79:Sc:68:LEU:HD12	1.94	0.50
59:SI:165:GLN:HE21	59:SI:171:LEU:HD23	1.77	0.50
62:SL:17:PHE:CE2	62:SL:19:ASN:HB2	2.46	0.50
63:SM:22:LEU:HD21	63:SM:109:VAL:HG21	1.93	0.50
73:SW:78:ARG:HD3	73:SW:126:LEU:HD23	1.94	0.50
76:SZ:103:HIS:O	76:SZ:104:ARG:C	2.54	0.50
77:Sa:22:ARG:NH2	77:Sa:27:ALA:HB1	2.27	0.50
85:S5:63:G:HO2'	85:S5:64:A:P	2.25	0.50
86:S6:23:A:C4	86:S6:24:G:N7	2.79	0.50
1:5:28:C:O2	1:5:28:C:C2'	2.60	0.50
1:5:209:U:O2	1:5:233:U:C4	2.65	0.50
1:5:211:G:N2	1:5:212:A:N9	2.60	0.50
1:5:230:G:C2	1:5:239:C:C2	3.00	0.50
1:5:298:G:C6	1:5:299:C:C4	3.00	0.50
1:5:920:C:C4	1:5:921:C:C5	3.00	0.50
1:5:1168:G:C2	1:5:1169:G:C5	2.99	0.50
1:5:1456:C:OP1	1:5:1456:C:H4'	2.11	0.50
1:5:1594:C:N4	1:5:1595:G:C5	2.80	0.50
1:5:1673:U:C2	1:5:1674:C:C6	3.00	0.50
1:5:1735:U:O2	1:5:1736:A:C8	2.65	0.50
1:5:1828:C:H1'	30:b:57:MET:HE2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1829:G:C2	1:5:1830:G:C4	2.99	0.50
1:5:1964:A:N6	1:5:1965:G:N9	2.56	0.50
1:5:1999:A:C4'	1:5:2019:C:H4'	2.40	0.50
1:5:2248:C:OP1	9:F:26:ASN:N	2.45	0.50
1:5:2322:G:N1	1:5:2323:C:C2	2.80	0.50
1:5:2385:U:C2	1:5:2386:U:C5	3.00	0.50
1:5:2393:C:OP2	1:5:2394:G:N7	2.45	0.50
1:5:2435:G:H21	1:5:2783:A:H1'	1.76	0.50
1:5:2700:G:H2'	1:5:2701:U:O4'	2.12	0.50
1:5:2794:C:N3	18:P:136:ILE:HD12	2.26	0.50
1:5:2909:C:O2	1:5:3586:G:C2	2.65	0.50
1:5:3692:A:N6	1:5:3693:U:C2	2.80	0.50
1:5:3754:G:C2	1:5:3755:G:C8	2.99	0.50
1:5:4137:C:H2'	1:5:4138:C:C6	2.47	0.50
1:5:4240:G:C2	1:5:4241:C:H1'	2.46	0.50
1:5:4283:G:H1	1:5:4284:C:N4	2.10	0.50
1:5:4647:G:H5'	1:5:4647:G:C8	2.47	0.50
1:5:4745:G:N2	1:5:4746:C:H41	2.09	0.50
1:5:4922:C:C2	1:5:4923:C:C6	3.00	0.50
1:5:4932:U:C2'	1:5:4933:C:O4'	2.60	0.50
1:5:5063:G:O6	5:B:124:LYS:NZ	2.40	0.50
2:7:22:A:N1	2:7:23:A:C6	2.79	0.50
2:7:51:G:C2	2:7:52:C:C5	3.00	0.50
3:8:106:G:C2	3:8:107:C:N3	2.80	0.50
3:8:106:G:N1	3:8:107:C:C4	2.80	0.50
3:8:132:G:C4	3:8:133:G:C8	3.00	0.50
4:A:30:ARG:NE	4:A:63:PHE:CE2	2.80	0.50
6:C:103:ALA:O	6:C:104:PRO:C	2.55	0.50
8:E:191:ILE:HG23	34:f:110:ILE:HD12	1.94	0.50
12:I:171:TRP:HE3	12:I:181:PHE:HB2	1.75	0.50
16:N:26:ARG:O	16:N:30:TYR:HB2	2.12	0.50
20:R:117:ARG:HH21	20:R:118:HIS:CE1	2.30	0.50
36:h:4:ILE:O	36:h:56:ARG:HD2	2.12	0.50
50:S2:88:G:H2'	50:S2:89:C:O4'	2.12	0.50
50:S2:153:G:C6	50:S2:154:U:C5	3.00	0.50
50:S2:428:U:C5	60:SJ:7:TRP:CE2	2.99	0.50
50:S2:529:A:C6	50:S2:530:U:C4	3.00	0.50
50:S2:581:U:O3'	75:SY:66:GLY:HA3	2.12	0.50
50:S2:616:A:O3'	74:SX:88:ASP:OD1	2.30	0.50
50:S2:800:U:H2'	50:S2:801:U:O4'	2.12	0.50
50:S2:828:G:C4	50:S2:829:C:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:952:G:C2	50:S2:953:C:C2	3.00	0.50
50:S2:1018:U:N3	50:S2:1019:C:H5	2.04	0.50
50:S2:1050:A:C5	50:S2:1051:G:N9	2.80	0.50
50:S2:1070:A:C8	50:S2:1071:G:C8	3.00	0.50
50:S2:1094:C:O2	50:S2:1094:C:H2'	2.12	0.50
50:S2:1095:U:O2	50:S2:1095:U:C2'	2.60	0.50
50:S2:1095:U:C2	50:S2:1149:A:N6	2.79	0.50
50:S2:1101:U:C2	50:S2:1102:G:C8	2.92	0.50
50:S2:1159:G:H2'	50:S2:1160:U:O4'	2.12	0.50
50:S2:1248:U:O2	86:S6:34:G:C4'	2.59	0.50
50:S2:1325:G:C2	50:S2:1327:G:N7	2.80	0.50
50:S2:1351:G:H1'	51:SA:110:ASN:ND2	2.25	0.50
50:S2:1436:C:N3	50:S2:1438:A:N7	2.60	0.50
50:S2:1452:A:C4	50:S2:1475:G:C2	3.00	0.50
50:S2:1466:G:N3	50:S2:1467:C:C6	2.80	0.50
50:S2:1510:G:O6	50:S2:1511:U:C4	2.65	0.50
50:S2:1528:G:C2	50:S2:1529:C:N3	2.80	0.50
50:S2:1589:A:OP1	70:ST:81:GLY:N	2.45	0.50
50:S2:1699:A:C2	53:SC:115:GLN:HG2	2.46	0.50
50:S2:1795:G:N1	50:S2:1796:G:C5	2.80	0.50
52:SB:150:ILE:HD13	68:SR:128:PHE:HA	1.92	0.50
55:SE:46:ILE:O	55:SE:50:ASN:HB2	2.12	0.50
57:SG:74:ARG:HH11	57:SG:74:ARG:HB3	1.77	0.50
58:SH:169:LYS:O	58:SH:171:GLU:N	2.45	0.50
63:SM:19:GLN:CB	63:SM:88:TRP:HB3	2.42	0.50
65:SO:56:VAL:HA	65:SO:60:MET:HE2	1.93	0.50
68:SR:71:ILE:O	68:SR:72:LYS:C	2.55	0.50
82:Sf:126:CYS:HB3	82:Sf:130:VAL:HB	1.93	0.50
83:Sg:230:LEU:HD22	83:Sg:259:TRP:CD2	2.47	0.50
84:S4:19:U:C2	86:S6:36:A:H2	2.30	0.50
85:S5:2:C:C4	85:S5:71:G:N2	2.56	0.50
85:S5:37:A:H2'	85:S5:38:A:C1'	2.41	0.50
1:5:33:A:H5''	1:5:33:A:H8	1.77	0.49
1:5:74:G:H5'	14:L:59:VAL:HG13	1.94	0.49
1:5:278:G:N2	1:5:330:G:C8	2.79	0.49
1:5:642:G:N3	1:5:643:C:C6	2.80	0.49
1:5:677:G:C6	1:5:678:C:N4	2.80	0.49
1:5:699:C:C4	1:5:700:G:N7	2.80	0.49
1:5:712:C:C2	1:5:713:C:C6	3.00	0.49
1:5:731:G:N7	1:5:732:A:C8	2.80	0.49
1:5:733:A:N7	1:5:734:G:N7	2.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:739:G:C2	1:5:740:G:C4	3.00	0.49
1:5:1213:G:C6	1:5:1215:C:C5	3.00	0.49
1:5:1213:G:N9	1:5:1215:C:HI'	2.25	0.49
1:5:1251:C:C2	1:5:1252:C:C5	2.99	0.49
1:5:1326:A:H2'	1:5:1327:C:H6	1.76	0.49
1:5:1344:C:C6	1:5:1344:C:H5''	2.47	0.49
1:5:1404:G:C2	1:5:1405:C:N1	2.80	0.49
1:5:1412:G:C4	1:5:1413:C:C5	3.00	0.49
1:5:1412:G:C6	1:5:1413:C:C4	3.00	0.49
1:5:1439:C:H5''	9:F:36:ARG:HH12	1.67	0.49
1:5:1832:C:O2	1:5:1832:C:H2'	2.11	0.49
1:5:1890:G:N2	1:5:1938:C:N4	2.59	0.49
1:5:1912:G:C2	1:5:1913:C:C4	2.99	0.49
1:5:1936:C:C2	1:5:1937:C:C6	3.00	0.49
1:5:2113:G:H8	1:5:2115:G:N3	2.10	0.49
1:5:2448:G:O2'	1:5:2449:A:O4'	2.29	0.49
1:5:2557:G:H2'	1:5:2558:C:O4'	2.11	0.49
1:5:2841:G:C6	1:5:2842:G:C8	3.00	0.49
1:5:3599:A:H2'	1:5:3600:G:C8	2.47	0.49
1:5:3711:A:H5''	1:5:3711:A:N3	2.27	0.49
1:5:4350:C:N3	1:5:4351:U:C5	2.80	0.49
1:5:4547:C:N3	1:5:4549:G:N7	2.60	0.49
1:5:4562:C:H2'	1:5:4562:C:O2	2.11	0.49
1:5:4628:U:O2	1:5:4629:U:C5	2.64	0.49
1:5:4725:C:C2	1:5:4726:G:C8	2.94	0.49
6:C:33:ARG:HH21	19:Q:22:ASP:CB	2.25	0.49
6:C:209:ILE:HD13	6:C:221:PHE:CE2	2.47	0.49
11:H:117:PHE:HD1	11:H:118:LEU:HB2	1.74	0.49
14:L:94:ILE:HA	36:h:119:PHE:HZ	1.76	0.49
26:X:119:ILE:HA	26:X:144:TYR:CE2	2.42	0.49
33:e:35:TRP:CE3	33:e:56:PRO:CD	2.86	0.49
39:k:19:ASP:OD1	39:k:19:ASP:C	2.56	0.49
45:r:49:VAL:HG11	45:r:97:ILE:HD11	1.92	0.49
46:z:147:LYS:HZ3	46:z:151:VAL:HG23	1.75	0.49
46:z:199:GLN:O	46:z:201:VAL:N	2.45	0.49
47:1:395:LYS:HD3	47:1:395:LYS:C	2.35	0.49
47:1:448:LEU:C	47:1:451:VAL:N	2.69	0.49
50:S2:49:C:O2	50:S2:478:G:C2	2.65	0.49
50:S2:164:A:OP2	50:S2:165:G:N2	2.45	0.49
50:S2:311:C:H3'	50:S2:312:G:C4'	2.42	0.49
50:S2:554:A:N1	50:S2:555:A:C6	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:570:C:O2	50:S2:571:U:C6	2.65	0.49
50:S2:600:G:N2	50:S2:601:G:C5	2.80	0.49
50:S2:635:G:N3	50:S2:636:C:C6	2.80	0.49
50:S2:853:C:O2	50:S2:853:C:O4'	2.29	0.49
50:S2:923:G:C6	50:S2:924:G:N7	2.80	0.49
50:S2:1083:A:N3	50:S2:1859:A:C2'	2.74	0.49
50:S2:1146:C:O2	50:S2:1147:C:C5	2.60	0.49
50:S2:1149:A:C6	50:S2:1151:G:N9	2.80	0.49
50:S2:1206:G:H1'	50:S2:1834:A:H8	1.74	0.49
50:S2:1304:U:O2	50:S2:1304:U:H2'	2.12	0.49
50:S2:1330:G:N1	50:S2:1492:U:N3	2.59	0.49
50:S2:1341:C:N4	50:S2:1484:A:N6	2.60	0.49
50:S2:1387:G:O2'	68:SR:6:THR:HG21	2.12	0.49
50:S2:1793:A:N3	50:S2:1794:C:C6	2.80	0.49
53:SC:94:ILE:HD11	53:SC:98:LEU:HD12	1.93	0.49
59:SI:172:LEU:HB3	59:SI:190:LEU:HD12	1.93	0.49
62:SL:121:GLN:N	62:SL:124:ASP:OD2	2.44	0.49
69:SS:20:ILE:CG2	69:SS:29:ALA:HB1	2.41	0.49
83:Sg:82:SER:OG	83:Sg:83:TRP:N	2.45	0.49
86:S6:5:C:N1	86:S6:6:G:H8	2.07	0.49
86:S6:71:G:N2	86:S6:72:C:N4	2.60	0.49
1:5:105:A:O2'	14:L:35:ARG:NH1	2.44	0.49
1:5:223:G:O2'	6:C:223:ASN:ND2	2.45	0.49
1:5:951:G:C2'	1:5:952:G:H5''	2.41	0.49
1:5:979:C:C4	1:5:980:U:C5	3.00	0.49
1:5:1263:A:C6	1:5:1264:C:C5	3.00	0.49
1:5:1265:G:C6	1:5:1266:G:C5	3.00	0.49
1:5:1277:G:C6	1:5:1278:C:C4	3.00	0.49
1:5:1277:G:C4	1:5:1278:C:C6	3.01	0.49
1:5:1434:G:H2'	1:5:1435:G:O4'	2.12	0.49
1:5:2052:G:OP1	17:O:83:THR:HG22	2.12	0.49
1:5:2314:G:C6	1:5:2326:G:C5	3.00	0.49
1:5:2326:G:N2	1:5:2327:G:C4	2.80	0.49
1:5:2445:C:O2	1:5:2445:C:C2'	2.60	0.49
1:5:2460:A:O4'	16:N:94:PHE:CE1	2.64	0.49
1:5:2866:C:N3	1:5:2867:C:C5	2.81	0.49
1:5:2889:G:H21	1:5:5034:A:H8	1.58	0.49
1:5:2895:A:C6	1:5:2896:G:N7	2.81	0.49
1:5:3669:G:N2	1:5:3671:G:OP2	2.45	0.49
1:5:3672:G:C8	1:5:3674:G:O4'	2.65	0.49
1:5:3820:G:C5	1:5:3821:A:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3880:G:C2	1:5:3881:G:C6	3.01	0.49
1:5:4143:G:C8	1:5:4145:C:C5	3.00	0.49
1:5:4257:A:C5	13:J:60:PHE:CE2	2.99	0.49
1:5:4362:A:N3	1:5:4363:A:C8	2.80	0.49
1:5:4478:G:H2'	1:5:4479:A:O4'	2.11	0.49
1:5:4552:U:H2'	1:5:4553:A:O5'	2.11	0.49
1:5:4743:G:O6	1:5:4744:A:N6	2.45	0.49
1:5:4763:U:H6	11:H:42:ASN:ND2	2.09	0.49
1:5:4768:G:H3'	1:5:4769:G:C8	2.47	0.49
1:5:4898:G:C2	1:5:4899:G:C5	2.99	0.49
1:5:4920:C:O2	1:5:4921:C:C5	2.66	0.49
1:5:4956:A:N1	1:5:4957:C:C6	2.80	0.49
1:5:4967:A:H2'	1:5:4968:A:H8	1.76	0.49
1:5:4997:G:C2	1:5:4998:G:C8	3.00	0.49
2:7:11:A:N1	2:7:66:G:O2'	2.37	0.49
2:7:44:C:N3	2:7:45:U:C5	2.81	0.49
3:8:118:C:O2	3:8:119:C:H6	1.96	0.49
4:A:40:TYR:HB3	4:A:93:LYS:HB2	1.93	0.49
8:E:129:PHE:C	8:E:129:PHE:HD1	2.20	0.49
8:E:253:ILE:O	8:E:255:ARG:N	2.44	0.49
10:G:61:ILE:O	10:G:62:ARG:C	2.55	0.49
12:I:98:ARG:CD	12:I:119:PHE:HE1	2.25	0.49
21:S:84:TYR:HD2	21:S:113:MET:CE	2.24	0.49
28:Z:36:ARG:C	28:Z:38:TYR:H	2.21	0.49
34:f:6:TRP:HB2	34:f:102:ARG:CB	2.37	0.49
35:g:60:ARG:HG3	35:g:61:PRO:HD2	1.93	0.49
37:i:20:ASN:OD1	37:i:20:ASN:C	2.54	0.49
38:j:21:ARG:NH2	38:j:38:GLY:O	2.46	0.49
50:S2:20:G:C5'	50:S2:620:G:N7	2.76	0.49
50:S2:79:A:H8	50:S2:79:A:O5'	1.95	0.49
50:S2:482:G:O2'	50:S2:484:A:N6	2.41	0.49
50:S2:666:U:O4'	50:S2:1088:U:C4	2.65	0.49
50:S2:839:C:C5	50:S2:841:G:C5	3.00	0.49
50:S2:950:C:O2	50:S2:950:C:H2'	2.11	0.49
50:S2:1032:C:C4	50:S2:1033:G:N7	2.80	0.49
50:S2:1109:C:C5	68:SR:123:THR:HG23	2.47	0.49
50:S2:1116:C:O4'	50:S2:1116:C:O2	2.30	0.49
50:S2:1309:C:H2'	82:Sf:143:LYS:HD3	1.94	0.49
50:S2:1335:G:C6	50:S2:1336:C:C4	3.00	0.49
50:S2:1339:U:C2	50:S2:1340:U:C5	3.00	0.49
50:S2:1376:A:N7	50:S2:1377:U:C6	2.79	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1378:A:OP2	51:SA:102:ARG:CZ	2.59	0.49
50:S2:1526:G:N1	50:S2:1527:C:C5	2.80	0.49
50:S2:1683:C:O2	50:S2:1683:C:H2'	2.11	0.49
50:S2:1831:A:H1'	50:S2:1852:C:OP1	2.11	0.49
55:SE:106:LYS:HB3	55:SE:108:ARG:HD3	1.94	0.49
60:SJ:7:TRP:O	60:SJ:8:VAL:C	2.54	0.49
63:SM:93:LYS:O	63:SM:94:ILE:HG22	2.12	0.49
63:SM:94:ILE:O	63:SM:95:ASP:C	2.54	0.49
65:SO:35:ALA:HB1	65:SO:112:ALA:HB2	1.93	0.49
66:SP:28:MET:HE1	66:SP:36:LEU:CD1	2.41	0.49
68:SR:13:ALA:HB2	68:SR:53:TYR:CD2	2.38	0.49
82:Sf:126:CYS:HG	82:Sf:144:CYS:HG	1.47	0.49
85:S5:52:G:N1	85:S5:53:G:N7	2.59	0.49
86:S6:5:C:N4	86:S6:68:C:N4	2.61	0.49
86:S6:15:G:N2	86:S6:21:A:C2	2.73	0.49
86:S6:61:C:H5'	86:S6:62:C:OP2	2.11	0.49
1:5:154:G:N1	1:5:155:C:C4	2.80	0.49
1:5:176:G:C5'	36:h:98:HIS:CE1	2.95	0.49
1:5:187:U:H3'	1:5:245:C:C2	2.47	0.49
1:5:294:G:OP2	1:5:294:G:O4'	2.31	0.49
1:5:322:C:H1'	1:5:4356:G:N2	2.28	0.49
1:5:347:A:C2	1:5:348:G:N7	2.81	0.49
1:5:910:G:C6	1:5:911:U:C4	3.00	0.49
1:5:1433:A:N6	1:5:1451:G:O2'	2.44	0.49
1:5:1440:U:H4'	1:5:2109:G:O2'	2.11	0.49
1:5:1444:G:N3	1:5:1445:U:C5	2.81	0.49
1:5:1467:C:C2	1:5:1468:C:C5	3.00	0.49
1:5:1479:G:O2'	1:5:1480:C:O5'	2.30	0.49
1:5:1491:A:C6	1:5:1492:G:C5	3.01	0.49
1:5:1685:G:N2	1:5:1686:C:C2	2.81	0.49
1:5:1805:A:C8	30:b:28:ARG:HB3	2.47	0.49
1:5:1877:G:N1	1:5:1878:G:C5	2.80	0.49
1:5:2032:U:H2'	1:5:2033:A:O4'	2.13	0.49
1:5:2084:C:H3'	1:5:2085:G:H5''	1.93	0.49
1:5:2256:C:O2'	1:5:2257:C:OP2	2.24	0.49
1:5:2279:A:C4	1:5:2280:G:N7	2.80	0.49
1:5:2361:G:O2'	1:5:2362:U:P	2.70	0.49
1:5:2363:A:H1'	1:5:4560:C:C5	2.46	0.49
1:5:2448:G:O6	1:5:2510:G:O2'	2.30	0.49
1:5:2456:G:O2'	1:5:2457:G:H5'	2.12	0.49
1:5:2496:G:N3	1:5:2497:C:C6	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2519:U:H1'	1:5:2520:C:C6	2.48	0.49
1:5:2557:G:C5	1:5:2558:C:C5	3.01	0.49
1:5:2585:C:N3	1:5:2588:C:N4	2.60	0.49
1:5:2591:A:N6	1:5:2753:G:N2	2.60	0.49
1:5:2854:G:C6	1:5:2856:C:H6	2.22	0.49
1:5:3911:C:C2'	1:5:3912:U:O5'	2.59	0.49
1:5:4034:G:N3	1:5:4035:G:C8	2.80	0.49
1:5:4098:A:C4	1:5:4099:G:C8	3.00	0.49
1:5:4271:A:N3	1:5:4271:A:H2'	2.26	0.49
1:5:4481:U:C2	1:5:4482:U:C4	2.99	0.49
1:5:4536:C:O2	1:5:4536:C:H2'	2.11	0.49
1:5:4713:G:C6	1:5:4714:C:C4	3.00	0.49
1:5:4743:G:N3	1:5:4744:A:C8	2.80	0.49
1:5:4913:G:H2'	1:5:4914:C:O4'	2.11	0.49
1:5:4916:G:C5	1:5:4917:C:C5	3.00	0.49
1:5:5023:C:O4'	1:5:5023:C:O2	2.28	0.49
2:7:104:C:C2	2:7:105:C:C6	3.00	0.49
2:7:105:C:H2'	2:7:105:C:O2	2.12	0.49
3:8:64:U:H3'	3:8:65:A:C8	2.47	0.49
4:A:18:ALA:O	4:A:20:VAL:HG13	2.13	0.49
7:D:99:TYR:CD2	7:D:199:ILE:HG23	2.47	0.49
7:D:284:LYS:HB3	12:I:209:TRP:HZ3	1.72	0.49
9:F:168:ARG:HB2	9:F:211:TRP:NE1	2.27	0.49
10:G:58:PRO:CD	26:X:46:PHE:HD2	2.25	0.49
11:H:54:ARG:CG	11:H:54:ARG:HH11	2.25	0.49
12:I:76:MET:HE1	12:I:140:THR:HG21	1.94	0.49
15:M:120:ASN:HA	15:M:123:ILE:HG22	1.93	0.49
19:Q:178:ARG:NH2	19:Q:186:TYR:HE1	2.11	0.49
20:R:109:TYR:CE1	20:R:114:LYS:CD	2.87	0.49
23:U:42:PHE:CE1	23:U:46:ARG:HD3	2.48	0.49
24:V:13:LYS:HG2	24:V:128:LEU:HD22	1.95	0.49
27:Y:15:ARG:HH11	27:Y:15:ARG:CG	2.26	0.49
50:S2:10:G:N2	53:SC:113:GLN:O	2.38	0.49
50:S2:488:U:H3'	50:S2:489:A:H5'	1.94	0.49
50:S2:599:A:C4'	50:S2:605:A:C2	2.94	0.49
50:S2:615:C:C2'	50:S2:616:A:O4'	2.60	0.49
50:S2:623:G:C2	50:S2:624:C:N1	2.80	0.49
50:S2:636:C:O2	50:S2:637:U:C6	2.65	0.49
50:S2:738:C:N3	50:S2:739:C:C5	2.80	0.49
50:S2:751:G:N2	50:S2:792:C:H1'	2.28	0.49
50:S2:847:A:H2'	50:S2:847:A:N3	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1135:C:N3	50:S2:1136:U:C5	2.80	0.49
50:S2:1159:G:OP2	74:SX:5:ARG:CG	2.60	0.49
50:S2:1290:G:C8	82:Sf:146:LEU:HD23	2.48	0.49
50:S2:1291:A:C1'	82:Sf:146:LEU:HB2	2.42	0.49
50:S2:1302:G:C8	82:Sf:140:TYR:CD2	3.00	0.49
50:S2:1363:C:O5'	50:S2:1363:C:H6	1.95	0.49
50:S2:1573:G:C6	50:S2:1574:C:C6	3.00	0.49
50:S2:1698:C:H3'	50:S2:1699:A:H5''	1.93	0.49
50:S2:1785:C:C2	50:S2:1786:U:C4	2.99	0.49
52:SB:180:ASP:OD1	52:SB:180:ASP:C	2.55	0.49
53:SC:65:LYS:HD3	53:SC:273:LEU:HD13	1.94	0.49
55:SE:159:THR:HG23	55:SE:227:VAL:CG2	2.43	0.49
59:SI:44:HIS:CD2	59:SI:58:LEU:HD11	2.47	0.49
69:SS:42:HIS:CE1	70:ST:45:LEU:HD11	2.47	0.49
74:SX:61:GLN:CD	74:SX:61:GLN:C	2.80	0.49
85:S5:36:A:N7	85:S5:37:A:C5	2.81	0.49
85:S5:40:C:C2'	85:S5:41:C:H5'	2.42	0.49
86:S6:55:U:O2'	86:S6:56:C:C5	2.63	0.49
1:5:302:C:H5''	16:N:68:ARG:HE	1.77	0.49
1:5:1097:C:H42	1:5:1198:G:H1	1.61	0.49
1:5:1211:G:C2	1:5:1212:G:C8	3.01	0.49
1:5:1235:G:N2	1:5:1236:C:C6	2.80	0.49
1:5:1263:A:H2'	1:5:1264:C:O4'	2.12	0.49
1:5:1309:C:H2'	1:5:1309:C:O2	2.12	0.49
1:5:1412:G:C2	1:5:1413:C:C2	3.00	0.49
1:5:1468:C:H2'	1:5:1469:C:C6	2.47	0.49
1:5:1566:C:C3'	1:5:1567:U:P	2.98	0.49
1:5:1665:C:C2'	1:5:1666:C:O5'	2.59	0.49
1:5:2034:G:C2	1:5:2035:C:C1'	2.95	0.49
1:5:2292:C:C4	1:5:2293:U:C5	3.00	0.49
1:5:2334:C:H2'	1:5:2334:C:O2	2.12	0.49
1:5:2491:C:H2'	1:5:2492:C:O4'	2.12	0.49
1:5:2551:A:H2'	1:5:2552:G:H5'	1.94	0.49
1:5:2658:G:O2'	1:5:2675:G:N2	2.45	0.49
1:5:3879:G:O6	1:5:3882:C:C5	2.63	0.49
1:5:3907:G:N7	1:5:4447:C:H1'	2.27	0.49
1:5:4269:G:O6	1:5:4277:G:O6	2.29	0.49
1:5:4518:A:C5	5:B:257:TRP:CZ2	3.00	0.49
1:5:4563:U:N3	1:5:4564:A:N6	2.58	0.49
1:5:4592:C:H2'	1:5:4593:C:C6	2.47	0.49
1:5:4627:U:O2'	5:B:55:HIS:CE1	2.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4651:A:C6	1:5:4652:G:N7	2.81	0.49
1:5:4652:G:H2'	1:5:4653:C:H6	1.77	0.49
2:7:111:C:N3	2:7:112:U:C5	2.80	0.49
3:8:78:G:H2'	3:8:79:G:C1'	2.43	0.49
9:F:239:GLU:O	9:F:240:ASP:HB3	2.13	0.49
10:G:55:VAL:HG22	26:X:44:PRO:HA	1.94	0.49
13:J:119:TYR:C	69:SS:101:ASN:ND2	2.70	0.49
14:L:38:ALA:O	14:L:39:ARG:C	2.55	0.49
17:O:140:ARG:HH21	17:O:140:ARG:HG3	1.77	0.49
19:Q:88:ASP:OD1	19:Q:109:ALA:HA	2.12	0.49
28:Z:18:TYR:CE2	28:Z:47:ASP:OD1	2.65	0.49
50:S2:177:G:N2	50:S2:178:C:H41	2.10	0.49
50:S2:200:G:C2	50:S2:201:C:C2	3.01	0.49
50:S2:218:U:N3	50:S2:219:U:C4	2.80	0.49
50:S2:333:G:C6	50:S2:334:C:C4	3.00	0.49
50:S2:356:C:O4'	50:S2:356:C:O2	2.29	0.49
50:S2:376:A:H4'	62:SL:9:ALA:CB	2.42	0.49
50:S2:453:C:O2'	50:S2:454:U:O5'	2.29	0.49
50:S2:548:C:N4	50:S2:549:C:H1'	2.28	0.49
50:S2:1018:U:H5'	64:SN:71:ILE:HD12	1.94	0.49
50:S2:1051:G:N3	50:S2:1052:A:C8	2.80	0.49
50:S2:1210:G:N2	50:S2:1690:U:N1	2.60	0.49
50:S2:1327:G:N2	50:S2:1503:C:H1'	2.27	0.49
50:S2:1357:A:O2'	50:S2:1358:U:OP1	2.29	0.49
50:S2:1382:A:N6	50:S2:1383:A:N6	2.60	0.49
50:S2:1488:C:C2	50:S2:1490:G:N7	2.80	0.49
50:S2:1512:C:H2'	50:S2:1513:C:C6	2.47	0.49
50:S2:1685:U:H2'	50:S2:1686:G:O4'	2.11	0.49
54:SD:161:GLY:C	54:SD:163:PRO:HD2	2.38	0.49
54:SD:211:VAL:CG2	68:SR:38:ILE:O	2.34	0.49
55:SE:73:ASP:OD1	55:SE:73:ASP:N	2.45	0.49
55:SE:159:THR:HG21	55:SE:227:VAL:O	2.12	0.49
58:SH:160:LYS:O	58:SH:163:GLN:HG2	2.11	0.49
65:SO:146:ARG:HG3	65:SO:146:ARG:NH1	2.08	0.49
68:SR:10:LYS:CA	68:SR:53:TYR:HE2	2.15	0.49
85:S5:56:C:H2'	85:S5:57:G:H5''	1.95	0.49
86:S6:55:U:H3'	86:S6:56:C:H5''	1.94	0.49
1:5:500:G:C2	1:5:504:G:N7	2.80	0.49
1:5:754:U:N3	1:5:755:C:C6	2.79	0.49
1:5:982:U:C6	8:E:67:ARG:NE	2.81	0.49
1:5:1206:C:N3	1:5:1207:C:C5	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1207:C:C2	1:5:1208:G:C8	3.00	0.49
1:5:1243:C:N3	1:5:1269:G:N2	2.48	0.49
1:5:1261:G:N1	1:5:1262:G:N7	2.60	0.49
1:5:1330:A:C8	1:5:3864:C:C4	3.00	0.49
1:5:1598:C:N1	1:5:2798:A:C8	2.80	0.49
1:5:2079:G:C6	1:5:2080:U:C5	3.00	0.49
1:5:2260:C:C2'	1:5:2261:G:C8	2.96	0.49
1:5:2314:G:C8	1:5:2326:G:C2	3.00	0.49
1:5:2363:A:O4'	1:5:4560:C:C5	2.65	0.49
1:5:2408:U:N1	1:5:2409:U:O4	2.45	0.49
1:5:2450:G:C6	1:5:2451:A:N7	2.80	0.49
1:5:2460:A:H1'	16:N:94:PHE:CZ	2.47	0.49
1:5:2515:G:O6	1:5:2516:G:C2	2.66	0.49
1:5:2533:C:C2	1:5:2534:C:C4	3.00	0.49
1:5:2613:C:N4	1:5:2614:C:N4	2.61	0.49
1:5:2644:G:N2	1:5:2645:G:H1'	2.28	0.49
1:5:2682:G:H2'	1:5:2683:C:H6	1.77	0.49
1:5:2738:C:N3	1:5:2741:U:C4	2.81	0.49
1:5:3594:C:O2	1:5:3594:C:C2'	2.60	0.49
1:5:3652:A:H3'	1:5:3653:A:C8	2.47	0.49
1:5:3717:A:C5	1:5:3736:A:C6	2.97	0.49
1:5:3867:A:C2	1:5:3868:G:C4	3.01	0.49
1:5:3944:G:O6	1:5:3945:A:C6	2.66	0.49
1:5:4077:A:N7	1:5:4078:C:C6	2.81	0.49
1:5:4168:G:H2'	1:5:4169:G:C5'	2.43	0.49
1:5:4287:G:C2	1:5:4288:C:C2	3.01	0.49
1:5:4565:C:O2'	1:5:4566:U:H5'	2.12	0.49
1:5:4592:C:C2	1:5:4593:C:C5	3.00	0.49
1:5:4631:G:H2'	1:5:4632:U:O4'	2.12	0.49
1:5:4982:A:C2	1:5:4983:C:C1'	2.95	0.49
2:7:93:G:C4	2:7:94:C:C5	3.00	0.49
3:8:42:G:C4	3:8:43:A:C8	3.00	0.49
3:8:53:G:C2	3:8:54:C:C2	3.00	0.49
4:A:174:ARG:HA	44:p:69:TRP:HH2	1.73	0.49
10:G:227:ASN:N	10:G:227:ASN:ND2	2.60	0.49
11:H:1:MET:HE3	21:S:144:GLN:HE21	1.78	0.49
11:H:111:LEU:HD12	11:H:113:GLU:OE1	2.12	0.49
12:I:76:MET:HB3	12:I:85:PHE:CE2	2.47	0.49
12:I:76:MET:HB3	12:I:85:PHE:CD2	2.47	0.49
22:T:3:ASN:CB	22:T:9:ARG:HH12	2.26	0.49
27:Y:81:TYR:HD2	27:Y:96:HIS:HB2	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Z:92:ASP:OD1	28:Z:92:ASP:C	2.56	0.49
30:b:16:TRP:N	30:b:16:TRP:CD1	2.80	0.49
42:n:9:ARG:NH2	50:S2:1707:U:OP1	2.45	0.49
45:r:57:GLY:O	45:r:121:GLN:OE1	2.30	0.49
45:r:65:LYS:N	45:r:102:TYR:OH	2.45	0.49
47:1:255:VAL:HG22	47:1:431:LEU:HD13	1.93	0.49
50:S2:116:U:C2	50:S2:117:C:C6	3.01	0.49
50:S2:187:G:C4	50:S2:188:C:C5	3.01	0.49
50:S2:380:G:OP1	59:SI:31:ARG:HB2	2.11	0.49
50:S2:458:A:C2	50:S2:459:C:H1'	2.47	0.49
50:S2:495:U:O2'	50:S2:496:C:O5'	2.30	0.49
50:S2:498:C:C2	50:S2:505:G:N2	2.81	0.49
50:S2:597:G:N1	50:S2:640:A:N1	2.60	0.49
50:S2:616:A:H4'	81:Se:8:ARG:O	2.12	0.49
50:S2:940:U:H2'	50:S2:941:C:C6	2.48	0.49
50:S2:990:A:H2'	50:S2:990:A:N3	2.28	0.49
50:S2:1005:G:H2'	50:S2:1006:C:H6	1.77	0.49
50:S2:1008:A:H1'	64:SN:101:HIS:ND1	2.27	0.49
50:S2:1121:G:C6	50:S2:1122:A:N7	2.80	0.49
50:S2:1199:A:N6	50:S2:1200:A:N6	2.60	0.49
50:S2:1380:C:H2'	50:S2:1381:G:C8	2.48	0.49
50:S2:1526:G:C2	50:S2:1527:C:C2	3.01	0.49
50:S2:1593:C:N3	50:S2:1594:A:C8	2.80	0.49
50:S2:1772:C:O2	50:S2:1773:C:C6	2.65	0.49
51:SA:72:ALA:O	51:SA:97:THR:OG1	2.30	0.49
52:SB:121:ILE:HD12	52:SB:207:LEU:HD21	1.93	0.49
54:SD:72:VAL:CG2	61:SK:20:VAL:HG21	2.42	0.49
60:SJ:13:TYR:C	60:SJ:13:TYR:CD1	2.90	0.49
63:SM:99:ASN:HD22	63:SM:99:ASN:N	2.09	0.49
74:SX:128:VAL:O	74:SX:129:SER:CB	2.60	0.49
75:SY:20:ARG:HB2	75:SY:76:TYR:CE1	2.48	0.49
83:Sg:239:LEU:HD23	83:Sg:250:ALA:HA	1.94	0.49
86:S6:5:C:N3	86:S6:6:G:C5	2.81	0.49
86:S6:52:G:N2	86:S6:63:G:N2	2.60	0.49
86:S6:62:C:C3'	86:S6:63:G:C8	2.95	0.49
1:5:16:G:O3'	36:h:78:TYR:HE2	1.96	0.49
1:5:94:A:C2'	1:5:95:G:O5'	2.60	0.49
1:5:246:G:N1	1:5:247:G:C5	2.80	0.49
1:5:917:A:C2	1:5:918:G:C2	3.00	0.49
1:5:964:A:H2	1:5:2252:G:O6	1.93	0.49
1:5:982:U:H5''	8:E:69:TYR:OH	2.09	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1092:G:C4	1:5:1093:C:C6	3.00	0.49
1:5:1193:C:C2	1:5:1194:G:C8	3.00	0.49
1:5:1261:G:C4	1:5:1262:G:C8	3.01	0.49
1:5:1268:G:N3	1:5:1270:A:C8	2.77	0.49
1:5:1347:G:C4	1:5:1348:U:C6	3.00	0.49
1:5:1358:G:C2'	1:5:1359:G:C8	2.94	0.49
1:5:1627:G:H3'	1:5:1628:C:C6	2.47	0.49
1:5:1635:C:N3	1:5:1636:U:C4	2.80	0.49
1:5:1899:G:H8	1:5:2278:G:C2	2.25	0.49
1:5:1972:G:N2	1:5:1973:G:C4	2.80	0.49
1:5:1983:A:C5	1:5:1987:C:OP2	2.57	0.49
1:5:2056:G:O2'	1:5:2057:A:H2'	2.13	0.49
1:5:2457:G:H2'	1:5:2458:C:O4'	2.11	0.49
1:5:2509:C:C2	1:5:2510:G:N7	2.80	0.49
1:5:2614:C:C2	1:5:2726:G:C2	3.01	0.49
1:5:2724:G:N1	1:5:2726:G:N7	2.57	0.49
1:5:2735:G:C2	1:5:2736:G:C5	3.00	0.49
1:5:2760:G:H4'	1:5:2762:G:H22	1.76	0.49
1:5:2795:A:O2'	1:5:2796:G:H3'	2.12	0.49
1:5:2827:G:H2'	1:5:2827:G:N3	2.26	0.49
1:5:2862:G:N3	1:5:3624:A:H2'	2.27	0.49
1:5:3722:G:C6	1:5:3723:A:N7	2.81	0.49
1:5:3939:G:H3'	1:5:3940:U:O5'	2.12	0.49
1:5:4181:U:C4	1:5:4182:G:C5	3.00	0.49
1:5:4222:G:C5	1:5:4223:C:C5	3.01	0.49
1:5:4305:G:C2'	1:5:4305:G:N3	2.75	0.49
1:5:4486:C:H2'	1:5:4487:A:O4'	2.13	0.49
1:5:4505:C:C2	1:5:4506:C:C5	3.01	0.49
1:5:4524:G:N2	1:5:4525:C:C2	2.81	0.49
1:5:4690:G:C6	1:5:4697:U:C5	3.01	0.49
1:5:4750:G:O2'	1:5:4751:G:OP1	2.31	0.49
1:5:4899:G:C2	1:5:4922:C:C2	3.00	0.49
1:5:4976:U:H5'	1:5:4976:U:C6	2.48	0.49
1:5:5062:G:H2'	1:5:5062:G:N3	2.27	0.49
3:8:92:U:H2'	3:8:93:C:O4'	2.12	0.49
9:F:82:ASN:HD21	22:T:142:ARG:HA	1.77	0.49
12:I:112:GLN:HB2	12:I:116:ARG:HH11	1.76	0.49
19:Q:168:ARG:HD3	19:Q:174:PHE:HE2	1.78	0.49
20:R:110:ARG:HD3	20:R:120:TYR:HE2	1.77	0.49
21:S:13:VAL:HG12	21:S:29:ARG:CA	2.43	0.49
21:S:90:THR:HG23	22:T:156:TYR:CE2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:121:ARG:HB3	27:Y:121:ARG:NH1	2.28	0.49
35:g:96:LEU:O	35:g:100:GLN:HG3	2.13	0.49
50:S2:61:A:C2	50:S2:335:G:C1'	2.95	0.49
50:S2:461:U:O2	50:S2:462:C:C6	2.65	0.49
50:S2:669:A:C2	50:S2:670:A:C6	3.01	0.49
50:S2:788:G:H2'	50:S2:789:G:C8	2.47	0.49
50:S2:961:G:C6	50:S2:962:A:N7	2.81	0.49
50:S2:983:A:OP1	50:S2:1073:U:O2'	2.20	0.49
50:S2:997:A:O2'	50:S2:998:A:O5'	2.27	0.49
50:S2:1143:A:H2'	50:S2:1144:A:C1'	2.43	0.49
50:S2:1294:G:C6	82:Sf:138:ARG:CD	2.96	0.49
50:S2:1331:C:N4	85:S5:34:G:C8	2.80	0.49
50:S2:1357:A:H5'	50:S2:1357:A:C8	2.48	0.49
50:S2:1418:C:H41	50:S2:1421:A:H62	1.61	0.49
50:S2:1452:A:C5	50:S2:1475:G:C2	3.01	0.49
50:S2:1512:C:C2	50:S2:1513:C:H5	2.23	0.49
50:S2:1754:G:C4	50:S2:1755:C:C6	3.00	0.49
50:S2:1795:G:N3	50:S2:1796:G:C8	2.79	0.49
59:SI:66:SER:CB	59:SI:73:THR:HB	2.42	0.49
60:SJ:36:GLY:O	60:SJ:111:GLN:OE1	2.30	0.49
62:SL:80:MET:HG2	62:SL:86:ILE:HG22	1.92	0.49
68:SR:21:TYR:HD1	68:SR:61:ILE:HD13	1.76	0.49
74:SX:54:LYS:HD2	81:Se:6:LEU:CD1	2.43	0.49
83:Sg:83:TRP:CH2	83:Sg:125:ARG:NH2	2.81	0.49
83:Sg:245:ARG:CD	83:Sg:247:TRP:CZ3	2.96	0.49
85:S5:48:C:C6	85:S5:59:U:N1	2.80	0.49
1:5:66:A:C5	1:5:328:A:C8	3.01	0.49
1:5:85:G:C2	1:5:97:G:N7	2.81	0.49
1:5:435:A:H2'	1:5:435:A:N3	2.27	0.49
1:5:465:G:N1	1:5:466:A:C8	2.81	0.49
1:5:957:G:OP1	1:5:1284:G:O2'	2.30	0.49
1:5:1070:G:N3	1:5:1071:C:C6	2.81	0.49
1:5:1189:G:C6	1:5:1190:C:C5	3.00	0.49
1:5:1218:G:O6	1:5:1219:G:N9	2.46	0.49
1:5:1283:G:C8	1:5:1283:G:H3'	2.48	0.49
1:5:1310:C:O2	1:5:1310:C:H2'	2.11	0.49
1:5:1392:A:N3	1:5:1393:G:C8	2.81	0.49
1:5:1488:G:C6	1:5:1489:G:N7	2.81	0.49
1:5:1598:C:C5	1:5:2798:A:C5	2.98	0.49
1:5:1771:U:N3	1:5:1772:C:C6	2.80	0.49
1:5:1999:A:H2'	1:5:2000:G:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2046:G:OP1	17:O:60:LYS:HE2	2.12	0.49
1:5:2076:G:O6	1:5:2077:C:C4	2.66	0.49
1:5:2314:G:N1	1:5:2315:G:N7	2.58	0.49
1:5:2326:G:N2	1:5:2327:G:C1'	2.76	0.49
1:5:2327:G:N2	1:5:2328:G:N9	2.60	0.49
1:5:2336:G:C6	1:5:2337:C:C4	3.00	0.49
1:5:2438:A:N7	1:5:2441:C:N4	2.60	0.49
1:5:2454:U:N3	1:5:2455:G:C8	2.81	0.49
1:5:2498:C:C2	1:5:2499:C:C5	3.01	0.49
1:5:2673:G:N2	31:c:89:TYR:CD1	2.80	0.49
1:5:3596:A:O3'	1:5:3597:G:C4'	2.61	0.49
1:5:3672:G:N7	1:5:3674:G:O4'	2.46	0.49
1:5:3794:C:O2	1:5:3795:A:C8	2.65	0.49
1:5:3862:A:C5	1:5:3863:C:C6	3.01	0.49
1:5:4096:C:C4	1:5:4097:G:N7	2.78	0.49
1:5:4240:G:C2	1:5:4241:C:C2	3.01	0.49
1:5:4269:G:N1	1:5:4270:C:C2	2.80	0.49
1:5:4301:U:C5'	22:T:54:HIS:HD2	2.25	0.49
1:5:4337:C:O2'	1:5:4338:G:O5'	2.26	0.49
1:5:4547:C:C2	1:5:4549:G:C8	3.01	0.49
1:5:4731:G:N7	1:5:4733:C:C5	2.81	0.49
1:5:4743:G:C2	1:5:4744:A:N7	2.80	0.49
1:5:4949:G:H3'	1:5:4950:U:H5''	1.94	0.49
1:5:4998:G:N3	1:5:4999:G:C8	2.80	0.49
1:5:5028:G:N3	1:5:5029:C:C6	2.80	0.49
3:8:131:G:N1	3:8:132:G:C4	2.81	0.49
4:A:29:LEU:HD23	4:A:76:PHE:CE1	2.47	0.49
5:B:235:TRP:HD1	5:B:267:ALA:CA	2.25	0.49
8:E:52:ARG:NH2	8:E:53:TYR:CE1	2.80	0.49
8:E:157:ARG:O	8:E:178:ASN:OD1	2.31	0.49
9:F:148:ASN:CB	9:F:243:ASN:ND2	2.75	0.49
10:G:29:ASN:HB3	10:G:32:PHE:CE1	2.48	0.49
16:N:150:TRP:HZ3	16:N:151:ILE:HG12	1.77	0.49
18:P:95:LEU:HD13	18:P:148:MET:HE1	1.93	0.49
19:Q:28:LEU:CD1	19:Q:51:LEU:HD22	2.43	0.49
26:X:84:GLU:HB3	47:1:404:HIS:HA	1.94	0.49
27:Y:62:TYR:CE2	27:Y:85:VAL:HG13	2.48	0.49
33:e:76:LYS:HD2	33:e:98:GLU:HG2	1.95	0.49
36:h:87:LYS:H	36:h:92:ARG:HD3	1.75	0.49
37:i:72:PHE:C	37:i:72:PHE:CD1	2.90	0.49
47:1:449:LEU:C	47:1:450:ALA:C	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:167:G:C4	50:S2:168:C:C6	3.01	0.49
50:S2:793:G:C6	50:S2:794:A:N9	2.81	0.49
50:S2:959:G:O6	65:SO:68:GLU:OE1	2.30	0.49
50:S2:968:U:O2'	50:S2:972:A:C1'	2.60	0.49
50:S2:979:C:C2	50:S2:980:A:C8	3.00	0.49
50:S2:1113:A:O2'	50:S2:1114:U:H5'	2.12	0.49
50:S2:1186:U:O2	50:S2:1186:U:H2'	2.12	0.49
50:S2:1293:A:C2'	82:Sf:151:ASN:C	2.86	0.49
50:S2:1294:G:N2	50:S2:1295:A:N9	2.60	0.49
50:S2:1348:G:N2	50:S2:1349:G:C8	2.80	0.49
50:S2:1425:G:C5	50:S2:1426:U:H1'	2.47	0.49
50:S2:1590:C:H3'	50:S2:1591:C:H6	1.77	0.49
50:S2:1618:C:C5	80:Sd:11:PRO:HG3	2.47	0.49
50:S2:1640:A:C5'	86:S6:41:C:O2'	2.61	0.49
50:S2:1659:U:C5	50:S2:1660:C:N3	2.81	0.49
50:S2:1838:U:C6	50:S2:1838:U:H5'	2.47	0.49
50:S2:1859:A:C2	50:S2:1860:A:C4	3.00	0.49
50:S2:1860:A:N3	50:S2:1862:G:H8	2.08	0.49
50:S2:1868:U:H1'	77:Sa:97:PRO:HB2	1.94	0.49
52:SB:101:HIS:CD2	52:SB:220:LYS:NZ	2.81	0.49
60:SJ:110:LEU:CD1	60:SJ:142:VAL:HG11	2.42	0.49
65:SO:130:GLU:OE1	65:SO:131:ASP:N	2.46	0.49
74:SX:92:ASN:H	81:Se:9:ALA:CB	2.25	0.49
77:Sa:92:ARG:NH1	77:Sa:92:ARG:CG	2.76	0.49
83:Sg:19:THR:OG1	83:Sg:66:VAL:O	2.12	0.49
86:S6:72:C:C1'	86:S6:73:A:H5''	2.40	0.49
1:5:89:C:C2'	1:5:90:G:O5'	2.61	0.49
1:5:98:A:C2	1:5:99:A:H1'	2.48	0.49
1:5:352:G:O6	6:C:196:MET:HG3	2.12	0.49
1:5:449:C:N3	1:5:450:G:N7	2.61	0.49
1:5:462:G:C2	1:5:694:C:C2	3.01	0.49
1:5:469:C:C2	1:5:688:U:H1'	2.35	0.49
1:5:1068:G:H2'	1:5:1069:G:H8	1.77	0.49
1:5:1197:C:H2'	1:5:1198:G:O4'	2.12	0.49
1:5:1200:G:C6	1:5:1201:U:C4	3.01	0.49
1:5:1215:C:C2	1:5:1216:C:C6	3.00	0.49
1:5:1280:C:C2'	1:5:1281:G:H3'	2.43	0.49
1:5:1398:A:C4	1:5:1399:G:C8	3.01	0.49
1:5:1761:G:C2	1:5:1772:C:C2	3.00	0.49
1:5:2080:U:O2'	1:5:2081:C:H5'	2.12	0.49
1:5:2091:C:H1'	1:5:2092:G:H2'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2395:A:O3'	1:5:2806:A:C2	2.66	0.49
1:5:2406:G:N7	40:l:2:SER:N	2.60	0.49
1:5:2419:C:C2'	1:5:2420:A:O5'	2.60	0.49
1:5:2479:G:C2	1:5:2480:G:C8	3.01	0.49
1:5:2521:G:N1	1:5:2535:G:C2	2.81	0.49
1:5:2566:G:N3	1:5:2567:G:C8	2.80	0.49
1:5:2684:C:H2'	1:5:2685:C:O4'	2.13	0.49
1:5:3590:G:N1	1:5:3591:C:C2	2.81	0.49
1:5:3621:A:C2	1:5:3622:C:C1'	2.95	0.49
1:5:3669:G:C2	1:5:3671:G:OP2	2.66	0.49
1:5:3732:A:N1	1:5:3733:A:N7	2.61	0.49
1:5:3753:G:C6	1:5:3776:G:C2	3.01	0.49
1:5:4092:G:N2	1:5:4093:G:O4'	2.46	0.49
1:5:4098:A:C2	1:5:4099:G:N9	2.81	0.49
1:5:4146:G:C2	1:5:4147:G:C8	3.01	0.49
1:5:4481:U:C2'	1:5:4482:U:C6	2.88	0.49
1:5:4501:U:OP2	1:5:4502:C:H5	1.95	0.49
1:5:4749:C:H3'	1:5:4750:G:H5''	1.95	0.49
1:5:4769:G:N2	1:5:4865:C:N3	2.61	0.49
1:5:5023:C:H42	1:5:5028:G:H21	1.61	0.49
2:7:8:G:C2	2:7:9:C:N1	2.81	0.49
3:8:14:U:O2'	3:8:15:G:C5'	2.61	0.49
3:8:66:A:C2	3:8:67:U:C4	3.00	0.49
3:8:80:A:H3'	3:8:81:C:C4'	2.40	0.49
5:B:21:ARG:HG3	5:B:274:TYR:HB3	1.94	0.49
9:F:161:TYR:CE2	9:F:168:ARG:CZ	2.91	0.49
19:Q:184:ARG:NH1	19:Q:184:ARG:HG2	2.27	0.49
22:T:11:THR:HB	22:T:15:PHE:CD1	2.48	0.49
22:T:80:VAL:HG21	22:T:85:LEU:HD12	1.94	0.49
47:1:85:VAL:HG11	47:1:297:LEU:HD21	1.95	0.49
47:1:430:ALA:O	47:1:433:VAL:HG23	2.10	0.49
50:S2:433:A:H5''	59:SI:22:HIS:HB3	1.94	0.49
50:S2:634:A:C4	50:S2:635:G:C8	3.01	0.49
50:S2:638:C:O2	50:S2:639:C:C5	2.65	0.49
50:S2:823:U:C5	75:SY:64:PHE:CE2	3.00	0.49
50:S2:827:A:C6	50:S2:828:G:C8	3.01	0.49
50:S2:862:A:C2	50:S2:863:U:C1'	2.95	0.49
50:S2:928:G:H1	50:S2:1013:U:H3	1.61	0.49
50:S2:1005:G:C2	50:S2:1006:C:C2	3.01	0.49
50:S2:1063:C:H5''	50:S2:1064:C:OP2	2.12	0.49
50:S2:1126:G:C4	50:S2:1127:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1134:G:C6	50:S2:1135:C:C5	3.00	0.49
50:S2:1208:A:N6	50:S2:1692:U:N3	2.61	0.49
50:S2:1241:A:H2	50:S2:1516:G:O2'	1.96	0.49
50:S2:1292:C:C5	82:Sf:141:CYS:HB3	2.48	0.49
50:S2:1440:C:H2'	50:S2:1441:U:O4'	2.13	0.49
50:S2:1561:A:O4'	50:S2:1583:C:H4'	2.12	0.49
50:S2:1615:U:H2'	50:S2:1616:U:C6	2.48	0.49
50:S2:1641:A:C3'	86:S6:31:A:O2'	2.61	0.49
50:S2:1686:G:C5	50:S2:1687:C:C5	3.00	0.49
55:SE:94:LYS:O	55:SE:95:THR:HG23	2.13	0.49
58:SH:145:ARG:HD2	73:SW:51:GLU:CG	2.41	0.49
66:SP:60:LEU:HD21	66:SP:94:VAL:HG22	1.95	0.49
68:SR:16:ILE:HD12	68:SR:50:ILE:CG2	2.43	0.49
83:Sg:59:LEU:HD12	83:Sg:95:GLY:HA2	1.94	0.49
86:S6:73:A:O2'	86:S6:74:C:H5'	2.12	0.49
1:5:196:C:O2	1:5:196:C:C2'	2.59	0.49
1:5:272:U:N3	1:5:273:U:C5	2.80	0.49
1:5:293:G:C5'	1:5:294:G:C8	2.95	0.49
1:5:442:G:C2'	1:5:443:G:O5'	2.58	0.49
1:5:1173:G:C6	1:5:1174:G:C4	3.00	0.49
1:5:1184:A:C2	1:5:1185:G:C8	3.01	0.49
1:5:1205:G:N2	1:5:1206:C:C2	2.81	0.49
1:5:1215:C:N4	1:5:1216:C:C5	2.80	0.49
1:5:1570:G:C2	1:5:1571:G:N9	2.80	0.49
1:5:1740:C:H1'	1:5:1742:A:N6	2.28	0.49
1:5:1759:G:N1	1:5:1760:G:N7	2.60	0.49
1:5:1807:C:N4	1:5:1808:C:C5	2.81	0.49
1:5:1871:A:C2	1:5:1872:G:C8	3.01	0.49
1:5:1966:C:O2	1:5:1966:C:C2'	2.61	0.49
1:5:2058:G:C6	1:5:2059:C:C4	2.99	0.49
1:5:2116:C:O5'	1:5:2116:C:C6	2.66	0.49
1:5:2301:G:C2	1:5:2302:C:N1	2.81	0.49
1:5:2483:G:C6	1:5:2484:A:N7	2.81	0.49
1:5:2577:C:O2	1:5:2577:C:C2'	2.61	0.49
1:5:2707:U:H2'	1:5:2707:U:O2	2.11	0.49
1:5:3740:G:C5	1:5:3741:C:C5	3.01	0.49
1:5:3759:A:C6	50:S2:1709:G:H5'	2.47	0.49
1:5:3856:A:N6	1:5:3857:G:C5	2.80	0.49
1:5:3938:G:H5'	1:5:3938:G:N3	2.27	0.49
1:5:4062:A:H2'	1:5:4063:U:H6	1.78	0.49
1:5:4085:A:H3'	1:5:4086:G:H5''	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4241:C:N3	1:5:4242:U:C6	2.80	0.49
1:5:4283:G:C5	1:5:4284:C:C5	3.00	0.49
1:5:4467:A:C5	1:5:4468:U:C5	3.01	0.49
1:5:4643:G:H2'	1:5:4644:G:O4'	2.13	0.49
1:5:4753:U:OP2	34:f:4:ARG:NH1	2.45	0.49
1:5:5006:U:O2	1:5:5042:A:C8	2.66	0.49
2:7:8:G:C6	2:7:9:C:C5	3.01	0.49
2:7:60:G:N1	2:7:61:G:C8	2.80	0.49
3:8:39:G:N3	3:8:39:G:H2'	2.26	0.49
3:8:94:G:O6	38:j:76:HIS:CE1	2.66	0.49
3:8:116:C:N3	3:8:117:C:C5	2.81	0.49
4:A:30:ARG:NE	4:A:63:PHE:HE2	2.11	0.49
17:O:12:ARG:NH1	21:S:171:ARG:HH21	2.11	0.49
22:T:41:ASP:OD1	22:T:41:ASP:N	2.46	0.49
27:Y:4:ASN:OD1	27:Y:4:ASN:C	2.56	0.49
27:Y:11:ARG:HH22	27:Y:15:ARG:CG	2.24	0.49
27:Y:27:ARG:HH21	27:Y:27:ARG:HG2	1.76	0.49
34:f:46:ARG:HD2	34:f:106:TYR:HE1	1.78	0.49
50:S2:154:U:O2	50:S2:154:U:H2'	2.12	0.49
50:S2:306:C:H3'	50:S2:307:G:H5'	1.95	0.49
50:S2:328:U:H2'	50:S2:329:G:O4'	2.11	0.49
50:S2:493:A:H1'	50:S2:574:A:H5'	1.95	0.49
50:S2:533:A:C6	50:S2:534:G:C8	3.01	0.49
50:S2:836:G:H3'	50:S2:837:A:C5'	2.43	0.49
50:S2:933:G:C8	50:S2:1001:A:C4	3.01	0.49
50:S2:936:G:H2'	50:S2:937:C:O4'	2.13	0.49
50:S2:963:A:N1	50:S2:964:A:C6	2.80	0.49
50:S2:994:C:C2	50:S2:995:G:N7	2.62	0.49
50:S2:1112:U:N3	50:S2:1113:A:C4	2.81	0.49
50:S2:1201:U:H2'	50:S2:1202:U:C6	2.42	0.49
50:S2:1233:G:C2	50:S2:1234:C:N1	2.81	0.49
50:S2:1292:C:H1'	82:Sf:148:TYR:HB3	1.89	0.49
50:S2:1524:G:C6	50:S2:1525:C:C4	3.01	0.49
50:S2:1538:C:H5''	70:ST:44:GLU:HG3	1.94	0.49
50:S2:1573:G:C5	50:S2:1574:C:C5	2.99	0.49
50:S2:1668:U:C2	50:S2:1669:G:C8	3.00	0.49
50:S2:1864:U:O2	50:S2:1864:U:H2'	2.13	0.49
51:SA:39:TYR:OH	68:SR:104:GLU:CB	2.61	0.49
51:SA:90:PHE:C	51:SA:90:PHE:CD1	2.91	0.49
51:SA:128:ARG:HD2	51:SA:153:PRO:HD3	1.94	0.49
60:SJ:48:PHE:CE2	60:SJ:52:LYS:HE3	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SJ:124:HIS:O	60:SJ:125:HIS:C	2.55	0.49
75:SY:20:ARG:CB	75:SY:76:TYR:HD1	2.26	0.49
82:Sf:141:CYS:O	82:Sf:141:CYS:SG	2.70	0.49
83:Sg:192:THR:O	83:Sg:213:ASP:HB2	2.12	0.49
1:5:66:A:N7	1:5:328:A:H1'	2.27	0.49
1:5:144:G:N2	1:5:145:G:C5	2.81	0.49
1:5:247:G:C2	1:5:248:C:C5	3.01	0.49
1:5:330:G:N1	1:5:331:G:C5	2.81	0.49
1:5:980:U:H2'	1:5:981:C:H6	1.78	0.49
1:5:991:C:C4	1:5:992:C:C5	3.00	0.49
1:5:994:G:C5	1:5:995:C:C5	3.01	0.49
1:5:1076:C:N4	1:5:1077:C:C5	2.81	0.49
1:5:1267:C:H4'	1:5:2110:C:O2'	2.13	0.49
1:5:1290:G:C2'	1:5:1291:G:H5'	2.42	0.49
1:5:1312:A:O2'	33:e:44:ARG:NH2	2.46	0.49
1:5:1511:U:C2	1:5:1512:G:C8	3.01	0.49
1:5:1528:U:H2'	1:5:1529:G:O4'	2.13	0.49
1:5:1726:U:C2	1:5:1727:U:C5	3.00	0.49
1:5:1992:U:H6	1:5:2002:A:C2	2.30	0.49
1:5:2421:G:OP2	1:5:2828:U:H1'	2.13	0.49
1:5:2595:C:N3	1:5:2596:G:N7	2.61	0.49
1:5:2784:C:N3	1:5:2785:C:H5	2.05	0.49
1:5:2802:C:H6	1:5:2802:C:O5'	1.96	0.49
1:5:3586:G:C4	1:5:3587:C:C5	3.01	0.49
1:5:3789:C:H5''	85:S5:73:A:OP1	2.10	0.49
1:5:3833:C:C2	1:5:3834:C:C6	3.01	0.49
1:5:3861:A:C4	1:5:3862:A:C8	3.01	0.49
1:5:3861:A:C2	1:5:3862:A:N9	2.81	0.49
1:5:3965:A:C6	1:5:4047:A:N6	2.79	0.49
1:5:3974:G:C3'	46:z:210:MET:CE	2.88	0.49
1:5:4034:G:N1	1:5:4035:G:C5	2.81	0.49
1:5:4299:U:C2	1:5:4300:U:C5	3.00	0.49
1:5:4323:A:C4	1:5:4324:A:C8	3.01	0.49
1:5:4479:A:C5	1:5:4480:A:N9	2.81	0.49
1:5:4548:A:C8	1:5:4548:A:O5'	2.64	0.49
1:5:4729:A:H5'	1:5:4965:U:O2'	2.13	0.49
1:5:4758:U:O2	1:5:4758:U:O4'	2.29	0.49
1:5:4984:C:N3	1:5:4985:U:C6	2.81	0.49
4:A:29:LEU:HD12	4:A:124:GLY:HA3	1.95	0.49
4:A:35:ALA:HB1	4:A:41:ILE:HB	1.95	0.49
4:A:55:GLY:HA2	4:A:174:ARG:HD3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:90:VAL:HG23	7:D:226:TYR:CZ	2.48	0.49
19:Q:68:ARG:CZ	19:Q:68:ARG:HB3	2.40	0.49
20:R:15:LEU:O	20:R:52:ARG:NH2	2.46	0.49
20:R:130:ASN:O	20:R:130:ASN:CG	2.55	0.49
21:S:32:ILE:HG22	21:S:33:PHE:H	1.77	0.49
32:d:87:ARG:NH1	32:d:87:ARG:HB2	2.27	0.49
38:j:74:PHE:O	38:j:75:ARG:C	2.56	0.49
50:S2:145:G:C2	50:S2:146:G:C5	3.01	0.49
50:S2:344:U:O2'	50:S2:345:U:H5'	2.13	0.49
50:S2:509:G:N2	50:S2:510:G:C4	2.81	0.49
50:S2:552:G:C6	50:S2:553:U:C4	3.01	0.49
50:S2:598:G:N2	50:S2:639:C:N3	2.61	0.49
50:S2:1063:C:O2'	50:S2:1838:U:C5	2.57	0.49
50:S2:1083:A:N3	50:S2:1859:A:H1'	2.28	0.49
50:S2:1203:G:C2	50:S2:1204:A:N9	2.81	0.49
50:S2:1594:A:C6	50:S2:1595:U:C6	2.93	0.49
50:S2:1643:U:O2'	50:S2:1644:C:C6	2.63	0.49
54:SD:52:ALA:O	54:SD:91:VAL:HG23	2.12	0.49
56:SF:161:ALA:HB3	56:SF:172:CYS:SG	2.53	0.49
60:SJ:118:GLY:O	60:SJ:120:ALA:N	2.46	0.49
65:SO:56:VAL:HG21	65:SO:61:LYS:HE2	1.95	0.49
65:SO:130:GLU:OE2	65:SO:132:VAL:CG1	2.61	0.49
72:SV:59:ILE:HG23	72:SV:64:GLU:HB2	1.93	0.49
74:SX:4:CYS:SG	74:SX:5:ARG:N	2.86	0.49
85:S5:48:C:C2'	85:S5:59:U:C1'	2.81	0.49
86:S6:16:A:N1	86:S6:60:U:C4	2.80	0.49
1:5:323:C:O2	1:5:323:C:H2'	2.12	0.48
1:5:345:C:C2	1:5:346:G:N7	2.81	0.48
1:5:455:C:C4	1:5:456:C:C5	3.01	0.48
1:5:505:G:C4	1:5:506:C:C5	3.01	0.48
1:5:652:G:C2	1:5:653:U:H1'	2.48	0.48
1:5:668:C:C4	1:5:669:C:C5	3.01	0.48
1:5:708:G:C2	1:5:709:C:C6	3.00	0.48
1:5:1233:G:N2	1:5:1234:G:C4	2.81	0.48
1:5:1268:G:C4	1:5:2111:G:N3	2.81	0.48
1:5:1406:G:N2	1:5:1409:C:N4	2.60	0.48
1:5:1542:U:O2	1:5:1542:U:H2'	2.13	0.48
1:5:1690:C:OP2	19:Q:11:ARG:NH2	2.46	0.48
1:5:1724:G:O6	30:b:14:ARG:HA	2.13	0.48
1:5:1727:U:O2	1:5:1728:U:C6	2.66	0.48
1:5:1811:G:C4	1:5:1812:C:C5	3.00	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1983:A:C2	1:5:2010:A:C3'	2.96	0.48
1:5:2254:G:O2'	1:5:2255:C:H4'	2.13	0.48
1:5:2288:G:C2	1:5:2290:C:C6	3.01	0.48
1:5:2311:C:N4	1:5:2312:U:C5	2.81	0.48
1:5:2314:G:C5	1:5:2326:G:C4	3.01	0.48
1:5:2384:U:O2	1:5:2385:U:C6	2.66	0.48
1:5:2479:G:C2	1:5:2480:G:N9	2.81	0.48
1:5:2818:C:O2	1:5:2818:C:H2'	2.13	0.48
1:5:2860:C:H2'	1:5:2861:C:O4'	2.13	0.48
1:5:3629:A:C5	1:5:3630:A:C8	3.01	0.48
1:5:3736:A:P	1:5:3736:A:H3'	2.53	0.48
1:5:3759:A:C2	50:S2:1709:G:O4'	2.66	0.48
1:5:3891:A:H2'	1:5:3892:U:O4'	2.13	0.48
1:5:3899:G:C5'	5:B:257:TRP:CD1	2.96	0.48
1:5:3944:G:C5	1:5:3945:A:C8	3.00	0.48
1:5:4466:C:N3	1:5:4467:A:N7	2.61	0.48
1:5:4467:A:C6	1:5:4468:U:C4	3.00	0.48
1:5:4509:U:C2'	1:5:4510:A:H2'	2.43	0.48
1:5:4564:A:O2'	1:5:4565:C:H5'	2.13	0.48
1:5:4746:C:H2'	1:5:4747:C:O4'	2.13	0.48
1:5:4750:G:O6	1:5:4949:G:N7	2.45	0.48
1:5:5006:U:H1'	1:5:5042:A:N7	2.27	0.48
2:7:30:C:C4	2:7:48:G:N1	2.81	0.48
2:7:93:G:C2	2:7:94:C:N1	2.80	0.48
3:8:74:U:C4	27:Y:74:TYR:HE1	2.27	0.48
4:A:209:HIS:CE1	4:A:211:PHE:HD2	2.29	0.48
5:B:136:LYS:HB3	5:B:146:LEU:HD11	1.95	0.48
10:G:47:PRO:HG2	10:G:49:ARG:HH22	1.78	0.48
12:I:36:LEU:HD22	12:I:73:ASN:HD21	1.77	0.48
12:I:100:ASN:HA	12:I:120:GLY:HA2	1.95	0.48
12:I:109:ASP:OD2	12:I:111:LEU:O	2.30	0.48
20:R:95:TRP:CE3	20:R:95:TRP:HA	2.47	0.48
35:g:5:LEU:HD21	35:g:22:LEU:CD1	2.43	0.48
35:g:13:TYR:N	35:g:13:TYR:CD1	2.81	0.48
45:r:33:LYS:CD	45:r:40:TYR:CE2	2.95	0.48
46:z:36:ILE:HD11	46:z:201:VAL:HG22	1.95	0.48
50:S2:37:C:N3	50:S2:38:A:C8	2.81	0.48
50:S2:61:A:C2	50:S2:334:C:H2'	2.48	0.48
50:S2:198:U:H2'	50:S2:200:G:N7	2.28	0.48
50:S2:212:C:C2	50:S2:213:G:C8	3.01	0.48
50:S2:224:A:H2'	50:S2:225:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:410:G:C6	50:S2:411:G:N7	2.80	0.48
50:S2:468:A:C4	50:S2:469:A:C8	3.01	0.48
50:S2:505:G:O2'	50:S2:506:G:H5'	2.12	0.48
50:S2:532:C:H4'	50:S2:532:C:OP1	2.13	0.48
50:S2:635:G:N2	50:S2:636:C:C2	2.81	0.48
50:S2:823:U:H5	60:SJ:144:ILE:HD13	1.77	0.48
50:S2:961:G:N2	50:S2:962:A:H1'	2.28	0.48
50:S2:1073:U:N3	50:S2:1074:C:C6	2.81	0.48
50:S2:1121:G:O2'	52:SB:204:ILE:HA	2.13	0.48
50:S2:1131:G:C6	50:S2:1132:C:C5	3.01	0.48
50:S2:1174:U:C2	50:S2:1175:G:C8	3.01	0.48
50:S2:1232:U:C2	50:S2:1233:G:N7	2.81	0.48
50:S2:1454:A:N7	50:S2:1476:A:N3	2.61	0.48
50:S2:1545:A:C4	50:S2:1546:G:C5	3.00	0.48
50:S2:1687:C:H2'	50:S2:1688:C:H5''	1.95	0.48
57:SG:232:ARG:O	57:SG:236:SER:N	2.46	0.48
65:SO:79:GLN:OE1	79:Sc:5:ARG:HD3	2.13	0.48
85:S5:15:G:N2	85:S5:48:C:H42	2.11	0.48
1:5:52:G:H3'	1:5:52:G:C8	2.48	0.48
1:5:218:A:H1'	1:5:219:G:C2	2.47	0.48
1:5:322:C:C2	1:5:4356:G:C2	3.00	0.48
1:5:440:U:C2	1:5:441:G:N7	2.81	0.48
1:5:504:G:C4	1:5:505:G:N7	2.81	0.48
1:5:512:U:C3'	1:5:513:U:C5'	2.91	0.48
1:5:710:G:H2'	1:5:711:A:C8	2.48	0.48
1:5:725:G:H2'	1:5:726:G:O4'	2.12	0.48
1:5:739:G:C6	1:5:740:G:N7	2.81	0.48
1:5:747:A:C2	1:5:918:G:O6	2.66	0.48
1:5:947:C:H2'	1:5:948:C:C6	2.47	0.48
1:5:1205:G:C2	1:5:1206:C:C2	3.01	0.48
1:5:1213:G:C6	1:5:1215:C:C4	3.02	0.48
1:5:1289:C:C2	1:5:1290:G:N7	2.81	0.48
1:5:1429:C:N3	1:5:1430:C:C5	2.81	0.48
1:5:1516:G:H2'	1:5:1516:G:N3	2.29	0.48
1:5:1529:G:O3'	38:j:47:TYR:OH	2.31	0.48
1:5:1826:G:N2	1:5:1827:C:H1'	2.28	0.48
1:5:2454:U:C2	1:5:2455:G:C8	3.01	0.48
1:5:2481:G:C2	1:5:2482:C:C2	3.00	0.48
1:5:2703:G:C6	1:5:2704:C:C4	3.01	0.48
1:5:2866:C:C2	1:5:2867:C:C6	3.01	0.48
1:5:3621:A:C4	1:5:3622:C:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3630:A:C2	1:5:3631:U:C5	3.01	0.48
1:5:3696:C:C2	1:5:3697:U:C5	3.00	0.48
1:5:3741:C:N3	1:5:3742:G:C8	2.76	0.48
1:5:3910:C:N3	1:5:3911:C:C5	2.80	0.48
1:5:4087:G:H3'	1:5:4087:G:C8	2.47	0.48
1:5:4109:G:C2	1:5:4110:C:C2	3.01	0.48
1:5:4167:G:N3	1:5:4168:G:C8	2.81	0.48
1:5:4276:G:C2	1:5:4277:G:C8	3.00	0.48
1:5:4371:G:O4'	86:S6:76:A:N7	2.46	0.48
1:5:4746:C:N3	1:5:4747:C:C5	2.81	0.48
1:5:4950:U:O2	1:5:4950:U:O4'	2.29	0.48
1:5:5029:C:N3	1:5:5030:U:C6	2.80	0.48
2:7:27:G:H1'	2:7:56:G:N1	2.28	0.48
3:8:80:A:H8	3:8:81:C:O2'	1.95	0.48
3:8:142:U:C4	3:8:143:G:N7	2.81	0.48
4:A:97:ASN:OD1	4:A:97:ASN:N	2.46	0.48
4:A:112:ILE:HD12	44:p:79:VAL:HG22	1.94	0.48
7:D:125:VAL:HG11	7:D:199:ILE:HG21	1.94	0.48
14:L:191:LEU:O	14:L:192:PHE:C	2.55	0.48
28:Z:10:VAL:HG11	28:Z:129:TRP:HZ3	1.78	0.48
36:h:101:ASN:OD1	36:h:101:ASN:N	2.42	0.48
47:1:205:ARG:HA	47:1:205:ARG:HE	1.78	0.48
50:S2:38:A:C6	50:S2:515:G:N1	2.81	0.48
50:S2:70:G:O6	50:S2:71:G:C6	2.66	0.48
50:S2:164:A:O2'	50:S2:165:G:C5'	2.60	0.48
50:S2:167:G:C5	50:S2:168:C:C5	3.01	0.48
50:S2:404:G:C2	50:S2:405:G:C4	3.01	0.48
50:S2:457:C:N3	50:S2:458:A:C8	2.82	0.48
50:S2:529:A:C5	50:S2:530:U:C5	3.00	0.48
50:S2:533:A:C2	50:S2:534:G:N9	2.81	0.48
50:S2:616:A:C2'	74:SX:88:ASP:OD2	2.59	0.48
50:S2:666:U:H2'	50:S2:667:U:C6	2.47	0.48
50:S2:696:G:C2	50:S2:735:C:O2	2.65	0.48
50:S2:999:G:N2	50:S2:1000:C:C2	2.81	0.48
50:S2:1055:A:H2	50:S2:1063:C:N4	2.12	0.48
50:S2:1061:U:O2	50:S2:1061:U:C2'	2.59	0.48
50:S2:1111:U:O2	50:S2:1111:U:C2'	2.61	0.48
50:S2:1122:A:H4'	52:SB:205:TYR:CZ	2.48	0.48
50:S2:1123:C:P	52:SB:205:TYR:HH	2.31	0.48
50:S2:1157:G:O6	73:SW:89:TRP:HZ3	1.96	0.48
50:S2:1210:G:C8	50:S2:1210:G:C4'	2.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1420:G:O2'	70:ST:4:VAL:C	2.57	0.48
50:S2:1545:A:C2	50:S2:1546:G:C2	3.01	0.48
50:S2:1669:G:C6	50:S2:1670:C:N4	2.81	0.48
50:S2:1727:G:C6	50:S2:1728:U:C5	3.01	0.48
50:S2:1746:U:C4	50:S2:1789:G:N2	2.81	0.48
50:S2:1782:G:N3	50:S2:1784:G:C8	2.81	0.48
55:SE:121:TYR:CD1	55:SE:121:TYR:C	2.90	0.48
67:SQ:48:GLN:HE21	67:SQ:52:LEU:HD11	1.78	0.48
74:SX:16:HIS:NE2	74:SX:20:HIS:CD2	2.81	0.48
78:Sb:35:VAL:HG11	78:Sb:63:LEU:HD23	1.95	0.48
80:Sd:39:CYS:SG	80:Sd:42:CYS:SG	3.05	0.48
85:S5:43:C:H4'	85:S5:44:G:OP1	2.13	0.48
1:5:1:C:C6	1:5:2:G:C8	3.01	0.48
1:5:18:C:C4'	16:N:138:PHE:CE2	2.94	0.48
1:5:246:G:N2	1:5:247:G:C5	2.82	0.48
1:5:660:A:C6	1:5:661:C:C4	3.01	0.48
1:5:669:C:HO2'	1:5:670:G:C5'	2.25	0.48
1:5:669:C:N3	1:5:670:G:N7	2.60	0.48
1:5:677:G:C4	1:5:678:C:C5	3.01	0.48
1:5:694:C:H2'	1:5:695:G:O4'	2.14	0.48
1:5:750:U:N3	1:5:751:G:N7	2.61	0.48
1:5:961:G:H5'	8:E:119:ARG:NH1	2.27	0.48
1:5:1280:C:C1'	6:C:323:ARG:NH2	2.76	0.48
1:5:1336:G:H2'	1:5:1337:A:C8	2.48	0.48
1:5:1412:G:C5	1:5:1413:C:C5	3.01	0.48
1:5:1444:G:N2	1:5:1445:U:C4	2.81	0.48
1:5:1481:C:O4'	1:5:1481:C:O2	2.30	0.48
1:5:1925:G:C6	1:5:1926:C:C5	3.01	0.48
1:5:2065:G:C4	1:5:2066:C:C6	3.01	0.48
1:5:2107:C:O2	1:5:2107:C:O2'	2.31	0.48
1:5:2436:U:C5	1:5:2783:A:H1'	2.48	0.48
1:5:2521:G:H2'	1:5:2522:G:O4'	2.13	0.48
1:5:2569:G:H2'	1:5:2570:U:H6	1.78	0.48
1:5:2789:A:H1'	1:5:2796:G:C8	2.48	0.48
1:5:3608:A:N3	1:5:3609:G:C8	2.81	0.48
1:5:3703:G:N3	1:5:3704:U:C6	2.81	0.48
1:5:3711:A:C6	1:5:3712:A:H1'	2.48	0.48
1:5:3725:G:N2	1:5:3727:A:H2'	2.28	0.48
1:5:3894:A:C2	1:5:4567:G:C2	3.01	0.48
1:5:4142:C:C4	1:5:4143:G:C6	3.01	0.48
1:5:4482:U:C2	1:5:4483:C:H5	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4551:U:O2	1:5:4552:U:C5	2.66	0.48
1:5:4635:A:C2	1:5:4664:A:C5	3.00	0.48
1:5:4935:C:H3'	8:E:179:ARG:HH21	1.78	0.48
3:8:100:U:O2	3:8:101:C:C6	2.66	0.48
3:8:119:C:C4	3:8:120:G:N7	2.76	0.48
9:F:71:ILE:HG22	9:F:75:ARG:CD	2.44	0.48
18:P:41:ILE:HD11	18:P:150:LEU:CD1	2.39	0.48
41:m:97:ARG:HD2	41:m:122:ARG:CD	2.43	0.48
46:z:44:GLN:CA	86:S6:54:U:H5'	2.42	0.48
46:z:66:CYS:HB2	46:z:107:TYR:CD1	2.47	0.48
50:S2:375:U:C2	50:S2:376:A:C8	3.01	0.48
50:S2:418:A:C6	50:S2:419:G:C5	3.00	0.48
50:S2:437:G:H2'	50:S2:438:G:N3	2.28	0.48
50:S2:478:G:N1	50:S2:479:C:C4	2.82	0.48
50:S2:501:C:O2	50:S2:501:C:H3'	2.12	0.48
50:S2:549:C:C4	50:S2:550:C:C5	3.01	0.48
50:S2:799:U:OP2	58:SH:106:ARG:O	2.31	0.48
50:S2:871:U:H5'	50:S2:871:U:H6	1.77	0.48
50:S2:1041:G:N3	50:S2:1041:G:H2'	2.27	0.48
50:S2:1282:A:N6	63:SM:93:LYS:HG3	2.28	0.48
50:S2:1293:A:H3'	82:Sf:151:ASN:CA	2.43	0.48
50:S2:1315:U:C4	50:S2:1316:C:C5	2.90	0.48
50:S2:1415:C:C6	50:S2:1416:C:C6	3.01	0.48
50:S2:1567:G:C2'	50:S2:1568:C:O5'	2.61	0.48
50:S2:1603:G:N7	69:SS:28:PHE:HZ	2.09	0.48
51:SA:81:ASN:HB2	51:SA:204:TYR:HE2	1.78	0.48
54:SD:115:VAL:HG21	54:SD:142:LEU:HD21	1.94	0.48
85:S5:72:C:H3'	85:S5:73:A:H5''	1.94	0.48
86:S6:42:C:H2'	86:S6:43:C:H6	1.79	0.48
86:S6:68:C:O2'	86:S6:69:G:OP1	2.29	0.48
1:5:85:G:N2	1:5:97:G:C8	2.82	0.48
1:5:126:C:O2	1:5:126:C:H2'	2.13	0.48
1:5:219:G:OP1	1:5:219:G:H4'	2.14	0.48
1:5:332:C:C4'	16:N:150:TRP:NE1	2.76	0.48
1:5:342:G:C6	1:5:343:C:C4	3.02	0.48
1:5:412:G:N2	40:l:28:ARG:NH1	2.61	0.48
1:5:655:C:OP2	6:C:268:ARG:NH1	2.47	0.48
1:5:936:C:O2'	15:M:46:ARG:NH1	2.46	0.48
1:5:965:G:C8	8:E:88:VAL:CG1	2.96	0.48
1:5:1072:C:N4	1:5:1239:C:C4	2.81	0.48
1:5:1213:G:C2	1:5:1215:C:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1426:G:C2'	1:5:1459:A:N6	2.76	0.48
1:5:1463:C:C2	1:5:1464:C:C6	3.01	0.48
1:5:1492:G:C6	1:5:1493:G:N7	2.81	0.48
1:5:1509:C:C2	1:5:1510:G:N7	2.82	0.48
1:5:1683:U:O2	1:5:1683:U:C2'	2.61	0.48
1:5:1727:U:C2	1:5:1728:U:C6	3.02	0.48
1:5:1807:C:C2	1:5:1808:C:H6	2.31	0.48
1:5:1964:A:C6	1:5:1965:G:C4	3.00	0.48
1:5:2034:G:N3	1:5:2035:C:C6	2.80	0.48
1:5:2122:G:H1'	1:5:2123:C:OP2	2.13	0.48
1:5:2270:G:C2	1:5:2271:C:C5	3.01	0.48
1:5:2293:U:O2	1:5:2293:U:C2'	2.61	0.48
1:5:2410:C:O2	1:5:2411:C:C6	2.66	0.48
1:5:2417:A:C6	1:5:2418:A:N7	2.82	0.48
1:5:2482:C:N3	1:5:2483:G:N7	2.61	0.48
1:5:2566:G:N1	1:5:2567:G:C5	2.81	0.48
1:5:3702:A:C6	1:5:3703:G:C8	2.88	0.48
1:5:3722:G:C4	1:5:3723:A:C8	3.01	0.48
1:5:3913:G:N1	1:5:4390:A:C2	2.81	0.48
1:5:3953:G:C2	1:5:3954:A:C1'	2.97	0.48
1:5:4125:C:H2'	1:5:4126:C:C6	2.49	0.48
1:5:4152:G:C2	1:5:4153:C:C4	3.02	0.48
1:5:4153:C:C2	1:5:4154:G:C8	3.01	0.48
1:5:4161:G:H2'	1:5:4162:C:H3'	1.95	0.48
1:5:4201:G:C4	1:5:4202:U:C5	3.01	0.48
1:5:4201:G:C6	1:5:4202:U:O4	2.66	0.48
1:5:4250:G:N2	1:5:4259:C:C2	2.82	0.48
1:5:4480:A:N1	1:5:4481:U:C6	2.81	0.48
1:5:4482:U:O2	1:5:4483:C:C5	2.67	0.48
1:5:4884:G:N2	1:5:4885:U:N1	2.61	0.48
2:7:7:G:HO2'	7:D:72:ASP:H	1.60	0.48
2:7:62:U:N3	2:7:64:G:N7	2.62	0.48
3:8:146:U:H2'	3:8:147:G:O4'	2.13	0.48
5:B:71:GLU:OE1	5:B:366:LYS:CE	2.61	0.48
6:C:112:HIS:CD2	6:C:112:HIS:N	2.82	0.48
7:D:284:LYS:CB	12:I:209:TRP:CH2	2.96	0.48
15:M:101:LYS:HD2	17:O:201:PHE:HE1	1.78	0.48
29:a:7:LYS:HD3	29:a:11:LEU:HD11	1.95	0.48
34:f:22:ARG:HG3	34:f:22:ARG:NH1	2.27	0.48
43:o:57:ARG:HH11	43:o:57:ARG:HG3	1.78	0.48
50:S2:44:U:C4	50:S2:484:A:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:44:U:O2'	50:S2:45:A:H2'	2.14	0.48
50:S2:120:U:O2	50:S2:120:U:H2'	2.13	0.48
50:S2:148:U:H2'	50:S2:149:A:O5'	2.13	0.48
50:S2:301:A:C2	59:SI:73:THR:HG21	2.47	0.48
50:S2:446:G:OP1	59:SI:50:GLY:N	2.36	0.48
50:S2:531:A:C5	50:S2:532:C:C6	3.02	0.48
50:S2:552:G:H3'	50:S2:553:U:H6	1.78	0.48
50:S2:821:G:O6	60:SJ:150:ARG:NH1	2.46	0.48
50:S2:929:G:N2	50:S2:1104:G:H4'	2.28	0.48
50:S2:978:G:N1	50:S2:979:C:C4	2.80	0.48
50:S2:1095:U:C4	50:S2:1149:A:N6	2.81	0.48
50:S2:1124:C:O2	50:S2:1125:C:C6	2.65	0.48
50:S2:1136:U:C2	50:S2:1137:U:C5	3.01	0.48
50:S2:1176:G:C6	50:S2:1177:U:C4	3.01	0.48
50:S2:1182:A:C8	50:S2:1183:A:H1'	2.48	0.48
50:S2:1189:A:H2'	50:S2:1190:A:C8	2.48	0.48
50:S2:1283:C:H4'	63:SM:102:LYS:HE3	1.95	0.48
50:S2:1293:A:H2'	82:Sf:152:LYS:CB	2.43	0.48
50:S2:1382:A:C5	50:S2:1383:A:N7	2.81	0.48
50:S2:1545:A:N7	50:S2:1588:A:N7	2.61	0.48
50:S2:1551:U:C2'	50:S2:1552:G:O4'	2.61	0.48
50:S2:1573:G:C2	50:S2:1574:C:C2	3.02	0.48
50:S2:1640:A:H2'	86:S6:31:A:H1'	1.95	0.48
50:S2:1693:G:C6	50:S2:1694:U:N3	2.81	0.48
52:SB:99:ASN:O	52:SB:100:PHE:C	2.56	0.48
53:SC:112:VAL:HG23	53:SC:112:VAL:O	2.12	0.48
56:SF:38:TYR:HA	56:SF:64:ALA:HB1	1.95	0.48
59:SI:110:ARG:HG2	59:SI:114:GLU:HG3	1.95	0.48
65:SO:75:MET:O	65:SO:79:GLN:HG3	2.13	0.48
69:SS:86:ARG:NE	69:SS:86:ARG:CA	2.77	0.48
71:SU:69:PRO:C	71:SU:70:CYS:SG	2.96	0.48
72:SV:1:MET:HE2	72:SV:10:ASP:HB3	1.95	0.48
83:Sg:107:ASP:N	83:Sg:107:ASP:OD1	2.47	0.48
1:5:39:A:C5	1:5:1654:G:C6	3.01	0.48
1:5:195:C:N3	1:5:196:C:C6	2.82	0.48
1:5:218:A:N7	6:C:181:LYS:CG	2.77	0.48
1:5:741:C:C2	1:5:742:G:C8	3.01	0.48
1:5:1212:G:N1	1:5:1213:G:C5	2.81	0.48
1:5:1215:C:C6	1:5:1215:C:H5''	2.49	0.48
1:5:1550:G:N1	1:5:1579:C:C2	2.82	0.48
1:5:1619:G:C4	1:5:1620:U:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1899:G:O2'	33:e:57:ASN:OD1	2.31	0.48
1:5:1983:A:N3	1:5:2010:A:H5''	2.29	0.48
1:5:2052:G:N2	1:5:2053:C:C2	2.82	0.48
1:5:2102:G:N1	1:5:2103:G:C5	2.82	0.48
1:5:2314:G:N3	1:5:2314:G:C2'	2.76	0.48
1:5:2438:A:C5	1:5:2441:C:C4	3.01	0.48
1:5:2477:A:H2'	1:5:2478:C:C6	2.48	0.48
1:5:2515:G:N7	1:5:2516:G:C5	2.81	0.48
1:5:2534:C:C2'	1:5:2535:G:O5'	2.61	0.48
1:5:2712:G:C6	1:5:2713:C:C4	3.02	0.48
1:5:3714:G:O6	1:5:3739:C:N3	2.46	0.48
1:5:3773:U:O2	1:5:3775:A:C2	2.66	0.48
1:5:3859:G:C4'	18:P:139:TYR:CZ	2.95	0.48
1:5:3952:A:C6	1:5:3953:G:C8	3.01	0.48
1:5:4052:C:O2	46:z:207:LYS:HE3	2.13	0.48
1:5:4094:G:C6	1:5:4095:G:C6	3.02	0.48
1:5:4104:G:H3'	1:5:4105:A:C8	2.48	0.48
1:5:4136:G:C4	1:5:4137:C:C5	3.01	0.48
1:5:4312:U:C2	1:5:4313:A:C8	3.01	0.48
1:5:4346:U:C2	1:5:4367:G:N2	2.82	0.48
1:5:4350:C:O2	1:5:4350:C:H2'	2.12	0.48
1:5:4423:U:O2	1:5:4423:U:H3'	2.13	0.48
1:5:4498:U:O2	1:5:4500:U:H5'	2.14	0.48
1:5:4635:A:H3'	1:5:4636:U:H4'	1.96	0.48
3:8:65:A:C4	3:8:66:A:C8	3.01	0.48
5:B:25:HIS:HB2	5:B:274:TYR:OH	2.14	0.48
5:B:369:ASP:OD1	5:B:369:ASP:C	2.55	0.48
6:C:186:SER:O	6:C:203:GLN:HA	2.13	0.48
8:E:56:SER:OG	8:E:57:ALA:N	2.45	0.48
9:F:59:TYR:CE2	9:F:194:HIS:CD2	3.01	0.48
16:N:65:ARG:HH21	16:N:127:TYR:HE2	1.59	0.48
21:S:9:GLU:HB3	21:S:67:VAL:CG1	2.43	0.48
40:l:21:ARG:HD2	47:1:273:ARG:CD	2.24	0.48
50:S2:46:A:C6	50:S2:99:A:N7	2.82	0.48
50:S2:339:A:C4	50:S2:340:C:C5	3.00	0.48
50:S2:457:C:N4	50:S2:458:A:C5	2.81	0.48
50:S2:553:U:C2	50:S2:554:A:C5	3.01	0.48
50:S2:933:G:C2	50:S2:1000:C:C4	2.96	0.48
50:S2:963:A:C6	50:S2:964:A:N6	2.82	0.48
50:S2:1281:G:C2	50:S2:1282:A:H1'	2.49	0.48
50:S2:1292:C:C6	82:Sf:150:PHE:N	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1292:C:C6	82:Sf:149:CYS:CA	2.96	0.48
50:S2:1331:C:N3	50:S2:1489:A:N7	2.62	0.48
50:S2:1413:G:C5	50:S2:1414:A:C8	3.01	0.48
50:S2:1431:G:C6	50:S2:1432:U:C6	3.00	0.48
50:S2:1507:G:HO2'	50:S2:1508:A:H5'	1.79	0.48
50:S2:1596:U:C4	50:S2:1597:C:C4	3.02	0.48
50:S2:1712:A:H2'	50:S2:1713:C:C6	2.49	0.48
57:SG:222:GLU:HA	57:SG:225:GLN:OE1	2.14	0.48
58:SH:116:ARG:NH2	58:SH:121:THR:OG1	2.46	0.48
59:SI:8:TRP:CD1	59:SI:9:HIS:N	2.82	0.48
65:SO:64:ALA:O	65:SO:66:ARG:N	2.40	0.48
85:S5:38:A:C4	85:S5:39:U:C5	3.02	0.48
85:S5:53:G:N2	85:S5:54:U:N1	2.60	0.48
85:S5:75:C:H4'	85:S5:76:A:O5'	2.12	0.48
86:S6:9:A:C5	86:S6:46:G:N1	2.80	0.48
1:5:112:C:C4	1:5:157:U:C4	3.02	0.48
1:5:235:A:C5	1:5:238:C:C4	3.02	0.48
1:5:298:G:C5	1:5:299:C:C5	3.02	0.48
1:5:325:U:C2	1:5:326:C:C5	3.01	0.48
1:5:423:G:C4	1:5:424:U:C6	3.01	0.48
1:5:456:C:C2	1:5:457:G:N7	2.81	0.48
1:5:480:C:C2	1:5:481:G:C8	3.02	0.48
1:5:701:G:N3	1:5:701:G:H2'	2.29	0.48
1:5:1090:G:C4	1:5:1091:C:C6	3.01	0.48
1:5:1265:G:O2'	1:5:2113:G:OP1	2.31	0.48
1:5:1341:U:H2'	1:5:1342:A:H8	1.78	0.48
1:5:1390:G:C8	1:5:1390:G:C3'	2.97	0.48
1:5:1455:G:C2	1:5:1456:C:C6	3.01	0.48
1:5:1491:A:N3	1:5:1492:G:C8	2.82	0.48
1:5:1745:G:N2	1:5:1746:A:H1'	2.28	0.48
1:5:1753:G:H2'	1:5:1755:C:H5''	1.96	0.48
1:5:1822:U:O2	1:5:1822:U:O4'	2.32	0.48
1:5:1902:G:C2'	1:5:1903:G:O5'	2.62	0.48
1:5:1933:G:H2'	1:5:1934:A:C1'	2.43	0.48
1:5:1945:G:C2	1:5:1946:G:H1'	2.49	0.48
1:5:1955:G:C6	1:5:1956:A:N7	2.81	0.48
1:5:1995:G:C5	1:5:1996:C:C4	3.01	0.48
1:5:2085:G:N2	1:5:2273:G:C4	2.82	0.48
1:5:2101:C:H2'	1:5:2102:G:O4'	2.13	0.48
1:5:2263:A:O2'	1:5:2265:G:C2'	2.61	0.48
1:5:2347:A:C2	1:5:2348:G:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2432:U:H2'	1:5:2433:G:O4'	2.14	0.48
1:5:2453:A:C6	1:5:2454:U:C4	3.01	0.48
1:5:2647:A:H2'	1:5:2648:G:C5'	2.44	0.48
1:5:2678:A:C2	1:5:2679:G:C4	3.02	0.48
1:5:2702:C:C2	1:5:2715:G:C2	3.01	0.48
1:5:2833:A:O2'	1:5:2834:C:C5'	2.62	0.48
1:5:3605:C:OP2	20:R:71:ARG:NH1	2.45	0.48
1:5:3686:G:OP2	4:A:193:ARG:NH2	2.46	0.48
1:5:3740:G:O6	1:5:3741:C:C4	2.67	0.48
1:5:3795:A:C6	1:5:3796:U:C4	3.01	0.48
1:5:3806:G:C6	1:5:3807:A:C5	3.02	0.48
1:5:3911:C:H2'	1:5:3912:U:H6	1.77	0.48
1:5:4091:G:N1	1:5:4092:G:C4	2.82	0.48
1:5:4093:G:C3'	1:5:4094:G:H5''	2.40	0.48
1:5:4269:G:C6	1:5:4270:C:C4	3.01	0.48
1:5:4300:U:H4'	22:T:89:ILE:HG22	1.95	0.48
1:5:4302:U:C5	1:5:4303:C:C5	2.90	0.48
1:5:4433:G:H2'	1:5:4434:C:H6	1.78	0.48
1:5:4577:U:O2'	1:5:4967:A:O2'	2.31	0.48
1:5:4692:A:H3'	1:5:4693:C:H2'	1.96	0.48
2:7:60:G:O2'	7:D:268:ARG:NH1	2.47	0.48
6:C:78:ARG:HH11	6:C:78:ARG:CG	2.26	0.48
11:H:117:PHE:CE1	11:H:118:LEU:HB2	2.48	0.48
17:O:108:ILE:HG23	17:O:160:ARG:CD	2.43	0.48
19:Q:95:VAL:HG23	19:Q:116:ALA:HB2	1.95	0.48
24:V:73:ARG:HH11	24:V:73:ARG:HB3	1.79	0.48
26:X:111:GLN:OE1	26:X:111:GLN:HA	2.13	0.48
33:e:43:ASN:C	33:e:43:ASN:ND2	2.66	0.48
47:1:251:VAL:CG2	47:1:448:LEU:HD11	2.44	0.48
50:S2:72:C:OP1	50:S2:79:A:N1	2.47	0.48
50:S2:75:G:N3	50:S2:77:A:OP2	2.46	0.48
50:S2:349:A:H2'	50:S2:350:C:C6	2.49	0.48
50:S2:827:A:C5	50:S2:828:G:N7	2.81	0.48
50:S2:1226:G:O6	50:S2:1638:G:C8	2.53	0.48
50:S2:1290:G:C5	82:Sf:146:LEU:HD23	2.49	0.48
50:S2:1291:A:H8	82:Sf:146:LEU:HB2	1.73	0.48
50:S2:1434:C:C2	50:S2:1435:C:C5	3.02	0.48
50:S2:1573:G:C4	50:S2:1574:C:C6	3.01	0.48
50:S2:1690:U:N3	50:S2:1691:U:C4	2.82	0.48
52:SB:153:THR:HB	52:SB:155:TYR:CZ	2.49	0.48
53:SC:260:VAL:O	53:SC:261:PHE:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SH:166:VAL:HG22	58:SH:173:PHE:HE2	1.78	0.48
60:SJ:44:TRP:HA	60:SJ:47:LYS:HB3	1.94	0.48
61:SK:84:HIS:HB3	63:SM:27:ILE:HD13	1.95	0.48
63:SM:50:CYS:HB3	63:SM:75:ASN:HD21	1.79	0.48
63:SM:104:VAL:HG13	63:SM:105:GLY:N	2.28	0.48
68:SR:13:ALA:CB	68:SR:53:TYR:CG	2.95	0.48
70:ST:31:PRO:CB	70:ST:33:TRP:CH2	2.97	0.48
73:SW:41:MET:HG2	73:SW:129:PHE:CD2	2.49	0.48
74:SX:19:ASP:OD1	74:SX:19:ASP:N	2.44	0.48
83:Sg:59:LEU:CD1	83:Sg:95:GLY:HA2	2.43	0.48
83:Sg:60:ARG:HA	83:Sg:60:ARG:HE	1.79	0.48
83:Sg:129:ILE:O	83:Sg:142:VAL:HB	2.13	0.48
85:S5:5:G:N2	85:S5:6:G:N2	2.60	0.48
86:S6:48:C:H1'	86:S6:49:C:P	2.53	0.48
1:5:354:U:H1'	6:C:97:ARG:CG	2.44	0.48
1:5:504:G:N1	1:5:654:C:O2	2.42	0.48
1:5:750:U:N3	1:5:751:G:C8	2.82	0.48
1:5:973:G:C6	1:5:974:C:C4	3.01	0.48
1:5:1193:C:H2'	1:5:1193:C:O2	2.12	0.48
1:5:1212:G:C2	1:5:1213:G:N7	2.81	0.48
1:5:1263:A:C2	1:5:1264:C:N1	2.82	0.48
1:5:1367:C:H2'	1:5:1368:A:O5'	2.14	0.48
1:5:1447:C:H2'	1:5:1448:G:H8	1.79	0.48
1:5:1448:G:N2	1:5:1449:C:C2	2.82	0.48
1:5:1471:U:C4	1:5:1472:C:C5	3.02	0.48
1:5:1477:C:C2	1:5:1478:C:C6	3.02	0.48
1:5:1759:G:C6	1:5:1760:G:C8	3.02	0.48
1:5:1777:C:N3	1:5:1778:C:C5	2.81	0.48
1:5:1878:G:C6	1:5:1879:C:C4	3.02	0.48
1:5:1945:G:C2	1:5:1946:G:C1'	2.97	0.48
1:5:1964:A:C2	1:5:4694:G:C6	3.02	0.48
1:5:1967:A:N1	1:5:1968:G:N7	2.62	0.48
1:5:1971:C:O2	1:5:1971:C:H2'	2.14	0.48
1:5:2076:G:C5	1:5:2077:C:C5	3.02	0.48
1:5:2096:G:H22	9:F:41:GLN:HE22	1.62	0.48
1:5:2099:G:N2	1:5:2100:A:N9	2.62	0.48
1:5:2120:G:H2'	1:5:2121:C:C2	2.48	0.48
1:5:2247:C:O2'	9:F:28:ALA:HB3	2.12	0.48
1:5:2367:A:N9	1:5:2798:A:C2	2.81	0.48
1:5:2503:G:H5'	1:5:2504:C:O5'	2.14	0.48
1:5:2532:C:N3	1:5:2533:C:N4	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2622:G:N2	1:5:2623:A:H1'	2.29	0.48
1:5:2878:G:H4'	1:5:3825:A:H5''	1.95	0.48
1:5:3585:G:C2	1:5:3586:G:C8	3.02	0.48
1:5:3863:C:H2'	1:5:3864:C:H6	1.79	0.48
1:5:3868:G:N2	1:5:3899:G:N2	2.62	0.48
1:5:3877:A:O2'	1:5:4400:G:N2	2.45	0.48
1:5:3879:G:C5	1:5:3882:C:C5	3.00	0.48
1:5:3898:G:C3'	1:5:3899:G:H5'	2.44	0.48
1:5:3930:U:H3	1:5:4180:G:H1	1.60	0.48
1:5:4104:G:C3'	1:5:4105:A:C8	2.97	0.48
1:5:4271:A:C4	1:5:4272:G:C2	3.01	0.48
1:5:4281:A:C5	1:5:4283:G:C8	3.01	0.48
1:5:4303:C:O2	1:5:4303:C:H3'	2.14	0.48
1:5:4712:C:O2	1:5:4712:C:H2'	2.13	0.48
3:8:10:G:N3	3:8:11:C:H1'	2.27	0.48
4:A:219:ILE:HG22	4:A:220:GLY:N	2.28	0.48
7:D:219:TYR:O	7:D:220:LYS:CB	2.61	0.48
16:N:135:ILE:HG21	16:N:151:ILE:CD1	2.44	0.48
17:O:192:PHE:N	17:O:192:PHE:CD1	2.81	0.48
18:P:30:ARG:HH12	18:P:62:ARG:HH21	1.62	0.48
19:Q:17:GLU:HA	19:Q:52:PHE:HE1	1.78	0.48
19:Q:33:ARG:NH2	19:Q:48:LEU:HD11	2.28	0.48
19:Q:33:ARG:HH21	19:Q:48:LEU:HD11	1.78	0.48
19:Q:146:ARG:HH11	19:Q:146:ARG:HB3	1.78	0.48
20:R:32:ILE:O	20:R:33:ALA:HB3	2.13	0.48
21:S:120:ARG:HB2	21:S:122:HIS:HD2	1.78	0.48
30:b:42:ASN:ND2	30:b:42:ASN:C	2.72	0.48
44:p:17:ARG:O	44:p:18:TYR:HB2	2.07	0.48
47:1:449:LEU:HB2	47:1:450:ALA:N	2.28	0.48
50:S2:25:A:H61	50:S2:648:A:N6	2.02	0.48
50:S2:167:G:C2	50:S2:168:C:C2	3.02	0.48
50:S2:307:G:OP2	50:S2:307:G:O3'	2.30	0.48
50:S2:533:A:H2'	50:S2:534:G:O4'	2.14	0.48
50:S2:913:A:C2	58:SH:120:ARG:NH2	2.82	0.48
50:S2:923:G:C2	50:S2:924:G:C8	3.01	0.48
50:S2:926:A:C4	50:S2:927:C:C5	3.01	0.48
50:S2:1083:A:C8	50:S2:1861:G:C6	3.02	0.48
50:S2:1151:G:N3	50:S2:1152:U:C6	2.82	0.48
50:S2:1162:C:C4	50:S2:1163:C:C4	3.01	0.48
50:S2:1175:G:C6	50:S2:1176:G:C5	3.01	0.48
50:S2:1253:A:C2	50:S2:1666:C:H1'	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1294:G:O2'	82:Sf:137:ASP:CG	2.56	0.48
50:S2:1401:A:H2'	50:S2:1402:A:H8	1.77	0.48
50:S2:1442:U:O2	50:S2:1443:C:C6	2.67	0.48
50:S2:1484:A:N9	50:S2:1485:U:H5	2.10	0.48
50:S2:1514:G:H21	66:SP:97:TYR:HE2	1.61	0.48
50:S2:1599:U:OP2	76:SZ:80:ARG:O	2.31	0.48
50:S2:1702:G:C6	50:S2:1703:C:C4	3.02	0.48
50:S2:1739:C:C4	50:S2:1740:C:C5	3.01	0.48
51:SA:130:ASP:OD1	51:SA:130:ASP:N	2.46	0.48
51:SA:181:GLU:OE1	51:SA:181:GLU:HA	2.10	0.48
54:SD:76:ARG:HD2	54:SD:77:PHE:CE1	2.49	0.48
54:SD:76:ARG:NE	61:SK:66:HIS:CE1	2.82	0.48
56:SF:25:THR:HG23	56:SF:109:LEU:HD13	1.94	0.48
63:SM:67:ALA:O	63:SM:71:GLU:HG2	2.13	0.48
64:SN:89:TYR:C	64:SN:89:TYR:HD1	2.22	0.48
70:ST:79:TYR:N	70:ST:79:TYR:CD1	2.80	0.48
85:S5:30:G:O2'	85:S5:31:A:H5'	2.14	0.48
85:S5:48:C:N4	85:S5:59:U:N3	2.57	0.48
86:S6:19:G:N3	86:S6:57:G:C6	2.80	0.48
86:S6:33:U:H3'	86:S6:33:U:O2	2.14	0.48
1:5:37:U:C4	1:5:38:A:C5	3.02	0.48
1:5:62:A:C2'	1:5:63:G:O5'	2.61	0.48
1:5:98:A:N6	1:5:99:A:C4	2.82	0.48
1:5:163:A:C6	1:5:164:G:N7	2.81	0.48
1:5:172:C:C4	1:5:173:C:C5	3.02	0.48
1:5:182:G:H1	1:5:254:G:H1	1.62	0.48
1:5:314:G:N2	1:5:4355:G:C5	2.82	0.48
1:5:503:C:OP2	1:5:505:G:OP2	2.31	0.48
1:5:744:G:H2'	1:5:745:G:H8	1.79	0.48
1:5:1094:G:C2	1:5:1095:A:C8	3.02	0.48
1:5:1175:A:H1'	7:D:275:GLN:HE22	1.76	0.48
1:5:1268:G:OP2	1:5:2110:C:C2'	2.62	0.48
1:5:1367:C:C6	1:5:1370:G:H2'	2.48	0.48
1:5:1387:A:H1'	1:5:1397:A:H61	1.78	0.48
1:5:1473:U:H2'	1:5:1474:C:O4'	2.14	0.48
1:5:1607:C:H2'	1:5:1607:C:O2	2.13	0.48
1:5:1749:A:H2'	1:5:1750:G:C1'	2.44	0.48
1:5:1754:U:O2	1:5:1754:U:O4'	2.31	0.48
1:5:1760:G:C6	1:5:1761:G:C8	3.01	0.48
1:5:1857:C:N3	1:5:1858:A:N7	2.62	0.48
1:5:1967:A:C2	1:5:1968:G:C4	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1968:G:N2	1:5:1969:G:C4	2.82	0.48
1:5:2000:G:HO2'	1:5:2017:A:H61	1.59	0.48
1:5:2270:G:C2	1:5:2271:C:C2	3.02	0.48
1:5:2391:G:C2	1:5:2392:C:C6	3.02	0.48
1:5:2417:A:N3	1:5:2417:A:H2'	2.27	0.48
1:5:2507:A:N7	1:5:2508:U:C5	2.82	0.48
1:5:2673:G:C2	31:c:89:TYR:CD1	3.01	0.48
1:5:2706:G:O2'	1:5:2709:C:N4	2.47	0.48
1:5:2842:G:N1	1:5:2843:U:C5	2.82	0.48
1:5:3587:C:H2'	1:5:3588:C:C6	2.49	0.48
1:5:3629:A:C2	1:5:3630:A:H1'	2.48	0.48
1:5:3733:A:C6	1:5:3734:U:C4	3.02	0.48
1:5:3935:C:C4	1:5:3936:A:N7	2.81	0.48
1:5:3965:A:C5	1:5:4047:A:N6	2.82	0.48
1:5:3974:G:C2	1:5:3975:C:N3	2.82	0.48
1:5:4054:C:C4'	46:z:205:TYR:CE2	2.85	0.48
1:5:4266:G:N1	1:5:4279:A:C5	2.82	0.48
1:5:4281:A:N1	1:5:4283:G:C4	2.82	0.48
1:5:4301:U:H5''	22:T:54:HIS:CD2	2.49	0.48
1:5:4301:U:C4'	22:T:54:HIS:HD2	2.27	0.48
1:5:4303:C:O2'	1:5:4304:A:H2'	2.14	0.48
1:5:4461:C:O2	1:5:4516:G:C2	2.67	0.48
1:5:4942:C:O3'	1:5:4944:C:P	2.72	0.48
1:5:4945:G:O6	34:f:60:PRO:HD2	2.13	0.48
1:5:4978:G:O2'	1:5:4979:A:O5'	2.22	0.48
1:5:4982:A:N3	1:5:4982:A:H2'	2.28	0.48
2:7:28:C:H2'	2:7:28:C:O2	2.12	0.48
3:8:101:C:N4	3:8:102:G:C6	2.81	0.48
3:8:141:C:C2	3:8:142:U:C5	3.01	0.48
3:8:146:U:N3	3:8:147:G:C8	2.82	0.48
4:A:3:ARG:HH11	4:A:3:ARG:CG	2.25	0.48
5:B:225:GLY:HA2	5:B:274:TYR:H	1.78	0.48
6:C:180:ILE:O	6:C:184:TYR:HB2	2.14	0.48
7:D:67:ALA:O	7:D:68:ARG:NH1	2.46	0.48
8:E:279:PRO:C	8:E:281:LYS:H	2.22	0.48
9:F:98:ARG:HH22	9:F:226:THR:HG23	1.79	0.48
9:F:144:TRP:CZ3	9:F:237:ASN:HB2	2.48	0.48
12:I:88:ARG:HB2	12:I:173:PHE:HE2	1.79	0.48
18:P:30:ARG:NE	18:P:34:GLN:OE1	2.47	0.48
21:S:8:ARG:NH1	21:S:10:TYR:OH	2.47	0.48
21:S:33:PHE:HE2	21:S:106:VAL:CG1	2.24	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:a:35:ALA:O	29:a:41:HIS:HD2	1.96	0.48
29:a:63:LEU:HD23	29:a:64:LYS:N	2.28	0.48
33:e:77:PHE:HE1	45:r:20:ARG:HD2	1.77	0.48
50:S2:22:A:C2	50:S2:653:A:N3	2.81	0.48
50:S2:322:C:H2'	50:S2:323:C:H6	1.78	0.48
50:S2:330:G:N1	50:S2:331:C:C6	2.81	0.48
50:S2:371:A:C2	50:S2:372:U:C5	3.02	0.48
50:S2:436:G:C5	50:S2:458:A:C2	3.01	0.48
50:S2:583:C:O2	50:S2:583:C:H2'	2.13	0.48
50:S2:795:A:H2'	50:S2:796:G:C8	2.36	0.48
50:S2:856:C:N3	50:S2:857:U:C6	2.81	0.48
50:S2:857:U:O2	50:S2:858:A:C8	2.66	0.48
50:S2:918:U:H2'	50:S2:919:A:C4	2.48	0.48
50:S2:987:A:H2	52:SB:114:VAL:HG21	1.79	0.48
50:S2:1034:A:C6	50:S2:1082:A:C4	3.01	0.48
50:S2:1063:C:O2'	50:S2:1838:U:C4	2.55	0.48
50:S2:1063:C:H1'	50:S2:1838:U:C5	2.48	0.48
50:S2:1184:G:C6	50:S2:1185:C:C5	3.01	0.48
50:S2:1407:U:C2'	50:S2:1408:U:H6	2.24	0.48
50:S2:1528:G:N2	50:S2:1529:C:N3	2.62	0.48
50:S2:1551:U:H2'	50:S2:1552:G:O4'	2.13	0.48
50:S2:1553:C:O2	50:S2:1553:C:O4'	2.32	0.48
50:S2:1624:U:O4'	50:S2:1624:U:O2	2.31	0.48
50:S2:1683:C:C2	50:S2:1684:C:C5	3.01	0.48
50:S2:1825:A:H61	85:S5:37:A:H4'	1.78	0.48
52:SB:34:LYS:HB2	52:SB:232:HIS:ND1	2.29	0.48
55:SE:11:ARG:O	55:SE:12:VAL:CB	2.62	0.48
57:SG:138:ALA:HB1	57:SG:153:VAL:HG21	1.95	0.48
58:SH:99:ARG:HG2	58:SH:99:ARG:HH21	1.79	0.48
60:SJ:48:PHE:HE2	60:SJ:52:LYS:HE3	1.79	0.48
61:SK:90:VAL:HG21	61:SK:94:LEU:HD12	1.96	0.48
62:SL:46:THR:O	62:SL:46:THR:HG23	2.13	0.48
74:SX:84:PHE:HD2	74:SX:105:PHE:CZ	2.31	0.48
75:SY:20:ARG:CB	75:SY:76:TYR:CD1	2.96	0.48
83:Sg:119:GLN:HE22	83:Sg:131:LEU:HD21	1.78	0.48
86:S6:16:A:H2	86:S6:60:U:C2	2.31	0.48
86:S6:55:U:H2'	86:S6:56:C:H2'	1.95	0.48
1:5:57:G:C2	1:5:58:G:C6	3.02	0.48
1:5:60:G:C4	1:5:61:A:N7	2.82	0.48
1:5:209:U:C2	1:5:233:U:O4	2.66	0.48
1:5:457:G:C6	1:5:458:C:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:467:U:N3	1:5:468:U:C6	2.80	0.48
1:5:659:G:C2	1:5:660:A:N9	2.81	0.48
1:5:709:C:N3	1:5:710:G:N7	2.62	0.48
1:5:738:C:H2'	1:5:739:G:H8	1.79	0.48
1:5:1268:G:H1'	1:5:2111:G:C6	2.49	0.48
1:5:1380:G:N3	1:5:1382:G:C5	2.82	0.48
1:5:1404:G:C5	1:5:1405:C:C5	3.02	0.48
1:5:1421:G:N1	1:5:1422:G:C5	2.82	0.48
1:5:1455:G:H3'	1:5:1456:C:H5''	1.94	0.48
1:5:1492:G:C2	1:5:1493:G:C8	3.02	0.48
1:5:1633:G:C6	4:A:207:VAL:HG11	2.49	0.48
1:5:1749:A:C2	1:5:1750:G:C4	3.02	0.48
1:5:1769:G:N2	1:5:1770:A:C4	2.82	0.48
1:5:1887:G:C6	1:5:1890:G:C6	3.02	0.48
1:5:2080:U:H2'	1:5:2081:C:H6	1.79	0.48
1:5:2263:A:O3'	1:5:2264:C:H2'	2.13	0.48
1:5:2332:A:N3	1:5:2333:G:H1'	2.29	0.48
1:5:2413:U:C2	1:5:2414:G:C8	3.02	0.48
1:5:2464:C:O2'	1:5:2465:C:O5'	2.25	0.48
1:5:2503:G:N3	1:5:2503:G:H2'	2.29	0.48
1:5:2566:G:N2	1:5:2567:G:N9	2.62	0.48
1:5:2749:C:O2'	35:g:64:LEU:HD23	2.14	0.48
1:5:2770:C:N3	1:5:2771:G:C8	2.82	0.48
1:5:2835:A:C1'	1:5:4979:A:H5'	2.43	0.48
1:5:2874:U:C6	1:5:2874:U:C5'	2.97	0.48
1:5:2895:A:C2	1:5:2896:G:C8	3.02	0.48
1:5:3586:G:C2	1:5:3587:C:C2	3.02	0.48
1:5:3651:A:H2'	1:5:3652:A:O4'	2.14	0.48
1:5:3841:C:O2	1:5:3841:C:H2'	2.14	0.48
1:5:3911:C:C2	1:5:3912:U:C6	3.01	0.48
1:5:3941:G:C6	1:5:4073:A:C6	3.01	0.48
1:5:4045:G:C8	1:5:4045:G:H3'	2.48	0.48
1:5:4050:A:OP2	1:5:4051:C:C5	2.67	0.48
1:5:4173:G:N3	1:5:4174:U:C6	2.82	0.48
1:5:4298:A:C6	1:5:4299:U:C5	3.01	0.48
1:5:4301:U:C4'	22:T:54:HIS:CD2	2.95	0.48
1:5:4370:G:C6	86:S6:76:A:N1	2.82	0.48
1:5:4860:G:C2	1:5:4861:G:C8	3.02	0.48
1:5:4871:C:H3'	15:M:91:TRP:HE1	1.79	0.48
1:5:4981:G:N1	1:5:4982:A:C5	2.81	0.48
1:5:5050:C:C2	1:5:5051:C:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5052:C:N3	1:5:5053:U:C6	2.82	0.48
2:7:93:G:N2	2:7:94:C:C2	2.82	0.48
3:8:66:A:C4	3:8:67:U:C5	3.02	0.48
3:8:115:G:C2	3:8:116:C:N1	2.81	0.48
3:8:133:G:C2	3:8:134:G:N9	2.80	0.48
4:A:109:GLU:CD	4:A:109:GLU:C	2.82	0.48
6:C:122:TYR:HB2	6:C:280:PRO:CG	2.44	0.48
7:D:95:TYR:HE2	7:D:198:HIS:C	2.21	0.48
11:H:59:LYS:HB2	11:H:70:VAL:HG22	1.96	0.48
12:I:35:ASP:N	12:I:35:ASP:OD1	2.45	0.48
12:I:85:PHE:CD1	12:I:85:PHE:C	2.92	0.48
16:N:101:VAL:HG12	16:N:105:ARG:HD2	1.93	0.48
34:f:72:GLY:HA3	34:f:88:PHE:CD1	2.49	0.48
47:1:43:LEU:HB3	48:2:54:VAL:CG2	2.28	0.48
50:S2:119:U:C4	50:S2:120:U:H5	2.30	0.48
50:S2:163:U:O2	50:S2:164:A:N7	2.47	0.48
50:S2:177:G:O2'	50:S2:178:C:H6	1.96	0.48
50:S2:201:C:C4	50:S2:202:G:H1'	2.49	0.48
50:S2:386:C:C4	50:S2:387:C:H5	2.29	0.48
50:S2:441:C:C6	50:S2:448:A:C2	3.01	0.48
50:S2:807:G:N1	50:S2:808:A:C5	2.82	0.48
50:S2:995:G:N2	50:S2:997:A:H8	2.11	0.48
50:S2:1012:A:H2'	50:S2:1013:U:O4'	2.13	0.48
50:S2:1114:U:O4	50:S2:1119:A:C6	2.58	0.48
50:S2:1200:A:C6	50:S2:1201:U:H5	2.31	0.48
50:S2:1204:A:HO2'	50:S2:1205:C:P	2.36	0.48
50:S2:1236:G:N2	50:S2:1237:C:C2	2.82	0.48
50:S2:1292:C:N3	82:Sf:150:PHE:HB2	2.25	0.48
50:S2:1330:G:C6	50:S2:1492:U:N3	2.82	0.48
50:S2:1429:G:C2	50:S2:1430:C:C4	3.02	0.48
50:S2:1433:C:OP2	50:S2:1434:C:OP2	2.31	0.48
50:S2:1552:G:OP2	54:SD:9:ARG:NH2	2.47	0.48
50:S2:1573:G:C2	50:S2:1574:C:N1	2.81	0.48
50:S2:1606:G:H22	50:S2:1632:G:H2'	1.78	0.48
50:S2:1693:G:C4	50:S2:1694:U:C5	3.02	0.48
50:S2:1758:G:C2	50:S2:1759:G:C8	3.02	0.48
50:S2:1790:A:H2'	50:S2:1791:A:O4'	2.14	0.48
50:S2:1866:A:C6	77:Sa:87:ARG:NH2	2.71	0.48
51:SA:58:LEU:HD12	51:SA:174:MET:HE1	1.96	0.48
59:SI:113:TYR:CE2	59:SI:121:LEU:HD11	2.48	0.48
59:SI:181:GLN:NE2	59:SI:181:GLN:HA	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SJ:76:ALA:O	60:SJ:80:ARG:HG3	2.13	0.48
61:SK:52:LEU:HB3	61:SK:58:VAL:HG12	1.96	0.48
71:SU:40:ILE:HD11	71:SU:53:PRO:CG	2.43	0.48
82:Sf:117:LEU:HA	82:Sf:131:PHE:HZ	1.78	0.48
85:S5:48:C:OP1	85:S5:59:U:P	2.71	0.48
86:S6:35:A:C8	86:S6:35:A:H5''	2.48	0.48
86:S6:51:U:N1	86:S6:52:G:H8	2.11	0.48
1:5:141:C:C2	1:5:142:G:C8	3.02	0.48
1:5:180:C:N3	1:5:181:C:C5	2.82	0.48
1:5:398:A:C2	1:5:399:G:C8	3.02	0.48
1:5:479:G:C6	1:5:480:C:C4	3.01	0.48
1:5:698:G:C6	1:5:699:C:C5	3.01	0.48
1:5:931:C:N1	1:5:932:A:C8	2.82	0.48
1:5:945:U:C5	9:F:67:TYR:CE2	3.02	0.48
1:5:963:G:N3	1:5:963:G:H2'	2.29	0.48
1:5:985:C:C2	1:5:986:C:C6	3.01	0.48
1:5:1168:G:N2	1:5:1169:G:C4	2.82	0.48
1:5:1292:C:H6	1:5:1292:C:H5''	1.78	0.48
1:5:1321:G:C2	1:5:3876:A:C4	3.02	0.48
1:5:1349:G:C6	1:5:1350:C:C4	3.02	0.48
1:5:1534:A:H1'	38:j:11:ARG:NH2	2.29	0.48
1:5:1759:G:N1	1:5:1760:G:C5	2.81	0.48
1:5:1838:A:C2	1:5:1839:U:C5	3.02	0.48
1:5:1850:A:C2'	1:5:1851:G:O5'	2.62	0.48
1:5:1953:U:H2'	1:5:1954:U:O4'	2.14	0.48
1:5:2243:C:O2	1:5:2244:C:C5	2.67	0.48
1:5:2367:A:N6	1:5:2798:A:C1'	2.77	0.48
1:5:2399:G:N3	1:5:2400:G:C8	2.81	0.48
1:5:2534:C:O2'	1:5:2535:G:C5'	2.60	0.48
1:5:2577:C:N3	1:5:2578:G:C8	2.82	0.48
1:5:2688:G:C6	1:5:2689:C:C4	3.02	0.48
1:5:2737:C:N3	1:5:2738:C:C5	2.82	0.48
1:5:2758:G:H2'	1:5:2759:G:C8	2.49	0.48
1:5:2871:A:H2'	1:5:2872:C:O4'	2.14	0.48
1:5:3621:A:C2	1:5:3622:C:N1	2.82	0.48
1:5:3755:G:C2	1:5:3756:A:C8	3.02	0.48
1:5:3793:U:C2	1:5:3794:C:C5	3.02	0.48
1:5:3907:G:C1'	1:5:4449:A:C1'	2.92	0.48
1:5:3974:G:O3'	46:z:26:ARG:CD	2.62	0.48
1:5:3974:G:N2	1:5:3975:C:C2	2.82	0.48
1:5:4129:G:H2'	1:5:4130:C:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4185:G:C2	1:5:4186:A:C8	3.02	0.48
1:5:4275:G:C8	1:5:4275:G:C3'	2.97	0.48
1:5:4498:U:N3	1:5:4500:U:P	2.87	0.48
1:5:4565:C:H1'	5:B:262:VAL:HG21	1.95	0.48
1:5:4594:U:C2	1:5:4595:G:C8	3.02	0.48
1:5:4687:A:N1	1:5:4688:C:C4	2.82	0.48
1:5:5004:C:O2	1:5:5044:A:C2	2.67	0.48
1:5:5050:C:H2'	1:5:5050:C:O2	2.14	0.48
2:7:11:A:N7	7:D:18:VAL:HG13	2.28	0.48
3:8:34:U:C2	3:8:34:U:C4'	2.97	0.48
8:E:160:PHE:HE2	8:E:169:LEU:HD22	1.78	0.48
9:F:124:PHE:HD2	9:F:196:ILE:CG2	2.27	0.48
10:G:58:PRO:CG	26:X:46:PHE:HD2	2.26	0.48
12:I:9:TYR:CD2	12:I:97:ILE:HG12	2.39	0.48
12:I:76:MET:CE	12:I:80:CYS:SG	2.99	0.48
13:J:178:ASN:OD1	13:J:178:ASN:C	2.56	0.48
21:S:10:TYR:OH	21:S:66:GLN:CG	2.60	0.48
21:S:29:ARG:HB3	21:S:29:ARG:NH2	2.29	0.48
21:S:94:TYR:HE2	21:S:96:GLU:HG3	1.77	0.48
22:T:17:ARG:HG3	22:T:18:PRO:CD	2.44	0.48
27:Y:69:LYS:HB3	27:Y:83:GLU:OE2	2.14	0.48
30:b:6:ASN:N	30:b:6:ASN:ND2	2.60	0.48
32:d:87:ARG:CZ	32:d:87:ARG:HA	2.44	0.48
33:e:35:TRP:CD1	33:e:36:ARG:CA	2.96	0.48
41:m:106:ARG:HB2	41:m:106:ARG:HH11	1.79	0.48
45:r:45:HIS:NE2	45:r:103:ARG:NH1	2.62	0.48
46:z:41:TYR:O	46:z:163:LEU:HD11	2.14	0.48
50:S2:50:A:N7	50:S2:51:U:C6	2.82	0.48
50:S2:64:A:N6	50:S2:82:G:C5	2.82	0.48
50:S2:167:G:C6	50:S2:168:C:C5	3.02	0.48
50:S2:173:A:N1	50:S2:174:C:C6	2.81	0.48
50:S2:339:A:C3'	50:S2:340:C:H6	2.26	0.48
50:S2:459:C:N4	50:S2:460:A:N7	2.61	0.48
50:S2:597:G:N2	50:S2:640:A:C4	2.82	0.48
50:S2:601:G:O2'	50:S2:602:G:C5'	2.62	0.48
50:S2:673:G:C6	50:S2:674:C:C4	3.02	0.48
50:S2:786:G:C8	57:SG:236:SER:O	2.67	0.48
50:S2:797:C:C2	58:SH:109:ARG:CZ	2.96	0.48
50:S2:900:C:C2	50:S2:901:G:N7	2.82	0.48
50:S2:914:U:O2	50:S2:914:U:O4'	2.32	0.48
50:S2:1287:A:N6	50:S2:1314:U:C4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1404:U:C4'	50:S2:1581:C:O2	2.61	0.48
50:S2:1457:U:H2'	50:S2:1458:G:H8	1.79	0.48
50:S2:1575:G:N3	50:S2:1576:G:N7	2.62	0.48
50:S2:1590:C:H5'	70:ST:82:ARG:CD	2.44	0.48
51:SA:107:THR:O	51:SA:116:PHE:HA	2.13	0.48
52:SB:36:PRO:CG	52:SB:231:LEU:HD21	2.40	0.48
53:SC:96:PHE:C	53:SC:96:PHE:CD1	2.92	0.48
53:SC:263:LYS:HB3	53:SC:267:GLN:OE1	2.14	0.48
54:SD:203:PRO:HG2	68:SR:42:PRO:HB3	1.95	0.48
55:SE:72:ILE:HG12	55:SE:90:ILE:HG12	1.96	0.48
56:SF:38:TYR:OH	79:Sc:54:ASP:OD2	2.29	0.48
65:SO:41:PHE:N	65:SO:41:PHE:CD1	2.80	0.48
65:SO:42:VAL:O	65:SO:55:ARG:O	2.32	0.48
69:SS:107:LEU:O	69:SS:111:LEU:HG	2.12	0.48
72:SV:19:ALA:HB3	72:SV:59:ILE:HD13	1.95	0.48
78:Sb:33:MET:HE3	78:Sb:79:PHE:HB3	1.95	0.48
83:Sg:191:HIS:HB2	83:Sg:195:LEU:HD21	1.95	0.48
85:S5:47:U:C2'	85:S5:48:C:OP1	2.61	0.48
86:S6:33:U:N3	86:S6:35:A:C5'	2.77	0.48
1:5:29:G:C5	1:5:30:C:C5	3.01	0.47
1:5:69:A:C3'	1:5:70:A:H8	2.24	0.47
1:5:85:G:N3	1:5:97:G:C6	2.82	0.47
1:5:87:A:H2'	1:5:87:A:N3	2.29	0.47
1:5:238:C:H2'	1:5:239:C:H5'	1.96	0.47
1:5:272:U:N3	1:5:273:U:C4	2.82	0.47
1:5:296:A:P	1:5:296:A:H8	2.35	0.47
1:5:299:C:O2	1:5:299:C:C2'	2.62	0.47
1:5:474:C:O2	1:5:475:G:C8	2.67	0.47
1:5:511:C:H2'	1:5:512:U:C6	2.49	0.47
1:5:642:G:C2	1:5:643:C:C6	3.01	0.47
1:5:661:C:N3	1:5:662:C:C6	2.82	0.47
1:5:722:G:N2	6:C:343:GLN:HE22	2.12	0.47
1:5:993:G:N1	1:5:994:G:C5	2.82	0.47
1:5:1176:C:C2	1:5:1177:U:C6	3.01	0.47
1:5:1265:G:C3'	1:5:1266:G:H5'	2.44	0.47
1:5:1318:C:OP1	29:a:21:ARG:HB2	2.14	0.47
1:5:1412:G:C6	1:5:1413:C:C5	3.02	0.47
1:5:1655:C:H2'	1:5:1655:C:O2	2.14	0.47
1:5:1838:A:C2	1:5:1839:U:C6	3.02	0.47
1:5:1919:G:H5'	21:S:163:HIS:CE1	2.49	0.47
1:5:1919:G:O6	34:f:29:LYS:CE	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1995:G:H2'	1:5:1996:C:C6	2.49	0.47
1:5:2089:G:O2'	1:5:2090:U:P	2.72	0.47
1:5:2431:A:OP1	40:l:41:ARG:NH1	2.47	0.47
1:5:2480:G:N3	1:5:2481:G:C8	2.82	0.47
1:5:2567:G:C2	1:5:2568:C:C2	3.02	0.47
1:5:2648:G:O2'	1:5:2649:G:OP2	2.29	0.47
1:5:2807:A:C2	1:5:2808:G:C8	3.02	0.47
1:5:2858:A:O2'	1:5:2859:G:P	2.71	0.47
1:5:3611:A:H2	1:5:5016:A:C8	2.30	0.47
1:5:3655:C:N3	1:5:3656:A:N7	2.62	0.47
1:5:3689:G:C2	1:5:3690:U:C6	3.01	0.47
1:5:3718:A:H2'	1:5:3719:A:C1'	2.44	0.47
1:5:3792:G:C4	1:5:3793:U:C5	3.02	0.47
1:5:3853:U:O2'	1:5:4979:A:H1'	2.14	0.47
1:5:3974:G:C2	1:5:3975:C:C4	3.02	0.47
1:5:4051:C:H2'	1:5:4052:C:C6	2.48	0.47
1:5:4082:G:H2'	1:5:4083:U:C6	2.49	0.47
1:5:4109:G:N3	1:5:4110:C:C6	2.82	0.47
1:5:4119:C:O2	1:5:4119:C:O4'	2.31	0.47
1:5:4122:G:C5	1:5:4123:C:C5	3.02	0.47
1:5:4169:G:H4'	1:5:4171:C:C2	2.48	0.47
1:5:4415:A:N1	1:5:4416:G:H1'	2.29	0.47
1:5:4433:G:C4	1:5:4434:C:C5	3.02	0.47
1:5:4463:U:C5	1:5:4488:A:C5	3.02	0.47
1:5:4697:U:C4'	41:m:104:HIS:CD2	2.87	0.47
1:5:4733:C:C5	1:5:4734:A:C1'	2.96	0.47
1:5:5019:A:N3	1:5:5020:G:C8	2.82	0.47
2:7:110:G:C6	2:7:111:C:C4	3.02	0.47
3:8:95:A:C4	3:8:96:C:C6	3.02	0.47
3:8:154:G:C6	3:8:155:C:C4	3.02	0.47
5:B:273:GLY:O	5:B:275:HIS:CD2	2.67	0.47
8:E:158:VAL:HG22	8:E:180:VAL:HG21	1.96	0.47
11:H:94:SER:OG	11:H:142:ASP:HB3	2.14	0.47
13:J:64:ARG:HG2	13:J:64:ARG:HH21	1.77	0.47
14:L:125:ILE:HD11	36:h:123:ALA:HB3	1.95	0.47
17:O:56:ALA:HA	17:O:59:ARG:HE	1.78	0.47
27:Y:27:ARG:HH21	27:Y:27:ARG:CG	2.26	0.47
33:e:95:TYR:CE2	45:r:23:GLN:HG2	2.49	0.47
43:o:55:ILE:CG2	86:S6:75:C:C4'	2.63	0.47
44:p:14:TYR:N	44:p:14:TYR:CD1	2.80	0.47
46:z:110:PHE:O	46:z:135:PRO:HB3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:1:448:LEU:CG	47:1:451:VAL:HG22	2.37	0.47
50:S2:118:C:C4	50:S2:119:U:N1	2.82	0.47
50:S2:161:U:H6	75:SY:116:LYS:HA	1.78	0.47
50:S2:177:G:H21	50:S2:178:C:N4	2.12	0.47
50:S2:216:C:O4'	50:S2:216:C:O2	2.32	0.47
50:S2:217:A:H1'	50:S2:309:G:H1	1.79	0.47
50:S2:361:U:H4'	50:S2:362:C:C5'	2.43	0.47
50:S2:387:C:O2	50:S2:387:C:H2'	2.13	0.47
50:S2:472:C:O4'	50:S2:472:C:OP1	2.32	0.47
50:S2:552:G:N3	50:S2:553:U:C6	2.83	0.47
50:S2:604:A:C2	50:S2:605:A:C6	3.02	0.47
50:S2:636:C:N3	50:S2:637:U:C6	2.77	0.47
50:S2:797:C:C4'	50:S2:798:A:OP1	2.60	0.47
50:S2:845:G:H2'	50:S2:846:G:C8	2.49	0.47
50:S2:868:G:N1	58:SH:115:LYS:HD2	2.29	0.47
50:S2:976:G:C6	50:S2:977:C:C5	3.02	0.47
50:S2:993:G:C5	50:S2:994:C:C6	3.02	0.47
50:S2:1064:C:P	65:SO:150:ARG:HH22	2.37	0.47
50:S2:1330:G:C2	50:S2:1492:U:C4	3.02	0.47
50:S2:1496:U:N3	50:S2:1498:A:N7	2.62	0.47
50:S2:1735:A:C6	50:S2:1800:A:C4	3.01	0.47
50:S2:1859:A:N1	50:S2:1860:A:C5	2.82	0.47
51:SA:147:LEU:O	51:SA:165:ASN:ND2	2.46	0.47
51:SA:198:MET:CG	51:SA:199:PRO:HD2	2.43	0.47
53:SC:132:ASP:OD1	53:SC:132:ASP:N	2.45	0.47
54:SD:76:ARG:HB3	54:SD:77:PHE:CD2	2.49	0.47
54:SD:101:GLN:HG3	54:SD:126:ILE:HG22	1.96	0.47
60:SJ:45:ARG:HH22	60:SJ:146:SER:CB	2.26	0.47
67:SQ:15:ARG:HG2	67:SQ:20:THR:HG22	1.95	0.47
68:SR:21:TYR:HE1	68:SR:61:ILE:HB	1.79	0.47
68:SR:83:ASN:ND2	68:SR:83:ASN:O	2.47	0.47
77:Sa:91:ALA:HA	77:Sa:94:ASP:OD2	2.14	0.47
86:S6:11:C:C2	86:S6:12:C:C5	3.02	0.47
86:S6:37:A:C2'	86:S6:38:A:C2	2.82	0.47
86:S6:68:C:C2	86:S6:69:G:C8	3.02	0.47
1:5:2:G:N2	1:5:3:C:C2	2.83	0.47
1:5:73:A:N3	1:5:74:G:C8	2.81	0.47
1:5:268:G:C2	1:5:269:G:N9	2.82	0.47
1:5:288:G:C2	1:5:289:C:C5	3.02	0.47
1:5:437:G:C2	1:5:438:G:C8	3.02	0.47
1:5:449:C:O2	1:5:449:C:H2'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:504:G:O6	1:5:654:C:N3	2.47	0.47
1:5:1168:G:C2	1:5:1169:G:C8	3.02	0.47
1:5:1187:G:N2	1:5:1188:C:H41	2.12	0.47
1:5:1477:C:O2	1:5:1478:C:C1'	2.61	0.47
1:5:1655:C:O3'	1:5:1679:A:H2	1.98	0.47
1:5:1786:A:H2'	1:5:1789:C:H5	1.79	0.47
1:5:1900:C:C4'	33:e:60:TYR:HB2	2.44	0.47
1:5:1983:A:C2	1:5:2010:A:O5'	2.67	0.47
1:5:2083:C:H3'	1:5:2084:C:H5''	1.96	0.47
1:5:2278:G:H5'	19:Q:7:HIS:CE1	2.48	0.47
1:5:2319:C:O2	1:5:2319:C:C2'	2.60	0.47
1:5:2339:G:C5	1:5:2340:C:C5	3.01	0.47
1:5:2508:U:O2	1:5:2508:U:H2'	2.14	0.47
1:5:2689:C:O2	1:5:2690:C:H6	1.97	0.47
1:5:2690:C:H2'	1:5:2690:C:O2	2.13	0.47
1:5:3734:U:O2'	1:5:3735:G:H5'	2.14	0.47
1:5:3799:A:N7	24:V:40:ILE:HG21	2.29	0.47
1:5:3867:A:C2	1:5:3880:G:C6	3.02	0.47
1:5:4095:G:C2	1:5:4096:C:N4	2.82	0.47
1:5:4099:G:C2	1:5:4100:C:N1	2.82	0.47
1:5:4258:C:H2'	1:5:4259:C:C6	2.47	0.47
1:5:4455:G:H22	1:5:4524:G:H22	1.62	0.47
1:5:4531:U:C6	1:5:4531:U:C5'	2.97	0.47
1:5:4580:U:N3	1:5:4581:G:N7	2.54	0.47
1:5:4683:U:C4	1:5:4707:A:C5	3.02	0.47
1:5:5004:C:C5	1:5:5005:G:C4	3.02	0.47
3:8:46:G:N2	3:8:47:C:C2	2.82	0.47
3:8:69:U:H2'	3:8:70:G:O4'	2.15	0.47
3:8:127:U:O2'	3:8:128:C:O4'	2.33	0.47
4:A:32:VAL:CG1	4:A:163:ARG:HD2	2.44	0.47
4:A:138:SER:OG	50:S2:949:G:H4'	2.13	0.47
6:C:325:MET:HE1	9:F:157:TYR:CD2	2.48	0.47
10:G:264:LYS:CD	52:SB:31:TYR:CZ	2.83	0.47
15:M:5:ARG:NH2	15:M:59:ASP:OD1	2.46	0.47
24:V:99:GLU:HG3	25:W:21:TYR:OH	2.14	0.47
32:d:71:ALA:C	32:d:73:TRP:H	2.21	0.47
33:e:35:TRP:HZ2	33:e:38:PRO:HD3	1.78	0.47
33:e:75:ARG:O	33:e:95:TYR:HB2	2.13	0.47
36:h:66:LYS:HG2	36:h:70:ARG:HH21	1.79	0.47
50:S2:27:A:C2	50:S2:28:U:C1'	2.97	0.47
50:S2:46:A:C6	50:S2:473:A:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:84:A:C4	50:S2:85:A:C8	3.01	0.47
50:S2:187:G:C5	50:S2:188:C:C5	3.02	0.47
50:S2:501:C:H3'	50:S2:501:C:C2	2.49	0.47
50:S2:527:C:H2'	50:S2:528:A:H8	1.78	0.47
50:S2:534:G:C2	50:S2:535:G:C8	3.02	0.47
50:S2:631:U:H5'	50:S2:631:U:H6	1.79	0.47
50:S2:857:U:C2	50:S2:858:A:N7	2.82	0.47
50:S2:897:U:H2'	50:S2:898:U:O4'	2.14	0.47
50:S2:1225:U:C4	50:S2:1226:G:C8	3.02	0.47
50:S2:1253:A:N3	50:S2:1666:C:C1'	2.77	0.47
50:S2:1289:U:C5'	50:S2:1315:U:O2'	2.61	0.47
50:S2:1317:C:O2	50:S2:1318:G:H8	1.83	0.47
50:S2:1386:A:H61	68:SR:7:LYS:NZ	2.12	0.47
50:S2:1537:A:C2	50:S2:1538:C:H1'	2.49	0.47
50:S2:1567:G:C5	50:S2:1568:C:C4	3.01	0.47
50:S2:1589:A:H2'	50:S2:1590:C:H6	1.79	0.47
50:S2:1624:U:H2'	50:S2:1625:U:O5'	2.14	0.47
50:S2:1797:U:H2'	50:S2:1798:C:C6	2.49	0.47
56:SF:128:ILE:O	56:SF:134:VAL:HG13	2.13	0.47
57:SG:209:TYR:O	57:SG:213:LEU:N	2.47	0.47
57:SG:226:GLU:HA	57:SG:229:ALA:HB3	1.96	0.47
74:SX:51:VAL:HG13	74:SX:70:VAL:CG1	2.44	0.47
76:SZ:98:LYS:HB2	76:SZ:113:THR:HG23	1.96	0.47
85:S5:69:G:H2'	85:S5:70:G:O4'	2.14	0.47
86:S6:10:G:C4	86:S6:11:C:C6	3.01	0.47
86:S6:63:G:N3	86:S6:64:A:N9	2.62	0.47
1:5:94:A:H2'	1:5:95:G:O5'	2.15	0.47
1:5:258:G:C6	1:5:259:C:C5	3.02	0.47
1:5:258:G:C4	1:5:259:C:C6	3.02	0.47
1:5:438:G:C4	1:5:439:G:C8	3.01	0.47
1:5:515:C:C2	1:5:647:G:N2	2.82	0.47
1:5:1069:G:C5	1:5:1070:G:C8	3.01	0.47
1:5:1076:C:N3	1:5:1077:C:C5	2.80	0.47
1:5:1175:A:N1	1:5:1176:C:C4	2.82	0.47
1:5:1239:C:H4'	1:5:1240:G:O5'	2.15	0.47
1:5:1362:G:C5	1:5:1363:C:C5	3.02	0.47
1:5:1489:G:N1	1:5:1490:G:C8	2.82	0.47
1:5:1560:A:N1	1:5:1561:G:N1	2.50	0.47
1:5:1613:A:H4'	4:A:186:TYR:HD2	1.77	0.47
1:5:1770:A:C2	1:5:1771:U:C2	3.03	0.47
1:5:1775:A:H3'	1:5:1776:A:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2302:C:C4	1:5:2303:C:C4	3.03	0.47
1:5:2302:C:N4	1:5:2303:C:N4	2.61	0.47
1:5:2322:G:C6	1:5:2323:C:C4	3.02	0.47
1:5:2420:A:C2	1:5:2427:G:C2	3.01	0.47
1:5:2455:G:H2'	1:5:2456:G:C5'	2.44	0.47
1:5:2597:G:H2'	1:5:2598:A:O5'	2.14	0.47
1:5:2632:U:C6	23:U:85:TYR:CE1	3.02	0.47
1:5:2666:U:C4	1:5:2668:G:OP2	2.68	0.47
1:5:2676:A:C2	1:5:2677:G:H1'	2.50	0.47
1:5:2816:G:C5	1:5:2817:C:C5	3.02	0.47
1:5:3654:G:N3	1:5:3654:G:H2'	2.30	0.47
1:5:3803:A:H2'	1:5:3803:A:N3	2.30	0.47
1:5:3839:G:N1	1:5:3842:C:N4	2.63	0.47
1:5:3965:A:N1	1:5:4047:A:C5	2.82	0.47
1:5:4233:A:C5	1:5:4235:G:N7	2.82	0.47
1:5:4283:G:N2	1:5:4284:C:N3	2.62	0.47
1:5:4324:A:N3	1:5:4325:A:C8	2.83	0.47
1:5:4576:U:H2'	1:5:4577:U:O4'	2.15	0.47
1:5:4691:A:C6	1:5:4692:A:C5	3.01	0.47
1:5:4713:G:C5	1:5:4714:C:C5	3.02	0.47
1:5:4734:A:C2	1:5:4735:G:N9	2.82	0.47
1:5:4769:G:H2'	1:5:4770:U:O4'	2.15	0.47
1:5:4895:C:H1'	1:5:4896:G:C8	2.49	0.47
1:5:5000:G:H2'	1:5:5001:U:O5'	2.14	0.47
3:8:30:U:N3	3:8:31:G:N7	2.62	0.47
3:8:101:C:O2	3:8:101:C:C2'	2.61	0.47
5:B:228:TYR:CE1	5:B:270:GLY:HA2	2.50	0.47
7:D:200:LEU:CB	7:D:202:GLN:HE22	2.27	0.47
11:H:41:ILE:CD1	11:H:69:THR:HG21	2.44	0.47
16:N:99:GLN:HG3	16:N:130:PHE:CE2	2.48	0.47
16:N:99:GLN:OE1	16:N:167:ALA:HB2	2.14	0.47
17:O:57:PHE:HZ	17:O:82:ARG:HH21	1.62	0.47
19:Q:31:LEU:O	19:Q:31:LEU:HD23	2.14	0.47
33:e:77:PHE:HD1	33:e:78:LEU:N	2.12	0.47
33:e:108:ARG:HD3	33:e:128:ARG:NH2	2.30	0.47
45:r:31:ASN:OD1	45:r:32:LEU:N	2.47	0.47
47:1:187:ILE:HG23	47:1:450:ALA:HB1	1.96	0.47
50:S2:122:G:C4	50:S2:123:G:C8	3.02	0.47
50:S2:310:C:N3	50:S2:311:C:C4	2.82	0.47
50:S2:404:G:N1	50:S2:405:G:N7	2.62	0.47
50:S2:414:A:O2'	50:S2:415:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:618:C:H3'	50:S2:619:A:H8	1.80	0.47
50:S2:794:A:C2	50:S2:795:A:C8	3.02	0.47
50:S2:923:G:C2	50:S2:924:G:C4	3.01	0.47
50:S2:933:G:C5	50:S2:1001:A:C5	3.02	0.47
50:S2:961:G:H1'	84:S4:15:U:O4'	2.14	0.47
50:S2:993:G:H21	50:S2:994:C:H1'	1.79	0.47
50:S2:1033:G:N1	50:S2:1080:A:O2'	2.44	0.47
50:S2:1067:C:C2	50:S2:1068:G:C8	3.02	0.47
50:S2:1229:G:C2	50:S2:1230:C:C2	3.02	0.47
50:S2:1235:G:C2	50:S2:1236:G:H1'	2.50	0.47
50:S2:1286:G:C2	63:SM:33:ARG:O	2.66	0.47
50:S2:1311:C:C5	50:S2:1312:G:C5	3.02	0.47
50:S2:1345:G:C6	50:S2:1346:U:O4	2.66	0.47
50:S2:1419:C:HO2'	70:ST:132:ASP:CG	2.22	0.47
50:S2:1545:A:C6	50:S2:1546:G:C6	3.02	0.47
51:SA:103:PHE:HZ	51:SA:107:THR:HG1	1.61	0.47
55:SE:87:MET:HE1	55:SE:236:ILE:HG21	1.96	0.47
58:SH:177:TYR:CE2	58:SH:185:VAL:CG2	2.96	0.47
61:SK:12:TYR:CE2	61:SK:79:LEU:HD23	2.49	0.47
64:SN:99:ARG:NH2	64:SN:115:LEU:HD21	2.29	0.47
80:Sd:26:ASN:C	80:Sd:27:ARG:CG	2.87	0.47
85:S5:48:C:C5	85:S5:59:U:O4	2.59	0.47
86:S6:48:C:C6	86:S6:59:U:H1'	2.49	0.47
1:5:90:G:C5	1:5:92:C:C1'	2.97	0.47
1:5:368:C:C2	1:5:374:G:N2	2.83	0.47
1:5:423:G:H2'	18:P:118:GLN:NE2	2.28	0.47
1:5:450:G:N2	1:5:1294:A:C2'	2.75	0.47
1:5:483:G:H2'	1:5:484:U:H6	1.79	0.47
1:5:716:C:H5''	1:5:716:C:H6	1.79	0.47
1:5:743:G:C2	1:5:744:G:C5	3.03	0.47
1:5:944:A:C1'	6:C:335:MET:HE1	2.44	0.47
1:5:985:C:O2	1:5:986:C:C6	2.67	0.47
1:5:1200:G:C5	1:5:1201:U:C5	3.02	0.47
1:5:1260:G:N2	1:5:1261:G:C4	2.83	0.47
1:5:1380:G:N2	1:5:1382:G:C4	2.83	0.47
1:5:1395:U:C2'	1:5:1396:G:O5'	2.61	0.47
1:5:1410:U:C5	1:5:1815:G:N2	2.83	0.47
1:5:1488:G:C2	1:5:1489:G:N9	2.82	0.47
1:5:1516:G:C2	1:5:1518:A:C6	3.02	0.47
1:5:1572:U:H4'	20:R:95:TRP:CZ2	2.49	0.47
1:5:1619:G:C4	1:5:1620:U:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1874:A:H2'	1:5:1875:C:O4'	2.14	0.47
1:5:1881:C:O4'	1:5:2281:U:C5	2.67	0.47
1:5:1886:G:C2	1:5:1894:C:C4	3.02	0.47
1:5:2122:G:O2'	1:5:2123:C:OP1	2.26	0.47
1:5:2340:C:C2	1:5:2341:A:C8	3.02	0.47
1:5:2351:C:C2	1:5:2352:U:C5	3.02	0.47
1:5:2368:A:C2	1:5:2788:U:C5	3.02	0.47
1:5:2507:A:H2'	1:5:2507:A:N3	2.28	0.47
1:5:2548:C:C2	1:5:2549:G:C8	3.02	0.47
1:5:2592:U:C5	1:5:2593:C:C5	3.02	0.47
1:5:2756:G:C2	1:5:2757:A:C5	3.03	0.47
1:5:2773:G:C2	1:5:2774:C:C5	3.02	0.47
1:5:3608:A:C2	1:5:3609:G:C5	3.02	0.47
1:5:3742:G:C2	1:5:3743:G:C5	3.03	0.47
1:5:3747:A:C1'	1:5:3817:A:H2'	2.44	0.47
1:5:3961:G:O6	1:5:3963:A:H5'	2.14	0.47
1:5:4224:A:C6	1:5:4225:G:C8	3.02	0.47
1:5:4635:A:H2	1:5:4663:G:H21	1.62	0.47
1:5:4652:G:C6	1:5:4653:C:C4	3.03	0.47
1:5:4730:C:C5'	1:5:4731:G:H21	2.24	0.47
1:5:4737:G:H5'	1:5:4737:G:H8	1.79	0.47
1:5:5031:G:C4	1:5:5032:C:C5	3.02	0.47
3:8:14:U:O2'	3:8:15:G:O4'	2.28	0.47
3:8:134:G:N2	3:8:135:C:N1	2.62	0.47
7:D:82:GLU:OE2	7:D:108:ARG:NH1	2.48	0.47
7:D:233:PRO:O	7:D:235:MET:N	2.48	0.47
8:E:53:TYR:CE2	8:E:61:ARG:NH2	2.82	0.47
14:L:90:VAL:HG12	14:L:94:ILE:HD12	1.96	0.47
14:L:99:ASP:OD1	14:L:101:ARG:N	2.45	0.47
15:M:118:MET:HG3	17:O:192:PHE:CE2	2.48	0.47
19:Q:25:LEU:HD12	19:Q:28:LEU:HD11	1.96	0.47
26:X:151:ASN:OD1	26:X:151:ASN:N	2.46	0.47
34:f:50:VAL:HG22	34:f:69:VAL:CG1	2.44	0.47
50:S2:47:G:C6	50:S2:48:C:C4	3.02	0.47
50:S2:202:G:C2	50:S2:203:G:C8	3.02	0.47
50:S2:289:G:N2	50:S2:295:C:C2	2.83	0.47
50:S2:379:C:N3	50:S2:380:G:N7	2.61	0.47
50:S2:449:A:C6	50:S2:452:G:C4	2.99	0.47
50:S2:638:C:O2'	50:S2:639:C:O5'	2.33	0.47
50:S2:787:G:H2'	50:S2:788:G:O4'	2.14	0.47
50:S2:795:A:C2	50:S2:796:G:C4	2.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:823:U:C2	75:SY:64:PHE:CD2	3.02	0.47
50:S2:832:G:C5	50:S2:833:C:C5	3.02	0.47
50:S2:1018:U:C2	50:S2:1019:C:H5	2.25	0.47
50:S2:1299:A:O2'	50:S2:1301:A:H5'	2.15	0.47
50:S2:1316:C:O2	50:S2:1316:C:H2'	2.13	0.47
50:S2:1344:A:H61	50:S2:1386:A:C5'	2.26	0.47
50:S2:1589:A:H2'	50:S2:1590:C:O5'	2.14	0.47
50:S2:1830:U:O4	84:S4:19:U:O4'	2.32	0.47
50:S2:1868:U:P	50:S2:1869:A:H8	2.37	0.47
68:SR:9:VAL:CG2	68:SR:49:LYS:HG2	2.44	0.47
68:SR:34:VAL:HG23	83:Sg:150:TRP:HH2	1.80	0.47
69:SS:28:PHE:N	69:SS:28:PHE:CD1	2.81	0.47
70:ST:18:LEU:HB2	70:ST:134:ILE:HD11	1.96	0.47
70:ST:127:GLY:O	70:ST:128:GLN:C	2.58	0.47
73:SW:80:ASP:N	73:SW:80:ASP:OD1	2.47	0.47
75:SY:56:PHE:CE1	75:SY:94:HIS:HE1	2.33	0.47
84:S4:16:U:C5	84:S4:17:U:C5	3.01	0.47
85:S5:7:A:H5''	85:S5:8:U:C5	2.33	0.47
85:S5:31:A:C8	85:S5:32:U:C6	3.01	0.47
85:S5:33:U:H3'	85:S5:34:G:C5'	2.45	0.47
86:S6:69:G:N2	86:S6:70:G:N9	2.62	0.47
1:5:66:A:C6	1:5:328:A:C5	3.02	0.47
1:5:84:A:H5'	1:5:86:U:C1'	2.44	0.47
1:5:142:G:C6	1:5:144:G:N7	2.82	0.47
1:5:181:C:C4	1:5:256:G:N1	2.83	0.47
1:5:199:G:N2	1:5:201:C:C2	2.83	0.47
1:5:259:C:N3	1:5:260:C:C6	2.83	0.47
1:5:415:G:N2	1:5:416:U:H1'	2.30	0.47
1:5:743:G:N2	1:5:744:G:C5	2.82	0.47
1:5:746:A:N1	1:5:916:C:OP2	2.47	0.47
1:5:987:C:C2	1:5:988:C:C6	3.03	0.47
1:5:1170:G:N2	1:5:1192:C:C2	2.82	0.47
1:5:1283:G:H3'	1:5:1283:G:H8	1.80	0.47
1:5:1467:C:O2	1:5:1467:C:H2'	2.15	0.47
1:5:1474:C:C4	1:5:1475:G:N7	2.81	0.47
1:5:1664:U:C2	1:5:1665:C:C5	3.03	0.47
1:5:1877:G:C5	1:5:1878:G:N7	2.82	0.47
1:5:1986:U:O4	1:5:2011:C:H5'	2.15	0.47
1:5:2044:U:O2	1:5:2044:U:H2'	2.15	0.47
1:5:2422:C:N3	1:5:2423:A:C8	2.82	0.47
1:5:2445:C:C2	1:5:2446:C:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2522:G:C2	1:5:2534:C:N3	2.82	0.47
1:5:2557:G:C2	1:5:2558:C:C2	3.03	0.47
1:5:2577:C:C2	1:5:2578:G:C8	3.02	0.47
1:5:2581:A:H1'	1:5:2654:C:O2'	2.14	0.47
1:5:2615:C:O2	1:5:2615:C:H2'	2.13	0.47
1:5:2618:G:C2	1:5:2619:G:C8	3.02	0.47
1:5:2643:G:C6	1:5:2644:G:C8	3.02	0.47
1:5:2726:G:N3	1:5:2727:C:C6	2.82	0.47
1:5:3613:U:O2'	1:5:5035:U:O2'	2.28	0.47
1:5:3717:A:O2'	1:5:3718:A:P	2.71	0.47
1:5:4128:A:N3	10:G:34:LYS:O	2.47	0.47
1:5:4238:G:C6	1:5:4239:A:C5	3.03	0.47
1:5:4241:C:C4	1:5:4242:U:C5	3.02	0.47
1:5:4362:A:C2	1:5:4363:A:N9	2.82	0.47
1:5:4509:U:H2'	1:5:4510:A:C2'	2.44	0.47
1:5:4595:G:C6	1:5:4596:C:C4	3.02	0.47
1:5:4686:G:C6	1:5:4687:A:N7	2.82	0.47
1:5:4723:A:C4	1:5:4724:A:N7	2.83	0.47
1:5:4733:C:C5	1:5:4734:A:H1'	2.49	0.47
1:5:4922:C:N3	1:5:4923:C:C5	2.82	0.47
1:5:4992:G:H2'	1:5:4993:G:C8	2.49	0.47
3:8:21:C:H5''	6:C:196:MET:HE2	1.97	0.47
3:8:64:U:C2'	3:8:65:A:H8	2.23	0.47
3:8:138:C:O2	3:8:139:G:C8	2.68	0.47
5:B:235:TRP:HA	5:B:235:TRP:CE3	2.50	0.47
6:C:125:CYS:HG	6:C:264:TYR:HE2	1.60	0.47
8:E:250:ASP:OD1	8:E:251:SER:N	2.48	0.47
15:M:81:ASP:OD1	15:M:81:ASP:C	2.57	0.47
17:O:46:ASN:O	17:O:47:PHE:C	2.58	0.47
35:g:13:TYR:O	35:g:14:ASN:C	2.56	0.47
38:j:21:ARG:HH21	38:j:39:TYR:HA	1.80	0.47
45:r:7:TRP:HD1	45:r:38:PHE:CD1	2.32	0.47
47:1:424:GLY:O	47:1:428:ILE:N	2.37	0.47
47:1:444:GLY:O	47:1:446:GLY:N	2.48	0.47
47:1:449:LEU:C	47:1:450:ALA:CA	2.87	0.47
50:S2:61:A:N3	50:S2:335:G:H1'	2.30	0.47
50:S2:69:C:N3	50:S2:70:G:N7	2.62	0.47
50:S2:170:A:H2'	50:S2:171:A:O4'	2.14	0.47
50:S2:191:A:N6	50:S2:208:G:O2'	2.48	0.47
50:S2:340:C:H2'	50:S2:341:C:H6	1.73	0.47
50:S2:474:G:C2	50:S2:475:C:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:474:G:C6	50:S2:475:C:C5	3.02	0.47
50:S2:493:A:H61	50:S2:509:G:N2	2.13	0.47
50:S2:569:A:C6	50:S2:570:C:C4	3.02	0.47
50:S2:862:A:C4	50:S2:863:U:C6	3.03	0.47
50:S2:952:G:H2'	50:S2:953:C:O4'	2.13	0.47
50:S2:977:C:O2	50:S2:977:C:H2'	2.13	0.47
50:S2:1041:G:C2	50:S2:1075:C:C2	3.02	0.47
50:S2:1066:U:N3	50:S2:1067:C:C5	2.83	0.47
50:S2:1066:U:O4	50:S2:1067:C:C5	2.68	0.47
50:S2:1123:C:N4	50:S2:1124:C:C5	2.83	0.47
50:S2:1145:A:N6	50:S2:1150:A:C2	2.83	0.47
50:S2:1154:U:O4'	50:S2:1154:U:O2	2.32	0.47
50:S2:1286:G:N2	63:SM:33:ARG:CG	2.70	0.47
50:S2:1287:A:H2'	50:S2:1315:U:C5	2.50	0.47
50:S2:1501:C:C4	50:S2:1502:C:C5	3.02	0.47
50:S2:1551:U:H1'	50:S2:1558:C:C2	2.49	0.47
50:S2:1616:U:H3	50:S2:1620:A:H2	1.62	0.47
50:S2:1629:C:N3	50:S2:1630:A:C8	2.82	0.47
50:S2:1781:A:C2	50:S2:1782:G:N7	2.82	0.47
51:SA:12:GLU:OE1	68:SR:111:PHE:CE1	2.68	0.47
52:SB:70:SER:OG	65:SO:128:ARG:NH1	2.48	0.47
52:SB:111:CYS:SG	77:Sa:68:TYR:CD2	3.05	0.47
56:SF:24:SER:O	56:SF:107:ASN:ND2	2.48	0.47
60:SJ:128:VAL:HG12	60:SJ:132:GLN:HG3	1.97	0.47
61:SK:83:LEU:HB2	61:SK:85:LEU:HD12	1.97	0.47
63:SM:89:VAL:HG12	63:SM:90:GLY:H	1.79	0.47
69:SS:23:ARG:HD3	76:SZ:48:VAL:HG21	1.96	0.47
69:SS:80:PRO:HG2	69:SS:82:TRP:NE1	2.29	0.47
74:SX:125:VAL:HG21	74:SX:130:LEU:HD21	1.95	0.47
78:Sb:72:ARG:HD3	78:Sb:72:ARG:C	2.39	0.47
79:Sc:31:ARG:CG	79:Sc:31:ARG:HH11	2.28	0.47
83:Sg:73:SER:HB3	83:Sg:117:ASN:HD21	1.79	0.47
1:5:21:G:H3'	1:5:21:G:C8	2.49	0.47
1:5:88:A:H2'	1:5:89:C:O5'	2.13	0.47
1:5:166:C:O2	1:5:166:C:C2'	2.62	0.47
1:5:169:G:C6	1:5:170:C:C4	3.02	0.47
1:5:370:U:C4	1:5:1637:A:C5	3.02	0.47
1:5:504:G:C2	1:5:505:G:C4	3.03	0.47
1:5:658:C:C2	1:5:659:G:N7	2.81	0.47
1:5:950:G:C2	1:5:951:G:C5	3.02	0.47
1:5:977:C:H2'	1:5:978:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1068:G:H2'	1:5:1069:G:C8	2.50	0.47
1:5:1257:A:C6	1:5:1258:G:C4	3.03	0.47
1:5:1321:G:H1'	1:5:1891:A:H62	1.80	0.47
1:5:1380:G:H2'	1:5:1382:G:C6	2.50	0.47
1:5:1428:U:H5'	1:5:1429:C:OP2	2.14	0.47
1:5:1674:C:C2	1:5:1675:C:C5	3.02	0.47
1:5:1693:U:H2'	1:5:1694:C:O4'	2.14	0.47
1:5:1812:C:H1'	30:b:57:MET:HE3	1.97	0.47
1:5:1836:G:H2'	1:5:1836:G:N3	2.30	0.47
1:5:1846:G:N1	1:5:1847:C:C4	2.82	0.47
1:5:1940:G:H2'	1:5:1941:A:C5'	2.45	0.47
1:5:1965:G:C2	1:5:1966:C:N1	2.82	0.47
1:5:1972:G:C2	1:5:1973:G:C8	3.02	0.47
1:5:2329:U:O2'	1:5:2330:G:H5'	2.11	0.47
1:5:2391:G:C6	1:5:2392:C:C4	3.01	0.47
1:5:2453:A:H2'	1:5:2453:A:N3	2.29	0.47
1:5:2646:C:O2	1:5:2646:C:H2'	2.14	0.47
1:5:2829:U:N3	1:5:2830:G:N7	2.62	0.47
1:5:2843:U:C4	1:5:2844:A:N7	2.83	0.47
1:5:3719:A:N7	1:5:3720:G:C8	2.83	0.47
1:5:3722:G:C6	1:5:3723:A:C5	3.02	0.47
1:5:3757:G:C5	1:5:3758:U:C5	3.03	0.47
1:5:3761:C:O4'	1:5:3761:C:O2	2.30	0.47
1:5:3883:U:C2'	1:5:3884:U:O5'	2.62	0.47
1:5:4050:A:N3	1:5:4050:A:H2'	2.29	0.47
1:5:4112:C:N4	1:5:4113:U:C4	2.83	0.47
1:5:4198:G:C6	1:5:4199:C:C6	3.02	0.47
1:5:4561:C:N3	1:5:4562:C:H5	2.09	0.47
1:5:4862:G:C6	1:5:4863:G:N7	2.83	0.47
1:5:4933:C:C4	1:5:4934:A:N7	2.83	0.47
2:7:23:A:O2'	2:7:24:C:C6	2.62	0.47
3:8:10:G:N2	3:8:11:C:C1'	2.74	0.47
3:8:34:U:O2	38:j:74:PHE:HB2	2.15	0.47
3:8:54:C:C5	3:8:55:U:C5	3.03	0.47
3:8:70:G:C6	3:8:87:G:C2	3.03	0.47
3:8:108:A:C2	3:8:112:G:N1	2.82	0.47
3:8:132:G:C2	3:8:133:G:C4	3.02	0.47
5:B:234:ARG:HA	5:B:272:LYS:HD2	1.97	0.47
5:B:240:LEU:HB3	5:B:244:THR:HG21	1.97	0.47
6:C:208:CYS:SG	6:C:230:LEU:HD12	2.55	0.47
9:F:213:PHE:N	9:F:213:PHE:CD1	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:77:PRO:HA	10:G:237:TRP:CE3	2.49	0.47
11:H:93:ARG:NH1	41:m:82:LEU:HD21	2.30	0.47
18:P:30:ARG:NH2	18:P:34:GLN:OE1	2.48	0.47
18:P:54:GLN:HB2	18:P:83:TRP:CD1	2.48	0.47
20:R:95:TRP:CG	20:R:99:MET:HE2	2.49	0.47
23:U:87:THR:HG23	23:U:102:VAL:HG21	1.97	0.47
45:r:30:ASN:HB3	45:r:50:GLY:HA3	1.96	0.47
50:S2:64:A:C5	50:S2:82:G:C6	3.03	0.47
50:S2:105:U:O2	50:S2:105:U:C2'	2.63	0.47
50:S2:114:G:C2	50:S2:383:G:N2	2.82	0.47
50:S2:165:G:O2'	50:S2:166:A:C5'	2.63	0.47
50:S2:426:A:N3	50:S2:427:U:C4	2.82	0.47
50:S2:429:C:C2	50:S2:430:C:C5	3.03	0.47
50:S2:452:G:C4	50:S2:453:C:C6	3.03	0.47
50:S2:504:G:O2'	50:S2:505:G:H5'	2.13	0.47
50:S2:615:C:H2'	50:S2:616:A:C8	2.49	0.47
50:S2:902:G:C6	50:S2:903:A:C2	3.03	0.47
50:S2:962:A:N1	50:S2:963:A:C5	2.82	0.47
50:S2:1109:C:H41	68:SR:123:THR:CA	2.21	0.47
50:S2:1113:A:C2'	50:S2:1114:U:H5'	2.44	0.47
50:S2:1249:C:C6	50:S2:1250:A:C8	3.00	0.47
50:S2:1269:G:H2'	50:S2:1270:G:O4'	2.14	0.47
50:S2:1284:A:N1	63:SM:33:ARG:C	2.72	0.47
50:S2:1290:G:H3'	82:Sf:146:LEU:CG	2.32	0.47
50:S2:1293:A:C4	82:Sf:151:ASN:N	2.81	0.47
50:S2:1323:U:H2'	50:S2:1324:G:O4'	2.14	0.47
50:S2:1438:A:H2'	50:S2:1439:A:O4'	2.15	0.47
50:S2:1456:G:C6	50:S2:1457:U:C4	3.02	0.47
50:S2:1543:U:O2'	50:S2:1544:C:H6	1.97	0.47
50:S2:1578:U:H6	54:SD:6:SER:HA	1.79	0.47
52:SB:125:VAL:HG22	52:SB:169:MET:HG3	1.96	0.47
52:SB:228:LEU:CD1	52:SB:228:LEU:C	2.86	0.47
52:SB:230:GLU:HA	52:SB:230:GLU:OE1	2.14	0.47
54:SD:24:PHE:C	54:SD:24:PHE:CD1	2.90	0.47
58:SH:131:GLU:OE2	58:SH:139:ILE:HD12	2.14	0.47
64:SN:5:HIS:HD2	64:SN:121:ARG:CD	2.28	0.47
86:S6:32:U:H2'	86:S6:33:U:H5'	1.97	0.47
86:S6:59:U:H3'	86:S6:60:U:H6	1.80	0.47
1:5:10:A:H1'	1:5:2472:A:C6	2.50	0.47
1:5:22:G:C2	3:8:35:C:N3	2.82	0.47
1:5:25:A:C4	1:5:341:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:27:C:OP1	16:N:193:ARG:HD3	2.14	0.47
1:5:56:A:C6	1:5:57:G:C6	3.03	0.47
1:5:85:G:N3	1:5:97:G:O6	2.47	0.47
1:5:88:A:O2'	1:5:89:C:O5'	2.33	0.47
1:5:118:C:H42	1:5:121:A:H62	1.61	0.47
1:5:450:G:C6	1:5:1295:C:C4	3.03	0.47
1:5:692:A:N1	1:5:693:C:C4	2.83	0.47
1:5:708:G:C6	1:5:709:C:C5	3.03	0.47
1:5:921:C:OP1	15:M:69:ARG:NH1	2.47	0.47
1:5:938:C:H2'	1:5:939:G:H8	1.76	0.47
1:5:1072:C:H1'	1:5:1073:G:C8	2.50	0.47
1:5:1092:G:N2	1:5:1093:C:C2	2.83	0.47
1:5:1219:G:C6	1:5:1220:G:N7	2.83	0.47
1:5:1288:G:O2'	8:E:128:PRO:HB2	2.14	0.47
1:5:1308:C:N3	1:5:1309:C:C5	2.83	0.47
1:5:1374:G:C4	1:5:1375:C:C6	3.02	0.47
1:5:1440:U:O2	1:5:1440:U:C2'	2.52	0.47
1:5:1735:U:N3	1:5:1736:A:N7	2.63	0.47
1:5:1761:G:C5	1:5:1762:C:C5	3.03	0.47
1:5:1789:C:H2'	1:5:1790:U:O5'	2.14	0.47
1:5:1796:U:N3	1:5:1797:G:C8	2.83	0.47
1:5:1797:G:N3	1:5:1798:G:C8	2.83	0.47
1:5:1855:G:OP1	30:b:4:SER:HB2	2.15	0.47
1:5:1866:U:C5	1:5:4405:G:C1'	2.98	0.47
1:5:1885:G:N2	1:5:1895:G:N3	2.62	0.47
1:5:1921:C:N1	21:S:161:ARG:HG2	2.30	0.47
1:5:1965:G:C4	1:5:1966:C:C6	3.03	0.47
1:5:2065:G:H2'	1:5:2066:C:O4'	2.13	0.47
1:5:2108:G:C5	1:5:2109:G:H1'	2.49	0.47
1:5:2276:A:C5	1:5:2277:C:C6	3.03	0.47
1:5:2307:A:N3	1:5:2333:G:O2'	2.46	0.47
1:5:2504:C:OP1	1:5:2504:C:H4'	2.15	0.47
1:5:2513:A:N7	35:g:13:TYR:CE2	2.82	0.47
1:5:2576:G:C2	1:5:2577:C:C6	3.03	0.47
1:5:2688:G:C4	1:5:2689:C:C5	3.03	0.47
1:5:2712:G:C2	1:5:2713:C:N1	2.83	0.47
1:5:2891:U:H5	20:R:74:ARG:NH1	2.11	0.47
1:5:3754:G:N2	1:5:3755:G:H1'	2.30	0.47
1:5:3773:U:H2'	1:5:3774:A:C8	2.49	0.47
1:5:3805:U:O2	1:5:3805:U:H2'	2.14	0.47
1:5:3857:G:O6	1:5:3858:C:C4	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3861:A:H4'	18:P:137:ASN:ND2	2.30	0.47
1:5:3911:C:O2	1:5:3912:U:C6	2.67	0.47
1:5:3952:A:C4	1:5:3953:G:C8	3.02	0.47
1:5:3974:G:C2'	46:z:210:MET:SD	2.93	0.47
1:5:4053:A:H4'	46:z:213:PRO:CG	2.45	0.47
1:5:4092:G:N3	1:5:4092:G:H2'	2.29	0.47
1:5:4117:U:N3	4:A:40:TYR:CD1	2.72	0.47
1:5:4147:G:C2	1:5:4148:C:C6	3.03	0.47
1:5:4147:G:N2	1:5:4148:C:C2	2.82	0.47
1:5:4154:G:N1	1:5:4155:C:C4	2.83	0.47
1:5:4173:G:C4	1:5:4174:U:C5	3.03	0.47
1:5:4257:A:C5	13:J:60:PHE:HE2	2.33	0.47
1:5:4286:C:H2'	1:5:4287:G:H8	1.80	0.47
1:5:4287:G:O2'	1:5:4288:C:O4'	2.32	0.47
1:5:4342:C:OP1	29:a:55:LYS:NZ	2.37	0.47
1:5:4373:G:H2'	43:o:60:ALA:HB2	1.96	0.47
1:5:4547:C:O2	1:5:4547:C:H2'	2.15	0.47
1:5:4549:G:N3	1:5:4549:G:H2'	2.30	0.47
1:5:4565:C:H1'	5:B:262:VAL:CG2	2.44	0.47
1:5:4593:C:C2	1:5:4594:U:C5	3.03	0.47
1:5:4627:U:O2	1:5:4627:U:C2'	2.60	0.47
1:5:4683:U:C5	1:5:4707:A:C6	3.03	0.47
1:5:4699:U:O4	1:5:4702:G:C6	2.67	0.47
1:5:4726:G:C4'	5:B:130:PHE:CE1	2.96	0.47
1:5:4744:A:C2	1:5:4745:G:N7	2.83	0.47
1:5:4868:G:H3'	1:5:4869:U:H5''	1.96	0.47
1:5:4876:U:O2	1:5:4876:U:O4'	2.31	0.47
1:5:4895:C:C2	1:5:4896:G:N7	2.82	0.47
1:5:5003:U:C2	1:5:5045:G:C2	3.03	0.47
2:7:8:G:P	7:D:33:ARG:HH22	2.37	0.47
2:7:36:C:H2'	2:7:37:G:C8	2.49	0.47
2:7:43:U:O2	2:7:43:U:H2'	2.15	0.47
3:8:35:C:C2'	3:8:36:G:O5'	2.62	0.47
3:8:144:U:H2'	3:8:145:C:H6	1.80	0.47
3:8:149:G:H21	10:G:64:GLN:HE22	1.61	0.47
4:A:40:TYR:HE2	4:A:89:TYR:CD2	2.32	0.47
5:B:208:ASN:OD1	5:B:208:ASN:N	2.44	0.47
5:B:254:ILE:HG21	5:B:262:VAL:CG1	2.45	0.47
7:D:64:ILE:HD12	7:D:105:LEU:HD21	1.96	0.47
7:D:220:LYS:HA	7:D:227:ILE:HD12	1.96	0.47
7:D:284:LYS:HB3	12:I:209:TRP:CH2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:158:VAL:CG2	8:E:180:VAL:HG21	2.45	0.47
9:F:168:ARG:CD	9:F:211:TRP:CD1	2.98	0.47
10:G:182:CYS:HA	10:G:226:TYR:CE2	2.50	0.47
11:H:31:ARG:HH11	11:H:31:ARG:CG	2.27	0.47
14:L:176:PHE:HD1	14:L:177:LYS:N	2.12	0.47
19:Q:105:VAL:HB	19:Q:110:ARG:HH12	1.80	0.47
21:S:35:PRO:HD2	21:S:39:VAL:CG2	2.45	0.47
21:S:78:PHE:CE1	21:S:102:THR:HG22	2.50	0.47
26:X:73:HIS:O	26:X:116:LEU:CD1	2.63	0.47
28:Z:17:ARG:HG2	28:Z:18:TYR:CD1	2.50	0.47
33:e:95:TYR:HE2	45:r:23:GLN:HG2	1.78	0.47
41:m:106:ARG:O	41:m:107:ALA:C	2.57	0.47
47:1:43:LEU:HD11	48:2:50:ILE:HG23	1.96	0.47
47:1:251:VAL:HG21	47:1:448:LEU:CD1	2.45	0.47
47:1:448:LEU:CA	47:1:451:VAL:CG2	2.46	0.47
50:S2:10:G:C6	50:S2:11:A:C5	3.03	0.47
50:S2:14:C:O2	50:S2:668:A:H2	1.97	0.47
50:S2:23:G:C6	50:S2:24:C:C4	3.02	0.47
50:S2:29:G:C2	50:S2:30:C:C2	3.02	0.47
50:S2:61:A:H5'	50:S2:61:A:H8	1.80	0.47
50:S2:66:G:N7	50:S2:68:A:N7	2.62	0.47
50:S2:69:C:H2'	50:S2:70:G:H8	1.79	0.47
50:S2:114:G:O4'	62:SL:132:ARG:CD	2.62	0.47
50:S2:167:G:C6	50:S2:168:C:C4	3.03	0.47
50:S2:171:A:C4	50:S2:173:A:C8	3.03	0.47
50:S2:173:A:C6	50:S2:174:C:C6	3.03	0.47
50:S2:188:C:N3	50:S2:189:U:C5	2.83	0.47
50:S2:200:G:H2'	50:S2:201:C:O4'	2.15	0.47
50:S2:338:G:C5	50:S2:339:A:C8	3.02	0.47
50:S2:349:A:C5'	59:SI:27:TYR:OH	2.62	0.47
50:S2:383:G:C8	50:S2:384:U:C2	3.03	0.47
50:S2:394:G:H2'	50:S2:394:G:N3	2.30	0.47
50:S2:403:G:N2	50:S2:404:G:H1'	2.30	0.47
50:S2:637:U:N3	50:S2:638:C:C4	2.82	0.47
50:S2:673:G:C1'	50:S2:1084:A:C2	2.96	0.47
50:S2:946:U:C2	50:S2:947:G:C8	3.03	0.47
50:S2:947:G:C6	50:S2:948:C:C5	3.03	0.47
50:S2:950:C:N3	50:S2:951:C:C6	2.82	0.47
50:S2:978:G:N3	50:S2:979:C:C6	2.82	0.47
50:S2:993:G:N2	50:S2:994:C:C2	2.83	0.47
50:S2:1099:G:C6	50:S2:1100:A:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1123:C:N4	50:S2:1124:C:N4	2.63	0.47
50:S2:1210:G:C5	50:S2:1211:G:C8	3.03	0.47
50:S2:1287:A:N6	50:S2:1314:U:C5	2.83	0.47
50:S2:1304:U:O2	50:S2:1305:C:C6	2.68	0.47
50:S2:1377:U:H2'	51:SA:102:ARG:NH2	2.30	0.47
50:S2:1404:U:H4'	50:S2:1581:C:O2	2.14	0.47
50:S2:1408:U:H5''	67:SQ:71:ARG:HE	1.79	0.47
50:S2:1411:G:C8	50:S2:1412:C:H1'	2.49	0.47
50:S2:1467:C:C4	50:S2:1468:C:C5	3.02	0.47
50:S2:1495:G:N9	80:Sd:41:GLN:HG2	2.29	0.47
50:S2:1571:G:C2	50:S2:1572:C:C2	3.02	0.47
50:S2:1576:G:C2	50:S2:1577:G:C4	3.02	0.47
50:S2:1578:U:H6	54:SD:6:SER:CB	2.27	0.47
50:S2:1640:A:C5'	86:S6:41:C:C1'	2.83	0.47
50:S2:1648:G:N3	50:S2:1674:G:C6	2.83	0.47
50:S2:1654:G:C2	50:S2:1655:C:C2	3.01	0.47
50:S2:1699:A:N1	53:SC:115:GLN:HG2	2.30	0.47
51:SA:126:ASP:HB2	51:SA:129:ALA:HB3	1.97	0.47
54:SD:103:GLU:HA	54:SD:103:GLU:OE1	2.15	0.47
55:SE:54:TYR:OH	55:SE:97:GLU:OE1	2.30	0.47
55:SE:181:CYS:SG	55:SE:195:ILE:CG1	3.02	0.47
56:SF:41:VAL:HG13	56:SF:42:LYS:HD3	1.96	0.47
57:SG:50:VAL:HG11	57:SG:111:LEU:HD13	1.95	0.47
58:SH:43:LEU:HD21	58:SH:71:SER:CB	2.45	0.47
59:SI:83:TYR:CD1	59:SI:84:ASN:N	2.82	0.47
60:SJ:13:TYR:CE2	60:SJ:41:ARG:HG3	2.50	0.47
65:SO:116:LEU:HD22	77:Sa:53:ILE:HD11	1.96	0.47
70:ST:52:TRP:CE3	70:ST:53:PHE:CA	2.97	0.47
74:SX:21:LYS:HD3	74:SX:27:TYR:CE1	2.49	0.47
77:Sa:7:ASN:C	77:Sa:8:ASN:O	2.57	0.47
78:Sb:5:LYS:O	78:Sb:7:LEU:N	2.48	0.47
79:Sc:60:GLU:HG2	79:Sc:63:ARG:HD3	1.97	0.47
80:Sd:19:ARG:CD	80:Sd:32:ARG:NE	2.78	0.47
85:S5:4:C:C2	85:S5:5:G:N7	2.83	0.47
85:S5:21:A:N9	85:S5:48:C:N4	2.63	0.47
85:S5:61:C:C2'	85:S5:62:C:H6	2.27	0.47
86:S6:5:C:C2	86:S6:70:G:N1	2.82	0.47
86:S6:14:C:H2'	86:S6:15:G:O5'	2.14	0.47
86:S6:53:G:N1	86:S6:54:U:N3	2.63	0.47
1:5:90:G:N3	1:5:95:G:N1	2.63	0.47
1:5:124:C:C4	1:5:125:C:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:290:U:N3	1:5:291:U:C4	2.83	0.47
1:5:295:A:O3'	1:5:296:A:N7	2.48	0.47
1:5:389:A:N3	1:5:389:A:H2'	2.29	0.47
1:5:458:C:C4	1:5:459:C:C4	3.03	0.47
1:5:472:C:N3	1:5:473:C:C4	2.83	0.47
1:5:698:G:N1	1:5:699:C:C5	2.83	0.47
1:5:964:A:H2	1:5:2252:G:C5	2.33	0.47
1:5:973:G:C6	1:5:974:C:C5	3.03	0.47
1:5:1092:G:C2	1:5:1093:C:C2	3.03	0.47
1:5:1189:G:C2	1:5:1190:C:C6	3.02	0.47
1:5:1203:G:C2	1:5:1204:C:C2	3.03	0.47
1:5:1264:C:H2'	1:5:1265:G:H5'	1.95	0.47
1:5:1284:G:C6	6:C:312:ARG:NH2	2.83	0.47
1:5:1486:C:H2'	1:5:1487:G:O4'	2.15	0.47
1:5:1492:G:C6	1:5:1493:G:C5	3.03	0.47
1:5:1532:G:OP1	38:j:16:HIS:HE1	1.98	0.47
1:5:1563:A:C2'	1:5:1564:A:C8	2.91	0.47
1:5:1570:G:N1	1:5:1571:G:C4	2.82	0.47
1:5:1663:C:O2'	1:5:1664:U:H5'	2.15	0.47
1:5:2082:G:C2	1:5:2275:G:C2	3.03	0.47
1:5:2104:G:C2	1:5:2105:A:N9	2.82	0.47
1:5:2125:C:O5'	1:5:2125:C:C6	2.65	0.47
1:5:2256:C:O2	1:5:2256:C:C2'	2.63	0.47
1:5:2270:G:H2'	1:5:2271:C:C6	2.50	0.47
1:5:2301:G:C6	1:5:2302:C:C4	3.02	0.47
1:5:2327:G:C4	1:5:2328:G:C8	3.03	0.47
1:5:2436:U:C5	1:5:2783:A:C1'	2.98	0.47
1:5:2538:U:H2'	1:5:2539:C:H6	1.80	0.47
1:5:2614:C:O2	1:5:2614:C:C2'	2.63	0.47
1:5:3622:C:C2	1:5:3623:C:N3	2.82	0.47
1:5:3636:C:N3	1:5:3637:U:C5	2.82	0.47
1:5:3739:C:C6	1:5:3739:C:C4'	2.97	0.47
1:5:3813:A:C2	1:5:4539:U:O4'	2.68	0.47
1:5:3867:A:N3	1:5:3880:G:C6	2.83	0.47
1:5:3938:G:C6	1:5:4077:A:C2	3.01	0.47
1:5:3953:G:N1	1:5:3954:A:C5	2.83	0.47
1:5:4095:G:H2'	1:5:4096:C:C6	2.44	0.47
1:5:4129:G:C6	1:5:4130:C:C4	3.02	0.47
1:5:4199:C:C2	1:5:4199:C:C3'	2.96	0.47
1:5:4240:G:N3	1:5:4241:C:H1'	2.30	0.47
1:5:4315:A:N1	1:5:4316:G:C8	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4478:G:C6	1:5:4479:A:C4	3.03	0.47
1:5:4506:C:H2'	1:5:4507:A:O4'	2.15	0.47
1:5:4510:A:N6	1:5:4592:C:Cl'	2.77	0.47
1:5:4510:A:C6	1:5:4592:C:H4'	2.48	0.47
1:5:4518:A:H3'	1:5:4519:C:C5'	2.44	0.47
1:5:4754:G:C2	1:5:4880:C:C2	3.03	0.47
1:5:4904:G:C6	1:5:4905:C:C4	3.02	0.47
1:5:4916:G:C2	1:5:4917:C:C2	3.02	0.47
1:5:5014:A:OP1	1:5:5014:A:H3'	2.15	0.47
1:5:5027:C:O2'	1:5:5028:G:OP2	2.29	0.47
2:7:66:G:C2	2:7:67:C:C2	3.03	0.47
2:7:110:G:C2	2:7:111:C:C4	3.03	0.47
3:8:15:G:H2'	3:8:16:G:O4'	2.15	0.47
3:8:73:U:N3	3:8:74:U:H1'	2.30	0.47
3:8:115:G:N1	3:8:116:C:C4	2.83	0.47
3:8:134:G:C2	3:8:135:C:C2	3.03	0.47
4:A:209:HIS:CE1	4:A:211:PHE:H	2.33	0.47
5:B:67:VAL:HG11	5:B:72:VAL:HG11	1.97	0.47
7:D:284:LYS:CB	12:I:209:TRP:CZ3	2.95	0.47
9:F:69:THR:O	9:F:73:MET:HG3	2.15	0.47
12:I:119:PHE:HD1	12:I:120:GLY:N	2.13	0.47
15:M:29:ASP:OD1	15:M:29:ASP:C	2.58	0.47
16:N:135:ILE:HG23	16:N:142:ILE:HD13	1.97	0.47
27:Y:27:ARG:CB	27:Y:75:ARG:HH12	2.27	0.47
32:d:33:ILE:HD11	32:d:45:ALA:HA	1.96	0.47
47:1:251:VAL:HG13	47:1:438:LEU:HD12	1.95	0.47
50:S2:211:G:H2'	50:S2:212:C:O4'	2.15	0.47
50:S2:452:G:C2	50:S2:453:C:C2	3.02	0.47
50:S2:550:C:N3	50:S2:551:U:C5	2.82	0.47
50:S2:693:A:C2	50:S2:694:G:C5	3.03	0.47
50:S2:932:G:C2	50:S2:934:G:C8	3.02	0.47
50:S2:1073:U:O2	50:S2:1074:C:C6	2.66	0.47
50:S2:1207:G:C5	50:S2:1837:G:O6	2.68	0.47
50:S2:1256:G:C8	80:Sd:40:ARG:CD	2.97	0.47
50:S2:1360:U:H5''	50:S2:1361:G:OP2	2.15	0.47
50:S2:1373:C:H2'	50:S2:1373:C:O2	2.14	0.47
50:S2:1388:A:H61	54:SD:161:GLY:CA	2.17	0.47
50:S2:1525:C:H2'	50:S2:1525:C:O2	2.15	0.47
50:S2:1541:G:N2	50:S2:1542:C:C6	2.83	0.47
50:S2:1552:G:C6	50:S2:1578:U:C2	2.89	0.47
50:S2:1654:G:C2	50:S2:1671:G:N1	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:15:VAL:HG21	68:SR:111:PHE:CZ	2.50	0.47
51:SA:134:LEU:CD2	51:SA:144:THR:HG21	2.44	0.47
52:SB:90:ASP:OD1	52:SB:223:PHE:CE1	2.66	0.47
57:SG:180:VAL:CG1	57:SG:185:LEU:HD21	2.44	0.47
58:SH:9:VAL:CG2	58:SH:24:SER:HB2	2.45	0.47
69:SS:23:ARG:CD	76:SZ:48:VAL:HG21	2.45	0.47
76:SZ:63:PRO:O	76:SZ:111:ARG:NH1	2.48	0.47
85:S5:11:C:H2'	85:S5:24:G:H22	1.79	0.47
85:S5:48:C:N1	85:S5:59:U:C2	2.82	0.47
86:S6:5:C:H2'	86:S6:6:G:C5'	2.44	0.47
86:S6:6:G:C6	86:S6:7:G:C5	3.03	0.47
1:5:85:G:C2	1:5:97:G:C5	3.03	0.47
1:5:154:G:C6	1:5:155:C:C4	3.03	0.47
1:5:210:C:C4	1:5:231:U:N3	2.83	0.47
1:5:330:G:OP2	16:N:166:SER:HB2	2.15	0.47
1:5:370:U:C5	1:5:1637:A:C5	3.03	0.47
1:5:472:C:O2	1:5:473:C:C6	2.66	0.47
1:5:488:G:H21	1:5:489:C:H1'	1.80	0.47
1:5:650:C:H2'	1:5:651:C:H6	1.75	0.47
1:5:716:C:H6	1:5:716:C:C5'	2.28	0.47
1:5:952:G:N2	1:5:953:C:C2	2.83	0.47
1:5:974:C:C6	1:5:974:C:H3'	2.49	0.47
1:5:1265:G:C2	1:5:1266:G:C4	3.02	0.47
1:5:1285:U:C4	1:5:1286:C:C4	3.03	0.47
1:5:1345:A:H4'	19:Q:166:TYR:CE2	2.49	0.47
1:5:1381:U:O2	1:5:1381:U:O4'	2.32	0.47
1:5:1572:U:O2	1:5:1572:U:H2'	2.15	0.47
1:5:1609:U:N3	1:5:1610:C:C6	2.83	0.47
1:5:1756:U:O4	1:5:1776:A:C2	2.66	0.47
1:5:1770:A:H2'	1:5:1771:U:O4'	2.15	0.47
1:5:1778:C:H5''	7:D:5:LYS:HD2	1.97	0.47
1:5:1900:C:C2	1:5:1901:C:C5	3.03	0.47
1:5:1988:G:N1	1:5:1989:G:C5	2.82	0.47
1:5:2126:G:O3'	1:5:2127:C:O4'	2.33	0.47
1:5:2247:C:H5''	1:5:2248:C:H6	1.80	0.47
1:5:2285:A:H2'	1:5:2286:G:O4'	2.14	0.47
1:5:2515:G:C6	1:5:2516:G:C5	3.03	0.47
1:5:2644:G:N1	1:5:2645:G:C4	2.83	0.47
1:5:2857:A:C2'	1:5:2858:A:C8	2.98	0.47
1:5:3668:C:N4	1:5:3669:G:C6	2.83	0.47
1:5:3719:A:HO2'	1:5:3934:G:HO2'	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3722:G:N3	1:5:3723:A:C8	2.83	0.47
1:5:3884:U:H2'	1:5:3885:G:O4'	2.15	0.47
1:5:4087:G:C8	1:5:4087:G:C3'	2.98	0.47
1:5:4165:C:H2'	1:5:4165:C:O2	2.15	0.47
1:5:4239:A:N6	1:5:4240:G:C6	2.83	0.47
1:5:4551:U:N3	1:5:4552:U:C4	2.83	0.47
1:5:4738:C:H2'	1:5:4739:C:O4'	2.14	0.47
3:8:46:G:C4	3:8:47:C:C5	3.03	0.47
3:8:139:G:C2	3:8:140:C:C2	3.03	0.47
4:A:24:LYS:HG3	4:A:49:ILE:HG21	1.97	0.47
4:A:202:VAL:HG12	4:A:217:GLN:CG	2.38	0.47
13:J:22:LEU:HD22	13:J:130:PHE:CE1	2.49	0.47
13:J:166:PHE:CE2	13:J:172:GLY:HA3	2.50	0.47
14:L:6:ASN:ND2	29:a:48:TYR:CE2	2.83	0.47
14:L:14:PHE:HD1	14:L:18:TRP:CD1	2.33	0.47
27:Y:74:TYR:CD2	27:Y:77:LYS:HD2	2.49	0.47
37:i:85:ARG:HG3	37:i:85:ARG:HH11	1.79	0.47
50:S2:14:C:OP1	53:SC:190:SER:OG	2.31	0.47
50:S2:148:U:N3	50:S2:170:A:C6	2.82	0.47
50:S2:159:A:O2'	50:S2:160:U:H5'	2.15	0.47
50:S2:377:G:C6	50:S2:378:U:C4	3.03	0.47
50:S2:386:C:O2'	59:SI:5:ARG:HA	2.14	0.47
50:S2:410:G:N1	50:S2:411:G:C5	2.83	0.47
50:S2:648:A:C4	50:S2:649:U:C6	3.02	0.47
50:S2:688:U:O2	58:SH:122:LEU:HG	2.15	0.47
50:S2:841:G:N2	50:S2:842:C:C6	2.83	0.47
50:S2:952:G:C6	50:S2:953:C:C4	3.03	0.47
50:S2:1067:C:N4	50:S2:1068:G:C6	2.83	0.47
50:S2:1109:C:N4	68:SR:123:THR:HG1	2.12	0.47
50:S2:1122:A:C6	50:S2:1123:C:C6	3.01	0.47
50:S2:1250:A:N3	50:S2:1339:U:C4'	2.78	0.47
50:S2:1254:C:O2	50:S2:1254:C:C2'	2.61	0.47
50:S2:1258:A:N1	50:S2:1663:A:C4	2.83	0.47
50:S2:1279:C:N3	50:S2:1280:G:C8	2.83	0.47
50:S2:1294:G:N2	50:S2:1295:A:C8	2.82	0.47
50:S2:1330:G:N7	50:S2:1492:U:H3'	2.30	0.47
50:S2:1355:C:O3'	53:SC:238:LYS:NZ	2.48	0.47
50:S2:1410:C:O2	50:S2:1410:C:C2'	2.62	0.47
50:S2:1551:U:C4'	50:S2:1558:C:H1'	2.44	0.47
50:S2:1609:C:N3	50:S2:1610:G:N7	2.62	0.47
50:S2:1622:U:O4	69:SS:120:HIS:HE1	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1771:G:C2	50:S2:1772:C:N1	2.83	0.47
51:SA:15:VAL:HG21	68:SR:111:PHE:CE2	2.50	0.47
55:SE:98:ASN:C	55:SE:99:PHE:CD1	2.92	0.47
63:SM:106:CYS:SG	63:SM:107:SER:N	2.88	0.47
65:SO:41:PHE:N	65:SO:41:PHE:HD1	2.13	0.47
66:SP:52:LYS:HE2	66:SP:52:LYS:HA	1.97	0.47
73:SW:17:ALA:CB	73:SW:25:VAL:HG11	2.45	0.47
74:SX:114:ASP:O	74:SX:115:ILE:C	2.58	0.47
83:Sg:166:VAL:HB	83:Sg:198:VAL:HG11	1.97	0.47
86:S6:63:G:C2	86:S6:64:A:C8	3.02	0.47
1:5:247:G:C4	1:5:248:C:C6	3.03	0.47
1:5:315:G:C6	29:a:62:HIS:CB	2.97	0.47
1:5:362:A:C2	3:8:53:G:H1'	2.50	0.47
1:5:453:G:H22	1:5:1294:A:N6	2.10	0.47
1:5:479:G:C2	1:5:480:C:N1	2.83	0.47
1:5:703:G:C6	1:5:706:C:N4	2.75	0.47
1:5:751:G:N2	1:5:752:G:C6	2.83	0.47
1:5:947:C:H2'	1:5:948:C:H6	1.80	0.47
1:5:951:G:C2	1:5:952:G:C5	3.02	0.47
1:5:985:C:C2	1:5:986:C:C5	3.02	0.47
1:5:1305:C:H2'	1:5:1306:C:O4'	2.15	0.47
1:5:1330:A:C2	1:5:1331:C:C5	3.03	0.47
1:5:1375:C:N3	1:5:1376:C:C5	2.83	0.47
1:5:1443:A:C4	1:5:1444:G:C8	3.03	0.47
1:5:1445:U:O2	1:5:1446:C:C6	2.68	0.47
1:5:1474:C:N3	1:5:1475:G:N7	2.63	0.47
1:5:1589:C:O2'	1:5:1590:C:O5'	2.27	0.47
1:5:1627:G:N7	1:5:1628:C:C5	2.82	0.47
1:5:1644:C:C2	1:5:1645:C:C5	3.03	0.47
1:5:1664:U:H2'	1:5:1665:C:C6	2.49	0.47
1:5:2052:G:C6	1:5:2053:C:C4	3.03	0.47
1:5:2055:G:O4'	17:O:130:LYS:HE2	2.13	0.47
1:5:2424:G:H2'	1:5:2426:U:C4	2.50	0.47
1:5:2513:A:C5	35:g:13:TYR:CD2	3.03	0.47
1:5:2737:C:C2	1:5:2738:C:C6	3.03	0.47
1:5:3600:G:C6	1:5:3601:C:C4	3.03	0.47
1:5:3625:G:H21	1:5:3627:G:P	2.37	0.47
1:5:3652:A:O2'	4:A:182:ALA:HB2	2.15	0.47
1:5:3706:C:OP1	4:A:226:ARG:HG3	2.14	0.47
1:5:3957:U:O2	1:5:3959:U:OP1	2.32	0.47
1:5:4082:G:H2'	1:5:4083:U:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4158:C:O2	1:5:4158:C:C2'	2.62	0.47
1:5:4199:C:C2	1:5:4199:C:H3'	2.50	0.47
1:5:4510:A:C2	1:5:4511:A:C2	3.02	0.47
1:5:4518:A:H4'	1:5:4519:C:H5'	1.97	0.47
1:5:4538:G:C6	1:5:4539:U:C4	3.03	0.47
1:5:4572:U:O2	1:5:4720:C:C5	2.68	0.47
1:5:4602:A:H4'	11:H:99:PHE:CE2	2.50	0.47
1:5:4887:C:H2'	1:5:4888:U:C6	2.49	0.47
1:5:4916:G:C4	1:5:4917:C:C6	3.03	0.47
1:5:5047:C:H5''	1:5:5050:C:C5	2.42	0.47
2:7:66:G:C6	2:7:67:C:C4	3.03	0.47
3:8:94:G:C6	38:j:79:ARG:CD	2.98	0.47
4:A:43:GLY:HA3	4:A:63:PHE:CD1	2.50	0.47
5:B:302:ASN:HB2	5:B:313:SER:HA	1.96	0.47
6:C:164:THR:HG22	6:C:220:ALA:O	2.15	0.47
6:C:341:LEU:HD11	8:E:52:ARG:CD	2.45	0.47
11:H:41:ILE:O	11:H:41:ILE:HD12	2.15	0.47
15:M:7:VAL:HG13	15:M:27:ILE:HD13	1.97	0.47
21:S:47:PHE:HE1	21:S:125:GLN:HG2	1.80	0.47
29:a:69:PHE:CE2	29:a:71:PRO:CD	2.98	0.47
29:a:110:LYS:HE3	29:a:128:PHE:O	2.14	0.47
45:r:106:LEU:O	45:r:108:MET:N	2.48	0.47
46:z:32:VAL:HA	46:z:208:SER:HA	1.97	0.47
47:1:215:ALA:HB3	47:1:218:HIS:CD2	2.50	0.47
50:S2:297:A:H5'	55:SE:132:GLY:O	2.15	0.47
50:S2:367:U:H1'	50:S2:371:A:C4	2.50	0.47
50:S2:431:G:N3	50:S2:432:G:C8	2.83	0.47
50:S2:554:A:N3	50:S2:555:A:N7	2.63	0.47
50:S2:693:A:C2	50:S2:694:G:C4	3.03	0.47
50:S2:916:A:C4	64:SN:73:ARG:HD3	2.50	0.47
50:S2:989:C:C4	50:S2:1001:A:N1	2.83	0.47
50:S2:1132:C:O2	50:S2:1132:C:H2'	2.15	0.47
50:S2:1184:G:C4	50:S2:1185:C:C6	3.03	0.47
50:S2:1237:C:C4	50:S2:1238:U:C4	3.03	0.47
50:S2:1301:A:OP2	80:Sd:7:TYR:OH	2.33	0.47
50:S2:1414:A:N3	50:S2:1415:C:C6	2.83	0.47
50:S2:1455:A:C2	50:S2:1456:G:N9	2.83	0.47
50:S2:1459:G:C2	50:S2:1460:C:C2	3.03	0.47
50:S2:1514:G:C2'	50:S2:1515:G:O4'	2.61	0.47
50:S2:1541:G:C2	50:S2:1593:C:C2	3.02	0.47
50:S2:1607:A:C5	50:S2:1608:U:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SC:146:GLU:OE1	54:SD:120:TYR:CZ	2.68	0.47
57:SG:13:GLN:N	57:SG:13:GLN:OE1	2.48	0.47
57:SG:212:LEU:HD12	57:SG:216:ARG:HG2	1.97	0.47
59:SI:54:LYS:HD3	59:SI:181:GLN:HE22	1.80	0.47
59:SI:120:PRO:HG3	59:SI:133:GLU:HG3	1.96	0.47
79:Sc:10:LYS:HB3	79:Sc:34:PHE:HE1	1.80	0.47
83:Sg:191:HIS:CB	83:Sg:195:LEU:HD21	2.45	0.47
84:S4:16:U:N3	84:S4:17:U:C4	2.79	0.47
86:S6:33:U:C2	86:S6:35:A:C5'	2.98	0.47
1:5:169:G:C2	1:5:170:C:C2	3.03	0.46
1:5:322:C:C2	1:5:4356:G:N1	2.82	0.46
1:5:934:C:H4'	1:5:935:A:OP2	2.14	0.46
1:5:1074:G:C2	1:5:1238:A:N1	2.80	0.46
1:5:1185:G:N2	1:5:1186:U:H1'	2.29	0.46
1:5:1268:G:N2	1:5:1270:A:C1'	2.78	0.46
1:5:1280:C:O2	1:5:1282:G:C8	2.68	0.46
1:5:1367:C:H1'	1:5:1370:G:C8	2.51	0.46
1:5:1392:A:H2'	1:5:1393:G:H8	1.78	0.46
1:5:1400:G:C2	1:5:1418:C:C2	3.03	0.46
1:5:1440:U:H5''	1:5:2110:C:OP2	2.15	0.46
1:5:1475:G:C2	1:5:1476:C:C6	3.00	0.46
1:5:1516:G:C4	1:5:1518:A:N7	2.84	0.46
1:5:1617:G:N1	1:5:1618:G:C5	2.83	0.46
1:5:1632:A:C6	1:5:1634:A:C1'	2.98	0.46
1:5:1682:A:C2	1:5:1683:U:H1'	2.49	0.46
1:5:1687:U:H2'	1:5:1688:G:O5'	2.15	0.46
1:5:1761:G:C4	1:5:1762:C:C5	3.03	0.46
1:5:1780:A:C2	1:5:1781:U:C1'	2.98	0.46
1:5:1855:G:C4	1:5:1856:C:C6	3.03	0.46
1:5:1866:U:O2'	1:5:1867:A:H8	1.95	0.46
1:5:1987:C:C2	1:5:1988:G:C8	3.03	0.46
1:5:2034:G:C2'	1:5:2035:C:H5'	2.46	0.46
1:5:2347:A:C4	1:5:2348:G:O6	2.68	0.46
1:5:2367:A:N3	1:5:2368:A:N7	2.62	0.46
1:5:2391:G:C4	1:5:2392:C:C5	3.04	0.46
1:5:2451:A:N3	1:5:2451:A:H2'	2.30	0.46
1:5:2484:A:C6	1:5:2485:U:C4	3.03	0.46
1:5:2532:C:C4	1:5:2533:C:N4	2.83	0.46
1:5:2590:G:N2	1:5:2754:G:O2'	2.48	0.46
1:5:2613:C:C4	1:5:2614:C:H5	2.28	0.46
1:5:2720:C:N3	1:5:2721:G:C8	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3590:G:C2	1:5:3591:C:C2	3.03	0.46
1:5:3715:U:O4'	1:5:3715:U:O2	2.33	0.46
1:5:4077:A:C8	1:5:4078:C:C6	3.04	0.46
1:5:4293:U:O4	1:5:4329:G:C8	2.68	0.46
1:5:4622:A:H5'	5:B:12:GLY:HA2	1.97	0.46
1:5:4861:G:N1	1:5:4862:G:C5	2.83	0.46
1:5:5001:U:H2'	1:5:5002:U:O5'	2.13	0.46
1:5:5042:A:N3	1:5:5043:A:C8	2.83	0.46
3:8:80:A:C8	3:8:81:C:O2'	2.68	0.46
3:8:143:G:C2	3:8:144:U:C6	3.03	0.46
4:A:227:ARG:HB3	4:A:239:ALA:HB2	1.96	0.46
9:F:59:TYR:CZ	9:F:194:HIS:CE1	3.03	0.46
11:H:31:ARG:HH11	11:H:31:ARG:HG3	1.80	0.46
14:L:3:PRO:HD2	29:a:41:HIS:CE1	2.50	0.46
15:M:6:PHE:HB3	21:S:151:LYS:HG2	1.97	0.46
18:P:36:ILE:CD1	18:P:48:LEU:HD11	2.46	0.46
19:Q:146:ARG:HH12	19:Q:149:TYR:HE1	1.63	0.46
21:S:82:LEU:HD21	21:S:109:CYS:SG	2.55	0.46
22:T:159:MET:HE2	22:T:159:MET:HA	1.96	0.46
24:V:70:PRO:HG2	50:S2:1724:A:H5'	1.97	0.46
27:Y:62:TYR:N	27:Y:62:TYR:HD1	2.12	0.46
33:e:35:TRP:HE1	33:e:37:LYS:CA	2.27	0.46
47:1:268:LYS:CG	47:1:276:TYR:CE1	2.98	0.46
50:S2:30:C:C2'	50:S2:31:U:O5'	2.63	0.46
50:S2:62:G:O2'	50:S2:172:U:O2	2.25	0.46
50:S2:171:A:C8	50:S2:173:A:N7	2.83	0.46
50:S2:373:G:H4'	62:SL:85:THR:HG21	1.97	0.46
50:S2:452:G:C6	50:S2:453:C:N4	2.83	0.46
50:S2:467:G:C6	50:S2:468:A:C8	3.03	0.46
50:S2:504:G:H2'	50:S2:505:G:O5'	2.15	0.46
50:S2:533:A:N1	50:S2:534:G:C4	2.83	0.46
50:S2:554:A:N3	50:S2:555:A:C8	2.82	0.46
50:S2:819:G:H1	50:S2:828:G:H1	1.63	0.46
50:S2:880:G:C5	50:S2:881:G:N7	2.82	0.46
50:S2:929:G:H2'	50:S2:930:C:O4'	2.15	0.46
50:S2:974:C:O2	50:S2:975:G:C8	2.65	0.46
50:S2:998:A:C8	50:S2:998:A:C3'	2.98	0.46
50:S2:1099:G:N2	50:S2:1100:A:H1'	2.30	0.46
50:S2:1141:G:N2	50:S2:1147:C:C2	2.83	0.46
50:S2:1199:A:C6	50:S2:1200:A:C5	3.03	0.46
50:S2:1209:A:H2	50:S2:1691:U:C2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1518:C:P	50:S2:1519:U:H2'	2.55	0.46
50:S2:1540:G:N2	50:S2:1541:G:H1'	2.30	0.46
50:S2:1545:A:O2'	50:S2:1546:G:O5'	2.33	0.46
50:S2:1629:C:O2	50:S2:1629:C:H2'	2.15	0.46
50:S2:1688:C:C6	50:S2:1688:C:C5'	2.84	0.46
50:S2:1793:A:N1	50:S2:1794:C:C5	2.83	0.46
50:S2:1796:G:H2'	50:S2:1797:U:C6	2.50	0.46
51:SA:38:ILE:HD11	51:SA:150:THR:CG2	2.44	0.46
52:SB:89:GLU:C	52:SB:223:PHE:CE2	2.94	0.46
56:SF:177:LEU:O	56:SF:181:ALA:HB2	2.15	0.46
58:SH:135:PHE:CD1	58:SH:136:PRO:CA	2.98	0.46
59:SI:60:LEU:CD2	59:SI:185:ALA:HB2	2.46	0.46
60:SJ:48:PHE:HZ	60:SJ:52:LYS:CG	2.28	0.46
61:SK:12:TYR:CD2	61:SK:79:LEU:HD22	2.50	0.46
63:SM:77:ILE:HG23	63:SM:78:LYS:N	2.31	0.46
86:S6:30:G:N3	86:S6:30:G:H2'	2.30	0.46
86:S6:53:G:N1	86:S6:61:C:N4	2.63	0.46
1:5:12:A:N3	1:5:14:C:C6	2.83	0.46
1:5:70:A:H4'	1:5:71:C:H5'	1.96	0.46
1:5:101:A:C5	1:5:102:G:N7	2.83	0.46
1:5:211:G:N2	1:5:212:A:C4	2.83	0.46
1:5:219:G:H5'	1:5:219:G:N9	2.30	0.46
1:5:246:G:N2	1:5:247:G:N9	2.63	0.46
1:5:328:A:C6	1:5:329:A:N6	2.83	0.46
1:5:371:A:O2'	1:5:372:A:H5'	2.15	0.46
1:5:517:C:C2	1:5:645:G:N2	2.83	0.46
1:5:689:U:C4	1:5:690:C:C5	3.02	0.46
1:5:710:G:C2	1:5:711:A:C5	3.03	0.46
1:5:747:A:C2'	1:5:749:G:C8	2.87	0.46
1:5:1191:C:C4	1:5:1192:C:C5	3.03	0.46
1:5:1330:A:N3	1:5:1331:C:C6	2.83	0.46
1:5:1338:G:N2	29:a:25:HIS:HD1	2.12	0.46
1:5:1348:U:C2	1:5:1349:G:N7	2.83	0.46
1:5:1466:G:C2	1:5:1467:C:C6	3.03	0.46
1:5:1585:C:N3	1:5:1586:G:C8	2.83	0.46
1:5:1770:A:C4	1:5:1771:U:C6	3.03	0.46
1:5:2365:C:C2	1:5:2829:U:C5	3.02	0.46
1:5:2428:A:C6	1:5:2789:A:C2	3.03	0.46
1:5:2447:U:O2'	1:5:2448:G:P	2.73	0.46
1:5:2559:G:C2	1:5:2560:C:N1	2.83	0.46
1:5:2569:G:H2'	1:5:2570:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2645:G:N2	1:5:2646:C:N1	2.63	0.46
1:5:3584:C:O2	1:5:3585:G:C8	2.68	0.46
1:5:3689:G:N2	1:5:3690:U:H1'	2.30	0.46
1:5:3763:A:H2	50:S2:1710:C:OP1	1.99	0.46
1:5:3830:A:C6	1:5:3831:U:C5	3.03	0.46
1:5:3966:A:N1	1:5:3967:G:C6	2.83	0.46
1:5:4085:A:C3'	1:5:4086:G:C5'	2.93	0.46
1:5:4086:G:C5	4:A:67:TYR:CD1	3.03	0.46
1:5:4111:U:N3	1:5:4112:C:C5	2.84	0.46
1:5:4273:A:C2'	1:5:4274:A:O4'	2.54	0.46
1:5:4281:A:C2	1:5:4283:G:N7	2.83	0.46
1:5:4333:C:N3	1:5:4334:U:C5	2.82	0.46
1:5:4406:U:N3	1:5:4407:G:C8	2.83	0.46
1:5:4462:C:N3	1:5:4515:G:C2	2.83	0.46
1:5:4524:G:C2	1:5:4525:C:C6	3.03	0.46
1:5:4767:C:C4'	1:5:4874:A:N1	2.77	0.46
1:5:4942:C:O2'	1:5:4944:C:P	2.73	0.46
1:5:5030:U:C2	1:5:5031:G:N7	2.82	0.46
2:7:27:G:C6	2:7:28:C:C4	3.03	0.46
2:7:73:U:H1'	2:7:102:U:O4	2.14	0.46
4:A:29:LEU:HD22	4:A:163:ARG:HH22	1.80	0.46
5:B:89:ILE:HG21	5:B:197:ALA:HB1	1.97	0.46
5:B:100:ARG:HB3	5:B:100:ARG:NH1	2.30	0.46
5:B:285:TYR:CD1	5:B:363:ILE:HD13	2.50	0.46
6:C:262:GLU:O	6:C:271:ALA:O	2.33	0.46
8:E:102:VAL:HG23	8:E:103:VAL:HG22	1.97	0.46
14:L:8:MET:HB2	14:L:10:LEU:HD13	1.96	0.46
15:M:116:ARG:NH2	17:O:201:PHE:CE2	2.84	0.46
20:R:110:ARG:HD3	20:R:120:TYR:CE2	2.50	0.46
26:X:110:LYS:CD	26:X:111:GLN:HE22	2.28	0.46
28:Z:100:VAL:CG1	28:Z:107:LYS:HA	2.46	0.46
35:g:75:SER:C	35:g:76:ARG:CG	2.88	0.46
38:j:66:HIS:CD2	38:j:66:HIS:C	2.93	0.46
46:z:18:LEU:CD1	46:z:180:VAL:HB	2.36	0.46
46:z:177:ASP:O	46:z:181:TYR:CD2	2.68	0.46
50:S2:46:A:C2	50:S2:99:A:C4	3.04	0.46
50:S2:52:G:N3	50:S2:53:C:H1'	2.29	0.46
50:S2:112:U:H5''	50:S2:113:G:H2'	1.96	0.46
50:S2:184:G:N3	50:S2:185:G:C8	2.84	0.46
50:S2:221:A:C4	50:S2:222:U:C6	3.03	0.46
50:S2:316:G:N3	50:S2:317:C:C6	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:348:A:C4	50:S2:349:A:C8	3.03	0.46
50:S2:357:C:C2	50:S2:358:C:C5	3.03	0.46
50:S2:404:G:C2	50:S2:405:G:N9	2.83	0.46
50:S2:429:C:O2	50:S2:429:C:C2'	2.63	0.46
50:S2:522:A:OP2	60:SJ:45:ARG:NH1	2.47	0.46
50:S2:549:C:H2'	50:S2:549:C:O2	2.15	0.46
50:S2:859:G:C6	50:S2:860:G:N7	2.83	0.46
50:S2:956:G:C2'	50:S2:957:A:O5'	2.64	0.46
50:S2:956:G:N3	50:S2:957:A:N7	2.63	0.46
50:S2:976:G:C2	50:S2:977:C:C2	3.03	0.46
50:S2:1189:A:H2'	50:S2:1190:A:H8	1.80	0.46
50:S2:1219:C:C5	50:S2:1220:A:C6	3.03	0.46
50:S2:1290:G:C2	82:Sf:146:LEU:CB	2.98	0.46
50:S2:1354:G:N2	50:S2:1357:A:OP2	2.47	0.46
50:S2:1399:C:H2'	50:S2:1400:U:H6	1.80	0.46
50:S2:1434:C:C2	50:S2:1435:C:C6	3.03	0.46
50:S2:1537:A:C5	50:S2:1538:C:C6	3.02	0.46
50:S2:1591:C:C5	50:S2:1592:C:C5	3.02	0.46
50:S2:1699:A:N1	53:SC:115:GLN:HG3	2.31	0.46
50:S2:1804:U:C4	50:S2:1805:G:N7	2.83	0.46
50:S2:1862:G:H4'	50:S2:1863:A:OP1	2.16	0.46
60:SJ:48:PHE:CZ	60:SJ:52:LYS:CG	2.97	0.46
60:SJ:138:ARG:HB2	60:SJ:138:ARG:HH11	1.79	0.46
77:Sa:22:ARG:HD2	77:Sa:29:CYS:SG	2.55	0.46
77:Sa:22:ARG:HH21	77:Sa:27:ALA:HB1	1.80	0.46
77:Sa:73:TYR:HB3	77:Sa:78:ALA:HB2	1.97	0.46
81:Se:45:VAL:O	81:Se:46:VAL:C	2.58	0.46
85:S5:15:G:C2	85:S5:48:C:N3	2.81	0.46
85:S5:69:G:H3'	85:S5:70:G:H8	1.80	0.46
86:S6:32:U:C2'	86:S6:33:U:H5'	2.45	0.46
1:5:31:U:O2	1:5:52:G:C2	2.68	0.46
1:5:167:C:C2	1:5:168:C:C6	3.04	0.46
1:5:173:C:N3	1:5:174:C:H5	1.99	0.46
1:5:290:U:H2'	1:5:291:U:C6	2.50	0.46
1:5:423:G:H2'	1:5:424:U:H6	1.80	0.46
1:5:484:U:C5	1:5:486:C:C5	3.01	0.46
1:5:504:G:O6	1:5:654:C:C4	2.68	0.46
1:5:658:C:N3	1:5:659:G:C8	2.84	0.46
1:5:739:G:C4	1:5:740:G:C8	3.04	0.46
1:5:749:G:O6	1:5:913:U:O4	2.33	0.46
1:5:752:G:C2	1:5:753:C:C1'	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1367:C:H6	1:5:1367:C:H5''	1.80	0.46
1:5:1377:G:N2	14:L:158:ARG:HG2	2.30	0.46
1:5:1391:A:N1	1:5:4351:U:H1'	2.31	0.46
1:5:1508:A:C2	1:5:1509:C:C6	3.04	0.46
1:5:1570:G:H2'	1:5:1571:G:O4'	2.15	0.46
1:5:1603:C:H2'	1:5:1604:G:C8	2.50	0.46
1:5:1674:C:C4	1:5:1675:C:C5	3.04	0.46
1:5:1724:G:N2	9:F:105:PRO:CG	2.78	0.46
1:5:1939:A:H2	1:5:3874:G:OP1	1.94	0.46
1:5:1983:A:H2	1:5:2010:A:H3'	1.80	0.46
1:5:2025:A:H4'	1:5:2026:A:OP1	2.15	0.46
1:5:2117:G:H1'	9:F:51:LEU:HD13	1.97	0.46
1:5:2265:G:C1'	1:5:2266:C:OP1	2.63	0.46
1:5:2289:C:O2	1:5:2289:C:C2'	2.58	0.46
1:5:2463:G:N3	1:5:2464:C:C6	2.83	0.46
1:5:2497:C:N4	1:5:2498:C:N4	2.63	0.46
1:5:2673:G:C4'	1:5:2675:G:C1'	2.91	0.46
1:5:2744:A:N1	1:5:2745:A:C6	2.83	0.46
1:5:2756:G:H2'	1:5:2757:A:C8	2.50	0.46
1:5:2820:C:H2'	1:5:2821:U:H5'	1.96	0.46
1:5:3729:U:H2'	1:5:3730:U:O4'	2.14	0.46
1:5:3744:G:H2'	1:5:3745:U:O5'	2.15	0.46
1:5:3763:A:C6	50:S2:1710:C:H5'	2.34	0.46
1:5:3847:C:H2'	1:5:3847:C:O2	2.14	0.46
1:5:3930:U:H1'	4:A:228:ASP:OD1	2.15	0.46
1:5:4092:G:N1	1:5:4093:G:C2	2.84	0.46
1:5:4200:G:C2	1:5:4201:G:C8	3.03	0.46
1:5:4257:A:N7	13:J:60:PHE:HE2	2.13	0.46
1:5:4332:C:O2	1:5:4332:C:C2'	2.47	0.46
1:5:4535:A:N1	1:5:4536:C:C6	2.84	0.46
1:5:4581:G:N2	1:5:4582:C:C5	2.84	0.46
1:5:4600:G:O2'	1:5:4601:U:OP2	2.32	0.46
1:5:4724:A:N3	1:5:4725:C:C6	2.84	0.46
1:5:5010:U:N3	1:5:5011:A:N7	2.63	0.46
2:7:27:G:O6	7:D:58:ARG:NH1	2.46	0.46
3:8:7:U:H2'	3:8:8:U:O4'	2.15	0.46
10:G:261:LEU:HD22	10:G:265:LEU:CD2	2.46	0.46
25:W:17:HIS:N	25:W:17:HIS:CD2	2.83	0.46
26:X:116:LEU:CB	26:X:117:TYR:CE1	2.98	0.46
27:Y:18:HIS:C	27:Y:20:ASN:H	2.24	0.46
29:a:60:HIS:ND1	29:a:63:LEU:HD12	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:c:38:ILE:HD11	31:c:46:VAL:HG21	1.97	0.46
36:h:93:ARG:HH11	36:h:93:ARG:HG2	1.79	0.46
44:p:49:ARG:HD3	44:p:51:ALA:N	2.30	0.46
46:z:21:ASN:HA	46:z:172:VAL:HG22	1.96	0.46
46:z:59:PRO:O	46:z:60:ARG:CB	2.63	0.46
46:z:65:VAL:HG11	46:z:147:LYS:HE3	1.96	0.46
50:S2:17:C:H2'	50:S2:18:C:C6	2.50	0.46
50:S2:100:U:H2'	50:S2:100:U:O2	2.15	0.46
50:S2:115:U:H2'	50:S2:116:U:C6	2.49	0.46
50:S2:193:C:C2	50:S2:207:G:N2	2.83	0.46
50:S2:330:G:N2	50:S2:331:C:H1'	2.29	0.46
50:S2:547:G:H2'	50:S2:548:C:H5''	1.97	0.46
50:S2:569:A:C6	50:S2:570:C:C5	3.03	0.46
50:S2:697:G:C2	50:S2:734:C:O2	2.69	0.46
50:S2:738:C:C2	50:S2:739:C:C6	3.04	0.46
50:S2:882:U:C4	50:S2:883:U:C5	3.04	0.46
50:S2:957:A:N1	50:S2:967:C:O2	2.48	0.46
50:S2:989:C:N3	50:S2:1001:A:C6	2.83	0.46
50:S2:1029:G:N1	50:S2:1030:A:C8	2.83	0.46
50:S2:1100:A:C4	50:S2:1101:U:C6	3.03	0.46
50:S2:1122:A:C2	50:S2:1123:C:N1	2.83	0.46
50:S2:1166:G:C2	50:S2:1167:G:C8	3.03	0.46
50:S2:1265:A:C2	50:S2:1266:C:C6	3.02	0.46
50:S2:1374:C:C2'	50:S2:1375:G:O5'	2.64	0.46
50:S2:1446:A:H5'	71:SU:57:PRO:HA	1.96	0.46
50:S2:1459:G:C4	50:S2:1460:C:C6	3.03	0.46
50:S2:1806:A:C2	50:S2:1807:C:C6	3.03	0.46
50:S2:1863:A:P	77:Sa:4:LYS:NZ	2.81	0.46
52:SB:97:LEU:C	52:SB:232:HIS:NE2	2.70	0.46
52:SB:120:VAL:HG22	52:SB:142:PHE:HE1	1.79	0.46
61:SK:15:LEU:HD22	61:SK:49:MET:HE1	1.98	0.46
63:SM:22:LEU:HD23	63:SM:111:VAL:CG2	2.46	0.46
63:SM:46:GLN:OE1	63:SM:112:LYS:HD2	2.16	0.46
70:ST:92:PHE:CD1	70:ST:92:PHE:C	2.93	0.46
71:SU:66:ARG:NH1	71:SU:75:LYS:HG2	2.30	0.46
74:SX:51:VAL:HG13	74:SX:70:VAL:HG13	1.98	0.46
77:Sa:28:ARG:CG	77:Sa:28:ARG:NH1	2.76	0.46
86:S6:13:C:O3'	86:S6:14:C:O4'	2.34	0.46
86:S6:72:C:O2'	86:S6:73:A:P	2.74	0.46
1:5:29:G:N3	1:5:30:C:C6	2.83	0.46
1:5:46:U:OP2	1:5:47:A:C2'	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:69:A:C6	1:5:70:A:C6	3.04	0.46
1:5:173:C:N3	1:5:174:C:C4	2.80	0.46
1:5:174:C:C2	1:5:175:C:C5	3.04	0.46
1:5:258:G:C2	1:5:259:C:C2	3.03	0.46
1:5:316:U:O4	1:5:4353:U:C1'	2.63	0.46
1:5:337:U:O2	1:5:337:U:H2'	2.14	0.46
1:5:352:G:H1'	1:5:355:A:H2	1.81	0.46
1:5:671:G:C2	1:5:672:C:C6	3.03	0.46
1:5:700:G:C6	1:5:701:G:N7	2.84	0.46
1:5:986:C:C2	1:5:987:C:C6	3.03	0.46
1:5:1185:G:C2	1:5:1186:U:C1'	2.97	0.46
1:5:1262:G:N1	1:5:1263:A:N7	2.63	0.46
1:5:1263:A:C2	1:5:1264:C:C2	3.04	0.46
1:5:1554:A:N6	1:5:1555:G:C4	2.84	0.46
1:5:1632:A:N6	1:5:1634:A:C1'	2.78	0.46
1:5:1858:A:C2	1:5:1859:C:C4	3.03	0.46
1:5:1900:C:H4'	33:e:60:TYR:CD1	2.50	0.46
1:5:1925:G:N2	1:5:1926:C:H1'	2.31	0.46
1:5:2086:G:C6	1:5:2087:C:C4	3.03	0.46
1:5:2092:G:H8	1:5:2093:A:N1	2.12	0.46
1:5:2267:U:O2	1:5:2267:U:O4'	2.31	0.46
1:5:2318:G:C2	1:5:2322:G:C2	3.03	0.46
1:5:2397:G:N7	1:5:2399:G:C8	2.83	0.46
1:5:2569:G:C5	1:5:2570:U:C5	3.03	0.46
1:5:2570:U:O2	1:5:2571:C:C6	2.68	0.46
1:5:2578:G:N1	1:5:2579:G:C5	2.82	0.46
1:5:2589:C:C5	1:5:2590:G:N7	2.84	0.46
1:5:2773:G:N3	1:5:2774:C:C6	2.84	0.46
1:5:4034:G:N2	1:5:4035:G:C4	2.83	0.46
1:5:4112:C:O2'	52:SB:222:LYS:NZ	2.46	0.46
1:5:4166:G:N2	1:5:4167:G:N9	2.63	0.46
1:5:4454:G:HO2'	1:5:4500:U:HO2'	1.63	0.46
1:5:4551:U:H2'	1:5:4552:U:C6	2.51	0.46
1:5:4567:G:OP1	5:B:19:ARG:N	2.43	0.46
1:5:4709:U:C2	1:5:4710:C:C6	3.04	0.46
1:5:4871:C:H5''	15:M:91:TRP:CZ2	2.51	0.46
1:5:4923:C:C2	1:5:4924:C:C6	3.04	0.46
1:5:4981:G:O4'	1:5:4981:G:N3	2.47	0.46
1:5:4988:U:C4'	1:5:4989:U:O2	2.50	0.46
3:8:96:C:C4	3:8:97:A:N7	2.78	0.46
5:B:82:PRO:HG3	5:B:171:LEU:HD21	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:379:PHE:N	5:B:379:PHE:CD1	2.83	0.46
7:D:41:LYS:C	7:D:44:TYR:HE1	2.23	0.46
9:F:88:GLU:HG3	22:T:136:ARG:HG2	1.97	0.46
10:G:177:MET:SD	10:G:177:MET:N	2.87	0.46
11:H:60:TRP:NE1	21:S:153:PRO:CG	2.79	0.46
12:I:47:PRO:HB3	12:I:171:TRP:HE1	1.79	0.46
15:M:119:ARG:HH21	15:M:119:ARG:CG	2.28	0.46
15:M:130:LEU:HD21	17:O:180:GLN:OE1	2.15	0.46
28:Z:76:ASN:HB2	28:Z:79:HIS:CD2	2.50	0.46
29:a:104:VAL:HG22	29:a:109:TYR:HE2	1.79	0.46
29:a:128:PHE:CD2	29:a:128:PHE:N	2.83	0.46
30:b:19:ASN:N	30:b:19:ASN:HD22	2.14	0.46
43:o:45:GLN:HA	43:o:45:GLN:HE21	1.77	0.46
50:S2:75:G:O2'	50:S2:76:U:H3'	2.15	0.46
50:S2:333:G:C2	50:S2:334:C:C2	3.03	0.46
50:S2:582:C:O2	50:S2:583:C:C6	2.68	0.46
50:S2:646:G:C5	50:S2:647:U:C5	3.03	0.46
50:S2:804:U:O2	50:S2:804:U:H2'	2.16	0.46
50:S2:816:A:C2	50:S2:817:G:C1'	2.99	0.46
50:S2:836:G:C3'	50:S2:837:A:C5'	2.94	0.46
50:S2:839:C:O2'	50:S2:841:G:H1'	2.16	0.46
50:S2:855:G:C5	50:S2:856:C:C6	3.03	0.46
50:S2:878:G:C6	50:S2:879:C:C5	3.03	0.46
50:S2:913:A:H2'	50:S2:913:A:N3	2.30	0.46
50:S2:916:A:C6	64:SN:73:ARG:HD3	2.49	0.46
50:S2:979:C:O2	50:S2:980:A:C8	2.68	0.46
50:S2:1031:A:C6	50:S2:1032:C:C4	3.03	0.46
50:S2:1206:G:N1	50:S2:1693:G:C4	2.83	0.46
50:S2:1234:C:O2	50:S2:1234:C:C2'	2.59	0.46
50:S2:1305:C:O2	50:S2:1305:C:H2'	2.15	0.46
50:S2:1382:A:C4	50:S2:1383:A:C8	3.02	0.46
50:S2:1407:U:C2	50:S2:1408:U:C5	3.03	0.46
50:S2:1414:A:C6	50:S2:1415:C:C5	3.03	0.46
50:S2:1446:A:O2'	50:S2:1447:G:H8	1.98	0.46
50:S2:1510:G:N1	50:S2:1511:U:C6	2.84	0.46
50:S2:1540:G:H21	50:S2:1541:G:H1'	1.81	0.46
50:S2:1703:C:O2	50:S2:1703:C:H2'	2.13	0.46
50:S2:1736:G:H2'	50:S2:1737:G:O4'	2.16	0.46
50:S2:1791:A:N7	50:S2:1792:G:C8	2.83	0.46
50:S2:1863:A:H5''	50:S2:1863:A:C8	2.51	0.46
50:S2:1863:A:C5'	50:S2:1863:A:C8	2.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:205:ARG:HH12	68:SR:84:TYR:CB	2.23	0.46
52:SB:81:PHE:CB	52:SB:109:LYS:HB2	2.46	0.46
57:SG:26:THR:HG21	57:SG:40:ALA:CB	2.46	0.46
59:SI:167:GLN:HG3	59:SI:168:GLN:N	2.31	0.46
60:SJ:108:ARG:NH2	60:SJ:113:GLN:OE1	2.49	0.46
68:SR:37:GLU:CG	83:Sg:150:TRP:HE1	2.26	0.46
74:SX:61:GLN:NE2	74:SX:61:GLN:C	2.73	0.46
83:Sg:87:LEU:HD21	83:Sg:108:VAL:HG11	1.98	0.46
83:Sg:125:ARG:NE	83:Sg:150:TRP:CE3	2.84	0.46
86:S6:63:G:H2'	86:S6:64:A:O4'	2.16	0.46
1:5:48:G:O2'	1:5:49:U:P	2.71	0.46
1:5:112:C:N3	1:5:113:A:N7	2.64	0.46
1:5:278:G:C6	1:5:330:G:N7	2.84	0.46
1:5:302:C:OP1	16:N:68:ARG:HG2	2.16	0.46
1:5:425:U:N3	1:5:426:A:C5	2.81	0.46
1:5:465:G:C2	1:5:466:A:N9	2.83	0.46
1:5:487:G:C4	1:5:488:G:C8	3.04	0.46
1:5:647:G:C5	1:5:648:G:C8	3.04	0.46
1:5:677:G:C2	1:5:678:C:C2	3.04	0.46
1:5:947:C:C2	1:5:948:C:C5	3.04	0.46
1:5:964:A:H1'	45:r:98:ARG:CZ	2.46	0.46
1:5:1048:G:H2'	1:5:1049:C:O4'	2.15	0.46
1:5:1245:C:C5	1:5:1269:G:N1	2.82	0.46
1:5:1271:G:O6	1:5:2109:G:O6	2.33	0.46
1:5:1355:G:C5	1:5:1385:G:N2	2.84	0.46
1:5:1464:C:O2	1:5:1464:C:C2'	2.64	0.46
1:5:1608:G:C1'	1:5:3828:A:C2	2.98	0.46
1:5:1698:C:H5'	1:5:1698:C:H6	1.81	0.46
1:5:1745:G:C6	1:5:1746:A:N7	2.83	0.46
1:5:1780:A:N6	1:5:1781:U:C5	2.83	0.46
1:5:1823:G:C4'	7:D:44:TYR:HD2	2.22	0.46
1:5:1945:G:N1	1:5:1946:G:N9	2.63	0.46
1:5:1968:G:N1	1:5:1969:G:C5	2.84	0.46
1:5:1975:G:O4'	1:5:1976:G:OP2	2.33	0.46
1:5:2276:A:C5	1:5:2277:C:C5	3.04	0.46
1:5:2368:A:HO2'	1:5:2369:U:P	2.39	0.46
1:5:2455:G:C2'	1:5:2456:G:O5'	2.60	0.46
1:5:2557:G:C4	1:5:2558:C:C6	3.04	0.46
1:5:2569:G:C2	1:5:2570:U:C2	3.04	0.46
1:5:2586:G:C8	1:5:2587:A:C4	3.04	0.46
1:5:2589:C:N4	1:5:2590:G:C5	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2712:G:C4	1:5:2713:C:C6	3.04	0.46
1:5:2745:A:C2'	1:5:2746:A:O5'	2.64	0.46
1:5:2773:G:C6	1:5:2774:C:C4	3.03	0.46
1:5:2793:G:O6	1:5:2797:C:C5	2.68	0.46
1:5:3591:C:N4	1:5:3592:G:C5	2.82	0.46
1:5:3674:G:N3	1:5:3675:G:C8	2.84	0.46
1:5:3801:U:O2'	1:5:3802:U:H5'	2.16	0.46
1:5:3806:G:C6	1:5:3807:A:N7	2.84	0.46
1:5:3871:A:C2'	1:5:3872:A:O5'	2.64	0.46
1:5:4089:G:H2'	1:5:4090:G:O4'	2.15	0.46
1:5:4109:G:C2	1:5:4110:C:N1	2.83	0.46
1:5:4135:G:C4	1:5:4136:G:C8	3.04	0.46
1:5:4330:G:C6	1:5:4331:G:C8	3.04	0.46
1:5:4480:A:H2'	1:5:4480:A:N3	2.30	0.46
1:5:4587:G:C2	1:5:4716:C:C2	3.03	0.46
1:5:4661:G:C6	1:5:4662:C:C4	3.03	0.46
1:5:4729:A:H4'	1:5:4965:U:HO2'	1.78	0.46
1:5:4758:U:C2'	1:5:4759:C:O5'	2.63	0.46
3:8:9:A:H2'	3:8:9:A:N3	2.30	0.46
3:8:75:G:C2	3:8:76:C:C4	3.04	0.46
3:8:120:G:H2'	3:8:121:G:H5'	1.96	0.46
5:B:46:PHE:CD1	5:B:84:MET:CE	2.98	0.46
5:B:321:VAL:O	5:B:322:HIS:HB3	2.14	0.46
6:C:177:TRP:O	6:C:180:ILE:N	2.48	0.46
8:E:175:LEU:HB2	8:E:246:GLN:NE2	2.27	0.46
11:H:41:ILE:HD11	11:H:69:THR:HB	1.97	0.46
13:J:165:TRP:HE3	13:J:166:PHE:HA	1.81	0.46
16:N:11:TRP:CZ3	16:N:19:MET:HE2	2.50	0.46
16:N:37:HIS:NE2	16:N:63:ARG:HB3	2.30	0.46
16:N:104:GLU:O	16:N:108:ARG:HB2	2.16	0.46
22:T:30:TYR:N	22:T:30:TYR:CD1	2.83	0.46
33:e:90:MET:HG2	45:r:33:LYS:HB2	1.98	0.46
35:g:75:SER:C	35:g:76:ARG:HG2	2.40	0.46
36:h:91:MET:HG3	36:h:94:ARG:NE	2.30	0.46
44:p:24:LYS:NZ	50:S2:1039:C:O2'	2.40	0.46
46:z:171:HIS:HB2	46:z:174:MET:SD	2.55	0.46
50:S2:78:C:H2'	50:S2:79:A:H4'	1.97	0.46
50:S2:80:G:C2	50:S2:81:U:C2	3.04	0.46
50:S2:102:A:H5''	50:S2:104:A:H1'	1.97	0.46
50:S2:211:G:C5	50:S2:212:C:C5	3.03	0.46
50:S2:311:C:H3'	50:S2:312:G:H4'	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:322:C:H2'	50:S2:323:C:C6	2.51	0.46
50:S2:363:A:N6	50:S2:400:C:O2'	2.48	0.46
50:S2:380:G:H21	50:S2:382:C:H2'	1.81	0.46
50:S2:448:A:H8	59:SI:25:ARG:C	2.24	0.46
50:S2:452:G:C6	50:S2:453:C:C4	3.03	0.46
50:S2:752:G:C6	50:S2:791:C:C2	3.03	0.46
50:S2:830:A:C6	50:S2:844:U:N3	2.70	0.46
50:S2:849:A:C4	50:S2:850:C:C5	3.04	0.46
50:S2:897:U:N3	50:S2:898:U:C6	2.83	0.46
50:S2:952:G:H2'	50:S2:953:C:C6	2.50	0.46
50:S2:1034:A:H2'	50:S2:1035:A:O4'	2.16	0.46
50:S2:1097:G:C6	50:S2:1098:C:C4	3.03	0.46
50:S2:1190:A:N3	50:S2:1714:U:O2'	2.39	0.46
50:S2:1215:C:H5	50:S2:1645:C:H2'	1.81	0.46
50:S2:1233:G:C2	50:S2:1234:C:C2	3.04	0.46
50:S2:1251:A:H2'	50:S2:1251:A:N3	2.31	0.46
50:S2:1309:C:C2	82:Sf:143:LYS:CE	2.99	0.46
50:S2:1310:U:O2	50:S2:1310:U:C2'	2.63	0.46
50:S2:1314:U:O2	50:S2:1315:U:O4'	2.34	0.46
50:S2:1355:C:O5'	50:S2:1355:C:H6	1.98	0.46
50:S2:1406:G:C2'	50:S2:1407:U:C4'	2.93	0.46
50:S2:1411:G:C4	50:S2:1412:C:H1'	2.50	0.46
50:S2:1456:G:C4	50:S2:1457:U:C5	3.03	0.46
50:S2:1542:C:H42	50:S2:1591:C:H42	1.62	0.46
50:S2:1667:U:C2	50:S2:1668:U:C4	3.03	0.46
50:S2:1777:G:C4	50:S2:1778:C:C6	3.03	0.46
52:SB:178:THR:O	52:SB:179:ASN:O	2.33	0.46
55:SE:51:ARG:HE	55:SE:51:ARG:CA	2.29	0.46
56:SF:73:THR:HG22	56:SF:93:VAL:HG21	1.98	0.46
56:SF:76:MET:HE2	56:SF:169:ILE:HG21	1.97	0.46
56:SF:142:SER:O	56:SF:144:LEU:N	2.49	0.46
58:SH:83:LEU:CD1	58:SH:92:VAL:HG21	2.45	0.46
62:SL:44:PHE:HE2	62:SL:143:LEU:HD23	1.76	0.46
68:SR:26:ASN:OD1	68:SR:59:LYS:CD	2.64	0.46
78:Sb:47:PHE:C	78:Sb:47:PHE:CD1	2.91	0.46
83:Sg:31:ILE:CG2	83:Sg:43:TRP:HB2	2.45	0.46
83:Sg:131:LEU:O	83:Sg:139:LYS:N	2.47	0.46
86:S6:69:G:N1	86:S6:70:G:C6	2.83	0.46
1:5:351:C:C2	3:8:25:G:C2	3.03	0.46
1:5:492:U:N3	1:5:493:G:N7	2.64	0.46
1:5:752:G:C6	1:5:753:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:969:C:H2'	1:5:970:G:C2	2.50	0.46
1:5:979:C:H4'	8:E:39:HIS:HB3	1.98	0.46
1:5:1072:C:H4'	1:5:1073:G:OP1	2.16	0.46
1:5:1077:C:O2	1:5:1077:C:H2'	2.16	0.46
1:5:1216:C:C4	1:5:1217:G:C8	3.04	0.46
1:5:1278:C:H3'	1:5:1279:A:H4'	1.97	0.46
1:5:1310:C:C2	1:5:1311:G:H8	2.32	0.46
1:5:1358:G:C1'	1:5:1359:G:C8	2.98	0.46
1:5:1477:C:N4	1:5:1478:C:C5	2.84	0.46
1:5:1481:C:H1'	1:5:1482:G:O4'	2.15	0.46
1:5:1749:A:C2	1:5:1750:G:C5	3.03	0.46
1:5:1760:G:C6	1:5:1761:G:C5	3.04	0.46
1:5:1899:G:C6	1:5:1900:C:C5	3.03	0.46
1:5:1922:G:H2'	1:5:1923:A:H5''	1.96	0.46
1:5:1964:A:C2	1:5:4694:G:N3	2.83	0.46
1:5:2311:C:O2	1:5:2311:C:H2'	2.15	0.46
1:5:2464:C:HO2'	1:5:2465:C:C5'	2.29	0.46
1:5:2561:C:H2'	1:5:2561:C:O2	2.16	0.46
1:5:2602:G:C4	1:5:2742:G:C6	3.04	0.46
1:5:2736:G:C6	1:5:2737:C:N4	2.83	0.46
1:5:3621:A:N3	1:5:3621:A:H2'	2.31	0.46
1:5:3759:A:C8	50:S2:1709:G:O2'	2.60	0.46
1:5:3805:U:N3	1:5:3806:G:C8	2.84	0.46
1:5:3806:G:H4'	50:S2:1719:A:C2'	2.44	0.46
1:5:3898:G:O3'	5:B:257:TRP:HB2	2.16	0.46
1:5:3927:U:H3	1:5:4184:G:H1	1.63	0.46
1:5:4068:U:C3'	1:5:4069:U:H5'	2.42	0.46
1:5:4073:A:N7	1:5:4074:C:C5	2.84	0.46
1:5:4117:U:O2	4:A:40:TYR:CE1	2.68	0.46
1:5:4405:G:C4	1:5:4406:U:C6	3.03	0.46
1:5:4458:C:C2'	1:5:4459:U:O5'	2.64	0.46
1:5:4468:U:O2	1:5:4708:A:N7	2.48	0.46
1:5:4883:C:H42	8:E:272:ALA:HB3	1.81	0.46
1:5:5000:G:C4	1:5:5001:U:C5	3.03	0.46
3:8:46:G:C6	3:8:47:C:N4	2.84	0.46
3:8:95:A:C4	3:8:96:C:C5	3.03	0.46
4:A:33:ASP:OD1	4:A:33:ASP:N	2.48	0.46
7:D:27:LYS:HE2	13:J:147:ARG:HH22	1.81	0.46
7:D:284:LYS:HB2	12:I:209:TRP:HH2	1.79	0.46
19:Q:75:ARG:HH11	19:Q:75:ARG:CG	2.28	0.46
20:R:37:SER:HB3	47:1:405:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:82:ILE:CD1	24:V:104:VAL:HG13	2.46	0.46
26:X:119:ILE:HD11	26:X:140:LEU:HD13	1.96	0.46
32:d:63:ARG:HD3	32:d:103:TYR:CE1	2.51	0.46
33:e:98:GLU:CD	33:e:123:THR:OG1	2.57	0.46
34:f:33:VAL:HG23	34:f:38:GLU:HB3	1.98	0.46
34:f:81:SER:OG	34:f:81:SER:O	2.32	0.46
37:i:43:MET:HA	37:i:46:GLU:OE2	2.15	0.46
42:n:5:TRP:CD1	50:S2:1852:C:P	3.07	0.46
46:z:195:LYS:O	46:z:196:LYS:C	2.59	0.46
