



Full wwPDB EM Validation Report ⓘ

Mar 9, 2026 – 07:08 PM UTC

PDB ID : 3J7P / pdb_00003j7p
EMDB ID : EMD-2646
Title : Structure of the 80S mammalian ribosome bound to eEF2
Authors : Voorhees, R.M.; Fernandez, I.S.; Scheres, S.H.W.; Hegde, R.S.
Deposited on : 2014-08-01
Resolution : 3.50 Å(reported)
Based on initial models : 3J3A, 3J3B, 3J3D, 3J3F

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

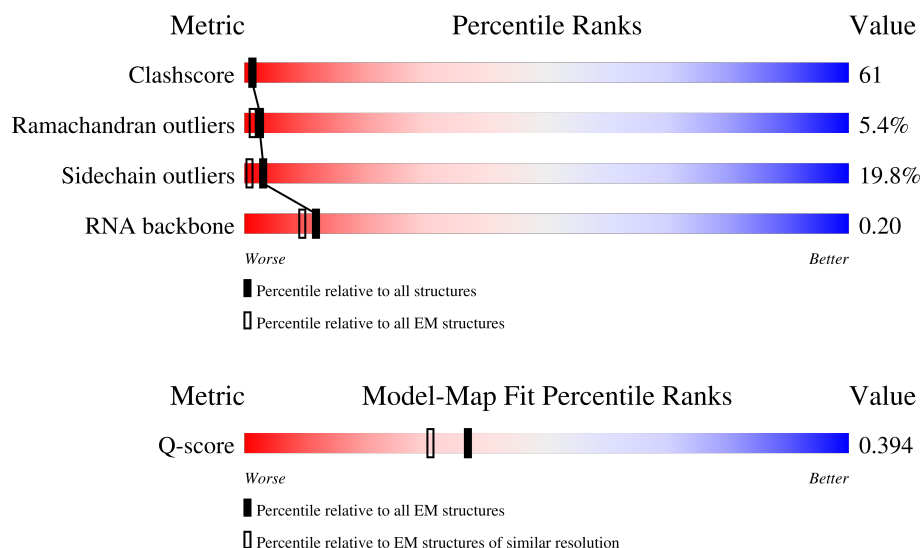
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.50 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.



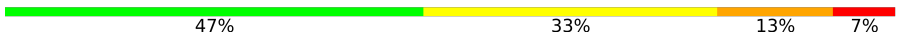
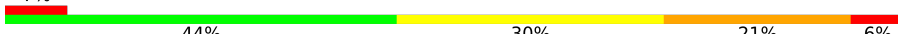
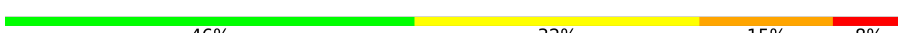
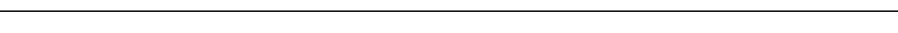
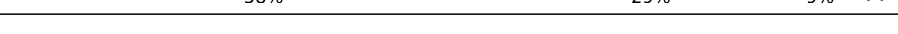
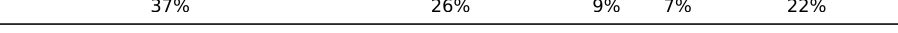
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	13950 (3.00 - 4.00)

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	3664	
2	7	120	
3	8	156	

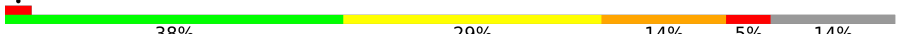
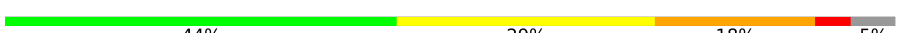
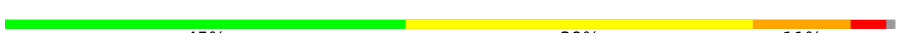
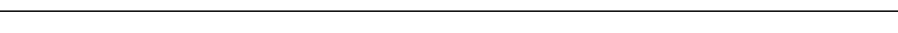
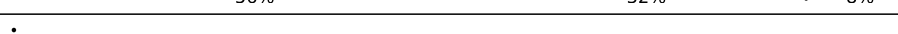
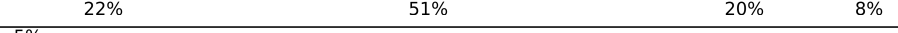
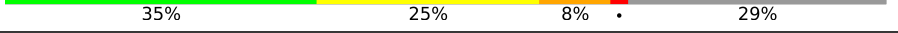
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Mol	Chain	Length	Quality of chain
4	A	257	
5	B	394	
6	C	367	
7	D	297	
8	E	236	
9	F	225	
10	G	266	
11	H	192	
12	I	213	
13	J	178	
14	K	163	
15	L	211	
16	M	213	
17	N	204	
18	O	204	
19	P	153	
20	Q	188	
21	R	196	
22	S	224	
23	T	160	
24	U	128	
25	V	140	
26	W	157	
27	X	156	
28	Y	145	

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Mol	Chain	Length	Quality of chain
29	Z	136	
30	a	148	
31	b	160	
32	c	115	
33	d	125	
34	e	135	
35	f	110	
36	g	117	
37	h	123	
38	i	105	
39	j	86	
40	k	70	
41	l	51	
42	m	128	
43	n	25	
44	o	106	
45	p	91	
46	q	202	
47	r	125	
48	4	856	
49	S2	1742	
50	SA	295	
51	SB	264	
52	SC	218	
53	SD	243	

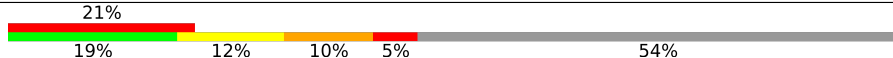
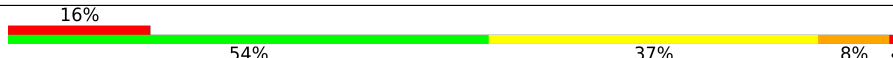
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Mol	Chain	Length	Quality of chain
54	SE	263	
55	SF	204	
56	SG	249	
57	SH	194	
58	SI	208	
59	SJ	194	
60	SK	165	
61	SL	158	
62	SM	124	
63	SN	151	
64	SO	151	
65	SP	145	
66	SQ	146	
67	SR	135	
68	SS	152	
69	ST	145	
70	SU	119	
71	SV	83	
72	SW	130	
73	SX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

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Mol	Chain	Length	Quality of chain
79	Sd	56	
80	Se	133	
81	Sf	156	
82	Sg	317	

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
84	ZN	Sa	201	-	-	X	-
84	ZN	m	201	-	-	X	-

2 Entry composition [i](#)

There are 84 unique types of molecules in this entry. The entry contains 221686 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	3662	Total	C	N	O	P	0	0
			78486	34947	14363	25515	3661		

- 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		

- 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		

- 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		

- 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		

- 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		

- 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		

- 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 uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	K	151	Total	C	N	O	S	0	0
			1140	708	215	213	4		

- Molecule 15 is a protein called Ribosomal protein eL13.

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

- Molecule 16 is a protein called Ribosomal protein eL14.

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

- Molecule 17 is a protein called Ribosomal protein eL15.

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

- Molecule 18 is a protein called Ribosomal protein uL13.

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

- Molecule 19 is a protein called Ribosomal protein uL22.

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

- Molecule 20 is a protein called Ribosomal protein eL18.

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

- Molecule 21 is a protein called Ribosomal protein eL19.

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

- Molecule 22 is a protein called Ribosomal protein eL20.

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

- Molecule 23 is a protein called Ribosomal protein eL21.

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

- Molecule 24 is a protein called Ribosomal protein eL22.

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

- Molecule 25 is a protein called Ribosomal protein uL14.

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

- Molecule 26 is a protein called Ribosomal protein eL24.

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

- Molecule 27 is a protein called Ribosomal protein uL23.

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

- Molecule 28 is a protein called Ribosomal protein uL24.

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

- Molecule 29 is a protein called Ribosomal protein eL27.

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

- Molecule 30 is a protein called Ribosomal protein uL15.

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

- Molecule 31 is a protein called Ribosomal protein eL29.

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

- Molecule 32 is a protein called Ribosomal protein eL30.

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

- Molecule 33 is a protein called Ribosomal protein eL31.

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

- Molecule 34 is a protein called Ribosomal protein eL32.

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

- Molecule 35 is a protein called Ribosomal protein eL33.

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

- Molecule 36 is a protein called Ribosomal protein eL34.

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

- Molecule 37 is a protein called Ribosomal protein uL29.

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

- Molecule 38 is a protein called Ribosomal protein eL36.

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

- Molecule 39 is a protein called Ribosomal protein eL37.

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

- Molecule 40 is a protein called Ribosomal protein eL38.

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

- Molecule 41 is a protein called Ribosomal protein eL39.

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

- Molecule 42 is a protein called Ribosomal protein eL40.

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

- Molecule 43 is a protein called Ribosomal protein eL41.

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

- Molecule 44 is a protein called Ribosomal protein eL42.

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

- Molecule 45 is a protein called Ribosomal protein eL43.

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

- Molecule 46 is a protein called Ribosomal protein uL10.

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

- Molecule 47 is a protein called Ribosomal protein eL28.

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

- Molecule 48 is a protein called Eukaryotic elongation factor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	4	856	Total	C	N	O	S	0	0
			6673	4234	1148	1247	44		

- Molecule 49 is a RNA chain called 18S ribosomal RNA.

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

- Molecule 50 is a protein called Ribosomal protein uS2.

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

- Molecule 51 is a protein called Ribosomal protein eS1.

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

- Molecule 52 is a protein called Ribosomal protein uS5.

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

- Molecule 53 is a protein called Ribosomal protein uS3.

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

- Molecule 54 is a protein called Ribosomal protein eS4.

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

- Molecule 55 is a protein called Ribosomal protein uS7.

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

- Molecule 56 is a protein called Ribosomal protein eS6.

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

- Molecule 57 is a protein called Ribosomal protein eS7.

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

- Molecule 58 is a protein called Ribosomal protein eS8.

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

- Molecule 59 is a protein called Ribosomal protein uS4.

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

- Molecule 60 is a protein called Ribosomal protein eS10.

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

- Molecule 61 is a protein called Ribosomal protein uS17.

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

- Molecule 62 is a protein called Ribosomal protein eS12.

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

- Molecule 63 is a protein called Ribosomal protein uS15.

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

- Molecule 64 is a protein called Ribosomal protein uS11.

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

- Molecule 65 is a protein called Ribosomal protein uS19.

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

- Molecule 66 is a protein called Ribosomal protein uS9.

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

- Molecule 67 is a protein called Ribosomal protein eS17.

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

- Molecule 68 is a protein called Ribosomal protein uS13.

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

- Molecule 69 is a protein called Ribosomal protein eS19.

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

- Molecule 70 is a protein called Ribosomal protein uS10.

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

- Molecule 71 is a protein called Ribosomal protein eS21.

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

- Molecule 72 is a protein called Ribosomal protein uS8.

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

- Molecule 73 is a protein called Ribosomal protein uS12.

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

- Molecule 74 is a protein called Ribosomal protein eS24.

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

- Molecule 75 is a protein called Ribosomal protein es25.

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

- Molecule 76 is a protein called Ribosomal protein eS26.

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

- Molecule 77 is a protein called Ribosomal protein eS27.

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

- Molecule 78 is a protein called Ribosomal protein eS28.

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

- Molecule 79 is a protein called Ribosomal protein uS14.

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

- Molecule 80 is a protein called Ribosomal protein eS30.

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

- Molecule 81 is a protein called Ribosomal protein eS31.

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

- Molecule 82 is a protein called Ribosomal protein RACK1.

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

- Molecule 83 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
83	5	118	Total	Mg	0
			118	118	
83	7	5	Total	Mg	0
			5	5	
83	8	4	Total	Mg	0
			4	4	

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Mol	Chain	Residues	Atoms		AltConf
83	P	1	Total 1	Mg 1	0
83	V	1	Total 1	Mg 1	0
83	4	1	Total 1	Mg 1	0
83	S2	36	Total 36	Mg 36	0

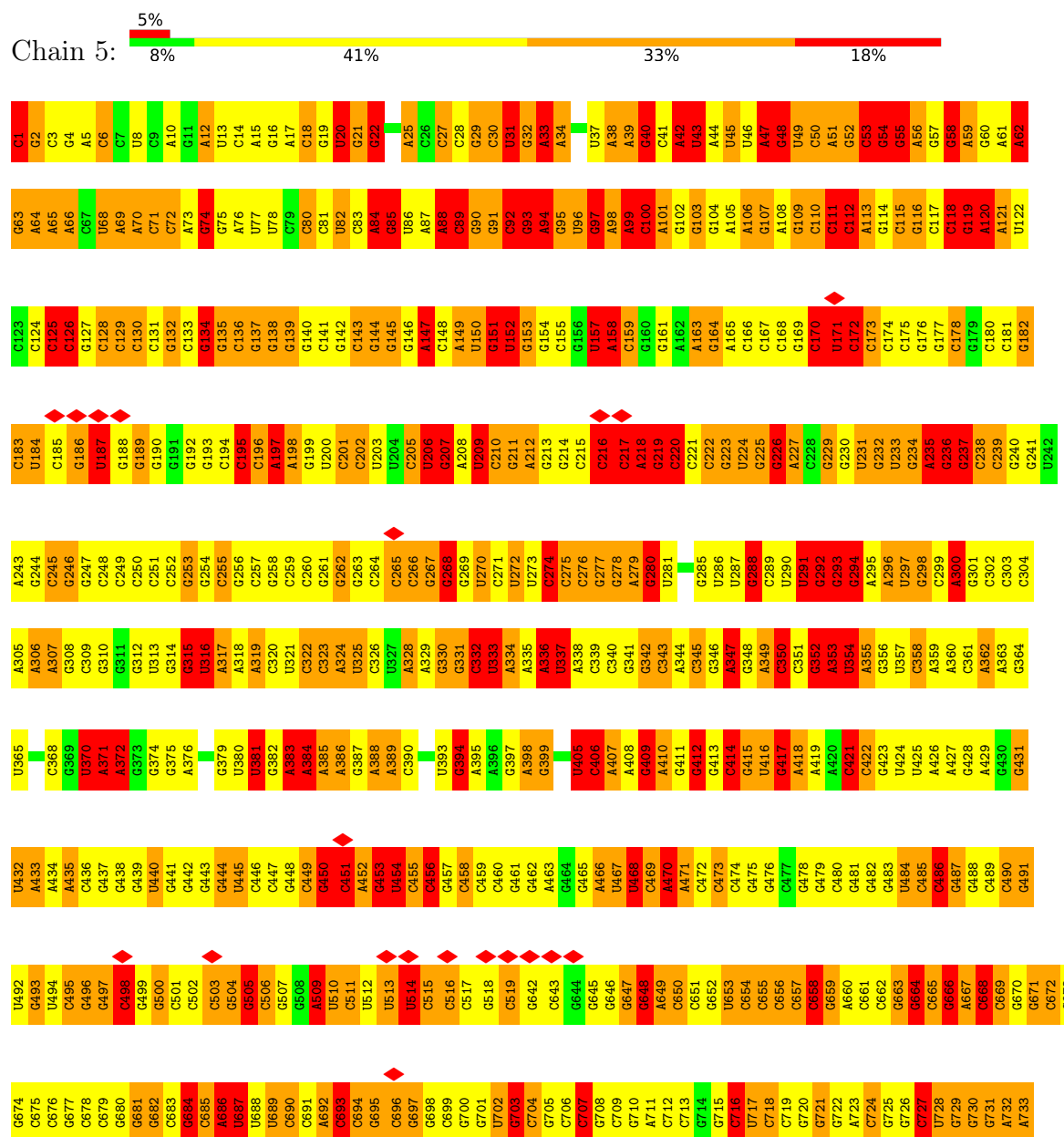
- Molecule 84 is ZINC ION (CCD ID: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
84	j	1	Total 1	Zn 1	0
84	m	1	Total 1	Zn 1	0
84	o	1	Total 1	Zn 1	0
84	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.

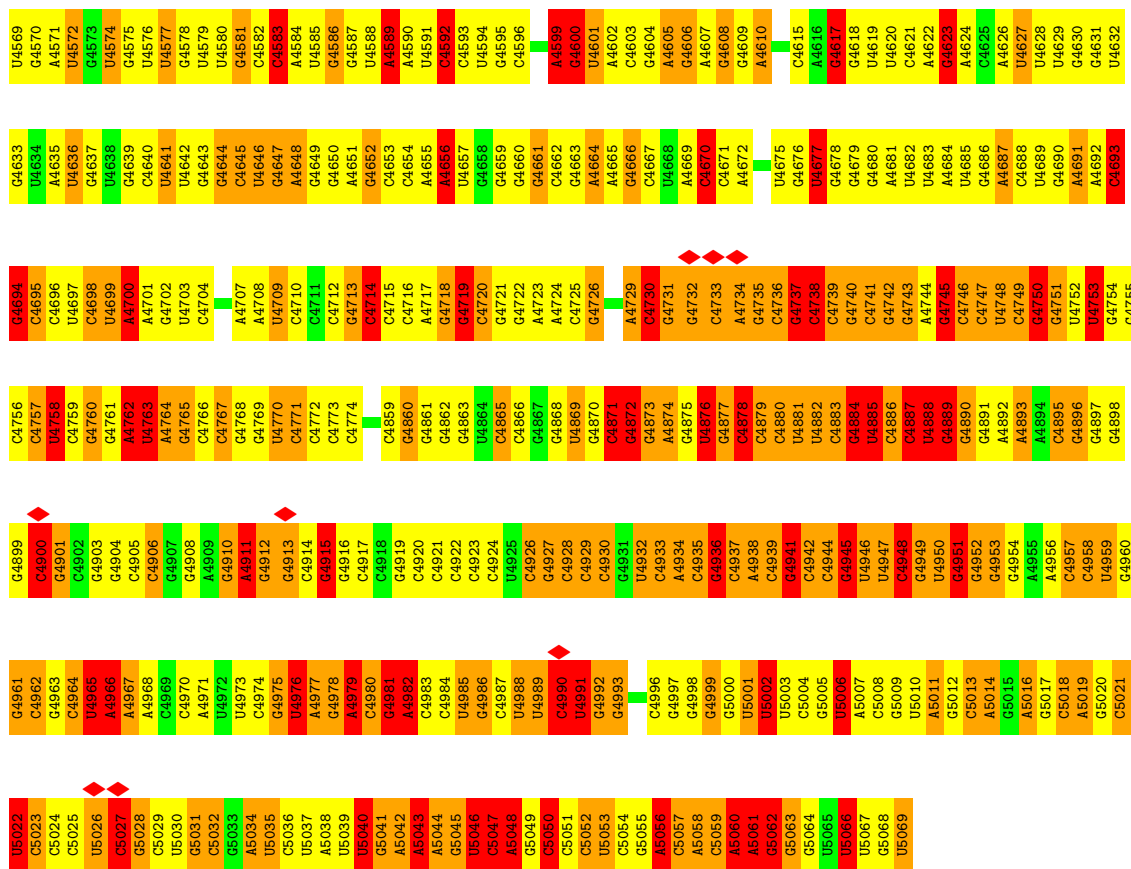
• Molecule 1: 28S ribosomal RNA



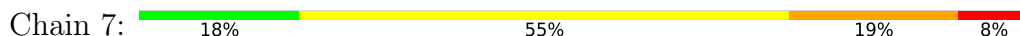




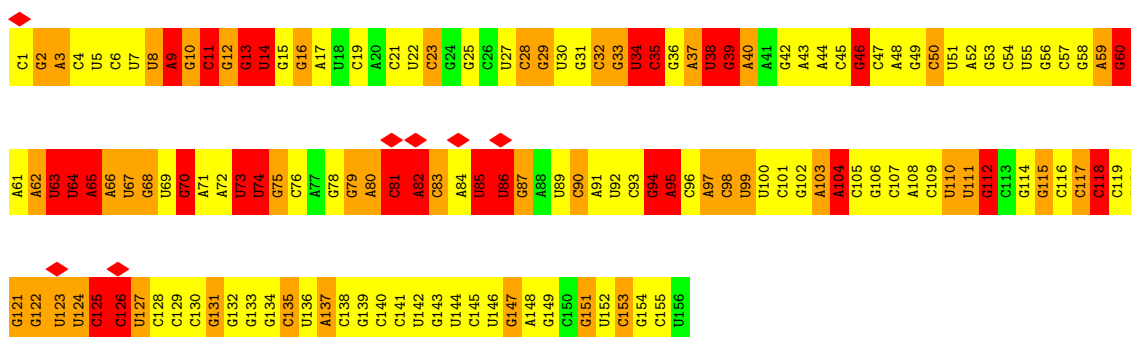
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A4510	A4449	C4387	C4199	C4138	C4078	C3842	C3781	U3721	C3601	A2858
A4511	U4450	U4265	G4200	C4139	C4079	U3843	G3782	G3722	C3602	C2859
U4512	C4389	G4266	G4201	C4140	C4080	U3844	A3783	A3723	C3603	C2860
A4513	U4452	C4267	U4202	C4141	G4081	A3845	A3784	G3724	A3604	C2861
G4514	C4453	C4268	C4203	C4142	G4082	C3846	A3785	G3725	C3605	C2862
C4515	G4454	C4269	C4204	C4143	U4083	C3847	U3786	A3726	U3606	
G4516	G4455	C4270	A4205	C4144	G4084	U3848		A3727	U3607	C2866
A4517	C4394	A4271	C4206	C4145	A4085	A3849	C3789	A3728	A3608	C2867
C4518	U4457	C4395	C4207	C4146	G4086	C3850	U3790	U3729	A3609	
C4519	C4458	A4272	U4208	C4147	G4087	U3851	C3791	U3730	A3610	A2871
G4520	U4459	A4273	G4209	C4148	C4088	A3852	G3792	C3731	A3611	C2872
U4521	U4460	C4274	U4210	C4149	G4089	U3853	U3793	A3732	C3612	U2873
G4522	C4461	C4275	C4211	C4150	G4090	C3854	C3794	A3733	U3613	U2874
A4523	G4337	G4276	A4212	C4151	G4091	C3855	U3795	A3734	G3614	
C4524	C4338	C4277	A4213	G4152	G4092	C3856	U3796	U3735	G3615	C2875
U4525	A4339	A4278	A4214	C4153	G4093	C3857	U3797	A3736	U3616	C2876
U4526	C4340	C4279	C4215	C4154	G4094	C3858	U3798	A3737	U3617	U2877
G4527	C4341	A4280	G4216	C4155	G4095	C3859	A3799	G3738	C3618	U2878
C4528	C4342	A4281	G4217	C4156	G4096	A3860	A3780	U3739	C3619	U2879
G4529	U4468	A4282	U4218	C4157	C4097	A3861	A3800	C3780	G3620	U2880
U4530	U4469	G4283	A4219	C4158	A4098	A3862	U3801	G3781	A3621	
U4531	C4470	U4284	A4220	C4159	G4099	A3863	U3802	C3741	A3622	
U4532	U4471	U4285	A4221	C4160	C4100	A3864	A3803	G3742	C3623	
C4533	G4347	C4286	G4222	C4161	C4101	A3865	A3804	G3743	A3624	
G4534	A4348	C4287	C4223	C4162	C4102	C3866	G3806	U3745	C3625	
A4535	C4349	U4289	A4224	C4163	C4103	A3867	A3807	A3746	G3626	
C4536	C4350	U4290	G4225	C4164	C4104	C3868	C3808	A3747	G3627	
C4537	U4351	G4291	C4226	C4165	G4105	C3869	C3809	A3748	G3628	
G4538	A4415	A4292	U4227	C4166	A4106	C3870	C3810	C3749	A3629	A2895
U4539	U4352	U4293	U4228	C4167	A4107	A3871	G3811	G3750	A3630	C2896
C4540	U4353	C4294	U4229	C4168	C4108	A3872	C3812	C3751	U3631	C2897
G4541	G4354	U4295	U4230	C4169	G4109	C3873	C3813	C3752	C3632	C2898
U4542	C4355	U4296	C4231	C4170	A4110	C3874	U3814	G3753	C3633	C2899
U4543	G4356	C4297	U4232	C4171	U4111	A3875	G3815	G3754	A3634	
U4544	U4357	U4298	A4233	C4172	U4112	A3876	A3816	C3755	A3635	
A4545	A4361	U4299	A4234	C4173	C4113	A3877	A3817	A3756	C3636	U2904
A4546	C4362	U4300	G4235	U4174	U4114	C3878	U3818	G3757	U3637	C2905
C4547	A4363	U4301	G4236	C4175	C4115	C3879	G3819	U3758	G3638	
U4548	G4364	U4302	U4237	C4176	G4116	C3880	G3820	A3759	U3639	C2906
G4549	U4367	A4303	G4238	C4177	U4117	C3881	A3821	C3760	U3640	C2907
C4550	C4368	C4304	A4239	C4178	U4118	C3882	U3822	C3761	U3641	U2908
U4551	A4369	G4305	G4240	C4179	U4119	U3883	G3823	U3762	A3642	C2909
C4552	C4370	U4306	C4241	U4180	C4120	U3884	A3824	A3763	A3643	
U4553	U4371	A4307	U4242	U4181	U4121	C3885	A3825	U3764	U3644	C2910
G4554	C4372	C4308	C4243	U4182	G4122	C3886	C3826	A3765	U3645	
U4555	A4373	G4309	U4244	G4183	C4123	C3887	A3827	C3766	A3646	
C4556	C4374	A4310	A4245	C4184	C4124	C3888	G3828	U3767	A3647	U3583
U4557	U4375	A4311	G4246	C4185	G4125	C3889	G3829	C3768	A3648	C3584
U4558	C4376	U4312	G4247	C4186	C4126	C3890	A3830	C3769	A3649	C3585
C4559	A4377	C4313	A4251	C4187	C4127	A3891	U3831	U3770	C3650	C3586
U4560	U4378	U4314	C4252	U4188	C4128	C3892	U3832	C3771	C3651	C3587
C4561	A4379	A4315	G4253	U4189	A4127	C3893	C3833	U3772	A3652	C3588
C4562	C4440	C4316	U4254	U4190	C4128	C3894	C3834	U3773	A3653	C3589
U4563	U4380	A4317	A4255	U4191	G4129	C3895	C3835	A3774	G3654	C3590
C4564	C4381	C4318	U4256	C4190	C4130	C3896	A3836	A3775	C3655	C3591
U4565	U4442	U4319	A4257	A4192	C4131	C3897	C3837	C3776	A3656	C3592
C4566	C4443	C4320	C4258	U4193	C4132	C3898	U3838	C3777	U3657	C3593
U4567	U4444	U4321	C4259	U4194	C4133	C3899	C3839	U3778	C3658	C3594
C4568	C4447	C4322	U4260	C4195	C4134	G3900	U3840	A3779	C3659	U3595
				C4197						A3596
										C3597
										A3599



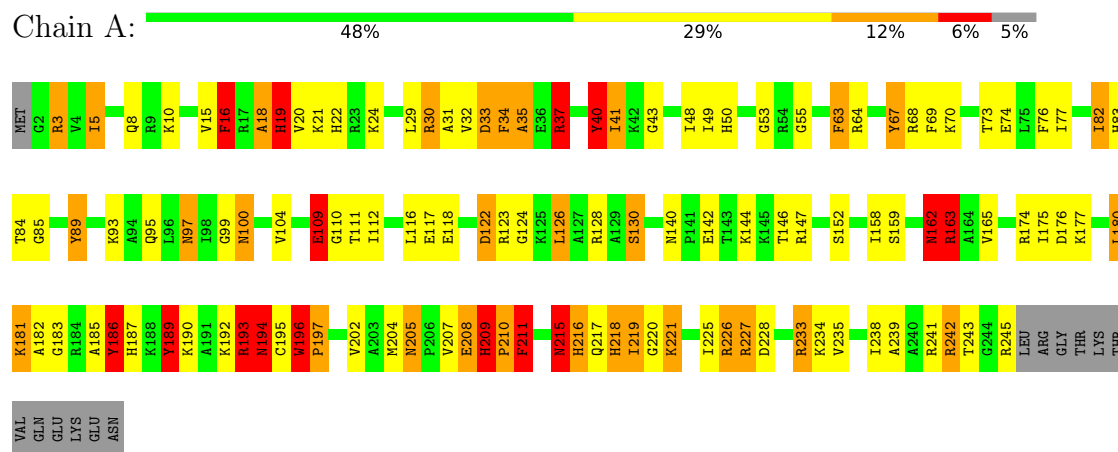
- Molecule 2: 5S ribosomal RNA



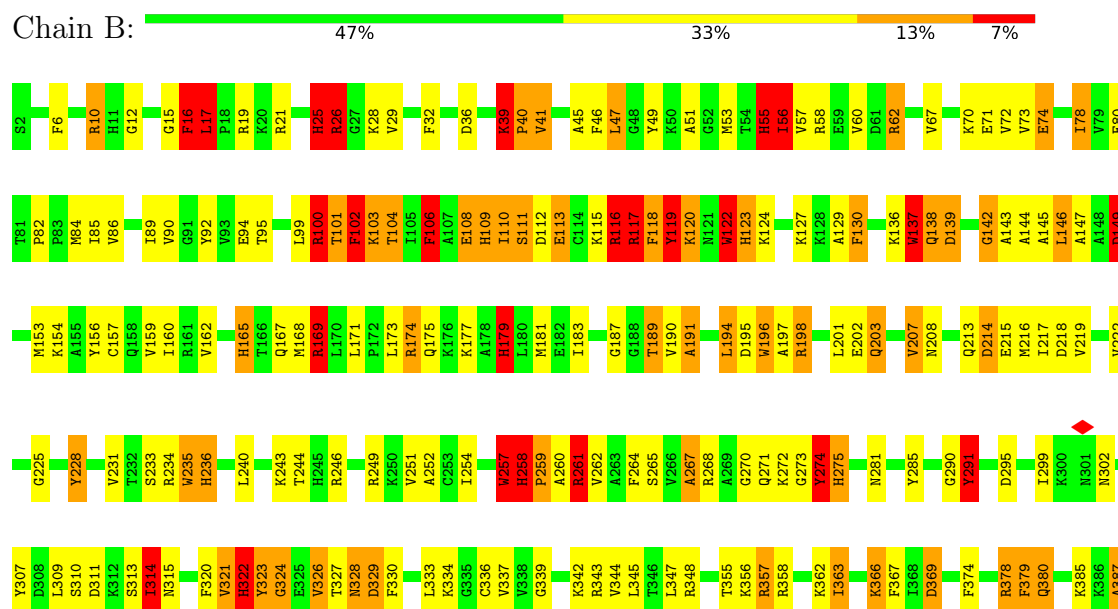
- Molecule 3: 5.8S ribosomal RNA



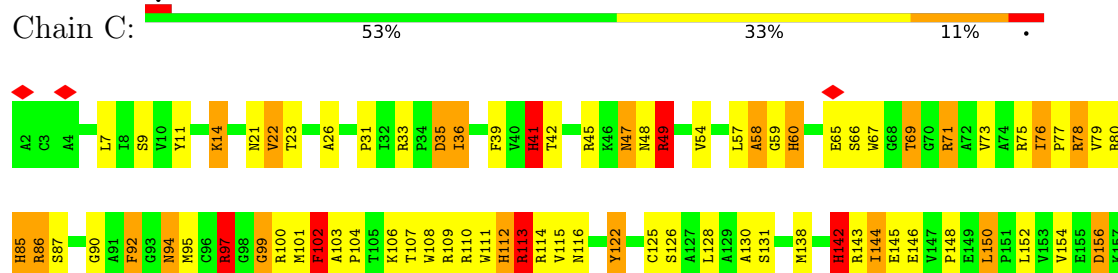
- Molecule 4: Ribosomal protein uL2

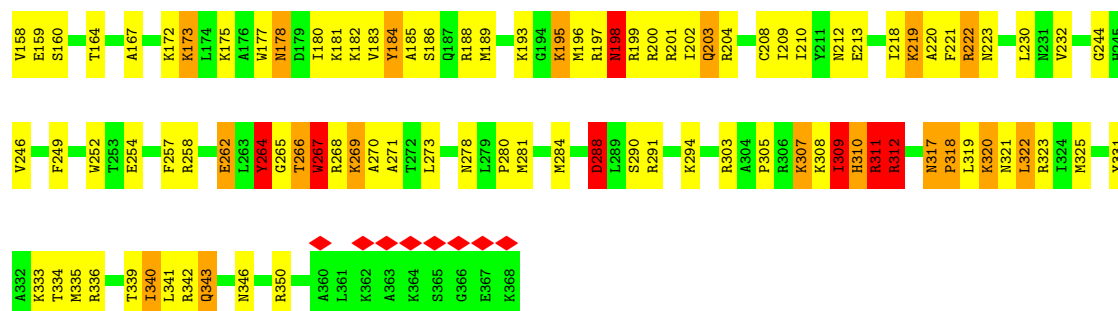


- Molecule 5: Ribosomal protein uL3

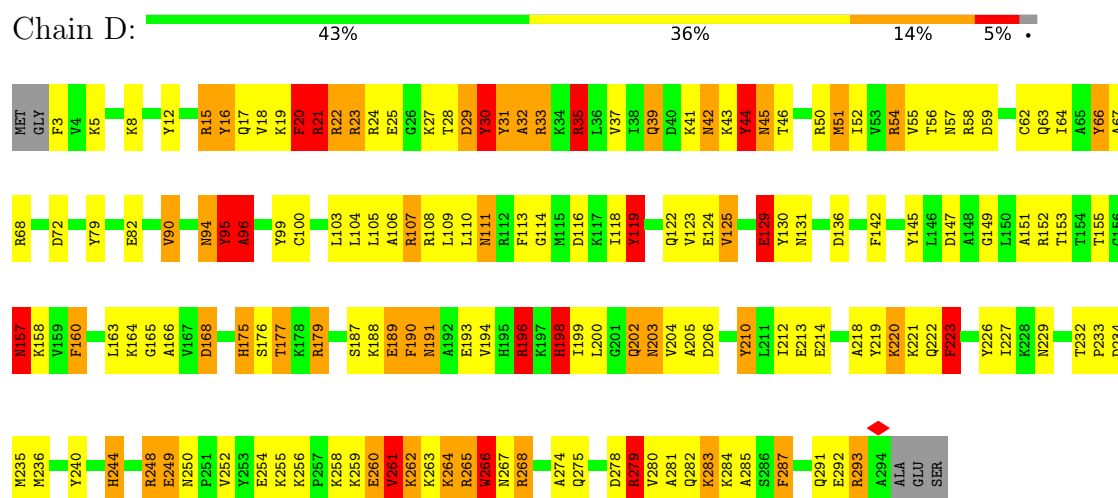


- Molecule 6: Ribosomal protein uL4

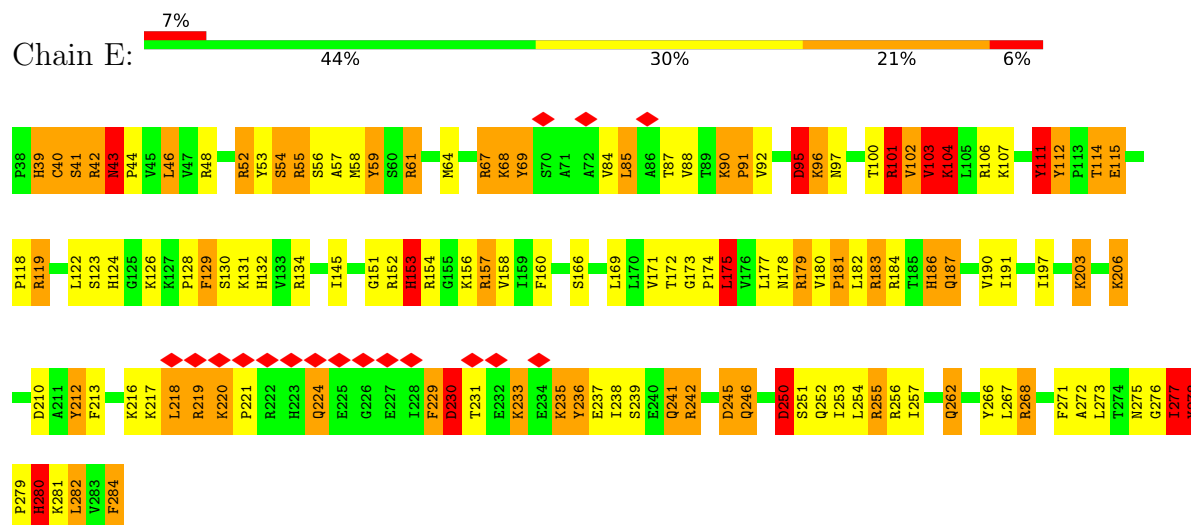




• Molecule 7: Ribosomal protein uL18

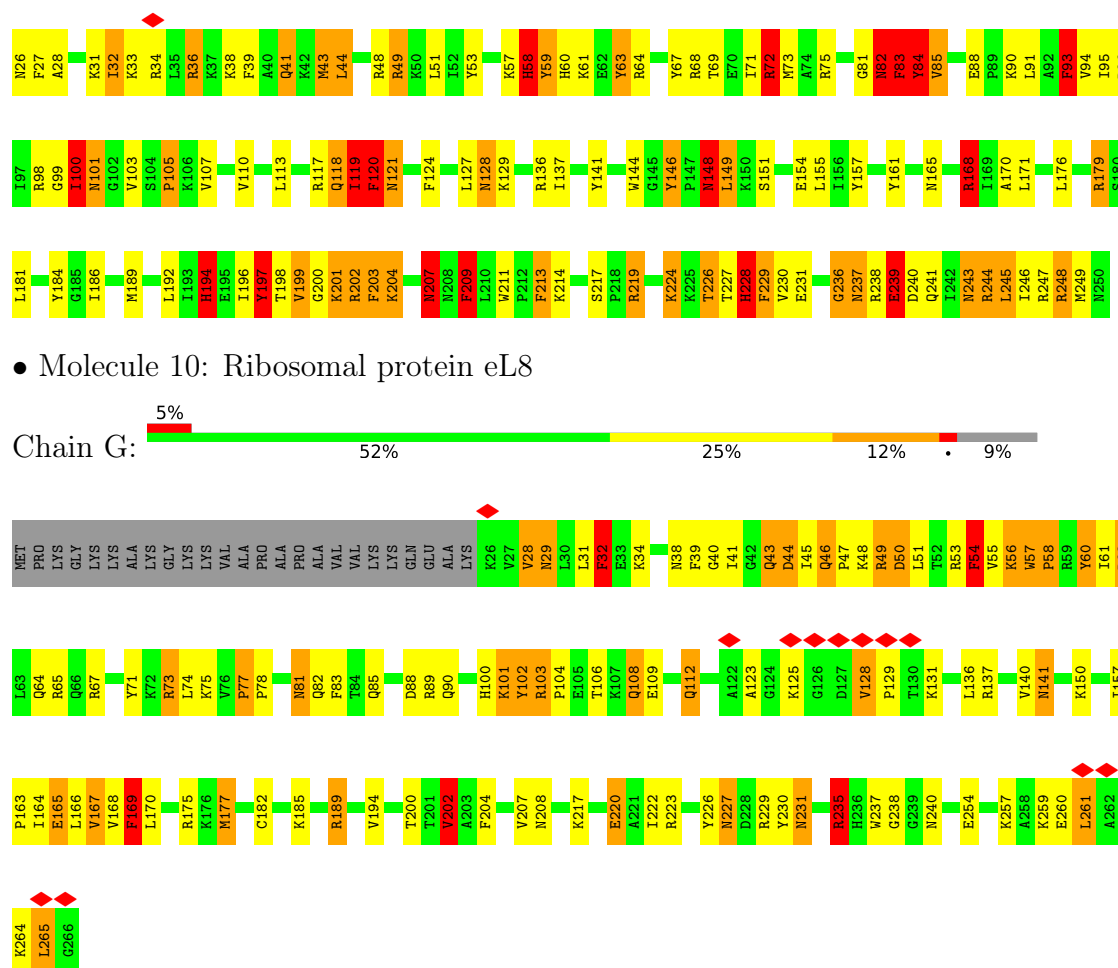


• Molecule 8: Ribosomal protein eL6



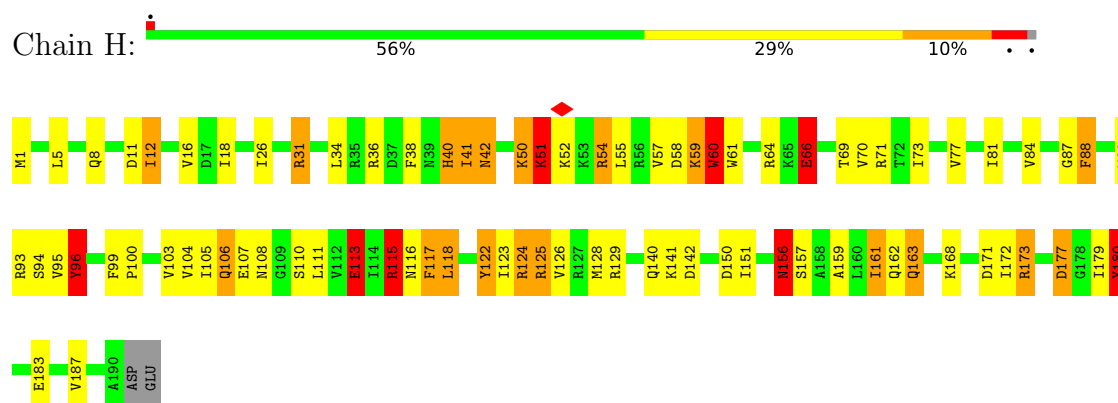
• Molecule 9: Ribosomal protein uL30



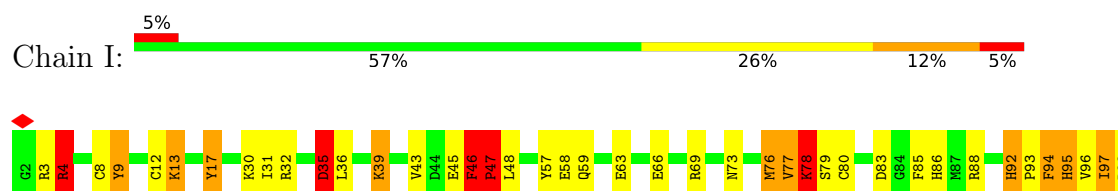


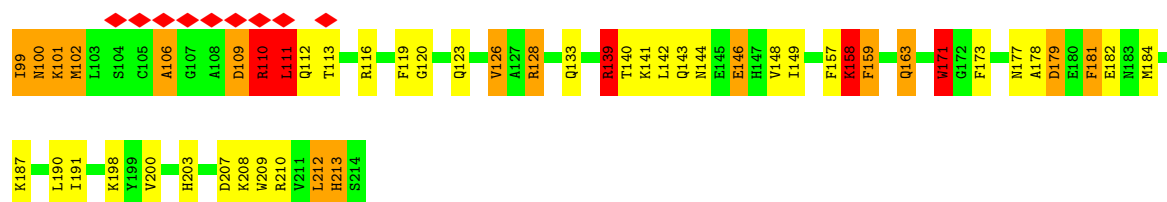
• Molecule 10: Ribosomal protein eL8

• Molecule 11: Ribosomal protein uL6



• Molecule 12: Ribosomal protein uL16

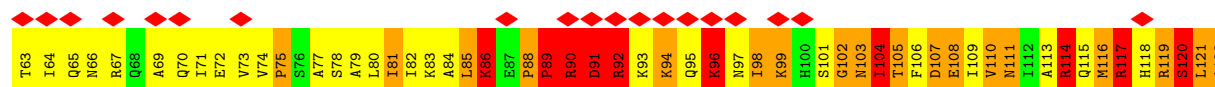




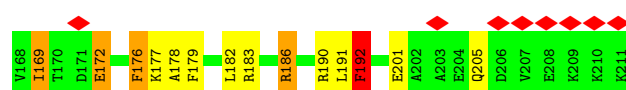
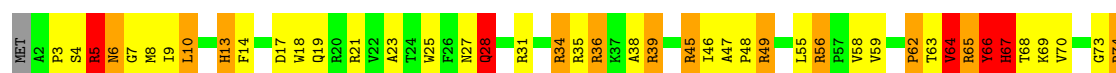
• Molecule 13: Ribosomal protein uL5



• Molecule 14: Ribosomal protein uL11

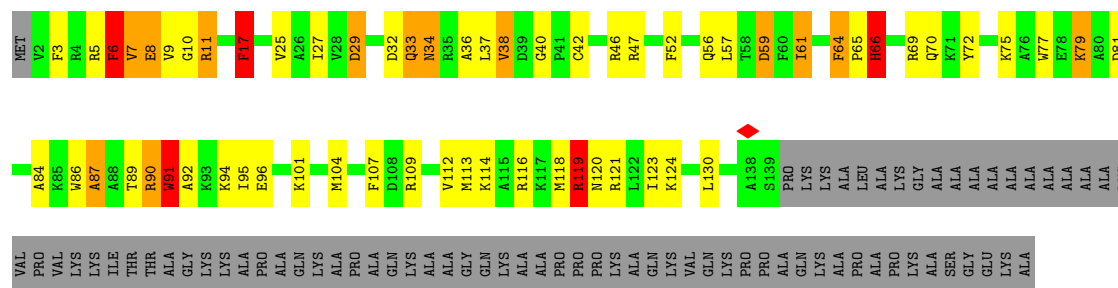


• Molecule 15: Ribosomal protein eL13



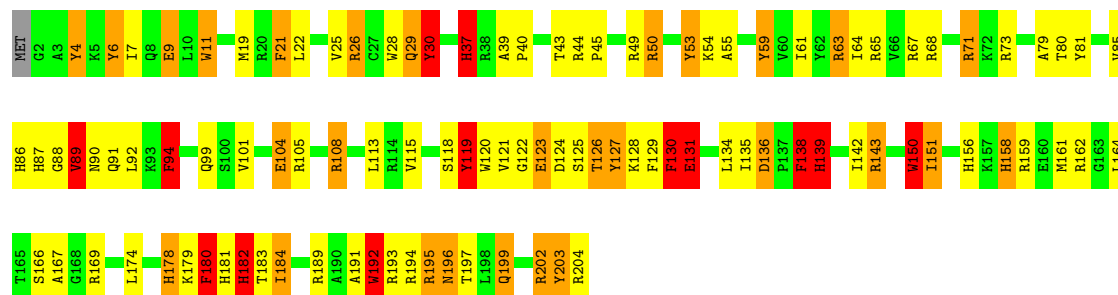
• Molecule 16: Ribosomal protein eL14





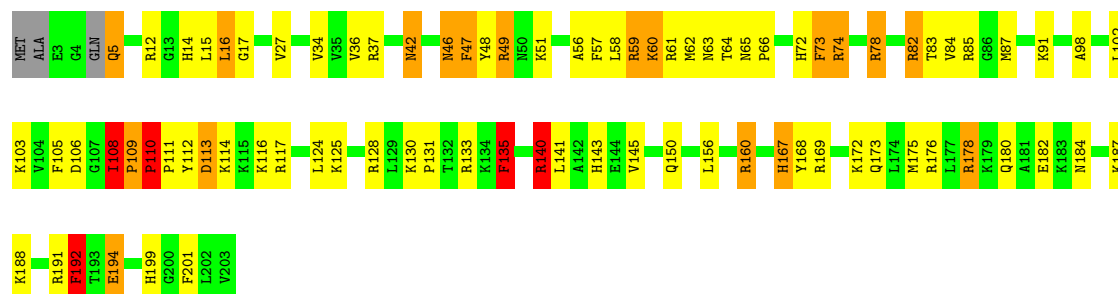
• Molecule 17: Ribosomal protein eL15

Chain N: 49% 31% 14% 6%



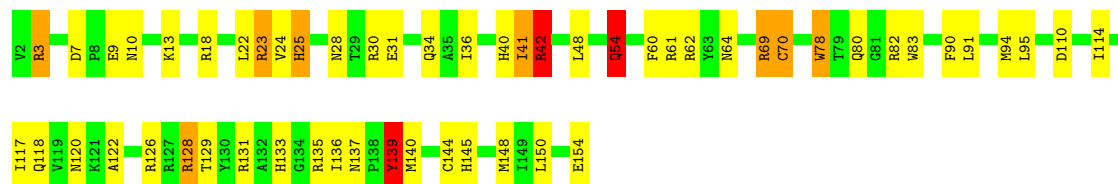
• Molecule 18: Ribosomal protein uL13

Chain O: 58% 29% 9%



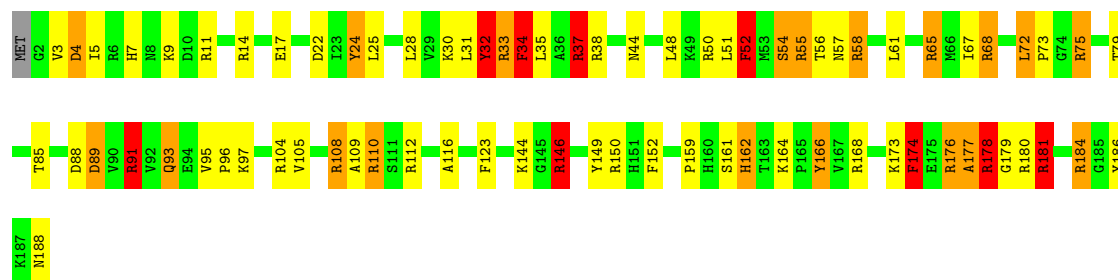
• Molecule 19: Ribosomal protein uL22

Chain P: 64% 29% 5%

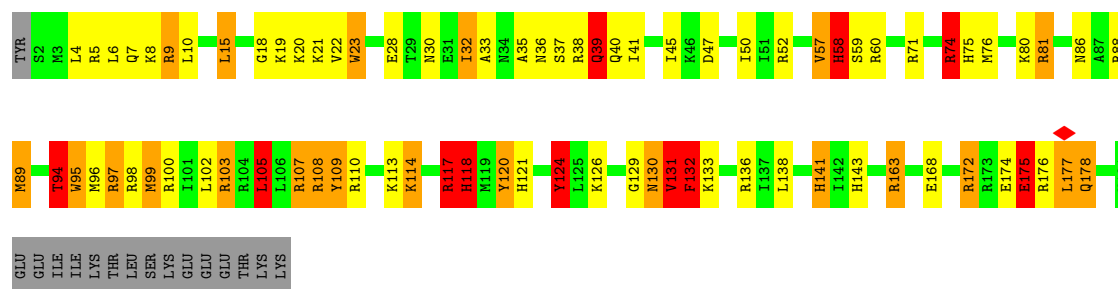


• Molecule 20: Ribosomal protein eL18

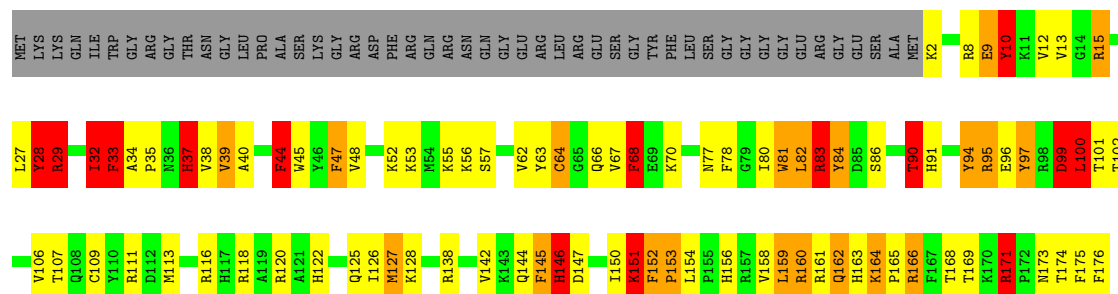
Chain Q: 59% 26% 10% 5%



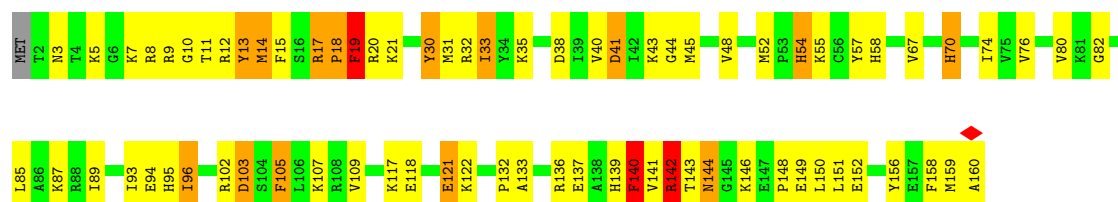
• Molecule 21: Ribosomal protein eL19



• Molecule 22: Ribosomal protein eL20

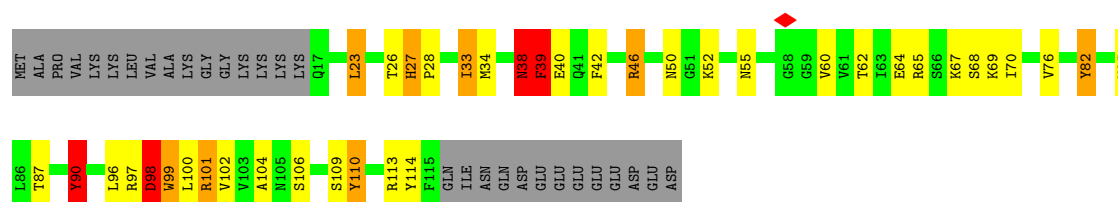


• Molecule 23: Ribosomal protein eL21

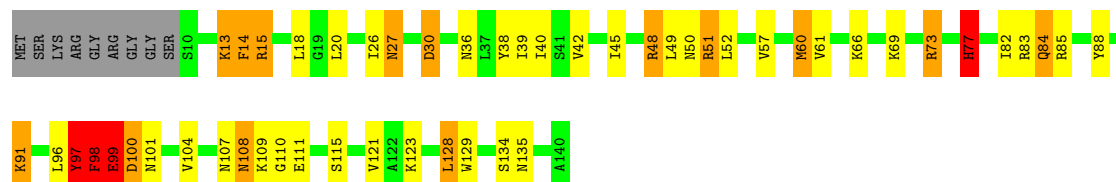


• Molecule 24: Ribosomal protein eL22

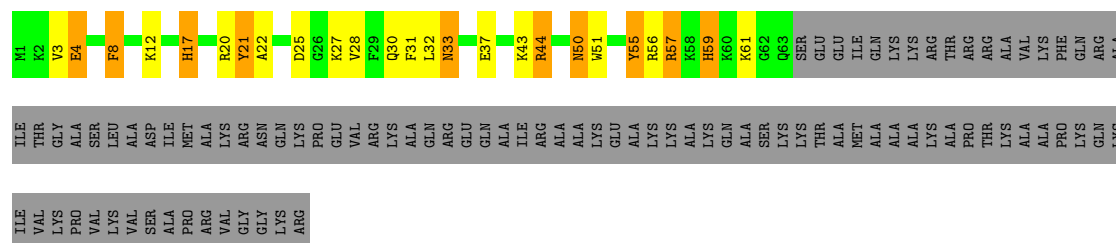




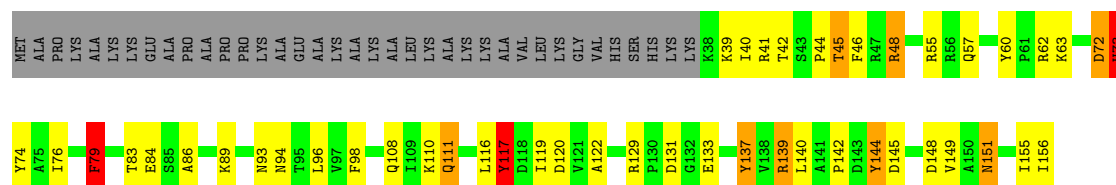
• Molecule 25: Ribosomal protein uL14



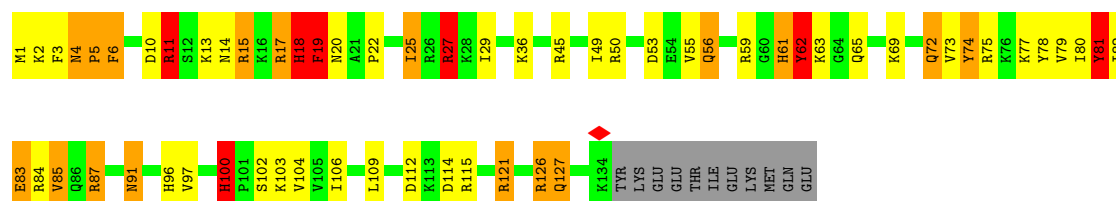
• Molecule 26: Ribosomal protein eL24



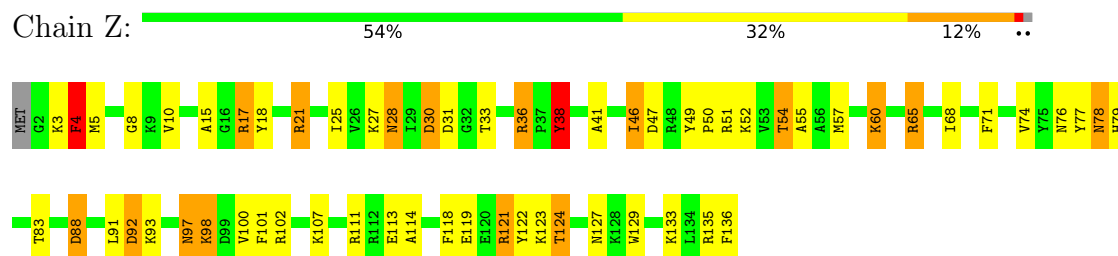
• Molecule 27: Ribosomal protein uL23



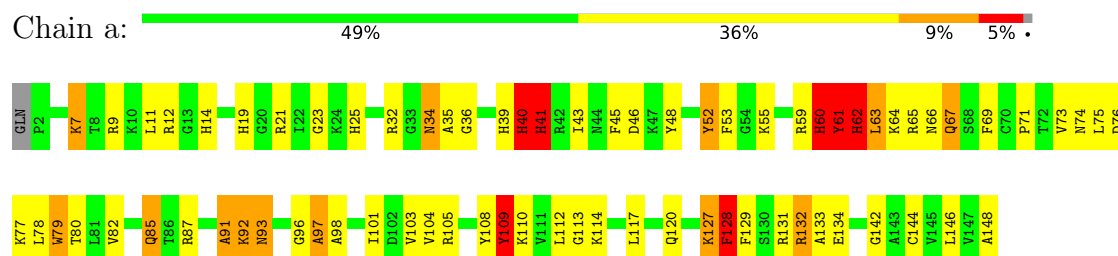
• Molecule 28: Ribosomal protein uL24



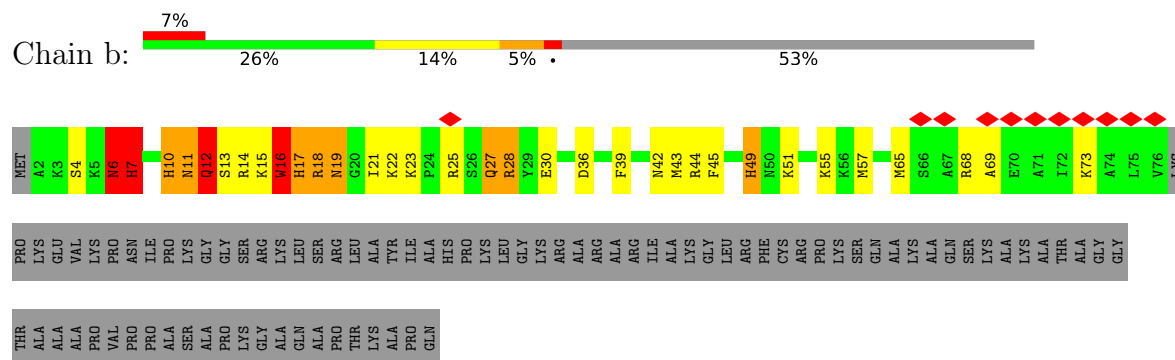
- Molecule 29: Ribosomal protein eL27



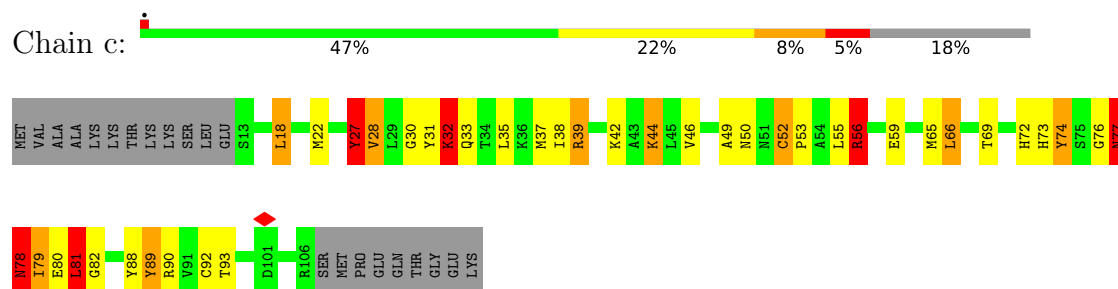
- Molecule 30: Ribosomal protein uL15



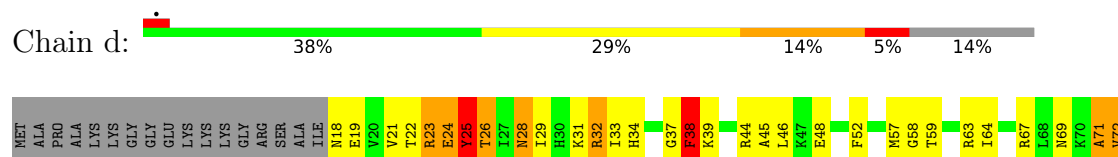
- Molecule 31: Ribosomal protein eL29

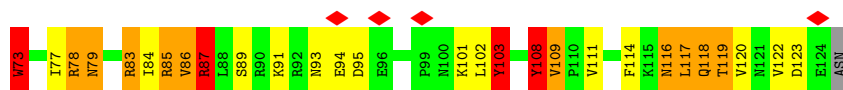


- Molecule 32: Ribosomal protein eL30



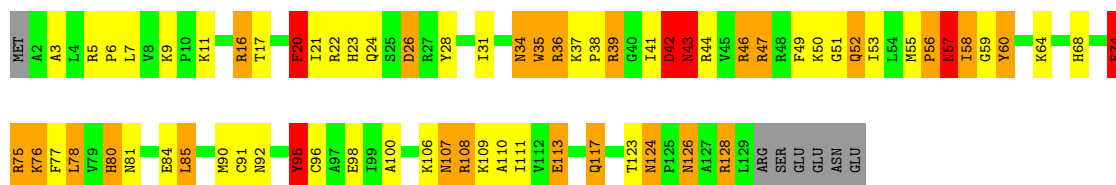
- Molecule 33: Ribosomal protein eL31





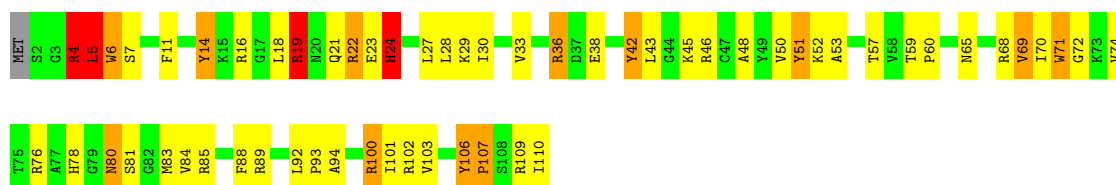
• Molecule 34: Ribosomal protein eL32

Chain e: 44% 29% 18% 5%



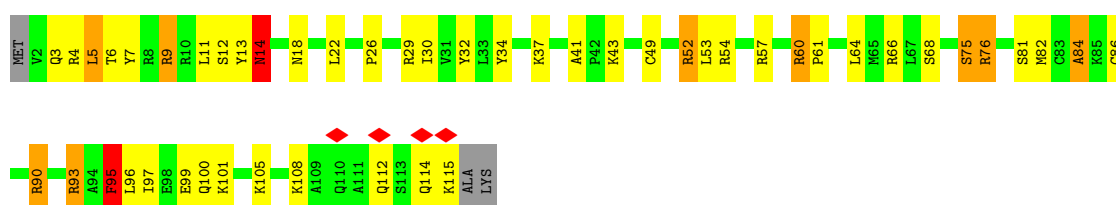
• Molecule 35: Ribosomal protein eL33

Chain f: 45% 39% 11%



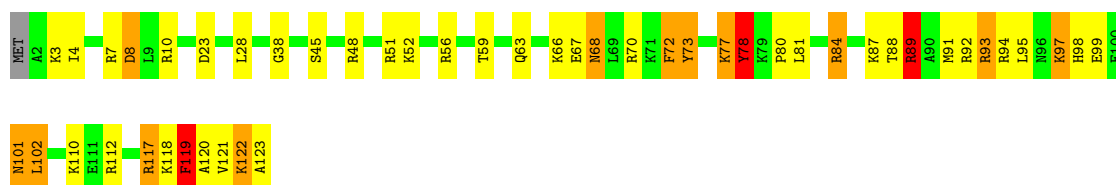
• Molecule 36: Ribosomal protein eL34

Chain g: 56% 32% 8%



• Molecule 37: Ribosomal protein uL29

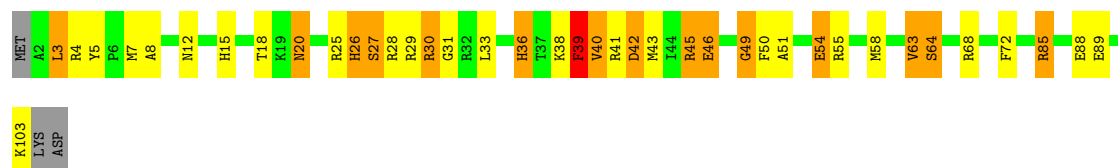
Chain h: 60% 27% 10%



• Molecule 38: Ribosomal protein eL36

Chain i: 59% 23% 14%





- Molecule 39: Ribosomal protein eL37



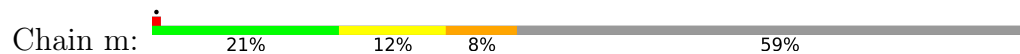
- Molecule 40: Ribosomal protein eL38



- Molecule 41: Ribosomal protein eL39



- Molecule 42: Ribosomal protein eL40



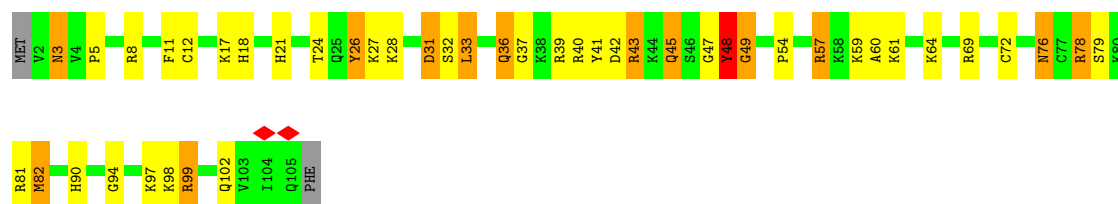
- Molecule 43: Ribosomal protein eL41



- Molecule 44: Ribosomal protein eL42



Chain o: 



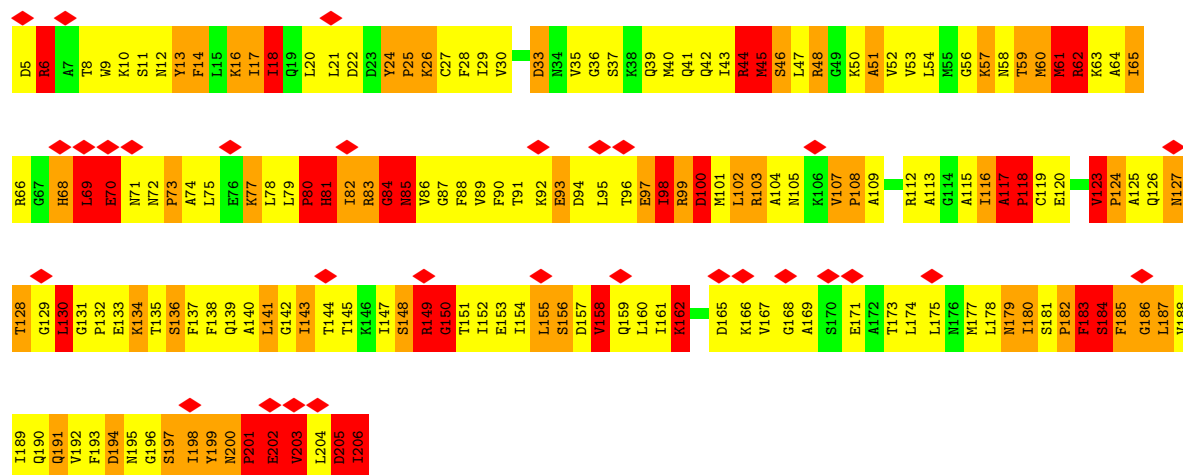
- Molecule 45: Ribosomal protein eL43

Chain p: 



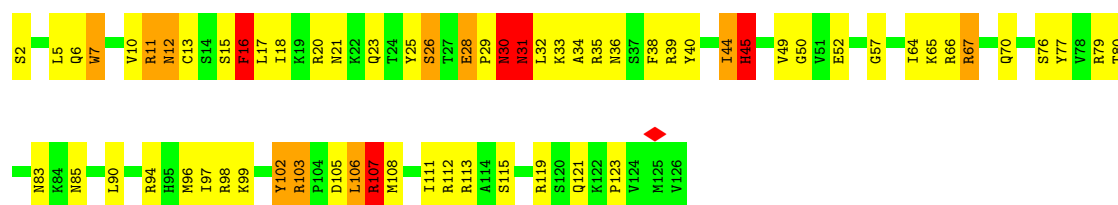
- Molecule 46: Ribosomal protein uL10

Chain q: 

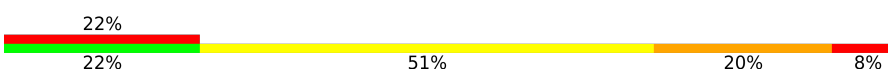


- Molecule 47: Ribosomal protein eL28

Chain r: 

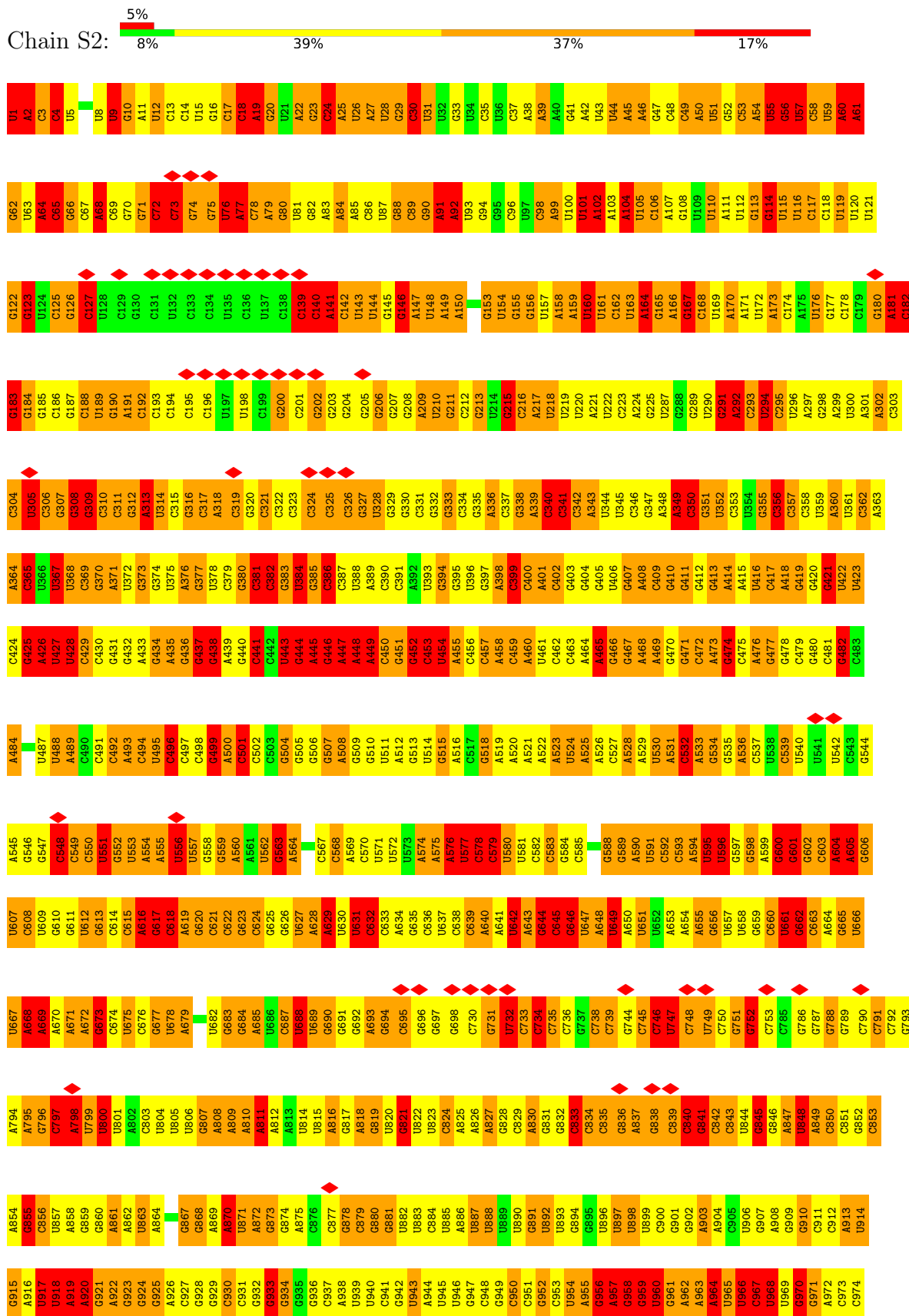


- Molecule 48: Eukaryotic elongation factor 2

Chain 4: 



● Molecule 49: 18S ribosomal RNA

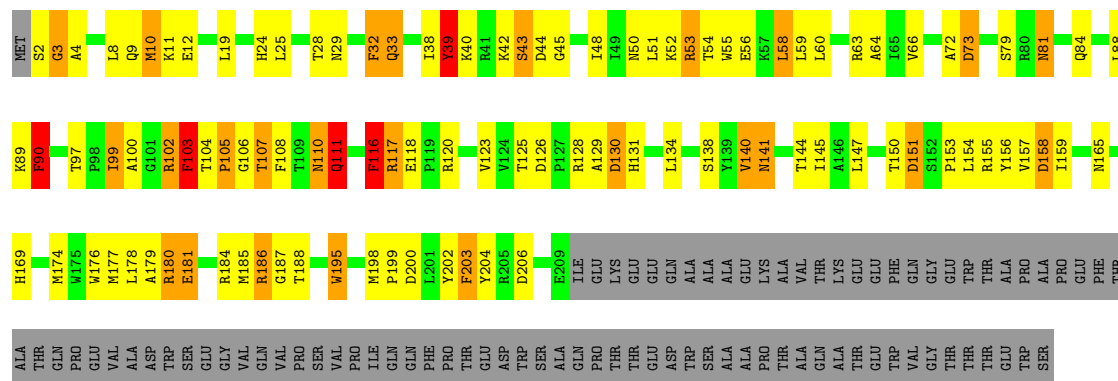


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G1769	G1709	U1585	C1464	U1404	U1340	C1279	C1219	G1158	U1038	G976
G1770	C1710	A1686	A1465	A1405	C1341	G1280	G1220	G1159	G1039	G977
G1771	C1711	G1466	G1406	G1406	U1342	G1281	A1221	U1160	G1040	G978
G1772	A1712	A1588	C1467	U1407	U1343	A1282	G1222	U1161	G1041	C979
C1773	C1713	A1589	C1468	U1408	A1344	C1283	A1223	U1162	A1042	A980
U1714	U1714	C1590	U1409	A1409	G1345	C1284	G1224	C1163	G1043	A981
A1651	A1715	A1531	C1471	C1410	U1346	G1285	U1225	G1164	G1044	G982
C1716	C1716	C1532	C1472	C1411	U1347	G1286	G1226	G1165	U1045	A983
U1775	G1717	A1533	A1473	C1412	G1348	A1287	G1227	G1166	U1046	A984
G1776	G1718	A1534	A1474	C1413	G1349	U1288	A1228	G1167	C1047	G985
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G1779	U1721	A1537	U1477	C1416	G1352	A1291	C1231	A1170	A1050	C988
G1780	G1722	U1538	U1478	C1417	A1353	C1292	U1232	G1171	G1051	C989
A1781	G1723	C1539	U1479	C1418	G1354	A1293	G1233	U1172	A1052	A990
G1782	A1724	G1540	A1480	C1419	C1355	G1294	C1234	A1173	C1053	G991
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G1665	U1728	C1544	A1485	G1424	C1363	U1299	U1239	U1178	A1058	A997
G1666	U1729	A1545	A1486	G1425	U1364	U1300	A1240	G1179	G1059	A998
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U1681	A1620	U1560	C1501	A1440	C1379	U1315	G1256	U1075	U1015	U1015
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A1693	U1630	G1570	U1511	U1450	U1392	U1325	C1266	G1085	U1025	U1025
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A1695	A1633	C1572	G1513	A1452	G1327	G1327	A1268	U1087	A1027	A1027
C1696	A1834	G1573	G1514	C1453	U1393	G1330	C1269	U1088	A1028	A1028
G1697	C1635	C1574	G1515	A1454	G1394	C1331	G1270	G1089	G1029	G1029
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C1701	G1639	U1578	U1519	U1458	G1398	G1334	G1274	U1152	A1033	G1033
A1823	C1702	A1579	G1520	G1459	C1399	G1335	A1275	A1094	A1034	A1034
A1824	G1762	U1580	C1521	G1460	U1400	C1336	G1276	U1095	A1035	A1035
A1825	G1763	A1581	A1522	G1461	A1401	C1337	A1277	U1154	G1096	G1096
G1826	G1764	C1582	C1523	U1462	A1402	G1338	C1277	U1155	U1155	A1036
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U1829	C1767	G1585	C1526	U1465	U1464	C1341	G1280	U1158	U1158	A1039
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C1832	U1807	C1574	G1515	A1454	G1394	C1331	G1270	G1089	G1029	G1029
U1833	C1807	G1575	G1516	A1455	C1395	C1332	A1271	A1148	A1030	A1030
G1834	U1808	G1576	G1517	A1456	A1396	A1332	G1272	A1149	A1031	A1031
A1835	G1748	G1577	U1518	G1457	U1397	U1333	C1273	G1151	G1032	C1032
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C1										



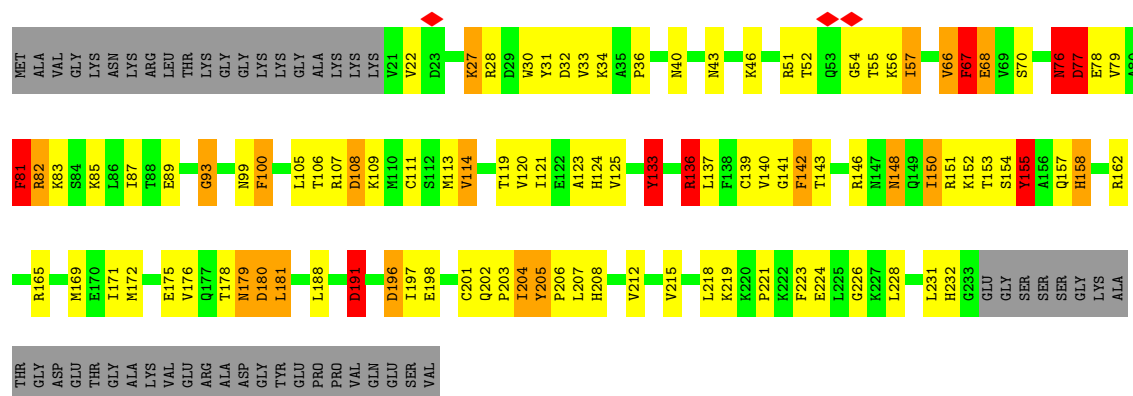
• Molecule 50: Ribosomal protein uS2

Chain SA: 35% 25% 8% • 29%



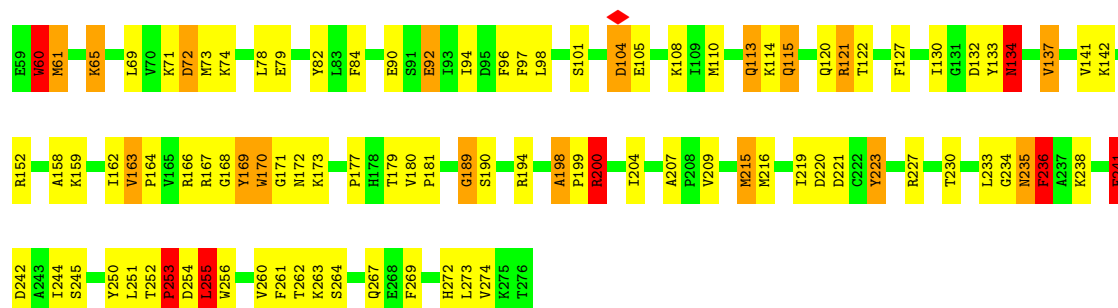
• Molecule 51: Ribosomal protein eS1

Chain SB: 42% 28% 7% • 19%

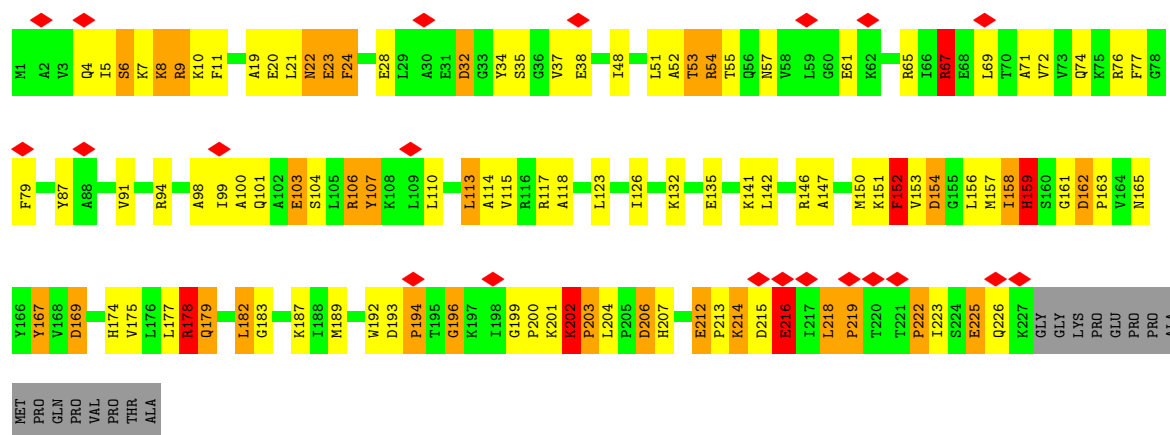


• Molecule 52: Ribosomal protein uS5

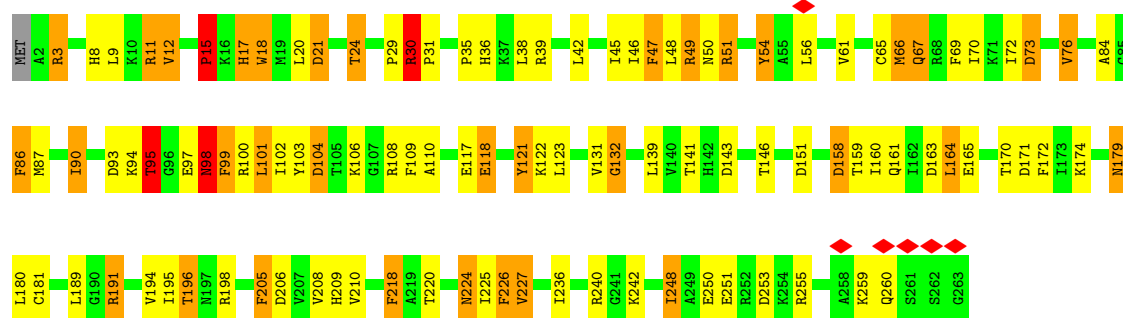
Chain SC: 55% 34% 8% •



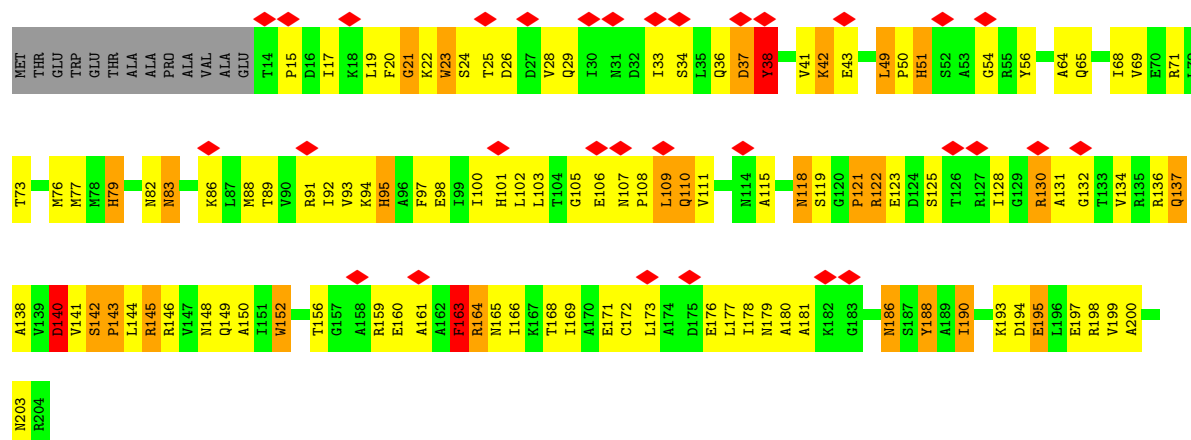
Chain SD:



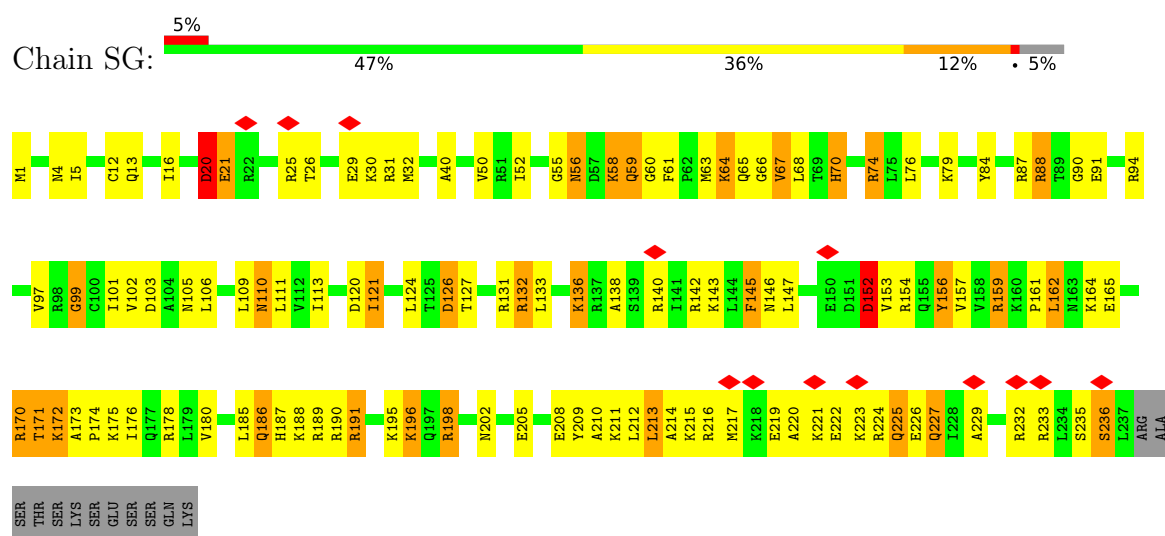
Chain SE:



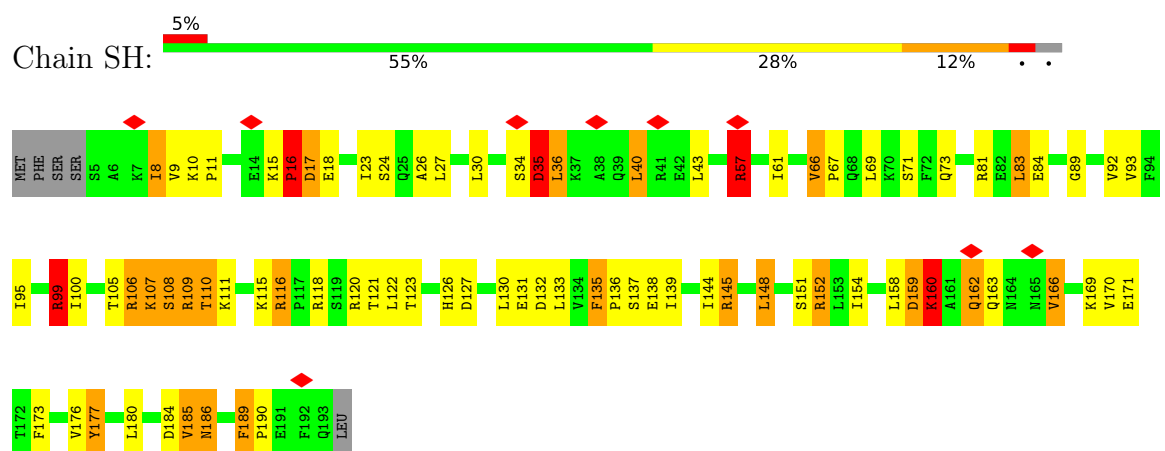
Chain SF:



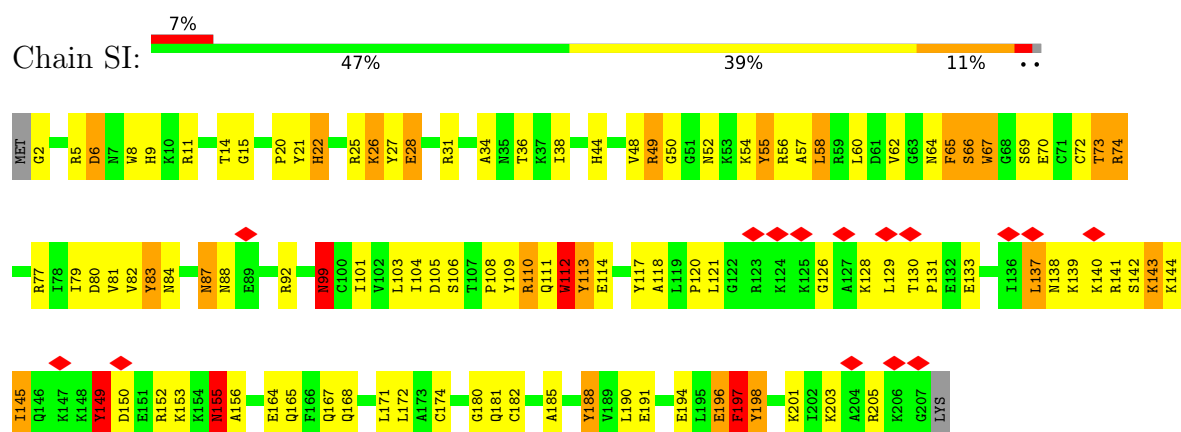
WORLDWIDE
PDB
PROTEIN DATA BANK



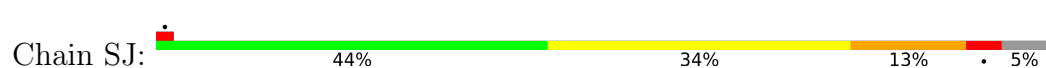
• Molecule 57: Ribosomal protein eS7

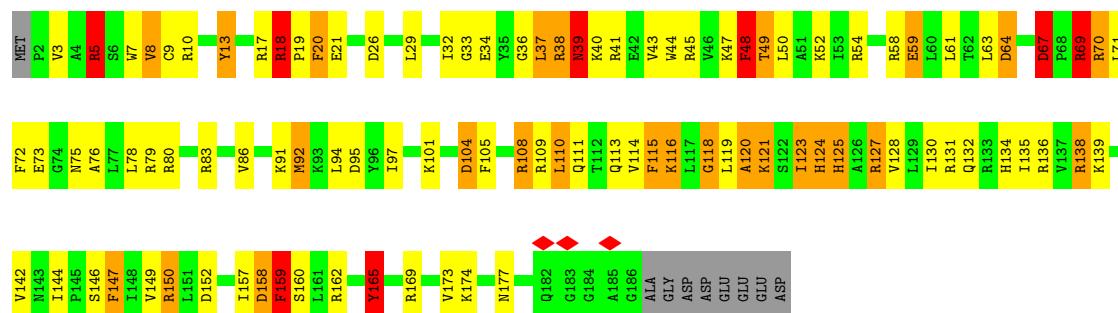


• Molecule 58: Ribosomal protein eS8

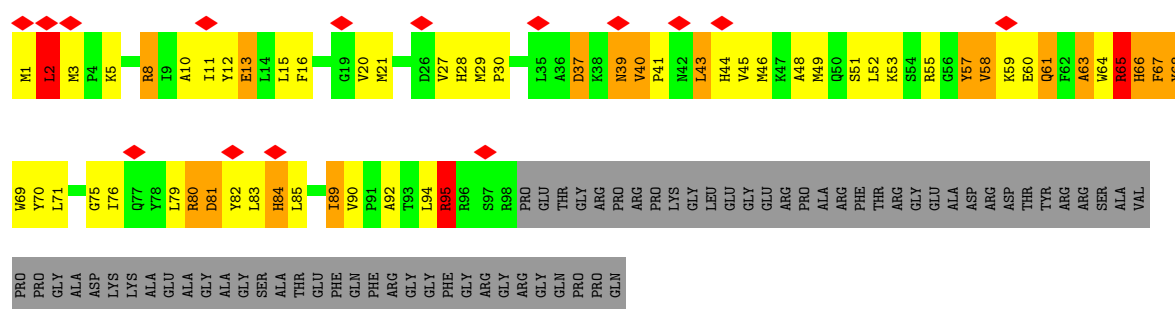
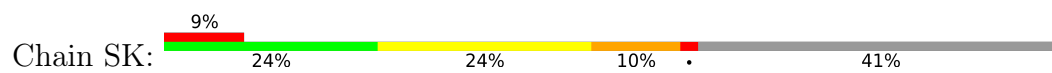


• Molecule 59: Ribosomal protein uS4

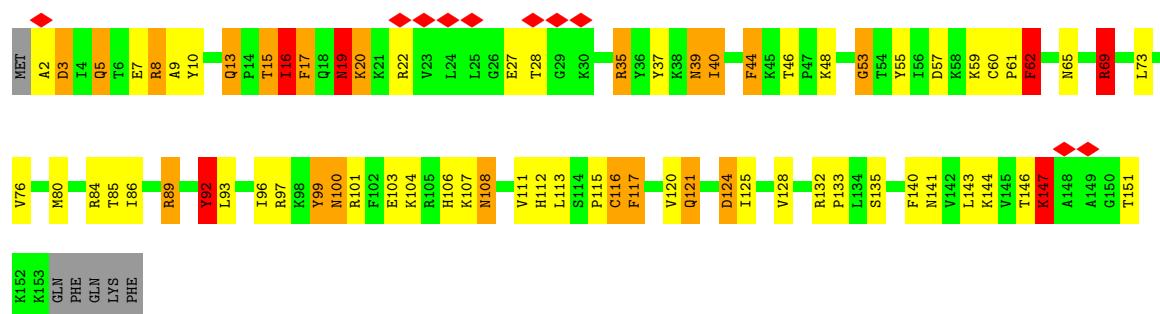




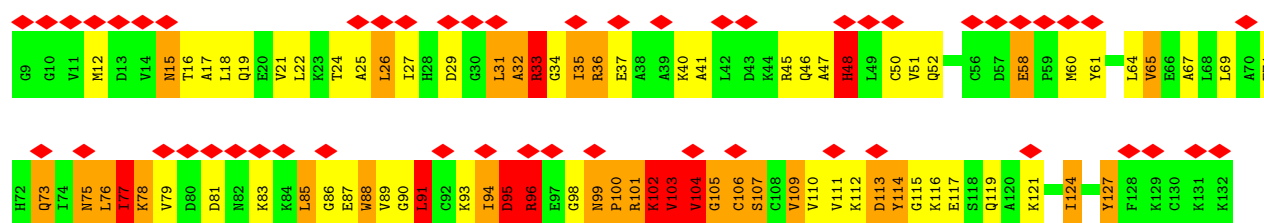
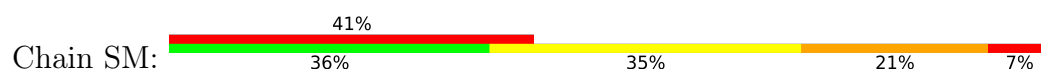
• Molecule 60: Ribosomal protein eS10



• Molecule 61: Ribosomal protein uS17

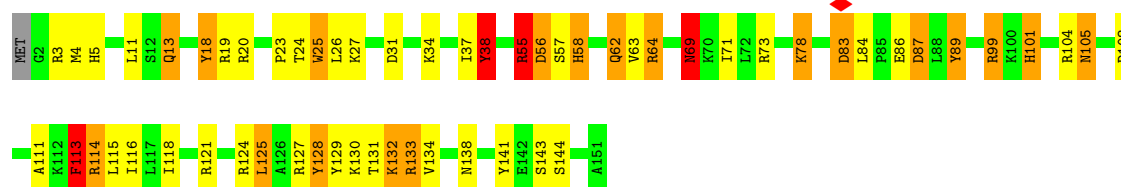


• Molecule 62: Ribosomal protein eS12



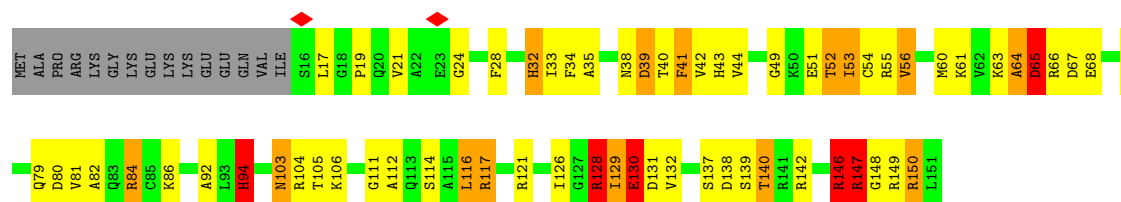
• Molecule 63: Ribosomal protein uS15

Chain SN: 

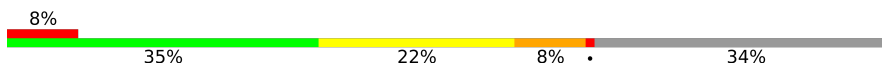


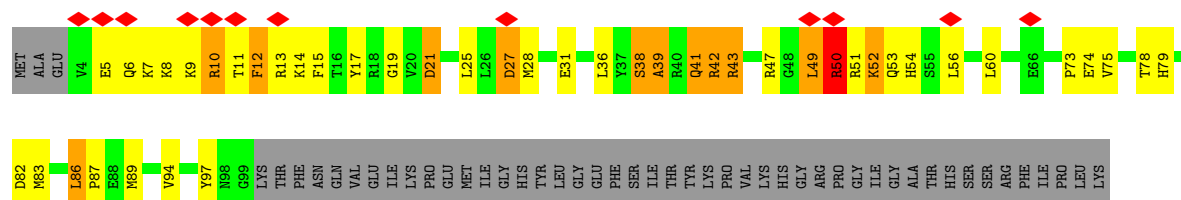
• Molecule 64: Ribosomal protein uS11

Chain SO: 



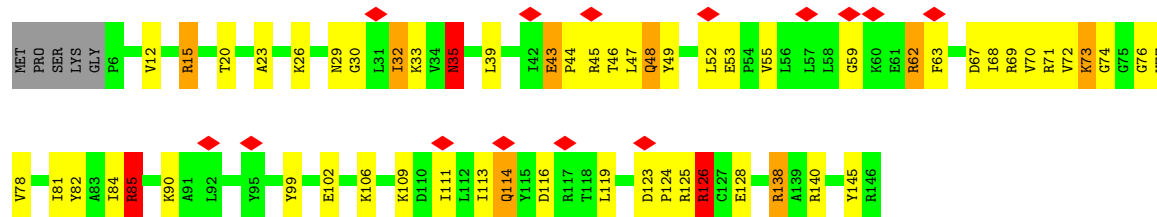
• Molecule 65: Ribosomal protein uS19

Chain SP: 

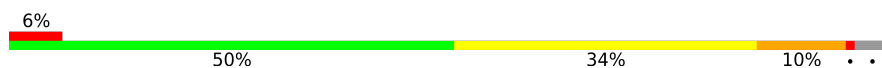


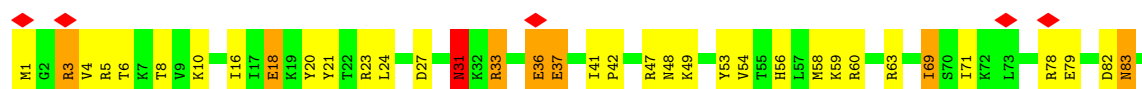
• Molecule 66: Ribosomal protein uS9

Chain SQ: 



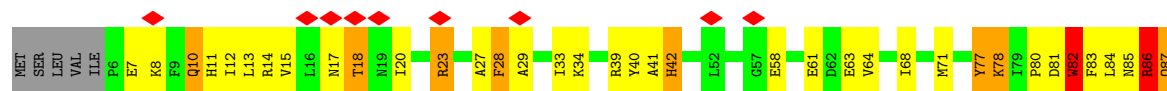
• Molecule 67: Ribosomal protein eS17

Chain SR: 





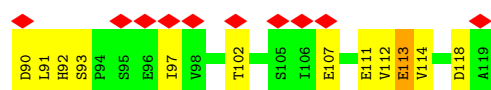
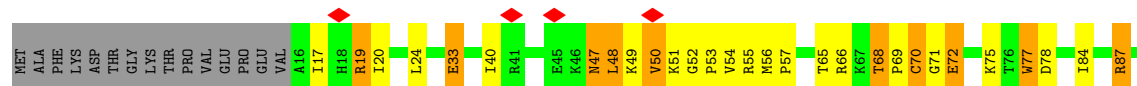
• Molecule 68: Ribosomal protein uS13



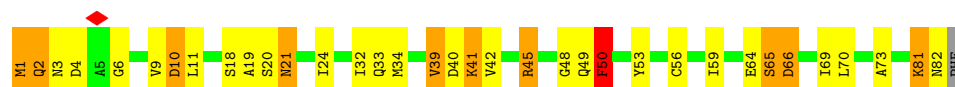
• Molecule 69: Ribosomal protein eS19



• Molecule 70: Ribosomal protein uS10

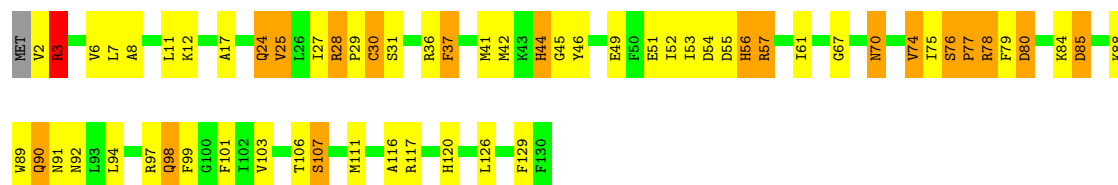


• Molecule 71: Ribosomal protein eS21

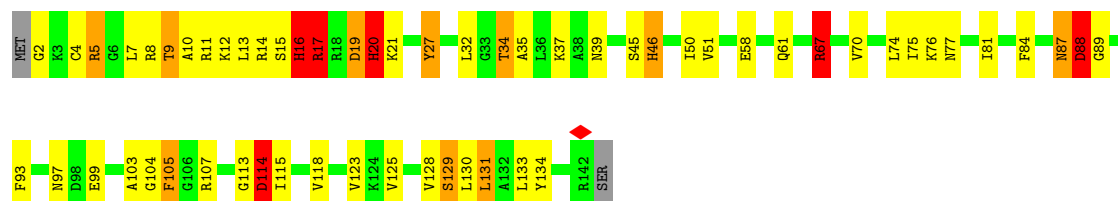


• Molecule 72: Ribosomal protein uS8

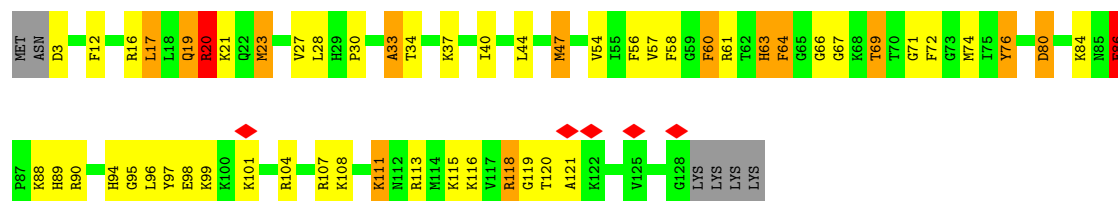




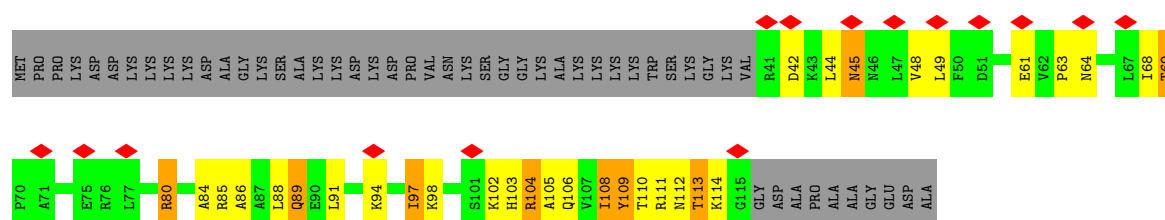
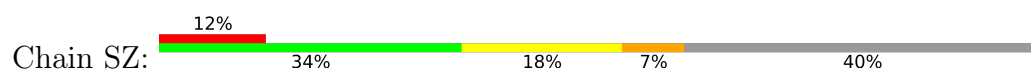
- Molecule 73: Ribosomal protein uS12



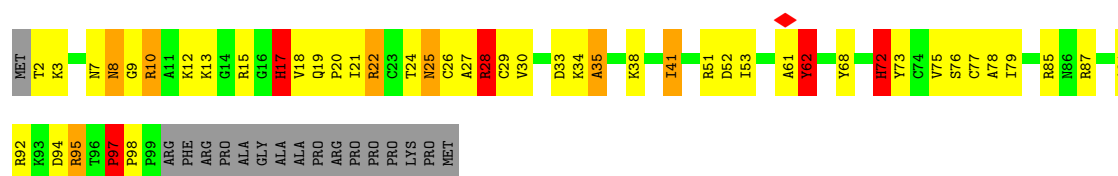
- Molecule 74: Ribosomal protein eS24



- Molecule 75: Ribosomal protein es25

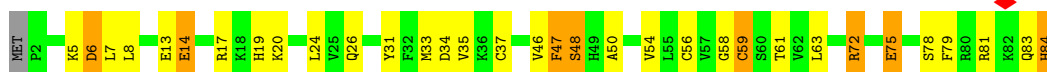


- Molecule 76: Ribosomal protein eS26



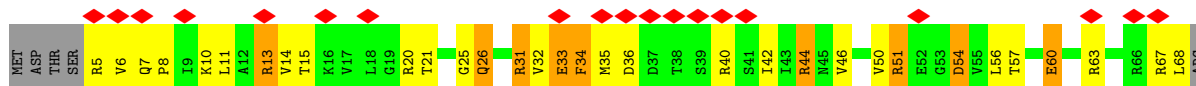
- Molecule 77: Ribosomal protein eS27

Chain Sb: 



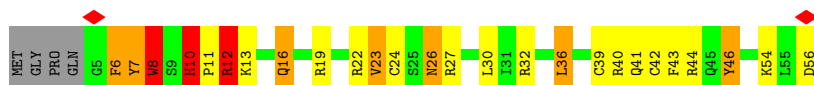
- Molecule 78: Ribosomal protein eS28

Chain Sc: 



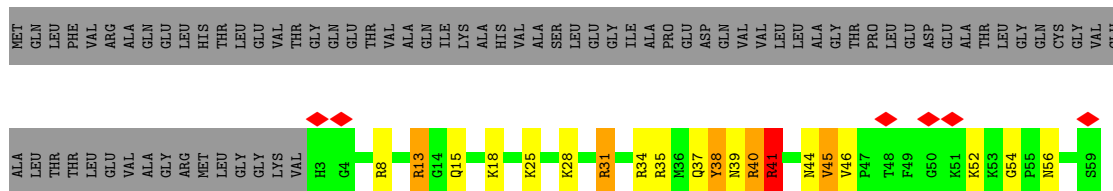
- Molecule 79: Ribosomal protein uS14

Chain Sd: 



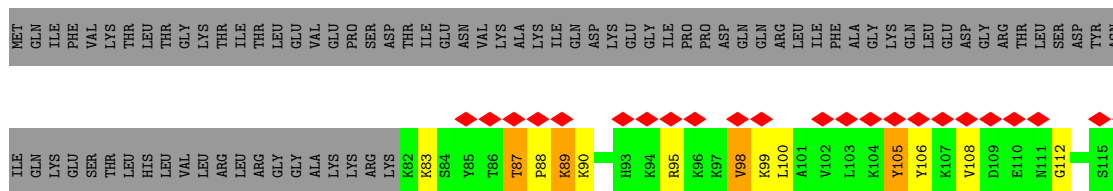
- Molecule 80: Ribosomal protein eS30

Chain Se: 



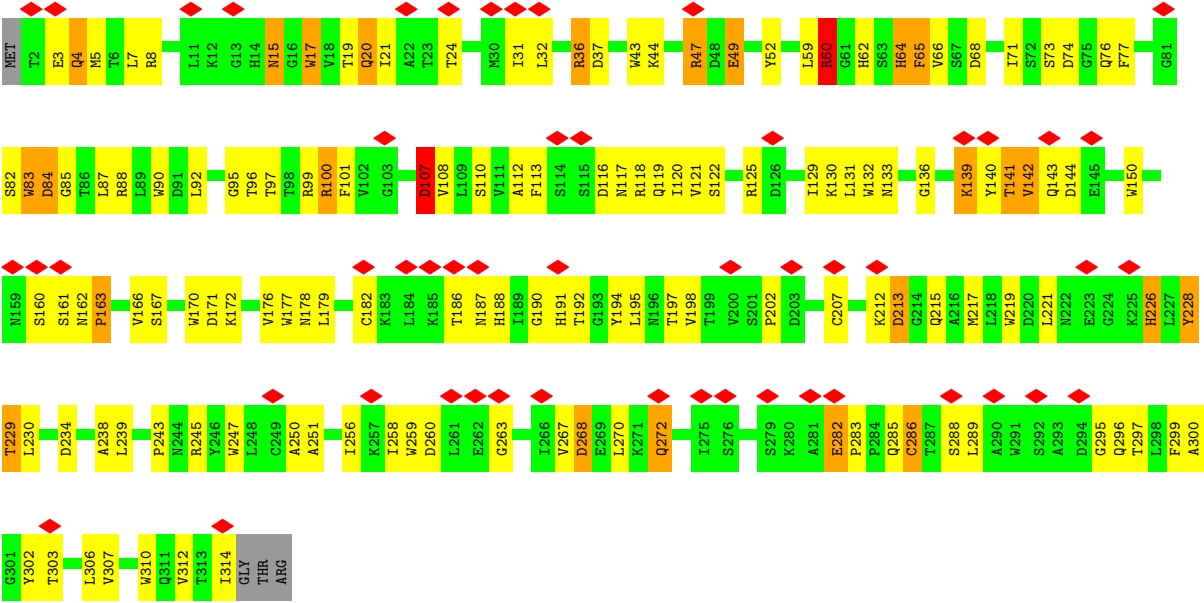
- Molecule 81: Ribosomal protein eS31

Chain Sf: 



- Molecule 82: Ribosomal protein RACK1

Chain Sg: 



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	36667	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	0.913	Depositor
Minimum map value	-0.580	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.025	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: ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	5	0.59	24/87792 (0.0%)	1.26	1272/136945 (0.9%)
2	7	0.51	1/2858 (0.0%)	1.11	16/4455 (0.4%)
3	8	0.62	0/3701	1.30	64/5766 (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	33/4308 (0.8%)
6	C	0.95	4/2973 (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	0.76	1/1382 (0.1%)	1.10	8/1849 (0.4%)
14	K	1.51	29/1154 (2.5%)	2.26	72/1555 (4.6%)
15	L	0.93	3/1734 (0.2%)	1.26	15/2318 (0.6%)
16	M	0.92	2/1152 (0.2%)	1.27	12/1539 (0.8%)
17	N	1.02	5/1746 (0.3%)	1.49	30/2338 (1.3%)
18	O	0.93	2/1684 (0.1%)	1.30	14/2251 (0.6%)
19	P	0.97	1/1268 (0.1%)	1.21	8/1701 (0.5%)
20	Q	0.89	1/1530 (0.1%)	1.41	23/2041 (1.1%)
21	R	0.97	7/1524 (0.5%)	1.42	22/2013 (1.1%)
22	S	1.20	8/1493 (0.5%)	1.45	28/2002 (1.4%)
23	T	0.88	1/1326 (0.1%)	1.21	12/1770 (0.7%)
24	U	0.83	3/822 (0.4%)	1.12	4/1103 (0.4%)
25	V	1.08	5/993 (0.5%)	1.26	6/1332 (0.5%)
26	W	0.91	1/541 (0.2%)	1.28	0/720
27	X	0.85	3/993 (0.3%)	1.26	7/1334 (0.5%)
28	Y	0.94	3/1132 (0.3%)	1.32	15/1504 (1.0%)
29	Z	0.84	0/1130	1.21	6/1507 (0.4%)
30	a	1.20	7/1192 (0.6%)	1.57	20/1591 (1.3%)
31	b	0.99	3/620 (0.5%)	1.45	11/819 (1.3%)
32	c	0.94	3/742 (0.4%)	1.31	9/996 (0.9%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	d	1.08	6/903 (0.7%)	1.46	14/1216 (1.2%)
34	e	1.05	5/1071 (0.5%)	1.39	20/1429 (1.4%)
35	f	1.15	4/895 (0.4%)	1.38	16/1198 (1.3%)
36	g	0.87	0/916	1.22	8/1220 (0.7%)
37	h	0.82	1/1023 (0.1%)	1.26	9/1350 (0.7%)
38	i	0.85	2/843 (0.2%)	1.29	8/1115 (0.7%)
39	j	1.13	4/721 (0.6%)	1.57	16/953 (1.7%)
40	k	0.74	1/575 (0.2%)	1.15	3/761 (0.4%)
41	l	0.85	0/454	1.25	6/599 (1.0%)
42	m	0.75	0/435	1.10	1/575 (0.2%)
43	n	0.63	0/223	1.10	0/284
44	o	0.83	1/864 (0.1%)	1.34	8/1140 (0.7%)
45	p	0.80	0/718	1.22	7/953 (0.7%)
46	q	1.17	25/1580 (1.6%)	1.77	55/2133 (2.6%)
47	r	0.89	1/1017 (0.1%)	1.32	13/1365 (1.0%)
48	4	1.48	53/6804 (0.8%)	2.15	243/9189 (2.6%)
49	S2	0.60	17/41243 (0.0%)	1.28	612/64257 (1.0%)
50	SA	1.06	7/1679 (0.4%)	1.25	14/2283 (0.6%)
51	SB	1.04	7/1753 (0.4%)	1.33	15/2350 (0.6%)
52	SC	1.20	9/1726 (0.5%)	1.30	14/2332 (0.6%)
53	SD	1.20	7/1793 (0.4%)	1.22	13/2414 (0.5%)
54	SE	0.92	8/2118 (0.4%)	1.13	9/2849 (0.3%)
55	SF	0.96	2/1531 (0.1%)	1.26	10/2059 (0.5%)
56	SG	0.96	8/1946 (0.4%)	1.09	5/2590 (0.2%)
57	SH	0.91	2/1544 (0.1%)	1.18	9/2068 (0.4%)
58	SI	1.06	7/1715 (0.4%)	1.23	11/2287 (0.5%)
59	SJ	1.15	11/1550 (0.7%)	1.33	13/2069 (0.6%)
60	SK	0.93	1/851 (0.1%)	1.14	4/1147 (0.3%)
61	SL	1.03	5/1259 (0.4%)	1.32	19/1684 (1.1%)
62	SM	1.69	5/970 (0.5%)	1.38	9/1300 (0.7%)
63	SN	1.05	6/1232 (0.5%)	1.33	9/1656 (0.5%)
64	SO	1.19	5/1029 (0.5%)	1.32	7/1380 (0.5%)
65	SP	1.74	7/816 (0.9%)	1.22	5/1084 (0.5%)
66	SQ	0.87	3/1142 (0.3%)	1.11	3/1528 (0.2%)
67	SR	0.91	5/1060 (0.5%)	1.23	4/1421 (0.3%)
68	SS	0.91	1/1157 (0.1%)	1.29	12/1548 (0.8%)
69	ST	0.83	1/1119 (0.1%)	1.27	6/1499 (0.4%)
70	SU	0.94	3/828 (0.4%)	1.10	4/1112 (0.4%)
71	SV	0.91	0/631	1.10	2/844 (0.2%)
72	SW	1.32	4/1051 (0.4%)	1.28	7/1406 (0.5%)
73	SX	1.22	6/1118 (0.5%)	1.22	10/1493 (0.7%)
74	SY	1.25	5/1040 (0.5%)	1.22	10/1382 (0.7%)
75	SZ	0.85	0/604	1.11	4/810 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
76	Sa	1.06	2/794 (0.3%)	1.29	5/1065 (0.5%)
77	Sb	0.79	0/665	0.99	0/891
78	Sc	0.86	0/508	1.12	2/680 (0.3%)
79	Sd	1.01	3/445 (0.7%)	1.17	1/589 (0.2%)
80	Se	0.86	0/458	1.17	4/602 (0.7%)
81	Sf	1.44	9/593 (1.5%)	1.72	15/786 (1.9%)
82	Sg	0.93	11/2493 (0.4%)	1.02	10/3394 (0.3%)
All	All	0.83	432/237633 (0.2%)	1.31	3194/348088 (0.9%)

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	0	154
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	4
13	J	0	2
14	K	0	5
15	L	0	5
16	M	0	4
17	N	0	11
18	O	0	3
19	P	0	1
20	Q	0	5
21	R	0	6
22	S	0	11
23	T	0	2
24	U	0	2
25	V	0	3
26	W	0	1
27	X	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
28	Y	0	4
30	a	0	9
31	b	0	1
32	c	0	2
33	d	0	4
34	e	0	4
35	f	0	2
36	g	0	1
37	h	0	3
38	i	0	3
39	j	0	4
40	k	0	1
44	o	0	6
45	p	0	1
46	q	0	7
47	r	0	5
48	4	0	40
49	S2	1	66
50	SA	0	2
51	SB	0	4
52	SC	0	4
53	SD	0	3
54	SE	0	2
55	SF	0	1
57	SH	0	1
58	SI	0	6
59	SJ	0	2
60	SK	0	1
61	SL	0	4
62	SM	0	3
63	SN	0	1
64	SO	0	1
65	SP	0	1
66	SQ	0	1
67	SR	0	2
70	SU	0	1
71	SV	0	2
72	SW	0	2
73	SX	0	2
74	SY	0	1
75	SZ	0	1
76	Sa	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
77	Sb	0	1
79	Sd	0	2
81	Sf	0	4
All	All	1	507

All (432) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	4	267	ASP	CA-C	37.55	1.88	1.52
62	SM	58	GLU	CD-OE1	37.46	1.96	1.25
65	SP	21	ASP	CG-OD1	37.40	1.96	1.25
48	4	267	ASP	N-CA	35.69	1.77	1.46
1	5	1823	G	O3'-P	33.24	2.11	1.61
53	SD	216	GLU	CD-OE1	25.44	1.73	1.25
74	SY	86	GLU	CD-OE2	23.08	1.69	1.25
48	4	269	ALA	C-N	20.68	1.60	1.33
72	SW	117	ARG	NE-CZ	19.50	1.54	1.33
22	S	81	TRP	CA-CB	14.99	1.71	1.53
30	a	109	TYR	CA-CB	14.24	1.72	1.53
57	SH	132	ASP	CG-OD2	14.23	1.52	1.25
8	E	278	TYR	CA-CB	13.98	1.72	1.53
58	SI	111	GLN	CD-NE2	13.66	1.61	1.33
74	SY	86	GLU	CG-CD	13.52	1.85	1.52
48	4	267	ASP	C-N	13.51	1.50	1.34
48	4	76	SER	C-N	12.75	1.51	1.33
25	V	97	TYR	CA-CB	12.46	1.73	1.53
56	SG	205	GLU	CD-OE1	12.44	1.49	1.25
48	4	768	GLY	C-N	12.40	1.49	1.33
14	K	130	LYS	CA-C	-12.24	1.35	1.52
73	SX	39	ASN	CG-ND2	12.00	1.58	1.33
73	SX	88	ASP	CG-OD2	11.62	1.47	1.25
14	K	163	PRO	C-O	-11.59	1.00	1.23
64	SO	104	ARG	CZ-NH1	11.54	1.48	1.32
53	SD	162	ASP	CG-OD1	11.47	1.47	1.25
52	SC	220	ASP	CG-OD2	11.37	1.47	1.25
14	K	114	ARG	CD-NE	11.24	1.61	1.46
58	SI	99	ASN	CG-OD1	11.15	1.44	1.23
48	4	669	VAL	CA-CB	11.08	1.68	1.53
14	K	130	LYS	CA-CB	11.07	1.72	1.53
48	4	266	PHE	C-N	11.06	1.46	1.33
48	4	154	VAL	C-N	11.03	1.49	1.33
14	K	114	ARG	CA-C	-10.80	1.38	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	B	119	TYR	CA-CB	10.79	1.66	1.52
59	SJ	64	ASP	CG-OD2	10.67	1.45	1.25
50	SA	151	ASP	CB-CG	10.60	1.78	1.52
14	K	137	GLN	CA-C	10.53	1.68	1.53
46	q	205	ASP	C-N	10.51	1.48	1.33
10	G	54	PHE	CA-CB	10.43	1.68	1.53
14	K	137	GLN	N-CA	10.32	1.60	1.45
64	SO	130	GLU	CD-OE1	10.23	1.44	1.25
74	SY	118	ARG	CZ-NH1	10.08	1.46	1.32
59	SJ	158	ASP	CG-OD2	9.99	1.44	1.25
33	d	25	TYR	CA-CB	9.87	1.66	1.52
35	f	6	TRP	CA-CB	9.85	1.70	1.53
82	Sg	60	ARG	CZ-NH1	9.79	1.46	1.32
22	S	10	TYR	CA-CB	9.64	1.67	1.52
72	SW	120	HIS	CE1-NE2	9.57	1.42	1.32
10	G	109	GLU	CD-OE2	9.52	1.43	1.25
59	SJ	59	GLU	CG-CD	9.40	1.75	1.52
12	I	171	TRP	CA-CB	9.37	1.64	1.52
81	Sf	151	ASN	CA-C	9.37	1.67	1.53
48	4	669	VAL	CA-C	9.34	1.62	1.53
11	H	66	GLU	CD-OE1	9.31	1.43	1.25
14	K	114	ARG	C-N	-9.29	1.20	1.33
48	4	109	VAL	CA-CB	-9.25	1.41	1.54
19	P	139	TYR	CA-CB	9.23	1.66	1.52
35	f	6	TRP	CB-CG	-9.11	1.22	1.50
48	4	699	GLY	C-N	-9.11	1.22	1.33
48	4	111	PHE	CA-CB	9.09	1.67	1.53
53	SD	162	ASP	CG-OD2	9.09	1.42	1.25
59	SJ	104	ASP	CG-OD2	9.04	1.42	1.25
5	B	274	TYR	CA-CB	8.98	1.68	1.53
48	4	72	SER	CA-C	-8.90	1.42	1.52
54	SE	104	ASP	CG-OD2	8.83	1.42	1.25
46	q	68	HIS	C-N	8.75	1.46	1.33
33	d	87	ARG	CA-CB	8.73	1.64	1.52
59	SJ	158	ASP	CG-OD1	8.67	1.41	1.25
52	SC	121	ARG	CZ-NH1	8.65	1.44	1.32
82	Sg	107	ASP	CB-CG	8.63	1.73	1.52
5	B	118	PHE	CA-C	8.56	1.59	1.52
52	SC	236	PHE	CA-CB	8.56	1.66	1.53
55	SF	130	ARG	CZ-NH1	8.53	1.44	1.32
56	SG	20	ASP	CG-OD2	8.53	1.41	1.25
14	K	24	ALA	C-N	-8.52	1.23	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	SE	251	GLU	CD-OE1	8.51	1.41	1.25
49	S2	1433	C	O3'-P	8.48	1.73	1.61
51	SB	232	HIS	CE1-NE2	8.47	1.41	1.32
48	4	829	SER	CA-C	-8.47	1.42	1.52
65	SP	27	ASP	CG-OD1	8.46	1.41	1.25
59	SJ	48	PHE	CA-CB	8.38	1.66	1.53
81	Sf	149	CYS	N-CA	8.38	1.56	1.46
46	q	24	TYR	C-N	8.26	1.41	1.33
74	SY	80	ASP	CB-CG	8.23	1.72	1.52
50	SA	33	GLN	CD-NE2	8.21	1.50	1.33
50	SA	118	GLU	CG-CD	8.21	1.72	1.52
61	SL	100	ASN	CB-CG	8.21	1.72	1.52
14	K	27	ALA	CA-C	8.19	1.62	1.52
14	K	111	ASN	C-N	-8.17	1.23	1.33
7	D	44	TYR	CA-CB	8.16	1.67	1.53
21	R	132	PHE	CA-CB	8.16	1.65	1.53
73	SX	88	ASP	CG-OD1	8.14	1.40	1.25
14	K	110	VAL	C-N	8.14	1.44	1.33
70	SU	90	ASP	CB-CG	8.14	1.72	1.52
54	SE	104	ASP	CG-OD1	8.10	1.40	1.25
25	V	97	TYR	CB-CG	-8.09	1.33	1.51
46	q	45	MET	N-CA	-8.09	1.36	1.46
48	4	154	VAL	CA-C	8.04	1.62	1.52
52	SC	220	ASP	CG-OD1	8.01	1.40	1.25
56	SG	205	GLU	CD-OE2	7.94	1.40	1.25
54	SE	18	TRP	CA-CB	7.92	1.64	1.53
81	Sf	148	TYR	CA-C	7.91	1.63	1.52
37	h	78	TYR	CA-CB	7.90	1.63	1.52
59	SJ	34	GLU	CG-CD	7.86	1.71	1.52
31	b	16	TRP	CB-CG	-7.85	1.25	1.50
48	4	196	GLU	CA-C	-7.85	1.42	1.52
46	q	62	ARG	N-CA	-7.81	1.35	1.45
48	4	848	ILE	CA-C	-7.77	1.44	1.52
22	S	29	ARG	CA-CB	7.77	1.64	1.53
61	SL	13	GLN	CD-NE2	7.76	1.49	1.33
15	L	17	ASP	CG-OD2	7.75	1.40	1.25
48	4	122	THR	CA-C	7.75	1.63	1.52
82	Sg	187	ASN	CG-OD1	7.74	1.38	1.23
48	4	821	PRO	CA-C	7.73	1.60	1.52
73	SX	39	ASN	CG-OD1	7.66	1.38	1.23
65	SP	21	ASP	CB-CG	7.65	1.71	1.52
30	a	60	HIS	CA-C	-7.64	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	4	620	GLY	C-N	7.63	1.44	1.33
49	S2	619	A	O3'-P	-7.62	1.49	1.61
28	Y	81	TYR	CA-CB	7.62	1.64	1.53
64	SO	130	GLU	CD-OE2	7.60	1.39	1.25
11	H	156	ASN	CA-C	7.59	1.62	1.52
7	D	21	ARG	N-CA	7.58	1.55	1.46
31	b	16	TRP	CA-CB	7.56	1.66	1.53
65	SP	31	GLU	CD-OE2	7.56	1.39	1.25
18	O	106	ASP	CG-OD2	7.52	1.39	1.25
66	SQ	85	ARG	CZ-NH1	7.48	1.43	1.32
59	SJ	38	ARG	CZ-NH1	7.43	1.43	1.32
14	K	111	ASN	CA-CB	7.39	1.65	1.53
4	A	211	PHE	CA-CB	7.39	1.65	1.53
25	V	97	TYR	N-CA	7.38	1.55	1.46
65	SP	31	GLU	CD-OE1	7.38	1.39	1.25
16	M	6	PHE	CA-CB	7.31	1.66	1.53
4	A	40	TYR	CA-CB	7.30	1.65	1.53
46	q	44	ARG	C-N	7.29	1.43	1.33
82	Sg	4	GLN	CD-OE1	7.29	1.37	1.23
14	K	130	LYS	C-N	-7.29	1.23	1.33
54	SE	121	TYR	CA-C	7.27	1.61	1.52
63	SN	13	GLN	CD-NE2	7.25	1.48	1.33
50	SA	118	GLU	CD-OE2	7.24	1.39	1.25
4	A	209	HIS	CA-CB	7.20	1.65	1.52
70	SU	33	GLU	CD-OE1	7.18	1.39	1.25
10	G	54	PHE	N-CA	7.17	1.54	1.46
20	Q	34	PHE	CA-CB	7.13	1.64	1.53
52	SC	241	PHE	CA-CB	7.10	1.64	1.53
64	SO	104	ARG	NE-CZ	7.10	1.40	1.33
58	SI	99	ASN	CG-ND2	7.05	1.48	1.33
49	S2	1291	A	O3'-P	7.04	1.71	1.61
10	G	54	PHE	CB-CG	-7.03	1.34	1.50
7	D	95	TYR	CA-CB	7.01	1.64	1.53
21	R	95	TRP	CB-CG	-7.01	1.28	1.50
34	e	35	TRP	CA-CB	6.99	1.64	1.53
67	SR	82	ASP	CG-OD1	6.97	1.38	1.25
1	5	4548	A	O5'-C5'	6.96	1.52	1.42
48	4	410	PHE	C-N	6.93	1.43	1.33
7	D	29	ASP	CA-C	-6.92	1.43	1.52
9	F	228	HIS	CA-CB	6.91	1.65	1.53
76	Sa	22	ARG	CZ-NH1	6.90	1.42	1.32
48	4	122	THR	N-CA	-6.89	1.37	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	4	53	GLU	CA-C	6.82	1.61	1.52
14	K	30	PRO	CA-C	-6.81	1.42	1.52
30	a	79	TRP	CA-CB	6.80	1.65	1.53
14	K	27	ALA	N-CA	6.80	1.54	1.45
21	R	118	HIS	CA-CB	6.78	1.64	1.53
46	q	68	HIS	N-CA	-6.76	1.38	1.46
81	Sf	146	LEU	CB-CG	6.76	1.67	1.53
7	D	145	TYR	CA-CB	6.74	1.62	1.53
23	T	19	PHE	CA-C	-6.72	1.44	1.52
52	SC	90	GLU	CD-OE1	6.69	1.38	1.25
44	o	48	TYR	CA-CB	6.68	1.62	1.52
49	S2	427	U	O5'-C5'	6.67	1.52	1.42
25	V	97	TYR	CA-C	6.65	1.61	1.52
1	5	4547	C	O3'-P	6.64	1.71	1.61
73	SX	58	GLU	CD-OE1	6.62	1.38	1.25
65	SP	27	ASP	CG-OD2	6.60	1.37	1.25
49	S2	1292	C	O3'-P	6.58	1.71	1.61
51	SB	198	GLU	CG-CD	6.58	1.68	1.52
66	SQ	29	ASN	CG-ND2	6.56	1.47	1.33
79	Sd	10	HIS	ND1-CE1	6.55	1.39	1.32
51	SB	155	TYR	CA-CB	6.55	1.63	1.53
63	SN	83	ASP	CG-OD1	6.54	1.37	1.25
48	4	331	GLU	CA-C	6.53	1.60	1.52
48	4	760	TYR	CA-C	-6.52	1.44	1.52
4	A	186	TYR	CA-CB	6.51	1.63	1.53
7	D	16	TYR	CA-CB	6.49	1.63	1.53
48	4	4	PHE	CA-C	6.46	1.61	1.52
54	SE	250	GLU	CD-OE2	6.46	1.37	1.25
18	O	106	ASP	CG-OD1	6.45	1.37	1.25
35	f	4	ARG	CA-CB	6.43	1.64	1.53
46	q	62	ARG	C-N	6.43	1.42	1.33
1	5	45	U	O3'-P	-6.43	1.51	1.61
30	a	128	PHE	CA-CB	6.43	1.62	1.53
22	S	33	PHE	N-CA	-6.43	1.37	1.46
12	I	57	TYR	CA-CB	6.42	1.60	1.52
4	A	89	TYR	CA-CB	6.42	1.61	1.53
8	E	250	ASP	CG-OD2	6.38	1.37	1.25
46	q	68	HIS	CA-C	-6.38	1.44	1.52
59	SJ	104	ASP	CG-OD1	6.38	1.37	1.25
58	SI	188	TYR	CE1-CZ	6.38	1.53	1.38
48	4	801	ARG	NE-CZ	6.37	1.40	1.33
46	q	44	ARG	CA-C	-6.35	1.44	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	SM	104	VAL	N-CA	6.35	1.54	1.46
1	5	3652	A	O3'-P	6.33	1.70	1.61
33	d	87	ARG	N-CA	6.33	1.55	1.46
58	SI	188	TYR	CG-CD1	6.33	1.52	1.39
14	K	111	ASN	CA-C	-6.31	1.44	1.52
26	W	21	TYR	CA-CB	6.29	1.63	1.53
16	M	6	PHE	CB-CG	-6.29	1.36	1.50
48	4	826	ASP	CA-C	-6.24	1.44	1.53
24	U	99	TRP	CA-C	6.24	1.60	1.52
74	SY	80	ASP	CG-OD2	6.24	1.37	1.25
82	Sg	116	ASP	CG-OD1	6.24	1.37	1.25
14	K	29	ALA	N-CA	-6.22	1.41	1.46
34	e	74	PHE	CA-CB	6.20	1.62	1.53
49	S2	1293	A	O5'-C5'	6.19	1.51	1.42
68	SS	86	ARG	CA-CB	6.19	1.60	1.52
49	S2	1309	C	O3'-P	6.18	1.70	1.61
6	C	41	HIS	CA-CB	6.18	1.63	1.53
46	q	162	LYS	CA-C	-6.17	1.45	1.52
81	Sf	146	LEU	CA-CB	6.17	1.68	1.53
5	B	275	HIS	N-CA	6.16	1.53	1.46
61	SL	89	ARG	CZ-NH1	6.16	1.41	1.32
72	SW	120	HIS	CG-CD2	6.16	1.42	1.35
48	4	263	ASP	C-N	-6.14	1.25	1.33
48	4	846	GLU	C-O	-6.13	1.17	1.24
7	D	210	TYR	CA-CB	6.12	1.63	1.53
5	B	119	TYR	N-CA	6.11	1.54	1.46
81	Sf	139	HIS	CA-C	6.11	1.59	1.52
73	SX	17	ARG	N-CA	6.10	1.54	1.46
39	j	66	HIS	CA-CB	6.08	1.63	1.53
81	Sf	140	TYR	N-CA	6.07	1.53	1.45
9	F	209	PHE	CA-CB	6.07	1.62	1.53
17	N	119	TYR	CA-CB	6.05	1.63	1.53
48	4	855	LEU	CA-C	6.05	1.60	1.52
30	a	41	HIS	N-CA	-6.05	1.39	1.46
46	q	149	ARG	N-CA	-6.05	1.38	1.46
6	C	35	ASP	CG-OD1	6.05	1.36	1.25
27	X	117	TYR	CA-CB	6.05	1.61	1.53
14	K	86	LYS	N-CA	-6.04	1.38	1.46
38	i	39	PHE	CA-CB	6.04	1.62	1.53
67	SR	122	PRO	CA-C	6.04	1.58	1.52
82	Sg	60	ARG	NE-CZ	6.04	1.39	1.33
72	SW	25	VAL	CA-C	-6.03	1.46	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	SG	152	ASP	CG-OD2	6.03	1.36	1.25
8	E	97	ASN	CG-ND2	6.01	1.45	1.33
4	A	209	HIS	CB-CG	-6.01	1.41	1.50
67	SR	123	THR	N-CA	6.00	1.53	1.46
48	4	199	PRO	CA-C	6.00	1.58	1.52
82	Sg	285	GLN	CD-NE2	5.99	1.45	1.33
48	4	43	ALA	N-CA	-5.98	1.38	1.46
8	E	101	ARG	CZ-NH2	5.98	1.41	1.33
17	N	139	HIS	CA-CB	5.97	1.61	1.53
58	SI	188	TYR	CG-CD2	5.97	1.51	1.39
62	SM	103	VAL	CA-C	5.97	1.60	1.52
64	SO	130	GLU	CG-CD	5.97	1.67	1.52
46	q	6	ARG	CA-C	5.96	1.60	1.52
49	S2	1142	G	O3'-P	5.96	1.70	1.61
82	Sg	36	ARG	CZ-NH1	5.96	1.41	1.32
14	K	104	ILE	CA-CB	-5.95	1.46	1.54
34	e	35	TRP	CB-CG	-5.95	1.31	1.50
56	SG	20	ASP	CG-OD1	5.95	1.36	1.25
81	Sf	146	LEU	N-CA	5.94	1.54	1.46
22	S	94	TYR	CA-CB	5.93	1.61	1.53
4	A	209	HIS	CA-C	5.93	1.60	1.52
48	4	849	PRO	CA-CB	-5.92	1.45	1.53
48	4	113	SER	CA-C	-5.92	1.44	1.52
51	SB	232	HIS	CG-ND1	5.92	1.44	1.38
5	B	311	ASP	CG-OD2	5.90	1.36	1.25
25	V	99	GLU	N-CA	5.90	1.53	1.46
56	SG	132	ARG	NE-CZ	5.89	1.39	1.33
21	R	95	TRP	CA-CB	5.89	1.62	1.53
22	S	99	ASP	CG-OD1	5.89	1.36	1.25
1	5	4566	U	O3'-P	-5.88	1.52	1.61
65	SP	41	GLN	CD-OE1	5.87	1.34	1.23
69	ST	33	TRP	CA-CB	5.87	1.63	1.53
59	SJ	64	ASP	CG-OD1	5.86	1.36	1.25
17	N	180	PHE	CA-CB	5.86	1.63	1.53
21	R	95	TRP	N-CA	5.85	1.53	1.46
4	A	186	TYR	N-CA	5.84	1.53	1.46
48	4	801	ARG	CA-C	-5.83	1.45	1.52
61	SL	92	TYR	CA-C	-5.83	1.45	1.52
53	SD	38	GLU	CD-OE2	5.83	1.36	1.25
48	4	192	TYR	N-CA	-5.82	1.39	1.46
49	S2	1378	A	O3'-P	5.79	1.69	1.61
46	q	44	ARG	NE-CZ	5.79	1.39	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	5	2510	G	O3'-P	-5.78	1.52	1.61
76	Sa	97	PRO	CA-C	5.75	1.57	1.52
51	SB	205	TYR	CA-CB	5.74	1.62	1.53
30	a	60	HIS	CA-CB	-5.73	1.43	1.53
1	5	2361	G	O3'-P	5.72	1.69	1.61
38	i	26	HIS	CA-C	5.72	1.60	1.52
59	SJ	95	ASP	CG-OD2	5.72	1.36	1.25
82	Sg	213	ASP	CG-OD1	5.72	1.36	1.25
52	SC	223	TYR	CA-CB	5.70	1.61	1.53
33	d	86	VAL	CA-C	5.69	1.59	1.52
24	U	99	TRP	CA-CB	5.69	1.62	1.53
46	q	123	VAL	C-N	5.68	1.41	1.33
82	Sg	187	ASN	CG-ND2	5.66	1.45	1.33
51	SB	157	GLN	CD-OE1	5.65	1.34	1.23
14	K	88	PRO	CA-C	5.65	1.57	1.52
48	4	740	LEU	C-N	5.63	1.41	1.33
49	S2	1292	C	O5'-C5'	5.62	1.50	1.42
63	SN	18	TYR	CA-CB	5.61	1.62	1.53
15	L	6	ASN	CA-C	-5.60	1.45	1.52
66	SQ	123	ASP	CG-OD2	5.60	1.35	1.25
52	SC	90	GLU	CG-CD	5.59	1.66	1.52
39	j	27	TYR	CA-CB	5.58	1.61	1.53
1	5	1851	G	O3'-P	-5.58	1.52	1.61
70	SU	113	GLU	CD-OE2	5.57	1.35	1.25
46	q	6	ARG	N-CA	5.57	1.53	1.46
28	Y	19	PHE	CA-CB	5.57	1.59	1.53
48	4	574	ASP	N-CA	-5.56	1.38	1.46
47	r	45	HIS	CA-CB	-5.55	1.44	1.53
79	Sd	46	TYR	CA-CB	5.55	1.61	1.53
14	K	86	LYS	CA-C	-5.54	1.45	1.52
1	5	1849	U	O3'-P	-5.54	1.52	1.61
81	Sf	149	CYS	CA-C	5.54	1.59	1.52
67	SR	82	ASP	CG-OD2	5.52	1.35	1.25
21	R	132	PHE	CB-CG	-5.51	1.38	1.50
48	4	794	PHE	N-CA	-5.51	1.38	1.45
22	S	10	TYR	CB-CG	-5.50	1.39	1.51
79	Sd	10	HIS	CG-CD2	5.50	1.41	1.35
62	SM	104	VAL	CA-C	5.49	1.59	1.52
48	4	72	SER	C-O	-5.47	1.17	1.24
56	SG	142	ARG	CZ-NH1	5.47	1.40	1.32
58	SI	150	ASP	CG-OD1	5.46	1.35	1.25
49	S2	1839	U	O3'-P	5.46	1.69	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
14	K	111	ASN	N-CA	5.45	1.53	1.46
1	5	4693	C	O3'-P	5.45	1.69	1.61
46	q	25	PRO	N-CD	5.44	1.55	1.47
39	j	49	TRP	CA-CB	5.43	1.62	1.53
48	4	118	ALA	CA-C	-5.43	1.45	1.52
46	q	201	PRO	N-CD	5.43	1.55	1.47
49	S2	1290	G	O3'-P	5.42	1.69	1.61
60	SK	37	ASP	CG-OD1	5.42	1.35	1.25
7	D	119	TYR	CA-CB	5.42	1.60	1.53
53	SD	159	HIS	CA-CB	5.41	1.61	1.53
1	5	1364	U	O3'-P	5.41	1.69	1.61
17	N	192	TRP	CB-CG	-5.40	1.33	1.50
55	SF	130	ARG	NE-CZ	5.38	1.39	1.33
63	SN	141	TYR	CA-CB	-5.38	1.45	1.53
54	SE	121	TYR	CA-CB	5.38	1.62	1.53
67	SR	87	GLU	CD-OE1	5.38	1.35	1.25
48	4	123	ASP	C-N	5.38	1.40	1.33
15	L	17	ASP	CG-OD1	5.37	1.35	1.25
46	q	81	HIS	N-CA	-5.37	1.38	1.46
8	E	278	TYR	CB-CG	-5.37	1.39	1.51
1	5	2692	U	O3'-P	-5.37	1.53	1.61
48	4	325	SER	N-CA	-5.37	1.39	1.46
5	B	257	TRP	CA-CB	5.36	1.63	1.53
49	S2	1079	C	O3'-P	-5.35	1.53	1.61
1	5	514	U	O3'-P	5.35	1.69	1.61
14	K	147	HIS	C-N	5.34	1.41	1.34
48	4	111	PHE	C-N	5.34	1.40	1.33
1	5	2053	C	O3'-P	-5.33	1.53	1.61
46	q	70	GLU	C-N	5.33	1.41	1.33
46	q	65	ILE	N-CA	-5.32	1.40	1.46
46	q	62	ARG	NE-CZ	5.32	1.39	1.33
1	5	964	A	O5'-C5'	5.32	1.50	1.42
21	R	94	THR	CA-C	5.31	1.60	1.52
63	SN	141	TYR	CA-C	-5.31	1.46	1.52
14	K	34	PRO	N-CD	5.31	1.55	1.47
13	J	99	PHE	CA-CB	5.31	1.62	1.53
48	4	325	SER	C-O	5.31	1.30	1.24
1	5	964	A	O3'-P	5.30	1.69	1.61
49	S2	1835	A	O3'-P	5.30	1.69	1.61
35	f	6	TRP	CA-C	5.30	1.59	1.52
48	4	5	THR	N-CA	5.29	1.52	1.45
50	SA	116	PHE	CA-CB	-5.29	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
63	SN	83	ASP	CG-OD2	5.29	1.35	1.25
33	d	26	THR	N-CA	5.29	1.53	1.46
33	d	71	ALA	CA-CB	-5.28	1.45	1.53
1	5	3692	A	O3'-P	5.27	1.69	1.61
31	b	16	TRP	N-CA	5.27	1.53	1.46
46	q	124	PRO	N-CD	5.27	1.55	1.47
5	B	215	GLU	CD-OE1	5.27	1.35	1.25
8	E	97	ASN	CG-OD1	5.26	1.33	1.23
32	c	78	ASN	CA-CB	5.26	1.62	1.53
22	S	9	GLU	CA-C	5.24	1.58	1.53
14	K	148	PRO	N-CD	5.23	1.55	1.47
48	4	496	VAL	CA-CB	-5.23	1.47	1.54
5	B	267	ALA	N-CA	-5.22	1.39	1.46
17	N	138	PHE	CA-CB	5.22	1.60	1.53
82	Sg	107	ASP	CG-OD1	5.22	1.35	1.25
14	K	104	ILE	CB-CG1	5.22	1.63	1.53
1	5	1912	G	O3'-P	-5.21	1.53	1.61
7	D	29	ASP	N-CA	5.21	1.52	1.46
62	SM	105	GLY	N-CA	5.20	1.51	1.45
14	K	29	ALA	CA-C	-5.20	1.46	1.52
30	a	109	TYR	CB-CG	-5.20	1.40	1.51
1	5	1522	G	O3'-P	5.19	1.69	1.61
48	4	807	GLN	N-CA	-5.19	1.39	1.46
1	5	4375	C	O3'-P	-5.19	1.53	1.61
32	c	78	ASN	CA-C	5.18	1.59	1.52
2	7	90	A	O3'-P	-5.18	1.53	1.61
32	c	28	VAL	N-CA	-5.16	1.40	1.46
1	5	2442	G	O3'-P	-5.16	1.53	1.61
48	4	827	ASN	CA-C	-5.16	1.46	1.53
5	B	137	TRP	CA-CB	5.15	1.62	1.53
49	S2	646	G	O3'-P	5.15	1.68	1.61
54	SE	250	GLU	CD-OE1	5.15	1.35	1.25
14	K	44	ASP	CA-C	-5.14	1.46	1.52
61	SL	93	LEU	N-CA	-5.13	1.39	1.46
49	S2	1833	C	O3'-P	-5.13	1.53	1.61
53	SD	216	GLU	CD-OE2	5.12	1.35	1.25
28	Y	61	HIS	CA-CB	5.12	1.61	1.53
40	k	43	TYR	CA-CB	5.12	1.60	1.53
49	S2	1858	G	O3'-P	5.11	1.68	1.61
48	4	495	ARG	C-N	-5.11	1.26	1.33
39	j	76	HIS	N-CA	-5.10	1.39	1.46
46	q	118	PRO	N-CD	5.10	1.54	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	4	56	PHE	CB-CG	5.10	1.62	1.50
50	SA	151	ASP	CG-OD2	5.09	1.35	1.25
46	q	162	LYS	C-O	-5.09	1.17	1.23
34	e	36	ARG	N-CA	5.08	1.52	1.46
50	SA	116	PHE	CA-C	-5.08	1.45	1.52
53	SD	5	ILE	N-CA	5.08	1.52	1.46
27	X	57	GLN	CD-OE1	5.08	1.33	1.23
8	E	278	TYR	N-CA	5.07	1.51	1.46
27	X	73	HIS	CA-CB	5.07	1.62	1.53
57	SH	145	ARG	CA-C	-5.06	1.46	1.53
56	SG	208	GLU	CG-CD	5.05	1.64	1.52
51	SB	157	GLN	CG-CD	5.05	1.64	1.52
1	5	207	G	O3'-P	-5.04	1.53	1.61
24	U	90	TYR	CA-C	-5.04	1.46	1.52
52	SC	163	VAL	CA-C	-5.02	1.48	1.52
34	e	56	PRO	N-CA	-5.02	1.41	1.47
6	C	198	ASN	N-CA	5.01	1.52	1.46
6	C	41	HIS	CA-C	5.01	1.59	1.52
1	5	1669	A	O3'-P	-5.01	1.53	1.61
5	B	55	HIS	CA-CB	5.00	1.61	1.53

All (3194) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	699	GLY	CA-C-N	-52.45	50.88	120.63
48	4	699	GLY	C-N-CA	-52.45	50.88	120.63
48	4	768	GLY	O-C-N	43.87	156.93	122.71
48	4	111	PHE	CA-CB-CG	25.41	139.21	113.80
48	4	267	ASP	N-CA-C	24.23	136.01	108.14
46	q	205	ASP	O-C-N	22.13	151.59	122.82
8	E	278	TYR	CB-CA-C	21.51	129.80	110.44
48	4	121	VAL	O-C-N	-20.56	100.52	121.90
48	4	154	VAL	CB-CA-C	20.09	142.02	110.28
46	q	68	HIS	CA-C-O	-19.39	100.00	120.55
48	4	539	GLU	CA-C-N	-19.37	95.26	120.44
48	4	539	GLU	C-N-CA	-19.37	95.26	120.44
18	O	135	PHE	N-CA-C	17.84	134.65	108.60
48	4	113	SER	N-CA-C	-17.53	91.99	113.20
11	H	156	ASN	N-CA-C	-17.43	92.42	111.07
3	8	34	U	C4'-C3'-O3'	-16.89	87.66	113.00
48	4	768	GLY	CA-C-N	-16.89	92.93	121.64
48	4	768	GLY	C-N-CA	-16.89	92.93	121.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	825	PHE	N-CA-C	16.76	129.24	111.14
48	4	269	ALA	O-C-N	-16.40	100.78	122.59
48	4	266	PHE	O-C-N	-16.23	100.41	122.97
14	K	137	GLN	N-CA-C	16.14	131.16	110.33
14	K	111	ASN	CA-CB-CG	15.54	128.14	112.60
14	K	114	ARG	CD-NE-CZ	15.54	146.16	124.40
14	K	111	ASN	N-CA-CB	15.19	133.66	110.42
1	5	383	A	C1'-C2'-O2'	-15.04	89.23	111.80
21	R	132	PHE	N-CA-C	-14.78	88.86	109.71
1	5	1676	C	C1'-C2'-O2'	-14.78	89.64	111.80
48	4	278	THR	O-C-N	-14.47	103.72	123.11
46	q	68	HIS	O-C-N	14.46	137.45	122.12
46	q	204	LEU	O-C-N	14.42	137.39	122.10
1	5	1439	C	C4'-C3'-O3'	-14.28	91.58	113.00
48	4	4	PHE	N-CA-C	14.19	141.03	110.80
14	K	24	ALA	O-C-N	-14.07	103.88	122.59
49	S2	642	U	C4'-C3'-O3'	14.04	134.07	113.00
3	8	60	G	N9-C1'-C2'	14.02	135.04	114.00
1	5	4163	U	C4'-C3'-O3'	13.97	133.95	113.00
48	4	267	ASP	CA-C-O	-13.95	108.57	120.71
21	R	132	PHE	CB-CA-C	13.92	132.67	112.07
48	4	285	LEU	O-C-N	-13.85	108.14	121.57
48	4	122	THR	CB-CA-C	13.82	129.28	110.06
49	S2	291	G	C4'-C3'-O3'	-13.54	89.09	109.40
1	5	1358	G	C4'-C3'-O3'	13.42	133.12	113.00
48	4	285	LEU	CA-C-N	13.29	134.35	119.99
48	4	285	LEU	C-N-CA	13.29	134.35	119.99
48	4	825	PHE	CA-C-N	-13.22	98.53	120.87
48	4	825	PHE	C-N-CA	-13.22	98.53	120.87
48	4	267	ASP	CA-C-N	-13.12	105.29	119.19
48	4	267	ASP	C-N-CA	-13.12	105.29	119.19
49	S2	1835	A	C4'-C3'-O3'	-12.91	93.63	113.00
48	4	104	ASP	CB-CA-C	12.80	125.54	109.80
18	O	110	PRO	CA-C-N	12.65	135.65	119.84
18	O	110	PRO	C-N-CA	12.65	135.65	119.84
1	5	4528	G	C2'-C3'-O3'	12.63	132.65	113.70
48	4	807	GLN	N-CA-C	-12.52	84.12	110.80
49	S2	1433	C	C4'-C3'-O3'	12.44	131.65	113.00
1	5	1359	G	C4'-C3'-O3'	-12.42	94.36	113.00
1	5	1211	G	C2'-C3'-O3'	12.35	132.23	113.70
49	S2	495	U	C1'-C2'-O2'	-12.29	93.36	111.80
49	S2	24	C	C2'-C3'-O3'	12.26	132.09	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	123	ASP	O-C-N	-12.20	105.62	122.46
48	4	197	SER	CA-C-N	12.20	141.02	121.87
48	4	197	SER	C-N-CA	12.20	141.02	121.87
1	5	1329	G	C2'-C3'-O3'	12.18	131.97	113.70
48	4	269	ALA	CA-C-N	-12.17	103.71	120.38
48	4	269	ALA	C-N-CA	-12.17	103.71	120.38
21	R	95	TRP	N-CA-CB	12.13	127.57	109.98
49	S2	60	A	C1'-C2'-O2'	-12.04	93.74	111.80
49	S2	1109	C	N1-C1'-C2'	12.03	130.04	112.00
9	F	120	PHE	CB-CA-C	12.02	127.21	111.82
1	5	2857	A	C1'-C2'-O2'	-12.00	93.80	111.80
14	K	130	LYS	CB-CA-C	-11.99	84.94	109.99
49	S2	1823	A	N9-C1'-C2'	11.98	131.97	114.00
1	5	2389	A	C2'-C3'-O3'	11.89	131.54	113.70
14	K	44	ASP	CA-CB-CG	11.87	124.47	112.60
49	S2	61	A	C4'-C3'-O3'	-11.85	95.22	113.00
14	K	30	PRO	CB-CA-C	11.83	131.08	111.56
25	V	97	TYR	N-CA-C	-11.80	92.25	109.96
3	8	94	G	C2'-C3'-O3'	11.80	127.19	109.50
12	I	139	ARG	CG-CD-NE	11.67	137.68	112.00
49	S2	1643	U	C1'-C2'-O2'	-11.58	94.43	111.80
1	5	4498	U	C1'-C2'-O2'	11.56	125.75	108.40
48	4	71	LYS	CA-C-N	-11.45	106.85	122.99
48	4	71	LYS	C-N-CA	-11.45	106.85	122.99
81	Sf	133	ALA	N-CA-C	11.36	123.23	108.34
1	5	1642	A	C4'-C3'-O3'	-11.30	96.05	113.00
22	S	81	TRP	CB-CA-C	11.30	127.84	110.67
27	X	73	HIS	N-CA-C	-11.29	98.94	113.17
30	a	61	TYR	CA-CB-CG	11.29	134.22	113.90
17	N	131	GLU	CA-CB-CG	11.25	136.60	114.10
49	S2	1542	C	C1'-C2'-O2'	-11.23	94.96	111.80
14	K	44	ASP	CA-C-O	-11.22	109.22	121.00
49	S2	1835	A	C2'-C3'-O3'	11.21	130.52	113.70
14	K	102	GLY	N-CA-C	11.20	133.93	113.76
48	4	121	VAL	CA-C-N	11.19	139.06	121.26
48	4	121	VAL	C-N-CA	11.19	139.06	121.26
1	5	4385	A	C2'-C3'-O3'	-11.19	96.92	113.70
48	4	267	ASP	O-C-N	-11.13	112.08	121.54
49	S2	747	U	C2'-C3'-O3'	11.13	130.39	113.70
30	a	109	TYR	CA-CB-CG	-11.07	93.98	113.90
1	5	3880	G	C1'-C2'-O2'	-11.01	95.28	111.80
58	SI	197	PHE	CB-CA-C	-10.92	93.55	110.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
17	N	131	GLU	CB-CG-CD	-10.90	94.06	112.60
33	d	25	TYR	CA-CB-CG	-10.83	94.41	113.90
1	5	1479	G	C1'-C2'-O2'	-10.81	95.59	111.80
1	5	5061	A	C2'-C3'-O3'	10.80	125.69	109.50
21	R	95	TRP	N-CA-C	-10.79	99.05	111.03
8	E	278	TYR	CA-CB-CG	-10.78	94.50	113.90
1	5	2858	A	C1'-C2'-O2'	-10.76	95.66	111.80
1	5	5059	C	C2'-C3'-O3'	10.76	129.84	113.70
49	S2	1293	A	N9-C1'-C2'	10.75	128.13	112.00
1	5	3773	U	C4'-C3'-O3'	10.75	129.12	113.00
1	5	231	U	C4'-C3'-O3'	-10.72	96.92	113.00
46	q	69	LEU	O-C-N	-10.71	108.35	122.59
1	5	4084	G	C2'-C3'-O3'	10.67	125.50	109.50
17	N	192	TRP	CA-CB-CG	10.67	133.87	113.60
30	a	79	TRP	N-CA-C	-10.66	100.22	113.02
49	S2	964	A	C1'-C2'-O2'	-10.64	95.83	111.80
1	5	1481	C	C2'-C3'-O3'	10.63	125.45	109.50
81	Sf	146	LEU	CA-CB-CG	10.62	153.47	116.30
9	F	58	HIS	CB-CA-C	-10.61	94.23	110.88
14	K	136	ALA	O-C-N	-10.60	108.50	122.59
49	S2	1292	C	C4'-C3'-O3'	10.55	128.83	113.00
49	S2	1552	G	C2'-C3'-O3'	10.55	129.53	113.70
49	S2	441	C	C4'-C3'-O3'	-10.55	97.17	113.00
1	5	1474	C	C2'-C3'-O3'	10.50	129.45	113.70
44	o	31	ASP	CB-CA-C	10.49	127.57	110.78
49	S2	848	U	N1-C1'-C2'	10.48	127.72	112.00
48	4	826	ASP	N-CA-C	-10.48	96.70	110.43
14	K	34	PRO	CA-N-CD	-10.46	97.36	112.00
48	4	432	PRO	CA-C-N	-10.45	106.28	122.37
48	4	432	PRO	C-N-CA	-10.45	106.28	122.37
49	S2	1588	A	C1'-C2'-O2'	-10.43	96.15	111.80
49	S2	1838	U	N1-C1'-C2'	10.42	129.64	114.00
48	4	427	VAL	CB-CA-C	-10.41	98.34	110.73
14	K	124	GLU	N-CA-C	-10.40	94.89	110.28
1	5	4125	C	C4'-C3'-O3'	-10.39	97.41	113.00
1	5	964	A	C4'-C3'-O3'	10.37	128.56	113.00
49	S2	1063	C	C1'-C2'-O2'	10.37	123.96	108.40
48	4	392	GLY	CA-C-N	10.36	130.12	119.76
48	4	392	GLY	C-N-CA	10.36	130.12	119.76
1	5	1214	C	N1-C1'-C2'	10.34	129.52	114.00
1	5	4965	U	C1'-C2'-O2'	10.33	123.89	108.40
27	X	73	HIS	CB-CA-C	10.32	127.32	110.09

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2046	G	C2'-C3'-O3'	10.32	124.97	109.50
1	5	936	C	C4'-C3'-O3'	10.29	124.84	109.40
1	5	2695	A	C2'-C3'-O3'	10.27	124.91	109.50
57	SH	177	TYR	CB-CA-C	-10.27	93.69	110.74
48	4	196	GLU	N-CA-C	-10.26	95.10	110.28
1	5	1	C	N1-C1'-C2'	10.25	129.38	114.00
49	S2	833	C	C2'-C3'-O3'	10.24	129.07	113.70
72	SW	117	ARG	NE-CZ-NH2	-10.24	109.98	119.20
49	S2	367	U	C1'-C2'-O2'	10.23	123.75	108.40
30	a	128	PHE	CB-CA-C	10.23	125.75	111.74
1	5	125	C	C2'-C3'-O3'	10.21	129.02	113.70
20	Q	33	ARG	N-CA-C	-10.21	98.86	111.11
1	5	62	A	N9-C1'-C2'	10.19	127.28	112.00
1	5	3735	G	C4'-C3'-O3'	-10.14	97.79	113.00
63	SN	113	PHE	CB-CA-C	-10.14	95.23	110.95
39	j	66	HIS	N-CA-CB	10.14	127.62	110.49
14	K	30	PRO	CA-N-CD	-10.13	97.81	112.00
33	d	25	TYR	CB-CA-C	10.13	128.13	111.41
46	q	85	ASN	N-CA-CB	10.13	127.61	110.49
48	4	495	ARG	O-C-N	-10.13	110.35	122.81
48	4	154	VAL	N-CA-C	-10.12	93.40	108.17
1	5	977	C	C2'-C3'-O3'	10.11	128.86	113.70
30	a	34	ASN	CB-CA-C	10.11	125.19	111.14
68	SS	42	HIS	CB-CA-C	-10.10	94.65	110.81
14	K	26	SER	CA-C-N	10.09	138.44	122.59
14	K	26	SER	C-N-CA	10.09	138.44	122.59
46	q	80	PRO	CA-C-N	-10.07	102.99	121.41
46	q	80	PRO	C-N-CA	-10.07	102.99	121.41
1	5	1356	U	C2'-C3'-O3'	10.06	128.78	113.70
1	5	2511	A	C4'-C3'-O3'	-10.04	94.34	109.40
31	b	16	TRP	N-CA-C	-10.04	100.97	113.01
1	5	2588	C	C4'-C3'-O3'	10.03	128.04	113.00
48	4	794	PHE	N-CA-C	-10.02	97.02	110.55
49	S2	1404	U	C4'-C3'-O3'	-10.02	94.36	109.40
1	5	978	G	C2'-C3'-O3'	10.01	128.71	113.70
1	5	1359	G	C2'-C3'-O3'	10.00	128.71	113.70
52	SC	241	PHE	N-CA-CB	9.97	124.46	109.91
15	L	99	ASP	N-CA-C	-9.96	97.18	109.83
33	d	73	TRP	N-CA-CB	-9.96	97.71	111.65
49	S2	1429	G	C2'-C3'-O3'	9.96	128.63	113.70
14	K	85	LEU	N-CA-C	-9.94	100.56	112.89
48	4	495	ARG	CA-C-N	-9.94	104.08	121.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	495	ARG	C-N-CA	-9.94	104.08	121.97
21	R	132	PHE	CA-CB-CG	-9.93	103.87	113.80
64	SO	147	ARG	CA-CB-CG	9.93	133.96	114.10
1	5	3625	G	C4'-C3'-O3'	-9.90	98.15	113.00
49	S2	1162	C	C1'-C2'-O2'	9.87	123.20	108.40
1	5	215	C	C4'-C3'-O3'	-9.86	98.22	113.00
14	K	111	ASN	CB-CA-C	-9.84	93.33	109.56
52	SC	236	PHE	N-CA-CB	9.82	124.25	109.91
1	5	927	G	C2'-C3'-O3'	9.82	124.23	109.50
48	4	427	VAL	N-CA-C	9.81	123.72	107.24
1	5	4693	C	N1-C1'-C2'	9.79	126.69	112.00
49	S2	160	U	C2'-C3'-O3'	9.79	124.18	109.50
49	S2	449	A	C2'-C3'-O3'	-9.78	99.03	113.70
1	5	2468	U	C4'-C3'-O3'	9.77	124.06	109.40
14	K	27	ALA	N-CA-C	9.76	124.65	109.52
49	S2	110	U	C2'-C3'-O3'	9.76	128.34	113.70
39	j	66	HIS	CA-CB-CG	-9.73	104.07	113.80
1	5	4767	C	C3'-C2'-O2'	9.72	125.28	110.70
3	8	14	U	N1-C1'-C2'	9.72	126.58	112.00
48	4	5	THR	CA-C-N	-9.72	107.27	121.65
48	4	5	THR	C-N-CA	-9.72	107.27	121.65
48	4	272	LYS	CA-C-N	9.70	134.53	120.95
48	4	272	LYS	C-N-CA	9.70	134.53	120.95
1	5	4518	A	C2'-C3'-O3'	-9.69	94.96	109.50
1	5	2083	C	C2'-C3'-O3'	-9.69	99.17	113.70
9	F	209	PHE	N-CA-C	-9.67	100.82	111.36
1	5	2588	C	C2'-C3'-O3'	-9.67	99.20	113.70
1	5	1365	C	C4'-C3'-O3'	9.64	123.86	109.40
1	5	4373	G	N9-C1'-C2'	9.63	128.44	114.00
1	5	92	C	N1-C1'-C2'	-9.61	97.59	112.00
14	K	75	PRO	CA-N-CD	-9.60	98.56	112.00
20	Q	174	PHE	CB-CA-C	9.60	126.27	112.07
48	4	74	ALA	N-CA-C	9.59	123.91	108.76
1	5	1724	G	O4'-C4'-C3'	-9.59	96.51	106.10
59	SJ	48	PHE	N-CA-CB	9.58	124.38	109.82
49	S2	798	A	C2'-C3'-O3'	9.58	128.07	113.70
9	F	194	HIS	CB-CA-C	-9.57	96.23	110.96
7	D	198	HIS	CB-CA-C	9.56	125.89	110.88
7	D	210	TYR	N-CA-CB	9.55	123.86	109.91
30	a	128	PHE	CA-CB-CG	-9.53	104.27	113.80
1	5	1324	A	C1'-C2'-O2'	-9.53	97.51	111.80
3	8	85	U	C2'-C3'-O3'	9.52	127.98	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	154	VAL	CA-CB-CG1	9.52	126.58	110.40
1	5	4119	C	C2'-C3'-O3'	9.51	127.97	113.70
46	q	80	PRO	CA-N-CD	-9.50	98.70	112.00
1	5	3912	U	C1'-C2'-O2'	-9.49	94.17	108.40
1	5	2511	A	C2'-C3'-O3'	9.48	123.73	109.50
23	T	13	TYR	N-CA-CB	-9.48	96.60	110.53
1	5	1500	A	C4'-C3'-O3'	9.47	127.20	113.00
1	5	1279	A	C2'-C3'-O3'	9.46	123.69	109.50
1	5	1357	C	C3'-C2'-O2'	9.45	124.88	110.70
48	4	563	GLU	N-CA-C	9.45	121.34	111.14
81	Sf	140	TYR	N-CA-C	9.44	123.81	110.50
50	SA	117	ARG	CG-CD-NE	9.44	132.76	112.00
1	5	4871	C	N1-C1'-C2'	9.41	128.11	114.00
1	5	747	A	C2'-C3'-O3'	9.40	123.60	109.50
4	A	83	HIS	N-CA-C	-9.40	94.65	109.50
1	5	1938	C	N1-C1'-C2'	9.38	128.08	114.00
14	K	44	ASP	CA-C-N	9.38	133.04	120.65
14	K	44	ASP	C-N-CA	9.38	133.04	120.65
16	M	95	ILE	N-CA-C	-9.38	99.83	110.05
1	5	2107	C	C2'-C3'-O3'	9.36	123.54	109.50
14	K	88	PRO	CA-N-CD	-9.36	98.90	112.00
1	5	958	G	C2'-C3'-O3'	9.31	127.67	113.70
49	S2	594	A	C4'-C3'-O3'	9.31	123.37	109.40
20	Q	34	PHE	N-CA-CB	9.31	123.97	109.82
17	N	139	HIS	N-CA-CB	9.30	125.02	109.87
14	K	129	ILE	CA-C-N	9.29	137.40	121.14
14	K	129	ILE	C-N-CA	9.29	137.40	121.14
12	I	171	TRP	CA-CB-CG	-9.28	95.96	113.60
1	5	2272	C	C1'-C2'-O2'	-9.28	94.48	108.40
1	5	664	G	C4'-C3'-O3'	9.28	123.32	109.40
1	5	961	G	C4'-C3'-O3'	9.28	123.32	109.40
3	8	94	G	C1'-C2'-O2'	-9.28	97.88	111.80
48	4	63	GLU	N-CA-C	-9.26	101.14	111.14
1	5	1866	U	C1'-C2'-O2'	-9.25	97.93	111.80
48	4	76	SER	O-C-N	9.24	135.24	123.23
44	o	48	TYR	CB-CA-C	9.23	127.10	111.68
1	5	1685	G	N9-C1'-C2'	9.22	125.83	112.00
1	5	3726	A	C1'-C2'-O2'	-9.22	97.97	111.80
1	5	4693	C	C4'-C3'-O3'	-9.22	99.17	113.00
49	S2	574	A	C1'-C2'-O2'	-9.21	97.98	111.80
53	SD	216	GLU	CG-CD-OE1	-9.21	97.22	118.40
19	P	54	GLN	CA-CB-CG	9.20	132.49	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1623	A	C2'-C3'-O3'	9.19	127.48	113.70
1	5	3913	G	C2'-C3'-O3'	9.18	123.28	109.50
1	5	316	U	C4'-C3'-O3'	-9.18	99.24	113.00
48	4	331	GLU	N-CA-C	9.18	123.40	108.99
9	F	228	HIS	CA-CB-CG	-9.17	104.63	113.80
1	5	1636	U	C2'-C3'-O3'	-9.15	99.97	113.70
1	5	1733	G	C2'-C3'-O3'	-9.15	99.98	113.70
11	H	156	ASN	N-CA-CB	9.15	123.27	110.01
49	S2	1114	U	C2'-C3'-O3'	9.14	123.21	109.50
37	h	78	TYR	CA-CB-CG	-9.11	97.50	113.90
49	S2	1823	A	C2'-C3'-O3'	9.11	123.17	109.50
1	5	2513	A	N9-C1'-C2'	9.11	127.66	114.00
1	5	3635	A	C1'-C2'-O2'	9.10	122.05	108.40
1	5	2246	C	C2'-C3'-O3'	9.10	127.34	113.70
49	S2	1378	A	N9-C1'-C2'	9.10	127.64	114.00
14	K	163	PRO	CA-N-CD	-9.09	99.28	112.00
3	8	34	U	C2'-C3'-O3'	9.09	127.33	113.70
30	a	61	TYR	N-CA-C	-9.08	96.10	109.63
1	5	4301	U	C4'-C3'-O3'	-9.08	99.39	113.00
6	C	41	HIS	N-CA-CB	9.07	123.46	109.94
7	D	54	ARG	CG-CD-NE	-9.07	92.04	112.00
37	h	78	TYR	CB-CA-C	9.07	126.92	111.68
5	B	25	HIS	CB-CA-C	9.06	120.84	109.16
1	5	3735	G	C2'-C3'-O3'	9.04	127.26	113.70
16	M	66	HIS	N-CA-C	9.02	123.59	113.21
46	q	204	LEU	CA-C-N	-9.02	108.55	121.99
46	q	204	LEU	C-N-CA	-9.02	108.55	121.99
1	5	1920	C	C4'-C3'-O3'	9.01	122.92	109.40
6	C	267	TRP	CA-CB-CG	9.01	130.72	113.60
5	B	258	HIS	CA-C-N	-9.00	108.59	119.84
5	B	258	HIS	C-N-CA	-9.00	108.59	119.84
49	S2	437	G	N9-C1'-C2'	9.00	125.50	112.00
53	SD	159	HIS	CA-CB-CG	-9.00	104.80	113.80
12	I	171	TRP	N-CA-CB	8.99	124.09	109.88
49	S2	1114	U	N1-C1'-C2'	8.99	127.49	114.00
1	5	2683	C	C2'-C3'-O3'	8.99	127.19	113.70
11	H	96	TYR	N-CA-C	8.98	122.25	108.42
1	5	3905	A	C2'-C3'-O3'	8.96	127.15	113.70
30	a	79	TRP	CA-CB-CG	-8.96	96.57	113.60
14	K	111	ASN	N-CA-C	-8.96	101.93	113.12
22	S	10	TYR	CA-CB-CG	-8.96	97.78	113.90
33	d	87	ARG	N-CA-C	-8.94	93.00	108.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	211	PHE	CB-CA-C	8.94	125.66	110.56
1	5	1724	G	C4'-C3'-O3'	-8.93	96.00	109.40
1	5	1668	A	N9-C1'-C2'	8.93	125.39	112.00
48	4	54	THR	N-CA-C	8.93	129.81	110.80
48	4	794	PHE	CB-CA-C	8.93	127.52	109.76
38	i	39	PHE	N-CA-CB	8.92	123.44	110.06
81	Sf	148	TYR	CA-C-N	8.91	135.02	122.72
81	Sf	148	TYR	C-N-CA	8.91	135.02	122.72
61	SL	13	GLN	CA-C-N	-8.90	111.71	120.52
61	SL	13	GLN	C-N-CA	-8.90	111.71	120.52
10	G	54	PHE	CA-CB-CG	-8.89	104.91	113.80
1	5	31	U	N1-C1'-C2'	8.89	125.34	112.00
1	5	1696	C	C2'-C3'-O3'	8.89	122.83	109.50
48	4	801	ARG	N-CA-CB	8.89	123.19	110.12
1	5	4885	U	C2'-C3'-O3'	8.89	127.03	113.70
30	a	109	TYR	CB-CA-C	8.88	124.76	111.17
22	S	29	ARG	CA-CB-CG	8.88	131.85	114.10
27	X	117	TYR	N-CA-C	-8.87	102.55	112.57
1	5	3692	A	C2'-C3'-O3'	8.86	126.99	113.70
49	S2	644	G	C3'-C2'-O2'	8.85	123.97	110.70
46	q	68	HIS	N-CA-C	-8.85	101.64	111.28
49	S2	1838	U	O4'-C4'-C3'	-8.84	97.26	106.10
1	5	716	C	C4'-C3'-O3'	-8.84	99.74	113.00
74	SY	86	GLU	CG-CD-OE2	-8.84	98.07	118.40
48	4	821	PRO	CB-CA-C	8.84	119.90	110.00
1	5	2517	A	N9-C1'-C2'	8.83	125.25	112.00
1	5	2446	C	N1-C1'-C2'	8.83	125.24	112.00
46	q	93	GLU	N-CA-C	8.83	120.90	111.28
54	SE	18	TRP	N-CA-C	-8.83	100.93	112.41
49	S2	1149	A	C3'-C2'-O2'	8.81	123.92	110.70
7	D	210	TYR	N-CA-C	-8.80	101.38	110.97
36	g	14	ASN	N-CA-C	-8.79	96.86	109.96
4	A	209	HIS	CA-CB-CG	-8.78	105.02	113.80
1	5	4275	G	C1'-C2'-O2'	8.78	121.56	108.40
22	S	81	TRP	N-CA-C	-8.78	96.51	109.15
1	5	2436	U	N1-C1'-C2'	8.77	127.16	114.00
49	S2	996	A	C1'-C2'-O2'	-8.77	98.64	111.80
2	7	56	G	N9-C1'-C2'	8.76	125.14	112.00
73	SX	20	HIS	CA-CB-CG	-8.75	105.05	113.80
1	5	2586	G	N9-C1'-C2'	8.75	127.12	114.00
1	5	2782	U	C4'-C3'-O3'	8.75	126.12	113.00
49	S2	619	A	C2'-C3'-O3'	-8.74	100.59	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	958	G	C1'-C2'-O2'	-8.74	98.69	111.80
68	SS	95	TYR	CA-CB-CG	8.73	129.62	113.90
1	5	668	C	C2'-C3'-O3'	8.72	126.78	113.70
46	q	6	ARG	N-CA-C	8.72	129.38	110.80
1	5	2407	G	C4'-C3'-O3'	-8.71	99.93	113.00
1	5	1397	A	C3'-C2'-O2'	8.71	123.77	110.70
1	5	2546	G	C3'-C2'-O2'	8.71	123.76	110.70
8	E	103	VAL	N-CA-C	8.70	119.44	108.82
46	q	81	HIS	CB-CA-C	8.71	122.44	109.29
1	5	1398	A	C2'-C3'-O3'	8.70	122.56	109.50
1	5	4228	G	C1'-C2'-O2'	8.70	121.45	108.40
16	M	64	PHE	N-CA-C	-8.70	99.00	110.40
49	S2	92	A	N9-C1'-C2'	8.70	127.04	114.00
34	e	41	ILE	N-CA-C	-8.69	102.26	110.42
1	5	2398	U	C2'-C3'-O3'	8.68	122.53	109.50
1	5	716	C	C2'-C3'-O3'	8.68	126.72	113.70
1	5	1723	A	C4'-C3'-O3'	-8.68	99.98	113.00
1	5	4563	U	N1-C1'-C2'	8.66	124.99	112.00
1	5	4713	G	C4'-C3'-O3'	-8.65	100.03	113.00
1	5	962	C	C4'-C3'-O3'	-8.64	96.43	109.40
1	5	209	U	C4'-C3'-O3'	8.64	125.95	113.00
1	5	2268	A	C2'-C3'-O3'	8.64	122.46	109.50
14	K	104	ILE	CA-CB-CG2	-8.62	95.84	110.50
1	5	119	G	O4'-C4'-C3'	-8.62	97.48	106.10
4	A	67	TYR	CA-CB-CG	8.62	129.42	113.90
1	5	1937	C	N1-C1'-C2'	8.62	124.92	112.00
1	5	2118	G	C4'-C3'-O3'	8.62	125.93	113.00
1	5	964	A	O4'-C1'-C2'	-8.61	98.99	107.60
1	5	1974	U	N1-C1'-C2'	8.61	126.91	114.00
1	5	88	A	C1'-C2'-O2'	-8.61	95.49	108.40
49	S2	1315	U	C3'-C2'-O2'	8.60	123.61	110.70
11	H	156	ASN	CA-CB-CG	-8.60	104.00	112.60
1	5	1264	C	C3'-C2'-O2'	8.59	123.59	110.70
1	5	4199	C	C4'-C3'-O3'	8.59	125.89	113.00
22	S	81	TRP	CA-CB-CG	-8.59	97.27	113.60
49	S2	1181	A	C1'-C2'-O2'	-8.59	98.92	111.80
35	f	4	ARG	CA-CB-CG	8.59	131.28	114.10
49	S2	421	G	N9-C1'-C2'	8.59	124.88	112.00
39	j	39	TYR	CA-C-N	-8.58	109.54	119.32
39	j	39	TYR	C-N-CA	-8.58	109.54	119.32
9	F	244	ARG	N-CA-C	-8.58	101.89	111.07
1	5	2406	G	C1'-C2'-O2'	8.55	121.22	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	a	62	HIS	CA-CB-CG	-8.55	105.25	113.80
46	q	117	ALA	C-N-CD	8.54	139.39	120.60
1	5	2546	G	C4'-C3'-O3'	8.53	125.80	113.00
49	S2	1339	U	C1'-C2'-O2'	8.53	121.20	108.40
48	4	166	GLU	N-CA-C	8.53	120.35	111.14
1	5	3656	A	C4'-C3'-O3'	-8.52	100.22	113.00
49	S2	428	U	N1-C1'-C2'	8.52	126.78	114.00
1	5	5040	U	C4'-C3'-O3'	-8.51	96.64	109.40
57	SH	177	TYR	CA-CB-CG	8.51	129.22	113.90
49	S2	1407	U	N1-C1'-C2'	8.51	124.76	112.00
1	5	1368	A	C3'-C2'-O2'	8.50	123.45	110.70
4	A	186	TYR	N-CA-C	-8.49	101.97	111.14
1	5	4448	G	C4'-C3'-O3'	8.48	122.12	109.40
49	S2	919	A	C4'-C3'-O3'	8.46	122.09	109.40
1	5	4745	G	C1'-C2'-O2'	-8.46	95.71	108.40
30	a	79	TRP	CB-CA-C	8.46	125.42	110.37
48	4	154	VAL	CA-C-O	-8.45	111.22	120.43
53	SD	159	HIS	CB-CA-C	8.45	124.99	110.72
1	5	2263	A	C2'-C3'-O3'	8.43	122.14	109.50
49	S2	18	C	C4'-C3'-O3'	-8.43	100.36	113.00
48	4	497	MET	CA-C-N	8.41	137.61	121.54
48	4	497	MET	C-N-CA	8.41	137.61	121.54
1	5	1398	A	N9-C1'-C2'	8.41	126.61	114.00
1	5	2394	G	N9-C1'-C2'	-8.40	101.40	114.00
49	S2	1408	U	N1-C1'-C2'	8.40	124.60	112.00
14	K	89	PRO	CA-N-CD	-8.39	99.75	111.50
34	e	35	TRP	CA-CB-CG	-8.39	97.66	113.60
50	SA	9	GLN	CB-CG-CD	-8.38	98.35	112.60
49	S2	381	C	N1-C1'-C2'	8.38	124.57	112.00
49	S2	1395	C	C2'-C3'-O3'	8.37	126.26	113.70
1	5	53	C	C2'-C3'-O3'	8.37	126.25	113.70
1	5	2465	C	N1-C1'-C2'	8.37	124.56	112.00
2	7	23	A	C1'-C2'-O2'	-8.37	99.25	111.80
48	4	272	LYS	N-CA-C	8.37	122.13	108.99
14	K	130	LYS	CB-CG-CD	8.36	130.53	111.30
17	N	37	HIS	N-CA-C	-8.36	99.83	110.19
1	5	1867	A	N9-C1'-C2'	8.35	124.52	112.00
49	S2	127	C	C4'-C3'-O3'	8.34	121.91	109.40
1	5	1671	U	O4'-C1'-C2'	-8.34	99.26	107.60
34	e	47	ARG	N-CA-C	-8.34	97.14	109.15
49	S2	349	A	C2'-C3'-O3'	8.34	126.21	113.70
20	Q	37	ARG	NE-CZ-NH2	8.33	126.70	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	h	117	ARG	CG-CD-NE	-8.32	93.70	112.00
4	A	193	ARG	CG-CD-NE	-8.31	93.71	112.00
7	D	210	TYR	CA-CB-CG	-8.30	98.96	113.90
1	5	4162	C	N1-C1'-C2'	8.29	126.44	114.00
1	5	4275	G	N9-C1'-C2'	-8.29	99.57	112.00
3	8	81	C	C1'-C2'-O2'	8.28	120.82	108.40
1	5	1377	G	C2'-C3'-O3'	8.27	126.11	113.70
1	5	2109	G	C3'-C2'-O2'	8.27	123.11	110.70
1	5	2510	G	C4'-C3'-O3'	-8.27	100.59	113.00
1	5	2089	G	C1'-C2'-O2'	-8.27	99.39	111.80
1	5	4871	C	C4'-C3'-O3'	8.26	121.79	109.40
1	5	943	A	C4'-C3'-O3'	8.26	121.79	109.40
3	8	86	U	O4'-C1'-C2'	-8.26	99.34	107.60
49	S2	1664	A	C2'-C3'-O3'	8.26	126.09	113.70
49	S2	102	A	C2'-C3'-O3'	8.26	121.88	109.50
1	5	4518	A	C4'-C3'-O3'	8.25	121.78	109.40
49	S2	141	A	C2'-C3'-O3'	8.25	121.88	109.50
1	5	5040	U	N1-C1'-C2'	8.24	126.36	114.00
1	5	5046	U	C2'-C3'-O3'	8.23	126.05	113.70
49	S2	77	A	C1'-C2'-O2'	8.23	120.74	108.40
5	B	102	PHE	CB-CA-C	-8.22	98.20	110.95
14	K	39	PRO	CA-N-CD	-8.22	100.49	112.00
1	5	157	U	C3'-C2'-O2'	8.21	123.01	110.70
1	5	930	G	C4'-C3'-O3'	8.20	121.70	109.40
1	5	88	A	C2'-C3'-O3'	-8.19	101.41	113.70
1	5	1235	G	C2'-C3'-O3'	-8.19	101.42	113.70
1	5	1501	C	N1-C1'-C2'	8.19	126.28	114.00
1	5	2361	G	N9-C1'-C2'	-8.18	99.73	112.00
51	SB	81	PHE	N-CA-C	-8.17	100.63	110.44
14	K	30	PRO	CA-C-O	-8.17	105.73	120.60
27	X	73	HIS	CA-CB-CG	-8.17	105.63	113.80
1	5	2116	C	C2'-C3'-O3'	8.17	121.75	109.50
48	4	72	SER	N-CA-C	8.17	122.21	108.90
49	S2	732	U	C2'-C3'-O3'	8.17	125.95	113.70
9	F	209	PHE	N-CA-CB	8.16	122.23	110.16
1	5	2769	U	C1'-C2'-O2'	8.15	120.63	108.40
58	SI	28	GLU	N-CA-C	-8.15	97.39	109.62
46	q	6	ARG	CA-C-N	8.14	137.10	121.54
46	q	6	ARG	C-N-CA	8.14	137.10	121.54
48	4	326	GLU	N-CA-C	-8.14	101.76	112.34
36	g	14	ASN	N-CA-CB	8.13	122.36	109.51
1	5	4981	G	C1'-C2'-O2'	8.13	120.59	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	r	31	ASN	CA-CB-CG	-8.12	104.48	112.60
1	5	4535	A	C2'-C3'-O3'	8.12	125.87	113.70
1	5	4888	U	C4'-C3'-O3'	8.11	121.57	109.40
1	5	2264	C	C2'-C3'-O3'	8.11	121.66	109.50
1	5	291	U	C2'-C3'-O3'	-8.10	101.55	113.70
1	5	3717	A	C1'-C2'-O2'	-8.10	96.24	108.40
49	S2	968	U	C1'-C2'-O2'	8.10	120.56	108.40
3	8	64	U	N1-C1'-C2'	8.10	124.14	112.00
49	S2	1331	C	C4'-C3'-O3'	-8.10	100.86	113.00
1	5	1266	G	C2'-C3'-O3'	8.08	125.83	113.70
1	5	1445	U	C2'-C3'-O3'	8.08	125.82	113.70
7	D	44	TYR	CB-CA-C	8.07	126.49	110.42
49	S2	1198	G	C4'-C3'-O3'	-8.07	100.89	113.00
55	SF	165	ASN	N-CA-CB	8.07	121.83	109.97
9	F	228	HIS	N-CA-CB	8.06	124.12	110.49
14	K	85	LEU	CA-C-N	8.06	136.93	121.54
14	K	85	LEU	C-N-CA	8.06	136.93	121.54
49	S2	1537	A	C3'-C2'-O2'	8.05	122.77	110.70
46	q	97	GLU	N-CA-C	8.04	120.05	111.28
1	5	172	C	C1'-C2'-O2'	8.03	120.45	108.40
1	5	4592	C	C3'-C2'-O2'	8.03	122.74	110.70
1	5	5066	U	N1-C1'-C2'	8.02	124.03	112.00
8	E	278	TYR	N-CA-C	-8.02	92.87	108.59
1	5	2124	G	C2'-C3'-O3'	8.02	125.72	113.70
48	4	806	GLY	CA-C-N	-8.01	106.24	121.54
48	4	806	GLY	C-N-CA	-8.01	106.24	121.54
1	5	151	G	N9-C1'-C2'	-8.00	100.00	112.00
1	5	2305	U	O4'-C4'-C3'	-8.00	98.10	106.10
1	5	4287	G	C1'-C2'-O2'	-8.00	99.80	111.80
73	SX	20	HIS	CB-CA-C	8.00	124.65	110.81
49	S2	551	U	C1'-C2'-O2'	7.99	120.39	108.40
1	5	1440	U	C2'-C3'-O3'	7.99	125.69	113.70
49	S2	917	U	C4'-C3'-O3'	-7.98	101.03	113.00
1	5	4400	G	C1'-C2'-O2'	7.98	120.37	108.40
38	i	27	SER	N-CA-C	7.98	119.61	111.07
49	S2	798	A	C3'-C2'-O2'	7.98	122.67	110.70
17	N	139	HIS	CA-CB-CG	-7.98	105.82	113.80
30	a	34	ASN	CA-CB-CG	-7.98	104.62	112.60
1	5	219	G	O4'-C1'-C2'	-7.97	99.62	107.60
1	5	974	C	C2'-C3'-O3'	7.97	125.66	113.70
14	K	85	LEU	CD1-CG-CD2	7.97	128.33	110.80
15	L	192	PHE	N-CA-CB	7.96	121.80	109.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	K	91	ASP	N-CA-C	7.96	124.78	114.75
1	5	1534	A	N9-C1'-C2'	7.96	125.93	114.00
1	5	2470	C	O4'-C1'-C2'	-7.96	99.64	107.60
1	5	979	C	C2'-C3'-O3'	7.96	125.63	113.70
22	S	29	ARG	CG-CD-NE	-7.95	94.52	112.00
49	S2	631	U	N1-C1'-C2'	7.95	125.92	114.00
48	4	191	THR	CA-C-N	-7.94	110.22	122.60
48	4	191	THR	C-N-CA	-7.94	110.22	122.60
49	S2	181	A	C4'-C3'-O3'	7.93	121.29	109.40
74	SY	20	ARG	N-CA-C	7.92	120.91	108.79
1	5	1916	G	N9-C1'-C2'	7.91	123.87	112.00
14	K	130	LYS	CA-CB-CG	7.91	129.93	114.10
20	Q	4	ASP	CA-CB-CG	-7.91	104.69	112.60
49	S2	1109	C	C1'-C2'-O2'	7.91	120.26	108.40
48	4	669	VAL	CB-CA-C	7.90	122.25	112.45
1	5	406	C	C2'-C3'-O3'	7.90	125.55	113.70
32	c	89	TYR	N-CA-C	7.90	120.15	108.14
1	5	1575	A	N9-C1'-C2'	7.90	123.84	112.00
1	5	486	C	C2'-C3'-O3'	7.89	125.54	113.70
7	D	145	TYR	CB-CA-C	7.88	122.95	110.19
1	5	2079	G	C4'-C3'-O3'	-7.88	101.19	113.00
28	Y	18	HIS	CA-CB-CG	-7.88	105.92	113.80
1	5	2553	A	N9-C1'-C2'	7.87	125.81	114.00
49	S2	1309	C	C4'-C3'-O3'	7.87	124.81	113.00
19	P	25	HIS	CB-CA-C	7.87	123.37	110.78
49	S2	1578	U	N1-C1'-C2'	7.86	125.79	114.00
1	5	3727	A	C1'-C2'-O2'	-7.84	96.64	108.40
1	5	4737	G	N9-C1'-C2'	7.84	123.76	112.00
49	S2	1133	A	C1'-C2'-O2'	7.82	120.13	108.40
45	p	14	TYR	N-CA-C	-7.82	102.37	112.23
16	M	6	PHE	CA-CB-CG	-7.82	105.98	113.80
1	5	3596	A	C3'-C2'-O2'	7.81	122.42	110.70
1	5	85	G	C1'-C2'-O2'	7.81	123.52	111.80
1	5	1382	G	N9-C1'-C2'	7.81	123.72	112.00
1	5	2251	G	C4'-C3'-O3'	7.81	121.11	109.40
49	S2	2	A	C4'-C3'-O3'	7.80	121.09	109.40
5	B	258	HIS	N-CA-C	7.79	127.03	109.81
1	5	1378	C	N1-C1'-C2'	7.79	123.69	112.00
1	5	3739	C	O4'-C1'-C2'	-7.79	99.81	107.60
49	S2	1113	A	N9-C1'-C2'	7.78	123.67	112.00
1	5	2053	C	C4'-C3'-O3'	-7.78	101.33	113.00
39	j	27	TYR	CA-CB-CG	-7.76	99.92	113.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2661	U	C2'-C3'-O3'	7.76	121.14	109.50
3	8	126	C	C2'-C3'-O3'	7.76	121.14	109.50
49	S2	427	U	N1-C1'-C2'	7.76	123.64	112.00
14	K	101	SER	N-CA-C	7.75	119.36	111.07
44	o	31	ASP	CA-CB-CG	-7.75	104.85	112.60
48	4	393	PRO	CA-C-N	-7.74	109.88	120.87
48	4	393	PRO	C-N-CA	-7.74	109.88	120.87
1	5	1396	G	C3'-C2'-O2'	7.74	122.31	110.70
49	S2	64	A	C2'-C3'-O3'	-7.74	102.09	113.70
1	5	4464	A	N9-C1'-C2'	7.73	123.60	112.00
64	SO	147	ARG	CG-CD-NE	-7.73	95.00	112.00
1	5	2125	C	C1'-C2'-O2'	-7.72	100.22	111.80
1	5	3871	A	N9-C1'-C2'	7.72	123.58	112.00
48	4	111	PHE	CA-C-N	7.72	132.46	121.42
48	4	111	PHE	C-N-CA	7.72	132.46	121.42
49	S2	642	U	N1-C1'-C2'	-7.72	100.42	112.00
1	5	4251	A	N9-C1'-C2'	7.71	123.57	112.00
17	N	143	ARG	CG-CD-NE	-7.71	95.04	112.00
16	M	17	PHE	N-CA-C	7.71	118.78	108.38
4	A	211	PHE	N-CA-C	-7.70	103.45	112.92
51	SB	205	TYR	CA-CB-CG	-7.70	100.05	113.90
1	5	686	A	C4'-C3'-O3'	7.69	120.94	109.40
31	b	17	HIS	N-CA-C	7.69	122.97	112.90
49	S2	215	G	C2'-C3'-O3'	7.68	121.02	109.50
1	5	747	A	C3'-C2'-O2'	7.67	126.10	114.60
1	5	5027	C	C2'-C3'-O3'	7.67	121.00	109.50
7	D	31	TYR	N-CA-C	-7.66	97.83	110.17
1	5	147	A	N9-C1'-C2'	7.66	123.48	112.00
1	5	4199	C	O4'-C1'-C2'	-7.66	99.94	107.60
1	5	4414	A	C4'-C3'-O3'	-7.65	101.53	113.00
14	K	41	LYS	N-CA-C	7.65	122.85	112.68
4	A	16	PHE	CB-CA-C	7.65	121.26	111.40
44	o	48	TYR	CA-CB-CG	-7.65	100.14	113.90
48	4	153	PRO	O-C-N	7.65	132.46	123.21
49	S2	1863	A	C1'-C2'-O2'	-7.64	100.33	111.80
1	5	1815	G	N9-C1'-C2'	7.64	125.46	114.00
30	a	62	HIS	N-CA-CB	7.64	123.40	110.49
37	h	119	PHE	CB-CA-C	-7.64	95.22	110.42
8	E	59	TYR	N-CA-C	-7.64	94.53	110.80
49	S2	1246	A	C1'-C2'-O2'	7.64	119.86	108.40
1	5	2280	G	N9-C1'-C2'	7.63	123.45	112.00
1	5	170	C	C2'-C3'-O3'	7.63	120.95	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1637	A	N9-C1'-C2'	-7.63	102.55	114.00
49	S2	1088	U	N1-C1'-C2'	7.63	125.45	114.00
61	SL	92	TYR	N-CA-C	7.63	119.73	108.60
1	5	1998	A	N9-C1'-C2'	7.62	125.44	114.00
1	5	4215	C	O4'-C1'-C2'	-7.62	99.98	107.60
1	5	1	C	C4'-C3'-O3'	7.62	120.83	109.40
48	4	102	LEU	N-CA-C	-7.62	96.85	108.96
1	5	3859	G	C4'-C3'-O3'	-7.61	101.58	113.00
1	5	2324	C	C2'-C3'-O3'	7.61	125.12	113.70
1	5	4966	A	N9-C1'-C2'	7.61	123.41	112.00
8	E	275	ASN	N-CA-CB	7.61	121.19	109.85
1	5	2268	A	N9-C1'-C2'	7.60	125.41	114.00
1	5	2812	A	N9-C1'-C2'	7.60	123.40	112.00
58	SI	113	TYR	CA-CB-CG	7.60	127.57	113.90
59	SJ	48	PHE	N-CA-C	-7.60	101.75	111.02
45	p	34	HIS	N-CA-C	-7.59	104.07	112.72
49	S2	1432	U	C2'-C3'-O3'	-7.59	102.32	113.70
49	S2	919	A	C2'-C3'-O3'	-7.59	98.12	109.50
54	SE	172	PHE	N-CA-C	7.58	119.67	108.60
49	S2	1556	A	C4'-C3'-O3'	7.58	120.77	109.40
1	5	2464	C	C1'-C2'-O2'	-7.57	100.44	111.80
1	5	4464	A	C2'-C3'-O3'	7.57	125.06	113.70
6	C	102	PHE	N-CA-CB	7.57	121.27	109.69
46	q	84	GLY	N-CA-C	7.56	131.10	113.18
65	SP	21	ASP	CB-CG-OD1	-7.55	101.03	118.40
49	S2	601	G	C1'-C2'-O2'	-7.54	100.48	111.80
14	K	114	ARG	N-CA-C	7.54	120.45	111.33
49	S2	3	C	N1-C1'-C2'	7.54	125.31	114.00
49	S2	450	C	C4'-C3'-O3'	-7.54	101.69	113.00
49	S2	1284	A	C1'-C2'-O2'	-7.53	100.51	111.80
29	Z	38	TYR	CB-CA-C	7.52	123.75	110.36
61	SL	100	ASN	OD1-CG-ND2	-7.52	115.08	122.60
1	5	4234	A	N9-C1'-C2'	7.52	125.28	114.00
49	S2	384	U	C2'-C3'-O3'	7.52	124.98	113.70
1	5	3698	G	C4'-C3'-O3'	-7.52	101.72	113.00
1	5	350	C	N1-C1'-C2'	7.51	123.26	112.00
1	5	514	U	C4'-C3'-O3'	7.51	124.26	113.00
4	A	211	PHE	CA-CB-CG	-7.51	106.29	113.80
5	B	274	TYR	CA-CB-CG	-7.50	100.39	113.90
1	5	1455	G	C2'-C3'-O3'	7.50	124.95	113.70
52	SC	241	PHE	CA-CB-CG	-7.50	106.30	113.80
1	5	29	G	N9-C1'-C2'	7.49	123.24	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1645	C	N1-C1'-C2'	7.49	123.24	112.00
1	5	514	U	C2'-C3'-O3'	7.49	124.94	113.70
1	5	1075	G	C4'-C3'-O3'	-7.49	101.76	113.00
14	K	114	ARG	NE-CZ-NH1	7.49	128.99	121.50
20	Q	4	ASP	CB-CA-C	7.49	122.78	111.70
30	a	41	HIS	N-CA-C	-7.48	102.68	112.41
4	A	189	TYR	CA-CB-CG	7.48	127.36	113.90
58	SI	198	TYR	N-CA-C	-7.47	103.15	111.82
28	Y	61	HIS	N-CA-CB	7.47	120.84	110.01
1	5	1734	G	C2'-C3'-O3'	7.46	120.69	109.50
29	Z	38	TYR	N-CA-C	-7.46	99.17	110.14
46	q	68	HIS	N-CA-CB	7.46	121.08	110.12
1	5	30	C	N1-C1'-C2'	7.46	123.19	112.00
6	C	41	HIS	CA-CB-CG	-7.45	106.35	113.80
1	5	1176	C	C3'-C2'-O2'	7.45	121.88	110.70
1	5	2256	C	C2'-C3'-O3'	7.45	120.68	109.50
1	5	1355	G	N9-C1'-C2'	7.45	123.18	112.00
9	F	168	ARG	CG-CD-NE	-7.45	95.61	112.00
7	D	175	HIS	N-CA-C	-7.44	97.69	109.23
49	S2	1395	C	O4'-C1'-C2'	-7.44	100.16	107.60
1	5	291	U	N1-C1'-C2'	7.44	123.16	112.00
1	5	2851	G	C2'-C3'-O3'	7.43	124.85	113.70
49	S2	1109	C	O4'-C1'-N1	7.43	119.65	108.50
25	V	97	TYR	CA-CB-CG	-7.43	100.53	113.90
49	S2	863	U	N1-C1'-C2'	7.43	123.14	112.00
1	5	2589	C	C2'-C3'-O3'	7.42	124.83	113.70
17	N	180	PHE	CB-CA-C	7.42	125.19	110.42
49	S2	104	A	C2'-C3'-O3'	7.42	124.83	113.70
74	SY	86	GLU	CB-CG-CD	-7.42	99.99	112.60
19	P	140	MET	N-CA-C	7.40	120.55	110.55
1	5	4221	C	C2'-C3'-O3'	-7.40	102.60	113.70
35	f	4	ARG	N-CA-CB	7.39	122.99	110.49
1	5	1214	C	C3'-C2'-O2'	-7.39	103.52	114.60
1	5	4745	G	C2'-C3'-O3'	-7.39	102.62	113.70
35	f	4	ARG	CG-CD-NE	-7.39	95.75	112.00
29	Z	54	THR	N-CA-C	7.38	122.02	113.38
49	S2	1452	A	C2'-C3'-O3'	7.38	120.57	109.50
49	S2	1719	A	C4'-C3'-O3'	-7.38	101.93	113.00
49	S2	645	C	N1-C1'-C2'	-7.38	100.93	112.00
1	5	2091	C	C2'-C3'-O3'	7.38	120.57	109.50
49	S2	146	G	C3'-C2'-O2'	7.38	121.77	110.70
49	S2	26	U	O4'-C1'-C2'	-7.38	100.22	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1729	A	C4'-C3'-O3'	-7.37	101.94	113.00
1	5	332	C	N1-C1'-C2'	7.37	123.06	112.00
1	5	2509	C	C1'-C2'-O2'	-7.37	97.34	108.40
1	5	4677	U	C1'-C2'-O2'	7.37	119.45	108.40
5	B	179	HIS	CA-CB-CG	-7.37	106.43	113.80
61	SL	120	VAL	N-CA-C	-7.37	102.02	110.05
1	5	4750	G	C3'-C2'-O2'	7.36	121.74	110.70
1	5	3790	U	N1-C1'-C2'	7.36	125.03	114.00
1	5	3736	A	C1'-C2'-O2'	-7.35	97.37	108.40
1	5	1890	G	N9-C1'-C2'	-7.35	100.97	112.00
9	F	168	ARG	CB-CG-CD	7.35	128.21	111.30
48	4	820	LEU	CA-C-N	-7.35	112.47	121.00
48	4	820	LEU	C-N-CA	-7.35	112.47	121.00
49	S2	1703	C	C1'-C2'-O2'	7.35	119.43	108.40
49	S2	353	C	C3'-C2'-O2'	7.35	121.73	110.70
48	4	420	LEU	CA-C-N	7.35	130.35	120.50
48	4	420	LEU	C-N-CA	7.35	130.35	120.50
1	5	3676	G	C2'-C3'-O3'	-7.35	102.68	113.70
1	5	3645	U	C4'-C3'-O3'	-7.35	101.98	113.00
48	4	855	LEU	CA-C-N	7.34	135.56	121.54
48	4	855	LEU	C-N-CA	7.34	135.56	121.54
49	S2	923	G	C2'-C3'-O3'	7.34	124.71	113.70
1	5	1887	G	N9-C1'-C2'	-7.34	101.00	112.00
1	5	4104	G	C1'-C2'-O2'	-7.34	100.79	111.80
49	S2	594	A	N9-C1'-C2'	-7.33	103.00	114.00
1	5	454	U	C2'-C3'-O3'	7.33	124.70	113.70
10	G	54	PHE	CB-CA-C	7.33	122.82	111.02
1	5	1832	C	C2'-C3'-O3'	7.33	124.69	113.70
34	e	60	TYR	N-CA-C	-7.33	101.45	110.61
47	r	21	ASN	CB-CA-C	7.33	121.59	111.63
48	4	52	GLY	CA-C-N	7.33	135.53	121.54
48	4	52	GLY	C-N-CA	7.33	135.53	121.54
49	S2	1568	C	C1'-C2'-O2'	-7.32	100.82	111.80
49	S2	1648	G	C4'-C3'-O3'	7.32	120.37	109.40
1	5	2797	C	N1-C1'-C2'	-7.31	103.03	114.00
1	5	1484	G	O4'-C4'-C3'	-7.31	98.79	106.10
6	C	42	THR	N-CA-C	7.31	120.12	111.71
63	SN	18	TYR	N-CA-CB	7.31	122.85	110.49
48	4	194	GLU	N-CA-C	7.31	119.03	111.14
49	S2	1648	G	C2'-C3'-O3'	-7.31	98.54	109.50
1	5	2123	C	C2'-C3'-O3'	7.30	120.46	109.50
4	A	209	HIS	CA-C-N	7.30	128.97	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	209	HIS	C-N-CA	7.30	128.97	119.84
12	I	4	ARG	CG-CD-NE	-7.30	95.93	112.00
24	U	90	TYR	CB-CA-C	-7.30	99.36	110.90
1	5	1280	C	C4'-C3'-O3'	-7.30	102.05	113.00
39	j	71	TYR	CA-CB-CG	7.30	127.05	113.90
61	SL	99	TYR	N-CA-C	-7.29	101.46	110.65
1	5	2852	U	O4'-C1'-C2'	-7.29	100.31	107.60
7	D	119	TYR	N-CA-C	-7.29	101.91	111.02
82	Sg	64	HIS	N-CA-C	7.29	120.00	109.14
48	4	123	ASP	CA-C-N	7.29	133.27	121.17
48	4	123	ASP	C-N-CA	7.29	133.27	121.17
49	S2	182	C	C2'-C3'-O3'	7.29	124.63	113.70
49	S2	1039	C	C2'-C3'-O3'	7.28	124.62	113.70
59	SJ	48	PHE	CA-CB-CG	-7.28	106.52	113.80
1	5	5001	U	N1-C1'-C2'	7.28	122.91	112.00
47	r	31	ASN	N-CA-CB	7.28	122.16	110.16
1	5	3625	G	C2'-C3'-O3'	7.27	124.61	113.70
33	d	73	TRP	N-CA-C	-7.27	101.52	110.61
74	SY	76	TYR	CA-CB-CG	-7.27	100.81	113.90
3	8	64	U	C2'-C3'-O3'	7.27	124.61	113.70
33	d	86	VAL	N-CA-C	7.27	117.94	108.35
1	5	2442	G	C4'-C3'-O3'	-7.26	102.10	113.00
48	4	197	SER	N-CA-C	7.26	121.67	110.20
4	A	34	PHE	N-CA-CB	7.26	120.85	109.82
49	S2	1012	A	C3'-C2'-O2'	7.26	121.59	110.70
49	S2	1282	A	C2'-C3'-O3'	-7.26	102.81	113.70
1	5	3804	G	C1'-C2'-O2'	7.25	119.28	108.40
1	5	2271	C	N1-C1'-C2'	7.25	122.87	112.00
49	S2	381	C	C1'-C2'-O2'	-7.24	97.53	108.40
38	i	28	ARG	CG-CD-NE	-7.24	96.08	112.00
1	5	2806	A	C1'-C2'-O2'	7.24	119.25	108.40
12	I	92	HIS	N-CA-C	-7.24	100.95	110.07
2	7	72	U	C2'-C3'-O3'	7.23	124.55	113.70
1	5	2325	C	O4'-C1'-C2'	-7.22	100.38	107.60
28	Y	81	TYR	CA-CB-CG	-7.22	100.89	113.90
1	5	1292	C	C2'-C3'-O3'	7.22	124.53	113.70
1	5	2319	C	N1-C1'-C2'	7.22	122.83	112.00
12	I	213	HIS	CB-CA-C	7.22	121.53	111.86
61	SL	62	PHE	CA-CB-CG	-7.22	106.58	113.80
49	S2	445	A	C2'-C3'-O3'	-7.22	102.88	113.70
1	5	2329	U	C1'-C2'-O2'	-7.21	100.98	111.80
49	S2	1016	U	C2'-C3'-O3'	-7.21	102.88	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	956	A	C2'-C3'-O3'	7.21	120.32	109.50
52	SC	241	PHE	N-CA-C	-7.21	103.11	110.97
1	5	3611	A	N9-C1'-C2'	7.21	122.81	112.00
1	5	2666	U	N1-C1'-C2'	-7.20	101.19	112.00
35	f	6	TRP	N-CA-C	-7.20	95.45	110.80
46	q	45	MET	N-CA-C	-7.20	101.95	111.24
48	4	669	VAL	N-CA-C	7.20	117.91	106.32
49	S2	1198	G	C2'-C3'-O3'	7.20	124.50	113.70
56	SG	61	PHE	CB-CA-C	7.19	116.91	110.44
5	B	116	ARG	CG-CD-NE	7.19	127.82	112.00
49	S2	294	U	N1-C1'-C2'	7.19	124.79	114.00
21	R	32	ILE	N-CA-C	-7.19	102.09	110.21
49	S2	444	G	O4'-C1'-C2'	-7.18	100.42	107.60
49	S2	1142	G	C1'-C2'-O2'	7.18	119.18	108.40
46	q	150	GLY	CA-C-N	-7.18	106.24	121.32
46	q	150	GLY	C-N-CA	-7.18	106.24	121.32
1	5	3692	A	C1'-C2'-O2'	7.18	119.17	108.40
1	5	4331	G	C4'-C3'-O3'	-7.18	102.23	113.00
46	q	69	LEU	CA-C-N	7.18	135.25	121.54
46	q	69	LEU	C-N-CA	7.18	135.25	121.54
48	4	103	ILE	N-CA-C	7.18	118.63	108.36
1	5	292	G	N9-C1'-C2'	7.17	124.76	114.00
48	4	540	GLU	N-CA-C	-7.17	103.40	111.07
49	S2	1	U	C5'-C4'-C3'	7.17	125.95	115.20
49	S2	596	U	N1-C1'-C2'	7.17	122.75	112.00
1	5	1364	U	C2'-C3'-O3'	7.17	124.45	113.70
52	SC	236	PHE	CA-CB-CG	-7.16	106.64	113.80
49	S2	451	G	C2'-C3'-O3'	-7.16	102.96	113.70
49	S2	1433	C	C5'-C4'-C3'	7.16	126.73	116.00
58	SI	55	TYR	CA-CB-CG	-7.16	101.02	113.90
49	S2	665	G	C4'-C3'-O3'	-7.15	102.28	113.00
49	S2	426	A	C4'-C3'-O3'	7.15	123.72	113.00
49	S2	646	G	C1'-C2'-O2'	7.14	119.11	108.40
20	Q	35	LEU	N-CA-C	7.14	118.95	111.03
49	S2	1546	G	C1'-C2'-O2'	-7.14	97.69	108.40
48	4	793	SER	CA-C-N	-7.13	106.34	121.32
48	4	793	SER	C-N-CA	-7.13	106.34	121.32
49	S2	399	C	N1-C1'-C2'	-7.13	103.30	114.00
49	S2	824	C	N1-C1'-C2'	7.12	122.69	112.00
49	S2	870	A	C4'-C3'-O3'	7.12	120.09	109.40
1	5	2347	A	C1'-C2'-O2'	7.12	122.48	111.80
68	SS	86	ARG	CG-CD-NE	-7.12	96.33	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	139	C	C3'-C2'-O2'	7.12	121.38	110.70
49	S2	1309	C	C1'-C2'-O2'	7.12	119.08	108.40
1	5	3938	G	N9-C1'-C2'	7.12	124.67	114.00
28	Y	87	ARG	NE-CZ-NH2	7.12	125.61	119.20
1	5	2827	G	O4'-C4'-C3'	-7.11	98.99	106.10
1	5	4280	A	C2'-C3'-O3'	7.11	124.37	113.70
38	i	39	PHE	CA-CB-CG	-7.11	106.69	113.80
1	5	4738	C	C4'-C3'-O3'	-7.11	102.33	113.00
3	8	38	U	C3'-C2'-O2'	7.11	121.36	110.70
39	j	27	TYR	N-CA-CB	7.11	120.74	109.51
1	5	3882	C	N1-C1'-C2'	7.10	122.65	112.00
14	K	143	VAL	N-CA-C	7.10	118.35	107.99
48	4	122	THR	N-CA-CB	-7.10	97.64	109.28
1	5	4528	G	O4'-C1'-C2'	-7.10	100.50	107.60
63	SN	18	TYR	CA-CB-CG	-7.10	101.13	113.90
1	5	1238	A	C3'-C2'-O2'	7.09	125.24	114.60
49	S2	367	U	N1-C1'-C2'	-7.09	101.36	112.00
1	5	93	G	N9-C1'-C2'	7.09	124.64	114.00
1	5	2382	A	C2'-C3'-O3'	-7.09	103.06	113.70
6	C	340	ILE	N-CA-C	-7.09	106.02	111.62
21	R	118	HIS	N-CA-C	-7.09	104.20	112.92
49	S2	532	C	C2'-C3'-O3'	7.09	124.33	113.70
1	5	5048	A	C4'-C3'-O3'	-7.08	102.38	113.00
49	S2	1063	C	N1-C1'-C2'	-7.08	101.38	112.00
49	S2	1667	U	N1-C1'-C2'	7.08	122.62	112.00
1	5	4693	C	C2'-C3'-O3'	7.08	124.32	113.70
1	5	1650	A	O4'-C4'-C3'	-7.07	99.03	106.10
1	5	5022	U	C2'-C3'-O3'	7.07	124.31	113.70
1	5	353	A	N9-C1'-C2'	-7.07	103.39	114.00
49	S2	1275	G	C2'-C3'-O3'	-7.07	103.10	113.70
1	5	4325	A	N9-C1'-C2'	7.06	122.60	112.00
1	5	4762	A	C4'-C3'-O3'	7.06	119.99	109.40
9	F	83	PHE	N-CA-C	7.06	119.89	107.61
1	5	4750	G	N9-C1'-C2'	-7.05	101.42	112.00
14	K	28	LEU	N-CA-CB	7.05	122.41	110.49
1	5	2046	G	C3'-C2'-O2'	7.05	125.17	114.60
1	5	4463	U	O4'-C1'-C2'	-7.05	100.55	107.60
1	5	3883	U	N1-C1'-C2'	7.04	122.57	112.00
49	S2	918	U	C2'-C3'-O3'	7.04	120.06	109.50
49	S2	1401	A	C2'-C3'-O3'	7.04	124.26	113.70
49	S2	1475	G	C4'-C3'-O3'	7.04	119.96	109.40
49	S2	1492	U	C1'-C2'-O2'	7.04	118.96	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4531	U	O4'-C4'-C3'	-7.04	99.06	106.10
14	K	129	ILE	O-C-N	-7.04	112.41	122.12
49	S2	501	C	O4'-C1'-C2'	-7.04	100.56	107.60
7	D	29	ASP	N-CA-C	-7.04	98.58	109.76
9	F	197	TYR	CB-CA-C	-7.03	96.42	110.42
49	S2	1434	C	N1-C1'-C2'	7.03	122.55	112.00
49	S2	1450	G	C3'-C2'-O2'	7.03	121.24	110.70
34	e	43	ASN	CB-CA-C	7.02	121.29	109.84
48	4	55	ARG	CA-C-N	7.02	134.95	121.54
48	4	55	ARG	C-N-CA	7.02	134.95	121.54
51	SB	82	ARG	CG-CD-NE	-7.02	96.55	112.00
1	5	4677	U	N1-C1'-C2'	-7.02	101.47	112.00
1	5	4666	G	C4'-C3'-O3'	-7.02	102.47	113.00
1	5	514	U	N1-C1'-C2'	-7.01	101.48	112.00
1	5	2122	G	C2'-C3'-O3'	7.01	120.02	109.50
48	4	664	ASP	CA-C-N	7.01	132.13	120.64
48	4	664	ASP	C-N-CA	7.01	132.13	120.64
1	5	4194	U	C3'-C2'-O2'	7.01	121.21	110.70
1	5	2847	G	C1'-C2'-O2'	7.00	118.91	108.40
49	S2	923	G	C4'-C3'-O3'	-7.00	102.49	113.00
49	S2	1841	C	C3'-C2'-O2'	7.00	121.20	110.70
1	5	505	G	C2'-C3'-O3'	7.00	124.20	113.70
12	I	35	ASP	N-CA-C	7.00	119.03	108.46
49	S2	1394	G	C2'-C3'-O3'	7.00	124.20	113.70
31	b	6	ASN	CA-CB-CG	-7.00	105.60	112.60
63	SN	114	ARG	N-CA-C	-6.99	104.01	112.54
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
1	5	48	G	C2'-C3'-O3'	6.99	119.98	109.50
1	5	172	C	O4'-C1'-C2'	-6.98	100.62	107.60
59	SJ	13	TYR	N-CA-C	6.97	119.35	108.96
61	SL	100	ASN	N-CA-C	6.97	125.66	110.80
1	5	5043	A	N9-C1'-C2'	6.97	122.45	112.00
20	Q	34	PHE	CA-CB-CG	-6.97	106.83	113.80
1	5	265	C	C4'-C3'-O3'	6.96	119.84	109.40
1	5	3908	A	N9-C1'-C2'	6.96	124.44	114.00
1	5	2851	G	C1'-C2'-O2'	6.96	118.83	108.40
25	V	97	TYR	CB-CA-C	6.95	121.02	109.89
49	S2	149	A	N9-C1'-C2'	6.95	122.43	112.00
28	Y	81	TYR	CB-CA-C	6.95	123.17	111.22
49	S2	1394	G	O4'-C1'-C2'	-6.94	100.66	107.60
1	5	2075	G	C2'-C3'-O3'	6.94	124.11	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	P	139	TYR	CA-CB-CG	-6.94	101.41	113.90
1	5	2328	G	C3'-C2'-O2'	6.94	121.11	110.70
1	5	2521	G	C3'-C2'-O2'	6.93	121.10	110.70
49	S2	499	G	C2'-C3'-O3'	6.93	124.10	113.70
1	5	307	A	N9-C1'-C2'	6.93	122.40	112.00
81	Sf	151	ASN	N-CA-C	6.93	119.04	109.54
1	5	2438	A	N9-C1'-C2'	-6.93	101.60	112.00
48	4	405	SER	N-CA-C	-6.93	104.79	113.18
1	5	43	U	C1'-C2'-O2'	6.93	118.80	108.40
52	SC	198	ALA	CA-C-N	-6.93	113.17	120.03
52	SC	198	ALA	C-N-CA	-6.93	113.17	120.03
1	5	4464	A	C4'-C3'-O3'	-6.93	102.61	113.00
1	5	4762	A	C2'-C3'-O3'	-6.93	99.11	109.50
1	5	1887	G	C2'-C3'-O3'	6.93	124.09	113.70
49	S2	402	C	C1'-C2'-O2'	6.92	118.78	108.40
1	5	4227	U	C2'-C3'-O3'	6.92	124.08	113.70
49	S2	1823	A	C4'-C3'-O3'	-6.92	99.02	109.40
1	5	55	G	C1'-C2'-O2'	6.92	118.77	108.40
48	4	742	GLU	C-N-CD	-6.92	96.65	125.00
1	5	1573	G	N9-C1'-C2'	6.92	122.37	112.00
49	S2	1850	A	N9-C1'-C2'	6.92	122.37	112.00
1	5	4566	U	C4'-C3'-O3'	-6.91	102.63	113.00
1	5	1572	U	N1-C1'-C2'	6.91	122.37	112.00
48	4	478	PHE	CB-CA-C	6.91	121.63	110.09
51	SB	67	PHE	N-CA-CB	-6.91	100.06	111.74
49	S2	1059	G	N9-C1'-C2'	6.91	122.36	112.00
1	5	1554	A	C1'-C2'-O2'	6.90	118.76	108.40
38	i	26	HIS	CA-CB-CG	-6.90	106.90	113.80
79	Sd	12	ARG	N-CA-C	-6.90	105.66	112.97
49	S2	1372	U	C1'-C2'-O2'	-6.89	101.46	111.80
62	SM	127	TYR	CA-CB-CG	6.89	126.30	113.90
9	F	58	HIS	N-CA-CB	6.89	120.00	110.01
48	4	829	SER	CA-C-N	-6.89	111.24	119.78
48	4	829	SER	C-N-CA	-6.89	111.24	119.78
44	o	78	ARG	NE-CZ-NH2	6.88	125.40	119.20
1	5	4560	C	C4'-C3'-O3'	-6.88	99.08	109.40
48	4	666	THR	CA-C-N	-6.88	112.65	123.24
48	4	666	THR	C-N-CA	-6.88	112.65	123.24
1	5	2649	G	N9-C1'-C2'	6.88	122.32	112.00
48	4	448	GLN	CB-CA-C	-6.88	100.08	110.88
3	8	35	C	N1-C1'-C2'	6.87	122.31	112.00
49	S2	964	A	N9-C1'-C2'	6.87	124.31	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	D	54	ARG	CB-CG-CD	6.87	127.10	111.30
1	5	2714	G	C4'-C3'-O3'	-6.87	102.69	113.00
1	5	4750	G	C2'-C3'-O3'	-6.87	103.40	113.70
1	5	279	A	C4'-C3'-O3'	-6.87	99.10	109.40
1	5	2490	U	C2'-C3'-O3'	6.86	119.79	109.50
49	S2	1082	A	N9-C1'-C2'	6.86	122.29	112.00
51	SB	205	TYR	CB-CA-C	6.86	118.04	110.15
58	SI	66	SER	N-CA-C	6.86	119.83	109.41
49	S2	398	A	C1'-C2'-O2'	-6.86	101.52	111.80
82	Sg	140	TYR	CA-CB-CG	-6.86	101.56	113.90
1	5	1632	A	C1'-C2'-O2'	6.85	118.68	108.40
49	S2	1851	A	N9-C1'-C2'	6.85	122.28	112.00
1	5	4078	C	C1'-C2'-O2'	6.85	118.68	108.40
49	S2	427	U	P-O5'-C5'	6.85	131.18	120.90
1	5	2263	A	C4'-C3'-O3'	-6.85	99.13	109.40
1	5	3615	G	C4'-C3'-O3'	6.85	119.67	109.40
50	SA	9	GLN	CA-CB-CG	6.85	127.80	114.10
1	5	354	U	N1-C1'-C2'	-6.84	103.73	114.00
1	5	4303	C	C3'-C2'-O2'	6.84	120.96	110.70
37	h	101	ASN	N-CA-C	-6.84	104.25	112.59
50	SA	33	GLN	OE1-CD-NE2	6.84	129.44	122.60
1	5	84	A	O4'-C4'-C3'	-6.84	99.26	106.10
1	5	82	U	C1'-C2'-O2'	6.83	118.65	108.40
1	5	2665	U	C2'-C3'-O3'	6.83	123.95	113.70
7	D	44	TYR	CA-CB-CG	-6.83	101.60	113.90
1	5	4270	C	C4'-C3'-O3'	-6.83	102.75	113.00
1	5	4479	A	C1'-C2'-O2'	6.83	118.64	108.40
49	S2	1209	A	C4'-C3'-O3'	-6.82	102.77	113.00
1	5	294	G	N9-C1'-C2'	6.82	122.23	112.00
1	5	2581	A	N9-C1'-C2'	6.82	122.23	112.00
49	S2	76	U	C4'-C3'-O3'	-6.82	102.77	113.00
1	5	2088	A	C2'-C3'-O3'	6.82	123.93	113.70
1	5	3868	G	N9-C1'-C2'	-6.81	103.78	114.00
1	5	727	C	C2'-C3'-O3'	6.81	119.72	109.50
33	d	87	ARG	N-CA-CB	6.80	119.76	110.57
49	S2	1249	C	C2'-C3'-O3'	6.80	123.91	113.70
1	5	703	G	C2'-C3'-O3'	-6.80	103.50	113.70
1	5	1241	C	C2'-C3'-O3'	6.80	123.90	113.70
14	K	28	LEU	N-CA-C	-6.79	96.33	110.80
13	J	99	PHE	CB-CA-C	6.79	123.94	110.42
1	5	1358	G	O4'-C1'-C2'	-6.79	100.81	107.60
1	5	2844	A	C4'-C3'-O3'	-6.79	102.82	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	3671	G	N9-C1'-C2'	6.79	122.18	112.00
66	SQ	85	ARG	CG-CD-NE	-6.79	97.07	112.00
13	J	99	PHE	CA-CB-CG	-6.78	107.02	113.80
1	5	4280	A	N9-C1'-C2'	-6.78	101.83	112.00
1	5	1805	A	N9-C1'-C2'	6.78	124.17	114.00
48	4	196	GLU	N-CA-CB	6.78	119.93	109.97
1	5	2395	A	C2'-C3'-O3'	6.77	119.66	109.50
1	5	3878	C	C4'-C3'-O3'	-6.77	99.24	109.40
1	5	4120	U	N1-C1'-C2'	-6.77	103.84	114.00
1	5	962	C	N1-C1'-C2'	6.77	124.15	114.00
57	SH	106	ARG	N-CA-C	-6.77	103.14	111.40
1	5	38	A	C4'-C3'-O3'	-6.77	102.85	113.00
1	5	2554	U	C2'-C3'-O3'	6.76	123.85	113.70
1	5	2281	U	C4'-C3'-O3'	-6.76	102.86	113.00
1	5	1615	C	C2'-C3'-O3'	6.76	123.84	113.70
1	5	4519	C	C2'-C3'-O3'	6.76	123.84	113.70
49	S2	639	C	C3'-C2'-O2'	6.76	120.84	110.70
46	q	68	HIS	CA-C-N	6.76	134.45	121.54
46	q	68	HIS	C-N-CA	6.76	134.45	121.54
48	4	4	PHE	CA-C-N	6.75	134.01	122.12
48	4	4	PHE	C-N-CA	6.75	134.01	122.12
1	5	2689	C	O4'-C1'-C2'	-6.75	100.85	107.60
49	S2	1669	G	N9-C1'-C2'	6.75	122.13	112.00
61	SL	17	PHE	N-CA-CB	6.75	120.11	109.71
14	K	85	LEU	N-CA-CB	6.75	121.41	110.40
1	5	4936	G	C4'-C3'-O3'	6.75	123.12	113.00
49	S2	496	C	C3'-C2'-O2'	6.75	120.82	110.70
48	4	760	TYR	CB-CA-C	-6.75	99.59	110.79
1	5	220	C	C4'-C3'-O3'	-6.75	102.88	113.00
49	S2	1378	A	O4'-C4'-C3'	-6.74	99.36	106.10
1	5	4476	C	C4'-C3'-O3'	-6.74	102.89	113.00
1	5	4872	G	C2'-C3'-O3'	6.74	119.61	109.50
6	C	22	VAL	N-CA-C	6.74	117.72	111.45
22	S	47	PHE	N-CA-C	6.74	118.42	111.14
49	S2	1000	C	C1'-C2'-O2'	6.74	118.51	108.40
1	5	2403	A	N9-C1'-C2'	6.74	122.11	112.00
49	S2	1292	C	P-O5'-C5'	6.74	131.01	120.90
20	Q	181	ARG	CA-CB-CG	6.74	127.57	114.10
49	S2	960	U	C2'-C3'-O3'	6.74	123.80	113.70
1	5	3663	A	O4'-C4'-C3'	-6.73	99.37	106.10
1	5	3832	U	C1'-C2'-O2'	6.73	118.50	108.40
1	5	5056	A	N9-C1'-C2'	6.73	122.10	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	l	21	ARG	CA-C-N	6.73	128.25	119.84
41	l	21	ARG	C-N-CA	6.73	128.25	119.84
1	5	3859	G	C1'-C2'-O2'	6.73	118.50	108.40
1	5	3619	G	C4'-C3'-O3'	-6.73	102.91	113.00
1	5	1671	U	C3'-C2'-O2'	-6.72	100.61	110.70
1	5	2082	G	N9-C1'-C2'	6.72	122.08	112.00
13	J	146	ARG	CG-CD-NE	-6.72	97.21	112.00
49	S2	1090	C	C4'-C3'-O3'	-6.72	102.92	113.00
1	5	1533	A	C2'-C3'-O3'	6.71	119.57	109.50
7	D	145	TYR	CA-CB-CG	-6.71	101.81	113.90
61	SL	13	GLN	N-CA-C	-6.71	101.30	109.83
49	S2	603	C	C4'-C3'-O3'	6.71	119.47	109.40
80	Se	45	VAL	N-CA-C	-6.71	104.31	110.82
1	5	1522	G	C1'-C2'-O2'	6.71	118.46	108.40
1	5	2675	G	C4'-C3'-O3'	-6.71	102.94	113.00
8	E	217	LYS	N-CA-C	6.71	120.54	110.14
14	K	114	ARG	CG-CD-NE	6.71	126.76	112.00
48	4	404	THR	N-CA-CB	6.71	122.41	111.21
33	d	73	TRP	CA-CB-CG	6.70	126.34	113.60
49	S2	327	G	C2'-C3'-O3'	6.70	119.56	109.50
62	SM	73	GLN	N-CA-C	-6.70	101.98	111.56
1	5	4282	A	N9-C1'-C2'	6.70	124.05	114.00
4	A	194	ASN	N-CA-C	6.70	120.18	108.52
14	K	22	VAL	N-CA-C	6.70	119.66	112.96
46	q	123	VAL	CA-C-N	-6.70	113.06	119.89
46	q	123	VAL	C-N-CA	-6.70	113.06	119.89
31	b	7	HIS	CB-CA-C	-6.70	97.10	110.42
49	S2	1603	G	O4'-C4'-C3'	-6.70	99.40	106.10
21	R	94	THR	N-CA-C	6.69	121.46	113.16
1	5	92	C	C1'-C2'-O2'	6.69	118.44	108.40
16	M	6	PHE	CB-CA-C	6.69	122.22	112.05
49	S2	1358	U	C1'-C2'-O2'	6.69	118.44	108.40
1	5	3727	A	N9-C1'-C2'	6.69	122.04	112.00
1	5	4115	G	C4'-C3'-O3'	6.69	119.44	109.40
1	5	4228	G	N9-C1'-C2'	-6.69	101.97	112.00
48	4	242	GLY	CA-C-N	6.69	134.32	121.54
48	4	242	GLY	C-N-CA	6.69	134.32	121.54
49	S2	963	A	N9-C1'-C2'	6.69	122.04	112.00
50	SA	10	MET	N-CA-C	6.69	118.57	111.28
1	5	4224	A	C1'-C2'-O2'	6.69	118.43	108.40
14	K	104	ILE	CA-C-O	-6.69	112.42	120.78
1	5	2406	G	N9-C1'-C2'	-6.68	101.97	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	SE	18	TRP	CB-CA-C	6.68	121.85	111.02
1	5	2804	C	C1'-C2'-O2'	6.68	118.42	108.40
49	S2	1668	U	N1-C1'-C2'	6.68	122.02	112.00
3	8	74	U	O4'-C1'-C2'	-6.68	100.92	107.60
1	5	2818	C	C1'-C2'-O2'	6.68	118.42	108.40
36	g	95	PHE	CB-CA-C	-6.67	100.68	110.96
1	5	4165	C	O4'-C1'-C2'	-6.67	100.93	107.60
49	S2	28	U	C4'-C3'-O3'	6.67	123.00	113.00
22	S	29	ARG	CB-CA-C	6.67	120.74	109.80
1	5	2370	A	C1'-C2'-O2'	-6.66	101.81	111.80
1	5	4700	A	C1'-C2'-O2'	6.66	118.39	108.40
49	S2	350	C	C1'-C2'-O2'	6.66	118.39	108.40
1	5	2474	G	C4'-C3'-O3'	-6.66	103.02	113.00
49	S2	309	G	C4'-C3'-O3'	-6.66	103.02	113.00
1	5	4548	A	P-O5'-C5'	6.65	130.88	120.90
49	S2	956	G	C2'-C3'-O3'	-6.65	103.72	113.70
49	S2	683	G	C4'-C3'-O3'	-6.65	103.03	113.00
1	5	4451	G	N9-C1'-C2'	6.64	121.97	112.00
48	4	432	PRO	O-C-N	-6.64	113.34	122.24
1	5	3640	U	C3'-C2'-O2'	6.64	120.66	110.70
1	5	5062	G	O4'-C1'-C2'	-6.64	100.96	107.60
49	S2	1735	A	N9-C1'-C2'	6.64	121.96	112.00
35	f	24	HIS	N-CA-C	-6.64	103.73	110.97
1	5	220	C	C2'-C3'-O3'	6.64	123.66	113.70
1	5	1633	G	C2'-C3'-O3'	-6.63	103.75	113.70
1	5	4880	C	N1-C1'-C2'	6.63	121.95	112.00
48	4	95	GLY	CA-C-N	6.63	130.39	120.31
48	4	95	GLY	C-N-CA	6.63	130.39	120.31
49	S2	1864	U	C3'-C2'-O2'	6.63	120.64	110.70
1	5	417	G	O4'-C1'-C2'	-6.63	100.97	107.60
49	S2	1442	U	O4'-C1'-C2'	-6.63	100.97	107.60
1	5	1317	U	C4'-C3'-O3'	-6.63	103.06	113.00
3	8	66	A	N9-C1'-C2'	6.62	121.94	112.00
15	L	64	VAL	N-CA-C	6.62	123.12	109.34
49	S2	1701	C	N1-C1'-C2'	6.62	123.94	114.00
1	5	2658	G	N9-C1'-C2'	-6.62	102.07	112.00
1	5	707	C	C1'-C2'-O2'	6.62	118.33	108.40
1	5	2846	G	C1'-C2'-O2'	6.62	118.33	108.40
49	S2	980	A	C2'-C3'-O3'	6.62	123.63	113.70
49	S2	987	A	C2'-C3'-O3'	-6.62	103.78	113.70
14	K	103	ASN	N-CA-C	6.61	119.40	108.49
49	S2	1585	U	O4'-C4'-C3'	-6.61	99.49	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1838	U	O4'-C1'-N1	-6.61	98.28	108.20
22	S	37	HIS	CB-CA-C	-6.61	100.46	110.90
49	S2	675	U	C1'-C2'-O2'	6.61	118.31	108.40
1	5	2312	U	O4'-C1'-C2'	-6.60	101.00	107.60
1	5	2790	U	N1-C1'-C2'	6.60	123.90	114.00
49	S2	1293	A	C4'-C3'-O3'	6.60	122.90	113.00
1	5	1236	C	C3'-C2'-O2'	6.60	120.60	110.70
17	N	150	TRP	CA-CB-CG	6.60	126.14	113.60
53	SD	79	PHE	CB-CA-C	6.60	117.06	110.33
49	S2	482	G	C1'-C2'-O2'	6.60	118.29	108.40
42	m	115	CYS	N-CA-C	-6.59	105.37	113.41
74	SY	63	HIS	N-CA-CB	6.59	120.87	110.39
14	K	104	ILE	CG1-CB-CG2	6.59	130.47	110.70
27	X	117	TYR	CB-CA-C	6.58	121.27	111.06
49	S2	642	U	C1'-C2'-O2'	6.58	118.28	108.40
1	5	2363	A	C1'-C2'-O2'	6.58	118.27	108.40
1	5	2761	U	C4'-C3'-O3'	6.58	119.27	109.40
1	5	4279	A	N9-C1'-C2'	-6.58	104.13	114.00
3	8	104	A	O4'-C4'-C3'	-6.58	99.52	106.10
1	5	968	C	C4'-C3'-O3'	6.58	119.27	109.40
49	S2	1674	G	C1'-C2'-O2'	6.58	118.27	108.40
4	A	89	TYR	CB-CA-C	6.58	120.84	110.19
49	S2	164	A	C3'-C2'-O2'	6.57	120.56	110.70
1	5	1577	G	C1'-C2'-O2'	6.57	118.25	108.40
17	N	130	PHE	CA-CB-CG	-6.57	107.23	113.80
73	SX	27	TYR	CA-CB-CG	6.57	125.73	113.90
49	S2	1404	U	O4'-C4'-C3'	-6.57	99.53	106.10
49	S2	1835	A	O4'-C4'-C3'	-6.57	97.43	104.00
1	5	235	A	O4'-C1'-C2'	-6.56	101.04	107.60
49	S2	840	C	C3'-C2'-O2'	6.56	120.54	110.70
29	Z	65	ARG	CG-CD-NE	-6.56	97.57	112.00
1	5	4986	G	N9-C1'-C2'	6.56	121.84	112.00
1	5	1379	C	P-O5'-C5'	6.55	130.73	120.90
49	S2	999	G	O4'-C1'-C2'	-6.55	101.05	107.60
1	5	451	C	C2'-C3'-O3'	6.55	119.33	109.50
20	Q	24	TYR	N-CA-C	6.55	118.50	111.36
1	5	4991	U	C3'-C2'-O2'	6.55	120.53	110.70
1	5	4239	A	C2'-C3'-O3'	6.55	123.52	113.70
1	5	1271	G	C4'-C3'-O3'	6.55	122.82	113.00
49	S2	1202	U	C4'-C3'-O3'	-6.54	103.19	113.00
1	5	1376	C	C4'-C3'-O3'	-6.54	103.19	113.00
1	5	1397	A	C4'-C3'-O3'	-6.54	103.19	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	S	151	LYS	N-CA-C	6.54	119.05	108.32
48	4	60	ARG	N-CA-C	6.54	120.47	108.58
48	4	198	GLY	CA-C-N	6.54	127.50	120.83
48	4	198	GLY	C-N-CA	6.54	127.50	120.83
48	4	851	LEU	N-CA-C	-6.54	105.18	113.02
49	S2	164	A	C1'-C2'-O2'	6.54	118.20	108.40
49	S2	1123	C	O4'-C1'-C2'	-6.54	101.06	107.60
49	S2	1284	A	C3'-C2'-O2'	-6.54	104.80	114.60
1	5	2091	C	C4'-C3'-O3'	-6.53	99.60	109.40
28	Y	80	ILE	N-CA-C	6.53	118.91	108.85
49	S2	1604	G	C4'-C3'-O3'	-6.53	103.20	113.00
3	8	13	G	N9-C1'-C2'	6.53	121.80	112.00
49	S2	123	G	C1'-C2'-O2'	6.53	118.19	108.40
49	S2	72	C	C4'-C3'-O3'	6.53	119.19	109.40
1	5	1211	G	O4'-C1'-C2'	-6.53	101.07	107.60
1	5	1616	U	O4'-C1'-C2'	-6.53	101.07	107.60
20	Q	33	ARG	CG-CD-NE	-6.53	97.64	112.00
1	5	300	A	C4'-C3'-O3'	-6.53	103.21	113.00
1	5	4385	A	N9-C1'-C2'	-6.53	102.21	112.00
1	5	4965	U	N1-C1'-C2'	-6.53	102.21	112.00
49	S2	1436	C	C3'-C2'-O2'	6.53	120.49	110.70
1	5	2854	G	C2'-C3'-O3'	6.52	123.48	113.70
49	S2	19	A	C2'-C3'-O3'	6.52	123.48	113.70
1	5	1658	G	N9-C1'-C2'	6.52	121.78	112.00
1	5	2744	A	N9-C1'-C2'	6.52	121.78	112.00
1	5	1380	G	C4'-C3'-O3'	6.52	119.18	109.40
1	5	4117	U	O4'-C1'-C2'	-6.52	101.08	107.60
49	S2	1283	C	O4'-C1'-C2'	-6.51	101.08	107.60
1	5	1614	C	C2'-C3'-O3'	6.51	123.47	113.70
48	4	278	THR	CA-C-N	6.51	137.69	121.80
48	4	278	THR	C-N-CA	6.51	137.69	121.80
1	5	171	U	C4'-C3'-O3'	-6.51	99.63	109.40
1	5	1239	C	C2'-C3'-O3'	6.51	119.27	109.50
1	5	4238	G	C1'-C2'-O2'	6.51	118.17	108.40
1	5	4557	U	C4'-C3'-O3'	-6.51	103.23	113.00
23	T	13	TYR	CA-CB-CG	6.51	125.62	113.90
1	5	4979	A	N9-C1'-C2'	6.51	121.77	112.00
46	q	65	ILE	CB-CA-C	6.51	120.93	112.14
72	SW	117	ARG	NH1-CZ-NH2	6.51	127.76	119.30
1	5	1495	G	N9-C1'-C2'	6.51	121.76	112.00
80	Se	39	ASN	N-CA-C	-6.51	104.11	111.07
49	S2	1863	A	N9-C1'-C2'	6.50	123.76	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	T	142	ARG	N-CA-C	6.50	118.92	107.61
1	5	1881	C	N1-C1'-C2'	6.50	123.75	114.00
20	Q	33	ARG	N-CA-CB	6.50	119.62	109.94
49	S2	531	A	C2'-C3'-O3'	6.50	123.45	113.70
1	5	292	G	O4'-C4'-C3'	-6.50	99.60	106.10
49	S2	452	G	C3'-C2'-O2'	6.50	120.44	110.70
51	SB	155	TYR	N-CA-C	-6.50	99.11	109.76
49	S2	617	G	C1'-C2'-O2'	6.50	118.14	108.40
1	5	1488	G	C2'-C3'-O3'	6.49	123.44	113.70
1	5	2328	G	C1'-C2'-O2'	-6.49	98.66	108.40
1	5	207	G	C2'-C3'-O3'	-6.49	103.97	113.70
1	5	2307	A	N9-C1'-C2'	6.49	121.73	112.00
48	4	195	GLY	CA-C-N	-6.48	111.66	120.87
48	4	195	GLY	C-N-CA	-6.48	111.66	120.87
4	A	186	TYR	N-CA-CB	6.48	119.47	110.07
14	K	38	SER	C-N-CD	-6.48	98.42	125.00
48	4	420	LEU	N-CA-C	6.48	118.77	107.49
3	8	63	U	O4'-C1'-C2'	-6.48	101.12	107.60
1	5	1624	G	C4'-C3'-O3'	6.48	119.11	109.40
1	5	2266	C	C2'-C3'-O3'	6.47	119.21	109.50
4	A	34	PHE	CB-CA-C	-6.47	100.63	110.92
1	5	1279	A	C3'-C2'-O2'	6.47	124.31	114.60
49	S2	1201	U	C3'-C2'-O2'	6.47	120.41	110.70
1	5	3843	C	C2'-C3'-O3'	6.47	119.20	109.50
1	5	4948	C	C2'-C3'-O3'	6.47	123.40	113.70
1	5	47	A	C4'-C3'-O3'	6.46	119.10	109.40
1	5	1681	G	C1'-C2'-O2'	6.46	118.10	108.40
18	O	192	PHE	N-CA-C	-6.46	103.27	112.13
49	S2	795	A	N9-C1'-C2'	6.46	121.69	112.00
81	Sf	150	PHE	CA-CB-CG	6.46	120.26	113.80
1	5	151	G	C1'-C2'-O2'	6.46	118.09	108.40
1	5	1894	C	N1-C1'-C2'	6.46	121.69	112.00
7	D	198	HIS	CA-CB-CG	-6.46	107.34	113.80
49	S2	1378	A	C2'-C3'-O3'	6.46	119.19	109.50
49	S2	1542	C	N1-C1'-C2'	6.46	123.69	114.00
49	S2	1543	U	C4'-C3'-O3'	6.46	119.08	109.40
1	5	1439	C	O4'-C1'-C2'	-6.46	101.14	107.60
32	c	90	ARG	CA-CB-CG	6.46	127.01	114.10
49	S2	1232	U	C1'-C2'-O2'	6.46	118.08	108.40
1	5	187	U	C4'-C3'-O3'	6.45	122.68	113.00
17	N	119	TYR	N-CA-C	-6.45	100.42	110.42
49	S2	9	U	C2'-C3'-O3'	6.45	123.38	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
81	Sf	146	LEU	N-CA-CB	6.45	122.75	110.82
49	S2	1298	G	C1'-C2'-O2'	-6.45	102.13	111.80
54	SE	121	TYR	N-CA-C	-6.45	101.86	110.24
1	5	2092	G	N9-C1'-C2'	6.45	123.67	114.00
1	5	2373	C	N1-C1'-C2'	6.45	121.67	112.00
1	5	4212	A	N9-C1'-C2'	6.45	123.67	114.00
1	5	4270	C	C2'-C3'-O3'	6.45	123.37	113.70
1	5	3896	C	C3'-C2'-O2'	6.44	120.36	110.70
49	S2	524	U	C4'-C3'-O3'	-6.44	103.33	113.00
1	5	33	A	N9-C1'-C2'	6.44	121.66	112.00
39	j	11	ARG	NE-CZ-NH2	-6.44	113.40	119.20
49	S2	959	G	C2'-C3'-O3'	6.44	123.36	113.70
49	S2	448	A	N9-C1'-C2'	-6.44	104.34	114.00
1	5	1268	G	C4'-C3'-O3'	6.43	119.05	109.40
1	5	4201	G	N9-C1'-C2'	6.43	121.65	112.00
49	S2	1419	C	C2'-C3'-O3'	6.43	123.35	113.70
9	F	239	GLU	CA-CB-CG	6.43	126.96	114.10
47	r	45	HIS	CA-CB-CG	6.42	120.22	113.80
64	SO	146	ARG	NE-CZ-NH1	6.42	127.92	121.50
49	S2	1844	U	C4'-C3'-O3'	-6.42	103.38	113.00
31	b	6	ASN	CB-CA-C	6.42	121.22	110.44
1	5	4074	C	N1-C1'-C2'	6.41	121.62	112.00
55	SF	165	ASN	CA-CB-CG	-6.41	106.19	112.60
1	5	4283	G	O4'-C1'-C2'	-6.41	101.19	107.60
1	5	4936	G	C2'-C3'-O3'	-6.41	104.09	113.70
25	V	98	PHE	CA-CB-CG	-6.41	107.39	113.80
49	S2	1858	G	C2'-C3'-O3'	6.41	123.31	113.70
1	5	498	C	C4'-C3'-O3'	6.41	119.01	109.40
1	5	3663	A	C4'-C3'-O3'	-6.41	99.79	109.40
49	S2	687	C	C2'-C3'-O3'	6.41	119.11	109.50
52	SC	200	ARG	NE-CZ-NH2	6.41	124.97	119.20
54	SE	121	TYR	CA-CB-CG	-6.40	102.37	113.90
49	S2	1356	G	N9-C1'-C2'	6.40	121.60	112.00
1	5	2090	U	C1'-C2'-O2'	-6.40	98.80	108.40
1	5	2110	C	C3'-C2'-O2'	-6.40	105.00	114.60
34	e	80	HIS	CB-CA-C	6.40	117.79	109.28
49	S2	1849	G	C1'-C2'-O2'	-6.40	102.20	111.80
33	d	87	ARG	CA-CB-CG	6.40	126.89	114.10
49	S2	30	C	N1-C1'-C2'	6.39	121.59	112.00
1	5	2279	A	C1'-C2'-O2'	6.39	117.99	108.40
1	5	40	G	N9-C1'-C2'	6.39	121.58	112.00
1	5	337	U	C1'-C2'-O2'	6.39	117.98	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	D	45	ASN	N-CA-C	6.39	118.32	111.36
5	B	149	ASP	N-CA-C	6.38	118.32	111.36
48	4	76	SER	CA-C-N	-6.38	112.08	122.81
48	4	76	SER	C-N-CA	-6.38	112.08	122.81
1	5	2066	C	C3'-C2'-O2'	6.38	120.27	110.70
1	5	965	G	C4'-C3'-O3'	6.38	118.97	109.40
1	5	4878	C	C4'-C3'-O3'	-6.38	103.43	113.00
8	E	231	THR	N-CA-C	-6.38	105.32	113.23
5	B	26	ARG	CG-CD-NE	-6.38	97.96	112.00
14	K	29	ALA	CA-C-O	-6.38	112.67	118.79
1	5	1370	G	N9-C1'-C2'	6.38	123.57	114.00
1	5	1521	C	C1'-C2'-O2'	6.38	117.97	108.40
1	5	3843	C	N1-C1'-C2'	6.38	123.57	114.00
48	4	47	ALA	O-C-N	6.38	131.07	122.59
1	5	2460	A	C1'-C2'-O2'	6.37	117.96	108.40
1	5	52	G	C2'-C3'-O3'	6.37	123.26	113.70
20	Q	184	ARG	CB-CG-CD	6.37	125.95	111.30
49	S2	1835	A	N9-C1'-C2'	6.37	121.56	112.00
2	7	58	A	C2'-C3'-O3'	6.37	123.25	113.70
3	8	72	A	C1'-C2'-O2'	6.37	117.95	108.40
1	5	226	G	N9-C1'-C2'	-6.37	104.45	114.00
1	5	943	A	N9-C1'-C2'	-6.37	104.45	114.00
51	SB	151	ARG	N-CA-C	6.37	118.10	111.03
49	S2	454	U	N1-C1'-C2'	6.36	121.55	112.00
1	5	4531	U	N1-C1'-C2'	6.36	123.54	114.00
49	S2	1739	C	C1'-C2'-O2'	6.36	117.94	108.40
1	5	1341	U	N1-C1'-C2'	6.36	121.53	112.00
1	5	2745	A	C1'-C2'-O2'	-6.35	98.87	108.40
1	5	3933	G	C1'-C2'-O2'	6.35	117.93	108.40
22	S	97	TYR	CA-CB-CG	-6.35	102.47	113.90
22	S	146	HIS	N-CA-C	6.35	124.33	110.80
49	S2	1115	U	N1-C1'-C2'	6.35	123.52	114.00
49	S2	1420	G	C2'-C3'-O3'	6.35	123.22	113.70
49	S2	1833	C	C4'-C3'-O3'	-6.35	103.48	113.00
28	Y	78	TYR	CB-CA-C	6.35	123.05	110.42
46	q	24	TYR	CA-C-N	-6.34	113.21	120.89
46	q	24	TYR	C-N-CA	-6.34	113.21	120.89
48	4	248	GLU	N-CA-C	6.34	118.20	111.28
49	S2	1045	U	O4'-C1'-C2'	-6.34	101.25	107.60
28	Y	27	ARG	NE-CZ-NH2	6.34	124.91	119.20
1	5	2081	C	C2'-C3'-O3'	-6.34	104.19	113.70
1	5	4481	U	N1-C1'-C2'	6.34	121.51	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	197	A	N9-C1'-C2'	6.34	121.51	112.00
1	5	3674	G	C4'-C3'-O3'	-6.34	103.50	113.00
1	5	5059	C	C4'-C3'-O3'	-6.34	103.50	113.00
49	S2	1621	U	C1'-C2'-O2'	-6.34	102.30	111.80
17	N	118	SER	N-CA-C	6.33	119.58	108.75
1	5	4229	U	O4'-C1'-C2'	-6.33	101.27	107.60
22	S	160	ARG	N-CA-C	-6.33	100.20	109.63
49	S2	139	C	C4'-C3'-O3'	6.33	122.49	113.00
1	5	2000	G	C1'-C2'-O2'	6.33	117.89	108.40
1	5	2089	G	C2'-C3'-O3'	6.32	118.98	109.50
49	S2	1078	C	C3'-C2'-O2'	6.32	120.18	110.70
1	5	4075	U	C4'-C3'-O3'	6.32	118.88	109.40
20	Q	91	ARG	NE-CZ-NH2	6.32	124.89	119.20
49	S2	1416	C	C2'-C3'-O3'	6.32	123.17	113.70
1	5	4519	C	O4'-C4'-C3'	-6.32	97.69	104.00
49	S2	1857	G	C2'-C3'-O3'	6.31	123.17	113.70
1	5	2687	U	C2'-C3'-O3'	-6.31	104.23	113.70
48	4	827	ASN	CA-C-N	6.31	132.66	123.13
48	4	827	ASN	C-N-CA	6.31	132.66	123.13
49	S2	417	C	C2'-C3'-O3'	6.31	123.17	113.70
49	S2	640	A	C4'-C3'-O3'	-6.31	103.54	113.00
32	c	78	ASN	CA-CB-CG	-6.31	106.29	112.60
34	e	60	TYR	N-CA-CB	-6.31	102.82	111.65
48	4	699	GLY	O-C-N	6.31	130.90	122.70
1	5	4221	C	N1-C1'-C2'	-6.30	102.54	112.00
1	5	4404	U	N1-C1'-C2'	-6.30	102.54	112.00
48	4	66	ARG	N-CA-C	-6.30	104.41	111.28
1	5	1980	U	O4'-C1'-C2'	-6.30	101.30	107.60
41	l	45	ARG	CB-CG-CD	6.30	125.79	111.30
81	Sf	148	TYR	CA-CB-CG	6.30	125.24	113.90
1	5	2305	U	C2'-C3'-O3'	6.30	118.95	109.50
49	S2	1282	A	C4'-C3'-O3'	6.30	122.45	113.00
39	j	76	HIS	CB-CA-C	6.30	120.75	109.29
49	S2	618	C	C1'-C2'-O2'	6.29	117.84	108.40
1	5	88	A	N9-C1'-C2'	6.29	121.44	112.00
1	5	1823	G	O3'-P-O5'	6.29	113.44	104.00
49	S2	446	G	C2'-C3'-O3'	6.29	123.14	113.70
49	S2	1612	G	C4'-C3'-O3'	-6.29	103.56	113.00
21	R	117	ARG	CB-CA-C	6.29	120.59	109.65
1	5	4976	U	O4'-C4'-C3'	-6.29	99.81	106.10
49	S2	474	G	C2'-C3'-O3'	6.29	123.13	113.70
61	SL	100	ASN	CA-CB-CG	-6.29	106.31	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2263	A	C5'-C4'-O4'	6.29	118.53	109.10
1	5	2796	G	N9-C1'-C2'	6.29	123.43	114.00
3	8	79	G	N9-C1'-C2'	6.29	121.43	112.00
11	H	116	ASN	N-CA-C	6.29	120.53	112.86
62	SM	33	ARG	CG-CD-NE	6.29	125.83	112.00
49	S2	1649	U	C4'-C3'-O3'	-6.28	103.58	113.00
1	5	236	G	N9-C1'-C2'	6.28	121.42	112.00
1	5	2322	G	C2'-C3'-O3'	6.28	123.12	113.70
1	5	4880	C	C1'-C2'-O2'	-6.28	98.98	108.40
1	5	2307	A	C1'-C2'-O2'	-6.28	98.98	108.40
49	S2	1544	C	C4'-C3'-O3'	-6.28	103.58	113.00
1	5	1631	A	C4'-C3'-O3'	-6.28	99.98	109.40
3	8	39	G	C4'-C3'-O3'	-6.28	103.58	113.00
1	5	1676	C	C2'-C3'-O3'	6.28	118.91	109.50
1	5	2395	A	N9-C1'-C2'	-6.28	104.59	114.00
3	8	135	C	N1-C1'-C2'	6.28	121.41	112.00
44	o	42	ASP	N-CA-CB	6.28	119.11	110.01
1	5	116	G	C4'-C3'-O3'	-6.27	103.59	113.00
17	N	192	TRP	N-CA-CB	-6.27	100.92	110.01
1	5	2851	G	N9-C1'-C2'	-6.27	102.60	112.00
49	S2	1477	U	C2'-C3'-O3'	6.27	123.10	113.70
1	5	4519	C	C4'-C3'-C2'	-6.27	96.33	102.60
55	SF	38	TYR	N-CA-CB	6.27	119.43	110.16
56	SG	156	TYR	CA-CB-CG	-6.27	102.62	113.90
76	Sa	98	PRO	N-CA-C	6.26	118.34	110.70
1	5	1487	G	C2'-C3'-O3'	6.26	123.09	113.70
1	5	1650	A	C4'-C3'-O3'	-6.26	100.01	109.40
1	5	4318	C	C4'-C3'-O3'	-6.26	103.61	113.00
1	5	3851	U	C1'-C2'-O2'	6.26	117.79	108.40
49	S2	1842	C	N1-C1'-C2'	6.26	121.39	112.00
1	5	1494	U	N1-C1'-C2'	6.26	121.38	112.00
49	S2	26	U	C2'-C3'-O3'	6.26	123.08	113.70
62	SM	124	ILE	N-CA-C	6.26	117.04	110.72
49	S2	1367	U	C2'-C3'-O3'	6.25	123.08	113.70
1	5	352	G	N9-C1'-C2'	-6.25	102.62	112.00
49	S2	504	G	N9-C1'-C2'	6.25	121.38	112.00
1	5	2282	A	N9-C1'-C2'	6.25	121.37	112.00
49	S2	1309	C	C2'-C3'-O3'	-6.25	104.33	113.70
1	5	1621	A	C3'-C2'-O2'	6.25	120.07	110.70
49	S2	841	G	O4'-C1'-C2'	-6.25	99.56	105.80
47	r	21	ASN	N-CA-CB	-6.24	102.66	112.46
49	S2	1510	G	C3'-C2'-O2'	6.24	120.06	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1546	G	N9-C1'-C2'	6.24	121.36	112.00
1	5	2673	G	O4'-C1'-C2'	-6.24	99.56	105.80
1	5	4884	G	O4'-C1'-C2'	-6.24	101.36	107.60
10	G	77	PRO	N-CA-C	6.24	118.31	110.70
1	5	1390	G	C1'-C2'-O2'	6.24	117.76	108.40
15	L	80	GLU	CB-CG-CD	-6.24	102.00	112.60
17	N	37	HIS	CA-CB-CG	-6.23	107.57	113.80
1	5	2836	A	C4'-C3'-O3'	-6.23	103.65	113.00
2	7	59	G	C3'-C2'-O2'	6.23	120.05	110.70
20	Q	52	PHE	N-CA-C	6.23	124.08	110.80
20	Q	174	PHE	CA-CB-CG	-6.23	107.57	113.80
49	S2	1429	G	C3'-C2'-O2'	6.23	120.05	110.70
70	SU	47	ASN	N-CA-C	6.23	118.34	110.24
1	5	1733	G	N9-C1'-C2'	-6.23	102.66	112.00
1	5	657	C	C2'-C3'-O3'	6.23	123.04	113.70
1	5	5044	A	C1'-C2'-O2'	-6.23	99.06	108.40
64	SO	104	ARG	NE-CZ-NH2	-6.22	113.60	119.20
34	e	35	TRP	N-CA-CB	6.22	119.13	109.48
1	5	113	A	C1'-C2'-O2'	6.22	117.73	108.40
1	5	4589	A	O4'-C4'-C3'	-6.22	99.88	106.10
18	O	47	PHE	N-CA-CB	6.22	119.28	109.82
49	S2	382	C	N1-C1'-C2'	6.22	121.33	112.00
1	5	429	A	C4'-C3'-O3'	-6.22	103.68	113.00
1	5	370	U	N1-C1'-C2'	6.21	121.32	112.00
48	4	287	ARG	CA-C-N	6.21	128.60	120.28
48	4	287	ARG	C-N-CA	6.21	128.60	120.28
49	S2	661	U	C1'-C2'-O2'	6.21	117.72	108.40
61	SL	62	PHE	CB-CA-C	6.21	122.15	109.67
76	Sa	28	ARG	NE-CZ-NH1	6.21	127.71	121.50
17	N	180	PHE	CA-CB-CG	-6.21	107.59	113.80
49	S2	649	U	N1-C1'-C2'	6.21	121.31	112.00
69	ST	62	ARG	NE-CZ-NH2	6.21	124.78	119.20
48	4	852	ASP	CA-CB-CG	6.20	118.80	112.60
1	5	4948	C	C1'-C2'-O2'	-6.20	99.10	108.40
8	E	275	ASN	CA-CB-CG	-6.20	106.40	112.60
22	S	94	TYR	CA-CB-CG	-6.20	102.74	113.90
49	S2	1021	U	C2'-C3'-O3'	6.20	118.80	109.50
10	G	54	PHE	N-CA-C	-6.20	105.03	112.59
49	S2	548	C	C2'-C3'-O3'	6.20	123.00	113.70
1	5	1835	G	C4'-C3'-O3'	6.19	118.69	109.40
32	c	32	LYS	N-CA-C	-6.19	97.61	110.80
1	5	1932	A	N9-C1'-C2'	6.19	121.28	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	e	60	TYR	CB-CA-C	6.19	122.00	111.35
49	S2	114	G	C1'-C2'-O2'	6.19	117.69	108.40
49	S2	976	G	C1'-C2'-O2'	6.19	117.68	108.40
3	8	12	G	C4'-C3'-O3'	-6.19	103.72	113.00
53	SD	216	GLU	CG-CD-OE2	6.19	132.63	118.40
23	T	140	PHE	CB-CA-C	-6.18	99.75	110.45
47	r	45	HIS	CB-CA-C	-6.18	98.12	110.42
1	5	2509	C	C2'-C3'-O3'	-6.18	104.43	113.70
48	4	801	ARG	CB-CA-C	-6.18	100.53	110.79
49	S2	1850	A	C4'-C3'-O3'	-6.18	103.73	113.00
1	5	2666	U	C4'-C3'-C2'	-6.18	96.42	102.60
49	S2	531	A	C4'-C3'-O3'	-6.18	103.73	113.00
49	S2	668	A	C4'-C3'-O3'	-6.18	103.74	113.00
49	S2	922	A	C4'-C3'-O3'	-6.18	103.73	113.00
1	5	4114	C	N1-C1'-C2'	6.17	121.26	112.00
1	5	727	C	C3'-C2'-O2'	6.17	123.85	114.60
7	D	16	TYR	N-CA-CB	6.17	119.25	109.51
46	q	206	ILE	N-CA-CB	-6.17	101.02	111.50
1	5	490	C	N1-C1'-C2'	6.17	121.25	112.00
1	5	2253	A	C2'-C3'-O3'	-6.17	104.45	113.70
17	N	130	PHE	CB-CA-C	6.17	120.65	110.78
49	S2	622	C	N1-C1'-C2'	-6.16	102.75	112.00
28	Y	18	HIS	N-CA-CB	6.16	120.90	110.49
3	8	81	C	C5'-C4'-C3'	6.16	125.24	116.00
15	L	80	GLU	N-CA-C	6.16	119.64	111.75
1	5	967	C	O4'-C1'-C2'	-6.16	101.44	107.60
1	5	1951	G	C3'-C2'-O2'	6.16	119.94	110.70
52	SC	219	ILE	N-CA-C	-6.16	101.60	109.30
1	5	684	G	C3'-C2'-O2'	6.16	119.94	110.70
1	5	2807	A	C2'-C3'-O3'	6.16	122.94	113.70
1	5	4699	U	C4'-C3'-O3'	6.16	118.64	109.40
14	K	104	ILE	N-CA-C	6.16	122.14	109.34
1	5	126	C	O4'-C1'-C2'	-6.15	101.45	107.60
49	S2	1378	A	C4'-C3'-O3'	-6.15	100.17	109.40
1	5	3653	A	C1'-C2'-O2'	6.15	117.62	108.40
3	8	115	G	C2'-C3'-O3'	6.15	122.93	113.70
49	S2	605	A	C4'-C3'-O3'	-6.15	103.78	113.00
1	5	134	G	O4'-C4'-C3'	-6.15	99.95	106.10
5	B	137	TRP	CA-CB-CG	-6.15	101.92	113.60
17	N	182	HIS	N-CA-C	-6.15	97.71	110.80
12	I	17	TYR	CA-C-N	-6.15	113.64	119.85
12	I	17	TYR	C-N-CA	-6.15	113.64	119.85