50:S2:4:C:H4'	53:SC:207:ALA:HB2	1.97	0.46
50:S2:123:G:O2'	55:SE:146:THR:HG23	2.15	0.46
50:S2:167:G:C2	50:S2:168:C:C4	3.03	0.46
50:S2:173:A:C5	50:S2:174:C:C5	3.04	0.46
50:S2:217:A:C5	50:S2:218:U:C5	3.03	0.46
50:S2:340:C:N1	50:S2:341:C:C5	2.82	0.46
50:S2:340:C:C3'	50:S2:341:C:H6	2.28	0.46
50:S2:872:A:N6	50:S2:914:U:C5	2.78	0.46
50:S2:910:G:N3	50:S2:911:C:C6	2.83	0.46
50:S2:957:A:C2	50:S2:958:G:N7	2.84	0.46
50:S2:968:U:O2	50:S2:968:U:H2'	2.16	0.46
50:S2:973:C:H2'	50:S2:973:C:O2	2.15	0.46
50:S2:1072:U:H3'	50:S2:1073:U:H5'	1.96	0.46
50:S2:1108:G:C2	50:S2:1125:C:C2	3.03	0.46
50:S2:1134:G:C2	50:S2:1135:C:C2	3.03	0.46
50:S2:1149:A:N1	50:S2:1151:G:C4	2.84	0.46
50:S2:1294:G:O2'	82:Sf:137:ASP:OD1	2.32	0.46
50:S2:1302:G:C8	82:Sf:140:TYR:CE2	3.04	0.46
50:S2:1423:C:H2'	50:S2:1424:G:C8	2.50	0.46
50:S2:1466:G:C2	50:S2:1467:C:C4	3.04	0.46
50:S2:1562:C:O2	50:S2:1562:C:H2'	2.16	0.46
50:S2:1643:U:O2'	50:S2:1644:C:P	2.73	0.46
50:S2:1654:G:C6	50:S2:1655:C:C4	3.04	0.46
50:S2:1696:C:C6	50:S2:1696:C:C4'	2.99	0.46
51:SA:138:SER:O	72:SV:29:HIS:O	2.34	0.46
52:SB:143:THR:HG22	52:SB:205:TYR:HB3	1.97	0.46
54:SD:211:VAL:HG22	68:SR:38:ILE:C	2.30	0.46
56:SF:100:ILE:CG2	56:SF:111:VAL:HG21	2.46	0.46
59:SI:118:ALA:HB1	59:SI:137:LEU:HD21	1.96	0.46
61:SK:2:LEU:HB3	61:SK:8:ARG:HH21	1.77	0.46
68:SR:21:TYR:CE1	68:SR:61:ILE:HG22	2.45	0.46
75:SY:27:VAL:HB	75:SY:69:THR:HG23	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:Sa:4:LYS:O	77:Sa:5:ARG:HG3	2.16	0.46
85:S5:67:C:H3'	85:S5:68:C:C5'	2.28	0.46
1:5:223:G:H4'	1:5:225:G:C8	2.50	0.46
1:5:247:G:C2	1:5:248:C:C2	3.03	0.46
1:5:262:G:C6	1:5:263:G:N7	2.83	0.46
1:5:353:A:C5	1:5:379:G:C5	3.04	0.46
1:5:748:G:O6	1:5:918:G:H1'	2.16	0.46
1:5:936:C:H5	15:M:46:ARG:HA	1.81	0.46
1:5:1203:G:N1	1:5:1204:C:C4	2.83	0.46
1:5:1337:A:H5'	6:C:102:PHE:HD2	1.80	0.46
1:5:1370:G:N3	1:5:1370:G:O4'	2.49	0.46
1:5:1427:A:H2'	1:5:1428:U:O5'	2.16	0.46
1:5:1658:G:H4'	1:5:2348:G:O2'	2.15	0.46
1:5:1757:U:H2'	1:5:1758:G:O4'	2.15	0.46
1:5:1797:G:N2	1:5:1798:G:C4	2.83	0.46
1:5:1826:G:C6	1:5:1827:C:C5	3.04	0.46
1:5:1965:G:H4'	1:5:4695:C:H1'	1.98	0.46
1:5:2094:G:N7	9:F:48:ARG:HD3	2.31	0.46
1:5:2375:A:OP1	32:d:63:ARG:NH2	2.48	0.46
1:5:2409:U:C5	1:5:2410:C:C5	3.04	0.46
1:5:2440:U:C2	1:5:2519:U:C6	3.04	0.46
1:5:2446:C:H2'	1:5:2447:U:H6	1.74	0.46
1:5:2596:G:N3	1:5:2597:G:C8	2.84	0.46
1:5:2645:G:C4	1:5:2646:C:C6	3.04	0.46
1:5:2703:G:C5	1:5:2704:C:C5	3.04	0.46
1:5:3755:G:H3'	1:5:3756:A:H5''	1.97	0.46
1:5:3789:C:C5'	85:S5:73:A:OP2	2.64	0.46
1:5:3829:G:C6	1:5:3830:A:N7	2.84	0.46
1:5:3862:A:N1	1:5:3863:C:H1'	2.31	0.46
1:5:4054:C:H5''	46:z:205:TYR:HE2	1.51	0.46
1:5:4109:G:C2	1:5:4110:C:C6	3.04	0.46
1:5:4118:U:O4	4:A:95:GLN:CB	2.64	0.46
1:5:4473:A:C4	1:5:4474:A:C8	3.03	0.46
1:5:4661:G:H2'	1:5:4662:C:O4'	2.16	0.46
1:5:4998:G:N2	1:5:4999:G:N9	2.64	0.46
1:5:5023:C:H5	1:5:5028:G:H1'	1.81	0.46
3:8:70:G:C4	3:8:87:G:N2	2.84	0.46
3:8:108:A:O2'	3:8:110:U:O4	2.28	0.46
3:8:118:C:O2	3:8:118:C:C2'	2.64	0.46
3:8:121:G:C2'	3:8:122:G:O5'	2.63	0.46
5:B:290:GLY:HA3	5:B:328:ASN:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:202:GLN:N	7:D:202:GLN:HE21	2.13	0.46
9:F:165:ASN:O	9:F:165:ASN:CG	2.58	0.46
15:M:7:VAL:O	15:M:7:VAL:HG12	2.15	0.46
15:M:10:GLY:HA2	15:M:64:PHE:CZ	2.51	0.46
16:N:88:GLY:HA2	43:o:48:TYR:HD2	1.80	0.46
17:O:51:LYS:HA	17:O:141:LEU:HD11	1.97	0.46
20:R:96:MET:O	20:R:100:ARG:HD2	2.16	0.46
33:e:58:ILE:HG23	33:e:59:GLY:N	2.31	0.46
39:k:11:PHE:HA	39:k:14:THR:HG22	1.97	0.46
47:1:43:LEU:CB	48:2:54:VAL:HG21	2.27	0.46
47:1:448:LEU:C	47:1:452:THR:OG1	2.58	0.46
50:S2:147:A:O2'	50:S2:148:U:O5'	2.34	0.46
50:S2:316:G:N3	50:S2:317:C:C5	2.84	0.46
50:S2:331:C:C2	50:S2:332:G:C8	3.04	0.46
50:S2:378:U:O2	50:S2:378:U:H2'	2.16	0.46
50:S2:381:C:OP1	59:SI:48:VAL:HB	2.16	0.46
50:S2:563:G:C2	50:S2:564:A:N7	2.83	0.46
50:S2:578:C:N4	50:S2:579:C:C5	2.84	0.46
50:S2:691:G:C6	50:S2:692:G:N7	2.84	0.46
50:S2:842:C:O2	50:S2:843:C:C6	2.68	0.46
50:S2:927:C:H2'	50:S2:928:G:O5'	2.15	0.46
50:S2:962:A:C6	50:S2:963:A:C5	3.04	0.46
50:S2:1035:A:H1'	50:S2:1857:G:H1'	1.96	0.46
50:S2:1089:G:C6	50:S2:1090:C:C4	3.04	0.46
50:S2:1099:G:C5	50:S2:1100:A:C8	3.03	0.46
50:S2:1102:G:H1	50:S2:1130:G:H22	1.63	0.46
50:S2:1126:G:C2	50:S2:1127:C:C4	3.04	0.46
50:S2:1208:A:C6	50:S2:1692:U:O2	2.69	0.46
50:S2:1307:U:C2	50:S2:1308:U:H1'	2.51	0.46
50:S2:1318:G:C5	50:S2:1319:U:C5	3.03	0.46
50:S2:1379:A:H2'	50:S2:1380:C:C6	2.51	0.46
50:S2:1393:G:N1	50:S2:1394:G:C5	2.84	0.46
50:S2:1531:A:H2'	50:S2:1532:C:C1'	2.46	0.46
50:S2:1685:U:C2	50:S2:1686:G:C8	3.03	0.46
50:S2:1687:C:C2	50:S2:1688:C:H5	2.33	0.46
50:S2:1690:U:C2	50:S2:1691:U:C4	3.04	0.46
50:S2:1780:G:C2	50:S2:1781:A:C4	3.04	0.46
50:S2:1833:C:C2	50:S2:1836:G:O6	2.69	0.46
74:SX:10:ALA:O	74:SX:12:LYS:N	2.39	0.46
83:Sg:76:GLN:HB3	83:Sg:77:PHE:CE2	2.51	0.46
85:S5:37:A:H3'	85:S5:38:A:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:40:C:H5'	85:S5:40:C:H6	1.80	0.46
1:5:27:C:O2	1:5:27:C:C2'	2.42	0.46
1:5:194:C:C4	1:5:195:C:C5	3.03	0.46
1:5:432:U:O4	17:O:91:LYS:HD3	2.16	0.46
1:5:731:G:H5''	1:5:732:A:OP2	2.16	0.46
1:5:920:C:H5''	15:M:72:TYR:CD2	2.50	0.46
1:5:975:C:H2'	1:5:976:G:H1'	1.98	0.46
1:5:982:U:H2'	1:5:983:C:C5	2.46	0.46
1:5:1075:G:H2'	1:5:1076:C:C6	2.50	0.46
1:5:1169:G:N1	1:5:1170:G:C5	2.84	0.46
1:5:1205:G:C4	1:5:1206:C:C5	3.04	0.46
1:5:1238:A:C2'	1:5:1239:C:O5'	2.62	0.46
1:5:1373:A:N3	1:5:1374:G:C8	2.83	0.46
1:5:1404:G:H2'	1:5:1405:C:O4'	2.15	0.46
1:5:1412:G:C2	1:5:1413:C:N1	2.84	0.46
1:5:1541:C:H5''	4:A:21:LYS:HD2	1.98	0.46
1:5:1611:C:O4'	1:5:1612:G:N7	2.48	0.46
1:5:1673:U:O4	1:5:1674:C:N4	2.48	0.46
1:5:1758:G:N3	1:5:1758:G:H2'	2.31	0.46
1:5:1785:C:H1'	12:I:94:PHE:CZ	2.51	0.46
1:5:1929:A:H2'	17:O:49:ARG:HH22	1.81	0.46
1:5:1965:G:C6	1:5:1966:C:C5	3.04	0.46
1:5:2085:G:N2	1:5:2273:G:C5	2.84	0.46
1:5:2273:G:H5''	6:C:311:ARG:HH22	1.79	0.46
1:5:2351:C:H2'	1:5:2351:C:O2	2.15	0.46
1:5:2392:C:C2	1:5:2393:C:C5	3.04	0.46
1:5:2405:G:H5'	38:j:12:ARG:O	2.15	0.46
1:5:2441:C:C5'	35:g:9:ARG:HE	2.28	0.46
1:5:2478:C:C2	1:5:2479:G:N7	2.84	0.46
1:5:2479:G:N1	1:5:2480:G:C4	2.84	0.46
1:5:2481:G:N3	1:5:2482:C:C6	2.83	0.46
1:5:2566:G:N2	1:5:2567:G:C4	2.84	0.46
1:5:2599:G:N2	1:5:2747:U:C4	2.83	0.46
1:5:2712:G:C5	1:5:2713:C:C5	3.04	0.46
1:5:2786:C:C4'	1:5:2787:A:C8	2.99	0.46
1:5:3597:G:C6	1:5:3598:C:C4	3.03	0.46
1:5:3629:A:C6	1:5:3630:A:N7	2.84	0.46
1:5:3632:C:C4	1:5:3633:C:C5	3.04	0.46
1:5:3723:A:N1	1:5:3724:A:N6	2.64	0.46
1:5:3749:C:C5	1:5:3750:G:C8	3.04	0.46
1:5:3860:A:C2	1:5:3861:A:H1'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3873:G:C2'	1:5:3874:G:O4'	2.58	0.46
1:5:3977:C:O2	1:5:4035:G:C2	2.68	0.46
1:5:4094:G:O6	1:5:4114:C:N3	2.49	0.46
1:5:4103:C:C4	1:5:4105:A:N6	2.84	0.46
1:5:4109:G:C4	1:5:4110:C:C5	3.04	0.46
1:5:4139:G:C2	1:5:4140:C:C6	3.04	0.46
1:5:4283:G:C4	1:5:4284:C:C6	3.02	0.46
1:5:4322:G:C2	1:5:4326:G:C6	3.04	0.46
1:5:4343:U:O2	1:5:4344:U:C6	2.69	0.46
1:5:4652:G:C2	1:5:4653:C:C2	3.03	0.46
1:5:4734:A:N3	1:5:4734:A:H2'	2.30	0.46
1:5:4772:C:H2'	1:5:4773:C:O4'	2.16	0.46
1:5:4958:C:O2	1:5:4958:C:C2'	2.63	0.46
1:5:4999:G:C5	1:5:5000:G:N7	2.84	0.46
2:7:21:G:C2	2:7:58:A:N3	2.83	0.46
3:8:12:G:N3	3:8:13:G:C8	2.80	0.46
3:8:55:U:N3	3:8:62:A:H2	2.10	0.46
4:A:122:ASP:OD1	4:A:122:ASP:C	2.59	0.46
4:A:180:LEU:HD23	44:p:14:TYR:CE2	2.50	0.46
5:B:80:GLU:HG3	5:B:326:VAL:HG22	1.98	0.46
5:B:110:ILE:HG21	5:B:115:LYS:HD3	1.96	0.46
5:B:203:GLN:HE21	5:B:203:GLN:CA	2.14	0.46
5:B:228:TYR:HE1	5:B:270:GLY:HA2	1.81	0.46
7:D:30:TYR:N	7:D:30:TYR:CD1	2.83	0.46
8:E:250:ASP:OD1	8:E:250:ASP:C	2.58	0.46
9:F:149:LEU:N	9:F:197:TYR:OH	2.48	0.46
13:J:60:PHE:CD1	13:J:60:PHE:N	2.84	0.46
21:S:96:GLU:HB3	21:S:142:VAL:HG21	1.97	0.46
24:V:88:TYR:CE1	24:V:96:LEU:HB3	2.51	0.46
28:Z:4:PHE:N	28:Z:4:PHE:CD1	2.84	0.46
29:a:71:PRO:HB2	29:a:108:TYR:HA	1.97	0.46
33:e:35:TRP:CZ3	33:e:56:PRO:CD	2.86	0.46
36:h:77:LYS:HB3	36:h:78:TYR:HD1	1.81	0.46
50:S2:46:A:C6	50:S2:99:A:C8	3.03	0.46
50:S2:145:G:N7	57:SG:178:ARG:NH1	2.64	0.46
50:S2:975:G:H2'	50:S2:975:G:N3	2.31	0.46
50:S2:978:G:C5	50:S2:979:C:C5	3.03	0.46
50:S2:1045:U:O4	50:S2:1046:U:O4	2.34	0.46
50:S2:1209:A:C2	50:S2:1691:U:O2	2.69	0.46
50:S2:1232:U:O4	69:SS:138:THR:HG21	2.16	0.46
50:S2:1277:C:H2'	50:S2:1278:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1284:A:N6	63:SM:33:ARG:CD	2.72	0.46
50:S2:1310:U:O4'	82:Sf:143:LYS:CG	2.63	0.46
50:S2:1462:U:O2	50:S2:1464:C:N4	2.49	0.46
51:SA:19:LEU:HD21	68:SR:106:LEU:HD21	1.96	0.46
60:SJ:130:ILE:HG12	60:SJ:135:ILE:HD11	1.97	0.46
61:SK:66:HIS:O	61:SK:67:PHE:HB2	2.16	0.46
63:SM:19:GLN:HG2	63:SM:88:TRP:CG	2.51	0.46
64:SN:4:MET:HE2	64:SN:124:ARG:HH11	1.81	0.46
70:ST:78:ILE:HG23	70:ST:79:TYR:CD1	2.50	0.46
83:Sg:5:MET:SD	83:Sg:312:VAL:HG22	2.56	0.46
84:S4:22:U:H6	84:S4:22:U:H3'	1.80	0.46
85:S5:37:A:C8	85:S5:38:A:C8	3.04	0.46
1:5:2:G:C6	1:5:3:C:C4	3.04	0.46
1:5:37:U:O4	1:5:38:A:C6	2.68	0.46
1:5:47:A:H4'	1:5:48:G:OP1	2.16	0.46
1:5:88:A:O2'	1:5:89:C:H5'	2.15	0.46
1:5:303:C:C2	1:5:304:C:C5	3.02	0.46
1:5:316:U:O4	1:5:4353:U:O4'	2.34	0.46
1:5:388:A:C5	1:5:411:G:C6	3.03	0.46
1:5:516:C:C4	1:5:646:G:N1	2.84	0.46
1:5:678:C:C2	1:5:679:C:C5	3.04	0.46
1:5:741:C:H2'	1:5:742:G:O4'	2.15	0.46
1:5:1085:C:C2	1:5:1086:C:C6	3.04	0.46
1:5:1234:G:C6	1:5:1235:G:C6	3.04	0.46
1:5:1555:G:C6	1:5:1556:C:C4	3.03	0.46
1:5:1733:G:C6	1:5:4214:A:C2	3.04	0.46
1:5:1811:G:N2	1:5:1812:C:N1	2.63	0.46
1:5:1944:A:N6	1:5:1945:G:C5	2.84	0.46
1:5:2050:G:C2	1:5:2051:C:C2	3.04	0.46
1:5:2263:A:H5'	45:r:39:ARG:HH22	1.81	0.46
1:5:2311:C:C4	1:5:2312:U:C6	3.03	0.46
1:5:2494:U:N3	1:5:2495:U:C6	2.84	0.46
1:5:2507:A:C6	1:5:2508:U:N1	2.83	0.46
1:5:2598:A:O2'	1:5:2599:G:H5'	2.15	0.46
1:5:2753:G:C3'	1:5:2754:G:O4'	2.64	0.46
1:5:2857:A:C2	1:5:2858:A:C4	3.03	0.46
1:5:3610:A:H2'	1:5:3611:A:H8	1.81	0.46
1:5:3635:A:C8	1:5:3635:A:H3'	2.51	0.46
1:5:3648:A:C5	1:5:3785:A:C6	3.04	0.46
1:5:3696:C:C2	1:5:3697:U:C6	3.04	0.46
1:5:3837:C:H2'	1:5:3838:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4133:C:O2	1:5:4133:C:H2'	2.14	0.46
1:5:4216:G:N3	1:5:4217:G:C8	2.84	0.46
1:5:4326:G:H2'	1:5:4327:C:O4'	2.16	0.46
1:5:4333:C:H2'	1:5:4334:U:O5'	2.16	0.46
1:5:4333:C:C2'	1:5:4334:U:O5'	2.63	0.46
1:5:4343:U:O2	1:5:4343:U:H2'	2.15	0.46
1:5:4518:A:H2'	5:B:257:TRP:CZ3	2.51	0.46
1:5:4528:G:N3	1:5:4529:G:C8	2.84	0.46
1:5:4882:U:O2'	1:5:4883:C:H2'	2.16	0.46
1:5:4904:G:N3	1:5:4905:C:C6	2.84	0.46
1:5:4939:C:O3'	1:5:4941:G:P	2.74	0.46
1:5:4997:G:C5	1:5:4998:G:C8	3.04	0.46
1:5:5028:G:C2	1:5:5029:C:C4	3.04	0.46
2:7:8:G:C2	2:7:9:C:C2	3.03	0.46
2:7:11:A:O2'	2:7:13:A:OP2	2.33	0.46
3:8:56:G:C6	3:8:57:C:C4	3.04	0.46
4:A:186:TYR:HA	4:A:196:TRP:CZ3	2.51	0.46
5:B:136:LYS:C	5:B:138:GLN:H	2.24	0.46
6:C:31:PRO:HB3	19:Q:24:TYR:HE2	1.80	0.46
6:C:122:TYR:CB	6:C:280:PRO:HG3	2.46	0.46
7:D:33:ARG:HE	7:D:37:VAL:HG21	1.80	0.46
7:D:90:VAL:HB	7:D:226:TYR:CE1	2.51	0.46
9:F:213:PHE:N	9:F:213:PHE:HD1	2.14	0.46
10:G:29:ASN:HB2	10:G:32:PHE:CZ	2.50	0.46
10:G:102:TYR:HH	10:G:208:ASN:H	1.63	0.46
16:N:150:TRP:HE3	16:N:150:TRP:C	2.23	0.46
21:S:106:VAL:O	21:S:107:THR:C	2.59	0.46
22:T:40:VAL:HG13	22:T:96:ILE:HG23	1.98	0.46
24:V:57:VAL:CG2	24:V:84:GLN:HG2	2.44	0.46
34:f:74:VAL:HG13	34:f:84:VAL:HG13	1.98	0.46
37:i:39:PHE:C	37:i:39:PHE:CD2	2.93	0.46
46:z:59:PRO:O	46:z:60:ARG:HB2	2.16	0.46
46:z:120:ILE:HG12	46:z:121:PRO:HD3	1.98	0.46
46:z:199:GLN:O	46:z:200:ASN:C	2.58	0.46
47:1:449:LEU:HA	47:1:452:THR:OG1	2.14	0.46
50:S2:141:A:N6	50:S2:177:G:N2	2.64	0.46
50:S2:218:U:N3	50:S2:219:U:C5	2.83	0.46
50:S2:402:C:O2	50:S2:402:C:H2'	2.15	0.46
50:S2:493:A:H1'	50:S2:574:A:OP1	2.15	0.46
50:S2:545:A:C2	50:S2:546:G:N7	2.84	0.46
50:S2:571:U:C2	50:S2:572:U:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:947:G:C6	50:S2:948:C:C4	3.03	0.46
50:S2:956:G:N2	50:S2:957:A:C4	2.84	0.46
50:S2:963:A:N3	50:S2:964:A:C5	2.84	0.46
50:S2:1005:G:C4	50:S2:1006:C:C5	3.03	0.46
50:S2:1067:C:N4	50:S2:1068:G:C5	2.83	0.46
50:S2:1101:U:N3	50:S2:1102:G:N7	2.64	0.46
50:S2:1223:A:O2'	50:S2:1651:A:H5'	2.16	0.46
50:S2:1293:A:H3'	82:Sf:151:ASN:O	2.16	0.46
50:S2:1453:C:N3	50:S2:1455:A:C8	2.84	0.46
50:S2:1455:A:C5	50:S2:1456:G:N7	2.83	0.46
50:S2:1568:C:H2'	50:S2:1569:A:N7	2.31	0.46
50:S2:1668:U:H5'	71:SU:77:TRP:CZ2	2.51	0.46
50:S2:1771:G:N1	50:S2:1772:C:C4	2.83	0.46
50:S2:1786:U:C2	50:S2:1787:G:N7	2.83	0.46
50:S2:1820:G:H2'	50:S2:1821:U:O4'	2.16	0.46
50:S2:1832:A:N6	50:S2:1833:C:H41	2.13	0.46
51:SA:158:ASP:OD2	72:SV:34:MET:HE2	2.16	0.46
51:SA:200:ASP:HA	51:SA:203:PHE:CE2	2.51	0.46
53:SC:179:THR:OG1	53:SC:180:VAL:N	2.48	0.46
54:SD:222:PRO:HB2	83:Sg:226:HIS:NE2	2.31	0.46
59:SI:8:TRP:NE1	59:SI:9:HIS:HB3	2.31	0.46
59:SI:65:PHE:CE2	59:SI:104:ILE:HG21	2.50	0.46
68:SR:94:GLU:O	68:SR:95:ILE:HB	2.15	0.46
69:SS:124:ARG:HD3	69:SS:131:VAL:HA	1.98	0.46
85:S5:5:G:C2'	85:S5:6:G:H5'	2.45	0.46
85:S5:41:C:N3	85:S5:42:C:C4	2.83	0.46
1:5:118:C:N3	1:5:121:A:N7	2.63	0.46
1:5:150:U:OP2	10:G:140:VAL:HG23	2.16	0.46
1:5:315:G:N1	29:a:62:HIS:CB	2.78	0.46
1:5:348:G:C4	1:5:350:C:C5	3.04	0.46
1:5:379:G:C2	1:5:380:U:C5	3.04	0.46
1:5:458:C:C2	1:5:459:C:C5	3.03	0.46
1:5:655:C:C2'	1:5:656:C:O5'	2.63	0.46
1:5:656:C:O2	1:5:657:C:C6	2.69	0.46
1:5:752:G:N2	1:5:753:C:H1'	2.31	0.46
1:5:1292:C:C3'	1:5:1293:G:H5''	2.46	0.46
1:5:1358:G:H3'	6:C:114:ARG:HH22	1.80	0.46
1:5:1463:C:N3	1:5:1464:C:C5	2.84	0.46
1:5:1612:G:C8	1:5:1612:G:H5''	2.51	0.46
1:5:1620:U:O2	1:5:1621:A:N7	2.49	0.46
1:5:1925:G:C6	1:5:1926:C:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1930:U:O5'	1:5:1930:U:H6	1.99	0.46
1:5:1975:G:C5	1:5:1984:A:N3	2.84	0.46
1:5:1978:C:C2	1:5:1979:A:H1'	2.51	0.46
1:5:2071:A:N3	1:5:2072:C:C5	2.84	0.46
1:5:2272:C:H2'	1:5:2273:G:O5'	2.16	0.46
1:5:2505:C:H1'	1:5:2506:G:C6	2.51	0.46
1:5:2632:U:C2	1:5:2633:U:H5	2.30	0.46
1:5:3696:C:N3	1:5:3697:U:C5	2.84	0.46
1:5:3960:A:N6	1:5:3965:A:C8	2.82	0.46
1:5:4054:C:H1'	46:z:35:GLN:CG	2.46	0.46
1:5:4134:C:C2	1:5:4135:G:C8	3.04	0.46
1:5:4146:G:C2	1:5:4147:G:C5	3.03	0.46
1:5:4518:A:C3'	1:5:4519:C:C5'	2.93	0.46
1:5:4532:U:C5	1:5:4554:G:N2	2.79	0.46
1:5:4559:A:O3'	1:5:4560:C:O2	2.34	0.46
1:5:4652:G:C6	1:5:4653:C:N4	2.84	0.46
1:5:4973:U:H1'	1:5:4986:G:C2	2.51	0.46
1:5:4977:A:C5	1:5:4978:G:C2	3.04	0.46
2:7:45:U:H2'	2:7:46:C:O4'	2.16	0.46
3:8:75:G:C6	3:8:76:C:N4	2.84	0.46
3:8:131:G:N1	3:8:132:G:C5	2.84	0.46
3:8:144:U:O2	3:8:145:C:C6	2.69	0.46
4:A:53:GLY:HA2	4:A:192:LYS:HD3	1.98	0.46
5:B:108:GLU:HB2	5:B:137:TRP:HB3	1.97	0.46
6:C:200:ARG:CZ	27:Y:11:ARG:HD2	2.46	0.46
8:E:43:ASN:HB3	8:E:58:MET:CE	2.46	0.46
8:E:90:LYS:N	8:E:91:PRO:CD	2.79	0.46
9:F:58:HIS:C	9:F:60:HIS:N	2.72	0.46
9:F:98:ARG:NH2	9:F:226:THR:HG23	2.30	0.46
9:F:100:ILE:HG21	19:Q:4:ASP:CG	2.41	0.46
17:O:47:PHE:C	17:O:47:PHE:CD2	2.94	0.46
19:Q:58:ARG:HH11	19:Q:58:ARG:CB	2.29	0.46
21:S:28:TYR:HD2	22:T:151:LEU:HD11	1.81	0.46
24:V:60:MET:HE1	24:V:108:ASN:HA	1.98	0.46
31:c:22:MET:HA	31:c:22:MET:HE2	1.98	0.46
33:e:126:ASN:C	33:e:126:ASN:ND2	2.72	0.46
39:k:22:SER:O	39:k:24:LYS:N	2.49	0.46
46:z:112:ALA:HB1	46:z:120:ILE:HG21	1.96	0.46
50:S2:118:C:H1'	50:S2:445:A:C5	2.50	0.46
50:S2:165:G:C2'	50:S2:166:A:C8	2.86	0.46
50:S2:287:U:O4	50:S2:297:A:N3	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:302:A:C6	50:S2:303:C:C4	3.04	0.46
50:S2:404:G:N2	50:S2:405:G:C4	2.84	0.46
50:S2:502:C:O2	50:S2:502:C:C2'	2.64	0.46
50:S2:694:G:N1	50:S2:695:C:C5	2.83	0.46
50:S2:797:C:N3	58:SH:109:ARG:NH2	2.62	0.46
50:S2:803:C:C4	50:S2:804:U:C5	3.04	0.46
50:S2:1004:U:N3	50:S2:1005:G:N7	2.64	0.46
50:S2:1041:G:N2	50:S2:1075:C:C2	2.84	0.46
50:S2:1050:A:N6	50:S2:1051:G:C4	2.84	0.46
50:S2:1134:G:N3	50:S2:1135:C:C5	2.82	0.46
50:S2:1185:C:C4	50:S2:1186:U:C5	3.04	0.46
50:S2:1341:C:H4'	50:S2:1342:U:OP1	2.15	0.46
50:S2:1513:C:C2	50:S2:1514:G:C8	3.04	0.46
50:S2:1528:G:N1	50:S2:1529:C:N4	2.62	0.46
50:S2:1610:G:C2	50:S2:1611:G:C5	3.04	0.46
50:S2:1641:A:C1'	86:S6:31:A:O2'	2.64	0.46
50:S2:1717:C:C2	50:S2:1817:G:C2	3.03	0.46
50:S2:1732:G:C6	50:S2:1733:U:C4	3.04	0.46
50:S2:1771:G:N2	50:S2:1772:C:N1	2.64	0.46
50:S2:1810:U:C2	50:S2:1811:C:C6	3.03	0.46
50:S2:1830:U:C4	84:S4:19:U:C4'	2.96	0.46
51:SA:158:ASP:OD1	51:SA:159:ILE:HG22	2.16	0.46
56:SF:199:VAL:O	56:SF:203:ASN:ND2	2.49	0.46
63:SM:32:ALA:CB	63:SM:41:ALA:HB2	2.45	0.46
63:SM:51:VAL:HA	63:SM:77:ILE:HG22	1.98	0.46
66:SP:53:GLN:N	66:SP:53:GLN:OE1	2.49	0.46
68:SR:71:ILE:C	68:SR:73:LEU:N	2.74	0.46
86:S6:55:U:H2'	86:S6:56:C:H5''	1.97	0.46
1:5:74:G:H5''	14:L:59:VAL:HG13	1.98	0.45
1:5:120:A:N7	1:5:149:A:C6	2.84	0.45
1:5:142:G:N1	1:5:144:G:C8	2.84	0.45
1:5:145:G:N2	1:5:146:G:H1'	2.31	0.45
1:5:154:G:C6	1:5:155:C:N4	2.84	0.45
1:5:695:G:H3'	1:5:696:C:C5'	2.45	0.45
1:5:1388:A:N1	1:5:1396:G:N3	2.64	0.45
1:5:1443:A:C6	1:5:1444:G:C5	3.04	0.45
1:5:1584:G:C4	1:5:1585:C:C5	3.04	0.45
1:5:1663:C:O2'	1:5:2319:C:N4	2.48	0.45
1:5:1751:A:N6	1:5:1752:G:N7	2.64	0.45
1:5:1811:G:H2'	1:5:1812:C:H6	1.81	0.45
1:5:1829:G:C4	1:5:1830:G:C8	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1866:U:O4	1:5:4405:G:C1'	2.64	0.45
1:5:1938:C:H5'	1:5:1938:C:H6	1.81	0.45
1:5:1970:A:N6	1:5:2016:C:OP2	2.44	0.45
1:5:2032:U:O2'	21:S:91:HIS:HE1	1.99	0.45
1:5:2090:U:H2'	1:5:2259:G:OP1	2.16	0.45
1:5:2267:U:O2'	1:5:2268:A:P	2.74	0.45
1:5:2282:A:C2'	1:5:2283:G:H5'	2.46	0.45
1:5:2458:C:O2'	1:5:3671:G:H1'	2.16	0.45
1:5:2515:G:C5	1:5:2516:G:C8	3.03	0.45
1:5:2543:A:C2	1:5:2773:G:C6	3.04	0.45
1:5:2666:U:C5	1:5:2668:G:OP2	2.68	0.45
1:5:2759:G:H2'	1:5:2760:G:H1'	1.97	0.45
1:5:2768:C:H4'	1:5:2769:U:OP2	2.16	0.45
1:5:2805:C:H1'	35:g:5:LEU:O	2.16	0.45
1:5:2823:G:N1	1:5:2824:C:C5	2.84	0.45
1:5:2854:G:C8	1:5:2854:G:C3'	2.97	0.45
1:5:3616:U:H1'	1:5:3617:G:C6	2.50	0.45
1:5:3631:U:O2	1:5:3631:U:H2'	2.16	0.45
1:5:3723:A:N1	1:5:3724:A:C6	2.84	0.45
1:5:3751:G:H21	1:5:3775:A:H8	1.59	0.45
1:5:3819:G:H2'	1:5:3819:G:N3	2.31	0.45
1:5:3856:A:N6	1:5:3857:G:C6	2.85	0.45
1:5:3960:A:H2	1:5:4045:G:C2'	2.26	0.45
1:5:4079:C:C4	1:5:4080:C:C5	3.04	0.45
1:5:4085:A:C3'	1:5:4086:G:H5''	2.46	0.45
1:5:4106:G:C5	1:5:4107:G:H1'	2.51	0.45
1:5:4121:G:N2	4:A:85:GLY:CA	2.79	0.45
1:5:4175:G:N1	1:5:4176:C:C4	2.84	0.45
1:5:4277:G:C2	1:5:4278:C:C2	3.04	0.45
1:5:4489:G:C2	1:5:4490:C:C2	3.04	0.45
1:5:4588:U:O2'	1:5:4589:A:H2'	2.14	0.45
1:5:4905:C:N3	1:5:4906:C:C5	2.85	0.45
1:5:4970:C:C2	1:5:4971:A:C8	3.04	0.45
2:7:23:A:O2'	2:7:24:C:P	2.74	0.45
3:8:31:G:C5	3:8:32:C:C5	3.04	0.45
3:8:38:U:C2	36:h:92:ARG:NH1	2.83	0.45
3:8:45:C:C2'	3:8:46:G:O5'	2.64	0.45
6:C:100:ARG:HD3	6:C:100:ARG:C	2.41	0.45
6:C:252:TRP:CB	6:C:257:PHE:HD1	2.29	0.45
6:C:269:LYS:O	6:C:278:ASN:ND2	2.49	0.45
7:D:111:ASN:C	7:D:111:ASN:HD22	2.24	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:111:TYR:CZ	45:r:119:ARG:HD3	2.51	0.45
11:H:41:ILE:CD1	11:H:69:THR:CB	2.89	0.45
14:L:101:ARG:HA	37:i:25:ARG:HH21	1.81	0.45
20:R:117:ARG:NH2	20:R:117:ARG:CB	2.75	0.45
21:S:33:PHE:HZ	21:S:106:VAL:HB	1.81	0.45
33:e:90:MET:HE1	45:r:113:ARG:HA	1.99	0.45
43:o:55:ILE:HG23	86:S6:75:C:H4'	1.87	0.45
46:z:171:HIS:O	46:z:179:LEU:HD21	2.16	0.45
50:S2:118:C:H1'	50:S2:445:A:N1	2.30	0.45
50:S2:192:C:H4'	50:S2:192:C:OP1	2.16	0.45
50:S2:312:G:OP1	50:S2:314:U:OP2	2.33	0.45
50:S2:365:C:H4'	50:S2:402:C:O2'	2.16	0.45
50:S2:499:G:N1	50:S2:504:G:O6	2.49	0.45
50:S2:539:C:C4	50:S2:540:U:C5	3.03	0.45
50:S2:641:A:O2'	50:S2:645:C:OP1	2.34	0.45
50:S2:893:U:N3	50:S2:894:G:N7	2.64	0.45
50:S2:899:U:N3	50:S2:900:C:C6	2.85	0.45
50:S2:922:A:OP1	73:SW:28:ARG:NH2	2.50	0.45
50:S2:990:A:C2	50:S2:992:A:C5	3.04	0.45
50:S2:993:G:N2	50:S2:994:C:C1'	2.79	0.45
50:S2:1180:C:O2	50:S2:1180:C:C2'	2.64	0.45
50:S2:1295:A:C6	50:S2:1296:U:H1'	2.51	0.45
50:S2:1310:U:C5'	82:Sf:143:LYS:HE3	2.46	0.45
50:S2:1310:U:C6	82:Sf:143:LYS:CE	2.98	0.45
50:S2:1338:G:C6	50:S2:1339:U:C4	3.04	0.45
50:S2:1342:U:H5	50:S2:1483:A:N7	2.08	0.45
50:S2:1383:A:C2	50:S2:1384:C:C6	3.04	0.45
50:S2:1408:U:O4	50:S2:1439:A:C6	2.61	0.45
50:S2:1462:U:C2	50:S2:1464:C:N4	2.84	0.45
50:S2:1485:U:H2'	50:S2:1486:A:O4'	2.16	0.45
50:S2:1533:A:C2	50:S2:1537:A:C1'	2.99	0.45
50:S2:1590:C:C5	50:S2:1591:C:H1'	2.50	0.45
50:S2:1594:A:N6	50:S2:1595:U:C5	2.81	0.45
50:S2:1617:G:H1'	50:S2:1661:A:H2	1.81	0.45
50:S2:1647:A:N6	50:S2:1675:A:C2	2.84	0.45
50:S2:1673:U:C5	50:S2:1674:G:C8	3.05	0.45
50:S2:1832:A:OP2	50:S2:1837:G:OP2	2.33	0.45
53:SC:163:VAL:HG22	53:SC:241:PHE:CZ	2.51	0.45
54:SD:103:GLU:OE1	54:SD:106:ARG:NH1	2.49	0.45
57:SG:229:ALA:HA	57:SG:232:ARG:HB2	1.98	0.45
58:SH:61:ILE:HD12	58:SH:93:VAL:O	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SJ:124:HIS:O	60:SJ:127:ARG:N	2.49	0.45
61:SK:82:TYR:CD2	61:SK:82:TYR:C	2.94	0.45
62:SL:96:ILE:HD12	62:SL:96:ILE:N	2.31	0.45
63:SM:19:GLN:HB3	63:SM:88:TRP:HB3	1.97	0.45
63:SM:31:LEU:HB3	63:SM:33:ARG:HB3	1.97	0.45
64:SN:4:MET:CE	64:SN:124:ARG:HD3	2.46	0.45
65:SO:117:ARG:HH22	79:Sc:62:GLU:HG2	1.81	0.45
66:SP:53:GLN:N	66:SP:53:GLN:CD	2.74	0.45
67:SQ:85:ARG:HD3	67:SQ:119:LEU:HD23	1.98	0.45
72:SV:21:ASN:HB3	73:SW:67:GLY:HA3	1.98	0.45
85:S5:15:G:H8	85:S5:15:G:OP2	1.98	0.45
85:S5:52:G:C4	85:S5:53:G:H8	2.32	0.45
1:5:31:U:H5''	16:N:71:ARG:HH21	1.81	0.45
1:5:116:G:C6	1:5:117:C:C4	3.05	0.45
1:5:224:U:O2	1:5:224:U:O4'	2.33	0.45
1:5:271:C:C4	1:5:272:U:H5	2.28	0.45
1:5:320:C:C4	1:5:321:U:C5	3.04	0.45
1:5:447:C:C4	1:5:448:G:N7	2.84	0.45
1:5:512:U:H3'	1:5:513:U:H5'	1.98	0.45
1:5:660:A:C5	1:5:661:C:C5	3.03	0.45
1:5:662:C:C2'	1:5:663:G:H8	2.20	0.45
1:5:709:C:C4	1:5:710:G:N7	2.85	0.45
1:5:731:G:C6	1:5:732:A:N9	2.84	0.45
1:5:919:C:N3	1:5:920:C:C5	2.84	0.45
1:5:1171:G:N2	1:5:1191:C:C2	2.84	0.45
1:5:1184:A:C4	1:5:1185:G:C8	3.05	0.45
1:5:1437:C:O2	1:5:2098:G:C8	2.70	0.45
1:5:1491:A:C5	1:5:1492:G:N7	2.84	0.45
1:5:1543:G:N1	1:5:1544:G:N7	2.63	0.45
1:5:1558:A:C2	1:5:1559:G:C5	3.04	0.45
1:5:1602:U:C2	1:5:1603:C:C5	3.04	0.45
1:5:1632:A:N1	1:5:1634:A:H8	2.11	0.45
1:5:1645:C:H2'	1:5:1646:A:C8	2.51	0.45
1:5:1666:C:H2'	1:5:1667:G:O5'	2.16	0.45
1:5:1694:C:O2	1:5:1694:C:H2'	2.16	0.45
1:5:1816:C:O2	1:5:1816:C:C2'	2.65	0.45
1:5:1858:A:C2	1:5:1859:C:C6	3.05	0.45
1:5:1972:G:N3	1:5:1973:G:C8	2.85	0.45
1:5:2001:G:N2	1:5:2004:U:C6	2.85	0.45
1:5:2059:C:O2	21:S:118:ARG:NH1	2.46	0.45
1:5:2246:C:O2'	1:5:2247:C:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2339:G:C2	1:5:2340:C:N1	2.85	0.45
1:5:2451:A:N7	1:5:2452:G:N7	2.64	0.45
1:5:2552:G:N2	1:5:2764:A:N7	2.64	0.45
1:5:2575:U:O4	28:Z:51:ARG:NH2	2.50	0.45
1:5:2662:G:H2'	1:5:2663:G:O5'	2.16	0.45
1:5:2904:U:OP2	1:5:2905:C:N4	2.49	0.45
1:5:3632:C:N3	1:5:3633:C:C5	2.84	0.45
1:5:3652:A:C3'	1:5:3653:A:C8	2.98	0.45
1:5:3657:U:C2	1:5:3658:C:C5	3.04	0.45
1:5:3722:G:C2	1:5:3723:A:N9	2.85	0.45
1:5:3776:G:O4'	1:5:3776:G:N3	2.50	0.45
1:5:3811:G:O2'	1:5:3814:U:OP2	2.28	0.45
1:5:4055:U:H4'	46:z:37:SER:HA	1.99	0.45
1:5:4087:G:H1	10:G:46:GLN:HG2	1.80	0.45
1:5:4111:U:C4	1:5:4112:C:C5	3.05	0.45
1:5:4114:C:H2'	1:5:4115:G:C1'	2.44	0.45
1:5:4233:A:N7	1:5:4235:G:C8	2.84	0.45
1:5:4293:U:N3	1:5:4294:C:C5	2.84	0.45
1:5:4470:G:C2	1:5:4486:C:N3	2.84	0.45
1:5:4483:C:H2'	1:5:4484:A:O5'	2.17	0.45
1:5:4926:C:H2'	1:5:4927:G:H21	1.81	0.45
1:5:5022:U:O2	1:5:5022:U:H2'	2.16	0.45
1:5:5050:C:H1'	5:B:374:PHE:CE2	2.51	0.45
2:7:16:A:C5	2:7:17:C:C5	3.04	0.45
2:7:62:U:O2	2:7:64:G:C8	2.70	0.45
3:8:63:U:C2	3:8:63:U:C3'	2.98	0.45
4:A:40:TYR:CE2	4:A:89:TYR:HD2	2.34	0.45
6:C:41:HIS:HB3	6:C:244:GLY:HA2	1.97	0.45
7:D:282:GLN:C	7:D:283:LYS:O	2.54	0.45
8:E:46:LEU:HG	8:E:52:ARG:HG2	1.98	0.45
9:F:245:LEU:HD22	9:F:249:MET:SD	2.56	0.45
11:H:171:ASP:OD1	11:H:173:ARG:NH1	2.48	0.45
20:R:131:VAL:CG2	20:R:132:PHE:CZ	2.99	0.45
35:g:99:GLU:HA	35:g:99:GLU:OE1	2.16	0.45
37:i:63:VAL:O	37:i:63:VAL:HG12	2.15	0.45
40:l:25:GLN:HE22	47:1:272:TYR:HD1	1.63	0.45
43:o:39:ARG:O	43:o:43:ARG:HG2	2.16	0.45
46:z:161:LYS:HE2	86:S6:55:U:O5'	2.17	0.45
50:S2:71:G:O2'	50:S2:72:C:O4'	2.33	0.45
50:S2:102:A:H5'	50:S2:104:A:N3	2.32	0.45
50:S2:220:U:C4	50:S2:221:A:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:335:G:C2	50:S2:336:A:C8	3.05	0.45
50:S2:375:U:C1'	62:SL:7:GLU:OE1	2.63	0.45
50:S2:428:U:C4	60:SJ:7:TRP:CZ2	3.05	0.45
50:S2:521:A:H2'	50:S2:522:A:O4'	2.16	0.45
50:S2:621:C:H2'	50:S2:622:C:O4'	2.15	0.45
50:S2:961:G:N3	50:S2:962:A:C8	2.83	0.45
50:S2:1031:A:H2'	50:S2:1032:C:O4'	2.15	0.45
50:S2:1110:G:C6	50:S2:1111:U:C5	3.05	0.45
50:S2:1176:G:C5	50:S2:1177:U:C5	3.05	0.45
50:S2:1210:G:C6	50:S2:1211:G:N7	2.83	0.45
50:S2:1293:A:C1'	82:Sf:150:PHE:HD2	2.28	0.45
50:S2:1297:U:O2	50:S2:1299:A:H8	1.99	0.45
50:S2:1332:A:H2	50:S2:1333:U:H1'	1.79	0.45
50:S2:1405:A:C2	50:S2:1406:G:N9	2.83	0.45
50:S2:1841:C:C2	50:S2:1842:C:H5	2.31	0.45
51:SA:104:THR:O	51:SA:107:THR:HG23	2.16	0.45
52:SB:34:LYS:O	52:SB:232:HIS:HE1	1.99	0.45
53:SC:209:VAL:HG21	53:SC:233:LEU:HD13	1.97	0.45
54:SD:222:PRO:CB	83:Sg:226:HIS:HE2	2.29	0.45
56:SF:49:LEU:HD23	67:SQ:49:TYR:HB2	1.96	0.45
58:SH:109:ARG:HG3	58:SH:110:THR:C	2.40	0.45
58:SH:162:GLN:HA	58:SH:162:GLN:OE1	2.16	0.45
68:SR:20:TYR:HB3	68:SR:23:ARG:HB2	1.99	0.45
85:S5:49:C:H1'	85:S5:65:G:N2	2.31	0.45
86:S6:65:G:C2	86:S6:66:U:C4	3.04	0.45
1:5:114:G:O6	1:5:157:U:C2	2.69	0.45
1:5:184:U:O2	1:5:254:G:C2	2.69	0.45
1:5:209:U:C2	1:5:233:U:N3	2.84	0.45
1:5:294:G:C2'	1:5:294:G:N3	2.79	0.45
1:5:474:C:N3	1:5:475:G:N7	2.65	0.45
1:5:708:G:OP1	34:f:46:ARG:NH2	2.49	0.45
1:5:735:G:H2'	1:5:736:C:C6	2.51	0.45
1:5:743:G:H1	1:5:921:C:H42	1.63	0.45
1:5:1092:G:N1	1:5:1093:C:C4	2.84	0.45
1:5:1188:C:O2	1:5:1188:C:C2'	2.63	0.45
1:5:1246:G:C6	1:5:1247:U:C5	3.04	0.45
1:5:1354:A:N1	1:5:1385:G:O2'	2.42	0.45
1:5:1446:C:H2'	1:5:1447:C:H5'	1.97	0.45
1:5:1446:C:N3	1:5:1447:C:C6	2.84	0.45
1:5:1663:C:H2'	1:5:1664:U:C6	2.50	0.45
1:5:1698:C:C6	1:5:1698:C:H5'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1698:C:H4'	1:5:1699:A:OP2	2.17	0.45
1:5:1743:A:C5	1:5:1744:U:C5	3.04	0.45
1:5:1752:G:C5	1:5:1753:G:C8	3.05	0.45
1:5:1781:U:O2	1:5:1782:U:C6	2.69	0.45
1:5:1997:U:H3'	1:5:1998:A:H5''	1.97	0.45
1:5:2008:U:H5	1:5:2010:A:H3'	1.81	0.45
1:5:2612:G:C5	1:5:2613:C:C6	3.04	0.45
1:5:2744:A:C6	1:5:2745:A:N6	2.85	0.45
1:5:2779:C:O2'	3:8:112:G:OP1	2.28	0.45
1:5:2811:G:H22	1:5:2813:A:C3'	2.28	0.45
1:5:2867:C:C2	1:5:2884:G:C2	3.04	0.45
1:5:2908:U:C2	1:5:2909:C:C6	3.04	0.45
1:5:3603:G:H2'	1:5:3604:A:N3	2.31	0.45
1:5:3635:A:N1	1:5:3636:C:H1'	2.31	0.45
1:5:3736:A:O2'	1:5:3737:A:C4'	2.64	0.45
1:5:3928:A:H5'	16:N:89:VAL:CG1	2.46	0.45
1:5:3941:G:C5	1:5:4073:A:C6	3.01	0.45
1:5:4091:G:C6	1:5:4092:G:C8	3.04	0.45
1:5:4095:G:H22	1:5:4096:C:N4	2.12	0.45
1:5:4202:U:C2	1:5:4204:C:C4	3.04	0.45
1:5:4203:A:N6	1:5:4221:C:C2	2.85	0.45
1:5:4292:A:O4'	1:5:4330:G:C1'	2.65	0.45
1:5:4323:A:H4'	7:D:176:SER:HB3	1.98	0.45
1:5:4524:G:N3	5:B:252:ALA:HB1	2.31	0.45
1:5:4696:C:H2'	1:5:4697:U:O4'	2.16	0.45
1:5:4731:G:C8	1:5:4732:G:C5	3.04	0.45
1:5:5006:U:C1'	1:5:5042:A:N7	2.80	0.45
4:A:29:LEU:HD23	4:A:76:PHE:HE1	1.81	0.45
4:A:77:ILE:HD13	4:A:128:ARG:HB2	1.97	0.45
6:C:197:ARG:C	6:C:198:ASN:CG	2.84	0.45
6:C:322:LEU:O	6:C:325:MET:HB3	2.16	0.45
7:D:62:CYS:HB3	7:D:105:LEU:HD22	1.98	0.45
7:D:99:TYR:CD1	7:D:165:GLY:HA2	2.51	0.45
7:D:106:ALA:HB2	7:D:166:ALA:HA	1.97	0.45
11:H:162:GLN:HG3	11:H:180:TYR:HA	1.98	0.45
14:L:178:ALA:HB1	29:a:146:LEU:HD21	1.99	0.45
24:V:96:LEU:HD12	25:W:20:ARG:O	2.15	0.45
25:W:8:PHE:CE1	25:W:51:TRP:CH2	3.04	0.45
26:X:74:TYR:CE1	26:X:116:LEU:HD22	2.51	0.45
32:d:46:LEU:HD12	32:d:72:VAL:HG11	1.99	0.45
39:k:23:VAL:HG13	39:k:66:VAL:HA	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:o:11:PHE:HA	43:o:18:HIS:HA	1.98	0.45
47:1:81:ILE:HG22	47:1:85:VAL:CG2	2.42	0.45
47:1:292:ILE:HG21	47:1:449:LEU:HB3	1.99	0.45
50:S2:99:A:OP2	50:S2:409:C:OP2	2.34	0.45
50:S2:380:G:N2	50:S2:382:C:C3'	2.73	0.45
50:S2:443:U:C2	50:S2:444:G:H1'	2.51	0.45
50:S2:454:U:C2'	50:S2:455:A:O5'	2.65	0.45
50:S2:556:U:H1'	50:S2:557:U:C5	2.51	0.45
50:S2:583:C:N4	50:S2:584:G:C5	2.84	0.45
50:S2:900:C:C2	50:S2:901:G:C8	3.04	0.45
50:S2:962:A:C4	50:S2:963:A:C8	3.04	0.45
50:S2:1050:A:H4'	50:S2:1846:G:O2'	2.16	0.45
50:S2:1110:G:C5	50:S2:1111:U:C5	3.04	0.45
50:S2:1211:G:C6	50:S2:1212:G:N7	2.82	0.45
50:S2:1245:G:C5	50:S2:1246:A:C8	3.05	0.45
50:S2:1335:G:C4	50:S2:1336:C:C6	3.05	0.45
50:S2:1377:U:C2'	51:SA:102:ARG:HH21	2.28	0.45
50:S2:1421:A:C6	50:S2:1422:G:C4	3.05	0.45
50:S2:1508:A:N6	50:S2:1510:G:C4	2.84	0.45
50:S2:1552:G:OP1	50:S2:1553:C:O2	2.34	0.45
50:S2:1590:C:C5	50:S2:1591:C:C1'	2.98	0.45
50:S2:1644:C:O2'	50:S2:1645:C:O5'	2.34	0.45
50:S2:1791:A:O2'	57:SG:67:VAL:HA	2.16	0.45
52:SB:32:ASP:OD1	52:SB:46:LYS:HD3	2.16	0.45
53:SC:94:ILE:CD1	53:SC:162:ILE:HD11	2.46	0.45
53:SC:115:GLN:CA	53:SC:115:GLN:HE21	2.28	0.45
53:SC:134:ASN:C	53:SC:134:ASN:ND2	2.74	0.45
54:SD:132:LYS:HB3	54:SD:189:MET:CG	2.45	0.45
57:SG:153:VAL:O	57:SG:154:ARG:C	2.60	0.45
58:SH:61:ILE:HD11	58:SH:95:ILE:HD12	1.98	0.45
59:SI:66:SER:HB3	59:SI:73:THR:HB	1.98	0.45
59:SI:174:CYS:HB2	59:SI:190:LEU:HD21	1.98	0.45
60:SJ:48:PHE:CD2	60:SJ:48:PHE:C	2.94	0.45
76:SZ:45:ASN:N	76:SZ:45:ASN:OD1	2.49	0.45
80:Sd:40:ARG:HE	80:Sd:41:GLN:HE22	1.63	0.45
86:S6:3:C:C5	86:S6:4:C:N4	2.73	0.45
86:S6:22:G:C8	86:S6:23:A:H2	2.33	0.45
86:S6:23:A:H2'	86:S6:24:G:O4'	2.16	0.45
86:S6:52:G:N2	86:S6:53:G:H1'	2.31	0.45
86:S6:54:U:H3'	86:S6:55:U:C6	2.50	0.45
86:S6:70:G:H2'	86:S6:70:G:N3	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:145:G:C2	1:5:146:G:C4	3.04	0.45
1:5:294:G:N3	1:5:294:G:H2'	2.32	0.45
1:5:467:U:C4	1:5:468:U:C5	3.05	0.45
1:5:488:G:N2	1:5:489:C:C1'	2.80	0.45
1:5:691:C:O2	1:5:692:A:C8	2.69	0.45
1:5:719:C:N3	1:5:720:G:C8	2.85	0.45
1:5:728:U:H2'	1:5:729:G:OP1	2.16	0.45
1:5:1067:G:N2	1:5:1068:G:H1'	2.31	0.45
1:5:1077:C:C4	1:5:1078:A:C5	3.04	0.45
1:5:1175:A:N3	1:5:1176:C:C6	2.85	0.45
1:5:1218:G:C5	1:5:1219:G:C8	3.04	0.45
1:5:1321:G:N2	1:5:3876:A:O4'	2.49	0.45
1:5:1349:G:N2	1:5:1350:C:C2	2.85	0.45
1:5:1396:G:H3'	1:5:1396:G:C8	2.51	0.45
1:5:1443:A:C5	1:5:1444:G:C5	3.05	0.45
1:5:1617:G:C2	1:5:2513:A:C2	3.04	0.45
1:5:1656:U:N3	1:5:1657:G:N7	2.65	0.45
1:5:1662:C:C2	1:5:1663:C:C6	3.04	0.45
1:5:1949:U:O2	1:5:1950:U:H6	1.94	0.45
1:5:1983:A:H2	1:5:2010:A:C3'	2.29	0.45
1:5:2082:G:O2'	1:5:2083:C:O5'	2.34	0.45
1:5:2253:A:H8	1:5:2254:G:O2'	1.99	0.45
1:5:2367:A:C4	1:5:2798:A:C2	3.05	0.45
1:5:2482:C:H2'	1:5:2482:C:O2	2.17	0.45
1:5:2496:G:C2	1:5:2497:C:C6	3.04	0.45
1:5:2598:A:O2'	1:5:2599:G:C5'	2.64	0.45
1:5:2603:C:C4	1:5:2604:C:C5	3.05	0.45
1:5:2703:G:C2	1:5:2704:C:C6	3.04	0.45
1:5:3702:A:N3	1:5:3702:A:C2'	2.76	0.45
1:5:3717:A:HO2'	1:5:3718:A:C4'	2.24	0.45
1:5:3740:G:H2'	1:5:3740:G:N3	2.31	0.45
1:5:3773:U:H2'	1:5:3774:A:H8	1.82	0.45
1:5:3965:A:H61	1:5:4045:G:H21	1.65	0.45
1:5:4083:U:O2	1:5:4085:A:O4'	2.34	0.45
1:5:4165:C:N4	1:5:4166:G:N7	2.63	0.45
1:5:4287:G:C4	1:5:4288:C:C5	3.04	0.45
1:5:4322:G:N2	1:5:4326:G:C5	2.84	0.45
1:5:4531:U:C5	85:S5:76:A:C2	3.04	0.45
1:5:4686:G:N2	1:5:4687:A:H1'	2.32	0.45
1:5:4723:A:H2'	1:5:4724:A:C8	2.51	0.45
1:5:5006:U:C6	25:W:50:ASN:ND2	2.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5051:C:O2	1:5:5051:C:C2'	2.63	0.45
2:7:9:C:C4	2:7:10:C:C6	3.04	0.45
3:8:143:G:C6	3:8:144:U:C5	3.04	0.45
5:B:29:VAL:HB	5:B:32:PHE:CE1	2.51	0.45
5:B:115:LYS:HE2	5:B:119:TYR:OH	2.16	0.45
8:E:151:GLY:O	8:E:154:ARG:NH2	2.49	0.45
15:M:3:PHE:C	15:M:6:PHE:HZ	2.24	0.45
27:Y:106:ILE:HG21	27:Y:109:LEU:HD23	1.97	0.45
31:c:50:ASN:OD1	31:c:76:GLY:C	2.60	0.45
32:d:33:ILE:HD11	32:d:45:ALA:CA	2.47	0.45
46:z:160:LYS:C	46:z:161:LYS:HD2	2.42	0.45
47:1:458:PHE:CE1	48:2:40:THR:HA	2.50	0.45
50:S2:122:G:C6	50:S2:123:G:C8	3.04	0.45
50:S2:222:U:O2	50:S2:222:U:H2'	2.15	0.45
50:S2:309:G:C2	50:S2:310:C:N3	2.85	0.45
50:S2:401:A:C8	50:S2:402:C:C6	3.05	0.45
50:S2:447:A:C2	50:S2:449:A:H1'	2.51	0.45
50:S2:495:U:C4	50:S2:496:C:C4	3.04	0.45
50:S2:602:G:N2	50:S2:621:C:C2	2.85	0.45
50:S2:693:A:C4	50:S2:694:G:C8	3.04	0.45
50:S2:832:G:O6	50:S2:833:C:C4	2.69	0.45
50:S2:1050:A:C6	50:S2:1051:G:C1'	2.98	0.45
50:S2:1089:G:C2	50:S2:1090:C:C2	3.05	0.45
50:S2:1106:C:C2	50:S2:1107:G:C8	3.05	0.45
50:S2:1204:A:C2'	50:S2:1205:C:C6	2.84	0.45
50:S2:1211:G:C2	50:S2:1212:G:N9	2.85	0.45
50:S2:1250:A:H2	50:S2:1339:U:C1'	2.29	0.45
50:S2:1280:G:N2	50:S2:1281:G:H1'	2.31	0.45
50:S2:1296:U:H2'	50:S2:1297:U:C6	2.51	0.45
50:S2:1585:U:H4'	50:S2:1586:U:OP2	2.16	0.45
51:SA:55:TRP:C	51:SA:55:TRP:HD1	2.21	0.45
51:SA:157:VAL:O	51:SA:158:ASP:C	2.59	0.45
52:SB:27:LYS:O	52:SB:28:ARG:HD2	2.16	0.45
52:SB:219:LYS:C	52:SB:220:LYS:HG3	2.41	0.45
55:SE:36:HIS:HD2	55:SE:84:ALA:C	2.24	0.45
57:SG:84:TYR:CD1	57:SG:84:TYR:C	2.94	0.45
59:SI:56:ARG:HA	59:SI:180:GLY:O	2.16	0.45
60:SJ:165:TYR:CD1	60:SJ:165:TYR:N	2.85	0.45
75:SY:44:LEU:HA	75:SY:47:MET:HG2	1.98	0.45
77:Sa:77:CYS:HG	88:Sa:201:ZN:ZN	0.31	0.45
83:Sg:188:HIS:ND1	83:Sg:219:TRP:CE3	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:S5:48:C:N3	85:S5:59:U:N3	2.62	0.45
1:5:294:G:C6	29:a:61:TYR:HD2	2.26	0.45
1:5:296:A:C8	1:5:296:A:O5'	2.69	0.45
1:5:306:A:C2	1:5:307:A:C5	3.04	0.45
1:5:475:G:H2'	1:5:476:G:O4'	2.16	0.45
1:5:489:C:H42	1:5:664:G:H1	1.64	0.45
1:5:721:G:C2	1:5:948:C:C2	3.05	0.45
1:5:755:C:C4	1:5:756:G:N7	2.85	0.45
1:5:1084:C:C2	1:5:1085:C:C6	3.05	0.45
1:5:1283:G:C8	1:5:1283:G:C3'	3.00	0.45
1:5:1334:A:N6	1:5:1335:G:C6	2.85	0.45
1:5:1374:G:N2	1:5:1375:C:H1'	2.31	0.45
1:5:1634:A:C6	1:5:1635:C:N4	2.84	0.45
1:5:1991:A:H3'	1:5:1992:U:H2'	1.99	0.45
1:5:2058:G:H21	1:5:2059:C:H1'	1.82	0.45
1:5:2120:G:H4'	9:F:43:MET:HE1	1.99	0.45
1:5:2126:G:C8	1:5:2127:C:C5	3.05	0.45
1:5:2316:G:C2	1:5:2324:C:C2	3.04	0.45
1:5:2367:A:N7	1:5:2798:A:N3	2.65	0.45
1:5:2496:G:C4	1:5:2497:C:C5	3.05	0.45
1:5:2529:A:C8	1:5:2532:C:C5	3.04	0.45
1:5:2590:G:C2'	1:5:2755:A:H61	2.30	0.45
1:5:2744:A:H2'	1:5:2745:A:N7	2.32	0.45
1:5:2857:A:C4	1:5:2858:A:N7	2.85	0.45
1:5:3692:A:N1	1:5:3693:U:H1'	2.32	0.45
1:5:4275:G:N1	1:5:4276:G:C4	2.85	0.45
1:5:4299:U:O2	1:5:4300:U:C6	2.70	0.45
1:5:4323:A:C2	1:5:4324:A:C5	3.05	0.45
1:5:4363:A:C6	1:5:4364:G:N7	2.84	0.45
1:5:4411:G:C6	1:5:4412:C:C4	3.04	0.45
1:5:4547:C:H2'	1:5:4549:G:H8	1.81	0.45
1:5:4550:G:C6	1:5:4551:U:C6	3.04	0.45
1:5:4742:G:C6	1:5:4743:G:C5	3.05	0.45
1:5:4899:G:C2	1:5:4922:C:O2	2.69	0.45
1:5:4905:C:C2	1:5:4906:C:C6	3.04	0.45
1:5:4910:G:N2	17:O:109:PRO:HA	2.32	0.45
1:5:5003:U:H2'	1:5:5004:C:C6	2.52	0.45
2:7:17:C:O2	2:7:17:C:C2'	2.62	0.45
2:7:24:C:C2'	2:7:25:G:O5'	2.64	0.45
2:7:42:A:C2	2:7:43:U:N1	2.83	0.45
2:7:50:A:N1	2:7:51:G:C8	2.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:38:U:H5	36:h:84:ARG:HB2	1.82	0.45
4:A:37:ARG:CZ	4:A:37:ARG:CB	2.93	0.45
5:B:367:PHE:HZ	5:B:380:GLN:NE2	2.14	0.45
6:C:138:MET:O	45:r:16:PHE:CZ	2.67	0.45
7:D:189:GLU:OE2	7:D:189:GLU:N	2.50	0.45
7:D:278:ASP:O	7:D:280:VAL:C	2.60	0.45
7:D:280:VAL:O	7:D:280:VAL:HG23	2.16	0.45
9:F:228:HIS:NE2	9:F:236:GLY:HA3	2.30	0.45
10:G:78:PRO:HD3	10:G:237:TRP:CE3	2.51	0.45
19:Q:24:TYR:CE1	45:r:5:LEU:CD1	2.99	0.45
22:T:14:MET:HE3	22:T:58:HIS:CG	2.51	0.45
37:i:45:ARG:NH1	37:i:49:GLY:O	2.49	0.45
39:k:11:PHE:C	39:k:11:PHE:CD1	2.94	0.45
50:S2:65:C:C5	57:SG:133:LEU:HD22	2.52	0.45
50:S2:301:A:O2'	59:SI:72:CYS:HA	2.16	0.45
50:S2:309:G:N3	50:S2:309:G:H2'	2.32	0.45
50:S2:379:C:H2'	50:S2:380:G:H8	1.82	0.45
50:S2:406:U:O2'	50:S2:407:G:H3'	2.17	0.45
50:S2:478:G:C4	50:S2:479:C:C5	3.04	0.45
50:S2:495:U:O2'	50:S2:496:C:H5''	2.16	0.45
50:S2:533:A:C2	50:S2:534:G:H1'	2.51	0.45
50:S2:600:G:C4	50:S2:631:U:O4	2.70	0.45
50:S2:616:A:N7	50:S2:617:G:N9	2.64	0.45
50:S2:807:G:C2	50:S2:808:A:C5	3.05	0.45
50:S2:862:A:N1	50:S2:863:U:C5	2.83	0.45
50:S2:1015:U:O2	50:S2:1017:U:C5	2.70	0.45
50:S2:1135:C:C2	50:S2:1136:U:C6	3.04	0.45
50:S2:1266:C:O2	50:S2:1266:C:C2'	2.65	0.45
50:S2:1294:G:C6	82:Sf:138:ARG:NE	2.84	0.45
50:S2:1326:U:O4'	50:S2:1494:U:C6	2.70	0.45
50:S2:1383:A:H4'	54:SD:156:LEU:HD21	1.96	0.45
50:S2:1398:G:N2	50:S2:1399:C:N1	2.63	0.45
50:S2:1405:A:O4'	50:S2:1580:A:C6	2.69	0.45
50:S2:1418:C:N3	50:S2:1420:G:C5	2.84	0.45
50:S2:1570:G:C6	50:S2:1571:G:N7	2.85	0.45
50:S2:1686:G:C2	50:S2:1687:C:C2	3.04	0.45
50:S2:1775:U:N3	50:S2:1776:G:C8	2.85	0.45
53:SC:127:PHE:CD1	53:SC:141:VAL:HG22	2.51	0.45
54:SD:22:ASN:C	54:SD:22:ASN:ND2	2.74	0.45
55:SE:100:ARG:HG2	55:SE:102:ILE:HG13	1.98	0.45
56:SF:118:ASN:ND2	56:SF:181:ALA:O	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SI:80:ASP:OD1	59:SI:81:VAL:N	2.50	0.45
61:SK:57:TYR:O	61:SK:58:VAL:HB	2.16	0.45
66:SP:17:TYR:HH	66:SP:38:SER:HB3	1.81	0.45
70:ST:92:PHE:HD1	70:ST:92:PHE:C	2.24	0.45
71:SU:24:LEU:HD23	71:SU:112:VAL:HG13	1.98	0.45
75:SY:19:GLN:N	75:SY:19:GLN:OE1	2.50	0.45
76:SZ:86:ALA:HA	76:SZ:89:GLN:OE1	2.16	0.45
83:Sg:7:LEU:HD21	83:Sg:272:GLN:HB3	1.98	0.45
85:S5:28:G:C2	85:S5:29:G:N9	2.84	0.45
85:S5:37:A:C6	85:S5:38:A:C2	3.05	0.45
85:S5:41:C:O2	85:S5:42:C:C6	2.70	0.45
86:S6:6:G:H2'	86:S6:7:G:C5'	2.45	0.45
1:5:14:C:O2	1:5:15:A:C8	2.70	0.45
1:5:44:A:H2'	1:5:44:A:N3	2.32	0.45
1:5:84:A:H5'	1:5:86:U:H1'	1.98	0.45
1:5:145:G:C6	1:5:146:G:C5	3.04	0.45
1:5:194:C:C4	1:5:195:C:C6	3.05	0.45
1:5:270:U:O2	1:5:270:U:H2'	2.17	0.45
1:5:450:G:HO2'	1:5:453:G:P	2.39	0.45
1:5:451:C:N4	1:5:1295:C:C2'	2.68	0.45
1:5:462:G:N2	1:5:694:C:C2	2.85	0.45
1:5:512:U:H3'	1:5:513:U:C5'	2.46	0.45
1:5:952:G:C6	1:5:953:C:C4	3.04	0.45
1:5:1173:G:C2	1:5:1174:G:H1'	2.51	0.45
1:5:1176:C:N3	1:5:1177:U:C5	2.85	0.45
1:5:1367:C:N3	1:5:1369:C:OP2	2.50	0.45
1:5:1377:G:N7	1:5:1378:C:H4'	2.32	0.45
1:5:1394:G:C2	1:5:1395:U:C2	3.05	0.45
1:5:1394:G:C2'	1:5:1395:U:O5'	2.64	0.45
1:5:1426:G:O2'	1:5:1459:A:N6	2.50	0.45
1:5:1448:G:C6	1:5:1449:C:C4	3.04	0.45
1:5:1475:G:H2'	1:5:1476:C:H6	1.82	0.45
1:5:1694:C:C2	1:5:1695:U:C5	3.05	0.45
1:5:1725:U:H1'	9:F:113:LEU:CD1	2.47	0.45
1:5:1744:U:N3	1:5:1745:G:N7	2.65	0.45
1:5:1902:G:OP1	34:f:24:HIS:CE1	2.70	0.45
1:5:1912:G:C6	1:5:1913:C:N4	2.85	0.45
1:5:2076:G:C2	1:5:2077:C:N1	2.85	0.45
1:5:2292:C:H2'	1:5:2293:U:H6	1.82	0.45
1:5:2329:U:O2'	1:5:2330:G:C4'	2.64	0.45
1:5:2351:C:N3	1:5:2352:U:C5	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2360:A:N6	1:5:3860:A:C8	2.84	0.45
1:5:2452:G:C6	1:5:2467:U:C4	3.02	0.45
1:5:2480:G:N2	1:5:2499:C:C2	2.85	0.45
1:5:2484:A:C5	1:5:2485:U:C5	3.04	0.45
1:5:2575:U:O2	1:5:2758:G:N2	2.50	0.45
1:5:2599:G:H5'	35:g:60:ARG:HH22	1.81	0.45
1:5:2603:C:N3	1:5:2604:C:C6	2.85	0.45
1:5:2658:G:N2	1:5:2675:G:N3	2.65	0.45
1:5:2725:A:H2'	1:5:2726:G:H5''	1.98	0.45
1:5:3673:C:O2'	1:5:3674:G:OP1	2.32	0.45
1:5:3700:C:O2'	1:5:3774:A:N3	2.39	0.45
1:5:3717:A:N7	1:5:3736:A:N6	2.65	0.45
1:5:3830:A:H4'	1:5:4552:U:H4'	1.98	0.45
1:5:3911:C:N3	1:5:3912:U:C4	2.84	0.45
1:5:3923:A:H2'	1:5:3924:C:C6	2.51	0.45
1:5:4175:G:N2	1:5:4176:C:C2	2.85	0.45
1:5:4283:G:N3	1:5:4284:C:H6	2.04	0.45
1:5:4291:G:N3	1:5:4291:G:H5''	2.32	0.45
1:5:4460:U:H2'	1:5:4461:C:C6	2.52	0.45
1:5:4687:A:H62	1:5:4698:C:H1'	1.80	0.45
1:5:4999:G:C2	1:5:5000:G:N9	2.85	0.45
1:5:5012:G:N2	1:5:5014:A:N7	2.62	0.45
1:5:5027:C:O2	1:5:5027:C:H2'	2.16	0.45
1:5:5041:G:OP2	25:W:61:LYS:HE3	2.17	0.45
2:7:51:G:N3	2:7:52:C:C5	2.84	0.45
5:B:110:ILE:O	5:B:111:SER:CB	2.64	0.45
5:B:234:ARG:HD2	5:B:271:GLN:O	2.17	0.45
6:C:288:ASP:OD2	6:C:291:ARG:CB	2.64	0.45
7:D:147:ASP:OD1	7:D:149:GLY:N	2.49	0.45
8:E:181:PRO:HA	8:E:246:GLN:NE2	2.17	0.45
14:L:21:ARG:HB3	16:N:197:THR:HG22	1.97	0.45
14:L:27:ASN:O	14:L:28:GLN:C	2.59	0.45
14:L:39:ARG:HB2	14:L:39:ARG:HH11	1.81	0.45
16:N:30:TYR:CZ	16:N:63:ARG:CD	2.99	0.45
18:P:114:ILE:HD11	18:P:117:ILE:HD12	1.98	0.45
34:f:93:PRO:O	34:f:94:ALA:HB3	2.16	0.45
46:z:41:TYR:HE2	46:z:48:ARG:C	2.25	0.45
47:1:205:ARG:HD3	47:1:219:LEU:HG	1.99	0.45
50:S2:176:U:H3'	50:S2:177:G:C8	2.51	0.45
50:S2:187:G:C5	50:S2:188:C:C4	3.05	0.45
50:S2:222:U:C2	50:S2:223:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:569:A:C5	50:S2:570:C:C5	3.04	0.45
50:S2:611:G:C5	50:S2:612:U:C5	3.04	0.45
50:S2:659:G:OP2	74:SX:17:ARG:HD3	2.16	0.45
50:S2:839:C:C6	50:S2:841:G:C4	3.04	0.45
50:S2:975:G:C5'	65:SO:32:HIS:HD2	2.29	0.45
50:S2:982:G:O2'	50:S2:983:A:H5'	2.16	0.45
50:S2:1040:G:N1	50:S2:1041:G:C4	2.85	0.45
50:S2:1043:G:O2'	50:S2:1044:G:O5'	2.35	0.45
50:S2:1093:A:H4'	73:SW:3:ARG:NH2	2.27	0.45
50:S2:1137:U:O2'	51:SA:155:ARG:NH2	2.49	0.45
50:S2:1295:A:C8	50:S2:1296:U:C6	3.04	0.45
50:S2:1314:U:H4'	61:SK:2:LEU:HA	1.97	0.45
50:S2:1335:G:C5	50:S2:1336:C:C5	3.05	0.45
50:S2:1466:G:C6	50:S2:1467:C:C4	3.04	0.45
50:S2:1517:G:H2'	50:S2:1518:C:O4'	2.17	0.45
50:S2:1613:G:C2	50:S2:1627:C:O2	2.70	0.45
50:S2:1657:G:C6	50:S2:1658:G:C5	3.04	0.45
50:S2:1677:U:C2	50:S2:1678:A:C2	3.05	0.45
50:S2:1687:C:H2'	50:S2:1688:C:C5'	2.47	0.45
50:S2:1687:C:O2	50:S2:1688:C:C6	2.69	0.45
50:S2:1690:U:O2	50:S2:1691:U:C4	2.70	0.45
50:S2:1810:U:H2'	50:S2:1811:C:O4'	2.17	0.45
50:S2:1823:A:H4'	74:SX:60:LYS:HA	1.98	0.45
50:S2:1855:G:OP2	65:SO:147:ARG:CZ	2.64	0.45
52:SB:123:ALA:O	52:SB:124:HIS:HB3	2.17	0.45
52:SB:153:THR:O	52:SB:154:SER:OG	2.25	0.45
54:SD:35:SER:HB3	54:SD:91:VAL:HG21	1.99	0.45
57:SG:221:LYS:HG3	57:SG:224:ARG:NH1	2.31	0.45
61:SK:95:ARG:NE	61:SK:95:ARG:CA	2.79	0.45
64:SN:133:ARG:CZ	64:SN:133:ARG:CB	2.94	0.45
65:SO:40:THR:HG21	65:SO:111:GLY:HA3	1.99	0.45
69:SS:117:ILE:HG22	69:SS:117:ILE:O	2.17	0.45
74:SX:54:LYS:CB	81:Se:6:LEU:CD1	2.94	0.45
74:SX:115:ILE:HG22	74:SX:118:VAL:CG2	2.47	0.45
83:Sg:3:GLU:HB3	83:Sg:314:ILE:HG22	1.99	0.45
86:S6:27:G:C4	86:S6:28:G:N7	2.83	0.45
1:5:54:G:C6	1:5:55:G:C5	3.04	0.45
1:5:72:C:H41	14:L:68:THR:HA	1.80	0.45
1:5:124:C:C2	1:5:125:C:C5	3.05	0.45
1:5:125:C:O2	1:5:125:C:C2'	2.65	0.45
1:5:144:G:N2	1:5:145:G:C8	2.83	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:182:G:H2'	1:5:182:G:N3	2.32	0.45
1:5:192:G:N2	1:5:250:C:C2	2.84	0.45
1:5:332:C:H2'	1:5:333:U:C6	2.52	0.45
1:5:476:G:C2	1:5:679:C:C2	3.05	0.45
1:5:722:G:H21	6:C:343:GLN:HE22	1.64	0.45
1:5:906:C:C2	1:5:907:C:C6	3.05	0.45
1:5:1067:G:C2	1:5:1068:G:H1'	2.52	0.45
1:5:1076:C:N4	1:5:1077:C:C4	2.84	0.45
1:5:1096:C:C2	1:5:1097:C:C6	3.05	0.45
1:5:1212:G:C2	1:5:1213:G:C5	3.05	0.45
1:5:1261:G:N3	1:5:1262:G:C8	2.84	0.45
1:5:1325:C:C4'	1:5:3901:A:C2	2.98	0.45
1:5:1362:G:C2	1:5:1363:C:N1	2.85	0.45
1:5:1383:G:H2'	1:5:1384:C:O4'	2.16	0.45
1:5:1507:C:C4	1:5:1508:A:N7	2.85	0.45
1:5:1668:A:C8	1:5:1881:C:C4	3.05	0.45
1:5:1671:U:HO2'	30:b:12:GLN:CD	2.24	0.45
1:5:2115:G:H8	1:5:2116:C:C6	2.35	0.45
1:5:2384:U:C2	1:5:2385:U:C6	3.04	0.45
1:5:2391:G:C2	1:5:2392:C:C2	3.05	0.45
1:5:2418:A:C2	1:5:2419:C:C6	3.05	0.45
1:5:2441:C:O2	1:5:2442:G:N7	2.50	0.45
1:5:2622:G:C2	1:5:2623:A:H1'	2.52	0.45
1:5:2645:G:N2	1:5:2646:C:H1'	2.31	0.45
1:5:2703:G:C4	1:5:2704:C:C6	3.05	0.45
1:5:3597:G:P	1:5:3597:G:O4'	2.75	0.45
1:5:3684:G:H2'	1:5:3685:C:O5'	2.17	0.45
1:5:3757:G:C6	1:5:3758:U:C4	3.05	0.45
1:5:3813:A:H2	1:5:4538:G:N3	2.14	0.45
1:5:4055:U:C3'	46:z:37:SER:HG	2.29	0.45
1:5:4091:G:C5	1:5:4092:G:N7	2.85	0.45
1:5:4257:A:C2'	1:5:4258:C:C6	2.77	0.45
1:5:4276:G:H4'	22:T:12:ARG:O	2.17	0.45
1:5:4281:A:C2	1:5:4283:G:C4	3.04	0.45
1:5:4595:G:C2	1:5:4596:C:C2	3.05	0.45
1:5:4640:C:C2	1:5:4641:U:C6	3.04	0.45
1:5:4904:G:C2	1:5:4905:C:C2	3.04	0.45
1:5:4923:C:N3	1:5:4924:C:C5	2.85	0.45
1:5:5047:C:H1'	1:5:5048:A:C2	2.52	0.45
2:7:42:A:C2	2:7:43:U:C5	2.99	0.45
2:7:42:A:C4	2:7:43:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:59:A:O5'	3:8:60:G:H2'	2.17	0.45
3:8:99:U:O2	3:8:99:U:H2'	2.16	0.45
5:B:26:ARG:HB2	5:B:344:VAL:HG11	1.99	0.45
5:B:190:VAL:O	5:B:191:ALA:CB	2.65	0.45
5:B:216:MET:HE3	5:B:281:ASN:OD1	2.17	0.45
7:D:196:ARG:NH1	7:D:196:ARG:HA	2.31	0.45
8:E:169:LEU:HD21	8:E:187:GLN:HB2	1.97	0.45
12:I:209:TRP:O	12:I:212:LEU:N	2.49	0.45
14:L:9:ILE:HG13	29:a:52:TYR:HE2	1.80	0.45
21:S:68:PHE:N	21:S:68:PHE:CD1	2.85	0.45
21:S:81:TRP:NE1	21:S:94:TYR:HD1	2.15	0.45
28:Z:77:TYR:CB	31:c:39:ARG:CD	2.92	0.45
36:h:72:PHE:CB	36:h:73:TYR:HD1	2.30	0.45
39:k:41:TYR:CB	39:k:43:TYR:CE1	3.00	0.45
50:S2:92:A:H5''	50:S2:92:A:N3	2.31	0.45
50:S2:122:G:H2'	50:S2:123:G:O4'	2.16	0.45
50:S2:122:G:N1	50:S2:123:G:C5	2.84	0.45
50:S2:306:C:C5	50:S2:308:G:N7	2.85	0.45
50:S2:330:G:C6	50:S2:331:C:C5	3.05	0.45
50:S2:458:A:N3	50:S2:458:A:H2'	2.31	0.45
50:S2:504:G:O2'	50:S2:505:G:C5'	2.65	0.45
50:S2:552:G:N2	50:S2:553:U:C2	2.85	0.45
50:S2:750:C:O2	50:S2:750:C:C2'	2.59	0.45
50:S2:793:G:O6	50:S2:794:A:C4	2.69	0.45
50:S2:901:G:C4	50:S2:902:G:C8	3.05	0.45
50:S2:936:G:C2	50:S2:1007:C:C2	3.05	0.45
50:S2:965:U:H2'	50:S2:966:U:O4'	2.16	0.45
50:S2:1016:U:O2	50:S2:1016:U:O4'	2.34	0.45
50:S2:1024:A:H2'	50:S2:1025:U:O4'	2.16	0.45
50:S2:1043:G:C2	50:S2:1044:G:C4	3.05	0.45
50:S2:1201:U:O2	50:S2:1202:U:C6	2.70	0.45
50:S2:1213:C:C4	50:S2:1682:C:C2	3.02	0.45
50:S2:1279:C:H2'	50:S2:1280:G:O4'	2.16	0.45
50:S2:1283:C:C1'	63:SM:86:GLY:HA3	2.44	0.45
50:S2:1310:U:H6	82:Sf:143:LYS:NZ	2.13	0.45
50:S2:1405:A:C5	50:S2:1406:G:N7	2.85	0.45
50:S2:1406:G:C2'	50:S2:1407:U:H4'	2.47	0.45
50:S2:1593:C:C2	50:S2:1594:A:C8	3.04	0.45
50:S2:1605:G:N2	50:S2:1635:C:N4	2.64	0.45
50:S2:1640:A:C5'	86:S6:41:C:C2'	2.95	0.45
50:S2:1646:C:OP1	67:SQ:138:ARG:NH1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1806:A:C4	50:S2:1807:C:C6	3.05	0.45
51:SA:64:ALA:CB	72:SV:34:MET:HE1	2.47	0.45
54:SD:158:ILE:CD1	54:SD:158:ILE:N	2.77	0.45
57:SG:102:VAL:HG13	57:SG:106:LEU:HD11	1.99	0.45
58:SH:61:ILE:CD1	58:SH:93:VAL:HG13	2.47	0.45
58:SH:130:LEU:HB3	58:SH:139:ILE:HD11	1.97	0.45
76:SZ:84:ALA:O	76:SZ:88:LEU:HG	2.17	0.45
80:Sd:6:PHE:CD1	80:Sd:6:PHE:C	2.94	0.45
83:Sg:219:TRP:HA	83:Sg:226:HIS:HA	1.99	0.45
85:S5:21:A:N7	85:S5:48:C:H5	2.10	0.45
85:S5:48:C:C2	85:S5:59:U:O2	2.70	0.45
86:S6:41:C:C4	86:S6:42:C:C5	3.04	0.45
1:5:2:G:C4	1:5:3:C:C5	3.05	0.45
1:5:96:U:OP1	14:L:13:HIS:HB3	2.16	0.45
1:5:146:G:N1	1:5:147:A:N7	2.65	0.45
1:5:154:G:C4	1:5:155:C:C5	3.04	0.45
1:5:199:G:C2	1:5:201:C:C2	3.05	0.45
1:5:235:A:O2'	1:5:237:G:OP2	2.35	0.45
1:5:277:G:O2'	1:5:278:G:P	2.75	0.45
1:5:294:G:H5''	43:o:43:ARG:NH2	2.30	0.45
1:5:300:A:N1	1:5:301:G:C5	2.85	0.45
1:5:314:G:C2	1:5:4355:G:C5	3.05	0.45
1:5:1247:U:H2'	1:5:1248:C:O4'	2.17	0.45
1:5:1358:G:OP1	1:5:1506:G:O2'	2.34	0.45
1:5:1362:G:C6	1:5:1363:C:C5	3.05	0.45
1:5:1376:C:H2'	1:5:1378:C:H6	1.81	0.45
1:5:1379:C:O3'	1:5:1380:G:C8	2.67	0.45
1:5:1410:U:O2'	1:5:1411:C:OP2	2.33	0.45
1:5:1444:G:C2'	1:5:1445:U:H6	2.22	0.45
1:5:1475:G:N2	1:5:1476:C:C6	2.83	0.45
1:5:1534:A:H2'	1:5:1637:A:C2	2.51	0.45
1:5:1682:A:H3'	1:5:1683:U:C6	2.50	0.45
1:5:1725:U:N3	1:5:1726:U:C6	2.85	0.45
1:5:1868:A:C6	1:5:1870:C:H1'	2.52	0.45
1:5:1993:C:C2	1:5:1994:C:C5	3.04	0.45
1:5:2021:G:C2	1:5:2022:C:C2	3.05	0.45
1:5:2090:U:C2	6:C:307:LYS:HE2	2.51	0.45
1:5:2104:G:N1	1:5:2105:A:C4	2.85	0.45
1:5:2115:G:C8	1:5:2116:C:C1'	2.99	0.45
1:5:2326:G:C4	1:5:2327:G:C8	3.04	0.45
1:5:2415:U:H2'	1:5:2416:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2442:G:C3'	1:5:2443:G:H5''	2.47	0.45
1:5:2752:G:C8	1:5:2752:G:C5'	2.99	0.45
1:5:3600:G:N2	1:5:3601:C:C2	2.85	0.45
1:5:3738:G:C8	1:5:3738:G:H3'	2.51	0.45
1:5:3859:G:C4'	18:P:139:TYR:HH	2.26	0.45
1:5:3974:G:C5'	46:z:28:PHE:HD1	2.26	0.45
1:5:4152:G:C6	1:5:4153:C:C4	3.05	0.45
1:5:4165:C:O2	1:5:4166:G:C8	2.70	0.45
1:5:4283:G:N2	1:5:4284:C:C4	2.85	0.45
1:5:4314:C:C2	1:5:4315:A:H8	2.33	0.45
1:5:4343:U:C4	1:5:4344:U:C4	3.05	0.45
1:5:4408:G:C6	1:5:4409:C:C4	3.04	0.45
1:5:4433:G:C2	1:5:4434:C:C4	3.04	0.45
1:5:4462:C:H2'	1:5:4463:U:O4'	2.16	0.45
1:5:4465:U:C4	1:5:4487:A:C6	3.04	0.45
1:5:4474:A:N7	1:5:4476:C:C2	2.85	0.45
1:5:4491:G:C6	1:5:4492:U:C4	3.05	0.45
1:5:4755:G:C6	1:5:4876:U:C4	3.05	0.45
1:5:5047:C:C6	1:5:5050:C:C6	3.02	0.45
2:7:69:U:C4	2:7:106:G:O6	2.70	0.45
2:7:115:A:H5'	2:7:115:A:H8	1.81	0.45
2:7:117:G:C6	2:7:118:C:C4	3.05	0.45
3:8:115:G:N2	3:8:116:C:C2	2.85	0.45
3:8:116:C:O2	3:8:116:C:H2'	2.17	0.45
4:A:218:HIS:ND1	4:A:218:HIS:C	2.74	0.45
5:B:213:GLN:C	5:B:214:ASP:OD1	2.60	0.45
7:D:122:GLN:HB3	7:D:168:ASP:OD1	2.17	0.45
9:F:84:TYR:HD1	9:F:85:VAL:H	1.65	0.45
9:F:203:PHE:O	9:F:204:LYS:C	2.60	0.45
10:G:166:LEU:HD21	16:N:45:PRO:HG2	1.98	0.45
11:H:12:ILE:HD11	11:H:16:VAL:HB	1.99	0.45
11:H:93:ARG:NH1	11:H:93:ARG:HB3	2.32	0.45
11:H:172:ILE:HD11	41:m:102:ARG:NH2	2.31	0.45
14:L:49:ARG:HA	36:h:119:PHE:O	2.17	0.45
16:N:19:MET:HA	16:N:19:MET:HE3	1.99	0.45
17:O:168:TYR:OH	17:O:172:LYS:HD3	2.17	0.45
19:Q:24:TYR:HE1	45:r:5:LEU:CD1	2.30	0.45
19:Q:37:ARG:HG3	19:Q:38:ARG:HG2	1.99	0.45
20:R:9:ARG:HH11	20:R:9:ARG:HG2	1.82	0.45
20:R:99:MET:HG3	20:R:103:ARG:NH1	2.31	0.45
20:R:117:ARG:NH2	20:R:118:HIS:CE1	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:e:34:ASN:O	33:e:35:TRP:C	2.60	0.45
38:j:39:TYR:C	38:j:41:ALA:N	2.75	0.45
44:p:28:LYS:HE2	50:S2:1040:G:O2'	2.17	0.45
46:z:15:ARG:HA	46:z:18:LEU:HD12	1.97	0.45
46:z:175:THR:HG22	46:z:178:GLU:HG3	1.99	0.45
47:1:45:CYS:HA	47:1:76:LEU:HD12	1.99	0.45
50:S2:74:G:C5'	50:S2:75:G:OP2	2.65	0.45
50:S2:140:C:H2'	50:S2:178:C:H1'	1.98	0.45
50:S2:143:U:O4	50:S2:315:C:OP2	2.35	0.45
50:S2:415:A:H2'	50:S2:416:U:O5'	2.17	0.45
50:S2:648:A:H1'	74:SX:46:HIS:NE2	2.31	0.45
50:S2:752:G:C5	50:S2:790:C:N4	2.84	0.45
50:S2:828:G:H2'	50:S2:829:C:O4'	2.17	0.45
50:S2:896:U:H2'	50:S2:897:U:O4'	2.16	0.45
50:S2:989:C:C2	50:S2:1001:A:C6	3.05	0.45
50:S2:1031:A:C6	50:S2:1032:C:C5	3.04	0.45
50:S2:1059:G:O2'	50:S2:1060:A:H5'	2.17	0.45
50:S2:1102:G:C6	50:S2:1103:C:C4	3.05	0.45
50:S2:1123:C:H42	50:S2:1124:C:N4	2.15	0.45
50:S2:1210:G:O6	50:S2:1211:G:C6	2.70	0.45
50:S2:1372:U:OP2	50:S2:1385:G:N1	2.37	0.45
50:S2:1378:A:C8	51:SA:132:GLN:CD	2.95	0.45
50:S2:1387:G:N2	68:SR:8:THR:CG2	2.80	0.45
50:S2:1427:C:C2	50:S2:1428:G:C8	3.04	0.45
50:S2:1450:G:C6	50:S2:1451:G:C5	3.05	0.45
50:S2:1537:A:C4	50:S2:1538:C:C6	3.04	0.45
50:S2:1551:U:C1'	50:S2:1558:C:O2	2.65	0.45
50:S2:1690:U:H2'	50:S2:1691:U:C6	2.52	0.45
50:S2:1806:A:C5	50:S2:1807:C:C5	3.04	0.45
51:SA:52:LYS:HD3	68:SR:109:LEU:HD12	1.98	0.45
51:SA:55:TRP:O	51:SA:58:LEU:N	2.50	0.45
52:SB:202:GLN:N	52:SB:203:PRO:HD2	2.31	0.45
56:SF:33:ILE:CG2	79:Sc:11:LEU:HD13	2.46	0.45
57:SG:147:LEU:HD21	57:SG:156:TYR:CB	2.47	0.45
60:SJ:58:ARG:HA	60:SJ:61:LEU:HD23	1.97	0.45
63:SM:85:LEU:HA	63:SM:88:TRP:HH2	1.64	0.45
69:SS:15:VAL:HG13	69:SS:68:ILE:CD1	2.46	0.45
85:S5:33:U:H3'	85:S5:33:U:O2	2.16	0.45
86:S6:34:G:HO2'	86:S6:35:A:C1'	2.23	0.45
86:S6:67:C:H2'	86:S6:67:C:O2	2.16	0.45
1:5:152:U:O2	1:5:152:U:C2'	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:235:A:N6	1:5:238:C:C2	2.85	0.45
1:5:344:A:C6	1:5:345:C:C5	3.05	0.45
1:5:672:C:C2	1:5:673:C:C6	3.05	0.45
1:5:937:U:O2	1:5:937:U:H2'	2.16	0.45
1:5:939:G:H2'	1:5:939:G:N3	2.32	0.45
1:5:1370:G:H5''	1:5:1371:A:OP1	2.17	0.45
1:5:1404:G:N1	1:5:1414:C:C4	2.85	0.45
1:5:1473:U:C4	1:5:1474:C:C4	3.05	0.45
1:5:1487:G:H8	1:5:1487:G:O5'	2.00	0.45
1:5:1583:A:N6	1:5:1584:G:C4	2.85	0.45
1:5:1684:A:N6	1:5:1685:G:C5	2.85	0.45
1:5:1817:U:O2	1:5:1821:G:O6	2.35	0.45
1:5:1864:G:C5	1:5:1865:G:C8	3.05	0.45
1:5:1878:G:C2	1:5:1879:C:C2	3.05	0.45
1:5:1899:G:C5	1:5:1900:C:C5	3.04	0.45
1:5:2052:G:O3'	17:O:17:GLY:HA3	2.17	0.45
1:5:2448:G:C2'	1:5:2449:A:C8	3.00	0.45
1:5:2480:G:C6	1:5:2481:G:C5	3.04	0.45
1:5:2505:C:O2	1:5:2505:C:O4'	2.33	0.45
1:5:2557:G:N1	1:5:2558:C:C2	2.84	0.45
1:5:2641:A:H2'	1:5:2642:A:O4'	2.17	0.45
1:5:2644:G:C2	1:5:2645:G:N9	2.85	0.45
1:5:3598:C:C2	1:5:3599:A:C8	3.05	0.45
1:5:3600:G:C2	1:5:3601:C:C2	3.05	0.45
1:5:3644:U:O2	1:5:4554:G:O2'	2.29	0.45
1:5:3857:G:C6	1:5:3858:C:C6	3.05	0.45
1:5:3943:A:N1	1:5:3944:G:C6	2.85	0.45
1:5:3974:G:H4'	46:z:210:MET:HG3	1.98	0.45
1:5:4070:U:O2	1:5:4071:U:C6	2.70	0.45
1:5:4112:C:C2	1:5:4113:U:C6	3.05	0.45
1:5:4238:G:O2'	1:5:4322:G:H4'	2.17	0.45
1:5:4355:G:N1	1:5:4356:G:C5	2.84	0.45
1:5:4394:A:HO2'	1:5:4395:U:H5	1.61	0.45
1:5:4975:G:C2	1:5:4977:A:C8	3.04	0.45
2:7:93:G:N1	2:7:94:C:C4	2.85	0.45
3:8:14:U:C2'	3:8:15:G:O5'	2.65	0.45
3:8:132:G:C2	3:8:133:G:C5	3.04	0.45
5:B:264:PHE:HD2	17:O:66:PRO:HD3	1.82	0.45
7:D:191:ASN:HB3	7:D:194:VAL:HG23	1.98	0.45
10:G:264:LYS:CG	52:SB:31:TYR:OH	2.63	0.45
11:H:41:ILE:HG21	11:H:73:ILE:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:49:ARG:HG2	17:O:49:ARG:NH1	2.32	0.45
33:e:95:TYR:N	33:e:95:TYR:CD1	2.83	0.45
36:h:99:GLU:HA	36:h:102:LEU:HD12	1.98	0.45
46:z:41:TYR:OH	46:z:159:MET:HG3	2.17	0.45
46:z:116:LEU:HA	46:z:119:GLN:CD	2.42	0.45
50:S2:11:A:H2	50:S2:1357:A:N3	2.14	0.45
50:S2:74:G:O6	57:SG:171:THR:N	2.49	0.45
50:S2:148:U:C4	50:S2:170:A:N7	2.85	0.45
50:S2:200:G:C5	50:S2:201:C:C5	3.05	0.45
50:S2:217:A:C6	50:S2:218:U:C6	3.05	0.45
50:S2:343:A:C5	50:S2:344:U:C5	3.05	0.45
50:S2:452:G:C5	50:S2:453:C:C5	3.04	0.45
50:S2:529:A:H2'	50:S2:530:U:O4'	2.17	0.45
50:S2:648:A:N3	50:S2:648:A:H2'	2.32	0.45
50:S2:654:A:C6	50:S2:655:A:C2	3.05	0.45
50:S2:787:G:H2'	50:S2:788:G:C4'	2.47	0.45
50:S2:849:A:O2'	50:S2:850:C:H5'	2.17	0.45
50:S2:975:G:N1	50:S2:976:G:C5	2.85	0.45
50:S2:1063:C:C1'	50:S2:1838:U:C4	2.99	0.45
50:S2:1213:C:H2'	50:S2:1214:A:C8	2.52	0.45
50:S2:1220:A:C2	50:S2:1678:A:H1'	2.52	0.45
50:S2:1293:A:H2'	82:Sf:152:LYS:HB2	1.99	0.45
50:S2:1294:G:O6	82:Sf:138:ARG:CZ	2.65	0.45
50:S2:1303:C:N4	50:S2:1304:U:C4	2.85	0.45
50:S2:1309:C:C2	82:Sf:143:LYS:NZ	2.84	0.45
50:S2:1351:G:C2	50:S2:1379:A:C4	3.05	0.45
50:S2:1427:C:O2	50:S2:1428:G:N7	2.50	0.45
50:S2:1431:G:H5''	50:S2:1432:U:OP2	2.17	0.45
50:S2:1500:G:H2'	50:S2:1501:C:C6	2.52	0.45
50:S2:1502:C:O2	50:S2:1502:C:H2'	2.16	0.45
50:S2:1612:G:C2	50:S2:1613:G:C8	3.04	0.45
50:S2:1738:C:N3	50:S2:1739:C:C5	2.84	0.45
50:S2:1782:G:N2	50:S2:1784:G:C8	2.85	0.45
51:SA:39:TYR:CD1	51:SA:40:LYS:HG2	2.52	0.45
52:SB:219:LYS:C	52:SB:220:LYS:CG	2.90	0.45
53:SC:204:ILE:HD13	53:SC:215:MET:HE3	1.99	0.45
57:SG:121:ILE:HG22	57:SG:124:LEU:HB3	1.99	0.45
59:SI:36:THR:HB	59:SI:57:ALA:O	2.17	0.45
59:SI:118:ALA:HB1	59:SI:137:LEU:CD2	2.47	0.45
59:SI:165:GLN:CD	59:SI:172:LEU:HD23	2.42	0.45
62:SL:103:GLU:HB3	74:SX:11:ARG:CA	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SO:146:ARG:O	65:SO:148:GLY:N	2.50	0.45
71:SU:50:VAL:HG13	71:SU:51:LYS:H	1.80	0.45
75:SY:74:MET:HG3	75:SY:76:TYR:OH	2.16	0.45
75:SY:113:ARG:C	75:SY:115:LYS:H	2.25	0.45
78:Sb:56:CYS:HB2	78:Sb:61:THR:HG23	1.98	0.45
85:S5:39:U:O2	85:S5:40:C:C5	2.70	0.45
86:S6:33:U:N3	86:S6:35:A:O5'	2.50	0.45
86:S6:54:U:O2	86:S6:55:U:C2	2.70	0.45
86:S6:55:U:C6	86:S6:55:U:OP2	2.70	0.45
1:5:66:A:C8	1:5:328:A:H1'	2.52	0.45
1:5:93:G:C4	1:5:94:A:C6	3.04	0.45
1:5:99:A:C4	1:5:100:C:O2	2.70	0.45
1:5:268:G:C6	1:5:269:G:N7	2.85	0.45
1:5:277:G:O2'	37:i:30:ARG:NH2	2.50	0.45
1:5:292:G:C2	1:5:293:G:C2	3.05	0.45
1:5:299:C:N3	1:5:300:A:N7	2.64	0.45
1:5:453:G:H2'	1:5:453:G:N3	2.32	0.45
1:5:497:G:C6	1:5:657:C:N4	2.85	0.45
1:5:514:U:C6	1:5:514:U:C3'	3.00	0.45
1:5:659:G:N1	1:5:660:A:N7	2.65	0.45
1:5:677:G:C6	1:5:678:C:C4	3.05	0.45
1:5:917:A:C4	1:5:918:G:C6	3.04	0.45
1:5:1210:C:O2	1:5:1210:C:C2'	2.64	0.45
1:5:1234:G:H3'	1:5:1235:G:H8	1.82	0.45
1:5:1285:U:O2	8:E:126:LYS:HG3	2.16	0.45
1:5:1293:G:H2'	1:5:1294:A:C4	2.51	0.45
1:5:1339:U:O2	1:5:1339:U:C2'	2.58	0.45
1:5:1411:C:C2	1:5:1412:G:N7	2.84	0.45
1:5:1420:A:OP1	1:5:1420:A:H4'	2.17	0.45
1:5:1427:A:OP2	1:5:1428:U:C4	2.70	0.45
1:5:1551:C:H2'	1:5:1552:G:O4'	2.17	0.45
1:5:1672:U:O2'	1:5:4304:A:OP1	2.31	0.45
1:5:1691:G:C4	1:5:1692:C:C6	3.05	0.45
1:5:1692:C:O2	1:5:1692:C:C2'	2.63	0.45
1:5:1927:U:O2	1:5:1928:C:C6	2.70	0.45
1:5:2273:G:H2'	1:5:2274:C:C6	2.52	0.45
1:5:2312:U:O2	1:5:2312:U:C2'	2.64	0.45
1:5:2315:G:N1	1:5:2316:G:C5	2.85	0.45
1:5:2497:C:C4	1:5:2498:C:H5	2.29	0.45
1:5:2576:G:N1	1:5:2577:C:C5	2.84	0.45
1:5:2607:C:C2	1:5:2608:G:C8	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2725:A:H2'	1:5:2726:G:H5'	1.99	0.45
1:5:2823:G:N2	1:5:2824:C:C2	2.85	0.45
1:5:2895:A:C2	1:5:2896:G:N9	2.85	0.45
1:5:3632:C:C2	1:5:3633:C:C6	3.05	0.45
1:5:3687:A:C6	1:5:3688:U:C6	3.05	0.45
1:5:3694:U:O2	1:5:3695:U:C6	2.70	0.45
1:5:3794:C:C4	1:5:3795:A:N7	2.84	0.45
1:5:3919:C:H5'	4:A:207:VAL:HG12	1.95	0.45
1:5:4062:A:C4	1:5:4063:U:C6	3.05	0.45
1:5:4079:C:C2	1:5:4080:C:C5	3.05	0.45
1:5:4099:G:C6	1:5:4100:C:C5	3.05	0.45
1:5:4104:G:C2'	1:5:4105:A:C8	3.00	0.45
1:5:4177:C:C2	1:5:4178:A:C8	3.05	0.45
1:5:4205:A:H3'	1:5:4206:C:H5''	1.97	0.45
1:5:4568:A:N3	18:P:69:ARG:NH2	2.65	0.45
1:5:4737:G:N1	1:5:4963:G:N3	2.64	0.45
1:5:4757:C:O2	17:O:114:LYS:C	2.59	0.45
1:5:4936:G:C2	1:5:4938:A:C8	3.04	0.45
1:5:5004:C:C3'	1:5:5005:G:O4'	2.65	0.45
2:7:71:G:C2	2:7:105:C:C2	3.05	0.45
2:7:83:A:N1	2:7:85:G:C8	2.85	0.45
4:A:242:ARG:HH11	4:A:242:ARG:CB	2.29	0.45
6:C:102:PHE:CD1	6:C:103:ALA:N	2.85	0.45
7:D:151:ALA:O	7:D:153:THR:N	2.50	0.45
7:D:250:ASN:ND2	7:D:252:VAL:HG12	2.20	0.45
12:I:86:HIS:HD2	12:I:139:ARG:HH12	1.65	0.45
32:d:33:ILE:HG22	32:d:33:ILE:O	2.16	0.45
35:g:101:LYS:O	35:g:105:LYS:HB2	2.17	0.45
50:S2:25:A:C6	50:S2:26:U:C5	3.05	0.45
50:S2:65:C:C4	57:SG:133:LEU:HB3	2.52	0.45
50:S2:219:U:C2	50:S2:220:U:C5	3.04	0.45
50:S2:302:A:C5	50:S2:303:C:C5	3.05	0.45
50:S2:309:G:C2	50:S2:310:C:C2	3.04	0.45
50:S2:452:G:N2	50:S2:453:C:N1	2.64	0.45
50:S2:552:G:C5	50:S2:553:U:C5	3.05	0.45
50:S2:752:G:C2	50:S2:790:C:C2	3.05	0.45
50:S2:834:C:H3'	50:S2:835:C:O4'	2.17	0.45
50:S2:841:G:N2	50:S2:842:C:N3	2.65	0.45
50:S2:978:G:C4	50:S2:979:C:C6	3.05	0.45
50:S2:1049:A:C5	50:S2:1070:A:N3	2.85	0.45
50:S2:1129:G:H3'	50:S2:1130:G:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1428:G:OP1	67:SQ:69:ARG:NH2	2.50	0.45
50:S2:1662:U:H5''	50:S2:1663:A:OP2	2.16	0.45
51:SA:39:TYR:HD1	51:SA:40:LYS:HG2	1.83	0.45
53:SC:74:LYS:CG	53:SC:269:PHE:CD2	2.99	0.45
58:SH:36:LEU:CD1	58:SH:40:LEU:HD12	2.47	0.45
60:SJ:136:ARG:CD	60:SJ:160:SER:HA	2.43	0.45
75:SY:97:TYR:C	75:SY:97:TYR:CD1	2.94	0.45
77:Sa:21:ILE:HG21	77:Sa:72:HIS:CE1	2.52	0.45
83:Sg:197:THR:HB	83:Sg:238:ALA:HA	1.99	0.45
85:S5:3:C:O2	85:S5:4:C:C6	2.70	0.45
85:S5:12:U:C2	85:S5:24:G:N3	2.85	0.45
85:S5:40:C:O2	85:S5:41:C:C6	2.70	0.45
86:S6:59:U:O2	86:S6:60:U:C6	2.70	0.45
86:S6:63:G:O6	86:S6:64:A:C6	2.70	0.45
1:5:2:G:C2	1:5:3:C:C2	3.06	0.44
1:5:29:G:C2	1:5:30:C:C2	3.05	0.44
1:5:85:G:H1'	1:5:86:U:H5	1.81	0.44
1:5:111:C:O2	1:5:331:G:C2	2.70	0.44
1:5:144:G:C2	1:5:145:G:C5	3.05	0.44
1:5:197:A:C8	1:5:197:A:C5'	2.96	0.44
1:5:273:U:O2'	1:5:274:C:O5'	2.27	0.44
1:5:313:U:N3	1:5:314:G:C8	2.85	0.44
1:5:381:U:H4'	1:5:414:C:H2'	2.00	0.44
1:5:446:C:H2'	1:5:446:C:O2	2.16	0.44
1:5:467:U:H2'	1:5:467:U:O2	2.17	0.44
1:5:488:G:N2	1:5:489:C:H1'	2.32	0.44
1:5:1077:C:C2	1:5:1078:A:C8	3.05	0.44
1:5:1313:C:C2	1:5:1323:A:C8	3.06	0.44
1:5:1321:G:C1'	1:5:1891:A:H62	2.29	0.44
1:5:1374:G:C2	1:5:1375:C:N1	2.85	0.44
1:5:1551:C:C3'	1:5:1552:G:O4'	2.65	0.44
1:5:1618:G:N2	1:5:1619:G:N9	2.64	0.44
1:5:1667:G:C6	1:5:2280:G:N3	2.85	0.44
1:5:1751:A:C3'	1:5:1752:G:H5'	2.47	0.44
1:5:1761:G:C2	1:5:1762:C:C2	3.05	0.44
1:5:2277:C:C2	1:5:2278:G:C8	2.91	0.44
1:5:2366:A:O2'	1:5:2367:A:H5''	2.17	0.44
1:5:2481:G:N2	1:5:2498:C:C2	2.85	0.44
1:5:2518:G:H4'	1:5:2538:U:O2'	2.16	0.44
1:5:2559:G:C2	1:5:2560:C:C2	3.05	0.44
1:5:2566:G:N3	1:5:2566:G:H2'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2644:G:C2	1:5:2645:G:C8	3.05	0.44
1:5:2726:G:C5	1:5:2727:C:N4	2.85	0.44
1:5:2727:C:H2'	1:5:2728:U:C6	2.52	0.44
1:5:2822:G:H5''	20:R:18:GLY:HA3	1.99	0.44
1:5:3780:G:O6	1:5:3815:G:C2	2.70	0.44
1:5:3967:G:H21	46:z:164:CYS:HB3	1.81	0.44
1:5:4097:G:H5'	35:g:112:GLN:CA	2.29	0.44
1:5:4216:G:C6	1:5:4217:G:N7	2.85	0.44
1:5:4315:A:C3'	1:5:4316:G:H5'	2.47	0.44
1:5:4368:G:H21	43:o:26:TYR:HE2	1.65	0.44
1:5:4405:G:H4'	12:I:4:ARG:HD3	1.98	0.44
1:5:4414:A:C6	1:5:4427:G:C2	2.97	0.44
1:5:4455:G:N1	1:5:4456:C:C5	2.84	0.44
1:5:4479:A:C6	1:5:4480:A:C4	3.05	0.44
1:5:4501:U:H5''	1:5:4502:C:OP2	2.17	0.44
1:5:4535:A:C2	1:5:4536:C:C6	3.05	0.44
1:5:4686:G:C5	1:5:4687:A:C8	3.05	0.44
1:5:4730:C:H2'	1:5:4965:U:C4	2.52	0.44
1:5:4977:A:C6	1:5:4978:G:N1	2.85	0.44
1:5:4978:G:C2'	1:5:4979:A:O5'	2.64	0.44
1:5:5013:C:O2	1:5:5013:C:O2'	2.32	0.44
2:7:24:C:H2'	2:7:25:G:O5'	2.17	0.44
2:7:25:G:C6	2:7:26:C:C4	3.05	0.44
2:7:44:C:H2'	2:7:45:U:O5'	2.16	0.44
3:8:149:G:C2	3:8:151:G:C5	3.05	0.44
4:A:185:ALA:HB3	4:A:196:TRP:CH2	2.53	0.44
4:A:211:PHE:CZ	4:A:221:LYS:HD3	2.52	0.44
7:D:223:PHE:N	7:D:223:PHE:CD1	2.84	0.44
8:E:42:ARG:O	8:E:43:ASN:C	2.59	0.44
11:H:40:HIS:CD2	11:H:40:HIS:N	2.85	0.44
11:H:41:ILE:HD11	11:H:69:THR:CG2	2.47	0.44
19:Q:33:ARG:O	19:Q:34:PHE:C	2.59	0.44
19:Q:93:GLN:CB	29:a:87:ARG:HH12	2.30	0.44
24:V:77:HIS:ND1	24:V:77:HIS:C	2.75	0.44
46:z:36:ILE:CG2	46:z:165:LEU:HB3	2.47	0.44
50:S2:83:A:N6	50:S2:84:A:C4	2.84	0.44
50:S2:154:U:O2	57:SG:4:ASN:ND2	2.48	0.44
50:S2:186:C:N3	50:S2:187:G:N7	2.64	0.44
50:S2:381:C:N4	59:SI:49:ARG:CG	2.80	0.44
50:S2:381:C:C4	59:SI:49:ARG:HG2	2.52	0.44
50:S2:551:U:O2	50:S2:551:U:H2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:551:U:O3'	81:Se:39:ASN:ND2	2.50	0.44
50:S2:793:G:C6	50:S2:794:A:N7	2.84	0.44
50:S2:794:A:C2	50:S2:795:A:H1'	2.53	0.44
50:S2:842:C:N3	50:S2:843:C:C4	2.85	0.44
50:S2:962:A:C2	50:S2:963:A:N9	2.85	0.44
50:S2:992:A:N6	77:Sa:15:ARG:HH11	2.15	0.44
50:S2:1177:U:N3	50:S2:1178:U:C5	2.85	0.44
50:S2:1290:G:C2'	82:Sf:146:LEU:N	2.70	0.44
50:S2:1308:U:C4	50:S2:1309:C:N4	2.85	0.44
50:S2:1357:A:H2'	50:S2:1358:U:O5'	2.18	0.44
50:S2:1372:U:O2	50:S2:1373:C:C6	2.70	0.44
50:S2:1402:A:N1	50:S2:1405:A:N1	2.66	0.44
50:S2:1419:C:O2'	70:ST:132:ASP:OD2	2.32	0.44
50:S2:1449:G:C4	50:S2:1450:G:C8	3.05	0.44
50:S2:1609:C:O2	50:S2:1609:C:C2'	2.65	0.44
50:S2:1686:G:N2	50:S2:1687:C:C2	2.85	0.44
50:S2:1690:U:O2	50:S2:1691:U:C2	2.70	0.44
50:S2:1690:U:O2	50:S2:1691:U:C5	2.71	0.44
50:S2:1725:U:C2	50:S2:1726:G:C8	3.06	0.44
50:S2:1730:U:C4	50:S2:1731:A:C8	3.05	0.44
50:S2:1806:A:C6	50:S2:1807:C:C4	3.05	0.44
54:SD:151:LYS:C	54:SD:152:PHE:CD1	2.95	0.44
65:SO:126:ILE:CG2	65:SO:129:ILE:HD11	2.46	0.44
69:SS:77:TYR:C	69:SS:78:LYS:HD2	2.43	0.44
77:Sa:24:THR:O	77:Sa:25:ASN:HB2	2.17	0.44
77:Sa:51:ARG:NH2	79:Sc:62:GLU:HG3	2.32	0.44
84:S4:17:U:O2'	84:S4:18:U:C5	2.70	0.44
1:5:195:C:C2	1:5:196:C:C6	3.05	0.44
1:5:218:A:H62	6:C:185:ALA:HB2	1.76	0.44
1:5:344:A:C2	1:5:345:C:H1'	2.52	0.44
1:5:405:U:H2'	1:5:407:A:N7	2.32	0.44
1:5:435:A:C6	1:5:436:C:C6	3.04	0.44
1:5:488:G:C5	1:5:489:C:C5	3.05	0.44
1:5:709:C:H2'	1:5:710:G:O4'	2.18	0.44
1:5:738:C:H2'	1:5:739:G:C8	2.52	0.44
1:5:984:C:C2	1:5:1070:G:N2	2.85	0.44
1:5:994:G:C4	1:5:995:C:C6	3.05	0.44
1:5:1064:G:C2	1:5:1065:G:C4	3.05	0.44
1:5:1070:G:N1	1:5:1071:C:C5	2.84	0.44
1:5:1085:C:C2	1:5:1213:G:N1	2.85	0.44
1:5:1185:G:C6	1:5:1186:U:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1241:C:C2'	1:5:1242:G:OP1	2.64	0.44
1:5:1359:G:H2'	1:5:1360:G:C1'	2.47	0.44
1:5:1416:G:C2	1:5:1417:C:C2	3.05	0.44
1:5:1451:G:OP1	1:5:1718:C:C4	2.70	0.44
1:5:1497:A:OP2	19:Q:162:HIS:HB2	2.18	0.44
1:5:1541:C:C2	1:5:1542:U:C6	3.05	0.44
1:5:1885:G:C6	1:5:1895:G:N1	2.85	0.44
1:5:1916:G:H2'	1:5:1917:A:C8	2.52	0.44
1:5:1968:G:H2'	1:5:1969:G:O4'	2.17	0.44
1:5:2058:G:C5	1:5:2059:C:C5	3.04	0.44
1:5:2074:C:H2'	1:5:2075:G:O4'	2.17	0.44
1:5:2438:A:N6	1:5:2441:C:N3	2.65	0.44
1:5:2484:A:C2	1:5:2485:U:C2	3.06	0.44
1:5:2567:G:C4	1:5:2568:C:C5	3.06	0.44
1:5:2692:U:C2'	1:5:2693:G:H5'	2.47	0.44
1:5:3606:U:O2	1:5:3606:U:H2'	2.16	0.44
1:5:3658:C:H2'	1:5:3659:G:H8	1.82	0.44
1:5:3717:A:C2'	1:5:3718:A:O5'	2.64	0.44
1:5:3804:G:C5	1:5:3805:U:C5	3.05	0.44
1:5:3867:A:H3'	1:5:3868:G:H8	1.81	0.44
1:5:3869:C:C2	1:5:3870:C:C5	3.05	0.44
1:5:3880:G:O2'	1:5:3881:G:C5'	2.65	0.44
1:5:4114:C:C3'	1:5:4115:G:O4'	2.62	0.44
1:5:4154:G:C6	1:5:4155:C:C4	3.05	0.44
1:5:4236:G:C2'	1:5:4237:C:O4'	2.66	0.44
1:5:4277:G:C4	1:5:4278:C:C5	3.05	0.44
1:5:4535:A:N6	1:5:4536:C:C5	2.85	0.44
1:5:4661:G:C5'	1:5:4661:G:H8	2.30	0.44
1:5:4735:G:C2	1:5:4736:C:N1	2.85	0.44
1:5:4923:C:H2'	1:5:4924:C:O4'	2.17	0.44
2:7:21:G:H5''	2:7:21:G:C8	2.51	0.44
3:8:75:G:N1	3:8:76:C:C4	2.85	0.44
4:A:186:TYR:CB	4:A:196:TRP:HZ3	2.30	0.44
5:B:106:PHE:N	5:B:106:PHE:CD1	2.86	0.44
8:E:114:THR:O	8:E:115:GLU:HB2	2.16	0.44
9:F:95:ILE:HG22	9:F:96:ARG:O	2.17	0.44
19:Q:68:ARG:O	19:Q:72:LEU:HD13	2.17	0.44
22:T:19:PHE:CG	22:T:20:ARG:HG3	2.52	0.44
26:X:155:ILE:O	26:X:156:ILE:CB	2.66	0.44
46:z:24:LYS:CD	46:z:172:VAL:HG11	2.45	0.44
47:1:189:GLU:C	47:1:193:TRP:HD1	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:14:C:OP1	53:SC:189:GLY:O	2.35	0.44
50:S2:153:G:C2	50:S2:154:U:C6	3.06	0.44
50:S2:165:G:O2'	50:S2:166:A:H8	1.98	0.44
50:S2:310:C:O2'	50:S2:339:A:O2'	2.19	0.44
50:S2:349:A:H2'	50:S2:350:C:H6	1.83	0.44
50:S2:478:G:C6	50:S2:479:C:C4	3.05	0.44
50:S2:478:G:N2	50:S2:479:C:C2	2.86	0.44
50:S2:498:C:N3	50:S2:505:G:N2	2.65	0.44
50:S2:640:A:C2'	50:S2:641:A:O4'	2.66	0.44
50:S2:672:A:C2	50:S2:1162:C:H1'	2.52	0.44
50:S2:806:U:C2	50:S2:807:G:H8	2.25	0.44
50:S2:807:G:N3	50:S2:808:A:C8	2.85	0.44
50:S2:1005:G:C6	50:S2:1006:C:C4	3.04	0.44
50:S2:1045:U:N3	50:S2:1046:U:C4	2.84	0.44
50:S2:1210:G:O6	50:S2:1211:G:C5	2.70	0.44
50:S2:1232:U:H1'	50:S2:1253:A:N7	2.32	0.44
50:S2:1238:U:H2'	50:S2:1239:U:O4'	2.18	0.44
50:S2:1253:A:N3	50:S2:1666:C:O4'	2.49	0.44
50:S2:1357:A:OP2	50:S2:1358:U:C5	2.70	0.44
50:S2:1411:G:N7	50:S2:1412:C:C1'	2.80	0.44
50:S2:1431:G:C2	50:S2:1432:U:C1'	2.98	0.44
50:S2:1524:G:C5	50:S2:1525:C:C5	3.06	0.44
50:S2:1691:U:C3'	50:S2:1692:U:H5'	2.46	0.44
50:S2:1792:G:C6	50:S2:1793:A:C5	3.05	0.44
50:S2:1865:C:H3'	50:S2:1866:A:H5'	1.99	0.44
50:S2:1869:A:H2'	77:Sa:41:ILE:HD13	1.98	0.44
51:SA:53:ARG:HB2	51:SA:53:ARG:NH1	2.32	0.44
54:SD:175:VAL:CG1	54:SD:182:LEU:HB2	2.47	0.44
55:SE:65:CYS:SG	55:SE:66:MET:N	2.90	0.44
56:SF:33:ILE:HG21	79:Sc:11:LEU:HD13	1.98	0.44
57:SG:105:ASN:O	57:SG:106:LEU:HD23	2.17	0.44
60:SJ:78:LEU:HD22	60:SJ:92:MET:HA	1.99	0.44
62:SL:2:ALA:O	62:SL:3:ASP:HB3	2.18	0.44
62:SL:117:PHE:HZ	62:SL:144:LYS:HA	1.80	0.44
63:SM:85:LEU:HB3	63:SM:106:CYS:HB3	1.99	0.44
71:SU:68:THR:HG22	71:SU:69:PRO:O	2.17	0.44
85:S5:21:A:C1'	85:S5:48:C:N4	2.79	0.44
85:S5:34:G:C2	85:S5:35:A:C6	3.05	0.44
85:S5:69:G:C8	85:S5:69:G:O5'	2.71	0.44
85:S5:70:G:C5	85:S5:71:G:O6	2.70	0.44
86:S6:6:G:O6	86:S6:7:G:C2	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:47:U:H3'	86:S6:47:U:H6	1.81	0.44
1:5:37:U:C4	1:5:38:A:N7	2.85	0.44
1:5:84:A:C6	1:5:86:U:C4	3.04	0.44
1:5:102:G:C2	1:5:103:G:C5	3.06	0.44
1:5:111:C:C2	1:5:331:G:N1	2.85	0.44
1:5:176:G:C6	1:5:261:G:C6	3.05	0.44
1:5:316:U:O2'	1:5:317:A:C8	2.70	0.44
1:5:364:G:O6	38:j:52:LYS:CE	2.66	0.44
1:5:458:C:H2'	1:5:459:C:O4'	2.18	0.44
1:5:483:G:N2	1:5:484:U:C4	2.85	0.44
1:5:497:G:N1	1:5:499:G:C5	2.86	0.44
1:5:707:C:H1'	1:5:4944:C:N4	2.31	0.44
1:5:920:C:C2	1:5:921:C:C6	3.06	0.44
1:5:961:G:O6	1:5:969:C:C6	2.70	0.44
1:5:973:G:H1	1:5:1282:G:H1'	1.83	0.44
1:5:976:G:OP1	1:5:976:G:H4'	2.17	0.44
1:5:1169:G:C6	1:5:1170:G:N7	2.85	0.44
1:5:1176:C:C4	1:5:1177:U:C5	3.05	0.44
1:5:1246:G:C5	1:5:1247:U:C6	3.04	0.44
1:5:1273:G:H2'	8:E:69:TYR:O	2.17	0.44
1:5:1362:G:N2	1:5:1363:C:H1'	2.32	0.44
1:5:1435:G:C3'	1:5:1436:C:H5'	2.48	0.44
1:5:1492:G:C2	1:5:1493:G:C4	3.06	0.44
1:5:2081:C:H2'	1:5:2082:G:H8	1.82	0.44
1:5:2308:A:H1'	3:8:19:C:O2'	2.18	0.44
1:5:2330:G:H2'	1:5:2331:G:O4'	2.17	0.44
1:5:2367:A:HO2'	1:5:2368:A:C5'	2.29	0.44
1:5:2441:C:C4'	35:g:9:ARG:HE	2.21	0.44
1:5:2614:C:C2	1:5:2726:G:N1	2.85	0.44
1:5:2645:G:H21	1:5:2646:C:H1'	1.83	0.44
1:5:2701:U:N3	1:5:2702:C:C5	2.85	0.44
1:5:2715:G:C5	1:5:2716:C:C5	3.05	0.44
1:5:2801:U:O2'	38:j:12:ARG:NH2	2.35	0.44
1:5:3758:U:C4	1:5:3765:G:C5	3.05	0.44
1:5:3823:G:H8	1:5:3823:G:O5'	2.00	0.44
1:5:3861:A:C2	1:5:3862:A:C4	3.06	0.44
1:5:3952:A:C2	1:5:3953:G:C4	3.06	0.44
1:5:3953:G:N1	1:5:3954:A:C4	2.85	0.44
1:5:3961:G:C6	1:5:3963:A:C5'	2.95	0.44
1:5:4092:G:C2	1:5:4093:G:N3	2.86	0.44
1:5:4108:G:N1	1:5:4109:G:C5	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4150:G:C6	1:5:4151:G:C5	3.05	0.44
1:5:4167:G:N2	1:5:4168:G:C4	2.86	0.44
1:5:4297:G:N1	1:5:4298:A:C8	2.86	0.44
1:5:4479:A:C6	1:5:4480:A:N9	2.86	0.44
1:5:4513:A:O2'	1:5:4514:G:H5'	2.17	0.44
1:5:4539:U:O2	1:5:4540:C:C6	2.69	0.44
1:5:4652:G:N3	1:5:4653:C:C5	2.85	0.44
1:5:4681:A:H2'	1:5:4682:U:O4'	2.17	0.44
1:5:4749:C:C5	1:5:4750:G:C2	3.05	0.44
3:8:63:U:O2	3:8:63:U:H3'	2.18	0.44
6:C:41:HIS:CD2	6:C:41:HIS:C	2.96	0.44
10:G:73:ARG:HH11	10:G:73:ARG:HB2	1.82	0.44
10:G:182:CYS:HA	10:G:226:TYR:CD2	2.53	0.44
10:G:231:ASN:N	10:G:231:ASN:ND2	2.59	0.44
11:H:66:GLU:N	11:H:66:GLU:OE1	2.50	0.44
16:N:21:PHE:CZ	16:N:25:VAL:HG21	2.52	0.44
16:N:182:HIS:O	16:N:183:THR:C	2.58	0.44
18:P:78:TRP:HA	18:P:78:TRP:CE3	2.52	0.44
20:R:96:MET:O	20:R:97:ARG:C	2.60	0.44
32:d:79:ASN:N	32:d:79:ASN:OD1	2.50	0.44
50:S2:4:C:H2'	50:S2:4:C:O2	2.17	0.44
50:S2:12:U:H2'	50:S2:13:C:H6	1.82	0.44
50:S2:211:G:C4	50:S2:212:C:C6	3.05	0.44
50:S2:384:U:O2'	62:SL:135:SER:O	2.35	0.44
50:S2:418:A:H3'	50:S2:419:G:H8	1.82	0.44
50:S2:436:G:N2	50:S2:437:G:C5	2.85	0.44
50:S2:437:G:N1	50:S2:457:C:C2	2.85	0.44
50:S2:447:A:P	59:SI:49:ARG:HE	2.40	0.44
50:S2:551:U:C2'	81:Se:44:ASN:OD1	2.66	0.44
50:S2:634:A:C2	50:S2:635:G:N9	2.86	0.44
50:S2:676:C:O2	50:S2:676:C:H2'	2.17	0.44
50:S2:826:A:C8	50:S2:827:A:C1'	3.01	0.44
50:S2:1098:C:O2	50:S2:1098:C:H2'	2.16	0.44
50:S2:1113:A:H2'	50:S2:1114:U:H3'	1.98	0.44
50:S2:1190:A:H2'	50:S2:1191:C:C5'	2.47	0.44
50:S2:1261:C:N4	50:S2:1262:C:N3	2.65	0.44
50:S2:1287:A:C6	50:S2:1313:A:N7	2.85	0.44
50:S2:1342:U:C5	50:S2:1483:A:N7	2.77	0.44
50:S2:1377:U:C3'	51:SA:102:ARG:HH21	2.30	0.44
50:S2:1458:G:C2	50:S2:1459:G:C8	3.06	0.44
50:S2:1483:A:H5''	54:SD:159:HIS:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1570:G:C4	50:S2:1571:G:C8	3.05	0.44
50:S2:1669:G:C2	50:S2:1670:C:C2	3.04	0.44
50:S2:1777:G:C4	50:S2:1778:C:C5	3.05	0.44
50:S2:1841:C:O2	50:S2:1841:C:H2'	2.18	0.44
50:S2:1864:U:C5	77:Sa:5:ARG:NH2	2.84	0.44
54:SD:23:GLU:O	54:SD:24:PHE:C	2.60	0.44
54:SD:162:ASP:O	54:SD:163:PRO:C	2.60	0.44
57:SG:113:ILE:HD12	57:SG:124:LEU:HD21	1.99	0.44
61:SK:27:VAL:CG1	61:SK:43:LEU:HD23	2.43	0.44
62:SL:111:VAL:HG21	62:SL:128:VAL:HG11	1.98	0.44
67:SQ:32:ILE:HG21	67:SQ:39:LEU:HD11	1.99	0.44
79:Sc:34:PHE:O	79:Sc:36:ASP:N	2.50	0.44
82:Sf:123:SER:OG	82:Sf:144:CYS:SG	2.57	0.44
85:S5:3:C:O2'	85:S5:4:C:C6	2.70	0.44
85:S5:6:G:C2'	85:S5:7:A:C8	3.00	0.44
85:S5:21:A:N6	85:S5:48:C:C1'	2.80	0.44
85:S5:52:G:C6	85:S5:63:G:O6	2.70	0.44
86:S6:50:U:C6	86:S6:50:U:OP2	2.70	0.44
86:S6:71:G:C8	86:S6:71:G:OP1	2.70	0.44
1:5:93:G:N2	1:5:94:A:N3	2.65	0.44
1:5:289:C:N4	1:5:290:U:O4	2.51	0.44
1:5:341:G:C6	1:5:342:G:N7	2.85	0.44
1:5:446:C:C4	1:5:447:C:C5	3.05	0.44
1:5:449:C:O2	1:5:449:C:C2'	2.64	0.44
1:5:671:G:C6	1:5:672:C:C4	3.05	0.44
1:5:732:A:C2	1:5:733:A:C1'	3.00	0.44
1:5:1189:G:N3	1:5:1190:C:C6	2.86	0.44
1:5:1201:U:C4	1:5:1202:C:C5	3.06	0.44
1:5:1215:C:N4	1:5:1216:C:H5	2.16	0.44
1:5:1233:G:C2	1:5:1234:G:C5	3.06	0.44
1:5:1266:G:C2	1:5:1268:G:O6	2.71	0.44
1:5:1269:G:C2'	1:5:2111:G:O6	2.65	0.44
1:5:1341:U:C2	1:5:1342:A:C8	3.05	0.44
1:5:1411:C:O2	1:5:1411:C:H2'	2.17	0.44
1:5:1727:U:N3	1:5:1728:U:C4	2.85	0.44
1:5:1759:G:N2	1:5:1760:G:H1'	2.32	0.44
1:5:1761:G:N3	1:5:1762:C:C6	2.85	0.44
1:5:1843:A:C2	1:5:1844:G:N9	2.85	0.44
1:5:1968:G:C2	1:5:1969:G:C5	3.06	0.44
1:5:1988:G:H2'	1:5:1988:G:N3	2.33	0.44
1:5:1992:U:C6	1:5:2002:A:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2023:C:H3'	1:5:2024:G:C8	2.53	0.44
1:5:2245:G:C5	1:5:2246:C:C5	3.06	0.44
1:5:2316:G:C2	1:5:2324:C:O2	2.71	0.44
1:5:2319:C:H5	33:e:58:ILE:HG13	1.81	0.44
1:5:2398:U:O2	1:5:2398:U:O2'	2.36	0.44
1:5:2451:A:C6	1:5:2452:G:N9	2.86	0.44
1:5:2628:U:C2	1:5:2629:C:C6	3.05	0.44
1:5:2823:G:N7	20:R:20:LYS:HD3	2.33	0.44
1:5:2852:U:C2	1:5:2852:U:C3'	2.97	0.44
1:5:3596:A:O3'	1:5:3597:G:O4'	2.35	0.44
1:5:3633:C:N3	1:5:3634:G:N7	2.66	0.44
1:5:3692:A:H5''	1:5:3693:U:OP2	2.17	0.44
1:5:3807:A:C2	1:5:3808:C:C6	3.05	0.44
1:5:3878:C:C2	1:5:4518:A:C6	3.05	0.44
1:5:3878:C:N4	1:5:4518:A:N3	2.64	0.44
1:5:4142:C:C2	1:5:4143:G:N2	2.86	0.44
1:5:4164:C:O2	1:5:4164:C:H2'	2.18	0.44
1:5:4202:U:O2	1:5:4204:C:C5	2.70	0.44
1:5:4335:C:H2'	1:5:4336:A:C1'	2.47	0.44
1:5:4551:U:N3	1:5:4552:U:C5	2.86	0.44
1:5:4599:A:N6	1:5:4610:A:C8	2.86	0.44
1:5:4659:G:N1	1:5:4660:G:C5	2.85	0.44
1:5:4884:G:C8	1:5:4884:G:H5''	2.52	0.44
1:5:4998:G:N2	1:5:4999:G:H1'	2.32	0.44
1:5:5050:C:N3	1:5:5051:C:C6	2.86	0.44
2:7:7:G:H5''	7:D:22:ARG:HH12	1.83	0.44
3:8:55:U:N3	3:8:62:A:C2	2.74	0.44
3:8:118:C:N3	3:8:119:C:C6	2.76	0.44
4:A:48:ILE:HD11	4:A:82:ILE:HG22	1.98	0.44
5:B:258:HIS:O	5:B:258:HIS:HD2	2.00	0.44
7:D:264:LYS:HD2	7:D:266:TRP:CD2	2.53	0.44
9:F:201:LYS:HA	9:F:201:LYS:HE3	1.99	0.44
14:L:127:PHE:HB2	36:h:118:LYS:C	2.42	0.44
16:N:28:TRP:CE3	16:N:29:GLN:HA	2.53	0.44
16:N:195:ARG:H	16:N:195:ARG:HG3	1.72	0.44
18:P:36:ILE:HD12	18:P:48:LEU:HD11	1.99	0.44
19:Q:88:ASP:OD1	19:Q:109:ALA:CA	2.66	0.44
20:R:131:VAL:HG23	20:R:132:PHE:CE2	2.52	0.44
21:S:161:ARG:HD3	21:S:161:ARG:HA	1.94	0.44
28:Z:4:PHE:CE2	31:c:66:LEU:HB3	2.53	0.44
34:f:18:LEU:HG	34:f:19:ARG:NH2	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:l:21:ARG:HH11	47:l:273:ARG:CG	2.30	0.44
41:m:97:ARG:HD2	41:m:122:ARG:HD2	1.99	0.44
46:z:42:ASP:CB	46:z:45:LYS:HD2	2.47	0.44
50:S2:20:G:H5'	50:S2:620:G:N7	2.32	0.44
50:S2:56:G:O6	50:S2:90:G:N1	2.50	0.44
50:S2:187:G:H3'	50:S2:188:C:H6	1.82	0.44
50:S2:296:U:H2'	50:S2:297:A:O4'	2.17	0.44
50:S2:309:G:H2'	50:S2:310:C:H6	1.80	0.44
50:S2:421:G:C2	50:S2:422:U:C2	3.05	0.44
50:S2:448:A:H4'	50:S2:449:A:H5'	1.99	0.44
50:S2:495:U:O2'	50:S2:496:C:C4'	2.65	0.44
50:S2:508:A:C6	50:S2:509:G:H1'	2.53	0.44
50:S2:873:G:O6	50:S2:912:C:N3	2.51	0.44
50:S2:933:G:N3	50:S2:1000:C:C2	2.86	0.44
50:S2:947:G:C5	50:S2:948:C:C5	3.05	0.44
50:S2:1146:C:C2	50:S2:1147:C:H5	2.32	0.44
50:S2:1234:C:C2	50:S2:1235:G:C8	3.06	0.44
50:S2:1290:G:N3	82:Sf:146:LEU:CA	2.80	0.44
50:S2:1332:A:C2	50:S2:1333:U:N1	2.86	0.44
50:S2:1405:A:N1	50:S2:1406:G:C5	2.85	0.44
50:S2:1415:C:H2'	50:S2:1416:C:C5'	2.47	0.44
50:S2:1419:C:OP2	50:S2:1420:G:P	2.76	0.44
50:S2:1484:A:C2	50:S2:1485:U:C6	3.04	0.44
50:S2:1508:A:C6	50:S2:1510:G:C8	3.04	0.44
50:S2:1513:C:C2'	50:S2:1514:G:C5'	2.81	0.44
50:S2:1524:G:C6	50:S2:1525:C:C5	3.05	0.44
50:S2:1539:U:O2	50:S2:1539:U:H2'	2.17	0.44
50:S2:1620:A:H2'	50:S2:1620:A:N3	2.33	0.44
50:S2:1732:G:C5	50:S2:1733:U:C5	3.05	0.44
50:S2:1832:A:C2	50:S2:1833:C:N1	2.82	0.44
50:S2:1866:A:H5'	77:Sa:95:ARG:HB2	2.00	0.44
52:SB:42:ARG:HH11	52:SB:232:HIS:C	1.80	0.44
56:SF:20:PHE:O	56:SF:22:LYS:N	2.50	0.44
57:SG:220:ALA:HA	57:SG:223:LYS:HB2	2.00	0.44
60:SJ:13:TYR:HA	60:SJ:48:PHE:CB	2.47	0.44
61:SK:66:HIS:HB3	61:SK:68:TYR:CE1	2.52	0.44
69:SS:120:HIS:CD2	69:SS:124:ARG:HD2	2.53	0.44
70:ST:23:LYS:HD3	70:ST:54:TYR:CD1	2.52	0.44
72:SV:20:SER:HB3	72:SV:59:ILE:HD11	1.99	0.44
74:SX:10:ALA:C	74:SX:12:LYS:N	2.72	0.44
83:Sg:20:GLN:HA	83:Sg:288:SER:CB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Sg:64:HIS:HB3	83:Sg:83:TRP:HB2	1.99	0.44
85:S5:27:G:N1	85:S5:43:C:H5	2.00	0.44
85:S5:50:U:C4	85:S5:64:A:N6	2.73	0.44
85:S5:70:G:C8	85:S5:70:G:OP2	2.70	0.44
86:S6:17:A:C5	86:S6:20:U:O4	2.71	0.44
86:S6:17:A:C8	86:S6:19:G:OP1	2.70	0.44
86:S6:20:U:C3'	86:S6:20:U:C6	3.00	0.44
86:S6:60:U:C6	86:S6:60:U:OP2	2.70	0.44
1:5:273:U:C2'	1:5:274:C:O5'	2.66	0.44
1:5:273:U:N3	1:5:274:C:C4	2.85	0.44
1:5:455:C:C2	1:5:456:C:C6	3.06	0.44
1:5:483:G:N1	1:5:484:U:C5	2.83	0.44
1:5:660:A:N3	1:5:661:C:C6	2.85	0.44
1:5:976:G:C2	1:5:977:C:C6	3.05	0.44
1:5:1174:G:N3	1:5:1175:A:C8	2.86	0.44
1:5:1232:G:C4'	1:5:1233:G:OP2	2.66	0.44
1:5:1358:G:P	6:C:114:ARG:NH2	2.91	0.44
1:5:1362:G:N2	1:5:1363:C:C2	2.85	0.44
1:5:1374:G:C6	1:5:1375:C:C5	3.05	0.44
1:5:1391:A:C4	1:5:1392:A:C8	3.06	0.44
1:5:1590:C:H5'	1:5:2856:C:O2'	2.17	0.44
1:5:1613:A:H3'	1:5:1614:C:H5'	2.00	0.44
1:5:1668:A:OP1	30:b:18:ARG:NH1	2.51	0.44
1:5:1916:G:C8	34:f:16:ARG:HD3	2.53	0.44
1:5:1960:A:H3'	1:5:1961:G:C5'	2.48	0.44
1:5:1985:G:H2'	1:5:1986:U:C6	2.52	0.44
1:5:2339:G:C4	1:5:2340:C:C6	3.06	0.44
1:5:2405:G:H8	1:5:2405:G:O5'	2.01	0.44
1:5:2496:G:N2	1:5:2497:C:C2	2.85	0.44
1:5:2556:G:C2	1:5:2572:C:N3	2.86	0.44
1:5:2599:G:C8	1:5:2600:A:C8	3.05	0.44
1:5:2638:G:N2	1:5:2697:A:H61	2.15	0.44
1:5:2651:C:O2'	35:g:54:ARG:NH2	2.50	0.44
1:5:2657:G:H2'	1:5:2658:G:C8	2.53	0.44
1:5:2857:A:C4	1:5:2858:A:C5	3.06	0.44
1:5:3656:A:HO2'	1:5:3747:A:HO2'	1.66	0.44
1:5:3658:C:H2'	1:5:3659:G:C8	2.52	0.44
1:5:3974:G:OP2	46:z:28:PHE:HB3	2.13	0.44
1:5:3976:C:H2'	1:5:3977:C:O4'	2.18	0.44
1:5:4153:C:O2	1:5:4154:G:C8	2.71	0.44
1:5:4411:G:N2	1:5:4412:C:C2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4454:G:N3	1:5:4454:G:H2'	2.32	0.44
1:5:4463:U:C5	1:5:4488:A:C8	3.05	0.44
1:5:4483:C:C4	1:5:4484:A:N7	2.85	0.44
1:5:4871:C:C6	21:S:176:PHE:CE2	3.05	0.44
2:7:28:C:H1'	2:7:55:A:N6	2.33	0.44
3:8:13:G:C6	3:8:14:U:C4	3.05	0.44
4:A:202:VAL:HA	4:A:211:PHE:O	2.18	0.44
5:B:17:LEU:HD22	5:B:17:LEU:O	2.17	0.44
5:B:315:ASN:OD1	5:B:326:VAL:HG12	2.18	0.44
8:E:224:GLN:HA	8:E:229:PHE:HB2	1.98	0.44
11:H:122:TYR:C	11:H:122:TYR:CD1	2.96	0.44
14:L:55:LEU:HD22	14:L:120:TYR:CD2	2.52	0.44
18:P:70:CYS:SG	18:P:83:TRP:HH2	2.39	0.44
21:S:29:ARG:NH1	21:S:29:ARG:CG	2.80	0.44
26:X:148:ASP:OD1	26:X:148:ASP:N	2.50	0.44
27:Y:56:GLN:HE21	27:Y:56:GLN:HB3	1.63	0.44
28:Z:17:ARG:HG2	28:Z:18:TYR:CE1	2.53	0.44
36:h:68:ASN:HD22	36:h:68:ASN:HA	1.65	0.44
50:S2:64:A:N1	50:S2:82:G:C2	2.84	0.44
50:S2:185:G:C6	50:S2:186:C:C4	3.05	0.44
50:S2:217:A:C2	50:S2:218:U:O4'	2.70	0.44
50:S2:421:G:C4	50:S2:422:U:C4	3.06	0.44
50:S2:602:G:H2'	50:S2:603:C:C5	2.51	0.44
50:S2:752:G:C2	50:S2:790:C:C4	3.05	0.44
50:S2:823:U:N3	75:SY:64:PHE:CE2	2.85	0.44
50:S2:837:A:N3	50:S2:837:A:C2'	2.81	0.44
50:S2:976:G:N2	50:S2:977:C:C2	2.86	0.44
50:S2:1032:C:C4	50:S2:1033:G:C5	3.06	0.44
50:S2:1167:G:H2'	50:S2:1168:G:O5'	2.17	0.44
50:S2:1203:G:O2'	50:S2:1699:A:C2	2.70	0.44
50:S2:1310:U:C4'	82:Sf:143:LYS:CG	2.95	0.44
50:S2:1332:A:C2	50:S2:1333:U:C6	3.05	0.44
50:S2:1432:U:O2	50:S2:1433:C:C5	2.70	0.44
50:S2:1455:A:H5'	50:S2:1456:G:OP2	2.17	0.44
50:S2:1496:U:O4	50:S2:1498:A:N7	2.50	0.44
50:S2:1553:C:H5'	50:S2:1556:A:H61	1.82	0.44
50:S2:1570:G:H2'	50:S2:1571:G:O4'	2.17	0.44
50:S2:1662:U:C5'	50:S2:1663:A:OP2	2.66	0.44
50:S2:1701:C:C6	86:S6:34:G:C6	3.05	0.44
51:SA:176:TRP:CE3	51:SA:199:PRO:HG3	2.49	0.44
54:SD:158:ILE:HG12	54:SD:158:ILE:O	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SG:29:GLU:HA	57:SG:101:ILE:HG23	1.99	0.44
60:SJ:64:ASP:O	60:SJ:67:ASP:HB3	2.17	0.44
63:SM:32:ALA:HB3	63:SM:110:VAL:HB	1.99	0.44
67:SQ:111:ILE:HA	67:SQ:114:GLN:NE2	2.33	0.44
68:SR:16:ILE:HD12	68:SR:50:ILE:HG23	1.98	0.44
69:SS:17:ASN:O	69:SS:18:THR:HG23	2.18	0.44
71:SU:48:LEU:CD1	71:SU:91:LEU:HD22	2.48	0.44
78:Sb:13:GLU:HG3	78:Sb:14:GLU:N	2.32	0.44
84:S4:23:U:O2'	84:S4:24:A:C8	2.70	0.44
85:S5:7:A:O5'	85:S5:8:U:C5	2.71	0.44
85:S5:8:U:C5	85:S5:8:U:OP2	2.70	0.44
86:S6:6:G:O6	86:S6:7:G:N1	2.50	0.44
86:S6:11:C:O2	86:S6:12:C:C6	2.71	0.44
86:S6:13:C:H3'	86:S6:14:C:C5	2.49	0.44
86:S6:41:C:O2	86:S6:42:C:C6	2.70	0.44
86:S6:43:C:H2'	86:S6:43:C:O2	2.16	0.44
1:5:37:U:H5''	29:a:32:ARG:HD2	1.99	0.44
1:5:83:C:O5'	1:5:84:A:C2'	2.64	0.44
1:5:127:G:C2	1:5:128:C:C5	3.05	0.44
1:5:176:G:C4	1:5:261:G:C2	3.06	0.44
1:5:341:G:H2'	1:5:341:G:N3	2.32	0.44
1:5:368:C:C2	1:5:374:G:C2	3.05	0.44
1:5:423:G:C4	1:5:424:U:C5	3.04	0.44
1:5:445:U:C5	1:5:446:C:C5	3.06	0.44
1:5:487:G:C6	1:5:488:G:C5	3.06	0.44
1:5:1088:C:C2	1:5:1089:G:C8	3.06	0.44
1:5:1099:C:H2'	1:5:1100:U:O4'	2.17	0.44
1:5:1184:A:C6	1:5:1185:G:N7	2.86	0.44
1:5:1303:A:H2'	1:5:1303:A:N3	2.33	0.44
1:5:1374:G:C2	1:5:1375:C:C2	3.06	0.44
1:5:1413:C:C2	1:5:1414:C:C6	3.05	0.44
1:5:1492:G:N3	1:5:1493:G:C8	2.86	0.44
1:5:1522:G:H5''	1:5:1523:A:OP1	2.16	0.44
1:5:1684:A:N6	1:5:1685:G:N7	2.66	0.44
1:5:1729:A:H5''	1:5:1729:A:H8	1.82	0.44
1:5:2065:G:C2	1:5:2066:C:C2	3.06	0.44
1:5:2359:U:OP2	1:5:2360:A:O2'	2.25	0.44
1:5:2428:A:N7	1:5:2789:A:H2	2.10	0.44
1:5:2439:G:H1'	1:5:2777:G:N3	2.33	0.44
1:5:2484:A:C4	1:5:2485:U:C6	3.06	0.44
1:5:2513:A:OP1	35:g:11:LEU:HG	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2588:C:C6	1:5:2588:C:C3'	3.01	0.44
1:5:2589:C:C4	1:5:2590:G:C4	3.05	0.44
1:5:2606:G:C2	1:5:2607:C:C2	3.05	0.44
1:5:2698:G:C5	1:5:2699:C:C5	3.06	0.44
1:5:2698:G:C2	1:5:2699:C:C2	3.06	0.44
1:5:2783:A:N3	1:5:2784:C:C6	2.86	0.44
1:5:3655:C:O2	1:5:3655:C:H2'	2.16	0.44
1:5:3794:C:O2	1:5:3794:C:H2'	2.17	0.44
1:5:3844:U:N3	1:5:3845:A:C8	2.85	0.44
1:5:3845:A:H2'	1:5:3845:A:N3	2.33	0.44
1:5:3871:A:H2'	1:5:3872:A:C8	2.52	0.44
1:5:3922:G:C2	1:5:4542:U:C5	3.06	0.44
1:5:3941:G:C6	1:5:4073:A:N1	2.81	0.44
1:5:3944:G:O6	1:5:3945:A:C5	2.71	0.44
1:5:3954:A:N3	1:5:3955:G:N7	2.66	0.44
1:5:4054:C:H4'	46:z:205:TYR:CB	2.36	0.44
1:5:4107:G:C4	1:5:4108:G:C8	3.06	0.44
1:5:4197:G:C6	1:5:4198:G:C4	3.06	0.44
1:5:4336:A:H5'	1:5:4337:C:O5'	2.18	0.44
1:5:4341:C:N4	86:S6:76:A:H2	2.12	0.44
1:5:4363:A:C2	1:5:4364:G:N9	2.85	0.44
1:5:4581:G:N2	1:5:4582:C:C4	2.85	0.44
1:5:4772:C:C4	1:5:4773:C:C5	3.05	0.44
1:5:4877:G:O2'	1:5:4878:C:O5'	2.32	0.44
1:5:4953:G:H2'	1:5:4954:G:O4'	2.16	0.44
1:5:5003:U:N3	1:5:5045:G:N2	2.65	0.44
2:7:22:A:C2	2:7:23:A:C6	3.06	0.44
2:7:39:C:C5	13:J:49:VAL:HG21	2.52	0.44
2:7:50:A:C6	2:7:51:G:N7	2.85	0.44
2:7:99:G:N7	21:S:55:LYS:HE3	2.33	0.44
3:8:49:G:C2	3:8:50:C:C2	3.06	0.44
4:A:182:ALA:O	4:A:183:GLY:C	2.59	0.44
5:B:92:TYR:HB2	5:B:159:VAL:HB	1.98	0.44
5:B:264:PHE:CD2	17:O:66:PRO:HD2	2.52	0.44
7:D:29:ASP:HB2	7:D:32:ALA:HB3	2.00	0.44
8:E:129:PHE:O	8:E:132:HIS:HB2	2.17	0.44
8:E:241:GLN:OE1	8:E:242:ARG:N	2.50	0.44
9:F:32:ILE:N	9:F:32:ILE:CD1	2.81	0.44
9:F:85:VAL:CG1	21:S:62:VAL:HA	2.46	0.44
9:F:237:ASN:HD21	9:F:238:ARG:C	2.25	0.44
10:G:104:PRO:HG3	10:G:194:VAL:HG12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:65:ARG:HD3	29:a:69:PHE:CD1	2.52	0.44
20:R:98:ARG:NH1	20:R:133:LYS:HB2	2.31	0.44
23:U:39:PHE:CD1	23:U:90:TYR:CE2	3.06	0.44
33:e:47:ARG:HD2	33:e:49:PHE:CE2	2.53	0.44
39:k:41:TYR:HB3	39:k:43:TYR:CE1	2.52	0.44
47:1:178:GLY:O	47:1:179:ILE:C	2.61	0.44
47:1:247:ALA:CB	47:1:440:ALA:HB2	2.46	0.44
50:S2:410:G:N1	50:S2:411:G:C4	2.86	0.44
50:S2:506:G:OP1	75:SY:108:LYS:CE	2.64	0.44
50:S2:648:A:N1	50:S2:649:U:C4	2.86	0.44
50:S2:932:G:N2	50:S2:934:G:C8	2.85	0.44
50:S2:988:C:C4	50:S2:989:C:C4	3.06	0.44
50:S2:1040:G:H5''	50:S2:1040:G:H8	1.83	0.44
50:S2:1093:A:C6	50:S2:1094:C:C4	3.06	0.44
50:S2:1345:G:O6	50:S2:1385:G:C2	2.70	0.44
50:S2:1407:U:C3'	50:S2:1408:U:H6	2.31	0.44
50:S2:1415:C:C2	50:S2:1416:C:C1'	3.01	0.44
50:S2:1690:U:O2	50:S2:1691:U:C6	2.70	0.44
50:S2:1869:A:H2'	77:Sa:41:ILE:CD1	2.47	0.44
51:SA:19:LEU:HD23	51:SA:24:HIS:CE1	2.51	0.44
51:SA:205:ARG:NH1	68:SR:84:TYR:CB	2.80	0.44
54:SD:106:ARG:HG2	54:SD:175:VAL:HG23	2.00	0.44
55:SE:15:PRO:HD2	55:SE:18:TRP:CH2	2.52	0.44
55:SE:101:LEU:HD23	55:SE:101:LEU:HA	1.89	0.44
59:SI:104:ILE:HD11	59:SI:171:LEU:HB2	1.99	0.44
62:SL:111:VAL:HG23	62:SL:140:PHE:HB3	1.99	0.44
64:SN:64:ARG:HA	64:SN:69:ASN:O	2.18	0.44
67:SQ:35:ASN:OD1	67:SQ:35:ASN:N	2.50	0.44
68:SR:99:ASP:O	68:SR:103:LYS:N	2.49	0.44
69:SS:39:ARG:NH2	70:ST:38:LYS:HD3	2.33	0.44
69:SS:83:PHE:O	69:SS:97:GLN:OE1	2.36	0.44
77:Sa:18:VAL:O	77:Sa:19:GLN:C	2.61	0.44
86:S6:42:C:O2	86:S6:43:C:C6	2.70	0.44
1:5:25:A:N3	1:5:339:C:O2'	2.45	0.44
1:5:32:G:H2'	1:5:33:A:O5'	2.18	0.44
1:5:33:A:H5'	16:N:86:HIS:CD2	2.53	0.44
1:5:43:U:C5	1:5:44:A:N7	2.85	0.44
1:5:126:C:N3	1:5:127:G:C8	2.85	0.44
1:5:195:C:N3	1:5:196:C:H5	2.12	0.44
1:5:345:C:N3	1:5:346:G:N7	2.65	0.44
1:5:349:A:C6	6:C:45:ARG:NH2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:432:U:O4	17:O:91:LYS:HA	2.17	0.44
1:5:479:G:N3	1:5:480:C:C6	2.86	0.44
1:5:664:G:C2	1:5:667:A:N1	2.84	0.44
1:5:669:C:O2'	1:5:670:G:O5'	2.32	0.44
1:5:726:G:O2'	1:5:727:C:H5'	2.18	0.44
1:5:952:G:N1	1:5:953:C:C4	2.86	0.44
1:5:978:G:C4	1:5:979:C:C6	3.05	0.44
1:5:1065:G:H2'	1:5:1066:G:C8	2.52	0.44
1:5:1201:U:O2	1:5:1202:C:C6	2.70	0.44
1:5:1206:C:C2	1:5:1207:C:C6	3.05	0.44
1:5:1219:G:C4	1:5:1220:G:C8	3.06	0.44
1:5:1239:C:C4'	1:5:1240:G:O5'	2.65	0.44
1:5:1293:G:H8	1:5:1293:G:C5'	2.31	0.44
1:5:1344:C:H5''	1:5:1344:C:H6	1.81	0.44
1:5:1473:U:N3	1:5:1474:C:C5	2.86	0.44
1:5:1577:G:N3	1:5:1577:G:C3'	2.81	0.44
1:5:1581:G:C5	1:5:1610:C:C4	3.06	0.44
1:5:1602:U:O2	1:5:1602:U:C2'	2.64	0.44
1:5:1617:G:H3'	1:5:1618:G:H8	1.82	0.44
1:5:1627:G:C4	1:5:1628:C:C6	3.05	0.44
1:5:1692:C:C4	1:5:1693:U:C5	3.06	0.44
1:5:1752:G:C5	1:5:1753:G:N7	2.86	0.44
1:5:1963:C:N4	1:5:1964:A:C8	2.84	0.44
1:5:1975:G:C2	1:5:1984:A:N9	2.86	0.44
1:5:1984:A:H62	1:5:2011:C:C4'	2.31	0.44
1:5:1989:G:C2	1:5:1990:A:N7	2.85	0.44
1:5:2050:G:C6	1:5:2051:C:C4	3.06	0.44
1:5:2100:A:C6	1:5:2101:C:H1'	2.53	0.44
1:5:2328:G:C6	1:5:2329:U:C4	3.06	0.44
1:5:2422:C:O2	1:5:2422:C:C2'	2.63	0.44
1:5:2486:G:H2'	1:5:2487:G:C1'	2.47	0.44
1:5:2559:G:C5	1:5:2560:C:C5	3.06	0.44
1:5:2732:G:C6	1:5:2733:C:C4	3.05	0.44
1:5:2832:A:C2'	1:5:2833:A:H5''	2.32	0.44
1:5:3633:C:H1'	1:5:3648:A:N3	2.32	0.44
1:5:3759:A:C2	1:5:3766:A:C5	3.06	0.44
1:5:3771:C:N4	1:5:3776:G:H22	2.15	0.44
1:5:3972:A:N3	1:5:4040:C:O2	2.43	0.44
1:5:4072:C:N4	1:5:4073:A:C6	2.86	0.44
1:5:4165:C:C2	1:5:4166:G:H8	2.30	0.44
1:5:4215:C:N4	1:5:4216:G:C6	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4230:C:O2	1:5:4230:C:C2'	2.64	0.44
1:5:4508:C:N3	1:5:4512:U:C5	2.76	0.44
1:5:4653:C:N3	1:5:4654:C:C4	2.85	0.44
1:5:4723:A:C2	1:5:4724:A:C4	3.06	0.44
1:5:4730:C:H1'	1:5:4731:G:H3'	1.99	0.44
1:5:4869:U:H5'	1:5:4870:G:N2	2.32	0.44
1:5:4968:A:OP1	5:B:120:LYS:HB2	2.17	0.44
2:7:112:U:O2	2:7:113:G:N7	2.50	0.44
2:7:117:G:C2	2:7:118:C:C2	3.06	0.44
5:B:67:VAL:HG23	24:V:14:PHE:HE2	1.81	0.44
6:C:265:GLY:C	6:C:266:THR:O	2.58	0.44
12:I:46:PHE:CZ	12:I:85:PHE:HA	2.52	0.44
13:J:99:PHE:CD2	13:J:105:PHE:HB3	2.49	0.44
13:J:166:PHE:CZ	13:J:172:GLY:HA3	2.52	0.44
20:R:95:TRP:CD2	20:R:99:MET:HE2	2.52	0.44
23:U:101:ARG:HH11	23:U:101:ARG:HG3	1.81	0.44
24:V:48:ARG:HD2	24:V:51:ARG:NH2	2.32	0.44
32:d:25:TYR:CE2	32:d:119:THR:HG22	2.52	0.44
47:1:188:CYS:HB3	48:2:47:MET:HB3	1.99	0.44
50:S2:28:U:C2	50:S2:29:G:N7	2.86	0.44
50:S2:173:A:C2	50:S2:174:C:N1	2.85	0.44
50:S2:215:G:N2	50:S2:312:G:H1	2.16	0.44
50:S2:302:A:C2	50:S2:303:C:C2	3.06	0.44
50:S2:319:C:O2	50:S2:320:G:N7	2.50	0.44
50:S2:525:A:N6	50:S2:588:G:N2	2.60	0.44
50:S2:584:G:C5	50:S2:585:C:C5	3.06	0.44
50:S2:596:U:O2'	50:S2:597:G:O5'	2.36	0.44
50:S2:600:G:N3	50:S2:601:G:N7	2.65	0.44
50:S2:610:G:C6	50:S2:611:G:C5	3.06	0.44
50:S2:642:U:O2'	50:S2:644:G:O2'	2.29	0.44
50:S2:695:C:N3	50:S2:696:G:N7	2.65	0.44
50:S2:796:G:C4	58:SH:109:ARG:CZ	3.01	0.44
50:S2:803:C:C2	50:S2:804:U:C6	3.05	0.44
50:S2:839:C:C2'	50:S2:839:C:O2	2.66	0.44
50:S2:872:A:HO2'	50:S2:873:G:C5'	2.29	0.44
50:S2:923:G:C2	50:S2:1022:U:C4	2.98	0.44
50:S2:1131:G:C6	50:S2:1132:C:C4	3.06	0.44
50:S2:1265:A:H2'	50:S2:1266:C:H6	1.82	0.44
50:S2:1310:U:H1'	82:Sf:143:LYS:HD2	1.94	0.44
50:S2:1311:C:C4	50:S2:1312:G:C4	3.05	0.44
50:S2:1372:U:C2	50:S2:1373:C:C6	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1648:G:H1'	50:S2:1649:U:H5	1.83	0.44
50:S2:1684:C:C2	50:S2:1685:U:C6	3.06	0.44
50:S2:1686:G:C4	50:S2:1687:C:C6	3.05	0.44
50:S2:1701:C:H4'	84:S4:20:U:C4	2.52	0.44
50:S2:1846:G:C6	50:S2:1847:G:N7	2.85	0.44
60:SJ:39:ASN:CG	60:SJ:40:LYS:N	2.74	0.44
61:SK:10:ALA:O	61:SK:13:GLU:HG3	2.18	0.44
65:SO:44:VAL:HG23	65:SO:81:VAL:HG11	1.98	0.44
65:SO:142:ARG:NH1	77:Sa:27:ALA:HB2	2.32	0.44
66:SP:10:ARG:HG3	66:SP:10:ARG:HH11	1.83	0.44
69:SS:78:LYS:O	69:SS:80:PRO:HD3	2.18	0.44
70:ST:11:GLN:NE2	70:ST:62:ARG:NH1	2.65	0.44
72:SV:21:ASN:O	72:SV:21:ASN:ND2	2.48	0.44
85:S5:29:G:H5'	85:S5:30:G:OP2	2.18	0.44
85:S5:36:A:H2'	85:S5:37:A:O4'	2.18	0.44
85:S5:38:A:C6	85:S5:39:U:O4	2.70	0.44
85:S5:70:G:C6	85:S5:71:G:C6	3.06	0.44
86:S6:10:G:C6	86:S6:11:C:C4	3.06	0.44
86:S6:47:U:C6	86:S6:47:U:O5'	2.70	0.44
1:5:111:C:H1'	1:5:331:G:N2	2.33	0.44
1:5:229:G:OP1	27:Y:11:ARG:NH1	2.48	0.44
1:5:234:G:O2'	1:5:235:A:H5'	2.18	0.44
1:5:279:A:H3'	1:5:279:A:OP1	2.17	0.44
1:5:291:U:C2'	1:5:292:G:C2'	2.78	0.44
1:5:341:G:C2	1:5:342:G:C8	3.06	0.44
1:5:382:G:N2	1:5:384:A:H2'	2.32	0.44
1:5:483:G:N2	1:5:484:U:N3	2.66	0.44
1:5:490:C:C2'	1:5:491:G:H8	2.31	0.44
1:5:689:U:C2	1:5:690:C:C5	3.05	0.44
1:5:753:C:C2	1:5:754:U:H6	2.26	0.44
1:5:957:G:H5'	1:5:1284:G:N2	2.32	0.44
1:5:1086:C:H42	1:5:1211:G:H1	1.64	0.44
1:5:1195:G:H2'	1:5:1196:G:C8	2.53	0.44
1:5:1221:G:N2	1:5:1233:G:C8	2.86	0.44
1:5:1265:G:H22	1:5:2111:G:HO2'	1.61	0.44
1:5:1268:G:N9	1:5:2111:G:C4	2.86	0.44
1:5:1324:A:C2'	1:5:1326:A:OP1	2.65	0.44
1:5:1354:A:C4	1:5:1503:A:C2	3.05	0.44
1:5:1362:G:N3	1:5:1363:C:C6	2.86	0.44
1:5:1397:A:HO2'	1:5:1398:A:C5'	2.31	0.44
1:5:1584:G:C5	1:5:1585:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1615:C:N3	1:5:1616:U:C6	2.86	0.44
1:5:1851:G:O5'	1:5:1851:G:H8	2.00	0.44
1:5:1928:C:N4	17:O:133:ARG:CZ	2.81	0.44
1:5:1929:A:H3'	1:5:1929:A:N3	2.33	0.44
1:5:1965:G:C2	1:5:1966:C:C2	3.06	0.44
1:5:2056:G:C6	1:5:2058:G:C8	3.06	0.44
1:5:2110:C:HO2'	1:5:2111:G:H5'	1.83	0.44
1:5:2278:G:H5'	19:Q:7:HIS:HE1	1.83	0.44
1:5:2279:A:H2'	1:5:2280:G:C8	2.53	0.44
1:5:2353:U:C2	1:5:2354:G:C8	3.06	0.44
1:5:2394:G:O6	1:5:2819:U:OP2	2.36	0.44
1:5:2460:A:C1'	16:N:94:PHE:CE1	3.01	0.44
1:5:2479:G:C6	1:5:2480:G:C6	3.05	0.44
1:5:2587:A:OP1	35:g:68:SER:OG	2.26	0.44
1:5:2643:G:C6	1:5:2644:G:C5	3.06	0.44
1:5:2769:U:H3	1:5:2770:C:N4	2.16	0.44
1:5:3595:U:O2'	20:R:114:LYS:HA	2.17	0.44
1:5:3806:G:O2'	50:S2:1719:A:N9	2.50	0.44
1:5:3830:A:C2	1:5:3831:U:C6	3.06	0.44
1:5:3927:U:O4	1:5:4182:G:C2	2.71	0.44
1:5:4131:G:C2	1:5:4132:C:C2	3.06	0.44
1:5:4167:G:C2	1:5:4168:G:N7	2.83	0.44
1:5:4167:G:C2	1:5:4168:G:N9	2.85	0.44
1:5:4192:A:H2'	1:5:4193:C:O4'	2.17	0.44
1:5:4292:A:O4'	1:5:4330:G:O4'	2.35	0.44
1:5:4324:A:C2	1:5:4325:A:C4	3.04	0.44
1:5:4405:G:N7	1:5:4406:U:C5	2.86	0.44
1:5:4423:U:N3	41:m:97:ARG:NH1	2.65	0.44
1:5:4543:G:O2'	1:5:4544:A:H5'	2.18	0.44
1:5:4981:G:H1'	18:P:69:ARG:NH1	2.33	0.44
1:5:5031:G:C6	1:5:5032:C:C4	3.06	0.44
1:5:5055:G:N2	1:5:5056:A:C4	2.85	0.44
3:8:118:C:C4	3:8:119:C:H5	2.35	0.44
3:8:137:A:C2	3:8:138:C:C5	3.05	0.44
5:B:74:GLU:HG2	5:B:334:LYS:HE3	2.00	0.44
12:I:31:ILE:HG13	12:I:66:GLU:OE1	2.17	0.44
15:M:112:VAL:HG11	17:O:201:PHE:CE2	2.53	0.44
16:N:88:GLY:HA2	43:o:48:TYR:CD2	2.53	0.44
16:N:182:HIS:CD2	16:N:182:HIS:H	2.36	0.44
17:O:103:LYS:HG2	17:O:105:PHE:CZ	2.53	0.44
17:O:192:PHE:N	17:O:192:PHE:HD1	2.15	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:26:THR:HA	23:U:68:SER:CB	2.48	0.44
24:V:27:ASN:OD1	24:V:27:ASN:N	2.51	0.44
32:d:87:ARG:CB	32:d:87:ARG:CZ	2.95	0.44
33:e:44:ARG:O	33:e:49:PHE:HB2	2.18	0.44
33:e:78:LEU:HD21	33:e:100:ALA:HA	1.99	0.44
38:j:17:THR:CG2	38:j:29:LEU:HD21	2.48	0.44
38:j:58:THR:O	38:j:59:THR:C	2.60	0.44
40:l:21:ARG:NH1	47:1:273:ARG:HD3	2.33	0.44
41:m:88:LYS:HA	41:m:92:ASP:OD1	2.17	0.44
46:z:28:PHE:CE2	46:z:29:LEU:O	2.71	0.44
50:S2:60:A:N3	50:S2:60:A:O4'	2.51	0.44
50:S2:321:C:O2	50:S2:322:C:C6	2.71	0.44
50:S2:379:C:O2	59:SI:5:ARG:NH1	2.51	0.44
50:S2:441:C:H6	50:S2:448:A:C2	2.36	0.44
50:S2:449:A:N7	50:S2:452:G:O6	2.51	0.44
50:S2:746:C:H2'	50:S2:747:U:C5'	2.48	0.44
50:S2:832:G:C2	50:S2:833:C:N1	2.85	0.44
50:S2:907:G:H3'	50:S2:908:A:C8	2.52	0.44
50:S2:962:A:N3	50:S2:963:A:C8	2.86	0.44
50:S2:963:A:C2	50:S2:964:A:C4	3.05	0.44
50:S2:1077:A:C2	50:S2:1078:C:C6	3.05	0.44
50:S2:1099:G:C4	50:S2:1100:A:C8	3.06	0.44
50:S2:1112:U:O2	50:S2:1113:A:O4'	2.36	0.44
50:S2:1144:A:OP1	50:S2:1355:C:C5	2.70	0.44
50:S2:1237:C:C2	50:S2:1238:U:C6	3.06	0.44
50:S2:1271:C:C2	50:S2:1272:C:C6	3.06	0.44
50:S2:1276:A:H3'	50:S2:1277:C:H6	1.83	0.44
50:S2:1292:C:O2	82:Sf:150:PHE:CD1	2.71	0.44
50:S2:1310:U:O5'	82:Sf:143:LYS:HG2	2.17	0.44
50:S2:1338:G:C4	50:S2:1339:U:C6	3.06	0.44
50:S2:1466:G:C2	50:S2:1467:C:C5	3.06	0.44
50:S2:1466:G:C6	50:S2:1467:C:N4	2.86	0.44
50:S2:1524:G:C2	50:S2:1525:C:C2	3.06	0.44
50:S2:1546:G:O2'	50:S2:1547:C:H5'	2.18	0.44
50:S2:1714:U:H2'	50:S2:1715:A:C8	2.52	0.44
52:SB:79:VAL:HB	52:SB:81:PHE:CE2	2.53	0.44
56:SF:17:ILE:HD11	56:SF:26:ASP:HB2	2.00	0.44
62:SL:13:GLN:N	62:SL:13:GLN:CD	2.75	0.44
63:SM:37:GLU:O	63:SM:41:ALA:N	2.49	0.44
64:SN:114:ARG:O	64:SN:118:ILE:CD1	2.66	0.44
67:SQ:47:LEU:O	67:SQ:49:TYR:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SW:37:PHE:CE1	73:SW:103:VAL:HG11	2.53	0.44
77:Sa:51:ARG:HH11	79:Sc:40:ARG:NH1	2.11	0.44
85:S5:12:U:C2	85:S5:24:G:C4	3.06	0.44
85:S5:48:C:N3	85:S5:59:U:C2	2.85	0.44
85:S5:48:C:H5	85:S5:59:U:C4	2.16	0.44
85:S5:63:G:O2'	85:S5:64:A:C8	2.70	0.44
86:S6:33:U:N3	86:S6:35:A:H5'	2.26	0.44
86:S6:61:C:C6	86:S6:61:C:H5''	2.52	0.44
86:S6:68:C:C6	86:S6:68:C:OP2	2.70	0.44
1:5:3:C:C2	1:5:4:G:C8	3.06	0.44
1:5:273:U:C4	1:5:274:C:N4	2.85	0.44
1:5:278:G:H4'	1:5:279:A:OP2	2.16	0.44
1:5:328:A:N1	1:5:329:A:C6	2.86	0.44
1:5:450:G:O2'	1:5:453:G:P	2.76	0.44
1:5:468:U:O2	1:5:468:U:H2'	2.18	0.44
1:5:481:G:C2	1:5:482:G:N7	2.85	0.44
1:5:744:G:H2'	1:5:745:G:C8	2.52	0.44
1:5:1086:C:C2	1:5:1212:G:C2	3.06	0.44
1:5:1190:C:N3	1:5:1191:C:C4	2.83	0.44
1:5:1248:C:C4	1:5:1249:C:H5	2.36	0.44
1:5:1266:G:H4'	1:5:2112:G:N3	2.33	0.44
1:5:1280:C:O2	1:5:1282:G:C5	2.71	0.44
1:5:1281:G:C6	8:E:48:ARG:NH1	2.86	0.44
1:5:1360:G:H2'	1:5:1361:G:O4'	2.18	0.44
1:5:1387:A:N9	1:5:1397:A:N6	2.64	0.44
1:5:1430:C:C4	1:5:1431:C:C5	3.06	0.44
1:5:1577:G:O4'	4:A:181:LYS:HE3	2.18	0.44
1:5:1621:A:O2'	1:5:1622:U:H5'	2.18	0.44
1:5:1638:A:H4'	1:5:1639:U:OP2	2.18	0.44
1:5:1721:G:N1	1:5:1840:G:C8	2.82	0.44
1:5:1828:C:N3	1:5:1829:G:C8	2.86	0.44
1:5:1858:A:N3	1:5:1859:C:C6	2.86	0.44
1:5:1937:C:C2'	1:5:1938:C:H2'	2.48	0.44
1:5:2091:C:OP2	1:5:2259:G:C8	2.71	0.44
1:5:2108:G:C6	1:5:2109:G:C4	3.05	0.44
1:5:2327:G:C2	1:5:2328:G:C4	3.05	0.44
1:5:2382:A:N3	1:5:2382:A:C2'	2.81	0.44
1:5:2543:A:H2	1:5:2773:G:N1	2.14	0.44
1:5:2713:C:O2	1:5:2714:G:H8	1.96	0.44
1:5:2715:G:C2	1:5:2716:C:C2	3.06	0.44
1:5:2821:U:OP1	20:R:21:LYS:NZ	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2825:A:H4'	1:5:2826:U:O5'	2.17	0.44
1:5:2851:G:N7	1:5:2852:U:H5	2.09	0.44
1:5:3656:A:C1'	1:5:3747:A:C2	3.01	0.44
1:5:3695:U:C4	1:5:3696:C:H5	2.32	0.44
1:5:3727:A:C2'	1:5:3728:A:O5'	2.66	0.44
1:5:3854:C:C4	1:5:3855:C:C5	3.05	0.44
1:5:3923:A:C8	1:5:4381:A:C4	3.06	0.44
1:5:4042:G:C2'	1:5:4043:G:O5'	2.66	0.44
1:5:4093:G:C8	1:5:4094:G:O4'	2.71	0.44
1:5:4111:U:C2	1:5:4112:C:C6	3.06	0.44
1:5:4173:G:C6	1:5:4174:U:C5	3.06	0.44
1:5:4333:C:O2	1:5:4334:U:C6	2.71	0.44
1:5:4401:G:C5	1:5:4402:C:C5	3.06	0.44
1:5:4564:A:C4	1:5:4565:C:C5	3.06	0.44
1:5:4659:G:C6	1:5:4660:G:C5	3.06	0.44
1:5:4760:G:O2'	1:5:4761:G:H5'	2.17	0.44
1:5:4904:G:C4	1:5:4905:C:C5	3.06	0.44
1:5:5031:G:C6	1:5:5032:C:N4	2.86	0.44
1:5:5048:A:O4'	1:5:5048:A:N3	2.51	0.44
1:5:5055:G:H2'	1:5:5056:A:H8	1.82	0.44
3:8:58:G:O6	38:j:63:ARG:NH1	2.51	0.44
3:8:131:G:N1	3:8:132:G:N9	2.66	0.44
3:8:133:G:C4	3:8:134:G:C8	3.06	0.44
5:B:153:MET:O	5:B:157:CYS:HB3	2.18	0.44
6:C:26:ALA:HB3	6:C:266:THR:HA	2.00	0.44
8:E:95:ASP:OD1	8:E:95:ASP:C	2.60	0.44
8:E:271:PHE:O	8:E:272:ALA:HB2	2.18	0.44
11:H:60:TRP:CZ2	21:S:153:PRO:HD3	2.53	0.44
11:H:156:ASN:ND2	11:H:157:SER:N	2.65	0.44
13:J:146:ARG:O	13:J:147:ARG:C	2.61	0.44
13:J:154:LYS:O	13:J:155:HIS:CB	2.66	0.44
15:M:81:ASP:OD1	15:M:84:ALA:HB3	2.17	0.44
16:N:63:ARG:HG3	16:N:131:GLU:HB3	2.00	0.44
22:T:54:HIS:C	22:T:54:HIS:ND1	2.75	0.44
34:f:48:ALA:HB2	34:f:71:TRP:CZ3	2.53	0.44
46:z:116:LEU:HG	46:z:119:GLN:NE2	2.31	0.44
47:1:43:LEU:HD22	47:1:193:TRP:CZ2	2.52	0.44
50:S2:217:A:C4	50:S2:309:G:O6	2.71	0.44
50:S2:341:C:N4	50:S2:342:C:C4	2.85	0.44
50:S2:429:C:O2'	50:S2:811:A:N1	2.42	0.44
50:S2:492:C:N4	50:S2:506:G:C8	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:536:A:N6	50:S2:537:C:C4	2.85	0.44
50:S2:656:G:N2	50:S2:663:C:H5''	2.31	0.44
50:S2:663:C:OP2	74:SX:3:LYS:HD2	2.17	0.44
50:S2:1082:A:C8	50:S2:1084:A:N9	2.86	0.44
50:S2:1110:G:N3	50:S2:1111:U:C6	2.86	0.44
50:S2:1219:C:C5	50:S2:1220:A:N6	2.86	0.44
50:S2:1277:C:H3'	50:S2:1278:A:H8	1.83	0.44
50:S2:1278:A:H5'	61:SK:55:ARG:HB3	2.00	0.44
50:S2:1345:G:O6	50:S2:1385:G:C6	2.70	0.44
50:S2:1357:A:HO2'	50:S2:1358:U:P	2.41	0.44
50:S2:1588:A:O2'	50:S2:1589:A:H5'	2.18	0.44
50:S2:1608:U:N3	50:S2:1609:C:C5	2.86	0.44
50:S2:1617:G:C5	50:S2:1619:A:OP2	2.71	0.44
50:S2:1713:C:O2'	50:S2:1714:U:O5'	2.29	0.44
50:S2:1840:U:N3	50:S2:1841:C:C4	2.84	0.44
51:SA:180:ARG:HD2	51:SA:184:ARG:HD2	2.00	0.44
54:SD:123:LEU:HD21	54:SD:154:ASP:HB3	2.00	0.44
56:SF:101:HIS:O	56:SF:105:GLY:HA2	2.18	0.44
59:SI:6:ASP:HB3	59:SI:28:GLU:HG2	2.00	0.44
59:SI:117:TYR:HB3	59:SI:156:ALA:HB1	2.00	0.44
68:SR:99:ASP:N	68:SR:102:THR:OG1	2.40	0.44
69:SS:127:TRP:CD1	69:SS:127:TRP:N	2.86	0.44
73:SW:85:ASP:N	73:SW:85:ASP:OD1	2.51	0.44
74:SX:7:LEU:HD13	74:SX:7:LEU:C	2.43	0.44
83:Sg:228:TYR:CE2	83:Sg:230:LEU:HD11	2.53	0.44
85:S5:6:G:O5'	85:S5:6:G:C8	2.70	0.44
85:S5:39:U:H2'	85:S5:40:C:H5'	2.00	0.44
85:S5:61:C:O2	85:S5:62:C:C5	2.71	0.44
1:5:159:C:H1'	14:L:78:LEU:HD11	1.99	0.43
1:5:245:C:H4'	1:5:246:G:O5'	2.18	0.43
1:5:328:A:C6	1:5:329:A:C6	3.06	0.43
1:5:397:G:H22	18:P:22:LEU:HD22	1.83	0.43
1:5:457:G:N2	1:5:458:C:C6	2.86	0.43
1:5:491:G:C2	1:5:663:G:N1	2.79	0.43
1:5:642:G:C4	1:5:643:C:C5	3.06	0.43
1:5:1066:G:C5	1:5:1067:G:N7	2.85	0.43
1:5:1218:G:O6	1:5:1219:G:C4	2.71	0.43
1:5:1264:C:O2'	1:5:2114:G:OP2	2.36	0.43
1:5:1404:G:C4	1:5:1405:C:C6	3.06	0.43
1:5:1436:C:O2'	1:5:2097:U:OP2	2.36	0.43
1:5:1543:G:H1'	1:5:2513:A:N3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1618:G:N2	1:5:1619:G:C8	2.86	0.43
1:5:1691:G:C5	1:5:1692:C:C6	3.06	0.43
1:5:1886:G:N1	1:5:1894:C:N4	2.66	0.43
1:5:1966:C:H42	1:5:1967:A:H62	1.66	0.43
1:5:1971:C:H5	1:5:2000:G:H2'	1.83	0.43
1:5:1991:A:H2'	1:5:1992:U:H1'	1.99	0.43
1:5:2015:U:C2	1:5:2016:C:C6	3.06	0.43
1:5:2287:G:C2	1:5:2288:G:H1'	2.53	0.43
1:5:2290:C:H1'	1:5:2321:G:N3	2.33	0.43
1:5:2315:G:C2	1:5:2316:G:N9	2.86	0.43
1:5:2327:G:N1	1:5:2328:G:C6	2.86	0.43
1:5:2566:G:N2	1:5:2567:G:C8	2.86	0.43
1:5:2568:C:H2'	1:5:2569:G:H8	1.83	0.43
1:5:2628:U:N3	1:5:2629:C:C5	2.86	0.43
1:5:2697:A:C2	1:5:2698:G:C8	3.05	0.43
1:5:2851:G:C6	1:5:2852:U:C1'	3.00	0.43
1:5:3591:C:C4	1:5:3592:G:N7	2.76	0.43
1:5:3688:U:O2	1:5:3689:G:C8	2.70	0.43
1:5:3694:U:O2	1:5:3694:U:H2'	2.17	0.43
1:5:3910:C:N3	1:5:3911:C:N4	2.66	0.43
1:5:4097:G:C5'	35:g:115:LYS:CG	2.85	0.43
1:5:4123:C:P	35:g:90:ARG:HH12	2.41	0.43
1:5:4235:G:C2'	1:5:4236:G:O5'	2.62	0.43
1:5:4344:U:C2	1:5:4345:C:C6	2.97	0.43
1:5:4406:U:C4	1:5:4407:G:N7	2.85	0.43
1:5:4413:C:H5	1:5:4429:C:H42	1.65	0.43
1:5:4518:A:H3'	1:5:4519:C:H5'	1.99	0.43
1:5:4646:U:OP1	20:R:58:HIS:HA	2.17	0.43
1:5:4750:G:O6	1:5:4949:G:C5	2.70	0.43
1:5:4895:C:O2	1:5:4896:G:N7	2.51	0.43
3:8:93:C:O3'	3:8:94:G:C8	2.71	0.43
3:8:103:A:H3'	3:8:104:A:H5''	2.00	0.43
3:8:129:C:C4	3:8:130:C:C5	3.06	0.43
4:A:77:ILE:CD1	4:A:128:ARG:HB2	2.48	0.43
5:B:40:PRO:O	5:B:187:GLY:HA2	2.18	0.43
5:B:60:VAL:HG12	5:B:62:ARG:HG2	1.99	0.43
6:C:57:LEU:O	6:C:58:ALA:C	2.61	0.43
8:E:53:TYR:CE2	8:E:61:ARG:CZ	3.01	0.43
9:F:119:ILE:HG12	9:F:120:PHE:HB3	2.00	0.43
11:H:36:ARG:HD3	11:H:38:PHE:CE1	2.53	0.43
12:I:209:TRP:C	12:I:209:TRP:CD1	2.94	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:53:TYR:HD1	16:N:54:LYS:N	2.16	0.43
17:O:167:HIS:O	17:O:168:TYR:C	2.61	0.43
20:R:9:ARG:HH12	20:R:10:LEU:CD1	2.31	0.43
21:S:28:TYR:CD2	22:T:151:LEU:HD11	2.53	0.43
29:a:69:PHE:CE2	29:a:71:PRO:HD3	2.53	0.43
30:b:15:LYS:C	30:b:17:HIS:N	2.74	0.43
34:f:30:ILE:HB	34:f:33:VAL:HG11	2.00	0.43
34:f:36:ARG:HH11	34:f:36:ARG:CG	2.28	0.43
43:o:37:GLY:HA2	43:o:40:ARG:NH2	2.33	0.43
46:z:17:VAL:HG23	46:z:214:GLN:HG2	1.98	0.43
47:1:39:LEU:HD22	48:2:50:ILE:HD13	1.99	0.43
50:S2:4:C:C2	50:S2:5:U:C5	3.06	0.43
50:S2:217:A:N1	50:S2:218:U:C6	2.86	0.43
50:S2:377:G:C5	50:S2:378:U:C5	3.06	0.43
50:S2:384:U:H3'	50:S2:384:U:C6	2.53	0.43
50:S2:415:A:C2	50:S2:423:U:O2	2.69	0.43
50:S2:421:G:N2	50:S2:422:U:C2	2.85	0.43
50:S2:447:A:C4	50:S2:449:A:H1'	2.52	0.43
50:S2:536:A:C5	50:S2:537:C:C6	3.06	0.43
50:S2:928:G:H2'	50:S2:929:G:H8	1.75	0.43
50:S2:1034:A:N6	50:S2:1082:A:C4	2.86	0.43
50:S2:1087:A:C5	50:S2:1861:G:C6	3.06	0.43
50:S2:1121:G:C2	50:S2:1122:A:N9	2.85	0.43
50:S2:1259:A:H5''	50:S2:1260:A:OP2	2.18	0.43
50:S2:1294:G:O4'	82:Sf:152:LYS:HA	2.18	0.43
50:S2:1299:A:O2'	50:S2:1300:U:H3'	2.17	0.43
50:S2:1586:U:H3'	50:S2:1587:G:H5'	2.00	0.43
50:S2:1687:C:O2	50:S2:1688:C:C5	2.71	0.43
50:S2:1693:G:C4	50:S2:1694:U:C6	3.05	0.43
50:S2:1839:U:H2'	50:S2:1840:U:C6	2.52	0.43
52:SB:34:LYS:O	52:SB:232:HIS:CE1	2.71	0.43
52:SB:171:ILE:HD13	52:SB:197:ILE:HA	2.00	0.43
52:SB:231:LEU:CD2	52:SB:231:LEU:C	2.85	0.43
58:SH:27:LEU:HD12	58:SH:40:LEU:HD21	1.99	0.43
63:SM:24:THR:HB	63:SM:115:GLY:HA3	1.99	0.43
65:SO:28:PHE:HD1	65:SO:92:ALA:HB3	1.83	0.43
70:ST:18:LEU:HB3	70:ST:58:ALA:HB1	2.00	0.43
70:ST:134:ILE:O	70:ST:138:VAL:N	2.50	0.43
75:SY:88:LYS:CE	75:SY:97:TYR:OH	2.65	0.43
79:Sc:14:VAL:HG22	79:Sc:32:VAL:HG12	2.00	0.43
83:Sg:202:PRO:HG3	83:Sg:243:PRO:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
86:S6:55:U:C2'	86:S6:56:C:C6	2.98	0.43
86:S6:65:G:C6	86:S6:66:U:O4	2.70	0.43
86:S6:65:G:C5	86:S6:66:U:C5	3.06	0.43
1:5:88:A:O2'	1:5:89:C:C5'	2.65	0.43
1:5:90:G:C8	1:5:92:C:N1	2.85	0.43
1:5:266:C:OP1	1:5:266:C:C2	2.71	0.43
1:5:343:C:C2	1:5:344:A:C8	3.06	0.43
1:5:482:G:H2'	1:5:483:G:C8	2.53	0.43
1:5:664:G:H21	1:5:665:C:H5	1.66	0.43
1:5:677:G:H2'	1:5:678:C:C6	2.54	0.43
1:5:973:G:C6	1:5:1282:G:N3	2.86	0.43
1:5:1482:G:N2	1:5:1484:G:N2	2.66	0.43
1:5:1491:A:N1	1:5:1492:G:C6	2.86	0.43
1:5:1492:G:C5	1:5:1493:G:N7	2.86	0.43
1:5:1542:U:C2	1:5:1543:G:H8	2.31	0.43
1:5:1545:G:N1	1:5:1546:C:C4	2.86	0.43
1:5:1554:A:N3	1:5:1554:A:H2'	2.33	0.43
1:5:1650:A:N6	6:C:100:ARG:HE	2.16	0.43
1:5:1800:U:H6	1:5:1800:U:H5''	1.83	0.43
1:5:1865:G:OP1	12:I:119:PHE:HA	2.17	0.43
1:5:1865:G:C6	1:5:1867:A:OP2	2.71	0.43
1:5:1988:G:N3	1:5:1989:G:C8	2.86	0.43
1:5:1997:U:C3'	1:5:1998:A:H5''	2.47	0.43
1:5:2058:G:N2	1:5:2059:C:C1'	2.80	0.43
1:5:2302:C:C4	1:5:2303:C:N4	2.86	0.43
1:5:2344:U:H2'	1:5:2345:G:OP2	2.18	0.43
1:5:2360:A:O4'	1:5:2362:U:C6	2.71	0.43
1:5:2439:G:C8	1:5:2777:G:C5	3.07	0.43
1:5:2481:G:C4	1:5:2482:C:C5	3.05	0.43
1:5:2600:A:C1'	1:5:2601:A:C6	3.01	0.43
1:5:2639:U:H1'	35:g:26:PRO:HA	1.99	0.43
1:5:2676:A:C5	1:5:2677:G:C8	3.07	0.43
1:5:2735:G:N2	1:5:2736:G:C4	2.86	0.43
1:5:2744:A:C2'	1:5:2745:A:C8	2.99	0.43
1:5:3625:G:N2	1:5:3626:G:O3'	2.43	0.43
1:5:3702:A:C5	1:5:3774:A:C6	3.07	0.43
1:5:3742:G:N2	1:5:3743:G:C4	2.86	0.43
1:5:3751:G:C6	1:5:3752:C:C4	3.06	0.43
1:5:3777:G:O2'	1:5:3815:G:O6	2.24	0.43
1:5:3976:C:C4	1:5:3977:C:C5	3.05	0.43
1:5:4087:G:H21	10:G:49:ARG:HD2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4107:G:N3	1:5:4108:G:C8	2.86	0.43
1:5:4147:G:N3	1:5:4148:C:C6	2.86	0.43
1:5:4243:C:O2	1:5:4243:C:C2'	2.65	0.43
1:5:4269:G:C2	1:5:4270:C:H1'	2.53	0.43
1:5:4298:A:C5	1:5:4299:U:C5	3.06	0.43
1:5:4307:A:H4'	19:Q:186:TYR:CD2	2.53	0.43
1:5:4460:U:H2'	1:5:4461:C:H6	1.82	0.43
1:5:4482:U:O2	1:5:4482:U:C2'	2.66	0.43
1:5:4712:C:OP1	17:O:74:ARG:NH2	2.51	0.43
1:5:4731:G:N7	1:5:4733:C:C6	2.86	0.43
1:5:4742:G:N2	1:5:4743:G:H1'	2.34	0.43
1:5:4927:G:H1'	15:M:121:ARG:HD3	1.99	0.43
1:5:4985:U:C2	1:5:4986:G:C8	3.06	0.43
1:5:5018:C:C2	1:5:5019:A:C8	3.06	0.43
2:7:44:C:N3	2:7:45:U:C4	2.86	0.43
2:7:66:G:H2'	2:7:67:C:H6	1.82	0.43
2:7:94:C:C2	2:7:95:C:H5	2.27	0.43
3:8:56:G:C2	3:8:57:C:C2	3.06	0.43
3:8:102:G:O3'	38:j:21:ARG:HD3	2.18	0.43
3:8:120:G:N1	3:8:121:G:C5	2.86	0.43
3:8:121:G:C6	3:8:122:G:C4	3.06	0.43
4:A:233:ARG:O	4:A:235:VAL:N	2.51	0.43
7:D:147:ASP:OD1	7:D:147:ASP:C	2.61	0.43
9:F:239:GLU:O	9:F:241:GLN:N	2.50	0.43
16:N:68:ARG:NH1	16:N:123:GLU:HG3	2.33	0.43
17:O:12:ARG:HD3	17:O:37:ARG:NH2	2.32	0.43
20:R:163:ARG:HD3	50:S2:871:U:O2	2.05	0.43
20:R:177:LEU:HB3	20:R:178:GLN:OE1	2.18	0.43
21:S:27:LEU:C	22:T:148:PRO:HB3	2.42	0.43
21:S:84:TYR:C	21:S:84:TYR:CD1	2.96	0.43
23:U:70:ILE:HD12	23:U:70:ILE:N	2.32	0.43
26:X:72:ASP:OD1	26:X:72:ASP:N	2.50	0.43
29:a:73:VAL:CG2	29:a:108:TYR:CG	3.01	0.43
32:d:85:ARG:HD3	32:d:109:VAL:HG21	2.00	0.43
34:f:4:ARG:O	34:f:5:LEU:HB2	2.17	0.43
47:1:268:LYS:HG3	47:1:276:TYR:CE1	2.53	0.43
50:S2:142:C:C2	57:SG:185:LEU:CD2	3.02	0.43
50:S2:167:G:N3	50:S2:168:C:C6	2.86	0.43
50:S2:319:C:H2'	50:S2:320:G:H8	1.82	0.43
50:S2:426:A:C4	50:S2:427:U:O4	2.72	0.43
50:S2:431:G:C5	50:S2:432:G:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:474:G:H5'	50:S2:475:C:OP2	2.18	0.43
50:S2:581:U:N3	50:S2:582:C:C5	2.86	0.43
50:S2:688:U:O2	50:S2:688:U:O4'	2.36	0.43
50:S2:750:C:O2	50:S2:751:G:H8	1.96	0.43
50:S2:833:C:C4	50:S2:834:C:C5	3.06	0.43
50:S2:960:U:C6	50:S2:960:U:H3'	2.53	0.43
50:S2:1066:U:C2	50:S2:1067:C:C6	3.06	0.43
50:S2:1374:C:O2'	50:S2:1375:G:H5'	2.18	0.43
50:S2:1377:U:H3'	51:SA:102:ARG:HH21	1.84	0.43
50:S2:1401:A:C6	50:S2:1402:A:C6	3.06	0.43
50:S2:1545:A:C5	50:S2:1546:G:C6	3.07	0.43
50:S2:1545:A:N6	50:S2:1588:A:C4	2.86	0.43
50:S2:1600:G:C3'	50:S2:1601:A:C5'	2.96	0.43
50:S2:1696:C:H6	50:S2:1696:C:O5'	1.99	0.43
55:SE:87:MET:HE3	55:SE:123:LEU:HB2	1.99	0.43
60:SJ:32:ILE:HG23	60:SJ:37:LEU:HB3	2.00	0.43
60:SJ:45:ARG:O	60:SJ:49:THR:HG23	2.18	0.43
67:SQ:32:ILE:HD11	67:SQ:63:PHE:CD2	2.53	0.43
67:SQ:49:TYR:HA	67:SQ:52:LEU:HD12	2.00	0.43
71:SU:40:ILE:HD11	71:SU:53:PRO:HG3	2.00	0.43
73:SW:90:GLN:HB2	73:SW:94:LEU:CD1	2.46	0.43
83:Sg:4:GLN:NE2	83:Sg:268:ASP:OD2	2.51	0.43
83:Sg:87:LEU:HB2	83:Sg:101:PHE:CD1	2.53	0.43
83:Sg:188:HIS:HB3	83:Sg:219:TRP:CZ3	2.53	0.43
86:S6:12:C:O2	86:S6:12:C:H2'	2.18	0.43
86:S6:55:U:O2	86:S6:56:C:H2'	2.18	0.43
1:5:98:A:H1'	1:5:292:G:C5	2.53	0.43
1:5:164:G:N2	1:5:165:A:H1'	2.33	0.43
1:5:301:G:C4	1:5:302:C:C6	3.06	0.43
1:5:505:G:N3	1:5:506:C:C6	2.86	0.43
1:5:711:A:C2	1:5:712:C:C4	3.06	0.43
1:5:711:A:H1'	8:E:132:HIS:CE1	2.53	0.43
1:5:908:G:N1	1:5:909:A:C8	2.86	0.43
1:5:1075:G:C6	1:5:1076:C:N4	2.87	0.43
1:5:1177:U:C4'	7:D:282:GLN:HB3	2.47	0.43
1:5:1236:C:O2'	1:5:1237:C:O5'	2.32	0.43
1:5:1244:G:O4'	1:5:1269:G:H1'	2.18	0.43
1:5:1245:C:C6	1:5:1269:G:N7	2.86	0.43
1:5:1278:C:H3'	1:5:1279:A:C4'	2.47	0.43
1:5:1362:G:C4	1:5:1363:C:C6	3.07	0.43
1:5:1367:C:C2	1:5:1368:A:H3'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1423:U:C2	1:5:1424:G:C8	3.07	0.43
1:5:1547:A:C5	1:5:1582:U:H1'	2.53	0.43
1:5:1602:U:N3	1:5:1603:C:C5	2.86	0.43
1:5:1620:U:OP2	38:j:30:GLN:HG2	2.19	0.43
1:5:1656:U:C2	1:5:1657:G:C8	3.06	0.43
1:5:1665:C:N3	1:5:2285:A:C2	2.87	0.43
1:5:1667:G:O5'	1:5:1667:G:H8	2.01	0.43
1:5:1683:U:C2	1:5:1684:A:H8	2.13	0.43
1:5:1755:C:N4	1:5:1778:C:H4'	2.33	0.43
1:5:1775:A:C4	1:5:1776:A:C8	3.07	0.43
1:5:1846:G:C2	1:5:1847:C:N3	2.86	0.43
1:5:1899:G:C6	1:5:1900:C:C4	3.05	0.43
1:5:1912:G:C2	1:5:1913:C:C2	3.07	0.43
1:5:1943:A:C8	1:5:1944:A:C1'	3.01	0.43
1:5:2107:C:O2	1:5:2107:C:C2'	2.66	0.43
1:5:2315:G:C4	1:5:2316:G:C8	3.06	0.43
1:5:2372:U:H2'	1:5:2373:C:H6	1.83	0.43
1:5:2413:U:N3	1:5:2414:G:N7	2.66	0.43
1:5:2418:A:C6	1:5:2419:C:C4	3.06	0.43
1:5:2470:C:C2	1:5:2470:C:H5''	2.54	0.43
1:5:2545:U:C5	1:5:2546:G:H4'	2.53	0.43
1:5:2742:G:H4'	4:A:22:HIS:CD2	2.53	0.43
1:5:2851:G:O2'	1:5:3841:C:H4'	2.18	0.43
1:5:2855:G:N2	1:5:2859:G:N2	2.66	0.43
1:5:2857:A:C6	1:5:2858:A:C6	3.06	0.43
1:5:2898:G:C2	1:5:2899:C:C2	3.06	0.43
1:5:3623:C:C5	1:5:3624:A:C5	3.07	0.43
1:5:3754:G:C2	1:5:3755:G:H1'	2.53	0.43
1:5:3921:U:H2'	1:5:3922:G:H3'	2.00	0.43
1:5:3974:G:H4'	46:z:210:MET:CG	2.48	0.43
1:5:4042:G:H2'	1:5:4043:G:O5'	2.17	0.43
1:5:4046:A:N3	86:S6:56:C:C4	2.86	0.43
1:5:4145:C:N3	1:5:4146:G:C5	2.87	0.43
1:5:4209:G:H5''	1:5:4275:G:O2'	2.17	0.43
1:5:4401:G:C8	1:5:4401:G:H5''	2.54	0.43
1:5:4413:C:H2'	1:5:4414:A:C1'	2.47	0.43
1:5:4489:G:C4	1:5:4490:C:C6	3.06	0.43
1:5:4505:C:H2'	1:5:4506:C:H6	1.83	0.43
1:5:4761:G:C2'	1:5:4762:A:O4'	2.60	0.43
1:5:4862:G:H2'	1:5:4863:G:O4'	2.17	0.43
5:B:47:LEU:HD13	5:B:181:MET:SD	2.58	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:116:ARG:CB	5:B:177:LYS:HA	2.47	0.43
9:F:41:GLN:NE2	9:F:41:GLN:CA	2.77	0.43
9:F:219:ARG:HH11	9:F:219:ARG:CB	2.30	0.43
10:G:157:ILE:HG23	10:G:167:VAL:HG11	1.99	0.43
12:I:35:ASP:HB2	12:I:86:HIS:CE1	2.50	0.43
13:J:74:VAL:C	13:J:75:ARG:CG	2.92	0.43
20:R:131:VAL:CB	20:R:132:PHE:CE2	2.99	0.43
22:T:11:THR:HB	22:T:15:PHE:HD1	1.82	0.43
28:Z:83:THR:HB	35:g:95:PHE:CZ	2.53	0.43
32:d:46:LEU:CD2	32:d:64:ILE:HD13	2.48	0.43
46:z:147:LYS:NZ	46:z:151:VAL:HG23	2.32	0.43
50:S2:30:C:H2'	50:S2:31:U:O5'	2.19	0.43
50:S2:77:A:H1'	57:SG:176:ILE:HD12	2.00	0.43
50:S2:92:A:H4'	50:S2:93:U:OP2	2.19	0.43
50:S2:116:U:N3	50:S2:117:C:C5	2.86	0.43
50:S2:182:C:H5'	50:S2:183:G:P	2.59	0.43
50:S2:201:C:N3	50:S2:202:G:H1'	2.32	0.43
50:S2:210:U:O2	50:S2:211:G:C8	2.71	0.43
50:S2:426:A:C4	50:S2:427:U:C4	3.06	0.43
50:S2:447:A:C5	50:S2:449:A:C4	3.05	0.43
50:S2:448:A:C8	59:SI:26:LYS:N	2.86	0.43
50:S2:457:C:N4	50:S2:458:A:N7	2.65	0.43
50:S2:465:A:H4'	50:S2:466:G:O5'	2.19	0.43
50:S2:604:A:C6	50:S2:605:A:N6	2.87	0.43
50:S2:661:U:OP2	74:SX:3:LYS:HE3	2.19	0.43
50:S2:673:G:C8	50:S2:1084:A:N1	2.86	0.43
50:S2:921:G:C5	73:SW:28:ARG:HD2	2.53	0.43
50:S2:1042:A:C5	50:S2:1043:G:C8	3.06	0.43
50:S2:1122:A:N1	50:S2:1123:C:C5	2.87	0.43
50:S2:1130:G:H2'	50:S2:1130:G:N3	2.33	0.43
50:S2:1282:A:H3'	63:SM:102:LYS:HB3	2.00	0.43
50:S2:1283:C:O2	63:SM:106:CYS:HB2	2.18	0.43
50:S2:1291:A:H2	82:Sf:140:TYR:C	2.25	0.43
50:S2:1310:U:C6	82:Sf:143:LYS:HD2	2.52	0.43
50:S2:1394:G:N2	50:S2:1474:A:C8	2.86	0.43
50:S2:1516:G:H2'	50:S2:1517:G:O4'	2.19	0.43
50:S2:1545:A:C2	50:S2:1546:G:C6	3.06	0.43
50:S2:1793:A:N3	50:S2:1793:A:H2'	2.34	0.43
50:S2:1806:A:N3	50:S2:1807:C:C6	2.86	0.43
50:S2:1858:G:C6	50:S2:1859:A:N7	2.86	0.43
52:SB:97:LEU:HD22	52:SB:232:HIS:CE1	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SD:153:VAL:HG12	54:SD:154:ASP:N	2.33	0.43
54:SD:167:TYR:OH	54:SD:193:ASP:OD2	2.36	0.43
55:SE:56:LEU:HD11	75:SY:74:MET:HE1	2.00	0.43
55:SE:104:ASP:OD1	55:SE:110:ALA:HB2	2.18	0.43
56:SF:21:GLY:HA2	67:SQ:49:TYR:CZ	2.53	0.43
56:SF:76:MET:O	56:SF:159:ARG:NH2	2.50	0.43
58:SH:57:ARG:NH2	58:SH:89:GLY:O	2.51	0.43
59:SI:21:TYR:CD1	59:SI:21:TYR:C	2.97	0.43
74:SX:76:LYS:HG3	74:SX:77:ASN:OD1	2.19	0.43
75:SY:23:MET:SD	75:SY:23:MET:N	2.91	0.43
83:Sg:68:ASP:HB2	83:Sg:110:SER:HA	2.00	0.43
86:S6:28:G:C2	86:S6:29:G:C5	3.06	0.43
1:5:21:G:C4	3:8:36:G:N2	2.85	0.43
1:5:90:G:N3	1:5:95:G:C2	2.86	0.43
1:5:127:G:C6	1:5:128:C:N4	2.86	0.43
1:5:285:G:H2'	1:5:286:U:O4'	2.18	0.43
1:5:318:A:H2'	1:5:319:A:C8	2.53	0.43
1:5:469:C:C4	1:5:470:A:N7	2.86	0.43
1:5:469:C:N4	1:5:470:A:C6	2.86	0.43
1:5:506:C:C2	1:5:507:G:C8	3.06	0.43
1:5:673:C:C2	1:5:674:G:N7	2.87	0.43
1:5:1081:C:H1'	1:5:1220:G:N2	2.34	0.43
1:5:1251:C:O2	1:5:1252:C:C6	2.71	0.43
1:5:1266:G:C5'	1:5:1266:G:C8	3.01	0.43
1:5:1274:A:O2'	1:5:1275:G:O5'	2.32	0.43
1:5:1289:C:N3	1:5:1290:G:C5	2.87	0.43
1:5:1349:G:C5	1:5:1350:C:C5	3.06	0.43
1:5:1384:C:O2'	1:5:1505:C:OP1	2.33	0.43
1:5:1438:U:O4	1:5:1444:G:O6	2.35	0.43
1:5:1728:U:H2'	1:5:1729:A:H5''	2.00	0.43
1:5:1919:G:N2	21:S:166:ARG:HB2	2.33	0.43
1:5:1972:G:N2	1:5:1973:G:C5	2.87	0.43
1:5:2281:U:C4'	33:e:46:ARG:NH2	2.79	0.43
1:5:2409:U:C5	1:5:2783:A:N1	2.74	0.43
1:5:2519:U:C2	1:5:2520:C:C5	3.06	0.43
1:5:2606:G:C6	1:5:2607:C:C4	3.07	0.43
1:5:2757:A:O2'	1:5:2758:G:O5'	2.36	0.43
1:5:3600:G:C4	1:5:3601:C:C5	3.06	0.43
1:5:3770:U:O2	1:5:3770:U:H2'	2.17	0.43
1:5:3848:U:O2	1:5:3848:U:H2'	2.18	0.43
1:5:3876:A:O2'	1:5:3877:A:P	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4039:G:O2'	1:5:4050:A:C8	2.71	0.43
1:5:4052:C:C1'	46:z:207:LYS:HZ1	2.30	0.43
1:5:4131:G:C5	1:5:4132:C:C5	3.06	0.43
1:5:4219:A:O2'	1:5:4220:A:C5'	2.66	0.43
1:5:4284:C:O2	1:5:4284:C:H2'	2.18	0.43
1:5:4336:A:C8	1:5:4336:A:C3'	3.02	0.43
1:5:4343:U:OP1	43:o:37:GLY:HA3	2.18	0.43
1:5:4439:U:C2	1:5:4440:G:C8	3.06	0.43
1:5:4464:A:H5'	1:5:4464:A:C4	2.52	0.43
1:5:4547:C:O3'	1:5:4548:A:H8	2.00	0.43
1:5:4897:G:N1	1:5:4898:G:C5	2.87	0.43
1:5:5002:U:O2'	1:5:5003:U:H5'	2.18	0.43
2:7:15:C:C2	2:7:16:A:C8	3.06	0.43
3:8:94:G:C4'	3:8:95:A:OP1	2.63	0.43
3:8:115:G:C5	3:8:116:C:C5	3.06	0.43
7:D:37:VAL:HG13	7:D:67:ALA:CB	2.48	0.43
8:E:238:ILE:O	8:E:239:SER:HB3	2.18	0.43
10:G:108:GLN:NE2	10:G:108:GLN:N	2.66	0.43
11:H:126:VAL:HG11	11:H:161:ILE:HG22	2.00	0.43
15:M:96:GLU:OE1	15:M:96:GLU:O	2.37	0.43
20:R:120:TYR:C	20:R:120:TYR:HD1	2.25	0.43
22:T:3:ASN:CB	22:T:9:ARG:NH1	2.81	0.43
24:V:82:ILE:HG23	24:V:121:VAL:HA	2.01	0.43
31:c:78:ASN:ND2	31:c:79:ILE:N	2.67	0.43
33:e:37:LYS:HB3	33:e:39:ARG:HH22	1.83	0.43
45:r:5:LEU:O	45:r:6:GLN:C	2.59	0.43
46:z:15:ARG:HD3	46:z:180:VAL:HG11	1.99	0.43
46:z:41:TYR:HB3	46:z:163:LEU:HD21	2.00	0.43
50:S2:9:U:C5	50:S2:11:A:OP2	2.71	0.43
50:S2:18:C:H4'	50:S2:1194:A:H62	1.82	0.43
50:S2:166:A:N1	50:S2:167:G:C5	2.86	0.43
50:S2:195:C:C2	50:S2:205:G:C2	3.06	0.43
50:S2:217:A:N3	50:S2:217:A:H2'	2.32	0.43
50:S2:418:A:H2'	50:S2:418:A:N3	2.33	0.43
50:S2:496:C:C5'	55:SE:29:PRO:HA	2.47	0.43
50:S2:616:A:N6	50:S2:617:G:N3	2.65	0.43
50:S2:839:C:O2	50:S2:839:C:H2'	2.17	0.43
50:S2:915:G:O2'	50:S2:916:A:H5'	2.17	0.43
50:S2:1005:G:N2	50:S2:1006:C:C2	2.86	0.43
50:S2:1107:G:C2	50:S2:1108:G:C8	3.07	0.43
50:S2:1202:U:O2	50:S2:1203:G:C8	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1215:C:N4	50:S2:1221:G:H1	2.13	0.43
50:S2:1261:C:C5	50:S2:1262:C:C4	3.06	0.43
50:S2:1268:C:C2	50:S2:1515:G:N2	2.86	0.43
50:S2:1275:G:H4'	50:S2:1276:A:H5'	2.00	0.43
50:S2:1284:A:H61	63:SM:33:ARG:CB	2.25	0.43
50:S2:1292:C:N4	50:S2:1293:A:C8	2.86	0.43
50:S2:1293:A:C3'	82:Sf:151:ASN:C	2.92	0.43
50:S2:1294:G:P	82:Sf:151:ASN:O	2.76	0.43
50:S2:1308:U:O3'	82:Sf:116:ARG:NH2	2.52	0.43
50:S2:1334:G:O3'	54:SD:183:GLY:HA3	2.18	0.43
50:S2:1335:G:C2	50:S2:1336:C:C2	3.06	0.43
50:S2:1504:U:H2'	50:S2:1505:U:O4'	2.18	0.43
50:S2:1545:A:N3	50:S2:1546:G:C5	2.87	0.43
50:S2:1563:G:C5	50:S2:1564:C:C5	3.06	0.43
50:S2:1698:C:H3'	50:S2:1699:A:H5'	1.99	0.43
50:S2:1837:G:N7	84:S4:18:U:OP2	2.52	0.43
51:SA:52:LYS:HD3	68:SR:109:LEU:CD1	2.49	0.43
55:SE:100:ARG:O	55:SE:101:LEU:HB2	2.18	0.43
57:SG:52:ILE:O	57:SG:52:ILE:HG23	2.17	0.43
60:SJ:50:LEU:CD2	60:SJ:54:ARG:HG3	2.49	0.43
62:SL:157:LYS:O	62:SL:157:LYS:HG3	2.18	0.43
83:Sg:31:ILE:HD13	83:Sg:299:PHE:CD2	2.52	0.43
85:S5:33:U:H3'	85:S5:34:G:H5''	1.98	0.43
85:S5:36:A:H2'	85:S5:37:A:C1'	2.48	0.43
85:S5:70:G:C2'	85:S5:71:G:C8	2.95	0.43
86:S6:6:G:C6	86:S6:69:G:O6	2.70	0.43
86:S6:9:A:C6	86:S6:46:G:C6	3.06	0.43
86:S6:22:G:C8	86:S6:23:A:C2	3.06	0.43
86:S6:53:G:C8	86:S6:53:G:C5'	2.93	0.43
1:5:12:A:N3	1:5:14:C:C5	2.86	0.43
1:5:44:A:N3	1:5:45:U:C6	2.87	0.43
1:5:95:G:H3'	1:5:95:G:C8	2.53	0.43
1:5:119:G:H3'	1:5:120:A:H5'	2.00	0.43
1:5:146:G:N2	1:5:147:A:C5	2.86	0.43
1:5:298:G:C2	1:5:299:C:N1	2.86	0.43
1:5:426:A:O2'	1:5:427:A:C5'	2.66	0.43
1:5:509:A:N3	29:a:105:ARG:CZ	2.82	0.43
1:5:518:G:C2	1:5:519:C:C2	3.07	0.43
1:5:659:G:N1	1:5:660:A:C8	2.86	0.43
1:5:689:U:C3'	1:5:690:C:H5''	2.49	0.43
1:5:691:C:N3	1:5:692:A:C5	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:933:G:C2	1:5:940:C:C5	3.06	0.43
1:5:992:C:C2	1:5:993:G:N7	2.85	0.43
1:5:1098:G:H2'	1:5:1099:C:O4'	2.19	0.43
1:5:1258:G:N3	1:5:1259:G:C8	2.87	0.43
1:5:1262:G:C6	1:5:1263:A:N7	2.86	0.43
1:5:1277:G:N2	1:5:1278:C:N1	2.66	0.43
1:5:1296:G:H1'	1:5:1297:U:P	2.58	0.43
1:5:1421:G:C5	1:5:1465:G:C2	3.07	0.43
1:5:1448:G:C2	1:5:1449:C:C2	3.06	0.43
1:5:1685:G:C6	1:5:1686:C:C4	3.07	0.43
1:5:1697:G:H4'	1:5:1698:C:OP1	2.19	0.43
1:5:1968:G:N3	1:5:1969:G:C8	2.87	0.43
1:5:2034:G:H3'	1:5:2035:C:C6	2.54	0.43
1:5:2044:U:O2	1:5:2044:U:C2'	2.62	0.43
1:5:2052:G:C2	1:5:2053:C:C2	3.06	0.43
1:5:2100:A:C5	1:5:2101:C:C6	3.06	0.43
1:5:2508:U:H2'	1:5:2509:C:H6	1.83	0.43
1:5:2712:G:C2	1:5:2713:C:C2	3.06	0.43
1:5:2784:C:N3	1:5:2785:C:N4	2.66	0.43
1:5:2811:G:N3	1:5:2811:G:H2'	2.33	0.43
1:5:3718:A:C2'	1:5:3719:A:O4'	2.59	0.43
1:5:3752:C:H2'	1:5:3777:G:C8	2.53	0.43
1:5:3883:U:H2'	1:5:3884:U:O5'	2.18	0.43
1:5:3974:G:OP1	46:z:28:PHE:HD1	1.95	0.43
1:5:4054:C:C1'	46:z:35:GLN:CD	2.75	0.43
1:5:4122:G:H2'	1:5:4122:G:N3	2.33	0.43
1:5:4136:G:N3	1:5:4137:C:C6	2.87	0.43
1:5:4360:U:C5	1:5:4361:U:C5	3.07	0.43
1:5:4433:G:N1	1:5:4434:C:C4	2.87	0.43
1:5:4703:U:O2	1:5:4704:C:C6	2.71	0.43
1:5:4880:C:O2'	1:5:4881:U:C5'	2.67	0.43
1:5:4911:A:H62	17:O:109:PRO:HG3	1.84	0.43
1:5:4967:A:C2	1:5:4968:A:C5	3.07	0.43
1:5:5055:G:C2	1:5:5056:A:N7	2.86	0.43
2:7:6:C:H5''	7:D:54:ARG:HH21	1.83	0.43
3:8:54:C:H2'	3:8:54:C:O2	2.17	0.43
3:8:131:G:O6	3:8:132:G:N7	2.50	0.43
8:E:104:LYS:HA	8:E:104:LYS:HE2	2.01	0.43
9:F:229:PHE:C	9:F:229:PHE:CD1	2.96	0.43
13:J:107:PHE:CZ	13:J:130:PHE:CG	3.06	0.43
14:L:6:ASN:N	29:a:48:TYR:HD2	2.15	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:128:PRO:HB2	14:L:133:ALA:HB3	1.99	0.43
17:O:108:ILE:HG23	17:O:160:ARG:HD2	1.99	0.43
27:Y:100:HIS:HB3	27:Y:102:SER:N	2.33	0.43
33:e:74:PHE:HB2	33:e:96:CYS:SG	2.59	0.43
38:j:76:HIS:C	38:j:79:ARG:NH1	2.76	0.43
46:z:177:ASP:O	46:z:181:TYR:CE2	2.71	0.43
47:1:165:LEU:HD23	47:1:168:LEU:HD12	2.01	0.43
50:S2:50:A:N1	50:S2:51:U:H1'	2.34	0.43
50:S2:115:U:H2'	50:S2:116:U:H6	1.84	0.43
50:S2:185:G:C6	50:S2:186:C:N4	2.86	0.43
50:S2:217:A:H1'	50:S2:309:G:H22	1.84	0.43
50:S2:221:A:C2	50:S2:222:U:N1	2.87	0.43
50:S2:302:A:N1	50:S2:303:C:C4	2.86	0.43
50:S2:342:C:C2	50:S2:343:A:C8	3.07	0.43
50:S2:443:U:N3	50:S2:444:G:N9	2.67	0.43
50:S2:611:G:C6	50:S2:612:U:C4	3.06	0.43
50:S2:881:G:C6	50:S2:882:U:C5	3.07	0.43
50:S2:1036:A:N7	50:S2:1037:G:C8	2.87	0.43
50:S2:1224:G:C6	50:S2:1225:U:N1	2.86	0.43
50:S2:1344:A:N6	50:S2:1386:A:C5'	2.82	0.43
50:S2:1368:U:O2	50:S2:1372:U:C5	2.70	0.43
50:S2:1483:A:H4'	54:SD:159:HIS:O	2.19	0.43
50:S2:1495:G:C6	50:S2:1496:U:C2	3.06	0.43
50:S2:1552:G:C5	50:S2:1578:U:C4	3.07	0.43
50:S2:1576:G:C6	50:S2:1577:G:N7	2.87	0.43
50:S2:1578:U:O2'	54:SD:4:GLN:O	2.31	0.43
50:S2:1639:G:H2'	50:S2:1639:G:N3	2.33	0.43
50:S2:1798:C:H2'	50:S2:1799:G:O4'	2.18	0.43
51:SA:138:SER:HB2	51:SA:156:TYR:CE1	2.53	0.43
51:SA:155:ARG:HB3	51:SA:156:TYR:CD2	2.51	0.43
52:SB:98:THR:N	52:SB:232:HIS:NE2	2.66	0.43
53:SC:60:TRP:CZ2	53:SC:92:GLU:CB	3.02	0.43
53:SC:104:ASP:OD1	53:SC:130:ILE:HG13	2.18	0.43
53:SC:113:GLN:HB2	53:SC:121:ARG:O	2.18	0.43
54:SD:98:ALA:HB2	54:SD:169:ASP:HB3	2.01	0.43
54:SD:226:GLN:HE21	83:Sg:186:THR:HB	1.83	0.43
55:SE:30:ARG:O	55:SE:31:PRO:C	2.61	0.43
58:SH:69:LEU:HD11	58:SH:73:GLN:HE21	1.83	0.43
70:ST:62:ARG:CG	70:ST:62:ARG:HH21	2.31	0.43
85:S5:2:C:H6	85:S5:2:C:C5'	2.29	0.43
1:5:1:C:C5	1:5:2:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:29:G:C5	1:5:54:G:C2	3.06	0.43
1:5:29:G:C2	1:5:30:C:C6	3.07	0.43
1:5:30:C:O2'	1:5:31:U:C5'	2.67	0.43
1:5:53:C:O2	1:5:53:C:H2'	2.19	0.43
1:5:101:A:C2	1:5:102:G:N9	2.85	0.43
1:5:352:G:C6	6:C:196:MET:SD	3.12	0.43
1:5:459:C:N3	1:5:460:C:C6	2.87	0.43
1:5:661:C:C2	1:5:662:C:C5	3.07	0.43
1:5:732:A:C2	1:5:733:A:H1'	2.53	0.43
1:5:1100:U:O2	1:5:1167:C:C5	2.72	0.43
1:5:1189:G:N2	1:5:1190:C:H1'	2.33	0.43
1:5:1247:U:N3	1:5:1248:C:C4	2.85	0.43
1:5:1290:G:H2'	1:5:1291:G:H5'	2.00	0.43
1:5:1396:G:N7	29:a:112:LEU:CD2	2.81	0.43
1:5:1422:G:C4	1:5:1423:U:C5	3.06	0.43
1:5:1539:G:H5'	4:A:194:ASN:ND2	2.33	0.43
1:5:1620:U:O2	1:5:1621:A:C8	2.71	0.43
1:5:1693:U:N3	1:5:1694:C:C6	2.85	0.43
1:5:1767:A:C4	1:5:1769:G:C8	3.06	0.43
1:5:1844:G:C5	1:5:1845:U:C5	3.07	0.43
1:5:1848:C:H5''	1:5:1848:C:C6	2.45	0.43
1:5:1872:G:N2	1:5:1873:A:C4	2.87	0.43
1:5:1921:C:C5	15:M:17:PHE:HD2	2.36	0.43
1:5:1944:A:C6	1:5:1945:G:C5	3.06	0.43
1:5:2077:C:N3	1:5:2078:C:C6	2.86	0.43
1:5:2080:U:H2'	1:5:2081:C:O5'	2.18	0.43
1:5:2103:G:C4	1:5:2104:G:C8	3.06	0.43
1:5:2439:G:C2	1:5:2440:U:C5	3.07	0.43
1:5:2550:G:C2	1:5:2551:A:C8	3.06	0.43
1:5:2576:G:C6	1:5:2577:C:C6	3.06	0.43
1:5:2723:U:C2	1:5:2724:G:C8	3.07	0.43
1:5:2738:C:C2	1:5:2741:U:C4	3.07	0.43
1:5:3628:G:C2	1:5:3629:A:C8	3.07	0.43
1:5:3663:A:H5'	1:5:3663:A:C4	2.54	0.43
1:5:3698:G:C6	1:5:3699:C:C4	3.07	0.43
1:5:3713:U:O2	1:5:3713:U:O4'	2.36	0.43
1:5:3734:U:O2'	1:5:3735:G:C5'	2.67	0.43
1:5:3789:C:H5''	85:S5:73:A:OP2	2.19	0.43
1:5:3928:A:H3'	1:5:3929:G:H8	1.84	0.43
1:5:4106:G:C2	1:5:4107:G:C8	3.06	0.43
1:5:4115:G:H5'	1:5:4116:C:OP1	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4254:G:N3	1:5:4254:G:H2'	2.34	0.43
1:5:4415:A:C2	1:5:4416:G:H1'	2.54	0.43
1:5:4425:G:O6	1:5:4426:C:C5	2.72	0.43
1:5:4461:C:C2	1:5:4516:G:C2	3.06	0.43
1:5:4653:C:N3	1:5:4654:C:N4	2.67	0.43
1:5:4653:C:H2'	1:5:4654:C:C6	2.48	0.43
1:5:4713:G:C4	1:5:4714:C:C6	3.07	0.43
1:5:4746:C:N4	1:5:4747:C:N4	2.66	0.43
1:5:4904:G:C2	1:5:4905:C:C6	3.06	0.43
1:5:4991:U:O2	1:5:4992:G:C8	2.72	0.43
1:5:5004:C:N4	1:5:5005:G:C2	2.87	0.43
2:7:34:C:N3	2:7:35:U:C5	2.87	0.43
7:D:55:VAL:HG21	7:D:158:LYS:HB2	2.01	0.43
9:F:181:LEU:HB3	9:F:186:ILE:HB	2.00	0.43
9:F:194:HIS:C	9:F:196:ILE:N	2.74	0.43
11:H:50:LYS:O	11:H:51:LYS:HG3	2.18	0.43
12:I:110:ARG:CZ	12:I:110:ARG:HA	2.49	0.43
12:I:171:TRP:CE3	12:I:181:PHE:HB2	2.51	0.43
20:R:124:TYR:C	20:R:124:TYR:CD1	2.97	0.43
23:U:38:ASN:C	23:U:90:TYR:OH	2.61	0.43
24:V:48:ARG:HG2	24:V:51:ARG:HB2	2.00	0.43
28:Z:5:MET:HE3	28:Z:25:ILE:HD11	1.99	0.43
33:e:85:LEU:HD12	33:e:111:ILE:HG23	1.99	0.43
45:r:7:TRP:CZ3	45:r:11:ARG:CB	3.01	0.43
50:S2:46:A:C5	50:S2:99:A:C8	3.06	0.43
50:S2:302:A:C4	50:S2:303:C:C6	3.06	0.43
50:S2:441:C:H6	50:S2:448:A:H2	1.65	0.43
50:S2:751:G:C2	50:S2:792:C:O2	2.71	0.43
50:S2:878:G:C6	50:S2:879:C:C6	3.07	0.43
50:S2:885:U:H2'	50:S2:886:A:H8	1.84	0.43
50:S2:1042:A:N6	50:S2:1043:G:C5	2.87	0.43
50:S2:1053:C:N3	50:S2:1054:G:C8	2.73	0.43
50:S2:1339:U:O2	50:S2:1340:U:C6	2.72	0.43
50:S2:1410:C:C4	50:S2:1411:G:C6	3.07	0.43
50:S2:1512:C:H4'	80:Sd:8:TRP:CZ2	2.54	0.43
50:S2:1574:C:O2	50:S2:1575:G:C8	2.72	0.43
50:S2:1597:C:C2'	50:S2:1598:G:O4'	2.65	0.43
50:S2:1606:G:C6	50:S2:1632:G:N1	2.87	0.43
50:S2:1641:A:C4	50:S2:1642:U:C5	3.06	0.43
50:S2:1731:A:C4	50:S2:1732:G:C8	3.07	0.43
50:S2:1751:C:H2'	50:S2:1751:C:O2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SB:172:MET:CE	52:SB:212:VAL:HG12	2.47	0.43
53:SC:108:LYS:HB3	53:SC:233:LEU:HD23	2.01	0.43
54:SD:193:ASP:HB3	54:SD:194:PRO:HD3	2.01	0.43
56:SF:54:GLY:HA2	56:SF:56:TYR:CE2	2.53	0.43
56:SF:103:LEU:HD23	56:SF:178:ILE:HD13	2.01	0.43
58:SH:10:LYS:N	58:SH:11:PRO:HD3	2.34	0.43
63:SM:19:GLN:HG2	63:SM:88:TRP:CB	2.48	0.43
73:SW:24:GLN:OE1	78:Sb:6:ASP:HA	2.18	0.43
86:S6:17:A:C6	86:S6:20:U:O4	2.71	0.43
86:S6:52:G:C6	86:S6:64:A:C6	3.07	0.43
1:5:113:A:N3	1:5:113:A:H2'	2.32	0.43
1:5:120:A:C8	1:5:121:A:N6	2.87	0.43
1:5:175:C:H2'	1:5:176:G:C8	2.54	0.43
1:5:181:C:H2'	1:5:182:G:C8	2.53	0.43
1:5:289:C:N3	1:5:290:U:C4	2.85	0.43
1:5:295:A:O3'	1:5:296:A:C8	2.71	0.43
1:5:988:C:C2	1:5:989:U:C6	3.07	0.43
1:5:1098:G:C5	1:5:1099:C:C5	3.07	0.43
1:5:1176:C:O2'	7:D:279:ARG:CG	2.66	0.43
1:5:1176:C:H4'	7:D:279:ARG:HG3	2.01	0.43
1:5:1299:G:N1	1:5:1300:G:C5	2.87	0.43
1:5:1334:A:H2'	1:5:1334:A:N3	2.32	0.43
1:5:1358:G:N1	1:5:1379:C:O2	2.52	0.43
1:5:1631:A:H8	1:5:1631:A:O5'	2.00	0.43
1:5:1752:G:N1	1:5:1753:G:C4	2.86	0.43
1:5:1818:G:H8	1:5:1821:G:C6	2.33	0.43
1:5:1865:G:N2	1:5:1867:A:H2'	2.34	0.43
1:5:1951:G:N2	1:5:1952:G:H1'	2.34	0.43
1:5:2316:G:H2'	1:5:2317:C:H6	1.83	0.43
1:5:2405:G:H3'	1:5:2405:G:C8	2.54	0.43
1:5:2546:G:H4'	1:5:2547:G:OP1	2.18	0.43
1:5:2645:G:C2	1:5:2646:C:C2	3.07	0.43
1:5:2666:U:C4	1:5:2669:C:C5	3.07	0.43
1:5:2712:G:N1	1:5:2713:C:C5	2.87	0.43
1:5:2735:G:N2	1:5:2736:G:N9	2.67	0.43
1:5:3656:A:C6	1:5:3657:U:C5	3.06	0.43
1:5:3731:C:O2	1:5:3731:C:C2'	2.67	0.43
1:5:3871:A:N1	1:5:3885:G:C2	2.87	0.43
1:5:3957:U:HO2'	1:5:3959:U:P	2.41	0.43
1:5:4125:C:H4'	10:G:45:ILE:HG21	1.99	0.43
1:5:4140:C:O2	1:5:4140:C:H2'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4241:C:C4	1:5:4242:U:H5	2.37	0.43
1:5:4338:G:H1	1:5:4372:U:H3'	1.84	0.43
1:5:4473:A:C2	1:5:4474:A:C5	3.06	0.43
1:5:4538:G:C4	1:5:4539:U:C6	3.06	0.43
1:5:4724:A:C2	1:5:4725:C:N1	2.87	0.43
1:5:4744:A:C2	1:5:4745:G:C8	3.07	0.43
1:5:4906:C:H1'	1:5:4916:G:N2	2.34	0.43
1:5:4928:C:H5''	15:M:114:LYS:HD3	2.01	0.43
1:5:5006:U:O4'	1:5:5042:A:N6	2.51	0.43
2:7:22:A:C6	7:D:266:TRP:CE2	3.07	0.43
2:7:40:U:O2	13:J:75:ARG:HD2	2.18	0.43
2:7:54:A:N7	13:J:12:MET:CG	2.82	0.43
4:A:174:ARG:CZ	4:A:174:ARG:HB3	2.48	0.43
5:B:231:VAL:HG11	5:B:251:VAL:HG23	2.01	0.43
8:E:43:ASN:HB3	8:E:58:MET:SD	2.58	0.43
8:E:277:ILE:CD1	8:E:282:LEU:HD13	2.48	0.43
9:F:93:PHE:HE2	9:F:246:ILE:HG12	1.84	0.43
11:H:106:GLN:NE2	11:H:113:GLU:HG2	2.34	0.43
13:J:99:PHE:CZ	13:J:105:PHE:CB	2.97	0.43
30:b:10:HIS:O	30:b:11:ASN:C	2.59	0.43
46:z:65:VAL:HG12	46:z:82:ILE:HD11	2.00	0.43
50:S2:42:A:N3	50:S2:42:A:H2'	2.32	0.43
50:S2:113:G:N2	50:S2:292:A:H1'	2.33	0.43
50:S2:160:U:O2'	50:S2:161:U:H3'	2.18	0.43
50:S2:178:C:O2	50:S2:178:C:H2'	2.19	0.43
50:S2:332:G:C6	57:SG:186:GLN:NE2	2.84	0.43
50:S2:364:A:C2	50:S2:397:G:N3	2.87	0.43
50:S2:420:G:O2'	50:S2:660:C:N3	2.46	0.43
50:S2:463:C:H2'	50:S2:465:A:N7	2.34	0.43
50:S2:496:C:O2'	50:S2:497:C:H5'	2.18	0.43
50:S2:513:G:C5	50:S2:514:U:C5	3.07	0.43
50:S2:792:C:N3	50:S2:793:G:C5	2.87	0.43
50:S2:836:G:C2'	50:S2:837:A:C5'	2.96	0.43
50:S2:916:A:C5	64:SN:73:ARG:HD3	2.54	0.43
50:S2:985:G:C2	50:S2:1002:U:C6	3.07	0.43
50:S2:1080:A:N3	50:S2:1081:U:H5	2.17	0.43
50:S2:1206:G:O4'	50:S2:1834:A:C8	2.72	0.43
50:S2:1230:C:H2'	50:S2:1665:G:H22	1.84	0.43
50:S2:1241:A:C2'	50:S2:1242:U:O4'	2.66	0.43
50:S2:1246:A:H2	50:S2:1251:A:N3	2.16	0.43
50:S2:1323:U:H2'	50:S2:1324:G:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1351:G:C6	50:S2:1352:G:C5	3.07	0.43
50:S2:1413:G:N1	50:S2:1414:A:H1'	2.33	0.43
50:S2:1434:C:H2'	50:S2:1435:C:H1'	1.95	0.43
50:S2:1500:G:C3'	50:S2:1501:C:H6	2.31	0.43
50:S2:1603:G:N1	70:ST:48:TYR:OH	2.52	0.43
50:S2:1687:C:C2'	50:S2:1688:C:O5'	2.66	0.43
50:S2:1704:C:N4	84:S4:20:U:OP1	2.52	0.43
52:SB:30:TRP:HD1	65:SO:19:PRO:HD3	1.83	0.43
54:SD:158:ILE:HD13	54:SD:158:ILE:N	2.17	0.43
55:SE:86:PHE:CE2	55:SE:226:PHE:HE2	2.37	0.43
55:SE:195:ILE:O	55:SE:209:HIS:O	2.36	0.43
73:SW:37:PHE:CD1	73:SW:37:PHE:C	2.95	0.43
75:SY:60:PHE:CD1	75:SY:71:GLY:HA3	2.52	0.43
83:Sg:112:ALA:HB3	83:Sg:121:VAL:HB	1.99	0.43
83:Sg:132:TRP:CD1	83:Sg:132:TRP:N	2.86	0.43
1:5:99:A:O2'	16:N:181:HIS:CE1	2.72	0.43
1:5:212:A:C4	1:5:213:G:N7	2.86	0.43
1:5:332:C:H2'	1:5:333:U:O5'	2.19	0.43
1:5:452:A:O3'	1:5:454:U:OP2	2.36	0.43
1:5:476:G:N2	1:5:679:C:C2	2.87	0.43
1:5:680:G:N2	1:5:681:G:H1'	2.34	0.43
1:5:1065:G:N1	1:5:1066:G:C6	2.87	0.43
1:5:1085:C:N3	1:5:1086:C:C5	2.85	0.43
1:5:1100:U:O2	1:5:1167:C:C6	2.71	0.43
1:5:1188:C:C2	1:5:1189:G:N7	2.72	0.43
1:5:1235:G:H2'	1:5:1236:C:H5'	2.01	0.43
1:5:1258:G:C2	1:5:1259:G:N9	2.87	0.43
1:5:1421:G:C6	1:5:1465:G:C4	3.07	0.43
1:5:1743:A:C6	1:5:1744:U:C6	3.07	0.43
1:5:1806:G:N1	1:5:1807:C:C5	2.87	0.43
1:5:1948:G:C4	1:5:1949:U:C5	3.06	0.43
1:5:2069:A:C5	1:5:2071:A:C8	3.07	0.43
1:5:2124:G:H2'	1:5:2124:G:N3	2.34	0.43
1:5:2301:G:C5	1:5:2302:C:C5	3.06	0.43
1:5:2307:A:N9	1:5:2332:A:C2	2.87	0.43
1:5:2359:U:O5'	1:5:2360:A:H2'	2.19	0.43
1:5:2364:G:N3	1:5:2365:C:C5	2.86	0.43
1:5:2509:C:N3	1:5:2510:G:C5	2.87	0.43
1:5:2587:A:H8	1:5:2588:C:N3	2.17	0.43
1:5:2599:G:C5'	35:g:60:ARG:HH22	2.32	0.43
1:5:2635:U:H2'	1:5:2636:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2739:C:H4'	44:p:52:VAL:CG2	2.44	0.43
1:5:2823:G:N1	1:5:2824:C:C4	2.86	0.43
1:5:3755:G:C6	1:5:3756:A:C8	3.06	0.43
1:5:3806:G:C4	1:5:3807:A:C8	3.07	0.43
1:5:3904:G:H3'	1:5:3905:A:O4'	2.18	0.43
1:5:3957:U:O2'	1:5:3959:U:P	2.77	0.43
1:5:3977:C:C2	1:5:4035:G:C2	3.06	0.43
1:5:4070:U:H2'	1:5:4071:U:O5'	2.18	0.43
1:5:4085:A:N6	10:G:62:ARG:NH2	2.67	0.43
1:5:4275:G:O6	1:5:4276:G:N7	2.48	0.43
1:5:4316:G:C6	1:5:4317:A:N7	2.86	0.43
1:5:4337:C:HO2'	1:5:4338:G:C5'	2.30	0.43
1:5:4487:A:O2'	1:5:4708:A:N1	2.49	0.43
1:5:4629:U:H2'	1:5:4630:G:O4'	2.18	0.43
1:5:4737:G:H2'	1:5:4738:C:H6	1.83	0.43
1:5:4749:C:C3'	1:5:4750:G:H5''	2.49	0.43
1:5:4861:G:C2	1:5:4862:G:C8	3.07	0.43
1:5:4898:G:C2	1:5:4899:G:C8	3.07	0.43
1:5:4914:C:H2'	1:5:4915:G:C8	2.54	0.43
1:5:4974:C:H2'	1:5:4975:G:O4'	2.19	0.43
1:5:4991:U:C2	1:5:4992:G:C8	3.07	0.43
3:8:27:U:C2	3:8:28:C:C6	3.06	0.43
3:8:28:C:N3	3:8:29:G:C8	2.87	0.43
3:8:117:C:N4	3:8:118:C:C5	2.86	0.43
4:A:158:ILE:HG21	4:A:162:ASN:OD1	2.19	0.43
6:C:150:LEU:O	6:C:152:LEU:N	2.52	0.43
6:C:189:MET:HB3	6:C:195:LYS:HD3	2.01	0.43
7:D:275:GLN:HA	7:D:278:ASP:OD1	2.19	0.43
8:E:157:ARG:HH22	8:E:271:PHE:HB2	1.83	0.43
9:F:198:THR:O	9:F:200:GLY:N	2.52	0.43
23:U:23:LEU:HA	23:U:110:TYR:O	2.18	0.43
28:Z:71:PHE:HA	28:Z:111:ARG:HG2	1.99	0.43
36:h:84:ARG:CZ	36:h:84:ARG:HB3	2.49	0.43
38:j:8:PHE:HA	38:j:11:ARG:HD2	2.01	0.43
39:k:41:TYR:CB	39:k:43:TYR:HE1	2.31	0.43
50:S2:28:U:O2	50:S2:28:U:C2'	2.61	0.43
50:S2:49:C:C2	50:S2:478:G:N1	2.87	0.43
50:S2:122:G:N1	50:S2:123:G:C4	2.87	0.43
50:S2:340:C:H3'	50:S2:341:C:H6	1.82	0.43
50:S2:529:A:C4	50:S2:530:U:C6	3.06	0.43
50:S2:672:A:H3'	50:S2:673:G:H5''	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1171:G:O2'	50:S2:1187:G:C6	2.70	0.43
50:S2:1291:A:H8	82:Sf:146:LEU:CG	2.32	0.43
50:S2:1293:A:C8	82:Sf:150:PHE:CB	2.98	0.43
50:S2:1298:G:H2'	50:S2:1299:A:C8	2.53	0.43
50:S2:1327:G:C2	50:S2:1503:C:C2	3.07	0.43
50:S2:1331:C:O4'	50:S2:1489:A:C4	2.71	0.43
50:S2:1484:A:C6	50:S2:1485:U:C5	3.06	0.43
50:S2:1610:G:C4	50:S2:1611:G:C8	3.07	0.43
50:S2:1669:G:C6	50:S2:1670:C:C4	3.06	0.43
50:S2:1738:C:O2	50:S2:1738:C:H2'	2.18	0.43
50:S2:1809:A:H2'	50:S2:1810:U:O4'	2.19	0.43
54:SD:200:PRO:C	54:SD:202:LYS:H	2.27	0.43
57:SG:186:GLN:HG2	57:SG:187:HIS:N	2.33	0.43
58:SH:61:ILE:HD11	58:SH:95:ILE:CD1	2.49	0.43
59:SI:34:ALA:HB2	59:SI:56:ARG:CD	2.46	0.43
61:SK:81:ASP:OD1	61:SK:81:ASP:C	2.61	0.43
63:SM:17:ALA:HB1	63:SM:124:ILE:CG2	2.49	0.43
63:SM:95:ASP:O	63:SM:96:ARG:HB2	2.19	0.43
65:SO:128:ARG:HA	77:Sa:62:TYR:OH	2.19	0.43
73:SW:51:GLU:OE1	78:Sb:8:LEU:CD1	2.67	0.43
74:SX:34:THR:OG1	74:SX:35:ALA:N	2.51	0.43
74:SX:46:HIS:CD2	74:SX:46:HIS:N	2.87	0.43
74:SX:93:PHE:CE1	74:SX:133:LEU:HD22	2.54	0.43
83:Sg:88:ARG:HB2	83:Sg:90:TRP:HE1	1.84	0.43
85:S5:21:A:H1'	85:S5:48:C:N4	2.33	0.43
86:S6:3:C:C5	86:S6:4:C:N3	2.85	0.43
1:5:55:G:N1	1:5:56:A:C5	2.87	0.43
1:5:74:G:H5'	14:L:59:VAL:CG1	2.49	0.43
1:5:141:C:H2'	1:5:142:G:O4'	2.19	0.43
1:5:247:G:C2	1:5:248:C:C4	3.07	0.43
1:5:288:G:C5	1:5:289:C:C5	3.06	0.43
1:5:472:C:C4	1:5:473:C:C4	3.06	0.43
1:5:655:C:C2	1:5:656:C:C6	3.06	0.43
1:5:687:U:C4	1:5:688:U:C4	3.07	0.43
1:5:951:G:N3	1:5:952:G:C8	2.87	0.43
1:5:1189:G:N2	1:5:1190:C:C2	2.87	0.43
1:5:1268:G:O5'	1:5:2109:G:H8	2.01	0.43
1:5:1285:U:C4	1:5:1286:C:C5	3.07	0.43
1:5:1330:A:C2	1:5:1331:C:C6	3.07	0.43
1:5:1380:G:N2	1:5:1382:G:N3	2.67	0.43
1:5:1398:A:H61	1:5:1419:G:H2'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1404:G:C2	1:5:1405:C:C2	3.07	0.43
1:5:1540:C:N3	1:5:1541:C:C5	2.86	0.43
1:5:1646:A:C6	1:5:1647:U:C4	3.07	0.43
1:5:1689:G:H4'	1:5:2285:A:H4'	2.01	0.43
1:5:1775:A:C2	1:5:1776:A:C4	3.07	0.43
1:5:1805:A:C8	30:b:28:ARG:HB2	2.54	0.43
1:5:1819:G:C8	7:D:142:PHE:HD2	2.37	0.43
1:5:1823:G:C3'	1:5:1825:A:P	3.03	0.43
1:5:1865:G:N2	1:5:1867:A:H3'	2.28	0.43
1:5:2315:G:C2	1:5:2316:G:C4	3.07	0.43
1:5:2325:C:C4	1:5:2326:G:N7	2.84	0.43
1:5:2448:G:O2'	1:5:2449:A:C8	2.63	0.43
1:5:2464:C:O2'	1:5:2465:C:C5'	2.67	0.43
1:5:2503:G:H1'	1:5:4084:G:C2	2.53	0.43
1:5:2646:C:N4	1:5:2686:G:C6	2.87	0.43
1:5:2666:U:C4	1:5:2669:C:C4	3.07	0.43
1:5:2812:A:H2'	1:5:2813:A:H8	1.78	0.43
1:5:2843:U:C2	1:5:2844:A:N7	2.72	0.43
1:5:3630:A:N3	1:5:3631:U:C6	2.87	0.43
1:5:3640:U:H2'	1:5:3646:A:H62	1.83	0.43
1:5:3832:U:C2	1:5:3833:C:C5	3.06	0.43
1:5:4045:G:C8	1:5:4045:G:C3'	3.01	0.43
1:5:4090:G:C5	1:5:4091:G:C8	3.07	0.43
1:5:4099:G:C4	1:5:4100:C:C5	3.07	0.43
1:5:4127:A:N7	1:5:4156:G:N2	2.66	0.43
1:5:4222:G:H2'	1:5:4223:C:O4'	2.18	0.43
1:5:4235:G:H2'	1:5:4236:G:C5'	2.49	0.43
1:5:4314:C:O2'	30:b:36:ASP:HB3	2.19	0.43
1:5:4344:U:N3	1:5:4345:C:H5	2.14	0.43
1:5:4498:U:C4	1:5:4500:U:P	3.12	0.43
1:5:4688:C:C2	1:5:4689:U:C6	3.07	0.43
3:8:82:A:H3'	3:8:82:A:C4	2.54	0.43
3:8:131:G:O6	3:8:132:G:C5	2.72	0.43
3:8:133:G:C2	3:8:134:G:C5	3.07	0.43
3:8:135:C:N3	3:8:136:U:C4	2.87	0.43
5:B:146:LEU:N	5:B:146:LEU:HD13	2.34	0.43
5:B:190:VAL:O	5:B:191:ALA:HB3	2.18	0.43
5:B:320:PHE:O	5:B:321:VAL:C	2.61	0.43
5:B:339:GLY:HA3	5:B:343:ARG:HD2	2.01	0.43
6:C:266:THR:OG1	6:C:267:TRP:N	2.52	0.43