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4670	C	O4'-C1'-C2'	-6.14	101.46	107.60
3	8	94	G	N9-C1'-C2'	6.14	123.21	114.00
49	S2	1061	U	O4'-C1'-C2'	-6.14	101.46	107.60
1	5	4693	C	O4'-C1'-N1	-6.14	99.29	108.50
48	4	393	PRO	CB-CA-C	-6.14	103.04	111.21
49	S2	477	G	C4'-C3'-O3'	-6.14	103.80	113.00
1	5	315	G	C1'-O4'-C4'	-6.13	103.57	109.70
1	5	2093	A	C4'-C3'-O3'	6.13	118.60	109.40
49	S2	669	A	C4'-C3'-O3'	-6.13	103.80	113.00
1	5	3909	C	O4'-C1'-C2'	-6.13	101.47	107.60
49	S2	1825	A	C2'-C3'-O3'	6.13	118.69	109.50
1	5	237	G	C1'-C2'-O2'	-6.13	102.61	111.80
1	5	3776	G	C2'-C3'-O3'	6.13	118.69	109.50
49	S2	1419	C	C3'-C2'-O2'	6.13	119.89	110.70
49	S2	1830	U	N1-C1'-C2'	-6.13	104.81	114.00
1	5	294	G	C1'-O4'-C4'	-6.13	103.77	109.90
49	S2	291	G	O4'-C4'-C3'	-6.13	99.97	106.10
49	S2	855	G	C2'-C3'-O3'	6.13	122.89	113.70
49	S2	850	C	C4'-C3'-O3'	-6.12	103.81	113.00
1	5	3827	G	N9-C1'-C2'	-6.12	104.81	114.00
9	F	58	HIS	N-CA-C	-6.12	104.52	111.07
13	J	170	HIS	CB-CA-C	6.12	120.52	110.17
49	S2	1291	A	C3'-C2'-O2'	6.12	119.88	110.70
1	5	1359	G	N9-C1'-C2'	6.12	121.18	112.00
1	5	2360	A	C2'-C3'-O3'	6.12	118.68	109.50
1	5	2385	U	N1-C1'-C2'	6.12	121.17	112.00
1	5	4341	C	C1'-C2'-O2'	6.12	117.57	108.40
1	5	4589	A	C4'-C3'-O3'	-6.12	100.23	109.40
49	S2	811	A	C4'-C3'-O3'	-6.12	103.83	113.00
1	5	2328	G	C2'-C3'-O3'	-6.11	104.53	113.70
49	S2	734	C	C4'-C3'-O3'	-6.11	103.83	113.00
49	S2	824	C	C1'-C2'-O2'	-6.11	99.23	108.40
1	5	4326	G	N9-C1'-C2'	6.11	121.17	112.00
1	5	223	G	C1'-C2'-O2'	6.11	117.56	108.40
49	S2	839	C	N1-C1'-C2'	6.11	121.16	112.00
48	4	357	HIS	N-CA-C	6.10	122.18	114.31
49	S2	401	A	C1'-C2'-O2'	6.10	117.55	108.40
49	S2	1644	C	C1'-C2'-O2'	-6.10	99.25	108.40
1	5	454	U	C3'-C2'-O2'	6.10	119.85	110.70
1	5	4951	G	C3'-C2'-O2'	6.10	123.75	114.60
49	S2	474	G	C4'-C3'-O3'	-6.10	103.85	113.00
1	5	514	U	C4'-C3'-C2'	-6.10	96.50	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1438	U	C2'-C3'-O3'	6.10	122.85	113.70
1	5	1827	C	N1-C1'-C2'	6.10	121.15	112.00
1	5	1938	C	O4'-C4'-C3'	-6.10	100.00	106.10
17	N	4	TYR	N-CA-C	6.10	119.55	111.75
48	4	329	ASP	CA-CB-CG	-6.10	106.50	112.60
1	5	1479	G	N9-C1'-C2'	6.09	123.14	114.00
1	5	4978	G	N9-C1'-C2'	6.09	121.14	112.00
50	SA	90	PHE	N-CA-C	-6.09	104.55	111.07
3	8	28	C	C1'-C2'-O2'	6.09	117.54	108.40
13	J	54	ARG	N-CA-C	-6.09	103.97	111.40
48	4	266	PHE	N-CA-C	-6.09	101.19	110.14
62	SM	106	CYS	N-CA-C	6.09	118.33	109.07
1	5	2643	G	C2'-C3'-O3'	6.09	122.83	113.70
1	5	4182	G	C4'-C3'-O3'	-6.08	103.87	113.00
3	8	94	G	C5'-C4'-O4'	6.08	118.23	109.10
48	4	741	MET	N-CA-C	6.08	119.62	109.95
4	A	205	ASN	N-CA-C	-6.08	102.48	110.39
7	D	145	TYR	N-CA-C	-6.08	98.82	108.73
49	S2	1432	U	N1-C1'-C2'	6.08	121.12	112.00
69	ST	53	PHE	N-CA-CB	-6.08	101.18	110.12
48	4	540	GLU	N-CA-CB	6.08	118.83	110.01
17	N	30	TYR	N-CA-CB	-6.08	100.22	110.49
22	S	77	ASN	CB-CA-C	6.08	120.70	111.76
18	O	109	PRO	CA-C-N	6.08	126.64	120.38
18	O	109	PRO	C-N-CA	6.08	126.64	120.38
1	5	3938	G	O4'-C4'-C3'	-6.08	100.02	106.10
49	S2	933	G	C2'-C3'-O3'	-6.07	104.59	113.70
70	SU	72	GLU	N-CA-C	6.07	119.44	109.85
1	5	3673	C	C4'-C3'-O3'	-6.07	103.89	113.00
1	5	3817	A	N9-C1'-C2'	6.07	123.10	114.00
62	SM	33	ARG	CB-CA-C	6.07	120.06	111.74
48	4	56	PHE	N-CA-CB	6.07	120.74	110.49
49	S2	1064	C	C1'-C2'-O2'	6.06	117.50	108.40
1	5	1215	C	O4'-C1'-C2'	-6.06	101.54	107.60
49	S2	1859	A	C1'-C2'-O2'	6.06	117.49	108.40
53	SD	202	LYS	CA-C-N	-6.06	112.26	119.84
53	SD	202	LYS	C-N-CA	-6.06	112.26	119.84
34	e	74	PHE	CB-CA-C	6.06	119.52	109.53
49	S2	31	U	N1-C1'-C2'	6.06	121.09	112.00
49	S2	629	A	C4'-C3'-O3'	-6.06	100.31	109.40
1	5	5047	C	C2'-C3'-O3'	6.05	118.58	109.50
19	P	139	TYR	CB-CA-C	6.05	119.21	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	Sg	15	ASN	N-CA-C	-6.05	100.45	109.83
49	S2	1715	A	C3'-C2'-O2'	6.05	119.78	110.70
1	5	4228	G	O4'-C1'-C2'	-6.05	101.55	107.60
3	8	70	G	N9-C1'-C2'	-6.05	102.92	112.00
1	5	4233	A	C3'-C2'-O2'	6.05	119.77	110.70
1	5	663	G	C4'-C3'-O3'	6.05	122.07	113.00
1	5	2348	G	C1'-C2'-O2'	-6.05	102.73	111.80
1	5	4394	A	C1'-C2'-O2'	-6.05	102.73	111.80
48	4	5	THR	CA-C-O	-6.05	113.94	121.50
49	S2	1073	U	C1'-C2'-O2'	6.05	117.47	108.40
1	5	2803	U	C1'-C2'-O2'	6.04	117.47	108.40
48	4	806	GLY	O-C-N	-6.04	114.83	122.32
1	5	372	A	N9-C1'-C2'	6.04	121.06	112.00
1	5	398	A	N9-C1'-C2'	6.04	121.06	112.00
1	5	1264	C	C2'-C3'-O3'	6.04	122.76	113.70
1	5	2766	A	C4'-C3'-O3'	-6.04	103.94	113.00
1	5	4265	U	N1-C1'-C2'	6.04	123.06	114.00
34	e	95	TYR	N-CA-C	6.04	118.47	108.99
1	5	3688	U	C1'-C2'-O2'	6.04	117.46	108.40
1	5	4338	G	N9-C1'-C2'	-6.04	104.94	114.00
39	j	78	PHE	CB-CA-C	-6.04	103.31	111.89
49	S2	1243	U	C2'-C3'-O3'	6.04	122.76	113.70
1	5	2009	A	C3'-C2'-O2'	6.04	119.75	110.70
1	5	4617	G	C4'-C3'-O3'	-6.04	103.95	113.00
76	Sa	10	ARG	CG-CD-NE	-6.04	98.72	112.00
78	Sc	44	ARG	CG-CD-NE	6.04	125.28	112.00
1	5	4745	G	N9-C1'-C2'	6.03	121.05	112.00
48	4	638	LYS	N-CA-C	6.03	117.94	111.36
49	S2	1433	C	C4'-C3'-C2'	-6.03	96.57	102.60
1	5	1625	G	N9-C1'-C2'	6.03	123.05	114.00
39	j	8	PHE	CA-CB-CG	-6.03	107.77	113.80
8	E	111	TYR	N-CA-CB	6.03	118.98	110.36
5	B	324	GLY	N-CA-C	6.03	118.00	110.29
39	j	39	TYR	CB-CA-C	-6.03	98.30	110.17
1	5	2087	C	N1-C1'-C2'	-6.02	102.97	112.00
40	k	61	PRO	N-CA-C	6.02	118.05	110.70
59	SJ	18	ARG	CA-C-N	6.02	125.91	119.28
59	SJ	18	ARG	C-N-CA	6.02	125.91	119.28
1	5	226	G	C4'-C3'-O3'	6.02	118.43	109.40
41	l	12	PHE	CB-CA-C	-6.02	101.18	110.81
48	4	206	ASP	C-N-CD	-6.02	100.32	125.00
14	K	110	VAL	CA-C-N	6.02	134.08	122.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	K	110	VAL	C-N-CA	6.02	134.08	122.53
1	5	1326	A	C3'-C2'-O2'	6.01	119.72	110.70
1	5	3879	G	N9-C1'-C2'	-6.01	102.98	112.00
1	5	4589	A	N9-C1'-C2'	6.01	123.02	114.00
4	A	163	ARG	CB-CA-C	6.01	119.58	109.48
49	S2	1433	C	O4'-C4'-C3'	-6.01	97.99	104.00
49	S2	1292	C	O4'-C1'-C2'	-6.01	101.59	107.60
81	Sf	136	PHE	N-CA-CB	6.01	117.08	110.35
1	5	1876	U	C2'-C3'-O3'	6.01	122.71	113.70
49	S2	746	C	C2'-C3'-O3'	6.01	122.72	113.70
1	5	2119	C	C4'-C3'-O3'	6.01	118.41	109.40
1	5	2368	A	C2'-C3'-O3'	-6.00	104.69	113.70
15	L	6	ASN	N-CA-CB	6.00	120.64	110.49
1	5	111	C	C1'-C2'-O2'	6.00	117.40	108.40
1	5	3653	A	N9-C1'-C2'	-6.00	102.99	112.00
39	j	11	ARG	CG-CD-NE	-6.00	98.79	112.00
57	SH	185	VAL	N-CA-C	6.00	117.33	108.45
1	5	118	C	C2'-C3'-O3'	6.00	122.70	113.70
1	5	5062	G	P-O5'-C5'	6.00	129.90	120.90
1	5	294	G	C2'-C3'-O3'	-6.00	104.70	113.70
1	5	27	C	C1'-C2'-O2'	6.00	117.39	108.40
7	D	160	PHE	N-CA-C	-5.99	105.73	113.16
15	L	103	ARG	CB-CA-C	5.99	119.63	109.80
48	4	27	HIS	N-CA-C	-5.99	103.04	110.41
48	4	271	GLY	CA-C-N	-5.99	111.24	121.85
48	4	271	GLY	C-N-CA	-5.99	111.24	121.85
49	S2	1415	C	N1-C1'-C2'	5.99	120.99	112.00
36	g	90	ARG	CG-CD-NE	-5.99	98.82	112.00
1	5	1588	U	N1-C1'-C2'	5.99	120.98	112.00
22	S	44	PHE	N-CA-C	-5.99	104.83	111.36
48	4	281	GLU	N-CA-C	-5.99	104.75	111.28
1	5	4454	G	C1'-C2'-O2'	5.99	117.38	108.40
1	5	4498	U	N1-C1'-C2'	-5.99	103.02	112.00
18	O	140	ARG	NE-CZ-NH2	5.99	124.59	119.20
1	5	4753	U	C2'-C3'-O3'	5.99	122.68	113.70
1	5	1539	G	C2'-C3'-O3'	5.98	122.67	113.70
1	5	3717	A	C2'-C3'-O3'	-5.98	104.72	113.70
48	4	266	PHE	CA-C-N	5.98	130.69	122.07
48	4	266	PHE	C-N-CA	5.98	130.69	122.07
3	8	68	G	N9-C1'-C2'	5.98	120.97	112.00
6	C	41	HIS	N-CA-C	-5.98	103.93	111.11
23	T	57	TYR	CA-CB-CG	5.98	124.67	113.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	SB	165	ARG	NE-CZ-NH2	5.98	124.58	119.20
59	SJ	49	THR	N-CA-C	5.98	117.79	111.28
17	N	182	HIS	N-CA-CB	5.97	120.59	110.49
9	F	57	LYS	N-CA-C	5.97	118.75	111.82
49	S2	457	C	C1'-C2'-O2'	5.97	117.36	108.40
1	5	3740	G	O4'-C1'-C2'	-5.97	101.63	107.60
1	5	4274	A	C1'-C2'-O2'	5.97	117.36	108.40
65	SP	86	LEU	CA-C-N	5.97	127.30	119.84
65	SP	86	LEU	C-N-CA	5.97	127.30	119.84
49	S2	1136	U	N1-C1'-C2'	5.97	120.95	112.00
1	5	2307	A	C2'-C3'-O3'	-5.97	104.75	113.70
1	5	4747	C	C3'-C2'-O2'	5.97	119.65	110.70
61	SL	92	TYR	CA-CB-CG	5.97	124.64	113.90
1	5	333	U	C4'-C3'-O3'	5.96	121.95	113.00
1	5	1238	A	C2'-C3'-O3'	5.96	118.45	109.50
1	5	2260	C	C2'-C3'-O3'	5.96	118.44	109.50
1	5	2487	G	C2'-C3'-O3'	5.96	122.64	113.70
8	E	236	TYR	N-CA-C	-5.96	101.07	109.96
49	S2	56	G	N9-C1'-C2'	5.96	120.94	112.00
1	5	2272	C	C3'-C2'-O2'	5.96	119.64	110.70
1	5	2474	G	C2'-C3'-O3'	5.96	122.64	113.70
9	F	83	PHE	N-CA-CB	-5.96	101.59	110.71
14	K	86	LYS	CB-CA-C	-5.96	98.56	110.42
19	P	144	CYS	N-CA-C	5.96	118.76	109.52
44	o	32	SER	N-CA-C	5.96	117.78	111.28
1	5	2089	G	O4'-C4'-C3'	-5.96	100.14	106.10
49	S2	55	U	N1-C1'-C2'	5.96	122.94	114.00
49	S2	920	A	C1'-C2'-O2'	-5.96	102.86	111.80
32	c	39	ARG	CG-CD-NE	-5.96	98.89	112.00
49	S2	683	G	C1'-C2'-O2'	5.96	117.33	108.40
49	S2	1666	C	N1-C1'-C2'	5.96	120.93	112.00
1	5	416	U	N1-C1'-C2'	5.95	120.93	112.00
15	L	7	GLY	N-CA-C	-5.95	99.07	113.18
49	S2	438	G	N9-C1'-C2'	5.95	120.93	112.00
3	8	2	G	O4'-C1'-C2'	-5.95	101.65	107.60
1	5	4742	G	O4'-C1'-C2'	-5.95	101.65	107.60
49	S2	308	G	C2'-C3'-O3'	-5.95	104.78	113.70
50	SA	103	PHE	CA-CB-CG	-5.95	107.85	113.80
49	S2	553	U	N1-C1'-C2'	5.95	120.92	112.00
49	S2	1194	A	N9-C1'-C2'	-5.95	105.08	114.00
49	S2	1376	A	C2'-C3'-O3'	5.94	122.62	113.70
1	5	2263	A	O4'-C4'-C3'	-5.94	100.16	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2806	A	N9-C1'-C2'	-5.94	103.08	112.00
17	N	203	TYR	N-CA-CB	-5.94	102.68	110.88
1	5	1832	C	C4'-C3'-O3'	-5.94	104.09	113.00
3	8	34	U	C5'-C4'-O4'	5.94	118.71	109.80
28	Y	25	ILE	CB-CA-C	-5.94	104.28	112.24
40	k	41	TYR	CB-CA-C	5.94	120.22	109.83
49	S2	1	U	C5'-C4'-O4'	5.94	118.01	109.10
1	5	1891	A	C2'-C3'-O3'	5.94	118.41	109.50
2	7	42	A	O4'-C1'-C2'	-5.94	101.66	107.60
49	S2	1371	U	C4'-C3'-O3'	-5.94	104.09	113.00
1	5	3635	A	N9-C1'-C2'	-5.94	103.09	112.00
3	8	82	A	O4'-C1'-C2'	-5.94	101.66	107.60
8	E	236	TYR	CA-CB-CG	-5.94	103.21	113.90
49	S2	1034	A	N9-C1'-C2'	5.94	120.91	112.00
7	D	223	PHE	CA-CB-CG	5.93	119.73	113.80
34	e	20	PHE	CA-CB-CG	-5.93	107.86	113.80
48	4	825	PHE	O-C-N	-5.93	115.68	122.09
1	5	3881	G	C1'-C2'-O2'	-5.93	102.90	111.80
4	A	34	PHE	N-CA-C	-5.93	103.78	111.02
49	S2	453	C	C1'-C2'-O2'	-5.93	99.50	108.40
49	S2	1476	A	O4'-C1'-C2'	-5.93	101.67	107.60
55	SF	164	ARG	CG-CD-NE	-5.93	98.95	112.00
1	5	2405	G	C1'-C2'-O2'	5.93	117.30	108.40
49	S2	1093	A	C4'-C3'-O3'	-5.93	104.11	113.00
1	5	957	G	C2'-C3'-O3'	5.93	118.39	109.50
1	5	1521	C	C2'-C3'-O3'	5.93	122.59	113.70
1	5	4767	C	C2'-C3'-O3'	5.93	122.59	113.70
10	G	235	ARG	CG-CD-NE	5.93	125.04	112.00
38	i	26	HIS	N-CA-CB	5.92	120.39	110.32
1	5	974	C	C4'-C3'-O3'	5.92	121.88	113.00
1	5	212	A	N9-C1'-C2'	5.92	120.88	112.00
1	5	2857	A	C4'-C3'-O3'	5.92	118.28	109.40
1	5	4730	C	C2'-C3'-O3'	5.92	118.38	109.50
29	Z	38	TYR	N-CA-CB	-5.92	101.88	110.70
1	5	2785	C	C4'-C3'-O3'	-5.92	104.12	113.00
9	F	94	VAL	CB-CA-C	-5.92	103.57	110.91
49	S2	1247	C	N1-C1'-C2'	5.92	122.87	114.00
17	N	21	PHE	N-CA-CB	5.91	118.81	110.12
49	S2	1428	G	C3'-C2'-O2'	5.91	119.57	110.70
4	A	163	ARG	N-CA-C	-5.91	100.07	109.76
21	R	94	THR	CA-C-N	-5.91	112.59	120.63
21	R	94	THR	C-N-CA	-5.91	112.59	120.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	41	G	N9-C1'-C2'	-5.91	105.14	114.00
49	S2	504	G	C1'-C2'-O2'	-5.91	99.53	108.40
6	C	288	ASP	N-CA-CB	5.91	118.81	109.71
7	D	35	ARG	CG-CD-NE	5.91	125.00	112.00
49	S2	833	C	C4'-C3'-O3'	-5.91	104.14	113.00
11	H	113	GLU	CB-CG-CD	-5.91	102.56	112.60
46	q	45	MET	CB-CA-C	5.91	120.61	110.86
1	5	1292	C	C4'-C3'-O3'	-5.91	104.14	113.00
32	c	78	ASN	N-CA-CB	5.91	120.47	110.49
34	e	58	ILE	N-CA-C	5.91	116.64	110.62
1	5	1885	G	C4'-C3'-O3'	5.90	121.86	113.00
12	I	92	HIS	CB-CA-C	5.90	117.19	108.87
33	d	87	ARG	CG-CD-NE	-5.90	99.01	112.00
49	S2	73	C	C2'-C3'-O3'	5.90	118.35	109.50
1	5	1820	C	C3'-C2'-O2'	5.90	119.55	110.70
12	I	139	ARG	CB-CG-CD	-5.90	97.73	111.30
1	5	1671	U	C1'-C2'-O2'	5.90	117.24	108.40
1	5	4463	U	C3'-C2'-O2'	5.90	119.55	110.70
1	5	1237	C	C4'-C3'-O3'	-5.89	104.16	113.00
22	S	83	ARG	CG-CD-NE	5.89	124.97	112.00
63	SN	113	PHE	N-CA-CB	5.89	118.53	109.98
73	SX	67	ARG	NE-CZ-NH2	5.89	124.50	119.20
1	5	4736	C	N1-C1'-C2'	5.89	120.84	112.00
49	S2	1447	G	C3'-C2'-O2'	5.89	119.54	110.70
1	5	2257	C	C2'-C3'-O3'	5.89	118.33	109.50
22	S	37	HIS	N-CA-CB	5.89	118.60	110.07
61	SL	48	LYS	N-CA-C	-5.89	104.78	111.14
1	5	4958	C	C4'-C3'-O3'	5.88	121.83	113.00
3	8	11	C	O4'-C1'-C2'	-5.88	101.72	107.60
29	Z	28	ASN	N-CA-C	-5.88	96.03	107.62
49	S2	336	A	C1'-C2'-O2'	5.88	117.22	108.40
1	5	106	A	C1'-C2'-O2'	5.88	117.21	108.40
1	5	1440	U	C4'-C3'-O3'	5.88	121.82	113.00
1	5	3719	A	C1'-C2'-O2'	5.88	117.22	108.40
5	B	380	GLN	N-CA-C	5.88	120.73	113.50
49	S2	292	A	C2'-C3'-O3'	5.88	118.32	109.50
7	D	196	ARG	N-CA-C	-5.88	103.85	111.02
49	S2	1816	G	C4'-C3'-O3'	-5.88	104.19	113.00
1	5	421	C	C2'-C3'-O3'	5.87	122.51	113.70
1	5	4600	G	N9-C1'-C2'	-5.87	103.19	112.00
19	P	7	ASP	CB-CA-C	5.87	117.89	109.26
1	5	3667	C	C2'-C3'-O3'	5.87	122.51	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	3861	A	C1'-C2'-O2'	5.87	117.21	108.40
82	Sg	84	ASP	CA-CB-CG	-5.87	106.73	112.60
1	5	417	G	C3'-C2'-O2'	5.87	119.50	110.70
1	5	1534	A	P-O5'-C5'	5.87	129.70	120.90
1	5	1725	U	O4'-C1'-C2'	-5.87	101.73	107.60
1	5	2710	C	C4'-C3'-O3'	5.87	121.80	113.00
46	q	62	ARG	N-CA-C	-5.87	104.81	113.61
1	5	2583	C	C2'-C3'-O3'	5.87	122.50	113.70
49	S2	349	A	C4'-C3'-O3'	-5.87	104.20	113.00
49	S2	594	A	C2'-C3'-O3'	-5.87	100.70	109.50
1	5	4497	U	N1-C1'-C2'	-5.86	103.20	112.00
1	5	1638	A	C2'-C3'-O3'	5.86	118.29	109.50
1	5	2044	U	C2'-C3'-O3'	-5.86	104.91	113.70
49	S2	1030	A	C3'-C2'-O2'	5.86	119.49	110.70
1	5	2360	A	C4'-C3'-O3'	-5.86	100.61	109.40
49	S2	4	C	C4'-C3'-O3'	-5.86	104.21	113.00
49	S2	631	U	O4'-C4'-C3'	-5.86	100.24	106.10
49	S2	1479	G	C3'-C2'-O2'	5.86	119.49	110.70
20	Q	181	ARG	CG-CD-NE	-5.86	99.11	112.00
49	S2	1860	A	C4'-C3'-O3'	-5.86	104.22	113.00
60	SK	2	LEU	CA-CB-CG	5.85	136.79	116.30
1	5	3634	G	C2'-C3'-O3'	5.85	122.48	113.70
15	L	147	ALA	N-CA-C	-5.85	104.69	112.94
1	5	5006	U	N1-C1'-C2'	-5.85	105.23	114.00
49	S2	1167	G	N9-C1'-C2'	5.85	120.78	112.00
1	5	4197	G	C1'-C2'-O2'	5.85	117.17	108.40
46	q	45	MET	CA-CB-CG	-5.85	102.41	114.10
17	N	143	ARG	CB-CG-CD	5.85	124.75	111.30
1	5	30	C	C1'-C2'-O2'	-5.84	99.63	108.40
1	5	4978	G	C1'-C2'-O2'	-5.84	99.63	108.40
35	f	51	TYR	N-CA-C	5.84	116.81	108.74
15	L	192	PHE	CA-CB-CG	-5.84	107.96	113.80
1	5	2676	A	C1'-C2'-O2'	5.84	117.16	108.40
20	Q	33	ARG	CB-CG-CD	5.84	124.74	111.30
63	SN	25	TRP	N-CA-CB	5.84	118.82	110.06
1	5	1410	U	C3'-C2'-O2'	5.84	119.46	110.70
1	5	1480	C	C2'-C3'-O3'	5.84	118.26	109.50
58	SI	112	TRP	CA-CB-CG	5.84	124.69	113.60
1	5	4911	A	C1'-O4'-C4'	-5.84	103.86	109.70
5	B	322	HIS	N-CA-CB	-5.84	104.69	114.27
1	5	2667	C	C3'-C2'-O2'	5.84	119.46	110.70
1	5	4713	G	C2'-C3'-O3'	5.84	122.46	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4737	G	C1'-C2'-O2'	-5.84	99.65	108.40
38	i	40	VAL	CB-CA-C	-5.84	104.52	111.81
1	5	3839	G	O4'-C4'-C3'	-5.83	100.27	106.10
1	5	63	G	N9-C1'-C2'	5.83	120.75	112.00
1	5	4497	U	C1'-C2'-O2'	5.83	117.15	108.40
61	SL	62	PHE	N-CA-C	-5.83	105.26	112.90
1	5	1394	G	N9-C1'-C2'	5.83	120.75	112.00
1	5	2071	A	C4'-C3'-O3'	-5.83	104.26	113.00
1	5	272	U	N1-C1'-C2'	5.83	120.74	112.00
1	5	4276	G	O4'-C1'-C2'	-5.83	101.78	107.60
1	5	4694	G	C2'-C3'-O3'	-5.83	104.96	113.70
14	K	114	ARG	CA-C-O	5.83	126.92	120.63
49	S2	563	G	C3'-C2'-O2'	5.83	119.44	110.70
10	G	169	PHE	N-CA-C	5.82	119.20	111.75
9	F	207	ASN	CA-CB-CG	-5.82	106.78	112.60
48	4	58	ASP	CA-C-N	5.82	128.66	120.28
48	4	58	ASP	C-N-CA	5.82	128.66	120.28
6	C	312	ARG	CG-CD-NE	-5.82	99.20	112.00
22	S	127	MET	N-CA-C	-5.82	104.57	111.03
70	SU	68	THR	CA-C-N	-5.82	113.97	119.85
70	SU	68	THR	C-N-CA	-5.82	113.97	119.85
1	5	2443	G	N9-C1'-C2'	5.82	120.72	112.00
37	h	89	ARG	CG-CD-NE	5.82	124.79	112.00
49	S2	445	A	C3'-C2'-O2'	5.81	119.42	110.70
1	5	3917	A	C4'-C3'-O3'	-5.81	104.28	113.00
1	5	4163	U	N1-C1'-C2'	-5.81	103.28	112.00
1	5	4330	G	C1'-C2'-O2'	5.81	117.12	108.40
1	5	4543	G	N9-C1'-C2'	5.81	120.72	112.00
8	E	277	ILE	N-CA-C	5.81	117.23	107.18
49	S2	122	G	C1'-C2'-O2'	5.81	117.12	108.40
49	S2	494	C	C2'-C3'-O3'	-5.81	104.98	113.70
49	S2	604	A	C2'-C3'-O3'	5.81	122.42	113.70
1	5	42	A	C1'-C2'-O2'	-5.81	103.09	111.80
1	5	58	G	N9-C1'-C2'	5.81	122.71	114.00
1	5	2323	C	C1'-C2'-O2'	5.81	117.11	108.40
1	5	2597	G	N9-C1'-C2'	5.81	120.71	112.00
5	B	119	TYR	CA-CB-CG	-5.81	103.45	113.90
49	S2	646	G	O4'-C1'-C2'	-5.81	101.79	107.60
49	S2	1835	A	C5'-C4'-O4'	5.81	118.51	109.80
1	5	405	U	C1'-C2'-O2'	5.81	117.11	108.40
51	SB	133	TYR	CA-CB-CG	5.81	124.35	113.90
1	5	1211	G	C4'-C3'-O3'	5.80	121.71	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	632	C	C3'-C2'-O2'	5.80	119.41	110.70
49	S2	1315	U	C2'-C3'-O3'	5.80	122.40	113.70
1	5	2305	U	N1-C1'-C2'	5.80	122.70	114.00
1	5	4644	G	C1'-C2'-O2'	5.80	117.10	108.40
57	SH	189	PHE	CB-CA-C	5.80	121.91	111.12
1	5	218	A	C4'-C3'-O3'	5.80	118.09	109.40
28	Y	5	PRO	N-CA-C	-5.80	102.09	111.19
37	h	84	ARG	CG-CD-NE	-5.80	99.25	112.00
1	5	4094	G	C4'-C3'-O3'	-5.79	104.31	113.00
47	r	45	HIS	N-CA-CB	-5.79	100.70	110.49
1	5	294	G	C4'-C3'-O3'	5.79	121.69	113.00
4	A	209	HIS	N-CA-CB	5.79	118.89	110.32
49	S2	1253	A	C4'-C3'-O3'	5.79	118.09	109.40
1	5	4900	C	C2'-C3'-O3'	5.79	118.19	109.50
1	5	4941	G	C4'-C3'-O3'	-5.79	104.31	113.00
1	5	3875	G	C2'-C3'-O3'	5.79	122.39	113.70
48	4	404	THR	N-CA-C	-5.79	100.75	108.74
49	S2	968	U	N1-C1'-C2'	-5.79	103.31	112.00
1	5	1850	A	N9-C1'-C2'	5.79	120.68	112.00
1	5	4314	C	O4'-C1'-C2'	-5.79	101.81	107.60
1	5	2056	G	O4'-C1'-C2'	-5.79	101.81	107.60
72	SW	56	HIS	N-CA-CB	-5.79	101.76	110.73
82	Sg	228	TYR	N-CA-C	5.79	117.33	108.42
1	5	2785	C	N1-C1'-C2'	5.78	120.67	112.00
8	E	153	HIS	N-CA-CB	-5.78	100.72	110.49
20	Q	32	TYR	CA-CB-CG	5.78	124.31	113.90
48	4	433	ASN	CB-CA-C	5.78	120.59	110.64
49	S2	1560	U	C3'-C2'-O2'	5.78	119.38	110.70
1	5	112	C	O4'-C1'-C2'	-5.78	101.82	107.60
1	5	4395	U	C4'-C3'-O3'	-5.78	104.33	113.00
48	4	539	GLU	O-C-N	-5.78	114.54	122.23
30	a	65	ARG	CG-CD-NE	-5.78	99.28	112.00
1	5	4915	G	C2'-C3'-O3'	5.78	122.37	113.70
6	C	102	PHE	CA-CB-CG	-5.78	108.02	113.80
3	8	9	A	C1'-C2'-O2'	5.78	117.06	108.40
31	b	11	ASN	N-CA-CB	5.78	118.55	109.94
59	SJ	147	PHE	N-CA-C	-5.78	97.81	107.80
68	SS	82	TRP	CA-CB-CG	5.78	124.57	113.60
1	5	1667	G	C2'-C3'-O3'	5.77	122.36	113.70
1	5	3898	G	C2'-C3'-O3'	5.77	122.36	113.70
3	8	46	G	N9-C1'-C2'	5.77	120.66	112.00
49	S2	410	G	C1'-C2'-O2'	5.77	117.06	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	Sg	272	GLN	N-CA-C	-5.77	102.50	110.35
1	5	3637	U	C1'-C2'-O2'	5.77	117.06	108.40
14	K	21	GLU	N-CA-C	-5.77	98.51	110.80
16	M	90	ARG	CG-CD-NE	-5.77	99.31	112.00
17	N	182	HIS	CA-CB-CG	5.77	119.57	113.80
49	S2	918	U	N1-C1'-C2'	5.77	122.65	114.00
49	S2	1567	G	N9-C1'-C2'	5.77	120.65	112.00
1	5	1998	A	C1'-C2'-O2'	-5.77	103.15	111.80
1	5	2014	C	C2'-C3'-O3'	5.77	122.35	113.70
82	Sg	15	ASN	CB-CA-C	5.77	120.95	112.07
1	5	456	C	O4'-C1'-C2'	-5.76	101.83	107.60
7	D	30	TYR	CB-CA-C	5.76	122.92	110.41
23	T	139	HIS	N-CA-C	-5.76	99.65	108.76
62	SM	85	LEU	N-CA-C	5.76	119.41	112.38
1	5	4517	A	C4'-C3'-O3'	-5.76	104.36	113.00
15	L	5	ARG	N-CA-C	5.76	119.19	111.24
5	B	291	TYR	N-CA-CB	5.76	118.61	109.51
49	S2	1800	A	C3'-C2'-O2'	5.76	119.34	110.70
65	SP	39	ALA	N-CA-C	5.76	117.25	110.97
1	5	1852	U	C1'-C2'-O2'	5.76	117.04	108.40
49	S2	1273	C	C1'-C2'-O2'	5.75	117.03	108.40
46	q	44	ARG	CD-NE-CZ	5.75	132.46	124.40
49	S2	398	A	N9-C1'-C2'	-5.75	105.37	114.00
49	S2	1703	C	N1-C1'-C2'	-5.75	103.37	112.00
1	5	693	C	C2'-C3'-O3'	5.75	122.33	113.70
1	5	1267	C	C2'-C3'-O3'	5.75	118.13	109.50
1	5	1631	A	N9-C1'-C2'	5.75	122.63	114.00
59	SJ	123	ILE	CB-CA-C	-5.75	103.25	112.16
1	5	4079	C	O4'-C1'-C2'	-5.75	101.85	107.60
61	SL	16	ILE	CB-CA-C	5.75	117.04	111.23
1	5	2319	C	O5'-C5'-C4'	-5.75	102.88	111.50
49	S2	578	C	C2'-C3'-O3'	5.75	122.32	113.70
49	S2	1216	C	C4'-C3'-O3'	-5.75	104.38	113.00
1	5	293	G	C2'-C3'-O3'	5.75	122.32	113.70
12	I	76	MET	N-CA-C	-5.74	101.13	110.20
15	L	82	ARG	CG-CD-NE	-5.74	99.37	112.00
49	S2	1203	G	C4'-C3'-O3'	-5.74	104.39	113.00
1	5	1534	A	C5'-C4'-O4'	5.74	117.71	109.10
1	5	3870	C	N1-C1'-C2'	5.74	120.61	112.00
12	I	96	VAL	CB-CA-C	-5.74	103.69	111.15
13	J	165	TRP	N-CA-C	-5.74	104.71	110.97
56	SG	145	PHE	CB-CA-C	-5.74	101.87	110.88

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
30	a	60	HIS	N-CA-C	-5.74	98.58	110.80
48	4	745	TYR	N-CA-C	5.74	123.03	110.80
49	S2	1283	C	C4'-C3'-O3'	-5.74	104.39	113.00
1	5	4478	G	C1'-C2'-O2'	5.74	117.00	108.40
55	SF	188	TYR	CA-CB-CG	-5.74	103.58	113.90
48	4	845	LYS	CA-C-N	5.73	127.96	120.28
48	4	845	LYS	C-N-CA	5.73	127.96	120.28
12	I	47	PRO	N-CA-C	5.73	124.27	112.47
49	S2	1597	C	C2'-C3'-O3'	5.73	118.09	109.50
1	5	2046	G	C1'-O4'-C4'	-5.73	103.97	109.70
1	5	2631	U	C4'-C3'-O3'	-5.73	104.41	113.00
80	Se	41	ARG	CG-CD-NE	5.73	124.60	112.00
49	S2	1452	A	N9-C1'-C2'	5.72	122.59	114.00
1	5	1455	G	C4'-C3'-O3'	-5.72	104.42	113.00
1	5	3863	C	N1-C1'-C2'	5.72	120.58	112.00
1	5	4170	A	C2'-C3'-O3'	5.72	118.08	109.50
1	5	4215	C	C4'-C3'-O3'	-5.72	104.42	113.00
49	S2	24	C	C4'-C3'-O3'	-5.72	104.42	113.00
46	q	186	GLY	N-CA-C	5.72	119.45	111.10
49	S2	453	C	C3'-C2'-O2'	5.72	119.28	110.70
1	5	2422	C	C3'-C2'-O2'	5.72	119.28	110.70
7	D	130	TYR	CA-CB-CG	-5.72	103.60	113.90
49	S2	164	A	N9-C1'-C2'	-5.72	103.42	112.00
1	5	4283	G	C4'-C3'-O3'	-5.72	104.42	113.00
53	SD	107	TYR	CB-CA-C	5.72	119.70	109.29
1	5	1672	U	N1-C1'-C2'	5.72	120.57	112.00
1	5	2693	G	C4'-C3'-O3'	-5.71	104.43	113.00
30	a	40	HIS	N-CA-C	5.71	122.97	110.80
49	S2	1151	G	C4'-C3'-O3'	-5.71	104.43	113.00
1	5	414	C	C3'-C2'-O2'	5.71	119.27	110.70
1	5	1895	G	N9-C1'-C2'	5.71	120.57	112.00
48	4	197	SER	CA-C-O	5.71	127.56	121.05
1	5	1296	G	C4'-C3'-O3'	5.71	117.97	109.40
1	5	3914	U	C2'-C3'-O3'	-5.71	105.14	113.70
49	S2	1292	C	C5'-C4'-C3'	5.71	124.56	116.00
73	SX	17	ARG	CG-CD-NE	-5.71	99.44	112.00
49	S2	677	G	C4'-C3'-O3'	-5.71	104.44	113.00
49	S2	1835	A	O4'-C1'-N9	-5.71	99.94	108.50
66	SQ	126	ARG	NE-CZ-NH2	5.71	124.34	119.20
1	5	3590	G	C2'-C3'-O3'	5.71	122.26	113.70
1	5	157	U	C1'-O4'-C4'	-5.70	104.20	109.90
5	B	119	TYR	N-CA-CB	5.70	118.93	110.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	q	107	VAL	CA-C-N	-5.70	113.88	119.76
46	q	107	VAL	C-N-CA	-5.70	113.88	119.76
1	5	1324	A	C3'-C2'-O2'	5.70	123.15	114.60
1	5	2077	C	O4'-C1'-C2'	-5.70	101.90	107.60
72	SW	3	ARG	CG-CD-NE	-5.70	99.47	112.00
1	5	74	G	N9-C1'-C2'	5.70	120.54	112.00
5	B	119	TYR	CB-CA-C	5.70	121.25	111.68
31	b	11	ASN	N-CA-C	-5.70	104.28	111.11
49	S2	166	A	C4'-C3'-O3'	-5.70	104.46	113.00
73	SX	16	HIS	CA-CB-CG	-5.70	108.10	113.80
1	5	911	U	C2'-C3'-O3'	5.69	122.24	113.70
1	5	229	G	C3'-C2'-O2'	5.69	119.24	110.70
49	S2	1474	A	C2'-C3'-O3'	5.69	118.03	109.50
14	K	147	HIS	N-CA-C	-5.69	102.95	110.40
17	N	53	TYR	N-CA-CB	5.69	118.74	109.69
1	5	2118	G	O4'-C4'-C3'	-5.69	98.31	104.00
6	C	22	VAL	CB-CA-C	-5.69	104.47	111.92
48	4	73	THR	N-CA-C	5.69	117.17	108.30
49	S2	1623	A	O4'-C1'-C2'	-5.69	101.91	107.60
49	S2	1818	A	C4'-C3'-O3'	-5.69	104.47	113.00
1	5	2043	A	C4'-C3'-O3'	-5.68	104.47	113.00
1	5	4463	U	N1-C1'-C2'	-5.68	103.47	112.00
1	5	4887	C	C1'-C2'-O2'	-5.68	99.87	108.40
49	S2	399	C	C4'-C3'-O3'	5.68	117.93	109.40
1	5	43	U	N1-C1'-C2'	-5.68	103.47	112.00
1	5	1930	U	N1-C1'-C2'	5.68	122.52	114.00
8	E	69	TYR	N-CA-C	5.68	118.32	107.75
49	S2	110	U	O4'-C1'-C2'	-5.68	101.92	107.60
55	SF	140	ASP	N-CA-C	-5.68	102.35	110.59
1	5	1953	U	N1-C1'-C2'	5.68	120.52	112.00
1	5	2533	C	N1-C1'-C2'	5.68	120.52	112.00
4	A	209	HIS	CB-CA-C	5.68	117.54	109.08
11	H	180	TYR	CA-CB-CG	5.68	124.12	113.90
1	5	1591	U	N1-C1'-C2'	5.68	120.52	112.00
1	5	2675	G	C1'-C2'-O2'	5.68	116.92	108.40
3	8	38	U	C1'-O4'-C4'	-5.68	104.22	109.90
6	C	317	ASN	N-CA-C	-5.68	101.95	109.84
54	SE	47	PHE	CB-CA-C	-5.67	101.42	110.84
1	5	2277	C	O4'-C1'-C2'	-5.67	101.93	107.60
1	5	2614	C	C3'-C2'-O2'	5.67	119.21	110.70
47	r	105	ASP	N-CA-C	-5.67	105.39	112.93
1	5	97	G	C1'-C2'-O2'	5.67	116.90	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1804	A	C4'-C3'-O3'	5.67	117.90	109.40
1	5	2367	A	C3'-C2'-O2'	5.67	119.21	110.70
1	5	931	C	C1'-C2'-O2'	-5.67	103.30	111.80
1	5	4368	G	O4'-C1'-C2'	-5.67	101.93	107.60
1	5	4548	A	O4'-C1'-C2'	-5.67	101.93	107.60
45	p	14	TYR	CB-CA-C	5.67	121.94	110.38
1	5	84	A	C1'-C2'-O2'	-5.67	103.30	111.80
1	5	4750	G	C1'-O4'-C4'	-5.67	104.23	109.90
14	K	43	GLY	O-C-N	5.67	128.25	122.24
1	5	85	G	O4'-C1'-C2'	-5.66	100.14	105.80
10	G	57	TRP	CB-CA-C	5.66	117.52	109.08
17	N	138	PHE	N-CA-C	-5.66	103.74	111.56
49	S2	140	C	C2'-C3'-O3'	5.66	117.99	109.50
74	SY	76	TYR	CB-CA-C	5.66	119.00	109.48
1	5	1576	G	C2'-C3'-O3'	5.66	117.99	109.50
1	5	4982	A	C1'-C2'-O2'	5.66	116.89	108.40
1	5	3676	G	C1'-C2'-O2'	-5.66	99.91	108.40
49	S2	101	U	C2'-C3'-O3'	-5.66	105.21	113.70
49	S2	104	A	C1'-C2'-O2'	5.66	116.89	108.40
73	SX	16	HIS	N-CA-CB	5.66	118.18	109.98
1	5	450	G	C1'-C2'-O2'	5.66	116.89	108.40
1	5	4627	U	O4'-C1'-C2'	-5.66	101.94	107.60
1	5	1408	G	C1'-C2'-O2'	5.66	116.88	108.40
1	5	1930	U	C4'-C3'-O3'	-5.66	100.92	109.40
1	5	2370	A	C3'-C2'-O2'	5.66	123.08	114.60
1	5	64	A	C4'-C3'-O3'	5.65	117.88	109.40
1	5	2056	G	P-O5'-C5'	-5.65	112.42	120.90
67	SR	31	ASN	N-CA-C	-5.65	106.15	113.16
1	5	4693	C	O4'-C4'-C3'	-5.65	98.35	104.00
36	g	76	ARG	CB-CA-C	-5.65	100.94	110.43
1	5	3753	G	C2'-C3'-O3'	5.65	122.17	113.70
1	5	3913	G	C4'-C3'-O3'	-5.65	100.93	109.40
49	S2	952	G	C1'-C2'-O2'	5.65	116.87	108.40
49	S2	1202	U	C2'-C3'-O3'	5.65	122.17	113.70
1	5	2248	C	O4'-C1'-C2'	-5.64	101.96	107.60
1	5	2262	G	C4'-C3'-O3'	5.64	117.86	109.40
48	4	477	GLN	CA-C-N	-5.64	113.23	122.54
48	4	477	GLN	C-N-CA	-5.64	113.23	122.54
51	SB	100	PHE	N-CA-C	-5.64	101.84	110.30
1	5	2817	C	C2'-C3'-O3'	5.64	122.16	113.70
1	5	4194	U	N1-C1'-C2'	-5.64	103.54	112.00
48	4	223	PHE	CA-CB-CG	-5.64	108.16	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	358	LEU	CA-C-N	-5.64	114.94	120.52
48	4	358	LEU	C-N-CA	-5.64	114.94	120.52
5	B	363	ILE	N-CA-C	5.64	116.11	107.77
49	S2	579	C	C1'-C2'-O2'	5.64	116.86	108.40
1	5	2081	C	N1-C1'-C2'	5.64	120.45	112.00
4	A	19	HIS	N-CA-CB	-5.64	100.96	110.49
48	4	111	PHE	N-CA-C	-5.64	105.02	112.24
48	4	206	ASP	N-CA-C	5.64	122.27	109.81
1	5	1379	C	C1'-O4'-C4'	-5.63	104.07	109.70
11	H	115	ARG	N-CA-CB	5.63	118.42	110.36
1	5	1334	A	C1'-C2'-O2'	5.63	116.85	108.40
64	SO	146	ARG	NE-CZ-NH2	-5.63	114.13	119.20
1	5	1274	A	C2'-C3'-O3'	5.63	117.95	109.50
1	5	3739	C	C2'-C3'-O3'	5.63	122.15	113.70
9	F	119	ILE	N-CA-CB	5.63	117.24	110.31
31	b	6	ASN	N-CA-C	-5.63	104.63	113.02
49	S2	465	A	C4'-C3'-O3'	5.63	117.85	109.40
82	Sg	83	TRP	CA-CB-CG	-5.63	102.90	113.60
49	S2	1358	U	C4'-C3'-O3'	-5.63	104.56	113.00
1	5	972	C	C4'-C3'-O3'	-5.63	104.56	113.00
3	8	125	C	O4'-C1'-C2'	-5.63	101.97	107.60
59	SJ	67	ASP	CB-CA-C	5.63	116.81	108.87
61	SL	53	GLY	N-CA-C	5.63	118.52	112.33
1	5	152	U	O4'-C1'-C2'	-5.63	101.97	107.60
52	SC	170	TRP	N-CA-C	-5.63	104.84	110.97
56	SG	156	TYR	CB-CA-C	5.63	120.81	112.03
1	5	4238	G	N9-C1'-C2'	-5.62	103.57	112.00
54	SE	227	VAL	N-CA-C	5.62	116.18	110.05
1	5	4497	U	C2'-C3'-O3'	5.62	122.13	113.70
24	U	90	TYR	N-CA-CB	5.62	118.22	110.07
49	S2	1092	G	C1'-C2'-O2'	5.62	116.83	108.40
51	SB	155	TYR	CB-CA-C	5.62	118.92	109.48
1	5	1390	G	C2'-C3'-O3'	5.62	122.13	113.70
1	5	2688	G	O4'-C1'-C2'	-5.62	101.98	107.60
5	B	236	HIS	N-CA-CB	-5.62	103.93	112.47
23	T	103	ASP	N-CA-C	5.62	119.61	112.87
49	S2	356	C	C4'-C3'-O3'	-5.62	104.57	113.00
1	5	2696	A	C1'-C2'-O2'	-5.62	103.38	111.80
48	4	392	GLY	C-N-CD	-5.62	101.98	125.00
1	5	1832	C	O4'-C1'-C2'	-5.61	101.99	107.60
3	8	118	C	O4'-C1'-C2'	-5.61	101.99	107.60
33	d	108	TYR	N-CA-C	5.61	117.99	110.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2507	A	O4'-C1'-C2'	-5.61	101.99	107.60
15	L	66	TYR	N-CA-CB	-5.61	103.54	111.00
17	N	151	ILE	N-CA-C	-5.61	104.88	111.00
1	5	406	C	C3'-C2'-O2'	5.61	119.11	110.70
1	5	1522	G	N9-C1'-C2'	-5.61	103.59	112.00
1	5	2795	A	C1'-C2'-O2'	-5.61	103.39	111.80
48	4	306	ASN	CA-CB-CG	-5.61	106.99	112.60
49	S2	1097	G	C2'-C3'-O3'	5.61	122.11	113.70
1	5	2077	C	C1'-C2'-O2'	5.61	116.81	108.40
1	5	2577	C	O4'-C1'-C2'	-5.61	101.99	107.60
6	C	42	THR	CB-CA-C	-5.61	100.25	110.63
80	Se	38	TYR	CA-CB-CG	5.61	124.00	113.90
1	5	1379	C	N1-C1'-C2'	5.61	122.41	114.00
1	5	1378	C	C4'-C3'-O3'	5.60	121.40	113.00
5	B	117	ARG	CG-CD-NE	-5.60	99.67	112.00
49	S2	484	A	C3'-C2'-O2'	5.60	119.10	110.70
49	S2	1302	G	C1'-C2'-O2'	-5.60	103.40	111.80
12	I	213	HIS	CA-CB-CG	-5.60	108.20	113.80
1	5	216	C	C2'-C3'-O3'	5.60	122.10	113.70
1	5	381	U	N1-C1'-C2'	5.60	120.40	112.00
1	5	4324	A	N9-C1'-C2'	5.60	120.40	112.00
49	S2	365	C	C1'-C2'-O2'	5.60	116.80	108.40
49	S2	821	G	O4'-C4'-C3'	-5.60	98.40	104.00
1	5	85	G	N9-C1'-C2'	-5.60	105.61	114.00
1	5	2467	U	C2'-C3'-O3'	-5.60	105.31	113.70
5	B	39	LYS	CA-C-N	5.60	126.83	119.84
5	B	39	LYS	C-N-CA	5.60	126.83	119.84
48	4	433	ASN	CA-C-O	5.60	126.08	119.48
1	5	963	G	C2'-C3'-O3'	-5.59	101.11	109.50
1	5	4464	A	C5'-C4'-O4'	5.59	118.19	109.80
1	5	4958	C	O4'-C1'-C2'	-5.59	102.01	107.60
9	F	203	PHE	N-CA-C	-5.59	104.87	110.97
1	5	4623	G	C1'-C2'-O2'	5.59	116.79	108.40
1	5	1478	C	N1-C1'-C2'	5.59	120.38	112.00
28	Y	19	PHE	CB-CA-C	5.59	118.15	111.22
1	5	977	C	C4'-C3'-C2'	-5.59	97.01	102.60
9	F	84	TYR	N-CA-CB	5.59	118.94	110.45
1	5	4979	A	C2'-C3'-O3'	-5.58	105.33	113.70
3	8	34	U	O4'-C1'-C2'	-5.58	102.02	107.60
63	SN	55	ARG	CG-CD-NE	5.58	124.28	112.00
1	5	136	C	C3'-C2'-O2'	5.58	119.07	110.70
1	5	2753	G	C2'-C3'-O3'	5.58	122.07	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
78	Sc	44	ARG	NE-CZ-NH2	5.58	124.22	119.20
49	S2	368	U	C2'-C3'-O3'	5.58	122.07	113.70
49	S2	536	A	O4'-C1'-C2'	-5.58	102.02	107.60
49	S2	752	G	C4'-C3'-O3'	5.58	117.76	109.40
1	5	664	G	C1'-O4'-C4'	-5.57	104.13	109.70
49	S2	651	U	N1-C1'-C2'	5.57	120.36	112.00
49	S2	1014	G	C1'-C2'-O2'	5.57	116.76	108.40
1	5	209	U	C1'-C2'-O2'	5.57	116.76	108.40
17	N	6	TYR	CA-CB-CG	-5.57	103.87	113.90
48	4	289	PHE	N-CA-C	-5.57	105.21	111.28
1	5	3773	U	C4'-C3'-C2'	-5.57	97.03	102.60
1	5	4306	U	C1'-C2'-O2'	5.57	116.76	108.40
48	4	542	GLY	N-CA-C	-5.57	99.98	113.18
49	S2	1337	C	C1'-C2'-O2'	5.57	116.76	108.40
50	SA	54	THR	CB-CA-C	-5.57	101.90	110.81
74	SY	63	HIS	CA-CB-CG	5.57	119.37	113.80
49	S2	1062	A	C2'-C3'-O3'	-5.57	105.35	113.70
16	M	119	ARG	NE-CZ-NH2	5.57	124.21	119.20
45	p	18	TYR	CA-CB-CG	5.57	123.92	113.90
49	S2	1072	U	C1'-C2'-O2'	5.57	116.75	108.40
1	5	2325	C	C2'-C3'-O3'	5.57	122.05	113.70
9	F	237	ASN	N-CA-CB	5.57	118.31	109.51
48	4	53	GLU	CA-C-N	5.57	132.17	121.54
48	4	53	GLU	C-N-CA	5.57	132.17	121.54
49	S2	452	G	C1'-C2'-O2'	-5.57	100.05	108.40
1	5	1292	C	N1-C1'-C2'	5.56	120.35	112.00
6	C	144	ILE	CB-CA-C	-5.56	103.46	111.19
22	S	10	TYR	CB-CA-C	5.56	120.62	111.50
22	S	32	ILE	N-CA-C	-5.56	103.99	110.05
49	S2	923	G	O4'-C1'-C2'	-5.56	102.04	107.60
1	5	2424	G	N9-C1'-C2'	5.56	120.34	112.00
3	8	112	G	C3'-C2'-O2'	5.56	119.04	110.70
49	S2	65	C	C2'-C3'-O3'	5.56	122.04	113.70
49	S2	91	A	C1'-C2'-O2'	5.56	116.74	108.40
49	S2	1296	U	N1-C1'-C2'	5.56	120.34	112.00
1	5	4424	A	C1'-C2'-O2'	5.56	116.74	108.40
49	S2	796	G	N9-C1'-C2'	5.56	120.34	112.00
49	S2	1152	U	C2'-C3'-O3'	-5.56	105.36	113.70
1	5	4518	A	C3'-C2'-O2'	-5.56	106.27	114.60
7	D	283	LYS	N-CA-C	-5.56	101.10	109.60
1	5	468	U	N1-C1'-C2'	5.55	120.33	112.00
1	5	1440	U	O4'-C1'-C2'	-5.55	102.05	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	2670	C	N1-C1'-C2'	5.55	120.33	112.00
49	S2	1262	C	N1-C1'-C2'	5.55	120.33	112.00
52	SC	172	ASN	N-CA-CB	5.55	118.92	109.87
10	G	57	TRP	CA-CB-CG	-5.55	103.05	113.60
1	5	4719	G	C4'-C3'-O3'	5.55	117.73	109.40
1	5	4976	U	N1-C1'-C2'	5.55	122.33	114.00
47	r	30	ASN	CA-C-N	-5.55	114.36	122.19
47	r	30	ASN	C-N-CA	-5.55	114.36	122.19
1	5	2324	C	O4'-C1'-C2'	-5.55	102.05	107.60
2	7	72	U	C3'-C2'-O2'	5.55	119.03	110.70
82	Sg	140	TYR	N-CA-C	5.55	117.69	108.20
18	O	73	PHE	N-CA-CB	5.55	118.13	109.97
22	S	44	PHE	N-CA-CB	5.55	118.37	110.16
48	4	741	MET	CA-CB-CG	5.55	125.19	114.10
1	5	267	G	C2'-C3'-O3'	5.54	122.02	113.70
9	F	197	TYR	N-CA-CB	5.54	119.86	110.49
36	g	14	ASN	CA-CB-CG	-5.54	107.06	112.60
1	5	1722	C	C4'-C3'-O3'	-5.54	104.69	113.00
1	5	2310	C	C2'-C3'-O3'	5.54	122.01	113.70
1	5	3626	G	C1'-C2'-O2'	5.54	116.71	108.40
1	5	4583	C	N1-C1'-C2'	-5.54	103.69	112.00
36	g	76	ARG	N-CA-C	5.54	116.95	108.42
49	S2	1579	A	C2'-C3'-O3'	5.54	122.01	113.70
1	5	2270	G	N9-C1'-C2'	5.54	120.31	112.00
4	A	162	ASN	N-CA-CB	5.54	119.20	110.23
47	r	16	PHE	N-CA-C	-5.54	106.11	112.92
1	5	3654	G	C1'-C2'-O2'	5.54	116.71	108.40
1	5	4198	G	O4'-C1'-C2'	-5.54	102.06	107.60
9	F	136	ARG	CG-CD-NE	-5.54	99.81	112.00
1	5	2007	G	C1'-C2'-O2'	-5.54	103.49	111.80
34	e	74	PHE	CA-CB-CG	-5.54	108.26	113.80
49	S2	351	G	C1'-C2'-O2'	5.54	116.71	108.40
1	5	2668	G	C3'-C2'-O2'	5.54	119.00	110.70
23	T	105	PHE	N-CA-C	-5.54	103.60	110.41
48	4	3	ASN	N-CA-C	-5.53	95.51	111.00
55	SF	152	TRP	N-CA-CB	5.53	118.09	110.07
1	5	158	A	N9-C1'-C2'	-5.53	103.70	112.00
1	5	4449	A	C4'-C3'-O3'	5.53	121.30	113.00
46	q	13	TYR	N-CA-C	-5.53	104.89	111.03
49	S2	1714	U	C4'-C3'-O3'	-5.53	104.70	113.00
1	5	4975	G	O4'-C1'-C2'	-5.53	102.07	107.60
34	e	57	ASN	N-CA-C	-5.53	100.89	109.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	p	34	HIS	CB-CA-C	5.53	120.06	110.94
1	5	153	G	C4'-C3'-O3'	-5.53	104.71	113.00
39	j	39	TYR	N-CA-C	5.53	122.02	109.81
11	H	115	ARG	CA-CB-CG	5.52	125.15	114.10
49	S2	999	G	C4'-C3'-O3'	-5.52	104.72	113.00
1	5	1523	A	C4'-C3'-O3'	-5.52	104.72	113.00
1	5	1323	A	N9-C1'-C2'	5.52	120.28	112.00
40	k	11	PHE	N-CA-CB	5.52	118.80	110.30
1	5	2833	A	N9-C1'-C2'	5.52	120.28	112.00
12	I	111	LEU	N-CA-C	-5.52	102.11	110.28
49	S2	1288	U	C4'-C3'-O3'	-5.52	104.72	113.00
1	5	268	G	C2'-C3'-O3'	5.52	121.97	113.70
1	5	1818	G	C4'-C3'-O3'	-5.52	104.73	113.00
3	8	38	U	O4'-C1'-C2'	-5.52	102.08	107.60
1	5	4165	C	C2'-C3'-O3'	5.51	121.97	113.70
50	SA	151	ASP	CA-CB-CG	-5.51	107.08	112.60
1	5	18	C	C4'-C3'-O3'	-5.51	104.73	113.00
1	5	1280	C	C3'-C2'-O2'	5.51	118.97	110.70
1	5	514	U	O4'-C1'-C2'	-5.51	102.09	107.60
1	5	2289	C	C2'-C3'-O3'	-5.51	105.44	113.70
49	S2	1505	U	C3'-C2'-O2'	5.51	118.96	110.70
1	5	4281	A	C2'-C3'-O3'	-5.51	105.44	113.70
4	A	37	ARG	CG-CD-NE	-5.51	99.89	112.00
9	F	136	ARG	CA-CB-CG	5.51	125.11	114.10
1	5	4499	G	C2'-C3'-O3'	-5.50	105.44	113.70
2	7	6	C	C2'-C3'-O3'	5.50	121.96	113.70
2	7	65	G	C2'-C3'-O3'	5.50	121.95	113.70
53	SD	67	ARG	CG-CD-NE	5.50	124.11	112.00
1	5	4467	A	C4'-C3'-O3'	-5.50	104.75	113.00
1	5	4693	C	C5'-C4'-O4'	5.50	118.05	109.80
3	8	1	C	C5'-C4'-C3'	5.50	124.25	116.00
4	A	33	ASP	CA-C-O	-5.50	115.47	121.14
9	F	84	TYR	N-CA-C	5.50	117.98	110.55
1	5	110	C	C1'-C2'-O2'	5.50	116.65	108.40
1	5	2323	C	C2'-C3'-O3'	5.50	121.95	113.70
48	4	776	VAL	N-CA-C	5.50	120.78	109.34
49	S2	1353	A	C1'-C2'-O2'	5.50	116.65	108.40
1	5	1214	C	C2'-C3'-O3'	-5.50	101.26	109.50
1	5	1847	C	N1-C1'-C2'	5.50	120.24	112.00
1	5	2529	A	C2'-C3'-O3'	-5.50	105.45	113.70
48	4	202	ASN	CA-C-N	5.50	129.77	120.64
48	4	202	ASN	C-N-CA	5.50	129.77	120.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1040	G	O4'-C1'-C2'	-5.50	102.10	107.60
49	S2	1584	G	N9-C1'-C2'	5.50	122.24	114.00
35	f	6	TRP	CB-CA-C	5.50	121.36	110.42
1	5	1627	G	C1'-C2'-O2'	5.49	116.64	108.40
1	5	4542	U	N1-C1'-C2'	5.49	120.24	112.00
12	I	46	PHE	CB-CA-C	5.49	117.96	111.15
46	q	17	ILE	CB-CA-C	5.49	119.00	111.97
48	4	854	PHE	CA-C-N	-5.49	113.58	122.81
48	4	854	PHE	C-N-CA	-5.49	113.58	122.81
49	S2	443	U	C1'-C2'-O2'	5.49	116.64	108.40
68	SS	11	HIS	CB-CA-C	5.49	121.35	110.42
72	SW	76	SER	N-CA-C	5.49	119.20	108.21
21	R	97	ARG	CG-CD-NE	-5.49	99.92	112.00
49	S2	1319	U	N1-C1'-C2'	5.49	120.23	112.00
1	5	222	C	C1'-C2'-O2'	5.49	116.63	108.40
23	T	17	ARG	CB-CA-C	5.49	117.34	109.11
49	S2	1142	G	N9-C1'-C2'	-5.49	103.77	112.00
49	S2	1503	C	N1-C1'-C2'	5.49	120.23	112.00
1	5	84	A	N9-C1'-C2'	5.49	122.23	114.00
44	o	42	ASP	CB-CA-C	-5.49	102.27	110.88
61	SL	89	ARG	CG-CD-NE	-5.49	99.93	112.00
49	S2	1292	C	O4'-C4'-C3'	-5.48	98.52	104.00
1	5	4764	A	C4'-C3'-O3'	-5.48	104.78	113.00
48	4	685	TRP	CB-CG-CD2	-5.48	119.12	126.80
49	S2	9	U	N1-C1'-C2'	-5.48	103.78	112.00
1	5	3776	G	N9-C1'-C2'	-5.48	105.78	114.00
1	5	4404	U	C1'-C2'-O2'	5.48	116.62	108.40
34	e	75	ARG	CG-CD-NE	-5.48	99.94	112.00
1	5	509	A	C4'-C3'-O3'	-5.48	104.78	113.00
1	5	4223	C	C1'-C2'-O2'	5.48	116.62	108.40
12	I	78	LYS	N-CA-C	-5.48	99.13	110.80
14	K	39	PRO	O-C-N	5.48	130.03	122.64
23	T	14	MET	CB-CA-C	-5.48	102.53	110.96
1	5	2344	U	C2'-C3'-O3'	-5.48	105.49	113.70
74	SY	61	ARG	CG-CD-NE	-5.48	99.95	112.00
1	5	405	U	C2'-C3'-O3'	5.47	121.91	113.70
1	5	934	C	O4'-C4'-C3'	-5.47	100.63	106.10
1	5	2258	C	C4'-C3'-O3'	5.47	121.21	113.00
1	5	1343	A	C4'-C3'-O3'	-5.47	104.79	113.00
1	5	99	A	C1'-C2'-O2'	5.47	116.61	108.40
49	S2	368	U	C3'-C2'-O2'	5.47	118.91	110.70
69	ST	83	GLN	CA-CB-CG	5.47	125.04	114.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	5044	A	N9-C1'-C2'	5.47	120.20	112.00
45	p	14	TYR	CA-CB-CG	-5.47	104.05	113.90
81	Sf	105	TYR	CB-CA-C	5.47	120.36	112.05
1	5	157	U	N1-C1'-C2'	-5.47	103.80	112.00
48	4	198	GLY	N-CA-C	5.47	123.50	112.34
1	5	2674	A	O4'-C4'-C3'	-5.47	100.63	106.10
1	5	3799	A	N9-C1'-C2'	5.47	120.20	112.00
9	F	110	VAL	CB-CA-C	-5.47	104.88	111.88
20	Q	176	ARG	CG-CD-NE	-5.47	99.97	112.00
28	Y	100	HIS	N-CA-CB	5.47	117.92	110.05
48	4	681	ALA	CA-C-N	5.47	126.01	120.00
48	4	681	ALA	C-N-CA	5.47	126.01	120.00
49	S2	1210	G	C4'-C3'-O3'	-5.47	104.80	113.00
1	5	1834	U	C4'-C3'-O3'	5.46	117.60	109.40
48	4	801	ARG	CB-CG-CD	5.46	123.87	111.30
1	5	1373	A	C4'-C3'-O3'	-5.46	104.81	113.00
1	5	2117	G	O4'-C4'-C3'	-5.46	98.54	104.00
49	S2	1597	C	N1-C1'-C2'	5.46	122.19	114.00
1	5	1534	A	C3'-C2'-O2'	-5.46	106.41	114.60
1	5	2580	U	N1-C1'-C2'	5.46	120.19	112.00
1	5	2667	C	C2'-C3'-O3'	-5.46	105.51	113.70
6	C	311	ARG	CG-CD-NE	-5.46	99.99	112.00
46	q	200	ASN	CA-C-N	-5.46	113.02	119.84
46	q	200	ASN	C-N-CA	-5.46	113.02	119.84
57	SH	109	ARG	N-CA-C	5.46	117.95	109.60
1	5	658	C	C2'-C3'-O3'	5.46	121.88	113.70
1	5	648	G	C2'-C3'-O3'	5.45	121.88	113.70
1	5	4320	G	N9-C1'-C2'	5.45	120.18	112.00
28	Y	74	TYR	N-CA-CB	5.45	119.70	110.49
1	5	376	A	C1'-C2'-O2'	5.45	116.57	108.40
1	5	1631	A	O4'-C4'-C3'	-5.45	100.65	106.10
1	5	1735	U	C1'-C2'-O2'	5.45	116.57	108.40
1	5	2090	U	N1-C1'-C2'	5.45	120.17	112.00
49	S2	1221	G	N9-C1'-C2'	5.45	120.17	112.00
1	5	170	C	C4'-C3'-O3'	5.45	117.57	109.40
1	5	1724	G	N9-C1'-C2'	5.45	122.17	114.00
49	S2	384	U	N1-C1'-C2'	-5.45	103.83	112.00
1	5	4600	G	O4'-C1'-C2'	-5.45	102.15	107.60
3	8	104	A	N9-C1'-C2'	5.45	122.17	114.00
48	4	249	ARG	N-CA-CB	5.45	118.12	110.12
2	7	6	C	C4'-C3'-O3'	-5.44	104.83	113.00
55	SF	51	HIS	CA-CB-CG	-5.44	108.36	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
72	SW	55	ASP	N-CA-C	-5.44	103.31	110.33
1	5	4699	U	C2'-C3'-O3'	-5.44	101.33	109.50
9	F	36	ARG	NE-CZ-NH2	5.44	124.10	119.20
49	S2	678	U	C4'-C3'-O3'	-5.44	104.83	113.00
49	S2	798	A	C4'-C3'-O3'	5.44	121.16	113.00
49	S2	1519	U	N1-C1'-C2'	5.44	122.16	114.00
49	S2	1109	C	C4'-C3'-O3'	5.44	121.16	113.00
1	5	2635	U	N1-C1'-C2'	5.44	120.16	112.00
49	S2	688	U	C2'-C3'-O3'	5.44	117.66	109.50
3	8	115	G	C4'-C3'-O3'	-5.44	104.84	113.00
4	A	195	CYS	N-CA-C	-5.44	101.49	109.81
22	S	28	TYR	CA-CB-CG	5.44	123.69	113.90
46	q	18	ILE	N-CA-CB	5.44	117.27	110.47
39	j	46	LYS	N-CA-C	-5.44	102.12	109.95
1	5	1895	G	C2'-C3'-O3'	-5.43	105.55	113.70
1	5	4714	C	C3'-C2'-O2'	5.43	118.85	110.70
7	D	218	ALA	N-CA-C	-5.43	105.45	112.68
49	S2	663	C	C4'-C3'-O3'	-5.43	104.85	113.00
52	SC	223	TYR	N-CA-CB	5.43	119.13	110.16
1	5	1521	C	N1-C1'-C2'	-5.43	103.85	112.00
48	4	702	PHE	CA-CB-CG	-5.43	108.37	113.80
49	S2	917	U	N1-C1'-C2'	5.43	120.15	112.00
54	SE	86	PHE	N-CA-CB	5.43	117.96	109.97
1	5	2827	G	N9-C1'-C2'	5.43	122.15	114.00
1	5	3666	C	C2'-C3'-O3'	5.43	121.84	113.70
1	5	4322	G	N9-C1'-C2'	-5.43	103.86	112.00
1	5	1896	A	C1'-C2'-O2'	5.43	116.54	108.40
1	5	2874	U	O4'-C4'-C3'	-5.43	100.67	106.10
1	5	1610	C	C4'-C3'-O3'	-5.43	104.86	113.00
1	5	2011	C	C3'-C2'-O2'	5.43	118.84	110.70
1	5	2264	C	C3'-C2'-O2'	5.43	122.74	114.60
16	M	91	TRP	CB-CA-C	-5.43	102.29	110.92
21	R	117	ARG	CB-CG-CD	5.43	123.78	111.30
47	r	77	TYR	N-CA-CB	-5.42	101.39	110.99
50	SA	111	GLN	N-CA-C	-5.42	106.25	112.92
3	8	104	A	P-O5'-C5'	5.42	129.03	120.90
49	S2	1606	G	N9-C1'-C2'	-5.42	103.86	112.00
2	7	110	G	C4'-C3'-O3'	-5.42	104.87	113.00
36	g	9	ARG	CG-CD-NE	-5.42	100.07	112.00
49	S2	853	C	C2'-C3'-O3'	5.42	121.83	113.70
49	S2	1680	G	N9-C1'-C2'	5.42	120.13	112.00
49	S2	1820	G	C3'-C2'-O2'	5.42	118.83	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1361	G	C2'-C3'-O3'	5.42	121.83	113.70
1	5	2658	G	C1'-C2'-O2'	5.42	116.53	108.40
4	A	194	ASN	N-CA-CB	5.42	118.38	110.58
1	5	394	G	N9-C1'-C2'	-5.41	103.88	112.00
1	5	1358	G	N9-C1'-C2'	5.41	120.12	112.00
1	5	3880	G	N9-C1'-C2'	5.41	122.12	114.00
1	5	3938	G	C4'-C3'-O3'	-5.41	101.28	109.40
28	Y	61	HIS	CA-CB-CG	-5.41	108.39	113.80
48	4	357	HIS	CA-C-N	-5.41	112.80	120.49
48	4	357	HIS	C-N-CA	-5.41	112.80	120.49
49	S2	648	A	C4'-C3'-O3'	-5.41	104.88	113.00
49	S2	632	C	C4'-C3'-O3'	-5.41	104.88	113.00
49	S2	798	A	C1'-C2'-O2'	-5.41	100.28	108.40
1	5	2083	C	C4'-C3'-O3'	5.41	121.12	113.00
1	5	4510	A	O4'-C4'-C3'	-5.41	100.69	106.10
1	5	4981	G	N9-C1'-C2'	-5.41	103.89	112.00
37	h	117	ARG	CB-CG-CD	5.41	123.74	111.30
1	5	3697	U	C3'-C2'-O2'	5.41	118.81	110.70
1	5	3813	A	O4'-C4'-C3'	-5.41	100.69	106.10
1	5	4123	C	O4'-C1'-C2'	-5.41	102.19	107.60
1	5	4183	G	O4'-C4'-C3'	-5.41	100.69	106.10
20	Q	178	ARG	CG-CD-NE	-5.41	100.10	112.00
49	S2	524	U	C2'-C3'-O3'	5.41	121.81	113.70
51	SB	100	PHE	N-CA-CB	5.41	118.15	109.28
1	5	3595	U	C3'-C2'-O2'	5.41	118.81	110.70
1	5	4234	A	C2'-C3'-O3'	5.41	117.61	109.50
1	5	4536	C	C1'-C2'-O2'	5.41	116.51	108.40
1	5	1272	C	O4'-C1'-C2'	-5.41	100.39	105.80
1	5	3627	G	C2'-C3'-O3'	5.41	121.81	113.70
1	5	3918	G	C1'-C2'-O2'	5.41	116.51	108.40
1	5	55	G	N9-C1'-C2'	-5.40	103.89	112.00
1	5	450	G	N9-C1'-C2'	-5.40	103.89	112.00
49	S2	1835	A	O4'-C1'-C2'	-5.40	102.20	107.60
3	8	73	U	N1-C1'-C2'	-5.40	103.89	112.00
35	f	19	ARG	CA-CB-CG	5.40	124.90	114.10
1	5	3734	U	N1-C1'-C2'	5.40	120.10	112.00
48	4	497	MET	N-CA-C	5.40	117.66	110.53
49	S2	576	A	C4'-C3'-O3'	-5.40	104.90	113.00
1	5	3594	C	N1-C1'-C2'	5.40	120.09	112.00
49	S2	1249	C	N1-C1'-C2'	-5.40	103.91	112.00
1	5	42	A	C1'-O4'-C4'	-5.39	104.31	109.70
14	K	148	PRO	N-CA-C	-5.39	106.03	113.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	f	42	TYR	CA-CB-CG	-5.39	104.19	113.90
49	S2	167	G	N9-C1'-C2'	5.39	120.09	112.00
1	5	470	A	O4'-C1'-C2'	-5.39	102.21	107.60
1	5	3801	U	C3'-C2'-O2'	5.39	118.79	110.70
1	5	956	A	N9-C1'-C2'	-5.39	105.91	114.00
1	5	2796	G	O4'-C4'-C3'	-5.39	100.71	106.10
22	S	145	PHE	CA-CB-CG	-5.39	108.41	113.80
1	5	1528	U	C4'-C3'-O3'	-5.39	104.92	113.00
1	5	4280	A	C4'-C3'-C2'	-5.39	97.21	102.60
1	5	4670	C	P-O5'-C5'	5.39	128.99	120.90
4	A	210	PRO	N-CA-C	5.39	123.57	112.47
11	H	115	ARG	CG-CD-NE	-5.39	100.14	112.00
48	4	66	ARG	CA-C-O	-5.39	114.84	120.55
49	S2	620	G	C4'-C3'-O3'	-5.39	104.92	113.00
75	SZ	105	ALA	N-CA-C	5.39	116.84	110.97
33	d	87	ARG	CB-CG-CD	5.39	123.69	111.30
49	S2	1513	C	N1-C1'-C2'	5.39	120.08	112.00
1	5	54	G	C2'-C3'-O3'	5.39	121.78	113.70
1	5	977	C	C4'-C3'-O3'	-5.39	104.92	113.00
49	S2	1604	G	N9-C1'-C2'	5.39	120.08	112.00
68	SS	11	HIS	CA-C-N	5.39	131.67	121.97
68	SS	11	HIS	C-N-CA	5.39	131.67	121.97
21	R	175	GLU	N-CA-C	-5.38	104.29	111.24
49	S2	125	C	C3'-C2'-O2'	5.38	118.78	110.70
1	5	4750	G	C4'-C3'-O3'	5.38	121.08	113.00
49	S2	1659	U	N1-C1'-C2'	-5.38	103.93	112.00
1	5	288	G	C1'-C2'-O2'	5.38	116.47	108.40
1	5	3844	U	C1'-C2'-O2'	5.38	116.47	108.40
6	C	159	GLU	N-CA-CB	5.38	118.51	110.22
49	S2	1623	A	N9-C1'-C2'	-5.38	103.93	112.00
1	5	664	G	O4'-C1'-N9	5.38	116.27	108.20
1	5	1929	A	N9-C1'-C2'	5.38	120.07	112.00
1	5	3846	C	C1'-C2'-O2'	5.38	116.47	108.40
1	5	4434	C	N1-C1'-C2'	5.38	120.07	112.00
1	5	5022	U	O4'-C1'-C2'	-5.38	102.22	107.60
6	C	142	HIS	CB-CA-C	5.38	119.82	110.94
21	R	74	ARG	NE-CZ-NH1	-5.38	116.12	121.50
33	d	24	GLU	CA-CB-CG	5.38	124.86	114.10
49	S2	106	C	C2'-C3'-O3'	-5.38	105.63	113.70
49	S2	616	A	C1'-C2'-O2'	5.38	116.47	108.40
1	5	1742	A	O4'-C1'-C2'	-5.38	102.22	107.60
1	5	4398	C	C2'-C3'-O3'	5.38	121.76	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4763	U	O5'-C5'-C4'	-5.38	103.64	111.70
48	4	110	ASP	N-CA-C	5.38	119.99	113.38
48	4	722	ILE	CB-CA-C	-5.38	108.65	114.35
49	S2	447	A	C4'-C3'-O3'	5.38	117.46	109.40
49	S2	1097	G	C4'-C3'-O3'	-5.38	104.94	113.00
1	5	1067	G	C2'-C3'-O3'	5.37	121.76	113.70
1	5	2769	U	N1-C1'-C2'	-5.37	103.94	112.00
71	SV	50	PHE	N-CA-C	5.37	117.56	109.23
1	5	1620	U	N1-C1'-C2'	5.37	120.06	112.00
1	5	2648	G	C2'-C3'-O3'	5.37	117.56	109.50
3	8	14	U	C1'-C2'-O2'	-5.37	100.34	108.40
48	4	199	PRO	CA-C-O	5.37	125.04	118.92
1	5	3714	G	N9-C1'-C2'	5.37	120.05	112.00
49	S2	68	A	N9-C1'-C2'	5.37	120.05	112.00
49	S2	1486	A	N9-C1'-C2'	-5.37	103.95	112.00
1	5	2447	U	C1'-C2'-O2'	-5.37	103.75	111.80
48	4	109	VAL	CB-CA-C	-5.37	102.49	111.29
1	5	2275	G	C2'-C3'-O3'	5.36	121.74	113.70
1	5	4257	A	C1'-C2'-O2'	-5.36	103.75	111.80
1	5	4915	G	C4'-C3'-O3'	-5.36	104.95	113.00
5	B	106	PHE	N-CA-CB	5.36	118.77	110.46
1	5	53	C	C1'-C2'-O2'	5.36	116.44	108.40
1	5	1543	G	C1'-C2'-O2'	5.36	116.44	108.40
47	r	12	ASN	N-CA-C	-5.36	102.26	110.14
1	5	2305	U	C1'-C2'-O2'	-5.36	103.76	111.80
1	5	4319	C	N1-C1'-C2'	5.36	120.04	112.00
1	5	952	G	N9-C1'-C2'	5.36	120.04	112.00
49	S2	595	U	C2'-C3'-O3'	5.36	117.53	109.50
49	S2	1637	A	C4'-C3'-O3'	5.36	117.44	109.40
49	S2	1744	G	C2'-C3'-O3'	5.36	117.54	109.50
1	5	1244	G	C4'-C3'-O3'	5.36	117.43	109.40
1	5	2879	A	O4'-C4'-C3'	-5.36	100.75	106.10
48	4	285	LEU	C-N-CD	-5.36	103.05	125.00
50	SA	90	PHE	N-CA-CB	5.36	117.78	110.01
1	5	1765	A	C2'-C3'-O3'	-5.35	105.67	113.70
1	5	1734	G	N9-C1'-C2'	-5.35	105.97	114.00
6	C	232	VAL	N-CA-C	-5.35	106.47	111.45
39	j	67	LEU	N-CA-C	5.35	117.53	111.11
46	q	61	MET	CA-C-N	5.35	130.64	122.29
46	q	61	MET	C-N-CA	5.35	130.64	122.29
49	S2	352	U	N1-C1'-C2'	5.35	120.03	112.00
49	S2	1135	C	N1-C1'-C2'	5.35	120.03	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1216	C	C2'-C3'-O3'	5.35	121.73	113.70
1	5	4307	A	C1'-C2'-O2'	5.35	116.43	108.40
1	5	1601	A	N9-C1'-C2'	-5.35	103.98	112.00
1	5	1930	U	O4'-C4'-C3'	-5.35	100.75	106.10
1	5	2848	G	N9-C1'-C2'	-5.35	103.98	112.00
7	D	20	PHE	CB-CA-C	5.35	121.06	110.42
49	S2	376	A	C1'-C2'-O2'	5.35	116.42	108.40
1	5	4558	U	C4'-C3'-O3'	-5.35	104.98	113.00
48	4	850	ALA	N-CA-C	-5.35	100.71	109.80
10	G	202	VAL	CB-CA-C	5.35	116.77	111.74
1	5	97	G	N9-C1'-C2'	-5.34	103.98	112.00
1	5	2859	G	C1'-C2'-O2'	-5.34	103.78	111.80
1	5	4464	A	O4'-C1'-N9	-5.34	100.48	108.50
49	S2	1444	U	C3'-C2'-O2'	5.34	118.72	110.70
1	5	1864	G	C2'-C3'-O3'	5.34	121.71	113.70
1	5	5060	A	C4'-C3'-O3'	5.34	121.02	113.00
1	5	100	C	C1'-C2'-O2'	5.34	116.41	108.40
1	5	1727	U	N1-C1'-C2'	5.34	120.01	112.00
1	5	2675	G	O4'-C1'-C2'	-5.34	102.26	107.60
49	S2	1351	G	C1'-C2'-O2'	5.34	116.41	108.40
62	SM	103	VAL	N-CA-C	5.34	120.45	109.34
1	5	3644	U	C2'-C3'-O3'	-5.34	105.69	113.70
1	5	3906	A	N9-C1'-C2'	-5.34	105.99	114.00
1	5	4519	C	O5'-C5'-C4'	-5.34	103.49	111.50
35	f	70	ILE	N-CA-C	-5.34	100.73	108.36
68	SS	86	ARG	NE-CZ-NH1	-5.34	116.16	121.50
1	5	4454	G	C2'-C3'-O3'	5.34	121.70	113.70
48	4	327	ASP	CA-CB-CG	-5.34	107.26	112.60
48	4	407	LYS	O-C-N	-5.34	116.52	122.55
49	S2	673	G	C3'-C2'-O2'	5.33	118.70	110.70
1	5	4519	C	N1-C1'-C2'	-5.33	104.00	112.00
49	S2	1645	C	C3'-C2'-O2'	5.33	118.70	110.70
1	5	2502	G	C3'-C2'-O2'	5.33	118.70	110.70
3	8	29	G	C4'-C3'-O3'	-5.33	105.00	113.00
32	c	56	ARG	CD-NE-CZ	5.33	131.86	124.40
68	SS	82	TRP	N-CA-CB	5.33	119.50	110.49
49	S2	1174	U	C1'-C2'-O2'	5.33	116.39	108.40
49	S2	1838	U	C5'-C4'-O4'	5.33	117.10	109.10
18	O	110	PRO	C-N-CD	-5.33	103.15	125.00
31	b	49	HIS	CA-CB-CG	-5.33	108.47	113.80
1	5	1555	G	C1'-C2'-O2'	5.33	116.39	108.40
1	5	4124	G	C3'-C2'-O2'	5.33	118.69	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	E	212	TYR	CA-CB-CG	5.33	123.49	113.90
1	5	4208	U	C2'-C3'-O3'	5.32	121.69	113.70
1	5	4889	G	C2'-C3'-O3'	5.32	117.48	109.50
1	5	5002	U	C4'-C3'-O3'	-5.32	105.02	113.00
1	5	1266	G	O4'-C1'-C2'	-5.32	102.28	107.60
21	R	57	VAL	N-CA-C	5.32	116.45	109.21
34	e	80	HIS	N-CA-CB	-5.32	102.77	111.18
3	8	123	U	C3'-C2'-O2'	5.32	118.68	110.70
32	c	27	TYR	N-CA-C	5.32	116.36	108.60
1	5	195	C	O4'-C1'-C2'	-5.32	102.28	107.60
1	5	2745	A	N9-C1'-C2'	5.32	119.98	112.00
49	S2	607	U	C4'-C3'-O3'	-5.32	105.03	113.00
51	SB	157	GLN	CG-CD-NE2	-5.32	108.42	116.40
1	5	274	C	C3'-C2'-O2'	5.32	118.67	110.70
1	5	347	A	C4'-C3'-O3'	-5.32	105.03	113.00
1	5	5031	G	C4'-C3'-O3'	-5.32	105.03	113.00
49	S2	383	G	N9-C1'-C2'	5.32	119.97	112.00
49	S2	1814	G	C4'-C3'-O3'	-5.32	105.03	113.00
1	5	931	C	C2'-C3'-O3'	5.31	117.47	109.50
1	5	1884	C	C3'-C2'-O2'	5.31	118.67	110.70
1	5	4473	A	C2'-C3'-O3'	5.31	121.67	113.70
16	M	40	GLY	CA-C-N	5.31	124.50	118.97
16	M	40	GLY	C-N-CA	5.31	124.50	118.97
49	S2	1267	C	C3'-C2'-O2'	5.31	118.67	110.70
49	S2	1291	A	C4'-C3'-O3'	-5.31	105.03	113.00
49	S2	1473	G	C3'-C2'-O2'	5.31	118.67	110.70
49	S2	1656	G	C3'-C2'-O2'	5.31	118.67	110.70
1	5	4270	C	C1'-C2'-O2'	5.31	116.37	108.40
50	SA	39	TYR	CA-CB-CG	5.31	123.46	113.90
51	SB	136	ARG	NE-CZ-NH2	5.31	123.98	119.20
1	5	745	G	N9-C1'-C2'	5.31	119.97	112.00
1	5	1925	G	O4'-C1'-C2'	-5.31	102.29	107.60
1	5	4094	G	C2'-C3'-O3'	5.31	121.67	113.70
5	B	243	LYS	N-CA-C	5.31	119.02	112.54
49	S2	1021	U	N1-C1'-C2'	5.31	121.97	114.00
59	SJ	69	ARG	NE-CZ-NH2	5.31	123.98	119.20
72	SW	44	HIS	N-CA-C	-5.31	104.07	110.44
1	5	2417	A	O4'-C1'-C2'	-5.31	102.29	107.60
1	5	2652	G	C3'-C2'-O2'	5.31	118.66	110.70
48	4	78	PHE	CA-C-N	-5.31	111.91	121.62
48	4	78	PHE	C-N-CA	-5.31	111.91	121.62
49	S2	639	C	C1'-C2'-O2'	-5.31	100.44	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1605	G	C2'-C3'-O3'	5.31	121.66	113.70
63	SN	25	TRP	CB-CA-C	-5.30	101.67	110.68
1	5	1643	A	C3'-C2'-O2'	5.30	118.65	110.70
49	S2	556	U	C2'-C3'-O3'	5.30	117.45	109.50
49	S2	1352	G	C2'-C3'-O3'	5.30	121.65	113.70
1	5	143	C	O4'-C1'-C2'	-5.30	102.30	107.60
1	5	2459	G	C1'-C2'-O2'	5.30	116.35	108.40
1	5	2527	A	C4'-C3'-O3'	-5.30	105.05	113.00
60	SK	68	TYR	CA-CB-CG	-5.30	104.36	113.90
49	S2	1545	A	N9-C1'-C2'	5.30	121.95	114.00
1	5	4434	C	C4'-C3'-O3'	-5.30	105.06	113.00
3	8	104	A	C1'-C2'-O2'	-5.30	103.85	111.80
5	B	56	ILE	N-CA-C	-5.30	100.97	108.65
49	S2	1098	C	C1'-C2'-O2'	5.30	116.34	108.40
49	S2	1861	G	C3'-C2'-O2'	5.30	122.55	114.60
1	5	68	U	C1'-C2'-O2'	5.29	116.34	108.40
1	5	405	U	O4'-C1'-C2'	-5.29	102.31	107.60
56	SG	67	VAL	N-CA-C	5.29	117.71	111.09
1	5	5011	A	C2'-C3'-O3'	5.29	121.64	113.70
49	S2	54	A	C2'-C3'-O3'	-5.29	105.76	113.70
1	5	989	U	C3'-C2'-O2'	5.29	118.64	110.70
1	5	1379	C	O4'-C1'-N1	5.29	116.14	108.20
1	5	3679	U	O4'-C4'-C3'	-5.29	100.81	106.10
14	K	122	ALA	N-CA-C	-5.29	104.60	111.74
49	S2	1865	C	C2'-C3'-O3'	5.29	117.44	109.50
48	4	409	ARG	CB-CA-C	5.29	120.94	110.42
49	S2	647	U	O4'-C1'-C2'	-5.29	102.31	107.60
49	S2	966	U	C2'-C3'-O3'	5.29	121.63	113.70
62	SM	58	GLU	OE1-CD-OE2	5.29	135.59	122.90
27	X	137	TYR	CA-CB-CG	5.29	123.42	113.90
8	E	42	ARG	N-CA-C	5.29	122.06	110.80
14	K	102	GLY	CA-C-N	-5.29	115.95	123.03
14	K	102	GLY	C-N-CA	-5.29	115.95	123.03
14	K	123	ARG	N-CA-C	5.29	117.89	110.23
1	5	2843	U	C2'-C3'-O3'	5.28	121.62	113.70
31	b	17	HIS	CB-CA-C	-5.28	99.05	109.67
49	S2	1419	C	N1-C1'-C2'	-5.28	104.07	112.00
59	SJ	49	THR	CB-CA-C	-5.28	102.02	110.79
18	O	135	PHE	CA-CB-CG	5.28	119.08	113.80
1	5	1823	G	C4'-C3'-O3'	-5.28	105.08	113.00
1	5	2032	U	C3'-C2'-O2'	5.28	118.62	110.70
5	B	169	ARG	CG-CD-NE	5.28	123.61	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	M	91	TRP	N-CA-CB	5.28	117.84	109.82
49	S2	800	U	O4'-C4'-C3'	-5.28	98.72	104.00
57	SH	99	ARG	NE-CZ-NH2	5.28	123.95	119.20
1	5	100	C	N1-C1'-C2'	-5.28	104.08	112.00
1	5	2529	A	C3'-C2'-O2'	5.28	118.62	110.70
1	5	4269	G	C1'-C2'-O2'	5.28	116.31	108.40
1	5	4876	U	N1-C1'-C2'	5.28	121.92	114.00
49	S2	8	U	C1'-C2'-O2'	5.28	119.72	111.80
49	S2	24	C	N1-C1'-C2'	-5.28	104.08	112.00
49	S2	313	A	N9-C1'-C2'	5.28	121.92	114.00
3	8	81	C	C1'-O4'-C4'	-5.28	104.62	109.90
9	F	237	ASN	CA-CB-CG	-5.28	107.32	112.60
67	SR	69	ILE	N-CA-C	5.28	114.14	107.70
1	5	4086	G	O4'-C4'-C3'	5.27	109.27	104.00
49	S2	1339	U	N1-C1'-C2'	-5.27	104.09	112.00
1	5	1211	G	C4'-C3'-C2'	-5.27	97.33	102.60
13	J	64	ARG	NE-CZ-NH2	5.27	123.94	119.20
34	e	20	PHE	CB-CA-C	5.27	119.78	111.72
49	S2	956	G	N9-C1'-C2'	5.27	119.91	112.00
63	SN	69	ASN	CA-CB-CG	5.27	117.87	112.60
1	5	2272	C	C4'-C3'-O3'	5.27	120.90	113.00
1	5	3602	C	C4'-C3'-O3'	-5.27	105.10	113.00
1	5	4560	C	O4'-C4'-C3'	-5.27	100.83	106.10
15	L	99	ASP	CA-CB-CG	-5.27	107.33	112.60
48	4	186	ASN	CA-CB-CG	-5.27	107.33	112.60
49	S2	386	C	O4'-C1'-C2'	-5.27	102.33	107.60
49	S2	807	G	N9-C1'-C2'	5.27	119.90	112.00
1	5	31	U	C1'-C2'-O2'	-5.27	100.50	108.40
1	5	1687	U	C4'-C3'-O3'	5.26	120.90	113.00
27	X	79	PHE	N-CA-C	5.26	114.90	108.11
38	i	28	ARG	CB-CG-CD	5.26	123.41	111.30
49	S2	57	U	C4'-C3'-O3'	-5.26	105.10	113.00
48	4	805	GLY	N-CA-C	-5.26	106.97	115.08
1	5	293	G	N9-C1'-C2'	5.26	119.89	112.00
3	8	67	U	N1-C1'-C2'	5.26	119.89	112.00
48	4	66	ARG	O-C-N	5.26	127.70	122.12
49	S2	1091	C	C2'-C3'-O3'	5.26	121.59	113.70
49	S2	1551	U	C4'-C3'-O3'	-5.26	105.11	113.00
48	4	233	VAL	N-CA-CB	5.26	116.70	110.55
49	S2	821	G	C4'-C3'-O3'	-5.26	105.11	113.00
49	S2	1182	A	N9-C1'-C2'	5.26	119.89	112.00
81	Sf	143	LYS	CD-CE-NZ	5.26	128.73	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1649	U	N1-C1'-C2'	5.26	121.89	114.00
1	5	2744	A	C1'-C2'-O2'	-5.26	100.52	108.40
30	a	40	HIS	CA-CB-CG	5.26	119.06	113.80
53	SD	106	ARG	CB-CG-CD	5.26	123.39	111.30
3	8	34	U	C1'-C2'-O2'	5.25	116.28	108.40
12	I	213	HIS	N-CA-C	-5.25	104.16	111.52
1	5	2087	C	C1'-C2'-O2'	5.25	116.28	108.40
1	5	4765	G	C4'-C3'-O3'	-5.25	105.12	113.00
35	f	59	THR	CA-C-N	5.25	126.07	119.98
35	f	59	THR	C-N-CA	5.25	126.07	119.98
48	4	398	ILE	N-CA-CB	5.25	117.98	111.41
8	E	59	TYR	N-CA-CB	5.25	119.36	110.49
1	5	944	A	O4'-C1'-C2'	-5.25	102.35	107.60
10	G	49	ARG	CG-CD-NE	-5.25	100.45	112.00
49	S2	402	C	N1-C1'-C2'	-5.25	104.13	112.00
49	S2	798	A	N9-C1'-C2'	-5.25	104.13	112.00
1	5	1921	C	C2'-C3'-O3'	5.25	117.37	109.50
49	S2	1062	A	C1'-C2'-O2'	5.25	116.27	108.40
10	G	81	ASN	CB-CA-C	-5.25	102.65	110.88
1	5	2836	A	C3'-C2'-O2'	5.24	118.56	110.70
20	Q	32	TYR	N-CA-CB	5.24	118.86	110.73
24	U	99	TRP	N-CA-C	-5.24	105.17	112.30
48	4	321	ILE	CA-C-N	-5.24	114.00	122.81
48	4	321	ILE	C-N-CA	-5.24	114.00	122.81
58	SI	113	TYR	N-CA-C	-5.24	105.24	111.69
49	S2	746	C	C3'-C2'-O2'	5.24	118.56	110.70
49	S2	1848	U	C3'-C2'-O2'	5.24	118.56	110.70
1	5	1806	G	C4'-C3'-O3'	-5.24	105.14	113.00
1	5	4385	A	C1'-C2'-O2'	5.24	116.26	108.40
1	5	4887	C	C2'-C3'-O3'	5.24	121.56	113.70
1	5	5048	A	O4'-C1'-C2'	-5.24	102.36	107.60
1	5	422	C	C2'-C3'-O3'	5.24	121.56	113.70
1	5	4377	G	C4'-C3'-O3'	-5.24	105.14	113.00
9	F	59	TYR	N-CA-C	-5.24	106.59	112.87
49	S2	922	A	C2'-C3'-O3'	5.24	121.56	113.70
58	SI	145	ILE	N-CA-C	5.24	117.64	111.09
1	5	1628	C	O4'-C1'-C2'	-5.24	102.36	107.60
1	5	2370	A	O4'-C4'-C3'	-5.24	100.86	106.10
1	5	4169	G	N9-C1'-C2'	5.23	119.85	112.00
1	5	1426	G	C4'-C3'-O3'	5.23	120.85	113.00
1	5	4490	C	C1'-C2'-O2'	5.23	116.25	108.40
49	S2	28	U	C2'-C3'-O3'	-5.23	105.85	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	425	G	C2'-C3'-O3'	5.23	121.55	113.70
49	S2	1859	A	C8-N9-C1'	-5.23	112.00	127.70
49	S2	1373	C	N1-C1'-C2'	5.23	119.84	112.00
1	5	3596	A	C2'-C3'-O3'	-5.23	105.86	113.70
1	5	3875	G	C1'-C2'-O2'	5.23	116.24	108.40
15	L	103	ARG	CA-CB-CG	5.23	124.56	114.10
81	Sf	147	THR	CB-CA-C	5.23	117.87	110.24
49	S2	413	G	N9-C1'-C2'	5.23	119.84	112.00
49	S2	1588	A	N9-C1'-C2'	5.23	121.84	114.00
1	5	1637	A	C4'-C3'-O3'	5.22	117.24	109.40
9	F	179	ARG	N-CA-C	5.22	116.97	111.28
33	d	26	THR	N-CA-C	5.22	117.22	108.23
49	S2	29	G	N9-C1'-C2'	5.22	119.84	112.00
49	S2	1530	U	C4'-C3'-O3'	-5.22	105.16	113.00
1	5	2269	C	C2'-C3'-O3'	-5.22	105.86	113.70
1	5	2896	G	O4'-C1'-C2'	-5.22	102.38	107.60
75	SZ	61	GLU	CA-C-N	5.22	123.53	120.24
75	SZ	61	GLU	C-N-CA	5.22	123.53	120.24
1	5	978	G	C3'-C2'-O2'	5.22	118.53	110.70
1	5	3657	U	C2'-C3'-O3'	5.22	121.53	113.70
1	5	4275	G	C2'-C3'-O3'	5.22	121.53	113.70
1	5	4369	A	C4'-C3'-O3'	-5.22	105.17	113.00
49	S2	624	C	N1-C1'-C2'	5.22	119.83	112.00
49	S2	669	A	N9-C1'-C2'	5.22	119.83	112.00
49	S2	1791	A	C1'-C2'-O2'	5.22	116.23	108.40
48	4	241	GLU	CA-C-N	5.22	131.63	121.41
48	4	241	GLU	C-N-CA	5.22	131.63	121.41
5	B	261	ARG	N-CA-C	-5.21	101.15	109.23
48	4	685	TRP	CA-C-N	5.21	127.69	120.29
48	4	685	TRP	C-N-CA	5.21	127.69	120.29
61	SL	17	PHE	CA-CB-CG	-5.21	108.58	113.80
1	5	3679	U	C4'-C3'-O3'	-5.21	101.58	109.40
49	S2	339	A	C1'-C2'-O2'	5.21	116.22	108.40
1	5	412	G	C4'-C3'-O3'	5.21	117.22	109.40
1	5	746	A	C3'-C2'-O2'	5.21	118.52	110.70
3	8	117	C	O4'-C1'-C2'	-5.21	102.39	107.60
13	J	32	ARG	CG-CD-NE	-5.21	100.53	112.00
46	q	44	ARG	CB-CG-CD	5.21	123.28	111.30
49	S2	1051	G	C2'-C3'-O3'	5.21	121.52	113.70
1	5	1210	C	N1-C1'-C2'	5.21	121.81	114.00
30	a	65	ARG	CB-CG-CD	5.21	123.28	111.30
1	5	1853	G	C1'-C2'-O2'	5.21	116.21	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4599	A	N9-C1'-C2'	5.21	121.81	114.00
7	D	16	TYR	CA-CB-CG	-5.21	104.53	113.90
49	S2	1085	C	C1'-C2'-O2'	-5.21	103.99	111.80
73	SX	10	ALA	N-CA-C	-5.21	105.60	111.28
1	5	976	G	O4'-C1'-C2'	-5.21	102.39	107.60
37	h	119	PHE	N-CA-CB	5.21	119.29	110.49
49	S2	448	A	C4'-C3'-O3'	5.21	117.21	109.40
49	S2	808	A	N9-C1'-C2'	5.21	119.81	112.00
67	SR	4	VAL	N-CA-C	-5.21	100.98	108.89
1	5	453	G	O4'-C1'-C2'	-5.21	102.39	107.60
1	5	1370	G	C4'-C3'-O3'	5.20	117.20	109.40
1	5	2613	C	C1'-C2'-O2'	5.20	116.20	108.40
2	7	55	A	N9-C1'-C2'	5.20	119.80	112.00
21	R	124	TYR	CA-CB-CG	5.20	123.27	113.90
48	4	855	LEU	CA-C-O	-5.20	115.37	121.46
1	5	2669	C	C2'-C3'-O3'	5.20	117.30	109.50
1	5	4475	G	C2'-C3'-O3'	-5.20	105.90	113.70
49	S2	162	C	C2'-C3'-O3'	5.20	121.50	113.70
49	S2	600	G	N9-C1'-C2'	5.20	119.80	112.00
1	5	1075	G	C2'-C3'-O3'	5.20	121.50	113.70
1	5	4276	G	C1'-C2'-O2'	5.20	116.19	108.40
1	5	4510	A	C2'-C3'-O3'	5.20	117.29	109.50
12	I	92	HIS	N-CA-CB	5.20	117.30	110.29
1	5	3860	A	C1'-C2'-O2'	5.19	116.19	108.40
1	5	4473	A	C4'-C3'-O3'	-5.19	105.21	113.00
49	S2	1092	G	C2'-C3'-O3'	5.19	121.49	113.70
1	5	2833	A	C1'-C2'-O2'	-5.19	100.61	108.40
10	G	32	PHE	N-CA-CB	5.19	117.71	109.71
35	f	51	TYR	CA-CB-CG	5.19	123.25	113.90
49	S2	164	A	C4'-C3'-O3'	5.19	120.79	113.00
49	S2	1114	U	C1'-O4'-C4'	-5.19	104.51	109.70
1	5	4719	G	C1'-C2'-O2'	-5.19	104.02	111.80
1	5	4341	C	N1-C1'-C2'	-5.19	104.22	112.00
49	S2	967	C	C2'-C3'-O3'	5.19	121.48	113.70
49	S2	1169	G	C1'-C2'-O2'	5.19	116.18	108.40
1	5	237	G	O4'-C1'-C2'	5.19	110.99	105.80
48	4	60	ARG	CB-CA-C	-5.19	102.99	111.50
71	SV	66	ASP	N-CA-C	5.19	116.93	111.28
9	F	194	HIS	N-CA-CB	5.19	117.48	109.91
49	S2	449	A	C3'-C2'-O2'	5.19	118.48	110.70
49	S2	819	G	C1'-C2'-O2'	5.19	116.18	108.40
1	5	2046	G	O4'-C1'-N9	5.18	115.98	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	3845	A	C1'-C2'-O2'	5.18	116.18	108.40
1	5	4543	G	C1'-C2'-O2'	-5.18	100.62	108.40
3	8	86	U	C2'-C3'-O3'	5.18	121.48	113.70
49	S2	1333	U	C3'-C2'-O2'	5.18	118.48	110.70
1	5	1921	C	C4'-C3'-O3'	5.18	117.17	109.40
1	5	2250	C	C2'-C3'-O3'	5.18	121.47	113.70
1	5	4340	U	C1'-C2'-O2'	5.18	116.17	108.40
1	5	4385	A	C4'-C3'-O3'	5.18	120.77	113.00
1	5	4534	G	C1'-C2'-O2'	5.18	116.17	108.40
10	G	57	TRP	N-CA-C	-5.18	103.24	109.72
46	q	118	PRO	CA-N-CD	-5.18	104.24	111.50
48	4	123	ASP	CA-CB-CG	-5.18	107.42	112.60
48	4	781	MET	N-CA-C	5.18	117.69	109.24
1	5	1505	C	C1'-C2'-O2'	5.18	116.17	108.40
1	5	4677	U	C3'-C2'-C1'	5.18	106.48	101.30
49	S2	1835	A	C3'-C2'-O2'	5.18	118.47	110.70
1	5	331	G	N9-C1'-C2'	5.18	119.77	112.00
1	5	2677	G	O4'-C1'-C2'	-5.18	102.42	107.60
1	5	1948	G	C2'-C3'-O3'	-5.17	105.94	113.70
49	S2	160	U	C1'-C2'-O2'	-5.17	104.04	111.80
49	S2	1828	C	C3'-C2'-O2'	5.17	118.46	110.70
1	5	4527	G	C4'-C3'-O3'	5.17	117.16	109.40
49	S2	305	U	C4'-C3'-O3'	5.17	117.16	109.40
1	5	2321	G	N9-C1'-C2'	5.17	119.76	112.00
55	SF	142	SER	N-CA-C	-5.17	101.90	109.50
17	N	59	TYR	CA-CB-CG	5.17	123.21	113.90
1	5	372	A	C4'-C3'-O3'	-5.17	105.25	113.00
1	5	3841	C	C3'-C2'-O2'	5.17	118.45	110.70
1	5	3903	A	C3'-C2'-O2'	5.17	118.45	110.70
49	S2	313	A	C1'-O4'-C4'	-5.17	104.53	109.70
58	SI	55	TYR	CB-CA-C	5.17	120.31	111.68
81	Sf	146	LEU	CB-CG-CD1	5.17	126.21	110.70
18	O	135	PHE	CB-CA-C	-5.17	101.04	111.17
60	SK	95	ARG	N-CA-C	5.17	117.48	111.02
67	SR	33	ARG	CG-CD-NE	-5.17	100.64	112.00
2	7	82	G	C1'-C2'-O2'	5.17	116.15	108.40
1	5	3775	A	N9-C1'-C2'	5.16	119.75	112.00
1	5	3888	G	C3'-C2'-O2'	5.16	118.44	110.70
1	5	4349	C	O4'-C4'-C3'	-5.16	100.94	106.10
48	4	307	PHE	CA-CB-CG	-5.16	108.64	113.80
49	S2	73	C	N1-C1'-C2'	5.16	121.74	114.00
1	5	32	G	C2'-C3'-O3'	5.16	121.44	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1557	C	C1'-C2'-O2'	5.16	116.14	108.40
1	5	2509	C	C4'-C3'-O3'	5.16	120.74	113.00
1	5	3636	C	O4'-C1'-C2'	-5.16	102.44	107.60
49	S2	1504	U	N1-C1'-C2'	5.16	119.74	112.00
1	5	2096	G	C3'-C2'-O2'	5.16	118.44	110.70
1	5	4945	G	C4'-C3'-O3'	-5.16	105.26	113.00
3	8	9	A	C4'-C3'-O3'	-5.16	105.26	113.00
21	R	141	HIS	CB-CA-C	-5.16	102.95	110.95
48	4	710	HIS	CA-C-N	5.16	127.19	120.28
48	4	710	HIS	C-N-CA	5.16	127.19	120.28
64	SO	49	GLY	N-CA-C	-5.16	107.75	113.79
75	SZ	89	GLN	N-CA-C	-5.16	105.35	111.69
1	5	3912	U	C3'-C2'-O2'	5.16	118.44	110.70
1	5	969	C	C3'-C2'-O2'	-5.16	106.87	114.60
1	5	2509	C	C3'-C2'-O2'	5.16	118.43	110.70
1	5	1552	G	N9-C1'-C2'	-5.15	104.27	112.00
1	5	1781	U	N1-C1'-C2'	5.15	119.72	112.00
1	5	2560	C	O4'-C1'-C2'	-5.15	102.45	107.60
1	5	4936	G	C3'-C2'-O2'	5.15	118.43	110.70
74	SY	80	ASP	CA-CB-CG	-5.15	107.45	112.60
1	5	1516	G	C1'-C2'-O2'	5.15	116.12	108.40
1	5	1632	A	C2'-C3'-O3'	5.15	121.42	113.70
1	5	2701	U	C1'-C2'-O2'	5.15	116.12	108.40
49	S2	1489	A	O4'-C4'-C3'	-5.15	100.95	106.10
1	5	2070	U	N1-C1'-C2'	5.15	121.72	114.00
1	5	231	U	C2'-C3'-O3'	5.14	121.42	113.70
1	5	4441	A	C2'-C3'-O3'	5.14	121.42	113.70
5	B	257	TRP	N-CA-CB	5.14	119.68	110.32
41	l	45	ARG	CG-CD-NE	-5.14	100.69	112.00
51	SB	157	GLN	CB-CG-CD	-5.14	103.86	112.60
1	5	3901	A	P-O5'-C5'	5.14	128.61	120.90
1	5	4510	A	C4'-C3'-O3'	-5.14	101.69	109.40
14	K	147	HIS	CA-C-N	-5.14	113.34	119.05
14	K	147	HIS	C-N-CA	-5.14	113.34	119.05
46	q	62	ARG	CA-C-N	5.14	131.36	121.54
46	q	62	ARG	C-N-CA	5.14	131.36	121.54
1	5	3887	C	C3'-C2'-O2'	5.14	118.41	110.70
23	T	57	TYR	CB-CA-C	-5.14	101.48	110.17
69	ST	46	ALA	CA-C-N	5.14	125.13	119.89
69	ST	46	ALA	C-N-CA	5.14	125.13	119.89
1	5	3593	C	C4'-C3'-O3'	5.14	117.11	109.40
1	5	3774	A	N9-C1'-C2'	5.14	121.71	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	4163	U	C4'-C3'-C2'	-5.14	97.46	102.60
49	S2	1157	G	N9-C1'-C2'	-5.14	104.30	112.00
1	5	353	A	C4'-C3'-O3'	5.13	117.10	109.40
2	7	7	G	C1'-C2'-O2'	5.13	116.10	108.40
5	B	179	HIS	CB-CA-C	5.13	119.85	112.05
48	4	531	ASP	CA-C-N	-5.13	113.42	119.84
48	4	531	ASP	C-N-CA	-5.13	113.42	119.84
1	5	235	A	N9-C1'-C2'	-5.13	104.30	112.00
1	5	1528	U	C1'-C2'-O2'	5.13	116.10	108.40
49	S2	1140	G	C1'-C2'-O2'	5.13	116.10	108.40
49	S2	1374	C	N1-C1'-C2'	5.13	119.69	112.00
68	SS	77	TYR	CA-CB-CG	-5.13	104.67	113.90
1	5	3686	G	C3'-C2'-O2'	5.13	118.39	110.70
1	5	4291	G	N9-C1'-C2'	5.13	121.69	114.00
49	S2	1055	A	N9-C1'-C2'	5.13	119.69	112.00
49	S2	1368	U	C4'-C3'-O3'	5.13	120.69	113.00
1	5	1952	G	N9-C1'-C2'	5.13	119.69	112.00
1	5	2308	A	N9-C1'-C2'	5.13	119.69	112.00
1	5	3707	U	C3'-C2'-O2'	5.13	118.39	110.70
1	5	4879	C	N1-C1'-C2'	5.13	119.69	112.00
25	V	77	HIS	CB-CA-C	5.13	120.27	110.17
1	5	2111	G	C1'-C2'-O2'	-5.12	104.11	111.80
4	A	194	ASN	CA-CB-CG	-5.12	107.48	112.60
10	G	60	TYR	N-CA-CB	5.12	117.65	110.12
49	S2	1679	A	C4'-C3'-O3'	5.12	120.68	113.00
65	SP	54	HIS	CB-CA-C	-5.12	102.34	110.84
1	5	2793	G	C4'-C3'-O3'	-5.12	105.32	113.00
4	A	163	ARG	CB-CG-CD	5.12	123.08	111.30
49	S2	340	C	C2'-C3'-O3'	5.12	121.38	113.70
53	SD	165	ASN	N-CA-C	5.12	117.53	111.33
66	SQ	126	ARG	NE-CZ-NH1	-5.12	116.38	121.50
1	5	217	C	N1-C1'-C2'	5.12	119.68	112.00
1	5	4321	U	C3'-C2'-O2'	5.12	118.38	110.70
1	5	1807	C	C2'-C3'-O3'	5.12	121.38	113.70
20	Q	178	ARG	CA-CB-CG	5.12	124.33	114.10
59	SJ	43	VAL	N-CA-C	-5.12	105.33	110.30
68	SS	94	LYS	N-CA-C	-5.12	102.11	110.20
1	5	4427	G	C4'-C3'-O3'	-5.12	105.33	113.00
17	N	94	PHE	CA-CB-CG	-5.12	108.68	113.80
68	SS	42	HIS	CA-CB-CG	5.12	118.92	113.80
1	5	3841	C	C4'-C3'-O3'	-5.11	105.33	113.00
1	5	4282	A	O4'-C4'-C3'	-5.11	100.99	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	SK	57	TYR	CA-CB-CG	-5.11	104.69	113.90
1	5	3667	C	O4'-C1'-C2'	-5.11	102.49	107.60
1	5	4693	C	O4'-C1'-C2'	-5.11	102.49	107.60
1	5	4698	C	C3'-C2'-O2'	5.11	118.37	110.70
3	8	8	U	C1'-C2'-O2'	5.11	116.07	108.40
35	f	19	ARG	CG-CD-NE	-5.11	100.75	112.00
49	S2	797	C	O4'-C1'-C2'	-5.11	100.69	105.80
54	SE	218	PHE	N-CA-C	-5.11	101.31	109.23
55	SF	163	PHE	N-CA-CB	5.11	119.13	110.49
1	5	2305	U	C4'-C3'-O3'	-5.11	101.73	109.40
21	R	105	LEU	N-CA-C	-5.11	105.40	110.97
49	S2	371	A	C1'-C2'-O2'	5.11	116.07	108.40
73	SX	39	ASN	OD1-CG-ND2	5.11	127.71	122.60
1	5	1980	U	C1'-O4'-C4'	-5.11	104.79	109.90
1	5	3676	G	C3'-C2'-O2'	5.11	118.36	110.70
1	5	4990	C	C3'-C2'-O2'	5.11	118.36	110.70
12	I	96	VAL	N-CA-C	5.11	115.63	108.89
49	S2	1859	A	C4-N9-C1'	5.11	141.63	126.30
1	5	2258	C	N1-C1'-C2'	5.11	119.66	112.00
1	5	2384	U	N1-C1'-C2'	5.11	119.66	112.00
1	5	4240	G	C1'-C2'-O2'	5.11	116.06	108.40
1	5	4270	C	N1-C1'-C2'	-5.11	104.34	112.00
1	5	4395	U	O4'-C1'-C2'	-5.11	102.49	107.60
22	S	9	GLU	CA-CB-CG	5.11	124.32	114.10
34	e	117	GLN	CB-CG-CD	-5.11	103.92	112.60
49	S2	341	C	C4'-C3'-O3'	5.11	120.66	113.00
49	S2	1671	G	N9-C1'-C2'	5.11	119.66	112.00
50	SA	107	THR	N-CA-C	-5.11	106.74	113.12
1	5	4656	A	C2'-C3'-O3'	5.11	117.16	109.50
30	a	60	HIS	CA-CB-CG	5.11	118.91	113.80
35	f	6	TRP	CA-CB-CG	-5.11	103.90	113.60
49	S2	631	U	C2'-C3'-O3'	5.11	117.16	109.50
50	SA	103	PHE	N-CA-CB	5.11	117.97	109.60
1	5	4436	U	N1-C1'-C2'	-5.10	106.34	114.00
1	5	2257	C	C4'-C3'-O3'	5.10	117.05	109.40
1	5	4510	A	N9-C1'-C2'	5.10	121.65	114.00
1	5	4758	U	N1-C1'-C2'	5.10	119.65	112.00
49	S2	992	A	C1'-C2'-O2'	5.10	116.06	108.40
81	Sf	120	GLU	CB-CG-CD	-5.10	103.92	112.60
1	5	1635	C	C4'-C3'-O3'	5.10	120.65	113.00
22	S	171	ARG	CG-CD-NE	5.10	123.22	112.00
1	5	371	A	C1'-C2'-O2'	-5.10	100.75	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1324	A	N9-C1'-C2'	5.10	121.65	114.00
49	S2	474	G	O4'-C1'-C2'	-5.10	102.50	107.60
1	5	1628	C	C2'-C3'-O3'	5.10	121.34	113.70
1	5	2787	A	N9-C1'-C2'	-5.10	106.35	114.00
7	D	157	ASN	CB-CA-C	5.10	118.84	109.46
9	F	63	TYR	CA-CB-CG	-5.10	104.72	113.90
52	SC	61	MET	CA-C-N	-5.10	114.32	119.83
52	SC	61	MET	C-N-CA	-5.10	114.32	119.83
49	S2	444	G	C1'-C2'-O2'	5.10	116.04	108.40
49	S2	617	G	N9-C1'-C2'	-5.10	104.36	112.00
1	5	2533	C	C1'-C2'-O2'	-5.09	100.76	108.40
1	5	3639	U	N1-C1'-C2'	5.09	119.64	112.00
45	p	71	TYR	N-CA-C	-5.09	105.64	111.14
1	5	206	U	C2'-C3'-O3'	5.09	121.34	113.70
49	S2	997	A	C4'-C3'-O3'	5.09	120.64	113.00
76	Sa	17	HIS	CA-CB-CG	-5.09	108.71	113.80
1	5	328	A	N9-C1'-C2'	5.09	119.64	112.00
1	5	336	A	C1'-O4'-C4'	-5.09	104.81	109.90
49	S2	1307	U	C1'-C2'-O2'	5.09	116.04	108.40
49	S2	1561	A	C1'-C2'-O2'	5.09	116.04	108.40
1	5	226	G	C2'-C3'-O3'	5.09	117.13	109.50
1	5	2554	U	C3'-C2'-O2'	5.09	118.33	110.70
49	S2	1845	A	C3'-C2'-O2'	5.09	118.33	110.70
1	5	917	A	C2'-C3'-O3'	5.09	117.13	109.50
1	5	1529	G	C4'-C3'-O3'	-5.09	105.37	113.00
1	5	1615	C	C1'-C2'-O2'	5.09	116.03	108.40
49	S2	1126	G	C1'-C2'-O2'	5.09	116.03	108.40
48	4	225	LEU	O-C-N	5.08	128.17	122.22
49	S2	1109	C	C1'-O4'-C4'	-5.08	104.81	109.90
49	S2	1313	A	N9-C1'-C2'	5.08	121.63	114.00
49	S2	73	C	O4'-C1'-C2'	-5.08	100.72	105.80
1	5	1937	C	C4'-C3'-O3'	5.08	120.62	113.00
1	5	4337	C	N1-C1'-C2'	5.08	119.62	112.00
49	S2	1591	C	C2'-C3'-O3'	5.08	121.32	113.70
58	SI	111	GLN	OE1-CD-NE2	5.08	127.68	122.60
73	SX	67	ARG	NE-CZ-NH1	-5.08	116.42	121.50
1	5	1293	G	N9-C1'-C2'	5.08	119.62	112.00
1	5	2247	C	C3'-C2'-O2'	5.08	118.32	110.70
49	S2	1597	C	C1'-C2'-O2'	-5.08	104.18	111.80
1	5	4239	A	C1'-C2'-O2'	5.08	116.02	108.40
25	V	97	TYR	N-CA-CB	5.08	117.42	109.85
82	Sg	15	ASN	N-CA-CB	-5.08	103.73	111.19

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	421	C	C1'-C2'-O2'	5.08	116.01	108.40
49	S2	1091	C	C4'-C3'-O3'	-5.08	105.39	113.00
49	S2	1858	G	C4'-C3'-O3'	-5.08	105.39	113.00
1	5	2369	U	C2'-C3'-O3'	5.07	117.11	109.50
21	R	74	ARG	NE-CZ-NH2	5.07	123.77	119.20
34	e	42	ASP	N-CA-CB	5.07	117.56	110.56
46	q	81	HIS	CA-C-N	-5.07	112.84	121.97
46	q	81	HIS	C-N-CA	-5.07	112.84	121.97
49	S2	818	A	C1'-C2'-O2'	5.07	116.01	108.40
1	5	1359	G	O4'-C4'-C3'	-5.07	98.93	104.00
1	5	2436	U	C1'-C2'-O2'	-5.07	104.19	111.80
7	D	96	ALA	N-CA-C	5.07	121.60	110.80
49	S2	1868	U	N1-C1'-C2'	5.07	121.61	114.00
1	5	2246	C	C3'-C2'-O2'	5.07	118.31	110.70
1	5	2268	A	O5'-C5'-C4'	-5.07	104.09	111.70
1	5	3687	A	C1'-C2'-O2'	5.07	116.00	108.40
48	4	775	GLN	CA-C-N	5.07	131.10	121.97
48	4	775	GLN	C-N-CA	5.07	131.10	121.97
3	8	124	U	C2'-C3'-O3'	5.07	117.10	109.50
9	F	148	ASN	N-CA-C	-5.07	102.28	110.14
1	5	2801	U	C3'-C2'-O2'	5.07	118.30	110.70
1	5	333	U	N1-C1'-C2'	5.07	119.60	112.00
1	5	3901	A	C5'-C4'-O4'	5.07	116.70	109.10
1	5	90	G	C1'-C2'-O2'	5.06	115.99	108.40
1	5	218	A	N9-C1'-C2'	-5.06	106.41	114.00
1	5	1470	G	C1'-C2'-O2'	5.06	115.99	108.40
1	5	1501	C	O4'-C1'-N1	5.06	115.79	108.20
14	K	21	GLU	CA-C-N	-5.06	116.12	121.84
14	K	21	GLU	C-N-CA	-5.06	116.12	121.84
49	S2	624	C	C5'-C4'-C3'	-5.06	108.41	116.00
49	S2	845	G	N9-C1'-C2'	5.06	119.59	112.00
1	5	1887	G	C4'-C3'-C2'	-5.06	97.54	102.60
35	f	83	MET	N-CA-C	-5.06	103.03	110.52
49	S2	1392	U	C1'-C2'-O2'	5.06	115.99	108.40
1	5	62	A	C1'-C2'-O2'	-5.06	100.81	108.40
1	5	300	A	C1'-C2'-O2'	5.06	115.99	108.40
1	5	4307	A	C4'-C3'-O3'	-5.06	105.41	113.00
1	5	4738	C	N1-C1'-C2'	5.06	119.58	112.00
5	B	17	LEU	N-CA-C	5.06	120.99	109.81
22	S	100	LEU	N-CA-C	5.06	118.33	112.97
41	l	13	LEU	N-CA-C	-5.06	105.47	111.69
49	S2	798	A	C4'-C3'-C2'	-5.06	97.54	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	S2	1722	G	C4'-C3'-O3'	-5.06	105.42	113.00
1	5	1381	U	C4'-C3'-O3'	-5.06	105.42	113.00
1	5	2448	G	N9-C1'-C2'	5.06	121.58	114.00
1	5	4535	A	C4'-C3'-O3'	-5.06	105.42	113.00
49	S2	434	G	C2'-C3'-O3'	-5.06	106.12	113.70
49	S2	1700	C	N1-C1'-C2'	-5.06	106.42	114.00
1	5	54	G	N9-C1'-C2'	-5.05	104.42	112.00
1	5	1213	G	C4'-C3'-O3'	-5.05	105.42	113.00
1	5	2515	G	C1'-C2'-O2'	5.05	115.98	108.40
1	5	4538	G	C4'-C3'-O3'	-5.05	105.42	113.00
57	SH	8	ILE	N-CA-C	5.05	115.83	110.72
21	R	23	TRP	CB-CA-C	-5.05	100.96	110.51
1	5	986	C	C2'-C3'-O3'	5.05	121.27	113.70
1	5	1319	U	C2'-C3'-O3'	5.05	121.28	113.70
1	5	3693	U	O4'-C1'-C2'	-5.05	102.55	107.60
19	P	42	ARG	CG-CD-NE	5.05	123.11	112.00
48	4	5	THR	N-CA-C	5.05	117.69	109.86
49	S2	104	A	N9-C1'-C2'	-5.05	104.43	112.00
49	S2	1697	A	C4'-C3'-O3'	5.05	116.97	109.40
1	5	1534	A	O4'-C4'-C3'	-5.05	101.05	106.10
1	5	2782	U	C2'-C3'-O3'	-5.05	106.13	113.70
18	O	108	ILE	CA-C-N	5.05	125.58	120.38
18	O	108	ILE	C-N-CA	5.05	125.58	120.38
1	5	279	A	C2'-C3'-O3'	5.05	117.07	109.50
49	S2	183	G	C2'-C3'-O3'	5.05	117.07	109.50
76	Sa	22	ARG	CB-CA-C	5.05	118.08	109.80
1	5	4241	C	O4'-C1'-C2'	-5.04	102.56	107.60
1	5	3773	U	O4'-C4'-C3'	-5.04	98.96	104.00
46	q	184	SER	N-CA-C	5.04	121.54	110.80
48	4	109	VAL	N-CA-C	5.04	119.83	109.34
49	S2	119	U	O4'-C1'-C2'	-5.04	102.56	107.60
53	SD	24	PHE	N-CA-CB	5.04	117.46	109.94
74	SY	33	ALA	N-CA-C	5.04	116.74	108.52
1	5	1723	A	C2'-C3'-O3'	5.04	121.26	113.70
8	E	54	SER	N-CA-C	5.04	116.82	108.20
69	ST	53	PHE	CA-CB-CG	5.04	118.84	113.80
5	B	122	TRP	CA-CB-CG	5.04	123.18	113.60
21	R	58	HIS	CB-CA-C	-5.04	102.55	111.22
3	8	94	G	P-O5'-C5'	5.04	128.46	120.90
49	S2	77	A	N9-C1'-C2'	-5.04	104.44	112.00
1	5	334	A	N9-C1'-C2'	5.04	119.56	112.00
1	5	687	U	C1'-C2'-O2'	5.03	115.95	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	5	1428	U	N1-C1'-C2'	5.03	119.55	112.00
1	5	3870	C	C1'-C2'-O2'	-5.03	100.85	108.40
57	SH	189	PHE	CA-CB-CG	-5.03	108.77	113.80
1	5	20	U	N1-C1'-C2'	-5.03	106.45	114.00
3	8	29	G	C2'-C3'-O3'	5.03	121.25	113.70
49	S2	1244	U	C2'-C3'-O3'	5.03	121.25	113.70
1	5	422	C	O4'-C1'-C2'	-5.03	102.57	107.60
1	5	666	G	C2'-C3'-O3'	5.03	121.25	113.70
1	5	1380	G	O4'-C4'-C3'	-5.03	101.07	106.10
2	7	7	G	O4'-C1'-C2'	-5.03	102.57	107.60
2	7	54	A	N9-C1'-C2'	5.03	119.55	112.00
49	S2	12	U	N1-C1'-C2'	5.03	119.55	112.00
49	S2	76	U	C3'-C2'-O2'	5.03	118.25	110.70
49	S2	577	U	C2'-C3'-O3'	5.03	121.25	113.70
32	c	79	ILE	CB-CA-C	-5.03	105.38	111.87
1	5	2453	A	O4'-C1'-C2'	-5.03	102.57	107.60
1	5	4666	G	C2'-C3'-O3'	5.03	121.24	113.70
14	K	81	ILE	N-CA-C	-5.03	105.64	110.72
1	5	315	G	O4'-C1'-N9	5.03	115.74	108.20
1	5	4457	U	N1-C1'-C2'	5.03	119.54	112.00
1	5	514	U	O4'-C4'-C3'	-5.02	98.98	104.00
53	SD	152	PHE	N-CA-C	-5.02	99.23	108.02
1	5	219	G	P-O5'-C5'	5.02	128.44	120.90
1	5	1274	A	C3'-C2'-O2'	5.02	122.13	114.60
22	S	29	ARG	N-CA-C	-5.02	101.12	109.46
1	5	1370	G	O4'-C4'-C3'	-5.02	101.08	106.10
49	S2	1139	C	C4'-C3'-O3'	-5.02	105.47	113.00
1	5	1319	U	N1-C1'-C2'	-5.02	104.47	112.00
1	5	1812	C	N1-C1'-C2'	5.02	119.53	112.00
1	5	5032	C	N1-C1'-C2'	5.02	119.53	112.00
31	b	16	TRP	N-CA-CB	5.02	119.17	110.39
49	S2	22	A	C1'-C2'-O2'	5.02	115.93	108.40
49	S2	168	C	N1-C1'-C2'	5.02	119.53	112.00
49	S2	925	G	C1'-C2'-O2'	5.02	115.93	108.40
49	S2	1186	U	C1'-C2'-O2'	5.02	115.93	108.40
1	5	1570	G	C4'-C3'-O3'	-5.02	105.47	113.00
49	S2	218	U	N1-C1'-C2'	5.02	119.53	112.00
49	S2	1477	U	C3'-C2'-O2'	5.02	118.22	110.70
1	5	42	A	O4'-C1'-N9	5.01	115.72	108.20
1	5	409	G	C3'-C2'-O2'	5.01	118.22	110.70
1	5	4577	U	C2'-C3'-O3'	5.01	121.22	113.70
48	4	651	CYS	CA-C-N	5.01	129.92	123.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	4	651	CYS	C-N-CA	5.01	129.92	123.00
49	S2	651	U	C1'-C2'-O2'	-5.01	100.88	108.40
64	SO	94	HIS	N-CA-CB	5.01	118.48	110.46
48	4	348	ASP	CA-CB-CG	-5.01	107.59	112.60
49	S2	1852	C	C4'-C3'-O3'	-5.01	105.48	113.00
1	5	1893	C	N1-C1'-C2'	5.01	119.52	112.00
1	5	4726	G	C4'-C3'-O3'	-5.01	105.48	113.00
5	B	130	PHE	CB-CA-C	5.01	119.43	111.51
1	5	22	G	C3'-C2'-O2'	5.01	118.21	110.70
1	5	1324	A	O4'-C4'-C3'	-5.01	101.09	106.10
1	5	4328	G	C1'-C2'-O2'	5.01	115.92	108.40
3	8	95	A	C4'-C3'-O3'	-5.01	105.49	113.00
9	F	93	PHE	CB-CA-C	5.01	118.58	110.22
1	5	1440	U	C4'-C3'-C2'	-5.01	97.59	102.60
1	5	1987	C	O4'-C1'-C2'	-5.01	102.59	107.60
1	5	3692	A	C4'-C3'-O3'	-5.01	105.49	113.00
1	5	4322	G	C1'-C2'-O2'	5.01	115.91	108.40
49	S2	970	G	C2'-C3'-O3'	5.01	117.01	109.50
10	G	40	GLY	N-CA-C	-5.00	105.06	113.02
49	S2	447	A	O4'-C1'-N9	5.00	115.71	108.20
49	S2	1726	G	C3'-C2'-O2'	5.00	118.21	110.70
1	5	478	G	C2'-C3'-O3'	5.00	121.20	113.70
3	8	73	U	C1'-C2'-O2'	5.00	115.90	108.40
11	H	66	GLU	N-CA-C	-5.00	107.35	113.50
23	T	140	PHE	CA-CB-CG	5.00	118.80	113.80
24	U	39	PHE	N-CA-C	-5.00	104.92	111.02

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
49	S2	1109	C	C1'

All (507) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
48	4	102	LEU	Mainchain
48	4	108	HIS	Peptide
48	4	111	PHE	Sidechain
48	4	112	SER	Mainchain,Peptide
48	4	121	VAL	Mainchain
48	4	123	ASP	Mainchain
48	4	193	GLY	Mainchain

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Mol	Chain	Res	Type	Group
48	4	196	GLU	Peptide
48	4	197	SER	Peptide
48	4	199	PRO	Peptide
48	4	242	GLY	Mainchain,Peptide
48	4	245	GLY	Peptide
48	4	246	PRO	Peptide
48	4	247	ALA	Peptide
48	4	266	PHE	Mainchain,Peptide
48	4	269	ALA	Mainchain
48	4	272	LYS	Peptide
48	4	325	SER	Peptide
48	4	4	PHE	Peptide
48	4	403	PRO	Peptide
48	4	406	ASP	Peptide
48	4	408	GLY	Peptide
48	4	42	LYS	Mainchain
48	4	495	ARG	Mainchain,Peptide
48	4	540	GLU	Peptide
48	4	55	ARG	Peptide
48	4	573	SER	Peptide
48	4	574	ASP	Peptide
48	4	575	PRO	Mainchain
48	4	667	LYS	Peptide
48	4	669	VAL	Peptide
48	4	699	GLY	Mainchain
48	4	702	PHE	Sidechain
48	4	775	GLN	Peptide
48	4	827	ASN	Peptide
48	4	847	GLY	Peptide
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
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

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Mol	Chain	Res	Type	Group
1	5	1522	G	Sidechain
1	5	1534	A	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	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
1	5	2438	A	Sidechain
1	5	2446	C	Sidechain
1	5	2450	G	Sidechain
1	5	2465	C	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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
1	5	42	A	Sidechain
1	5	4228	G	Sidechain
1	5	4229	U	Sidechain
1	5	4234	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	4404	U	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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
12	I	77	VAL	Peptide
12	I	93	PRO	Peptide
13	J	87	LEU	Peptide
13	J	99	PHE	Sidechain
14	K	114	ARG	Mainchain
14	K	130	LYS	Mainchain
14	K	27	ALA	Peptide
14	K	44	ASP	Mainchain
14	K	86	LYS	Peptide
15	L	146	LEU	Peptide
15	L	147	ALA	Peptide
15	L	192	PHE	Sidechain
15	L	62	PRO	Peptide
15	L	66	TYR	Peptide
16	M	6	PHE	Sidechain
16	M	65	PRO	Peptide
16	M	79	LYS	Peptide
16	M	94	LYS	Peptide
17	N	119	TYR	Sidechain
17	N	130	PHE	Sidechain
17	N	131	GLU	Sidechain
17	N	138	PHE	Peptide
17	N	139	HIS	Sidechain
17	N	180	PHE	Sidechain
17	N	184	ILE	Peptide
17	N	202	ARG	Peptide
17	N	37	HIS	Sidechain
17	N	90	ASN	Peptide
17	N	94	PHE	Sidechain
18	O	110	PRO	Peptide
18	O	117	ARG	Peptide
18	O	135	PHE	Sidechain
19	P	139	TYR	Sidechain
20	Q	161	SER	Peptide
20	Q	162	HIS	Peptide
20	Q	174	PHE	Sidechain
20	Q	32	TYR	Peptide
20	Q	34	PHE	Sidechain
21	R	118	HIS	Sidechain
21	R	132	PHE	Sidechain
21	R	174	GLU	Peptide
21	R	19	LYS	Peptide

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Mol	Chain	Res	Type	Group
21	R	57	VAL	Peptide
21	R	94	THR	Peptide
22	S	10	TYR	Sidechain
22	S	145	PHE	Peptide,Sidechain
22	S	152	PHE	Peptide
22	S	154	LEU	Peptide
22	S	159	LEU	Peptide
22	S	164	LYS	Peptide
22	S	32	ILE	Peptide
22	S	33	PHE	Peptide
22	S	68	PHE	Peptide
22	S	90	THR	Peptide
49	S2	1034	A	Sidechain
49	S2	104	A	Sidechain
49	S2	1045	U	Sidechain
49	S2	1063	C	Sidechain
49	S2	1085	C	Sidechain
49	S2	1088	U	Sidechain
49	S2	1109	C	Sidechain
49	S2	114	G	Sidechain
49	S2	1142	G	Sidechain
49	S2	1150	A	Sidechain
49	S2	1167	G	Sidechain
49	S2	1181	A	Sidechain
49	S2	1249	C	Sidechain
49	S2	1283	C	Sidechain
49	S2	1315	U	Sidechain
49	S2	1378	A	Sidechain
49	S2	1565	C	Sidechain
49	S2	1578	U	Sidechain
49	S2	1603	G	Sidechain
49	S2	1606	G	Sidechain
49	S2	1623	A	Sidechain
49	S2	1659	U	Sidechain
49	S2	1663	A	Sidechain
49	S2	1703	C	Sidechain
49	S2	1823	A	Sidechain
49	S2	1835	A	Sidechain
49	S2	1838	U	Sidechain
49	S2	1849	G	Sidechain
49	S2	1850	A	Sidechain
49	S2	1851	A	Sidechain

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Mol	Chain	Res	Type	Group
49	S2	1860	A	Sidechain
49	S2	294	U	Sidechain
49	S2	30	C	Sidechain
49	S2	313	A	Sidechain
49	S2	367	U	Sidechain
49	S2	381	C	Sidechain
49	S2	384	U	Sidechain
49	S2	399	C	Sidechain
49	S2	421	G	Sidechain
49	S2	423	U	Sidechain
49	S2	426	A	Sidechain
49	S2	427	U	Sidechain
49	S2	428	U	Sidechain
49	S2	437	G	Sidechain
49	S2	444	G	Sidechain
49	S2	447	A	Sidechain
49	S2	482	G	Sidechain
49	S2	601	G	Sidechain
49	S2	617	G	Sidechain
49	S2	631	U	Sidechain
49	S2	642	U	Sidechain
49	S2	645	C	Sidechain
49	S2	646	G	Sidechain
49	S2	661	U	Sidechain
49	S2	662	G	Sidechain
49	S2	685	A	Sidechain
49	S2	821	G	Sidechain
49	S2	848	U	Sidechain
49	S2	849	A	Sidechain
49	S2	9	U	Sidechain
49	S2	918	U	Sidechain
49	S2	92	A	Sidechain
49	S2	957	A	Sidechain
49	S2	958	G	Sidechain
49	S2	964	A	Sidechain
49	S2	999	G	Sidechain
50	SA	103	PHE	Sidechain
50	SA	131	HIS	Peptide
51	SB	141	GLY	Peptide
51	SB	40	ASN	Peptide
51	SB	66	VAL	Peptide
51	SB	76	ASN	Peptide

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Mol	Chain	Res	Type	Group
52	SC	168	GLY	Peptide
52	SC	236	PHE	Sidechain
52	SC	241	PHE	Sidechain
52	SC	60	TRP	Peptide
53	SD	159	HIS	Sidechain
53	SD	196	GLY	Peptide
53	SD	203	PRO	Peptide
54	SE	17	HIS	Peptide
54	SE	205	PHE	Peptide
55	SF	43	GLU	Peptide
57	SH	108	SER	Peptide
58	SI	149	TYR	Peptide
58	SI	153	LYS	Peptide
58	SI	155	ASN	Peptide
58	SI	26	LYS	Peptide
58	SI	65	PHE	Peptide
58	SI	99	ASN	Sidechain
59	SJ	165	TYR	Peptide
59	SJ	48	PHE	Sidechain
60	SK	29	MET	Peptide
61	SL	147	LYS	Peptide
61	SL	15	THR	Peptide
61	SL	151	THR	Peptide
61	SL	62	PHE	Sidechain
62	SM	100	PRO	Peptide
62	SM	107	SER	Peptide
62	SM	32	ALA	Peptide
63	SN	113	PHE	Peptide
64	SO	147	ARG	Sidechain
65	SP	11	THR	Peptide
66	SQ	43	GLU	Peptide
67	SR	108	LEU	Peptide
67	SR	125	GLY	Peptide
70	SU	71	GLY	Peptide
71	SV	32	ILE	Peptide
71	SV	48	GLY	Peptide
72	SW	54	ASP	Peptide
72	SW	76	SER	Peptide
73	SX	16	HIS	Sidechain
73	SX	20	HIS	Sidechain
74	SY	86	GLU	Sidechain
75	SZ	108	ILE	Peptide

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Mol	Chain	Res	Type	Group
76	Sa	17	HIS	Sidechain
77	Sb	81	ARG	Peptide
79	Sd	10	HIS	Peptide
79	Sd	8	TRP	Peptide
81	Sf	132	MET	Peptide
81	Sf	135	HIS	Peptide
81	Sf	138	ARG	Peptide
81	Sf	139	HIS	Peptide
23	T	140	PHE	Sidechain
23	T	142	ARG	Peptide
24	U	110	TYR	Peptide
24	U	55	ASN	Peptide
25	V	108	ASN	Peptide
25	V	97	TYR	Sidechain
25	V	98	PHE	Sidechain
26	W	27	LYS	Peptide
27	X	73	HIS	Sidechain
28	Y	18	HIS	Sidechain
28	Y	61	HIS	Sidechain
28	Y	62	TYR	Peptide
28	Y	81	TYR	Sidechain
30	a	109	TYR	Sidechain
30	a	128	PHE	Sidechain
30	a	34	ASN	Sidechain
30	a	39	HIS	Peptide
30	a	60	HIS	Sidechain
30	a	61	TYR	Peptide,Sidechain
30	a	62	HIS	Sidechain
30	a	91	ALA	Peptide
31	b	6	ASN	Sidechain
32	c	77	ASN	Peptide
32	c	78	ASN	Sidechain
33	d	103	TYR	Peptide
33	d	108	TYR	Peptide
33	d	25	TYR	Sidechain
33	d	72	VAL	Peptide
34	e	20	PHE	Sidechain
34	e	3	ALA	Peptide
34	e	74	PHE	Sidechain
34	e	76	LYS	Peptide
35	f	100	ARG	Peptide
35	f	53	ALA	Peptide

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Mol	Chain	Res	Type	Group
36	g	6	THR	Peptide
37	h	121	VAL	Peptide
37	h	78	TYR	Sidechain
37	h	97	LYS	Peptide
38	i	26	HIS	Sidechain
38	i	39	PHE	Sidechain
38	i	49	GLY	Peptide
39	j	46	LYS	Peptide
39	j	48	ASN	Peptide
39	j	66	HIS	Sidechain
39	j	8	PHE	Sidechain
40	k	28	ASN	Peptide
44	o	31	ASP	Peptide,Sidechain
44	o	43	ARG	Peptide
44	o	47	GLY	Peptide
44	o	48	TYR	Sidechain
44	o	76	ASN	Peptide
45	p	17	ARG	Peptide
46	q	108	PRO	Peptide
46	q	148	SER	Peptide
46	q	205	ASP	Mainchain,Peptide
46	q	44	ARG	Sidechain
46	q	6	ARG	Peptide
46	q	99	ARG	Sidechain
47	r	30	ASN	Peptide
47	r	31	ASN	Sidechain
47	r	45	HIS	Sidechain
47	r	70	GLN	Peptide
47	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	78486	0	39660	10608	0
2	7	2558	0	1296	310	0
3	8	3314	0	1683	500	0
4	A	1868	0	1959	166	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	B	3147	0	3280	225	0
6	C	2919	0	3100	178	0
7	D	2380	0	2412	184	0
8	E	1904	0	2055	148	0
9	F	1870	0	1996	180	0
10	G	1934	0	2086	132	0
11	H	1518	0	1601	87	0
12	I	1713	0	1752	110	0
13	J	1359	0	1389	70	0
14	K	1140	0	1189	601	0
15	L	1703	0	1818	102	0
16	M	1131	0	1209	75	0
17	N	1701	0	1749	129	0
18	O	1651	0	1786	89	0
19	P	1242	0	1269	56	0
20	Q	1506	0	1623	78	0
21	R	1508	0	1664	101	0
22	S	1454	0	1496	128	0
23	T	1298	0	1366	85	0
24	U	808	0	831	27	0
25	V	979	0	1039	54	0
26	W	528	0	541	52	0
27	X	976	0	1053	38	0
28	Y	1115	0	1205	64	0
29	Z	1107	0	1182	56	0
30	a	1163	0	1211	110	0
31	b	610	0	650	48	0
32	c	732	0	769	41	0
33	d	888	0	930	66	0
34	e	1053	0	1147	91	0
35	f	876	0	912	56	0
36	g	906	0	1002	56	0
37	h	1015	0	1149	56	0
38	i	832	0	917	30	0
39	j	706	0	743	53	0
40	k	569	0	637	21	0
41	l	444	0	483	13	0
42	m	429	0	466	31	0
43	n	222	0	261	10	0
44	o	851	0	922	45	0
45	p	708	0	760	28	0
46	q	1556	0	1604	668	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
47	r	1001	0	1062	74	0
48	4	6673	0	6739	2124	0
49	S2	36900	0	18598	5448	0
50	SA	1642	0	1646	107	0
51	SB	1725	0	1797	81	0
52	SC	1690	0	1777	74	0
53	SD	1765	0	1865	104	0
54	SE	2076	0	2177	80	0
55	SF	1509	0	1563	70	0
56	SG	1923	0	2089	101	0
57	SH	1521	0	1616	90	0
58	SI	1686	0	1772	110	0
59	SJ	1525	0	1640	103	0
60	SK	827	0	854	58	0
61	SL	1238	0	1315	59	0
62	SM	960	0	989	114	0
63	SN	1208	0	1294	66	0
64	SO	1016	0	1039	68	0
65	SP	805	0	861	27	0
66	SQ	1124	0	1193	47	0
67	SR	1047	0	1103	51	0
68	SS	1139	0	1191	79	0
69	ST	1101	0	1135	73	0
70	SU	818	0	883	27	0
71	SV	625	0	628	25	0
72	SW	1034	0	1080	57	0
73	SX	1099	0	1166	67	0
74	SY	1023	0	1090	58	0
75	SZ	598	0	656	16	0
76	Sa	781	0	830	56	0
77	Sb	651	0	672	20	0
78	Sc	506	0	536	23	0
79	Sd	434	0	427	38	0
80	Se	452	0	494	19	0
81	Sf	581	0	599	222	0
82	Sg	2436	0	2393	116	0
83	4	1	0	0	0	0
83	5	118	0	0	0	0
83	7	5	0	0	0	0
83	8	4	0	0	0	0
83	P	1	0	0	0	0
83	S2	36	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
83	V	1	0	0	0	0
84	Sa	1	0	0	3	0
84	j	1	0	0	1	0
84	m	1	0	0	2	0
84	o	1	0	0	1	0
All	All	221686	0	166621	23711	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 61.

All (23711) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:753:GLU:HA	48:4:782:PHE:CE1	1.25	1.71
48:4:236:PHE:CE2	48:4:273:PHE:CZ	1.79	1.71
10:G:261:LEU:CD2	10:G:264:LYS:HE2	1.21	1.66
1:5:4413:C:H4'	12:I:157:PHE:CE2	1.13	1.65
48:4:751:CYS:CB	48:4:755:VAL:HB	1.23	1.64
49:S2:460:A:C2	49:S2:461:U:C5	1.85	1.64
14:K:61:LYS:CE	14:K:72:GLU:HB3	1.28	1.63
14:K:97:ASN:CA	14:K:98:ILE:HG13	1.29	1.63
48:4:613:LEU:HD22	48:4:639:TYR:CD1	1.30	1.63
46:q:134:LYS:HE3	46:q:137:PHE:CE1	1.36	1.61
48:4:236:PHE:CE2	48:4:273:PHE:HZ	0.94	1.61
14:K:106:PHE:CD2	14:K:110:VAL:CG2	1.75	1.60
14:K:123:ARG:CA	14:K:129:ILE:HD11	1.19	1.60
14:K:61:LYS:HE3	14:K:72:GLU:CB	1.18	1.60
48:4:507:VAL:CG2	48:4:554:LEU:HD21	1.17	1.60
48:4:825:PHE:CE2	48:4:849:PRO:HD2	1.30	1.59
14:K:94:LYS:CB	14:K:96:LYS:HD2	1.28	1.58
48:4:692:LEU:HD11	48:4:734:LEU:CD1	1.28	1.58
14:K:47:ALA:CB	14:K:72:GLU:HG2	1.24	1.58
48:4:672:LEU:CA	48:4:675:ILE:HG12	1.21	1.57
14:K:106:PHE:CD2	14:K:110:VAL:HG21	1.09	1.57
48:4:753:GLU:CA	48:4:782:PHE:CE1	1.81	1.57
59:SJ:59:GLU:CG	59:SJ:59:GLU:CD	1.75	1.57
46:q:147:ILE:HB	48:4:204:MET:CE	1.35	1.57
48:4:56:PHE:CZ	48:4:455:GLY:HA3	1.38	1.57
48:4:236:PHE:HE2	48:4:273:PHE:CZ	1.10	1.56
48:4:751:CYS:HB2	48:4:755:VAL:CB	1.22	1.56
48:4:628:LEU:CD2	48:4:631:ARG:HH22	1.13	1.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:759:ILE:HD13	48:4:784:VAL:CG2	1.34	1.55
14:K:97:ASN:HA	14:K:98:ILE:CG1	1.15	1.55
48:4:58:ASP:HB3	48:4:63:GLU:CG	1.37	1.54
48:4:686:ALA:CB	48:4:729:LEU:HD12	1.35	1.53
49:S2:1453:C:C4	49:S2:1455:A:HI'	1.43	1.53
46:q:6:ARG:CG	46:q:10:LYS:HE3	1.32	1.53
50:SA:151:ASP:CB	50:SA:151:ASP:CG	1.78	1.52
14:K:123:ARG:CG	14:K:129:ILE:CD1	1.82	1.52
48:4:691:ALA:N	48:4:730:TYR:CD1	1.75	1.52
14:K:102:GLY:HA2	14:K:139:VAL:C	1.33	1.51
48:4:744:ILE:CD1	48:4:816:HIS:N	1.70	1.51
1:5:1994:C:C2'	14:K:132:ILE:HG12	1.40	1.51
1:5:4605:A:N6	48:4:801:ARG:CG	1.67	1.51
48:4:206:ASP:HB3	48:4:207:PRO:CD	1.19	1.51
48:4:543:GLU:CD	48:4:576:VAL:CG2	1.81	1.51
46:q:134:LYS:CE	46:q:137:PHE:HE1	1.18	1.51
48:4:759:ILE:CD1	48:4:784:VAL:HB	1.35	1.50
48:4:686:ALA:HB3	48:4:729:LEU:CD1	1.38	1.50
14:K:123:ARG:CG	14:K:129:ILE:HD12	1.33	1.49
48:4:543:GLU:CD	48:4:576:VAL:HG23	1.26	1.49
1:5:100:C:C5	1:5:101:A:C8	2.00	1.49
48:4:628:LEU:CD2	48:4:631:ARG:NH2	1.73	1.49
14:K:121:LEU:CD1	14:K:129:ILE:HD13	1.43	1.49
48:4:73:THR:N	48:4:104:ASP:HB3	1.24	1.48
14:K:123:ARG:HB2	14:K:129:ILE:CG1	1.42	1.47
46:q:66:ARG:HD2	46:q:69:LEU:CD2	1.18	1.47
48:4:693:CYS:HA	48:4:839:ARG:NE	1.22	1.47
46:q:97:GLU:CB	46:q:206:ILE:CG1	1.92	1.47
48:4:58:ASP:CB	48:4:63:GLU:HG2	1.44	1.47
48:4:692:LEU:CD1	48:4:734:LEU:HD11	1.03	1.47
48:4:56:PHE:CZ	48:4:455:GLY:CA	1.94	1.47
74:SY:86:GLU:CG	74:SY:86:GLU:CD	1.85	1.47
48:4:73:THR:H	48:4:104:ASP:CB	1.28	1.46
48:4:267:ASP:CA	48:4:267:ASP:C	1.88	1.46
48:4:675:ILE:HG21	48:4:709:LEU:CD1	1.41	1.46
13:J:119:TYR:CD1	68:SS:108:ARG:NH2	1.84	1.46
13:J:119:TYR:CG	68:SS:108:ARG:NH2	1.82	1.46
48:4:267:ASP:CA	48:4:267:ASP:N	1.77	1.46
48:4:672:LEU:HA	48:4:675:ILE:CG1	1.01	1.46
14:K:123:ARG:CB	14:K:129:ILE:CG1	1.92	1.45
14:K:125:LEU:CD1	14:K:163:PRO:HB3	1.45	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:113:SER:HB3	48:4:533:MET:CB	1.43	1.45
1:5:4413:C:H4'	12:I:157:PHE:CD2	1.50	1.45
14:K:121:LEU:CD1	14:K:129:ILE:HG21	1.47	1.45
48:4:150:ARG:CZ	48:4:194:GLU:OE1	1.65	1.45
14:K:102:GLY:N	14:K:139:VAL:HG13	1.12	1.45
46:q:66:ARG:CD	46:q:69:LEU:CD2	1.85	1.45
1:5:4605:A:N6	48:4:801:ARG:CD	1.79	1.44
14:K:121:LEU:HD13	14:K:129:ILE:CG2	1.47	1.44
48:4:56:PHE:CE1	48:4:455:GLY:CA	2.01	1.44
14:K:160:VAL:O	14:K:163:PRO:CD	1.64	1.44
14:K:56:LEU:CD1	14:K:91:ASP:OD2	1.66	1.43
14:K:102:GLY:CA	14:K:139:VAL:C	1.90	1.43
48:4:741:MET:HG3	48:4:817:TRP:CZ3	1.50	1.43
46:q:6:ARG:HG2	46:q:10:LYS:CE	1.42	1.43
46:q:120:GLU:CD	46:q:159:GLN:NE2	1.74	1.43
48:4:744:ILE:HD13	48:4:816:HIS:N	1.15	1.43
48:4:753:GLU:OE2	48:4:779:THR:CG2	1.66	1.43
46:q:144:THR:HG22	48:4:179:GLN:NE2	1.16	1.43
48:4:691:ALA:HB2	48:4:730:TYR:CG	1.54	1.42
49:S2:460:A:C2	49:S2:461:U:C6	2.03	1.42
48:4:27:HIS:HD2	48:4:28:VAL:N	1.08	1.42
48:4:753:GLU:CD	48:4:779:THR:HG23	1.43	1.42
48:4:686:ALA:CB	48:4:729:LEU:CD1	1.91	1.42
46:q:47:LEU:CD2	46:q:103:ARG:HG3	1.46	1.42
1:5:4413:C:C4'	12:I:157:PHE:CE2	2.01	1.41
48:4:56:PHE:HZ	48:4:456:ARG:N	1.17	1.41
48:4:690:GLY:C	48:4:730:TYR:CE1	1.96	1.41
49:S2:42:A:C6	49:S2:43:U:H5	1.37	1.41
48:4:113:SER:CB	48:4:533:MET:HB3	1.51	1.41
1:5:1174:G:N2	1:5:1175:A:N7	1.67	1.41
1:5:3709:U:C4	49:S2:970:G:N2	1.87	1.41
48:4:697:MET:SD	48:4:702:PHE:HZ	1.40	1.41
14:K:35:LEU:CD2	46:q:131:GLY:HA2	1.51	1.40
48:4:825:PHE:CE2	48:4:849:PRO:CD	2.01	1.40
49:S2:460:A:N1	49:S2:461:U:C5	1.88	1.40
49:S2:1416:C:H2'	49:S2:1417:C:C6	1.55	1.40
48:4:691:ALA:CB	48:4:730:TYR:HB3	0.94	1.40
1:5:1266:G:N2	1:5:2111:G:N3	1.67	1.39
48:4:613:LEU:CD2	48:4:639:TYR:CD1	2.04	1.39
1:5:1958:A:N1	1:5:2026:A:N6	1.68	1.39
48:4:206:ASP:CB	48:4:207:PRO:HD3	1.28	1.39