7:D:44:TYR:HA	22:T:33:ILE:HB	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:95:TYR:CD1	7:D:95:TYR:C	2.96	0.43
8:E:112:TYR:CE2	45:r:108:MET:HE1	2.54	0.43
8:E:236:TYR:CE2	8:E:238:ILE:HA	2.47	0.43
9:F:228:HIS:O	9:F:231:GLU:N	2.52	0.43
11:H:113:GLU:OE2	11:H:125:ARG:HB3	2.19	0.43
14:L:65:ARG:HE	29:a:66:ASN:ND2	2.16	0.43
14:L:103:ARG:CZ	14:L:103:ARG:HB3	2.49	0.43
15:M:75:LYS:C	15:M:77:TRP:H	2.27	0.43
16:N:120:TRP:CZ2	16:N:123:GLU:HB3	2.54	0.43
23:U:33:ILE:CD1	23:U:96:LEU:HD22	2.45	0.43
24:V:35:LYS:NZ	50:S2:1804:U:P	2.92	0.43
24:V:42:VAL:HB	24:V:45:ILE:HD12	2.01	0.43
24:V:97:TYR:CD1	24:V:97:TYR:N	2.85	0.43
32:d:71:ALA:HB3	32:d:108:TYR:HE2	1.83	0.43
32:d:111:VAL:HB	32:d:114:PHE:HE1	1.84	0.43
40:l:21:ARG:HH11	47:1:273:ARG:HD3	1.84	0.43
46:z:17:VAL:HG21	46:z:216:LEU:HB3	2.00	0.43
46:z:32:VAL:HG12	46:z:169:VAL:CG2	2.49	0.43
47:1:151:ILE:HG22	47:1:155:LEU:HG	2.00	0.43
47:1:380:ILE:HB	47:1:385:SER:O	2.18	0.43
50:S2:10:G:N1	50:S2:11:A:C5	2.86	0.43
50:S2:217:A:H61	50:S2:303:C:H42	1.66	0.43
50:S2:302:A:N3	50:S2:303:C:C6	2.86	0.43
50:S2:340:C:C4	50:S2:341:C:C5	3.07	0.43
50:S2:448:A:C8	59:SI:26:LYS:CA	3.01	0.43
50:S2:511:U:H2'	50:S2:512:A:H8	1.84	0.43
50:S2:616:A:C4	50:S2:617:G:H1'	2.54	0.43
50:S2:752:G:N2	50:S2:791:C:H1'	2.34	0.43
50:S2:883:U:C2	50:S2:884:C:C6	3.07	0.43
50:S2:997:A:H2'	50:S2:998:A:O5'	2.19	0.43
50:S2:1022:U:H6	64:SN:128:TYR:CE2	2.27	0.43
50:S2:1118:C:H3'	50:S2:1119:A:C2	2.54	0.43
50:S2:1332:A:N7	50:S2:1493:C:N4	2.63	0.43
50:S2:1354:G:H2'	50:S2:1356:G:N7	2.34	0.43
50:S2:1398:G:N2	50:S2:1399:C:C5	2.81	0.43
50:S2:1528:G:O2'	50:S2:1666:C:OP1	2.36	0.43
50:S2:1562:C:C2	50:S2:1563:G:N7	2.87	0.43
50:S2:1567:G:C8	69:SS:82:TRP:CZ3	3.07	0.43
51:SA:120:ARG:HH12	53:SC:267:GLN:CG	2.32	0.43
54:SD:156:LEU:HD13	54:SD:157:MET:N	2.33	0.43
56:SF:49:LEU:CD2	67:SQ:49:TYR:HB2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SF:70:GLU:O	56:SF:73:THR:OG1	2.25	0.43
56:SF:115:ALA:HA	56:SF:181:ALA:HA	2.00	0.43
57:SG:56:ASN:HD22	57:SG:56:ASN:HA	1.60	0.43
57:SG:126:ASP:CG	57:SG:127:THR:N	2.77	0.43
59:SI:27:TYR:C	59:SI:27:TYR:CD1	2.97	0.43
64:SN:108:ASP:HB3	64:SN:111:ALA:HB3	2.01	0.43
67:SQ:55:VAL:HA	67:SQ:63:PHE:HE1	1.83	0.43
79:Sc:13:ARG:HD3	79:Sc:35:MET:SD	2.58	0.43
82:Sf:88:PRO:O	82:Sf:90:LYS:N	2.51	0.43
83:Sg:64:HIS:HB3	83:Sg:83:TRP:HB3	2.01	0.43
83:Sg:230:LEU:HD22	83:Sg:259:TRP:CE3	2.53	0.43
85:S5:27:G:C6	85:S5:28:G:N7	2.86	0.43
85:S5:73:A:O2'	85:S5:74:C:C2	2.70	0.43
1:5:38:A:C2	1:5:41:C:C4	3.07	0.43
1:5:114:G:O6	1:5:157:U:O2	2.36	0.43
1:5:146:G:N2	1:5:147:A:C8	2.87	0.43
1:5:298:G:C4	1:5:299:C:C6	3.07	0.43
1:5:450:G:O2'	1:5:453:G:OP1	2.29	0.43
1:5:490:C:H3'	1:5:491:G:C8	2.51	0.43
1:5:516:C:N1	1:5:646:G:N2	2.66	0.43
1:5:652:G:C5	1:5:653:U:C6	3.07	0.43
1:5:660:A:C2	1:5:661:C:C5	3.07	0.43
1:5:686:A:C2'	1:5:687:U:H5'	2.49	0.43
1:5:713:C:N4	1:5:955:G:H1	2.15	0.43
1:5:717:U:C4	1:5:718:C:C5	3.07	0.43
1:5:723:A:H4'	6:C:346:ASN:HB2	1.99	0.43
1:5:910:G:C2	1:5:911:U:C6	3.07	0.43
1:5:919:C:O2'	1:5:920:C:H5'	2.18	0.43
1:5:993:G:C4	1:5:994:G:C8	3.07	0.43
1:5:1203:G:N3	1:5:1204:C:C6	2.87	0.43
1:5:1236:C:H2'	8:E:56:SER:CB	2.49	0.43
1:5:1248:C:N4	1:5:1249:C:H41	2.17	0.43
1:5:1345:A:H4'	19:Q:166:TYR:HE2	1.84	0.43
1:5:1355:G:N1	1:5:1385:G:N3	2.67	0.43
1:5:1564:A:O2'	1:5:1565:A:O5'	2.37	0.43
1:5:1581:G:N7	1:5:1610:C:N4	2.67	0.43
1:5:1581:G:C6	1:5:1610:C:C4	3.07	0.43
1:5:1617:G:C2	1:5:1618:G:C4	3.07	0.43
1:5:1751:A:C2	1:5:1752:G:C1'	3.02	0.43
1:5:1776:A:OP1	85:S5:53:G:OP1	2.36	0.43
1:5:1777:C:O2	1:5:1777:C:H2'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1829:G:C2	1:5:1830:G:C5	3.07	0.43
1:5:1961:G:C6	1:5:2024:G:N1	2.87	0.43
1:5:1964:A:C5	1:5:4694:G:C6	3.07	0.43
1:5:2276:A:C4	1:5:2277:C:C6	3.07	0.43
1:5:2288:G:H5'	1:5:2289:C:OP1	2.18	0.43
1:5:2338:C:H5''	45:r:12:ASN:HD22	1.84	0.43
1:5:2347:A:N3	1:5:2348:G:N1	2.66	0.43
1:5:2576:G:N1	1:5:2577:C:C4	2.87	0.43
1:5:2594:C:O2	1:5:2595:C:C6	2.72	0.43
1:5:2612:G:C6	1:5:2613:C:N3	2.87	0.43
1:5:2701:U:C2	1:5:2702:C:C6	3.07	0.43
1:5:2782:U:O2	1:5:2782:U:H2'	2.18	0.43
1:5:2889:G:N2	1:5:5034:A:H8	2.17	0.43
1:5:3755:G:N1	1:5:3756:A:C8	2.87	0.43
1:5:3842:C:OP2	1:5:3843:C:O2'	2.27	0.43
1:5:3879:G:O6	1:5:3882:C:C6	2.72	0.43
1:5:3927:U:C4	1:5:4182:G:N2	2.87	0.43
1:5:3944:G:C6	1:5:4069:U:O2	2.72	0.43
1:5:3966:A:C2	1:5:3967:G:C6	3.07	0.43
1:5:4061:G:N2	1:5:4062:A:C1'	2.82	0.43
1:5:4094:G:C2	1:5:4095:G:C4	3.07	0.43
1:5:4139:G:C2	1:5:4140:C:C2	3.06	0.43
1:5:4168:G:C2'	1:5:4169:G:O5'	2.66	0.43
1:5:4175:G:C2	1:5:4176:C:C6	3.07	0.43
1:5:4250:G:C2	1:5:4259:C:C2	3.07	0.43
1:5:4724:A:H4'	5:B:102:PHE:O	2.18	0.43
1:5:4890:G:C2	1:5:4930:C:C2	3.06	0.43
1:5:4898:G:C2	1:5:4899:G:N7	2.87	0.43
1:5:4910:G:N7	17:O:156:LEU:HD22	2.34	0.43
1:5:5034:A:C5	1:5:5035:U:H1'	2.54	0.43
2:7:73:U:O2	2:7:102:U:C4	2.72	0.43
3:8:73:U:OP1	27:Y:75:ARG:HD2	2.19	0.43
3:8:144:U:N3	3:8:145:C:C5	2.87	0.43
5:B:213:GLN:CD	5:B:214:ASP:OD1	2.62	0.43
6:C:14:LYS:C	6:C:173:LYS:HG2	2.44	0.43
6:C:331:TYR:O	6:C:335:MET:HG3	2.19	0.43
7:D:284:LYS:HB2	12:I:209:TRP:CH2	2.53	0.43
11:H:41:ILE:CD1	11:H:69:THR:HB	2.48	0.43
12:I:30:LYS:HG2	12:I:63:GLU:HG2	2.01	0.43
12:I:184:MET:HB2	12:I:190:LEU:HD12	2.00	0.43
14:L:35:ARG:O	14:L:36:ARG:C	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:182:LEU:HD23	37:i:7:MET:CE	2.49	0.43
15:M:3:PHE:HB2	15:M:6:PHE:CE1	2.54	0.43
16:N:113:LEU:CD2	16:N:136:ASP:OD1	2.66	0.43
16:N:156:HIS:O	16:N:159:ARG:HG3	2.19	0.43
21:S:13:VAL:HA	21:S:28:TYR:O	2.19	0.43
21:S:13:VAL:HG23	21:S:62:VAL:HB	2.00	0.43
22:T:52:MET:HG2	22:T:95:HIS:CE1	2.54	0.43
35:g:82:MET:SD	35:g:90:ARG:HD2	2.59	0.43
47:1:193:TRP:CZ3	48:2:55:LYS:HB2	2.54	0.43
47:1:292:ILE:CG2	47:1:449:LEU:HD13	2.36	0.43
50:S2:5:U:O2	50:S2:5:U:H2'	2.18	0.43
50:S2:23:G:C2	50:S2:24:C:C2	3.07	0.43
50:S2:27:A:H2	50:S2:28:U:H1'	1.81	0.43
50:S2:49:C:C2	50:S2:478:G:C2	3.06	0.43
50:S2:104:A:C6	50:S2:105:U:C5	3.07	0.43
50:S2:145:G:H2'	50:S2:146:G:O4'	2.18	0.43
50:S2:191:A:H3'	50:S2:192:C:C5'	2.48	0.43
50:S2:312:G:O2'	50:S2:313:A:P	2.76	0.43
50:S2:638:C:C2'	50:S2:639:C:O5'	2.67	0.43
50:S2:654:A:C6	50:S2:655:A:N1	2.86	0.43
50:S2:878:G:N2	50:S2:879:C:H1'	2.33	0.43
50:S2:919:A:C2	64:SN:64:ARG:NH2	2.87	0.43
50:S2:995:G:N2	50:S2:997:A:C8	2.81	0.43
50:S2:1131:G:C2	50:S2:1132:C:C6	3.06	0.43
50:S2:1231:C:C4'	50:S2:1665:G:C2	3.02	0.43
50:S2:1250:A:N3	50:S2:1339:U:C1'	2.81	0.43
50:S2:1253:A:H4'	50:S2:1254:C:C5'	2.47	0.43
50:S2:1286:G:N1	50:S2:1312:G:C6	2.86	0.43
50:S2:1292:C:C1'	82:Sf:148:TYR:CB	2.89	0.43
50:S2:1293:A:OP2	82:Sf:151:ASN:OD1	2.36	0.43
50:S2:1314:U:O2	50:S2:1315:U:C1'	2.67	0.43
50:S2:1402:A:O2'	71:SU:54:VAL:HG13	2.19	0.43
50:S2:1415:C:C5	50:S2:1416:C:C2	3.07	0.43
50:S2:1447:G:P	71:SU:87:ARG:HH12	2.42	0.43
50:S2:1589:A:C2'	50:S2:1590:C:O5'	2.67	0.43
50:S2:1605:G:O3'	50:S2:1606:G:O4'	2.36	0.43
50:S2:1866:A:C5	77:Sa:87:ARG:NH2	2.87	0.43
53:SC:199:PRO:HD3	53:SC:223:TYR:OH	2.18	0.43
57:SG:88:ARG:HB3	57:SG:91:GLU:HB2	2.00	0.43
59:SI:60:LEU:HD23	59:SI:185:ALA:HB2	2.00	0.43
67:SQ:85:ARG:HD3	67:SQ:119:LEU:CD2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SR:5:ARG:HG3	68:SR:49:LYS:HE3	1.99	0.43
72:SV:40:ASP:O	72:SV:41:LYS:CB	2.66	0.43
75:SY:108:LYS:O	75:SY:111:LYS:HG3	2.18	0.43
78:Sb:31:TYR:CE1	78:Sb:48:SER:HB3	2.54	0.43
82:Sf:147:THR:HG22	82:Sf:148:TYR:HD1	1.75	0.43
85:S5:31:A:C5	85:S5:32:U:C6	3.07	0.43
86:S6:48:C:C1'	86:S6:49:C:P	3.07	0.43
86:S6:50:U:OP2	86:S6:50:U:H6	2.01	0.43
86:S6:51:U:H2'	86:S6:52:G:O4'	2.19	0.43
1:5:32:G:OP1	16:N:73:ARG:NH1	2.52	0.42
1:5:202:C:C2	1:5:214:G:N2	2.87	0.42
1:5:269:G:N3	1:5:269:G:C2'	2.82	0.42
1:5:405:U:H5'	1:5:406:C:OP2	2.19	0.42
1:5:479:G:C5	1:5:480:C:C5	3.07	0.42
1:5:489:C:N4	1:5:490:C:C4	2.87	0.42
1:5:681:G:C2	1:5:682:G:H1'	2.54	0.42
1:5:686:A:H3'	1:5:687:U:H5'	2.00	0.42
1:5:744:G:N1	1:5:921:C:C2	2.87	0.42
1:5:917:A:N3	1:5:918:G:C6	2.86	0.42
1:5:975:C:C3'	1:5:976:G:O4'	2.67	0.42
1:5:1205:G:C5	1:5:1206:C:C5	3.07	0.42
1:5:1346:C:N3	1:5:1347:G:N7	2.67	0.42
1:5:1522:G:N3	1:5:1522:G:H2'	2.34	0.42
1:5:1641:G:C6	1:5:4386:C:O4'	2.72	0.42
1:5:1750:G:N3	1:5:1751:A:C8	2.87	0.42
1:5:1750:G:N2	1:5:1751:A:N9	2.67	0.42
1:5:1776:A:C4	1:5:1777:C:C5	3.07	0.42
1:5:2041:A:C2	1:5:4464:A:N6	2.86	0.42
1:5:2090:U:O2	1:5:2090:U:OP2	2.37	0.42
1:5:2281:U:O2	1:5:2282:A:C8	2.72	0.42
1:5:2322:G:C2	1:5:2323:C:C2	3.07	0.42
1:5:2401:A:N1	1:5:2402:G:C5	2.87	0.42
1:5:2471:G:H3'	1:5:2472:A:H5''	2.01	0.42
1:5:2538:U:C2	1:5:2539:C:C5	3.07	0.42
1:5:2613:C:H42	1:5:2614:C:N4	2.17	0.42
1:5:2622:G:C6	1:5:2623:A:C8	3.07	0.42
1:5:2678:A:C2	1:5:2679:G:C8	3.07	0.42
1:5:2693:G:OP1	39:k:35:LYS:NZ	2.50	0.42
1:5:2703:G:C2	1:5:2704:C:C2	3.07	0.42
1:5:2820:C:C2'	1:5:2821:U:H5'	2.49	0.42
1:5:3621:A:C6	1:5:3622:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3757:G:C6	1:5:3758:U:C5	3.06	0.42
1:5:3873:G:C2	1:5:3883:U:N3	2.87	0.42
1:5:4059:C:O2	1:5:4059:C:H2'	2.18	0.42
1:5:4200:G:C6	1:5:4201:G:C5	3.07	0.42
1:5:4215:C:C2	1:5:4216:G:N7	2.76	0.42
1:5:4238:G:H2'	1:5:4239:A:O4'	2.19	0.42
1:5:4343:U:N3	1:5:4344:U:C4	2.87	0.42
1:5:4497:U:O4	1:5:4498:U:C2	2.72	0.42
1:5:4518:A:H5''	1:5:4520:G:H4'	2.01	0.42
1:5:4692:A:OP2	1:5:4693:C:O2'	2.36	0.42
1:5:4723:A:C2	1:5:4724:A:N7	2.87	0.42
1:5:4892:A:C2	1:5:4893:A:H1'	2.54	0.42
1:5:4945:G:H21	34:f:69:VAL:H	1.65	0.42
1:5:5063:G:N3	1:5:5064:G:C8	2.86	0.42
2:7:73:U:O2	2:7:102:U:C5	2.72	0.42
2:7:113:G:N2	2:7:114:U:C2	2.87	0.42
3:8:106:G:N3	3:8:107:C:C5	2.87	0.42
3:8:138:C:N3	3:8:139:G:N7	2.67	0.42
4:A:202:VAL:CG1	4:A:217:GLN:HG2	2.39	0.42
5:B:6:PHE:HB3	24:V:49:LEU:HD11	2.01	0.42
5:B:109:HIS:HB2	5:B:202:GLU:CD	2.44	0.42
5:B:285:TYR:CE2	5:B:334:LYS:HB2	2.54	0.42
6:C:336:ARG:O	6:C:340:ILE:CG1	2.67	0.42
7:D:43:LYS:HB3	7:D:46:THR:HG22	2.01	0.42
7:D:109:LEU:HD21	7:D:142:PHE:CE1	2.54	0.42
7:D:160:PHE:CE2	7:D:179:ARG:HB2	2.54	0.42
7:D:198:HIS:CE1	7:D:203:ASN:CG	2.97	0.42
9:F:44:LEU:CD2	9:F:48:ARG:NE	2.81	0.42
9:F:88:GLU:CG	22:T:136:ARG:HG2	2.49	0.42
15:M:42:CYS:HG	15:M:77:TRP:CD1	2.37	0.42
16:N:128:LYS:HB3	16:N:130:PHE:HE1	1.83	0.42
29:a:127:LYS:HG3	29:a:128:PHE:CZ	2.53	0.42
32:d:87:ARG:HB2	32:d:87:ARG:HH11	1.84	0.42
33:e:20:PHE:HZ	33:e:60:TYR:HH	1.55	0.42
34:f:57:THR:HG21	34:f:68:ARG:HD3	2.01	0.42
35:g:76:ARG:NH2	35:g:84:ALA:HB2	2.27	0.42
40:l:21:ARG:O	40:l:22:PRO:O	2.37	0.42
50:S2:42:A:C6	50:S2:426:A:N6	2.70	0.42
50:S2:196:C:C2	50:S2:204:G:N2	2.87	0.42
50:S2:302:A:O4'	59:SI:73:THR:HG23	2.19	0.42
50:S2:341:C:O2	50:S2:342:C:H1'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:350:C:O2'	50:S2:383:G:C2	2.72	0.42
50:S2:440:G:C2	50:S2:454:U:N3	2.87	0.42
50:S2:454:U:OP1	57:SG:94:ARG:N	2.49	0.42
50:S2:559:G:C2	50:S2:560:A:C8	3.07	0.42
50:S2:616:A:N1	50:S2:632:C:H1'	2.34	0.42
50:S2:814:U:H5''	60:SJ:8:VAL:HG11	1.99	0.42
50:S2:837:A:H2	50:S2:838:G:C5	2.33	0.42
50:S2:916:A:H3'	50:S2:917:U:H5'	2.01	0.42
50:S2:961:G:C5	50:S2:962:A:N7	2.87	0.42
50:S2:1110:G:C2	50:S2:1111:U:C6	3.07	0.42
50:S2:1211:G:C2	50:S2:1212:G:H1'	2.54	0.42
50:S2:1283:C:O4'	63:SM:91:LEU:HD13	2.19	0.42
50:S2:1310:U:O5'	82:Sf:143:LYS:HE2	2.19	0.42
50:S2:1378:A:N7	51:SA:132:GLN:NE2	2.60	0.42
50:S2:1450:G:C2	50:S2:1451:G:H1'	2.54	0.42
50:S2:1452:A:N1	50:S2:1475:G:H5''	2.33	0.42
50:S2:1508:A:C6	50:S2:1510:G:H1'	2.54	0.42
50:S2:1512:C:N3	50:S2:1513:C:N4	2.66	0.42
50:S2:1513:C:O2'	50:S2:1514:G:C5'	2.67	0.42
50:S2:1524:G:C4	50:S2:1525:C:C6	3.07	0.42
50:S2:1529:C:C2	50:S2:1530:U:C5	3.07	0.42
50:S2:1584:G:N1	50:S2:1586:U:C6	2.87	0.42
50:S2:1630:A:N1	50:S2:1631:U:C5	2.87	0.42
50:S2:1693:G:C6	50:S2:1694:U:C2	3.07	0.42
50:S2:1718:G:C6	50:S2:1814:G:C6	3.07	0.42
50:S2:1758:G:C2	50:S2:1759:G:C4	3.07	0.42
50:S2:1817:G:H2'	50:S2:1818:A:C8	2.54	0.42
50:S2:1850:A:H2'	50:S2:1851:A:H5''	2.00	0.42
55:SE:15:PRO:HD2	55:SE:18:TRP:HH2	1.83	0.42
56:SF:149:GLN:O	56:SF:150:ALA:C	2.62	0.42
57:SG:145:PHE:CB	57:SG:147:LEU:HD13	2.48	0.42
58:SH:26:ALA:O	58:SH:30:LEU:HG	2.19	0.42
59:SI:167:GLN:CG	59:SI:168:GLN:N	2.81	0.42
66:SP:13:ARG:O	66:SP:15:PHE:N	2.52	0.42
67:SQ:71:ARG:HG3	67:SQ:73:LYS:HE2	2.00	0.42
73:SW:7:LEU:O	73:SW:8:ALA:C	2.62	0.42
1:5:6:C:O2	1:5:6:C:H2'	2.18	0.42
1:5:62:A:O2'	1:5:63:G:H5'	2.19	0.42
1:5:199:G:C2	1:5:201:C:C4	3.07	0.42
1:5:224:U:O2	6:C:219:LYS:HG2	2.19	0.42
1:5:268:G:C2	1:5:269:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:301:G:C4	1:5:302:C:C5	3.08	0.42
1:5:685:C:O2	1:5:685:C:H2'	2.19	0.42
1:5:718:C:C2	1:5:719:C:C6	3.07	0.42
1:5:727:C:C2'	1:5:728:U:OP1	2.67	0.42
1:5:1086:C:O2	1:5:1086:C:C2'	2.67	0.42
1:5:1184:A:N1	1:5:1185:G:C5	2.87	0.42
1:5:1279:A:N3	1:5:1280:C:N3	2.67	0.42
1:5:1320:U:C2	1:5:1321:G:C8	3.06	0.42
1:5:1373:A:C4	1:5:1374:G:C8	3.06	0.42
1:5:1427:A:H2	19:Q:50:ARG:HH22	1.65	0.42
1:5:1558:A:H1'	20:R:129:GLY:HA3	2.01	0.42
1:5:1667:G:N3	1:5:2283:G:C6	2.87	0.42
1:5:1684:A:N1	1:5:1685:G:C8	2.86	0.42
1:5:1944:A:C6	1:5:1945:G:C8	3.07	0.42
1:5:1992:U:C5	1:5:2002:A:H5''	2.55	0.42
1:5:1998:A:H2	1:5:2020:U:O4'	2.02	0.42
1:5:2106:G:N2	1:5:2107:C:C4	2.87	0.42
1:5:2261:G:O2'	1:5:2262:G:C8	2.72	0.42
1:5:2363:A:C1'	1:5:4560:C:H5	2.26	0.42
1:5:2580:U:H1'	28:Z:38:TYR:OH	2.19	0.42
1:5:2606:G:N3	1:5:2607:C:C5	2.87	0.42
1:5:2630:U:O2	1:5:2632:U:H1'	2.19	0.42
1:5:2650:G:C6	1:5:2651:C:C4	3.07	0.42
1:5:2670:C:O2'	1:5:2671:C:C5'	2.67	0.42
1:5:2682:G:C4	1:5:2683:C:C5	3.07	0.42
1:5:2690:C:C2	1:5:2691:U:C5	3.05	0.42
1:5:2713:C:C2	1:5:2714:G:N7	2.87	0.42
1:5:2758:G:O2'	1:5:2764:A:N3	2.44	0.42
1:5:3605:C:C4	1:5:3606:U:C5	3.07	0.42
1:5:3629:A:C4'	50:S2:1721:U:O2	2.55	0.42
1:5:3702:A:C6	1:5:3774:A:C6	3.07	0.42
1:5:3717:A:N1	1:5:3736:A:N1	2.66	0.42
1:5:4056:A:C6	1:5:4057:C:C4	3.07	0.42
1:5:4112:C:N3	1:5:4113:U:C6	2.87	0.42
1:5:4113:U:H3'	1:5:4114:C:H5''	2.00	0.42
1:5:4193:C:H3'	1:5:4194:U:O2	2.19	0.42
1:5:4344:U:C2	1:5:4345:C:H5	2.30	0.42
1:5:4355:G:N2	1:5:4356:G:C8	2.87	0.42
1:5:4404:U:C4	1:5:4436:U:N3	2.88	0.42
1:5:4578:G:C2	1:5:4579:U:C6	3.07	0.42
1:5:4660:G:H2'	1:5:4661:G:H5''	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4898:G:N3	1:5:4899:G:C8	2.87	0.42
1:5:4956:A:N6	1:5:4957:C:C5	2.87	0.42
1:5:5042:A:N3	1:5:5042:A:H2'	2.33	0.42
2:7:27:G:C2	2:7:28:C:C2	3.07	0.42
3:8:116:C:C2	3:8:117:C:C6	3.07	0.42
6:C:48:ASN:O	6:C:49:ARG:CB	2.66	0.42
7:D:203:ASN:OD1	7:D:203:ASN:N	2.49	0.42
8:E:160:PHE:C	8:E:160:PHE:CD1	2.96	0.42
12:I:9:TYR:CD1	12:I:9:TYR:N	2.87	0.42
14:L:78:LEU:O	14:L:79:GLU:C	2.62	0.42
15:M:109:ARG:HH21	15:M:109:ARG:CB	2.32	0.42
16:N:184:ILE:HG23	16:N:194:ARG:HH12	1.84	0.42
17:O:15:LEU:HA	17:O:42:ASN:O	2.19	0.42
22:T:8:ARG:HH11	22:T:52:MET:HE1	1.83	0.42
22:T:141:VAL:HG12	22:T:142:ARG:N	2.35	0.42
25:W:59:HIS:N	25:W:59:HIS:CD2	2.87	0.42
27:Y:27:ARG:HB2	27:Y:75:ARG:HH12	1.83	0.42
27:Y:126:ARG:HH11	27:Y:126:ARG:HG2	1.84	0.42
30:b:12:GLN:CB	30:b:16:TRP:CZ2	3.00	0.42
32:d:57:MET:O	32:d:59:THR:N	2.52	0.42
39:k:19:ASP:OD1	39:k:20:ALA:N	2.52	0.42
50:S2:217:A:C4	50:S2:309:G:C6	3.05	0.42
50:S2:315:C:H2'	50:S2:316:G:H8	1.83	0.42
50:S2:454:U:H2'	50:S2:455:A:O5'	2.19	0.42
50:S2:795:A:N1	50:S2:796:G:O6	2.50	0.42
50:S2:862:A:C2	50:S2:863:U:H1'	2.54	0.42
50:S2:899:U:C5	50:S2:900:C:C5	3.07	0.42
50:S2:908:A:H2	50:S2:909:G:C5	2.35	0.42
50:S2:926:A:C2	50:S2:927:C:C2	3.07	0.42
50:S2:1093:A:C4	50:S2:1094:C:C6	3.07	0.42
50:S2:1109:C:O2	50:S2:1110:G:O4'	2.33	0.42
50:S2:1110:G:N3	50:S2:1110:G:H2'	2.34	0.42
50:S2:1283:C:H4'	63:SM:102:LYS:CE	2.49	0.42
50:S2:1295:A:N7	50:S2:1296:U:C6	2.88	0.42
50:S2:1302:G:C5	82:Sf:138:ARG:CZ	3.02	0.42
50:S2:1311:C:N3	50:S2:1314:U:C5	2.86	0.42
50:S2:1352:G:C2'	50:S2:1353:A:C5'	2.85	0.42
50:S2:1433:C:C3'	50:S2:1433:C:P	3.06	0.42
50:S2:1491:G:H2'	50:S2:1492:U:O4'	2.18	0.42
50:S2:1512:C:H2'	50:S2:1513:C:H6	1.83	0.42
50:S2:1591:C:C2	50:S2:1592:C:C6	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1668:U:O2	50:S2:1669:G:C8	2.72	0.42
50:S2:1740:C:C2	50:S2:1741:U:C5	3.07	0.42
51:SA:39:TYR:CD2	68:SR:105:MET:HE2	2.54	0.42
51:SA:198:MET:CE	68:SR:85:VAL:CG1	2.96	0.42
52:SB:133:TYR:CZ	52:SB:181:LEU:HD12	2.51	0.42
65:SO:147:ARG:HH21	65:SO:150:ARG:HH11	1.66	0.42
70:ST:97:LYS:O	70:ST:98:SER:C	2.62	0.42
73:SW:41:MET:HG2	73:SW:129:PHE:CG	2.54	0.42
1:5:52:G:C8	1:5:52:G:C3'	3.02	0.42
1:5:86:U:C2	1:5:87:A:N7	2.86	0.42
1:5:113:A:C2	1:5:114:G:H1'	2.55	0.42
1:5:165:A:C4	1:5:166:C:C5	3.07	0.42
1:5:216:C:O4'	1:5:216:C:OP1	2.36	0.42
1:5:275:C:H2'	1:5:276:C:H5''	2.00	0.42
1:5:294:G:C5	29:a:61:TYR:CD2	3.07	0.42
1:5:353:A:C4	1:5:379:G:N7	2.87	0.42
1:5:418:A:N6	3:8:16:G:O2'	2.53	0.42
1:5:446:C:N3	1:5:447:C:C6	2.87	0.42
1:5:459:C:C2	1:5:460:C:C5	3.08	0.42
1:5:469:C:N4	1:5:470:A:C5	2.87	0.42
1:5:506:C:C2	1:5:507:G:N7	2.88	0.42
1:5:512:U:C3'	1:5:513:U:H5''	2.48	0.42
1:5:919:C:C5	1:5:920:C:C5	3.07	0.42
1:5:950:G:N2	1:5:951:G:C4	2.87	0.42
1:5:957:G:C5'	1:5:1284:G:C2	2.97	0.42
1:5:1079:C:N4	1:5:1080:C:C5	2.87	0.42
1:5:1186:U:C5	1:5:1187:G:N7	2.87	0.42
1:5:1274:A:H5'	1:5:2123:C:C6	2.55	0.42
1:5:1305:C:OP1	3:8:7:U:O2'	2.37	0.42
1:5:1460:C:H5''	19:Q:144:LYS:HB2	2.02	0.42
1:5:1483:C:H2'	1:5:1483:C:OP2	2.18	0.42
1:5:1543:G:H1'	1:5:2513:A:C2	2.55	0.42
1:5:1545:G:C4	1:5:1546:C:C5	3.07	0.42
1:5:1570:G:C2	1:5:1571:G:H1'	2.54	0.42
1:5:1633:G:N1	4:A:207:VAL:HG11	2.35	0.42
1:5:1840:G:O2'	1:5:1842:G:O5'	2.37	0.42
1:5:2290:C:H1'	1:5:2321:G:H1'	2.02	0.42
1:5:2294:G:N2	1:5:2295:C:C6	2.86	0.42
1:5:2316:G:C2	1:5:2317:C:N3	2.87	0.42
1:5:2442:G:C2'	1:5:2443:G:H5''	2.49	0.42
1:5:2533:C:O2	1:5:2534:C:C4	2.71	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2598:A:C2	1:5:2748:C:O2	2.72	0.42
1:5:2606:G:C5	1:5:2607:C:C5	3.07	0.42
1:5:2674:A:H4'	1:5:2675:G:OP2	2.18	0.42
1:5:2752:G:C5'	1:5:2752:G:H8	2.32	0.42
1:5:2752:G:H3'	1:5:2753:G:H8	1.84	0.42
1:5:2791:C:N3	1:5:2792:C:C5	2.87	0.42
1:5:3698:G:C4	1:5:3699:C:C5	3.08	0.42
1:5:3723:A:N1	1:5:3724:A:C5	2.87	0.42
1:5:3775:A:H2'	1:5:3776:G:C1'	2.49	0.42
1:5:3775:A:H2'	1:5:3776:G:O4'	2.19	0.42
1:5:3834:C:N3	1:5:3835:C:C5	2.87	0.42
1:5:3845:A:C6	1:5:3846:C:C4	3.07	0.42
1:5:3877:A:C2	1:5:4444:C:H1'	2.54	0.42
1:5:4055:U:H5'	46:z:37:SER:CB	2.29	0.42
1:5:4176:C:H2'	1:5:4177:C:H6	1.83	0.42
1:5:4362:A:O2'	43:o:39:ARG:NH2	2.52	0.42
1:5:4503:A:C4	1:5:4504:C:C5	3.07	0.42
1:5:4629:U:H2'	1:5:4630:G:O5'	2.20	0.42
1:5:4693:C:H4'	1:5:4694:G:OP1	2.16	0.42
1:5:4730:C:H1'	1:5:4731:G:C3'	2.50	0.42
1:5:4734:A:N3	1:5:4735:G:C8	2.87	0.42
1:5:4898:G:N2	1:5:4923:C:C2	2.87	0.42
2:7:27:G:C5	2:7:28:C:C5	3.08	0.42
2:7:55:A:H2'	2:7:56:G:H5'	2.00	0.42
2:7:72:U:H2'	2:7:73:U:C6	2.54	0.42
3:8:97:A:C6	3:8:98:C:N4	2.87	0.42
5:B:145:ALA:C	5:B:146:LEU:HD13	2.44	0.42
9:F:129:LYS:HB2	22:T:133:ALA:HB3	2.00	0.42
11:H:54:ARG:HH11	11:H:54:ARG:HG3	1.83	0.42
11:H:60:TRP:NE1	21:S:153:PRO:HG3	2.34	0.42
11:H:129:ARG:HG2	11:H:156:ASN:ND2	2.34	0.42
19:Q:32:TYR:OH	19:Q:123:PHE:CD2	2.69	0.42
21:S:173:ASN:OD1	21:S:174:THR:N	2.53	0.42
24:V:13:LYS:HG2	24:V:128:LEU:HD13	2.02	0.42
25:W:20:ARG:HE	25:W:30:GLN:HG3	1.83	0.42
27:Y:5:PRO:O	27:Y:6:PHE:CB	2.67	0.42
27:Y:72:GLN:HE21	27:Y:73:VAL:N	2.16	0.42
28:Z:60:LYS:HA	28:Z:60:LYS:CE	2.49	0.42
34:f:11:PHE:HZ	34:f:14:TYR:CD1	2.37	0.42
41:m:104:HIS:HB2	41:m:105:PRO:HD2	2.01	0.42
46:z:216:LEU:C	46:z:216:LEU:HD12	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:1:268:LYS:HG3	47:1:276:TYR:CD1	2.55	0.42
50:S2:27:A:C6	50:S2:28:U:C6	3.07	0.42
50:S2:46:A:H2'	50:S2:99:A:O4'	2.18	0.42
50:S2:52:G:C2	50:S2:53:C:C2	3.08	0.42
50:S2:104:A:H5'	50:S2:105:U:OP2	2.18	0.42
50:S2:158:A:N6	50:S2:466:G:C5	2.88	0.42
50:S2:460:A:C4	50:S2:461:U:C5	3.07	0.42
50:S2:913:A:O2'	58:SH:67:PRO:HD3	2.19	0.42
50:S2:924:G:C2	50:S2:1019:C:C2	3.07	0.42
50:S2:929:G:C6	50:S2:930:C:C4	3.07	0.42
50:S2:941:C:H2'	50:S2:942:G:H8	1.84	0.42
50:S2:956:G:O2'	50:S2:957:A:H5'	2.20	0.42
50:S2:973:C:N4	50:S2:974:C:C5	2.87	0.42
50:S2:977:C:O2	50:S2:977:C:C2'	2.67	0.42
50:S2:1194:A:O3'	50:S2:1195:A:H4'	2.19	0.42
50:S2:1292:C:C5'	82:Sf:149:CYS:O	2.67	0.42
50:S2:1351:G:O6	50:S2:1360:U:O4	2.37	0.42
50:S2:1500:G:H4'	54:SD:179:GLN:O	2.20	0.42
50:S2:1511:U:O4	50:S2:1512:C:C5	2.72	0.42
50:S2:1576:G:C2	50:S2:1577:G:C8	3.07	0.42
50:S2:1588:A:O2'	50:S2:1589:A:O5'	2.37	0.42
50:S2:1610:G:N2	50:S2:1611:G:C4	2.88	0.42
50:S2:1641:A:O2'	86:S6:31:A:C2'	2.67	0.42
50:S2:1752:C:N3	50:S2:1753:C:C5	2.88	0.42
50:S2:1782:G:C2	50:S2:1784:G:C5	3.00	0.42
50:S2:1788:A:H2'	50:S2:1789:G:O4'	2.19	0.42
50:S2:1840:U:C4	50:S2:1841:C:H5	2.36	0.42
56:SF:190:ILE:HA	56:SF:193:LYS:HB3	2.02	0.42
57:SG:132:ARG:HB3	57:SG:133:LEU:HD12	2.02	0.42
57:SG:235:SER:OG	57:SG:236:SER:N	2.52	0.42
58:SH:110:THR:O	58:SH:110:THR:CG2	2.66	0.42
60:SJ:38:ARG:HA	81:Se:31:ARG:CG	2.49	0.42
60:SJ:115:PHE:HD1	60:SJ:116:LYS:N	2.17	0.42
60:SJ:149:VAL:HG12	60:SJ:150:ARG:O	2.20	0.42
63:SM:58:GLU:O	63:SM:60:MET:N	2.48	0.42
65:SO:116:LEU:HD22	77:Sa:53:ILE:CD1	2.49	0.42
68:SR:104:GLU:OE1	68:SR:107:LYS:HD2	2.19	0.42
69:SS:42:HIS:HE1	70:ST:45:LEU:HD11	1.84	0.42
83:Sg:150:TRP:CD1	83:Sg:150:TRP:N	2.88	0.42
86:S6:55:U:C3'	86:S6:56:C:C5'	2.97	0.42
1:5:38:A:N1	1:5:41:C:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:227:A:N6	1:5:241:G:H2'	2.34	0.42
1:5:371:A:H2'	1:5:372:A:C8	2.54	0.42
1:5:423:G:C2'	18:P:118:GLN:HE21	2.32	0.42
1:5:509:A:H2	29:a:105:ARG:HE	1.65	0.42
1:5:642:G:C6	1:5:643:C:N4	2.87	0.42
1:5:680:G:C6	1:5:681:G:N7	2.88	0.42
1:5:689:U:H4'	45:r:85:ASN:HD22	1.84	0.42
1:5:719:C:O2	1:5:720:G:C8	2.72	0.42
1:5:1084:C:N3	1:5:1085:C:C6	2.87	0.42
1:5:1194:G:N1	1:5:1195:G:C5	2.87	0.42
1:5:1195:G:H2'	1:5:1196:G:H8	1.84	0.42
1:5:1398:A:N1	1:5:1420:A:C8	2.87	0.42
1:5:1421:G:C2	1:5:1422:G:C4	3.07	0.42
1:5:1477:C:C4	1:5:1478:C:C6	3.06	0.42
1:5:1617:G:C6	1:5:1618:G:C6	3.07	0.42
1:5:1617:G:C6	1:5:1618:G:N7	2.88	0.42
1:5:1634:A:N6	1:5:1635:C:N4	2.67	0.42
1:5:1808:C:C4	1:5:1809:C:C5	3.07	0.42
1:5:1827:C:N3	1:5:1828:C:C5	2.87	0.42
1:5:1866:U:C5	1:5:4405:G:H1'	2.54	0.42
1:5:1918:U:O2	1:5:1920:C:C4	2.73	0.42
1:5:1983:A:C2	1:5:2008:U:C5	2.93	0.42
1:5:2012:A:H2'	1:5:2013:A:O4'	2.19	0.42
1:5:2054:U:H4'	1:5:2056:G:O4'	2.19	0.42
1:5:2123:C:H3'	9:F:39:PHE:CE1	2.54	0.42
1:5:2308:A:C2'	1:5:2309:G:O5'	2.67	0.42
1:5:2487:G:O6	1:5:2489:C:H1'	2.19	0.42
1:5:2549:G:N2	1:5:2550:G:H1'	2.34	0.42
1:5:2751:G:N1	1:5:2752:G:C5	2.87	0.42
1:5:3675:G:C2	1:5:3676:G:C5	2.97	0.42
1:5:3841:C:C2	1:5:3842:C:C5	3.08	0.42
1:5:3861:A:C6	1:5:3862:A:C5	3.06	0.42
1:5:3896:C:H5''	1:5:3897:G:OP2	2.19	0.42
1:5:4055:U:O3'	46:z:39:LYS:CE	2.68	0.42
1:5:4081:G:N1	1:5:4082:G:N7	2.66	0.42
1:5:4107:G:N1	1:5:4108:G:C5	2.88	0.42
1:5:4147:G:C2	1:5:4148:C:C2	3.08	0.42
1:5:4166:G:C2	1:5:4167:G:N9	2.86	0.42
1:5:4189:U:C2	1:5:4190:U:C6	3.07	0.42
1:5:4238:G:N2	1:5:4287:G:C5	2.87	0.42
1:5:4280:A:N6	7:D:28:THR:C	2.75	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4322:G:N2	1:5:4326:G:C6	2.88	0.42
1:5:4390:A:H2'	1:5:4391:G:O4'	2.20	0.42
1:5:4502:C:C4	1:5:4503:A:N7	2.87	0.42
1:5:4550:G:N2	1:5:4551:U:C1'	2.81	0.42
1:5:4583:C:C4	1:5:4718:G:C2	3.07	0.42
1:5:4651:A:C2	1:5:4652:G:C1'	3.02	0.42
1:5:4652:G:H2'	1:5:4653:C:C6	2.54	0.42
1:5:4982:A:N6	1:5:4983:C:C4	2.87	0.42
1:5:4998:G:C4	1:5:4999:G:C8	3.07	0.42
1:5:5007:A:C5	1:5:5040:U:O4	2.73	0.42
2:7:7:G:N3	2:7:7:G:H2'	2.34	0.42
2:7:31:G:C2	2:7:47:G:C2	3.07	0.42
2:7:66:G:H2'	2:7:67:C:C6	2.54	0.42
2:7:110:G:N2	2:7:111:C:N1	2.66	0.42
3:8:101:C:N3	3:8:102:G:C8	2.87	0.42
3:8:121:G:H2'	3:8:122:G:C5'	2.49	0.42
3:8:149:G:C2	3:8:151:G:N7	2.87	0.42
4:A:242:ARG:CG	4:A:243:THR:N	2.83	0.42
5:B:25:HIS:ND1	5:B:25:HIS:C	2.77	0.42
5:B:55:HIS:O	5:B:56:ILE:HD12	2.19	0.42
5:B:89:ILE:CG2	5:B:197:ALA:HB1	2.49	0.42
9:F:155:LEU:HB3	9:F:213:PHE:CE2	2.54	0.42
10:G:29:ASN:HD22	10:G:29:ASN:HA	1.68	0.42
14:L:92:ARG:HB3	14:L:92:ARG:CZ	2.49	0.42
20:R:107:ARG:HH11	20:R:107:ARG:HB3	1.84	0.42
20:R:110:ARG:CD	20:R:120:TYR:HE2	2.32	0.42
21:S:34:ALA:HB1	21:S:35:PRO:CD	2.49	0.42
21:S:84:TYR:HD2	21:S:113:MET:HE3	1.85	0.42
24:V:128:LEU:HG	24:V:129:TRP:CD1	2.54	0.42
28:Z:4:PHE:N	28:Z:4:PHE:HD1	2.18	0.42
28:Z:50:PRO:HB2	28:Z:122:TYR:HE2	1.85	0.42
29:a:75:LEU:HA	29:a:78:LEU:HD13	2.01	0.42
31:c:28:VAL:HG13	31:c:33:GLN:HB3	1.98	0.42
41:m:90:ASN:OD1	41:m:90:ASN:N	2.50	0.42
46:z:18:LEU:O	46:z:20:GLY:N	2.39	0.42
46:z:157:PHE:CD2	46:z:190:LEU:CD2	3.02	0.42
50:S2:27:A:N3	50:S2:27:A:H2'	2.35	0.42
50:S2:30:C:O2'	50:S2:31:U:H5'	2.19	0.42
50:S2:62:G:C1'	50:S2:172:U:O2	2.66	0.42
50:S2:185:G:N3	50:S2:186:C:C5	2.87	0.42
50:S2:358:C:C4	50:S2:359:U:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:377:G:N2	50:S2:378:U:N1	2.67	0.42
50:S2:507:G:H4'	50:S2:509:G:N7	2.33	0.42
50:S2:512:A:C2	50:S2:513:G:C8	3.07	0.42
50:S2:574:A:HO2'	50:S2:575:A:H8	1.56	0.42
50:S2:598:G:C2	50:S2:639:C:C2	3.07	0.42
50:S2:656:G:C5'	50:S2:662:G:N2	2.82	0.42
50:S2:925:G:OP1	64:SN:121:ARG:NH1	2.53	0.42
50:S2:947:G:C4	50:S2:948:C:C6	3.07	0.42
50:S2:1058:A:N3	50:S2:1058:A:H2'	2.33	0.42
50:S2:1122:A:C6	50:S2:1123:C:C4	3.06	0.42
50:S2:1351:G:N2	50:S2:1379:A:N7	2.67	0.42
50:S2:1363:C:N4	50:S2:1375:G:N1	2.59	0.42
50:S2:1458:G:N1	50:S2:1459:G:C5	2.87	0.42
50:S2:1468:C:OP1	68:SR:1:MET:HE2	2.20	0.42
50:S2:1541:G:N1	50:S2:1593:C:C2	2.88	0.42
50:S2:1551:U:O4	50:S2:1577:G:H2'	2.20	0.42
50:S2:1728:U:H5'	50:S2:1729:U:OP2	2.20	0.42
50:S2:1747:C:C2'	50:S2:1748:G:O4'	2.66	0.42
50:S2:1777:G:H2'	50:S2:1778:C:O4'	2.19	0.42
53:SC:233:LEU:O	53:SC:234:GLY:C	2.60	0.42
54:SD:204:LEU:O	54:SD:207:HIS:HB3	2.18	0.42
63:SM:47:ALA:O	63:SM:48:HIS:CD2	2.73	0.42
64:SN:11:LEU:HD11	78:Sb:19:HIS:CE1	2.54	0.42
64:SN:128:TYR:O	64:SN:129:TYR:C	2.62	0.42
69:SS:135:HIS:CD2	69:SS:135:HIS:N	2.86	0.42
72:SV:69:ILE:O	72:SV:70:LEU:C	2.62	0.42
73:SW:11:LEU:HD21	73:SW:37:PHE:CE2	2.54	0.42
83:Sg:5:MET:HG3	83:Sg:270:LEU:HD11	2.01	0.42
86:S6:42:C:H2'	86:S6:43:C:C6	2.54	0.42
86:S6:65:G:O2'	86:S6:66:U:H5'	2.19	0.42
86:S6:70:G:H2'	86:S6:71:G:OP1	2.19	0.42
1:5:12:A:H8	1:5:12:A:H5''	1.84	0.42
1:5:106:A:P	14:L:39:ARG:HH21	2.42	0.42
1:5:138:G:H2'	1:5:139:G:H5'	2.00	0.42
1:5:153:G:N2	1:5:154:G:C4	2.87	0.42
1:5:194:C:C2'	27:Y:121:ARG:NH2	2.82	0.42
1:5:444:G:N2	1:5:1304:C:C2	2.87	0.42
1:5:681:G:C6	1:5:682:G:C5	3.07	0.42
1:5:731:G:O6	1:5:732:A:C4	2.72	0.42
1:5:910:G:C4	1:5:911:U:C6	3.08	0.42
1:5:972:C:C5	1:5:1282:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1260:G:C2	1:5:1261:G:C5	3.07	0.42
1:5:1374:G:C2	1:5:1375:C:C6	3.07	0.42
1:5:1376:C:H2'	1:5:1378:C:C6	2.55	0.42
1:5:1398:A:H2'	1:5:1398:A:P	2.59	0.42
1:5:1554:A:N6	1:5:1573:G:H1'	2.34	0.42
1:5:1556:C:H2'	1:5:1557:C:C6	2.51	0.42
1:5:1557:C:C2	1:5:1558:A:C8	3.08	0.42
1:5:1667:G:N1	1:5:2280:G:H2'	2.34	0.42
1:5:1687:U:N3	1:5:1850:A:N6	2.68	0.42
1:5:1811:G:C6	1:5:1812:C:C4	3.07	0.42
1:5:1829:G:N1	1:5:1830:G:C5	2.88	0.42
1:5:1961:G:H2'	1:5:2024:G:N2	2.34	0.42
1:5:1964:A:C6	1:5:1965:G:C8	2.84	0.42
1:5:1967:A:N1	1:5:1968:G:C6	2.87	0.42
1:5:2480:G:C5	1:5:2481:G:N7	2.87	0.42
1:5:2513:A:N6	35:g:13:TYR:CE2	2.74	0.42
1:5:2574:G:O6	1:5:2762:G:O6	2.37	0.42
1:5:2657:G:C3'	1:5:2658:G:H8	2.31	0.42
1:5:2665:U:C4	20:R:124:TYR:OH	2.69	0.42
1:5:3593:C:H2'	1:5:3595:U:C5	2.54	0.42
1:5:3795:A:C4	1:5:3796:U:C6	3.07	0.42
1:5:3804:G:O2'	1:5:3832:U:H1'	2.19	0.42
1:5:3899:G:H5''	5:B:257:TRP:O	2.19	0.42
1:5:4081:G:N2	1:5:4082:G:C4	2.87	0.42
1:5:4154:G:C2	1:5:4155:C:C2	3.07	0.42
1:5:4216:G:C6	1:5:4217:G:C5	3.07	0.42
1:5:4240:G:N1	1:5:4241:C:C2	2.88	0.42
1:5:4352:U:H2'	1:5:4353:U:H5'	2.00	0.42
1:5:4400:G:C6	1:5:4401:G:N7	2.87	0.42
1:5:4475:G:H8	1:5:4475:G:O5'	2.02	0.42
1:5:4538:G:C4	1:5:4539:U:C5	3.07	0.42
1:5:4580:U:N3	1:5:4723:A:C2	2.87	0.42
1:5:4734:A:C6	1:5:4735:G:C6	3.06	0.42
1:5:4742:G:N1	1:5:4743:G:C5	2.88	0.42
1:5:4746:C:C4	1:5:4747:C:C4	3.07	0.42
1:5:4752:U:O2	1:5:4948:C:N3	2.52	0.42
1:5:4862:G:C2	1:5:4863:G:N9	2.87	0.42
1:5:4898:G:N2	1:5:4899:G:C4	2.87	0.42
2:7:19:C:O2	2:7:19:C:C2'	2.58	0.42
2:7:29:C:C2'	2:7:30:C:H5'	2.50	0.42
2:7:44:C:C2	2:7:45:U:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:50:A:H2'	2:7:50:A:N3	2.34	0.42
2:7:56:G:H2'	2:7:57:C:C5'	2.49	0.42
2:7:60:G:C6	2:7:61:G:C8	3.07	0.42
2:7:119:U:O4	7:D:258:LYS:CE	2.68	0.42
3:8:49:G:C6	3:8:50:C:C4	3.07	0.42
3:8:49:G:H2'	3:8:50:C:O4'	2.20	0.42
3:8:53:G:C4	3:8:54:C:C5	3.08	0.42
3:8:133:G:C6	3:8:134:G:C5	3.08	0.42
12:I:112:GLN:HB2	12:I:116:ARG:NH1	2.34	0.42
15:M:120:ASN:O	15:M:124:LYS:HB2	2.19	0.42
16:N:30:TYR:CZ	16:N:63:ARG:HD3	2.54	0.42
18:P:23:ARG:HH11	18:P:23:ARG:HG2	1.84	0.42
21:S:84:TYR:C	21:S:84:TYR:HD1	2.28	0.42
33:e:16:ARG:HD3	33:e:60:TYR:OH	2.20	0.42
44:p:29:ILE:HG23	44:p:69:TRP:HD1	1.74	0.42
50:S2:310:C:C4	50:S2:311:C:N4	2.87	0.42
50:S2:412:G:N2	50:S2:429:C:C2	2.88	0.42
50:S2:494:C:C2'	50:S2:495:U:O5'	2.66	0.42
50:S2:623:G:N2	50:S2:624:C:C1'	2.82	0.42
50:S2:832:G:C2	50:S2:833:C:C1'	3.01	0.42
50:S2:860:G:H2'	50:S2:861:A:O4'	2.20	0.42
50:S2:885:U:O2	50:S2:886:A:C8	2.72	0.42
50:S2:1040:G:H5'	50:S2:1041:G:OP2	2.20	0.42
50:S2:1210:G:C5	50:S2:1211:G:N7	2.87	0.42
50:S2:1450:G:C5	50:S2:1451:G:C8	3.07	0.42
50:S2:1457:U:O2	50:S2:1458:G:C8	2.73	0.42
50:S2:1495:G:C6	50:S2:1496:U:N1	2.87	0.42
50:S2:1535:U:OP2	76:SZ:106:GLN:NE2	2.47	0.42
50:S2:1595:U:O2	50:S2:1595:U:H2'	2.18	0.42
50:S2:1631:U:C4	50:S2:1632:G:C5	3.08	0.42
50:S2:1776:G:N1	50:S2:1777:G:N7	2.67	0.42
53:SC:235:ASN:OD1	53:SC:235:ASN:N	2.52	0.42
53:SC:252:THR:HB	73:SW:99:PHE:CE2	2.54	0.42
57:SG:67:VAL:HG23	57:SG:99:GLY:HA2	2.00	0.42
58:SH:137:SER:OG	58:SH:158:LEU:HB3	2.20	0.42
59:SI:112:TRP:C	59:SI:112:TRP:CE3	2.97	0.42
60:SJ:33:GLY:HA3	81:Se:38:TYR:CE1	2.55	0.42
60:SJ:38:ARG:HA	81:Se:31:ARG:HG3	2.00	0.42
60:SJ:75:ASN:O	60:SJ:79:ARG:HD2	2.20	0.42
63:SM:34:GLY:O	63:SM:36:ARG:N	2.53	0.42
65:SO:56:VAL:HG23	65:SO:60:MET:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SQ:71:ARG:HH11	67:SQ:71:ARG:HG2	1.85	0.42
70:ST:63:HIS:CE1	70:ST:78:ILE:HG12	2.54	0.42
70:ST:112:MET:HA	70:ST:127:GLY:CA	2.50	0.42
1:5:98:A:H1'	1:5:292:G:C6	2.54	0.42
1:5:229:G:C2	1:5:240:G:C2	3.07	0.42
1:5:273:U:H2'	1:5:274:C:O4'	2.20	0.42
1:5:301:G:C2	1:5:302:C:C2	3.07	0.42
1:5:497:G:N1	1:5:657:C:N4	2.67	0.42
1:5:500:G:H5''	1:5:501:C:C5	2.53	0.42
1:5:671:G:N3	1:5:672:C:C6	2.88	0.42
1:5:1085:C:N4	1:5:1086:C:C5	2.88	0.42
1:5:1096:C:N3	1:5:1097:C:C5	2.87	0.42
1:5:1167:C:C2	1:5:1195:G:N1	2.87	0.42
1:5:1211:G:N3	1:5:1212:G:C8	2.88	0.42
1:5:1247:U:C4	1:5:1248:C:C4	3.07	0.42
1:5:1258:G:N1	1:5:1259:G:C5	2.88	0.42
1:5:1272:C:O2'	1:5:1273:G:C1'	2.67	0.42
1:5:1355:G:C2'	1:5:1356:U:O5'	2.67	0.42
1:5:1421:G:N1	1:5:1422:G:N7	2.68	0.42
1:5:1424:G:C4	1:5:1425:G:C8	3.08	0.42
1:5:1563:A:N6	50:S2:1028:A:C6	2.82	0.42
1:5:1588:U:H2'	1:5:1589:C:C6	2.55	0.42
1:5:1603:C:H2'	1:5:1604:G:H8	1.85	0.42
1:5:1617:G:C2	1:5:1618:G:N9	2.88	0.42
1:5:1672:U:O2	1:5:1673:U:C4	2.70	0.42
1:5:1761:G:N2	1:5:1762:C:C2	2.88	0.42
1:5:1795:A:N3	2:7:79:U:O2'	2.50	0.42
1:5:1844:G:C4	1:5:1845:U:C5	3.08	0.42
1:5:1859:C:C4	1:5:1860:U:C4	3.08	0.42
1:5:1886:G:N1	1:5:1894:C:C4	2.87	0.42
1:5:1899:G:C8	1:5:2278:G:N2	2.87	0.42
1:5:1921:C:H2'	15:M:17:PHE:CE2	2.55	0.42
1:5:1930:U:C4	17:O:48:TYR:CD2	3.07	0.42
1:5:1993:C:C2	1:5:1994:C:C6	3.08	0.42
1:5:2102:G:C2	1:5:2103:G:C8	3.08	0.42
1:5:2271:C:C2	1:5:2272:C:C5	3.07	0.42
1:5:2336:G:C4	1:5:2337:C:C5	3.07	0.42
1:5:2370:A:H3'	1:5:2826:U:O2	2.20	0.42
1:5:2393:C:H1'	1:5:2398:U:C2	2.55	0.42
1:5:2437:C:H5''	1:5:2782:U:C4	2.48	0.42
1:5:2505:C:H4'	1:5:2506:G:C5'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2529:A:H61	1:5:2532:C:H1'	1.84	0.42
1:5:2533:C:O2'	1:5:2534:C:O5'	2.37	0.42
1:5:2560:C:N3	1:5:2561:C:C6	2.87	0.42
1:5:2667:C:O4'	20:R:96:MET:HG2	2.20	0.42
1:5:2673:G:N1	31:c:89:TYR:CZ	2.87	0.42
1:5:2736:G:N1	1:5:2737:C:C5	2.76	0.42
1:5:2823:G:C6	1:5:2824:C:C4	3.08	0.42
1:5:2830:G:N1	1:5:2831:G:N7	2.68	0.42
1:5:2890:C:O4'	1:5:5034:A:H1'	2.20	0.42
1:5:3611:A:H2	1:5:5016:A:N7	2.17	0.42
1:5:3617:G:H2'	1:5:3618:C:O4'	2.20	0.42
1:5:3733:A:C5	1:5:3734:U:C5	3.08	0.42
1:5:3753:G:C2	1:5:3754:G:N9	2.87	0.42
1:5:3801:U:O2'	1:5:3802:U:C5'	2.68	0.42
1:5:3846:C:C4	1:5:3847:C:H5	2.37	0.42
1:5:3871:A:C5	1:5:3885:G:N2	2.88	0.42
1:5:3879:G:O4'	1:5:3879:G:P	2.78	0.42
1:5:3909:C:H42	1:5:3910:C:N4	2.18	0.42
1:5:4101:C:N3	1:5:4102:C:C6	2.87	0.42
1:5:4172:A:C2	1:5:4173:G:C5	3.08	0.42
1:5:4229:U:H3'	1:5:4230:C:C6	2.52	0.42
1:5:4416:G:C6	1:5:4417:C:C4	3.07	0.42
1:5:4693:C:C6	1:5:4693:C:O5'	2.73	0.42
1:5:4719:G:H4'	1:5:4720:C:OP1	2.18	0.42
1:5:4725:C:O2	1:5:4725:C:H2'	2.19	0.42
1:5:4871:C:H3'	15:M:91:TRP:NE1	2.34	0.42
1:5:4973:U:H1'	1:5:4986:G:N1	2.34	0.42
1:5:4977:A:C4	1:5:4978:G:N2	2.88	0.42
1:5:4990:C:H2'	1:5:4992:G:OP1	2.19	0.42
2:7:23:A:O2'	2:7:24:C:C5'	2.67	0.42
3:8:118:C:C4	3:8:119:C:C5	3.04	0.42
3:8:119:C:O2	3:8:119:C:H2'	2.19	0.42
3:8:154:G:C2	3:8:155:C:C2	3.08	0.42
6:C:310:HIS:O	6:C:311:ARG:C	2.62	0.42
7:D:107:ARG:HD3	7:D:248:ARG:HD2	2.02	0.42
13:J:147:ARG:O	13:J:147:ARG:HG2	2.18	0.42
15:M:86:TRP:O	15:M:87:ALA:CB	2.68	0.42
19:Q:91:ARG:HH21	19:Q:91:ARG:CG	2.32	0.42
22:T:121:GLU:OE2	22:T:122:LYS:HG3	2.19	0.42
28:Z:41:ALA:HB2	28:Z:77:TYR:HE1	1.83	0.42
28:Z:52:LYS:O	28:Z:65:ARG:NH2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:f:23:GLU:N	34:f:23:GLU:OE1	2.52	0.42
34:f:76:ARG:NE	34:f:85:ARG:HH21	2.17	0.42
44:p:74:THR:HB	50:S2:1042:A:H4'	2.01	0.42
50:S2:71:G:H2'	50:S2:72:C:N1	2.34	0.42
50:S2:100:U:C2'	50:S2:101:U:O5'	2.65	0.42
50:S2:118:C:C1'	50:S2:445:A:N3	2.82	0.42
50:S2:168:C:OP1	57:SG:131:ARG:NH2	2.52	0.42
50:S2:171:A:C5	50:S2:173:A:C8	3.08	0.42
50:S2:523:A:OP2	60:SJ:38:ARG:HD3	2.20	0.42
50:S2:599:A:H2'	50:S2:606:G:N2	2.34	0.42
50:S2:660:C:H2'	50:S2:661:U:O4'	2.19	0.42
50:S2:1040:G:C2	50:S2:1041:G:H1'	2.55	0.42
50:S2:1042:A:C2	50:S2:1043:G:C1'	3.03	0.42
50:S2:1085:C:C4	50:S2:1087:A:C1'	3.03	0.42
50:S2:1136:U:C2'	50:S2:1137:U:O5'	2.68	0.42
50:S2:1381:G:N2	50:S2:1382:A:H1'	2.34	0.42
50:S2:1430:C:N4	50:S2:1431:G:C5	2.88	0.42
50:S2:1434:C:P	50:S2:1434:C:O4'	2.77	0.42
50:S2:1466:G:C2	50:S2:1467:C:C6	3.06	0.42
50:S2:1551:U:H5'	50:S2:1558:C:H1'	2.01	0.42
50:S2:1678:A:C2	50:S2:1679:A:N7	2.88	0.42
50:S2:1687:C:H2'	50:S2:1688:C:O5'	2.20	0.42
50:S2:1699:A:H2'	50:S2:1700:C:OP2	2.19	0.42
50:S2:1785:C:O2	50:S2:1786:U:C5	2.71	0.42
52:SB:68:GLU:OE2	52:SB:68:GLU:HA	2.19	0.42
52:SB:137:LEU:HD11	52:SB:176:VAL:HG21	2.02	0.42
53:SC:158:ALA:O	53:SC:159:LYS:C	2.62	0.42
54:SD:32:ASP:OD1	54:SD:57:ASN:HB2	2.19	0.42
55:SE:103:TYR:CE1	55:SE:189:LEU:HD11	2.54	0.42
57:SG:32:MET:CE	57:SG:63:MET:SD	3.08	0.42
60:SJ:32:ILE:HG21	81:Se:34:ARG:CG	2.47	0.42
62:SL:92:TYR:O	62:SL:104:LYS:HA	2.20	0.42
64:SN:104:ARG:HE	64:SN:104:ARG:HB2	1.63	0.42
75:SY:37:LYS:HA	75:SY:40:ILE:HG22	2.01	0.42
85:S5:52:G:N1	85:S5:53:G:C5	2.87	0.42
86:S6:66:U:C4	86:S6:67:C:C4	3.08	0.42
86:S6:71:G:P	86:S6:71:G:C8	3.10	0.42
1:5:101:A:N3	1:5:101:A:H2'	2.33	0.42
1:5:177:G:C2	1:5:178:C:C2	3.08	0.42
1:5:218:A:C8	6:C:181:LYS:HG3	2.55	0.42
1:5:288:G:N3	1:5:289:C:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:347:A:N3	1:5:348:G:C8	2.88	0.42
1:5:473:C:O2	1:5:473:C:H2'	2.19	0.42
1:5:480:C:H2'	1:5:481:G:C8	2.54	0.42
1:5:702:U:H2'	1:5:703:G:H4'	2.02	0.42
1:5:962:C:H4'	1:5:968:C:N4	2.35	0.42
1:5:987:C:C2	1:5:1067:G:N2	2.88	0.42
1:5:1075:G:H2'	1:5:1076:C:H6	1.84	0.42
1:5:1262:G:N3	1:5:1263:A:C8	2.87	0.42
1:5:1321:G:C1'	1:5:1891:A:N6	2.83	0.42
1:5:1330:A:C4	1:5:1331:C:C5	3.08	0.42
1:5:1355:G:H2'	1:5:1356:U:C6	2.55	0.42
1:5:1466:G:C2	1:5:1467:C:C5	3.08	0.42
1:5:1555:G:N3	1:5:1555:G:H2'	2.34	0.42
1:5:1685:G:C2	1:5:1686:C:N3	2.88	0.42
1:5:1971:C:N3	1:5:1972:G:C5	2.87	0.42
1:5:1984:A:N6	1:5:2011:C:C1'	2.81	0.42
1:5:2276:A:C2	1:5:2277:C:H1'	2.54	0.42
1:5:2347:A:O2'	1:5:2348:G:C8	2.59	0.42
1:5:2443:G:OP2	1:5:2516:G:N2	2.48	0.42
1:5:2528:G:C6	1:5:2529:A:C5	3.08	0.42
1:5:2555:G:C6	1:5:2573:A:C6	3.08	0.42
1:5:2566:G:N1	1:5:2567:G:N7	2.67	0.42
1:5:2568:C:N3	1:5:2569:G:C5	2.87	0.42
1:5:2576:G:N1	1:5:2577:C:C6	2.88	0.42
1:5:2588:C:H3'	1:5:2588:C:H6	1.83	0.42
1:5:2666:U:C6	1:5:2666:U:H3'	2.55	0.42
1:5:2702:C:O2	1:5:2702:C:H2'	2.19	0.42
1:5:2831:G:C2	1:5:2832:A:C5	3.08	0.42
1:5:3604:A:C5	1:5:3605:C:C6	3.08	0.42
1:5:3806:G:C2	1:5:3807:A:C8	3.07	0.42
1:5:3857:G:C2	1:5:3858:C:H1'	2.54	0.42
1:5:3896:C:O2'	5:B:268:ARG:NH2	2.53	0.42
1:5:3945:A:HO2'	1:5:3946:G:H8	1.64	0.42
1:5:4139:G:N2	1:5:4140:C:C2	2.88	0.42
1:5:4215:C:O2	1:5:4215:C:C2'	2.68	0.42
1:5:4352:U:C2'	1:5:4353:U:H5'	2.49	0.42
1:5:4453:C:O2	1:5:4529:G:C2	2.73	0.42
1:5:4489:G:C4	1:5:4490:C:C5	3.08	0.42
1:5:4582:C:OP2	5:B:28:LYS:NZ	2.36	0.42
1:5:4593:C:C2	1:5:4594:U:C6	3.07	0.42
1:5:4666:G:C5	1:5:4667:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4986:G:C2'	1:5:4987:C:O5'	2.67	0.42
2:7:13:A:P	2:7:109:U:HO2'	2.42	0.42
2:7:43:U:C4	2:7:44:C:N4	2.88	0.42
2:7:54:A:N3	2:7:55:A:H8	2.06	0.42
2:7:111:C:C4	2:7:112:U:C6	3.03	0.42
3:8:42:G:N3	3:8:43:A:C8	2.88	0.42
4:A:10:LYS:HE2	4:A:16:PHE:CE2	2.55	0.42
4:A:117:GLU:HB2	4:A:162:ASN:HB2	2.02	0.42
4:A:186:TYR:HA	4:A:196:TRP:HE3	1.83	0.42
4:A:227:ARG:CZ	4:A:227:ARG:HB2	2.50	0.42
6:C:154:VAL:HG11	6:C:158:VAL:HG21	2.02	0.42
6:C:308:LYS:C	6:C:309:ILE:O	2.63	0.42
12:I:12:CYS:SG	12:I:59:GLN:HG2	2.59	0.42
14:L:125:ILE:HD12	14:L:125:ILE:N	2.35	0.42
21:S:33:PHE:CE2	21:S:106:VAL:HG21	2.55	0.42
23:U:27:HIS:N	23:U:28:PRO:HD2	2.34	0.42
24:V:85:ARG:NE	24:V:99:GLU:O	2.50	0.42
28:Z:5:MET:O	28:Z:28:ASN:HB3	2.20	0.42
29:a:92:LYS:O	29:a:93:ASN:HB3	2.19	0.42
50:S2:19:A:OP1	74:SX:107:ARG:HD2	2.19	0.42
50:S2:298:G:N1	50:S2:299:A:N7	2.67	0.42
50:S2:376:A:C4	50:S2:377:G:C8	3.08	0.42
50:S2:379:C:N4	50:S2:380:G:C6	2.88	0.42
50:S2:426:A:N3	50:S2:426:A:C2'	2.82	0.42
50:S2:435:A:H8	50:S2:435:A:OP2	2.02	0.42
50:S2:468:A:C6	50:S2:469:A:C5	3.08	0.42
50:S2:589:G:C5	50:S2:591:U:C6	3.08	0.42
50:S2:595:U:HO2'	50:S2:596:U:H6	1.47	0.42
50:S2:694:G:N1	50:S2:695:C:C4	2.88	0.42
50:S2:832:G:C4	50:S2:833:C:C6	3.07	0.42
50:S2:900:C:H2'	50:S2:901:G:H8	1.85	0.42
50:S2:912:C:H3'	50:S2:913:A:H5''	2.02	0.42
50:S2:1060:A:H4'	50:S2:1061:U:O5'	2.20	0.42
50:S2:1168:G:C2	50:S2:1192:U:O2	2.72	0.42
50:S2:1227:G:N3	50:S2:1227:G:H2'	2.33	0.42
50:S2:1279:C:C2	50:S2:1280:G:C8	3.06	0.42
50:S2:1293:A:H62	82:Sf:140:TYR:N	2.17	0.42
50:S2:1324:G:HO2'	50:S2:1510:G:HO2'	0.46	0.42
50:S2:1495:G:N7	50:S2:1496:U:C5	2.87	0.42
50:S2:1524:G:C2	50:S2:1525:C:N1	2.88	0.42
50:S2:1561:A:C5	50:S2:1562:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1691:U:C6	50:S2:1692:U:C5	3.07	0.42
50:S2:1774:C:C2	50:S2:1775:U:C6	3.08	0.42
55:SE:98:ASN:OD1	55:SE:98:ASN:N	2.52	0.42
59:SI:194:GLU:HA	62:SL:10:TYR:CE2	2.54	0.42
67:SQ:102:GLU:OE2	67:SQ:102:GLU:N	2.53	0.42
73:SW:106:THR:OG1	73:SW:111:MET:HE2	2.19	0.42
83:Sg:59:LEU:HB3	83:Sg:90:TRP:CE3	2.54	0.42
86:S6:15:G:C2'	86:S6:16:A:C5'	2.97	0.42
1:5:74:G:C5'	14:L:59:VAL:CG1	2.97	0.42
1:5:109:G:N2	1:5:333:U:C2	2.87	0.42
1:5:113:A:O2'	16:N:50:ARG:HA	2.20	0.42
1:5:138:G:C3'	1:5:139:G:C5'	2.97	0.42
1:5:209:U:C6	1:5:211:G:C8	3.08	0.42
1:5:212:A:C2	1:5:213:G:C6	3.08	0.42
1:5:292:G:C4	1:5:293:G:C6	3.08	0.42
1:5:342:G:C2	1:5:343:C:C2	3.08	0.42
1:5:675:C:C2	1:5:676:C:C5	3.08	0.42
1:5:736:C:O5'	1:5:737:C:OP2	2.37	0.42
1:5:753:C:O2	1:5:754:U:C6	2.71	0.42
1:5:962:C:N4	45:r:112:ARG:HD2	2.34	0.42
1:5:964:A:OP1	45:r:94:ARG:HD3	2.20	0.42
1:5:982:U:C2	1:5:983:C:C5	3.07	0.42
1:5:986:C:N1	1:5:1068:G:N2	2.68	0.42
1:5:1067:G:C5	1:5:1068:G:C8	3.07	0.42
1:5:1075:G:N2	1:5:1076:C:C2	2.88	0.42
1:5:1178:G:C5	1:5:1179:U:C5	3.08	0.42
1:5:1380:G:H4'	1:5:1381:U:OP1	2.20	0.42
1:5:1644:C:N3	1:5:1645:C:C5	2.88	0.42
1:5:1667:G:H1	1:5:2280:G:H2'	1.84	0.42
1:5:1820:C:O2'	1:5:1821:G:O5'	2.26	0.42
1:5:1920:C:C4'	1:5:1921:C:OP2	2.66	0.42
1:5:1979:A:H2	1:5:1982:G:N7	2.18	0.42
1:5:2081:C:O2'	1:5:2082:G:C5'	2.67	0.42
1:5:2336:G:C2	1:5:2337:C:C2	3.08	0.42
1:5:2481:G:C2	1:5:2482:C:N1	2.88	0.42
1:5:2486:G:C4	1:5:2487:G:C8	3.07	0.42
1:5:2771:G:C5	1:5:2772:C:C6	3.08	0.42
1:5:2783:A:C5	1:5:2784:C:C4	3.08	0.42
1:5:2840:A:C6	1:5:2841:G:C8	3.08	0.42
1:5:3615:G:H1'	25:W:44:ARG:HD3	2.00	0.42
1:5:3690:U:C4	1:5:3691:G:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3701:C:N4	1:5:3745:U:H2'	2.35	0.42
1:5:3744:G:H2'	1:5:3745:U:C6	2.54	0.42
1:5:3867:A:H3'	1:5:3868:G:C8	2.55	0.42
1:5:3949:A:C2	1:5:4064:C:N4	2.87	0.42
1:5:4048:A:N3	1:5:4049:U:C5	2.88	0.42
1:5:4107:G:C2	1:5:4108:G:C4	3.08	0.42
1:5:4280:A:C6	7:D:29:ASP:OD1	2.72	0.42
1:5:4342:C:O2	1:5:4342:C:H2'	2.18	0.42
1:5:4595:G:C4	1:5:4596:C:C5	3.07	0.42
1:5:4639:G:C5	1:5:4640:C:C5	3.07	0.42
1:5:4682:U:O2	1:5:4682:U:H2'	2.19	0.42
1:5:4743:G:C6	1:5:4744:A:C6	3.08	0.42
1:5:4997:G:N1	1:5:4998:G:C5	2.88	0.42
1:5:5000:G:H2'	1:5:5001:U:C5'	2.49	0.42
1:5:5051:C:C4	1:5:5052:C:C5	3.08	0.42
2:7:19:C:C2	2:7:60:G:N2	2.87	0.42
3:8:120:G:C2	3:8:121:G:N9	2.87	0.42
8:E:276:GLY:C	8:E:278:TYR:CE2	2.97	0.42
9:F:120:PHE:CE2	9:F:217:SER:HA	2.54	0.42
13:J:105:PHE:HE1	13:J:132:VAL:CB	2.25	0.42
14:L:34:ARG:HH11	14:L:34:ARG:CB	2.33	0.42
14:L:103:ARG:HD2	14:L:105:LYS:HD2	2.02	0.42
17:O:65:ASN:ND2	17:O:65:ASN:C	2.77	0.42
17:O:125:LYS:HD2	17:O:135:PHE:HZ	1.84	0.42
25:W:33:ASN:OD1	25:W:33:ASN:N	2.53	0.42
27:Y:72:GLN:HE21	27:Y:72:GLN:C	2.28	0.42
29:a:74:ASN:HB3	29:a:114:LYS:HB3	2.02	0.42
30:b:69:ALA:O	30:b:73:LYS:HB2	2.19	0.42
37:i:38:LYS:O	37:i:42:ASP:OD1	2.38	0.42
46:z:43:PRO:CB	46:z:161:LYS:HA	2.49	0.42
46:z:57:SER:O	46:z:58:THR:HG22	2.19	0.42
47:1:193:TRP:HH2	48:2:54:VAL:HG23	1.85	0.42
50:S2:18:C:O2	50:S2:18:C:H2'	2.19	0.42
50:S2:61:A:C2	50:S2:334:C:O2	2.72	0.42
50:S2:189:U:C5	50:S2:190:G:C8	3.08	0.42
50:S2:315:C:C2	50:S2:316:G:C8	3.07	0.42
50:S2:336:A:C5	50:S2:337:C:C5	3.07	0.42
50:S2:344:U:C2	50:S2:345:U:C6	3.07	0.42
50:S2:457:C:O2	50:S2:457:C:H2'	2.19	0.42
50:S2:462:C:N3	50:S2:463:C:C5	2.88	0.42
50:S2:595:U:O2'	50:S2:596:U:O5'	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:908:A:H2'	50:S2:909:G:C8	2.55	0.42
50:S2:1041:G:C6	50:S2:1042:A:C8	3.08	0.42
50:S2:1202:U:O2'	53:SC:114:LYS:HD3	2.19	0.42
50:S2:1502:C:C4	50:S2:1503:C:C5	3.07	0.42
50:S2:1528:G:C2	50:S2:1529:C:C2	3.07	0.42
50:S2:1575:G:N1	50:S2:1576:G:C6	2.88	0.42
50:S2:1606:G:N3	50:S2:1632:G:N2	2.68	0.42
50:S2:1698:C:H2'	50:S2:1698:C:O5'	2.19	0.42
52:SB:196:ASP:OD1	52:SB:196:ASP:C	2.61	0.42
54:SD:11:PHE:CE2	71:SU:84:ILE:CD1	3.00	0.42
54:SD:106:ARG:HH21	54:SD:110:LEU:HD13	1.84	0.42
55:SE:158:ASP:OD1	55:SE:158:ASP:N	2.51	0.42
57:SG:1:MET:HE1	57:SG:106:LEU:O	2.20	0.42
62:SL:153:LYS:HB3	62:SL:155:PHE:CE1	2.55	0.42
64:SN:113:PHE:C	64:SN:115:LEU:N	2.73	0.42
66:SP:82:ASP:OD1	66:SP:83:MET:N	2.53	0.42
69:SS:23:ARG:HD3	76:SZ:48:VAL:HB	2.02	0.42
73:SW:28:ARG:N	73:SW:29:PRO:CD	2.82	0.42
77:Sa:34:LYS:O	77:Sa:35:ALA:CB	2.68	0.42
79:Sc:13:ARG:NH1	79:Sc:33:GLU:HB3	2.35	0.42
79:Sc:26:GLN:HE21	79:Sc:26:GLN:CA	2.32	0.42
85:S5:5:G:N2	85:S5:6:G:C2	2.88	0.42
86:S6:17:A:N3	86:S6:17:A:O2'	2.52	0.42
86:S6:41:C:N4	86:S6:42:C:H41	2.18	0.42
86:S6:50:U:O2	86:S6:51:U:C6	2.73	0.42
86:S6:53:G:C6	86:S6:54:U:O4	2.70	0.42
86:S6:55:U:C3'	86:S6:56:C:H5''	2.50	0.42
86:S6:59:U:C2	86:S6:60:U:C6	3.08	0.42
1:5:12:A:C4	1:5:14:C:C5	3.07	0.42
1:5:69:A:N1	1:5:70:A:C6	2.88	0.42
1:5:177:G:C5	1:5:178:C:C5	3.08	0.42
1:5:247:G:C6	1:5:248:C:C5	3.06	0.42
1:5:258:G:C4	1:5:259:C:C5	3.07	0.42
1:5:316:U:O4	1:5:4353:U:H1'	2.19	0.42
1:5:324:A:C2	1:5:325:U:C2	3.08	0.42
1:5:496:G:N2	1:5:658:C:C2	2.87	0.42
1:5:753:C:C4	1:5:754:U:H5	2.33	0.42
1:5:1210:C:H5'	9:F:72:ARG:HH22	1.85	0.42
1:5:1233:G:N3	1:5:1234:G:C8	2.88	0.42
1:5:1234:G:C2	1:5:1235:G:C5	3.07	0.42
1:5:1281:G:O2'	6:C:323:ARG:N	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1398:A:H3'	29:a:132:ARG:HH22	1.84	0.42
1:5:1760:G:C2	1:5:1761:G:C1'	3.01	0.42
1:5:1806:G:C6	1:5:1807:C:C4	3.08	0.42
1:5:1819:G:C8	7:D:142:PHE:CD2	3.07	0.42
1:5:1860:U:C2	1:5:1861:U:C6	3.08	0.42
1:5:1872:G:N1	1:5:1873:A:N7	2.68	0.42
1:5:1877:G:C5	1:5:1878:G:C8	3.08	0.42
1:5:1938:C:O4'	1:5:1939:A:O4'	2.38	0.42
1:5:2090:U:C2'	1:5:2091:C:O5'	2.68	0.42
1:5:2102:G:C2	1:5:2103:G:C5	3.07	0.42
1:5:2243:C:O2	1:5:2243:C:H2'	2.20	0.42
1:5:2320:G:O2'	1:5:2321:G:N7	2.52	0.42
1:5:2408:U:C6	1:5:2409:U:O4	2.73	0.42
1:5:2453:A:H1'	1:5:2507:A:C5	2.55	0.42
1:5:2479:G:C5	1:5:2480:G:C8	3.08	0.42
1:5:2481:G:N1	1:5:2482:C:C4	2.88	0.42
1:5:2566:G:C2	1:5:2567:G:C5	3.07	0.42
1:5:2674:A:C3'	1:5:2675:G:H5'	2.49	0.42
1:5:2867:C:O2	1:5:2867:C:H2'	2.20	0.42
1:5:3608:A:C2	1:5:3609:G:C4	3.08	0.42
1:5:3610:A:C2	1:5:3611:A:C5	3.08	0.42
1:5:3616:U:C1'	1:5:3617:G:C6	3.03	0.42
1:5:3668:C:C4	1:5:3669:G:C5	3.08	0.42
1:5:3725:G:H2'	1:5:3726:A:H2'	2.01	0.42
1:5:3832:U:H2'	1:5:3833:C:C6	2.53	0.42
1:5:3857:G:C2	1:5:3858:C:N1	2.88	0.42
1:5:3894:A:O4'	1:5:4979:A:C6	2.73	0.42
1:5:3924:C:H2'	1:5:3925:U:O5'	2.20	0.42
1:5:4095:G:N3	1:5:4096:C:C6	2.87	0.42
1:5:4097:G:C2	1:5:4098:A:N9	2.86	0.42
1:5:4137:C:C2	1:5:4138:C:C6	3.07	0.42
1:5:4175:G:C4	1:5:4176:C:C6	3.08	0.42
1:5:4277:G:N3	1:5:4282:A:H2	2.18	0.42
1:5:4524:G:N1	1:5:4525:C:C4	2.88	0.42
1:5:4978:G:HO2'	1:5:4979:A:P	2.40	0.42
1:5:5047:C:H6	1:5:5050:C:C6	2.38	0.42
1:5:5055:G:H2'	1:5:5056:A:C8	2.55	0.42
2:7:9:C:O2	2:7:9:C:C2'	2.66	0.42
2:7:30:C:C4	2:7:48:G:C2	3.07	0.42
2:7:66:G:C4	2:7:67:C:C5	3.08	0.42
3:8:13:G:H2'	3:8:14:U:O5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:40:TYR:CE2	4:A:89:TYR:CD2	3.07	0.42
6:C:39:PHE:CD1	6:C:39:PHE:C	2.98	0.42
6:C:109:ARG:HD2	6:C:111:TRP:CZ3	2.55	0.42
10:G:46:GLN:HG3	10:G:47:PRO:HD2	2.01	0.42
10:G:136:LEU:HD21	10:G:204:PHE:HE1	1.82	0.42
10:G:220:GLU:CD	10:G:220:GLU:C	2.88	0.42
11:H:41:ILE:HD11	11:H:69:THR:HG21	2.01	0.42
15:M:17:PHE:C	15:M:17:PHE:HD1	2.27	0.42
17:O:49:ARG:NH1	17:O:49:ARG:CG	2.83	0.42
19:Q:32:TYR:N	19:Q:32:TYR:HD1	2.17	0.42
22:T:48:VAL:HG21	22:T:94:GLU:HG2	2.00	0.42
24:V:70:PRO:CD	50:S2:1724:A:OP1	2.68	0.42
29:a:103:VAL:CG1	29:a:108:TYR:HB2	2.50	0.42
30:b:13:SER:CA	30:b:16:TRP:CH2	2.95	0.42
32:d:22:THR:OG1	32:d:122:VAL:HB	2.20	0.42
46:z:32:VAL:HG13	46:z:207:LYS:O	2.20	0.42
46:z:80:VAL:O	46:z:81:ASP:CB	2.68	0.42
46:z:111:LEU:HD12	46:z:143:ASN:CB	2.47	0.42
50:S2:80:G:C5	50:S2:81:U:C5	3.08	0.42
50:S2:81:U:C2	50:S2:82:G:C8	3.07	0.42
50:S2:108:G:O2'	50:S2:854:A:N1	2.46	0.42
50:S2:154:U:H2'	57:SG:4:ASN:HD21	1.84	0.42
50:S2:351:G:N3	50:S2:351:G:H2'	2.34	0.42
50:S2:370:G:H4'	50:S2:371:A:O5'	2.19	0.42
50:S2:371:A:C4	50:S2:372:U:C5	3.07	0.42
50:S2:422:U:O2'	50:S2:423:U:O4'	2.27	0.42
50:S2:547:G:C2'	50:S2:548:C:H5''	2.50	0.42
50:S2:550:C:C2	50:S2:551:U:C6	3.08	0.42
50:S2:552:G:C3'	50:S2:553:U:H6	2.33	0.42
50:S2:552:G:H2'	50:S2:553:U:C6	2.54	0.42
50:S2:578:C:C4	50:S2:579:C:C5	3.08	0.42
50:S2:600:G:N3	50:S2:601:G:C8	2.88	0.42
50:S2:807:G:C2	50:S2:808:A:C8	3.07	0.42
50:S2:832:G:C2	50:S2:833:C:C2	3.08	0.42
50:S2:867:G:C6	50:S2:868:G:C6	3.08	0.42
50:S2:923:G:N2	50:S2:924:G:C4	2.88	0.42
50:S2:1064:C:P	65:SO:150:ARG:NH2	2.93	0.42
50:S2:1105:G:N2	50:S2:1128:C:C2	2.87	0.42
50:S2:1107:G:C6	50:S2:1108:G:N7	2.88	0.42
50:S2:1201:U:N3	50:S2:1202:U:C5	2.88	0.42
50:S2:1299:A:O2'	50:S2:1301:A:C5'	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1323:U:C2'	50:S2:1324:G:O4'	2.68	0.42
50:S2:1492:U:O2'	71:SU:70:CYS:SG	2.61	0.42
50:S2:1528:G:C6	50:S2:1529:C:C4	3.07	0.42
50:S2:1641:A:H4'	86:S6:31:A:HO2'	1.45	0.42
50:S2:1645:C:O2'	50:S2:1646:C:O5'	2.35	0.42
50:S2:1757:G:N2	50:S2:1758:G:C4	2.88	0.42
50:S2:1771:G:C2	50:S2:1772:C:C2	3.08	0.42
50:S2:1781:A:N1	50:S2:1782:G:O6	2.52	0.42
50:S2:1832:A:H2'	50:S2:1833:C:O5'	2.20	0.42
50:S2:1850:A:O2'	50:S2:1851:A:C4'	2.67	0.42
52:SB:158:HIS:C	52:SB:158:HIS:HD2	2.27	0.42
54:SD:28:GLU:OE1	54:SD:28:GLU:HA	2.20	0.42
54:SD:113:LEU:HD23	54:SD:114:ALA:N	2.35	0.42
56:SF:38:TYR:CD2	56:SF:143:PRO:HB2	2.54	0.42
58:SH:144:ILE:HG21	58:SH:152:ARG:HH12	1.85	0.42
59:SI:79:ILE:HG22	59:SI:103:LEU:C	2.45	0.42
60:SJ:91:LYS:O	60:SJ:92:MET:C	2.63	0.42
60:SJ:138:ARG:HA	60:SJ:138:ARG:HD3	1.92	0.42
60:SJ:173:VAL:O	60:SJ:177:ASN:ND2	2.53	0.42
62:SL:99:TYR:CD2	74:SX:13:LEU:CB	2.55	0.42
62:SL:124:ASP:OD1	62:SL:147:LYS:HA	2.20	0.42
67:SQ:47:LEU:HD22	67:SQ:81:ILE:HD13	2.02	0.42
69:SS:138:THR:HA	69:SS:141:ARG:HH21	1.84	0.42
77:Sa:4:LYS:O	77:Sa:4:LYS:HG2	2.19	0.42
83:Sg:130:LYS:HB2	83:Sg:132:TRP:HE1	1.84	0.42
85:S5:49:C:C2'	85:S5:50:U:H6	2.30	0.42
85:S5:53:G:C6	85:S5:54:U:C4	3.08	0.42
86:S6:27:G:C2	86:S6:28:G:C5	3.07	0.42
86:S6:49:C:H2'	86:S6:49:C:O2	2.19	0.42
1:5:31:U:C2'	1:5:32:G:O5'	2.67	0.42
1:5:72:C:C1'	37:i:15:HIS:HB3	2.50	0.42
1:5:107:G:N3	1:5:107:G:H2'	2.35	0.42
1:5:117:C:H5'	1:5:118:C:P	2.60	0.42
1:5:142:G:N1	1:5:144:G:C5	2.88	0.42
1:5:298:G:C5	1:5:299:C:C6	3.07	0.42
1:5:426:A:C2'	1:5:427:A:O5'	2.68	0.42
1:5:445:U:H1'	1:5:2313:A:N3	2.33	0.42
1:5:455:C:N3	1:5:456:C:C5	2.87	0.42
1:5:682:G:H2'	1:5:682:G:N3	2.35	0.42
1:5:689:U:O2	1:5:689:U:H2'	2.20	0.42
1:5:744:G:C2	1:5:921:C:O2	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:919:C:N3	1:5:920:C:C4	2.88	0.42
1:5:963:G:N3	1:5:963:G:C2'	2.83	0.42
1:5:1070:G:N1	1:5:1071:C:C4	2.88	0.42
1:5:1215:C:C2'	1:5:1216:C:H5'	2.49	0.42
1:5:1221:G:O2'	1:5:1222:A:P	2.78	0.42
1:5:1233:G:C2	1:5:1234:G:N7	2.88	0.42
1:5:1260:G:C6	1:5:1261:G:C5	3.08	0.42
1:5:1261:G:N1	1:5:1262:G:C8	2.88	0.42
1:5:1396:G:C8	1:5:1396:G:C3'	3.02	0.42
1:5:1406:G:C2	1:5:1409:C:N4	2.88	0.42
1:5:1484:G:O4'	1:5:1485:C:P	2.78	0.42
1:5:1556:C:O2	1:5:1556:C:H2'	2.19	0.42
1:5:1753:G:H2'	1:5:1755:C:C5'	2.50	0.42
1:5:1769:G:C2	1:5:1770:A:N7	2.88	0.42
1:5:1922:G:C2	1:5:1923:A:C8	3.07	0.42
1:5:2076:G:C2	1:5:2077:C:H1'	2.54	0.42
1:5:2083:C:H2'	1:5:2085:G:O4'	2.19	0.42
1:5:2264:C:HO2'	1:5:2265:G:H2'	1.82	0.42
1:5:2311:C:N3	1:5:2312:U:C6	2.88	0.42
1:5:2395:A:OP1	1:5:2395:A:H4'	2.20	0.42
1:5:2401:A:N3	1:5:2402:G:C8	2.87	0.42
1:5:2410:C:O2	1:5:2411:C:C5	2.73	0.42
1:5:2465:C:C2'	1:5:2466:G:O4'	2.68	0.42
1:5:2485:U:H2'	1:5:2486:G:H8	1.85	0.42
1:5:2502:G:H4'	1:5:2503:G:OP1	2.20	0.42
1:5:2522:G:C2	1:5:2534:C:C2	3.08	0.42
1:5:2658:G:N1	1:5:2675:G:C6	2.88	0.42
1:5:3587:C:H2'	1:5:3588:C:H6	1.84	0.42
1:5:3672:G:N7	1:5:3674:G:H1'	2.35	0.42
1:5:3714:G:N1	1:5:3739:C:O2	2.53	0.42
1:5:3869:C:N3	1:5:3870:C:C5	2.88	0.42
1:5:3901:A:OP1	1:5:3902:A:H5'	2.20	0.42
1:5:3907:G:C8	1:5:4449:A:C1'	2.94	0.42
1:5:4077:A:N7	1:5:4078:C:C5	2.88	0.42
1:5:4283:G:H21	1:5:4284:C:H1'	1.85	0.42
1:5:4330:G:C5	1:5:4331:G:C8	3.07	0.42
1:5:4411:G:N1	1:5:4412:C:C4	2.88	0.42
1:5:4419:U:H6	1:5:4419:U:O5'	2.03	0.42
1:5:4495:G:C2	1:5:4506:C:C2	3.07	0.42
1:5:4551:U:H2'	1:5:4552:U:H6	1.85	0.42
1:5:4649:G:H2'	1:5:4650:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4985:U:H2'	1:5:4986:G:O5'	2.20	0.42
1:5:5035:U:N3	1:5:5036:C:C6	2.87	0.42
2:7:59:G:C2	2:7:60:G:C4	3.08	0.42
2:7:98:G:C2	2:7:99:G:H1'	2.55	0.42
2:7:113:G:C2	2:7:114:U:C5	3.08	0.42
3:8:75:G:C4	3:8:76:C:C5	3.08	0.42
4:A:109:GLU:O	4:A:111:THR:N	2.53	0.42
7:D:123:VAL:CG1	7:D:248:ARG:HH22	2.28	0.42
7:D:163:LEU:HD21	7:D:175:HIS:CB	2.50	0.42
7:D:177:THR:HB	7:D:190:PHE:CZ	2.55	0.42
8:E:95:ASP:HB3	8:E:101:ARG:HB2	2.02	0.42
8:E:172:THR:OG1	8:E:182:LEU:HD23	2.19	0.42
9:F:201:LYS:C	9:F:202:ARG:HD2	2.45	0.42
10:G:73:ARG:HH11	10:G:73:ARG:CB	2.32	0.42
10:G:136:LEU:HD22	10:G:202:VAL:HG13	2.01	0.42
12:I:171:TRP:CG	12:I:181:PHE:CD2	3.08	0.42
15:M:109:ARG:NH2	15:M:109:ARG:HB2	2.35	0.42
15:M:123:ILE:HD11	17:O:182:GLU:CG	2.49	0.42
17:O:178:ARG:HH11	17:O:178:ARG:HG3	1.84	0.42
26:X:76:ILE:CD1	26:X:108:GLN:HB3	2.50	0.42
28:Z:114:ALA:HB1	28:Z:118:PHE:HE2	1.85	0.42
28:Z:121:ARG:CG	28:Z:121:ARG:HH11	2.33	0.42
32:d:29:ILE:HD12	32:d:84:ILE:HG13	2.02	0.42
37:i:45:ARG:NH2	37:i:50:PHE:HE1	2.14	0.42
40:l:44:TRP:CE3	40:l:45:ARG:HB2	2.55	0.42
49:3:71:UNK:O	49:3:72:UNK:C	2.68	0.42
50:S2:20:G:OP1	50:S2:620:G:C8	2.73	0.42
50:S2:23:G:N1	50:S2:24:C:C2	2.88	0.42
50:S2:29:G:H2'	50:S2:30:C:H6	1.84	0.42
50:S2:85:A:C4	50:S2:86:C:C5	3.08	0.42
50:S2:85:A:H2'	50:S2:86:C:H6	1.84	0.42
50:S2:108:G:N3	50:S2:854:A:H2	2.18	0.42
50:S2:293:C:O2'	50:S2:294:U:H3'	2.20	0.42
50:S2:318:A:N6	57:SG:186:GLN:OE1	2.52	0.42
50:S2:331:C:H41	57:SG:189:ARG:HH21	1.66	0.42
50:S2:379:C:H2'	50:S2:380:G:C8	2.55	0.42
50:S2:439:A:N1	50:S2:455:A:N1	2.67	0.42
50:S2:684:G:H2'	50:S2:685:A:O4'	2.20	0.42
50:S2:827:A:N6	50:S2:828:G:C5	2.88	0.42
50:S2:996:A:N7	64:SN:113:PHE:CE2	2.88	0.42
50:S2:1099:G:C5	50:S2:1100:A:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1137:U:H2'	50:S2:1138:C:H5''	2.01	0.42
50:S2:1252:C:H5''	50:S2:1254:C:C6	2.55	0.42
50:S2:1313:A:O2'	63:SM:90:GLY:C	2.62	0.42
50:S2:1336:C:C2	50:S2:1337:C:C6	3.08	0.42
50:S2:1373:C:OP1	68:SR:7:LYS:HG2	2.20	0.42
50:S2:1431:G:N3	50:S2:1431:G:H2'	2.35	0.42
50:S2:1453:C:N3	50:S2:1455:A:C1'	2.73	0.42
50:S2:1551:U:C5'	50:S2:1558:C:H1'	2.50	0.42
50:S2:1666:C:O2	50:S2:1666:C:H2'	2.19	0.42
50:S2:1691:U:O4	50:S2:1692:U:C4	2.70	0.42
50:S2:1710:C:O2	50:S2:1710:C:H2'	2.20	0.42
50:S2:1753:C:N3	50:S2:1754:G:N7	2.68	0.42
50:S2:1792:G:N3	50:S2:1793:A:C8	2.88	0.42
50:S2:1850:A:O2'	50:S2:1851:A:C5'	2.68	0.42
51:SA:24:HIS:CD2	51:SA:25:LEU:HD12	2.55	0.42
51:SA:64:ALA:HB1	72:SV:34:MET:HE1	2.02	0.42
54:SD:53:THR:O	54:SD:55:THR:N	2.53	0.42
54:SD:203:PRO:HB2	68:SR:42:PRO:HG3	2.02	0.42
56:SF:15:PRO:HB3	67:SQ:59:GLY:HA2	2.02	0.42
56:SF:20:PHE:O	56:SF:23:TRP:HB2	2.20	0.42
56:SF:77:MET:HE1	56:SF:86:LYS:HD2	2.01	0.42
58:SH:34:SER:O	58:SH:36:LEU:N	2.47	0.42
58:SH:152:ARG:HB3	58:SH:152:ARG:NH1	2.35	0.42
59:SI:88:ASN:OD1	59:SI:205:ARG:NH2	2.53	0.42
61:SK:15:LEU:HD21	61:SK:71:LEU:HD13	2.02	0.42
65:SO:103:ASN:OD1	65:SO:103:ASN:N	2.52	0.42
73:SW:82:GLN:HE21	73:SW:82:GLN:HB2	1.69	0.42
76:SZ:91:LEU:HB2	76:SZ:97:ILE:HD11	2.01	0.42
85:S5:3:C:O2	85:S5:4:C:C5	2.71	0.42
85:S5:28:G:N3	85:S5:29:G:N9	2.63	0.42
85:S5:39:U:O2'	85:S5:40:C:H5'	2.19	0.42
86:S6:9:A:N7	86:S6:46:G:N2	2.67	0.42
86:S6:50:U:O2	86:S6:51:U:C2	2.73	0.42
1:5:98:A:C8	1:5:98:A:H3'	2.55	0.41
1:5:145:G:N1	1:5:146:G:N7	2.68	0.41
1:5:218:A:C8	6:C:181:LYS:CG	3.02	0.41
1:5:274:C:C2'	1:5:275:C:O5'	2.67	0.41
1:5:287:U:O2	1:5:287:U:H2'	2.20	0.41
1:5:483:G:C4	1:5:484:U:C5	3.08	0.41
1:5:720:G:C2	1:5:721:G:C8	3.08	0.41
1:5:945:U:C5	9:F:67:TYR:CZ	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1065:G:H2'	1:5:1066:G:H8	1.84	0.41
1:5:1187:G:N3	1:5:1188:C:H5	2.18	0.41
1:5:1199:G:C4	1:5:1200:G:C8	3.08	0.41
1:5:1246:G:H2'	1:5:1247:U:O4'	2.20	0.41
1:5:1267:C:C2	1:5:1271:G:N1	2.88	0.41
1:5:1349:G:N1	1:5:1350:C:C4	2.88	0.41
1:5:1371:A:C2	3:8:29:G:H1'	2.55	0.41
1:5:1390:G:N2	1:5:1394:G:N7	2.64	0.41
1:5:1520:C:H2'	1:5:1521:C:O4'	2.19	0.41
1:5:1552:G:N2	1:5:1574:G:C2	2.88	0.41
1:5:1727:U:O2	1:5:1727:U:H2'	2.20	0.41
1:5:1968:G:C2	1:5:1969:G:C8	3.07	0.41
1:5:2008:U:C5	1:5:2010:A:H3'	2.55	0.41
1:5:2021:G:C2	1:5:2022:C:N1	2.87	0.41
1:5:2399:G:C6	1:5:2400:G:N7	2.88	0.41
1:5:2401:A:N1	1:5:2402:G:N7	2.68	0.41
1:5:2470:C:C2	1:5:2470:C:C5'	3.02	0.41
1:5:2562:G:C6	1:5:2564:G:OP2	2.73	0.41
1:5:2567:G:N2	1:5:2568:C:N1	2.68	0.41
1:5:2606:G:C6	1:5:2607:C:N4	2.87	0.41
1:5:2702:C:C2	1:5:2715:G:N1	2.88	0.41
1:5:2726:G:N2	1:5:2727:C:N3	2.68	0.41
1:5:2794:C:C2	18:P:136:ILE:CD1	3.02	0.41
1:5:3630:A:C6	1:5:3631:U:C5	3.08	0.41
1:5:3756:A:C4	1:5:3757:G:C8	3.08	0.41
1:5:3758:U:C4	1:5:3765:G:C6	3.08	0.41
1:5:3820:G:C5	1:5:3821:A:N7	2.87	0.41
1:5:3851:U:C4	1:5:3852:A:C5	3.08	0.41
1:5:3879:G:N1	1:5:3882:C:C5	2.86	0.41
1:5:3971:G:C4'	46:z:31:THR:OG1	2.59	0.41
1:5:4152:G:C6	1:5:4153:C:N4	2.88	0.41
1:5:4237:C:H4'	1:5:4327:C:O2	2.19	0.41
1:5:4481:U:H2'	1:5:4482:U:O4'	2.20	0.41
1:5:4510:A:C4	1:5:4511:A:C6	3.08	0.41
1:5:4565:C:C1'	5:B:262:VAL:CG2	2.97	0.41
1:5:4884:G:C6	1:5:4885:U:C5	3.08	0.41
1:5:4886:C:H41	8:E:268:ARG:HH22	1.68	0.41
1:5:4896:G:N3	1:5:4926:C:N4	2.66	0.41
1:5:4897:G:C2	1:5:4898:G:C4	3.08	0.41
3:8:131:G:N3	3:8:131:G:H2'	2.33	0.41
3:8:154:G:H4'	10:G:189:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:A:5:ILE:HB	4:A:208:GLU:O	2.19	0.41
6:C:33:ARG:HD3	6:C:122:TYR:OH	2.20	0.41
8:E:233:LYS:O	8:E:235:LYS:N	2.52	0.41
10:G:82:GLN:HG3	10:G:83:PHE:CE1	2.55	0.41
15:M:86:TRP:CD1	15:M:92:ALA:HB2	2.55	0.41
15:M:112:VAL:O	15:M:113:MET:C	2.61	0.41
18:P:122:ALA:HA	18:P:145:HIS:HE1	1.84	0.41
19:Q:32:TYR:N	19:Q:32:TYR:CD1	2.87	0.41
21:S:29:ARG:HH22	22:T:149:GLU:C	2.28	0.41
24:V:14:PHE:CE1	24:V:91:LYS:HD2	2.55	0.41
26:X:110:LYS:HD2	26:X:111:GLN:HE22	1.85	0.41
33:e:42:ASP:OD1	33:e:42:ASP:N	2.53	0.41
50:S2:126:G:H22	50:S2:181:A:P	2.43	0.41
50:S2:187:G:C4	50:S2:188:C:C6	3.08	0.41
50:S2:201:C:C5	50:S2:202:G:C8	3.07	0.41
50:S2:358:C:C2	50:S2:405:G:C2	3.08	0.41
50:S2:443:U:C4	50:S2:444:G:C5	3.08	0.41
50:S2:449:A:N6	50:S2:452:G:C2	2.87	0.41
50:S2:536:A:N6	50:S2:537:C:C6	2.87	0.41
50:S2:634:A:C2	50:S2:635:G:N7	2.87	0.41
50:S2:730:C:H2'	50:S2:731:G:O4'	2.20	0.41
50:S2:746:C:C4	50:S2:747:U:C5	3.08	0.41
50:S2:794:A:C2	50:S2:795:A:C1'	3.03	0.41
50:S2:837:A:H62	75:SY:47:MET:CB	2.31	0.41
50:S2:837:A:H61	75:SY:47:MET:C	2.28	0.41
50:S2:982:G:H1'	50:S2:1045:U:C6	2.55	0.41
50:S2:1003:U:C2	50:S2:1004:U:C6	3.08	0.41
50:S2:1157:G:C6	73:SW:75:ILE:HD12	2.55	0.41
50:S2:1271:C:O2	50:S2:1271:C:H2'	2.20	0.41
50:S2:1293:A:C2'	82:Sf:152:LYS:HB2	2.50	0.41
50:S2:1313:A:O2'	63:SM:91:LEU:N	2.52	0.41
50:S2:1320:G:H2'	50:S2:1321:G:O4'	2.19	0.41
50:S2:1406:G:C6	50:S2:1407:U:C4	3.08	0.41
50:S2:1481:G:C2'	50:S2:1482:C:H5'	2.49	0.41
50:S2:1545:A:C6	50:S2:1588:A:C2	3.00	0.41
50:S2:1566:G:H3'	50:S2:1567:G:H5''	2.00	0.41
50:S2:1597:C:HO2'	50:S2:1598:G:C4'	2.22	0.41
50:S2:1641:A:C1'	86:S6:31:A:HO2'	2.32	0.41
50:S2:1641:A:C6	50:S2:1642:U:C4	3.08	0.41
50:S2:1691:U:C4	50:S2:1692:U:C5	3.06	0.41
50:S2:1867:U:HO2'	77:Sa:38:LYS:HG2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SA:108:PHE:HB3	51:SA:140:VAL:HG21	2.01	0.41
51:SA:139:TYR:O	72:SV:29:HIS:CB	2.51	0.41
53:SC:115:GLN:HE21	53:SC:115:GLN:HA	1.83	0.41
55:SE:179:ASN:O	55:SE:194:VAL:HA	2.20	0.41
57:SG:21:GLU:O	57:SG:25:ARG:N	2.53	0.41
61:SK:11:ILE:CD1	61:SK:45:VAL:HG22	2.49	0.41
64:SN:101:HIS:CD2	64:SN:101:HIS:C	2.98	0.41
70:ST:11:GLN:CD	70:ST:11:GLN:O	2.63	0.41
83:Sg:302:TYR:OH	83:Sg:310:TRP:HH2	2.03	0.41
85:S5:46:G:H3'	85:S5:47:U:H5''	2.02	0.41
85:S5:55:U:O2	85:S5:55:U:O4'	2.35	0.41
1:5:82:U:O2	1:5:82:U:H2'	2.19	0.41
1:5:88:A:N1	1:5:97:G:H1'	2.35	0.41
1:5:96:U:C5	1:5:97:G:C8	3.08	0.41
1:5:128:C:C2	1:5:129:C:C6	3.08	0.41
1:5:258:G:C2	1:5:259:C:N1	2.89	0.41
1:5:302:C:C2	1:5:303:C:C6	3.08	0.41
1:5:356:G:O2'	3:8:25:G:N3	2.51	0.41
1:5:417:G:H1'	3:8:17:A:N6	2.35	0.41
1:5:479:G:N1	1:5:480:C:C5	2.88	0.41
1:5:505:G:N1	1:5:506:C:C4	2.89	0.41
1:5:660:A:C2	1:5:661:C:N1	2.87	0.41
1:5:684:G:HO2'	1:5:685:C:P	2.43	0.41
1:5:693:C:H2'	1:5:694:C:H6	1.86	0.41
1:5:698:G:N1	1:5:699:C:C6	2.88	0.41
1:5:711:A:H1'	8:E:132:HIS:NE2	2.35	0.41
1:5:738:C:N3	1:5:739:G:C5	2.88	0.41
1:5:738:C:N4	1:5:739:G:O6	2.53	0.41
1:5:1187:G:HO2'	1:5:1188:C:H6	1.67	0.41
1:5:1241:C:C4	1:5:1242:G:C2	3.08	0.41
1:5:1281:G:O6	8:E:48:ARG:NH1	2.52	0.41
1:5:1367:C:H3'	1:5:1368:A:H5''	2.02	0.41
1:5:1487:G:C2	1:5:1488:G:C1'	3.03	0.41
1:5:1554:A:C6	1:5:1555:G:N9	2.88	0.41
1:5:1629:G:N2	1:5:1631:A:N3	2.68	0.41
1:5:1779:U:N3	1:5:1780:A:N7	2.68	0.41
1:5:1780:A:N3	12:I:198:LYS:NZ	2.68	0.41
1:5:1912:G:C2	1:5:1913:C:C5	3.09	0.41
1:5:2008:U:N3	1:5:2010:A:OP2	2.53	0.41
1:5:2263:A:O2'	1:5:2264:C:O2'	2.36	0.41
1:5:2339:G:C2	1:5:2340:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2340:C:C4	1:5:2341:A:N7	2.88	0.41
1:5:2342:G:N2	1:5:2344:U:O4'	2.53	0.41
1:5:2450:G:O6	1:5:2451:A:C5	2.73	0.41
1:5:2481:G:C6	1:5:2482:C:C5	3.07	0.41
1:5:2658:G:H22	1:5:2675:G:C2'	2.25	0.41
1:5:2678:A:C4	1:5:2679:G:C8	3.09	0.41
1:5:2688:G:N2	1:5:2689:C:N1	2.68	0.41
1:5:2712:G:C2	1:5:2713:C:C5	3.08	0.41
1:5:2743:A:H2	1:5:2744:A:C4	2.38	0.41
1:5:2743:A:C4	1:5:2744:A:N7	2.85	0.41
1:5:2793:G:C6	1:5:2797:C:N4	2.88	0.41
1:5:2851:G:N2	1:5:2856:C:N4	2.68	0.41
1:5:3590:G:C6	1:5:3591:C:C6	3.08	0.41
1:5:3709:U:C4	50:S2:970:G:C2	3.07	0.41
1:5:3727:A:C2'	1:5:3728:A:C8	3.03	0.41
1:5:3953:G:C5	1:5:3954:A:N7	2.88	0.41
1:5:4075:U:O2	1:5:4076:G:C8	2.73	0.41
1:5:4075:U:H4'	1:5:4076:G:OP1	2.21	0.41
1:5:4086:G:N3	10:G:51:LEU:HD11	2.35	0.41
1:5:4101:C:N3	1:5:4102:C:C5	2.88	0.41
1:5:4280:A:N6	7:D:29:ASP:CG	2.78	0.41
1:5:4320:G:H2'	1:5:4321:U:O4'	2.20	0.41
1:5:4392:G:O6	1:5:4447:C:O2'	2.28	0.41
1:5:4404:U:O2'	1:5:4405:G:N7	2.42	0.41
1:5:4455:G:H1	1:5:4524:G:H1	1.67	0.41
1:5:4502:C:N4	1:5:4503:A:N7	2.68	0.41
1:5:4567:G:H2'	1:5:4568:A:C5'	2.50	0.41
2:7:1:G:H2'	2:7:2:U:O4'	2.20	0.41
4:A:82:ILE:HD11	4:A:99:GLY:CA	2.49	0.41
5:B:323:TYR:C	5:B:323:TYR:HD1	2.28	0.41
7:D:8:LYS:HA	7:D:12:TYR:CB	2.50	0.41
8:E:276:GLY:C	8:E:278:TYR:HE2	2.28	0.41
10:G:108:GLN:CA	10:G:108:GLN:NE2	2.83	0.41
10:G:185:LYS:O	10:G:189:ARG:HD2	2.20	0.41
11:H:60:TRP:HE1	21:S:153:PRO:HG3	1.85	0.41
12:I:12:CYS:HB3	12:I:128:ARG:HE	1.86	0.41
12:I:181:PHE:CD1	12:I:190:LEU:HD13	2.55	0.41
17:O:125:LYS:HD2	17:O:135:PHE:CZ	2.55	0.41
22:T:14:MET:HE3	22:T:58:HIS:CB	2.50	0.41
22:T:136:ARG:O	22:T:137:GLU:HB2	2.19	0.41
26:X:96:LEU:HB3	26:X:98:PHE:HE1	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:a:45:PHE:HD2	29:a:53:PHE:HE1	1.67	0.41
32:d:83:ARG:HB3	32:d:114:PHE:CD2	2.54	0.41
41:m:87:GLN:HE21	41:m:87:GLN:HB3	1.71	0.41
44:p:74:THR:HG21	50:S2:1042:A:O2'	2.20	0.41
45:r:16:PHE:O	45:r:26:SER:HA	2.19	0.41
47:1:200:THR:O	47:1:201:VAL:HG23	2.20	0.41
47:1:306:GLN:OE1	47:1:338:VAL:HA	2.20	0.41
50:S2:31:U:O2	50:S2:644:G:C2	2.72	0.41
50:S2:84:A:C5	50:S2:85:A:N7	2.89	0.41
50:S2:127:C:C6	50:S2:181:A:N6	2.88	0.41
50:S2:185:G:C2	50:S2:186:C:C2	3.08	0.41
50:S2:304:C:O3'	50:S2:306:C:H1'	2.20	0.41
50:S2:474:G:C6	50:S2:475:C:C4	3.07	0.41
50:S2:649:U:O2	50:S2:649:U:C2'	2.61	0.41
50:S2:862:A:C8	73:SW:107:SER:CA	3.00	0.41
50:S2:931:C:H2'	50:S2:932:G:O4'	2.20	0.41
50:S2:949:G:H2'	50:S2:950:C:O4'	2.20	0.41
50:S2:975:G:C4'	65:SO:32:HIS:CD2	3.01	0.41
50:S2:1065:G:C6	50:S2:1066:U:C5	3.08	0.41
50:S2:1146:C:O2	50:S2:1146:C:H2'	2.20	0.41
50:S2:1421:A:C2	50:S2:1422:G:H1'	2.56	0.41
50:S2:1457:U:C2	50:S2:1458:G:N7	2.89	0.41
50:S2:1457:U:H2'	50:S2:1458:G:C8	2.55	0.41
51:SA:125:THR:O	51:SA:147:LEU:HB2	2.21	0.41
56:SF:115:ALA:O	56:SF:119:SER:OG	2.34	0.41
56:SF:195:GLU:HA	56:SF:198:ARG:HB3	2.01	0.41
61:SK:52:LEU:C	61:SK:58:VAL:HG12	2.45	0.41
64:SN:105:ASN:OD1	64:SN:105:ASN:N	2.52	0.41
67:SQ:102:GLU:O	67:SQ:106:LYS:HG2	2.19	0.41
68:SR:10:LYS:HD2	68:SR:53:TYR:OH	2.18	0.41
75:SY:86:GLU:CD	75:SY:86:GLU:HB3	2.41	0.41
83:Sg:217:MET:CG	83:Sg:229:THR:HG23	2.49	0.41
83:Sg:251:ALA:HB1	83:Sg:286:CYS:SG	2.60	0.41
83:Sg:260:ASP:HB3	83:Sg:263:GLY:O	2.20	0.41
85:S5:7:A:N7	85:S5:49:C:C4	2.88	0.41
86:S6:6:G:H2'	86:S6:7:G:C4'	2.49	0.41
86:S6:29:G:O6	86:S6:42:C:C4	2.73	0.41
1:5:127:G:C2	1:5:128:C:C2	3.08	0.41
1:5:275:C:C2'	1:5:276:C:H5''	2.50	0.41
1:5:343:C:C4	1:5:344:A:N7	2.88	0.41
1:5:370:U:C5	1:5:1637:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1169:G:C2	1:5:1170:G:N9	2.88	0.41
1:5:1218:G:O6	1:5:1219:G:C8	2.73	0.41
1:5:1667:G:N3	1:5:2283:G:N1	2.67	0.41
1:5:1669:A:C4'	1:5:1685:G:N2	2.69	0.41
1:5:1694:C:C2	1:5:1695:U:C6	3.08	0.41
1:5:1777:C:C2	1:5:1778:C:C5	3.09	0.41
1:5:1846:G:C2	1:5:1847:C:C2	3.09	0.41
1:5:1891:A:C2'	1:5:1892:A:C8	3.03	0.41
1:5:1895:G:C6	1:5:1896:A:N3	2.88	0.41
1:5:1964:A:C5	1:5:1965:G:C4	3.09	0.41
1:5:1994:C:C4	1:5:1995:G:N7	2.89	0.41
1:5:1996:C:C4	1:5:1997:U:H1'	2.55	0.41
1:5:2055:G:C8	1:5:2055:G:H3'	2.56	0.41
1:5:2247:C:H5''	1:5:2248:C:C6	2.55	0.41
1:5:2294:G:H2'	1:5:2295:C:H6	1.85	0.41
1:5:2295:C:O2	1:5:2296:G:N7	2.52	0.41
1:5:2316:G:N1	1:5:2317:C:N4	2.68	0.41
1:5:2448:G:O6	1:5:2511:A:C5	2.73	0.41
1:5:2481:G:C2	1:5:2482:C:C6	3.07	0.41
1:5:2493:G:C5	1:5:2494:U:C5	3.09	0.41
1:5:2526:C:O2'	1:5:2527:A:O5'	2.37	0.41
1:5:2577:C:N4	28:Z:17:ARG:CZ	2.83	0.41
1:5:2800:G:C5	1:5:2801:U:C5	3.09	0.41
1:5:2850:A:O2'	24:V:52:LEU:HD21	2.20	0.41
1:5:3807:A:HO2'	50:S2:1816:G:C1'	2.32	0.41
1:5:3953:G:N1	1:5:3954:A:C8	2.88	0.41
1:5:4111:U:N3	1:5:4112:C:C6	2.88	0.41
1:5:4129:G:C2	1:5:4130:C:C2	3.07	0.41
1:5:4346:U:H2'	1:5:4347:G:O5'	2.20	0.41
1:5:4552:U:C2'	1:5:4553:A:O5'	2.68	0.41
1:5:4879:C:H2'	1:5:4880:C:H6	1.85	0.41
1:5:4966:A:C2	1:5:4967:A:C2	3.08	0.41
1:5:5005:G:H22	1:5:5041:G:H1'	1.85	0.41
2:7:25:G:C2	2:7:26:C:C2	3.08	0.41
2:7:106:G:C6	2:7:107:G:C5	3.08	0.41
5:B:142:GLY:HA2	5:B:146:LEU:HD21	2.03	0.41
5:B:219:VAL:HG21	5:B:333:LEU:HD21	2.02	0.41
7:D:202:GLN:HA	7:D:205:ALA:HB3	2.02	0.41
8:E:43:ASN:C	8:E:43:ASN:HD22	2.27	0.41
8:E:84:VAL:HG13	8:E:87:THR:O	2.19	0.41
8:E:156:LYS:HB3	8:E:178:ASN:HD21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:124:PHE:HD2	9:F:196:ILE:HG23	1.86	0.41
10:G:128:VAL:N	10:G:129:PRO:CD	2.83	0.41
11:H:31:ARG:HE	11:H:87:GLY:HA3	1.86	0.41
15:M:9:VAL:HG11	15:M:66:HIS:HA	2.02	0.41
29:a:45:PHE:HD2	29:a:53:PHE:CE1	2.38	0.41
30:b:13:SER:HA	30:b:16:TRP:CZ2	2.55	0.41
44:p:74:THR:CG2	50:S2:1042:A:O2'	2.68	0.41
46:z:183:ILE:O	46:z:187:VAL:HG22	2.20	0.41
50:S2:165:G:H2'	50:S2:166:A:C8	2.50	0.41
50:S2:359:U:O2	50:S2:359:U:H2'	2.20	0.41
50:S2:403:G:C6	50:S2:404:G:C8	3.08	0.41
50:S2:403:G:C5	50:S2:404:G:N7	2.88	0.41
50:S2:493:A:C8	50:S2:574:A:H8	2.26	0.41
50:S2:563:G:C2'	50:S2:564:A:H5'	2.50	0.41
50:S2:604:A:N1	50:S2:605:A:C6	2.88	0.41
50:S2:678:U:N3	50:S2:679:A:N7	2.68	0.41
50:S2:830:A:H2'	50:S2:831:G:O4'	2.20	0.41
50:S2:953:C:C2	50:S2:954:U:C6	3.08	0.41
50:S2:1040:G:C8	50:S2:1040:G:H5''	2.55	0.41
50:S2:1078:C:O2	50:S2:1078:C:H2'	2.20	0.41
50:S2:1126:G:C6	50:S2:1127:C:N4	2.88	0.41
50:S2:1134:G:OP1	77:Sa:13:LYS:NZ	2.54	0.41
50:S2:1185:C:O2	50:S2:1185:C:C2'	2.69	0.41
50:S2:1257:G:H4'	50:S2:1258:A:C5'	2.51	0.41
50:S2:1294:G:C5	82:Sf:138:ARG:CD	2.97	0.41
50:S2:1310:U:OP1	63:SM:40:LYS:HG2	2.20	0.41
50:S2:1418:C:O2	50:S2:1420:G:H3'	2.20	0.41
50:S2:1435:C:N4	50:S2:1436:C:C4	2.88	0.41
50:S2:1528:G:C2	50:S2:1529:C:C6	3.09	0.41
50:S2:1551:U:O5'	50:S2:1552:G:OP2	2.38	0.41
50:S2:1587:G:N3	50:S2:1587:G:C2'	2.83	0.41
57:SG:191:ARG:HB3	57:SG:191:ARG:HH11	1.84	0.41
60:SJ:63:LEU:O	60:SJ:70:ARG:NH1	2.53	0.41
63:SM:46:GLN:OE1	63:SM:112:LYS:CD	2.68	0.41
69:SS:113:ARG:CZ	69:SS:113:ARG:HB3	2.50	0.41
70:ST:21:PHE:C	70:ST:21:PHE:CD1	2.98	0.41
84:S4:22:U:C4	85:S5:36:A:N6	2.78	0.41
85:S5:7:A:C8	85:S5:49:C:C5	3.08	0.41
86:S6:62:C:O2	86:S6:63:G:C6	2.73	0.41
86:S6:73:A:H5'	86:S6:73:A:H8	1.84	0.41
1:5:70:A:C6	1:5:4355:G:O4'	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:163:A:C6	1:5:164:G:C8	3.08	0.41
1:5:206:U:O2	1:5:206:U:H2'	2.20	0.41
1:5:238:C:O2	1:5:239:C:C6	2.73	0.41
1:5:465:G:N1	1:5:466:A:C5	2.89	0.41
1:5:483:G:N1	1:5:484:U:O4	2.53	0.41
1:5:709:C:H4'	8:E:186:HIS:CE1	2.53	0.41
1:5:711:A:C4	1:5:712:C:C5	3.08	0.41
1:5:961:G:C6	1:5:969:C:C5	3.08	0.41
1:5:1261:G:C2	1:5:1262:G:C4	3.09	0.41
1:5:1268:G:C5	1:5:2111:G:N3	2.88	0.41
1:5:1308:C:O2	1:5:1308:C:H2'	2.20	0.41
1:5:1329:G:C2'	1:5:1330:A:OP1	2.69	0.41
1:5:1358:G:C4	1:5:1359:G:C8	3.08	0.41
1:5:1516:G:HO2'	14:L:18:TRP:HE1	1.66	0.41
1:5:1756:U:H2'	1:5:1757:U:O4'	2.21	0.41
1:5:1761:G:C4	1:5:1762:C:C6	3.08	0.41
1:5:1776:A:C2	1:5:1777:C:C2	3.08	0.41
1:5:1781:U:C4	1:5:1782:U:C4	3.09	0.41
1:5:1831:G:C2	1:5:1832:C:N1	2.88	0.41
1:5:2005:G:C2	1:5:2006:U:C6	3.08	0.41
1:5:2079:G:H4'	33:e:58:ILE:HD11	2.02	0.41
1:5:2092:G:C8	1:5:2093:A:N1	2.89	0.41
1:5:2320:G:O2'	1:5:2321:G:OP2	2.39	0.41
1:5:2439:G:H1'	1:5:2777:G:C2	2.55	0.41
1:5:2477:A:C2	1:5:2478:C:C5	3.09	0.41
1:5:2696:A:C8	39:k:69:LEU:HD12	2.56	0.41
1:5:2823:G:H2'	1:5:2824:C:O4'	2.20	0.41
1:5:3585:G:N3	1:5:3586:G:C8	2.88	0.41
1:5:3605:C:N3	1:5:3606:U:C6	2.88	0.41
1:5:3836:A:H2'	1:5:3837:C:O4'	2.20	0.41
1:5:4061:G:C6	1:5:4062:A:C5	3.08	0.41
1:5:4062:A:C2	1:5:4063:U:C6	3.08	0.41
1:5:4101:C:OP1	52:SB:230:GLU:HG2	2.20	0.41
1:5:4274:A:H2'	1:5:4275:G:O4'	2.20	0.41
1:5:4315:A:C6	1:5:4316:G:N7	2.88	0.41
1:5:4361:U:N3	1:5:4362:A:C8	2.88	0.41
1:5:4425:G:C5	1:5:4426:C:C6	3.08	0.41
1:5:4489:G:C2	1:5:4490:C:N1	2.89	0.41
1:5:4737:G:C6	1:5:4738:C:C4	3.08	0.41
1:5:4745:G:H2'	1:5:4746:C:H5	1.86	0.41
1:5:5006:U:O4'	1:5:5042:A:C6	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5047:C:N3	1:5:5048:A:N6	2.68	0.41
2:7:36:C:H2'	2:7:37:G:H8	1.85	0.41
2:7:51:G:C4	2:7:52:C:C5	3.08	0.41
2:7:58:A:N6	2:7:59:G:C5	2.89	0.41
2:7:93:G:C2	2:7:94:C:C2	3.07	0.41
3:8:31:G:C4	3:8:32:C:C6	3.08	0.41
4:A:226:ARG:HB2	4:A:226:ARG:CZ	2.50	0.41
5:B:235:TRP:HA	5:B:235:TRP:HE3	1.85	0.41
6:C:270:ALA:HA	6:C:278:ASN:ND2	2.34	0.41
7:D:268:ARG:HH11	7:D:268:ARG:HG3	1.85	0.41
11:H:179:ILE:C	11:H:180:TYR:CD1	2.99	0.41
13:J:19:LYS:HB3	13:J:75:ARG:HE	1.85	0.41
16:N:44:ARG:HD2	16:N:120:TRP:O	2.21	0.41
22:T:9:ARG:HG3	22:T:10:GLY:N	2.28	0.41
24:V:27:ASN:OD1	24:V:101:ASN:O	2.38	0.41
31:c:74:TYR:CD1	31:c:74:TYR:C	2.98	0.41
33:e:43:ASN:HD22	33:e:44:ARG:N	2.18	0.41
33:e:91:CYS:HB3	33:e:95:TYR:CE1	2.55	0.41
34:f:6:TRP:O	34:f:6:TRP:CD2	2.74	0.41
37:i:63:VAL:O	37:i:64:SER:C	2.64	0.41
45:r:28:GLU:OE1	45:r:31:ASN:HB3	2.20	0.41
50:S2:39:A:N3	50:S2:39:A:H2'	2.36	0.41
50:S2:81:U:C5	50:S2:82:G:C8	3.08	0.41
50:S2:219:U:C4	50:S2:220:U:C5	3.08	0.41
50:S2:289:G:N2	50:S2:295:C:O2	2.53	0.41
50:S2:292:A:C2	62:SL:69:ARG:HB3	2.56	0.41
50:S2:316:G:C6	50:S2:317:C:C4	3.08	0.41
50:S2:412:G:C2	50:S2:429:C:C2	3.09	0.41
50:S2:513:G:C6	50:S2:514:U:C4	3.08	0.41
50:S2:833:C:N3	50:S2:834:C:C6	2.89	0.41
50:S2:910:G:C2	50:S2:911:C:N1	2.88	0.41
50:S2:918:U:H5'	64:SN:20:ARG:HH11	1.85	0.41
50:S2:1085:C:N4	50:S2:1087:A:H1'	2.35	0.41
50:S2:1110:G:N2	50:S2:1111:U:C2	2.88	0.41
50:S2:1110:G:H5''	50:S2:1111:U:P	2.60	0.41
50:S2:1146:C:C2	50:S2:1147:C:C6	3.04	0.41
50:S2:1204:A:C5	50:S2:1205:C:N4	2.88	0.41
50:S2:1280:G:C2	50:S2:1281:G:C8	3.08	0.41
50:S2:1281:G:N7	63:SM:95:ASP:OD2	2.54	0.41
50:S2:1284:A:N1	63:SM:33:ARG:O	2.53	0.41
50:S2:1290:G:N2	82:Sf:142:GLY:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1291:A:O5'	82:Sf:146:LEU:O	2.38	0.41
50:S2:1292:C:C2	82:Sf:150:PHE:CG	3.09	0.41
50:S2:1311:C:C6	50:S2:1312:G:C8	3.09	0.41
50:S2:1380:C:H1'	51:SA:113:GLN:HE21	1.86	0.41
50:S2:1425:G:C6	50:S2:1426:U:H1'	2.56	0.41
50:S2:1449:G:N1	50:S2:1450:G:C5	2.88	0.41
50:S2:1484:A:C2'	50:S2:1485:U:H6	2.24	0.41
50:S2:1490:G:C2	50:S2:1491:G:C5	3.08	0.41
50:S2:1510:G:N1	50:S2:1511:U:N1	2.68	0.41
50:S2:1537:A:C2	50:S2:1538:C:N1	2.89	0.41
50:S2:1545:A:C2	50:S2:1546:G:N1	2.89	0.41
50:S2:1563:G:C6	50:S2:1564:C:N4	2.89	0.41
50:S2:1668:U:C2	50:S2:1669:G:N7	2.88	0.41
50:S2:1702:G:H1	50:S2:1833:C:N4	2.19	0.41
50:S2:1744:G:C2	50:S2:1789:G:N1	2.88	0.41
50:S2:1824:A:H1'	84:S4:22:U:O2'	2.21	0.41
50:S2:1832:A:C2	50:S2:1833:C:C2	3.09	0.41
50:S2:1855:G:P	65:SO:147:ARG:HH22	2.43	0.41
51:SA:63:ARG:NH2	72:SV:39:VAL:HG13	2.34	0.41
51:SA:145:ILE:HD13	51:SA:159:ILE:HG22	2.01	0.41
54:SD:32:ASP:OD2	54:SD:54:ARG:O	2.37	0.41
57:SG:55:GLY:N	57:SG:63:MET:SD	2.93	0.41
63:SM:96:ARG:HB3	63:SM:100:PRO:CD	2.50	0.41
64:SN:133:ARG:CZ	64:SN:133:ARG:HB2	2.51	0.41
65:SO:64:ALA:HB3	65:SO:67:ASP:OD1	2.21	0.41
66:SP:17:TYR:HH	66:SP:37:TYR:C	2.27	0.41
67:SQ:78:VAL:HA	67:SQ:81:ILE:HD12	2.02	0.41
74:SX:115:ILE:HG22	74:SX:118:VAL:CB	2.47	0.41
85:S5:48:C:O5'	85:S5:59:U:H5'	2.20	0.41
85:S5:62:C:H2'	85:S5:63:G:H5''	2.02	0.41
86:S6:12:C:C5'	86:S6:13:C:OP2	2.67	0.41
1:5:137:G:H2'	1:5:138:G:H8	1.86	0.41
1:5:150:U:OP2	10:G:200:THR:OG1	2.39	0.41
1:5:168:C:N3	1:5:268:G:C2	2.89	0.41
1:5:268:G:C4	1:5:269:G:C8	3.08	0.41
1:5:348:G:N2	1:5:350:C:N1	2.69	0.41
1:5:718:C:O2	1:5:718:C:H2'	2.21	0.41
1:5:732:A:C8	1:5:732:A:H5''	2.55	0.41
1:5:962:C:O2	1:5:2264:C:O5'	2.38	0.41
1:5:977:C:C3'	1:5:978:G:H5'	2.50	0.41
1:5:980:U:C2	1:5:981:C:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1212:G:N1	1:5:1213:G:N7	2.67	0.41
1:5:1249:C:H1'	1:5:1262:G:N2	2.36	0.41
1:5:1545:G:O2'	1:5:1546:C:O5'	2.37	0.41
1:5:1577:G:OP1	44:p:17:ARG:NH2	2.53	0.41
1:5:1634:A:N1	1:5:1635:C:C5	2.88	0.41
1:5:1830:G:H2'	30:b:68:ARG:NH2	2.35	0.41
1:5:1866:U:O2'	1:5:1867:A:P	2.78	0.41
1:5:1927:U:H4'	1:5:2035:C:HO2'	1.85	0.41
1:5:2021:G:C2	1:5:2022:C:C6	3.09	0.41
1:5:2034:G:H2'	1:5:2035:C:O4'	2.21	0.41
1:5:2056:G:C2	1:5:2058:G:C6	3.09	0.41
1:5:2060:G:C5	1:5:2061:U:C5	3.08	0.41
1:5:2245:G:C4	1:5:2246:C:C6	3.08	0.41
1:5:2347:A:C2	1:5:2348:G:C6	3.07	0.41
1:5:2454:U:O2	1:5:2454:U:C2'	2.68	0.41
1:5:2509:C:HO2'	1:5:2510:G:H5'	1.82	0.41
1:5:2673:G:H4'	1:5:2675:G:C1'	2.50	0.41
1:5:2715:G:C6	1:5:2716:C:N4	2.89	0.41
1:5:2788:U:O2	1:5:2798:A:H4'	2.21	0.41
1:5:3631:U:C2	1:5:3632:C:C6	3.08	0.41
1:5:3705:G:C5	1:5:3706:C:C4	3.08	0.41
1:5:3763:A:C2	50:S2:1710:C:OP1	2.73	0.41
1:5:3779:A:C2	1:5:3816:A:C6	3.08	0.41
1:5:3789:C:P	85:S5:73:A:OP1	2.78	0.41
1:5:3804:G:N2	1:5:3805:U:H1'	2.35	0.41
1:5:3806:G:O2'	50:S2:1719:A:C4	2.66	0.41
1:5:3806:G:N1	1:5:3807:A:C5	2.89	0.41
1:5:3904:G:H5''	1:5:3905:A:OP2	2.20	0.41
1:5:4109:G:C6	1:5:4110:C:C5	3.09	0.41
1:5:4113:U:H2'	1:5:4114:C:C1'	2.45	0.41
1:5:4147:G:C5	1:5:4148:C:C5	3.09	0.41
1:5:4205:A:N3	1:5:4206:C:C6	2.88	0.41
1:5:4257:A:C8	13:J:60:PHE:HE2	2.39	0.41
1:5:4351:U:C2	1:5:4352:U:C6	3.08	0.41
1:5:4361:U:N3	1:5:4362:A:N7	2.68	0.41
1:5:4425:G:C2	1:5:4426:C:C1'	3.04	0.41
1:5:4451:G:H3'	1:5:4522:G:H22	1.85	0.41
1:5:4484:A:N1	1:5:4485:C:C4	2.89	0.41
1:5:4518:A:C3'	1:5:4519:C:H5'	2.50	0.41
1:5:4685:U:H2'	1:5:4686:G:O4'	2.20	0.41
1:5:4944:C:H4'	1:5:4945:G:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4996:C:C4	1:5:4997:G:N7	2.88	0.41
1:5:5004:C:C2'	1:5:5005:G:O4'	2.67	0.41
2:7:8:G:N2	2:7:9:C:H1'	2.35	0.41
2:7:13:A:P	2:7:109:U:O2'	2.78	0.41
3:8:120:G:N1	3:8:121:G:N7	2.69	0.41
6:C:67:TRP:CD1	6:C:71:ARG:HE	2.39	0.41
6:C:167:ALA:CB	6:C:221:PHE:CE1	3.04	0.41
6:C:183:VAL:HA	6:C:204:ARG:HB2	2.03	0.41
9:F:58:HIS:O	9:F:60:HIS:N	2.53	0.41
11:H:61:TRP:CZ2	15:M:33:GLN:CD	2.99	0.41
22:T:105:PHE:CE1	22:T:109:VAL:HG23	2.56	0.41
27:Y:13:LYS:HB3	27:Y:17:ARG:HH21	1.86	0.41
31:c:53:PRO:CD	31:c:56:ARG:NH1	2.84	0.41
32:d:78:ARG:HH11	32:d:78:ARG:CG	2.34	0.41
33:e:57:ASN:OD1	33:e:60:TYR:HB3	2.21	0.41
39:k:25:ILE:HD13	39:k:57:LYS:HE2	2.03	0.41
40:l:44:TRP:HE3	40:l:45:ARG:N	2.19	0.41
43:o:45:GLN:NE2	43:o:45:GLN:CA	2.82	0.41
43:o:57:ARG:HH11	43:o:57:ARG:CG	2.33	0.41
45:r:30:ASN:OD1	45:r:30:ASN:N	2.52	0.41
46:z:80:VAL:HG13	46:z:148:VAL:HG22	2.01	0.41
50:S2:14:C:H2'	50:S2:15:U:C6	2.55	0.41
50:S2:118:C:N3	50:S2:119:U:C6	2.85	0.41
50:S2:126:G:O6	57:SG:196:LYS:HA	2.20	0.41
50:S2:309:G:C6	50:S2:310:C:C4	3.07	0.41
50:S2:452:G:H2'	50:S2:453:C:H6	1.85	0.41
50:S2:511:U:H2'	50:S2:512:A:C8	2.56	0.41
50:S2:529:A:C2	50:S2:530:U:C6	3.09	0.41
50:S2:553:U:O4	50:S2:554:A:N6	2.53	0.41
50:S2:555:A:N1	50:S2:557:U:C5	2.88	0.41
50:S2:563:G:N1	50:S2:564:A:N7	2.69	0.41
50:S2:827:A:N7	50:S2:828:G:N7	2.69	0.41
50:S2:936:G:C2	50:S2:937:C:C2	3.08	0.41
50:S2:982:G:C2	50:S2:1045:U:H1'	2.55	0.41
50:S2:1027:A:C6	50:S2:1028:A:H1'	2.56	0.41
50:S2:1040:G:C8	50:S2:1040:G:C5'	3.03	0.41
50:S2:1231:C:H3'	50:S2:1232:U:C6	2.55	0.41
50:S2:1278:A:C4	50:S2:1279:C:C5	3.09	0.41
50:S2:1291:A:O5'	82:Sf:146:LEU:HG	2.20	0.41
50:S2:1351:G:H4'	51:SA:110:ASN:H	1.84	0.41
50:S2:1419:C:O2'	70:ST:132:ASP:CG	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1669:G:N2	50:S2:1670:C:C2	2.88	0.41
50:S2:1715:A:C2	50:S2:1819:A:C2	3.08	0.41
50:S2:1838:U:O5'	50:S2:1838:U:H6	2.04	0.41
50:S2:1839:U:H2'	50:S2:1840:U:H6	1.84	0.41
51:SA:55:TRP:HE1	51:SA:59:LEU:HG	1.86	0.41
52:SB:150:ILE:HG12	68:SR:128:PHE:HD1	1.77	0.41
54:SD:65:ARG:O	54:SD:69:LEU:HG	2.20	0.41
55:SE:67:GLN:HG2	55:SE:69:PHE:CE2	2.56	0.41
56:SF:140:ASP:OD1	56:SF:140:ASP:N	2.53	0.41
60:SJ:108:ARG:HA	60:SJ:108:ARG:HE	1.85	0.41
62:SL:99:TYR:HD2	74:SX:13:LEU:CD1	2.34	0.41
64:SN:125:LEU:HD22	64:SN:129:TYR:HE2	1.83	0.41
65:SO:55:ARG:O	65:SO:56:VAL:C	2.64	0.41
67:SQ:30:GLY:HA2	67:SQ:67:ASP:HA	2.02	0.41
69:SS:23:ARG:HD3	76:SZ:48:VAL:CB	2.50	0.41
77:Sa:93:LYS:HE3	77:Sa:93:LYS:HB2	1.85	0.41
79:Sc:15:THR:CG2	79:Sc:33:GLU:HG2	2.51	0.41
85:S5:5:G:H8	85:S5:5:G:O5'	2.04	0.41
86:S6:13:C:O2	86:S6:14:C:C4	2.26	0.41
86:S6:63:G:C2'	86:S6:64:A:C5'	2.89	0.41
86:S6:65:G:C2	86:S6:66:U:N3	2.88	0.41
1:5:29:G:O6	1:5:53:C:N3	2.53	0.41
1:5:175:C:H2'	1:5:176:G:H8	1.86	0.41
1:5:209:U:N3	1:5:211:G:C8	2.88	0.41
1:5:288:G:C2	1:5:289:C:C2	3.07	0.41
1:5:671:G:C2	1:5:672:C:C5	3.09	0.41
1:5:722:G:H21	6:C:343:GLN:CD	2.29	0.41
1:5:742:G:N3	1:5:742:G:H2'	2.35	0.41
1:5:986:C:C4	1:5:1068:G:C2	3.08	0.41
1:5:1095:A:C5	1:5:1096:C:C5	3.09	0.41
1:5:1173:G:C4	1:5:1174:G:C8	3.08	0.41
1:5:1269:G:C5	1:5:2111:G:C6	3.09	0.41
1:5:1337:A:C2	1:5:1658:G:N3	2.87	0.41
1:5:1358:G:H2'	1:5:1359:G:C1'	2.44	0.41
1:5:1367:C:C6	1:5:1367:C:H5''	2.55	0.41
1:5:1422:G:C2	1:5:1464:C:C2	3.09	0.41
1:5:1446:C:N3	1:5:1447:C:C5	2.88	0.41
1:5:1488:G:C4	1:5:1489:G:C8	3.08	0.41
1:5:1650:A:C3'	1:5:1651:G:H5''	2.50	0.41
1:5:1757:U:O2	1:5:1758:G:C8	2.71	0.41
1:5:2283:G:O2'	1:5:2284:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2294:G:C6	1:5:2295:C:C4	3.08	0.41
1:5:2409:U:H5	1:5:2410:C:C5	2.38	0.41
1:5:2498:C:N3	1:5:2499:C:C6	2.83	0.41
1:5:2554:U:O4	1:5:2762:G:C2'	2.69	0.41
1:5:2560:C:O2	1:5:2560:C:H2'	2.20	0.41
1:5:2767:U:H3'	1:5:2769:U:H6	1.86	0.41
1:5:3702:A:C8	1:5:3774:A:C4	3.09	0.41
1:5:3928:A:H5'	16:N:89:VAL:HG11	2.03	0.41
1:5:3956:G:C2	1:5:3966:A:O4'	2.72	0.41
1:5:4162:C:O2	1:5:4162:C:O4'	2.38	0.41
1:5:4167:G:N1	1:5:4168:G:C5	2.88	0.41
1:5:4232:U:H1'	1:5:4233:A:OP2	2.21	0.41
1:5:4349:C:H3'	1:5:4350:C:H5''	2.03	0.41
1:5:4368:G:N2	43:o:26:TYR:HE2	2.18	0.41
1:5:4580:U:C4	1:5:4581:G:C5	3.08	0.41
1:5:4656:A:N3	1:5:4656:A:O4'	2.53	0.41
1:5:4683:U:H2'	1:5:4684:A:O5'	2.21	0.41
1:5:4735:G:N1	1:5:4736:C:C5	2.88	0.41
1:5:4770:U:O2'	1:5:4771:C:C6	2.73	0.41
1:5:4865:C:C2	1:5:4866:C:C6	3.09	0.41
1:5:4912:G:OP1	1:5:4913:G:OP2	2.37	0.41
1:5:4956:A:C2	1:5:4957:C:C6	3.07	0.41
1:5:5006:U:C2	1:5:5042:A:C8	3.08	0.41
3:8:27:U:N3	3:8:28:C:C5	2.88	0.41
3:8:97:A:C6	3:8:98:C:C4	3.09	0.41
3:8:111:U:O2	3:8:111:U:C3'	2.68	0.41
6:C:156:ASP:OD1	6:C:254:GLU:HB3	2.20	0.41
6:C:197:ARG:O	6:C:198:ASN:ND2	2.54	0.41
10:G:102:TYR:OH	10:G:208:ASN:N	2.50	0.41
24:V:57:VAL:HG23	24:V:84:GLN:CG	2.44	0.41
32:d:25:TYR:HB3	32:d:52:PHE:HE2	1.85	0.41
35:g:3:GLN:HE22	35:g:30:ILE:HB	1.85	0.41
44:p:68:ALA:C	44:p:69:TRP:CE3	2.98	0.41
45:r:107:ARG:HH11	45:r:107:ARG:CG	2.34	0.41
46:z:143:ASN:HA	46:z:147:LYS:HB2	2.02	0.41
50:S2:170:A:C6	50:S2:171:A:C6	3.08	0.41
50:S2:189:U:C4	50:S2:190:G:C4	3.08	0.41
50:S2:337:C:C4	50:S2:338:G:N7	2.87	0.41
50:S2:408:A:C2'	50:S2:409:C:O5'	2.68	0.41
50:S2:441:C:OP2	59:SI:2:GLY:HA3	2.20	0.41
50:S2:443:U:C4'	57:SG:90:GLY:HA3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:445:A:N6	50:S2:446:G:C2	2.89	0.41
50:S2:449:A:O2'	55:SE:3:ARG:NH2	2.54	0.41
50:S2:476:A:C5	50:S2:477:G:C8	3.08	0.41
50:S2:610:G:N2	50:S2:611:G:H1'	2.34	0.41
50:S2:922:A:C2	50:S2:1021:U:C2	3.08	0.41
50:S2:947:G:C2	50:S2:948:C:C6	3.09	0.41
50:S2:989:C:C2	50:S2:1001:A:N6	2.88	0.41
50:S2:1049:A:C4	50:S2:1070:A:H2	2.30	0.41
50:S2:1053:C:H2'	50:S2:1054:G:H5'	2.03	0.41
50:S2:1175:G:C4	50:S2:1176:G:C8	3.08	0.41
50:S2:1206:G:N1	50:S2:1208:A:C5	2.88	0.41
50:S2:1278:A:C2'	50:S2:1279:C:H5'	2.51	0.41
50:S2:1281:G:C5	50:S2:1282:A:C8	3.08	0.41
50:S2:1283:C:H1'	63:SM:91:LEU:HD13	2.02	0.41
50:S2:1303:C:N4	50:S2:1304:U:C5	2.88	0.41
50:S2:1353:A:C6	50:S2:1354:G:C5	3.08	0.41
50:S2:1474:A:C2'	50:S2:1475:G:O5'	2.69	0.41
50:S2:1526:G:H2'	50:S2:1527:C:O4'	2.21	0.41
50:S2:1584:G:C4	50:S2:1586:U:O4'	2.73	0.41
50:S2:1759:G:C6	50:S2:1760:G:N7	2.88	0.41
50:S2:1849:G:O2'	50:S2:1850:A:O5'	2.39	0.41
53:SC:72:ASP:O	53:SC:73:MET:C	2.64	0.41
53:SC:170:TRP:CH2	73:SW:97:ARG:CD	3.03	0.41
54:SD:7:LYS:NZ	71:SU:113:GLU:OE2	2.38	0.41
54:SD:71:ALA:HB1	61:SK:20:VAL:HG12	2.02	0.41
55:SE:73:ASP:C	55:SE:164:LEU:HD11	2.45	0.41
55:SE:253:ASP:O	55:SE:257:ALA:N	2.50	0.41
59:SI:142:SER:O	59:SI:144:LYS:N	2.54	0.41
60:SJ:63:LEU:HD11	60:SJ:69:ARG:NH2	2.35	0.41
62:SL:76:VAL:HG12	62:SL:125:ILE:CD1	2.50	0.41
63:SM:65:VAL:C	63:SM:69:LEU:HG	2.46	0.41
65:SO:52:THR:OG1	65:SO:53:ILE:N	2.52	0.41
68:SR:21:TYR:CE1	68:SR:58:MET:SD	3.14	0.41
74:SX:135:LYS:C	81:Se:13:ARG:HH22	2.27	0.41
77:Sa:30:VAL:HG11	77:Sa:35:ALA:HB2	2.02	0.41
83:Sg:32:LEU:HB2	83:Sg:71:ILE:HD11	2.03	0.41
84:S4:20:U:O2'	84:S4:21:U:P	2.79	0.41
85:S5:67:C:N4	85:S5:68:C:N4	2.68	0.41
86:S6:3:C:C2	86:S6:71:G:N2	2.88	0.41
1:5:289:C:O2	1:5:290:U:C6	2.73	0.41
1:5:296:A:H8	1:5:296:A:C5'	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:308:G:H8	37:i:31:GLY:HA3	1.85	0.41
1:5:423:G:H2'	1:5:424:U:C6	2.55	0.41
1:5:435:A:H61	1:5:1312:A:H2	1.66	0.41
1:5:466:A:N3	1:5:467:U:C5	2.86	0.41
1:5:647:G:N3	1:5:647:G:H2'	2.34	0.41
1:5:689:U:O2	1:5:690:C:C6	2.74	0.41
1:5:708:G:N2	1:5:709:C:H1'	2.34	0.41
1:5:723:A:C2'	1:5:724:C:O5'	2.68	0.41
1:5:744:G:C2	1:5:745:G:C5	3.09	0.41
1:5:1070:G:N1	1:5:1071:C:C6	2.89	0.41
1:5:1085:C:N3	1:5:1213:G:C6	2.88	0.41
1:5:1195:G:C2	1:5:1196:G:C5	3.09	0.41
1:5:1219:G:N2	1:5:1220:G:C4	2.88	0.41
1:5:1233:G:N1	1:5:1234:G:C5	2.88	0.41
1:5:1265:G:C5	1:5:1266:G:C5	3.09	0.41
1:5:1267:C:H2'	1:5:2121:C:N4	2.31	0.41
1:5:1334:A:C5	1:5:1335:G:N7	2.89	0.41
1:5:1341:U:H2'	1:5:1342:A:C8	2.56	0.41
1:5:1437:C:H1'	1:5:2097:U:H5'	2.03	0.41
1:5:1492:G:C5'	30:b:45:PHE:HZ	2.33	0.41
1:5:1548:G:O2'	1:5:2812:A:N3	2.48	0.41
1:5:1642:A:N3	1:5:1642:A:C2'	2.82	0.41
1:5:1664:U:H2'	1:5:1665:C:H6	1.85	0.41
1:5:1681:G:H21	29:a:40:HIS:HB2	1.86	0.41
1:5:1696:C:H1'	1:5:1697:G:O5'	2.20	0.41
1:5:1818:G:N7	1:5:1821:G:O6	2.51	0.41
1:5:1855:G:C2	1:5:1856:C:C2	3.08	0.41
1:5:1866:U:O2'	1:5:1867:A:C5'	2.69	0.41
1:5:1876:U:O4	30:b:10:HIS:NE2	2.53	0.41
1:5:1899:G:C4	1:5:1900:C:H5	2.34	0.41
1:5:1925:G:C2	1:5:1926:C:C6	3.09	0.41
1:5:2036:C:O2	1:5:2037:C:C6	2.73	0.41
1:5:2046:G:N9	17:O:60:LYS:HD3	2.36	0.41
1:5:2081:C:N3	1:5:2082:G:C5	2.89	0.41
1:5:2270:G:C6	1:5:2271:C:C4	3.09	0.41
1:5:2304:U:C4	1:5:2332:A:N7	2.88	0.41
1:5:2394:G:H1'	1:5:2397:G:N2	2.36	0.41
1:5:2576:G:N3	1:5:2576:G:H2'	2.36	0.41
1:5:2605:G:C2	1:5:2606:G:C4	3.09	0.41
1:5:2605:G:C4	1:5:2606:G:C8	3.09	0.41
1:5:2682:G:C2	1:5:2683:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2752:G:H8	1:5:2752:G:H5''	1.85	0.41
1:5:2854:G:O6	1:5:2856:C:C1'	2.68	0.41
1:5:3590:G:N3	1:5:3591:C:HI1'	2.35	0.41
1:5:3653:A:H8	1:5:3653:A:P	2.43	0.41
1:5:3719:A:O2'	1:5:3934:G:O2'	2.33	0.41
1:5:3733:A:C4	1:5:3734:U:C5	3.09	0.41
1:5:3736:A:O2'	1:5:3737:A:P	2.79	0.41
1:5:4283:G:C5	1:5:4284:C:H5	2.38	0.41
1:5:4433:G:C2	1:5:4434:C:C2	3.09	0.41
1:5:4483:C:C2'	1:5:4484:A:O5'	2.68	0.41
1:5:4531:U:O4	85:S5:76:A:C6	2.73	0.41
1:5:4942:C:H4'	1:5:4944:C:P	2.61	0.41
1:5:4981:G:C6	1:5:4982:A:C5	3.08	0.41
1:5:5022:U:C4	1:5:5024:C:C5	3.08	0.41
2:7:16:A:C4	2:7:17:C:C6	3.09	0.41
2:7:29:C:O2'	2:7:30:C:H5'	2.21	0.41
2:7:59:G:C4	2:7:60:G:C8	3.08	0.41
3:8:80:A:C8	3:8:81:C:C1'	3.03	0.41
3:8:102:G:H5''	38:j:39:TYR:OH	2.20	0.41
5:B:393:LYS:O	5:B:395:ASP:N	2.54	0.41
6:C:47:ASN:OD1	6:C:47:ASN:N	2.52	0.41
6:C:112:HIS:HE1	16:N:202:ARG:HE	1.66	0.41
8:E:104:LYS:HG3	8:E:107:LYS:HB3	2.01	0.41
9:F:239:GLU:C	9:F:241:GLN:N	2.78	0.41
14:L:45:ARG:HG2	14:L:46:ILE:HG23	2.03	0.41
18:P:31:GLU:OE2	18:P:60:PHE:HA	2.21	0.41
20:R:120:TYR:O	20:R:121:HIS:C	2.63	0.41
22:T:43:LYS:HA	22:T:58:HIS:CE1	2.56	0.41
23:U:104:ALA:HA	23:U:110:TYR:HD1	1.86	0.41
25:W:57:ARG:HG2	25:W:57:ARG:NH1	2.35	0.41
26:X:142:PRO:C	26:X:144:TYR:H	2.29	0.41
29:a:75:LEU:HB3	29:a:117:LEU:HD13	2.02	0.41
33:e:6:PRO:CA	33:e:74:PHE:HE1	2.34	0.41
33:e:58:ILE:C	33:e:60:TYR:N	2.78	0.41
40:l:21:ARG:NH1	47:1:273:ARG:CD	2.84	0.41
40:l:21:ARG:HH11	47:1:273:ARG:CD	2.34	0.41
43:o:3:ASN:OD1	43:o:3:ASN:C	2.63	0.41
46:z:187:VAL:HA	46:z:190:LEU:HG	2.01	0.41
50:S2:177:G:H21	50:S2:178:C:H41	1.67	0.41
50:S2:295:C:H2'	50:S2:296:U:O4'	2.20	0.41
50:S2:431:G:C6	50:S2:432:G:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:432:G:N3	50:S2:432:G:H2'	2.36	0.41
50:S2:549:C:N3	50:S2:550:C:C6	2.88	0.41
50:S2:601:G:O2'	50:S2:602:G:C8	2.59	0.41
50:S2:656:G:H5'	50:S2:662:G:H22	1.85	0.41
50:S2:697:G:N1	50:S2:734:C:C2	2.89	0.41
50:S2:818:A:N6	50:S2:819:G:C5	2.89	0.41
50:S2:1175:G:C6	50:S2:1176:G:N7	2.89	0.41
50:S2:1181:A:O2'	50:S2:1182:A:C5'	2.68	0.41
50:S2:1229:G:C5	50:S2:1230:C:C6	3.09	0.41
50:S2:1291:A:C2	82:Sf:140:TYR:CB	3.04	0.41
50:S2:1299:A:C2'	50:S2:1301:A:H5'	2.50	0.41
50:S2:1325:G:N3	50:S2:1327:G:C8	2.88	0.41
50:S2:1380:C:H1'	51:SA:113:GLN:NE2	2.35	0.41
50:S2:1406:G:C4	50:S2:1407:U:C6	3.09	0.41
50:S2:1417:C:O2	50:S2:1419:C:C5	2.72	0.41
50:S2:1454:A:C5	50:S2:1476:A:N3	2.89	0.41
50:S2:1537:A:C6	50:S2:1538:C:C6	3.09	0.41
50:S2:1545:A:C6	50:S2:1588:A:C5	3.08	0.41
50:S2:1571:G:H2'	50:S2:1572:C:O4'	2.21	0.41
50:S2:1691:U:C5	50:S2:1692:U:O4	2.73	0.41
50:S2:1692:U:C5'	50:S2:1692:U:C6	2.95	0.41
50:S2:1703:C:O2	50:S2:1833:C:N3	2.53	0.41
50:S2:1752:C:C2	50:S2:1753:C:C6	3.09	0.41
50:S2:1832:A:C2'	50:S2:1833:C:O5'	2.69	0.41
50:S2:1860:A:C6	50:S2:1862:G:C6	3.08	0.41
52:SB:139:CYS:SG	52:SB:140:VAL:N	2.93	0.41
53:SC:209:VAL:HG11	53:SC:233:LEU:CD1	2.50	0.41
54:SD:106:ARG:HG2	54:SD:175:VAL:HB	2.02	0.41
54:SD:225:GLU:OE2	54:SD:226:GLN:N	2.53	0.41
57:SG:223:LYS:O	57:SG:227:GLN:N	2.53	0.41
60:SJ:39:ASN:OD1	60:SJ:39:ASN:C	2.62	0.41
61:SK:16:PHE:CE1	61:SK:89:ILE:HD12	2.55	0.41
62:SL:35:ARG:NH1	62:SL:53:GLY:O	2.53	0.41
62:SL:37:TYR:CD1	62:SL:37:TYR:C	2.99	0.41
62:SL:108:ASN:OD1	62:SL:108:ASN:N	2.45	0.41
62:SL:125:ILE:HB	62:SL:146:THR:CG2	2.51	0.41
66:SP:51:ARG:C	66:SP:53:GLN:OE1	2.64	0.41
67:SQ:34:VAL:HG21	67:SQ:84:ILE:HD12	2.02	0.41
70:ST:10:ASN:HB2	70:ST:13:GLU:OE2	2.21	0.41
74:SX:103:ALA:HB2	74:SX:123:VAL:HG21	2.02	0.41
79:Sc:33:GLU:OE1	79:Sc:33:GLU:HA	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:Sg:15:ASN:O	83:Sg:15:ASN:ND2	2.47	0.41
83:Sg:87:LEU:HD11	83:Sg:122:SER:CB	2.50	0.41
83:Sg:87:LEU:HD11	83:Sg:122:SER:HB3	2.02	0.41
83:Sg:251:ALA:HB2	83:Sg:289:LEU:HD22	2.03	0.41
85:S5:2:C:H41	85:S5:71:G:H1	1.57	0.41
85:S5:52:G:N1	85:S5:63:G:C5	2.88	0.41
86:S6:22:G:N3	86:S6:23:A:C2	2.86	0.41
86:S6:23:A:C5	86:S6:24:G:C5	3.04	0.41
86:S6:29:G:C6	86:S6:42:C:C4	3.08	0.41
1:5:18:C:O2	1:5:19:G:C8	2.74	0.41
1:5:101:A:N1	1:5:102:G:C4	2.89	0.41
1:5:113:A:C5	1:5:114:G:C8	3.08	0.41
1:5:167:C:C4	1:5:269:G:N1	2.89	0.41
1:5:187:U:H3'	1:5:245:C:O2	2.19	0.41
1:5:250:C:H2'	1:5:251:C:O4'	2.20	0.41
1:5:454:U:H4'	1:5:455:C:C5'	2.51	0.41
1:5:496:G:N1	1:5:658:C:N3	2.69	0.41
1:5:755:C:O2	1:5:756:G:C8	2.72	0.41
1:5:911:U:O2	1:5:911:U:H2'	2.21	0.41
1:5:924:C:N3	1:5:925:C:C5	2.89	0.41
1:5:1072:C:O2	1:5:1072:C:H2'	2.21	0.41
1:5:1078:A:H2'	1:5:1079:C:H5	1.85	0.41
1:5:1173:G:C5	1:5:1174:G:C8	3.09	0.41
1:5:1199:G:C6	1:5:1200:G:C5	3.08	0.41
1:5:1372:A:C5	1:5:1373:A:C8	3.08	0.41
1:5:1380:G:O2'	1:5:1381:U:O5'	2.32	0.41
1:5:1396:G:O6	29:a:110:LYS:HD3	2.20	0.41
1:5:1558:A:H2'	1:5:1559:G:H8	1.86	0.41
1:5:1570:G:C4	1:5:1571:G:C8	3.09	0.41
1:5:1599:A:C2'	1:5:1600:A:H5''	2.47	0.41
1:5:1620:U:H2'	1:5:1621:A:H8	1.85	0.41
1:5:1676:C:O2'	1:5:3914:U:O4	2.34	0.41
1:5:1751:A:C6	1:5:1752:G:N9	2.89	0.41
1:5:1760:G:O6	1:5:1772:C:N3	2.53	0.41
1:5:1780:A:N6	1:5:1781:U:C6	2.88	0.41
1:5:1886:G:C6	1:5:1887:G:C8	3.09	0.41
1:5:1982:G:O2'	1:5:2010:A:C5'	2.65	0.41
1:5:1991:A:C2'	1:5:1992:U:H1'	2.51	0.41
1:5:2065:G:O2'	34:f:80:ASN:ND2	2.54	0.41
1:5:2115:G:N7	1:5:2116:C:H1'	2.36	0.41
1:5:2392:C:O2	1:5:2392:C:C2'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2479:G:O6	1:5:2480:G:O6	2.39	0.41
1:5:2732:G:C2	1:5:2733:C:C2	3.09	0.41
1:5:2782:U:H4'	1:5:2783:A:OP2	2.21	0.41
1:5:2861:C:O2	1:5:3626:G:C4'	2.68	0.41
1:5:3698:G:C6	1:5:3699:C:N4	2.89	0.41
1:5:3703:G:C4	1:5:3704:U:C6	3.09	0.41
1:5:3753:G:C8	1:5:3776:G:C5	3.08	0.41
1:5:3898:G:O3'	5:B:257:TRP:HA	2.21	0.41
1:5:4039:G:C6	1:5:4040:C:C5	3.09	0.41
1:5:4101:C:C2	1:5:4102:C:C6	3.09	0.41
1:5:4108:G:N3	1:5:4109:G:C8	2.88	0.41
1:5:4122:G:O4'	35:g:93:ARG:HD3	2.21	0.41
1:5:4184:G:N2	1:5:4185:G:H1'	2.36	0.41
1:5:4233:A:OP1	43:o:97:LYS:HA	2.21	0.41
1:5:4372:U:O2	1:5:4377:G:H1'	2.20	0.41
1:5:4455:G:N2	1:5:4456:C:N1	2.69	0.41
1:5:4498:U:N3	1:5:4500:U:O5'	2.53	0.41
1:5:4544:A:C8	1:5:4545:G:C1'	3.03	0.41
1:5:4586:G:OP1	17:O:72:HIS:CD2	2.74	0.41
1:5:4608:G:C5	1:5:4609:G:C5	3.09	0.41
1:5:4665:A:C6	1:5:4666:G:C5	3.09	0.41
1:5:4737:G:H5'	1:5:4737:G:C8	2.55	0.41
1:5:4748:U:H2'	1:5:4749:C:O4'	2.21	0.41
1:5:4753:U:P	34:f:4:ARG:NH1	2.93	0.41
1:5:4896:G:C2	1:5:4897:G:N9	2.88	0.41
1:5:4934:A:C6	1:5:4935:C:C6	3.06	0.41
1:5:4946:U:O2	1:5:4946:U:C2'	2.69	0.41
1:5:4984:C:H2'	1:5:4985:U:C5'	2.51	0.41
1:5:5008:C:H2'	1:5:5009:G:O4'	2.20	0.41
1:5:5019:A:N1	1:5:5020:G:C5	2.88	0.41
2:7:54:A:N7	13:J:12:MET:HG2	2.36	0.41
2:7:119:U:C4	7:D:261:VAL:HG21	2.56	0.41
6:C:71:ARG:HB3	6:C:71:ARG:CZ	2.50	0.41
6:C:77:PRO:O	6:C:90:GLY:HA2	2.21	0.41
6:C:339:THR:HA	6:C:342:ARG:HB3	2.03	0.41
7:D:27:LYS:HE3	13:J:147:ARG:HH21	1.82	0.41
7:D:41:LYS:CG	22:T:93:ILE:HD11	2.45	0.41
8:E:280:HIS:CB	34:f:42:TYR:HE1	2.34	0.41
9:F:148:ASN:HD22	9:F:149:LEU:H	1.69	0.41
10:G:166:LEU:HD23	16:N:7:ILE:HD13	2.02	0.41
11:H:38:PHE:HB3	11:H:41:ILE:CG2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:L:9:ILE:HG13	29:a:52:TYR:CE2	2.55	0.41
14:L:76:PHE:HD2	14:L:80:GLU:OE1	2.04	0.41
17:O:27:VAL:HG12	17:O:98:ALA:HB1	2.01	0.41
28:Z:123:LYS:O	28:Z:124:THR:CB	2.68	0.41
32:d:116:ASN:ND2	32:d:116:ASN:C	2.78	0.41
36:h:73:TYR:HE2	36:h:80:PRO:HG3	1.86	0.41
38:j:79:ARG:HG3	38:j:82:ILE:CG2	2.51	0.41
46:z:93:LEU:HD11	46:z:110:PHE:HZ	1.86	0.41
46:z:149:ASP:O	46:z:152:LYS:C	2.63	0.41
50:S2:149:A:O2'	50:S2:150:A:O4'	2.36	0.41
50:S2:478:G:H2'	50:S2:479:C:H6	1.86	0.41
50:S2:642:U:C6	50:S2:642:U:C3'	3.04	0.41
50:S2:834:C:C2	50:S2:841:G:N2	2.89	0.41
50:S2:871:U:H6	50:S2:871:U:C5'	2.33	0.41
50:S2:876:C:N3	50:S2:878:G:C8	2.89	0.41
50:S2:926:A:N1	50:S2:927:C:C4	2.89	0.41
50:S2:959:G:C8	65:SO:38:ASN:ND2	2.89	0.41
50:S2:1126:G:N2	50:S2:1127:C:N1	2.69	0.41
50:S2:1291:A:O5'	82:Sf:146:LEU:CG	2.69	0.41
50:S2:1292:C:O5'	82:Sf:149:CYS:O	2.38	0.41
50:S2:1330:G:O2'	50:S2:1331:C:P	2.79	0.41
50:S2:1351:G:C5	50:S2:1352:G:C8	3.09	0.41
50:S2:1452:A:C5	50:S2:1475:G:N1	2.89	0.41
50:S2:1495:G:N7	50:S2:1496:U:C6	2.87	0.41
50:S2:1541:G:N2	50:S2:1593:C:H1'	2.35	0.41
50:S2:1744:G:N1	50:S2:1789:G:C6	2.89	0.41
50:S2:1806:A:C6	50:S2:1807:C:C5	3.08	0.41
51:SA:66:VAL:HG22	51:SA:186:ARG:NH2	2.36	0.41
53:SC:65:LYS:HB2	53:SC:273:LEU:HD22	2.02	0.41
54:SD:19:ALA:HB1	80:Sd:46:TYR:HD2	1.86	0.41
56:SF:152:TRP:O	56:SF:156:THR:N	2.34	0.41
58:SH:43:LEU:HD21	58:SH:71:SER:OG	2.20	0.41
60:SJ:104:ASP:OD1	60:SJ:104:ASP:N	2.53	0.41
65:SO:54:CYS:SG	65:SO:84:ARG:HB3	2.61	0.41
68:SR:59:LYS:O	68:SR:63:ARG:HB2	2.21	0.41
83:Sg:245:ARG:HD3	83:Sg:247:TRP:CZ3	2.56	0.41
86:S6:23:A:N7	86:S6:24:G:C6	2.86	0.41
1:5:68:U:O4	1:5:69:A:C4	2.74	0.41
1:5:128:C:H2'	1:5:129:C:C6	2.56	0.41
1:5:138:G:H3'	1:5:139:G:H5'	2.02	0.41
1:5:186:G:H1'	1:5:187:U:C1'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:419:A:N3	1:5:1332:C:O2'	2.49	0.41
1:5:431:G:C1'	1:5:3889:G:C2	3.03	0.41
1:5:450:G:H22	1:5:1294:A:H2'	1.81	0.41
1:5:468:U:O2'	1:5:469:C:H4'	2.21	0.41
1:5:497:G:N2	1:5:657:C:N3	2.65	0.41
1:5:689:U:N3	1:5:690:C:C6	2.89	0.41
1:5:732:A:C5	1:5:733:A:N3	2.88	0.41
1:5:752:G:C2	1:5:753:C:H1'	2.55	0.41
1:5:909:A:N3	1:5:910:G:C8	2.88	0.41
1:5:916:C:O2	1:5:916:C:H2'	2.20	0.41
1:5:944:A:H1'	6:C:335:MET:HE1	2.03	0.41
1:5:961:G:C4'	1:5:962:C:OP1	2.69	0.41
1:5:1086:C:C2	1:5:1212:G:N1	2.89	0.41
1:5:1212:G:C4	1:5:1213:G:C8	3.08	0.41
1:5:1218:G:O5'	1:5:1219:G:OP2	2.39	0.41
1:5:1234:G:C4	1:5:1235:G:N7	2.89	0.41
1:5:1258:G:C4	1:5:1259:G:C8	3.09	0.41
1:5:1274:A:O2'	1:5:1275:G:P	2.78	0.41
1:5:1334:A:C2	1:5:1335:G:C8	3.09	0.41
1:5:1377:G:C8	1:5:1377:G:C3'	3.03	0.41
1:5:1380:G:H1'	1:5:1381:U:H3	1.86	0.41
1:5:1453:G:N1	1:5:1454:G:C5	2.89	0.41
1:5:1509:C:O2	1:5:1509:C:H2'	2.20	0.41
1:5:1511:U:H2'	1:5:1512:G:O4'	2.20	0.41
1:5:1629:G:N3	1:5:1631:A:C5	2.88	0.41
1:5:1638:A:H5'	38:j:8:PHE:HE1	1.85	0.41
1:5:1669:A:C2	1:5:1852:U:H4'	2.55	0.41
1:5:1675:C:C2	1:5:1681:G:N2	2.89	0.41
1:5:1697:G:H8	9:F:165:ASN:HA	1.86	0.41
1:5:1760:G:C6	1:5:1761:G:N7	2.89	0.41
1:5:1895:G:C2'	1:5:1896:A:O5'	2.68	0.41
1:5:1912:G:C6	1:5:1913:C:C4	3.09	0.41
1:5:1918:U:OP1	34:f:80:ASN:HB2	2.21	0.41
1:5:1965:G:O2'	1:5:4695:C:C4'	2.69	0.41
1:5:1995:G:C6	1:5:1996:C:N4	2.89	0.41
1:5:1998:A:C2	1:5:2020:U:O4'	2.74	0.41
1:5:2000:G:N3	1:5:2000:G:C3'	2.83	0.41
1:5:2039:G:O2'	1:5:2040:A:OP1	2.33	0.41
1:5:2059:C:O2	1:5:2060:G:C8	2.74	0.41
1:5:2068:C:C2'	1:5:2069:A:H5''	2.50	0.41
1:5:2084:C:H6	1:5:2084:C:OP1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2086:G:C2	1:5:2087:C:C2	3.08	0.41
1:5:2263:A:O2'	1:5:2264:C:H2'	2.21	0.41
1:5:2301:G:C4	1:5:2302:C:C6	3.08	0.41
1:5:2408:U:O4'	1:5:2409:U:C4	2.74	0.41
1:5:2463:G:C2	1:5:2464:C:C2	3.09	0.41
1:5:2477:A:N1	1:5:2478:C:C4	2.88	0.41
1:5:2597:G:C2'	1:5:2598:A:O5'	2.69	0.41
1:5:2623:A:N1	1:5:2624:G:C5	2.89	0.41
1:5:2646:C:O2	1:5:2646:C:C2'	2.66	0.41
1:5:2677:G:N3	1:5:2677:G:H2'	2.36	0.41
1:5:2724:G:N1	1:5:2726:G:C6	2.89	0.41
1:5:2745:A:H2'	1:5:2746:A:C8	2.56	0.41
1:5:2891:U:H2'	1:5:2892:C:O4'	2.21	0.41
1:5:3615:G:N3	1:5:3615:G:C2'	2.84	0.41
1:5:3641:U:C5	1:5:3646:A:N7	2.89	0.41
1:5:3643:A:N1	38:j:3:LYS:HG3	2.36	0.41
1:5:3656:A:C2	1:5:3657:U:C4	3.08	0.41
1:5:3692:A:C6	1:5:3693:U:C6	3.08	0.41
1:5:3698:G:C2	1:5:3699:C:C4	3.08	0.41
1:5:3699:C:O2	1:5:3699:C:H2'	2.20	0.41
1:5:3709:U:C5	50:S2:970:G:C2	3.09	0.41
1:5:3738:G:C8	1:5:3738:G:C3'	3.04	0.41
1:5:3756:A:N1	1:5:3757:G:C5	2.89	0.41
1:5:3786:U:H6	1:5:3786:U:C5'	2.33	0.41
1:5:3801:U:O2'	1:5:3802:U:O5'	2.38	0.41
1:5:3808:C:H4'	50:S2:1816:G:H4'	2.03	0.41
1:5:3874:G:C5	1:5:3875:G:C8	3.09	0.41
1:5:3956:G:H21	1:5:3966:A:C1'	2.25	0.41
1:5:4044:U:O2	1:5:4048:A:N7	2.54	0.41
1:5:4100:C:H42	1:5:4101:C:N4	2.18	0.41
1:5:4166:G:C6	1:5:4167:G:C5	3.09	0.41
1:5:4227:U:H2'	1:5:4228:G:O4'	2.21	0.41
1:5:4258:C:N3	1:5:4259:C:C4	2.88	0.41
1:5:4266:G:C6	1:5:4279:A:C5	3.08	0.41
1:5:4286:C:H2'	1:5:4287:G:C8	2.56	0.41
1:5:4313:A:C2	1:5:4314:C:N1	2.89	0.41
1:5:4404:U:C4	1:5:4436:U:O4	2.74	0.41
1:5:4424:A:C5'	41:m:122:ARG:HE	2.33	0.41
1:5:4524:G:N3	1:5:4525:C:C6	2.89	0.41
1:5:4608:G:C4	1:5:4609:G:C8	3.09	0.41
1:5:4608:G:C2	1:5:4609:G:H1'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4661:G:C2	1:5:4662:C:C2	3.09	0.41
1:5:4688:C:C4	1:5:4689:U:C4	3.08	0.41
1:5:4745:G:C2'	1:5:4746:C:H5	2.32	0.41
1:5:4754:G:N1	1:5:4880:C:C4	2.89	0.41
1:5:4897:G:C2	1:5:4924:C:C2	3.09	0.41
1:5:4914:C:C2	1:5:4915:G:C8	3.08	0.41
1:5:4929:C:H6	1:5:4929:C:C5'	2.29	0.41
1:5:4981:G:O2'	18:P:69:ARG:HB3	2.21	0.41
1:5:4988:U:O2	1:5:4988:U:C2'	2.66	0.41
1:5:4990:C:N3	5:B:113:GLU:OE2	2.54	0.41
1:5:5036:C:C2	1:5:5037:U:C5	3.09	0.41
2:7:8:G:P	7:D:33:ARG:NH2	2.94	0.41
2:7:18:C:H42	2:7:19:C:H41	1.69	0.41
2:7:55:A:C2	2:7:56:G:N7	2.89	0.41
2:7:57:C:H2'	2:7:58:A:O4'	2.21	0.41
2:7:69:U:O2	2:7:70:G:C8	2.74	0.41
3:8:30:U:C2	3:8:31:G:N7	2.89	0.41
3:8:31:G:C2	3:8:32:C:C2	3.09	0.41
3:8:52:A:N3	3:8:52:A:H2'	2.36	0.41
3:8:66:A:H2'	3:8:67:U:H6	1.82	0.41
3:8:66:A:C2	3:8:67:U:N3	2.89	0.41
3:8:70:G:C2	3:8:87:G:N3	2.89	0.41
3:8:82:A:N1	3:8:83:C:H5''	2.35	0.41
3:8:147:G:C2	3:8:148:A:C8	3.09	0.41
4:A:192:LYS:C	4:A:193:ARG:HD3	2.45	0.41
5:B:195:ASP:O	5:B:196:TRP:HB2	2.21	0.41
6:C:110:ARG:O	6:C:113:ARG:NH1	2.53	0.41
6:C:142:HIS:HD2	6:C:249:PHE:HB3	1.85	0.41
6:C:172:LYS:CE	6:C:177:TRP:HE1	2.34	0.41
7:D:240:TYR:C	7:D:244:HIS:CE1	2.99	0.41
8:E:174:PRO:O	8:E:175:LEU:C	2.64	0.41
8:E:219:ARG:C	8:E:220:LYS:HG2	2.46	0.41
10:G:32:PHE:CD2	28:Z:55:ALA:HB2	2.56	0.41
10:G:53:ARG:HB3	10:G:54:PHE:CE2	2.55	0.41
11:H:55:LEU:HD22	11:H:77:VAL:HG11	2.03	0.41
11:H:159:ALA:O	11:H:163:GLN:HB2	2.20	0.41
15:M:6:PHE:O	15:M:7:VAL:C	2.64	0.41
15:M:86:TRP:NE1	15:M:92:ALA:HB2	2.35	0.41
16:N:61:ILE:HD12	16:N:131:GLU:OE2	2.20	0.41
16:N:135:ILE:CG2	16:N:142:ILE:HD13	2.50	0.41
19:Q:54:SER:O	19:Q:55:ARG:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:38:ARG:O	20:R:39:GLN:HB3	2.21	0.41
20:R:102:LEU:HD13	20:R:132:PHE:O	2.20	0.41
21:S:84:TYR:CE1	21:S:91:HIS:HB2	2.55	0.41
22:T:19:PHE:O	22:T:21:LYS:HG3	2.20	0.41
26:X:84:GLU:HB3	47:1:404:HIS:CA	2.51	0.41
27:Y:11:ARG:HH22	27:Y:15:ARG:HD3	1.85	0.41
31:c:90:ARG:CZ	31:c:90:ARG:HB2	2.48	0.41
35:g:49:CYS:SG	35:g:86:CYS:SG	3.19	0.41
36:h:88:THR:O	36:h:89:ARG:C	2.64	0.41
38:j:39:TYR:HB3	38:j:40:PRO:HD3	2.01	0.41
42:n:14:LYS:HD2	50:S2:1172:U:H5''	2.03	0.41
44:p:13:LYS:HG3	44:p:14:TYR:HD1	1.85	0.41
45:r:44:ILE:HG22	45:r:45:HIS:N	2.36	0.41
46:z:38:LEU:O	46:z:163:LEU:HD22	2.20	0.41
47:1:166:ASP:O	47:1:170:GLN:N	2.50	0.41
48:2:54:VAL:HA	48:2:57:ILE:HG12	2.02	0.41
50:S2:41:G:H1	50:S2:481:C:H42	1.69	0.41
50:S2:76:U:HO2'	50:S2:77:A:P	2.44	0.41
50:S2:84:A:C2	50:S2:85:A:C8	3.09	0.41
50:S2:106:C:C2	50:S2:107:A:C8	3.04	0.41
50:S2:118:C:C1'	50:S2:445:A:C4	3.04	0.41
50:S2:164:A:H2'	50:S2:165:G:N3	2.36	0.41
50:S2:165:G:C8	50:S2:166:A:C5	2.99	0.41
50:S2:188:C:C4	50:S2:189:U:C5	3.09	0.41
50:S2:200:G:C4	50:S2:201:C:C6	3.09	0.41
50:S2:217:A:H1'	50:S2:309:G:N1	2.36	0.41
50:S2:301:A:C6	50:S2:302:A:N7	2.89	0.41
50:S2:344:U:N3	50:S2:345:U:C5	2.89	0.41
50:S2:369:C:C5'	50:S2:369:C:O2	2.69	0.41
50:S2:377:G:C4	50:S2:378:U:C5	3.09	0.41
50:S2:390:C:C2	50:S2:391:C:C6	3.09	0.41
50:S2:440:G:N2	50:S2:454:U:N3	2.69	0.41
50:S2:475:C:N4	50:S2:476:A:N7	2.69	0.41
50:S2:493:A:O4'	50:S2:574:A:H5'	2.20	0.41
50:S2:531:A:C2	50:S2:532:C:H1'	2.56	0.41
50:S2:534:G:C2	50:S2:535:G:C5	3.09	0.41
50:S2:534:G:N3	50:S2:535:G:C8	2.89	0.41
50:S2:574:A:H4'	75:SY:89:HIS:CB	2.51	0.41
50:S2:582:C:O2	50:S2:582:C:C2'	2.69	0.41
50:S2:584:G:C2	50:S2:585:C:C2	3.09	0.41
50:S2:592:C:O2	50:S2:592:C:O4'	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:600:G:C8	50:S2:631:U:C4	3.06	0.41
50:S2:610:G:N1	50:S2:611:G:C5	2.89	0.41
50:S2:826:A:C8	50:S2:827:A:H1'	2.56	0.41
50:S2:862:A:H2	50:S2:863:U:H1'	1.84	0.41
50:S2:939:U:C2	50:S2:940:U:C5	3.09	0.41
50:S2:992:A:H62	77:Sa:15:ARG:NH1	2.18	0.41
50:S2:1028:A:C6	50:S2:1029:G:H1'	2.56	0.41
50:S2:1032:C:N4	50:S2:1033:G:C6	2.89	0.41
50:S2:1092:G:N1	50:S2:1093:A:N7	2.69	0.41
50:S2:1110:G:C2	50:S2:1111:U:C2	3.08	0.41
50:S2:1129:G:H2'	50:S2:1130:G:C1'	2.51	0.41
50:S2:1205:C:C2'	50:S2:1206:G:O5'	2.68	0.41
50:S2:1228:A:C6	50:S2:1531:A:N1	2.89	0.41
50:S2:1231:C:H2'	50:S2:1232:U:C6	2.56	0.41
50:S2:1246:A:N6	50:S2:1247:C:N4	2.59	0.41
50:S2:1276:A:H3'	50:S2:1277:C:C6	2.56	0.41
50:S2:1278:A:C2	50:S2:1279:C:N1	2.88	0.41
50:S2:1307:U:H3'	50:S2:1308:U:H5''	2.03	0.41
50:S2:1333:U:O2	50:S2:1333:U:H2'	2.20	0.41
50:S2:1342:U:H6	50:S2:1483:A:N6	2.15	0.41
50:S2:1343:U:O2	50:S2:1343:U:C2'	2.69	0.41
50:S2:1431:G:C2	50:S2:1432:U:C6	3.09	0.41
50:S2:1449:G:C2	50:S2:1450:G:N9	2.89	0.41
50:S2:1454:A:N9	50:S2:1476:A:H1'	2.34	0.41
50:S2:1524:G:N2	50:S2:1525:C:C2	2.89	0.41
50:S2:1640:A:C4'	86:S6:41:C:O2'	2.69	0.41
50:S2:1644:C:O2'	50:S2:1645:C:C4'	2.64	0.41
50:S2:1654:G:N2	50:S2:1671:G:C2	2.89	0.41
50:S2:1693:G:H3'	50:S2:1694:U:C5	2.49	0.41
50:S2:1698:C:C4'	50:S2:1699:A:OP2	2.69	0.41
50:S2:1711:U:C2	50:S2:1712:A:C8	3.09	0.41
50:S2:1742:C:C4	50:S2:1743:G:N7	2.89	0.41
50:S2:1757:G:C2	50:S2:1758:G:N7	2.89	0.41
50:S2:1758:G:C6	50:S2:1759:G:N7	2.88	0.41
50:S2:1839:U:O2	50:S2:1840:U:N1	2.54	0.41
50:S2:1840:U:O2	50:S2:1840:U:H2'	2.20	0.41
52:SB:101:HIS:HD2	52:SB:220:LYS:HZ3	1.69	0.41
52:SB:136:ARG:NH2	52:SB:218:LEU:HD11	2.35	0.41
54:SD:21:LEU:HD13	54:SD:48:ILE:HD12	2.03	0.41
54:SD:167:TYR:OH	54:SD:193:ASP:HB2	2.21	0.41
54:SD:213:PRO:O	54:SD:215:ASP:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SE:95:THR:HB	55:SE:97:GLU:HG3	2.01	0.41
57:SG:5:ILE:O	57:SG:13:GLN:HA	2.21	0.41
57:SG:156:TYR:CD1	57:SG:156:TYR:N	2.89	0.41
59:SI:82:VAL:CG2	59:SI:103:LEU:HG	2.51	0.41
59:SI:149:TYR:N	59:SI:149:TYR:CD1	2.89	0.41
60:SJ:19:PRO:C	60:SJ:20:PHE:CD1	2.99	0.41
61:SK:64:TRP:CE3	80:Sd:23:VAL:HA	2.56	0.41
62:SL:117:PHE:CE2	62:SL:144:LYS:HA	2.56	0.41
63:SM:24:THR:HA	63:SM:27:ILE:HG22	2.02	0.41
63:SM:69:LEU:HD22	63:SM:75:ASN:OD1	2.21	0.41
64:SN:114:ARG:O	64:SN:118:ILE:CG1	2.68	0.41
65:SO:81:VAL:O	65:SO:82:ALA:C	2.64	0.41
66:SP:41:GLN:O	66:SP:42:ARG:C	2.64	0.41
68:SR:41:ILE:HG21	68:SR:47:ARG:N	2.36	0.41
69:SS:27:ALA:HA	69:SS:41:ALA:HB1	2.02	0.41
71:SU:19:ARG:HD2	71:SU:19:ARG:N	2.35	0.41
75:SY:20:ARG:HB2	75:SY:76:TYR:CD1	2.56	0.41
75:SY:57:VAL:HG11	75:SY:60:PHE:CE2	2.55	0.41
75:SY:117:VAL:HG11	75:SY:123:ALA:HB3	2.02	0.41
77:Sa:21:ILE:HD13	77:Sa:72:HIS:HE1	1.83	0.41
79:Sc:46:VAL:HG11	79:Sc:50:VAL:CG2	2.51	0.41
80:Sd:16:GLN:HA	80:Sd:19:ARG:NH1	2.35	0.41
82:Sf:135:HIS:HD1	82:Sf:138:ARG:HB2	1.86	0.41
83:Sg:32:LEU:HD13	83:Sg:92:LEU:CD1	2.49	0.41
84:S4:23:U:O2'	84:S4:24:A:P	2.79	0.41
85:S5:6:G:C1'	85:S5:7:A:H5'	2.51	0.41
85:S5:10:G:N1	85:S5:25:C:N4	2.27	0.41
85:S5:34:G:O2'	85:S5:35:A:P	2.79	0.41
86:S6:52:G:N3	86:S6:52:G:C2'	2.82	0.41
86:S6:63:G:C6	86:S6:64:A:C6	3.06	0.41
86:S6:63:G:O6	86:S6:64:A:C5	2.71	0.41
86:S6:66:U:O2	86:S6:67:C:C6	2.72	0.41
86:S6:69:G:N2	86:S6:70:G:C5	2.88	0.41
1:5:89:C:HO2'	1:5:90:G:H5'	1.83	0.41
1:5:226:G:C4	1:5:236:G:C8	3.09	0.41
1:5:231:U:O2'	27:Y:100:HIS:HD2	2.04	0.41
1:5:244:G:N1	1:5:246:G:N9	2.69	0.41
1:5:324:A:C2'	1:5:325:U:H5'	2.51	0.41
1:5:349:A:H2'	1:5:349:A:O5'	2.21	0.41
1:5:381:U:C4'	1:5:414:C:H2'	2.51	0.41
1:5:450:G:H22	1:5:1294:A:C2'	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:692:A:N3	1:5:693:C:C5	2.88	0.41
1:5:730:G:N2	1:5:939:G:C2	2.82	0.41
1:5:925:C:C4	1:5:926:G:N7	2.89	0.41
1:5:979:C:H4'	8:E:39:HIS:CB	2.50	0.41
1:5:1253:G:N2	1:5:1256:G:C8	2.89	0.41
1:5:1308:C:C2	1:5:1309:C:C6	3.09	0.41
1:5:1529:G:C2'	38:j:47:TYR:OH	2.69	0.41
1:5:1685:G:C2	1:5:1686:C:C4	3.09	0.41
1:5:1697:G:C8	9:F:165:ASN:HA	2.55	0.41
1:5:1734:G:H2'	22:T:13:TYR:CZ	2.56	0.41
1:5:1742:A:H2	1:5:1743:A:N7	2.18	0.41
1:5:1971:C:C5	1:5:2000:G:C4	3.09	0.41
1:5:2101:C:N3	1:5:2102:G:N7	2.69	0.41
1:5:2259:G:OP2	1:5:2262:G:O6	2.38	0.41
1:5:2265:G:OP2	45:r:35:ARG:NH1	2.53	0.41
1:5:2314:G:N1	1:5:2326:G:C8	2.89	0.41
1:5:2396:A:N3	1:5:2396:A:O4'	2.54	0.41
1:5:2467:U:O2'	1:5:2469:C:N3	2.52	0.41
1:5:2549:G:C6	1:5:2550:G:C5	3.09	0.41
1:5:2590:G:H2'	1:5:2755:A:N6	2.36	0.41
1:5:2606:G:C4	1:5:2607:C:C6	3.08	0.41
1:5:2744:A:HO2'	1:5:2745:A:C5'	2.34	0.41
1:5:2907:G:C2	1:5:3588:C:C2	3.09	0.41
1:5:3683:C:H4'	1:5:3684:G:OP2	2.21	0.41
1:5:3739:C:C6	1:5:3739:C:H5'	2.50	0.41
1:5:3952:A:N3	1:5:3952:A:H2'	2.36	0.41
1:5:4055:U:H4'	46:z:37:SER:CB	2.48	0.41
1:5:4269:G:C2	1:5:4270:C:C1'	3.04	0.41
1:5:4308:C:C2	1:5:4309:G:C8	3.09	0.41
1:5:4343:U:H1'	1:5:4370:G:N2	2.35	0.41
1:5:4370:G:C6	86:S6:76:A:C6	3.09	0.41
1:5:4399:U:N3	1:5:4400:G:C8	2.89	0.41
1:5:4413:C:H5	1:5:4429:C:N4	2.18	0.41
1:5:4741:C:O2	1:5:4741:C:H2'	2.20	0.41
1:5:4868:G:C3'	1:5:4869:U:H5''	2.50	0.41
1:5:4914:C:H2'	1:5:4915:G:O4'	2.21	0.41
1:5:4997:G:N1	1:5:4998:G:C4	2.89	0.41
1:5:5047:C:N1	1:5:5048:A:C6	2.89	0.41
1:5:5063:G:N2	1:5:5064:G:C4	2.89	0.41
2:7:82:G:C2	2:7:95:C:N3	2.89	0.41
3:8:70:G:C2	3:8:87:G:N2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:70:G:C6	3:8:87:G:C6	3.09	0.41
3:8:78:G:O2'	36:h:45:SER:HB3	2.20	0.41
6:C:335:MET:HE3	9:F:60:HIS:CE1	2.56	0.41
9:F:83:PHE:CD2	21:S:62:VAL:HG11	2.56	0.41
9:F:100:ILE:N	9:F:101:ASN:OD1	2.53	0.41
10:G:108:GLN:O	10:G:112:GLN:NE2	2.54	0.41
17:O:191:ARG:HA	17:O:194:GLU:HB3	2.03	0.41
20:R:8:LYS:HG3	20:R:22:VAL:CG1	2.50	0.41
21:S:37:HIS:O	21:S:38:VAL:C	2.64	0.41
23:U:27:HIS:CD2	23:U:27:HIS:C	2.99	0.41
25:W:21:TYR:HB2	25:W:31:PHE:CE2	2.56	0.41
26:X:89:LYS:HE3	26:X:93:ASN:HD22	1.84	0.41
30:b:11:ASN:O	30:b:13:SER:N	2.54	0.41
33:e:74:PHE:HB3	33:e:95:TYR:HA	2.02	0.41
39:k:41:TYR:HB3	39:k:43:TYR:HE1	1.85	0.41
40:l:44:TRP:HZ3	40:l:45:ARG:HD3	1.86	0.41
46:z:60:ARG:N	46:z:61:PRO:CD	2.84	0.41
46:z:141:ASN:HD22	46:z:141:ASN:HA	1.68	0.41
47:1:173:TYR:CG	47:1:174:GLY:N	2.89	0.41
47:1:238:ASN:O	47:1:239:LEU:HD12	2.21	0.41
50:S2:21:U:O2'	50:S2:22:A:H5'	2.22	0.41
50:S2:54:A:C2	50:S2:451:G:C4	3.09	0.41
50:S2:61:A:H5'	50:S2:61:A:C8	2.56	0.41
50:S2:436:G:O2'	50:S2:437:G:H5'	2.21	0.41
50:S2:448:A:C8	59:SI:25:ARG:C	2.99	0.41
50:S2:522:A:N1	50:S2:643:A:C5'	2.84	0.41
50:S2:550:C:O2	50:S2:550:C:C2'	2.67	0.41
50:S2:569:A:C2	50:S2:570:C:C6	3.09	0.41
50:S2:597:G:N1	50:S2:640:A:C6	2.89	0.41
50:S2:601:G:O2'	50:S2:602:G:O5'	2.38	0.41
50:S2:688:U:OP1	58:SH:116:ARG:NH2	2.46	0.41
50:S2:689:U:H2'	50:S2:690:G:O4'	2.21	0.41
50:S2:1029:G:C2	50:S2:1030:A:N9	2.88	0.41
50:S2:1294:G:C1'	82:Sf:137:ASP:OD2	2.68	0.41
50:S2:1302:G:C5	82:Sf:140:TYR:CD2	3.09	0.41
50:S2:1342:U:H5	50:S2:1483:A:N6	2.16	0.41
50:S2:1407:U:C3'	50:S2:1408:U:C6	3.04	0.41
50:S2:1408:U:C3'	50:S2:1409:A:H8	2.30	0.41
50:S2:1448:A:C5	50:S2:1449:G:C8	3.09	0.41
50:S2:1531:A:H2'	50:S2:1532:C:O4'	2.20	0.41
50:S2:1621:U:O2'	50:S2:1622:U:H2'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1686:G:C4	50:S2:1687:C:C5	3.09	0.41
50:S2:1698:C:O5'	50:S2:1698:C:C2'	2.69	0.41
50:S2:1771:G:N2	50:S2:1772:C:H1'	2.36	0.41
52:SB:119:THR:HG1	52:SB:156:ALA:H	1.68	0.41
53:SC:202:THR:HG21	53:SC:223:TYR:OH	2.21	0.41
55:SE:124:CYS:HB2	55:SE:162:ILE:HD13	2.03	0.41
56:SF:138:ALA:HB2	56:SF:200:ALA:O	2.21	0.41
57:SG:155:GLN:HB2	57:SG:156:TYR:CE1	2.56	0.41
61:SK:64:TRP:O	61:SK:65:ARG:C	2.64	0.41
63:SM:21:VAL:HG12	63:SM:111:VAL:HG11	2.03	0.41
67:SQ:70:VAL:CG1	67:SQ:84:ILE:HG22	2.46	0.41
70:ST:118:ASP:OD1	70:ST:118:ASP:N	2.52	0.41
73:SW:42:MET:HE2	73:SW:49:GLU:HA	2.03	0.41
82:Sf:121:CYS:SG	82:Sf:141:CYS:SG	3.08	0.41
83:Sg:170:TRP:CD1	83:Sg:194:TYR:HB2	2.56	0.41
83:Sg:251:ALA:HB1	83:Sg:286:CYS:O	2.21	0.41
85:S5:8:U:C1'	85:S5:48:C:HO2'	2.34	0.41
85:S5:71:G:H8	85:S5:71:G:P	2.39	0.41
86:S6:9:A:C4	86:S6:46:G:N2	2.87	0.41
86:S6:41:C:N1	86:S6:42:C:H5	2.19	0.41
86:S6:47:U:C6	86:S6:47:U:C3'	3.04	0.41
1:5:96:U:C4	1:5:97:G:C4	3.09	0.40
1:5:147:A:H2'	1:5:148:C:C5'	2.51	0.40
1:5:183:C:C2	1:5:189:G:O6	2.74	0.40
1:5:272:U:O2	1:5:272:U:H2'	2.21	0.40
1:5:440:U:O2	1:5:440:U:H2'	2.21	0.40
1:5:979:C:C6	1:5:979:C:OP2	2.74	0.40
1:5:1095:A:C6	1:5:1096:C:C4	3.08	0.40
1:5:1327:C:H2'	1:5:1328:G:C8	2.56	0.40
1:5:1351:G:C6	1:5:1352:C:C4	3.09	0.40
1:5:1379:C:H4'	1:5:1380:G:C1'	2.51	0.40
1:5:1388:A:C6	1:5:1389:U:C2	3.09	0.40
1:5:1390:G:N3	1:5:1394:G:N1	2.69	0.40
1:5:1475:G:C2	1:5:1476:C:C4	2.92	0.40
1:5:1494:U:O2	1:5:1495:G:C8	2.73	0.40
1:5:1516:G:O2'	14:L:18:TRP:NE1	2.39	0.40
1:5:1782:U:C2	1:5:1783:C:C5	3.09	0.40
1:5:1817:U:C2'	1:5:1818:G:O5'	2.69	0.40
1:5:1983:A:H62	1:5:1987:C:H5'	1.86	0.40
1:5:2108:G:H2'	1:5:2109:G:C4'	2.49	0.40
1:5:2290:C:C4	1:5:2291:G:N7	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2664:G:C6	1:5:2665:U:C2	3.09	0.40
1:5:2838:G:C8	1:5:2838:G:H5''	2.56	0.40
1:5:3636:C:N4	1:5:3637:U:C5	2.88	0.40
1:5:3737:A:H2'	1:5:3738:G:C1'	2.48	0.40
1:5:3800:A:C2	1:5:4496:A:H1'	2.56	0.40
1:5:3853:U:O2'	1:5:4979:A:N3	2.52	0.40
1:5:4038:C:O2	1:5:4050:A:O2'	2.33	0.40
1:5:4164:C:H4'	10:G:53:ARG:O	2.21	0.40
1:5:4333:C:N3	1:5:4334:U:O4	2.54	0.40
1:5:4905:C:C4	1:5:4906:C:C5	3.09	0.40
1:5:4906:C:O2	1:5:4916:G:C2	2.73	0.40
1:5:4946:U:C4	1:5:4947:U:C5	3.09	0.40
1:5:4997:G:C6	1:5:4998:G:C8	3.10	0.40
1:5:5043:A:H2'	1:5:5044:A:O5'	2.21	0.40
2:7:45:U:O3'	7:D:157:ASN:HB2	2.20	0.40
3:8:10:G:N3	3:8:10:G:H2'	2.36	0.40
3:8:42:G:N2	3:8:43:A:H1'	2.36	0.40
3:8:75:G:C2	3:8:76:C:C2	3.09	0.40
4:A:104:VAL:HG12	4:A:146:THR:HG21	2.02	0.40
4:A:189:TYR:HA	4:A:192:LYS:HG3	2.03	0.40
4:A:209:HIS:CD2	4:A:210:PRO:HD2	2.57	0.40
6:C:85:HIS:CD2	6:C:85:HIS:N	2.89	0.40
7:D:66:TYR:C	7:D:66:TYR:HD1	2.29	0.40
8:E:153:HIS:CD2	8:E:183:ARG:NH1	2.88	0.40
8:E:173:GLY:O	8:E:174:PRO:C	2.64	0.40
11:H:95:VAL:HG22	41:m:82:LEU:CD2	2.45	0.40
12:I:148:VAL:O	12:I:149:ILE:C	2.64	0.40
14:L:145:LYS:HG3	14:L:146:LEU:N	2.36	0.40
16:N:47:LYS:O	16:N:48:ALA:C	2.64	0.40
16:N:150:TRP:C	16:N:150:TRP:CE3	2.99	0.40
20:R:163:ARG:CZ	50:S2:871:U:C2	3.04	0.40
21:S:29:ARG:HH12	22:T:150:LEU:CA	2.34	0.40
23:U:60:VAL:HG11	23:U:76:VAL:HG22	2.03	0.40
24:V:48:ARG:HD2	24:V:51:ARG:HH22	1.86	0.40
27:Y:127:GLN:HE21	27:Y:127:GLN:C	2.28	0.40
29:a:9:ARG:NE	29:a:9:ARG:HA	2.36	0.40
29:a:148:ALA:HA	37:i:8:ALA:HB2	2.01	0.40
32:d:63:ARG:CD	32:d:103:TYR:CE1	3.04	0.40
44:p:14:TYR:N	44:p:14:TYR:HD1	2.19	0.40
46:z:187:VAL:HG12	46:z:190:LEU:HD12	2.03	0.40
46:z:198:TRP:O	46:z:200:ASN:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:75:G:H1	57:SG:159:ARG:NE	2.16	0.40
50:S2:118:C:N3	50:S2:119:U:C1'	2.85	0.40
50:S2:143:U:H1'	50:S2:144:U:C5	2.56	0.40
50:S2:223:C:C2	50:S2:224:A:N7	2.89	0.40
50:S2:386:C:N4	50:S2:387:C:N4	2.69	0.40
50:S2:403:G:N1	50:S2:404:G:C5	2.89	0.40
50:S2:410:G:C2	50:S2:411:G:C4	3.09	0.40
50:S2:435:A:OP2	50:S2:435:A:O4'	2.39	0.40
50:S2:446:G:H5''	59:SI:49:ARG:NE	2.36	0.40
50:S2:452:G:N1	50:S2:453:C:C5	2.85	0.40
50:S2:501:C:C2	50:S2:501:C:C3'	3.04	0.40
50:S2:563:G:N2	50:S2:564:A:N9	2.68	0.40
50:S2:597:G:N3	50:S2:640:A:C2	2.85	0.40
50:S2:650:A:C2'	50:S2:651:U:O5'	2.68	0.40
50:S2:673:G:C2	50:S2:674:C:C2	3.08	0.40
50:S2:992:A:C5	77:Sa:15:ARG:NH1	2.87	0.40
50:S2:1015:U:O2'	64:SN:55:ARG:NH2	2.55	0.40
50:S2:1063:C:C2'	50:S2:1838:U:C4	3.04	0.40
50:S2:1122:A:H2	52:SB:146:ARG:HH22	1.69	0.40
50:S2:1204:A:O2'	50:S2:1205:C:OP1	2.32	0.40
50:S2:1284:A:C2	63:SM:34:GLY:CA	3.03	0.40
50:S2:1365:G:C2'	50:S2:1366:G:O5'	2.69	0.40
50:S2:1395:C:C6	50:S2:1395:C:H5'	2.55	0.40
50:S2:1592:C:C4	50:S2:1593:C:H5	2.32	0.40
50:S2:1604:G:H2'	50:S2:1605:G:O4'	2.21	0.40
50:S2:1751:C:N3	50:S2:1752:C:C5	2.89	0.40
51:SA:42:LYS:C	51:SA:43:SER:O	2.62	0.40
52:SB:97:LEU:CG	52:SB:232:HIS:CD2	3.04	0.40
53:SC:105:GLU:CB	53:SC:216:MET:HE1	2.51	0.40
58:SH:16:PRO:O	58:SH:17:ASP:C	2.65	0.40
61:SK:59:LYS:HB3	61:SK:70:TYR:HD2	1.85	0.40
65:SO:117:ARG:CZ	79:Sc:62:GLU:CD	2.59	0.40
65:SO:147:ARG:HH21	65:SO:150:ARG:HE	1.67	0.40
69:SS:61:GLU:HA	69:SS:64:VAL:HG22	2.02	0.40
75:SY:12:PHE:CZ	75:SY:21:LYS:HB3	2.56	0.40
75:SY:56:PHE:HE1	75:SY:94:HIS:CE1	2.39	0.40
75:SY:86:GLU:CG	75:SY:86:GLU:OE2	2.68	0.40
86:S6:15:G:H1	86:S6:48:C:N4	2.19	0.40
1:5:151:G:O6	10:G:141:ASN:ND2	2.54	0.40
1:5:189:G:N2	1:5:190:G:C8	2.90	0.40
1:5:322:C:O2	1:5:322:C:C2'	2.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:410:A:N3	1:5:410:A:H2'	2.36	0.40
1:5:684:G:O2'	1:5:685:C:O5'	2.38	0.40
1:5:688:U:C2	1:5:689:U:C6	3.09	0.40
1:5:704:C:C6	1:5:704:C:C5'	3.02	0.40
1:5:908:G:C5	1:5:909:A:C8	3.09	0.40
1:5:911:U:C4	1:5:912:G:N7	2.89	0.40
1:5:931:C:C5	1:5:932:A:N7	2.89	0.40
1:5:957:G:H3'	1:5:2077:C:OP1	2.21	0.40
1:5:993:G:N3	1:5:994:G:C8	2.89	0.40
1:5:1074:G:C2'	1:5:1075:G:O4'	2.64	0.40
1:5:1098:G:C4	1:5:1099:C:C6	3.09	0.40
1:5:1288:G:O2'	1:5:1289:C:OP1	2.37	0.40
1:5:1534:A:N6	38:j:14:LYS:CA	2.79	0.40
1:5:1598:C:H5	1:5:2798:A:H62	1.69	0.40
1:5:1601:A:C5	1:5:3643:A:O4'	2.74	0.40
1:5:1627:G:C2	1:5:1628:C:H1'	2.56	0.40
1:5:1667:G:H2'	1:5:2280:G:H22	1.86	0.40
1:5:1697:G:C2'	9:F:165:ASN:HD22	2.32	0.40
1:5:1742:A:N3	1:5:1742:A:H2'	2.35	0.40
1:5:1856:C:O2	1:5:1856:C:H2'	2.19	0.40
1:5:1904:G:N2	1:5:2073:C:C2	2.89	0.40
1:5:2076:G:C4	1:5:2077:C:C6	3.10	0.40
1:5:2326:G:N3	1:5:2326:G:H2'	2.36	0.40
1:5:2330:G:C2'	1:5:2331:G:O4'	2.69	0.40
1:5:2399:G:C2	1:5:2400:G:C5	3.09	0.40
1:5:2447:U:HO2'	1:5:2448:G:P	2.44	0.40
1:5:2483:G:N1	1:5:2484:A:C5	2.89	0.40
1:5:2618:G:C6	1:5:2619:G:N7	2.89	0.40
1:5:2664:G:C2	1:5:2671:C:N3	2.89	0.40
1:5:2734:U:C2	1:5:2735:G:H8	2.31	0.40
1:5:2744:A:C2	1:5:2745:A:N1	2.89	0.40
1:5:2791:C:O2	1:5:2792:C:C6	2.74	0.40
1:5:2830:G:N1	1:5:2831:G:C5	2.89	0.40
1:5:2855:G:H22	1:5:2859:G:N2	2.18	0.40
1:5:3724:A:C6	1:5:3725:G:C6	3.09	0.40
1:5:3747:A:O4'	1:5:3817:A:H2'	2.21	0.40
1:5:3858:C:N3	1:5:3859:G:N9	2.70	0.40
1:5:3867:A:H2'	1:5:3868:G:C8	2.56	0.40
1:5:3882:C:C2	1:5:3883:U:C5	3.08	0.40
1:5:3883:U:O2'	1:5:3884:U:C5'	2.70	0.40
1:5:3930:U:N3	1:5:3931:C:C5	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3977:C:N3	1:5:4035:G:C6	2.89	0.40
1:5:4034:G:C2	1:5:4035:G:C5	3.09	0.40
1:5:4074:C:O2'	1:5:4075:U:C5'	2.69	0.40
1:5:4113:U:C4	1:5:4114:C:C4	3.09	0.40
1:5:4143:G:N7	1:5:4145:C:C4	2.89	0.40
1:5:4171:C:H2'	1:5:4172:A:O4'	2.21	0.40
1:5:4274:A:H3'	1:5:4274:A:C8	2.56	0.40
1:5:4547:C:H2'	1:5:4549:G:C8	2.55	0.40
1:5:4552:U:O2	1:5:4553:A:C8	2.75	0.40
1:5:4742:G:H2'	1:5:4742:G:N3	2.35	0.40
1:5:4933:C:OP1	1:5:4933:C:H4'	2.21	0.40
1:5:4981:G:H1'	18:P:69:ARG:HH11	1.85	0.40
1:5:5061:A:O4'	1:5:5062:G:H5''	2.20	0.40
3:8:93:C:O3'	3:8:94:G:H8	2.04	0.40
3:8:94:G:C8	3:8:94:G:C4'	3.03	0.40
3:8:134:G:N2	3:8:135:C:C1'	2.82	0.40
4:A:33:ASP:C	4:A:37:ARG:NH2	2.80	0.40
9:F:32:ILE:N	9:F:32:ILE:HD12	2.36	0.40
10:G:32:PHE:N	10:G:32:PHE:CD1	2.89	0.40
11:H:31:ARG:NE	11:H:87:GLY:HA3	2.35	0.40
11:H:96:TYR:CE2	11:H:100:PRO:CA	2.99	0.40
12:I:46:PHE:CZ	12:I:85:PHE:CA	3.05	0.40
13:J:165:TRP:CH2	13:J:169:LYS:HG2	2.56	0.40
14:L:179:PHE:CE1	14:L:183:ARG:HD3	2.56	0.40
33:e:76:LYS:HD2	33:e:98:GLU:CG	2.50	0.40
40:l:38:ASN:OD1	40:l:38:ASN:C	2.64	0.40
43:o:55:ILE:CG2	86:S6:75:C:H5''	2.52	0.40
47:1:339:GLY:CA	47:1:343:HIS:HB2	2.48	0.40
50:S2:13:C:C2'	50:S2:14:C:O5'	2.70	0.40
50:S2:29:G:C2	50:S2:30:C:C5	3.09	0.40
50:S2:113:G:N2	50:S2:293:C:C2	2.89	0.40
50:S2:184:G:N1	50:S2:185:G:C5	2.89	0.40
50:S2:217:A:H1'	50:S2:309:G:N2	2.36	0.40
50:S2:310:C:C2	50:S2:311:C:C4	3.09	0.40
50:S2:343:A:C6	50:S2:344:U:C6	3.09	0.40
50:S2:421:G:H2'	50:S2:422:U:C6	2.57	0.40
50:S2:427:U:O2	50:S2:427:U:H2'	2.21	0.40
50:S2:449:A:N3	50:S2:449:A:C2'	2.84	0.40
50:S2:496:C:O2'	50:S2:497:C:C5'	2.69	0.40
50:S2:664:A:O2'	50:S2:670:A:N1	2.40	0.40
50:S2:849:A:C2'	50:S2:850:C:O5'	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:869:A:N7	58:SH:115:LYS:HB3	2.36	0.40
50:S2:878:G:O6	50:S2:908:A:N1	2.54	0.40
50:S2:954:U:N3	50:S2:971:G:N2	2.69	0.40
50:S2:959:G:C8	50:S2:959:G:C3'	3.03	0.40
50:S2:1034:A:C2	50:S2:1082:A:C2	3.09	0.40
50:S2:1141:G:H1'	50:S2:1151:G:H4'	2.03	0.40
50:S2:1223:A:H3'	50:S2:1223:A:C8	2.55	0.40
50:S2:1258:A:C2	50:S2:1663:A:C2	3.09	0.40
50:S2:1372:U:O2	50:S2:1372:U:C2'	2.69	0.40
50:S2:1416:C:C2'	50:S2:1417:C:H6	2.19	0.40
50:S2:1559:C:C2	50:S2:1577:G:C2	3.09	0.40
50:S2:1608:U:N3	50:S2:1609:C:C6	2.89	0.40
50:S2:1610:G:C2	50:S2:1630:A:H1'	2.56	0.40
50:S2:1610:G:N2	50:S2:1630:A:H1'	2.36	0.40
50:S2:1618:C:H5	80:Sd:11:PRO:CG	2.34	0.40
50:S2:1628:C:H2'	50:S2:1629:C:O4'	2.21	0.40
50:S2:1668:U:H4'	71:SU:77:TRP:CZ3	2.56	0.40
50:S2:1841:C:O2	50:S2:1841:C:C2'	2.67	0.40
52:SB:151:ARG:O	52:SB:152:LYS:CB	2.69	0.40
52:SB:152:LYS:HB3	52:SB:153:THR:HG23	2.03	0.40
52:SB:171:ILE:O	52:SB:175:GLU:OE2	2.38	0.40
53:SC:170:TRP:HZ3	73:SW:97:ARG:HH11	1.70	0.40
56:SF:125:SER:CB	56:SF:199:VAL:HG12	2.50	0.40
59:SI:74:ARG:HB3	59:SI:108:PRO:HB2	2.02	0.40
59:SI:117:TYR:HB3	59:SI:156:ALA:CB	2.50	0.40
59:SI:141:ARG:HH12	59:SI:145:ILE:HG23	1.85	0.40
63:SM:31:LEU:HD12	63:SM:33:ARG:CB	2.51	0.40
73:SW:23:ARG:HB2	78:Sb:3:LEU:O	2.21	0.40
83:Sg:176:VAL:HG11	83:Sg:221:LEU:HD11	2.03	0.40
84:S4:23:U:H3	85:S5:34:G:N2	2.17	0.40
85:S5:37:A:C1'	85:S5:38:A:C8	3.05	0.40
85:S5:55:U:H5	85:S5:58:A:OP2	2.04	0.40
86:S6:20:U:H6	86:S6:20:U:C3'	2.35	0.40
86:S6:55:U:H2'	86:S6:56:C:C6	2.54	0.40
86:S6:71:G:O2'	86:S6:72:C:P	2.79	0.40
1:5:98:A:N7	1:5:99:A:C8	2.90	0.40
1:5:183:C:O2	1:5:189:G:C6	2.74	0.40
1:5:225:G:N3	1:5:243:A:C2	2.89	0.40
1:5:244:G:C2	1:5:246:G:N9	2.89	0.40
1:5:447:C:O2	1:5:448:G:C8	2.74	0.40
1:5:487:G:C2	1:5:488:G:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:699:C:N3	1:5:700:G:N7	2.69	0.40
1:5:715:G:N2	1:5:954:C:C2	2.89	0.40
1:5:731:G:N1	1:5:732:A:H1'	2.36	0.40
1:5:938:C:C2	1:5:939:G:C8	3.10	0.40
1:5:986:C:N3	1:5:987:C:C5	2.90	0.40
1:5:1098:G:H2'	1:5:1099:C:H6	1.86	0.40
1:5:1212:G:N2	1:5:1213:G:C4	2.89	0.40
1:5:1257:A:C5	1:5:1258:G:C8	3.09	0.40
1:5:1349:G:N3	1:5:1350:C:C6	2.89	0.40
1:5:1358:G:H3'	1:5:1358:G:C8	2.57	0.40
1:5:1397:A:H2	1:5:1498:G:N3	2.18	0.40
1:5:1442:C:O2	1:5:1443:A:C8	2.74	0.40
1:5:1552:G:C2'	1:5:1574:G:H22	2.33	0.40
1:5:1571:G:N3	1:5:1571:G:H2'	2.36	0.40
1:5:1865:G:H22	1:5:1867:A:C3'	2.33	0.40
1:5:1887:G:C6	1:5:1890:G:N7	2.87	0.40
1:5:1919:G:O6	34:f:29:LYS:HE2	2.21	0.40
1:5:1945:G:O6	1:5:1946:G:N7	2.54	0.40
1:5:2020:U:O2	1:5:2021:G:C8	2.74	0.40
1:5:2108:G:N2	1:5:2125:C:C4	2.88	0.40
1:5:2384:U:H2'	1:5:2385:U:C6	2.57	0.40
1:5:2559:G:C4	1:5:2560:C:C6	3.09	0.40
1:5:2583:C:N4	35:g:75:SER:OG	2.54	0.40
1:5:2614:C:H1'	1:5:2726:G:N2	2.36	0.40
1:5:2633:U:C4	1:5:2634:C:C5	3.08	0.40
1:5:2634:C:O2	1:5:2635:U:C6	2.74	0.40
1:5:2658:G:N2	1:5:2675:G:H2'	2.25	0.40
1:5:2714:G:N2	1:5:2715:G:C5	2.89	0.40
1:5:2727:C:C2	1:5:2728:U:C5	3.09	0.40
1:5:2765:A:H5''	1:5:2766:A:H2	1.85	0.40
1:5:2843:U:N3	1:5:2844:A:C5	2.90	0.40
1:5:3683:C:O3'	4:A:174:ARG:NH2	2.55	0.40
1:5:3841:C:O2	1:5:3841:C:C2'	2.69	0.40
1:5:4079:C:O2	1:5:4080:C:C6	2.75	0.40
1:5:4097:G:C2	1:5:4098:A:C4	3.09	0.40
1:5:4125:C:C5	4:A:69:PHE:CD2	3.09	0.40
1:5:4275:G:C5	1:5:4276:G:N7	2.88	0.40
1:5:4283:G:C6	1:5:4284:C:H5	2.30	0.40
1:5:4459:U:H4'	5:B:265:SER:O	2.21	0.40
1:5:4476:C:C6	11:H:171:ASP:OD2	2.75	0.40
1:5:4518:A:OP2	5:B:258:HIS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4680:G:C2	1:5:4681:A:C5	3.09	0.40
1:5:4737:G:C6	1:5:4963:G:N2	2.88	0.40
1:5:4742:G:C6	1:5:4743:G:C8	3.09	0.40
1:5:5006:U:N1	1:5:5042:A:N7	2.69	0.40
2:7:62:U:C5'	7:D:279:ARG:HH12	2.35	0.40
2:7:117:G:C4	2:7:118:C:C5	3.09	0.40
3:8:13:G:N1	3:8:14:U:N3	2.70	0.40
3:8:64:U:O2	3:8:95:A:C2	2.74	0.40
3:8:82:A:C5	3:8:83:C:H5''	2.57	0.40
3:8:117:C:C4	3:8:118:C:H5	2.36	0.40
6:C:92:PHE:C	6:C:100:ARG:NH1	2.79	0.40
6:C:288:ASP:OD2	6:C:291:ARG:HB3	2.21	0.40
8:E:277:ILE:HD11	8:E:282:LEU:HD22	2.04	0.40
10:G:60:TYR:O	10:G:64:GLN:HG2	2.21	0.40
11:H:59:LYS:O	11:H:59:LYS:HE3	2.21	0.40
11:H:180:TYR:HD2	41:m:89:TYR:HD2	1.68	0.40
14:L:58:VAL:C	14:L:59:VAL:HG23	2.45	0.40
15:M:34:ASN:ND2	15:M:34:ASN:N	2.69	0.40
15:M:110:TYR:OH	15:M:114:LYS:HE2	2.21	0.40
17:O:36:VAL:CG1	17:O:108:ILE:HB	2.52	0.40
20:R:74:ARG:O	20:R:75:HIS:HB2	2.21	0.40
28:Z:76:ASN:HB3	28:Z:78:ASN:H	1.86	0.40
34:f:96:ALA:O	34:f:99:HIS:HB2	2.22	0.40
37:i:3:LEU:HD12	37:i:5:TYR:CZ	2.56	0.40
37:i:55:ARG:HA	37:i:58:MET:HG2	2.03	0.40
37:i:68:ARG:O	37:i:72:PHE:N	2.45	0.40
45:r:31:ASN:OD1	45:r:40:TYR:HB3	2.21	0.40
47:1:448:LEU:CG	47:1:451:VAL:HG23	2.26	0.40
50:S2:14:C:C2	50:S2:1198:G:C2	3.09	0.40
50:S2:61:A:H2	50:S2:334:C:H2'	1.87	0.40
50:S2:143:U:H1'	50:S2:144:U:H5	1.86	0.40
50:S2:289:G:C2	50:S2:295:C:O2	2.75	0.40
50:S2:558:G:H2'	50:S2:559:G:N9	2.36	0.40
50:S2:830:A:C6	50:S2:845:G:C4	3.10	0.40
50:S2:855:G:C5	50:S2:856:C:C5	3.09	0.40
50:S2:909:G:N3	50:S2:909:G:H2'	2.36	0.40
50:S2:957:A:C2	50:S2:967:C:C2	3.08	0.40
50:S2:1052:A:C4	50:S2:1053:C:C5	3.09	0.40
50:S2:1291:A:C8	82:Sf:146:LEU:HD13	2.56	0.40
50:S2:1411:G:C8	50:S2:1412:C:C1'	3.04	0.40
50:S2:1412:C:O2'	50:S2:1413:G:H8	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:S2:1439:A:O2'	50:S2:1440:C:O4'	2.34	0.40
50:S2:1481:G:O2'	50:S2:1482:C:H5'	2.21	0.40
50:S2:1495:G:N3	80:Sd:41:GLN:HB3	2.36	0.40
50:S2:1534:C:H1'	50:S2:1536:G:C4	2.57	0.40
50:S2:1541:G:C2	50:S2:1593:C:O2	2.74	0.40
50:S2:1551:U:C4	50:S2:1552:G:C6	3.10	0.40
50:S2:1563:G:C2	50:S2:1564:C:C6	3.10	0.40
50:S2:1563:G:N1	50:S2:1564:C:C4	2.89	0.40
50:S2:1601:A:H61	50:S2:1635:C:H3'	1.85	0.40
50:S2:1623:A:N3	50:S2:1623:A:O4'	2.55	0.40
50:S2:1709:G:C4	50:S2:1826:G:C2	3.10	0.40
50:S2:1711:U:C2	50:S2:1712:A:N7	2.90	0.40
50:S2:1742:C:N3	50:S2:1743:G:C8	2.89	0.40
50:S2:1843:G:C2'	50:S2:1844:U:O5'	2.70	0.40
56:SF:98:GLU:O	56:SF:102:LEU:HG	2.22	0.40
59:SI:65:PHE:HE1	59:SI:76:THR:HB	1.86	0.40
60:SJ:59:GLU:O	60:SJ:62:THR:OG1	2.35	0.40
60:SJ:75:ASN:O	60:SJ:76:ALA:C	2.64	0.40
60:SJ:149:VAL:HG11	60:SJ:157:ILE:HD11	2.03	0.40
66:SP:21:ASP:OD1	66:SP:21:ASP:N	2.54	0.40
69:SS:23:ARG:HD3	76:SZ:48:VAL:CG2	2.52	0.40
69:SS:120:HIS:CD2	69:SS:120:HIS:C	2.99	0.40
72:SV:24:ILE:HD11	72:SV:56:CYS:HA	2.02	0.40
78:Sb:33:MET:HB2	78:Sb:79:PHE:HB2	2.03	0.40
81:Se:40:ARG:HE	81:Se:40:ARG:HB2	1.76	0.40
83:Sg:101:PHE:CD2	83:Sg:136:GLY:HA2	2.57	0.40
83:Sg:125:ARG:C	83:Sg:127:LYS:N	2.80	0.40
83:Sg:163:PRO:CB	83:Sg:179:LEU:HB2	2.50	0.40
85:S5:8:U:C4'	85:S5:48:C:O2'	2.69	0.40
85:S5:39:U:H2'	85:S5:40:C:H6	1.87	0.40
85:S5:39:U:O2	85:S5:40:C:C6	2.75	0.40
85:S5:41:C:C4	85:S5:42:C:C5	3.09	0.40
86:S6:27:G:C2	86:S6:28:G:C8	3.10	0.40
86:S6:48:C:H1'	86:S6:49:C:OP2	2.22	0.40
86:S6:55:U:C2'	86:S6:56:C:H5''	2.52	0.40
86:S6:57:G:H3'	86:S6:58:A:C1'	2.49	0.40
86:S6:60:U:O2'	86:S6:61:C:P	2.79	0.40
1:5:44:A:C4	1:5:45:U:C6	3.10	0.40
1:5:208:A:C6	1:5:233:U:N3	2.89	0.40
1:5:227:A:H61	1:5:241:G:C2'	2.33	0.40
1:5:289:C:O2	1:5:289:C:H2'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:297:U:H2'	1:5:298:G:O4'	2.21	0.40
1:5:471:A:N1	1:5:472:C:N1	2.69	0.40
1:5:722:G:H2'	1:5:723:A:C8	2.57	0.40
1:5:948:C:O2	1:5:948:C:H2'	2.20	0.40
1:5:1187:G:H21	1:5:1188:C:N4	2.19	0.40
1:5:1281:G:H2'	6:C:323:ARG:HG2	2.03	0.40
1:5:1408:G:C2'	1:5:1411:C:H41	2.35	0.40
1:5:1475:G:N2	1:5:1489:G:N1	2.59	0.40
1:5:1520:C:H5'	6:C:102:PHE:CZ	2.56	0.40
1:5:1617:G:N3	1:5:1618:G:C8	2.90	0.40
1:5:1619:G:C2'	1:5:1620:U:O5'	2.69	0.40
1:5:1719:A:N3	1:5:1719:A:H5''	2.36	0.40
1:5:1869:G:C8	1:5:3877:A:C6	3.09	0.40
1:5:1900:C:H4'	33:e:60:TYR:CG	2.57	0.40
1:5:1949:U:N3	1:5:1950:U:H5	2.15	0.40
1:5:1966:C:N4	1:5:1967:A:N7	2.70	0.40
1:5:1979:A:C2	1:5:1982:G:N7	2.89	0.40
1:5:2021:G:N1	1:5:2022:C:C4	2.89	0.40
1:5:2037:C:C5	1:5:2038:U:H5	2.39	0.40
1:5:2480:G:C2	1:5:2481:G:C4	3.09	0.40
1:5:2830:G:C2	1:5:2831:G:C5	3.09	0.40
1:5:3639:U:H2'	1:5:3640:U:O4'	2.22	0.40
1:5:3682:A:C2	4:A:152:SER:HB3	2.57	0.40
1:5:3751:G:N2	1:5:3775:A:H8	2.17	0.40
1:5:3772:U:C2	1:5:3773:U:C5	3.10	0.40
1:5:3868:G:N2	1:5:3899:G:H21	2.19	0.40
1:5:3945:A:H2'	1:5:3946:G:C8	2.54	0.40
1:5:4061:G:N2	1:5:4062:A:C4	2.90	0.40
1:5:4198:G:N3	1:5:4198:G:H2'	2.37	0.40
1:5:4201:G:N3	1:5:4202:U:C5	2.90	0.40
1:5:4278:C:O2	1:5:4278:C:H2'	2.21	0.40
1:5:4381:A:C6	1:5:4382:G:N7	2.89	0.40
1:5:4586:G:H8	1:5:4586:G:H5''	1.87	0.40
1:5:4593:C:N3	1:5:4594:U:C5	2.90	0.40
1:5:4615:C:H5''	5:B:357:ARG:HD2	2.03	0.40
1:5:4683:U:C2'	1:5:4684:A:O5'	2.70	0.40
1:5:4733:C:N4	1:5:4734:A:H1'	2.34	0.40
1:5:4733:C:H5	1:5:4734:A:H1'	1.87	0.40
3:8:38:U:C5	36:h:84:ARG:HB2	2.56	0.40
4:A:225:ILE:HD12	4:A:233:ARG:CZ	2.50	0.40
6:C:130:ALA:HB3	6:C:246:VAL:CG1	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:31:TYR:CD1	7:D:35:ARG:NH2	2.90	0.40
7:D:99:TYR:O	7:D:100:CYS:C	2.65	0.40
9:F:202:ARG:N	9:F:202:ARG:CD	2.85	0.40
10:G:264:LYS:HD2	52:SB:31:TYR:CE2	2.52	0.40
11:H:34:LEU:HD21	11:H:150:ASP:OD1	2.21	0.40
12:I:106:ALA:HB1	12:I:109:ASP:HA	2.02	0.40
14:L:163:ARG:HD2	14:L:164:GLU:C	2.46	0.40
16:N:8:GLN:HE21	16:N:50:ARG:NH2	2.19	0.40
19:Q:43:PHE:CD1	19:Q:43:PHE:C	3.00	0.40
50:S2:49:C:N3	50:S2:478:G:C6	2.89	0.40
50:S2:380:G:N2	50:S2:382:C:C2'	2.85	0.40
50:S2:497:C:O2'	50:S2:498:C:H5'	2.22	0.40
50:S2:554:A:C2	50:S2:555:A:C8	3.09	0.40
50:S2:616:A:C5	50:S2:617:G:C1'	3.02	0.40
50:S2:675:U:O2	50:S2:676:C:C6	2.75	0.40
50:S2:690:G:C2	50:S2:691:G:C8	3.10	0.40
50:S2:840:C:H2'	75:SY:12:PHE:CE2	2.56	0.40
50:S2:901:G:C6	50:S2:902:G:C5	3.09	0.40
50:S2:984:C:O2	65:SO:138:ASP:OD2	2.40	0.40
50:S2:1004:U:H2'	50:S2:1005:G:H8	1.86	0.40
50:S2:1215:C:C4	50:S2:1646:C:N4	2.90	0.40
50:S2:1332:A:H2'	50:S2:1332:A:N3	2.37	0.40
50:S2:1373:C:O2	50:S2:1373:C:C2'	2.69	0.40
50:S2:1410:C:C4	50:S2:1411:G:N7	2.90	0.40
50:S2:1459:G:C2	50:S2:1460:C:N1	2.89	0.40
50:S2:1521:C:C5	69:SS:137:LYS:HA	2.57	0.40
50:S2:1540:G:N1	50:S2:1541:G:C6	2.87	0.40
50:S2:1576:G:N3	50:S2:1577:G:C8	2.90	0.40
50:S2:1578:U:C4'	50:S2:1579:A:O5'	2.70	0.40
50:S2:1588:A:C6	50:S2:1589:A:N6	2.90	0.40
50:S2:1596:U:O2	50:S2:1597:C:O4'	2.39	0.40
50:S2:1699:A:C2'	50:S2:1700:C:OP2	2.69	0.40
50:S2:1757:G:N3	50:S2:1757:G:H2'	2.36	0.40
50:S2:1773:C:C2	50:S2:1774:C:C6	3.08	0.40
50:S2:1840:U:H2'	50:S2:1841:C:H6	1.86	0.40
56:SF:121:PRO:C	56:SF:146:ARG:CD	2.92	0.40
58:SH:83:LEU:HD12	58:SH:84:GLU:N	2.36	0.40
58:SH:144:ILE:CG2	58:SH:152:ARG:HH12	2.34	0.40
58:SH:158:LEU:HB2	58:SH:189:PHE:CE1	2.56	0.40
59:SI:65:PHE:CE1	59:SI:76:THR:HB	2.57	0.40
60:SJ:158:ASP:OD1	60:SJ:159:PHE:N	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SK:39:ASN:HD22	61:SK:39:ASN:N	2.19	0.40
62:SL:155:PHE:CD1	62:SL:155:PHE:N	2.88	0.40
64:SN:132:LYS:HE2	64:SN:132:LYS:HA	2.02	0.40
66:SP:60:LEU:HD13	66:SP:89:MET:HG2	2.04	0.40
73:SW:41:MET:CG	73:SW:129:PHE:CD2	3.05	0.40
74:SX:87:ASN:ND2	74:SX:134:TYR:CE2	2.89	0.40
75:SY:12:PHE:HA	75:SY:23:MET:HB3	2.03	0.40
80:Sd:32:ARG:O	80:Sd:33:LYS:C	2.64	0.40
83:Sg:4:GLN:HG3	83:Sg:268:ASP:OD2	2.21	0.40
83:Sg:68:ASP:CB	83:Sg:110:SER:HA	2.51	0.40
83:Sg:194:TYR:CE1	83:Sg:212:LYS:HB2	2.57	0.40
85:S5:37:A:N3	85:S5:38:A:C1'	2.82	0.40
85:S5:63:G:C2	85:S5:64:A:C5	3.10	0.40
86:S6:31:A:N1	86:S6:40:C:N3	2.69	0.40
1:5:133:C:O2	1:5:133:C:C2'	2.70	0.40
1:5:209:U:O2	1:5:233:U:N3	2.54	0.40
1:5:294:G:H5''	43:o:43:ARG:HH12	1.86	0.40
1:5:511:C:H2'	1:5:512:U:H6	1.86	0.40
1:5:962:C:C5	45:r:112:ARG:CZ	3.05	0.40
1:5:990:C:N3	1:5:991:C:C6	2.90	0.40
1:5:1076:C:C4	1:5:1077:C:C6	3.04	0.40
1:5:1219:G:C2	1:5:1220:G:C4	3.09	0.40
1:5:1275:G:C2	1:5:1276:C:C2	3.09	0.40
1:5:1275:G:C5	1:5:1276:C:C5	3.09	0.40
1:5:1302:U:C4	1:5:1303:A:N7	2.89	0.40
1:5:1320:U:H1'	1:5:1856:C:O4'	2.22	0.40
1:5:1337:A:H4'	6:C:102:PHE:CE2	2.56	0.40
1:5:1338:G:C8	29:a:17:HIS:CE1	3.10	0.40
1:5:1359:G:C6	1:5:1360:G:C6	3.10	0.40
1:5:1388:A:C2	1:5:1396:G:N3	2.90	0.40
1:5:1614:C:H3'	1:5:1614:C:C6	2.56	0.40
1:5:1645:C:H2'	1:5:1646:A:H8	1.85	0.40
1:5:1867:A:O2'	1:5:1868:A:C5'	2.69	0.40
1:5:1994:C:C2	1:5:1995:G:N7	2.86	0.40
1:5:2045:G:O6	1:5:3870:C:O2'	2.39	0.40
1:5:2270:G:N2	1:5:2271:C:N3	2.70	0.40
1:5:2438:A:H1'	1:5:2531:C:O4'	2.21	0.40
1:5:2486:G:C6	1:5:2487:G:C5	3.09	0.40
1:5:2504:C:O2'	1:5:2505:C:N3	2.34	0.40
1:5:2515:G:O6	1:5:2516:G:C6	2.74	0.40
1:5:2591:A:H62	1:5:2753:G:N2	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2595:C:O2	1:5:2596:G:C8	2.74	0.40
1:5:2688:G:C2	1:5:2689:C:C4	3.08	0.40
1:5:2704:C:O2	1:5:2705:G:C8	2.74	0.40
1:5:2738:C:O2	1:5:2740:U:H2'	2.21	0.40
1:5:2821:U:H2'	1:5:2822:G:O4'	2.22	0.40
1:5:3604:A:C6	1:5:3605:C:C5	3.10	0.40
1:5:3621:A:H3'	1:5:3622:C:C6	2.57	0.40
1:5:3656:A:H2'	1:5:3657:U:C6	2.54	0.40
1:5:3756:A:C2	1:5:3757:G:C5	3.10	0.40
1:5:3902:A:C6	1:5:4523:A:C5	3.09	0.40
1:5:3909:C:N4	1:5:3910:C:H41	2.20	0.40
1:5:3924:C:C2'	1:5:3925:U:O5'	2.69	0.40
1:5:4065:G:C5	1:5:4066:U:C5	3.09	0.40
1:5:4100:C:N4	1:5:4101:C:H41	2.19	0.40
1:5:4118:U:C2	4:A:40:TYR:CE2	3.10	0.40
1:5:4135:G:N1	1:5:4136:G:C5	2.90	0.40
1:5:4212:A:N6	1:5:4218:U:H2'	2.36	0.40
1:5:4334:U:H2'	1:5:4335:C:H5''	2.04	0.40
1:5:4489:G:N3	1:5:4490:C:C6	2.89	0.40
1:5:4534:G:C2	1:5:4535:A:H1'	2.57	0.40
1:5:4546:A:N7	4:A:215:ASN:ND2	2.69	0.40
1:5:4550:G:N1	1:5:4551:U:C5	2.85	0.40
1:5:4677:U:O2	1:5:4677:U:C2'	2.62	0.40
1:5:4691:A:C4	1:5:4692:A:C8	3.09	0.40
1:5:4709:U:C4	1:5:4710:C:C4	3.10	0.40
1:5:4739:C:C2	1:5:4961:G:C2	3.09	0.40
1:5:4752:U:C2	1:5:4948:C:N3	2.90	0.40
1:5:4900:C:H4'	1:5:4901:G:OP2	2.22	0.40
1:5:4901:G:N1	1:5:4921:C:C4	2.90	0.40
1:5:4911:A:N6	17:O:105:PHE:CE1	2.78	0.40
1:5:4975:G:C6	1:5:4977:A:C6	3.08	0.40
1:5:5021:C:C4	1:5:5022:U:C5	3.09	0.40
1:5:5022:U:C5	1:5:5024:C:C4	3.10	0.40
1:5:5029:C:H2'	1:5:5030:U:O4'	2.22	0.40
1:5:5062:G:N2	1:5:5063:G:N9	2.68	0.40
2:7:27:G:C4	2:7:28:C:C6	3.10	0.40
2:7:113:G:C4	2:7:114:U:C5	3.09	0.40
3:8:63:U:O2	3:8:63:U:C3'	2.69	0.40
3:8:64:U:O2'	36:h:59:THR:OG1	2.14	0.40
3:8:102:G:H4'	38:j:21:ARG:HD3	2.04	0.40
4:A:5:ILE:HG23	4:A:8:GLN:HG2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:93:PHE:CE2	9:F:246:ILE:HG12	2.57	0.40
10:G:164:ILE:O	10:G:168:VAL:HG23	2.21	0.40
12:I:47:PRO:CB	12:I:171:TRP:NE1	2.81	0.40
14:L:192:PHE:C	14:L:192:PHE:CD2	2.99	0.40
18:P:128:ARG:NH1	18:P:136:ILE:HG21	2.36	0.40
21:S:28:TYR:CE2	21:S:52:LYS:HG3	2.56	0.40
29:a:113:GLY:N	29:a:133:ALA:HB2	2.37	0.40
35:g:108:LYS:O	35:g:112:GLN:HG2	2.21	0.40
37:i:85:ARG:HH11	37:i:85:ARG:CG	2.34	0.40
43:o:97:LYS:HB2	43:o:99:ARG:HH21	1.86	0.40
46:z:149:ASP:HB3	46:z:154:THR:HB	2.04	0.40
50:S2:29:G:N3	50:S2:30:C:C6	2.89	0.40
50:S2:83:A:C6	50:S2:84:A:H1'	2.56	0.40
50:S2:105:U:O4	50:S2:106:C:C4	2.75	0.40
50:S2:298:G:N1	50:S2:299:A:C5	2.89	0.40
50:S2:563:G:O2'	50:S2:564:A:C5'	2.69	0.40
50:S2:598:G:N1	50:S2:639:C:C4	2.89	0.40
50:S2:824:C:O2'	50:S2:825:A:H5'	2.21	0.40
50:S2:839:C:H2'	50:S2:841:G:O4'	2.22	0.40
50:S2:883:U:N3	50:S2:884:C:C5	2.90	0.40
50:S2:901:G:C2	50:S2:902:G:C4	3.09	0.40
50:S2:999:G:H21	50:S2:1000:C:H1'	1.85	0.40
50:S2:1027:A:C8	50:S2:1028:A:C8	3.09	0.40
50:S2:1184:G:C5	50:S2:1185:C:C6	3.10	0.40
50:S2:1234:C:N3	50:S2:1235:G:C8	2.89	0.40
50:S2:1259:A:N1	50:S2:1519:U:C5	2.90	0.40
50:S2:1293:A:C6	82:Sf:139:HIS:HB2	2.56	0.40
50:S2:1391:C:C4	50:S2:1392:U:C5	3.09	0.40
50:S2:1435:C:C4	50:S2:1436:C:C4	3.10	0.40
50:S2:1447:G:C6	50:S2:1448:A:C5	3.09	0.40
50:S2:1510:G:C2	50:S2:1511:U:C6	3.10	0.40
50:S2:1566:G:C3'	50:S2:1567:G:H5''	2.51	0.40
50:S2:1596:U:O2	50:S2:1596:U:C2'	2.69	0.40
50:S2:1823:A:OP1	74:SX:60:LYS:CG	2.69	0.40
50:S2:1847:G:N2	50:S2:1853:C:C2	2.90	0.40
58:SH:148:LEU:O	58:SH:148:LEU:HD23	2.21	0.40
60:SJ:94:LEU:HD12	60:SJ:97:ILE:HD12	2.03	0.40
61:SK:95:ARG:HA	61:SK:95:ARG:HE	1.81	0.40
63:SM:12:MET:HG2	63:SM:123:VAL:HG11	2.04	0.40
64:SN:87:ASP:OD2	64:SN:125:LEU:HD11	2.21	0.40
65:SO:114:SER:HA	65:SO:117:ARG:HB3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SQ:50:LYS:HZ2	67:SQ:85:ARG:HH22	1.70	0.40
68:SR:26:ASN:ND2	68:SR:59:LYS:HE3	2.34	0.40
68:SR:34:VAL:CG2	83:Sg:150:TRP:HH2	2.27	0.40
69:SS:117:ILE:O	69:SS:119:ALA:N	2.55	0.40
72:SV:53:TYR:OH	72:SV:73:ALA:HA	2.21	0.40
73:SW:70:ASN:N	73:SW:70:ASN:OD1	2.54	0.40
77:Sa:87:ARG:NH1	77:Sa:92:ARG:HA	2.36	0.40
80:Sd:24:CYS:SG	80:Sd:26:ASN:OD1	2.80	0.40
83:Sg:166:VAL:HG22	83:Sg:176:VAL:HG22	2.03	0.40
85:S5:29:G:O6	85:S5:42:C:N4	2.54	0.40
86:S6:7:G:N2	86:S6:68:C:C2	2.79	0.40
86:S6:72:C:O2'	86:S6:73:A:OP2	2.33	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
4	A	242/257 (94%)	203 (84%)	30 (12%)	9 (4%)	2	22
5	B	392/394 (100%)	319 (81%)	40 (10%)	33 (8%)	0	10
6	C	365/367 (100%)	304 (83%)	45 (12%)	16 (4%)	2	20
7	D	290/297 (98%)	235 (81%)	33 (11%)	22 (8%)	1	12
8	E	232/236 (98%)	150 (65%)	51 (22%)	31 (13%)	0	3
9	F	223/225 (99%)	190 (85%)	23 (10%)	10 (4%)	2	19
10	G	239/266 (90%)	200 (84%)	32 (13%)	7 (3%)	3	26
11	H	188/192 (98%)	164 (87%)	20 (11%)	4 (2%)	5	31
12	I	211/213 (99%)	168 (80%)	30 (14%)	13 (6%)	1	15
13	J	168/178 (94%)	136 (81%)	24 (14%)	8 (5%)	2	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	L	208/211 (99%)	171 (82%)	26 (12%)	11 (5%)	1	17
15	M	136/213 (64%)	118 (87%)	16 (12%)	2 (2%)	8	37
16	N	201/204 (98%)	172 (86%)	23 (11%)	6 (3%)	3	26
17	O	199/201 (99%)	182 (92%)	14 (7%)	3 (2%)	8	37
18	P	151/153 (99%)	140 (93%)	9 (6%)	2 (1%)	9	40
19	Q	185/188 (98%)	160 (86%)	20 (11%)	5 (3%)	4	28
20	R	178/196 (91%)	153 (86%)	21 (12%)	4 (2%)	5	31
21	S	173/224 (77%)	146 (84%)	24 (14%)	3 (2%)	7	35
22	T	157/160 (98%)	128 (82%)	26 (17%)	3 (2%)	6	33
23	U	97/128 (76%)	74 (76%)	21 (22%)	2 (2%)	5	31
24	V	129/140 (92%)	112 (87%)	14 (11%)	3 (2%)	5	30
25	W	61/157 (39%)	57 (93%)	3 (5%)	1 (2%)	7	36
26	X	117/156 (75%)	108 (92%)	7 (6%)	2 (2%)	7	35
27	Y	132/145 (91%)	112 (85%)	14 (11%)	6 (4%)	2	19
28	Z	133/136 (98%)	113 (85%)	15 (11%)	5 (4%)	2	21
29	a	145/148 (98%)	111 (77%)	26 (18%)	8 (6%)	1	17
30	b	73/160 (46%)	58 (80%)	11 (15%)	4 (6%)	1	17
31	c	92/115 (80%)	78 (85%)	10 (11%)	4 (4%)	2	20
32	d	105/125 (84%)	85 (81%)	16 (15%)	4 (4%)	2	21
33	e	126/135 (93%)	110 (87%)	15 (12%)	1 (1%)	16	50
34	f	107/110 (97%)	95 (89%)	7 (6%)	5 (5%)	2	19
35	g	112/117 (96%)	103 (92%)	7 (6%)	2 (2%)	6	34
36	h	120/123 (98%)	103 (86%)	14 (12%)	3 (2%)	4	29
37	i	100/105 (95%)	91 (91%)	7 (7%)	2 (2%)	6	32
38	j	84/86 (98%)	67 (80%)	13 (16%)	4 (5%)	2	18
39	k	67/70 (96%)	55 (82%)	7 (10%)	5 (8%)	1	12
40	l	48/51 (94%)	42 (88%)	4 (8%)	2 (4%)	2	20
41	m	50/128 (39%)	44 (88%)	6 (12%)	0	100	100
42	n	21/25 (84%)	21 (100%)	0	0	100	100
43	o	102/106 (96%)	85 (83%)	11 (11%)	6 (6%)	1	15
44	p	89/91 (98%)	79 (89%)	9 (10%)	1 (1%)	11	43

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
45	r	123/125 (98%)	97 (79%)	20 (16%)	6 (5%)	1	18
46	z	213/217 (98%)	166 (78%)	29 (14%)	18 (8%)	0	10
47	1	363/393 (92%)	312 (86%)	36 (10%)	15 (4%)	2	20
48	2	60/68 (88%)	49 (82%)	7 (12%)	4 (7%)	1	14
51	SA	206/295 (70%)	176 (85%)	24 (12%)	6 (3%)	3	26
52	SB	209/264 (79%)	168 (80%)	26 (12%)	15 (7%)	1	13
53	SC	216/218 (99%)	188 (87%)	20 (9%)	8 (4%)	2	22
54	SD	225/243 (93%)	170 (76%)	44 (20%)	11 (5%)	1	18
55	SE	260/263 (99%)	202 (78%)	41 (16%)	17 (6%)	1	15
56	SF	189/204 (93%)	160 (85%)	19 (10%)	10 (5%)	1	17
57	SG	235/249 (94%)	194 (83%)	35 (15%)	6 (3%)	4	28
58	SH	187/194 (96%)	143 (76%)	29 (16%)	15 (8%)	1	11
59	SI	204/208 (98%)	176 (86%)	21 (10%)	7 (3%)	3	24
60	SJ	183/194 (94%)	145 (79%)	24 (13%)	14 (8%)	1	12
61	SK	96/165 (58%)	60 (62%)	26 (27%)	10 (10%)	0	7
62	SL	154/158 (98%)	124 (80%)	23 (15%)	7 (4%)	2	19
63	SM	122/124 (98%)	77 (63%)	25 (20%)	20 (16%)	0	2
64	SN	148/151 (98%)	115 (78%)	28 (19%)	5 (3%)	3	24
65	SO	134/151 (89%)	102 (76%)	18 (13%)	14 (10%)	0	7
66	SP	94/145 (65%)	65 (69%)	18 (19%)	11 (12%)	0	5
67	SQ	139/146 (95%)	112 (81%)	21 (15%)	6 (4%)	2	20
68	SR	127/135 (94%)	95 (75%)	22 (17%)	10 (8%)	1	11
69	SS	135/152 (89%)	104 (77%)	23 (17%)	8 (6%)	1	15
70	ST	139/145 (96%)	116 (84%)	17 (12%)	6 (4%)	2	20
71	SU	102/119 (86%)	80 (78%)	18 (18%)	4 (4%)	2	21
72	SV	80/83 (96%)	63 (79%)	10 (12%)	7 (9%)	0	10
73	SW	127/130 (98%)	112 (88%)	11 (9%)	4 (3%)	3	25
74	SX	139/143 (97%)	115 (83%)	19 (14%)	5 (4%)	2	23
75	SY	124/132 (94%)	92 (74%)	23 (18%)	9 (7%)	1	13
76	SZ	73/125 (58%)	54 (74%)	13 (18%)	6 (8%)	0	11
77	Sa	96/115 (84%)	71 (74%)	17 (18%)	8 (8%)	0	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
78	Sb	81/84 (96%)	61 (75%)	15 (18%)	5 (6%)	1	15
79	Sc	62/69 (90%)	46 (74%)	16 (26%)	0	100	100
80	Sd	50/56 (89%)	38 (76%)	9 (18%)	3 (6%)	1	15
81	Se	55/133 (41%)	40 (73%)	14 (26%)	1 (2%)	6	34
82	Sf	69/156 (44%)	39 (56%)	21 (30%)	9 (13%)	0	3
83	Sg	311/317 (98%)	250 (80%)	45 (14%)	16 (5%)	1	17
All	All	11778/13201 (89%)	9619 (82%)	1571 (13%)	588 (5%)	3	18