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:147:ILE:CB	48:4:204:MET:HE1	1.49	1.38
48:4:165:LEU:CD1	48:4:305:MET:HE2	1.53	1.38
1:5:2361:G:O6	19:P:25:HIS:CD2	1.74	1.38
46:q:80:PRO:HG2	46:q:81:HIS:CE1	1.58	1.37
46:q:91:THR:HG21	46:q:99:ARG:CZ	1.51	1.38
48:4:73:THR:N	48:4:104:ASP:CB	1.77	1.37
49:S2:1538:C:N3	49:S2:1539:U:H5	1.18	1.38
46:q:18:ILE:CG1	46:q:66:ARG:HD3	1.52	1.37
14:K:94:LYS:HD3	14:K:96:LYS:CE	1.51	1.37
48:4:72:SER:OG	48:4:104:ASP:C	1.63	1.37
1:5:4283:G:C2	1:5:4284:C:C6	2.13	1.37
48:4:56:PHE:CZ	48:4:456:ARG:N	1.93	1.37
48:4:507:VAL:HG22	48:4:554:LEU:CD2	1.53	1.37
1:5:1563:A:N6	49:S2:1028:A:H61	1.22	1.36
48:4:690:GLY:CA	48:4:730:TYR:CE1	2.06	1.36
48:4:845:LYS:NZ	48:4:846:GLU:HG2	1.34	1.36
48:4:855:LEU:HD23	48:4:856:ASP:N	1.34	1.36
1:5:3767:C:H5'	49:S2:1849:G:C6	1.60	1.36
3:8:11:C:N3	3:8:12:G:N7	1.70	1.36
48:4:27:HIS:CD2	48:4:28:VAL:N	1.93	1.36
48:4:541:SER:O	48:4:543:GLU:CG	1.72	1.36
1:5:1994:C:O2'	14:K:132:ILE:CG1	1.72	1.36
46:q:109:ALA:O	46:q:181:SER:CB	1.75	1.35
48:4:693:CYS:CA	48:4:839:ARG:HE	1.36	1.35
48:4:4:PHE:O	48:4:46:ILE:CD1	1.72	1.35
48:4:759:ILE:HD13	48:4:784:VAL:CB	1.57	1.35
1:5:977:C:C2	1:5:978:G:C8	2.14	1.35
46:q:97:GLU:CB	46:q:206:ILE:HG12	1.53	1.35
48:4:543:GLU:CG	48:4:576:VAL:HG21	1.56	1.35
1:5:2078:C:N3	1:5:2079:G:N7	1.76	1.34
48:4:56:PHE:CE1	48:4:455:GLY:HA2	1.62	1.34
1:5:3709:U:C2	49:S2:970:G:C2	2.14	1.34
48:4:541:SER:O	48:4:543:GLU:HG3	1.17	1.34
74:SY:86:GLU:CD	74:SY:86:GLU:OE2	1.69	1.34
1:5:2367:A:N1	1:5:2788:U:O4	1.56	1.34
1:5:4283:G:C2	1:5:4284:C:C5	2.15	1.34
48:4:45:ILE:CG2	48:4:78:PHE:N	1.85	1.34
14:K:102:GLY:CA	14:K:139:VAL:O	1.77	1.33
48:4:236:PHE:CZ	48:4:273:PHE:HZ	1.44	1.33
1:5:1960:A:C4	46:q:14:PHE:CZ	1.84	1.33
2:7:54:A:C2	2:7:55:A:N7	1.96	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:160:MET:HE3	48:4:178:PHE:CE2	1.62	1.33
48:4:543:GLU:OE2	48:4:576:VAL:CG2	1.69	1.33
2:7:18:C:N3	2:7:19:C:C5	1.96	1.33
13:J:119:TYR:CD2	68:SS:108:ARG:NH2	1.84	1.33
25:V:97:TYR:OH	26:W:21:TYR:HA	1.29	1.33
1:5:4213:A:N1	1:5:4218:U:O4	1.60	1.32
1:5:3709:U:C5	49:S2:970:G:N2	1.90	1.32
14:K:160:VAL:C	14:K:163:PRO:CD	2.01	1.32
14:K:160:VAL:HA	14:K:163:PRO:CG	1.58	1.32
46:q:97:GLU:HB3	46:q:206:ILE:CG1	1.55	1.32
1:5:983:C:O2	1:5:984:C:C6	1.81	1.32
14:K:31:LYS:O	14:K:34:PRO:CD	1.76	1.32
46:q:134:LYS:CE	46:q:137:PHE:CE1	2.02	1.32
1:5:1973:G:H1	1:5:1993:C:N4	1.28	1.32
48:4:769:HIS:O	48:4:786:ALA:CB	1.75	1.32
14:K:61:LYS:CE	14:K:72:GLU:CB	1.89	1.31
48:4:825:PHE:CZ	48:4:849:PRO:HD3	1.63	1.31
1:5:1388:A:C6	1:5:1396:G:N2	1.96	1.31
49:S2:1539:U:N3	49:S2:1540:G:N7	1.74	1.31
1:5:4892:A:N1	1:5:4927:G:O6	1.62	1.31
48:4:543:GLU:CG	48:4:576:VAL:CG2	2.08	1.31
46:q:149:ARG:O	46:q:151:THR:N	1.61	1.31
48:4:198:GLY:CA	48:4:201:GLY:HA2	1.52	1.31
49:S2:647:U:O2	49:S2:648:A:C8	1.83	1.31
48:4:72:SER:OG	48:4:104:ASP:CA	1.78	1.31
49:S2:1231:C:O4'	49:S2:1665:G:N2	1.61	1.31
1:5:1983:A:N7	1:5:1987:C:OP2	1.64	1.30
46:q:53:VAL:HG22	46:q:89:VAL:CG2	1.61	1.30
46:q:61:MET:SD	46:q:82:ILE:HB	1.70	1.30
46:q:127:ASN:HB3	46:q:153:GLU:CG	1.60	1.30
1:5:4233:A:N1	1:5:4290:U:O4	1.64	1.30
48:4:541:SER:CB	48:4:576:VAL:HG11	1.59	1.30
48:4:613:LEU:CD1	48:4:639:TYR:HB3	1.60	1.30
48:4:697:MET:SD	48:4:702:PHE:CZ	2.22	1.30
49:S2:42:A:N3	49:S2:426:A:N7	1.77	1.30
1:5:1958:A:N1	1:5:2026:A:C6	2.00	1.30
14:K:79:ALA:O	14:K:83:LYS:HG3	1.17	1.30
14:K:137:GLN:OE1	14:K:148:PRO:HB3	1.19	1.30
49:S2:1133:A:C2	49:S2:1134:G:C8	2.19	1.30
48:4:496:VAL:HG22	48:4:497:MET:SD	1.71	1.30
48:4:691:ALA:HB1	48:4:854:PHE:CZ	1.65	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:524:U:N3	49:S2:594:A:N6	1.77	1.30
49:S2:1284:A:O2'	62:SM:106:CYS:HA	1.17	1.30
48:4:10:ARG:NH2	48:4:465:PRO:HD3	1.46	1.29
48:4:113:SER:HA	48:4:499:PHE:CB	1.61	1.29
48:4:541:SER:HB3	48:4:576:VAL:CG1	1.61	1.29
53:SD:216:GLU:CD	53:SD:216:GLU:OE1	1.73	1.29
1:5:977:C:N3	1:5:978:G:N7	1.81	1.29
48:4:502:SER:HB2	48:4:504:VAL:CG1	1.63	1.29
48:4:753:GLU:CB	48:4:782:PHE:CE1	2.14	1.29
1:5:1245:C:O2	1:5:1246:G:C8	1.85	1.29
46:q:97:GLU:HB2	46:q:206:ILE:CD1	1.61	1.29
49:S2:1114:U:O4	49:S2:1119:A:N1	1.65	1.29
14:K:94:LYS:HG2	14:K:96:LYS:CG	1.62	1.28
49:S2:830:A:N6	49:S2:844:U:H3	1.30	1.28
46:q:168:GLY:HA3	46:q:171:GLU:OE1	1.24	1.28
48:4:507:VAL:CG2	48:4:554:LEU:CD2	2.07	1.28
48:4:771:PHE:HB3	48:4:785:LYS:CB	1.60	1.28
48:4:771:PHE:N	48:4:785:LYS:O	1.67	1.28
1:5:1998:A:C2	1:5:2019:C:O2'	1.84	1.28
14:K:102:GLY:H	14:K:139:VAL:CG1	1.44	1.28
14:K:160:VAL:CA	14:K:163:PRO:CG	2.11	1.28
48:4:581:GLU:OE2	48:4:695:GLU:HB2	1.33	1.28
14:K:94:LYS:HB3	14:K:96:LYS:CD	1.63	1.28
46:q:120:GLU:OE1	46:q:159:GLN:NE2	1.60	1.28
48:4:691:ALA:HB2	48:4:730:TYR:CB	0.81	1.28
48:4:756:VAL:O	48:4:759:ILE:HG22	1.34	1.28
1:5:5005:G:O6	26:W:51:TRP:HB3	1.32	1.27
48:4:571:LYS:HE2	48:4:572:LYS:N	1.49	1.27
48:4:73:THR:H	48:4:104:ASP:CG	1.40	1.27
48:4:331:GLU:OE2	48:4:335:LEU:HD22	1.30	1.27
1:5:1478:C:O2	1:5:1479:G:N7	1.62	1.27
48:4:42:LYS:HG3	48:4:79:TYR:OH	1.24	1.27
48:4:43:ALA:O	48:4:45:ILE:N	1.66	1.27
49:S2:1408:U:O4	49:S2:1439:A:N1	1.67	1.27
46:q:99:ARG:HA	46:q:102:LEU:CD2	1.62	1.27
49:S2:56:G:C6	49:S2:90:G:N2	2.02	1.27
1:5:1958:A:C2	1:5:2026:A:C6	2.21	1.27
14:K:47:ALA:CB	14:K:72:GLU:CG	2.13	1.27
48:4:692:LEU:CD1	48:4:734:LEU:CD1	1.91	1.27
14:K:106:PHE:HD2	14:K:110:VAL:CG2	1.24	1.26
1:5:1994:C:C2'	14:K:132:ILE:CG1	2.12	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1994:C:O2'	14:K:132:ILE:HG13	1.21	1.26
48:4:739:ARG:NH1	48:4:823:ASP:HB2	1.49	1.26
49:S2:469:A:N1	49:S2:470:G:C8	2.04	1.26
14:K:14:TYR:CD2	14:K:63:THR:OG1	1.82	1.26
48:4:4:PHE:CD1	48:4:5:THR:HG22	1.70	1.26
48:4:693:CYS:HA	48:4:839:ARG:CZ	1.64	1.26
48:4:855:LEU:HD23	48:4:855:LEU:C	1.50	1.26
49:S2:1539:U:O2	49:S2:1540:G:C8	1.88	1.26
48:4:502:SER:CB	48:4:504:VAL:HG13	1.65	1.26
48:4:740:LEU:CB	48:4:831:PRO:HB3	1.64	1.26
1:5:1936:C:C5	2:7:84:U:C5	2.22	1.25
14:K:125:LEU:HD12	14:K:163:PRO:CB	1.66	1.25
48:4:3:ASN:HA	48:4:45:ILE:O	1.36	1.25
46:q:168:GLY:CA	46:q:171:GLU:OE1	1.83	1.25
1:5:2743:A:C2	1:5:2744:A:C5	2.24	1.25
10:G:261:LEU:CD2	10:G:264:LYS:CE	2.14	1.25
49:S2:460:A:N1	49:S2:461:U:C4	2.03	1.25
14:K:63:THR:HA	14:K:71:ILE:O	1.35	1.25
14:K:94:LYS:CG	14:K:96:LYS:HD2	1.64	1.25
49:S2:1433:C:H2'	49:S2:1434:C:C1'	1.65	1.25
46:q:80:PRO:C	46:q:81:HIS:ND1	1.93	1.25
48:4:79:TYR:CD2	48:4:351:LEU:HD13	1.71	1.25
1:5:1672:U:C2	1:5:1673:U:C5	2.23	1.25
46:q:127:ASN:HB3	46:q:153:GLU:CD	1.59	1.25
46:q:182:PRO:HG2	46:q:183:PHE:CE1	1.72	1.25
48:4:45:ILE:CG2	48:4:78:PHE:H	1.47	1.25
49:S2:50:A:N6	49:S2:488:U:H3	1.36	1.25
49:S2:551:U:O2	49:S2:552:G:C8	1.89	1.25
1:5:3702:A:C2	1:5:3703:G:C8	2.24	1.24
48:4:13:MET:CE	48:4:464:VAL:HG13	1.65	1.24
14:K:94:LYS:CB	14:K:96:LYS:CD	2.11	1.24
49:S2:165:G:C8	49:S2:166:A:N7	2.05	1.24
14:K:56:LEU:HB3	14:K:91:ASP:OD1	1.30	1.24
14:K:94:LYS:CG	14:K:96:LYS:CD	2.15	1.24
48:4:402:VAL:CG2	48:4:403:PRO:HD2	1.65	1.24
48:4:753:GLU:CA	48:4:782:PHE:HE1	1.28	1.24
49:S2:50:A:N1	49:S2:488:U:O4	1.69	1.24
14:K:142:ASN:HB2	14:K:148:PRO:N	1.53	1.24
46:q:61:MET:HG2	46:q:82:ILE:CG2	1.66	1.24
48:4:690:GLY:CA	48:4:730:TYR:HE1	1.42	1.24
48:4:759:ILE:CD1	48:4:784:VAL:CB	2.10	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:141:LEU:O	48:4:180:ARG:NH2	1.70	1.23
49:S2:1417:C:N3	49:S2:1419:C:H5	1.36	1.23
49:S2:1433:C:H3'	49:S2:1433:C:OP2	1.38	1.23
48:4:113:SER:CA	48:4:499:PHE:HB2	1.67	1.23
48:4:753:GLU:HB3	48:4:782:PHE:CZ	1.72	1.23
1:5:1899:G:C2	1:5:1900:C:C5	2.27	1.23
14:K:14:TYR:CE2	14:K:63:THR:OG1	1.90	1.23
14:K:61:LYS:HE3	14:K:72:GLU:CA	1.67	1.23
14:K:102:GLY:N	14:K:139:VAL:CG1	1.99	1.23
48:4:698:ARG:O	48:4:700:VAL:CG2	1.84	1.23
48:4:762:VAL:HG13	48:4:766:LYS:NZ	1.51	1.23
48:4:165:LEU:HD12	48:4:305:MET:CE	1.65	1.23
14:K:125:LEU:CD1	14:K:163:PRO:CB	2.16	1.23
21:R:131:VAL:HB	21:R:132:PHE:CZ	1.74	1.23
48:4:58:ASP:OD1	48:4:69:THR:HG23	1.27	1.23
14:K:92:ARG:HA	14:K:95:GLN:OE1	1.37	1.22
1:5:1268:G:C2	1:5:1270:A:C8	2.28	1.22
48:4:13:MET:CE	48:4:465:PRO:HD2	1.69	1.22
1:5:1958:A:C6	1:5:2026:A:N6	2.06	1.22
49:S2:1538:C:N3	49:S2:1539:U:C5	2.06	1.22
1:5:3709:U:C2	49:S2:970:G:N2	2.07	1.22
1:5:3709:U:N3	49:S2:970:G:N2	1.87	1.22
1:5:4605:A:N6	48:4:801:ARG:CB	2.01	1.22
46:q:168:GLY:O	46:q:171:GLU:HG2	1.40	1.22
48:4:331:GLU:OE2	48:4:335:LEU:CD2	1.86	1.22
1:5:1956:A:N1	1:5:2027:U:N3	1.87	1.22
48:4:160:MET:HE3	48:4:178:PHE:CZ	1.73	1.22
1:5:1961:G:OP2	46:q:57:LYS:HD2	1.10	1.21
14:K:137:GLN:OE1	14:K:148:PRO:CB	1.86	1.21
14:K:102:GLY:HA2	14:K:139:VAL:CA	1.70	1.21
48:4:330:LYS:O	48:4:331:GLU:HG2	1.33	1.21
48:4:710:HIS:CD2	48:4:715:HIS:HB2	1.75	1.21
1:5:964:A:N6	1:5:966:A:N7	1.87	1.21
1:5:2314:G:C2	1:5:2315:G:N7	2.09	1.21
14:K:102:GLY:CA	14:K:139:VAL:CG1	2.18	1.21
46:q:144:THR:CG2	48:4:179:GLN:NE2	2.02	1.21
48:4:628:LEU:HD23	48:4:631:ARG:NH2	1.39	1.21
48:4:713:ALA:HB2	48:4:716:ARG:NH2	1.53	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
3:8:12:G:C2	3:8:13:G:C8	2.28	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:160:VAL:CA	14:K:163:PRO:HG2	1.69	1.21
48:4:103:ILE:CG1	48:4:122:THR:HG21	1.70	1.21
1:5:3709:U:C6	49:S2:970:G:N2	1.99	1.21
46:q:127:ASN:CA	46:q:153:GLU:HG2	1.69	1.20
48:4:503:PRO:O	48:4:505:VAL:N	1.73	1.20
14:K:102:GLY:HA2	14:K:139:VAL:CG1	1.67	1.20
49:S2:821:G:O6	59:SJ:150:ARG:HD2	1.40	1.20
49:S2:1273:C:O2	49:S2:1506:A:H2	1.22	1.20
25:V:97:TYR:OH	26:W:21:TYR:CA	1.89	1.20
48:4:672:LEU:CA	48:4:675:ILE:CG1	1.89	1.20
49:S2:42:A:C6	49:S2:43:U:C5	2.29	1.20
49:S2:795:A:C2	49:S2:796:G:C5	2.28	1.20
1:5:469:C:O2	1:5:688:U:H1'	1.36	1.20
1:5:4413:C:C4'	12:I:157:PHE:CD2	2.16	1.20
14:K:31:LYS:HG3	48:4:775:GLN:OE1	1.35	1.20
14:K:106:PHE:CB	14:K:110:VAL:HG23	1.71	1.20
46:q:6:ARG:HG3	46:q:10:LYS:HG3	1.22	1.20
48:4:753:GLU:HA	48:4:782:PHE:CD1	1.76	1.20
1:5:1279:A:H2'	1:5:1280:C:C5	1.76	1.20
1:5:3629:A:C1'	49:S2:1721:U:H3	1.53	1.20
48:4:72:SER:C	48:4:104:ASP:HB3	1.64	1.20
48:4:325:SER:O	48:4:327:ASP:N	1.75	1.20
49:S2:1539:U:C2	49:S2:1540:G:C8	2.28	1.20
1:5:4283:G:N1	1:5:4284:C:C5	2.09	1.19
14:K:48:LYS:HG2	14:K:52:ASP:OD1	1.41	1.19
14:K:94:LYS:HG2	14:K:96:LYS:CB	1.70	1.19
1:5:208:A:O4'	1:5:232:G:N2	1.73	1.19
48:4:45:ILE:HG21	48:4:77:LEU:C	1.66	1.19
48:4:496:VAL:CG2	48:4:497:MET:SD	2.29	1.19
48:4:275:LYS:O	48:4:275:LYS:HE3	1.40	1.19
48:4:481:LYS:CG	48:4:482:THR:H	1.44	1.19
48:4:651:CYS:SG	48:4:662:LEU:HD12	1.83	1.19
48:4:825:PHE:CZ	48:4:849:PRO:CD	2.18	1.19
1:5:106:A:H1'	1:5:336:A:C8	1.76	1.19
14:K:113:ALA:O	14:K:116:MET:HG2	1.43	1.19
1:5:2361:G:O6	19:P:25:HIS:HD2	1.04	1.18
1:5:2362:U:C4	1:5:3859:G:N2	2.12	1.18
48:4:13:MET:SD	48:4:465:PRO:HD2	1.82	1.18
1:5:1960:A:H4'	46:q:59:THR:HG23	1.22	1.18
14:K:160:VAL:O	14:K:163:PRO:HD2	1.15	1.18
48:4:562:GLU:HA	48:4:570:ILE:HD11	1.25	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:119:C:N3	3:8:120:G:N7	1.92	1.18
46:q:47:LEU:HD21	46:q:103:ARG:CG	1.72	1.18
48:4:45:ILE:HG21	48:4:78:PHE:N	1.19	1.18
48:4:111:PHE:CE1	48:4:809:PHE:CZ	2.30	1.18
48:4:742:GLU:OE2	48:4:791:ASN:OD1	1.61	1.18
3:8:64:U:C2	3:8:65:A:N7	2.12	1.18
48:4:4:PHE:C	48:4:46:ILE:HD11	1.69	1.18
48:4:804:THR:CB	48:4:808:ALA:HB2	1.73	1.18
1:5:207:G:N2	1:5:383:A:N7	1.90	1.18
48:4:75:ILE:CG2	48:4:77:LEU:CD1	2.21	1.18
48:4:609:PHE:CZ	48:4:661:ILE:HD12	1.76	1.18
48:4:762:VAL:CG2	48:4:800:LEU:HD12	1.71	1.18
1:5:1213:G:C4	1:5:1215:C:HI'	1.77	1.17
1:5:4276:G:C6	1:5:4277:G:C8	2.32	1.17
14:K:94:LYS:HD3	14:K:96:LYS:HE2	1.24	1.17
48:4:113:SER:CB	48:4:499:PHE:HB2	1.74	1.17
48:4:150:ARG:NH1	48:4:194:GLU:OE1	1.77	1.17
49:S2:26:U:N3	49:S2:27:A:C8	2.12	1.17
46:q:91:THR:CG2	46:q:99:ARG:NH2	2.07	1.17
48:4:739:ARG:HA	48:4:824:PRO:HD3	1.26	1.17
49:S2:1273:C:O2	49:S2:1506:A:C2	1.96	1.17
1:5:2724:G:C2	1:5:2726:G:N7	2.13	1.17
1:5:2856:C:C2	1:5:2857:A:N7	2.13	1.17
2:7:54:A:C2	2:7:55:A:C8	2.33	1.17
46:q:127:ASN:HB3	46:q:153:GLU:OE2	1.45	1.17
48:4:40:VAL:O	48:4:43:ALA:CB	1.92	1.17
1:5:484:U:C4	1:5:486:C:C5	2.32	1.17
1:5:1245:C:C5	1:5:1269:G:C6	2.33	1.17
1:5:2856:C:O2	1:5:2857:A:C8	1.98	1.17
1:5:3767:C:C5'	49:S2:1849:G:C6	2.26	1.17
46:q:97:GLU:HB2	46:q:206:ILE:CG1	1.60	1.17
1:5:166:C:O2	1:5:167:C:C5	1.98	1.17
1:5:1969:G:O6	1:5:2018:C:N4	1.75	1.17
3:8:96:C:C2	3:8:97:A:C8	2.33	1.17
10:G:264:LYS:NZ	10:G:265:LEU:HD22	1.57	1.17
1:5:1961:G:OP2	46:q:57:LYS:CD	1.91	1.16
1:5:4767:C:O2'	1:5:4874:A:N6	1.79	1.16
14:K:102:GLY:C	14:K:139:VAL:O	1.88	1.16
14:K:131:GLU:O	14:K:135:THR:HG23	1.45	1.16
46:q:127:ASN:CB	46:q:153:GLU:HG2	1.75	1.16
48:4:72:SER:OG	48:4:104:ASP:O	1.61	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:675:ILE:CG2	48:4:709:LEU:CD1	2.23	1.16
49:S2:1316:C:N3	49:S2:1317:C:C5	2.13	1.16
1:5:1936:C:C5	2:7:84:U:C6	2.33	1.16
1:5:4119:C:N4	36:g:100:GLN:OE1	1.78	1.16
48:4:103:ILE:HG12	48:4:122:THR:CG2	1.74	1.16
48:4:740:LEU:HB3	48:4:831:PRO:CB	1.73	1.16
1:5:1358:G:H2'	1:5:1359:G:O4'	1.45	1.16
48:4:808:ALA:O	48:4:810:PRO:HD3	1.02	1.16
49:S2:994:C:N3	49:S2:995:G:N7	1.93	1.16
1:5:100:C:C4	1:5:101:A:N7	2.14	1.16
49:S2:1308:U:H2'	49:S2:1309:C:C6	1.79	1.16
14:K:56:LEU:HD12	14:K:91:ASP:OD2	1.00	1.16
14:K:62:LEU:O	14:K:62:LEU:HD12	1.40	1.16
46:q:202:GLU:HA	46:q:203:VAL:HG22	1.22	1.16
48:4:198:GLY:HA2	48:4:201:GLY:HA2	1.22	1.16
48:4:206:ASP:CB	48:4:207:PRO:CD	1.94	1.16
48:4:396:MET:HE1	48:4:472:LEU:HD11	1.22	1.16
48:4:498:LYS:O	48:4:498:LYS:HG3	1.45	1.16
48:4:672:LEU:N	48:4:675:ILE:HG12	1.58	1.16
48:4:749:ILE:O	48:4:782:PHE:O	1.63	1.16
49:S2:426:A:C2	49:S2:427:U:C5	2.33	1.16
49:S2:1552:G:O6	49:S2:1578:U:C2	1.96	1.16
2:7:18:C:O2	2:7:19:C:C6	1.98	1.15
14:K:38:SER:CB	14:K:39:PRO:HD3	1.66	1.15
48:4:518:PRO:HA	73:SX:50:ILE:CD1	1.76	1.15
48:4:690:GLY:HA2	48:4:730:TYR:CE1	1.74	1.15
49:S2:339:A:H2'	49:S2:340:C:C6	1.81	1.15
49:S2:349:A:H4'	58:SI:27:TYR:OH	1.43	1.15
1:5:161:G:N2	1:5:275:C:O2	1.80	1.15
1:5:1378:C:H3'	1:5:1379:C:C5'	1.73	1.15
1:5:2080:U:C2	1:5:2081:C:C5	2.34	1.15
48:4:770:VAL:HG13	48:4:784:VAL:HG13	1.16	1.15
49:S2:1249:C:C4	49:S2:1250:A:N7	2.14	1.15
1:5:4606:G:OP1	48:4:27:HIS:NE2	1.78	1.15
48:4:75:ILE:CG2	48:4:77:LEU:HD12	1.76	1.15
49:S2:830:A:N6	49:S2:844:U:N3	1.88	1.15
46:q:61:MET:SD	46:q:82:ILE:CB	2.34	1.15
48:4:60:ARG:C	48:4:60:ARG:HD2	1.72	1.15
48:4:448:GLN:HE21	48:4:448:GLN:CA	1.57	1.15
49:S2:649:U:O2	49:S2:650:A:C8	1.98	1.15
49:S2:1283:C:O2'	62:SM:91:LEU:HD22	1.46	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1358:G:C2'	1:5:1359:G:O4'	1.95	1.15
46:q:91:THR:CG2	46:q:99:ARG:CZ	2.25	1.15
48:4:79:TYR:CD2	48:4:351:LEU:CD1	2.29	1.15
48:4:191:THR:HG21	48:4:192:TYR:CZ	1.81	1.15
1:5:2508:U:O2	1:5:2509:C:C6	1.99	1.14
1:5:2532:C:C2	1:5:2533:C:C5	2.35	1.14
46:q:80:PRO:CG	46:q:81:HIS:CE1	2.29	1.14
48:4:804:THR:OG1	48:4:808:ALA:HB2	1.47	1.14
1:5:1628:C:N3	1:5:1629:G:N7	1.94	1.14
1:5:1683:U:O2	1:5:1684:A:C8	1.99	1.14
1:5:3767:C:C5'	49:S2:1849:G:O6	1.94	1.14
14:K:125:LEU:HD13	14:K:163:PRO:HA	1.24	1.14
48:4:240:GLY:CA	48:4:241:GLU:HB2	1.75	1.14
48:4:762:VAL:HG21	48:4:800:LEU:CD1	1.77	1.14
49:S2:444:G:N2	49:S2:446:G:C8	2.15	1.14
1:5:1598:C:C5	1:5:2798:A:N7	2.16	1.14
1:5:2293:U:O2	1:5:2294:G:C8	2.00	1.14
1:5:2326:G:C2	1:5:2327:G:C8	2.34	1.14
1:5:4606:G:H5''	48:4:28:VAL:HG21	1.15	1.14
9:F:161:TYR:CE2	9:F:168:ARG:NH2	2.15	1.14
48:4:613:LEU:HD11	48:4:639:TYR:HB3	1.21	1.14
48:4:667:LYS:HZ3	48:4:667:LYS:HB2	1.12	1.14
49:S2:1309:C:C2	81:Sf:143:LYS:HD3	1.83	1.14
1:5:4280:A:H61	7:D:29:ASP:CA	1.58	1.14
1:5:4757:C:O2	18:O:114:LYS:HA	1.42	1.14
14:K:160:VAL:C	14:K:163:PRO:CG	2.19	1.14
46:q:29:ILE:HG23	46:q:86:VAL:HG11	1.29	1.14
48:4:13:MET:HE1	48:4:464:VAL:CG1	1.77	1.14
48:4:49:ALA:HA	48:4:55:ARG:HH21	1.13	1.14
48:4:502:SER:O	48:4:504:VAL:HG22	1.48	1.14
48:4:672:LEU:HA	48:4:675:ILE:CD1	1.78	1.14
49:S2:1309:C:O2	81:Sf:143:LYS:HD3	0.99	1.14
46:q:135:THR:HG23	46:q:152:ILE:HD13	1.21	1.13
48:4:56:PHE:CZ	48:4:455:GLY:C	2.24	1.13
49:S2:1402:A:N6	49:S2:1441:U:N3	1.96	1.13
1:5:1724:G:N7	31:b:17:HIS:ND1	1.96	1.13
14:K:102:GLY:O	14:K:139:VAL:O	1.67	1.13
46:q:199:TYR:HB3	46:q:205:ASP:HB3	1.22	1.13
48:4:40:VAL:O	48:4:43:ALA:HB3	1.49	1.13
48:4:165:LEU:CD1	48:4:305:MET:CE	2.24	1.13
48:4:479:LEU:HD21	48:4:483:GLY:HA3	1.15	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:481:LYS:HG3	48:4:482:THR:N	1.37	1.13
48:4:698:ARG:O	48:4:700:VAL:HG23	0.98	1.13
48:4:744:ILE:HD12	48:4:816:HIS:C	1.73	1.13
1:5:2468:U:O4	1:5:2473:A:N1	1.80	1.13
1:5:4413:C:C4'	12:I:157:PHE:HE2	1.49	1.13
14:K:160:VAL:C	14:K:163:PRO:HD3	1.73	1.13
46:q:77:LYS:CG	46:q:198:ILE:HD11	1.76	1.13
48:4:45:ILE:HD12	48:4:78:PHE:CD1	1.82	1.13
48:4:106:PRO:HD2	48:4:115:VAL:HG22	1.18	1.13
1:5:2277:C:O2	1:5:2278:G:C8	2.02	1.13
1:5:3702:A:N1	1:5:3703:G:C8	2.17	1.13
46:q:66:ARG:CD	46:q:69:LEU:HD21	1.57	1.13
48:4:613:LEU:H	48:4:613:LEU:HD23	1.08	1.13
1:5:208:A:C1'	1:5:232:G:N2	2.12	1.12
1:5:1214:C:O2'	1:5:2114:G:N1	1.82	1.13
14:K:95:GLN:O	14:K:96:LYS:HD3	1.49	1.12
14:K:117:ARG:HG3	14:K:133:LEU:HD11	1.15	1.12
14:K:121:LEU:HD12	14:K:129:ILE:CD1	1.79	1.13
48:4:58:ASP:OD1	48:4:69:THR:CG2	1.97	1.13
1:5:2314:G:N2	1:5:2315:G:C8	2.17	1.12
1:5:4518:A:C8	5:B:257:TRP:CH2	2.37	1.12
48:4:543:GLU:CD	48:4:576:VAL:CB	2.22	1.12
48:4:829:SER:O	48:4:833:GLN:HG2	1.45	1.12
49:S2:383:G:H2'	49:S2:384:U:O4'	1.45	1.12
1:5:4606:G:OP1	48:4:27:HIS:CE1	2.02	1.12
14:K:121:LEU:HD12	14:K:123:ARG:HD2	1.14	1.12
46:q:127:ASN:HA	46:q:153:GLU:HG2	1.23	1.12
49:S2:925:G:C2	49:S2:926:A:C8	2.36	1.12
48:4:236:PHE:HE2	48:4:273:PHE:CE2	1.65	1.12
48:4:610:PRO:HB2	48:4:613:LEU:HG	1.22	1.12
48:4:753:GLU:CD	48:4:779:THR:CG2	2.18	1.12
49:S2:1309:C:O2	81:Sf:143:LYS:CD	1.96	1.12
1:5:84:A:N6	1:5:98:A:C8	2.17	1.12
1:5:1960:A:C4'	46:q:59:THR:HG23	1.80	1.12
46:q:97:GLU:HB2	46:q:206:ILE:HD11	1.22	1.12
1:5:1598:C:C6	1:5:2798:A:N7	2.18	1.12
1:5:3629:A:H4'	49:S2:1721:U:O2	1.49	1.12
14:K:35:LEU:HD22	46:q:132:PRO:HD3	1.22	1.12
48:4:56:PHE:HZ	48:4:455:GLY:C	1.57	1.12
1:5:1269:G:H3'	1:5:2111:G:O6	1.51	1.11
3:8:74:U:O4	28:Y:74:TYR:CD1	2.02	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:261:LEU:HD21	10:G:264:LYS:HE2	1.26	1.11
14:K:47:ALA:HB2	14:K:72:GLU:HG2	1.28	1.11
48:4:297:ILE:O	48:4:300:VAL:HG22	1.50	1.11
48:4:804:THR:CG2	48:4:808:ALA:HB2	1.80	1.11
49:S2:1123:C:N3	49:S2:1124:C:C5	2.18	1.11
1:5:1358:G:N2	1:5:1359:G:O6	1.83	1.11
2:7:18:C:C2	2:7:19:C:C6	2.38	1.11
14:K:94:LYS:HG2	14:K:96:LYS:CD	1.74	1.11
48:4:75:ILE:HG21	48:4:77:LEU:HD11	1.19	1.11
48:4:295:ASP:O	48:4:299:LYS:HG3	1.49	1.11
48:4:745:TYR:HA	48:4:815:ASP:HB2	1.28	1.11
49:S2:1407:U:H2'	49:S2:1408:U:C6	1.84	1.11
1:5:28:C:N3	1:5:29:G:N7	1.97	1.11
1:5:1325:C:H4'	1:5:3901:A:N1	1.66	1.11
1:5:5048:A:C8	33:d:34:HIS:CD2	2.37	1.11
14:K:142:ASN:HD21	14:K:151:ILE:HG13	1.10	1.11
48:4:58:ASP:O	48:4:63:GLU:HB3	1.47	1.11
48:4:448:GLN:HE21	48:4:448:GLN:HA	0.95	1.11
1:5:1379:C:H4'	1:5:1380:G:C8	1.85	1.11
1:5:3909:C:N3	1:5:3910:C:C5	2.19	1.11
1:5:4276:G:C6	1:5:4277:G:N7	2.18	1.11
1:5:4280:A:H61	7:D:29:ASP:HA	1.10	1.11
14:K:35:LEU:HD23	46:q:131:GLY:HA2	1.23	1.11
46:q:29:ILE:HG23	46:q:86:VAL:CG1	1.81	1.11
48:4:686:ALA:HB3	48:4:729:LEU:HD13	1.15	1.11
48:4:745:TYR:CD2	48:4:814:PHE:HA	1.85	1.11
1:5:1899:G:C8	1:5:2278:G:N1	2.19	1.11
46:q:18:ILE:HG13	46:q:66:ARG:HD3	1.14	1.11
46:q:135:THR:O	46:q:137:PHE:N	1.84	1.11
48:4:24:VAL:HG23	48:4:32:LYS:HE3	1.32	1.11
48:4:240:GLY:HA3	48:4:241:GLU:HB2	1.20	1.11
48:4:427:VAL:HG21	48:4:447:ILE:HD11	1.19	1.11
49:S2:426:A:N1	49:S2:427:U:C5	2.18	1.11
1:5:1248:C:N3	1:5:1249:C:C5	2.19	1.10
14:K:48:LYS:HG2	14:K:52:ASP:CG	1.75	1.10
48:4:4:PHE:O	48:4:46:ILE:HD11	0.93	1.10
48:4:357:HIS:O	48:4:359:PRO:HD3	1.51	1.10
48:4:753:GLU:HB3	48:4:782:PHE:CE1	1.77	1.10
48:4:808:ALA:O	48:4:810:PRO:CD	1.98	1.10
49:S2:837:A:C2	49:S2:838:G:N7	2.18	1.10
1:5:491:G:N2	1:5:663:G:N1	1.98	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4094:G:H2'	1:5:4095:G:O4'	1.50	1.10
48:4:37:ASP:OD2	48:4:54:THR:HB	1.52	1.10
48:4:79:TYR:CE2	48:4:351:LEU:CD1	2.33	1.10
48:4:543:GLU:HG2	48:4:576:VAL:HG21	1.30	1.10
48:4:776:VAL:HG22	48:4:777:ALA:N	1.54	1.10
1:5:1475:G:C2	1:5:1476:C:C5	2.39	1.10
1:5:1973:G:N1	1:5:1993:C:N4	1.89	1.10
3:8:96:C:N3	3:8:97:A:N7	2.00	1.10
14:K:62:LEU:CD1	14:K:73:VAL:HB	1.79	1.10
46:q:39:GLN:CD	46:q:107:VAL:HG11	1.50	1.10
46:q:94:ASP:HA	46:q:95:LEU:HB2	1.25	1.10
48:4:42:LYS:CG	48:4:79:TYR:OH	1.98	1.10
48:4:75:ILE:HG21	48:4:77:LEU:CD1	1.78	1.10
48:4:236:PHE:CZ	48:4:273:PHE:CZ	2.27	1.10
48:4:613:LEU:HD13	48:4:639:TYR:CB	1.81	1.10
48:4:752:PRO:HD2	48:4:755:VAL:CG2	1.81	1.10
1:5:1624:G:N2	1:5:1642:A:O2'	1.85	1.10
14:K:102:GLY:HA3	14:K:139:VAL:O	1.37	1.10
14:K:106:PHE:CG	14:K:110:VAL:CG2	2.35	1.10
46:q:148:SER:OG	46:q:153:GLU:OE1	1.67	1.10
48:4:751:CYS:O	48:4:781:MET:HA	1.42	1.10
48:4:753:GLU:CB	48:4:782:PHE:CZ	2.32	1.10
1:5:161:G:N2	1:5:275:C:C2	2.19	1.10
1:5:3709:U:H1'	49:S2:970:G:N1	1.67	1.10
14:K:94:LYS:CD	14:K:96:LYS:CE	2.28	1.10
46:q:91:THR:HG21	46:q:99:ARG:NH1	1.63	1.10
48:4:93:LYS:HD2	48:4:93:LYS:C	1.76	1.10
48:4:396:MET:HE1	48:4:472:LEU:CD1	1.81	1.10
48:4:592:LEU:C	48:4:592:LEU:HD12	1.76	1.10
48:4:829:SER:HB2	48:4:832:SER:H	1.15	1.10
49:S2:386:C:N3	49:S2:387:C:C5	2.20	1.10
49:S2:795:A:N3	49:S2:796:G:C8	2.20	1.10
49:S2:1290:G:N3	81:Sf:146:LEU:HB3	1.66	1.10
1:5:2078:C:C2	1:5:2079:G:C8	2.40	1.09
1:5:3767:C:H5''	49:S2:1849:G:N7	1.64	1.09
3:8:64:U:O2	3:8:65:A:C8	2.05	1.09
46:q:59:THR:O	46:q:61:MET:N	1.85	1.09
46:q:135:THR:CG2	46:q:152:ILE:HD13	1.81	1.09
48:4:24:VAL:CG2	48:4:32:LYS:HE3	1.81	1.09
48:4:581:GLU:CD	48:4:695:GLU:HB2	1.75	1.09
48:4:800:LEU:HG	48:4:808:ALA:HB1	1.32	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:845:LYS:NZ	48:4:846:GLU:H	1.48	1.09
48:4:845:LYS:HE3	48:4:846:GLU:N	1.67	1.09
1:5:1995:G:O4'	14:K:132:ILE:HD11	1.52	1.09
1:5:2079:G:C2	1:5:2080:U:C5	2.40	1.09
1:5:2367:A:N6	1:5:2788:U:H3	1.50	1.09
48:4:78:PHE:O	48:4:79:TYR:HD1	1.34	1.09
48:4:93:LYS:HD2	48:4:93:LYS:O	1.49	1.09
49:S2:436:G:C8	49:S2:471:G:N2	2.20	1.09
49:S2:795:A:C2	49:S2:796:G:N7	2.19	1.09
49:S2:1453:C:C4	49:S2:1455:A:C1'	2.34	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
1:5:2105:A:C2	1:5:2106:G:C8	2.40	1.09
46:q:61:MET:HG2	46:q:82:ILE:HG22	1.23	1.09
46:q:144:THR:CG2	48:4:179:GLN:HE22	1.63	1.09
48:4:74:ALA:O	48:4:75:ILE:HD12	1.52	1.09
48:4:507:VAL:HG21	48:4:554:LEU:HD21	1.20	1.09
48:4:692:LEU:HD11	48:4:734:LEU:HD13	1.26	1.09
48:4:694:GLU:HG3	48:4:844:LEU:CD1	1.82	1.09
49:S2:449:A:C6	49:S2:452:G:C5	2.40	1.09
49:S2:599:A:O4'	49:S2:605:A:C2	2.05	1.09
49:S2:1100:A:C2	49:S2:1101:U:C6	2.39	1.09
1:5:84:A:N6	1:5:98:A:N7	1.99	1.09
1:5:1994:C:C1'	14:K:132:ILE:HG12	1.81	1.09
1:5:4605:A:N6	48:4:801:ARG:HD3	1.53	1.09
48:4:21:ASN:ND2	48:4:469:ILE:HD11	1.66	1.09
48:4:752:PRO:O	48:4:754:GLN:N	1.83	1.09
49:S2:458:A:C6	49:S2:459:C:C6	2.41	1.09
62:SM:85:LEU:HA	62:SM:88:TRP:CH2	1.87	1.09
1:5:88:A:N6	1:5:97:G:N3	2.01	1.09
1:5:1823:G:O3'	1:5:1825:A:P	2.11	1.09
1:5:4096:C:C4	1:5:4097:G:C8	2.41	1.09
14:K:94:LYS:HA	14:K:95:GLN:C	1.68	1.09
14:K:106:PHE:HB2	14:K:110:VAL:HG23	1.13	1.09
48:4:672:LEU:HA	48:4:675:ILE:HG13	1.16	1.09
49:S2:60:A:O2'	49:S2:61:A:H5''	1.52	1.09
49:S2:858:A:C2	49:S2:859:G:N7	2.19	1.09
49:S2:958:G:O2'	49:S2:959:G:O4'	1.69	1.09
1:5:1566:C:H2'	1:5:1567:U:C6	1.88	1.08
1:5:1960:A:N3	46:q:14:PHE:CE1	1.84	1.08
1:5:3629:A:H1'	49:S2:1721:U:O4	1.53	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:31:LYS:O	14:K:34:PRO:HD3	1.34	1.08
14:K:94:LYS:HG2	14:K:96:LYS:HB3	1.35	1.08
48:4:197:SER:OG	48:4:201:GLY:O	1.69	1.08
48:4:555:GLU:O	48:4:559:LYS:HG3	1.53	1.08
48:4:791:ASN:O	48:4:794:PHE:CE1	2.06	1.08
49:S2:469:A:C2	49:S2:470:G:C8	2.40	1.08
1:5:291:U:H2'	1:5:292:G:H2'	1.28	1.08
1:5:1561:G:H2'	1:5:1562:G:H5'	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
46:q:96:THR:CG2	46:q:97:GLU:H	1.65	1.08
48:4:275:LYS:HE3	48:4:275:LYS:C	1.78	1.08
48:4:616:ASP:CG	48:4:621:GLU:HB2	1.78	1.08
49:S2:841:G:C2	49:S2:842:C:C5	2.42	1.08
65:SP:21:ASP:CG	65:SP:21:ASP:OD1	1.96	1.08
10:G:264:LYS:NZ	10:G:265:LEU:CD2	2.15	1.08
11:H:156:ASN:OD1	11:H:156:ASN:C	1.96	1.08
14:K:105:THR:O	14:K:106:PHE:CG	2.06	1.08
14:K:121:LEU:CD1	14:K:129:ILE:CD1	2.31	1.08
46:q:61:MET:CG	46:q:82:ILE:CG2	2.31	1.08
46:q:97:GLU:HB3	46:q:206:ILE:HG13	1.12	1.08
48:4:58:ASP:CG	48:4:69:THR:HA	1.75	1.08
48:4:689:GLU:HB3	48:4:730:TYR:OH	1.51	1.08
48:4:771:PHE:CB	48:4:785:LYS:HB2	1.83	1.08
49:S2:1101:U:O2	49:S2:1102:G:C8	2.07	1.08
1:5:100:C:N4	1:5:101:A:N7	2.01	1.08
1:5:424:U:O2	1:5:425:U:C5	2.05	1.08
1:5:983:C:N3	1:5:984:C:C5	2.22	1.08
1:5:4605:A:N6	48:4:801:ARG:HB2	1.68	1.08
14:K:131:GLU:OE2	14:K:155:ILE:HD12	1.52	1.08
46:q:53:VAL:HG22	46:q:89:VAL:HG22	1.16	1.08
46:q:184:SER:O	46:q:185:PHE:HB2	1.43	1.08
48:4:675:ILE:HG21	48:4:709:LEU:HD12	1.30	1.08
48:4:675:ILE:HG21	48:4:709:LEU:HD11	1.27	1.08
48:4:827:ASN:HD22	48:4:827:ASN:C	1.62	1.08
48:4:829:SER:OG	48:4:833:GLN:N	1.86	1.08
49:S2:1316:C:O2	49:S2:1317:C:C6	2.05	1.08
62:SM:58:GLU:OE1	62:SM:58:GLU:CD	1.96	1.08
1:5:424:U:O2	1:5:425:U:C6	2.07	1.08
1:5:1556:C:O2	1:5:1557:C:C6	2.06	1.08
1:5:2055:G:O6	22:S:158:VAL:HB	1.53	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2347:A:O2'	1:5:2348:G:N7	1.84	1.08
1:5:3767:C:H4'	49:S2:1849:G:O6	1.53	1.08
1:5:3785:A:C2	1:5:4536:C:H1'	1.88	1.08
1:5:4537:C:N3	1:5:4538:G:N7	2.01	1.08
46:q:77:LYS:O	46:q:80:PRO:HD3	1.53	1.08
48:4:73:THR:HG23	48:4:74:ALA:N	1.62	1.08
48:4:689:GLU:O	48:4:730:TYR:CE1	2.06	1.08
49:S2:469:A:C2	49:S2:470:G:H8	1.71	1.08
49:S2:494:C:C2	49:S2:495:U:C5	2.42	1.08
49:S2:1513:C:H2'	49:S2:1514:G:H5'	1.35	1.08
1:5:48:G:H5'	17:N:192:TRP:HE1	1.16	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
1:5:2508: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
14:K:97:ASN:OD1	14:K:98:ILE:HD11	1.51	1.07
46:q:26:LYS:HE2	46:q:94:ASP:O	1.54	1.07
46:q:96:THR:HG22	46:q:97:GLU:N	1.63	1.07
48:4:45:ILE:CG1	48:4:46:ILE:H	1.57	1.07
48:4:518:PRO:HA	73:SX:50:ILE:HD11	1.30	1.07
48:4:744:ILE:HD11	48:4:816:HIS:CG	1.90	1.07
49:S2:1314:U:N3	49:S2:1315:U:H1'	1.68	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	1.89	1.07
1:5:2314:G:N2	1:5:2315:G:N7	2.01	1.07
2:7:43:U:N3	2:7:44:C:C5	2.22	1.07
48:4:60:ARG:HH11	48:4:60:ARG:CG	1.66	1.07
48:4:316:ILE:HG23	48:4:321:ILE:HB	1.34	1.07
48:4:562:GLU:CA	48:4:570:ILE:HD11	1.84	1.07
1:5:2021:G:O3'	46:q:84:GLY:HA2	1.24	1.07
2:7:18:C:C2	2:7:19:C:C5	2.42	1.07
14:K:56:LEU:CG	14:K:91:ASP:OD2	2.02	1.07
14:K:106:PHE:CG	14:K:110:VAL:HG23	1.90	1.07
14:K:106:PHE:CE2	14:K:110:VAL:HG21	1.90	1.07
46:q:182:PRO:HG2	46:q:183:PHE:CD1	1.88	1.07
48:4:113:SER:HA	48:4:499:PHE:HB2	1.08	1.07
1:5:28:C:O2	1:5:29:G:C8	2.06	1.07
1:5:2468:U:N3	1:5:2473:A:N6	2.03	1.07
1:5:4280:A:N6	7:D:29:ASP:HA	1.67	1.07
1:5:4283:G:N1	1:5:4284:C:C4	2.21	1.07
1:5:4413:C:C5'	12:I:157:PHE:HE2	1.66	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:94:LYS:HB3	14:K:96:LYS:CE	1.83	1.07
46:q:99:ARG:CA	46:q:102:LEU:HD22	1.85	1.07
46:q:126:GLN:NE2	46:q:127:ASN:OD1	1.88	1.07
48:4:509:VAL:HG21	48:4:546:ILE:HD12	1.30	1.07
1:5:2095:A:C6	9:F:41:GLN:OE1	2.06	1.07
3:8:10:G:C6	3:8:11:C:C5	2.43	1.07
13:J:91:GLU:OE2	65:SP:12:PHE:HB2	1.54	1.07
14:K:38:SER:HB2	14:K:39:PRO:HD3	1.07	1.07
46:q:45:MET:CE	46:q:48:ARG:HG2	1.85	1.07
48:4:72:SER:OG	48:4:104:ASP:CB	2.01	1.07
48:4:480:VAL:O	48:4:481:LYS:HB3	1.49	1.07
49:S2:994:C:C2	49:S2:995:G:C8	2.42	1.07
1:5:173:C:N3	1:5:174:C:C5	2.23	1.06
14:K:94:LYS:HB3	14:K:96:LYS:HD2	1.18	1.06
1:5:4606:G:C5'	48:4:28:VAL:HG21	1.83	1.06
3:8:96:C:O2	3:8:97:A:C8	2.07	1.06
14:K:117:ARG:HG3	14:K:133:LEU:CD1	1.84	1.06
14:K:131:GLU:HG2	14:K:155:ILE:HD11	1.33	1.06
48:4:340:MET:HE2	48:4:340:MET:HA	1.34	1.06
48:4:752:PRO:O	48:4:754:GLN:HG3	1.54	1.06
49:S2:339:A:C2	49:S2:340:C:N4	2.24	1.06
49:S2:1111:U:N3	49:S2:1112:U:C5	2.23	1.06
14:K:125:LEU:HD13	14:K:163:PRO:CA	1.85	1.06
46:q:12:ASN:C	46:q:16:LYS:HE3	1.79	1.06
49:S2:339:A:C2	49:S2:340:C:C4	2.43	1.06
1:5:271:C:N3	1:5:272:U:C5	2.24	1.06
1:5:1188:C:N3	1:5:1189:G:N7	2.02	1.06
14:K:117:ARG:N	14:K:117:ARG:HE	1.53	1.06
48:4:82:SER:O	48:4:86:LEU:HD13	1.56	1.06
48:4:690:GLY:HA2	48:4:730:TYR:HE1	1.03	1.06
49:S2:121:U:C2	49:S2:122:G:C8	2.42	1.06
49:S2:1063:C:C4'	49:S2:1838:U:O4	2.02	1.06
49:S2:1074:C:C2	49:S2:1075:C:C5	2.42	1.06
49:S2:1594:A:C6	49:S2:1595:U:C5	2.44	1.06
14:K:117:ARG:HE	14:K:117:ARG:CA	1.67	1.06
46:q:133:GLU:O	46:q:152:ILE:CD1	2.04	1.06
48:4:691:ALA:CA	48:4:730:TYR:CG	2.39	1.06
49:S2:1293:A:N3	81:Sf:152:LYS:N	2.02	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
1:5:4229:U:C4	1:5:4230:C:C5	2.44	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:45:ILE:HG12	48:4:46:ILE:H	1.18	1.05
48:4:113:SER:HB2	48:4:499:PHE:HB2	1.36	1.05
48:4:686:ALA:HB2	48:4:726:ARG:HA	1.32	1.05
48:4:691:ALA:HB1	48:4:730:TYR:HB3	1.37	1.05
49:S2:1316:C:C2	49:S2:1317:C:C5	2.44	1.05
1:5:2659:A:N6	1:5:2675:G:O2'	1.89	1.05
1:5:4653:C:C2	1:5:4654:C:C5	2.45	1.05
2:7:59:G:C6	2:7:60:G:N7	2.24	1.05
10:G:261:LEU:HD22	10:G:264:LYS:HE2	1.13	1.05
48:4:206:ASP:O	48:4:212:VAL:HG23	1.56	1.05
48:4:427:VAL:HG12	48:4:427:VAL:O	1.54	1.05
48:4:689:GLU:O	48:4:730:TYR:CZ	2.09	1.05
49:S2:1594:A:C2	49:S2:1595:U:C6	2.43	1.05
1:5:1929:A:N6	1:5:2054:U:H3	1.52	1.05
1:5:3611:A:O2'	58:SI:92:ARG:NH1	1.89	1.05
14:K:56:LEU:HD12	14:K:91:ASP:CG	1.81	1.05
48:4:427:VAL:HG21	48:4:447:ILE:CD1	1.86	1.05
1:5:1998:A:H2	1:5:2019:C:O2'	1.25	1.05
1:5:2260:C:H2'	1:5:2261:G:N7	1.71	1.05
1:5:3739:C:N3	1:5:3740:G:C8	2.24	1.05
14:K:94:LYS:HD3	14:K:96:LYS:HE3	1.23	1.05
14:K:94:LYS:CD	14:K:96:LYS:HE3	1.85	1.05
46:q:99:ARG:HG2	46:q:100:ASP:H	1.14	1.05
48:4:613:LEU:HD23	48:4:613:LEU:N	1.65	1.05
48:4:693:CYS:CA	48:4:839:ARG:NE	2.06	1.05
1:5:1929:A:N1	1:5:2054:U:O4	1.90	1.05
14:K:56:LEU:CB	14:K:91:ASP:OD1	2.05	1.05
14:K:94:LYS:CA	14:K:96:LYS:HD2	1.87	1.05
48:4:4:PHE:CD1	48:4:5:THR:CG2	2.39	1.05
48:4:510:GLU:O	48:4:570:ILE:HG22	1.57	1.05
48:4:571:LYS:CE	48:4:572:LYS:H	1.69	1.05
48:4:628:LEU:HD22	48:4:631:ARG:NH2	1.51	1.05
48:4:670:GLN:O	48:4:673:ASN:OD1	1.73	1.05
48:4:845:LYS:CE	48:4:846:GLU:H	1.69	1.05
49:S2:1292:C:C4	81:Sf:150:PHE:HB2	1.91	1.05
49:S2:1419:C:OP2	69:ST:129:ARG:HA	1.57	1.05
1:5:1444:G:H2'	1:5:1445:U:C6	1.90	1.04
3:8:119:C:C2	3:8:120:G:C8	2.45	1.04
48:4:206:ASP:O	48:4:212:VAL:CG2	2.04	1.04
48:4:275:LYS:HE2	48:4:276:SER:HA	1.36	1.04
48:4:767:ARG:HH21	48:4:792:GLU:CG	1.70	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2417:A:C2	1:5:2418:A:C8	2.45	1.04
1:5:2691:U:O2	1:5:2692:U:C5	2.10	1.04
1:5:3912:U:O2'	1:5:3913:G:C5'	2.05	1.04
1:5:4392:G:O2'	1:5:4395:U:O4	1.76	1.04
14:K:47:ALA:HB2	14:K:72:GLU:CG	1.80	1.04
46:q:12:ASN:O	46:q:16:LYS:HD2	1.57	1.04
48:4:741:MET:CG	48:4:817:TRP:CZ3	2.40	1.04
49:S2:26:U:N3	49:S2:27:A:N7	2.05	1.04
49:S2:797:C:O4'	57:SH:109:ARG:NH1	1.89	1.04
49:S2:1063:C:H4'	49:S2:1838:U:O4	1.56	1.04
49:S2:1249:C:C5	49:S2:1250:A:N7	2.24	1.04
49:S2:1840:U:N3	49:S2:1841:C:C5	2.25	1.04
1:5:2105:A:C2	1:5:2106:G:N7	2.25	1.04
1:5:4284:C:C2	1:5:4285:U:C5	2.45	1.04
14:K:23:GLY:O	14:K:24:ALA:CB	2.05	1.04
48:4:3:ASN:O	48:4:46:ILE:HG13	1.53	1.04
48:4:607:ARG:HG2	48:4:701:ARG:HD3	1.36	1.04
48:4:744:ILE:CD1	48:4:816:HIS:CA	2.35	1.04
1:5:77:U:N3	1:5:335:A:N6	2.06	1.04
1:5:4113:U:H2'	1:5:4114:C:O4'	1.56	1.04
14:K:142:ASN:HB2	14:K:147:HIS:C	1.81	1.04
48:4:756:VAL:HG21	48:4:782:PHE:CG	1.93	1.04
48:4:776:VAL:CG2	48:4:777:ALA:H	1.70	1.04
49:S2:384:U:C5	49:S2:386:C:C5	2.46	1.04
49:S2:1433:C:H2'	49:S2:1434:C:H1'	1.34	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
1:5:2856:C:N3	1:5:2857:A:N7	2.06	1.04
1:5:3910:C:O2	1:5:3911:C:C5	2.11	1.04
3:8:94:G:C8	3:8:94:G:H5'	1.92	1.04
14:K:154:ASP:O	14:K:155:ILE:HB	1.57	1.04
48:4:60:ARG:NH1	48:4:60:ARG:HG2	1.49	1.04
48:4:255:ASP:OD1	48:4:259:LYS:HE3	1.58	1.04
48:4:855:LEU:C	48:4:855:LEU:CD2	2.30	1.04
49:S2:1310:U:O4'	81:Sf:143:LYS:CD	2.05	1.04
49:S2:1534:C:N4	49:S2:1600:G:O6	1.89	1.04
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
1:5:3767:C:C5'	49:S2:1849:G:C5	2.41	1.03
1:5:4276:G:O6	1:5:4277:G:C5	2.11	1.03
14:K:105:THR:O	14:K:106:PHE:CD1	2.11	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:V:134:SER:OG	49:S2:465:A:H2	1.41	1.03
48:4:73:THR:CG2	48:4:74:ALA:H	1.71	1.03
1:5:1556:C:C2	1:5:1557:C:C5	2.47	1.03
1:5:1683:U:O2	1:5:1684:A:H8	1.34	1.03
1:5:4257:A:H2'	1:5:4258:C:C6	1.91	1.03
48:4:284:LYS:HD3	48:4:284:LYS:N	1.70	1.03
48:4:691:ALA:CB	48:4:730:TYR:CG	2.25	1.03
48:4:759:ILE:CD1	48:4:784:VAL:CG2	2.30	1.03
49:S2:1552:G:N7	49:S2:1578:U:O4	1.89	1.03
1:5:1899:G:C2	1:5:1900:C:C6	2.47	1.03
1:5:4983:C:C2	1:5:4984:C:C5	2.47	1.03
13:J:105:PHE:CE1	13:J:132:VAL:HB	1.93	1.03
46:q:99:ARG:HA	46:q:102:LEU:HD22	1.37	1.03
48:4:10:ARG:NH2	48:4:465:PRO:CD	2.21	1.03
48:4:240:GLY:O	48:4:243:GLN:HG3	1.54	1.03
48:4:686:ALA:HB1	48:4:729:LEU:CD1	1.88	1.03
1:5:1632:A:C6	1:5:1634:A:C8	2.47	1.03
1:5:2027:U:O2'	1:5:2028:C:H5'	1.59	1.03
1:5:2858:A:O2'	1:5:2859:G:O5'	1.77	1.03
1:5:3709:U:C1'	49:S2:970:G:H1	1.72	1.03
46:q:148:SER:OG	46:q:153:GLU:CD	2.00	1.03
48:4:693:CYS:CA	48:4:839:ARG:HH21	1.71	1.03
48:4:713:ALA:HA	48:4:716:ARG:HB3	1.39	1.03
49:S2:524:U:N3	49:S2:594:A:C6	2.26	1.03
1:5:471:A:C6	1:5:472:C:C6	2.46	1.03
1:5:1973:G:C6	1:5:1993:C:N4	2.23	1.03
1:5:2109:G:O6	1:5:2122:G:O6	1.74	1.03
14:K:56:LEU:HB3	14:K:91:ASP:CG	1.83	1.03
14:K:123:ARG:HG3	14:K:129:ILE:HD12	1.37	1.03
33:d:25:TYR:OH	33:d:119:THR:HB	1.56	1.03
46:q:61:MET:SD	46:q:82:ILE:CG2	2.46	1.03
48:4:769:HIS:O	48:4:786:ALA:CA	2.06	1.03
48:4:825:PHE:HE2	48:4:849:PRO:CD	1.50	1.03
49:S2:998:A:N7	49:S2:999:G:C1'	2.22	1.03
49:S2:1539:U:C2	49:S2:1540:G:N7	2.24	1.03
1:5:28:C:O2	1:5:29:G:H8	1.36	1.02
1:5:1563:A:N6	49:S2:1028:A:N6	2.07	1.02
1:5:2109:G:C6	1:5:2122:G:O6	2.11	1.02
1:5:3597:G:OP1	21:R:109:TYR:OH	1.77	1.02
14:K:97:ASN:CA	14:K:98:ILE:CG1	2.07	1.02
48:4:4:PHE:HD1	48:4:5:THR:CB	1.72	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:430:MET:HE1	48:4:486:THR:CG2	1.89	1.02
48:4:739:ARG:CA	48:4:824:PRO:HD3	1.87	1.02
48:4:756:VAL:HG22	48:4:782:PHE:HB2	1.37	1.02
1:5:1994:C:H2'	14:K:132:ILE:HG12	1.40	1.02
1:5:2000:G:O2'	1:5:2017:A:N1	1.92	1.02
3:8:133:G:C2	3:8:134:G:C8	2.47	1.02
10:G:264:LYS:CE	10:G:265:LEU:HD22	1.88	1.02
48:4:103:ILE:HG12	48:4:122:THR:HG21	1.06	1.02
48:4:160:MET:CE	48:4:178:PHE:CE2	2.42	1.02
48:4:551:GLU:N	48:4:551:GLU:OE1	1.90	1.02
48:4:686:ALA:HB1	48:4:729:LEU:HD12	1.41	1.02
48:4:752:PRO:HD2	48:4:755:VAL:HG21	1.38	1.02
49:S2:1292:C:P	81:Sf:149:CYS:H	1.82	1.02
49:S2:1310:U:O4'	81:Sf:143:LYS:HD2	1.57	1.02
1:5:1190:C:N3	1:5:1191:C:C5	2.28	1.02
1:5:1245:C:C2	1:5:1246:G:N7	2.26	1.02
1:5:1566:C:H2'	1:5:1567:U:H6	1.17	1.02
1:5:2497:C:C2	1:5:2498:C:C6	2.48	1.02
1:5:2646:C:O2	1:5:2647:A:H8	1.42	1.02
48:4:689:GLU:O	48:4:730:TYR:OH	1.78	1.02
50:SA:176:TRP:CZ3	50:SA:199:PRO:HG3	1.95	1.02
1:5:1724:G:N7	31:b:17:HIS:CE1	2.28	1.02
1:5:3611:A:H4'	58:SI:92:ARG:HH22	1.25	1.02
14:K:22:VAL:HG21	14:K:48:LYS:HB2	1.42	1.02
46:q:109:ALA:O	46:q:181:SER:HB2	0.85	1.02
48:4:686:ALA:HB2	48:4:729:LEU:HD12	1.42	1.02
49:S2:996:A:C6	63:SN:113:PHE:CZ	2.46	1.02
49:S2:998:A:N7	49:S2:999:G:O4'	1.93	1.02
1:5:1392:A:C2	1:5:1393:G:C5	2.48	1.02
1:5:2327:G:C2	1:5:2328:G:C8	2.48	1.02
1:5:3859:G:O4'	19: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
1:5:4284:C:N3	1:5:4285:U:C5	2.28	1.02
14:K:62:LEU:HD11	14:K:73:VAL:CG2	1.90	1.02
46:q:97:GLU:CD	46:q:206:ILE:HG12	1.85	1.02
49:S2:75:G:O2'	49:S2:76:U:H6	1.41	1.02
49:S2:458:A:N6	49:S2:459:C:C5	2.28	1.02
1:5:48:G:O2'	1:5:49:U:OP2	1.78	1.01
1:5:173:C:O2	1:5:174:C:C6	2.13	1.01
1:5:173:C:C2	1:5:174:C:C5	2.46	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1378:C:C3'	1:5:1379:C:H5'	1.90	1.01
1:5:2367:A:H61	1:5:2788:U:H3	1.03	1.01
3:8:118:C:N3	3:8:119:C:C5	2.28	1.01
13:J:119:TYR:CD2	68:SS:108:ARG:HH21	1.04	1.01
13:J:119:TYR:CE1	68:SS:108:ARG:NH2	1.99	1.01
14:K:79:ALA:O	14:K:83:LYS:CG	2.07	1.01
14:K:121:LEU:HD11	14:K:129:ILE:HG21	1.38	1.01
46:q:77:LYS:HG3	46:q:198:ILE:CD1	1.88	1.01
46:q:126:GLN:HE21	46:q:127:ASN:H	1.03	1.01
48:4:609:PHE:HZ	48:4:661:ILE:HD12	0.89	1.01
48:4:613:LEU:CD1	48:4:639:TYR:CB	2.36	1.01
48:4:691:ALA:CB	48:4:854:PHE:CZ	2.43	1.01
49:S2:1294:G:C2	49:S2:1295:A:C8	2.48	1.01
49:S2:1315:U:N3	49:S2:1316:C:C5	2.27	1.01
1:5:1598:C:O2	1:5:1599:A:H8	1.39	1.01
1:5:1899:G:N3	1:5:1900:C:C6	2.29	1.01
1:5:1936:C:N3	1:5:1937:C:C5	2.27	1.01
1:5:4605:A:H62	48:4:801:ARG:CD	1.50	1.01
46:q:53:VAL:CG2	46:q:89:VAL:HG22	1.89	1.01
46:q:66:ARG:CD	46:q:69:LEU:HD22	1.70	1.01
46:q:77:LYS:HG3	46:q:198:ILE:HD11	1.02	1.01
48:4:767:ARG:HH21	48:4:792:GLU:HG3	1.21	1.01
49:S2:337:C:C2	49:S2:338:G:C8	2.48	1.01
49:S2:551:U:C2	49:S2:552:G:N7	2.28	1.01
49:S2:1417:C:N3	49:S2:1419:C:C5	2.28	1.01
1:5:470:A:C5	1:5:471:A:C8	2.47	1.01
1:5:983:C:C2	1:5:984:C:C6	2.48	1.01
1:5:1618:G:C2	1:5:1619:G:C8	2.48	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
3:8:119:C:N3	3:8:120:G:C8	2.28	1.01
46:q:99:ARG:CA	46:q:102:LEU:CD2	2.39	1.01
48:4:759:ILE:HD13	48:4:784:VAL:HG23	1.41	1.01
49:S2:378:U:C2	49:S2:379:C:C6	2.48	1.01
49:S2:387:C:N3	49:S2:388:U:C5	2.28	1.01
1:5:1556:C:C2	1:5:1557:C:C6	2.48	1.01
1:5:5025:C:OP1	58:SI:164:GLU:OE2	1.78	1.01
3:8:130:C:N3	3:8:131:G:C8	2.28	1.01
46:q:168:GLY:N	46:q:171:GLU:OE1	1.93	1.01
48:4:27:HIS:CD2	48:4:28:VAL:H	1.65	1.01
48:4:125:ALA:O	48:4:154:VAL:HG12	1.60	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:402:VAL:HG23	48:4:403:PRO:HD2	1.03	1.01
48:4:823:ASP:OD1	48:4:825:PHE:N	1.93	1.01
49:S2:1293:A:N3	81:Sf:151:ASN:CA	2.24	1.01
49:S2:1538:C:O2	49:S2:1539:U:H6	1.42	1.01
49:S2:1644:C:O2'	49:S2:1645:C:O4'	1.78	1.01
1:5:1267:C:H5''	1:5:2110:C:O2	1.61	1.01
1:5:2078:C:O2	1:5:2079:G:C8	2.12	1.01
1:5:3709:U:N1	49:S2:970:G:N2	2.08	1.01
1:5:4080:C:C2	1:5:4081:G:C8	2.49	1.01
1:5:4745:G:O2'	1:5:4746:C:C6	2.13	1.01
14:K:162:CYS:N	14:K:163:PRO:HD3	1.76	1.01
34:e:35:TRP:C	34:e:35:TRP:CD1	2.31	1.01
46:q:6:ARG:CD	46:q:10:LYS:HE3	1.90	1.01
46:q:61:MET:CG	46:q:82:ILE:HG21	1.87	1.01
48:4:206:ASP:HB3	48:4:207:PRO:HD2	1.39	1.01
48:4:592:LEU:HD22	48:4:603:TYR:CE2	1.96	1.01
48:4:691:ALA:HB1	48:4:854:PHE:HZ	0.86	1.01
49:S2:1291:A:C6	81:Sf:140:TYR:CE2	2.48	1.01
49:S2:1402:A:C5	49:S2:1441:U:O4	2.14	1.01
49:S2:1416:C:C2'	49:S2:1417:C:C6	2.44	1.01
49:S2:1433:C:OP2	49:S2:1434:C:P	2.18	1.01
49:S2:1643:U:O2'	49:S2:1644:C:O5'	1.77	1.01
1:5:1378:C:H3'	1:5:1379:C:H5'	1.05	1.00
1:5:1563:A:H61	49:S2:1028:A:H61	1.02	1.00
1:5:1993:C:H1'	14:K:135:THR:HB	1.03	1.00
1:5:1995:G:H21	46:q:41:GLN:NE2	1.59	1.00
1:5:2079:G:C2	1:5:2080:U:C6	2.49	1.00
1:5:3723:A:C2	1:5:3724:A:N7	2.29	1.00
1:5:4095:G:N2	1:5:4096:C:C4	2.29	1.00
1:5:4233:A:N6	1:5:4290:U:H3	1.58	1.00
1:5:4283:G:N3	1:5:4284:C:C6	2.28	1.00
2:7:42:A:C2	2:7:43:U:C6	2.48	1.00
14:K:22:VAL:CG2	14:K:48:LYS:HB2	1.90	1.00
14:K:61:LYS:HE2	14:K:72:GLU:CG	1.90	1.00
14:K:154:ASP:O	14:K:155:ILE:N	1.83	1.00
48:4:575:PRO:O	48:4:577:VAL:HG23	1.61	1.00
48:4:613:LEU:CD2	48:4:639:TYR:HD1	1.56	1.00
49:S2:1111:U:O2	49:S2:1112:U:C6	2.13	1.00
49:S2:1273:C:C2	49:S2:1506:A:H2	1.78	1.00
49:S2:1512:C:O2	49:S2:1513:C:C5	2.14	1.00
49:S2:1540:G:C2	49:S2:1541:G:C8	2.48	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1566:C:O2'	1:5:1567:U:O4'	1.78	1.00
1:5:3709:U:C1'	49:S2:970:G:N1	2.25	1.00
1:5:4165:C:N3	1:5:4166:G:C8	2.29	1.00
34:e:35:TRP:CZ3	34:e:56:PRO:HD3	1.96	1.00
46:q:96:THR:HG22	46:q:97:GLU:H	0.86	1.00
48:4:160:MET:HE3	48:4:178:PHE:HE2	1.25	1.00
48:4:753:GLU:OE2	48:4:779:THR:HG23	0.83	1.00
49:S2:848:U:C2	49:S2:849:A:N7	2.29	1.00
49:S2:1109:C:C2	49:S2:1110:G:O4'	2.13	1.00
1:5:27:C:H2'	1:5:27:C:O2	1.62	1.00
1:5:1628:C:C2	1:5:1629:G:C8	2.49	1.00
1:5:2127:C:H2'	1:5:2128:G:C8	1.97	1.00
2:7:17:C:N3	2:7:18:C:C5	2.30	1.00
2:7:18:C:N3	2:7:19:C:H5	1.59	1.00
14:K:160:VAL:HA	14:K:163:PRO:HG2	1.04	1.00
46:q:12:ASN:O	46:q:16:LYS:CE	2.09	1.00
48:4:13:MET:HE1	48:4:464:VAL:HG13	1.03	1.00
48:4:73:THR:HG23	48:4:74:ALA:H	0.86	1.00
48:4:402:VAL:CG2	48:4:403:PRO:CD	2.40	1.00
48:4:771:PHE:CB	48:4:785:LYS:CB	2.39	1.00
49:S2:493:A:C8	49:S2:574:A:C8	2.50	1.00
49:S2:1453:C:C5	49:S2:1455:A:H1'	1.96	1.00
1:5:166:C:C2	1:5:167:C:H5	1.78	1.00
1:5:4283:G:N2	1:5:4284:C:C2	2.29	1.00
1:5:5005:G:N7	26:W:51:TRP:CD1	2.29	1.00
2:7:54:A:N3	2:7:55:A:C8	2.30	1.00
1:5:1266:G:H5''	1:5:2112:G:N3	1.75	1.00
14:K:160:VAL:CA	14:K:163:PRO:HG3	1.88	1.00
49:S2:1552:G:O6	49:S2:1578:U:N3	1.95	1.00
1:5:209:U:C2	1:5:233:U:C4	2.49	1.00
1:5:1672:U:O2	1:5:1673:U:C5	2.15	1.00
1:5:2508:U:C2	1:5:2509:C:C5	2.50	1.00
1:5:1358:G:N2	1:5:1359:G:C6	2.29	1.00
1:5:1601:A:C8	1:5:3643:A:C8	2.50	1.00
14:K:35:LEU:HD22	46:q:132:PRO:CD	1.92	1.00
14:K:102:GLY:HA2	14:K:139:VAL:HG12	1.38	1.00
46:q:168:GLY:HA3	46:q:171:GLU:CD	1.85	1.00
48:4:430:MET:CE	48:4:486:THR:HG23	1.90	0.99
76:Sa:77:CYS:SG	84:Sa:201:ZN:ZN	1.50	0.99
1:5:4730:C:O5'	1:5:4731:G:N2	1.94	0.99
1:5:4983:C:O2	1:5:4984:C:C6	2.15	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:80:LEU:HA	14:K:83:LYS:CD	1.92	0.99
48:4:753:GLU:N	48:4:782:PHE:HE1	1.60	0.99
49:S2:506:G:OP1	74:SY:108:LYS:NZ	1.95	0.99
1:5:2428:A:C5	1:5:2789:A:C2	2.50	0.99
1:5:4100:C:N3	1:5:4101:C:C5	2.31	0.99
1:5:4165:C:N3	1:5:4166:G:N7	2.10	0.99
48:4:671:TYR:CD1	48:4:674:GLU:OE1	2.15	0.99
49:S2:42:A:C5	49:S2:426:A:N6	2.30	0.99
49:S2:848:U:N3	49:S2:849:A:C6	2.30	0.99
49:S2:1513:C:C2'	49:S2:1514:G:H5'	1.91	0.99
49:S2:1540:G:N1	49:S2:1541:G:C5	2.30	0.99
1:5:1076:C:O3'	1:5:2114:G:O6	1.81	0.99
1:5:1324:A:O2'	1:5:1326:A:OP1	1.79	0.99
1:5:3912:U:O2'	1:5:3913:G:H5'	1.59	0.99
1:5:4166:G:C2	1:5:4167:G:C8	2.51	0.99
14:K:77:ALA:HB3	14:K:80:LEU:HD12	1.40	0.99
46:q:199:TYR:HB3	46:q:205:ASP:CB	1.92	0.99
71:SV:1:MET:N	71:SV:1:MET:SD	2.30	0.99
1:5:1899:G:N2	1:5:1900:C:C2	2.31	0.99
1:5:2590:G:C2	1:5:2754:G:C2	2.51	0.99
46:q:183:PHE:CD1	46:q:183:PHE:N	2.30	0.99
1:5:4414:A:C2	1:5:4427:G:N2	2.30	0.99
14:K:47:ALA:HB1	14:K:72:GLU:HG2	1.02	0.99
48:4:659:PRO:CG	48:4:698:ARG:NH2	2.25	0.99
1:5:330:G:C2	1:5:331:G:C8	2.50	0.99
1:5:1390:G:N2	1:5:1394:G:C5	2.31	0.99
1:5:3675:G:C2	1:5:3676:G:N7	2.31	0.99
1:5:3709:U:H1'	49:S2:970:G:C6	1.98	0.99
1:5:3767:C:C4'	49:S2:1849:G:O6	2.09	0.99
1:5:4606:G:H5''	48:4:28:VAL:CG2	1.91	0.99
3:8:64:U:N3	3:8:65:A:C6	2.31	0.99
14:K:35:LEU:CD2	46:q:132:PRO:HD3	1.91	0.99
14:K:38:SER:CB	14:K:39:PRO:CD	2.39	0.99
46:q:182:PRO:CG	46:q:183:PHE:CE1	2.45	0.99
1:5:3879:G:C6	1:5:3882:C:C5	2.49	0.99
14:K:22:VAL:HG21	14:K:48:LYS:HE3	1.42	0.99
46:q:97:GLU:OE2	46:q:206:ILE:HG12	1.62	0.99
49:S2:146:G:O2'	49:S2:147:A:H5'	1.62	0.99
1:5:85:G:O2'	1:5:97:G:O6	1.80	0.99
1:5:484:U:N3	1:5:486:C:C6	2.30	0.99
1:5:1485:C:O2	1:5:4349:C:C5	2.15	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2668:G:H2'	1:5:2669:C:H5'	1.45	0.99
1:5:2784:C:O2	1:5:2785:C:C6	2.16	0.99
1:5:4117:U:N3	4:A:40:TYR:CE1	2.31	0.99
2:7:42:A:C6	2:7:43:U:C5	2.51	0.99
7:D:42:ASN:HA	7:D:44:TYR:OH	1.61	0.99
46:q:91:THR:CG2	46:q:99:ARG:NH1	2.25	0.99
48:4:762:VAL:HG13	48:4:766:LYS:HZ3	1.20	0.99
49:S2:923:G:N2	49:S2:1022:U:O4	1.96	0.99
49:S2:1133:A:N1	49:S2:1134:G:N7	2.10	0.99
1:5:3629:A:H1'	49:S2:1721:U:C4	1.97	0.99
48:4:60:ARG:HH11	48:4:60:ARG:HG2	0.86	0.99
48:4:689:GLU:C	48:4:730:TYR:OH	2.04	0.99
1:5:291:U:C2'	1:5:292:G:H2'	1.92	0.98
1:5:1248:C:C2	1:5:1249:C:C5	2.51	0.98
1:5:1629:G:C2	1:5:1631:A:C6	2.51	0.98
1:5:1899:G:N1	1:5:1900:C:C4	2.30	0.98
1:5:2673:G:O4'	1:5:2675:G:H1'	1.63	0.98
1:5:4605:A:N6	48:4:801:ARG:HG2	1.74	0.98
34:e:35:TRP:HE1	34:e:36:ARG:C	1.71	0.98
46:q:189:ILE:HD11	46:q:192:VAL:CG2	1.91	0.98
48:4:45:ILE:HG22	48:4:78:PHE:H	1.26	0.98
48:4:824:PRO:O	48:4:832:SER:HB2	1.61	0.98
1:5:4174:U:N3	1:5:4175:G:N7	2.10	0.98
1:5:4280:A:N6	7:D:29:ASP:CA	2.25	0.98
1:5:4283:G:N2	1:5:4284:C:N1	2.10	0.98
48:4:157:MET:HE2	48:4:214:PHE:CE2	1.97	0.98
49:S2:378:U:N3	49:S2:379:C:C5	2.31	0.98
1:5:1217:G:H2'	1:5:1218:G:H8	1.28	0.98
1:5:1269:G:C8	1:5:2111:G:C6	2.52	0.98
1:5:1840:G:O3'	1:5:1842:G:P	2.21	0.98
48:4:430:MET:CE	48:4:486:THR:CG2	2.41	0.98
48:4:691:ALA:HB3	48:4:730:TYR:HB3	1.40	0.98
49:S2:993:G:C6	49:S2:994:C:C5	2.50	0.98
1:5:293:G:H2'	1:5:297:U:C6	1.97	0.98
3:8:11:C:N3	3:8:12:G:C8	2.30	0.98
46:q:139:GLN:O	48:4:180:ARG:NE	1.93	0.98
48:4:42:LYS:CE	48:4:79:TYR:OH	2.12	0.98
49:S2:998:A:C8	49:S2:999:G:O4'	2.16	0.98
1:5:470:A:C6	1:5:471:A:C8	2.52	0.98
1:5:1248:C:C2	1:5:1249:C:C6	2.51	0.98
1:5:2325:C:N3	1:5:2326:G:N7	2.12	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:29:ILE:CG2	46:q:86:VAL:HG11	1.93	0.98
46:q:133:GLU:O	46:q:152:ILE:HD11	1.62	0.98
48:4:397:TYR:HE1	48:4:496:VAL:HG12	1.25	0.98
48:4:659:PRO:HG3	48:4:698:ARG:CZ	1.92	0.98
49:S2:923:G:N2	49:S2:1022:U:C4	2.31	0.98
49:S2:1415:C:H2'	49:S2:1416:C:O4'	1.63	0.98
3:8:64:U:C2	3:8:65:A:C5	2.50	0.98
14:K:61:LYS:CE	14:K:72:GLU:CA	2.33	0.98
46:q:183:PHE:O	46:q:184:SER:HB3	1.62	0.98
48:4:613:LEU:HD21	48:4:639:TYR:HD1	1.29	0.98
46:q:160:LEU:CD1	46:q:175:LEU:HD21	1.92	0.98
48:4:226:LYS:NZ	48:4:356:ILE:HD12	1.78	0.98
48:4:794:PHE:CD1	48:4:794:PHE:N	2.26	0.98
1:5:2058:G:C2	1:5:2059:C:C6	2.52	0.98
14:K:111:ASN:HA	14:K:114:ARG:HE	1.23	0.98
46:q:139:GLN:HE22	48:4:184:ASN:CA	1.77	0.98
48:4:693:CYS:C	48:4:839:ARG:NH2	2.21	0.98
48:4:825:PHE:O	48:4:826:ASP:C	1.94	0.98
1:5:1899:G:C2	1:5:1900:C:C4	2.51	0.98
1:5:3717:A:O2'	1:5:3718:A:O5'	1.81	0.98
1:5:4099:G:O2'	51:SB:224:GLU:CB	2.12	0.98
48:4:198:GLY:CA	48:4:201:GLY:CA	2.40	0.98
48:4:667:LYS:HB2	48:4:667:LYS:NZ	1.74	0.98
49:S2:524:U:C4	49:S2:594:A:N6	2.32	0.98
49:S2:1095:U:N3	49:S2:1149:A:N6	2.12	0.98
49:S2:1249:C:C5	49:S2:1250:A:C8	2.52	0.98
1:5:1340:C:N3	1:5:1341:U:C5	2.32	0.98
1:5:4174:U:O2	1:5:4175:G:C8	2.17	0.98
1:5:4982:A:C6	1:5:4983:C:C5	2.52	0.98
3:8:94:G:HO2'	3:8:95:A:H8	1.03	0.98
14:K:61:LYS:HE2	14:K:72:GLU:CB	1.94	0.98
46:q:134:LYS:HE2	46:q:137:PHE:HE1	1.29	0.98
48:4:79:TYR:CE2	48:4:351:LEU:HD12	1.98	0.98
1:5:2743:A:N3	1:5:2744:A:N7	2.11	0.97
14:K:111:ASN:HA	14:K:114:ARG:NE	1.78	0.97
16:M:33:GLN:HA	16:M:33:GLN:NE2	1.77	0.97
49:S2:1315:U:C4	49:S2:1316:C:C6	2.53	0.97
26:W:50:ASN:HB3	26:W:55:TYR:CE2	1.98	0.97
46:q:75:LEU:HD22	46:q:78:LEU:CD1	1.95	0.97
46:q:178:LEU:O	46:q:179:ASN:HB2	1.63	0.97
48:4:78:PHE:O	48:4:79:TYR:CD1	2.16	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:693:CYS:HA	48:4:839:ARG:NH2	1.78	0.97
48:4:759:ILE:HD13	48:4:784:VAL:HG21	1.40	0.97
1:5:1074:G:C2	1:5:1238:A:C2	2.52	0.97
1:5:2087:C:C5	20:Q:37:ARG:NH1	2.31	0.97
1:5:4167:G:C2	1:5:4168:G:C8	2.51	0.97
1:5:4223:C:H4'	12:I:119:PHE:HE2	1.29	0.97
48:4:776:VAL:HG22	48:4:777:ALA:H	0.83	0.97
14:K:116:MET:O	14:K:118:HIS:N	1.98	0.97
48:4:762:VAL:HG13	48:4:766:LYS:HZ2	1.27	0.97
1:5:2437:C:H5''	1:5:2782:U:O4	1.63	0.97
1:5:3709:U:N1	49:S2:970:G:N1	2.12	0.97
3:8:64:U:O2	3:8:65:A:N7	1.96	0.97
14:K:102:GLY:CA	14:K:139:VAL:CA	2.37	0.97
49:S2:620:G:N2	49:S2:620:G:OP1	1.97	0.97
1:5:1979:A:OP1	14:K:99:LYS:CG	2.11	0.97
1:5:4283:G:N2	1:5:4284:C:C6	2.31	0.97
14:K:23:GLY:O	14:K:24:ALA:HB3	1.62	0.97
14:K:154:ASP:O	14:K:155:ILE:CB	2.12	0.97
14:K:159:ALA:C	14:K:163:PRO:HG3	1.90	0.97
46:q:101:MET:HE2	46:q:206:ILE:HD13	1.46	0.97
48:4:253:VAL:HG12	48:4:257:MET:CE	1.95	0.97
48:4:667:LYS:HZ3	48:4:667:LYS:CB	1.78	0.97
49:S2:636:C:N3	49:S2:637:U:C5	2.31	0.97
49:S2:1232:U:O2	49:S2:1233:G:C8	2.18	0.97
1:5:3702:A:N1	1:5:3703:G:N7	2.10	0.97
1:5:3731:C:N3	1:5:3732:A:N7	2.13	0.97
3:8:74:U:C4	28:Y:74:TYR:CE1	2.53	0.97
48:4:58:ASP:C	48:4:63:GLU:OE1	2.08	0.97
48:4:769:HIS:O	48:4:786:ALA:HB2	1.62	0.97
48:4:770:VAL:CG1	48:4:784:VAL:HG13	1.94	0.97
1:5:375:G:OP2	39:j:52:LYS:NZ	1.98	0.97
1:5:1973:G:N2	1:5:1993:C:N3	2.12	0.97
1:5:3709:U:N1	49:S2:970:G:C2	2.30	0.97
1:5:3721:U:O2	1:5:3722:G:C8	2.18	0.97
1:5:3740:G:C6	1:5:3741:C:C6	2.52	0.97
48:4:45:ILE:CG1	48:4:46:ILE:N	2.20	0.97
48:4:686:ALA:CB	48:4:726:ARG:HA	1.94	0.97
49:S2:797:C:C2	57:SH:109:ARG:NH2	2.33	0.97
49:S2:1292:C:O5'	81:Sf:149:CYS:N	1.96	0.97
49:S2:1857:G:N7	64:SO:146:ARG:NH2	2.12	0.97
1:5:1993:C:H1'	14:K:135:THR:CB	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4608:G:OP1	48:4:66:ARG:NH2	1.98	0.97
16:M:7:VAL:HB	22:S:152:PHE:HB2	1.44	0.97
46:q:39:GLN:CD	46:q:107:VAL:CG1	2.36	0.97
48:4:121:VAL:HG23	48:4:122:THR:HG23	1.46	0.97
48:4:189:ILE:CG2	48:4:203:ILE:HG13	1.95	0.97
1:5:4481:U:C2	1:5:4482:U:C5	2.52	0.97
48:4:72:SER:OG	48:4:104:ASP:HB3	1.64	0.97
48:4:804:THR:HG21	48:4:808:ALA:HB2	1.45	0.97
48:4:855:LEU:CD2	48:4:856:ASP:N	2.27	0.97
49:S2:99:A:C2	49:S2:100:U:C6	2.53	0.97
49:S2:120:U:C4	49:S2:121:U:C5	2.53	0.97
1:5:2658:G:C2	1:5:2675:G:C2	2.53	0.96
1:5:2743:A:C2	1:5:2744:A:C6	2.53	0.96
14:K:131:GLU:CG	14:K:155:ILE:CD1	2.42	0.96
48:4:165:LEU:HD11	48:4:305:MET:HE2	1.46	0.96
48:4:751:CYS:O	48:4:781:MET:CA	2.12	0.96
49:S2:1545:A:C5	49:S2:1588:A:C6	2.52	0.96
1:5:483:G:C2	1:5:484:U:C5	2.53	0.96
1:5:977:C:N3	1:5:978:G:C8	2.26	0.96
1:5:1269:G:C6	1:5:2111:G:C2	2.53	0.96
1:5:3694:U:N3	1:5:3695:U:C5	2.33	0.96
46:q:91:THR:HG22	46:q:99:ARG:HH22	1.27	0.96
48:4:56:PHE:HE1	48:4:455:GLY:HA2	1.23	0.96
48:4:751:CYS:HB2	48:4:755:VAL:CG2	1.95	0.96
49:S2:1409:A:C2	49:S2:1410:C:C6	2.53	0.96
1:5:27:C:O2	1:5:28:C:H6	1.48	0.96
1:5:1269:G:C5	1:5:2111:G:C2	2.52	0.96
1:5:1899:G:C8	1:5:2278:G:C2	2.52	0.96
3:8:74:U:O4	28:Y:74:TYR:CE1	2.17	0.96
9:F:149:LEU:HB2	9:F:197:TYR:OH	1.64	0.96
46:q:47:LEU:HD21	46:q:103:ARG:HG3	0.99	0.96
49:S2:830:A:N1	49:S2:844:U:O4	1.96	0.96
1:5:1078:A:H2	1:5:1079:C:H41	1.01	0.96
1:5:2099:G:C2	1:5:2100:A:C8	2.53	0.96
1:5:3702:A:C6	1:5:3703:G:N7	2.33	0.96
1:5:4099:G:O2'	51:SB:224:GLU:HB3	1.65	0.96
1:5:4518:A:C8	5:B:257:TRP:CZ2	2.53	0.96
3:8:85:U:H2'	3:8:87:G:C8	2.00	0.96
10:G:264:LYS:HZ2	10:G:265:LEU:HD22	1.30	0.96
46:q:127:ASN:CB	46:q:153:GLU:OE2	2.13	0.96
48:4:60:ARG:C	48:4:60:ARG:CD	2.29	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:756:VAL:CG2	48:4:782:PHE:CG	2.48	0.96
49:S2:56:G:C6	49:S2:90:G:C2	2.52	0.96
49:S2:1284:A:O2'	62:SM:106:CYS:CA	2.13	0.96
49:S2:1308:U:H2'	49:S2:1309:C:H6	1.25	0.96
1:5:957:G:O5'	1:5:1284:G:N2	1.98	0.96
1:5:1672:U:O2	1:5:1673:U:C6	2.19	0.96
1:5:2021:G:O3'	46:q:84:GLY:CA	2.13	0.96
1:5:2726:G:C2	1:5:2727:C:C4	2.54	0.96
1:5:2832:A:H2'	1:5:2833:A:H5''	1.44	0.96
1:5:4966:A:H2'	1:5:4967:A:O4'	1.65	0.96
14:K:116:MET:HB2	14:K:117:ARG:HH21	1.28	0.96
46:q:134:LYS:HE2	46:q:137:PHE:CE1	1.95	0.96
49:S2:1051:G:C2	49:S2:1052:A:C8	2.52	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
1:5:2279:A:C2	1:5:2280:G:C5	2.54	0.96
1:5:2532:C:O2	1:5:2533:C:C6	2.18	0.96
34:e:35:TRP:CE3	34:e:56:PRO:HD3	2.01	0.96
46:q:134:LYS:HE3	46:q:137:PHE:CZ	1.99	0.96
48:4:162:ARG:O	48:4:166:GLU:HG3	1.66	0.96
48:4:804:THR:OG1	48:4:808:ALA:CB	2.12	0.96
1:5:1724:G:N7	31:b:17:HIS:CG	2.33	0.96
1:5:1983:A:C8	1:5:1987:C:OP2	2.19	0.96
1:5:3767:C:H5''	49:S2:1849:G:C5	2.01	0.96
14:K:131:GLU:HG2	14:K:155:ILE:CD1	1.94	0.96
49:S2:1132:C:C4	49:S2:1133:A:C8	2.54	0.96
49:S2:1541:G:C2	49:S2:1542:C:C5	2.54	0.96
1:5:970:G:O6	1:5:2256:C:N4	1.97	0.96
1:5:2453:A:C6	1:5:2454:U:C5	2.53	0.96
3:8:132:G:C2	3:8:133:G:C8	2.52	0.96
49:S2:77:A:O2'	56:SG:175:LYS:HA	1.65	0.96
49:S2:349:A:C4'	58:SI:27:TYR:OH	2.13	0.96
49:S2:1314:U:H3	49:S2:1315:U:H1'	1.25	0.96
1:5:1280:C:C2	1:5:1282:G:N7	2.34	0.96
14:K:56:LEU:CB	14:K:91:ASP:CG	2.38	0.96
14:K:117:ARG:CG	14:K:133:LEU:CD1	2.43	0.96
14:K:121:LEU:HD13	14:K:129:ILE:HG21	1.05	0.96
48:4:585:GLU:CD	48:4:737:GLN:HE22	1.71	0.96
49:S2:648:A:C2	49:S2:649:U:C6	2.54	0.96
49:S2:862:A:C2	49:S2:863:U:C6	2.54	0.96
49:S2:974:C:C2	49:S2:975:G:C8	2.53	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1217:G:H2'	1:5:1218:G:C8	2.01	0.96
49:S2:26:U:C4	49:S2:27:A:N7	2.34	0.96
49:S2:339:A:H2'	49:S2:340:C:C5	2.00	0.96
49:S2:793:G:C5	49:S2:794:A:C8	2.54	0.96
1:5:486:C:C2	1:5:487:G:C8	2.53	0.95
1:5:2857:A:O2'	1:5:2858:A:O5'	1.82	0.95
1:5:3629:A:O2'	49:S2:1721:U:N3	1.98	0.95
1:5:3905:A:C2	1:5:4449:A:N6	2.34	0.95
17:N:30:TYR:CE1	17:N:63:ARG:HD2	2.01	0.95
48:4:791:ASN:C	48:4:794:PHE:HE1	1.74	0.95
49:S2:75:G:H21	49:S2:77:A:P	1.89	0.95
49:S2:119:U:N3	49:S2:120:U:C5	2.34	0.95
49:S2:217:A:N3	49:S2:309:G:C6	2.34	0.95
1:5:92:C:OP2	1:5:4341:C:O2'	1.84	0.95
1:5:472:C:C2	1:5:473:C:C6	2.53	0.95
1:5:1561:G:C2'	1:5:1562:G:H5'	1.93	0.95
1:5:4215:C:C2	1:5:4216:G:C8	2.53	0.95
1:5:4414:A:N1	1:5:4427:G:C2	2.34	0.95
49:S2:42:A:N1	49:S2:43:U:H5	1.63	0.95
3:8:11:C:C2	3:8:12:G:C8	2.54	0.95
14:K:102:GLY:HA2	14:K:139:VAL:CB	1.95	0.95
46:q:97:GLU:CG	46:q:206:ILE:HG12	1.96	0.95
49:S2:588:G:N3	49:S2:589:G:N2	2.14	0.95
49:S2:908:A:C2	49:S2:909:G:N7	2.35	0.95
49:S2:909:G:C2	49:S2:910:G:C8	2.54	0.95
49:S2:1111:U:N3	49:S2:1112:U:H5	1.62	0.95
49:S2:1408:U:N3	49:S2:1439:A:H2	1.64	0.95
49:S2:1609:C:O2	49:S2:1610:G:C8	2.19	0.95
1:5:977:C:O2	1:5:978:G:C8	2.17	0.95
1:5:4080:C:O2	1:5:4081:G:C8	2.20	0.95
1:5:4258:C:C2	1:5:4259:C:C5	2.53	0.95
46:q:127:ASN:CB	46:q:153:GLU:CG	2.39	0.95
48:4:430:MET:HE1	48:4:486:THR:HG21	1.46	0.95
48:4:540:GLU:HA	48:4:540:GLU:OE1	1.62	0.95
48:4:588:ASN:OD1	48:4:589:VAL:N	1.98	0.95
48:4:693:CYS:CA	48:4:839:ARG:NH2	2.29	0.95
48:4:742:GLU:OE2	48:4:791:ASN:CG	2.08	0.95
48:4:745:TYR:CG	48:4:813:VAL:O	2.20	0.95
1:5:1340:C:C2	1:5:1341:U:C6	2.55	0.95
1:5:1979:A:OP1	14:K:99:LYS:HG3	1.63	0.95
1:5:2743:A:C2	1:5:2744:A:N7	2.34	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4285:U:C2	1:5:4286:C:C5	2.54	0.95
1:5:4999:G:C2	1:5:5000:G:C8	2.55	0.95
10:G:261:LEU:HD22	10:G:264:LYS:CE	1.86	0.95
48:4:427:VAL:HG13	48:4:485:ILE:HG23	1.46	0.95
1:5:1994:C:H2'	14:K:132:ILE:CG1	1.91	0.95
1:5:3726:A:O2'	1:5:3727:A:C8	2.19	0.95
1:5:4369:A:C2	1:5:4370:G:C8	2.55	0.95
1:5:4563:U:C2	1:5:4564:A:N7	2.35	0.95
48:4:21:ASN:ND2	48:4:469:ILE:CD1	2.29	0.95
48:4:225:LEU:HD21	48:4:257:MET:O	1.63	0.95
49:S2:1398:G:C2	49:S2:1399:C:C5	2.54	0.95
49:S2:1430:C:N3	49:S2:1431:G:C8	2.35	0.95
49:S2:1540:G:C6	49:S2:1541:G:N7	2.35	0.95
1:5:4518:A:N7	5:B:257:TRP:CZ2	2.33	0.95
3:8:119:C:O2	3:8:120:G:C8	2.19	0.95
22:S:45:TRP:CZ3	22:S:56:LYS:HA	2.01	0.95
46:q:53:VAL:HG22	46:q:89:VAL:HG21	1.47	0.95
48:4:420:LEU:N	48:4:420:LEU:CD2	2.29	0.95
48:4:692:LEU:HD22	48:4:734:LEU:HD21	1.48	0.95
1:5:969:C:O2'	1:5:970:G:N3	1.98	0.95
1:5:1936:C:C6	2:7:84:U:C6	2.54	0.95
1:5:1996:C:O2'	46:q:41:GLN:HG2	1.66	0.95
1:5:2089:G:C4	1:5:2262:G:H2'	2.02	0.95
1:5:2854:G:O6	1:5:2856:C:C6	2.19	0.95
1:5:3629:A:C1'	49:S2:1721:U:N3	2.29	0.95
46:q:182:PRO:CG	46:q:183:PHE:HE1	1.78	0.95
48:4:75:ILE:HG22	48:4:77:LEU:HD12	1.47	0.95
48:4:753:GLU:CB	48:4:782:PHE:HE1	1.63	0.95
49:S2:121:U:N3	49:S2:122:G:N7	2.13	0.95
49:S2:1591:C:C4	49:S2:1592:C:C5	2.54	0.95
1:5:2127:C:H2'	1:5:2128:G:N7	1.82	0.95
5:B:118:PHE:HB2	5:B:119:TYR:CE1	2.02	0.95
8:E:184:ARG:NH2	8:E:210:ASP:OD1	2.00	0.95
14:K:62:LEU:HD11	14:K:73:VAL:CB	1.96	0.95
14:K:97:ASN:HA	14:K:98:ILE:HG12	1.47	0.95
48:4:6:VAL:O	48:4:7:ASP:C	2.04	0.95
49:S2:1101:U:O2	49:S2:1102:G:N7	1.99	0.95
1:5:1198:G:H2'	1:5:1199:G:C8	2.02	0.95
1:5:1427:A:H3'	1:5:1428:U:H6	1.30	0.95
1:5:2497:C:C2	1:5:2498:C:C5	2.55	0.95
14:K:95:GLN:O	14:K:96:LYS:CD	2.13	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:4:PHE:HD1	48:4:5:THR:CG2	1.79	0.95
48:4:60:ARG:HD2	48:4:60:ARG:O	1.66	0.95
48:4:759:ILE:HG21	48:4:784:VAL:HG21	1.49	0.95
1:5:208:A:C1'	1:5:232:G:H21	1.78	0.94
1:5:983:C:C2	1:5:984:C:C5	2.55	0.94
1:5:4379:A:C8	44:o:54:PRO:HA	2.02	0.94
14:K:102:GLY:CA	14:K:139:VAL:HG12	1.89	0.94
14:K:142:ASN:CB	14:K:147:HIS:C	2.37	0.94
46:q:124:PRO:HA	46:q:157:ASP:OD2	1.67	0.94
48:4:672:LEU:O	48:4:676:LYS:N	1.99	0.94
48:4:692:LEU:HD13	48:4:734:LEU:HD11	0.97	0.94
48:4:754:GLN:OE1	48:4:755:VAL:HG23	1.64	0.94
48:4:845:LYS:CE	48:4:846:GLU:HG2	1.97	0.94
49:S2:340:C:C2	49:S2:341:C:C5	2.54	0.94
49:S2:1250:A:C2	49:S2:1339:U:O2'	2.19	0.94
49:S2:1412:C:H2'	49:S2:1413:G:C8	2.02	0.94
49:S2:1593:C:O2'	69:ST:12:GLN:OE1	1.84	0.94
1:5:514:U:H5	1:5:515:C:O4'	1.48	0.94
1:5:909:A:C2	1:5:910:G:C8	2.55	0.94
1:5:1217:G:C2'	1:5:1218:G:H8	1.80	0.94
1:5:1476:C:N3	1:5:1477:C:C5	2.35	0.94
1:5:2646:C:O2	1:5:2647:A:C8	2.19	0.94
1:5:2851:G:C5	1:5:2852:U:C6	2.54	0.94
1:5:3741:C:C2	1:5:3742:G:C8	2.55	0.94
1:5:4414:A:C2	1:5:4427:G:C2	2.55	0.94
1:5:4729:A:H4'	1:5:4965:U:O2'	1.67	0.94
3:8:11:C:O2	3:8:12:G:H8	1.49	0.94
48:4:543:GLU:CD	48:4:576:VAL:HB	1.91	0.94
48:4:613:LEU:CD2	48:4:613:LEU:N	2.30	0.94
48:4:659:PRO:CG	48:4:698:ARG:CZ	2.44	0.94
49:S2:1109:C:N3	49:S2:1110:G:O4'	2.00	0.94
49:S2:1545:A:C6	49:S2:1588:A:C6	2.54	0.94
49:S2:1793:A:C2	49:S2:1794:C:C5	2.55	0.94
1:5:484:U:C2	1:5:486:C:C6	2.54	0.94
1:5:917:A:C6	1:5:919:C:C4	2.55	0.94
1:5:1390:G:C2	1:5:1394:G:C6	2.55	0.94
1:5:1984:A:N6	1:5:2011:C:O2'	1.99	0.94
1:5:3737:A:H2'	1:5:3738:G:O4'	1.68	0.94
1:5:3790:U:N3	1:5:3792:G:O4'	2.00	0.94
46:q:18:ILE:HG13	46:q:66:ARG:CD	1.97	0.94
49:S2:42:A:N1	49:S2:43:U:C5	2.35	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:42:A:N6	1:5:4379:A:C2	2.36	0.94
1:5:4194:U:O2'	1:5:4221:C:N4	2.00	0.94
28:Y:15:ARG:HH12	28:Y:19:PHE:HE2	1.09	0.94
48:4:498:LYS:C	48:4:500:SER:H	1.68	0.94
48:4:571:LYS:HE2	48:4:572:LYS:H	1.13	0.94
49:S2:378:U:C4	49:S2:379:C:C5	2.56	0.94
49:S2:1053:C:N3	49:S2:1054:G:N7	2.14	0.94
49:S2:1095:U:O4	49:S2:1149:A:N1	2.00	0.94
1:5:471:A:C5	1:5:472:C:C6	2.55	0.94
1:5:1238:A:O2'	1:5:1239:C:O5'	1.83	0.94
1:5:2080:U:O2	1:5:2081:C:C6	2.21	0.94
1:5:4098:A:C2	1:5:4099:G:C8	2.55	0.94
14:K:56:LEU:CB	14:K:91:ASP:OD2	2.16	0.94
48:4:240:GLY:O	48:4:243:GLN:CG	2.15	0.94
48:4:420:LEU:HD23	48:4:420:LEU:C	1.91	0.94
49:S2:795:A:N3	49:S2:796:G:N7	2.15	0.94
1:5:246:G:C2	1:5:247:G:C8	2.56	0.94
1:5:1358:G:O2'	1:5:1359:G:O4'	1.84	0.94
1:5:2504:C:O2	1:5:2505:C:C5	2.21	0.94
1:5:4724:A:HO2'	5:B:104:THR:HG1	1.09	0.94
14:K:22:VAL:HG23	14:K:48:LYS:HE2	1.46	0.94
46:q:66:ARG:HD2	46:q:69:LEU:HD21	1.12	0.94
46:q:167:VAL:HG21	46:q:183:PHE:HE2	1.29	0.94
49:S2:444:G:N2	49:S2:446:G:H8	1.64	0.94
49:S2:641:A:H2'	49:S2:642:U:O4'	1.68	0.94
49:S2:1266:C:O2	49:S2:1267:C:C5	2.20	0.94
1:5:2304:U:O2	1:5:2332:A:N6	2.00	0.94
1:5:2604:C:O2	1:5:2605:G:H8	1.51	0.94
1:5:4985:U:H4'	5:B:175:GLN:OE1	1.67	0.94
48:4:271:GLY:O	48:4:272:LYS:HD3	1.68	0.94
48:4:694:GLU:HG3	48:4:844:LEU:HD11	1.47	0.94
49:S2:428:U:H5	59:SJ:7:TRP:CZ2	1.86	0.94
49:S2:458:A:C6	49:S2:459:C:C5	2.55	0.94
49:S2:1552:G:C6	49:S2:1578:U:N3	2.35	0.94
1:5:43:U:C5	1:5:44:A:C8	2.55	0.94
1:5:100:C:C4	1:5:101:A:C8	2.52	0.94
1:5:120:A:H1'	1:5:121:A:C2	2.02	0.94
1:5:983:C:O2	1:5:984:C:H6	1.48	0.94
1:5:1245:C:C6	1:5:1269:G:C6	2.55	0.94
1:5:1965:G:H2'	1:5:1966:C:C6	2.02	0.94
1:5:2326:G:N1	1:5:2327:G:N7	2.16	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2843:U:C2	1:5:2844:A:C8	2.56	0.94
1:5:2859:G:N2	1:5:3837:C:O2	2.01	0.94
1:5:3907:G:N9	1:5:4449:A:HI'	1.82	0.94
1:5:4725:C:O2	1:5:4726:G:H8	1.45	0.94
1:5:4744:A:C2	1:5:4745:G:C5	2.55	0.94
1:5:4983:C:N3	1:5:4984:C:C5	2.36	0.94
10:G:261:LEU:HD23	10:G:264:LYS:HE2	1.44	0.94
14:K:102:GLY:CA	14:K:139:VAL:HG13	1.89	0.94
14:K:137:GLN:OE1	14:K:148:PRO:CG	2.16	0.94
39:j:22:CYS:SG	84:j:101:ZN:ZN	1.54	0.94
48:4:448:GLN:HA	48:4:448:GLN:NE2	1.73	0.94
48:4:743:PRO:CB	48:4:744:ILE:HB	1.97	0.94
48:4:745:TYR:HA	48:4:815:ASP:CB	1.97	0.94
49:S2:992:A:N7	76:Sa:15:ARG:NH1	2.14	0.94
49:S2:1293:A:N9	81:Sf:150:PHE:HB3	1.83	0.94
49:S2:1402:A:C6	49:S2:1441:U:C4	2.55	0.94
1:5:975:C:OP1	9:F:49:ARG:NH1	2.01	0.94
14:K:21:GLU:OE2	14:K:21:GLU:HA	1.67	0.94
48:4:42:LYS:CG	48:4:79:TYR:HH	1.73	0.94
48:4:759:ILE:HD11	48:4:784:VAL:HB	0.94	0.94
49:S2:43:U:C2	49:S2:484:A:H2	1.85	0.94
49:S2:551:U:C2	49:S2:552:G:C8	2.56	0.94
1:5:2736:G:C2	1:5:2737:C:C5	2.56	0.94
1:5:4988:U:H4'	1:5:4989:U:O2	1.67	0.94
46:q:12:ASN:O	46:q:16:LYS:CD	2.14	0.94
46:q:47:LEU:CD2	46:q:103:ARG:CG	2.36	0.94
46:q:117:ALA:HB1	46:q:118:PRO:HA	1.50	0.94
48:4:659:PRO:HG3	48:4:698:ARG:NH2	1.83	0.94
48:4:745:TYR:H	48:4:815:ASP:HB3	1.32	0.94
48:4:845:LYS:NZ	48:4:846:GLU:CG	2.30	0.94
49:S2:848:U:C2	49:S2:849:A:C5	2.55	0.94
1:5:1635:C:H2'	1:5:1636:U:H5'	1.46	0.93
1:5:2735:G:C2	1:5:2736:G:C8	2.57	0.93
1:5:4165:C:C2	1:5:4166:G:C8	2.55	0.93
3:8:80:A:H8	3:8:81:C:HO2'	1.13	0.93
49:S2:1310:U:C1'	81:Sf:143:LYS:HD2	1.98	0.93
49:S2:1402:A:C6	49:S2:1441:U:N3	2.35	0.93
1:5:208:A:HI'	1:5:232:G:N2	1.83	0.93
1:5:1438:U:O2	1:5:2099:G:O6	1.86	0.93
1:5:1667:G:N2	1:5:2283:G:O6	2.01	0.93
1:5:4324:A:C2	1:5:4325:A:C5	2.57	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4601:U:C4	1:5:4609:G:N2	2.36	0.93
14:K:121:LEU:CD1	14:K:129:ILE:CG2	2.24	0.93
14:K:159:ALA:O	14:K:163:PRO:HG3	1.68	0.93
46:q:26:LYS:CE	46:q:94:ASP:O	2.16	0.93
49:S2:384:U:C5	49:S2:386:C:C6	2.57	0.93
1:5:5044:A:C2'	1:5:5045:G:H5'	1.98	0.93
48:4:543:GLU:OE2	48:4:576:VAL:HG23	0.76	0.93
49:S2:1592:C:C4	49:S2:1593:C:C5	2.56	0.93
1:5:1247:U:C2	1:5:1248:C:C6	2.55	0.93
1:5:2509:C:O2'	1:5:2510:G:O5'	1.85	0.93
1:5:4563:U:N3	1:5:4564:A:C6	2.35	0.93
14:K:141:CYS:C	14:K:148:PRO:HD3	1.93	0.93
14:K:160:VAL:O	14:K:163:PRO:CG	2.12	0.93
46:q:35:VAL:HG21	46:q:40:MET:SD	2.09	0.93
48:4:113:SER:CB	48:4:533:MET:CB	2.22	0.93
48:4:769:HIS:O	48:4:786:ALA:HB1	1.67	0.93
49:S2:792:C:N3	49:S2:793:G:C8	2.36	0.93
49:S2:1017:U:N3	49:S2:1018:U:C5	2.37	0.93
1:5:1217:G:N2	1:5:1218:G:O6	2.01	0.93
1:5:4097:G:C2	1:5:4098:A:C8	2.57	0.93
1:5:5005:G:O6	26:W:51:TRP:CB	2.17	0.93
14:K:31:LYS:C	14:K:34:PRO:HD3	1.94	0.93
49:S2:989:C:N3	49:S2:1001:A:N1	2.16	0.93
49:S2:1248:U:H2'	49:S2:1249:C:O4'	1.66	0.93
1:5:747:A:H2'	1:5:749:G:C8	2.04	0.93
1:5:2604:C:N3	1:5:2605:G:N7	2.16	0.93
1:5:4080:C:N3	1:5:4081:G:C8	2.35	0.93
1:5:4257:A:H2'	1:5:4258:C:H6	1.32	0.93
1:5:4697:U:H4'	42:m:104:HIS:CD2	2.03	0.93
1:5:4745:G:HO2'	1:5:4746:C:H6	1.16	0.93
14:K:20:GLY:HA3	14:K:92:ARG:HH22	1.31	0.93
14:K:31:LYS:O	14:K:34:PRO:CG	2.16	0.93
48:4:4:PHE:CD1	48:4:5:THR:CB	2.52	0.93
49:S2:333:G:N7	56:SG:190:ARG:NH1	2.15	0.93
49:S2:993:G:C2	49:S2:994:C:C6	2.56	0.93
1:5:1408:G:O2'	1:5:1411:C:N4	2.02	0.93
1:5:1671:U:N3	1:5:1672:U:H5	1.66	0.93
1:5:2851:G:H1'	1:5:3840:U:O2	1.67	0.93
48:4:40:VAL:O	48:4:43:ALA:HB2	1.66	0.93
49:S2:963:A:H2'	49:S2:964:A:C8	2.03	0.93
49:S2:1050:A:N7	49:S2:1051:G:C8	2.37	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1290:G:H3'	81:Sf:146:LEU:HG	1.50	0.93
49:S2:1433:C:H2'	49:S2:1434:C:O4'	1.67	0.93
1:5:173:C:C2	1:5:174:C:C6	2.57	0.93
1:5:3617:G:O2'	1:5:3620:G:N7	2.00	0.93
46:q:167:VAL:HG21	46:q:183:PHE:CE2	2.02	0.93
48:4:27:HIS:CD2	48:4:28:VAL:HG22	2.04	0.93
48:4:579:TYR:HA	48:4:817:TRP:HH2	1.30	0.93
48:4:845:LYS:HZ1	48:4:846:GLU:H	1.03	0.93
1:5:1981:G:O2'	1:5:1982:G:O4'	1.85	0.93
1:5:3731:C:C2	1:5:3732:A:C8	2.57	0.93
1:5:4883:C:O2'	1:5:4884:G:OP2	1.87	0.93
1:5:969:C:O2'	1:5:970:G:O4'	1.86	0.93
1:5:1264:C:C2	1:5:1265:G:C8	2.56	0.93
1:5:1371:A:N6	3:8:28:C:O2'	2.02	0.93
1:5:2784:C:O2	1:5:2785:C:C5	2.22	0.93
1:5:4981:G:C6	1:5:4982:A:C8	2.57	0.93
14:K:121:LEU:HD12	14:K:123:ARG:CD	1.96	0.93
49:S2:381:C:N4	58:SI:49:ARG:HD3	1.83	0.93
49:S2:1420:G:HO2'	69:ST:4:VAL:N	1.66	0.93
1:5:2561:C:N3	1:5:2562:G:C8	2.36	0.92
1:5:2613:C:N3	1:5:2614:C:C5	2.37	0.92
1:5:4095:G:C2	1:5:4096:C:C5	2.56	0.92
10:G:53:ARG:NH2	10:G:54:PHE:HZ	1.67	0.92
33:d:24:GLU:OE1	33:d:87:ARG:NH2	2.01	0.92
49:S2:75:G:N2	49:S2:77:A:OP1	2.02	0.92
49:S2:341:C:C4	49:S2:342:C:C5	2.57	0.92
49:S2:994:C:N3	49:S2:995:G:C8	2.37	0.92
49:S2:1290:G:C4	81:Sf:146:LEU:HB3	2.04	0.92
1:5:27:C:N3	1:5:28:C:C5	2.37	0.92
1:5:424:U:C2	1:5:425:U:H5	1.87	0.92
1:5:1739:G:H2'	1:5:1740:C:O4'	1.69	0.92
1:5:4888:U:HO2'	1:5:4889:G:H8	1.11	0.92
1:5:4911:A:C5'	5:B:100:ARG:HD3	1.99	0.92
3:8:73:U:C5	3:8:74:U:C6	2.56	0.92
46:q:66:ARG:O	46:q:69:LEU:HB2	1.67	0.92
49:S2:1864:U:O4	76:Sa:9:GLY:HA3	1.69	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
1:5:3939:G:N3	1:5:4076:G:O6	2.02	0.92
48:4:82:SER:O	48:4:86:LEU:CD1	2.16	0.92
48:4:651:CYS:SG	48:4:683:PHE:HD2	1.92	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1398:G:C2	49:S2:1399:C:C6	2.57	0.92
1:5:1995:G:O4'	14:K:132:ILE:CD1	2.17	0.92
1:5:4275:G:O6	1:5:4276:G:C5	2.22	0.92
14:K:47:ALA:CA	14:K:72:GLU:HG2	1.98	0.92
46:q:47:LEU:HD23	46:q:103:ARG:HG3	1.47	0.92
48:4:42:LYS:HE2	48:4:79:TYR:OH	1.68	0.92
48:4:693:CYS:C	48:4:839:ARG:HH21	1.77	0.92
49:S2:1455:A:C2	49:S2:1456:G:C8	2.58	0.92
1:5:1280:C:O4'	6:C:323:ARG:NH2	2.02	0.92
1:5:1973:G:O6	1:5:1993:C:N4	2.00	0.92
1:5:1993:C:C1'	14:K:135:THR:HB	1.96	0.92
21:R:109:TYR:CE1	21:R:114:LYS:HD2	2.04	0.92
1:5:4413:C:C4'	12:I:157:PHE:HD2	1.80	0.92
10:G:55:VAL:HB	10:G:57:TRP:HE1	1.34	0.92
46:q:52:VAL:O	46:q:89:VAL:HG13	1.69	0.92
48:4:226:LYS:NZ	48:4:356:ILE:CD1	2.33	0.92
48:4:671:TYR:C	48:4:675:ILE:HG12	1.86	0.92
49:S2:43:U:N3	49:S2:484:A:H2	1.67	0.92
49:S2:165:G:C8	49:S2:166:A:C8	2.56	0.92
49:S2:1406:G:H2'	49:S2:1407:U:C1'	1.98	0.92
1:5:1310:C:N3	1:5:1311:G:C8	2.37	0.92
48:4:160:MET:CE	48:4:178:PHE:CZ	2.53	0.92
49:S2:310:C:H2'	49:S2:311:C:C6	2.03	0.92
49:S2:469:A:N1	49:S2:470:G:H8	1.57	0.92
49:S2:974:C:N3	49:S2:975:G:C8	2.38	0.92
49:S2:1538:C:O2	49:S2:1539:U:C6	2.22	0.92
1:5:210:C:N4	1:5:231:U:C2	2.38	0.92
1:5:469:C:O2	1:5:688:U:C1'	2.17	0.92
48:4:114:GLU:OE2	48:4:400:LYS:HD3	1.69	0.92
48:4:562:GLU:CB	48:4:570:ILE:HD11	2.00	0.92
48:4:738:PRO:C	48:4:824:PRO:HD2	1.95	0.92
49:S2:56:G:C5	49:S2:90:G:N2	2.38	0.92
49:S2:120:U:N3	49:S2:121:U:C5	2.38	0.92
49:S2:1111:U:C2	49:S2:1112:U:C5	2.57	0.92
64:SO:147:ARG:HB2	64:SO:147:ARG:CZ	2.00	0.92
1:5:144:G:C2	1:5:145:G:C8	2.57	0.92
1:5:272:U:C2	1:5:273:U:C5	2.58	0.92
1:5:1248:C:O2	1:5:1249:C:C6	2.23	0.92
1:5:1750:G:C2	1:5:1751:A:C8	2.58	0.92
1:5:1967:A:N6	1:5:2020:U:O4	2.03	0.92
1:5:3767:C:H5'	49:S2:1849:G:C5	2.00	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:94:C:C2	2:7:95:C:C5	2.57	0.92
3:8:40:A:N7	3:8:102:G:N2	2.17	0.92
8:E:157:ARG:HD2	8:E:266:TYR:CD1	2.04	0.92
8:E:181:PRO:HA	8:E:246:GLN:HE22	1.34	0.92
46:q:28:PHE:CD1	46:q:192:VAL:HG22	2.03	0.92
48:4:751:CYS:HB3	48:4:755:VAL:CG1	2.00	0.92
49:S2:377:G:C2	49:S2:378:U:C6	2.58	0.92
49:S2:880:G:C8	49:S2:881:G:C8	2.58	0.92
49:S2:933:G:C2	49:S2:1000:C:N3	2.38	0.92
49:S2:1594:A:N1	49:S2:1595:U:C5	2.38	0.92
1:5:2326:G:C6	1:5:2327:G:N7	2.38	0.92
14:K:117:ARG:CG	14:K:133:LEU:HD11	1.99	0.92
46:q:168:GLY:CA	46:q:171:GLU:CD	2.41	0.92
46:q:200:ASN:O	46:q:202:GLU:N	2.03	0.92
48:4:72:SER:HA	48:4:104:ASP:CG	1.94	0.92
48:4:137:VAL:HG11	48:4:807:GLN:HE22	1.32	0.92
49:S2:1224:G:N2	49:S2:1643:U:C2	2.38	0.92
1:5:1245:C:N3	1:5:1246:G:N7	2.18	0.91
1:5:1695:U:H2'	1:5:1696:C:H5'	1.52	0.91
1:5:2081:C:H2'	1:5:2082:G:O5'	1.70	0.91
1:5:2856:C:N4	1:5:2857:A:N6	2.18	0.91
1:5:3740:G:C6	1:5:3741:C:C5	2.59	0.91
1:5:3905:A:C6	1:5:4449:A:C6	2.58	0.91
3:8:10:G:C6	3:8:11:C:C6	2.57	0.91
49:S2:118:C:C4	49:S2:119:U:C6	2.57	0.91
49:S2:618:C:N3	49:S2:619:A:C8	2.37	0.91
49:S2:1839:U:O4	76:Sa:28:ARG:NH2	2.03	0.91
64:SO:147:ARG:CZ	64:SO:147:ARG:CB	2.46	0.91
1:5:86:U:O2	1:5:87:A:C8	2.22	0.91
1:5:1247:U:N3	1:5:1248:C:C5	2.38	0.91
1:5:2533:C:OP1	27:X:139:ARG:NH2	2.01	0.91
1:5:2851:G:C6	1:5:2852:U:C6	2.58	0.91
1:5:3591:C:N4	1:5:3592:G:N7	2.17	0.91
1:5:3739:C:C4	1:5:3740:G:N7	2.39	0.91
48:4:845:LYS:CE	48:4:846:GLU:N	2.30	0.91
49:S2:27:A:C6	49:S2:28:U:C5	2.58	0.91
49:S2:60:A:O2'	49:S2:61:A:C5'	2.18	0.91
49:S2:460:A:N3	49:S2:461:U:C6	2.37	0.91
49:S2:623:G:C2	49:S2:624:C:C6	2.59	0.91
49:S2:1133:A:N1	49:S2:1134:G:C8	2.38	0.91
1:5:451:C:N4	1:5:1295:C:H2'	1.86	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1671:U:H3	1:5:1672:U:H5	1.09	0.91
1:5:4998:G:C2	1:5:4999:G:C8	2.57	0.91
5:B:203:GLN:HA	5:B:203:GLN:HE21	1.33	0.91
46:q:12:ASN:O	46:q:16:LYS:HE3	1.70	0.91
49:S2:1149:A:C2	49:S2:1151:G:C5	2.58	0.91
1:5:701:G:C6	1:5:702:U:C6	2.58	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
1:5:2108:G:N2	1:5:2125:C:N3	2.18	0.91
48:4:556:ILE:HA	48:4:559:LYS:HE2	1.52	0.91
48:4:694:GLU:HG3	48:4:844:LEU:HD13	1.52	0.91
48:4:769:HIS:O	48:4:786:ALA:HA	1.66	0.91
49:S2:804:U:N3	49:S2:805:U:C5	2.38	0.91
1:5:27:C:O2	1:5:28:C:C6	2.23	0.91
1:5:106:A:H1'	1:5:336:A:H8	1.15	0.91
1:5:466:A:C2	1:5:467:U:C5	2.58	0.91
1:5:658:C:C2	1:5:659:G:C8	2.58	0.91
1:5:2294:G:C2	1:5:2295:C:C5	2.57	0.91
1:5:2382:A:N6	1:5:2830:G:O4'	2.04	0.91
1:5:3739:C:N4	1:5:3740:G:N7	2.19	0.91
48:4:191:THR:HB	48:4:192:TYR:CD1	2.05	0.91
49:S2:337:C:N3	49:S2:338:G:N7	2.18	0.91
49:S2:744:G:H2'	49:S2:745:C:C6	2.06	0.91
49:S2:1293:A:N3	81:Sf:151:ASN:N	2.19	0.91
49:S2:1408:U:H3	49:S2:1439:A:H2	0.96	0.91
1:5:962:C:OP2	1:5:2264:C:N3	2.03	0.91
1:5:2604:C:C2	1:5:2605:G:C8	2.58	0.91
14:K:121:LEU:HD12	14:K:123:ARG:HB3	1.49	0.91
48:4:330:LYS:C	48:4:331:GLU:HG2	1.92	0.91
48:4:541:SER:CB	48:4:576:VAL:CG1	2.33	0.91
48:4:753:GLU:N	48:4:782:PHE:CE1	2.36	0.91
49:S2:1595:U:N3	49:S2:1596:U:C6	2.38	0.91
1:5:1669:A:H4'	1:5:1685:G:N2	1.85	0.91
3:8:12:G:N2	3:8:13:G:H1'	1.84	0.91
3:8:119:C:C2	3:8:120:G:H8	1.89	0.91
48:4:111:PHE:HE1	48:4:809:PHE:CZ	1.83	0.91
48:4:479:LEU:CD2	48:4:483:GLY:HA3	2.00	0.91
48:4:539:GLU:O	48:4:540:GLU:C	1.95	0.91
49:S2:974:C:N3	49:S2:975:G:N7	2.19	0.91
81:Sf:133:ALA:HB3	81:Sf:139:HIS:HA	1.51	0.91
1:5:1673:U:C2	1:5:1674:C:C5	2.59	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1695:U:C2'	1:5:1696:C:H5'	2.01	0.91
1:5:1778:C:O2	1:5:1779:U:C5	2.24	0.91
1:5:1818:G:C8	1:5:1821:G:O6	2.24	0.91
1:5:4878:C:C2	1:5:4879:C:C5	2.58	0.91
49:S2:1291:A:C5'	81:Sf:146:LEU:HD12	2.00	0.91
1:5:272:U:O2	1:5:273:U:C5	2.23	0.91
1:5:730:G:N2	1:5:939:G:N2	2.18	0.91
1:5:1987:C:N3	1:5:1988:G:C8	2.39	0.91
1:5:2126:G:H1'	1:5:2127:C:C6	2.05	0.91
48:4:75:ILE:HG22	48:4:77:LEU:CD1	1.96	0.91
49:S2:428:U:C5	59:SJ:7:TRP:CZ2	2.59	0.91
49:S2:599:A:H1'	49:S2:605:A:N3	1.84	0.91
1:5:489:C:N4	1:5:664:G:O6	2.04	0.91
1:5:1696:C:H1'	1:5:1697:G:H5'	1.53	0.91
3:8:131:G:C6	3:8:132:G:N7	2.38	0.91
34:e:35:TRP:CD1	34:e:36:ARG:N	2.37	0.91
46:q:52:VAL:O	46:q:89:VAL:HA	1.70	0.91
46:q:69:LEU:HB3	46:q:71:ASN:HB2	1.50	0.91
46:q:183:PHE:N	46:q:183:PHE:HD1	1.64	0.91
46:q:194:ASP:O	46:q:197:SER:OG	1.89	0.91
48:4:4:PHE:HD1	48:4:5:THR:HG22	1.32	0.91
48:4:165:LEU:HD12	48:4:305:MET:HE1	1.50	0.91
48:4:191:THR:CG2	48:4:192:TYR:CZ	2.53	0.91
49:S2:551:U:H2'	49:S2:552:G:H8	1.36	0.91
1:5:753:C:N3	1:5:754:U:C5	2.39	0.90
1:5:1176:C:O2	7:D:282:GLN:NE2	2.03	0.90
1:5:2724:G:C2	1:5:2726:G:C5	2.59	0.90
1:5:4172:A:C2	1:5:4173:G:C8	2.60	0.90
1:5:4627:U:N3	1:5:4628:U:C5	2.38	0.90
3:8:12:G:N1	3:8:13:G:N7	2.19	0.90
48:4:613:LEU:HD22	48:4:639:TYR:CG	2.06	0.90
49:S2:27:A:C2	49:S2:28:U:C6	2.59	0.90
1:5:1268:G:N1	1:5:1270:A:N7	2.18	0.90
1:5:2613:C:C4	1:5:2614:C:C5	2.58	0.90
1:5:4123:C:N3	1:5:4124:G:C8	2.39	0.90
14:K:121:LEU:CD1	14:K:123:ARG:HB3	2.01	0.90
14:K:123:ARG:HB2	14:K:129:ILE:HG13	1.52	0.90
30:a:36:GLY:O	30:a:41:HIS:HB2	1.71	0.90
46:q:99:ARG:HA	46:q:102:LEU:HD23	1.53	0.90
48:4:113:SER:HA	48:4:499:PHE:HB3	1.53	0.90
48:4:744:ILE:HD12	48:4:816:HIS:CA	2.00	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:387:C:C2	49:S2:388:U:C5	2.59	0.90
49:S2:999:G:C6	49:S2:1000:C:C5	2.58	0.90
49:S2:1433:C:OP2	49:S2:1433:C:C3'	2.19	0.90
49:S2:1755:C:N3	49:S2:1756:C:C5	2.39	0.90
1:5:54:G:C6	1:5:55:G:C8	2.58	0.90
1:5:4242:U:O2	1:5:4279:A:H2	1.54	0.90
48:4:58:ASP:CA	48:4:63:GLU:CD	2.45	0.90
48:4:432:PRO:HB3	48:4:497:MET:HE1	1.51	0.90
48:4:752:PRO:HG3	48:4:780:PRO:HB3	1.53	0.90
48:4:845:LYS:HZ3	48:4:846:GLU:HG2	1.01	0.90
49:S2:633:C:N3	49:S2:634:A:C8	2.39	0.90
49:S2:647:U:O2	49:S2:648:A:H8	1.45	0.90
49:S2:1220:A:N6	49:S2:1221:G:O6	2.04	0.90
49:S2:1317:C:C2	49:S2:1318:G:C8	2.59	0.90
1:5:2614:C:O2'	1:5:2808:G:OP1	1.88	0.90
1:5:2724:G:N2	1:5:2726:G:C5	2.39	0.90
1:5:3791:C:N3	1:5:3802:U:C6	2.40	0.90
14:K:80:LEU:HA	14:K:83:LYS:HD3	1.52	0.90
46:q:50:LYS:HB3	46:q:93:GLU:OE2	1.71	0.90
48:4:72:SER:CB	48:4:104:ASP:C	2.44	0.90
48:4:121:VAL:O	48:4:415:ARG:NH1	2.04	0.90
49:S2:1109:C:N3	49:S2:1110:G:C1'	2.34	0.90
1:5:100:C:C5	1:5:101:A:N7	2.37	0.90
1:5:1542:U:OP1	1:5:2743:A:C8	2.24	0.90
1:5:1807:C:N3	1:5:1808:C:C6	2.40	0.90
1:5:2007:G:O2'	1:5:2008:U:O4'	1.88	0.90
1:5:4213:A:H61	1:5:4218:U:H3	0.95	0.90
48:4:106:PRO:CD	48:4:115:VAL:HG22	2.00	0.90
48:4:743:PRO:O	48:4:790:VAL:N	1.99	0.90
49:S2:337:C:N3	49:S2:338:G:C8	2.39	0.90
60:SK:8:ARG:HD3	60:SK:12:TYR:CE1	2.06	0.90
1:5:1174:G:N2	1:5:1175:A:C8	2.40	0.90
1:5:1266:G:N2	1:5:1268:G:C5	2.40	0.90
1:5:2034:G:C6	1:5:2035:C:N3	2.39	0.90
1:5:2293:U:O2	1:5:2294:G:H8	1.45	0.90
1:5:2538:U:OP1	40:k:41:TYR:OH	1.88	0.90
1:5:3723:A:C2	1:5:3724:A:C5	2.59	0.90
49:S2:415:A:H2'	49:S2:416:U:O4'	1.70	0.90
49:S2:1273:C:C2	49:S2:1506:A:C2	2.56	0.90
64:SO:146:ARG:HG3	64:SO:146:ARG:HH11	1.35	0.90
1:5:977:C:C4	1:5:978:G:N7	2.38	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2017:A:N7	1:5:2018:C:C5	2.39	0.90
1:5:3807:A:HO2'	49:S2:1816:G:HO2'	1.09	0.90
14:K:102:GLY:C	14:K:139:VAL:C	2.37	0.90
46:q:97:GLU:O	46:q:99:ARG:N	2.05	0.90
48:4:751:CYS:CB	48:4:755:VAL:CG1	2.49	0.90
49:S2:388:U:C2	49:S2:389:A:C8	2.59	0.90
49:S2:1310:U:H3	49:S2:1311:C:H5	1.18	0.90
67:SR:27:ASP:O	67:SR:31:ASN:ND2	2.05	0.90
1:5:1999:A:O2'	1:5:2000:G:O4'	1.88	0.90
1:5:2447:U:O2'	1:5:2448:G:O5'	1.89	0.90
1:5:3899:G:P	5:B:257:TRP:HB2	2.12	0.90
10:G:264:LYS:HZ1	10:G:265:LEU:CD2	1.84	0.90
46:q:18:ILE:HG12	46:q:66:ARG:HD3	1.51	0.90
48:4:571:LYS:HE2	48:4:571:LYS:C	1.95	0.90
48:4:804:THR:HG21	48:4:808:ALA:CB	2.00	0.90
49:S2:414:A:C2	49:S2:424:C:O2	2.24	0.90
49:S2:579:C:C4	49:S2:580:U:C5	2.60	0.90
1:5:106:A:C1'	1:5:336:A:H8	1.85	0.90
1:5:754:U:N3	1:5:755:C:C5	2.40	0.90
1:5:2106:G:N2	1:5:2107:C:C5	2.39	0.90
1:5:2529:A:C5	1:5:2532:C:C5	2.59	0.90
1:5:2565:A:N7	1:5:2566:G:H1'	1.86	0.90
1:5:2568:C:C2	1:5:2569:G:C8	2.59	0.90
1:5:4355:G:C2	1:5:4356:G:N7	2.40	0.90
46:q:157:ASP:OD1	46:q:158:VAL:N	2.02	0.90
48:4:331:GLU:CD	48:4:335:LEU:HD22	1.97	0.90
48:4:543:GLU:HG3	48:4:576:VAL:HG21	1.53	0.90
48:4:578:SER:C	48:4:579:TYR:CD1	2.50	0.90
48:4:739:ARG:HH11	48:4:823:ASP:HB2	1.25	0.90
49:S2:51:U:N3	49:S2:52:G:N7	2.19	0.90
49:S2:94:G:HO2'	49:S2:508:A:HO2'	0.96	0.90
49:S2:597:G:C2	49:S2:640:A:C2	2.59	0.90
1:5:1475:G:N2	1:5:1476:C:C5	2.40	0.90
1:5:4281:A:C2	1:5:4283:G:C5	2.60	0.90
14:K:56:LEU:CD1	14:K:91:ASP:CG	2.40	0.90
1:5:2089:G:O6	1:5:2263:A:C5'	2.20	0.89
1:5:3680:U:H2'	1:5:3680:U:O2	1.71	0.89
1:5:3783:A:H2	1:5:3789:C:H42	1.17	0.89
1:5:4518:A:HO2'	5:B:257:TRP:HZ3	0.94	0.89
2:7:94:C:N3	2:7:95:C:C5	2.40	0.89
14:K:117:ARG:NE	14:K:117:ARG:HA	1.86	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:6:ARG:CG	46:q:10:LYS:CE	2.19	0.89
48:4:157:MET:HE2	48:4:214:PHE:HE2	1.34	0.89
49:S2:1030:A:C2	49:S2:1031:A:N7	2.39	0.89
49:S2:1512:C:C2	49:S2:1513:C:C5	2.60	0.89
1:5:211:G:C2	1:5:212:A:C8	2.60	0.89
1:5:2328:G:HO2'	1:5:2329:U:C5'	1.84	0.89
1:5:3743:G:H2'	1:5:3744:G:H5'	1.54	0.89
1:5:4273:A:H2'	1:5:4274:A:O4'	1.71	0.89
14:K:97:ASN:OD1	14:K:98:ILE:CD1	2.19	0.89
48:4:613:LEU:HD22	48:4:639:TYR:CE1	2.05	0.89
48:4:691:ALA:N	48:4:730:TYR:CG	2.39	0.89
48:4:713:ALA:HB2	48:4:716:ARG:HH21	1.36	0.89
49:S2:524:U:C2	49:S2:594:A:N6	2.39	0.89
49:S2:1095:U:C4	49:S2:1149:A:N1	2.40	0.89
49:S2:1114:U:H3	49:S2:1119:A:N6	1.71	0.89
1:5:1235:G:C2	1:5:1236:C:C5	2.61	0.89
1:5:4697:U:H4'	42:m:104:HIS:HD2	1.35	0.89
40:k:40:ARG:HB3	40:k:41:TYR:HD1	1.32	0.89
46:q:45:MET:SD	46:q:48:ARG:HG2	2.11	0.89
48:4:45:ILE:HG13	48:4:46:ILE:N	1.84	0.89
48:4:690:GLY:C	48:4:730:TYR:CD1	2.32	0.89
49:S2:1151:G:C2	49:S2:1152:U:C6	2.60	0.89
49:S2:1317:C:O2	49:S2:1318:G:C8	2.25	0.89
49:S2:1782:G:C2	49:S2:1784:G:N7	2.41	0.89
49:S2:1840:U:C2	49:S2:1841:C:C6	2.61	0.89
1:5:1632:A:N6	1:5:1634:A:N9	2.19	0.89
1:5:2724:G:C2	1:5:2726:G:C8	2.61	0.89
1:5:4580:U:N3	1:5:4581:G:C8	2.40	0.89
14:K:140:GLY:O	14:K:141:CYS:SG	2.30	0.89
46:q:97:GLU:CB	46:q:206:ILE:HG13	1.77	0.89
49:S2:291:G:O5'	49:S2:291:G:C8	2.25	0.89
49:S2:1434:C:H3'	49:S2:1435:C:O4'	1.71	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	2.60	0.89
1:5:4228:G:H5''	1:5:4229:U:O4'	1.73	0.89
14:K:91:ASP:O	14:K:92:ARG:HB2	1.73	0.89
46:q:61:MET:SD	46:q:82:ILE:HG21	2.11	0.89
49:S2:309:G:N2	49:S2:310:C:C2	2.40	0.89
49:S2:1414:A:C2	49:S2:1415:C:C5	2.61	0.89
1:5:2026:A:C2'	1:5:2027:U:H5'	2.01	0.89
1:5:2463:G:C2	1:5:2464:C:C4	2.60	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:11:C:O2	3:8:12:G:C8	2.26	0.89
8:E:157:ARG:HD3	8:E:266:TYR:CE1	2.07	0.89
13:J:91:GLU:OE2	65:SP:12:PHE:CB	2.19	0.89
48:4:322:LYS:HZ3	48:4:322:LYS:HB2	1.38	0.89
49:S2:56:G:N1	49:S2:90:G:C2	2.39	0.89
1:5:445:U:H1'	1:5:2313:A:C2	2.07	0.89
1:5:1284:G:O6	6:C:312:ARG:NH2	2.06	0.89
1:5:2018:C:N3	1:5:2019:C:C5	2.41	0.89
14:K:22:VAL:CG2	14:K:48:LYS:CE	2.50	0.89
49:S2:186:C:O2	49:S2:187:G:C8	2.25	0.89
1:5:352:G:O2'	3:8:22:U:O4	1.89	0.89
1:5:1245:C:C5	1:5:1269:G:O6	2.25	0.89
1:5:3767:C:C5'	49:S2:1849:G:N7	2.34	0.89
1:5:4098:A:N1	1:5:4099:G:C5	2.41	0.89
1:5:4229:U:N3	1:5:4230:C:C6	2.40	0.89
1:5:5003:U:C2	1:5:5045:G:N2	2.41	0.89
7:D:210:TYR:OH	7:D:214:GLU:HG3	1.72	0.89
14:K:61:LYS:CE	14:K:72:GLU:CG	2.48	0.89
14:K:124:GLU:CA	14:K:128:THR:OG1	2.08	0.89
46:q:66:ARG:HD2	46:q:69:LEU:HD22	0.91	0.89
46:q:80:PRO:CB	46:q:81:HIS:CE1	2.56	0.89
48:4:103:ILE:CD1	48:4:122:THR:HG21	2.02	0.89
48:4:845:LYS:HZ1	48:4:846:GLU:N	1.70	0.89
1:5:28:C:C2	1:5:29:G:C8	2.60	0.89
1:5:983:C:N3	1:5:984:C:H5	1.65	0.89
1:5:2325:C:N3	1:5:2326:G:C8	2.41	0.89
1:5:4241:C:N3	1:5:4242:U:C5	2.41	0.89
1:5:4579:U:C2	1:5:4580:U:C6	2.61	0.89
48:4:744:ILE:HD11	48:4:816:HIS:N	1.87	0.89
1:5:294:G:C6	30:a:61:TYR:CD2	2.61	0.89
1:5:504:G:N1	1:5:654:C:C2	2.41	0.89
1:5:2851:G:C5	1:5:2852:U:H6	1.90	0.89
1:5:3767:C:H5'	49:S2:1849:G:O6	1.63	0.89
1:5:3878:C:O2	5:B:258:HIS:HE1	1.54	0.89
48:4:659:PRO:HG2	48:4:698:ARG:NH2	1.87	0.89
49:S2:51:U:C2	49:S2:52:G:C8	2.60	0.89
49:S2:419:G:N2	49:S2:661:U:O2	2.06	0.89
49:S2:555:A:C2	49:S2:557:U:C5	2.61	0.89
49:S2:618:C:C4	49:S2:619:A:C8	2.60	0.89
49:S2:792:C:C2	49:S2:793:G:C8	2.61	0.89
49:S2:821:G:O6	59:SJ:150:ARG:CD	2.19	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1124:C:N3	49:S2:1125:C:C5	2.41	0.89
1:5:445:U:C1'	1:5:2313:A:C2	2.56	0.88
1:5:733:A:C8	1:5:734:G:C8	2.61	0.88
1:5:751:G:N2	1:5:752:G:C5	2.41	0.88
1:5:2328:G:O2'	1:5:2329:U:O5'	1.88	0.88
1:5:2497:C:O2	1:5:2498:C:C6	2.26	0.88
14:K:62:LEU:HD11	14:K:73:VAL:HB	1.52	0.88
14:K:94:LYS:CG	14:K:96:LYS:HB3	2.03	0.88
48:4:581:GLU:OE2	48:4:695:GLU:CB	2.21	0.88
49:S2:449:A:C6	49:S2:452:G:C6	2.60	0.88
1:5:271:C:C2	1:5:272:U:C6	2.60	0.88
1:5:1049:C:N3	1:5:1050:C:C5	2.41	0.88
1:5:1269:G:C3'	1:5:2111:G:O6	2.20	0.88
1:5:2449:A:C8	1:5:2450:G:H1'	2.08	0.88
1:5:4934:A:C6	1:5:4935:C:C5	2.61	0.88
48:4:751:CYS:CB	48:4:755:VAL:CB	2.05	0.88
49:S2:43:U:O2	49:S2:484:A:C2	2.25	0.88
49:S2:341:C:N4	49:S2:342:C:C5	2.41	0.88
49:S2:1540:G:N3	49:S2:1541:G:C8	2.41	0.88
1:5:1175:A:C2	1:5:1176:C:C6	2.61	0.88
1:5:1213:G:C5	1:5:1215:C:C6	2.62	0.88
1:5:1950:U:C2	1:5:1951:G:C8	2.62	0.88
1:5:2017:A:C8	1:5:2018:C:C5	2.62	0.88
1:5:4548:A:C8	1:5:4548:A:C5'	2.55	0.88
1:5:4884:G:C2	1:5:4885:U:C6	2.61	0.88
46:q:127:ASN:HB3	46:q:153:GLU:HG2	1.32	0.88
48:4:585:GLU:CG	48:4:737:GLN:HE22	1.86	0.88
48:4:609:PHE:HZ	48:4:661:ILE:CD1	1.83	0.88
49:S2:386:C:C2	49:S2:387:C:C6	2.61	0.88
49:S2:1562:C:O2	49:S2:1563:G:C8	2.26	0.88
1:5:751:G:C2	1:5:752:G:N7	2.42	0.88
1:5:1271:G:H3'	1:5:1272:C:H5'	1.54	0.88
1:5:1929:A:H61	1:5:2054:U:H3	0.89	0.88
1:5:2089:G:C5	1:5:2262:G:H2'	2.08	0.88
1:5:3693:U:C4	1:5:3694:U:C5	2.61	0.88
1:5:4093:G:H2'	1:5:4094:G:H5''	1.55	0.88
46:q:61:MET:HG2	46:q:82:ILE:HG21	1.48	0.88
1:5:294:G:C2	30:a:61:TYR:CE2	2.61	0.88
1:5:689:U:N3	1:5:690:C:C5	2.42	0.88
1:5:1340:C:C2	1:5:1341:U:C5	2.61	0.88
1:5:2844:A:C6	1:5:3839:G:C8	2.61	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:119:TYR:CE2	68:SS:108:ARG:NH2	1.98	0.88
14:K:77:ALA:CB	14:K:80:LEU:HD12	2.04	0.88
14:K:142:ASN:ND2	14:K:151:ILE:HG13	1.88	0.88
48:4:275:LYS:C	48:4:275:LYS:CE	2.45	0.88
48:4:691:ALA:CB	48:4:730:TYR:CB	1.75	0.88
48:4:762:VAL:CG1	48:4:766:LYS:NZ	2.37	0.88
48:4:771:PHE:HB3	48:4:785:LYS:HB2	0.89	0.88
49:S2:553:U:C2	49:S2:554:A:C8	2.61	0.88
49:S2:1532:C:H5''	49:S2:1533:A:O4'	1.73	0.88
1:5:189:G:C2	1:5:190:G:N7	2.42	0.88
3:8:86:U:O4	37:h:7:ARG:HG2	1.72	0.88
1:5:197:A:H5'	1:5:197:A:H8	1.38	0.88
1:5:1411:C:O2	1:5:1412:G:C8	2.27	0.88
1:5:1687:U:O2	1:5:1850:A:C6	2.26	0.88
1:5:2078:C:O2	1:5:2079:G:H8	1.56	0.88
1:5:2294:G:C2	1:5:2295:C:C6	2.62	0.88
36:g:11:LEU:HB3	36:g:18:ASN:HD21	1.35	0.88
48:4:144:ARG:CZ	48:4:781:MET:HE1	2.04	0.88
48:4:191:THR:HB	48:4:192:TYR:CE1	2.07	0.88
48:4:228:PHE:CD1	48:4:232:TYR:CE2	2.61	0.88
49:S2:114:G:HO2'	49:S2:382:C:HO2'	0.91	0.88
49:S2:618:C:C4	49:S2:619:A:N7	2.42	0.88
49:S2:1551:U:O4'	49:S2:1558:C:O2	1.90	0.88
1:5:1074:G:N2	1:5:1238:A:C2	2.41	0.88
1:5:1563:A:H62	49:S2:1028:A:H61	1.14	0.88
1:5:1757:U:C2	1:5:1758:G:C8	2.62	0.88
1:5:1936:C:H5	2:7:84:U:C5	1.86	0.88
1:5:1992:U:O2'	1:5:2002:A:OP1	1.91	0.88
1:5:2327:G:C2	1:5:2328:G:N7	2.42	0.88
1:5:2468:U:H3	1:5:2473:A:N6	1.67	0.88
1:5:5062:G:N2	1:5:5063:G:C8	2.41	0.88
48:4:741:MET:HG3	48:4:817:TRP:HZ3	1.09	0.88
49:S2:1149:A:C2	49:S2:1151:G:N7	2.41	0.88
1:5:1478:C:O2	1:5:1479:G:C8	2.26	0.88
1:5:1958:A:N6	1:5:2026:A:H61	1.70	0.88
1:5:3721:U:O2	1:5:3722:G:H8	1.55	0.88
1:5:4269:G:H1	1:5:4277:G:H1	1.17	0.88
13:J:99:PHE:CE2	13:J:105:PHE:HB3	2.09	0.88
14:K:94:LYS:HB3	14:K:96:LYS:HE3	1.56	0.88
48:4:420:LEU:CB	48:4:465:PRO:HA	2.03	0.88
48:4:585:GLU:CG	48:4:737:GLN:NE2	2.36	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:628:LEU:HD21	48:4:631:ARG:HH22	1.36	0.88
49:S2:1122:A:C6	49:S2:1123:C:C5	2.62	0.88
49:S2:1310:U:N3	49:S2:1311:C:H5	1.71	0.88
49:S2:1545:A:HO2'	49:S2:1546:G:H8	1.15	0.88
1:5:1188:C:O2	1:5:1189:G:C8	2.27	0.88
1:5:1324:A:C2	1:5:3876:A:H2'	2.09	0.88
1:5:1960:A:H4'	46:q:59:THR:CG2	2.03	0.88
1:5:3662:A:N6	1:5:3680:U:H3	1.71	0.88
7:D:22:ARG:HH11	7:D:22:ARG:HG3	1.38	0.88
49:S2:340:C:N3	49:S2:341:C:C4	2.41	0.88
1:5:270:U:N3	1:5:271:C:C5	2.42	0.87
1:5:1217:G:HO2'	1:5:1218:G:H8	1.21	0.87
1:5:1475:G:N2	1:5:1476:C:C4	2.41	0.87
1:5:1866:U:O2'	1:5:1867:A:O5'	1.92	0.87
1:5:2465:C:H2'	1:5:2466:G:C8	2.08	0.87
1:5:4123:C:C2	1:5:4124:G:C8	2.63	0.87
14:K:61:LYS:NZ	14:K:72:GLU:HB3	1.88	0.87
46:q:80:PRO:HG2	46:q:81:HIS:HE1	1.12	0.87
48:4:49:ALA:HA	48:4:55:ARG:NH2	1.88	0.87
48:4:72:SER:CB	48:4:104:ASP:O	2.22	0.87
49:S2:475:C:N3	49:S2:476:A:C8	2.42	0.87
49:S2:751:G:C6	49:S2:791:C:N3	2.42	0.87
49:S2:1307:U:H1'	81:Sf:133:ALA:HB2	1.54	0.87
49:S2:1310:U:O2	49:S2:1311:C:H6	1.57	0.87
82:Sg:17:TRP:HB3	82:Sg:303:THR:HA	1.54	0.87
1:5:77:U:O4	1:5:335:A:N1	2.06	0.87
1:5:662:C:H2'	1:5:663:G:H8	1.39	0.87
1:5:2613:C:C2	1:5:2614:C:C6	2.62	0.87
1:5:4269:G:H22	1:5:4277:G:H22	1.18	0.87
7:D:250:ASN:HD21	7:D:252:VAL:HG12	1.39	0.87
14:K:121:LEU:CD1	14:K:123:ARG:HD2	2.01	0.87
22:S:29:ARG:CZ	22:S:29:ARG:HB3	2.03	0.87
48:4:604:MET:HG2	48:4:728:CYS:SG	2.14	0.87
48:4:743:PRO:HB3	48:4:744:ILE:HB	1.55	0.87
49:S2:71:G:H2'	49:S2:72:C:C6	2.09	0.87
49:S2:452:G:N2	49:S2:453:C:C2	2.42	0.87
49:S2:649:U:O2	49:S2:650:A:H8	1.49	0.87
49:S2:1101:U:C2	49:S2:1102:G:N7	2.42	0.87
1:5:1359:G:H2'	1:5:1360:G:C8	2.09	0.87
1:5:2018:C:C2	1:5:2019:C:C6	2.62	0.87
1:5:2021:G:H2'	1:5:2022:C:H6	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4561:C:O2	1:5:4561:C:H2'	1.73	0.87
48:4:693:CYS:CB	48:4:839:ARG:HE	1.88	0.87
48:4:829:SER:O	48:4:833:GLN:CG	2.22	0.87
49:S2:384:U:H5	49:S2:386:C:C5	1.91	0.87
54:SE:191:ARG:HD2	54:SE:218:PHE:CE1	2.09	0.87
1:5:1174:G:C2	1:5:1175:A:N7	2.42	0.87
1:5:1699:A:O5'	9:F:179:ARG:NH2	2.07	0.87
1:5:4563:U:C2	1:5:4564:A:C5	2.61	0.87
1:5:5047:C:C2	1:5:5048:A:C6	2.62	0.87
14:K:92:ARG:O	14:K:93:LYS:HB2	1.72	0.87
48:4:24:VAL:HG23	48:4:32:LYS:CE	2.03	0.87
48:4:111:PHE:HB2	48:4:501:VAL:HG21	1.53	0.87
48:4:731:ALA:HB2	48:4:854:PHE:HB3	1.56	0.87
49:S2:309:G:C2	49:S2:310:C:C4	2.62	0.87
49:S2:634:A:C2	49:S2:635:G:C8	2.63	0.87
49:S2:1017:U:O2	49:S2:1017:U:H2'	1.74	0.87
49:S2:1074:C:O2	49:S2:1075:C:C6	2.27	0.87
49:S2:1284:A:N6	62:SM:33:ARG:HD3	1.89	0.87
49:S2:1291:A:H5''	81:Sf:146:LEU:HD12	1.57	0.87
1:5:425:U:N3	1:5:426:A:N7	2.22	0.87
1:5:1991:A:H3'	1:5:1992:U:H5''	1.56	0.87
1:5:2110:C:C6	1:5:2110:C:OP1	2.28	0.87
1:5:4096:C:O2'	36:g:112:GLN:NE2	2.06	0.87
1:5:4315:A:C2	1:5:4316:G:C8	2.62	0.87
1:5:4332:C:N3	1:5:4333:C:H5	1.73	0.87
1:5:4481:U:H2'	1:5:4482:U:H6	1.37	0.87
1:5:4885:U:C2	1:5:4886:C:C6	2.63	0.87
46:q:59:THR:O	46:q:60:MET:C	2.12	0.87
49:S2:806:U:C2	49:S2:807:G:C8	2.62	0.87
49:S2:1592:C:N3	49:S2:1593:C:C6	2.42	0.87
1:5:126:C:N3	1:5:127:G:N7	2.22	0.87
1:5:2361:G:C6	19:P:25:HIS:HD2	1.93	0.87
1:5:2784:C:N3	1:5:2785:C:C5	2.42	0.87
46:q:6:ARG:HG3	46:q:10:LYS:CG	2.04	0.87
46:q:39:GLN:CG	46:q:107:VAL:HG11	2.04	0.87
48:4:6:VAL:O	48:4:9:ILE:N	2.07	0.87
48:4:744:ILE:CD1	48:4:816:HIS:CG	2.58	0.87
48:4:753:GLU:HB3	48:4:782:PHE:HZ	1.36	0.87
1:5:964:A:H8	1:5:964:A:C5'	1.86	0.87
1:5:2568:C:O2	1:5:2569:G:C8	2.26	0.87
14:K:106:PHE:CZ	14:K:137:GLN:NE2	2.42	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:143:LEU:HD21	48:4:189:ILE:HD11	1.56	0.87
48:4:829:SER:OG	48:4:832:SER:C	2.17	0.87
49:S2:600:G:C8	49:S2:631:U:C5	2.61	0.87
49:S2:1666:C:C2	49:S2:1667:U:C5	2.63	0.87
1:5:723:A:C2	1:5:943:A:N1	2.43	0.87
1:5:1279:A:H2'	1:5:1280:C:C4	2.09	0.87
1:5:4230:C:N3	1:5:4231:C:H5	1.71	0.87
1:5:4333:C:C2	1:5:4334:U:C5	2.63	0.87
14:K:121:LEU:HD13	14:K:129:ILE:CG1	2.04	0.87
48:4:231:MET:SD	48:4:343:TRP:HH2	1.98	0.87
49:S2:1073:U:N3	49:S2:1074:C:C5	2.42	0.87
1:5:3907:G:C8	1:5:4449:A:H1'	2.09	0.87
3:8:60:G:O6	37:h:59:THR:HA	1.74	0.87
46:q:160:LEU:HD12	46:q:175:LEU:HD21	1.55	0.87
48:4:101:ASN:CG	48:4:469:ILE:HD13	1.99	0.87
48:4:112:SER:O	48:4:115:VAL:N	2.07	0.87
48:4:243:GLN:O	48:4:249:ARG:NE	2.07	0.87
1:5:1598:C:C2	1:5:1599:A:H8	1.93	0.86
2:7:23:A:O2'	2:7:24:C:O5'	1.93	0.86
48:4:154:VAL:HG13	48:4:353:MET:HE3	1.54	0.86
49:S2:459:C:C4	49:S2:460:A:N7	2.43	0.86
49:S2:499:G:N2	49:S2:504:G:C2	2.44	0.86
54:SE:100:ARG:NH1	54:SE:121:TYR:OH	2.08	0.86
1:5:1477:C:N3	1:5:1478:C:C6	2.43	0.86
1:5:1485:C:O2	1:5:4349:C:C4	2.29	0.86
1:5:1958:A:C2	1:5:2026:A:C5	2.63	0.86
1:5:2279:A:C2	1:5:2280:G:N7	2.43	0.86
1:5:4215:C:N3	1:5:4216:G:N7	2.24	0.86
1:5:4314:C:N3	1:5:4315:A:C8	2.44	0.86
2:7:59:G:C6	2:7:60:G:C8	2.63	0.86
3:8:39:G:O2'	3:8:103:A:N6	2.08	0.86
14:K:57:ARG:NH2	14:K:89:PRO:HA	1.90	0.86
14:K:102:GLY:O	14:K:140:GLY:O	1.93	0.86
14:K:125:LEU:O	14:K:127:GLY:N	2.08	0.86
48:4:165:LEU:HD12	48:4:305:MET:HE2	1.31	0.86
48:4:503:PRO:O	48:4:548:GLY:O	1.93	0.86
48:4:685:TRP:HZ3	48:4:723:PRO:HD3	1.38	0.86
48:4:825:PHE:HZ	48:4:849:PRO:HD3	1.04	0.86
49:S2:339:A:N3	49:S2:340:C:C5	2.44	0.86
49:S2:823:U:C4	74:SY:64:PHE:CE2	2.63	0.86
1:5:488:G:C2	1:5:489:C:C6	2.63	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1215:C:N3	1:5:1216:C:C6	2.43	0.86
1:5:4934:A:C2	1:5:4935:C:C6	2.63	0.86
3:8:81:C:O2	3:8:81:C:H2'	1.75	0.86
48:4:58:ASP:HA	48:4:63:GLU:CD	2.00	0.86
48:4:144:ARG:NH1	48:4:781:MET:CE	2.39	0.86
49:S2:1755:C:C2	49:S2:1756:C:C6	2.63	0.86
1:5:1214:C:O2'	1:5:2114:G:C2	2.25	0.86
1:5:1476:C:C2	1:5:1477:C:C6	2.63	0.86
1:5:1899:G:N3	1:5:1900:C:C5	2.40	0.86
1:5:1970:A:O2'	1:5:2017:A:N6	2.08	0.86
1:5:2011:C:H2'	1:5:2012:A:O4'	1.76	0.86
1:5:2689:C:N3	1:5:2690:C:H5	1.73	0.86
10:G:261:LEU:HD21	10:G:264:LYS:CE	1.91	0.86
14:K:61:LYS:HE2	14:K:72:GLU:HG3	1.57	0.86
49:S2:995:G:H22	49:S2:997:A:H3'	1.38	0.86
49:S2:1603:G:N7	68:SS:28:PHE:CE2	2.44	0.86
49:S2:1828:C:H2'	49:S2:1829:G:O4'	1.75	0.86
1:5:738:C:N3	1:5:739:G:N7	2.24	0.86
1:5:1447:C:N3	1:5:2097:U:O4	2.08	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
1:5:1994:C:H2'	14:K:132:ILE:CD1	2.06	0.86
1:5:2509:C:O2'	1:5:2510:G:C5'	2.23	0.86
1:5:2568:C:N3	1:5:2569:G:N7	2.22	0.86
1:5:3912:U:O2'	1:5:3913:G:H5''	1.76	0.86
1:5:4481:U:H2'	1:5:4482:U:C6	2.10	0.86
1:5:4550:G:C6	1:5:4551:U:C5	2.62	0.86
46:q:22:ASP:CG	46:q:66:ARG:HE	1.84	0.86
49:S2:1224:G:N2	49:S2:1643:U:N3	2.23	0.86
49:S2:1434:C:H2'	49:S2:1435:C:C1'	2.06	0.86
1:5:1240:G:N7	1:5:1271:G:H4'	1.91	0.86
1:5:2843:U:N3	1:5:2844:A:N7	2.24	0.86
1:5:4174:U:C2	1:5:4175:G:C8	2.63	0.86
1:5:4233:A:H61	1:5:4290:U:H3	1.07	0.86
14:K:94:LYS:CG	14:K:96:LYS:CE	2.52	0.86
14:K:106:PHE:CD2	14:K:110:VAL:HG23	1.80	0.86
48:4:27:HIS:HD2	48:4:28:VAL:CA	1.87	0.86
48:4:113:SER:HB3	48:4:533:MET:HB2	1.55	0.86
48:4:541:SER:O	48:4:543:GLU:HG2	1.73	0.86
49:S2:314:U:OP1	56:SG:191:ARG:NH2	2.09	0.86
49:S2:381:C:H41	58:SI:49:ARG:HD3	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:499:G:N2	49:S2:504:G:N1	2.23	0.86
49:S2:551:U:N3	49:S2:552:G:N7	2.23	0.86
49:S2:1430:C:C4	49:S2:1431:G:N7	2.43	0.86
49:S2:1511:U:N3	49:S2:1512:C:C6	2.44	0.86
1:5:1667:G:C2	1:5:2283:G:O6	2.29	0.86
1:5:2508:U:C2	1:5:2509:C:H5	1.92	0.86
13:J:99:PHE:CE2	13:J:105:PHE:CB	2.59	0.86
17:N:138:PHE:HB3	17:N:143:ARG:HH22	1.39	0.86
46:q:80:PRO:HB2	46:q:81:HIS:CE1	2.10	0.86
49:S2:536:A:C6	49:S2:537:C:C6	2.63	0.86
49:S2:1293:A:N3	81:Sf:151:ASN:C	2.33	0.86
49:S2:1860:A:C2	49:S2:1862:G:C8	2.63	0.86
1:5:196:C:N3	1:5:243:A:N6	2.24	0.86
1:5:470:A:N6	1:5:471:A:C5	2.44	0.86
1:5:1598:C:O2	1:5:1598:C:H2'	1.74	0.86
1:5:1724:G:H21	9:F:105:PRO:HB3	1.39	0.86
1:5:3717:A:C6	1:5:3736:A:C6	2.63	0.86
1:5:4510:A:N6	1:5:4592:C:H4'	1.90	0.86
4:A:89:TYR:HB2	4:A:100:ASN:HD21	1.41	0.86
48:4:13:MET:CE	48:4:465:PRO:CD	2.54	0.86
49:S2:1398:G:N2	49:S2:1399:C:C6	2.43	0.86
49:S2:1528:G:C2	49:S2:1529:C:C4	2.64	0.86
1:5:1583:A:H1'	1:5:2396:A:N6	1.91	0.86
1:5:1983:A:C2	1:5:2010:A:H5''	2.10	0.86
1:5:2576:G:C6	1:5:2577:C:C5	2.63	0.86
1:5:3718:A:H2'	1:5:3719:A:O4'	1.76	0.86
1:5:4339:A:O2'	20:Q:178:ARG:NH1	2.09	0.86
1:5:4983:C:O2	1:5:4984:C:C5	2.28	0.86
3:8:65:A:N3	3:8:66:A:C8	2.43	0.86
46:q:94:ASP:CA	46:q:95:LEU:HB2	2.06	0.86
49:S2:1402:A:C2	49:S2:1405:A:C6	2.63	0.86
1:5:1538:U:O2'	1:5:1629:G:OP1	1.94	0.86
11:H:61:TRP:HZ2	22:S:152:PHE:HE2	1.22	0.86
29:Z:28:ASN:O	29:Z:28:ASN:ND2	2.07	0.86
46:q:185:PHE:HD1	46:q:186:GLY:H	1.22	0.86
48:4:579:TYR:OH	48:4:791:ASN:HB3	1.76	0.86
49:S2:459:C:N3	49:S2:460:A:C8	2.44	0.86
49:S2:880:G:N7	49:S2:881:G:N7	2.24	0.86
49:S2:1310:U:O4'	81:Sf:143:LYS:HE3	1.74	0.86
49:S2:1402:A:N6	49:S2:1441:U:C4	2.44	0.86
1:5:1249:C:N3	1:5:1250:C:C5	2.44	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3622:C:O2	1:5:3623:C:C2	2.29	0.85
1:5:4165:C:C4	1:5:4166:G:N7	2.44	0.85
1:5:4276:G:N1	1:5:4277:G:C8	2.44	0.85
1:5:4414:A:C6	1:5:4427:G:N1	2.44	0.85
14:K:35:LEU:HD23	46:q:131:GLY:CA	2.05	0.85
46:q:135:THR:HG23	46:q:152:ILE:CD1	2.05	0.85
48:4:689:GLU:CB	48:4:730:TYR:OH	2.24	0.85
48:4:691:ALA:CB	48:4:854:PHE:HZ	1.78	0.85
49:S2:1310:U:O2	49:S2:1311:C:C6	2.29	0.85
1:5:237:G:O2'	1:5:238:C:OP2	1.94	0.85
1:5:1213:G:C4	1:5:1215:C:C1'	2.58	0.85
1:5:1552:G:O2'	1:5:1575:A:N6	2.09	0.85
1:5:3675:G:N2	1:5:3676:G:C5	2.44	0.85
1:5:4092:G:C6	1:5:4093:G:C2	2.63	0.85
1:5:4240:G:C6	1:5:4241:C:C5	2.63	0.85
14:K:33:GLY:O	14:K:38:SER:OG	1.93	0.85
14:K:106:PHE:HB2	14:K:110:VAL:CG2	2.03	0.85
14:K:142:ASN:HB2	14:K:148:PRO:CA	2.05	0.85
46:q:45:MET:HE1	46:q:48:ARG:HG2	1.57	0.85
48:4:110:ASP:OD2	48:4:112:SER:HB3	1.76	0.85
48:4:574:ASP:HB3	48:4:575:PRO:C	2.01	0.85
48:4:590:LEU:CD2	48:4:605:LYS:HE3	2.06	0.85
49:S2:447:A:C6	49:S2:449:A:C4	2.64	0.85
49:S2:841:G:C2	49:S2:842:C:C4	2.65	0.85
49:S2:1402:A:N6	49:S2:1441:U:C2	2.43	0.85
49:S2:1642:U:O2	49:S2:1643:U:C5	2.29	0.85
1:5:86:U:O2	1:5:86:U:H2'	1.76	0.85
1:5:291:U:H2'	1:5:292:G:C2'	2.05	0.85
1:5:1995:G:N2	46:q:41:GLN:NE2	2.22	0.85
1:5:2495:U:N3	1:5:2496:G:N7	2.24	0.85
1:5:2529:A:C6	1:5:2532:C:C6	2.63	0.85
1:5:2736:G:N2	1:5:2737:C:C2	2.44	0.85
1:5:4100:C:C2	1:5:4101:C:C6	2.65	0.85
1:5:5005:G:N7	26:W:51:TRP:HD1	1.71	0.85
48:4:150:ARG:NH2	48:4:194:GLU:OE1	2.08	0.85
49:S2:26:U:C2	49:S2:27:A:C8	2.63	0.85
1:5:244:G:C6	1:5:246:G:N7	2.45	0.85
1:5:1439:C:C5'	9:F:36:ARG:HH12	1.88	0.85
1:5:2452:G:N1	1:5:2467:U:C4	2.44	0.85
1:5:2726:G:C6	1:5:2727:C:N4	2.45	0.85
3:8:125:C:H4'	3:8:126:C:H3'	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:80:CYS:SG	12:I:144:ASN:ND2	2.50	0.85
14:K:57:ARG:HH22	14:K:89:PRO:HA	1.41	0.85
48:4:634:TYR:CE1	48:4:638:LYS:HG2	2.12	0.85
49:S2:1306:U:O4	81:Sf:140:TYR:HD1	1.60	0.85
49:S2:1316:C:N3	49:S2:1317:C:H5	1.69	0.85
1:5:703:G:O6	1:5:706:C:N4	2.09	0.85
1:5:1339:U:O2	1:5:1340:C:C6	2.30	0.85
1:5:1949:U:O2	1:5:1950:U:C6	2.30	0.85
1:5:1960:A:H1'	46:q:59:THR:HG21	1.56	0.85
1:5:2021:G:H2'	1:5:2022:C:C6	2.10	0.85
1:5:2513:A:N7	36:g:13:TYR:CD2	2.45	0.85
1:5:2639:U:H2'	1:5:2694:G:H1	1.40	0.85
1:5:4335:C:H2'	1:5:4336:A:O4'	1.77	0.85
1:5:4935:C:N4	8:E:179:ARG:HG2	1.90	0.85
1:5:5044:A:H2'	1:5:5045:G:H5'	1.58	0.85
2:7:112:U:O2	2:7:113:G:C8	2.28	0.85
8:E:157:ARG:CD	8:E:266:TYR:CE1	2.59	0.85
48:4:526:ARG:HH11	48:4:526:ARG:HG2	1.41	0.85
48:4:691:ALA:CA	48:4:730:TYR:CD1	2.58	0.85
49:S2:841:G:N3	49:S2:842:C:C5	2.43	0.85
49:S2:925:G:N1	49:S2:926:A:N7	2.23	0.85
49:S2:1611:G:O2'	68:SS:86:ARG:NH1	2.09	0.85
1:5:1650:A:C2	6:C:100:ARG:NH2	2.44	0.85
1:5:1886:G:N2	1:5:1894:C:C2	2.45	0.85
1:5:1967:A:C2	1:5:1968:G:C8	2.63	0.85
1:5:3731:C:N3	1:5:3732:A:C8	2.44	0.85
1:5:4223:C:H4'	12:I:119:PHE:CE2	2.10	0.85
1:5:4548:A:C8	1:5:4548:A:H5'	2.12	0.85
3:8:12:G:H21	3:8:13:G:H1'	1.37	0.85
48:4:208:VAL:HA	48:4:225:LEU:HD22	1.58	0.85
48:4:541:SER:HB3	48:4:576:VAL:HG11	0.87	0.85
49:S2:999:G:C2	49:S2:1000:C:C6	2.63	0.85
1:5:2568:C:C2	1:5:2569:G:N7	2.44	0.85
1:5:2848:G:O2'	1:5:3838:U:O4	1.94	0.85
1:5:3726:A:O2'	1:5:3727:A:N7	2.09	0.85
1:5:4344:U:C2	1:5:4345:C:C5	2.65	0.85
1:5:4757:C:O2	18:O:114:LYS:CA	2.25	0.85
3:8:134:G:C2	3:8:135:C:C6	2.64	0.85
9:F:161:TYR:CD2	9:F:168:ARG:NH2	2.44	0.85
14:K:62:LEU:CG	14:K:73:VAL:HB	2.06	0.85
14:K:121:LEU:HD13	14:K:129:ILE:CB	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:6:ARG:CG	46:q:10:LYS:HG3	2.05	0.85
46:q:94:ASP:OD2	46:q:99:ARG:NH1	2.09	0.85
48:4:432:PRO:O	48:4:433:ASN:OD1	1.94	0.85
49:S2:1591:C:N4	49:S2:1592:C:C4	2.45	0.85
1:5:1266:G:H5''	1:5:2112:G:C2	2.11	0.85
1:5:1598:C:N3	1:5:1599:A:C8	2.45	0.85
1:5:1634:A:C2	1:5:1635:C:C6	2.65	0.85
1:5:1764:G:C6	1:5:1766:A:OP2	2.29	0.85
1:5:3653:A:N1	1:5:3692:A:H4'	1.92	0.85
1:5:4239:A:N6	1:5:4240:G:C5	2.43	0.85
46:q:148:SER:O	46:q:149:ARG:O	1.94	0.85
48:4:160:MET:CE	48:4:178:PHE:HE2	1.84	0.85
48:4:610:PRO:CB	48:4:613:LEU:HG	2.05	0.85
48:4:647:ARG:HG2	48:4:647:ARG:HH21	1.39	0.85
49:S2:499:G:C2	49:S2:504:G:N1	2.44	0.85
49:S2:1303:C:C4	49:S2:1304:U:C5	2.65	0.85
49:S2:1303:C:C5	49:S2:1304:U:C6	2.63	0.85
53:SD:106:ARG:HG3	53:SD:174:HIS:O	1.77	0.85
1:5:27:C:N3	1:5:28:C:H5	1.75	0.85
1:5:106:A:C1'	1:5:336:A:C8	2.57	0.85
1:5:957:G:P	1:5:1284:G:N2	2.50	0.85
1:5:982:U:H2'	1:5:983:C:H6	1.40	0.85
1:5:1188:C:C2	1:5:1189:G:C8	2.64	0.85
1:5:2027:U:O2'	1:5:2028:C:C5'	2.24	0.85
1:5:2370:A:HO2'	1:5:2826:U:H3	1.22	0.85
1:5:4230:C:O2	1:5:4231:C:C6	2.30	0.85
1:5:4601:U:O4	1:5:4609:G:N2	2.10	0.85
2:7:22:A:C2	2:7:23:A:C5	2.65	0.85
14:K:62:LEU:HD11	14:K:73:VAL:HG21	1.56	0.85
46:q:109:ALA:C	46:q:181:SER:HB2	2.00	0.85
49:S2:164:A:H2'	49:S2:165:G:H21	1.41	0.85
49:S2:341:C:C4	49:S2:342:C:C6	2.65	0.85
49:S2:1316:C:C2	49:S2:1317:C:C6	2.64	0.85
72:SW:77:PRO:HD2	72:SW:79:PHE:CZ	2.12	0.85
1:5:94:A:H2'	1:5:95:G:O4'	1.77	0.85
1:5:1177:U:C2	1:5:1178:G:C8	2.64	0.85
1:5:1847:C:H4'	20:Q:152:PHE:CE2	2.12	0.85
1:5:1916:G:N2	1:5:2067:C:O2	2.10	0.85
1:5:4982:A:C6	1:5:4983:C:C6	2.64	0.85
1:5:4983:C:C2	1:5:4984:C:H5	1.92	0.85
2:7:114:U:H2'	2:7:115:A:H5''	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:25:A:H61	49:S2:648:A:H61	1.22	0.85
49:S2:42:A:C2	49:S2:426:A:N7	2.44	0.85
49:S2:387:C:O2	49:S2:388:U:C6	2.29	0.85
49:S2:933:G:N2	49:S2:1000:C:C4	2.45	0.85
49:S2:1123:C:C4	49:S2:1124:C:C5	2.64	0.85
49:S2:1294:G:O5'	81:Sf:151:ASN:O	1.95	0.85
49:S2:1592:C:C2	49:S2:1593:C:C6	2.65	0.85
49:S2:1666:C:C2	49:S2:1667:U:C6	2.65	0.85
1:5:2080:U:O2	1:5:2081:C:C5	2.28	0.84
1:5:2294:G:N2	1:5:2295:C:C2	2.44	0.84
1:5:3717:A:O2'	1:5:3718:A:C5'	2.25	0.84
14:K:117:ARG:CA	14:K:117:ARG:NE	2.33	0.84
46:q:75:LEU:CD2	46:q:78:LEU:HD11	2.07	0.84
48:4:189:ILE:HG22	48:4:203:ILE:HG13	1.59	0.84
48:4:226:LYS:HZ2	48:4:356:ILE:HD12	1.40	0.84
48:4:420:LEU:HD23	48:4:420:LEU:O	1.75	0.84
48:4:759:ILE:HD11	48:4:784:VAL:CB	1.91	0.84
49:S2:1540:G:C4	49:S2:1541:G:C8	2.64	0.84
1:5:1218:G:N1	1:5:1219:G:H1'	1.92	0.84
1:5:4241:C:O2	1:5:4241:C:H2'	1.77	0.84
48:4:479:LEU:HD21	48:4:483:GLY:CA	2.03	0.84
49:S2:575:A:H2'	49:S2:576:A:O4'	1.75	0.84
49:S2:1049:A:C4	49:S2:1070:A:C2	2.66	0.84
49:S2:1508:A:C5	49:S2:1510:G:C8	2.64	0.84
1:5:172:C:O4'	1:5:172:C:P	2.35	0.84
1:5:1427:A:H3'	1:5:1428:U:C6	2.11	0.84
1:5:1625:G:C4	1:5:1642:A:N1	2.45	0.84
1:5:1753:G:O6	1:5:1776:A:N6	2.09	0.84
1:5:1887:G:O6	1:5:1890:G:N7	2.09	0.84
46:q:91:THR:HG22	46:q:99:ARG:NH2	1.84	0.84
48:4:59:THR:N	48:4:63:GLU:OE1	2.10	0.84
48:4:672:LEU:HB2	48:4:675:ILE:HD11	1.59	0.84
49:S2:794:A:C2	49:S2:795:A:C4	2.65	0.84
49:S2:1857:G:C8	64:SO:146:ARG:NH2	2.46	0.84
1:5:153:G:C2	1:5:154:G:C8	2.65	0.84
1:5:753:C:C2	1:5:754:U:C6	2.65	0.84
1:5:970:G:H2'	1:5:971:U:O4'	1.77	0.84
1:5:1388:A:C5	1:5:1396:G:N2	2.33	0.84
1:5:2532:C:N3	1:5:2533:C:C5	2.46	0.84
1:5:4498:U:H2'	1:5:4498:U:O2	1.76	0.84
48:4:343:TRP:CE3	48:4:343:TRP:O	2.30	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:992:A:C6	49:S2:993:G:C8	2.65	0.84
49:S2:1416:C:H2'	49:S2:1417:C:C5	2.11	0.84
1:5:457:G:C2	1:5:458:C:C6	2.66	0.84
1:5:1245:C:O2	1:5:1246:G:N7	2.09	0.84
1:5:2457:G:N2	1:5:2465:C:C2	2.44	0.84
1:5:2495:U:O2	1:5:2496:G:C8	2.31	0.84
1:5:3662:A:H61	1:5:3680:U:H3	1.23	0.84
1:5:4653:C:O2	1:5:4654:C:C5	2.30	0.84
14:K:20:GLY:HA3	14:K:92:ARG:NH2	1.91	0.84
22:S:83:ARG:NH2	23:T:156:TYR:HB2	1.93	0.84
48:4:150:ARG:CA	48:4:200:MET:HE1	2.07	0.84
48:4:253:VAL:HG12	48:4:257:MET:HE2	1.55	0.84
49:S2:28:U:O2	49:S2:29:G:C8	2.30	0.84
49:S2:105:U:C4	49:S2:106:C:C5	2.65	0.84
49:S2:474:G:C2	49:S2:475:C:C6	2.64	0.84
49:S2:618:C:N4	49:S2:619:A:C5	2.45	0.84
49:S2:1018:U:C2	49:S2:1019:C:C5	2.64	0.84
49:S2:1133:A:C6	49:S2:1134:G:N7	2.45	0.84
49:S2:1292:C:O4'	81:Sf:148:TYR:HB3	1.78	0.84
49:S2:1545:A:O2'	49:S2:1546:G:C8	2.30	0.84
49:S2:1839:U:C2	49:S2:1840:U:C6	2.66	0.84
1:5:146:G:C2	1:5:147:A:C8	2.65	0.84
1:5:166:C:C2	1:5:167:C:C5	2.59	0.84
1:5:1214:C:HO2'	1:5:2114:G:H1	1.21	0.84
1:5:1683:U:N3	1:5:1684:A:N7	2.25	0.84
1:5:2055:G:O6	22:S:158:VAL:CB	2.25	0.84
1:5:2107:C:C5	1:5:2126:G:C2	2.64	0.84
1:5:2586:G:N7	1:5:2587:A:C2	2.46	0.84
3:8:38:U:N3	37:h:92:ARG:NH1	2.24	0.84
14:K:94:LYS:CB	14:K:96:LYS:HE3	2.07	0.84
48:4:10:ARG:HD2	48:4:13:MET:SD	2.18	0.84
48:4:75:ILE:CG2	48:4:77:LEU:HD11	1.96	0.84
49:S2:1431:G:C6	49:S2:1432:U:C5	2.66	0.84
49:S2:1455:A:C6	49:S2:1456:G:N7	2.46	0.84
1:5:100:C:C5	1:5:101:A:H8	1.96	0.84
1:5:3944:G:C2	1:5:3945:A:C8	2.66	0.84
1:5:4230:C:O2	1:5:4231:C:H6	1.60	0.84
1:5:4413:C:C5'	12:I:157:PHE:CE2	2.49	0.84
2:7:54:A:C2	2:7:55:A:C5	2.64	0.84
14:K:35:LEU:HD21	46:q:131:GLY:HA2	1.59	0.84
46:q:63:LYS:HE3	46:q:82:ILE:HD11	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:99:ARG:HG2	46:q:100:ASP:N	1.91	0.84
48:4:27:HIS:HD2	48:4:28:VAL:H	0.89	0.84
48:4:744:ILE:HD13	48:4:815:ASP:C	2.02	0.84
49:S2:1100:A:C6	49:S2:1101:U:C5	2.66	0.84
1:5:2078:C:C2	1:5:2079:G:H8	1.94	0.84
1:5:2294:G:N1	1:5:2295:C:C4	2.46	0.84
1:5:2329:U:O2'	1:5:2330:G:C5'	2.25	0.84
1:5:3692:A:C5	1:5:3693:U:C6	2.66	0.84
1:5:4490:C:N3	1:5:4491:G:C8	2.46	0.84
3:8:134:G:C6	3:8:135:C:C5	2.66	0.84
7:D:17:GLN:HG3	23:T:20:ARG:HA	1.59	0.84
46:q:92:LYS:O	46:q:92:LYS:HD3	1.78	0.84
48:4:42:LYS:HG3	48:4:79:TYR:HH	0.99	0.84
48:4:120:ARG:NH1	48:4:495:ARG:HB3	1.93	0.84
48:4:284:LYS:CD	48:4:284:LYS:H	1.87	0.84
49:S2:1205:C:O2	49:S2:1206:G:C8	2.31	0.84
49:S2:1317:C:N3	49:S2:1318:G:N7	2.25	0.84
49:S2:1667:U:C2	49:S2:1668:U:C5	2.64	0.84
1:5:736:C:H2'	1:5:737:C:O4'	1.77	0.84
1:5:1994:C:C2	1:5:1995:G:C8	2.65	0.84
1:5:2282:A:H2'	1:5:2283:G:O5'	1.76	0.84
1:5:4117:U:C6	10:G:41:ILE:O	2.31	0.84
2:7:43:U:C2	2:7:44:C:C5	2.65	0.84
2:7:43:U:C2	2:7:44:C:C6	2.65	0.84
48:4:284:LYS:N	48:4:284:LYS:CD	2.34	0.84
1:5:278:G:C2	1:5:330:G:C8	2.66	0.84
1:5:514:U:C5	1:5:515:C:O4'	2.30	0.84
1:5:1268:G:N2	1:5:1270:A:C8	2.46	0.84
1:5:2108:G:N1	1:5:2125:C:N4	2.25	0.84
1:5:4095:G:N3	1:5:4096:C:C5	2.44	0.84
48:4:61:LYS:O	48:4:62:ASP:HB2	1.76	0.84
48:4:157:MET:CE	48:4:214:PHE:HE2	1.91	0.84
49:S2:1552:G:N7	49:S2:1578:U:C4	2.46	0.84
1:5:747:A:O2'	1:5:748:G:H5'	1.78	0.83
1:5:1909:G:OP1	2:7:84:U:O2	1.95	0.83
1:5:1960:A:C4'	46:q:59:THR:CG2	2.56	0.83
1:5:2113:G:C8	1:5:2115:G:H1'	2.12	0.83
1:5:3709:U:H1'	49:S2:970:G:H1	1.33	0.83
1:5:4145:C:C2	1:5:4146:G:C8	2.66	0.83
14:K:94:LYS:CG	14:K:96:LYS:CG	2.50	0.83
17:N:138:PHE:N	17:N:138:PHE:CD1	2.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1226:G:O6	49:S2:1638:G:H8	1.61	0.83
49:S2:1292:C:C1'	81:Sf:148:TYR:HB3	2.07	0.83
49:S2:1564:C:N3	49:S2:1565:C:C5	2.46	0.83
1:5:89:C:O2'	1:5:90:G:H5'	1.78	0.83
1:5:102:G:HO2'	1:5:1381:U:HO2'	1.26	0.83
1:5:216:C:O4'	1:5:216:C:P	2.35	0.83
1:5:244:G:C6	1:5:246:G:C8	2.66	0.83
1:5:246:G:C2	1:5:247:G:N7	2.47	0.83
1:5:1338:G:H22	30:a:25:HIS:CE1	1.96	0.83
1:5:1439:C:H5'	9:F:36:ARG:HH12	1.40	0.83
1:5:1995:G:O6	1:5:2000:G:N2	2.11	0.83
1:5:4275:G:C6	1:5:4276:G:C5	2.65	0.83
1:5:4879:C:C2	1:5:4880:C:C5	2.66	0.83
14:K:47:ALA:HB1	14:K:72:GLU:CG	1.96	0.83
46:q:99:ARG:O	46:q:101:MET:N	2.11	0.83
48:4:297:ILE:O	48:4:300:VAL:CG2	2.27	0.83
48:4:741:MET:HA	48:4:820:LEU:H	1.43	0.83
49:S2:70:G:C2	49:S2:80:G:C2	2.65	0.83
49:S2:158:A:N6	49:S2:466:G:O6	2.11	0.83
49:S2:994:C:H2'	49:S2:994:C:O2	1.78	0.83
49:S2:1114:U:C4	49:S2:1119:A:N1	2.46	0.83
49:S2:1840:U:C2	49:S2:1841:C:C5	2.66	0.83
69:ST:56:ARG:HD3	69:ST:79:TYR:CE2	2.12	0.83
1:5:300:A:C2	1:5:301:G:N7	2.45	0.83
1:5:1280:C:N3	1:5:1282:G:C6	2.45	0.83
1:5:2301:G:C2	1:5:2302:C:C6	2.66	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
6:C:325:MET:HE1	9:F:157:TYR:CE2	2.13	0.83
34:e:98:GLU:OE1	34:e:123:THR:OG1	1.93	0.83
44:o:12:CYS:SG	84:o:201:ZN:ZN	1.66	0.83
45:p:29:ILE:HG23	45:p:69:TRP:CD1	2.13	0.83
48:4:4:PHE:O	48:4:46:ILE:CG1	2.25	0.83
48:4:296:PRO:HA	48:4:299:LYS:CE	2.08	0.83
49:S2:1410:C:C2	49:S2:1411:G:C8	2.65	0.83
55:SF:51:HIS:ND1	66:SQ:82:TYR:OH	2.11	0.83
1:5:1676:C:O2'	1:5:3914:U:N3	2.02	0.83
1:5:2089:G:O6	1:5:2263:A:H5''	1.75	0.83
1:5:2099:G:N2	1:5:2100:A:C8	2.46	0.83
1:5:2468:U:H2'	1:5:2506:G:C6	2.13	0.83
1:5:2736:G:N1	1:5:2737:C:C4	2.46	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3693:U:N3	1:5:3694:U:C5	2.47	0.83
1:5:3847:C:N3	1:5:3848:U:C5	2.47	0.83
1:5:4549:G:C2	1:5:4550:G:C8	2.66	0.83
1:5:5062:G:C2	1:5:5063:G:C8	2.65	0.83
14:K:21:GLU:OE1	14:K:48:LYS:HD3	1.78	0.83
14:K:22:VAL:HG23	14:K:48:LYS:CE	2.09	0.83
31:b:36:ASP:OD1	31:b:39:PHE:HB2	1.78	0.83
46:q:52:VAL:O	46:q:89:VAL:CA	2.26	0.83
46:q:91:THR:CG2	46:q:99:ARG:HH22	1.84	0.83
46:q:174:LEU:HD12	46:q:175:LEU:N	1.92	0.83
47:r:80:THR:HG21	47:r:96:MET:HE1	1.61	0.83
48:4:448:GLN:CA	48:4:448:GLN:NE2	2.29	0.83
48:4:813:VAL:HG22	48:4:814:PHE:H	1.43	0.83
49:S2:53:C:N3	49:S2:54:A:N7	2.25	0.83
60:SK:8:ARG:HD3	60:SK:12:TYR:HE1	1.39	0.83
69:ST:23:LYS:HE2	69:ST:51:ASN:HD22	1.42	0.83
1:5:348:G:C2	1:5:350:C:C4	2.67	0.83
1:5:1213:G:C6	1:5:1215:C:C2	2.65	0.83
1:5:1673:U:N3	1:5:1674:C:C5	2.47	0.83
1:5:2451:A:C5	1:5:2452:G:C8	2.67	0.83
1:5:2743:A:N1	1:5:2744:A:C6	2.47	0.83
3:8:102:G:P	3:8:104:A:O2'	2.35	0.83
10:G:53:ARG:HB3	10:G:54:PHE:CZ	2.14	0.83
14:K:62:LEU:CD1	14:K:73:VAL:CB	2.56	0.83
48:4:829:SER:HB2	48:4:832:SER:N	1.93	0.83
49:S2:305:U:O3'	49:S2:306:C:O4'	1.96	0.83
49:S2:426:A:C2	49:S2:427:U:C4	2.66	0.83
1:5:1215:C:N3	1:5:1216:C:C5	2.46	0.83
1:5:1983:A:C2	1:5:2010:A:C5'	2.62	0.83
1:5:2498:C:N3	1:5:2499:C:C5	2.46	0.83
1:5:2633:U:N3	1:5:2634:C:C5	2.46	0.83
1:5:4933:C:N3	1:5:4934:A:C8	2.46	0.83
19:P:41:ILE:HD11	19:P:150:LEU:HD13	1.59	0.83
43:n:9:ARG:NH1	49:S2:1851:A:OP1	2.12	0.83
48:4:531:ASP:HB3	48:4:534:VAL:HG12	1.59	0.83
49:S2:994:C:C4	49:S2:995:G:N7	2.47	0.83
49:S2:1402:A:C5	49:S2:1441:U:C4	2.66	0.83
1:5:383:A:O2'	1:5:384:A:C8	2.31	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