All (588) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	A	19	HIS
4	A	197	PRO
5	B	16	PHE
5	B	40	PRO
5	B	47	LEU
5	B	108	GLU
5	B	109	HIS
5	B	111	SER
5	B	120	LYS
5	B	138	GLN
5	B	143	ALA
5	B	169	ARG
5	B	191	ALA
5	B	196	TRP
5	B	388	PHE
5	B	389	MET
6	C	69	THR
6	C	99	GLY
6	C	309	ILE
6	C	318	PRO
6	C	319	LEU
7	D	19	LYS
7	D	212	ILE
7	D	262	LYS
7	D	285	ALA
8	E	55	ARG
8	E	59	TYR
8	E	96	LYS
8	E	131	LYS

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Mol	Chain	Res	Type
8	E	175	LEU
8	E	221	PRO
8	E	230	ASP
8	E	280	HIS
9	F	72	ARG
9	F	128	ASN
9	F	236	GLY
10	G	128	VAL
11	H	60	TRP
12	I	78	LYS
12	I	79	SER
12	I	178	ALA
12	I	179	ASP
12	I	187	LYS
13	J	91	GLU
14	L	62	PRO
14	L	64	VAL
14	L	67	HIS
14	L	82	ARG
14	L	83	VAL
14	L	134	PRO
15	M	7	VAL
16	N	30	TYR
16	N	89	VAL
17	O	5	GLN
17	O	111	PRO
19	Q	177	ALA
20	R	36	ASN
21	S	146	HIS
21	S	165	PRO
24	V	14	PHE
24	V	99	GLU
26	X	131	ASP
29	a	76	ASP
29	a	92	LYS
29	a	96	GLY
30	b	7	HIS
30	b	12	GLN
34	f	4	ARG
35	g	7	TYR
36	h	119	PHE
37	i	64	SER