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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
1:5:2268:A:H4'	1:5:2269:C:C5'	2.09	0.83
46:q:94:ASP:HA	46:q:95:LEU:CB	2.03	0.83
48:4:433:ASN:O	48:4:434:TYR:C	2.20	0.83
48:4:623:SER:HB3	48:4:626:GLN:HG2	1.60	0.83
48:4:770:VAL:HG13	48:4:784:VAL:CG1	2.06	0.83
49:S2:858:A:C2	49:S2:859:G:C8	2.66	0.83
49:S2:1123:C:N3	49:S2:1124:C:C6	2.46	0.83
1:5:755:C:C2	1:5:756:G:C8	2.67	0.83
1:5:2397:G:C8	1:5:2399:G:C8	2.67	0.83
1:5:2743:A:N1	1:5:2744:A:N6	2.26	0.83
1:5:4280:A:H61	7:D:29:ASP:N	1.75	0.83
1:5:4325:A:H2'	1:5:4326:G:O4'	1.79	0.83
11:H:156:ASN:OD1	11:H:157:SER:HA	1.77	0.83
48:4:829:SER:CB	48:4:832:SER:H	1.91	0.83
49:S2:623:G:N1	49:S2:624:C:C5	2.46	0.83
49:S2:805:U:N3	49:S2:806:U:C5	2.45	0.83
49:S2:1109:C:H41	67:SR:122:PRO:C	1.85	0.83
49:S2:1286:G:N2	62:SM:33:ARG:HG3	1.92	0.83
1:5:42:A:C6	1:5:4379:A:C2	2.67	0.83
1:5:43:U:C4	1:5:44:A:C8	2.66	0.83
1:5:83:C:OP2	1:5:84:A:O2'	1.96	0.83
1:5:1379:C:C4'	1:5:1380:G:C8	2.62	0.83
1:5:1598:C:N3	1:5:1599:A:N7	2.27	0.83
1:5:1683:U:C2	1:5:1684:A:C8	2.66	0.83
1:5:2107:C:C4	1:5:2126:G:C2	2.66	0.83
1:5:4601:U:O4	1:5:4609:G:C2	2.31	0.83
3:8:83:C:H4'	3:8:85:U:C2	2.13	0.83
35:f:6:TRP:HB2	35:f:102:ARG:HB3	1.58	0.83
46:q:22:ASP:CG	46:q:66:ARG:HH21	1.87	0.83
49:S2:42:A:C5	49:S2:43:U:H5	1.96	0.83
49:S2:851:C:O2'	49:S2:852:G:N2	2.11	0.83
49:S2:1018:U:N3	49:S2:1019:C:C5	2.47	0.83
49:S2:1095:U:H3	49:S2:1149:A:N6	1.75	0.83
49:S2:1249:C:N4	49:S2:1250:A:C6	2.47	0.83
1:5:1387:A:C4	1:5:1397:A:N6	2.45	0.83
1:5:4416:G:N2	1:5:4417:C:C2	2.46	0.83
9:F:149:LEU:CB	9:F:197:TYR:OH	2.26	0.83
48:4:27:HIS:CD2	48:4:28:VAL:O	2.31	0.83
48:4:762:VAL:HG11	48:4:800:LEU:HD13	1.59	0.83
48:4:813:VAL:HG13	48:4:814:PHE:N	1.92	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:449:A:C2	49:S2:452:G:N7	2.46	0.83
49:S2:1850:A:O2'	49:S2:1851:A:O4'	1.96	0.83
1:5:504:G:N2	1:5:654:C:H1'	1.94	0.82
1:5:3591:C:C4	1:5:3592:G:C8	2.66	0.82
1:5:3732:A:C2	1:5:3733:A:C8	2.66	0.82
1:5:3910:C:O2	1:5:3911:C:C6	2.32	0.82
1:5:4413:C:C1'	12:I:157:PHE:HD2	1.91	0.82
14:K:47:ALA:HB2	14:K:72:GLU:CD	2.04	0.82
48:4:225:LEU:CD2	48:4:257:MET:O	2.26	0.82
48:4:628:LEU:HD22	48:4:631:ARG:HH21	1.40	0.82
49:S2:494:C:O2	49:S2:495:U:C6	2.32	0.82
49:S2:600:G:C5	49:S2:631:U:C4	2.66	0.82
49:S2:669:A:H2'	49:S2:670:A:C8	2.13	0.82
49:S2:1292:C:H3'	81:Sf:150:PHE:HA	1.60	0.82
49:S2:1537:A:H4'	49:S2:1604:G:H4'	1.61	0.82
1:5:1273:G:N7	8:E:69:TYR:N	2.25	0.82
1:5:1280:C:C2	1:5:1282:G:C5	2.67	0.82
1:5:1442:C:C2	1:5:1443:A:C8	2.67	0.82
1:5:1572:U:H4'	21:R:95:TRP:HE1	1.43	0.82
1:5:1994:C:H1'	14:K:132:ILE:HG12	1.59	0.82
1:5:4884:G:C2	1:5:4885:U:C5	2.67	0.82
48:4:518:PRO:CA	73:SX:50:ILE:CD1	2.57	0.82
48:4:692:LEU:HD22	48:4:734:LEU:CD2	2.08	0.82
48:4:776:VAL:CG2	48:4:777:ALA:N	2.32	0.82
49:S2:1292:C:O4'	81:Sf:148:TYR:C	2.23	0.82
49:S2:1407:U:H2'	49:S2:1408:U:C5	2.13	0.82
49:S2:1575:G:C2	49:S2:1576:G:N7	2.47	0.82
76:Sa:18:VAL:HG21	76:Sa:33:ASP:OD2	1.79	0.82
1:5:1671:U:N3	1:5:1672:U:C5	2.44	0.82
1:5:1671:U:H2'	1:5:1671:U:O2	1.79	0.82
1:5:4772:C:N3	1:5:4773:C:C5	2.47	0.82
4:A:202:VAL:HG12	4:A:217:GLN:HG2	1.60	0.82
11:H:156:ASN:OD1	11:H:157:SER:N	2.12	0.82
33:d:85:ARG:HG3	33:d:85:ARG:HH11	1.44	0.82
48:4:420:LEU:N	48:4:420:LEU:HD23	1.94	0.82
48:4:751:CYS:HB3	48:4:755:VAL:HG11	1.62	0.82
49:S2:1051:G:N1	49:S2:1052:A:N7	2.27	0.82
49:S2:1254:C:O2	49:S2:1255:G:C8	2.32	0.82
1:5:287:U:N3	1:5:288:G:N7	2.28	0.82
1:5:321:U:N3	1:5:322:C:C5	2.48	0.82
1:5:957:G:P	1:5:1284:G:H21	2.02	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1265:G:H5''	1:5:2115:G:N2	1.94	0.82
1:5:1632:A:N1	1:5:1634:A:C8	2.47	0.82
1:5:2327:G:N1	1:5:2328:G:C5	2.47	0.82
3:8:10:G:C5	3:8:11:C:C6	2.67	0.82
4:A:174:ARG:HA	45:p:69:TRP:CH2	2.13	0.82
5:B:321:VAL:HG12	5:B:322:HIS:HB2	1.62	0.82
48:4:3:ASN:O	48:4:46:ILE:HA	1.78	0.82
48:4:150:ARG:C	48:4:200:MET:HE1	2.04	0.82
49:S2:452:G:N3	49:S2:453:C:C6	2.48	0.82
49:S2:996:A:N6	63:SN:113:PHE:CZ	2.47	0.82
49:S2:1018:U:O2	49:S2:1019:C:C6	2.32	0.82
49:S2:1249:C:N4	49:S2:1250:A:C5	2.46	0.82
49:S2:1434:C:C3'	49:S2:1435:C:O4'	2.27	0.82
49:S2:1601:A:H1'	49:S2:1604:G:O6	1.80	0.82
1:5:2034:G:C6	1:5:2035:C:C4	2.68	0.82
1:5:2107:C:C4	1:5:2126:G:N2	2.48	0.82
1:5:2293:U:N3	1:5:2294:G:N7	2.26	0.82
1:5:4623:G:H4'	5:B:16:PHE:HE2	1.43	0.82
3:8:10:G:C2	3:8:11:C:H1'	2.15	0.82
5:B:119:TYR:N	5:B:119:TYR:CD1	2.46	0.82
14:K:116:MET:HB2	14:K:117:ARG:NH2	1.95	0.82
14:K:121:LEU:HD13	14:K:129:ILE:HD13	1.52	0.82
46:q:148:SER:HG	46:q:153:GLU:CD	1.81	0.82
48:4:740:LEU:HD12	48:4:820:LEU:HD12	1.59	0.82
49:S2:476:A:C2	49:S2:488:U:O2	2.33	0.82
49:S2:1306:U:O2	81:Sf:133:ALA:HB1	1.80	0.82
49:S2:1315:U:N3	49:S2:1316:C:C6	2.47	0.82
49:S2:1414:A:C2	49:S2:1415:C:C6	2.67	0.82
49:S2:1781:A:C2	49:S2:1782:G:C5	2.67	0.82
1:5:1478:C:C2	1:5:1479:G:N7	2.47	0.82
1:5:2026:A:H2'	1:5:2027:U:H5'	1.62	0.82
1:5:2251:G:C1'	1:5:2252:G:N2	2.43	0.82
1:5:2366:A:C2	1:5:3851:U:H1'	2.14	0.82
1:5:2632:U:C2	1:5:2633:U:C5	2.68	0.82
1:5:2744:A:C2	1:5:2745:A:C6	2.67	0.82
48:4:240:GLY:O	48:4:243:GLN:CD	2.22	0.82
48:4:575:PRO:O	48:4:576:VAL:C	2.20	0.82
48:4:592:LEU:C	48:4:592:LEU:CD1	2.52	0.82
49:S2:339:A:C2'	49:S2:340:C:C6	2.61	0.82
1:5:166:C:N3	1:5:167:C:H5	1.78	0.82
1:5:723:A:H2	1:5:943:A:N1	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2395:A:O2'	1:5:2806:A:N3	2.11	0.82
1:5:2566:G:C2	1:5:2567:G:C8	2.67	0.82
1:5:3911:C:C2	1:5:3912:U:C5	2.68	0.82
1:5:4076:G:H21	10:G:74:LEU:HG	1.43	0.82
1:5:4581:G:C2	1:5:4582:C:C5	2.67	0.82
3:8:12:G:N1	3:8:13:G:C8	2.48	0.82
48:4:638:LYS:HD2	48:4:638:LYS:N	1.95	0.82
48:4:689:GLU:C	48:4:730:TYR:CE1	2.58	0.82
1:5:470:A:C5	1:5:471:A:N7	2.48	0.82
1:5:690:C:N3	1:5:691:C:C5	2.48	0.82
1:5:1465:G:C2	1:5:1466:G:H1'	2.14	0.82
1:5:2507:A:C5	1:5:2508:U:C6	2.67	0.82
1:5:3873:G:H2'	1:5:3874:G:O4'	1.79	0.82
3:8:95:A:C2	3:8:96:C:C6	2.68	0.82
48:4:331:GLU:OE2	48:4:335:LEU:HD23	1.80	0.82
49:S2:452:G:C2	49:S2:453:C:C5	2.68	0.82
49:S2:862:A:C6	49:S2:863:U:C5	2.66	0.82
1:5:1660:U:C4	30:a:12:ARG:NH1	2.48	0.82
3:8:119:C:O2	3:8:120:G:H8	1.58	0.82
14:K:125:LEU:CD1	14:K:163:PRO:CA	2.51	0.82
32:c:28:VAL:HG11	32:c:33:GLN:HB3	1.62	0.82
48:4:592:LEU:HD12	48:4:592:LEU:O	1.80	0.82
48:4:730:TYR:HB3	48:4:854:PHE:CZ	2.15	0.82
49:S2:439:A:C2	49:S2:455:A:C2	2.67	0.82
1:5:484:U:N3	1:5:486:C:C5	2.47	0.82
1:5:961:G:H2'	1:5:961:G:N3	1.94	0.82
1:5:2272:C:O2'	1:5:2273:G:H5'	1.80	0.82
1:5:2329:U:O2'	1:5:2330:G:O5'	1.97	0.82
1:5:2826:U:H1'	1:5:2827:G:N1	1.95	0.82
11:H:61:TRP:CZ2	22:S:152:PHE:HE2	1.98	0.82
48:4:27:HIS:CD2	48:4:28:VAL:CG2	2.63	0.82
48:4:155:LEU:HD23	48:4:156:MET:N	1.94	0.82
48:4:205:ILE:HG13	48:4:211:THR:HB	1.60	0.82
48:4:240:GLY:CA	48:4:241:GLU:CB	2.55	0.82
48:4:275:LYS:HE2	48:4:276:SER:CA	2.09	0.82
48:4:611:ASP:OD1	48:4:612:GLY:N	2.13	0.82
49:S2:581:U:C4	49:S2:582:C:C5	2.68	0.82
49:S2:806:U:N3	49:S2:807:G:N7	2.27	0.82
49:S2:1114:U:O4	49:S2:1119:A:C2	2.32	0.82
49:S2:1290:G:H2'	81:Sf:146:LEU:CA	2.09	0.82
49:S2:1453:C:N4	49:S2:1455:A:H1'	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1528:G:N2	49:S2:1529:C:C2	2.48	0.82
49:S2:1595:U:N3	49:S2:1596:U:C5	2.47	0.82
1:5:370:U:C5	1:5:1637:A:C6	2.68	0.81
1:5:987:C:H2'	1:5:988:C:O4'	1.78	0.81
1:5:1213:G:N1	1:5:1215:C:C2	2.48	0.81
1:5:1771:U:H2'	1:5:1772:C:O4'	1.79	0.81
1:5:1967:A:C2	1:5:1968:G:N7	2.48	0.81
1:5:2734:U:C2	1:5:2735:G:C8	2.68	0.81
14:K:123:ARG:CD	14:K:129:ILE:CD1	2.58	0.81
14:K:124:GLU:C	14:K:128:THR:OG1	2.23	0.81
46:q:107:VAL:HG12	46:q:108:PRO:HD2	1.62	0.81
48:4:771:PHE:CD2	48:4:785:LYS:HD2	2.15	0.81
49:S2:604:A:C8	59:SJ:20:PHE:CD2	2.68	0.81
49:S2:792:C:N3	49:S2:793:G:N7	2.28	0.81
49:S2:868:G:N2	57:SH:115:LYS:HA	1.95	0.81
49:S2:1422:G:N2	49:S2:1424:G:C8	2.48	0.81
49:S2:1824:A:C2	49:S2:1825:A:N7	2.48	0.81
1:5:1076:C:C4	1:5:1077:C:C5	2.69	0.81
1:5:1751:A:C6	1:5:1752:G:C8	2.67	0.81
1:5:2769:U:O2'	1:5:2770:C:O5'	1.98	0.81
1:5:3674:G:C2	1:5:3675:G:C8	2.68	0.81
1:5:4745:G:O2'	1:5:4746:C:H6	1.55	0.81
14:K:17:CYS:O	14:K:18:THR:OG1	1.97	0.81
31:b:13:SER:HA	31:b:16:TRP:CH2	2.14	0.81
46:q:28:PHE:CE1	46:q:192:VAL:CG2	2.62	0.81
46:q:50:LYS:O	46:q:51:ALA:O	1.98	0.81
48:4:722:ILE:HB	48:4:723:PRO:HD3	1.60	0.81
49:S2:105:U:C4	49:S2:106:C:C6	2.67	0.81
49:S2:349:A:O3'	58:SI:27:TYR:OH	1.98	0.81
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
1:5:907:C:C2	1:5:908:G:C8	2.69	0.81
1:5:1340:C:O2	1:5:1341:U:C6	2.33	0.81
1:5:2018:C:C2'	1:5:2019:C:H5'	2.11	0.81
1:5:2457:G:OP1	17:N:65:ARG:NH1	2.12	0.81
1:5:2590:G:C2	1:5:2754:G:N2	2.48	0.81
1:5:3846:C:N3	1:5:3847:C:C5	2.48	0.81
1:5:5045:G:H2'	1:5:5046:U:O4'	1.80	0.81
3:8:125:C:C4'	3:8:126:C:H3'	2.09	0.81
14:K:22:VAL:CG2	14:K:48:LYS:HE3	2.10	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:77:ALA:HB3	14:K:80:LEU:CD1	2.10	0.81
46:q:52:VAL:N	46:q:90:PHE:O	2.13	0.81
48:4:543:GLU:OE1	48:4:576:VAL:HB	1.80	0.81
48:4:604:MET:HE1	48:4:729:LEU:HD23	1.63	0.81
48:4:824:PRO:O	48:4:832:SER:CB	2.27	0.81
49:S2:380:G:N2	49:S2:382:C:H3'	1.94	0.81
49:S2:1306:U:O4	81:Sf:140:TYR:CD1	2.33	0.81
49:S2:1418:C:C2	49:S2:1420:G:N7	2.48	0.81
49:S2:1496:U:N3	49:S2:1498:A:C8	2.48	0.81
49:S2:1782:G:N2	49:S2:1784:G:C5	2.49	0.81
54:SE:18:TRP:HB3	54:SE:46:ILE:HD13	1.61	0.81
79:Sd:26:ASN:ND2	79:Sd:39:CYS:SG	2.53	0.81
1:5:690:C:C2	1:5:691:C:C6	2.69	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
1:5:5047:C:O4'	1:5:5048:A:C2	2.33	0.81
3:8:94:G:C8	3:8:94:G:C5'	2.62	0.81
14:K:93:LYS:O	14:K:94:LYS:HB2	1.79	0.81
14:K:96:LYS:C	14:K:98:ILE:HG12	2.05	0.81
14:K:123:ARG:HB3	14:K:129:ILE:CG1	1.78	0.81
46:q:61:MET:CG	46:q:82:ILE:HG22	2.03	0.81
48:4:848:ILE:CG2	48:4:849:PRO:N	2.41	0.81
49:S2:173:A:C6	49:S2:174:C:C5	2.69	0.81
68:SS:10:GLN:HG2	68:SS:13:LEU:HD21	1.63	0.81
1:5:1517:G:N2	1:5:1650:A:N1	2.28	0.81
1:5:2504:C:O2	1:5:2505:C:C6	2.34	0.81
1:5:2736:G:C2	1:5:2737:C:C6	2.67	0.81
1:5:4731:G:O4'	1:5:4732:G:N2	2.13	0.81
14:K:96:LYS:O	14:K:98:ILE:HG12	1.80	0.81
14:K:131:GLU:CG	14:K:155:ILE:HD12	2.10	0.81
19:P:54:GLN:HB3	19:P:83:TRP:HD1	1.45	0.81
48:4:58:ASP:O	48:4:63:GLU:CB	2.28	0.81
48:4:402:VAL:HG23	48:4:403:PRO:CD	1.97	0.81
48:4:845:LYS:HZ1	48:4:846:GLU:HG2	1.41	0.81
49:S2:120:U:N3	49:S2:121:U:C6	2.49	0.81
49:S2:120:U:C2	49:S2:121:U:C6	2.68	0.81
49:S2:1314:U:C2	49:S2:1315:U:H1'	2.15	0.81
49:S2:1605:G:H2'	49:S2:1606:G:H1'	1.63	0.81
1:5:120:A:C1'	1:5:121:A:N1	2.43	0.81
1:5:422:C:O2	1:5:423:G:H8	1.64	0.81
1:5:967:C:H5	1:5:968:C:O2	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1238:A:H2'	1:5:1239:C:C6	2.14	0.81
1:5:1392:A:C2	1:5:1393:G:C6	2.68	0.81
1:5:1438:U:C2	1:5:2099:G:O6	2.33	0.81
1:5:1857:C:O2	1:5:1858:A:C8	2.34	0.81
1:5:1995:G:H21	46:q:41:GLN:HE22	1.28	0.81
1:5:2753:G:H3'	1:5:2754:G:H8	1.46	0.81
1:5:4283:G:C6	1:5:4284:C:C5	2.69	0.81
14:K:92:ARG:HA	14:K:95:GLN:CD	2.04	0.81
48:4:56:PHE:CE1	48:4:455:GLY:C	2.52	0.81
48:4:741:MET:SD	48:4:817:TRP:CE3	2.74	0.81
49:S2:43:U:H3	49:S2:484:A:H2	1.22	0.81
49:S2:459:C:C2	49:S2:460:A:C8	2.69	0.81
49:S2:1132:C:N4	49:S2:1133:A:N7	2.29	0.81
55:SF:79:HIS:O	55:SF:83:ASN:ND2	2.14	0.81
1:5:1280:C:O2'	1:5:1281:G:H3'	1.80	0.81
1:5:2409:U:C5	1:5:2783:A:C2	2.69	0.81
1:5:2438:A:C6	1:5:2441:C:C5	2.69	0.81
1:5:3668:C:O2	1:5:3668:C:H2'	1.81	0.81
1:5:4079:C:N3	1:5:4080:C:C5	2.49	0.81
1:5:4276:G:C5	1:5:4277:G:C8	2.69	0.81
2:7:42:A:C1'	13:J:75:ARG:NH1	2.43	0.81
14:K:131:GLU:CD	14:K:155:ILE:HD12	2.04	0.81
21:R:117:ARG:NH2	21:R:117:ARG:HB2	1.96	0.81
34:e:35:TRP:C	34:e:35:TRP:HD1	1.87	0.81
48:4:45:ILE:HD12	48:4:78:PHE:HD1	1.38	0.81
48:4:746:LEU:O	48:4:812:CYS:HB2	1.81	0.81
48:4:794:PHE:N	48:4:794:PHE:HD1	1.76	0.81
49:S2:636:C:C2	49:S2:637:U:C6	2.69	0.81
79:Sd:40:ARG:HG2	79:Sd:41:GLN:OE1	1.81	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
1:5:504:G:C2	1:5:654:C:O2	2.34	0.81
1:5:1269:G:C6	1:5:2111:G:N2	2.49	0.81
1:5:2294:G:N3	1:5:2295:C:C6	2.48	0.81
1:5:2515:G:N7	1:5:2516:G:N7	2.28	0.81
1:5:3621:A:H8	1:5:4642:U:H1'	1.45	0.81
1:5:4653:C:O2	1:5:4654:C:C6	2.34	0.81
14:K:81:ILE:HD13	14:K:117:ARG:NH1	1.95	0.81
14:K:162:CYS:N	14:K:163:PRO:CD	2.44	0.81
17:N:199:GLN:HA	17:N:199:GLN:OE1	1.79	0.81
32:c:31:TYR:HD1	32:c:32:LYS:N	1.77	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:75:LEU:HD22	46:q:78:LEU:HD12	1.60	0.81
46:q:147:ILE:CB	48:4:204:MET:CE	2.29	0.81
48:4:649:ILE:HD13	48:4:652:PHE:CE1	2.15	0.81
48:4:710:HIS:HD2	48:4:715:HIS:HB2	1.42	0.81
49:S2:460:A:C2	49:S2:461:U:C4	2.57	0.81
49:S2:617:G:N7	73:SX:67:ARG:NH1	2.28	0.81
49:S2:1231:C:C1'	49:S2:1665:G:N2	2.43	0.81
49:S2:1430:C:C2	49:S2:1431:G:C8	2.69	0.81
1:5:1049:C:C2	1:5:1050:C:C6	2.69	0.81
1:5:1245:C:C6	1:5:1269:G:C5	2.69	0.81
1:5:2658:G:H22	1:5:2675:G:H2'	1.45	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
3:8:64:U:H2'	3:8:65:A:C8	2.15	0.81
14:K:104:ILE:O	14:K:106:PHE:CD1	2.34	0.81
48:4:10:ARG:CD	48:4:13:MET:SD	2.69	0.81
48:4:430:MET:HE2	48:4:486:THR:OG1	1.80	0.81
49:S2:1035:A:H2'	49:S2:1036:A:O4'	1.80	0.81
49:S2:1293:A:C4	81:Sf:150:PHE:HB3	2.15	0.81
49:S2:1394:G:C6	49:S2:1395:C:H5	1.99	0.81
1:5:504:G:H22	1:5:654:C:H1'	1.44	0.81
1:5:1338:G:N2	30:a:25:HIS:CE1	2.49	0.81
1:5:1628:C:O2	1:5:1629:G:H8	1.62	0.81
1:5:2495:U:C2	1:5:2496:G:C8	2.69	0.81
1:5:2691:U:C2	1:5:2692:U:C5	2.68	0.81
1:5:3686:G:P	4:A:193:ARG:HH22	2.04	0.81
1:5:4344:U:O2	1:5:4345:C:C6	2.34	0.81
29:Z:77:TYR:HB3	32:c:39:ARG:HD3	1.63	0.81
32:c:31:TYR:HE2	32:c:56:ARG:NE	1.77	0.81
49:S2:795:A:H2'	49:S2:796:G:H8	1.45	0.81
49:S2:1034:A:H2'	49:S2:1035:A:O5'	1.81	0.81
49:S2:1099:G:C6	49:S2:1100:A:N7	2.48	0.81
49:S2:1248:U:H2'	49:S2:1249:C:C1'	2.11	0.81
1:5:93:G:C2	1:5:94:A:C2	2.69	0.80
1:5:1174:G:N2	1:5:1175:A:C5	2.49	0.80
1:5:1310:C:C2	1:5:1311:G:C8	2.69	0.80
1:5:2277:C:O2	1:5:2278:G:H8	1.60	0.80
1:5:2553:A:N1	1:5:2763:U:C5	2.49	0.80
1:5:3695:U:C4	1:5:3696:C:C5	2.69	0.80
1:5:3731:C:O2	1:5:3732:A:C8	2.34	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4233:A:O2'	1:5:4234:A:H3'	1.82	0.80
1:5:4280:A:N6	7:D:29:ASP:OD1	2.14	0.80
1:5:4332:C:O2	1:5:4333:C:C6	2.34	0.80
1:5:4426:C:C2	1:5:4427:G:C8	2.69	0.80
14:K:60:VAL:HG12	14:K:75:PRO:HG2	1.63	0.80
14:K:123:ARG:N	14:K:129:ILE:HD11	1.96	0.80
25:V:97:TYR:CZ	26:W:21:TYR:HA	2.15	0.80
46:q:75:LEU:CD2	46:q:78:LEU:CD1	2.58	0.80
49:S2:107:A:H2'	49:S2:108:G:C8	2.17	0.80
49:S2:445:A:H2'	49:S2:446:G:O4'	1.80	0.80
49:S2:1291:A:C2	81:Sf:140:TYR:CD2	2.69	0.80
49:S2:1597:C:O2'	49:S2:1598:G:O4'	1.99	0.80
50:SA:111:GLN:HA	50:SA:116:PHE:CE2	2.15	0.80
1:5:100:C:H5	1:5:101:A:C8	1.90	0.80
1:5:1190:C:C2	1:5:1191:C:C6	2.69	0.80
1:5:1406:G:O6	1:5:1408:G:O2'	1.97	0.80
1:5:4257:A:H2'	1:5:4258:C:C5	2.16	0.80
8:E:153:HIS:CE1	8:E:180:VAL:HG22	2.16	0.80
13:J:119:TYR:CG	68:SS:108:ARG:HH21	1.34	0.80
14:K:61:LYS:CE	14:K:72:GLU:HA	2.11	0.80
47:r:107:ARG:C	47:r:107:ARG:HD2	2.06	0.80
48:4:271:GLY:C	48:4:272:LYS:HG2	2.06	0.80
48:4:671:TYR:O	48:4:675:ILE:N	2.01	0.80
48:4:686:ALA:HB2	48:4:726:ARG:CA	2.12	0.80
49:S2:452:G:N1	49:S2:453:C:C4	2.50	0.80
49:S2:751:G:O6	49:S2:791:C:N3	2.13	0.80
49:S2:1258:A:N7	49:S2:1659:U:O2	2.14	0.80
49:S2:1293:A:O4'	81:Sf:150:PHE:CG	2.34	0.80
49:S2:1648:G:C8	66:SQ:125:ARG:HB3	2.17	0.80
49:S2:1835:A:H5'	49:S2:1863:A:C8	2.17	0.80
68:SS:86:ARG:HD3	68:SS:89:ASP:HB2	1.61	0.80
1:5:424:U:O2	1:5:425:U:H6	1.64	0.80
1:5:1441:C:OP1	1:5:2109:G:O3'	2.00	0.80
1:5:2532:C:O2	1:5:2533:C:C5	2.32	0.80
1:5:4277:G:C2	1:5:4278:C:C6	2.69	0.80
3:8:96:C:C2	3:8:97:A:H8	1.99	0.80
11:H:113:GLU:OE2	11:H:113:GLU:HA	1.81	0.80
49:S2:1051:G:C6	49:S2:1052:A:N7	2.48	0.80
49:S2:1156:U:O4	52:SC:194:ARG:NH1	2.15	0.80
49:S2:1594:A:N1	49:S2:1595:U:C6	2.48	0.80
1:5:146:G:C2	1:5:147:A:N7	2.50	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1756:U:C4	1:5:1776:A:C2	2.70	0.80
1:5:1926:C:N3	1:5:1927:U:C5	2.49	0.80
1:5:1967:A:C2	1:5:1968:G:C5	2.69	0.80
1:5:2690:C:C2	1:5:2691:U:C6	2.69	0.80
1:5:3741:C:N3	1:5:3742:G:N7	2.29	0.80
1:5:4256:A:N7	13:J:60:PHE:CE1	2.50	0.80
10:G:264:LYS:HE3	10:G:265:LEU:HD22	1.61	0.80
14:K:35:LEU:CD2	46:q:131:GLY:CA	2.48	0.80
48:4:112:SER:C	48:4:114:GLU:N	2.35	0.80
49:S2:165:G:C2'	49:S2:166:A:H8	1.94	0.80
49:S2:1074:C:N3	49:S2:1075:C:C5	2.48	0.80
49:S2:1292:C:N4	81:Sf:132:MET:SD	2.55	0.80
49:S2:1310:U:N3	49:S2:1311:C:C5	2.48	0.80
49:S2:1409:A:C2	49:S2:1410:C:C5	2.70	0.80
1:5:753:C:N3	1:5:754:U:C6	2.48	0.80
1:5:1279:A:H3'	1:5:1280:C:C5	2.16	0.80
1:5:1687:U:C2	1:5:1850:A:N6	2.49	0.80
1:5:3739:C:C4	1:5:3740:G:C8	2.69	0.80
1:5:4098:A:N3	1:5:4099:G:C8	2.49	0.80
1:5:4579:U:N3	1:5:4580:U:C5	2.49	0.80
14:K:32:ILE:C	14:K:34:PRO:HD3	2.06	0.80
48:4:73:THR:N	48:4:104:ASP:OD2	2.11	0.80
48:4:540:GLU:OE1	48:4:540:GLU:CA	2.29	0.80
48:4:562:GLU:HA	48:4:570:ILE:CD1	2.08	0.80
49:S2:220:U:C2	49:S2:221:A:C8	2.70	0.80
49:S2:648:A:C6	49:S2:649:U:C5	2.69	0.80
49:S2:1134:G:N1	49:S2:1135:C:C4	2.49	0.80
49:S2:1290:G:H2'	81:Sf:146:LEU:N	1.96	0.80
49:S2:1834:A:C2	49:S2:1837:G:N2	2.48	0.80
1:5:1279:A:C2'	1:5:1280:C:C5	2.62	0.80
1:5:1572:U:H4'	21:R:95:TRP:NE1	1.97	0.80
1:5:2079:G:N1	1:5:2080:U:C4	2.50	0.80
1:5:3648:A:C4	1:5:3785:A:N6	2.50	0.80
1:5:4080:C:C2	1:5:4081:G:H8	1.96	0.80
3:8:64:U:O2	3:8:65:A:C5	2.35	0.80
6:C:143:ARG:NH2	6:C:145:GLU:HG3	1.96	0.80
14:K:114:ARG:HD2	14:K:130:LYS:HE3	1.62	0.80
14:K:121:LEU:HD12	14:K:129:ILE:HD13	0.83	0.80
46:q:183:PHE:O	46:q:184:SER:CB	2.29	0.80
48:4:113:SER:HB3	48:4:533:MET:HB3	0.80	0.80
48:4:271:GLY:O	48:4:272:LYS:CD	2.30	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:271:GLY:O	48:4:272:LYS:CG	2.30	0.80
49:S2:580:U:O4	49:S2:581:U:C5	2.35	0.80
49:S2:599:A:C1'	49:S2:605:A:N3	2.45	0.80
49:S2:750:C:O2	49:S2:751:G:C8	2.35	0.80
49:S2:1310:U:O4'	81:Sf:143:LYS:CE	2.29	0.80
1:5:473:C:N3	1:5:474:C:C5	2.49	0.80
1:5:1070:G:C6	1:5:1071:C:C5	2.69	0.80
1:5:1948:G:O6	1:5:2034:G:O6	2.00	0.80
1:5:2279:A:N3	1:5:2280:G:C8	2.49	0.80
1:5:4258:C:O2	1:5:4259:C:C6	2.34	0.80
1:5:4510:A:N6	1:5:4592:C:C4'	2.44	0.80
23:T:82:GLY:CA	31:b:16:TRP:HB2	2.12	0.80
46:q:6:ARG:HG2	46:q:10:LYS:CD	2.11	0.80
46:q:26:LYS:CG	46:q:194:ASP:OD2	2.29	0.80
46:q:57:LYS:HD3	46:q:58:ASN:H	1.46	0.80
48:4:155:LEU:CD1	48:4:185:VAL:HG21	2.12	0.80
48:4:206:ASP:CB	48:4:207:PRO:HD2	2.02	0.80
48:4:849:PRO:CD	48:4:849:PRO:O	2.30	0.80
48:4:849:PRO:O	48:4:849:PRO:CG	2.29	0.80
49:S2:165:G:O2'	49:S2:166:A:O4'	2.00	0.80
49:S2:182:C:H2'	49:S2:184:G:H1'	1.61	0.80
49:S2:863:U:O2	49:S2:864:A:C8	2.35	0.80
49:S2:964:A:O2'	49:S2:965:U:O5'	1.97	0.80
49:S2:1039:C:N3	49:S2:1040:G:C8	2.50	0.80
49:S2:1291:A:C5	81:Sf:140:TYR:CE2	2.70	0.80
49:S2:1408:U:N3	49:S2:1439:A:C2	2.42	0.80
51:SB:133:TYR:CE2	51:SB:181:LEU:HD12	2.16	0.80
1:5:33:A:H2'	1:5:34:A:C8	2.16	0.80
1:5:424:U:N3	1:5:425:U:H5	1.79	0.80
1:5:486:C:N3	1:5:487:G:N7	2.30	0.80
1:5:738:C:C4	1:5:739:G:N7	2.50	0.80
1:5:1268:G:C2	1:5:2111:G:C2	2.70	0.80
1:5:2812:A:H2'	1:5:2813:A:C8	2.16	0.80
1:5:4772:C:C2	1:5:4773:C:C6	2.70	0.80
2:7:50:A:C2	2:7:51:G:C8	2.69	0.80
14:K:48:LYS:CG	14:K:52:ASP:OD1	2.26	0.80
48:4:49:ALA:CA	48:4:55:ARG:HH21	1.92	0.80
48:4:420:LEU:N	48:4:420:LEU:HD22	1.96	0.80
48:4:567:CYS:C	48:4:568:ILE:HD12	2.06	0.80
48:4:660:ASN:ND2	48:4:697:MET:O	2.14	0.80
48:4:752:PRO:HD2	48:4:755:VAL:HG23	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:829:SER:CB	48:4:832:SER:HB3	2.12	0.80
49:S2:599:A:O4'	49:S2:605:A:H2	1.65	0.80
49:S2:1290:G:H2'	81:Sf:146:LEU:CB	2.12	0.80
49:S2:1539:U:O2	49:S2:1540:G:H8	1.62	0.80
60:SK:2:LEU:HB3	60:SK:8:ARG:NH2	1.96	0.80
1:5:2428:A:C5	1:5:2789:A:H2	2.00	0.80
1:5:4078:C:O2'	1:5:4172:A:N6	2.14	0.80
1:5:5012:G:N2	1:5:5014:A:C8	2.50	0.80
3:8:65:A:C2	3:8:66:A:C5	2.69	0.80
32:c:28:VAL:CG1	32:c:33:GLN:HB3	2.11	0.80
46:q:97:GLU:OE2	46:q:206:ILE:CG1	2.29	0.80
46:q:134:LYS:HE3	46:q:137:PHE:HE1	0.67	0.80
46:q:135:THR:HG22	46:q:152:ILE:HG21	1.64	0.80
48:4:27:HIS:CD2	48:4:27:HIS:C	2.60	0.80
48:4:60:ARG:CG	48:4:60:ARG:O	2.30	0.80
48:4:101:ASN:CB	48:4:469:ILE:HD13	2.12	0.80
48:4:420:LEU:CD2	48:4:420:LEU:O	2.30	0.80
48:4:498:LYS:C	48:4:500:SER:N	2.39	0.80
49:S2:38:A:C2	49:S2:515:G:N2	2.50	0.80
49:S2:71:G:H3'	49:S2:72:C:H5''	1.64	0.80
49:S2:1063:C:C1'	49:S2:1838:U:O4	2.30	0.80
49:S2:1835:A:C2	49:S2:1863:A:N6	2.50	0.80
1:5:194:C:O2'	28:Y:121:ARG:NH2	2.15	0.80
1:5:504:G:C2	1:5:505:G:C5	2.70	0.80
1:5:1080:C:N3	1:5:1081:C:C5	2.50	0.80
1:5:4301:U:H4'	23:T:54:HIS:CD2	2.17	0.80
48:4:402:VAL:HG22	48:4:403:PRO:CD	2.10	0.80
49:S2:618:C:H2'	49:S2:618:C:O2	1.79	0.80
49:S2:1134:G:N2	49:S2:1135:C:C2	2.49	0.80
49:S2:1146:C:C2	49:S2:1147:C:C5	2.70	0.80
49:S2:1595:U:C4	49:S2:1596:U:C5	2.70	0.80
49:S2:1708:C:N3	49:S2:1709:G:N7	2.30	0.80
49:S2:1755:C:C4	49:S2:1756:C:C5	2.70	0.80
1:5:440:U:C2	1:5:441:G:C8	2.70	0.79
1:5:1886:G:C2	1:5:1894:C:N3	2.50	0.79
1:5:2505:C:H1'	1:5:2506:G:C5	2.17	0.79
1:5:4239:A:C6	1:5:4240:G:C8	2.70	0.79
3:8:11:C:O2	3:8:11:C:H2'	1.82	0.79
3:8:120:G:C2	3:8:121:G:C8	2.69	0.79
8:E:197:ILE:HD12	8:E:257:ILE:HG23	1.63	0.79
46:q:101:MET:HE2	46:q:206:ILE:CD1	2.11	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:339:A:N3	49:S2:340:C:C4	2.49	0.79
49:S2:495:U:O2'	49:S2:496:C:O4'	1.99	0.79
49:S2:608:C:N3	49:S2:609:U:C5	2.50	0.79
49:S2:795:A:C4	49:S2:796:G:N7	2.50	0.79
49:S2:998:A:N7	49:S2:999:G:H1'	1.97	0.79
49:S2:1053:C:O2	49:S2:1054:G:C8	2.36	0.79
49:S2:1094:C:N3	49:S2:1095:U:C5	2.51	0.79
49:S2:1540:G:C2	49:S2:1541:G:N9	2.50	0.79
49:S2:1786:U:C2	49:S2:1787:G:C8	2.69	0.79
49:S2:1831:A:H1'	49:S2:1851:A:H2'	1.63	0.79
1:5:70:A:C2	1:5:4355:G:O4'	2.35	0.79
1:5:235:A:C6	1:5:238:C:C4	2.70	0.79
1:5:982:U:H5'	8:E:69:TYR:OH	1.83	0.79
1:5:3695:U:N3	1:5:3696:C:C5	2.51	0.79
1:5:4976:U:O4	5:B:342:LYS:HD2	1.81	0.79
3:8:12:G:N2	3:8:13:G:N9	2.30	0.79
3:8:81:C:O2	3:8:83:C:OP1	1.99	0.79
14:K:62:LEU:HG	14:K:73:VAL:HB	1.65	0.79
14:K:104:ILE:O	14:K:106:PHE:HD1	1.66	0.79
46:q:139:GLN:HE22	48:4:184:ASN:HA	1.44	0.79
49:S2:1008:A:H1'	63:SN:101:HIS:CE1	2.16	0.79
49:S2:1202:U:N3	49:S2:1203:G:C8	2.50	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
1:5:1247:U:C4	1:5:1248:C:C5	2.70	0.79
1:5:2089:G:C6	1:5:2263:A:C5	2.70	0.79
1:5:2328:G:O2'	1:5:2329:U:C5'	2.30	0.79
14:K:140:GLY:O	14:K:141:CYS:CB	2.30	0.79
14:K:159:ALA:O	14:K:163:PRO:CG	2.31	0.79
46:q:126:GLN:NE2	46:q:127:ASN:H	1.79	0.79
49:S2:119:U:C2	49:S2:120:U:C6	2.69	0.79
49:S2:164:A:H2'	49:S2:165:G:N2	1.96	0.79
49:S2:221:A:C6	49:S2:222:U:C5	2.69	0.79
49:S2:494:C:N3	49:S2:495:U:C5	2.51	0.79
49:S2:1100:A:C2	49:S2:1101:U:C5	2.70	0.79
49:S2:1592:C:N3	49:S2:1593:C:C5	2.51	0.79
1:5:66:A:C2	1:5:312:G:O4'	2.36	0.79
1:5:83:C:O2	1:5:99:A:N6	2.12	0.79
1:5:1388:A:N6	1:5:1396:G:N2	2.30	0.79
1:5:1806:G:N2	1:5:1807:C:C2	2.51	0.79
1:5:4098:A:C2	1:5:4099:G:C5	2.70	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4269:G:C6	1:5:4270:C:C5	2.71	0.79
1:5:4627:U:C2	1:5:4628:U:C5	2.70	0.79
3:8:37:A:O4'	3:8:39:G:H1'	1.82	0.79
3:8:65:A:C2	3:8:66:A:N7	2.50	0.79
14:K:124:GLU:O	14:K:128:THR:OG1	2.01	0.79
46:q:80:PRO:CG	46:q:81:HIS:HE1	1.81	0.79
48:4:191:THR:CG2	48:4:192:TYR:CE1	2.65	0.79
48:4:751:CYS:SG	48:4:755:VAL:HB	2.22	0.79
48:4:756:VAL:HG22	48:4:782:PHE:CB	2.13	0.79
49:S2:848:U:H2'	49:S2:849:A:C8	2.16	0.79
49:S2:1222:G:H2'	49:S2:1223:A:O4'	1.81	0.79
49:S2:1785:C:C2	49:S2:1786:U:C5	2.70	0.79
60:SK:27:VAL:HG13	60:SK:43:LEU:HD23	1.65	0.79
1:5:153:G:C2	1:5:154:G:N7	2.51	0.79
1:5:4537:C:O2	1:5:4538:G:C8	2.35	0.79
1:5:4737:G:C6	1:5:4963:G:C2	2.70	0.79
2:7:42:A:C6	2:7:43:U:C4	2.69	0.79
20:Q:37:ARG:HG3	20:Q:38:ARG:N	1.96	0.79
46:q:29:ILE:HG12	46:q:88:PHE:HE1	1.48	0.79
48:4:259:LYS:O	48:4:288:THR:HG21	1.83	0.79
48:4:502:SER:HB2	48:4:504:VAL:HG13	0.81	0.79
49:S2:475:C:C2	49:S2:476:A:C8	2.71	0.79
49:S2:996:A:C6	63:SN:113:PHE:CE2	2.70	0.79
49:S2:1246:A:N6	49:S2:1247:C:H41	1.81	0.79
49:S2:1271:C:C4	49:S2:1272:C:C5	2.71	0.79
49:S2:1433:C:C2'	49:S2:1434:C:C1'	2.56	0.79
49:S2:1545:A:C6	49:S2:1588:A:N1	2.51	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
1:5:2277:C:N3	1:5:2278:G:N7	2.30	0.79
1:5:2452:G:C2	1:5:2467:U:C4	2.70	0.79
1:5:2632:U:O2	1:5:2632:U:H2'	1.83	0.79
1:5:4114:C:H3'	1:5:4115:G:O4'	1.83	0.79
46:q:22:ASP:OD1	46:q:66:ARG:NE	2.15	0.79
46:q:29:ILE:HG12	46:q:88:PHE:CE1	2.18	0.79
48:4:420:LEU:HB2	48:4:465:PRO:HA	1.63	0.79
48:4:592:LEU:HD22	48:4:603:TYR:CZ	2.17	0.79
48:4:827:ASN:C	48:4:827:ASN:ND2	2.29	0.79
48:4:846:GLU:OE2	48:4:846:GLU:CA	2.30	0.79
48:4:846:GLU:OE2	48:4:846:GLU:HA	1.82	0.79
49:S2:332:G:O6	56:SG:186:GLN:NE2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:691:G:C2	49:S2:692:G:C8	2.71	0.79
49:S2:1772:C:N3	49:S2:1773:C:C5	2.51	0.79
1:5:422:C:O2	1:5:423:G:C8	2.35	0.79
1:5:982:U:C5'	8:E:69:TYR:OH	2.31	0.79
1:5:1965:G:H2'	1:5:1966:C:H6	1.46	0.79
1:5:3593:C:H4'	1:5:3594:C:OP2	1.79	0.79
1:5:4888:U:O2'	1:5:4889:G:H8	1.65	0.79
1:5:4990:C:O3'	1:5:4991:U:H4'	1.82	0.79
11:H:96:TYR:CE2	11:H:100:PRO:HA	2.17	0.79
14:K:160:VAL:N	14:K:163:PRO:HG3	1.97	0.79
15:L:35:ARG:C	15:L:39:ARG:HH12	1.91	0.79
46:q:202:GLU:CA	46:q:203:VAL:HG22	2.10	0.79
48:4:4:PHE:CD1	48:4:5:THR:HB	2.15	0.79
48:4:40:VAL:C	48:4:43:ALA:HB2	2.07	0.79
48:4:48:SER:OG	48:4:49:ALA:N	2.02	0.79
48:4:610:PRO:HB2	48:4:613:LEU:CG	2.10	0.79
48:4:647:ARG:HG2	48:4:647:ARG:NH2	1.95	0.79
48:4:698:ARG:C	48:4:700:VAL:HG23	2.06	0.79
49:S2:22:A:C2	49:S2:653:A:C2	2.70	0.79
49:S2:43:U:C2	49:S2:484:A:C2	2.69	0.79
49:S2:1408:U:C4	49:S2:1439:A:N1	2.50	0.79
1:5:425:U:O2	1:5:426:A:C8	2.35	0.79
1:5:1270:A:H2'	1:5:1271:G:O5'	1.83	0.79
1:5:1836:G:C2	1:5:1837:A:C8	2.71	0.79
1:5:2463:G:N2	1:5:2464:C:C2	2.51	0.79
1:5:4744:A:C2	1:5:4745:G:C4	2.71	0.79
14:K:59:THR:O	14:K:60:VAL:HG23	1.83	0.79
48:4:150:ARG:CZ	48:4:194:GLU:CD	2.56	0.79
48:4:449:ARG:HB3	48:4:473:VAL:CG1	2.13	0.79
49:S2:449:A:N1	49:S2:452:G:N7	2.31	0.79
49:S2:1294:G:C5	81:Sf:138:ARG:HD3	2.17	0.79
1:5:152:U:N3	1:5:153:G:N7	2.30	0.79
1:5:1899:G:N7	1:5:2278:G:C6	2.51	0.79
1:5:2090:U:O2'	1:5:2091:C:O5'	2.00	0.79
1:5:3629:A:C2'	49:S2:1721:U:H3	1.95	0.79
1:5:4096:C:N4	1:5:4097:G:C5	2.50	0.79
3:8:102:G:OP2	3:8:104:A:O2'	2.00	0.79
14:K:137:GLN:CD	14:K:148:PRO:HB3	2.08	0.79
14:K:142:ASN:OD1	14:K:143:VAL:N	2.15	0.79
19:P:30:ARG:HD3	19:P:30:ARG:C	2.06	0.79
48:4:27:HIS:HE2	48:4:28:VAL:HG23	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:577:VAL:HG12	48:4:579:TYR:CE1	2.18	0.79
48:4:591:CYS:SG	48:4:732:SER:HB3	2.21	0.79
48:4:607:ARG:CG	48:4:701:ARG:HD3	2.12	0.79
48:4:634:TYR:O	48:4:638:LYS:HB2	1.83	0.79
49:S2:751:G:C2	49:S2:792:C:C2	2.71	0.79
49:S2:933:G:N2	49:S2:1000:C:N3	2.30	0.79
49:S2:1266:C:C2	49:S2:1267:C:C5	2.70	0.79
49:S2:1365:G:O6	49:S2:1375:G:N2	2.16	0.79
49:S2:1552:G:O6	49:S2:1578:U:O2	2.01	0.79
51:SB:79:VAL:HB	51:SB:81:PHE:CZ	2.18	0.79
1:5:70:A:N1	1:5:4355:G:O4'	2.16	0.79
1:5:1177:U:H1'	7:D:282:GLN:NE2	1.98	0.79
1:5:1177:U:O2	1:5:1178:G:C8	2.36	0.79
1:5:1684:A:C6	1:5:1685:G:C8	2.71	0.79
1:5:1866:U:O2'	1:5:1867:A:C8	2.36	0.79
1:5:2533:C:C2	1:5:2534:C:C5	2.71	0.79
1:5:3595:U:O2'	21:R:114:LYS:HG3	1.82	0.79
1:5:4276:G:O6	1:5:4277:G:N7	2.12	0.79
1:5:4332:C:O2	1:5:4333:C:C5	2.35	0.79
1:5:4605:A:H62	48:4:801:ARG:HD2	1.47	0.79
2:7:30:C:C2	2:7:48:G:N2	2.51	0.79
3:8:96:C:N3	3:8:97:A:C8	2.47	0.79
5:B:51:ALA:HA	5:B:323:TYR:CE2	2.18	0.79
12:I:9:TYR:HD2	12:I:97:ILE:HG12	1.48	0.79
46:q:206:ILE:CG2	46:q:206:ILE:O	2.28	0.79
48:4:10:ARG:HH22	48:4:465:PRO:HD3	1.47	0.79
48:4:113:SER:CA	48:4:499:PHE:CB	2.42	0.79
49:S2:75:G:HO2'	49:S2:76:U:H6	1.28	0.79
49:S2:381:C:C6	49:S2:381:C:O5'	2.36	0.79
49:S2:649:U:O2	49:S2:650:A:N7	2.16	0.79
49:S2:848:U:N3	49:S2:849:A:C5	2.51	0.79
49:S2:1100:A:N1	49:S2:1101:U:C5	2.51	0.79
49:S2:1135:C:C2	49:S2:1136:U:C5	2.71	0.79
49:S2:1551:U:H2'	49:S2:1552:G:C1'	2.13	0.79
76:Sa:41:ILE:HG22	76:Sa:68:TYR:CD1	2.17	0.79
1:5:92:C:N4	44:o:40:ARG:HH11	1.79	0.78
1:5:269:G:C6	1:5:270:U:C5	2.71	0.78
1:5:1339:U:C2	1:5:1340:C:C5	2.71	0.78
1:5:1358:G:C3'	6:C:114:ARG:HH12	1.96	0.78
1:5:1898:C:C5	1:5:2279:A:H1'	2.17	0.78
1:5:1961:G:H5''	46:q:58:ASN:HD22	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2441:C:H4'	36:g:9:ARG:HE	1.46	0.78
1:5:3905:A:C5	1:5:4449:A:N1	2.51	0.78
3:8:131:G:C6	3:8:132:G:C8	2.71	0.78
10:G:169:PHE:CD2	17:N:6:TYR:HB3	2.18	0.78
14:K:22:VAL:HG21	14:K:48:LYS:CE	2.13	0.78
14:K:142:ASN:HD21	14:K:151:ILE:CG1	1.79	0.78
46:q:28:PHE:HE1	46:q:192:VAL:HG21	1.48	0.78
46:q:149:ARG:C	46:q:151:THR:N	2.40	0.78
48:4:27:HIS:HE2	48:4:28:VAL:CG2	1.96	0.78
49:S2:341:C:N3	49:S2:342:C:C6	2.52	0.78
1:5:917:A:C2	1:5:919:C:C6	2.71	0.78
1:5:1791:U:H4'	23:T:19:PHE:CZ	2.19	0.78
1:5:2691:U:C2	1:5:2692:U:H5	2.01	0.78
1:5:3655:C:N3	1:5:3656:A:C8	2.52	0.78
1:5:3739:C:H6	1:5:3739:C:H5''	1.47	0.78
1:5:4563:U:C4	1:5:4564:A:N6	2.52	0.78
6:C:210:ILE:HD13	6:C:252:TRP:CH2	2.18	0.78
9:F:120:PHE:CZ	9:F:217:SER:HA	2.18	0.78
14:K:61:LYS:HD3	14:K:73:VAL:O	1.83	0.78
25:V:20:LEU:HD21	25:V:101:ASN:HD22	1.47	0.78
35:f:76:ARG:HE	35:f:85:ARG:NH2	1.80	0.78
49:S2:222:U:N3	49:S2:223:C:C5	2.52	0.78
49:S2:460:A:C6	49:S2:461:U:C5	2.70	0.78
49:S2:554:A:C2	49:S2:555:A:C5	2.71	0.78
49:S2:794:A:C6	49:S2:795:A:C5	2.70	0.78
49:S2:928:G:H2'	49:S2:929:G:C8	2.18	0.78
49:S2:1093:A:N6	49:S2:1151:G:O6	2.16	0.78
49:S2:1569:A:C8	49:S2:1570:G:H1'	2.19	0.78
54:SE:18:TRP:CB	54:SE:46:ILE:HD13	2.12	0.78
1:5:1398:A:H2'	1:5:1398:A:OP1	1.84	0.78
1:5:2509:C:O2'	1:5:2510:G:H5'	1.84	0.78
1:5:2690:C:C4	1:5:2691:U:C5	2.72	0.78
1:5:3629:A:H1'	49:S2:1721:U:N3	1.95	0.78
1:5:5047:C:O2	1:5:5048:A:C5	2.37	0.78
3:8:117:C:N3	3:8:118:C:C5	2.52	0.78
10:G:53:ARG:CZ	10:G:54:PHE:HZ	1.95	0.78
48:4:13:MET:HE2	48:4:465:PRO:HD2	1.61	0.78
48:4:394:LEU:H	48:4:487:THR:HG22	1.49	0.78
48:4:518:PRO:CA	73:SX:50:ILE:HD11	2.10	0.78
48:4:541:SER:C	48:4:543:GLU:HG3	2.08	0.78
48:4:544:HIS:NE2	73:SX:97:ASN:ND2	2.30	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:845:LYS:HZ3	48:4:846:GLU:CG	1.89	0.78
49:S2:986:G:C8	64:SO:137:SER:HA	2.18	0.78
49:S2:1419:C:O2'	69:ST:132:ASP:HB3	1.83	0.78
49:S2:1495:G:C2	49:S2:1496:U:H1'	2.19	0.78
50:SA:48:ILE:HG22	67:SR:105:MET:HE3	1.64	0.78
1:5:424:U:C2	1:5:425:U:C5	2.67	0.78
1:5:688:U:N3	1:5:689:U:C6	2.50	0.78
1:5:917:A:N1	1:5:919:C:C4	2.52	0.78
1:5:964:A:C2	1:5:2252:G:O6	2.36	0.78
1:5:1811:G:N1	1:5:1812:C:C4	2.52	0.78
1:5:2079:G:N3	1:5:2080:U:C6	2.52	0.78
1:5:2567:G:C2	1:5:2568:C:C6	2.71	0.78
1:5:4352:U:OP1	15:L:190:ARG:NH2	2.17	0.78
1:5:4719:G:O2'	1:5:4720:C:H4'	1.83	0.78
14:K:141:CYS:O	14:K:142:ASN:CB	2.32	0.78
48:4:267:ASP:N	48:4:267:ASP:HA	1.98	0.78
48:4:411:TYR:N	48:4:411:TYR:HD1	1.80	0.78
48:4:442:LEU:HD21	48:4:444:LEU:HD11	1.64	0.78
49:S2:53:C:O2	49:S2:54:A:H8	1.67	0.78
49:S2:1413:G:C2	49:S2:1414:A:H1'	2.17	0.78
49:S2:1540:G:N1	49:S2:1541:G:N7	2.31	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
1:5:1735:U:H2'	1:5:1735:U:O2	1.84	0.78
1:5:1858:A:C2	1:5:1859:C:C5	2.71	0.78
1:5:2361:G:O6	19:P:25:HIS:CG	2.37	0.78
1:5:3717:A:O2'	1:5:3718:A:O4'	2.00	0.78
17:N:179:LYS:HB2	17:N:180:PHE:CE2	2.18	0.78
33:d:87:ARG:N	33:d:87:ARG:HH12	1.81	0.78
36:g:75:SER:O	36:g:76:ARG:HG2	1.84	0.78
48:4:6:VAL:O	48:4:8:GLN:N	2.16	0.78
49:S2:42:A:C2	49:S2:43:U:C6	2.71	0.78
49:S2:340:C:C2	49:S2:341:C:C6	2.71	0.78
49:S2:563:G:C2	49:S2:564:A:C8	2.71	0.78
1:5:966:A:H61	1:5:2252:G:H8	1.29	0.78
1:5:1213:G:C5	1:5:1215:C:N1	2.51	0.78
1:5:1896:A:C5	9:F:101:ASN:ND2	2.51	0.78
1:5:2665:U:OP2	21:R:120:TYR:OH	2.02	0.78
1:5:2724:G:N3	1:5:2726:G:C8	2.52	0.78
1:5:3739:C:C5'	1:5:3739:C:C6	2.66	0.78
1:5:4117:U:N3	4:A:40:TYR:HE1	1.81	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4761:G:H2'	1:5:4762:A:O4'	1.83	0.78
1:5:4886:C:N3	1:5:4887:C:H5	1.82	0.78
46:q:77:LYS:O	46:q:80:PRO:CD	2.32	0.78
46:q:199:TYR:CB	46:q:205:ASP:HB3	2.10	0.78
49:S2:10:G:N7	49:S2:1697:A:C2	2.52	0.78
49:S2:52:G:C6	49:S2:53:C:C5	2.72	0.78
49:S2:383:G:H2'	49:S2:384:U:C1'	2.13	0.78
49:S2:1121:G:C6	49:S2:1122:A:C5	2.72	0.78
51:SB:82:ARG:NH1	51:SB:188:LEU:O	2.15	0.78
1:5:101:A:C2	1:5:102:G:C8	2.72	0.78
1:5:1958:A:C2	1:5:2026:A:N1	2.52	0.78
1:5:2077:C:H2'	1:5:2077:C:O2	1.81	0.78
1:5:2367:A:C2	1:5:2788:U:O4	2.37	0.78
1:5:2713:C:O2	1:5:2714:G:C8	2.36	0.78
1:5:4284:C:O2	1:5:4285:U:C6	2.36	0.78
1:5:5066:U:H2'	1:5:5067:U:C6	2.17	0.78
4:A:163:ARG:CZ	4:A:163:ARG:HB2	2.14	0.78
10:G:81:ASN:HD21	10:G:238:GLY:HA3	1.49	0.78
48:4:510:GLU:HB3	48:4:571:LYS:O	1.83	0.78
49:S2:70:G:C6	49:S2:71:G:C5	2.72	0.78
49:S2:553:U:C2	49:S2:554:A:N7	2.51	0.78
49:S2:623:G:N1	49:S2:624:C:C4	2.51	0.78
49:S2:977:C:C2	49:S2:978:G:C8	2.71	0.78
49:S2:1533:A:N1	49:S2:1537:A:H1'	1.99	0.78
49:S2:1538:C:O2	49:S2:1538:C:H2'	1.84	0.78
59:SJ:136:ARG:HD3	59:SJ:160:SER:HA	1.65	0.78
81:Sf:105:TYR:O	81:Sf:116:ARG:NH1	2.16	0.78
1:5:425:U:C2	1:5:426:A:C8	2.71	0.78
1:5:1214:C:C2'	1:5:2114:G:C2	2.66	0.78
1:5:1382:G:OP1	15:L:65:ARG:NH1	2.16	0.78
1:5:1438:U:O2	1:5:2099:G:C6	2.36	0.78
1:5:1734:G:H3'	23:T:13:TYR:CE2	2.18	0.78
1:5:2108:G:C2	1:5:2125:C:N3	2.52	0.78
1:5:2724:G:N2	1:5:2726:G:C4	2.52	0.78
1:5:2726:G:N3	1:5:2727:C:C5	2.52	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
1:5:4099:G:O2'	51:SB:224:GLU:CG	2.31	0.78
1:5:4426:C:C4	1:5:4427:G:N7	2.52	0.78
1:5:4880:C:C2'	1:5:4881:U:H5'	2.14	0.78
9:F:41:GLN:HA	9:F:41:GLN:HE21	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:22:VAL:CG2	14:K:48:LYS:CB	2.62	0.78
14:K:86:LYS:O	14:K:104:ILE:HG21	1.82	0.78
46:q:144:THR:HG22	48:4:179:GLN:HE21	0.96	0.78
48:4:154:VAL:CG1	48:4:353:MET:HE3	2.13	0.78
48:4:585:GLU:CD	48:4:737:GLN:NE2	2.41	0.78
49:S2:148:U:C2	49:S2:170:A:N6	2.52	0.78
49:S2:1411:G:C5	49:S2:1412:C:H1'	2.18	0.78
49:S2:1547:C:H2'	49:S2:1548:G:O4'	1.83	0.78
1:5:86:U:C4	1:5:97:G:C2	2.72	0.78
1:5:425:U:C2	1:5:426:A:N7	2.52	0.78
1:5:483:G:C2	1:5:484:U:C4	2.72	0.78
1:5:1724:G:C8	31:b:17:HIS:CE1	2.72	0.78
1:5:1806:G:N1	1:5:1807:C:C4	2.52	0.78
1:5:1811:G:N2	1:5:1812:C:C2	2.50	0.78
1:5:2327:G:N1	1:5:2328:G:N7	2.32	0.78
1:5:3607:U:C2	1:5:3608:A:C8	2.72	0.78
1:5:3799:A:H2'	1:5:3800:A:C8	2.19	0.78
1:5:4213:A:C2	1:5:4218:U:O4	2.37	0.78
1:5:4302:U:H5	1:5:4303:C:C5	2.01	0.78
45:p:68:ALA:HB1	45:p:69:TRP:CZ3	2.19	0.78
46:q:6:ARG:CD	46:q:10:LYS:CE	2.58	0.78
46:q:147:ILE:CA	48:4:204:MET:HE1	2.14	0.78
48:4:27:HIS:NE2	48:4:28:VAL:CG2	2.47	0.78
48:4:507:VAL:HG22	48:4:554:LEU:HD21	0.79	0.78
48:4:767:ARG:NH2	48:4:792:GLU:HG3	1.98	0.78
49:S2:460:A:H2	49:S2:461:U:C6	1.94	0.78
49:S2:1134:G:N3	49:S2:1135:C:C6	2.51	0.78
1:5:1598:C:C2	1:5:1599:A:C8	2.72	0.78
1:5:1807:C:N3	1:5:1808:C:C5	2.52	0.78
1:5:4093:G:C6	1:5:4115:G:O6	2.37	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
6:C:111:TRP:HB2	6:C:112:HIS:HD2	1.48	0.78
7:D:94:ASN:C	7:D:94:ASN:HD22	1.91	0.78
14:K:123:ARG:CA	14:K:129:ILE:CD1	2.05	0.78
19:P:54:GLN:HB3	19:P:83:TRP:CD1	2.18	0.78
34:e:35:TRP:NE1	34:e:36:ARG:C	2.42	0.78
46:q:63:LYS:CD	46:q:82:ILE:HD11	2.14	0.78
48:4:739:ARG:NH1	48:4:823:ASP:CB	2.41	0.78
49:S2:1290:G:N3	81:Sf:146:LEU:CB	2.46	0.78
49:S2:1406:G:H2'	49:S2:1407:U:O4'	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2438:A:C6	1:5:2441:C:C4	2.72	0.77
1:5:4216:G:C2	1:5:4217:G:C8	2.72	0.77
1:5:4606:G:C5'	48:4:28:VAL:CG2	2.56	0.77
46:q:75:LEU:HD22	46:q:78:LEU:HD11	1.66	0.77
48:4:114:GLU:OE1	48:4:114:GLU:HA	1.82	0.77
48:4:420:LEU:O	48:4:420:LEU:CG	2.30	0.77
48:4:616:ASP:CG	48:4:621:GLU:CB	2.56	0.77
49:S2:388:U:O2	49:S2:389:A:C8	2.37	0.77
49:S2:414:A:C2	49:S2:424:C:C2	2.72	0.77
49:S2:491:C:H1'	49:S2:574:A:N6	1.99	0.77
49:S2:923:G:C2	49:S2:1022:U:O4	2.37	0.77
49:S2:992:A:N1	49:S2:993:G:C8	2.51	0.77
49:S2:1030:A:C2	49:S2:1031:A:C8	2.72	0.77
49:S2:1301:A:P	79:Sd:7:TYR:OH	2.42	0.77
49:S2:1332:A:O2'	53:SD:141:LYS:NZ	2.15	0.77
49:S2:1575:G:C2	49:S2:1576:G:C5	2.72	0.77
1:5:120:A:H1'	1:5:121:A:N1	1.98	0.77
1:5:124:C:N3	1:5:125:C:C5	2.52	0.77
1:5:197:A:H5'	1:5:197:A:C8	2.19	0.77
1:5:300:A:O2'	17:N:94:PHE:O	2.02	0.77
1:5:2277:C:C2	1:5:2278:G:N7	2.53	0.77
1:5:3794:C:C2	1:5:3795:A:C8	2.71	0.77
1:5:4076:G:N2	10:G:74:LEU:HG	1.98	0.77
1:5:4276:G:C6	1:5:4277:G:C5	2.70	0.77
1:5:4481:U:C2	1:5:4482:U:C6	2.73	0.77
1:5:4535:A:C6	1:5:4536:C:C5	2.72	0.77
1:5:4723:A:C2	1:5:4724:A:C5	2.72	0.77
1:5:4982:A:N1	1:5:4983:C:C6	2.53	0.77
22:S:94:TYR:OH	22:S:96:GLU:HG2	1.84	0.77
32:c:31:TYR:HE2	32:c:56:ARG:CD	1.98	0.77
49:S2:337:C:O2	49:S2:338:G:C8	2.37	0.77
49:S2:1109:C:N3	49:S2:1110:G:H1'	1.99	0.77
49:S2:1527:C:C4	49:S2:1528:G:N7	2.53	0.77
1:5:54:G:O6	1:5:55:G:N7	2.17	0.77
1:5:223:G:H4'	1:5:225:G:N7	1.99	0.77
1:5:458:C:C2	1:5:459:C:C6	2.73	0.77
1:5:1672:U:N3	1:5:1673:U:C5	2.51	0.77
1:5:1899:G:C4	1:5:1900:C:C5	2.71	0.77
1:5:2264:C:O2'	1:5:2265:G:O5'	2.02	0.77
3:8:15:G:H2'	3:8:16:G:C1'	2.14	0.77
14:K:123:ARG:HD2	14:K:129:ILE:HD13	1.64	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:R:163:ARG:NE	49:S2:871:U:O2	2.16	0.77
48:4:650:TRP:HZ3	48:4:679:VAL:CG1	1.97	0.77
49:S2:338:G:C4	49:S2:339:A:C8	2.71	0.77
49:S2:494:C:O2	49:S2:495:U:C5	2.36	0.77
49:S2:636:C:C2	49:S2:637:U:C5	2.72	0.77
49:S2:821:G:C8	49:S2:821:G:H5'	2.18	0.77
49:S2:1405:A:N6	49:S2:1441:U:O4	2.18	0.77
1:5:195:C:N3	1:5:196:C:C5	2.52	0.77
1:5:208:A:H1'	1:5:232:G:C2	2.19	0.77
1:5:1781:U:C2	1:5:1782:U:C6	2.72	0.77
1:5:1950:U:N3	1:5:1951:G:N7	2.32	0.77
1:5:2054:U:H4'	1:5:2056:G:C1'	2.13	0.77
1:5:2291:G:C2	1:5:2292:C:C6	2.73	0.77
1:5:2689:C:H2'	1:5:2689:C:O2	1.84	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
1:5:4735:G:N3	1:5:4736:C:C6	2.52	0.77
2:7:111:C:C4	2:7:112:U:C5	2.73	0.77
3:8:81:C:H3'	3:8:82:A:H4'	1.65	0.77
11:H:41:ILE:HD11	11:H:69:THR:CB	2.12	0.77
14:K:103:ASN:C	14:K:104:ILE:HG13	2.08	0.77
14:K:154:ASP:O	14:K:155:ILE:CA	2.31	0.77
14:K:160:VAL:C	14:K:163:PRO:HG2	1.96	0.77
46:q:29:ILE:CG2	46:q:86:VAL:CG1	2.55	0.77
48:4:114:GLU:CB	48:4:532:PRO:CG	2.48	0.77
48:4:402:VAL:O	48:4:403:PRO:O	2.02	0.77
48:4:498:LYS:O	48:4:500:SER:N	2.18	0.77
48:4:556:ILE:O	48:4:560:ASP:CG	2.27	0.77
48:4:829:SER:OG	48:4:832:SER:CA	2.32	0.77
52:SC:199:PRO:HD2	52:SC:223:TYR:OH	1.84	0.77
1:5:702:U:O2	1:5:703:G:O2'	2.00	0.77
1:5:1277:G:C2	1:5:1278:C:C6	2.72	0.77
1:5:1791:U:H4'	23:T:19:PHE:CE2	2.17	0.77
1:5:2018:C:C4	1:5:2019:C:C5	2.72	0.77
1:5:2127:C:C2'	1:5:2128:G:C8	2.68	0.77
1:5:3796:U:O2'	49:S2:1720:U:O2'	2.02	0.77
1:5:4560:C:H2'	1:5:4560:C:O2	1.84	0.77
1:5:4739:C:H2'	1:5:4740:G:O4'	1.85	0.77
3:8:127:U:H2'	3:8:128:C:O4'	1.84	0.77
5:B:378:ARG:HD3	26:W:32:LEU:HD21	1.65	0.77
46:q:91:THR:CB	46:q:99:ARG:NH2	2.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:93:LYS:O	48:4:93:LYS:CD	2.30	0.77
48:4:296:PRO:HA	48:4:299:LYS:HE3	1.66	0.77
48:4:425:LEU:HD23	48:4:426:LYS:N	1.98	0.77
48:4:634:TYR:CD1	48:4:638:LYS:HG2	2.19	0.77
48:4:648:LYS:HD3	48:4:664:ASP:O	1.83	0.77
48:4:691:ALA:H	48:4:730:TYR:HD1	1.23	0.77
49:S2:476:A:H2	49:S2:488:U:O2	1.66	0.77
49:S2:908:A:N3	49:S2:909:G:C8	2.53	0.77
49:S2:1114:U:H3	49:S2:1119:A:H61	1.31	0.77
49:S2:1124:C:C2	49:S2:1125:C:C6	2.72	0.77
49:S2:1243:U:C2	49:S2:1265:A:N1	2.53	0.77
49:S2:1400:U:H2'	49:S2:1401:A:O4'	1.85	0.77
50:SA:110:ASN:O	50:SA:116:PHE:HD2	1.66	0.77
75:SZ:97:ILE:HD12	75:SZ:109:TYR:CE2	2.20	0.77
82:Sg:142:VAL:HG13	82:Sg:177:TRP:CZ3	2.20	0.77
1:5:145:G:C2	1:5:146:G:C8	2.73	0.77
1:5:287:U:C2	1:5:288:G:C8	2.73	0.77
1:5:321:U:C2	1:5:322:C:C6	2.73	0.77
1:5:1367:C:C2	1:5:1370:G:H2'	2.20	0.77
1:5:1421:G:C2	1:5:1422:G:C8	2.72	0.77
1:5:1502:G:OP1	20:Q:65:ARG:NH1	2.17	0.77
1:5:1674:C:N3	1:5:1675:C:C5	2.53	0.77
1:5:1949:U:N3	1:5:1950:U:C5	2.53	0.77
1:5:4098:A:C2	1:5:4099:G:N7	2.53	0.77
1:5:4332:C:C2	1:5:4333:C:H5	2.03	0.77
1:5:4551:U:C2	1:5:4552:U:C5	2.72	0.77
1:5:4892:A:C2	1:5:4927:G:O6	2.36	0.77
3:8:86:U:OP1	3:8:87:G:OP1	2.00	0.77
3:8:103:A:C8	3:8:104:A:N7	2.53	0.77
3:8:117:C:N3	3:8:118:C:C6	2.51	0.77
6:C:197:ARG:C	6:C:198:ASN:ND2	2.43	0.77
33:d:87:ARG:N	33:d:87:ARG:NH1	2.32	0.77
37:h:73:TYR:CD2	37:h:80:PRO:HD3	2.20	0.77
48:4:541:SER:O	48:4:576:VAL:HG21	1.82	0.77
48:4:602:LEU:HD23	48:4:603:TYR:N	2.00	0.77
48:4:665:ILE:HB	48:4:704:VAL:O	1.85	0.77
49:S2:185:G:N2	49:S2:186:C:C2	2.53	0.77
49:S2:609:U:C2	49:S2:610:G:C8	2.72	0.77
49:S2:637:U:C2	49:S2:638:C:C5	2.72	0.77
49:S2:1510:G:C5	49:S2:1511:U:C5	2.73	0.77
49:S2:1603:G:N7	68:SS:28:PHE:CZ	2.52	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:244:G:N1	1:5:246:G:C8	2.53	0.77
1:5:274:C:O2'	1:5:275:C:O5'	2.02	0.77
1:5:701:G:O6	1:5:702:U:C5	2.38	0.77
1:5:1289:C:C2	1:5:1290:G:C8	2.73	0.77
1:5:1634:A:N3	1:5:1635:C:C6	2.53	0.77
1:5:1781:U:N3	1:5:1782:U:C5	2.53	0.77
1:5:2305:U:H5'	1:5:2305:U:C6	2.20	0.77
1:5:2663:G:H4'	21:R:117:ARG:HH12	1.49	0.77
1:5:4275:G:O6	1:5:4276:G:C6	2.38	0.77
1:5:4908:G:H1	1:5:4913:G:H21	1.31	0.77
46:q:97:GLU:C	46:q:99:ARG:H	1.91	0.77
48:4:411:TYR:N	48:4:411:TYR:CD1	2.52	0.77
49:S2:474:G:N2	49:S2:475:C:C2	2.52	0.77
49:S2:494:C:N3	49:S2:495:U:C4	2.53	0.77
49:S2:672:A:C2	49:S2:1162:C:O2'	2.37	0.77
49:S2:1433:C:C2'	49:S2:1434:C:O4'	2.32	0.77
49:S2:1540:G:C2	49:S2:1541:G:C4	2.71	0.77
49:S2:1696:C:H2'	49:S2:1696:C:O2	1.84	0.77
49:S2:1839:U:C2	49:S2:1840:U:C5	2.73	0.77
61:SL:61:PRO:HG2	61:SL:62:PHE:CE2	2.19	0.77
81:Sf:138:ARG:NH2	81:Sf:149:CYS:SG	2.56	0.77
1:5:1973:G:C2	1:5:1993:C:N3	2.53	0.77
2:7:42:A:C5	2:7:43:U:C5	2.72	0.77
3:8:10:G:N2	3:8:11:C:HI'	2.00	0.77
7:D:41:LYS:HG3	23:T:93:ILE:HD11	1.67	0.77
7:D:284:LYS:HB3	12:I:209:TRP:CZ3	2.20	0.77
9:F:120:PHE:HZ	9:F:217:SER:HA	1.48	0.77
14:K:38:SER:HB2	14:K:39:PRO:CD	2.00	0.77
46:q:26:LYS:HA	46:q:194:ASP:OD1	1.85	0.77
46:q:52:VAL:O	46:q:89:VAL:CG1	2.31	0.77
46:q:80:PRO:O	46:q:81:HIS:ND1	2.18	0.77
46:q:161:ILE:HD13	46:q:167:VAL:HA	1.65	0.77
48:4:526:ARG:HG2	48:4:526:ARG:NH1	1.97	0.77
48:4:713:ALA:HA	48:4:716:ARG:CB	2.13	0.77
49:S2:15:U:H2'	49:S2:16:G:O4'	1.84	0.77
49:S2:29:G:C2	49:S2:30:C:C4	2.73	0.77
49:S2:1433:C:C2'	49:S2:1434:C:HI'	2.12	0.77
1:5:667:A:H2'	1:5:668:C:O4'	1.85	0.77
1:5:709:C:C2	1:5:710:G:C8	2.72	0.77
1:5:1175:A:HI'	7:D:275:GLN:NE2	1.99	0.77
1:5:1213:G:N3	1:5:1215:C:HI'	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1370:G:H4'	1:5:1371:A:H4'	1.67	0.77
1:5:1563:A:O2'	1:5:1564:A:O4'	2.02	0.77
1:5:1956:A:C2	1:5:2027:U:N3	2.44	0.77
1:5:2019:C:C2	1:5:2020:U:C6	2.73	0.77
1:5:2041:A:C2	1:5:4464:A:C6	2.73	0.77
1:5:2293:U:C2	1:5:2294:G:C8	2.73	0.77
1:5:4332:C:O2	1:5:4332:C:H2'	1.82	0.77
1:5:4750:G:O6	1:5:4949:G:O6	2.02	0.77
1:5:5005:G:O2'	1:5:5042:A:N6	2.18	0.77
2:7:111:C:N3	2:7:112:U:C6	2.53	0.77
3:8:130:C:C2	3:8:131:G:C8	2.72	0.77
37:h:73:TYR:HD2	37:h:80:PRO:HD3	1.47	0.77
48:4:3:ASN:O	48:4:46:ILE:CG1	2.32	0.77
48:4:509:VAL:HG21	48:4:546:ILE:CD1	2.14	0.77
48:4:845:LYS:HZ1	48:4:845:LYS:HA	1.48	0.77
49:S2:493:A:C8	49:S2:574:A:N7	2.52	0.77
49:S2:1229:G:H2'	49:S2:1230:C:O4'	1.84	0.77
49:S2:1291:A:O4'	81:Sf:146:LEU:CB	2.32	0.77
49:S2:1405:A:H2'	49:S2:1406:G:O4'	1.85	0.77
1:5:1262:G:C2	1:5:1263:A:C8	2.72	0.77
1:5:1363:C:OP2	15:L:36:ARG:NH2	2.18	0.77
1:5:1866:U:O4	1:5:4405:G:C8	2.38	0.77
1:5:2277:C:O2	1:5:2278:G:N7	2.17	0.77
1:5:4269:G:C5	1:5:4270:C:C6	2.73	0.77
48:4:713:ALA:CB	48:4:716:ARG:NH2	2.44	0.77
49:S2:42:A:C4	49:S2:426:A:N6	2.53	0.77
49:S2:386:C:C4	49:S2:387:C:C5	2.73	0.77
49:S2:598:G:N2	49:S2:639:C:C2	2.53	0.77
1:5:182:G:H22	1:5:254:G:H22	1.33	0.76
1:5:664:G:N2	1:5:667:A:C6	2.53	0.76
1:5:1202:C:C2	1:5:1203:G:C8	2.74	0.76
1:5:1268:G:C2	1:5:1270:A:N7	2.52	0.76
1:5:1650:A:N1	6:C:100:ARG:NH2	2.33	0.76
1:5:1696:C:O2'	1:5:2084:C:N4	2.18	0.76
1:5:2124:G:N2	9:F:32:ILE:HG13	2.01	0.76
1:5:2468:U:C4	1:5:2473:A:N1	2.51	0.76
1:5:2753:G:H3'	1:5:2754:G:C8	2.19	0.76
1:5:3899:G:OP1	5:B:257:TRP:HB2	1.84	0.76
1:5:4123:C:C4	1:5:4124:G:N7	2.53	0.76
1:5:4998:G:C6	1:5:4999:G:N7	2.53	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)
49:S2:148:U:N3	49:S2:170:A:N6	2.33	0.76
49:S2:980:A:H2'	49:S2:981:A:C8	2.19	0.76
1:5:62:A:H2	1:5:77:U:O2	1.67	0.76
1:5:135:G:N2	37:h:94:ARG:NH2	2.33	0.76
1:5:271:C:C4	1:5:272:U:C5	2.74	0.76
1:5:1302:U:C2	1:5:1303:A:C8	2.73	0.76
1:5:1563:A:C2	1:5:1564:A:C4	2.73	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
1:5:2327:G:N3	1:5:2328:G:C8	2.53	0.76
1:5:4341:C:C4	1:5:4342:C:C5	2.73	0.76
1:5:4510:A:H61	1:5:4592:C:H4'	1.50	0.76
1:5:4920:C:H2'	1:5:4921:C:H6	1.50	0.76
1:5:5012:G:C2	1:5:5014:A:N7	2.53	0.76
9:F:93:PHE:HB2	9:F:124:PHE:CD1	2.21	0.76
48:4:58:ASP:C	48:4:63:GLU:HB3	2.10	0.76
49:S2:45:A:C2	49:S2:481:C:H1'	2.21	0.76
49:S2:75:G:O2'	49:S2:76:U:C6	2.34	0.76
49:S2:378:U:N3	49:S2:379:C:C6	2.52	0.76
49:S2:694:G:C2	49:S2:695:C:C5	2.73	0.76
49:S2:961:G:C2	49:S2:962:A:C8	2.73	0.76
1:5:665:C:O2	1:5:665:C:H2'	1.85	0.76
1:5:964:A:H3'	1:5:964:A:C8	2.19	0.76
1:5:1985:G:O2'	1:5:2003:G:OP2	2.01	0.76
1:5:2079:G:N1	1:5:2080:U:C5	2.53	0.76
1:5:2261:G:H2'	1:5:2262:G:C8	2.20	0.76
46:q:125:ALA:HB2	46:q:156:SER:O	1.86	0.76
49:S2:217:A:C2	49:S2:309:G:O6	2.38	0.76
49:S2:449:A:N1	49:S2:452:G:C8	2.54	0.76
49:S2:993:G:C2	49:S2:994:C:N1	2.54	0.76
49:S2:1564:C:C2	49:S2:1565:C:C5	2.73	0.76
49:S2:1735:A:N6	49:S2:1799:G:O2'	2.17	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
1:5:1870:C:N3	1:5:1871:A:N7	2.34	0.76
1:5:2513:A:N7	36:g:13:TYR:CG	2.54	0.76
1:5:2743:A:H2	1:5:2744:A:C5	2.01	0.76
1:5:3863:C:C2	1:5:3864:C:C5	2.73	0.76
1:5:4215:C:N3	1:5:4216:G:C8	2.54	0.76
1:5:4562:C:N3	1:5:4563:U:C6	2.53	0.76
1:5:4563:U:O2	1:5:4564:A:C8	2.38	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:38:U:H3	37:h:92:ARG:NH1	1.83	0.76
25:V:98:PHE:CZ	26:W:22:ALA:HB3	2.20	0.76
34:e:26:ASP:OD1	34:e:26:ASP:N	2.19	0.76
48:4:49:ALA:CA	48:4:55:ARG:NH2	2.46	0.76
48:4:168:GLN:O	48:4:168:GLN:CG	2.33	0.76
48:4:194:GLU:OE2	48:4:195:GLY:N	2.18	0.76
48:4:385:ILE:HD12	48:4:417:PHE:HB3	1.66	0.76
49:S2:1284:A:H61	62:SM:33:ARG:HB2	1.51	0.76
49:S2:1293:A:O4'	81:Sf:150:PHE:CD2	2.37	0.76
49:S2:1412:C:O2	49:S2:1413:G:N7	2.18	0.76
49:S2:1527:C:N3	49:S2:1528:G:C8	2.54	0.76
67:SR:69:ILE:HD11	67:SR:71:ILE:HD11	1.66	0.76
1:5:210:C:N4	1:5:231:U:N3	2.33	0.76
1:5:642:G:N2	1:5:643:C:C2	2.53	0.76
1:5:919:C:C4	1:5:920:C:C5	2.74	0.76
1:5:957:G:C5'	1:5:1284:G:N2	2.48	0.76
1:5:1190:C:C2	1:5:1191:C:C5	2.73	0.76
1:5:1625:G:C8	1:5:1642:A:C2	2.74	0.76
1:5:1720:C:H2'	1:5:1721:G:O4'	1.86	0.76
1:5:1961:G:H8	46:q:58:ASN:HD21	1.31	0.76
1:5:1969:G:C6	1:5:2018:C:N4	2.41	0.76
1:5:2078:C:O2	1:5:2078:C:H2'	1.85	0.76
1:5:2792:C:O2'	39:j:11:ARG:HD3	1.85	0.76
1:5:3692:A:N7	1:5:3693:U:C5	2.53	0.76
1:5:4532:U:H5	1:5:4554:G:H21	1.32	0.76
2:7:6:C:N4	2:7:7:G:C8	2.53	0.76
46:q:52:VAL:C	46:q:89:VAL:HG13	2.08	0.76
46:q:144:THR:HG23	48:4:179:GLN:HE22	1.51	0.76
48:4:73:THR:N	48:4:104:ASP:HB2	1.97	0.76
48:4:739:ARG:CA	48:4:824:PRO:CD	2.63	0.76
48:4:829:SER:HB3	48:4:832:SER:HB3	1.67	0.76
49:S2:1348:G:H2'	49:S2:1348:G:N3	1.99	0.76
49:S2:1835:A:H5'	49:S2:1863:A:N7	1.99	0.76
76:Sa:26:CYS:HG	76:Sa:77:CYS:HG	1.29	0.76
1:5:88:A:H62	1:5:97:G:N2	1.82	0.76
1:5:209:U:C4	1:5:211:G:C8	2.74	0.76
1:5:1629:G:N1	4:A:208:GLU:OE1	2.18	0.76
1:5:1967:A:N3	1:5:1968:G:C8	2.53	0.76
1:5:2479:G:C6	1:5:2480:G:N7	2.53	0.76
48:4:10:ARG:CZ	48:4:465:PRO:CD	2.64	0.76
48:4:46:ILE:HG22	48:4:46:ILE:O	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:113:SER:CB	48:4:499:PHE:CB	2.61	0.76
48:4:543:GLU:HG2	48:4:576:VAL:CG2	1.94	0.76
49:S2:298:G:C2	49:S2:299:A:C8	2.73	0.76
49:S2:827:A:C5	49:S2:828:G:C8	2.74	0.76
49:S2:1100:A:N3	49:S2:1101:U:C6	2.54	0.76
49:S2:1432:U:N3	49:S2:1433:C:C5	2.54	0.76
1:5:21:G:C5	3:8:36:G:N2	2.54	0.76
1:5:125:C:N3	1:5:126:C:C6	2.54	0.76
1:5:914:U:H2'	1:5:915:A:O4'	1.86	0.76
1:5:1596:U:O2	19:P:131:ARG:NH2	2.19	0.76
1:5:2087:C:H5	20:Q:37:ARG:NH1	1.80	0.76
1:5:3717:A:C5	1:5:3736:A:N6	2.54	0.76
1:5:4271:A:H3'	1:5:4272:G:H21	1.51	0.76
1:5:4343:U:C2	1:5:4344:U:C6	2.73	0.76
1:5:4345:C:N3	1:5:4346:U:C5	2.54	0.76
3:8:79:G:C4	3:8:80:A:C2	2.74	0.76
22:S:29:ARG:CZ	22:S:29:ARG:CB	2.63	0.76
48:4:808:ALA:C	48:4:810:PRO:HD3	2.06	0.76
49:S2:996:A:O2'	49:S2:997:A:O5'	2.04	0.76
49:S2:1017:U:O2	49:S2:1018:U:C6	2.38	0.76
49:S2:1486:A:O2'	49:S2:1487:A:O4'	2.03	0.76
49:S2:1569:A:N7	49:S2:1570:G:H1'	2.01	0.76
55:SF:50:PRO:HB2	55:SF:73:THR:HG21	1.67	0.76
63:SN:18:TYR:CE1	72:SW:56:HIS:HB2	2.19	0.76
1:5:752:G:C6	1:5:753:C:C5	2.74	0.76
1:5:986:C:C2	1:5:1068:G:N2	2.54	0.76
1:5:1216:C:C2	1:5:1217:G:C8	2.73	0.76
1:5:1316:G:O4'	1:5:2348:G:N2	2.17	0.76
1:5:1534:A:N6	39:j:14:LYS:HA	2.01	0.76
1:5:1878:G:N2	1:5:1879:C:C2	2.54	0.76
1:5:1899:G:N7	1:5:2278:G:N1	2.33	0.76
1:5:1984:A:N7	1:5:2011:C:H4'	2.01	0.76
1:5:2105:A:N3	1:5:2106:G:C8	2.53	0.76
1:5:2279:A:C2	1:5:2280:G:C8	2.73	0.76
1:5:2453:A:C2	1:5:2454:U:C6	2.74	0.76
1:5:3693:U:C2	1:5:3694:U:C6	2.74	0.76
1:5:3732:A:C2	1:5:3733:A:N7	2.54	0.76
1:5:3909:C:C4	1:5:3910:C:C5	2.74	0.76
1:5:4117:U:C2	4:A:40:TYR:CE1	2.74	0.76
12:I:47:PRO:CA	12:I:171:TRP:HE1	1.98	0.76
14:K:123:ARG:HB3	14:K:129:ILE:HD13	0.76	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:45:MET:O	46:q:47:LEU:N	2.18	0.76
48:4:10:ARG:O	48:4:13:MET:HG2	1.85	0.76
48:4:739:ARG:HA	48:4:824:PRO:CD	2.12	0.76
48:4:756:VAL:CG2	48:4:782:PHE:CD1	2.67	0.76
48:4:826:ASP:OD1	48:4:827:ASN:C	2.29	0.76
49:S2:474:G:N1	49:S2:475:C:C4	2.54	0.76
49:S2:1540:G:N2	49:S2:1541:G:C4	2.54	0.76
1:5:237:G:O2'	1:5:238:C:P	2.43	0.76
1:5:466:A:C2	1:5:467:U:C6	2.73	0.76
1:5:752:G:C6	1:5:753:C:C6	2.73	0.76
1:5:1078:A:H2	1:5:1079:C:N4	1.82	0.76
1:5:2251:G:O4'	1:5:2252:G:N2	2.18	0.76
1:5:2479:G:C6	1:5:2480:G:C5	2.73	0.76
1:5:2851:G:N7	1:5:2852:U:C5	2.54	0.76
1:5:3727:A:O2'	1:5:3728:A:O5'	2.04	0.76
1:5:4092:G:C5	1:5:4093:G:N2	2.54	0.76
1:5:4355:G:C2	1:5:4356:G:C8	2.73	0.76
1:5:4563:U:N3	1:5:4564:A:C5	2.53	0.76
3:8:106:G:C2	3:8:107:C:C4	2.74	0.76
12:I:157:PHE:O	12:I:159:PHE:N	2.17	0.76
23:T:82:GLY:HA3	31:b:16:TRP:HB2	1.65	0.76
46:q:63:LYS:CE	46:q:82:ILE:HD11	2.16	0.76
46:q:99:ARG:C	46:q:102:LEU:HD22	2.11	0.76
48:4:205:ILE:O	48:4:206:ASP:CG	2.29	0.76
49:S2:158:A:N6	49:S2:466:G:C6	2.54	0.76
49:S2:217:A:C2	49:S2:309:G:C6	2.73	0.76
49:S2:367:U:O2'	49:S2:371:A:N7	2.18	0.76
49:S2:595:U:O2'	49:S2:596:U:C6	2.38	0.76
49:S2:1289:U:H5'	49:S2:1315:U:O2'	1.86	0.76
49:S2:1289:U:H3'	49:S2:1290:G:H8	1.51	0.76
49:S2:1302:G:O2'	81:Sf:146:LEU:HD13	1.85	0.76
49:S2:1315:U:C2	49:S2:1316:C:C5	2.74	0.76
49:S2:1545:A:C4	49:S2:1588:A:N6	2.54	0.76
59:SJ:18:ARG:HG2	59:SJ:21:GLU:HG2	1.67	0.76
1:5:967:C:C5	1:5:968:C:O2	2.38	0.76
1:5:1213:G:O6	1:5:1215:C:C4	2.39	0.76
1:5:1458:C:H2'	1:5:1458:C:O2	1.84	0.76
1:5:1598:C:O2	1:5:1599:A:C8	2.32	0.76
1:5:1625:G:H2'	17:N:81:TYR:OH	1.85	0.76
1:5:2101:C:C2	1:5:2102:G:C8	2.73	0.76
1:5:2251:G:O6	47:r:99:LYS:HA	1.87	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3721:U:C2	1:5:3722:G:C8	2.74	0.76
1:5:4095:G:N2	1:5:4096:C:N4	2.32	0.76
1:5:4199:C:N3	1:5:4200:G:C8	2.54	0.76
10:G:53:ARG:NH2	10:G:54:PHE:CZ	2.53	0.76
21:R:131:VAL:CB	21:R:132:PHE:CZ	2.64	0.76
46:q:139:GLN:HE22	48:4:184:ASN:N	1.83	0.76
48:4:60:ARG:CD	48:4:60:ARG:O	2.29	0.76
48:4:616:ASP:OD2	48:4:621:GLU:HB2	1.86	0.76
48:4:675:ILE:CG2	48:4:709:LEU:HD13	2.15	0.76
49:S2:98:C:N3	49:S2:409:C:C5	2.54	0.76
49:S2:804:U:C2	49:S2:805:U:C6	2.73	0.76
49:S2:925:G:N2	49:S2:926:A:C8	2.54	0.76
49:S2:1111:U:O2	49:S2:1112:U:H6	1.64	0.76
49:S2:1122:A:O3'	51:SB:205:TYR:OH	2.04	0.76
49:S2:1243:U:O2	49:S2:1265:A:C2	2.39	0.76
49:S2:1489:A:N1	53:SD:146:ARG:NH2	2.34	0.76
1:5:752:G:C5	1:5:753:C:C6	2.74	0.75
1:5:1279:A:H3'	1:5:1280:C:H5	1.51	0.75
1:5:1410:U:C5	1:5:1815:G:C2	2.74	0.75
1:5:1490:G:C2	1:5:1491:A:C8	2.74	0.75
1:5:2316:G:C2	1:5:2317:C:C4	2.74	0.75
1:5:2362:U:C5	1:5:3859:G:N2	2.54	0.75
1:5:4283:G:C2	1:5:4284:C:C4	2.70	0.75
3:8:133:G:N1	3:8:134:G:C5	2.54	0.75
14:K:123:ARG:CD	14:K:129:ILE:HD13	2.16	0.75
46:q:202:GLU:HA	46:q:203:VAL:CG2	2.10	0.75
48:4:649:ILE:CD1	48:4:652:PHE:CE1	2.69	0.75
49:S2:426:A:N1	49:S2:427:U:H5	1.80	0.75
49:S2:625:G:C4'	49:S2:629:A:C2	2.70	0.75
49:S2:637:U:N3	49:S2:638:C:C5	2.54	0.75
49:S2:1224:G:C5	49:S2:1225:U:C6	2.73	0.75
49:S2:1545:A:N6	49:S2:1588:A:C2	2.53	0.75
49:S2:1658:G:H1	49:S2:1664:A:N6	1.83	0.75
1:5:1491:A:C2	1:5:1492:G:C4	2.75	0.75
1:5:1885:G:C2	1:5:1895:G:C2	2.74	0.75
1:5:2479:G:N1	1:5:2480:G:C5	2.54	0.75
1:5:2613:C:N3	1:5:2614:C:C6	2.54	0.75
1:5:3709:U:C2	49:S2:970:G:N1	2.53	0.75
1:5:4416:G:C2	1:5:4417:C:C5	2.73	0.75
1:5:4735:G:N2	1:5:4736:C:C2	2.54	0.75
48:4:507:VAL:HG21	48:4:554:LEU:CD2	1.93	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:857:U:C2	49:S2:858:A:C8	2.74	0.75
49:S2:957:A:C2	49:S2:967:C:O2	2.40	0.75
49:S2:1134:G:C2	49:S2:1135:C:C6	2.74	0.75
49:S2:1835:A:H4'	49:S2:1836:G:OP2	1.84	0.75
1:5:90:G:C8	1:5:92:C:C6	2.74	0.75
1:5:166:C:O2	1:5:167:C:H6	1.69	0.75
1:5:422:C:O2	1:5:422:C:H2'	1.85	0.75
1:5:1440:U:H2'	1:5:1440:U:O2	1.86	0.75
1:5:1445:U:N3	1:5:1446:C:C5	2.54	0.75
1:5:2081:C:C2'	1:5:2082:G:O5'	2.35	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
20:Q:89:ASP:OD1	20:Q:91:ARG:NH2	2.19	0.75
46:q:59:THR:C	46:q:61:MET:N	2.42	0.75
46:q:108:PRO:HA	46:q:109:ALA:CB	2.16	0.75
48:4:592:LEU:CD2	48:4:603:TYR:CE2	2.67	0.75
49:S2:378:U:C4	49:S2:379:C:C4	2.74	0.75
49:S2:452:G:C2	49:S2:453:C:C4	2.74	0.75
49:S2:474:G:C2	49:S2:475:C:C5	2.74	0.75
49:S2:579:C:C4	49:S2:580:U:C6	2.73	0.75
49:S2:1134:G:C2	49:S2:1135:C:C5	2.74	0.75
49:S2:1256:G:C8	79:Sd:40:ARG:HD2	2.20	0.75
49:S2:1855:G:OP2	64:SO:147:ARG:NH2	2.18	0.75
59:SJ:124:HIS:HB3	80:Se:31:ARG:NH2	2.01	0.75
1:5:144:G:C2	1:5:145:G:N7	2.54	0.75
1:5:470:A:N6	1:5:471:A:C4	2.55	0.75
1:5:1628:C:O2	1:5:1628:C:H2'	1.84	0.75
1:5:3794:C:N3	1:5:3795:A:N7	2.34	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
1:5:4886:C:O2	1:5:4887:C:C6	2.39	0.75
29:Z:77:TYR:CB	32:c:39:ARG:HD3	2.17	0.75
48:4:4:PHE:CE1	48:4:5:THR:HB	2.21	0.75
48:4:42:LYS:HG3	48:4:79:TYR:CZ	2.20	0.75
48:4:144:ARG:NH1	48:4:781:MET:HE2	2.01	0.75
48:4:207:PRO:HG2	48:4:261:TRP:CE2	2.20	0.75
48:4:590:LEU:HD23	48:4:605:LYS:HG3	1.69	0.75
48:4:665:ILE:HG13	48:4:703:ASP:HB3	1.69	0.75
49:S2:381:C:H2'	49:S2:382:C:C5	2.22	0.75
49:S2:848:U:O2	49:S2:849:A:C8	2.39	0.75
49:S2:1283:C:N4	62:SM:104:VAL:O	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:438:G:OP1	34:e:16:ARG:NH1	2.19	0.75
1:5:1217:G:C2'	1:5:1218:G:C8	2.65	0.75
1:5:1271:G:C3'	1:5:1272:C:H5'	2.16	0.75
1:5:2034:G:N1	1:5:2035:C:N3	2.35	0.75
1:5:3717:A:OP2	1:5:3735:G:N2	2.19	0.75
1:5:4368:G:C6	1:5:4369:A:N7	2.55	0.75
14:K:159:ALA:O	14:K:163:PRO:CD	2.34	0.75
48:4:364:ALA:HA	48:4:367:TYR:CE2	2.22	0.75
49:S2:402:C:C4	49:S2:403:G:N7	2.55	0.75
49:S2:436:G:H8	49:S2:471:G:N2	1.85	0.75
49:S2:653:A:H2'	49:S2:654:A:O4'	1.86	0.75
49:S2:1000:C:H2'	49:S2:1000:C:O2	1.86	0.75
49:S2:1066:U:N3	49:S2:1067:C:C6	2.55	0.75
49:S2:1283:C:HO2'	62:SM:91:LEU:HD22	1.51	0.75
49:S2:1408:U:H2'	49:S2:1409:A:C8	2.22	0.75
49:S2:1434:C:H2'	49:S2:1435:C:O4'	1.87	0.75
49:S2:1709:G:N1	49:S2:1710:C:C4	2.53	0.75
1:5:211:G:C2	1:5:212:A:N7	2.55	0.75
1:5:1757:U:N3	1:5:1758:G:C8	2.55	0.75
1:5:1987:C:C4	1:5:1988:G:C8	2.75	0.75
1:5:1995:G:N2	46:q:41:GLN:HE22	1.83	0.75
1:5:2058:G:N2	1:5:2059:C:C2	2.55	0.75
1:5:2314:G:C2	1:5:2315:G:C8	2.67	0.75
1:5:2347:A:C2	1:5:2348:G:N1	2.54	0.75
1:5:2507:A:C6	1:5:2508:U:C6	2.74	0.75
1:5:3629:A:H4'	49:S2:1721:U:C2	2.21	0.75
1:5:3739:C:H5''	1:5:3739:C:C6	2.22	0.75
1:5:4097:G:N1	1:5:4098:A:C5	2.55	0.75
1:5:4627:U:O2	1:5:4628:U:C6	2.39	0.75
1:5:5047:C:H5''	1:5:5050:C:H5	1.52	0.75
3:8:70:G:N2	3:8:87:G:O2'	2.18	0.75
14:K:97:ASN:C	14:K:98:ILE:HG13	2.11	0.75
30:a:127:LYS:CG	30:a:128:PHE:CE2	2.69	0.75
47:r:7:TRP:HZ3	47:r:11:ARG:HA	1.52	0.75
48:4:4:PHE:HD1	48:4:5:THR:CA	1.98	0.75
48:4:144:ARG:NH1	48:4:781:MET:HE1	2.01	0.75
48:4:398:ILE:CD1	48:4:479:LEU:HD23	2.17	0.75
48:4:762:VAL:HG22	48:4:803:ASN:HB2	1.68	0.75
48:4:830:ARG:CB	48:4:831:PRO:HD3	2.16	0.75
49:S2:551:U:O2	49:S2:552:G:N7	2.18	0.75
49:S2:745:C:H1'	57:SH:108:SER:HA	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SC:199:PRO:CD	52:SC:223:TYR:OH	2.34	0.75
1:5:490:C:H2'	1:5:491:G:C8	2.22	0.75
1:5:661:C:C4	1:5:662:C:C5	2.74	0.75
1:5:688:U:C4	1:5:689:U:C5	2.75	0.75
1:5:909:A:C6	1:5:910:G:N7	2.54	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
1:5:1598:C:C6	1:5:2798:A:C8	2.74	0.75
1:5:1811:G:C2	1:5:1812:C:C5	2.75	0.75
1:5:1893:C:H2'	1:5:1893:C:O2	1.85	0.75
1:5:1929:A:N1	1:5:2054:U:C4	2.55	0.75
1:5:2101:C:O2	1:5:2102:G:C8	2.40	0.75
1:5:3657:U:N3	1:5:3658:C:C5	2.55	0.75
1:5:4164:C:N3	1:5:4165:C:C5	2.54	0.75
2:7:56:G:H2'	2:7:57:C:O5'	1.87	0.75
14:K:31:LYS:NZ	48:4:753:GLU:OE1	2.19	0.75
48:4:597:ASN:O	48:4:598:LYS:HB2	1.84	0.75
49:S2:56:G:C2'	49:S2:57:U:O5'	2.33	0.75
49:S2:444:G:H22	49:S2:446:G:H3'	1.51	0.75
49:S2:549:C:C4	49:S2:550:C:C6	2.74	0.75
49:S2:1253:A:C2	49:S2:1666:C:O4'	2.39	0.75
49:S2:1307:U:H1'	81:Sf:133:ALA:CB	2.17	0.75
49:S2:1709:G:C2	49:S2:1710:C:C6	2.75	0.75
1:5:1271:G:H3'	1:5:1272:C:C5'	2.16	0.75
1:5:1287:G:C2	1:5:1289:C:C6	2.74	0.75
1:5:1961:G:C5'	46:q:58:ASN:HD22	1.99	0.75
1:5:2366:A:H2	1:5:3851:U:H1'	1.50	0.75
1:5:2857:A:C2	1:5:2858:A:C6	2.74	0.75
1:5:4425:G:C6	1:5:4426:C:C6	2.75	0.75
3:8:132:G:N1	3:8:133:G:C5	2.55	0.75
16:M:3:PHE:HB2	16:M:6:PHE:CZ	2.20	0.75
22:S:33:PHE:HE2	22:S:106:VAL:HG11	1.50	0.75
46:q:18:ILE:CD1	46:q:66:ARG:HD3	2.17	0.75
48:4:226:LYS:HZ1	48:4:356:ILE:CD1	1.99	0.75
48:4:749:ILE:HD12	48:4:759:ILE:CD1	2.17	0.75
49:S2:51:U:N3	49:S2:52:G:C8	2.55	0.75
49:S2:623:G:N2	49:S2:624:C:C2	2.55	0.75
49:S2:858:A:C2	49:S2:859:G:C5	2.74	0.75
49:S2:1149:A:N1	49:S2:1151:G:C5	2.55	0.75
49:S2:1545:A:C5	49:S2:1588:A:N6	2.54	0.75
49:S2:1595:U:C4	49:S2:1596:U:H5	2.05	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1862:G:N3	49:S2:1863:A:O2'	2.18	0.75
1:5:142:G:C2	1:5:144:G:C8	2.74	0.75
1:5:730:G:N2	1:5:939:G:H22	1.82	0.75
1:5:1265:G:C2'	1:5:1266:G:H5'	2.16	0.75
1:5:1280:C:N4	1:5:1282:G:O6	2.19	0.75
1:5:1758:G:C2	1:5:1759:G:C5	2.74	0.75
1:5:1877:G:C6	1:5:1878:G:N7	2.55	0.75
1:5:1946:G:C2	1:5:1948:G:N7	2.54	0.75
1:5:1979:A:P	14:K:99:LYS:HG3	2.26	0.75
1:5:2524:U:H5''	1:5:2711:G:N2	2.02	0.75
1:5:3721:U:N3	1:5:3722:G:N7	2.35	0.75
1:5:4229:U:C5	1:5:4230:C:C5	2.75	0.75
1:5:4933:C:C4	1:5:4934:A:C8	2.74	0.75
1:5:5005:G:C6	26:W:51:TRP:HB3	2.20	0.75
3:8:85:U:H2'	3:8:87:G:H8	1.48	0.75
46:q:28:PHE:CE1	46:q:192:VAL:HG21	2.20	0.75
48:4:64:GLN:CD	48:4:64:GLN:O	2.30	0.75
48:4:111:PHE:CD1	48:4:809:PHE:CZ	2.75	0.75
48:4:191:THR:HG22	48:4:192:TYR:CD2	2.22	0.75
48:4:531:ASP:CB	48:4:534:VAL:CG1	2.64	0.75
48:4:770:VAL:HG22	48:4:784:VAL:HG11	1.69	0.75
49:S2:340:C:C4	49:S2:341:C:N4	2.55	0.75
49:S2:452:G:C2	49:S2:453:C:C6	2.75	0.75
49:S2:835:C:N3	49:S2:837:A:H4'	2.02	0.75
49:S2:1356:G:H2'	49:S2:1357:A:C8	2.21	0.75
49:S2:1405:A:C2	49:S2:1406:G:C4	2.74	0.75
49:S2:1454:A:C8	49:S2:1476:A:H1'	2.22	0.75
1:5:331:G:C2	1:5:332:C:C5	2.75	0.74
1:5:450:G:O2'	1:5:452:A:H4'	1.87	0.74
1:5:1447:C:H1'	1:5:2098:G:N2	2.01	0.74
1:5:1900:C:N3	1:5:1901:C:C5	2.55	0.74
1:5:3676:G:O2'	1:5:3677:U:C5'	2.35	0.74
8:E:280:HIS:HD2	35:f:38:GLU:HG3	1.52	0.74
14:K:31:LYS:CG	48:4:775:GLN:OE1	2.29	0.74
20:Q:34:PHE:CE2	20:Q:38:ARG:HG3	2.22	0.74
34:e:110:ALA:HA	34:e:113:GLU:OE2	1.85	0.74
48:4:396:MET:CE	48:4:472:LEU:HD11	2.13	0.74
48:4:588:ASN:OD1	48:4:589:VAL:HG23	1.87	0.74
49:S2:647:U:C2	49:S2:648:A:N7	2.55	0.74
49:S2:1366:G:H2'	49:S2:1367:U:O4'	1.87	0.74
1:5:114:G:H2'	1:5:115:C:H5'	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:348:G:C6	1:5:350:C:N4	2.55	0.74
1:5:489:C:C4	1:5:490:C:C5	2.75	0.74
1:5:754:U:C2	1:5:755:C:C6	2.75	0.74
1:5:1564:A:H61	49:S2:1029:G:HO2'	1.35	0.74
1:5:1811:G:C2	1:5:1812:C:C6	2.74	0.74
1:5:1823:G:H4'	7:D:44:TYR:HD2	1.50	0.74
1:5:4217:G:C2'	1:5:4218:U:O5'	2.35	0.74
1:5:4257:A:C2'	1:5:4258:C:H6	2.00	0.74
1:5:4744:A:N1	1:5:4745:G:C6	2.55	0.74
1:5:5047:C:O4'	1:5:5048:A:N1	2.20	0.74
2:7:42:A:N9	13:J:75:ARG:NH1	2.36	0.74
29:Z:49:TYR:CE2	29:Z:133:LYS:HA	2.22	0.74
46:q:82:ILE:C	46:q:83:ARG:HG2	2.10	0.74
48:4:73:THR:N	48:4:104:ASP:CG	2.20	0.74
48:4:710:HIS:CD2	48:4:715:HIS:CB	2.64	0.74
49:S2:316:G:N2	49:S2:317:C:C2	2.56	0.74
49:S2:1053:C:C2	49:S2:1054:G:C8	2.75	0.74
49:S2:1623:A:N6	49:S2:1625:U:OP2	2.20	0.74
1:5:989:U:H2'	1:5:990:C:H5	1.52	0.74
1:5:1216:C:H2'	1:5:1217:G:O4'	1.86	0.74
1:5:1353:G:N7	20:Q:104:ARG:NH2	2.35	0.74
1:5:1359:G:H2'	1:5:1360:G:O4'	1.86	0.74
1:5:2689:C:N3	1:5:2690:C:C5	2.55	0.74
1:5:3858:C:N4	1:5:3859:G:C5	2.55	0.74
1:5:4120:U:O4	36:g:97:ILE:HA	1.88	0.74
1:5:4258:C:N3	1:5:4259:C:C5	2.55	0.74
1:5:4490:C:O2	1:5:4490:C:H2'	1.87	0.74
9:F:82:ASN:HD21	23:T:142:ARG:CB	2.00	0.74
14:K:161:GLU:N	14:K:163:PRO:HD3	2.01	0.74
21:R:163:ARG:NE	49:S2:871:U:C2	2.55	0.74
48:4:501:VAL:O	48:4:502:SER:C	2.30	0.74
49:S2:908:A:C2	49:S2:909:G:C8	2.75	0.74
49:S2:1045:U:N3	49:S2:1046:U:C5	2.55	0.74
1:5:516:C:C2	1:5:646:G:C2	2.76	0.74
1:5:916:C:C4	1:5:917:A:C8	2.75	0.74
1:5:977:C:N3	1:5:978:G:C5	2.55	0.74
1:5:1074:G:H2'	1:5:1075:G:O4'	1.87	0.74
1:5:1280:C:N3	1:5:1282:G:C5	2.55	0.74
1:5:1977:C:O2	1:5:1990:A:N1	2.20	0.74
1:5:4093:G:H2'	1:5:4094:G:C5'	2.17	0.74
1:5:4213:A:N1	1:5:4218:U:C4	2.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4920:C:H2'	1:5:4921:C:C6	2.21	0.74
2:7:51:G:N2	2:7:52:C:C2	2.55	0.74
11:H:156:ASN:CG	11:H:157:SER:N	2.45	0.74
14:K:62:LEU:HD23	14:K:75:PRO:HB3	1.70	0.74
21:R:131:VAL:HB	21:R:132:PHE:CE2	2.23	0.74
22:S:10:TYR:OH	22:S:66:GLN:HG3	1.85	0.74
48:4:531:ASP:CB	48:4:534:VAL:HG12	2.17	0.74
48:4:640:GLU:O	48:4:640:GLU:CD	2.31	0.74
48:4:671:TYR:CE1	48:4:674:GLU:OE1	2.39	0.74
48:4:849:PRO:O	48:4:849:PRO:HG2	1.86	0.74
49:S2:69:C:C2	49:S2:70:G:C8	2.76	0.74
49:S2:182:C:C2'	49:S2:184:G:H1'	2.16	0.74
49:S2:1291:A:O4'	81:Sf:146:LEU:HB2	1.86	0.74
49:S2:1294:G:O4'	81:Sf:151:ASN:O	2.04	0.74
57:SH:145:ARG:HD2	72:SW:51:GLU:HG2	1.69	0.74
58:SI:101:ILE:HG13	58:SI:198:TYR:CD2	2.23	0.74
1:5:89:C:O2'	1:5:90:G:C5'	2.35	0.74
1:5:348:G:N2	1:5:350:C:C2	2.56	0.74
1:5:431:G:O4'	1:5:3889:G:N2	2.20	0.74
1:5:473:C:C2	1:5:474:C:C5	2.74	0.74
1:5:1214:C:N3	1:5:2116:C:N4	2.35	0.74
1:5:1269:G:C5	1:5:2111:G:N1	2.56	0.74
1:5:1485:C:O2	1:5:4349:C:C6	2.40	0.74
1:5:1823:G:H4'	7:D:44:TYR:CD2	2.22	0.74
1:5:2830:G:C2	1:5:2831:G:C8	2.76	0.74
1:5:4368:G:C2	1:5:4369:A:C8	2.76	0.74
1:5:4885:U:N3	1:5:4886:C:C5	2.55	0.74
3:8:64:U:C4	3:8:65:A:N6	2.55	0.74
48:4:521:VAL:O	48:4:525:LYS:HD2	1.87	0.74
48:4:571:LYS:HE2	48:4:571:LYS:CA	2.16	0.74
48:4:622:VAL:HG11	48:4:635:LEU:HD21	1.70	0.74
49:S2:106:C:O2	49:S2:107:A:C8	2.38	0.74
49:S2:647:U:C2	49:S2:648:A:C8	2.73	0.74
49:S2:1514:G:H2'	49:S2:1515:G:O4'	1.87	0.74
52:SC:115:GLN:HA	52:SC:115:GLN:HE21	1.52	0.74
53:SD:192:TRP:CD1	53:SD:196:GLY:HA2	2.23	0.74
82:Sg:125:ARG:HD3	82:Sg:150:TRP:CD2	2.23	0.74
1:5:319:A:H2'	1:5:320:C:O4'	1.86	0.74
1:5:450:G:N2	1:5:1294:A:H2'	2.02	0.74
1:5:472:C:N3	1:5:473:C:C5	2.56	0.74
1:5:655:C:C2	1:5:656:C:C5	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:660:A:C2	1:5:661:C:C6	2.75	0.74
1:5:1663:C:C2	1:5:1664:U:C5	2.76	0.74
1:5:1988:G:C2	1:5:1989:G:C8	2.75	0.74
1:5:2270:G:C2	1:5:2271:C:C4	2.75	0.74
1:5:2290:C:C2	1:5:2291:G:C8	2.76	0.74
1:5:2301:G:N1	1:5:2302:C:C4	2.55	0.74
1:5:2401:A:C2	1:5:2402:G:C8	2.75	0.74
1:5:3783:A:H2	1:5:3789:C:N4	1.86	0.74
1:5:4200:G:N2	1:5:4201:G:H1'	2.03	0.74
1:5:4341:C:C4	1:5:4342:C:C6	2.75	0.74
1:5:4426:C:N3	1:5:4427:G:C8	2.56	0.74
1:5:4549:G:C6	1:5:4550:G:N7	2.56	0.74
1:5:4606:G:H2'	1:5:4607:A:C8	2.22	0.74
11:H:95:VAL:HG22	42:m:82:LEU:HD22	1.69	0.74
14:K:141:CYS:O	14:K:142:ASN:HB3	1.87	0.74
32:c:31:TYR:HE2	32:c:56:ARG:HE	1.25	0.74
48:4:60:ARG:O	48:4:61:LYS:C	2.31	0.74
49:S2:386:C:N3	49:S2:387:C:C6	2.55	0.74
49:S2:604:A:C5	59:SJ:20:PHE:CE2	2.75	0.74
49:S2:665:G:O4'	49:S2:670:A:C2	2.40	0.74
1:5:60:G:C5	1:5:61:A:N7	2.56	0.74
1:5:509:A:H2	30:a:105:ARG:NE	1.85	0.74
1:5:516:C:C2	1:5:646:G:N2	2.56	0.74
1:5:701:G:C6	1:5:702:U:C5	2.76	0.74
1:5:964:A:C5'	1:5:964:A:C8	2.69	0.74
1:5:1358:G:N3	1:5:1359:G:N7	2.34	0.74
1:5:3591:C:N4	1:5:3592:G:C8	2.55	0.74
1:5:4406:U:C2	1:5:4407:G:C8	2.76	0.74
3:8:133:G:C6	3:8:134:G:N7	2.56	0.74
48:4:13:MET:HE2	48:4:465:PRO:CD	2.18	0.74
48:4:14:ASP:O	48:4:16:LYS:CE	2.36	0.74
48:4:321:ILE:HG23	48:4:342:ARG:HD2	1.70	0.74
49:S2:29:G:N2	49:S2:30:C:C2	2.56	0.74
49:S2:458:A:N1	49:S2:459:C:C6	2.54	0.74
1:5:1317:U:OP1	30:a:21:ARG:NH1	2.20	0.74
1:5:1884:C:H42	1:5:1896:A:H2	1.34	0.74
1:5:2021:G:C5	1:5:2022:C:C4	2.75	0.74
1:5:2263:A:O3'	1:5:2264:C:C6	2.41	0.74
1:5:4223:C:H5'	12:I:119:PHE:HD2	1.53	0.74
1:5:4242:U:O2	1:5:4279:A:C2	2.41	0.74
14:K:119:ARG:H	14:K:123:ARG:HH12	1.35	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:125:LEU:HD23	14:K:125:LEU:H	1.52	0.74
40:k:40:ARG:HB3	40:k:41:TYR:CD1	2.20	0.74
46:q:127:ASN:HA	46:q:153:GLU:CG	2.12	0.74
48:4:686:ALA:CB	48:4:729:LEU:HD13	1.80	0.74
49:S2:185:G:N1	49:S2:186:C:C4	2.55	0.74
49:S2:377:G:C2	49:S2:378:U:C5	2.75	0.74
49:S2:388:U:N3	49:S2:389:A:N7	2.36	0.74
49:S2:436:G:N7	49:S2:471:G:N2	2.30	0.74
49:S2:809:A:H2'	49:S2:810:A:O4'	1.87	0.74
49:S2:1074:C:O2	49:S2:1075:C:C5	2.39	0.74
49:S2:1431:G:C2	49:S2:1432:U:H1'	2.22	0.74
49:S2:1507:G:O2'	49:S2:1508:A:H5'	1.87	0.74
49:S2:1538:C:C2	49:S2:1539:U:C5	2.76	0.74
1:5:467:U:N3	1:5:468:U:C5	2.56	0.74
1:5:657:C:H2'	1:5:658:C:O4'	1.87	0.74
1:5:1201:U:C2	1:5:1202:C:C6	2.76	0.74
1:5:1438:U:O2	1:5:2099:G:N7	2.21	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
1:5:2532:C:N3	1:5:2533:C:C4	2.56	0.74
1:5:2856:C:O2	1:5:2856:C:H2'	1.87	0.74
1:5:4166:G:N1	1:5:4167:G:C5	2.55	0.74
1:5:4502:C:C4	1:5:4503:A:C8	2.75	0.74
1:5:4687:A:C2	1:5:4688:C:C5	2.75	0.74
3:8:10:G:C2	3:8:11:C:N1	2.55	0.74
5:B:258:HIS:O	5:B:260:ALA:N	2.21	0.74
14:K:55:GLY:O	14:K:56:LEU:HD23	1.88	0.74
14:K:121:LEU:HD13	14:K:129:ILE:HG23	1.63	0.74
22:S:10:TYR:CZ	22:S:66:GLN:HG3	2.22	0.74
30:a:61:TYR:O	30:a:62:HIS:C	2.31	0.74
49:S2:10:G:C5	49:S2:1697:A:C2	2.76	0.74
49:S2:54:A:C2	49:S2:451:G:C2	2.75	0.74
49:S2:933:G:N2	49:S2:1000:C:C2	2.56	0.74
49:S2:968:U:O2'	49:S2:972:A:H1'	1.87	0.74
49:S2:1322:G:H2'	49:S2:1323:U:C6	2.23	0.74
49:S2:1455:A:N1	49:S2:1456:G:C8	2.55	0.74
49:S2:1781:A:C2	49:S2:1782:G:C6	2.75	0.74
50:SA:2:SER:O	50:SA:4:ALA:N	2.20	0.74
1:5:2282:A:C2'	1:5:2283:G:O5'	2.36	0.74
1:5:3736:A:O2'	1:5:3737:A:O5'	2.05	0.74
1:5:4910:G:H8	1:5:4910:G:O5'	1.71	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4981:G:N1	1:5:4982:A:N7	2.36	0.74
1:5:5030:U:C2	1:5:5031:G:C8	2.76	0.74
3:8:55:U:H3	3:8:62:A:H2	1.34	0.74
14:K:113:ALA:HA	14:K:116:MET:SD	2.28	0.74
17:N:99:GLN:HG3	17:N:130:PHE:CD2	2.22	0.74
46:q:143:ILE:N	46:q:143:ILE:HD12	2.03	0.74
48:4:743:PRO:CA	48:4:744:ILE:HB	2.16	0.74
49:S2:449:A:C5	49:S2:452:G:C6	2.75	0.74
49:S2:637:U:O2	80:Se:56:ASN:ND2	2.21	0.74
49:S2:794:A:N1	49:S2:795:A:C4	2.56	0.74
49:S2:1316:C:O2	49:S2:1317:C:H6	1.70	0.74
1:5:370:U:C4	1:5:1637:A:C6	2.76	0.73
1:5:495:C:C2	1:5:496:G:C8	2.76	0.73
1:5:1266:G:O2'	1:5:1267:C:H5'	1.87	0.73
1:5:1390:G:N7	1:5:1392:A:OP2	2.20	0.73
1:5:2327:G:C2	1:5:2328:G:C5	2.76	0.73
1:5:2485:U:O2	1:5:2486:G:C8	2.41	0.73
1:5:2561:C:C2	1:5:2562:G:C8	2.76	0.73
1:5:4580:U:C2	1:5:4581:G:C8	2.76	0.73
1:5:4733:C:N4	1:5:4734:A:O2'	2.21	0.73
3:8:117:C:C4	3:8:118:C:C5	2.76	0.73
4:A:163:ARG:HB2	4:A:163:ARG:NH1	2.02	0.73
46:q:28:PHE:CE1	46:q:192:VAL:HG22	2.22	0.73
48:4:86:LEU:O	48:4:89:ILE:HG22	1.88	0.73
48:4:208:VAL:HG22	48:4:261:TRP:HB3	1.70	0.73
48:4:585:GLU:HB2	48:4:737:GLN:NE2	2.03	0.73
48:4:791:ASN:O	48:4:794:PHE:CZ	2.41	0.73
49:S2:123:G:H2'	49:S2:123:G:N3	2.02	0.73
49:S2:975:G:H4'	64:SO:32:HIS:CD2	2.23	0.73
49:S2:1666:C:N3	49:S2:1667:U:C5	2.56	0.73
62:SM:16:THR:HA	62:SM:19:GLN:HG3	1.70	0.73
1:5:93:G:O2'	1:5:94:A:N7	2.19	0.73
1:5:491:G:N2	1:5:663:G:C2	2.56	0.73
1:5:690:C:C4	1:5:691:C:C5	2.77	0.73
1:5:1265:G:O2'	1:5:2112:G:H3'	1.87	0.73
1:5:1542:U:C2	1:5:1543:G:C8	2.75	0.73
1:5:1555:G:C5	1:5:1556:C:C5	2.77	0.73
1:5:1818:G:C8	1:5:1821:G:C6	2.75	0.73
1:5:1982:G:O2'	1:5:2010:A:H5'	1.89	0.73
1:5:2367:A:N1	1:5:2788:U:C4	2.51	0.73
1:5:2605:G:C2	1:5:2606:G:C8	2.75	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:125:LEU:HD23	14:K:125:LEU:N	2.03	0.73
46:q:171:GLU:O	46:q:174:LEU:HG	1.87	0.73
48:4:113:SER:HB2	48:4:499:PHE:CB	2.16	0.73
48:4:752:PRO:CD	48:4:755:VAL:HG21	2.17	0.73
49:S2:458:A:N6	49:S2:459:C:C4	2.56	0.73
49:S2:1324:G:HO2'	49:S2:1510:G:HO2'	0.76	0.73
49:S2:1330:G:N2	49:S2:1333:U:C4	2.56	0.73
49:S2:1562:C:O2	49:S2:1563:G:H8	1.70	0.73
1:5:1076:C:N3	1:5:1077:C:C6	2.56	0.73
1:5:1442:C:N3	1:5:1443:A:C8	2.56	0.73
1:5:1661:C:O2	1:5:1662:C:C6	2.41	0.73
1:5:1958:A:N6	1:5:2026:A:N6	2.31	0.73
1:5:2036:C:H2'	1:5:2037:C:H6	1.54	0.73
1:5:2058:G:N2	1:5:2059:C:N1	2.37	0.73
1:5:2368:A:N1	1:5:2788:U:C4	2.57	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
1:5:2793:G:C6	1:5:2797:C:C4	2.76	0.73
1:5:3590:G:C6	1:5:3591:C:C5	2.75	0.73
1:5:4563:U:H2'	1:5:4564:A:C8	2.24	0.73
3:8:12:G:N2	3:8:13:G:C1'	2.50	0.73
5:B:235:TRP:CD1	5:B:267:ALA:HA	2.23	0.73
14:K:22:VAL:HG22	14:K:48:LYS:HB2	1.69	0.73
48:4:226:LYS:HZ1	48:4:356:ILE:HD12	1.52	0.73
48:4:228:PHE:CE2	48:4:293:ILE:HG23	2.22	0.73
48:4:539:GLU:O	48:4:540:GLU:O	2.06	0.73
48:4:804:THR:CG2	48:4:808:ALA:CB	2.61	0.73
49:S2:550:C:H2'	49:S2:551:U:H6	1.52	0.73
49:S2:647:U:O2	49:S2:647:U:H2'	1.88	0.73
49:S2:1408:U:H3'	49:S2:1409:A:C8	2.23	0.73
1:5:75:G:O6	15:L:103:ARG:NH2	2.20	0.73
1:5:187:U:C6	1:5:245:C:N3	2.56	0.73
1:5:218:A:N6	6:C:185:ALA:HB2	2.03	0.73
1:5:447:C:N3	1:5:448:G:N7	2.36	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
1:5:1951:G:O2'	22:S:95:ARG:NH2	2.22	0.73
1:5:3606:U:N3	1:5:3607:U:C5	2.56	0.73
1:5:3868:G:C6	1:5:4562:C:H1'	2.24	0.73
1:5:4199:C:O2	1:5:4199:C:H2'	1.88	0.73
1:5:4878:C:O2	1:5:4879:C:C5	2.40	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:R:95:TRP:O	21:R:98:ARG:N	2.20	0.73
32:c:78:ASN:OD1	32:c:79:ILE:HG13	1.89	0.73
48:4:112:SER:C	48:4:114:GLU:H	1.93	0.73
48:4:149:GLU:O	48:4:368:ARG:HD2	1.89	0.73
48:4:191:THR:CB	48:4:192:TYR:CE1	2.70	0.73
48:4:502:SER:C	48:4:504:VAL:N	2.41	0.73
48:4:628:LEU:HD23	48:4:631:ARG:CZ	2.18	0.73
49:S2:64:A:C6	49:S2:82:G:C2	2.75	0.73
49:S2:1146:C:O2	49:S2:1147:C:C6	2.41	0.73
49:S2:1294:G:C8	81:Sf:151:ASN:HA	2.23	0.73
49:S2:1431:G:C5	49:S2:1432:U:C5	2.75	0.73
70:SU:78:ASP:OD2	79:Sd:44:ARG:NH1	2.21	0.73
1:5:39:A:C2	30:a:40:HIS:CE1	2.76	0.73
1:5:1070:G:C2	1:5:1071:C:C6	2.76	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
1:5:2842:G:C6	1:5:2843:U:C5	2.75	0.73
1:5:4124:G:O6	4:A:64:ARG:HD3	1.88	0.73
1:5:4275:G:C5	1:5:4276:G:C8	2.76	0.73
1:5:4537:C:O2	1:5:4537:C:H2'	1.87	0.73
3:8:34:U:O4'	3:8:34:U:O2	1.97	0.73
8:E:278:TYR:CD2	8:E:278:TYR:N	2.57	0.73
33:d:71:ALA:CB	33:d:108:TYR:HE2	2.01	0.73
43:n:12:ARG:NH1	49:S2:1848:U:O4	2.22	0.73
48:4:634:TYR:HA	48:4:638:LYS:HD3	1.70	0.73
49:S2:309:G:C2	49:S2:310:C:C5	2.76	0.73
49:S2:1151:G:C2	49:S2:1152:U:C5	2.77	0.73
49:S2:1224:G:C2	49:S2:1643:U:C4	2.76	0.73
49:S2:1293:A:N3	81:Sf:151:ASN:HA	2.01	0.73
49:S2:1398:G:N1	49:S2:1399:C:C5	2.56	0.73
49:S2:1776:G:C2	49:S2:1777:G:C8	2.75	0.73
1:5:1185:G:C6	1:5:1186:U:C6	2.76	0.73
1:5:1268:G:N2	1:5:1270:A:N9	2.36	0.73
1:5:1268:G:H1'	1:5:2111:G:C5	2.23	0.73
1:5:1390:G:C2	1:5:1394:G:C5	2.74	0.73
1:5:2017:A:C8	1:5:2018:C:H5	2.05	0.73
1:5:2463:G:C6	1:5:2464:C:N4	2.57	0.73
1:5:3873:G:N2	1:5:3883:U:C2	2.56	0.73
1:5:4344:U:N3	1:5:4345:C:C5	2.56	0.73
1:5:5006:U:H1'	1:5:5042:A:C5	2.23	0.73
2:7:42:A:H1'	13:J:75:ARG:NH1	2.04	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:175:LEU:HB2	8:E:246:GLN:HE21	1.52	0.73
46:q:13:TYR:OH	46:q:56:GLY:HA3	1.87	0.73
46:q:69:LEU:C	46:q:71:ASN:N	2.44	0.73
48:4:402:VAL:HG12	48:4:411:TYR:O	1.89	0.73
49:S2:121:U:O2	49:S2:122:G:C8	2.40	0.73
49:S2:316:G:C2	49:S2:317:C:C4	2.77	0.73
49:S2:1017:U:C2	49:S2:1018:U:C5	2.76	0.73
49:S2:1294:G:N1	49:S2:1295:A:N7	2.37	0.73
49:S2:1294:G:N3	81:Sf:137:ASP:OD2	2.21	0.73
49:S2:1430:C:C4	49:S2:1431:G:C8	2.76	0.73
49:S2:1578:U:H6	53:SD:6:SER:CA	2.02	0.73
1:5:269:G:N1	1:5:270:U:C6	2.57	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
1:5:1545:G:C6	1:5:1546:C:N4	2.56	0.73
1:5:1634:A:C6	1:5:1635:C:C4	2.77	0.73
1:5:1759:G:C2	1:5:1760:G:C8	2.77	0.73
1:5:2264:C:O2'	1:5:2265:G:H2'	1.88	0.73
1:5:2364:G:C2	1:5:2365:C:C5	2.76	0.73
1:5:4093:G:C3'	1:5:4094:G:C5'	2.66	0.73
1:5:4093:G:O6	1:5:4115:G:C6	2.42	0.73
1:5:4166:G:C6	1:5:4167:G:N7	2.57	0.73
1:5:4537:C:C2	1:5:4538:G:C8	2.77	0.73
1:5:4686:G:C6	1:5:4687:A:C8	2.76	0.73
1:5:4707:A:C2'	1:5:4708:A:O5'	2.36	0.73
1:5:5063:G:C2	1:5:5064:G:C8	2.77	0.73
2:7:112:U:O2	2:7:113:G:H8	1.69	0.73
7:D:29:ASP:O	7:D:33:ARG:HB2	1.89	0.73
8:E:184:ARG:HD3	8:E:213:PHE:CB	2.18	0.73
14:K:47:ALA:CA	14:K:72:GLU:CG	2.61	0.73
46:q:107:VAL:HG12	46:q:108:PRO:CD	2.18	0.73
48:4:58:ASP:OD1	48:4:69:THR:CB	2.35	0.73
48:4:113:SER:HB2	48:4:499:PHE:CD2	2.24	0.73
48:4:160:MET:HE3	48:4:178:PHE:HZ	1.48	0.73
48:4:744:ILE:HG23	48:4:745:TYR:N	2.03	0.73
49:S2:37:C:C4	49:S2:38:A:C8	2.77	0.73
49:S2:973:C:C4	49:S2:974:C:C6	2.76	0.73
49:S2:1249:C:C4	49:S2:1250:A:C5	2.76	0.73
49:S2:1291:A:C8	81:Sf:146:LEU:HB2	2.24	0.73
49:S2:1408:U:O4	49:S2:1439:A:C2	2.42	0.73
49:S2:1526:G:C6	49:S2:1527:C:C5	2.77	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:198:MET:HG3	50:SA:199:PRO:HD2	1.69	0.73
1:5:950:G:C2	1:5:951:G:C8	2.77	0.73
1:5:3736:A:O2'	1:5:3737:A:C5'	2.37	0.73
3:8:102:G:O5'	3:8:104:A:O2'	2.06	0.73
34:e:35:TRP:HE1	34:e:37:LYS:N	1.85	0.73
34:e:38:PRO:HB2	34:e:43:ASN:OD1	1.88	0.73
46:q:184:SER:O	46:q:185:PHE:CB	2.27	0.73
48:4:651:CYS:SG	48:4:662:LEU:CD1	2.73	0.73
49:S2:105:U:C5	49:S2:106:C:C5	2.76	0.73
49:S2:832:G:H2'	49:S2:833:C:O4'	1.88	0.73
49:S2:1394:G:C6	49:S2:1395:C:C5	2.76	0.73
49:S2:1408:U:C4	49:S2:1439:A:C2	2.76	0.73
49:S2:1696:C:O2	49:S2:1697:A:C8	2.41	0.73
53:SD:11:PHE:CE2	70:SU:84:ILE:HD13	2.24	0.73
1:5:126:C:O2	1:5:127:G:C8	2.41	0.73
1:5:270:U:C2	1:5:271:C:C5	2.76	0.73
1:5:659:G:C2	1:5:660:A:C8	2.77	0.73
1:5:753:C:C4	1:5:754:U:C5	2.77	0.73
1:5:1936:C:O2	1:5:1936:C:H2'	1.88	0.73
1:5:2251:G:C1'	1:5:2252:G:C2	2.71	0.73
1:5:2632:U:N3	1:5:2633:U:C5	2.57	0.73
1:5:3688:U:C2	1:5:3689:G:C8	2.77	0.73
1:5:4510:A:H61	1:5:4592:C:C4'	2.02	0.73
1:5:5047:C:C2	1:5:5048:A:N6	2.57	0.73
48:4:21:ASN:HD22	48:4:469:ILE:HD11	1.53	0.73
48:4:562:GLU:HB3	48:4:570:ILE:HG13	1.71	0.73
49:S2:42:A:C2	49:S2:43:U:H6	2.07	0.73
49:S2:752:G:N1	49:S2:790:C:C4	2.56	0.73
49:S2:989:C:O2	49:S2:1001:A:N6	2.22	0.73
1:5:1358:G:O3'	6:C:114:ARG:NH1	2.21	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
1:5:2843:U:O2	1:5:2844:A:C8	2.42	0.73
1:5:3879:G:C6	1:5:3882:C:C4	2.76	0.73
14:K:117:ARG:CG	14:K:133:LEU:HD13	2.17	0.73
14:K:117:ARG:HG2	14:K:133:LEU:CD1	2.19	0.73
20:Q:56:THR:HB	20:Q:146:ARG:HH21	1.53	0.73
48:4:27:HIS:NE2	48:4:28:VAL:HG22	2.04	0.73
48:4:567:CYS:O	48:4:568:ILE:HD12	1.87	0.73
48:4:769:HIS:H	48:4:786:ALA:HB1	1.53	0.73
49:S2:604:A:H2'	49:S2:605:A:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:848:U:H2'	49:S2:849:A:H8	1.54	0.73
49:S2:1294:G:C2	81:Sf:138:ARG:HG2	2.24	0.73
49:S2:1528:G:N1	49:S2:1529:C:C4	2.57	0.73
1:5:85:G:N2	1:5:97:G:C5	2.57	0.72
1:5:181:C:C2	1:5:256:G:N2	2.57	0.72
1:5:440:U:O2	1:5:441:G:C8	2.42	0.72
1:5:660:A:C6	1:5:661:C:C5	2.77	0.72
1:5:976:G:C6	1:5:977:C:C5	2.77	0.72
1:5:1085:C:C4	1:5:1086:C:C5	2.77	0.72
1:5:1212:G:C2	1:5:1213:G:C8	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	2.57	0.72
1:5:2361:G:HO2'	1:5:3859:G:H1	1.35	0.72
1:5:3732:A:N3	1:5:3733:A:C8	2.56	0.72
1:5:4419:U:C5	48:4:765:ARG:NH2	2.57	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	2.57	0.72
14:K:47:ALA:HA	14:K:72:GLU:CG	2.18	0.72
14:K:161:GLU:C	14:K:163:PRO:HD3	2.14	0.72
16:M:11:ARG:HH22	16:M:61:ILE:HG23	1.53	0.72
48:4:206:ASP:HA	48:4:212:VAL:CG2	2.19	0.72
48:4:762:VAL:CG1	48:4:766:LYS:HZ2	1.97	0.72
49:S2:42:A:C5	49:S2:43:U:C5	2.73	0.72
49:S2:65:C:O2'	56:SG:172:LYS:NZ	2.15	0.72
49:S2:379:C:C2	49:S2:380:G:C8	2.77	0.72
49:S2:618:C:C2	49:S2:619:A:C8	2.77	0.72
49:S2:1574:C:N3	49:S2:1575:G:N7	2.37	0.72
1:5:90:G:C2	1:5:95:G:C6	2.78	0.72
1:5:90:G:N2	1:5:95:G:C6	2.57	0.72
1:5:1092:G:C6	1:5:1093:C:C5	2.77	0.72
1:5:2322:G:H2'	1:5:2323:C:O4'	1.89	0.72
1:5:2570:U:C2	1:5:2571:C:C5	2.77	0.72
1:5:2606:G:N2	1:5:2607:C:C2	2.57	0.72
1:5:2631:U:O4'	24:U:82:TYR:CE1	2.41	0.72
1:5:2857:A:C2	1:5:2858:A:C5	2.77	0.72
1:5:4455:G:C2	1:5:4456:C:C6	2.77	0.72
1:5:4982:A:C2	1:5:4983:C:C6	2.77	0.72
33:d:114:PHE:HA	33:d:117:LEU:HD23	1.71	0.72
48:4:191:THR:CG2	48:4:192:TYR:CE2	2.72	0.72
49:S2:50:A:N6	49:S2:488:U:N3	2.10	0.72
49:S2:53:C:O2	49:S2:54:A:C8	2.41	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:524:U:O2	49:S2:594:A:N7	2.21	0.72
49:S2:996:A:C5	63:SN:113:PHE:CE2	2.77	0.72
61:SL:99:TYR:O	61:SL:101:ARG:N	2.20	0.72
1:5:12:A:C2	1:5:14:C:C5	2.77	0.72
1:5:88:A:N6	1:5:97:G:N2	2.36	0.72
1:5:1542:U:H5''	1:5:2743:A:N7	2.04	0.72
1:5:1625:G:N7	1:5:1642:A:C2	2.58	0.72
1:5:1755:C:H3'	1:5:1756:U:H5''	1.68	0.72
1:5:2590:G:N1	1:5:2754:G:C2	2.57	0.72
1:5:2645:G:C2	1:5:2646:C:C6	2.77	0.72
1:5:3694:U:C2	1:5:3695:U:C5	2.78	0.72
1:5:3793:U:N3	1:5:3794:C:C5	2.57	0.72
14:K:137:GLN:OE1	14:K:148:PRO:HG3	1.89	0.72
31:b:12:GLN:HB2	31:b:16:TRP:HZ2	1.55	0.72
46:q:91:THR:HB	46:q:99:ARG:NH2	2.04	0.72
48:4:63:GLU:HG3	48:4:70:ILE:H	1.53	0.72
48:4:79:TYR:CG	48:4:351:LEU:HD13	2.23	0.72
48:4:369:CYS:SG	48:4:385:ILE:HB	2.29	0.72
49:S2:620:G:OP1	49:S2:620:G:C2	2.43	0.72
81:Sf:147:THR:HG22	81:Sf:148:TYR:CD1	2.24	0.72
1:5:212:A:H2'	1:5:213:G:C8	2.24	0.72
1:5:255:C:O2	1:5:255:C:H2'	1.88	0.72
1:5:1899:G:N1	1:5:1900:C:C5	2.54	0.72
1:5:2108:G:C6	1:5:2125:C:N4	2.57	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
1:5:3653:A:N1	1:5:3692:A:C4'	2.53	0.72
1:5:4498:U:O2	1:5:4500:U:H5'	1.89	0.72
1:5:4880:C:H2'	1:5:4881:U:H5'	1.69	0.72
2:7:51:G:C2	2:7:52:C:C4	2.77	0.72
3:8:80:A:H3'	3:8:81:C:H4'	1.71	0.72
5:B:100:ARG:HH21	5:B:101:THR:C	1.98	0.72
14:K:35:LEU:HD22	46:q:131:GLY:HA2	1.67	0.72
14:K:105:THR:HG22	14:K:144:ASP:H	1.55	0.72
17:N:30:TYR:CE1	17:N:63:ARG:CD	2.72	0.72
22:S:95:ARG:HH11	22:S:97:TYR:HH	1.36	0.72
25:V:57:VAL:HG23	25:V:84:GLN:HG2	1.71	0.72
29:Z:38:TYR:CE2	29:Z:76:ASN:OD1	2.43	0.72
36:g:41:ALA:O	36:g:52:ARG:NH1	2.23	0.72
46:q:80:PRO:CB	46:q:81:HIS:ND1	2.53	0.72
46:q:149:ARG:HD2	48:4:197:SER:O	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:155:LEU:HD22	48:4:157:MET:SD	2.30	0.72
48:4:224:THR:OG1	48:4:227:GLN:HG3	1.88	0.72
48:4:693:CYS:CA	48:4:839:ARG:CZ	2.50	0.72
48:4:753:GLU:HG2	48:4:779:THR:HG22	1.70	0.72
49:S2:597:G:N2	49:S2:640:A:C2	2.57	0.72
49:S2:647:U:O2	49:S2:648:A:N7	2.20	0.72
1:5:85:G:N2	1:5:97:G:N7	2.38	0.72
1:5:102:G:O2'	1:5:1381:U:O2'	2.03	0.72
1:5:504:G:C6	1:5:654:C:C2	2.77	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
1:5:2858:A:O2'	1:5:2859:G:C8	2.39	0.72
1:5:3907:G:H1'	1:5:4449:A:C8	2.24	0.72
1:5:4981:G:N1	1:5:4982:A:C8	2.58	0.72
1:5:5062:G:C2	1:5:5063:G:N7	2.57	0.72
3:8:43:A:N1	3:8:44:A:N7	2.38	0.72
3:8:133:G:N1	3:8:134:G:N7	2.37	0.72
6:C:106:LYS:HG2	6:C:108:TRP:CZ2	2.24	0.72
14:K:22:VAL:CG2	14:K:48:LYS:CG	2.67	0.72
14:K:105:THR:HG22	14:K:144:ASP:CA	2.19	0.72
46:q:139:GLN:NE2	48:4:184:ASN:N	2.36	0.72
47:r:16:PHE:HD2	47:r:28:GLU:HB3	1.54	0.72
48:4:271:GLY:O	48:4:272:LYS:HG2	1.87	0.72
48:4:690:GLY:C	48:4:730:TYR:CZ	2.67	0.72
49:S2:337:C:C2	49:S2:338:G:H8	2.03	0.72
49:S2:434:G:H2'	49:S2:435:A:C8	2.24	0.72
49:S2:436:G:C2	49:S2:437:G:C5	2.78	0.72
49:S2:499:G:N2	49:S2:504:G:C6	2.57	0.72
49:S2:633:C:C2	49:S2:634:A:C8	2.77	0.72
49:S2:842:C:C2	49:S2:843:C:C5	2.78	0.72
49:S2:1102:G:H22	49:S2:1130:G:N2	1.88	0.72
1:5:423:G:H1'	19:P:120:ASN:OD1	1.90	0.72
1:5:751:G:C2	1:5:752:G:C5	2.77	0.72
1:5:1213:G:C6	1:5:1215:C:C6	2.78	0.72
1:5:1956:A:N1	1:5:2027:U:C4	2.57	0.72
1:5:2281:U:O2	1:5:2281:U:H2'	1.88	0.72
1:5:4413:C:O4'	12:I:157:PHE:CD2	2.42	0.72
1:5:4730:C:O2	1:5:4734:A:N7	2.23	0.72
1:5:4939:C:O2'	8:E:242:ARG:NH2	2.22	0.72
2:7:110:G:N2	2:7:111:C:C2	2.56	0.72
4:A:140:ASN:OD1	4:A:142:GLU:O	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:117:PHE:C	11:H:117:PHE:HD1	1.97	0.72
14:K:80:LEU:HA	14:K:83:LYS:HD2	1.70	0.72
46:q:12:ASN:HB3	46:q:16:LYS:HE3	1.71	0.72
46:q:123:VAL:O	46:q:157:ASP:OD2	2.07	0.72
48:4:207:PRO:HG2	48:4:261:TRP:NE1	2.04	0.72
48:4:397:TYR:HE1	48:4:496:VAL:CG1	2.03	0.72
48:4:585:GLU:HG3	48:4:737:GLN:NE2	2.05	0.72
48:4:791:ASN:C	48:4:794:PHE:CE1	2.55	0.72
49:S2:70:G:C6	49:S2:71:G:C6	2.78	0.72
49:S2:518:G:C2	49:S2:519:A:C8	2.78	0.72
49:S2:796:G:C6	57:SH:109:ARG:NH2	2.58	0.72
1:5:447:C:C2	1:5:448:G:C8	2.78	0.72
1:5:1249:C:C2	1:5:1250:C:C6	2.78	0.72
1:5:1412:G:N2	1:5:1413:C:C2	2.58	0.72
1:5:1451:G:OP1	1:5:1718:C:N4	2.22	0.72
1:5:1618:G:N1	1:5:1619:G:N7	2.37	0.72
1:5:1631:A:H2	4:A:204:MET:SD	2.12	0.72
1:5:1998:A:N3	1:5:2019:C:O2'	2.22	0.72
1:5:2452:G:C6	1:5:2467:U:C5	2.76	0.72
1:5:4166:G:N1	1:5:4167:G:N7	2.37	0.72
2:7:94:C:O2	2:7:95:C:C6	2.42	0.72
9:F:144:TRP:CH2	9:F:237:ASN:HB2	2.25	0.72
48:4:715:HIS:O	48:4:716:ARG:HB2	1.90	0.72
48:4:741:MET:HG3	48:4:817:TRP:CE3	2.22	0.72
49:S2:383:G:C2'	49:S2:384:U:O4'	2.33	0.72
49:S2:1607:A:N6	49:S2:1632:G:H1'	2.04	0.72
69:ST:82:ARG:CZ	69:ST:82:ARG:HB2	2.20	0.72
1:5:917:A:C6	1:5:919:C:N4	2.57	0.72
1:5:2058:G:C2	1:5:2059:C:C5	2.78	0.72
1:5:2080:U:N3	1:5:2081:C:C5	2.58	0.72
1:5:2691:U:O2	1:5:2692:U:C6	2.41	0.72
1:5:3607:U:O2	1:5:3608:A:C8	2.43	0.72
1:5:4562:C:N3	1:5:4563:U:C5	2.58	0.72
1:5:4726:G:H4'	5:B:130:PHE:CE1	2.24	0.72
48:4:225:LEU:HD23	48:4:257:MET:HB2	1.70	0.72
49:S2:42:A:C4	49:S2:426:A:N7	2.57	0.72
49:S2:551:U:H2'	49:S2:552:G:C8	2.22	0.72
49:S2:599:A:C1'	49:S2:605:A:C2	2.72	0.72
49:S2:1293:A:C8	81:Sf:150:PHE:HB3	2.24	0.72
49:S2:1294:G:C4	81:Sf:138:ARG:HD3	2.25	0.72
76:Sa:26:CYS:SG	84:Sa:201:ZN:ZN	1.77	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:300:A:C2	1:5:301: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
1:5:4284:C:C2	1:5:4285:U:C6	2.77	0.72
1:5:4579:U:H2'	1:5:4580:U:O4'	1.88	0.72
1:5:4742:G:C6	1:5:4743:G:N7	2.58	0.72
13:J:105:PHE:HE1	13:J:132:VAL:HB	1.54	0.72
14:K:106:PHE:CE2	14:K:137:GLN:NE2	2.57	0.72
48:4:153:PRO:O	48:4:205:ILE:HD12	1.90	0.72
48:4:206:ASP:O	48:4:212:VAL:CB	2.37	0.72
48:4:759:ILE:CG2	48:4:784:VAL:HG21	2.19	0.72
49:S2:56:G:N1	49:S2:90:G:N2	2.37	0.72
49:S2:597:G:C2	49:S2:640:A:N1	2.58	0.72
49:S2:1376:A:C6	49:S2:1377:U:H1'	2.25	0.72
52:SC:230:THR:HG23	52:SC:236:PHE:CD2	2.24	0.72
73:SX:67:ARG:HG2	73:SX:115:ILE:HD13	1.70	0.72
1:5:1926:C:C2	1:5:1927:U:C5	2.77	0.72
1:5:2250:C:OP2	1:5:2250:C:H4'	1.88	0.72
1:5:2743:A:H2'	1:5:2744:A:C8	2.24	0.72
1:5:2856:C:N3	1:5:2857:A:C5	2.57	0.72
1:5:4100:C:C2	1:5:4101:C:C5	2.76	0.72
14:K:106:PHE:HZ	14:K:137:GLN:NE2	1.84	0.72
14:K:142:ASN:ND2	14:K:151:ILE:CG1	2.41	0.72
48:4:495:ARG:O	48:4:496:VAL:HG12	1.90	0.72
48:4:675:ILE:CG2	48:4:709:LEU:HD11	2.06	0.72
49:S2:52:G:C2	49:S2:53:C:H1'	2.25	0.72
49:S2:525:A:N6	49:S2:588:G:H22	1.87	0.72
49:S2:832:G:N1	49:S2:833:C:C2	2.58	0.72
49:S2:842:C:H2'	49:S2:843:C:O5'	1.88	0.72
49:S2:1122:A:C2	49:S2:1123:C:C6	2.78	0.72
49:S2:1310:U:P	81:Sf:143:LYS:HE2	2.30	0.72
49:S2:1405:A:C6	49:S2:1406:G:C5	2.78	0.72
49:S2:1527:C:C4	49:S2:1528:G:C8	2.78	0.72
55:SF:121:PRO:C	55:SF:146:ARG:HD2	2.15	0.72
74:SY:86:GLU:CD	74:SY:86:GLU:CB	2.63	0.72
1:5:44:A:C6	1:5:45:U:C4	2.78	0.71
1:5:183:C:O2'	1:5:189:G:N7	2.23	0.71
1:5:489:C:N3	1:5:490:C:C5	2.58	0.71
1:5:1264:C:N3	1:5:1265:G:C8	2.58	0.71
1:5:1269:G:C8	1:5:2111:G:C5	2.76	0.71
1:5:1390:G:N2	1:5:1394:G:C4	2.57	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1392:A:N3	1:5:1393:G:N7	2.38	0.71
1:5:1442:C:N3	1:5:1443:A:N7	2.38	0.71
1:5:1958:A:O2'	1:5:1959:U:H5''	1.90	0.71
1:5:2362:U:O4	1:5:3859:G:N2	2.22	0.71
1:5:2459:G:N7	17:N:105:ARG:NH2	2.37	0.71
1:5:4314:C:C2	1:5:4315:A:C8	2.78	0.71
1:5:4455:G:C6	1:5:4456:C:C5	2.78	0.71
1:5:4759:C:H2'	1:5:4760:G:O4'	1.89	0.71
1:5:4871:C:O2	1:5:4871:C:H5''	1.90	0.71
1:5:4942:C:O2	1:5:4942:C:O5'	2.07	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
14:K:125:LEU:HD12	14:K:163:PRO:HB3	0.74	0.71
46:q:20:LEU:HD12	46:q:54:LEU:HD22	1.71	0.71
48:4:154:VAL:HG11	48:4:358:LEU:HD11	1.70	0.71
48:4:541:SER:HB3	48:4:576:VAL:CB	2.20	0.71
48:4:659:PRO:HG3	48:4:698:ARG:NH1	2.05	0.71
48:4:690:GLY:N	48:4:730:TYR:HE1	1.88	0.71
48:4:819:ILE:HD12	48:4:819:ILE:O	1.90	0.71
48:4:831:PRO:O	48:4:834:VAL:HG22	1.89	0.71
49:S2:793:G:C6	49:S2:794:A:C8	2.78	0.71
49:S2:1406:G:N3	49:S2:1407:U:H1'	2.04	0.71
49:S2:1849:G:H2'	49:S2:1850:A:N7	2.05	0.71
1:5:126:C:C2	1:5:127:G:C8	2.78	0.71
1:5:493:G:C6	1:5:494:U:C5	2.78	0.71
1:5:1203:G:C6	1:5:1204:C:C5	2.78	0.71
1:5:2533:C:O2	1:5:2534:C:C5	2.42	0.71
1:5:4239:A:C5	1:5:4240:G:C8	2.78	0.71
1:5:4767:C:H4'	1:5:4874:A:N1	2.04	0.71
1:5:4871:C:H4'	1:5:4872:G:O5'	1.90	0.71
3:8:65:A:C2	3:8:66:A:C8	2.78	0.71
14:K:47:ALA:HB2	14:K:72:GLU:OE2	1.91	0.71
14:K:86:LYS:CA	14:K:104:ILE:HG12	2.19	0.71
46:q:26:LYS:HG2	46:q:194:ASP:OD2	1.89	0.71
48:4:590:LEU:HD23	48:4:605:LYS:HE3	1.70	0.71
48:4:651:CYS:SG	48:4:683:PHE:CD2	2.80	0.71
49:S2:497:C:C2	49:S2:506:G:N2	2.58	0.71
49:S2:1308:U:H2'	49:S2:1309:C:C5	2.24	0.71
49:S2:1665:G:N7	69:ST:88:MET:CG	2.52	0.71
1:5:1563:A:H61	49:S2:1028:A:N6	1.80	0.71
1:5:1727:U:C2	1:5:1728:U:C5	2.78	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1839:U:H3'	1:5:1840:G:H21	1.54	0.71
1:5:3676:G:O2'	1:5:3677:U:H5'	1.89	0.71
1:5:3833:C:N3	1:5:3834:C:C5	2.59	0.71
1:5:4093:G:H3'	1:5:4094:G:H5'	1.72	0.71
1:5:4413:C:C2'	12:I:157:PHE:HD2	2.03	0.71
1:5:4463:U:C4	1:5:4488:A:C5	2.79	0.71
1:5:4771:C:C6	1:5:4772:C:C6	2.78	0.71
1:5:4906:C:C2	1:5:4916:G:C2	2.78	0.71
2:7:25:G:H2'	2:7:26:C:O4'	1.90	0.71
14:K:53:TRP:O	14:K:54:LYS:HB2	1.90	0.71
14:K:74:VAL:HG12	14:K:74:VAL:O	1.88	0.71
48:4:43:ALA:O	48:4:45:ILE:HG22	1.89	0.71
48:4:206:ASP:C	48:4:212:VAL:HG23	2.15	0.71
48:4:240:GLY:N	48:4:241:GLU:HB2	2.05	0.71
48:4:617:ILE:HG12	48:4:622:VAL:HG23	1.71	0.71
48:4:813:VAL:HG22	48:4:814:PHE:N	2.04	0.71
49:S2:996:A:N6	63:SN:113:PHE:CE2	2.59	0.71
49:S2:1622:U:C4	68:SS:120:HIS:CE1	2.78	0.71
54:SE:36:HIS:HE1	54:SE:143:ASP:HB2	1.53	0.71
64:SO:94:HIS:HB3	64:SO:128:ARG:HB2	1.72	0.71
1:5:100:C:N4	1:5:101:A:C5	2.56	0.71
1:5:300:A:C2	1:5:301:G:C5	2.79	0.71
1:5:497:G:H3'	1:5:498:C:H5''	1.71	0.71
1:5:1183:C:C2	1:5:1184:A:C8	2.78	0.71
1:5:1217:G:O2'	1:5:1218:G:H8	1.72	0.71
1:5:1280:C:C5'	1:5:1280:C:C6	2.73	0.71
1:5:1564:A:O2'	1:5:1565:A:H5'	1.90	0.71
1:5:1843:A:C2	1:5:1844:G:C8	2.78	0.71
1:5:1994:C:H2'	14:K:132:ILE:HD11	1.72	0.71
1:5:2058:G:N1	1:5:2059:C:C5	2.58	0.71
1:5:2326:G:N1	1:5:2327:G:C8	2.57	0.71
1:5:4123:C:N3	1:5:4124:G:N7	2.38	0.71
1:5:4195:G:N3	1:5:4195:G:H5''	2.05	0.71
1:5:4196:G:H2'	1:5:4197:G:O4'	1.90	0.71
1:5:4280:A:N6	7:D:29:ASP:N	2.37	0.71
1:5:4508:C:N3	1:5:4512:U:H5	1.86	0.71
8:E:280:HIS:CE1	8:E:281:LYS:HB2	2.25	0.71
14:K:62:LEU:O	14:K:62:LEU:CD1	2.29	0.71
30:a:79:TRP:N	30:a:79:TRP:CD1	2.58	0.71
46:q:77:LYS:NZ	46:q:198:ILE:HD13	2.04	0.71
46:q:93:GLU:CG	46:q:95:LEU:HD22	2.20	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:620:G:N2	49:S2:620:G:P	2.63	0.71
49:S2:1510:G:C6	49:S2:1511:U:C5	2.77	0.71
49:S2:1597:C:H2'	49:S2:1598:G:C8	2.24	0.71
49:S2:1804:U:C2	49:S2:1805:G:C8	2.78	0.71
65:SP:39:ALA:HA	65:SP:42:ARG:NH2	2.05	0.71
1:5:93:G:O2'	1:5:94:A:C8	2.44	0.71
1:5:153:G:N3	1:5:154:G:C8	2.58	0.71
1:5:936:C:H2'	16:M:46:ARG:NH1	2.03	0.71
1:5:1628:C:C2	1:5:1629:G:N7	2.55	0.71
1:5:1671:U:O2'	31:b:12:GLN:NE2	2.22	0.71
1:5:1936:C:N3	1:5:1937:C:H5	1.89	0.71
1:5:1945:G:H2'	1:5:1946:G:H5'	1.71	0.71
1:5:1993:C:N4	1:5:2002:A:C5	2.58	0.71
1:5:2534:C:O2'	1:5:2535:G:H5'	1.90	0.71
1:5:4151:G:C2	1:5:4152:G:C8	2.79	0.71
1:5:4687:A:C2	1:5:4688:C:C6	2.79	0.71
11:H:156:ASN:OD1	11:H:157:SER:CA	2.38	0.71
14:K:86:LYS:HA	14:K:104:ILE:HG12	1.72	0.71
14:K:113:ALA:O	14:K:116:MET:CG	2.32	0.71
46:q:187:LEU:C	46:q:187:LEU:HD12	2.15	0.71
48:4:111:PHE:CE1	48:4:809:PHE:CE2	2.77	0.71
48:4:752:PRO:CD	48:4:755:VAL:CG2	2.67	0.71
49:S2:38:A:N1	49:S2:515:G:C2	2.59	0.71
49:S2:66:G:C5	49:S2:68:A:C8	2.78	0.71
49:S2:1291:A:C6	81:Sf:140:TYR:CD2	2.78	0.71
49:S2:1596:U:C4	49:S2:1597:C:C5	2.79	0.71
57:SH:154:ILE:HB	57:SH:185:VAL:HG22	1.72	0.71
61:SL:112:HIS:HB3	61:SL:141:ASN:OD1	1.90	0.71
1:5:161:G:N2	1:5:275:C:N3	2.35	0.71
1:5:167:C:C2	1:5:269:G:C2	2.79	0.71
1:5:989:U:H2'	1:5:990:C:C5	2.26	0.71
1:5:1246:G:C5	1:5:1247:U:C5	2.78	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
1:5:2515:G:O6	1:5:2516:G:C4	2.43	0.71
1:5:2690:C:N3	1:5:2691:U:C5	2.59	0.71
1:5:2842:G:C2	1:5:2843:U:C6	2.78	0.71
1:5:3702:A:H2'	1:5:3702:A:N3	2.04	0.71
1:5:4240:G:C5	1:5:4241:C:C6	2.77	0.71
1:5:4285:U:O2	1:5:4286:C:C6	2.43	0.71
1:5:4743:G:C2	1:5:4744:A:C8	2.79	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:18:C:O2	2:7:19:C:H6	1.71	0.71
2:7:33:U:C2	2:7:34:C:C6	2.79	0.71
46:q:93:GLU:HG2	46:q:95:LEU:HD22	1.71	0.71
46:q:147:ILE:HD12	48:4:204:MET:HE2	1.72	0.71
48:4:12:ILE:CG2	48:4:99:LEU:HD22	2.19	0.71
48:4:517:LEU:HB3	48:4:518:PRO:HD3	1.73	0.71
48:4:689:GLU:C	48:4:730:TYR:CZ	2.65	0.71
48:4:749:ILE:HD12	48:4:759:ILE:HG13	1.73	0.71
49:S2:50:A:N1	49:S2:488:U:C4	2.57	0.71
49:S2:106:C:C2	49:S2:107:A:N7	2.58	0.71
49:S2:600:G:N7	49:S2:631:U:C5	2.59	0.71
49:S2:842:C:N3	49:S2:843:C:C5	2.59	0.71
49:S2:1123:C:O2'	51:SB:148:ASN:ND2	2.24	0.71
49:S2:1407:U:C2'	49:S2:1408:U:C6	2.69	0.71
49:S2:1708:C:C2	49:S2:1709:G:C8	2.78	0.71
1:5:86:U:O2	1:5:86:U:C2'	2.38	0.71
1:5:423:G:H1	3:8:10:G:H1	1.39	0.71
1:5:1672:U:N3	1:5:1673:U:C4	2.59	0.71
1:5:2734:U:O2	1:5:2735:G:C8	2.43	0.71
1:5:4117:U:C2	4:A:40:TYR:HE1	2.08	0.71
1:5:4652:G:N2	1:5:4653:C:C2	2.58	0.71
1:5:5001:U:C2'	1:5:5002:U:O5'	2.38	0.71
14:K:116:MET:CB	14:K:117:ARG:HH21	2.02	0.71
14:K:123:ARG:CB	14:K:129:ILE:HD13	1.45	0.71
48:4:3:ASN:CA	48:4:45:ILE:O	2.28	0.71
48:4:150:ARG:HA	48:4:200:MET:HE1	1.72	0.71
48:4:191:THR:HG21	48:4:192:TYR:CE1	2.25	0.71
48:4:208:VAL:CG1	48:4:258:LYS:HA	2.20	0.71
48:4:571:LYS:CE	48:4:571:LYS:HA	2.20	0.71
49:S2:112:U:H1'	49:S2:114:G:O6	1.91	0.71
49:S2:114:G:O4'	61:SL:132:ARG:HD2	1.90	0.71
49:S2:426:A:C2	49:S2:427:U:C6	2.78	0.71
49:S2:1396:A:H2'	49:S2:1398:G:N7	2.05	0.71
1:5:158:A:C6	1:5:277:G:C6	2.78	0.71
1:5:977:C:C2	1:5:978:G:N7	2.42	0.71
1:5:986:C:C2	1:5:1068:G:C2	2.79	0.71
1:5:1358:G:N3	1:5:1359:G:C5	2.58	0.71
1:5:1465:G:N2	1:5:1466:G:H1'	2.06	0.71
1:5:2457:G:C2	1:5:2465:C:N3	2.59	0.71
1:5:2497:C:C4	1:5:2498:C:C5	2.78	0.71
1:5:4315:A:H2'	1:5:4316:G:H5'	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:7:43:U:C4	2:7:44:C:C5	2.78	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
3:8:132:G:C6	3:8:133:G:N7	2.58	0.71
11:H:61:TRP:HZ2	22:S:152:PHE:CE2	2.08	0.71
14:K:38:SER:OG	14:K:39:PRO:CD	2.38	0.71
46:q:24:TYR:CD2	46:q:90:PHE:HB3	2.25	0.71
46:q:168:GLY:O	46:q:171:GLU:CG	2.31	0.71
48:4:58:ASP:HB3	48:4:63:GLU:CD	2.15	0.71
48:4:762:VAL:HG21	48:4:800:LEU:HD12	0.84	0.71
49:S2:381:C:N4	58:SI:49:ARG:CD	2.54	0.71
49:S2:1709:G:N2	49:S2:1710:C:C2	2.58	0.71
1:5:27:C:C2	1:5:28:C:C6	2.78	0.71
1:5:171:U:O2	1:5:266:C:N4	2.23	0.71
1:5:330:G:N3	1:5:331:G:C8	2.59	0.71
1:5:348:G:C2	1:5:350:C:C5	2.79	0.71
1:5:424:U:H3	1:5:425:U:H5	1.36	0.71
1:5:738:C:C2	1:5:739:G:C8	2.79	0.71
1:5:1948:G:H1	1:5:2034:G:H1	1.36	0.71
1:5:2058:G:N1	1:5:2059:C:C4	2.59	0.71
1:5:2449:A:C8	1:5:2450:G:C1'	2.73	0.71
1:5:2508:U:N3	1:5:2509:C:C5	2.59	0.71
1:5:2590:G:C6	1:5:2754:G:N1	2.59	0.71
1:5:3762:U:H2'	1:5:3763:A:O4'	1.91	0.71
1:5:4096:C:C5	1:5:4097:G:C8	2.79	0.71
1:5:4744:A:C6	1:5:4745:G:C6	2.79	0.71
1:5:4884:G:N1	1:5:4885:U:C5	2.59	0.71
1:5:4932:U:H2'	1:5:4933:C:O4'	1.90	0.71
2:7:42:A:H1'	13:J:75:ARG:HH12	1.56	0.71
2:7:59:G:N1	2:7:60:G:C5	2.59	0.71
3:8:74:U:H2'	3:8:74:U:O2	1.90	0.71
3:8:86:U:H3'	3:8:86:U:C6	2.26	0.71
14:K:61:LYS:HE3	14:K:72:GLU:C	2.15	0.71
16:M:3:PHE:HB2	16:M:6:PHE:HZ	1.53	0.71
47:r:52:GLU:OE1	47:r:79:ARG:NH2	2.24	0.71
48:4:544:HIS:CE1	73:SI:97:ASN:HD22	2.09	0.71
48:4:574:ASP:HB3	48:4:576:VAL:N	2.06	0.71
49:S2:379:C:C2	49:S2:380:G:N7	2.59	0.71
49:S2:600:G:N7	49:S2:631:U:C4	2.59	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:654:A:C5	49:S2:655:A:C2	2.79	0.71
49:S2:974:C:C4	49:S2:975:G:N7	2.59	0.71
49:S2:1073:U:C2	49:S2:1074:C:C6	2.79	0.71
1:5:289:C:C2	1:5:290:U:C5	2.79	0.71
1:5:491:G:N2	1:5:663:G:H1	1.89	0.71
1:5:662:C:C2	1:5:663:G:N7	2.58	0.71
1:5:1628:C:N3	1:5:1629:G:C8	2.58	0.71
1:5:1637:A:H2	39:j:11:ARG:HH22	1.39	0.71
1:5:1692:C:N3	1:5:1693:U:C5	2.58	0.71
1:5:1866:U:C4	1:5:4405:G:O4'	2.43	0.71
1:5:1991:A:C3'	1:5:1992:U:H5''	2.20	0.71
1:5:2021:G:H4'	46:q:85:ASN:HB2	1.72	0.71
1:5:2784:C:C2	1:5:2785:C:C6	2.78	0.71
1:5:5025:C:H2'	1:5:5028:G:O4'	1.89	0.71
2:7:43:U:O2	2:7:44:C:C6	2.43	0.71
2:7:58:A:C6	2:7:59:G:C5	2.79	0.71
7:D:17:GLN:HG3	23:T:20:ARG:CA	2.20	0.71
14:K:124:GLU:N	14:K:128:THR:OG1	2.23	0.71
17:N:6:TYR:OH	38:i:40:VAL:HG22	1.91	0.71
46:q:108:PRO:HA	46:q:109:ALA:HB3	1.72	0.71
48:4:27:HIS:HB3	48:4:30:HIS:CE1	2.25	0.71
49:S2:118:C:H1'	49:S2:445:A:C2	2.26	0.71
49:S2:470:G:H2'	49:S2:471:G:C8	2.26	0.71
49:S2:795:A:C4	49:S2:796:G:C8	2.79	0.71
49:S2:1452:A:H4'	49:S2:1453:C:O4'	1.90	0.71
64:SO:147:ARG:HB2	64:SO:147:ARG:NH1	2.05	0.71
1:5:259:C:C4	1:5:260:C:C5	2.79	0.70
1:5:489:C:C2	1:5:490:C:C6	2.79	0.70
1:5:1066:G:H2'	1:5:1067:G:O4'	1.91	0.70
1:5:1238:A:H2'	1:5:1239:C:C5	2.25	0.70
1:5:2290:C:N3	1:5:2291:G:C8	2.58	0.70
1:5:3693:U:N3	1:5:3694:U:C6	2.59	0.70
1:5:4277:G:C6	1:5:4278:C:C5	2.79	0.70
1:5:4414:A:N6	1:5:4427:G:C6	2.59	0.70
1:5:4561:C:C2	1:5:4562:C:C5	2.79	0.70
14:K:86:LYS:HA	14:K:104:ILE:CG1	2.21	0.70
36:g:76:ARG:HH22	36:g:84:ALA:HB2	1.54	0.70
48:4:58:ASP:CA	48:4:63:GLU:OE1	2.40	0.70
48:4:330:LYS:HB2	48:4:330:LYS:NZ	2.06	0.70
48:4:402:VAL:HG11	48:4:453:MET:HE1	1.71	0.70
48:4:563:GLU:O	48:4:563:GLU:CD	2.34	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:762:VAL:O	48:4:766:LYS:HD3	1.91	0.70
48:4:767:ARG:NH2	48:4:792:GLU:CG	2.52	0.70
48:4:801:ARG:HD2	48:4:802:SER:N	2.06	0.70
48:4:845:LYS:NZ	48:4:845:LYS:HA	2.06	0.70
49:S2:86:C:C4	49:S2:87:U:C5	2.79	0.70
49:S2:453:C:HO2'	49:S2:454:U:C5'	2.04	0.70
49:S2:466:G:O2'	56:SG:59:GLN:NE2	2.23	0.70
49:S2:551:U:O2'	80:Se:44:ASN:OD1	2.09	0.70
49:S2:924:G:C5	49:S2:925:G:C8	2.79	0.70
49:S2:1573:G:C6	49:S2:1574:C:C5	2.79	0.70
49:S2:1606:G:C2	49:S2:1632:G:N2	2.58	0.70
49:S2:1772:C:C2	49:S2:1773:C:C5	2.79	0.70
1:5:330:G:N2	1:5:331:G:C4	2.58	0.70
1:5:737:C:H2'	1:5:738:C:O4'	1.91	0.70
1:5:1238:A:HO2'	1:5:1239:C:C5'	2.03	0.70
1:5:1265:G:H2'	1:5:1266:G:H5'	1.73	0.70
1:5:1358:G:H2'	1:5:1359:G:C8	2.26	0.70
1:5:1950:U:O2	1:5:1951:G:C8	2.44	0.70
1:5:1971:C:C2	1:5:1972:G:C8	2.78	0.70
1:5:2726:G:C4	1:5:2727:C:C5	2.79	0.70
1:5:2851:G:H2'	1:5:2851:G:N3	2.06	0.70
1:5:3591:C:H2'	1:5:3591:C:O2	1.91	0.70
1:5:3729:U:C4	1:5:3730:U:C5	2.79	0.70
1:5:3858:C:H2'	1:5:3858:C:O2	1.91	0.70
1:5:4229:U:C4	1:5:4230:C:C6	2.78	0.70
1:5:4230:C:N3	1:5:4231:C:C5	2.57	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
8:E:43:ASN:ND2	8:E:43:ASN:C	2.48	0.70
25:V:97:TYR:OH	26:W:21:TYR:N	2.24	0.70
46:q:17:ILE:HD13	46:q:54:LEU:HD21	1.73	0.70
48:4:13:MET:SD	48:4:465:PRO:CD	2.71	0.70
48:4:72:SER:CA	48:4:104:ASP:HB3	2.20	0.70
48:4:126:LEU:CD1	48:4:353:MET:HE1	2.21	0.70
48:4:685:TRP:CZ3	48:4:723:PRO:HD3	2.23	0.70
48:4:771:PHE:CB	48:4:785:LYS:HB3	2.21	0.70
49:S2:493:A:N7	49:S2:574:A:N7	2.39	0.70
49:S2:530:U:C2	49:S2:531:A:C8	2.79	0.70
49:S2:636:C:C4	49:S2:637:U:C5	2.79	0.70
49:S2:993:G:C5	49:S2:994:C:C5	2.79	0.70
49:S2:1418:C:N4	49:S2:1421:A:H62	1.88	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1434:C:C2'	49:S2:1435:C:O4'	2.39	0.70
49:S2:1842:C:H2'	49:S2:1843:G:O5'	1.91	0.70
55:SF:91:ARG:O	55:SF:95:HIS:HB2	1.91	0.70
1:5:18:C:H4'	17:N:138:PHE:CE2	2.25	0.70
1:5:69:A:H3'	1:5:70:A:H8	1.54	0.70
1:5:235:A:C6	1:5:238:C:C5	2.79	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
1:5:1635:C:C2	1:5:1636:U:C5	2.78	0.70
1:5:1993:C:O2	14:K:135:THR:OG1	2.04	0.70
1:5:2055:G:C5'	1:5:2056:G:H5'	2.21	0.70
1:5:2113:G:H8	1:5:2115:G:H1'	1.53	0.70
1:5:2453:A:N1	1:5:2454:U:C6	2.58	0.70
1:5:4729:A:C4'	1:5:4965:U:O2'	2.38	0.70
1:5:5003:U:H2'	1:5:5004:C:O4'	1.92	0.70
3:8:15:G:H2'	3:8:16:G:H1'	1.74	0.70
46:q:200:ASN:ND2	46:q:202:GLU:HG3	2.06	0.70
48:4:162:ARG:HG3	48:4:166:GLU:HG2	1.72	0.70
48:4:206:ASP:HA	48:4:212:VAL:HG21	1.73	0.70
48:4:267:ASP:C	48:4:267:ASP:HA	2.10	0.70
49:S2:53:C:C2	49:S2:54:A:C8	2.79	0.70
49:S2:56:G:H2'	49:S2:57:U:O5'	1.89	0.70
49:S2:449:A:N1	49:S2:452:G:C5	2.60	0.70
49:S2:460:A:N3	49:S2:461:U:C5	2.55	0.70
49:S2:898:U:C4	49:S2:899:U:C5	2.79	0.70
49:S2:1224:G:C2	49:S2:1643:U:N3	2.58	0.70
68:SS:81:ASP:O	68:SS:87:GLN:NE2	2.24	0.70
1:5:1074:G:H2'	1:5:1075:G:C1'	2.22	0.70
1:5:1266:G:N2	1:5:1268:G:C6	2.59	0.70
1:5:1310:C:N3	1:5:1311:G:N7	2.39	0.70
1:5:2105:A:C2	1:5:2106:G:C5	2.79	0.70
1:5:5010:U:C2	1:5:5011:A:C8	2.80	0.70
1:5:5029:C:C2	1:5:5030:U:C6	2.79	0.70
46:q:18:ILE:CG1	46:q:66:ARG:CD	2.49	0.70
48:4:60:ARG:CG	48:4:60:ARG:NH1	2.30	0.70
48:4:848:ILE:HG23	48:4:849:PRO:N	2.06	0.70
49:S2:64:A:H2	49:S2:83:A:H62	1.38	0.70
49:S2:1417:C:O2	49:S2:1419:C:C6	2.44	0.70
49:S2:1739:C:N3	49:S2:1740:C:C5	2.60	0.70
52:SC:170:TRP:CD1	52:SC:198:ALA:C	2.70	0.70
1:5:189:G:N2	1:5:190:G:C5	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:512:U:H2'	1:5:513:U:H5''	1.73	0.70
1:5:942:G:OP2	9:F:244:ARG:NH1	2.22	0.70
1:5:977:C:C2	1:5:978:G:H8	1.96	0.70
1:5:1167:C:C2	1:5:1195:G:C2	2.80	0.70
1:5:1213:G:C6	1:5:1215:C:N1	2.59	0.70
1:5:1358:G:C2	1:5:1359:G:C6	2.79	0.70
1:5:1724:G:N2	9:F:105:PRO:HB3	2.06	0.70
1:5:2089:G:C6	1:5:2263:A:N7	2.60	0.70
1:5:2507:A:N1	1:5:2508:U:H1'	2.06	0.70
1:5:2658:G:C6	1:5:2675:G:C6	2.78	0.70
1:5:4240:G:C4	1:5:4241:C:C6	2.79	0.70
1:5:4355:G:C2	1:5:4356:G:C5	2.79	0.70
1:5:4735:G:N1	1:5:4736:C:C4	2.59	0.70
2:7:59:G:N1	2:7:60:G:C8	2.59	0.70
6:C:210:ILE:HD13	6:C:252:TRP:CZ3	2.26	0.70
10:G:264:LYS:CE	10:G:265:LEU:CD2	2.66	0.70
14:K:17:CYS:C	14:K:18:THR:HG1	1.97	0.70
14:K:48:LYS:HG2	14:K:52:ASP:OD2	1.92	0.70
14:K:160:VAL:O	14:K:163:PRO:HG2	1.86	0.70
15:L:55:LEU:C	15:L:56:ARG:HG2	2.16	0.70
18:O:73:PHE:HB2	18:O:78:ARG:HB3	1.74	0.70
46:q:51:ALA:HB1	46:q:89:VAL:CG1	2.21	0.70
48:4:10:ARG:CZ	48:4:465:PRO:HD3	2.21	0.70
48:4:16:LYS:HD3	48:4:466:CYS:O	1.92	0.70
48:4:56:PHE:CE1	48:4:455:GLY:HA3	1.89	0.70
48:4:410:PHE:CE2	48:4:530:SER:HB2	2.27	0.70
48:4:692:LEU:CD2	48:4:734:LEU:CD2	2.69	0.70
49:S2:1501:C:C2	49:S2:1502:C:C6	2.80	0.70
49:S2:1562:C:N3	49:S2:1563:G:N7	2.39	0.70
49:S2:1593:C:O2	49:S2:1593:C:H2'	1.91	0.70
49:S2:1793:A:C2	49:S2:1794:C:C6	2.78	0.70
52:SC:170:TRP:HD1	52:SC:198:ALA:C	2.00	0.70
67:SR:83:ASN:C	67:SR:83:ASN:HD22	2.00	0.70
69:ST:52:TRP:CZ3	69:ST:53:PHE:HB2	2.27	0.70
1:5:189:G:C2	1:5:190:G:C5	2.79	0.70
1:5:208:A:H3'	1:5:209:U:H5''	1.73	0.70
1:5:433:A:C2	1:5:3867:A:H4'	2.26	0.70
1:5:472:C:C2	1:5:473:C:C5	2.80	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
1:5:1780:A:C2	1:5:1781:U:H1'	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1828:C:C2	1:5:1829:G:C8	2.79	0.70
1:5:1876:U:N3	1:5:1877:G:C8	2.59	0.70
1:5:2054:U:H4'	1:5:2056:G:H1'	1.71	0.70
1:5:2289:C:O2	1:5:2289:C:H2'	1.90	0.70
1:5:3695:U:N3	1:5:3696:C:C6	2.59	0.70
1:5:4285:U:H2'	1:5:4286:C:H6	1.55	0.70
2:7:17:C:C2	2:7:18:C:C6	2.79	0.70
7:D:21:ARG:HH12	7:D:22:ARG:HG2	1.55	0.70
14:K:121:LEU:HD13	14:K:129:ILE:CD1	2.08	0.70
26:W:44:ARG:HH11	26:W:44:ARG:HG3	1.55	0.70
27:X:119:ILE:HD12	27:X:149:VAL:HG21	1.73	0.70
34:e:43:ASN:HD22	34:e:43:ASN:C	2.00	0.70
46:q:157:ASP:C	46:q:158:VAL:HG22	2.15	0.70
48:4:692:LEU:HD13	48:4:734:LEU:CD1	1.87	0.70
49:S2:2:A:C8	52:SC:223:TYR:HB3	2.27	0.70
49:S2:119:U:N3	49:S2:120:U:C6	2.58	0.70
49:S2:1109:C:H41	67:SR:123:THR:N	1.90	0.70
1:5:692:A:C2	1:5:693:C:C5	2.79	0.70
1:5:944:A:C2'	6:C:335:MET:HE1	2.20	0.70
1:5:964:A:C8	1:5:964:A:C3'	2.74	0.70
1:5:1410:U:H5	1:5:1815:G:C2	2.08	0.70
1:5:1476:C:C2	1:5:1477:C:C5	2.79	0.70
1:5:1755:C:O2'	1:5:1756:U:OP1	2.10	0.70
1:5:2367:A:C2	1:5:2368:A:C5	2.79	0.70
1:5:2481:G:C2	1:5:2498:C:C2	2.80	0.70
1:5:2770:C:C2	1:5:2771:G:C8	2.80	0.70
1:5:3591:C:N3	1:5:3592:G:C8	2.60	0.70
1:5:3695:U:C2	1:5:3696:C:C6	2.79	0.70
1:5:3880:G:O2'	1:5:3881:G:C8	2.42	0.70
1:5:4093:G:C2'	1:5:4094:G:H5''	2.21	0.70
1:5:4483:C:C2	1:5:4484:A:C8	2.80	0.70
1:5:4484:A:C2	1:5:4485:C:C5	2.79	0.70
1:5:5031:G:N2	1:5:5032:C:C2	2.59	0.70
4:A:109:GLU:OE2	49:S2:980:A:OP1	2.10	0.70
14:K:117:ARG:HG2	14:K:133:LEU:HD13	1.74	0.70
15:L:64:VAL:HA	15:L:67:HIS:HD2	1.55	0.70
48:4:397:TYR:CE1	48:4:496:VAL:HG12	2.17	0.70
48:4:502:SER:O	48:4:504:VAL:CG2	2.36	0.70
48:4:745:TYR:N	48:4:815:ASP:HB3	2.06	0.70
49:S2:167:G:N1	49:S2:168:C:C4	2.60	0.70
49:S2:428:U:H5	59:SJ:7:TRP:CH2	2.10	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:908:A:C2	49:S2:909:G:C5	2.79	0.70
53:SD:67:ARG:HH11	53:SD:67:ARG:HG3	1.57	0.70
53:SD:157:MET:HG3	53:SD:159:HIS:HE1	1.55	0.70
72:SW:88:LYS:O	72:SW:92:ASN:OD1	2.10	0.70
1:5:208:A:H1'	1:5:232:G:H21	1.48	0.70
1:5:244:G:N2	1:5:246:G:H1'	2.07	0.70
1:5:738:C:C2	1:5:739:G:N7	2.60	0.70
1:5:990:C:N3	1:5:991:C:C5	2.59	0.70
1:5:1280:C:C4	1:5:1282:G:O6	2.44	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
1:5:2529:A:C5	1:5:2532:C:C6	2.79	0.70
3:8:11:C:C2	3:8:12:G:H8	2.01	0.70
7:D:94:ASN:C	7:D:94:ASN:ND2	2.48	0.70
10:G:81:ASN:HD21	10:G:238:GLY:CA	2.04	0.70
12:I:76:MET:HE2	12:I:80:CYS:SG	2.31	0.70
14:K:22:VAL:CG2	14:K:48:LYS:HG3	2.21	0.70
19:P:64:ASN:HB2	19:P:80:GLN:OE1	1.91	0.70
30:a:61:TYR:O	30:a:62:HIS:O	2.10	0.70
46:q:124:PRO:CA	46:q:157:ASP:OD2	2.39	0.70
48:4:43:ALA:O	48:4:44:GLY:C	2.34	0.70
49:S2:184:G:C2	49:S2:185:G:C8	2.79	0.70
49:S2:493:A:H8	49:S2:574:A:C8	2.05	0.70
49:S2:632:C:C2	49:S2:633:C:C5	2.80	0.70
49:S2:666:U:C2	49:S2:667:U:C5	2.79	0.70
49:S2:863:U:C2	49:S2:864:A:N7	2.60	0.70
49:S2:1137:U:H3	49:S2:1148:A:N6	1.89	0.70
49:S2:1302:G:C6	81:Sf:140:TYR:CE1	2.80	0.70
1:5:60:G:C4	1:5:61:A:C8	2.80	0.70
1:5:231:U:H4'	28:Y:100:HIS:CD2	2.26	0.70
1:5:1049:C:C2	1:5:1050:C:C5	2.79	0.70
1:5:1444:G:H2'	1:5:1445:U:C5	2.25	0.70
1:5:1516:G:C5	1:5:1518:A:C8	2.79	0.70
1:5:2080:U:N3	1:5:2081:C:C4	2.59	0.70
1:5:2124:G:H22	9:F:32:ILE:HG13	1.56	0.70
1:5:2277:C:O2	1:5:2277:C:H2'	1.89	0.70
1:5:2623:A:C2	1:5:2624:G:C8	2.80	0.70
1:5:4121:G:H22	4:A:84:THR:HB	1.55	0.70
1:5:4236:G:O2'	1:5:4237:C:O4'	2.08	0.70
3:8:13:G:C2	3:8:14:U:C2	2.80	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:47:PRO:HA	12:I:171:TRP:HE1	1.56	0.70
14:K:40:LYS:O	14:K:44:ASP:HB2	1.90	0.70
14:K:86:LYS:C	14:K:104:ILE:HG21	2.16	0.70
27:X:73:HIS:O	27:X:116:LEU:HD11	1.92	0.70
46:q:6:ARG:CG	46:q:10:LYS:CD	2.69	0.70
48:4:37:ASP:OD2	48:4:54:THR:CB	2.35	0.70
48:4:228:PHE:HE1	48:4:232:TYR:OH	1.73	0.70
48:4:671:TYR:C	48:4:675:ILE:CG1	2.64	0.70
48:4:697:MET:SD	48:4:702:PHE:CE2	2.85	0.70
48:4:744:ILE:HG12	48:4:745:TYR:H	1.55	0.70
48:4:752:PRO:O	48:4:754:GLN:CG	2.34	0.70
49:S2:70:G:C4	49:S2:71:G:C8	2.80	0.70
49:S2:148:U:N3	49:S2:149:A:N7	2.39	0.70
49:S2:792:C:C4	49:S2:793:G:N7	2.60	0.70
49:S2:862:A:C8	72:SW:107:SER:HA	2.27	0.70
49:S2:1146:C:N3	49:S2:1147:C:C5	2.60	0.70
49:S2:1265:A:N3	49:S2:1266:C:H6	1.89	0.70
49:S2:1453:C:N4	49:S2:1455:A:C1'	2.53	0.70
49:S2:1526:G:C2	49:S2:1527:C:C6	2.79	0.70
49:S2:1740:C:N3	49:S2:1741:U:C5	2.60	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:N1	2.40	0.70
1:5:752:G:C5	1:5:753:C:C5	2.80	0.70
1:5:1188:C:O2	1:5:1189:G:H8	1.73	0.70
1:5:1339:U:O2	1:5:1340:C:C5	2.45	0.70
1:5:1733:G:O2'	1:5:4214:A:O2'	2.10	0.70
1:5:2021:G:C5	1:5:2022:C:C5	2.80	0.70
1:5:2086:G:H2'	1:5:2087:C:O4'	1.92	0.70
1:5:2301:G:N2	1:5:2302:C:C2	2.60	0.70
1:5:2441:C:H4'	36:g:9:ARG:NE	2.07	0.70
1:5:2529:A:N7	1:5:2532:C:C5	2.60	0.70
1:5:2552:G:OP2	1:5:2553:A:H2'	1.91	0.70
1:5:2589:C:C4	1:5:2590:G:C5	2.80	0.70
1:5:3621:A:C5	1:5:3622:C:C5	2.79	0.70
1:5:3702:A:C2	1:5:3703:G:H8	2.02	0.70
1:5:3759:A:N1	49:S2:1709:G:H5'	2.06	0.70
1:5:3794:C:N3	1:5:3795:A:C8	2.60	0.70
1:5:4093:G:O6	1:5:4115:G:O6	2.09	0.70
1:5:4509:U:H2'	1:5:4510:A:H2'	1.74	0.70
1:5:4536:C:N3	1:5:4537:C:C5	2.59	0.70
7:D:123:VAL:HG13	7:D:248:ARG:HH22	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:31:LYS:NZ	48:4:753:GLU:CD	2.50	0.70
21:R:108:ARG:HH11	21:R:108:ARG:HG2	1.57	0.70
46:q:26:LYS:HG3	46:q:194:ASP:OD2	1.91	0.70
46:q:91:THR:CG2	46:q:99:ARG:HH12	2.05	0.70
48:4:126:LEU:HD21	48:4:156:MET:SD	2.32	0.70
48:4:143:LEU:HD21	48:4:189:ILE:CD1	2.22	0.70
48:4:394:LEU:H	48:4:487:THR:CG2	2.04	0.70
48:4:616:ASP:HA	48:4:621:GLU:OE1	1.92	0.70
48:4:829:SER:CB	48:4:832:SER:N	2.53	0.70
49:S2:18:C:O4'	49:S2:1194:A:N6	2.25	0.70
49:S2:122:G:C5	49:S2:123:G:C8	2.80	0.70
49:S2:477:G:C2	49:S2:478:G:C8	2.80	0.70
49:S2:859:G:C2	49:S2:860:G:C8	2.80	0.70
49:S2:993:G:H1	49:S2:999:G:H1	1.38	0.70
49:S2:1095:U:C4	49:S2:1149:A:C6	2.79	0.70
49:S2:1112:U:C4	49:S2:1113:A:C5	2.79	0.70
49:S2:1258:A:H62	49:S2:1659:U:H3	1.38	0.70
49:S2:1747:C:H2'	49:S2:1748:G:O4'	1.91	0.70
49:S2:1805:G:C2	49:S2:1806:A:C8	2.80	0.70
1:5:330:G:C2	1:5:331:G:N7	2.59	0.69
1:5:1070:G:C2	1:5:1071:C:N1	2.60	0.69
1:5:1506:G:O2'	6:C:116:ASN:OD1	2.06	0.69
1:5:2018:C:N3	1:5:2019:C:C6	2.60	0.69
1:5:2314:G:N2	1:5:2315:G:C4	2.60	0.69
1:5:3611:A:H4'	58:SI:92:ARG:NH2	2.05	0.69
1:5:3629:A:O2'	49:S2:1721:U:C2	2.44	0.69
1:5:3732:A:C2	1:5:3733:A:C5	2.80	0.69
1:5:4229:U:C2	1:5:4230:C:C6	2.80	0.69
1:5:4342:C:C4	1:5:4343:U:C5	2.80	0.69
1:5:4983:C:N3	1:5:4984:C:H5	1.82	0.69
11:H:41:ILE:HD11	11:H:69:THR:OG1	1.92	0.69
19:P:54:GLN:CB	19:P:83:TRP:CD1	2.75	0.69
22:S:99:ASP:OD1	22:S:100:LEU:N	2.25	0.69
30:a:127:LYS:HG3	30:a:128:PHE:CE2	2.27	0.69
32:c:31:TYR:HE1	32:c:35:LEU:HD22	1.55	0.69
46:q:95:LEU:HB3	46:q:98:ILE:HD11	1.73	0.69
48:4:116:THR:HB	48:4:499:PHE:HB3	1.74	0.69
48:4:120:ARG:O	48:4:368:ARG:NH2	2.20	0.69
48:4:178:PHE:O	48:4:182:VAL:HG23	1.91	0.69
48:4:511:ALA:HB2	48:4:520:LEU:HD22	1.74	0.69
48:4:690:GLY:HA2	48:4:730:TYR:CD1	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:309:G:N1	49:S2:310:C:C4	2.59	0.69
49:S2:404:G:C2	49:S2:405:G:C8	2.80	0.69
49:S2:996:A:O2'	49:S2:997:A:C5'	2.40	0.69
49:S2:1308:U:C2'	49:S2:1309:C:H6	2.02	0.69
49:S2:1378:A:H4'	49:S2:1379:A:O5'	1.91	0.69
49:S2:1417:C:O2	49:S2:1419:C:H6	1.75	0.69
49:S2:1643:U:C2	49:S2:1644:C:C4	2.80	0.69
56:SG:209:TYR:CE2	56:SG:213:LEU:HD23	2.26	0.69
60:SK:64:TRP:CZ3	79:Sd:23:VAL:HG22	2.27	0.69
1:5:1264:C:N3	1:5:1265:G:N7	2.40	0.69
1:5:1313:C:N3	1:5:1323:A:C8	2.60	0.69
1:5:1780:A:C6	1:5:1781:U:C6	2.80	0.69
1:5:2018:C:O2'	1:5:2019:C:H5'	1.91	0.69
1:5:2318:G:N2	1:5:2320:G:O2'	2.25	0.69
1:5:2347:A:N3	1:5:2348:G:C6	2.60	0.69
1:5:2713:C:N3	1:5:2714:G:N7	2.39	0.69
1:5:2726:G:N2	1:5:2727:C:C2	2.60	0.69
1:5:4561:C:O2	1:5:4561:C:C2'	2.39	0.69
1:5:4629:U:C2	1:5:4630:G:C8	2.80	0.69
1:5:5021:C:N3	1:5:5022:U:C5	2.59	0.69
2:7:56:G:H2'	2:7:57:C:O4'	1.92	0.69
10:G:231:ASN:HD22	10:G:231:ASN:N	1.88	0.69
14:K:105:THR:C	14:K:106:PHE:CD1	2.69	0.69
46:q:53:VAL:HA	46:q:89:VAL:HG22	1.73	0.69
46:q:61:MET:SD	46:q:82:ILE:CD1	2.80	0.69
48:4:394:LEU:HD23	48:4:485:ILE:HG22	1.73	0.69
48:4:497:MET:HA	48:4:499:PHE:CE1	2.27	0.69
48:4:756:VAL:CG2	48:4:782:PHE:HB2	2.17	0.69
49:S2:219:U:N3	49:S2:220:U:C5	2.60	0.69
49:S2:309:G:N3	49:S2:310:C:C5	2.60	0.69
49:S2:399:C:O4'	73:SX:11:ARG:NH1	2.24	0.69
49:S2:640:A:O2'	49:S2:641:A:O4'	2.09	0.69
49:S2:863:U:C2	49:S2:864:A:C8	2.80	0.69
49:S2:926:A:C2	49:S2:927:C:C6	2.80	0.69
49:S2:1839:U:N3	49:S2:1840:U:C5	2.60	0.69
1:5:48:G:H5'	17:N:192:TRP:NE1	2.01	0.69
1:5:445:U:H2'	1:5:446:C:O4'	1.92	0.69
1:5:472:C:C4	1:5:473:C:C5	2.80	0.69
1:5:1629:G:H2'	1:5:1631:A:N7	2.07	0.69
1:5:1634:A:N1	1:5:1635:C:C4	2.60	0.69
1:5:1688:G:N2	1:5:1849:U:O2	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2019:C:H2'	1:5:2020:U:H5''	1.74	0.69
1:5:2713:C:C2	1:5:2714:G:C8	2.79	0.69
1:5:2823:G:C6	1:5:2824:C:C5	2.80	0.69
1:5:3909:C:O2	1:5:3909:C:H2'	1.92	0.69
1:5:4579:U:C2	1:5:4580:U:C5	2.79	0.69
16:M:36:ALA:HB2	16:M:52:PHE:CE1	2.28	0.69
17:N:124:ASP:OD1	17:N:125:SER:N	2.25	0.69
48:4:613:LEU:HD13	48:4:639:TYR:HB2	1.70	0.69
49:S2:68:A:H2'	49:S2:69:C:O4'	1.92	0.69
49:S2:495:U:O2'	49:S2:496:C:C5'	2.40	0.69
49:S2:841:G:N2	49:S2:842:C:C4	2.61	0.69
49:S2:925:G:N3	49:S2:925:G:H2'	2.07	0.69
49:S2:1063:C:O4'	49:S2:1838:U:O4	2.08	0.69
49:S2:1303:C:C5	49:S2:1304:U:C5	2.80	0.69
49:S2:1569:A:C8	49:S2:1570:G:C1'	2.75	0.69
49:S2:1746:U:H4'	56:SG:65:GLN:HE22	1.56	0.69
1:5:459:C:C2	1:5:460:C:C6	2.79	0.69
1:5:469:C:H2'	1:5:470:A:O4'	1.93	0.69
1:5:1543:G:C2	1:5:1544:G:C8	2.80	0.69
1:5:1625:G:C5	1:5:1642:A:C2	2.81	0.69
1:5:1667:G:N2	1:5:2283:G:C6	2.60	0.69
1:5:2632:U:O2	1:5:2633:U:C6	2.45	0.69
1:5:3909:C:N3	1:5:3910:C:C6	2.61	0.69
2:7:114:U:C2'	2:7:115:A:H5''	2.21	0.69
10:G:102:TYR:OH	10:G:207:VAL:HA	1.91	0.69
25:V:82:ILE:HG22	25:V:83:ARG:HG3	1.72	0.69
35:f:18:LEU:HG	35:f:19:ARG:HH22	1.56	0.69
48:4:3:ASN:N	48:4:3:ASN:ND2	2.39	0.69
48:4:49:ALA:N	48:4:55:ARG:NH2	2.40	0.69
48:4:393:PRO:O	48:4:393:PRO:CG	2.40	0.69
48:4:740:LEU:HB3	48:4:831:PRO:HB3	0.78	0.69
49:S2:42:A:C2	49:S2:43:U:C5	2.80	0.69
49:S2:1642:U:O2	49:S2:1643:U:H5	1.74	0.69
49:S2:1755:C:N3	49:S2:1756:C:C6	2.61	0.69
49:S2:1794:C:C2	49:S2:1795:G:C8	2.79	0.69
80:Se:41:ARG:HG3	80:Se:41:ARG:HH11	1.58	0.69
1:5:70:A:C2	1:5:4355:G:C1'	2.75	0.69
1:5:125:C:C2	1:5:126:C:C6	2.81	0.69
1:5:917:A:N1	1:5:919:C:C5	2.60	0.69
1:5:1216:C:C4	1:5:1217:G:N7	2.61	0.69
1:5:1219:G:C2	1:5:1220:G:C8	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1368:A:H1'	28:Y:1:MET:HE2	1.74	0.69
1:5:1876:U:N3	1:5:1877:G:N7	2.41	0.69
1:5:1899:G:C1'	1:5:2278:G:N2	2.55	0.69
1:5:2058:G:C6	1:5:2059:C:C5	2.80	0.69
1:5:2721:G:H2'	1:5:2722:G:H5'	1.75	0.69
1:5:4199:C:C6	1:5:4199:C:O5'	2.45	0.69
1:5:4240:G:C6	1:5:4241:C:C4	2.80	0.69
1:5:4878:C:O2	1:5:4879:C:C6	2.45	0.69
7:D:210:TYR:OH	7:D:214:GLU:CG	2.41	0.69
14:K:141:CYS:CA	14:K:148:PRO:HD3	2.22	0.69
34:e:28:TYR:HB2	34:e:31:ILE:HD12	1.73	0.69
46:q:45:MET:CE	46:q:48:ARG:CG	2.66	0.69
48:4:813:VAL:HG13	48:4:814:PHE:H	1.56	0.69
48:4:830:ARG:HB2	48:4:831:PRO:HD3	1.72	0.69
49:S2:349:A:H4'	58:SI:27:TYR:CZ	2.28	0.69
49:S2:436:G:C2	49:S2:437:G:C8	2.79	0.69
49:S2:444:G:C6	49:S2:446:G:OP2	2.45	0.69
49:S2:977:C:N3	49:S2:978:G:C8	2.60	0.69
49:S2:1126:G:N2	49:S2:1127:C:C2	2.61	0.69
49:S2:1224:G:N7	49:S2:1225:U:C5	2.61	0.69
49:S2:1295:A:C5	49:S2:1296:U:H1'	2.27	0.69
49:S2:1307:U:H2'	49:S2:1308:U:H4'	1.72	0.69
49:S2:1401:A:H2'	49:S2:1402:A:C8	2.28	0.69
49:S2:1427:C:O2	49:S2:1428:G:C8	2.45	0.69
49:S2:1453:C:N3	49:S2:1455:A:H1'	2.05	0.69
49:S2:1603:G:N7	68:SS:28:PHE:HE2	1.90	0.69
58:SI:34:ALA:HB2	58:SI:56:ARG:HD3	1.74	0.69
1:5:272:U:C2	1:5:273:U:H5	2.10	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
1:5:1346:C:C2	1:5:1347:G:C8	2.80	0.69
1:5:1447:C:C2	1:5:2098:G:C2	2.80	0.69
1:5:1724:G:H21	9:F:105:PRO:CB	2.04	0.69
1:5:1751:A:H2'	1:5:1752:G:H5'	1.73	0.69
1:5:1771:U:C2	1:5:1772:C:C6	2.81	0.69
1:5:2685:C:H2'	1:5:2686:G:O4'	1.91	0.69
1:5:3653:A:C2	1:5:3692:A:H4'	2.27	0.69
1:5:4605:A:C6	48:4:801:ARG:HB2	2.28	0.69
3:8:100:U:N3	3:8:101:C:C5	2.61	0.69
33:d:87:ARG:NH1	33:d:87:ARG:CA	2.56	0.69
37:h:89:ARG:HH11	37:h:89:ARG:HG2	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:53:VAL:CB	46:q:89:VAL:HG22	2.23	0.69
46:q:63:LYS:NZ	46:q:78:LEU:HB3	2.07	0.69
48:4:420:LEU:HB3	48:4:465:PRO:HA	1.72	0.69
49:S2:140:C:N4	49:S2:176:U:O2	2.18	0.69
49:S2:600:G:C2	49:S2:601:G:C5	2.80	0.69
49:S2:994:C:O2	49:S2:995:G:C8	2.45	0.69
49:S2:1283:C:H2'	49:S2:1283:C:O2	1.92	0.69
49:S2:1537:A:O2'	49:S2:1604:G:H5'	1.92	0.69
64:SO:150:ARG:HG2	64:SO:150:ARG:HH21	1.58	0.69
1:5:90:G:N7	1:5:92:C:N1	2.41	0.69
1:5:924:C:H2'	1:5:925:C:O4'	1.92	0.69
1:5:1218:G:C6	1:5:1219:G:C1'	2.75	0.69
1:5:1598:C:O2	1:5:1598:C:C2'	2.39	0.69
1:5:2024:G:O2'	1:5:2025:A:OP2	2.11	0.69
1:5:2494:U:C2	1:5:2495:U:C6	2.81	0.69
1:5:2735:G:C2	1:5:2736:G:N7	2.61	0.69
1:5:2743:A:N3	1:5:2744:A:C8	2.60	0.69
1:5:4743:G:N1	1:5:4744:A:C5	2.61	0.69
7:D:223:PHE:HB2	7:D:226:TYR:HB2	1.73	0.69
9:F:197:TYR:C	9:F:199:VAL:H	2.00	0.69
10:G:169:PHE:CE2	17:N:6:TYR:CB	2.75	0.69
14:K:34:PRO:HD2	14:K:35:LEU:H	1.57	0.69
46:q:97:GLU:OE2	46:q:206:ILE:HG23	1.92	0.69
48:4:45:ILE:HG21	48:4:77:LEU:CA	2.21	0.69
48:4:120:ARG:HH11	48:4:496:VAL:HA	1.57	0.69
48:4:408:GLY:HA2	49:S2:479:C:C5'	2.23	0.69
48:4:417:PHE:CD2	48:4:494:MET:HE1	2.26	0.69
48:4:420:LEU:HD23	48:4:420:LEU:H	1.58	0.69
49:S2:752:G:C6	49:S2:790:C:N4	2.60	0.69
49:S2:1030:A:C2	49:S2:1031:A:C5	2.81	0.69
70:SU:65:THR:O	70:SU:77:TRP:HB3	1.92	0.69
1:5:86:U:O4	1:5:97:G:C2	2.44	0.69
1:5:92:C:H41	44:o:40:ARG:HH11	1.37	0.69
1:5:422:C:C2	1:5:423:G:C8	2.81	0.69
1:5:491:G:C2	1:5:492:U:C5	2.80	0.69
1:5:658:C:N3	1:5:659:G:N7	2.41	0.69
1:5:930:G:N3	1:5:931:C:C6	2.61	0.69
1:5:961:G:N3	1:5:961:G:C2'	2.55	0.69
1:5:992:C:C2	1:5:993:G:C8	2.81	0.69
1:5:1084:C:N3	1:5:1085:C:C5	2.61	0.69
1:5:1267:C:C5'	1:5:2110:C:O2	2.39	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1545:G:C2	1:5:1546:C:C4	2.81	0.69
1:5:1563:A:H62	49:S2:1028:A:N6	1.81	0.69
1:5:1867:A:OP1	12:I:13:LYS:NZ	2.24	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
1:5:1994: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
1:5:2445:C:O2	1:5:2445:C:H2'	1.93	0.69
1:5:3635:A:N7	1:5:3636:C:C6	2.61	0.69
1:5:3656:A:C4'	1:5:3747:A:C2	2.76	0.69
1:5:3730:U:N3	1:5:3731:C:C5	2.61	0.69
1:5:3773:U:H3	1:5:3774:A:H2'	1.58	0.69
1:5:3878:C:O2	5:B:258:HIS:CE1	2.43	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
1:5:4281:A:H2'	1:5:4282:A:H2'	1.74	0.69
1:5:4561:C:O2	1:5:4562:C:C6	2.45	0.69
5:B:175:GLN:HE21	5:B:179:HIS:HE1	1.41	0.69
10:G:260:GLU:OE1	51:SB:57:ILE:HD13	1.93	0.69
11:H:117:PHE:CD1	11:H:118:LEU:HB2	2.28	0.69
24:U:38:ASN:O	24:U:90:TYR:OH	2.10	0.69
48:4:744:ILE:HD11	48:4:816:HIS:ND1	2.08	0.69
49:S2:443:U:C4	49:S2:444:G:C8	2.80	0.69
49:S2:557:U:H2'	49:S2:558:G:O4'	1.93	0.69
49:S2:598:G:C2	49:S2:639:C:N3	2.61	0.69
49:S2:608:C:C2	49:S2:609:U:C6	2.80	0.69
49:S2:625:G:O4'	49:S2:629:A:C2	2.46	0.69
49:S2:797:C:H4'	49:S2:798:A:OP1	1.91	0.69
49:S2:804:U:C2	49:S2:805:U:C5	2.80	0.69
49:S2:882:U:H2'	49:S2:883:U:O4'	1.91	0.69
49:S2:950:C:N3	49:S2:951:C:C5	2.61	0.69
49:S2:1022:U:H6	63:SN:128:TYR:HE2	1.39	0.69
49:S2:1083:A:N3	49:S2:1859:A:O2'	2.22	0.69
49:S2:1093:A:H4'	72:SW:3:ARG:HH22	1.58	0.69
49:S2:1406:G:H2'	49:S2:1407:U:C4'	2.23	0.69
73:SX:88:ASP:OD1	73:SX:88:ASP:C	2.35	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
1:5:957:G:OP2	1:5:1284:G:N2	2.23	0.69
1:5:1282:G:N7	8:E:124:HIS:CE1	2.61	0.69
1:5:1338:G:N2	30:a:25:HIS:ND1	2.40	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1629:G:C2	1:5:1631:A:N1	2.61	0.69
1:5:1632:A:N6	1:5:1634:A:C4	2.61	0.69
1:5:1840:G:C2'	1:5:1842:G:O5'	2.41	0.69
1:5:2033:A:C2	1:5:2034:G:C8	2.80	0.69
1:5:2316:G:N2	1:5:2317:C:C2	2.61	0.69
1:5:4167:G:N1	1:5:4168:G:N7	2.41	0.69
1:5:4302:U:C5	1:5:4303:C:C6	2.80	0.69
1:5:4549:G:N1	1:5:4550:G:N7	2.40	0.69
1:5:4550:G:C2	1:5:4551:U:C6	2.80	0.69
3:8:9:A:C2	3:8:10:G:C8	2.80	0.69
3:8:14:U:H2'	3:8:15:G:C8	2.28	0.69
26:W:4:GLU:CD	26:W:30:GLN:HE21	2.00	0.69
48:4:592:LEU:HB2	48:4:603:TYR:CD2	2.28	0.69
48:4:683:PHE:CD1	48:4:729:LEU:HD21	2.28	0.69
49:S2:118:C:C5	49:S2:119:U:C5	2.80	0.69
49:S2:220:U:N3	49:S2:221:A:C8	2.61	0.69
49:S2:321:C:C2	49:S2:322:C:C5	2.80	0.69
49:S2:403:G:C6	49:S2:404:G:N7	2.60	0.69
49:S2:449:A:C2	49:S2:452:G:C8	2.81	0.69
49:S2:830:A:N6	49:S2:844:U:C2	2.60	0.69
49:S2:926:A:C6	49:S2:927:C:C4	2.80	0.69
49:S2:927:C:O2	49:S2:928:G:C8	2.46	0.69
49:S2:1786:U:N3	49:S2:1787:G:N7	2.40	0.69
1:5:483:G:N1	1:5:484:U:C4	2.61	0.69
1:5:1272:C:O2'	1:5:1273:G:C4	2.46	0.69
1:5:2077:C:N3	1:5:2078:C:C5	2.61	0.69
1:5:2248:C:O2	1:5:2248:C:H2'	1.92	0.69
1:5:2282:A:H2'	1:5:2283:G:C5'	2.22	0.69
1:5:2627:C:C5	1:5:2628:U:C5	2.81	0.69
1:5:2744:A:H2'	1:5:2745:A:C8	2.28	0.69
1:5:3656:A:O4'	1:5:3747:A:C2	2.45	0.69
1:5:4070:U:N3	1:5:4071:U:C5	2.60	0.69
7:D:29:ASP:HB3	7:D:31:TYR:O	1.92	0.69
15:L:167:ARG:O	30:a:97:ALA:O	2.11	0.69
34:e:80:HIS:HB3	34:e:84:GLU:OE2	1.93	0.69
40:k:22:SER:HA	40:k:65:ALA:HB3	1.74	0.69
48:4:58:ASP:CB	48:4:63:GLU:CD	2.65	0.69
48:4:296:PRO:HA	48:4:299:LYS:HE2	1.74	0.69
48:4:475:VAL:HG12	48:4:475:VAL:O	1.92	0.69
48:4:649:ILE:HD11	48:4:652:PHE:HE1	1.57	0.69
49:S2:83:A:C2	49:S2:84:A:H1'	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:339:A:N1	49:S2:340:C:N4	2.41	0.69
49:S2:475:C:C4	49:S2:476:A:N7	2.61	0.69
49:S2:638:C:C2	49:S2:639:C:C5	2.81	0.69
49:S2:848:U:O2	49:S2:849:A:C5	2.45	0.69
49:S2:994:C:C2	49:S2:995:G:H8	2.09	0.69
49:S2:999:G:C2	49:S2:1000:C:N1	2.61	0.69
49:S2:1093:A:C6	49:S2:1094:C:C5	2.81	0.69
49:S2:1397:U:C5	49:S2:1442:U:H4'	2.28	0.69
49:S2:1540:G:C2	49:S2:1541:G:C5	2.81	0.69
49:S2:1775:U:C2	49:S2:1776:G:C8	2.81	0.69
1:5:187:U:C5	1:5:245:C:N3	2.61	0.68
1:5:195:C:H2'	1:5:195:C:O2	1.92	0.68
1:5:424:U:O2	1:5:424:U:H2'	1.93	0.68
1:5:494:U:N3	1:5:495:C:C5	2.61	0.68
1:5:909:A:N1	1:5:910:G:C8	2.62	0.68
1:5:2076:G:C6	1:5:2077:C:C5	2.81	0.68
1:5:2270:G:C4	1:5:2271:C:C5	2.82	0.68
1:5:3635:A:C6	1:5:3636:C:H1'	2.28	0.68
1:5:3670:C:O2'	1:5:3671:G:C8	2.46	0.68
1:5:3692:A:N7	1:5:3693:U:C6	2.60	0.68
1:5:4152:G:N2	1:5:4153:C:C2	2.61	0.68
1:5:4229:U:C4	1:5:4230:C:C4	2.81	0.68
1:5:5005:G:C5	26:W:51:TRP:HD1	2.11	0.68
9:F:149:LEU:CA	9:F:197:TYR:OH	2.41	0.68
46:q:45:MET:HE1	46:q:48:ARG:CG	2.22	0.68
49:S2:53:C:O2	49:S2:53:C:H2'	1.93	0.68
49:S2:340:C:H2'	49:S2:341:C:C6	2.28	0.68
49:S2:594:A:H8	49:S2:594:A:O5'	1.75	0.68
49:S2:951:C:C2	49:S2:952:G:C8	2.80	0.68
49:S2:1413:G:C6	49:S2:1414:A:C8	2.80	0.68
1:5:468:U:O2	1:5:469:C:O4'	2.10	0.68
1:5:488:G:N1	1:5:489:C:C4	2.61	0.68
1:5:491:G:N2	1:5:663:G:C6	2.60	0.68
1:5:1093:C:C2	1:5:1094:G:C8	2.81	0.68
1:5:1269:G:C4	1:5:2111:G:N1	2.61	0.68
1:5:2089:G:O2'	1:5:2090:U:O2	2.11	0.68
1:5:2294:G:C2	1:5:2295:C:C4	2.80	0.68
1:5:2371:U:H2'	1:5:2372:U:H5'	1.73	0.68
1:5:2688:G:N1	1:5:2689:C:C4	2.61	0.68
1:5:2741:U:O2'	4:A:50:HIS:HB3	1.93	0.68
1:5:3629:A:C2'	49:S2:1721:U:N3	2.53	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3759:A:H61	49:S2:1709:G:C5'	2.07	0.68
1:5:4093:G:H3'	1:5:4094:G:C5'	2.23	0.68
1:5:4345:C:C2	1:5:4346:U:C5	2.81	0.68
1:5:4871:C:C4	22:S:176:PHE:CD2	2.81	0.68
1:5:4871:C:C5	22:S:176:PHE:CE2	2.81	0.68
5:B:323:TYR:HB3	5:B:342:LYS:HG2	1.74	0.68
14:K:22:VAL:HG22	14:K:48:LYS:HG3	1.76	0.68
14:K:131:GLU:CG	14:K:155:ILE:HD11	2.11	0.68
23:T:82:GLY:HA3	31:b:16:TRP:CB	2.23	0.68
46:q:22:ASP:OD1	46:q:66:ARG:NH2	2.26	0.68
48:4:74:ALA:O	48:4:75:ILE:CD1	2.37	0.68
48:4:144:ARG:O	48:4:147:ILE:HG22	1.93	0.68
49:S2:81:U:C4	49:S2:82:G:C8	2.81	0.68
49:S2:1760:G:C2	49:S2:1773:C:C2	2.81	0.68
50:SA:39:TYR:OH	67:SR:104:GLU:HB2	1.94	0.68
61:SL:44:PHE:CE2	61:SL:143:LEU:HD23	2.27	0.68
63:SN:38:TYR:OH	63:SN:78:LYS:HG3	1.92	0.68
1:5:278:G:N1	1:5:330:G:C8	2.61	0.68
1:5:287:U:O2	1:5:288:G:C8	2.47	0.68
1:5:938:C:H2'	1:5:939:G:C8	2.27	0.68
1:5:1759:G:C6	1:5:1760:G:N7	2.61	0.68
1:5:2041:A:C2	1:5:4464:A:C5	2.82	0.68
1:5:2279:A:N3	1:5:2279:A:H2'	2.07	0.68
1:5:2498:C:C2	1:5:2499:C:C6	2.82	0.68
1:5:2529:A:N7	1:5:2532:C:C4	2.61	0.68
4:A:209:HIS:NE2	4:A:235:VAL:HG11	2.08	0.68
9:F:209:PHE:C	9:F:209:PHE:CD1	2.70	0.68
14:K:93:LYS:O	14:K:94:LYS:CB	2.40	0.68
14:K:94:LYS:HA	14:K:96:LYS:HD2	1.75	0.68
17:N:162:ARG:HH21	17:N:164:LEU:HD11	1.58	0.68
49:S2:43:U:O2	49:S2:484:A:N1	2.26	0.68
49:S2:104:A:C5	49:S2:105:U:C6	2.82	0.68
49:S2:579:C:N3	49:S2:580:U:C6	2.62	0.68
49:S2:1111:U:C2	49:S2:1112:U:H5	2.05	0.68
49:S2:1280:G:C6	49:S2:1281:G:C8	2.81	0.68
57:SH:177:TYR:CE2	57:SH:185:VAL:HG21	2.27	0.68
1:5:66:A:C2	1:5:312:G:C1'	2.76	0.68
1:5:73:A:C2	1:5:74:G:C8	2.81	0.68
1:5:481:G:C2	1:5:482:G:C8	2.82	0.68
1:5:642:G:N1	1:5:643:C:C4	2.61	0.68
1:5:1269:G:N7	1:5:2111:G:C5	2.61	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1358:G:C4	1:5:1359:G:N7	2.62	0.68
1:5:1554:A:OP2	45:p:4:ARG:NH1	2.26	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
1:5:2633:U:C2	1:5:2634:C:C6	2.81	0.68
1:5:2891:U:C5	21:R:74:ARG:NH1	2.61	0.68
1:5:3736:A:O2'	1:5:3737:A:O4'	2.11	0.68
1:5:4189:U:H1'	1:5:4380:A:C2	2.28	0.68
1:5:4258:C:C2	1:5:4259:C:C6	2.82	0.68
1:5:4287:G:O2'	1:5:4288:C:O5'	2.10	0.68
1:5:4763:U:O2	16:M:3:PHE:CE2	2.46	0.68
1:5:4879:C:O2	1:5:4880:C:C6	2.45	0.68
1:5:5021:C:C2	1:5:5022:U:C6	2.82	0.68
7:D:125:VAL:O	7:D:196:ARG:NH2	2.27	0.68
14:K:14:TYR:C	14:K:14:TYR:CD1	2.72	0.68
22:S:95:ARG:NH1	22:S:97:TYR:OH	2.21	0.68
46:q:6:ARG:CG	46:q:10:LYS:CG	2.69	0.68
48:4:137:VAL:CG1	48:4:807:GLN:HE22	2.05	0.68
48:4:691:ALA:HB2	48:4:730:TYR:CA	2.10	0.68
48:4:745:TYR:CD1	48:4:813:VAL:O	2.46	0.68
48:4:745:TYR:HD2	48:4:814:PHE:HA	1.53	0.68
48:4:752:PRO:HB2	48:4:754:GLN:CD	2.17	0.68
48:4:756:VAL:HG21	48:4:782:PHE:CD2	2.29	0.68
48:4:823:ASP:OD1	48:4:823:ASP:C	2.37	0.68
49:S2:993:G:C4	49:S2:994:C:C6	2.81	0.68
49:S2:1049:A:C5	49:S2:1070:A:C2	2.81	0.68
49:S2:1291:A:C2	81:Sf:140:TYR:CG	2.81	0.68
49:S2:1394:G:O2'	66:SQ:124:PRO:O	2.11	0.68
49:S2:1565:C:C2	49:S2:1571:G:C2	2.81	0.68
1:5:209:U:C5	1:5:211:G:C8	2.82	0.68
1:5:442:G:H2'	1:5:443:G:O5'	1.92	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
1:5:1243:C:O2	1:5:1269:G:N3	2.26	0.68
1:5:1811:G:N3	1:5:1812:C:C6	2.62	0.68
1:5:1848:C:H6	1:5:1848:C:H5''	1.58	0.68
1:5:2095:A:N6	9:F:41:GLN:OE1	2.26	0.68
1:5:2108:G:H2'	1:5:2109:G:H4'	1.76	0.68
1:5:2305:U:H4'	1:5:2306:G:OP2	1.93	0.68
1:5:2485:U:C2	1:5:2486:G:C8	2.82	0.68
1:5:4735:G:C2	1:5:4736:C:C6	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:118:PHE:CB	5:B:119:TYR:CE1	2.75	0.68
14:K:105:THR:O	14:K:106:PHE:CD2	2.46	0.68
15:L:69:LYS:HA	15:L:159:ASN:HD21	1.59	0.68
17:N:138:PHE:HB3	17:N:143:ARG:NH2	2.08	0.68
48:4:228:PHE:CD2	48:4:293:ILE:HG12	2.28	0.68
49:S2:52:G:C5	49:S2:53:C:C6	2.81	0.68
49:S2:649:U:O2	49:S2:649:U:H2'	1.91	0.68
49:S2:1137:U:H3	49:S2:1148:A:H61	1.41	0.68
49:S2:1545:A:O2'	49:S2:1546:G:H8	1.72	0.68
49:S2:1606:G:N1	49:S2:1632:G:C2	2.61	0.68
49:S2:1658:G:N1	49:S2:1664:A:N6	2.42	0.68
56:SG:215:LYS:O	56:SG:219:GLU:N	2.27	0.68
76:Sa:10:ARG:NH1	76:Sa:12:LYS:HD3	2.09	0.68
82:Sg:88:ARG:HG2	82:Sg:100:ARG:HB2	1.73	0.68
1:5:99:A:C2	1:5:100:C:C2	2.82	0.68
1:5:247:G:N2	1:5:248:C:C2	2.62	0.68
1:5:669:C:C2	1:5:670:G:C8	2.81	0.68
1:5:701:G:O2'	34:e:7:LEU:O	2.11	0.68
1:5:916:C:C4	1:5:917:A:N7	2.62	0.68
1:5:1080:C:C4	1:5:1081:C:C5	2.82	0.68
1:5:1249:C:C2	1:5:1262:G:C2	2.81	0.68
1:5:1412:G:C2	1:5:1413:C:C6	2.81	0.68
1:5:1744:U:N3	1:5:1745:G:C8	2.62	0.68
1:5:1934:A:O2'	1:5:2059:C:OP1	2.11	0.68
1:5:2567:G:N2	1:5:2568:C:C2	2.62	0.68
1:5:3811:G:H4'	1:5:3812:C:OP2	1.93	0.68
1:5:3857:G:C6	1:5:3858:C:C4	2.81	0.68
1:5:4284:C:C2	1:5:4285:U:H5	2.07	0.68
1:5:4286:C:O2	1:5:4287:G:N7	2.27	0.68
1:5:4623:G:H4'	5:B:16:PHE:CE2	2.28	0.68
1:5:4707:A:H2'	1:5:4708:A:O5'	1.93	0.68
1:5:5035:U:C4	1:5:5036:C:C5	2.81	0.68
2:7:60:G:C6	2:7:61:G:N7	2.61	0.68
10:G:136:LEU:HD21	10:G:204:PHE:CE1	2.28	0.68
33:d:25:TYR:OH	33:d:119:THR:CB	2.39	0.68
46:q:17:ILE:CD1	46:q:54:LEU:HD21	2.23	0.68
46:q:206:ILE:O	46:q:206:ILE:HG23	1.94	0.68
48:4:33:SER:CB	48:4:57:THR:HG21	2.24	0.68
48:4:42:LYS:HE2	48:4:79:TYR:HH	1.52	0.68
48:4:157:MET:CE	48:4:214:PHE:CE2	2.69	0.68
48:4:502:SER:C	48:4:504:VAL:H	2.00	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:709:LEU:HD13	48:4:716:ARG:HD2	1.76	0.68
48:4:756:VAL:CG2	48:4:782:PHE:CB	2.69	0.68
49:S2:164:A:O2'	49:S2:165:G:H5'	1.93	0.68
49:S2:377:G:N1	49:S2:378:U:C5	2.62	0.68
49:S2:378:U:C2	49:S2:379:C:C5	2.77	0.68
49:S2:752:G:N1	49:S2:791:C:C2	2.62	0.68
49:S2:993:G:N1	49:S2:994:C:C5	2.62	0.68
49:S2:1049:A:C6	49:S2:1070:A:N3	2.62	0.68
49:S2:1133:A:N1	49:S2:1134:G:C5	2.62	0.68
49:S2:1575:G:N2	49:S2:1576:G:C5	2.62	0.68
49:S2:1643:U:HO2'	49:S2:1644:C:P	2.17	0.68
55:SF:71:ARG:NH1	55:SF:148:ASN:OD1	2.25	0.68
1:5:28:C:N3	1:5:29:G:C8	2.62	0.68
1:5:659:G:C6	1:5:660:A:N7	2.62	0.68
1:5:719:C:C2	1:5:720:G:C8	2.81	0.68
1:5:750:U:C2	1:5:751:G:C8	2.82	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
1:5:1387:A:N3	1:5:1397:A:N6	2.41	0.68
1:5:1595:G:C2	1:5:4557:U:H4'	2.28	0.68
1:5:1694:C:N3	1:5:1695:U:C5	2.62	0.68
1:5:1807:C:C2	1:5:1808:C:C6	2.81	0.68
1:5:1995:G:C4'	14:K:132:ILE:HD11	2.24	0.68
1:5:2093:A:H5''	1:5:2093:A:N3	2.09	0.68
1:5:4069:U:H2'	1:5:4070:U:C5	2.29	0.68
1:5:4256:A:N7	13:J:60:PHE:CZ	2.61	0.68
3:8:125:C:C5'	3:8:125:C:C2	2.76	0.68
8:E:145:ILE:HD11	8:E:267:LEU:HD21	1.76	0.68
14:K:22:VAL:HG22	14:K:48:LYS:CB	2.22	0.68
14:K:117:ARG:HE	14:K:117:ARG:HA	1.45	0.68
46:q:92:LYS:HD3	46:q:92:LYS:C	2.18	0.68
48:4:113:SER:OG	48:4:533:MET:HB3	1.93	0.68
48:4:420:LEU:CD2	48:4:420:LEU:H	2.06	0.68
49:S2:71:G:H3'	49:S2:72:C:C5'	2.24	0.68
49:S2:436:G:C6	49:S2:458:A:C2	2.82	0.68
49:S2:440:G:OP1	49:S2:1798:C:O2'	2.11	0.68
49:S2:580:U:O2	49:S2:580:U:H2'	1.92	0.68
49:S2:648:A:N1	49:S2:649:U:C5	2.62	0.68
49:S2:695:C:C2	49:S2:696:G:C8	2.81	0.68
49:S2:794:A:C2	49:S2:795:A:N9	2.60	0.68
49:S2:1051:G:N1	49:S2:1052:A:C5	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1295:A:C4	49:S2:1296:U:H1'	2.29	0.68
49:S2:1302:G:C6	81:Sf:138:ARG:NH1	2.61	0.68
49:S2:1512:C:O2	49:S2:1513:C:C6	2.46	0.68
49:S2:1666:C:O2	49:S2:1667:U:C6	2.47	0.68
1:5:33:A:N6	1:5:50:C:C2	2.62	0.68
1:5:43:U:OP1	17:N:85:VAL:HG23	1.94	0.68
1:5:656:C:N3	1:5:657:C:C5	2.61	0.68
1:5:1553:A:C2	1:5:1575:A:H1'	2.28	0.68
1:5:2463:G:N3	1:5:2464:C:C5	2.62	0.68
1:5:2904:U:O2	1:5:2905:C:C6	2.46	0.68
1:5:4095:G:H2'	1:5:4096:C:H6	1.58	0.68
1:5:4627:U:C2	1:5:4628:U:C6	2.82	0.68
2:7:110:G:C2	2:7:111:C:C6	2.81	0.68
2:7:112:U:O2	2:7:112:U:H2'	1.94	0.68
3:8:35:C:H6	3:8:35:C:O5'	1.77	0.68
3:8:106:G:N2	3:8:107:C:C2	2.62	0.68
6:C:9:SER:HA	6:C:21:ASN:OD1	1.92	0.68
10:G:227:ASN:N	10:G:227:ASN:HD22	1.91	0.68
33:d:87:ARG:NH1	33:d:87:ARG:CB	2.56	0.68
41:l:44:TRP:CZ3	41:l:45:ARG:HB2	2.29	0.68
48:4:41:CYS:SG	48:4:49:ALA:CB	2.82	0.68
48:4:264:ARG:O	48:4:288:THR:HG22	1.94	0.68
48:4:275:LYS:O	48:4:275:LYS:CE	2.31	0.68
48:4:505:VAL:HB	48:4:548:GLY:O	1.94	0.68
49:S2:588:G:C1'	49:S2:589:G:H21	2.05	0.68
49:S2:831:G:C2	49:S2:844:U:C4	2.82	0.68
49:S2:956:G:C2	49:S2:957:A:C5	2.82	0.68
49:S2:1273:C:N3	49:S2:1506:A:N3	2.41	0.68
49:S2:1308:U:C2	49:S2:1309:C:C5	2.82	0.68
49:S2:1406:G:H2'	49:S2:1407:U:H1'	1.76	0.68
78:Sc:6:VAL:HG12	78:Sc:8:PRO:HD3	1.74	0.68
1:5:21:G:C6	3:8:36:G:N2	2.62	0.68
1:5:316:U:O2	1:5:316:U:H2'	1.94	0.68
1:5:465:G:C2	1:5:466:A:C8	2.82	0.68
1:5:1170:G:C2	1:5:1192:C:C2	2.82	0.68
1:5:1201:U:N3	1:5:1202:C:C5	2.62	0.68
1:5:1266:G:H4'	1:5:2112:G:C4	2.28	0.68
1:5:1273:G:N7	8:E:68:LYS:C	2.52	0.68
1:5:2726:G:C2	1:5:2727:C:C5	2.82	0.68
1:5:2874:U:H5'	1:5:2874:U:C6	2.29	0.68
1:5:3688:U:N3	1:5:3689:G:N7	2.41	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4069:U:H2'	1:5:4070:U:C6	2.29	0.68
1:5:4094:G:C2'	1:5:4095:G:O4'	2.38	0.68
1:5:4096:C:N4	1:5:4097:G:C8	2.61	0.68
1:5:4121:G:N2	4:A:85:GLY:N	2.42	0.68
1:5:4174:U:O2	1:5:4175:G:H8	1.76	0.68
1:5:4460:U:OP1	5:B:10:ARG:NH1	2.27	0.68
1:5:4945:G:O6	35:f:60:PRO:CD	2.41	0.68
1:5:5028:G:C4	1:5:5029:C:C5	2.82	0.68
2:7:17:C:C2	2:7:18:C:C5	2.81	0.68
2:7:56:G:C2'	2:7:57:C:O5'	2.42	0.68
6:C:325:MET:HA	6:C:325:MET:HE3	1.76	0.68
8:E:184:ARG:HD3	8:E:213:PHE:HB3	1.76	0.68
32:c:78:ASN:ND2	32:c:78:ASN:C	2.52	0.68
43:n:4:LYS:NZ	49:S2:1844:U:O4	2.26	0.68
46:q:182:PRO:CG	46:q:183:PHE:CD1	2.70	0.68
48:4:64:GLN:CD	48:4:64:GLN:C	2.58	0.68
48:4:849:PRO:HD2	48:4:849:PRO:O	1.92	0.68
49:S2:806:U:O2	49:S2:807:G:C8	2.45	0.68
49:S2:828:G:C6	49:S2:829:C:C5	2.81	0.68
49:S2:951:C:N3	49:S2:952:G:N7	2.42	0.68
49:S2:965:U:O2	49:S2:1066:U:H1'	1.94	0.68
49:S2:1342:U:C4	49:S2:1483:A:C5	2.82	0.68
49:S2:1348:G:C2	49:S2:1349:G:C8	2.82	0.68
49:S2:1501:C:N3	49:S2:1502:C:C5	2.62	0.68
49:S2:1568:C:H2'	49:S2:1569:A:C8	2.29	0.68
69:ST:13:GLU:HA	69:ST:16:ARG:HG3	1.75	0.68
1:5:122:U:H1'	1:5:152:U:O2	1.93	0.68
1:5:1175:A:C6	1:5:1176:C:C5	2.81	0.68
1:5:1413:C:C2	1:5:1414:C:C5	2.82	0.68
1:5:1877:G:C2	1:5:1878:G:C8	2.82	0.68
1:5:1939:A:C2	1:5:3874:G:OP1	2.47	0.68
1:5:1967:A:N1	1:5:1968:G:C5	2.62	0.68
1:5:1973:G:O6	1:5:2002:A:C8	2.46	0.68
1:5:2263:A:O3'	1:5:2264:C:H6	1.74	0.68
1:5:2524:U:H5''	1:5:2711:G:C2	2.28	0.68
1:5:2857:A:N3	1:5:2858:A:C5	2.62	0.68
1:5:4091:G:C6	1:5:4092:G:N7	2.62	0.68
1:5:4490:C:N3	1:5:4491:G:N7	2.42	0.68
3:8:43:A:C2	3:8:44:A:N7	2.62	0.68
3:8:68:G:H2'	3:8:69:U:O4'	1.93	0.68
3:8:94:G:H4'	3:8:95:A:OP1	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:22:ASP:OD1	46:q:66:ARG:CZ	2.42	0.68
46:q:81:HIS:O	46:q:83:ARG:N	2.26	0.68
49:S2:436:G:C2	49:S2:437:G:N7	2.61	0.68
49:S2:436:G:N3	49:S2:437:G:C8	2.62	0.68
49:S2:580:U:C4	49:S2:581:U:C5	2.82	0.68
49:S2:925:G:N1	49:S2:926:A:C8	2.59	0.68
49:S2:1017:U:C2	49:S2:1018:U:C6	2.82	0.68
49:S2:1366:G:N2	49:S2:1374:C:N3	2.42	0.68
49:S2:1422:G:H22	49:S2:1424:G:H3'	1.58	0.68
68:SS:124:ARG:HH11	68:SS:124:ARG:HG2	1.57	0.68
1:5:65:A:C2	1:5:76:A:H4'	2.29	0.67
1:5:86:U:O2	1:5:87:A:N7	2.27	0.67
1:5:104:G:O2'	1:5:1361:G:O2'	2.06	0.67
1:5:289:C:C2	1:5:290:U:C6	2.81	0.67
1:5:440:U:N3	1:5:441:G:N7	2.42	0.67
1:5:445:U:O4'	1:5:2313:A:C2	2.47	0.67
1:5:711:A:C2	1:5:712:C:C5	2.82	0.67
1:5:976:G:C4	1:5:977:C:C6	2.82	0.67
1:5:1421:G:N2	1:5:1422:G:C4	2.62	0.67
1:5:1631:A:C2	4:A:204:MET:SD	2.87	0.67
1:5:1936:C:C4	2:7:84:U:C5	2.81	0.67
1:5:2458:C:H5'	17:N:67:ARG:HD3	1.76	0.67
1:5:2522:G:N2	1:5:2534:C:C2	2.63	0.67
1:5:2612:G:H2'	1:5:2613:C:O4'	1.95	0.67
1:5:2811:G:N2	1:5:2813:A:C8	2.63	0.67
1:5:3740:G:O6	1:5:3741:C:C5	2.45	0.67
1:5:4478:G:O2'	1:5:4602:A:N1	2.26	0.67
2:7:110:G:N1	2:7:111:C:C4	2.62	0.67
3:8:134:G:N2	3:8:135:C:H1'	2.09	0.67
5:B:235:TRP:HD1	5:B:267:ALA:HA	1.59	0.67
48:4:767:ARG:NH2	48:4:789:PRO:HG2	2.10	0.67
49:S2:154:U:H1'	56:SG:13:GLN:HG2	1.76	0.67
49:S2:552:G:C4	49:S2:553:U:C5	2.82	0.67
49:S2:870:A:H4'	49:S2:871:U:O5'	1.94	0.67
49:S2:1204:A:C4	49:S2:1205:C:C5	2.81	0.67
49:S2:1248:U:C2'	49:S2:1249:C:O4'	2.42	0.67
49:S2:1256:G:N7	79:Sd:40:ARG:HD2	2.08	0.67
49:S2:1630:A:C2	49:S2:1631:U:C6	2.82	0.67
1:5:1172:C:C2	1:5:1173:G:C8	2.82	0.67
1:5:1287:G:C2	1:5:1289:C:C5	2.82	0.67
1:5:2714:G:C2	1:5:2715:G:N7	2.62	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2745:A:O2'	1:5:2746:A:O5'	2.12	0.67
1:5:3730:U:C2	1:5:3731:C:C6	2.82	0.67
1:5:3796:U:HO2'	49:S2:1720:U:HO2'	1.41	0.67
1:5:3878:C:C4	1:5:4518:A:C2	2.82	0.67
1:5:3905:A:C6	1:5:4449:A:N1	2.62	0.67
1:5:3912:U:C2'	1:5:3913:G:H5'	2.24	0.67
1:5:4072:C:C2	1:5:4073:A:C8	2.82	0.67
1:5:4985:U:O2	5:B:174:ARG:NH1	2.28	0.67
2:7:22:A:C2	2:7:23:A:N7	2.61	0.67
4:A:89:TYR:CB	4:A:100:ASN:HD21	2.06	0.67
14:K:113:ALA:C	14:K:116:MET:HG2	2.17	0.67
47:r:7:TRP:CD1	47:r:38:PHE:CD1	2.82	0.67
48:4:393:PRO:O	48:4:393:PRO:CD	2.42	0.67
48:4:691:ALA:HA	48:4:730:TYR:CG	2.28	0.67
49:S2:155:G:C2	49:S2:156:G:H1'	2.29	0.67
49:S2:316:G:N1	49:S2:317:C:C4	2.62	0.67
49:S2:604:A:N7	59:SJ:20:PHE:CE2	2.62	0.67
49:S2:637:U:C2	49:S2:638:C:C6	2.82	0.67
49:S2:1794:C:N3	49:S2:1795:G:C8	2.62	0.67
49:S2:1840:U:C4	49:S2:1841:C:C5	2.83	0.67
1:5:207:G:N2	1:5:383:A:C8	2.61	0.67
1:5:509:A:C2	30:a:105:ARG:NE	2.61	0.67
1:5:1171:G:C2	1:5:1191:C:C2	2.82	0.67
1:5:1267:C:O2'	1:5:1271:G:O6	2.13	0.67
1:5:2453:A:C6	1:5:2454:U:C6	2.83	0.67
1:5:2745:A:O2'	1:5:2746:A:C5'	2.43	0.67
1:5:4123:C:H2'	1:5:4123:C:O2	1.92	0.67
1:5:4369:A:N1	1:5:4370:G:C5	2.62	0.67
1:5:4911:A:H5''	5:B:100:ARG:HD3	1.77	0.67
3:8:80:A:H2'	3:8:81:C:O2'	1.94	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
3:8:115:G:C6	3:8:116:C:C5	2.83	0.67
3:8:125:C:C2	3:8:125:C:H5''	2.28	0.67
6:C:128:LEU:HD12	6:C:264:TYR:OH	1.95	0.67
10:G:260:GLU:CD	51:SB:57:ILE:HD13	2.19	0.67
14:K:62:LEU:HD13	14:K:64:ILE:HD11	1.76	0.67
48:4:154:VAL:CA	48:4:205:ILE:CD1	2.73	0.67
48:4:751:CYS:SG	48:4:756:VAL:CG2	2.83	0.67
49:S2:386:C:O2	49:S2:387:C:C6	2.47	0.67
49:S2:623:G:C6	49:S2:624:C:C5	2.81	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:794:A:C4	49:S2:795:A:C8	2.82	0.67
49:S2:1067:C:C4	49:S2:1068:G:C5	2.82	0.67
49:S2:1126:G:N1	49:S2:1127:C:C4	2.63	0.67
49:S2:1308:U:C2'	49:S2:1309:C:C6	2.68	0.67
57:SH:145:ARG:CD	72:SW:51:GLU:HG2	2.24	0.67
60:SK:95:ARG:HA	60:SK:95:ARG:NE	2.10	0.67
1:5:99:A:H4'	17:N:181:HIS:ND1	2.09	0.67
1:5:451:C:C4	1:5:1295:C:H2'	2.29	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
1:5:1764:G:O6	1:5:1766:A:H5''	1.94	0.67
1:5:2021:G:C6	1:5:2022:C:C4	2.82	0.67
1:5:2258:C:H2'	1:5:2258:C:O2	1.95	0.67
1:5:4112:C:C4	1:5:4113:U:C5	2.82	0.67
1:5:4233:A:N1	1:5:4290:U:C4	2.56	0.67
1:5:4745:G:C2'	1:5:4746:C:C6	2.77	0.67
14:K:15:LEU:HD11	14:K:60:VAL:CG1	2.25	0.67
14:K:64:ILE:HB	14:K:71:ILE:HD12	1.76	0.67
14:K:141:CYS:HA	14:K:148:PRO:HD3	1.77	0.67
46:q:142:GLY:O	46:q:143:ILE:HG13	1.93	0.67
48:4:448:GLN:HE21	48:4:448:GLN:C	2.03	0.67
49:S2:81:U:C4	49:S2:82:G:C5	2.81	0.67
49:S2:98:C:C2	49:S2:409:C:C5	2.82	0.67
49:S2:1427:C:C2	49:S2:1428:G:N7	2.62	0.67
49:S2:1435:C:C4	49:S2:1436:C:C5	2.83	0.67
49:S2:1542:C:O2'	49:S2:1543:U:O5'	2.12	0.67
63:SN:128:TYR:C	63:SN:128:TYR:HD1	2.01	0.67
66:SQ:53:GLU:OE1	66:SQ:85:ARG:NH2	2.27	0.67
1:5:38:A:C6	1:5:41:C:C5	2.83	0.67
1:5:1186:U:C4	1:5:1187:G:C5	2.83	0.67
1:5:1218:G:C6	1:5:1219:G:H1'	2.30	0.67
1:5:1411:C:C2	1:5:1412:G:C8	2.82	0.67
1:5:1491:A:C4	1:5:1492:G:C8	2.82	0.67
1:5:2325:C:O2	1:5:2326:G:H8	1.77	0.67
1:5:2480:G:C2	1:5:2481:G:C8	2.83	0.67
1:5:2736:G:N3	1:5:2737:C:C6	2.62	0.67
1:5:4075:U:O2	1:5:4076:G:N7	2.27	0.67
1:5:4285:U:N3	1:5:4286:C:C5	2.62	0.67
1:5:4627:U:O2	1:5:4627:U:H2'	1.94	0.67
2:7:19:C:N3	2:7:20:U:C5	2.62	0.67
2:7:59:G:C2	2:7:60:G:N9	2.62	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:29:ASP:HB3	7:D:32:ALA:HB3	1.76	0.67
8:E:157:ARG:HD2	8:E:266:TYR:CE1	2.28	0.67
48:4:10:ARG:HH22	48:4:465:PRO:HG3	1.60	0.67
48:4:79:TYR:CD2	48:4:351:LEU:HD12	2.19	0.67
48:4:531:ASP:HB3	48:4:534:VAL:CG1	2.25	0.67
48:4:730:TYR:CB	48:4:854:PHE:CZ	2.77	0.67
49:S2:119:U:C4	49:S2:120:U:C5	2.82	0.67
49:S2:439:A:C2	49:S2:455:A:N1	2.63	0.67
49:S2:452:G:C4	49:S2:453:C:C5	2.82	0.67
49:S2:663:C:N3	49:S2:664:A:C8	2.62	0.67
49:S2:1052:A:C5	49:S2:1053:C:C5	2.82	0.67
49:S2:1112:U:H2'	49:S2:1113:A:O4'	1.95	0.67
49:S2:1495:G:O2'	79:Sd:26:ASN:ND2	2.28	0.67
49:S2:1840:U:O2	49:S2:1841:C:C6	2.47	0.67
55:SF:91:ARG:HD2	66:SQ:46:THR:HG22	1.76	0.67
1:5:68:U:C4	1:5:69:A:C8	2.83	0.67
1:5:449:C:N3	1:5:450:G:C8	2.62	0.67
1:5:1271:G:H3'	1:5:1272:C:O4'	1.94	0.67
1:5:1277:G:C6	1:5:1278:C:C5	2.83	0.67
1:5:1408:G:N3	1:5:1408:G:H2'	2.10	0.67
1:5:1412:G:N3	1:5:1413:C:C6	2.62	0.67
1:5:1629:G:N2	1:5:1631:A:C2	2.63	0.67
1:5:2457:G:N2	1:5:2465:C:N3	2.43	0.67
1:5:3907:G:C4	1:5:4449:A:H1'	2.28	0.67
1:5:4097:G:N3	1:5:4098:A:C8	2.63	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
1:5:4956:A:C6	1:5:4957:C:C5	2.83	0.67
1:5:5046:U:OP1	33:d:83:ARG:NH2	2.28	0.67
3:8:118:C:N3	3:8:119:C:H5	1.90	0.67
25:V:20:LEU:HD21	25:V:101:ASN:ND2	2.09	0.67
32:c:31:TYR:HD1	32:c:32:LYS:H	1.43	0.67
48:4:228:PHE:HD1	48:4:232:TYR:CE2	2.12	0.67
48:4:322:LYS:HB2	48:4:322:LYS:NZ	2.08	0.67
49:S2:381:C:O5'	49:S2:381:C:H6	1.76	0.67
49:S2:439:A:H4'	49:S2:1799:G:H4'	1.75	0.67
49:S2:444:G:N2	49:S2:446:G:H3'	2.10	0.67
49:S2:550:C:C2	49:S2:551:U:C5	2.83	0.67
49:S2:854:A:H2'	49:S2:855:G:O4'	1.94	0.67
49:S2:1231:C:O4'	49:S2:1665:G:C2	2.45	0.67
49:S2:1287:A:C6	49:S2:1314:U:C4	2.83	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1589:A:H2'	49:S2:1590:C:C6	2.29	0.67
1:5:91:G:N7	1:5:93:G:C6	2.63	0.67
1:5:699:C:N3	1:5:700:G:C8	2.62	0.67
1:5:951:G:C2	1:5:952:G:N7	2.63	0.67
1:5:957:G:P	1:5:1284:G:C2	2.88	0.67
1:5:1245:C:C4	1:5:1269:G:O6	2.47	0.67
1:5:1263:A:C5	1:5:1264:C:C5	2.83	0.67
1:5:1887:G:N1	1:5:1890:G:O6	2.27	0.67
1:5:2366:A:H2'	1:5:2367:A:C5'	2.24	0.67
1:5:2513:A:H62	36:g:13:TYR:HE2	1.40	0.67
1:5:3629:A:C4'	49:S2:1721:U:H3	2.08	0.67
1:5:3759:A:N6	49:S2:1709:G:C5'	2.58	0.67
1:5:4228:G:C5'	1:5:4229:U:O4'	2.43	0.67
1:5:4276:G:C5	1:5:4277:G:N7	2.63	0.67
1:5:4562:C:C2	1:5:4563:U:C6	2.83	0.67
1:5:4653:C:N3	1:5:4654:C:C5	2.63	0.67
1:5:4984:C:N3	1:5:4985:U:C5	2.63	0.67
2:7:18:C:C4	2:7:19:C:H5	2.12	0.67
3:8:11:C:C4	3:8:12:G:N7	2.59	0.67
3:8:91:A:H2'	3:8:92:U:O4'	1.94	0.67
4:A:211:PHE:CE1	4:A:219:ILE:HG23	2.29	0.67
48:4:585:GLU:CB	48:4:737:GLN:NE2	2.58	0.67
48:4:744:ILE:HD12	48:4:816:HIS:O	1.93	0.67
49:S2:300:U:C2	49:S2:301:A:C8	2.83	0.67
49:S2:926:A:C5	49:S2:927:C:C5	2.82	0.67
49:S2:1290:G:C3'	81:Sf:146:LEU:HG	2.25	0.67
49:S2:1432:U:C2	49:S2:1433:C:C5	2.83	0.67
49:S2:1510:G:C6	49:S2:1511:U:C6	2.83	0.67
49:S2:1606:G:C2	49:S2:1632:G:C2	2.81	0.67
49:S2:1665:G:N7	69:ST:88:MET:HG3	2.09	0.67
51:SB:66:VAL:HG22	51:SB:87:ILE:HG22	1.77	0.67
66:SQ:70:VAL:HG11	66:SQ:84:ILE:HG22	1.75	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
1:5:1725:U:N3	1:5:1726:U:C5	2.63	0.67
1:5:1839:U:H3'	1:5:1840:G:N2	2.09	0.67
1:5:2056:G:N1	1:5:2058:G:C5	2.62	0.67
1:5:2274:C:H5'	6:C:312:ARG:HB3	1.77	0.67
1:5:2688:G:N2	1:5:2689:C:C2	2.63	0.67
1:5:3899:G:H5''	5:B:257:TRP:CD1	2.30	0.67
1:5:3910:C:C2	1:5:3911:C:H5	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4124:G:N2	10:G:43:GLN:O	2.28	0.67
1:5:4314:C:N3	1:5:4315:A:N7	2.43	0.67
1:5:4413:C:H3'	1:5:4414:A:H8	1.60	0.67
1:5:4939:C:H2'	1:5:4939:C:O2	1.94	0.67
2:7:62:U:C2	2:7:64:G:C8	2.83	0.67
3:8:64:U:N3	3:8:65:A:N6	2.43	0.67
7:D:29:ASP:CB	7:D:32:ALA:HB3	2.25	0.67
14:K:105:THR:HG22	14:K:144:ASP:N	2.09	0.67
48:4:741:MET:HB2	48:4:818:GLN:O	1.95	0.67
48:4:770:VAL:HG22	48:4:784:VAL:CG1	2.24	0.67
49:S2:27:A:C2	49:S2:28:U:N1	2.63	0.67
49:S2:114:G:H2'	49:S2:114:G:N3	2.09	0.67
49:S2:525:A:H62	49:S2:588:G:H22	1.42	0.67
49:S2:609:U:N3	49:S2:610:G:N7	2.43	0.67
49:S2:1039:C:C2	49:S2:1040:G:C8	2.83	0.67
49:S2:1149:A:C5	49:S2:1151:G:C8	2.83	0.67
49:S2:1412:C:H2'	49:S2:1413:G:H8	1.58	0.67
49:S2:1538:C:C2	49:S2:1539:U:C6	2.83	0.67
49:S2:1599:U:C5	55:SF:164:ARG:HA	2.30	0.67
49:S2:1687:C:N3	49:S2:1688:C:C5	2.62	0.67
49:S2:1841:C:C2	49:S2:1842:C:C5	2.82	0.67
49:S2:1849:G:H2'	49:S2:1850:A:C8	2.30	0.67
1:5:218:A:H1'	1:5:219:G:H5''	1.76	0.67
1:5:270:U:O2	1:5:271:C:C6	2.47	0.67
1:5:661:C:C2	1:5:662:C:C6	2.82	0.67
1:5:673:C:H2'	1:5:674:G:C8	2.30	0.67
1:5:1268:G:C2	1:5:2111:G:N2	2.63	0.67
1:5:1380:G:H2'	1:5:1382:G:N7	2.09	0.67
1:5:1742:A:C2	1:5:1743:A:N7	2.63	0.67
1:5:1916:G:H21	1:5:2067:C:H1'	1.59	0.67
1:5:2567:G:N3	1:5:2568:C:C6	2.63	0.67
1:5:2673:G:C2	32:c:89:TYR:CE1	2.83	0.67
1:5:2689:C:O2	1:5:2689:C:C2'	2.43	0.67
1:5:2826:U:O2	1:5:2826:U:H2'	1.95	0.67
1:5:3674:G:C6	1:5:3675:G:N7	2.63	0.67
1:5:4136:G:C6	1:5:4137:C:C4	2.83	0.67
1:5:4745:G:H21	1:5:4746:C:N4	1.93	0.67
3:8:73:U:P	28:Y:75:ARG:HD2	2.35	0.67
9:F:168:ARG:HD2	9:F:211:TRP:CD1	2.30	0.67
10:G:55:VAL:HB	10:G:57:TRP:NE1	2.09	0.67
14:K:20:GLY:CA	14:K:92:ARG:NH2	2.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:102:GLY:C	14:K:140:GLY:HA2	2.19	0.67
24:U:33:ILE:HD11	24:U:96:LEU:HD22	1.76	0.67
46:q:93:GLU:O	46:q:95:LEU:HD13	1.95	0.67
46:q:93:GLU:O	46:q:95:LEU:HD22	1.95	0.67
48:4:40:VAL:CA	48:4:43:ALA:HB2	2.24	0.67
48:4:60:ARG:O	48:4:61:LYS:O	2.13	0.67
48:4:111:PHE:HB3	48:4:145:GLN:NE2	2.10	0.67
48:4:206:ASP:O	48:4:212:VAL:HB	1.94	0.67
48:4:272:LYS:HD2	48:4:273:PHE:CE1	2.30	0.67
48:4:449:ARG:HB3	48:4:473:VAL:HG11	1.74	0.67
49:S2:118:C:C5	49:S2:119:U:C6	2.82	0.67
49:S2:358:C:H2'	49:S2:358:C:O2	1.94	0.67
49:S2:440:G:H2'	49:S2:441:C:O4'	1.95	0.67
49:S2:628:A:C2	53:SD:178:ARG:HD2	2.29	0.67
49:S2:1293:A:C2	81:Sf:151:ASN:HA	2.29	0.67
49:S2:1442:U:H2'	49:S2:1442:U:O2	1.95	0.67
49:S2:1591:C:N3	49:S2:1592:C:C6	2.62	0.67
1:5:50:C:H2'	1:5:51:A:O5'	1.94	0.67
1:5:294:G:N1	30:a:61:TYR:CD2	2.63	0.67
1:5:332:C:H4'	17:N:150:TRP:CD1	2.30	0.67
1:5:504:G:C6	1:5:654:C:N3	2.63	0.67
1:5:1079:C:N3	1:5:1080:C:C5	2.63	0.67
1:5:1260:G:N1	1:5:1261:G:C5	2.63	0.67
1:5:1355:G:C6	1:5:1385:G:C2	2.83	0.67
1:5:1542:U:N3	1:5:1543:G:C8	2.63	0.67
1:5:1672:U:H2'	1:5:1673:U:H6	1.58	0.67
1:5:2279:A:N3	1:5:2280:G:N7	2.43	0.67
1:5:2293:U:O2	1:5:2293:U:H2'	1.95	0.67
1:5:2314:G:C2	1:5:2315:G:C5	2.80	0.67
1:5:2428:A:C4	1:5:2789:A:H2	2.12	0.67
1:5:3772:U:N3	1:5:3773:U:C5	2.62	0.67
1:5:3879:G:N7	1:5:3882:C:N4	2.43	0.67
1:5:4071:U:N3	1:5:4072:C:C5	2.63	0.67
1:5:4223:C:H5'	12:I:119:PHE:CD2	2.30	0.67
1:5:4745:G:N2	1:5:4746:C:N4	2.43	0.67
2:7:8:G:OP1	7:D:33:ARG:NH2	2.28	0.67
3:8:73:U:C4	3:8:74:U:C6	2.82	0.67
3:8:73:U:C4	3:8:74:U:N1	2.62	0.67
39:j:39:TYR:O	39:j:40:PRO:C	2.34	0.67
46:q:94:ASP:CG	46:q:99:ARG:NH1	2.53	0.67
48:4:10:ARG:HH22	48:4:465:PRO:CG	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:41:CYS:HA	48:4:49:ALA:HB2	1.77	0.67
48:4:55:ARG:HD2	48:4:56:PHE:HB2	1.77	0.67
48:4:155:LEU:HD12	48:4:185:VAL:HG21	1.77	0.67
48:4:432:PRO:HB3	48:4:497:MET:CE	2.24	0.67
48:4:672:LEU:C	48:4:675:ILE:HG12	2.15	0.67
49:S2:355:G:OP2	61:SL:107:LYS:NZ	2.28	0.67
49:S2:632:C:H2'	49:S2:632:C:O2	1.95	0.67
49:S2:995:G:N2	49:S2:996:A:O2'	2.28	0.67
49:S2:1029:G:C2	49:S2:1030:A:C8	2.83	0.67
49:S2:1309:C:C2	81:Sf:143:LYS:CD	2.68	0.67
49:S2:1405:A:O4'	49:S2:1580:A:C5	2.48	0.67
1:5:28:C:C2	1:5:29:G:N7	2.63	0.66
1:5:152:U:O2	1:5:152:U:H2'	1.94	0.66
1:5:196:C:H2'	1:5:196:C:O2	1.95	0.66
1:5:650:C:H2'	1:5:651:C:C6	2.30	0.66
1:5:1091:C:N3	1:5:1092:G:N7	2.43	0.66
1:5:1191:C:N3	1:5:1192:C:C5	2.63	0.66
1:5:1325:C:C4'	1:5:3901:A:N1	2.52	0.66
1:5:1438:U:O2	1:5:2099:G:C5	2.49	0.66
1:5:1830:G:C2	1:5:1831:G:C8	2.84	0.66
1:5:2362:U:O4	1:5:3859:G:C2	2.48	0.66
1:5:2605:G:N3	1:5:2606:G:C8	2.63	0.66
1:5:4174:U:C2	1:5:4175:G:N7	2.62	0.66
1:5:4266:G:C2	1:5:4279:A:C6	2.83	0.66
1:5:4757:C:C2	18:O:114:LYS:HA	2.29	0.66
9:F:73:MET:HB3	9:F:84:TYR:HE2	1.60	0.66
25:V:77:HIS:ND1	25:V:77:HIS:O	2.28	0.66
48:4:154:VAL:CG1	48:4:358:LEU:HD21	2.24	0.66
48:4:183:GLU:O	48:4:187:VAL:HG23	1.95	0.66
48:4:226:LYS:HZ2	48:4:356:ILE:CD1	2.03	0.66
49:S2:633:C:N3	49:S2:634:A:N7	2.42	0.66
49:S2:982:G:N3	49:S2:1045:U:H1'	2.10	0.66
49:S2:1111:U:O2	49:S2:1111:U:H2'	1.95	0.66
49:S2:1215:C:N4	49:S2:1646:C:N4	2.43	0.66
49:S2:1508:A:N7	49:S2:1510:G:N7	2.43	0.66
63:SN:128:TYR:C	63:SN:128:TYR:CD1	2.73	0.66
1:5:973:G:O6	1:5:1282:G:C2	2.48	0.66
1:5:1395:U:O2	1:5:1469:C:H4'	1.94	0.66
1:5:1517:G:N2	1:5:1650:A:C6	2.63	0.66
1:5:1774:C:C2	1:5:1775:A:C8	2.83	0.66
1:5:2077:C:C4	1:5:2078:C:C5	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2279:A:N1	1:5:2280:G:C5	2.63	0.66
1:5:2422:C:C2	1:5:2423:A:C8	2.84	0.66
1:5:2744:A:C2	1:5:2745:A:C5	2.83	0.66
1:5:2811:G:H22	1:5:2813:A:H3'	1.59	0.66
1:5:2905:C:C2	1:5:3590:G:C2	2.84	0.66
1:5:3731:C:C2	1:5:3732:A:H8	2.14	0.66
1:5:4490:C:C2	1:5:4491:G:H8	2.13	0.66
2:7:59:G:H4'	7:D:267:ASN:HD21	1.60	0.66
3:8:42:G:C2	3:8:43:A:C8	2.84	0.66
3:8:95:A:C5	3:8:96:C:C5	2.83	0.66
10:G:257:LYS:NZ	51:SB:54:GLY:O	2.24	0.66
25:V:100:ASP:N	25:V:100:ASP:OD1	2.26	0.66
48:4:238:ALA:HB1	48:4:239:LYS:HB2	1.77	0.66
48:4:322:LYS:NZ	48:4:322:LYS:CB	2.57	0.66
48:4:325:SER:O	48:4:326:GLU:C	2.37	0.66
49:S2:18:C:C2	49:S2:19:A:C8	2.84	0.66
49:S2:149:A:H2'	49:S2:150:A:O4'	1.94	0.66
49:S2:394:G:C2	49:S2:395:G:C8	2.84	0.66
49:S2:461:U:C2	49:S2:462:C:C5	2.83	0.66
49:S2:588:G:O4'	49:S2:589:G:N2	2.24	0.66
49:S2:795:A:C2	49:S2:796:G:C6	2.83	0.66
49:S2:796:G:C5	57:SH:109:ARG:NH2	2.63	0.66
49:S2:1034:A:C2'	49:S2:1035:A:O5'	2.42	0.66
49:S2:1099:G:C2	49:S2:1100:A:C8	2.83	0.66
49:S2:1409:A:C2	49:S2:1438:A:N1	2.64	0.66
49:S2:1821:U:H2'	49:S2:1822:A:O4'	1.95	0.66
82:Sg:83:TRP:CZ2	82:Sg:125:ARG:NH2	2.63	0.66
1:5:125:C:C2	1:5:126:C:H6	2.12	0.66
1:5:287:U:C2	1:5:288:G:N7	2.63	0.66
1:5:471:A:C6	1:5:472:C:C5	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
1:5:1984:A:N6	1:5:2011:C:HO2'	1.92	0.66
1:5:2078:C:C4	1:5:2079:G:N7	2.60	0.66
1:5:2307:A:C8	1:5:2332:A:C2	2.83	0.66
1:5:2367:A:C5	1:5:2798:A:N3	2.63	0.66
1:5:2561:C:N3	1:5:2562:G:N7	2.44	0.66
1:5:2739:C:H4'	45:p:52:VAL:HG21	1.77	0.66
1:5:2904:U:O2	1:5:2905:C:H6	1.77	0.66
1:5:3857:G:C6	1:5:3858:C:C5	2.82	0.66
1:5:4134:C:O2	1:5:4135:G:C8	2.47	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4199:C:O2	1:5:4199:C:C2'	2.42	0.66
1:5:4345:C:O2'	44:o:82:MET:HE1	1.95	0.66
1:5:4466:C:C2	1:5:4467:A:C8	2.82	0.66
1:5:4561:C:C2	1:5:4562:C:H5	2.13	0.66
1:5:4735:G:C4	1:5:4736:C:C6	2.82	0.66
2:7:11:A:C8	7:D:18:VAL:HG13	2.30	0.66
3:8:101:C:O2	3:8:101:C:H2'	1.95	0.66
4:A:3:ARG:HG3	4:A:3:ARG:HH11	1.58	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:157:ARG:CD	8:E:266:TYR:CD1	2.78	0.66
10:G:264:LYS:HZ2	10:G:265:LEU:CD2	1.93	0.66
11:H:117:PHE:C	11:H:117:PHE:CD1	2.73	0.66
14:K:22:VAL:HG21	14:K:48:LYS:CB	2.22	0.66
46:q:126:GLN:HE21	46:q:127:ASN:N	1.87	0.66
48:4:189:ILE:CG2	48:4:203:ILE:CG1	2.71	0.66
48:4:240:GLY:HA3	48:4:241:GLU:CB	2.06	0.66
49:S2:26:U:O4	49:S2:27:A:N7	2.27	0.66
49:S2:404:G:C6	49:S2:405:G:N7	2.63	0.66
49:S2:581:U:N3	49:S2:582:C:C6	2.64	0.66
49:S2:591:U:H5''	49:S2:593:C:C5	2.30	0.66
49:S2:623:G:C2	49:S2:624:C:C5	2.82	0.66
49:S2:1839:U:H2'	49:S2:1840:U:O4'	1.95	0.66
59:SJ:115:PHE:C	59:SJ:115:PHE:HD1	2.03	0.66
1:5:656:C:C2	1:5:657:C:C5	2.84	0.66
1:5:976:G:C5	1:5:977:C:C5	2.84	0.66
1:5:2035:C:O5'	1:5:2035:C:H6	1.79	0.66
1:5:2076:G:C5	1:5:2077:C:C6	2.83	0.66
1:5:2293:U:C2	1:5:2294:G:N7	2.64	0.66
1:5:2368:A:C6	1:5:2788:U:C4	2.84	0.66
1:5:3728:A:N7	1:5:3729:U:H1'	2.11	0.66
1:5:4498:U:H3	1:5:4500:U:P	2.19	0.66
1:5:4693:C:H5'	1:5:4693:C:C6	2.30	0.66
1:5:4896:G:N1	1:5:4897:G:C5	2.63	0.66
1:5:5001:U:O2'	1:5:5002:U:O5'	2.11	0.66
3:8:12:G:N2	3:8:13:G:C8	2.62	0.66
3:8:131:G:N2	3:8:132:G:H1'	2.09	0.66
21:R:130:ASN:O	21:R:131:VAL:HG22	1.96	0.66
27:X:119:ILE:HA	27:X:144:TYR:HE2	1.60	0.66
48:4:61:LYS:O	48:4:62:ASP:CB	2.40	0.66
48:4:86:LEU:HD21	48:4:96:ALA:HA	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:231:MET:HE3	48:4:232:TYR:CZ	2.30	0.66
48:4:470:VAL:HG22	48:4:471:GLY:H	1.58	0.66
48:4:543:GLU:CG	48:4:576:VAL:HG23	1.98	0.66
48:4:585:GLU:O	48:4:736:ALA:HB1	1.96	0.66
49:S2:396:U:H2'	49:S2:397:G:O5'	1.95	0.66
49:S2:806:U:N3	49:S2:807:G:C8	2.64	0.66
49:S2:842:C:C2'	49:S2:843:C:O5'	2.43	0.66
49:S2:892:U:N3	49:S2:893:U:C5	2.63	0.66
49:S2:1232:U:O2'	49:S2:1253:A:C8	2.48	0.66
49:S2:1292:C:N4	49:S2:1293:A:N7	2.43	0.66
49:S2:1412:C:C2'	49:S2:1413:G:C8	2.78	0.66
53:SD:192:TRP:CG	53:SD:196:GLY:HA2	2.30	0.66
59:SJ:111:GLN:HE21	59:SJ:127:ARG:HB2	1.59	0.66
82:Sg:130:LYS:HA	82:Sg:141:THR:HA	1.78	0.66
1:5:44:A:C5	1:5:45:U:C5	2.83	0.66
1:5:422:C:C2	1:5:423:G:H8	2.12	0.66
1:5:456:C:C2	1:5:457:G:C8	2.83	0.66
1:5:1245:C:O2	1:5:1246:G:H8	1.73	0.66
1:5:1280:C:C6	1:5:1280:C:H5''	2.31	0.66
1:5:1840:G:C3'	1:5:1842:G:P	2.83	0.66
1:5:2021:G:O2'	1:5:2022:C:H5'	1.95	0.66
1:5:2108:G:C4	1:5:2109:G:H1'	2.29	0.66
1:5:2441:C:O2	1:5:2442:G:C8	2.48	0.66
1:5:3730:U:C4	1:5:3731:C:C5	2.83	0.66
1:5:3857:G:C5	1:5:3858:C:C6	2.84	0.66
1:5:4095:G:C2	1:5:4096:C:C4	2.80	0.66
1:5:4504:C:H2'	1:5:4505:C:H6	1.61	0.66
1:5:4633:G:O2'	1:5:4635:A:OP2	2.11	0.66
1:5:4904:G:N2	1:5:4905:C:C2	2.64	0.66
1:5:4981:G:O6	1:5:4982:A:C4	2.49	0.66
1:5:4999:G:N1	1:5:5000:G:N7	2.44	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:CE2	2.30	0.66
23:T:158:PHE:CZ	23:T:160:ALA:HB2	2.31	0.66
47:r:7:TRP:CZ3	47:r:11:ARG:HB3	2.30	0.66
48:4:191:THR:HG21	48:4:192:TYR:CE2	2.28	0.66
49:S2:16:G:H2'	49:S2:17:C:O4'	1.95	0.66
49:S2:302:A:O2'	58:SI:64:ASN:ND2	2.27	0.66
49:S2:580:U:N3	49:S2:581:U:C6	2.63	0.66
49:S2:604:A:N7	59:SJ:20:PHE:CD2	2.64	0.66
49:S2:795:A:N1	49:S2:796:G:C6	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1050:A:C6	49:S2:1051:G:H1'	2.30	0.66
49:S2:1432:U:N3	49:S2:1433:C:H5	1.93	0.66
49:S2:1540:G:C5	49:S2:1541:G:N7	2.63	0.66
52:SC:199:PRO:HD2	52:SC:223:TYR:HH	1.60	0.66
76:Sa:21:ILE:HD13	76:Sa:72:HIS:CE1	2.29	0.66
1:5:193:G:H2'	1:5:194:C:O4'	1.95	0.66
1:5:727:C:O2'	1:5:728:U:OP1	2.10	0.66
1:5:1172:C:N3	1:5:1173:G:C8	2.64	0.66
1:5:1268:G:O4'	1:5:2111:G:C8	2.49	0.66
1:5:1827:C:C2	1:5:1828:C:C5	2.84	0.66
1:5:1987:C:N4	1:5:1988:G:N7	2.43	0.66
1:5:2480:G:C6	1:5:2481:G:N7	2.64	0.66
1:5:3740:G:N1	1:5:3741:C:C6	2.64	0.66
1:5:3800:A:C2	1:5:4496:A:O4'	2.48	0.66
1:5:4255:A:C6	1:5:4256:A:C2	2.83	0.66
1:5:4285:U:C2	1:5:4286:C:C6	2.83	0.66
1:5:4536:C:C2	1:5:4537:C:C6	2.84	0.66
1:5:4981:G:C5	1:5:4982:A:C8	2.84	0.66
2:7:110:G:N3	2:7:111:C:C6	2.64	0.66
3:8:117:C:C2	3:8:118:C:C6	2.83	0.66
9:F:248:ARG:HB3	9:F:248:ARG:NH1	2.11	0.66
48:4:40:VAL:HG22	48:4:75:ILE:HG12	1.77	0.66
48:4:616:ASP:OD2	48:4:621:GLU:CB	2.43	0.66
48:4:672:LEU:CA	48:4:675:ILE:CD1	2.54	0.66
48:4:752:PRO:CG	48:4:780:PRO:HB3	2.26	0.66
49:S2:311:C:H2'	49:S2:312:G:H1'	1.78	0.66
49:S2:436:G:N2	49:S2:437:G:C4	2.63	0.66
49:S2:1017:U:O2	49:S2:1017:U:C2'	2.43	0.66
49:S2:1059:G:C2'	49:S2:1060:A:H5'	2.26	0.66
49:S2:1234:C:H2'	49:S2:1234:C:O2	1.95	0.66
49:S2:1394:G:H4'	66:SQ:126:ARG:NH1	2.10	0.66
49:S2:1495:G:C5	49:S2:1496:U:C6	2.83	0.66
49:S2:1537:A:C6	49:S2:1538:C:C5	2.83	0.66
60:SK:76:ILE:O	60:SK:80:ARG:HB3	1.96	0.66
1:5:101:A:C6	1:5:102:G:N7	2.63	0.66
1:5:280:G:C8	17:N:120:TRP:HZ3	2.13	0.66
1:5:288:G:C4	1:5:289:C:C5	2.84	0.66
1:5:1214:C:N3	1:5:2116:C:N3	2.42	0.66
1:5:1298:C:C2	1:5:1299:G:C8	2.83	0.66
1:5:1479:G:C6	1:5:1487:G:C2	2.83	0.66
1:5:1798:G:O4'	1:5:4215:C:C6	2.49	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1876:U:C4	1:5:1877:G:N7	2.64	0.66
1:5:1912:G:N2	1:5:1913:C:C2	2.64	0.66
1:5:2021:G:C4	1:5:2022:C:C5	2.84	0.66
1:5:2115:G:C8	1:5:2116:C:O4'	2.49	0.66
1:5:2253:A:C8	1:5:2254:G:H1'	2.30	0.66
1:5:2253:A:H2	1:5:2260:C:H42	1.43	0.66
1:5:2410:C:C2	1:5:2411:C:C5	2.84	0.66
1:5:3802:U:H2'	1:5:3802:U:O2	1.95	0.66
1:5:4511:A:H2'	1:5:4512:U:O4'	1.95	0.66
1:5:4698:C:H2'	1:5:4698:C:O2	1.93	0.66
1:5:4998:G:N1	1:5:4999:G:N7	2.44	0.66
2:7:94:C:C2	2:7:95:C:C6	2.83	0.66
9:F:148:ASN:HB3	9:F:243:ASN:ND2	2.10	0.66
9:F:230:VAL:HA	22:S:39:VAL:HG12	1.77	0.66
15:L:39:ARG:HB2	15:L:39:ARG:NH1	2.10	0.66
44:o:41:TYR:OH	44:o:45:GLN:HG2	1.96	0.66
46:q:97:GLU:C	46:q:99:ARG:N	2.48	0.66
46:q:142:GLY:C	46:q:143:ILE:HD12	2.21	0.66
46:q:147:ILE:HB	48:4:204:MET:HE1	0.69	0.66
46:q:157:ASP:O	46:q:158:VAL:HG13	1.95	0.66
48:4:39:LEU:HB3	48:4:77:LEU:HD21	1.76	0.66
49:S2:185:G:C2	49:S2:186:C:C5	2.83	0.66
49:S2:459:C:C4	49:S2:460:A:C8	2.84	0.66
49:S2:535:G:N2	49:S2:536:A:N7	2.43	0.66
49:S2:832:G:C5	49:S2:833:C:C6	2.83	0.66
49:S2:1293:A:H62	81:Sf:140:TYR:HA	1.60	0.66
49:S2:1528:G:C2	49:S2:1529:C:C5	2.83	0.66
50:SA:38:ILE:HD11	50:SA:150:THR:HG22	1.78	0.66
1:5:120:A:C1'	1:5:121:A:C2	2.77	0.66
1:5:197:A:H2'	1:5:198:A:C8	2.30	0.66
1:5:348:G:N3	1:5:350:C:C5	2.64	0.66
1:5:2071:A:C2	1:5:2072:C:C4	2.84	0.66
1:5:2428:A:N7	1:5:2789:A:C2	2.64	0.66
1:5:2634:C:C2	1:5:2635:U:C5	2.84	0.66
1:5:2773:G:N1	1:5:2774:C:C4	2.64	0.66
1:5:3611:A:N3	1:5:5016:A:H8	1.94	0.66
1:5:3919:C:C5'	4:A:207:VAL:HG12	2.25	0.66
1:5:4081:G:C2	1:5:4082:G:N7	2.64	0.66
1:5:4269:G:C6	1:5:4270:C:C6	2.83	0.66
14:K:34:PRO:HD2	14:K:35:LEU:N	2.08	0.66
21:R:120:TYR:CD1	21:R:120:TYR:C	2.74	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:9:GLU:OE1	22:S:33:PHE:CD1	2.49	0.66
48:4:126:LEU:HD11	48:4:156:MET:HG3	1.77	0.66
48:4:541:SER:OG	48:4:576:VAL:HG11	1.96	0.66
48:4:672:LEU:CB	48:4:675:ILE:HD11	2.26	0.66
49:S2:64:A:C6	49:S2:82:G:N1	2.64	0.66
49:S2:386:C:C2	49:S2:387:C:C5	2.83	0.66
49:S2:696:G:C2	49:S2:735:C:C2	2.84	0.66
49:S2:795:A:C2	49:S2:796:G:C8	2.76	0.66
49:S2:856:C:C4	49:S2:857:U:C5	2.84	0.66
49:S2:1527:C:N4	49:S2:1528:G:N7	2.44	0.66
50:SA:89:LYS:HB3	50:SA:202:TYR:CZ	2.31	0.66
53:SD:34:TYR:CE1	53:SD:37:VAL:HG13	2.31	0.66
56:SG:5:ILE:HD12	56:SG:16:ILE:HD13	1.76	0.66
64:SO:147:ARG:CZ	64:SO:147:ARG:HB3	2.26	0.66
78:Sc:60:GLU:CD	78:Sc:60:GLU:H	2.03	0.66
1:5:66:A:N3	1:5:312:G:H1'	2.11	0.66
1:5:98:A:H1'	1:5:292:G:N7	2.11	0.66
1:5:165:A:H3'	1:5:166:C:H6	1.61	0.66
1:5:288:G:N2	1:5:289:C:C2	2.64	0.66
1:5:294:G:O6	30:a:61:TYR:HB2	1.96	0.66
1:5:315:G:C6	30:a:62:HIS:HB2	2.31	0.66
1:5:499:G:C2	1:5:656:C:C2	2.84	0.66
1:5:500:G:H5''	1:5:501:C:C6	2.30	0.66
1:5:1672:U:C2	1:5:1673:U:H5	2.10	0.66
1:5:1692:C:O2	1:5:1692:C:H2'	1.95	0.66
1:5:1787:A:O2'	1:5:1788:A:C8	2.49	0.66
1:5:1878:G:C4	1:5:1879:C:C5	2.84	0.66
1:5:2327:G:N2	1:5:2328:G:C4	2.64	0.66
1:5:2736:G:H2'	1:5:2737:C:H5'	1.78	0.66
1:5:3743:G:C2'	1:5:3744:G:H5'	2.25	0.66
1:5:3888:G:O2'	1:5:3889:G:OP1	2.11	0.66
1:5:3890:A:N7	1:5:4571:A:H1'	2.10	0.66
1:5:4208:U:O2'	1:5:4275:G:H1'	1.95	0.66
1:5:4217:G:O2'	1:5:4218:U:O5'	2.14	0.66
1:5:4934:A:N1	1:5:4935:C:C6	2.64	0.66
3:8:64:U:O2'	37:h:59:THR:OG1	2.14	0.66
14:K:57:ARG:NH2	14:K:89:PRO:CA	2.59	0.66
14:K:105:THR:HB	14:K:107:ASP:OD1	1.95	0.66
20:Q:181:ARG:NH2	20:Q:181:ARG:HB3	2.11	0.66
46:q:109:ALA:O	46:q:181:SER:CA	2.43	0.66
48:4:58:ASP:CG	48:4:69:THR:HG23	2.20	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:393:PRO:HD2	48:4:418:SER:OG	1.96	0.66
48:4:543:GLU:OE2	48:4:576:VAL:N	2.28	0.66
48:4:649:ILE:CD1	48:4:652:PHE:HE1	2.09	0.66
48:4:826:ASP:OD1	48:4:827:ASN:N	2.29	0.66
49:S2:18:C:C4'	49:S2:1194:A:N6	2.59	0.66
49:S2:29:G:C6	49:S2:30:C:N4	2.64	0.66
49:S2:532:C:C2	49:S2:533:A:C8	2.83	0.66
49:S2:616:A:C5	49:S2:617:G:H1'	2.30	0.66
49:S2:826:A:N7	49:S2:827:A:H1'	2.11	0.66
49:S2:836:G:H2'	49:S2:837:A:H5''	1.77	0.66
49:S2:858:A:N3	49:S2:859:G:C8	2.63	0.66
49:S2:868:G:C2	57:SH:115:LYS:HA	2.31	0.66
49:S2:981:A:H2'	49:S2:982:G:C8	2.31	0.66
49:S2:999:G:N1	49:S2:1000:C:C5	2.64	0.66
49:S2:1050:A:C8	49:S2:1051:G:C8	2.83	0.66
49:S2:1074:C:H2'	49:S2:1075:C:H6	1.61	0.66
49:S2:1123:C:C2	49:S2:1124:C:C6	2.83	0.66
49:S2:1319:U:H2'	49:S2:1320:G:C8	2.30	0.66
49:S2:1409:A:N1	49:S2:1410:C:C5	2.64	0.66
49:S2:1410:C:H2'	49:S2:1410:C:O2	1.95	0.66
1:5:86:U:O2	1:5:87:A:H8	1.76	0.66
1:5:711:A:C2	1:5:712:C:C6	2.84	0.66
1:5:956:A:H3'	1:5:957:G:C5	2.31	0.66
1:5:1260:G:C2	1:5:1261:G:C8	2.84	0.66
1:5:1439:C:C5'	9:F:36:ARG:NH1	2.58	0.66
1:5:1583:A:C5	1:5:1584:G:C8	2.84	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
1:5:2301:G:N1	1:5:2302:C:C5	2.63	0.66
1:5:3727:A:O2'	1:5:3728:A:C5'	2.44	0.66
1:5:3759:A:C6	49:S2:1709:G:C4'	2.79	0.66
1:5:3907:G:H1'	1:5:4449:A:N9	2.10	0.66
1:5:4079:C:O2	1:5:4079:C:H2'	1.96	0.66
1:5:4280:A:C2	7:D:23:ARG:NE	2.64	0.66
1:5:4754:G:N2	1:5:4880:C:C2	2.64	0.66
1:5:5003:U:C2'	1:5:5004:C:O4'	2.44	0.66
3:8:10:G:C2	3:8:11:C:C1'	2.79	0.66
3:8:127:U:C2'	3:8:128:C:O4'	2.44	0.66
46:q:80:PRO:C	46:q:81:HIS:CG	2.68	0.66
48:4:236:PHE:CZ	48:4:273:PHE:CE1	2.84	0.66
48:4:283:LYS:HA	48:4:284:LYS:NZ	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:347:GLY:O	48:4:351:LEU:HG	1.96	0.66
48:4:448:GLN:NE2	48:4:448:GLN:O	2.29	0.66
48:4:577:VAL:HG12	48:4:579:TYR:HE1	1.60	0.66
48:4:634:TYR:CE2	48:4:639:TYR:HE2	2.14	0.66
48:4:748:GLU:O	48:4:748:GLU:HG2	1.96	0.66
48:4:759:ILE:HG21	48:4:784:VAL:CG2	2.25	0.66
49:S2:43:U:N3	49:S2:484:A:C2	2.50	0.66
49:S2:50:A:C6	49:S2:51:U:H1'	2.30	0.66
49:S2:388:U:C2	49:S2:389:A:N7	2.64	0.66
49:S2:404:G:N1	49:S2:405:G:C5	2.64	0.66
49:S2:646:G:N3	49:S2:646:G:H2'	2.11	0.66
49:S2:793:G:O6	49:S2:794:A:C5	2.49	0.66
49:S2:862:A:C5	49:S2:863:U:C5	2.84	0.66
49:S2:1109:C:O2	49:S2:1110:G:H8	1.78	0.66
49:S2:1134:G:C2	49:S2:1135:C:C4	2.84	0.66
49:S2:1254:C:O2	49:S2:1254:C:H2'	1.96	0.66
49:S2:1291:A:N1	81:Sf:140:TYR:CD2	2.63	0.66
49:S2:1309:C:O2	49:S2:1309:C:H2'	1.96	0.66
49:S2:1410:C:C2	49:S2:1411:G:N7	2.64	0.66
49:S2:1860:A:N3	49:S2:1862:G:C8	2.64	0.66
59:SJ:115:PHE:C	59:SJ:115:PHE:CD1	2.73	0.66
82:Sg:36:ARG:HA	82:Sg:65:PHE:HA	1.77	0.66
1:5:42:A:N7	1:5:4379:A:C6	2.64	0.65
1:5:484:U:C4	1:5:486:C:C4	2.83	0.65
1:5:671:G:N2	1:5:672:C:C2	2.64	0.65
1:5:1217:G:O2'	1:5:1218:G:C8	2.47	0.65
1:5:1272:C:O2'	1:5:1273:G:N9	2.30	0.65
1:5:1478:C:H2'	1:5:1479:G:C8	2.31	0.65
1:5:1750:G:N1	1:5:1751:A:N7	2.44	0.65
1:5:1961:G:H5''	46:q:58:ASN:ND2	2.11	0.65
1:5:1998:A:H2	1:5:2019:C:C2'	2.09	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
1:5:2463:G:C4	1:5:2464:C:C5	2.83	0.65
1:5:2851:G:N7	1:5:2852:U:C6	2.64	0.65
1:5:2856:C:H42	1:5:2857:A:N6	1.92	0.65
1:5:3845:A:C6	1:5:3846:C:C5	2.83	0.65
1:5:4982:A:C5	1:5:4983:C:C5	2.83	0.65
1:5:5051:C:O2	1:5:5051:C:H2'	1.96	0.65
14:K:105:THR:C	14:K:106:PHE:CG	2.73	0.65
29:Z:15:ALA:HB3	29:Z:79:HIS:HB3	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:d:22:THR:HG22	33:d:89:SER:HB2	1.76	0.65
48:4:563:GLU:CD	48:4:563:GLU:C	2.63	0.65
49:S2:42:A:C4	49:S2:426:A:C5	2.84	0.65
49:S2:77:A:O2'	56:SG:175:LYS:CA	2.44	0.65
49:S2:402:C:C4	49:S2:403:G:C8	2.84	0.65
49:S2:623:G:N2	49:S2:624:C:N1	2.44	0.65
49:S2:675:U:N3	49:S2:676:C:C5	2.63	0.65
49:S2:793:G:C6	49:S2:794:A:C4	2.84	0.65
49:S2:909:G:N1	49:S2:910:G:N7	2.44	0.65
49:S2:1250:A:C2	49:S2:1339:U:C2'	2.79	0.65
49:S2:1301:A:OP1	79:Sd:7:TYR:OH	2.13	0.65
49:S2:1419:C:O2'	69:ST:132:ASP:CB	2.44	0.65
49:S2:1431:G:C5	49:S2:1432:U:C6	2.84	0.65
49:S2:1502:C:N3	49:S2:1503:C:C5	2.65	0.65
49:S2:1552:G:H4'	49:S2:1557:C:H41	1.61	0.65
49:S2:1786:U:O2	49:S2:1787:G:C8	2.49	0.65
59:SJ:32:ILE:HG21	80:Se:34:ARG:HG2	1.77	0.65
1:5:145:G:N1	1:5:146:G:C5	2.64	0.65
1:5:168:C:C2	1:5:268:G:N2	2.65	0.65
1:5:908:G:C6	1:5:909:A:N7	2.65	0.65
1:5:1336:G:H2'	1:5:1337:A:N7	2.11	0.65
1:5:1778:C:C2	1:5:1779:U:C5	2.85	0.65
1:5:2673:G:C4'	1:5:2675:G:H1'	2.25	0.65
1:5:2826:U:O2	1:5:2826:U:C2'	2.43	0.65
1:5:3642:A:HO2'	39:j:2:THR:N	1.94	0.65
1:5:4091:G:C5	1:5:4092:G:C8	2.85	0.65
1:5:4355:G:N2	1:5:4356:G:C4	2.64	0.65
1:5:4361:U:C2	1:5:4362:A:C8	2.84	0.65
1:5:4518:A:O2'	5:B:257:TRP:HZ3	1.73	0.65
1:5:4628:U:H4'	26:W:17:HIS:HB3	1.77	0.65
1:5:4750:G:HO2'	1:5:4751:G:P	2.19	0.65
1:5:4884:G:N2	1:5:4885:U:C6	2.64	0.65
1:5:5012:G:C2	1:5:5014:A:C8	2.85	0.65
2:7:30:C:N3	2:7:48:G:C2	2.64	0.65
3:8:95:A:C6	3:8:96:C:C4	2.84	0.65
3:8:130:C:C4	3:8:131:G:N7	2.65	0.65
3:8:132:G:N1	3:8:133:G:N7	2.42	0.65
11:H:88:PHE:CE2	11:H:151:ILE:HB	2.31	0.65
14:K:117:ARG:N	14:K:117:ARG:NE	2.37	0.65
14:K:160:VAL:HA	14:K:163:PRO:HG3	1.50	0.65
22:S:94:TYR:OH	22:S:96:GLU:CG	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:o:45:GLN:NE2	44:o:45:GLN:HA	2.11	0.65
46:q:117:ALA:CB	46:q:118:PRO:HA	2.18	0.65
46:q:127:ASN:O	46:q:129:GLY:N	2.29	0.65
48:4:113:SER:HB2	48:4:499:PHE:HD2	1.60	0.65
48:4:562:GLU:CB	48:4:570:ILE:CD1	2.73	0.65
48:4:579:TYR:HA	48:4:817:TRP:CH2	2.22	0.65
48:4:740:LEU:O	48:4:820:LEU:HB2	1.96	0.65
49:S2:70:G:C2	49:S2:71:G:C4	2.84	0.65
49:S2:70:G:N2	49:S2:71:G:H1'	2.10	0.65
49:S2:609:U:N3	49:S2:610:G:C8	2.64	0.65
49:S2:970:G:O3'	49:S2:971:G:O4'	2.14	0.65
49:S2:1061:U:H3	49:S2:1848:U:HO2'	1.42	0.65
49:S2:1100:A:N1	49:S2:1101:U:C4	2.65	0.65
49:S2:1134:G:C4	49:S2:1135:C:C5	2.85	0.65
49:S2:1177:U:C2	49:S2:1178:U:C5	2.84	0.65
49:S2:1709:G:C2	49:S2:1710:C:C5	2.83	0.65
50:SA:32:PHE:C	50:SA:32:PHE:CD1	2.74	0.65
51:SB:139:CYS:HB2	51:SB:172:MET:HE1	1.76	0.65
1:5:237:G:HO2'	1:5:238:C:P	2.19	0.65
1:5:510:U:O4'	30:a:85:GLN:NE2	2.24	0.65
1:5:1309:C:N3	1:5:1310:C:C5	2.64	0.65
1:5:1684:A:C6	1:5:1685:G:N7	2.64	0.65
1:5:2041:A:N3	1:5:4464:A:C6	2.65	0.65
1:5:2307:A:H2'	1:5:2308:A:O5'	1.96	0.65
1:5:2325:C:C2	1:5:2326:G:C8	2.84	0.65
1:5:2384:U:C2	1:5:2385:U:C5	2.83	0.65
1:5:2650:G:H2'	1:5:2651:C:O4'	1.96	0.65
1:5:3912:U:HO2'	1:5:3913:G:H5''	1.62	0.65
1:5:4081:G:C2	1:5:4082:G:C8	2.84	0.65
1:5:4093:G:C2'	1:5:4094:G:C5'	2.75	0.65
1:5:4693:C:C6	1:5:4693:C:C5'	2.79	0.65
1:5:4998:G:N1	1:5:4999:G:C5	2.64	0.65
3:8:13:G:C5	3:8:14:U:C4	2.84	0.65
7:D:249:GLU:C	7:D:249:GLU:OE1	2.39	0.65
32:c:31:TYR:CE2	32:c:56:ARG:NE	2.55	0.65
48:4:420:LEU:O	48:4:420:LEU:HG	1.96	0.65
48:4:594:LYS:HE3	48:4:856:ASP:HB2	1.77	0.65
49:S2:217:A:C6	49:S2:218:U:C5	2.84	0.65
49:S2:750:C:O2	49:S2:750:C:H2'	1.96	0.65
49:S2:793:G:C6	49:S2:794:A:C5	2.84	0.65
49:S2:837:A:H2'	49:S2:837:A:N3	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1052:A:C6	49:S2:1053:C:C5	2.85	0.65
49:S2:1280:G:C6	49:S2:1281:G:N7	2.64	0.65
49:S2:1418:C:C2	49:S2:1420:G:C8	2.84	0.65
49:S2:1511:U:C4	49:S2:1512:C:C5	2.84	0.65
49:S2:1742:C:C2	49:S2:1743:G:C8	2.83	0.65
72:SW:30:CYS:SG	72:SW:31:SER:N	2.69	0.65
82:Sg:150:TRP:HB2	82:Sg:170:TRP:HB2	1.77	0.65
1:5:445:U:O4'	1:5:2313:A:N1	2.30	0.65
1:5:1513:U:H2'	1:5:1514:U:O4'	1.96	0.65
1:5:1635:C:N3	1:5:1636:U:C5	2.64	0.65
1:5:1666:C:O2'	1:5:1688:G:OP1	2.14	0.65
1:5:1998:A:O2'	1:5:1999:A:O4'	2.14	0.65
1:5:2390:G:N2	1:5:2391:G:H1'	2.10	0.65
1:5:2455:G:H2'	1:5:2456:G:O5'	1.97	0.65
1:5:2478:C:C2	1:5:2479:G:C8	2.84	0.65
1:5:2567:G:C6	1:5:2568:C:C5	2.84	0.65
1:5:2712:G:C2	1:5:2713:C:C6	2.84	0.65
1:5:2746:A:H2'	1:5:2747:U:O4'	1.97	0.65
1:5:4215:C:O2	1:5:4216:G:C8	2.49	0.65
1:5:4881:U:O2'	1:5:4882:U:C6	2.50	0.65
1:5:4896:G:C2	1:5:4897:G:C4	2.84	0.65
1:5:4896:G:N2	1:5:4897:G:C4	2.65	0.65
3:8:55:U:O4	3:8:62:A:N1	2.29	0.65
17:N:196:ASN:N	17:N:196:ASN:HD22	1.94	0.65
22:S:83:ARG:HH22	23:T:156:TYR:HB2	1.58	0.65
34:e:126:ASN:C	34:e:126:ASN:HD22	2.04	0.65
46:q:182:PRO:HG3	46:q:183:PHE:HE1	1.60	0.65
48:4:72:SER:CA	48:4:104:ASP:CG	2.69	0.65
48:4:532:PRO:HD2	48:4:533:MET:H	1.61	0.65
49:S2:309:G:C6	49:S2:310:C:N4	2.65	0.65
49:S2:310:C:H2'	49:S2:311:C:H6	1.61	0.65
49:S2:379:C:N3	49:S2:380:G:C5	2.64	0.65
49:S2:449:A:N6	49:S2:452:G:C5	2.64	0.65
49:S2:892:U:C2	49:S2:893:U:C5	2.84	0.65
49:S2:962:A:C2	49:S2:963:A:C8	2.84	0.65
49:S2:1528:G:C6	49:S2:1529:C:N4	2.64	0.65
49:S2:1759:G:C2	49:S2:1774:C:C2	2.85	0.65
55:SF:160:GLU:HA	55:SF:163:PHE:CE1	2.30	0.65
63:SN:13:GLN:O	77:Sb:20:LYS:NZ	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:134:G:H5'	1:5:134:G:C8	2.32	0.65
1:5:1542:U:O2	1:5:1543:G:C8	2.49	0.65
1:5:1602:U:H2'	1:5:1602:U:O2	1.96	0.65
1:5:1760:G:C2	1:5:1761:G:H1'	2.31	0.65
1:5:1960:A:C4	46:q:14:PHE:HZ	1.99	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'	1.96	0.65
1:5:3680:U:O2	1:5:3680:U:C2'	2.44	0.65
1:5:3717:A:N6	1:5:3736:A:C6	2.64	0.65
1:5:3821:A:C6	1:5:3822:U:C5	2.85	0.65
1:5:4480:A:C6	1:5:4481:U:C6	2.85	0.65
1:5:4698:C:C2	42:m:111:ARG:NH2	2.65	0.65
1:5:4698:C:N3	42:m:111:ARG:NH2	2.45	0.65
1:5:4920:C:C2	1:5:4921:C:C5	2.85	0.65
1:5:4937:C:H5'	8:E:179:ARG:HD2	1.79	0.65
3:8:118:C:C2	3:8:119:C:C6	2.85	0.65
6:C:318:PRO:O	6:C:320:LYS:N	2.29	0.65
14:K:23:GLY:O	14:K:24:ALA:HB2	1.96	0.65
14:K:95:GLN:C	14:K:97:ASN:H	2.05	0.65
35:f:22:ARG:HG3	35:f:22:ARG:HH11	1.61	0.65
43:n:2:ARG:NH1	49:S2:1841:C:OP2	2.29	0.65
48:4:3:ASN:HB3	48:4:47:ALA:O	1.97	0.65
49:S2:62:G:H1'	49:S2:172:U:O2	1.97	0.65
49:S2:618:C:C4	49:S2:619:A:C5	2.84	0.65
49:S2:649:U:C2	49:S2:650:A:N7	2.64	0.65
49:S2:948:C:C2	49:S2:949:G:C8	2.85	0.65
49:S2:957:A:O2'	49:S2:958:G:O5'	2.15	0.65
49:S2:1263:U:O4	49:S2:1517:G:O6	2.13	0.65
49:S2:1309:C:H2'	81:Sf:143:LYS:CD	2.26	0.65
49:S2:1317:C:N3	49:S2:1318:G:C8	2.63	0.65
49:S2:1441:U:H1'	49:S2:1442:U:O4	1.95	0.65
49:S2:1454:A:C8	49:S2:1476:A:C1'	2.79	0.65
49:S2:1454:A:O4'	49:S2:1476:A:H1'	1.97	0.65
49:S2:1492:U:HO2'	70:SU:70:CYS:HG	1.43	0.65
53:SD:219:PRO:HA	82:Sg:192:THR:HG21	1.78	0.65
1:5:91:G:C8	1:5:93:G:C5	2.85	0.65
1:5:307:A:H3'	1:5:308:G:N2	2.11	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
1:5:662:C:O2	1:5:663:G:N7	2.28	0.65
1:5:911:U:C2	1:5:912:G:C8	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:913:U:C2	1:5:914:U:C5	2.85	0.65
1:5:938:C:H5	16:M:46:ARG:HE	1.45	0.65
1:5:980:U:H2'	1:5:981:C:C6	2.31	0.65
1:5:1264:C:C2'	1:5:1265:G:H5'	2.27	0.65
1:5:1290:G:N2	1:5:1291:G:C5	2.65	0.65
1:5:1845:U:O2	1:5:1846:G:C8	2.49	0.65
1:5:1865:G:H22	1:5:1867:A:H3'	1.61	0.65
1:5:2243:C:C2	1:5:2244:C:C5	2.84	0.65
1:5:2281:U:H4'	34:e:46:ARG:NH2	2.12	0.65
1:5:2562:G:H22	1:5:2564:G:H3'	1.61	0.65
1:5:4373:G:OP2	1:5:4374:U:O2'	2.13	0.65
1:5:4628:U:C2	1:5:4629:U:C5	2.85	0.65
22:S:27:LEU:C	22:S:28:TYR:HD1	2.04	0.65
46:q:159:GLN:HB2	46:q:162:LYS:HE3	1.76	0.65
48:4:120:ARG:NH1	48:4:496:VAL:HA	2.11	0.65
48:4:510:GLU:CG	48:4:511:ALA:H	2.10	0.65
48:4:747:VAL:O	48:4:784:VAL:O	2.15	0.65
48:4:751:CYS:SG	48:4:756:VAL:N	2.70	0.65
49:S2:357:C:N3	49:S2:358:C:C5	2.65	0.65
49:S2:1277:C:H5'	60:SK:51:SER:HA	1.79	0.65
49:S2:1292:C:C5	81:Sf:150:PHE:HB2	2.31	0.65
49:S2:1508:A:N7	49:S2:1510:G:C8	2.65	0.65
49:S2:1708:C:N3	49:S2:1709:G:C8	2.65	0.65
1:5:182:G:N2	1:5:254:G:H22	1.94	0.65
1:5:466:A:N1	1:5:467:U:C4	2.65	0.65
1:5:494:U:C2	1:5:495:C:C6	2.85	0.65
1:5:691:C:C2	1:5:692:A:C8	2.84	0.65
1:5:954:C:H2'	1:5:955:G:O4'	1.96	0.65
1:5:1216:C:N3	1:5:1217:G:C8	2.64	0.65
1:5:1380:G:C2	1:5:1382:G:C2	2.84	0.65
1:5:1608:G:O4'	1:5:3828:A:C2	2.50	0.65
1:5:1848:C:H5'	1:5:1849:U:OP2	1.97	0.65
1:5:1920:C:H4'	1:5:1921:C:OP2	1.97	0.65
1:5:1949:U:C2	1:5:1950:U:C5	2.85	0.65
1:5:2106:G:C2	1:5:2107:C:C5	2.84	0.65
1:5:2606:G:N3	1:5:2607:C:C6	2.65	0.65
1:5:2658:G:C2	1:5:2675:G:N2	2.65	0.65
1:5:2724:G:N3	1:5:2726:G:N7	2.44	0.65
1:5:3606:U:O2	1:5:3607:U:C6	2.50	0.65
1:5:3847:C:C2	1:5:3848:U:C6	2.84	0.65
3:8:122:G:H2'	3:8:123:U:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:102:GLY:CA	14:K:139:VAL:HA	2.24	0.65
17:N:120:TRP:CD1	17:N:121:VAL:N	2.64	0.65
44:o:21:HIS:HD2	44:o:72:CYS:HA	1.61	0.65
48:4:110:ASP:OD2	48:4:112:SER:CB	2.45	0.65
48:4:113:SER:CB	48:4:499:PHE:CD2	2.79	0.65
48:4:742:GLU:HB3	48:4:820:LEU:HD21	1.78	0.65
49:S2:92:A:C6	49:S2:447:A:C2	2.85	0.65
49:S2:993:G:H22	49:S2:999:G:H22	1.42	0.65
49:S2:1135:C:N3	49:S2:1136:U:C4	2.64	0.65
49:S2:1149:A:C4	49:S2:1151:G:C8	2.85	0.65
49:S2:1253:A:C2	49:S2:1666:C:C1'	2.80	0.65
49:S2:1283:C:H1'	62:SM:86:GLY:HA3	1.79	0.65
49:S2:1306:U:H1'	81:Sf:135:HIS:HA	1.78	0.65
49:S2:1835:A:C5'	49:S2:1863:A:N7	2.60	0.65
1:5:246:G:N2	1:5:247:G:C4	2.65	0.65
1:5:294:G:H5''	44:o:43:ARG:HH22	1.60	0.65
1:5:471:A:C2	1:5:472:C:C1'	2.80	0.65
1:5:1175:A:N1	1:5:1176:C:C5	2.65	0.65
1:5:1298:C:N3	1:5:1299:G:N7	2.45	0.65
1:5:1564:A:N6	49:S2:1029:G:HO2'	1.94	0.65
1:5:1617:G:C6	1:5:1618:G:C5	2.84	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'	2.32	0.65
1:5:1885:G:C4	1:5:1895:G:N2	2.64	0.65
1:5:1899:G:N1	1:5:1900:C:N4	2.45	0.65
1:5:2050:G:H2'	1:5:2051:C:O4'	1.97	0.65
1:5:2857:A:O2'	1:5:2858:A:C8	2.49	0.65
1:5:4396:A:C2	1:5:4397:A:C8	2.84	0.65
1:5:4482:U:N3	1:5:4483:C:C5	2.64	0.65
1:5:4548:A:C8	1:5:4548:A:P	2.90	0.65
1:5:4879:C:N3	1:5:4880:C:C5	2.65	0.65
1:5:4945:G:N3	35:f:69:VAL:HG13	2.12	0.65
14:K:94:LYS:CD	14:K:96:LYS:HE2	2.10	0.65
21:R:7:GLN:N	21:R:7:GLN:OE1	2.30	0.65
32:c:31:TYR:CD1	32:c:32:LYS:N	2.64	0.65
48:4:207:PRO:HB3	48:4:261:TRP:CD2	2.32	0.65
48:4:398:ILE:O	48:4:398:ILE:HG13	1.95	0.65
48:4:470:VAL:HG22	48:4:471:GLY:N	2.12	0.65
49:S2:70:G:N1	49:S2:80:G:C2	2.65	0.65
49:S2:384:U:C4	49:S2:386:C:C6	2.84	0.65
49:S2:530:U:N3	49:S2:531:A:C8	2.65	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:551:U:H1'	80:Se:44:ASN:OD1	1.96	0.65
49:S2:578:C:C4	49:S2:579:C:C6	2.85	0.65
49:S2:656:G:H21	49:S2:663:C:H5''	1.60	0.65
49:S2:793:G:C5	49:S2:794:A:N7	2.63	0.65
49:S2:964:A:C2	49:S2:965:U:C4	2.85	0.65
49:S2:1294:G:C2	49:S2:1295:A:N7	2.65	0.65
49:S2:1402:A:C2	49:S2:1405:A:N1	2.65	0.65
49:S2:1431:G:C4	49:S2:1432:U:C6	2.84	0.65
49:S2:1594:A:C2	49:S2:1595:U:N1	2.64	0.65
50:SA:39:TYR:HB2	50:SA:50:ASN:OD1	1.97	0.65
50:SA:151:ASP:CG	50:SA:151:ASP:CA	2.69	0.65
1:5:275:C:O2'	1:5:276:C:O4'	2.11	0.65
1:5:492:U:C2	1:5:493:G:C8	2.85	0.65
1:5:755:C:N3	1:5:756:G:N7	2.44	0.65
1:5:951:G:H2'	1:5:952:G:H5''	1.79	0.65
1:5:1211:G:C2	1:5:1212:G:C5	2.85	0.65
1:5:1323:A:C2	1:5:1324:A:C4	2.84	0.65
1:5:1366:G:C8	1:5:1367:C:O3'	2.50	0.65
1:5:1445:U:C2	1:5:1446:C:C6	2.85	0.65
1:5:1683:U:O2	1:5:1683:U:H2'	1.96	0.65
1:5:2058:G:N3	1:5:2059:C:C6	2.64	0.65
1:5:2562:G:N2	1:5:2564:G:C8	2.65	0.65
1:5:2567:G:N1	1:5:2568:C:C4	2.65	0.65
1:5:2603:C:N3	1:5:2604:C:C5	2.65	0.65
1:5:3717:A:N6	1:5:3736:A:C5	2.65	0.65
1:5:3759:A:N1	49:S2:1709:G:O4'	2.29	0.65
1:5:3805:U:C2	1:5:3806:G:C8	2.85	0.65
1:5:3873:G:N2	1:5:3883:U:N3	2.45	0.65
1:5:4510:A:O2'	1:5:4511:A:C8	2.46	0.65
1:5:4547:C:O3'	1:5:4548:A:C8	2.50	0.65
1:5:4885:U:C2	1:5:4886:C:C5	2.85	0.65
1:5:4901:G:N2	1:5:4921:C:C2	2.65	0.65
1:5:5029:C:C4	1:5:5030:U:C5	2.85	0.65
3:8:133:G:N3	3:8:134:G:C8	2.65	0.65
8:E:236:TYR:HE2	8:E:238:ILE:HA	1.62	0.65
12:I:47:PRO:CB	12:I:171:TRP:HE1	2.10	0.65
30:a:63:LEU:C	30:a:63:LEU:HD23	2.22	0.65
49:S2:98:C:C2	49:S2:409:C:C6	2.85	0.65
49:S2:832:G:N2	49:S2:843:C:C2	2.65	0.65
49:S2:933:G:C2	49:S2:1000:C:C2	2.84	0.65
49:S2:1127:C:C2	49:S2:1128:C:C5	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1292:C:H2'	81:Sf:150:PHE:CD1	2.32	0.65
62:SM:33:ARG:HH11	62:SM:33:ARG:HG2	1.62	0.65
1:5:259:C:H2'	1:5:260:C:O4'	1.97	0.65
1:5:515:C:C2	1:5:647:G:C2	2.85	0.65
1:5:1177:U:H2'	1:5:1178:G:H8	1.61	0.65
1:5:1246:G:C6	1:5:1247:U:C4	2.85	0.65
1:5:1261:G:C6	1:5:1262:G:N7	2.65	0.65
1:5:1268:G:N1	1:5:1270:A:C5	2.65	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
1:5:1840: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
1:5:2445:C:N3	1:5:2446:C:C5	2.64	0.65
1:5:2509:C:C2'	1:5:2510:G:O5'	2.44	0.65
1:5:2665:U:C4	21:R:124:TYR:CZ	2.85	0.65
1:5:2858:A:O2'	1:5:2859:G:C5'	2.44	0.65
1:5:2859:G:O2'	1:5:2860:C:O5'	2.15	0.65
1:5:3846:C:O2	1:5:3846:C:H2'	1.97	0.65
1:5:3857:G:C5	1:5:3858:C:C5	2.85	0.65
1:5:4772:C:C2	1:5:4773:C:C5	2.85	0.65
6:C:112:HIS:CE1	17:N:202:ARG:HE	2.14	0.65
14:K:71:ILE:HG22	14:K:73:VAL:HG23	1.78	0.65
17:N:158:HIS:HB3	17:N:161:MET:HG2	1.79	0.65
48:4:24:VAL:CG2	48:4:32:LYS:CE	2.67	0.65
48:4:126:LEU:HD11	48:4:156:MET:SD	2.36	0.65
48:4:168:GLN:O	48:4:168:GLN:HG2	1.96	0.65
48:4:690:GLY:CA	48:4:730:TYR:CD1	2.74	0.65
48:4:692:LEU:CD2	48:4:734:LEU:HD21	2.25	0.65
48:4:740:LEU:HD13	48:4:741:MET:N	2.12	0.65
49:S2:387:C:C2	49:S2:388:U:C6	2.82	0.65
49:S2:625:G:H4'	49:S2:629:A:C2	2.32	0.65
49:S2:632:C:N3	49:S2:633:C:C5	2.65	0.65
49:S2:960:U:O4	64:SO:66:ARG:HA	1.97	0.65
49:S2:1415:C:H2'	49:S2:1416:C:C4'	2.26	0.65
49:S2:1791:A:C6	49:S2:1792:G:H1'	2.31	0.65
49:S2:1792:G:C2	49:S2:1793:A:C8	2.85	0.65
50:SA:55:TRP:C	50:SA:55:TRP:CD1	2.74	0.65
52:SC:267:GLN:NE2	71:SV:50:PHE:HE2	1.94	0.65
1:5:288:G:H2'	1:5:289:C:C6	2.32	0.64
1:5:457:G:N1	1:5:458:C:C5	2.64	0.64
1:5:489:C:N3	1:5:490:C:C6	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:695:G:H3'	1:5:696:C:H5'	1.77	0.64
1:5:1357:C:O2'	1:5:1358:G:H5'	1.96	0.64
1:5:1934:A:C6	1:5:2048:U:C2	2.85	0.64
1:5:1973:G:C6	1:5:2002:A:N7	2.64	0.64
1:5:2279:A:N1	1:5:2280:G:C6	2.65	0.64
1:5:2367:A:O2'	1:5:2368:A:O5'	2.14	0.64
1:5:2768:C:O4'	1:5:2768:C:O2	2.14	0.64
1:5:3652:A:C8	1:5:3691:G:N2	2.65	0.64
1:5:3938:G:C6	1:5:4077:A:H2	2.14	0.64
1:5:4241:C:O2	1:5:4241:C:C2'	2.40	0.64
1:5:4275:G:C6	1:5:4276:G:N7	2.65	0.64
3:8:103:A:N7	3:8:104:A:N7	2.45	0.64
3:8:121:G:H2'	3:8:122:G:O5'	1.96	0.64
6:C:48:ASN:O	6:C:48:ASN:CG	2.39	0.64
15:L:28:GLN:HG2	17:N:202:ARG:HH11	1.61	0.64
20:Q:17:GLU:HA	20:Q:52:PHE:CE1	2.31	0.64
21:R:131:VAL:HB	21:R:132:PHE:CE1	2.31	0.64
25:V:48:ARG:HH21	25:V:48:ARG:HG3	1.61	0.64
48:4:40:VAL:HA	48:4:43:ALA:HB2	1.78	0.64
48:4:730:TYR:HB2	48:4:854:PHE:CE2	2.31	0.64
49:S2:173:A:C2	49:S2:174:C:C6	2.84	0.64
49:S2:554:A:C2	49:S2:555:A:N7	2.65	0.64
49:S2:796:G:H3'	49:S2:797:C:H5''	1.78	0.64
49:S2:833:C:C2	49:S2:834:C:C6	2.85	0.64
49:S2:963:A:C2	49:S2:964:A:C5	2.84	0.64
49:S2:1352:G:H1'	49:S2:1378:A:N3	2.12	0.64
49:S2:1466:G:N2	49:S2:1467:C:C2	2.65	0.64
49:S2:1578:U:C6	53:SD:6:SER:N	2.65	0.64
49:S2:1595:U:O4	49:S2:1596:U:C5	2.49	0.64
57:SH:135:PHE:C	57:SH:135:PHE:CD1	2.74	0.64
61:SL:17:PHE:CZ	61:SL:19:ASN:HB2	2.31	0.64
63:SN:128:TYR:CD1	63:SN:129:TYR:N	2.65	0.64
68:SS:86:ARG:CZ	68:SS:86:ARG:HA	2.27	0.64
1:5:422:C:N3	1:5:423:G:C8	2.66	0.64
1:5:459:C:N3	1:5:460:C:C5	2.65	0.64
1:5:1609:U:C4	1:5:1610:C:C5	2.84	0.64
1:5:1684:A:C2	1:5:1685:G:H1'	2.32	0.64
1:5:1900:C:C2	1:5:1901:C:C6	2.85	0.64
1:5:2394:G:O6	1:5:2819:U:P	2.55	0.64
1:5:2463:G:H2'	1:5:2464:C:C6	2.32	0.64
1:5:2468:U:N3	1:5:2473:A:C6	2.64	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2644:G:C6	1:5:2645:G:C5	2.85	0.64
1:5:3694:U:C4	1:5:3695:U:C5	2.85	0.64
1:5:4099:G:C5	1:5:4100:C:C5	2.85	0.64
1:5:4404:U:C5	1:5:4436:U:O4	2.50	0.64
1:5:4463:U:C5	1:5:4488:A:N7	2.66	0.64
1:5:4482:U:O2	1:5:4483:C:C6	2.49	0.64
1:5:5029:C:N3	1:5:5030:U:C5	2.66	0.64
3:8:131:G:N1	3:8:132:G:C8	2.64	0.64
14:K:66:ASN:HB2	14:K:69:ALA:HB3	1.79	0.64
48:4:58:ASP:CB	48:4:63:GLU:CG	2.27	0.64
48:4:73:THR:C	48:4:104:ASP:HB2	2.22	0.64
48:4:191:THR:HG22	48:4:192:TYR:CE2	2.32	0.64
48:4:267:ASP:OD1	48:4:268:PRO:N	2.30	0.64
48:4:609:PHE:CZ	48:4:661:ILE:CD1	2.68	0.64
49:S2:340:C:C4	49:S2:341:C:C4	2.85	0.64
49:S2:494:C:C2	49:S2:495:U:H5	2.14	0.64
49:S2:500:A:H3'	49:S2:501:C:C5	2.33	0.64
49:S2:609:U:O2	49:S2:610:G:C8	2.50	0.64
49:S2:842:C:C2	49:S2:843:C:C6	2.85	0.64
49:S2:848:U:C2	49:S2:849:A:C8	2.86	0.64
49:S2:863:U:N3	49:S2:864:A:N7	2.45	0.64
49:S2:1144:A:OP1	49:S2:1355:C:C5	2.50	0.64
49:S2:1215:C:H42	49:S2:1221:G:H1	1.44	0.64
49:S2:1310:U:C4'	81:Sf:143:LYS:HG3	2.27	0.64
49:S2:1366:G:N2	49:S2:1374:C:C2	2.64	0.64
49:S2:1405:A:C4	49:S2:1406:G:C8	2.85	0.64
49:S2:1551:U:O4'	49:S2:1558:C:C2	2.50	0.64
52:SC:104:ASP:OD2	52:SC:130:ILE:HB	1.96	0.64
59:SJ:59:GLU:CD	59:SJ:59:GLU:CB	2.68	0.64
1:5:88:A:C2	1:5:89:C:C4	2.85	0.64
1:5:247:G:N1	1:5:248:C:C4	2.65	0.64
1:5:661:C:N3	1:5:662:C:C5	2.66	0.64
1:5:966:A:N6	1:5:2252:G:C8	2.56	0.64
1:5:1261:G:N1	1:5:1262:G:C5	2.65	0.64
1:5:1554:A:C5	1:5:1555:G:C8	2.86	0.64
1:5:1673:U:N3	1:5:1674:C:C4	2.66	0.64
1:5:2272:C:O2'	1:5:2273:G:C5'	2.45	0.64
1:5:2367:A:N6	1:5:2788:U:N3	2.27	0.64
1:5:2645:G:C6	1:5:2646:C:C5	2.86	0.64
1:5:2736:G:N2	1:5:2737:C:N1	2.45	0.64
1:5:4723:A:N3	1:5:4724:A:C8	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:17:C:H2'	2:7:17:C:O2	1.97	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
4:A:34:PHE:O	4:A:35:ALA:C	2.41	0.64
46:q:51:ALA:HA	46:q:91:THR:HB	1.78	0.64
46:q:57:LYS:CD	46:q:58:ASN:H	2.10	0.64
46:q:69:LEU:O	46:q:71:ASN:N	2.30	0.64
46:q:168:GLY:C	46:q:171:GLU:HG2	2.19	0.64
46:q:178:LEU:O	46:q:179:ASN:CB	2.43	0.64
48:4:690:GLY:N	48:4:730:TYR:CE1	2.61	0.64
48:4:818:GLN:HG2	48:4:819:ILE:N	2.11	0.64
49:S2:673:G:H1'	49:S2:1084:A:C2	2.32	0.64
49:S2:676:C:C2	49:S2:677:G:C8	2.85	0.64
49:S2:1030:A:N3	49:S2:1031:A:C8	2.66	0.64
49:S2:1126:G:C2	49:S2:1127:C:C6	2.86	0.64
49:S2:1220:A:N6	49:S2:1221:G:C6	2.65	0.64
1:5:704:C:C6	1:5:704:C:H5''	2.31	0.64
1:5:1177:U:N3	1:5:1178:G:N7	2.46	0.64
1:5:1646:A:H1'	39:j:49:TRP:CH2	2.32	0.64
1:5:2079:G:N2	1:5:2080:U:C2	2.65	0.64
1:5:2305:U:C6	1:5:2305:U:C5'	2.80	0.64
1:5:2325:C:O2	1:5:2325:C:C2'	2.45	0.64
1:5:3723:A:C2	1:5:3724:A:C8	2.85	0.64
1:5:3779:A:H2'	1:5:3780:G:O4'	1.98	0.64
1:5:4096:C:N4	1:5:4097:G:C4	2.64	0.64
1:5:4532:U:OP2	1:5:4554:G:N2	2.30	0.64
1:5:5031:G:N1	1:5:5032:C:C4	2.65	0.64
6:C:200:ARG:NH2	28:Y:11:ARG:HD2	2.11	0.64
10:G:169:PHE:CE2	17:N:6:TYR:HB2	2.31	0.64
17:N:181:HIS:C	17:N:182:HIS:O	2.38	0.64
46:q:123:VAL:HG21	46:q:160:LEU:HD11	1.80	0.64
48:4:70:ILE:O	48:4:71:LYS:CB	2.44	0.64
49:S2:81:U:C4	49:S2:82:G:N7	2.65	0.64
49:S2:530:U:C4	49:S2:531:A:N7	2.64	0.64
49:S2:1032:C:C2	49:S2:1033:G:C8	2.86	0.64
49:S2:1409:A:H2'	49:S2:1410:C:O4'	1.97	0.64
68:SS:86:ARG:NH1	68:SS:86:ARG:HA	2.12	0.64
1:5:75:G:O6	15:L:103:ARG:NH1	2.30	0.64
1:5:211:G:N3	1:5:212:A:C8	2.66	0.64
1:5:235:A:C5	1:5:238:C:N4	2.66	0.64
1:5:271:C:N3	1:5:272:U:C6	2.60	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:453:G:H22	1:5:1294:A:H62	1.46	0.64
1:5:984:C:C2	1:5:1070:G:C2	2.86	0.64
1:5:1085:C:N3	1:5:1086:C:C6	2.65	0.64
1:5:1388:A:C6	1:5:1396:G:C2	2.81	0.64
1:5:1412:G:N1	1:5:1413:C:C4	2.65	0.64
1:5:1507:C:C2	1:5:1508:A:C8	2.86	0.64
1:5:1936:C:O2	1:5:1936:C:C2'	2.46	0.64
1:5:1960:A:C1'	46:q:59:THR:CG2	2.75	0.64
1:5:2292:C:C2	1:5:2293:U:C6	2.85	0.64
1:5:2570:U:N3	1:5:2571:C:C5	2.66	0.64
1:5:3938:G:H4'	1:5:3939:G:O5'	1.97	0.64
3:8:94:G:C5	39:j:79:ARG:HD2	2.33	0.64
6:C:54:VAL:HG21	6:C:101:MET:HE3	1.80	0.64
14:K:81:ILE:CD1	14:K:117:ARG:NH1	2.60	0.64
22:S:15:ARG:HH21	23:T:141:VAL:HG22	1.61	0.64
49:S2:52:G:N2	49:S2:53:C:H1'	2.12	0.64
49:S2:600:G:C2	49:S2:601:G:N7	2.65	0.64
49:S2:841:G:N3	49:S2:842:C:C6	2.65	0.64
49:S2:925:G:N2	49:S2:926:A:N9	2.46	0.64
49:S2:927:C:C2	49:S2:928:G:C8	2.85	0.64
49:S2:958:G:HO2'	49:S2:959:G:C4'	2.05	0.64
49:S2:977:C:N3	49:S2:978:G:N7	2.45	0.64
49:S2:1123:C:C4	49:S2:1124:C:H5	2.13	0.64
49:S2:1201:U:H1'	49:S2:1357:A:C2	2.33	0.64
49:S2:1254:C:O2	49:S2:1255:G:H8	1.80	0.64
49:S2:1496:U:C4	49:S2:1498:A:N7	2.66	0.64
49:S2:1710:C:N3	49:S2:1711:U:C5	2.66	0.64
57:SH:57:ARG:HA	57:SH:57:ARG:NE	2.13	0.64
1:5:76:A:C8	15:L:74:ARG:NH2	2.66	0.64
1:5:238:C:C2	1:5:239:C:C5	2.86	0.64
1:5:364:G:O6	39:j:52:LYS:HE3	1.97	0.64
1:5:484:U:O4	1:5:486:C:C4	2.51	0.64
1:5:1204:C:N3	1:5:1205:G:N7	2.46	0.64
1:5:1325:C:H4'	1:5:3901:A:C2	2.32	0.64
1:5:1632:A:O2'	1:5:3641:U:O2	2.14	0.64
1:5:1673:U:O4	1:5:1682:A:N1	2.30	0.64
1:5:1877:G:N2	1:5:1878:G:H1'	2.11	0.64
1:5:1878:G:C2	1:5:1879:C:C5	2.86	0.64
1:5:1921:C:C6	22:S:161:ARG:HG2	2.33	0.64
1:5:1928:C:H1'	1:5:1929:A:C6	2.33	0.64
1:5:1997:U:H2'	1:5:1998:A:H3'	1.80	0.64

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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	0.64
1:5:2703:G:C6	1:5:2704:C:C5	2.86	0.64
1:5:3622:C:N3	1:5:3623:C:N3	2.45	0.64
1:5:3629:A:C6	1:5:3630:A:C8	2.85	0.64
1:5:3742:G:C2	1:5:3743:G:C8	2.85	0.64
1:5:4301:U:H4'	23:T:54:HIS:HD2	1.61	0.64
1:5:4343:U:C2	1:5:4344:U:C5	2.86	0.64
1:5:4510:A:H62	1:5:4592:C:C2'	2.11	0.64
1:5:4547:C:O2	1:5:4549:G:C8	2.51	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'	1.97	0.64
3:8:134:G:H21	3:8:135:C:H1'	1.62	0.64
12:I:9:TYR:HD2	12:I:97:ILE:CG1	2.11	0.64
21:R:95:TRP:HZ3	21:R:98:ARG:HH21	1.44	0.64
22:S:44:PHE:C	22:S:44:PHE:CD1	2.74	0.64
46:q:77:LYS:HZ3	46:q:198:ILE:HD13	1.61	0.64
48:4:308:LYS:HB3	48:4:311:GLU:HG3	1.78	0.64
48:4:495:ARG:O	48:4:496:VAL:CG1	2.45	0.64
49:S2:69:C:H2'	49:S2:70:G:C8	2.32	0.64
49:S2:469:A:N1	49:S2:470:G:N7	2.44	0.64
49:S2:694:G:C2	49:S2:695:C:C6	2.85	0.64
49:S2:751:G:O6	49:S2:791:C:C4	2.51	0.64
49:S2:906:U:O2	49:S2:907:G:C8	2.51	0.64
49:S2:910:G:C6	49:S2:911:C:C4	2.85	0.64
49:S2:926:A:C6	49:S2:927:C:C5	2.86	0.64
49:S2:1265:A:N3	49:S2:1266:C:C6	2.65	0.64
49:S2:1276:A:C2	49:S2:1277:C:H1'	2.33	0.64
49:S2:1654:G:H2'	49:S2:1655:C:O4'	1.97	0.64
56:SG:162:LEU:HG	56:SG:170:ARG:HB2	1.78	0.64
56:SG:180:VAL:HG13	56:SG:185:LEU:HD21	1.80	0.64
1:5:206:U:O2	1:5:208:A:C8	2.51	0.64
1:5:246:G:N3	1:5:247:G:C8	2.66	0.64
1:5:1167:C:H1'	1:5:1195:G:N2	2.13	0.64
1:5:1398:A:O2'	1:5:1399:G:OP2	2.13	0.64
1:5:1516:G:C5	1:5:1518:A:N7	2.66	0.64
1:5:1517:G:C2	1:5:1650:A:C6	2.86	0.64
1:5:1926:C:C2	1:5:1927:U:C6	2.85	0.64
1:5:2089:G:C5	1:5:2262:G:C2'	2.79	0.64
1:5:2399:G:C2	1:5:2400:G:C8	2.85	0.64
1:5:2546:G:O2'	1:5:2547:G:H5''	1.96	0.64
1:5:4097:G:C2	1:5:4098:A:N7	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4369:A:C2	1:5:4370:G:N7	2.65	0.64
1:5:4490:C:C2	1:5:4491:G:C8	2.86	0.64
2:7:93:G:C2	2:7:94:C:C6	2.85	0.64
3:8:63:U:C2'	3:8:63:U:O2	2.45	0.64
3:8:118:C:O2	3:8:119:C:C6	2.51	0.64
8:E:43:ASN:HB3	8:E:58:MET:HE1	1.80	0.64
14:K:31:LYS:O	14:K:34:PRO:HD2	1.93	0.64
14:K:61:LYS:HE3	14:K:72:GLU:HB3	0.67	0.64
14:K:124:GLU:C	14:K:128:THR:HG1	2.02	0.64
46:q:138:PHE:HB3	46:q:143:ILE:HD13	1.80	0.64
46:q:139:GLN:NE2	48:4:184:ASN:HA	2.13	0.64
48:4:113:SER:CB	48:4:533:MET:HB2	2.17	0.64
48:4:191:THR:CB	48:4:192:TYR:CD1	2.80	0.64
48:4:284:LYS:H	48:4:284:LYS:CE	2.11	0.64
48:4:408:GLY:HA2	49:S2:479:C:H5'	1.79	0.64
48:4:541:SER:O	48:4:543:GLU:N	2.31	0.64
48:4:742:GLU:HB2	48:4:820:LEU:HD11	1.79	0.64
49:S2:360:A:C2	49:S2:363:A:C8	2.86	0.64
49:S2:553:U:N3	49:S2:554:A:C5	2.65	0.64
49:S2:635:G:C6	49:S2:636:C:C4	2.86	0.64
49:S2:837:A:C2	49:S2:838:G:C8	2.86	0.64
49:S2:1561:A:H2'	49:S2:1561:A:N3	2.13	0.64
49:S2:1573:G:C5	49:S2:1574:C:C6	2.85	0.64
52:SC:252:THR:O	52:SC:253:PRO:C	2.40	0.64
1:5:50:C:C2'	1:5:51:A:O5'	2.46	0.64
1:5:98:A:C1'	1:5:292:G:O6	2.45	0.64
1:5:176:G:H5''	37:h:98:HIS:CE1	2.33	0.64
1:5:690:C:N3	1:5:691:C:C6	2.66	0.64
1:5:1079:C:N3	1:5:1080:C:C6	2.66	0.64
1:5:1198:G:H2'	1:5:1199:G:H8	1.59	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
1:5:1696:C:O2	1:5:1697:G:H5'	1.97	0.64
1:5:1807:C:C4	1:5:1808:C:C5	2.85	0.64
1:5:2079:G:C2	1:5:2080:U:C4	2.85	0.64
1:5:2326:G:N2	1:5:2327:G:N9	2.45	0.64
1:5:2371:U:O4	1:5:2825:A:H2	1.79	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
1:5:3621:A:C2	1:5:3622:C:C6	2.86	0.64
1:5:3722:G:N1	1:5:3723:A:C5	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4145:C:N3	1:5:4146:G:N7	2.46	0.64
1:5:4255:A:C2	1:5:4256:A:N3	2.66	0.64
1:5:4275:G:C6	1:5:4276:G:C8	2.85	0.64
1:5:4342:C:N3	1:5:4343:U:C6	2.66	0.64
4:A:211:PHE:CD1	4:A:219:ILE:HG23	2.33	0.64
14:K:123:ARG:CB	14:K:129:ILE:CD1	0.64	0.64
48:4:60:ARG:O	48:4:60:ARG:HG3	1.97	0.64
48:4:516:ASP:O	48:4:518:PRO:N	2.30	0.64
48:4:616:ASP:OD1	48:4:621:GLU:CB	2.46	0.64
48:4:749:ILE:HD12	48:4:759:ILE:CG1	2.28	0.64
48:4:800:LEU:CG	48:4:808:ALA:HB1	2.21	0.64
49:S2:856:C:H2'	49:S2:856:C:O2	1.98	0.64
49:S2:1204:A:N3	49:S2:1205:C:C6	2.66	0.64
49:S2:1291:A:O2'	81:Sf:148:TYR:C	2.40	0.64
49:S2:1741:U:C2	49:S2:1742:C:C6	2.86	0.64
49:S2:1793:A:N1	49:S2:1794:C:C4	2.66	0.64
49:S2:1797:U:O2'	49:S2:1798:C:O5'	2.13	0.64
59:SJ:86:VAL:HG21	59:SJ:105:PHE:CE1	2.32	0.64
62:SM:87:GLU:HA	62:SM:91:LEU:HD11	1.80	0.64
1:5:83:C:P	1:5:84:A:O2'	2.55	0.64
1:5:106:A:H2'	1:5:107:G:O4'	1.98	0.64
1:5:107:G:C6	15:L:56:ARG:NH1	2.66	0.64
1:5:276:C:OP2	38:i:36:HIS:ND1	2.30	0.64
1:5:298:G:C6	1:5:299:C:C5	2.85	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
1:5:491:G:N2	1:5:492:U:C5	2.66	0.64
1:5:911:U:N3	1:5:912:G:N7	2.46	0.64
1:5:978:G:H5''	8:E:41:SER:O	1.97	0.64
1:5:1292:C:H3'	1:5:1293:G:H5''	1.80	0.64
1:5:1447:C:C1'	1:5:2098:G:N2	2.61	0.64
1:5:1542:U:N3	1:5:1543:G:N7	2.46	0.64
1:5:1878:G:N1	1:5:1879:C:C4	2.66	0.64
1:5:1891:A:H2'	1:5:1892:A:C8	2.33	0.64
1:5:2301:G:C6	1:5:2302:C:C5	2.85	0.64
1:5:2407:G:O2'	1:5:2409:U:N3	2.30	0.64
1:5:2449:A:N7	1:5:2450:G:H1'	2.12	0.64
1:5:2496:G:C6	1:5:2497:C:C4	2.86	0.64
1:5:4480:A:C2	1:5:4481:U:C1'	2.81	0.64
1:5:4528:G:C2	1:5:4529:G:C8	2.85	0.64
1:5:4935:C:H3'	8:E:179:ARG:NH2	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:64:U:H2'	3:8:65:A:H8	1.59	0.64
14:K:61:LYS:HA	14:K:75:PRO:HD3	1.79	0.64
14:K:94:LYS:CA	14:K:95:GLN:C	2.54	0.64
14:K:102:GLY:HA2	14:K:140:GLY:N	2.07	0.64
14:K:121:LEU:HB2	14:K:123:ARG:HB3	1.80	0.64
16:M:11:ARG:NH2	16:M:61:ILE:HG23	2.13	0.64
25:V:97:TYR:OH	26:W:21:TYR:CB	2.45	0.64
30:a:104:VAL:HG13	30:a:109:TYR:OH	1.98	0.64
46:q:202:GLU:N	46:q:203:VAL:HA	2.12	0.64
48:4:481:LYS:CG	48:4:482:THR:N	2.16	0.64
48:4:502:SER:O	48:4:504:VAL:N	2.30	0.64
48:4:738:PRO:HB2	48:4:824:PRO:HG2	1.80	0.64
48:4:769:HIS:C	48:4:786:ALA:CB	2.66	0.64
49:S2:909:G:C6	49:S2:910:G:N7	2.65	0.64
49:S2:1095:U:O4	49:S2:1149:A:C6	2.51	0.64
49:S2:1162:C:O2	49:S2:1162:C:H2'	1.97	0.64
49:S2:1253:A:OP2	49:S2:1526:G:N2	2.30	0.64
49:S2:1271:C:N3	49:S2:1272:C:C6	2.66	0.64
49:S2:1283:C:O2	49:S2:1283:C:C2'	2.46	0.64
68:SS:33:ILE:HD13	68:SS:71:MET:HE1	1.78	0.64
1:5:42:A:N6	1:5:4379:A:N3	2.46	0.64
1:5:189:G:C2	1:5:190:G:C8	2.85	0.64
1:5:289:C:C4	1:5:290:U:C5	2.86	0.64
1:5:292:G:O2'	1:5:293:G:O5'	2.15	0.64
1:5:699:C:C2	1:5:700:G:C8	2.85	0.64
1:5:730:G:H22	1:5:939:G:N2	1.94	0.64
1:5:964:A:H8	1:5:964:A:O5'	1.80	0.64
1:5:1987:C:C4	1:5:1988:G:N7	2.65	0.64
1:5:2326:G:C2	1:5:2327:G:N9	2.65	0.64
1:5:2690:C:N3	1:5:2691:U:C6	2.66	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
1:5:4482:U:N3	1:5:4483:C:H5	1.94	0.64
1:5:4966:A:H2'	1:5:4967:A:C1'	2.27	0.64
3:8:82:A:H2'	3:8:82:A:N3	2.12	0.64
5:B:53:MET:HE1	5:B:336:CYS:HB3	1.80	0.64
7:D:223:PHE:CB	7:D:226:TYR:HB2	2.28	0.64
46:q:24:TYR:HD2	46:q:90:PHE:HB3	1.62	0.64
46:q:80:PRO:CG	46:q:81:HIS:ND1	2.61	0.64
46:q:108:PRO:CA	46:q:109:ALA:HB3	2.28	0.64
48:4:27:HIS:NE2	48:4:28:VAL:HG23	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:70:ILE:O	48:4:71:LYS:CG	2.46	0.64
48:4:73:THR:CA	48:4:104:ASP:CB	2.74	0.64
48:4:207:PRO:CG	48:4:261:TRP:CE2	2.81	0.64
48:4:216:SER:OG	48:4:219:HIS:HB2	1.98	0.64
48:4:571:LYS:CE	48:4:571:LYS:CA	2.75	0.64
48:4:638:LYS:HD2	48:4:638:LYS:H	1.62	0.64
49:S2:27:A:C5	49:S2:28:U:C5	2.85	0.64
49:S2:218:U:H2'	49:S2:219:U:O4'	1.98	0.64
49:S2:475:C:N3	49:S2:476:A:N7	2.46	0.64
49:S2:1290:G:H2'	81:Sf:146:LEU:HB3	1.80	0.64
49:S2:1311:C:H2'	49:S2:1312:G:O4'	1.98	0.64
49:S2:1412:C:H2'	49:S2:1413:G:N7	2.12	0.64
1:5:246:G:N1	1:5:247:G:N7	2.45	0.63
1:5:1245:C:C6	1:5:1269:G:O6	2.49	0.63
1:5:1258:G:C2	1:5:1259:G:C8	2.87	0.63
1:5:1267:C:H2'	1:5:2121:C:H41	1.62	0.63
1:5:1475:G:N3	1:5:1476:C:C5	2.64	0.63
1:5:1476:C:O2	1:5:1477:C:C6	2.51	0.63
1:5:1867:A:N3	1:5:4403:U:O2'	2.27	0.63
1:5:1933:G:H2'	1:5:1934:A:O4'	1.98	0.63
1:5:1936:C:C6	2:7:84:U:H6	2.13	0.63
1:5:1958:A:C6	1:5:2026:A:C6	2.70	0.63
1:5:1964:A:C2	1:5:4694:G:C6	2.86	0.63
1:5:1979:A:OP1	14:K:99:LYS:HG2	1.97	0.63
1:5:2316:G:C4	1:5:2317:C:C5	2.86	0.63
1:5:2399:G:N1	1:5:2400:G:C5	2.67	0.63
1:5:2589:C:H3'	1:5:2590:G:H8	1.63	0.63
1:5:2829:U:C2	1:5:2830:G:C8	2.86	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
1:5:3689: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
1:5:3927:U:C4	1:5:4182:G:C2	2.87	0.63
1:5:4114:C:H2'	1:5:4115:G:H1'	1.80	0.63
1:5:4117:U:H2'	1:5:4117:U:O2	1.97	0.63
1:5:4139:G:C6	1:5:4140:C:C5	2.85	0.63
1:5:4251:A:H2'	1:5:4252:C:C6	2.31	0.63
1:5:4426:C:N4	1:5:4427:G:C6	2.66	0.63
1:5:4746:C:C4	1:5:4747:C:C5	2.86	0.63
2:7:42:A:N1	2:7:43:U:C5	2.66	0.63
46:q:189:ILE:HD11	46:q:192:VAL:HG22	1.77	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:207:PRO:HB2	48:4:261:TRP:CG	2.33	0.63
48:4:223:PHE:HB3	48:4:344:LEU:HD13	1.79	0.63
48:4:335:LEU:O	48:4:339:VAL:HG23	1.98	0.63
48:4:503:PRO:C	48:4:505:VAL:N	2.56	0.63
48:4:845:LYS:HZ1	48:4:845:LYS:CA	2.10	0.63
49:S2:52:G:C5	49:S2:53:C:C5	2.85	0.63
49:S2:85:A:N1	49:S2:86:C:C4	2.65	0.63
49:S2:113:G:N3	49:S2:293:C:C5	2.66	0.63
49:S2:121:U:C4	49:S2:122:G:N7	2.66	0.63
49:S2:377:G:C6	49:S2:378:U:C5	2.86	0.63
49:S2:387:C:N3	49:S2:388:U:H5	1.92	0.63
49:S2:892:U:C2	49:S2:893:U:C6	2.86	0.63
49:S2:1294:G:O4'	81:Sf:151:ASN:C	2.41	0.63
49:S2:1591:C:N4	49:S2:1592:C:C5	2.66	0.63
63:SN:128:TYR:HD1	63:SN:129:TYR:N	1.96	0.63
72:SW:27:ILE:HD11	72:SW:61:ILE:HD12	1.79	0.63
82:Sg:113:PHE:CE2	82:Sg:117:ASN:HA	2.33	0.63
1:5:144:G:N3	1:5:145:G:C8	2.65	0.63
1:5:181:C:C2	1:5:256:G:C2	2.86	0.63
1:5:280:G:H8	17:N:120:TRP:CZ3	2.16	0.63
1:5:293:G:H4'	1:5:294:G:C8	2.33	0.63
1:5:295:A:N7	1:5:316:U:O2'	2.29	0.63
1:5:1411:C:N3	1:5:1412:G:N7	2.45	0.63
1:5:1439:C:C2	9:F:36:ARG:NH1	2.67	0.63
1:5:1993:C:C4	1:5:2002:A:C6	2.86	0.63
1:5:2056:G:C6	1:5:2058:G:C5	2.86	0.63
1:5:2270:G:N1	1:5:2271:C:C4	2.66	0.63
1:5:2453:A:N6	1:5:2454:U:C4	2.67	0.63
1:5:3723:A:N3	1:5:3724:A:C8	2.66	0.63
1:5:3728:A:C8	1:5:3729:U:H1'	2.32	0.63
1:5:3753:G:C6	1:5:3754:G:N7	2.66	0.63
1:5:4215:C:C4	1:5:4216:G:N7	2.66	0.63
1:5:4406:U:N3	1:5:4407:G:N7	2.46	0.63
1:5:4453:C:C2	1:5:4529:G:C2	2.87	0.63
1:5:4472:G:C6	1:5:4473:A:C8	2.86	0.63
2:7:42:A:C8	13:J:75:ARG:NH1	2.67	0.63
2:7:59:G:C5	2:7:60:G:C8	2.87	0.63
3:8:81:C:O2	3:8:81:C:C2'	2.45	0.63
5:B:106:PHE:CE2	5:B:130:PHE:CZ	2.86	0.63
46:q:117:ALA:HB1	46:q:118:PRO:CA	2.24	0.63
49:S2:26:U:C2	49:S2:27:A:H8	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:634:A:N3	49:S2:635:G:C8	2.66	0.63
49:S2:752:G:C2	49:S2:791:C:O2	2.51	0.63
49:S2:1266:C:C2	49:S2:1267:C:H5	2.15	0.63
49:S2:1546:G:O2'	49:S2:1547:C:C5'	2.46	0.63
49:S2:1574:C:C2	49:S2:1575:G:C8	2.87	0.63
49:S2:1729:U:O2	49:S2:1730:U:C5	2.51	0.63
49:S2:1781:A:H2'	49:S2:1782:G:H8	1.62	0.63
1:5:44:A:C2	1:5:45:U:C6	2.86	0.63
1:5:54:G:N1	1:5:55:G:C8	2.66	0.63
1:5:209:U:C5	1:5:211:G:N7	2.66	0.63
1:5:293:G:H5''	1:5:294:G:H8	1.61	0.63
1:5:1066:G:C4	1:5:1067:G:C8	2.87	0.63
1:5:1091:C:N3	1:5:1092:G:C8	2.66	0.63
1:5:1176:C:O2'	7:D:279:ARG:HG2	1.98	0.63
1:5:1250:C:C2	1:5:1261:G:C2	2.86	0.63
1:5:1476:C:C4	1:5:1477:C:C5	2.86	0.63
1:5:1661:C:O2	1:5:1662:C:C5	2.52	0.63
1:5:2422:C:H2'	1:5:2422:C:O2	1.96	0.63
1:5:3606:U:C2	1:5:3607:U:C5	2.85	0.63
1:5:4479:A:C2	1:5:4480:A:H1'	2.32	0.63
1:5:4583:C:N4	1:5:4718:G:C6	2.67	0.63
4:A:186:TYR:N	4:A:196:TRP:CZ3	2.66	0.63
14:K:94:LYS:CG	14:K:96:LYS:HE3	2.24	0.63
14:K:105:THR:HG22	14:K:144:ASP:HA	1.79	0.63
14:K:114:ARG:NE	14:K:130:LYS:HE2	2.13	0.63
20:Q:178:ARG:NH2	20:Q:186:TYR:CE1	2.66	0.63
46:q:27:CYS:HB3	46:q:193:PHE:HD1	1.62	0.63
48:4:13:MET:HE1	48:4:464:VAL:CA	2.28	0.63
48:4:27:HIS:CD2	48:4:28:VAL:CA	2.70	0.63
48:4:126:LEU:HD12	48:4:353:MET:HE1	1.80	0.63
48:4:753:GLU:OE2	48:4:779:THR:CB	2.45	0.63
49:S2:100:U:O4	49:S2:409:C:H1'	1.99	0.63
49:S2:104:A:N6	49:S2:105:U:C4	2.66	0.63
49:S2:402:C:N3	49:S2:403:G:C8	2.67	0.63
49:S2:579:C:N4	49:S2:580:U:C4	2.66	0.63
49:S2:906:U:O2	49:S2:907:G:N7	2.31	0.63
49:S2:942:G:H2'	49:S2:943:U:C6	2.34	0.63
49:S2:1455:A:C6	49:S2:1456:G:C8	2.86	0.63
55:SF:88:MET:HE1	55:SF:92:ILE:HD11	1.79	0.63
57:SH:158:LEU:HB2	57:SH:189:PHE:CZ	2.33	0.63
62:SM:35:ILE:HB	62:SM:61:TYR:CE1	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:30:C:C2'	1:5:31:U:O5'	2.47	0.63
1:5:65:A:H2	1:5:76:A:H4'	1.63	0.63
1:5:916:C:N4	1:5:917:A:N7	2.46	0.63
1:5:1202:C:N3	1:5:1203:G:N7	2.47	0.63
1:5:1251:C:N3	1:5:1252:C:C5	2.67	0.63
1:5:1441:C:C2	1:5:1442:C:C6	2.86	0.63
1:5:1509:C:N3	1:5:1510:G:N7	2.47	0.63
1:5:1529:G:H21	39:j:49:TRP:HZ2	1.43	0.63
1:5:2441:C:H2'	1:5:2442:G:C8	2.34	0.63
1:5:3590:G:C5	1:5:3591:C:C5	2.87	0.63
1:5:3622:C:C2	1:5:3623:C:C2	2.87	0.63
1:5:3709:U:N3	49:S2:970:G:C2	2.52	0.63
1:5:3763:A:H2'	1:5:3764:U:O4'	1.98	0.63
1:5:4583:C:C4	1:5:4718:G:N1	2.66	0.63
3:8:11:C:O2	3:8:11:C:C2'	2.47	0.63
14:K:78:SER:HA	14:K:117:ARG:HH11	1.62	0.63
48:4:13:MET:HE3	48:4:464:VAL:HG13	1.74	0.63
48:4:228:PHE:CE1	48:4:232:TYR:OH	2.49	0.63
48:4:507:VAL:HG22	48:4:554:LEU:HD22	1.71	0.63
48:4:557:CYS:HA	48:4:560:ASP:OD2	1.98	0.63
48:4:739:ARG:HH12	48:4:823:ASP:HB2	1.59	0.63
49:S2:10:G:C2	49:S2:11:A:C8	2.86	0.63
49:S2:61:A:C2	49:S2:335:G:H1'	2.33	0.63
49:S2:114:G:H1'	49:S2:383:G:O4'	1.98	0.63
49:S2:166:A:C2	49:S2:167:G:C8	2.87	0.63
49:S2:185:G:N3	49:S2:186:C:C6	2.66	0.63
49:S2:383:G:O2'	61:SL:133:PRO:O	2.16	0.63
49:S2:835:C:H5'	49:S2:836:G:OP2	1.98	0.63
49:S2:1160:U:OP2	73:SX:4:CYS:O	2.16	0.63
49:S2:1229:G:C5	49:S2:1230:C:C5	2.86	0.63
49:S2:1273:C:N3	49:S2:1506:A:C2	2.67	0.63
49:S2:1528:G:C4	49:S2:1529:C:C5	2.87	0.63
49:S2:1590:C:C4	49:S2:1591:C:H1'	2.34	0.63
49:S2:1603:G:C8	68:SS:28:PHE:HE2	2.16	0.63
59:SJ:48:PHE:CZ	59:SJ:52:LYS:HG3	2.33	0.63
61:SL:57:ASP:OD2	61:SL:60:CYS:N	2.30	0.63
73:SX:67:ARG:CG	73:SX:115:ILE:HD13	2.27	0.63
1:5:27:C:C2	1:5:28:C:H6	2.16	0.63
1:5:315:G:N1	30:a:62:HIS:CG	2.66	0.63
1:5:1248:C:C4	1:5:1249:C:C5	2.86	0.63
1:5:2026:A:O2'	1:5:2027:U:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2090:U:N3	6:C:307:LYS:HE3	2.13	0.63
1:5:2096:G:H3'	1:5:2096:G:N3	2.13	0.63
1:5:2126:G:C1'	1:5:2127:C:C6	2.80	0.63
1:5:2657:G:C6	1:5:2658:G:C6	2.86	0.63
1:5:3879:G:OP1	1:5:3879:G:O4'	2.16	0.63
1:5:4091:G:C4	1:5:4092:G:C8	2.86	0.63
1:5:4426:C:C4	1:5:4427:G:C5	2.86	0.63
1:5:4730:C:H5''	1:5:4965:U:O2	1.98	0.63
1:5:4886:C:O2	1:5:4887:C:H6	1.80	0.63
1:5:4929:C:H6	1:5:4929:C:H5''	1.63	0.63
2:7:59:G:C2	2:7:60:G:C8	2.86	0.63
15:L:169:ILE:HD13	30:a:142:GLY:HA2	1.79	0.63
26:W:50:ASN:HB3	26:W:55:TYR:HE2	1.60	0.63
29:Z:78:ASN:OD1	29:Z:78:ASN:N	2.32	0.63
33:d:87:ARG:CZ	33:d:109:VAL:HG22	2.28	0.63
46:q:28:PHE:HE2	46:q:99:ARG:NH1	1.95	0.63
46:q:157:ASP:O	46:q:158:VAL:HG22	1.99	0.63
48:4:195:GLY:O	48:4:196:GLU:C	2.36	0.63
49:S2:81:U:O4	49:S2:82:G:C5	2.52	0.63
49:S2:90:G:H2'	49:S2:91:A:O4'	1.99	0.63
49:S2:299:A:C6	49:S2:300:U:C5	2.87	0.63
49:S2:338:G:C6	49:S2:339:A:C5	2.87	0.63
49:S2:380:G:H22	49:S2:382:C:H3'	1.63	0.63
49:S2:1036:A:N3	49:S2:1844:U:O2'	2.30	0.63
49:S2:1205:C:C2	49:S2:1206:G:C8	2.86	0.63
49:S2:1292:C:C2	81:Sf:150:PHE:CD1	2.86	0.63
49:S2:1310:U:H4'	81:Sf:143:LYS:HG3	1.80	0.63
49:S2:1408:U:C2'	49:S2:1409:A:C8	2.81	0.63
49:S2:1417:C:C2	49:S2:1419:C:C5	2.86	0.63
49:S2:1448:A:C6	49:S2:1449:G:C8	2.86	0.63
49:S2:1526:G:C4	49:S2:1527:C:C6	2.86	0.63
49:S2:1568:C:O2'	49:S2:1569:A:O4'	2.16	0.63
52:SC:200:ARG:HH21	52:SC:200:ARG:HG3	1.64	0.63
58:SI:139:LYS:HD2	58:SI:145:ILE:HD12	1.81	0.63
62:SM:51:VAL:HG12	62:SM:109:VAL:HG22	1.81	0.63
67:SR:5:ARG:HG3	67:SR:49:LYS:HE3	1.79	0.63
79:Sd:40:ARG:CG	79:Sd:41:GLN:OE1	2.46	0.63
82:Sg:21:ILE:HD13	82:Sg:307:VAL:HG13	1.80	0.63
1:5:748:G:C6	1:5:918:G:H1'	2.34	0.63
1:5:1246:G:C4	1:5:1247:U:C6	2.87	0.63
1:5:1382:G:O2'	1:5:1383:G:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2327:G:C6	1:5:2328:G:N7	2.67	0.63
1:5:2606:G:C4	1:5:2607:C:C5	2.87	0.63
1:5:2644:G:C6	1:5:2645:G:N7	2.66	0.63
1:5:2688:G:C2	1:5:2689:C:C6	2.86	0.63
1:5:3911:C:O2'	1:5:3912:U:O5'	2.13	0.63
1:5:4080:C:O2	1:5:4081:G:H8	1.69	0.63
1:5:4158:C:O2	1:5:4158:C:H2'	1.97	0.63
1:5:4189:U:C1'	1:5:4380:A:C2	2.81	0.63
1:5:4194:U:O4	1:5:4197:G:H5''	1.98	0.63
1:5:4286:C:C2	1:5:4287:G:N7	2.67	0.63
1:5:4368:G:N1	1:5:4369:A:C8	2.66	0.63
1:5:4591:U:H2'	1:5:4592:C:C6	2.34	0.63
1:5:4735:G:C4	1:5:4736:C:C5	2.87	0.63
2:7:8:G:C6	2:7:9:C:C4	2.87	0.63
5:B:337:VAL:HG21	5:B:345:LEU:HD21	1.81	0.63
7:D:42:ASN:CA	7:D:44:TYR:OH	2.44	0.63
30:a:62:HIS:C	30:a:62:HIS:CD2	2.77	0.63
33:d:71:ALA:CB	33:d:108:TYR:CE2	2.80	0.63
42:m:99:CYS:SG	42:m:101:ALA:HB2	2.39	0.63
46:q:75:LEU:CD2	46:q:78:LEU:HD12	2.28	0.63
48:4:845:LYS:HE3	48:4:846:GLU:CA	2.28	0.63
49:S2:99:A:C6	49:S2:100:U:C5	2.87	0.63
49:S2:221:A:C5	49:S2:222:U:C5	2.87	0.63
49:S2:419:G:N2	49:S2:661:U:C2	2.67	0.63
49:S2:499:G:C2	49:S2:504:G:C6	2.87	0.63
49:S2:1294:G:H8	81:Sf:151:ASN:CA	2.12	0.63
49:S2:1433:C:O3'	49:S2:1434:C:O4'	2.17	0.63
49:S2:1804:U:N3	49:S2:1805:G:N7	2.47	0.63
50:SA:110:ASN:O	50:SA:116:PHE:CD2	2.50	0.63
54:SE:11:ARG:HD2	54:SE:20:LEU:HB3	1.80	0.63
65:SP:17:TYR:HB3	65:SP:25:LEU:HD11	1.81	0.63
82:Sg:19:THR:OG1	82:Sg:66:VAL:O	2.12	0.63
1:5:52:G:H8	1:5:52:G:O5'	1.82	0.63
1:5:312:G:H2'	1:5:313:U:O4'	1.99	0.63
1:5:1089:G:H5'	23:T:140:PHE:CE1	2.33	0.63
1:5:1321:G:O4'	1:5:1891:A:N6	2.32	0.63
1:5:1379:C:O3'	1:5:1380:G:H8	1.81	0.63
1:5:1439:C:H5''	9:F:36:ARG:NH1	2.12	0.63
1:5:1556:C:H2'	1:5:1557:C:H6	1.64	0.63
1:5:1661:C:C2	1:5:1662:C:C5	2.86	0.63
1:5:1671:U:O2	1:5:1671:U:C2'	2.45	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1771:U:N3	1:5:1772:C:C5	2.66	0.63
1:5:1843:A:C6	1:5:1844:G:N7	2.66	0.63
1:5:2275:G:H5''	1:5:2275:G:H8	1.63	0.63
1:5:2496:G:C5	1:5:2497:C:C5	2.87	0.63
1:5:2540:C:C2	1:5:2541:G:C8	2.87	0.63
1:5:2856:C:N4	1:5:2857:A:H62	1.94	0.63
1:5:3858:C:C4	1:5:3859:G:C8	2.86	0.63
1:5:3858:C:C4	1:5:3859:G:N7	2.67	0.63
1:5:4097:G:N1	1:5:4098:A:N7	2.47	0.63
1:5:4119:C:O2	1:5:4119:C:O5'	2.17	0.63
1:5:4277:G:N2	1:5:4278:C:C2	2.67	0.63
9:F:219:ARG:HH11	9:F:219:ARG:HB3	1.63	0.63
14:K:78:SER:HA	14:K:117:ARG:NH1	2.14	0.63
16:M:36:ALA:HB2	16:M:52:PHE:CZ	2.34	0.63
17:N:138:PHE:N	17:N:138:PHE:HD1	1.96	0.63
46:q:189:ILE:HD11	46:q:192:VAL:HG23	1.76	0.63
47:r:33:LYS:HD2	47:r:40:TYR:CE2	2.34	0.63
48:4:120:ARG:CZ	48:4:496:VAL:O	2.47	0.63
48:4:300:VAL:HG23	48:4:301:PHE:N	2.12	0.63
48:4:700:VAL:CG1	48:4:702:PHE:CE2	2.82	0.63
49:S2:80:G:C6	49:S2:81:U:C4	2.87	0.63
49:S2:113:G:C2	49:S2:293:C:C4	2.86	0.63
49:S2:449:A:N6	49:S2:452:G:C6	2.66	0.63
49:S2:493:A:N3	49:S2:493:A:H2'	2.14	0.63
49:S2:693:A:H2'	49:S2:694:G:O4'	1.99	0.63
49:S2:1095:U:N3	49:S2:1149:A:C6	2.67	0.63
49:S2:1304:U:O2	49:S2:1305:C:C5	2.52	0.63
49:S2:1741:U:N3	49:S2:1742:C:C5	2.67	0.63
49:S2:1863:A:C2	76:Sa:76:SER:HA	2.34	0.63
73:SX:115:ILE:HG22	73:SX:118:VAL:HB	1.80	0.63
1:5:470:A:N6	8:E:101:ARG:NH2	2.46	0.63
1:5:698:G:C2	1:5:699:C:C6	2.86	0.63
1:5:979:C:H2'	1:5:980:U:O4'	1.97	0.63
1:5:1243:C:H2'	1:5:1244:G:N7	2.14	0.63
1:5:1334:A:C6	1:5:1335:G:N7	2.67	0.63
1:5:1634:A:C2	1:5:1635:C:N1	2.67	0.63
1:5:1758:G:N3	1:5:1759:G:C8	2.67	0.63
1:5:2294:G:C4	1:5:2295:C:C5	2.87	0.63
1:5:2340:C:N3	1:5:2341:A:C8	2.66	0.63
1:5:2483:G:C2	1:5:2484:A:C8	2.85	0.63
1:5:2485:U:C2	1:5:2486:G:N7	2.67	0.63