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Mol	Chain	Res	Type
39	k	23	VAL
39	k	59	SER
40	l	22	PRO
43	o	90	HIS
43	o	94	GLY
45	r	34	ALA
45	r	45	HIS
45	r	107	ARG
46	z	19	HIS
46	z	26	ARG
46	z	60	ARG
46	z	81	ASP
46	z	199	GLN
46	z	209	THR
47	1	201	VAL
47	1	287	SER
47	1	406	GLU
47	1	445	THR
51	SA	3	GLY
52	SB	57	ILE
52	SB	179	ASN
52	SB	191	ASP
53	SC	253	PRO
53	SC	254	ASP
54	SD	54	ARG
54	SD	202	LYS
54	SD	223	ILE
55	SE	12	VAL
55	SE	95	THR
55	SE	101	LEU
55	SE	196	THR
56	SF	34	SER
56	SF	37	ASP
58	SH	16	PRO
58	SH	17	ASP
58	SH	18	GLU
58	SH	66	VAL
58	SH	116	ARG
58	SH	170	VAL
58	SH	190	PRO
59	SI	155	ASN
60	SJ	3	VAL

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Mol	Chain	Res	Type
60	SJ	69	ARG
60	SJ	70	ARG
60	SJ	119	LEU
60	SJ	121	LYS
60	SJ	159	PHE
61	SK	30	PRO
61	SK	58	VAL
62	SL	19	ASN
62	SL	100	ASN
63	SM	15	ASN
63	SM	77	ILE
63	SM	91	LEU
63	SM	96	ARG
63	SM	102	LYS
63	SM	114	TYR
64	SN	143	SER
65	SO	56	VAL
65	SO	65	ASP
65	SO	140	THR
66	SP	14	LYS
66	SP	38	SER
67	SQ	48	GLN
67	SQ	77	HIS
68	SR	70	SER
68	SR	88	VAL
69	SS	12	ILE
69	SS	90	VAL
69	SS	118	ARG
70	ST	29	LYS
71	SU	50	VAL
71	SU	107	GLU
72	SV	41	LYS
72	SV	65	SER
73	SW	77	PRO
73	SW	107	SER
74	SX	34	THR
74	SX	129	SER
76	SZ	113	THR
82	Sf	89	LYS
82	Sf	98	VAL
82	Sf	137	ASP
83	Sg	96	THR