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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	0.63
1:5:2549:G:N2	1:5:2770:C:N3	2.46	0.63
1:5:3859:G:OP2	19:P:25:HIS:NE2	2.31	0.63
1:5:4100:C:C4	1:5:4101:C:C5	2.87	0.63
1:5:4345:C:C2	1:5:4346:U:C6	2.87	0.63
1:5:5001:U:H2'	1:5:5002:U:O4'	1.99	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
7:D:204:VAL:HG12	7:D:236:MET:HE1	1.81	0.63
14:K:62:LEU:CD1	14:K:73:VAL:CG2	2.72	0.63
28:Y:15:ARG:NH1	28:Y:19:PHE:HE2	1.89	0.63
46:q:66:ARG:CG	46:q:69:LEU:HD22	2.28	0.63
48:4:496:VAL:HG23	48:4:497:MET:N	2.13	0.63
48:4:771:PHE:HD2	48:4:785:LYS:HD2	1.63	0.63
49:S2:42:A:C4	49:S2:426:A:C6	2.86	0.63
49:S2:821:G:C8	49:S2:821:G:C5'	2.82	0.63
49:S2:1004:U:C2	49:S2:1005:G:C8	2.87	0.63
49:S2:1046:U:C4	49:S2:1047:C:N4	2.67	0.63
49:S2:1061:U:O2	49:S2:1061:U:H2'	1.97	0.63
49:S2:1063:C:O2	49:S2:1063:C:H2'	1.90	0.63
49:S2:1591:C:C4	49:S2:1592:C:C6	2.86	0.63
49:S2:1831:A:C1'	49:S2:1851:A:H2'	2.27	0.63
54:SE:67:GLN:HB3	54:SE:69:PHE:CE2	2.34	0.63
73:SX:15:SER:O	73:SX:19:ASP:OD1	2.16	0.63
1:5:28:C:O2	1:5:28:C:H2'	1.97	0.63
1:5:31:U:O2'	1:5:32:G:H5'	1.98	0.63
1:5:112:C:H2'	1:5:112:C:O2	1.99	0.63
1:5:199:G:C4	1:5:201:C:C5	2.87	0.63
1:5:465:G:C6	1:5:466:A:N7	2.67	0.63
1:5:962:C:OP1	1:5:2264:C:N4	2.31	0.63
1:5:986:C:N3	1:5:1068:G:C2	2.67	0.63
1:5:1213:G:N7	1:5:1215:C:C6	2.66	0.63
1:5:1870:C:C2	1:5:1871:A:C8	2.87	0.63
1:5:1885:G:N1	1:5:1895:G:C2	2.67	0.63
1:5:2056:G:C5	1:5:2058:G:C8	2.87	0.63
1:5:2577:C:H2'	1:5:2577:C:O2	1.96	0.63
1:5:3643:A:C2	39:j:3:LYS:HE3	2.34	0.63
1:5:3899:G:H5''	5:B:257:TRP:HD1	1.63	0.63
1:5:4101:C:C2	1:5:4109:G:C2	2.86	0.63
1:5:4132:C:C4	1:5:4133:C:C5	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4504:C:H2'	1:5:4505:C:C6	2.34	0.63
1:5:4562:C:C4	1:5:4563:U:C5	2.86	0.63
1:5:4874:A:H2'	1:5:4874:A:N3	2.14	0.63
2:7:60:G:C2	2:7:61:G:C8	2.86	0.63
3:8:95:A:H2'	37:h:63:GLN:HE22	1.63	0.63
3:8:101:C:C2	3:8:102:G:C8	2.86	0.63
3:8:132:G:N3	3:8:133:G:C8	2.66	0.63
3:8:135:C:C2	3:8:136:U:C5	2.86	0.63
11:H:113:GLU:HB3	11:H:115:ARG:HH22	1.63	0.63
26:W:55:TYR:CD1	26:W:55:TYR:C	2.76	0.63
48:4:239:LYS:HD2	48:4:241:GLU:HB3	1.80	0.63
48:4:649:ILE:HG22	48:4:663:THR:OG1	1.99	0.63
48:4:689:GLU:C	48:4:730:TYR:HE1	1.99	0.63
48:4:751:CYS:SG	48:4:756:VAL:HG22	2.39	0.63
48:4:816:HIS:HD2	48:4:818:GLN:N	1.96	0.63
49:S2:37:C:C4	49:S2:38:A:N7	2.66	0.63
49:S2:43:U:O2	49:S2:43:U:C2'	2.47	0.63
49:S2:496:C:H5'	54:SE:29:PRO:HA	1.81	0.63
49:S2:582:C:H4'	74:SY:33:ALA:HB2	1.80	0.63
49:S2:1045:U:H2'	49:S2:1045:U:O2	1.97	0.63
49:S2:1132:C:N3	49:S2:1133:A:C8	2.66	0.63
49:S2:1394:G:N1	49:S2:1395:C:C5	2.67	0.63
49:S2:1431:G:C6	49:S2:1432:U:C4	2.87	0.63
1:5:10:A:H1'	1:5:2472:A:N1	2.14	0.62
1:5:294:G:N1	30:a:61:TYR:CE2	2.66	0.62
1:5:468:U:O4	1:5:687:U:O4	2.17	0.62
1:5:672:C:C4	1:5:673:C:C5	2.86	0.62
1:5:1211:G:C2	1:5:1212:G:N7	2.66	0.62
1:5:1264:C:O2'	1:5:2114:G:P	2.56	0.62
1:5:1268:G:C6	1:5:1270:A:N7	2.67	0.62
1:5:1886:G:N2	1:5:1894:C:N3	2.47	0.62
1:5:1896:A:N7	9:F:101:ASN:ND2	2.47	0.62
1:5:1960:A:H1'	46:q:59:THR:CG2	2.27	0.62
1:5:2253:A:H2	1:5:2260:C:N4	1.97	0.62
1:5:2408:U:H5'	41:l:44:TRP:HD1	1.64	0.62
1:5:2463:G:C2	1:5:2464:C:N3	2.67	0.62
1:5:3625:G:N2	1:5:3627:G:H5'	2.13	0.62
1:5:3689:G:C6	1:5:3690:U:C5	2.87	0.62
1:5:3901:A:O2'	1:5:4450:U:O3'	2.17	0.62
1:5:3937:C:O2	1:5:3937:C:H2'	1.99	0.62
1:5:4169:G:H4'	1:5:4171:C:O2	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4233:A:C2	1:5:4290:U:O4	2.48	0.62
1:5:4518:A:N9	5:B:257:TRP:CH2	2.65	0.62
2:7:22:A:N3	2:7:22:A:H2'	2.13	0.62
3:8:34:U:C2	3:8:34:U:C5'	2.82	0.62
7:D:27:LYS:HE3	13:J:147:ARG:NH2	2.14	0.62
7:D:249:GLU:OE1	7:D:250:ASN:N	2.32	0.62
11:H:172:ILE:HD11	42:m:102:ARG:HH22	1.64	0.62
25:V:26:ILE:HG22	25:V:101:ASN:HB3	1.81	0.62
28:Y:59:ARG:HG3	28:Y:103:LYS:HD2	1.80	0.62
46:q:171:GLU:HA	46:q:174:LEU:CD2	2.29	0.62
48:4:160:MET:SD	48:4:178:PHE:HZ	2.21	0.62
48:4:448:GLN:NE2	48:4:448:GLN:C	2.57	0.62
48:4:801:ARG:HD2	48:4:802:SER:CA	2.29	0.62
49:S2:164:A:O2'	49:S2:165:G:O4'	2.17	0.62
49:S2:309:G:C4	49:S2:310:C:C5	2.87	0.62
49:S2:384:U:C5	49:S2:386:C:H5	2.15	0.62
49:S2:690:G:C5	49:S2:691:G:H1'	2.34	0.62
49:S2:851:C:C2'	49:S2:852:G:H21	2.10	0.62
49:S2:995:G:N2	49:S2:997:A:H3'	2.12	0.62
49:S2:1018:U:O2	49:S2:1019:C:C5	2.52	0.62
49:S2:1066:U:C4	49:S2:1067:C:C5	2.87	0.62
49:S2:1220:A:C6	49:S2:1221:G:C6	2.87	0.62
49:S2:1223:A:C2	49:S2:1644:C:N3	2.67	0.62
49:S2:1588:A:H4'	69:ST:92:PHE:CE2	2.34	0.62
49:S2:1757:G:C2	49:S2:1758:G:C8	2.87	0.62
49:S2:1841:C:O2	49:S2:1842:C:C5	2.52	0.62
53:SD:24:PHE:HB2	60:SK:63:ALA:HB1	1.79	0.62
59:SJ:20:PHE:N	59:SJ:20:PHE:CD1	2.67	0.62
60:SK:2:LEU:CB	60:SK:8:ARG:NH2	2.61	0.62
1:5:112:C:N3	1:5:113:A:C8	2.68	0.62
1:5:149:A:H4'	1:5:151:G:C8	2.34	0.62
1:5:166:C:N3	1:5:167:C:C5	2.64	0.62
1:5:450:G:O6	1:5:1295:C:C4	2.52	0.62
1:5:930:G:C4	1:5:931:C:C5	2.86	0.62
1:5:1070:G:C5	1:5:1071:C:C5	2.87	0.62
1:5:1174:G:C2	1:5:1175:A:C8	2.87	0.62
1:5:1190:C:O2	1:5:1191:C:C6	2.52	0.62
1:5:1263:A:C6	1:5:1264:C:C4	2.87	0.62
1:5:1987:C:O2	1:5:1987:C:H2'	1.99	0.62
1:5:2000:G:H3'	1:5:2000:G:N3	2.15	0.62
1:5:2034:G:O6	1:5:2035:C:N4	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2441:C:C2	1:5:2442:G:N7	2.68	0.62
1:5:2453:A:C5	1:5:2454:U:C5	2.86	0.62
1:5:2508:U:N3	1:5:2509:C:H5	1.97	0.62
1:5:2724:G:N2	1:5:2726:G:C8	2.66	0.62
1:5:2726:G:N1	1:5:2727:C:C4	2.67	0.62
1:5:4243:C:H2'	1:5:4243:C:O2	1.99	0.62
1:5:4324:A:N1	1:5:4325:A:C6	2.67	0.62
1:5:4384:U:O2'	1:5:4386:C:OP1	2.11	0.62
1:5:4413:C:O4'	12:I:157:PHE:HD2	1.81	0.62
1:5:4481:U:N3	1:5:4482:U:C4	2.67	0.62
1:5:4724:A:C5	1:5:4725:C:C5	2.86	0.62
1:5:4987:C:H2'	5:B:123:HIS:CD2	2.34	0.62
5:B:100:ARG:HB3	5:B:100:ARG:CZ	2.29	0.62
8:E:55:ARG:O	8:E:58:MET:O	2.17	0.62
9:F:171:LEU:HB3	9:F:189:MET:HE1	1.80	0.62
16:M:6:PHE:N	16:M:6:PHE:CD2	2.67	0.62
25:V:98:PHE:CE1	26:W:22:ALA:HB3	2.34	0.62
46:q:22:ASP:OD2	46:q:66:ARG:NE	2.31	0.62
47:r:7:TRP:CZ3	47:r:11:ARG:HA	2.33	0.62
48:4:155:LEU:HD23	48:4:156:MET:C	2.24	0.62
48:4:449:ARG:NE	48:4:460:PRO:HB3	2.14	0.62
48:4:498:LYS:O	48:4:498:LYS:CG	2.34	0.62
48:4:615:GLU:O	48:4:619:LYS:HB2	1.99	0.62
48:4:691:ALA:HA	48:4:730:TYR:CD2	2.34	0.62
49:S2:52:G:C2	49:S2:53:C:N1	2.66	0.62
49:S2:68:A:C2	49:S2:69:C:C2	2.88	0.62
49:S2:149:A:H2'	49:S2:150:A:C8	2.34	0.62
49:S2:341:C:H3'	49:S2:342:C:H5''	1.81	0.62
49:S2:619:A:C2	73:SX:113:GLY:HA3	2.35	0.62
49:S2:1142:G:N3	49:S2:1142:G:H2'	2.13	0.62
49:S2:1467:C:OP1	67:SR:1:MET:N	2.30	0.62
49:S2:1696:C:N3	49:S2:1697:A:N7	2.47	0.62
49:S2:1746:U:H4'	56:SG:65:GLN:NE2	2.13	0.62
53:SD:22:ASN:HD22	53:SD:22:ASN:C	2.07	0.62
63:SN:38:TYR:OH	63:SN:78:LYS:HE3	2.00	0.62
69:ST:60:THR:HG23	69:ST:75:MET:HE2	1.82	0.62
1:5:172:C:C4	1:5:173:C:C4	2.87	0.62
1:5:911:U:N3	1:5:912:G:C8	2.67	0.62
1:5:1093:C:N3	1:5:1094:G:C8	2.66	0.62
1:5:1266:G:H21	1:5:2111:G:H1'	1.65	0.62
1:5:1534:A:C6	39:j:14:LYS:HA	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1642:A:H2'	1:5:1642:A:N3	2.14	0.62
1:5:2329:U:O2'	1:5:2330:G:O4'	2.16	0.62
1:5:2368:A:N6	1:5:2827:G:H1'	2.14	0.62
1:5:2370:A:O2'	1:5:2826:U:N3	2.22	0.62
1:5:2714:G:N3	1:5:2715:G:C8	2.66	0.62
1:5:3712:A:H3'	1:5:3713:U:H5''	1.80	0.62
1:5:4091:G:C6	1:5:4092:G:C5	2.86	0.62
1:5:4302:U:H5	1:5:4303:C:C6	2.17	0.62
1:5:5047:C:C1'	1:5:5048:A:C2	2.83	0.62
10:G:50:ASP:HB2	27:X:40:ILE:HB	1.81	0.62
10:G:57:TRP:HE3	10:G:61:ILE:HG21	1.62	0.62
10:G:169:PHE:CD2	17:N:6:TYR:CB	2.82	0.62
13:J:15:LEU:HB3	13:J:165:TRP:CD1	2.34	0.62
18:O:116:LYS:HE3	22:S:169:THR:HG21	1.81	0.62
25:V:97:TYR:HE2	26:W:21:TYR:CD1	2.18	0.62
28:Y:11:ARG:HH22	28:Y:15:ARG:HG3	1.63	0.62
32:c:82:GLY:HA3	32:c:89:TYR:O	1.99	0.62
46:q:57:LYS:HD3	46:q:58:ASN:N	2.15	0.62
48:4:14:ASP:O	48:4:16:LYS:HE3	1.98	0.62
48:4:503:PRO:HB3	48:4:533:MET:HE1	1.80	0.62
48:4:692:LEU:HD21	48:4:733:VAL:HG12	1.81	0.62
49:S2:85:A:C2	49:S2:86:C:C5	2.87	0.62
49:S2:376:A:C6	49:S2:377:G:C8	2.87	0.62
49:S2:837:A:H2	49:S2:838:G:N7	1.89	0.62
49:S2:1063:C:C2'	49:S2:1838:U:O4	2.47	0.62
49:S2:1397:U:O4	66:SQ:12:VAL:HA	1.99	0.62
49:S2:1402:A:N7	49:S2:1441:U:O4	2.32	0.62
49:S2:1406:G:C4	49:S2:1407:U:H1'	2.34	0.62
49:S2:1574:C:O2	49:S2:1574:C:H2'	1.97	0.62
49:S2:1781:A:H2'	49:S2:1782:G:C8	2.34	0.62
81:Sf:138:ARG:HH11	81:Sf:138:ARG:HG3	1.63	0.62
1:5:99:A:C6	1:5:100:C:N3	2.68	0.62
1:5:499:G:N2	1:5:656:C:C2	2.67	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
1:5:1634:A:C4	1:5:1635:C:C5	2.87	0.62
1:5:1994:C:O2'	14:K:132:ILE:HG12	1.56	0.62
1:5:2099:G:H2'	1:5:2100:A:O4'	1.98	0.62
1:5:2423:A:C2	1:5:2424:G:C4	2.86	0.62
1:5:2590:G:N1	1:5:2754:G:N1	2.46	0.62
1:5:2645:G:N2	1:5:2646:C:C2	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2826:U:H1'	1:5:2827:G:H1	1.64	0.62
1:5:3631:U:N3	1:5:3632:C:C5	2.68	0.62
1:5:4702:G:C6	1:5:4703:U:C5	2.87	0.62
1:5:4997:G:C6	1:5:4998:G:N7	2.66	0.62
3:8:134:G:N2	3:8:135:C:C2	2.67	0.62
5:B:264:PHE:N	18:O:64:THR:O	2.32	0.62
7:D:35:ARG:HH11	7:D:35:ARG:HG2	1.63	0.62
8:E:280:HIS:CD2	35:f:38:GLU:HG3	2.32	0.62
14:K:159:ALA:O	14:K:163:PRO:HD3	1.98	0.62
48:4:739:ARG:N	48:4:824:PRO:CD	2.62	0.62
48:4:741:MET:HB2	48:4:819:ILE:HA	1.81	0.62
48:4:744:ILE:HG23	48:4:745:TYR:CD2	2.34	0.62
49:S2:148:U:O4	49:S2:170:A:N7	2.33	0.62
49:S2:220:U:N3	49:S2:221:A:N7	2.48	0.62
49:S2:460:A:N1	49:S2:461:U:O4	2.33	0.62
49:S2:848:U:N3	49:S2:849:A:N6	2.46	0.62
49:S2:957:A:H4'	49:S2:973:C:O2'	1.99	0.62
49:S2:1058:A:C2	49:S2:1059:G:C5	2.87	0.62
49:S2:1073:U:H2'	49:S2:1073:U:O2	1.98	0.62
49:S2:1102:G:H22	49:S2:1130:G:H22	1.46	0.62
1:5:60:G:C6	1:5:61:A:N7	2.68	0.62
1:5:99:A:N3	1:5:99:A:H2'	2.13	0.62
1:5:168:C:C2	1:5:268:G:C2	2.87	0.62
1:5:688:U:C4	1:5:689:U:C6	2.87	0.62
1:5:973:G:N2	1:5:1282:G:O2'	2.32	0.62
1:5:1266:G:H5'	1:5:1266:G:H8	1.64	0.62
1:5:1396:G:N7	30:a:112:LEU:HD22	2.14	0.62
1:5:1479:G:O2'	1:5:1480:C:C5'	2.47	0.62
1:5:1867:A:O2'	1:5:1868:A:O4'	2.15	0.62
1:5:2321:G:OP1	34:e:35:TRP:N	2.32	0.62
1:5:2450:G:C6	1:5:2451:A:C8	2.87	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
1:5:2856:C:C4	1:5:2857:A:N6	2.67	0.62
1:5:4081:G:C2	1:5:4082:G:C5	2.88	0.62
1:5:4518:A:C8	5:B:257:TRP:CZ3	2.88	0.62
1:5:4737:G:C5	1:5:4963:G:N2	2.67	0.62
2:7:9:C:C5	2:7:10:C:C5	2.87	0.62
2:7:42:A:N1	2:7:43:U:C6	2.67	0.62
7:D:177:THR:HB	7:D:190:PHE:CE2	2.35	0.62
14:K:77:ALA:HB3	14:K:80:LEU:CG	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:92:ARG:CA	14:K:95:GLN:OE1	2.32	0.62
33:d:118:GLN:HA	33:d:118:GLN:OE1	2.00	0.62
40:k:37:ARG:HG3	40:k:38:CYS:N	2.12	0.62
48:4:58:ASP:C	48:4:63:GLU:CD	2.66	0.62
48:4:531:ASP:HB2	48:4:534:VAL:CG1	2.29	0.62
48:4:616:ASP:OD1	48:4:621:GLU:HB2	1.98	0.62
49:S2:550:C:H2'	49:S2:551:U:C6	2.32	0.62
49:S2:751:G:C6	49:S2:792:C:C4	2.87	0.62
49:S2:950:C:C4	49:S2:951:C:C5	2.88	0.62
49:S2:1537:A:C5	49:S2:1538:C:C5	2.87	0.62
49:S2:1741:U:C4	49:S2:1742:C:C5	2.87	0.62
49:S2:1859:A:N1	49:S2:1860:A:C6	2.68	0.62
62:SM:16:THR:HA	62:SM:19:GLN:CG	2.30	0.62
1:5:479:G:C2	1:5:480:C:C6	2.87	0.62
1:5:964:A:C8	1:5:964:A:C4'	2.82	0.62
1:5:1480:C:O2	1:5:1484:G:O6	2.16	0.62
1:5:1599:A:H2'	1:5:1600:A:H5''	1.82	0.62
1:5:1929:A:N6	1:5:2054:U:N3	2.33	0.62
1:5:1986:U:O2	1:5:2007:G:O6	2.18	0.62
1:5:2639:U:H2'	1:5:2694:G:N1	2.12	0.62
1:5:3741:C:C2	1:5:3742:G:N7	2.68	0.62
1:5:4234:A:C2	1:5:4271:A:C8	2.88	0.62
1:5:4481:U:C2'	1:5:4482:U:H6	2.11	0.62
1:5:4687:A:N7	1:5:4698:C:C6	2.67	0.62
1:5:5050:C:N3	1:5:5051:C:C5	2.68	0.62
2:7:42:A:C1'	13:J:75:ARG:HH12	2.12	0.62
5:B:116:ARG:HB3	5:B:177:LYS:HA	1.82	0.62
6:C:111:TRP:HB2	6:C:112:HIS:CD2	2.31	0.62
14:K:61:LYS:CD	14:K:72:GLU:HA	2.30	0.62
33:d:28:ASN:OD1	33:d:28:ASN:C	2.43	0.62
46:q:97:GLU:OE2	46:q:206:ILE:CG2	2.47	0.62
46:q:156:SER:O	46:q:157:ASP:HB2	1.98	0.62
48:4:42:LYS:CD	48:4:79:TYR:OH	2.46	0.62
48:4:753:GLU:CG	48:4:779:THR:CG2	2.76	0.62
48:4:824:PRO:C	48:4:832:SER:HB2	2.24	0.62
49:S2:54:A:C4	49:S2:451:G:N2	2.67	0.62
49:S2:70:G:N1	49:S2:71:G:C4	2.68	0.62
49:S2:75:G:C6	56:SG:171:THR:HB	2.35	0.62
49:S2:104:A:N7	49:S2:105:U:C5	2.68	0.62
49:S2:165:G:N7	49:S2:166:A:N7	2.46	0.62
49:S2:311:C:C4	49:S2:312:G:C8	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:377:G:N1	49:S2:378:U:C4	2.68	0.62
49:S2:804:U:O2	49:S2:805:U:C6	2.52	0.62
49:S2:836:G:H2'	49:S2:837:A:C5'	2.30	0.62
49:S2:1133:A:H2'	49:S2:1133:A:N3	2.15	0.62
49:S2:1250:A:C2	49:S2:1339:U:H1'	2.33	0.62
49:S2:1552:G:C5	49:S2:1578:U:N3	2.68	0.62
49:S2:1562:C:C2	49:S2:1563:G:C8	2.86	0.62
49:S2:1608:U:C2	49:S2:1609:C:C6	2.87	0.62
49:S2:1709:G:N3	49:S2:1710:C:C6	2.67	0.62
49:S2:1746:U:O4	49:S2:1789:G:N2	2.33	0.62
74:SY:20:ARG:HB3	74:SY:76:TYR:HD1	1.63	0.62
1:5:62:A:H2'	1:5:63:G:C8	2.34	0.62
1:5:1066:G:C2	1:5:1067:G:C4	2.87	0.62
1:5:1299:G:C6	1:5:1300:G:N7	2.68	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
1:5:1760:G:C5	1:5:1761:G:C8	2.88	0.62
1:5:1928:C:C4	18:O:133:ARG:NH1	2.68	0.62
1:5:1996:C:H1'	46:q:41:GLN:HE21	1.65	0.62
1:5:2292:C:N3	1:5:2293:U:C5	2.68	0.62
1:5:2444:U:C5	1:5:2445:C:H5	2.17	0.62
1:5:2451:A:C6	1:5:2452:G:C4	2.87	0.62
1:5:2452:G:N1	1:5:2467:U:C5	2.67	0.62
1:5:2734:U:N3	1:5:2735:G:C8	2.68	0.62
1:5:2833:A:O2'	1:5:2834:C:O4'	2.16	0.62
1:5:2857:A:C6	1:5:2858:A:N6	2.68	0.62
1:5:3728:A:C8	1:5:3729:U:C1'	2.83	0.62
1:5:3793:U:C2	1:5:3794:C:C6	2.88	0.62
9:F:73:MET:CB	9:F:84:TYR:HE2	2.13	0.62
10:G:77:PRO:HA	10:G:237:TRP:CZ3	2.34	0.62
20:Q:32:TYR:OH	20:Q:123:PHE:HD2	1.82	0.62
34:e:44:ARG:O	34:e:47:ARG:O	2.17	0.62
46:q:127:ASN:CG	46:q:153:GLU:OE2	2.42	0.62
46:q:168:GLY:N	46:q:171:GLU:CD	2.57	0.62
48:4:13:MET:HE1	48:4:464:VAL:HA	1.81	0.62
48:4:275:LYS:HG3	48:4:276:SER:N	2.14	0.62
48:4:738:PRO:C	48:4:824:PRO:CD	2.72	0.62
48:4:762:VAL:HG11	48:4:800:LEU:CD1	2.27	0.62
48:4:762:VAL:CB	48:4:800:LEU:CD1	2.78	0.62
48:4:801:ARG:HD2	48:4:802:SER:HA	1.81	0.62
48:4:855:LEU:HD23	48:4:856:ASP:CA	2.27	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:529:A:C6	49:S2:530:U:C5	2.87	0.62
49:S2:551:U:O2'	80:Se:44:ASN:CG	2.43	0.62
49:S2:751:G:N1	49:S2:791:C:O2	2.32	0.62
49:S2:993:G:N3	49:S2:994:C:C6	2.67	0.62
49:S2:994:C:O2	49:S2:994:C:C2'	2.47	0.62
49:S2:1229:G:C4	49:S2:1230:C:C6	2.88	0.62
49:S2:1284:A:C6	62:SM:33:ARG:HD3	2.34	0.62
49:S2:1291:A:N6	81:Sf:140:TYR:CZ	2.68	0.62
49:S2:1293:A:O4'	81:Sf:150:PHE:CB	2.47	0.62
49:S2:1325:G:C2	49:S2:1327:G:C5	2.87	0.62
49:S2:1371:U:H2'	49:S2:1371:U:O2	1.98	0.62
49:S2:1527:C:N4	49:S2:1528:G:C5	2.68	0.62
49:S2:1552:G:H5'	49:S2:1557:C:H5	1.65	0.62
49:S2:1728:U:C4	49:S2:1729:U:C6	2.87	0.62
53:SD:150:MET:HB3	53:SD:152:PHE:HE1	1.64	0.62
1:5:323:C:N3	1:5:324:A:N7	2.47	0.62
1:5:1218:G:C6	1:5:1219:G:N9	2.68	0.62
1:5:1267:C:H5''	1:5:2110:C:O2'	2.00	0.62
1:5:1752:G:C4	1:5:1753:G:C8	2.87	0.62
1:5:1845:U:O2	1:5:1846:G:N7	2.32	0.62
1:5:1894:C:H2'	1:5:1895:G:O5'	1.99	0.62
1:5:1899:G:N2	1:5:1900:C:C6	2.68	0.62
1:5:2340:C:H2'	1:5:2340:C:O2	2.00	0.62
1:5:2480:G:N1	1:5:2481:G:C5	2.68	0.62
1:5:3590:G:C6	1:5:3591:C:C4	2.88	0.62
1:5:3606:U:C2	1:5:3607:U:C6	2.87	0.62
1:5:3703:G:C6	1:5:3704:U:C4	2.88	0.62
1:5:3709:U:H1'	49:S2:970:G:O6	2.00	0.62
1:5:4651:A:C6	1:5:4652:G:C8	2.88	0.62
1:5:4652:G:N3	1:5:4653:C:C6	2.68	0.62
1:5:4744:A:N1	1:5:4745:G:C5	2.67	0.62
1:5:4896:G:C2	1:5:4897:G:C5	2.87	0.62
3:8:133:G:C2	3:8:134:G:N7	2.67	0.62
10:G:81:ASN:HD21	10:G:238:GLY:N	1.98	0.62
35:f:36:ARG:HH11	35:f:36:ARG:HG2	1.64	0.62
48:4:636:ALA:HA	48:4:641:TRP:O	2.00	0.62
49:S2:37:C:N4	49:S2:38:A:C5	2.68	0.62
49:S2:185:G:C2	49:S2:186:C:C4	2.87	0.62
49:S2:426:A:H2'	49:S2:426:A:N3	2.15	0.62
49:S2:447:A:C5	49:S2:449:A:C8	2.88	0.62
49:S2:497:C:N3	49:S2:506:G:C2	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:794:A:N1	49:S2:795:A:C5	2.68	0.62
49:S2:1205:C:C2	49:S2:1206:G:N7	2.68	0.62
49:S2:1292:C:O4'	81:Sf:148:TYR:CB	2.48	0.62
50:SA:10:MET:HA	50:SA:55:TRP:CZ3	2.35	0.62
78:Sc:32:VAL:HG11	78:Sc:56:LEU:HD22	1.81	0.62
1:5:68:U:C5	1:5:69:A:C8	2.88	0.62
1:5:202:C:C2	1:5:214:G:C2	2.87	0.62
1:5:692:A:C2	1:5:693:C:C4	2.87	0.62
1:5:1265:G:C6	1:5:1266:G:C6	2.87	0.62
1:5:1302:U:N3	1:5:1303:A:C8	2.68	0.62
1:5:1550:G:C2	1:5:1579:C:C2	2.88	0.62
1:5:1676:C:C2'	1:5:3914:U:O4	2.48	0.62
1:5:1878:G:N3	1:5:1879:C:C6	2.68	0.62
1:5:1973:G:N2	1:5:1993:C:C2	2.61	0.62
1:5:2036:C:H2'	1:5:2037:C:C6	2.35	0.62
1:5:2409:U:C4	1:5:2783:A:C2	2.88	0.62
1:5:2506:G:H2'	1:5:2506:G:N3	2.15	0.62
1:5:2533:C:N3	1:5:2534:C:N4	2.48	0.62
1:5:2606:G:N1	1:5:2607:C:C4	2.67	0.62
1:5:2712:G:N2	1:5:2713:C:C2	2.67	0.62
1:5:2744:A:N3	1:5:2745:A:C5	2.68	0.62
1:5:2802:C:O2	36:g:13:TYR:OH	2.18	0.62
1:5:2856:C:O2	1:5:2856:C:C2'	2.47	0.62
1:5:3590:G:C4	1:5:3591:C:C6	2.88	0.62
1:5:3859:G:H4'	19:P:139:TYR:CZ	2.35	0.62
1:5:4093:G:C3'	1:5:4094:G:H5'	2.30	0.62
1:5:4233:A:C8	1:5:4235:G:C8	2.87	0.62
1:5:4273:A:H2'	1:5:4274:A:C1'	2.29	0.62
1:5:4468:U:O2	1:5:4708:A:C8	2.53	0.62
1:5:4498:U:N3	1:5:4500:U:P	2.73	0.62
1:5:4737:G:C6	1:5:4738:C:N4	2.68	0.62
2:7:8:G:C5	2:7:9:C:C5	2.88	0.62
3:8:138:C:C2	3:8:139:G:C8	2.88	0.62
9:F:85:VAL:HG13	22:S:62:VAL:HA	1.82	0.62
36:g:11:LEU:HB3	36:g:18:ASN:ND2	2.13	0.62
48:4:72:SER:CA	48:4:104:ASP:CB	2.77	0.62
48:4:480:VAL:O	48:4:481:LYS:CB	2.35	0.62
48:4:562:GLU:HB3	48:4:570:ILE:CG1	2.29	0.62
49:S2:74:G:H5'	49:S2:75:G:OP2	1.99	0.62
49:S2:118:C:C1'	49:S2:445:A:C2	2.83	0.62
49:S2:376:A:C6	49:S2:377:G:N7	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:426:A:C6	49:S2:427:U:C5	2.88	0.62
49:S2:533:A:C5	49:S2:534:G:C8	2.88	0.62
49:S2:1310:U:H6	81:Sf:143:LYS:CE	2.12	0.62
56:SG:198:ARG:NH1	56:SG:202:ASN:OD1	2.32	0.62
72:SW:101:PHE:HB2	72:SW:129:PHE:CE1	2.34	0.62
74:SY:76:TYR:HE2	74:SY:86:GLU:OE2	1.82	0.62
1:5:33:A:C6	1:5:50:C:C2	2.88	0.62
1:5:55:G:C2	1:5:56:A:C8	2.88	0.62
1:5:55:G:N1	1:5:56:A:N7	2.47	0.62
1:5:270:U:C2	1:5:271:C:C6	2.88	0.62
1:5:272:U:O2	1:5:273:U:C6	2.52	0.62
1:5:330:G:N1	1:5:331:G:N7	2.48	0.62
1:5:751:G:N3	1:5:752:G:C8	2.67	0.62
1:5:1214:C:N4	9:F:58:HIS:CE1	2.68	0.62
1:5:1371:A:H61	3:8:28:C:C2'	2.13	0.62
1:5:1635:C:H2'	1:5:1636:U:C5'	2.26	0.62
1:5:1672:U:C2	1:5:1673:U:C6	2.77	0.62
1:5:1781:U:C2	1:5:1782:U:C5	2.88	0.62
1:5:1785:C:H1'	12:I:94:PHE:CE2	2.34	0.62
1:5:1937:C:H3'	1:5:1938:C:H2'	1.80	0.62
1:5:2367:A:N7	1:5:2798:A:C4	2.68	0.62
1:5:2441:C:H2'	1:5:2442:G:H8	1.64	0.62
1:5:3656:A:O4'	1:5:3747:A:H2	1.83	0.62
1:5:3672:G:N7	1:5:3674:G:C1'	2.63	0.62
1:5:3772:U:C2	1:5:3773:U:C6	2.88	0.62
1:5:3805:U:N3	1:5:3806:G:N7	2.47	0.62
1:5:4304:A:C2	30:a:43:ILE:HG23	2.35	0.62
1:5:4464:A:H5'	1:5:4464:A:N3	2.15	0.62
1:5:4653:C:C2	1:5:4654:C:H5	2.13	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
1:5:4935:C:N4	8:E:179:ARG:CG	2.62	0.62
1:5:5051:C:N3	1:5:5052:C:C5	2.68	0.62
3:8:13:G:C4	3:8:14:U:C5	2.88	0.62
3:8:64:U:C2'	3:8:65:A:C8	2.83	0.62
5:B:10:ARG:NH2	5:B:10:ARG:HB2	2.15	0.62
6:C:22:VAL:HG11	6:C:257:PHE:HD2	1.64	0.62
38:i:45:ARG:NH2	38:i:50:PHE:CE1	2.67	0.62
42:m:96:CYS:SG	84:m:201:ZN:ZN	1.89	0.62
46:q:97:GLU:HB3	46:q:206:ILE:HG12	1.37	0.62
46:q:133:GLU:C	46:q:152:ILE:HD11	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:205:ILE:HG13	48:4:211:THR:CB	2.30	0.62
48:4:236:PHE:HZ	48:4:273:PHE:CZ	2.11	0.62
48:4:552:LEU:HA	48:4:555:GLU:OE1	1.99	0.62
48:4:744:ILE:HG23	48:4:815:ASP:H	1.64	0.62
48:4:825:PHE:HE2	48:4:849:PRO:HD2	0.65	0.62
49:S2:1258:A:N6	49:S2:1659:U:H3	1.98	0.62
49:S2:1433:C:OP2	49:S2:1433:C:O3'	2.18	0.62
49:S2:1552:G:H5'	49:S2:1557:C:C5	2.35	0.62
49:S2:1573:G:C2	49:S2:1574:C:H1'	2.34	0.62
49:S2:1730:U:C4	49:S2:1731:A:N7	2.67	0.62
74:SY:88:LYS:HE3	74:SY:97:TYR:OH	2.00	0.62
1:5:197:A:N3	1:5:222:C:O2'	2.26	0.61
1:5:288:G:H2'	1:5:289:C:H6	1.64	0.61
1:5:1247:U:C2	1:5:1248:C:C5	2.87	0.61
1:5:1366:G:N7	1:5:1367:C:O3'	2.33	0.61
1:5:1673:U:C4	1:5:1674:C:N4	2.68	0.61
1:5:1805:A:N7	31:b:28:ARG:HB3	2.15	0.61
1:5:1881:C:O4'	1:5:2281:U:C6	2.53	0.61
1:5:2342:G:C2	1:5:2344:U:C6	2.88	0.61
1:5:2363:A:C2	1:5:2364:G:H1'	2.34	0.61
1:5:2368:A:C6	1:5:2788:U:O4	2.53	0.61
1:5:2773:G:N2	1:5:2774:C:C2	2.68	0.61
1:5:3633:C:C2	1:5:3634:G:C8	2.88	0.61
1:5:3656:A:H4'	1:5:3747:A:C2	2.35	0.61
1:5:4085:A:N6	10:G:62:ARG:HH22	1.98	0.61
1:5:4269:G:N2	1:5:4277:G:H22	1.95	0.61
1:5:4341:C:N4	1:5:4342:C:C5	2.68	0.61
1:5:4369:A:N3	1:5:4370:G:C8	2.67	0.61
1:5:4426:C:N4	1:5:4427:G:C5	2.68	0.61
1:5:4481:U:O2	1:5:4482:U:C6	2.52	0.61
1:5:4734:A:C6	1:5:4735:G:C5	2.88	0.61
3:8:3:A:O3'	19:P:61:ARG:HD3	2.00	0.61
7:D:155:THR:OG1	7:D:179:ARG:NH1	2.33	0.61
46:q:168:GLY:N	46:q:171:GLU:CG	2.61	0.61
48:4:56:PHE:HE1	48:4:455:GLY:CA	1.83	0.61
48:4:200:MET:HG2	48:4:203:ILE:HG21	1.81	0.61
48:4:340:MET:HE2	48:4:340:MET:CA	2.21	0.61
49:S2:413:G:H2'	49:S2:414:A:O5'	2.00	0.61
49:S2:457:C:C4	49:S2:458:A:C8	2.88	0.61
49:S2:608:C:N3	49:S2:609:U:C6	2.68	0.61
49:S2:695:C:C4	49:S2:696:G:N7	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:832:G:C6	49:S2:833:C:C5	2.88	0.61
49:S2:909:G:N1	49:S2:910:G:C5	2.67	0.61
49:S2:961:G:H2'	49:S2:961:G:N3	2.15	0.61
49:S2:1249:C:H42	49:S2:1250:A:N6	1.97	0.61
82:Sg:125:ARG:HD3	82:Sg:150:TRP:CE2	2.35	0.61
1:5:114:G:C2'	1:5:115:C:H5'	2.29	0.61
1:5:449:C:C2	1:5:450:G:C8	2.88	0.61
1:5:1267:C:C5'	1:5:2110:C:O2'	2.48	0.61
1:5:1296:G:O2'	1:5:1297:U:OP1	2.14	0.61
1:5:1304:C:HO2'	3:8:8:U:HO2'	1.48	0.61
1:5:1669:A:H4'	1:5:1685:G:H21	1.66	0.61
1:5:1752:G:C6	1:5:1753:G:C5	2.88	0.61
1:5:1797:G:C2	1:5:1798:G:N7	2.67	0.61
1:5:2319:C:O2	1:5:2319:C:H2'	1.99	0.61
1:5:3648:A:C5	1:5:3785:A:N6	2.67	0.61
1:5:3694:U:C2	1:5:3695:U:C6	2.88	0.61
1:5:3847:C:N3	1:5:3848:U:C6	2.68	0.61
1:5:4196:G:N3	1:5:4396:A:H1'	2.15	0.61
1:5:4229:U:O4	1:5:4230:C:C4	2.53	0.61
1:5:4281:A:C6	1:5:4283:G:C8	2.87	0.61
1:5:4342:C:N3	1:5:4343:U:C5	2.68	0.61
1:5:4934:A:N1	1:5:4935:C:C5	2.68	0.61
3:8:10:G:N1	3:8:11:C:N1	2.48	0.61
3:8:131:G:C6	3:8:132:G:C5	2.89	0.61
14:K:123:ARG:CB	14:K:129:ILE:HD11	0.62	0.61
17:N:150:TRP:HE3	17:N:151:ILE:N	1.99	0.61
46:q:35:VAL:CG2	46:q:40:MET:SD	2.86	0.61
46:q:61:MET:SD	46:q:82:ILE:HD12	2.40	0.61
46:q:119:CYS:O	46:q:120:GLU:C	2.42	0.61
48:4:58:ASP:CG	48:4:69:THR:CG2	2.72	0.61
48:4:60:ARG:HD2	48:4:61:LYS:N	2.15	0.61
48:4:710:HIS:CD2	48:4:712:ASP:H	2.17	0.61
48:4:756:VAL:HG23	48:4:782:PHE:CD1	2.35	0.61
48:4:845:LYS:CE	48:4:846:GLU:CG	2.74	0.61
49:S2:52:G:C4	49:S2:53:C:C6	2.88	0.61
49:S2:185:G:C2	49:S2:186:C:C6	2.88	0.61
49:S2:221:A:C2	49:S2:222:U:C6	2.89	0.61
49:S2:533:A:C6	49:S2:534:G:N7	2.68	0.61
49:S2:1109:C:O2	49:S2:1110:G:C8	2.52	0.61
49:S2:1293:A:C4	81:Sf:152:LYS:N	2.68	0.61
49:S2:1303:C:O2	49:S2:1303:C:O4'	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1451:G:O2'	49:S2:1474:A:N6	2.32	0.61
49:S2:1824:A:H2	49:S2:1825:A:N7	1.96	0.61
52:SC:253:PRO:O	52:SC:255:LEU:N	2.33	0.61
54:SE:29:PRO:HG2	54:SE:46:ILE:HD11	1.81	0.61
76:Sa:28:ARG:HG3	76:Sa:28:ARG:HH11	1.65	0.61
1:5:86:U:N3	1:5:97:G:N2	2.48	0.61
1:5:130:C:C2	1:5:139:G:C2	2.88	0.61
1:5:295:A:OP2	44:o:39:ARG:NH1	2.33	0.61
1:5:370:U:C6	1:5:1637:A:N1	2.69	0.61
1:5:383:A:O2'	1:5:384:A:O5'	2.18	0.61
1:5:472:C:H2'	1:5:473:C:O4'	2.00	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
1:5:1251:C:C2	1:5:1252:C:C6	2.89	0.61
1:5:1264:C:C4	1:5:1265:G:N7	2.69	0.61
1:5:1268:G:C4	1:5:2111:G:C2	2.88	0.61
1:5:1358:G:O5'	6:C:114:ARG:NH2	2.33	0.61
1:5:1668:A:C8	1:5:1881:C:N4	2.68	0.61
1:5:1885:G:C2	1:5:1895:G:N3	2.68	0.61
1:5:1899:G:C8	1:5:2278:G:C6	2.87	0.61
1:5:1969:G:N1	1:5:2018:C:N4	2.48	0.61
1:5:2479:G:C5	1:5:2480:G:N7	2.68	0.61
1:5:2743:A:H2'	1:5:2744:A:H8	1.62	0.61
1:5:2784:C:H2'	1:5:2785:C:H6	1.65	0.61
1:5:3840:U:O2	1:5:3840:U:H2'	1.99	0.61
1:5:4277:G:N1	1:5:4278:C:C4	2.69	0.61
1:5:4479:A:N7	1:5:4480:A:C8	2.68	0.61
1:5:4978:G:O2'	1:5:4979:A:H3'	2.00	0.61
1:5:5003:U:O2'	1:5:5004:C:O4'	2.18	0.61
3:8:63:U:O2	3:8:63:U:H2'	1.99	0.61
8:E:111:TYR:OH	47:r:119:ARG:HG2	2.00	0.61
18:O:128:ARG:HE	22:S:162:GLN:HE22	1.48	0.61
44:o:36:GLN:HA	44:o:36:GLN:HE21	1.64	0.61
48:4:526:ARG:O	48:4:529:LYS:HG3	2.01	0.61
48:4:526:ARG:NH2	49:S2:480:G:OP1	2.33	0.61
48:4:650:TRP:CZ3	48:4:679:VAL:HB	2.34	0.61
48:4:766:LYS:O	48:4:767:ARG:HB2	1.99	0.61
49:S2:301:A:N3	58:SI:73:THR:HG21	2.15	0.61
49:S2:452:G:C2'	49:S2:453:C:O5'	2.48	0.61
49:S2:474:G:N1	49:S2:475:C:C5	2.68	0.61
49:S2:1278:A:C2	49:S2:1320:G:C2	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1284:A:H2	62:SM:34:GLY:HA2	1.66	0.61
49:S2:1409:A:H2	49:S2:1438:A:N1	1.98	0.61
53:SD:201:LYS:O	53:SD:203:PRO:HD2	1.99	0.61
57:SH:110:THR:O	57:SH:110:THR:HG23	2.00	0.61
67:SR:83:ASN:C	67:SR:83:ASN:ND2	2.55	0.61
1:5:164:G:C6	1:5:165:A:C5	2.89	0.61
1:5:209:U:C5	1:5:211:G:C5	2.89	0.61
1:5:422:C:N3	1:5:423:G:N7	2.48	0.61
1:5:931:C:O2'	1:5:932:A:O4'	2.12	0.61
1:5:950:G:C2	1:5:951:G:N7	2.68	0.61
1:5:1430:C:N3	1:5:1431:C:C5	2.68	0.61
1:5:1634:A:C5	1:5:1635:C:C5	2.88	0.61
1:5:1665:C:H2'	1:5:1666:C:O5'	2.00	0.61
1:5:1983:A:N3	1:5:2010:A:O3'	2.34	0.61
1:5:2261:G:O2'	1:5:2262:G:O5'	2.18	0.61
1:5:2325:C:C2	1:5:2326:G:H8	2.19	0.61
1:5:2394:G:N2	1:5:2820:C:C5	2.69	0.61
1:5:2409:U:O4'	41:l:44:TRP:NE1	2.33	0.61
1:5:2478:C:N3	1:5:2479:G:C5	2.69	0.61
1:5:2602:G:H1'	1:5:2742:G:C4	2.34	0.61
1:5:2647:A:H2'	1:5:2648:G:H5'	1.82	0.61
1:5:3674:G:N1	1:5:3675:G:N7	2.49	0.61
1:5:3717:A:C6	1:5:3736:A:N1	2.68	0.61
1:5:3905:A:N1	1:5:4449:A:C6	2.67	0.61
1:5:4113:U:C2'	1:5:4114:C:O4'	2.42	0.61
1:5:4166:G:C2	1:5:4167:G:N7	2.69	0.61
1:5:4219:A:O2'	1:5:4220:A:O5'	2.19	0.61
1:5:4221:C:N3	12:I:116:ARG:HD3	2.15	0.61
1:5:4462:C:C2	1:5:4515:G:N2	2.68	0.61
1:5:4618:G:C2	1:5:4619:U:C5	2.88	0.61
2:7:51:G:C6	2:7:52:C:N4	2.68	0.61
2:7:55:A:H2'	2:7:56:G:O5'	1.99	0.61
3:8:30:U:C2	3:8:31:G:C8	2.89	0.61
6:C:94:ASN:HA	6:C:100:ARG:O	2.00	0.61
42:m:96:CYS:HG	84:m:201:ZN:ZN	1.11	0.61
46:q:133:GLU:HA	46:q:152:ILE:HD11	1.82	0.61
48:4:333:LYS:HB2	48:4:334:PRO:HD3	1.82	0.61
48:4:449:ARG:HB3	48:4:473:VAL:HG12	1.81	0.61
48:4:588:ASN:OD1	48:4:588:ASN:C	2.44	0.61
48:4:617:ILE:CG1	48:4:622:VAL:HG23	2.29	0.61
48:4:762:VAL:CG1	48:4:800:LEU:HD13	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:590:A:O2'	49:S2:591:U:O5'	2.18	0.61
49:S2:1250:A:H2	49:S2:1339:U:O2'	1.76	0.61
49:S2:1310:U:OP2	62:SM:36:ARG:NH1	2.29	0.61
49:S2:1316:C:C2	49:S2:1317:C:H5	2.06	0.61
49:S2:1542:C:H2'	49:S2:1543:U:C6	2.35	0.61
49:S2:1611:G:C1'	68:SS:86:ARG:HH12	2.13	0.61
67:SR:53:TYR:O	67:SR:54:VAL:C	2.43	0.61
1:5:181:C:N3	1:5:256:G:C2	2.68	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
1:5:348:G:N1	1:5:350:C:C4	2.68	0.61
1:5:1279:A:C3'	1:5:1280:C:C5	2.83	0.61
1:5:1340:C:C4	1:5:1341:U:C5	2.89	0.61
1:5:1394:G:H5''	15:L:186:ARG:HH12	1.65	0.61
1:5:1634:A:C2	1:5:1635:C:C5	2.89	0.61
1:5:1725:U:OP1	1:5:1725:U:H4'	1.99	0.61
1:5:1899:G:N2	1:5:1900:C:N3	2.48	0.61
1:5:1916:G:O6	35:f:18:LEU:HB2	2.01	0.61
1:5:1936:C:C4	1:5:1937:C:C5	2.88	0.61
1:5:2295:C:O2	1:5:2296:G:C8	2.53	0.61
1:5:2382:A:H62	1:5:2830:G:C1'	2.12	0.61
1:5:3907:G:C1'	1:5:4449:A:N9	2.64	0.61
1:5:4138:C:C2	1:5:4147:G:C2	2.89	0.61
1:5:4240:G:C2	1:5:4241:C:N1	2.68	0.61
1:5:4277:G:C4	1:5:4278:C:C6	2.89	0.61
1:5:4933:C:N4	1:5:4934:A:N7	2.48	0.61
2:7:6:C:C4	2:7:7:G:C8	2.89	0.61
2:7:93:G:C5	2:7:94:C:C5	2.88	0.61
27:X:145:ASP:HB3	27:X:148:ASP:OD1	1.99	0.61
29:Z:36:ARG:HG3	29:Z:36:ARG:HH11	1.65	0.61
30:a:127:LYS:HG2	30:a:128:PHE:HE2	1.65	0.61
46:q:46:SER:O	46:q:103:ARG:HD2	2.01	0.61
46:q:135:THR:CG2	46:q:152:ILE:HG21	2.30	0.61
47:r:7:TRP:CD1	47:r:38:PHE:HD1	2.18	0.61
48:4:58:ASP:HA	48:4:63:GLU:OE1	2.00	0.61
48:4:369:CYS:CB	48:4:386:LYS:HG3	2.29	0.61
48:4:531:ASP:HB2	48:4:534:VAL:HG11	1.83	0.61
48:4:667:LYS:NZ	48:4:667:LYS:CB	2.30	0.61
49:S2:340:C:N4	49:S2:341:C:N4	2.48	0.61
49:S2:477:G:C2	49:S2:478:G:N7	2.69	0.61
49:S2:480:G:H2'	49:S2:481:C:O4'	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1022:U:H1'	63:SN:128:TYR:CD2	2.35	0.61
49:S2:1094:C:C2	49:S2:1095:U:C6	2.88	0.61
49:S2:1476:A:N3	49:S2:1476:A:H5'	2.16	0.61
49:S2:1612:G:C2	49:S2:1628:C:C2	2.87	0.61
53:SD:150:MET:HB3	53:SD:152:PHE:CE1	2.36	0.61
1:5:62:A:C2	1:5:77:U:O2	2.52	0.61
1:5:280:G:C5'	17:N:120:TRP:HE3	2.13	0.61
1:5:1280:C:C2	1:5:1282:G:C8	2.89	0.61
1:5:1689:G:H2'	1:5:1690:C:O4'	1.99	0.61
1:5:1852:U:OP1	30:a:23:GLY:N	2.30	0.61
1:5:2046:G:O2'	1:5:2047:A:OP2	2.11	0.61
1:5:2106:G:N2	1:5:2107:C:H5	1.98	0.61
1:5:2301:G:N3	1:5:2302:C:C6	2.69	0.61
1:5:2400:G:C2	1:5:2401:A:C8	2.88	0.61
1:5:2723:U:H2'	1:5:2724:G:C8	2.36	0.61
1:5:3643:A:C2	39:j:3:LYS:CE	2.84	0.61
1:5:3909:C:C4	1:5:3910:C:H5	2.19	0.61
1:5:4093:G:C5	1:5:4094:G:C8	2.88	0.61
1:5:4477:A:C2	1:5:4604:G:O4'	2.54	0.61
1:5:5020:G:C6	1:5:5021:C:C4	2.88	0.61
3:8:130:C:C4	3:8:131:G:C8	2.89	0.61
6:C:76:ILE:HG22	6:C:77:PRO:HD2	1.83	0.61
6:C:222:ARG:HH21	28:Y:3:PHE:HE2	1.46	0.61
25:V:97:TYR:CE2	26:W:21:TYR:CD1	2.89	0.61
46:q:100:ASP:OD2	46:q:189:ILE:HD12	2.00	0.61
47:r:16:PHE:N	47:r:16:PHE:CD1	2.67	0.61
48:4:308:LYS:HB3	48:4:311:GLU:CG	2.30	0.61
48:4:753:GLU:CG	48:4:779:THR:HG22	2.30	0.61
49:S2:396:U:C2'	49:S2:397:G:O5'	2.49	0.61
49:S2:431:G:C6	49:S2:432:G:N7	2.68	0.61
49:S2:536:A:N6	49:S2:537:C:C5	2.69	0.61
49:S2:964:A:HO2'	49:S2:965:U:C5'	2.14	0.61
49:S2:992:A:C6	49:S2:993:G:N7	2.69	0.61
49:S2:992:A:H2'	49:S2:992:A:N3	2.16	0.61
49:S2:1095:U:O4	49:S2:1149:A:C2	2.53	0.61
49:S2:1102:G:N2	49:S2:1130:G:H22	1.99	0.61
49:S2:1132:C:N4	49:S2:1133:A:C8	2.67	0.61
49:S2:1290:G:O2'	81:Sf:145:CYS:SG	2.58	0.61
49:S2:1420:G:HO2'	69:ST:4:VAL:CA	2.13	0.61
49:S2:1596:U:N3	49:S2:1597:C:C5	2.69	0.61
49:S2:1730:U:N3	49:S2:1731:A:C8	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SC:134:ASN:HD22	52:SC:134:ASN:C	2.08	0.61
59:SJ:69:ARG:O	59:SJ:71:LEU:N	2.33	0.61
62:SM:101:ARG:C	62:SM:102:LYS:HG2	2.25	0.61
66:SQ:55:VAL:HA	66:SQ:63:PHE:CE1	2.35	0.61
1:5:57:G:N2	1:5:58:G:C2	2.69	0.61
1:5:90:G:N2	1:5:95:G:C5	2.69	0.61
1:5:99:A:H4'	17:N:181:HIS:CE1	2.36	0.61
1:5:112:C:C5	1:5:157:U:C4	2.88	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
1:5:668: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
1:5:1252:C:C2	1:5:1259:G:C2	2.89	0.61
1:5:1266:G:H22	1:5:2111:G:N2	1.98	0.61
1:5:1361:G:C6	1:5:1362:G:N7	2.69	0.61
1:5:2110:C:N3	1:5:2121:C:N4	2.48	0.61
1:5:2326:G:N3	1:5:2327:G:C8	2.67	0.61
1:5:2451:A:N6	1:5:2452:G:C5	2.69	0.61
1:5:2584:G:C6	1:5:2585:C:C5	2.89	0.61
1:5:3636:C:C4	1:5:3637:U:C5	2.89	0.61
1:5:3739:C:C2	1:5:3740:G:C8	2.89	0.61
1:5:4085:A:N7	10:G:56:LYS:HA	2.14	0.61
1:5:4187:G:H2'	1:5:4188:U:O4'	2.00	0.61
1:5:4510:A:N6	1:5:4592:C:C2'	2.64	0.61
1:5:4724:A:C6	1:5:4725:C:C4	2.88	0.61
1:5:4737:G:C4	1:5:4738:C:C5	2.88	0.61
1:5:4745:G:C2'	1:5:4746:C:C5	2.83	0.61
2:7:58:A:N6	2:7:59:G:C6	2.69	0.61
9:F:100:ILE:O	9:F:100:ILE:HG23	2.00	0.61
23:T:17:ARG:HH12	23:T:45:MET:HE2	1.66	0.61
35:f:76:ARG:NE	35:f:85:ARG:NH2	2.48	0.61
46:q:26:LYS:HE2	46:q:94:ASP:OD1	2.01	0.61
46:q:28:PHE:HD1	46:q:192:VAL:HG22	1.64	0.61
46:q:57:LYS:HD3	46:q:58:ASN:HB3	1.81	0.61
46:q:123:VAL:HG11	46:q:178:LEU:HD13	1.83	0.61
49:S2:99:A:N1	49:S2:100:U:C5	2.69	0.61
49:S2:429:C:H2'	49:S2:429:C:O2	2.00	0.61
49:S2:570:C:C2	49:S2:571:U:C6	2.89	0.61
49:S2:891:G:C6	49:S2:892:U:C5	2.89	0.61
49:S2:1111:U:C2	49:S2:1112:U:C6	2.82	0.61
49:S2:1317:C:C2	49:S2:1318:G:H8	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1526:G:N3	49:S2:1527:C:C6	2.69	0.61
49:S2:1568:C:C2'	49:S2:1569:A:C8	2.84	0.61
49:S2:1739:C:C2	49:S2:1740:C:C6	2.89	0.61
1:5:208:A:C1'	1:5:232:G:C2	2.82	0.61
1:5:209:U:C4	1:5:211:G:N9	2.68	0.61
1:5:1277:G:N2	1:5:1278:C:C2	2.69	0.61
1:5:1277:G:N3	1:5:1278:C:C6	2.69	0.61
1:5:1354:A:C5	1:5:1503:A:C2	2.88	0.61
1:5:1394:G:H2'	1:5:1395:U:C6	2.36	0.61
1:5:1437:C:C2	1:5:2098:G:N7	2.68	0.61
1:5:1613:A:H4'	4:A:186:TYR:CD2	2.36	0.61
1:5:1670:G:OP2	31:b:11:ASN:ND2	2.20	0.61
1:5:1693:U:C4	1:5:1694:C:C5	2.89	0.61
1:5:2371:U:C2'	1:5:2372:U:H5'	2.30	0.61
1:5:2428:A:C8	1:5:2789:A:H2	2.17	0.61
1:5:2532:C:C2	1:5:2533:C:H5	2.13	0.61
1:5:2566:G:C2	1:5:2567:G:N7	2.69	0.61
1:5:4243:C:H1'	1:5:4268:A:C2	2.36	0.61
1:5:4744:A:N3	1:5:4745:G:C8	2.68	0.61
1:5:4887:C:O2'	1:5:4888:U:H5'	2.00	0.61
1:5:4937:C:OP1	8:E:179:ARG:NE	2.31	0.61
2:7:42:A:N6	2:7:43:U:C4	2.69	0.61
2:7:56:G:H2'	2:7:57:C:C6	2.36	0.61
3:8:10:G:C5	3:8:11:C:C5	2.87	0.61
9:F:219:ARG:O	9:F:248:ARG:NH2	2.34	0.61
13:J:107:PHE:CE1	13:J:130:PHE:CB	2.82	0.61
14:K:111:ASN:O	14:K:115:GLN:HG3	2.01	0.61
16:M:3:PHE:CB	16:M:6:PHE:HZ	2.13	0.61
48:4:394:LEU:N	48:4:487:THR:HG22	2.14	0.61
48:4:587:SER:CB	48:4:735:THR:HG23	2.30	0.61
49:S2:28:U:O2	49:S2:28:U:H2'	2.01	0.61
49:S2:70:G:C5	49:S2:71:G:C5	2.88	0.61
49:S2:217:A:N3	49:S2:309:G:O6	2.34	0.61
49:S2:381:C:C2'	49:S2:382:C:C5	2.84	0.61
49:S2:558:G:H2'	49:S2:559:G:C8	2.36	0.61
49:S2:839:C:C6	49:S2:841:G:C5	2.89	0.61
49:S2:957:A:N1	49:S2:967:C:C2	2.69	0.61
49:S2:1207:G:O2'	49:S2:1835:A:O2'	1.97	0.61
49:S2:1217:A:H2'	49:S2:1218:C:C6	2.36	0.61
49:S2:1314:U:C2	49:S2:1315:U:C1'	2.84	0.61
49:S2:1315:U:C4	49:S2:1316:C:N1	2.67	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1317:C:O2	49:S2:1318:G:H8	1.83	0.61
49:S2:1539:U:C4	49:S2:1540:G:N7	2.66	0.61
54:SE:98:ASN:C	54:SE:99:PHE:HD1	2.09	0.61
1:5:21:G:C6	3:8:36:G:C2	2.88	0.61
1:5:152:U:C2	1:5:153:G:C8	2.88	0.61
1:5:291:U:O2	1:5:293:G:H3'	2.01	0.61
1:5:480:C:OP1	47:r:66:ARG:O	2.18	0.61
1:5:495:C:N3	1:5:496:G:N7	2.48	0.61
1:5:719:C:N3	1:5:720:G:N7	2.49	0.61
1:5:957:G:P	1:5:1284:G:N3	2.74	0.61
1:5:1067:G:H2'	1:5:1068:G:O4'	2.01	0.61
1:5:1089:G:H5'	23:T:140:PHE:HE1	1.66	0.61
1:5:1268:G:N1	1:5:2111:G:N2	2.49	0.61
1:5:1367:C:N4	1:5:1369:C:OP2	2.34	0.61
1:5:1380:G:C4	1:5:1382:G:C6	2.89	0.61
1:5:1552:G:H2'	1:5:1574:G:H22	1.64	0.61
1:5:2079:G:N2	1:5:2080:U:C6	2.67	0.61
1:5:2104:G:C6	1:5:2105:A:N7	2.69	0.61
1:5:2282:A:H5''	30:a:21:ARG:HD3	1.80	0.61
1:5:3648:A:C8	1:5:3785:A:N6	2.69	0.61
1:5:3698:G:N2	1:5:3699:C:C2	2.69	0.61
1:5:4176:C:C2	1:5:4177:C:C5	2.88	0.61
1:5:4287:G:O2'	1:5:4288:C:C5'	2.48	0.61
1:5:4539:U:C2	1:5:4540:C:C5	2.89	0.61
1:5:4977:A:O2'	1:5:4978:G:H5'	2.01	0.61
2:7:110:G:C2	2:7:111:C:C5	2.89	0.61
3:8:111:U:H3'	3:8:111:U:O2	2.00	0.61
14:K:114:ARG:HE	14:K:130:LYS:HE2	1.65	0.61
17:N:65:ARG:HG2	17:N:129:PHE:CE2	2.36	0.61
26:W:50:ASN:CB	26:W:55:TYR:CE2	2.81	0.61
48:4:24:VAL:HG23	48:4:32:LYS:CD	2.29	0.61
48:4:449:ARG:CZ	48:4:460:PRO:HB3	2.31	0.61
48:4:650:TRP:HZ2	48:4:672:LEU:HD11	1.66	0.61
48:4:752:PRO:HB3	48:4:780:PRO:HA	1.83	0.61
48:4:769:HIS:N	48:4:786:ALA:HB1	2.14	0.61
49:S2:315:C:O2	49:S2:316:G:C8	2.54	0.61
49:S2:339:A:C2'	49:S2:340:C:H6	2.10	0.61
49:S2:474:G:N3	49:S2:475:C:C6	2.69	0.61
49:S2:961:G:C6	49:S2:962:A:C5	2.88	0.61
49:S2:1215:C:C5	49:S2:1645:C:H2'	2.36	0.61
49:S2:1228:A:H2'	49:S2:1229:G:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1249:C:N4	49:S2:1250:A:N6	2.48	0.61
49:S2:1365:G:C6	49:S2:1375:G:N2	2.68	0.61
49:S2:1526:G:N2	49:S2:1527:C:C2	2.69	0.61
49:S2:1771:G:C2	49:S2:1772:C:C6	2.88	0.61
1:5:69:A:O5'	1:5:100:C:O2'	2.19	0.61
1:5:269:G:H2'	1:5:269:G:N3	2.16	0.61
1:5:1217:G:N3	1:5:1218:G:N7	2.48	0.61
1:5:1268:G:OP2	1:5:2110:C:H2'	2.00	0.61
1:5:1277:G:N1	1:5:1278:C:C4	2.69	0.61
1:5:1439:C:O2	9:F:36:ARG:NH1	2.34	0.61
1:5:1487:G:N2	1:5:1488:G:H1'	2.16	0.61
1:5:1566:C:O2'	1:5:1567:U:C5'	2.49	0.61
1:5:1816:C:O2	1:5:1816:C:H2'	2.00	0.61
1:5:1965:G:C5	1:5:1966:C:C4	2.89	0.61
1:5:2059:C:N3	1:5:2060:G:N7	2.48	0.61
1:5:2106:G:C2	1:5:2107:C:H5	2.19	0.61
1:5:2256:C:O2	1:5:2256:C:H2'	2.01	0.61
1:5:2517:A:H2'	1:5:2518:G:C8	2.36	0.61
1:5:3676:G:O2'	1:5:3677:U:O5'	2.18	0.61
1:5:4143:G:C5	1:5:4145:C:C6	2.89	0.61
1:5:4441:A:H8	1:5:4441:A:H5''	1.65	0.61
3:8:116:C:C4	3:8:117:C:C5	2.88	0.61
3:8:134:G:N3	3:8:135:C:C6	2.69	0.61
4:A:186:TYR:HE1	4:A:190:LYS:HG3	1.65	0.61
9:F:244:ARG:NH1	9:F:244:ARG:HG2	2.16	0.61
12:I:171:TRP:CB	12:I:181:PHE:CE2	2.83	0.61
14:K:58:ILE:HG22	14:K:59:THR:N	2.15	0.61
14:K:140:GLY:O	14:K:141:CYS:HB2	2.00	0.61
19:P:3:ARG:HG3	19:P:3:ARG:HH11	1.66	0.61
46:q:14:PHE:HB3	46:q:62:ARG:HH11	1.66	0.61
48:4:208:VAL:HG11	48:4:258:LYS:HA	1.82	0.61
48:4:271:GLY:C	48:4:272:LYS:CG	2.74	0.61
48:4:526:ARG:HA	48:4:529:LYS:HD2	1.82	0.61
48:4:669:VAL:HG11	48:4:707:VAL:O	2.01	0.61
49:S2:107:A:H2'	49:S2:108:G:H8	1.66	0.61
49:S2:360:A:N1	49:S2:363:A:N7	2.49	0.61
49:S2:377:G:N3	49:S2:378:U:C6	2.69	0.61
49:S2:535:G:N2	49:S2:536:A:C8	2.69	0.61
49:S2:924:G:C6	49:S2:925:G:C8	2.89	0.61
49:S2:1059:G:H2'	49:S2:1060:A:H5'	1.83	0.61
49:S2:1272:C:OP1	49:S2:1303:C:O4'	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1374:C:H2'	49:S2:1375:G:O5'	2.01	0.61
49:S2:1500:G:H3'	49:S2:1501:C:H6	1.65	0.61
49:S2:1526:G:N1	49:S2:1527:C:C4	2.69	0.61
49:S2:1607:A:H61	49:S2:1632:G:H1'	1.64	0.61
49:S2:1643:U:C2	49:S2:1644:C:C5	2.89	0.61
51:SB:106:THR:OG1	51:SB:108:ASP:OD1	2.16	0.61
57:SH:177:TYR:HE2	57:SH:185:VAL:HG21	1.66	0.61
63:SN:20:ARG:HD3	72:SW:56:HIS:NE2	2.15	0.61
1:5:56:A:N1	1:5:57:G:C6	2.69	0.60
1:5:88:A:C2'	1:5:89:C:O5'	2.49	0.60
1:5:91:G:C8	1:5:93:G:C6	2.89	0.60
1:5:189:G:N2	1:5:190:G:C4	2.69	0.60
1:5:301:G:C6	1:5:302:C:C4	2.88	0.60
1:5:486:C:C4	1:5:487:G:N7	2.69	0.60
1:5:488:G:N3	1:5:489:C:C6	2.67	0.60
1:5:1290:G:C2	1:5:1291:G:N7	2.69	0.60
1:5:1392:A:N1	1:5:1393:G:C6	2.69	0.60
1:5:1447:C:H2'	1:5:1448:G:C8	2.35	0.60
1:5:1565:A:C2'	1:5:1566:C:H5'	2.31	0.60
1:5:2263:A:O2'	1:5:2265:G:H2'	2.00	0.60
1:5:2272:C:C2'	1:5:2273:G:O5'	2.49	0.60
1:5:2454:U:N3	1:5:2455:G:N7	2.49	0.60
1:5:2498:C:C4	1:5:2499:C:C5	2.88	0.60
1:5:2664:G:N2	1:5:2671:C:C2	2.69	0.60
1:5:3894:A:H2'	1:5:3895:G:O4'	2.01	0.60
1:5:4547:C:C2	1:5:4549:G:N7	2.69	0.60
1:5:4750:G:O6	1:5:4949:G:C6	2.54	0.60
1:5:5047:C:C1'	1:5:5048:A:N1	2.64	0.60
3:8:96:C:O2	3:8:97:A:H8	1.73	0.60
14:K:109:ILE:O	14:K:113:ALA:N	2.34	0.60
14:K:123:ARG:HB3	14:K:129:ILE:CD1	0.64	0.60
14:K:132:ILE:O	14:K:135:THR:OG1	2.19	0.60
21:R:95:TRP:O	21:R:96:MET:C	2.44	0.60
21:R:132:PHE:N	21:R:132:PHE:CD2	2.69	0.60
46:q:103:ARG:CG	46:q:103:ARG:HH11	2.14	0.60
48:4:171:PRO:HB2	48:4:290:CYS:SG	2.41	0.60
48:4:183:GLU:HA	48:4:183:GLU:OE1	2.01	0.60
48:4:330:LYS:O	48:4:331:GLU:CG	2.29	0.60
49:S2:300:U:N3	49:S2:301:A:N7	2.49	0.60
49:S2:639:C:O2'	49:S2:640:A:H5'	2.01	0.60
49:S2:751:G:N1	49:S2:791:C:C2	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:850:C:O2'	49:S2:851:C:H5'	2.00	0.60
49:S2:879:C:C4	49:S2:880:G:C2	2.89	0.60
49:S2:880:G:C8	49:S2:881:G:N7	2.66	0.60
49:S2:975:G:C6	49:S2:976:G:N7	2.69	0.60
49:S2:1093:A:C5	49:S2:1094:C:C5	2.89	0.60
49:S2:1266:C:O2	49:S2:1266:C:H2'	2.01	0.60
49:S2:1294:G:H1'	81:Sf:137:ASP:OD2	2.01	0.60
69:ST:78:ILE:HG23	69:ST:79:TYR:CE1	2.36	0.60
1:5:127:G:N2	1:5:128:C:C2	2.69	0.60
1:5:323:C:O2	1:5:324:A:C8	2.54	0.60
1:5:930:G:N3	1:5:931:C:H6	1.99	0.60
1:5:1177:U:H1'	7:D:282:GLN:CD	2.26	0.60
1:5:1615:C:C4	1:5:1616:U:C5	2.89	0.60
1:5:1628:C:C2	1:5:1629:G:H8	2.13	0.60
1:5:1949:U:C2	1:5:1950:U:C6	2.89	0.60
1:5:2301:G:C2	1:5:2302:C:C5	2.89	0.60
1:5:2309:G:H2'	1:5:2310:C:O4'	2.02	0.60
1:5:2335:C:H2'	1:5:2335:C:O2	2.00	0.60
1:5:2367:A:N6	1:5:2798:A:O4'	2.30	0.60
1:5:3711:A:N6	1:5:3712:A:H1'	2.16	0.60
1:5:3759:A:C6	49:S2:1709:G:H4'	2.36	0.60
1:5:4332:C:C2	1:5:4333:C:C5	2.85	0.60
1:5:4742:G:C2	1:5:4743:G:C8	2.89	0.60
2:7:59:G:C6	2:7:60:G:C5	2.89	0.60
10:G:261:LEU:HD22	10:G:265:LEU:HD23	1.82	0.60
14:K:81:ILE:HD12	14:K:113:ALA:HB1	1.82	0.60
35:f:27:LEU:HD22	35:f:78:HIS:CD2	2.35	0.60
46:q:53:VAL:CA	46:q:89:VAL:HG22	2.30	0.60
48:4:401:MET:HE1	48:4:476:ASP:HA	1.83	0.60
48:4:738:PRO:O	48:4:739:ARG:NH1	2.33	0.60
49:S2:139:C:O2'	49:S2:140:C:O5'	2.19	0.60
49:S2:579:C:H2'	49:S2:579:C:O2	1.99	0.60
49:S2:849:A:C6	49:S2:850:C:N4	2.69	0.60
49:S2:903:A:N7	49:S2:904:A:C8	2.69	0.60
49:S2:1124:C:C4	49:S2:1125:C:C5	2.88	0.60
49:S2:1290:G:H2'	81:Sf:146:LEU:H	1.66	0.60
49:S2:1605:G:C3'	49:S2:1606:G:O4'	2.48	0.60
57:SH:8:ILE:HG23	57:SH:9:VAL:HG13	1.83	0.60
57:SH:57:ARG:HA	57:SH:57:ARG:CZ	2.32	0.60
61:SL:39:ASN:C	61:SL:39:ASN:OD1	2.44	0.60
1:5:42:A:C5	1:5:4379:A:N1	2.69	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
1:5:388:A:C6	1:5:411:G:C6	2.90	0.60
1:5:460:C:H2'	1:5:461:G:H8	1.65	0.60
1:5:509:A:N3	30:a:105:ARG:NH1	2.48	0.60
1:5:1392:A:H2'	1:5:1393:G:C8	2.37	0.60
1:5:1769:G:C2	1:5:1770:A:C5	2.88	0.60
1:5:1969:G:H1	1:5:2018:C:N4	1.98	0.60
1:5:2451:A:C4	1:5:2452:G:C8	2.89	0.60
1:5:2468:U:C2	1:5:2473:A:N6	2.70	0.60
1:5:2577:C:C4	29:Z:17:ARG:NH2	2.69	0.60
1:5:2766:A:H5''	1:5:2766:A:N3	2.16	0.60
1:5:2830:G:C2	1:5:2831:G:N7	2.69	0.60
1:5:3858:C:N3	1:5:3859:G:C8	2.68	0.60
1:5:3935:C:N3	1:5:3936:A:C8	2.69	0.60
1:5:4117:U:C5	10:G:41:ILE:O	2.55	0.60
1:5:4368:G:H21	44:o:26:TYR:HE2	1.48	0.60
1:5:4455:G:C5	1:5:4456:C:C5	2.89	0.60
1:5:4979:A:C2'	1:5:4980:C:O5'	2.49	0.60
2:7:18:C:C2	2:7:19:C:H6	2.10	0.60
2:7:119:U:O4	7:D:258:LYS:NZ	2.32	0.60
3:8:42:G:C6	3:8:43:A:N7	2.69	0.60
3:8:45:C:C2	3:8:46:G:C8	2.88	0.60
9:F:93:PHE:C	9:F:93:PHE:CD1	2.79	0.60
14:K:32:ILE:C	14:K:34:PRO:CD	2.74	0.60
44:o:36:GLN:O	44:o:36:GLN:NE2	2.34	0.60
46:q:180:ILE:HG22	46:q:182:PRO:HD3	1.83	0.60
48:4:683:PHE:HD1	48:4:729:LEU:HD21	1.66	0.60
48:4:738:PRO:O	48:4:824:PRO:HD2	2.01	0.60
49:S2:323:C:H3'	49:S2:324:C:H5''	1.83	0.60
49:S2:570:C:N3	49:S2:571:U:C5	2.69	0.60
49:S2:608:C:C4	49:S2:609:U:C5	2.89	0.60
49:S2:816:A:C5	49:S2:817:G:C8	2.90	0.60
49:S2:1310:U:O2	49:S2:1310:U:H2'	2.01	0.60
49:S2:1571:G:C6	49:S2:1572:C:C4	2.89	0.60
49:S2:1593:C:N3	49:S2:1594:A:N7	2.49	0.60
49:S2:1754:G:C6	49:S2:1755:C:C4	2.89	0.60
49:S2:1772:C:C2	49:S2:1773:C:C6	2.88	0.60
58:SI:83:TYR:CD1	58:SI:83:TYR:C	2.79	0.60
62:SM:85:LEU:O	62:SM:85:LEU:HD23	2.01	0.60
69:ST:52:TRP:CE3	69:ST:53:PHE:HB2	2.37	0.60
79:Sd:22:ARG:NE	79:Sd:36:LEU:O	2.33	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
1:5:293:G:C4'	1:5:294:G:C8	2.84	0.60
1:5:325:U:H2'	1:5:326:C:H6	1.67	0.60
1:5:446:C:N3	1:5:447:C:C5	2.68	0.60
1:5:1324:A:C2	1:5:3876:A:C2'	2.84	0.60
1:5:1582:U:C4	1:5:1583:A:C8	2.89	0.60
1:5:1983:A:N1	1:5:2010:A:OP2	2.35	0.60
1:5:2290:C:N3	1:5:2291:G:N7	2.50	0.60
1:5:2361:G:O2'	1:5:2362:U:OP2	2.19	0.60
1:5:2423:A:C6	1:5:2424:G:C6	2.90	0.60
1:5:2448:G:C6	1:5:2511:A:C6	2.89	0.60
1:5:3711:A:N1	1:5:3712:A:N3	2.49	0.60
1:5:3871:A:C6	1:5:3885:G:C2	2.90	0.60
1:5:4191:G:N2	1:5:4374:U:O4'	2.34	0.60
1:5:4239:A:C6	1:5:4240:G:N7	2.69	0.60
1:5:4332:C:O2	1:5:4333:C:H6	1.81	0.60
1:5:4647:G:H4'	21:R:59:SER:HB3	1.82	0.60
1:5:4746:C:C2	1:5:4747:C:C6	2.90	0.60
1:5:4999:G:N1	1:5:5000:G:C5	2.69	0.60
2:7:93:G:N3	2:7:94:C:C6	2.69	0.60
3:8:134:G:N1	3:8:135:C:C5	2.69	0.60
3:8:142:U:C2	3:8:143:G:C8	2.89	0.60
8:E:197:ILE:HD11	8:E:256:ARG:HB2	1.83	0.60
12:I:35:ASP:HB2	12:I:86:HIS:HE1	1.66	0.60
14:K:35:LEU:HD21	46:q:130:LEU:O	2.01	0.60
14:K:61:LYS:HD3	14:K:72:GLU:C	2.25	0.60
14:K:120:SER:OG	14:K:121:LEU:N	2.34	0.60
30:a:131:ARG:O	30:a:134:GLU:HB3	2.02	0.60
45:p:85:ARG:HH11	45:p:85:ARG:HG2	1.65	0.60
48:4:13:MET:HE1	48:4:464:VAL:CB	2.32	0.60
48:4:269:ALA:O	48:4:270:ASN:C	2.35	0.60
49:S2:51:U:C4	49:S2:52:G:N7	2.68	0.60
49:S2:53:C:N3	49:S2:54:A:C8	2.69	0.60
49:S2:167:G:N2	49:S2:168:C:C2	2.69	0.60
49:S2:222:U:C2	49:S2:223:C:C6	2.90	0.60
49:S2:338:G:C5	49:S2:339:A:N7	2.69	0.60
49:S2:376:A:C5	49:S2:377:G:C8	2.90	0.60
49:S2:452:G:H2'	49:S2:453:C:O5'	2.02	0.60
49:S2:457:C:C4	49:S2:458:A:N7	2.69	0.60
49:S2:751:G:C6	49:S2:791:C:C2	2.90	0.60
49:S2:798:A:N6	57:SH:106:ARG:HB2	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1056:U:H2'	49:S2:1057:C:O4'	2.00	0.60
49:S2:1287:A:C2	49:S2:1313:A:C4	2.89	0.60
49:S2:1291:A:O2'	81:Sf:148:TYR:O	2.18	0.60
49:S2:1611:G:H1'	68:SS:86:ARG:HH12	1.66	0.60
74:SY:76:TYR:CE2	74:SY:86:GLU:OE2	2.54	0.60
82:Sg:226:HIS:ND1	82:Sg:226:HIS:C	2.58	0.60
1:5:30:C:H2'	1:5:31:U:O5'	2.02	0.60
1:5:225:G:C2	1:5:243:A:C2	2.90	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
1:5:488:G:C6	1:5:489:C:C4	2.90	0.60
1:5:642:G:C2	1:5:643:C:C4	2.89	0.60
1:5:745:G:H2'	1:5:746:A:O4'	2.00	0.60
1:5:1179:U:C4	1:5:1181:C:OP2	2.54	0.60
1:5:1410:U:H5	1:5:1815:G:N1	1.99	0.60
1:5:1437:C:O2	1:5:2097:U:C2	2.54	0.60
1:5:1806:G:C2	1:5:1807:C:C5	2.90	0.60
1:5:1878:G:OP2	31:b:14:ARG:NH1	2.34	0.60
1:5:1928:C:C4	18:O:133:ARG:CZ	2.85	0.60
1:5:2055:G:H5'	1:5:2056:G:H5'	1.82	0.60
1:5:2468:U:O4	1:5:2473:A:C2	2.53	0.60
1:5:2645:G:N1	1:5:2646:C:C4	2.70	0.60
1:5:3944:G:C2	1:5:3945:A:N7	2.69	0.60
1:5:4198:G:C5	1:5:4199:C:C5	2.89	0.60
1:5:4544:A:C8	1:5:4545:G:H1'	2.37	0.60
2:7:58:A:C5	2:7:59:G:N7	2.69	0.60
7:D:44:TYR:N	7:D:44:TYR:CD1	2.69	0.60
7:D:103:LEU:CD2	7:D:244:HIS:HB3	2.31	0.60
13:J:99:PHE:CZ	13:J:105:PHE:HB2	2.37	0.60
16:M:6:PHE:HB3	22:S:151:LYS:CG	2.31	0.60
21:R:105:LEU:O	21:R:109:TYR:HB2	2.01	0.60
33:d:83:ARG:HB2	33:d:114:PHE:CD2	2.36	0.60
42:m:119:ASN:OD1	42:m:119:ASN:C	2.43	0.60
48:4:10:ARG:HH22	48:4:465:PRO:CD	2.01	0.60
48:4:42:LYS:CE	48:4:79:TYR:HH	2.05	0.60
48:4:42:LYS:CD	48:4:79:TYR:HH	2.13	0.60
48:4:77:LEU:HB2	48:4:100:ILE:HB	1.82	0.60
48:4:113:SER:OG	48:4:499:PHE:CD2	2.52	0.60
48:4:125:ALA:C	48:4:154:VAL:HG12	2.27	0.60
48:4:238:ALA:HB1	48:4:239:LYS:CB	2.31	0.60
49:S2:54:A:N3	49:S2:451:G:C2	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:64:A:C5	49:S2:82:G:N1	2.69	0.60
49:S2:431:G:C2	49:S2:432:G:C8	2.89	0.60
49:S2:461:U:O2	49:S2:462:C:C5	2.54	0.60
49:S2:474:G:N2	49:S2:475:C:N1	2.48	0.60
49:S2:795:A:N1	49:S2:796:G:C5	2.70	0.60
49:S2:797:C:C2	49:S2:798:A:O2'	2.40	0.60
49:S2:886:A:H2'	49:S2:887:U:O4'	2.02	0.60
49:S2:950:C:C2	49:S2:951:C:C6	2.89	0.60
49:S2:1082:A:C5	49:S2:1084:A:H1'	2.37	0.60
49:S2:1455:A:C6	49:S2:1456:G:C5	2.88	0.60
49:S2:1575:G:N2	49:S2:1576:G:C4	2.69	0.60
49:S2:1609:C:O2	49:S2:1610:G:H8	1.82	0.60
49:S2:1784:G:H2'	49:S2:1785:C:H5'	1.83	0.60
52:SC:133:TYR:HD1	52:SC:216:MET:HA	1.66	0.60
55:SF:119:SER:OG	55:SF:180:ALA:HB1	2.01	0.60
59:SJ:110:LEU:HD12	59:SJ:142:VAL:HG11	1.83	0.60
63:SN:125:LEU:HD22	63:SN:129:TYR:CE2	2.37	0.60
1:5:470:A:N7	1:5:471:A:N7	2.48	0.60
1:5:919:C:C2	1:5:920:C:C6	2.90	0.60
1:5:976:G:H22	1:5:1277:G:H22	1.49	0.60
1:5:1264:C:H2'	1:5:1265:G:O4'	2.02	0.60
1:5:1379:C:H4'	1:5:1380:G:N9	2.15	0.60
1:5:2089:G:O6	1:5:2263:A:C8	2.54	0.60
1:5:2294:G:N3	1:5:2295:C:C5	2.69	0.60
1:5:2363:A:H1'	1:5:4560:C:H5	1.66	0.60
1:5:2559:G:C6	1:5:2560:C:C5	2.90	0.60
1:5:3590:G:C5	1:5:3591:C:C6	2.90	0.60
1:5:3738:G:C6	1:5:3739:C:C6	2.90	0.60
1:5:3754:G:C6	1:5:3755:G:C8	2.90	0.60
1:5:3806:G:O2'	49:S2:1719:A:H1'	2.00	0.60
1:5:3846:C:C2	1:5:3847:C:C6	2.89	0.60
1:5:4269:G:H22	1:5:4277:G:N2	1.94	0.60
1:5:4313:A:C6	1:5:4314:C:C5	2.88	0.60
1:5:4379:A:C8	44:o:54:PRO:CA	2.80	0.60
1:5:4489:G:C6	1:5:4490:C:C4	2.90	0.60
1:5:4977:A:C4	1:5:4978:G:C2	2.90	0.60
2:7:29:C:C2	2:7:30:C:C5	2.89	0.60
4:A:186:TYR:CA	4:A:196:TRP:HZ3	2.13	0.60
17:N:150:TRP:CZ3	17:N:151:ILE:HG12	2.36	0.60
18:O:58:LEU:HD11	18:O:145:VAL:HG13	1.83	0.60
22:S:94:TYR:CE2	22:S:96:GLU:HG3	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:d:32:ARG:HG2	33:d:48:GLU:HG2	1.84	0.60
45:p:33:GLN:OE1	45:p:49:ARG:NH2	2.34	0.60
46:q:75:LEU:HD23	46:q:78:LEU:HD11	1.84	0.60
48:4:462:GLU:O	48:4:463:ASP:HB3	2.02	0.60
48:4:801:ARG:CD	48:4:802:SER:N	2.64	0.60
49:S2:27:A:C2	49:S2:28:U:H1'	2.37	0.60
49:S2:69:C:C2	49:S2:70:G:N7	2.70	0.60
49:S2:149:A:H2'	49:S2:150:A:H8	1.66	0.60
49:S2:309:G:N3	49:S2:310:C:C6	2.70	0.60
49:S2:333:G:H2'	49:S2:334:C:O4'	2.02	0.60
49:S2:881:G:C2	49:S2:882:U:C6	2.90	0.60
49:S2:1040:G:C6	49:S2:1041:G:N7	2.70	0.60
49:S2:1272:C:N3	49:S2:1273:C:C5	2.69	0.60
49:S2:1293:A:O4'	81:Sf:150:PHE:HB3	2.01	0.60
49:S2:1542:C:C2'	49:S2:1543:U:O5'	2.49	0.60
49:S2:1795:G:C2	49:S2:1796:G:C8	2.89	0.60
62:SM:51:VAL:HG13	62:SM:85:LEU:HD21	1.83	0.60
64:SO:146:ARG:C	64:SO:148:GLY:N	2.54	0.60
1:5:299:C:H2'	1:5:299:C:O2	2.01	0.60
1:5:747:A:H2'	1:5:749:G:N7	2.16	0.60
1:5:1065:G:C2	1:5:1066:G:C4	2.89	0.60
1:5:1341:U:C2	1:5:1342:A:N7	2.69	0.60
1:5:1682:A:H3'	1:5:1683:U:H6	1.66	0.60
1:5:1961:G:O2'	1:5:2025:A:N6	2.34	0.60
1:5:1972:G:C2	1:5:1973:G:C5	2.89	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
1:5:2612:G:C5	1:5:2613:C:C5	2.89	0.60
1:5:2841:G:C6	1:5:2842:G:N7	2.69	0.60
1:5:4077:A:H8	1:5:4077:A:O5'	1.84	0.60
1:5:4078:C:N3	1:5:4079:C:C6	2.69	0.60
1:5:4080:C:O2	1:5:4080:C:H2'	2.01	0.60
1:5:4109:G:C6	1:5:4110:C:C4	2.90	0.60
1:5:4315:A:C2'	1:5:4316:G:H5'	2.31	0.60
1:5:4945:G:O6	35:f:60:PRO:HD3	2.00	0.60
3:8:79:G:N3	3:8:80:A:C2	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:CZ3	2.85	0.60
5:B:198:ARG:HB2	5:B:198:ARG:NH1	2.16	0.60
6:C:102:PHE:O	6:C:103:ALA:C	2.43	0.60
9:F:128:ASN:HD21	23:T:132:PRO:HG2	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:47:ALA:CA	14:K:72:GLU:CD	2.74	0.60
14:K:91:ASP:O	14:K:92:ARG:CB	2.46	0.60
37:h:81:LEU:HA	37:h:84:ARG:HG3	1.84	0.60
39:j:16:HIS:HA	39:j:27:TYR:O	2.02	0.60
46:q:47:LEU:HD23	46:q:103:ARG:HH11	1.65	0.60
46:q:136:SER:O	46:q:140:ALA:N	2.31	0.60
48:4:111:PHE:HB2	48:4:501:VAL:CG2	2.29	0.60
48:4:427:VAL:CG1	48:4:485:ILE:HG23	2.27	0.60
48:4:556:ILE:O	48:4:560:ASP:OD1	2.19	0.60
48:4:590:LEU:HD23	48:4:605:LYS:CG	2.31	0.60
48:4:698:ARG:O	48:4:700:VAL:CB	2.49	0.60
49:S2:26:U:O2	49:S2:26:U:H2'	2.02	0.60
49:S2:166:A:N3	49:S2:167:G:C8	2.69	0.60
49:S2:349:A:C3'	58:SI:27:TYR:OH	2.49	0.60
49:S2:350:C:O2'	49:S2:383:G:N1	2.34	0.60
49:S2:570:C:C2	49:S2:571:U:C5	2.89	0.60
49:S2:591:U:H5''	49:S2:593:C:H5	1.64	0.60
49:S2:910:G:C5	49:S2:911:C:C5	2.90	0.60
49:S2:1040:G:C6	49:S2:1041:G:C8	2.90	0.60
49:S2:1232:U:O2'	49:S2:1253:A:N7	2.24	0.60
49:S2:1665:G:N7	69:ST:88:MET:HG2	2.17	0.60
55:SF:20:PHE:CZ	55:SF:69:VAL:HG11	2.37	0.60
1:5:20:U:C4	3:8:37:A:C6	2.90	0.60
1:5:245:C:O2	1:5:245:C:O4'	2.17	0.60
1:5:483:G:C2	1:5:484:U:C6	2.90	0.60
1:5:667:A:C2	1:5:668:C:C5	2.89	0.60
1:5:986:C:H2'	1:5:987:C:O4'	2.02	0.60
1:5:1619:G:C5	1:5:1620:U:C5	2.90	0.60
1:5:1629:G:N3	1:5:1631:A:C6	2.70	0.60
1:5:1692:C:H4'	20:Q:57:ASN:HD21	1.67	0.60
1:5:2006:U:H2'	1:5:2007:G:O4'	2.01	0.60
1:5:2253:A:H8	1:5:2254:G:HO2'	1.49	0.60
1:5:2279:A:C2	1:5:2280:G:C4	2.90	0.60
1:5:2294:G:N2	1:5:2295:C:N1	2.49	0.60
1:5:2496:G:C4	1:5:2497:C:C6	2.89	0.60
1:5:2712:G:N1	1:5:2713:C:C4	2.70	0.60
1:5:2736:G:C2'	1:5:2737:C:H5'	2.31	0.60
1:5:3693:U:C4	1:5:3694:U:C4	2.88	0.60
1:5:4416:G:N2	1:5:4417:C:N1	2.50	0.60
1:5:4647:G:C2	1:5:4648:A:C8	2.90	0.60
1:5:4747:C:O2'	1:5:4748:U:H5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4984:C:C2	1:5:4985:U:C6	2.89	0.60
3:8:70:G:C6	3:8:87:G:N1	2.70	0.60
3:8:134:G:C5	3:8:135:C:C5	2.90	0.60
5:B:217:ILE:HD11	5:B:333:LEU:HD11	1.84	0.60
14:K:92:ARG:O	14:K:93:LYS:CB	2.42	0.60
46:q:35:VAL:HG21	46:q:40:MET:CG	2.31	0.60
46:q:35:VAL:CG2	46:q:40:MET:HG2	2.31	0.60
48:4:189:ILE:HG21	48:4:203:ILE:HG13	1.83	0.60
48:4:207:PRO:CB	48:4:261:TRP:CD2	2.85	0.60
48:4:541:SER:O	48:4:543:GLU:CB	2.49	0.60
48:4:693:CYS:O	48:4:694:GLU:HB2	2.00	0.60
48:4:762:VAL:CG1	48:4:766:LYS:HZ3	2.05	0.60
49:S2:433:A:H2'	49:S2:434:G:C8	2.37	0.60
49:S2:553:U:O2	49:S2:554:A:C8	2.55	0.60
49:S2:581:U:C2	49:S2:582:C:C6	2.90	0.60
49:S2:744:G:H1'	57:SH:107:LYS:HB3	1.82	0.60
49:S2:796:G:H3'	49:S2:797:C:C5'	2.32	0.60
49:S2:973:C:C4	49:S2:974:C:C5	2.90	0.60
49:S2:1131:G:N1	49:S2:1132:C:C4	2.69	0.60
49:S2:1202:U:C4	49:S2:1203:G:C8	2.90	0.60
49:S2:1270:G:H1'	49:S2:1298:G:O6	2.02	0.60
49:S2:1283:C:C5	62:SM:103:VAL:HA	2.37	0.60
49:S2:1540:G:C2	49:S2:1541:G:N7	2.70	0.60
49:S2:1596:U:C2	49:S2:1597:C:C6	2.90	0.60
49:S2:1835:A:C5'	49:S2:1863:A:C8	2.84	0.60
54:SE:99:PHE:HD1	54:SE:99:PHE:N	1.98	0.60
58:SI:99:ASN:HA	58:SI:174:CYS:SG	2.42	0.60
68:SS:82:TRP:C	68:SS:84:LEU:H	2.10	0.60
81:Sf:149:CYS:SG	81:Sf:149:CYS:O	2.60	0.60
1:5:479:G:C6	1:5:480:C:C5	2.89	0.60
1:5:982:U:C2'	1:5:983:C:C6	2.77	0.60
1:5:1271:G:N2	1:5:2122:G:OP2	2.35	0.60
1:5:1339:U:N3	1:5:1340:C:C5	2.70	0.60
1:5:1404:G:C6	1:5:1405:C:C5	2.90	0.60
1:5:1685:G:C6	1:5:1686:C:N4	2.70	0.60
1:5:1898:C:N4	1:5:2279:A:O2'	2.35	0.60
1:5:2277:C:O2	1:5:2277:C:C2'	2.49	0.60
1:5:2343:G:C2	6:C:101:MET:HE2	2.37	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
1:5:2852:U:C2'	1:5:2852:U:O2	2.50	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2874:U:O2'	1:5:2876:G:N7	2.33	0.60
1:5:3900:G:C6	1:5:3902:A:H1'	2.37	0.60
1:5:4230:C:O2	1:5:4230:C:H2'	2.01	0.60
1:5:4234:A:C6	1:5:4271:A:H1'	2.37	0.60
1:5:4733:C:H41	1:5:4734:A:H1'	1.66	0.60
1:5:4913:G:O2'	1:5:4914:C:O4'	2.19	0.60
1:5:5030:U:N3	1:5:5031:G:N7	2.50	0.60
5:B:314:ILE:HD12	5:B:314:ILE:N	2.16	0.60
11:H:8:GLN:HE22	11:H:71:ARG:HD2	1.67	0.60
26:W:55:TYR:C	26:W:55:TYR:HD1	2.09	0.60
29:Z:38:TYR:CZ	29:Z:76:ASN:OD1	2.55	0.60
44:o:26:TYR:C	44:o:26:TYR:HD1	2.10	0.60
46:q:127:ASN:CB	46:q:153:GLU:CD	2.54	0.60
48:4:481:LYS:HG3	48:4:482:THR:H	0.54	0.60
48:4:686:ALA:HB1	48:4:729:LEU:HB2	1.83	0.60
49:S2:218:U:C2	49:S2:219:U:C5	2.90	0.60
49:S2:1038:U:H1'	49:S2:1181:A:N1	2.17	0.60
49:S2:1405:A:H1'	49:S2:1580:A:N1	2.15	0.60
57:SH:138:GLU:HG2	63:SN:19:ARG:HD3	1.84	0.60
69:ST:85:ASN:HB2	69:ST:88:MET:HB2	1.83	0.60
81:Sf:147:THR:HG22	81:Sf:148:TYR:CE1	2.37	0.60
1:5:30:C:H2'	1:5:31:U:C6	2.37	0.60
1:5:166:C:O2	1:5:166:C:H2'	2.02	0.60
1:5:332:C:H4'	17:N:150:TRP:NE1	2.17	0.60
1:5:655:C:O2	1:5:656:C:C6	2.55	0.60
1:5:1266:G:C5'	1:5:2112:G:N3	2.60	0.60
1:5:1268:G:N3	1:5:2111:G:C2	2.70	0.60
1:5:1378:C:H5''	1:5:1379:C:H3'	1.83	0.60
1:5:1634:A:C6	1:5:1635:C:C5	2.90	0.60
1:5:2055:G:O6	22:S:158:VAL:CG1	2.50	0.60
1:5:2108:G:C2	1:5:2125:C:C4	2.90	0.60
1:5:2304:U:OP1	1:5:2305:U:O2'	2.12	0.60
1:5:2428:A:C4	1:5:2789:A:C2	2.88	0.60
1:5:2438:A:C5	1:5:2441:C:N4	2.70	0.60
1:5:4236:G:H4'	1:5:4328:G:O2'	2.01	0.60
1:5:4608:G:OP1	48:4:66:ARG:CZ	2.50	0.60
2:7:54:A:N1	2:7:55:A:N7	2.46	0.60
15:L:94:ILE:HA	37:h:119:PHE:CZ	2.37	0.60
46:q:135:THR:HA	46:q:138:PHE:CE1	2.37	0.60
46:q:136:SER:HA	46:q:139:GLN:HB2	1.84	0.60
48:4:402:VAL:C	48:4:403:PRO:O	2.40	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:423:THR:HG22	48:4:450:THR:H	1.66	0.60
48:4:731:ALA:HB2	48:4:854:PHE:CB	2.30	0.60
49:S2:50:A:C2	49:S2:488:U:O4	2.53	0.60
49:S2:190:G:O2'	49:S2:209:A:N6	2.35	0.60
49:S2:371:A:C2	49:S2:372:U:C4	2.89	0.60
49:S2:379:C:N4	49:S2:380:G:O6	2.34	0.60
49:S2:440:G:N2	49:S2:454:U:C2	2.70	0.60
49:S2:453:C:O2'	49:S2:454:U:H5'	2.02	0.60
49:S2:582:C:O2	49:S2:583:C:C5	2.54	0.60
49:S2:732:U:C2	49:S2:733:C:C6	2.89	0.60
49:S2:1229:G:C6	49:S2:1230:C:C4	2.89	0.60
49:S2:1368:U:H1'	49:S2:1372:U:N3	2.17	0.60
49:S2:1422:G:C6	49:S2:1424:G:OP2	2.55	0.60
49:S2:1542:C:O2'	49:S2:1543:U:C5'	2.49	0.60
49:S2:1561:A:C5	49:S2:1562:C:C6	2.90	0.60
49:S2:1730:U:C2	49:S2:1731:A:C8	2.90	0.60
61:SL:116:CYS:SG	61:SL:117:PHE:N	2.74	0.60
1:5:726:G:H2'	1:5:727:C:O4'	2.02	0.59
1:5:1465:G:C6	1:5:1466:G:C8	2.89	0.59
1:5:1529:G:N2	39:j:49:TRP:HZ2	2.00	0.59
1:5:2059:C:C2	1:5:2060:G:C8	2.90	0.59
1:5:2422:C:C6	1:5:2829:U:H1'	2.37	0.59
1:5:2559:G:H1	1:5:2567:G:H1	1.50	0.59
1:5:2589:C:N4	1:5:2590:G:C6	2.69	0.59
1:5:2848:G:C2	1:5:3838:U:C5	2.90	0.59
1:5:4172:A:C2	1:5:4173:G:N7	2.70	0.59
1:5:4878:C:N3	1:5:4879:C:C5	2.70	0.59
3:8:33:G:H4'	3:8:34:U:C4	2.38	0.59
3:8:68:G:C2	3:8:91:A:C2	2.89	0.59
4:A:209:HIS:HE1	4:A:211:PHE:HD2	1.47	0.59
7:D:67:ALA:HB1	23:T:31:MET:HE1	1.82	0.59
14:K:47:ALA:HA	14:K:72:GLU:CD	2.25	0.59
46:q:54:LEU:N	46:q:88:PHE:O	2.27	0.59
47:r:106:LEU:O	47:r:107:ARG:C	2.45	0.59
48:4:206:ASP:C	48:4:212:VAL:CG2	2.73	0.59
48:4:297:ILE:C	48:4:300:VAL:HG22	2.25	0.59
48:4:671:TYR:CB	48:4:675:ILE:HG23	2.32	0.59
49:S2:453:C:O2'	49:S2:454:U:C5'	2.50	0.59
49:S2:615:C:H2'	49:S2:616:A:O4'	2.01	0.59
49:S2:848:U:C4	49:S2:849:A:N6	2.70	0.59
49:S2:862:A:H2'	49:S2:862:A:N3	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1302:G:N7	81:Sf:140:TYR:CD2	2.70	0.59
49:S2:1368:U:C2	49:S2:1372:U:O4	2.55	0.59
49:S2:1406:G:C2	49:S2:1407:U:C2	2.89	0.59
49:S2:1418:C:O2	49:S2:1420:G:C8	2.55	0.59
49:S2:1448:A:C2	49:S2:1449:G:H1'	2.37	0.59
49:S2:1551:U:H3'	49:S2:1552:G:C8	2.37	0.59
49:S2:1552:G:C8	49:S2:1578:U:O4	2.54	0.59
49:S2:1573:G:N3	49:S2:1574:C:H1'	2.16	0.59
49:S2:1839:U:O2	49:S2:1840:U:C6	2.54	0.59
50:SA:10:MET:HE1	50:SA:51:LEU:HB3	1.83	0.59
51:SB:77:ASP:O	51:SB:77:ASP:OD1	2.19	0.59
72:SW:90:GLN:HB2	72:SW:94:LEU:HD12	1.83	0.59
1:5:75:G:O6	15:L:103:ARG:CZ	2.51	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
1:5:1201:U:C2	1:5:1202:C:C5	2.90	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
1:5:1280:C:H5'	1:5:1280:C:H6	1.65	0.59
1:5:1342:A:OP1	17:N:204:ARG:NH1	2.35	0.59
1:5:1751:A:C2	1:5:1752:G:O4'	2.55	0.59
1:5:1857:C:O4'	1:5:1892:A:C2	2.55	0.59
1:5:1921:C:O2	22:S:160:ARG:HB2	2.01	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
1:5:2367:A:C2	1:5:2368:A:N7	2.69	0.59
1:5:2367:A:C8	1:5:2798:A:C2	2.89	0.59
1:5:2594:C:N3	1:5:2595:C:C5	2.69	0.59
1:5:2603:C:C2	1:5:2604:C:C6	2.90	0.59
1:5:2633:U:O2	1:5:2634:C:C6	2.55	0.59
1:5:2746:A:C2'	1:5:2747:U:O5'	2.50	0.59
1:5:3677:U:H2'	1:5:3678:G:C8	2.37	0.59
1:5:3833:C:C2	1:5:3834:C:C5	2.90	0.59
1:5:3911:C:H5''	1:5:4197:G:O2'	2.01	0.59
1:5:4078:C:C4	1:5:4079:C:C5	2.89	0.59
1:5:4470:G:N2	1:5:4486:C:C2	2.70	0.59
1:5:4549:G:N1	1:5:4550:G:C8	2.69	0.59
1:5:4872:G:O2'	1:5:4873:G:OP1	2.20	0.59
3:8:132:G:C2	3:8:133:G:N9	2.69	0.59
3:8:141:C:H2'	3:8:142:U:H6	1.67	0.59
14:K:22:VAL:HG22	14:K:48:LYS:CG	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:N:37:HIS:CD2	17:N:37:HIS:C	2.80	0.59
19:P:129:THR:HB	19:P:139:TYR:HB2	1.82	0.59
34:e:108:ARG:HD3	34:e:128:ARG:HH21	1.66	0.59
46:q:167:VAL:CG2	46:q:183:PHE:HE2	2.09	0.59
49:S2:537:C:H42	49:S2:546:G:H1	1.48	0.59
49:S2:622:C:N4	49:S2:623:G:H1'	2.18	0.59
49:S2:805:U:C2	49:S2:806:U:C5	2.89	0.59
49:S2:851:C:H5''	49:S2:852:G:H5'	1.84	0.59
49:S2:1022:U:H1'	63:SN:128:TYR:CE2	2.36	0.59
49:S2:1031:A:C5	49:S2:1032:C:C5	2.91	0.59
49:S2:1149:A:C6	49:S2:1151:G:C4	2.90	0.59
49:S2:1157:G:H1'	73:SX:5:ARG:HE	1.67	0.59
49:S2:1231:C:OP2	68:SS:139:THR:HG21	2.01	0.59
49:S2:1291:A:O5'	81:Sf:146:LEU:HD12	2.01	0.59
49:S2:1408:U:H3'	49:S2:1409:A:H8	1.63	0.59
49:S2:1532:C:OP1	49:S2:1604:G:O2'	2.20	0.59
49:S2:1608:U:C4	49:S2:1609:C:C5	2.89	0.59
63:SN:128:TYR:O	63:SN:131:THR:N	2.35	0.59
71:SV:64:GLU:O	71:SV:65:SER:C	2.44	0.59
1:5:371:A:O2'	1:5:372:A:O5'	2.20	0.59
1:5:466:A:N3	1:5:467:U:C6	2.71	0.59
1:5:509:A:O2'	15:L:163:ARG:HB2	2.02	0.59
1:5:944:A:H2'	6:C:335:MET:HE1	1.85	0.59
1:5:1075:G:C6	1:5:1076:C:C4	2.90	0.59
1:5:1278:C:C2	1:5:1279:A:H1'	2.37	0.59
1:5:1281:G:O4'	1:5:1281:G:N3	2.34	0.59
1:5:1444:G:C2	1:5:1445:U:C4	2.89	0.59
1:5:1489:G:N2	1:5:1490:G:H1'	2.16	0.59
1:5:1516:G:C6	1:5:1518:A:C5	2.90	0.59
1:5:1673:U:C4	1:5:1682:A:N1	2.70	0.59
1:5:1723:A:N1	1:5:1838:A:C2	2.70	0.59
1:5:1794:A:C8	1:5:4214:A:N6	2.70	0.59
1:5:1898:C:H1'	1:5:2070:U:O2	2.02	0.59
1:5:1900:C:C4	1:5:1901:C:C5	2.91	0.59
1:5:2061:U:O2	22:S:111:ARG:HD3	2.02	0.59
1:5:2447:U:O2'	1:5:2448:G:C5'	2.50	0.59
1:5:2457:G:N2	1:5:3672:G:N2	2.50	0.59
1:5:2561:C:C4	1:5:2562:G:N7	2.70	0.59
1:5:3675:G:N2	1:5:3676:G:C8	2.70	0.59
1:5:4413:C:H4'	12:I:157:PHE:HE2	0.86	0.59
1:5:4532:U:H5	1:5:4554:G:N2	2.00	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4543:G:O2'	1:5:4544:A:C5'	2.50	0.59
6:C:122:TYR:HB2	6:C:280:PRO:HG3	1.85	0.59
10:G:54:PHE:CD2	10:G:54:PHE:N	2.70	0.59
18:O:36:VAL:HG11	18:O:108:ILE:HD12	1.84	0.59
33:d:71:ALA:HB2	33:d:108:TYR:HE2	1.65	0.59
48:4:144:ARG:NH2	48:4:781:MET:HE1	2.17	0.59
48:4:410:PHE:CE2	48:4:530:SER:CB	2.85	0.59
49:S2:29:G:C4	49:S2:30:C:C5	2.89	0.59
49:S2:582:C:C4'	74:SY:33:ALA:HB2	2.32	0.59
49:S2:752:G:C6	49:S2:791:C:N3	2.70	0.59
49:S2:837:A:H62	74:SY:47:MET:HB3	1.67	0.59
49:S2:1293:A:C1'	81:Sf:150:PHE:CD2	2.85	0.59
49:S2:1528:G:N3	49:S2:1529:C:C5	2.70	0.59
50:SA:123:VAL:HG13	50:SA:145:ILE:HB	1.83	0.59
54:SE:161:GLN:HB3	54:SE:170:THR:O	2.01	0.59
60:SK:82:TYR:O	62:SM:27:ILE:HD11	2.00	0.59
1:5:49:U:H2'	1:5:50:C:O5'	2.01	0.59
1:5:86:U:C4	1:5:97:G:N2	2.70	0.59
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
1:5:423:G:O6	3:8:10:G:O6	2.21	0.59
1:5:1347:G:C5	1:5:1348:U:C5	2.90	0.59
1:5:1684:A:C5	1:5:1685:G:C8	2.90	0.59
1:5:1929:A:C2	1:5:2054:U:O4	2.55	0.59
1:5:1964:A:N1	1:5:4694:G:O6	2.35	0.59
1:5:2406:G:N2	1:5:2785:C:C2	2.71	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:H8	1.66	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
1:5:3630:A:C2	1:5:3631:U:C6	2.90	0.59
1:5:3739:C:N4	1:5:3740:G:C5	2.70	0.59
1:5:4098:A:C2	1:5:4099:G:C4	2.91	0.59
1:5:4269:G:C2	1:5:4270:C:N1	2.70	0.59
1:5:4277:G:C5	1:5:4278:C:C5	2.90	0.59
1:5:4281:A:C2	1:5:4283:G:C6	2.90	0.59
1:5:4463:U:C4	1:5:4488:A:C6	2.90	0.59
1:5:4501:U:C4	1:5:4502:C:H1'	2.37	0.59
1:5:4763:U:O2	16:M:3:PHE:HE2	1.85	0.59
1:5:4878:C:C2	1:5:4879:C:H5	2.18	0.59
1:5:4952:G:H5''	1:5:4952:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:336:ARG:O	6:C:340:ILE:HG12	2.02	0.59
9:F:41:GLN:HA	9:F:41:GLN:NE2	2.18	0.59
9:F:96:ARG:O	9:F:120:PHE:HA	2.02	0.59
17:N:63:ARG:CZ	17:N:63:ARG:HB2	2.32	0.59
46:q:69:LEU:C	46:q:71:ASN:H	2.08	0.59
48:4:752:PRO:C	48:4:754:GLN:N	2.59	0.59
49:S2:11:A:C2	49:S2:12:U:C6	2.90	0.59
49:S2:42:A:N3	49:S2:426:A:C5	2.68	0.59
49:S2:672:A:N1	49:S2:1162:C:C1'	2.65	0.59
49:S2:837:A:C2	49:S2:838:G:C5	2.91	0.59
49:S2:900:C:O2	49:S2:901:G:C8	2.55	0.59
49:S2:1142:G:H22	49:S2:1144:A:H3'	1.67	0.59
49:S2:1337:C:O2	49:S2:1337:C:H2'	2.01	0.59
49:S2:1428:G:O2'	66:SQ:33:LYS:NZ	2.35	0.59
49:S2:1533:A:C2	49:S2:1537:A:O4'	2.56	0.59
49:S2:1540:G:C6	49:S2:1541:G:C5	2.87	0.59
61:SL:55:TYR:OH	61:SL:116:CYS:HB3	2.02	0.59
70:SU:102:THR:HG21	70:SU:114:VAL:HG21	1.83	0.59
1:5:54:G:H2'	1:5:54:G:N3	2.17	0.59
1:5:94:A:H2'	1:5:95:G:C5'	2.32	0.59
1:5:111:C:O2	1:5:111:C:H2'	2.01	0.59
1:5:180:C:C2	1:5:181:C:C5	2.90	0.59
1:5:219:G:H5'	1:5:219:G:C4	2.37	0.59
1:5:323:C:C2	1:5:324:A:C8	2.90	0.59
1:5:463:A:N1	1:5:692:A:H2	2.00	0.59
1:5:466:A:C2	1:5:467:U:C4	2.90	0.59
1:5:1634:A:C2	1:5:1635:C:C2	2.90	0.59
1:5:1724:G:N7	31:b:17:HIS:CD2	2.70	0.59
1:5:1778:C:O2	1:5:1779:U:C6	2.55	0.59
1:5:1925:G:C5	1:5:1926:C:C5	2.91	0.59
1:5:2294:G:N1	1:5:2295:C:C5	2.69	0.59
1:5:2479:G:C4	1:5:2480:G:C8	2.90	0.59
1:5:2508:U:O2	1:5:2509:C:H6	1.75	0.59
1:5:2658:G:C6	1:5:2675:G:N1	2.70	0.59
1:5:2734:U:N3	1:5:2735:G:N7	2.51	0.59
1:5:3764:U:H2'	1:5:3765:G:O4'	2.01	0.59
1:5:3802:U:H3	1:5:4498:U:C1'	2.14	0.59
1:5:4096:C:N4	1:5:4097:G:N7	2.51	0.59
1:5:4466:C:N3	1:5:4467:A:C8	2.70	0.59
1:5:4467:A:C2	1:5:4468:U:C6	2.91	0.59
1:5:4653:C:H2'	1:5:4654:C:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4759:C:OP1	18:O:160:ARG:NH2	2.33	0.59
1:5:4911:A:C5'	5:B:100:ARG:CD	2.77	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
3:8:102:G:H3'	3:8:104:A:H2'	1.83	0.59
4:A:109:GLU:OE2	49:S2:980:A:H5''	2.02	0.59
9:F:168:ARG:HD2	9:F:211:TRP:NE1	2.17	0.59
15:L:4:SER:C	15:L:5:ARG:HG3	2.27	0.59
21:R:172:ARG:HG2	49:S2:909:G:OP1	2.03	0.59
29:Z:88:ASP:OD1	29:Z:88:ASP:N	2.36	0.59
31:b:11:ASN:OD1	31:b:12:GLN:N	2.36	0.59
32:c:22:MET:SD	32:c:27:TYR:CE2	2.95	0.59
32:c:52:CYS:HB2	32:c:92:CYS:SG	2.41	0.59
48:4:111:PHE:CD1	48:4:809:PHE:HZ	2.17	0.59
48:4:578:SER:O	48:4:579:TYR:CD1	2.56	0.59
48:4:597:ASN:OD1	48:4:720:GLN:HG3	2.02	0.59
48:4:671:TYR:HD1	48:4:674:GLU:OE1	1.76	0.59
49:S2:104:A:C5	49:S2:105:U:C5	2.90	0.59
49:S2:891:G:C2	49:S2:892:U:C6	2.89	0.59
49:S2:993:G:N1	49:S2:994:C:C6	2.70	0.59
49:S2:1052:A:C4	49:S2:1053:C:C6	2.91	0.59
49:S2:1139:C:H2'	49:S2:1140:G:O4'	2.02	0.59
49:S2:1363:C:N3	49:S2:1376:A:N1	2.50	0.59
49:S2:1589:A:O2'	49:S2:1590:C:O4'	2.19	0.59
49:S2:1616:U:H2'	49:S2:1617:G:O4'	2.03	0.59
49:S2:1643:U:N3	49:S2:1644:C:N4	2.49	0.59
52:SC:137:VAL:HG21	52:SC:244:ILE:HD12	1.84	0.59
62:SM:22:LEU:HD22	62:SM:89:VAL:HG22	1.83	0.59
66:SQ:44:PRO:HG2	66:SQ:81:ILE:HD11	1.84	0.59
1:5:98:A:C5	1:5:99:A:C8	2.90	0.59
1:5:238:C:C2'	1:5:239:C:H5'	2.33	0.59
1:5:1172:C:N3	1:5:1173:G:N7	2.50	0.59
1:5:1265:G:C5'	1:5:2115:G:N2	2.64	0.59
1:5:1296:G:H1'	1:5:1297:U:OP2	2.03	0.59
1:5:1398:A:H61	1:5:1419:G:C2'	2.15	0.59
1:5:1509:C:O2	1:5:1510:G:C8	2.56	0.59
1:5:1961:G:OP2	46:q:57:LYS:CE	2.50	0.59
1:5:2308:A:H2'	1:5:2309:G:O4'	2.02	0.59
1:5:2372:U:H1'	33:d:73:TRP:HE1	1.66	0.59
1:5:2769:U:O2'	1:5:2770:C:C6	2.54	0.59
1:5:3607:U:N3	1:5:3608:A:N7	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3723:A:N3	1:5:3724:A:N7	2.51	0.59
1:5:3724:A:C6	1:5:3725:G:C5	2.90	0.59
1:5:3913:G:C2	1:5:4390:A:C2	2.90	0.59
1:5:4136:G:C5	1:5:4137:C:C5	2.90	0.59
1:5:4152:G:N1	1:5:4153:C:C4	2.70	0.59
1:5:4229:U:H2'	1:5:4229:U:O2	2.02	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
1:5:4984:C:H4'	5:B:25:HIS:CD2	2.38	0.59
3:8:134:G:N1	3:8:135:C:C4	2.70	0.59
9:F:161:TYR:CD1	9:F:170:ALA:HA	2.37	0.59
46:q:12:ASN:CB	46:q:16:LYS:HE3	2.33	0.59
48:4:340:MET:HA	48:4:340:MET:CE	2.21	0.59
48:4:372:LEU:HD13	48:4:417:PHE:CE1	2.38	0.59
48:4:829:SER:OG	48:4:832:SER:N	2.36	0.59
49:S2:12:U:H2'	49:S2:13:C:C6	2.37	0.59
49:S2:624:C:H1'	49:S2:631:U:O2	2.01	0.59
49:S2:752:G:C6	49:S2:790:C:C4	2.91	0.59
49:S2:848:U:O2	49:S2:849:A:C4	2.56	0.59
49:S2:1133:A:C2	49:S2:1134:G:N9	2.67	0.59
49:S2:1201:U:C1'	49:S2:1357:A:C2	2.86	0.59
49:S2:1278:A:C5	49:S2:1279:C:C5	2.91	0.59
49:S2:1304:U:C2	49:S2:1305:C:C5	2.91	0.59
49:S2:1415:C:C4	49:S2:1416:C:C2	2.90	0.59
1:5:90:G:C5	1:5:92:C:H1'	2.38	0.59
1:5:303:C:N3	1:5:304:C:C5	2.71	0.59
1:5:504:G:H2'	1:5:505:G:H8	1.67	0.59
1:5:976:G:C6	1:5:977:C:C4	2.91	0.59
1:5:1100:U:C2	1:5:1167:C:C5	2.91	0.59
1:5:1327:C:H4'	1:5:4448:G:H2'	1.84	0.59
1:5:1378:C:H2'	1:5:1378:C:O2	2.03	0.59
1:5:1413:C:N3	1:5:1414:C:C5	2.71	0.59
1:5:1672:U:H2'	1:5:1673:U:C6	2.36	0.59
1:5:2079:G:N3	1:5:2080:U:C5	2.70	0.59
1:5:2477:A:C2	1:5:2478:C:C4	2.91	0.59
1:5:2478:C:H2'	1:5:2479:G:C8	2.38	0.59
1:5:2485:U:N3	1:5:2486:G:N7	2.50	0.59
1:5:2593:C:N3	1:5:2594:C:C5	2.71	0.59
1:5:2773:G:C2	1:5:2774:C:C6	2.91	0.59
1:5:3720:G:C5	1:5:3721:U:C5	2.90	0.59
1:5:3732:A:N1	1:5:3733:A:C5	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3802:U:H3	1:5:4498:U:C2'	2.15	0.59
1:5:3909:C:O2	1:5:3909:C:C2'	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
1:5:4425:G:C2	1:5:4426:C:H1'	2.37	0.59
1:5:4476:C:O2'	1:5:4478:G:OP2	2.17	0.59
1:5:4561:C:N3	1:5:4562:C:C5	2.70	0.59
1:5:4628:U:O2	1:5:4629:U:C6	2.55	0.59
1:5:4879:C:C2	1:5:4880:C:C6	2.89	0.59
1:5:4946:U:O2	1:5:4946:U:H2'	2.01	0.59
3:8:28:C:C2	3:8:29:G:C8	2.90	0.59
5:B:203:GLN:HA	5:B:203:GLN:NE2	2.12	0.59
6:C:142:HIS:O	6:C:144:ILE:HG13	2.02	0.59
14:K:81:ILE:CD1	14:K:113:ALA:HB1	2.33	0.59
26:W:50:ASN:HB3	26:W:55:TYR:CZ	2.37	0.59
34:e:58:ILE:C	34:e:60:TYR:H	2.11	0.59
34:e:107:ASN:OD1	34:e:107:ASN:N	2.36	0.59
36:g:9:ARG:NH1	36:g:34:TYR:CD2	2.71	0.59
48:4:330:LYS:HB2	48:4:330:LYS:HZ3	1.66	0.59
48:4:496:VAL:HG23	48:4:497:MET:SD	2.37	0.59
48:4:742:GLU:CB	48:4:820:LEU:HD21	2.32	0.59
49:S2:165:G:HO2'	49:S2:166:A:H8	1.51	0.59
49:S2:529:A:N1	49:S2:555:A:N1	2.51	0.59
49:S2:610:G:C2	49:S2:611:G:C8	2.90	0.59
49:S2:617:G:C6	49:S2:618:C:C6	2.90	0.59
49:S2:862:A:C2	49:S2:863:U:N1	2.70	0.59
49:S2:975:G:C2	49:S2:976:G:C8	2.91	0.59
49:S2:1055:A:H2	49:S2:1063:C:H41	1.49	0.59
49:S2:1098:C:C2	49:S2:1099:G:C8	2.91	0.59
49:S2:1101:U:H2'	49:S2:1102:G:H8	1.68	0.59
49:S2:1266:C:O2	49:S2:1267:C:C6	2.55	0.59
49:S2:1270:G:C2	49:S2:1271:C:C6	2.91	0.59
49:S2:1415:C:C2	49:S2:1416:C:H1'	2.37	0.59
49:S2:1538:C:O2	49:S2:1538:C:C2'	2.51	0.59
49:S2:1644:C:O2'	49:S2:1645:C:C5'	2.50	0.59
49:S2:1741:U:N3	49:S2:1742:C:C6	2.71	0.59
64:SO:137:SER:C	64:SO:138:ASP:OD1	2.46	0.59
78:Sc:20:ARG:NH2	78:Sc:25:GLY:O	2.35	0.59
82:Sg:3:GLU:OE2	82:Sg:245:ARG:NE	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:280:G:C8	17:N:120:TRP:CZ3	2.91	0.59
1:5:458:C:C4	1:5:459:C:C5	2.91	0.59
1:5:665:C:O2	1:5:665:C:C2'	2.49	0.59
1:5:942:G:P	9:F:244:ARG:HH12	2.25	0.59
1:5:978:G:C6	1:5:979:C:C4	2.91	0.59
1:5:1263:A:C4	1:5:1264:C:C6	2.90	0.59
1:5:1367:C:N1	1:5:1370:G:H2'	2.18	0.59
1:5:1566:C:HO2'	1:5:1567:U:C4'	2.09	0.59
1:5:1617:G:C4	1:5:1618:G:C8	2.91	0.59
1:5:1631:A:O2'	1:5:3650:C:H4'	2.02	0.59
1:5:1667:G:C5	1:5:2280:G:C2	2.91	0.59
1:5:1960:A:O4'	46:q:59:THR:CG2	2.51	0.59
1:5:2320:G:O2'	1:5:2321:G:P	2.61	0.59
1:5:2404:A:H2'	1:5:2405:G:O4'	2.03	0.59
1:5:2736:G:N3	1:5:2737:C:C5	2.71	0.59
1:5:2794:C:C2	19:P:136:ILE:HD12	2.37	0.59
1:5:3704:U:C2	1:5:3705:G:C8	2.90	0.59
1:5:3722:G:C2	1:5:3723:A:C8	2.91	0.59
1:5:3785:A:N1	1:5:4536:C:H1'	2.14	0.59
1:5:4276:G:N1	1:5:4277:G:N9	2.51	0.59
1:5:4331:G:N3	1:5:4331:G:H2'	2.16	0.59
1:5:4333:C:O2	1:5:4334:U:C5	2.56	0.59
1:5:4413:C:C1'	12:I:157:PHE:CD2	2.81	0.59
1:5:4482:U:C2	1:5:4483:C:C5	2.90	0.59
1:5:4537:C:C2	1:5:4538:G:N7	2.68	0.59
1:5:4735:G:C5	1:5:4736:C:C5	2.90	0.59
3:8:9:A:C6	3:8:10:G:N7	2.71	0.59
3:8:79:G:C2	3:8:80:A:N1	2.71	0.59
7:D:265:ARG:HH11	7:D:265:ARG:HG2	1.68	0.59
8:E:157:ARG:HB3	8:E:267:LEU:HD23	1.85	0.59
8:E:197:ILE:CD1	8:E:257:ILE:HG23	2.32	0.59
9:F:100:ILE:HG21	20:Q:4:ASP:OD1	2.03	0.59
14:K:131:GLU:HG3	14:K:155:ILE:CD1	2.31	0.59
21:R:4:LEU:HD21	21:R:33:ALA:HB2	1.82	0.59
46:q:61:MET:HA	46:q:82:ILE:HD13	1.85	0.59
46:q:199:TYR:CB	46:q:205:ASP:CB	2.75	0.59
48:4:120:ARG:HA	48:4:149:GLU:OE1	2.03	0.59
48:4:140:GLU:HG3	48:4:188:ILE:HD13	1.84	0.59
48:4:208:VAL:HG13	48:4:258:LYS:HA	1.83	0.59
48:4:526:ARG:HH11	48:4:526:ARG:CG	2.12	0.59
48:4:693:CYS:N	48:4:839:ARG:HH21	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:165:G:H2'	49:S2:166:A:H8	1.68	0.59
49:S2:617:G:H4'	73:SX:88:ASP:HB2	1.83	0.59
49:S2:696:G:N2	49:S2:735:C:H1'	2.17	0.59
49:S2:899:U:C4	49:S2:900:C:C5	2.91	0.59
49:S2:979:C:N3	49:S2:980:A:N7	2.50	0.59
49:S2:1095:U:O2	49:S2:1095:U:H2'	2.03	0.59
49:S2:1123:C:H2'	49:S2:1123:C:O2	2.00	0.59
49:S2:1123:C:P	51:SB:205:TYR:OH	2.61	0.59
49:S2:1293:A:O5'	81:Sf:150:PHE:CD1	2.56	0.59
49:S2:1305:C:H42	81:Sf:138:ARG:HG3	1.67	0.59
49:S2:1590:C:H5'	69:ST:82:ARG:HD3	1.84	0.59
49:S2:1792:G:C6	49:S2:1793:A:N7	2.70	0.59
50:SA:158:ASP:CG	50:SA:159:ILE:N	2.61	0.59
63:SN:4:MET:HE2	63:SN:124:ARG:HD3	1.85	0.59
72:SW:57:ARG:HG3	72:SW:57:ARG:HH11	1.68	0.59
1:5:183:C:O2	1:5:189:G:O6	2.21	0.59
1:5:279:A:H5'	1:5:329:A:N3	2.18	0.59
1:5:421:C:C4	1:5:422:C:C5	2.91	0.59
1:5:722:G:H21	6:C:343:GLN:NE2	2.00	0.59
1:5:964:A:H1'	47:r:98:ARG:NH1	2.18	0.59
1:5:1188:C:O2	1:5:1188:C:H2'	2.01	0.59
1:5:1430:C:C2	1:5:1431:C:C6	2.91	0.59
1:5:1437:C:N3	1:5:2098:G:N7	2.51	0.59
1:5:1629:G:N1	1:5:1631:A:N1	2.51	0.59
1:5:1972:G:C2	1:5:1973:G:N7	2.70	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
1:5:3759:A:H2	49:S2:1708:C:O2	1.84	0.59
1:5:3863:C:O2	1:5:3864:C:C6	2.56	0.59
1:5:3919:C:H5''	4:A:207:VAL:HG12	1.85	0.59
1:5:4070:U:C2	1:5:4071:U:C6	2.90	0.59
1:5:4416:G:C2	1:5:4417:C:C4	2.91	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	2.71	0.59
1:5:4895:C:O2	1:5:4896:G:C5	2.56	0.59
1:5:5047:C:C5	1:5:5050:C:H6	2.20	0.59
2:7:55:A:C2	2:7:56:G:C5	2.91	0.59
6:C:138:MET:O	47:r:16:PHE:HZ	1.84	0.59
7:D:20:PHE:HB3	7:D:30:TYR:OH	2.02	0.59
7:D:111:ASN:C	7:D:111:ASN:ND2	2.60	0.59
9:F:83:PHE:CE2	22:S:13:VAL:HG21	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:F:149:LEU:HB2	9:F:197:TYR:HH	1.64	0.59
14:K:81:ILE:O	14:K:85:LEU:HG	2.03	0.59
15:L:166:ALA:CB	30:a:97:ALA:HB1	2.33	0.59
29:Z:30:ASP:OD1	29:Z:31:ASP:HB2	2.02	0.59
44:o:40:ARG:HB3	44:o:40:ARG:HH21	1.66	0.59
46:q:80:PRO:HB2	46:q:81:HIS:ND1	2.18	0.59
46:q:99:ARG:HD2	46:q:100:ASP:OD1	2.01	0.59
48:4:393:PRO:O	48:4:393:PRO:HG2	2.03	0.59
48:4:591:CYS:O	48:4:728:CYS:SG	2.61	0.59
48:4:694:GLU:CG	48:4:844:LEU:CD1	2.71	0.59
49:S2:74:G:C6	56:SG:171:THR:OG1	2.55	0.59
49:S2:139:C:O2'	49:S2:140:C:O3'	2.15	0.59
49:S2:439:A:N1	49:S2:455:A:C6	2.71	0.59
49:S2:444:G:H2'	49:S2:444:G:N3	2.17	0.59
49:S2:530:U:N3	49:S2:531:A:N7	2.50	0.59
49:S2:536:A:C6	49:S2:537:C:C5	2.91	0.59
49:S2:644:G:H2'	49:S2:645:C:O4'	2.03	0.59
49:S2:663:C:C2	49:S2:664:A:C8	2.91	0.59
49:S2:816:A:C2	49:S2:817:G:H1'	2.38	0.59
49:S2:910:G:C4	49:S2:911:C:C5	2.91	0.59
49:S2:1018:U:O2	49:S2:1018:U:H2'	2.01	0.59
49:S2:1039:C:H3'	49:S2:1040:G:H5''	1.85	0.59
49:S2:1292:C:O4'	81:Sf:148:TYR:CA	2.51	0.59
49:S2:1414:A:N1	49:S2:1415:C:C4	2.71	0.59
49:S2:1414:A:N1	49:S2:1415:C:C5	2.70	0.59
63:SN:114:ARG:O	63:SN:118:ILE:HD12	2.03	0.59
1:5:90:G:C2	1:5:95:G:N1	2.71	0.59
1:5:167:C:N3	1:5:168:C:C5	2.71	0.59
1:5:456:C:O2	1:5:457:G:C8	2.55	0.59
1:5:1479:G:O2'	1:5:1480:C:H5'	2.03	0.59
1:5:1556:C:N3	1:5:1557:C:H5	1.98	0.59
1:5:1674:C:C2	1:5:1675:C:C6	2.91	0.59
1:5:2405:G:HO2'	1:5:2791:C:HO2'	1.51	0.59
1:5:3611:A:C2	1:5:5016:A:C8	2.91	0.59
1:5:3663:A:N3	1:5:3663:A:H2'	2.18	0.59
1:5:3791:C:N3	1:5:3802:U:H6	1.99	0.59
1:5:4531:U:H5'	1:5:4531:U:C6	2.38	0.59
1:5:4539:U:N3	1:5:4540:C:C5	2.71	0.59
1:5:4874:A:H1'	18:O:175:MET:SD	2.42	0.59
1:5:5038:A:OP1	26:W:61:LYS:NZ	2.34	0.59
3:8:70:G:N1	3:8:87:G:C2	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:55:HIS:CE1	5:B:369:ASP:OD2	2.56	0.59
5:B:302:ASN:HD22	5:B:330:PHE:HE2	1.51	0.59
9:F:58:HIS:O	9:F:61:LYS:N	2.36	0.59
9:F:83:PHE:HE2	22:S:13:VAL:HG21	1.67	0.59
9:F:244:ARG:HG2	9:F:244:ARG:HH11	1.66	0.59
14:K:161:GLU:C	14:K:163:PRO:CD	2.76	0.59
29:Z:97:ASN:OD1	29:Z:98:LYS:N	2.36	0.59
46:q:28:PHE:CE2	46:q:99:ARG:NH1	2.70	0.59
48:4:267:ASP:C	48:4:267:ASP:OD1	2.45	0.59
48:4:402:VAL:HG22	48:4:403:PRO:N	2.16	0.59
48:4:694:GLU:CG	48:4:844:LEU:HD13	2.29	0.59
49:S2:122:G:C6	49:S2:123:G:N7	2.71	0.59
49:S2:750:C:C2	49:S2:751:G:C8	2.91	0.59
49:S2:1123:C:OP1	51:SB:205:TYR:OH	2.20	0.59
49:S2:1141:G:H5'	49:S2:1142:G:OP2	2.03	0.59
49:S2:1221:G:O2'	49:S2:1222:G:H5'	2.03	0.59
49:S2:1272:C:C2	49:S2:1273:C:C6	2.91	0.59
49:S2:1286:G:C2	49:S2:1312:G:C6	2.91	0.59
49:S2:1408:U:C3'	49:S2:1409:A:C8	2.85	0.59
49:S2:1436:C:N3	49:S2:1438:A:C8	2.71	0.59
50:SA:12:GLU:OE1	67:SR:111:PHE:HD1	1.85	0.59
52:SC:170:TRP:CZ3	72:SW:97:ARG:HD3	2.38	0.59
72:SW:37:PHE:CD1	72:SW:103:VAL:HG11	2.37	0.59
1:5:405:U:O4	1:5:407:A:OP2	2.21	0.58
1:5:1170:G:C2	1:5:1171:G:C8	2.91	0.58
1:5:1233:G:C2	1:5:1234:G:C8	2.90	0.58
1:5:1751:A:C5	1:5:1752:G:C8	2.91	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
1:5:2313:A:O2'	1:5:2314:G:OP1	2.17	0.58
1:5:2481:G:C6	1:5:2482:C:C4	2.91	0.58
1:5:2560:C:C4	1:5:2561:C:C5	2.91	0.58
1:5:2604:C:C2	1:5:2605:G:H8	2.10	0.58
1:5:2751:G:C2	1:5:2752:G:C8	2.90	0.58
1:5:4099:G:C4	1:5:4100:C:C6	2.91	0.58
1:5:4236:G:H2'	1:5:4237:C:C6	2.38	0.58
1:5:4734:A:C4	1:5:4735:G:C8	2.91	0.58
1:5:5044:A:O2'	1:5:5045:G:H5'	2.03	0.58
5:B:222:VAL:HG11	5:B:274:TYR:CZ	2.38	0.58
15:L:179:PHE:CE2	30:a:131:ARG:HB2	2.38	0.58
22:S:13:VAL:HG22	22:S:63:TYR:HB3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:V:115:SER:HA	25:V:135:ASN:HD21	1.68	0.58
27:X:117:TYR:N	27:X:117:TYR:CD1	2.69	0.58
46:q:53:VAL:HA	46:q:89:VAL:HA	1.85	0.58
46:q:80:PRO:CA	46:q:81:HIS:ND1	2.66	0.58
48:4:132:VAL:HG23	48:4:133:SER:N	2.17	0.58
48:4:154:VAL:CA	48:4:205:ILE:HD11	2.33	0.58
48:4:585:GLU:HG3	48:4:737:GLN:HE22	1.60	0.58
48:4:590:LEU:HD21	48:4:605:LYS:HE3	1.85	0.58
48:4:647:ARG:HH21	48:4:647:ARG:CG	2.10	0.58
48:4:700:VAL:HG12	48:4:702:PHE:CE2	2.38	0.58
49:S2:142:C:N3	56:SG:185:LEU:HD22	2.17	0.58
49:S2:447:A:N3	49:S2:449:A:H1'	2.17	0.58
49:S2:841:G:C2	49:S2:842:C:C6	2.90	0.58
49:S2:1039:C:N3	49:S2:1040:G:N7	2.50	0.58
49:S2:1223:A:O2'	49:S2:1651:A:C5'	2.50	0.58
61:SL:13:GLN:HB2	61:SL:16:ILE:HD12	1.85	0.58
1:5:153:G:N1	1:5:154:G:C5	2.72	0.58
1:5:235:A:N6	1:5:238:C:C4	2.71	0.58
1:5:247:G:N3	1:5:248:C:C6	2.71	0.58
1:5:661:C:C4	1:5:662:C:C4	2.91	0.58
1:5:1203:G:C2	1:5:1204:C:C6	2.90	0.58
1:5:1213:G:O6	1:5:1215:C:C5	2.55	0.58
1:5:1265:G:N2	1:5:2111:G:O3'	2.37	0.58
1:5:1266:G:C5'	1:5:2112:G:C2	2.84	0.58
1:5:1299:G:C2	1:5:1300:G:C8	2.91	0.58
1:5:1368:A:O2'	1:5:1369:C:OP1	2.19	0.58
1:5:1984:A:N6	1:5:2011:C:C2'	2.65	0.58
1:5:2265:G:H1'	1:5:2266:C:OP1	2.03	0.58
1:5:3909:C:N3	1:5:3910:C:H5	1.92	0.58
1:5:4076:G:H21	10:G:74:LEU:CG	2.13	0.58
1:5:4166:G:N3	1:5:4167:G:C8	2.69	0.58
1:5:4414:A:N3	1:5:4427:G:N2	2.51	0.58
1:5:4416:G:N3	1:5:4417:C:C6	2.70	0.58
1:5:4660:G:C2	1:5:4661:G:N7	2.71	0.58
1:5:4881:U:O2'	1:5:4882:U:O4'	2.18	0.58
1:5:5021:C:C2	1:5:5022:U:C5	2.91	0.58
1:5:5047:C:C6	1:5:5050:C:H6	2.20	0.58
3:8:10:G:N1	3:8:11:C:C2	2.71	0.58
5:B:103:LYS:HD3	5:B:149:ASP:OD1	2.02	0.58
5:B:307:TYR:CD2	5:B:366:LYS:HD2	2.38	0.58
12:I:146:GLU:N	12:I:146:GLU:OE2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:179:PHE:CD2	30:a:131:ARG:HB2	2.39	0.58
17:N:11:TRP:CE3	17:N:19:MET:HE2	2.38	0.58
48:4:177:THR:O	48:4:181:ILE:HG13	2.03	0.58
48:4:254:GLU:HA	48:4:257:MET:HE3	1.85	0.58
48:4:430:MET:HE2	48:4:486:THR:CG2	2.30	0.58
48:4:477:GLN:NE2	48:4:477:GLN:H	2.01	0.58
49:S2:70:G:N2	49:S2:80:G:N3	2.51	0.58
49:S2:71:G:O2'	49:S2:79:A:N6	2.36	0.58
49:S2:105:U:O2	49:S2:105:U:H2'	2.03	0.58
49:S2:143:U:N3	49:S2:315:C:OP1	2.33	0.58
49:S2:340:C:C2	49:S2:341:C:C4	2.90	0.58
49:S2:449:A:C5	49:S2:452:G:O6	2.56	0.58
49:S2:676:C:C4	49:S2:677:G:C5	2.91	0.58
49:S2:832:G:C2	49:S2:843:C:N3	2.71	0.58
49:S2:958:G:O2'	49:S2:959:G:C4'	2.51	0.58
49:S2:1097:G:H4'	50:SA:32:PHE:CD2	2.38	0.58
49:S2:1123:C:C2'	51:SB:148:ASN:HD21	2.17	0.58
49:S2:1431:G:N3	49:S2:1432:U:H1'	2.18	0.58
49:S2:1453:C:N4	49:S2:1455:A:N9	2.51	0.58
49:S2:1605:G:H3'	49:S2:1606:G:O4'	2.04	0.58
49:S2:1793:A:C2	49:S2:1794:C:C4	2.90	0.58
51:SB:191:ASP:OD1	51:SB:191:ASP:N	2.36	0.58
54:SE:181:CYS:SG	54:SE:195:ILE:HG13	2.43	0.58
67:SR:33:ARG:HG2	67:SR:36:GLU:HG2	1.85	0.58
82:Sg:119:GLN:HE22	82:Sg:131:LEU:CD2	2.16	0.58
1:5:212:A:C2	1:5:213:G:C5	2.91	0.58
1:5:218:A:N7	6:C:181:LYS:HG2	2.19	0.58
1:5:423:G:C5	1:5:424:U:C5	2.91	0.58
1:5:436:C:H4'	34:e:26:ASP:OD2	2.03	0.58
1:5:936:C:O2'	16:M:46:ARG:CZ	2.50	0.58
1:5:962:C:P	1:5:2264:C:N3	2.76	0.58
1:5:1301:C:O4'	1:5:1301:C:O2	2.20	0.58
1:5:1309:C:C2	1:5:1310:C:C6	2.90	0.58
1:5:1507:C:N3	1:5:1508:A:C8	2.70	0.58
1:5:1572:U:C5'	21:R:95:TRP:HZ2	2.16	0.58
1:5:1583:A:H1'	1:5:2396:A:C6	2.38	0.58
1:5:1813:U:H4'	31:b:49:HIS:O	2.02	0.58
1:5:2078:C:O2	1:5:2078:C:C2'	2.51	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
1:5:4724:A:C4	1:5:4725:C:C6	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5047:C:O2	1:5:5048:A:C6	2.53	0.58
3:8:70:G:C5'	28:Y:27:ARG:HH11	2.16	0.58
8:E:218:LEU:HD21	8:E:230:ASP:OD2	2.03	0.58
14:K:94:LYS:HG2	14:K:96:LYS:HG3	1.76	0.58
16:M:104:MET:HE2	18:O:199:HIS:HB3	1.84	0.58
20:Q:146:ARG:HH11	20:Q:146:ARG:CB	2.16	0.58
22:S:80:ILE:HD11	22:S:126:ILE:HD12	1.85	0.58
25:V:134:SER:HG	49:S2:465:A:H2	0.66	0.58
30:a:129:PHE:CE2	30:a:144:CYS:HB3	2.37	0.58
43:n:5:TRP:HD1	49:S2:1852:C:OP2	1.85	0.58
48:4:503:PRO:HA	48:4:549:ALA:HA	1.85	0.58
48:4:672:LEU:HA	48:4:675:ILE:HD11	1.81	0.58
49:S2:157:U:H4'	56:SG:59:GLN:C	2.28	0.58
49:S2:210:U:C2	49:S2:211:G:C8	2.91	0.58
49:S2:378:U:O4	49:S2:379:C:N4	2.37	0.58
49:S2:926:A:C2	49:S2:927:C:N1	2.72	0.58
49:S2:1046:U:C4	49:S2:1047:C:C4	2.90	0.58
49:S2:1126:G:C2	49:S2:1127:C:C5	2.91	0.58
49:S2:1181:A:O2'	49:S2:1182:A:C8	2.43	0.58
49:S2:1225:U:C4	49:S2:1226:G:N7	2.72	0.58
49:S2:1246:A:O2'	70:SU:72:GLU:OE1	2.21	0.58
49:S2:1293:A:N3	81:Sf:150:PHE:C	2.62	0.58
49:S2:1412:C:C2'	49:S2:1413:G:H8	2.16	0.58
49:S2:1545:A:C5	49:S2:1588:A:C5	2.90	0.58
49:S2:1609:C:O2	49:S2:1610:G:N7	2.34	0.58
61:SL:61:PRO:HD3	61:SL:141:ASN:HD21	1.67	0.58
82:Sg:131:LEU:HD22	82:Sg:139:LYS:HB3	1.84	0.58
1:5:490:C:H3'	1:5:491:G:H8	1.68	0.58
1:5:494:U:C4	1:5:495:C:C5	2.91	0.58
1:5:916:C:N4	1:5:917:A:C5	2.70	0.58
1:5:919:C:C4	1:5:920:C:C4	2.92	0.58
1:5:976:G:C2	1:5:977:C:N1	2.71	0.58
1:5:1070:G:C4	1:5:1071:C:C6	2.90	0.58
1:5:1177:U:H4'	7:D:282:GLN:HB3	1.85	0.58
1:5:1215:C:C4	1:5:1216:C:C5	2.91	0.58
1:5:1245:C:H1'	1:5:2111:G:H2'	1.86	0.58
1:5:1326:A:P	1:5:3901:A:H61	2.25	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
1:5:1441:C:C4	1:5:1442:C:C5	2.90	0.58
1:5:1489:G:N3	1:5:1489:G:H2'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1492:G:N1	1:5:1493:G:C5	2.71	0.58
1:5:1725:U:C6	1:5:1725:U:H5''	2.39	0.58
1:5:1755:C:C2	7:D:3:PHE:HB2	2.38	0.58
1:5:1894:C:O2'	1:5:1895:G:H5'	2.03	0.58
1:5:1956:A:H2	1:5:2027:U:O2	1.87	0.58
1:5:1965:G:C5	1:5:1966:C:N4	2.70	0.58
1:5:1984:A:H62	1:5:2011:C:C1'	2.15	0.58
1:5:2056:G:N1	1:5:2058:G:C6	2.71	0.58
1:5:2128:G:H2'	1:5:2129:C:O4'	2.04	0.58
1:5:2261:G:C2'	1:5:2262:G:C8	2.86	0.58
1:5:2268:A:H4'	1:5:2269:C:H5'	1.85	0.58
1:5:2270:G:C6	1:5:2271:C:N4	2.72	0.58
1:5:2369:U:C5	1:5:4656:A:C2	2.92	0.58
1:5:2417:A:N1	1:5:2418:A:N7	2.51	0.58
1:5:2459:G:O6	17:N:105:ARG:NE	2.36	0.58
1:5:2468:U:OP2	1:5:2506:G:N2	2.36	0.58
1:5:2515:G:O6	1:5:2516:G:C5	2.57	0.58
1:5:2595:C:C2	1:5:2596:G:C8	2.90	0.58
1:5:2783:A:C4	1:5:2784:C:C5	2.91	0.58
1:5:2851:G:O2'	1:5:3841:C:C4'	2.51	0.58
1:5:3590:G:C2	1:5:3591:C:N1	2.71	0.58
1:5:3665:G:N2	1:5:3685:C:O2'	2.36	0.58
1:5:3759:A:C2	49:S2:1709:G:O4'	2.56	0.58
1:5:3800:A:C2	1:5:4496:A:C1'	2.87	0.58
1:5:4098:A:N1	1:5:4099:G:N7	2.51	0.58
1:5:4480:A:C2	1:5:4481:U:O4'	2.57	0.58
1:5:4977:A:C2	1:5:4978:G:C4	2.92	0.58
1:5:4982:A:N6	1:5:4983:C:C5	2.70	0.58
2:7:21:G:H8	2:7:21:G:H5''	1.68	0.58
6:C:210:ILE:HG21	6:C:252:TRP:HZ3	1.67	0.58
8:E:184:ARG:HD3	8:E:213:PHE:HB2	1.83	0.58
9:F:100:ILE:C	9:F:101:ASN:OD1	2.46	0.58
10:G:261:LEU:HD23	10:G:264:LYS:HB3	1.86	0.58
13:J:105:PHE:CE1	13:J:132:VAL:CB	2.81	0.58
13:J:154:LYS:O	13:J:155:HIS:HB2	2.04	0.58
14:K:88:PRO:HB2	14:K:89:PRO:HB3	1.85	0.58
14:K:110:VAL:HG12	14:K:110:VAL:O	2.04	0.58
17:N:6:TYR:CZ	38:i:40:VAL:HG22	2.37	0.58
30:a:127:LYS:HG2	30:a:128:PHE:CE2	2.38	0.58
46:q:6:ARG:HG2	46:q:10:LYS:HE3	0.62	0.58
46:q:119:CYS:SG	46:q:120:GLU:N	2.76	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:147:ILE:HG23	46:q:150:GLY:O	2.03	0.58
48:4:101:ASN:OD1	48:4:469:ILE:CD1	2.51	0.58
48:4:155:LEU:N	48:4:205:ILE:HD11	2.17	0.58
48:4:713:ALA:O	48:4:716:ARG:N	2.37	0.58
49:S2:83:A:N1	49:S2:84:A:H1'	2.18	0.58
49:S2:105:U:N3	49:S2:106:C:C6	2.71	0.58
49:S2:166:A:H2'	49:S2:167:G:H5''	1.85	0.58
49:S2:171:A:N7	49:S2:173:A:C5	2.71	0.58
49:S2:316:G:C6	49:S2:317:C:N4	2.71	0.58
49:S2:1151:G:N1	49:S2:1152:U:C5	2.71	0.58
49:S2:1281:G:N2	49:S2:1315:U:O4	2.32	0.58
49:S2:1750:C:C4	49:S2:1751:C:C6	2.91	0.58
49:S2:1782:G:N2	49:S2:1784:G:N7	2.49	0.58
49:S2:1833:C:OP2	49:S2:1836:G:O2'	2.13	0.58
59:SJ:32:ILE:HD11	59:SJ:40:LYS:HD3	1.85	0.58
61:SL:117:PHE:CZ	61:SL:144:LYS:HA	2.38	0.58
1:5:70:A:C2	1:5:4355:G:H1'	2.37	0.58
1:5:174:C:C2	1:5:263:G:N2	2.71	0.58
1:5:910:G:C6	1:5:911:U:C5	2.91	0.58
1:5:1206:C:C2	1:5:1207:C:C5	2.92	0.58
1:5:1520:C:H4'	6:C:94:ASN:HD21	1.68	0.58
1:5:1918:U:C2	1:5:1920:C:C5	2.92	0.58
1:5:1936:C:C4	2:7:84:U:H5	2.20	0.58
1:5:2128:G:C6	1:5:2129:C:C4	2.91	0.58
1:5:2261:G:O2'	1:5:2262:G:O4'	2.20	0.58
1:5:2319:C:H41	34:e:58:ILE:HD12	1.68	0.58
1:5:2376:A:H2'	1:5:2377:C:O4'	2.03	0.58
1:5:2497:C:N3	1:5:2498:C:C4	2.70	0.58
1:5:3796:U:C2	1:5:3797:C:C5	2.91	0.58
1:5:3812:C:OP1	1:5:3813:A:O2'	2.21	0.58
1:5:4287:G:C6	1:5:4288:C:N4	2.71	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
2:7:28:C:C4	2:7:29:C:C6	2.92	0.58
2:7:58:A:C6	2:7:59:G:N7	2.72	0.58
3:8:97:A:C4	3:8:98:C:C5	2.91	0.58
13:J:99:PHE:CE2	13:J:105:PHE:HB2	2.36	0.58
25:V:14:PHE:CE2	25:V:91:LYS:HG3	2.38	0.58
28:Y:10:ASP:O	28:Y:11:ARG:C	2.45	0.58
30:a:127:LYS:CG	30:a:128:PHE:HE2	2.16	0.58
48:4:58:ASP:CB	48:4:69:THR:HA	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:110:ASP:N	48:4:110:ASP:OD1	2.35	0.58
48:4:744:ILE:HD13	48:4:815:ASP:CB	2.34	0.58
48:4:744:ILE:CG2	48:4:745:TYR:CD2	2.86	0.58
49:S2:66:G:C6	49:S2:68:A:C8	2.91	0.58
49:S2:343:A:C6	49:S2:344:U:C5	2.92	0.58
49:S2:495:U:OP1	54:SE:49:ARG:NH1	2.31	0.58
49:S2:525:A:H62	49:S2:588:G:N2	2.01	0.58
49:S2:620:G:N3	49:S2:620:G:O5'	2.36	0.58
49:S2:980:A:H2'	49:S2:981:A:H8	1.67	0.58
49:S2:993:G:N2	49:S2:994:C:H1'	2.18	0.58
49:S2:1092:G:C2	49:S2:1093:A:C8	2.92	0.58
49:S2:1203:G:C6	49:S2:1204:A:C6	2.92	0.58
49:S2:1526:G:C5	49:S2:1527:C:C5	2.91	0.58
49:S2:1756:C:H2'	49:S2:1756:C:O2	2.01	0.58
60:SK:64:TRP:CH2	79:Sd:23:VAL:HG22	2.37	0.58
62:SM:32:ALA:HB2	62:SM:112:LYS:HD3	1.86	0.58
74:SY:27:VAL:HG12	74:SY:28:LEU:O	2.03	0.58
82:Sg:191:HIS:CG	82:Sg:195:LEU:HD21	2.38	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:C5	2.91	0.58
1:5:488:G:C2	1:5:489:C:N1	2.72	0.58
1:5:1566:C:O2'	1:5:1567:U:C4'	2.52	0.58
1:5:1617:G:N3	1:5:2513:A:C2	2.72	0.58
1:5:1618:G:C2	1:5:1619:G:N7	2.71	0.58
1:5:1758:G:N1	1:5:1759:G:C5	2.72	0.58
1:5:1806:G:C2	1:5:1807:C:C6	2.92	0.58
1:5:1979:A:H3'	1:5:1980:U:C5'	2.33	0.58
1:5:2438:A:N6	1:5:2441:C:C4	2.71	0.58
1:5:3654:G:O2'	1:5:3693:U:OP1	2.20	0.58
1:5:3892:U:O2'	19:P:80:GLN:NE2	2.36	0.58
1:5:4539:U:C2	1:5:4540:C:C6	2.92	0.58
1:5:4608:G:C6	1:5:4609:G:C4	2.92	0.58
1:5:4976:U:C4	5:B:342:LYS:HD2	2.39	0.58
1:5:5052:C:C4	1:5:5053:U:C5	2.91	0.58
3:8:5:U:OP2	19:P:62:ARG:NH1	2.36	0.58
3:8:73:U:C5	3:8:74:U:C5	2.91	0.58
3:8:144:U:C2	3:8:145:C:C5	2.90	0.58
10:G:264:LYS:NZ	10:G:265:LEU:HD21	2.15	0.58
13:J:107:PHE:CE1	13:J:130:PHE:HB2	2.38	0.58
32:c:78:ASN:CG	32:c:79:ILE:N	2.61	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:o:26:TYR:C	44:o:26:TYR:CD1	2.81	0.58
46:q:120:GLU:OE2	46:q:159:GLN:NE2	2.32	0.58
48:4:552:LEU:HD12	48:4:555:GLU:OE1	2.04	0.58
49:S2:444:G:N1	49:S2:446:G:OP2	2.36	0.58
49:S2:647:U:N3	49:S2:648:A:N7	2.52	0.58
49:S2:648:A:N3	49:S2:649:U:C6	2.71	0.58
49:S2:921:G:C6	72:SW:28:ARG:HG3	2.38	0.58
49:S2:1036:A:C5	49:S2:1037:G:C8	2.91	0.58
49:S2:1099:G:C6	49:S2:1100:A:C8	2.92	0.58
49:S2:1228:A:C2	49:S2:1531:A:C2	2.91	0.58
49:S2:1399:C:C2	49:S2:1400:U:C5	2.92	0.58
49:S2:1500:G:H3'	49:S2:1501:C:C6	2.39	0.58
49:S2:1527:C:H2'	49:S2:1527:C:O2	2.01	0.58
49:S2:1849:G:O2'	49:S2:1850:A:H5'	2.03	0.58
55:SF:141:VAL:HG21	55:SF:146:ARG:HG3	1.84	0.58
59:SJ:111:GLN:NE2	59:SJ:127:ARG:HB2	2.19	0.58
64:SO:139:SER:O	64:SO:140:THR:O	2.21	0.58
66:SQ:138:ARG:HG3	66:SQ:138:ARG:HH11	1.68	0.58
82:Sg:245:ARG:NH1	82:Sg:295:GLY:O	2.34	0.58
1:5:909:A:N1	1:5:910:G:N7	2.51	0.58
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
1:5:1326:A:H2'	1:5:1327:C:C6	2.38	0.58
1:5:1351:G:OP1	6:C:33:ARG:NH1	2.36	0.58
1:5:1441:C:N3	1:5:1442:C:C5	2.72	0.58
1:5:1543:G:C6	1:5:1544:G:N7	2.72	0.58
1:5:1582:U:H5	1:5:1610:C:O2	1.87	0.58
1:5:1616:U:O2	1:5:1617:G:C8	2.56	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
1:5:1755:C:H41	1:5:1778:C:C4'	2.16	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'	2.04	0.58
1:5:4086:G:H4'	10:G:54:PHE:HB3	1.86	0.58
1:5:4137:C:H2'	1:5:4138:C:H6	1.67	0.58
1:5:4315:A:N1	1:5:4316:G:N7	2.52	0.58
1:5:4404:U:O4	1:5:4436:U:C4	2.56	0.58
1:5:4454:G:O2'	1:5:4500:U:O2'	2.18	0.58
1:5:4537:C:O2	1:5:4537:C:C2'	2.51	0.58
1:5:4999:G:N3	1:5:5000:G:C8	2.72	0.58
3:8:53:G:C6	3:8:54:C:C4	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:264:PHE:HD2	18:O:66:PRO:CD	2.16	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
21:R:117:ARG:HB2	21:R:117:ARG:CZ	2.33	0.58
22:S:8:ARG:HB2	22:S:10:TYR:HE2	1.66	0.58
22:S:12:VAL:HG13	22:S:64:CYS:HB2	1.86	0.58
44:o:37:GLY:HA2	44:o:40:ARG:HH22	1.67	0.58
46:q:133:GLU:O	46:q:152:ILE:HD12	2.01	0.58
46:q:133:GLU:HG3	46:q:134:LYS:N	2.18	0.58
48:4:671:TYR:HB3	48:4:675:ILE:HG23	1.86	0.58
48:4:685:TRP:HZ3	48:4:723:PRO:CD	2.13	0.58
48:4:691:ALA:CB	48:4:730:TYR:CA	2.76	0.58
48:4:826:ASP:OD1	48:4:828:SER:N	2.37	0.58
49:S2:186:C:C2	49:S2:187:G:C8	2.92	0.58
49:S2:321:C:H2'	49:S2:322:C:H6	1.68	0.58
49:S2:499:G:C6	49:S2:501:C:H1'	2.39	0.58
49:S2:501:C:C2'	49:S2:501:C:O2	2.52	0.58
49:S2:635:G:C5	49:S2:636:C:C5	2.91	0.58
49:S2:916:A:C2	63:SN:73:ARG:HD3	2.38	0.58
49:S2:943:U:H2'	49:S2:944:A:O4'	2.02	0.58
49:S2:951:C:O2	49:S2:952:G:C8	2.57	0.58
49:S2:1100:A:C2	49:S2:1101:U:N1	2.70	0.58
49:S2:1136:U:O2'	49:S2:1137:U:H5'	2.03	0.58
49:S2:1402:A:N3	49:S2:1405:A:C6	2.71	0.58
49:S2:1409:A:N3	49:S2:1410:C:C6	2.71	0.58
49:S2:1571:G:C5	49:S2:1572:C:C5	2.92	0.58
49:S2:1728:U:N3	49:S2:1729:U:C6	2.72	0.58
53:SD:6:SER:O	53:SD:10:LYS:N	2.34	0.58
53:SD:157:MET:CG	53:SD:159:HIS:HE1	2.16	0.58
54:SE:11:ARG:O	54:SE:12:VAL:HB	2.04	0.58
55:SF:110:GLN:NE2	55:SF:110:GLN:HA	2.19	0.58
68:SS:123:LEU:O	68:SS:127:TRP:CD1	2.57	0.58
1:5:83:C:O5'	1:5:84:A:H2'	2.04	0.58
1:5:218:A:C1'	1:5:219:G:H5''	2.33	0.58
1:5:1491:A:C2	1:5:1492:G:C5	2.92	0.58
1:5:1963:C:N4	1:5:1964:A:N6	2.52	0.58
1:5:2076:G:C6	1:5:2077:C:C6	2.92	0.58
1:5:2081:C:O2'	1:5:2082:G:H5'	2.03	0.58
1:5:2085:G:C2	1:5:2273:G:C6	2.92	0.58
1:5:2089:G:C6	1:5:2262:G:O2'	2.57	0.58
1:5:2126:G:H1'	1:5:2127:C:C5	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3760:A:H2'	49:S2:1826:G:O2'	2.03	0.58
1:5:3859:G:N3	1:5:3859:G:H2'	2.18	0.58
1:5:3868:G:H22	1:5:3899:G:N2	2.01	0.58
1:5:3909:C:C2	1:5:3910:C:C6	2.91	0.58
1:5:4369:A:N1	1:5:4370:G:N7	2.51	0.58
1:5:4626:A:H5'	5:B:53:MET:HE3	1.85	0.58
2:7:93:G:C4	2:7:94:C:C6	2.92	0.58
8:E:43:ASN:ND2	8:E:44:PRO:O	2.37	0.58
9:F:101:ASN:OD1	9:F:101:ASN:N	2.35	0.58
12:I:171:TRP:HB3	12:I:181:PHE:CE2	2.38	0.58
25:V:14:PHE:CZ	25:V:91:LYS:HD2	2.38	0.58
25:V:97:TYR:CE2	26:W:21:TYR:HD1	2.22	0.58
29:Z:74:VAL:HG23	29:Z:101:PHE:CE2	2.38	0.58
31:b:27:GLN:N	31:b:27:GLN:HE21	2.02	0.58
38:i:29:ARG:HG3	38:i:29:ARG:O	2.04	0.58
47:r:33:LYS:HD2	47:r:40:TYR:HE2	1.69	0.58
49:S2:10:G:C6	49:S2:11:A:N7	2.72	0.58
49:S2:144:U:C2	49:S2:145:G:C8	2.92	0.58
49:S2:413:G:C6	49:S2:425:G:C2	2.91	0.58
49:S2:665:G:C2	49:S2:671:A:N7	2.72	0.58
49:S2:794:A:C6	49:S2:795:A:C6	2.91	0.58
49:S2:1045:U:O4	49:S2:1046:U:C4	2.57	0.58
49:S2:1053:C:O2	49:S2:1053:C:H2'	2.03	0.58
49:S2:1232:U:C2	49:S2:1233:G:C8	2.91	0.58
49:S2:1280:G:H5'	62:SM:96:ARG:HG2	1.86	0.58
49:S2:1366:G:C2	49:S2:1374:C:N3	2.71	0.58
49:S2:1402:A:C4	49:S2:1405:A:N6	2.72	0.58
49:S2:1596:U:O2	49:S2:1596:U:H2'	2.03	0.58
49:S2:1605:G:H2'	49:S2:1606:G:C1'	2.34	0.58
49:S2:1842:C:C2'	49:S2:1843:G:O5'	2.52	0.58
51:SB:150:ILE:HD11	67:SR:128:PHE:HA	1.86	0.58
52:SC:230:THR:HG23	52:SC:236:PHE:CE2	2.38	0.58
54:SE:54:TYR:CD1	74:SY:17:LEU:HD11	2.39	0.58
1:5:301:G:C5	1:5:302:C:C5	2.92	0.58
1:5:490:C:C2'	1:5:491:G:C8	2.87	0.58
1:5:731:G:C5	1:5:732:A:C8	2.91	0.58
1:5:964:A:H8	1:5:964:A:H5''	1.66	0.58
1:5:985:C:N3	1:5:986:C:C5	2.72	0.58
1:5:1254:A:H2'	1:5:1256:G:N7	2.19	0.58
1:5:1570:G:C6	1:5:1571:G:N7	2.71	0.58
1:5:1755:C:H5	1:5:1778:C:HI'	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1866:U:C4	1:5:4405:G:C1'	2.87	0.58
1:5:1948:G:C5	1:5:1949:U:C5	2.92	0.58
1:5:2089:G:C2	1:5:2263:A:C6	2.92	0.58
1:5:2347:A:C4	1:5:2348:G:C6	2.91	0.58
1:5:2480:G:C4	1:5:2481:G:C8	2.92	0.58
1:5:2578:G:C2	1:5:2579:G:C8	2.92	0.58
1:5:2796:G:H4'	1:5:2797:C:OP2	2.04	0.58
1:5:3698:G:N1	1:5:3699:C:C4	2.72	0.58
1:5:5007:A:N7	1:5:5040:U:O4	2.36	0.58
2:7:30:C:C2	2:7:48:G:C2	2.91	0.58
3:8:94:G:C6	39:j:79:ARG:HD2	2.39	0.58
4:A:186:TYR:N	4:A:196:TRP:HZ3	2.01	0.58
5:B:17:LEU:HD13	5:B:17:LEU:C	2.28	0.58
14:K:47:ALA:CB	14:K:72:GLU:CD	2.68	0.58
14:K:65:GLN:O	14:K:66:ASN:OD1	2.22	0.58
14:K:105:THR:O	14:K:106:PHE:CE1	2.55	0.58
22:S:95:ARG:NH1	22:S:97:TYR:HH	1.99	0.58
26:W:50:ASN:HA	26:W:55:TYR:CD2	2.39	0.58
46:q:50:LYS:HG3	46:q:51:ALA:H	1.69	0.58
47:r:45:HIS:CE1	47:r:103:ARG:NH1	2.71	0.58
48:4:24:VAL:HG21	48:4:32:LYS:HG3	1.84	0.58
48:4:111:PHE:HE1	48:4:809:PHE:CE1	2.22	0.58
48:4:602:LEU:HD22	48:4:728:CYS:SG	2.44	0.58
49:S2:81:U:C5	49:S2:82:G:N7	2.72	0.58
49:S2:458:A:C2	49:S2:459:C:C1'	2.87	0.58
49:S2:477:G:N3	49:S2:478:G:C8	2.72	0.58
49:S2:663:C:C4	49:S2:664:A:N7	2.72	0.58
49:S2:926:A:N3	49:S2:927:C:C6	2.72	0.58
49:S2:949:G:C5	49:S2:950:C:C5	2.91	0.58
49:S2:1045:U:C4	49:S2:1046:U:C5	2.92	0.58
49:S2:1203:G:C6	49:S2:1204:A:C5	2.92	0.58
49:S2:1287:A:N1	49:S2:1314:U:C2	2.72	0.58
49:S2:1352:G:O4'	49:S2:1378:A:C2	2.57	0.58
49:S2:1382:A:C2	49:S2:1383:A:C8	2.91	0.58
49:S2:1565:C:C2	49:S2:1571:G:N2	2.71	0.58
49:S2:1709:G:N1	49:S2:1710:C:C5	2.71	0.58
65:SP:43:ARG:HD3	65:SP:47:ARG:HG3	1.86	0.58
1:5:88:A:C6	1:5:97:G:N3	2.71	0.58
1:5:910:G:C5	1:5:911:U:C5	2.92	0.58
1:5:1212:G:N3	1:5:1213:G:C8	2.72	0.58
1:5:1676:C:O2'	1:5:3914:U:C4	2.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1777:C:C2	1:5:1778:C:C6	2.92	0.58
1:5:1811:G:C2	1:5:1812:C:C4	2.92	0.58
1:5:1887:G:C2	1:5:1890:G:O6	2.57	0.58
1:5:1926:C:O2	1:5:1927:U:C6	2.57	0.58
1:5:2263:A:OP2	47:r:39:ARG:NH2	2.36	0.58
1:5:2365:C:O2	1:5:2829:U:C5	2.57	0.58
1:5:2844:A:O2'	1:5:4631:G:H4'	2.04	0.58
1:5:3907:G:C2	1:5:3909:C:C5	2.92	0.58
1:5:4269:G:C4	1:5:4270:C:C6	2.91	0.58
1:5:4283:G:C4	1:5:4284:C:C5	2.91	0.58
1:5:4314:C:C4	1:5:4315:A:N7	2.72	0.58
1:5:4332:C:O2	1:5:4332:C:C2'	2.47	0.58
1:5:4497:U:C5	1:5:4498:U:C6	2.92	0.58
1:5:4735:G:C2	1:5:4736:C:C5	2.92	0.58
2:7:17:C:O2	2:7:18:C:C6	2.56	0.58
2:7:17:C:C4	2:7:18:C:C5	2.92	0.58
3:8:130:C:N3	3:8:131:G:N7	2.51	0.58
3:8:131:G:C2	3:8:132:G:C8	2.92	0.58
4:A:186:TYR:HA	4:A:196:TRP:CE3	2.39	0.58
9:F:239:GLU:C	9:F:241:GLN:H	2.12	0.58
13:J:15:LEU:HB3	13:J:165:TRP:HD1	1.69	0.58
15:L:126:LEU:HD11	37:h:117:ARG:HG3	1.86	0.58
33:d:24:GLU:HG2	33:d:120:VAL:HB	1.84	0.58
48:4:727:ARG:HG3	48:4:727:ARG:HH11	1.69	0.58
48:4:727:ARG:NH2	48:4:853:ASN:O	2.37	0.58
48:4:759:ILE:HG23	48:4:760:TYR:N	2.19	0.58
49:S2:20:G:P	49:S2:620:G:H8	2.27	0.58
49:S2:340:C:H2'	49:S2:341:C:O4'	2.04	0.58
49:S2:579:C:N4	49:S2:580:U:C5	2.72	0.58
49:S2:1189:A:C2	49:S2:1190:A:C5	2.92	0.58
49:S2:1202:U:C4	49:S2:1203:G:N7	2.72	0.58
49:S2:1291:A:P	81:Sf:146:LEU:HG	2.43	0.58
49:S2:1294:G:C8	81:Sf:151:ASN:CA	2.87	0.58
49:S2:1325:G:N2	49:S2:1327:G:C4	2.72	0.58
49:S2:1453:C:H1'	67:SR:48:ASN:ND2	2.19	0.58
49:S2:1537:A:O2'	49:S2:1604:G:C5'	2.52	0.58
49:S2:1578:U:H6	53:SD:6:SER:N	2.02	0.58
52:SC:170:TRP:CD1	52:SC:199:PRO:N	2.71	0.58
57:SH:123:THR:O	57:SH:127:ASP:OD1	2.22	0.58
1:5:29:G:C6	1:5:30:C:C4	2.92	0.57
1:5:125:C:O2	1:5:126:C:C6	2.57	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:307:A:H2'	1:5:308:G:N3	2.19	0.57
1:5:919:C:N4	1:5:920:C:N4	2.52	0.57
1:5:1175:A:C2	1:5:1176:C:C5	2.91	0.57
1:5:1243:C:N3	1:5:1269:G:N2	2.48	0.57
1:5:1261:G:C2	1:5:1262:G:N9	2.72	0.57
1:5:1392:A:C2	1:5:1393:G:N7	2.71	0.57
1:5:1757:U:N3	1:5:1758:G:N7	2.51	0.57
1:5:1970:A:C2'	1:5:2017:A:N6	2.66	0.57
1:5:2113:G:OP1	1:5:2113:G:O4'	2.21	0.57
1:5:2328:G:O2'	1:5:2329:U:H5'	2.01	0.57
1:5:2362:U:C4	1:5:3859:G:C2	2.90	0.57
1:5:2440:U:O2'	1:5:2441:C:P	2.62	0.57
1:5:2857:A:O2'	1:5:2858:A:P	2.61	0.57
1:5:3596:A:O3'	21:R:143:HIS:CE1	2.56	0.57
1:5:3621:A:C8	1:5:4642:U:O2	2.56	0.57
1:5:3793:U:O2	1:5:3794:C:C6	2.57	0.57
1:5:4081:G:N1	1:5:4082:G:C5	2.72	0.57
1:5:4100:C:O2	1:5:4101:C:C6	2.57	0.57
1:5:4124:G:H21	10:G:44:ASP:HA	1.69	0.57
1:5:4304:A:H2	30:a:43:ILE:HG23	1.69	0.57
1:5:4605:A:H62	48:4:801:ARG:CB	2.11	0.57
1:5:4683:U:C4	1:5:4707:A:C6	2.92	0.57
1:5:4737:G:C2	1:5:4738:C:N3	2.72	0.57
4:A:40:TYR:O	4:A:40:TYR:CG	2.56	0.57
10:G:51:LEU:O	10:G:55:VAL:HG23	2.03	0.57
14:K:62:LEU:CD1	14:K:64:ILE:HD11	2.34	0.57
14:K:102:GLY:C	14:K:140:GLY:CA	2.76	0.57
15:L:78:LEU:O	15:L:82:ARG:NH2	2.37	0.57
15:L:166:ALA:HB1	30:a:97:ALA:HB1	1.85	0.57
18:O:49:ARG:HH11	18:O:49:ARG:HG2	1.69	0.57
36:g:37:LYS:HB2	36:g:60:ARG:HE	1.69	0.57
46:q:169:ALA:O	46:q:173:THR:HG23	2.03	0.57
48:4:323:LEU:HD11	48:4:335:LEU:HD11	1.86	0.57
48:4:531:ASP:CB	48:4:534:VAL:HG11	2.33	0.57
49:S2:144:U:H2'	49:S2:145:G:H8	1.69	0.57
49:S2:211:G:C6	49:S2:212:C:C4	2.91	0.57
49:S2:223:C:H2'	49:S2:224:A:H8	1.69	0.57
49:S2:816:A:N1	49:S2:817:G:H1'	2.18	0.57
49:S2:989:C:H5'	49:S2:990:A:C8	2.39	0.57
49:S2:1073:U:C4	49:S2:1074:C:C5	2.92	0.57
49:S2:1224:G:N2	49:S2:1643:U:C4	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:73:ASP:N	50:SA:73:ASP:OD1	2.36	0.57
53:SD:35:SER:CB	53:SD:91:VAL:HG21	2.34	0.57
54:SE:11:ARG:NH1	54:SE:24:THR:OG1	2.37	0.57
58:SI:197:PHE:CZ	61:SL:5:GLN:HG3	2.39	0.57
62:SM:64:LEU:HD21	81:Sf:108:VAL:HG22	1.85	0.57
76:Sa:20:PRO:HB2	76:Sa:29:CYS:SG	2.44	0.57
1:5:28:C:C2	1:5:29:G:H8	2.09	0.57
1:5:60:G:C2	1:5:61:A:C8	2.91	0.57
1:5:124:C:C2	1:5:125:C:C6	2.92	0.57
1:5:486:C:O2	1:5:487:G:C8	2.56	0.57
1:5:488:G:C6	1:5:489:C:C5	2.92	0.57
1:5:991:C:C2	1:5:992:C:C6	2.93	0.57
1:5:1048:G:C6	1:5:1049:C:C4	2.91	0.57
1:5:1379:C:O3'	1:5:1380:G:O4'	2.22	0.57
1:5:1491:A:N1	1:5:1492:G:C5	2.72	0.57
1:5:1545:G:N2	1:5:1546:C:C2	2.71	0.57
1:5:1572:U:H4'	21:R:95:TRP:CE2	2.38	0.57
1:5:1921:C:H1'	22:S:160:ARG:HB2	1.86	0.57
1:5:2004:U:H2'	1:5:2005:G:O4'	2.03	0.57
1:5:2013:A:H2'	1:5:2014:C:O4'	2.04	0.57
1:5:2316:G:C2	1:5:2317:C:C5	2.92	0.57
1:5:2363:A:O2'	1:5:4560:C:N4	2.37	0.57
1:5:2481:G:C5	1:5:2482:C:C5	2.92	0.57
1:5:2515:G:C6	1:5:2516:G:C4	2.92	0.57
1:5:2663:G:OP1	21:R:118:HIS:HA	2.03	0.57
1:5:3782:C:C4	1:5:3809:G:C6	2.92	0.57
1:5:3945:A:C2	1:5:3946:G:C5	2.92	0.57
1:5:4079:C:C2	1:5:4080:C:C6	2.92	0.57
1:5:4199:C:N3	1:5:4200:G:H8	2.02	0.57
1:5:4455:G:N3	1:5:4456:C:C6	2.72	0.57
1:5:4915:G:C2	1:5:4916:G:C8	2.93	0.57
1:5:4989:U:O2	1:5:4989:U:O4'	2.23	0.57
2:7:116:G:C2	2:7:117:G:C8	2.92	0.57
3:8:152:U:H2'	3:8:153:C:O4'	2.03	0.57
4:A:192:LYS:HB3	4:A:193:ARG:HD3	1.86	0.57
12:I:36:LEU:HD22	12:I:73:ASN:ND2	2.19	0.57
20:Q:34:PHE:CZ	20:Q:38:ARG:HG3	2.39	0.57
21:R:110:ARG:HH11	21:R:120:TYR:HE2	1.52	0.57
30:a:62:HIS:O	30:a:62:HIS:CD2	2.57	0.57
30:a:104:VAL:HG22	30:a:109:TYR:CE2	2.39	0.57
46:q:6:ARG:NE	46:q:10:LYS:HE3	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:139:GLN:NE2	48:4:184:ASN:CA	2.58	0.57
48:4:5:THR:OG1	48:4:6:VAL:N	2.37	0.57
48:4:189:ILE:HG22	48:4:203:ILE:CG1	2.32	0.57
48:4:290:CYS:HA	48:4:294:LEU:HD12	1.86	0.57
48:4:496:VAL:CG2	48:4:497:MET:N	2.67	0.57
48:4:536:CYS:O	48:4:537:ILE:HG23	2.05	0.57
48:4:579:TYR:CD2	48:4:740:LEU:HD11	2.39	0.57
48:4:605:LYS:HD2	48:4:705:HIS:CE1	2.38	0.57
48:4:605:LYS:HB2	48:4:705:HIS:HE1	1.68	0.57
48:4:818:GLN:CG	48:4:819:ILE:N	2.67	0.57
49:S2:431:G:N1	49:S2:432:G:C5	2.72	0.57
49:S2:907:G:H3'	49:S2:908:A:H8	1.68	0.57
49:S2:1034:A:C6	49:S2:1082:A:C5	2.91	0.57
49:S2:1063:C:O2'	49:S2:1838:U:C4	2.55	0.57
49:S2:1224:G:N1	49:S2:1643:U:C4	2.72	0.57
49:S2:1667:U:O2	49:S2:1668:U:C6	2.57	0.57
54:SE:86:PHE:CE2	54:SE:87:MET:HG2	2.39	0.57
55:SF:28:VAL:HA	55:SF:110:GLN:OE1	2.04	0.57
65:SP:56:LEU:HD22	65:SP:78:THR:HG22	1.85	0.57
69:ST:31:PRO:HB3	69:ST:33:TRP:CH2	2.39	0.57
82:Sg:64:HIS:HB2	82:Sg:83:TRP:C	2.29	0.57
1:5:98:A:N6	1:5:99:A:C5	2.72	0.57
1:5:150:U:O2	10:G:166:LEU:HD11	2.03	0.57
1:5:291:U:O2	1:5:292:G:O2'	2.21	0.57
1:5:752:G:O6	1:5:753:C:C4	2.57	0.57
1:5:951:G:C2	1:5:952:G:C8	2.92	0.57
1:5:1437:C:N4	1:5:2098:G:O6	2.35	0.57
1:5:1572:U:H5'	21:R:95:TRP:CZ2	2.38	0.57
1:5:1878:G:C6	1:5:1879:C:N4	2.73	0.57
1:5:1948:G:C6	1:5:1949:U:C4	2.93	0.57
1:5:2385:U:H2'	1:5:2386:U:C6	2.39	0.57
1:5:2612:G:C4	1:5:2613:C:C6	2.91	0.57
1:5:2688:G:N3	1:5:2689:C:C6	2.72	0.57
1:5:2770:C:C4	1:5:2771:G:N7	2.72	0.57
1:5:2793:G:C5	1:5:2797:C:N4	2.72	0.57
1:5:3898:G:C2'	1:5:3899:G:H5'	2.34	0.57
1:5:4323:A:C2	1:5:4324:A:C4	2.92	0.57
1:5:4607:A:C5	1:5:4608:G:H1'	2.39	0.57
1:5:4700:A:H2	11:H:69:THR:HG22	1.69	0.57
1:5:4734:A:C2	1:5:4735:G:C4	2.92	0.57
2:7:11:A:H4'	2:7:13:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:93:G:C6	2:7:94:C:C4	2.92	0.57
3:8:29:G:C2	3:8:30:U:C6	2.93	0.57
3:8:40:A:C8	3:8:102:G:N2	2.72	0.57
6:C:33:ARG:HH11	6:C:122:TYR:HH	1.52	0.57
9:F:184:TYR:HB3	9:F:202:ARG:HG2	1.85	0.57
14:K:80:LEU:HD23	14:K:83:LYS:CD	2.34	0.57
14:K:97:ASN:N	14:K:98:ILE:CG1	2.65	0.57
17:N:143:ARG:HD3	37:h:95:LEU:CD2	2.34	0.57
18:O:113:ASP:N	18:O:113:ASP:OD1	2.38	0.57
27:X:155:ILE:O	27:X:156:ILE:HB	2.04	0.57
30:a:78:LEU:C	30:a:80:THR:H	2.12	0.57
48:4:190:SER:HB3	48:4:204:MET:HE2	1.86	0.57
48:4:829:SER:CB	48:4:832:SER:CB	2.82	0.57
49:S2:16:G:H2'	49:S2:17:C:C1'	2.34	0.57
49:S2:68:A:C6	49:S2:69:C:C4	2.92	0.57
49:S2:121:U:C2	49:S2:122:G:N7	2.58	0.57
49:S2:187:G:C6	49:S2:188:C:C4	2.93	0.57
49:S2:311:C:C3'	49:S2:312:G:H4'	2.34	0.57
49:S2:493:A:C1'	49:S2:574:A:H5'	2.35	0.57
49:S2:646:G:C6	49:S2:647:U:C6	2.92	0.57
49:S2:793:G:C4	49:S2:794:A:C8	2.91	0.57
49:S2:1121:G:C4	49:S2:1122:A:C8	2.92	0.57
49:S2:1564:C:C2	49:S2:1565:C:C6	2.93	0.57
49:S2:1728:U:C4	49:S2:1729:U:C5	2.91	0.57
50:SA:134:LEU:HD22	50:SA:144:THR:HG21	1.85	0.57
54:SE:99:PHE:N	54:SE:99:PHE:CD1	2.69	0.57
62:SM:33:ARG:NH2	62:SM:90:GLY:O	2.37	0.57
66:SQ:12:VAL:HG11	66:SQ:90:LYS:HB3	1.84	0.57
68:SS:80:PRO:HG2	68:SS:82:TRP:CD1	2.38	0.57
1:5:144:G:N2	1:5:145:G:C4	2.73	0.57
1:5:225:G:O4'	1:5:243:A:H1'	2.04	0.57
1:5:436:C:O2	1:5:436:C:H2'	2.03	0.57
1:5:486:C:N3	1:5:487:G:C8	2.71	0.57
1:5:499:G:C2	1:5:500:G:C8	2.92	0.57
1:5:504:G:N1	1:5:505:G:C6	2.73	0.57
1:5:670:G:H2'	1:5:671:G:H8	1.68	0.57
1:5:691:C:C2	1:5:692:A:N7	2.72	0.57
1:5:754:U:C4	1:5:755:C:C5	2.93	0.57
1:5:907:C:N3	1:5:908:G:N7	2.52	0.57
1:5:977:C:O2	1:5:977:C:H2'	2.04	0.57
1:5:1079:C:C2	1:5:1080:C:C6	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1257:A:C2	1:5:1258:G:H1'	2.39	0.57
1:5:1270:A:C2'	1:5:1271:G:O5'	2.52	0.57
1:5:1444:G:C2	1:5:1445:U:O4	2.58	0.57
1:5:1446:C:C4	1:5:1447:C:C5	2.93	0.57
1:5:1456:C:O2'	20:Q:73:PRO:O	2.21	0.57
1:5:1539:G:H4'	4:A:194:ASN:HD22	1.69	0.57
1:5:1618:G:N3	1:5:1619:G:C8	2.73	0.57
1:5:1857:C:C2	1:5:1858:A:C8	2.91	0.57
1:5:1882:U:H1'	1:5:1883:G:C8	2.40	0.57
1:5:2419:C:H2'	1:5:2420:A:O5'	2.05	0.57
1:5:2439:G:C2	1:5:2440:U:C6	2.92	0.57
1:5:2458:C:H1'	1:5:3672:G:H21	1.69	0.57
1:5:2783:A:C4	1:5:2784:C:C6	2.92	0.57
1:5:3688:U:N3	1:5:3689:G:C8	2.72	0.57
1:5:3945:A:C2	1:5:3946:G:C8	2.92	0.57
1:5:3945:A:N3	1:5:3946:G:C8	2.73	0.57
1:5:4070:U:C4	1:5:4071:U:C5	2.92	0.57
1:5:4092:G:C2	1:5:4158:C:C2	2.92	0.57
1:5:4235:G:H2'	1:5:4236:G:O5'	2.04	0.57
1:5:4898:G:C2	1:5:4923:C:C2	2.93	0.57
1:5:4958:C:H2'	1:5:4958:C:O2	2.04	0.57
3:8:66:A:H2'	3:8:67:U:C6	2.38	0.57
3:8:118:C:O2	3:8:118:C:H2'	2.03	0.57
4:A:82:ILE:HD11	4:A:99:GLY:HA3	1.85	0.57
4:A:242:ARG:HH11	4:A:242:ARG:HB2	1.69	0.57
7:D:107:ARG:HD3	7:D:248:ARG:HG3	1.85	0.57
15:L:176:PHE:C	15:L:176:PHE:CD1	2.81	0.57
21:R:163:ARG:NH2	49:S2:871:U:H3	2.02	0.57
22:S:27:LEU:C	22:S:28:TYR:CD1	2.81	0.57
25:V:39:ILE:HG23	25:V:61:VAL:HG13	1.85	0.57
48:4:113:SER:OG	48:4:481:LYS:NZ	2.37	0.57
48:4:154:VAL:CG1	48:4:358:LEU:HD11	2.35	0.57
48:4:521:VAL:O	48:4:525:LYS:CD	2.52	0.57
48:4:692:LEU:CD2	48:4:734:LEU:HD22	2.33	0.57
48:4:712:ASP:O	48:4:715:HIS:N	2.38	0.57
48:4:741:MET:CG	48:4:817:TRP:CE3	2.83	0.57
49:S2:121:U:N3	49:S2:122:G:C5	2.71	0.57
49:S2:532:C:N3	49:S2:533:A:N7	2.51	0.57
49:S2:533:A:C6	49:S2:534:G:C5	2.92	0.57
49:S2:619:A:N1	73:SX:113:GLY:HA3	2.20	0.57
49:S2:676:C:N4	49:S2:677:G:C6	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1053:C:N3	49:S2:1054:G:C8	2.73	0.57
49:S2:1259:A:H3'	49:S2:1259:A:N3	2.19	0.57
49:S2:1293:A:H2'	81:Sf:151:ASN:C	2.30	0.57
49:S2:1293:A:N1	81:Sf:138:ARG:HD2	2.19	0.57
49:S2:1488:C:O2	49:S2:1490:G:C8	2.58	0.57
49:S2:1533:A:N1	49:S2:1537:A:C1'	2.67	0.57
49:S2:1667:U:N3	49:S2:1668:U:C4	2.72	0.57
49:S2:1860:A:C6	49:S2:1862:G:C5	2.92	0.57
50:SA:59:LEU:HD23	50:SA:181:GLU:HG2	1.86	0.57
63:SN:18:TYR:C	63:SN:18:TYR:CD2	2.83	0.57
72:SW:98:GLN:HE21	72:SW:98:GLN:HA	1.67	0.57
82:Sg:64:HIS:HB3	82:Sg:83:TRP:CB	2.33	0.57
1:5:12:A:C2	1:5:14:C:C6	2.92	0.57
1:5:158:A:C5	1:5:277:G:C6	2.92	0.57
1:5:448:G:C6	1:5:449:C:C6	2.92	0.57
1:5:950:G:N3	1:5:951:G:C8	2.73	0.57
1:5:978:G:H2'	1:5:979:C:O4'	2.04	0.57
1:5:1190:C:C4	1:5:1191:C:C5	2.92	0.57
1:5:1204:C:O2	1:5:1205:G:C8	2.58	0.57
1:5:1444:G:H2'	1:5:1445:U:H6	1.57	0.57
1:5:1491:A:H2'	1:5:1492:G:O4'	2.05	0.57
1:5:1797:G:C2	1:5:1798:G:C5	2.93	0.57
1:5:1846:G:H2'	1:5:1847:C:C6	2.39	0.57
1:5:2461:G:C2	1:5:2462:C:C5	2.92	0.57
1:5:2463:G:N2	1:5:2464:C:N3	2.52	0.57
1:5:2478:C:H2'	1:5:2479:G:O4'	2.04	0.57
1:5:2515:G:O2'	1:5:2745:A:N1	2.35	0.57
1:5:2581:A:H2'	1:5:2582:A:C8	2.39	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
1:5:3785:A:H2	1:5:4536:C:H1'	1.63	0.57
1:5:4355:G:N3	1:5:4356:G:C8	2.73	0.57
1:5:4476:C:O4'	1:5:4476:C:O2	2.22	0.57
1:5:4480:A:C6	1:5:4481:U:C5	2.92	0.57
1:5:4644:G:N2	1:5:4654:C:C2	2.73	0.57
1:5:4911:A:H5''	5:B:100:ARG:CD	2.35	0.57
1:5:5030:U:O2	1:5:5031:G:C8	2.58	0.57
3:8:43:A:N1	3:8:44:A:C5	2.72	0.57
5:B:51:ALA:HA	5:B:323:TYR:HE2	1.66	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:J:164:ARG:O	13:J:164:ARG:NH2	2.37	0.57
14:K:119:ARG:N	14:K:123:ARG:HH12	2.03	0.57
24:U:99:TRP:CD1	24:U:99:TRP:N	2.73	0.57
29:Z:46:ILE:HD12	29:Z:49:TYR:CD1	2.40	0.57
33:d:46:LEU:HD23	33:d:64:ILE:HD13	1.86	0.57
46:q:96:THR:CG2	46:q:97:GLU:N	2.36	0.57
46:q:103:ARG:HG2	46:q:103:ARG:NH1	2.19	0.57
46:q:120:GLU:CG	46:q:159:GLN:NE2	2.63	0.57
46:q:144:THR:CG2	48:4:179:GLN:HE21	1.89	0.57
48:4:13:MET:CE	48:4:464:VAL:CG1	2.55	0.57
48:4:62:ASP:HA	48:4:65:GLU:HB3	1.85	0.57
48:4:239:LYS:HD3	48:4:241:GLU:HG2	1.85	0.57
48:4:275:LYS:CE	48:4:276:SER:HA	2.23	0.57
48:4:449:ARG:NH2	48:4:460:PRO:HB2	2.18	0.57
49:S2:85:A:C2	49:S2:86:C:C4	2.93	0.57
49:S2:316:G:C2	49:S2:317:C:C5	2.92	0.57
49:S2:403:G:C6	49:S2:404:G:C5	2.93	0.57
49:S2:857:U:N3	49:S2:858:A:N7	2.52	0.57
49:S2:1114:U:N3	49:S2:1119:A:N6	2.40	0.57
49:S2:1511:U:C2	49:S2:1512:C:C6	2.92	0.57
49:S2:1564:C:O2	49:S2:1565:C:C6	2.58	0.57
50:SA:19:LEU:HD23	50:SA:24:HIS:HE1	1.68	0.57
54:SE:141:THR:OG1	54:SE:143:ASP:OD1	2.13	0.57
55:SF:179:ASN:HD22	55:SF:186:ASN:HB3	1.70	0.57
62:SM:26:LEU:HG	62:SM:90:GLY:HA3	1.86	0.57
76:Sa:28:ARG:HH11	76:Sa:28:ARG:CG	2.17	0.57
82:Sg:32:LEU:HD13	82:Sg:92:LEU:HD11	1.86	0.57
1:5:99:A:N1	1:5:100:C:C2	2.72	0.57
1:5:258:G:N1	1:5:259:C:C4	2.73	0.57
1:5:296:A:C8	1:5:296:A:C5'	2.88	0.57
1:5:300:A:N3	1:5:301:G:C8	2.73	0.57
1:5:456:C:N3	1:5:457:G:N7	2.52	0.57
1:5:470:A:C6	1:5:471:A:N7	2.70	0.57
1:5:687:U:C4	1:5:688:U:C5	2.93	0.57
1:5:732:A:C6	1:5:733:A:C4	2.92	0.57
1:5:755:C:N3	1:5:756:G:C8	2.72	0.57
1:5:965:G:N2	8:E:85:LEU:O	2.38	0.57
1:5:1081:C:C2	1:5:1220:G:C2	2.92	0.57
1:5:1186:U:C2	1:5:1187:G:C8	2.93	0.57
1:5:1268:G:C1'	1:5:2111:G:C5	2.87	0.57
1:5:1465:G:C5	1:5:1466:G:C8	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1632:A:C6	1:5:1634:A:N9	2.69	0.57
1:5:1888:A:N6	1:5:3873:G:O2'	2.36	0.57
1:5:1943:A:C8	1:5:1944:A:C8	2.92	0.57
1:5:2089:G:N1	1:5:2263:A:C6	2.73	0.57
1:5:2244:C:O2	1:5:2245:G:C8	2.57	0.57
1:5:2857:A:O2'	1:5:2858:A:H8	1.87	0.57
1:5:3652:A:N7	1:5:3691:G:N2	2.53	0.57
1:5:4341:C:N4	1:5:4342:C:C4	2.73	0.57
1:5:4537:C:O2	1:5:4538:G:H8	1.85	0.57
1:5:4548:A:N7	1:5:4548:A:OP1	2.37	0.57
1:5:4636:U:O4	33:d:78:ARG:NH1	2.38	0.57
1:5:4730:C:H2'	1:5:4965:U:H3	1.69	0.57
1:5:4886:C:O2	1:5:4887:C:C5	2.57	0.57
1:5:4951:G:O2'	1:5:4952:G:P	2.62	0.57
3:8:101:C:C4	3:8:102:G:C5	2.92	0.57
7:D:287:PHE:C	7:D:287:PHE:CD1	2.82	0.57
25:V:98:PHE:CZ	26:W:22:ALA:CB	2.86	0.57
28:Y:5:PRO:O	28:Y:6:PHE:HB2	2.05	0.57
41:l:27:ILE:O	41:l:33:ASN:ND2	2.37	0.57
48:4:12:ILE:HG21	48:4:99:LEU:HD22	1.85	0.57
48:4:58:ASP:OD2	48:4:69:THR:N	2.27	0.57
48:4:477:GLN:H	48:4:477:GLN:CD	2.12	0.57
48:4:587:SER:HB3	48:4:735:THR:CG2	2.35	0.57
48:4:672:LEU:CA	48:4:675:ILE:HD11	2.33	0.57
48:4:689:GLU:CB	48:4:730:TYR:HH	2.16	0.57
49:S2:443:U:C5	49:S2:444:G:C8	2.93	0.57
49:S2:648:A:C2	49:S2:649:U:N1	2.72	0.57
49:S2:649:U:N3	49:S2:650:A:N7	2.53	0.57
49:S2:832:G:C2	49:S2:833:C:H1'	2.38	0.57
49:S2:898:U:N3	49:S2:899:U:C5	2.72	0.57
49:S2:989:C:N3	49:S2:1001:A:C2	2.72	0.57
49:S2:993:G:C6	49:S2:994:C:C4	2.92	0.57
49:S2:1045:U:N3	49:S2:1046:U:C6	2.72	0.57
49:S2:1274:G:N7	60:SK:43:LEU:HD22	2.19	0.57
49:S2:1291:A:O3'	81:Sf:149:CYS:N	2.37	0.57
49:S2:1307:U:O2'	81:Sf:132:MET:O	2.21	0.57
49:S2:1411:G:H3'	49:S2:1412:C:H4'	1.85	0.57
49:S2:1428:G:H2'	49:S2:1429:G:O4'	2.04	0.57
49:S2:1433:C:P	49:S2:1434:C:OP1	2.62	0.57
49:S2:1502:C:C2	49:S2:1503:C:C6	2.92	0.57
49:S2:1590:C:C6	49:S2:1591:C:C6	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1771:G:N2	49:S2:1772:C:C2	2.72	0.57
49:S2:1826:G:C2	49:S2:1827:U:C5	2.93	0.57
53:SD:216:GLU:OE1	53:SD:216:GLU:CG	2.52	0.57
60:SK:8:ARG:NH1	60:SK:12:TYR:OH	2.37	0.57
1:5:43:U:C4	1:5:44:A:N9	2.72	0.57
1:5:243:A:H2'	1:5:244:G:O4'	2.05	0.57
1:5:482:G:H2'	1:5:483:G:O4'	2.04	0.57
1:5:490:C:C3'	1:5:491:G:H8	2.17	0.57
1:5:701:G:N1	1:5:702:U:C6	2.72	0.57
1:5:1071:C:O2	1:5:1071:C:C2'	2.52	0.57
1:5:1248:C:N3	1:5:1249:C:C4	2.72	0.57
1:5:1269:G:N7	1:5:2111:G:C4	2.72	0.57
1:5:1269:G:N1	1:5:2111:G:N2	2.53	0.57
1:5:1281:G:C4	1:5:1281:G:O5'	2.58	0.57
1:5:1804:A:H4'	1:5:1805:A:O5'	2.05	0.57
1:5:1846:G:N2	1:5:1847:C:C2	2.72	0.57
1:5:1940:G:H2'	1:5:1941:A:H5''	1.87	0.57
1:5:1976:G:N1	1:5:1992:U:O4	2.37	0.57
1:5:1991:A:H3'	1:5:1992:U:C5'	2.31	0.57
1:5:2675:G:H2'	1:5:2675:G:N3	2.18	0.57
1:5:3846:C:C4	1:5:3847:C:C5	2.93	0.57
1:5:3894:A:O4'	1:5:4979:A:N1	2.37	0.57
1:5:4301:U:C5'	23:T:54:HIS:CD2	2.88	0.57
1:5:4583:C:N3	1:5:4718:G:C2	2.73	0.57
1:5:4730:C:C2	1:5:4734:A:N7	2.73	0.57
1:5:4742:G:N1	1:5:4743:G:C8	2.73	0.57
3:8:31:G:H2'	3:8:32:C:O4'	2.05	0.57
3:8:44:A:C2	3:8:45:C:C2	2.93	0.57
5:B:106:PHE:CD2	5:B:130:PHE:CE2	2.93	0.57
9:F:33:LYS:HA	9:F:36:ARG:HE	1.69	0.57
14:K:75:PRO:O	14:K:75:PRO:HD2	2.03	0.57
14:K:97:ASN:N	14:K:98:ILE:HG12	2.20	0.57
14:K:141:CYS:C	14:K:148:PRO:CD	2.75	0.57
18:O:130:LYS:HG3	18:O:131:PRO:HD2	1.87	0.57
46:q:86:VAL:HG12	46:q:87:GLY:N	2.20	0.57
46:q:155:LEU:CD1	46:q:155:LEU:O	2.53	0.57
48:4:113:SER:OG	48:4:533:MET:CB	2.52	0.57
48:4:536:CYS:C	48:4:537:ILE:HG23	2.30	0.57
49:S2:68:A:C4	49:S2:69:C:C6	2.93	0.57
49:S2:75:G:H1	56:SG:159:ARG:HE	1.53	0.57
49:S2:164:A:O2'	49:S2:165:G:N3	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:299:A:C2	49:S2:300:U:C6	2.92	0.57
49:S2:659:G:N3	49:S2:659:G:H2'	2.19	0.57
49:S2:1223:A:H2	49:S2:1644:C:N3	2.02	0.57
49:S2:1225:U:N3	49:S2:1226:G:C8	2.73	0.57
49:S2:1291:A:C6	81:Sf:140:TYR:CZ	2.93	0.57
49:S2:1526:G:C2	49:S2:1527:C:N1	2.72	0.57
49:S2:1545:A:N7	49:S2:1588:A:C5	2.73	0.57
49:S2:1661:A:OP1	79:Sd:19:ARG:NH2	2.38	0.57
49:S2:1757:G:N1	49:S2:1758:G:C5	2.73	0.57
53:SD:157:MET:HG3	53:SD:159:HIS:CE1	2.39	0.57
67:SR:33:ARG:HH12	82:Sg:83:TRP:HZ3	1.52	0.57
1:5:92:C:H41	44:o:40:ARG:NH1	2.01	0.57
1:5:209:U:N3	1:5:233:U:C4	2.73	0.57
1:5:271:C:O2	1:5:272:U:C6	2.57	0.57
1:5:358:C:C2	1:5:359:A:C8	2.92	0.57
1:5:479:G:N2	1:5:480:C:C2	2.73	0.57
1:5:1268:G:N3	1:5:2111:G:N1	2.52	0.57
1:5:1447:C:O2	1:5:2098:G:C2	2.57	0.57
1:5:1946:G:N2	1:5:1948:G:C8	2.73	0.57
1:5:2124:G:H22	9:F:32:ILE:CG1	2.17	0.57
1:5:2391:G:N2	1:5:2392:C:C2	2.72	0.57
1:5:2673:G:C1'	1:5:2675:G:H1'	2.35	0.57
1:5:3605:C:C2	1:5:3606:U:C6	2.93	0.57
1:5:3635:A:C5	1:5:3636:C:C6	2.93	0.57
1:5:3848:U:C2	1:5:3849:A:C8	2.93	0.57
1:5:4228:G:O2'	1:5:4373:G:O6	2.21	0.57
1:5:4455:G:C2	1:5:4456:C:N1	2.73	0.57
1:5:5050:C:C4	1:5:5051:C:C5	2.93	0.57
2:7:111:C:N4	2:7:112:U:C5	2.73	0.57
3:8:70:G:H5''	28:Y:27:ARG:HH11	1.69	0.57
3:8:75:G:N2	3:8:76:C:C2	2.73	0.57
15:L:63:THR:O	15:L:65:ARG:N	2.37	0.57
17:N:68:ARG:HH12	17:N:123:GLU:HG3	1.68	0.57
23:T:19:PHE:O	23:T:20:ARG:C	2.46	0.57
31:b:12:GLN:CB	31:b:16:TRP:HZ2	2.17	0.57
46:q:26:LYS:NZ	46:q:94:ASP:O	2.37	0.57
48:4:258:LYS:O	48:4:258:LYS:HD2	2.05	0.57
48:4:814:PHE:CD2	48:4:815:ASP:N	2.73	0.57
49:S2:834:C:H5'	49:S2:835:C:O5'	2.05	0.57
49:S2:1094:C:N3	49:S2:1095:U:H5	2.02	0.57
49:S2:1201:U:HO2'	49:S2:1358:U:HO2'	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1232:U:O2	49:S2:1232:U:H2'	2.05	0.57
49:S2:1293:A:C1'	81:Sf:150:PHE:HB3	2.34	0.57
49:S2:1294:G:N3	49:S2:1295:A:C8	2.73	0.57
69:ST:23:LYS:CE	69:ST:51:ASN:HD22	2.14	0.57
72:SW:17:ALA:HB2	72:SW:25:VAL:HG11	1.87	0.57
1:5:80:C:C2	1:5:104:G:N2	2.73	0.57
1:5:133:C:H2'	1:5:133:C:O2	2.05	0.57
1:5:299:C:C2	1:5:300:A:C8	2.92	0.57
1:5:486:C:N3	1:5:487:G:C5	2.73	0.57
1:5:642:G:C2	1:5:643:C:C5	2.93	0.57
1:5:663:G:H3'	1:5:664:G:C5'	2.35	0.57
1:5:685:C:C2'	1:5:685:C:O2	2.52	0.57
1:5:1273:G:H5'	1:5:2123:C:H4'	1.86	0.57
1:5:1440:U:O2	1:5:1440:U:C2'	2.52	0.57
1:5:1477:C:O2	1:5:1478:C:H1'	2.04	0.57
1:5:1619:G:H2'	1:5:1620:U:O5'	2.05	0.57
1:5:1785:C:OP1	12:I:133:GLN:NE2	2.37	0.57
1:5:1843:A:N1	1:5:1844:G:C5	2.72	0.57
1:5:1893:C:C2	1:5:1894:C:C5	2.93	0.57
1:5:2466:G:H2'	1:5:2467:U:C1'	2.34	0.57
1:5:2854:G:C8	1:5:2854:G:H3'	2.40	0.57
1:5:3724:A:N6	1:5:3725:G:C6	2.72	0.57
1:5:4194:U:C2'	1:5:4221:C:H41	2.18	0.57
1:5:4198:G:O6	12:I:112:GLN:CD	2.48	0.57
1:5:4455:G:C4	1:5:4456:C:C6	2.93	0.57
1:5:4695:C:O2'	1:5:4696:C:H5'	2.05	0.57
3:8:108:A:C2	3:8:112:G:C6	2.93	0.57
6:C:79:VAL:HG21	6:C:86:ARG:HE	1.70	0.57
10:G:50:ASP:OD1	10:G:50:ASP:C	2.48	0.57
22:S:81:TRP:CZ2	22:S:94:TYR:CD1	2.92	0.57
48:4:4:PHE:CD1	48:4:5:THR:CA	2.86	0.57
48:4:159:LYS:HE2	48:4:162:ARG:HH11	1.70	0.57
48:4:597:ASN:HB3	48:4:599:HIS:ND1	2.20	0.57
49:S2:27:A:C6	49:S2:28:U:C4	2.92	0.57
49:S2:380:G:H21	49:S2:382:C:H6	1.52	0.57
49:S2:529:A:N1	49:S2:555:A:C2	2.73	0.57
49:S2:832:G:C6	49:S2:833:C:C4	2.92	0.57
49:S2:1099:G:N1	49:S2:1100:A:C8	2.73	0.57
49:S2:1111:U:O2	49:S2:1112:U:C5	2.48	0.57
49:S2:1405:A:C1'	49:S2:1580:A:C6	2.87	0.57
49:S2:1563:G:N2	49:S2:1564:C:C2	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1735:A:H2'	49:S2:1736:G:O4'	2.04	0.57
54:SE:118:GLU:HG2	54:SE:121:TYR:CE1	2.40	0.57
56:SG:4:ASN:HB3	56:SG:110:ASN:HB3	1.85	0.57
82:Sg:176:VAL:HG23	82:Sg:188:HIS:CD2	2.40	0.57
1:5:77:U:C2	1:5:335:A:N6	2.71	0.57
1:5:504:G:C2	1:5:654:C:C2	2.92	0.57
1:5:933:G:C2	1:5:939:G:N1	2.73	0.57
1:5:956:A:H3'	1:5:957:G:C4	2.40	0.57
1:5:1781:U:C4	1:5:1782:U:C5	2.92	0.57
1:5:1846:G:H2'	1:5:1847:C:H6	1.70	0.57
1:5:1846:G:C2	1:5:1847:C:C4	2.93	0.57
1:5:2018:C:H2'	1:5:2019:C:H5'	1.86	0.57
1:5:2020:U:H2'	1:5:2020:U:O2	2.04	0.57
1:5:2044:U:O2'	18:O:63:ASN:HB3	2.04	0.57
1:5:2058:G:C2	1:5:2059:C:N1	2.73	0.57
1:5:2081:C:C2	1:5:2082:G:C8	2.93	0.57
1:5:2465:C:O2'	1:5:2466:G:O4'	2.23	0.57
1:5:2577:C:N4	29:Z:17:ARG:NH2	2.53	0.57
1:5:2844:A:C5	1:5:3839:G:C8	2.93	0.57
1:5:3694:U:O4	1:5:3695:U:O4	2.23	0.57
1:5:3858:C:C4	1:5:3859:G:C5	2.92	0.57
1:5:4105:A:H1'	1:5:4106:G:N2	2.20	0.57
1:5:4258:C:H2'	1:5:4259:C:H6	1.70	0.57
1:5:4566:U:O2'	5:B:234:ARG:NH2	2.38	0.57
1:5:4910:G:O5'	1:5:4910:G:C8	2.56	0.57
1:5:4942:C:H5'	8:E:151:GLY:HA2	1.87	0.57
1:5:5020:G:C2	1:5:5021:C:C2	2.93	0.57
3:8:120:G:C6	3:8:121:G:N7	2.73	0.57
5:B:53:MET:HE1	5:B:336:CYS:CB	2.33	0.57
14:K:15:LEU:HD11	14:K:60:VAL:HG12	1.86	0.57
27:X:73:HIS:N	27:X:73:HIS:CD2	2.72	0.57
31:b:12:GLN:O	31:b:13:SER:C	2.48	0.57
33:d:37:GLY:O	33:d:38:PHE:HB2	2.05	0.57
46:q:22:ASP:CG	46:q:66:ARG:NH2	2.59	0.57
46:q:50:LYS:HG3	46:q:51:ALA:N	2.20	0.57
46:q:127:ASN:O	46:q:128:THR:C	2.48	0.57
48:4:3:ASN:C	48:4:46:ILE:HA	2.29	0.57
48:4:46:ILE:O	48:4:46:ILE:CG2	2.51	0.57
48:4:160:MET:CE	48:4:178:PHE:HZ	2.08	0.57
48:4:206:ASP:CA	48:4:212:VAL:HG23	2.35	0.57
48:4:241:GLU:N	48:4:243:GLN:OE1	2.31	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:296:PRO:CA	48:4:299:LYS:HE2	2.35	0.57
48:4:683:PHE:CE1	48:4:729:LEU:CD2	2.87	0.57
48:4:744:ILE:HG12	48:4:745:TYR:N	2.20	0.57
49:S2:414:A:O2'	49:S2:415:A:O5'	2.23	0.57
49:S2:429:C:N3	49:S2:430:C:C5	2.72	0.57
49:S2:504:G:C2'	49:S2:505:G:O5'	2.52	0.57
49:S2:794:A:N6	49:S2:795:A:C6	2.72	0.57
49:S2:940:U:H2'	49:S2:941:C:H6	1.70	0.57
49:S2:1284:A:C2	62:SM:34:GLY:HA2	2.40	0.57
49:S2:1290:G:C2'	81:Sf:146:LEU:H	2.17	0.57
49:S2:1293:A:H62	81:Sf:139:HIS:C	2.13	0.57
49:S2:1294:G:H1'	81:Sf:152:LYS:C	2.30	0.57
49:S2:1433:C:P	49:S2:1434:C:P	3.02	0.57
49:S2:1459:G:C6	49:S2:1460:C:C4	2.93	0.57
49:S2:1609:C:O2	49:S2:1609:C:H2'	2.04	0.57
49:S2:1722:G:N2	49:S2:1723:G:H1'	2.20	0.57
50:SA:29:ASN:HB3	50:SA:151:ASP:OD2	2.04	0.57
58:SI:87:ASN:OD1	58:SI:87:ASN:C	2.47	0.57
69:ST:31:PRO:HB2	69:ST:33:TRP:CZ2	2.39	0.57
1:5:30:C:O2'	1:5:31:U:H5'	2.05	0.56
1:5:199:G:C6	1:5:201:C:N4	2.73	0.56
1:5:470:A:C6	1:5:471:A:C5	2.92	0.56
1:5:919:C:H2'	1:5:920:C:O5'	2.05	0.56
1:5:931:C:C6	1:5:932:A:N7	2.72	0.56
1:5:1070:G:N2	1:5:1071:C:H1'	2.20	0.56
1:5:1090:G:C6	1:5:1091:C:C4	2.93	0.56
1:5:1507:C:N3	1:5:1508:A:N7	2.53	0.56
1:5:1598:C:C4	1:5:2798:A:N7	2.71	0.56
1:5:1629:G:C2	1:5:1631:A:C5	2.93	0.56
1:5:1724:G:N3	9:F:105:PRO:HB3	2.20	0.56
1:5:1752:G:H2'	1:5:1753:G:O4'	2.04	0.56
1:5:1760:G:N2	1:5:1761:G:H1'	2.19	0.56
1:5:1847:C:C4'	20:Q:152:PHE:CE2	2.86	0.56
1:5:1991:A:H3'	1:5:1991:A:H8	1.70	0.56
1:5:2312:U:O2	1:5:2312:U:H2'	2.04	0.56
1:5:2342:G:C6	1:5:2344:U:C4	2.92	0.56
1:5:2557:G:C6	1:5:2558:C:C4	2.93	0.56
1:5:3693:U:O4	1:5:3694:U:C4	2.58	0.56
1:5:3755:G:C6	1:5:3756:A:N7	2.73	0.56
1:5:3765:G:O2'	1:5:3766:A:C8	2.52	0.56
1:5:3867:A:C2	1:5:3880:G:O6	2.57	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4216:G:N1	1:5:4217:G:C5	2.73	0.56
1:5:4236:G:H22	1:5:4289:U:H1'	1.69	0.56
1:5:4349:C:H3'	1:5:4350:C:C5'	2.35	0.56
1:5:4583:C:C2	1:5:4718:G:N2	2.73	0.56
2:7:33:U:C2	2:7:34:C:C5	2.93	0.56
2:7:43:U:O4	2:7:44:C:N4	2.37	0.56
2:7:69:U:C2	2:7:70:G:C8	2.92	0.56
2:7:82:G:C2	2:7:95:C:C2	2.93	0.56
5:B:137:TRP:CZ2	5:B:146:LEU:HG	2.40	0.56
10:G:162:ASP:HB3	10:G:163:PRO:CD	2.35	0.56
11:H:31:ARG:NH2	11:H:187:VAL:HG21	2.20	0.56
14:K:28:LEU:HD13	14:K:29:ALA:H	1.70	0.56
14:K:78:SER:O	14:K:81:ILE:HG12	2.05	0.56
14:K:94:LYS:H	14:K:95:GLN:HB2	1.69	0.56
14:K:119:ARG:H	14:K:123:ARG:NH1	2.00	0.56
28:Y:11:ARG:NH2	28:Y:15:ARG:HD3	2.20	0.56
33:d:87:ARG:CA	33:d:87:ARG:CZ	2.83	0.56
35:f:43:LEU:HD22	35:f:76:ARG:HA	1.87	0.56
46:q:22:ASP:CG	46:q:66:ARG:NE	2.58	0.56
46:q:133:GLU:C	46:q:135:THR:H	2.11	0.56
48:4:228:PHE:CE1	48:4:231:MET:CE	2.88	0.56
48:4:485:ILE:HD12	48:4:485:ILE:N	2.20	0.56
49:S2:1:U:O4'	49:S2:1:U:O2	2.22	0.56
49:S2:127:C:OP1	49:S2:180:G:N2	2.38	0.56
49:S2:351:G:N1	49:S2:352:U:C5	2.73	0.56
49:S2:924:G:H2'	49:S2:924:G:N3	2.20	0.56
49:S2:963:A:C2	49:S2:964:A:C6	2.92	0.56
49:S2:1052:A:C2	49:S2:1053:C:C6	2.92	0.56
49:S2:1126:G:N3	49:S2:1127:C:C6	2.73	0.56
49:S2:1293:A:N6	81:Sf:140:TYR:N	2.53	0.56
49:S2:1303:C:C6	49:S2:1304:U:C6	2.93	0.56
49:S2:1397:U:C5	49:S2:1442:U:C4'	2.87	0.56
49:S2:1432:U:O2	49:S2:1433:C:C6	2.58	0.56
49:S2:1775:U:N3	49:S2:1776:G:N7	2.52	0.56
49:S2:1782:G:C2	49:S2:1784:G:C8	2.93	0.56
49:S2:1794:C:C4	49:S2:1795:G:N7	2.73	0.56
51:SB:133:TYR:CD1	51:SB:221:PRO:HD3	2.39	0.56
58:SI:197:PHE:O	58:SI:201:LYS:N	2.36	0.56
1:5:45:U:H2'	1:5:46:U:O5'	2.06	0.56
1:5:275:C:O2'	1:5:276:C:OP1	2.23	0.56
1:5:463:A:N1	1:5:692:A:N1	2.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:516:C:N3	1:5:646:G:C2	2.73	0.56
1:5:517:C:C2	1:5:645:G:C2	2.92	0.56
1:5:1070:G:C6	1:5:1071:C:C4	2.92	0.56
1:5:1379:C:H1'	1:5:1380:G:C8	2.40	0.56
1:5:1724:G:C8	31:b:17:HIS:NE2	2.73	0.56
1:5:2079:G:N2	1:5:2080:U:N1	2.53	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
1:5:2260:C:C2'	1:5:2261:G:N7	2.57	0.56
1:5:2830:G:N3	1:5:2831:G:C8	2.73	0.56
1:5:3656:A:N1	1:5:3657:U:C4	2.73	0.56
1:5:3676:G:C2'	1:5:3677:U:O5'	2.53	0.56
1:5:3829:G:C2	1:5:3830:A:C8	2.93	0.56
1:5:4217:G:H2'	1:5:4218:U:O5'	2.05	0.56
1:5:4321:U:H2'	1:5:4322:G:O4'	2.05	0.56
1:5:4563:U:H2'	1:5:4564:A:H8	1.67	0.56
1:5:4652:G:N1	1:5:4653:C:C4	2.73	0.56
1:5:5020:G:H2'	1:5:5021:C:O4'	2.06	0.56
3:8:86:U:C6	3:8:86:U:C3'	2.87	0.56
9:F:203:PHE:CE1	9:F:207:ASN:HB2	2.41	0.56
17:N:143:ARG:HB3	37:h:99:GLU:OE1	2.05	0.56
29:Z:28:ASN:O	29:Z:28:ASN:CG	2.48	0.56
30:a:67:GLN:HA	30:a:67:GLN:HE21	1.70	0.56
30:a:128:PHE:CZ	38:i:8:ALA:HB3	2.40	0.56
46:q:91:THR:HG21	46:q:99:ARG:NH2	1.85	0.56
48:4:6:VAL:C	48:4:8:GLN:N	2.61	0.56
48:4:207:PRO:HB2	48:4:261:TRP:CD1	2.41	0.56
48:4:267:ASP:C	48:4:267:ASP:CB	2.75	0.56
48:4:432:PRO:O	48:4:433:ASN:CG	2.48	0.56
48:4:449:ARG:CB	48:4:473:VAL:CG1	2.83	0.56
49:S2:52:G:C6	49:S2:53:C:C4	2.93	0.56
49:S2:127:C:OP2	49:S2:312:G:N3	2.38	0.56
49:S2:221:A:C6	49:S2:222:U:C4	2.93	0.56
49:S2:458:A:N1	49:S2:459:C:N1	2.52	0.56
49:S2:618:C:N3	49:S2:619:A:N9	2.53	0.56
49:S2:634:A:C6	49:S2:635:G:N7	2.73	0.56
49:S2:1109:C:O2	49:S2:1109:C:O2'	2.21	0.56
49:S2:1148:A:O4'	49:S2:1149:A:C8	2.59	0.56
49:S2:1538:C:H1'	49:S2:1603:G:H21	1.69	0.56
49:S2:1622:U:C5	68:SS:120:HIS:CE1	2.93	0.56
49:S2:1639:G:C2	49:S2:1640:A:C8	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1773:C:C2	49:S2:1774:C:C5	2.93	0.56
50:SA:111:GLN:N	50:SA:111:GLN:OE1	2.38	0.56
50:SA:203:PHE:N	50:SA:203:PHE:CD1	2.73	0.56
52:SC:163:VAL:HG22	52:SC:241:PHE:HZ	1.70	0.56
55:SF:179:ASN:ND2	55:SF:186:ASN:HB3	2.19	0.56
62:SM:101:ARG:HA	62:SM:101:ARG:NH1	2.20	0.56
1:5:85:G:C6	15:L:13:HIS:CE1	2.93	0.56
1:5:153:G:C2	1:5:154:G:C5	2.93	0.56
1:5:158:A:C6	1:5:277:G:C5	2.93	0.56
1:5:183:C:H1'	1:5:184:U:N3	2.21	0.56
1:5:209:U:O4	1:5:211:G:H1'	2.05	0.56
1:5:269:G:C2	1:5:270:U:C6	2.93	0.56
1:5:322:C:H2'	1:5:322:C:O2	2.04	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
1:5:696:C:H5''	1:5:697:G:H5'	1.86	0.56
1:5:916:C:N3	1:5:918:G:O6	2.38	0.56
1:5:932:A:H2'	1:5:932:A:N3	2.20	0.56
1:5:1218:G:C6	1:5:1219:G:C8	2.93	0.56
1:5:1298:C:C4	1:5:1299:G:N7	2.73	0.56
1:5:1324:A:H2'	1:5:1326:A:N7	2.20	0.56
1:5:1334:A:C6	1:5:1335:G:C5	2.93	0.56
1:5:1341:U:O2	1:5:1342:A:C8	2.58	0.56
1:5:1380:G:H2'	1:5:1382:G:C5	2.41	0.56
1:5:1390:G:N3	1:5:1394:G:C6	2.73	0.56
1:5:1410:U:C5	1:5:1815:G:N1	2.73	0.56
1:5:1465:G:C2	1:5:1466:G:C1'	2.88	0.56
1:5:1544:G:C2	1:5:1545:G:C8	2.94	0.56
1:5:1558:A:C2	1:5:1559:G:C4	2.93	0.56
1:5:1582:U:O4	1:5:1583:A:C5	2.59	0.56
1:5:1661:C:H1'	1:5:2345:G:N2	2.20	0.56
1:5:1750:G:C6	1:5:1751:A:N7	2.73	0.56
1:5:1887:G:C6	1:5:1890:G:O6	2.59	0.56
1:5:1995:G:C2	1:5:1996:C:C2	2.94	0.56
1:5:2090:U:H1'	6:C:305:PRO:HG2	1.88	0.56
1:5:2110:C:C6	1:5:2110:C:P	2.97	0.56
1:5:2292:C:C2	1:5:2293:U:C5	2.92	0.56
1:5:2315:G:C2	1:5:2316:G:C8	2.94	0.56
1:5:2395:A:C2'	1:5:2806:A:HO2'	2.16	0.56
1:5:2569:G:C6	1:5:2570:U:C4	2.94	0.56
1:5:2577:C:N3	1:5:2578:G:N7	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2634:C:C2	1:5:2635:U:C6	2.93	0.56
1:5:2668:G:C2'	1:5:2669:C:H5'	2.28	0.56
1:5:2712:G:C6	1:5:2713:C:C5	2.92	0.56
1:5:2726:G:N1	1:5:2727:C:N4	2.53	0.56
1:5:3621:A:H1'	1:5:4655:A:H2	1.70	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
1:5:3703:G:C5	1:5:3704:U:C5	2.93	0.56
1:5:3834:C:C2	1:5:3835:C:C5	2.94	0.56
1:5:3923:A:C2	1:5:3924:C:C4	2.93	0.56
1:5:4189:U:H1'	1:5:4380:A:N3	2.20	0.56
1:5:4276:G:H2'	1:5:4276:G:N3	2.20	0.56
1:5:4413:C:H2'	1:5:4414:A:O4'	2.05	0.56
1:5:4455:G:C6	1:5:4456:C:C4	2.94	0.56
1:5:4563:U:O2	1:5:4564:A:N7	2.35	0.56
1:5:4660:G:C2	1:5:4661:G:C8	2.93	0.56
1:5:4666:G:C6	1:5:4667:C:C4	2.93	0.56
1:5:4735:G:C2	1:5:4736:C:C2	2.94	0.56
1:5:5019:A:C2	1:5:5020:G:C5	2.94	0.56
1:5:5035:U:N3	1:5:5036:C:C5	2.73	0.56
2:7:59:G:N1	2:7:60:G:N7	2.52	0.56
3:8:89:U:H2'	3:8:90:C:C6	2.40	0.56
3:8:131:G:C2	3:8:132:G:N9	2.73	0.56
5:B:41:VAL:HG12	5:B:187:GLY:HA3	1.87	0.56
5:B:90:VAL:HB	5:B:104:THR:HG23	1.86	0.56
5:B:175:GLN:HE21	5:B:179:HIS:CE1	2.22	0.56
5:B:314:ILE:HD13	5:B:326:VAL:HG12	1.88	0.56
5:B:323:TYR:CB	5:B:342:LYS:HG2	2.35	0.56
7:D:42:ASN:N	7:D:42:ASN:OD1	2.37	0.56
7:D:278:ASP:O	7:D:282:GLN:HG2	2.04	0.56
8:E:102:VAL:HB	8:E:103:VAL:HG13	1.87	0.56
14:K:18:THR:HA	14:K:58:ILE:HG23	1.88	0.56
16:M:3:PHE:CB	16:M:6:PHE:CZ	2.89	0.56
20:Q:32:TYR:HH	20:Q:123:PHE:HD2	1.51	0.56
26:W:50:ASN:HA	26:W:55:TYR:CE2	2.40	0.56
27:X:122:ALA:HB3	27:X:139:ARG:HG3	1.87	0.56
29:Z:41:ALA:HB2	29:Z:77:TYR:CE1	2.40	0.56
33:d:33:ILE:HD11	33:d:45:ALA:HB2	1.86	0.56
39:j:20:ARG:CD	39:j:39:TYR:OH	2.54	0.56
46:q:26:LYS:NZ	46:q:92:LYS:O	2.38	0.56
46:q:108:PRO:CA	46:q:109:ALA:CB	2.84	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:135:THR:HG22	46:q:152:ILE:HD13	1.80	0.56
48:4:42:LYS:NZ	48:4:79:TYR:OH	2.38	0.56
48:4:155:LEU:HD11	48:4:185:VAL:HG21	1.84	0.56
48:4:231:MET:HE3	48:4:232:TYR:CE1	2.39	0.56
48:4:331:GLU:HA	48:4:335:LEU:HB2	1.87	0.56
48:4:727:ARG:HH11	48:4:727:ARG:CG	2.17	0.56
48:4:739:ARG:HD2	48:4:821:PRO:O	2.05	0.56
48:4:762:VAL:CG2	48:4:800:LEU:CD1	2.55	0.56
48:4:791:ASN:CA	48:4:794:PHE:HE1	2.19	0.56
49:S2:12:U:C2	49:S2:13:C:C5	2.92	0.56
49:S2:75:G:N2	49:S2:77:A:P	2.68	0.56
49:S2:77:A:OP1	56:SG:157:VAL:HG11	2.05	0.56
49:S2:120:U:C4	49:S2:121:U:C4	2.93	0.56
49:S2:122:G:H2'	49:S2:123:G:C1'	2.35	0.56
49:S2:309:G:H2'	49:S2:310:C:C6	2.39	0.56
49:S2:310:C:H2'	49:S2:311:C:O4'	2.04	0.56
49:S2:325:C:O2	49:S2:326:C:C6	2.58	0.56
49:S2:360:A:H4'	49:S2:361:U:H3'	1.87	0.56
49:S2:379:C:O2	49:S2:380:G:C8	2.58	0.56
49:S2:402:C:N4	49:S2:403:G:N7	2.54	0.56
49:S2:550:C:O2	49:S2:551:U:C6	2.59	0.56
49:S2:636:C:N3	49:S2:637:U:C4	2.72	0.56
49:S2:856:C:N3	49:S2:857:U:C5	2.74	0.56
49:S2:923:G:C2	49:S2:924:G:N9	2.73	0.56
49:S2:958:G:O2'	49:S2:959:G:C5'	2.54	0.56
49:S2:1021:U:H4'	49:S2:1022:U:O4'	2.04	0.56
49:S2:1073:U:C2	49:S2:1074:C:C5	2.93	0.56
49:S2:1118:C:O4'	49:S2:1118:C:O2	2.22	0.56
49:S2:1137:U:O2'	49:S2:1138:C:OP1	2.15	0.56
49:S2:1184:G:C5	49:S2:1185:C:C5	2.93	0.56
49:S2:1233:G:C6	49:S2:1234:C:C5	2.94	0.56
49:S2:1292:C:C3'	81:Sf:150:PHE:HD1	2.18	0.56
49:S2:1309:C:H2'	81:Sf:143:LYS:CG	2.35	0.56
49:S2:1408:U:H2'	49:S2:1409:A:N9	2.20	0.56
49:S2:1429:G:H2'	49:S2:1430:C:C6	2.41	0.56
49:S2:1508:A:O4'	49:S2:1508:A:OP2	2.23	0.56
49:S2:1550:G:H3'	49:S2:1579:A:H61	1.71	0.56
49:S2:1563:G:C4	49:S2:1564:C:C5	2.93	0.56
49:S2:1709:G:C6	49:S2:1710:C:C5	2.93	0.56
49:S2:1753:C:C2	49:S2:1754:G:C8	2.94	0.56
49:S2:1776:G:C2	49:S2:1777:G:N7	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1777:G:C6	49:S2:1778:C:C4	2.92	0.56
51:SB:158:HIS:CD2	51:SB:158:HIS:C	2.82	0.56
54:SE:51:ARG:HA	54:SE:51:ARG:HE	1.69	0.56
58:SI:62:VAL:HG12	58:SI:77:ARG:HA	1.88	0.56
61:SL:99:TYR:CE2	73:SX:13:LEU:HB3	2.40	0.56
66:SQ:62:ARG:HH11	66:SQ:62:ARG:HA	1.70	0.56
69:ST:76:THR:HG21	69:ST:97:LYS:HG3	1.87	0.56
82:Sg:83:TRP:HZ2	82:Sg:125:ARG:NH2	2.03	0.56
1:5:100:C:O4'	1:5:100:C:O2	2.22	0.56
1:5:246:G:C2	1:5:247:G:C5	2.93	0.56
1:5:483:G:N3	1:5:484:U:C5	2.72	0.56
1:5:499:G:H2'	1:5:499:G:N3	2.20	0.56
1:5:936:C:C2'	16:M:46:ARG:NH1	2.68	0.56
1:5:1093:C:N3	1:5:1094:G:N7	2.54	0.56
1:5:1270:A:C6	1:5:1271:G:H1'	2.40	0.56
1:5:1539:G:H1'	4:A:15:VAL:HG13	1.87	0.56
1:5:1857:C:H2'	1:5:1858:A:H8	1.70	0.56
1:5:1945:G:H4'	1:5:1945:G:OP1	2.06	0.56
1:5:2009:A:O2'	1:5:2010:A:OP1	2.20	0.56
1:5:2324:C:H2'	1:5:2324:C:O2	2.04	0.56
1:5:2454:U:H2'	1:5:2454:U:O2	2.04	0.56
1:5:2505:C:H1'	1:5:2506:G:C4	2.40	0.56
1:5:2692:U:H2'	1:5:2693:G:H5'	1.87	0.56
1:5:2880:U:N3	1:5:3625:G:C8	2.73	0.56
1:5:3688:U:H2'	1:5:3688:U:O2	2.05	0.56
1:5:3893:C:N3	1:5:4568:A:C2	2.73	0.56
1:5:4239:A:N6	1:5:4240:G:N7	2.54	0.56
1:5:4324:A:C2	1:5:4325:A:N7	2.73	0.56
1:5:4896:G:C2	1:5:4897:G:C8	2.93	0.56
1:5:4897:G:C4	1:5:4898:G:C8	2.94	0.56
1:5:4981:G:C6	1:5:4982:A:C4	2.93	0.56
1:5:4982:A:C5	1:5:4983:C:C6	2.93	0.56
1:5:5061:A:C4'	1:5:5062:G:H5''	2.35	0.56
2:7:7:G:C2	2:7:8:G:C8	2.93	0.56
2:7:22:A:N3	2:7:23:A:N7	2.53	0.56
2:7:93:G:C6	2:7:94:C:C5	2.94	0.56
3:8:53:G:C5	3:8:54:C:C5	2.94	0.56
4:A:37:ARG:CZ	4:A:37:ARG:HB2	2.32	0.56
9:F:71:ILE:HG22	9:F:75:ARG:HD2	1.86	0.56
15:L:58:VAL:HG13	15:L:70:VAL:CG1	2.36	0.56
22:S:90:THR:HG23	23:T:156:TYR:CD2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:4:GLU:OE1	26:W:30:GLN:NE2	2.29	0.56
46:q:17:ILE:CD1	46:q:54:LEU:CD2	2.83	0.56
46:q:66:ARG:O	46:q:69:LEU:HD22	2.05	0.56
46:q:139:GLN:HE21	48:4:183:GLU:HB3	1.69	0.56
48:4:267:ASP:C	48:4:267:ASP:CG	2.74	0.56
48:4:408:GLY:HA2	49:S2:479:C:H5''	1.86	0.56
48:4:541:SER:C	48:4:543:GLU:N	2.55	0.56
48:4:744:ILE:CG1	48:4:745:TYR:H	2.17	0.56
49:S2:105:U:H4'	58:SI:21:TYR:OH	2.04	0.56
49:S2:118:C:N1	49:S2:445:A:C2	2.73	0.56
49:S2:211:G:C2	49:S2:212:C:C2	2.94	0.56
49:S2:357:C:C2	49:S2:358:C:C6	2.94	0.56
49:S2:532:C:O2	49:S2:533:A:C8	2.58	0.56
49:S2:581:U:O2	74:SY:33:ALA:HB1	2.04	0.56
49:S2:625:G:O4'	49:S2:629:A:H2	1.87	0.56
49:S2:920:A:O2'	49:S2:922:A:O5'	2.23	0.56
49:S2:927:C:C2	49:S2:928:G:N7	2.74	0.56
49:S2:999:G:C5	49:S2:1000:C:C5	2.93	0.56
49:S2:1085:C:C4	49:S2:1087:A:H1'	2.40	0.56
49:S2:1501:C:C2	49:S2:1502:C:C5	2.93	0.56
49:S2:1592:C:N4	49:S2:1593:C:C5	2.73	0.56
49:S2:1593:C:O2	49:S2:1593:C:C2'	2.54	0.56
49:S2:1776:G:N2	49:S2:1777:G:C4	2.73	0.56
49:S2:1794:C:N3	49:S2:1795:G:N7	2.53	0.56
52:SC:166:ARG:HH22	71:SV:1:MET:HE3	1.69	0.56
56:SG:26:THR:HG21	56:SG:40:ALA:HB3	1.87	0.56
59:SJ:120:ALA:O	59:SJ:121:LYS:CB	2.54	0.56
62:SM:85:LEU:HA	62:SM:88:TRP:CZ2	2.38	0.56
63:SN:113:PHE:O	63:SN:116:ILE:N	2.38	0.56
68:SS:34:LYS:HB3	68:SS:103:LEU:HD21	1.88	0.56
70:SU:66:ARG:HD2	70:SU:77:TRP:CD1	2.41	0.56
82:Sg:49:GLU:N	82:Sg:49:GLU:OE1	2.38	0.56
1:5:153:G:N1	1:5:154:G:N7	2.53	0.56
1:5:173:C:N3	1:5:174:C:H5	1.99	0.56
1:5:258:G:N2	1:5:259:C:C2	2.72	0.56
1:5:388:A:C6	1:5:411:G:C5	2.93	0.56
1:5:497:G:C2	1:5:657:C:C2	2.94	0.56
1:5:655:C:N3	1:5:656:C:C5	2.73	0.56
1:5:671:G:N1	1:5:672:C:C4	2.74	0.56
1:5:1189:G:C5	1:5:1190:C:C5	2.93	0.56
1:5:1348:U:C2	1:5:1349:G:C8	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1388:A:N1	1:5:1396:G:N2	2.48	0.56
1:5:1464:C:H2'	1:5:1464:C:O2	2.04	0.56
1:5:1547:A:C6	1:5:1582:U:H1'	2.40	0.56
1:5:1831:G:C6	1:5:1832:C:C5	2.93	0.56
1:5:1850:A:H2'	1:5:1851:G:O5'	2.05	0.56
1:5:1860:U:N3	1:5:1861:U:C5	2.73	0.56
1:5:1895:G:H2'	1:5:1896:A:O5'	2.04	0.56
1:5:1899:G:H1'	34:e:59:GLY:HA3	1.88	0.56
1:5:1918:U:O2	1:5:1920:C:C5	2.58	0.56
1:5:2084:C:H3'	1:5:2085:G:C5'	2.36	0.56
1:5:2325:C:O2'	34:e:98:GLU:OE2	2.20	0.56
1:5:2463:G:N1	1:5:2464:C:C4	2.73	0.56
1:5:2714:G:N2	1:5:2715:G:C4	2.73	0.56
1:5:2744:A:O2'	1:5:2745:A:O5'	2.24	0.56
1:5:3731:C:O2	1:5:3732:A:H8	1.88	0.56
1:5:3858:C:C2	1:5:3859:G:C8	2.93	0.56
1:5:4088:C:C4	10:G:53:ARG:NH2	2.74	0.56
1:5:4152:G:N3	1:5:4153:C:C6	2.74	0.56
1:5:4518:A:C2'	5:B:257:TRP:CZ3	2.89	0.56
1:5:4878:C:O2	1:5:4878:C:H2'	2.04	0.56
1:5:4945:G:H21	35:f:69:VAL:N	2.04	0.56
2:7:111:C:H2'	2:7:111:C:O2	2.04	0.56
3:8:37:A:OP2	37:h:89:ARG:HD3	2.05	0.56
7:D:163:LEU:HD21	7:D:175:HIS:HB3	1.87	0.56
9:F:148:ASN:HB3	9:F:243:ASN:HD22	1.71	0.56
22:S:44:PHE:C	22:S:44:PHE:HD1	2.13	0.56
32:c:31:TYR:CE1	32:c:35:LEU:HD22	2.40	0.56
48:4:206:ASP:HB2	48:4:207:PRO:CD	2.22	0.56
48:4:369:CYS:HB3	48:4:386:LYS:HG3	1.86	0.56
49:S2:51:U:O2	49:S2:52:G:C8	2.58	0.56
49:S2:99:A:N1	49:S2:100:U:C6	2.72	0.56
49:S2:106:C:O2	49:S2:107:A:N7	2.38	0.56
49:S2:194:C:C2	49:S2:206:G:C2	2.94	0.56
49:S2:340:C:N3	49:S2:341:C:C5	2.67	0.56
49:S2:447:A:N6	49:S2:449:A:C5	2.73	0.56
49:S2:562:U:H2'	49:S2:563:G:C8	2.40	0.56
49:S2:672:A:N1	49:S2:1162:C:H1'	2.20	0.56
49:S2:805:U:O2	49:S2:806:U:C6	2.58	0.56
49:S2:943:U:C2	49:S2:944:A:C8	2.94	0.56
49:S2:1074:C:C2	49:S2:1075:C:C6	2.87	0.56
49:S2:1115:U:O4'	49:S2:1115:U:O2	2.24	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1119:A:C5	49:S2:1120:U:H1'	2.41	0.56
49:S2:1278:A:C6	49:S2:1279:C:C4	2.93	0.56
49:S2:1410:C:N3	49:S2:1411:G:C5	2.74	0.56
49:S2:1502:C:C2	49:S2:1503:C:C5	2.94	0.56
49:S2:1739:C:C2	49:S2:1740:C:C5	2.94	0.56
49:S2:1753:C:O2	49:S2:1754:G:C8	2.59	0.56
49:S2:1811:C:C2	49:S2:1812:U:C6	2.93	0.56
49:S2:1865:C:O2'	76:Sa:95:ARG:NH1	2.37	0.56
50:SA:158:ASP:OD2	50:SA:159:ILE:HB	2.05	0.56
59:SJ:132:GLN:HB2	59:SJ:134:HIS:HD2	1.69	0.56
82:Sg:162:ASN:OD1	82:Sg:178:ASN:ND2	2.39	0.56
1:5:291:U:O2	1:5:293:G:H8	1.88	0.56
1:5:471:A:N6	1:5:472:C:C5	2.73	0.56
1:5:969:C:C2'	1:5:970:G:N3	2.69	0.56
1:5:1177:U:C1'	7:D:282:GLN:NE2	2.67	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
1:5:1310:C:C4	1:5:1311:G:N7	2.73	0.56
1:5:1380:G:N1	1:5:1382:G:C2	2.74	0.56
1:5:1478:C:H2'	1:5:1479:G:H8	1.70	0.56
1:5:1596:U:O2'	1:5:1597:G:P	2.64	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
1:5:1882:U:O2	1:5:1883:G:N7	2.38	0.56
1:5:1937:C:OP2	1:5:1938:C:O2'	2.22	0.56
1:5:2034:G:C6	1:5:2035:C:N4	2.73	0.56
1:5:2339:G:C6	1:5:2340:C:C4	2.93	0.56
1:5:2451:A:C6	1:5:2452:G:C8	2.93	0.56
1:5:3594:C:H2'	1:5:3597:G:H1'	1.86	0.56
1:5:4095:G:N2	1:5:4096:C:C5	2.69	0.56
1:5:4269:G:C5	1:5:4270:C:C5	2.93	0.56
1:5:4343:U:C4	1:5:4344:U:C5	2.93	0.56
1:5:4479:A:N6	1:5:4480:A:C4	2.74	0.56
1:5:4684:A:H2'	1:5:4685:U:O4'	2.06	0.56
1:5:4698:C:O2	1:5:4698:C:C2'	2.53	0.56
1:5:4714:C:O2	1:5:4714:C:H2'	2.05	0.56
1:5:4723:A:C4	1:5:4724:A:C8	2.94	0.56
1:5:4737:G:O2'	1:5:4738:C:O5'	2.23	0.56
1:5:4767:C:O3'	1:5:4874:A:N1	2.38	0.56
1:5:5036:C:N3	1:5:5037:U:C5	2.74	0.56
3:8:10:G:C4	3:8:11:C:C6	2.92	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:138:GLN:O	5:B:139:ASP:HB3	2.05	0.56
5:B:169:ARG:HH11	5:B:169:ARG:HG2	1.69	0.56
17:N:126:THR:C	17:N:127:TYR:HD1	2.14	0.56
27:X:116:LEU:HB2	27:X:117:TYR:CE1	2.41	0.56
42:m:99:CYS:SG	42:m:101:ALA:CB	2.94	0.56
48:4:393:PRO:O	48:4:393:PRO:HD2	2.06	0.56
48:4:503:PRO:HB3	48:4:533:MET:SD	2.45	0.56
48:4:675:ILE:HG22	48:4:709:LEU:HD13	1.86	0.56
49:S2:291:G:C8	49:S2:291:G:C5'	2.88	0.56
49:S2:323:C:H3'	49:S2:324:C:C5'	2.35	0.56
49:S2:447:A:C5	49:S2:449:A:N9	2.74	0.56
49:S2:647:U:O2	49:S2:647:U:C2'	2.51	0.56
49:S2:675:U:C2	49:S2:676:C:C6	2.93	0.56
49:S2:862:A:C6	49:S2:863:U:C4	2.94	0.56
49:S2:903:A:C5	49:S2:904:A:C8	2.94	0.56
49:S2:1406:G:C5	49:S2:1407:U:C6	2.94	0.56
49:S2:1419:C:OP2	69:ST:129:ARG:CA	2.43	0.56
49:S2:1568:C:OP1	69:ST:96:SER:OG	2.18	0.56
53:SD:212:GLU:C	67:SR:20:TYR:OH	2.47	0.56
77:Sb:46:VAL:HG22	77:Sb:54:VAL:HG11	1.87	0.56
82:Sg:247:TRP:NE1	82:Sg:267:VAL:HG21	2.20	0.56
1:5:42:A:C6	1:5:4379:A:N1	2.73	0.56
1:5:76:A:N7	15:L:74:ARG:NH2	2.54	0.56
1:5:177:G:C6	1:5:178:C:C4	2.94	0.56
1:5:471:A:C2	1:5:472:C:H1'	2.40	0.56
1:5:481:G:OP1	47:r:67:ARG:NH1	2.38	0.56
1:5:495:C:C4	1:5:496:G:N7	2.74	0.56
1:5:1398:A:C2	1:5:1399:G:H1'	2.41	0.56
1:5:2097:U:O2	1:5:2097:U:C5'	2.52	0.56
1:5:2400:G:C6	1:5:2401:A:N7	2.73	0.56
1:5:2650:G:N2	1:5:2684:C:C2	2.74	0.56
1:5:2852:U:H3'	1:5:2852:U:C2	2.41	0.56
1:5:2857:A:N1	1:5:2858:A:C6	2.74	0.56
1:5:2909:C:C2	1:5:3586:G:C2	2.93	0.56
1:5:3759:A:H61	49:S2:1709:G:H5'	1.70	0.56
1:5:4222:G:C6	1:5:4223:C:C4	2.94	0.56
1:5:4232:U:O2	44:o:5:PRO:HG3	2.05	0.56
1:5:4297:G:C2	1:5:4298:A:C8	2.93	0.56
1:5:4324:A:C2	1:5:4325:A:C6	2.94	0.56
1:5:4433:G:H2'	1:5:4434:C:C6	2.40	0.56
1:5:4549:G:N1	1:5:4550:G:C5	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4605:A:H2'	1:5:4606:G:C8	2.40	0.56
1:5:4628:U:O2	1:5:4628:U:H2'	2.06	0.56
4:A:186:TYR:C	4:A:186:TYR:CD1	2.84	0.56
6:C:78:ARG:HH11	6:C:78:ARG:HG2	1.70	0.56
14:K:59:THR:HA	14:K:80:LEU:HD13	1.87	0.56
14:K:97:ASN:N	14:K:98:ILE:HA	2.19	0.56
29:Z:21:ARG:HH11	29:Z:21:ARG:HG3	1.70	0.56
46:q:182:PRO:HG2	46:q:183:PHE:HD1	1.61	0.56
48:4:82:SER:O	48:4:86:LEU:HD12	2.05	0.56
48:4:120:ARG:NH1	48:4:496:VAL:CA	2.69	0.56
48:4:373:TYR:CE2	48:4:375:GLY:HA3	2.40	0.56
48:4:589:VAL:HG12	48:4:590:LEU:N	2.21	0.56
48:4:592:LEU:HD12	48:4:593:SER:N	2.19	0.56
48:4:689:GLU:C	48:4:730:TYR:HH	2.00	0.56
48:4:744:ILE:HD11	48:4:816:HIS:CB	2.36	0.56
49:S2:120:U:O4	49:S2:121:U:C4	2.59	0.56
49:S2:144:U:H2'	49:S2:145:G:C8	2.40	0.56
49:S2:348:A:C2'	49:S2:349:A:H5'	2.36	0.56
49:S2:414:A:O2'	49:S2:415:A:C5'	2.54	0.56
49:S2:639:C:O2'	49:S2:640:A:C5'	2.53	0.56
49:S2:823:U:C4	74:SY:64:PHE:HE2	2.22	0.56
49:S2:862:A:N7	72:SW:107:SER:HA	2.21	0.56
49:S2:892:U:O2	49:S2:893:U:C6	2.59	0.56
49:S2:1115:U:H4'	49:S2:1116:C:OP1	2.06	0.56
49:S2:1121:G:C5	49:S2:1122:A:N7	2.74	0.56
49:S2:1533:A:H2	49:S2:1536:G:N3	2.03	0.56
57:SH:83:LEU:HD13	57:SH:92:VAL:HG21	1.87	0.56
57:SH:105:THR:OG1	57:SH:108:SER:N	2.36	0.56
71:SV:64:GLU:O	71:SV:66:ASP:N	2.37	0.56
1:5:12:A:N1	1:5:14:C:C4	2.74	0.56
1:5:29:G:N2	1:5:30:C:C2	2.74	0.56
1:5:78:U:C2	1:5:336:A:N6	2.73	0.56
1:5:190:G:C2	1:5:252:C:O2	2.57	0.56
1:5:465:G:N2	1:5:466:A:H1'	2.21	0.56
1:5:711:A:N1	1:5:712:C:C4	2.73	0.56
1:5:1049:C:O2	1:5:1050:C:C6	2.59	0.56
1:5:1173:G:C6	1:5:1174:G:C5	2.94	0.56
1:5:1279:A:O2'	1:5:1280:C:H5''	2.05	0.56
1:5:1340:C:N3	1:5:1341:U:C4	2.73	0.56
1:5:1479:G:C2'	1:5:1480:C:O5'	2.54	0.56
1:5:1582:U:C4	1:5:1583:A:N7	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1634:A:C4	1:5:1635:C:C6	2.94	0.56
1:5:1806:G:C2	1:5:1807:C:C4	2.93	0.56
1:5:1868:A:C5	1:5:1870:C:HI'	2.41	0.56
1:5:2092:G:HI'	1:5:2093:A:C2	2.41	0.56
1:5:2422:C:N3	1:5:2423:A:N7	2.54	0.56
1:5:2490:U:H2'	1:5:2491:C:C6	2.40	0.56
1:5:2494:U:N3	1:5:2495:U:C5	2.74	0.56
1:5:2521:G:C2	1:5:2535:G:C2	2.94	0.56
1:5:2723:U:C2	1:5:2724:G:N7	2.74	0.56
1:5:2725:A:N6	21:R:88:ARG:O	2.38	0.56
1:5:2735:G:N1	1:5:2736:G:C5	2.73	0.56
1:5:3721:U:O2	1:5:3721:U:H2'	2.05	0.56
1:5:4109:G:C5	1:5:4110:C:C5	2.93	0.56
1:5:4152:G:C2	1:5:4153:C:C5	2.94	0.56
1:5:4192:A:C2	1:5:4204:C:N3	2.73	0.56
1:5:4482:U:O2	1:5:4482:U:H2'	2.04	0.56
2:7:34:C:C2	2:7:35:U:C5	2.93	0.56
3:8:37:A:C4'	3:8:39:G:HI'	2.34	0.56
5:B:86:VAL:HG13	5:B:162:VAL:HG13	1.88	0.56
8:E:95:ASP:OD1	8:E:96:LYS:N	2.38	0.56
9:F:82:ASN:HD21	23:T:142:ARG:HB3	1.70	0.56
13:J:107:PHE:CZ	13:J:130:PHE:CB	2.89	0.56
14:K:147:HIS:N	14:K:147:HIS:CD2	2.73	0.56
15:L:36:ARG:HB2	15:L:36:ARG:HH11	1.70	0.56
30:a:132:ARG:HH11	30:a:132:ARG:HB3	1.70	0.56
39:j:20:ARG:HD3	39:j:39:TYR:OH	2.05	0.56
40:k:22:SER:O	40:k:23:VAL:C	2.48	0.56
46:q:52:VAL:HB	46:q:90:PHE:O	2.05	0.56
48:4:49:ALA:N	48:4:55:ARG:HH22	2.03	0.56
49:S2:449:A:N6	49:S2:452:G:C4	2.74	0.56
49:S2:830:A:N1	49:S2:844:U:C4	2.73	0.56
49:S2:949:G:C6	49:S2:950:C:C4	2.93	0.56
49:S2:1149:A:C2	49:S2:1151:G:C6	2.94	0.56
49:S2:1241:A:H2'	49:S2:1242:U:O4'	2.05	0.56
49:S2:1315:U:O4	49:S2:1316:C:C2	2.59	0.56
49:S2:1687:C:C2	49:S2:1688:C:C6	2.94	0.56
49:S2:1776:G:C2	49:S2:1777:G:C5	2.94	0.56
55:SF:86:LYS:HA	55:SF:89:THR:HG22	1.88	0.56
82:Sg:296:GLN:OE1	82:Sg:312:VAL:HB	2.06	0.56
1:5:165:A:H3'	1:5:166:C:C6	2.40	0.56
1:5:288:G:C2	1:5:289:C:C4	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:314:G:C2	1:5:4355:G:N7	2.73	0.56
1:5:443:G:P	35:f:68:ARG:HH22	2.28	0.56
1:5:494:U:N3	1:5:495:C:C6	2.73	0.56
1:5:693:C:C2	1:5:694:C:C5	2.94	0.56
1:5:751:G:C2	1:5:752:G:C8	2.93	0.56
1:5:994:G:C6	1:5:995:C:C4	2.94	0.56
1:5:1279:A:H2'	1:5:1280:C:C6	2.35	0.56
1:5:1359:G:C2'	1:5:1360:G:C8	2.87	0.56
1:5:1368:A:HO2'	1:5:1369:C:P	2.28	0.56
1:5:1377:G:C8	1:5:1378:C:H4'	2.40	0.56
1:5:1555:G:C6	1:5:1556:C:C5	2.93	0.56
1:5:1570:G:C5	1:5:1571:G:C8	2.94	0.56
1:5:1589:C:C2'	1:5:1590:C:O5'	2.54	0.56
1:5:1661:C:H2'	1:5:1662:C:H6	1.71	0.56
1:5:1691:G:C6	1:5:1692:C:C5	2.93	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
1:5:1755:C:C3'	1:5:1756:U:H5''	2.36	0.56
1:5:2451:A:C6	1:5:2452:G:C5	2.94	0.56
1:5:2606:G:C2	1:5:2607:C:C5	2.94	0.56
1:5:2645:G:C2	1:5:2646:C:N1	2.74	0.56
1:5:3756:A:C2	1:5:3757:G:C4	2.94	0.56
1:5:3857:G:N1	1:5:3858:C:C2	2.74	0.56
1:5:3880:G:O2'	1:5:3881:G:O5'	2.24	0.56
1:5:4091:G:C2	1:5:4092:G:N9	2.74	0.56
1:5:4098:A:C6	1:5:4099:G:N7	2.74	0.56
1:5:4099:G:C2	1:5:4100:C:C2	2.93	0.56
1:5:4152:G:C2	1:5:4153:C:C6	2.93	0.56
1:5:4174:U:O2	1:5:4174:U:H2'	2.05	0.56
1:5:4301:U:OP2	23:T:87:LYS:NZ	2.39	0.56
1:5:4413:C:O4'	1:5:4413:C:O2	2.23	0.56
1:5:4483:C:N3	1:5:4484:A:N7	2.54	0.56
1:5:4504:C:C2	1:5:4505:C:C5	2.94	0.56
1:5:4988:U:H3'	1:5:4988:U:OP2	2.05	0.56
1:5:5028:G:N2	1:5:5029:C:C2	2.73	0.56
2:7:69:U:N3	2:7:70:G:N7	2.53	0.56
3:8:116:C:N3	3:8:117:C:C6	2.74	0.56
4:A:118:GLU:HB3	4:A:126:LEU:HD21	1.88	0.56
4:A:226:ARG:NH1	4:A:226:ARG:HB2	2.21	0.56
5:B:62:ARG:HH11	5:B:62:ARG:HG3	1.70	0.56
6:C:331:TYR:O	6:C:331:TYR:CG	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:108:GLN:CA	10:G:108:GLN:HE21	2.19	0.56
14:K:16:ARG:HH12	14:K:28:LEU:C	2.13	0.56
18:O:84:VAL:HG11	18:O:102:LEU:HD22	1.88	0.56
21:R:89:MET:HE1	21:R:97:ARG:HD2	1.87	0.56
24:U:106:SER:HG	24:U:109:SER:HG	1.53	0.56
30:a:109:TYR:CD1	30:a:109:TYR:N	2.74	0.56
46:q:28:PHE:CE2	46:q:99:ARG:HD2	2.41	0.56
46:q:80:PRO:CB	46:q:81:HIS:HE1	2.12	0.56
48:4:24:VAL:HG23	48:4:24:VAL:O	2.06	0.56
48:4:510:GLU:CB	48:4:571:LYS:O	2.54	0.56
48:4:723:PRO:O	48:4:727:ARG:HB2	2.06	0.56
49:S2:45:A:C2	49:S2:481:C:C1'	2.89	0.56
49:S2:77:A:O3'	56:SG:173:ALA:HB3	2.06	0.56
49:S2:85:A:C2	49:S2:86:C:C6	2.94	0.56
49:S2:122:G:H2'	49:S2:123:G:H1'	1.88	0.56
49:S2:219:U:C2	49:S2:220:U:C6	2.94	0.56
49:S2:749:U:C5	49:S2:750:C:C6	2.94	0.56
49:S2:898:U:N3	49:S2:899:U:C6	2.73	0.56
49:S2:1250:A:C2	49:S2:1339:U:C1'	2.89	0.56
49:S2:1261:C:C5	49:S2:1262:C:C5	2.93	0.56
49:S2:1368:U:C2	49:S2:1372:U:C4	2.93	0.56
49:S2:1426:U:C2	49:S2:1427:C:C6	2.94	0.56
52:SC:74:LYS:HG3	52:SC:269:PHE:CD2	2.41	0.56
62:SM:36:ARG:HD3	81:Sf:143:LYS:HZ3	1.70	0.56
64:SO:146:ARG:HG2	76:Sa:29:CYS:HB2	1.88	0.56
1:5:39:A:C2	30:a:40:HIS:NE2	2.74	0.56
1:5:98:A:C6	1:5:99:A:C4	2.94	0.56
1:5:290:U:H2'	1:5:291:U:O5'	2.06	0.56
1:5:331:G:C2	1:5:332:C:C4	2.93	0.56
1:5:450:G:C6	1:5:1295:C:N3	2.74	0.56
1:5:1214:C:N4	9:F:58:HIS:ND1	2.54	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
1:5:1286:C:C2	1:5:1287:G:C8	2.93	0.56
1:5:1358:G:C2	1:5:1359:G:C5	2.94	0.56
1:5:1473:U:C4	1:5:1474:C:C5	2.94	0.56
1:5:1774:C:N3	1:5:1775:A:N7	2.53	0.56
1:5:1984:A:H62	1:5:2011:C:C2'	2.19	0.56
1:5:2394:G:N2	1:5:2820:C:H5	2.04	0.56
1:5:2494:U:C4	1:5:2495:U:C5	2.94	0.56
1:5:2589:C:H5''	1:5:2590:G:OP2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2715:G:C4	1:5:2716:C:C5	2.93	0.56
1:5:2904:U:P	1:5:2905:C:H41	2.29	0.56
1:5:3720:G:C6	1:5:3721:U:C5	2.94	0.56
1:5:4164:C:C4	1:5:4165:C:C5	2.94	0.56
1:5:4205:A:C2	1:5:4206:C:C6	2.93	0.56
1:5:4235:G:O5'	1:5:4331:G:O2'	2.24	0.56
1:5:4280:A:H61	7:D:28:THR:C	2.13	0.56
1:5:4413:C:H5'	12:I:157:PHE:CE2	2.39	0.56
1:5:4473:A:C2	1:5:4474:A:C4	2.93	0.56
1:5:4535:A:H2'	1:5:4535:A:N3	2.21	0.56
1:5:4749:C:O4'	1:5:4749:C:O2	2.23	0.56
1:5:4957:C:O2	1:5:4958:C:C6	2.59	0.56
1:5:5037:U:C2	1:5:5038:A:C8	2.94	0.56
2:7:82:G:N2	2:7:95:C:C2	2.74	0.56
6:C:213:GLU:N	6:C:213:GLU:OE1	2.39	0.56
15:L:5:ARG:HA	30:a:48:TYR:CE2	2.41	0.56
15:L:9:ILE:O	15:L:10:LEU:HB2	2.05	0.56
28:Y:62:TYR:OH	28:Y:97:VAL:HB	2.06	0.56
30:a:91:ALA:HB2	30:a:120:GLN:OE1	2.06	0.56
46:q:48:ARG:NE	46:q:48:ARG:HA	2.21	0.56
48:4:12:ILE:HG22	48:4:99:LEU:HD22	1.87	0.56
48:4:27:HIS:CD2	48:4:28:VAL:C	2.84	0.56
48:4:154:VAL:HA	48:4:205:ILE:HD11	1.86	0.56
49:S2:68:A:C5	49:S2:69:C:C5	2.94	0.56
49:S2:376:A:C2	49:S2:377:G:N9	2.74	0.56
49:S2:580:U:C4	49:S2:581:U:C6	2.94	0.56
49:S2:824:C:H2'	49:S2:825:A:C8	2.41	0.56
49:S2:927:C:N3	49:S2:928:G:N7	2.54	0.56
49:S2:978:G:N2	49:S2:979:C:C2	2.73	0.56
49:S2:992:A:H62	76:Sa:15:ARG:HH11	1.52	0.56
49:S2:1124:C:C2	49:S2:1125:C:C5	2.93	0.56
49:S2:1250:A:N3	49:S2:1339:U:H4'	2.21	0.56
49:S2:1259:A:O2'	49:S2:1263:U:O2	2.22	0.56
49:S2:1338:G:C5	49:S2:1339:U:C5	2.94	0.56
49:S2:1398:G:N3	49:S2:1398:G:H2'	2.21	0.56
49:S2:1432:U:O2	49:S2:1432:U:H2'	2.04	0.56
49:S2:1484:A:C5'	53:SD:159:HIS:HB3	2.36	0.56
49:S2:1554:C:O4'	49:S2:1554:C:O2	2.23	0.56
49:S2:1588:A:O2'	49:S2:1589:A:C5'	2.54	0.56
49:S2:1852:C:C2	49:S2:1853:C:C5	2.93	0.56
51:SB:33:VAL:HG21	51:SB:67:PHE:HZ	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SB:89:GLU:N	51:SB:89:GLU:OE2	2.39	0.56
68:SS:111:LEU:HD22	68:SS:125:HIS:HD2	1.70	0.56
82:Sg:130:LYS:HG2	82:Sg:141:THR:HG23	1.88	0.56
1:5:165:A:C5	1:5:166:C:C5	2.94	0.55
1:5:183:C:H4'	1:5:184:U:C5	2.41	0.55
1:5:247:G:C2	1:5:248:C:C6	2.93	0.55
1:5:302:C:C2	1:5:303:C:C5	2.94	0.55
1:5:469:C:C4	1:5:470:A:C5	2.93	0.55
1:5:677:G:N2	1:5:678:C:C2	2.74	0.55
1:5:964:A:H2	1:5:2252:G:C6	2.24	0.55
1:5:1287:G:N1	1:5:1289:C:C5	2.74	0.55
1:5:1749:A:H4'	12:I:35:ASP:OD2	2.05	0.55
1:5:2463:G:H2'	1:5:2464:C:H6	1.71	0.55
1:5:2726:G:C2	1:5:2727:C:N3	2.74	0.55
1:5:2772:C:C2	1:5:2773:G:C8	2.94	0.55
1:5:2783:A:C5	1:5:2784:C:C5	2.94	0.55
1:5:3675:G:C2	1:5:3676:G:C8	2.94	0.55
1:5:3754:G:N1	1:5:3755:G:C8	2.74	0.55
1:5:3795:A:O2'	49:S2:1719:A:N1	2.38	0.55
1:5:3871:A:H2'	1:5:3872:A:O5'	2.06	0.55
1:5:3873:G:H2'	1:5:3874:G:C1'	2.35	0.55
1:5:4133:C:O2	1:5:4134:C:C6	2.59	0.55
1:5:4173:G:C2	1:5:4174:U:C6	2.94	0.55
1:5:5020:G:C5	1:5:5021:C:C5	2.94	0.55
1:5:5043:A:O2'	1:5:5044:A:C5'	2.54	0.55
3:8:10:G:C6	3:8:11:C:C4	2.93	0.55
3:8:139:G:C6	3:8:140:C:C4	2.94	0.55
32:c:44:LYS:HA	32:c:69:THR:HG23	1.87	0.55
37:h:119:PHE:N	37:h:119:PHE:CD1	2.74	0.55
46:q:35:VAL:HG22	46:q:40:MET:HG2	1.88	0.55
47:r:39:ARG:HB3	47:r:40:TYR:HD1	1.71	0.55
48:4:501:VAL:O	48:4:501:VAL:HG12	2.06	0.55
49:S2:27:A:N1	49:S2:28:U:C5	2.74	0.55
49:S2:27:A:N3	49:S2:28:U:C6	2.74	0.55
49:S2:149:A:C2'	49:S2:150:A:O4'	2.54	0.55
49:S2:172:U:O2	49:S2:172:U:C2'	2.52	0.55
49:S2:297:A:C6	49:S2:298:G:C8	2.93	0.55
49:S2:351:G:C2	49:S2:352:U:C6	2.94	0.55
49:S2:574:A:O2'	49:S2:575:A:O5'	2.24	0.55
49:S2:637:U:O2	49:S2:638:C:C6	2.59	0.55
49:S2:695:C:N3	49:S2:696:G:C8	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:926:A:C4	49:S2:927:C:C6	2.94	0.55
49:S2:945:U:O2	49:S2:1045:U:O2'	2.23	0.55
49:S2:1292:C:C6	81:Sf:149:CYS:HA	2.41	0.55
49:S2:1294:G:C6	49:S2:1295:A:N7	2.75	0.55
49:S2:1387:G:N1	53:SD:206:ASP:OD2	2.33	0.55
49:S2:1435:C:H2'	49:S2:1436:C:O4'	2.06	0.55
49:S2:1454:A:N7	49:S2:1476:A:C4	2.74	0.55
49:S2:1622:U:O4	68:SS:120:HIS:CE1	2.59	0.55
49:S2:1776:G:N1	49:S2:1777:G:C5	2.74	0.55
49:S2:1779:G:C2	49:S2:1780:G:C8	2.94	0.55
49:S2:1804:U:N3	49:S2:1805:G:C8	2.74	0.55
50:SA:90:PHE:HB2	50:SA:179:ALA:HB2	1.87	0.55
55:SF:83:ASN:N	55:SF:83:ASN:HD22	2.04	0.55
58:SI:6:ASP:OD1	58:SI:6:ASP:N	2.38	0.55
62:SM:90:GLY:C	62:SM:91:LEU:HG	2.30	0.55
1:5:15:A:H2'	1:5:16:G:O4'	2.06	0.55
1:5:471:A:C6	1:5:472:C:N1	2.74	0.55
1:5:497:G:C2	1:5:657:C:C4	2.94	0.55
1:5:497:G:N1	1:5:657:C:C4	2.75	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
1:5:737:C:C4	1:5:738:C:C5	2.94	0.55
1:5:909:A:C6	1:5:910:G:C8	2.95	0.55
1:5:949:G:C2	1:5:950:G:C8	2.94	0.55
1:5:964:A:C2	1:5:2252:G:N7	2.75	0.55
1:5:973:G:O6	1:5:1282:G:N2	2.38	0.55
1:5:1215:C:C4	1:5:1216:C:H5	2.24	0.55
1:5:1479:G:C5	1:5:1487:G:N2	2.74	0.55
1:5:1552:G:C2	1:5:1574:G:C2	2.94	0.55
1:5:1819:G:H2'	1:5:1819:G:N3	2.21	0.55
1:5:1873:A:C2	1:5:1874:A:C8	2.94	0.55
1:5:2089:G:N1	1:5:2263:A:C5	2.74	0.55
1:5:2106:G:O2'	1:5:2107:C:O4'	2.11	0.55
1:5:2439:G:C6	1:5:2440:U:C4	2.94	0.55
1:5:2453:A:H1'	1:5:2507:A:C6	2.41	0.55
1:5:2480:G:C2	1:5:2499:C:C2	2.94	0.55
1:5:2658:G:N1	1:5:2675:G:C2	2.74	0.55
1:5:2677:G:C5	1:5:2678:A:C8	2.94	0.55
1:5:2686:G:H5'	1:5:2687:U:OP1	2.07	0.55
1:5:3607:U:C2	1:5:3608:A:N7	2.74	0.55
1:5:3759:A:O2'	49:S2:1826:G:H2'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3935:C:C2	1:5:3936:A:C8	2.94	0.55
1:5:4071:U:C2	1:5:4072:C:C6	2.94	0.55
1:5:4083:U:H5'	4:A:31:ALA:HB2	1.87	0.55
1:5:4092:G:N1	1:5:4093:G:N3	2.54	0.55
1:5:4344:U:O2	1:5:4345:C:C5	2.54	0.55
1:5:4490:C:O2	1:5:4491:G:H8	1.89	0.55
1:5:4572:U:C2	1:5:4720:C:C5	2.94	0.55
1:5:4999:G:N1	1:5:5000:G:C8	2.73	0.55
1:5:5048:A:N7	33:d:34:HIS:CD2	2.73	0.55
2:7:8:G:C4	2:7:9:C:C6	2.94	0.55
6:C:334:THR:HG21	9:F:53:TYR:OH	2.06	0.55
14:K:94:LYS:HA	14:K:96:LYS:N	2.18	0.55
20:Q:181:ARG:HB3	20:Q:181:ARG:HH21	1.71	0.55
34:e:22:ARG:NH2	34:e:36:ARG:HG3	2.21	0.55
37:h:72:PHE:HB3	37:h:73:TYR:HD1	1.71	0.55
46:q:12:ASN:HB3	46:q:16:LYS:CE	2.35	0.55
48:4:312:THR:HG23	48:4:313:ALA:N	2.21	0.55
48:4:330:LYS:NZ	48:4:330:LYS:CB	2.69	0.55
48:4:816:HIS:CD2	48:4:818:GLN:N	2.73	0.55
49:S2:10:G:C8	49:S2:1697:A:N3	2.75	0.55
49:S2:35:C:O2	49:S2:520:A:N1	2.39	0.55
49:S2:193:C:C2	49:S2:207:G:C2	2.94	0.55
49:S2:312:G:HO2'	49:S2:313:A:P	2.29	0.55
49:S2:449:A:H2'	49:S2:449:A:N3	2.20	0.55
49:S2:458:A:C5	49:S2:459:C:C6	2.92	0.55
49:S2:518:G:C2	49:S2:519:A:N7	2.74	0.55
49:S2:623:G:N2	49:S2:624:C:H1'	2.22	0.55
49:S2:633:C:C4	49:S2:634:A:N7	2.74	0.55
49:S2:816:A:C6	49:S2:817:G:C4	2.95	0.55
49:S2:828:G:C5	49:S2:829:C:C5	2.94	0.55
49:S2:830:A:OP2	49:S2:846:G:N2	2.36	0.55
49:S2:834:C:C2	49:S2:841:G:C2	2.95	0.55
49:S2:1077:A:C6	49:S2:1078:C:C5	2.95	0.55
49:S2:1171:G:O2'	49:S2:1172:U:OP2	2.25	0.55
49:S2:1292:C:C4'	81:Sf:148:TYR:HB3	2.36	0.55
49:S2:1302:G:C6	81:Sf:140:TYR:CD1	2.94	0.55
49:S2:1563:G:C6	49:S2:1564:C:C4	2.94	0.55
49:S2:1573:G:C6	49:S2:1574:C:C4	2.94	0.55
49:S2:1585:U:H5'	49:S2:1585:U:C6	2.40	0.55
49:S2:1776:G:N3	49:S2:1777:G:C8	2.74	0.55
61:SL:15:THR:HG22	61:SL:15:THR:O	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SY:60:PHE:HD1	74:SY:71:GLY:HA3	1.72	0.55
1:5:42:A:N7	1:5:4379:A:N6	2.54	0.55
1:5:471:A:C2	1:5:472:C:O4'	2.59	0.55
1:5:712:C:N3	1:5:713:C:C5	2.75	0.55
1:5:990:C:C4	1:5:1064:G:C2	2.94	0.55
1:5:1048:G:C2	1:5:1049:C:C2	2.94	0.55
1:5:1215:C:H2'	1:5:1216:C:H5'	1.88	0.55
1:5:1269:G:N9	1:5:2111:G:C6	2.75	0.55
1:5:1281:G:H1'	6:C:322:LEU:N	2.21	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
1:5:1475:G:H22	1:5:1489:G:H1	1.54	0.55
1:5:1691:G:C6	1:5:1692:C:C4	2.94	0.55
1:5:1899:G:H1'	1:5:2278:G:N2	2.19	0.55
1:5:1995:G:C4	1:5:1996:C:C5	2.93	0.55
1:5:2034:G:N1	1:5:2035:C:C2	2.74	0.55
1:5:2104:G:N1	1:5:2105:A:C5	2.75	0.55
1:5:2444:U:C5	1:5:2445:C:C5	2.94	0.55
1:5:2479:G:C2	1:5:2480:G:C4	2.93	0.55
1:5:2855:G:N2	1:5:2859:G:H22	2.04	0.55
1:5:3694:U:N3	1:5:3695:U:C4	2.73	0.55
1:5:3734:U:C2'	1:5:3735:G:O5'	2.55	0.55
1:5:3753:G:C2	1:5:3754:G:C8	2.95	0.55
1:5:3778:U:H2'	1:5:3778:U:O2	2.06	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
1:5:4530:U:N3	1:5:4531:U:O2'	2.38	0.55
3:8:43:A:N3	3:8:44:A:C8	2.73	0.55
4:A:163:ARG:NH1	4:A:163:ARG:CB	2.69	0.55
26:W:50:ASN:OD1	26:W:50:ASN:N	2.40	0.55
28:Y:62:TYR:N	28:Y:62:TYR:CD1	2.74	0.55
46:q:81:HIS:ND1	46:q:81:HIS:N	2.49	0.55
46:q:148:SER:C	46:q:149:ARG:O	2.49	0.55
48:4:41:CYS:HA	48:4:48:SER:O	2.06	0.55
48:4:144:ARG:HH12	48:4:781:MET:CE	2.18	0.55
48:4:189:ILE:CG2	48:4:203:ILE:CD1	2.84	0.55
48:4:316:ILE:CG2	48:4:321:ILE:O	2.54	0.55
48:4:398:ILE:HD13	48:4:479:LEU:HD23	1.88	0.55
48:4:503:PRO:CB	48:4:533:MET:HE1	2.36	0.55
48:4:575:PRO:HG2	48:4:577:VAL:CG2	2.36	0.55
48:4:650:TRP:CE2	48:4:664:ASP:HB2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:749:ILE:HB	48:4:759:ILE:HD12	1.88	0.55
49:S2:19:A:O3'	49:S2:620:G:H8	1.89	0.55
49:S2:52:G:C6	49:S2:53:C:C6	2.95	0.55
49:S2:92:A:C5	49:S2:447:A:N3	2.74	0.55
49:S2:96:C:O2	49:S2:473:A:O2'	2.24	0.55
49:S2:413:G:C2'	49:S2:414:A:O5'	2.54	0.55
49:S2:860:G:OP1	57:SH:107:LYS:NZ	2.39	0.55
49:S2:1097:G:H4'	50:SA:32:PHE:CE2	2.41	0.55
49:S2:1293:A:N6	81:Sf:140:TYR:HA	2.20	0.55
49:S2:1301:A:H2'	49:S2:1303:C:O2	2.06	0.55
49:S2:1302:G:C5	81:Sf:140:TYR:CE2	2.95	0.55
49:S2:1574:C:N3	49:S2:1575:G:C8	2.74	0.55
49:S2:1593:C:O2'	69:ST:12:GLN:CD	2.49	0.55
49:S2:1630:A:C6	49:S2:1631:U:C5	2.95	0.55
53:SD:99:ILE:O	53:SD:103:GLU:HB2	2.07	0.55
54:SE:18:TRP:HB3	54:SE:46:ILE:HG21	1.87	0.55
54:SE:47:PHE:CE1	54:SE:101:LEU:HD21	2.41	0.55
54:SE:87:MET:HE1	54:SE:236:ILE:HD13	1.88	0.55
62:SM:25:ALA:CB	62:SM:111:VAL:HG13	2.36	0.55
68:SS:86:ARG:HA	68:SS:86:ARG:NE	2.22	0.55
78:Sc:26:GLN:HE21	78:Sc:26:GLN:HA	1.71	0.55
1:5:125:C:O2	1:5:125:C:H2'	2.05	0.55
1:5:126:C:C2	1:5:127:G:N7	2.72	0.55
1:5:258:G:C6	1:5:259:C:C4	2.94	0.55
1:5:266:C:H1'	37:h:112:ARG:NH1	2.21	0.55
1:5:293:G:H2'	1:5:297:U:N1	2.21	0.55
1:5:470:A:C6	1:5:471:A:C4	2.95	0.55
1:5:1089:G:C5'	23:T:140:PHE:CE1	2.89	0.55
1:5:1249:C:C2	1:5:1250:C:C5	2.94	0.55
1:5:1266:G:C2	1:5:1268:G:C6	2.95	0.55
1:5:1273:G:C8	8:E:69:TYR:C	2.84	0.55
1:5:1534:A:C2'	1:5:1637:A:C2	2.89	0.55
1:5:1554:A:C2	1:5:1555:G:H1'	2.41	0.55
1:5:1950:U:C2	1:5:1951:G:N7	2.74	0.55
1:5:2128:G:C2	1:5:2129:C:C2	2.94	0.55
1:5:2404:A:H61	1:5:2787:A:N6	2.04	0.55
1:5:2468:U:C4	1:5:2473:A:C6	2.95	0.55
1:5:2519:U:C2	1:5:2520:C:C4	2.95	0.55
1:5:3741:C:N3	1:5:3742:G:C5	2.74	0.55
1:5:3870:C:C2	1:5:3886:G:C2	2.94	0.55
1:5:3879:G:C6	1:5:3882:C:C6	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4481:U:N3	1:5:4482:U:C5	2.74	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
1:5:4670:C:O2	25:V:15:ARG:NH2	2.39	0.55
1:5:4911:A:N6	18:O:105:PHE:CD1	2.73	0.55
1:5:4976:U:O4	5:B:342:LYS:CD	2.52	0.55
1:5:5039:U:H5''	1:5:5040:U:H2'	1.88	0.55
2:7:19:C:C2	2:7:20:U:C5	2.94	0.55
2:7:33:U:O2	2:7:34:C:C6	2.60	0.55
3:8:141:C:H2'	3:8:142:U:C6	2.41	0.55
4:A:234:LYS:HG2	4:A:238:ILE:HD12	1.89	0.55
6:C:284:MET:HE3	20:Q:28:LEU:HB3	1.88	0.55
6:C:317:ASN:HD21	6:C:320:LYS:HG3	1.72	0.55
7:D:107:ARG:HD3	7:D:248:ARG:CG	2.36	0.55
14:K:43:GLY:O	14:K:72:GLU:OE2	2.25	0.55
14:K:123:ARG:CG	14:K:129:ILE:HD11	1.91	0.55
30:a:67:GLN:HA	30:a:67:GLN:NE2	2.21	0.55
46:q:107:VAL:CG1	46:q:108:PRO:HD2	2.35	0.55
48:4:16:LYS:HE3	48:4:16:LYS:H	1.71	0.55
48:4:43:ALA:O	48:4:45:ILE:CG2	2.55	0.55
48:4:73:THR:H	48:4:104:ASP:HB2	1.53	0.55
48:4:126:LEU:HD11	48:4:156:MET:CG	2.36	0.55
48:4:231:MET:HE1	48:4:343:TRP:CZ2	2.41	0.55
48:4:475:VAL:O	48:4:475:VAL:CG1	2.54	0.55
48:4:500:SER:O	48:4:501:VAL:HB	2.07	0.55
48:4:541:SER:O	48:4:542:GLY:C	2.50	0.55
48:4:753:GLU:HB2	48:4:782:PHE:CZ	2.38	0.55
49:S2:171:A:C5	49:S2:173:A:C5	2.94	0.55
49:S2:378:U:O2	49:S2:379:C:C6	2.60	0.55
49:S2:452:G:N3	49:S2:453:C:C5	2.71	0.55
49:S2:455:A:O2'	49:S2:1735:A:O2'	2.24	0.55
49:S2:600:G:C5	49:S2:631:U:O4	2.59	0.55
49:S2:752:G:N2	49:S2:790:C:C2	2.75	0.55
49:S2:1233:G:C6	49:S2:1234:C:C4	2.94	0.55
49:S2:1283:C:C4	62:SM:103:VAL:HA	2.41	0.55
49:S2:1302:G:C4	81:Sf:140:TYR:CZ	2.93	0.55
49:S2:1405:A:N1	49:S2:1406:G:C4	2.75	0.55
49:S2:1408:U:H2'	49:S2:1409:A:C1'	2.36	0.55
49:S2:1518:C:O4'	49:S2:1518:C:O2	2.24	0.55
49:S2:1588:A:H4'	69:ST:92:PHE:HE2	1.72	0.55
49:S2:1589:A:C2'	49:S2:1590:C:O4'	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1773:C:N3	49:S2:1774:C:C5	2.73	0.55
50:SA:56:GLU:OE1	71:SV:82:ASN:ND2	2.38	0.55
53:SD:152:PHE:N	53:SD:152:PHE:CD1	2.71	0.55
70:SU:93:SER:HB2	70:SU:97:ILE:HB	1.89	0.55
1:5:144:G:N1	1:5:145:G:N7	2.54	0.55
1:5:145:G:C2	1:5:146:G:N9	2.75	0.55
1:5:211:G:N2	1:5:212:A:C8	2.74	0.55
1:5:288:G:N3	1:5:289:C:C6	2.75	0.55
1:5:405:U:H2'	1:5:405:U:O2	2.07	0.55
1:5:515:C:O2	1:5:515:C:H2'	2.04	0.55
1:5:656:C:C2	1:5:657:C:C6	2.95	0.55
1:5:961:G:O6	1:5:969:C:C5	2.59	0.55
1:5:1413:C:O2	1:5:1414:C:C6	2.60	0.55
1:5:1725:U:C4	1:5:1726:U:C5	2.95	0.55
1:5:1864:G:C6	1:5:1865:G:C4	2.94	0.55
1:5:1877:G:C6	1:5:1878:G:C5	2.94	0.55
1:5:1912:G:C4	1:5:1913:C:C5	2.94	0.55
1:5:1945:G:C2'	1:5:1946:G:H5'	2.34	0.55
1:5:1946:G:C2	1:5:1948:G:C8	2.95	0.55
1:5:2034:G:C2	1:5:2035:C:C2	2.95	0.55
1:5:2291:G:N1	1:5:2292:C:C5	2.75	0.55
1:5:2482:C:C2	1:5:2483:G:C8	2.95	0.55
1:5:2496:G:C2	1:5:2497:C:C2	2.94	0.55
1:5:2721:G:C2'	1:5:2722:G:H5'	2.36	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
1:5:3910:C:H2'	1:5:3911:C:H6	1.70	0.55
1:5:4081:G:N3	1:5:4082:G:C8	2.74	0.55
1:5:4092:G:N2	1:5:4158:C:C2	2.75	0.55
1:5:4145:C:O2	1:5:4146:G:C8	2.59	0.55
1:5:4277:G:C2	1:5:4278:C:N1	2.75	0.55
1:5:4405:G:C5	1:5:4406:U:C6	2.94	0.55
1:5:4652:G:C2	1:5:4653:C:C5	2.94	0.55
1:5:4747:C:H2'	1:5:4748:U:C5	2.42	0.55
1:5:5031:G:C2	1:5:5032:C:C5	2.95	0.55
2:7:7:G:OP1	7:D:33:ARG:HD2	2.06	0.55
2:7:19:C:C2	2:7:60:G:C2	2.94	0.55
3:8:42:G:N1	3:8:43:A:C5	2.75	0.55
14:K:113:ALA:HA	14:K:116:MET:CG	2.37	0.55
17:N:9:GLU:OE2	38:i:41:ARG:NE	2.37	0.55
18:O:16:LEU:HD11	18:O:83:THR:HG21	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:35:PRO:HD2	22:S:39:VAL:HG21	1.87	0.55
29:Z:21:ARG:HG3	29:Z:21:ARG:NH1	2.22	0.55
33:d:83:ARG:CB	33:d:114:PHE:CD2	2.89	0.55
34:e:81:ASN:OD1	34:e:81:ASN:C	2.49	0.55
48:4:3:ASN:CB	48:4:47:ALA:O	2.54	0.55
48:4:150:ARG:HB2	48:4:368:ARG:HG3	1.88	0.55
48:4:191:THR:HG22	48:4:192:TYR:CG	2.41	0.55
48:4:240:GLY:C	48:4:243:GLN:CD	2.75	0.55
48:4:842:LYS:HD3	48:4:842:LYS:N	2.21	0.55
49:S2:20:G:P	49:S2:620:G:C8	2.99	0.55
49:S2:170:A:H4'	56:SG:136:LYS:HD2	1.89	0.55
49:S2:180:G:H3'	49:S2:181:A:H3'	1.89	0.55
49:S2:862:A:N1	49:S2:863:U:C6	2.74	0.55
49:S2:921:G:O6	72:SW:28:ARG:HG3	2.05	0.55
49:S2:1029:G:N2	49:S2:1030:A:H1'	2.22	0.55
49:S2:1142:G:N2	49:S2:1144:A:H3'	2.22	0.55
49:S2:1171:G:O2'	49:S2:1187:G:O6	2.24	0.55
49:S2:1325:G:N1	49:S2:1327:G:C5	2.75	0.55
49:S2:1426:U:N3	49:S2:1427:C:C5	2.75	0.55
49:S2:1453:C:C4	49:S2:1455:A:N9	2.75	0.55
49:S2:1467:C:C2	49:S2:1468:C:C6	2.95	0.55
49:S2:1659:U:O2	49:S2:1659:U:H2'	2.07	0.55
51:SB:133:TYR:CE2	51:SB:181:LEU:CD1	2.88	0.55
53:SD:107:TYR:HA	53:SD:110:LEU:HB3	1.88	0.55
62:SM:15:ASN:O	62:SM:19:GLN:HG3	2.06	0.55
72:SW:51:GLU:OE1	77:Sb:8:LEU:HD13	2.07	0.55
79:Sd:23:VAL:HG21	79:Sd:42:CYS:HB3	1.88	0.55
1:5:105:A:H2'	1:5:106:A:O4'	2.07	0.55
1:5:332:C:C2'	1:5:333:U:O5'	2.55	0.55
1:5:388:A:N6	1:5:411:G:C4	2.75	0.55
1:5:460:C:C2	1:5:461:G:N7	2.74	0.55
1:5:733:A:N7	1:5:734:G:C8	2.74	0.55
1:5:1509:C:C2	1:5:1510:G:C8	2.95	0.55
1:5:1627:G:H3'	1:5:1628:C:H6	1.71	0.55
1:5:1688:G:C2	1:5:1849:U:O2	2.59	0.55
1:5:1878:G:N3	1:5:1879:C:C5	2.75	0.55
1:5:1970:A:C2	1:5:2016:C:C5	2.95	0.55
1:5:2104:G:H2'	1:5:2105:A:O4'	2.07	0.55
1:5:2328:G:C5	1:5:2329:U:C4	2.94	0.55
1:5:2367:A:N3	1:5:2368:A:C8	2.75	0.55
1:5:2382:A:H2'	1:5:2382:A:N3	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2392:C:H2'	1:5:2392:C:O2	2.05	0.55
1:5:2417:A:N3	1:5:2418:A:C8	2.75	0.55
1:5:2582:A:OP1	36:g:76:ARG:NH1	2.39	0.55
1:5:2688:G:C2	1:5:2689:C:C5	2.95	0.55
1:5:2791:C:H2'	1:5:2791:C:O2	2.05	0.55
1:5:2840:A:C6	1:5:2841:G:N7	2.74	0.55
1:5:3593:C:C4'	1:5:3594:C:OP2	2.54	0.55
1:5:3717:A:O2'	1:5:3718:A:C4'	2.54	0.55
1:5:3816:A:OP1	1:5:3818:U:H5	1.89	0.55
1:5:4164:C:C2	1:5:4165:C:C6	2.95	0.55
1:5:4194:U:O4'	1:5:4194:U:O2	2.23	0.55
1:5:4270:C:H2'	1:5:4270:C:O2	1.98	0.55
1:5:4333:C:N3	1:5:4334:U:C4	2.75	0.55
1:5:4484:A:C2	1:5:4485:C:C4	2.95	0.55
1:5:4768:G:H3'	1:5:4769:G:H8	1.72	0.55
1:5:4998:G:N1	1:5:4999:G:C8	2.74	0.55
2:7:89:G:H2'	2:7:90:A:C8	2.41	0.55
2:7:111:C:C2	2:7:112:U:C6	2.93	0.55
3:8:38:U:H2'	3:8:38:U:O2	2.05	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
6:C:270:ALA:HA	6:C:278:ASN:HD21	1.71	0.55
7:D:119:TYR:N	7:D:119:TYR:CD1	2.72	0.55
8:E:277:ILE:N	8:E:278:TYR:CE2	2.74	0.55
12:I:100:ASN:C	12:I:102:MET:H	2.14	0.55
14:K:40:LYS:HD2	14:K:41:LYS:N	2.21	0.55
14:K:48:LYS:CG	14:K:52:ASP:CG	2.67	0.55
14:K:86:LYS:C	14:K:104:ILE:HG12	2.31	0.55
46:q:109:ALA:HB1	46:q:181:SER:OG	2.06	0.55
46:q:123:VAL:HG13	46:q:180:ILE:CD1	2.36	0.55
48:4:206:ASP:HB3	48:4:207:PRO:HD3	0.56	0.55
48:4:532:PRO:CD	48:4:533:MET:H	2.20	0.55
48:4:752:PRO:CD	48:4:755:VAL:HG23	2.35	0.55
49:S2:11:A:C6	49:S2:12:U:C5	2.95	0.55
49:S2:140:C:O2'	49:S2:141:A:O4'	2.23	0.55
49:S2:167:G:H2'	49:S2:168:C:O4'	2.07	0.55
49:S2:447:A:N6	49:S2:449:A:C6	2.74	0.55
49:S2:622:C:C4	49:S2:623:G:H1'	2.42	0.55
49:S2:898:U:C2	49:S2:899:U:C6	2.94	0.55
49:S2:1224:G:C6	49:S2:1225:U:C2	2.95	0.55
49:S2:1263:U:H5''	79:Sd:27:ARG:HH12	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1291:A:N1	81:Sf:140:TYR:CG	2.75	0.55
49:S2:1466:G:N1	49:S2:1467:C:C4	2.74	0.55
49:S2:1550:G:OP2	53:SD:8:LYS:NZ	2.35	0.55
49:S2:1556:A:O5'	79:Sd:13:LYS:HA	2.06	0.55
49:S2:1644:C:HO2'	49:S2:1645:C:C1'	2.19	0.55
51:SB:81:PHE:HB3	51:SB:109:LYS:HB2	1.89	0.55
59:SJ:69:ARG:HD2	59:SJ:73:GLU:HG3	1.88	0.55
60:SK:52:LEU:HD11	60:SK:79:LEU:HD21	1.88	0.55
62:SM:85:LEU:HA	62:SM:88:TRP:HH2	1.64	0.55
63:SN:99:ARG:HH21	63:SN:115:LEU:HD11	1.71	0.55
67:SR:54:VAL:O	67:SR:58:MET:HG2	2.07	0.55
79:Sd:41:GLN:OE1	79:Sd:41:GLN:N	2.39	0.55
1:5:29:G:N1	1:5:30:C:C4	2.75	0.55
1:5:44:A:C6	1:5:45:U:C5	2.95	0.55
1:5:66:A:C2	1:5:312:G:H1'	2.40	0.55
1:5:83:C:O2	1:5:83:C:H2'	2.07	0.55
1:5:90:G:N7	1:5:92:C:C1'	2.70	0.55
1:5:172:C:O4'	1:5:172:C:OP1	2.24	0.55
1:5:208:A:C4'	1:5:232:G:N2	2.68	0.55
1:5:299:C:C4	1:5:300:A:N7	2.74	0.55
1:5:447:C:N3	1:5:448:G:C8	2.74	0.55
1:5:448:G:N1	1:5:449:C:C6	2.74	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
1:5:1080:C:N3	1:5:1081:C:C6	2.74	0.55
1:5:1210:C:H2'	1:5:1210:C:O2	2.06	0.55
1:5:1282:G:C8	8:E:124:HIS:CE1	2.94	0.55
1:5:1932:A:H2'	1:5:1933:G:C8	2.42	0.55
1:5:2080:U:N3	1:5:2081:C:N4	2.55	0.55
1:5:2100:A:C8	1:5:2101:C:C5	2.95	0.55
1:5:2129:C:C2	1:5:2130:G:C8	2.95	0.55
1:5:3797:C:O2	1:5:3801:U:O4	2.25	0.55
1:5:4241:C:N3	1:5:4242:U:H5	2.03	0.55
1:5:4271:A:C3'	1:5:4272:G:H21	2.19	0.55
1:5:4293:U:O4	1:5:4329:G:H8	1.89	0.55
1:5:4413:C:H3'	1:5:4414:A:C8	2.39	0.55
1:5:4550:G:N1	1:5:4551:U:C6	2.75	0.55
1:5:4560:C:H5'	1:5:4560:C:C2	2.42	0.55
1:5:4979:A:H2'	1:5:4980:C:O5'	2.06	0.55
1:5:4998:G:C2	1:5:4999:G:N9	2.74	0.55
5:B:264:PHE:C	5:B:264:PHE:CD1	2.85	0.55

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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	0.55
12:I:100:ASN:O	12:I:102:MET:N	2.37	0.55
46:q:8:THR:O	46:q:11:SER:OG	2.19	0.55
48:4:46:ILE:CG2	48:4:454:MET:SD	2.95	0.55
48:4:58:ASP:CA	48:4:63:GLU:CG	2.80	0.55
48:4:140:GLU:HG3	48:4:188:ILE:CD1	2.36	0.55
48:4:165:LEU:HD11	48:4:305:MET:CE	2.15	0.55
49:S2:10:G:H8	49:S2:1697:A:O2'	1.90	0.55
49:S2:29:G:H2'	49:S2:30:C:C6	2.42	0.55
49:S2:185:G:C4	49:S2:186:C:C5	2.94	0.55
49:S2:328:U:H2'	49:S2:329:G:C8	2.42	0.55
49:S2:798:A:OP1	49:S2:798:A:O3'	2.24	0.55
49:S2:956:G:O6	49:S2:968:U:C2	2.59	0.55
49:S2:1034:A:C5	49:S2:1082:A:C6	2.95	0.55
49:S2:1153:C:O4'	49:S2:1153:C:O2	2.20	0.55
49:S2:1442:U:O2	49:S2:1442:U:C2'	2.54	0.55
49:S2:1450:G:O2'	82:Sg:64:HIS:CE1	2.60	0.55
49:S2:1781:A:N3	49:S2:1782:G:N7	2.54	0.55
56:SG:70:HIS:CD2	56:SG:103:ASP:OD2	2.59	0.55
1:5:49:U:C2'	1:5:50:C:O5'	2.55	0.55
1:5:60:G:N3	1:5:61:A:C8	2.74	0.55
1:5:184:U:C2	1:5:254:G:N2	2.75	0.55
1:5:219:G:C8	1:5:220:C:H5	2.25	0.55
1:5:299:C:N3	1:5:300:A:C8	2.74	0.55
1:5:365:U:H2'	1:5:365:U:O2	2.06	0.55
1:5:483:G:N3	1:5:484:U:C6	2.75	0.55
1:5:514:U:C6	1:5:514:U:H3'	2.42	0.55
1:5:675:C:N3	1:5:676:C:C5	2.75	0.55
1:5:977:C:C2'	1:5:978:G:H5'	2.36	0.55
1:5:1076:C:C2	1:5:1077:C:C6	2.94	0.55
1:5:1203:G:C2	1:5:1204:C:N1	2.75	0.55
1:5:1393:G:H2'	1:5:1394:G:C5'	2.37	0.55
1:5:1555:G:C5	1:5:1556:C:C6	2.95	0.55
1:5:1629:G:N2	1:5:1631:A:C4	2.75	0.55
1:5:1684:A:C2	1:5:1685:G:C1'	2.90	0.55
1:5:1726:U:O2	1:5:1727:U:C6	2.60	0.55
1:5:1960:A:C1'	46:q:59:THR:HG21	2.30	0.55
1:5:2021:G:H4'	46:q:85:ASN:N	2.22	0.55
1:5:2034:G:H5'	1:5:2035:C:OP2	2.06	0.55
1:5:2081:C:C2	1:5:2082:G:N7	2.75	0.55
1:5:2253:A:H8	1:5:2254:G:H1'	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2390:G:C6	1:5:2391:G:C8	2.94	0.55
1:5:2567:G:C4	1:5:2568:C:C6	2.94	0.55
1:5:2606:G:C2	1:5:2607:C:C4	2.95	0.55
1:5:3773:U:O2	1:5:3775:A:N1	2.40	0.55
1:5:4097:G:C2	1:5:4098:A:C5	2.95	0.55
1:5:4104:G:O2'	1:5:4105:A:H8	1.89	0.55
1:5:4275:G:C6	1:5:4276:G:C4	2.95	0.55
1:5:4601:U:H2'	1:5:4601:U:O2	2.07	0.55
1:5:4735:G:C6	1:5:4736:C:C5	2.94	0.55
1:5:4885:U:O2	1:5:4886:C:C6	2.59	0.55
1:5:5057:C:O3'	33:d:23:ARG:NH2	2.39	0.55
3:8:74:U:N3	28:Y:74:TYR:CE1	2.75	0.55
3:8:134:G:C6	3:8:135:C:C4	2.94	0.55
3:8:139:G:C5	3:8:140:C:C5	2.95	0.55
7:D:27:LYS:CE	13:J:147:ARG:NH2	2.69	0.55
7:D:123:VAL:HG22	7:D:248:ARG:NH2	2.22	0.55
9:F:107:VAL:HG11	9:F:141:TYR:CE1	2.42	0.55
12:I:159:PHE:HB3	12:I:163:GLN:HE22	1.71	0.55
14:K:30:PRO:HB3	48:4:775:GLN:O	2.07	0.55
15:L:23:ALA:HB3	17:N:199:GLN:OE1	2.07	0.55
17:N:85:VAL:HA	44:o:49:GLY:HA2	1.89	0.55
26:W:28:VAL:HG12	26:W:30:GLN:OE1	2.05	0.55
36:g:5:LEU:HD21	36:g:22:LEU:HD12	1.87	0.55
37:h:119:PHE:N	37:h:119:PHE:HD1	2.04	0.55
46:q:93:GLU:HG2	46:q:95:LEU:CD2	2.37	0.55
46:q:100:ASP:N	46:q:100:ASP:OD1	2.39	0.55
46:q:103:ARG:O	46:q:105:ASN:N	2.40	0.55
48:4:81:LEU:HB3	48:4:86:LEU:HD12	1.89	0.55
48:4:398:ILE:HD11	48:4:479:LEU:HD23	1.88	0.55
48:4:518:PRO:HB3	73:SX:75:ILE:HD12	1.89	0.55
48:4:576:VAL:O	48:4:577:VAL:HB	2.07	0.55
48:4:591:CYS:SG	48:4:591:CYS:O	2.64	0.55
48:4:591:CYS:SG	48:4:732:SER:CB	2.94	0.55
48:4:622:VAL:HG11	48:4:635:LEU:CD2	2.35	0.55
49:S2:46:A:C5	49:S2:473:A:C2	2.95	0.55
49:S2:53:C:C2	49:S2:54:A:H8	2.20	0.55
49:S2:85:A:N3	49:S2:86:C:C6	2.75	0.55
49:S2:212:C:N3	49:S2:213:G:C8	2.75	0.55
49:S2:223:C:H2'	49:S2:224:A:C8	2.42	0.55
49:S2:294:U:H4'	49:S2:295:C:OP2	2.06	0.55
49:S2:526:A:O2'	59:SJ:125:HIS:ND1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:576:A:H2'	49:S2:577:U:O4'	2.07	0.55
49:S2:623:G:H21	49:S2:624:C:H1'	1.71	0.55
49:S2:678:U:N3	49:S2:679:A:C8	2.75	0.55
49:S2:1133:A:N3	49:S2:1134:G:C8	2.73	0.55
49:S2:1271:C:N4	49:S2:1272:C:C4	2.75	0.55
49:S2:1293:A:N6	81:Sf:140:TYR:CA	2.70	0.55
49:S2:1430:C:N4	49:S2:1431:G:N7	2.54	0.55
49:S2:1535:U:H1'	55:SF:88:MET:SD	2.47	0.55
49:S2:1606:G:O2'	49:S2:1633:A:N6	2.35	0.55
50:SA:116:PHE:C	50:SA:117:ARG:HG3	2.32	0.55
52:SC:253:PRO:O	52:SC:256:TRP:HB2	2.07	0.55
58:SI:110:ARG:NH1	58:SI:121:LEU:HB2	2.21	0.55
60:SK:61:GLN:HA	60:SK:61:GLN:OE1	2.05	0.55
76:Sa:18:VAL:HG23	76:Sa:18:VAL:O	2.05	0.55
82:Sg:176:VAL:HG21	82:Sg:221:LEU:CD1	2.37	0.55
1:5:172:C:C2	1:5:173:C:C5	2.95	0.55
1:5:184:U:C2	1:5:254:G:C2	2.95	0.55
1:5:293:G:C5'	1:5:294:G:H8	2.20	0.55
1:5:460:C:H2'	1:5:461:G:C8	2.42	0.55
1:5:515:C:C2	1:5:516:C:C5	2.95	0.55
1:5:754:U:C2	1:5:755:C:C5	2.95	0.55
1:5:1211:G:N2	1:5:1212:G:C4	2.75	0.55
1:5:1583:A:N7	1:5:1584:G:C8	2.74	0.55
1:5:1723:A:N1	1:5:1838:A:N1	2.55	0.55
1:5:1726:U:N3	1:5:1727:U:C6	2.75	0.55
1:5:1761:G:C6	1:5:1762:C:C4	2.95	0.55
1:5:1786:A:H2'	1:5:1789:C:C5	2.42	0.55
1:5:1884:C:OP1	34:e:50:LYS:HB2	2.07	0.55
1:5:1899:G:C6	1:5:1900:C:N4	2.75	0.55
1:5:2082:G:C2'	1:5:2083:C:O5'	2.55	0.55
1:5:2088:A:N1	1:5:2268:A:O2'	2.40	0.55
1:5:2368:A:N1	1:5:2788:U:C5	2.75	0.55
1:5:2576:G:C2	1:5:2577:C:N1	2.75	0.55
1:5:2607:C:C2	1:5:2608:G:N7	2.75	0.55
1:5:2792:C:C2	1:5:2793:G:C8	2.95	0.55
1:5:3656:A:N3	1:5:3657:U:C6	2.75	0.55
1:5:3771:C:H2'	1:5:3772:U:C6	2.42	0.55
1:5:3832:U:N3	1:5:3833:C:C5	2.75	0.55
1:5:4097:G:N2	1:5:4098:A:C4	2.75	0.55
1:5:4251:A:N6	13:J:127:GLY:O	2.39	0.55
1:5:4403:U:H2'	1:5:4404:U:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5061:A:H4'	1:5:5062:G:H5''	1.87	0.55
3:8:78:G:H2'	3:8:79:G:O4'	2.07	0.55
3:8:95:A:N3	3:8:96:C:C6	2.75	0.55
12:I:66:GLU:OE1	12:I:69:ARG:NH1	2.40	0.55
17:N:126:THR:C	17:N:127:TYR:CD1	2.85	0.55
29:Z:36:ARG:HD2	29:Z:38:TYR:CE1	2.41	0.55
47:r:10:VAL:HG12	47:r:10:VAL:O	2.07	0.55
48:4:183:GLU:OE1	48:4:183:GLU:CA	2.55	0.55
48:4:265:TYR:N	48:4:265:TYR:CD1	2.74	0.55
48:4:316:ILE:HG22	48:4:321:ILE:O	2.06	0.55
48:4:659:PRO:HG2	48:4:698:ARG:CZ	2.25	0.55
48:4:798:ALA:O	48:4:801:ARG:HG3	2.06	0.55
49:S2:70:G:C5	49:S2:71:G:N7	2.75	0.55
49:S2:92:A:C5	49:S2:447:A:C2	2.95	0.55
49:S2:164:A:H2'	49:S2:165:G:C2	2.41	0.55
49:S2:165:G:H5''	56:SG:110:ASN:HB2	1.88	0.55
49:S2:194:C:C2	49:S2:206:G:N2	2.75	0.55
49:S2:298:G:C6	49:S2:299:A:N7	2.74	0.55
49:S2:794:A:N3	49:S2:795:A:C8	2.75	0.55
49:S2:893:U:C2	49:S2:894:G:C8	2.95	0.55
49:S2:910:G:C4	49:S2:911:C:C6	2.95	0.55
49:S2:1233:G:C5	49:S2:1234:C:C5	2.95	0.55
49:S2:1738:C:C4	49:S2:1739:C:C5	2.95	0.55
49:S2:1822:A:C8	49:S2:1823:A:H2'	2.42	0.55
49:S2:1860:A:N1	49:S2:1862:G:C5	2.75	0.55
1:5:48:G:HO2'	1:5:49:U:P	2.21	0.55
1:5:74:G:C5'	15:L:59:VAL:HG13	2.37	0.55
1:5:661:C:N4	1:5:662:C:N4	2.55	0.55
1:5:1086:C:H2'	1:5:1086:C:O2	2.05	0.55
1:5:1268:G:H4'	1:5:1269:G:OP1	2.06	0.55
1:5:1272:C:H3'	1:5:2122:G:O2'	2.07	0.55
1:5:1309:C:C4	1:5:1310:C:C5	2.94	0.55
1:5:1378:C:H5''	1:5:1379:C:C3'	2.37	0.55
1:5:1411:C:O2	1:5:1412:G:H8	1.88	0.55
1:5:1444:G:C2'	1:5:1445:U:C6	2.78	0.55
1:5:1846:G:C6	1:5:1847:C:N4	2.74	0.55
1:5:1906:U:H2'	1:5:1907:A:H5'	1.89	0.55
1:5:1937:C:C3'	1:5:1938:C:H2'	2.37	0.55
1:5:2014:C:C4	1:5:2015:U:C5	2.95	0.55
1:5:2103:G:C6	1:5:2104:G:C5	2.95	0.55
1:5:2319:C:H2'	1:5:2320:G:H5'	1.89	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
1:5:2436:U:O4	1:5:2783:A:C8	2.60	0.55
1:5:2450:G:C5	1:5:2451:A:C8	2.95	0.55
1:5:2546:G:O2'	1:5:2547:G:C5'	2.55	0.55
1:5:2567:G:C2	1:5:2568:C:C5	2.95	0.55
1:5:2690:C:C4	1:5:2691:U:C4	2.95	0.55
1:5:2745:A:HO2'	1:5:2746:A:C5'	2.19	0.55
1:5:2878:G:OP2	1:5:2879:A:O2'	2.18	0.55
1:5:3657:U:O2	1:5:3657:U:H2'	2.07	0.55
1:5:4090:G:C6	1:5:4091:G:C5	2.95	0.55
1:5:4108:G:C2	1:5:4109:G:C8	2.95	0.55
1:5:4222:G:C6	1:5:4223:C:C5	2.94	0.55
1:5:4433:G:N2	1:5:4434:C:C2	2.75	0.55
1:5:4548:A:C8	1:5:4548:A:C4'	2.89	0.55
1:5:4652:G:C2	1:5:4653:C:C6	2.95	0.55
1:5:4881:U:O2	1:5:4881:U:H2'	2.05	0.55
1:5:4910:G:N2	18:O:109:PRO:CA	2.70	0.55
1:5:4949:G:N2	1:5:4950:U:H2'	2.22	0.55
1:5:4956:A:C6	1:5:4957:C:C6	2.95	0.55
1:5:5050:C:O2'	5:B:321:VAL:HA	2.07	0.55
3:8:12:G:N2	3:8:13:G:C4	2.75	0.55
9:F:197:TYR:O	9:F:199:VAL:N	2.40	0.55
14:K:142:ASN:CG	14:K:143:VAL:H	2.13	0.55
18:O:167:HIS:CD2	18:O:167:HIS:C	2.84	0.55
20:Q:159:PRO:HA	20:Q:188:ASN:HD22	1.71	0.55
30:a:79:TRP:CE3	30:a:87:ARG:HG3	2.43	0.55
48:4:41:CYS:SG	48:4:49:ALA:HB2	2.47	0.55
48:4:189:ILE:HG23	48:4:203:ILE:CD1	2.37	0.55
48:4:518:PRO:HG3	73:5X:50:ILE:HD12	1.88	0.55
48:4:609:PHE:HD1	48:4:610:PRO:HD2	1.72	0.55
49:S2:155:G:N2	49:S2:156:G:H1'	2.22	0.55
49:S2:381:C:O2'	49:S2:382:C:C5'	2.55	0.55
49:S2:491:C:C1'	49:S2:574:A:N6	2.70	0.55
49:S2:527:C:H2'	49:S2:528:A:C8	2.42	0.55
49:S2:872:A:H61	49:S2:914:U:H6	1.47	0.55
49:S2:963:A:H2'	49:S2:964:A:H8	1.63	0.55
49:S2:1274:G:H2'	49:S2:1274:G:N3	2.22	0.55
49:S2:1380:C:H2'	49:S2:1381:G:O4'	2.07	0.55
49:S2:1433:C:C3'	49:S2:1434:C:O4'	2.55	0.55
49:S2:1528:G:N3	49:S2:1529:C:C6	2.75	0.55
49:S2:1622:U:C4	68:SS:120:HIS:HE1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1735:A:C4	49:S2:1800:A:C2	2.95	0.55
49:S2:1758:G:N1	49:S2:1759:G:C5	2.75	0.55
51:SB:120:VAL:HG13	51:SB:142:PHE:HE1	1.72	0.55
51:SB:150:ILE:CD1	67:SR:128:PHE:HA	2.37	0.55
54:SE:48:LEU:HD21	54:SE:70:ILE:HD11	1.89	0.55
57:SH:10:LYS:NZ	57:SH:15:LYS:O	2.37	0.55
58:SI:11:ARG:HD3	58:SI:15:GLY:O	2.06	0.55
59:SJ:20:PHE:N	59:SJ:20:PHE:HD1	2.05	0.55
65:SP:9:LYS:O	65:SP:10:ARG:HG3	2.07	0.55
65:SP:19:GLY:CA	68:SS:92:ASP:HA	2.37	0.55
68:SS:111:LEU:HD22	68:SS:125:HIS:CD2	2.42	0.55
1:5:93:G:N2	1:5:94:A:C2	2.75	0.54
1:5:164:G:C6	1:5:165:A:N7	2.75	0.54
1:5:194:C:N4	1:5:195:C:C5	2.75	0.54
1:5:286:U:C2	1:5:287:U:C6	2.95	0.54
1:5:409:G:N2	1:5:2329:U:H4'	2.22	0.54
1:5:460:C:C2	1:5:461:G:C8	2.95	0.54
1:5:470:A:C4	1:5:471:A:C8	2.95	0.54
1:5:972:C:C6	1:5:1283:G:O6	2.59	0.54
1:5:1202:C:N3	1:5:1203:G:C8	2.75	0.54
1:5:1214:C:H42	9:F:58:HIS:CE1	2.24	0.54
1:5:1558:A:H2'	1:5:1559:G:C8	2.42	0.54
1:5:1699:A:N6	1:5:2094:G:O2'	2.40	0.54
1:5:1756:U:H3	1:5:1775:A:H2	1.53	0.54
1:5:1885:G:H2'	1:5:1886:G:O4'	2.07	0.54
1:5:2088:A:N6	20:Q:30:LYS:HB3	2.21	0.54
1:5:2126:G:C1'	1:5:2127:C:C5	2.90	0.54
1:5:2438:A:N1	1:5:2441:C:C5	2.75	0.54
1:5:2559:G:C6	1:5:2560:C:C4	2.95	0.54
1:5:2565:A:N7	1:5:2566:G:C1'	2.65	0.54
1:5:2611:A:H5'	1:5:2688:G:H4'	1.88	0.54
1:5:2852:U:N3	1:5:2854:G:OP2	2.37	0.54
1:5:2853:C:H2'	1:5:2854:G:O4'	2.07	0.54
1:5:2856:C:O2	1:5:2857:A:H8	1.75	0.54
1:5:3727:A:O2'	1:5:3728:A:O4'	2.23	0.54
1:5:3898:G:H2'	1:5:3899:G:H5'	1.88	0.54
1:5:4687:A:N1	1:5:4688:C:C5	2.75	0.54
1:5:4700:A:H2'	1:5:4700:A:N3	2.21	0.54
1:5:5039:U:C5'	1:5:5040:U:H2'	2.37	0.54
22:S:120:ARG:HB2	22:S:122:HIS:CD2	2.41	0.54
42:m:98:LYS:HD3	42:m:118:THR:HG21	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:51:ALA:HB1	46:q:89:VAL:HG11	1.89	0.54
48:4:51:ALA:O	48:4:53:GLU:N	2.40	0.54
48:4:281:GLU:CD	48:4:281:GLU:H	2.15	0.54
49:S2:56:G:N1	49:S2:90:G:N3	2.54	0.54
49:S2:60:A:HO2'	49:S2:61:A:H5''	1.65	0.54
49:S2:98:C:O2	49:S2:409:C:C6	2.61	0.54
49:S2:395:G:N2	58:SI:14:THR:O	2.40	0.54
49:S2:407:G:H2'	49:S2:407:G:N3	2.22	0.54
49:S2:466:G:H3'	49:S2:466:G:N3	2.21	0.54
49:S2:837:A:N6	74:SY:47:MET:HB3	2.22	0.54
49:S2:949:G:C6	49:S2:950:C:C5	2.95	0.54
49:S2:1100:A:C5	49:S2:1101:U:C5	2.95	0.54
49:S2:1262:C:O2'	79:Sd:12:ARG:NH1	2.40	0.54
49:S2:1294:G:N1	49:S2:1295:A:C5	2.74	0.54
49:S2:1310:U:C2	49:S2:1311:C:C5	2.95	0.54
49:S2:1315:U:C2	49:S2:1316:C:C6	2.94	0.54
49:S2:1427:C:H2'	49:S2:1428:G:H8	1.72	0.54
49:S2:1464:C:O3'	67:SR:60:ARG:NH1	2.41	0.54
49:S2:1495:G:H1'	79:Sd:41:GLN:CD	2.32	0.54
49:S2:1512:C:C2	49:S2:1513:C:H5	2.23	0.54
49:S2:1540:G:N2	49:S2:1541:G:N9	2.55	0.54
49:S2:1551:U:C6	49:S2:1577:G:C2	2.95	0.54
49:S2:1618:C:H5	79:Sd:11:PRO:HG3	1.72	0.54
49:S2:1775:U:O2	49:S2:1776:G:C8	2.59	0.54
49:S2:1831:A:C2	49:S2:1832:A:C8	2.95	0.54
50:SA:12:GLU:OE1	67:SR:111:PHE:CD1	2.60	0.54
51:SB:137:LEU:HD23	51:SB:215:VAL:HG22	1.88	0.54
59:SJ:63:LEU:HD11	59:SJ:69:ARG:HH22	1.72	0.54
68:SS:82:TRP:O	68:SS:84:LEU:N	2.39	0.54
1:5:210:C:H6	1:5:210:C:O5'	1.91	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
1:5:448:G:C2	1:5:449:C:H1'	2.43	0.54
1:5:504:G:C2	1:5:505:G:C6	2.95	0.54
1:5:672:C:N3	1:5:673:C:C6	2.75	0.54
1:5:908:G:C2	1:5:909:A:C8	2.96	0.54
1:5:1214:C:N3	1:5:2116:C:C4	2.75	0.54
1:5:1249:C:C4	1:5:1250:C:C5	2.95	0.54
1:5:1288:G:HO2'	1:5:1289:C:P	2.31	0.54
1:5:1323:A:N3	1:5:1324:A:C8	2.75	0.54
1:5:1404:G:C6	1:5:1405:C:C4	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1569:U:C2	1:5:1570:G:C8	2.95	0.54
1:5:1577:G:H3'	1:5:1577:G:N3	2.22	0.54
1:5:1590:C:H5''	1:5:1591:U:O5'	2.07	0.54
1:5:1759:G:C2	1:5:1760:G:N9	2.75	0.54
1:5:1871:A:N1	1:5:1872:G:C5	2.76	0.54
1:5:1893:C:O2	1:5:1893:C:C2'	2.55	0.54
1:5:2017:A:C8	1:5:2018:C:C6	2.96	0.54
1:5:2128:G:C5	1:5:2129:C:C5	2.96	0.54
1:5:2258:C:O2	1:5:2258:C:C2'	2.56	0.54
1:5:2784:C:N3	1:5:2785:C:C4	2.75	0.54
1:5:3879:G:O6	1:5:3882:C:C4	2.60	0.54
1:5:4093:G:C6	1:5:4094:G:N7	2.75	0.54
1:5:4098:A:N1	1:5:4099:G:C6	2.75	0.54
1:5:4211:C:O5'	1:5:4211:C:H6	1.90	0.54
1:5:4495:G:N2	1:5:4506:C:C2	2.75	0.54
1:5:4560:C:O2	1:5:4560:C:C2'	2.55	0.54
1:5:4579:U:N3	1:5:4580:U:C4	2.75	0.54
1:5:4997:G:C2	1:5:4998:G:N9	2.75	0.54
2:7:59:G:N1	2:7:60:G:C4	2.76	0.54
15:L:65:ARG:HB2	30:a:69:PHE:CD2	2.42	0.54
19:P:30:ARG:HH22	19:P:62:ARG:NH2	2.06	0.54
44:o:36:GLN:HE21	44:o:36:GLN:CA	2.20	0.54
48:4:111:PHE:HB3	48:4:145:GLN:HE22	1.72	0.54
48:4:508:ALA:HB3	48:4:573:SER:O	2.06	0.54
48:4:634:TYR:CE2	48:4:639:TYR:CE2	2.94	0.54
48:4:816:HIS:CD2	48:4:817:TRP:N	2.75	0.54
48:4:827:ASN:ND2	48:4:827:ASN:O	2.30	0.54
49:S2:70:G:C2	49:S2:71:G:N9	2.75	0.54
49:S2:70:G:C2	49:S2:80:G:N3	2.76	0.54
49:S2:84:A:O2'	74:SY:119:GLY:O	2.21	0.54
49:S2:305:U:OP2	49:S2:306:C:C2	2.60	0.54
49:S2:477:G:N2	49:S2:478:G:C4	2.75	0.54
49:S2:583:C:C4	49:S2:584:G:C8	2.95	0.54
49:S2:678:U:C2	49:S2:679:A:C8	2.95	0.54
49:S2:1121:G:C5	49:S2:1122:A:C8	2.95	0.54
49:S2:1123:C:P	51:SB:205:TYR:HH	2.31	0.54
49:S2:1265:A:H2'	49:S2:1266:C:C6	2.42	0.54
49:S2:1293:A:C4'	81:Sf:151:ASN:H	2.19	0.54
79:Sd:39:CYS:SG	79:Sd:42:CYS:SG	3.05	0.54
1:5:69:A:H3'	1:5:70:A:C8	2.40	0.54
1:5:1075:G:C4	1:5:1076:C:C5	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1260:G:C6	1:5:1261:G:N7	2.75	0.54
1:5:1289:C:N3	1:5:1290:G:N7	2.56	0.54
1:5:1695:U:O2'	1:5:1696:C:H5'	2.06	0.54
1:5:1726:U:C4	1:5:1727:U:C5	2.94	0.54
1:5:1855:G:C6	1:5:1856:C:C4	2.96	0.54
1:5:1999:A:C2'	1:5:2000:G:O4'	2.56	0.54
1:5:2409:U:O4	1:5:2783:A:N1	2.39	0.54
1:5:2539:C:C2	1:5:2540:C:C5	2.95	0.54
1:5:2543:A:C2	1:5:2773:G:N1	2.74	0.54
1:5:2712:G:N3	1:5:2713:C:C6	2.76	0.54
1:5:2852:U:O2	1:5:2852:U:H2'	2.06	0.54
1:5:3656:A:C2	1:5:3657:U:C6	2.96	0.54
1:5:3804:G:H1'	1:5:3832:U:O2'	2.07	0.54
1:5:3859:G:C4'	19:P:139:TYR:OH	2.55	0.54
1:5:4085:A:H3'	1:5:4086:G:C5'	2.38	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
1:5:4651:A:C2	1:5:4652:G:H1'	2.43	0.54
1:5:4771:C:C5	1:5:4772:C:C6	2.96	0.54
1:5:4988:U:N3	1:5:5060:A:O3'	2.38	0.54
1:5:5043:A:H2'	1:5:5044:A:C8	2.42	0.54
2:7:28:C:C5	2:7:29:C:C5	2.95	0.54
2:7:51:G:N1	2:7:52:C:C4	2.75	0.54
5:B:168:MET:HE3	5:B:171:LEU:HD12	1.89	0.54
10:G:137:ARG:O	10:G:202:VAL:HA	2.07	0.54
10:G:260:GLU:OE1	51:SB:57:ILE:CD1	2.50	0.54
12:I:73:ASN:O	12:I:76:MET:O	2.26	0.54
46:q:6:ARG:NE	46:q:10:LYS:CE	2.71	0.54
48:4:58:ASP:O	48:4:64:GLN:N	2.41	0.54
48:4:160:MET:SD	48:4:178:PHE:CZ	2.98	0.54
48:4:241:GLU:H	48:4:243:GLN:CD	2.13	0.54
48:4:825:PHE:C	48:4:826:ASP:O	2.32	0.54
48:4:830:ARG:CB	48:4:831:PRO:CD	2.84	0.54
49:S2:27:A:C4	49:S2:28:U:C6	2.95	0.54
49:S2:164:A:C2	49:S2:165:G:C4	2.95	0.54
49:S2:297:A:C5	49:S2:298:G:C8	2.95	0.54
49:S2:338:G:C2	49:S2:339:A:C4	2.95	0.54
49:S2:341:C:H3'	49:S2:342:C:C5'	2.37	0.54
49:S2:574:A:C2'	49:S2:575:A:C8	2.90	0.54
49:S2:601:G:N1	49:S2:622:C:C2	2.75	0.54
49:S2:623:G:N3	49:S2:624:C:C6	2.74	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:635:G:C4	49:S2:636:C:C6	2.96	0.54
49:S2:828:G:C2	49:S2:829:C:N1	2.76	0.54
49:S2:841:G:N2	49:S2:842:C:C5	2.73	0.54
49:S2:956:G:C2	49:S2:957:A:N7	2.75	0.54
49:S2:1041:G:C6	49:S2:1042:A:N7	2.75	0.54
49:S2:1151:G:C6	49:S2:1152:U:C5	2.94	0.54
49:S2:1200:A:H2'	49:S2:1200:A:N3	2.22	0.54
49:S2:1226:G:N2	49:S2:1639:G:C5	2.75	0.54
49:S2:1231:C:H2'	49:S2:1232:U:O4'	2.07	0.54
49:S2:1231:C:C4'	49:S2:1665:G:N2	2.69	0.54
49:S2:1286:G:N2	62:SM:33:ARG:HD2	2.23	0.54
49:S2:1483:A:H4'	53:SD:159:HIS:O	2.07	0.54
49:S2:1754:G:C2	49:S2:1755:C:C2	2.96	0.54
49:S2:1834:A:H2	49:S2:1837:G:N2	2.03	0.54
50:SA:99:ILE:HG12	50:SA:117:ARG:NH2	2.22	0.54
55:SF:122:ARG:HG2	78:Sc:57:THR:HG21	1.88	0.54
57:SH:135:PHE:HD1	57:SH:136:PRO:N	2.05	0.54
1:5:32:G:N1	1:5:48:G:O2'	2.40	0.54
1:5:100:C:C6	1:5:101:A:H8	2.19	0.54
1:5:127:G:C6	1:5:128:C:C4	2.95	0.54
1:5:211:G:N1	1:5:212:A:C5	2.76	0.54
1:5:231:U:H4'	28:Y:100:HIS:NE2	2.22	0.54
1:5:723:A:N1	1:5:943:A:N1	2.54	0.54
1:5:1277:G:N1	1:5:1278:C:C5	2.75	0.54
1:5:1302:U:H4'	34:e:17:THR:O	2.07	0.54
1:5:1358:G:OP2	6:C:114:ARG:NH2	2.40	0.54
1:5:1380:G:C2	1:5:1382:G:C4	2.95	0.54
1:5:1759:G:N1	1:5:1760:G:C8	2.74	0.54
1:5:1763:C:N4	1:5:1764:G:C4	2.76	0.54
1:5:1816:C:H2'	1:5:1817:U:H5'	1.88	0.54
1:5:2576:G:C6	1:5:2577:C:C4	2.95	0.54
1:5:2605:G:N1	1:5:2606:G:C5	2.75	0.54
1:5:2632:U:O2	1:5:2633:U:C5	2.61	0.54
1:5:2702:C:O2	1:5:2715:G:C2	2.61	0.54
1:5:2733:C:C4	1:5:2734:U:C5	2.95	0.54
1:5:2743:A:C6	1:5:2744:A:N6	2.75	0.54
1:5:3595:U:OP1	1:5:3596:A:C8	2.60	0.54
1:5:3687:A:C6	1:5:3688:U:C5	2.95	0.54
1:5:3738:G:N7	1:5:3739:C:C6	2.75	0.54
1:5:4068:U:C4	1:5:4069:U:C6	2.95	0.54
1:5:4146:G:H2'	1:5:4147:G:H8	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4260:U:H2'	1:5:4261:C:C6	2.41	0.54
1:5:4269:G:H2'	1:5:4270:C:O4'	2.07	0.54
1:5:4363:A:C2	1:5:4364:G:C8	2.95	0.54
1:5:5019:A:C2	1:5:5020:G:C8	2.95	0.54
3:8:83:C:H4'	3:8:85:U:N3	2.23	0.54
4:A:29:LEU:HD13	4:A:163:ARG:HH12	1.73	0.54
6:C:35:ASP:OD1	6:C:36:ILE:N	2.41	0.54
7:D:109:LEU:HD21	7:D:142:PHE:CZ	2.43	0.54
8:E:119:ARG:HG3	8:E:119:ARG:HH11	1.72	0.54
10:G:235:ARG:HG3	10:G:235:ARG:HH11	1.73	0.54
11:H:59:LYS:O	11:H:60:TRP:CB	2.55	0.54
14:K:15:LEU:HD11	14:K:60:VAL:HG13	1.88	0.54
14:K:81:ILE:HD13	14:K:117:ARG:HH12	1.71	0.54
28:Y:18:HIS:HB3	28:Y:19:PHE:CE1	2.43	0.54
36:g:93:ARG:HB2	36:g:93:ARG:HH11	1.72	0.54
46:q:16:LYS:HD2	46:q:16:LYS:H	1.72	0.54
46:q:107:VAL:CG1	46:q:108:PRO:CD	2.85	0.54
46:q:133:GLU:HG3	46:q:134:LYS:H	1.72	0.54
48:4:114:GLU:CA	48:4:532:PRO:CG	2.85	0.54
48:4:126:LEU:HD13	48:4:353:MET:CE	2.37	0.54
48:4:137:VAL:HG11	48:4:807:GLN:NE2	2.14	0.54
48:4:170:GLU:HG2	48:4:171:PRO:N	2.23	0.54
48:4:502:SER:CB	48:4:504:VAL:CG1	2.48	0.54
48:4:504:VAL:HG11	48:4:811:GLN:HA	1.89	0.54
48:4:562:GLU:HB3	48:4:570:ILE:CD1	2.36	0.54
48:4:579:TYR:CD1	48:4:579:TYR:N	2.75	0.54
49:S2:18:C:H4'	49:S2:1194:A:N6	2.23	0.54
49:S2:69:C:N3	49:S2:70:G:C5	2.75	0.54
49:S2:106:C:H2'	49:S2:107:A:H8	1.72	0.54
49:S2:118:C:H1'	49:S2:445:A:C6	2.43	0.54
49:S2:122:G:C6	49:S2:123:G:C5	2.95	0.54
49:S2:555:A:C2	49:S2:557:U:C6	2.95	0.54
49:S2:567:C:H2'	49:S2:568:C:H5''	1.89	0.54
49:S2:887:U:C5	49:S2:888:U:C5	2.96	0.54
49:S2:1134:G:C5	49:S2:1135:C:C5	2.95	0.54
49:S2:1286:G:C2	49:S2:1312:G:N1	2.76	0.54
49:S2:1311:C:N3	49:S2:1314:U:H5	2.06	0.54
49:S2:1643:U:C4	49:S2:1644:C:N4	2.76	0.54
54:SE:47:PHE:HE1	54:SE:101:LEU:HD21	1.73	0.54
55:SF:137:GLN:HE21	55:SF:137:GLN:HA	1.73	0.54
65:SP:49:LEU:O	65:SP:50:ARG:C	2.51	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:Sg:99:ARG:NH1	82:Sg:99:ARG:HA	2.23	0.54
1:5:82:U:C4	1:5:83:C:C5	2.96	0.54
1:5:112:C:C2	1:5:113:A:C8	2.96	0.54
1:5:908:G:N2	1:5:909:A:H1'	2.23	0.54
1:5:917:A:C2	1:5:918:G:N1	2.76	0.54
1:5:933:G:C5	1:5:940:C:C4	2.96	0.54
1:5:992:C:O2	1:5:993:G:C8	2.60	0.54
1:5:1271:G:C3'	1:5:1272:C:C5'	2.81	0.54
1:5:1273:G:N2	1:5:2123:C:OP1	2.31	0.54
1:5:1280:C:C5'	1:5:1280:C:H6	2.15	0.54
1:5:1390:G:H3'	1:5:1390:G:C8	2.42	0.54
1:5:1479:G:C6	1:5:1487:G:N2	2.76	0.54
1:5:1563:A:C2	1:5:1564:A:N3	2.75	0.54
1:5:1572:U:H3'	1:5:1573:G:H8	1.73	0.54
1:5:1828:C:N3	1:5:1829:G:N7	2.55	0.54
1:5:1857:C:C2	1:5:1858:A:N7	2.75	0.54
1:5:1870:C:N3	1:5:1871:A:C8	2.75	0.54
1:5:2106:G:HO2'	1:5:2107:C:Cl'	2.19	0.54
1:5:2282:A:C2'	1:5:2283:G:C5'	2.86	0.54
1:5:3594:C:H2'	1:5:3594:C:O2	2.08	0.54
1:5:3662:A:N6	1:5:3680:U:N3	2.40	0.54
1:5:3685:C:H5''	4:A:193:ARG:NH2	2.22	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
1:5:3756:A:H2'	1:5:3757:G:O4'	2.07	0.54
1:5:3759:A:N6	49:S2:1709:G:H4'	2.22	0.54
1:5:3773:U:N3	1:5:3774:A:H2'	2.21	0.54
1:5:3877:A:N1	1:5:4444:C:H1'	2.22	0.54
1:5:4467:A:C6	1:5:4468:U:C5	2.96	0.54
1:5:4550:G:N2	1:5:4551:U:H1'	2.22	0.54
1:5:4562:C:C2	1:5:4563:U:H6	2.23	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	2.75	0.54
1:5:5043:A:O2'	1:5:5044:A:H5'	2.07	0.54
2:7:54:A:H2	2:7:55:A:C5	2.19	0.54
3:8:95:A:C2	3:8:96:C:N1	2.75	0.54
8:E:266:TYR:CD2	16:M:107:PHE:CD1	2.95	0.54
15:L:59:VAL:HG21	15:L:73:GLY:HA3	1.89	0.54
16:M:6:PHE:O	16:M:8:GLU:N	2.41	0.54
21:R:175:GLU:OE1	21:R:176:ARG:HA	2.07	0.54
26:W:31:PHE:CD2	26:W:37:GLU:HA	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:556:ILE:HA	48:4:559:LYS:CE	2.32	0.54
49:S2:325:C:O2	49:S2:326:C:C5	2.61	0.54
49:S2:447:A:N7	49:S2:449:A:C8	2.76	0.54
49:S2:823:U:C5	74:SY:64:PHE:HE2	2.26	0.54
49:S2:882:U:C2	49:S2:883:U:C6	2.96	0.54
49:S2:910:G:C2	49:S2:911:C:C2	2.95	0.54
49:S2:925:G:O2'	63:SN:87:ASP:HA	2.06	0.54
49:S2:1792:G:C2	49:S2:1793:A:N9	2.75	0.54
49:S2:1805:G:C6	49:S2:1806:A:N7	2.75	0.54
53:SD:115:VAL:CG2	53:SD:142:LEU:HD11	2.37	0.54
60:SK:11:ILE:HD12	60:SK:45:VAL:HG22	1.88	0.54
62:SM:21:VAL:HG22	62:SM:121:LYS:HG3	1.89	0.54
64:SO:146:ARG:HG2	76:Sa:29:CYS:CB	2.37	0.54
82:Sg:17:TRP:HB3	82:Sg:303:THR:CA	2.33	0.54
1:5:288:G:C6	1:5:289:C:N4	2.76	0.54
1:5:291:U:O2'	1:5:292:G:H2'	2.06	0.54
1:5:450:G:HO2'	1:5:452:A:H4'	1.73	0.54
1:5:919:C:H2'	1:5:920:C:C5'	2.38	0.54
1:5:1070:G:O6	8:E:42:ARG:NH1	2.40	0.54
1:5:1267:C:O5'	1:5:1267:C:H6	1.91	0.54
1:5:1563:A:N7	49:S2:678:U:O4'	2.40	0.54
1:5:1591:U:N3	1:5:4555:U:OP1	2.40	0.54
1:5:1682:A:C5	1:5:1683:U:C5	2.96	0.54
1:5:1758:G:C2	1:5:1759:G:C4	2.96	0.54
1:5:1871:A:C6	1:5:1872:G:N7	2.76	0.54
1:5:2092:G:N1	6:C:305:PRO:O	2.37	0.54
1:5:2426:U:O2'	1:5:2427:G:H5'	2.08	0.54
1:5:2632:U:C5	24:U:85:TYR:CD1	2.96	0.54
1:5:2769:U:O2'	1:5:2770:C:C5'	2.56	0.54
1:5:3586:G:C6	1:5:3587:C:C4	2.96	0.54
1:5:3635:A:C8	1:5:3692:A:H1'	2.42	0.54
1:5:3656:A:C2	1:5:3657:U:C5	2.96	0.54
1:5:3753:G:C5	1:5:3776:G:C6	2.95	0.54
1:5:4101:C:C4	1:5:4102:C:C5	2.96	0.54
1:5:4154:G:N2	1:5:4155:C:C2	2.76	0.54
1:5:4183:G:C4	1:5:4183:G:H5''	2.42	0.54
1:5:4745:G:C2'	1:5:4746:C:H6	2.17	0.54
1:5:4886:C:C2	1:5:4887:C:H5	2.26	0.54
1:5:4916:G:C6	1:5:4917:C:C4	2.96	0.54
1:5:4942:C:O2	1:5:4942:C:O4'	2.23	0.54
1:5:5035:U:O2	1:5:5035:U:H2'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:69:U:O4	2:7:106:G:O6	2.26	0.54
4:A:177:LYS:HD2	45:p:29:ILE:HG21	1.89	0.54
14:K:58:ILE:CG2	14:K:59:THR:N	2.70	0.54
19:P:82:ARG:HA	19:P:83:TRP:HE3	1.72	0.54
22:S:83:ARG:HH21	22:S:83:ARG:HG3	1.72	0.54
23:T:105:PHE:HE1	23:T:109:VAL:CG2	2.21	0.54
46:q:93:GLU:HG3	46:q:95:LEU:HD22	1.89	0.54
48:4:356:ILE:HG23	48:4:357:HIS:ND1	2.22	0.54
48:4:671:TYR:C	48:4:675:ILE:H	2.15	0.54
48:4:693:CYS:C	48:4:839:ARG:CZ	2.73	0.54
49:S2:81:U:N3	49:S2:82:G:C8	2.76	0.54
49:S2:414:A:C2'	49:S2:415:A:O5'	2.56	0.54
49:S2:519:A:C2	49:S2:520:A:C8	2.95	0.54
49:S2:545:A:C2	49:S2:546:G:C5	2.95	0.54
49:S2:579:C:C5	49:S2:580:U:C5	2.95	0.54
49:S2:583:C:C4	49:S2:584:G:N7	2.75	0.54
49:S2:999:G:N1	49:S2:1000:C:C6	2.75	0.54
49:S2:1348:G:C2	49:S2:1349:G:N7	2.76	0.54
49:S2:1395:C:C5'	49:S2:1395:C:C6	2.91	0.54
49:S2:1405:A:C6	49:S2:1406:G:C6	2.94	0.54
49:S2:1510:G:C5	49:S2:1511:U:C6	2.96	0.54
49:S2:1537:A:N6	49:S2:1538:C:C4	2.76	0.54
49:S2:1756:C:C2	49:S2:1777:G:C2	2.96	0.54
54:SE:67:GLN:HG2	54:SE:69:PHE:CZ	2.42	0.54
63:SN:89:TYR:C	63:SN:89:TYR:CD1	2.85	0.54
70:SU:48:LEU:CD2	70:SU:97:ILE:HD13	2.38	0.54
1:5:244:G:O6	1:5:246:G:N7	2.41	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
1:5:488:G:N1	1:5:489:C:C5	2.76	0.54
1:5:668:C:C2	1:5:669:C:C6	2.96	0.54
1:5:686:A:C3'	1:5:687:U:H5'	2.38	0.54
1:5:909:A:N1	1:5:910:G:C5	2.75	0.54
1:5:1065:G:C2	1:5:1066:G:C5	2.96	0.54
1:5:1198:G:C2'	1:5:1199:G:C8	2.86	0.54
1:5:1237:C:O4'	1:5:1237:C:O2	2.25	0.54
1:5:1352:C:O2'	1:5:1356:U:OP1	2.25	0.54
1:5:1359:G:C2'	1:5:1360:G:O4'	2.55	0.54
1:5:1482:G:N2	1:5:1484:G:H22	2.06	0.54
1:5:1666:C:H2'	1:5:1667:G:O4'	2.08	0.54
1:5:1699:A:H4'	1:5:1718:C:P	2.48	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1725:U:O2	1:5:1725:U:H2'	2.07	0.54
1:5:1744:U:C4	1:5:1745:G:N7	2.75	0.54
1:5:1813:U:H2'	1:5:1814:C:C6	2.42	0.54
1:5:1938:C:H4'	1:5:1939:A:O5'	2.08	0.54
1:5:2328:G:C2	1:5:2329:U:C2	2.96	0.54
1:5:2493:G:O2'	3:8:127:U:OP2	2.20	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	2.96	0.54
1:5:3738:G:H8	1:5:3738:G:O5'	1.89	0.54
1:5:3832:U:C2	1:5:3833:C:C6	2.96	0.54
1:5:3910:C:H2'	1:5:3911:C:C6	2.43	0.54
1:5:4142:C:C4	1:5:4143:G:N1	2.76	0.54
1:5:4175:G:C6	1:5:4176:C:C4	2.95	0.54
1:5:4183:G:H2'	1:5:4183:G:N3	2.23	0.54
1:5:4750:G:H2'	1:5:4751:G:O5'	2.07	0.54
1:5:4763:U:C6	11:H:42:ASN:ND2	2.76	0.54
3:8:10:G:C2	3:8:11:C:C6	2.96	0.54
3:8:118:C:C2	3:8:119:C:C5	2.95	0.54
5:B:100:ARG:NH2	5:B:101:THR:C	2.65	0.54
12:I:99:ILE:HG22	12:I:123:GLN:HB2	1.88	0.54
21:R:88:ARG:HH11	21:R:88:ARG:HG2	1.72	0.54
22:S:81:TRP:CZ2	22:S:94:TYR:CE1	2.96	0.54
34:e:35:TRP:CE3	34:e:56:PRO:CD	2.86	0.54
46:q:197:SER:O	46:q:198:ILE:HG13	2.08	0.54
48:4:72:SER:HB2	48:4:104:ASP:C	2.32	0.54
48:4:130:ASP:OD2	48:4:132:VAL:HG22	2.08	0.54
48:4:154:VAL:C	48:4:205:ILE:HD11	2.32	0.54
48:4:189:ILE:HG23	48:4:203:ILE:HD12	1.88	0.54
48:4:393:PRO:CD	48:4:418:SER:OG	2.55	0.54
48:4:398:ILE:HG23	48:4:485:ILE:HD13	1.90	0.54
48:4:482:THR:OG1	48:4:496:VAL:HG21	2.08	0.54
48:4:829:SER:CB	48:4:832:SER:CA	2.86	0.54
49:S2:69:C:H2'	49:S2:70:G:O4'	2.08	0.54
49:S2:155:G:C2	49:S2:164:A:C8	2.96	0.54
49:S2:222:U:O2	49:S2:223:C:C6	2.61	0.54
49:S2:316:G:C4	49:S2:317:C:C5	2.96	0.54
49:S2:375:U:O4'	61:SL:7:GLU:OE1	2.26	0.54
49:S2:635:G:C4	49:S2:636:C:C5	2.95	0.54
49:S2:635:G:C2	49:S2:636:C:C2	2.95	0.54
49:S2:949:G:C4	49:S2:950:C:C6	2.95	0.54
49:S2:1053:C:O2	49:S2:1054:G:H8	1.87	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1315:U:C5	49:S2:1316:C:C6	2.95	0.54
49:S2:1342:U:C5	49:S2:1483:A:C6	2.96	0.54
49:S2:1410:C:N4	49:S2:1411:G:C6	2.75	0.54
49:S2:1508:A:C6	49:S2:1510:G:N9	2.76	0.54
49:S2:1551:U:H2'	49:S2:1552:G:N9	2.22	0.54
49:S2:1609:C:C2	49:S2:1610:G:N7	2.75	0.54
49:S2:1839:U:N3	49:S2:1840:U:C4	2.76	0.54
50:SA:155:ARG:HB3	50:SA:156:TYR:HD2	1.72	0.54
52:SC:170:TRP:CH2	72:SW:97:ARG:HD2	2.43	0.54
54:SE:45:ILE:O	54:SE:49:ARG:HG3	2.08	0.54
69:ST:47:PRO:HG2	69:ST:52:TRP:CD1	2.42	0.54
71:SV:2:GLN:HB3	71:SV:6:GLY:HA2	1.88	0.54
1:5:259:C:N3	1:5:260:C:C5	2.76	0.54
1:5:479:G:N1	1:5:480:C:C4	2.76	0.54
1:5:728:U:C2'	1:5:729:G:OP1	2.56	0.54
1:5:1273:G:H21	1:5:2123:C:P	2.30	0.54
1:5:1377:G:C8	1:5:1377:G:H3'	2.43	0.54
1:5:1394:G:O2'	1:5:1395:U:H5'	2.08	0.54
1:5:1445:U:N3	1:5:1446:C:C6	2.76	0.54
1:5:1539:G:C1'	4:A:15:VAL:HG13	2.38	0.54
1:5:1583:A:N1	1:5:1584:G:H1'	2.23	0.54
1:5:1724:G:H21	9:F:105:PRO:CG	2.21	0.54
1:5:1936:C:C5	2:7:84:U:H5	2.13	0.54
1:5:1939:A:N1	1:5:3874:G:C5'	2.59	0.54
1:5:2122:G:O2'	1:5:2123:C:OP1	2.26	0.54
1:5:2291:G:C2	1:5:2292:C:C5	2.96	0.54
1:5:2326:G:N2	1:5:2327:G:H1'	2.23	0.54
1:5:2341:A:N1	1:5:2342:G:C5	2.75	0.54
1:5:2605:G:N2	1:5:2606:G:C4	2.76	0.54
1:5:3605:C:N3	1:5:3606:U:C5	2.75	0.54
1:5:3667:C:O2	1:5:3667:C:H2'	2.08	0.54
1:5:3790:U:H3	1:5:3792:G:C1'	2.20	0.54
1:5:3870:C:C2	1:5:3886:G:N2	2.76	0.54
1:5:3875:G:O6	1:5:3877:A:H4'	2.08	0.54
1:5:4285:U:H2'	1:5:4286:C:C6	2.40	0.54
1:5:4368:G:N2	1:5:4369:A:H1'	2.23	0.54
1:5:4618:G:C2	1:5:4619:U:C6	2.96	0.54
1:5:4880:C:O2'	1:5:4881:U:H5'	2.08	0.54
1:5:4884:G:H2'	1:5:4884:G:N3	2.23	0.54
1:5:4997:G:C6	1:5:4998:G:C5	2.96	0.54
2:7:27:G:H1'	2:7:56:G:H1	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:59:G:O6	2:7:60:G:N7	2.37	0.54
3:8:132:G:N2	3:8:133:G:C4	2.75	0.54
4:A:48:ILE:HG22	45:p:54:ILE:HD12	1.89	0.54
9:F:168:ARG:HD2	9:F:211:TRP:HE1	1.73	0.54
10:G:57:TRP:N	10:G:57:TRP:CD1	2.75	0.54
13:J:107:PHE:CE1	13:J:130:PHE:HB3	2.42	0.54
17:N:178:HIS:HA	17:N:181:HIS:NE2	2.22	0.54
22:S:45:TRP:CZ3	22:S:56:LYS:CA	2.84	0.54
25:V:30:ASP:OD1	25:V:104:VAL:HG12	2.08	0.54
31:b:12:GLN:C	31:b:16:TRP:CZ2	2.86	0.54
40:k:11:PHE:HZ	40:k:56:LEU:HD11	1.71	0.54
46:q:50:LYS:O	46:q:51:ALA:C	2.49	0.54
48:4:58:ASP:CG	48:4:69:THR:CA	2.38	0.54
48:4:571:LYS:HE3	48:4:572:LYS:H	1.65	0.54
48:4:672:LEU:C	48:4:675:ILE:CG1	2.77	0.54
49:S2:142:C:O4'	49:S2:142:C:O2	2.24	0.54
49:S2:172:U:O2	49:S2:172:U:O2'	2.23	0.54
49:S2:511:U:C2	49:S2:512:A:C8	2.95	0.54
49:S2:618:C:C5	49:S2:619:A:N7	2.76	0.54
49:S2:999:G:C6	49:S2:1000:C:C4	2.95	0.54
49:S2:1040:G:C5	49:S2:1041:G:C8	2.95	0.54
49:S2:1243:U:C2	49:S2:1265:A:C2	2.94	0.54
49:S2:1287:A:C6	49:S2:1314:U:N3	2.75	0.54
49:S2:1721:U:H5'	49:S2:1721:U:C6	2.43	0.54
49:S2:1868:U:H4'	49:S2:1869:A:OP2	2.08	0.54
51:SB:79:VAL:CB	51:SB:81:PHE:CZ	2.90	0.54
56:SG:210:ALA:O	56:SG:214:ALA:HB3	2.08	0.54
57:SH:35:ASP:OD1	57:SH:36:LEU:N	2.41	0.54
1:5:120:A:O4'	1:5:121:A:C6	2.61	0.54
1:5:246:G:N2	1:5:247:G:C8	2.74	0.54
1:5:330:G:N2	1:5:331:G:N9	2.56	0.54
1:5:736:C:C2'	1:5:737:C:O4'	2.53	0.54
1:5:981:C:C2	8:E:69:TYR:CE2	2.96	0.54
1:5:1234:G:C2	1:5:1235:G:C4	2.96	0.54
1:5:1355:G:H2'	1:5:1356:U:O5'	2.08	0.54
1:5:1473:U:C2	1:5:1474:C:C6	2.96	0.54
1:5:1565:A:H2'	1:5:1566:C:H5'	1.90	0.54
1:5:1753:G:N3	1:5:1755:C:H5''	2.22	0.54
1:5:1912:G:N2	18:O:87:MET:SD	2.81	0.54
1:5:1956:A:C2	1:5:2027:U:C2	2.96	0.54
1:5:2079:G:H1	1:5:2276:A:H61	1.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2260:C:H2'	1:5:2261:G:C8	2.41	0.54
1:5:2656:U:H3'	1:5:2657:G:H8	1.72	0.54
1:5:2669:C:O2'	1:5:2670:C:OP2	2.25	0.54
1:5:2743:A:H1'	4:A:21:LYS:HE3	1.90	0.54
1:5:3657:U:C4	1:5:3658:C:C5	2.96	0.54
1:5:3692:A:C6	1:5:3693:U:N1	2.76	0.54
1:5:3714:G:C2	1:5:3715:U:C2	2.96	0.54
1:5:3754:G:C6	1:5:3755:G:N7	2.76	0.54
1:5:4085:A:OP1	27:X:45:THR:HG23	2.08	0.54
1:5:4096:C:C4	1:5:4097:G:N9	2.75	0.54
1:5:4146:G:N3	1:5:4147:G:C8	2.76	0.54
1:5:4173:G:C6	1:5:4174:U:C4	2.96	0.54
1:5:4735:G:C6	1:5:4736:C:C4	2.95	0.54
1:5:4896:G:C4	1:5:4897:G:C8	2.95	0.54
2:7:9:C:O2	2:7:9:C:H2'	2.08	0.54
5:B:222:VAL:HG11	5:B:274:TYR:CE2	2.43	0.54
12:I:171:TRP:CB	12:I:181:PHE:CD2	2.91	0.54
14:K:61:LYS:CD	14:K:72:GLU:CA	2.84	0.54
14:K:102:GLY:O	14:K:140:GLY:CA	2.56	0.54
16:M:6:PHE:HA	22:S:152:PHE:O	2.08	0.54
21:R:8:LYS:HG3	21:R:22:VAL:HG11	1.90	0.54
28:Y:15:ARG:NH1	28:Y:15:ARG:CG	2.70	0.54
46:q:97:GLU:CB	46:q:206:ILE:HD11	2.15	0.54
47:r:17:LEU:HD12	47:r:36:ASN:HD21	1.71	0.54
48:4:73:THR:CA	48:4:104:ASP:HB2	2.37	0.54
48:4:111:PHE:CD1	48:4:141:THR:HG23	2.43	0.54
48:4:510:GLU:HG2	48:4:511:ALA:H	1.73	0.54
48:4:571:LYS:CE	48:4:572:LYS:N	2.33	0.54
49:S2:200:G:C6	49:S2:201:C:C4	2.95	0.54
49:S2:385:G:H2'	49:S2:385:G:N3	2.23	0.54
49:S2:656:G:H21	49:S2:663:C:C5'	2.21	0.54
49:S2:673:G:C8	49:S2:1084:A:C6	2.96	0.54
49:S2:872:A:N1	49:S2:914:U:H5	2.06	0.54
49:S2:1022:U:C6	63:SN:128:TYR:HE2	2.23	0.54
49:S2:1290:G:H3'	81:Sf:146:LEU:CG	2.32	0.54
49:S2:1291:A:C5	81:Sf:140:TYR:CD2	2.96	0.54
49:S2:1448:A:C2	49:S2:1449:G:C1'	2.91	0.54
49:S2:1566:G:N7	69:ST:101:ARG:NH2	2.56	0.54
49:S2:1587:G:O6	69:ST:67:ARG:HG2	2.08	0.54
49:S2:1602:U:H2'	49:S2:1603:G:H3'	1.90	0.54
49:S2:1835:A:H61	76:Sa:79:ILE:HB	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:35:SER:O	53:SD:99:ILE:HD11	2.07	0.54
58:SI:67:TRP:HB2	58:SI:72:CYS:SG	2.48	0.54
59:SJ:83:ARG:HD3	59:SJ:150:ARG:NH2	2.23	0.54
68:SS:23:ARG:CZ	68:SS:23:ARG:HB2	2.38	0.54
69:ST:52:TRP:CE3	69:ST:53:PHE:N	2.76	0.54
74:SY:57:VAL:HG11	74:SY:60:PHE:CZ	2.43	0.54
76:Sa:34:LYS:O	76:Sa:35:ALA:HB3	2.07	0.54
82:Sg:31:ILE:HG23	82:Sg:43:TRP:HB2	1.88	0.54
1:5:73:A:C2	1:5:74:G:N7	2.76	0.54
1:5:206:U:O2	1:5:208:A:H8	1.90	0.54
1:5:473:C:C2	1:5:474:C:C6	2.95	0.54
1:5:976:G:H3'	1:5:977:C:H6	1.72	0.54
1:5:1397:A:O2'	1:5:1398:A:C5'	2.56	0.54
1:5:1802:A:H5'	23:T:105:PHE:CD2	2.43	0.54
1:5:1856:C:O2	1:5:1892:A:H2	1.89	0.54
1:5:1872:G:C2	1:5:1873:A:N7	2.76	0.54
1:5:1947:U:O2	1:5:1947:U:H2'	2.08	0.54
1:5:2104:G:C6	1:5:2105:A:C5	2.96	0.54
1:5:2107:C:N4	1:5:2126:G:C2	2.75	0.54
1:5:2347:A:N7	34:e:31:ILE:HD11	2.23	0.54
1:5:2614:C:H2'	1:5:2614:C:O2	2.08	0.54
1:5:3690:U:C2	1:5:3691:G:C8	2.96	0.54
1:5:4093:G:N7	1:5:4094:G:C8	2.76	0.54
1:5:4172:A:N3	1:5:4173:G:C8	2.75	0.54
1:5:4205:A:O4'	1:5:4375:C:H2'	2.08	0.54
1:5:4216:G:H2'	1:5:4217:G:H5'	1.90	0.54
1:5:4239:A:C6	1:5:4240:G:C5	2.95	0.54
1:5:4275:G:H3'	1:5:4275:G:C8	2.43	0.54
1:5:4277:G:C2	1:5:4278:C:C5	2.96	0.54
1:5:4297:G:C6	1:5:4298:A:N7	2.76	0.54
1:5:4308:C:O2'	1:5:4338:G:H4'	2.07	0.54
1:5:4592:C:H2'	1:5:4593:C:H6	1.72	0.54
1:5:4767:C:H4'	1:5:4874:A:C2	2.42	0.54
1:5:5042:A:C2	1:5:5043:A:C5	2.96	0.54
4:A:180:LEU:HG	45:p:18:TYR:CE1	2.43	0.54
6:C:178:ASN:ND2	6:C:178:ASN:N	2.55	0.54
9:F:161:TYR:CD2	9:F:168:ARG:CZ	2.91	0.54
10:G:102:TYR:OH	10:G:207:VAL:CA	2.56	0.54
10:G:165:GLU:OE1	17:N:22:LEU:HD13	2.07	0.54
17:N:88:GLY:CA	44:o:48:TYR:HD2	2.21	0.54
17:N:143:ARG:HD3	37:h:95:LEU:HD23	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:8:ARG:HB2	22:S:10:TYR:CE2	2.42	0.54
48:4:24:VAL:HG22	48:4:32:LYS:HE3	1.85	0.54
48:4:546:ILE:CG2	48:4:554:LEU:CD1	2.86	0.54
48:4:738:PRO:HB2	48:4:824:PRO:CG	2.39	0.54
49:S2:2:A:C8	52:SC:223:TYR:CB	2.91	0.54
49:S2:52:G:C2	49:S2:53:C:C1'	2.91	0.54
49:S2:73:C:H1'	49:S2:74:G:O4'	2.07	0.54
49:S2:548:C:H41	49:S2:549:C:H1'	1.73	0.54
49:S2:574:A:H2'	49:S2:575:A:C8	2.43	0.54
49:S2:613:G:H2'	49:S2:627:U:C5	2.43	0.54
49:S2:620:G:C2	49:S2:620:G:P	3.01	0.54
49:S2:847:A:N1	49:S2:848:U:H1'	2.22	0.54
49:S2:862:A:N3	49:S2:863:U:C6	2.76	0.54
49:S2:909:G:C2	49:S2:910:G:N7	2.76	0.54
49:S2:909:G:N3	49:S2:910:G:C8	2.76	0.54
49:S2:989:C:C2	49:S2:1001:A:N1	2.76	0.54
49:S2:992:A:N6	49:S2:993:G:N7	2.56	0.54
49:S2:996:A:C2	49:S2:997:A:C2	2.95	0.54
49:S2:999:G:N2	49:S2:1000:C:H1'	2.23	0.54
49:S2:1039:C:C4	49:S2:1040:G:N7	2.76	0.54
49:S2:1074:C:H2'	49:S2:1075:C:C6	2.42	0.54
49:S2:1256:G:N2	49:S2:1658:G:O2'	2.37	0.54
49:S2:1280:G:N1	49:S2:1281:G:C8	2.76	0.54
49:S2:1286:G:H21	62:SM:33:ARG:HD2	1.73	0.54
49:S2:1290:G:N2	81:Sf:145:CYS:O	2.41	0.54
49:S2:1292:C:H2'	49:S2:1292:C:O2	2.07	0.54
49:S2:1348:G:N3	49:S2:1348:G:C2'	2.71	0.54
49:S2:1407:U:O2	49:S2:1408:U:C5	2.60	0.54
49:S2:1408:U:H2'	49:S2:1409:A:O4'	2.08	0.54
49:S2:1457:U:C2	49:S2:1458:G:C8	2.95	0.54
49:S2:1575:G:C2	49:S2:1576:G:C8	2.96	0.54
49:S2:1576:G:C4	49:S2:1577:G:C8	2.96	0.54
49:S2:1578:U:H2'	53:SD:4:GLN:HG2	1.90	0.54
49:S2:1588:A:C2	49:S2:1589:A:C6	2.96	0.54
49:S2:1729:U:O2	49:S2:1729:U:H2'	2.07	0.54
49:S2:1732:G:C6	49:S2:1733:U:C5	2.96	0.54
49:S2:1754:G:C5	49:S2:1755:C:C5	2.96	0.54
49:S2:1759:G:N2	49:S2:1774:C:C2	2.76	0.54
55:SF:36:GLN:O	55:SF:37:ASP:HB2	2.08	0.54
60:SK:15:LEU:HD13	60:SK:21:MET:HE3	1.89	0.54
1:5:27:C:C2	1:5:28:C:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:670:G:H2'	1:5:671:G:C8	2.43	0.53
1:5:750:U:C4	1:5:751:G:N7	2.77	0.53
1:5:751:G:N2	1:5:752:G:C4	2.76	0.53
1:5:967:C:H2'	1:5:969:C:OP1	2.08	0.53
1:5:1066:G:N1	1:5:1067:G:C5	2.76	0.53
1:5:1167:C:O2	1:5:1195:G:C2	2.61	0.53
1:5:1329:G:C2	1:5:3865:A:H1'	2.43	0.53
1:5:1750:G:N1	1:5:1751:A:C5	2.76	0.53
1:5:1844:G:C6	1:5:1845:U:C4	2.95	0.53
1:5:1867:A:H2'	1:5:1868:A:C8	2.42	0.53
1:5:2090:U:N3	6:C:307:LYS:CE	2.71	0.53
1:5:2090:U:HO2'	1:5:2091:C:P	2.31	0.53
1:5:2116:C:H4'	1:5:2117:G:O4'	2.08	0.53
1:5:2417:A:N1	1:5:2418:A:C5	2.76	0.53
1:5:2593:C:C2	1:5:2594:C:C6	2.95	0.53
1:5:3638:G:C6	1:5:3651:A:C2	2.96	0.53
1:5:3668:C:C4	1:5:3669:G:N7	2.75	0.53
1:5:3791:C:N4	1:5:3802:U:C5	2.76	0.53
1:5:3909:C:C2	1:5:3910:C:C5	2.96	0.53
1:5:4400:G:N3	1:5:4400:G:H2'	2.23	0.53
1:5:4543:G:O2'	1:5:4544:A:O5'	2.26	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
1:5:4991:U:H2'	1:5:4992:G:H8	1.73	0.53
1:5:5022:U:C4	1:5:5024:C:C4	2.96	0.53
2:7:58:A:C5	2:7:59:G:C8	2.95	0.53
4:A:97:ASN:O	4:A:100:ASN:HB2	2.08	0.53
7:D:95:TYR:HA	7:D:158:LYS:HG2	1.89	0.53
7:D:99:TYR:CE1	7:D:165:GLY:HA2	2.42	0.53
9:F:243:ASN:N	9:F:243:ASN:OD1	2.37	0.53
33:d:87:ARG:NH1	33:d:109:VAL:HG22	2.23	0.53
38:i:51:ALA:HB3	38:i:54:GLU:OE1	2.08	0.53
44:o:26:TYR:CD2	44:o:82:MET:HE3	2.43	0.53
47:r:2:SER:O	47:r:6:GLN:HG2	2.08	0.53
48:4:121:VAL:HG23	48:4:122:THR:N	2.23	0.53
48:4:154:VAL:HG11	48:4:358:LEU:HD21	1.89	0.53
48:4:228:PHE:CD1	48:4:231:MET:HE2	2.43	0.53
48:4:480:VAL:HG13	48:4:529:LYS:HA	1.90	0.53
49:S2:104:A:C6	49:S2:105:U:C6	2.96	0.53
49:S2:219:U:H4'	58:SI:182:CYS:SG	2.48	0.53
49:S2:380:G:N2	49:S2:382:C:H2'	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:384:U:C4	49:S2:386:C:H6	2.24	0.53
49:S2:449:A:H4'	54:SE:3:ARG:HE	1.73	0.53
49:S2:584:G:C6	49:S2:585:C:C4	2.96	0.53
49:S2:734:C:C6	49:S2:734:C:H5''	2.44	0.53
49:S2:974:C:H4'	64:SO:41:PHE:CE2	2.43	0.53
49:S2:997:A:H2'	49:S2:998:A:O4'	2.07	0.53
49:S2:1134:G:C4	49:S2:1135:C:C6	2.96	0.53
49:S2:1231:C:H3'	49:S2:1232:U:H6	1.73	0.53
49:S2:1294:G:C8	81:Sf:151:ASN:C	2.86	0.53
49:S2:1302:G:C4	81:Sf:140:TYR:CE2	2.95	0.53
49:S2:1387:G:C2	49:S2:1388:A:H1'	2.43	0.53
49:S2:1496:U:H2'	49:S2:1496:U:O2	2.08	0.53
49:S2:1526:G:C6	49:S2:1527:C:C4	2.96	0.53
49:S2:1529:C:H2'	49:S2:1530:U:C6	2.43	0.53
49:S2:1594:A:N1	49:S2:1595:U:C4	2.76	0.53
49:S2:1754:G:H2'	49:S2:1755:C:O4'	2.08	0.53
50:SA:33:GLN:HB3	50:SA:154:LEU:HD12	1.88	0.53
50:SA:53:ARG:CZ	50:SA:53:ARG:HB2	2.39	0.53
52:SC:267:GLN:HE22	71:SV:50:PHE:HE2	1.55	0.53
52:SC:274:VAL:O	52:SC:274:VAL:HG13	2.08	0.53
57:SH:92:VAL:O	57:SH:169:LYS:NZ	2.41	0.53
59:SJ:69:ARG:O	59:SJ:72:PHE:N	2.41	0.53
61:SL:80:MET:HG2	61:SL:86:ILE:CG2	2.38	0.53
72:SW:8:ALA:HA	72:SW:74:VAL:HG11	1.89	0.53
1:5:190:G:N1	1:5:252:C:C2	2.76	0.53
1:5:209:U:N3	1:5:233:U:C5	2.76	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
1:5:970:G:C2'	1:5:971:U:O4'	2.55	0.53
1:5:994:G:C2	1:5:1050:C:C2	2.95	0.53
1:5:1092:G:C2	1:5:1093:C:N1	2.76	0.53
1:5:1297:U:O2	1:5:1298:C:C6	2.61	0.53
1:5:1492:G:C4	1:5:1493:G:C8	2.97	0.53
1:5:1549:G:N2	1:5:1580:C:C2	2.76	0.53
1:5:1595:G:N1	1:5:4557:U:H5'	2.23	0.53
1:5:1719:A:O2'	1:5:1720:C:C6	2.58	0.53
1:5:1758:G:C2	1:5:1759:G:C8	2.97	0.53
1:5:1898:C:H5	1:5:2279:A:H1'	1.66	0.53
1:5:1899:G:H1'	1:5:2278:G:H22	1.73	0.53
1:5:1978:C:N3	1:5:1988:G:O6	2.41	0.53
1:5:2243:C:O2	1:5:2244:C:C6	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2245:G:C6	1:5:2246:C:C4	2.96	0.53
1:5:2285:A:OP2	30:a:7:LYS:NZ	2.41	0.53
1:5:2335:C:O2	1:5:2336:G:C8	2.62	0.53
1:5:2352:U:C2	1:5:2353:U:C5	2.96	0.53
1:5:2439:G:C8	1:5:2777:G:C6	2.96	0.53
1:5:2439:G:N3	1:5:2439:G:H2'	2.23	0.53
1:5:2492:C:H2'	1:5:2493:G:O4'	2.08	0.53
1:5:2549:G:N1	1:5:2770:C:N4	2.56	0.53
1:5:2677:G:C6	1:5:2678:A:C8	2.96	0.53
1:5:2682:G:H2'	1:5:2683:C:C6	2.43	0.53
1:5:2835:A:N3	5:B:228:TYR:HD2	2.07	0.53
1:5:3694:U:C4	1:5:3695:U:C4	2.95	0.53
1:5:3731:C:O2	1:5:3731:C:H2'	2.06	0.53
1:5:3944:G:N2	1:5:3945:A:C4	2.76	0.53
1:5:4131:G:C6	1:5:4132:C:C4	2.96	0.53
1:5:4579:U:C4	1:5:4580:U:C5	2.96	0.53
1:5:5006:U:C1'	1:5:5042:A:C5	2.91	0.53
1:5:5026:U:OP1	58:SI:168:GLN:HG3	2.09	0.53
3:8:125:C:O4'	3:8:125:C:O2	2.21	0.53
6:C:341:LEU:HD21	8:E:52:ARG:HD2	1.90	0.53
7:D:52:ILE:HG23	7:D:54:ARG:NH2	2.23	0.53
9:F:228:HIS:O	9:F:229:PHE:C	2.51	0.53
14:K:56:LEU:HB2	14:K:91:ASP:OD2	2.04	0.53
15:L:28:GLN:HG2	17:N:202:ARG:NH1	2.23	0.53
18:O:109:PRO:O	18:O:113:ASP:OD1	2.26	0.53
21:R:109:TYR:CE1	21:R:114:LYS:CD	2.87	0.53
34:e:35:TRP:CZ3	34:e:55:MET:HA	2.43	0.53
39:j:39:TYR:HB3	39:j:40:PRO:CD	2.37	0.53
48:4:154:VAL:HG13	48:4:353:MET:CE	2.34	0.53
48:4:617:ILE:CG1	48:4:622:VAL:CG2	2.87	0.53
48:4:848:ILE:HG22	48:4:849:PRO:N	2.15	0.53
49:S2:10:G:O2'	52:SC:113:GLN:NE2	2.41	0.53
49:S2:367:U:H4'	49:S2:371:A:C8	2.43	0.53
49:S2:386:C:O2	49:S2:386:C:H2'	2.08	0.53
49:S2:404:G:C4	49:S2:405:G:C8	2.96	0.53
49:S2:553:U:N3	49:S2:554:A:N7	2.56	0.53
49:S2:643:A:OP2	59:SJ:38:ARG:NH2	2.41	0.53
49:S2:823:U:C5	59:SJ:144:ILE:HD13	2.43	0.53
49:S2:961:G:N1	49:S2:962:A:C5	2.76	0.53
49:S2:1209:A:O2'	76:Sa:85:ARG:NH2	2.41	0.53
49:S2:1272:C:OP1	49:S2:1303:C:C1'	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1302:G:C5	81:Sf:138:ARG:NH1	2.76	0.53
49:S2:1308:U:N3	49:S2:1309:C:C4	2.76	0.53
49:S2:1545:A:H4'	66:SQ:74:GLY:HA2	1.90	0.53
49:S2:1648:G:O2'	49:S2:1674:G:O6	2.15	0.53
51:SB:120:VAL:HG13	51:SB:142:PHE:CE1	2.43	0.53
56:SG:229:ALA:HB1	56:SG:233:ARG:NH2	2.23	0.53
72:SW:11:LEU:HD11	72:SW:37:PHE:HE2	1.71	0.53
1:5:70:A:N1	1:5:4355:G:C1'	2.72	0.53
1:5:328:A:C2	1:5:329:A:C5	2.96	0.53
1:5:491:G:N2	1:5:492:U:C4	2.76	0.53
1:5:713:C:H42	1:5:955:G:H1	1.55	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
1:5:1092:G:C2	1:5:1093:C:C6	2.97	0.53
1:5:1183:C:N3	1:5:1184:A:C8	2.76	0.53
1:5:1442:C:C4	1:5:1443:A:N7	2.76	0.53
1:5:1665:C:O2'	1:5:1666:C:H5'	2.08	0.53
1:5:1667:G:C2	1:5:2283:G:C6	2.94	0.53
1:5:1670:G:O5'	1:5:1671:U:H6	1.91	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
1:5:1961:G:O2'	1:5:2024:G:N2	2.40	0.53
1:5:1994:C:O2	1:5:1995:G:C8	2.60	0.53
1:5:2113:G:C8	1:5:2115:G:N3	2.76	0.53
1:5:2366:A:H2	1:5:3851:U:C1'	2.14	0.53
1:5:2394:G:O2'	1:5:2819:U:O4	2.23	0.53
1:5:2457:G:H21	1:5:3672:G:N2	2.06	0.53
1:5:2484:A:H2'	1:5:2485:U:O4'	2.08	0.53
1:5:2583:C:OP1	36:g:54:ARG:HB2	2.07	0.53
1:5:2698:G:C6	1:5:2699:C:C4	2.97	0.53
1:5:3857:G:C4	1:5:3858:C:C6	2.96	0.53
1:5:4078:C:C2	1:5:4079:C:C6	2.96	0.53
1:5:4132:C:C2	1:5:4133:C:C6	2.97	0.53
1:5:4202:U:O2	1:5:4204:C:C4	2.61	0.53
1:5:4214:A:H8	1:5:4214:A:O5'	1.91	0.53
1:5:4424:A:OP2	42:m:97:ARG:HD2	2.08	0.53
1:5:4881:U:O2'	1:5:4882:U:O5'	2.27	0.53
1:5:4886:C:O2	1:5:4886:C:H2'	2.08	0.53
1:5:4948:C:O2'	1:5:4949:G:H5'	2.07	0.53
1:5:5026:U:OP1	58:SI:168:GLN:CD	2.50	0.53
1:5:5031:G:C2	1:5:5032:C:C4	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:64:U:C2	3:8:95:A:N1	2.76	0.53
5:B:323:TYR:CD1	5:B:324:GLY:N	2.76	0.53
9:F:63:TYR:HD2	9:F:149:LEU:HD21	1.73	0.53
14:K:59:THR:O	14:K:60:VAL:CG2	2.54	0.53
15:L:82:ARG:CZ	15:L:82:ARG:HB3	2.36	0.53
21:R:163:ARG:HD2	49:S2:871:U:O2'	2.08	0.53
25:V:97:TYR:C	25:V:97:TYR:CD2	2.85	0.53
30:a:103:VAL:HG12	30:a:108:TYR:HB2	1.89	0.53
46:q:123:VAL:HG13	46:q:180:ILE:HD12	1.89	0.53
48:4:206:ASP:CA	48:4:212:VAL:CG2	2.86	0.53
48:4:593:SER:OG	48:4:728:CYS:HA	2.09	0.53
49:S2:29:G:C2	49:S2:30:C:N3	2.75	0.53
49:S2:73:C:C6	49:S2:74:G:C8	2.96	0.53
49:S2:311:C:C2	49:S2:312:G:H1'	2.43	0.53
49:S2:312:G:O2'	49:S2:313:A:OP2	2.26	0.53
49:S2:360:A:C2	49:S2:363:A:N7	2.76	0.53
49:S2:634:A:N1	49:S2:635:G:C5	2.76	0.53
49:S2:793:G:C2	49:S2:794:A:H1'	2.43	0.53
49:S2:964:A:N3	49:S2:965:U:C4	2.76	0.53
49:S2:1112:U:C4	49:S2:1113:A:C4	2.96	0.53
49:S2:1162:C:C4	49:S2:1163:C:C5	2.96	0.53
49:S2:1253:A:H4'	49:S2:1254:C:H5''	1.89	0.53
49:S2:1291:A:H8	81:Sf:146:LEU:HB2	1.73	0.53
49:S2:1292:C:H6	81:Sf:149:CYS:HA	1.74	0.53
49:S2:1410:C:N3	49:S2:1411:G:N7	2.57	0.53
49:S2:1432:U:C2	49:S2:1433:C:H5	2.22	0.53
49:S2:1537:A:C6	49:S2:1538:C:C4	2.96	0.53
49:S2:1771:G:N3	49:S2:1772:C:C6	2.77	0.53
54:SE:248:ILE:HD12	59:SJ:72:PHE:CD2	2.43	0.53
57:SH:133:LEU:HD21	57:SH:176:VAL:HG11	1.90	0.53
59:SJ:67:ASP:OD1	59:SJ:67:ASP:C	2.50	0.53
73:SX:88:ASP:OD1	73:SX:89:GLY:N	2.41	0.53
1:5:60:G:C6	1:5:61:A:C5	2.96	0.53
1:5:102:G:C2'	1:5:103:G:O5'	2.56	0.53
1:5:127:G:C4	1:5:128:C:C5	2.96	0.53
1:5:313:U:C2	1:5:314:G:C8	2.96	0.53
1:5:319:A:H1'	1:5:3726:A:C2	2.44	0.53
1:5:907:C:N3	1:5:908:G:C8	2.77	0.53
1:5:942:G:P	9:F:244:ARG:NH1	2.82	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:5:1609:U:C2	1:5:1610:C:C6	2.97	0.53
1:5:1662:C:O2	1:5:1663:C:C6	2.62	0.53
1:5:1776:A:C6	1:5:1777:C:C4	2.96	0.53
1:5:1778:C:C2	1:5:1779:U:H5	2.26	0.53
1:5:2284:G:H2'	1:5:2285:A:O4'	2.08	0.53
1:5:2737:C:C2	1:5:2738:C:C5	2.97	0.53
1:5:2851:G:O2'	1:5:3841:C:O4'	2.23	0.53
1:5:3612:C:H2'	1:5:3613:U:O4'	2.09	0.53
1:5:3742:G:C2	1:5:3743:G:N7	2.77	0.53
1:5:3925:U:H2'	1:5:3926:C:O4'	2.08	0.53
1:5:4167:G:N1	1:5:4168:G:C8	2.76	0.53
1:5:4198:G:O6	12:I:112:GLN:NE2	2.42	0.53
1:5:4345:C:O2	1:5:4346:U:C6	2.60	0.53
1:5:4416:G:N1	1:5:4417:C:C5	2.77	0.53
1:5:4424:A:H5'	42:m:122:ARG:HE	1.73	0.53
1:5:4430:G:O2'	12:I:158:LYS:HB2	2.09	0.53
1:5:4965:U:O2	1:5:4965:U:H2'	2.04	0.53
1:5:4983:C:O2	1:5:4984:C:H6	1.86	0.53
1:5:4999:G:C4	1:5:5000:G:C8	2.97	0.53
1:5:5000:G:C5	1:5:5001:U:C5	2.96	0.53
1:5:5000:G:C6	1:5:5001:U:C4	2.96	0.53
7:D:31:TYR:CD1	7:D:31:TYR:C	2.87	0.53
14:K:62:LEU:HD12	14:K:73:VAL:HB	1.85	0.53
26:W:8:PHE:CD1	26:W:8:PHE:C	2.87	0.53
32:c:56:ARG:HG3	32:c:56:ARG:HH11	1.74	0.53
34:e:77:PHE:HE2	47:r:25:TYR:HD2	1.57	0.53
46:q:59:THR:C	46:q:61:MET:H	2.16	0.53
46:q:113:ALA:HB2	46:q:169:ALA:HA	1.90	0.53
46:q:129:GLY:HA2	46:q:151:THR:HG21	1.91	0.53
46:q:147:ILE:HB	48:4:204:MET:HE2	1.70	0.53
48:4:743:PRO:HG3	48:4:817:TRP:CE3	2.44	0.53
48:4:801:ARG:HD2	48:4:801:ARG:C	2.32	0.53
49:S2:436:G:C6	49:S2:458:A:N3	2.76	0.53
49:S2:650:A:H2'	49:S2:651:U:O5'	2.08	0.53
49:S2:697:G:C2	49:S2:734:C:C2	2.97	0.53
49:S2:810:A:H5'	49:S2:811:A:OP2	2.08	0.53
49:S2:816:A:N6	49:S2:817:G:C4	2.76	0.53
49:S2:979:C:O2	49:S2:979:C:H2'	2.08	0.53
49:S2:993:G:N2	49:S2:994:C:N1	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1067:C:H2'	49:S2:1067:C:O2	2.08	0.53
49:S2:1181:A:C2	49:S2:1182:A:C2	2.97	0.53
49:S2:1184:G:C6	49:S2:1185:C:C4	2.96	0.53
49:S2:1250:A:H2	49:S2:1339:U:H1'	1.73	0.53
49:S2:1355:C:O3'	52:SC:238:LYS:NZ	2.41	0.53
49:S2:1393:G:C6	49:S2:1394:G:N7	2.77	0.53
49:S2:1431:G:N2	49:S2:1432:U:H1'	2.22	0.53
49:S2:1561:A:C6	49:S2:1562:C:C6	2.97	0.53
49:S2:1729:U:O2	49:S2:1730:U:H5	1.91	0.53
49:S2:1859:A:C2	49:S2:1860:A:C5	2.97	0.53
50:SA:39:TYR:C	50:SA:39:TYR:HD1	2.16	0.53
51:SB:113:MET:O	51:SB:142:PHE:HE2	1.92	0.53
62:SM:101:ARG:HA	62:SM:101:ARG:CZ	2.39	0.53
64:SO:35:ALA:CB	64:SO:112:ALA:HB2	2.38	0.53
68:SS:15:VAL:HG13	68:SS:68:ILE:HD11	1.90	0.53
68:SS:130:ARG:HG3	68:SS:136:THR:CG2	2.39	0.53
1:5:69:A:C2	1:5:70:A:C4	2.97	0.53
1:5:99:A:H4'	17:N:181:HIS:HD1	1.71	0.53
1:5:209:U:C6	1:5:211:G:N7	2.77	0.53
1:5:271:C:C2	1:5:272:U:C5	2.86	0.53
1:5:426:A:O2'	1:5:427:A:H5'	2.09	0.53
1:5:437:G:H5'	34:e:53:ILE:HG22	1.90	0.53
1:5:965:G:H2'	1:5:965:G:N3	2.23	0.53
1:5:1214:C:H2'	1:5:2114:G:C2	2.41	0.53
1:5:1260:G:C4	1:5:1261:G:C8	2.97	0.53
1:5:1278:C:C3'	1:5:1279:A:H4'	2.38	0.53
1:5:1335:G:C6	1:5:1336:G:C5	2.96	0.53
1:5:1394:G:O2'	1:5:1395:U:C5'	2.57	0.53
1:5:1667:G:C6	1:5:2280:G:C4	2.96	0.53
1:5:1789:C:C2'	1:5:1790:U:O5'	2.55	0.53
1:5:1806:G:N3	1:5:1807:C:C6	2.77	0.53
1:5:1866:U:C5	1:5:4405:G:O4'	2.61	0.53
1:5:2270:G:N3	1:5:2271:C:C6	2.76	0.53
1:5:2451:A:N6	1:5:2452:G:C4	2.77	0.53
1:5:2481:G:C4	1:5:2482:C:C6	2.96	0.53
1:5:3622:C:O2	1:5:3623:C:O2	2.26	0.53
1:5:3668:C:N4	1:5:3669:G:C5	2.76	0.53
1:5:4401:G:C6	1:5:4402:C:C4	2.97	0.53
1:5:4404:U:C4	1:5:4436:U:C4	2.96	0.53
1:5:4763:U:O2	16:M:3:PHE:CZ	2.62	0.53
1:5:4767:C:HO2'	1:5:4874:A:H61	1.46	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4997:G:N2	1:5:4998:G:H1'	2.23	0.53
1:5:5019:A:C2	1:5:5020:G:N7	2.77	0.53
1:5:5028:G:C2	1:5:5029:C:C2	2.97	0.53
1:5:5055:G:C2	1:5:5056:A:C5	2.96	0.53
3:8:132:G:N2	3:8:133:G:N9	2.55	0.53
4:A:209:HIS:HE1	4:A:211:PHE:CD2	2.26	0.53
7:D:21:ARG:HA	7:D:24:ARG:HE	1.73	0.53
8:E:54:SER:O	8:E:55:ARG:C	2.51	0.53
14:K:83:LYS:O	14:K:86:LYS:HB2	2.08	0.53
14:K:94:LYS:HA	14:K:95:GLN:O	2.03	0.53
15:L:47:ALA:HB3	15:L:48:PRO:HD3	1.90	0.53
16:M:11:ARG:CZ	16:M:11:ARG:HB2	2.38	0.53
18:O:14:HIS:CD2	18:O:124:LEU:HD12	2.44	0.53
19:P:82:ARG:HA	19:P:83:TRP:CE3	2.44	0.53
31:b:13:SER:N	31:b:16:TRP:CZ2	2.77	0.53
37:h:93:ARG:CG	37:h:93:ARG:HH11	2.21	0.53
46:q:62:ARG:C	46:q:64:ALA:N	2.64	0.53
46:q:198:ILE:HG22	46:q:198:ILE:O	2.09	0.53
48:4:48:SER:O	48:4:49:ALA:HB2	2.08	0.53
48:4:326:GLU:O	48:4:327:ASP:C	2.51	0.53
48:4:604:MET:HE2	48:4:732:SER:OG	2.08	0.53
49:S2:112:U:H1'	49:S2:114:G:C6	2.43	0.53
49:S2:218:U:C2	49:S2:219:U:C6	2.97	0.53
49:S2:410:G:C6	49:S2:411:G:C5	2.96	0.53
49:S2:459:C:N3	49:S2:460:A:N7	2.55	0.53
49:S2:617:G:C6	49:S2:618:C:C5	2.97	0.53
49:S2:833:C:N3	49:S2:834:C:C5	2.77	0.53
49:S2:1050:A:C5	49:S2:1051:G:C8	2.97	0.53
49:S2:1094:C:N3	49:S2:1095:U:C6	2.76	0.53
49:S2:1222:G:C2'	49:S2:1223:A:O4'	2.54	0.53
49:S2:1256:G:H2'	49:S2:1256:G:N3	2.23	0.53
49:S2:1292:C:H1'	81:Sf:148:TYR:HB3	1.90	0.53
49:S2:1405:A:C2'	49:S2:1406:G:H5'	2.39	0.53
49:S2:1407:U:O2	49:S2:1408:U:C4	2.62	0.53
49:S2:1410:C:C4	49:S2:1411:G:C5	2.96	0.53
49:S2:1511:U:N3	49:S2:1512:C:C5	2.76	0.53
49:S2:1595:U:C2	49:S2:1596:U:H6	2.26	0.53
50:SA:10:MET:O	50:SA:55:TRP:CZ3	2.62	0.53
52:SC:72:ASP:OD1	52:SC:72:ASP:N	2.42	0.53
69:ST:33:TRP:O	69:ST:35:ASP:N	2.41	0.53
80:Se:37:GLN:O	80:Se:41:ARG:HG2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:124:C:O2	1:5:124:C:H2'	2.07	0.53
1:5:235:A:N1	1:5:238:C:C5	2.77	0.53
1:5:258:G:C2	1:5:259:C:C6	2.97	0.53
1:5:330:G:C2	1:5:331:G:C5	2.97	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
1:5:687:U:O2'	8:E:101:ARG:HG2	2.09	0.53
1:5:924:C:C2	1:5:925:C:C6	2.96	0.53
1:5:936:C:O4'	1:5:936:C:O2	2.27	0.53
1:5:983:C:C2	1:5:984:C:H6	2.10	0.53
1:5:1090:G:H2'	1:5:1091:C:O4'	2.09	0.53
1:5:1092:G:C6	1:5:1093:C:C4	2.96	0.53
1:5:1235:G:N2	1:5:1236:C:C5	2.77	0.53
1:5:1260:G:C2	1:5:1261:G:N9	2.77	0.53
1:5:1337:A:C5'	6:C:102:PHE:HD2	2.21	0.53
1:5:1359:G:H2'	1:5:1360:G:N9	2.23	0.53
1:5:1367:C:N3	1:5:1369:C:P	2.82	0.53
1:5:1609:U:N3	1:5:1610:C:C5	2.77	0.53
1:5:1752:G:C2	1:5:1753:G:C4	2.97	0.53
1:5:2019:C:C2	1:5:2020:U:H6	2.24	0.53
1:5:2034:G:C5	1:5:2035:C:C4	2.96	0.53
1:5:2244:C:C2	1:5:2245:G:C8	2.96	0.53
1:5:2246:C:H2'	1:5:2247:C:O4'	2.09	0.53
1:5:2314:G:N2	1:5:2315:G:N9	2.56	0.53
1:5:2368:A:N6	1:5:2827:G:O2'	2.41	0.53
1:5:2494:U:H2'	1:5:2495:U:O4'	2.08	0.53
1:5:2605:G:C2	1:5:2606:G:C5	2.96	0.53
1:5:2658:G:N3	1:5:2675:G:N2	2.56	0.53
1:5:3635:A:C6	1:5:3636:C:C1'	2.91	0.53
1:5:3703:G:C2	1:5:3704:U:C6	2.96	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
1:5:3879:G:C5	1:5:3882:C:C4	2.96	0.53
1:5:4091:G:N1	1:5:4092:G:C5	2.77	0.53
1:5:4136:G:C2	1:5:4137:C:C2	2.97	0.53
1:5:4276:G:O6	1:5:4277:G:C6	2.61	0.53
1:5:4277:G:N1	1:5:4278:C:C5	2.77	0.53
1:5:4279:A:O4'	1:5:4281:A:C8	2.62	0.53
1:5:4703:U:N3	1:5:4704:C:C5	2.77	0.53
1:5:4750:G:C2'	1:5:4751:G:O5'	2.56	0.53
1:5:4904:G:N1	1:5:4905:C:C4	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4928:C:H2'	1:5:4929:C:H5''	1.90	0.53
1:5:4957:C:O2	1:5:4957:C:H2'	2.09	0.53
1:5:4960:G:C2'	1:5:4961:G:H5'	2.38	0.53
3:8:99:U:N3	3:8:100:U:C5	2.76	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
8:E:277:ILE:HD11	8:E:282:LEU:HD13	1.90	0.53
10:G:100:HIS:HA	10:G:103:ARG:HD2	1.89	0.53
10:G:108:GLN:HE21	10:G:108:GLN:HA	1.74	0.53
11:H:88:PHE:CZ	11:H:151:ILE:HB	2.43	0.53
17:N:39:ALA:HB2	17:N:63:ARG:HH21	1.74	0.53
33:d:25:TYR:N	33:d:25:TYR:CD1	2.76	0.53
46:q:159:GLN:CB	46:q:162:LYS:HE3	2.38	0.53
48:4:157:MET:HE2	48:4:214:PHE:CD2	2.41	0.53
48:4:281:GLU:CD	48:4:281:GLU:N	2.67	0.53
48:4:769:HIS:C	48:4:786:ALA:HB1	2.32	0.53
48:4:845:LYS:NZ	48:4:845:LYS:CA	2.69	0.53
49:S2:403:G:C2	49:S2:404:G:C8	2.97	0.53
49:S2:437:G:C2	49:S2:457:C:O2	2.61	0.53
49:S2:597:G:N2	49:S2:640:A:N3	2.57	0.53
49:S2:608:C:O2	49:S2:608:C:H2'	2.08	0.53
49:S2:851:C:C2'	49:S2:852:G:N2	2.70	0.53
49:S2:948:C:N3	49:S2:949:G:N7	2.57	0.53
49:S2:987:A:C2	51:SB:114:VAL:HG21	2.43	0.53
49:S2:999:G:N1	49:S2:1000:C:C4	2.77	0.53
49:S2:1040:G:C6	49:S2:1041:G:C5	2.97	0.53
49:S2:1292:C:H2'	81:Sf:150:PHE:HD1	1.73	0.53
49:S2:1294:G:H8	81:Sf:151:ASN:C	2.17	0.53
49:S2:1408:U:H4'	66:SQ:71:ARG:HH21	1.73	0.53
49:S2:1660:C:O4'	49:S2:1660:C:O2	2.23	0.53
49:S2:1791:A:C5	49:S2:1792:G:H1'	2.44	0.53
53:SD:34:TYR:HE1	53:SD:37:VAL:HG13	1.72	0.53
54:SE:48:LEU:HD22	54:SE:61:VAL:HG13	1.91	0.53
57:SH:135:PHE:HD1	57:SH:136:PRO:CA	2.22	0.53
58:SI:149:TYR:HA	58:SI:152:ARG:HB2	1.91	0.53
1:5:84:A:C8	1:5:84:A:H5'	2.44	0.53
1:5:84:A:H4'	1:5:85:G:OP1	2.08	0.53
1:5:127:G:N1	1:5:128:C:C4	2.77	0.53
1:5:145:G:N3	1:5:146:G:C8	2.76	0.53
1:5:208:A:H1'	1:5:232:G:N3	2.23	0.53
1:5:219:G:C8	1:5:220:C:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:732:A:C5	1:5:733:A:C2	2.96	0.53
1:5:908:G:C2	1:5:909:A:N9	2.77	0.53
1:5:962:C:C5	47:r:112:ARG:NH2	2.76	0.53
1:5:992:C:N3	1:5:993:G:N7	2.57	0.53
1:5:1090:G:C2	1:5:1091:C:C2	2.97	0.53
1:5:1185:G:N2	7:D:282:GLN:NE2	2.56	0.53
1:5:1191:C:C2	1:5:1192:C:C6	2.97	0.53
1:5:1388:A:N1	1:5:1396:G:C2	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
1:5:1572:U:C5'	21:R:95:TRP:CZ2	2.92	0.53
1:5:1691:G:C5	1:5:1692:C:C5	2.97	0.53
1:5:1949:U:O2	1:5:1949:U:H2'	2.09	0.53
1:5:1991:A:H3'	1:5:1991:A:C8	2.44	0.53
1:5:2089:G:C6	1:5:2263:A:C8	2.96	0.53
1:5:2468:U:H2'	1:5:2506:G:O6	2.09	0.53
1:5:2480:G:C2	1:5:2481:G:N9	2.77	0.53
1:5:2497:C:N4	1:5:2498:C:H41	2.07	0.53
1:5:2604:C:O2	1:5:2604:C:H2'	2.09	0.53
1:5:2614:C:O2	1:5:2726:G:C2	2.61	0.53
1:5:3657:U:C2	1:5:3658:C:C6	2.96	0.53
1:5:3741:C:N3	1:5:3742:G:C8	2.76	0.53
1:5:4215:C:O2	1:5:4215:C:H2'	2.07	0.53
1:5:4399:U:C4	1:5:4400:G:N7	2.76	0.53
1:5:4441:A:H5''	1:5:4441:A:C8	2.43	0.53
1:5:4479:A:N1	1:5:4480:A:H1'	2.23	0.53
1:5:4498:U:O2	1:5:4500:U:C5'	2.57	0.53
1:5:4640:C:C4	1:5:4641:U:C5	2.97	0.53
1:5:4967:A:H2'	1:5:4968:A:C8	2.44	0.53
1:5:5005:G:C5	26:W:51:TRP:CD1	2.91	0.53
1:5:5031:G:N3	1:5:5032:C:C6	2.77	0.53
3:8:79:G:C2	3:8:80:A:C6	2.97	0.53
3:8:80:A:C5	3:8:81:C:C6	2.96	0.53
9:F:171:LEU:CB	9:F:189:MET:HE1	2.38	0.53
14:K:147:HIS:CD2	14:K:147:HIS:H	2.26	0.53
17:N:196:ASN:N	17:N:196:ASN:ND2	2.54	0.53
24:U:97:ARG:O	24:U:98:ASP:HB2	2.08	0.53
42:m:79:GLU:OE1	42:m:81:SER:N	2.42	0.53
46:q:182:PRO:HG2	46:q:183:PHE:HE1	1.29	0.53
47:r:7:TRP:HE1	47:r:38:PHE:HB2	1.74	0.53
49:S2:23:G:H2'	49:S2:24:C:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:70:G:C4	49:S2:71:G:N7	2.76	0.53
49:S2:477:G:C2	49:S2:478:G:C5	2.97	0.53
49:S2:828:G:C6	49:S2:829:C:C4	2.97	0.53
49:S2:835:C:C2	49:S2:837:A:H4'	2.43	0.53
49:S2:859:G:N1	49:S2:860:G:C5	2.76	0.53
49:S2:933:G:C4	49:S2:1001:A:C8	2.97	0.53
49:S2:996:A:N6	63:SN:113:PHE:CE1	2.76	0.53
49:S2:1048:G:H2'	49:S2:1068:G:N2	2.24	0.53
49:S2:1110:G:C4	49:S2:1111:U:C6	2.96	0.53
49:S2:1113:A:H2'	49:S2:1114:U:C3'	2.39	0.53
49:S2:1302:G:C5	81:Sf:140:TYR:CZ	2.96	0.53
49:S2:1431:G:C2	49:S2:1432:U:N1	2.77	0.53
49:S2:1551:U:C1'	49:S2:1558:C:C2	2.92	0.53
49:S2:1580:A:H2'	49:S2:1580:A:OP1	2.08	0.53
49:S2:1629:C:O2'	68:SS:82:TRP:O	2.26	0.53
49:S2:1760:G:N2	49:S2:1773:C:C2	2.76	0.53
49:S2:1777:G:C5	49:S2:1778:C:C5	2.97	0.53
50:SA:199:PRO:HB2	50:SA:203:PHE:HZ	1.74	0.53
54:SE:121:TYR:HB2	54:SE:161:GLN:HE21	1.74	0.53
1:5:180:C:O2	1:5:181:C:C6	2.61	0.53
1:5:505:G:C6	1:5:506:C:C4	2.97	0.53
1:5:666:G:C2	1:5:666:G:OP2	2.62	0.53
1:5:964:A:N3	1:5:2252:G:O6	2.42	0.53
1:5:990:C:C2	1:5:991:C:C6	2.97	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
1:5:1215:C:C2	1:5:1216:C:H6	2.27	0.53
1:5:1297:U:O2	1:5:1298:C:H6	1.91	0.53
1:5:1543:G:N1	1:5:1544:G:C5	2.76	0.53
1:5:1663:C:H2'	1:5:1664:U:H6	1.74	0.53
1:5:1696:C:O2'	1:5:1697:G:OP2	2.21	0.53
1:5:1836:G:N1	1:5:1837:A:N7	2.56	0.53
1:5:2316:G:N3	1:5:2317:C:C6	2.76	0.53
1:5:3653:A:C2	1:5:3692:A:C4'	2.91	0.53
1:5:3742:G:N3	1:5:3743:G:C8	2.77	0.53
1:5:3858:C:N4	1:5:3859:G:C6	2.76	0.53
1:5:4083:U:H2'	1:5:4084:G:H3'	1.90	0.53
1:5:4117:U:O2	1:5:4117:U:C2'	2.55	0.53
1:5:4223:C:H2'	1:5:4223:C:O2	2.08	0.53
1:5:4283:G:N3	1:5:4284:C:C5	2.63	0.53
1:5:4284:C:N3	1:5:4285:U:C4	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4731:G:C8	1:5:4732:G:C6	2.97	0.53
1:5:4737:G:C5	1:5:4738:C:C4	2.97	0.53
3:8:9:A:N1	3:8:10:G:C5	2.77	0.53
3:8:80:A:C8	3:8:81:C:H1'	2.44	0.53
3:8:80:A:C3'	3:8:81:C:H4'	2.38	0.53
4:A:16:PHE:CE1	4:A:194:ASN:HB3	2.44	0.53
7:D:43:LYS:HB3	7:D:46:THR:CG2	2.38	0.53
7:D:265:ARG:HH11	7:D:265:ARG:CG	2.22	0.53
8:E:273:LEU:HB2	35:f:4:ARG:CG	2.39	0.53
12:I:95:HIS:CE1	12:I:97:ILE:HD12	2.44	0.53
14:K:31:LYS:HE2	48:4:753:GLU:OE2	2.08	0.53
16:M:118:MET:HG3	18:O:192:PHE:HE2	1.73	0.53
29:Z:50:PRO:CG	29:Z:122:TYR:CE2	2.91	0.53
34:e:77:PHE:HE2	47:r:25:TYR:CD2	2.27	0.53
47:r:103:ARG:CZ	47:r:106:LEU:HD21	2.39	0.53
48:4:3:ASN:HB3	48:4:47:ALA:H	1.74	0.53
48:4:64:GLN:O	48:4:64:GLN:NE2	2.42	0.53
48:4:450:THR:CG2	48:4:470:VAL:HG21	2.38	0.53
48:4:814:PHE:CD2	48:4:814:PHE:C	2.86	0.53
49:S2:55:U:H3	49:S2:91:A:HO2'	1.56	0.53
49:S2:58:C:H1'	49:S2:59:U:C5	2.43	0.53
49:S2:64:A:N6	49:S2:82:G:C4	2.77	0.53
49:S2:118:C:H1'	49:S2:445:A:C4	2.44	0.53
49:S2:291:G:C5'	49:S2:291:G:H8	2.22	0.53
49:S2:494:C:O2	49:S2:494:C:H2'	2.09	0.53
49:S2:583:C:N3	49:S2:584:G:C8	2.77	0.53
49:S2:632:C:O2	49:S2:633:C:C6	2.62	0.53
49:S2:636:C:C4	49:S2:637:U:C4	2.97	0.53
49:S2:646:G:C5	49:S2:647:U:C6	2.97	0.53
49:S2:976:G:C5	49:S2:977:C:C5	2.97	0.53
49:S2:976:G:C6	49:S2:977:C:C4	2.97	0.53
49:S2:992:A:C2	49:S2:993:G:C8	2.97	0.53
49:S2:1190:A:N3	49:S2:1714:U:O2'	2.40	0.53
49:S2:1283:C:C1'	62:SM:91:LEU:HD13	2.37	0.53
49:S2:1325:G:C2	49:S2:1327:G:C8	2.97	0.53
49:S2:1341:C:H4'	49:S2:1342:U:OP1	2.09	0.53
49:S2:1572:C:N3	49:S2:1573:G:C8	2.77	0.53
49:S2:1744:G:C2	49:S2:1789:G:C2	2.96	0.53
49:S2:1842:C:O2'	49:S2:1843:G:H5'	2.08	0.53
50:SA:176:TRP:HE1	50:SA:195:TRP:HE3	1.55	0.53
54:SE:224:ASN:OD1	54:SE:224:ASN:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SL:89:ARG:HE	61:SL:106:HIS:CD2	2.27	0.53
61:SL:124:ASP:OD1	61:SL:147:LYS:HB3	2.08	0.53
1:5:91:G:N7	1:5:93:G:C5	2.77	0.53
1:5:101:A:N6	1:5:102:G:C6	2.77	0.53
1:5:111:C:OP1	37:h:110:LYS:NZ	2.38	0.53
1:5:322:C:O2	1:5:4356:G:C2	2.61	0.53
1:5:397:G:N2	19:P:22:LEU:HD22	2.24	0.53
1:5:426:A:C2	1:5:427:A:C5	2.96	0.53
1:5:486:C:C2	1:5:487:G:N7	2.72	0.53
1:5:1092:G:H2'	1:5:1093:C:O4'	2.09	0.53
1:5:1260:G:N3	1:5:1261:G:C8	2.77	0.53
1:5:1373:A:C2	1:5:1374:G:C8	2.97	0.53
1:5:1492:G:H5'	31:b:45:PHE:HZ	1.74	0.53
1:5:1549:G:C2	1:5:1580:C:C2	2.97	0.53
1:5:1698:C:OP2	1:5:1698:C:C6	2.61	0.53
1:5:1955:G:C5	1:5:1956:A:C8	2.97	0.53
1:5:2061:U:O2	22:S:111:ARG:CD	2.57	0.53
1:5:2076:G:C6	1:5:2077:C:C4	2.97	0.53
1:5:2085:G:C2	1:5:2273:G:N1	2.76	0.53
1:5:2301:G:N2	1:5:2302:C:N1	2.56	0.53
1:5:2529:A:N6	1:5:2532:C:H1'	2.23	0.53
1:5:2645:G:C6	1:5:2646:C:C4	2.97	0.53
1:5:2735:G:N1	1:5:2736:G:N7	2.57	0.53
1:5:2801:U:O2'	39:j:12:ARG:NH2	2.35	0.53
1:5:2851:G:C6	1:5:2852:U:H1'	2.44	0.53
1:5:3709:U:C6	49:S2:970:G:C2	2.82	0.53
1:5:4297:G:N3	1:5:4297:G:H2'	2.23	0.53
1:5:4640:C:N3	1:5:4641:U:C5	2.77	0.53
1:5:4687:A:C8	1:5:4698:C:C6	2.97	0.53
1:5:4697:U:C4'	42:m:104:HIS:HD2	2.15	0.53
1:5:4750:G:O2'	1:5:4751:G:P	2.67	0.53
1:5:4981:G:C2	1:5:4982:A:N7	2.77	0.53
3:8:142:U:N3	3:8:143:G:C8	2.77	0.53
5:B:45:ALA:HB3	5:B:183:ILE:HG23	1.90	0.53
6:C:317:ASN:OD1	6:C:317:ASN:C	2.52	0.53
7:D:99:TYR:HD2	7:D:199:ILE:HG23	1.74	0.53
9:F:124:PHE:CD2	9:F:196:ILE:CG2	2.92	0.53
11:H:113:GLU:OE2	11:H:124:ARG:O	2.27	0.53
14:K:88:PRO:O	14:K:88:PRO:HD2	2.07	0.53
15:L:81:LEU:O	15:L:83:VAL:N	2.42	0.53
17:N:115:VAL:HA	17:N:134:LEU:HD23	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:e:6:PRO:HA	34:e:74:PHE:HE1	1.74	0.53
45:p:89:LEU:O	51:SB:219:LYS:NZ	2.42	0.53
47:r:7:TRP:CE3	47:r:11:ARG:HB3	2.43	0.53
48:4:162:ARG:O	48:4:166:GLU:CG	2.49	0.53
48:4:325:SER:C	48:4:327:ASP:H	2.05	0.53
48:4:403:PRO:HA	48:4:410:PHE:CD2	2.44	0.53
49:S2:38:A:N1	49:S2:515:G:N2	2.57	0.53
49:S2:122:G:C2	49:S2:123:G:C4	2.97	0.53
49:S2:350:C:C2	49:S2:351:G:C8	2.97	0.53
49:S2:383:G:H4'	61:SL:132:ARG:HD2	1.90	0.53
49:S2:402:C:N4	49:S2:403:G:C5	2.77	0.53
49:S2:751:G:N1	49:S2:792:C:C2	2.77	0.53
49:S2:752:G:C2	49:S2:790:C:N3	2.77	0.53
49:S2:989:C:C4	49:S2:1001:A:C2	2.97	0.53
49:S2:997:A:C2'	49:S2:998:A:O5'	2.56	0.53
49:S2:1117:C:O4'	49:S2:1117:C:O2	2.27	0.53
49:S2:1271:C:C4	49:S2:1272:C:C6	2.97	0.53
49:S2:1294:G:C5'	81:Sf:151:ASN:O	2.57	0.53
49:S2:1410:C:O2	49:S2:1411:G:C8	2.62	0.53
49:S2:1683:C:N3	49:S2:1684:C:C5	2.77	0.53
49:S2:1687:C:C2	49:S2:1688:C:C5	2.96	0.53
49:S2:1838:U:C5'	49:S2:1838:U:C6	2.92	0.53
50:SA:84:GLN:HE21	50:SA:100:ALA:HB1	1.73	0.53
53:SD:158:ILE:CD1	53:SD:189:MET:HE1	2.38	0.53
55:SF:20:PHE:HB3	55:SF:23:TRP:HB2	1.89	0.53
1:5:31:U:O2'	1:5:32:G:C5'	2.57	0.53
1:5:65:A:O2'	1:5:66:A:H4'	2.08	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
1:5:450:G:H21	1:5:1294:A:H2'	1.74	0.53
1:5:754:U:O2	1:5:755:C:C6	2.61	0.53
1:5:1048:G:C5	1:5:1049:C:C5	2.97	0.53
1:5:1075:G:C2	1:5:1076:C:C2	2.97	0.53
1:5:1265:G:H5''	1:5:2115:G:C2	2.43	0.53
1:5:1272:C:O3'	1:5:1273:G:O4'	2.25	0.53
1:5:1348:U:O2	1:5:1348:U:H2'	2.09	0.53
1:5:1516:G:N7	1:5:1518:A:C8	2.77	0.53
1:5:1555:G:C4	1:5:1556:C:C6	2.97	0.53
1:5:1651:G:H8	1:5:1651:G:O5'	1.92	0.53
1:5:1673:U:O2	1:5:1674:C:C6	2.62	0.53
1:5:1682:A:C4	1:5:1683:U:C6	2.97	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
1:5:1878: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
1:5:2044:U:O2'	18:O:63:ASN:CB	2.57	0.53
1:5:2319:C:C5	34:e:58:ILE:HG13	2.44	0.53
1:5:2463:G:C2	1:5:2464:C:C5	2.97	0.53
1:5:2503:G:H3'	1:5:2504:C:C5'	2.39	0.53
1:5:2538:U:H2'	1:5:2539:C:C6	2.44	0.53
1:5:2567:G:C2	1:5:2568:C:N1	2.76	0.53
1:5:2594:C:C2	1:5:2595:C:C5	2.97	0.53
1:5:3597:G:P	21:R:109:TYR:OH	2.67	0.53
1:5:3753:G:C6	1:5:3776:G:N1	2.77	0.53
1:5:3893:C:C4	1:5:4568:A:C2	2.97	0.53
1:5:4236:G:N2	1:5:4289:U:H1'	2.23	0.53
1:5:4617:G:C2	1:5:4618:G:C8	2.97	0.53
2:7:43:U:N3	2:7:44:C:C4	2.75	0.53
2:7:104:C:N3	2:7:105:C:C5	2.77	0.53
3:8:53:G:C4	3:8:54:C:C6	2.97	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:160:ILE:HD13	5:B:194:LEU:HD13	1.90	0.53
9:F:202:ARG:N	9:F:202:ARG:HD2	2.23	0.53
10:G:57:TRP:CE3	10:G:61:ILE:HG21	2.44	0.53
15:L:94:ILE:HG22	15:L:94:ILE:O	2.09	0.53
16:M:17:PHE:CD1	16:M:17:PHE:C	2.86	0.53
46:q:165:ASP:OD1	46:q:166:LYS:N	2.42	0.53
46:q:168:GLY:H	46:q:171:GLU:CD	2.16	0.53
48:4:495:ARG:C	48:4:496:VAL:CG1	2.81	0.53
48:4:518:PRO:CG	73:5X:50:ILE:HD12	2.39	0.53
48:4:577:VAL:HG12	48:4:578:SER:N	2.23	0.53
48:4:591:CYS:SG	48:4:732:SER:CA	2.97	0.53
49:S2:18:C:N3	49:S2:19:A:N7	2.57	0.53
49:S2:158:A:H2'	49:S2:159:A:C8	2.43	0.53
49:S2:166:A:C2	49:S2:167:G:C5	2.97	0.53
49:S2:171:A:N7	49:S2:173:A:C6	2.77	0.53
49:S2:205:G:H2'	49:S2:206:G:O4'	2.09	0.53
49:S2:376:A:C6	49:S2:377:G:C5	2.96	0.53
49:S2:409:C:O2	49:S2:409:C:H2'	2.06	0.53
49:S2:436:G:N1	49:S2:437:G:C5	2.76	0.53
49:S2:752:G:C2	49:S2:791:C:C2	2.97	0.53
49:S2:956:G:N2	49:S2:957:A:C5	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1029:G:C6	49:S2:1030:A:N7	2.77	0.53
49:S2:1248:U:C5	49:S2:1249:C:C2	2.96	0.53
49:S2:1489:A:N1	53:SD:146:ARG:CZ	2.72	0.53
49:S2:1510:G:C6	49:S2:1511:U:C4	2.97	0.53
49:S2:1552:G:H5''	49:S2:1553:C:H5''	1.91	0.53
51:SB:120:VAL:HG22	51:SB:142:PHE:CE1	2.43	0.53
1:5:146:G:C2	1:5:147:A:C5	2.97	0.52
1:5:209:U:C2	1:5:233:U:C5	2.96	0.52
1:5:964:A:C8	1:5:964:A:O5'	2.61	0.52
1:5:1168:G:C2	1:5:1169:G:N7	2.77	0.52
1:5:1189:G:C2	1:5:1190:C:N1	2.77	0.52
1:5:1490:G:N1	1:5:1491:A:C5	2.77	0.52
1:5:1557:C:H2'	1:5:1557:C:O2	2.07	0.52
1:5:1655:C:H4'	1:5:1679:A:C2	2.44	0.52
1:5:1902:G:C6	1:5:2075:G:C2	2.97	0.52
1:5:1907:A:H2'	1:5:1908:A:C8	2.44	0.52
1:5:1928:C:N3	18:O:133:ARG:HD2	2.23	0.52
1:5:2104:G:C4	1:5:2105:A:C8	2.96	0.52
1:5:2316:G:N3	1:5:2317:C:C5	2.77	0.52
1:5:2521:G:O2'	36:g:26:PRO:HG2	2.09	0.52
1:5:2605:G:C2	1:5:2606:G:N7	2.77	0.52
1:5:2606:G:C2	1:5:2607:C:C6	2.97	0.52
1:5:3759:A:N6	49:S2:1709:G:H5'	2.25	0.52
1:5:4173:G:C5	1:5:4174:U:C5	2.98	0.52
1:5:4518:A:O2'	5:B:257:TRP:CZ3	2.54	0.52
1:5:4580:U:C4	1:5:4581:G:C8	2.96	0.52
1:5:4730:C:H2'	1:5:4965:U:N3	2.23	0.52
1:5:4932:U:H2'	1:5:4933:C:CI'	2.39	0.52
2:7:73:U:O2	2:7:102:U:O4	2.26	0.52
3:8:13:G:C4	3:8:14:U:C4	2.97	0.52
9:F:59:TYR:O	9:F:63:TYR:HB2	2.08	0.52
12:I:184:MET:CB	12:I:190:LEU:HD12	2.38	0.52
13:J:19:LYS:HD2	13:J:21:CYS:SG	2.49	0.52
14:K:113:ALA:CA	14:K:116:MET:SD	2.94	0.52
15:L:176:PHE:C	15:L:176:PHE:HD1	2.17	0.52
20:Q:58:ARG:HH11	20:Q:58:ARG:HB2	1.72	0.52
28:Y:81:TYR:CD2	28:Y:96:HIS:HB2	2.44	0.52
46:q:17:ILE:HD13	46:q:54:LEU:CD2	2.38	0.52
46:q:26:LYS:CA	46:q:194:ASP:OD1	2.56	0.52
48:4:79:TYR:CE2	48:4:351:LEU:HD11	2.38	0.52
48:4:543:GLU:HG3	48:4:576:VAL:CG2	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:749:ILE:O	48:4:783:VAL:HA	2.09	0.52
48:4:762:VAL:CB	48:4:800:LEU:HD12	2.34	0.52
48:4:763:LEU:HD12	48:4:770:VAL:HG22	1.89	0.52
48:4:772:GLU:O	48:4:783:VAL:O	2.27	0.52
48:4:797:THR:HG23	48:4:798:ALA:N	2.23	0.52
48:4:801:ARG:NE	48:4:802:SER:HB3	2.24	0.52
49:S2:29:G:N3	49:S2:30:C:C5	2.77	0.52
49:S2:291:G:O5'	49:S2:291:G:H8	1.89	0.52
49:S2:340:C:C2'	49:S2:341:C:C6	2.91	0.52
49:S2:568:C:C5	49:S2:569:A:C8	2.98	0.52
49:S2:605:A:H8	49:S2:605:A:O5'	1.91	0.52
49:S2:646:G:H5'	49:S2:647:U:OP2	2.09	0.52
49:S2:666:U:H2'	49:S2:667:U:H6	1.73	0.52
49:S2:823:U:O4'	49:S2:823:U:O2	2.27	0.52
49:S2:983:A:OP1	49:S2:1073:U:O2'	2.20	0.52
49:S2:983:A:H2'	49:S2:984:C:O4'	2.09	0.52
49:S2:998:A:C8	49:S2:998:A:H3'	2.43	0.52
49:S2:1097:G:C6	49:S2:1098:C:C5	2.96	0.52
49:S2:1185:C:H2'	49:S2:1185:C:O2	2.09	0.52
49:S2:1284:A:N6	62:SM:33:ARG:HB2	2.20	0.52
49:S2:1289:U:C4	49:S2:1290:G:C5	2.98	0.52
49:S2:1315:U:O2	49:S2:1315:U:O4'	2.27	0.52
49:S2:1435:C:C2	49:S2:1436:C:C6	2.97	0.52
49:S2:1451:G:H2'	49:S2:1452:A:H2'	1.90	0.52
49:S2:1467:C:N3	49:S2:1468:C:C5	2.77	0.52
49:S2:1498:A:C2	49:S2:1499:U:H1'	2.44	0.52
54:SE:21:ASP:OD1	54:SE:21:ASP:C	2.52	0.52
55:SF:19:LEU:HD22	55:SF:24:SER:HA	1.90	0.52
60:SK:40:VAL:HG13	60:SK:40:VAL:O	2.10	0.52
60:SK:57:TYR:HB3	60:SK:75:GLY:HA2	1.89	0.52
1:5:21:G:N1	3:8:36:G:C2	2.77	0.52
1:5:46:U:OP2	1:5:47:A:O2'	2.19	0.52
1:5:98:A:C6	1:5:99:A:N9	2.77	0.52
1:5:127:G:N3	1:5:128:C:C6	2.77	0.52
1:5:303:C:C2	1:5:304:C:C6	2.97	0.52
1:5:427:A:O2'	1:5:428:G:H5'	2.08	0.52
1:5:981:C:C4	8:E:69:TYR:CZ	2.97	0.52
1:5:984:C:N3	1:5:1070:G:C2	2.78	0.52
1:5:1066:G:C6	1:5:1067:G:C5	2.98	0.52
1:5:1074:G:H2'	1:5:1075:G:H1'	1.91	0.52
1:5:1211:G:N2	1:5:1212:G:C5	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1219:G:N3	1:5:1220:G:C8	2.77	0.52
1:5:1287:G:N2	1:5:1289:C:C6	2.77	0.52
1:5:1362:G:C2	1:5:1363:C:C6	2.97	0.52
1:5:1379:C:O2	1:5:1380:G:N7	2.42	0.52
1:5:1429:C:C2	1:5:1430:C:C6	2.98	0.52
1:5:1474:C:N3	1:5:1475:G:C5	2.77	0.52
1:5:1545:G:C2	1:5:1546:C:N3	2.77	0.52
1:5:1624:G:C5	1:5:1643:A:C8	2.98	0.52
1:5:1782:U:O2	1:5:1783:C:C6	2.62	0.52
1:5:1797:G:C2	1:5:1798:G:C8	2.97	0.52
1:5:1831:G:C5	1:5:1832:C:C5	2.97	0.52
1:5:1871:A:C6	1:5:1872:G:C5	2.96	0.52
1:5:1889:U:H3'	1:5:1890:G:C8	2.43	0.52
1:5:1987:C:O2	1:5:1987:C:C2'	2.55	0.52
1:5:2080:U:C4	1:5:2081:C:N4	2.77	0.52
1:5:2288:G:C2	1:5:2290:C:C5	2.98	0.52
1:5:2505:C:H4'	1:5:2506:G:H5'	1.90	0.52
1:5:2569:G:C4	1:5:2570:U:C5	2.97	0.52
1:5:2577:C:C5	29:Z:17:ARG:NH2	2.77	0.52
1:5:2725:A:H2'	1:5:2726:G:C5'	2.38	0.52
1:5:2736:G:C4	1:5:2737:C:C5	2.98	0.52
1:5:2753:G:H3'	1:5:2754:G:O4'	2.09	0.52
1:5:4228:G:H5''	1:5:4229:U:C4'	2.39	0.52
1:5:4301:U:P	23:T:87:LYS:HZ3	2.32	0.52
1:5:4399:U:C4	1:5:4400:G:C8	2.97	0.52
1:5:4690:G:N2	1:5:4691:A:N7	2.57	0.52
1:5:4885:U:C4	1:5:4886:C:C5	2.96	0.52
2:7:11:A:C2	2:7:67:C:O4'	2.62	0.52
2:7:110:G:C4	2:7:111:C:C5	2.97	0.52
5:B:118:PHE:CB	5:B:119:TYR:HE1	2.21	0.52
5:B:251:VAL:HG21	5:B:267:ALA:HB3	1.91	0.52
6:C:22:VAL:HG13	6:C:258:ARG:HE	1.74	0.52
6:C:54:VAL:HG21	6:C:101:MET:CE	2.39	0.52
6:C:200:ARG:NH2	28:Y:11:ARG:CD	2.72	0.52
10:G:264:LYS:HZ1	10:G:265:LEU:HD21	1.70	0.52
14:K:102:GLY:O	14:K:140:GLY:C	2.53	0.52
22:S:29:ARG:HH12	23:T:150:LEU:HA	1.74	0.52
24:U:42:PHE:CD2	24:U:90:TYR:CE1	2.98	0.52
27:X:79:PHE:N	27:X:79:PHE:CD1	2.77	0.52
46:q:118:PRO:HG2	46:q:119:CYS:H	1.74	0.52
46:q:174:LEU:HD12	46:q:174:LEU:C	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:120:ARG:NH1	48:4:496:VAL:O	2.42	0.52
48:4:166:GLU:HG3	48:4:167:LEU:H	1.73	0.52
48:4:398:ILE:HD11	48:4:479:LEU:CD2	2.37	0.52
48:4:613:LEU:HD13	48:4:639:TYR:CG	2.42	0.52
48:4:685:TRP:CZ3	48:4:723:PRO:CD	2.90	0.52
48:4:749:ILE:HD12	48:4:759:ILE:HD12	1.88	0.52
49:S2:54:A:C2	49:S2:451:G:N3	2.77	0.52
49:S2:99:A:C2	49:S2:100:U:N1	2.77	0.52
49:S2:100:U:H2'	49:S2:101:U:O5'	2.09	0.52
49:S2:196:C:C2	49:S2:204:G:C2	2.98	0.52
49:S2:217:A:C2	49:S2:218:U:C6	2.97	0.52
49:S2:447:A:C6	49:S2:449:A:C5	2.97	0.52
49:S2:533:A:C4	49:S2:534:G:C8	2.98	0.52
49:S2:955:A:N6	49:S2:971:G:O2'	2.42	0.52
49:S2:1025:U:H2'	49:S2:1026:C:O4'	2.09	0.52
49:S2:1052:A:C6	49:S2:1053:C:C4	2.98	0.52
49:S2:1061:U:O2	49:S2:1848:U:H4'	2.09	0.52
49:S2:1267:C:C2	49:S2:1268:C:C5	2.97	0.52
49:S2:1708:C:C4	49:S2:1709:G:N7	2.77	0.52
57:SH:177:TYR:O	57:SH:180:LEU:N	2.41	0.52
59:SJ:69:ARG:O	59:SJ:70:ARG:C	2.52	0.52
60:SK:52:LEU:HD12	60:SK:57:TYR:HB2	1.91	0.52
61:SL:84:ARG:NH1	61:SL:115:PRO:HG3	2.24	0.52
73:SX:61:GLN:NE2	73:SX:61:GLN:O	2.42	0.52
1:5:512:U:C2'	1:5:513:U:H5''	2.39	0.52
1:5:667:A:C2'	1:5:668:C:O4'	2.55	0.52
1:5:1271:G:H5''	1:5:1272:C:O4'	2.10	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
1:5:1685:G:C2	1:5:1686:C:C2	2.97	0.52
1:5:1846:G:C4	1:5:1847:C:C5	2.98	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
1:5:2573:A:H2'	1:5:2574:G:O4'	2.09	0.52
1:5:2586:G:N7	1:5:2587:A:N1	2.57	0.52
1:5:2678:A:N1	1:5:2679:G:C5	2.77	0.52
1:5:2786:C:H4'	1:5:2787:A:C8	2.44	0.52
1:5:2859:G:O2'	1:5:2860:C:C5'	2.57	0.52
1:5:2908:U:N3	1:5:2909:C:C5	2.78	0.52
1:5:3623:C:H5	1:5:3624:A:C5	2.28	0.52
1:5:3668:C:N3	1:5:3669:G:C8	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3722:G:C2	1:5:3723:A:C4	2.98	0.52
1:5:3738:G:C6	1:5:3739:C: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'	2.09	0.52
1:5:4951:G:O2'	1:5:4952:G:OP1	2.23	0.52
3:8:79:G:H2'	3:8:80:A:N3	2.25	0.52
3:8:131:G:C5	3:8:132:G:C8	2.97	0.52
4:A:89:TYR:HB2	4:A:100:ASN:ND2	2.17	0.52
4:A:89:TYR:O	4:A:100:ASN:ND2	2.43	0.52
5:B:57:VAL:HG22	5:B:73:VAL:HG12	1.91	0.52
5:B:388:PHE:O	5:B:390:GLY:N	2.42	0.52
6:C:33:ARG:HH21	20:Q:22:ASP:HB3	1.75	0.52
6:C:209:ILE:HD13	6:C:221:PHE:CD2	2.45	0.52
13:J:32:ARG:CZ	13:J:32:ARG:HB3	2.39	0.52
14:K:121:LEU:HD12	14:K:123:ARG:CG	2.39	0.52
17:N:191:ALA:O	17:N:194:ARG:HB3	2.09	0.52
35:f:14:TYR:OH	35:f:94:ALA:HB2	2.09	0.52
48:4:264:ARG:HB3	48:4:288:THR:HG21	1.92	0.52
48:4:619:LYS:HB3	48:4:621:GLU:OE1	2.08	0.52
48:4:847:GLY:HA3	48:4:848:ILE:CG1	2.39	0.52
49:S2:321:C:H2'	49:S2:322:C:C6	2.43	0.52
49:S2:413:G:C5	49:S2:425:G:N2	2.78	0.52
49:S2:449:A:C6	49:S2:452:G:N7	2.72	0.52
49:S2:497:C:N3	49:S2:506:G:N2	2.57	0.52
49:S2:553:U:H2'	49:S2:554:A:C8	2.44	0.52
49:S2:582:C:O2	49:S2:582:C:H2'	2.09	0.52
49:S2:675:U:O2	49:S2:675:U:H2'	2.09	0.52
49:S2:902:G:C2	49:S2:903:A:C4	2.97	0.52
49:S2:1223:A:O2'	49:S2:1651:A:H4'	2.09	0.52
49:S2:1236:G:C2	49:S2:1237:C:C2	2.98	0.52
49:S2:1411:G:N7	49:S2:1412:C:H1'	2.23	0.52
49:S2:1541:G:N2	49:S2:1542:C:C5	2.78	0.52
49:S2:1589:A:H4'	69:ST:82:ARG:HG2	1.92	0.52
49:S2:1743:G:H2'	49:S2:1744:G:C8	2.44	0.52
49:S2:1843:G:H2'	49:S2:1844:U:O4'	2.09	0.52
52:SC:169:TYR:CE2	52:SC:173:LYS:HA	2.45	0.52
56:SG:64:LYS:HG2	56:SG:97:VAL:HG11	1.91	0.52
1:5:48:G:C5'	17:N:192:TRP:HE1	2.05	0.52
1:5:56:A:C2	1:5:57:G:C5	2.97	0.52
1:5:154:G:N2	1:5:155:C:C2	2.77	0.52
1:5:691:C:H2'	1:5:692:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:712:C:C4	1:5:713:C:C5	2.98	0.52
1:5:1293:G:H5''	1:5:1293:G:H8	1.74	0.52
1:5:1682:A:C5	1:5:1683:U:C6	2.98	0.52
1:5:1866:U:O4	1:5:4405:G:N9	2.41	0.52
1:5:2079:G:C4	1:5:2080:U:C5	2.98	0.52
1:5:2300:A:C2	6:C:182:LYS:HA	2.45	0.52
1:5:2448:G:C6	1:5:2511:A:C5	2.98	0.52
1:5:2453:A:C4	1:5:2507:A:C8	2.97	0.52
1:5:2557:G:C2	1:5:2571:C:C2	2.97	0.52
1:5:2570:U:C2	1:5:2571:C:C6	2.97	0.52
1:5:3650:C:H2'	1:5:3651:A:O4'	2.10	0.52
1:5:3800:A:N3	1:5:4496:A:H1'	2.24	0.52
1:5:3858:C:O2	1:5:3858:C:C2'	2.55	0.52
1:5:4240:G:C6	1:5:4241:C:C6	2.97	0.52
1:5:4518:A:C4'	1:5:4519:C:H5'	2.39	0.52
1:5:4733:C:C5	1:5:4734:A:O4'	2.63	0.52
1:5:4773:C:C2	1:5:4863:G:C2	2.98	0.52
1:5:4872:G:O2'	1:5:4873:G:P	2.67	0.52
1:5:4874:A:O2'	18:O:175:MET:HE3	2.09	0.52
1:5:4963:G:H3'	1:5:4964:C:H5''	1.90	0.52
1:5:4966:A:C2'	1:5:4967:A:O4'	2.47	0.52
5:B:119:TYR:OH	5:B:129:ALA:HB3	2.10	0.52
12:I:171:TRP:HB2	12:I:181:PHE:CD2	2.44	0.52
18:O:34:VAL:HG11	18:O:112:TYR:CE2	2.44	0.52
21:R:117:ARG:HD3	21:R:118:HIS:CE1	2.43	0.52
39:j:76:HIS:O	39:j:79:ARG:NH1	2.43	0.52
47:r:16:PHE:CD2	47:r:28:GLU:HB3	2.40	0.52
48:4:228:PHE:HE2	48:4:293:ILE:HG23	1.71	0.52
48:4:297:ILE:O	48:4:301:PHE:HD1	1.93	0.52
48:4:452:LEU:HD11	48:4:461:ILE:CD1	2.39	0.52
48:4:516:ASP:O	48:4:517:LEU:C	2.53	0.52
48:4:693:CYS:CB	48:4:839:ARG:NE	2.63	0.52
48:4:713:ALA:CA	48:4:716:ARG:HB3	2.27	0.52
48:4:739:ARG:C	48:4:824:PRO:HD3	2.34	0.52
49:S2:56:G:H2'	49:S2:57:U:C6	2.44	0.52
49:S2:376:A:N1	49:S2:377:G:C4	2.78	0.52
49:S2:425:G:H5''	49:S2:425:G:H8	1.74	0.52
49:S2:840:C:H2'	74:SY:12:PHE:CD2	2.44	0.52
49:S2:959:G:C8	49:S2:959:G:H3'	2.45	0.52
49:S2:989:C:N4	49:S2:1001:A:C2	2.77	0.52
49:S2:999:G:C4	49:S2:1000:C:C6	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1094:C:C2	49:S2:1095:U:H6	2.27	0.52
49:S2:1132:C:N4	49:S2:1133:A:C5	2.78	0.52
49:S2:1278:A:C4	49:S2:1279:C:C6	2.97	0.52
49:S2:1563:G:C2	49:S2:1564:C:C2	2.98	0.52
49:S2:1571:G:C4	49:S2:1572:C:C6	2.98	0.52
49:S2:1630:A:N1	49:S2:1631:U:C4	2.77	0.52
50:SA:55:TRP:O	50:SA:56:GLU:C	2.51	0.52
51:SB:205:TYR:CD1	51:SB:206:PRO:HD2	2.43	0.52
52:SC:74:LYS:HG3	52:SC:269:PHE:CE2	2.45	0.52
66:SQ:109:LYS:HG2	66:SQ:113:ILE:HD12	1.91	0.52
67:SR:104:GLU:HA	67:SR:104:GLU:OE1	2.09	0.52
1:5:54:G:N1	1:5:55:G:N9	2.58	0.52
1:5:70:A:N6	1:5:314:G:O2'	2.42	0.52
1:5:138:G:C3'	1:5:139:G:H5'	2.40	0.52
1:5:230:G:N2	1:5:239:C:C2	2.78	0.52
1:5:394:G:N3	1:5:394:G:H2'	2.25	0.52
1:5:939:G:H5'	1:5:940:C:OP2	2.10	0.52
1:5:986:C:C4	1:5:1068:G:N1	2.78	0.52
1:5:993:G:C2	1:5:994:G:C8	2.97	0.52
1:5:1275:G:C6	1:5:1276:C:C4	2.98	0.52
1:5:1347:G:C6	1:5:1348:U:C5	2.97	0.52
1:5:1388:A:H2'	1:5:1389:U:O4'	2.09	0.52
1:5:1412:G:C2	1:5:1413:C:C5	2.97	0.52
1:5:1487:G:C6	1:5:1488:G:C8	2.97	0.52
1:5:1554:A:C6	1:5:1555:G:C4	2.97	0.52
1:5:1629:G:C5	1:5:1631:A:N6	2.78	0.52
1:5:1672:U:N3	1:5:1673:U:O4	2.42	0.52
1:5:1776:A:C4	1:5:1777:C:C6	2.98	0.52
1:5:1899:G:N2	1:5:1900:C:C4	2.78	0.52
1:5:2553:A:C6	1:5:2763:U:C5	2.98	0.52
1:5:2555:G:H2'	1:5:2556:G:O4'	2.09	0.52
1:5:2560:C:C2	1:5:2561:C:C6	2.98	0.52
1:5:2592:U:C5	1:5:2593:C:C6	2.98	0.52
1:5:2715:G:C6	1:5:2716:C:C4	2.98	0.52
1:5:2805:C:N4	1:5:2806:A:C6	2.78	0.52
1:5:3728:A:C8	1:5:3729:U:O4'	2.63	0.52
1:5:4097:G:C6	1:5:4098:A:N7	2.78	0.52
1:5:4109:G:C4	1:5:4110:C:C6	2.98	0.52
1:5:4124:G:N1	4:A:64:ARG:NH1	2.57	0.52
1:5:4136:G:C4	1:5:4137:C:C6	2.97	0.52
1:5:4455:G:N1	1:5:4456:C:C4	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5057:C:H2'	1:5:5058:A:C8	2.45	0.52
2:7:92:C:C2	2:7:93:G:C8	2.98	0.52
3:8:43:A:C6	3:8:44:A:N7	2.77	0.52
3:8:139:G:C4	3:8:140:C:C6	2.98	0.52
9:F:93:PHE:CE1	9:F:95:ILE:HG13	2.44	0.52
13:J:98:ASN:OD1	13:J:98:ASN:N	2.42	0.52
13:J:104:ASN:OD1	13:J:133:VAL:HA	2.10	0.52
21:R:35:ALA:O	21:R:37:SER:N	2.42	0.52
46:q:95:LEU:O	46:q:98:ILE:CG1	2.57	0.52
48:4:461:ILE:HG23	48:4:463:ASP:H	1.74	0.52
49:S2:72:C:O2	49:S2:73:C:N1	2.43	0.52
49:S2:118:C:C4	49:S2:119:U:C5	2.97	0.52
49:S2:430:C:C2	49:S2:431:G:C8	2.97	0.52
49:S2:589:G:O2'	49:S2:590:A:H2'	2.09	0.52
49:S2:1191:C:H2'	49:S2:1192:U:O4'	2.08	0.52
49:S2:1287:A:C4	49:S2:1313:A:C6	2.97	0.52
49:S2:1405:A:H1'	49:S2:1580:A:C6	2.44	0.52
49:S2:1510:G:H2'	49:S2:1510:G:N3	2.23	0.52
49:S2:1541:G:C2	49:S2:1542:C:C4	2.97	0.52
49:S2:1669:G:C4	49:S2:1670:C:C5	2.98	0.52
49:S2:1678:A:OP1	55:SF:145:ARG:NH2	2.43	0.52
52:SC:166:ARG:NH2	71:SV:10:ASP:OD2	2.41	0.52
53:SD:193:ASP:HB3	53:SD:194:PRO:CD	2.39	0.52
54:SE:17:HIS:O	54:SE:18:TRP:CD1	2.62	0.52
58:SI:38:ILE:HD11	58:SI:81:VAL:HG23	1.90	0.52
64:SO:146:ARG:HG3	64:SO:146:ARG:NH1	2.08	0.52
65:SP:17:TYR:OH	65:SP:38:SER:HB3	2.10	0.52
1:5:127:G:C2	1:5:128:C:C6	2.97	0.52
1:5:219:G:H8	1:5:220:C:C5	2.28	0.52
1:5:321:U:H2'	1:5:322:C:O4'	2.08	0.52
1:5:328:A:OP2	38:i:30:ARG:NH1	2.42	0.52
1:5:370:U:C4	1:5:1637:A:N6	2.78	0.52
1:5:914:U:H2'	1:5:915:A:C1'	2.40	0.52
1:5:961:G:H5'	8:E:119:ARG:HH11	1.75	0.52
1:5:1308:C:C2	1:5:1309:C:C5	2.97	0.52
1:5:1393:G:H2'	1:5:1394:G:H5'	1.92	0.52
1:5:1490:G:N3	1:5:1491:A:C8	2.77	0.52
1:5:1996:C:O2'	46:q:41:GLN:CG	2.48	0.52
1:5:2090:U:P	1:5:2090:U:O4'	2.66	0.52
1:5:2424:G:N2	1:5:2426:U:O2	2.43	0.52
1:5:2534:C:H2'	1:5:2535:G:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2567:G:N1	1:5:2568:C:C5	2.77	0.52
1:5:2643:G:C6	1:5:2644:G:N7	2.77	0.52
1:5:2898:G:C6	1:5:2899:C:C4	2.98	0.52
1:5:3755:G:O6	1:5:3769:C:N4	2.42	0.52
1:5:3767:C:H5''	49:S2:1849:G:C6	2.18	0.52
1:5:3775:A:H3'	1:5:3776:G:O4'	2.09	0.52
1:5:3846:C:N3	1:5:3847:C:C6	2.77	0.52
1:5:4147:G:C6	1:5:4148:C:C4	2.97	0.52
1:5:4201:G:C2	1:5:4202:U:C4	2.97	0.52
1:5:4236:G:C2	1:5:4289:U:O2	2.62	0.52
1:5:4479:A:C5	1:5:4480:A:C8	2.98	0.52
1:5:4745:G:H2'	1:5:4746:C:C5	2.44	0.52
3:8:10:G:O6	3:8:11:C:C4	2.63	0.52
3:8:130:C:N4	3:8:131:G:N7	2.57	0.52
3:8:135:C:C2	3:8:136:U:C6	2.98	0.52
4:A:196:TRP:CG	4:A:197:PRO:N	2.78	0.52
9:F:59:TYR:CD2	9:F:194:HIS:CD2	2.98	0.52
9:F:117:ARG:O	20:Q:4:ASP:OD2	2.27	0.52
9:F:146:TYR:CE2	9:F:239:GLU:HB3	2.45	0.52
11:H:59:LYS:O	11:H:60:TRP:HB2	2.00	0.52
11:H:156:ASN:HD21	11:H:157:SER:HB3	1.74	0.52
11:H:177:ASP:OD1	11:H:177:ASP:N	2.42	0.52
14:K:22:VAL:HG12	14:K:44:ASP:OD1	2.09	0.52
14:K:56:LEU:HB2	14:K:91:ASP:CG	2.31	0.52
14:K:162:CYS:H	14:K:163:PRO:HD3	1.68	0.52
23:T:3:ASN:HB3	23:T:9:ARG:NH1	2.25	0.52
46:q:197:SER:C	46:q:198:ILE:HG13	2.33	0.52
47:r:29:PRO:C	47:r:30:ASN:OD1	2.53	0.52
47:r:103:ARG:NH2	47:r:106:LEU:HD21	2.24	0.52
48:4:170:GLU:CG	48:4:171:PRO:HD2	2.40	0.52
48:4:253:VAL:CG1	48:4:257:MET:HE2	2.34	0.52
48:4:525:LYS:O	48:4:529:LYS:HG2	2.09	0.52
48:4:769:HIS:C	48:4:786:ALA:HB2	2.31	0.52
49:S2:56:G:O6	49:S2:90:G:C2	2.61	0.52
49:S2:83:A:C5	49:S2:84:A:C8	2.97	0.52
49:S2:187:G:C2	49:S2:188:C:C2	2.97	0.52
49:S2:293:C:O2	49:S2:293:C:H2'	2.09	0.52
49:S2:313:A:O5'	56:SG:195:LYS:NZ	2.42	0.52
49:S2:318:A:C2	49:S2:332:G:N2	2.77	0.52
49:S2:375:U:H2'	49:S2:376:A:O4'	2.10	0.52
49:S2:378:U:O4	49:S2:379:C:C4	2.61	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:414:A:N1	49:S2:424:C:C2	2.78	0.52
49:S2:426:A:C5	49:S2:427:U:O4	2.63	0.52
49:S2:460:A:N3	49:S2:460:A:H2'	2.25	0.52
49:S2:494:C:H2'	49:S2:495:U:O5'	2.09	0.52
49:S2:648:A:C2	49:S2:649:U:C5	2.97	0.52
49:S2:1233:G:C4	49:S2:1234:C:C6	2.97	0.52
49:S2:1364:U:O4'	49:S2:1364:U:O2	2.27	0.52
49:S2:1792:G:N1	49:S2:1793:A:C5	2.78	0.52
53:SD:20:GLU:HG2	60:SK:64:TRP:CD2	2.45	0.52
54:SE:139:LEU:HD13	54:SE:160:ILE:CD1	2.40	0.52
69:ST:31:PRO:CB	69:ST:33:TRP:CZ2	2.93	0.52
70:SU:17:ILE:HG22	70:SU:92:HIS:HB3	1.92	0.52
78:Sc:13:ARG:HH11	78:Sc:33:GLU:HB3	1.75	0.52
1:5:219:G:C4	1:5:219:G:C5'	2.93	0.52
1:5:709:C:H4'	8:E:186:HIS:HE1	1.73	0.52
1:5:1189:G:C4	1:5:1190:C:C6	2.97	0.52
1:5:1262:G:N1	1:5:1263:A:C5	2.78	0.52
1:5:1395:U:H2'	1:5:1396:G:O5'	2.09	0.52
1:5:1467:C:N3	1:5:1468:C:C5	2.78	0.52
1:5:1774:C:N3	1:5:1775:A:C8	2.77	0.52
1:5:1855:G:C5	1:5:1856:C:C5	2.98	0.52
1:5:1902:G:H2'	1:5:1903:G:O5'	2.09	0.52
1:5:2428:A:C8	1:5:2789:A:C2	2.98	0.52
1:5:2567:G:C6	1:5:2568:C:C4	2.97	0.52
1:5:2590:G:C6	1:5:2754:G:C6	2.98	0.52
1:5:2723:U:O2	1:5:2724:G:C8	2.62	0.52
1:5:2804:C:O2	1:5:2804:C:H2'	2.08	0.52
1:5:2819:U:HO2'	21:R:58:HIS:CD2	2.25	0.52
1:5:3856:A:C6	1:5:3857:G:C5	2.97	0.52
1:5:4092:G:C6	1:5:4093:G:N2	2.77	0.52
1:5:4194:U:O4	1:5:4197:G:C5'	2.57	0.52
1:5:4283:G:N1	1:5:4284:C:N4	2.57	0.52
1:5:4313:A:C2	1:5:4314:C:C6	2.98	0.52
1:5:4341:C:N3	1:5:4342:C:C6	2.78	0.52
1:5:4462:C:C2	1:5:4515:G:C2	2.98	0.52
1:5:4510:A:N6	1:5:4592:C:O2'	2.39	0.52
1:5:4619:U:C2	1:5:4620:U:C6	2.98	0.52
1:5:5063:G:C2	1:5:5064:G:N7	2.78	0.52
3:8:135:C:C4	3:8:136:U:C4	2.98	0.52
4:A:158:ILE:CG2	4:A:162:ASN:OD1	2.57	0.52
5:B:118:PHE:HB2	5:B:119:TYR:HE1	1.69	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:D:164:LYS:O	7:D:168:ASP:HB2	2.09	0.52
8:E:129:PHE:CD1	8:E:129:PHE:C	2.87	0.52
8:E:175:LEU:HD11	8:E:179:ARG:HH11	1.75	0.52
10:G:48:LYS:HB3	27:X:42:THR:HG23	1.90	0.52
14:K:81:ILE:HG13	14:K:82:ILE:N	2.24	0.52
14:K:104:ILE:HD12	14:K:140:GLY:HA3	1.92	0.52
14:K:111:ASN:HA	14:K:114:ARG:CD	2.40	0.52
15:L:178:ALA:HB3	30:a:134:GLU:OE1	2.10	0.52
18:O:143:HIS:ND1	18:O:150:GLN:OE1	2.37	0.52
22:S:10:TYR:HB2	22:S:40:ALA:CB	2.39	0.52
24:U:26:THR:HA	24:U:68:SER:HB3	1.91	0.52
30:a:110:LYS:HG2	30:a:112:LEU:HD21	1.92	0.52
33:d:33:ILE:HD11	33:d:45:ALA:CB	2.40	0.52
46:q:13:TYR:OH	46:q:60:MET:SD	2.67	0.52
48:4:322:LYS:HG3	48:4:323:LEU:N	2.25	0.52
48:4:692:LEU:HD22	48:4:692:LEU:N	2.24	0.52
48:4:800:LEU:HD23	48:4:810:PRO:HG3	1.91	0.52
49:S2:43:U:O2	49:S2:43:U:H2'	2.09	0.52
49:S2:113:G:C2	49:S2:293:C:C5	2.97	0.52
49:S2:421:G:C2	49:S2:422:U:N3	2.78	0.52
49:S2:604:A:C2	49:S2:605:A:C5	2.98	0.52
49:S2:610:G:C6	49:S2:611:G:N7	2.77	0.52
49:S2:1121:G:N1	49:S2:1122:A:C4	2.77	0.52
49:S2:1126:G:C6	49:S2:1127:C:C4	2.97	0.52
49:S2:1140:G:H2'	49:S2:1141:G:O4'	2.10	0.52
49:S2:1149:A:N3	49:S2:1151:G:N7	2.57	0.52
49:S2:1207:G:H4'	49:S2:1208:A:OP2	2.08	0.52
49:S2:1236:G:C4	49:S2:1237:C:C5	2.98	0.52
49:S2:1286:G:N2	62:SM:33:ARG:CG	2.70	0.52
49:S2:1307:U:C4	49:S2:1308:U:C6	2.97	0.52
49:S2:1346:U:OP2	49:S2:1371:U:O4	2.28	0.52
49:S2:1407:U:C2'	49:S2:1408:U:C5	2.91	0.52
49:S2:1419:C:O4'	69:ST:128:GLN:OE1	2.27	0.52
49:S2:1533:A:C2	49:S2:1536:G:N3	2.78	0.52
49:S2:1668:U:H5'	70:SU:77:TRP:CH2	2.44	0.52
49:S2:1850:A:H2'	49:S2:1851:A:C8	2.45	0.52
54:SE:86:PHE:CD2	54:SE:87:MET:HG2	2.44	0.52
55:SF:97:PHE:HB3	55:SF:108:PRO:HG2	1.91	0.52
57:SH:61:ILE:HD12	57:SH:93:VAL:HG13	1.92	0.52
61:SL:73:LEU:HD12	61:SL:140:PHE:CE2	2.45	0.52
62:SM:60:MET:HB3	81:Sf:108:VAL:HG21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:SS:40:TYR:CE2	68:SS:97:GLN:CD	2.87	0.52
69:ST:5:THR:HA	69:ST:132:ASP:OD2	2.09	0.52
75:SZ:68:ILE:O	75:SZ:69:THR:HG23	2.09	0.52
79:Sd:8:TRP:HA	79:Sd:8:TRP:CE3	2.44	0.52
81:Sf:126:CYS:HG	81:Sf:144:CYS:HG	1.53	0.52
1:5:12:A:C2	1:5:14:C:C4	2.98	0.52
1:5:98:A:H1'	1:5:292:G:O6	2.09	0.52
1:5:307:A:H3'	1:5:308:G:H21	1.74	0.52
1:5:661:C:N4	1:5:662:C:C4	2.78	0.52
1:5:689:U:C2	1:5:690:C:C6	2.98	0.52
1:5:1170:G:N1	1:5:1171:G:C5	2.77	0.52
1:5:1266:G:H8	1:5:1266:G:C5'	2.22	0.52
1:5:1360:G:H5''	15:L:25:TRP:CZ3	2.45	0.52
1:5:1404:G:C2	1:5:1414:C:N3	2.76	0.52
1:5:1443:A:H2'	1:5:1444:G:O4'	2.09	0.52
1:5:1475:G:C2	1:5:1476:C:C4	2.92	0.52
1:5:1552:G:O2'	1:5:1574:G:N2	2.43	0.52
1:5:1617:G:C5	1:5:1618:G:N7	2.77	0.52
1:5:1689:G:C6	1:5:1690:C:C4	2.98	0.52
1:5:2065:G:C6	1:5:2066:C:C4	2.97	0.52
1:5:2089:G:O6	1:5:2263:A:O5'	2.27	0.52
1:5:2311:C:C4	1:5:2312:U:C5	2.98	0.52
1:5:2409:U:C4	1:5:2783:A:C6	2.98	0.52
1:5:2495:U:C2	1:5:2496:G:N7	2.76	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
1:5:2736:G:N2	1:5:2737:C:C6	2.78	0.52
1:5:3611:A:C2	1:5:5016:A:H8	2.27	0.52
1:5:3621:A:N3	1:5:3622:C:C6	2.78	0.52
1:5:3719:A:C5	1:5:3720:G:C8	2.97	0.52
1:5:3730:U:N3	1:5:3731:C:C6	2.78	0.52
1:5:4093:G:C3'	1:5:4094:G:H5''	2.40	0.52
1:5:4123:C:O2'	29:Z:135:ARG:HB3	2.10	0.52
1:5:4139:G:C6	1:5:4140:C:C4	2.97	0.52
1:5:4175:G:C6	1:5:4176:C:C5	2.98	0.52
1:5:4255:A:C2	1:5:4256:A:C4	2.98	0.52
1:5:4483:C:N3	1:5:4484:A:C8	2.77	0.52
1:5:4498:U:C4	1:5:4500:U:OP2	2.62	0.52
1:5:4675:U:OP1	5:B:358:ARG:NH2	2.43	0.52
1:5:4910:G:C2	18:O:109:PRO:HA	2.44	0.52
1:5:4980:C:C5	1:5:4981:G:C4	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:5042:A:C2	1:5:5043:A:C4	2.97	0.52
2:7:114:U:C2	2:7:115:A:C8	2.97	0.52
5:B:67:VAL:HG13	5:B:70:LYS:HB2	1.91	0.52
11:H:172:ILE:HD12	42:m:90:ASN:HB3	1.91	0.52
14:K:28:LEU:CD1	14:K:29:ALA:H	2.23	0.52
14:K:61:LYS:CD	14:K:73:VAL:O	2.57	0.52
14:K:97:ASN:OD1	14:K:98:ILE:CG1	2.55	0.52
17:N:120:TRP:HE1	17:N:122:GLY:C	2.17	0.52
21:R:126:LYS:HB3	21:R:132:PHE:CE2	2.44	0.52
22:S:161:ARG:HD2	22:S:164:LYS:HB2	1.91	0.52
23:T:105:PHE:CE1	23:T:109:VAL:CG2	2.92	0.52
26:W:8:PHE:C	26:W:8:PHE:HD1	2.17	0.52
27:X:48:ARG:HG3	27:X:48:ARG:HH11	1.75	0.52
32:c:35:LEU:HD23	32:c:39:ARG:HH12	1.75	0.52
33:d:69:ASN:O	33:d:73:TRP:HB3	2.09	0.52
33:d:83:ARG:HB2	33:d:114:PHE:HD2	1.74	0.52
46:q:47:LEU:HD23	46:q:103:ARG:CG	2.24	0.52
46:q:126:GLN:HE21	46:q:127:ASN:CG	2.18	0.52
48:4:118:ALA:O	48:4:122:THR:OG1	2.26	0.52
48:4:228:PHE:CE1	48:4:232:TYR:CZ	2.98	0.52
48:4:283:LYS:HA	48:4:284:LYS:HZ3	1.74	0.52
48:4:301:PHE:CE2	48:4:336:LEU:HD21	2.44	0.52
48:4:609:PHE:HB2	48:4:699:GLY:HA2	1.91	0.52
49:S2:70:G:C6	49:S2:80:G:N1	2.77	0.52
49:S2:166:A:C2	49:S2:167:G:N7	2.77	0.52
49:S2:582:C:H2'	49:S2:583:C:H6	1.75	0.52
49:S2:868:G:N2	57:SH:115:LYS:CA	2.71	0.52
49:S2:902:G:C5	49:S2:903:A:C2	2.98	0.52
49:S2:925:G:C6	49:S2:926:A:N7	2.77	0.52
49:S2:958:G:C6	49:S2:959:G:N2	2.78	0.52
49:S2:1100:A:C6	49:S2:1101:U:C4	2.98	0.52
49:S2:1156:U:H2'	49:S2:1157:G:H21	1.74	0.52
49:S2:1232:U:O2	49:S2:1233:G:H8	1.86	0.52
49:S2:1292:C:C5	81:Sf:150:PHE:N	2.77	0.52
49:S2:1318:G:C6	49:S2:1319:U:C4	2.97	0.52
49:S2:1739:C:O2	49:S2:1739:C:H2'	2.09	0.52
53:SD:72:VAL:HG22	60:SK:20:VAL:HG21	1.91	0.52
53:SD:222:PRO:HB2	82:Sg:226:HIS:HE2	1.74	0.52
57:SH:130:LEU:HD11	57:SH:177:TYR:OH	2.10	0.52
59:SJ:5:ARG:HB2	59:SJ:7:TRP:CH2	2.45	0.52
61:SL:62:PHE:N	61:SL:62:PHE:CD2	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:ST:92:PHE:HD1	69:ST:93:SER:N	2.07	0.52
69:ST:132:ASP:O	69:ST:135:ALA:HB3	2.10	0.52
1:5:991:C:C4	1:5:992:C:C4	2.98	0.52
1:5:1073:G:N2	1:5:1239:C:N3	2.58	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
1:5:1268:G:C4	1:5:2111:G:C4	2.98	0.52
1:5:1270:A:C8	1:5:1271:G:C8	2.97	0.52
1:5:1277:G:C5	1:5:1278:C:C5	2.98	0.52
1:5:1432:G:C2	1:5:1451:G:C2	2.97	0.52
1:5:1441:C:H2'	1:5:1442:C:O4'	2.09	0.52
1:5:1479:G:H2'	1:5:1480:C:C6	2.45	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
1:5:1687:U:O2	1:5:1850:A:N1	2.42	0.52
1:5:1993:C:H2'	1:5:1994:C:H6	1.75	0.52
1:5:2055:G:C1'	18:O:130:LYS:HD3	2.40	0.52
1:5:2328:G:C4	1:5:2329:U:C5	2.98	0.52
1:5:2367:A:C2	1:5:2368:A:C8	2.98	0.52
1:5:2556:G:N2	1:5:2572:C:C2	2.78	0.52
1:5:3597:G:C2	1:5:3598:C:C2	2.98	0.52
1:5:3648:A:N9	1:5:3785:A:N6	2.58	0.52
1:5:3652:A:N6	1:5:3691:G:O2'	2.43	0.52
1:5:3772:U:C4	1:5:3773:U:C5	2.98	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
1:5:3899:G:C5'	5:B:257:TRP:HD1	2.22	0.52
1:5:3944:G:N3	1:5:3945:A:C8	2.78	0.52
1:5:4066:U:H2'	1:5:4067:U:O4'	2.10	0.52
1:5:4071:U:C2	1:5:4072:C:C5	2.98	0.52
1:5:4087:G:H3'	1:5:4087:G:H8	1.74	0.52
1:5:4139:G:C2	1:5:4140:C:N1	2.78	0.52
1:5:4332:C:N3	1:5:4333:C:C5	2.65	0.52
1:5:4502:C:N3	1:5:4503:A:C8	2.78	0.52
1:5:4744:A:C6	1:5:4745:G:O6	2.63	0.52
1:5:4859:C:C2	1:5:4860:G:C8	2.97	0.52
1:5:5031:G:C2	1:5:5032:C:C6	2.98	0.52
3:8:94:G:O2'	3:8:95:A:H8	1.81	0.52
9:F:82:ASN:HD21	23:T:142:ARG:CA	2.23	0.52
12:I:39:LYS:HB3	12:I:86:HIS:CE1	2.44	0.52
14:K:64:ILE:O	14:K:70:GLN:HA	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:56:ARG:O	15:L:116:ARG:NH2	2.40	0.52
35:f:45:LYS:HA	35:f:107:PRO:HG2	1.92	0.52
48:4:753:GLU:CB	48:4:782:PHE:HZ	1.99	0.52
48:4:813:VAL:CG1	48:4:814:PHE:N	2.61	0.52
49:S2:113:G:C2	49:S2:292:A:H1'	2.45	0.52
49:S2:143:U:O4	49:S2:315:C:P	2.68	0.52
49:S2:191:A:H3'	49:S2:192:C:H5''	1.92	0.52
49:S2:532:C:C2	49:S2:533:A:N7	2.78	0.52
49:S2:563:G:N2	49:S2:564:A:C8	2.78	0.52
49:S2:672:A:N3	49:S2:672:A:O4'	2.40	0.52
49:S2:858:A:N1	49:S2:859:G:N7	2.56	0.52
49:S2:956:G:C6	49:S2:968:U:O2	2.63	0.52
49:S2:1102:G:N2	49:S2:1103:C:C2	2.78	0.52
49:S2:1112:U:C5	49:S2:1113:A:C5	2.98	0.52
49:S2:1121:G:O6	49:S2:1122:A:C6	2.63	0.52
49:S2:1180:C:H2'	49:S2:1180:C:O2	2.10	0.52
49:S2:1272:C:C4	49:S2:1273:C:C5	2.98	0.52
49:S2:1308:U:C2	49:S2:1309:C:C6	2.98	0.52
49:S2:1309:C:C3'	81:Sf:143:LYS:HE2	2.40	0.52
49:S2:1466:G:C4	49:S2:1467:C:C5	2.97	0.52
50:SA:116:PHE:C	50:SA:117:ARG:CG	2.82	0.52
51:SB:172:MET:HE3	51:SB:212:VAL:HG12	1.91	0.52
62:SM:17:ALA:HB1	62:SM:124:ILE:HG23	1.92	0.52
67:SR:16:ILE:HG22	67:SR:24:LEU:HD11	1.91	0.52
1:5:61:A:OP1	17:N:162:ARG:NH2	2.42	0.52
1:5:102:G:H2'	1:5:103:G:O5'	2.10	0.52
1:5:118:C:H2'	1:5:118:C:O2	2.09	0.52
1:5:247:G:C4	1:5:248:C:C5	2.98	0.52
1:5:288:G:C6	1:5:289:C:C4	2.98	0.52
1:5:442:G:O2'	1:5:443:G:H5'	2.10	0.52
1:5:687:U:C5	1:5:688:U:C5	2.97	0.52
1:5:966:A:C2	8:E:84:VAL:HB	2.45	0.52
1:5:976:G:C5	1:5:977:C:C6	2.99	0.52
1:5:1177:U:H2'	1:5:1178:G:C8	2.44	0.52
1:5:1189:G:C2	1:5:1190:C:C2	2.98	0.52
1:5:1196:G:C6	1:5:1197:C:C4	2.98	0.52
1:5:1203:G:C6	1:5:1204:C:C4	2.98	0.52
1:5:1218:G:N1	1:5:1219:G:C1'	2.71	0.52
1:5:1779:U:C2	1:5:1780:A:C8	2.98	0.52
1:5:1831:G:C6	1:5:1832:C:C4	2.97	0.52
1:5:1877:G:C4	1:5:1878:G:C8	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2082:G:H2'	1:5:2083:C:C6	2.45	0.52
1:5:2245:G:H2'	1:5:2246:C:O4'	2.10	0.52
1:5:2612:G:C2	1:5:2613:C:C2	2.98	0.52
1:5:2632:U:O2	1:5:2632:U:C2'	2.52	0.52
1:5:2769:U:OP1	36:g:68:SER:HA	2.10	0.52
1:5:2874:U:H4'	1:5:2875:C:OP2	2.10	0.52
1:5:3630:A:N1	1:5:3631:U:C4	2.78	0.52
1:5:3703:G:C4	1:5:3704:U:C5	2.98	0.52
1:5:3829:G:N3	1:5:3829:G:H2'	2.24	0.52
1:5:3833:C:O2	1:5:3834:C:C6	2.63	0.52
1:5:4097:G:N2	1:5:4098:A:N9	2.58	0.52
1:5:4238:G:C2	1:5:4287:G:C6	2.97	0.52
1:5:4248:A:H2'	1:5:4249:G:O4'	2.10	0.52
1:5:4266:G:C6	1:5:4279:A:N7	2.78	0.52
1:5:4536:C:C2	1:5:4537:C:C5	2.99	0.52
1:5:4730:C:N3	1:5:4734:A:N7	2.58	0.52
1:5:4927:G:H1'	16:M:121:ARG:CD	2.40	0.52
2:7:56:G:H2'	2:7:57:C:H6	1.75	0.52
3:8:73:U:O4	3:8:74:U:C2	2.63	0.52
3:8:100:U:C2	3:8:101:C:C6	2.98	0.52
3:8:115:G:C2	3:8:116:C:C6	2.98	0.52
3:8:132:G:C2	3:8:133:G:N7	2.77	0.52
5:B:379:PHE:HE2	5:B:385:LYS:CG	2.23	0.52
9:F:118:GLN:HB3	9:F:121:ASN:OD1	2.10	0.52
10:G:81:ASN:ND2	10:G:238:GLY:HA3	2.21	0.52
13:J:107:PHE:CZ	13:J:130:PHE:HB2	2.45	0.52
16:M:25:VAL:CG1	16:M:38:VAL:HG22	2.40	0.52
34:e:51:GLY:C	34:e:52:GLN:OE1	2.53	0.52
36:g:37:LYS:HB2	36:g:60:ARG:NE	2.24	0.52
48:4:16:LYS:HA	48:4:19:ILE:HD12	1.92	0.52
48:4:744:ILE:CD1	48:4:816:HIS:CB	2.87	0.52
49:S2:88:G:C2	49:S2:500:A:C2	2.99	0.52
49:S2:415:A:H2	49:S2:423:U:O2	1.93	0.52
49:S2:469:A:H2'	49:S2:469:A:N3	2.25	0.52
49:S2:661:U:H3'	49:S2:662:G:H8	1.75	0.52
49:S2:833:C:H2'	49:S2:834:C:O4'	2.10	0.52
49:S2:977:C:C4	49:S2:978:G:N7	2.78	0.52
49:S2:1112:U:C2	49:S2:1113:A:C8	2.98	0.52
49:S2:1139:C:O4'	49:S2:1139:C:O2	2.28	0.52
49:S2:1309:C:H5''	62:SM:36:ARG:CZ	2.39	0.52
49:S2:1453:C:N4	49:S2:1455:A:C4	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1484:A:H5'	53:SD:159:HIS:HB3	1.91	0.52
49:S2:1575:G:N3	49:S2:1576:G:C8	2.78	0.52
54:SE:210:VAL:HB	54:SE:218:PHE:CE2	2.45	0.52
64:SO:64:ALA:O	64:SO:66:ARG:N	2.40	0.52
69:ST:56:ARG:HD3	69:ST:79:TYR:HE2	1.69	0.52
1:5:244:G:C2	1:5:246:G:C8	2.98	0.51
1:5:261:G:H2'	1:5:262:G:O4'	2.10	0.51
1:5:385:A:C2	1:5:386:A:C5	2.98	0.51
1:5:1091:C:C4	1:5:1092:G:N7	2.78	0.51
1:5:1203:G:C4	1:5:1204:C:C6	2.97	0.51
1:5:1203:G:C5	1:5:1204:C:C5	2.98	0.51
1:5:1571:G:C5	1:5:1572:U:C5	2.98	0.51
1:5:2004:U:C2	1:5:2005:G:C8	2.99	0.51
1:5:2249:C:H2'	1:5:2249:C:O2	2.09	0.51
1:5:2434:G:O3'	27:X:83:THR:HG21	2.10	0.51
1:5:2448:G:H2'	1:5:2449:A:C8	2.45	0.51
1:5:3656:A:H2'	1:5:3657:U:H6	1.75	0.51
1:5:3710:G:N3	1:5:3710:G:H2'	2.23	0.51
1:5:3740:G:C5	1:5:3741:C:C6	2.97	0.51
1:5:3911:C:N3	1:5:3912:U:C5	2.77	0.51
1:5:4104:G:O2'	1:5:4106:G:C6	2.63	0.51
1:5:4143:G:C5	1:5:4145:C:C5	2.99	0.51
1:5:4277:G:C6	1:5:4278:C:C4	2.98	0.51
1:5:4314:C:H2'	1:5:4314:C:O2	2.09	0.51
1:5:4324:A:N3	1:5:4325:A:N7	2.58	0.51
1:5:4369:A:C2	1:5:4370:G:C5	2.98	0.51
1:5:4719:G:H8	1:5:4719:G:O5'	1.92	0.51
1:5:5051:C:N3	1:5:5052:C:C6	2.78	0.51
2:7:21:G:N1	2:7:58:A:C2	2.78	0.51
3:8:103:A:C8	3:8:104:A:C8	2.98	0.51
5:B:62:ARG:HH11	5:B:62:ARG:CG	2.23	0.51
5:B:116:ARG:CG	5:B:177:LYS:HG3	2.39	0.51
5:B:201:LEU:O	5:B:202:GLU:HB2	2.09	0.51
8:E:153:HIS:HD2	8:E:183:ARG:NH1	2.08	0.51
12:I:59:GLN:NE2	12:I:126:VAL:HG11	2.25	0.51
20:Q:67:ILE:HD12	20:Q:96:PRO:HD2	1.91	0.51
28:Y:121:ARG:CZ	28:Y:121:ARG:HB3	2.40	0.51
29:Z:18:TYR:CD2	29:Z:47:ASP:OD1	2.63	0.51
37:h:118:LYS:C	37:h:119:PHE:CD1	2.88	0.51
46:q:52:VAL:O	46:q:89:VAL:C	2.53	0.51
48:4:609:PHE:CD2	48:4:699:GLY:HA2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:691:ALA:N	48:4:730:TYR:CE1	2.28	0.51
48:4:744:ILE:C	48:4:745:TYR:CG	2.88	0.51
49:S2:119:U:O2	49:S2:120:U:C6	2.63	0.51
49:S2:292:A:H4'	61:SL:40:ILE:O	2.10	0.51
49:S2:344:U:C2	49:S2:345:U:C5	2.99	0.51
49:S2:403:G:N3	49:S2:403:G:H2'	2.26	0.51
49:S2:443:U:O4	49:S2:444:G:C5	2.63	0.51
49:S2:493:A:N3	49:S2:493:A:C2'	2.73	0.51
49:S2:903:A:C8	49:S2:904:A:C8	2.98	0.51
49:S2:931:C:H2'	49:S2:932:G:C8	2.45	0.51
49:S2:1123:C:O2	49:S2:1123:C:C2'	2.58	0.51
49:S2:1573:G:H5'	49:S2:1574:C:OP2	2.10	0.51
49:S2:1573:G:N1	49:S2:1574:C:C2	2.78	0.51
49:S2:1606:G:C2'	49:S2:1633:A:H62	2.22	0.51
49:S2:1670:C:H2'	49:S2:1671:G:C8	2.45	0.51
49:S2:1771:G:C6	49:S2:1772:C:C4	2.98	0.51
50:SA:39:TYR:CD2	67:SR:105:MET:HE2	2.45	0.51
50:SA:176:TRP:CH2	50:SA:199:PRO:HG3	2.45	0.51
53:SD:113:LEU:HD21	53:SD:117:ARG:HB3	1.92	0.51
56:SG:162:LEU:HD11	56:SG:165:GLU:CD	2.35	0.51
64:SO:137:SER:C	64:SO:138:ASP:CG	2.78	0.51
64:SO:147:ARG:NH2	64:SO:150:ARG:HH11	2.08	0.51
76:Sa:77:CYS:HG	84:Sa:201:ZN:ZN	0.32	0.51
1:5:49:U:H5'	17:N:192:TRP:CZ2	2.45	0.51
1:5:59:A:C4	1:5:60:G:C8	2.98	0.51
1:5:135:G:C2	37:h:94:ARG:NH2	2.78	0.51
1:5:146:G:N2	1:5:147:A:C4	2.79	0.51
1:5:223:G:H21	6:C:223:ASN:HB3	1.75	0.51
1:5:238:C:N3	1:5:239:C:C5	2.78	0.51
1:5:382:G:H2'	1:5:383:A:H2'	1.91	0.51
1:5:518:G:C6	1:5:519:C:C4	2.98	0.51
1:5:672:C:H2'	1:5:673:C:O4'	2.10	0.51
1:5:718:C:N3	1:5:719:C:C5	2.79	0.51
1:5:918:G:H2'	1:5:918:G:N3	2.25	0.51
1:5:964:A:C2	1:5:2252:G:C6	2.98	0.51
1:5:975:C:H2'	1:5:976:G:C1'	2.40	0.51
1:5:1302:U:C4'	34:e:17:THR:O	2.58	0.51
1:5:1968:G:C2	1:5:1969:G:C4	2.98	0.51
1:5:2046:G:C4	18:O:60:LYS:HD3	2.45	0.51
1:5:2054:U:C4'	1:5:2056:G:H1'	2.38	0.51
1:5:2056:G:C6	1:5:2058:G:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2089:G:C2	1:5:2263:A:N6	2.78	0.51
1:5:2323:C:H2'	1:5:2324:C:O4'	2.10	0.51
1:5:2611:A:H2'	1:5:2612:G:C8	2.44	0.51
1:5:2645:G:N3	1:5:2646:C:C6	2.76	0.51
1:5:2658:G:N1	1:5:2675:G:N1	2.59	0.51
1:5:2740:U:O4'	1:5:2740:U:O2	2.24	0.51
1:5:2823:G:N2	1:5:2824:C:H1'	2.24	0.51
1:5:2844:A:N6	1:5:3839:G:C8	2.78	0.51
1:5:3702:A:N1	1:5:3703:G:C5	2.77	0.51
1:5:3754:G:C2	1:5:3755:G:N9	2.78	0.51
1:5:3802:U:H3	1:5:4498:U:HO2'	1.58	0.51
1:5:3907:G:N9	1:5:4449:A:C1'	2.65	0.51
1:5:4142:C:C2	1:5:4143:G:C2	2.99	0.51
1:5:4167:G:C6	1:5:4168:G:N7	2.78	0.51
1:5:4336:A:C8	1:5:4336:A:H3'	2.45	0.51
1:5:4593:C:O2	1:5:4594:U:C6	2.63	0.51
1:5:4652:G:C2	1:5:4653:C:C4	2.98	0.51
1:5:4737:G:C2	1:5:4738:C:C2	2.98	0.51
5:B:67:VAL:HG12	5:B:67:VAL:O	2.10	0.51
5:B:78:ILE:HD11	5:B:320:PHE:CE1	2.45	0.51
5:B:260:ALA:C	5:B:261:ARG:HD3	2.35	0.51
9:F:128:ASN:ND2	23:T:132:PRO:HG2	2.25	0.51
14:K:14:TYR:HE1	14:K:16:ARG:HB3	1.76	0.51
17:N:178:HIS:CD2	17:N:178:HIS:C	2.88	0.51
21:R:28:GLU:O	21:R:32:ILE:HD12	2.10	0.51
28:Y:15:ARG:HB3	28:Y:15:ARG:CZ	2.40	0.51
33:d:22:THR:HG22	33:d:89:SER:CB	2.39	0.51
34:e:16:ARG:CD	34:e:60:TYR:OH	2.58	0.51
46:q:12:ASN:CA	46:q:16:LYS:HE3	2.40	0.51
48:4:4:PHE:CG	48:4:5:THR:HG22	2.34	0.51
48:4:45:ILE:HD13	48:4:78:PHE:CA	2.40	0.51
48:4:154:VAL:CB	48:4:358:LEU:HD21	2.40	0.51
48:4:231:MET:HE1	48:4:343:TRP:CH2	2.46	0.51
48:4:451:ILE:HD12	48:4:458:VAL:CG1	2.40	0.51
48:4:505:VAL:HG23	48:4:549:ALA:O	2.10	0.51
48:4:581:GLU:CD	48:4:695:GLU:CB	2.67	0.51
48:4:732:SER:O	48:4:735:THR:HG22	2.10	0.51
48:4:754:GLN:OE1	48:4:755:VAL:CG2	2.50	0.51
49:S2:27:A:N1	49:S2:28:U:C6	2.77	0.51
49:S2:52:G:N1	49:S2:53:C:C2	2.78	0.51
49:S2:68:A:C4	49:S2:69:C:C5	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:348:A:C6	49:S2:349:A:C5	2.98	0.51
49:S2:381:C:O2'	49:S2:382:C:H5'	2.09	0.51
49:S2:431:G:C4	49:S2:432:G:C8	2.99	0.51
49:S2:488:U:H3'	49:S2:489:A:C5'	2.40	0.51
49:S2:551:U:C1'	80:Se:44:ASN:OD1	2.58	0.51
49:S2:619:A:H2'	49:S2:619:A:N3	2.24	0.51
49:S2:750:C:N3	49:S2:751:G:N7	2.58	0.51
49:S2:805:U:O2	49:S2:805:U:H2'	2.09	0.51
49:S2:832:G:C6	49:S2:833:C:C6	2.98	0.51
49:S2:1127:C:N3	49:S2:1128:C:C5	2.79	0.51
49:S2:1311:C:OP2	62:SM:37:GLU:OE2	2.28	0.51
49:S2:1319:U:H2'	49:S2:1320:G:H8	1.71	0.51
49:S2:1330:G:N2	49:S2:1333:U:C5	2.78	0.51
49:S2:1459:G:C2	49:S2:1468:C:C2	2.99	0.51
49:S2:1610:G:N1	49:S2:1611:G:C5	2.78	0.51
49:S2:1807:C:C2	49:S2:1808:U:C6	2.98	0.51
49:S2:1808:U:C2	49:S2:1809:A:C8	2.98	0.51
51:SB:32:ASP:OD1	51:SB:46:LYS:CD	2.58	0.51
52:SC:82:TYR:CE1	52:SC:164:PRO:HD3	2.46	0.51
59:SJ:13:TYR:HA	59:SJ:48:PHE:HB3	1.92	0.51
63:SN:34:LYS:O	63:SN:38:TYR:HB2	2.10	0.51
68:SS:20:ILE:CG2	68:SS:29:ALA:HB1	2.41	0.51
1:5:44:A:C4	1:5:45:U:C5	2.98	0.51
1:5:45:U:C2'	1:5:46:U:O5'	2.58	0.51
1:5:137:G:H4'	37:h:98:HIS:HD2	1.73	0.51
1:5:216:C:O4'	1:5:216:C:OP2	2.29	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
1:5:371:A:HO2'	1:5:372:A:C5'	2.23	0.51
1:5:386:A:H2	1:5:405:U:O4'	1.93	0.51
1:5:466:A:N1	1:5:467:U:C5	2.79	0.51
1:5:739:G:N1	1:5:740:G:C5	2.78	0.51
1:5:747:A:N7	1:5:915:A:C2	2.78	0.51
1:5:957:G:H1'	1:5:958:G:OP2	2.10	0.51
1:5:976:G:C2	1:5:977:C:C2	2.98	0.51
1:5:1069:G:C6	1:5:1070:G:C8	2.98	0.51
1:5:1416:G:C6	1:5:1417:C:C4	2.98	0.51
1:5:1424:G:H2'	1:5:1425:G:O4'	2.10	0.51
1:5:1497:A:H1'	20:Q:164:LYS:HG2	1.91	0.51
1:5:1663:C:O2	1:5:1664:U:C5	2.63	0.51
1:5:1699:A:C2	9:F:179:ARG:O	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1936:C:C2	1:5:1937:C:C5	2.97	0.51
1:5:1991:A:H2'	1:5:1992:U:C6	2.44	0.51
1:5:1995:G:C6	1:5:1996:C:C4	2.98	0.51
1:5:2032:U:O2'	22:S:91:HIS:CE1	2.63	0.51
1:5:2104:G:C2	1:5:2105:A:C4	2.99	0.51
1:5:2245:G:C2	1:5:2246:C:C2	2.98	0.51
1:5:2248:C:O2	1:5:2248:C:C2'	2.56	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
1:5:3697:U:O2'	1:5:3698:G:OP2	2.20	0.51
1:5:4091:G:C2	1:5:4092:G:C4	2.99	0.51
1:5:4142:C:H2'	1:5:4143:G:C1'	2.41	0.51
1:5:4168:G:H2'	1:5:4169:G:O5'	2.10	0.51
1:5:4271:A:N6	1:5:4336:A:H61	2.09	0.51
1:5:4323:A:N3	1:5:4324:A:C8	2.79	0.51
1:5:4453:C:H1'	1:5:4529:G:N2	2.26	0.51
1:5:4563:U:O2	1:5:4564:A:C5	2.64	0.51
1:5:4574:U:O2	1:5:4574:U:H2'	2.11	0.51
1:5:4579:U:O2	1:5:4580:U:C6	2.63	0.51
1:5:4606:G:H5'	48:4:28:VAL:CG2	2.36	0.51
1:5:4608:G:H3'	1:5:4609:G:H8	1.75	0.51
1:5:4730:C:O2	1:5:4730:C:O4'	2.27	0.51
1:5:4744:A:C4	1:5:4745:G:N7	2.78	0.51
1:5:4884:G:N1	1:5:4885:U:C4	2.78	0.51
1:5:5004:C:H2'	1:5:5005:G:O4'	2.11	0.51
1:5:5062:G:N2	1:5:5063:G:N7	2.58	0.51
2:7:42:A:H2'	2:7:42:A:N3	2.26	0.51
2:7:55:A:H2'	2:7:56:G:C5'	2.41	0.51
3:8:54:C:C4	3:8:55:U:C5	2.99	0.51
5:B:321:VAL:O	5:B:322:HIS:CB	2.59	0.51
13:J:26:VAL:HG22	13:J:28:GLU:HG3	1.91	0.51
22:S:13:VAL:HG12	22:S:29:ARG:HA	1.92	0.51
22:S:81:TRP:CE2	22:S:94:TYR:HD1	2.27	0.51
28:Y:15:ARG:HH11	28:Y:15:ARG:HG2	1.75	0.51
32:c:18:LEU:HD23	32:c:22:MET:HE3	1.93	0.51
46:q:43:ILE:HA	46:q:46:SER:OG	2.10	0.51
48:4:81:LEU:HB2	48:4:86:LEU:CD1	2.39	0.51
48:4:343:TRP:CE3	48:4:343:TRP:HA	2.46	0.51
48:4:546:ILE:HG22	48:4:554:LEU:CD1	2.40	0.51
48:4:580:ARG:HG3	48:4:817:TRP:CZ2	2.46	0.51
48:4:744:ILE:HD13	48:4:815:ASP:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:744:ILE:HG12	48:4:815:ASP:HB3	1.92	0.51
49:S2:186:C:C2	49:S2:187:G:N7	2.78	0.51
49:S2:549:C:N4	49:S2:550:C:C5	2.78	0.51
49:S2:665:G:H1'	49:S2:670:A:N3	2.25	0.51
49:S2:678:U:C4	49:S2:679:A:N7	2.78	0.51
49:S2:993:G:N1	49:S2:994:C:C4	2.79	0.51
49:S2:1292:C:H6	81:Sf:149:CYS:CA	2.23	0.51
49:S2:1595:U:C2	49:S2:1596:U:C6	2.99	0.51
49:S2:1686:G:C6	49:S2:1687:C:C4	2.97	0.51
49:S2:1740:C:C2	49:S2:1741:U:C6	2.99	0.51
57:SH:176:VAL:O	57:SH:177:TYR:C	2.52	0.51
62:SM:22:LEU:HD23	62:SM:111:VAL:HG22	1.93	0.51
62:SM:98:GLY:C	62:SM:99:ASN:HD22	2.19	0.51
62:SM:101:ARG:C	62:SM:102:LYS:CG	2.83	0.51
66:SQ:126:ARG:HH21	66:SQ:126:ARG:HG3	1.75	0.51
73:SX:84:PHE:HD2	73:SX:105:PHE:HZ	1.58	0.51
1:5:91:G:OP2	1:5:92:C:H5''	2.11	0.51
1:5:142:G:N2	1:5:144:G:C8	2.78	0.51
1:5:181:C:H42	1:5:255:C:H42	1.59	0.51
1:5:269:G:N1	1:5:270:U:C5	2.78	0.51
1:5:474:C:C2	1:5:475:G:C8	2.98	0.51
1:5:483:G:N2	1:5:484:U:C2	2.78	0.51
1:5:484:U:O5'	1:5:485:C:O5'	2.29	0.51
1:5:675:C:C2	1:5:676:C:C6	2.98	0.51
1:5:720:G:C6	1:5:721:G:N7	2.78	0.51
1:5:930:G:C4	1:5:931:C:H5	2.29	0.51
1:5:1048:G:C4	1:5:1049:C:C6	2.98	0.51
1:5:1236:C:H2'	8:E:56:SER:OG	2.11	0.51
1:5:1268:G:C2	1:5:2111:G:N1	2.78	0.51
1:5:1289:C:O2	1:5:1290:G:C8	2.64	0.51
1:5:1517:G:N2	1:5:1650:A:C2	2.79	0.51
1:5:1662:C:N3	1:5:1663:C:C5	2.78	0.51
1:5:2071:A:C2	1:5:2072:C:C5	2.99	0.51
1:5:2347:A:H61	34:e:24:GLN:HE21	1.58	0.51
1:5:2441:C:H4'	36:g:9:ARG:CD	2.41	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
1:5:3909:C:N4	1:5:3910:C:N4	2.59	0.51
1:5:4142:C:C5	1:5:4143:G:C6	2.98	0.51
1:5:4167:G:N2	1:5:4168:G:N9	2.59	0.51
1:5:4287:G:C2	1:5:4288:C:N3	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4405:G:C5	1:5:4406:U:C5	2.98	0.51
1:5:4414:A:C6	1:5:4427:G:C6	2.97	0.51
1:5:4489:G:C5	1:5:4490:C:C5	2.98	0.51
1:5:4581:G:C2	1:5:4582:C:C6	2.98	0.51
2:7:33:U:O2	2:7:33:U:H2'	2.09	0.51
3:8:35:C:O2'	3:8:36:G:H5'	2.10	0.51
3:8:110:U:O3'	3:8:111:U:H4'	2.10	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
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:162:ASP:HB3	10:G:163:PRO:HD3	1.92	0.51
11:H:96:TYR:CZ	11:H:100:PRO:HA	2.45	0.51
14:K:21:GLU:OE1	14:K:48:LYS:CD	2.56	0.51
14:K:62:LEU:H	14:K:75:PRO:HG3	1.76	0.51
14:K:121:LEU:O	14:K:122:ALA:HB3	2.10	0.51
21:R:109:TYR:CD1	21:R:114:LYS:HD2	2.45	0.51
22:S:9:GLU:HB3	22:S:67:VAL:HG12	1.91	0.51
28:Y:18:HIS:NE2	28:Y:29:ILE:HD13	2.26	0.51
37:h:78:TYR:N	37:h:78:TYR:CD1	2.78	0.51
44:o:41:TYR:CZ	44:o:45:GLN:HG2	2.44	0.51
48:4:24:VAL:CG2	48:4:32:LYS:HG3	2.39	0.51
48:4:231:MET:SD	48:4:343:TRP:CH2	2.90	0.51
48:4:526:ARG:O	48:4:529:LYS:CG	2.58	0.51
48:4:700:VAL:HG12	48:4:702:PHE:CD2	2.45	0.51
48:4:813:VAL:CG2	48:4:814:PHE:H	2.10	0.51
49:S2:70:G:N3	49:S2:71:G:C8	2.77	0.51
49:S2:84:A:C6	49:S2:85:A:C5	2.98	0.51
49:S2:127:C:C5	49:S2:181:A:C6	2.98	0.51
49:S2:148:U:C2	49:S2:149:A:C8	2.98	0.51
49:S2:599:A:C4'	49:S2:605:A:C2	2.94	0.51
49:S2:836:G:H3'	49:S2:837:A:H5'	1.92	0.51
49:S2:1061:U:O2	49:S2:1061:U:C2'	2.59	0.51
49:S2:1157:G:H1'	73:SX:5:ARG:NE	2.25	0.51
49:S2:1224:G:C5	49:S2:1225:U:C5	2.98	0.51
49:S2:1307:U:H2'	49:S2:1308:U:C4'	2.39	0.51
49:S2:1402:A:N7	49:S2:1441:U:C4	2.77	0.51
49:S2:1534:C:O4'	49:S2:1536:G:H1'	2.10	0.51
49:S2:1563:G:N3	49:S2:1564:C:C6	2.79	0.51
49:S2:1568:C:O2'	49:S2:1569:A:C8	2.60	0.51
49:S2:1576:G:N1	49:S2:1577:G:C5	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:103:PHE:CD2	50:SA:103:PHE:C	2.87	0.51
54:SE:208:VAL:HB	54:SE:225:ILE:HD12	1.93	0.51
55:SF:49:LEU:HD13	55:SF:50:PRO:HD2	1.93	0.51
58:SI:54:LYS:HD3	58:SI:181:GLN:NE2	2.25	0.51
58:SI:113:TYR:CD2	58:SI:121:LEU:HD21	2.45	0.51
69:ST:47:PRO:CG	69:ST:52:TRP:CD1	2.94	0.51
79:Sd:26:ASN:OD1	79:Sd:26:ASN:N	2.44	0.51
1:5:331:G:N3	1:5:332:C:C5	2.78	0.51
1:5:458:C:N3	1:5:459:C:C5	2.79	0.51
1:5:518:G:H2'	1:5:519:C:O4'	2.09	0.51
1:5:691:C:H2'	1:5:692:A:H8	1.75	0.51
1:5:715:G:H2'	1:5:716:C:O4'	2.10	0.51
1:5:1090:G:C5	1:5:1091:C:C5	2.98	0.51
1:5:1382:G:H2'	1:5:1383:G:O5'	2.10	0.51
1:5:1421:G:C2	1:5:1422:G:C5	2.99	0.51
1:5:1444:G:C2'	1:5:1445:U:H6	2.22	0.51
1:5:1543:G:N3	1:5:2513:A:C2	2.79	0.51
1:5:1669:A:H2'	1:5:1670:G:O4'	2.10	0.51
1:5:1886:G:C5	1:5:1887:G:C8	2.98	0.51
1:5:1898:C:C5	1:5:2279:A:C1'	2.91	0.51
1:5:1960:A:C3'	46:q:59:THR:HG23	2.38	0.51
1:5:2021:G:H4'	46:q:85:ASN:CA	2.41	0.51
1:5:2482:C:N3	1:5:2483:G:C8	2.78	0.51
1:5:2497:C:H42	1:5:2498:C:N4	2.08	0.51
1:5:3625:G:H2'	1:5:3625:G:N3	2.25	0.51
1:5:3634:G:N2	1:5:3636:C:H5'	2.24	0.51
1:5:4124:G:H2'	1:5:4124:G:N3	2.25	0.51
1:5:4137:C:N3	1:5:4138:C:C5	2.79	0.51
1:5:4229:U:H3'	1:5:4230:C:H6	1.74	0.51
1:5:4499:G:H3'	1:5:4500:U:H5''	1.92	0.51
1:5:4724:A:C2	1:5:4725:C:C2	2.98	0.51
1:5:4737:G:C4	1:5:4738:C:C4	2.99	0.51
1:5:4886:C:C2	1:5:4887:C:C5	2.99	0.51
1:5:4977:A:C2'	1:5:4978:G:H5'	2.41	0.51
1:5:5006:U:C5	26:W:50:ASN:ND2	2.78	0.51
2:7:43:U:C4	2:7:44:C:C4	2.99	0.51
2:7:94:C:N3	2:7:95:C:H5	2.06	0.51
3:8:117:C:O2	3:8:117:C:H2'	2.09	0.51
6:C:58:ALA:O	6:C:60:HIS:HB2	2.10	0.51
9:F:229:PHE:CD2	9:F:238:ARG:HB3	2.46	0.51
12:I:95:HIS:ND1	12:I:95:HIS:C	2.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:M:7:VAL:N	22:S:152:PHE:O	2.44	0.51
22:S:175:PHE:C	22:S:175:PHE:CD1	2.89	0.51
28:Y:22:PRO:HD2	28:Y:25:ILE:HD12	1.91	0.51
29:Z:68:ILE:HG22	29:Z:119:GLU:HG3	1.92	0.51
34:e:20:PHE:HZ	34:e:60:TYR:OH	1.93	0.51
46:q:6:ARG:HE	46:q:10:LYS:CE	2.24	0.51
46:q:133:GLU:CA	46:q:152:ILE:HD11	2.40	0.51
46:q:206:ILE:O	46:q:206:ILE:HG22	2.07	0.51
48:4:81:LEU:CB	48:4:86:LEU:HD12	2.41	0.51
48:4:137:VAL:HG23	48:4:138:GLN:N	2.25	0.51
48:4:207:PRO:CB	48:4:261:TRP:CG	2.94	0.51
48:4:364:ALA:HA	48:4:367:TYR:CZ	2.45	0.51
48:4:536:CYS:O	48:4:537:ILE:CG2	2.58	0.51
48:4:693:CYS:O	48:4:694:GLU:CB	2.59	0.51
49:S2:501:C:O2	49:S2:501:C:H2'	2.10	0.51
49:S2:828:G:C2	49:S2:829:C:C6	2.98	0.51
49:S2:832:G:C2	49:S2:843:C:C2	2.99	0.51
49:S2:1042:A:C6	49:S2:1043:G:C5	2.98	0.51
49:S2:1045:U:C4	49:S2:1046:U:C4	2.98	0.51
49:S2:1052:A:N3	49:S2:1053:C:C6	2.79	0.51
49:S2:1386:A:C2	49:S2:1387:G:H1'	2.45	0.51
49:S2:1590:C:C5	49:S2:1591:C:N1	2.79	0.51
50:SA:28:THR:HA	50:SA:45:GLY:O	2.10	0.51
50:SA:181:GLU:OE1	50:SA:184:ARG:HB2	2.10	0.51
54:SE:159:THR:HG23	54:SE:227:VAL:HG22	1.92	0.51
57:SH:186:ASN:OD1	57:SH:186:ASN:N	2.44	0.51
59:SJ:54:ARG:NH2	59:SJ:54:ARG:HB3	2.25	0.51
61:SL:55:TYR:CD2	61:SL:115:PRO:HG2	2.46	0.51
73:SX:74:LEU:HG	73:SX:81:ILE:HD12	1.93	0.51
74:SY:86:GLU:CD	74:SY:90:ARG:HD2	2.36	0.51
1:5:70:A:H1'	1:5:71:C:N4	2.26	0.51
1:5:139:G:H2'	1:5:140:G:O4'	2.11	0.51
1:5:158:A:H5''	1:5:159:C:C6	2.45	0.51
1:5:186:G:H1'	1:5:187:U:H1'	1.93	0.51
1:5:255:C:O2	1:5:255:C:C2'	2.55	0.51
1:5:292:G:N2	1:5:293:G:C2	2.79	0.51
1:5:302:C:N3	1:5:303:C:C5	2.78	0.51
1:5:930:G:H4'	1:5:931:C:O5'	2.09	0.51
1:5:1049:C:C4	1:5:1050:C:C5	2.99	0.51
1:5:1072:C:C2'	1:5:1072:C:O2	2.57	0.51
1:5:1205:G:C6	1:5:1206:C:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1234:G:H2'	1:5:1235:G:C8	2.46	0.51
1:5:1337:A:C2	1:5:1659:U:O4'	2.64	0.51
1:5:1374:G:C6	1:5:1375:C:C4	2.98	0.51
1:5:1421:G:C2	1:5:1422:G:N7	2.79	0.51
1:5:1475:G:N3	1:5:1476:C:C6	2.79	0.51
1:5:1724:G:C2	9:F:105:PRO:HB3	2.44	0.51
1:5:1758:G:C2	1:5:1759:G:N7	2.79	0.51
1:5:1961:G:H2'	1:5:2024:G:N1	2.26	0.51
1:5:1973:G:O6	1:5:2002:A:N7	2.44	0.51
1:5:1993:C:O2'	14:K:135:THR:CG2	2.59	0.51
1:5:2040:A:H4'	1:5:2041:A:O5'	2.11	0.51
1:5:2055:G:H1'	18:O:130:LYS:HD3	1.91	0.51
1:5:2359:U:OP2	1:5:2360:A:O2'	2.25	0.51
1:5:2442:G:H2'	1:5:2443:G:H5''	1.92	0.51
1:5:2477:A:H2'	1:5:2478:C:H6	1.74	0.51
1:5:2532:C:O2'	27:X:93:ASN:ND2	2.44	0.51
1:5:2703:G:C2	1:5:2704:C:N1	2.79	0.51
1:5:2704:C:H2'	1:5:2704:C:O2	2.10	0.51
1:5:3744:G:C2'	1:5:3745:U:O5'	2.59	0.51
1:5:3879:G:C5	1:5:3882:C:N4	2.79	0.51
1:5:3930:U:C2	1:5:3931:C:C5	2.99	0.51
1:5:4122:G:C5	1:5:4123:C:C6	2.98	0.51
1:5:4456:C:H2'	1:5:4456:C:O2	2.10	0.51
1:5:4490:C:O2	1:5:4491:G:C8	2.63	0.51
1:5:5020:G:C4	1:5:5021:C:C6	2.99	0.51
2:7:23:A:O2'	2:7:24:C:C6	2.62	0.51
2:7:59:G:H4'	7:D:267:ASN:ND2	2.25	0.51
3:8:129:C:N3	3:8:130:C:C5	2.79	0.51
5:B:17:LEU:HD21	5:B:264:PHE:CE1	2.46	0.51
5:B:49:TYR:CE1	5:B:171:LEU:HD11	2.45	0.51
5:B:122:TRP:NE1	5:B:127:LYS:HE3	2.26	0.51
5:B:168:MET:CE	5:B:171:LEU:HD12	2.40	0.51
6:C:197:ARG:O	6:C:199:ARG:N	2.43	0.51
7:D:51:MET:HE1	7:D:163:LEU:HA	1.92	0.51
11:H:5:LEU:HD13	11:H:60:TRP:CE3	2.45	0.51
13:J:74:VAL:C	13:J:75:ARG:HG2	2.35	0.51
14:K:58:ILE:C	14:K:59:THR:HG23	2.36	0.51
15:L:65:ARG:HB2	30:a:69:PHE:CG	2.46	0.51
15:L:146:LEU:CD1	37:h:120:ALA:HB3	2.41	0.51
20:Q:34:PHE:C	20:Q:34:PHE:CD2	2.88	0.51
20:Q:88:ASP:OD2	20:Q:108:ARG:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:45:TRP:CE3	22:S:56:LYS:HA	2.43	0.51
24:U:27:HIS:O	24:U:114:TYR:OH	2.23	0.51
35:f:74:VAL:HG13	35:f:84:VAL:CG1	2.41	0.51
47:r:103:ARG:NH2	47:r:106:LEU:HD11	2.26	0.51
48:4:449:ARG:CB	48:4:473:VAL:HG11	2.41	0.51
48:4:503:PRO:CD	48:4:533:MET:HE1	2.41	0.51
48:4:816:HIS:NE2	48:4:818:GLN:HB2	2.25	0.51
49:S2:46:A:C2	49:S2:99:A:N9	2.78	0.51
49:S2:311:C:H2'	49:S2:312:G:C1'	2.41	0.51
49:S2:340:C:C2'	49:S2:341:C:H6	2.24	0.51
49:S2:374:G:OP1	61:SL:59:LYS:NZ	2.41	0.51
49:S2:747:U:H3'	49:S2:748:C:C6	2.46	0.51
49:S2:962:A:C6	49:S2:963:A:N7	2.78	0.51
49:S2:978:G:C6	49:S2:979:C:C4	2.98	0.51
49:S2:985:G:O4'	64:SO:138:ASP:OD2	2.28	0.51
49:S2:1004:U:O2	49:S2:1005:G:C8	2.63	0.51
49:S2:1122:A:C5	49:S2:1123:C:C5	2.99	0.51
49:S2:1122:A:N1	49:S2:1123:C:C6	2.78	0.51
49:S2:1131:G:N2	49:S2:1132:C:C2	2.78	0.51
49:S2:1135:C:C4	49:S2:1136:U:C4	2.98	0.51
49:S2:1136:U:O2'	49:S2:1137:U:C5'	2.58	0.51
49:S2:1291:A:C4	81:Sf:140:TYR:CD2	2.99	0.51
49:S2:1392:U:C2	49:S2:1393:G:C8	2.99	0.51
49:S2:1449:G:C2	49:S2:1450:G:C4	2.99	0.51
49:S2:1567:G:H1'	68:SS:82:TRP:CH2	2.46	0.51
49:S2:1643:U:O2'	49:S2:1644:C:C6	2.63	0.51
49:S2:1683:C:O2	49:S2:1684:C:C6	2.63	0.51
49:S2:1808:U:O2	49:S2:1809:A:C8	2.64	0.51
49:S2:1812:U:H2'	49:S2:1812:U:O2	2.11	0.51
50:SA:10:MET:HA	50:SA:55:TRP:CE3	2.45	0.51
50:SA:39:TYR:OH	67:SR:104:GLU:CB	2.59	0.51
56:SG:188:LYS:HA	56:SG:191:ARG:HD3	1.93	0.51
57:SH:43:LEU:HD21	57:SH:71:SER:HB3	1.92	0.51
62:SM:113:ASP:O	62:SM:115:GLY:N	2.43	0.51
82:Sg:47:ARG:HB2	82:Sg:52:TYR:CE1	2.45	0.51
1:5:85:G:C5	15:L:13:HIS:CE1	2.99	0.51
1:5:91:G:C5	1:5:93:G:C6	2.98	0.51
1:5:106:A:OP1	15:L:39:ARG:NH2	2.43	0.51
1:5:111:C:C2	1:5:331:G:C2	2.99	0.51
1:5:449:C:C4	1:5:450:G:N7	2.79	0.51
1:5:463:A:C2	1:5:692:A:H2	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:660:A:N1	1:5:661:C:C5	2.79	0.51
1:5:908:G:C6	1:5:909:A:C8	2.98	0.51
1:5:1193:C:N3	1:5:1194:G:C8	2.78	0.51
1:5:1213:G:C2	1:5:1215:C:O2	2.64	0.51
1:5:1280:C:H2'	1:5:1282:G:OP2	2.11	0.51
1:5:1365:C:H4'	1:5:1366:G:OP1	2.11	0.51
1:5:1374:G:C5	1:5:1375:C:C5	2.99	0.51
1:5:1516:G:C6	1:5:1518:A:C4	2.98	0.51
1:5:1683:U:C2	1:5:1684:A:N7	2.77	0.51
1:5:1727:U:N3	1:5:1728:U:C5	2.79	0.51
1:5:1965:G:C6	1:5:1966:C:N4	2.78	0.51
1:5:2268:A:O4'	1:5:2270:G:N7	2.44	0.51
1:5:2440:U:N3	1:5:2519:U:C5	2.78	0.51
1:5:2682:G:C6	1:5:2683:C:N4	2.79	0.51
1:5:3710:G:C2	1:5:3711:A:C2	2.99	0.51
1:5:4082:G:C4	1:5:4083:U:C5	2.98	0.51
1:5:4124:G:C2	4:A:64:ARG:NH1	2.79	0.51
1:5:4137:C:C2	1:5:4138:C:C5	2.98	0.51
1:5:4440:G:H8	1:5:4440:G:H5''	1.76	0.51
1:5:4459:U:H5''	5:B:10:ARG:HH22	1.75	0.51
1:5:4535:A:C6	1:5:4536:C:C6	2.98	0.51
1:5:4537:C:N3	1:5:4538:G:C8	2.71	0.51
1:5:4702:G:N2	1:5:4703:U:H1'	2.25	0.51
1:5:4735:G:C2	1:5:4736:C:C4	2.98	0.51
1:5:4750:G:C6	1:5:4949:G:O6	2.61	0.51
1:5:4754:G:C2	1:5:4880:C:N3	2.78	0.51
2:7:18:C:O2	2:7:18:C:H2'	2.11	0.51
3:8:79:G:H3'	3:8:80:A:N3	2.25	0.51
4:A:63:PHE:N	4:A:63:PHE:CD1	2.77	0.51
6:C:210:ILE:HG21	6:C:252:TRP:CZ3	2.45	0.51
12:I:46:PHE:N	12:I:47:PRO:HD3	2.26	0.51
14:K:81:ILE:HD13	14:K:117:ARG:CZ	2.40	0.51
14:K:102:GLY:HA3	14:K:139:VAL:HA	1.91	0.51
15:L:83:VAL:HG11	15:L:114:VAL:HG21	1.92	0.51
19:P:42:ARG:HH11	19:P:42:ARG:HG3	1.76	0.51
21:R:4:LEU:HD22	21:R:32:ILE:HG22	1.93	0.51
21:R:10:LEU:HD23	21:R:41:ILE:HD12	1.92	0.51
37:h:89:ARG:HA	37:h:92:ARG:HH21	1.76	0.51
41:l:44:TRP:CE3	41:l:45:ARG:N	2.79	0.51
46:q:57:LYS:CG	46:q:58:ASN:N	2.73	0.51
48:4:101:ASN:CG	48:4:469:ILE:CD1	2.77	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:284:LYS:H	48:4:284:LYS:HE2	1.76	0.51
48:4:420:LEU:HB2	48:4:465:PRO:CA	2.38	0.51
49:S2:17:C:C2	49:S2:18:C:C5	2.99	0.51
49:S2:49:C:H2'	49:S2:49:C:O2	2.11	0.51
49:S2:71:G:C2'	49:S2:72:C:O4'	2.59	0.51
49:S2:300:U:N3	49:S2:301:A:C8	2.79	0.51
49:S2:320:G:N2	49:S2:321:C:H1'	2.26	0.51
49:S2:601:G:C2	49:S2:622:C:O2	2.63	0.51
49:S2:997:A:C2'	49:S2:998:A:O4'	2.59	0.51
49:S2:1048:G:H2'	49:S2:1068:G:H22	1.76	0.51
49:S2:1130:G:H8	49:S2:1130:G:O5'	1.94	0.51
49:S2:1149:A:C6	49:S2:1151:G:C8	2.99	0.51
49:S2:1422:G:C2	49:S2:1424:G:C8	2.98	0.51
49:S2:1540:G:C5	49:S2:1541:G:C8	2.98	0.51
49:S2:1561:A:N6	49:S2:1574:C:N3	2.58	0.51
49:S2:1612:G:N2	49:S2:1628:C:C2	2.79	0.51
49:S2:1707:U:C5	49:S2:1708:C:C5	2.98	0.51
49:S2:1811:C:N3	49:S2:1812:U:C5	2.79	0.51
49:S2:1831:A:OP2	49:S2:1837:G:OP2	2.28	0.51
68:SS:87:GLN:HA	68:SS:95:TYR:HB3	1.92	0.51
74:SY:119:GLY:O	74:SY:121:ALA:N	2.44	0.51
1:5:222:C:H2'	1:5:223:G:O4'	2.11	0.51
1:5:1092:G:C5	1:5:1093:C:C5	2.98	0.51
1:5:1169:G:C2	1:5:1170:G:C8	2.98	0.51
1:5:1194:G:C2	1:5:1195:G:C8	2.99	0.51
1:5:1320:U:H2'	1:5:1891:A:H61	1.76	0.51
1:5:1380:G:C2	1:5:1382:G:N3	2.79	0.51
1:5:1387:A:H1'	1:5:1397:A:N6	2.26	0.51
1:5:1743:A:C6	1:5:1744:U:C5	2.99	0.51
1:5:1820:C:O2'	1:5:1821:G:O5'	2.26	0.51
1:5:1912:G:N3	1:5:1913:C:C6	2.79	0.51
1:5:1975:G:C6	1:5:1984:A:C4	2.98	0.51
1:5:2088:A:H61	20:Q:30:LYS:HB3	1.75	0.51
1:5:2089:G:C6	1:5:2262:G:H2'	2.44	0.51
1:5:2307:A:O2'	1:5:2308:A:H5'	2.11	0.51
1:5:2328:G:C2'	1:5:2329:U:O5'	2.58	0.51
1:5:2391:G:N1	1:5:2392:C:C4	2.78	0.51
1:5:2435:G:N2	1:5:2783:A:H1'	2.26	0.51
1:5:2468:U:C4	1:5:2473:A:N6	2.77	0.51
1:5:2627:C:O2	1:5:2627:C:O4'	2.28	0.51
1:5:2721:G:C2	1:5:2722:G:C8	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3707:U:O2'	4:A:241:ARG:HG2	2.10	0.51
1:5:3791:C:O4'	1:5:3791:C:O2	2.25	0.51
1:5:3859:G:C1'	19:P:139:TYR:OH	2.58	0.51
1:5:3874:G:C6	1:5:3875:G:C4	2.99	0.51
1:5:3937:C:H1'	17:N:125:SER:HB3	1.93	0.51
1:5:4198:G:C5	1:5:4199:C:C6	2.99	0.51
1:5:4467:A:O2'	1:5:4510:A:N3	2.41	0.51
1:5:4525:C:OP1	5:B:246:ARG:NH2	2.44	0.51
1:5:4737:G:H5''	1:5:5069:U:C4	2.46	0.51
1:5:4901:G:C2	1:5:4921:C:N3	2.78	0.51
1:5:5048:A:N9	33:d:34:HIS:CD2	2.76	0.51
2:7:22:A:C4	7:D:266:TRP:CH2	2.99	0.51
3:8:80:A:C6	3:8:81:C:C5	2.98	0.51
3:8:103:A:H3'	3:8:104:A:C5'	2.41	0.51
5:B:102:PHE:HB3	5:B:103:LYS:HB2	1.92	0.51
5:B:323:TYR:CD1	5:B:323:TYR:C	2.89	0.51
7:D:42:ASN:HA	7:D:44:TYR:CZ	2.44	0.51
14:K:131:GLU:O	14:K:135:THR:CG2	2.38	0.51
22:S:99:ASP:CG	22:S:100:LEU:N	2.69	0.51
24:U:96:LEU:O	24:U:100:LEU:HB2	2.11	0.51
29:Z:77:TYR:HB3	32:c:39:ARG:CD	2.39	0.51
46:q:103:ARG:CG	46:q:103:ARG:NH1	2.73	0.51
46:q:141:LEU:CD1	46:q:141:LEU:N	2.73	0.51
46:q:200:ASN:ND2	46:q:202:GLU:CG	2.73	0.51
48:4:430:MET:CE	48:4:486:THR:OG1	2.57	0.51
48:4:430:MET:HE2	48:4:486:THR:CB	2.41	0.51
48:4:693:CYS:HA	48:4:839:ARG:HE	0.76	0.51
48:4:739:ARG:HD3	48:4:823:ASP:HA	1.92	0.51
48:4:752:PRO:CB	48:4:780:PRO:HA	2.08	0.51
49:S2:87:U:H4'	49:S2:173:A:O4'	2.10	0.51
49:S2:371:A:N3	49:S2:372:U:C5	2.79	0.51
49:S2:847:A:H2'	49:S2:847:A:N3	2.26	0.51
49:S2:873:G:H2'	49:S2:874:G:C8	2.46	0.51
49:S2:1134:G:N1	49:S2:1135:C:C5	2.78	0.51
49:S2:1134:G:C6	49:S2:1135:C:C4	2.99	0.51
49:S2:1232:U:N3	49:S2:1233:G:N7	2.57	0.51
49:S2:1243:U:C4	49:S2:1244:U:H1'	2.46	0.51
49:S2:1280:G:C2	49:S2:1318:G:C5	2.99	0.51
49:S2:1455:A:N3	49:S2:1455:A:H2'	2.26	0.51
49:S2:1495:G:N1	49:S2:1496:U:H1'	2.26	0.51
49:S2:1546:G:O2'	49:S2:1547:C:O5'	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1613:G:C2	49:S2:1627:C:C2	2.99	0.51
49:S2:1864:U:C4	76:Sa:9:GLY:HA3	2.45	0.51
53:SD:35:SER:HB2	53:SD:91:VAL:HG21	1.92	0.51
53:SD:113:LEU:HD22	53:SD:118:ALA:HB2	1.93	0.51
56:SG:66:GLY:O	56:SG:68:LEU:HD22	2.11	0.51
57:SH:130:LEU:HD21	57:SH:177:TYR:CZ	2.46	0.51
57:SH:135:PHE:CD1	57:SH:136:PRO:N	2.78	0.51
58:SI:69:SER:HA	61:SL:20:LYS:HE2	1.93	0.51
59:SJ:114:VAL:HG12	59:SJ:120:ALA:HB2	1.91	0.51
62:SM:77:ILE:HG23	62:SM:78:LYS:H	1.76	0.51
65:SP:17:TYR:HH	65:SP:38:SER:HB3	1.75	0.51
73:SX:67:ARG:NH2	73:SX:114:ASP:OD2	2.38	0.51
81:Sf:126:CYS:HB3	81:Sf:130:VAL:HB	1.93	0.51
1:5:165:A:C4	1:5:166:C:C6	2.99	0.51
1:5:205:C:N3	1:5:209:U:C5	2.79	0.51
1:5:388:A:C5	1:5:411:G:N1	2.79	0.51
1:5:930:G:N3	1:5:931:C:C5	2.79	0.51
1:5:971:U:H2'	1:5:972:C:H5'	1.93	0.51
1:5:978:G:C2	1:5:979:C:C2	2.98	0.51
1:5:1203:G:N2	1:5:1204:C:C2	2.79	0.51
1:5:1247:U:O2	1:5:1248:C:C6	2.64	0.51
1:5:1412:G:C4	1:5:1413:C:C6	2.99	0.51
1:5:1550:G:C2	1:5:1579:C:O2	2.63	0.51
1:5:1651:G:O5'	1:5:1651:G:C8	2.64	0.51
1:5:1748:U:C2	1:5:1749:A:C8	2.98	0.51
1:5:1750:G:H2'	1:5:1750:G:N3	2.26	0.51
1:5:1751:A:C2'	1:5:1752:G:H5'	2.38	0.51
1:5:1936:C:C4	1:5:1937:C:H5	2.26	0.51
1:5:1989:G:C2	1:5:1990:A:C5	2.99	0.51
1:5:2080:U:C2	1:5:2081:C:H5	2.17	0.51
1:5:2391:G:N3	1:5:2392:C:C6	2.79	0.51
1:5:3771:C:O2	1:5:3771:C:O5'	2.28	0.51
1:5:4100:C:N3	1:5:4101:C:C4	2.79	0.51
1:5:4189:U:O4'	1:5:4380:A:C2	2.63	0.51
1:5:4455:G:N2	1:5:4456:C:C2	2.79	0.51
1:5:4501:U:C5	1:5:4502:C:C6	2.99	0.51
1:5:4743:G:C2	1:5:4744:A:C5	2.99	0.51
3:8:42:G:C2	3:8:43:A:N9	2.78	0.51
3:8:64:U:O2	3:8:65:A:C4	2.63	0.51
5:B:19:ARG:NE	5:B:235:TRP:CZ3	2.78	0.51
7:D:284:LYS:HB3	12:I:209:TRP:HZ3	1.72	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:111:TYR:OH	47:r:119:ARG:CG	2.59	0.51
23:T:70:HIS:N	23:T:70:HIS:CD2	2.79	0.51
48:4:51:ALA:C	48:4:53:GLU:H	2.19	0.51
48:4:110:ASP:O	48:4:501:VAL:HG21	2.11	0.51
48:4:330:LYS:O	48:4:335:LEU:HB2	2.11	0.51
48:4:477:GLN:HG2	48:4:478:PHE:CG	2.45	0.51
48:4:590:LEU:HD23	48:4:605:LYS:CE	2.40	0.51
49:S2:56:G:O2'	49:S2:57:U:O5'	2.28	0.51
49:S2:338:G:H3'	49:S2:339:A:H8	1.76	0.51
49:S2:415:A:C2'	49:S2:416:U:O4'	2.52	0.51
49:S2:460:A:C6	49:S2:461:U:H5	2.24	0.51
49:S2:552:G:C2	49:S2:553:U:C4	2.99	0.51
49:S2:956:G:O6	49:S2:968:U:O2	2.28	0.51
49:S2:973:C:N3	64:SO:55:ARG:NH1	2.59	0.51
49:S2:1045:U:C2	49:S2:1046:U:C6	2.97	0.51
49:S2:1074:C:C2	49:S2:1075:C:H5	2.15	0.51
49:S2:1109:C:O2	49:S2:1109:C:C2'	2.57	0.51
49:S2:1221:G:O2'	49:S2:1222:G:C5'	2.59	0.51
49:S2:1293:A:H3'	81:Sf:151:ASN:C	2.36	0.51
49:S2:1302:G:N7	81:Sf:138:ARG:NH2	2.58	0.51
49:S2:1434:C:H3'	49:S2:1435:C:C4'	2.41	0.51
49:S2:1713:C:O2'	49:S2:1714:U:O5'	2.29	0.51
49:S2:1807:C:C2	49:S2:1808:U:C5	2.98	0.51
52:SC:94:ILE:HD11	52:SC:98:LEU:HD12	1.92	0.51
63:SN:19:ARG:NH1	77:Sb:84:HIS:CE1	2.79	0.51
64:SO:65:ASP:N	64:SO:65:ASP:OD1	2.44	0.51
72:SW:27:ILE:HG12	72:SW:61:ILE:HB	1.92	0.51
82:Sg:166:VAL:HG21	82:Sg:207:CYS:SG	2.51	0.51
1:5:68:U:N3	1:5:69:A:H1'	2.26	0.51
1:5:152:U:N3	1:5:153:G:C8	2.78	0.51
1:5:189:G:N3	1:5:190:G:C8	2.79	0.51
1:5:354:U:O4	1:5:1334:A:H1'	2.10	0.51
1:5:364:G:N7	39:j:55:ARG:NH2	2.59	0.51
1:5:455:C:N3	1:5:456:C:C6	2.79	0.51
1:5:913:U:O2	1:5:914:U:C5	2.64	0.51
1:5:1344:C:C2	1:5:1345:A:C8	2.98	0.51
1:5:1620:U:C2	1:5:1621:A:N7	2.79	0.51
1:5:1748:U:H2'	1:5:1749:A:O4'	2.10	0.51
1:5:2034:G:O3'	22:S:118:ARG:HD3	2.11	0.51
1:5:2408:U:H1'	1:5:2409:U:C5	2.45	0.51
1:5:2532:C:O2	1:5:2532:C:H2'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3589:G:H2'	1:5:3590:G:O4'	2.11	0.51
1:5:3591:C:O2	1:5:3591:C:C2'	2.56	0.51
1:5:3711:A:C6	1:5:3712:A:N3	2.79	0.51
1:5:3720:G:C6	1:5:3721:U:C4	2.99	0.51
1:5:3791:C:C4	1:5:3802:U:C6	2.99	0.51
1:5:3819:G:C2	1:5:3820:G:C8	2.99	0.51
1:5:3842:C:H3'	1:5:3843:C:H2'	1.93	0.51
1:5:3921:U:OP2	1:5:4183:G:O2'	2.20	0.51
1:5:4093:G:C2'	1:5:4094:G:H5'	2.41	0.51
1:5:4136:G:N2	1:5:4137:C:H1'	2.26	0.51
1:5:4147:G:N1	1:5:4148:C:C4	2.79	0.51
1:5:4230:C:C2	1:5:4231:C:C5	2.99	0.51
1:5:4362:A:N1	1:5:4363:A:C5	2.79	0.51
1:5:4545:G:N7	4:A:215:ASN:ND2	2.59	0.51
1:5:4734:A:N1	1:5:4735:G:C4	2.79	0.51
1:5:4911:A:H5'	5:B:100:ARG:HD3	1.89	0.51
3:8:12:G:OP1	19:P:3:ARG:NH1	2.43	0.51
3:8:23:C:OP1	28:Y:15:ARG:NH2	2.29	0.51
8:E:145:ILE:HD11	8:E:267:LEU:CD2	2.40	0.51
16:M:5:ARG:N	16:M:6:PHE:CE2	2.79	0.51
20:Q:177:ALA:O	20:Q:179:GLY:N	2.43	0.51
32:c:49:ALA:HB2	32:c:81:LEU:HD12	1.92	0.51
45:p:29:ILE:CG2	45:p:69:TRP:CD1	2.90	0.51
46:q:63:LYS:HG3	46:q:82:ILE:HD11	1.93	0.51
48:4:45:ILE:HD12	48:4:78:PHE:CG	2.04	0.51
48:4:568:ILE:O	48:4:570:ILE:HD13	2.11	0.51
48:4:580:ARG:HB2	48:4:741:MET:SD	2.51	0.51
48:4:752:PRO:HB2	48:4:754:GLN:OE1	2.11	0.51
48:4:770:VAL:C	48:4:785:LYS:O	2.48	0.51
49:S2:86:C:N4	49:S2:87:U:C4	2.79	0.51
49:S2:522:A:N1	49:S2:643:A:H5'	2.26	0.51
49:S2:524:U:C2	49:S2:594:A:C6	2.94	0.51
49:S2:880:G:N7	49:S2:881:G:C5	2.79	0.51
49:S2:903:A:C5	49:S2:904:A:N7	2.79	0.51
49:S2:1005:G:H2'	49:S2:1006:C:C6	2.45	0.51
49:S2:1018:U:C2	49:S2:1019:C:H5	2.24	0.51
49:S2:1236:G:C6	49:S2:1237:C:C4	2.99	0.51
49:S2:1290:G:C2'	81:Sf:146:LEU:N	2.70	0.51
49:S2:1292:C:N3	81:Sf:150:PHE:HB2	2.25	0.51
49:S2:1387:G:C5	49:S2:1388:A:C8	2.99	0.51
49:S2:1841:C:O2	49:S2:1842:C:C6	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SE:195:ILE:O	54:SE:196:THR:CB	2.59	0.51
56:SG:58:LYS:C	56:SG:60:GLY:H	2.19	0.51
57:SH:118:ARG:O	57:SH:121:THR:HG22	2.11	0.51
58:SI:174:CYS:HB3	58:SI:188:TYR:CE1	2.46	0.51
82:Sg:120:ILE:HB	82:Sg:132:TRP:HB2	1.93	0.51
82:Sg:125:ARG:CZ	82:Sg:150:TRP:CZ3	2.94	0.51
82:Sg:171:ASP:O	82:Sg:172:LYS:HB3	2.11	0.51
1:5:55:G:C6	1:5:56:A:N7	2.79	0.50
1:5:56:A:C2	1:5:57:G:C4	2.99	0.50
1:5:145:G:C4	1:5:146:G:C8	3.00	0.50
1:5:471:A:N1	1:5:472:C:C1'	2.74	0.50
1:5:505:G:C2	1:5:506:C:C2	2.99	0.50
1:5:676:C:C2	1:5:677:G:C8	2.99	0.50
1:5:973:G:O6	1:5:1282:G:N3	2.45	0.50
1:5:978:G:C5	1:5:979:C:C5	2.99	0.50
1:5:1277:G:C2	1:5:1278:C:C5	2.98	0.50
1:5:1877:G:C2	1:5:1878:G:N9	2.79	0.50
1:5:1924:C:N3	1:5:1925:G:C8	2.79	0.50
1:5:2007:G:C3'	1:5:2008:U:H5''	2.41	0.50
1:5:2089:G:C5	1:5:2263:A:N7	2.79	0.50
1:5:2247:C:H5''	1:5:2248:C:O5'	2.11	0.50
1:5:2295:C:H5'	6:C:199:ARG:HH21	1.76	0.50
1:5:2322:G:OP1	34:e:36:ARG:NH1	2.43	0.50
1:5:2363:A:C1'	1:5:4560:C:C5	2.94	0.50
1:5:2366:A:C2'	1:5:2367:A:C5'	2.89	0.50
1:5:2555:G:O6	1:5:2572:C:N4	2.43	0.50
1:5:2601:A:C8	1:5:2743:A:OP1	2.63	0.50
1:5:2662:G:H2'	1:5:2663:G:O4'	2.11	0.50
1:5:2666:U:C5	1:5:2669:C:N4	2.80	0.50
1:5:3660:C:OP2	4:A:241:ARG:NH2	2.44	0.50
1:5:4126:C:H3'	1:5:4127:A:C5'	2.41	0.50
1:5:4152:G:C4	1:5:4153:C:C5	2.99	0.50
1:5:4164:C:N3	1:5:4165:C:C6	2.78	0.50
1:5:4258:C:O2	1:5:4259:C:C5	2.59	0.50
1:5:4413:C:H5''	12:I:157:PHE:HE2	1.68	0.50
1:5:4594:U:O2	1:5:4595:G:C8	2.64	0.50
1:5:5034:A:C2	1:5:5035:U:C6	2.99	0.50
2:7:42:A:N3	2:7:43:U:C6	2.79	0.50
3:8:63:U:H3'	3:8:63:U:C2	2.46	0.50
7:D:22:ARG:HG3	7:D:22:ARG:NH1	2.14	0.50
14:K:103:ASN:CA	14:K:140:GLY:HA2	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:e:23:HIS:CD2	34:e:24:GLN:HG3	2.46	0.50
46:q:52:VAL:O	46:q:90:PHE:N	2.44	0.50
46:q:109:ALA:H	46:q:184:SER:CB	2.23	0.50
48:4:193:GLY:HA3	48:4:203:ILE:CD1	2.40	0.50
48:4:241:GLU:N	48:4:243:GLN:CD	2.68	0.50
48:4:518:PRO:HB3	73:SX:75:ILE:CD1	2.41	0.50
48:4:558:LEU:O	48:4:562:GLU:HG2	2.11	0.50
48:4:650:TRP:HZ3	48:4:679:VAL:CB	2.24	0.50
48:4:693:CYS:SG	48:4:695:GLU:HG2	2.51	0.50
49:S2:29:G:N1	49:S2:30:C:C4	2.79	0.50
49:S2:105:U:H5''	49:S2:106:C:OP2	2.11	0.50
49:S2:341:C:C2	49:S2:342:C:C6	2.99	0.50
49:S2:356:C:O4'	49:S2:356:C:O2	2.29	0.50
49:S2:732:U:N3	49:S2:733:C:C5	2.80	0.50
49:S2:841:G:N2	49:S2:842:C:C2	2.79	0.50
49:S2:850:C:H2'	49:S2:851:C:C6	2.46	0.50
49:S2:853:C:O2	49:S2:853:C:O4'	2.29	0.50
49:S2:999:G:N2	49:S2:1000:C:N1	2.59	0.50
49:S2:1083:A:N3	49:S2:1859:A:C2'	2.74	0.50
49:S2:1146:C:O2	49:S2:1147:C:C5	2.60	0.50
49:S2:1201:U:O4'	49:S2:1357:A:C2	2.64	0.50
49:S2:1226:G:O6	49:S2:1638:G:C8	2.53	0.50
49:S2:1283:C:N4	62:SM:103:VAL:HA	2.26	0.50
49:S2:1293:A:N6	81:Sf:139:HIS:C	2.68	0.50
49:S2:1417:C:H42	49:S2:1419:C:H41	1.59	0.50
49:S2:1594:A:C6	49:S2:1595:U:C6	2.93	0.50
49:S2:1812:U:O2	49:S2:1813:A:C8	2.64	0.50
49:S2:1828:C:H2'	49:S2:1829:G:C1'	2.41	0.50
49:S2:1841:C:N3	49:S2:1842:C:C5	2.79	0.50
50:SA:59:LEU:CD2	50:SA:181:GLU:HG2	2.40	0.50
50:SA:141:ASN:N	50:SA:141:ASN:HD22	2.07	0.50
55:SF:38:TYR:OH	78:Sc:54:ASP:OD2	2.29	0.50
58:SI:196:GLU:OE2	58:SI:197:PHE:N	2.44	0.50
59:SJ:5:ARG:HB2	59:SJ:7:TRP:CZ2	2.46	0.50
60:SK:21:MET:HE1	60:SK:49:MET:HE3	1.92	0.50
63:SN:56:ASP:HB3	77:Sb:50:ALA:O	2.11	0.50
74:SY:58:PHE:CE1	74:SY:72:PHE:HB3	2.46	0.50
1:5:29:G:C4	1:5:30:C:C5	2.99	0.50
1:5:40:G:C6	1:5:4378:A:C4	2.98	0.50
1:5:56:A:N1	1:5:57:G:C5	2.79	0.50
1:5:130:C:C2	1:5:139:G:N2	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:217:C:O2	6:C:172:LYS:HE2	2.11	0.50
1:5:313:U:H2'	1:5:314:G:O4'	2.11	0.50
1:5:441:G:C2	1:5:442:G:C5	2.99	0.50
1:5:446:C:C2	1:5:447:C:C6	2.99	0.50
1:5:739:G:H2'	1:5:740:G:O4'	2.10	0.50
1:5:1250:C:C2	1:5:1261:G:N2	2.79	0.50
1:5:1584:G:C6	1:5:1585:C:C4	2.99	0.50
1:5:1632:A:H3'	1:5:1632:A:N3	2.27	0.50
1:5:1663:C:O2	1:5:1664:U:C6	2.65	0.50
1:5:1721:G:C6	1:5:1840:G:N7	2.78	0.50
1:5:1751:A:N6	1:5:1752:G:C8	2.79	0.50
1:5:1890:G:H22	1:5:1938:C:N4	2.09	0.50
1:5:2027:U:H2'	1:5:2028:C:H6	1.76	0.50
1:5:2100:A:C8	1:5:2101:C:C6	2.99	0.50
1:5:2320:G:O2'	1:5:2321:G:C8	2.57	0.50
1:5:2347:A:N7	34:e:31:ILE:CD1	2.74	0.50
1:5:2408:U:C1'	1:5:2409:U:C4	2.95	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
1:5:2557:G:H2'	1:5:2558:C:O4'	2.11	0.50
1:5:2634:C:N3	1:5:2635:U:C5	2.79	0.50
1:5:2794:C:N3	19:P:136:ILE:HD12	2.26	0.50
1:5:2823:G:C2	1:5:2824:C:N1	2.79	0.50
1:5:3590:G:C2	1:5:3591:C:H1'	2.46	0.50
1:5:3738:G:N7	1:5:3739:C:C5	2.79	0.50
1:5:3759:A:C6	49:S2:1709:G:H5'	2.47	0.50
1:5:3847:C:C4	1:5:3848:U:C5	2.99	0.50
1:5:4095:G:H2'	1:5:4096:C:C6	2.44	0.50
1:5:4118:U:O4	4:A:95:GLN:HB3	2.11	0.50
1:5:4175:G:C5	1:5:4176:C:C5	2.99	0.50
1:5:4233:A:N6	1:5:4290:U:N3	2.27	0.50
1:5:4301:U:P	23:T:87:LYS:NZ	2.84	0.50
1:5:4355:G:N1	1:5:4356:G:N7	2.59	0.50
1:5:4479:A:C6	1:5:4480:A:H1'	2.46	0.50
1:5:4730:C:P	1:5:4731:G:N2	2.85	0.50
2:7:26:C:H5''	7:D:56:THR:HG21	1.93	0.50
2:7:60:G:H2'	2:7:60:G:N3	2.25	0.50
3:8:30:U:O2	3:8:31:G:C8	2.65	0.50
4:A:216:HIS:CD2	4:A:216:HIS:N	2.78	0.50
5:B:85:ILE:HB	5:B:165:HIS:CD2	2.46	0.50
9:F:248:ARG:CZ	9:F:248:ARG:CB	2.87	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:I:191:ILE:HD12	12:I:200:VAL:HG11	1.94	0.50
13:J:31:ASP:O	13:J:32:ARG:HB2	2.10	0.50
14:K:14:TYR:CE1	14:K:16:ARG:HB3	2.47	0.50
14:K:116:MET:CB	14:K:117:ARG:NH2	2.68	0.50
14:K:117:ARG:O	14:K:123:ARG:NH1	2.44	0.50
22:S:171:ARG:HH11	22:S:171:ARG:HG3	1.76	0.50
35:f:5:LEU:O	35:f:6:TRP:C	2.54	0.50
35:f:88:PHE:CE2	35:f:92:LEU:HD11	2.47	0.50
48:4:26:ALA:HB3	48:4:32:LYS:HB2	1.93	0.50
48:4:58:ASP:C	48:4:63:GLU:CG	2.85	0.50
48:4:154:VAL:HG22	48:4:353:MET:SD	2.52	0.50
48:4:533:MET:SD	48:4:533:MET:C	2.94	0.50
48:4:541:SER:OG	48:4:576:VAL:CG1	2.54	0.50
48:4:751:CYS:SG	48:4:756:VAL:HG23	2.50	0.50
48:4:752:PRO:CB	48:4:780:PRO:CA	2.77	0.50
48:4:845:LYS:HE3	48:4:846:GLU:CB	2.42	0.50
49:S2:79:A:H8	49:S2:79:A:O5'	1.95	0.50
49:S2:309:G:C2	49:S2:310:C:C6	2.98	0.50
49:S2:805:U:C2	49:S2:806:U:C6	2.99	0.50
49:S2:950:C:O2	49:S2:950:C:H2'	2.11	0.50
49:S2:1031:A:C4	49:S2:1032:C:C6	2.99	0.50
49:S2:1070:A:C8	49:S2:1071:G:C8	3.00	0.50
49:S2:1135:C:C4	49:S2:1136:U:O4	2.65	0.50
49:S2:1184:G:H2'	49:S2:1185:C:O4'	2.11	0.50
49:S2:1294:G:C6	81:Sf:138:ARG:HD3	2.46	0.50
49:S2:1513:C:O2'	49:S2:1514:G:H5'	2.11	0.50
49:S2:1565:C:N3	49:S2:1571:G:C2	2.80	0.50
49:S2:1667:U:O2	49:S2:1668:U:C5	2.64	0.50
56:SG:217:MET:O	56:SG:221:LYS:N	2.43	0.50
62:SM:22:LEU:HD21	62:SM:109:VAL:HG21	1.93	0.50
62:SM:99:ASN:HD22	62:SM:99:ASN:N	2.09	0.50
71:SV:59:ILE:HG23	71:SV:64:GLU:HB2	1.93	0.50
72:SW:44:HIS:O	72:SW:46:TYR:N	2.45	0.50
1:5:69:A:C2	1:5:70:A:C5	2.99	0.50
1:5:132:G:C2	1:5:133:C:H1'	2.47	0.50
1:5:247:G:C5	1:5:248:C:C5	3.00	0.50
1:5:416:U:H2'	1:5:417:G:O4'	2.12	0.50
1:5:504:G:O2'	1:5:505:G:O4'	2.26	0.50
1:5:660:A:N1	1:5:661:C:C4	2.79	0.50
1:5:709:C:N3	1:5:710:G:C8	2.80	0.50
1:5:1196:G:C2	1:5:1197:C:C2	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1267:C:O2'	1:5:2109:G:N7	2.42	0.50
1:5:1325:C:O3'	1:5:3901:A:N6	2.44	0.50
1:5:1616:U:O2	1:5:1616:U:H2'	2.11	0.50
1:5:1758:G:N1	1:5:1759:G:C6	2.80	0.50
1:5:1818:G:H2'	1:5:1819:G:H5'	1.93	0.50
1:5:1885:G:H2'	1:5:1886:G:O5'	2.10	0.50
1:5:1912:G:C2	1:5:1913:C:C4	2.99	0.50
1:5:1929:A:C6	1:5:2054:U:O4	2.62	0.50
1:5:2366:A:H2'	1:5:2367:A:H5'	1.91	0.50
1:5:2435:G:H21	1:5:2783:A:H1'	1.76	0.50
1:5:2436:U:C4	1:5:2783:A:C8	3.00	0.50
1:5:2440:U:O2'	1:5:2441:C:OP1	2.26	0.50
1:5:2522:G:HO2'	1:5:2697:A:HO2'	1.53	0.50
1:5:2547:G:H2'	1:5:2547:G:N3	2.26	0.50
1:5:2889:G:H21	1:5:5034:A:H8	1.58	0.50
1:5:2905:C:C2	1:5:3590:G:N2	2.80	0.50
1:5:3642:A:C4	39:j:3:LYS:HB3	2.46	0.50
1:5:3643:A:C2	39:j:3:LYS:HE2	2.45	0.50
1:5:3795:A:C5	1:5:3796:U:C5	3.00	0.50
1:5:3870:C:H4'	5:B:261:ARG:HE	1.76	0.50
1:5:4255:A:C5	1:5:4256:A:C2	2.99	0.50
1:5:4323:A:H3'	1:5:4324:A:H8	1.77	0.50
1:5:4413:C:O2'	12:I:157:PHE:CD2	2.59	0.50
1:5:4433:G:C6	1:5:4434:C:N4	2.80	0.50
1:5:4723:A:H2'	1:5:4724:A:H8	1.75	0.50
1:5:4724:A:C4	1:5:4725:C:C5	2.99	0.50
1:5:4905:C:N3	1:5:4906:C:C6	2.80	0.50
1:5:4997:G:C4	1:5:4998:G:C8	2.99	0.50
1:5:5003:U:N3	1:5:5045:G:C2	2.80	0.50
1:5:5023:C:O4'	1:5:5023:C:O2	2.28	0.50
2:7:22:A:N1	2:7:23:A:C6	2.79	0.50
2:7:112:U:O2	2:7:112:U:C2'	2.58	0.50
3:8:82:A:N3	3:8:82:A:C2'	2.74	0.50
3:8:99:U:C2	3:8:100:U:C6	3.00	0.50
5:B:264:PHE:HD2	18:O:66:PRO:HD2	1.76	0.50
6:C:59:GLY:HA3	6:C:99:GLY:O	2.10	0.50
7:D:287:PHE:C	7:D:287:PHE:HD1	2.19	0.50
21:R:81:ARG:HG3	21:R:88:ARG:NE	2.26	0.50
38:i:20:ASN:OD1	38:i:20:ASN:C	2.53	0.50
43:n:21:ARG:HH12	49:S2:1174:U:H5''	1.76	0.50
46:q:141:LEU:C	48:4:180:ARG:HH21	2.18	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:201:PRO:HA	46:q:205:ASP:OD1	2.11	0.50
48:4:72:SER:CB	48:4:104:ASP:HB3	2.42	0.50
48:4:288:THR:HG23	48:4:289:PHE:N	2.27	0.50
48:4:562:GLU:CB	48:4:570:ILE:CG1	2.90	0.50
48:4:577:VAL:CG1	48:4:579:TYR:CE1	2.91	0.50
48:4:579:TYR:HB2	48:4:740:LEU:HD21	1.94	0.50
49:S2:59:U:H2'	49:S2:60:A:H2'	1.92	0.50
49:S2:188:C:N3	49:S2:189:U:C6	2.80	0.50
49:S2:340:C:H2'	49:S2:341:C:H6	1.74	0.50
49:S2:428:U:H5	59:SJ:7:TRP:CE2	2.28	0.50
49:S2:552:G:N1	49:S2:553:U:C4	2.79	0.50
49:S2:750:C:O2	49:S2:750:C:C2'	2.59	0.50
49:S2:793:G:N7	49:S2:794:A:N7	2.59	0.50
49:S2:923:G:N1	49:S2:924:G:C5	2.79	0.50
49:S2:999:G:N3	49:S2:1000:C:C6	2.79	0.50
49:S2:1037:G:C6	49:S2:1038:U:C5	2.99	0.50
49:S2:1094:C:O2	49:S2:1095:U:C6	2.64	0.50
49:S2:1132:C:C4	49:S2:1133:A:N7	2.75	0.50
49:S2:1205:C:N3	49:S2:1206:G:N7	2.60	0.50
49:S2:1248:U:H2'	49:S2:1249:C:H1'	1.92	0.50
49:S2:1405:A:N6	49:S2:1406:G:C6	2.79	0.50
49:S2:1495:G:H1'	79:Sd:41:GLN:CG	2.41	0.50
49:S2:1630:A:C6	49:S2:1631:U:C4	2.99	0.50
49:S2:1795:G:N3	49:S2:1796:G:C8	2.79	0.50
49:S2:1811:C:C4	49:S2:1812:U:C5	2.99	0.50
51:SB:180:ASP:OD1	51:SB:180:ASP:C	2.55	0.50
52:SC:133:TYR:CD1	52:SC:216:MET:HA	2.45	0.50
52:SC:177:PRO:HD3	71:SV:9:VAL:HG11	1.93	0.50
62:SM:94:ILE:O	62:SM:95:ASP:C	2.54	0.50
1:5:165:A:C6	1:5:166:C:C4	2.98	0.50
1:5:345:C:C2	1:5:346:G:C8	2.99	0.50
1:5:470:A:H61	8:E:101:ARG:NH2	2.09	0.50
1:5:1235:G:C2	1:5:1236:C:C4	2.99	0.50
1:5:1267:C:C4'	1:5:2110:C:O2'	2.59	0.50
1:5:1302:U:C2	1:5:1303:A:H8	2.24	0.50
1:5:1358:G:H2'	1:5:1359:G:H8	1.72	0.50
1:5:1508:A:C6	1:5:1509:C:C5	3.00	0.50
1:5:1522:G:C6	1:5:1653:A:C6	2.99	0.50
1:5:1566:C:O2'	1:5:1567:U:H5'	2.11	0.50
1:5:1856:C:N3	1:5:1857:C:C5	2.79	0.50
1:5:1893:C:O2	1:5:1894:C:C5	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1899:G:H1	1:5:2076:G:H1	1.60	0.50
1:5:2270:G:C2	1:5:2271:C:N3	2.79	0.50
1:5:2496:G:C6	1:5:2497:C:C5	3.00	0.50
1:5:2540:C:N3	1:5:2541:G:N7	2.59	0.50
1:5:2644:G:N1	1:5:2645:G:C5	2.80	0.50
1:5:2724:G:N1	1:5:2726:G:C5	2.79	0.50
1:5:2762:G:H1'	1:5:2763:U:O4'	2.11	0.50
1:5:2851:G:C6	1:5:2852:U:H6	2.17	0.50
1:5:3666:C:C4	1:5:3667:C:C6	3.00	0.50
1:5:3832:U:H2'	1:5:3833:C:H6	1.75	0.50
1:5:3943:A:C2	1:5:3944:G:H1'	2.46	0.50
1:5:4145:C:C2	1:5:4146:G:N7	2.79	0.50
1:5:4284:C:N3	1:5:4285:U:H5	1.99	0.50
1:5:4511:A:H2'	1:5:4512:U:C1'	2.42	0.50
1:5:4731:G:N7	1:5:4732:G:C6	2.79	0.50
1:5:4898:G:C2	1:5:4899:G:C5	2.99	0.50
1:5:4960:G:H2'	1:5:4961:G:H5'	1.93	0.50
1:5:5028:G:C6	1:5:5029:C:C4	2.99	0.50
2:7:51:G:C2	2:7:52:C:C5	3.00	0.50
3:8:4:C:C2	3:8:5:U:C6	3.00	0.50
3:8:5:U:H2'	3:8:6:C:C6	2.46	0.50
3:8:86:U:O4	37:h:7:ARG:NE	2.44	0.50
3:8:99:U:C2	3:8:100:U:C5	3.00	0.50
3:8:133:G:N2	3:8:134:G:N9	2.59	0.50
3:8:144:U:C2	3:8:145:C:C6	3.00	0.50
12:I:184:MET:HB3	12:I:190:LEU:HD12	1.94	0.50
20:Q:176:ARG:O	20:Q:177:ALA:HB2	2.10	0.50
22:S:33:PHE:CZ	22:S:106:VAL:HB	2.46	0.50
34:e:124:ASN:OD1	34:e:124:ASN:N	2.45	0.50
36:g:60:ARG:HG3	36:g:61:PRO:HD2	1.93	0.50
45:p:14:TYR:N	45:p:14:TYR:CD1	2.80	0.50
46:q:35:VAL:CG2	46:q:40:MET:CG	2.89	0.50
46:q:63:LYS:HZ2	46:q:78:LEU:HB3	1.76	0.50
46:q:168:GLY:N	46:q:171:GLU:HG3	2.26	0.50
46:q:182:PRO:O	46:q:183:PHE:C	2.54	0.50
48:4:60:ARG:HG3	48:4:70:ILE:HD12	1.93	0.50
48:4:81:LEU:HB2	48:4:86:LEU:HD11	1.93	0.50
48:4:394:LEU:CD2	48:4:485:ILE:HG22	2.39	0.50
48:4:503:PRO:HB3	48:4:533:MET:CE	2.41	0.50
48:4:540:GLU:OE1	48:4:540:GLU:O	2.29	0.50
48:4:650:TRP:NE1	48:4:664:ASP:HB2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:756:VAL:O	48:4:759:ILE:CG2	2.29	0.50
49:S2:20:G:H4'	49:S2:620:G:N7	2.27	0.50
49:S2:191:A:P	58:SI:141:ARG:HD2	2.51	0.50
49:S2:609:U:C2	49:S2:610:G:H8	2.27	0.50
49:S2:880:G:N7	49:S2:881:G:C8	2.72	0.50
49:S2:976:G:C4	49:S2:977:C:C6	2.99	0.50
49:S2:978:G:C2	49:S2:979:C:C2	2.99	0.50
49:S2:1063:C:H5''	49:S2:1064:C:OP2	2.12	0.50
49:S2:1234:C:O2	49:S2:1234:C:C2'	2.59	0.50
49:S2:1292:C:C2'	81:Sf:150:PHE:HD1	2.23	0.50
49:S2:1573:G:C5	49:S2:1574:C:C5	2.99	0.50
49:S2:1710:C:C4	49:S2:1711:U:C5	3.00	0.50
49:S2:1795:G:N1	49:S2:1796:G:C5	2.80	0.50
49:S2:1824:A:N1	49:S2:1825:A:N6	2.53	0.50
50:SA:81:ASN:HB2	50:SA:204:TYR:CE2	2.46	0.50
50:SA:141:ASN:N	50:SA:141:ASN:ND2	2.58	0.50
55:SF:97:PHE:HB3	55:SF:108:PRO:CG	2.41	0.50
55:SF:110:GLN:HA	55:SF:110:GLN:HE21	1.77	0.50
56:SG:173:ALA:HB1	56:SG:174:PRO:CD	2.41	0.50
59:SJ:7:TRP:O	59:SJ:8:VAL:C	2.54	0.50
61:SL:80:MET:HG2	61:SL:86:ILE:HG22	1.92	0.50
72:SW:78:ARG:HD3	72:SW:126:LEU:HD23	1.94	0.50
82:Sg:176:VAL:HG23	82:Sg:188:HIS:HD2	1.75	0.50
82:Sg:256:ILE:HD11	82:Sg:300:ALA:CB	2.41	0.50
1:5:469:C:C2	1:5:688:U:H1'	2.35	0.50
1:5:654:C:O2	1:5:654:C:H2'	2.12	0.50
1:5:658:C:H2'	1:5:659:G:O4'	2.11	0.50
1:5:751:G:H2'	1:5:752:G:H8	1.77	0.50
1:5:1178:G:C5	1:5:1179:U:C6	3.00	0.50
1:5:1271:G:H3'	1:5:1272:C:C4'	2.41	0.50
1:5:1309:C:H2'	35:f:21:GLN:HE22	1.76	0.50
1:5:1440:U:C4'	1:5:2109:G:O2'	2.60	0.50
1:5:1570:G:C6	1:5:1571:G:C5	3.00	0.50
1:5:1594:C:N4	1:5:1595:G:C5	2.80	0.50
1:5:1666:C:C2	1:5:2284:G:N2	2.80	0.50
1:5:1671:U:O4	1:5:1853:G:H1'	2.10	0.50
1:5:1961:G:H2'	1:5:2024:G:H1	1.75	0.50
1:5:2261:G:H2'	1:5:2262:G:N7	2.26	0.50
1:5:2270:G:N3	1:5:2271:C:C5	2.80	0.50
1:5:2690:C:N4	1:5:2691:U:C4	2.79	0.50
1:5:2745:A:C2	1:5:2746:A:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2836:A:C2	1:5:3895:G:H4'	2.46	0.50
1:5:2907:G:H2'	1:5:2908:U:O4'	2.12	0.50
1:5:3753:G:C4	1:5:3776:G:C6	3.00	0.50
1:5:3879:G:O6	1:5:3882:C:C5	2.63	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
1:5:4136:G:C2	1:5:4137:C:N1	2.79	0.50
1:5:4137:C:H2'	1:5:4138:C:C6	2.47	0.50
1:5:4913:G:C2'	1:5:4914:C:O4'	2.59	0.50
2:7:85:G:OP1	9:F:224:LYS:NZ	2.43	0.50
3:8:65:A:OP1	37:h:56:ARG:HG3	2.12	0.50
3:8:115:G:C6	3:8:116:C:C4	2.99	0.50
4:A:3:ARG:HG3	4:A:3:ARG:NH1	2.26	0.50
6:C:178:ASN:N	6:C:178:ASN:HD22	2.08	0.50
11:H:117:PHE:HD1	11:H:118:LEU:HB2	1.74	0.50
12:I:47:PRO:HA	12:I:171:TRP:NE1	2.25	0.50
18:O:12:ARG:NH1	22:S:171:ARG:NH2	2.60	0.50
20:Q:75:ARG:HH11	20:Q:75:ARG:HG3	1.76	0.50
32:c:30:GLY:O	32:c:93:THR:HB	2.12	0.50
45:p:10:ILE:HG12	45:p:30:GLU:HB3	1.92	0.50
46:q:99:ARG:CD	46:q:100:ASP:OD1	2.59	0.50
47:r:90:LEU:HG	47:r:111:ILE:HG23	1.93	0.50
48:4:13:MET:HE1	48:4:465:PRO:HD2	1.81	0.50
48:4:451:ILE:HD12	48:4:458:VAL:HB	1.94	0.50
48:4:536:CYS:HA	48:4:545:ILE:O	2.12	0.50
48:4:591:CYS:SG	48:4:732:SER:N	2.85	0.50
48:4:592:LEU:HA	48:4:602:LEU:O	2.11	0.50
48:4:686:ALA:O	48:4:689:GLU:O	2.30	0.50
49:S2:623:G:C2	49:S2:624:C:N1	2.80	0.50
49:S2:794:A:C5	49:S2:795:A:N7	2.80	0.50
49:S2:828:G:C4	49:S2:829:C:C6	3.00	0.50
49:S2:862:A:C2	49:S2:863:U:C1'	2.95	0.50
49:S2:1005:G:H2'	49:S2:1006:C:H6	1.77	0.50
49:S2:1018:U:N3	49:S2:1019:C:H5	2.04	0.50
49:S2:1018:U:H5'	63:SN:71:ILE:HD12	1.94	0.50
49:S2:1159:G:H2'	49:S2:1160:U:O4'	2.12	0.50
49:S2:1204:A:H2'	49:S2:1205:C:H6	1.76	0.50
49:S2:1290:G:C4	81:Sf:146:LEU:HD23	2.46	0.50
49:S2:1434:C:H3'	49:S2:1435:C:C5'	2.42	0.50
49:S2:1455:A:N6	49:S2:1456:G:C5	2.79	0.50
49:S2:1459:G:C5	49:S2:1460:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1589:A:H2'	49:S2:1590:C:O4'	2.11	0.50
49:S2:1596:U:N3	49:S2:1597:C:C6	2.80	0.50
49:S2:1785:C:C2	49:S2:1786:U:C4	2.99	0.50
53:SD:7:LYS:NZ	70:SU:113:GLU:OE2	2.38	0.50
53:SD:141:LYS:HA	53:SD:147:ALA:HA	1.93	0.50
55:SF:25:THR:HG23	55:SF:109:LEU:HD13	1.94	0.50
57:SH:169:LYS:O	57:SH:171:GLU:N	2.45	0.50
58:SI:65:PHE:O	58:SI:109:TYR:OH	2.30	0.50
58:SI:165:GLN:HE21	58:SI:171:LEU:HD23	1.77	0.50
62:SM:19:GLN:CB	62:SM:88:TRP:HB3	2.42	0.50
65:SP:53:GLN:HG2	65:SP:83:MET:SD	2.52	0.50
75:SZ:103:HIS:O	75:SZ:104:ARG:C	2.54	0.50
1:5:190:G:C2	1:5:252:C:C2	3.00	0.50
1:5:226:G:O2'	1:5:227:A:OP2	2.21	0.50
1:5:457:G:C2	1:5:458:C:C5	3.00	0.50
1:5:642:G:N3	1:5:643:C:C6	2.80	0.50
1:5:929:A:N1	1:5:930:G:H3'	2.26	0.50
1:5:951:G:C2'	1:5:952:G:H5''	2.41	0.50
1:5:990:C:C4	1:5:991:C:C5	2.99	0.50
1:5:994:G:C2	1:5:995:C:C2	2.99	0.50
1:5:1188:C:C2	1:5:1189:G:H8	2.23	0.50
1:5:1203:G:H2'	1:5:1204:C:O4'	2.11	0.50
1:5:1279:A:C2	1:5:1280:C:N3	2.80	0.50
1:5:1326:A:H2'	1:5:1327:C:H6	1.76	0.50
1:5:1484:G:H5''	1:5:1484:G:C8	2.47	0.50
1:5:1540:C:O2	1:5:1540:C:H2'	2.11	0.50
1:5:1564:A:N6	49:S2:1029:G:O2'	2.28	0.50
1:5:1565:A:H2'	1:5:1566:C:C5'	2.42	0.50
1:5:1598:C:C5	1:5:2798:A:C5	2.99	0.50
1:5:1673:U:C2	1:5:1674:C:C6	3.00	0.50
1:5:1751:A:N6	1:5:1752:G:C5	2.80	0.50
1:5:1872:G:N3	1:5:4219:A:H2	2.10	0.50
1:5:1890:G:N2	1:5:1938:C:N4	2.59	0.50
1:5:1895:G:C6	1:5:1896:A:C2	3.00	0.50
1:5:1983:A:H2	1:5:2008:U:C5	2.28	0.50
1:5:2056:G:N2	1:5:2058:G:O6	2.45	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
1:5:2382:A:N7	1:5:2830:G:O2'	2.43	0.50
1:5:2460:A:O4'	17:N:94:PHE:CE1	2.64	0.50
1:5:2559:G:H22	1:5:2567:G:H22	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2669:C:O2'	1:5:2670:C:P	2.70	0.50
1:5:2837:U:C4	1:5:2838:G:C8	2.98	0.50
1:5:4133:C:N3	1:5:4134:C:C5	2.80	0.50
1:5:4413:C:C2'	12:I:157:PHE:CD2	2.90	0.50
1:5:4419:U:H5	48:4:765:ARG:NH2	2.08	0.50
1:5:4536:C:O2	1:5:4536:C:H2'	2.11	0.50
1:5:4552:U:H2'	1:5:4553:A:O5'	2.11	0.50
1:5:4651:A:C5	1:5:4652:G:C8	3.00	0.50
1:5:4758:U:H2'	1:5:4759:C:O5'	2.12	0.50
1:5:4930:C:OP1	8:E:262:GLN:N	2.44	0.50
1:5:4956:A:N1	1:5:4957:C:C6	2.80	0.50
1:5:4961:G:H2'	1:5:4962:C:O4'	2.11	0.50
1:5:4967:A:H2'	1:5:4968:A:H8	1.76	0.50
1:5:5020:G:O6	1:5:5028:G:O6	2.28	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
3:8:74:U:O2	3:8:74:U:C2'	2.55	0.50
3:8:81:C:H3'	3:8:82:A:C4'	2.38	0.50
4:A:40:TYR:HB3	4:A:93:LYS:HB2	1.93	0.50
5:B:116:ARG:C	5:B:118:PHE:H	2.20	0.50
5:B:378:ARG:CD	26:W:32:LEU:HD21	2.39	0.50
8:E:54:SER:O	8:E:56:SER:N	2.44	0.50
11:H:103:VAL:HA	11:H:113:GLU:O	2.12	0.50
12:I:98:ARG:CD	12:I:119:PHE:HE1	2.25	0.50
14:K:34:PRO:CD	14:K:35:LEU:N	2.74	0.50
14:K:126:SER:HB2	14:K:130:LYS:CE	2.42	0.50
20:Q:22:ASP:OD1	20:Q:25:LEU:HB3	2.12	0.50
27:X:79:PHE:N	27:X:79:PHE:HD1	2.08	0.50
45:p:10:ILE:HG23	45:p:11:VAL:HG13	1.94	0.50
45:p:68:ALA:HB1	45:p:69:TRP:CE3	2.47	0.50
46:q:123:VAL:C	46:q:157:ASP:OD2	2.55	0.50
48:4:4:PHE:HD1	48:4:5:THR:N	2.10	0.50
48:4:154:VAL:CB	48:4:353:MET:HE3	2.41	0.50
48:4:200:MET:HG2	48:4:203:ILE:CG2	2.40	0.50
48:4:804:THR:OG1	48:4:808:ALA:HB3	2.05	0.50
49:S2:10:G:H2'	49:S2:10:G:N3	2.26	0.50
49:S2:70:G:C2	49:S2:80:G:N2	2.78	0.50
49:S2:72:C:H4'	49:S2:73:C:OP1	2.10	0.50
49:S2:393:U:O2	49:S2:394:G:C8	2.64	0.50
49:S2:452:G:O2'	49:S2:453:C:H5'	2.12	0.50
49:S2:581:U:O3'	74:SY:66:GLY:HA3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:800:U:H2'	49:S2:801:U:O4'	2.12	0.50
49:S2:928:G:H2'	49:S2:929:G:H8	1.75	0.50
49:S2:936:G:C6	49:S2:937:C:C4	3.00	0.50
49:S2:959:G:O6	64:SO:68:GLU:OE1	2.30	0.50
49:S2:974:C:O2	49:S2:975:G:C8	2.65	0.50
49:S2:1074:C:N3	49:S2:1075:C:C4	2.80	0.50
49:S2:1339:U:C2	49:S2:1340:U:C5	3.00	0.50
49:S2:1792:G:C4	49:S2:1793:A:C8	3.00	0.50
49:S2:1805:G:N1	49:S2:1806:A:C8	2.80	0.50
49:S2:1849:G:O2'	49:S2:1850:A:C5'	2.59	0.50
50:SA:116:PHE:C	50:SA:116:PHE:CD1	2.88	0.50
53:SD:115:VAL:HG21	53:SD:142:LEU:HD21	1.94	0.50
53:SD:202:LYS:O	53:SD:203:PRO:C	2.50	0.50
56:SG:224:ARG:HA	56:SG:227:GLN:HB2	1.92	0.50
57:SH:145:ARG:NE	72:SW:51:GLU:HG2	2.26	0.50
62:SM:93:LYS:O	62:SM:94:ILE:HG22	2.12	0.50
64:SO:56:VAL:HA	64:SO:60:MET:HE2	1.93	0.50
65:SP:28:MET:HE1	65:SP:36:LEU:CD1	2.41	0.50
82:Sg:192:THR:O	82:Sg:213:ASP:HB2	2.12	0.50
1:5:101:A:N1	1:5:102:G:C5	2.79	0.50
1:5:105:A:O2'	15:L:35:ARG:NH1	2.44	0.50
1:5:193:G:C6	1:5:194:C:C4	3.00	0.50
1:5:316:U:O2	1:5:316:U:C2'	2.57	0.50
1:5:353:A:C2	1:5:379:G:C8	3.00	0.50
1:5:677:G:C6	1:5:678:C:N4	2.80	0.50
1:5:964:A:H5'	47:r:94:ARG:HH11	1.76	0.50
1:5:1187:G:H4'	7:D:274:ALA:CB	2.41	0.50
1:5:1213:G:C6	1:5:1215:C:C5	3.00	0.50
1:5:1215:C:H2'	1:5:1215:C:O2	2.10	0.50
1:5:1277:G:C2	1:5:1278:C:N1	2.80	0.50
1:5:1329:G:N2	1:5:3865:A:H1'	2.27	0.50
1:5:1627:G:C5	1:5:1628:C:C6	3.00	0.50
1:5:1633:G:N2	1:5:1642:A:C8	2.79	0.50
1:5:1725:U:C2	1:5:1726:U:C6	2.99	0.50
1:5:1805:A:C8	31:b:28:ARG:CB	2.95	0.50
1:5:1808:C:C2	1:5:1831:G:C2	3.00	0.50
1:5:1939:A:H2	1:5:3874:G:OP1	1.95	0.50
1:5:1968:G:C4	1:5:1969:G:C8	3.00	0.50
1:5:1972:G:N2	1:5:1973:G:C4	2.80	0.50
1:5:1994:C:N3	1:5:1995:G:C8	2.78	0.50
1:5:2315:G:C6	1:5:2316:G:N7	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2463:G:N1	1:5:2464:C:N4	2.60	0.50
1:5:2612:G:N1	1:5:2613:C:C2	2.79	0.50
1:5:2645:G:N1	1:5:2646:C:C5	2.80	0.50
1:5:2841:G:C6	1:5:2842:G:C8	3.00	0.50
1:5:3599:A:H2'	1:5:3600:G:C8	2.47	0.50
1:5:3621:A:H1'	1:5:4655:A:C2	2.46	0.50
1:5:3721:U:C2	1:5:3722:G:H8	2.18	0.50
1:5:3878:C:C5	1:5:4518:A:C2	2.99	0.50
1:5:4240:G:C2	1:5:4241:C:H1'	2.46	0.50
1:5:4257:A:C5	13:J:60:PHE:CE2	2.99	0.50
1:5:4362:A:N3	1:5:4363:A:C8	2.80	0.50
1:5:4426:C:C4	1:5:4427:G:C8	2.99	0.50
1:5:4538:G:C5	1:5:4539:U:C5	2.99	0.50
1:5:4702:G:C6	1:5:4703:U:C6	3.00	0.50
1:5:4743:G:N3	1:5:4744:A:C8	2.80	0.50
1:5:4910:G:N2	18:O:109:PRO:N	2.59	0.50
1:5:4945:G:N7	35:f:60:PRO:HD2	2.27	0.50
2:7:58:A:C4	2:7:59:G:C8	2.99	0.50
3:8:35:C:H2'	3:8:36:G:O5'	2.11	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
7:D:66:TYR:CD1	7:D:66:TYR:C	2.90	0.50
12:I:171:TRP:HE3	12:I:181:PHE:HB2	1.75	0.50
14:K:111:ASN:O	14:K:114:ARG:HG2	2.12	0.50
22:S:84:TYR:HD2	22:S:113:MET:CE	2.24	0.50
47:r:39:ARG:HB3	47:r:40:TYR:CD1	2.46	0.50
48:4:32:LYS:O	48:4:36:THR:HG23	2.12	0.50
48:4:72:SER:HB2	48:4:105:SER:HA	1.94	0.50
48:4:147:ILE:HD11	48:4:203:ILE:CD1	2.41	0.50
48:4:660:ASN:CG	48:4:697:MET:C	2.74	0.50
48:4:833:GLN:O	48:4:837:GLU:HG2	2.12	0.50
49:S2:25:A:H61	49:S2:648:A:N6	2.02	0.50
49:S2:28:U:O2	49:S2:29:G:N7	2.44	0.50
49:S2:505:G:O2'	49:S2:506:G:H5'	2.12	0.50
49:S2:597:G:N1	49:S2:640:A:N1	2.60	0.50
49:S2:600:G:N2	49:S2:601:G:C5	2.80	0.50
49:S2:1286:G:N2	49:S2:1312:G:C4	2.79	0.50
49:S2:1394:G:H2'	49:S2:1394:G:N3	2.26	0.50
49:S2:1590:C:H3'	49:S2:1591:C:H6	1.77	0.50
49:S2:1610:G:C2	49:S2:1611:G:C4	3.00	0.50
49:S2:1666:C:N3	49:S2:1667:U:C4	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1754:G:C4	49:S2:1755:C:C6	3.00	0.50
53:SD:72:VAL:CG2	60:SK:20:VAL:HG21	2.42	0.50
54:SE:106:LYS:HB3	54:SE:108:ARG:HD3	1.94	0.50
57:SH:127:ASP:O	57:SH:130:LEU:HB2	2.10	0.50
58:SI:87:ASN:OD1	58:SI:88:ASN:N	2.45	0.50
60:SK:43:LEU:HD12	60:SK:44:HIS:CD2	2.46	0.50
65:SP:43:ARG:HB3	65:SP:47:ARG:HD3	1.93	0.50
68:SS:92:ASP:O	68:SS:94:LYS:N	2.37	0.50
1:5:33:A:H5''	1:5:33:A:H8	1.77	0.50
1:5:77:U:C4	1:5:335:A:N1	2.79	0.50
1:5:321:U:O2	1:5:322:C:C6	2.64	0.50
1:5:739:G:C2	1:5:740:G:C4	3.00	0.50
1:5:931:C:C6	1:5:932:A:C8	3.00	0.50
1:5:1266:G:H5''	1:5:2112:G:N2	2.26	0.50
1:5:1320:U:H2'	1:5:1320:U:O2	2.11	0.50
1:5:1362:G:C6	1:5:1363:C:C4	3.00	0.50
1:5:1456:C:OP1	1:5:1456:C:H4'	2.11	0.50
1:5:1735:U:O2	1:5:1736:A:C8	2.65	0.50
1:5:1755:C:H41	1:5:1778:C:H4'	1.75	0.50
1:5:1811:G:N1	1:5:1812:C:C5	2.78	0.50
1:5:1829:G:C2	1:5:1830:G:C4	2.99	0.50
1:5:1962:A:H5''	1:5:1962:A:H8	1.76	0.50
1:5:2015:U:N3	1:5:2016:C:C5	2.80	0.50
1:5:2021:G:H4'	46:q:85:ASN:CB	2.39	0.50
1:5:2065:G:C5	1:5:2066:C:C5	2.99	0.50
1:5:2089:G:C6	1:5:2262:G:C2'	2.95	0.50
1:5:2089:G:C8	1:5:2262:G:H3'	2.47	0.50
1:5:2123:C:O2'	1:5:2124:G:OP2	2.15	0.50
1:5:2326:G:N2	1:5:2327:G:C4	2.80	0.50
1:5:2645:G:C5	1:5:2646:C:C5	3.00	0.50
1:5:2827:G:H2'	1:5:2827:G:N3	2.26	0.50
1:5:3629:A:C4'	49:S2:1721:U:C2	2.94	0.50
1:5:3636:C:O2	1:5:3636:C:C2'	2.59	0.50
1:5:3754:G:C2	1:5:3755:G:C8	2.99	0.50
1:5:3802:U:N3	1:5:4498:U:O2'	2.44	0.50
1:5:4543:G:H2'	1:5:4544:A:C8	2.46	0.50
1:5:4755:G:N1	1:5:4876:U:C4	2.80	0.50
1:5:4763:U:H6	11:H:42:ASN:ND2	2.09	0.50
1:5:4957:C:O2	1:5:4958:C:H6	1.94	0.50
2:7:92:C:O2	2:7:93:G:C8	2.65	0.50
3:8:12:G:N1	3:8:13:G:C5	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:39:G:N3	3:8:39:G:H2'	2.26	0.50
4:A:202:VAL:CG1	4:A:217:GLN:HG2	2.39	0.50
6:C:209:ILE:HD13	6:C:221:PHE:CE2	2.47	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
8:E:129:PHE:C	8:E:129:PHE:HD1	2.20	0.50
8:E:129:PHE:O	8:E:130:SER:C	2.52	0.50
10:G:58:PRO:CD	27:X:46:PHE:HD2	2.25	0.50
14:K:40:LYS:O	14:K:44:ASP:CB	2.59	0.50
14:K:121:LEU:HB2	14:K:129:ILE:CD1	2.41	0.50
21:R:117:ARG:HH21	21:R:118:HIS:CE1	2.30	0.50
23:T:74:ILE:HG23	23:T:89:ILE:HG13	1.93	0.50
26:W:57:ARG:HH11	26:W:57:ARG:HG2	1.76	0.50
32:c:28:VAL:CG1	32:c:33:GLN:CB	2.86	0.50
44:o:26:TYR:HD1	44:o:27:LYS:N	2.09	0.50
48:4:103:ILE:HD11	48:4:122:THR:HG21	1.88	0.50
48:4:517:LEU:HD23	73:SX:50:ILE:HD13	1.94	0.50
48:4:518:PRO:CA	73:SX:50:ILE:HD12	2.42	0.50
48:4:759:ILE:CD1	48:4:784:VAL:HG21	2.23	0.50
49:S2:49:C:O2	49:S2:478:G:C2	2.65	0.50
49:S2:171:A:C5	49:S2:173:A:N7	2.79	0.50
49:S2:461:U:O2	49:S2:462:C:C6	2.65	0.50
49:S2:689:U:H2'	49:S2:690:G:C1'	2.42	0.50
49:S2:1032:C:C4	49:S2:1033:G:N7	2.80	0.50
49:S2:1094:C:O2	49:S2:1094:C:H2'	2.12	0.50
49:S2:1325:G:C2	49:S2:1327:G:N7	2.80	0.50
49:S2:1373:C:H2'	49:S2:1374:C:C6	2.47	0.50
49:S2:1466:G:N3	49:S2:1467:C:C6	2.80	0.50
49:S2:1471:C:H2'	49:S2:1472:C:C6	2.47	0.50
49:S2:1772:C:O2	49:S2:1773:C:C6	2.65	0.50
52:SC:199:PRO:CD	52:SC:223:TYR:HH	2.22	0.50
67:SR:3:ARG:NH1	67:SR:49:LYS:HD3	2.27	0.50
81:Sf:141:CYS:O	81:Sf:141:CYS:SG	2.70	0.50
1:5:246:G:N1	1:5:247:G:C5	2.80	0.50
1:5:258:G:C5	1:5:259:C:C5	2.99	0.50
1:5:446:C:O2'	1:5:2314:G:H4'	2.11	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
1:5:699:C:C4	1:5:700:G:N7	2.80	0.50
1:5:712:C:C2	1:5:713:C:C6	3.00	0.50
1:5:920:C:C4	1:5:921:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:936:C:C5	16:M:46:ARG:HA	2.47	0.50
1:5:1168:G:C2	1:5:1169:G:C5	2.99	0.50
1:5:1185:G:C5	1:5:1186:U:C6	3.00	0.50
1:5:1213:G:N9	1:5:1215:C:H1'	2.25	0.50
1:5:1261:G:N1	1:5:1262:G:N7	2.60	0.50
1:5:1263:A:H2'	1:5:1264:C:O4'	2.12	0.50
1:5:1412:G:C4	1:5:1413:C:C5	3.00	0.50
1:5:1832:C:O2	1:5:1832:C:H2'	2.11	0.50
1:5:2248:C:OP1	9:F:26:ASN:N	2.45	0.50
1:5:2257:C:O2'	1:5:2258:C:O5'	2.30	0.50
1:5:2460:A:H1'	17:N:94:PHE:CZ	2.47	0.50
1:5:2658:G:N2	1:5:2675:G:C2	2.78	0.50
1:5:2700:G:H2'	1:5:2701:U:O4'	2.12	0.50
1:5:3653:A:O2'	4:A:180:LEU:O	2.22	0.50
1:5:3693:U:O2	1:5:3693:U:H2'	2.12	0.50
1:5:3794:C:O2	1:5:3795:A:C8	2.65	0.50
1:5:4068:U:C2	1:5:4069:U:H1'	2.47	0.50
1:5:4269:G:O6	1:5:4277:G:O6	2.29	0.50
1:5:4565:C:O2'	1:5:4566:U:H5'	2.12	0.50
1:5:4707:A:O2'	1:5:4708:A:O5'	2.26	0.50
1:5:4743:G:O6	1:5:4744:A:N6	2.45	0.50
1:5:4744:A:N3	1:5:4745:G:N7	2.60	0.50
1:5:4922:C:C2	1:5:4923:C:C6	3.00	0.50
2:7:11:A:N1	2:7:66:G:O2'	2.37	0.50
2:7:38:U:N3	2:7:40:U:OP2	2.45	0.50
3:8:92:U:H2'	3:8:93:C:O4'	2.12	0.50
3:8:118:C:O2	3:8:119:C:H6	1.95	0.50
6:C:103:ALA:O	6:C:104:PRO:C	2.55	0.50
6:C:218:ILE:HD12	6:C:222:ARG:HD2	1.93	0.50
7:D:99:TYR:CD2	7:D:199:ILE:HG23	2.47	0.50
8:E:279:PRO:C	8:E:281:LYS:N	2.69	0.50
14:K:84:ALA:C	14:K:86:LYS:H	2.19	0.50
14:K:123:ARG:HB2	14:K:129:ILE:CD1	0.95	0.50
14:K:143:VAL:O	14:K:145:GLY:N	2.45	0.50
21:R:76:MET:O	21:R:81:ARG:NH1	2.45	0.50
21:R:172:ARG:HD2	49:S2:909:G:OP2	2.12	0.50
24:U:28:PRO:HA	24:U:114:TYR:OH	2.12	0.50
30:a:82:VAL:HG21	30:a:101:ILE:HG12	1.94	0.50
31:b:16:TRP:N	31:b:16:TRP:CD1	2.80	0.50
38:i:72:PHE:C	38:i:72:PHE:CD1	2.90	0.50
46:q:28:PHE:CE1	46:q:189:ILE:CD1	2.95	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:45:MET:O	46:q:46:SER:C	2.53	0.50
46:q:45:MET:C	46:q:47:LEU:N	2.70	0.50
48:4:91:GLN:OE1	48:4:363:THR:HG21	2.12	0.50
49:S2:218:U:N3	49:S2:219:U:C4	2.80	0.50
49:S2:441:C:C6	49:S2:448:A:H2	2.29	0.50
49:S2:554:A:N1	49:S2:555:A:C6	2.80	0.50
49:S2:574:A:O2'	49:S2:575:A:C8	2.61	0.50
49:S2:788:G:H2'	49:S2:789:G:C8	2.47	0.50
49:S2:839:C:C5	49:S2:841:G:C5	3.00	0.50
49:S2:1304:U:C2	49:S2:1305:C:H5	2.29	0.50
49:S2:1512:C:H2'	49:S2:1513:C:C6	2.47	0.50
49:S2:1643:U:N3	49:S2:1644:C:C4	2.80	0.50
49:S2:1685:U:H2'	49:S2:1686:G:O4'	2.11	0.50
50:SA:39:TYR:C	50:SA:39:TYR:CD1	2.89	0.50
51:SB:205:TYR:O	51:SB:207:LEU:HG	2.10	0.50
58:SI:55:TYR:CD2	58:SI:55:TYR:N	2.79	0.50
68:SS:132:ARG:O	68:SS:134:GLN:N	2.44	0.50
82:Sg:21:ILE:CD1	82:Sg:307:VAL:HG13	2.41	0.50
82:Sg:230:LEU:HD22	82:Sg:259:TRP:CD2	2.47	0.50
1:5:278:G:N2	1:5:330:G:C8	2.79	0.49
1:5:467:U:C2	1:5:468:U:C6	3.00	0.49
1:5:731:G:N7	1:5:732:A:C8	2.80	0.49
1:5:910:G:C6	1:5:911:U:C4	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
1:5:1404:G:C2	1:5:1405:C:N1	2.80	0.49
1:5:1412:G:C6	1:5:1413:C:C4	3.00	0.49
1:5:1828:C:H1'	31:b:57:MET:HE2	1.94	0.49
1:5:1870:C:O2	1:5:1870:C:H2'	2.10	0.49
1:5:2052:G:OP1	18:O:83:THR:HG22	2.12	0.49
1:5:2079:G:C6	1:5:2080:U:C5	3.00	0.49
1:5:2113:G:H8	1:5:2115:G:N3	2.10	0.49
1:5:2314:G:C6	1:5:2326:G:C5	2.99	0.49
1:5:2393:C:OP2	1:5:2394:G:N7	2.45	0.49
1:5:2457:G:H2'	1:5:2458:C:O4'	2.11	0.49
1:5:2503:G:H3'	1:5:2504:C:C4'	2.41	0.49
1:5:2735:G:C2	1:5:2736:G:C5	3.00	0.49
1:5:2909:C:O2	1:5:3586:G:C2	2.65	0.49
1:5:3594:C:O2	1:5:3594:C:C2'	2.60	0.49
1:5:3711:A:H5''	1:5:3711:A:N3	2.27	0.49
1:5:3911:C:C2'	1:5:3912:U:O5'	2.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4302:U:C5	1:5:4303:C:C5	2.90	0.49
1:5:4548:A:C8	1:5:4548:A:O5'	2.64	0.49
1:5:4713:G:C6	1:5:4714:C:C4	3.00	0.49
1:5:4916:G:C5	1:5:4917:C:C5	3.00	0.49
2:7:54:A:H2	2:7:55:A:C8	2.15	0.49
4:A:30:ARG:NE	4:A:63:PHE:CE2	2.80	0.49
5:B:291:TYR:CZ	5:B:327:THR:HA	2.47	0.49
9:F:168:ARG:HB2	9:F:211:TRP:NE1	2.27	0.49
10:G:55:VAL:HG22	27:X:44:PRO:HA	1.94	0.49
28:Y:15:ARG:CG	28:Y:15:ARG:HH11	2.25	0.49
28:Y:91:ASN:OD1	28:Y:91:ASN:N	2.44	0.49
34:e:98:GLU:CD	34:e:123:THR:HG1	2.11	0.49
40:k:30:ASP:OD1	40:k:31:ASN:N	2.44	0.49
46:q:68:HIS:C	46:q:70:GLU:H	2.19	0.49
48:4:12:ILE:CG2	48:4:99:LEU:HB2	2.41	0.49
48:4:21:ASN:HD21	48:4:469:ILE:CD1	2.22	0.49
48:4:722:ILE:CB	48:4:723:PRO:HD3	2.36	0.49
49:S2:74:G:O6	56:SG:171:THR:OG1	2.25	0.49
49:S2:340:C:O2	49:S2:341:C:C6	2.64	0.49
49:S2:656:G:H5'	49:S2:662:G:N2	2.27	0.49
49:S2:823:U:H5	59:SJ:144:ILE:HD13	1.77	0.49
49:S2:978:G:N1	49:S2:979:C:C4	2.80	0.49
49:S2:986:G:H2'	49:S2:986:G:N3	2.27	0.49
49:S2:1050:A:C5	49:S2:1051:G:N9	2.80	0.49
49:S2:1061:U:N3	49:S2:1848:U:O2'	2.38	0.49
49:S2:1323:U:O2'	49:S2:1324:G:O4'	2.25	0.49
49:S2:1433:C:O3'	49:S2:1434:C:C4'	2.59	0.49
49:S2:1454:A:C8	49:S2:1476:A:N9	2.80	0.49
49:S2:1488:C:C2	49:S2:1490:G:N7	2.80	0.49
49:S2:1688:C:N3	49:S2:1689:C:C5	2.80	0.49
49:S2:1868:U:H1'	76:Sa:97:PRO:HB2	1.94	0.49
52:SC:60:TRP:CZ2	52:SC:92:GLU:HB3	2.47	0.49
58:SI:83:TYR:HD1	58:SI:84:ASN:N	2.09	0.49
61:SL:121:GLN:N	61:SL:124:ASP:OD2	2.44	0.49
69:ST:4:VAL:HA	69:ST:8:ASP:HB3	1.93	0.49
1:5:74:G:H5'	15:L:59:VAL:HG13	1.95	0.49
1:5:209:U:O2	1:5:233:U:C4	2.64	0.49
1:5:292:G:C2	1:5:293:G:N1	2.79	0.49
1:5:298:G:C6	1:5:299:C:C4	3.00	0.49
1:5:1202:C:O2	1:5:1203:G:C8	2.65	0.49
1:5:1215:C:C2	1:5:1216:C:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1235:G:N2	1:5:1236:C:C6	2.80	0.49
1:5:1251:C:C2	1:5:1252:C:C5	2.99	0.49
1:5:1472:C:C4	1:5:1473:U:C5	2.99	0.49
1:5:1565:A:H2'	1:5:1566:C:O4'	2.12	0.49
1:5:1877:G:N1	1:5:1878:G:C5	2.80	0.49
1:5:1936:C:C2	1:5:1937:C:C6	3.00	0.49
1:5:2322:G:N1	1:5:2323:C:C2	2.80	0.49
1:5:2361:G:O2'	1:5:2362:U:P	2.70	0.49
1:5:2363:A:O4'	1:5:4560:C:C5	2.65	0.49
1:5:2371:U:O4	1:5:2825:A:C2	2.61	0.49
1:5:2496:G:N3	1:5:2497:C:C6	2.80	0.49
1:5:2519:U:H1'	1:5:2520:C:C6	2.47	0.49
1:5:3862:A:C5	1:5:3863:C:C6	3.01	0.49
1:5:3880:G:C2	1:5:3881:G:C6	3.01	0.49
1:5:3907:G:N7	1:5:4447:C:H1'	2.27	0.49
1:5:4285:U:N3	1:5:4286:C:C4	2.80	0.49
1:5:4305:G:C2'	1:5:4305:G:N3	2.75	0.49
1:5:4481:U:C2	1:5:4482:U:C4	2.99	0.49
1:5:4647:G:H5'	1:5:4647:G:C8	2.47	0.49
1:5:4758:U:O2	1:5:4758:U:O4'	2.29	0.49
1:5:4997:G:C2	1:5:4998:G:C8	3.00	0.49
2:7:111:C:N3	2:7:112:U:C5	2.80	0.49
3:8:53:G:C2	3:8:54:C:C2	3.00	0.49
3:8:151:G:OP2	10:G:65:ARG:NE	2.43	0.49
4:A:33:ASP:O	4:A:34:PHE:C	2.53	0.49
6:C:33:ARG:HH21	20:Q:22:ASP:CB	2.25	0.49
6:C:341:LEU:HD11	8:E:52:ARG:HD2	1.94	0.49
7:D:278:ASP:O	7:D:280:VAL:N	2.44	0.49
9:F:58:HIS:HB2	9:F:59:TYR:HD1	1.77	0.49
10:G:61:ILE:O	10:G:62:ARG:C	2.55	0.49
12:I:47:PRO:HD2	12:I:141:LYS:HA	1.94	0.49
12:I:76:MET:HB3	12:I:85:PHE:CE2	2.47	0.49
14:K:107:ASP:HA	14:K:143:VAL:HG22	1.93	0.49
15:L:94:ILE:HA	37:h:119:PHE:HZ	1.76	0.49
19:P:95:LEU:HD13	19:P:148:MET:HE1	1.93	0.49
20:Q:88:ASP:OD1	20:Q:109:ALA:HA	2.12	0.49
37:h:101:ASN:OD1	37:h:101:ASN:N	2.42	0.49
40:k:19:ASP:OD1	40:k:19:ASP:C	2.56	0.49
47:r:49:VAL:HG11	47:r:97:ILE:HD11	1.92	0.49
48:4:442:LEU:CD2	48:4:444:LEU:HD11	2.36	0.49
48:4:546:ILE:HG22	48:4:554:LEU:HD13	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:744:ILE:HG23	48:4:745:TYR:H	1.77	0.49
49:S2:164:A:OP2	49:S2:165:G:N2	2.45	0.49
49:S2:182:C:H2'	49:S2:184:G:C1'	2.36	0.49
49:S2:306:C:H5	49:S2:308:G:N7	2.10	0.49
49:S2:488:U:H3'	49:S2:489:A:H5'	1.94	0.49
49:S2:499:G:N1	49:S2:504:G:C6	2.79	0.49
49:S2:595:U:O2'	49:S2:596:U:P	2.69	0.49
49:S2:616:A:H4'	80:Se:8:ARG:O	2.12	0.49
49:S2:738:C:N3	49:S2:739:C:C5	2.80	0.49
49:S2:963:A:N1	49:S2:964:A:C6	2.80	0.49
49:S2:1113:A:O2'	49:S2:1114:U:H5'	2.12	0.49
49:S2:1116:C:O4'	49:S2:1116:C:O2	2.30	0.49
49:S2:1134:G:C6	49:S2:1135:C:C5	3.00	0.49
49:S2:1200:A:H2	49:S2:1357:A:H2	1.59	0.49
49:S2:1294:G:N2	49:S2:1295:A:N9	2.60	0.49
49:S2:1327:G:N2	49:S2:1503:C:H1'	2.27	0.49
49:S2:1528:G:C2	49:S2:1529:C:N3	2.80	0.49
49:S2:1683:C:O2	49:S2:1683:C:H2'	2.11	0.49
49:S2:1793:A:N3	49:S2:1794:C:C5	2.79	0.49
49:S2:1831:A:H1'	49:S2:1852:C:OP1	2.11	0.49
59:SJ:120:ALA:O	59:SJ:121:LYS:HB3	2.12	0.49
66:SQ:23:ALA:HA	66:SQ:70:VAL:HA	1.93	0.49
68:SS:42:HIS:CE1	69:ST:45:LEU:HD11	2.47	0.49
73:SX:128:VAL:O	73:SX:129:SER:CB	2.60	0.49
1:5:66:A:C5	1:5:328:A:C8	3.01	0.49
1:5:99:A:C6	1:5:100:C:C2	3.00	0.49
1:5:230:G:C2	1:5:239:C:C2	3.00	0.49
1:5:302:C:H5''	17:N:68:ARG:HE	1.77	0.49
1:5:1207:C:C2	1:5:1208:G:C8	2.99	0.49
1:5:1277:G:C4	1:5:1278:C:C6	3.01	0.49
1:5:1310:C:O2	1:5:1310:C:H2'	2.11	0.49
1:5:1358:G:O6	1:5:1379:C:N3	2.45	0.49
1:5:1440:U:H4'	1:5:2109:G:O2'	2.11	0.49
1:5:1491:A:C6	1:5:1492:G:C5	3.01	0.49
1:5:1831:G:C4	1:5:1832:C:C6	2.99	0.49
1:5:1959:U:C2	1:5:1961:G:C2	3.00	0.49
1:5:2032:U:H2'	1:5:2033:A:O4'	2.13	0.49
1:5:2046:G:OP1	18:O:60:LYS:HE2	2.12	0.49
1:5:2080:U:O2'	1:5:2081:C:H5'	2.12	0.49
1:5:2084:C:H3'	1:5:2085:G:H5''	1.93	0.49
1:5:2292:C:C4	1:5:2293:U:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2406:G:N7	41:l:2:SER:N	2.60	0.49
1:5:2438:A:N7	1:5:2441:C:N4	2.60	0.49
1:5:2551:A:H2'	1:5:2552:G:H5'	1.94	0.49
1:5:2556:G:H2'	1:5:2557:G:O4'	2.12	0.49
1:5:2851:G:O6	1:5:2852:U:C6	2.63	0.49
1:5:2866:C:N3	1:5:2867:C:C5	2.80	0.49
1:5:2895:A:C6	1:5:2896:G:N7	2.80	0.49
1:5:3692:A:N6	1:5:3693:U:C2	2.80	0.49
1:5:4369:A:C6	1:5:4370:G:N7	2.81	0.49
1:5:4653:C:H2'	1:5:4654:C:C6	2.48	0.49
1:5:4749:C:H3'	1:5:4750:G:H5''	1.95	0.49
1:5:4886:C:N3	1:5:4887:C:C5	2.71	0.49
1:5:4899:G:C2	1:5:4922:C:C2	3.00	0.49
1:5:4920:C:O2	1:5:4921:C:C5	2.66	0.49
3:8:64:U:H3'	3:8:65:A:C8	2.48	0.49
4:A:209:HIS:CE1	4:A:235:VAL:HG11	2.46	0.49
8:E:191:ILE:HG23	35:f:110:ILE:HD12	1.94	0.49
11:H:54:ARG:CG	11:H:54:ARG:HH11	2.25	0.49
28:Y:81:TYR:HD2	28:Y:96:HIS:HB2	1.78	0.49
29:Z:36:ARG:C	29:Z:38:TYR:H	2.21	0.49
35:f:46:ARG:HD2	35:f:106:TYR:HE1	1.77	0.49
39:j:21:ARG:NH2	39:j:38:GLY:O	2.46	0.49
46:q:63:LYS:HD2	46:q:82:ILE:HD11	1.91	0.49
48:4:58:ASP:C	48:4:63:GLU:CB	2.83	0.49
48:4:70:ILE:O	48:4:71:LYS:HG3	2.11	0.49
48:4:563:GLU:C	48:4:563:GLU:OE1	2.54	0.49
48:4:602:LEU:HD23	48:4:602:LEU:C	2.36	0.49
48:4:643:VAL:HG13	48:4:644:ALA:N	2.27	0.49
48:4:683:PHE:CE1	48:4:729:LEU:HD22	2.47	0.49
48:4:685:TRP:HH2	48:4:723:PRO:HG3	1.76	0.49
48:4:700:VAL:HG11	48:4:702:PHE:CE2	2.47	0.49
48:4:766:LYS:HG2	48:4:796:PHE:CE1	2.47	0.49
49:S2:154:U:O2	49:S2:154:U:H2'	2.12	0.49
49:S2:192:C:C2	49:S2:193:C:C5	2.99	0.49
49:S2:418:A:C6	49:S2:419:G:C5	3.00	0.49
49:S2:433:A:H5''	58:SI:22:HIS:HB3	1.94	0.49
49:S2:458:A:C2	49:S2:459:C:H1'	2.47	0.49
49:S2:529:A:C6	49:S2:530:U:C4	3.00	0.49
49:S2:548:C:N4	49:S2:549:C:H1'	2.28	0.49
49:S2:570:C:O2	49:S2:571:U:C6	2.65	0.49
49:S2:636:C:N4	49:S2:637:U:O4	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:804:U:C4	49:S2:805:U:C5	2.99	0.49
49:S2:979:C:C2	49:S2:980:A:C8	3.00	0.49
49:S2:1102:G:N1	49:S2:1103:C:C4	2.80	0.49
49:S2:1293:A:C4	81:Sf:151:ASN:N	2.81	0.49
49:S2:1294:G:C6	81:Sf:138:ARG:CD	2.96	0.49
49:S2:1348:G:N2	49:S2:1349:G:C8	2.80	0.49
49:S2:1415:C:C2'	49:S2:1416:C:O4'	2.47	0.49
49:S2:1436:C:N3	49:S2:1438:A:N7	2.60	0.49
49:S2:1668:U:C2	49:S2:1669:G:C8	3.00	0.49
49:S2:1840:U:N3	49:S2:1859:A:C2	2.80	0.49
52:SC:113:GLN:HB3	52:SC:122:THR:HA	1.95	0.49
56:SG:74:ARG:HH11	56:SG:74:ARG:HB3	1.77	0.49
58:SI:172:LEU:HB3	58:SI:190:LEU:HD12	1.93	0.49
59:SJ:124:HIS:O	59:SJ:125:HIS:C	2.55	0.49
66:SQ:32:ILE:HG23	66:SQ:68:ILE:HB	1.92	0.49
73:SX:61:GLN:CD	73:SX:61:GLN:C	2.80	0.49
1:5:154:G:N1	1:5:155:C:C4	2.80	0.49
1:5:176:G:C5'	37:h:98:HIS:CE1	2.95	0.49
1:5:211:G:N2	1:5:212:A:N9	2.60	0.49
1:5:223:G:O2'	6:C:223:ASN:ND2	2.45	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
1:5:917:A:C2	1:5:918:G:C2	3.00	0.49
1:5:1070:G:N3	1:5:1071:C:C6	2.81	0.49
1:5:1211:G:C2	1:5:1212:G:C8	3.01	0.49
1:5:1277:G:C6	1:5:1278:C:C4	3.00	0.49
1:5:1412:G:C2	1:5:1413:C:C2	3.00	0.49
1:5:1434:G:H2'	1:5:1435:G:O4'	2.12	0.49
1:5:1444:G:N3	1:5:1445:U:C5	2.81	0.49
1:5:1468:C:H2'	1:5:1469:C:C6	2.47	0.49
1:5:1685:G:N2	1:5:1686:C:C2	2.81	0.49
1:5:1724:G:C8	31:b:17:HIS:CD2	2.99	0.49
1:5:1761:G:C2	1:5:1772:C:C2	3.00	0.49
1:5:1805:A:C8	31:b:28:ARG:HB3	2.47	0.49
1:5:1884:C:HO2'	1:5:1885:G:C5'	2.25	0.49
1:5:1965:G:C4	1:5:1966:C:C5	3.00	0.49
1:5:1993:C:C4	1:5:2002:A:C5	3.00	0.49
1:5:2035:C:C4	1:5:2036:C:C4	3.00	0.49
1:5:2056:G:O2'	1:5:2057:A:H2'	2.13	0.49
1:5:2279:A:C4	1:5:2280:G:N7	2.80	0.49
1:5:2325:C:O2	1:5:2326:G:C8	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2408:U:N1	1:5:2409:U:O4	2.45	0.49
1:5:2445:C:O2	1:5:2445:C:C2'	2.60	0.49
1:5:2456:G:O2'	1:5:2457:G:H5'	2.13	0.49
1:5:2499:C:O2	1:5:2499:C:H2'	2.11	0.49
1:5:2515:G:O6	1:5:2516:G:C2	2.66	0.49
1:5:2566:G:N3	1:5:2567:G:C8	2.80	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
1:5:3705:G:C6	1:5:3706:C:C4	2.99	0.49
1:5:3722:G:C6	1:5:3723:A:N7	2.81	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
1:5:4350:C:N3	1:5:4351:U:C5	2.80	0.49
1:5:4524:G:N2	1:5:4525:C:C2	2.81	0.49
1:5:4592:C:C2	1:5:4593:C:C5	3.00	0.49
1:5:4627:U:O2'	5:B:55:HIS:CE1	2.66	0.49
1:5:4631:G:H2'	1:5:4632:U:O4'	2.12	0.49
1:5:4932:U:C2'	1:5:4933:C:O4'	2.60	0.49
1:5:4978:G:O2'	1:5:4979:A:O5'	2.22	0.49
1:5:5062:G:H2'	1:5:5062:G:N3	2.27	0.49
2:7:44:C:N3	2:7:45:U:C5	2.81	0.49
2:7:93:G:C2	2:7:94:C:N1	2.80	0.49
2:7:93:G:C4	2:7:94:C:C5	3.00	0.49
3:8:80:A:H3'	3:8:81:C:C4'	2.40	0.49
3:8:106:G:C2	3:8:107:C:N3	2.80	0.49
10:G:264:LYS:HE3	10:G:265:LEU:N	2.27	0.49
11:H:100:PRO:HG3	48:4:167:LEU:O	2.12	0.49
11:H:111:LEU:HD12	11:H:113:GLU:OE1	2.12	0.49
14:K:103:ASN:HA	14:K:140:GLY:HA2	1.95	0.49
18:O:140:ARG:HH21	18:O:140:ARG:HG3	1.77	0.49
20:Q:178:ARG:NH2	20:Q:186:TYR:HE1	2.10	0.49
20:Q:184:ARG:NH1	20:Q:184:ARG:HG2	2.27	0.49
22:S:90:THR:HG23	23:T:156:TYR:CE2	2.47	0.49
25:V:13:LYS:HG2	25:V:128:LEU:HD22	1.95	0.49
28:Y:27:ARG:HH21	28:Y:27:ARG:HG2	1.77	0.49
37:h:87:LYS:H	37:h:92:ARG:HD3	1.75	0.49
47:r:65:LYS:N	47:r:102:TYR:OH	2.45	0.49
48:4:154:VAL:HG11	48:4:358:LEU:CD1	2.39	0.49
48:4:267:ASP:N	48:4:267:ASP:CB	2.67	0.49
48:4:502:SER:O	48:4:503:PRO:C	2.55	0.49
48:4:650:TRP:CZ2	48:4:672:LEU:HD11	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:665:ILE:HG22	48:4:665:ILE:O	2.11	0.49
49:S2:311:C:H3'	49:S2:312:G:C4'	2.42	0.49
49:S2:380:G:OP1	58:SI:31:ARG:HB2	2.11	0.49
49:S2:436:G:N7	49:S2:471:G:C2	2.79	0.49
49:S2:443:U:H4'	56:SG:90:GLY:HA3	1.93	0.49
49:S2:533:A:C6	49:S2:534:G:C8	3.01	0.49
49:S2:574:A:H4'	74:SY:89:HIS:HB3	1.93	0.49
49:S2:793:G:C6	49:S2:794:A:N9	2.81	0.49
49:S2:940:U:H2'	49:S2:941:C:C6	2.48	0.49
49:S2:1083:A:N3	49:S2:1859:A:H1'	2.28	0.49
49:S2:1292:C:C5	81:Sf:141:CYS:HB3	2.48	0.49
49:S2:1378:A:N6	50:SA:106:GLY:CA	2.75	0.49
49:S2:1510:G:O6	49:S2:1511:U:C4	2.65	0.49
50:SA:72:ALA:O	50:SA:97:THR:OG1	2.30	0.49
50:SA:128:ARG:HD2	50:SA:153:PRO:HD3	1.94	0.49
54:SE:94:LYS:O	54:SE:95:THR:HG23	2.13	0.49
59:SJ:110:LEU:CD1	59:SJ:142:VAL:HG11	2.42	0.49
62:SM:89:VAL:HB	62:SM:91:LEU:HD21	1.93	0.49
69:ST:62:ARG:HG3	69:ST:63:HIS:N	2.26	0.49
76:Sa:22:ARG:NH2	76:Sa:27:ALA:HB1	2.27	0.49
82:Sg:245:ARG:CD	82:Sg:247:TRP:CZ3	2.96	0.49
1:5:347:A:C2	1:5:348:G:N7	2.81	0.49
1:5:1092:G:C4	1:5:1093:C:C6	3.00	0.49
1:5:1217:G:N2	1:5:1218:G:C6	2.67	0.49
1:5:1283:G:C8	1:5:1283:G:H3'	2.48	0.49
1:5:1330:A:C8	1:5:3864:C:C4	3.00	0.49
1:5:1344:C:C6	1:5:1344:C:H5''	2.47	0.49
1:5:1433:A:N6	1:5:1451:G:O2'	2.44	0.49
1:5:1598:C:N1	1:5:2798:A:C8	2.80	0.49
1:5:1665:C:C2'	1:5:1666:C:O5'	2.60	0.49
1:5:1970:A:H1'	1:5:2017:A:N6	2.28	0.49
1:5:2314:G:C8	1:5:2326:G:C2	3.00	0.49
1:5:2448:G:O2'	1:5:2449:A:O4'	2.29	0.49
1:5:2498:C:C2	1:5:2499:C:C5	3.00	0.49
1:5:2585:C:N3	1:5:2588:C:N4	2.60	0.49
1:5:2613:C:N4	1:5:2614:C:N4	2.61	0.49
1:5:3629:A:O4'	49:S2:1721:U:N3	2.38	0.49
1:5:3766:A:H2	49:S2:1828:C:O4'	1.95	0.49
1:5:3902:A:C2	1:5:3903:A:C8	3.00	0.49
1:5:4092:G:N2	1:5:4093:G:O4'	2.46	0.49
1:5:4168:G:H2'	1:5:4169:G:C5'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:5:4269:G:N1	1:5:4270:C:C2	2.80	0.49
1:5:4505:C:C2	1:5:4506:C:C5	3.01	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
1:5:4651: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
1:5:4768:G:H3'	1:5:4769:G:C8	2.47	0.49
1:5:4910:G:H4'	1:5:4911:A:OP2	2.10	0.49
1:5:4976:U:H5'	1:5:4976:U:C6	2.48	0.49
2:7:60:G:N1	2:7:61:G:C8	2.80	0.49
3:8:42:G:C4	3:8:43:A:C8	3.00	0.49
3:8:66:A:C2	3:8:67:U:C4	3.00	0.49
4:A:18:ALA:O	4:A:20:VAL:HG13	2.12	0.49
4:A:35:ALA:HB1	4:A:41:ILE:HB	1.94	0.49
5:B:21:ARG:HG3	5:B:274:TYR:HB3	1.94	0.49
8:E:253:ILE:O	8:E:255:ARG:N	2.44	0.49
9:F:148:ASN:CB	9:F:243:ASN:ND2	2.75	0.49
10:G:227:ASN:N	10:G:227:ASN:ND2	2.60	0.49
12:I:109:ASP:OD2	12:I:111:LEU:O	2.30	0.49
12:I:112:GLN:HB2	12:I:116:ARG:HH11	1.76	0.49
14:K:116:MET:C	14:K:118:HIS:N	2.70	0.49
15:L:38:ALA:O	15:L:39:ARG:C	2.55	0.49
17:N:26:ARG:O	17:N:30:TYR:HB2	2.12	0.49
24:U:42:PHE:CE1	24:U:46:ARG:HD3	2.48	0.49
27:X:119:ILE:HA	27:X:144:TYR:CE2	2.42	0.49
29:Z:92:ASP:OD1	29:Z:92:ASP:C	2.56	0.49
46:q:28:PHE:CE1	46:q:189:ILE:HD11	2.48	0.49
46:q:63:LYS:CG	46:q:82:ILE:HD11	2.42	0.49
47:r:57:GLY:O	47:r:121:GLN:OE1	2.30	0.49
48:4:192:TYR:CD1	48:4:192:TYR:N	2.81	0.49
48:4:275:LYS:HE2	48:4:276:SER:N	2.27	0.49
48:4:396:MET:HE1	48:4:472:LEU:HD12	1.85	0.49
49:S2:306:C:H3'	49:S2:307:G:H5'	1.95	0.49
49:S2:328:U:H2'	49:S2:329:G:O4'	2.11	0.49
49:S2:333:G:C6	49:S2:334:C:C4	3.00	0.49
49:S2:375:U:C2	49:S2:376:A:C8	3.01	0.49
49:S2:495:U:O2'	49:S2:496:C:O5'	2.30	0.49
49:S2:532:C:H4'	49:S2:532:C:OP1	2.13	0.49
49:S2:549:C:C4	49:S2:550:C:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:552:G:H3'	49:S2:553:U:H6	1.78	0.49
49:S2:638:C:O2	49:S2:639:C:C5	2.65	0.49
49:S2:959:G:H3'	49:S2:959:G:H8	1.76	0.49
49:S2:990:A:H2'	49:S2:990:A:N3	2.28	0.49
49:S2:1124:C:O2	49:S2:1125:C:C6	2.65	0.49
49:S2:1126:G:C4	49:S2:1127:C:C5	3.00	0.49
49:S2:1135:C:N3	49:S2:1136:U:C5	2.80	0.49
49:S2:1143:A:H2'	49:S2:1144:A:C1'	2.42	0.49
49:S2:1174:U:C2	49:S2:1175:G:C8	3.01	0.49
49:S2:1293:A:H3'	81:Sf:151:ASN:CA	2.43	0.49
49:S2:1425:G:C5	49:S2:1426:U:H1'	2.47	0.49
49:S2:1452:A:C4	49:S2:1475:G:C2	3.00	0.49
49:S2:1526:G:C2	49:S2:1527:C:C2	3.01	0.49
49:S2:1541:G:C2	49:S2:1542:C:C6	2.98	0.49
49:S2:1546:G:O2'	49:S2:1547:C:O4'	2.29	0.49
49:S2:1552:G:C5'	49:S2:1557:C:H5	2.24	0.49
49:S2:1589:A:OP1	69:ST:81:GLY:N	2.45	0.49
49:S2:1601:A:O2'	49:S2:1604:G:O6	2.27	0.49
49:S2:1686:G:C5	49:S2:1687:C:C5	3.00	0.49
49:S2:1777:G:C2	49:S2:1778:C:C2	3.00	0.49
49:S2:1838:U:C6	49:S2:1838:U:H5'	2.47	0.49
54:SE:73:ASP:OD1	54:SE:73:ASP:N	2.45	0.49
58:SI:44:HIS:CD2	58:SI:58:LEU:HD11	2.47	0.49
61:SL:17:PHE:CE2	61:SL:19:ASN:HB2	2.46	0.49
74:SY:20:ARG:CB	74:SY:76:TYR:HD1	2.26	0.49
1:5:16:G:O3'	37:h:78:TYR:HE2	1.96	0.49
1:5:85:G:C2	1:5:97:G:N7	2.81	0.49
1:5:89:C:C2'	1:5:90:G:O5'	2.61	0.49
1:5:187:U:H3'	1:5:245:C:C2	2.47	0.49
1:5:322:C:C2	1:5:4356:G:C2	3.00	0.49
1:5:733:A:N7	1:5:734:G:N7	2.59	0.49
1:5:754:U:N3	1:5:755:C:C6	2.78	0.49
1:5:979:C:C4	1:5:980:U:C5	3.00	0.49
1:5:1218:G:O6	1:5:1219:G:N9	2.46	0.49
1:5:1570:G:C2	1:5:1571:G:N9	2.81	0.49
1:5:1724:G:O6	31:b:14:ARG:HA	2.13	0.49
1:5:1811:G:C4	1:5:1812:C:C5	3.00	0.49
1:5:1973:G:N1	1:5:1993:C:C4	2.41	0.49
1:5:2058:G:C6	1:5:2059:C:C4	2.99	0.49
1:5:2326:G:N2	1:5:2327:G:C1'	2.76	0.49
1:5:2385:U:C2	1:5:2386:U:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2464:C:O2'	1:5:2465:C:O5'	2.25	0.49
1:5:2557:G:C5	1:5:2558:C:C5	3.01	0.49
1:5:2644:G:N2	1:5:2645:G:H1'	2.28	0.49
1:5:2707:U:H2'	1:5:2707:U:O2	2.11	0.49
1:5:2860:C:H2'	1:5:2861:C:O4'	2.13	0.49
1:5:2862:G:N3	1:5:3624:A:H2'	2.27	0.49
1:5:3596:A:O3'	1:5:3597:G:C4'	2.61	0.49
1:5:3669:G:C2	1:5:3671:G:OP2	2.66	0.49
1:5:3672:G:C8	1:5:3674:G:O4'	2.65	0.49
1:5:3802:U:O2	1:5:3802:U:C2'	2.57	0.49
1:5:3867:A:C2	1:5:3868:G:C4	3.01	0.49
1:5:3879:G:C5	1:5:3882:C:C5	3.00	0.49
1:5:3910:C:N3	1:5:3911:C:C5	2.80	0.49
1:5:4085:A:H3'	1:5:4086:G:H5''	1.94	0.49
1:5:4143:G:C8	1:5:4145:C:C5	3.00	0.49
1:5:4301:U:C5'	23:T:54:HIS:HD2	2.25	0.49
1:5:4628:U:O2	1:5:4629:U:C5	2.64	0.49
1:5:4635:A:C2	1:5:4664:A:C5	3.00	0.49
1:5:4725:C:C2	1:5:4726:G:C8	2.94	0.49
1:5:4731:G:N7	1:5:4733:C:C5	2.81	0.49
1:5:4949:G:H3'	1:5:4950:U:H5''	1.94	0.49
1:5:4982:A:C2	1:5:4983:C:Cl'	2.95	0.49
2:7:7:G:HO2'	7:D:72:ASP:H	1.59	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
3:8:74:U:C4	28:Y:74:TYR:HE1	2.27	0.49
4:A:55:GLY:HA2	4:A:174:ARG:HD3	1.95	0.49
4:A:112:ILE:HD12	45:p:79:VAL:HG22	1.94	0.49
9:F:82:ASN:HD21	23:T:142:ARG:HA	1.77	0.49
11:H:1:MET:HE3	22:S:144:GLN:HE21	1.78	0.49
14:K:89:PRO:C	14:K:90:ARG:O	2.52	0.49
29:Z:18:TYR:CE2	29:Z:47:ASP:OD1	2.65	0.49
46:q:39:GLN:CG	46:q:107:VAL:CG1	2.81	0.49
46:q:118:PRO:CG	46:q:119:CYS:H	2.25	0.49
46:q:155:LEU:O	46:q:155:LEU:HD12	2.12	0.49
46:q:182:PRO:O	46:q:183:PHE:O	2.30	0.49
48:4:154:VAL:HG22	48:4:353:MET:CG	2.42	0.49
48:4:191:THR:CG2	48:4:192:TYR:CD1	2.95	0.49
48:4:343:TRP:O	48:4:343:TRP:HE3	1.90	0.49
48:4:417:PHE:CE2	48:4:494:MET:HE1	2.48	0.49
48:4:563:GLU:O	48:4:563:GLU:OE1	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:825:PHE:N	48:4:825:PHE:HD1	2.11	0.49
49:S2:116:U:C2	49:S2:117:C:C6	3.01	0.49
49:S2:376:A:C2	49:S2:377:G:H1'	2.47	0.49
49:S2:404:G:N3	49:S2:405:G:C8	2.80	0.49
49:S2:428:U:C5	59:SJ:7:TRP:CE2	2.99	0.49
49:S2:529:A:C5	49:S2:530:U:C5	3.00	0.49
49:S2:553:U:C2	49:S2:554:A:C5	3.01	0.49
49:S2:589:G:H4'	49:S2:589:G:OP1	2.12	0.49
49:S2:632:C:O2	49:S2:632:C:C2'	2.61	0.49
49:S2:636:C:O2	49:S2:637:U:C6	2.64	0.49
49:S2:1073:U:N3	49:S2:1074:C:C6	2.81	0.49
49:S2:1200:A:C2	49:S2:1357:A:H2	2.29	0.49
49:S2:1309:C:H2'	81:Sf:143:LYS:HD3	1.94	0.49
49:S2:1335:G:C6	49:S2:1336:C:C4	2.99	0.49
49:S2:1573:G:C6	49:S2:1574:C:C6	3.00	0.49
49:S2:1593:C:N3	49:S2:1594:A:C8	2.80	0.49
49:S2:1630:A:C2	49:S2:1631:U:C5	3.00	0.49
50:SA:90:PHE:C	50:SA:90:PHE:CD1	2.91	0.49
57:SH:160:LYS:O	57:SH:163:GLN:HG2	2.11	0.49
58:SI:113:TYR:CE2	58:SI:121:LEU:HD11	2.48	0.49
59:SJ:44:TRP:HA	59:SJ:47:LYS:HB3	1.94	0.49
64:SO:56:VAL:HG21	64:SO:61:LYS:HE2	1.95	0.49
73:SX:19:ASP:OD1	73:SX:19:ASP:N	2.44	0.49
74:SY:20:ARG:CB	74:SY:76:TYR:CD1	2.96	0.49
74:SY:20:ARG:HB2	74:SY:76:TYR:CE1	2.48	0.49
78:Sc:50:VAL:HG12	78:Sc:51:ARG:N	2.27	0.49
1:5:18:C:C4'	17:N:138:PHE:CE2	2.94	0.49
1:5:196:C:O2	1:5:196:C:C2'	2.59	0.49
1:5:482:G:H2'	1:5:483:G:C1'	2.41	0.49
1:5:500:G:C2	1:5:504:G:N7	2.80	0.49
1:5:964:A:C8	1:5:964:A:H5''	2.43	0.49
1:5:980:U:H2'	1:5:981:C:H6	1.78	0.49
1:5:1097:C:H42	1:5:1198:G:H1	1.61	0.49
1:5:1200:G:C6	1:5:1201:U:C4	3.00	0.49
1:5:1309:C:H2'	1:5:1309:C:O2	2.12	0.49
1:5:1312:A:O2'	34:e:44:ARG:NH2	2.46	0.49
1:5:1635:C:N3	1:5:1636:U:C4	2.80	0.49
1:5:1726:U:C2	1:5:1727:U:C5	3.00	0.49
1:5:1759:G:N1	1:5:1760:G:N7	2.60	0.49
1:5:2260:C:C2'	1:5:2261:G:C8	2.96	0.49
1:5:2327:G:N2	1:5:2328:G:N9	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2363:A:H1'	1:5:4560:C:C5	2.47	0.49
1:5:2614:C:C2	1:5:2726:G:C2	3.01	0.49
1:5:3621:A:C2	1:5:3622:C:C1'	2.95	0.49
1:5:4240:G:C2	1:5:4241:C:C2	3.01	0.49
1:5:4467:A:C6	1:5:4468:U:C4	3.00	0.49
1:5:4580:U:N3	1:5:4581:G:N7	2.54	0.49
1:5:4913:G:H2'	1:5:4914:C:O4'	2.11	0.49
1:5:5023:C:H42	1:5:5028:G:H21	1.61	0.49
2:7:8:G:C6	2:7:9:C:C5	3.01	0.49
3:8:14:U:O2'	3:8:15:G:C5'	2.61	0.49
3:8:116:C:N3	3:8:117:C:C5	2.81	0.49
9:F:161:TYR:CE2	9:F:168:ARG:CZ	2.91	0.49
9:F:239:GLU:O	9:F:240:ASP:HB3	2.12	0.49
10:G:29:ASN:HB3	10:G:32:PHE:CE1	2.48	0.49
14:K:86:LYS:HA	14:K:104:ILE:CD1	2.43	0.49
16:M:120:ASN:HA	16:M:123:ILE:HG22	1.93	0.49
20:Q:28:LEU:CD1	20:Q:51:LEU:HD22	2.43	0.49
23:T:11:THR:HB	23:T:15:PHE:CD1	2.48	0.49
28:Y:62:TYR:CE2	28:Y:85:VAL:HG13	2.48	0.49
28:Y:121:ARG:HB3	28:Y:121:ARG:NH1	2.28	0.49
37:h:4:ILE:O	37:h:56:ARG:HD2	2.12	0.49
48:4:205:ILE:O	48:4:206:ASP:OD2	2.30	0.49
48:4:818:GLN:CG	48:4:819:ILE:H	2.26	0.49
49:S2:167:G:C4	49:S2:168:C:C6	3.01	0.49
49:S2:301:A:C2	58:SI:73:THR:HG21	2.47	0.49
49:S2:330:G:N1	49:S2:331:C:C6	2.81	0.49
49:S2:386:C:C4	49:S2:387:C:H5	2.29	0.49
49:S2:666:U:O4'	49:S2:1088:U:C4	2.65	0.49
49:S2:746:C:H2'	49:S2:747:U:O4'	2.11	0.49
49:S2:830:A:C6	49:S2:844:U:N3	2.70	0.49
49:S2:887:U:O4'	49:S2:887:U:O2	2.26	0.49
49:S2:1008:A:H1'	63:SN:101:HIS:ND1	2.27	0.49
49:S2:1149:A:C6	49:S2:1151:G:N9	2.81	0.49
49:S2:1316:C:O2	49:S2:1316:C:H2'	2.13	0.49
49:S2:1431:G:C6	49:S2:1432:U:C6	3.01	0.49
49:S2:1551:U:H2'	49:S2:1552:G:O4'	2.12	0.49
49:S2:1624:U:O2	49:S2:1624:U:O4'	2.31	0.49
54:SE:159:THR:HG23	54:SE:227:VAL:CG2	2.43	0.49
57:SH:145:ARG:HD2	72:SW:51:GLU:CG	2.41	0.49
78:Sc:60:GLU:CD	78:Sc:60:GLU:N	2.71	0.49
1:5:66:A:N7	1:5:328:A:H1'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:94:A:C2'	1:5:95:G:O5'	2.60	0.49
1:5:125:C:O2	1:5:126:C:H6	1.92	0.49
1:5:183:C:H1'	1:5:184:U:C4	2.46	0.49
1:5:272:U:N3	1:5:273:U:C5	2.80	0.49
1:5:442:G:C2'	1:5:443:G:O5'	2.58	0.49
1:5:455:C:C4	1:5:456:C:C5	3.01	0.49
1:5:465:G:N1	1:5:466:A:C8	2.81	0.49
1:5:991:C:C4	1:5:992:C:C5	3.00	0.49
1:5:1173:G:C6	1:5:1174:G:C4	3.00	0.49
1:5:1189:G:C6	1:5:1190:C:C5	3.00	0.49
1:5:1206:C:N3	1:5:1207:C:C5	2.80	0.49
1:5:1261:G:C4	1:5:1262:G:C8	3.01	0.49
1:5:1392:A:N3	1:5:1393:G:C8	2.81	0.49
1:5:1444:G:N2	1:5:1445:U:C4	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
1:5:1528:U:H2'	1:5:1529:G:O4'	2.13	0.49
1:5:1565:A:H2'	1:5:1566:C:C4'	2.43	0.49
1:5:1780:A:N1	1:5:1781:U:H1'	2.27	0.49
1:5:1899:G:H8	1:5:2278:G:C2	2.25	0.49
1:5:2076:G:O6	1:5:2077:C:C4	2.66	0.49
1:5:2334:C:H2'	1:5:2334:C:O2	2.12	0.49
1:5:2336:G:C6	1:5:2337:C:C4	3.00	0.49
1:5:2454:U:N3	1:5:2455:G:C8	2.81	0.49
1:5:2509:C:C2	1:5:2510:G:N7	2.81	0.49
1:5:2595:C:N3	1:5:2596:G:N7	2.61	0.49
1:5:2673:G:N2	32:c:89:TYR:CD1	2.80	0.49
1:5:2738:C:N3	1:5:2741:U:C4	2.81	0.49
1:5:3629:A:C4'	49:S2:1721:U:N3	2.75	0.49
1:5:3652:A:H3'	1:5:3653:A:C8	2.47	0.49
1:5:3669:G:N2	1:5:3671:G:OP2	2.45	0.49
1:5:3672:G:N7	1:5:3674:G:O4'	2.46	0.49
1:5:3820:G:C5	1:5:3821:A:C8	3.00	0.49
1:5:3913:G:N1	1:5:4390:A:C2	2.81	0.49
1:5:4077:A:N7	1:5:4078:C:C6	2.81	0.49
1:5:4201:G:C4	1:5:4202:U:C5	3.01	0.49
1:5:4287:G:C2	1:5:4288:C:C2	3.01	0.49
1:5:4392:G:O6	1:5:4447:C:O2'	2.28	0.49
1:5:4467:A:C5	1:5:4468:U:C5	3.01	0.49
1:5:4478:G:H2'	1:5:4479:A:O4'	2.11	0.49
1:5:4509:U:C2'	1:5:4510:A:H2'	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4592:C:H2'	1:5:4593:C:C6	2.47	0.49
1:5:4643:G:H2'	1:5:4644:G:O4'	2.13	0.49
1:5:4690:G:C6	1:5:4697:U:C5	3.01	0.49
1:5:4743:G:C2	1:5:4744:A:N7	2.80	0.49
2:7:8:G:C2	2:7:9:C:N1	2.81	0.49
3:8:78:G:H2'	3:8:79:G:C1'	2.43	0.49
5:B:235:TRP:HD1	5:B:267:ALA:CA	2.25	0.49
7:D:125:VAL:HG11	7:D:199:ILE:HG21	1.94	0.49
12:I:76:MET:HB3	12:I:85:PHE:CD2	2.47	0.49
13:J:119:TYR:CE2	68:SS:108:ARG:HH21	1.39	0.49
21:R:110:ARG:HD3	21:R:120:TYR:HE2	1.77	0.49
22:S:13:VAL:HG12	22:S:29:ARG:CA	2.42	0.49
30:a:63:LEU:HD23	30:a:64:LYS:N	2.28	0.49
34:e:76:LYS:HD2	34:e:98:GLU:HG2	1.95	0.49
36:g:13:TYR:N	36:g:13:TYR:CD1	2.81	0.49
36:g:96:LEU:O	36:g:100:GLN:HG3	2.13	0.49
46:q:50:LYS:CB	46:q:93:GLU:OE2	2.52	0.49
48:4:159:LYS:CE	48:4:162:ARG:HH11	2.25	0.49
48:4:183:GLU:O	48:4:183:GLU:OE1	2.30	0.49
48:4:650:TRP:HZ3	48:4:679:VAL:HB	1.78	0.49
48:4:689:GLU:CA	48:4:730:TYR:OH	2.60	0.49
48:4:741:MET:CB	48:4:819:ILE:HA	2.43	0.49
49:S2:88:G:H2'	49:S2:89:C:O4'	2.12	0.49
49:S2:148:U:H2'	49:S2:149:A:O5'	2.13	0.49
49:S2:153:G:C6	49:S2:154:U:C5	3.00	0.49
49:S2:404:G:C2	49:S2:405:G:C4	3.01	0.49
49:S2:498:C:C2	49:S2:505:G:N2	2.81	0.49
49:S2:635:G:N3	49:S2:636:C:C6	2.80	0.49
49:S2:666:U:H2'	49:S2:667:U:C6	2.47	0.49
49:S2:673:G:C1'	49:S2:1084:A:C2	2.96	0.49
49:S2:827:A:C5	49:S2:828:G:N7	2.81	0.49
49:S2:836:G:H3'	49:S2:837:A:C5'	2.43	0.49
49:S2:978:G:C4	49:S2:979:C:C5	3.00	0.49
49:S2:1201:U:C4	49:S2:1202:U:C5	3.01	0.49