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Mol	Chain	Res	Type
83	Sg	142	VAL
83	Sg	182	CYS
83	Sg	282	GLU
4	A	110	GLY
5	B	147	ALA
5	B	274	TYR
5	B	314	ILE
5	B	394	LYS
6	C	58	ALA
6	C	66	SER
6	C	320	LYS
7	D	21	ARG
7	D	57	ASN
7	D	96	ALA
7	D	220	LYS
7	D	260	GLU
7	D	279	ARG
7	D	281	ALA
7	D	293	ARG
8	E	43	ASN
8	E	61	ARG
8	E	91	PRO
8	E	181	PRO
8	E	220	LYS
9	F	31	LYS
9	F	168	ARG
9	F	229	PHE
10	G	28	VAL
11	H	64	ARG
12	I	101	LYS
12	I	210	ARG
13	J	26	VAL
13	J	88	LYS
13	J	169	LYS
14	L	143	GLU
15	M	87	ALA
16	N	79	ALA
18	P	41	ILE
19	Q	178	ARG
20	R	39	GLN
22	T	18	PRO
22	T	44	GLY

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Mol	Chain	Res	Type
22	T	55	LYS
26	X	86	ALA
27	Y	6	PHE
28	Z	91	LEU
29	a	60	HIS
29	a	62	HIS
29	a	97	ALA
31	c	32	LYS
31	c	80	GLU
31	c	81	LEU
32	d	93	ASN
33	e	34	ASN
36	h	122	LYS
39	k	61	PRO
43	o	33	LEU
43	o	98	LYS
45	r	123	PRO
46	z	200	ASN
47	1	174	GLY
47	1	211	GLY
47	1	238	ASN
47	1	239	LEU
47	1	432	SER
48	2	8	VAL
48	2	66	VAL
51	SA	110	ASN
51	SA	187	GLY
52	SB	83	LYS
52	SB	108	ASP
52	SB	152	LYS
52	SB	204	ILE
52	SB	223	PHE
53	SC	134	ASN
53	SC	255	LEU
54	SD	219	PRO
55	SE	76	VAL
55	SE	98	ASN
55	SE	109	PHE
56	SF	21	GLY
56	SF	121	PRO
57	SG	99	GLY
58	SH	160	LYS

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Mol	Chain	Res	Type
59	SI	126	GLY
59	SI	137	LEU
59	SI	138	ASN
60	SJ	5	ARG
60	SJ	118	GLY
62	SL	3	ASP
63	SM	35	ILE
63	SM	48	HIS
63	SM	79	VAL
64	SN	38	TYR
65	SO	32	HIS
65	SO	33	ILE
65	SO	64	ALA
65	SO	105	THR
65	SO	129	ILE
65	SO	146	ARG
66	SP	12	PHE
67	SQ	32	ILE
67	SQ	35	ASN
68	SR	72	LYS
68	SR	93	GLN
68	SR	95	ILE
68	SR	110	ASP
68	SR	123	THR
69	SS	7	GLU
69	SS	133	GLY
70	ST	28	LEU
70	ST	34	VAL
70	ST	39	LEU
70	ST	49	ASP
73	SW	45	GLY
74	SX	99	GLU
75	SY	60	PHE
75	SY	84	LYS
75	SY	118	ARG
75	SY	120	THR
76	SZ	42	ASP
76	SZ	102	LYS
76	SZ	104	ARG
76	SZ	108	ILE
77	Sa	5	ARG
77	Sa	8	ASN

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Mol	Chain	Res	Type
77	Sa	25	ASN
78	Sb	6	ASP
78	Sb	59	CYS
82	Sf	112	GLY
83	Sg	97	THR
83	Sg	139	LYS
83	Sg	141	THR
83	Sg	161	SER
4	A	180	LEU
4	A	196	TRP
5	B	295	ASP
6	C	73	VAL
6	C	97	ARG
6	C	266	THR
6	C	273	LEU
7	D	129	GLU
7	D	152	ARG
7	D	187	SER
7	D	188	LYS
8	E	92	VAL
8	E	95	ASP
8	E	104	LYS
8	E	153	HIS
8	E	206	LYS
8	E	218	LEU
8	E	255	ARG
9	F	105	PRO
12	I	94	PHE
12	I	106	ALA
13	J	124	GLY
14	L	172	GLU
18	P	54	GLN
19	Q	52	PHE
19	Q	146	ARG
20	R	130	ASN
21	S	153	PRO
23	U	38	ASN
27	Y	11	ARG
27	Y	18	HIS
28	Z	8	GLY
28	Z	33	THR
29	a	93	ASN

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Mol	Chain	Res	Type
32	d	38	PHE
34	f	80	ASN
34	f	107	PRO
40	l	47	THR
43	o	49	GLY
46	z	154	THR
46	z	196	LYS
46	z	212	LYS
47	1	28	PHE
47	1	288	ASN
48	2	64	ILE
51	SA	105	PRO
52	SB	43	ASN
53	SC	264	SER
54	SD	178	ARG
54	SD	179	GLN
55	SE	24	THR
55	SE	163	ASP
55	SE	171	ASP
56	SF	163	PHE
58	SH	107	LYS
58	SH	110	THR
59	SI	143	LYS
61	SK	63	ALA
61	SK	92	ALA
62	SL	28	THR
63	SM	65	VAL
63	SM	95	ASP
63	SM	103	VAL
63	SM	116	LYS
63	SM	117	GLU
65	SO	128	ARG
66	SP	50	ARG
66	SP	73	PRO
66	SP	74	GLU
66	SP	87	PRO
68	SR	127	ASN
69	SS	92	ASP
70	ST	128	GLN
72	SV	3	ASN
73	SW	30	CYS
74	SX	114	ASP

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Mol	Chain	Res	Type
75	SY	104	ARG
76	SZ	80	ARG
77	Sa	61	ALA
77	Sa	62	TYR
77	Sa	97	PRO
80	Sd	7	TYR
82	Sf	83	LYS
82	Sf	99	LYS
82	Sf	100	LEU
83	Sg	65	PHE
83	Sg	144	ASP
83	Sg	283	PRO
4	A	35	ALA
4	A	109	GLU
4	A	193	ARG
5	B	117	ARG
5	B	189	THR
5	B	310	SER
5	B	329	ASP
6	C	23	THR
6	C	49	ARG
7	D	20	PHE
7	D	32	ALA
8	E	85	LEU
8	E	118	PRO
8	E	122	LEU
8	E	183	ARG
8	E	203	LYS
8	E	254	LEU
10	G	43	GLN
10	G	165	GLU
11	H	51	LYS
12	I	77	VAL
12	I	109	ASP
16	N	182	HIS
19	Q	55	ARG
20	R	131	VAL
23	U	98	ASP
24	V	110	GLY
25	W	43	LYS
29	a	98	ALA
30	b	10	HIS

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Mol	Chain	Res	Type
32	d	58	GLY
32	d	102	LEU
34	f	5	LEU
39	k	29	LYS
43	o	8	ARG
46	z	71	GLN
51	SA	188	THR
52	SB	77	ASP
52	SB	146	ARG
54	SD	218	LEU
55	SE	132	GLY
56	SF	131	ALA
56	SF	132	GLY
56	SF	143	PRO
57	SG	146	ASN
57	SG	152	ASP
58	SH	35	ASP
58	SH	57	ARG
58	SH	111	LYS
60	SJ	39	ASN
60	SJ	92	MET
60	SJ	120	ALA
60	SJ	125	HIS
61	SK	3	MET
62	SL	8	ARG
63	SM	36	ARG
63	SM	76	LEU
63	SM	119	GLN
66	SP	8	LYS
66	SP	75	VAL
67	SQ	116	ASP
72	SV	10	ASP
75	SY	30	PRO
75	SY	34	THR
77	Sa	35	ALA
78	Sb	75	GLU
80	Sd	8	TRP
82	Sf	87	THR
83	Sg	37	ASP
83	Sg	160	SER
83	Sg	286	CYS
4	A	130	SER

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Mol	Chain	Res	Type
5	B	137	TRP
5	B	139	ASP
5	B	194	LEU
5	B	387	ALA
7	D	125	VAL
7	D	263	LYS
8	E	229	PHE
8	E	245	ASP
9	F	99	GLY
10	G	123	ALA
10	G	125	LYS
11	H	110	SER
13	J	11	PRO
13	J	32	ARG
16	N	40	PRO
16	N	55	ALA
27	Y	85	VAL
28	Z	124	THR
30	b	21	ILE
31	c	77	ASN
34	f	106	TYR
35	g	84	ALA
38	j	5	THR
38	j	38	GLY
46	z	153	SER
46	z	175	THR
46	z	198	TRP
48	2	27	LYS
52	SB	22	VAL
52	SB	76	ASN
52	SB	93	GLY
53	SC	181	PRO
53	SC	189	GLY
54	SD	199	GLY
54	SD	214	LYS
55	SE	38	LEU
56	SF	68	ILE
57	SG	20	ASP
57	SG	59	GLN
58	SH	100	ILE
58	SH	159	ASP
61	SK	39	ASN

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Mol	Chain	Res	Type
61	SK	65	ARG
61	SK	67	PHE
61	SK	69	TRP
62	SL	147	LYS
63	SM	81	ASP
64	SN	58	HIS
64	SN	138	ASN
65	SO	39	ASP
65	SO	149	ARG
67	SQ	43	GLU
69	SS	82	TRP
71	SU	118	ASP
72	SV	42	VAL
72	SV	45	ARG
77	Sa	72	HIS
80	Sd	10	HIS
82	Sf	138	ARG
5	B	17	LEU
5	B	112	ASP
5	B	144	ALA
6	C	198	ASN
8	E	40	CYS
8	E	100	THR
12	I	110	ARG
13	J	27	GLY
14	L	169	ILE
17	O	110	PRO
27	Y	63	LYS
27	Y	79	VAL
28	Z	4	PHE
38	j	9	GLY
38	j	75	ARG
44	p	4	ARG
45	r	103	ARG
47	1	199	THR
47	1	237	GLN
47	1	353	SER
51	SA	43	SER
55	SE	30	ARG
55	SE	35	PRO
59	SI	131	PRO
61	SK	41	PRO

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Mol	Chain	Res	Type
62	SL	69	ARG
66	SP	27	ASP
66	SP	49	LEU
68	SR	121	GLN
69	SS	117	ILE
72	SV	81	LYS
74	SX	104	GLY
78	Sb	48	SER
5	B	110	ILE
5	B	259	PRO
7	D	114	GLY
39	k	63	GLY
46	z	83	PRO
53	SC	171	GLY
54	SD	222	PRO
56	SF	166	ILE
75	SY	95	GLY
83	Sg	190	GLY
14	L	100	PRO
46	z	87	ILE
55	SE	15	PRO
57	SG	161	PRO
64	SN	37	ILE
75	SY	67	GLY
81	Se	54	GLY
7	D	261	VAL
12	I	47	PRO
46	z	58	THR
47	1	179	ILE
54	SD	194	PRO
55	SE	131	VAL
60	SJ	8	VAL
60	SJ	169	ARG
63	SM	94	ILE
68	SR	86	PRO
71	SU	52	GLY
78	Sb	58	GLY
83	Sg	163	PRO
5	B	321	VAL
8	E	90	LYS
9	F	100	ILE
10	G	58	PRO

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Mol	Chain	Res	Type
14	L	28	GLN
36	h	38	GLY
37	i	63	VAL
45	r	44	ILE
52	SB	114	VAL
55	SE	90	ILE
63	SM	104	VAL
65	SO	24	GLY
65	SO	53	ILE
6	C	6	PRO
9	F	199	VAL
46	z	211	GLY
59	SI	20	PRO

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	A	187/199 (94%)	141 (75%)	46 (25%)	1	4
5	B	335/335 (100%)	267 (80%)	68 (20%)	1	8
6	C	305/305 (100%)	242 (79%)	63 (21%)	1	7
7	D	246/250 (98%)	179 (73%)	67 (27%)	0	3
8	E	209/209 (100%)	162 (78%)	47 (22%)	1	5
9	F	194/194 (100%)	143 (74%)	51 (26%)	0	3
10	G	206/226 (91%)	156 (76%)	50 (24%)	1	4
11	H	169/171 (99%)	126 (75%)	43 (25%)	0	4
12	I	180/180 (100%)	140 (78%)	40 (22%)	1	6
13	J	143/149 (96%)	112 (78%)	31 (22%)	1	6
14	L	176/177 (99%)	135 (77%)	41 (23%)	1	5
15	M	116/160 (72%)	95 (82%)	21 (18%)	2	12
16	N	171/172 (99%)	132 (77%)	39 (23%)	1	5
17	O	172/172 (100%)	144 (84%)	28 (16%)	2	14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	P	134/134 (100%)	113 (84%)	21 (16%)	2	15
19	Q	163/164 (99%)	133 (82%)	30 (18%)	1	11
20	R	159/175 (91%)	119 (75%)	40 (25%)	0	4
21	S	156/192 (81%)	121 (78%)	35 (22%)	1	6
22	T	139/140 (99%)	117 (84%)	22 (16%)	2	15
23	U	89/114 (78%)	70 (79%)	19 (21%)	1	6
24	V	101/107 (94%)	79 (78%)	22 (22%)	1	6
25	W	55/126 (44%)	42 (76%)	13 (24%)	1	5
26	X	107/133 (80%)	87 (81%)	20 (19%)	1	10
27	Y	124/135 (92%)	92 (74%)	32 (26%)	0	4
28	Z	117/118 (99%)	94 (80%)	23 (20%)	1	9
29	a	119/120 (99%)	104 (87%)	15 (13%)	4	20
30	b	63/123 (51%)	46 (73%)	17 (27%)	0	3
31	c	79/97 (81%)	61 (77%)	18 (23%)	1	5
32	d	98/110 (89%)	66 (67%)	32 (33%)	0	2
33	e	114/121 (94%)	87 (76%)	27 (24%)	1	5
34	f	88/89 (99%)	69 (78%)	19 (22%)	1	6
35	g	98/100 (98%)	80 (82%)	18 (18%)	1	11
36	h	109/110 (99%)	91 (84%)	18 (16%)	2	13
37	i	86/89 (97%)	69 (80%)	17 (20%)	1	9
38	j	73/73 (100%)	61 (84%)	12 (16%)	2	13
39	k	64/65 (98%)	54 (84%)	10 (16%)	2	15
40	l	47/48 (98%)	39 (83%)	8 (17%)	2	13
41	m	48/116 (41%)	35 (73%)	13 (27%)	0	3
42	n	22/24 (92%)	19 (86%)	3 (14%)	3	18
43	o	92/94 (98%)	71 (77%)	21 (23%)	1	5
44	p	74/74 (100%)	62 (84%)	12 (16%)	2	14
45	r	109/109 (100%)	92 (84%)	17 (16%)	2	15
46	z	195/196 (100%)	166 (85%)	29 (15%)	3	16
47	1	316/331 (96%)	297 (94%)	19 (6%)	17	44
48	2	53/59 (90%)	49 (92%)	4 (8%)	12	38

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
51	SA	174/245 (71%)	142 (82%)	32 (18%)	1	11
52	SB	194/231 (84%)	162 (84%)	32 (16%)	2	13
53	SC	184/184 (100%)	150 (82%)	34 (18%)	1	11
54	SD	190/202 (94%)	160 (84%)	30 (16%)	2	15
55	SE	224/225 (100%)	180 (80%)	44 (20%)	1	9
56	SF	161/170 (95%)	130 (81%)	31 (19%)	1	9
57	SG	207/218 (95%)	170 (82%)	37 (18%)	2	12
58	SH	169/174 (97%)	149 (88%)	20 (12%)	5	21
59	SI	178/180 (99%)	153 (86%)	25 (14%)	3	17
60	SJ	161/168 (96%)	130 (81%)	31 (19%)	1	9
61	SK	89/136 (65%)	70 (79%)	19 (21%)	1	6
62	SL	140/142 (99%)	116 (83%)	24 (17%)	2	12
63	SM	104/104 (100%)	77 (74%)	27 (26%)	0	3
64	SN	130/131 (99%)	98 (75%)	32 (25%)	1	4
65	SO	106/119 (89%)	82 (77%)	24 (23%)	1	5
66	SP	88/130 (68%)	78 (89%)	10 (11%)	5	22
67	SQ	117/121 (97%)	102 (87%)	15 (13%)	4	20
68	SR	117/121 (97%)	101 (86%)	16 (14%)	3	18
69	SS	119/132 (90%)	100 (84%)	19 (16%)	2	14
70	ST	112/115 (97%)	87 (78%)	25 (22%)	1	6
71	SU	94/107 (88%)	83 (88%)	11 (12%)	5	22
72	SV	66/67 (98%)	55 (83%)	11 (17%)	2	13
73	SW	112/113 (99%)	93 (83%)	19 (17%)	2	13
74	SX	113/115 (98%)	97 (86%)	16 (14%)	3	17
75	SY	108/114 (95%)	90 (83%)	18 (17%)	2	13
76	SZ	66/103 (64%)	55 (83%)	11 (17%)	2	13
77	Sa	85/98 (87%)	69 (81%)	16 (19%)	1	10
78	Sb	75/76 (99%)	64 (85%)	11 (15%)	3	16
79	Sc	57/62 (92%)	42 (74%)	15 (26%)	0	3
80	Sd	45/48 (94%)	33 (73%)	12 (27%)	0	3
81	Se	46/105 (44%)	36 (78%)	10 (22%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
82	Sf	64/140 (46%)	44 (69%)	20 (31%)	0	2
83	Sg	272/275 (99%)	246 (90%)	26 (10%)	8	29
All	All	10267/11256 (91%)	8303 (81%)	1964 (19%)	3	10

All (1964) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	A	3	ARG
4	A	5	ILE
4	A	16	PHE
4	A	30	ARG
4	A	37	ARG
4	A	40	TYR
4	A	41	ILE
4	A	63	PHE
4	A	70	LYS
4	A	73	THR
4	A	74	GLU
4	A	82	ILE
4	A	97	ASN
4	A	100	ASN
4	A	109	GLU
4	A	116	LEU
4	A	122	ASP
4	A	123	ARG
4	A	126	LEU
4	A	130	SER
4	A	144	LYS
4	A	147	ARG
4	A	159	SER
4	A	162	ASN
4	A	163	ARG
4	A	165	VAL
4	A	175	ILE
4	A	176	ASP
4	A	181	LYS
4	A	186	TYR
4	A	187	HIS
4	A	189	TYR
4	A	193	ARG
4	A	194	ASN

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Mol	Chain	Res	Type
4	A	205	ASN
4	A	208	GLU
4	A	215	ASN
4	A	216	HIS
4	A	218	HIS
4	A	219	ILE
4	A	221	LYS
4	A	226	ARG
4	A	227	ARG
4	A	233	ARG
4	A	242	ARG
4	A	245	ARG
5	B	10	ARG
5	B	16	PHE
5	B	17	LEU
5	B	25	HIS
5	B	26	ARG
5	B	36	ASP
5	B	39	LYS
5	B	41	VAL
5	B	55	HIS
5	B	56	ILE
5	B	58	ARG
5	B	62	ARG
5	B	74	GLU
5	B	78	ILE
5	B	94	GLU
5	B	95	THR
5	B	99	LEU
5	B	100	ARG
5	B	101	THR
5	B	103	LYS
5	B	104	THR
5	B	106	PHE
5	B	113	GLU
5	B	116	ARG
5	B	117	ARG
5	B	119	TYR
5	B	122	TRP
5	B	123	HIS
5	B	146	LEU
5	B	149	ASP

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Mol	Chain	Res	Type
5	B	154	LYS
5	B	156	TYR
5	B	165	HIS
5	B	167	GLN
5	B	169	ARG
5	B	173	LEU
5	B	174	ARG
5	B	189	THR
5	B	198	ARG
5	B	203	GLN
5	B	207	VAL
5	B	214	ASP
5	B	218	ASP
5	B	228	TYR
5	B	233	SER
5	B	235	TRP
5	B	236	HIS
5	B	249	ARG
5	B	257	TRP
5	B	258	HIS
5	B	261	ARG
5	B	291	TYR
5	B	299	ILE
5	B	309	LEU
5	B	314	ILE
5	B	323	TYR
5	B	326	VAL
5	B	328	ASN
5	B	329	ASP
5	B	347	LEU
5	B	348	ARG
5	B	355	THR
5	B	356	LYS
5	B	357	ARG
5	B	362	LYS
5	B	366	LYS
5	B	369	ASP
5	B	378	ARG
6	C	7	LEU
6	C	14	LYS
6	C	36	ILE
6	C	47	ASN

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Mol	Chain	Res	Type
6	C	49	ARG
6	C	60	HIS
6	C	65	GLU
6	C	69	THR
6	C	71	ARG
6	C	75	ARG
6	C	76	ILE
6	C	78	ARG
6	C	80	ARG
6	C	85	HIS
6	C	86	ARG
6	C	87	SER
6	C	92	PHE
6	C	94	ASN
6	C	95	MET
6	C	97	ARG
6	C	107	THR
6	C	112	HIS
6	C	113	ARG
6	C	115	VAL
6	C	122	TYR
6	C	126	SER
6	C	131	SER
6	C	142	HIS
6	C	146	GLU
6	C	150	LEU
6	C	156	ASP
6	C	160	SER
6	C	173	LYS
6	C	175	LYS
6	C	178	ASN
6	C	184	TYR
6	C	188	ARG
6	C	193	LYS
6	C	195	LYS
6	C	198	ASN
6	C	201	ARG
6	C	202	ILE
6	C	203	GLN
6	C	212	ASN
6	C	219	LYS
6	C	222	ARG

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Mol	Chain	Res	Type
6	C	262	GLU
6	C	264	TYR
6	C	267	TRP
6	C	269	LYS
6	C	281	MET
6	C	288	ASP
6	C	303	ARG
6	C	307	LYS
6	C	309	ILE
6	C	310	HIS
6	C	311	ARG
6	C	312	ARG
6	C	321	ASN
6	C	322	LEU
6	C	333	LYS
6	C	343	GLN
6	C	350	ARG
7	D	15	ARG
7	D	22	ARG
7	D	23	ARG
7	D	25	GLU
7	D	30	TYR
7	D	33	ARG
7	D	35	ARG
7	D	39	GLN
7	D	42	ASN
7	D	44	TYR
7	D	45	ASN
7	D	50	ARG
7	D	51	MET
7	D	59	ASP
7	D	63	GLN
7	D	66	TYR
7	D	79	TYR
7	D	90	VAL
7	D	94	ASN
7	D	95	TYR
7	D	104	LEU
7	D	107	ARG
7	D	110	LEU
7	D	111	ASN
7	D	113	PHE

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Mol	Chain	Res	Type
7	D	116	ASP
7	D	118	ILE
7	D	119	TYR
7	D	124	GLU
7	D	129	GLU
7	D	131	ASN
7	D	136	ASP
7	D	157	ASN
7	D	168	ASP
7	D	177	THR
7	D	179	ARG
7	D	189	GLU
7	D	191	ASN
7	D	193	GLU
7	D	196	ARG
7	D	202	GLN
7	D	203	ASN
7	D	206	ASP
7	D	213	GLU
7	D	221	LYS
7	D	223	PHE
7	D	229	ASN
7	D	232	THR
7	D	234	ASP
7	D	244	HIS
7	D	248	ARG
7	D	249	GLU
7	D	254	GLU
7	D	255	LYS
7	D	256	LYS
7	D	259	LYS
7	D	260	GLU
7	D	262	LYS
7	D	264	LYS
7	D	265	ARG
7	D	266	TRP
7	D	268	ARG
7	D	279	ARG
7	D	287	PHE
7	D	291	GLN
7	D	292	GLU
7	D	293	ARG

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Mol	Chain	Res	Type
8	E	39	HIS
8	E	40	CYS
8	E	43	ASN
8	E	46	LEU
8	E	52	ARG
8	E	64	MET
8	E	67	ARG
8	E	68	LYS
8	E	95	ASP
8	E	101	ARG
8	E	104	LYS
8	E	106	ARG
8	E	111	TYR
8	E	112	TYR
8	E	114	THR
8	E	115	GLU
8	E	119	ARG
8	E	129	PHE
8	E	134	ARG
8	E	153	HIS
8	E	157	ARG
8	E	166	SER
8	E	171	VAL
8	E	175	LEU
8	E	179	ARG
8	E	186	HIS
8	E	187	GLN
8	E	190	VAL
8	E	203	LYS
8	E	206	LYS
8	E	212	TYR
8	E	219	ARG
8	E	230	ASP
8	E	233	LYS
8	E	237	GLU
8	E	241	GLN
8	E	242	ARG
8	E	245	ASP
8	E	246	GLN
8	E	250	ASP
8	E	252	GLN
8	E	262	GLN

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Mol	Chain	Res	Type
8	E	268	ARG
8	E	277	ILE
8	E	280	HIS
8	E	282	LEU
8	E	284	PHE
9	F	27	PHE
9	F	32	ILE
9	F	34	ARG
9	F	38	LYS
9	F	41	GLN
9	F	43	MET
9	F	44	LEU
9	F	49	ARG
9	F	58	HIS
9	F	64	ARG
9	F	68	ARG
9	F	72	ARG
9	F	82	ASN
9	F	83	PHE
9	F	84	TYR
9	F	85	VAL
9	F	90	LYS
9	F	91	LEU
9	F	93	PHE
9	F	100	ILE
9	F	101	ASN
9	F	103	VAL
9	F	118	GLN
9	F	119	ILE
9	F	120	PHE
9	F	121	ASN
9	F	137	ILE
9	F	146	TYR
9	F	148	ASN
9	F	149	LEU
9	F	151	SER
9	F	154	GLU
9	F	176	LEU
9	F	192	LEU
9	F	194	HIS
9	F	201	LYS
9	F	202	ARG

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Mol	Chain	Res	Type
9	F	204	LYS
9	F	207	ASN
9	F	209	PHE
9	F	213	PHE
9	F	214	LYS
9	F	219	ARG
9	F	224	LYS
9	F	226	THR
9	F	227	THR
9	F	228	HIS
9	F	239	GLU
9	F	243	ASN
9	F	245	LEU
9	F	248	ARG
10	G	28	VAL
10	G	29	ASN
10	G	31	LEU
10	G	32	PHE
10	G	38	ASN
10	G	39	PHE
10	G	44	ASP
10	G	46	GLN
10	G	50	ASP
10	G	56	LYS
10	G	60	TYR
10	G	62	ARG
10	G	67	ARG
10	G	71	TYR
10	G	73	ARG
10	G	75	LYS
10	G	85	GLN
10	G	88	ASP
10	G	89	ARG
10	G	90	GLN
10	G	101	LYS
10	G	102	TYR
10	G	103	ARG
10	G	106	THR
10	G	108	GLN
10	G	112	GLN
10	G	131	LYS
10	G	141	ASN

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Mol	Chain	Res	Type
10	G	150	LYS
10	G	162	ASP
10	G	167	VAL
10	G	169	PHE
10	G	170	LEU
10	G	175	ARG
10	G	177	MET
10	G	189	ARG
10	G	202	VAL
10	G	217	LYS
10	G	220	GLU
10	G	222	ILE
10	G	223	ARG
10	G	227	ASN
10	G	229	ARG
10	G	230	TYR
10	G	231	ASN
10	G	235	ARG
10	G	240	ASN
10	G	254	GLU
10	G	259	LYS
10	G	265	LEU
11	H	11	ASP
11	H	12	ILE
11	H	18	ILE
11	H	26	ILE
11	H	31	ARG
11	H	40	HIS
11	H	41	ILE
11	H	42	ASN
11	H	51	LYS
11	H	52	LYS
11	H	54	ARG
11	H	57	VAL
11	H	58	ASP
11	H	59	LYS
11	H	60	TRP
11	H	66	GLU
11	H	84	VAL
11	H	88	PHE
11	H	92	MET
11	H	96	TYR

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Mol	Chain	Res	Type
11	H	104	VAL
11	H	105	ILE
11	H	106	GLN
11	H	107	GLU
11	H	108	ASN
11	H	113	GLU
11	H	115	ARG
11	H	117	PHE
11	H	118	LEU
11	H	122	TYR
11	H	123	ILE
11	H	124	ARG
11	H	125	ARG
11	H	128	MET
11	H	140	GLN
11	H	141	LYS
11	H	161	ILE
11	H	163	GLN
11	H	168	LYS
11	H	173	ARG
11	H	177	ASP
11	H	180	TYR
11	H	183	GLU
12	I	3	ARG
12	I	4	ARG
12	I	8	CYS
12	I	9	TYR
12	I	13	LYS
12	I	17	TYR
12	I	32	ARG
12	I	35	ASP
12	I	39	LYS
12	I	43	VAL
12	I	45	GLU
12	I	46	PHE
12	I	48	LEU
12	I	58	GLU
12	I	78	LYS
12	I	83	ASP
12	I	92	HIS
12	I	95	HIS
12	I	97	ILE

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Mol	Chain	Res	Type
12	I	99	ILE
12	I	100	ASN
12	I	101	LYS
12	I	102	MET
12	I	111	LEU
12	I	126	VAL
12	I	128	ARG
12	I	142	LEU
12	I	143	GLN
12	I	146	GLU
12	I	159	PHE
12	I	163	GLN
12	I	171	TRP
12	I	177	ASN
12	I	179	ASP
12	I	181	PHE
12	I	182	GLU
12	I	203	HIS
12	I	207	ASP
12	I	208	LYS
12	I	212	LEU
13	J	15	LEU
13	J	23	ASN
13	J	32	ARG
13	J	33	LEU
13	J	35	ARG
13	J	54	ARG
13	J	58	ARG
13	J	59	SER
13	J	73	THR
13	J	81	GLU
13	J	83	LEU
13	J	85	LYS
13	J	87	LEU
13	J	90	ARG
13	J	95	ARG
13	J	96	LYS
13	J	97	ASN
13	J	98	ASN
13	J	101	ASP
13	J	110	GLN
13	J	113	ILE

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Mol	Chain	Res	Type
13	J	128	LEU
13	J	129	ASP
13	J	143	ASP
13	J	146	ARG
13	J	150	CYS
13	J	154	LYS
13	J	155	HIS
13	J	164	ARG
13	J	171	ASP
13	J	178	ASN
14	L	5	ARG
14	L	10	LEU
14	L	13	HIS
14	L	19	GLN
14	L	28	GLN
14	L	31	ARG
14	L	34	ARG
14	L	36	ARG
14	L	39	ARG
14	L	45	ARG
14	L	49	ARG
14	L	56	ARG
14	L	65	ARG
14	L	66	TYR
14	L	67	HIS
14	L	74	ARG
14	L	79	GLU
14	L	80	GLU
14	L	82	ARG
14	L	83	VAL
14	L	92	ARG
14	L	99	ASP
14	L	101	ARG
14	L	103	ARG
14	L	111	GLN
14	L	115	GLN
14	L	119	GLU
14	L	123	LYS
14	L	127	PHE
14	L	129	ARG
14	L	130	LYS
14	L	146	LEU

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Mol	Chain	Res	Type
14	L	158	ARG
14	L	162	LYS
14	L	163	ARG
14	L	165	LYS
14	L	172	GLU
14	L	176	PHE
14	L	186	ARG
14	L	201	GLU
14	L	205	GLN
15	M	8	GLU
15	M	11	ARG
15	M	17	PHE
15	M	29	ASP
15	M	32	ASP
15	M	33	GLN
15	M	34	ASN
15	M	37	LEU
15	M	38	VAL
15	M	47	ARG
15	M	56	GLN
15	M	57	LEU
15	M	59	ASP
15	M	61	ILE
15	M	66	HIS
15	M	70	GLN
15	M	79	LYS
15	M	89	THR
15	M	90	ARG
15	M	91	TRP
15	M	119	ARG
16	N	4	TYR
16	N	9	GLU
16	N	11	TRP
16	N	26	ARG
16	N	29	GLN
16	N	43	THR
16	N	49	ARG
16	N	50	ARG
16	N	59	TYR
16	N	63	ARG
16	N	64	ILE
16	N	71	ARG

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Mol	Chain	Res	Type
16	N	80	THR
16	N	87	HIS
16	N	89	VAL
16	N	91	GLN
16	N	92	LEU
16	N	104	GLU
16	N	108	ARG
16	N	119	TYR
16	N	123	GLU
16	N	126	THR
16	N	127	TYR
16	N	131	GLU
16	N	136	ASP
16	N	138	PHE
16	N	139	HIS
16	N	150	TRP
16	N	158	HIS
16	N	169	ARG
16	N	174	LEU
16	N	178	HIS
16	N	182	HIS
16	N	189	ARG
16	N	192	TRP
16	N	195	ARG
16	N	196	ASN
16	N	199	GLN
16	N	203	TYR
17	O	5	GLN
17	O	16	LEU
17	O	42	ASN
17	O	46	ASN
17	O	49	ARG
17	O	59	ARG
17	O	60	LYS
17	O	61	ARG
17	O	62	MET
17	O	74	ARG
17	O	78	ARG
17	O	82	ARG
17	O	85	ARG
17	O	108	ILE
17	O	110	PRO

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Mol	Chain	Res	Type
17	O	113	ASP
17	O	140	ARG
17	O	160	ARG
17	O	167	HIS
17	O	169	ARG
17	O	173	GLN
17	O	176	ARG
17	O	178	ARG
17	O	184	ASN
17	O	187	LYS
17	O	188	LYS
17	O	192	PHE
17	O	194	GLU
18	P	3	ARG
18	P	9	GLU
18	P	10	ASN
18	P	13	LYS
18	P	18	ARG
18	P	23	ARG
18	P	24	VAL
18	P	28	ASN
18	P	40	HIS
18	P	42	ARG
18	P	69	ARG
18	P	70	CYS
18	P	78	TRP
18	P	90	PHE
18	P	91	LEU
18	P	110	ASP
18	P	126	ARG
18	P	128	ARG
18	P	133	HIS
18	P	135	ARG
18	P	154	GLU
19	Q	3	VAL
19	Q	5	ILE
19	Q	9	LYS
19	Q	14	ARG
19	Q	32	TYR
19	Q	37	ARG
19	Q	44	ASN
19	Q	54	SER

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Mol	Chain	Res	Type
19	Q	58	ARG
19	Q	61	LEU
19	Q	65	ARG
19	Q	68	ARG
19	Q	72	LEU
19	Q	75	ARG
19	Q	79	THR
19	Q	85	THR
19	Q	89	ASP
19	Q	91	ARG
19	Q	93	GLN
19	Q	97	LYS
19	Q	108	ARG
19	Q	110	ARG
19	Q	112	ARG
19	Q	146	ARG
19	Q	150	ARG
19	Q	166	TYR
19	Q	173	LYS
19	Q	178	ARG
19	Q	180	ARG
19	Q	181	ARG
20	R	5	ARG
20	R	6	LEU
20	R	9	ARG
20	R	15	LEU
20	R	23	TRP
20	R	39	GLN
20	R	40	GLN
20	R	45	ILE
20	R	47	ASP
20	R	50	ILE
20	R	58	HIS
20	R	60	ARG
20	R	74	ARG
20	R	80	LYS
20	R	81	ARG
20	R	86	ASN
20	R	89	MET
20	R	94	THR
20	R	99	MET
20	R	103	ARG

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Mol	Chain	Res	Type
20	R	105	LEU
20	R	107	ARG
20	R	108	ARG
20	R	109	TYR
20	R	113	LYS
20	R	114	LYS
20	R	117	ARG
20	R	118	HIS
20	R	120	TYR
20	R	124	TYR
20	R	131	VAL
20	R	136	ARG
20	R	138	LEU
20	R	141	HIS
20	R	163	ARG
20	R	168	GLU
20	R	172	ARG
20	R	175	GLU
20	R	177	LEU
20	R	178	GLN
21	S	2	LYS
21	S	15	ARG
21	S	28	TYR
21	S	29	ARG
21	S	37	HIS
21	S	39	VAL
21	S	44	PHE
21	S	48	VAL
21	S	53	LYS
21	S	57	SER
21	S	64	CYS
21	S	68	PHE
21	S	70	LYS
21	S	82	LEU
21	S	83	ARG
21	S	84	TYR
21	S	86	SER
21	S	90	THR
21	S	95	ARG
21	S	99	ASP
21	S	100	LEU
21	S	101	THR

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Mol	Chain	Res	Type
21	S	127	MET
21	S	128	LYS
21	S	138	ARG
21	S	146	HIS
21	S	147	ASP
21	S	150	ILE
21	S	151	LYS
21	S	156	HIS
21	S	159	LEU
21	S	162	GLN
21	S	166	ARG
21	S	168	THR
21	S	171	ARG
22	T	5	LYS
22	T	7	LYS
22	T	19	PHE
22	T	30	TYR
22	T	32	ARG
22	T	33	ILE
22	T	35	LYS
22	T	38	ASP
22	T	41	ASP
22	T	54	HIS
22	T	67	VAL
22	T	70	HIS
22	T	76	VAL
22	T	96	ILE
22	T	102	ARG
22	T	103	ASP
22	T	107	LYS
22	T	117	LYS
22	T	118	GLU
22	T	121	GLU
22	T	144	ASN
22	T	152	GLU
23	U	23	LEU
23	U	27	HIS
23	U	33	ILE
23	U	38	ASN
23	U	39	PHE
23	U	40	GLU
23	U	46	ARG

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Mol	Chain	Res	Type
23	U	50	ASN
23	U	52	LYS
23	U	62	THR
23	U	64	GLU
23	U	65	ARG
23	U	67	LYS
23	U	69	LYS
23	U	82	TYR
23	U	90	TYR
23	U	98	ASP
23	U	101	ARG
23	U	113	ARG
24	V	13	LYS
24	V	15	ARG
24	V	18	LEU
24	V	27	ASN
24	V	30	ASP
24	V	36	ASN
24	V	48	ARG
24	V	50	ASN
24	V	51	ARG
24	V	60	MET
24	V	69	LYS
24	V	73	ARG
24	V	77	HIS
24	V	84	GLN
24	V	91	LYS
24	V	98	PHE
24	V	100	ASP
24	V	107	ASN
24	V	109	LYS
24	V	111	GLU
24	V	123	LYS
24	V	128	LEU
25	W	3	VAL
25	W	4	GLU
25	W	8	PHE
25	W	12	LYS
25	W	17	HIS
25	W	25	ASP
25	W	33	ASN
25	W	44	ARG

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Mol	Chain	Res	Type
25	W	50	ASN
25	W	55	TYR
25	W	56	ARG
25	W	57	ARG
25	W	59	HIS
26	X	39	LYS
26	X	41	ARG
26	X	45	THR
26	X	48	ARG
26	X	55	ARG
26	X	62	ARG
26	X	63	LYS
26	X	72	ASP
26	X	79	PHE
26	X	84	GLU
26	X	94	ASN
26	X	111	GLN
26	X	117	TYR
26	X	120	ASP
26	X	129	ARG
26	X	133	GLU
26	X	137	TYR
26	X	139	ARG
26	X	144	TYR
26	X	151	ASN
27	Y	2	LYS
27	Y	4	ASN
27	Y	11	ARG
27	Y	14	ASN
27	Y	15	ARG
27	Y	17	ARG
27	Y	18	HIS
27	Y	19	PHE
27	Y	27	ARG
27	Y	36	LYS
27	Y	45	ARG
27	Y	49	ILE
27	Y	50	ARG
27	Y	53	ASP
27	Y	55	VAL
27	Y	56	GLN
27	Y	62	TYR

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Mol	Chain	Res	Type
27	Y	65	GLN
27	Y	72	GLN
27	Y	82	ILE
27	Y	83	GLU
27	Y	84	ARG
27	Y	87	ARG
27	Y	91	ASN
27	Y	100	HIS
27	Y	104	VAL
27	Y	112	ASP
27	Y	114	ASP
27	Y	115	ARG
27	Y	121	ARG
27	Y	126	ARG
27	Y	127	GLN
28	Z	3	LYS
28	Z	4	PHE
28	Z	17	ARG
28	Z	21	ARG
28	Z	27	LYS
28	Z	30	ASP
28	Z	36	ARG
28	Z	38	TYR
28	Z	46	ILE
28	Z	54	THR
28	Z	57	MET
28	Z	60	LYS
28	Z	78	ASN
28	Z	88	ASP
28	Z	92	ASP
28	Z	93	LYS
28	Z	97	ASN
28	Z	98	LYS
28	Z	102	ARG
28	Z	113	GLU
28	Z	121	ARG
28	Z	127	ASN
28	Z	136	PHE
29	a	7	LYS
29	a	14	HIS
29	a	19	HIS
29	a	40	HIS

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Mol	Chain	Res	Type
29	a	41	HIS
29	a	46	ASP
29	a	52	TYR
29	a	59	ARG
29	a	61	TYR
29	a	63	LEU
29	a	67	GLN
29	a	77	LYS
29	a	85	GLN
29	a	127	LYS
29	a	132	ARG
30	b	6	ASN
30	b	7	HIS
30	b	12	GLN
30	b	16	TRP
30	b	18	ARG
30	b	19	ASN
30	b	22	LYS
30	b	23	LYS
30	b	25	ARG
30	b	27	GLN
30	b	28	ARG
30	b	30	GLU
30	b	43	MET
30	b	44	ARG
30	b	51	LYS
30	b	55	LYS
30	b	65	MET
31	c	18	LEU
31	c	27	TYR
31	c	37	MET
31	c	42	LYS
31	c	44	LYS
31	c	52	CYS
31	c	55	LEU
31	c	56	ARG
31	c	59	GLU
31	c	65	MET
31	c	66	LEU
31	c	72	HIS
31	c	73	HIS
31	c	74	TYR

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Mol	Chain	Res	Type
31	c	77	ASN
31	c	78	ASN
31	c	81	LEU
31	c	88	TYR
32	d	18	ASN
32	d	19	GLU
32	d	21	VAL
32	d	23	ARG
32	d	26	THR
32	d	28	ASN
32	d	31	LYS
32	d	32	ARG
32	d	38	PHE
32	d	39	LYS
32	d	44	ARG
32	d	67	ARG
32	d	73	TRP
32	d	77	ILE
32	d	78	ARG
32	d	79	ASN
32	d	83	ARG
32	d	85	ARG
32	d	86	VAL
32	d	87	ARG
32	d	91	LYS
32	d	94	GLU
32	d	95	ASP
32	d	101	LYS
32	d	103	TYR
32	d	108	TYR
32	d	109	VAL
32	d	116	ASN
32	d	117	LEU
32	d	118	GLN
32	d	119	THR
32	d	123	ASP
33	e	5	ARG
33	e	9	LYS
33	e	11	LYS
33	e	16	ARG
33	e	21	ILE
33	e	26	ASP

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Mol	Chain	Res	Type
33	e	39	ARG
33	e	42	ASP
33	e	43	ASN
33	e	46	ARG
33	e	52	GLN
33	e	57	ASN
33	e	64	LYS
33	e	68	HIS
33	e	78	LEU
33	e	85	LEU
33	e	92	ASN
33	e	95	TYR
33	e	106	LYS
33	e	107	ASN
33	e	108	ARG
33	e	109	LYS
33	e	113	GLU
33	e	117	GLN
33	e	124	ASN
33	e	126	ASN
33	e	128	ARG
34	f	4	ARG
34	f	5	LEU
34	f	7	SER
34	f	14	TYR
34	f	19	ARG
34	f	22	ARG
34	f	24	HIS
34	f	28	LEU
34	f	36	ARG
34	f	51	TYR
34	f	52	LYS
34	f	65	ASN
34	f	69	VAL
34	f	71	TRP
34	f	89	ARG
34	f	100	ARG
34	f	101	ILE
34	f	103	VAL
34	f	109	ARG
35	g	4	ARG
35	g	5	LEU

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Mol	Chain	Res	Type
35	g	12	SER
35	g	14	ASN
35	g	29	ARG
35	g	32	TYR
35	g	43	LYS
35	g	52	ARG
35	g	53	LEU
35	g	57	ARG
35	g	60	ARG
35	g	66	ARG
35	g	75	SER
35	g	81	SER
35	g	93	ARG
35	g	95	PHE
35	g	114	GLN
35	g	115	LYS
36	h	3	LYS
36	h	8	ASP
36	h	10	ARG
36	h	23	ASP
36	h	28	LEU
36	h	48	ARG
36	h	51	ARG
36	h	67	GLU
36	h	68	ASN
36	h	72	PHE
36	h	73	TYR
36	h	77	LYS
36	h	89	ARG
36	h	93	ARG
36	h	97	LYS
36	h	102	LEU
36	h	119	PHE
36	h	122	LYS
37	i	3	LEU
37	i	4	ARG
37	i	12	ASN
37	i	18	THR
37	i	20	ASN
37	i	27	SER
37	i	30	ARG
37	i	33	LEU

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Mol	Chain	Res	Type
37	i	36	HIS
37	i	42	ASP
37	i	45	ARG
37	i	46	GLU
37	i	54	GLU
37	i	85	ARG
37	i	88	GLU
37	i	89	GLU
37	i	103	LYS
38	j	10	LYS
38	j	25	LYS
38	j	27	TYR
38	j	45	ARG
38	j	47	TYR
38	j	48	ASN
38	j	55	ARG
38	j	56	ARG
38	j	57	ASN
38	j	71	TYR
38	j	79	ARG
38	j	80	GLU
39	k	14	THR
39	k	19	ASP
39	k	35	LYS
39	k	37	ARG
39	k	44	THR
39	k	51	GLU
39	k	54	GLU
39	k	56	LEU
39	k	60	LEU
39	k	70	LYS
40	l	12	PHE
40	l	13	LEU
40	l	16	LYS
40	l	17	GLN
40	l	21	ARG
40	l	36	ARG
40	l	46	ARG
40	l	49	LEU
41	m	79	GLU
41	m	84	GLN
41	m	87	GLN

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Mol	Chain	Res	Type
41	m	90	ASN
41	m	96	CYS
41	m	97	ARG
41	m	98	LYS
41	m	104	HIS
41	m	106	ARG
41	m	109	ASN
41	m	111	ARG
41	m	117	HIS
41	m	119	ASN
42	n	8	LYS
42	n	9	ARG
42	n	18	ARG
43	o	3	ASN
43	o	17	LYS
43	o	24	THR
43	o	26	TYR
43	o	28	LYS
43	o	33	LEU
43	o	36	GLN
43	o	45	GLN
43	o	48	TYR
43	o	57	ARG
43	o	59	LYS
43	o	61	LYS
43	o	64	LYS
43	o	69	ARG
43	o	76	ASN
43	o	78	ARG
43	o	79	SER
43	o	81	ARG
43	o	82	MET
43	o	99	ARG
43	o	102	GLN
44	p	3	LYS
44	p	4	ARG
44	p	16	THR
44	p	29	ILE
44	p	30	GLU
44	p	48	LYS
44	p	49	ARG
44	p	69	TRP

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Mol	Chain	Res	Type
44	p	84	ARG
44	p	85	ARG
44	p	87	LYS
44	p	92	GLN
45	r	7	TRP
45	r	11	ARG
45	r	13	CYS
45	r	15	SER
45	r	16	PHE
45	r	18	ILE
45	r	26	SER
45	r	28	GLU
45	r	30	ASN
45	r	35	ARG
45	r	64	ILE
45	r	67	ARG
45	r	83	ASN
45	r	102	TYR
45	r	106	LEU
45	r	107	ARG
45	r	115	SER
46	z	25	ARG
46	z	28	PHE
46	z	29	LEU
46	z	41	TYR
46	z	42	ASP
46	z	58	THR
46	z	91	LYS
46	z	93	LEU
46	z	99	LEU
46	z	101	LYS
46	z	107	TYR
46	z	111	LEU
46	z	120	ILE
46	z	130	LYS
46	z	147	LYS
46	z	150	GLU
46	z	154	THR
46	z	156	LYS
46	z	159	MET
46	z	160	LYS
46	z	163	LEU

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Mol	Chain	Res	Type
46	z	172	VAL
46	z	174	MET
46	z	178	GLU
46	z	191	VAL
46	z	194	LEU
46	z	196	LYS
46	z	202	ARG
46	z	212	LYS
47	1	25	LYS
47	1	130	VAL
47	1	132	VAL
47	1	149	LEU
47	1	201	VAL
47	1	205	ARG
47	1	207	MET
47	1	226	LYS
47	1	239	LEU
47	1	243	MET
47	1	273	ARG
47	1	355	LEU
47	1	368	MET
47	1	377	LYS
47	1	395	LYS
47	1	412	GLU
47	1	415	ARG
47	1	431	LEU
47	1	457	TYR
48	2	8	VAL
48	2	21	LEU
48	2	32	GLU
48	2	61	ILE
51	SA	8	LEU
51	SA	11	LYS
51	SA	32	PHE
51	SA	39	TYR
51	SA	44	ASP
51	SA	53	ARG
51	SA	58	LEU
51	SA	60	LEU
51	SA	73	ASP
51	SA	79	SER
51	SA	81	ASN

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Mol	Chain	Res	Type
51	SA	88	LEU
51	SA	90	PHE
51	SA	99	ILE
51	SA	102	ARG
51	SA	105	PRO
51	SA	111	GLN
51	SA	116	PHE
51	SA	130	ASP
51	SA	140	VAL
51	SA	141	ASN
51	SA	158	ASP
51	SA	169	HIS
51	SA	177	MET
51	SA	178	LEU
51	SA	180	ARG
51	SA	181	GLU
51	SA	185	MET
51	SA	186	ARG
51	SA	195	TRP
51	SA	203	PHE
51	SA	206	ASP
52	SB	27	LYS
52	SB	31	TYR
52	SB	34	LYS
52	SB	51	ARG
52	SB	52	THR
52	SB	55	THR
52	SB	56	LYS
52	SB	67	PHE
52	SB	68	GLU
52	SB	76	ASN
52	SB	77	ASP
52	SB	78	GLU
52	SB	81	PHE
52	SB	85	LYS
52	SB	105	LEU
52	SB	107	ARG
52	SB	119	THR
52	SB	133	TYR
52	SB	136	ARG
52	SB	142	PHE
52	SB	146	ARG

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Mol	Chain	Res	Type
52	SB	148	ASN
52	SB	150	ILE
52	SB	155	TYR
52	SB	158	HIS
52	SB	162	ARG
52	SB	180	ASP
52	SB	181	LEU
52	SB	191	ASP
52	SB	196	ASP
52	SB	208	HIS
52	SB	231	LEU
53	SC	60	TRP
53	SC	61	MET
53	SC	65	LYS
53	SC	71	LYS
53	SC	72	ASP
53	SC	78	LEU
53	SC	79	GLU
53	SC	92	GLU
53	SC	97	PHE
53	SC	101	SER
53	SC	104	ASP
53	SC	110	MET
53	SC	115	GLN
53	SC	120	GLN
53	SC	121	ARG
53	SC	134	ASN
53	SC	137	VAL
53	SC	142	LYS
53	SC	152	ARG
53	SC	167	ARG
53	SC	169	TYR
53	SC	200	ARG
53	SC	215	MET
53	SC	221	ASP
53	SC	227	ARG
53	SC	235	ASN
53	SC	242	ASP
53	SC	245	SER
53	SC	250	TYR
53	SC	251	LEU
53	SC	253	PRO

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Mol	Chain	Res	Type
53	SC	255	LEU
53	SC	262	THR
53	SC	272	HIS
54	SD	6	SER
54	SD	8	LYS
54	SD	9	ARG
54	SD	22	ASN
54	SD	23	GLU
54	SD	32	ASP
54	SD	53	THR
54	SD	61	GLU
54	SD	67	ARG
54	SD	74	GLN
54	SD	87	TYR
54	SD	94	ARG
54	SD	103	GLU
54	SD	113	LEU
54	SD	135	GLU
54	SD	152	PHE
54	SD	154	ASP
54	SD	158	ILE
54	SD	167	TYR
54	SD	169	ASP
54	SD	177	LEU
54	SD	178	ARG
54	SD	182	LEU
54	SD	187	LYS
54	SD	206	ASP
54	SD	212	GLU
54	SD	214	LYS
54	SD	216	GLU
54	SD	218	LEU
54	SD	225	GLU
55	SE	3	ARG
55	SE	8	HIS
55	SE	9	LEU
55	SE	11	ARG
55	SE	15	PRO
55	SE	21	ASP
55	SE	30	ARG
55	SE	39	ARG
55	SE	42	LEU

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Mol	Chain	Res	Type
55	SE	49	ARG
55	SE	51	ARG
55	SE	54	TYR
55	SE	66	MET
55	SE	67	GLN
55	SE	73	ASP
55	SE	76	VAL
55	SE	93	ASP
55	SE	95	THR
55	SE	98	ASN
55	SE	99	PHE
55	SE	117	GLU
55	SE	118	GLU
55	SE	122	LYS
55	SE	151	ASP
55	SE	158	ASP
55	SE	164	LEU
55	SE	165	GLU
55	SE	174	LYS
55	SE	179	ASN
55	SE	180	LEU
55	SE	191	ARG
55	SE	198	ARG
55	SE	205	PHE
55	SE	206	ASP
55	SE	220	THR
55	SE	224	ASN
55	SE	226	PHE
55	SE	240	ARG
55	SE	242	LYS
55	SE	248	ILE
55	SE	253	ASP
55	SE	255	ARG
55	SE	259	LYS
55	SE	260	GLN
56	SF	23	TRP
56	SF	29	GLN
56	SF	38	TYR
56	SF	42	LYS
56	SF	49	LEU
56	SF	65	GLN
56	SF	79	HIS

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Mol	Chain	Res	Type
56	SF	82	ASN
56	SF	83	ASN
56	SF	94	LYS
56	SF	95	HIS
56	SF	106	GLU
56	SF	109	LEU
56	SF	110	GLN
56	SF	118	ASN
56	SF	122	ARG
56	SF	123	GLU
56	SF	130	ARG
56	SF	136	ARG
56	SF	137	GLN
56	SF	140	ASP
56	SF	145	ARG
56	SF	168	THR
56	SF	171	GLU
56	SF	173	LEU
56	SF	176	GLU
56	SF	186	ASN
56	SF	190	ILE
56	SF	194	ASP
56	SF	195	GLU
56	SF	197	GLU
57	SG	12	CYS
57	SG	20	ASP
57	SG	21	GLU
57	SG	30	LYS
57	SG	31	ARG
57	SG	56	ASN
57	SG	58	LYS
57	SG	64	LYS
57	SG	70	HIS
57	SG	74	ARG
57	SG	76	LEU
57	SG	79	LYS
57	SG	87	ARG
57	SG	88	ARG
57	SG	109	LEU
57	SG	110	ASN
57	SG	120	ASP
57	SG	121	ILE

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Mol	Chain	Res	Type
57	SG	126	ASP
57	SG	136	LYS
57	SG	140	ARG
57	SG	143	LYS
57	SG	152	ASP
57	SG	159	ARG
57	SG	162	LEU
57	SG	164	LYS
57	SG	170	ARG
57	SG	171	THR
57	SG	172	LYS
57	SG	186	GLN
57	SG	191	ARG
57	SG	196	LYS
57	SG	198	ARG
57	SG	213	LEU
57	SG	225	GLN
57	SG	227	GLN
57	SG	236	SER
58	SH	16	PRO
58	SH	23	ILE
58	SH	35	ASP
58	SH	36	LEU
58	SH	40	LEU
58	SH	57	ARG
58	SH	66	VAL
58	SH	81	ARG
58	SH	83	LEU
58	SH	99	ARG
58	SH	135	PHE
58	SH	148	LEU
58	SH	151	SER
58	SH	152	ARG
58	SH	159	ASP
58	SH	160	LYS
58	SH	162	GLN
58	SH	166	VAL
58	SH	184	ASP
58	SH	186	ASN
59	SI	6	ASP
59	SI	22	HIS
59	SI	49	ARG

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Mol	Chain	Res	Type
59	SI	52	ASN
59	SI	58	LEU
59	SI	67	TRP
59	SI	70	GLU
59	SI	73	THR
59	SI	74	ARG
59	SI	83	TYR
59	SI	87	ASN
59	SI	105	ASP
59	SI	106	SER
59	SI	110	ARG
59	SI	112	TRP
59	SI	128	LYS
59	SI	130	THR
59	SI	140	LYS
59	SI	143	LYS
59	SI	149	TYR
59	SI	155	ASN
59	SI	191	GLU
59	SI	196	GLU
59	SI	197	PHE
59	SI	203	LYS
60	SJ	5	ARG
60	SJ	9	CYS
60	SJ	10	ARG
60	SJ	17	ARG
60	SJ	18	ARG
60	SJ	20	PHE
60	SJ	26	ASP
60	SJ	29	LEU
60	SJ	37	LEU
60	SJ	39	ASN
60	SJ	67	ASP
60	SJ	69	ARG
60	SJ	101	LYS
60	SJ	108	ARG
60	SJ	109	ARG
60	SJ	110	LEU
60	SJ	115	PHE
60	SJ	116	LYS
60	SJ	123	ILE
60	SJ	124	HIS

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Mol	Chain	Res	Type
60	SJ	127	ARG
60	SJ	131	ARG
60	SJ	138	ARG
60	SJ	139	LYS
60	SJ	147	PHE
60	SJ	150	ARG
60	SJ	152	ASP
60	SJ	159	PHE
60	SJ	162	ARG
60	SJ	165	TYR
60	SJ	174	LYS
61	SK	1	MET
61	SK	2	LEU
61	SK	5	LYS
61	SK	8	ARG
61	SK	13	GLU
61	SK	28	HIS
61	SK	37	ASP
61	SK	40	VAL
61	SK	43	LEU
61	SK	46	MET
61	SK	60	GLU
61	SK	61	GLN
61	SK	65	ARG
61	SK	66	HIS
61	SK	80	ARG
61	SK	81	ASP
61	SK	84	HIS
61	SK	89	ILE
61	SK	95	ARG
62	SL	5	GLN
62	SL	8	ARG
62	SL	16	ILE
62	SL	19	ASN
62	SL	20	LYS
62	SL	22	ARG
62	SL	27	GLU
62	SL	35	ARG
62	SL	39	ASN
62	SL	40	ILE
62	SL	44	PHE
62	SL	65	ASN

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Mol	Chain	Res	Type
62	SL	69	ARG
62	SL	92	TYR
62	SL	97	ARG
62	SL	103	GLU
62	SL	108	ASN
62	SL	113	LEU
62	SL	116	CYS
62	SL	117	PHE
62	SL	121	GLN
62	SL	124	ASP
62	SL	155	PHE
62	SL	156	GLN
63	SM	12	MET
63	SM	18	LEU
63	SM	26	LEU
63	SM	29	ASP
63	SM	31	LEU
63	SM	33	ARG
63	SM	45	ARG
63	SM	48	HIS
63	SM	52	GLN
63	SM	73	GLN
63	SM	75	ASN
63	SM	76	LEU
63	SM	77	ILE
63	SM	78	LYS
63	SM	83	LYS
63	SM	88	TRP
63	SM	91	LEU
63	SM	95	ASP
63	SM	96	ARG
63	SM	99	ASN
63	SM	101	ARG
63	SM	102	LYS
63	SM	104	VAL
63	SM	109	VAL
63	SM	113	ASP
63	SM	114	TYR
63	SM	127	TYR
64	SN	3	ARG
64	SN	24	THR
64	SN	25	TRP

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Mol	Chain	Res	Type
64	SN	26	LEU
64	SN	27	LYS
64	SN	31	ASP
64	SN	38	TYR
64	SN	55	ARG
64	SN	56	ASP
64	SN	58	HIS
64	SN	62	GLN
64	SN	64	ARG
64	SN	69	ASN
64	SN	78	LYS
64	SN	83	ASP
64	SN	84	LEU
64	SN	86	GLU
64	SN	87	ASP
64	SN	89	TYR
64	SN	99	ARG
64	SN	101	HIS
64	SN	104	ARG
64	SN	105	ASN
64	SN	113	PHE
64	SN	125	LEU
64	SN	127	ARG
64	SN	128	TYR
64	SN	130	LYS
64	SN	132	LYS
64	SN	133	ARG
64	SN	134	VAL
64	SN	144	SER
65	SO	17	LEU
65	SO	21	VAL
65	SO	34	PHE
65	SO	39	ASP
65	SO	41	PHE
65	SO	43	HIS
65	SO	51	GLU
65	SO	52	THR
65	SO	63	LYS
65	SO	65	ASP
65	SO	80	ASP
65	SO	84	ARG
65	SO	86	LYS

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Mol	Chain	Res	Type
65	SO	94	HIS
65	SO	103	ASN
65	SO	106	LYS
65	SO	116	LEU
65	SO	117	ARG
65	SO	121	ARG
65	SO	128	ARG
65	SO	130	GLU
65	SO	146	ARG
65	SO	147	ARG
65	SO	150	ARG
66	SP	5	GLU
66	SP	6	GLN
66	SP	7	LYS
66	SP	10	ARG
66	SP	41	GLN
66	SP	42	ARG
66	SP	43	ARG
66	SP	52	LYS
66	SP	79	HIS
66	SP	86	LEU
67	SQ	15	ARG
67	SQ	26	LYS
67	SQ	35	ASN
67	SQ	45	ARG
67	SQ	62	ARG
67	SQ	72	VAL
67	SQ	73	LYS
67	SQ	85	ARG
67	SQ	99	TYR
67	SQ	114	GLN
67	SQ	126	ARG
67	SQ	128	GLU
67	SQ	138	ARG
67	SQ	140	ARG
67	SQ	145	TYR
68	SR	3	ARG
68	SR	18	GLU
68	SR	31	ASN
68	SR	36	GLU
68	SR	37	GLU
68	SR	56	HIS

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Mol	Chain	Res	Type
68	SR	78	ARG
68	SR	79	GLU
68	SR	83	ASN
68	SR	87	GLU
68	SR	91	LEU
68	SR	93	GLN
68	SR	104	GLU
68	SR	109	LEU
68	SR	118	GLN
68	SR	120	THR
69	SS	8	LYS
69	SS	10	GLN
69	SS	14	ARG
69	SS	18	THR
69	SS	23	ARG
69	SS	28	PHE
69	SS	63	GLU
69	SS	78	LYS
69	SS	82	TRP
69	SS	85	ASN
69	SS	86	ARG
69	SS	87	GLN
69	SS	95	TYR
69	SS	108	ARG
69	SS	118	ARG
69	SS	124	ARG
69	SS	125	HIS
69	SS	134	GLN
69	SS	135	HIS
70	ST	13	GLU
70	ST	23	LYS
70	ST	28	LEU
70	ST	33	TRP
70	ST	35	ASP
70	ST	37	VAL
70	ST	39	LEU
70	ST	42	HIS
70	ST	53	PHE
70	ST	62	ARG
70	ST	63	HIS
70	ST	74	SER
70	ST	79	TYR

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Mol	Chain	Res	Type
70	ST	82	ARG
70	ST	83	GLN
70	ST	84	ARG
70	ST	92	PHE
70	ST	94	ARG
70	ST	97	LYS
70	ST	108	GLU
70	ST	118	ASP
70	ST	121	ARG
70	ST	128	GLN
70	ST	129	ARG
70	ST	130	ASP
71	SU	19	ARG
71	SU	20	ILE
71	SU	47	ASN
71	SU	48	LEU
71	SU	49	LYS
71	SU	55	ARG
71	SU	56	MET
71	SU	70	CYS
71	SU	77	TRP
71	SU	87	ARG
71	SU	111	GLU
72	SV	1	MET
72	SV	2	GLN
72	SV	4	ASP
72	SV	11	LEU
72	SV	18	SER
72	SV	21	ASN
72	SV	39	VAL
72	SV	45	ARG
72	SV	49	GLN
72	SV	50	PHE
72	SV	81	LYS
73	SW	2	VAL
73	SW	3	ARG
73	SW	6	VAL
73	SW	12	LYS
73	SW	24	GLN
73	SW	28	ARG
73	SW	36	ARG
73	SW	37	PHE

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Mol	Chain	Res	Type
73	SW	52	ILE
73	SW	57	ARG
73	SW	70	ASN
73	SW	74	VAL
73	SW	78	ARG
73	SW	80	ASP
73	SW	84	LYS
73	SW	85	ASP
73	SW	90	GLN
73	SW	91	ASN
73	SW	98	GLN
74	SX	5	ARG
74	SX	7	LEU
74	SX	14	ARG
74	SX	17	ARG
74	SX	19	ASP
74	SX	32	LEU
74	SX	37	LYS
74	SX	45	SER
74	SX	46	HIS
74	SX	67	ARG
74	SX	87	ASN
74	SX	88	ASP
74	SX	105	PHE
74	SX	107	ARG
74	SX	114	ASP
74	SX	131	LEU
75	SY	3	ASP
75	SY	16	ARG
75	SY	17	LEU
75	SY	19	GLN
75	SY	20	ARG
75	SY	23	MET
75	SY	47	MET
75	SY	54	VAL
75	SY	63	HIS
75	SY	64	PHE
75	SY	69	THR
75	SY	80	ASP
75	SY	96	LEU
75	SY	98	GLU
75	SY	99	LYS

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Mol	Chain	Res	Type
75	SY	101	LYS
75	SY	107	ARG
75	SY	111	LYS
76	SZ	44	LEU
76	SZ	45	ASN
76	SZ	49	LEU
76	SZ	64	ASN
76	SZ	69	THR
76	SZ	85	ARG
76	SZ	94	LYS
76	SZ	97	ILE
76	SZ	109	TYR
76	SZ	110	THR
76	SZ	114	LYS
77	Sa	3	LYS
77	Sa	4	LYS
77	Sa	5	ARG
77	Sa	28	ARG
77	Sa	41	ILE
77	Sa	51	ARG
77	Sa	52	ASP
77	Sa	62	TYR
77	Sa	72	HIS
77	Sa	85	ARG
77	Sa	86	ASN
77	Sa	87	ARG
77	Sa	92	ARG
77	Sa	93	LYS
77	Sa	94	ASP
77	Sa	95	ARG
78	Sb	14	GLU
78	Sb	17	ARG
78	Sb	26	GLN
78	Sb	34	ASP
78	Sb	37	CYS
78	Sb	47	PHE
78	Sb	59	CYS
78	Sb	72	ARG
78	Sb	75	GLU
78	Sb	78	SER
78	Sb	84	HIS
79	Sc	5	ARG

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Mol	Chain	Res	Type
79	Sc	7	GLN
79	Sc	13	ARG
79	Sc	21	THR
79	Sc	26	GLN
79	Sc	31	ARG
79	Sc	33	GLU
79	Sc	34	PHE
79	Sc	40	ARG
79	Sc	42	ILE
79	Sc	44	ARG
79	Sc	51	ARG
79	Sc	54	ASP
79	Sc	60	GLU
79	Sc	67	ARG
80	Sd	6	PHE
80	Sd	8	TRP
80	Sd	10	HIS
80	Sd	12	ARG
80	Sd	16	GLN
80	Sd	23	VAL
80	Sd	26	ASN
80	Sd	30	LEU
80	Sd	36	LEU
80	Sd	43	PHE
80	Sd	54	LYS
80	Sd	56	ASP
81	Se	13	ARG
81	Se	15	GLN
81	Se	18	LYS
81	Se	25	LYS
81	Se	28	LYS
81	Se	31	ARG
81	Se	35	ARG
81	Se	40	ARG
81	Se	41	ARG
81	Se	52	LYS
82	Sf	87	THR
82	Sf	89	LYS
82	Sf	95	ARG
82	Sf	98	VAL
82	Sf	106	TYR
82	Sf	119	ARG

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Mol	Chain	Res	Type
82	Sf	120	GLU
82	Sf	126	CYS
82	Sf	131	PHE
82	Sf	136	PHE
82	Sf	138	ARG
82	Sf	139	HIS
82	Sf	140	TYR
82	Sf	141	CYS
82	Sf	143	LYS
82	Sf	146	LEU
82	Sf	148	TYR
82	Sf	149	CYS
82	Sf	150	PHE
82	Sf	152	LYS
83	Sg	8	ARG
83	Sg	15	ASN
83	Sg	17	TRP
83	Sg	20	GLN
83	Sg	24	THR
83	Sg	44	LYS
83	Sg	47	ARG
83	Sg	49	GLU
83	Sg	60	ARG
83	Sg	74	ASP
83	Sg	84	ASP
83	Sg	100	ARG
83	Sg	107	ASP
83	Sg	118	ARG
83	Sg	133	ASN
83	Sg	143	GLN
83	Sg	167	SER
83	Sg	215	GLN
83	Sg	226	HIS
83	Sg	229	THR
83	Sg	234	ASP
83	Sg	258	ILE
83	Sg	268	ASP
83	Sg	282	GLU
83	Sg	297	THR
83	Sg	306	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (295) such sidechains are listed below:

Mol	Chain	Res	Type
4	A	19	HIS
4	A	100	ASN
4	A	132	ASN
4	A	194	ASN
4	A	209	HIS
4	A	215	ASN
5	B	109	HIS
5	B	123	HIS
5	B	167	GLN
5	B	179	HIS
5	B	203	GLN
5	B	258	HIS
5	B	275	HIS
5	B	276	HIS
5	B	289	GLN
5	B	302	ASN
5	B	322	HIS
5	B	380	GLN
6	C	50	GLN
6	C	85	HIS
6	C	94	ASN
6	C	112	HIS
6	C	142	HIS
6	C	178	ASN
6	C	198	ASN
6	C	203	GLN
6	C	223	ASN
6	C	282	HIS
6	C	286	ASN
6	C	321	ASN
6	C	338	ASN
6	C	343	GLN
7	D	45	ASN
7	D	94	ASN
7	D	111	ASN
7	D	157	ASN
7	D	191	ASN
7	D	195	HIS
7	D	202	GLN
7	D	244	HIS
7	D	250	ASN
7	D	282	GLN
8	E	124	HIS

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Mol	Chain	Res	Type
8	E	153	HIS
8	E	178	ASN
8	E	186	HIS
8	E	246	GLN
9	F	58	HIS
9	F	82	ASN
9	F	128	ASN
9	F	153	ASN
9	F	174	ASN
9	F	194	HIS
9	F	237	ASN
9	F	250	ASN
10	G	29	ASN
10	G	64	GLN
10	G	66	GLN
10	G	81	ASN
10	G	108	GLN
10	G	112	GLN
10	G	231	ASN
11	H	40	HIS
11	H	63	ASN
11	H	106	GLN
11	H	108	ASN
11	H	188	GLN
12	I	59	GLN
12	I	100	ASN
12	I	144	ASN
12	I	163	GLN
12	I	177	ASN
12	I	213	HIS
13	J	46	GLN
13	J	155	HIS
13	J	170	HIS
14	L	6	ASN
14	L	28	GLN
14	L	87	HIS
14	L	113	ASN
14	L	159	ASN
15	M	20	HIS
15	M	34	ASN
15	M	48	GLN
16	N	8	GLN

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Mol	Chain	Res	Type
16	N	29	GLN
16	N	90	ASN
16	N	158	HIS
16	N	178	HIS
16	N	181	HIS
16	N	182	HIS
16	N	196	ASN
16	N	201	HIS
17	O	14	HIS
17	O	65	ASN
17	O	173	GLN
17	O	184	ASN
18	P	28	ASN
18	P	56	GLN
18	P	64	ASN
18	P	80	GLN
18	P	133	HIS
18	P	145	HIS
19	Q	7	HIS
19	Q	8	ASN
19	Q	40	ASN
19	Q	44	ASN
19	Q	57	ASN
19	Q	93	GLN
19	Q	188	ASN
20	R	36	ASN
20	R	66	ASN
20	R	75	HIS
20	R	118	HIS
20	R	143	HIS
21	S	37	HIS
21	S	50	GLN
21	S	91	HIS
21	S	122	HIS
21	S	125	GLN
21	S	163	HIS
22	T	58	HIS
22	T	70	HIS
22	T	139	HIS
23	U	55	ASN
23	U	105	ASN
24	V	36	ASN

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Mol	Chain	Res	Type
24	V	135	ASN
25	W	17	HIS
25	W	59	HIS
26	X	57	GLN
26	X	93	ASN
26	X	111	GLN
27	Y	24	HIS
27	Y	56	GLN
27	Y	72	GLN
27	Y	86	GLN
27	Y	100	HIS
27	Y	127	GLN
28	Z	79	HIS
29	a	19	HIS
29	a	34	ASN
29	a	40	HIS
29	a	41	HIS
29	a	62	HIS
29	a	67	GLN
30	b	7	HIS
30	b	12	GLN
30	b	19	ASN
30	b	27	GLN
30	b	42	ASN
31	c	19	GLN
31	c	40	GLN
31	c	77	ASN
32	d	30	HIS
32	d	93	ASN
32	d	100	ASN
33	e	24	GLN
33	e	43	ASN
33	e	126	ASN
34	f	21	GLN
34	f	24	HIS
34	f	56	ASN
34	f	65	ASN
34	f	80	ASN
35	g	18	ASN
36	h	68	ASN
36	h	98	HIS
38	j	16	HIS

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Mol	Chain	Res	Type
38	j	48	ASN
40	l	25	GLN
41	m	84	GLN
41	m	87	GLN
41	m	109	ASN
41	m	120	ASN
43	o	21	HIS
43	o	25	GLN
43	o	45	GLN
43	o	76	ASN
43	o	90	HIS
45	r	6	GLN
45	r	12	ASN
45	r	31	ASN
45	r	36	ASN
45	r	70	GLN
45	r	83	ASN
46	z	44	GLN
46	z	119	GLN
46	z	141	ASN
46	z	182	ASN
46	z	200	ASN
47	1	127	GLN
47	1	186	ASN
47	1	218	HIS
47	1	244	ASN
47	1	343	HIS
47	1	398	GLN
47	1	414	ASN
51	SA	24	HIS
51	SA	29	ASN
51	SA	33	GLN
51	SA	110	ASN
51	SA	113	GLN
51	SA	141	ASN
51	SA	169	HIS
52	SB	99	ASN
52	SB	101	HIS
52	SB	118	GLN
52	SB	124	HIS
52	SB	148	ASN
53	SC	115	GLN

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Mol	Chain	Res	Type
53	SC	120	GLN
53	SC	134	ASN
53	SC	272	HIS
54	SD	4	GLN
54	SD	159	HIS
54	SD	179	GLN
54	SD	226	GLN
55	SE	36	HIS
55	SE	138	HIS
55	SE	161	GLN
56	SF	29	GLN
56	SF	65	GLN
56	SF	82	ASN
56	SF	95	HIS
56	SF	137	GLN
56	SF	186	ASN
56	SF	203	ASN
57	SG	59	GLN
57	SG	65	GLN
57	SG	110	ASN
58	SH	76	GLN
59	SI	9	HIS
59	SI	44	HIS
59	SI	167	GLN
60	SJ	111	GLN
60	SJ	143	ASN
61	SK	28	HIS
61	SK	39	ASN
62	SL	65	ASN
62	SL	94	HIS
62	SL	106	HIS
62	SL	141	ASN
62	SL	156	GLN
63	SM	48	HIS
63	SM	52	GLN
63	SM	99	ASN
64	SN	5	HIS
64	SN	62	GLN
64	SN	69	ASN
66	SP	24	GLN
66	SP	79	HIS
67	SQ	24	HIS