49:S2:1526:G:N1	49:S2:1527:C:C5	2.80	0.49
49:S2:1567:G:H2'	49:S2:1568:C:O5'	2.11	0.49
49:S2:1739:C:C4	49:S2:1740:C:C5	3.01	0.49
49:S2:1859:A:C2	49:S2:1860:A:C4	3.00	0.49
51:SB:121:ILE:HD12	51:SB:207:LEU:HD21	1.93	0.49
55:SF:128:ILE:O	55:SF:134:VAL:HG13	2.13	0.49
59:SJ:48:PHE:CE2	59:SJ:52:LYS:HE3	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SK:53:LYS:N	60:SK:58:VAL:HG12	2.27	0.49
64:SO:130:GLU:OE2	64:SO:132:VAL:CG1	2.61	0.49
70:SU:69:PRO:C	70:SU:70:CYS:SG	2.96	0.49
74:SY:20:ARG:HB3	74:SY:76:TYR:CD1	2.46	0.49
1:5:98:A:C2	1:5:99:A:H1'	2.48	0.49
1:5:293:G:C5'	1:5:294:G:C8	2.95	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
1:5:668:C:C4	1:5:669:C:C5	3.01	0.49
1:5:710:G:H2'	1:5:711:A:C8	2.48	0.49
1:5:723:A:H2	1:5:943:A:C2	2.29	0.49
1:5:982:U:C6	8:E:67:ARG:NE	2.81	0.49
1:5:1076:C:N4	1:5:1077:C:C5	2.81	0.49
1:5:1197:C:H2'	1:5:1198:G:O4'	2.12	0.49
1:5:1205:G:N2	1:5:1206:C:C2	2.81	0.49
1:5:1280:C:C2'	1:5:1281:G:H3'	2.43	0.49
1:5:1290:G:C2'	1:5:1291:G:H5'	2.42	0.49
1:5:1358:G:C2'	1:5:1359:G:C8	2.94	0.49
1:5:1492:G:C6	1:5:1493:G:N7	2.81	0.49
1:5:1529:G:O3'	39:j:47:TYR:OH	2.31	0.49
1:5:1627:G:H3'	1:5:1628:C:C6	2.47	0.49
1:5:2288:G:C2	1:5:2290:C:C6	3.01	0.49
1:5:2483:G:C6	1:5:2484:A:N7	2.81	0.49
1:5:2491:C:H2'	1:5:2492:C:O4'	2.12	0.49
1:5:2682:G:H2'	1:5:2683:C:H6	1.76	0.49
1:5:2802:C:H6	1:5:2802:C:O5'	1.96	0.49
1:5:3590:G:N1	1:5:3591:C:C2	2.81	0.49
1:5:3611:A:H2	1:5:5016:A:C8	2.30	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
1:5:3861:A:C2	1:5:3862:A:N9	2.81	0.49
1:5:3891:A:H2'	1:5:3892:U:O4'	2.13	0.49
1:5:4087:G:H3'	1:5:4087:G:C8	2.47	0.49
1:5:4146:G:C2	1:5:4147:G:C8	3.01	0.49
1:5:4769:G:N2	1:5:4865:C:N3	2.61	0.49
1:5:5006:U:H1'	1:5:5042:A:N7	2.27	0.49
1:5:5028:G:N3	1:5:5029:C:C6	2.80	0.49
1:5:5048:A:C8	33:d:34:HIS:CG	2.96	0.49
4:A:209:HIS:CE1	4:A:211:PHE:HD2	2.29	0.49
12:I:76:MET:HE1	12:I:140:THR:HG21	1.94	0.49
14:K:114:ARG:HD2	14:K:130:LYS:CE	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:N:150:TRP:HZ3	17:N:151:ILE:HG12	1.78	0.49
20:Q:68:ARG:CZ	20:Q:68:ARG:HB3	2.40	0.49
20:Q:168:ARG:HD3	20:Q:174:PHE:HE2	1.78	0.49
21:R:130:ASN:O	21:R:130:ASN:CG	2.55	0.49
22:S:32:ILE:HG22	22:S:33:PHE:H	1.78	0.49
34:e:77:PHE:HE1	47:r:20:ARG:HD2	1.77	0.49
35:f:6:TRP:HB2	35:f:102:ARG:CB	2.37	0.49
46:q:47:LEU:CD2	46:q:103:ARG:HH11	2.26	0.49
48:4:126:LEU:CD1	48:4:353:MET:CE	2.90	0.49
48:4:255:ASP:OD1	48:4:259:LYS:CE	2.46	0.49
48:4:343:TRP:HA	48:4:343:TRP:HE3	1.77	0.49
48:4:432:PRO:CB	48:4:497:MET:HE1	2.33	0.49
48:4:672:LEU:CA	48:4:675:ILE:HG13	2.01	0.49
48:4:683:PHE:CE1	48:4:729:LEU:HD21	2.48	0.49
49:S2:20:G:C5'	49:S2:620:G:N7	2.76	0.49
49:S2:378:U:N3	49:S2:379:C:C4	2.78	0.49
49:S2:428:U:C5	59:SJ:7:TRP:CH2	2.93	0.49
49:S2:615:C:C2'	49:S2:616:A:O4'	2.60	0.49
49:S2:751:G:N2	49:S2:792:C:H1'	2.28	0.49
49:S2:936:G:H2'	49:S2:937:C:O4'	2.13	0.49
49:S2:961:G:C6	49:S2:962:A:N7	2.81	0.49
49:S2:1122:A:H4'	51:SB:205:TYR:CZ	2.48	0.49
49:S2:1233:G:C2	49:S2:1234:C:N1	2.81	0.49
49:S2:1524:G:C6	49:S2:1525:C:C4	3.01	0.49
49:S2:1545:A:N7	49:S2:1588:A:N7	2.61	0.49
49:S2:1615:U:H2'	49:S2:1616:U:C6	2.48	0.49
49:S2:1659:U:C5	49:S2:1660:C:N3	2.81	0.49
50:SA:181:GLU:OE1	50:SA:181:GLU:HA	2.10	0.49
54:SE:159:THR:HG21	54:SE:227:VAL:O	2.12	0.49
55:SF:128:ILE:HD12	78:Sc:68:LEU:HD12	1.94	0.49
62:SM:104:VAL:HG13	62:SM:105:GLY:N	2.28	0.49
65:SP:60:LEU:HD21	65:SP:94:VAL:HG22	1.95	0.49
73:SX:16:HIS:NE2	73:SX:20:HIS:CD2	2.81	0.49
1:5:247:G:C2	1:5:248:C:C5	3.01	0.49
1:5:323:C:O2	1:5:323:C:H2'	2.12	0.49
1:5:435:A:H2'	1:5:435:A:N3	2.27	0.49
1:5:504:G:C4	1:5:505:G:N7	2.81	0.49
1:5:652:G:C2	1:5:653:U:H1'	2.48	0.49
1:5:965:G:C8	8:E:88:VAL:CG1	2.96	0.49
1:5:994:G:C5	1:5:995:C:C5	3.01	0.49
1:5:1205:G:C2	1:5:1206:C:C2	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1336:G:H2'	1:5:1337:A:C8	2.48	0.49
1:5:1347:G:C4	1:5:1348:U:C6	3.00	0.49
1:5:1439:C:H5''	9:F:36:ARG:HH12	1.68	0.49
1:5:1542:U:O2	1:5:1542:U:H2'	2.13	0.49
1:5:1572:U:C4'	21:R:95:TRP:HE1	2.19	0.49
1:5:1871:A:C2	1:5:1872:G:C8	3.01	0.49
1:5:1925:G:C6	1:5:1926:C:C5	3.01	0.49
1:5:2021:G:C6	1:5:2022:C:N4	2.81	0.49
1:5:2107:C:O2	1:5:2107:C:O2'	2.31	0.49
1:5:2384:U:O2	1:5:2385:U:C6	2.66	0.49
1:5:2395:A:O3'	1:5:2806:A:C2	2.66	0.49
1:5:2419:C:C2'	1:5:2420:A:O5'	2.60	0.49
1:5:2450:G:C6	1:5:2451:A:N7	2.80	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
1:5:2684:C:H2'	1:5:2685:C:O4'	2.13	0.49
1:5:2703:G:C6	1:5:2704:C:C4	3.01	0.49
1:5:3702:A:C6	1:5:3703:G:C8	2.88	0.49
1:5:3807:A:O4'	49:S2:1815:A:H2	1.96	0.49
1:5:3856:A:N6	1:5:3857:G:C5	2.80	0.49
1:5:3861:A:C4	1:5:3862:A:C8	3.01	0.49
1:5:4136:G:C4	1:5:4137:C:C5	3.01	0.49
1:5:4350:C:O2	1:5:4350:C:H2'	2.12	0.49
1:5:4466:C:N3	1:5:4467:A:N7	2.61	0.49
1:5:4479:A:C5	1:5:4480:A:N9	2.81	0.49
1:5:4486:C:H2'	1:5:4487:A:O4'	2.13	0.49
1:5:4884:G:N2	1:5:4885:U:N1	2.61	0.49
1:5:4935:C:H3'	8:E:179:ARG:HH21	1.78	0.49
1:5:4951:G:HO2'	1:5:4952:G:P	2.36	0.49
1:5:5006:U:O2	1:5:5042:A:C8	2.66	0.49
2:7:30:C:C4	2:7:48:G:N1	2.81	0.49
4:A:30:ARG:NE	4:A:63:PHE:HE2	2.11	0.49
5:B:71:GLU:OE1	5:B:366:LYS:CE	2.61	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
21:R:15:LEU:O	21:R:52:ARG:NH2	2.46	0.49
21:R:95:TRP:CE3	21:R:95:TRP:HA	2.47	0.49
22:S:120:ARG:HB2	22:S:122:HIS:HD2	1.77	0.49
23:T:80:VAL:HG21	23:T:85:LEU:HD12	1.94	0.49
28:Y:4:ASN:OD1	28:Y:4:ASN:C	2.56	0.49
46:q:99:ARG:CG	46:q:100:ASP:H	2.03	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:146:ALA:HA	48:4:151:ILE:HD12	1.93	0.49
48:4:181:ILE:O	48:4:185:VAL:HG23	2.13	0.49
48:4:573:SER:HB2	48:4:574:ASP:CG	2.38	0.49
48:4:613:LEU:HD12	48:4:641:TRP:CD1	2.48	0.49
48:4:747:VAL:HA	48:4:812:CYS:HB3	1.95	0.49
49:S2:37:C:N3	49:S2:38:A:C8	2.81	0.49
49:S2:38:A:C6	49:S2:515:G:N1	2.81	0.49
49:S2:61:A:C2	49:S2:334:C:H2'	2.48	0.49
49:S2:164:A:O2'	49:S2:165:G:C5'	2.60	0.49
49:S2:198:U:H2'	49:S2:200:G:N7	2.28	0.49
49:S2:339:A:C4	49:S2:340:C:C5	3.00	0.49
49:S2:344:U:O2'	49:S2:345:U:H5'	2.13	0.49
49:S2:348:A:H2'	49:S2:349:A:H5'	1.93	0.49
49:S2:441:C:C6	49:S2:448:A:C2	3.01	0.49
49:S2:552:G:C6	49:S2:553:U:C4	3.01	0.49
49:S2:634:A:C4	49:S2:635:G:C8	3.01	0.49
49:S2:1111:U:O2	49:S2:1111:U:C2'	2.61	0.49
49:S2:1112:U:N3	49:S2:1113:A:C4	2.81	0.49
49:S2:1182:A:C8	49:S2:1183:A:H1'	2.48	0.49
49:S2:1290:G:C8	81:Sf:146:LEU:HD23	2.48	0.49
49:S2:1291:A:C1'	81:Sf:146:LEU:HB2	2.42	0.49
49:S2:1404:U:C4'	49:S2:1581:C:O2	2.61	0.49
49:S2:1433:C:OP2	49:S2:1434:C:OP2	2.31	0.49
49:S2:1560:U:O2	49:S2:1560:U:H2'	2.11	0.49
49:S2:1561:A:O4'	49:S2:1583:C:H4'	2.12	0.49
49:S2:1793:A:N3	49:S2:1794:C:C6	2.80	0.49
54:SE:121:TYR:CD1	54:SE:121:TYR:C	2.90	0.49
55:SF:38:TYR:HA	55:SF:64:ALA:HB1	1.95	0.49
58:SI:66:SER:CB	58:SI:73:THR:HB	2.42	0.49
59:SJ:118:GLY:O	59:SJ:120:ALA:N	2.46	0.49
82:Sg:82:SER:OG	82:Sg:83:TRP:N	2.45	0.49
1:5:342:G:C6	1:5:343:C:C4	3.02	0.48
1:5:352:G:O6	6:C:196:MET:HG3	2.12	0.48
1:5:505:G:C4	1:5:506:C:C5	3.01	0.48
1:5:708:G:C2	1:5:709:C:C6	3.00	0.48
1:5:1268:G:C4	1:5:2111:G:N3	2.81	0.48
1:5:1289:C:C2	1:5:1290:G:N7	2.81	0.48
1:5:1488:G:C6	1:5:1489:G:N7	2.81	0.48
1:5:1511:U:C2	1:5:1512:G:C8	3.01	0.48
1:5:1727:U:O2	1:5:1728:U:C6	2.66	0.48
1:5:1740:C:H1'	1:5:1742:A:N6	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1771:U:N3	1:5:1772:C:C6	2.80	0.48
1:5:1993:C:O2'	14:K:135:THR:HG21	2.13	0.48
1:5:2247:C:O2'	9:F:28:ALA:HB3	2.12	0.48
1:5:2254:G:O2'	1:5:2255:C:H4'	2.13	0.48
1:5:2270:G:C2	1:5:2271:C:C5	3.01	0.48
1:5:2311:C:N4	1:5:2312:U:C5	2.81	0.48
1:5:2314:G:N3	1:5:2314:G:C2'	2.76	0.48
1:5:2314:G:C5	1:5:2326:G:C4	3.01	0.48
1:5:2421:G:OP2	1:5:2828:U:H1'	2.13	0.48
1:5:2481:G:C2	1:5:2482:C:C2	3.00	0.48
1:5:2566:G:N1	1:5:2567:G:C5	2.81	0.48
1:5:2591:A:N6	1:5:2753:G:N2	2.60	0.48
1:5:3586:G:C4	1:5:3587:C:C5	3.01	0.48
1:5:3773:U:O2	1:5:3775:A:C2	2.66	0.48
1:5:3833:C:C2	1:5:3834:C:C6	3.01	0.48
1:5:3938:G:H5'	1:5:3938:G:N3	2.27	0.48
1:5:4104:G:H3'	1:5:4105:A:C8	2.48	0.48
1:5:4276:G:C2	1:5:4277:G:C8	3.00	0.48
1:5:4300:U:H4'	23:T:89:ILE:HG22	1.95	0.48
1:5:4423:U:O2	1:5:4423:U:H3'	2.13	0.48
1:5:4518:A:C5	5:B:257:TRP:CZ2	3.00	0.48
1:5:4547:C:C2	1:5:4549:G:C8	3.01	0.48
1:5:4551:U:O2	1:5:4552:U:C5	2.66	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
1:5:4950:U:O2	1:5:4950:U:O4'	2.29	0.48
3:8:94:G:O6	39:j:76:HIS:CE1	2.66	0.48
4:A:219:ILE:HG22	4:A:220:GLY:N	2.28	0.48
12:I:35:ASP:N	12:I:35:ASP:OD1	2.45	0.48
14:K:33:GLY:N	14:K:34:PRO:HD3	2.26	0.48
14:K:103:ASN:N	14:K:140:GLY:HA2	2.28	0.48
14:K:108:GLU:O	14:K:111:ASN:HB2	2.13	0.48
21:R:163:ARG:NH2	49:S2:871:U:N3	2.60	0.48
23:T:3:ASN:CB	23:T:9:ARG:HH12	2.26	0.48
23:T:41:ASP:OD1	23:T:41:ASP:N	2.46	0.48
46:q:103:ARG:HH11	46:q:103:ARG:HG2	1.76	0.48
48:4:433:ASN:O	48:4:434:TYR:O	2.30	0.48
48:4:692:LEU:HD21	48:4:734:LEU:HD22	1.93	0.48
48:4:763:LEU:CD1	48:4:786:ALA:HB2	2.43	0.48
48:4:845:LYS:CE	48:4:846:GLU:CB	2.90	0.48
49:S2:339:A:C3'	49:S2:340:C:H6	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:504:G:O2'	49:S2:505:G:H5'	2.13	0.48
49:S2:527:C:H2'	49:S2:528:A:H8	1.78	0.48
49:S2:597:G:OP1	73:SX:131:LEU:HD11	2.12	0.48
49:S2:696:G:C2	49:S2:735:C:O2	2.65	0.48
49:S2:799:U:OP2	57:SH:106:ARG:O	2.31	0.48
49:S2:923:G:C2	49:S2:924:G:C8	3.01	0.48
49:S2:1093:A:H4'	72:SW:3:ARG:NH2	2.27	0.48
49:S2:1121:G:C6	49:S2:1122:A:N7	2.80	0.48
49:S2:1189:A:H2'	49:S2:1190:A:C8	2.48	0.48
49:S2:1293:A:C2'	81:Sf:151:ASN:C	2.86	0.48
49:S2:1302:G:C8	81:Sf:140:TYR:CD2	3.00	0.48
49:S2:1452:A:C5	49:S2:1475:G:C2	3.01	0.48
49:S2:1545:A:C4	49:S2:1546:G:C5	3.00	0.48
49:S2:1618:C:C5	79:Sd:11:PRO:HG3	2.47	0.48
49:S2:1669:G:C6	49:S2:1670:C:N4	2.81	0.48
49:S2:1832:A:C2	49:S2:1833:C:C4	3.00	0.48
51:SB:99:ASN:O	51:SB:100:PHE:C	2.56	0.48
66:SQ:48:GLN:HE21	66:SQ:52:LEU:HD11	1.78	0.48
82:Sg:73:SER:HB3	82:Sg:117:ASN:HD21	1.78	0.48
82:Sg:239:LEU:HD23	82:Sg:250:ALA:HA	1.94	0.48
1:5:126:C:O2	1:5:126:C:H2'	2.13	0.48
1:5:144:G:N2	1:5:145:G:C5	2.81	0.48
1:5:330:G:N1	1:5:331:G:C5	2.81	0.48
1:5:694:C:H2'	1:5:695:G:O4'	2.14	0.48
1:5:1184:A:C2	1:5:1185:G:C8	3.01	0.48
1:5:1193:C:H2'	1:5:1193:C:O2	2.12	0.48
1:5:1193:C:C2	1:5:1194:G:C8	3.00	0.48
1:5:1213:G:C2	1:5:1215:C:C2	3.02	0.48
1:5:1398:A:C4	1:5:1399:G:C8	3.01	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	2.28	0.48
1:5:1745:G:N2	1:5:1746:A:H1'	2.28	0.48
1:5:1826:G:N2	1:5:1827:C:H1'	2.28	0.48
1:5:1936:C:N3	1:5:1937:C:C6	2.76	0.48
1:5:1999:A:H2'	1:5:2000:G:N3	2.28	0.48
1:5:2122:G:H1'	1:5:2123:C:OP2	2.13	0.48
1:5:2314:G:N1	1:5:2315:G:N7	2.58	0.48
1:5:2385:U:H2'	1:5:2386:U:H6	1.77	0.48
1:5:2479:G:C2	1:5:2480:G:N9	2.81	0.48
1:5:2533:C:C2	1:5:2534:C:C4	3.00	0.48
1:5:2534:C:O2'	1:5:2535:G:C5'	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2534:C:C2'	1:5:2535:G:O5'	2.61	0.48
1:5:2569:G:H2'	1:5:2570:U:H6	1.78	0.48
1:5:2724:G:N1	1:5:2726:G:N7	2.57	0.48
1:5:2854:G:C6	1:5:2856:C:H6	2.22	0.48
1:5:3911:C:H2'	1:5:3912:U:H6	1.77	0.48
1:5:4241:C:N3	1:5:4242:U:C6	2.80	0.48
1:5:4283:G:C5	1:5:4284:C:C5	3.00	0.48
1:5:4323:A:C4	1:5:4324:A:C8	3.01	0.48
1:5:4577:U:O2'	1:5:4967:A:O2'	2.31	0.48
1:5:4746:C:N3	1:5:4747:C:C5	2.81	0.48
2:7:18:C:C4	2:7:19:C:C5	2.85	0.48
3:8:100:U:O2	3:8:101:C:C6	2.66	0.48
3:8:131:G:N1	3:8:132:G:C4	2.81	0.48
4:A:29:LEU:HD12	4:A:124:GLY:HA3	1.95	0.48
10:G:47:PRO:HG2	10:G:49:ARG:HH22	1.78	0.48
14:K:104:ILE:O	14:K:105:THR:C	2.55	0.48
16:M:101:LYS:HD2	18:O:201:PHE:HE1	1.78	0.48
27:X:111:GLN:OE1	27:X:111:GLN:HA	2.13	0.48
30:a:7:LYS:HD3	30:a:11:LEU:HD11	1.95	0.48
33:d:71:ALA:C	33:d:73:TRP:H	2.21	0.48
39:j:74:PHE:O	39:j:75:ARG:C	2.56	0.48
44:o:57:ARG:HH11	44:o:57:ARG:HG3	1.78	0.48
46:q:81:HIS:C	46:q:83:ARG:HG2	2.38	0.48
48:4:275:LYS:CE	48:4:276:SER:N	2.76	0.48
48:4:396:MET:HG3	48:4:415:ARG:O	2.13	0.48
48:4:517:LEU:C	48:4:517:LEU:HD23	2.38	0.48
49:S2:44:U:C4	49:S2:484:A:C6	3.01	0.48
49:S2:167:G:C5	49:S2:168:C:C5	3.01	0.48
49:S2:187:G:C4	49:S2:188:C:C5	3.01	0.48
49:S2:200:G:C2	49:S2:201:C:C2	3.01	0.48
49:S2:349:A:H2'	49:S2:350:C:C6	2.49	0.48
49:S2:361:U:H4'	49:S2:362:C:C5'	2.43	0.48
49:S2:387:C:C2	49:S2:388:U:H5	2.20	0.48
49:S2:493:A:H1'	49:S2:574:A:H5'	1.95	0.48
49:S2:797:C:C4'	49:S2:798:A:OP1	2.60	0.48
49:S2:923:G:C6	49:S2:924:G:N7	2.80	0.48
49:S2:928:G:H1	49:S2:1013:U:H3	1.61	0.48
49:S2:1122:A:C6	49:S2:1123:C:C6	3.01	0.48
49:S2:1204:A:C5	49:S2:1205:C:C5	3.01	0.48
49:S2:1286:G:C2	62:SM:33:ARG:O	2.66	0.48
49:S2:1287:A:N6	49:S2:1314:U:C4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1293:A:H2'	81:Sf:152:LYS:CB	2.43	0.48
49:S2:1363:C:O5'	49:S2:1363:C:H6	1.95	0.48
49:S2:1366:G:N1	49:S2:1374:C:N4	2.61	0.48
49:S2:1380:C:H2'	49:S2:1381:G:C8	2.48	0.48
49:S2:1449:G:H2'	49:S2:1450:G:O4'	2.12	0.48
49:S2:1537:A:C2	49:S2:1538:C:H1'	2.49	0.48
49:S2:1703:C:O2	49:S2:1703:C:H2'	2.13	0.48
49:S2:1727:G:C6	49:S2:1728:U:C5	3.01	0.48
52:SC:69:LEU:HG	52:SC:273:LEU:HD21	1.94	0.48
56:SG:138:ALA:HB1	56:SG:153:VAL:HG21	1.95	0.48
56:SG:222:GLU:HA	56:SG:225:GLN:OE1	2.14	0.48
64:SO:35:ALA:HB1	64:SO:112:ALA:HB2	1.93	0.48
71:SV:19:ALA:HB3	71:SV:59:ILE:HD13	1.95	0.48
82:Sg:119:GLN:HE22	82:Sg:131:LEU:HD21	1.78	0.48
1:5:39:A:C5	1:5:1654:G:C6	3.01	0.48
1:5:412:G:N2	41:l:28:ARG:NH1	2.61	0.48
1:5:440:U:C2	1:5:441:G:N7	2.82	0.48
1:5:503:C:OP2	1:5:505:G:OP2	2.31	0.48
1:5:725:G:H2'	1:5:726:G:O4'	2.12	0.48
1:5:936:C:O2'	16:M:46:ARG:NH1	2.46	0.48
1:5:1068:G:H2'	1:5:1069:G:H8	1.77	0.48
1:5:1233:G:N2	1:5:1234:G:C4	2.82	0.48
1:5:1267:C:H4'	1:5:2110:C:O2'	2.13	0.48
1:5:1406:G:N2	1:5:1409:C:N4	2.60	0.48
1:5:1412:G:C5	1:5:1413:C:C5	3.02	0.48
1:5:1463:C:C2	1:5:1464:C:C6	3.01	0.48
1:5:1491:A:N3	1:5:1492:G:C8	2.81	0.48
1:5:1563:A:H2'	1:5:1564:A:C8	2.48	0.48
1:5:1727:U:C2	1:5:1728:U:C6	3.02	0.48
1:5:1760:G:C6	1:5:1761:G:C8	3.01	0.48
1:5:1807:C:N4	1:5:1808:C:C5	2.81	0.48
1:5:2085:G:N2	1:5:2273:G:C4	2.82	0.48
1:5:2091:C:H1'	1:5:2092:G:H2'	1.94	0.48
1:5:2116:C:O5'	1:5:2116: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
1:5:2521:G:H2'	1:5:2522:G:O4'	2.13	0.48
1:5:3714:G:O6	1:5:3739:C:N3	2.47	0.48
1:5:3859:G:C4'	19:P:139:TYR:CZ	2.95	0.48
1:5:4091:G:N1	1:5:4092:G:C4	2.82	0.48
1:5:4480:A:N1	1:5:4481:U:C6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4482:U:C2	1:5:4483:C:H5	2.30	0.48
1:5:4945:G:O6	35:f:60:PRO:HD2	2.13	0.48
3:8:10:G:N3	3:8:11:C:H1'	2.27	0.48
3:8:65:A:C4	3:8:66:A:C8	3.01	0.48
3:8:146:U:H2'	3:8:147:G:O4'	2.13	0.48
4:A:29:LEU:HD23	4:A:76:PHE:CE1	2.47	0.48
4:A:97:ASN:OD1	4:A:97:ASN:N	2.46	0.48
5:B:136:LYS:HB3	5:B:146:LEU:HD11	1.95	0.48
7:D:90:VAL:HG23	7:D:226:TYR:CZ	2.48	0.48
7:D:284:LYS:CB	12:I:209:TRP:CH2	2.96	0.48
8:E:160:PHE:HE2	8:E:169:LEU:HD22	1.78	0.48
12:I:100:ASN:HA	12:I:120:GLY:HA2	1.95	0.48
18:O:56:ALA:HA	18:O:59:ARG:HE	1.78	0.48
18:O:108:ILE:HG23	18:O:160:ARG:CD	2.43	0.48
29:Z:10:VAL:HG11	29:Z:129:TRP:HZ3	1.78	0.48
36:g:5:LEU:HD21	36:g:22:LEU:CD1	2.43	0.48
46:q:80:PRO:HD2	46:q:81:HIS:ND1	2.27	0.48
48:4:70:ILE:O	48:4:71:LYS:HB2	2.14	0.48
48:4:72:SER:HA	48:4:104:ASP:OD2	2.11	0.48
48:4:669:VAL:O	48:4:671:TYR:N	2.46	0.48
48:4:683:PHE:HE1	48:4:729:LEU:CD2	2.26	0.48
48:4:710:HIS:NE2	48:4:715:HIS:CD2	2.81	0.48
49:S2:22:A:C2	49:S2:653:A:N3	2.81	0.48
49:S2:436:G:C5	49:S2:458:A:C2	3.01	0.48
49:S2:449:A:C6	49:S2:452:G:C4	2.99	0.48
49:S2:457:C:N4	49:S2:458:A:C5	2.81	0.48
49:S2:926:A:C4	49:S2:927:C:C5	3.01	0.48
49:S2:933:G:C8	49:S2:1001:A:C4	3.01	0.48
49:S2:1034:A:C6	49:S2:1082:A:C4	3.01	0.48
49:S2:1055:A:H2	49:S2:1063:C:N4	2.12	0.48
49:S2:1292:C:C6	81:Sf:150:PHE:N	2.82	0.48
49:S2:1415:C:C6	49:S2:1416:C:C6	3.01	0.48
49:S2:1434:C:C2	49:S2:1435:C:C5	3.02	0.48
49:S2:1454:A:N7	49:S2:1476:A:N3	2.61	0.48
49:S2:1606:G:H22	49:S2:1632:G:H2'	1.78	0.48
49:S2:1712:A:H2'	49:S2:1713:C:C6	2.49	0.48
49:S2:1735:A:C6	49:S2:1800:A:C4	3.01	0.48
52:SC:65:LYS:HD3	52:SC:273:LEU:HD13	1.94	0.48
52:SC:96:PHE:C	52:SC:96:PHE:CD1	2.92	0.48
53:SD:24:PHE:CD1	53:SD:24:PHE:C	2.90	0.48
54:SE:46:ILE:O	54:SE:50:ASN:HB2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:ST:79:TYR:N	69:ST:79:TYR:CD1	2.81	0.48
70:SU:40:ILE:HD11	70:SU:53:PRO:CG	2.43	0.48
72:SW:111:MET:HE3	72:SW:116:ALA:HA	1.94	0.48
1:5:17:A:OP2	27:X:60:TYR:OH	2.18	0.48
1:5:85:G:N2	1:5:97:G:C8	2.82	0.48
1:5:219:G:OP1	1:5:219:G:H4'	2.14	0.48
1:5:246:G:N2	1:5:247:G:C5	2.82	0.48
1:5:655:C:OP2	6:C:268:ARG:NH1	2.47	0.48
1:5:660:A:C6	1:5:661:C:C4	3.01	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
1:5:747:A:C2	1:5:918:G:O6	2.67	0.48
1:5:750:U:N3	1:5:751:G:N7	2.61	0.48
1:5:1072:C:N4	1:5:1239:C:C4	2.81	0.48
1:5:1212:G:N1	1:5:1213:G:C5	2.81	0.48
1:5:1280:C:C1'	6:C:323:ARG:NH2	2.76	0.48
1:5:1683:U:O2	1:5:1683:U:C2'	2.61	0.48
1:5:1690:C:OP2	20:Q:11:ARG:NH2	2.46	0.48
1:5:1807:C:C2	1:5:1808:C:H6	2.31	0.48
1:5:1865:G:N2	1:5:1867:A:H3'	2.28	0.48
1:5:1933:G:H2'	1:5:1934:A:C1'	2.44	0.48
1:5:1995:G:N2	46:q:41:GLN:HE21	2.06	0.48
1:5:1995:G:C5	1:5:1996:C:C4	3.01	0.48
1:5:2052:G:N2	1:5:2053:C:C2	2.82	0.48
1:5:2301:G:C2	1:5:2302:C:N1	2.80	0.48
1:5:3613:U:O2'	1:5:5035:U:O2'	2.28	0.48
1:5:3630:A:C2	1:5:3631:U:C5	3.00	0.48
1:5:3703:G:N3	1:5:3704:U:C6	2.81	0.48
1:5:3791:C:O2	1:5:3802:U:O4'	2.31	0.48
1:5:4104:G:C3'	1:5:4105:A:C8	2.97	0.48
1:5:4281:A:C5	1:5:4283:G:C8	3.02	0.48
1:5:4368:G:C6	1:5:4369:A:C8	3.01	0.48
1:5:4563:U:N3	1:5:4564:A:N6	2.58	0.48
1:5:4753:U:OP2	35:f:4:ARG:NH1	2.45	0.48
1:5:4998:G:N3	1:5:4999:G:C8	2.80	0.48
6:C:112:HIS:CD2	6:C:112:HIS:N	2.82	0.48
9:F:59:TYR:CE2	9:F:194:HIS:CD2	3.01	0.48
9:F:71:ILE:HG22	9:F:75:ARG:CD	2.44	0.48
10:G:53:ARG:CZ	10:G:54:PHE:CZ	2.85	0.48
11:H:59:LYS:HB2	11:H:70:VAL:HG22	1.95	0.48
12:I:36:LEU:HD22	12:I:73:ASN:HD21	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:K:64:ILE:HB	14:K:71:ILE:HB	1.95	0.48
14:K:121:LEU:HD13	14:K:123:ARG:HB3	1.94	0.48
19:P:30:ARG:NE	19:P:34:GLN:OE1	2.47	0.48
20:Q:17:GLU:HA	20:Q:52:PHE:HE1	1.78	0.48
20:Q:33:ARG:NH2	20:Q:48:LEU:HD11	2.28	0.48
33:d:87:ARG:NH1	33:d:87:ARG:HB2	2.27	0.48
34:e:35:TRP:CD1	34:e:36:ARG:CA	2.96	0.48
34:e:43:ASN:C	34:e:43:ASN:ND2	2.66	0.48
46:q:142:GLY:C	46:q:143:ILE:CG1	2.85	0.48
46:q:142:GLY:C	46:q:143:ILE:CD1	2.86	0.48
48:4:341:ARG:O	48:4:345:PRO:HG3	2.13	0.48
48:4:381:ALA:O	48:4:385:ILE:HG12	2.13	0.48
49:S2:46:A:C6	49:S2:99:A:N7	2.82	0.48
49:S2:173:A:N1	49:S2:174:C:C6	2.81	0.48
49:S2:177:G:N2	49:S2:178:C:H41	2.10	0.48
49:S2:371:A:C2	49:S2:372:U:C5	3.02	0.48
49:S2:453:C:O2'	49:S2:454:U:O5'	2.29	0.48
49:S2:501:C:O2	49:S2:501:C:H3'	2.12	0.48
49:S2:601:G:O2'	49:S2:602:G:C5'	2.62	0.48
49:S2:618:C:N4	49:S2:619:A:C6	2.79	0.48
49:S2:918:U:H2'	49:S2:919:A:C4	2.48	0.48
49:S2:923:G:C2	49:S2:1022:U:C4	2.98	0.48
49:S2:952:G:C2	49:S2:953:C:C2	3.00	0.48
49:S2:1131:G:C6	49:S2:1132:C:C5	3.01	0.48
49:S2:1176:G:C6	49:S2:1177:U:C4	3.01	0.48
49:S2:1184:G:C6	49:S2:1185:C:C5	3.01	0.48
49:S2:1186:U:O2	49:S2:1186:U:H2'	2.12	0.48
49:S2:1413:G:C5	49:S2:1414:A:C8	3.01	0.48
49:S2:1442:U:O2	49:S2:1443:C:C6	2.67	0.48
49:S2:1573:G:C4	49:S2:1574:C:C6	3.01	0.48
60:SK:84:HIS:HB3	62:SM:27:ILE:HD13	1.95	0.48
64:SO:41:PHE:N	64:SO:41:PHE:CD1	2.80	0.48
68:SS:107:LEU:O	68:SS:111:LEU:HG	2.12	0.48
73:SX:4:CYS:SG	73:SX:5:ARG:N	2.86	0.48
1:5:112:C:C4	1:5:157:U:C4	3.02	0.48
1:5:163:A:C6	1:5:164:G:N7	2.81	0.48
1:5:195:C:N3	1:5:196:C:C6	2.82	0.48
1:5:450:G:N2	1:5:1294:A:C2'	2.75	0.48
1:5:512:U:C3'	1:5:513:U:C5'	2.90	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:642:G:C2	1:5:643:C:C6	3.01	0.48
1:5:739:G:C6	1:5:740:G:N7	2.81	0.48
1:5:947:C:H2'	1:5:948:C:C6	2.47	0.48
1:5:973:G:C6	1:5:974:C:C4	3.01	0.48
1:5:985:C:C2	1:5:986:C:C6	3.01	0.48
1:5:1090:G:C4	1:5:1091:C:C6	3.01	0.48
1:5:1213:G:C6	1:5:1215:C:C4	3.02	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
1:5:1471:U:C4	1:5:1472:C:C5	3.02	0.48
1:5:1509:C:C2	1:5:1510:G:N7	2.82	0.48
1:5:1550:G:N1	1:5:1579:C:C2	2.82	0.48
1:5:1822:U:O2	1:5:1822:U:O4'	2.32	0.48
1:5:1958:A:H2	1:5:2026:A:C5	2.29	0.48
1:5:1967:A:C2	1:5:1968:G:C4	3.01	0.48
1:5:1971:C:H1'	46:q:37:SER:HB3	1.95	0.48
1:5:1983:A:C5	1:5:1987:C:OP2	2.57	0.48
1:5:2065:G:C4	1:5:2066:C:C6	3.02	0.48
1:5:2102:G:N1	1:5:2103:G:C5	2.82	0.48
1:5:2263:A:O2'	1:5:2265:G:C2'	2.61	0.48
1:5:2436:U:C5	1:5:2783:A:H1'	2.49	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
1:5:2818:C:H2'	1:5:2818:C:O2	2.14	0.48
1:5:2866:C:C2	1:5:2867:C:C6	3.01	0.48
1:5:3725:G:N2	1:5:3727:A:H2'	2.29	0.48
1:5:3736:A:P	1:5:3736:A:H3'	2.53	0.48
1:5:3759:A:H61	49:S2:1709:G:H5''	1.79	0.48
1:5:3894:A:C2	1:5:4567:G:C2	3.01	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
1:5:4303:C:O2	1:5:4303:C:H3'	2.13	0.48
1:5:4342:C:OP1	30:a:55:LYS:NZ	2.37	0.48
1:5:4482:U:O2	1:5:4483:C:C5	2.67	0.48
1:5:4564:A:O2'	1:5:4565:C:H5'	2.13	0.48
1:5:4984:C:N3	1:5:4985:U:C6	2.81	0.48
3:8:119:C:C4	3:8:120:G:N7	2.76	0.48
5:B:25:HIS:HB2	5:B:274:TYR:OH	2.14	0.48
11:H:117:PHE:CE1	11:H:118:LEU:HB2	2.48	0.48
14:K:31:LYS:O	14:K:34:PRO:HG2	2.10	0.48
14:K:95:GLN:C	14:K:97:ASN:N	2.68	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:191:LEU:O	15:L:192:PHE:C	2.55	0.48
18:O:12:ARG:NH1	22:S:171:ARG:HH21	2.11	0.48
20:Q:95:VAL:HG23	20:Q:116:ALA:HB2	1.95	0.48
31:b:6:ASN:ND2	31:b:6:ASN:N	2.59	0.48
47:r:33:LYS:CD	47:r:40:TYR:CE2	2.95	0.48
48:4:120:ARG:NH1	48:4:496:VAL:C	2.71	0.48
48:4:228:PHE:CE1	48:4:232:TYR:CE2	3.02	0.48
48:4:753:GLU:OE2	48:4:779:THR:CA	2.61	0.48
49:S2:145:G:C2	49:S2:146:G:C5	3.01	0.48
49:S2:167:G:C6	49:S2:168:C:C5	3.02	0.48
49:S2:376:A:H4'	61:SL:9:ALA:CB	2.43	0.48
49:S2:379:C:N3	49:S2:380:G:N7	2.61	0.48
49:S2:531:A:C5	49:S2:532:C:C6	3.02	0.48
49:S2:583:C:O2	49:S2:583:C:H2'	2.13	0.48
49:S2:604:A:C2	49:S2:605:A:C6	3.02	0.48
49:S2:669:A:C2	49:S2:670:A:C6	3.01	0.48
49:S2:827:A:C6	49:S2:828:G:C8	3.01	0.48
49:S2:856:C:N3	49:S2:857:U:C6	2.81	0.48
49:S2:923:G:C2	49:S2:924:G:C4	3.01	0.48
49:S2:933:G:C2	49:S2:1000:C:C4	2.96	0.48
49:S2:994:C:C2	49:S2:995:G:N7	2.62	0.48
49:S2:1005:G:C2	49:S2:1006:C:C2	3.01	0.48
49:S2:1162:C:C4	49:S2:1163:C:C4	3.01	0.48
49:S2:1282:A:N6	62:SM:93:LYS:HG3	2.28	0.48
49:S2:1294:G:O2'	81:Sf:137:ASP:CG	2.56	0.48
49:S2:1323:U:H2'	49:S2:1324:G:O4'	2.14	0.48
49:S2:1545:A:C6	49:S2:1546:G:C6	3.02	0.48
49:S2:1545:A:C2	49:S2:1546:G:C2	3.01	0.48
49:S2:1551:U:C2'	49:S2:1552:G:O4'	2.61	0.48
49:S2:1567:G:C2'	49:S2:1568:C:O5'	2.61	0.48
49:S2:1596:U:C4	49:S2:1597:C:C4	3.02	0.48
49:S2:1599:U:OP2	75:SZ:80:ARG:O	2.31	0.48
49:S2:1617:G:N7	65:SP:47:ARG:NH2	2.59	0.48
49:S2:1758:G:C2	49:S2:1759:G:C8	3.02	0.48
50:SA:81:ASN:HB2	50:SA:204:TYR:HE2	1.78	0.48
50:SA:107:THR:O	50:SA:116:PHE:HA	2.13	0.48
50:SA:198:MET:CG	50:SA:199:PRO:HD2	2.43	0.48
57:SH:116:ARG:NH2	57:SH:121:THR:OG1	2.46	0.48
57:SH:166:VAL:HG22	57:SH:173:PHE:HE2	1.79	0.48
73:SX:84:PHE:HD2	73:SX:105:PHE:CZ	2.31	0.48
82:Sg:129:ILE:O	82:Sg:142:VAL:HB	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1:C:C6	1:5:2:G:C8	3.02	0.48
1:5:52:G:H3'	1:5:52:G:C8	2.48	0.48
1:5:423:G:C4	1:5:424:U:C6	3.01	0.48
1:5:661:C:N3	1:5:662:C:C6	2.82	0.48
1:5:701:G:N3	1:5:701:G:H2'	2.29	0.48
1:5:1215:C:N4	1:5:1216:C:C5	2.80	0.48
1:5:1268:G:N3	1:5:1270:A:C8	2.77	0.48
1:5:1341:U:H2'	1:5:1342:A:H8	1.78	0.48
1:5:1426:G:C2'	1:5:1459:A:N6	2.76	0.48
1:5:1481:C:O4'	1:5:1481:C:O2	2.30	0.48
1:5:1589:C:O2'	1:5:1590:C:O5'	2.27	0.48
1:5:1777:C:N3	1:5:1778:C:C5	2.81	0.48
1:5:1899:G:O2'	34:e:57:ASN:OD1	2.31	0.48
1:5:1902:G:C2'	1:5:1903:G:O5'	2.62	0.48
1:5:1983:A:C2	1:5:2010:A:C3'	2.96	0.48
1:5:2035:C:C5	1:5:2036:C:C5	3.02	0.48
1:5:2099:G:N2	1:5:2100:A:N9	2.62	0.48
1:5:2319:C:O2	1:5:2319:C:C2'	2.60	0.48
1:5:2432:U:H2'	1:5:2433:G:O4'	2.14	0.48
1:5:2454:U:C2	1:5:2455:G:C8	3.01	0.48
1:5:2515:G:N7	1:5:2516:G:C5	2.81	0.48
1:5:2622:G:N2	1:5:2623:A:H1'	2.29	0.48
1:5:2648:G:O2'	1:5:2649:G:OP2	2.29	0.48
1:5:2678:A:C2	1:5:2679:G:C4	3.02	0.48
1:5:2789:A:H1'	1:5:2796:G:C8	2.48	0.48
1:5:2871:A:H2'	1:5:2872:C:O4'	2.14	0.48
1:5:3629:A:C5	1:5:3630:A:C8	3.01	0.48
1:5:3696:C:C2	1:5:3697:U:C5	3.00	0.48
1:5:3711:A:C6	1:5:3712:A:H1'	2.48	0.48
1:5:3907:G:C1'	1:5:4449:A:C1'	2.92	0.48
1:5:3944:G:N1	1:5:3945:A:N7	2.61	0.48
1:5:4069:U:O2	1:5:4070:U:C5	2.67	0.48
1:5:4098:A:C2	1:5:4099:G:N9	2.81	0.48
1:5:4142:C:C4	1:5:4143:G:C6	3.01	0.48
1:5:4250:G:N2	1:5:4259:C:C2	2.82	0.48
1:5:4269:G:C6	1:5:4270:C:C4	3.01	0.48
1:5:4271:A:C4	1:5:4272:G:C2	3.01	0.48
1:5:4298:A:C6	1:5:4299:U:C5	3.01	0.48
1:5:4299:U:C2	1:5:4300:U:C5	3.00	0.48
1:5:4635:A:H3'	1:5:4636:U:H4'	1.95	0.48
1:5:4860:G:C2	1:5:4861:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:60:G:O2'	7:D:268:ARG:NH1	2.46	0.48
2:7:62:U:N3	2:7:64:G:N7	2.62	0.48
3:8:101:C:O2	3:8:101:C:C2'	2.61	0.48
3:8:141:C:C2	3:8:142:U:C5	3.01	0.48
5:B:225:GLY:HA2	5:B:274:TYR:H	1.78	0.48
5:B:369:ASP:OD1	5:B:369:ASP:C	2.55	0.48
7:D:219:TYR:O	7:D:220:LYS:CB	2.61	0.48
8:E:56:SER:OG	8:E:57:ALA:N	2.45	0.48
12:I:85:PHE:CD1	12:I:85:PHE:C	2.92	0.48
17:N:65:ARG:HH21	17:N:127:TYR:HE2	1.59	0.48
20:Q:146:ARG:HH11	20:Q:146:ARG:HB3	1.78	0.48
25:V:73:ARG:HH11	25:V:73:ARG:HB3	1.79	0.48
28:Y:11:ARG:HH22	28:Y:15:ARG:CG	2.24	0.48
46:q:129:GLY:HA2	46:q:151:THR:CG2	2.43	0.48
48:4:4:PHE:CD1	48:4:5:THR:N	2.81	0.48
48:4:198:GLY:N	48:4:201:GLY:HA2	2.21	0.48
48:4:308:LYS:CB	48:4:311:GLU:HG3	2.44	0.48
48:4:750:GLN:HA	48:4:782:PHE:O	2.14	0.48
48:4:771:PHE:HB2	48:4:785:LYS:C	2.38	0.48
49:S2:14:C:O2	49:S2:668:A:H2	1.97	0.48
49:S2:61:A:C2	49:S2:335:G:C1'	2.95	0.48
49:S2:70:G:O6	49:S2:71:G:C6	2.66	0.48
49:S2:410:G:C6	49:S2:411:G:N7	2.80	0.48
49:S2:468:A:C4	49:S2:469:A:C8	3.01	0.48
49:S2:478:G:N1	49:S2:479:C:C4	2.82	0.48
49:S2:550:C:N3	49:S2:551:U:C5	2.82	0.48
49:S2:961:G:N2	49:S2:962:A:H1'	2.28	0.48
49:S2:963:A:C6	49:S2:964:A:N6	2.82	0.48
49:S2:1012:A:H2'	49:S2:1013:U:O4'	2.13	0.48
49:S2:1041:G:N3	49:S2:1041:G:H2'	2.27	0.48
49:S2:1073:U:O2	49:S2:1074:C:C6	2.66	0.48
49:S2:1121:G:O2'	51:SB:204:ILE:HA	2.13	0.48
49:S2:1281:G:C2	49:S2:1282:A:H1'	2.49	0.48
49:S2:1292:C:C6	81:Sf:149:CYS:CA	2.96	0.48
49:S2:1311:C:C5	49:S2:1312:G:C5	3.02	0.48
49:S2:1567:G:C5	49:S2:1568:C:C4	3.01	0.48
49:S2:1683:C:C2	49:S2:1684:C:C5	3.01	0.48
49:S2:1702:G:C6	49:S2:1703:C:C4	3.02	0.48
49:S2:1826:G:N1	49:S2:1827:U:C4	2.82	0.48
50:SA:58:LEU:HD12	50:SA:174:MET:HE1	1.96	0.48
53:SD:52:ALA:O	53:SD:91:VAL:HG23	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SH:177:TYR:CE2	57:SH:185:VAL:CG2	2.96	0.48
67:SR:10:LYS:HD3	67:SR:53:TYR:CE2	2.49	0.48
68:SS:86:ARG:NE	68:SS:86:ARG:CA	2.77	0.48
73:SX:125:VAL:HG21	73:SX:130:LEU:HD21	1.96	0.48
81:Sf:147:THR:HG22	81:Sf:148:TYR:HD1	1.75	0.48
82:Sg:60:ARG:HA	82:Sg:60:ARG:HE	1.79	0.48
82:Sg:191:HIS:HB2	82:Sg:195:LEU:HD21	1.95	0.48
1:5:69:A:C3'	1:5:70:A:H8	2.24	0.48
1:5:218:A:H1'	1:5:219:G:C2	2.47	0.48
1:5:218:A:N7	6:C:181:LYS:CG	2.77	0.48
1:5:314:G:N2	1:5:4355:G:C5	2.82	0.48
1:5:345:C:C2	1:5:346:G:N7	2.81	0.48
1:5:961:G:H5'	8:E:119:ARG:NH1	2.28	0.48
1:5:982:U:H5''	8:E:69:TYR:OH	2.09	0.48
1:5:1069:G:C5	1:5:1070:G:C8	3.01	0.48
1:5:1215:C:C6	1:5:1215:C:H5''	2.49	0.48
1:5:1292:C:H6	1:5:1292:C:H5''	1.78	0.48
1:5:1349:G:C6	1:5:1350:C:C4	3.02	0.48
1:5:1387:A:H1'	1:5:1397:A:H61	1.78	0.48
1:5:1477:C:O2	1:5:1478:C:C1'	2.61	0.48
1:5:1753:G:H2'	1:5:1755:C:H5''	1.95	0.48
1:5:1857:C:N3	1:5:1858:A:N7	2.62	0.48
1:5:1874:A:H2'	1:5:1875:C:O4'	2.14	0.48
1:5:1878:G:C6	1:5:1879:C:C4	3.02	0.48
1:5:1919:G:H5'	22:S:163:HIS:CE1	2.49	0.48
1:5:1983:A:N3	1:5:2010:A:H5''	2.28	0.48
1:5:2096:G:H22	9:F:41:GLN:HE22	1.62	0.48
1:5:2647:A:H2'	1:5:2648:G:C5'	2.44	0.48
1:5:2702:C:C2	1:5:2715:G:C2	3.01	0.48
1:5:2842:G:N1	1:5:2843:U:C5	2.82	0.48
1:5:3585:G:C2	1:5:3586:G:C8	3.02	0.48
1:5:3686:G:OP2	4:A:193:ARG:NH2	2.46	0.48
1:5:3689:G:C2	1:5:3690:U:C6	3.01	0.48
1:5:3795:A:C6	1:5:3796:U:C4	3.01	0.48
1:5:3930:U:H3	1:5:4180:G:H1	1.60	0.48
1:5:4125:C:H2'	1:5:4126:C:C6	2.49	0.48
1:5:4219:A:O2'	1:5:4220:A:C8	2.52	0.48
1:5:4423:U:N3	42:m:97:ARG:NH1	2.60	0.48
1:5:4692:A:H3'	1:5:4693:C:H2'	1.96	0.48
1:5:4712:C:O2	1:5:4712:C:H2'	2.13	0.48
1:5:4729:A:H5'	1:5:4965:U:O2'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4922:C:N3	1:5:4923:C:C5	2.82	0.48
1:5:4942:C:O3'	1:5:4944:C:P	2.72	0.48
1:5:5019:A:N3	1:5:5020:G:C8	2.81	0.48
1:5:5052:C:N3	1:5:5053:U:C6	2.82	0.48
2:7:27:G:H1'	2:7:56:G:N1	2.28	0.48
3:8:14:U:O2'	3:8:15:G:O4'	2.28	0.48
3:8:101:C:N4	3:8:102:G:C6	2.81	0.48
3:8:142:U:C4	3:8:143:G:N7	2.81	0.48
14:K:123:ARG:CB	14:K:129:ILE:HD12	0.97	0.48
17:N:101:VAL:HG12	17:N:105:ARG:HD2	1.94	0.48
19:P:30:ARG:HH12	19:P:62:ARG:HH21	1.62	0.48
22:S:9:GLU:HB3	22:S:67:VAL:CG1	2.43	0.48
22:S:29:ARG:HB3	22:S:29:ARG:NH2	2.28	0.48
35:f:72:GLY:HA3	35:f:88:PHE:CD1	2.49	0.48
48:4:420:LEU:HB2	48:4:464:VAL:O	2.14	0.48
48:4:556:ILE:O	48:4:560:ASP:OD2	2.31	0.48
48:4:593:SER:OG	48:4:728:CYS:CA	2.62	0.48
48:4:710:HIS:HB3	48:4:715:HIS:O	2.13	0.48
48:4:744:ILE:CD1	48:4:815:ASP:HB3	2.42	0.48
49:S2:72:C:OP1	49:S2:79:A:N1	2.47	0.48
49:S2:307:G:OP2	49:S2:307:G:O3'	2.30	0.48
49:S2:457:C:N3	49:S2:458:A:C8	2.82	0.48
49:S2:509:G:N2	49:S2:510:G:C4	2.81	0.48
49:S2:533:A:H2'	49:S2:534:G:O4'	2.14	0.48
49:S2:635:G:N2	49:S2:636:C:C2	2.81	0.48
49:S2:845:G:H2'	49:S2:846:G:C8	2.49	0.48
49:S2:1051:G:N3	49:S2:1052:A:C8	2.80	0.48
49:S2:1083:A:C8	49:S2:1861:G:C6	3.02	0.48
49:S2:1253:A:N3	49:S2:1666:C:C1'	2.77	0.48
49:S2:1496:U:N3	49:S2:1498:A:N7	2.62	0.48
49:S2:1514:G:C2'	49:S2:1515:G:O4'	2.61	0.48
49:S2:1736:G:O6	49:S2:1798:C:N4	2.44	0.48
49:S2:1860:A:C4	49:S2:1862:G:N7	2.82	0.48
52:SC:260:VAL:O	52:SC:261:PHE:HB2	2.13	0.48
53:SD:76:ARG:HD2	53:SD:77:PHE:CE1	2.49	0.48
54:SE:72:ILE:HG12	54:SE:90:ILE:HG12	1.96	0.48
56:SG:50:VAL:HG11	56:SG:111:LEU:HD13	1.95	0.48
56:SG:232:ARG:O	56:SG:236:SER:N	2.46	0.48
58:SI:8:TRP:CD1	58:SI:9:HIS:N	2.82	0.48
59:SJ:13:TYR:C	59:SJ:13:TYR:CD1	2.90	0.48
59:SJ:36:GLY:O	59:SJ:111:GLN:OE1	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SJ:45:ARG:HH22	59:SJ:146:SER:CB	2.26	0.48
63:SN:89:TYR:C	63:SN:89:TYR:HD1	2.22	0.48
64:SO:75:MET:O	64:SO:79:GLN:HG3	2.13	0.48
77:Sb:35:VAL:HG11	77:Sb:63:LEU:HD23	1.95	0.48
82:Sg:59:LEU:CD1	82:Sg:95:GLY:HA2	2.43	0.48
1:5:37:U:C4	1:5:38:A:C5	3.02	0.48
1:5:57:G:C2	1:5:58:G:C6	3.02	0.48
1:5:172:C:C4	1:5:173:C:C5	3.02	0.48
1:5:235:A:C5	1:5:238:C:C4	3.02	0.48
1:5:325:U:C2	1:5:326:C:C5	3.01	0.48
1:5:354:U:H1'	6:C:97:ARG:CG	2.44	0.48
1:5:474:C:O2	1:5:475:G:C8	2.67	0.48
1:5:738:C:H2'	1:5:739:G:H8	1.79	0.48
1:5:744:G:H2'	1:5:745:G:H8	1.79	0.48
1:5:750:U:N3	1:5:751:G:C8	2.82	0.48
1:5:945:U:C5	9:F:67:TYR:CE2	3.02	0.48
1:5:1265:G:O2'	1:5:2113:G:OP1	2.31	0.48
1:5:1367:C:C6	1:5:1370:G:H2'	2.48	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
1:5:1886:G:C2	1:5:1894:C:C4	3.02	0.48
1:5:1994:C:O2	14:K:132:ILE:HD13	2.14	0.48
1:5:2076:G:C5	1:5:2077:C:C5	3.02	0.48
1:5:2119:C:O2'	1:5:2120:G:OP2	2.16	0.48
1:5:2256:C:O2'	1:5:2257:C:OP2	2.24	0.48
1:5:2391:G:C2	1:5:2392:C:C6	3.02	0.48
1:5:2690:C:H2'	1:5:2690:C:O2	2.13	0.48
1:5:2712:G:C6	1:5:2713:C:C4	3.02	0.48
1:5:2758:G:H2'	1:5:2759:G:C8	2.49	0.48
1:5:3586:G:C2	1:5:3587:C:C2	3.02	0.48
1:5:3587:C:H2'	1:5:3588:C:C6	2.49	0.48
1:5:3608:A:N3	1:5:3609:G:C8	2.81	0.48
1:5:3621:A:C2	1:5:3622:C:N1	2.82	0.48
1:5:3651:A:H2'	1:5:3652:A:O4'	2.14	0.48
1:5:3686:G:P	4:A:193:ARG:NH2	2.82	0.48
1:5:3717:A:O2'	1:5:3718:A:P	2.71	0.48
1:5:3793:U:C2	1:5:3794:C:C5	3.02	0.48
1:5:3911:C:C2	1:5:3912:U:C6	3.01	0.48
1:5:3935:C:C4	1:5:3936:A:N7	2.81	0.48
1:5:3945:A:C2	1:5:3946:G:C4	3.01	0.48
1:5:4109:G:N3	1:5:4110:C:C6	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4169:G:H4'	1:5:4171:C:C2	2.48	0.48
1:5:4258:C:H2'	1:5:4259:C:C6	2.47	0.48
1:5:4303:C:O2'	1:5:4304:A:H2'	2.14	0.48
1:5:4594:U:C2	1:5:4595:G:C8	3.02	0.48
1:5:5029:C:N3	1:5:5030:U:C6	2.80	0.48
4:A:174:ARG:HA	45:p:69:TRP:HH2	1.73	0.48
6:C:180:ILE:O	6:C:184:TYR:HB2	2.14	0.48
6:C:186:SER:O	6:C:203:GLN:HA	2.13	0.48
7:D:67:ALA:O	7:D:68:ARG:NH1	2.46	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
18:O:192:PHE:N	18:O:192:PHE:CD1	2.81	0.48
20:Q:33:ARG:HH21	20:Q:48:LEU:HD11	1.78	0.48
46:q:66:ARG:CG	46:q:69:LEU:CD2	2.82	0.48
46:q:78:LEU:C	46:q:80:PRO:HD3	2.38	0.48
46:q:86:VAL:CG1	46:q:87:GLY:N	2.76	0.48
46:q:168:GLY:H	46:q:171:GLU:CG	2.26	0.48
48:4:24:VAL:HG21	48:4:32:LYS:CG	2.44	0.48
48:4:206:ASP:N	48:4:211:THR:OG1	2.42	0.48
49:S2:177:G:H21	49:S2:178:C:N4	2.12	0.48
49:S2:201:C:C4	49:S2:202:G:H1'	2.49	0.48
49:S2:224:A:H2'	49:S2:225:G:C8	2.48	0.48
49:S2:437:G:H2'	49:S2:438:G:N3	2.28	0.48
49:S2:821:G:O6	59:SJ:150:ARG:NH1	2.46	0.48
49:S2:913:A:C2	57:SH:120:ARG:NH2	2.82	0.48
49:S2:962:A:N1	49:S2:963:A:C5	2.82	0.48
49:S2:976:G:C6	49:S2:977:C:C5	3.02	0.48
49:S2:1095:U:C2	49:S2:1149:A:N6	2.79	0.48
49:S2:1310:U:C2	49:S2:1311:C:C6	2.99	0.48
49:S2:1429:G:C2	49:S2:1430:C:C4	3.02	0.48
49:S2:1429:G:O2'	49:S2:1430:C:OP1	2.30	0.48
49:S2:1440:C:H2'	49:S2:1441:U:O4'	2.13	0.48
49:S2:1514:G:H21	65:SP:97:TYR:HE2	1.61	0.48
49:S2:1528:G:N1	49:S2:1529:C:N4	2.62	0.48
49:S2:1573:G:C2	49:S2:1574:C:N1	2.81	0.48
49:S2:1591:C:C5	49:S2:1592:C:C5	3.02	0.48
52:SC:263:LYS:HB3	52:SC:267:GLN:OE1	2.14	0.48
54:SE:181:CYS:SG	54:SE:195:ILE:CG1	3.02	0.48
55:SF:41:VAL:HG13	55:SF:42:LYS:HD3	1.96	0.48
58:SI:181:GLN:NE2	58:SI:181:GLN:HA	2.29	0.48
59:SJ:48:PHE:CZ	59:SJ:52:LYS:CG	2.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SK:48:ALA:O	60:SK:51:SER:OG	2.28	0.48
64:SO:130:GLU:OE1	64:SO:131:ASP:N	2.46	0.48
67:SR:83:ASN:ND2	67:SR:83:ASN:O	2.47	0.48
68:SS:28:PHE:N	68:SS:28:PHE:CD1	2.81	0.48
1:5:298:G:C5	1:5:299:C:C5	3.02	0.48
1:5:457:G:C6	1:5:458:C:C5	3.02	0.48
1:5:467:U:N3	1:5:468:U:C6	2.81	0.48
1:5:480:C:C2	1:5:481:G:C8	3.02	0.48
1:5:741:C:C2	1:5:742:G:C8	3.01	0.48
1:5:747:A:C2'	1:5:749:G:C8	2.87	0.48
1:5:931:C:N1	1:5:932:A:C8	2.82	0.48
1:5:1175:A:H1'	7:D:275:GLN:HE22	1.76	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
1:5:1265:G:C3'	1:5:1266:G:H5'	2.44	0.48
1:5:1268:G:H1'	1:5:2111:G:C6	2.49	0.48
1:5:1395:U:C2'	1:5:1396:G:O5'	2.61	0.48
1:5:1607:C:H2'	1:5:1607:C:O2	2.12	0.48
1:5:1619:G:C4	1:5:1620:U:C5	3.02	0.48
1:5:1749:A:C2	1:5:1750:G:C4	3.02	0.48
1:5:1749:A:H2'	1:5:1750:G:C1'	2.44	0.48
1:5:1775:A:H3'	1:5:1776:A:H8	1.79	0.48
1:5:1955:G:C6	1:5:1956:A:N7	2.81	0.48
1:5:2019:C:N3	1:5:2020:U:C6	2.82	0.48
1:5:2263:A:O3'	1:5:2264:C:H2'	2.13	0.48
1:5:2278:G:H5'	20:Q:7:HIS:CE1	2.49	0.48
1:5:2332:A:N3	1:5:2333:G:H1'	2.29	0.48
1:5:2339:G:C5	1:5:2340:C:C5	3.01	0.48
1:5:2347:A:C2	1:5:2348:G:C2	3.02	0.48
1:5:2413:U:C2	1:5:2414:G:C8	3.02	0.48
1:5:2420:A:C2	1:5:2427:G:C2	3.02	0.48
1:5:2503:G:H5'	1:5:2504:C:O5'	2.14	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
1:5:2615:C:O2	1:5:2615:C:H2'	2.13	0.48
1:5:2688:G:C6	1:5:2689:C:C4	3.02	0.48
1:5:2706:G:O2'	1:5:2709:C:N4	2.47	0.48
1:5:2745:A:O2'	1:5:2746:A:H5'	2.12	0.48
1:5:2807:A:C2	1:5:2808:G:C8	3.02	0.48
1:5:2833:A:O2'	1:5:2834:C:C5'	2.62	0.48
1:5:3629:A:C2	1:5:3630:A:H1'	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3655:C:N3	1:5:3656:A:N7	2.62	0.48
1:5:3740:G:O6	1:5:3741:C:C4	2.67	0.48
1:5:3759:A:N1	49:S2:1709:G:C4'	2.76	0.48
1:5:3806:G:C6	1:5:3807:A:C5	3.02	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
1:5:3898:G:C3'	1:5:3899:G:H5'	2.44	0.48
1:5:4122:G:C5	1:5:4123:C:C5	3.02	0.48
1:5:4161:G:H2'	1:5:4162:C:H3'	1.94	0.48
1:5:4173:G:N3	1:5:4174:U:C6	2.82	0.48
1:5:4201:G:C6	1:5:4202:U:O4	2.67	0.48
1:5:4281:A:N1	1:5:4283:G:C4	2.82	0.48
1:5:4283:G:N2	1:5:4284:C:N3	2.62	0.48
1:5:4301:U:H5''	23:T:54:HIS:CD2	2.49	0.48
1:5:4461:C:O2	1:5:4516:G:C2	2.67	0.48
1:5:4691:A:C6	1:5:4692:A:C5	3.01	0.48
1:5:4713:G:C5	1:5:4714:C:C5	3.02	0.48
1:5:5004:C:O2	1:5:5044:A:C2	2.67	0.48
1:5:5031:G:C4	1:5:5032:C:C5	3.02	0.48
2:7:11:A:N7	7:D:18:VAL:HG13	2.28	0.48
2:7:28:C:H2'	2:7:28:C:O2	2.12	0.48
3:8:46:G:N2	3:8:47:C:C2	2.81	0.48
3:8:66:A:C4	3:8:67:U:C5	3.02	0.48
3:8:95:A:C4	3:8:96:C:C6	3.02	0.48
6:C:78:ARG:HH11	6:C:78:ARG:CG	2.26	0.48
8:E:279:PRO:C	8:E:281:LYS:H	2.22	0.48
15:L:125:ILE:HD11	37:h:123:ALA:HB3	1.95	0.48
22:S:8:ARG:NH1	22:S:10:TYR:OH	2.47	0.48
22:S:10:TYR:OH	22:S:66:GLN:CG	2.60	0.48
23:T:17:ARG:HG3	23:T:18:PRO:CD	2.44	0.48
34:e:77:PHE:HD1	34:e:78:LEU:N	2.12	0.48
35:f:22:ARG:HG3	35:f:22:ARG:NH1	2.27	0.48
46:q:147:ILE:N	48:4:204:MET:HE1	2.29	0.48
48:4:172:GLU:O	48:4:176:GLN:HG2	2.13	0.48
48:4:241:GLU:N	48:4:243:GLN:HB2	2.28	0.48
48:4:300:VAL:CG2	48:4:301:PHE:N	2.77	0.48
49:S2:84:A:C4	49:S2:85:A:C8	3.01	0.48
49:S2:161:U:H6	74:SY:116:LYS:HA	1.78	0.48
49:S2:170:A:H2'	49:S2:171:A:O4'	2.14	0.48
49:S2:216:C:O4'	49:S2:216:C:O2	2.32	0.48
49:S2:386:C:O2'	58:SI:5:ARG:HA	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:387:C:O2	49:S2:387:C:H2'	2.13	0.48
49:S2:533:A:C2	49:S2:534:G:N9	2.81	0.48
49:S2:637:U:N3	49:S2:638:C:C4	2.82	0.48
49:S2:786:G:C8	56:SG:236:SER:O	2.67	0.48
49:S2:794:A:C2	49:S2:795:A:C8	3.02	0.48
49:S2:857:U:O2	49:S2:858:A:C8	2.66	0.48
49:S2:952:G:H2'	49:S2:953:C:O4'	2.14	0.48
49:S2:995:G:H21	49:S2:997:A:H8	1.62	0.48
49:S2:1552:G:OP2	53:SD:9:ARG:NH2	2.47	0.48
49:S2:1746:U:C4	49:S2:1789:G:N2	2.81	0.48
50:SA:130:ASP:OD1	50:SA:130:ASP:N	2.46	0.48
53:SD:76:ARG:NE	60:SK:66:HIS:CE1	2.82	0.48
60:SK:90:VAL:HG21	60:SK:94:LEU:HD12	1.96	0.48
61:SL:46:THR:O	61:SL:46:THR:HG23	2.13	0.48
1:5:62:A:C2'	1:5:63:G:O5'	2.61	0.48
1:5:73:A:N3	1:5:74:G:C8	2.81	0.48
1:5:85:G:N3	1:5:97:G:C6	2.82	0.48
1:5:87:A:H2'	1:5:87:A:N3	2.29	0.48
1:5:180:C:N3	1:5:181:C:C5	2.82	0.48
1:5:182:G:H1	1:5:254:G:H1	1.62	0.48
1:5:238:C:H2'	1:5:239:C:H5'	1.96	0.48
1:5:288:G:C2	1:5:289:C:C5	3.02	0.48
1:5:1094:G:C2	1:5:1095:A:C8	3.02	0.48
1:5:1168:G:N2	1:5:1169:G:C4	2.82	0.48
1:5:1239:C:H4'	1:5:1240:G:O5'	2.14	0.48
1:5:1475:G:C2	1:5:1476:C:C6	3.00	0.48
1:5:1488:G:C2	1:5:1489:G:N9	2.82	0.48
1:5:1516:G:O2'	15:L:18:TRP:NE1	2.39	0.48
1:5:1534:A:H1'	39:j:11:ARG:NH2	2.29	0.48
1:5:1786:A:H2'	1:5:1789:C:H5	1.79	0.48
1:5:1887:G:C6	1:5:1890:G:C6	3.02	0.48
1:5:1953:U:H2'	1:5:1954:U:O4'	2.14	0.48
1:5:1972:G:C2	1:5:1973:G:C8	3.02	0.48
1:5:2101:C:H2'	1:5:2102:G:O4'	2.13	0.48
1:5:2243:C:O2	1:5:2244:C:C5	2.67	0.48
1:5:2270:G:C2	1:5:2271:C:C2	3.02	0.48
1:5:2302:C:N4	1:5:2303:C:N4	2.61	0.48
1:5:2410:C:O2	1:5:2411:C:C6	2.66	0.48
1:5:2507:A:H2'	1:5:2507:A:N3	2.28	0.48
1:5:2532:C:N3	1:5:2533:C:N4	2.62	0.48
1:5:2581:A:H1'	1:5:2654:C:O2'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2673:G:C2	32:c:89:TYR:CD1	3.01	0.48
1:5:2737:C:N3	1:5:2738:C:C5	2.82	0.48
1:5:2739:C:H4'	45:p:52:VAL:CG2	2.44	0.48
1:5:2858:A:O2'	1:5:2859:G:P	2.71	0.48
1:5:3722:G:C4	1:5:3723:A:C8	3.02	0.48
1:5:3799:A:N7	25:V:40:ILE:HG21	2.29	0.48
1:5:3863:C:H2'	1:5:3864:C:H6	1.79	0.48
1:5:3945:A:N1	1:5:3946:G:C5	2.81	0.48
1:5:4095:G:H22	1:5:4096:C:N4	2.11	0.48
1:5:4128:A:N3	10:G:34:LYS:O	2.47	0.48
1:5:4337:C:O2'	1:5:4338:G:O5'	2.26	0.48
1:5:4531:U:C6	1:5:4531:U:C5'	2.97	0.48
1:5:4876:U:O2	1:5:4876:U:O4'	2.31	0.48
1:5:5050:C:C2	1:5:5051:C:C6	3.02	0.48
3:8:154:G:C6	3:8:155:C:C4	3.02	0.48
4:A:109:GLU:CD	4:A:109:GLU:C	2.82	0.48
11:H:94:SER:OG	11:H:142:ASP:HB3	2.14	0.48
12:I:88:ARG:HB2	12:I:173:PHE:HE2	1.79	0.48
31:b:42:ASN:ND2	31:b:42:ASN:C	2.72	0.48
46:q:45:MET:C	46:q:47:LEU:H	2.22	0.48
46:q:80:PRO:CD	46:q:81:HIS:ND1	2.77	0.48
48:4:75:ILE:CG2	48:4:76:SER:N	2.75	0.48
48:4:395:MET:SD	48:4:486:THR:HG22	2.54	0.48
48:4:402:VAL:HG22	48:4:403:PRO:CG	2.43	0.48
48:4:590:LEU:CD2	48:4:605:LYS:HG3	2.43	0.48
48:4:791:ASN:HA	48:4:794:PHE:CE1	2.49	0.48
49:S2:27:A:C2	49:S2:28:U:C1'	2.97	0.48
49:S2:121:U:N3	49:S2:122:G:C8	2.67	0.48
49:S2:217:A:H1'	49:S2:309:G:H1	1.79	0.48
49:S2:322:C:H2'	49:S2:323:C:H6	1.78	0.48
49:S2:472:C:O4'	49:S2:472:C:OP1	2.32	0.48
49:S2:554:A:N3	49:S2:555:A:C8	2.82	0.48
49:S2:871:U:H5'	49:S2:871:U:H6	1.77	0.48
49:S2:950:C:N3	49:S2:951:C:C6	2.82	0.48
49:S2:995:G:N2	49:S2:997:A:H8	2.11	0.48
49:S2:1175:G:C6	49:S2:1176:G:C5	3.01	0.48
49:S2:1241:A:H2	49:S2:1516:G:O2'	1.96	0.48
49:S2:1538:C:H5''	69:ST:44:GLU:HG3	1.95	0.48
49:S2:1551:U:C4'	49:S2:1558:C:H1'	2.44	0.48
49:S2:1782:G:N3	49:S2:1784:G:C8	2.81	0.48
51:SB:36:PRO:HB3	51:SB:231:LEU:HD21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SB:125:VAL:HG22	51:SB:169:MET:HG3	1.96	0.48
51:SB:153:THR:HB	51:SB:155:TYR:CZ	2.49	0.48
57:SH:99:ARG:HG2	57:SH:99:ARG:HH21	1.79	0.48
69:ST:31:PRO:CB	69:ST:33:TRP:CH2	2.97	0.48
82:Sg:59:LEU:HD12	82:Sg:95:GLY:HA2	1.94	0.48
1:5:209:U:C2	1:5:233:U:O4	2.66	0.47
1:5:272:U:N3	1:5:273:U:C4	2.82	0.47
1:5:332:C:C4'	17:N:150:TRP:NE1	2.76	0.47
1:5:456:C:C2	1:5:457:G:N7	2.81	0.47
1:5:479:G:C6	1:5:480:C:C4	3.01	0.47
1:5:1168:G:C2	1:5:1169:G:C8	3.02	0.47
1:5:1170:G:N2	1:5:1192:C:C2	2.82	0.47
1:5:1176:C:C2	1:5:1177:U:C6	3.01	0.47
1:5:1260:G:N2	1:5:1261:G:C4	2.82	0.47
1:5:1268:G:OP2	1:5:2110:C:C2'	2.62	0.47
1:5:1321:G:C2	1:5:3876:A:C4	3.02	0.47
1:5:1367:C:H2'	1:5:1368:A:O5'	2.14	0.47
1:5:1380:G:N3	1:5:1382:G:C5	2.82	0.47
1:5:1412:G:C6	1:5:1413:C:C5	3.02	0.47
1:5:1421:G:N1	1:5:1422:G:C5	2.82	0.47
1:5:1448:G:N2	1:5:1449:C:C2	2.82	0.47
1:5:1759:G:C6	1:5:1760:G:C8	3.02	0.47
1:5:1968:G:N2	1:5:1969:G:C4	2.82	0.47
1:5:2367:A:N9	1:5:2798:A:C2	2.81	0.47
1:5:2417:A:N3	1:5:2417:A:H2'	2.27	0.47
1:5:2480:G:N3	1:5:2481:G:C8	2.82	0.47
1:5:2522:G:C2	1:5:2534:C:N3	2.82	0.47
1:5:2632:U:C6	24:U:85:TYR:CE1	3.02	0.47
1:5:2689:C:O2	1:5:2690:C:H6	1.97	0.47
1:5:2749:C:O2'	36:g:64:LEU:HD23	2.14	0.47
1:5:2757:A:HO2'	1:5:2758:G:C5'	2.26	0.47
1:5:2835:A:C1'	1:5:4979:A:H5'	2.43	0.47
1:5:2878:G:H4'	1:5:3825:A:H5''	1.96	0.47
1:5:3733:A:C6	1:5:3734:U:C4	3.02	0.47
1:5:3734:U:O2'	1:5:3735:G:H5'	2.14	0.47
1:5:4094:G:C6	1:5:4095:G:C6	3.02	0.47
1:5:4129:G:H2'	1:5:4130:C:O4'	2.14	0.47
1:5:4185:G:C2	1:5:4186:A:C8	3.02	0.47
1:5:4312:U:C2	1:5:4313:A:C8	3.01	0.47
1:5:4455:G:H22	1:5:4524:G:H22	1.62	0.47
1:5:4595:G:C6	1:5:4596:C:C4	3.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4635:A:H2	1:5:4663:G:H21	1.62	0.47
1:5:4683:U:C4	1:5:4707:A:C5	3.02	0.47
1:5:4895:C:H1'	1:5:4896:G:C8	2.49	0.47
17:N:99:GLN:HG3	17:N:130:PHE:CE2	2.48	0.47
20:Q:31:LEU:O	20:Q:31:LEU:HD23	2.14	0.47
36:g:13:TYR:O	36:g:14:ASN:C	2.56	0.47
46:q:142:GLY:C	46:q:143:ILE:HG13	2.39	0.47
46:q:160:LEU:HD13	46:q:175:LEU:HD21	1.87	0.47
47:r:7:TRP:HD1	47:r:38:PHE:CD1	2.32	0.47
48:4:146:ALA:CA	48:4:151:ILE:HD12	2.45	0.47
48:4:168:GLN:O	48:4:168:GLN:HG3	2.12	0.47
48:4:427:VAL:CG2	48:4:447:ILE:CD1	2.75	0.47
48:4:444:LEU:HD12	48:4:444:LEU:N	2.29	0.47
48:4:579:TYR:CE2	48:4:742:GLU:HG3	2.49	0.47
48:4:742:GLU:HA	48:4:743:PRO:HD3	1.55	0.47
48:4:744:ILE:HD12	48:4:816:HIS:CG	2.47	0.47
48:4:744:ILE:CG2	48:4:815:ASP:H	2.27	0.47
48:4:812:CYS:SG	48:4:813:VAL:N	2.87	0.47
49:S2:47:G:C6	49:S2:48:C:C4	3.02	0.47
49:S2:119:U:C2	49:S2:120:U:H6	2.30	0.47
49:S2:163:U:O2	49:S2:164:A:N7	2.47	0.47
49:S2:177:G:O2'	49:S2:178:C:H6	1.96	0.47
49:S2:380:G:N2	49:S2:382:C:C3'	2.73	0.47
49:S2:452:G:C2	49:S2:453:C:C2	3.02	0.47
49:S2:534:G:C2	49:S2:535:G:C8	3.02	0.47
49:S2:620:G:P	49:S2:620:G:H21	2.33	0.47
49:S2:823:U:C5	74:SY:64:PHE:CE2	3.00	0.47
49:S2:916:A:C6	63:SN:73:ARG:HD3	2.49	0.47
49:S2:932:G:C2	49:S2:934:G:C8	3.02	0.47
49:S2:1225:U:C4	49:S2:1226:G:C8	3.02	0.47
49:S2:1236:G:N2	49:S2:1237:C:C2	2.82	0.47
49:S2:1269:G:H2'	49:S2:1270:G:O4'	2.14	0.47
49:S2:1283:C:H4'	62:SM:102:LYS:HE3	1.95	0.47
49:S2:1284:A:N1	62:SM:33:ARG:C	2.72	0.47
49:S2:1404:U:H4'	49:S2:1581:C:O2	2.14	0.47
49:S2:1420:G:O2'	69:ST:4:VAL:C	2.57	0.47
49:S2:1575:G:N3	49:S2:1576:G:N7	2.62	0.47
49:S2:1589:A:H2'	49:S2:1590:C:O5'	2.14	0.47
49:S2:1822:A:H5''	49:S2:1823:A:H5''	1.94	0.47
50:SA:138:SER:HB2	50:SA:156:TYR:CE1	2.48	0.47
50:SA:147:LEU:O	50:SA:165:ASN:ND2	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:SC:132:ASP:OD1	52:SC:132:ASP:N	2.45	0.47
54:SE:54:TYR:OH	54:SE:97:GLU:OE1	2.30	0.47
62:SM:67:ALA:O	62:SM:71:GLU:HG2	2.14	0.47
63:SN:99:ARG:NH2	63:SN:115:LEU:HD21	2.29	0.47
68:SS:23:ARG:HD3	75:SZ:48:VAL:HG21	1.96	0.47
1:5:22:G:C2	3:8:35:C:N3	2.82	0.47
1:5:29:G:C5	1:5:30:C:C5	3.01	0.47
1:5:88:A:H2'	1:5:89:C:O5'	2.13	0.47
1:5:94:A:H2'	1:5:95:G:O5'	2.15	0.47
1:5:118:C:H42	1:5:121:A:H62	1.61	0.47
1:5:141:C:C2	1:5:142:G:C8	3.02	0.47
1:5:296:A:P	1:5:296:A:H8	2.35	0.47
1:5:398:A:C2	1:5:399:G:C8	3.02	0.47
1:5:437:G:C2	1:5:438:G:C8	3.02	0.47
1:5:438:G:C4	1:5:439:G:C8	3.01	0.47
1:5:709:C:N3	1:5:710:G:N7	2.62	0.47
1:5:743:G:N2	1:5:744:G:C5	2.82	0.47
1:5:963:G:N3	1:5:963:G:H2'	2.29	0.47
1:5:1283:G:H3'	1:5:1283:G:H8	1.79	0.47
1:5:1404:G:C5	1:5:1405:C:C5	3.02	0.47
1:5:1613:A:H4'	4:A:186:TYR:HD2	1.77	0.47
1:5:1655:C:H2'	1:5:1655:C:O2	2.14	0.47
1:5:1655:C:O3'	1:5:1679:A:H2	1.98	0.47
1:5:1769:G:N2	1:5:1770:A:C4	2.82	0.47
1:5:1838:A:C2	1:5:1839:U:C5	3.02	0.47
1:5:1962:A:H5''	1:5:1962:A:C8	2.49	0.47
1:5:2120:G:H2'	1:5:2121:C:C2	2.48	0.47
1:5:2557:G:C2	1:5:2558:C:C2	3.03	0.47
1:5:2643:G:C6	1:5:2644:G:C8	3.02	0.47
1:5:2676:A:C2	1:5:2677:G:H1'	2.50	0.47
1:5:2770:C:N3	1:5:2771:G:C8	2.82	0.47
1:5:2874:U:C6	1:5:2874:U:C5'	2.97	0.47
1:5:3621:A:C4	1:5:3622:C:C5	3.01	0.47
1:5:3722:G:C6	1:5:3723:A:C5	3.02	0.47
1:5:3739:C:C6	1:5:3739:C:C4'	2.97	0.47
1:5:3759:A:C6	49:S2:1709:G:C5'	2.97	0.47
1:5:3841:C:O2	1:5:3841:C:H2'	2.14	0.47
1:5:3883:U:C2'	1:5:3884:U:O5'	2.62	0.47
1:5:3911:C:O2	1:5:3912:U:C6	2.67	0.47
1:5:4082:G:H2'	1:5:4083:U:C6	2.49	0.47
1:5:4096:C:C4	1:5:4097:G:N7	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4241:C:C4	1:5:4242:U:C5	3.02	0.47
1:5:4266:G:N1	1:5:4279:A:C5	2.82	0.47
1:5:4415:A:N1	1:5:4416:G:H1'	2.29	0.47
1:5:4433:G:H2'	1:5:4434:C:H6	1.78	0.47
1:5:4463:U:C5	1:5:4488:A:C5	3.02	0.47
1:5:4481:U:C2'	1:5:4482:U:C6	2.88	0.47
1:5:4510:A:C6	1:5:4592:C:H4'	2.48	0.47
1:5:4565:C:H1'	5:B:262:VAL:CG2	2.44	0.47
1:5:4687:A:N1	1:5:4688:C:C4	2.82	0.47
1:5:4981:G:N1	1:5:4982:A:C5	2.81	0.47
1:5:5026:U:OP1	58:SI:168:GLN:CG	2.62	0.47
2:7:110:G:C6	2:7:111:C:C4	3.02	0.47
3:8:69:U:H2'	3:8:70:G:O4'	2.14	0.47
3:8:108:A:C2	3:8:112:G:N1	2.82	0.47
3:8:146:U:N3	3:8:147:G:C8	2.82	0.47
4:A:32:VAL:CG1	4:A:163:ARG:HD2	2.44	0.47
5:B:228:TYR:CE1	5:B:270:GLY:HA2	2.50	0.47
5:B:273:GLY:O	5:B:275:HIS:CD2	2.68	0.47
7:D:200:LEU:CB	7:D:202:GLN:HE22	2.27	0.47
13:J:64:ARG:HG2	13:J:64:ARG:HH21	1.77	0.47
14:K:71:ILE:CG2	14:K:73:VAL:HG23	2.44	0.47
14:K:110:VAL:HG12	14:K:114:ARG:NH1	2.29	0.47
16:M:5:ARG:NH2	16:M:59:ASP:OD1	2.45	0.47
17:N:99:GLN:OE1	17:N:167:ALA:HB2	2.14	0.47
21:R:95:TRP:CG	21:R:99:MET:HE2	2.49	0.47
27:X:151:ASN:OD1	27:X:151:ASN:N	2.46	0.47
28:Y:69:LYS:HB3	28:Y:83:GLU:OE2	2.14	0.47
30:a:35:ALA:O	30:a:41:HIS:HD2	1.96	0.47
33:d:87:ARG:CZ	33:d:87:ARG:HA	2.44	0.47
35:f:50:VAL:HG22	35:f:69:VAL:CG1	2.44	0.47
38:i:85:ARG:HG3	38:i:85:ARG:HH11	1.79	0.47
42:m:106:ARG:HB2	42:m:106:ARG:HH11	1.79	0.47
42:m:106:ARG:O	42:m:107:ALA:C	2.57	0.47
46:q:35:VAL:HG22	46:q:36:GLY:N	2.30	0.47
46:q:68:HIS:O	46:q:70:GLU:N	2.40	0.47
46:q:92:LYS:C	46:q:92:LYS:CD	2.85	0.47
46:q:93:GLU:CG	46:q:95:LEU:CD2	2.91	0.47
48:4:438:LYS:HB3	48:4:440:GLU:HG2	1.95	0.47
48:4:617:ILE:HG13	48:4:622:VAL:CG2	2.44	0.47
49:S2:64:A:N6	49:S2:82:G:C5	2.82	0.47
49:S2:140:C:O2'	49:S2:141:A:O5'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:165:G:O2'	49:S2:166:A:C5'	2.63	0.47
49:S2:212:C:C2	49:S2:213:G:C8	3.01	0.47
49:S2:338:G:C5	49:S2:339:A:C8	3.02	0.47
49:S2:482:G:O2'	49:S2:484:A:N6	2.41	0.47
49:S2:598:G:N2	49:S2:639:C:N3	2.61	0.47
49:S2:673:G:C6	49:S2:674:C:C4	3.02	0.47
49:S2:787:G:H2'	49:S2:788:G:O4'	2.14	0.47
49:S2:857:U:C2	49:S2:858:A:N7	2.82	0.47
49:S2:1099:G:C6	49:S2:1100:A:C5	3.02	0.47
49:S2:1232:U:C2	49:S2:1233:G:N7	2.81	0.47
49:S2:1287:A:N6	49:S2:1314:U:C5	2.83	0.47
49:S2:1290:G:C5	81:Sf:146:LEU:HD23	2.49	0.47
49:S2:1310:U:H1'	81:Sf:143:LYS:HD2	1.94	0.47
49:S2:1551:U:H1'	49:S2:1558:C:C2	2.49	0.47
49:S2:1571:G:C2	49:S2:1572:C:C2	3.02	0.47
49:S2:1603:G:N7	68:SS:28:PHE:HZ	2.09	0.47
49:S2:1654:G:C2	49:S2:1655:C:C2	3.01	0.47
49:S2:1859:A:N1	49:S2:1860:A:C5	2.82	0.47
49:S2:1860:A:C5	49:S2:1862:G:N7	2.82	0.47
62:SM:89:VAL:HG12	62:SM:90:GLY:H	1.79	0.47
62:SM:106:CYS:SG	62:SM:107:SER:N	2.88	0.47
68:SS:80:PRO:HG2	68:SS:82:TRP:NE1	2.29	0.47
69:ST:52:TRP:CE3	69:ST:53:PHE:CA	2.97	0.47
72:SW:80:ASP:N	72:SW:80:ASP:OD1	2.47	0.47
73:SX:51:VAL:HG13	73:SX:70:VAL:CG1	2.44	0.47
1:5:2:G:N2	1:5:3:C:C2	2.83	0.47
1:5:60:G:C4	1:5:61:A:N7	2.82	0.47
1:5:90:G:C5	1:5:92:C:C1'	2.97	0.47
1:5:98:A:N6	1:5:99:A:C4	2.82	0.47
1:5:142:G:C6	1:5:144:G:N7	2.82	0.47
1:5:173:C:N3	1:5:174:C:C4	2.80	0.47
1:5:299:C:O2	1:5:299:C:C2'	2.62	0.47
1:5:423:G:H2'	19:P:118:GLN:NE2	2.28	0.47
1:5:483:G:H2'	1:5:484:U:H6	1.79	0.47
1:5:504:G:O6	1:5:654:C:N3	2.47	0.47
1:5:669:C:HO2'	1:5:670:G:C5'	2.26	0.47
1:5:698:G:C6	1:5:699:C:C5	3.01	0.47
1:5:722:G:N2	6:C:343:GLN:HE22	2.13	0.47
1:5:950:G:C2	1:5:951:G:C5	3.02	0.47
1:5:985:C:O2	1:5:986:C:C6	2.67	0.47
1:5:1175:A:N1	1:5:1176:C:C4	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1185:G:N2	1:5:1186:U:H1'	2.29	0.47
1:5:1473:U:H2'	1:5:1474:C:O4'	2.14	0.47
1:5:1474:C:C4	1:5:1475:G:N7	2.81	0.47
1:5:1516:G:C2	1:5:1518:A:C6	3.02	0.47
1:5:1633:G:C6	4:A:207:VAL:HG11	2.49	0.47
1:5:1759:G:N1	1:5:1760:G:C5	2.81	0.47
1:5:1838:A:C2	1:5:1839:U:C6	3.02	0.47
1:5:1850:A:C2'	1:5:1851:G:O5'	2.62	0.47
1:5:1881:C:O4'	1:5:2281:U:C5	2.67	0.47
1:5:1967:A:N1	1:5:1968:G:N7	2.62	0.47
1:5:1995:G:H2'	1:5:1996:C:C6	2.50	0.47
1:5:2125:C:O5'	1:5:2125:C:C6	2.65	0.47
1:5:2367:A:N6	1:5:2798:A:C1'	2.77	0.47
1:5:2508:U:O2	1:5:2508:U:H2'	2.14	0.47
1:5:2577:C:N3	1:5:2578:G:C8	2.82	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
1:5:3857:G:O6	1:5:3858:C:C4	2.67	0.47
1:5:3867:A:C2	1:5:3880:G:C6	3.02	0.47
1:5:4092:G:N3	1:5:4092:G:H2'	2.29	0.47
1:5:4100:C:O3'	51:SB:226:GLY:HA2	2.14	0.47
1:5:4109:G:C2	1:5:4110:C:C2	3.01	0.47
1:5:4324:A:N3	1:5:4325:A:C8	2.83	0.47
1:5:4433:G:C4	1:5:4434:C:C5	3.02	0.47
1:5:4576:U:H2'	1:5:4577:U:O4'	2.15	0.47
1:5:4605:A:C6	48:4:801:ARG:HD3	2.42	0.47
1:5:4868:G:H3'	1:5:4869:U:H5''	1.96	0.47
1:5:4982:A:N3	1:5:4982:A:H2'	2.28	0.47
2:7:93:G:N2	2:7:94:C:C2	2.82	0.47
3:8:115:G:C2	3:8:116:C:N1	2.81	0.47
5:B:240:LEU:HB3	5:B:244:THR:HG21	1.97	0.47
6:C:122:TYR:HB2	6:C:280:PRO:CG	2.44	0.47
6:C:125:CYS:HG	6:C:264:TYR:HE2	1.58	0.47
17:N:135:ILE:HG21	17:N:151:ILE:CD1	2.44	0.47
19:P:41:ILE:HD11	19:P:150:LEU:CD1	2.39	0.47
34:e:75:ARG:O	34:e:95:TYR:HB2	2.13	0.47
46:q:78:LEU:C	46:q:80:PRO:CD	2.88	0.47
46:q:168:GLY:CA	46:q:171:GLU:CG	2.92	0.47
47:r:30:ASN:HB3	47:r:50:GLY:HA3	1.96	0.47
47:r:45:HIS:NE2	47:r:103:ARG:NH1	2.62	0.47
48:4:154:VAL:C	48:4:205:ILE:CD1	2.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:402:VAL:CG2	48:4:403:PRO:N	2.74	0.47
48:4:594:LYS:HA	48:4:600:ASN:O	2.14	0.47
48:4:604:MET:HE1	48:4:702:PHE:CD1	2.49	0.47
48:4:847:GLY:HA3	48:4:848:ILE:HG13	1.94	0.47
49:S2:23:G:C6	49:S2:24:C:C4	3.02	0.47
49:S2:46:A:C6	49:S2:473:A:C2	3.02	0.47
49:S2:61:A:N3	49:S2:335:G:H1'	2.29	0.47
49:S2:112:U:H5''	49:S2:113:G:H2'	1.96	0.47
49:S2:114:G:C2	49:S2:383:G:N2	2.82	0.47
49:S2:340:C:N1	49:S2:341:C:C5	2.82	0.47
49:S2:525:A:N6	49:S2:588:G:N2	2.60	0.47
49:S2:648:A:C4	49:S2:649:U:C6	3.02	0.47
49:S2:841:G:HO2'	49:S2:842:C:H6	1.61	0.47
49:S2:862:A:C4	49:S2:863:U:C6	3.03	0.47
49:S2:900:C:C2	49:S2:901:G:N7	2.82	0.47
49:S2:978:G:N3	49:S2:979:C:C6	2.82	0.47
49:S2:987:A:H2	51:SB:114:VAL:HG21	1.79	0.47
49:S2:1035:A:H1'	49:S2:1857:G:H1'	1.96	0.47
49:S2:1067:C:C2	49:S2:1068:G:C8	3.02	0.47
49:S2:1410:C:O2	49:S2:1410:C:C2'	2.62	0.47
49:S2:1573:G:C2	49:S2:1574:C:C2	3.02	0.47
49:S2:1595:U:O4	49:S2:1596:U:H5	1.88	0.47
49:S2:1624:U:H2'	49:S2:1625:U:O5'	2.14	0.47
49:S2:1629:C:N3	49:S2:1630:A:C8	2.82	0.47
50:SA:38:ILE:HD11	50:SA:150:THR:CG2	2.44	0.47
53:SD:76:ARG:HB3	53:SD:77:PHE:CD2	2.49	0.47
55:SF:161:ALA:HB3	55:SF:172:CYS:SG	2.53	0.47
56:SG:209:TYR:O	56:SG:213:LEU:N	2.47	0.47
60:SK:12:TYR:CE2	60:SK:79:LEU:HD23	2.49	0.47
72:SW:41:MET:HG2	72:SW:129:PHE:CD2	2.49	0.47
74:SY:27:VAL:HB	74:SY:69:THR:HG23	1.96	0.47
1:5:21:G:H3'	1:5:21:G:C8	2.49	0.47
1:5:268:G:C2	1:5:269:G:N9	2.82	0.47
1:5:450:G:C6	1:5:1295:C:C4	3.03	0.47
1:5:511:C:H2'	1:5:512:U:C6	2.49	0.47
1:5:743:G:C2	1:5:744:G:C5	3.03	0.47
1:5:1257:A:C6	1:5:1258:G:C4	3.03	0.47
1:5:1380:G:N2	1:5:1382:G:C4	2.83	0.47
1:5:1428:U:H5'	1:5:1429:C:OP2	2.14	0.47
1:5:1477:C:C2	1:5:1478:C:C6	3.02	0.47
1:5:1489:G:N1	1:5:1490:G:C8	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1770:A:C2	1:5:1771:U:C2	3.03	0.47
1:5:1866:U:C5	1:5:4405:G:C1'	2.98	0.47
1:5:1877:G:C5	1:5:1878:G:N7	2.82	0.47
1:5:1940:G:H2'	1:5:1941:A:C5'	2.45	0.47
1:5:2399:G:N3	1:5:2400:G:C8	2.81	0.47
1:5:2455:G:H2'	1:5:2456:G:C5'	2.44	0.47
1:5:2507:A:N7	1:5:2508:U:C5	2.82	0.47
1:5:2816:G:C5	1:5:2817:C:C5	3.03	0.47
1:5:3636:C:N3	1:5:3637:U:C5	2.82	0.47
1:5:3755:G:C2	1:5:3756:A:C8	3.02	0.47
1:5:3839:G:N1	1:5:3842:C:N4	2.63	0.47
1:5:3853:U:O2'	1:5:4979:A:H1'	2.14	0.47
1:5:4224:A:C6	1:5:4225:G:C8	3.02	0.47
1:5:4238:G:C6	1:5:4239:A:C5	3.03	0.47
1:5:4565:C:H1'	5:B:262:VAL:HG21	1.95	0.47
1:5:4627:U:O2	1:5:4627:U:C2'	2.60	0.47
1:5:4871:C:H3'	16:M:91:TRP:HE1	1.79	0.47
1:5:5050:C:H2'	1:5:5050:C:O2	2.14	0.47
3:8:127:U:O2'	3:8:128:C:O4'	2.33	0.47
4:A:3:ARG:HH11	4:A:3:ARG:CG	2.25	0.47
4:A:209:HIS:CE1	4:A:211:PHE:H	2.33	0.47
7:D:95:TYR:HE2	7:D:198:HIS:C	2.21	0.47
9:F:124:PHE:HD2	9:F:196:ILE:CG2	2.27	0.47
9:F:213:PHE:N	9:F:213:PHE:CD1	2.83	0.47
11:H:41:ILE:CD1	11:H:69:THR:HG21	2.44	0.47
15:L:90:VAL:HG12	15:L:94:ILE:HD12	1.96	0.47
18:O:57:PHE:HZ	18:O:82:ARG:HH21	1.62	0.47
22:S:78:PHE:CE1	22:S:102:THR:HG22	2.50	0.47
24:U:33:ILE:CD1	24:U:96:LEU:HD22	2.45	0.47
34:e:95:TYR:CE2	47:r:23:GLN:HG2	2.49	0.47
37:h:66:LYS:HG2	37:h:70:ARG:HH21	1.79	0.47
46:q:188:VAL:HG12	46:q:189:ILE:N	2.29	0.47
47:r:31:ASN:OD1	47:r:32:LEU:N	2.46	0.47
48:4:39:LEU:O	48:4:43:ALA:N	2.47	0.47
48:4:114:GLU:CB	48:4:532:PRO:HG2	2.39	0.47
48:4:410:PHE:CZ	48:4:530:SER:HB3	2.50	0.47
48:4:449:ARG:CZ	48:4:460:PRO:CB	2.93	0.47
48:4:477:GLN:HG3	48:4:478:PHE:CZ	2.50	0.47
48:4:568:ILE:CG2	48:4:569:PRO:N	2.77	0.47
48:4:744:ILE:CD1	48:4:816:HIS:CD2	2.97	0.47
49:S2:118:C:C4	49:S2:119:U:N1	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:167:G:C6	49:S2:168:C:C4	3.03	0.47
49:S2:168:C:O2'	56:SG:133:LEU:O	2.30	0.47
49:S2:429:C:C2	49:S2:430:C:C5	3.03	0.47
49:S2:474:G:C6	49:S2:475:C:C5	3.02	0.47
49:S2:552:G:N3	49:S2:553:U:C6	2.83	0.47
49:S2:807:G:N1	49:S2:808:A:C5	2.82	0.47
49:S2:868:G:N1	57:SH:115:LYS:HD2	2.29	0.47
49:S2:933:G:C5	49:S2:1001:A:C5	3.03	0.47
49:S2:952:G:H2'	49:S2:953:C:C6	2.50	0.47
49:S2:999:G:N2	49:S2:1000:C:C2	2.81	0.47
49:S2:1041:G:C2	49:S2:1075:C:C2	3.02	0.47
49:S2:1072:U:H3'	49:S2:1073:U:H5'	1.96	0.47
49:S2:1136:U:C2	49:S2:1137:U:C5	3.01	0.47
49:S2:1145:A:N6	49:S2:1150:A:C2	2.83	0.47
49:S2:1157:G:O6	72:SW:89:TRP:HZ3	1.96	0.47
49:S2:1253:A:C2	49:S2:1666:C:H1'	2.49	0.47
49:S2:1332:A:C2	49:S2:1500:G:H1'	2.49	0.47
49:S2:1352:G:C1'	49:S2:1378:A:C2	2.97	0.47
49:S2:1456:G:C6	49:S2:1457:U:C4	3.02	0.47
49:S2:1459:G:C4	49:S2:1460:C:C6	3.03	0.47
49:S2:1576:G:C2	49:S2:1577:G:C4	3.02	0.47
49:S2:1578:U:H6	53:SD:6:SER:CB	2.27	0.47
49:S2:1797:U:H2'	49:S2:1798:C:C6	2.49	0.47
49:S2:1868:U:P	49:S2:1869:A:H8	2.37	0.47
56:SG:180:VAL:CG1	56:SG:185:LEU:HD21	2.44	0.47
57:SH:83:LEU:CD1	57:SH:92:VAL:HG21	2.45	0.47
58:SI:110:ARG:HG2	58:SI:114:GLU:HG3	1.95	0.47
59:SJ:76:ALA:O	59:SJ:80:ARG:HG3	2.13	0.47
60:SK:52:LEU:HB3	60:SK:58:VAL:HG12	1.95	0.47
77:Sb:5:LYS:O	77:Sb:7:LEU:N	2.47	0.47
77:Sb:47:PHE:C	77:Sb:47:PHE:CD1	2.92	0.47
1:5:10:A:H1'	1:5:2472:A:C6	2.49	0.47
1:5:27:C:OP1	17:N:193:ARG:HD3	2.14	0.47
1:5:88:A:O2'	1:5:89:C:O5'	2.33	0.47
1:5:169:G:C6	1:5:170:C:C4	3.02	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
1:5:294:G:C6	30:a:61:TYR:HD2	2.26	0.47
1:5:368:C:C2	1:5:374:G:N2	2.83	0.47
1:5:449:C:O2	1:5:449:C:H2'	2.13	0.47
1:5:659:G:C2	1:5:660:A:N9	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:993:G:N1	1:5:994:G:C5	2.82	0.47
1:5:1185:G:C2	1:5:1186:U:C1'	2.97	0.47
1:5:1187:G:N2	1:5:1188:C:H41	2.12	0.47
1:5:1203:G:C2	1:5:1204:C:C2	3.03	0.47
1:5:1318:C:OP1	30:a:21:ARG:HB2	2.14	0.47
1:5:1321:G:H1'	1:5:1891:A:H62	1.80	0.47
1:5:1362:G:C5	1:5:1363:C:C5	3.02	0.47
1:5:1410:U:C5	1:5:1815:G:N2	2.83	0.47
1:5:1664:U:C2	1:5:1665:C:C5	3.03	0.47
1:5:1812:C:H1'	31:b:57:MET:HE3	1.97	0.47
1:5:1983:A:H2	1:5:2010:A:H3'	1.80	0.47
1:5:2044:U:O2	1:5:2044:U:H2'	2.15	0.47
1:5:2080:U:H2'	1:5:2081:C:H6	1.79	0.47
1:5:2083:C:H3'	1:5:2084:C:H5''	1.96	0.47
1:5:2281:U:O2	1:5:2281:U:C2'	2.59	0.47
1:5:2340:C:C2	1:5:2341:A:C8	3.03	0.47
1:5:2431:A:OP1	41:l:41:ARG:NH1	2.47	0.47
1:5:2445:C:C2	1:5:2446:C:C5	3.02	0.47
1:5:2548:C:C2	1:5:2549:G:C8	3.02	0.47
1:5:2597:G:H2'	1:5:2598:A:O5'	2.14	0.47
1:5:2618:G:C2	1:5:2619:G:C8	3.02	0.47
1:5:2688:G:C4	1:5:2689:C:C5	3.03	0.47
1:5:2895:A:C2	1:5:2896:G:C8	3.02	0.47
1:5:3605:C:OP2	21:R:71:ARG:NH1	2.45	0.47
1:5:3718:A:H2'	1:5:3719:A:C1'	2.44	0.47
1:5:3773:U:H2'	1:5:3774:A:C8	2.49	0.47
1:5:3803:A:H2'	1:5:3803:A:N3	2.30	0.47
1:5:4173:G:C4	1:5:4174:U:C5	3.03	0.47
1:5:4198:G:C6	1:5:4199:C:C6	3.02	0.47
1:5:4275:G:C8	1:5:4275:G:C3'	2.97	0.47
1:5:4510:A:N6	1:5:4592:C:C1'	2.77	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:C1'	2.96	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
1:5:4862:G:C6	1:5:4863:G:N7	2.83	0.47
1:5:5004:C:C5	1:5:5005:G:C4	3.01	0.47
3:8:34:U:C2	3:8:34:U:C4'	2.97	0.47
4:A:40:TYR:HE2	4:A:89:TYR:CD2	2.32	0.47
8:E:158:VAL:HG22	8:E:180:VAL:HG21	1.96	0.47
10:G:58:PRO:CG	27:X:46:PHE:HD2	2.26	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:G:182:CYS:HA	10:G:226:TYR:CE2	2.50	0.47
14:K:52:ASP:C	14:K:53:TRP:CD1	2.92	0.47
14:K:80:LEU:HD23	14:K:83:LYS:NZ	2.29	0.47
14:K:104:ILE:HD12	14:K:140:GLY:CA	2.44	0.47
15:L:176:PHE:HD1	15:L:177:LYS:N	2.12	0.47
16:M:81:ASP:OD1	16:M:81:ASP:C	2.57	0.47
21:R:32:ILE:O	21:R:33:ALA:HB3	2.13	0.47
28:Y:62:TYR:N	28:Y:62:TYR:HD1	2.12	0.47
46:q:77:LYS:CG	46:q:198:ILE:CD1	2.64	0.47
46:q:185:PHE:CD1	46:q:186:GLY:N	2.73	0.47
48:4:76:SER:C	48:4:77:LEU:HD12	2.40	0.47
48:4:81:LEU:CB	48:4:86:LEU:CD1	2.93	0.47
48:4:165:LEU:HD22	48:4:165:LEU:N	2.29	0.47
48:4:170:GLU:HG3	48:4:171:PRO:HD2	1.96	0.47
48:4:264:ARG:O	48:4:288:THR:CG2	2.61	0.47
48:4:272:LYS:HD2	48:4:273:PHE:HE1	1.75	0.47
48:4:477:GLN:HG2	48:4:478:PHE:CD2	2.50	0.47
48:4:503:PRO:HD3	48:4:533:MET:HE1	1.97	0.47
49:S2:115:U:H2'	49:S2:116:U:C6	2.50	0.47
49:S2:159:A:O2'	49:S2:160:U:H5'	2.15	0.47
49:S2:167:G:C2	49:S2:168:C:C2	3.02	0.47
49:S2:410:G:N1	49:S2:411:G:C5	2.83	0.47
49:S2:493:A:H61	49:S2:509:G:N2	2.13	0.47
49:S2:597:G:N2	49:S2:640:A:C4	2.82	0.47
49:S2:631:U:H5'	49:S2:631:U:H6	1.79	0.47
49:S2:855:G:C5	49:S2:856:C:C6	3.03	0.47
49:S2:878:G:C6	49:S2:879:C:C5	3.03	0.47
49:S2:998:A:C8	49:S2:998:A:C3'	2.98	0.47
49:S2:1066:U:O4	49:S2:1067:C:C5	2.68	0.47
49:S2:1201:U:H1'	49:S2:1357:A:N3	2.29	0.47
49:S2:1314:U:H4'	60:SK:2:LEU:HA	1.97	0.47
49:S2:1453:C:H1'	67:SR:48:ASN:HD21	1.77	0.47
49:S2:1459:G:C2	49:S2:1460:C:C2	3.03	0.47
49:S2:1541:G:N2	49:S2:1542:C:C6	2.83	0.47
49:S2:1616:U:H3	49:S2:1620:A:H2	1.62	0.47
49:S2:1688:C:C2	49:S2:1689:C:C6	3.02	0.47
49:S2:1771:G:C2	49:S2:1772:C:N1	2.83	0.47
49:S2:1781:A:C2	49:S2:1782:G:N7	2.82	0.47
51:SB:153:THR:O	51:SB:154:SER:OG	2.25	0.47
58:SI:54:LYS:HD3	58:SI:181:GLN:HE22	1.80	0.47
58:SI:83:TYR:CD1	58:SI:84:ASN:N	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SI:120:PRO:HG3	58:SI:133:GLU:HG3	1.97	0.47
64:SO:116:LEU:HD22	76:Sa:53:ILE:HD11	1.96	0.47
66:SQ:15:ARG:HG2	66:SQ:20:THR:HG22	1.95	0.47
67:SR:24:LEU:HB2	67:SR:58:MET:HE3	1.95	0.47
77:Sb:72:ARG:HD3	77:Sb:72:ARG:C	2.39	0.47
82:Sg:107:ASP:N	82:Sg:107:ASP:OD1	2.47	0.47
1:5:84:A:H5'	1:5:86:U:C1'	2.44	0.47
1:5:85:G:N3	1:5:97:G:O6	2.47	0.47
1:5:983:C:O2	1:5:984:C:C5	2.44	0.47
1:5:985:C:C2	1:5:986:C:C5	3.02	0.47
1:5:1754:U:O2	1:5:1754:U:O4'	2.31	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
1:5:1900:C:C4'	34:e:60:TYR:HB2	2.44	0.47
1:5:1919:G:O6	35:f:29:LYS:CE	2.62	0.47
1:5:1975:G:O4'	1:5:1976:G:OP2	2.33	0.47
1:5:1997:U:OP1	46:q:44:ARG:HG3	2.15	0.47
1:5:2019:C:N3	1:5:2020:U:C5	2.83	0.47
1:5:2089:G:O2'	1:5:2090:U:P	2.72	0.47
1:5:2302:C:C4	1:5:2303:C:C4	3.03	0.47
1:5:2322:G:C6	1:5:2323:C:C4	3.03	0.47
1:5:2363:A:C1'	1:5:4560:C:H5	2.27	0.47
1:5:2365:C:C2	1:5:2829:U:C5	3.02	0.47
1:5:2422:C:N3	1:5:2423:A:C8	2.82	0.47
1:5:2577:C:C2	1:5:2578:G:C8	3.02	0.47
1:5:2592:U:C5	1:5:2593:C:C5	3.02	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
1:5:3717:A:C5	1:5:3736:A:C6	2.97	0.47
1:5:3759:A:C8	1:5:3765:G:C2	3.02	0.47
1:5:3867:A:N3	1:5:3880:G:C6	2.83	0.47
1:5:3884:U:H2'	1:5:3885:G:O4'	2.15	0.47
1:5:4165:C:H2'	1:5:4165:C:O2	2.15	0.47
1:5:4233:A:C5	1:5:4235:G:N7	2.82	0.47
1:5:4287:G:O2'	1:5:4288:C:O4'	2.32	0.47
1:5:4315:A:N1	1:5:4316:G:C8	2.83	0.47
1:5:4518:A:H4'	1:5:4519:C:H5'	1.96	0.47
1:5:4538:G:C6	1:5:4539:U:C4	3.03	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
1:5:4750:G:O2'	1:5:4751:G:OP1	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:36:C:H2'	2:7:37:G:C8	2.49	0.47
2:7:73:U:H1'	2:7:102:U:O4	2.14	0.47
3:8:34:U:O2	39:j:74:PHE:HB2	2.15	0.47
3:8:35:C:C2'	3:8:36:G:O5'	2.62	0.47
3:8:73:U:N3	3:8:74:U:H1'	2.29	0.47
3:8:149:G:H21	10:G:64:GLN:HE22	1.61	0.47
5:B:203:GLN:HE21	5:B:203:GLN:CA	2.14	0.47
6:C:325:MET:HE1	9:F:157:TYR:CD2	2.48	0.47
7:D:64:ILE:HD12	7:D:105:LEU:HD21	1.96	0.47
7:D:233:PRO:O	7:D:235:MET:N	2.48	0.47
8:E:250:ASP:OD1	8:E:251:SER:N	2.48	0.47
10:G:77:PRO:HA	10:G:237:TRP:CE3	2.49	0.47
10:G:261:LEU:HD21	10:G:264:LYS:CD	2.43	0.47
11:H:93:ARG:NH1	42:m:82:LEU:HD21	2.30	0.47
14:K:36:GLY:O	14:K:37:LEU:HB2	2.15	0.47
14:K:116:MET:HG3	14:K:117:ARG:NH2	2.29	0.47
19:P:30:ARG:NH2	19:P:34:GLN:OE1	2.48	0.47
48:4:193:GLY:HA3	48:4:203:ILE:HD11	1.97	0.47
48:4:244:LEU:CD2	48:4:244:LEU:H	2.27	0.47
48:4:609:PHE:HD2	48:4:699:GLY:HA2	1.79	0.47
48:4:616:ASP:OD2	48:4:622:VAL:HG13	2.15	0.47
48:4:650:TRP:CZ3	48:4:679:VAL:CG1	2.87	0.47
48:4:727:ARG:CG	48:4:727:ARG:NH1	2.76	0.47
48:4:730:TYR:CB	48:4:854:PHE:CE2	2.97	0.47
48:4:744:ILE:CG1	48:4:815:ASP:HB3	2.44	0.47
48:4:756:VAL:HG21	48:4:782:PHE:CD1	2.42	0.47
49:S2:50:A:N7	49:S2:51:U:C6	2.82	0.47
49:S2:75:G:N3	49:S2:77:A:OP2	2.46	0.47
49:S2:120:U:O2	49:S2:120:U:H2'	2.13	0.47
49:S2:191:A:N6	49:S2:208:G:O2'	2.48	0.47
49:S2:202:G:C2	49:S2:203:G:C8	3.02	0.47
49:S2:310:C:N3	49:S2:311:C:C4	2.82	0.47
49:S2:311:C:H3'	49:S2:312:G:H4'	1.96	0.47
49:S2:339:A:C2'	49:S2:340:C:C5	2.87	0.47
49:S2:414:A:O2'	49:S2:415:A:H5'	2.15	0.47
49:S2:429:C:O2'	49:S2:811:A:N1	2.42	0.47
49:S2:618:C:H3'	49:S2:619:A:H8	1.80	0.47
49:S2:832:G:C5	49:S2:833:C:C5	3.02	0.47
49:S2:929:G:N2	49:S2:1104:G:H4'	2.28	0.47
49:S2:1063:C:H1'	49:S2:1838:U:C5	2.48	0.47
49:S2:1067:C:N4	49:S2:1068:G:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1229:G:C2	49:S2:1230:C:C2	3.02	0.47
49:S2:1235:G:C2	49:S2:1236:G:H1'	2.49	0.47
49:S2:1284:A:N6	62:SM:33:ARG:CD	2.72	0.47
49:S2:1629:C:O2	49:S2:1629:C:H2'	2.15	0.47
49:S2:1835:A:C4'	49:S2:1836:G:OP2	2.58	0.47
51:SB:120:VAL:HG22	51:SB:142:PHE:HE1	1.79	0.47
59:SJ:13:TYR:CE2	59:SJ:41:ARG:HG3	2.50	0.47
77:Sb:33:MET:HE3	77:Sb:79:PHE:HB3	1.96	0.47
78:Sc:31:ARG:CG	78:Sc:31:ARG:HH11	2.28	0.47
79:Sd:19:ARG:CD	79:Sd:32:ARG:NE	2.78	0.47
81:Sf:117:LEU:HA	81:Sf:131:PHE:HZ	1.78	0.47
1:5:25:A:C4	1:5:341:G:C8	3.02	0.47
1:5:56:A:C6	1:5:57:G:C6	3.03	0.47
1:5:66:A:C6	1:5:328:A:C5	3.02	0.47
1:5:124:C:C4	1:5:125:C:C5	3.03	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
1:5:247:G:C4	1:5:248:C:C6	3.03	0.47
1:5:259:C:N3	1:5:260:C:C6	2.83	0.47
1:5:290:U:N3	1:5:291:U:C4	2.83	0.47
1:5:370:U:C4	1:5:1637:A:C5	3.02	0.47
1:5:389:A:N3	1:5:389:A:H2'	2.29	0.47
1:5:415:G:N2	1:5:416:U:H1'	2.30	0.47
1:5:504:G:N1	1:5:654:C:O2	2.42	0.47
1:5:515:C:C2	1:5:647:G:N2	2.82	0.47
1:5:517:C:C2	1:5:645:G:N2	2.83	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
1:5:716:C:H5''	1:5:716:C:H6	1.79	0.47
1:5:746:A:N1	1:5:916:C:OP2	2.47	0.47
1:5:751:G:N2	1:5:752:G:C6	2.83	0.47
1:5:752:G:C2	1:5:753:C:C1'	2.98	0.47
1:5:938:C:H2'	1:5:939:G:H8	1.76	0.47
1:5:944:A:C1'	6:C:335:MET:HE1	2.44	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'	2.50	0.47
1:5:987:C:C2	1:5:988:C:C6	3.03	0.47
1:5:1068:G:H2'	1:5:1069:G:C8	2.50	0.47
1:5:1072:C:H1'	1:5:1073:G:C8	2.50	0.47
1:5:1074:G:C2	1:5:1238:A:N1	2.80	0.47
1:5:1076:C:N3	1:5:1077:C:C5	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1200:G:C5	1:5:1201:U:C5	3.02	0.47
1:5:1308:C:N3	1:5:1309:C:C5	2.83	0.47
1:5:1380:G:O2'	1:5:1381:U:O5'	2.32	0.47
1:5:1381:U:O2	1:5:1381:U:O4'	2.32	0.47
1:5:1445:U:O2	1:5:1446:C:C6	2.68	0.47
1:5:1570:G:N1	1:5:1571:G:C4	2.82	0.47
1:5:1609:U:N3	1:5:1610:C:C6	2.83	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
1:5:1674:C:C2	1:5:1675:C:C5	3.02	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
1:5:1866:U:O2'	1:5:1867:A:H8	1.95	0.47
1:5:1900:C:C2	1:5:1901:C:C5	3.03	0.47
1:5:1921:C:N1	22:S:161:ARG:HG2	2.30	0.47
1:5:1971:C:O2	1:5:1971:C:H2'	2.14	0.47
1:5:1991:A:C3'	1:5:1991:A:C8	2.98	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
1:5:2256:C:O2	1:5:2256:C:C2'	2.63	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
1:5:2351:C:C2	1:5:2352:U:C5	3.02	0.47
1:5:2391:G:C6	1:5:2392:C:C4	3.01	0.47
1:5:2436:U:C5	1:5:2783:A:C1'	2.98	0.47
1:5:2515:G:C6	1:5:2516:G:C5	3.03	0.47
1:5:2567:G:C2	1:5:2568:C:C2	3.02	0.47
1:5:2576:G:C2	1:5:2577:C:C6	3.03	0.47
1:5:2666:U:C4	1:5:2668:G:OP2	2.68	0.47
1:5:2737:C:C2	1:5:2738:C:C6	3.03	0.47
1:5:2756:G:C2	1:5:2757:A:C5	3.03	0.47
1:5:3600:G:C6	1:5:3601:C:C4	3.03	0.47
1:5:3654:G:N3	1:5:3654:G:H2'	2.30	0.47
1:5:3668:C:N4	1:5:3669:G:C6	2.83	0.47
1:5:3689:G:N2	1:5:3690:U:H1'	2.30	0.47
1:5:3740:G:C5	1:5:3741:C:C5	3.01	0.47
1:5:3754:G:N2	1:5:3755:G:H1'	2.30	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
1:5:3792:G:C4	1:5:3793:U:C5	3.02	0.47
1:5:3861:A:H4'	19:P:137:ASN:ND2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4099:G:C2	1:5:4100:C:N1	2.82	0.47
1:5:4112:C:N4	1:5:4113:U:C4	2.83	0.47
1:5:4147:G:N2	1:5:4148:C:C2	2.82	0.47
1:5:4239:A:N6	1:5:4240:G:C6	2.83	0.47
1:5:4281:A:C2	1:5:4283:G:N7	2.83	0.47
1:5:4286:C:H2'	1:5:4287:G:H8	1.80	0.47
1:5:4510:A:C2	1:5:4511:A:C2	3.03	0.47
1:5:4549:G:N3	1:5:4549:G:H2'	2.30	0.47
1:5:4567:G:OP1	5:B:19:ARG:N	2.43	0.47
1:5:4593:C:C2	1:5:4594:U:C5	3.03	0.47
1:5:4683:U:C5	1:5:4707:A:C6	3.03	0.47
1:5:4686:G:C6	1:5:4687:A:N7	2.82	0.47
1:5:4699:U:O4	1:5:4702:G:C6	2.68	0.47
1:5:4744:A:C2	1:5:4745:G:N7	2.83	0.47
1:5:4895:C:C2	1:5:4896:G:N7	2.82	0.47
1:5:4933:C:C4	1:5:4934:A:N7	2.83	0.47
1:5:5000:G:H2'	1:5:5001:U:O5'	2.14	0.47
1:5:5030:U:C2	1:5:5031:G:N7	2.83	0.47
2:7:43:U:O2	2:7:43:U:H2'	2.15	0.47
3:8:70:G:C6	3:8:87:G:C2	3.03	0.47
3:8:138:C:O2	3:8:139:G:C8	2.68	0.47
3:8:144:U:H2'	3:8:145:C:H6	1.80	0.47
5:B:235:TRP:HA	5:B:235:TRP:CE3	2.50	0.47
5:B:254:ILE:HG21	5:B:262:VAL:CG1	2.45	0.47
6:C:208:CYS:SG	6:C:230:LEU:HD12	2.55	0.47
8:E:158:VAL:CG2	8:E:180:VAL:HG21	2.45	0.47
9:F:69:THR:O	9:F:73:MET:HG3	2.15	0.47
11:H:31:ARG:HH11	11:H:31:ARG:CG	2.27	0.47
16:M:29:ASP:OD1	16:M:29:ASP:C	2.58	0.47
16:M:118:MET:HG3	18:O:192:PHE:CE2	2.48	0.47
17:N:135:ILE:HG23	17:N:142:ILE:HD13	1.97	0.47
22:S:33:PHE:HE2	22:S:106:VAL:CG1	2.25	0.47
25:V:99:GLU:HG3	26:W:21:TYR:OH	2.14	0.47
27:X:73:HIS:O	27:X:116:LEU:CD1	2.63	0.47
27:X:116:LEU:CB	27:X:117:TYR:CE1	2.98	0.47
28:Y:27:ARG:HH21	28:Y:27:ARG:CG	2.26	0.47
28:Y:74:TYR:CD2	28:Y:77:LYS:HD2	2.49	0.47
30:a:104:VAL:HG22	30:a:109:TYR:HE2	1.79	0.47
30:a:110:LYS:HE3	30:a:128:PHE:O	2.14	0.47
34:e:35:TRP:HZ2	34:e:38:PRO:HD3	1.78	0.47
39:j:21:ARG:HH21	39:j:39:TYR:HA	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:p:17:ARG:O	45:p:18:TYR:HB2	2.07	0.47
46:q:91:THR:HG22	46:q:99:ARG:HH12	1.79	0.47
46:q:187:LEU:C	46:q:187:LEU:CD1	2.86	0.47
46:q:195:ASN:C	46:q:197:SER:N	2.73	0.47
48:4:202:ASN:OD1	48:4:204:MET:HG3	2.15	0.47
48:4:330:LYS:HB2	48:4:330:LYS:HZ2	1.78	0.47
48:4:401:MET:CE	48:4:476:ASP:HA	2.44	0.47
48:4:538:ILE:O	48:4:538:ILE:HG23	2.13	0.47
48:4:575:PRO:HG2	48:4:577:VAL:HG23	1.97	0.47
48:4:592:LEU:CB	48:4:603:TYR:CD2	2.98	0.47
48:4:744:ILE:HG23	48:4:745:TYR:HD2	1.79	0.47
48:4:745:TYR:CA	48:4:815:ASP:CB	2.81	0.47
48:4:762:VAL:CG1	48:4:800:LEU:CD1	2.92	0.47
48:4:851:LEU:HA	48:4:854:PHE:HD1	1.79	0.47
49:S2:44:U:O2'	49:S2:45:A:H2'	2.14	0.47
49:S2:46:A:C6	49:S2:99:A:C8	3.03	0.47
49:S2:66:G:N7	49:S2:68:A:N7	2.62	0.47
49:S2:69:C:N3	49:S2:70:G:N7	2.62	0.47
49:S2:75:G:O2'	49:S2:76:U:H3'	2.15	0.47
49:S2:118:C:H1'	49:S2:445:A:C5	2.50	0.47
49:S2:119:U:C4	49:S2:120:U:H5	2.29	0.47
49:S2:122:G:C4	49:S2:123:G:C8	3.02	0.47
49:S2:167:G:C2	49:S2:168:C:C4	3.03	0.47
49:S2:188:C:N3	49:S2:189:U:C5	2.83	0.47
49:S2:211:G:C5	49:S2:212:C:C5	3.03	0.47
49:S2:217:A:C5	49:S2:218:U:C5	3.03	0.47
49:S2:316:G:N3	49:S2:317:C:C6	2.83	0.47
49:S2:330:G:N2	49:S2:331:C:H1'	2.29	0.47
49:S2:377:G:C6	49:S2:378:U:C4	3.03	0.47
49:S2:467:G:C6	49:S2:468:A:C8	3.03	0.47
49:S2:615:C:H2'	49:S2:616:A:C8	2.49	0.47
49:S2:752:G:C6	49:S2:791:C:C2	3.03	0.47
49:S2:797:C:N3	57:SH:109:ARG:NH2	2.62	0.47
49:S2:859:G:C6	49:S2:860:G:N7	2.82	0.47
49:S2:897:U:H2'	49:S2:898:U:O4'	2.14	0.47
49:S2:947:G:C6	49:S2:948:C:C5	3.02	0.47
49:S2:956:G:N3	49:S2:957:A:N7	2.63	0.47
49:S2:1109:C:N4	67:SR:123:THR:OG1	2.48	0.47
49:S2:1113:A:C2'	49:S2:1114:U:H5'	2.44	0.47
49:S2:1132:C:O2	49:S2:1132:C:H2'	2.15	0.47
49:S2:1154:U:O2	49:S2:1154:U:O4'	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1204:A:N1	49:S2:1205:C:C4	2.82	0.47
49:S2:1249:C:C6	49:S2:1250:A:C8	3.00	0.47
49:S2:1299:A:O2'	49:S2:1301:A:H5'	2.15	0.47
49:S2:1301:A:OP2	79:Sd:7:TYR:OH	2.33	0.47
49:S2:1304:U:O2	49:S2:1305:C:C6	2.68	0.47
49:S2:1351:G:H1'	50:SA:110:ASN:HD21	1.79	0.47
49:S2:1399:C:H2'	49:S2:1400:U:H6	1.80	0.47
49:S2:1438:A:H2'	49:S2:1439:A:O4'	2.15	0.47
49:S2:1453:C:N3	49:S2:1455:A:C1'	2.73	0.47
49:S2:1456:G:C4	49:S2:1457:U:C5	3.03	0.47
49:S2:1467:C:C4	49:S2:1468:C:C5	3.02	0.47
49:S2:1528:G:N2	49:S2:1529:C:N3	2.62	0.47
49:S2:1537:A:C5	49:S2:1538:C:C6	3.02	0.47
49:S2:1540:G:N2	49:S2:1541:G:H1'	2.29	0.47
49:S2:1609:C:N3	49:S2:1610:G:N7	2.62	0.47
49:S2:1692:U:H2'	49:S2:1693:G:C8	2.50	0.47
49:S2:1697:A:H4'	49:S2:1698:C:H5''	1.96	0.47
49:S2:1793:A:N1	49:S2:1794:C:C5	2.83	0.47
56:SG:13:GLN:N	56:SG:13:GLN:OE1	2.47	0.47
56:SG:226:GLU:HA	56:SG:229:ALA:HB3	1.96	0.47
57:SH:9:VAL:CG2	57:SH:24:SER:HB2	2.45	0.47
59:SJ:130:ILE:HG12	59:SJ:135:ILE:HD11	1.97	0.47
60:SK:83:LEU:HB2	60:SK:85:LEU:HD12	1.97	0.47
62:SM:19:GLN:HB3	62:SM:88:TRP:HB3	1.97	0.47
64:SO:42:VAL:O	64:SO:55:ARG:O	2.32	0.47
65:SP:52:LYS:HE2	65:SP:52:LYS:HA	1.97	0.47
71:SV:1:MET:HE2	71:SV:10:ASP:HB3	1.95	0.47
73:SX:21:LYS:HD3	73:SX:27:TYR:CE1	2.49	0.47
73:SX:61:GLN:NE2	73:SX:61:GLN:C	2.73	0.47
73:SX:114:ASP:O	73:SX:115:ILE:C	2.58	0.47
1:5:70:A:H4'	1:5:71:C:H5'	1.96	0.47
1:5:154:G:C6	1:5:155:C:C4	3.03	0.47
1:5:246:G:N2	1:5:247:G:N9	2.63	0.47
1:5:504:G:C2	1:5:505:G:C4	3.03	0.47
1:5:977:C:H2'	1:5:978:G:O4'	2.14	0.47
1:5:1189:G:C2	1:5:1190:C:C6	3.02	0.47
1:5:1219:G:C6	1:5:1220:G:N7	2.83	0.47
1:5:1264:C:H2'	1:5:1265:G:H5'	1.95	0.47
1:5:1305:C:H2'	1:5:1306:C:O4'	2.15	0.47
1:5:1330:A:N3	1:5:1331:C:C6	2.83	0.47
1:5:1474:C:N3	1:5:1475:G:N7	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1486:C:H2'	1:5:1487:G:O4'	2.15	0.47
1:5:1572:U:H4'	21:R:95:TRP:CZ2	2.50	0.47
1:5:1663:C:H2'	1:5:1664:U:C6	2.50	0.47
1:5:1986:U:O4	1:5:2011:C:H5'	2.15	0.47
1:5:2017:A:C5	1:5:2018:C:C6	3.03	0.47
1:5:2301:G:C6	1:5:2302:C:C4	3.02	0.47
1:5:2368:A:C2	1:5:2788:U:C5	3.03	0.47
1:5:2424:G:H2'	1:5:2426:U:C4	2.50	0.47
1:5:2440:U:HO2'	1:5:2441:C:P	2.38	0.47
1:5:2504:C:OP1	1:5:2504:C:H4'	2.15	0.47
1:5:2513:A:N7	36:g:13:TYR:CE2	2.82	0.47
1:5:2590:G:N2	1:5:2754:G:O2'	2.48	0.47
1:5:2590:G:N2	1:5:2754:G:C2	2.79	0.47
1:5:2773:G:C2	1:5:2774:C:C5	3.02	0.47
1:5:3719:A:N7	1:5:3720:G:C8	2.83	0.47
1:5:4240:G:N3	1:5:4241:C:H1'	2.30	0.47
1:5:4333:C:N3	1:5:4334:U:C5	2.82	0.47
1:5:4498:U:N3	1:5:4500:U:OP2	2.47	0.47
1:5:4506:C:H2'	1:5:4507:A:O4'	2.15	0.47
1:5:4737:G:H5'	1:5:4737:G:H8	1.79	0.47
1:5:4887:C:H2'	1:5:4888:U:C6	2.49	0.47
1:5:5003:U:C2	1:5:5045:G:C2	3.03	0.47
1:5:5014:A:OP1	1:5:5014:A:H3'	2.15	0.47
2:7:66:G:C2	2:7:67:C:C2	3.03	0.47
3:8:21:C:H5''	6:C:196:MET:HE2	1.97	0.47
3:8:115:G:N1	3:8:116:C:C4	2.83	0.47
3:8:120:G:H2'	3:8:121:G:H5'	1.96	0.47
6:C:341:LEU:HD11	8:E:52:ARG:CD	2.45	0.47
7:D:220:LYS:HA	7:D:227:ILE:HD12	1.96	0.47
8:E:53:TYR:CE2	8:E:61:ARG:NH2	2.82	0.47
14:K:56:LEU:HB2	14:K:91:ASP:OD1	2.06	0.47
15:L:8:MET:HB2	15:L:10:LEU:HD13	1.97	0.47
20:Q:75:ARG:HH11	20:Q:75:ARG:CG	2.28	0.47
22:S:94:TYR:HE2	22:S:96:GLU:HG3	1.77	0.47
24:U:87:THR:HG23	24:U:102:VAL:HG21	1.97	0.47
48:4:125:ALA:O	48:4:154:VAL:HB	2.15	0.47
48:4:683:PHE:CD1	48:4:729:LEU:CD2	2.96	0.47
49:S2:29:G:C2	49:S2:30:C:C2	3.02	0.47
49:S2:289:G:N2	49:S2:295:C:C2	2.83	0.47
49:S2:383:G:C8	49:S2:384:U:C2	3.03	0.47
49:S2:460:A:N3	49:S2:461:U:H6	2.08	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:533:A:N1	49:S2:534:G:C4	2.83	0.47
49:S2:1102:G:H1	49:S2:1130:G:H22	1.63	0.47
49:S2:1265:A:C2	49:S2:1266:C:C6	3.02	0.47
49:S2:1279:C:N3	49:S2:1280:G:C8	2.83	0.47
49:S2:1304:U:O2	49:S2:1304:U:H2'	2.12	0.47
49:S2:1411:G:C8	49:S2:1412:C:H1'	2.49	0.47
49:S2:1455:A:C5	49:S2:1456:G:N7	2.83	0.47
49:S2:1501:C:C4	49:S2:1502:C:C5	3.02	0.47
49:S2:1543:U:O2'	49:S2:1544:C:H6	1.97	0.47
49:S2:1590:C:H5'	69:ST:82:ARG:CD	2.44	0.47
49:S2:1791:A:N7	49:S2:1792:G:C8	2.83	0.47
55:SF:24:SER:O	55:SF:107:ASN:ND2	2.48	0.47
55:SF:177:LEU:O	55:SF:181:ALA:HB2	2.15	0.47
57:SH:131:GLU:OE2	57:SH:139:ILE:HD12	2.14	0.47
57:SH:135:PHE:CD1	57:SH:136:PRO:CA	2.98	0.47
76:Sa:22:ARG:HD2	76:Sa:29:CYS:SG	2.55	0.47
76:Sa:22:ARG:HH21	76:Sa:27:ALA:HB1	1.80	0.47
78:Sc:60:GLU:HG2	78:Sc:63:ARG:HD3	1.97	0.47
82:Sg:83:TRP:CH2	82:Sg:125:ARG:NH2	2.81	0.47
1:5:46:U:OP2	1:5:47:A:C2'	2.62	0.47
1:5:90:G:N3	1:5:95:G:N1	2.63	0.47
1:5:166:C:O2	1:5:166:C:C2'	2.62	0.47
1:5:210:C:C4	1:5:231:U:N3	2.83	0.47
1:5:290:U:H2'	1:5:291:U:C6	2.50	0.47
1:5:328:A:C6	1:5:329:A:N6	2.83	0.47
1:5:698:G:N1	1:5:699:C:C5	2.83	0.47
1:5:951:G:C2	1:5:952:G:C5	3.02	0.47
1:5:1092:G:C2	1:5:1093:C:C2	3.03	0.47
1:5:1092:G:N2	1:5:1093:C:C2	2.83	0.47
1:5:1265:G:C2	1:5:1266:G:C4	3.02	0.47
1:5:1284:G:C6	6:C:312:ARG:NH2	2.83	0.47
1:5:1443:A:C4	1:5:1444:G:C8	3.03	0.47
1:5:1585:C:N3	1:5:1586:G:C8	2.83	0.47
1:5:1664:U:H2'	1:5:1665:C:C6	2.49	0.47
1:5:1770:A:H2'	1:5:1771:U:O4'	2.15	0.47
1:5:1797:G:N3	1:5:1798:G:C8	2.83	0.47
1:5:1855:G:OP1	31:b:4:SER:HB2	2.15	0.47
1:5:1949:U:O2	1:5:1950:U:H6	1.94	0.47
1:5:1988:G:N1	1:5:1989:G:C5	2.83	0.47
1:5:2065:G:H2'	1:5:2066:C:O4'	2.13	0.47
1:5:2117:G:H1'	9:F:51:LEU:HD13	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2285:A:H2'	1:5:2286:G:O4'	2.14	0.47
1:5:2726:G:N3	1:5:2727:C:C6	2.83	0.47
1:5:3584:C:O2	1:5:3585:G:C8	2.67	0.47
1:5:3622:C:C2	1:5:3623:C:N3	2.82	0.47
1:5:3706:C:OP1	4:A:226:ARG:HG3	2.15	0.47
1:5:3813:A:C2	1:5:4539:U:O4'	2.68	0.47
1:5:4079:C:O2	1:5:4079:C:C2'	2.63	0.47
1:5:4116:C:O2	1:5:4116:C:O2'	2.29	0.47
1:5:4119:C:O2	1:5:4119:C:O4'	2.31	0.47
1:5:4147:G:C2	1:5:4148:C:C6	3.03	0.47
1:5:4199:C:C2	1:5:4199:C:H3'	2.50	0.47
1:5:4257:A:N7	13:J:60:PHE:HE2	2.13	0.47
1:5:4362:A:C2	1:5:4363:A:N9	2.82	0.47
1:5:4518:A:H3'	1:5:4519:C:C5'	2.44	0.47
1:5:4547:C:O2	1:5:4547:C:H2'	2.15	0.47
1:5:4726:G:C4'	5:B:130:PHE:CE1	2.96	0.47
1:5:4733:C:C5	1:5:4734:A:H1'	2.49	0.47
1:5:4916:G:C4	1:5:4917:C:C6	3.03	0.47
1:5:4992:G:H2'	1:5:4993:G:C8	2.49	0.47
2:7:8:G:P	7:D:33:ARG:HH22	2.37	0.47
3:8:54:C:C5	3:8:55:U:C5	3.03	0.47
3:8:134:G:N2	3:8:135:C:N1	2.62	0.47
4:A:43:GLY:HA3	4:A:63:PHE:CD1	2.50	0.47
5:B:67:VAL:HG11	5:B:72:VAL:HG11	1.97	0.47
5:B:82:PRO:HG3	5:B:171:LEU:HD21	1.97	0.47
7:D:284:LYS:HB3	12:I:209:TRP:CH2	2.49	0.47
9:F:168:ARG:CD	9:F:211:TRP:CD1	2.98	0.47
11:H:41:ILE:O	11:H:41:ILE:HD12	2.15	0.47
13:J:166:PHE:CE2	13:J:172:GLY:HA3	2.50	0.47
14:K:34:PRO:CD	14:K:35:LEU:H	2.26	0.47
14:K:111:ASN:CA	14:K:114:ARG:HG2	2.45	0.47
15:L:6:ASN:ND2	30:a:48:TYR:CE2	2.83	0.47
16:M:119:ARG:HH21	16:M:119:ARG:CG	2.28	0.47
20:Q:25:LEU:HD12	20:Q:28:LEU:HD11	1.96	0.47
20:Q:105:VAL:HB	20:Q:110:ARG:HH12	1.80	0.47
27:X:110:LYS:CD	27:X:111:GLN:HE22	2.28	0.47
30:a:69:PHE:CE2	30:a:71:PRO:CD	2.98	0.47
33:d:33:ILE:HD11	33:d:45:ALA:HA	1.97	0.47
46:q:14:PHE:HB3	46:q:62:ARG:NH1	2.30	0.47
46:q:45:MET:O	46:q:48:ARG:N	2.33	0.47
46:q:133:GLU:CG	46:q:134:LYS:H	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:510:GLU:CG	48:4:511:ALA:N	2.78	0.47
48:4:616:ASP:OD1	48:4:621:GLU:CG	2.63	0.47
48:4:643:VAL:HG22	48:4:647:ARG:HD2	1.95	0.47
48:4:685:TRP:CH2	48:4:723:PRO:HG3	2.50	0.47
48:4:745:TYR:CZ	48:4:790:VAL:HG22	2.50	0.47
49:S2:52:G:N3	49:S2:53:C:H1'	2.29	0.47
49:S2:61:A:H5'	49:S2:61:A:H8	1.80	0.47
49:S2:118:C:H1'	49:S2:445:A:N1	2.30	0.47
49:S2:333:G:C2	49:S2:334:C:C2	3.03	0.47
49:S2:426:A:N3	49:S2:427:U:C4	2.82	0.47
49:S2:431:G:N3	49:S2:432:G:C8	2.83	0.47
49:S2:693:A:C2	49:S2:694:G:C4	3.03	0.47
49:S2:693:A:C2	49:S2:694:G:C5	3.03	0.47
49:S2:797:C:C2	57:SH:109:ARG:CZ	2.96	0.47
49:S2:823:U:C2	74:SY:64:PHE:CD2	3.02	0.47
49:S2:872:A:HO2'	49:S2:873:G:C5'	2.28	0.47
49:S2:880:G:C5	49:S2:881:G:N7	2.82	0.47
49:S2:897:U:N3	49:S2:898:U:C6	2.83	0.47
49:S2:902:G:C6	49:S2:903:A:C2	3.03	0.47
49:S2:952:G:C6	49:S2:953:C:C4	3.03	0.47
49:S2:993:G:C5	49:S2:994:C:C6	3.02	0.47
49:S2:993:G:N2	49:S2:994:C:C2	2.83	0.47
49:S2:1005:G:C4	49:S2:1006:C:C5	3.03	0.47
49:S2:1066:U:N3	49:S2:1067:C:C5	2.83	0.47
49:S2:1108:G:C2	49:S2:1125:C:C2	3.03	0.47
49:S2:1219:C:C5	49:S2:1220:A:C6	3.03	0.47
49:S2:1408:U:H5''	66:SQ:71:ARG:HE	1.79	0.47
49:S2:1446:A:H5'	70:SU:57:PRO:HA	1.97	0.47
49:S2:1541:G:C2	49:S2:1593:C:C2	3.02	0.47
49:S2:1590:C:C5	49:S2:1591:C:H1'	2.50	0.47
49:S2:1709:G:C6	49:S2:1710:C:C4	3.03	0.47
49:S2:1810:U:C2	49:S2:1811:C:C6	3.03	0.47
53:SD:132:LYS:HB3	53:SD:189:MET:CG	2.45	0.47
54:SE:11:ARG:O	54:SE:12:VAL:CB	2.62	0.47
58:SI:118:ALA:HB1	58:SI:137:LEU:HD21	1.96	0.47
59:SJ:48:PHE:HE2	59:SJ:52:LYS:HE3	1.79	0.47
1:5:85:G:C2	1:5:97:G:C5	3.03	0.47
1:5:219:G:H5'	1:5:219:G:N9	2.30	0.47
1:5:295:A:O3'	1:5:296:A:N7	2.48	0.47
1:5:316:U:O4	1:5:4353:U:C1'	2.63	0.47
1:5:322:C:C2	1:5:4356:G:N1	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:362:A:C2	3:8:53:G:H1'	2.50	0.47
1:5:669:C:O2'	1:5:670:G:O5'	2.33	0.47
1:5:716:C:H6	1:5:716:C:C5'	2.28	0.47
1:5:752:G:C6	1:5:753:C:C4	3.03	0.47
1:5:1348:U:C2	1:5:1349:G:N7	2.83	0.47
1:5:1375:C:N3	1:5:1376:C:C5	2.83	0.47
1:5:1380:G:H2'	1:5:1382:G:C6	2.50	0.47
1:5:1467:C:O2	1:5:1467:C:H2'	2.15	0.47
1:5:1693:U:H2'	1:5:1694:C:O4'	2.14	0.47
1:5:1770:A:C4	1:5:1771:U:C6	3.03	0.47
1:5:1778:C:H5''	7:D:5:LYS:HD2	1.97	0.47
1:5:1780:A:C2	1:5:1781:U:C1'	2.98	0.47
1:5:2108:G:C5	1:5:2109:G:H1'	2.49	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
1:5:2265:G:C1'	1:5:2266:C:OP1	2.63	0.47
1:5:2267:U:O2	1:5:2267:U:O4'	2.31	0.47
1:5:2270:G:H2'	1:5:2271:C:C6	2.50	0.47
1:5:2327:G:C4	1:5:2328:G:C8	3.03	0.47
1:5:2453:A:H2'	1:5:2453:A:N3	2.29	0.47
1:5:2532:C:C4	1:5:2533:C:N4	2.83	0.47
1:5:2773:G:C6	1:5:2774:C:C4	3.03	0.47
1:5:3608:A:C2	1:5:3609:G:C5	3.02	0.47
1:5:3700:C:O2'	1:5:3774:A:N3	2.39	0.47
1:5:3744:G:H2'	1:5:3745:U:O5'	2.15	0.47
1:5:3830:A:C6	1:5:3831:U:C5	3.03	0.47
1:5:3927:U:H3	1:5:4184:G:H1	1.63	0.47
1:5:4077:A:C8	1:5:4078:C:C6	3.03	0.47
1:5:4087:G:C8	1:5:4087:G:C3'	2.98	0.47
1:5:4095:G:C2	1:5:4096:C:N4	2.82	0.47
1:5:4114:C:H2'	1:5:4115:G:C1'	2.44	0.47
1:5:4283:G:C4	1:5:4284:C:C6	3.02	0.47
1:5:4509:U:H2'	1:5:4510:A:C2'	2.44	0.47
1:5:4535:A:N1	1:5:4536:C:C6	2.83	0.47
1:5:4551:U:N3	1:5:4552:U:C4	2.83	0.47
1:5:4916:G:C2	1:5:4917:C:C2	3.02	0.47
1:5:4942:C:O2'	1:5:4944:C:P	2.73	0.47
3:8:7:U:H2'	3:8:8:U:O4'	2.15	0.47
3:8:15:G:H2'	3:8:16:G:O4'	2.15	0.47
3:8:30:U:N3	3:8:31:G:N7	2.62	0.47
3:8:94:G:C6	39:j:79:ARG:CD	2.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:133:G:C2	3:8:134:G:N9	2.80	0.47
3:8:134:G:C2	3:8:135:C:C2	3.03	0.47
4:A:24:LYS:HG3	4:A:49:ILE:HG21	1.97	0.47
5:B:234:ARG:HA	5:B:272:LYS:HD2	1.97	0.47
6:C:262:GLU:O	6:C:271:ALA:O	2.33	0.47
7:D:284:LYS:HB2	12:I:209:TRP:HH2	1.79	0.47
9:F:59:TYR:CZ	9:F:194:HIS:CE1	3.03	0.47
13:J:22:LEU:HD22	13:J:130:PHE:CE1	2.49	0.47
14:K:163:PRO:HD2	14:K:163:PRO:O	2.13	0.47
15:L:14:PHE:HD1	15:L:18:TRP:CD1	2.33	0.47
22:S:35:PRO:HD2	22:S:39:VAL:CG2	2.45	0.47
23:T:159:MET:HE2	23:T:159:MET:HA	1.96	0.47
29:Z:123:LYS:O	29:Z:124:THR:OG1	2.24	0.47
30:a:128:PHE:CD2	30:a:128:PHE:N	2.83	0.47
34:e:95:TYR:HE2	47:r:23:GLN:HG2	1.79	0.47
48:4:41:CYS:SG	48:4:49:ALA:HB1	2.54	0.47
48:4:82:SER:C	48:4:86:LEU:HD13	2.34	0.47
48:4:228:PHE:CD1	48:4:232:TYR:HE2	2.28	0.47
49:S2:64:A:C5	49:S2:82:G:C6	3.03	0.47
49:S2:105:U:O2	49:S2:105:U:C2'	2.63	0.47
49:S2:218:U:N3	49:S2:219:U:C5	2.83	0.47
49:S2:221:A:C4	49:S2:222:U:C6	3.03	0.47
49:S2:501:C:H3'	49:S2:501:C:C2	2.49	0.47
49:S2:563:G:C2	49:S2:564:A:N7	2.83	0.47
49:S2:638:C:O2'	49:S2:639:C:O5'	2.33	0.47
49:S2:1284:A:H61	62:SM:33:ARG:CB	2.26	0.47
49:S2:1287:A:H2'	49:S2:1315:U:C5	2.50	0.47
49:S2:1294:G:O2'	81:Sf:137:ASP:OD1	2.32	0.47
49:S2:1310:U:H6	81:Sf:143:LYS:NZ	2.13	0.47
49:S2:1414:A:N3	49:S2:1415:C:C6	2.83	0.47
49:S2:1423:C:H2'	49:S2:1424:G:C8	2.50	0.47
49:S2:1495:G:N9	79:Sd:41:GLN:HG2	2.29	0.47
49:S2:1667:U:C2	49:S2:1668:U:C4	3.03	0.47
49:S2:1685:U:C2	49:S2:1686:G:C8	3.03	0.47
49:S2:1771:G:N2	49:S2:1772:C:N1	2.63	0.47
50:SA:126:ASP:HB2	50:SA:129:ALA:HB3	1.97	0.47
50:SA:134:LEU:CD2	50:SA:144:THR:HG21	2.44	0.47
51:SB:70:SER:OG	64:SO:128:ARG:NH1	2.48	0.47
51:SB:143:THR:HG22	51:SB:205:TYR:HB3	1.97	0.47
54:SE:87:MET:HE1	54:SE:236:ILE:HG21	1.96	0.47
55:SF:49:LEU:HD23	66:SQ:49:TYR:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:SW:17:ALA:CB	72:SW:25:VAL:HG11	2.45	0.47
73:SX:134:TYR:CE1	80:Se:13:ARG:CZ	2.98	0.47
1:5:303:C:C2	1:5:304:C:C5	3.02	0.46
1:5:458:C:C4	1:5:459:C:C4	3.03	0.46
1:5:472:C:N3	1:5:473:C:C4	2.83	0.46
1:5:689:U:C4	1:5:690:C:C5	3.02	0.46
1:5:934:C:H4'	1:5:935:A:OP2	2.14	0.46
1:5:964:A:H2	1:5:2252:G:C5	2.33	0.46
1:5:1191:C:C4	1:5:1192:C:C5	3.03	0.46
1:5:1262:G:N1	1:5:1263:A:N7	2.63	0.46
1:5:1288:G:O2'	8:E:128:PRO:HB2	2.14	0.46
1:5:1345:A:H4'	20:Q:166:TYR:CE2	2.49	0.46
1:5:1374:G:C4	1:5:1375:C:C6	3.02	0.46
1:5:1440:U:H5''	1:5:2110:C:OP2	2.15	0.46
1:5:1492:G:C6	1:5:1493:G:C5	3.03	0.46
1:5:1572:U:O2	1:5:1572:U:H2'	2.15	0.46
1:5:1617:G:N1	1:5:1618:G:C5	2.83	0.46
1:5:1619:G:C4	1:5:1620:U:C6	3.02	0.46
1:5:1663:C:O2'	1:5:1664:U:H5'	2.15	0.46
1:5:1682:A:C2	1:5:1683:U:H1'	2.50	0.46
1:5:1735:U:N3	1:5:1736:A:N7	2.63	0.46
1:5:1756:U:O4	1:5:1776:A:C2	2.66	0.46
1:5:1761:G:C4	1:5:1762:C:C5	3.03	0.46
1:5:1796:U:N3	1:5:1797:G:C8	2.83	0.46
1:5:1885:G:N2	1:5:1895:G:N3	2.62	0.46
1:5:1975:G:H2'	14:K:17:CYS:SG	2.55	0.46
1:5:1978:C:C2	1:5:1979:A:H1'	2.51	0.46
1:5:2052:G:C6	1:5:2053:C:C4	3.03	0.46
1:5:2092:G:H8	1:5:2093:A:N1	2.12	0.46
1:5:2347:A:C4	1:5:2348:G:O6	2.68	0.46
1:5:2484:A:C6	1:5:2485:U:C4	3.03	0.46
1:5:2598:A:O2'	1:5:2599:G:H5'	2.15	0.46
1:5:2644:G:N1	1:5:2645:G:C4	2.83	0.46
1:5:2646:C:O2	1:5:2646:C:H2'	2.14	0.46
1:5:2712:G:C2	1:5:2713:C:N1	2.83	0.46
1:5:2756:G:H2'	1:5:2757:A:C8	2.50	0.46
1:5:3652:A:O2'	4:A:182:ALA:HB2	2.15	0.46
1:5:4082:G:H2'	1:5:4083:U:H6	1.80	0.46
1:5:4154:G:N1	1:5:4155:C:C4	2.83	0.46
1:5:4478:G:C6	1:5:4479:A:C4	3.03	0.46
1:5:4587:G:C2	1:5:4716:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4602:A:H4'	11:H:99:PHE:CE2	2.50	0.46
1:5:4724:A:N3	1:5:4725:C:C6	2.83	0.46
1:5:4754:G:C2	1:5:4880:C:C2	3.03	0.46
2:7:110:G:C2	2:7:111:C:C4	3.03	0.46
3:8:46:G:C4	3:8:47:C:C5	3.03	0.46
3:8:64:U:C2'	3:8:65:A:H8	2.24	0.46
3:8:132:G:C2	3:8:133:G:C4	3.02	0.46
3:8:143:G:C2	3:8:144:U:C6	3.03	0.46
5:B:285:TYR:CD1	5:B:363:ILE:HD13	2.50	0.46
9:F:88:GLU:HG3	23:T:136:ARG:HG2	1.97	0.46
12:I:9:TYR:CD2	12:I:97:ILE:HG12	2.39	0.46
12:I:119:PHE:HD1	12:I:120:GLY:N	2.13	0.46
15:L:3:PRO:HD2	30:a:41:HIS:CE1	2.50	0.46
20:Q:146:ARG:HH12	20:Q:149:TYR:HE1	1.63	0.46
21:R:110:ARG:HD3	21:R:120:TYR:CE2	2.50	0.46
23:T:30:TYR:N	23:T:30:TYR:CD1	2.83	0.46
28:Y:18:HIS:C	28:Y:20:ASN:H	2.24	0.46
29:Z:17:ARG:HG2	29:Z:18:TYR:CD1	2.50	0.46
34:e:95:TYR:N	34:e:95:TYR:CD1	2.83	0.46
46:q:135:THR:O	46:q:138:PHE:HD1	1.98	0.46
48:4:219:HIS:HB3	48:4:221:TRP:HD1	1.79	0.46
48:4:587:SER:HB3	48:4:735:THR:HG23	1.95	0.46
49:S2:53:C:O2	49:S2:53:C:C2'	2.58	0.46
49:S2:71:G:O2'	49:S2:72:C:O4'	2.33	0.46
49:S2:78:C:H2'	49:S2:79:A:H4'	1.97	0.46
49:S2:102:A:H5''	49:S2:104:A:H1'	1.97	0.46
49:S2:148:U:N3	49:S2:170:A:C6	2.82	0.46
49:S2:187:G:C5	49:S2:188:C:C5	3.02	0.46
49:S2:193:C:C2	49:S2:207:G:N2	2.83	0.46
49:S2:348:A:C4	49:S2:349:A:C8	3.03	0.46
49:S2:357:C:C2	49:S2:358:C:C5	3.03	0.46
49:S2:394:G:H2'	49:S2:394:G:N3	2.30	0.46
49:S2:446:G:OP1	58:SI:50:GLY:N	2.36	0.46
49:S2:452:G:C6	49:S2:453:C:C4	3.03	0.46
49:S2:452:G:C6	49:S2:453:C:N4	2.83	0.46
49:S2:504:G:H2'	49:S2:505:G:O5'	2.15	0.46
49:S2:578:C:N4	49:S2:579:C:C5	2.84	0.46
49:S2:642:U:HO2'	49:S2:644:G:HO2'	1.62	0.46
49:S2:819:G:H1	49:S2:828:G:H1	1.63	0.46
49:S2:927:C:H2'	49:S2:928:G:O5'	2.15	0.46
49:S2:963:A:N3	49:S2:964:A:C5	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:977:C:O2	49:S2:977:C:H2'	2.13	0.46
49:S2:1097:G:C6	49:S2:1098:C:C4	3.03	0.46
49:S2:1101:U:C2	49:S2:1102:G:C8	2.92	0.46
49:S2:1166:G:C2	49:S2:1167:G:C8	3.03	0.46
49:S2:1318:G:C5	49:S2:1319:U:C5	3.03	0.46
49:S2:1330:G:C2	49:S2:1333:U:C4	3.02	0.46
49:S2:1342:U:C6	49:S2:1483:A:C6	3.03	0.46
49:S2:1373:C:O2'	49:S2:1374:C:O4'	2.21	0.46
49:S2:1398:G:N2	49:S2:1399:C:N1	2.63	0.46
49:S2:1553:C:O2	49:S2:1553:C:O4'	2.32	0.46
49:S2:1648:G:N3	49:S2:1674:G:C6	2.83	0.46
49:S2:1804:U:C4	49:S2:1805:G:N7	2.83	0.46
51:SB:178:THR:O	51:SB:179:ASN:O	2.33	0.46
57:SH:109:ARG:HG3	57:SH:110:THR:C	2.40	0.46
59:SJ:138:ARG:HB2	59:SJ:138:ARG:HH11	1.79	0.46
60:SK:12:TYR:CD2	60:SK:79:LEU:HD22	2.50	0.46
62:SM:22:LEU:HD23	62:SM:111:VAL:CG2	2.45	0.46
64:SO:41:PHE:N	64:SO:41:PHE:HD1	2.13	0.46
67:SR:94:GLU:O	67:SR:95:ILE:HB	2.15	0.46
68:SS:23:ARG:CD	75:SZ:48:VAL:HG21	2.45	0.46
69:ST:78:ILE:HG23	69:ST:79:TYR:CD1	2.50	0.46
74:SY:56:PHE:CE1	74:SY:94:HIS:HE1	2.33	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
1:5:330:G:OP2	17:N:166:SER:HB2	2.15	0.46
1:5:351:C:C2	3:8:25:G:C2	3.03	0.46
1:5:352:G:H1'	1:5:355:A:H2	1.81	0.46
1:5:388:A:C5	1:5:411:G:C6	3.03	0.46
1:5:739:G:C4	1:5:740:G:C8	3.04	0.46
1:5:921:C:OP1	16:M:69:ARG:NH1	2.47	0.46
1:5:1187:G:HO2'	1:5:1188:C:H6	1.61	0.46
1:5:1285:U:C4	1:5:1286:C:C4	3.03	0.46
1:5:1358:G:C1'	1:5:1359:G:C8	2.98	0.46
1:5:1367:C:H1'	1:5:1370:G:C8	2.51	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
1:5:1516:G:C4	1:5:1518:A:N7	2.84	0.46
1:5:1532:G:OP1	39:j:16:HIS:HE1	1.98	0.46
1:5:1561:G:C3'	1:5:1562:G:H5'	2.45	0.46
1:5:1745:G:C6	1:5:1746:A:N7	2.83	0.46
1:5:1922:G:H2'	1:5:1923:A:H5''	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2055:G:O4'	18:O:130:LYS:HE2	2.13	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	3.03	0.46
1:5:2440:U:C2	1:5:2519:U:C6	3.04	0.46
1:5:2447:U:O2'	1:5:2448:G:P	2.73	0.46
1:5:2513:A:C5	36:g:13:TYR:CD2	3.04	0.46
1:5:2538:U:H2'	1:5:2539:C:H6	1.80	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
1:5:2589:C:N4	1:5:2590:G:C5	2.83	0.46
1:5:2673:G:C4'	1:5:2675:G:C1'	2.92	0.46
1:5:4129:G:C6	1:5:4130:C:C4	3.02	0.46
1:5:4462:C:N3	1:5:4515:G:C2	2.83	0.46
1:5:4622:A:H5'	5:B:12:GLY:HA2	1.98	0.46
1:5:4714:C:O2	1:5:4714:C:C2'	2.62	0.46
1:5:4738:C:H2'	1:5:4739:C:O4'	2.14	0.46
1:5:4904:G:C6	1:5:4905:C:C4	3.02	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
2:7:27:G:C6	2:7:28:C:C4	3.03	0.46
3:8:10:G:N2	3:8:11:C:C1'	2.74	0.46
3:8:12:G:N3	3:8:13:G:C8	2.80	0.46
4:A:180:LEU:HD23	45:p:14:TYR:CE2	2.50	0.46
5:B:89:ILE:HG21	5:B:197:ALA:HB1	1.97	0.46
5:B:208:ASN:OD1	5:B:208:ASN:N	2.44	0.46
5:B:302:ASN:HB2	5:B:313:SER:HA	1.96	0.46
7:D:41:LYS:C	7:D:44:TYR:HE1	2.23	0.46
10:G:177:MET:SD	10:G:177:MET:N	2.87	0.46
13:J:165:TRP:HE3	13:J:166:PHE:HA	1.80	0.46
14:K:48:LYS:CG	14:K:52:ASP:OD2	2.54	0.46
14:K:80:LEU:CA	14:K:83:LYS:HD2	2.42	0.46
14:K:120:SER:OG	14:K:121:LEU:HD23	2.15	0.46
19:P:36:ILE:CD1	19:P:48:LEU:HD11	2.46	0.46
22:S:47:PHE:HE1	22:S:125:GLN:HG2	1.80	0.46
27:X:119:ILE:HD11	27:X:140:LEU:HD13	1.96	0.46
28:Y:27:ARG:CB	28:Y:75:ARG:HH12	2.27	0.46
46:q:168:GLY:H	46:q:171:GLU:HG3	1.80	0.46
46:q:180:ILE:C	46:q:182:PRO:HD3	2.39	0.46
48:4:10:ARG:NH2	48:4:465:PRO:CG	2.72	0.46
48:4:60:ARG:H	48:4:63:GLU:CB	2.28	0.46
48:4:113:SER:CB	48:4:499:PHE:HD2	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:120:ARG:HH12	48:4:495:ARG:HB3	1.78	0.46
49:S2:17:C:H2'	49:S2:18:C:C6	2.50	0.46
49:S2:114:G:O4'	61:SL:132:ARG:CD	2.62	0.46
49:S2:331:C:C2	49:S2:332:G:C8	3.04	0.46
49:S2:375:U:C1'	61:SL:7:GLU:OE1	2.63	0.46
49:S2:404:G:N1	49:S2:405:G:N7	2.62	0.46
49:S2:404:G:N2	49:S2:405:G:C4	2.84	0.46
49:S2:569:A:C6	49:S2:570:C:C4	3.02	0.46
49:S2:595:U:HO2'	49:S2:596:U:H6	1.45	0.46
49:S2:697:G:C2	49:S2:734:C:O2	2.69	0.46
49:S2:841:G:N2	49:S2:842:C:C6	2.83	0.46
49:S2:910:G:N3	49:S2:911:C:C6	2.83	0.46
49:S2:976:G:C2	49:S2:977:C:C2	3.03	0.46
49:S2:993:G:H21	49:S2:994:C:H1'	1.79	0.46
49:S2:1031:A:C6	49:S2:1032:C:C4	3.03	0.46
49:S2:1064:C:P	64:SO:150:ARG:HH22	2.37	0.46
49:S2:1089:G:C6	49:S2:1090:C:C4	3.03	0.46
49:S2:1149:A:N1	49:S2:1151:G:C4	2.84	0.46
49:S2:1184:G:C4	49:S2:1185:C:C6	3.03	0.46
49:S2:1250:A:N3	49:S2:1339:U:C4'	2.78	0.46
49:S2:1258:A:N1	49:S2:1663:A:C4	2.83	0.46
49:S2:1283:C:C1'	62:SM:86:GLY:HA3	2.44	0.46
49:S2:1434:C:C2	49:S2:1435:C:C6	3.04	0.46
49:S2:1589:A:H2'	49:S2:1590:C:H6	1.79	0.46
49:S2:1654:G:C2	49:S2:1671:G:N1	2.83	0.46
49:S2:1717:C:C2	49:S2:1817:G:C2	3.03	0.46
49:S2:1771:G:N1	49:S2:1772:C:C4	2.83	0.46
49:S2:1777:G:C4	49:S2:1778:C:C6	3.03	0.46
49:S2:1790:A:H2'	49:S2:1791:A:O4'	2.14	0.46
53:SD:101:GLN:HG3	53:SD:126:ILE:HG22	1.96	0.46
54:SE:98:ASN:C	54:SE:99:PHE:CD1	2.92	0.46
57:SH:43:LEU:HD21	57:SH:71:SER:CB	2.45	0.46
59:SJ:128:VAL:HG12	59:SJ:132:GLN:HG3	1.97	0.46
62:SM:51:VAL:HA	62:SM:77:ILE:HG22	1.98	0.46
69:ST:92:PHE:CD1	69:ST:92:PHE:C	2.93	0.46
76:Sa:28:ARG:CG	76:Sa:28:ARG:NH1	2.76	0.46
76:Sa:73:TYR:HB3	76:Sa:78:ALA:HB2	1.96	0.46
1:5:12:A:N3	1:5:14:C:C6	2.84	0.46
1:5:29:G:N3	1:5:30:C:C6	2.83	0.46
1:5:37:U:O4	1:5:38:A:C6	2.68	0.46
1:5:258:G:C2	1:5:259:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:370:U:C5	1:5:1637:A:C5	3.03	0.46
1:5:465:G:C2	1:5:466:A:N9	2.83	0.46
1:5:488:G:H21	1:5:489:C:H1'	1.80	0.46
1:5:700:G:C6	1:5:701:G:N7	2.83	0.46
1:5:710:G:C2	1:5:711:A:C5	3.03	0.46
1:5:1203:G:N1	1:5:1204:C:C4	2.83	0.46
1:5:1344:C:H5''	1:5:1344:C:H6	1.80	0.46
1:5:1355:G:C5	1:5:1385:G:N2	2.83	0.46
1:5:1367:C:H6	1:5:1367:C:H5''	1.80	0.46
1:5:1400:G:C2	1:5:1418:C:C2	3.03	0.46
1:5:1603:C:H2'	1:5:1604:G:C8	2.50	0.46
1:5:1632:A:C6	1:5:1634:A:C1'	2.99	0.46
1:5:1674:C:C4	1:5:1675:C:C5	3.04	0.46
1:5:1696:C:HO2'	1:5:1697:G:P	2.37	0.46
1:5:1925:G:N2	1:5:1926:C:H1'	2.31	0.46
1:5:1956:A:H2	1:5:2027:U:C2	2.33	0.46
1:5:1968:G:N1	1:5:1969:G:C5	2.84	0.46
1:5:2318:G:C2	1:5:2322:G:C2	3.03	0.46
1:5:2329:U:O2'	1:5:2330:G:H5'	2.11	0.46
1:5:2820:C:H2'	1:5:2821:U:H5'	1.96	0.46
1:5:3635:A:C8	1:5:3635:A:H3'	2.51	0.46
1:5:3722:G:N3	1:5:3723:A:C8	2.83	0.46
1:5:3729:U:H2'	1:5:3730:U:O4'	2.15	0.46
1:5:3930:U:H1'	4:A:228:ASP:OD1	2.15	0.46
1:5:3938:G:C6	1:5:4077:A:C2	3.01	0.46
1:5:4117:U:N3	4:A:40:TYR:CD1	2.72	0.46
1:5:4117:U:O2	4:A:40:TYR:CE1	2.68	0.46
1:5:4133:C:O2	1:5:4133:C:H2'	2.14	0.46
1:5:4257:A:C5	13:J:60:PHE:HE2	2.33	0.46
1:5:4524:G:C2	1:5:4525:C:C6	3.03	0.46
1:5:4572:U:O2	1:5:4720:C:C5	2.68	0.46
1:5:4729:A:H4'	1:5:4965:U:HO2'	1.78	0.46
1:5:4888:U:O2'	1:5:4889:G:C8	2.50	0.46
2:7:66:G:C6	2:7:67:C:C4	3.03	0.46
3:8:9:A:H2'	3:8:9:A:N3	2.30	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
7:D:30:TYR:N	7:D:30:TYR:CD1	2.83	0.46
16:M:7:VAL:HG13	16:M:27:ILE:HD13	1.97	0.46
16:M:130:LEU:HD21	18:O:180:GLN:OE1	2.15	0.46
19:P:54:GLN:HB2	19:P:83:TRP:CD1	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:96:GLU:HB3	22:S:142:VAL:HG21	1.97	0.46
32:c:38:ILE:HD11	32:c:46:VAL:HG21	1.97	0.46
36:g:75:SER:C	36:g:76:ARG:CG	2.88	0.46
38:i:43:MET:HA	38:i:46:GLU:OE2	2.15	0.46
46:q:139:GLN:NE2	48:4:183:GLU:HB3	2.29	0.46
48:4:748:GLU:OE2	48:4:811:GLN:NE2	2.48	0.46
48:4:851:LEU:HD23	48:4:851:LEU:H	1.80	0.46
49:S2:145:G:N7	56:SG:178:ARG:NH1	2.64	0.46
49:S2:200:G:H2'	49:S2:201:C:O4'	2.15	0.46
49:S2:363:A:N6	49:S2:400:C:O2'	2.48	0.46
49:S2:403:G:N2	49:S2:404:G:H1'	2.30	0.46
49:S2:549:C:H2'	49:S2:549:C:O2	2.15	0.46
49:S2:836:G:C3'	49:S2:837:A:C5'	2.94	0.46
49:S2:842:C:O2	49:S2:843:C:C6	2.68	0.46
49:S2:929:G:H2'	49:S2:930:C:O4'	2.15	0.46
49:S2:947:G:C6	49:S2:948:C:C4	3.03	0.46
49:S2:978:G:C5	49:S2:979:C:C5	3.03	0.46
49:S2:1029:G:N1	49:S2:1030:A:C8	2.83	0.46
49:S2:1114:U:O4	49:S2:1119:A:C6	2.58	0.46
49:S2:1126:G:C2	49:S2:1127:C:C4	3.04	0.46
49:S2:1290:G:C2	81:Sf:146:LEU:CB	2.98	0.46
49:S2:1297:U:O2	49:S2:1299:A:H8	1.99	0.46
49:S2:1302:G:C8	81:Sf:140:TYR:CE2	3.04	0.46
49:S2:1305:C:O2	49:S2:1305:C:H2'	2.15	0.46
49:S2:1350:U:N3	49:S2:1351:G:C8	2.83	0.46
49:S2:1393:G:N1	49:S2:1394:G:C5	2.84	0.46
49:S2:1407:U:C2	49:S2:1408:U:C5	3.03	0.46
49:S2:1786:U:C2	49:S2:1787:G:N7	2.83	0.46
52:SC:179:THR:OG1	52:SC:180:VAL:N	2.48	0.46
55:SF:142:SER:O	55:SF:144:LEU:N	2.49	0.46
59:SJ:108:ARG:NH2	59:SJ:113:GLN:OE1	2.49	0.46
63:SN:4:MET:HE2	63:SN:124:ARG:HH11	1.81	0.46
73:SX:134:TYR:CE1	80:Se:13:ARG:NH2	2.84	0.46
75:SZ:63:PRO:O	75:SZ:111:ARG:NH1	2.48	0.46
79:Sd:26:ASN:C	79:Sd:27:ARG:CG	2.87	0.46
82:Sg:125:ARG:NE	82:Sg:150:TRP:CE3	2.84	0.46
1:5:48:G:O2'	1:5:49:U:P	2.71	0.46
1:5:167:C:C2	1:5:168:C:C6	3.04	0.46
1:5:337:U:O2	1:5:337:U:H2'	2.14	0.46
1:5:479:G:C2	1:5:480:C:N1	2.83	0.46
1:5:504:G:O6	1:5:654:C:C4	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:658:C:C2	1:5:659:G:N7	2.81	0.46
1:5:749:G:O6	1:5:913:U:O4	2.33	0.46
1:5:920:C:H5''	16:M:72:TYR:CD2	2.50	0.46
1:5:973:G:C6	1:5:974:C:C5	3.03	0.46
1:5:1075:G:H2'	1:5:1076:C:C6	2.50	0.46
1:5:1263:A:C2	1:5:1264:C:C2	3.04	0.46
1:5:1264:C:HO2'	1:5:2114:G:P	2.34	0.46
1:5:1268:G:N2	1:5:1270:A:C1'	2.78	0.46
1:5:1337:A:H5'	6:C:102:PHE:HD2	1.80	0.46
1:5:1464:C:O2	1:5:1464:C:C2'	2.64	0.46
1:5:1563:A:C6	49:S2:677:G:O2'	2.68	0.46
1:5:1608:G:C1'	1:5:3828:A:C2	2.98	0.46
1:5:1811:G:N2	1:5:1812:C:N1	2.63	0.46
1:5:1855:G:C4	1:5:1856:C:C6	3.03	0.46
1:5:1983:A:C2	1:5:2008:U:C5	2.94	0.46
1:5:1983:A:C2	1:5:2010:A:O5'	2.67	0.46
1:5:2276:A:C5	1:5:2277:C:C5	3.04	0.46
1:5:2557:G:C4	1:5:2558:C:C6	3.04	0.46
1:5:2586:G:C8	1:5:2587:A:C4	3.04	0.46
1:5:2645:G:N2	1:5:2646:C:N1	2.63	0.46
1:5:2658:G:O2'	1:5:2675:G:N2	2.45	0.46
1:5:2773:G:N3	1:5:2774:C:C6	2.84	0.46
1:5:2833:A:HO2'	1:5:2834:C:C4'	2.27	0.46
1:5:2857:A:C2'	1:5:2858:A:C8	2.98	0.46
1:5:3591:C:N4	1:5:3592:G:C5	2.82	0.46
1:5:3621:A:N3	1:5:3621:A:H2'	2.31	0.46
1:5:4085:A:C3'	1:5:4086:G:C5'	2.93	0.46
1:5:4109:G:C2	1:5:4110:C:N1	2.83	0.46
1:5:4111:U:N3	1:5:4112:C:C5	2.84	0.46
1:5:4158:C:O2	1:5:4158:C:C2'	2.62	0.46
1:5:4551:U:H2'	1:5:4552:U:C6	2.51	0.46
1:5:4581:G:N2	1:5:4582:C:C5	2.84	0.46
1:5:4709:U:C2	1:5:4710:C:C6	3.04	0.46
1:5:4861:G:N1	1:5:4862:G:C5	2.83	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
1:5:5023:C:H5	1:5:5028:G:H1'	1.80	0.46
1:5:5047:C:H5''	1:5:5050:C:C5	2.42	0.46
3:8:139:G:C2	3:8:140:C:C2	3.02	0.46
8:E:102:VAL:HG23	8:E:103:VAL:HG22	1.97	0.46
9:F:98:ARG:NH2	9:F:226:THR:HG23	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:60:TRP:NE1	22:S:153:PRO:CG	2.79	0.46
15:L:99:ASP:OD1	15:L:101:ARG:N	2.45	0.46
16:M:116:ARG:NH2	18:O:201:PHE:CE2	2.84	0.46
29:Z:100:VAL:CG1	29:Z:107:LYS:HA	2.46	0.46
34:e:35:TRP:HE1	34:e:37:LYS:CA	2.27	0.46
34:e:58:ILE:HG23	34:e:59:GLY:N	2.31	0.46
34:e:90:MET:HG2	47:r:33:LYS:HB2	1.98	0.46
35:f:33:VAL:HG23	35:f:38:GLU:HB3	1.98	0.46
45:p:49:ARG:HD3	45:p:51:ALA:N	2.30	0.46
46:q:77:LYS:HG2	46:q:198:ILE:HD11	1.86	0.46
46:q:135:THR:O	46:q:136:SER:C	2.50	0.46
46:q:182:PRO:CB	46:q:183:PHE:CD1	2.99	0.46
47:r:106:LEU:O	47:r:108:MET:N	2.48	0.46
48:4:19:ILE:HD13	48:4:468:ASN:OD1	2.15	0.46
48:4:205:ILE:C	48:4:206:ASP:CG	2.81	0.46
48:4:330:LYS:HZ3	48:4:330:LYS:CB	2.26	0.46
48:4:504:VAL:CG1	48:4:811:GLN:HA	2.45	0.46
48:4:683:PHE:HA	48:4:729:LEU:HD11	1.98	0.46
49:S2:69:C:H2'	49:S2:70:G:H8	1.79	0.46
49:S2:184:G:N3	49:S2:185:G:C8	2.84	0.46
49:S2:211:G:H2'	49:S2:212:C:O4'	2.15	0.46
49:S2:297:A:H5'	54:SE:132:GLY:O	2.15	0.46
49:S2:322:C:H2'	49:S2:323:C:C6	2.51	0.46
49:S2:349:A:C5'	58:SI:27:TYR:OH	2.62	0.46
49:S2:367:U:H1'	49:S2:371:A:C4	2.50	0.46
49:S2:452:G:C4	49:S2:453:C:C6	3.03	0.46
49:S2:459:C:N4	49:S2:460:A:N7	2.61	0.46
49:S2:493:A:H1'	49:S2:574:A:OP1	2.15	0.46
49:S2:691:G:C6	49:S2:692:G:N7	2.84	0.46
49:S2:738:C:C2	49:S2:739:C:C6	3.04	0.46
49:S2:914:U:O2	49:S2:914:U:O4'	2.32	0.46
49:S2:961:G:N3	49:S2:962:A:C8	2.84	0.46
49:S2:979:C:O2	49:S2:980:A:C8	2.68	0.46
49:S2:990:A:C2	49:S2:992:A:C5	3.04	0.46
49:S2:1233:G:C2	49:S2:1234:C:C2	3.04	0.46
49:S2:1251:A:H2'	49:S2:1251:A:N3	2.31	0.46
49:S2:1405:A:O4'	49:S2:1580:A:C6	2.69	0.46
49:S2:1688:C:C2	49:S2:1689:C:C5	3.04	0.46
49:S2:1866:A:C6	76:Sa:87:ARG:HD2	2.50	0.46
58:SI:60:LEU:CD2	58:SI:185:ALA:HB2	2.46	0.46
63:SN:5:HIS:HD2	63:SN:121:ARG:CD	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SR:21:TYR:CD1	67:SR:71:ILE:HD13	2.50	0.46
73:SX:9:THR:HG22	73:SX:12:LYS:HB3	1.97	0.46
75:SZ:98:LYS:HB2	75:SZ:113:THR:HG23	1.96	0.46
1:5:169:G:C2	1:5:170:C:C2	3.04	0.46
1:5:223:G:H4'	1:5:225:G:C8	2.50	0.46
1:5:302:C:OP1	17:N:68:ARG:HG2	2.16	0.46
1:5:655:C:C2'	1:5:656:C:O5'	2.63	0.46
1:5:753:C:C2	1:5:754:U:H6	2.26	0.46
1:5:919:C:N3	1:5:920:C:C5	2.84	0.46
1:5:947:C:H2'	1:5:948:C:H6	1.80	0.46
1:5:1238:A:C2'	1:5:1239:C:O5'	2.62	0.46
1:5:1278:C:H3'	1:5:1279:A:H4'	1.97	0.46
1:5:1330:A:C2	1:5:1331:C:C5	3.03	0.46
1:5:1338:G:N2	30:a:25:HIS:HD1	2.12	0.46
1:5:1358:G:H3'	6:C:114:ARG:HH22	1.80	0.46
1:5:1373:A:N3	1:5:1374:G:C8	2.83	0.46
1:5:1611:C:O4'	1:5:1612:G:N7	2.48	0.46
1:5:1757:U:H2'	1:5:1758:G:O4'	2.16	0.46
1:5:1797:G:N2	1:5:1798:G:C4	2.83	0.46
1:5:1858:A:C2	1:5:1859:C:C4	3.03	0.46
1:5:1987:C:C2	1:5:1988:G:C8	3.03	0.46
1:5:2441:C:C5'	36:g:9:ARG:HE	2.28	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
1:5:2570: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
1:5:2720:C:N3	1:5:2721:G:C8	2.83	0.46
1:5:2793:G:O6	1:5:2797:C:C5	2.68	0.46
1:5:3590:G:C2	1:5:3591:C:C2	3.03	0.46
1:5:3625:G:H21	1:5:3627:G:P	2.37	0.46
1:5:3629:A:C6	1:5:3630:A:N7	2.84	0.46
1:5:3759:A:N1	49:S2:1708:C:H2'	2.31	0.46
1:5:3805:U:N3	1:5:3806:G:C8	2.84	0.46
1:5:3805:U:H2'	1:5:3805:U:O2	2.14	0.46
1:5:3829:G:C6	1:5:3830:A:N7	2.84	0.46
1:5:3847:C:H2'	1:5:3847:C:O2	2.14	0.46
1:5:4293:U:O4	1:5:4329:G:C8	2.68	0.46
1:5:4368:G:N2	44:o:26:TYR:HE2	2.13	0.46
1:5:4373:G:H2'	44:o:60:ALA:HB2	1.96	0.46
1:5:4406:U:N3	1:5:4407:G:C8	2.83	0.46
1:5:4458:C:C2'	1:5:4459:U:O5'	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4528:G:N3	1:5:4529:G:C8	2.84	0.46
1:5:4767:C:C4'	1:5:4874:A:N1	2.77	0.46
1:5:4871:C:H5''	16:M:91:TRP:CZ2	2.51	0.46
1:5:5000:G:C4	1:5:5001:U:C5	3.03	0.46
2:7:8:G:C2	2:7:9:C:C2	3.03	0.46
3:8:63:U:C2	3:8:63:U:C3'	2.98	0.46
3:8:95:A:C4	3:8:96:C:C5	3.03	0.46
4:A:29:LEU:HD22	4:A:163:ARG:HH22	1.80	0.46
5:B:100:ARG:HB3	5:B:100:ARG:NH1	2.30	0.46
5:B:108:GLU:HB2	5:B:137:TRP:HB3	1.97	0.46
6:C:164:THR:HG22	6:C:220:ALA:O	2.15	0.46
7:D:27:LYS:HE2	13:J:147:ARG:HH22	1.81	0.46
9:F:165:ASN:O	9:F:165:ASN:CG	2.58	0.46
10:G:261:LEU:HD22	10:G:265:LEU:CD2	2.46	0.46
44:o:45:GLN:HA	44:o:45:GLN:HE21	1.77	0.46
46:q:85:ASN:O	46:q:86:VAL:HG23	2.16	0.46
46:q:108:PRO:HB3	46:q:109:ALA:HB3	1.98	0.46
46:q:171:GLU:HA	46:q:174:LEU:HD21	1.95	0.46
48:4:343:TRP:CE3	48:4:343:TRP:CA	2.98	0.46
48:4:385:ILE:CD1	48:4:417:PHE:HB3	2.42	0.46
48:4:448:GLN:O	48:4:448:GLN:CD	2.59	0.46
48:4:543:GLU:CD	48:4:576:VAL:H	2.22	0.46
48:4:751:CYS:SG	48:4:756:VAL:CA	3.04	0.46
48:4:830:ARG:HB2	48:4:831:PRO:CD	2.43	0.46
49:S2:4:C:H4'	52:SC:207:ALA:HB2	1.97	0.46
49:S2:30:C:C2'	49:S2:31:U:O5'	2.63	0.46
49:S2:100:U:H2'	49:S2:100:U:O2	2.15	0.46
49:S2:122:G:C6	49:S2:123:G:C8	3.04	0.46
49:S2:171:A:C4	49:S2:173:A:C8	3.03	0.46
49:S2:171:A:C8	49:S2:173:A:N7	2.83	0.46
49:S2:309:G:C2	49:S2:310:C:C2	3.04	0.46
49:S2:312:G:OP1	49:S2:314:U:OP2	2.33	0.46
49:S2:340:C:C3'	49:S2:341:C:H6	2.28	0.46
49:S2:373:G:H4'	61:SL:85:THR:HG21	1.98	0.46
49:S2:420:G:O2'	49:S2:660:C:N3	2.46	0.46
49:S2:646:G:C5	49:S2:647:U:C5	3.03	0.46
49:S2:862:A:N1	49:S2:863:U:C5	2.83	0.46
49:S2:882:U:C4	49:S2:883:U:C5	3.04	0.46
49:S2:975:G:H2'	49:S2:975:G:N3	2.31	0.46
49:S2:1034:A:H2'	49:S2:1035:A:O4'	2.16	0.46
49:S2:1134:G:C2	49:S2:1135:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1204:A:C4	49:S2:1205:C:C6	3.03	0.46
49:S2:1374:C:C2'	49:S2:1375:G:O5'	2.64	0.46
49:S2:1385:G:H5''	49:S2:1386:A:OP2	2.15	0.46
49:S2:1427:C:C2	49:S2:1428:G:C8	3.04	0.46
49:S2:1590:C:C5	49:S2:1591:C:C1'	2.98	0.46
49:S2:1644:C:O2'	49:S2:1645:C:C4'	2.64	0.46
49:S2:1668:U:H5'	70:SU:77:TRP:CZ2	2.51	0.46
49:S2:1780:G:C2	49:S2:1781:A:C4	3.04	0.46
49:S2:1806:A:C2	49:S2:1807:C:C6	3.03	0.46
50:SA:158:ASP:OD1	50:SA:159:ILE:HG22	2.16	0.46
57:SH:130:LEU:HB3	57:SH:139:ILE:HD11	1.97	0.46
59:SJ:48:PHE:HZ	59:SJ:52:LYS:CG	2.28	0.46
60:SK:66:HIS:O	60:SK:67:PHE:HB2	2.16	0.46
62:SM:31:LEU:HB3	62:SM:33:ARG:HB3	1.98	0.46
68:SS:124:ARG:HD3	68:SS:131:VAL:HA	1.98	0.46
69:ST:92:PHE:HD1	69:ST:92:PHE:C	2.24	0.46
1:5:112:C:N3	1:5:113:A:N7	2.64	0.46
1:5:174:C:C2	1:5:175:C:C5	3.04	0.46
1:5:278:G:C6	1:5:330:G:N7	2.84	0.46
1:5:315:G:C6	30:a:62:HIS:CB	2.97	0.46
1:5:450:G:HO2'	1:5:453:G:P	2.38	0.46
1:5:453:G:H22	1:5:1294:A:N6	2.10	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
1:5:969:C:H2'	1:5:970:G:C2	2.50	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
1:5:1280:C:O2	1:5:1282:G:C8	2.68	0.46
1:5:1392:A:H2'	1:5:1393:G:H8	1.78	0.46
1:5:1404:G:H2'	1:5:1405:C:O4'	2.16	0.46
1:5:1466:G:C2	1:5:1467:C:C6	3.03	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'	2.16	0.46
1:5:1555:G:C6	1:5:1556:C:C4	3.03	0.46
1:5:1570:G:H2'	1:5:1571:G:O4'	2.15	0.46
1:5:1724:G:N2	9:F:105:PRO:CG	2.78	0.46
1:5:1760:G:C6	1:5:1761:G:C5	3.04	0.46
1:5:1900:C:H4'	34:e:60:TYR:CD1	2.50	0.46
1:5:1929:A:H2'	18:O:49:ARG:HH22	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1975:G:C5	1:5:1984:A:N3	2.84	0.46
1:5:2018:C:H2'	1:5:2018:C:O2	2.15	0.46
1:5:2311:C:C4	1:5:2312:U:C6	3.03	0.46
1:5:2351:C:H2'	1:5:2351:C:O2	2.16	0.46
1:5:2392:C:C2	1:5:2393:C:C5	3.04	0.46
1:5:2405:G:H5'	39:j:12:ARG:O	2.15	0.46
1:5:2455:G:C2'	1:5:2456:G:O5'	2.60	0.46
1:5:2479:G:N1	1:5:2480:G:C4	2.84	0.46
1:5:2599:G:N2	1:5:2747:U:C4	2.83	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
1:5:2753:G:C3'	1:5:2754:G:O4'	2.64	0.46
1:5:2768:C:H4'	1:5:2769:U:OP2	2.16	0.46
1:5:2854:G:C8	1:5:2854:G:C3'	2.97	0.46
1:5:3632:C:C4	1:5:3633:C:C5	3.04	0.46
1:5:3674:G:N3	1:5:3675:G:C8	2.84	0.46
1:5:3946:G:C2	1:5:3947:A:C8	3.03	0.46
1:5:4086:G:C5	4:A:67:TYR:CD1	3.03	0.46
1:5:4089:G:H2'	1:5:4090:G:O4'	2.15	0.46
1:5:4094:G:O6	1:5:4114:C:N3	2.49	0.46
1:5:4135:G:C4	1:5:4136:G:C8	3.04	0.46
1:5:4314:C:C2	1:5:4315:A:H8	2.33	0.46
1:5:4561:C:N3	1:5:4562:C:H5	2.09	0.46
1:5:4652:G:C6	1:5:4653:C:N4	2.84	0.46
1:5:4734:A:N3	1:5:4734:A:H2'	2.30	0.46
1:5:4997:G:C5	1:5:4998:G:C8	3.04	0.46
1:5:4998:G:N2	1:5:4999:G:N9	2.64	0.46
2:7:21:G:C2	2:7:58:A:N3	2.83	0.46
3:8:144:U:O2	3:8:145:C:C6	2.69	0.46
4:A:202:VAL:HG12	4:A:217:GLN:CG	2.38	0.46
4:A:227:ARG:HB3	4:A:239:ALA:HB2	1.96	0.46
7:D:202:GLN:N	7:D:202:GLN:HE21	2.13	0.46
10:G:231:ASN:N	10:G:231:ASN:ND2	2.59	0.46
11:H:31:ARG:HH11	11:H:31:ARG:HG3	1.80	0.46
11:H:41:ILE:HD11	11:H:69:THR:HB	1.97	0.46
16:M:6:PHE:HB3	22:S:151:LYS:HG2	1.97	0.46
21:R:96:MET:O	21:R:100:ARG:HD2	2.16	0.46
22:S:82:LEU:HD21	22:S:109:CYS:SG	2.55	0.46
26:W:17:HIS:N	26:W:17:HIS:CD2	2.83	0.46
30:a:60:HIS:ND1	30:a:63:LEU:HD12	2.30	0.46
37:h:77:LYS:HB3	37:h:78:TYR:HD1	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:94:ASP:CG	46:q:99:ARG:HH11	2.16	0.46
46:q:133:GLU:C	46:q:135:THR:N	2.73	0.46
48:4:4:PHE:HE1	48:4:5:THR:HB	1.76	0.46
48:4:27:HIS:NE2	48:4:28:VAL:O	2.48	0.46
48:4:435:THR:OG1	48:4:438:LYS:HB2	2.15	0.46
48:4:543:GLU:OE1	48:4:576:VAL:CB	2.50	0.46
48:4:592:LEU:HB2	48:4:603:TYR:CE2	2.50	0.46
48:4:689:GLU:O	48:4:730:TYR:HE1	1.72	0.46
49:S2:14:C:OP1	52:SC:190:SER:OG	2.31	0.46
49:S2:447:A:C2	49:S2:449:A:H1'	2.51	0.46
49:S2:474:G:C2	49:S2:475:C:C4	3.02	0.46
49:S2:545:A:C2	49:S2:546:G:N7	2.84	0.46
49:S2:554:A:N3	49:S2:555:A:N7	2.63	0.46
49:S2:616:A:N7	49:S2:617:G:N9	2.64	0.46
49:S2:658:U:N3	73:SX:20:HIS:O	2.47	0.46
49:S2:832:G:O6	49:S2:833:C:C4	2.69	0.46
49:S2:839:C:O2'	49:S2:841:G:H1'	2.16	0.46
49:S2:900:C:C2	49:S2:901:G:C8	3.04	0.46
49:S2:946:U:C2	49:S2:947:G:C8	3.03	0.46
49:S2:956:G:N2	49:S2:957:A:C4	2.84	0.46
49:S2:956:G:C2'	49:S2:957:A:O5'	2.64	0.46
49:S2:957:A:N1	49:S2:967:C:O2	2.48	0.46
49:S2:1095:U:C4	49:S2:1149:A:N6	2.81	0.46
49:S2:1123:C:N4	49:S2:1124:C:N4	2.63	0.46
49:S2:1141:G:N2	49:S2:1147:C:C2	2.83	0.46
49:S2:1307:U:C2	49:S2:1308:U:H1'	2.51	0.46
49:S2:1309:C:C2	81:Sf:143:LYS:CE	2.99	0.46
49:S2:1533:A:C2	49:S2:1537:A:C1'	2.99	0.46
49:S2:1568:C:H2'	49:S2:1569:A:N7	2.31	0.46
49:S2:1622:U:O4	68:SS:120:HIS:HE1	1.98	0.46
49:S2:1835:A:C2	49:S2:1863:A:C6	3.04	0.46
61:SL:44:PHE:HE2	61:SL:143:LEU:HD23	1.76	0.46
62:SM:32:ALA:CB	62:SM:41:ALA:HB2	2.45	0.46
62:SM:37:GLU:O	62:SM:41:ALA:N	2.49	0.46
69:ST:127:GLY:O	69:ST:128:GLN:C	2.57	0.46
82:Sg:191:HIS:CB	82:Sg:195:LEU:HD21	2.45	0.46
1:5:31:U:O2	1:5:52:G:C2	2.68	0.46
1:5:69:A:C6	1:5:70:A:C6	3.04	0.46
1:5:118:C:N3	1:5:121:A:N7	2.63	0.46
1:5:152:U:O2	1:5:152:U:C2'	2.59	0.46
1:5:194:C:C4	1:5:195:C:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:247:G:C2	1:5:248:C:C2	3.03	0.46
1:5:353:A:C5	1:5:379:G:C5	3.04	0.46
1:5:423:G:H2'	1:5:424:U:H6	1.80	0.46
1:5:425:U:N3	1:5:426:A:C5	2.81	0.46
1:5:741:C:H2'	1:5:742:G:O4'	2.15	0.46
1:5:748:G:O6	1:5:918:G:H1'	2.16	0.46
1:5:1085:C:C2	1:5:1086:C:C6	3.04	0.46
1:5:1205:G:C4	1:5:1206:C:C5	3.04	0.46
1:5:1325:C:C4'	1:5:3901:A:C2	2.98	0.46
1:5:1370:G:N3	1:5:1370:G:O4'	2.49	0.46
1:5:1377:G:N2	15:L:158:ARG:HG2	2.30	0.46
1:5:1446:C:N3	1:5:1447:C:C6	2.84	0.46
1:5:1687:U:H2'	1:5:1688:G:O5'	2.15	0.46
1:5:1698:C:H5'	1:5:1698:C:H6	1.81	0.46
1:5:1780:A:N6	1:5:1781:U:C5	2.83	0.46
1:5:1785:C:H1'	12:I:94:PHE:CZ	2.51	0.46
1:5:2050:G:C2	1:5:2051:C:C2	3.04	0.46
1:5:2059:C:O2	22:S:118:ARG:NH1	2.46	0.46
1:5:2086:G:C6	1:5:2087:C:C4	3.03	0.46
1:5:2428:A:C6	1:5:2789:A:C2	3.03	0.46
1:5:2478:C:C2	1:5:2479:G:N7	2.84	0.46
1:5:2481:G:N3	1:5:2482:C:C6	2.83	0.46
1:5:2515:G:C5	1:5:2516:G:C8	3.03	0.46
1:5:2569:G:C2	1:5:2570:U:C2	3.04	0.46
1:5:2589:C:C5	1:5:2590:G:N7	2.84	0.46
1:5:2666:U:C5	1:5:2668:G:OP2	2.68	0.46
1:5:2736:G:C6	1:5:2737:C:N4	2.83	0.46
1:5:2744:A:N1	1:5:2745:A:C6	2.83	0.46
1:5:2891:U:H5	21:R:74:ARG:NH1	2.11	0.46
1:5:3696:C:N3	1:5:3697:U:C5	2.84	0.46
1:5:3715:U:O4'	1:5:3715:U:O2	2.33	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
1:5:3943:A:C5	1:5:3944:G:C8	3.04	0.46
1:5:4085:A:C3'	1:5:4086:G:H5''	2.46	0.46
1:5:4118:U:O4	4:A:95:GLN:CB	2.64	0.46
1:5:4202:U:C2	1:5:4204:C:C4	3.03	0.46
1:5:4322:G:C2	1:5:4326:G:C6	3.04	0.46
1:5:4326:G:H2'	1:5:4327:C:O4'	2.16	0.46
1:5:4330:G:C6	1:5:4331:G:C8	3.04	0.46
1:5:4468:U:O2	1:5:4708:A:N7	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4473:A:C4	1:5:4474:A:C8	3.03	0.46
1:5:4652:G:C2	1:5:4653:C:C2	3.04	0.46
1:5:4883:C:H42	8:E:272:ALA:HB3	1.81	0.46
1:5:5012:G:N2	1:5:5014:A:N7	2.62	0.46
2:7:17:C:O2	2:7:17:C:C2'	2.62	0.46
3:8:56:G:C6	3:8:57:C:C4	3.04	0.46
3:8:75:G:C2	3:8:76:C:C4	3.04	0.46
3:8:118:C:O2	3:8:118:C:C2'	2.64	0.46
4:A:122:ASP:OD1	4:A:122:ASP:C	2.59	0.46
6:C:100:ARG:HD3	6:C:100:ARG:C	2.41	0.46
6:C:177:TRP:O	6:C:180:ILE:N	2.48	0.46
7:D:33:ARG:HE	7:D:37:VAL:HG21	1.80	0.46
14:K:81:ILE:HD12	14:K:113:ALA:CB	2.45	0.46
14:K:123:ARG:CA	14:K:129:ILE:CG1	2.72	0.46
17:N:37:HIS:NE2	17:N:63:ARG:HB3	2.31	0.46
18:O:51:LYS:HA	18:O:141:LEU:HD11	1.97	0.46
25:V:57:VAL:CG2	25:V:84:GLN:HG2	2.44	0.46
25:V:82:ILE:CD1	25:V:104:VAL:HG13	2.46	0.46
29:Z:4:PHE:N	29:Z:4:PHE:CD1	2.84	0.46
30:a:71:PRO:HB2	30:a:108:TYR:HA	1.97	0.46
31:b:19:ASN:N	31:b:19:ASN:HD22	2.14	0.46
33:d:63:ARG:HD3	33:d:103:TYR:CE1	2.51	0.46
46:q:50:LYS:CG	46:q:51:ALA:H	2.27	0.46
46:q:77:LYS:HD3	46:q:77:LYS:HA	1.59	0.46
48:4:330:LYS:C	48:4:331:GLU:CG	2.74	0.46
48:4:352:GLN:O	48:4:356:ILE:HG22	2.16	0.46
48:4:660:ASN:CG	48:4:697:MET:O	2.58	0.46
48:4:819:ILE:HD12	48:4:819:ILE:C	2.41	0.46
49:S2:215:G:O2'	49:S2:216:C:O5'	2.33	0.46
49:S2:448:A:H8	58:SI:25:ARG:C	2.24	0.46
49:S2:478:G:C4	49:S2:479:C:C5	3.04	0.46
49:S2:611:G:C5	49:S2:612:U:C5	3.04	0.46
49:S2:1018:U:O2	49:S2:1018:U:C2'	2.64	0.46
49:S2:1031:A:H2'	49:S2:1032:C:O4'	2.15	0.46
49:S2:1045:U:O4	49:S2:1046:U:O4	2.34	0.46
49:S2:1099:G:C5	49:S2:1100:A:C8	3.03	0.46
49:S2:1110:G:C5	49:S2:1111:U:C5	3.04	0.46
49:S2:1137:U:O2'	50:SA:155:ARG:NH2	2.49	0.46
49:S2:1202:U:O4	49:S2:1203:G:N7	2.49	0.46
49:S2:1289:U:C5'	49:S2:1315:U:O2'	2.61	0.46
49:S2:1292:C:Cl'	81:Sf:148:TYR:CB	2.89	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1295:A:C6	49:S2:1296:U:H1'	2.51	0.46
49:S2:1310:U:C5'	81:Sf:143:LYS:HE3	2.46	0.46
49:S2:1405:A:C2	49:S2:1406:G:N9	2.83	0.46
49:S2:1414:A:C6	49:S2:1415:C:C5	3.03	0.46
56:SG:26:THR:HG21	56:SG:40:ALA:CB	2.46	0.46
62:SM:19:GLN:HG2	62:SM:88:TRP:CG	2.51	0.46
67:SR:18:GLU:OE2	67:SR:69:ILE:HA	2.16	0.46
68:SS:15:VAL:HG13	68:SS:68:ILE:CD1	2.46	0.46
75:SZ:86:ALA:HA	75:SZ:89:GLN:OE1	2.16	0.46
80:Se:45:VAL:O	80:Se:46:VAL:C	2.58	0.46
82:Sg:87:LEU:HD21	82:Sg:108:VAL:HG11	1.98	0.46
1:5:145:G:N2	1:5:146:G:H1'	2.31	0.46
1:5:184:U:O2	1:5:254:G:C2	2.69	0.46
1:5:316:U:O4	1:5:4353:U:O4'	2.34	0.46
1:5:432:U:O4	18:O:91:LYS:HD3	2.16	0.46
1:5:492:U:N3	1:5:493:G:N7	2.64	0.46
1:5:650:C:H2'	1:5:651:C:H6	1.75	0.46
1:5:671:G:C2	1:5:672:C:C6	3.03	0.46
1:5:731:G:H5''	1:5:732:A:OP2	2.16	0.46
1:5:986:C:C2	1:5:987:C:C6	3.03	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
1:5:1541:C:H5''	4:A:21:LYS:HD2	1.98	0.46
1:5:1602:U:C2	1:5:1603:C:C5	3.04	0.46
1:5:1632:A:N6	1:5:1634:A:C1'	2.78	0.46
1:5:1660:U:O4	30:a:12:ARG:NH1	2.37	0.46
1:5:1743:A:C5	1:5:1744:U:C5	3.04	0.46
1:5:1749:A:C2	1:5:1750:G:C5	3.03	0.46
1:5:2090:U:H2'	1:5:2259:G:OP1	2.16	0.46
1:5:2094:G:N7	9:F:48:ARG:HD3	2.31	0.46
1:5:2367:A:HO2'	1:5:2368:A:C5'	2.28	0.46
1:5:2375:A:OP1	33:d:63:ARG:NH2	2.48	0.46
1:5:2451:A:N3	1:5:2451:A:H2'	2.30	0.46
1:5:2494:U:N3	1:5:2495:U:C6	2.84	0.46
1:5:2561:C:H2'	1:5:2561:C:O2	2.16	0.46
1:5:2569:G:C5	1:5:2570:U:C5	3.03	0.46
1:5:2745:A:C2'	1:5:2746:A:O5'	2.64	0.46
1:5:3631:U:O2	1:5:3631:U:H2'	2.16	0.46
1:5:3648:A:C5	1:5:3785:A:C6	3.04	0.46
1:5:3860:A:C2	1:5:3861:A:H1'	2.51	0.46
1:5:4109:G:C4	1:5:4110:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4121:G:N2	4:A:85:GLY:CA	2.79	0.46
1:5:4139:G:C2	1:5:4140:C:C6	3.04	0.46
1:5:4200:G:C2	1:5:4201:G:C8	3.03	0.46
1:5:4772:C:H2'	1:5:4773:C:O4'	2.16	0.46
1:5:5010:U:N3	1:5:5011:A:N7	2.63	0.46
2:7:50:A:N1	2:7:51:G:C8	2.83	0.46
3:8:31:G:C5	3:8:32:C:C5	3.04	0.46
3:8:70:G:C4	3:8:87:G:N2	2.84	0.46
4:A:40:TYR:CE2	4:A:89:TYR:HD2	2.33	0.46
7:D:106:ALA:HB2	7:D:166:ALA:HA	1.97	0.46
9:F:149:LEU:N	9:F:197:TYR:OH	2.48	0.46
9:F:213:PHE:N	9:F:213:PHE:HD1	2.14	0.46
14:K:95:GLN:O	14:K:97:ASN:N	2.48	0.46
16:M:10:GLY:HA2	16:M:64:PHE:CZ	2.51	0.46
17:N:104:GLU:O	17:N:108:ARG:HB2	2.16	0.46
21:R:131:VAL:CG2	21:R:132:PHE:CZ	2.99	0.46
23:T:40:VAL:HG13	23:T:96:ILE:HG23	1.98	0.46
35:f:74:VAL:HG13	35:f:84:VAL:HG13	1.98	0.46
36:g:75:SER:C	36:g:76:ARG:HG2	2.40	0.46
37:h:93:ARG:HH11	37:h:93:ARG:HG2	1.79	0.46
46:q:133:GLU:CG	46:q:134:LYS:N	2.79	0.46
46:q:195:ASN:O	46:q:197:SER:N	2.49	0.46
48:4:21:ASN:HD21	48:4:469:ILE:HD12	1.79	0.46
48:4:111:PHE:CG	48:4:141:THR:HG23	2.51	0.46
49:S2:10:G:C6	49:S2:11:A:C5	3.03	0.46
49:S2:404:G:C2	49:S2:405:G:N9	2.83	0.46
49:S2:582:C:O2	49:S2:583:C:C6	2.68	0.46
49:S2:688:U:O2	57:SH:122:LEU:HG	2.15	0.46
49:S2:916:A:C4	63:SN:73:ARG:HD3	2.50	0.46
49:S2:993:G:N2	49:S2:994:C:C1'	2.79	0.46
49:S2:1123:C:N4	49:S2:1124:C:C5	2.83	0.46
49:S2:1185:C:C4	49:S2:1186:U:C5	3.04	0.46
49:S2:1189:A:H2'	49:S2:1190:A:H8	1.80	0.46
49:S2:1203:G:C4	49:S2:1204:A:C8	3.04	0.46
49:S2:1250:A:H2	49:S2:1339:U:C1'	2.29	0.46
49:S2:1294:G:C6	81:Sf:138:ARG:NE	2.84	0.46
49:S2:1518:C:P	49:S2:1519:U:H2'	2.55	0.46
49:S2:1607:A:C5	49:S2:1608:U:C5	3.03	0.46
49:S2:1869:A:H2'	76:Sa:41:ILE:HD13	1.98	0.46
50:SA:200:ASP:HA	50:SA:203:PHE:CE2	2.51	0.46
51:SB:111:CYS:SG	76:Sa:68:TYR:CD2	3.05	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SF:76:MET:HE2	55:SF:169:ILE:HG21	1.97	0.46
58:SI:8:TRP:NE1	58:SI:9:HIS:HB3	2.31	0.46
67:SR:10:LYS:HD3	67:SR:53:TYR:HE2	1.79	0.46
1:5:114:G:O6	1:5:157:U:C2	2.69	0.46
1:5:120:A:N7	1:5:149:A:C6	2.84	0.46
1:5:262:G:C6	1:5:263:G:N7	2.83	0.46
1:5:271:C:C4	1:5:272:U:H5	2.28	0.46
1:5:371:A:O2'	1:5:372:A:H5'	2.15	0.46
1:5:660:A:C5	1:5:661:C:C5	3.03	0.46
1:5:703:G:C6	1:5:706:C:N4	2.75	0.46
1:5:731:G:C6	1:5:732:A:N9	2.84	0.46
1:5:975:C:H2'	1:5:976:G:H1'	1.98	0.46
1:5:979:C:H4'	8:E:39:HIS:HB3	1.98	0.46
1:5:1234:G:C6	1:5:1235:G:C6	3.04	0.46
1:5:1396:G:H3'	1:5:1396:G:C8	2.51	0.46
1:5:1427:A:H2'	1:5:1428:U:O5'	2.16	0.46
1:5:1554:A:N6	1:5:1555:G:C4	2.84	0.46
1:5:1698:C:C6	1:5:1698:C:H5'	2.51	0.46
1:5:1758:G:N3	1:5:1758:G:H2'	2.31	0.46
1:5:1823:G:C4'	7:D:44:TYR:HD2	2.22	0.46
1:5:1938:C:H5'	1:5:1938:C:H6	1.81	0.46
1:5:1996:C:H1'	46:q:41:GLN:NE2	2.31	0.46
1:5:2272:C:H2'	1:5:2273:G:O5'	2.16	0.46
1:5:2277:C:C2	1:5:2278:G:C8	2.91	0.46
1:5:2282:A:C2'	1:5:2283:G:H5'	2.46	0.46
1:5:2409:U:C5	1:5:2410:C:C5	3.04	0.46
1:5:2496:G:C2	1:5:2497:C:C6	3.03	0.46
1:5:2505:C:H1'	1:5:2506:G:C6	2.51	0.46
1:5:2596:G:N3	1:5:2597:G:C8	2.84	0.46
1:5:2602:G:C4	1:5:2742:G:C6	3.04	0.46
1:5:2662:G:H2'	1:5:2663:G:O5'	2.16	0.46
1:5:2712:G:C4	1:5:2713:C:C6	3.04	0.46
1:5:3616:U:H1'	1:5:3617:G:C6	2.50	0.46
1:5:3652:A:C3'	1:5:3653:A:C8	2.98	0.46
1:5:3723:A:N1	1:5:3724:A:C6	2.84	0.46
1:5:3723:A:N1	1:5:3724:A:N6	2.64	0.46
1:5:3837:C:H2'	1:5:3838:U:O4'	2.16	0.46
1:5:3862:A:N1	1:5:3863:C:H1'	2.31	0.46
1:5:4146:G:C2	1:5:4147:G:C5	3.03	0.46
1:5:4273:A:C2'	1:5:4274:A:O4'	2.54	0.46
1:5:4277:G:C2	1:5:4278:C:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4343:U:H2'	1:5:4343:U:O2	2.15	0.46
1:5:4367:G:C6	1:5:4368:G:N7	2.84	0.46
1:5:4532:U:C5	1:5:4554:G:N2	2.79	0.46
1:5:4550:G:C6	1:5:4551:U:C6	3.04	0.46
1:5:4600:G:O2'	1:5:4601:U:OP2	2.32	0.46
1:5:4904:G:N3	1:5:4905:C:C6	2.84	0.46
1:5:4973:U:H1'	1:5:4986:G:C2	2.51	0.46
1:5:4999:G:C5	1:5:5000:G:N7	2.84	0.46
2:7:24:C:C2'	2:7:25:G:O5'	2.64	0.46
2:7:27:G:O6	7:D:58:ARG:NH1	2.46	0.46
3:8:75:G:C6	3:8:76:C:N4	2.84	0.46
3:8:96:C:C4	3:8:97:A:N7	2.78	0.46
4:A:33:ASP:OD1	4:A:33:ASP:N	2.48	0.46
4:A:77:ILE:HD13	4:A:128:ARG:HB2	1.97	0.46
4:A:186:TYR:HA	4:A:196:TRP:CZ3	2.51	0.46
5:B:228:TYR:HE1	5:B:270:GLY:HA2	1.80	0.46
5:B:290:GLY:HA3	5:B:328:ASN:HA	1.97	0.46
6:C:122:TYR:CB	6:C:280:PRO:HG3	2.46	0.46
6:C:197:ARG:C	6:C:198:ASN:CG	2.84	0.46
8:E:250:ASP:OD1	8:E:250:ASP:C	2.58	0.46
10:G:29:ASN:HB2	10:G:32:PHE:CZ	2.50	0.46
11:H:41:ILE:CD1	11:H:69:THR:CB	2.90	0.46
16:M:7:VAL:O	16:M:7:VAL:HG12	2.15	0.46
25:V:60:MET:HE1	25:V:108:ASN:HA	1.98	0.46
29:Z:76:ASN:HB2	29:Z:79:HIS:CD2	2.50	0.46
46:q:63:LYS:HD2	46:q:82:ILE:CD1	2.45	0.46
46:q:194:ASP:O	46:q:195:ASN:HB2	2.16	0.46
48:4:114:GLU:HA	48:4:532:PRO:HB2	1.96	0.46
48:4:409:ARG:C	48:4:410:PHE:CD1	2.94	0.46
48:4:543:GLU:CD	48:4:576:VAL:N	2.74	0.46
48:4:762:VAL:HG22	48:4:803:ASN:CB	2.42	0.46
49:S2:222:U:O2	49:S2:222:U:H2'	2.15	0.46
49:S2:309:G:H2'	49:S2:310:C:H6	1.80	0.46
49:S2:310:C:O2'	49:S2:339:A:O2'	2.19	0.46
49:S2:380:G:H21	49:S2:382:C:H2'	1.81	0.46
49:S2:539:C:C4	49:S2:540:U:C5	3.03	0.46
49:S2:793:G:O6	49:S2:794:A:C4	2.69	0.46
49:S2:795:A:H2'	49:S2:796:G:C8	2.36	0.46
49:S2:849:A:C4	49:S2:850:C:C5	3.04	0.46
49:S2:1049:A:C4	49:S2:1070:A:H2	2.30	0.46
49:S2:1095:U:O2	49:S2:1095:U:C2'	2.60	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1099:G:N2	49:S2:1100:A:H1'	2.30	0.46
49:S2:1314:U:O2	49:S2:1315:U:O4'	2.34	0.46
49:S2:1540:G:H21	49:S2:1541:G:H1'	1.80	0.46
49:S2:1585:U:H4'	49:S2:1586:U:OP2	2.16	0.46
49:S2:1644:C:O2'	49:S2:1645:C:O5'	2.34	0.46
49:S2:1709:G:C2	49:S2:1710:C:C4	3.04	0.46
49:S2:1736:G:H2'	49:S2:1737:G:O4'	2.15	0.46
49:S2:1782:G:C2	49:S2:1784:G:C5	3.00	0.46
49:S2:1796:G:H2'	49:S2:1797:U:C6	2.50	0.46
52:SC:163:VAL:HG22	52:SC:241:PHE:CZ	2.51	0.46
53:SD:222:PRO:CB	82:Sg:226:HIS:HE2	2.29	0.46
54:SE:36:HIS:HD2	54:SE:84:ALA:C	2.24	0.46
58:SI:167:GLN:HG3	58:SI:168:GLN:N	2.31	0.46
58:SI:174:CYS:HB2	58:SI:190:LEU:HD21	1.98	0.46
59:SJ:132:GLN:HB2	59:SJ:134:HIS:CD2	2.51	0.46
60:SK:82:TYR:CD2	60:SK:82:TYR:C	2.94	0.46
61:SL:96:ILE:HD12	61:SL:96:ILE:N	2.31	0.46
62:SM:58:GLU:O	62:SM:60:MET:N	2.48	0.46
63:SN:4:MET:CE	63:SN:124:ARG:HD3	2.46	0.46
67:SR:33:ARG:NH1	82:Sg:107:ASP:OD2	2.48	0.46
82:Sg:5:MET:SD	82:Sg:312:VAL:HG22	2.56	0.46
1:5:2:G:C6	1:5:3:C:C4	3.04	0.46
1:5:88:A:O2'	1:5:89:C:H5'	2.15	0.46
1:5:92:C:N4	44:o:40:ARG:NH1	2.55	0.46
1:5:154:G:C6	1:5:155:C:N4	2.84	0.46
1:5:315:G:N1	30:a:62:HIS:CB	2.78	0.46
1:5:458:C:C2	1:5:459:C:C5	3.03	0.46
1:5:472:C:O2	1:5:473:C:C6	2.66	0.46
1:5:516:C:C4	1:5:646:G:N1	2.84	0.46
1:5:662:C:C2'	1:5:663:G:H8	2.20	0.46
1:5:752:G:N2	1:5:753:C:H1'	2.31	0.46
1:5:1218:G:C5	1:5:1219:G:C8	3.04	0.46
1:5:1267:C:H2'	1:5:2121:C:N4	2.31	0.46
1:5:1379:C:O3'	1:5:1380:G:C8	2.67	0.46
1:5:1412:G:C2	1:5:1413:C:N1	2.84	0.46
1:5:1443:A:C6	1:5:1444:G:C5	3.04	0.46
1:5:1463:C:N3	1:5:1464:C:C5	2.85	0.46
1:5:1529:G:O2'	39:j:47:TYR:OH	2.34	0.46
1:5:1584:G:C4	1:5:1585:C:C5	3.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1645:C:H2'	1:5:1646:A:C8	2.51	0.46
1:5:1658:G:H4'	1:5:2348:G:O2'	2.15	0.46
1:5:1733:G:C6	1:5:4214:A:C2	3.04	0.46
1:5:1826:G:C6	1:5:1827:C:C5	3.03	0.46
1:5:1829:G:C4	1:5:1830:G:C8	3.03	0.46
1:5:1866:U:O4	1:5:4405:G:C1'	2.64	0.46
1:5:1899:G:C6	1:5:1900:C:C5	3.03	0.46
1:5:2033:A:C2	1:5:2034:G:N7	2.84	0.46
1:5:2273:G:H5''	6:C:311:ARG:HH22	1.79	0.46
1:5:2397:G:N7	1:5:2399:G:C8	2.83	0.46
1:5:2458:C:O2'	1:5:3671:G:H1'	2.16	0.46
1:5:2851:G:N7	1:5:2852:U:H5	2.09	0.46
1:5:3610:A:H2'	1:5:3611:A:H8	1.81	0.46
1:5:3644:U:O2	1:5:4554:G:O2'	2.29	0.46
1:5:3740:G:H2'	1:5:3740:G:N3	2.31	0.46
1:5:3749:C:C5	1:5:3750:G:C8	3.04	0.46
1:5:3755:G:H3'	1:5:3756:A:H5''	1.97	0.46
1:5:3801:U:O2'	1:5:3802:U:H5'	2.16	0.46
1:5:3899:G:C5'	5:B:257:TRP:CD1	2.96	0.46
1:5:4088:C:N3	10:G:53:ARG:NH2	2.63	0.46
1:5:4103:C:C4	1:5:4105:A:N6	2.84	0.46
1:5:4111:U:C4	1:5:4112:C:C5	3.04	0.46
1:5:4134:C:C2	1:5:4135:G:C8	3.04	0.46
1:5:4166:G:N2	1:5:4167:G:N9	2.63	0.46
1:5:4333:C:H2'	1:5:4334:U:O5'	2.16	0.46
1:5:4343:U:O2	1:5:4344:U:C6	2.69	0.46
1:5:4518:A:H2'	5:B:257:TRP:CZ3	2.51	0.46
1:5:4518:A:C3'	1:5:4519:C:C5'	2.93	0.46
1:5:4524:G:N3	5:B:252:ALA:HB1	2.31	0.46
1:5:4547:C:H2'	1:5:4549:G:H8	1.81	0.46
1:5:4559:A:O3'	1:5:4560:C:O2	2.34	0.46
1:5:4687:A:H62	1:5:4698:C:H1'	1.80	0.46
1:5:4697:U:C4'	42:m:104:HIS:CD2	2.87	0.46
1:5:4731:G:C8	1:5:4732:G:C5	3.04	0.46
1:5:4882:U:O2'	1:5:4883:C:H2'	2.16	0.46
1:5:4939:C:O3'	1:5:4941:G:P	2.74	0.46
1:5:4958:C:O2	1:5:4958:C:C2'	2.63	0.46
1:5:5006:U:C6	26:W:50:ASN:ND2	2.84	0.46
2:7:9:C:C4	2:7:10:C:C6	3.04	0.46
2:7:23:A:O2'	2:7:24:C:P	2.74	0.46
3:8:46:G:C6	3:8:47:C:N4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:131:G:N1	3:8:132:G:C5	2.84	0.46
4:A:29:LEU:HD23	4:A:76:PHE:HE1	1.80	0.46
4:A:53:GLY:HA2	4:A:192:LYS:HD3	1.98	0.46
5:B:29:VAL:HB	5:B:32:PHE:CE1	2.51	0.46
14:K:56:LEU:C	14:K:57:ARG:HG3	2.41	0.46
14:K:114:ARG:CD	14:K:130:LYS:HE3	2.39	0.46
15:L:21:ARG:HB3	17:N:197:THR:HG22	1.97	0.46
16:M:3:PHE:C	16:M:6:PHE:HZ	2.24	0.46
17:N:11:TRP:CZ3	17:N:19:MET:HE2	2.50	0.46
17:N:150:TRP:HE3	17:N:150:TRP:C	2.23	0.46
22:S:106:VAL:O	22:S:107:THR:C	2.59	0.46
34:e:126:ASN:C	34:e:126:ASN:ND2	2.72	0.46
44:o:39:ARG:O	44:o:43:ARG:HG2	2.16	0.46
46:q:40:MET:HE3	46:q:44:ARG:CZ	2.46	0.46
46:q:95:LEU:O	46:q:98:ILE:HD11	2.15	0.46
46:q:157:ASP:C	46:q:158:VAL:CG2	2.85	0.46
48:4:659:PRO:HG2	48:4:698:ARG:HG3	1.98	0.46
48:4:669:VAL:O	48:4:672:LEU:N	2.46	0.46
48:4:815:ASP:CG	48:4:816:HIS:N	2.74	0.46
49:S2:80:G:C2	49:S2:81:U:C2	3.04	0.46
49:S2:99:A:OP2	49:S2:409:C:OP2	2.34	0.46
49:S2:173:A:C5	49:S2:174:C:C5	3.04	0.46
49:S2:176:U:H3'	49:S2:177:G:C8	2.51	0.46
49:S2:287:U:O4	49:S2:297:A:N3	2.48	0.46
49:S2:316:G:N3	49:S2:317:C:C5	2.84	0.46
49:S2:378:U:O2	49:S2:378:U:H2'	2.16	0.46
49:S2:522:A:OP2	59:SJ:45:ARG:NH1	2.47	0.46
49:S2:571:U:C2	49:S2:572:U:C6	3.04	0.46
49:S2:621:C:H2'	49:S2:622:C:O4'	2.15	0.46
49:S2:694:G:N1	49:S2:695:C:C5	2.83	0.46
49:S2:806:U:C2	49:S2:807:G:H8	2.25	0.46
49:S2:913:A:H2'	49:S2:913:A:N3	2.30	0.46
49:S2:957:A:C2	49:S2:958:G:N7	2.84	0.46
49:S2:962:A:C6	49:S2:963:A:C5	3.04	0.46
49:S2:965:U:H2'	49:S2:966:U:O4'	2.16	0.46
49:S2:1041:G:N2	49:S2:1075:C:C2	2.84	0.46
49:S2:1100:A:C4	49:S2:1101:U:C6	3.03	0.46
49:S2:1151:G:N3	49:S2:1152:U:C6	2.82	0.46
49:S2:1199:A:C6	49:S2:1200:A:C5	3.04	0.46
49:S2:1204:A:C2	49:S2:1205:C:C5	3.04	0.46
49:S2:1232:U:O4	68:SS:138:THR:HG21	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1309:C:C2	81:Sf:143:LYS:NZ	2.84	0.46
49:S2:1593:C:C2	49:S2:1594:A:C8	3.04	0.46
49:S2:1732:G:C6	49:S2:1733:U:C4	3.04	0.46
51:SB:27:LYS:O	51:SB:28:ARG:HD2	2.16	0.46
51:SB:202:GLN:N	51:SB:203:PRO:HD2	2.31	0.46
52:SC:209:VAL:HG21	52:SC:233:LEU:HD13	1.97	0.46
53:SD:103:GLU:OE1	53:SD:106:ARG:NH1	2.49	0.46
55:SF:33:ILE:CG2	78:Sc:11:LEU:HD13	2.46	0.46
59:SJ:58:ARG:HA	59:SJ:61:LEU:HD23	1.97	0.46
69:ST:18:LEU:HB2	69:ST:134:ILE:HD11	1.97	0.46
70:SU:66:ARG:NH1	70:SU:75:LYS:HG2	2.30	0.46
72:SW:90:GLN:HB2	72:SW:94:LEU:CD1	2.46	0.46
73:SX:51:VAL:HG13	73:SX:70:VAL:HG13	1.98	0.46
79:Sd:40:ARG:HE	79:Sd:41:GLN:HE22	1.63	0.46
82:Sg:31:ILE:CG2	82:Sg:43:TRP:HB2	2.45	0.46
1:5:150:U:OP2	10:G:140:VAL:HG23	2.16	0.45
1:5:708:G:OP1	35:f:46:ARG:NH2	2.49	0.45
1:5:936:C:H5	16:M:46:ARG:HA	1.81	0.45
1:5:964:A:H1'	47:r:98:ARG:CZ	2.46	0.45
1:5:1067:G:N2	1:5:1068:G:H1'	2.30	0.45
1:5:1072:C:H4'	1:5:1073:G:OP1	2.16	0.45
1:5:1171:G:N2	1:5:1191:C:C2	2.84	0.45
1:5:1173:G:C2	1:5:1174:G:H1'	2.51	0.45
1:5:1394:G:C2'	1:5:1395:U:O5'	2.64	0.45
1:5:1634:A:C6	1:5:1635:C:N4	2.84	0.45
1:5:1811:G:H2'	1:5:1812:C:H6	1.81	0.45
1:5:1858:A:C2	1:5:1859:C:C6	3.05	0.45
1:5:1930:U:O5'	1:5:1930:U:H6	1.99	0.45
1:5:2085:G:N2	1:5:2273:G:C5	2.84	0.45
1:5:2311:C:O2	1:5:2311:C:H2'	2.16	0.45
1:5:2482:C:H2'	1:5:2482:C:O2	2.16	0.45
1:5:2507:A:C6	1:5:2508:U:N1	2.83	0.45
1:5:2552:G:N2	1:5:2764:A:N7	2.64	0.45
1:5:2566:G:N2	1:5:2567:G:C4	2.84	0.45
1:5:2712:G:C5	1:5:2713:C:C5	3.04	0.45
1:5:3597:G:C6	1:5:3598:C:C4	3.03	0.45
1:5:3629:A:C1'	49:S2:1721:U:C4	2.77	0.45
1:5:3696:C:C2	1:5:3697:U:C6	3.04	0.45
1:5:3898:G:O3'	5:B:257:TRP:HB2	2.16	0.45
1:5:3919:C:H5'	4:A:207:VAL:HG12	1.95	0.45
1:5:3928:A:H5'	17:N:89:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4079:C:C4	1:5:4080:C:C5	3.04	0.45
1:5:4087:G:H1	10:G:46:GLN:HG2	1.80	0.45
1:5:4216:G:N3	1:5:4217:G:C8	2.84	0.45
1:5:4287:G:C4	1:5:4288:C:C5	3.04	0.45
1:5:4323:A:H4'	7:D:176:SER:HB3	1.98	0.45
1:5:4405:G:C4	1:5:4406:U:C6	3.03	0.45
1:5:4480:A:N3	1:5:4480:A:H2'	2.30	0.45
1:5:4758:U:C2'	1:5:4759:C:O5'	2.63	0.45
1:5:5022:U:O2	1:5:5022:U:H2'	2.16	0.45
2:7:11:A:O2'	2:7:13:A:OP2	2.33	0.45
2:7:16:A:C5	2:7:17:C:C5	3.04	0.45
2:7:45:U:H2'	2:7:46:C:O4'	2.16	0.45
3:8:45:C:C2'	3:8:46:G:O5'	2.64	0.45
5:B:80:GLU:HG3	5:B:326:VAL:HG22	1.98	0.45
7:D:123:VAL:CG1	7:D:248:ARG:HH22	2.29	0.45
7:D:280:VAL:O	7:D:280:VAL:HG23	2.16	0.45
8:E:90:LYS:N	8:E:91:PRO:CD	2.80	0.45
8:E:111:TYR:CZ	47:r:119:ARG:HD3	2.51	0.45
8:E:151:GLY:O	8:E:154:ARG:NH2	2.49	0.45
9:F:73:MET:CB	9:F:84:TYR:CE2	2.96	0.45
9:F:228:HIS:NE2	9:F:236:GLY:HA3	2.30	0.45
14:K:22:VAL:CG2	14:K:48:LYS:HE2	2.20	0.45
14:K:61:LYS:HG2	14:K:73:VAL:O	2.16	0.45
14:K:116:MET:CG	14:K:117:ARG:NH2	2.79	0.45
14:K:163:PRO:CD	14:K:163:PRO:O	2.64	0.45
17:N:88:GLY:HA2	44:o:48:TYR:HD2	1.80	0.45
18:O:47:PHE:CD2	18:O:47:PHE:C	2.94	0.45
20:Q:24:TYR:CE1	47:r:5:LEU:CD1	2.99	0.45
20:Q:58:ARG:HH11	20:Q:58:ARG:CB	2.29	0.45
25:V:96:LEU:HD12	26:W:20:ARG:O	2.15	0.45
28:Y:106:ILE:HG21	28:Y:109:LEU:HD23	1.98	0.45
32:c:22:MET:HA	32:c:22:MET:HE2	1.98	0.45
34:e:90:MET:HE1	47:r:113:ARG:HA	1.99	0.45
35:f:81:SER:OG	35:f:81:SER:O	2.32	0.45
37:h:91:MET:HG3	37:h:94:ARG:NE	2.30	0.45
37:h:99:GLU:HA	37:h:102:LEU:HD12	1.98	0.45
38:i:45:ARG:NH1	38:i:49:GLY:O	2.49	0.45
39:j:66:HIS:CD2	39:j:66:HIS:C	2.93	0.45
46:q:96:THR:HG22	46:q:97:GLU:HG2	1.98	0.45
46:q:179:ASN:O	46:q:180:ILE:C	2.58	0.45
48:4:434:TYR:C	48:4:434:TYR:CD1	2.95	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:434:TYR:HB3	48:4:493:ASN:ND2	2.30	0.45
48:4:748:GLU:CD	48:4:811:GLN:HE21	2.24	0.45
48:4:752:PRO:CB	48:4:780:PRO:HB3	2.46	0.45
48:4:823:ASP:OD2	48:4:826:ASP:N	2.46	0.45
49:S2:74:G:O6	56:SG:171:THR:N	2.49	0.45
49:S2:219:U:C2	49:S2:220:U:C5	3.04	0.45
49:S2:499:G:N1	49:S2:504:G:O6	2.48	0.45
49:S2:521:A:H2'	49:S2:522:A:O4'	2.16	0.45
49:S2:752:G:C5	49:S2:790:C:N4	2.84	0.45
49:S2:975:G:C5'	64:SO:32:HIS:HD2	2.29	0.45
49:S2:1043:G:C2	49:S2:1044:G:C4	3.05	0.45
49:S2:1050:A:N6	49:S2:1051:G:C4	2.84	0.45
49:S2:1089:G:C2	49:S2:1090:C:C2	3.05	0.45
49:S2:1122:A:C2	49:S2:1123:C:N1	2.83	0.45
49:S2:1204:A:C6	49:S2:1205:C:C4	3.04	0.45
49:S2:1277:C:H2'	49:S2:1278:A:C8	2.51	0.45
49:S2:1280:G:N2	49:S2:1281:G:H1'	2.31	0.45
49:S2:1401:A:H2'	49:S2:1402:A:H8	1.77	0.45
49:S2:1453:C:N3	49:S2:1455:A:C8	2.84	0.45
49:S2:1455:A:C2	49:S2:1456:G:N9	2.83	0.45
49:S2:1462:U:O2	49:S2:1464:C:N4	2.49	0.45
49:S2:1542:C:H42	49:S2:1591:C:H42	1.62	0.45
49:S2:1617:G:H1'	49:S2:1661:A:H2	1.81	0.45
52:SC:127:PHE:CD1	52:SC:141:VAL:HG22	2.52	0.45
53:SD:103:GLU:OE1	53:SD:103:GLU:HA	2.15	0.45
54:SE:191:ARG:CD	54:SE:218:PHE:CE1	2.91	0.45
60:SK:95:ARG:NE	60:SK:95:ARG:CA	2.79	0.45
62:SM:50:CYS:HB3	62:SM:75:ASN:HD21	1.79	0.45
82:Sg:3:GLU:HB3	82:Sg:314:ILE:HG22	1.99	0.45
1:5:84:A:H5'	1:5:86:U:H1'	1.98	0.45
1:5:116:G:C6	1:5:117:C:C4	3.05	0.45
1:5:142:G:N1	1:5:144:G:C8	2.84	0.45
1:5:182:G:H2'	1:5:182:G:N3	2.32	0.45
1:5:197:A:C8	1:5:197:A:C5'	2.96	0.45
1:5:294:G:C2'	1:5:294:G:N3	2.79	0.45
1:5:348:G:C4	1:5:350:C:C5	3.04	0.45
1:5:467:U:C4	1:5:468:U:C5	3.05	0.45
1:5:721:G:C2	1:5:948:C:C2	3.04	0.45
1:5:735:G:H2'	1:5:736:C:C6	2.51	0.45
1:5:952:G:C6	1:5:953:C:C4	3.04	0.45
1:5:1077:C:C4	1:5:1078:A:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1169:G:N1	1:5:1170:G:C5	2.84	0.45
1:5:1246:G:C6	1:5:1247:U:C5	3.04	0.45
1:5:1271:G:O6	1:5:2109:G:O6	2.33	0.45
1:5:1388:A:N1	1:5:1396:G:N3	2.64	0.45
1:5:1534:A:H2'	1:5:1637:A:C2	2.51	0.45
1:5:1666:C:H2'	1:5:1667:G:O5'	2.16	0.45
1:5:1682:A:H3'	1:5:1683:U:C6	2.50	0.45
1:5:1964:A:O2'	1:5:1965:G:H5'	2.15	0.45
1:5:1993:C:N4	1:5:2002:A:N7	2.63	0.45
1:5:2001:G:N2	1:5:2004:U:C6	2.85	0.45
1:5:2071:A:N3	1:5:2072:C:C5	2.84	0.45
1:5:2115:G:C8	1:5:2116:C:C1'	2.99	0.45
1:5:2246:C:O2'	1:5:2247:C:H5'	2.17	0.45
1:5:2326:G:C4	1:5:2327:G:C8	3.04	0.45
1:5:2329:U:O2'	1:5:2330:G:C4'	2.64	0.45
1:5:2451:A:N7	1:5:2452:G:N7	2.65	0.45
1:5:2786:C:C4'	1:5:2787:A:C8	2.99	0.45
1:5:2823:G:N1	1:5:2824:C:C5	2.85	0.45
1:5:3773:U:H2'	1:5:3774:A:H8	1.82	0.45
1:5:3811:G:O2'	1:5:3814:U:OP2	2.27	0.45
1:5:3856:A:N6	1:5:3857:G:C6	2.84	0.45
1:5:3911:C:N3	1:5:3912:U:C4	2.84	0.45
1:5:4072:C:N3	1:5:4073:A:N7	2.64	0.45
1:5:4091:G:C6	1:5:4092:G:C8	3.04	0.45
1:5:4322:G:N2	1:5:4326:G:C5	2.84	0.45
1:5:4588:U:O2'	1:5:4589:A:H2'	2.14	0.45
1:5:4661:G:C6	1:5:4662:C:C4	3.03	0.45
1:5:4661:G:H2'	1:5:4662:C:O4'	2.16	0.45
1:5:4970:C:C2	1:5:4971:A:C8	3.04	0.45
1:5:4977:A:C5	1:5:4978:G:C2	3.04	0.45
1:5:4988:U:C4'	1:5:4989:U:O2	2.50	0.45
1:5:5041:G:OP2	26:W:61:LYS:HE3	2.17	0.45
1:5:5047:C:H1'	1:5:5048:A:C2	2.52	0.45
4:A:37:ARG:CZ	4:A:37:ARG:CB	2.93	0.45
4:A:218:HIS:C	4:A:218:HIS:ND1	2.74	0.45
5:B:110:ILE:HG21	5:B:115:LYS:HD3	1.96	0.45
6:C:200:ARG:CZ	28:Y:11:ARG:HD2	2.46	0.45
8:E:43:ASN:HB3	8:E:58:MET:CE	2.47	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
14:K:14:TYR:CE2	14:K:63:THR:CB	2.93	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:K:111:ASN:C	14:K:114:ARG:HG2	2.40	0.45
15:L:178:ALA:HB1	30:a:146:LEU:HD21	1.99	0.45
23:T:14:MET:HE3	23:T:58:HIS:CG	2.51	0.45
26:W:8:PHE:CE1	26:W:51:TRP:CH2	3.04	0.45
38:i:63:VAL:O	38:i:63:VAL:HG12	2.15	0.45
46:q:24:TYR:CD1	46:q:24:TYR:N	2.84	0.45
48:4:33:SER:HA	48:4:57:THR:HG21	1.98	0.45
48:4:194:GLU:CD	48:4:195:GLY:N	2.75	0.45
48:4:239:LYS:HZ2	48:4:239:LYS:HG3	1.41	0.45
48:4:702:PHE:CE1	48:4:733:VAL:HG23	2.51	0.45
49:S2:83:A:N6	49:S2:84:A:C4	2.84	0.45
49:S2:122:G:H2'	49:S2:123:G:O4'	2.16	0.45
49:S2:343:A:C5	49:S2:344:U:C5	3.04	0.45
49:S2:381:C:C4	58:SI:49:ARG:HG2	2.52	0.45
49:S2:401:A:C8	49:S2:402:C:C6	3.05	0.45
49:S2:602:G:N2	49:S2:621:C:C2	2.85	0.45
49:S2:962:A:C4	49:S2:963:A:C8	3.04	0.45
49:S2:973:C:H2'	49:S2:973:C:O2	2.15	0.45
49:S2:1031:A:C6	49:S2:1032:C:C5	3.04	0.45
49:S2:1040:G:N1	49:S2:1041:G:C4	2.85	0.45
49:S2:1067:C:N4	49:S2:1068:G:C5	2.83	0.45
49:S2:1204:A:C2	49:S2:1205:C:C4	3.04	0.45
49:S2:1223:A:O2'	49:S2:1651:A:H5'	2.16	0.45
49:S2:1545:A:O2'	49:S2:1546:G:O5'	2.33	0.45
49:S2:1570:G:C6	49:S2:1571:G:N7	2.85	0.45
49:S2:1610:G:C2	49:S2:1611:G:C5	3.04	0.45
49:S2:1647:A:N6	49:S2:1675:A:C2	2.85	0.45
49:S2:1654:G:C6	49:S2:1655:C:C4	3.04	0.45
49:S2:1806:A:C5	49:S2:1807:C:C5	3.04	0.45
51:SB:81:PHE:CB	51:SB:109:LYS:HB2	2.46	0.45
56:SG:221:LYS:HG3	56:SG:224:ARG:NH1	2.31	0.45
58:SI:56:ARG:HA	58:SI:180:GLY:O	2.16	0.45
60:SK:66:HIS:HB3	60:SK:68:TYR:CE1	2.52	0.45
1:5:31:U:H5''	17:N:71:ARG:HH21	1.81	0.45
1:5:72:C:H41	15:L:68:THR:HA	1.80	0.45
1:5:194:C:C4	1:5:195:C:C6	3.05	0.45
1:5:209:U:C2	1:5:233:U:N3	2.84	0.45
1:5:447:C:C4	1:5:448:G:N7	2.84	0.45
1:5:474:C:N3	1:5:475:G:N7	2.65	0.45
1:5:484:U:C5	1:5:486:C:C5	3.01	0.45
1:5:512:U:H3'	1:5:513:U:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:755:C:C4	1:5:756:G:N7	2.85	0.45
1:5:917:A:C4	1:5:918:G:C6	3.04	0.45
1:5:1184:A:C4	1:5:1185:G:C8	3.05	0.45
1:5:1283:G:C8	1:5:1283:G:C3'	3.00	0.45
1:5:1292:C:C3'	1:5:1293:G:H5''	2.46	0.45
1:5:1349:G:N2	1:5:1350:C:C2	2.85	0.45
1:5:1437:C:O2	1:5:2098:G:C8	2.70	0.45
1:5:1448:G:C6	1:5:1449:C:C4	3.04	0.45
1:5:1475:G:N2	1:5:1476:C:C6	2.84	0.45
1:5:1507:C:C4	1:5:1508:A:N7	2.85	0.45
1:5:1558:A:C2	1:5:1559:G:C5	3.04	0.45
1:5:1618:G:N2	1:5:1619:G:N9	2.64	0.45
1:5:1673:U:O4	1:5:1674:C:N4	2.48	0.45
1:5:1694:C:O2	1:5:1694:C:H2'	2.16	0.45
1:5:1698:C:H4'	1:5:1699:A:OP2	2.17	0.45
1:5:1751:A:N6	1:5:1752:G:N7	2.65	0.45
1:5:1925:G:C6	1:5:1926:C:C4	3.04	0.45
1:5:2032:U:O2'	22:S:91:HIS:HE1	1.99	0.45
1:5:2058:G:C5	1:5:2059:C:C5	3.04	0.45
1:5:2253:A:H8	1:5:2254:G:O2'	1.99	0.45
1:5:2263:A:H5'	47:r:39:ARG:HH22	1.81	0.45
1:5:2267:U:O2'	1:5:2268:A:P	2.74	0.45
1:5:2316:G:C2	1:5:2324:C:C2	3.04	0.45
1:5:2557:G:N1	1:5:2558:C:C2	2.84	0.45
1:5:2590:G:C2'	1:5:2755:A:H61	2.30	0.45
1:5:2599:G:H5'	36:g:60:ARG:HH22	1.81	0.45
1:5:2645:G:N2	1:5:2646:C:H1'	2.31	0.45
1:5:2752:G:C8	1:5:2752:G:C5'	2.99	0.45
1:5:2805:C:H1'	36:g:5:LEU:O	2.17	0.45
1:5:2857:A:C2	1:5:2858:A:C4	3.03	0.45
1:5:2908:U:C2	1:5:2909:C:C6	3.04	0.45
1:5:3591:C:C4	1:5:3592:G:N7	2.76	0.45
1:5:3600:G:N2	1:5:3601:C:C2	2.85	0.45
1:5:3776:G:O4'	1:5:3776:G:N3	2.50	0.45
1:5:3806:G:HO2'	49:S2:1719:A:H1'	1.80	0.45
1:5:3819:G:H2'	1:5:3819:G:N3	2.31	0.45
1:5:4175:G:N1	1:5:4176:C:C4	2.84	0.45
1:5:4203:A:N6	1:5:4221:C:C2	2.85	0.45
1:5:4205:A:H3'	1:5:4206:C:H5''	1.97	0.45
1:5:4293:U:N3	1:5:4294:C:C5	2.84	0.45
1:5:4333:C:C2'	1:5:4334:U:O5'	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4483:C:H2'	1:5:4484:A:O5'	2.17	0.45
1:5:4686:G:N2	1:5:4687:A:H1'	2.32	0.45
1:5:4926:C:H2'	1:5:4927:G:H21	1.82	0.45
1:5:5050:C:H1'	5:B:374:PHE:CE2	2.51	0.45
6:C:31:PRO:HB3	20:Q:24:TYR:HE2	1.80	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
9:F:100:ILE:HG21	20:Q:4:ASP:CG	2.41	0.45
9:F:194:HIS:C	9:F:196:ILE:N	2.74	0.45
11:H:172:ILE:HD11	42:m:102:ARG:NH2	2.31	0.45
12:I:47:PRO:HB3	12:I:171:TRP:HE1	1.79	0.45
14:K:92:ARG:CA	14:K:95:GLN:CD	2.84	0.45
15:L:27:ASN:O	15:L:28:GLN:C	2.59	0.45
25:V:88:TYR:CE1	25:V:96:LEU:HB3	2.51	0.45
27:X:74:TYR:CE1	27:X:116:LEU:HD22	2.51	0.45
29:Z:77:TYR:CB	32:c:39:ARG:CD	2.92	0.45
32:c:50:ASN:OD1	32:c:76:GLY:C	2.60	0.45
38:i:39:PHE:C	38:i:39:PHE:CD2	2.93	0.45
46:q:17:ILE:HD12	46:q:54:LEU:HD21	1.97	0.45
46:q:97:GLU:O	46:q:98:ILE:C	2.59	0.45
48:4:585:GLU:OE1	48:4:737:GLN:NE2	2.49	0.45
48:4:592:LEU:CD1	48:4:592:LEU:O	2.57	0.45
49:S2:122:G:N1	49:S2:123:G:C5	2.84	0.45
49:S2:123:G:O2'	54:SE:146:THR:HG23	2.15	0.45
49:S2:141:A:N6	49:S2:177:G:N2	2.64	0.45
49:S2:379:C:H2'	49:S2:380:G:H8	1.82	0.45
49:S2:452:G:N2	49:S2:453:C:N1	2.64	0.45
49:S2:454:U:C2'	49:S2:455:A:O5'	2.64	0.45
49:S2:493:A:C8	49:S2:574:A:H8	2.26	0.45
49:S2:597:G:N3	49:S2:640:A:C2	2.85	0.45
49:S2:602:G:H2'	49:S2:603:C:C5	2.51	0.45
49:S2:804:U:O2	49:S2:804:U:H2'	2.16	0.45
49:S2:989:C:C2	49:S2:1001:A:C6	3.05	0.45
49:S2:1004:U:N3	49:S2:1005:G:N7	2.64	0.45
49:S2:1059:G:O2'	49:S2:1060:A:H5'	2.17	0.45
49:S2:1176:G:C5	49:S2:1177:U:C5	3.05	0.45
49:S2:1237:C:C4	49:S2:1238:U:C4	3.04	0.45
49:S2:1338:G:C6	49:S2:1339:U:C4	3.04	0.45
49:S2:1379:A:H2'	49:S2:1380:C:C6	2.51	0.45
49:S2:1419:C:HO2'	69:ST:132:ASP:CG	2.20	0.45
49:S2:1462:U:C2	49:S2:1464:C:N4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1510:G:N1	49:S2:1511:U:C6	2.84	0.45
49:S2:1525:C:H2'	49:S2:1525:C:O2	2.15	0.45
49:S2:1810:U:H2'	49:S2:1811:C:O4'	2.17	0.45
50:SA:19:LEU:HD23	50:SA:24:HIS:CE1	2.51	0.45
50:SA:157:VAL:O	50:SA:158:ASP:C	2.59	0.45
53:SD:222:PRO:HB2	82:Sg:226:HIS:NE2	2.31	0.45
56:SG:212:LEU:HD12	56:SG:216:ARG:HG2	1.97	0.45
57:SH:162:GLN:HA	57:SH:162:GLN:OE1	2.16	0.45
58:SI:65:PHE:CE2	58:SI:104:ILE:HG21	2.50	0.45
58:SI:66:SER:HB3	58:SI:73:THR:HB	1.98	0.45
62:SM:85:LEU:HB3	62:SM:106:CYS:HB3	1.99	0.45
71:SV:21:ASN:HB3	72:SW:67:GLY:HA3	1.98	0.45
82:Sg:20:GLN:HA	82:Sg:288:SER:CB	2.47	0.45
82:Sg:76:GLN:HB3	82:Sg:77:PHE:CE2	2.51	0.45
1:5:44:A:H2'	1:5:44:A:N3	2.32	0.45
1:5:47:A:H4'	1:5:48:G:OP1	2.16	0.45
1:5:96:U:OP1	15:L:13:HIS:HB3	2.16	0.45
1:5:192:G:N2	1:5:250:C:C2	2.84	0.45
1:5:299:C:N3	1:5:300:A:N7	2.64	0.45
1:5:379:G:C2	1:5:380:U:C5	3.04	0.45
1:5:512:U:H3'	1:5:513:U:C5'	2.46	0.45
1:5:678:C:C2	1:5:679:C:C5	3.04	0.45
1:5:709:C:C4	1:5:710:G:N7	2.85	0.45
1:5:728:U:H2'	1:5:729:G:OP1	2.16	0.45
1:5:1175:A:N3	1:5:1176:C:C6	2.85	0.45
1:5:1426:G:O2'	1:5:1459:A:N6	2.50	0.45
1:5:1443:A:C5	1:5:1444:G:C5	3.05	0.45
1:5:1475:G:H2'	1:5:1476:C:H6	1.81	0.45
1:5:1542:U:C2	1:5:1543:G:H8	2.31	0.45
1:5:1668:A:C8	1:5:1881:C:C4	3.05	0.45
1:5:1752:G:C5	1:5:1753:G:C8	3.05	0.45
1:5:1899:G:C5	1:5:1900:C:C5	3.04	0.45
1:5:1902:G:OP1	35:f:24:HIS:CE1	2.70	0.45
1:5:2292:C:H2'	1:5:2293:U:H6	1.82	0.45
1:5:2339:G:C2	1:5:2340:C:N1	2.85	0.45
1:5:2351:C:N3	1:5:2352:U:C5	2.85	0.45
1:5:2367:A:N7	1:5:2798:A:N3	2.65	0.45
1:5:2453:A:C6	1:5:2454:U:C4	3.01	0.45
1:5:2496:G:C4	1:5:2497:C:C5	3.04	0.45
1:5:2497:C:C4	1:5:2498:C:H5	2.29	0.45
1:5:2529:A:C8	1:5:2532:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2543:A:C2	1:5:2773:G:C6	3.04	0.45
1:5:2575:U:O4	29:Z:51:ARG:NH2	2.50	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
1:5:2904:U:OP2	1:5:2905:C:N4	2.49	0.45
1:5:3603:G:H2'	1:5:3604:A:N3	2.31	0.45
1:5:3632:C:N3	1:5:3633:C:C5	2.84	0.45
1:5:3717:A:N7	1:5:3736:A:N6	2.65	0.45
1:5:3757:G:C6	1:5:3758:U:C4	3.05	0.45
1:5:4099:G:O2'	51:SB:224:GLU:CA	2.64	0.45
1:5:4109:G:C2	1:5:4110:C:C6	3.04	0.45
1:5:4112:C:C2	1:5:4113:U:C6	3.05	0.45
1:5:4257:A:C2'	1:5:4258:C:C6	2.77	0.45
1:5:4292:A:O4'	1:5:4330:G:C1'	2.65	0.45
1:5:4299:U:O2	1:5:4300:U:C6	2.70	0.45
1:5:4408:G:C6	1:5:4409:C:C4	3.04	0.45
1:5:4723:A:H2'	1:5:4724:A:C8	2.51	0.45
1:5:4899:G:C2	1:5:4922:C:O2	2.70	0.45
1:5:4905:C:N3	1:5:4906:C:C5	2.85	0.45
1:5:4999:G:C2	1:5:5000:G:N9	2.85	0.45
1:5:5027:C:O2	1:5:5027:C:H2'	2.15	0.45
1:5:5047:C:O2'	1:5:5050:C:OP2	2.15	0.45
2:7:62:U:O2	2:7:64:G:C8	2.70	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
3:8:55:U:N3	3:8:62:A:C2	2.74	0.45
5:B:136:LYS:C	5:B:138:GLN:H	2.24	0.45
5:B:379:PHE:N	5:B:379:PHE:CD1	2.83	0.45
6:C:322:LEU:O	6:C:325:MET:HB3	2.16	0.45
8:E:46:LEU:HG	8:E:52:ARG:HG2	1.98	0.45
9:F:58:HIS:C	9:F:60:HIS:N	2.72	0.45
10:G:166:LEU:HD21	17:N:45:PRO:HG2	1.98	0.45
10:G:261:LEU:HD22	10:G:264:LYS:NZ	2.29	0.45
11:H:162:GLN:HG3	11:H:180:TYR:HA	1.99	0.45
13:J:60:PHE:CD1	13:J:60:PHE:N	2.84	0.45
18:O:49:ARG:HG2	18:O:49:ARG:NH1	2.32	0.45
22:S:68:PHE:CD1	22:S:68:PHE:N	2.85	0.45
33:d:33:ILE:HD11	33:d:45:ALA:CA	2.47	0.45
33:d:33:ILE:HG22	33:d:33:ILE:O	2.16	0.45
33:d:46:LEU:HD12	33:d:72:VAL:HG11	1.99	0.45
36:g:99:GLU:HA	36:g:99:GLU:OE1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:k:11:PHE:HA	40:k:14:THR:HG22	1.97	0.45
42:m:115:CYS:SG	42:m:116:GLY:N	2.89	0.45
46:q:12:ASN:C	46:q:16:LYS:CE	2.61	0.45
46:q:18:ILE:CD1	46:q:66:ARG:CD	2.92	0.45
46:q:29:ILE:CG2	46:q:86:VAL:HG13	2.44	0.45
46:q:75:LEU:HD23	46:q:78:LEU:CD1	2.41	0.45
48:4:33:SER:HB3	48:4:57:THR:HG21	1.95	0.45
48:4:113:SER:HB2	48:4:499:PHE:CG	2.50	0.45
48:4:402:VAL:O	48:4:403:PRO:C	2.60	0.45
48:4:505:VAL:CG2	48:4:549:ALA:O	2.64	0.45
49:S2:147:A:O2'	49:S2:148:U:O5'	2.33	0.45
49:S2:330:G:C6	49:S2:331:C:C5	3.05	0.45
49:S2:448:A:H4'	49:S2:449:A:H5'	1.99	0.45
49:S2:452:G:C5	49:S2:453:C:C5	3.05	0.45
49:S2:498:C:N3	49:S2:505:G:N2	2.65	0.45
49:S2:569:A:C6	49:S2:570:C:C5	3.04	0.45
49:S2:899:U:N3	49:S2:900:C:C6	2.85	0.45
49:S2:982:G:O2'	49:S2:983:A:H5'	2.17	0.45
49:S2:1005:G:C6	49:S2:1006:C:C4	3.04	0.45
49:S2:1045:U:N3	49:S2:1046:U:C4	2.84	0.45
49:S2:1050:A:C6	49:S2:1051:G:C1'	2.98	0.45
49:S2:1106:C:C2	49:S2:1107:G:C8	3.04	0.45
49:S2:1293:A:H3'	81:Sf:151:ASN:O	2.16	0.45
49:S2:1335:G:C5	49:S2:1336:C:C5	3.05	0.45
49:S2:1387:G:C6	49:S2:1388:A:C4	3.05	0.45
49:S2:1418:C:N3	49:S2:1420:G:C5	2.84	0.45
49:S2:1466:G:C6	49:S2:1467:C:C4	3.04	0.45
49:S2:1508:A:N6	49:S2:1510:G:C4	2.84	0.45
49:S2:1552:G:OP1	49:S2:1553:C:O2	2.34	0.45
49:S2:1612:G:C2	49:S2:1613:G:C8	3.04	0.45
49:S2:1621:U:HO2'	49:S2:1622:U:H6	1.63	0.45
49:S2:1686:G:C2	49:S2:1687:C:C2	3.04	0.45
49:S2:1791:A:O2'	56:SG:67:VAL:HA	2.16	0.45
49:S2:1806:A:C4	49:S2:1807:C:C6	3.05	0.45
50:SA:104:THR:O	50:SA:107:THR:HG23	2.16	0.45
52:SC:74:LYS:CG	52:SC:269:PHE:CD2	2.99	0.45
52:SC:233:LEU:O	52:SC:234:GLY:C	2.60	0.45
54:SE:100:ARG:HG2	54:SE:102:ILE:HG13	1.98	0.45
55:SF:73:THR:HG22	55:SF:93:VAL:HG21	1.98	0.45
55:SF:100:ILE:CG2	55:SF:111:VAL:HG21	2.46	0.45
59:SJ:39:ASN:CG	59:SJ:40:LYS:N	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SJ:124:HIS:O	59:SJ:127:ARG:N	2.49	0.45
62:SM:32:ALA:HB3	62:SM:110:VAL:HB	1.99	0.45
64:SO:40:THR:HG21	64:SO:111:GLY:HA3	1.99	0.45
65:SP:53:GLN:CD	65:SP:53:GLN:N	2.74	0.45
76:Sa:21:ILE:HG21	76:Sa:72:HIS:CE1	2.52	0.45
82:Sg:166:VAL:HB	82:Sg:198:VAL:HG11	1.97	0.45
1:5:14:C:O2	1:5:15:A:C8	2.70	0.45
1:5:320:C:C4	1:5:321:U:C5	3.04	0.45
1:5:446:C:H2'	1:5:446:C:O2	2.16	0.45
1:5:451:C:N4	1:5:1295:C:C2'	2.68	0.45
1:5:656:C:O2	1:5:657:C:C6	2.69	0.45
1:5:691:C:O2	1:5:692:A:C8	2.69	0.45
1:5:695:G:H3'	1:5:696:C:C5'	2.45	0.45
1:5:743:G:H1	1:5:921:C:H42	1.63	0.45
1:5:937:U:O2	1:5:937:U:H2'	2.16	0.45
1:5:1096:C:C2	1:5:1097:C:C6	3.05	0.45
1:5:1176:C:N3	1:5:1177:U:C5	2.85	0.45
1:5:1362:G:C2	1:5:1363:C:N1	2.85	0.45
1:5:1394:G:C2	1:5:1395:U:C2	3.05	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
1:5:1617:G:C2	1:5:2513:A:C2	3.04	0.45
1:5:1683:U:C2	1:5:1684:A:H8	2.13	0.45
1:5:1691:G:C4	1:5:1692:C:C6	3.05	0.45
1:5:1694:C:C2	1:5:1695:U:C5	3.05	0.45
1:5:1744:U:N3	1:5:1745:G:N7	2.65	0.45
1:5:1781:U:O2	1:5:1782:U:C6	2.69	0.45
1:5:1983:A:H2	1:5:2010:A:C3'	2.28	0.45
1:5:2008:U:H5	1:5:2010:A:H3'	1.81	0.45
1:5:2391:G:C2	1:5:2392:C:C2	3.05	0.45
1:5:2576:G:N1	1:5:2577:C:C5	2.84	0.45
1:5:2598:A:O2'	1:5:2599:G:C5'	2.64	0.45
1:5:2867:C:C2	1:5:2884:G:C2	3.04	0.45
1:5:3635:A:N1	1:5:3636:C:H1'	2.31	0.45
1:5:3671:G:HO2'	1:5:3672:G:C5'	2.30	0.45
1:5:3738:G:C8	1:5:3738:G:H3'	2.52	0.45
1:5:3759:A:C2	49:S2:1708:C:H2'	2.50	0.45
1:5:4167:G:C2	1:5:4168:G:N7	2.83	0.45
1:5:4233:A:N7	1:5:4235:G:C8	2.84	0.45
1:5:4291:G:N3	1:5:4291:G:H5''	2.32	0.45
1:5:4315:A:C3'	1:5:4316:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4363:A:C6	1:5:4364:G:N7	2.84	0.45
1:5:4470:G:C2	1:5:4486:C:N3	2.85	0.45
1:5:4489:G:C2	1:5:4490:C:C2	3.04	0.45
1:5:4905:C:C2	1:5:4906:C:C6	3.04	0.45
1:5:5006:U:C1'	1:5:5042:A:N7	2.80	0.45
2:7:42:A:C2	2:7:43:U:N1	2.83	0.45
3:8:38:U:C2	37:h:92:ARG:NH1	2.83	0.45
5:B:234:ARG:HD2	5:B:271:GLN:O	2.17	0.45
7:D:189:GLU:OE2	7:D:189:GLU:N	2.50	0.45
7:D:196:ARG:NH1	7:D:196:ARG:HA	2.31	0.45
7:D:278:ASP:O	7:D:280:VAL:C	2.60	0.45
8:E:175:LEU:HB2	8:E:246:GLN:NE2	2.27	0.45
10:G:78:PRO:HD3	10:G:237:TRP:CE3	2.52	0.45
17:N:30:TYR:CZ	17:N:63:ARG:CD	2.99	0.45
19:P:114:ILE:HD11	19:P:117:ILE:HD12	1.98	0.45
34:e:98:GLU:CD	34:e:123:THR:OG1	2.57	0.45
40:k:22:SER:O	40:k:24:LYS:N	2.49	0.45
46:q:135:THR:O	46:q:138:PHE:CD1	2.69	0.45
48:4:19:ILE:HG22	48:4:20:ARG:N	2.31	0.45
48:4:27:HIS:HB3	48:4:30:HIS:CD2	2.52	0.45
48:4:112:SER:C	48:4:115:VAL:H	2.20	0.45
48:4:114:GLU:OE1	48:4:114:GLU:CA	2.61	0.45
48:4:236:PHE:HZ	48:4:273:PHE:CE1	2.33	0.45
48:4:517:LEU:HD23	48:4:517:LEU:O	2.16	0.45
48:4:745:TYR:CG	48:4:814:PHE:HA	2.46	0.45
49:S2:46:A:C2	49:S2:99:A:C4	3.04	0.45
49:S2:64:A:N1	49:S2:82:G:C2	2.84	0.45
49:S2:92:A:H5''	49:S2:92:A:N3	2.31	0.45
49:S2:165:G:H8	49:S2:166:A:C8	2.23	0.45
49:S2:173:A:C6	49:S2:174:C:C6	3.03	0.45
49:S2:192:C:H4'	49:S2:192:C:OP1	2.16	0.45
49:S2:478:G:C6	49:S2:479:C:C4	3.05	0.45
49:S2:533:A:C2	49:S2:534:G:H1'	2.51	0.45
49:S2:556:U:H1'	49:S2:557:U:C5	2.51	0.45
49:S2:569:A:C5	49:S2:570:C:C5	3.04	0.45
49:S2:816:A:C2	49:S2:817:G:C1'	2.99	0.45
49:S2:1279:C:H2'	49:S2:1280:G:O4'	2.16	0.45
49:S2:1326:U:O4'	49:S2:1494:U:C6	2.70	0.45
49:S2:1421:A:C6	49:S2:1422:G:C4	3.05	0.45
49:S2:1427:C:O2	49:S2:1428:G:N7	2.49	0.45
49:S2:1446:A:O2'	49:S2:1447:G:H8	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1553:C:H5'	49:S2:1556:A:H61	1.82	0.45
49:S2:1562:C:O2	49:S2:1562:C:H2'	2.16	0.45
49:S2:1605:G:N2	49:S2:1635:C:N4	2.64	0.45
49:S2:1662:U:H5''	49:S2:1663:A:OP2	2.16	0.45
49:S2:1677:U:C2	49:S2:1678:A:C2	3.05	0.45
49:S2:1832:A:C6	49:S2:1833:C:N4	2.85	0.45
50:SA:52:LYS:HD3	67:SR:109:LEU:HD12	1.98	0.45
50:SA:55:TRP:C	50:SA:55:TRP:HD1	2.21	0.45
52:SC:204:ILE:HD13	52:SC:215:MET:HE3	1.99	0.45
56:SG:147:LEU:HD21	56:SG:156:TYR:CB	2.47	0.45
60:SK:15:LEU:HD22	60:SK:49:MET:HE1	1.98	0.45
60:SK:57:TYR:O	60:SK:58:VAL:HB	2.16	0.45
65:SP:53:GLN:N	65:SP:53:GLN:OE1	2.49	0.45
74:SY:74:MET:HG3	74:SY:76:TYR:OH	2.16	0.45
82:Sg:7:LEU:HD21	82:Sg:272:GLN:HB3	1.98	0.45
82:Sg:219:TRP:HA	82:Sg:226:HIS:HA	1.99	0.45
1:5:74:G:H5''	15:L:59:VAL:HG13	1.98	0.45
1:5:85:G:H1'	1:5:86:U:H5	1.81	0.45
1:5:218:A:H62	6:C:185:ALA:HB2	1.76	0.45
1:5:235:A:O2'	1:5:237:G:OP2	2.35	0.45
1:5:273:U:O2'	1:5:274:C:O5'	2.27	0.45
1:5:292:G:C2	1:5:293:G:C2	3.05	0.45
1:5:294:G:N3	1:5:294:G:H2'	2.32	0.45
1:5:296:A:C8	1:5:296:A:O5'	2.69	0.45
1:5:476:G:C2	1:5:679:C:C2	3.05	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
1:5:1084:C:C2	1:5:1085:C:C6	3.05	0.45
1:5:1092:G:N1	1:5:1093:C:C4	2.84	0.45
1:5:1212:G:C2	1:5:1213:G:C5	3.05	0.45
1:5:1241:C:C2'	1:5:1242:G:OP1	2.65	0.45
1:5:1280:C:C6	1:5:1280:C:H5'	2.45	0.45
1:5:1310:C:C2	1:5:1311:G:H8	2.32	0.45
1:5:1427:A:OP2	1:5:1428:U:C4	2.70	0.45
1:5:1446:C:H2'	1:5:1447:C:H5'	1.98	0.45
1:5:1662:C:C2	1:5:1663:C:C6	3.04	0.45
1:5:1663:C:O2'	1:5:2319:C:N4	2.48	0.45
1:5:1972:G:N3	1:5:1973:G:C8	2.85	0.45
1:5:1985:G:H2'	1:5:1986:U:C6	2.52	0.45
1:5:2076:G:C2	1:5:2077:C:N1	2.84	0.45
1:5:2126:G:C8	1:5:2127:C:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2441:C:O2	1:5:2442:G:N7	2.50	0.45
1:5:2603:C:N3	1:5:2604:C:C6	2.85	0.45
1:5:2603:C:C4	1:5:2604:C:C5	3.05	0.45
1:5:2622:G:C2	1:5:2623:A:H1'	2.52	0.45
1:5:2658:G:N2	1:5:2675:G:N3	2.65	0.45
1:5:2744:A:C6	1:5:2745:A:N6	2.85	0.45
1:5:2759:G:H2'	1:5:2760:G:H1'	1.97	0.45
1:5:3597:G:P	1:5:3597:G:O4'	2.75	0.45
1:5:3673:C:O2'	1:5:3674:G:OP1	2.32	0.45
1:5:3721:U:N3	1:5:3722:G:C8	2.80	0.45
1:5:3722:G:C2	1:5:3723:A:N9	2.85	0.45
1:5:4069:U:H2'	1:5:4069:U:O2	2.16	0.45
1:5:4092:G:N1	1:5:4093:G:C2	2.84	0.45
1:5:4108:G:N1	1:5:4109:G:C5	2.85	0.45
1:5:4175:G:N2	1:5:4176:C:C2	2.85	0.45
1:5:4275:G:N1	1:5:4276:G:C4	2.85	0.45
1:5:4276:G:H4'	23:T:12:ARG:O	2.17	0.45
1:5:4539:U:O2	1:5:4540:C:C6	2.69	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
1:5:4910:G:N2	18:O:109:PRO:HA	2.31	0.45
1:5:4978:G:C2'	1:5:4979:A:O5'	2.65	0.45
1:5:5028:G:C2	1:5:5029:C:C4	3.04	0.45
2:7:21:G:H5''	2:7:21:G:C8	2.51	0.45
3:8:38:U:H5	37:h:84:ARG:HB2	1.82	0.45
3:8:59:A:O5'	3:8:60:G:H2'	2.17	0.45
3:8:121:G:C2'	3:8:122:G:O5'	2.63	0.45
3:8:132:G:C2	3:8:133:G:C5	3.04	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
6:C:41:HIS:HB3	6:C:244:GLY:HA2	1.97	0.45
7:D:62:CYS:HB3	7:D:105:LEU:HD22	1.98	0.45
14:K:86:LYS:HA	14:K:104:ILE:HD13	1.98	0.45
18:O:168:TYR:OH	18:O:172:LYS:HD3	2.17	0.45
22:S:28:TYR:HD2	23:T:151:LEU:HD11	1.81	0.45
35:f:18:LEU:HG	35:f:19:ARG:NH2	2.26	0.45
40:k:23:VAL:HG13	40:k:66:VAL:HA	1.98	0.45
46:q:18:ILE:HD11	46:q:66:ARG:CD	2.46	0.45
46:q:28:PHE:CD1	46:q:189:ILE:CD1	2.99	0.45
46:q:135:THR:C	46:q:138:PHE:HD1	2.24	0.45
46:q:141:LEU:C	48:4:180:ARG:NH2	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:503:PRO:C	48:4:505:VAL:H	2.02	0.45
48:4:739:ARG:HH11	48:4:823:ASP:CB	2.13	0.45
48:4:767:ARG:HH22	48:4:789:PRO:HG2	1.82	0.45
48:4:770:VAL:HA	48:4:785:LYS:O	2.17	0.45
49:S2:25:A:C6	49:S2:26:U:C5	3.05	0.45
49:S2:65:C:C4	56:SG:133:LEU:HB3	2.52	0.45
49:S2:65:C:C5	56:SG:133:LEU:HD22	2.52	0.45
49:S2:148:U:C4	49:S2:170:A:N7	2.85	0.45
49:S2:186:C:N3	49:S2:187:G:N7	2.64	0.45
49:S2:187:G:C5	49:S2:188:C:C4	3.05	0.45
49:S2:302:A:C6	49:S2:303:C:C4	3.04	0.45
49:S2:306:C:C5	49:S2:308:G:N7	2.85	0.45
49:S2:365:C:H4'	49:S2:402:C:O2'	2.16	0.45
49:S2:547:G:H2'	49:S2:548:C:H5''	1.97	0.45
49:S2:600:G:C4	49:S2:631:U:O4	2.70	0.45
49:S2:641:A:O2'	49:S2:645:C:OP1	2.34	0.45
49:S2:672:A:C2	49:S2:1162:C:H1'	2.52	0.45
49:S2:837:A:H2	49:S2:838:G:C5	2.33	0.45
49:S2:839:C:C6	49:S2:841:G:C4	3.05	0.45
49:S2:947:G:C5	49:S2:948:C:C5	3.04	0.45
49:S2:1102:G:C6	49:S2:1103:C:C4	3.05	0.45
49:S2:1293:A:C1'	81:Sf:150:PHE:HD2	2.28	0.45
49:S2:1332:A:C6	49:S2:1333:U:C6	3.05	0.45
49:S2:1407:U:C2'	49:S2:1408:U:H6	2.24	0.45
49:S2:1411:G:C4	49:S2:1412:C:H1'	2.51	0.45
49:S2:1428:G:OP1	66:SQ:69:ARG:NH2	2.50	0.45
49:S2:1466:G:C2	49:S2:1467:C:C4	3.04	0.45
49:S2:1502:C:O2	49:S2:1502:C:H2'	2.16	0.45
49:S2:1531:A:H2'	49:S2:1532:C:C1'	2.46	0.45
49:S2:1537:A:C4	49:S2:1538:C:C6	3.04	0.45
49:S2:1646:C:OP1	66:SQ:138:ARG:NH1	2.50	0.45
49:S2:1777:G:C4	49:S2:1778:C:C5	3.05	0.45
49:S2:1820:G:H2'	49:S2:1821:U:O4'	2.16	0.45
50:SA:158:ASP:OD2	71:SV:34:MET:HE2	2.16	0.45
53:SD:22:ASN:C	53:SD:22:ASN:ND2	2.74	0.45
54:SE:51:ARG:HE	54:SE:51:ARG:CA	2.29	0.45
55:SF:118:ASN:ND2	55:SF:181:ALA:O	2.49	0.45
55:SF:199:VAL:O	55:SF:203:ASN:ND2	2.49	0.45
56:SG:211:LYS:O	56:SG:215:LYS:N	2.37	0.45
57:SH:61:ILE:HD11	57:SH:95:ILE:HD12	1.98	0.45
58:SI:80:ASP:OD1	58:SI:81:VAL:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SL:117:PHE:HZ	61:SL:144:LYS:HA	1.80	0.45
64:SO:126:ILE:CG2	64:SO:129:ILE:HD11	2.47	0.45
64:SO:142:ARG:NH1	76:Sa:27:ALA:HB2	2.32	0.45
73:SX:115:ILE:HG22	73:SX:118:VAL:CG2	2.47	0.45
74:SY:19:GLN:N	74:SY:19:GLN:OE1	2.50	0.45
75:SZ:84:ALA:O	75:SZ:88:LEU:HG	2.17	0.45
82:Sg:188:HIS:ND1	82:Sg:219:TRP:CE3	2.85	0.45
1:5:145:G:C2	1:5:146:G:C4	3.04	0.45
1:5:154:G:C4	1:5:155:C:C5	3.04	0.45
1:5:235:A:N6	1:5:238:C:C2	2.85	0.45
1:5:277:G:O2'	38:i:30:ARG:NH2	2.50	0.45
1:5:462:G:N2	1:5:694:C:C2	2.85	0.45
1:5:719:C:N3	1:5:720:G:C8	2.85	0.45
1:5:1076:C:N4	1:5:1077:C:C4	2.84	0.45
1:5:1247:U:H2'	1:5:1248:C:O4'	2.17	0.45
1:5:1293:G:H2'	1:5:1294:A:C4	2.51	0.45
1:5:1564:A:H2'	1:5:1565:A:C8	2.51	0.45
1:5:1656:U:N3	1:5:1657:G:N7	2.65	0.45
1:5:1878:G:C2	1:5:1879:C:C2	3.05	0.45
1:5:2058:G:H21	1:5:2059:C:HI1'	1.82	0.45
1:5:2360:A:N6	1:5:3860:A:C8	2.84	0.45
1:5:2367:A:C4	1:5:2798:A:C2	3.05	0.45
1:5:2422:C:O2	1:5:2422:C:C2'	2.63	0.45
1:5:2484:A:C5	1:5:2485:U:C5	3.04	0.45
1:5:2644:G:C2	1:5:2645:G:C8	3.05	0.45
1:5:2725:A:H2'	1:5:2726:G:H5''	1.98	0.45
1:5:2823:G:N2	1:5:2824:C:C2	2.85	0.45
1:5:3657:U:C2	1:5:3658:C:C5	3.04	0.45
1:5:3869:C:C2	1:5:3870:C:C5	3.05	0.45
1:5:3923:A:H2'	1:5:3924:C:C6	2.51	0.45
1:5:4152:G:C6	1:5:4153:C:C4	3.05	0.45
1:5:4238:G:O2'	1:5:4322:G:H4'	2.17	0.45
1:5:4405:G:H4'	12:I:4:ARG:HD3	1.98	0.45
1:5:4460:U:H2'	1:5:4461:C:C6	2.52	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
1:5:4686:G:C5	1:5:4687:A:C8	3.05	0.45
1:5:4696:C:H2'	1:5:4697:U:O4'	2.16	0.45
1:5:4735:G:C2	1:5:4736:C:N1	2.85	0.45
1:5:4742:G:C6	1:5:4743:G:C5	3.05	0.45
1:5:4755:G:C6	1:5:4876:U:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:83:A:N1	2:7:85:G:C8	2.85	0.45
5:B:213:GLN:C	5:B:214:ASP:OD1	2.60	0.45
7:D:99:TYR:CD1	7:D:165:GLY:HA2	2.51	0.45
7:D:147:ASP:OD1	7:D:149:GLY:N	2.50	0.45
7:D:223:PHE:N	7:D:223:PHE:CD1	2.84	0.45
11:H:93:ARG:NH1	11:H:93:ARG:HB3	2.32	0.45
14:K:94:LYS:HE2	14:K:96:LYS:HG3	1.97	0.45
15:L:9:ILE:HG13	30:a:52:TYR:HE2	1.80	0.45
15:L:49:ARG:HA	37:h:119:PHE:O	2.17	0.45
15:L:101:ARG:HA	38:i:25:ARG:HH21	1.81	0.45
19:P:70:CYS:SG	19:P:83:TRP:HH2	2.39	0.45
21:R:9:ARG:HH11	21:R:9:ARG:HG2	1.82	0.45
22:S:33:PHE:HZ	22:S:106:VAL:HB	1.81	0.45
28:Y:56:GLN:HE21	28:Y:56:GLN:HB3	1.63	0.45
35:f:93:PRO:O	35:f:94:ALA:HB3	2.16	0.45
37:h:72:PHE:CB	37:h:73:TYR:HD1	2.30	0.45
40:k:41:TYR:CB	40:k:43:TYR:CE1	3.00	0.45
46:q:51:ALA:HB1	46:q:89:VAL:HG12	1.97	0.45
46:q:182:PRO:HB2	46:q:183:PHE:CD1	2.52	0.45
48:4:21:ASN:ND2	48:4:469:ILE:HD12	2.22	0.45
48:4:518:PRO:CB	73:SX:50:ILE:HD11	2.46	0.45
49:S2:415:A:H2'	49:S2:416:U:O5'	2.17	0.45
49:S2:752:G:C2	49:S2:790:C:C4	3.05	0.45
49:S2:807:G:C2	49:S2:808:A:C5	3.05	0.45
49:S2:975:G:N1	49:S2:976:G:C5	2.85	0.45
49:S2:989:C:C4	49:S2:1001:A:N1	2.83	0.45
49:S2:1102:G:N2	49:S2:1130:G:N2	2.58	0.45
49:S2:1135:C:C2	49:S2:1136:U:C6	3.04	0.45
49:S2:1180:C:O2	49:S2:1180:C:C2'	2.64	0.45
49:S2:1293:A:H2'	81:Sf:152:LYS:HB2	1.99	0.45
49:S2:1295:A:C8	49:S2:1296:U:C6	3.04	0.45
49:S2:1457:U:H2'	49:S2:1458:G:H8	1.79	0.45
49:S2:1730:U:C4	49:S2:1731:A:C8	3.05	0.45
49:S2:1865:C:H3'	49:S2:1866:A:H5'	1.98	0.45
50:SA:64:ALA:CB	71:SV:34:MET:HE1	2.47	0.45
56:SG:113:ILE:HD12	56:SG:124:LEU:HD21	1.99	0.45
56:SG:153:VAL:O	56:SG:154:ARG:C	2.60	0.45
57:SH:36:LEU:CD1	57:SH:40:LEU:HD12	2.47	0.45
58:SI:118:ALA:HB1	58:SI:137:LEU:CD2	2.47	0.45
59:SJ:48:PHE:CD2	59:SJ:48:PHE:C	2.94	0.45
62:SM:46:GLN:OE1	62:SM:112:LYS:HD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SV:21:ASN:O	71:SV:21:ASN:ND2	2.48	0.45
1:5:2:G:C4	1:5:3:C:C5	3.05	0.45
1:5:90:G:C8	1:5:92:C:N1	2.85	0.45
1:5:93:G:C4	1:5:94:A:C6	3.04	0.45
1:5:124:C:C2	1:5:125:C:C5	3.05	0.45
1:5:145:G:C6	1:5:146:G:C5	3.04	0.45
1:5:146:G:N1	1:5:147:A:N7	2.65	0.45
1:5:224:U:O2	1:5:224:U:O4'	2.33	0.45
1:5:306:A:C2	1:5:307:A:C5	3.04	0.45
1:5:332:C:H2'	1:5:333:U:C6	2.52	0.45
1:5:435:A:C6	1:5:436:C:C6	3.04	0.45
1:5:453:G:H2'	1:5:453:G:N3	2.32	0.45
1:5:467:U:H2'	1:5:467:U:O2	2.17	0.45
1:5:488:G:N2	1:5:489:C:C1'	2.80	0.45
1:5:489:C:H42	1:5:664:G:H1	1.64	0.45
1:5:677:G:C6	1:5:678:C:C4	3.05	0.45
1:5:722:G:H21	6:C:343:GLN:HE22	1.64	0.45
1:5:939:G:H2'	1:5:939:G:N3	2.32	0.45
1:5:1261:G:N3	1:5:1262:G:C8	2.84	0.45
1:5:1269:G:C2'	1:5:2111:G:O6	2.65	0.45
1:5:1285:U:O2	8:E:126:LYS:HG3	2.16	0.45
1:5:1321:G:N2	1:5:3876:A:O4'	2.49	0.45
1:5:1377:G:N7	1:5:1378:C:H4'	2.32	0.45
1:5:1473:U:C4	1:5:1474:C:C4	3.05	0.45
1:5:1541:C:C2	1:5:1542:U:C6	3.05	0.45
1:5:1583:A:N6	1:5:1584:G:C4	2.85	0.45
1:5:2052:G:O3'	18:O:17:GLY:HA3	2.17	0.45
1:5:2115:G:H8	1:5:2116:C:C6	2.35	0.45
1:5:2319:C:H5	34:e:58:ILE:HG13	1.81	0.45
1:5:2442:G:C3'	1:5:2443:G:H5''	2.47	0.45
1:5:2518:G:H4'	1:5:2538:U:O2'	2.16	0.45
1:5:2612:G:C5	1:5:2613:C:C6	3.04	0.45
1:5:2641:A:H2'	1:5:2642:A:O4'	2.17	0.45
1:5:3598:C:C2	1:5:3599:A:C8	3.05	0.45
1:5:3692:A:N1	1:5:3693:U:H1'	2.32	0.45
1:5:3813:A:H2	1:5:4538:G:N3	2.14	0.45
1:5:4079:C:C2	1:5:4080:C:C5	3.05	0.45
1:5:4595:G:C2	1:5:4596:C:C2	3.04	0.45
1:5:4923:C:N3	1:5:4924:C:C5	2.85	0.45
1:5:4975:G:C2	1:5:4977:A:C8	3.04	0.45
1:5:4977:A:C6	1:5:4978:G:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:14:U:C2'	3:8:15:G:O5'	2.65	0.45
3:8:143:G:C6	3:8:144:U:C5	3.04	0.45
5:B:216:MET:HE3	5:B:281:ASN:OD1	2.17	0.45
5:B:367:PHE:HZ	5:B:380:GLN:NE2	2.14	0.45
7:D:122:GLN:HB3	7:D:168:ASP:OD1	2.17	0.45
8:E:169:LEU:HD21	8:E:187:GLN:HB2	1.97	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	2.59	0.45
12:I:86:HIS:HD2	12:I:139:ARG:HH12	1.65	0.45
14:K:134:GLY:O	14:K:137:GLN:HG3	2.17	0.45
17:N:19:MET:HA	17:N:19:MET:HE3	1.99	0.45
18:O:46:ASN:O	18:O:47:PHE:C	2.58	0.45
20:Q:33:ARG:O	20:Q:34:PHE:C	2.59	0.45
21:R:117:ARG:NH2	21:R:118:HIS:CE1	2.84	0.45
25:V:77:HIS:ND1	25:V:77:HIS:C	2.75	0.45
36:g:101:LYS:O	36:g:105:LYS:HB2	2.17	0.45
44:o:11:PHE:HA	44:o:18:HIS:HA	1.99	0.45
48:4:5:THR:O	48:4:9:ILE:HG13	2.16	0.45
48:4:239:LYS:CD	48:4:241:GLU:HG2	2.46	0.45
48:4:323:LEU:CD1	48:4:335:LEU:HD11	2.47	0.45
48:4:518:PRO:CB	73:50:ILE:CD1	2.94	0.45
48:4:562:GLU:CA	48:4:570:ILE:CD1	2.74	0.45
48:4:604:MET:CE	48:4:702:PHE:CD1	3.00	0.45
48:4:744:ILE:HG22	48:4:745:TYR:CD2	2.52	0.45
49:S2:102:A:H5'	49:S2:104:A:N3	2.31	0.45
49:S2:220:U:C4	49:S2:221:A:N7	2.85	0.45
49:S2:693:A:C4	49:S2:694:G:C8	3.04	0.45
49:S2:793:G:C6	49:S2:794:A:N7	2.84	0.45
49:S2:803:C:C2	49:S2:804:U:C6	3.05	0.45
49:S2:849:A:O2'	49:S2:850:C:H5'	2.17	0.45
49:S2:922:A:OP1	72:SW:28:ARG:NH2	2.49	0.45
49:S2:962:A:C2	49:S2:963:A:N9	2.85	0.45
49:S2:968:U:O2'	49:S2:972:A:C1'	2.60	0.45
49:S2:1215:C:H5	49:S2:1645:C:H2'	1.81	0.45
49:S2:1296:U:H2'	49:S2:1297:U:C6	2.51	0.45
49:S2:1310:U:O5'	81:Sf:143:LYS:HG2	2.17	0.45
49:S2:1310:U:C6	81:Sf:143:LYS:CE	2.98	0.45
49:S2:1669:G:C2	49:S2:1670:C:C2	3.04	0.45
50:SA:48:ILE:CG2	67:SR:105:MET:HE3	2.40	0.45
50:SA:53:ARG:HB2	50:SA:53:ARG:NH1	2.32	0.45
51:SB:123:ALA:O	51:SB:124:HIS:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:SE:65:CYS:SG	54:SE:66:MET:N	2.90	0.45
58:SI:36:THR:HB	58:SI:57:ALA:O	2.17	0.45
62:SM:24:THR:HB	62:SM:115:GLY:HA3	1.99	0.45
64:SO:44:VAL:HG23	64:SO:81:VAL:HG11	1.98	0.45
64:SO:146:ARG:O	64:SO:148:GLY:N	2.50	0.45
74:SY:44:LEU:HA	74:SY:47:MET:HG2	1.98	0.45
79:Sd:6:PHE:CD1	79:Sd:6:PHE:C	2.94	0.45
82:Sg:31:ILE:HD13	82:Sg:299:PHE:CD2	2.52	0.45
1:5:229:G:OP1	28:Y:11:ARG:NH1	2.48	0.45
1:5:277:G:O2'	1:5:278:G:P	2.75	0.45
1:5:316:U:O2'	1:5:317:A:C8	2.70	0.45
1:5:449:C:O2	1:5:449:C:C2'	2.64	0.45
1:5:707:C:H1'	1:5:4944:C:N4	2.32	0.45
1:5:1321:G:C1'	1:5:1891:A:H62	2.29	0.45
1:5:1362:G:C6	1:5:1363:C:C5	3.05	0.45
1:5:1374:G:N2	1:5:1375:C:H1'	2.31	0.45
1:5:1684:A:N6	1:5:1685:G:C5	2.85	0.45
1:5:1725:U:N3	1:5:1726:U:C6	2.85	0.45
1:5:1817:U:O2	1:5:1821:G:O6	2.35	0.45
1:5:1868:A:C6	1:5:1870:C:H1'	2.52	0.45
1:5:1885:G:C6	1:5:1895:G:N1	2.85	0.45
1:5:1927:U:O2	1:5:1928:C:C6	2.70	0.45
1:5:1997:U:H3'	1:5:1998:A:H5''	1.97	0.45
1:5:2104:G:N1	1:5:2105:A:C4	2.85	0.45
1:5:2480:G:C6	1:5:2481:G:C5	3.04	0.45
1:5:2480:G:N2	1:5:2499:C:C2	2.85	0.45
1:5:2481:G:N2	1:5:2498:C:C2	2.85	0.45
1:5:2587:A:OP1	36:g:68:SER:OG	2.26	0.45
1:5:2644:G:C2	1:5:2645:G:N9	2.85	0.45
1:5:2703:G:C4	1:5:2704:C:C6	3.05	0.45
1:5:2725:A:H2'	1:5:2726:G:H5'	1.99	0.45
1:5:2852:U:C2	1:5:2852:U:C3'	2.97	0.45
1:5:3600:G:C2	1:5:3601:C:C2	3.05	0.45
1:5:3694:U:O2	1:5:3695:U:C6	2.70	0.45
1:5:3736:A:O2'	1:5:3737:A:C4'	2.64	0.45
1:5:3794:C:C4	1:5:3795:A:N7	2.84	0.45
1:5:4083:U:O2	1:5:4085:A:O4'	2.34	0.45
1:5:4106:G:C5	1:5:4107:G:H1'	2.51	0.45
1:5:4165:C:N4	1:5:4166:G:N7	2.63	0.45
1:5:4216:G:C6	1:5:4217:G:N7	2.85	0.45
1:5:4411:G:C6	1:5:4412:C:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4479:A:C6	1:5:4480:A:C4	3.05	0.45
1:5:4737:G:N1	1:5:4963:G:N3	2.64	0.45
1:5:5003:U:H2'	1:5:5004:C:C6	2.52	0.45
1:5:5004:C:C3'	1:5:5005:G:O4'	2.65	0.45
2:7:24:C:H2'	2:7:25:G:O5'	2.16	0.45
2:7:42:A:C4	2:7:43:U:C5	3.05	0.45
2:7:44:C:H2'	2:7:45:U:O5'	2.16	0.45
2:7:51:G:N3	2:7:52:C:C5	2.84	0.45
2:7:93:G:N1	2:7:94:C:C4	2.85	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
5:B:110:ILE:O	5:B:111:SER:CB	2.64	0.45
5:B:115:LYS:HE2	5:B:119:TYR:OH	2.16	0.45
6:C:138:MET:O	47:r:16:PHE:CZ	2.67	0.45
7:D:90:VAL:HB	7:D:226:TYR:CE1	2.51	0.45
7:D:111:ASN:C	7:D:111:ASN:HD22	2.24	0.45
7:D:282:GLN:C	7:D:283:LYS:O	2.54	0.45
14:K:58:ILE:C	14:K:59:THR:CG2	2.90	0.45
19:P:78:TRP:HA	19:P:78:TRP:CE3	2.52	0.45
20:Q:24:TYR:HE1	47:r:5:LEU:CD1	2.30	0.45
20:Q:93:GLN:CB	30:a:87:ARG:HH12	2.30	0.45
21:R:96:MET:O	21:R:97:ARG:C	2.60	0.45
21:R:99:MET:HG3	21:R:103:ARG:NH1	2.31	0.45
22:S:81:TRP:NE1	22:S:94:TYR:HD1	2.15	0.45
39:j:39:TYR:C	39:j:41:ALA:N	2.75	0.45
48:4:154:VAL:HG11	48:4:358:LEU:CG	2.47	0.45
48:4:322:LYS:CG	48:4:323:LEU:N	2.80	0.45
48:4:577:VAL:CG1	48:4:578:SER:N	2.80	0.45
48:4:749:ILE:CD1	48:4:759:ILE:HG13	2.42	0.45
49:S2:12:U:H2'	49:S2:13:C:H6	1.82	0.45
49:S2:14:C:OP1	52:SC:189:GLY:O	2.35	0.45
49:S2:201:C:N3	49:S2:202:G:H1'	2.32	0.45
49:S2:217:A:C2	49:S2:218:U:O4'	2.70	0.45
49:S2:458:A:N3	49:S2:458:A:H2'	2.31	0.45
49:S2:475:C:O2'	49:S2:507:G:N3	2.45	0.45
49:S2:552:G:C5	49:S2:553:U:C5	3.05	0.45
49:S2:828:G:H2'	49:S2:829:C:O4'	2.17	0.45
49:S2:896:U:H2'	49:S2:897:U:O4'	2.16	0.45
49:S2:901:G:C4	49:S2:902:G:C8	3.05	0.45
49:S2:1016:U:O2	49:S2:1016:U:O4'	2.34	0.45
49:S2:1024:A:H2'	49:S2:1025:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1110:G:C6	49:S2:1111:U:C5	3.05	0.45
49:S2:1190:A:H2'	49:S2:1191:C:C5'	2.47	0.45
49:S2:1203:G:H3'	49:S2:1204:A:C8	2.52	0.45
49:S2:1294:G:O6	81:Sf:138:ARG:CZ	2.65	0.45
49:S2:1303:C:N4	49:S2:1304:U:C4	2.85	0.45
49:S2:1481:G:H2'	49:S2:1482:C:O4'	2.16	0.45
49:S2:1535:U:OP2	75:SZ:106:GLN:NE2	2.47	0.45
49:S2:1551:U:C1'	49:S2:1558:C:O2	2.65	0.45
49:S2:1594:A:N6	49:S2:1595:U:C5	2.81	0.45
49:S2:1840:U:N3	49:S2:1841:C:C4	2.84	0.45
49:S2:1841:C:C2	49:S2:1842:C:H5	2.31	0.45
53:SD:23:GLU:O	53:SD:24:PHE:C	2.60	0.45
56:SG:84:TYR:C	56:SG:84:TYR:CD1	2.94	0.45
56:SG:102:VAL:HG13	56:SG:106:LEU:HD11	1.99	0.45
62:SM:77:ILE:HG23	62:SM:78:LYS:N	2.31	0.45
63:SN:133:ARG:CZ	63:SN:133:ARG:CB	2.94	0.45
69:ST:134:ILE:O	69:ST:138:VAL:N	2.50	0.45
70:SU:50:VAL:HG13	70:SU:51:LYS:H	1.80	0.45
1:5:54:G:C6	1:5:55:G:C5	3.04	0.45
1:5:66:A:C8	1:5:328:A:H1'	2.53	0.45
1:5:144:G:C2	1:5:145:G:C5	3.05	0.45
1:5:176:G:C6	1:5:261:G:C6	3.05	0.45
1:5:268:G:C6	1:5:269:G:N7	2.85	0.45
1:5:273:U:N3	1:5:274:C:C4	2.85	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
1:5:405:U:H2'	1:5:407:A:N7	2.32	0.45
1:5:423:G:C4	1:5:424:U:C5	3.04	0.45
1:5:488:G:C5	1:5:489:C:C5	3.05	0.45
1:5:514:U:C6	1:5:514:U:C3'	3.00	0.45
1:5:664:G:C2	1:5:667:A:N1	2.84	0.45
1:5:1362:G:N2	1:5:1363:C:H1'	2.32	0.45
1:5:1404:G:N1	1:5:1414:C:C4	2.85	0.45
1:5:1411:C:C2	1:5:1412:G:N7	2.84	0.45
1:5:1522:G:H5''	1:5:1523:A:OP1	2.16	0.45
1:5:1551:C:H2'	1:5:1552:G:O4'	2.17	0.45
1:5:1667:G:C6	1:5:2280:G:N3	2.85	0.45
1:5:1725:U:H1'	9:F:113:LEU:CD1	2.47	0.45
1:5:1848:C:H5''	1:5:1848:C:C6	2.45	0.45
1:5:1916:G:H2'	1:5:1917:A:C8	2.52	0.45
1:5:2021:G:C4	1:5:2022:C:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2082:G:O2'	1:5:2083:C:O5'	2.34	0.45
1:5:2120:G:H4'	9:F:43:MET:HE1	1.99	0.45
1:5:2315:G:N1	1:5:2316:G:C5	2.85	0.45
1:5:2366:A:O2'	1:5:2367:A:H5''	2.17	0.45
1:5:2415:U:H2'	1:5:2416:G:C8	2.52	0.45
1:5:2575:U:O2	1:5:2758:G:N2	2.50	0.45
1:5:2703:G:C2	1:5:2704:C:C6	3.05	0.45
1:5:2727:C:H2'	1:5:2728:U:C6	2.52	0.45
1:5:3632:C:C2	1:5:3633:C:C6	3.05	0.45
1:5:3684:G:H2'	1:5:3685:C:O5'	2.17	0.45
1:5:3759:A:N1	49:S2:1709:G:C5'	2.77	0.45
1:5:3780:G:O6	1:5:3815:G:C2	2.70	0.45
1:5:3878:C:C2	1:5:4518:A:C6	3.05	0.45
1:5:3880:G:O2'	1:5:3881:G:C5'	2.65	0.45
1:5:4070:U:N3	1:5:4071:U:C6	2.85	0.45
1:5:4091:G:C5	1:5:4092:G:N7	2.85	0.45
1:5:4165:C:O2	1:5:4166:G:C8	2.70	0.45
1:5:4202:U:O2	1:5:4204:C:C5	2.70	0.45
1:5:4283:G:N2	1:5:4284:C:C4	2.85	0.45
1:5:4343:U:C4	1:5:4344:U:C4	3.05	0.45
1:5:4363:A:C2	1:5:4364:G:N9	2.85	0.45
1:5:4433:G:C2	1:5:4434:C:C4	3.04	0.45
1:5:4455:G:N1	1:5:4456:C:C5	2.84	0.45
1:5:4463:U:C5	1:5:4488:A:C8	3.05	0.45
1:5:4465:U:C4	1:5:4487:A:C6	3.04	0.45
1:5:4772:C:C4	1:5:4773:C:C5	3.05	0.45
1:5:4936:G:C2	1:5:4938:A:C8	3.04	0.45
1:5:4998:G:N2	1:5:4999:G:H1'	2.32	0.45
2:7:71:G:C2	2:7:105:C:C2	3.05	0.45
2:7:117:G:C6	2:7:118:C:C4	3.05	0.45
4:A:211:PHE:CZ	4:A:221:LYS:HD3	2.52	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:284:LYS:CB	12:I:209:TRP:CZ3	2.95	0.45
8:E:114:THR:O	8:E:115:GLU:HB2	2.16	0.45
11:H:12:ILE:HD11	11:H:16:VAL:HB	1.99	0.45
14:K:141:CYS:O	14:K:147:HIS:HA	2.17	0.45
15:L:39:ARG:HB2	15:L:39:ARG:HH11	1.81	0.45
20:Q:37:ARG:HG3	20:Q:38:ARG:HG2	1.99	0.45
23:T:19:PHE:CG	23:T:20:ARG:HG3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:e:34:ASN:O	34:e:35:TRP:C	2.60	0.45
48:4:109:VAL:CG2	48:4:138:GLN:HE21	2.29	0.45
48:4:379:ASP:OD2	48:4:381:ALA:HB3	2.17	0.45
48:4:740:LEU:CB	48:4:831:PRO:CB	2.56	0.45
48:4:814:PHE:CE2	48:4:815:ASP:O	2.70	0.45
49:S2:296:U:H2'	49:S2:297:A:O4'	2.17	0.45
49:S2:309:G:C2	49:S2:310:C:N3	2.85	0.45
49:S2:319:C:O2	49:S2:320:G:N7	2.50	0.45
49:S2:381:C:OP1	58:SI:48:VAL:HB	2.16	0.45
49:S2:406:U:O2'	49:S2:407:G:H3'	2.17	0.45
49:S2:437:G:N1	49:S2:457:C:C2	2.85	0.45
49:S2:443:U:C2	49:S2:444:G:H1'	2.51	0.45
49:S2:447:A:C5	49:S2:449:A:C4	3.05	0.45
49:S2:504:G:O2'	49:S2:505:G:C5'	2.65	0.45
49:S2:552:G:N2	49:S2:553:U:C2	2.85	0.45
49:S2:841:G:N2	49:S2:842:C:N3	2.65	0.45
49:S2:1015:U:O2	49:S2:1017:U:C5	2.70	0.45
49:S2:1050:A:H4'	49:S2:1846:G:O2'	2.16	0.45
49:S2:1121:G:C2	49:S2:1122:A:N9	2.85	0.45
49:S2:1232:U:H1'	49:S2:1253:A:N7	2.32	0.45
49:S2:1245:G:C5	49:S2:1246:A:C8	3.05	0.45
49:S2:1253:A:H4'	49:S2:1254:C:C5'	2.47	0.45
49:S2:1282:A:H3'	62:SM:102:LYS:HB3	1.99	0.45
49:S2:1405:A:C5	49:S2:1406:G:N7	2.85	0.45
49:S2:1411:G:N7	49:S2:1412:C:C1'	2.80	0.45
49:S2:1431:G:C2	49:S2:1432:U:C1'	2.98	0.45
49:S2:1513:C:C2	49:S2:1514:G:C8	3.04	0.45
49:S2:1673:U:C5	49:S2:1674:G:C8	3.05	0.45
49:S2:1782:G:N2	49:S2:1784:G:C8	2.85	0.45
50:SA:39:TYR:CD1	50:SA:40:LYS:HG2	2.52	0.45
52:SC:94:ILE:CD1	52:SC:162:ILE:HD11	2.46	0.45
57:SH:61:ILE:HD12	57:SH:93:VAL:O	2.16	0.45
58:SI:165:GLN:CD	58:SI:172:LEU:HD23	2.42	0.45
59:SJ:64:ASP:O	59:SJ:67:ASP:HB3	2.17	0.45
59:SJ:165:TYR:CD1	59:SJ:165:TYR:N	2.85	0.45
61:SL:99:TYR:HE2	73:SX:13:LEU:HB3	1.81	0.45
66:SQ:32:ILE:HG21	66:SQ:39:LEU:HD11	1.98	0.45
68:SS:117:ILE:HG22	68:SS:117:ILE:O	2.17	0.45
69:ST:11:GLN:NE2	69:ST:62:ARG:NH1	2.65	0.45
70:SU:68:THR:HG22	70:SU:69:PRO:O	2.17	0.45
74:SY:88:LYS:CE	74:SY:97:TYR:OH	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SY:113:ARG:C	74:SY:115:LYS:H	2.25	0.45
76:Sa:24:THR:O	76:Sa:25:ASN:HB2	2.17	0.45
78:Sc:10:LYS:HB3	78:Sc:34:PHE:HE1	1.80	0.45
1:5:84:A:C6	1:5:86:U:C4	3.04	0.44
1:5:125:C:O2	1:5:125:C:C2'	2.65	0.44
1:5:199:G:C2	1:5:201:C:C2	3.05	0.44
1:5:344:A:C2	1:5:345:C:H1'	2.52	0.44
1:5:344:A:C6	1:5:345:C:C5	3.05	0.44
1:5:381:U:H4'	1:5:414:C:H2'	1.99	0.44
1:5:475:G:H2'	1:5:476:G:O4'	2.17	0.44
1:5:488:G:N2	1:5:489:C:H1'	2.32	0.44
1:5:961:G:O6	1:5:969:C:C6	2.70	0.44
1:5:976:G:OP1	1:5:976:G:H4'	2.17	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
1:5:1210:C:O2	1:5:1210:C:C2'	2.64	0.44
1:5:1273:G:H2'	8:E:69:TYR:O	2.17	0.44
1:5:1313:C:C2	1:5:1323:A:C8	3.06	0.44
1:5:1334:A:N6	1:5:1335:G:C6	2.85	0.44
1:5:1359:G:H2'	1:5:1360:G:C1'	2.47	0.44
1:5:1367:C:N3	1:5:1369:C:OP2	2.50	0.44
1:5:1374:G:C2	1:5:1375:C:N1	2.85	0.44
1:5:1497:A:OP2	20:Q:162:HIS:HB2	2.18	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
1:5:1864:G:C5	1:5:1865:G:C8	3.05	0.44
1:5:1912:G:C6	1:5:1913:C:N4	2.85	0.44
1:5:2308:A:H1'	3:8:19:C:O2'	2.18	0.44
1:5:2384:U:C2	1:5:2385:U:C6	3.04	0.44
1:5:2448:G:C2'	1:5:2449:A:C8	3.00	0.44
1:5:2448:G:O6	1:5:2510:G:O2'	2.30	0.44
1:5:2484:A:C2	1:5:2485:U:C2	3.06	0.44
1:5:2607:C:C2	1:5:2608:G:C8	3.05	0.44
1:5:2726:G:C5	1:5:2727:C:N4	2.85	0.44
1:5:2822:G:H5''	21:R:18:GLY:HA3	1.99	0.44
1:5:2895:A:C2	1:5:2896:G:N9	2.85	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
1:5:3687:A:C6	1:5:3688:U:C6	3.05	0.44
1:5:3804:G:C5	1:5:3805:U:C5	3.05	0.44
1:5:4283:G:H1	1:5:4284:C:N4	2.10	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4394:A:HO2'	1:5:4395:U:H5	1.62	0.44
1:5:4462:C:H2'	1:5:4463:U:O4'	2.17	0.44
1:5:4652:G:N3	1:5:4653:C:C5	2.85	0.44
1:5:4730:C:H2'	1:5:4965:U:C4	2.52	0.44
1:5:4968:A:OP1	5:B:120:LYS:HB2	2.17	0.44
1:5:5013:C:O2	1:5:5013:C:O2'	2.32	0.44
2:7:25:G:C6	2:7:26:C:C4	3.05	0.44
3:8:99:U:O2	3:8:99:U:H2'	2.16	0.44
4:A:186:TYR:CB	4:A:196:TRP:HZ3	2.30	0.44
6:C:288:ASP:OD2	6:C:291:ARG:CB	2.64	0.44
7:D:191:ASN:HB3	7:D:194:VAL:HG23	1.98	0.44
11:H:41:ILE:HG21	11:H:73:ILE:HD11	1.99	0.44
14:K:148:PRO:HA	14:K:151:ILE:HD12	1.98	0.44
17:N:21:PHE:CZ	17:N:25:VAL:HG21	2.52	0.44
31:b:15:LYS:C	31:b:17:HIS:N	2.74	0.44
40:k:11:PHE:C	40:k:11:PHE:CD1	2.94	0.44
46:q:107:VAL:HG12	46:q:108:PRO:N	2.32	0.44
46:q:173:THR:O	46:q:177:MET:HG2	2.17	0.44
48:4:816:HIS:HD2	48:4:817:TRP:N	2.14	0.44
48:4:829:SER:HG	48:4:833:GLN:N	2.07	0.44
49:S2:18:C:H4'	49:S2:1194:A:H62	1.82	0.44
49:S2:222:U:C2	49:S2:223:C:C5	3.04	0.44
49:S2:332:G:C6	56:SG:186:GLN:NE2	2.84	0.44
49:S2:415:A:C2	49:S2:423:U:O2	2.69	0.44
49:S2:536:A:N6	49:S2:537:C:C4	2.85	0.44
49:S2:648:A:N1	49:S2:649:U:C4	2.86	0.44
49:S2:656:G:N2	49:S2:663:C:H5''	2.31	0.44
49:S2:814:U:H5''	59:SJ:8:VAL:HG11	1.99	0.44
49:S2:832:G:C2	49:S2:833:C:N1	2.85	0.44
49:S2:932:G:N2	49:S2:934:G:C8	2.85	0.44
49:S2:992:A:N6	76:Sa:15:ARG:HH11	2.15	0.44
49:S2:1022:U:H6	63:SN:128:TYR:CE2	2.27	0.44
49:S2:1109:C:O2	49:S2:1110:G:O4'	2.33	0.44
49:S2:1123:C:H42	49:S2:1124:C:N4	2.15	0.44
49:S2:1177:U:N3	49:S2:1178:U:C5	2.85	0.44
49:S2:1254:C:O2	49:S2:1254:C:C2'	2.61	0.44
49:S2:1287:A:C6	49:S2:1313:A:N7	2.85	0.44
49:S2:1294:G:N2	49:S2:1295:A:C8	2.82	0.44
49:S2:1308:U:C4	49:S2:1309:C:N4	2.85	0.44
49:S2:1311:C:C4	49:S2:1312:G:C4	3.05	0.44
49:S2:1405:A:N1	49:S2:1406:G:C5	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1455:A:H5'	49:S2:1456:G:OP2	2.18	0.44
49:S2:1496:U:O4	49:S2:1498:A:N7	2.50	0.44
49:S2:1613:G:C2	49:S2:1627:C:O2	2.70	0.44
49:S2:1775:U:N3	49:S2:1776:G:C8	2.85	0.44
50:SA:55:TRP:O	50:SA:58:LEU:N	2.50	0.44
54:SE:15:PRO:HD2	54:SE:18:TRP:CH2	2.52	0.44
56:SG:52:ILE:O	56:SG:52:ILE:HG23	2.17	0.44
57:SH:34:SER:O	57:SH:36:LEU:N	2.47	0.44
58:SI:34:ALA:HB2	58:SI:56:ARG:CD	2.46	0.44
60:SK:95:ARG:HA	60:SK:95:ARG:HE	1.81	0.44
74:SY:97:TYR:C	74:SY:97:TYR:CD1	2.94	0.44
1:5:27:C:O2	1:5:27:C:C2'	2.42	0.44
1:5:37:U:H5''	30:a:32:ARG:HD2	1.99	0.44
1:5:99:A:C4	1:5:100:C:O2	2.70	0.44
1:5:126:C:N3	1:5:127:G:C8	2.85	0.44
1:5:195:C:C2	1:5:196:C:C6	3.05	0.44
1:5:270:U:O2	1:5:270:U:H2'	2.17	0.44
1:5:313:U:N3	1:5:314:G:C8	2.85	0.44
1:5:368:C:C2	1:5:374:G:C2	3.05	0.44
1:5:483:G:N1	1:5:484:U:C5	2.83	0.44
1:5:497:G:C6	1:5:657:C:N4	2.85	0.44
1:5:659:G:N1	1:5:660:A:N7	2.65	0.44
1:5:920:C:C2	1:5:921:C:C6	3.06	0.44
1:5:1070:G:N1	1:5:1071:C:C5	2.84	0.44
1:5:1077:C:C2	1:5:1078:A:C8	3.05	0.44
1:5:1085:C:C2	1:5:1213:G:N1	2.85	0.44
1:5:1188:C:O2	1:5:1188:C:C2'	2.63	0.44
1:5:1376:C:H2'	1:5:1378:C:H6	1.82	0.44
1:5:1383:G:H2'	1:5:1384:C:O4'	2.16	0.44
1:5:1590:C:H5'	1:5:2856:C:O2'	2.17	0.44
1:5:1759:G:N2	1:5:1760:G:H1'	2.32	0.44
1:5:2081:C:H2'	1:5:2082:G:H8	1.82	0.44
1:5:2245:G:C5	1:5:2246:C:C5	3.06	0.44
1:5:2273:G:H2'	1:5:2274:C:C6	2.52	0.44
1:5:2327:G:C2	1:5:2328:G:C4	3.05	0.44
1:5:2486:G:H2'	1:5:2487:G:C1'	2.47	0.44
1:5:2496:G:N2	1:5:2497:C:C2	2.85	0.44
1:5:2505:C:O2	1:5:2505:C:O4'	2.33	0.44
1:5:2713:C:O2	1:5:2714:G:H8	1.96	0.44
1:5:2779:C:O2'	3:8:112:G:OP1	2.28	0.44
1:5:2811:G:H22	1:5:2813:A:C3'	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2843:U:N3	1:5:2844:A:C8	2.75	0.44
1:5:3596:A:O3'	1:5:3597:G:O4'	2.35	0.44
1:5:3633:C:H1'	1:5:3648:A:N3	2.32	0.44
1:5:3751:G:H21	1:5:3775:A:H8	1.59	0.44
1:5:3767:C:H5''	49:S2:1849:G:O6	2.02	0.44
1:5:3871:A:H2'	1:5:3872:A:C8	2.52	0.44
1:5:3873:G:C2'	1:5:3874:G:O4'	2.58	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
1:5:4167:G:N2	1:5:4168:G:C4	2.86	0.44
1:5:4230:C:O2	1:5:4230:C:C2'	2.64	0.44
1:5:4323:A:C2	1:5:4324:A:C5	3.05	0.44
1:5:4661:G:C5'	1:5:4661:G:H8	2.30	0.44
1:5:4681:A:H2'	1:5:4682:U:O4'	2.17	0.44
1:5:4923:C:H2'	1:5:4924:C:O4'	2.17	0.44
1:5:5047:C:C6	1:5:5050:C:C6	3.02	0.44
3:8:13:G:C6	3:8:14:U:C4	3.05	0.44
4:A:48:ILE:HD11	4:A:82:ILE:HG22	1.98	0.44
4:A:185:ALA:HB3	4:A:196:TRP:CH2	2.53	0.44
10:G:104:PRO:HG3	10:G:194:VAL:HG12	1.98	0.44
11:H:41:ILE:HD11	11:H:69:THR:CG2	2.47	0.44
11:H:66:GLU:N	11:H:66:GLU:OE1	2.50	0.44
14:K:108:GLU:O	14:K:111:ASN:CB	2.65	0.44
15:L:55:LEU:HD22	15:L:120:TYR:CD2	2.52	0.44
20:Q:68:ARG:O	20:Q:72:LEU:HD13	2.17	0.44
33:d:79:ASN:N	33:d:79:ASN:OD1	2.50	0.44
46:q:17:ILE:O	46:q:21:LEU:HG	2.16	0.44
46:q:135:THR:C	46:q:137:PHE:N	2.69	0.44
48:4:114:GLU:HG2	48:4:532:PRO:HD3	1.96	0.44
48:4:154:VAL:HG21	48:4:358:LEU:CD2	2.48	0.44
48:4:207:PRO:CB	48:4:261:TRP:CE2	3.00	0.44
48:4:236:PHE:CE2	48:4:273:PHE:CE2	2.58	0.44
48:4:301:PHE:O	48:4:305:MET:HG2	2.16	0.44
48:4:570:ILE:H	48:4:570:ILE:HG12	1.74	0.44
48:4:743:PRO:HA	48:4:744:ILE:HB	1.97	0.44
48:4:744:ILE:O	48:4:745:TYR:CD1	2.70	0.44
48:4:763:LEU:HD13	48:4:786:ALA:CB	2.47	0.44
49:S2:74:G:C5'	49:S2:75:G:OP2	2.65	0.44
49:S2:143:U:O4	49:S2:315:C:OP2	2.35	0.44
49:S2:173:A:C2	49:S2:174:C:N1	2.85	0.44
49:S2:195:C:C2	49:S2:205:G:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:211:G:C4	49:S2:212:C:C6	3.05	0.44
49:S2:302:A:C5	49:S2:303:C:C5	3.05	0.44
49:S2:335:G:C2	49:S2:336:A:C8	3.05	0.44
49:S2:349:A:H2'	49:S2:350:C:H6	1.83	0.44
49:S2:495:U:C4	49:S2:496:C:C4	3.04	0.44
49:S2:502:C:O2	49:S2:502:C:C2'	2.64	0.44
49:S2:551:U:O2	49:S2:551:U:H2'	2.17	0.44
49:S2:600:G:N3	49:S2:601:G:N7	2.65	0.44
49:S2:672:A:H3'	49:S2:673:G:H5''	1.99	0.44
49:S2:752:G:C2	49:S2:790:C:C2	3.05	0.44
49:S2:826:A:C8	49:S2:827:A:C1'	3.01	0.44
49:S2:893:U:N3	49:S2:894:G:N7	2.64	0.44
49:S2:1040:G:H5''	49:S2:1040:G:H8	1.83	0.44
49:S2:1049:A:C5	49:S2:1070:A:N3	2.85	0.44
49:S2:1131:G:C6	49:S2:1132:C:C4	3.06	0.44
49:S2:1207:G:P	49:S2:1207:G:H3'	2.57	0.44
49:S2:1310:U:C6	81:Sf:143:LYS:HD2	2.52	0.44
49:S2:1338:G:C4	49:S2:1339:U:C6	3.06	0.44
49:S2:1402:A:N1	49:S2:1405:A:N1	2.66	0.44
49:S2:1500:G:H2'	49:S2:1501:C:C6	2.52	0.44
49:S2:1568:C:HO2'	49:S2:1569:A:C1'	2.30	0.44
49:S2:1570:G:H2'	49:S2:1571:G:O4'	2.17	0.44
49:S2:1620:A:H2'	49:S2:1620:A:N3	2.33	0.44
49:S2:1686:G:N2	49:S2:1687:C:C2	2.85	0.44
49:S2:1738:C:N3	49:S2:1739:C:C5	2.84	0.44
49:S2:1832:A:OP2	49:S2:1837:G:OP2	2.33	0.44
49:S2:1855:G:OP2	64:SO:147:ARG:CZ	2.64	0.44
49:S2:1860:A:C2	49:S2:1862:G:N7	2.84	0.44
50:SA:39:TYR:HD1	50:SA:40:LYS:HG2	1.83	0.44
51:SB:32:ASP:OD1	51:SB:46:LYS:HD3	2.16	0.44
55:SF:20:PHE:O	55:SF:22:LYS:N	2.50	0.44
56:SG:105:ASN:O	56:SG:106:LEU:HD23	2.17	0.44
56:SG:229:ALA:HA	56:SG:232:ARG:HB2	1.98	0.44
61:SL:111:VAL:HG21	61:SL:128:VAL:HG11	1.98	0.44
74:SY:60:PHE:CD1	74:SY:71:GLY:HA3	2.52	0.44
78:Sc:34:PHE:O	78:Sc:36:ASP:N	2.50	0.44
82:Sg:87:LEU:HB2	82:Sg:101:PHE:CD1	2.53	0.44
82:Sg:112:ALA:HB3	82:Sg:121:VAL:HB	1.99	0.44
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
1:5:111:C:C2	1:5:331:G:N1	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:144:G:N2	1:5:145:G:C8	2.83	0.44
1:5:294:G:H5''	44:o:43:ARG:NH2	2.30	0.44
1:5:364:G:O6	39:j:52:LYS:CE	2.66	0.44
1:5:455:C:C2	1:5:456:C:C6	3.06	0.44
1:5:458:C:H2'	1:5:459:C:O4'	2.18	0.44
1:5:481:G:C2	1:5:482:G:N7	2.85	0.44
1:5:487:G:C6	1:5:488:G:C5	3.06	0.44
1:5:660:A:N3	1:5:661:C:C6	2.85	0.44
1:5:1064:G:C2	1:5:1065:G:C4	3.05	0.44
1:5:1086:C:H42	1:5:1211:G:H1	1.64	0.44
1:5:1099:C:H2'	1:5:1100:U:O4'	2.17	0.44
1:5:1176:C:C4	1:5:1177:U:C5	3.05	0.44
1:5:1201:U:O2	1:5:1202:C:C6	2.70	0.44
1:5:1232:G:C4'	1:5:1233:G:OP2	2.66	0.44
1:5:1233:G:C2	1:5:1234:G:C5	3.06	0.44
1:5:1234:G:H3'	1:5:1235:G:H8	1.82	0.44
1:5:1362:G:N2	1:5:1363:C:C2	2.86	0.44
1:5:1420:A:OP1	1:5:1420:A:H4'	2.17	0.44
1:5:1435:G:C3'	1:5:1436:C:H5'	2.48	0.44
1:5:1487:G:H8	1:5:1487:G:O5'	2.01	0.44
1:5:1727:U:N3	1:5:1728:U:C4	2.85	0.44
1:5:1761:G:N3	1:5:1762:C:C6	2.84	0.44
1:5:1968:G:H2'	1:5:1969:G:O4'	2.17	0.44
1:5:1970:A:C2'	1:5:2017:A:H61	2.23	0.44
1:5:1973:G:O2'	14:K:133:LEU:HD21	2.17	0.44
1:5:2019:C:O2	1:5:2020:U:C6	2.70	0.44
1:5:2021:G:O3'	46:q:84:GLY:C	2.60	0.44
1:5:2035:C:N4	1:5:2036:C:N4	2.65	0.44
1:5:2090:U:C2	6:C:307:LYS:HE2	2.51	0.44
1:5:2330:G:H2'	1:5:2331:G:O4'	2.17	0.44
1:5:2418:A:C2	1:5:2419:C:C6	3.05	0.44
1:5:2513:A:OP1	36:g:11:LEU:HG	2.17	0.44
1:5:2566:G:N3	1:5:2566:G:H2'	2.33	0.44
1:5:2567:G:C4	1:5:2568:C:C5	3.06	0.44
1:5:2628:U:C2	1:5:2629:C:C6	3.05	0.44
1:5:2645:G:H21	1:5:2646:C:H1'	1.83	0.44
1:5:2692:U:C2'	1:5:2693:G:H5'	2.47	0.44
1:5:3692:A:H5''	1:5:3693:U:OP2	2.17	0.44
1:5:3830:A:H4'	1:5:4552:U:H4'	1.98	0.44
1:5:3867:A:H3'	1:5:3868:G:H8	1.82	0.44
1:5:4104:G:C2'	1:5:4105:A:C8	3.00	0.44