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Mol	Chain	Res	Type
67	SQ	48	GLN
67	SQ	114	GLN
67	SQ	142	GLN
68	SR	74	GLN
68	SR	83	ASN
69	SS	10	GLN
69	SS	42	HIS
69	SS	120	HIS
70	ST	10	ASN
70	ST	11	GLN
70	ST	51	ASN
70	ST	63	HIS
71	SU	47	ASN
71	SU	81	GLN
72	SV	29	HIS
72	SV	47	ASN
72	SV	49	GLN
73	SW	82	GLN
73	SW	98	GLN
74	SX	20	HIS
74	SX	23	HIS
74	SX	61	GLN
74	SX	110	HIS
75	SY	85	ASN
75	SY	94	HIS
76	SZ	103	HIS
77	Sa	72	HIS
78	Sb	19	HIS
78	Sb	26	GLN
78	Sb	51	GLN
79	Sc	7	GLN
79	Sc	24	GLN
79	Sc	26	GLN
80	Sd	10	HIS
80	Sd	26	ASN
80	Sd	28	HIS
81	Se	37	GLN
81	Se	58	ASN
82	Sf	111	ASN
83	Sg	119	GLN
83	Sg	181	ASN
83	Sg	215	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	5	3709/3722 (99%)	1696 (45%)	637 (17%)
2	7	119/120 (99%)	31 (26%)	9 (7%)
3	8	155/156 (99%)	61 (39%)	22 (14%)
50	S2	1716/1742 (98%)	796 (46%)	273 (15%)
84	S4	9/10 (90%)	9 (100%)	0
85	S5	71/74 (95%)	47 (66%)	10 (14%)
86	S6	75/76 (98%)	53 (70%)	8 (10%)
All	All	5854/5900 (99%)	2693 (46%)	959 (16%)

All (2693) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	5	2	G
1	5	5	A
1	5	6	C
1	5	8	U
1	5	12	A
1	5	13	U
1	5	20	U
1	5	21	G
1	5	25	A
1	5	33	A
1	5	34	A
1	5	39	A
1	5	40	G
1	5	42	A
1	5	43	U
1	5	47	A
1	5	48	G
1	5	49	U
1	5	50	C
1	5	51	A
1	5	53	C
1	5	54	G
1	5	56	A
1	5	58	G
1	5	59	A
1	5	64	A
1	5	65	A
1	5	66	A
1	5	69	A

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Mol	Chain	Res	Type
1	5	70	A
1	5	71	C
1	5	72	C
1	5	74	G
1	5	80	C
1	5	81	C
1	5	84	A
1	5	85	G
1	5	88	A
1	5	89	C
1	5	91	G
1	5	92	C
1	5	93	G
1	5	94	A
1	5	95	G
1	5	96	U
1	5	98	A
1	5	99	A
1	5	101	A
1	5	107	G
1	5	108	A
1	5	109	G
1	5	110	C
1	5	111	C
1	5	112	C
1	5	115	C
1	5	118	C
1	5	119	G
1	5	120	A
1	5	121	A
1	5	125	C
1	5	126	C
1	5	128	C
1	5	129	C
1	5	130	C
1	5	131	C
1	5	132	G
1	5	134	G
1	5	135	G
1	5	136	C
1	5	137	G
1	5	138	G

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Mol	Chain	Res	Type
1	5	139	G
1	5	143	C
1	5	144	G
1	5	145	G
1	5	150	U
1	5	152	U
1	5	157	U
1	5	158	A
1	5	159	C
1	5	164	G
1	5	170	C
1	5	171	U
1	5	172	C
1	5	173	C
1	5	178	C
1	5	182	G
1	5	183	C
1	5	184	U
1	5	185	C
1	5	186	G
1	5	187	U
1	5	188	G
1	5	189	G
1	5	195	C
1	5	196	C
1	5	197	A
1	5	198	A
1	5	200	U
1	5	201	C
1	5	202	C
1	5	203	U
1	5	205	C
1	5	206	U
1	5	210	C
1	5	211	G
1	5	216	C
1	5	217	C
1	5	218	A
1	5	219	G
1	5	220	C
1	5	221	C
1	5	224	U

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Mol	Chain	Res	Type
1	5	225	G
1	5	226	G
1	5	227	A
1	5	232	G
1	5	233	U
1	5	234	G
1	5	235	A
1	5	236	G
1	5	237	G
1	5	238	C
1	5	239	C
1	5	245	C
1	5	246	G
1	5	255	C
1	5	257	C
1	5	262	G
1	5	264	C
1	5	265	C
1	5	266	C
1	5	267	G
1	5	270	U
1	5	274	C
1	5	275	C
1	5	276	C
1	5	277	G
1	5	278	G
1	5	280	G
1	5	281	U
1	5	288	G
1	5	292	G
1	5	293	G
1	5	294	G
1	5	296	A
1	5	297	U
1	5	300	A
1	5	305	A
1	5	306	A
1	5	309	C
1	5	310	G
1	5	315	G
1	5	316	U
1	5	317	A

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Mol	Chain	Res	Type
1	5	319	A
1	5	322	C
1	5	323	C
1	5	324	A
1	5	325	U
1	5	330	G
1	5	334	A
1	5	337	U
1	5	338	A
1	5	339	C
1	5	340	C
1	5	342	G
1	5	343	C
1	5	345	C
1	5	347	A
1	5	349	A
1	5	350	C
1	5	352	G
1	5	353	A
1	5	354	U
1	5	355	A
1	5	357	U
1	5	358	C
1	5	360	A
1	5	361	C
1	5	362	A
1	5	363	A
1	5	370	U
1	5	371	A
1	5	372	A
1	5	381	U
1	5	383	A
1	5	384	A
1	5	385	A
1	5	386	A
1	5	387	G
1	5	388	A
1	5	389	A
1	5	390	C
1	5	395	A
1	5	399	G
1	5	406	C

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Mol	Chain	Res	Type
1	5	407	A
1	5	408	A
1	5	409	G
1	5	410	A
1	5	412	G
1	5	413	G
1	5	414	C
1	5	415	G
1	5	417	G
1	5	418	A
1	5	431	G
1	5	432	U
1	5	433	A
1	5	434	A
1	5	440	U
1	5	444	G
1	5	445	U
1	5	449	C
1	5	450	G
1	5	451	C
1	5	452	A
1	5	453	G
1	5	454	U
1	5	455	C
1	5	456	C
1	5	458	C
1	5	466	A
1	5	467	U
1	5	468	U
1	5	469	C
1	5	470	A
1	5	471	A
1	5	473	C
1	5	484	U
1	5	485	C
1	5	486	C
1	5	487	G
1	5	491	G
1	5	496	G
1	5	498	C
1	5	500	G
1	5	502	C

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Mol	Chain	Res	Type
1	5	503	C
1	5	504	G
1	5	506	C
1	5	509	A
1	5	510	U
1	5	511	C
1	5	513	U
1	5	514	U
1	5	515	C
1	5	516	C
1	5	519	C
1	5	647	G
1	5	648	G
1	5	649	A
1	5	650	C
1	5	653	U
1	5	654	C
1	5	656	C
1	5	658	C
1	5	664	G
1	5	665	C
1	5	666	G
1	5	667	A
1	5	668	C
1	5	669	C
1	5	671	G
1	5	672	C
1	5	681	G
1	5	682	G
1	5	683	C
1	5	684	G
1	5	685	C
1	5	686	A
1	5	687	U
1	5	689	U
1	5	690	C
1	5	692	A
1	5	694	C
1	5	695	G
1	5	696	C
1	5	697	G
1	5	702	U

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Mol	Chain	Res	Type
1	5	703	G
1	5	704	C
1	5	705	G
1	5	707	C
1	5	716	C
1	5	717	U
1	5	718	C
1	5	721	G
1	5	724	C
1	5	727	C
1	5	728	U
1	5	729	G
1	5	730	G
1	5	731	G
1	5	732	A
1	5	737	C
1	5	739	G
1	5	742	G
1	5	743	G
1	5	745	G
1	5	746	A
1	5	747	A
1	5	748	G
1	5	749	G
1	5	912	G
1	5	915	A
1	5	917	A
1	5	918	G
1	5	920	C
1	5	921	C
1	5	926	G
1	5	927	G
1	5	928	C
1	5	929	A
1	5	930	G
1	5	931	C
1	5	932	A
1	5	933	G
1	5	934	C
1	5	935	A
1	5	936	C
1	5	937	U

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Mol	Chain	Res	Type
1	5	938	C
1	5	939	G
1	5	940	C
1	5	944	A
1	5	945	U
1	5	946	C
1	5	950	G
1	5	952	G
1	5	955	G
1	5	956	A
1	5	957	G
1	5	958	G
1	5	959	G
1	5	960	A
1	5	961	G
1	5	962	C
1	5	963	G
1	5	964	A
1	5	965	G
1	5	966	A
1	5	967	C
1	5	968	C
1	5	969	C
1	5	971	U
1	5	972	C
1	5	973	G
1	5	974	C
1	5	975	C
1	5	976	G
1	5	977	C
1	5	978	G
1	5	979	C
1	5	980	U
1	5	982	U
1	5	983	C
1	5	985	C
1	5	990	C
1	5	1051	G
1	5	1068	G
1	5	1069	G
1	5	1072	C
1	5	1075	G

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Mol	Chain	Res	Type
1	5	1076	C
1	5	1077	C
1	5	1078	A
1	5	1082	C
1	5	1083	U
1	5	1084	C
1	5	1086	C
1	5	1167	C
1	5	1168	G
1	5	1177	U
1	5	1181	C
1	5	1186	U
1	5	1187	G
1	5	1193	C
1	5	1210	C
1	5	1211	G
1	5	1212	G
1	5	1214	C
1	5	1215	C
1	5	1218	G
1	5	1219	G
1	5	1221	G
1	5	1222	A
1	5	1233	G
1	5	1235	G
1	5	1236	C
1	5	1237	C
1	5	1238	A
1	5	1239	C
1	5	1240	G
1	5	1242	G
1	5	1243	C
1	5	1244	G
1	5	1245	C
1	5	1255	A
1	5	1264	C
1	5	1265	G
1	5	1266	G
1	5	1267	C
1	5	1268	G
1	5	1269	G
1	5	1270	A

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Mol	Chain	Res	Type
1	5	1271	G
1	5	1272	C
1	5	1273	G
1	5	1274	A
1	5	1275	G
1	5	1277	G
1	5	1279	A
1	5	1280	C
1	5	1282	G
1	5	1283	G
1	5	1284	G
1	5	1285	U
1	5	1288	G
1	5	1289	C
1	5	1290	G
1	5	1291	G
1	5	1292	C
1	5	1293	G
1	5	1294	A
1	5	1295	C
1	5	1296	G
1	5	1297	U
1	5	1298	C
1	5	1300	G
1	5	1301	C
1	5	1304	C
1	5	1313	C
1	5	1314	C
1	5	1319	U
1	5	1324	A
1	5	1325	C
1	5	1326	A
1	5	1329	G
1	5	1330	A
1	5	1333	A
1	5	1337	A
1	5	1338	G
1	5	1344	C
1	5	1354	A
1	5	1357	C
1	5	1358	G
1	5	1359	G

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Mol	Chain	Res	Type
1	5	1360	G
1	5	1362	G
1	5	1364	U
1	5	1365	C
1	5	1366	G
1	5	1367	C
1	5	1368	A
1	5	1369	C
1	5	1370	G
1	5	1371	A
1	5	1372	A
1	5	1377	G
1	5	1378	C
1	5	1379	C
1	5	1380	G
1	5	1381	U
1	5	1382	G
1	5	1387	A
1	5	1390	G
1	5	1394	G
1	5	1397	A
1	5	1398	A
1	5	1399	G
1	5	1402	C
1	5	1407	C
1	5	1408	G
1	5	1410	U
1	5	1411	C
1	5	1420	A
1	5	1421	G
1	5	1426	G
1	5	1427	A
1	5	1428	U
1	5	1429	C
1	5	1435	G
1	5	1436	C
1	5	1438	U
1	5	1439	C
1	5	1440	U
1	5	1441	C
1	5	1444	G
1	5	1445	U

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Mol	Chain	Res	Type
1	5	1446	C
1	5	1448	G
1	5	1455	G
1	5	1456	C
1	5	1457	G
1	5	1458	C
1	5	1465	G
1	5	1466	G
1	5	1474	C
1	5	1475	G
1	5	1478	C
1	5	1479	G
1	5	1480	C
1	5	1481	C
1	5	1482	G
1	5	1483	C
1	5	1484	G
1	5	1485	C
1	5	1487	G
1	5	1488	G
1	5	1489	G
1	5	1490	G
1	5	1493	G
1	5	1497	A
1	5	1498	G
1	5	1499	C
1	5	1500	A
1	5	1501	C
1	5	1503	A
1	5	1504	G
1	5	1514	U
1	5	1516	G
1	5	1518	A
1	5	1519	C
1	5	1520	C
1	5	1521	C
1	5	1522	G
1	5	1523	A
1	5	1525	A
1	5	1530	G
1	5	1534	A
1	5	1535	C

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Mol	Chain	Res	Type
1	5	1542	U
1	5	1543	G
1	5	1547	A
1	5	1562	G
1	5	1563	A
1	5	1564	A
1	5	1565	A
1	5	1566	C
1	5	1568	C
1	5	1571	G
1	5	1572	U
1	5	1578	U
1	5	1583	A
1	5	1590	C
1	5	1591	U
1	5	1596	U
1	5	1597	G
1	5	1604	G
1	5	1611	C
1	5	1612	G
1	5	1613	A
1	5	1614	C
1	5	1624	G
1	5	1625	G
1	5	1631	A
1	5	1633	G
1	5	1634	A
1	5	1636	U
1	5	1637	A
1	5	1638	A
1	5	1639	U
1	5	1640	C
1	5	1641	G
1	5	1642	A
1	5	1643	A
1	5	1650	A
1	5	1654	G
1	5	1655	C
1	5	1656	U
1	5	1661	C
1	5	1662	C
1	5	1670	G

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Mol	Chain	Res	Type
1	5	1671	U
1	5	1673	U
1	5	1674	C
1	5	1676	C
1	5	1677	U
1	5	1678	C
1	5	1679	A
1	5	1680	G
1	5	1681	G
1	5	1684	A
1	5	1685	G
1	5	1687	U
1	5	1691	G
1	5	1692	C
1	5	1694	C
1	5	1696	C
1	5	1697	G
1	5	1698	C
1	5	1699	A
1	5	1718	C
1	5	1719	A
1	5	1720	C
1	5	1721	G
1	5	1722	C
1	5	1723	A
1	5	1724	G
1	5	1725	U
1	5	1727	U
1	5	1730	U
1	5	1733	G
1	5	1734	G
1	5	1735	U
1	5	1736	A
1	5	1741	G
1	5	1742	A
1	5	1746	A
1	5	1750	G
1	5	1751	A
1	5	1753	G
1	5	1754	U
1	5	1755	C
1	5	1756	U

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Mol	Chain	Res	Type
1	5	1757	U
1	5	1758	G
1	5	1759	G
1	5	1760	G
1	5	1761	G
1	5	1764	G
1	5	1765	A
1	5	1766	A
1	5	1767	A
1	5	1768	C
1	5	1769	G
1	5	1770	A
1	5	1772	C
1	5	1776	A
1	5	1777	C
1	5	1779	U
1	5	1781	U
1	5	1787	A
1	5	1788	A
1	5	1790	U
1	5	1791	U
1	5	1799	G
1	5	1800	U
1	5	1803	G
1	5	1804	A
1	5	1805	A
1	5	1817	U
1	5	1818	G
1	5	1819	G
1	5	1820	C
1	5	1822	U
1	5	1825	A
1	5	1827	C
1	5	1830	G
1	5	1832	C
1	5	1833	G
1	5	1834	U
1	5	1835	G
1	5	1836	G
1	5	1840	G
1	5	1842	G
1	5	1843	A

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Mol	Chain	Res	Type
1	5	1847	C
1	5	1848	C
1	5	1849	U
1	5	1850	A
1	5	1851	G
1	5	1855	G
1	5	1864	G
1	5	1866	U
1	5	1867	A
1	5	1869	G
1	5	1870	C
1	5	1876	U
1	5	1877	G
1	5	1878	G
1	5	1881	C
1	5	1882	U
1	5	1884	C
1	5	1885	G
1	5	1886	G
1	5	1887	G
1	5	1888	A
1	5	1890	G
1	5	1891	A
1	5	1897	A
1	5	1899	G
1	5	1900	C
1	5	1903	G
1	5	1907	A
1	5	1910	G
1	5	1912	G
1	5	1913	C
1	5	1916	G
1	5	1917	A
1	5	1918	U
1	5	1919	G
1	5	1920	C
1	5	1921	C
1	5	1922	G
1	5	1923	A
1	5	1925	G
1	5	1929	A
1	5	1930	U

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Mol	Chain	Res	Type
1	5	1931	C
1	5	1932	A
1	5	1935	C
1	5	1936	C
1	5	1938	C
1	5	1939	A
1	5	1940	G
1	5	1941	A
1	5	1947	U
1	5	1948	G
1	5	1951	G
1	5	1952	G
1	5	1956	A
1	5	1959	U
1	5	1961	G
1	5	1962	A
1	5	1964	A
1	5	1965	G
1	5	1966	C
1	5	1971	C
1	5	1974	U
1	5	1975	G
1	5	1976	G
1	5	1977	C
1	5	1979	A
1	5	1980	U
1	5	1981	G
1	5	1983	A
1	5	1984	A
1	5	1985	G
1	5	1986	U
1	5	1987	C
1	5	1988	G
1	5	1992	U
1	5	1993	C
1	5	1997	U
1	5	1998	A
1	5	1999	A
1	5	2001	G
1	5	2002	A
1	5	2003	G
1	5	2004	U

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Mol	Chain	Res	Type
1	5	2005	G
1	5	2007	G
1	5	2008	U
1	5	2009	A
1	5	2010	A
1	5	2014	C
1	5	2015	U
1	5	2018	C
1	5	2019	C
1	5	2020	U
1	5	2023	C
1	5	2024	G
1	5	2025	A
1	5	2026	A
1	5	2033	A
1	5	2034	G
1	5	2035	C
1	5	2040	A
1	5	2044	U
1	5	2045	G
1	5	2046	G
1	5	2047	A
1	5	2048	U
1	5	2052	G
1	5	2055	G
1	5	2056	G
1	5	2057	A
1	5	2058	G
1	5	2059	C
1	5	2060	G
1	5	2062	C
1	5	2063	G
1	5	2064	G
1	5	2069	A
1	5	2070	U
1	5	2075	G
1	5	2076	G
1	5	2077	C
1	5	2083	C
1	5	2084	C
1	5	2085	G
1	5	2088	A

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Mol	Chain	Res	Type
1	5	2089	G
1	5	2090	U
1	5	2091	C
1	5	2092	G
1	5	2093	A
1	5	2094	G
1	5	2095	A
1	5	2096	G
1	5	2097	U
1	5	2100	A
1	5	2105	A
1	5	2107	C
1	5	2108	G
1	5	2109	G
1	5	2110	C
1	5	2111	G
1	5	2112	G
1	5	2113	G
1	5	2114	G
1	5	2115	G
1	5	2116	C
1	5	2117	G
1	5	2118	G
1	5	2119	C
1	5	2120	G
1	5	2121	C
1	5	2122	G
1	5	2123	C
1	5	2124	G
1	5	2125	C
1	5	2126	G
1	5	2127	C
1	5	2247	C
1	5	2248	C
1	5	2250	C
1	5	2251	G
1	5	2252	G
1	5	2253	A
1	5	2254	G
1	5	2255	C
1	5	2256	C
1	5	2257	C

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Mol	Chain	Res	Type
1	5	2258	C
1	5	2259	G
1	5	2260	C
1	5	2261	G
1	5	2262	G
1	5	2263	A
1	5	2264	C
1	5	2265	G
1	5	2266	C
1	5	2267	U
1	5	2268	A
1	5	2269	C
1	5	2270	G
1	5	2273	G
1	5	2275	G
1	5	2277	C
1	5	2279	A
1	5	2282	A
1	5	2283	G
1	5	2288	G
1	5	2289	C
1	5	2299	G
1	5	2300	A
1	5	2301	G
1	5	2305	U
1	5	2309	G
1	5	2312	U
1	5	2313	A
1	5	2314	G
1	5	2316	G
1	5	2319	C
1	5	2321	G
1	5	2322	G
1	5	2324	C
1	5	2325	C
1	5	2328	G
1	5	2329	U
1	5	2330	G
1	5	2331	G
1	5	2332	A
1	5	2333	G
1	5	2334	C

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Mol	Chain	Res	Type
1	5	2337	C
1	5	2339	G
1	5	2342	G
1	5	2343	G
1	5	2347	A
1	5	2348	G
1	5	2349	A
1	5	2350	U
1	5	2351	C
1	5	2357	G
1	5	2360	A
1	5	2361	G
1	5	2362	U
1	5	2366	A
1	5	2367	A
1	5	2368	A
1	5	2369	U
1	5	2370	A
1	5	2371	U
1	5	2372	U
1	5	2378	G
1	5	2382	A
1	5	2384	U
1	5	2389	A
1	5	2390	G
1	5	2391	G
1	5	2395	A
1	5	2396	A
1	5	2397	G
1	5	2398	U
1	5	2399	G
1	5	2407	G
1	5	2409	U
1	5	2417	A
1	5	2422	C
1	5	2425	U
1	5	2426	U
1	5	2428	A
1	5	2429	A
1	5	2432	U
1	5	2433	G
1	5	2434	G

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Mol	Chain	Res	Type
1	5	2437	C
1	5	2438	A
1	5	2439	G
1	5	2440	U
1	5	2441	C
1	5	2443	G
1	5	2447	U
1	5	2448	G
1	5	2449	A
1	5	2450	G
1	5	2454	U
1	5	2456	G
1	5	2464	C
1	5	2465	C
1	5	2468	U
1	5	2469	C
1	5	2470	C
1	5	2471	G
1	5	2472	A
1	5	2474	G
1	5	2475	G
1	5	2476	G
1	5	2487	G
1	5	2488	C
1	5	2489	C
1	5	2490	U
1	5	2491	C
1	5	2502	G
1	5	2503	G
1	5	2504	C
1	5	2505	C
1	5	2506	G
1	5	2507	A
1	5	2508	U
1	5	2509	C
1	5	2510	G
1	5	2511	A
1	5	2512	A
1	5	2513	A
1	5	2514	G
1	5	2526	C
1	5	2527	A

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Mol	Chain	Res	Type
1	5	2529	A
1	5	2530	U
1	5	2532	C
1	5	2533	C
1	5	2534	C
1	5	2537	A
1	5	2544	G
1	5	2545	U
1	5	2546	G
1	5	2547	G
1	5	2549	G
1	5	2551	A
1	5	2552	G
1	5	2553	A
1	5	2554	U
1	5	2555	G
1	5	2560	C
1	5	2566	G
1	5	2571	C
1	5	2572	C
1	5	2577	C
1	5	2581	A
1	5	2582	A
1	5	2583	C
1	5	2586	G
1	5	2587	A
1	5	2588	C
1	5	2589	C
1	5	2600	A
1	5	2601	A
1	5	2602	G
1	5	2615	C
1	5	2616	C
1	5	2620	G
1	5	2623	A
1	5	2627	C
1	5	2630	U
1	5	2631	U
1	5	2638	G
1	5	2639	U
1	5	2640	G
1	5	2643	G

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Mol	Chain	Res	Type
1	5	2645	G
1	5	2648	G
1	5	2649	G
1	5	2652	G
1	5	2653	C
1	5	2658	G
1	5	2659	A
1	5	2660	A
1	5	2661	U
1	5	2662	G
1	5	2664	G
1	5	2665	U
1	5	2666	U
1	5	2667	C
1	5	2670	C
1	5	2673	G
1	5	2674	A
1	5	2675	G
1	5	2678	A
1	5	2683	C
1	5	2684	C
1	5	2687	U
1	5	2688	G
1	5	2689	C
1	5	2692	U
1	5	2694	G
1	5	2696	A
1	5	2704	C
1	5	2710	C
1	5	2711	G
1	5	2712	G
1	5	2713	C
1	5	2714	G
1	5	2716	C
1	5	2722	G
1	5	2725	A
1	5	2726	G
1	5	2735	G
1	5	2737	C
1	5	2740	U
1	5	2743	A
1	5	2744	A

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Mol	Chain	Res	Type
1	5	2745	A
1	5	2747	U
1	5	2751	G
1	5	2752	G
1	5	2754	G
1	5	2756	G
1	5	2760	G
1	5	2762	G
1	5	2764	A
1	5	2765	A
1	5	2766	A
1	5	2767	U
1	5	2768	C
1	5	2769	U
1	5	2770	C
1	5	2783	A
1	5	2786	C
1	5	2787	A
1	5	2788	U
1	5	2790	U
1	5	2794	C
1	5	2796	G
1	5	2797	C
1	5	2798	A
1	5	2799	G
1	5	2806	A
1	5	2807	A
1	5	2808	G
1	5	2812	A
1	5	2813	A
1	5	2814	C
1	5	2815	A
1	5	2818	C
1	5	2820	C
1	5	2821	U
1	5	2824	C
1	5	2826	U
1	5	2827	G
1	5	2828	U
1	5	2829	U
1	5	2832	A
1	5	2833	A

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Mol	Chain	Res	Type
1	5	2834	C
1	5	2835	A
1	5	2838	G
1	5	2841	G
1	5	2842	G
1	5	2848	G
1	5	2849	A
1	5	2850	A
1	5	2852	U
1	5	2854	G
1	5	2855	G
1	5	2858	A
1	5	2859	G
1	5	2860	C
1	5	2866	C
1	5	2867	C
1	5	2873	U
1	5	2874	U
1	5	2875	C
1	5	2876	G
1	5	2879	A
1	5	2880	U
1	5	2888	G
1	5	2892	C
1	5	2897	G
1	5	2898	G
1	5	2900	U
1	5	2904	U
1	5	2905	C
1	5	2910	G
1	5	3591	C
1	5	3592	G
1	5	3594	C
1	5	3595	U
1	5	3596	A
1	5	3597	G
1	5	3605	C
1	5	3606	U
1	5	3615	G
1	5	3616	U
1	5	3617	G
1	5	3620	G

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Mol	Chain	Res	Type
1	5	3621	A
1	5	3622	C
1	5	3623	C
1	5	3625	G
1	5	3626	G
1	5	3627	G
1	5	3635	A
1	5	3636	C
1	5	3643	A
1	5	3644	U
1	5	3648	A
1	5	3649	A
1	5	3650	C
1	5	3658	C
1	5	3660	C
1	5	3662	A
1	5	3663	A
1	5	3664	G
1	5	3667	C
1	5	3668	C
1	5	3670	C
1	5	3671	G
1	5	3672	G
1	5	3673	C
1	5	3674	G
1	5	3675	G
1	5	3676	G
1	5	3677	U
1	5	3678	G
1	5	3679	U
1	5	3680	U
1	5	3681	G
1	5	3682	A
1	5	3683	C
1	5	3684	G
1	5	3688	U
1	5	3692	A
1	5	3698	G
1	5	3699	C
1	5	3709	U
1	5	3710	G
1	5	3711	A

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Mol	Chain	Res	Type
1	5	3712	A
1	5	3713	U
1	5	3715	U
1	5	3716	C
1	5	3717	A
1	5	3718	A
1	5	3727	A
1	5	3728	A
1	5	3729	U
1	5	3733	A
1	5	3735	G
1	5	3736	A
1	5	3737	A
1	5	3738	G
1	5	3739	C
1	5	3743	G
1	5	3744	G
1	5	3745	U
1	5	3748	A
1	5	3756	A
1	5	3759	A
1	5	3760	A
1	5	3770	U
1	5	3772	U
1	5	3773	U
1	5	3774	A
1	5	3775	A
1	5	3776	G
1	5	3777	G
1	5	3784	A
1	5	3785	A
1	5	3786	U
1	5	3791	C
1	5	3799	A
1	5	3800	A
1	5	3802	U
1	5	3803	A
1	5	3807	A
1	5	3809	G
1	5	3810	C
1	5	3811	G
1	5	3813	A

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Mol	Chain	Res	Type
1	5	3814	U
1	5	3817	A
1	5	3818	U
1	5	3819	G
1	5	3822	U
1	5	3831	U
1	5	3838	U
1	5	3839	G
1	5	3840	U
1	5	3843	C
1	5	3849	A
1	5	3851	U
1	5	3859	G
1	5	3861	A
1	5	3865	A
1	5	3867	A
1	5	3876	A
1	5	3877	A
1	5	3878	C
1	5	3879	G
1	5	3880	G
1	5	3881	G
1	5	3882	C
1	5	3887	C
1	5	3889	G
1	5	3895	G
1	5	3897	G
1	5	3898	G
1	5	3899	G
1	5	3900	G
1	5	3901	A
1	5	3902	A
1	5	3905	A
1	5	3906	A
1	5	3907	G
1	5	3908	A
1	5	3912	U
1	5	3913	G
1	5	3914	U
1	5	3915	U
1	5	3916	G
1	5	3917	A

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Mol	Chain	Res	Type
1	5	3922	G
1	5	3923	A
1	5	3925	U
1	5	3926	C
1	5	3938	G
1	5	3939	G
1	5	3943	A
1	5	3944	G
1	5	3945	A
1	5	3951	G
1	5	3954	A
1	5	3956	G
1	5	3960	A
1	5	3961	G
1	5	3962	A
1	5	3963	A
1	5	3964	U
1	5	3965	A
1	5	3969	G
1	5	3973	G
1	5	4037	C
1	5	4038	C
1	5	4039	G
1	5	4041	C
1	5	4042	G
1	5	4043	G
1	5	4044	U
1	5	4045	G
1	5	4047	A
1	5	4048	A
1	5	4049	U
1	5	4051	C
1	5	4053	A
1	5	4069	U
1	5	4070	U
1	5	4071	U
1	5	4072	C
1	5	4075	U
1	5	4076	G
1	5	4083	U
1	5	4084	G
1	5	4085	A

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Mol	Chain	Res	Type
1	5	4086	G
1	5	4087	G
1	5	4089	G
1	5	4091	G
1	5	4092	G
1	5	4093	G
1	5	4094	G
1	5	4095	G
1	5	4097	G
1	5	4104	G
1	5	4105	A
1	5	4107	G
1	5	4114	C
1	5	4115	G
1	5	4116	C
1	5	4117	U
1	5	4118	U
1	5	4119	C
1	5	4120	U
1	5	4121	G
1	5	4122	G
1	5	4125	C
1	5	4126	C
1	5	4127	A
1	5	4128	A
1	5	4129	G
1	5	4132	C
1	5	4140	C
1	5	4143	G
1	5	4145	C
1	5	4158	C
1	5	4162	C
1	5	4164	C
1	5	4166	G
1	5	4168	G
1	5	4169	G
1	5	4171	C
1	5	4172	A
1	5	4173	G
1	5	4180	G
1	5	4183	G
1	5	4184	G

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Mol	Chain	Res	Type
1	5	4191	G
1	5	4195	G
1	5	4196	G
1	5	4197	G
1	5	4199	C
1	5	4203	A
1	5	4205	A
1	5	4206	C
1	5	4208	U
1	5	4212	A
1	5	4213	A
1	5	4214	A
1	5	4215	C
1	5	4216	G
1	5	4217	G
1	5	4218	U
1	5	4219	A
1	5	4220	A
1	5	4221	C
1	5	4222	G
1	5	4225	G
1	5	4226	G
1	5	4228	G
1	5	4229	U
1	5	4232	U
1	5	4233	A
1	5	4234	A
1	5	4235	G
1	5	4236	G
1	5	4239	A
1	5	4241	C
1	5	4249	G
1	5	4251	A
1	5	4252	C
1	5	4254	G
1	5	4255	A
1	5	4257	A
1	5	4258	C
1	5	4265	U
1	5	4267	G
1	5	4268	A
1	5	4270	C

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Mol	Chain	Res	Type
1	5	4271	A
1	5	4274	A
1	5	4276	G
1	5	4279	A
1	5	4280	A
1	5	4281	A
1	5	4282	A
1	5	4283	G
1	5	4286	C
1	5	4287	G
1	5	4288	C
1	5	4290	U
1	5	4291	G
1	5	4292	A
1	5	4296	U
1	5	4297	G
1	5	4305	G
1	5	4306	U
1	5	4311	A
1	5	4314	C
1	5	4316	G
1	5	4318	C
1	5	4323	A
1	5	4329	G
1	5	4330	G
1	5	4332	C
1	5	4335	C
1	5	4336	A
1	5	4337	C
1	5	4339	A
1	5	4344	U
1	5	4348	A
1	5	4349	C
1	5	4350	C
1	5	4352	U
1	5	4353	U
1	5	4354	U
1	5	4356	G
1	5	4364	G
1	5	4368	G
1	5	4369	A
1	5	4373	G

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Mol	Chain	Res	Type
1	5	4374	U
1	5	4375	C
1	5	4376	A
1	5	4377	G
1	5	4378	A
1	5	4379	A
1	5	4385	A
1	5	4386	C
1	5	4387	C
1	5	4388	A
1	5	4391	G
1	5	4393	G
1	5	4394	A
1	5	4395	U
1	5	4396	A
1	5	4401	G
1	5	4419	U
1	5	4420	U
1	5	4422	A
1	5	4425	G
1	5	4426	C
1	5	4434	C
1	5	4436	U
1	5	4437	U
1	5	4438	U
1	5	4439	U
1	5	4440	G
1	5	4441	A
1	5	4443	C
1	5	4444	C
1	5	4448	G
1	5	4449	A
1	5	4450	U
1	5	4451	G
1	5	4452	U
1	5	4454	G
1	5	4459	U
1	5	4463	U
1	5	4464	A
1	5	4465	U
1	5	4466	C
1	5	4467	A

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Mol	Chain	Res	Type
1	5	4469	U
1	5	4471	U
1	5	4472	G
1	5	4473	A
1	5	4475	G
1	5	4476	C
1	5	4484	A
1	5	4488	A
1	5	4489	G
1	5	4491	G
1	5	4497	U
1	5	4498	U
1	5	4499	G
1	5	4500	U
1	5	4503	A
1	5	4510	A
1	5	4511	A
1	5	4512	U
1	5	4513	A
1	5	4518	A
1	5	4519	C
1	5	4520	G
1	5	4522	G
1	5	4523	A
1	5	4524	G
1	5	4528	G
1	5	4529	G
1	5	4530	U
1	5	4531	U
1	5	4532	U
1	5	4534	G
1	5	4536	C
1	5	4537	C
1	5	4543	G
1	5	4544	A
1	5	4546	A
1	5	4548	A
1	5	4549	G
1	5	4550	G
1	5	4552	U
1	5	4557	U
1	5	4560	C

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Mol	Chain	Res	Type
1	5	4569	U
1	5	4570	G
1	5	4572	U
1	5	4574	U
1	5	4575	G
1	5	4581	G
1	5	4583	C
1	5	4584	A
1	5	4585	U
1	5	4586	G
1	5	4589	A
1	5	4590	A
1	5	4592	C
1	5	4599	A
1	5	4600	G
1	5	4601	U
1	5	4603	C
1	5	4605	A
1	5	4606	G
1	5	4608	G
1	5	4617	G
1	5	4623	G
1	5	4624	A
1	5	4636	U
1	5	4637	G
1	5	4641	U
1	5	4646	U
1	5	4647	G
1	5	4648	A
1	5	4652	G
1	5	4656	A
1	5	4657	U
1	5	4661	G
1	5	4664	A
1	5	4669	A
1	5	4670	C
1	5	4671	C
1	5	4672	A
1	5	4676	G
1	5	4677	U
1	5	4678	G
1	5	4679	G

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Mol	Chain	Res	Type
1	5	4687	A
1	5	4693	C
1	5	4694	G
1	5	4695	C
1	5	4700	A
1	5	4701	A
1	5	4709	U
1	5	4714	C
1	5	4715	C
1	5	4717	A
1	5	4718	G
1	5	4719	G
1	5	4720	C
1	5	4721	G
1	5	4722	G
1	5	4729	A
1	5	4730	C
1	5	4731	G
1	5	4732	G
1	5	4733	C
1	5	4734	A
1	5	4735	G
1	5	4737	G
1	5	4738	C
1	5	4741	C
1	5	4743	G
1	5	4745	G
1	5	4746	C
1	5	4748	U
1	5	4749	C
1	5	4750	G
1	5	4751	G
1	5	4753	U
1	5	4756	C
1	5	4757	C
1	5	4758	U
1	5	4760	G
1	5	4763	U
1	5	4764	A
1	5	4770	U
1	5	4771	C
1	5	4774	C

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Mol	Chain	Res	Type
1	5	4860	G
1	5	4865	C
1	5	4869	U
1	5	4871	C
1	5	4872	G
1	5	4873	G
1	5	4874	A
1	5	4875	G
1	5	4876	U
1	5	4877	G
1	5	4878	C
1	5	4881	U
1	5	4882	U
1	5	4883	C
1	5	4884	G
1	5	4885	U
1	5	4886	C
1	5	4888	U
1	5	4889	G
1	5	4890	G
1	5	4891	G
1	5	4893	A
1	5	4895	C
1	5	4896	G
1	5	4900	C
1	5	4901	G
1	5	4903	G
1	5	4906	C
1	5	4910	G
1	5	4911	A
1	5	4912	G
1	5	4913	G
1	5	4915	G
1	5	4919	G
1	5	4926	C
1	5	4927	G
1	5	4928	C
1	5	4929	C
1	5	4930	C
1	5	4932	U
1	5	4933	C
1	5	4934	A

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Mol	Chain	Res	Type
1	5	4936	G
1	5	4937	C
1	5	4938	A
1	5	4939	C
1	5	4941	G
1	5	4942	C
1	5	4944	C
1	5	4945	G
1	5	4946	U
1	5	4947	U
1	5	4948	C
1	5	4949	G
1	5	4950	U
1	5	4951	G
1	5	4952	G
1	5	4953	G
1	5	4957	C
1	5	4959	U
1	5	4961	G
1	5	4962	C
1	5	4964	C
1	5	4965	U
1	5	4966	A
1	5	4967	A
1	5	4977	A
1	5	4979	A
1	5	4980	C
1	5	4981	G
1	5	4982	A
1	5	4985	U
1	5	4988	U
1	5	4989	U
1	5	4990	C
1	5	4991	U
1	5	4992	G
1	5	4993	G
1	5	4999	G
1	5	5002	U
1	5	5006	U
1	5	5013	C
1	5	5014	A
1	5	5016	A

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Mol	Chain	Res	Type
1	5	5017	G
1	5	5018	C
1	5	5019	A
1	5	5021	C
1	5	5023	C
1	5	5026	U
1	5	5027	C
1	5	5028	G
1	5	5034	A
1	5	5035	U
1	5	5040	U
1	5	5041	G
1	5	5042	A
1	5	5045	G
1	5	5047	C
1	5	5048	A
1	5	5049	G
1	5	5050	C
1	5	5052	C
1	5	5053	U
1	5	5054	C
1	5	5056	A
1	5	5057	C
1	5	5058	A
1	5	5060	A
1	5	5061	A
1	5	5062	G
1	5	5063	G
1	5	5069	U
2	7	7	G
2	7	11	A
2	7	17	C
2	7	21	G
2	7	22	A
2	7	23	A
2	7	24	C
2	7	27	G
2	7	30	C
2	7	31	G
2	7	42	A
2	7	53	U
2	7	54	A

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Mol	Chain	Res	Type
2	7	57	C
2	7	60	G
2	7	63	C
2	7	64	G
2	7	65	G
2	7	70	G
2	7	73	U
2	7	74	A
2	7	79	U
2	7	80	U
2	7	90	A
2	7	100	A
2	7	105	C
2	7	106	G
2	7	110	G
2	7	112	U
2	7	115	A
2	7	120	U
3	8	2	G
3	8	3	A
3	8	9	A
3	8	11	C
3	8	13	G
3	8	16	G
3	8	23	C
3	8	32	C
3	8	33	G
3	8	34	U
3	8	35	C
3	8	37	A
3	8	38	U
3	8	39	G
3	8	40	A
3	8	46	G
3	8	48	A
3	8	50	C
3	8	51	U
3	8	59	A
3	8	61	A
3	8	62	A
3	8	63	U
3	8	64	U

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Mol	Chain	Res	Type
3	8	65	A
3	8	70	G
3	8	71	A
3	8	74	U
3	8	75	G
3	8	80	A
3	8	81	C
3	8	82	A
3	8	83	C
3	8	84	A
3	8	85	U
3	8	86	U
3	8	87	G
3	8	90	C
3	8	94	G
3	8	95	A
3	8	97	A
3	8	98	C
3	8	99	U
3	8	103	A
3	8	104	A
3	8	105	C
3	8	109	C
3	8	110	U
3	8	111	U
3	8	112	G
3	8	114	G
3	8	118	C
3	8	121	G
3	8	122	G
3	8	125	C
3	8	126	C
3	8	127	U
3	8	137	A
3	8	147	G
3	8	151	G
3	8	153	C
50	S2	3	C
50	S2	4	C
50	S2	9	U
50	S2	10	G
50	S2	17	C

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Mol	Chain	Res	Type
50	S2	18	C
50	S2	20	G
50	S2	23	G
50	S2	24	C
50	S2	25	A
50	S2	27	A
50	S2	33	G
50	S2	39	A
50	S2	44	U
50	S2	45	A
50	S2	46	A
50	S2	49	C
50	S2	51	U
50	S2	53	C
50	S2	56	G
50	S2	57	U
50	S2	58	C
50	S2	59	U
50	S2	60	A
50	S2	61	A
50	S2	62	G
50	S2	63	U
50	S2	64	A
50	S2	65	C
50	S2	66	G
50	S2	67	C
50	S2	68	A
50	S2	71	G
50	S2	72	C
50	S2	73	C
50	S2	74	G
50	S2	75	G
50	S2	76	U
50	S2	77	A
50	S2	78	C
50	S2	79	A
50	S2	80	G
50	S2	84	A
50	S2	88	G
50	S2	89	C
50	S2	92	A
50	S2	98	C

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Mol	Chain	Res	Type
50	S2	99	A
50	S2	101	U
50	S2	103	A
50	S2	104	A
50	S2	105	U
50	S2	111	A
50	S2	113	G
50	S2	114	G
50	S2	115	U
50	S2	116	U
50	S2	117	C
50	S2	123	G
50	S2	125	C
50	S2	127	C
50	S2	140	C
50	S2	141	A
50	S2	142	C
50	S2	143	U
50	S2	144	U
50	S2	146	G
50	S2	147	A
50	S2	148	U
50	S2	150	A
50	S2	153	G
50	S2	154	U
50	S2	155	G
50	S2	156	G
50	S2	158	A
50	S2	159	A
50	S2	160	U
50	S2	161	U
50	S2	162	C
50	S2	163	U
50	S2	164	A
50	S2	165	G
50	S2	167	G
50	S2	169	U
50	S2	170	A
50	S2	173	A
50	S2	176	U
50	S2	180	G
50	S2	181	A

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Mol	Chain	Res	Type
50	S2	182	C
50	S2	183	G
50	S2	184	G
50	S2	188	C
50	S2	189	U
50	S2	191	A
50	S2	192	C
50	S2	200	G
50	S2	202	G
50	S2	206	G
50	S2	209	A
50	S2	210	U
50	S2	211	G
50	S2	213	G
50	S2	215	G
50	S2	216	C
50	S2	217	A
50	S2	290	U
50	S2	291	G
50	S2	292	A
50	S2	293	C
50	S2	295	C
50	S2	302	A
50	S2	305	U
50	S2	306	C
50	S2	307	G
50	S2	308	G
50	S2	309	G
50	S2	310	C
50	S2	311	C
50	S2	312	G
50	S2	313	A
50	S2	314	U
50	S2	316	G
50	S2	317	C
50	S2	318	A
50	S2	319	C
50	S2	321	C
50	S2	324	C
50	S2	325	C
50	S2	326	C
50	S2	327	G

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Mol	Chain	Res	Type
50	S2	328	U
50	S2	338	G
50	S2	340	C
50	S2	341	C
50	S2	342	C
50	S2	343	A
50	S2	346	C
50	S2	347	G
50	S2	350	C
50	S2	355	G
50	S2	356	C
50	S2	357	C
50	S2	360	A
50	S2	362	C
50	S2	364	A
50	S2	365	C
50	S2	367	U
50	S2	368	U
50	S2	369	C
50	S2	370	G
50	S2	373	G
50	S2	377	G
50	S2	380	G
50	S2	381	C
50	S2	382	C
50	S2	384	U
50	S2	385	G
50	S2	386	C
50	S2	394	G
50	S2	398	A
50	S2	400	C
50	S2	407	G
50	S2	408	A
50	S2	409	C
50	S2	411	G
50	S2	414	A
50	S2	416	U
50	S2	417	C
50	S2	418	A
50	S2	419	G
50	S2	421	G
50	S2	422	U

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Mol	Chain	Res	Type
50	S2	425	G
50	S2	426	A
50	S2	427	U
50	S2	428	U
50	S2	429	C
50	S2	435	A
50	S2	436	G
50	S2	438	G
50	S2	441	C
50	S2	444	G
50	S2	445	A
50	S2	447	A
50	S2	448	A
50	S2	449	A
50	S2	450	C
50	S2	453	C
50	S2	454	U
50	S2	455	A
50	S2	459	C
50	S2	460	A
50	S2	464	A
50	S2	465	A
50	S2	466	G
50	S2	467	G
50	S2	468	A
50	S2	469	A
50	S2	471	G
50	S2	472	C
50	S2	473	A
50	S2	474	G
50	S2	476	A
50	S2	482	G
50	S2	487	U
50	S2	488	U
50	S2	489	A
50	S2	492	C
50	S2	493	A
50	S2	496	C
50	S2	499	G
50	S2	500	A
50	S2	501	C
50	S2	507	G

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Mol	Chain	Res	Type
50	S2	508	A
50	S2	516	A
50	S2	518	G
50	S2	523	A
50	S2	525	A
50	S2	528	A
50	S2	530	U
50	S2	532	C
50	S2	533	A
50	S2	534	G
50	S2	542	U
50	S2	544	G
50	S2	548	C
50	S2	549	C
50	S2	550	C
50	S2	551	U
50	S2	552	G
50	S2	554	A
50	S2	555	A
50	S2	556	U
50	S2	557	U
50	S2	559	G
50	S2	560	A
50	S2	562	U
50	S2	563	G
50	S2	564	A
50	S2	568	C
50	S2	575	A
50	S2	576	A
50	S2	578	C
50	S2	579	C
50	S2	580	U
50	S2	583	C
50	S2	588	G
50	S2	589	G
50	S2	590	A
50	S2	591	U
50	S2	592	C
50	S2	593	C
50	S2	595	U
50	S2	596	U
50	S2	598	G

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Mol	Chain	Res	Type
50	S2	600	G
50	S2	601	G
50	S2	602	G
50	S2	604	A
50	S2	605	A
50	S2	606	G
50	S2	607	U
50	S2	608	C
50	S2	612	U
50	S2	614	C
50	S2	616	A
50	S2	617	G
50	S2	621	C
50	S2	623	G
50	S2	626	G
50	S2	627	U
50	S2	628	A
50	S2	629	A
50	S2	630	U
50	S2	631	U
50	S2	632	C
50	S2	643	A
50	S2	644	G
50	S2	646	G
50	S2	649	U
50	S2	655	A
50	S2	657	U
50	S2	660	C
50	S2	662	G
50	S2	666	U
50	S2	667	U
50	S2	668	A
50	S2	669	A
50	S2	671	A
50	S2	672	A
50	S2	673	G
50	S2	679	A
50	S2	683	G
50	S2	684	G
50	S2	687	C
50	S2	688	U
50	S2	689	U

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Mol	Chain	Res	Type
50	S2	690	G
50	S2	693	A
50	S2	694	G
50	S2	695	C
50	S2	698	G
50	S2	731	G
50	S2	733	C
50	S2	734	C
50	S2	735	C
50	S2	736	C
50	S2	738	C
50	S2	739	C
50	S2	745	C
50	S2	747	U
50	S2	748	C
50	S2	749	U
50	S2	751	G
50	S2	752	G
50	S2	753	C
50	S2	788	G
50	S2	791	C
50	S2	797	C
50	S2	798	A
50	S2	799	U
50	S2	800	U
50	S2	809	A
50	S2	810	A
50	S2	811	A
50	S2	812	A
50	S2	815	U
50	S2	816	A
50	S2	820	U
50	S2	821	G
50	S2	822	U
50	S2	827	A
50	S2	830	A
50	S2	833	C
50	S2	834	C
50	S2	835	C
50	S2	836	G
50	S2	837	A
50	S2	838	G

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Mol	Chain	Res	Type
50	S2	840	C
50	S2	841	G
50	S2	842	C
50	S2	843	C
50	S2	845	G
50	S2	847	A
50	S2	848	U
50	S2	856	C
50	S2	861	A
50	S2	867	G
50	S2	868	G
50	S2	869	A
50	S2	870	A
50	S2	871	U
50	S2	872	A
50	S2	873	G
50	S2	875	A
50	S2	877	C
50	S2	878	G
50	S2	879	C
50	S2	880	G
50	S2	881	G
50	S2	887	U
50	S2	888	U
50	S2	890	U
50	S2	891	G
50	S2	892	U
50	S2	897	U
50	S2	898	U
50	S2	903	A
50	S2	910	G
50	S2	913	A
50	S2	914	U
50	S2	915	G
50	S2	917	U
50	S2	918	U
50	S2	919	A
50	S2	920	A
50	S2	921	G
50	S2	930	C
50	S2	933	G
50	S2	934	G

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Mol	Chain	Res	Type
50	S2	938	A
50	S2	943	U
50	S2	954	U
50	S2	955	A
50	S2	956	G
50	S2	957	A
50	S2	958	G
50	S2	959	G
50	S2	960	U
50	S2	961	G
50	S2	962	A
50	S2	964	A
50	S2	965	U
50	S2	966	U
50	S2	968	U
50	S2	969	U
50	S2	970	G
50	S2	971	G
50	S2	979	C
50	S2	980	A
50	S2	981	A
50	S2	990	A
50	S2	991	G
50	S2	992	A
50	S2	996	A
50	S2	997	A
50	S2	999	G
50	S2	1001	A
50	S2	1002	U
50	S2	1008	A
50	S2	1017	U
50	S2	1023	A
50	S2	1033	G
50	S2	1034	A
50	S2	1035	A
50	S2	1040	G
50	S2	1041	G
50	S2	1044	G
50	S2	1045	U
50	S2	1049	A
50	S2	1050	A
50	S2	1060	A

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Mol	Chain	Res	Type
50	S2	1062	A
50	S2	1067	C
50	S2	1070	A
50	S2	1072	U
50	S2	1073	U
50	S2	1077	A
50	S2	1078	C
50	S2	1083	A
50	S2	1084	A
50	S2	1085	C
50	S2	1087	A
50	S2	1088	U
50	S2	1089	G
50	S2	1091	C
50	S2	1096	G
50	S2	1099	G
50	S2	1100	A
50	S2	1102	G
50	S2	1109	C
50	S2	1110	G
50	S2	1111	U
50	S2	1114	U
50	S2	1115	U
50	S2	1116	C
50	S2	1117	C
50	S2	1118	C
50	S2	1120	U
50	S2	1123	C
50	S2	1126	G
50	S2	1130	G
50	S2	1131	G
50	S2	1133	A
50	S2	1137	U
50	S2	1138	C
50	S2	1139	C
50	S2	1143	A
50	S2	1144	A
50	S2	1146	C
50	S2	1148	A
50	S2	1149	A
50	S2	1150	A
50	S2	1151	G

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Mol	Chain	Res	Type
50	S2	1153	C
50	S2	1154	U
50	S2	1157	G
50	S2	1165	G
50	S2	1166	G
50	S2	1171	G
50	S2	1172	U
50	S2	1181	A
50	S2	1182	A
50	S2	1186	U
50	S2	1187	G
50	S2	1192	U
50	S2	1194	A
50	S2	1195	A
50	S2	1199	A
50	S2	1203	G
50	S2	1204	A
50	S2	1205	C
50	S2	1206	G
50	S2	1207	G
50	S2	1208	A
50	S2	1209	A
50	S2	1210	G
50	S2	1211	G
50	S2	1212	G
50	S2	1213	C
50	S2	1214	A
50	S2	1215	C
50	S2	1216	C
50	S2	1217	A
50	S2	1221	G
50	S2	1224	G
50	S2	1234	C
50	S2	1242	U
50	S2	1243	U
50	S2	1244	U
50	S2	1247	C
50	S2	1248	U
50	S2	1250	A
50	S2	1251	A
50	S2	1253	A
50	S2	1254	C

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Mol	Chain	Res	Type
50	S2	1256	G
50	S2	1257	G
50	S2	1258	A
50	S2	1259	A
50	S2	1264	C
50	S2	1265	A
50	S2	1266	C
50	S2	1267	C
50	S2	1268	C
50	S2	1269	G
50	S2	1271	C
50	S2	1273	C
50	S2	1274	G
50	S2	1275	G
50	S2	1276	A
50	S2	1280	G
50	S2	1282	A
50	S2	1283	C
50	S2	1284	A
50	S2	1285	G
50	S2	1286	G
50	S2	1288	U
50	S2	1289	U
50	S2	1292	C
50	S2	1293	A
50	S2	1296	U
50	S2	1298	G
50	S2	1299	A
50	S2	1301	A
50	S2	1302	G
50	S2	1303	C
50	S2	1304	U
50	S2	1305	C
50	S2	1306	U
50	S2	1308	U
50	S2	1309	C
50	S2	1312	G
50	S2	1313	A
50	S2	1314	U
50	S2	1315	U
50	S2	1316	C
50	S2	1322	G

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Mol	Chain	Res	Type
50	S2	1324	G
50	S2	1326	U
50	S2	1330	G
50	S2	1331	C
50	S2	1332	A
50	S2	1333	U
50	S2	1337	C
50	S2	1342	U
50	S2	1344	A
50	S2	1345	G
50	S2	1346	U
50	S2	1348	G
50	S2	1352	G
50	S2	1353	A
50	S2	1354	G
50	S2	1355	C
50	S2	1356	G
50	S2	1357	A
50	S2	1358	U
50	S2	1367	U
50	S2	1368	U
50	S2	1369	A
50	S2	1370	A
50	S2	1371	U
50	S2	1372	U
50	S2	1373	C
50	S2	1377	U
50	S2	1378	A
50	S2	1379	A
50	S2	1380	C
50	S2	1383	A
50	S2	1384	C
50	S2	1385	G
50	S2	1386	A
50	S2	1387	G
50	S2	1394	G
50	S2	1395	C
50	S2	1396	A
50	S2	1397	U
50	S2	1401	A
50	S2	1402	A
50	S2	1403	C

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Mol	Chain	Res	Type
50	S2	1404	U
50	S2	1405	A
50	S2	1407	U
50	S2	1410	C
50	S2	1411	G
50	S2	1412	C
50	S2	1414	A
50	S2	1416	C
50	S2	1417	C
50	S2	1418	C
50	S2	1419	C
50	S2	1420	G
50	S2	1424	G
50	S2	1426	U
50	S2	1429	G
50	S2	1430	C
50	S2	1431	G
50	S2	1432	U
50	S2	1433	C
50	S2	1434	C
50	S2	1435	C
50	S2	1437	C
50	S2	1438	A
50	S2	1441	U
50	S2	1442	U
50	S2	1449	G
50	S2	1450	G
50	S2	1452	A
50	S2	1454	A
50	S2	1455	A
50	S2	1456	G
50	S2	1462	U
50	S2	1463	U
50	S2	1464	C
50	S2	1466	G
50	S2	1467	C
50	S2	1474	A
50	S2	1475	G
50	S2	1476	A
50	S2	1477	U
50	S2	1478	U
50	S2	1483	A

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Mol	Chain	Res	Type
50	S2	1484	A
50	S2	1485	U
50	S2	1489	A
50	S2	1490	G
50	S2	1493	C
50	S2	1494	U
50	S2	1495	G
50	S2	1496	U
50	S2	1506	A
50	S2	1507	G
50	S2	1508	A
50	S2	1509	U
50	S2	1510	G
50	S2	1512	C
50	S2	1513	C
50	S2	1514	G
50	S2	1515	G
50	S2	1520	G
50	S2	1521	C
50	S2	1522	A
50	S2	1525	C
50	S2	1527	C
50	S2	1531	A
50	S2	1534	C
50	S2	1535	U
50	S2	1536	G
50	S2	1537	A
50	S2	1540	G
50	S2	1541	G
50	S2	1542	C
50	S2	1543	U
50	S2	1544	C
50	S2	1545	A
50	S2	1546	G
50	S2	1548	G
50	S2	1550	G
50	S2	1551	U
50	S2	1552	G
50	S2	1553	C
50	S2	1554	C
50	S2	1555	U
50	S2	1556	A

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Mol	Chain	Res	Type
50	S2	1557	C
50	S2	1558	C
50	S2	1560	U
50	S2	1567	G
50	S2	1568	C
50	S2	1569	A
50	S2	1570	G
50	S2	1574	C
50	S2	1578	U
50	S2	1579	A
50	S2	1580	A
50	S2	1581	C
50	S2	1585	U
50	S2	1586	U
50	S2	1587	G
50	S2	1588	A
50	S2	1589	A
50	S2	1590	C
50	S2	1593	C
50	S2	1594	A
50	S2	1595	U
50	S2	1596	U
50	S2	1598	G
50	S2	1599	U
50	S2	1600	G
50	S2	1601	A
50	S2	1602	U
50	S2	1603	G
50	S2	1604	G
50	S2	1605	G
50	S2	1606	G
50	S2	1609	C
50	S2	1610	G
50	S2	1621	U
50	S2	1622	U
50	S2	1623	A
50	S2	1624	U
50	S2	1625	U
50	S2	1633	A
50	S2	1637	A
50	S2	1638	G
50	S2	1643	U

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Mol	Chain	Res	Type
50	S2	1644	C
50	S2	1648	G
50	S2	1649	U
50	S2	1656	G
50	S2	1660	C
50	S2	1663	A
50	S2	1664	A
50	S2	1665	G
50	S2	1666	C
50	S2	1674	G
50	S2	1679	A
50	S2	1680	G
50	S2	1682	C
50	S2	1683	C
50	S2	1684	C
50	S2	1688	C
50	S2	1689	C
50	S2	1692	U
50	S2	1693	G
50	S2	1695	A
50	S2	1696	C
50	S2	1697	A
50	S2	1699	A
50	S2	1700	C
50	S2	1701	C
50	S2	1702	G
50	S2	1707	U
50	S2	1720	U
50	S2	1721	U
50	S2	1722	G
50	S2	1729	U
50	S2	1730	U
50	S2	1734	G
50	S2	1742	C
50	S2	1744	G
50	S2	1745	A
50	S2	1746	U
50	S2	1751	C
50	S2	1753	C
50	S2	1783	C
50	S2	1785	C
50	S2	1786	U

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Mol	Chain	Res	Type
50	S2	1792	G
50	S2	1793	A
50	S2	1795	G
50	S2	1797	U
50	S2	1798	C
50	S2	1804	U
50	S2	1805	G
50	S2	1816	G
50	S2	1823	A
50	S2	1824	A
50	S2	1825	A
50	S2	1826	G
50	S2	1830	U
50	S2	1831	A
50	S2	1834	A
50	S2	1835	A
50	S2	1836	G
50	S2	1837	G
50	S2	1838	U
50	S2	1839	U
50	S2	1841	C
50	S2	1849	G
50	S2	1850	A
50	S2	1851	A
50	S2	1852	C
50	S2	1857	G
50	S2	1858	G
50	S2	1860	A
50	S2	1861	G
50	S2	1862	G
50	S2	1863	A
50	S2	1864	U
50	S2	1865	C
50	S2	1868	U
50	S2	1869	A
84	S4	16	U
84	S4	17	U
84	S4	18	U
84	S4	19	U
84	S4	20	U
84	S4	21	U
84	S4	22	U

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Mol	Chain	Res	Type
84	S4	23	U
84	S4	24	A
85	S5	2	C
85	S5	3	C
85	S5	4	C
85	S5	6	G
85	S5	7	A
85	S5	8	U
85	S5	9	A
85	S5	13	C
85	S5	15	G
85	S5	19	G
85	S5	20	U
85	S5	21	A
85	S5	22	G
85	S5	23	A
85	S5	26	A
85	S5	27	G
85	S5	28	G
85	S5	29	G
85	S5	30	G
85	S5	31	A
85	S5	32	U
85	S5	33	U
85	S5	34	G
85	S5	35	A
85	S5	36	A
85	S5	37	A
85	S5	38	A
85	S5	39	U
85	S5	40	C
85	S5	41	C
85	S5	44	G
85	S5	46	G
85	S5	47	U
85	S5	49	C
85	S5	51	U
85	S5	57	G
85	S5	64	A
85	S5	65	G
85	S5	67	C
85	S5	68	C

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Mol	Chain	Res	Type
85	S5	70	G
85	S5	71	G
85	S5	72	C
85	S5	73	A
85	S5	74	C
85	S5	75	C
85	S5	76	A
86	S6	2	G
86	S6	3	C
86	S6	4	C
86	S6	5	C
86	S6	6	G
86	S6	7	G
86	S6	8	U
86	S6	9	A
86	S6	12	C
86	S6	13	C
86	S6	14	C
86	S6	15	G
86	S6	17	A
86	S6	18	G
86	S6	19	G
86	S6	20	U
86	S6	21	A
86	S6	22	G
86	S6	23	A
86	S6	26	A
86	S6	30	G
86	S6	33	U
86	S6	34	G
86	S6	35	A
86	S6	38	A
86	S6	42	C
86	S6	44	G
86	S6	46	G
86	S6	47	U
86	S6	48	C
86	S6	49	C
86	S6	50	U
86	S6	51	U
86	S6	52	G
86	S6	53	G

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Mol	Chain	Res	Type
86	S6	54	U
86	S6	56	C
86	S6	57	G
86	S6	58	A
86	S6	59	U
86	S6	60	U
86	S6	61	C
86	S6	62	C
86	S6	64	A
86	S6	65	G
86	S6	68	C
86	S6	69	G
86	S6	70	G
86	S6	71	G
86	S6	72	C
86	S6	73	A
86	S6	74	C
86	S6	76	A

All (959) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	5	1	C
1	5	20	U
1	5	33	A
1	5	39	A
1	5	42	A
1	5	47	A
1	5	48	G
1	5	51	A
1	5	53	C
1	5	54	G
1	5	55	G
1	5	62	A
1	5	64	A
1	5	65	A
1	5	66	A
1	5	84	A
1	5	85	G
1	5	88	A
1	5	94	A
1	5	97	G

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Mol	Chain	Res	Type
1	5	98	A
1	5	99	A
1	5	100	C
1	5	107	G
1	5	111	C
1	5	112	C
1	5	119	G
1	5	120	A
1	5	125	C
1	5	134	G
1	5	136	C
1	5	143	C
1	5	149	A
1	5	151	G
1	5	158	A
1	5	159	C
1	5	163	A
1	5	170	C
1	5	172	C
1	5	183	C
1	5	186	G
1	5	187	U
1	5	197	A
1	5	207	G
1	5	209	U
1	5	216	C
1	5	218	A
1	5	219	G
1	5	226	G
1	5	235	A
1	5	237	G
1	5	245	C
1	5	253	G
1	5	265	C
1	5	266	C
1	5	268	G
1	5	275	C
1	5	276	C
1	5	280	G
1	5	292	G
1	5	293	G
1	5	296	A

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Mol	Chain	Res	Type
1	5	298	G
1	5	315	G
1	5	333	U
1	5	337	U
1	5	340	C
1	5	349	A
1	5	353	A
1	5	354	U
1	5	360	A
1	5	361	C
1	5	362	A
1	5	371	A
1	5	385	A
1	5	387	G
1	5	388	A
1	5	393	U
1	5	394	G
1	5	405	U
1	5	406	C
1	5	407	A
1	5	410	A
1	5	414	C
1	5	417	G
1	5	421	C
1	5	432	U
1	5	435	A
1	5	451	C
1	5	454	U
1	5	485	C
1	5	486	C
1	5	493	G
1	5	495	C
1	5	496	G
1	5	497	G
1	5	502	C
1	5	505	G
1	5	514	U
1	5	647	G
1	5	648	G
1	5	655	C
1	5	658	C
1	5	659	G

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Mol	Chain	Res	Type
1	5	664	G
1	5	666	G
1	5	668	C
1	5	684	G
1	5	686	A
1	5	693	C
1	5	704	C
1	5	727	C
1	5	728	U
1	5	732	A
1	5	733	A
1	5	738	C
1	5	746	A
1	5	747	A
1	5	909	A
1	5	911	U
1	5	917	A
1	5	920	C
1	5	927	G
1	5	930	G
1	5	931	C
1	5	932	A
1	5	936	C
1	5	943	A
1	5	946	C
1	5	956	A
1	5	957	G
1	5	958	G
1	5	961	G
1	5	962	C
1	5	965	G
1	5	968	C
1	5	974	C
1	5	977	C
1	5	978	G
1	5	979	C
1	5	986	C
1	5	987	C
1	5	989	U
1	5	1067	G
1	5	1068	G
1	5	1074	G

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Mol	Chain	Res	Type
1	5	1076	C
1	5	1186	U
1	5	1210	C
1	5	1211	G
1	5	1214	C
1	5	1217	G
1	5	1221	G
1	5	1232	G
1	5	1235	G
1	5	1236	C
1	5	1237	C
1	5	1238	A
1	5	1239	C
1	5	1241	C
1	5	1243	C
1	5	1244	G
1	5	1254	A
1	5	1264	C
1	5	1266	G
1	5	1268	G
1	5	1272	C
1	5	1274	A
1	5	1279	A
1	5	1280	C
1	5	1281	G
1	5	1293	G
1	5	1296	G
1	5	1319	U
1	5	1324	A
1	5	1325	C
1	5	1329	G
1	5	1334	A
1	5	1356	U
1	5	1357	C
1	5	1359	G
1	5	1364	U
1	5	1365	C
1	5	1368	A
1	5	1370	G
1	5	1371	A
1	5	1377	G
1	5	1378	C

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Mol	Chain	Res	Type
1	5	1379	C
1	5	1380	G
1	5	1386	C
1	5	1398	A
1	5	1405	C
1	5	1406	G
1	5	1407	C
1	5	1410	U
1	5	1419	G
1	5	1420	A
1	5	1426	G
1	5	1428	U
1	5	1438	U
1	5	1439	C
1	5	1440	U
1	5	1445	U
1	5	1464	C
1	5	1474	C
1	5	1479	G
1	5	1480	C
1	5	1481	C
1	5	1484	G
1	5	1488	G
1	5	1489	G
1	5	1500	A
1	5	1509	C
1	5	1521	C
1	5	1522	G
1	5	1539	G
1	5	1554	A
1	5	1563	A
1	5	1564	A
1	5	1596	U
1	5	1613	A
1	5	1614	C
1	5	1615	C
1	5	1617	G
1	5	1627	G
1	5	1633	G
1	5	1636	U
1	5	1640	C
1	5	1650	A

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Mol	Chain	Res	Type
1	5	1654	G
1	5	1671	U
1	5	1676	C
1	5	1681	G
1	5	1682	A
1	5	1696	C
1	5	1697	G
1	5	1698	C
1	5	1724	G
1	5	1725	U
1	5	1742	A
1	5	1763	C
1	5	1764	G
1	5	1804	A
1	5	1808	C
1	5	1819	G
1	5	1835	G
1	5	1864	G
1	5	1865	G
1	5	1869	G
1	5	1876	U
1	5	1881	C
1	5	1884	C
1	5	1887	G
1	5	1890	G
1	5	1891	A
1	5	1912	G
1	5	1919	G
1	5	1920	C
1	5	1921	C
1	5	1925	G
1	5	1928	C
1	5	1930	U
1	5	1935	C
1	5	1938	C
1	5	1945	G
1	5	1946	G
1	5	1961	G
1	5	1963	C
1	5	1974	U
1	5	1975	G
1	5	1980	U

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Mol	Chain	Res	Type
1	5	1983	A
1	5	1992	U
1	5	1998	A
1	5	2007	G
1	5	2008	U
1	5	2009	A
1	5	2014	C
1	5	2025	A
1	5	2037	C
1	5	2044	U
1	5	2046	G
1	5	2057	A
1	5	2068	C
1	5	2075	G
1	5	2077	C
1	5	2083	C
1	5	2088	A
1	5	2089	G
1	5	2090	U
1	5	2093	A
1	5	2094	G
1	5	2096	G
1	5	2107	C
1	5	2111	G
1	5	2114	G
1	5	2116	C
1	5	2118	G
1	5	2119	C
1	5	2122	G
1	5	2123	C
1	5	2124	G
1	5	2126	G
1	5	2246	C
1	5	2248	C
1	5	2250	C
1	5	2251	G
1	5	2256	C
1	5	2257	C
1	5	2258	C
1	5	2260	C
1	5	2261	G
1	5	2262	G

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Mol	Chain	Res	Type
1	5	2264	C
1	5	2265	G
1	5	2266	C
1	5	2267	U
1	5	2268	A
1	5	2269	C
1	5	2272	C
1	5	2276	A
1	5	2278	G
1	5	2289	C
1	5	2313	A
1	5	2321	G
1	5	2323	C
1	5	2324	C
1	5	2325	C
1	5	2328	G
1	5	2329	U
1	5	2331	G
1	5	2332	A
1	5	2347	A
1	5	2361	G
1	5	2362	U
1	5	2370	A
1	5	2389	A
1	5	2394	G
1	5	2396	A
1	5	2398	U
1	5	2417	A
1	5	2436	U
1	5	2438	A
1	5	2447	U
1	5	2448	G
1	5	2459	G
1	5	2464	C
1	5	2468	U
1	5	2470	C
1	5	2474	G
1	5	2479	G
1	5	2487	G
1	5	2490	U
1	5	2502	G
1	5	2507	A

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Mol	Chain	Res	Type
1	5	2509	C
1	5	2512	A
1	5	2513	A
1	5	2514	G
1	5	2515	G
1	5	2529	A
1	5	2533	C
1	5	2544	G
1	5	2545	U
1	5	2546	G
1	5	2553	A
1	5	2554	U
1	5	2576	G
1	5	2581	A
1	5	2583	C
1	5	2587	A
1	5	2588	C
1	5	2589	C
1	5	2591	A
1	5	2600	A
1	5	2614	C
1	5	2618	G
1	5	2622	G
1	5	2631	U
1	5	2652	G
1	5	2658	G
1	5	2661	U
1	5	2665	U
1	5	2666	U
1	5	2673	G
1	5	2674	A
1	5	2677	G
1	5	2683	C
1	5	2686	G
1	5	2688	G
1	5	2695	A
1	5	2703	G
1	5	2711	G
1	5	2732	G
1	5	2744	A
1	5	2761	U
1	5	2768	C

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Mol	Chain	Res	Type
1	5	2769	U
1	5	2782	U
1	5	2786	C
1	5	2796	G
1	5	2803	U
1	5	2806	A
1	5	2811	G
1	5	2812	A
1	5	2817	C
1	5	2825	A
1	5	2827	G
1	5	2828	U
1	5	2833	A
1	5	2834	C
1	5	2837	U
1	5	2843	U
1	5	2848	G
1	5	2851	G
1	5	2858	A
1	5	2859	G
1	5	2879	A
1	5	2895	A
1	5	2896	G
1	5	3590	G
1	5	3593	C
1	5	3615	G
1	5	3620	G
1	5	3622	C
1	5	3625	G
1	5	3626	G
1	5	3636	C
1	5	3648	A
1	5	3653	A
1	5	3654	G
1	5	3663	A
1	5	3666	C
1	5	3667	C
1	5	3671	G
1	5	3676	G
1	5	3679	U
1	5	3681	G
1	5	3683	C

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Mol	Chain	Res	Type
1	5	3692	A
1	5	3697	U
1	5	3712	A
1	5	3717	A
1	5	3727	A
1	5	3730	U
1	5	3735	G
1	5	3736	A
1	5	3773	U
1	5	3774	A
1	5	3776	G
1	5	3784	A
1	5	3799	A
1	5	3802	U
1	5	3803	A
1	5	3809	G
1	5	3813	A
1	5	3817	A
1	5	3839	G
1	5	3845	A
1	5	3856	A
1	5	3860	A
1	5	3862	A
1	5	3875	G
1	5	3876	A
1	5	3877	A
1	5	3879	G
1	5	3888	G
1	5	3905	A
1	5	3922	G
1	5	3938	G
1	5	3942	A
1	5	3959	U
1	5	3965	A
1	5	3968	U
1	5	3972	A
1	5	4036	G
1	5	4040	C
1	5	4041	C
1	5	4058	U
1	5	4069	U
1	5	4070	U

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Mol	Chain	Res	Type
1	5	4075	U
1	5	4084	G
1	5	4085	A
1	5	4086	G
1	5	4095	G
1	5	4096	C
1	5	4097	G
1	5	4102	C
1	5	4103	C
1	5	4115	G
1	5	4116	C
1	5	4118	U
1	5	4119	C
1	5	4120	U
1	5	4121	G
1	5	4123	C
1	5	4124	G
1	5	4127	A
1	5	4144	C
1	5	4163	U
1	5	4165	C
1	5	4170	A
1	5	4173	G
1	5	4183	G
1	5	4195	G
1	5	4197	G
1	5	4219	A
1	5	4221	C
1	5	4227	U
1	5	4228	G
1	5	4229	U
1	5	4232	U
1	5	4233	A
1	5	4239	A
1	5	4240	G
1	5	4250	G
1	5	4251	A
1	5	4254	G
1	5	4257	A
1	5	4269	G
1	5	4270	C
1	5	4275	G

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Mol	Chain	Res	Type
1	5	4276	G
1	5	4280	A
1	5	4282	A
1	5	4283	G
1	5	4287	G
1	5	4291	G
1	5	4295	U
1	5	4297	G
1	5	4322	G
1	5	4330	G
1	5	4334	U
1	5	4338	G
1	5	4348	A
1	5	4349	C
1	5	4368	G
1	5	4374	U
1	5	4375	C
1	5	4378	A
1	5	4385	A
1	5	4395	U
1	5	4419	U
1	5	4425	G
1	5	4436	U
1	5	4440	G
1	5	4448	G
1	5	4449	A
1	5	4451	G
1	5	4454	G
1	5	4463	U
1	5	4464	A
1	5	4472	G
1	5	4474	A
1	5	4475	G
1	5	4481	U
1	5	4488	A
1	5	4489	G
1	5	4497	U
1	5	4498	U
1	5	4507	A
1	5	4518	A
1	5	4519	C
1	5	4522	G

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Mol	Chain	Res	Type
1	5	4527	G
1	5	4528	G
1	5	4531	U
1	5	4533	A
1	5	4535	A
1	5	4536	C
1	5	4543	G
1	5	4547	C
1	5	4548	A
1	5	4560	C
1	5	4574	U
1	5	4583	C
1	5	4600	G
1	5	4605	A
1	5	4610	A
1	5	4645	C
1	5	4647	G
1	5	4656	A
1	5	4670	C
1	5	4677	U
1	5	4678	G
1	5	4691	A
1	5	4693	C
1	5	4700	A
1	5	4718	G
1	5	4719	G
1	5	4720	C
1	5	4730	C
1	5	4731	G
1	5	4737	G
1	5	4739	C
1	5	4740	G
1	5	4745	G
1	5	4756	C
1	5	4762	A
1	5	4763	U
1	5	4871	C
1	5	4872	G
1	5	4873	G
1	5	4874	A
1	5	4884	G
1	5	4885	U

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Mol	Chain	Res	Type
1	5	4887	C
1	5	4888	U
1	5	4889	G
1	5	4900	C
1	5	4911	A
1	5	4926	C
1	5	4929	C
1	5	4935	C
1	5	4936	G
1	5	4938	A
1	5	4948	C
1	5	4949	G
1	5	4950	U
1	5	4951	G
1	5	4981	G
1	5	4990	C
1	5	4991	U
1	5	5022	U
1	5	5026	U
1	5	5027	C
1	5	5041	G
1	5	5046	U
1	5	5049	G
1	5	5056	A
1	5	5059	C
1	5	5060	A
1	5	5061	A
1	5	5062	G
1	5	5068	G
2	7	7	G
2	7	21	G
2	7	42	A
2	7	56	G
2	7	58	A
2	7	60	G
2	7	63	C
2	7	72	U
2	7	75	G
3	8	2	G
3	8	9	A
3	8	10	G
3	8	14	U

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Mol	Chain	Res	Type
3	8	33	G
3	8	34	U
3	8	37	A
3	8	64	U
3	8	70	G
3	8	73	U
3	8	81	C
3	8	83	C
3	8	85	U
3	8	94	G
3	8	95	A
3	8	98	C
3	8	110	U
3	8	111	U
3	8	124	U
3	8	125	C
3	8	126	C
3	8	131	G
50	S2	1	U
50	S2	2	A
50	S2	9	U
50	S2	19	A
50	S2	24	C
50	S2	50	A
50	S2	55	U
50	S2	60	A
50	S2	61	A
50	S2	65	C
50	S2	66	G
50	S2	67	C
50	S2	72	C
50	S2	73	C
50	S2	74	G
50	S2	90	G
50	S2	91	A
50	S2	98	C
50	S2	102	A
50	S2	104	A
50	S2	110	U
50	S2	113	G
50	S2	126	G
50	S2	127	C

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Mol	Chain	Res	Type
50	S2	139	C
50	S2	140	C
50	S2	141	A
50	S2	142	C
50	S2	158	A
50	S2	160	U
50	S2	163	U
50	S2	164	A
50	S2	180	G
50	S2	181	A
50	S2	182	C
50	S2	183	G
50	S2	190	G
50	S2	215	G
50	S2	291	G
50	S2	294	U
50	S2	304	C
50	S2	305	U
50	S2	312	G
50	S2	313	A
50	S2	327	G
50	S2	333	G
50	S2	340	C
50	S2	349	A
50	S2	355	G
50	S2	357	C
50	S2	360	A
50	S2	368	U
50	S2	369	C
50	S2	377	G
50	S2	381	C
50	S2	384	U
50	S2	385	G
50	S2	409	C
50	S2	421	G
50	S2	427	U
50	S2	435	A
50	S2	443	U
50	S2	444	G
50	S2	446	G
50	S2	448	A
50	S2	452	G

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Mol	Chain	Res	Type
50	S2	453	C
50	S2	458	A
50	S2	465	A
50	S2	468	A
50	S2	471	G
50	S2	473	A
50	S2	482	G
50	S2	492	C
50	S2	499	G
50	S2	515	G
50	S2	532	C
50	S2	539	C
50	S2	548	C
50	S2	550	C
50	S2	577	U
50	S2	578	C
50	S2	579	C
50	S2	601	G
50	S2	604	A
50	S2	606	G
50	S2	607	U
50	S2	613	G
50	S2	615	C
50	S2	618	C
50	S2	642	U
50	S2	646	G
50	S2	649	U
50	S2	656	G
50	S2	671	A
50	S2	687	C
50	S2	688	U
50	S2	732	U
50	S2	733	C
50	S2	746	C
50	S2	747	U
50	S2	751	G
50	S2	752	G
50	S2	797	C
50	S2	798	A
50	S2	799	U
50	S2	800	U
50	S2	810	A

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Mol	Chain	Res	Type
50	S2	815	U
50	S2	821	G
50	S2	827	A
50	S2	833	C
50	S2	841	G
50	S2	855	G
50	S2	867	G
50	S2	868	G
50	S2	869	A
50	S2	870	A
50	S2	871	U
50	S2	872	A
50	S2	918	U
50	S2	919	A
50	S2	924	G
50	S2	950	C
50	S2	956	G
50	S2	957	A
50	S2	958	G
50	S2	959	G
50	S2	960	U
50	S2	964	A
50	S2	967	C
50	S2	970	G
50	S2	980	A
50	S2	991	G
50	S2	992	A
50	S2	993	G
50	S2	999	G
50	S2	1001	A
50	S2	1016	U
50	S2	1039	C
50	S2	1050	A
50	S2	1051	G
50	S2	1083	A
50	S2	1085	C
50	S2	1087	A
50	S2	1088	U
50	S2	1093	A
50	S2	1097	G
50	S2	1098	C
50	S2	1109	C

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Mol	Chain	Res	Type
50	S2	1110	G
50	S2	1114	U
50	S2	1115	U
50	S2	1121	G
50	S2	1132	C
50	S2	1133	A
50	S2	1137	U
50	S2	1138	C
50	S2	1141	G
50	S2	1142	G
50	S2	1150	A
50	S2	1153	C
50	S2	1165	G
50	S2	1171	G
50	S2	1181	A
50	S2	1194	A
50	S2	1204	A
50	S2	1205	C
50	S2	1223	A
50	S2	1244	U
50	S2	1247	C
50	S2	1249	C
50	S2	1250	A
50	S2	1253	A
50	S2	1265	A
50	S2	1273	C
50	S2	1275	G
50	S2	1283	C
50	S2	1292	C
50	S2	1298	G
50	S2	1302	G
50	S2	1312	G
50	S2	1313	A
50	S2	1315	U
50	S2	1330	G
50	S2	1341	C
50	S2	1342	U
50	S2	1353	A
50	S2	1357	A
50	S2	1367	U
50	S2	1368	U
50	S2	1372	U

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Mol	Chain	Res	Type
50	S2	1378	A
50	S2	1393	G
50	S2	1395	C
50	S2	1396	A
50	S2	1401	A
50	S2	1404	U
50	S2	1416	C
50	S2	1417	C
50	S2	1418	C
50	S2	1419	C
50	S2	1421	A
50	S2	1429	G
50	S2	1433	C
50	S2	1434	C
50	S2	1440	C
50	S2	1441	U
50	S2	1442	U
50	S2	1446	A
50	S2	1454	A
50	S2	1462	U
50	S2	1463	U
50	S2	1474	A
50	S2	1475	G
50	S2	1477	U
50	S2	1489	A
50	S2	1493	C
50	S2	1494	U
50	S2	1506	A
50	S2	1512	C
50	S2	1521	C
50	S2	1522	A
50	S2	1534	C
50	S2	1537	A
50	S2	1540	G
50	S2	1542	C
50	S2	1543	U
50	S2	1552	G
50	S2	1555	U
50	S2	1556	A
50	S2	1557	C
50	S2	1561	A
50	S2	1568	C

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Mol	Chain	Res	Type
50	S2	1579	A
50	S2	1585	U
50	S2	1588	A
50	S2	1593	C
50	S2	1597	C
50	S2	1598	G
50	S2	1599	U
50	S2	1603	G
50	S2	1605	G
50	S2	1623	A
50	S2	1629	C
50	S2	1637	A
50	S2	1643	U
50	S2	1648	G
50	S2	1659	U
50	S2	1664	A
50	S2	1678	A
50	S2	1679	A
50	S2	1682	C
50	S2	1688	C
50	S2	1692	U
50	S2	1696	C
50	S2	1698	C
50	S2	1699	A
50	S2	1703	C
50	S2	1720	U
50	S2	1744	G
50	S2	1756	C
50	S2	1825	A
50	S2	1830	U
50	S2	1835	A
50	S2	1836	G
50	S2	1838	U
50	S2	1849	G
50	S2	1857	G
50	S2	1858	G
50	S2	1860	A
50	S2	1863	A
50	S2	1868	U
85	S5	2	C
85	S5	6	G
85	S5	9	A

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Mol	Chain	Res	Type
85	S5	18	G
85	S5	19	G
85	S5	34	G
85	S5	38	A
85	S5	43	C
85	S5	47	U
85	S5	75	C
86	S6	8	U
86	S6	34	G
86	S6	48	C
86	S6	50	U
86	S6	53	G
86	S6	57	G
86	S6	70	G
86	S6	71	G

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 ⓘ

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	5	18
47	1	6
50	S2	5
85	S5	4
52	SB	3
8	E	1
46	z	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	E	72:ALA	C	84:VAL	N	23.51
1	S2	753:C	O3'	785:C	P	22.68
1	S2	698:G	O3'	730:C	P	19.95
1	5	4776:G	O3'	4859:C	P	17.87
1	5	757:G	O3'	906:C	P	16.89
1	5	519:C	O3'	642:G	P	16.61
1	5	3977:C	O3'	4034:G	P	16.30
1	5	2910:G	O3'	3583:U	P	16.04
1	5	2131:C	O3'	2243:C	P	14.89
1	5	997:C	O3'	1047:C	P	13.99
1	1	312:PHE	C	337:PRO	N	11.28
1	1	133:MET	C	148:CYS	N	10.01
1	5	1051:G	O3'	1064:G	P	9.59
1	S5	15:G	O3'	18:G	P	7.89
1	S2	739:C	O3'	744:G	P	7.74
1	S2	225:G	O3'	287:U	P	6.54
1	S5	58:A	O3'	59:U	P	4.88
1	5	4087:G	O3'	4088:C	P	4.33
1	5	1222:A	O3'	1232:G	P	3.97
1	S5	60:U	O3'	61:C	P	3.51
1	1	25:LYS	C	26:ILE	N	3.38
1	5	1699:A	O3'	1718:C	P	3.33
1	1	26:ILE	C	27:GLN	N	3.27
1	z	100:VAL	C	101:LYS	N	3.20
1	5	1100:U	O3'	1167:C	P	3.02
1	5	4939:C	O3'	4941:G	P	2.74
1	5	4942:C	O3'	4944:C	P	2.72
1	1	449:LEU	C	450:ALA	N	2.47
1	5	3939:G	O3'	3940:U	P	2.44

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S2	1373:C	O3'	1374:C	P	2.12
1	SB	144:LYS	C	145:LYS	N	2.05
1	5	1566:C	O3'	1567:U	P	2.02
1	1	272:TYR	C	273:ARG	N	1.81
1	SB	221:PRO	C	222:LYS	N	1.68
1	5	4116:C	O3'	4117:U	P	1.19
1	S5	47:U	O3'	48:C	P	1.01
1	5	2037:C	O3'	2038:U	P	0.79
1	SB	145:LYS	C	146:ARG	N	0.31

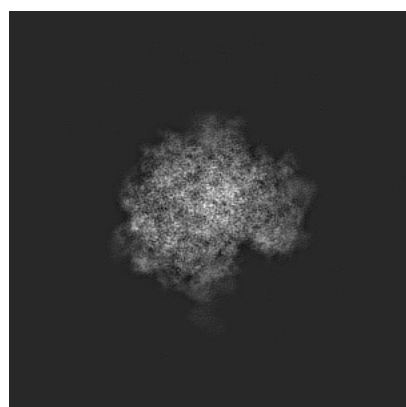
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-2644. These allow visual inspection of the internal detail of the map and identification of artifacts.

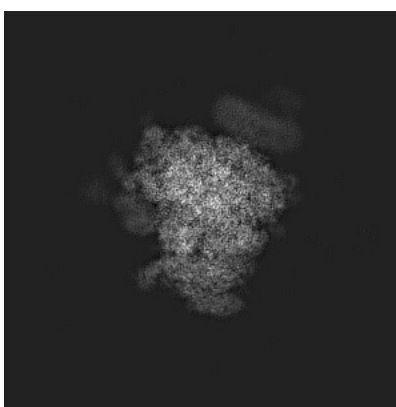
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

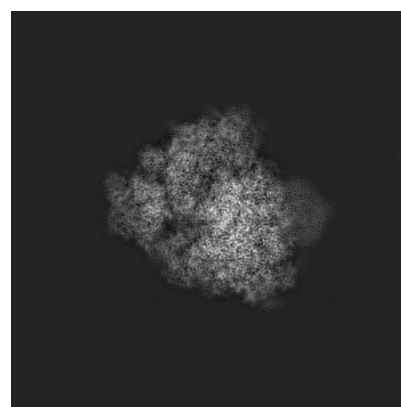
6.1.1 Primary map



X



Y

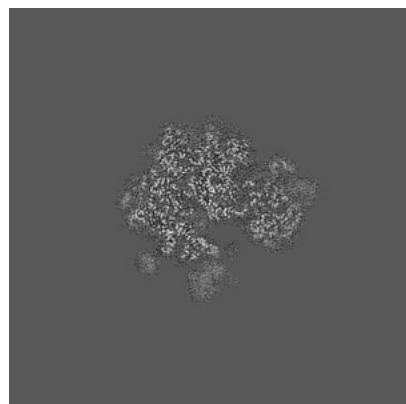


Z

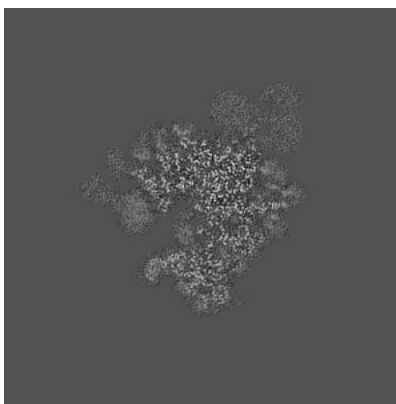
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

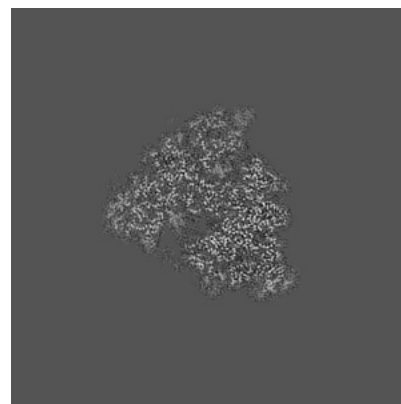
6.2.1 Primary map



X Index: 210



Y Index: 210

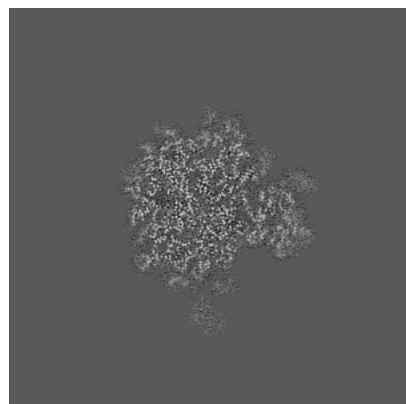


Z Index: 210

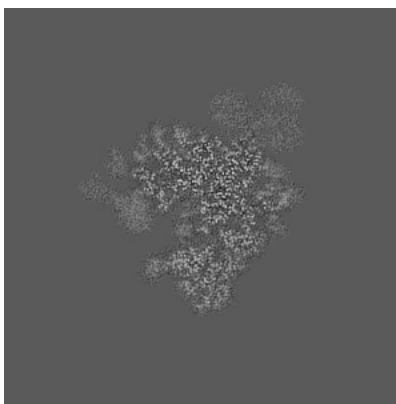
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

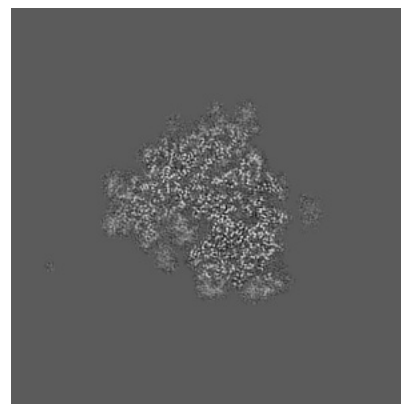
6.3.1 Primary map



X Index: 230



Y Index: 208

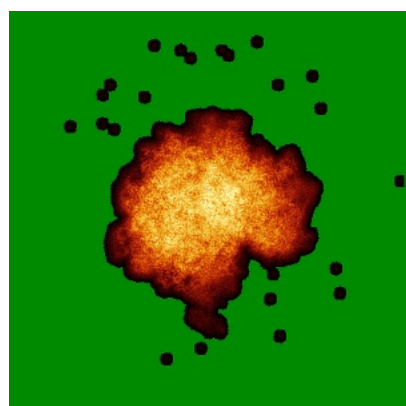


Z Index: 218

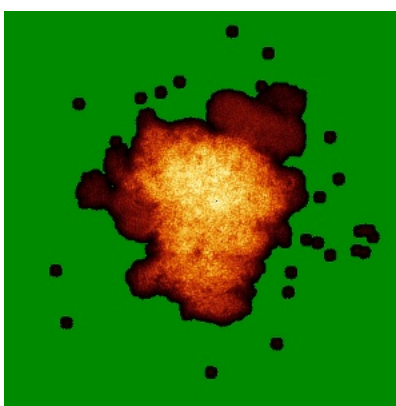
The images above show the largest variance slices of the map in three orthogonal directions.

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

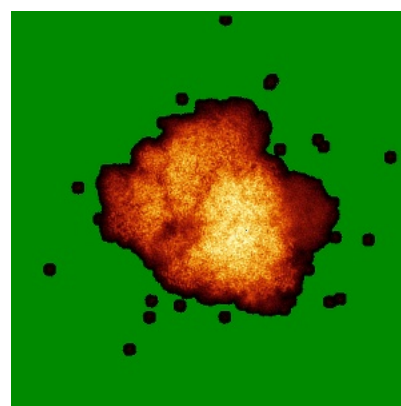
6.4.1 Primary map



X



Y

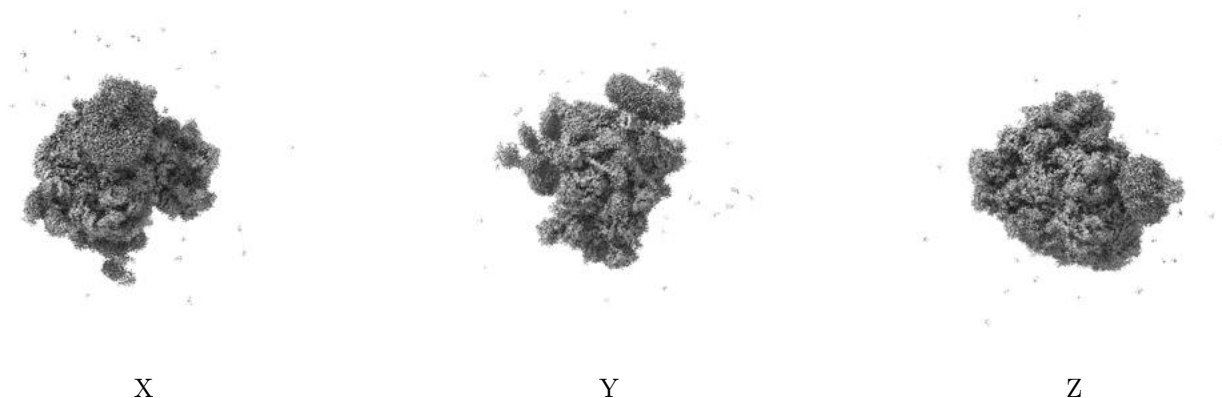


Z

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 0.065. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

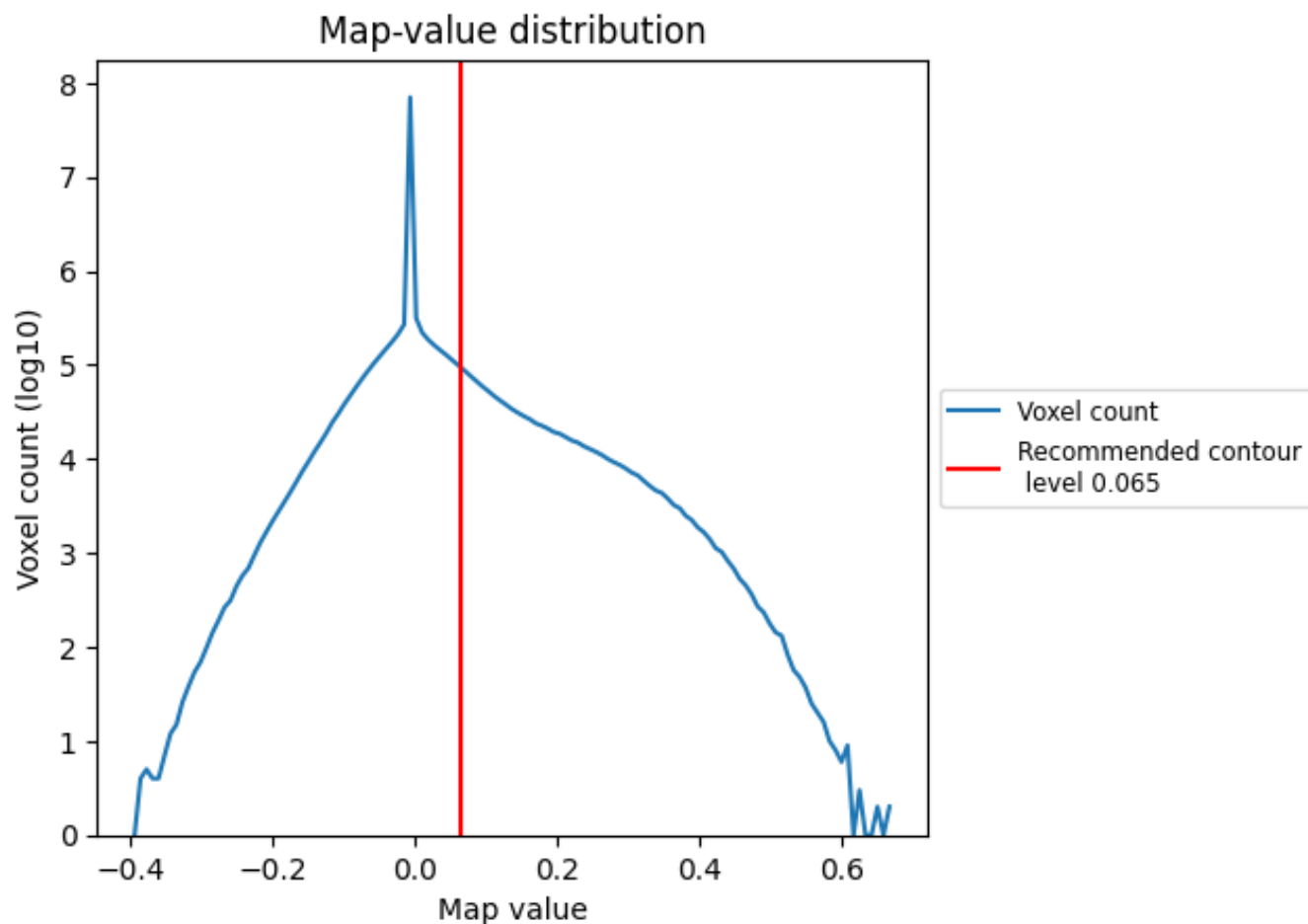
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

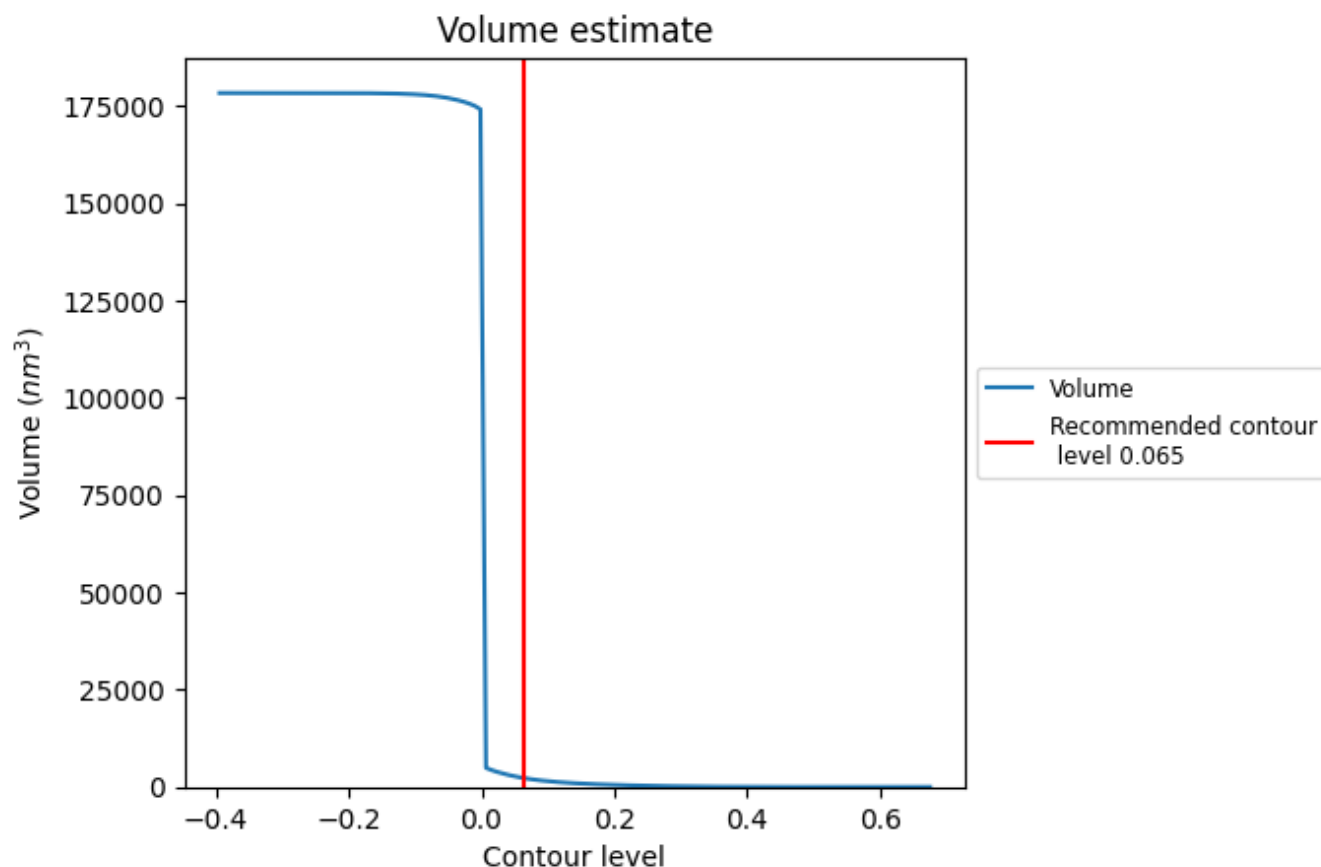
This section contains the results of statistical analysis of the map.

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.

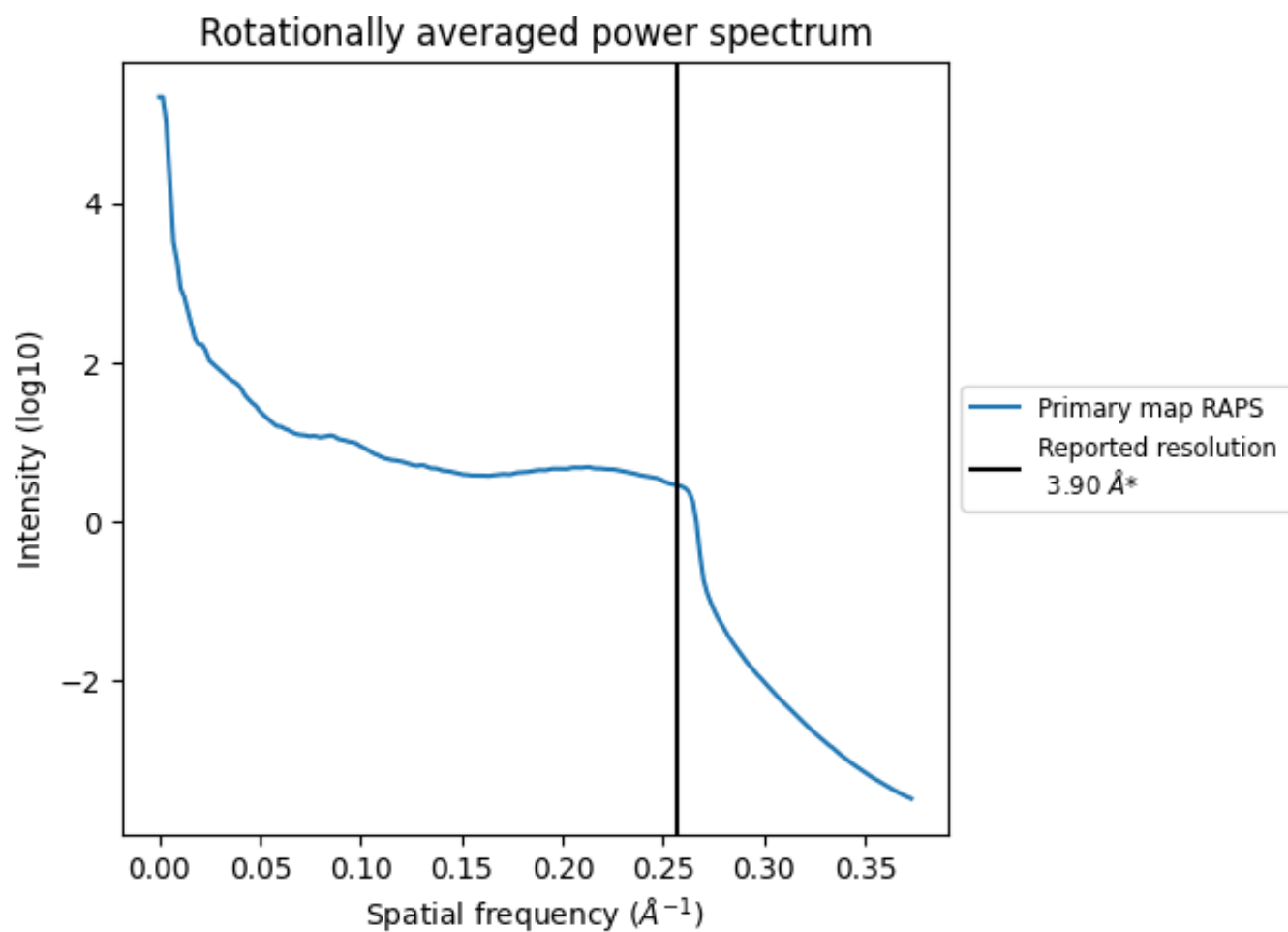
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2249 nm^3 ; this corresponds to an approximate mass of 2032 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 0.256 Å⁻¹

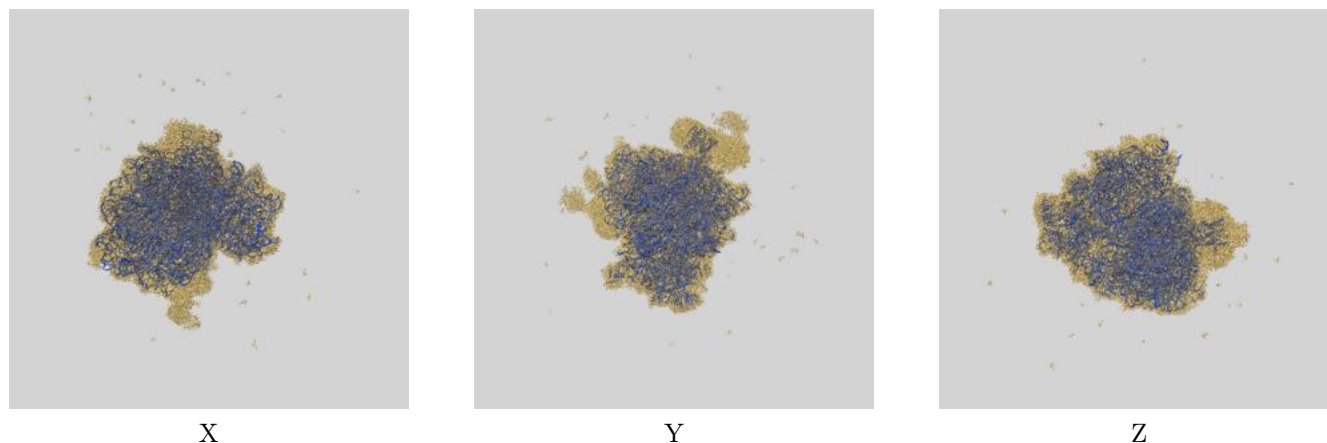
8 Fourier-Shell correlation ⓘ

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

9 Map-model fit [i](#)

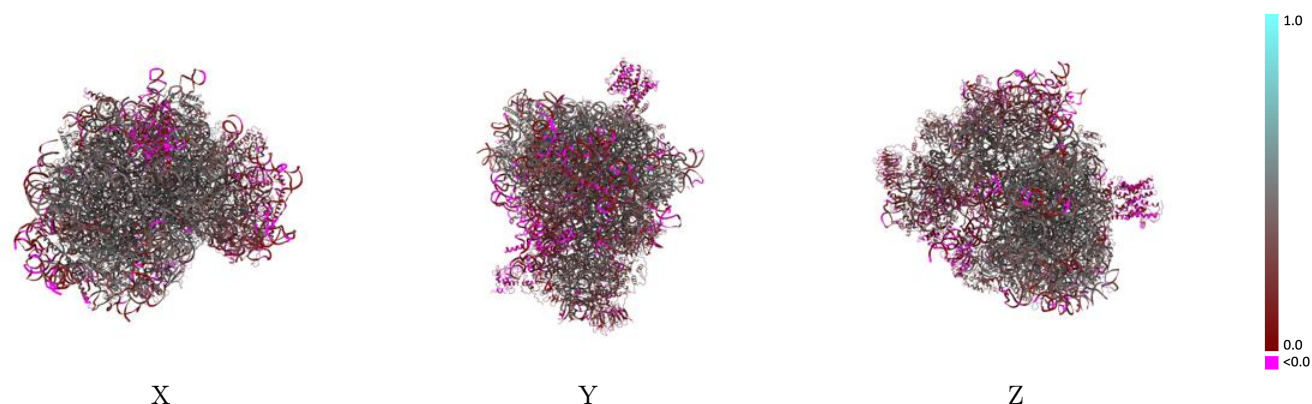
This section contains information regarding the fit between EMDB map EMD-2644 and PDB model 3J7R. Per-residue inclusion information can be found in [section 3](#) on [page 40](#).

9.1 Map-model overlay [i](#)



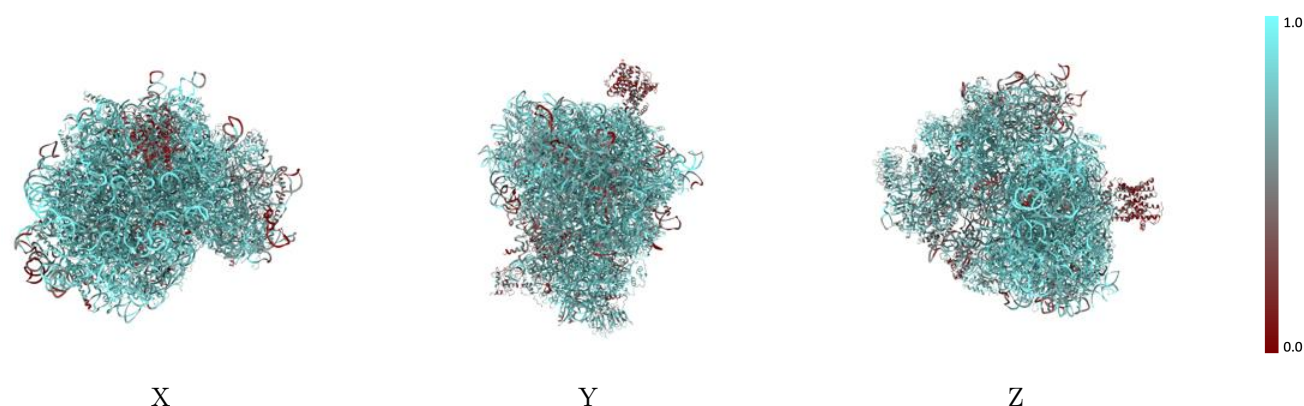
The images above show the 3D surface view of the map at the recommended contour level 0.065 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



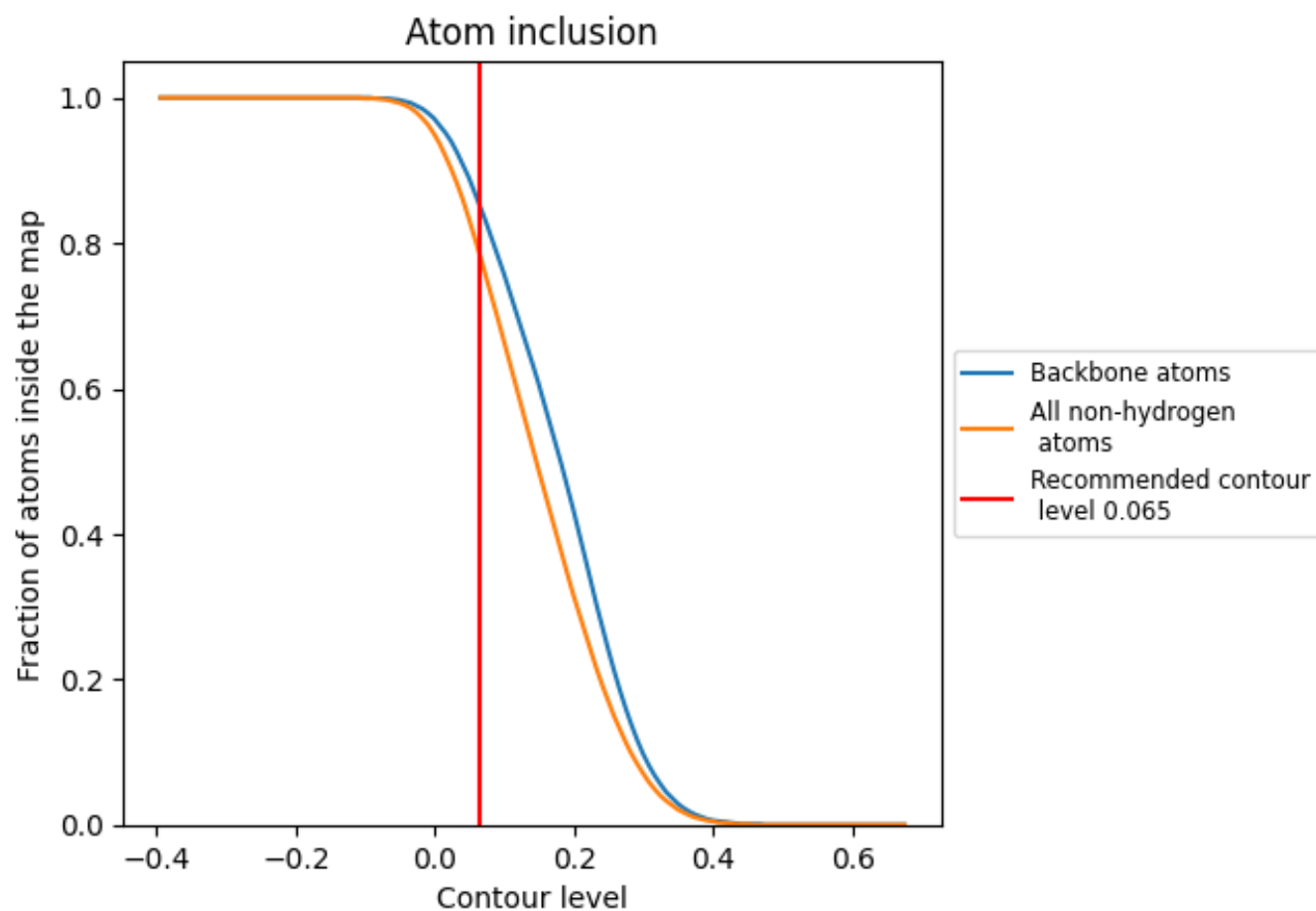
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.065).

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 (0.065) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7830	 0.3280
1	 0.3180	 0.0870
2	 0.2760	 0.0550
3	 0.1500	 0.0260
5	 0.8370	 0.3450
7	 0.9290	 0.4110
8	 0.8700	 0.3830
A	 0.8350	 0.4610
B	 0.8450	 0.4450
C	 0.8150	 0.4310
D	 0.7970	 0.3500
E	 0.7770	 0.3780
F	 0.8250	 0.4320
G	 0.7880	 0.3800
H	 0.8220	 0.4230
I	 0.8110	 0.4170
J	 0.7150	 0.2960
L	 0.7930	 0.4020
M	 0.8490	 0.4300
N	 0.8420	 0.4500
O	 0.8380	 0.4490
P	 0.8420	 0.4540
Q	 0.8500	 0.4570
R	 0.7940	 0.3910
S	 0.8460	 0.4380
S2	 0.8050	 0.2890
S4	 0.9350	 0.4180
S5	 0.5760	 0.1580
S6	 0.7030	 0.1880
SA	 0.8010	 0.3670
SB	 0.7190	 0.2930
SC	 0.8100	 0.3880
SD	 0.7190	 0.3080
SE	 0.6020	 0.1750
SF	 0.5930	 0.1730



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Chain	Atom inclusion	Q-score
SG	 0.6640	 0.2190
SH	 0.6940	 0.2780
SI	 0.6460	 0.2250
SJ	 0.4990	 0.0670
SK	 0.6500	 0.1850
SL	 0.6460	 0.2660
SM	 0.4030	 0.0090
SN	 0.7810	 0.3620
SO	 0.6720	 0.2480
SP	 0.5760	 0.1370
SQ	 0.7480	 0.3180
SR	 0.6830	 0.2750
SS	 0.6520	 0.2000
ST	 0.7320	 0.2990
SU	 0.7010	 0.2960
SV	 0.8020	 0.3830
SW	 0.8010	 0.3940
SX	 0.7250	 0.3160
SY	 0.4960	 0.0490
SZ	 0.4730	 0.0290
Sa	 0.8010	 0.3960
Sb	 0.7230	 0.3230
Sc	 0.4320	 0.1010
Sd	 0.7740	 0.3550
Se	 0.4460	 0.1010
Sf	 0.4060	 0.0160
Sg	 0.6410	 0.1780
T	 0.8300	 0.4420
U	 0.7780	 0.3480
V	 0.7980	 0.4380
W	 0.8090	 0.4100
X	 0.7930	 0.4320
Y	 0.8000	 0.4190
Z	 0.8340	 0.4270
a	 0.8440	 0.4470
b	 0.7520	 0.3750
c	 0.8100	 0.4130
d	 0.7860	 0.4040
e	 0.8430	 0.4530
f	 0.8590	 0.4610
g	 0.8010	 0.4170
h	 0.7970	 0.4150

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Chain	Atom inclusion	Q-score
i	 0.7940	 0.3990
j	 0.8810	 0.4600
k	 0.7520	 0.3590
l	 0.8250	 0.4470
m	 0.8460	 0.4230
n	 0.7710	 0.3940
o	 0.7880	 0.4210
p	 0.8140	 0.4420
r	 0.8470	 0.4490
z	 0.3580	 0.0590