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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	0.44
1:5:4153:C:O2	1:5:4154:G:C8	2.70	0.44
1:5:4154:G:C6	1:5:4155:C:C4	3.05	0.44
1:5:4411:G:N2	1:5:4412:C:C2	2.85	0.44
1:5:4454:G:N3	1:5:4454:G:H2'	2.33	0.44
1:5:4479:A:C6	1:5:4480:A:N9	2.86	0.44
1:5:4550:G:N1	1:5:4551:U:C5	2.86	0.44
1:5:4739:C:C2'	1:5:4740:G:O4'	2.62	0.44
1:5:4757:C:O2	18:O:114:LYS:C	2.59	0.44
1:5:4884:G:C8	1:5:4884:G:H5''	2.52	0.44
2:7:7:G:H5''	7:D:22:ARG:HH12	1.83	0.44
3:8:63:U:O2	3:8:63:U:H3'	2.18	0.44
3:8:75:G:N1	3:8:76:C:C4	2.85	0.44
5:B:258:HIS:O	5:B:258:HIS:HD2	2.00	0.44
8:E:42:ARG:O	8:E:43:ASN:C	2.59	0.44
12:I:209:TRP:O	12:I:212:LEU:N	2.49	0.44
14:K:114:ARG:O	14:K:117:ARG:HB2	2.17	0.44
15:L:65:ARG:HD3	30:a:69:PHE:CD1	2.52	0.44
15:L:127:PHE:HB2	37:h:118:LYS:C	2.42	0.44
17:N:28:TRP:CE3	17:N:29:GLN:HA	2.53	0.44
17:N:182:HIS:O	17:N:183:THR:C	2.59	0.44
21:R:95:TRP:CD2	21:R:99:MET:HE2	2.52	0.44
24:U:70:ILE:HD12	24:U:70:ILE:N	2.32	0.44
27:X:155:ILE:O	27:X:156:ILE:CB	2.66	0.44
35:f:36:ARG:HH11	35:f:36:ARG:CG	2.28	0.44
40:k:41:TYR:HB3	40:k:43:TYR:CE1	2.52	0.44
46:q:52:VAL:CB	46:q:90:PHE:O	2.65	0.44
46:q:135:THR:HA	46:q:138:PHE:CD1	2.52	0.44
48:4:196:GLU:OE1	48:4:196:GLU:HA	2.05	0.44
48:4:410:PHE:C	48:4:411:TYR:HD1	2.26	0.44
48:4:587:SER:HB3	48:4:735:THR:HG21	1.98	0.44
48:4:659:PRO:HG3	48:4:698:ARG:HH22	1.75	0.44
48:4:771:PHE:CB	48:4:785:LYS:C	2.91	0.44
48:4:824:PRO:O	48:4:832:SER:OG	2.35	0.44
49:S2:402:C:O2	49:S2:402:C:H2'	2.15	0.44
49:S2:583:C:N4	49:S2:584:G:C5	2.84	0.44
49:S2:610:G:C6	49:S2:611:G:C5	3.06	0.44
49:S2:611:G:C6	49:S2:612:U:C4	3.06	0.44
49:S2:616:A:N6	49:S2:617:G:N3	2.65	0.44
49:S2:682:U:OP2	73:SX:8:ARG:HD3	2.17	0.44
49:S2:803:C:C4	49:S2:804:U:C5	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1098:C:O2	49:S2:1098:C:H2'	2.16	0.44
49:S2:1290:G:N3	81:Sf:146:LEU:CA	2.80	0.44
49:S2:1415:C:H2'	49:S2:1416:C:C5'	2.47	0.44
49:S2:1419:C:OP2	49:S2:1420:G:P	2.76	0.44
49:S2:1439:A:O2'	49:S2:1440:C:O4'	2.34	0.44
49:S2:1450:G:C6	49:S2:1451:G:C5	3.05	0.44
49:S2:1588:A:O2'	49:S2:1589:A:H5'	2.18	0.44
49:S2:1605:G:O3'	49:S2:1606:G:O4'	2.36	0.44
49:S2:1609:C:O2	49:S2:1609:C:C2'	2.65	0.44
49:S2:1846:G:C6	49:S2:1847:G:N7	2.85	0.44
53:SD:151:LYS:C	53:SD:152:PHE:CD1	2.96	0.44
53:SD:175:VAL:CG1	53:SD:182:LEU:HB2	2.47	0.44
55:SF:76:MET:O	55:SF:159:ARG:NH2	2.50	0.44
59:SJ:13:TYR:HA	59:SJ:48:PHE:CB	2.47	0.44
63:SN:114:ARG:O	63:SN:118:ILE:CD1	2.66	0.44
1:5:83:C:O5'	1:5:84:A:C2'	2.64	0.44
1:5:273:U:C2'	1:5:274:C:O5'	2.66	0.44
1:5:432:U:O4	18:O:91:LYS:HA	2.17	0.44
1:5:671:G:C6	1:5:672:C:C4	3.05	0.44
1:5:1088:C:C2	1:5:1089:G:C8	3.06	0.44
1:5:1185:G:C6	1:5:1186:U:C5	3.05	0.44
1:5:1189:G:N3	1:5:1190:C:C6	2.86	0.44
1:5:1215:C:N4	1:5:1216:C:H5	2.16	0.44
1:5:1246:G:C5	1:5:1247:U:C6	3.04	0.44
1:5:1358:G:OP1	1:5:1506:G:O2'	2.34	0.44
1:5:1370:G:H5''	1:5:1371:A:OP1	2.17	0.44
1:5:1411:C:O2	1:5:1411:C:H2'	2.16	0.44
1:5:1451:G:OP1	1:5:1718:C:C4	2.70	0.44
1:5:1473:U:N3	1:5:1474:C:C5	2.85	0.44
1:5:1492:G:C2	1:5:1493:G:C4	3.06	0.44
1:5:1577:G:N3	1:5:1577:G:C3'	2.81	0.44
1:5:2074:C:H2'	1:5:2075:G:O4'	2.17	0.44
1:5:2316:G:C2	1:5:2324:C:O2	2.71	0.44
1:5:2438:A:N6	1:5:2441:C:N3	2.65	0.44
1:5:2460:A:C1'	17:N:94:PHE:CE1	3.01	0.44
1:5:2715:G:C5	1:5:2716:C:C5	3.05	0.44
1:5:2732:G:C6	1:5:2733:C:C4	3.05	0.44
1:5:3633:C:N3	1:5:3634:G:N7	2.66	0.44
1:5:3717:A:C2'	1:5:3718:A:O5'	2.64	0.44
1:5:3771:C:N4	1:5:3776:G:H22	2.15	0.44
1:5:3845:A:N3	1:5:3845:A:H2'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3857:G:C6	1:5:3858:C:C6	3.05	0.44
1:5:3861:A:C2	1:5:3862:A:C4	3.06	0.44
1:5:4236:G:C2'	1:5:4237:C:O4'	2.66	0.44
1:5:4281:A:C2	1:5:4283:G:C4	3.03	0.44
1:5:4283:G:C6	1:5:4284:C:C4	3.03	0.44
1:5:4292:A:O4'	1:5:4330:G:O4'	2.36	0.44
1:5:4355:G:N1	1:5:4356:G:C5	2.85	0.44
1:5:4750:G:O6	1:5:4949:G:C5	2.70	0.44
1:5:4953:G:H2'	1:5:4954:G:O4'	2.16	0.44
3:8:49:G:C2	3:8:50:C:C2	3.06	0.44
5:B:315:ASN:OD1	5:B:326:VAL:HG12	2.18	0.44
6:C:41:HIS:CD2	6:C:41:HIS:C	2.96	0.44
8:E:224:GLN:HA	8:E:229:PHE:HB2	1.99	0.44
10:G:182:CYS:HA	10:G:226:TYR:CD2	2.52	0.44
10:G:261:LEU:CD2	10:G:264:LYS:NZ	2.79	0.44
11:H:122:TYR:C	11:H:122:TYR:CD1	2.96	0.44
14:K:52:ASP:O	14:K:53:TRP:CD1	2.70	0.44
14:K:106:PHE:HA	14:K:109:ILE:HB	2.00	0.44
21:R:9:ARG:HH12	21:R:10:LEU:CD1	2.31	0.44
34:e:47:ARG:HD2	34:e:49:PHE:CE2	2.53	0.44
39:j:17:THR:CG2	39:j:29:LEU:HD21	2.48	0.44
42:m:88:LYS:HA	42:m:92:ASP:OD1	2.17	0.44
48:4:12:ILE:HG21	48:4:99:LEU:HB2	1.99	0.44
48:4:64:GLN:NE2	48:4:64:GLN:CA	2.78	0.44
48:4:580:ARG:HB2	48:4:741:MET:HE3	2.00	0.44
48:4:713:ALA:O	48:4:716:ARG:C	2.61	0.44
48:4:754:GLN:HG3	48:4:754:GLN:H	1.45	0.44
49:S2:56:G:O6	49:S2:90:G:N1	2.50	0.44
49:S2:56:G:O6	49:S2:90:G:N2	2.43	0.44
49:S2:100:U:C2'	49:S2:101:U:O5'	2.65	0.44
49:S2:381:C:N4	58:SI:49:ARG:CG	2.80	0.44
49:S2:421:G:C4	49:S2:422:U:C4	3.06	0.44
49:S2:447:A:C4	49:S2:449:A:H1'	2.52	0.44
49:S2:447:A:P	58:SI:49:ARG:HE	2.40	0.44
49:S2:794:A:C2	49:S2:795:A:H1'	2.53	0.44
49:S2:915:G:O2'	49:S2:916:A:H5'	2.17	0.44
49:S2:936:G:C2	49:S2:1007:C:C2	3.05	0.44
49:S2:989:C:N3	49:S2:1001:A:C6	2.83	0.44
49:S2:1129:G:H3'	49:S2:1130:G:C8	2.52	0.44
49:S2:1137:U:N3	49:S2:1148:A:N6	2.59	0.44
49:S2:1299:A:O2'	49:S2:1300:U:H3'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1334:G:O3'	53:SD:183:GLY:HA3	2.18	0.44
49:S2:1341:C:H5'	49:S2:1343:U:H1'	2.00	0.44
49:S2:1597:C:C2'	49:S2:1598:G:O4'	2.65	0.44
49:S2:1662:U:C5'	49:S2:1663:A:OP2	2.66	0.44
49:S2:1684:C:C2	49:S2:1685:U:C6	3.06	0.44
49:S2:1709:G:C5	49:S2:1710:C:C5	3.05	0.44
53:SD:162:ASP:O	53:SD:163:PRO:C	2.60	0.44
56:SG:220:ALA:HA	56:SG:223:LYS:HB2	2.00	0.44
59:SJ:32:ILE:HG23	59:SJ:37:LEU:HB3	2.00	0.44
67:SR:99:ASP:O	67:SR:103:LYS:N	2.49	0.44
72:SW:37:PHE:CD1	72:SW:37:PHE:C	2.95	0.44
74:SY:23:MET:SD	74:SY:23:MET:N	2.91	0.44
74:SY:108:LYS:O	74:SY:111:LYS:HG3	2.18	0.44
77:Sb:13:GLU:HG3	77:Sb:14:GLU:N	2.32	0.44
1:5:32:G:H2'	1:5:33:A:O5'	2.18	0.44
1:5:37:U:C4	1:5:38:A:N7	2.85	0.44
1:5:102:G:C2	1:5:103:G:C5	3.06	0.44
1:5:111:C:O2	1:5:331:G:C2	2.70	0.44
1:5:176:G:C4	1:5:261:G:C2	3.06	0.44
1:5:278:G:H4'	1:5:279:A:OP2	2.17	0.44
1:5:341:G:C2	1:5:342:G:C8	3.06	0.44
1:5:341:G:H2'	1:5:341:G:N3	2.32	0.44
1:5:479:G:N3	1:5:480:C:C6	2.86	0.44
1:5:483:G:N2	1:5:484:U:N3	2.66	0.44
1:5:709:C:H2'	1:5:710:G:O4'	2.18	0.44
1:5:726:G:O2'	1:5:727:C:H5'	2.18	0.44
1:5:973:G:H1	1:5:1282:G:H1'	1.83	0.44
1:5:1391:A:C4	1:5:1392:A:C8	3.06	0.44
1:5:1413:C:C2	1:5:1414:C:C6	3.05	0.44
1:5:1551:C:C3'	1:5:1552:G:O4'	2.65	0.44
1:5:1691:G:C5	1:5:1692:C:C6	3.06	0.44
1:5:1692:C:C4	1:5:1693:U:C5	3.06	0.44
1:5:1865:G:OP1	12:I:119:PHE:HA	2.17	0.44
1:5:1928:C:N4	18:O:133:ARG:CZ	2.81	0.44
1:5:1970:A:N6	1:5:2016:C:OP2	2.44	0.44
1:5:1984:A:H62	1:5:2011:C:C4'	2.31	0.44
1:5:1988:G:H2'	1:5:1988:G:N3	2.33	0.44
1:5:2360:A:O4'	1:5:2362:U:C6	2.71	0.44
1:5:2543:A:H2	1:5:2773:G:N1	2.14	0.44
1:5:2614:C:C2	1:5:2726:G:N1	2.85	0.44
1:5:2651:C:O2'	36:g:54:ARG:NH2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2701:U:N3	1:5:2702:C:C5	2.85	0.44
1:5:2769:U:H3	1:5:2770:C:N4	2.16	0.44
1:5:2783:A:N3	1:5:2784:C:C6	2.86	0.44
1:5:2823:G:N7	21:R:20:LYS:HD3	2.33	0.44
1:5:3807:A:C2	1:5:3808:C:C6	3.05	0.44
1:5:3830:A:C2	1:5:3831:U:C6	3.06	0.44
1:5:3878:C:N4	1:5:4518:A:N3	2.64	0.44
1:5:4099:G:C6	1:5:4100:C:C5	3.05	0.44
1:5:4123:C:P	36:g:90:ARG:HH12	2.41	0.44
1:5:4177:C:C2	1:5:4178:A:C8	3.05	0.44
1:5:4209:G:H5''	1:5:4275:G:O2'	2.17	0.44
1:5:4297:G:N1	1:5:4298:A:C8	2.86	0.44
1:5:4513:A:O2'	1:5:4514:G:H5'	2.18	0.44
1:5:4535:A:C2	1:5:4536:C:C6	3.05	0.44
1:5:4547:C:O3'	1:5:4548:A:H8	2.00	0.44
1:5:4568:A:N3	19:P:69:ARG:NH2	2.65	0.44
1:5:4599:A:N6	1:5:4610:A:C8	2.86	0.44
1:5:4646:U:OP1	21:R:58:HIS:HA	2.18	0.44
1:5:4659:G:N1	1:5:4660:G:C5	2.85	0.44
1:5:4877:G:O2'	1:5:4878:C:O5'	2.32	0.44
2:7:39:C:C5	13:J:49:VAL:HG21	2.52	0.44
2:7:55:A:H2'	2:7:56:G:H5'	2.00	0.44
5:B:264:PHE:HD2	18:O:66:PRO:HD3	1.82	0.44
9:F:95:ILE:HG22	9:F:96:ARG:O	2.17	0.44
9:F:237:ASN:HD21	9:F:238:ARG:C	2.25	0.44
10:G:157:ILE:HG23	10:G:167:VAL:HG11	1.99	0.44
20:Q:88:ASP:OD1	20:Q:109:ALA:CA	2.66	0.44
21:R:98:ARG:NH1	21:R:133:LYS:HB2	2.31	0.44
21:R:163:ARG:CZ	49:S2:871:U:N3	2.81	0.44
22:S:29:ARG:NH1	22:S:29:ARG:CG	2.80	0.44
24:U:101:ARG:HH11	24:U:101:ARG:HG3	1.81	0.44
29:Z:17:ARG:HG2	29:Z:18:TYR:CE1	2.53	0.44
33:d:87:ARG:CB	33:d:87:ARG:CZ	2.95	0.44
39:j:58:THR:O	39:j:59:THR:C	2.60	0.44
46:q:13:TYR:OH	46:q:56:GLY:CA	2.62	0.44
46:q:18:ILE:HG13	46:q:66:ARG:HB2	1.99	0.44
46:q:63:LYS:HD3	46:q:78:LEU:HD13	2.00	0.44
46:q:127:ASN:C	46:q:129:GLY:N	2.74	0.44
48:4:27:HIS:HB3	48:4:30:HIS:NE2	2.32	0.44
48:4:388:CYS:O	48:4:390:PRO:HD3	2.18	0.44
48:4:670:GLN:O	48:4:673:ASN:CG	2.54	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:800:LEU:HD23	48:4:808:ALA:O	2.17	0.44
49:S2:28:U:C2	49:S2:29:G:N7	2.86	0.44
49:S2:140:C:H2'	49:S2:178:C:H1'	1.98	0.44
49:S2:185:G:C6	49:S2:186:C:C4	3.05	0.44
49:S2:200:G:C5	49:S2:201:C:C5	3.05	0.44
49:S2:309:G:N3	49:S2:309:G:H2'	2.32	0.44
49:S2:418:A:H2'	49:S2:418:A:N3	2.33	0.44
49:S2:823:U:N3	74:SY:64:PHE:CE2	2.85	0.44
49:S2:839:C:H2'	49:S2:839:C:O2	2.17	0.44
49:S2:951:C:N3	49:S2:952:G:C8	2.85	0.44
49:S2:963:A:C2	49:S2:964:A:C4	3.05	0.44
49:S2:978:G:C4	49:S2:979:C:C6	3.05	0.44
49:S2:988:C:C4	49:S2:989:C:C4	3.06	0.44
49:S2:1171:G:O2'	49:S2:1187:G:C6	2.70	0.44
49:S2:1220:A:C2	49:S2:1678:A:H1'	2.52	0.44
49:S2:1234:C:C2	49:S2:1235:G:C8	3.06	0.44
49:S2:1458:G:C2	49:S2:1459:G:C8	3.06	0.44
49:S2:1495:G:C6	49:S2:1496:U:C2	3.06	0.44
49:S2:1524:G:C6	49:S2:1525:C:C5	3.05	0.44
49:S2:1524:G:C5	49:S2:1525:C:C5	3.06	0.44
49:S2:1617:G:C5	49:S2:1619:A:OP2	2.71	0.44
49:S2:1639:G:H2'	49:S2:1639:G:N3	2.33	0.44
49:S2:1686:G:C4	49:S2:1687:C:C6	3.05	0.44
49:S2:1732:G:C5	49:S2:1733:U:C5	3.05	0.44
51:SB:172:MET:CE	51:SB:212:VAL:HG12	2.47	0.44
56:SG:29:GLU:HA	56:SG:101:ILE:HG23	1.99	0.44
61:SL:111:VAL:HG23	61:SL:140:PHE:HB3	1.99	0.44
68:SS:77:TYR:C	68:SS:78:LYS:HD2	2.42	0.44
82:Sg:131:LEU:O	82:Sg:139:LYS:N	2.47	0.44
1:5:234:G:O2'	1:5:235:A:H5'	2.18	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
1:5:349:A:C6	6:C:45:ARG:NH2	2.86	0.44
1:5:483:G:N2	1:5:484:U:C4	2.85	0.44
1:5:672:C:C2	1:5:673:C:C6	3.05	0.44
1:5:732:A:C2	1:5:733:A:C1'	3.00	0.44
1:5:738:C:H2'	1:5:739:G:C8	2.52	0.44
1:5:744:G:H2'	1:5:745:G:C8	2.52	0.44
1:5:1169:G:C6	1:5:1170:G:N7	2.85	0.44
1:5:1184:A:C6	1:5:1185:G:N7	2.86	0.44
1:5:1201:U:C4	1:5:1202:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1266:G:C2	1:5:1268:G:O6	2.71	0.44
1:5:1416:G:C2	1:5:1417:C:C2	3.05	0.44
1:5:1430:C:C4	1:5:1431:C:C5	3.06	0.44
1:5:1491:A:N1	1:5:1492:G:C6	2.86	0.44
1:5:1563:A:C5	49:S2:677:G:O2'	2.71	0.44
1:5:1577:G:O4'	4:A:181:LYS:HE3	2.18	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
1:5:1638:A:H4'	1:5:1639:U:OP2	2.18	0.44
1:5:1843:A:C2	1:5:1844:G:N9	2.85	0.44
1:5:1851:G:O5'	1:5:1851:G:H8	2.00	0.44
1:5:1937:C:C2'	1:5:1938:C:H2'	2.48	0.44
1:5:2018:C:O2	1:5:2019:C:C6	2.70	0.44
1:5:2281:U:C4'	34:e:46:ARG:NH2	2.79	0.44
1:5:2405:G:H8	1:5:2405:G:O5'	2.01	0.44
1:5:2446:C:H2'	1:5:2447:U:H6	1.74	0.44
1:5:2451:A:C6	1:5:2452:G:N9	2.86	0.44
1:5:2588:C:C6	1:5:2588:C:C3'	3.01	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
1:5:2657:G:H2'	1:5:2658:G:C8	2.53	0.44
1:5:2697:A:C2	1:5:2698:G:C8	3.05	0.44
1:5:2744:A:C2'	1:5:2745:A:C8	2.99	0.44
1:5:2851:G:HO2'	1:5:3841:C:C4'	2.29	0.44
1:5:2857:A:C4	1:5:2858:A:C5	3.06	0.44
1:5:3655:C:O2	1:5:3655:C:H2'	2.16	0.44
1:5:3658:C:H2'	1:5:3659:G:C8	2.52	0.44
1:5:3751:G:C6	1:5:3752:C:C4	3.05	0.44
1:5:3777:G:O2'	1:5:3815:G:O6	2.24	0.44
1:5:3854:C:C4	1:5:3855:C:C5	3.05	0.44
1:5:3922:G:C2	1:5:4542:U:C5	3.06	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
1:5:4277:G:C4	1:5:4278:C:C5	3.05	0.44
1:5:4464:A:H5'	1:5:4464:A:C4	2.52	0.44
1:5:4483:C:C4	1:5:4484:A:N7	2.85	0.44
1:5:4749:C:C5	1:5:4750:G:C2	3.05	0.44
1:5:5050:C:N3	1:5:5051:C:C6	2.86	0.44
2:7:22:A:C2	2:7:23:A:C6	3.06	0.44
2:7:28:C:H1'	2:7:55:A:N6	2.33	0.44
2:7:50:A:C6	2:7:51:G:N7	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:7:99:G:N7	22:S:55:LYS:HE3	2.33	0.44
3:8:129:C:C4	3:8:130:C:C5	3.06	0.44
3:8:149:G:C2	3:8:151:G:C5	3.05	0.44
5:B:67:VAL:HG23	25:V:14:PHE:HE2	1.81	0.44
5:B:74:GLU:HG2	5:B:334:LYS:HE3	2.00	0.44
5:B:92:TYR:HB2	5:B:159:VAL:HB	1.98	0.44
5:B:106:PHE:N	5:B:106:PHE:CD1	2.86	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
11:H:40:HIS:CD2	11:H:40:HIS:N	2.85	0.44
13:J:99:PHE:CD2	13:J:105:PHE:HB3	2.49	0.44
14:K:81:ILE:HG13	14:K:82:ILE:HG13	2.00	0.44
14:K:114:ARG:CD	14:K:130:LYS:CE	2.96	0.44
16:M:81:ASP:OD1	16:M:84:ALA:HB3	2.17	0.44
23:T:54:HIS:C	23:T:54:HIS:ND1	2.75	0.44
29:Z:4:PHE:CE2	32:c:66:LEU:HB3	2.53	0.44
46:q:135:THR:HA	46:q:138:PHE:HE1	1.81	0.44
46:q:135:THR:CA	46:q:138:PHE:CD1	3.00	0.44
48:4:58:ASP:O	48:4:63:GLU:C	2.61	0.44
48:4:587:SER:CB	48:4:735:THR:CG2	2.95	0.44
48:4:806:GLY:C	48:4:807:GLN:O	2.59	0.44
48:4:825:PHE:O	48:4:827:ASN:N	2.47	0.44
49:S2:165:G:O2'	49:S2:166:A:H8	1.98	0.44
49:S2:187:G:H3'	49:S2:188:C:H6	1.82	0.44
49:S2:191:A:H3'	49:S2:192:C:C5'	2.48	0.44
49:S2:301:A:O2'	58:SI:72:CYS:HA	2.16	0.44
49:S2:421:G:N2	49:S2:422:U:C2	2.85	0.44
49:S2:508:A:C6	49:S2:509:G:H1'	2.53	0.44
49:S2:618:C:OP1	73:SX:87:ASN:HA	2.18	0.44
49:S2:654:A:C6	49:S2:655:A:C2	3.05	0.44
49:S2:795:A:N1	49:S2:796:G:O6	2.50	0.44
49:S2:842:C:N3	49:S2:843:C:C4	2.85	0.44
49:S2:1093:A:C6	49:S2:1094:C:C4	3.06	0.44
49:S2:1227:G:N3	49:S2:1227:G:H2'	2.33	0.44
49:S2:1250:A:H2	49:S2:1339:U:C2'	2.27	0.44
49:S2:1278:A:H5'	60:SK:55:ARG:HB3	2.00	0.44
49:S2:1294:G:O4'	81:Sf:152:LYS:HA	2.18	0.44
49:S2:1335:G:C4	49:S2:1336:C:C6	3.05	0.44
49:S2:1394:G:N2	49:S2:1474:A:C8	2.86	0.44
49:S2:1406:G:C2'	49:S2:1407:U:H4'	2.47	0.44
49:S2:1418:C:H41	49:S2:1421:A:H62	1.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1452:A:N1	49:S2:1475:G:H5''	2.33	0.44
49:S2:1466:G:C6	49:S2:1467:C:N4	2.86	0.44
49:S2:1539:U:O2	49:S2:1539:U:H2'	2.17	0.44
49:S2:1570:G:C4	49:S2:1571:G:C8	3.05	0.44
49:S2:1600:G:C3'	49:S2:1601:A:C5'	2.96	0.44
49:S2:1657:G:C6	49:S2:1658:G:C5	3.04	0.44
49:S2:1694:U:H2'	49:S2:1696:C:C5	2.53	0.44
49:S2:1696:C:C2	49:S2:1697:A:C8	3.06	0.44
49:S2:1806:A:C6	49:S2:1807:C:C4	3.05	0.44
49:S2:1860:A:C6	49:S2:1862:G:N7	2.86	0.44
49:S2:1866:A:H5'	76:Sa:95:ARG:HB2	2.00	0.44
52:SC:104:ASP:OD1	52:SC:130:ILE:HG13	2.18	0.44
58:SI:104:ILE:HD11	58:SI:171:LEU:HB2	1.99	0.44
61:SL:108:ASN:OD1	61:SL:108:ASN:N	2.45	0.44
66:SQ:35:ASN:OD1	66:SQ:35:ASN:N	2.50	0.44
66:SQ:85:ARG:HD3	66:SQ:119:LEU:HD23	1.98	0.44
68:SS:78:LYS:O	68:SS:80:PRO:HD3	2.18	0.44
68:SS:135:HIS:CD2	68:SS:135:HIS:N	2.86	0.44
70:SU:24:LEU:HD23	70:SU:112:VAL:HG13	1.98	0.44
71:SV:40:ASP:O	71:SV:41:LYS:CB	2.65	0.44
72:SW:24:GLN:OE1	77:Sb:6:ASP:HA	2.18	0.44
82:Sg:197:THR:HB	82:Sg:238:ALA:HA	1.99	0.44
82:Sg:228:TYR:CE2	82:Sg:230:LEU:HD11	2.53	0.44
1:5:93:G:N2	1:5:94:A:N3	2.65	0.44
1:5:273:U:C4	1:5:274:C:N4	2.85	0.44
1:5:328:A:N1	1:5:329:A:C6	2.86	0.44
1:5:345:C:N3	1:5:346:G:N7	2.65	0.44
1:5:497:G:N1	1:5:499:G:C5	2.86	0.44
1:5:952:G:N1	1:5:953:C:C4	2.86	0.44
1:5:992:C:C2	1:5:993:G:N7	2.85	0.44
1:5:1174:G:N3	1:5:1175:A:C8	2.86	0.44
1:5:1177:U:C4'	7:D:282:GLN:HB3	2.47	0.44
1:5:1266:G:H4'	1:5:2112:G:N3	2.33	0.44
1:5:1354:A:C4	1:5:1503:A:C2	3.05	0.44
1:5:1358:G:P	6:C:114:ARG:NH2	2.91	0.44
1:5:1374:G:C2	1:5:1375:C:C2	3.06	0.44
1:5:1615:C:N3	1:5:1616:U:C6	2.86	0.44
1:5:1627:G:C4	1:5:1628:C:C6	3.05	0.44
1:5:1650:A:N6	6:C:100:ARG:HE	2.16	0.44
1:5:1668:A:OP1	31:b:18:ARG:NH1	2.51	0.44
1:5:1886:G:N1	1:5:1894:C:N4	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1916:G:C8	35:f:16:ARG:HD3	2.53	0.44
1:5:2021:G:C8	1:5:2022:C:C5	3.06	0.44
1:5:2027:U:O2'	1:5:2028:C:C4'	2.66	0.44
1:5:2278:G:H5'	20:Q:7:HIS:HE1	1.83	0.44
1:5:2339:G:C4	1:5:2340:C:C6	3.06	0.44
1:5:2394:G:O6	1:5:2819:U:OP2	2.36	0.44
1:5:2398:U:O2	1:5:2398:U:O2'	2.36	0.44
1:5:2413:U:N3	1:5:2414:G:N7	2.66	0.44
1:5:2464:C:HO2'	1:5:2465:C:C5'	2.31	0.44
1:5:2479:G:C6	1:5:2480:G:C6	3.05	0.44
1:5:2484:A:C4	1:5:2485:U:C6	3.06	0.44
1:5:2559:G:C2	1:5:2560:C:C2	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
1:5:2735:G:N2	1:5:2736:G:C4	2.86	0.44
1:5:3770:U:O2	1:5:3770:U:H2'	2.17	0.44
1:5:4098:A:C6	1:5:4099:G:C5	3.06	0.44
1:5:4107:G:C4	1:5:4108:G:C8	3.06	0.44
1:5:4150:G:C6	1:5:4151:G:C5	3.06	0.44
1:5:4167:G:N3	1:5:4168:G:C8	2.81	0.44
1:5:4243:C:O2	1:5:4243:C:C2'	2.65	0.44
1:5:4406:U:C4	1:5:4407:G:N7	2.85	0.44
1:5:4414:A:C6	1:5:4427:G:C2	2.97	0.44
1:5:4551:U:N3	1:5:4552:U:C5	2.86	0.44
1:5:4659:G:C6	1:5:4660:G:C5	3.06	0.44
1:5:5055:G:N2	1:5:5056:A:C4	2.85	0.44
2:7:6:C:H5''	7:D:54:ARG:HH21	1.82	0.44
3:8:102:G:O3'	39:j:21:ARG:HD3	2.18	0.44
3:8:103:A:H3'	3:8:104:A:H5''	2.00	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
12:I:209:TRP:CD1	12:I:209:TRP:C	2.94	0.44
14:K:102:GLY:HA3	14:K:139:VAL:C	1.91	0.44
14:K:110:VAL:O	14:K:114:ARG:CD	2.66	0.44
17:N:88:GLY:HA2	44:o:48:TYR:CD2	2.53	0.44
18:O:192:PHE:N	18:O:192:PHE:HD1	2.15	0.44
22:S:27:LEU:C	23:T:148:PRO:HB3	2.42	0.44
34:e:35:TRP:CZ3	34:e:56:PRO:CD	2.86	0.44
42:m:99:CYS:HB3	42:m:115:CYS:HB3	1.99	0.44
46:q:61:MET:CA	46:q:82:ILE:HG21	2.47	0.44
46:q:69:LEU:O	46:q:70:GLU:C	2.59	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:r:5:LEU:O	47:r:6:GLN:C	2.59	0.44
48:4:751:CYS:SG	48:4:756:VAL:HA	2.58	0.44
48:4:807:GLN:OE1	48:4:807:GLN:HA	2.18	0.44
48:4:846:GLU:N	48:4:846:GLU:CD	2.66	0.44
49:S2:46:A:C5	49:S2:99:A:C8	3.06	0.44
49:S2:217:A:N3	49:S2:217:A:H2'	2.32	0.44
49:S2:321:C:O2	49:S2:322:C:C6	2.71	0.44
49:S2:457:C:N4	49:S2:458:A:N7	2.65	0.44
49:S2:492:C:N4	49:S2:506:G:C8	2.86	0.44
49:S2:551:U:C2'	80:Se:44:ASN:OD1	2.66	0.44
49:S2:640:A:C2'	49:S2:641:A:O4'	2.66	0.44
49:S2:648:A:N3	49:S2:648:A:H2'	2.32	0.44
49:S2:673:G:C8	49:S2:1084:A:N1	2.86	0.44
49:S2:872:A:N6	49:S2:914:U:C5	2.78	0.44
49:S2:995:G:N2	49:S2:997:A:C8	2.81	0.44
49:S2:1063:C:O2	49:S2:1063:C:C2'	2.60	0.44
49:S2:1203:G:C4	49:S2:1204:A:N7	2.86	0.44
49:S2:1407:U:C3'	49:S2:1408:U:H6	2.31	0.44
49:S2:1415:C:C2	49:S2:1416:C:C1'	3.01	0.44
50:SA:155:ARG:HB3	50:SA:156:TYR:CD2	2.51	0.44
50:SA:180:ARG:HD2	50:SA:184:ARG:HD2	2.00	0.44
53:SD:153:VAL:HG12	53:SD:154:ASP:N	2.33	0.44
54:SE:87:MET:HE3	54:SE:123:LEU:HB2	1.99	0.44
54:SE:104:ASP:OD1	54:SE:110:ALA:HB2	2.18	0.44
59:SJ:78:LEU:HD22	59:SJ:92:MET:HA	1.99	0.44
60:SK:81:ASP:OD1	60:SK:81:ASP:C	2.61	0.44
68:SS:39:ARG:NH2	69:ST:38:LYS:HD3	2.33	0.44
68:SS:120:HIS:CD2	68:SS:124:ARG:HD2	2.53	0.44
69:ST:18:LEU:HB3	69:ST:58:ALA:HB1	2.00	0.44
69:ST:23:LYS:HD3	69:ST:54:TYR:CD1	2.52	0.44
1:5:33:A:H5'	17:N:86:HIS:CD2	2.53	0.44
1:5:127:G:C6	1:5:128:C:N4	2.86	0.44
1:5:279:A:H3'	1:5:279:A:OP1	2.18	0.44
1:5:382:G:N2	1:5:384:A:H2'	2.32	0.44
1:5:445:U:C5	1:5:446:C:C5	3.06	0.44
1:5:482:G:H2'	1:5:483:G:C8	2.53	0.44
1:5:978:G:C4	1:5:979:C:C6	3.05	0.44
1:5:1219:G:C4	1:5:1220:G:C8	3.06	0.44
1:5:1221:G:N2	1:5:1233:G:C8	2.86	0.44
1:5:1293:G:H8	1:5:1293:G:C5'	2.31	0.44
1:5:1324:A:C2'	1:5:1326:A:OP1	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1613:A:H3'	1:5:1614:C:H5'	2.00	0.44
1:5:1621:A:O2'	1:5:1622:U:H5'	2.18	0.44
1:5:1684:A:N6	1:5:1685:G:N7	2.65	0.44
1:5:1752:G:C5	1:5:1753:G:N7	2.86	0.44
1:5:1858:A:N3	1:5:1859:C:C6	2.86	0.44
1:5:1886:G:C2	1:5:1894:C:C2	3.02	0.44
1:5:1989:G:C2	1:5:1990:A:N7	2.85	0.44
1:5:2328:G:C6	1:5:2329:U:C4	3.06	0.44
1:5:2556:G:C2	1:5:2572:C:N3	2.86	0.44
1:5:2559:G:C5	1:5:2560:C:C5	3.06	0.44
1:5:2821:U:OP1	21:R:21:LYS:NZ	2.44	0.44
1:5:2832:A:C2'	1:5:2833:A:H5''	2.32	0.44
1:5:3759:A:N6	49:S2:1709:G:C4'	2.81	0.44
1:5:4413:C:H2'	1:5:4414:A:C1'	2.47	0.44
1:5:4489:G:C4	1:5:4490:C:C6	3.06	0.44
1:5:4543:G:O2'	1:5:4544:A:H5'	2.18	0.44
1:5:4760:G:O2'	1:5:4761:G:H5'	2.17	0.44
2:7:44:C:N3	2:7:45:U:C4	2.86	0.44
3:8:56:G:C2	3:8:57:C:C2	3.06	0.44
3:8:118:C:N3	3:8:119:C:C6	2.76	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
4:A:182:ALA:O	4:A:183:GLY:C	2.59	0.44
4:A:202:VAL:HA	4:A:211:PHE:O	2.18	0.44
4:A:233:ARG:O	4:A:235:VAL:N	2.51	0.44
5:B:40:PRO:O	5:B:187:GLY:HA2	2.18	0.44
5:B:116:ARG:CB	5:B:177:LYS:HA	2.47	0.44
6:C:57:LEU:O	6:C:58:ALA:C	2.61	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:229:PHE:C	9:F:229:PHE:CD1	2.96	0.44
11:H:156:ASN:ND2	11:H:157:SER:N	2.65	0.44
13:J:166:PHE:CZ	13:J:172:GLY:HA3	2.52	0.44
14:K:28:LEU:HD13	14:K:29:ALA:N	2.32	0.44
16:M:112:VAL:HG11	18:O:201:PHE:CE2	2.53	0.44
17:N:68:ARG:NH1	17:N:123:GLU:HG3	2.33	0.44
29:Z:83:THR:HB	36:g:95:PHE:CZ	2.53	0.44
33:d:85:ARG:HD3	33:d:109:VAL:HG21	2.00	0.44
35:f:48:ALA:HB2	35:f:71:TRP:CZ3	2.53	0.44
39:j:76:HIS:C	39:j:79:ARG:NH1	2.76	0.44
43:n:4:LYS:HB2	49:S2:1842:C:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:q:18:ILE:HD11	46:q:69:LEU:HD21	2.00	0.44
46:q:145:THR:OG1	48:4:183:GLU:OE2	2.36	0.44
46:q:168:GLY:C	46:q:171:GLU:CG	2.87	0.44
48:4:36:THR:O	48:4:40:VAL:HG23	2.17	0.44
48:4:161:ASP:O	48:4:165:LEU:HD23	2.18	0.44
48:4:452:LEU:HD11	48:4:461:ILE:HD13	1.98	0.44
48:4:588:ASN:OD1	48:4:589:VAL:CG2	2.63	0.44
48:4:694:GLU:N	48:4:839:ARG:HH21	2.14	0.44
48:4:759:ILE:CD1	48:4:784:VAL:HG23	2.27	0.44
49:S2:10:G:N7	49:S2:1697:A:N3	2.65	0.44
49:S2:118:C:N3	49:S2:119:U:C6	2.85	0.44
49:S2:384:U:O2'	61:SL:135:SER:O	2.35	0.44
49:S2:421:G:C2	49:S2:422:U:C2	3.05	0.44
49:S2:495:U:O2'	49:S2:496:C:C4'	2.65	0.44
49:S2:506:G:OP1	74:SY:108:LYS:CE	2.64	0.44
49:S2:839:C:O2	49:S2:839:C:C2'	2.66	0.44
49:S2:968:U:HO2'	49:S2:972:A:H1'	1.83	0.44
49:S2:1058:A:N3	49:S2:1058:A:H2'	2.33	0.44
49:S2:1112:U:O2	49:S2:1113:A:O4'	2.36	0.44
49:S2:1113:A:H2'	49:S2:1114:U:H3'	1.98	0.44
49:S2:1130:G:N3	49:S2:1130:G:H2'	2.33	0.44
49:S2:1167:G:H2'	49:S2:1168:G:O5'	2.17	0.44
49:S2:1203:G:H3'	49:S2:1204:A:H8	1.82	0.44
49:S2:1224:G:C6	49:S2:1225:U:N1	2.86	0.44
49:S2:1293:A:OP2	81:Sf:151:ASN:OD1	2.36	0.44
49:S2:1406:G:C2'	49:S2:1407:U:C4'	2.93	0.44
49:S2:1432:U:O2	49:S2:1433:C:C5	2.70	0.44
49:S2:1504:U:H2'	49:S2:1505:U:O4'	2.18	0.44
49:S2:1508:A:C6	49:S2:1510:G:C8	3.05	0.44
49:S2:1696:C:O2	49:S2:1696:C:C2'	2.53	0.44
54:SE:56:LEU:HD11	74:SY:74:MET:HE1	2.00	0.44
55:SF:17:ILE:HD11	55:SF:26:ASP:HB2	2.00	0.44
55:SF:54:GLY:HA2	55:SF:56:TYR:CE2	2.53	0.44
57:SH:61:ILE:CD1	57:SH:93:VAL:HG13	2.46	0.44
60:SK:2:LEU:HB3	60:SK:8:ARG:HH21	1.77	0.44
61:SL:2:ALA:O	61:SL:3:ASP:HB3	2.18	0.44
62:SM:19:GLN:HG2	62:SM:88:TRP:CB	2.48	0.44
1:5:3:C:C2	1:5:4:G:C8	3.06	0.44
1:5:21:G:C4	3:8:36:G:N2	2.85	0.44
1:5:43:U:C5	1:5:44:A:N7	2.85	0.44
1:5:111:C:H1'	1:5:331:G:N2	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:159:C:H1'	15:L:78:LEU:HD11	1.99	0.44
1:5:450:G:O2'	1:5:453:G:P	2.76	0.44
1:5:457:G:N2	1:5:458:C:C6	2.86	0.44
1:5:469:C:C4	1:5:470:A:N7	2.86	0.44
1:5:1065:G:H2'	1:5:1066:G:C8	2.53	0.44
1:5:1086:C:C2	1:5:1212:G:C2	3.06	0.44
1:5:1236:C:O2'	1:5:1237:C:O5'	2.32	0.44
1:5:1239:C:C4'	1:5:1240:G:O5'	2.65	0.44
1:5:1266:G:C5'	1:5:1266:G:C8	3.01	0.44
1:5:1268:G:N9	1:5:2111:G:C4	2.86	0.44
1:5:1290:G:H2'	1:5:1291:G:H5''	2.00	0.44
1:5:1341:U:C2	1:5:1342:A:C8	3.05	0.44
1:5:1374:G:C6	1:5:1375:C:C5	3.05	0.44
1:5:1492:G:N3	1:5:1493:G:C8	2.86	0.44
1:5:1545:G:N1	1:5:1546:C:C4	2.86	0.44
1:5:1554:A:N3	1:5:1554:A:H2'	2.33	0.44
1:5:1656:U:C2	1:5:1657:G:C8	3.06	0.44
1:5:1800:U:H6	1:5:1800:U:H5''	1.83	0.44
1:5:1865:G:C6	1:5:1867:A:OP2	2.71	0.44
1:5:2050:G:C6	1:5:2051:C:C4	3.06	0.44
1:5:2056:G:C6	1:5:2058:G:C8	3.06	0.44
1:5:2091:C:OP2	1:5:2259:G:C8	2.71	0.44
1:5:2279:A:H2'	1:5:2280:G:C8	2.53	0.44
1:5:2315:G:C2	1:5:2316:G:N9	2.86	0.44
1:5:2382:A:N3	1:5:2382:A:C2'	2.81	0.44
1:5:2508:U:H2'	1:5:2509:C:H6	1.83	0.44
1:5:2545:U:C5	1:5:2546:G:H4'	2.53	0.44
1:5:2712:G:C2	1:5:2713:C:C2	3.06	0.44
1:5:2855:G:N2	1:5:2859:G:N2	2.66	0.44
1:5:3595:U:O2'	21:R:114:LYS:HA	2.17	0.44
1:5:3688:U:O2	1:5:3689:G:C8	2.70	0.44
1:5:3742:G:N2	1:5:3743:G:C4	2.86	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
1:5:3842:C:OP2	1:5:3843:C:O2'	2.27	0.44
1:5:3844:U:N3	1:5:3845:A:C8	2.86	0.44
1:5:4087:G:H21	10:G:49:ARG:HD2	1.83	0.44
1:5:4092:G:C2	1:5:4093:G:N3	2.85	0.44
1:5:4114:C:C3'	1:5:4115:G:O4'	2.61	0.44
1:5:4131:G:C5	1:5:4132:C:C5	3.06	0.44
1:5:4197:G:C6	1:5:4198:G:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4215:C:N4	1:5:4216:G:C6	2.86	0.44
1:5:4235:G:C2'	1:5:4236:G:O5'	2.62	0.44
1:5:4335:C:H2'	1:5:4336:A:C1'	2.47	0.44
1:5:4336:A:H5'	1:5:4337:C:O5'	2.18	0.44
1:5:4405:G:N7	1:5:4406:U:C5	2.86	0.44
1:5:4518:A:H3'	1:5:4519:C:H5'	1.99	0.44
1:5:4535:A:N6	1:5:4536:C:C5	2.85	0.44
1:5:4653:C:N3	1:5:4654:C:C4	2.86	0.44
1:5:4862:G:H2'	1:5:4863:G:O4'	2.18	0.44
1:5:4981:G:H1'	19:P:69:ARG:NH1	2.32	0.44
1:5:5002:U:O2'	1:5:5003:U:H5'	2.18	0.44
1:5:5031:G:C6	1:5:5032:C:C4	3.06	0.44
3:8:58:G:O6	39:j:63:ARG:NH1	2.51	0.44
3:8:120:G:N1	3:8:121:G:C5	2.86	0.44
3:8:131:G:O6	3:8:132:G:N7	2.50	0.44
5:B:17:LEU:HD22	5:B:17:LEU:O	2.17	0.44
5:B:264:PHE:CD2	18:O:66:PRO:HD2	2.52	0.44
6:C:265:GLY:C	6:C:266:THR:O	2.57	0.44
7:D:147:ASP:OD1	7:D:147:ASP:C	2.61	0.44
8:E:181:PRO:HA	8:E:246:GLN:NE2	2.17	0.44
13:J:146:ARG:O	13:J:147:ARG:C	2.61	0.44
14:K:38:SER:OG	14:K:39:PRO:N	2.50	0.44
18:O:108:ILE:HG23	18:O:160:ARG:HD2	1.99	0.44
21:R:131:VAL:HG23	21:R:132:PHE:CE2	2.52	0.44
24:U:26:THR:HA	24:U:68:SER:CB	2.48	0.44
30:a:73:VAL:CG2	30:a:108:TYR:CG	3.01	0.44
35:f:4:ARG:O	35:f:5:LEU:HB2	2.17	0.44
44:o:37:GLY:HA2	44:o:40:ARG:NH2	2.33	0.44
46:q:133:GLU:O	46:q:135:THR:N	2.51	0.44
48:4:6:VAL:H	48:4:6:VAL:HG22	1.34	0.44
48:4:113:SER:CB	48:4:499:PHE:CG	3.01	0.44
48:4:114:GLU:HA	48:4:532:PRO:CB	2.35	0.44
48:4:425:LEU:HD23	48:4:426:LYS:H	1.78	0.44
48:4:744:ILE:CG2	48:4:745:TYR:N	2.73	0.44
48:4:744:ILE:O	48:4:745:TYR:CG	2.70	0.44
49:S2:4:C:H2'	49:S2:4:C:O2	2.17	0.44
49:S2:4:C:C2	49:S2:5:U:C5	3.06	0.44
49:S2:5:U:O2	49:S2:5:U:H2'	2.18	0.44
49:S2:46:A:H2'	49:S2:99:A:O4'	2.18	0.44
49:S2:217:A:N1	49:S2:218:U:C6	2.86	0.44
49:S2:217:A:C4	49:S2:309:G:O6	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:441:C:H6	49:S2:448:A:C2	2.36	0.44
49:S2:448:A:C8	58:SI:26:LYS:N	2.86	0.44
49:S2:478:G:N2	49:S2:479:C:C2	2.86	0.44
49:S2:496:C:C5'	54:SE:29:PRO:HA	2.47	0.44
49:S2:584:G:C5	49:S2:585:C:C5	3.06	0.44
49:S2:807:G:N3	49:S2:808:A:C8	2.85	0.44
49:S2:873:G:O6	49:S2:912:C:N3	2.51	0.44
49:S2:1063:C:C1'	49:S2:1838:U:C4	3.00	0.44
49:S2:1087:A:C5	49:S2:1861:G:C6	3.06	0.44
49:S2:1250:A:N3	49:S2:1339:U:C1'	2.81	0.44
49:S2:1253:A:N3	49:S2:1666:C:O4'	2.49	0.44
49:S2:1259:A:H5''	49:S2:1260:A:OP2	2.18	0.44
49:S2:1271:C:C2	49:S2:1272:C:C6	3.06	0.44
49:S2:1277:C:H3'	49:S2:1278:A:H8	1.83	0.44
49:S2:1347:U:C4	49:S2:1362:U:O4	2.71	0.44
49:S2:1373:C:H4'	67:SR:10:LYS:HE3	2.00	0.44
49:S2:1449:G:C4	49:S2:1450:G:C8	3.05	0.44
49:S2:1491:G:H2'	49:S2:1492:U:O4'	2.18	0.44
49:S2:1714:U:H2'	49:S2:1715:A:C8	2.52	0.44
49:S2:1725:U:C2	49:S2:1726:G:C8	3.06	0.44
49:S2:1839:U:H2'	49:S2:1840:U:C6	2.52	0.44
49:S2:1862:G:O6	76:Sa:34:LYS:NZ	2.49	0.44
49:S2:1869:A:H2'	76:Sa:41:ILE:CD1	2.47	0.44
54:SE:100:ARG:O	54:SE:101:LEU:HB2	2.18	0.44
55:SF:33:ILE:HG21	78:Sc:11:LEU:HD13	1.98	0.44
56:SG:121:ILE:HG22	56:SG:124:LEU:HB3	1.99	0.44
65:SP:10:ARG:HG3	65:SP:10:ARG:HH11	1.83	0.44
71:SV:20:SER:HB3	71:SV:59:ILE:HD11	1.99	0.44
1:5:1:C:O2	1:5:1:C:O2'	2.26	0.43
1:5:88:A:O2'	1:5:89:C:C5'	2.65	0.43
1:5:90:G:N3	1:5:95:G:C2	2.86	0.43
1:5:127:G:C2	1:5:128:C:C5	3.05	0.43
1:5:318:A:H2'	1:5:319:A:C8	2.53	0.43
1:5:343:C:C2	1:5:344:A:C8	3.06	0.43
1:5:397:G:H22	19:P:22:LEU:HD22	1.83	0.43
1:5:446:C:C4	1:5:447:C:C5	3.05	0.43
1:5:732:A:C2	1:5:733:A:H1'	2.53	0.43
1:5:1247:U:N3	1:5:1248:C:C4	2.85	0.43
1:5:1264:C:O2'	1:5:2114:G:OP2	2.36	0.43
1:5:1277:G:N2	1:5:1278:C:N1	2.66	0.43
1:5:1360:G:H2'	1:5:1361:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1362:G:N3	1:5:1363:C:C6	2.86	0.43
1:5:1397:A:HO2'	1:5:1398:A:C5'	2.31	0.43
1:5:1436:C:O2'	1:5:2097:U:OP2	2.36	0.43
1:5:1547:A:C5	1:5:1582:U:H1'	2.53	0.43
1:5:1584:G:C5	1:5:1585:C:C5	3.06	0.43
1:5:1617:G:H3'	1:5:1618:G:H8	1.82	0.43
1:5:2100:A:C6	1:5:2101:C:H1'	2.53	0.43
1:5:2108:G:C6	1:5:2109:G:C4	3.05	0.43
1:5:2287:G:C2	1:5:2288:G:H1'	2.53	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
1:5:2372:U:H2'	1:5:2373:C:H6	1.83	0.43
1:5:2503:G:H1'	1:5:4084:G:C2	2.53	0.43
1:5:2698:G:C2	1:5:2699:C:C2	3.06	0.43
1:5:2851:G:C6	1:5:2852:U:C1'	3.00	0.43
1:5:2851:G:O2'	1:5:3841:C:H4'	2.18	0.43
1:5:2898:G:C2	1:5:2899:C:C2	3.06	0.43
1:5:3876:A:O2'	1:5:3877:A:P	2.76	0.43
1:5:3883:U:H2'	1:5:3884:U:O5'	2.18	0.43
1:5:4115:G:H5'	1:5:4116:C:OP1	2.18	0.43
1:5:4199:C:C2	1:5:4199:C:C3'	2.96	0.43
1:5:4275:G:O6	1:5:4276:G:N7	2.48	0.43
1:5:4333:C:O2	1:5:4334:U:C6	2.71	0.43
1:5:4508:C:N3	1:5:4512:U:C5	2.76	0.43
1:5:4581:G:N2	1:5:4582:C:C4	2.85	0.43
1:5:4712:C:OP1	18:O:74:ARG:NH2	2.51	0.43
1:5:4730:C:H1'	1:5:4731:G:H3'	1.99	0.43
1:5:4869:U:H5'	1:5:4870:G:N2	2.32	0.43
1:5:4904:G:C4	1:5:4905:C:C5	3.06	0.43
2:7:66:G:H2'	2:7:67:C:H6	1.83	0.43
3:8:93:C:O3'	3:8:94:G:C8	2.71	0.43
4:A:77:ILE:CD1	4:A:128:ARG:HB2	2.48	0.43
5:B:47:LEU:HD13	5:B:181:MET:SD	2.58	0.43
8:E:95:ASP:OD1	8:E:95:ASP:C	2.60	0.43
8:E:271:PHE:O	8:E:272:ALA:HB2	2.18	0.43
10:G:73:ARG:HH11	10:G:73:ARG:HB2	1.83	0.43
13:J:154:LYS:O	13:J:155:HIS:CB	2.66	0.43
15:L:6:ASN:N	30:a:48:TYR:HD2	2.15	0.43
16:M:96:GLU:OE1	16:M:96:GLU:O	2.36	0.43
17:N:63:ARG:HG3	17:N:131:GLU:HB3	2.00	0.43
17:N:182:HIS:CD2	17:N:182:HIS:H	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:X:148:ASP:OD1	27:X:148:ASP:N	2.50	0.43
28:Y:100:HIS:HB3	28:Y:102:SER:N	2.33	0.43
30:a:69:PHE:CE2	30:a:71:PRO:HD3	2.53	0.43
33:d:25:TYR:CE2	33:d:119:THR:HG22	2.53	0.43
34:e:37:LYS:HB3	34:e:39:ARG:HH22	1.83	0.43
34:e:44:ARG:O	34:e:49:PHE:HB2	2.18	0.43
34:e:85:LEU:HD12	34:e:111:ILE:HG23	1.99	0.43
46:q:18:ILE:HD11	46:q:66:ARG:HD3	1.98	0.43
46:q:47:LEU:O	46:q:48:ARG:C	2.60	0.43
46:q:91:THR:HG22	46:q:99:ARG:NH1	2.23	0.43
48:4:12:ILE:HD12	48:4:12:ILE:HA	1.66	0.43
48:4:150:ARG:O	48:4:200:MET:HE1	2.18	0.43
48:4:602:LEU:HD23	48:4:603:TYR:C	2.43	0.43
49:S2:20:G:H5'	49:S2:620:G:N7	2.32	0.43
49:S2:28:U:O2	49:S2:28:U:C2'	2.61	0.43
49:S2:77:A:H1'	56:SG:176:ILE:HD12	2.00	0.43
49:S2:154:U:O2	56:SG:4:ASN:ND2	2.48	0.43
49:S2:167:G:N3	49:S2:168:C:C6	2.86	0.43
49:S2:210:U:O2	49:S2:211:G:C8	2.71	0.43
49:S2:426:A:C4	49:S2:427:U:C4	3.06	0.43
49:S2:496:C:O2'	49:S2:497:C:H5'	2.18	0.43
49:S2:634:A:C2	49:S2:635:G:N9	2.85	0.43
49:S2:796:G:C4	57:SH:109:ARG:CZ	3.01	0.43
49:S2:834:C:H3'	49:S2:835:C:O4'	2.18	0.43
49:S2:933:G:N3	49:S2:1000:C:C2	2.86	0.43
49:S2:960:U:C6	49:S2:960:U:H3'	2.53	0.43
49:S2:1042:A:C5	49:S2:1043:G:C8	3.06	0.43
49:S2:1212:G:C6	49:S2:1213:C:C4	3.05	0.43
49:S2:1219:C:C5	49:S2:1220:A:N6	2.86	0.43
49:S2:1298:G:H2'	49:S2:1299:A:C8	2.53	0.43
49:S2:1431:G:H5''	49:S2:1432:U:OP2	2.17	0.43
49:S2:1466:G:C2	49:S2:1467:C:C5	3.06	0.43
49:S2:1566:G:H3'	49:S2:1567:G:H5''	2.00	0.43
49:S2:1595:U:H2'	49:S2:1595:U:O2	2.18	0.43
49:S2:1792:G:C6	49:S2:1793:A:C5	3.05	0.43
51:SB:36:PRO:HB3	51:SB:231:LEU:CD2	2.48	0.43
54:SE:195:ILE:O	54:SE:209:HIS:O	2.36	0.43
58:SI:117:TYR:HB3	58:SI:156:ALA:HB1	2.00	0.43
58:SI:167:GLN:CG	58:SI:168:GLN:N	2.81	0.43
61:SL:13:GLN:N	61:SL:13:GLN:CD	2.75	0.43
68:SS:127:TRP:CD1	68:SS:127:TRP:N	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:SU:48:LEU:CD1	70:SU:91:LEU:HD22	2.48	0.43
77:Sb:56:CYS:HB2	77:Sb:61:THR:HG23	1.98	0.43
1:5:146:G:N2	1:5:147:A:C5	2.86	0.43
1:5:181:C:H2'	1:5:182:G:C8	2.52	0.43
1:5:245:C:H4'	1:5:246:G:O5'	2.18	0.43
1:5:295:A:O3'	1:5:296:A:C8	2.71	0.43
1:5:356:G:O2'	3:8:25:G:N3	2.51	0.43
1:5:469:C:N4	1:5:470:A:C6	2.86	0.43
1:5:659:G:N1	1:5:660:A:C8	2.86	0.43
1:5:677:G:H2'	1:5:678:C:C6	2.54	0.43
1:5:689:U:C2	1:5:690:C:C5	3.05	0.43
1:5:711:A:H1'	8:E:132:HIS:CE1	2.53	0.43
1:5:713:C:N4	1:5:955:G:H1	2.15	0.43
1:5:723:A:H4'	6:C:346:ASN:HB2	1.99	0.43
1:5:976:G:C2	1:5:977:C:C6	3.05	0.43
1:5:1075:G:C6	1:5:1076:C:N4	2.87	0.43
1:5:1218:G:O6	1:5:1219:G:C4	2.71	0.43
1:5:1245:C:C6	1:5:1269:G:N7	2.86	0.43
1:5:1280:C:O2	1:5:1282:G:C5	2.71	0.43
1:5:1281:G:C6	8:E:48:ARG:NH1	2.86	0.43
1:5:1492:G:C5	1:5:1493:G:N7	2.86	0.43
1:5:1602:U:N3	1:5:1603:C:C5	2.86	0.43
1:5:1631:A:H8	1:5:1631:A:O5'	2.00	0.43
1:5:1672:U:O2'	1:5:4304:A:OP1	2.31	0.43
1:5:1818:G:H8	1:5:1821:G:C6	2.33	0.43
1:5:1828:C:N3	1:5:1829:G:C8	2.85	0.43
1:5:1929:A:H3'	1:5:1929:A:N3	2.33	0.43
1:5:1960:A:N9	46:q:14:PHE:CZ	2.68	0.43
1:5:1964:A:C2	1:5:4694:G:O6	2.70	0.43
1:5:2017:A:H5''	1:5:2017:A:H8	1.84	0.43
1:5:2065:G:C2	1:5:2066:C:C2	3.06	0.43
1:5:2327:G:N1	1:5:2328:G:C6	2.86	0.43
1:5:2409:U:C5	1:5:2783:A:N1	2.74	0.43
1:5:2439:G:H1'	1:5:2777:G:N3	2.33	0.43
1:5:2519:U:C2	1:5:2520:C:C5	3.06	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
1:5:2639:U:H1'	36:g:26:PRO:HA	1.99	0.43
1:5:2742:G:H4'	4:A:22:HIS:CD2	2.53	0.43
1:5:3656:A:C1'	1:5:3747:A:C2	3.01	0.43
1:5:3702:A:C5	1:5:3774:A:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3766:A:C2	49:S2:1828:C:O4'	2.71	0.43
1:5:3923:A:C8	1:5:4381:A:C4	3.06	0.43
1:5:3945:A:C4	1:5:3946:G:C8	3.06	0.43
1:5:4106:G:C2	1:5:4107:G:C8	3.06	0.43
1:5:4131:G:C2	1:5:4132:C:C2	3.06	0.43
1:5:4147:G:N3	1:5:4148:C:C6	2.86	0.43
1:5:4168:G:C2'	1:5:4169:G:O5'	2.66	0.43
1:5:4173:G:C6	1:5:4174:U:C5	3.06	0.43
1:5:4703:U:O2	1:5:4704:C:C6	2.72	0.43
1:5:4723:A:C2	1:5:4724:A:C4	3.06	0.43
1:5:4927:G:H1'	16:M:121:ARG:HD3	1.99	0.43
1:5:5031:G:C6	1:5:5032:C:N4	2.86	0.43
2:7:15:C:C2	2:7:16:A:C8	3.06	0.43
2:7:117:G:C2	2:7:118:C:C2	3.06	0.43
3:8:54:C:H2'	3:8:54:C:O2	2.17	0.43
7:D:95:TYR:CD1	7:D:95:TYR:C	2.96	0.43
8:E:43:ASN:HB3	8:E:58:MET:SD	2.58	0.43
11:H:60:TRP:CZ2	22:S:153:PRO:HD3	2.53	0.43
12:I:46:PHE:CZ	12:I:85:PHE:HA	2.53	0.43
18:O:167:HIS:O	18:O:168:TYR:C	2.61	0.43
19:P:36:ILE:HD12	19:P:48:LEU:HD11	1.99	0.43
22:S:84:TYR:C	22:S:84:TYR:CD1	2.96	0.43
25:V:27:ASN:OD1	25:V:27:ASN:N	2.51	0.43
29:Z:5:MET:HE3	29:Z:25:ILE:HD11	1.99	0.43
33:d:71:ALA:HB3	33:d:108:TYR:HE2	1.82	0.43
34:e:108:ARG:HD3	34:e:128:ARG:NH2	2.30	0.43
46:q:63:LYS:HZ3	46:q:78:LEU:HB3	1.82	0.43
46:q:82:ILE:C	46:q:83:ARG:CG	2.85	0.43
46:q:200:ASN:C	46:q:202:GLU:N	2.73	0.43
46:q:202:GLU:H	46:q:203:VAL:HA	1.82	0.43
48:4:60:ARG:N	48:4:63:GLU:CB	2.82	0.43
48:4:319:LEU:O	48:4:320:ASP:HB2	2.18	0.43
48:4:731:ALA:CB	48:4:854:PHE:HB3	2.39	0.43
48:4:743:PRO:C	48:4:790:VAL:H	2.18	0.43
49:S2:9:U:C5	49:S2:11:A:OP2	2.71	0.43
49:S2:10:G:N1	49:S2:11:A:C5	2.86	0.43
49:S2:182:C:H5'	49:S2:183:G:P	2.58	0.43
49:S2:217:A:C6	49:S2:218:U:C6	3.05	0.43
49:S2:217:A:H61	49:S2:303:C:H42	1.66	0.43
49:S2:302:A:N1	49:S2:303:C:C4	2.86	0.43
49:S2:302:A:N3	49:S2:303:C:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:465:A:H4'	49:S2:466:G:O5'	2.19	0.43
49:S2:529:A:H2'	49:S2:530:U:O4'	2.17	0.43
49:S2:536:A:C5	49:S2:537:C:C6	3.06	0.43
49:S2:797:C:O2	57:SH:109:ARG:NH2	2.50	0.43
49:S2:1005:G:N2	49:S2:1006:C:C2	2.86	0.43
49:S2:1101:U:N3	49:S2:1102:G:N7	2.64	0.43
49:S2:1204:A:C2	49:S2:1205:C:C6	3.06	0.43
49:S2:1237:C:C2	49:S2:1238:U:C6	3.05	0.43
49:S2:1291:A:H2	81:Sf:140:TYR:C	2.25	0.43
49:S2:1294:G:P	81:Sf:151:ASN:O	2.76	0.43
49:S2:1413:G:N1	49:S2:1414:A:H1'	2.33	0.43
49:S2:1415:C:C5	49:S2:1416:C:C2	3.06	0.43
49:S2:1512:C:H2'	49:S2:1513:C:H6	1.83	0.43
49:S2:1524:G:C2	49:S2:1525:C:C2	3.06	0.43
49:S2:1528:G:O2'	49:S2:1666:C:OP1	2.36	0.43
49:S2:1574:C:O2	49:S2:1575:G:C8	2.72	0.43
49:S2:1694:U:H2'	49:S2:1696:C:H5	1.83	0.43
49:S2:1841:C:O2	49:S2:1841:C:H2'	2.18	0.43
55:SF:21:GLY:HA2	66:SQ:49:TYR:CZ	2.53	0.43
56:SG:67:VAL:HG23	56:SG:99:GLY:HA2	2.00	0.43
63:SN:64:ARG:HA	63:SN:69:ASN:O	2.18	0.43
68:SS:17:ASN:O	68:SS:18:THR:HG23	2.18	0.43
78:Sc:13:ARG:HD3	78:Sc:35:MET:SD	2.58	0.43
82:Sg:202:PRO:HG3	82:Sg:243:PRO:HA	2.00	0.43
1:5:98:A:H1'	1:5:292:G:C5	2.53	0.43
1:5:285:G:H2'	1:5:286:U:O4'	2.18	0.43
1:5:506:C:C2	1:5:507:G:C8	3.06	0.43
1:5:664:G:H21	1:5:665:C:H5	1.67	0.43
1:5:711:A:C2	1:5:712:C:C4	3.06	0.43
1:5:1081:C:H1'	1:5:1220:G:N2	2.34	0.43
1:5:1195:G:H2'	1:5:1196:G:C8	2.53	0.43
1:5:1278:C:H3'	1:5:1279:A:C4'	2.47	0.43
1:5:1296:G:H1'	1:5:1297:U:P	2.58	0.43
1:5:1339:U:O2	1:5:1339:U:C2'	2.58	0.43
1:5:1387:A:N9	1:5:1397:A:N6	2.64	0.43
1:5:1404:G:C4	1:5:1405:C:C6	3.06	0.43
1:5:1620:U:OP2	39:j:30:GLN:HG2	2.18	0.43
1:5:1665:C:N3	1:5:2285:A:C2	2.87	0.43
1:5:1729:A:H5''	1:5:1729:A:H8	1.82	0.43
1:5:1968:G:C2	1:5:1969:G:C5	3.06	0.43
1:5:1971:C:H5	1:5:2000:G:H2'	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1975:G:C2	1:5:1984:A:N9	2.86	0.43
1:5:1988:G:N3	1:5:1989:G:C8	2.86	0.43
1:5:2077:C:N3	1:5:2078:C:C6	2.86	0.43
1:5:2290:C:H1'	1:5:2321:G:N3	2.33	0.43
1:5:2439:G:C8	1:5:2777:G:C5	3.07	0.43
1:5:2589:C:C4	1:5:2590:G:C4	3.05	0.43
1:5:2632:U:C2	1:5:2633:U:H5	2.30	0.43
1:5:2715:G:C2	1:5:2716:C:C2	3.06	0.43
1:5:2811:G:N3	1:5:2811:G:H2'	2.33	0.43
1:5:3675:G:C2	1:5:3676:G:C5	2.97	0.43
1:5:3713:U:O2	1:5:3713:U:O4'	2.36	0.43
1:5:3727:A:C2'	1:5:3728:A:O5'	2.66	0.43
1:5:3794:C:O2	1:5:3794:C:H2'	2.17	0.43
1:5:3927:U:O4	1:5:4182:G:C2	2.71	0.43
1:5:4111:U:C2	1:5:4112:C:C6	3.06	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	2.86	0.43
1:5:4324:A:C2	1:5:4325:A:C4	3.04	0.43
1:5:4338:G:H1	1:5:4372:U:H3'	1.83	0.43
1:5:4401:G:C5	1:5:4402:C:C5	3.06	0.43
1:5:4404:U:O2'	1:5:4405:G:N7	2.42	0.43
1:5:4433:G:N1	1:5:4434:C:C4	2.87	0.43
1:5:4460:U:H2'	1:5:4461:C:H6	1.82	0.43
1:5:4461:C:C2	1:5:4516:G:C2	3.06	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
1:5:4861:G:C2	1:5:4862:G:C8	3.07	0.43
1:5:4871:C:C6	22:S:176:PHE:CE2	3.05	0.43
1:5:4880:C:O2'	1:5:4881:U:C5'	2.67	0.43
1:5:4897:G:N1	1:5:4898:G:C5	2.87	0.43
1:5:4985:U:C2	1:5:4986:G:C8	3.06	0.43
1:5:5055:G:H2'	1:5:5056:A:H8	1.82	0.43
5:B:153:MET:O	5:B:157:CYS:HB3	2.18	0.43
5:B:320:PHE:O	5:B:321:VAL:C	2.61	0.43
6:C:150:LEU:O	6:C:152:LEU:N	2.52	0.43
8:E:53:TYR:CE2	8:E:61:ARG:CZ	3.02	0.43
9:F:85:VAL:CG1	22:S:62:VAL:HA	2.46	0.43
9:F:119:ILE:HG12	9:F:120:PHE:HB3	2.00	0.43
14:K:14:TYR:CD1	14:K:15:LEU:N	2.85	0.43
14:K:106:PHE:O	14:K:110:VAL:HG23	2.19	0.43
14:K:119:ARG:N	14:K:123:ARG:NH1	2.63	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:O:12:ARG:HD3	18:O:37:ARG:NH2	2.32	0.43
34:e:74:PHE:HB2	34:e:96:CYS:SG	2.58	0.43
37:h:68:ASN:HD22	37:h:68:ASN:HA	1.65	0.43
46:q:27:CYS:HB3	46:q:193:PHE:CD1	2.48	0.43
48:4:10:ARG:HD2	48:4:10:ARG:HA	1.78	0.43
48:4:25:ILE:CG2	48:4:142:VAL:HB	2.48	0.43
48:4:154:VAL:CG2	48:4:358:LEU:HD21	2.48	0.43
48:4:226:LYS:CE	48:4:356:ILE:CD1	2.97	0.43
48:4:390:PRO:N	48:4:466:CYS:SG	2.92	0.43
48:4:484:THR:C	48:4:485:ILE:HD12	2.44	0.43
48:4:577:VAL:HG11	48:4:579:TYR:OH	2.18	0.43
48:4:613:LEU:CD2	48:4:639:TYR:CG	2.81	0.43
48:4:661:ILE:CG2	48:4:662:LEU:N	2.81	0.43
48:4:713:ALA:CA	48:4:716:ARG:CZ	2.96	0.43
48:4:800:LEU:O	48:4:804:THR:HG23	2.17	0.43
49:S2:196:C:C2	49:S2:204:G:N2	2.87	0.43
49:S2:302:A:C4	49:S2:303:C:C6	3.06	0.43
49:S2:319:C:H2'	49:S2:320:G:H8	1.82	0.43
49:S2:448:A:C8	58:SI:26:LYS:CA	3.01	0.43
49:S2:596:U:O2'	49:S2:597:G:O5'	2.36	0.43
49:S2:642:U:O2'	49:S2:644:G:O2'	2.29	0.43
49:S2:695:C:N3	49:S2:696:G:N7	2.65	0.43
49:S2:787:G:H2'	49:S2:788:G:C4'	2.47	0.43
49:S2:929:G:C6	49:S2:930:C:C4	3.07	0.43
49:S2:973:C:N4	49:S2:974:C:C5	2.87	0.43
49:S2:976:G:N2	49:S2:977:C:C2	2.86	0.43
49:S2:1118:C:H3'	49:S2:1119:A:C2	2.54	0.43
49:S2:1131:G:C2	49:S2:1132:C:C6	3.06	0.43
49:S2:1202:U:O2	49:S2:1202:U:H2'	2.17	0.43
49:S2:1261:C:N4	49:S2:1262:C:N3	2.65	0.43
49:S2:1310:U:C4'	81:Sf:143:LYS:CG	2.95	0.43
49:S2:1517:G:H2'	49:S2:1518:C:O4'	2.17	0.43
49:S2:1545:A:C5	49:S2:1546:G:C6	3.07	0.43
49:S2:1545:A:N6	49:S2:1588:A:C4	2.86	0.43
49:S2:1563:G:C5	49:S2:1564:C:C5	3.06	0.43
49:S2:1641:A:C4	49:S2:1642:U:C5	3.06	0.43
49:S2:1666:C:O2	49:S2:1666:C:H2'	2.19	0.43
49:S2:1709:G:C4	49:S2:1710:C:C5	3.06	0.43
49:S2:1776:G:N1	49:S2:1777:G:N7	2.67	0.43
49:S2:1806:A:N3	49:S2:1807:C:C6	2.86	0.43
49:S2:1858:G:C6	49:S2:1859:A:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:123:LEU:HD21	53:SD:154:ASP:HB3	2.00	0.43
53:SD:226:GLN:HE21	82:Sg:186:THR:HB	1.83	0.43
57:SH:69:LEU:HD11	57:SH:73:GLN:HE21	1.83	0.43
60:SK:10:ALA:O	60:SK:13:GLU:HG3	2.18	0.43
67:SR:20:TYR:HB3	67:SR:23:ARG:HB2	1.99	0.43
70:SU:40:ILE:HD11	70:SU:53:PRO:HG3	2.00	0.43
73:SX:76:LYS:HG3	73:SX:77:ASN:OD1	2.19	0.43
81:Sf:121:CYS:SG	81:Sf:141:CYS:SG	3.08	0.43
82:Sg:132:TRP:CD1	82:Sg:132:TRP:N	2.86	0.43
1:5:29:G:C2	1:5:30:C:C6	3.07	0.43
1:5:642:G:C4	1:5:643:C:C5	3.06	0.43
1:5:957:G:H5'	1:5:1284:G:N2	2.32	0.43
1:5:973:G:C6	1:5:1282:G:N3	2.86	0.43
1:5:1190:C:N3	1:5:1191:C:C4	2.83	0.43
1:5:1206:C:C2	1:5:1207:C:C6	3.06	0.43
1:5:1262:G:C6	1:5:1263:A:N7	2.86	0.43
1:5:1334:A:H2'	1:5:1334:A:N3	2.32	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
1:5:1482:G:N2	1:5:1484:G:N2	2.66	0.43
1:5:1543:G:H1'	1:5:2513:A:N3	2.33	0.43
1:5:1620:U:O2	1:5:1621:A:C8	2.71	0.43
1:5:1775:A:C4	1:5:1776:A:C8	3.07	0.43
1:5:1912:G:C2	1:5:1913:C:C2	3.07	0.43
1:5:1921:C:C5	16:M:17:PHE:HD2	2.36	0.43
1:5:1972:G:N2	1:5:1973:G:C5	2.86	0.43
1:5:2080:U:H2'	1:5:2081:C:O5'	2.18	0.43
1:5:2470:C:C2	1:5:2470:C:H5''	2.54	0.43
1:5:2481:G:C4	1:5:2482:C:C5	3.05	0.43
1:5:2550:G:C2	1:5:2551:A:C8	3.06	0.43
1:5:2600:A:C1'	1:5:2601:A:C6	3.01	0.43
1:5:2643:G:C6	1:5:2644:G:C5	3.06	0.43
1:5:2676:A:C5	1:5:2677:G:C8	3.07	0.43
1:5:3600:G:C4	1:5:3601:C:C5	3.06	0.43
1:5:3709:U:C6	49:S2:970:G:N1	2.86	0.43
1:5:3928:A:H3'	1:5:3929:G:H8	1.84	0.43
1:5:4089:G:C2	1:5:4161:G:C2	3.06	0.43
1:5:4127:A:N7	1:5:4156:G:N2	2.66	0.43
1:5:4145:C:N3	1:5:4146:G:C5	2.87	0.43
1:5:4284:C:O2	1:5:4284:C:H2'	2.18	0.43
1:5:4343:U:OP1	44:o:37:GLY:HA3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4564:A:C4	1:5:4565:C:C5	3.06	0.43
1:5:4629:U:H2'	1:5:4630:G:O4'	2.18	0.43
1:5:4746:C:N4	1:5:4747:C:N4	2.66	0.43
1:5:4749:C:C3'	1:5:4750:G:H5''	2.49	0.43
1:5:4928:C:H5''	16:M:114:LYS:HD3	2.01	0.43
1:5:5003:U:N3	1:5:5045:G:N2	2.65	0.43
1:5:5048:A:O4'	1:5:5048:A:N3	2.51	0.43
2:7:112:U:O2	2:7:113:G:N7	2.50	0.43
3:8:121:G:C6	3:8:122:G:C4	3.06	0.43
3:8:133:G:C4	3:8:134:G:C8	3.06	0.43
3:8:135:C:N3	3:8:136:U:C4	2.86	0.43
11:H:50:LYS:O	11:H:51:LYS:HG3	2.18	0.43
12:I:31:ILE:HG13	12:I:66:GLU:OE1	2.17	0.43
12:I:35:ASP:HB2	12:I:86:HIS:CE1	2.50	0.43
13:J:99:PHE:CZ	13:J:105:PHE:CB	2.97	0.43
14:K:116:MET:O	14:K:117:ARG:C	2.61	0.43
16:M:42:CYS:HG	16:M:77:TRP:CD1	2.35	0.43
17:N:53:TYR:HD1	17:N:54:LYS:N	2.16	0.43
24:U:38:ASN:C	24:U:90:TYR:OH	2.61	0.43
25:V:48:ARG:HD2	25:V:51:ARG:NH2	2.32	0.43
33:d:46:LEU:CD2	33:d:64:ILE:HD13	2.48	0.43
33:d:71:ALA:C	33:d:73:TRP:N	2.76	0.43
46:q:202:GLU:C	46:q:203:VAL:CG2	2.90	0.43
48:4:60:ARG:N	48:4:63:GLU:HB3	2.33	0.43
48:4:61:LYS:HA	48:4:61:LYS:HD3	1.76	0.43
48:4:343:TRP:O	48:4:344:LEU:HD23	2.17	0.43
48:4:741:MET:HE2	48:4:819:ILE:HG22	2.00	0.43
48:4:744:ILE:HD13	48:4:815:ASP:CA	2.47	0.43
48:4:847:GLY:HA3	48:4:848:ILE:CB	2.48	0.43
49:S2:81:U:C2	49:S2:82:G:C8	3.06	0.43
49:S2:142:C:C2	56:SG:185:LEU:CD2	3.02	0.43
49:S2:153:G:C2	49:S2:154:U:C6	3.06	0.43
49:S2:168:C:OP1	56:SG:131:ARG:NH2	2.52	0.43
49:S2:342:C:C2	49:S2:343:A:C8	3.07	0.43
49:S2:513:G:C5	49:S2:514:U:C5	3.07	0.43
49:S2:654:A:C6	49:S2:655:A:N1	2.86	0.43
49:S2:746:C:H2'	49:S2:747:U:C5'	2.48	0.43
49:S2:878:G:C6	49:S2:879:C:C6	3.07	0.43
49:S2:962:A:N3	49:S2:963:A:C8	2.86	0.43
49:S2:1034:A:N6	49:S2:1082:A:C4	2.86	0.43
49:S2:1077:A:C2	49:S2:1078:C:C6	3.05	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1266:C:O2	49:S2:1266:C:C2'	2.65	0.43
49:S2:1291:A:H8	81:Sf:146:LEU:CG	2.32	0.43
49:S2:1308:U:O3'	81:Sf:116:ARG:NH2	2.52	0.43
49:S2:1337:C:O2	49:S2:1337:C:C2'	2.66	0.43
49:S2:1402:A:C6	49:S2:1441:U:O4	2.53	0.43
49:S2:1751:C:H2'	49:S2:1751:C:O2	2.18	0.43
51:SB:30:TRP:HD1	64:SO:19:PRO:HD3	1.83	0.43
57:SH:27:LEU:HD12	57:SH:40:LEU:HD21	1.99	0.43
58:SI:60:LEU:HD23	58:SI:185:ALA:HB2	2.00	0.43
59:SJ:45:ARG:O	59:SJ:49:THR:HG23	2.18	0.43
66:SQ:47:LEU:O	66:SQ:49:TYR:N	2.51	0.43
1:5:95:G:H3'	1:5:95:G:C8	2.53	0.43
1:5:99:A:O2'	17:N:181:HIS:CE1	2.72	0.43
1:5:101:A:C2	1:5:102:G:N9	2.85	0.43
1:5:114:G:O6	1:5:157:U:O2	2.36	0.43
1:5:288:G:C5	1:5:289:C:C5	3.06	0.43
1:5:301:G:C4	1:5:302:C:C6	3.06	0.43
1:5:452:A:O3'	1:5:454:U:OP2	2.37	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
1:5:518:G:C2	1:5:519:C:C2	3.07	0.43
1:5:655:C:C2	1:5:656:C:C6	3.06	0.43
1:5:673:C:C2	1:5:674:G:N7	2.87	0.43
1:5:908:G:N1	1:5:909:A:C8	2.87	0.43
1:5:1085:C:N3	1:5:1086:C:C5	2.84	0.43
1:5:1244:G:O4'	1:5:1269:G:H1'	2.18	0.43
1:5:1248:C:C4	1:5:1249:C:H5	2.36	0.43
1:5:1289:C:N3	1:5:1290:G:C5	2.87	0.43
1:5:1345:A:H4'	20:Q:166:TYR:HE2	1.84	0.43
1:5:1358:G:N1	1:5:1379:C:O2	2.52	0.43
1:5:1373:A:C4	1:5:1374:G:C8	3.06	0.43
1:5:1421:G:C5	1:5:1465:G:C2	3.07	0.43
1:5:1423:U:C2	1:5:1424:G:C8	3.07	0.43
1:5:1427:A:H2	20:Q:50:ARG:HH22	1.65	0.43
1:5:1667:G:O5'	1:5:1667:G:H8	2.01	0.43
1:5:1685:G:C6	1:5:1686:C:C4	3.07	0.43
1:5:1728:U:H2'	1:5:1729:A:H5''	2.00	0.43
1:5:1846:G:C2	1:5:1847:C:N3	2.86	0.43
1:5:1951:G:N2	1:5:1952:G:H1'	2.34	0.43
1:5:1984:A:N6	1:5:2011:C:C1'	2.81	0.43
1:5:2069:A:C5	1:5:2071:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:5:2504:C:O2'	1:5:2505:C:N3	2.34	0.43
1:5:2690:C:C2	1:5:2691:U:C5	3.05	0.43
1:5:2712:G:N1	1:5:2713:C:C5	2.86	0.43
1:5:2735:G:N2	1:5:2736:G:N9	2.67	0.43
1:5:2736:G:N1	1:5:2737:C:C5	2.77	0.43
1:5:3752:C:H2'	1:5:3777:G:C8	2.53	0.43
1:5:3848:U:O2	1:5:3848:U:H2'	2.18	0.43
1:5:4093:G:C8	1:5:4094:G:O4'	2.71	0.43
1:5:4094:G:C2	1:5:4095:G:C4	3.07	0.43
1:5:4099:G:O2'	51:SB:224:GLU:CD	2.61	0.43
1:5:4113:U:H3'	1:5:4114:C:H5''	2.00	0.43
1:5:4219:A:O2'	1:5:4220:A:C5'	2.66	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'	20:Q:186:TYR:CD2	2.53	0.43
1:5:4482:U:O2	1:5:4482:U:C2'	2.66	0.43
1:5:4505:C:H2'	1:5:4506:C:H6	1.83	0.43
1:5:4518:A:H5''	1:5:4520:G:H4'	2.01	0.43
1:5:4688:C:C2	1:5:4689:U:C6	3.07	0.43
1:5:4734:A:C6	1:5:4735:G:C6	3.06	0.43
1:5:4742:G:N2	1:5:4743:G:H1'	2.34	0.43
1:5:4890:G:C2	1:5:4930:C:C2	3.06	0.43
1:5:4895:C:O2	1:5:4896:G:N7	2.51	0.43
1:5:5018:C:C2	1:5:5019:A:C8	3.06	0.43
2:7:13:A:P	2:7:109:U:HO2'	2.42	0.43
2:7:40:U:O2	13:J:75:ARG:HD2	2.18	0.43
2:7:94:C:C2	2:7:95:C:H5	2.28	0.43
3:8:38:U:O2	3:8:38:U:C2'	2.67	0.43
6:C:26:ALA:HB3	6:C:266:THR:HA	2.00	0.43
7:D:55:VAL:HG21	7:D:158:LYS:HB2	2.01	0.43
9:F:239:GLU:O	9:F:241:GLN:N	2.50	0.43
11:H:126:VAL:HG11	11:H:161:ILE:HG22	2.00	0.43
18:O:103:LYS:HG2	18:O:105:PHE:CZ	2.53	0.43
20:Q:32:TYR:OH	20:Q:123:PHE:CD2	2.69	0.43
21:R:120:TYR:C	21:R:120:TYR:HD1	2.25	0.43
21:R:124:TYR:C	21:R:124:TYR:CD1	2.97	0.43
21:R:163:ARG:CZ	49:S2:871:U:C2	3.01	0.43
24:U:39:PHE:CD1	24:U:90:TYR:CE2	3.06	0.43
25:V:82:ILE:HG23	25:V:121:VAL:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:b:10:HIS:O	31:b:11:ASN:C	2.60	0.43
34:e:78:LEU:HD21	34:e:100:ALA:HA	1.99	0.43
35:f:30:ILE:HB	35:f:33:VAL:HG11	2.00	0.43
48:4:9:ILE:HG21	48:4:452:LEU:HD13	1.99	0.43
48:4:33:SER:CA	48:4:57:THR:HG21	2.47	0.43
49:S2:50:A:N1	49:S2:51:U:H1'	2.34	0.43
49:S2:60:A:N3	49:S2:60:A:O4'	2.51	0.43
49:S2:92:A:H4'	49:S2:93:U:OP2	2.19	0.43
49:S2:215:G:N2	49:S2:312:G:H1	2.16	0.43
49:S2:302:A:C2	49:S2:303:C:C2	3.06	0.43
49:S2:315:C:H2'	49:S2:316:G:H8	1.83	0.43
49:S2:340:C:H3'	49:S2:341:C:H6	1.82	0.43
49:S2:341:C:N4	49:S2:342:C:C4	2.85	0.43
49:S2:341:C:O2	49:S2:342:C:H1'	2.18	0.43
49:S2:364:A:C2	49:S2:397:G:N3	2.87	0.43
49:S2:410:G:N1	49:S2:411:G:C4	2.85	0.43
49:S2:418:A:H3'	49:S2:419:G:H8	1.82	0.43
49:S2:795:A:C2	49:S2:796:G:C4	2.98	0.43
49:S2:907:G:H3'	49:S2:908:A:C8	2.52	0.43
49:S2:1275:G:H4'	49:S2:1276:A:H5'	2.00	0.43
49:S2:1279:C:C2	49:S2:1280:G:C8	3.07	0.43
49:S2:1292:C:O2	81:Sf:150:PHE:CD1	2.71	0.43
49:S2:1339:U:O2	49:S2:1340:U:C6	2.72	0.43
49:S2:1356:G:C2	49:S2:1357:A:C6	3.07	0.43
49:S2:1528:G:C6	49:S2:1529:C:C4	3.07	0.43
49:S2:1731:A:C4	49:S2:1732:G:C8	3.06	0.43
49:S2:1740:C:C2	49:S2:1741:U:C5	3.07	0.43
53:SD:167:TYR:OH	53:SD:193:ASP:OD2	2.36	0.43
56:SG:235:SER:OG	56:SG:236:SER:N	2.52	0.43
57:SH:10:LYS:N	57:SH:11:PRO:HD3	2.34	0.43
58:SI:6:ASP:HB3	58:SI:28:GLU:HG2	2.00	0.43
59:SJ:50:LEU:CD2	59:SJ:54:ARG:HG3	2.49	0.43
64:SO:28:PHE:HD1	64:SO:92:ALA:HB3	1.83	0.43
66:SQ:102:GLU:O	66:SQ:106:LYS:HG2	2.19	0.43
67:SR:99:ASP:N	67:SR:102:THR:OG1	2.40	0.43
75:SZ:45:ASN:N	75:SZ:45:ASN:OD1	2.49	0.43
76:Sa:18:VAL:O	76:Sa:19:GLN:C	2.61	0.43
1:5:30:C:O2'	1:5:31:U:C5'	2.67	0.43
1:5:44:A:N3	1:5:45:U:C6	2.87	0.43
1:5:113:A:H2'	1:5:113:A:N3	2.32	0.43
1:5:120:A:C8	1:5:121:A:N6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:164:G:N2	1:5:165:A:H1'	2.33	0.43
1:5:266:C:OP1	1:5:266:C:C2	2.71	0.43
1:5:298:G:C2	1:5:299:C:N1	2.86	0.43
1:5:450:G:O2'	1:5:453:G:OP1	2.29	0.43
1:5:468:U:O2	1:5:468:U:H2'	2.18	0.43
1:5:472:C:C4	1:5:473:C:C4	3.06	0.43
1:5:505:G:N3	1:5:506:C:C6	2.86	0.43
1:5:691:C:N3	1:5:692:A:C5	2.87	0.43
1:5:933:G:C2	1:5:940:C:C5	3.06	0.43
1:5:957:G:OP1	1:5:1284:G:O2'	2.30	0.43
1:5:1066:G:C5	1:5:1067:G:N7	2.86	0.43
1:5:1098:G:C5	1:5:1099:C:C5	3.07	0.43
1:5:1100:U:O2	1:5:1167:C:C6	2.71	0.43
1:5:1458:C:O2	1:5:1458:C:C2'	2.54	0.43
1:5:1516:G:HO2'	15:L:18:TRP:HE1	1.64	0.43
1:5:1992:U:C6	1:5:2002:A:H2	2.36	0.43
1:5:2014:C:OP1	46:q:112:ARG:CZ	2.67	0.43
1:5:2315:G:C4	1:5:2316:G:C8	3.06	0.43
1:5:2353:U:C2	1:5:2354:G:C8	3.06	0.43
1:5:2509:C:N3	1:5:2510:G:C5	2.87	0.43
1:5:2606:G:C6	1:5:2607:C:C4	3.07	0.43
1:5:2723:U:C2	1:5:2724:G:C8	3.07	0.43
1:5:2857:A:C6	1:5:2858:A:C6	3.07	0.43
1:5:3755:G:C6	1:5:3756:A:C8	3.06	0.43
1:5:3832:U:C2	1:5:3833:C:C5	3.06	0.43
1:5:3910:C:N3	1:5:3911:C:N4	2.66	0.43
1:5:4081:G:N1	1:5:4082:G:N7	2.66	0.43
1:5:4235:G:H2'	1:5:4236:G:C5'	2.49	0.43
1:5:4401:G:C8	1:5:4401:G:H5''	2.54	0.43
1:5:4653:C:N3	1:5:4654:C:N4	2.67	0.43
1:5:4713:G:C4	1:5:4714:C:C6	3.07	0.43
1:5:4724:A:H4'	5:B:102:PHE:O	2.18	0.43
1:5:4731:G:N7	1:5:4733:C:C6	2.86	0.43
1:5:4967:A:C2	1:5:4968:A:C5	3.07	0.43
1:5:5004:C:N4	1:5:5005:G:C2	2.87	0.43
1:5:5006:U:O4'	1:5:5042:A:N6	2.51	0.43
1:5:5055:G:C2	1:5:5056:A:N7	2.86	0.43
2:7:73:U:O2	2:7:102:U:C4	2.72	0.43
2:7:111:C:O2	2:7:111:C:C2'	2.67	0.43
3:8:27:U:C2	3:8:28:C:C6	3.06	0.43
3:8:115:G:C5	3:8:116:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:131:G:N1	3:8:132:G:N9	2.66	0.43
3:8:144:U:N3	3:8:145:C:C5	2.87	0.43
5:B:60:VAL:HG12	5:B:62:ARG:HG2	1.99	0.43
6:C:336:ARG:O	6:C:340:ILE:CG1	2.66	0.43
7:D:284:LYS:HB2	12:I:209:TRP:CH2	2.53	0.43
8:E:104:LYS:HA	8:E:104:LYS:HE2	2.01	0.43
8:E:157:ARG:HH22	8:E:271:PHE:HB2	1.83	0.43
11:H:36:ARG:HD3	11:H:38:PHE:CE1	2.53	0.43
11:H:106:GLN:NE2	11:H:113:GLU:HG2	2.34	0.43
12:I:110:ARG:CZ	12:I:110:ARG:HA	2.49	0.43
12:I:157:PHE:C	12:I:159:PHE:N	2.76	0.43
14:K:77:ALA:HB2	14:K:80:LEU:HD12	1.97	0.43
14:K:88:PRO:HB2	14:K:89:PRO:CB	2.48	0.43
14:K:102:GLY:O	14:K:140:GLY:HA2	2.17	0.43
16:M:109:ARG:HH21	16:M:109:ARG:CB	2.32	0.43
29:Z:71:PHE:HA	29:Z:111:ARG:HG2	1.99	0.43
32:c:78:ASN:ND2	32:c:79:ILE:N	2.66	0.43
39:j:8:PHE:HA	39:j:11:ARG:HD2	2.01	0.43
42:m:90:ASN:OD1	42:m:90:ASN:N	2.50	0.43
49:S2:49:C:C2	49:S2:478:G:C2	3.06	0.43
49:S2:71:G:H2'	49:S2:72:C:N1	2.34	0.43
49:S2:116:U:N3	49:S2:117:C:C5	2.86	0.43
49:S2:185:G:C6	49:S2:186:C:N4	2.86	0.43
49:S2:336:A:C5	49:S2:337:C:C5	3.07	0.43
49:S2:379:C:O2	58:SI:5:ARG:NH1	2.51	0.43
49:S2:426:A:C4	49:S2:427:U:O4	2.71	0.43
49:S2:436:G:N2	49:S2:437:G:C5	2.85	0.43
49:S2:512:A:C2	49:S2:513:G:C8	3.07	0.43
49:S2:529:A:C4	49:S2:530:U:C6	3.06	0.43
49:S2:805:U:N3	49:S2:806:U:H5	2.10	0.43
49:S2:832:G:C2	49:S2:833:C:C1'	3.01	0.43
49:S2:862:A:C2	49:S2:863:U:H1'	2.54	0.43
49:S2:883:U:C2	49:S2:884:C:C6	3.07	0.43
49:S2:1230:C:H2'	49:S2:1665:G:H22	1.83	0.43
49:S2:1241:A:C2'	49:S2:1242:U:O4'	2.66	0.43
49:S2:1246:A:N6	49:S2:1247:C:N4	2.59	0.43
49:S2:1246:A:H2	49:S2:1251:A:N3	2.16	0.43
49:S2:1261:C:C5	49:S2:1262:C:C4	3.06	0.43
49:S2:1268:C:C2	49:S2:1515:G:N2	2.86	0.43
49:S2:1292:C:N4	49:S2:1293:A:C8	2.86	0.43
49:S2:1356:G:H8	49:S2:1356:G:O5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1374:C:O2'	49:S2:1375:G:H5'	2.18	0.43
49:S2:1401:A:C6	49:S2:1402:A:C6	3.06	0.43
49:S2:1417:C:O2	49:S2:1419:C:C5	2.72	0.43
50:SA:103:PHE:HZ	50:SA:107:THR:HG1	1.65	0.43
51:SB:79:VAL:HB	51:SB:81:PHE:CE2	2.53	0.43
53:SD:158:ILE:C	53:SD:159:HIS:ND1	2.77	0.43
54:SE:30:ARG:O	54:SE:31:PRO:C	2.61	0.43
54:SE:98:ASN:OD1	54:SE:98:ASN:N	2.52	0.43
55:SF:101:HIS:O	55:SF:105:GLY:HA2	2.18	0.43
64:SO:128:ARG:HA	76:Sa:62:TYR:OH	2.19	0.43
66:SQ:32:ILE:HD11	66:SQ:63:PHE:CD2	2.53	0.43
66:SQ:111:ILE:HA	66:SQ:114:GLN:NE2	2.33	0.43
72:SW:37:PHE:CE1	72:SW:103:VAL:HG11	2.53	0.43
82:Sg:5:MET:HG3	82:Sg:270:LEU:HD11	2.01	0.43
1:5:53:C:O2	1:5:53:C:H2'	2.19	0.43
1:5:141:C:H2'	1:5:142:G:O4'	2.19	0.43
1:5:175:C:H2'	1:5:176:G:C8	2.54	0.43
1:5:216:C:O4'	1:5:216:C:OP1	2.36	0.43
1:5:328:A:C6	1:5:329:A:C6	3.06	0.43
1:5:426:A:O2'	1:5:427:A:C5'	2.66	0.43
1:5:476:G:N2	1:5:679:C:C2	2.87	0.43
1:5:686:A:C2'	1:5:687:U:H5'	2.49	0.43
1:5:988:C:C2	1:5:989:U:C6	3.07	0.43
1:5:1065:G:N1	1:5:1066:G:C6	2.87	0.43
1:5:1176:C:H4'	7:D:279:ARG:HG3	2.01	0.43
1:5:1189:G:N2	1:5:1190:C:H1'	2.33	0.43
1:5:1236:C:H2'	8:E:56:SER:CB	2.49	0.43
1:5:1251:C:O2	1:5:1252:C:C6	2.71	0.43
1:5:1299:G:N1	1:5:1300:G:C5	2.87	0.43
1:5:1396:G:N7	30:a:112:LEU:CD2	2.81	0.43
1:5:1448:G:C2	1:5:1449:C:C2	3.06	0.43
1:5:1539:G:H5'	4:A:194:ASN:ND2	2.33	0.43
1:5:1581:G:N7	1:5:1610:C:N4	2.67	0.43
1:5:1693:U:N3	1:5:1694:C:C6	2.85	0.43
1:5:1755:C:N4	1:5:1778:C:H4'	2.33	0.43
1:5:1767:A:C4	1:5:1769:G:C8	3.06	0.43
1:5:1777:C:O2	1:5:1777:C:H2'	2.19	0.43
1:5:1948:G:C4	1:5:1949:U:C5	3.06	0.43
1:5:1969:G:O6	1:5:2019:C:N4	2.51	0.43
1:5:2100:A:C5	1:5:2101:C:C6	3.06	0.43
1:5:2281:U:O2	1:5:2282:A:C8	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2294:G:N2	1:5:2295:C:C6	2.86	0.43
1:5:2359:U:O5'	1:5:2360:A:H2'	2.19	0.43
1:5:2401:A:N1	1:5:2402:G:C5	2.87	0.43
1:5:2418:A:C6	1:5:2419:C:C4	3.06	0.43
1:5:2441:C:C4'	36:g:9:ARG:HE	2.22	0.43
1:5:2566:G:N2	1:5:2567:G:C8	2.86	0.43
1:5:2594:C:O2	1:5:2595:C:C6	2.72	0.43
1:5:2599:G:C5'	36:g:60:ARG:HH22	2.32	0.43
1:5:2612:G:C6	1:5:2613:C:N3	2.87	0.43
1:5:2784:C:N3	1:5:2785:C:N4	2.66	0.43
1:5:2812:A:H2'	1:5:2813:A:H8	1.78	0.43
1:5:3628:G:C2	1:5:3629:A:C8	3.07	0.43
1:5:3656:A:C6	1:5:3657:U:C5	3.06	0.43
1:5:3698:G:C6	1:5:3699:C:C4	3.07	0.43
1:5:3734:U:O2'	1:5:3735:G:C5'	2.67	0.43
1:5:3807:A:O4'	49:S2:1815:A:C2	2.71	0.43
1:5:3904:G:H3'	1:5:3905:A:O4'	2.18	0.43
1:5:4090:G:C5	1:5:4091:G:C8	3.07	0.43
1:5:4125:C:H4'	10:G:45:ILE:HG21	2.00	0.43
1:5:4175:G:C2	1:5:4176:C:C6	3.07	0.43
1:5:4254:G:N3	1:5:4254:G:H2'	2.34	0.43
1:5:4314:C:O2'	31:b:36:ASP:HB3	2.18	0.43
1:5:4413:C:H5	1:5:4429:C:H42	1.65	0.43
1:5:4898:G:C2	1:5:4899:G:C8	3.07	0.43
1:5:4906:C:H1'	1:5:4916:G:N2	2.34	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
1:5:5034:A:C5	1:5:5035:U:H1'	2.54	0.43
1:5:5063:G:N3	1:5:5064:G:C8	2.86	0.43
2:7:7:G:N3	2:7:7:G:H2'	2.34	0.43
2:7:34:C:N3	2:7:35:U:C5	2.87	0.43
2:7:111:C:C4	2:7:112:U:C6	3.03	0.43
3:8:106:G:N3	3:8:107:C:C5	2.87	0.43
4:A:158:ILE:HG21	4:A:162:ASN:OD1	2.19	0.43
5:B:213:GLN:CD	5:B:214:ASP:OD1	2.62	0.43
5:B:231:VAL:HG11	5:B:251:VAL:HG23	2.01	0.43
9:F:41:GLN:NE2	9:F:41:GLN:CA	2.77	0.43
9:F:93:PHE:HE2	9:F:246:ILE:HG12	1.84	0.43
9:F:129:LYS:HB2	23:T:133:ALA:HB3	2.00	0.43
9:F:219:ARG:HH11	9:F:219:ARG:CB	2.31	0.43
9:F:228:HIS:O	9:F:231:GLU:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:113:GLU:OE2	11:H:125:ARG:HB3	2.19	0.43
14:K:46:ILE:O	14:K:46:ILE:HG22	2.17	0.43
15:L:65:ARG:HE	30:a:66:ASN:ND2	2.16	0.43
15:L:78:LEU:O	15:L:79:GLU:C	2.62	0.43
46:q:57:LYS:CG	46:q:58:ASN:H	2.31	0.43
46:q:61:MET:SD	46:q:82:ILE:CG1	3.05	0.43
48:4:228:PHE:CG	48:4:293:ILE:HG12	2.53	0.43
48:4:634:TYR:CZ	48:4:639:TYR:HE2	2.37	0.43
48:4:675:ILE:CG2	48:4:709:LEU:HD12	2.15	0.43
48:4:731:ALA:HA	48:4:854:PHE:CD1	2.54	0.43
48:4:763:LEU:HD13	48:4:786:ALA:HB2	2.01	0.43
49:S2:42:A:N3	49:S2:42:A:H2'	2.32	0.43
49:S2:61:A:C2	49:S2:334:C:O2	2.72	0.43
49:S2:145:G:H2'	49:S2:146:G:O4'	2.18	0.43
49:S2:221:A:C2	49:S2:222:U:N1	2.87	0.43
49:S2:358:C:C4	49:S2:359:U:C5	3.07	0.43
49:S2:449:A:N7	49:S2:452:G:O6	2.51	0.43
49:S2:495:U:O2'	49:S2:496:C:H5''	2.16	0.43
49:S2:599:A:H2'	49:S2:606:G:N2	2.33	0.43
49:S2:623:G:N2	49:S2:624:C:C1'	2.82	0.43
49:S2:676:C:O2	49:S2:676:C:H2'	2.17	0.43
49:S2:792:C:N3	49:S2:793:G:C5	2.87	0.43
49:S2:878:G:N2	49:S2:879:C:H1'	2.33	0.43
49:S2:899:U:C5	49:S2:900:C:C5	3.07	0.43
49:S2:919:A:C2	63:SN:64:ARG:NH2	2.87	0.43
49:S2:1032:C:C4	49:S2:1033:G:C5	3.06	0.43
49:S2:1036:A:N7	49:S2:1037:G:C8	2.87	0.43
49:S2:1099:G:C4	49:S2:1100:A:C8	3.06	0.43
49:S2:1238:U:H2'	49:S2:1239:U:O4'	2.18	0.43
49:S2:1310:U:O2	49:S2:1310:U:C2'	2.63	0.43
49:S2:1433:C:C3'	49:S2:1433:C:P	3.06	0.43
49:S2:1512:C:N3	49:S2:1513:C:N4	2.66	0.43
49:S2:1584:G:N1	49:S2:1586:U:C6	2.87	0.43
49:S2:1588:A:O2'	49:S2:1589:A:O5'	2.37	0.43
49:S2:1591:C:C2	49:S2:1592:C:C6	3.06	0.43
49:S2:1696:C:C2	49:S2:1697:A:N7	2.87	0.43
49:S2:1826:G:H2'	49:S2:1826:G:N3	2.34	0.43
53:SD:32:ASP:OD2	53:SD:54:ARG:O	2.37	0.43
53:SD:204:LEU:O	53:SD:207:HIS:HB3	2.19	0.43
54:SE:86:PHE:CE2	54:SE:226:PHE:HE2	2.37	0.43
57:SH:26:ALA:O	57:SH:30:LEU:HG	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:SH:110:THR:O	57:SH:110:THR:CG2	2.66	0.43
62:SM:17:ALA:HB1	62:SM:124:ILE:CG2	2.49	0.43
68:SS:83:PHE:O	68:SS:97:GLN:OE1	2.36	0.43
82:Sg:60:ARG:O	82:Sg:62:HIS:N	2.50	0.43
82:Sg:188:HIS:HB3	82:Sg:219:TRP:CZ3	2.54	0.43
1:5:1:C:C5	1:5:2:G:C8	3.07	0.43
1:5:119:G:H3'	1:5:120:A:H5'	2.00	0.43
1:5:157:U:O2'	1:5:158:A:C8	2.70	0.43
1:5:202:C:C2	1:5:214:G:N2	2.87	0.43
1:5:247:G:C2	1:5:248:C:C4	3.07	0.43
1:5:490:C:C2'	1:5:491:G:H8	2.31	0.43
1:5:512:U:C3'	1:5:513:U:H5''	2.48	0.43
1:5:680:G:N2	1:5:681:G:H1'	2.34	0.43
1:5:689:U:C3'	1:5:690:C:H5''	2.49	0.43
1:5:1100:U:O2	1:5:1167:C:C5	2.72	0.43
1:5:1203:G:N3	1:5:1204:C:C6	2.87	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
1:5:1274:A:O2'	1:5:1275:G:O5'	2.31	0.43
1:5:1477:C:C4	1:5:1478:C:C6	3.06	0.43
1:5:1689:G:H4'	1:5:2285:A:H4'	2.01	0.43
1:5:1752:G:N1	1:5:1753:G:C4	2.86	0.43
1:5:1819:G:C8	7:D:142:PHE:HD2	2.37	0.43
1:5:1844:G:C5	1:5:1845:U:C5	3.07	0.43
1:5:1865:G:N2	1:5:1867:A:H2'	2.34	0.43
1:5:1942:A:H2'	1:5:1943:A:C8	2.53	0.43
1:5:1997:U:C3'	1:5:1998:A:H5''	2.47	0.43
1:5:2041:A:C2	1:5:4464:A:N6	2.87	0.43
1:5:2058:G:N2	1:5:2059:C:C1'	2.80	0.43
1:5:2307:A:N9	1:5:2332:A:C2	2.87	0.43
1:5:2576:G:N1	1:5:2577:C:C4	2.87	0.43
1:5:2635:U:H2'	1:5:2636:U:C6	2.54	0.43
1:5:2701:U:C2	1:5:2702:C:C6	3.07	0.43
1:5:2738:C:C2	1:5:2741:U:C4	3.07	0.43
1:5:2757:A:O2'	1:5:2758:G:O5'	2.36	0.43
1:5:3806:G:C4	1:5:3807:A:C8	3.07	0.43
1:5:4112:C:N3	1:5:4113:U:C6	2.87	0.43
1:5:4166:G:C2	1:5:4167:G:N9	2.86	0.43
1:5:4360:U:C5	1:5:4361:U:C5	3.07	0.43
1:5:4415:A:C2	1:5:4416:G:H1'	2.54	0.43
1:5:4439:U:C2	1:5:4440:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4475:G:H8	1:5:4475:G:O5'	2.02	0.43
1:5:4660:G:H2'	1:5:4661:G:H5''	1.99	0.43
1:5:4911:A:H62	18:O:109:PRO:HG3	1.84	0.43
1:5:4991:U:C2	1:5:4992:G:C8	3.07	0.43
2:7:54:A:N7	13:J:12:MET:CG	2.82	0.43
2:7:110:G:N2	2:7:111:C:N1	2.66	0.43
5:B:339:GLY:HA3	5:B:343:ARG:HD2	2.01	0.43
6:C:189:MET:HB3	6:C:195:LYS:HD3	2.01	0.43
6:C:331:TYR:O	6:C:335:MET:HG3	2.18	0.43
8:E:112:TYR:CE2	47:r:108:MET:HE1	2.54	0.43
8:E:238:ILE:O	8:E:239:SER:HB3	2.18	0.43
9:F:44:LEU:CD2	9:F:48:ARG:NE	2.81	0.43
9:F:198:THR:O	9:F:200:GLY:N	2.52	0.43
15:L:35:ARG:O	15:L:36:ARG:C	2.62	0.43
15:L:182:LEU:HD23	38:i:7:MET:CE	2.49	0.43
17:N:195:ARG:H	17:N:195:ARG:HG3	1.72	0.43
23:T:11:THR:HB	23:T:15:PHE:HD1	1.82	0.43
28:Y:27:ARG:HB2	28:Y:75:ARG:HH12	1.83	0.43
36:g:82:MET:SD	36:g:90:ARG:HD2	2.59	0.43
46:q:66:ARG:O	46:q:69:LEU:CB	2.54	0.43
48:4:71:LYS:HB3	48:4:72:SER:H	1.80	0.43
48:4:147:ILE:CD1	48:4:193:GLY:N	2.81	0.43
48:4:325:SER:O	48:4:327:ASP:CA	2.61	0.43
48:4:541:SER:CB	48:4:576:VAL:HG12	2.42	0.43
48:4:645:GLU:OE1	48:4:665:ILE:CD1	2.67	0.43
49:S2:885:U:O2	49:S2:886:A:C8	2.72	0.43
49:S2:997:A:H2'	49:S2:998:A:O5'	2.19	0.43
49:S2:1080:A:N3	49:S2:1081:U:H5	2.17	0.43
49:S2:1082:A:C8	49:S2:1084:A:N9	2.86	0.43
49:S2:1105:G:N2	49:S2:1128:C:C2	2.87	0.43
49:S2:1202:U:O2'	52:SC:114:LYS:HD3	2.19	0.43
49:S2:1202:U:C2	49:S2:1203:G:C8	3.07	0.43
49:S2:1215:C:N4	49:S2:1221:G:H1	2.13	0.43
49:S2:1283:C:O2	62:SM:106:CYS:HB2	2.18	0.43
49:S2:1286:G:N1	49:S2:1312:G:C6	2.86	0.43
49:S2:1512:C:H4'	79:Sd:8:TRP:CZ2	2.54	0.43
49:S2:1513:C:O2'	49:S2:1514:G:C5'	2.67	0.43
49:S2:1545:A:C2	49:S2:1546:G:C6	3.06	0.43
49:S2:1546:G:O2'	49:S2:1547:C:H5'	2.19	0.43
49:S2:1630:A:N1	49:S2:1631:U:C5	2.87	0.43
49:S2:1793:A:N3	49:S2:1793:A:H2'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:SA:2:SER:O	50:SA:3:GLY:C	2.62	0.43
50:SA:120:ARG:HH12	52:SC:267:GLN:CG	2.32	0.43
51:SB:171:ILE:HD13	51:SB:197:ILE:HA	2.00	0.43
51:SB:196:ASP:OD1	51:SB:196:ASP:C	2.61	0.43
53:SD:98:ALA:HB2	53:SD:169:ASP:HB3	2.01	0.43
55:SF:115:ALA:HA	55:SF:181:ALA:HA	2.00	0.43
56:SG:88:ARG:HB3	56:SG:91:GLU:HB2	2.00	0.43
57:SH:61:ILE:HD11	57:SH:95:ILE:CD1	2.49	0.43
63:SN:11:LEU:HD11	77:Sb:19:HIS:CE1	2.54	0.43
81:Sf:88:PRO:O	81:Sf:90:LYS:N	2.51	0.43
1:5:12:A:N3	1:5:14:C:C5	2.86	0.43
1:5:29:G:C5	1:5:54:G:C2	3.06	0.43
1:5:224:U:O2	6:C:219:LYS:HG2	2.19	0.43
1:5:332:C:H2'	1:5:333:U:O5'	2.19	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
1:5:661:C:C2	1:5:662:C:C5	3.07	0.43
1:5:1098:G:H2'	1:5:1099:C:O4'	2.19	0.43
1:5:1248:C:N4	1:5:1249:C:H41	2.17	0.43
1:5:1305:C:OP1	3:8:7:U:O2'	2.37	0.43
1:5:1380:G:N2	1:5:1382:G:N3	2.67	0.43
1:5:1684:A:N1	1:5:1685:G:C8	2.86	0.43
1:5:1697:G:H4'	1:5:1698:C:OP1	2.19	0.43
1:5:1743:A:C6	1:5:1744:U:C6	3.07	0.43
1:5:1775:A:C2	1:5:1776:A:C4	3.07	0.43
1:5:1776:A:C4	1:5:1777:C:C5	3.07	0.43
1:5:1872:G:N2	1:5:1873:A:C4	2.87	0.43
1:5:1919:G:N2	22:S:166:ARG:HB2	2.33	0.43
1:5:2015:U:C2	1:5:2016:C:C6	3.06	0.43
1:5:2027:U:HO2'	1:5:2028:C:C4'	2.31	0.43
1:5:2052:G:C2	1:5:2053:C:C2	3.06	0.43
1:5:2090:U:O2	1:5:2090:U:OP2	2.37	0.43
1:5:2364:G:N3	1:5:2365:C:C5	2.86	0.43
1:5:2443:G:OP2	1:5:2516:G:N2	2.48	0.43
1:5:2613:C:H42	1:5:2614:C:N4	2.17	0.43
1:5:2658:G:H22	1:5:2675:G:C2'	2.25	0.43
1:5:2823:G:N1	1:5:2824:C:C4	2.86	0.43
1:5:2825:A:H4'	1:5:2826:U:O5'	2.17	0.43
1:5:3640:U:H2'	1:5:3646:A:H62	1.83	0.43
1:5:3754:G:C2	1:5:3755:G:H1'	2.53	0.43
1:5:3757:G:C6	1:5:3758:U:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3871:A:N1	1:5:3885:G:C2	2.87	0.43
1:5:3879:G:O6	1:5:3882:C:C6	2.72	0.43
1:5:3921:U:H2'	1:5:3922:G:H3'	2.00	0.43
1:5:3943:A:C6	1:5:3944:G:C5	3.07	0.43
1:5:4216:G:C6	1:5:4217:G:C5	3.07	0.43
1:5:4222:G:H2'	1:5:4223:C:O4'	2.18	0.43
1:5:4241:C:C4	1:5:4242:U:H5	2.37	0.43
1:5:4250:G:C2	1:5:4259:C:C2	3.07	0.43
1:5:4425:G:O6	1:5:4426:C:C5	2.72	0.43
1:5:4724:A:C2	1:5:4725:C:N1	2.87	0.43
1:5:4737:G:H2'	1:5:4738:C:H6	1.83	0.43
5:B:146:LEU:N	5:B:146:LEU:HD13	2.34	0.43
7:D:37:VAL:HG13	7:D:67:ALA:CB	2.48	0.43
7:D:275:GLN:HA	7:D:278:ASP:OD1	2.19	0.43
8:E:276:GLY:C	8:E:278:TYR:CE2	2.96	0.43
9:F:181:LEU:HB3	9:F:186:ILE:HB	2.00	0.43
10:G:108:GLN:NE2	10:G:108:GLN:N	2.66	0.43
11:H:60:TRP:NE1	22:S:153:PRO:HG3	2.34	0.43
12:I:30:LYS:HG2	12:I:63:GLU:HG2	2.01	0.43
12:I:171:TRP:CE3	12:I:181:PHE:HB2	2.51	0.43
12:I:184:MET:HB2	12:I:190:LEU:HD12	2.00	0.43
13:J:107:PHE:CZ	13:J:130:PHE:CG	3.06	0.43
16:M:75:LYS:C	16:M:77:TRP:H	2.27	0.43
17:N:128:LYS:HB3	17:N:130:PHE:HE1	1.83	0.43
23:T:143:THR:OG1	23:T:146:LYS:O	2.18	0.43
25:V:48:ARG:HG2	25:V:51:ARG:HB2	2.00	0.43
26:W:20:ARG:HE	26:W:30:GLN:HG3	1.83	0.43
30:a:127:LYS:HG3	30:a:128:PHE:CZ	2.53	0.43
42:m:104:HIS:HB2	42:m:105:PRO:HD2	2.01	0.43
46:q:24:TYR:N	46:q:24:TYR:HD1	2.16	0.43
48:4:589:VAL:CG1	48:4:590:LEU:N	2.82	0.43
48:4:753:GLU:N	48:4:782:PHE:CD1	2.81	0.43
49:S2:30:C:H2'	49:S2:31:U:O5'	2.19	0.43
49:S2:106:C:C2	49:S2:107:A:C8	3.04	0.43
49:S2:160:U:O2'	49:S2:161:U:H3'	2.18	0.43
49:S2:310:C:C4	49:S2:311:C:N4	2.87	0.43
49:S2:331:C:H41	56:SG:189:ARG:HH21	1.66	0.43
49:S2:384:U:H3'	49:S2:384:U:C6	2.53	0.43
49:S2:452:G:N1	49:S2:453:C:C5	2.85	0.43
49:S2:474:G:H5'	49:S2:475:C:OP2	2.18	0.43
49:S2:552:G:H2'	49:S2:553:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:615:C:O2'	49:S2:616:A:O4'	2.32	0.43
49:S2:616:A:N1	49:S2:632:C:H1'	2.34	0.43
49:S2:656:G:C5'	49:S2:662:G:N2	2.82	0.43
49:S2:751:G:C2	49:S2:792:C:O2	2.71	0.43
49:S2:833:C:C4	49:S2:834:C:C5	3.07	0.43
49:S2:916:A:H3'	49:S2:917:U:H5'	2.01	0.43
49:S2:921:G:C5	72:SW:28:ARG:HD2	2.53	0.43
49:S2:926:A:C2	49:S2:927:C:C2	3.07	0.43
49:S2:1066:U:C2	49:S2:1067:C:C6	3.06	0.43
49:S2:1313:A:O2'	62:SM:90:GLY:C	2.62	0.43
49:S2:1353:A:C6	49:S2:1354:G:C5	3.06	0.43
49:S2:1539:U:N3	49:S2:1540:G:C5	2.61	0.43
49:S2:1610:G:C4	49:S2:1611:G:C8	3.07	0.43
49:S2:1669:G:C6	49:S2:1670:C:C4	3.06	0.43
49:S2:1862:G:O6	76:Sa:34:LYS:HE2	2.18	0.43
52:SC:235:ASN:OD1	52:SC:235:ASN:N	2.52	0.43
53:SD:193:ASP:HB3	53:SD:194:PRO:HD3	2.01	0.43
56:SG:56:ASN:HD22	56:SG:56:ASN:HA	1.60	0.43
57:SH:57:ARG:NH2	57:SH:89:GLY:O	2.51	0.43
58:SI:194:GLU:HA	61:SL:10:TYR:CE2	2.54	0.43
66:SQ:49:TYR:HA	66:SQ:52:LEU:HD12	2.00	0.43
69:ST:62:ARG:CG	69:ST:62:ARG:HH21	2.31	0.43
72:SW:106:THR:OG1	72:SW:111:MET:HE2	2.18	0.43
77:Sb:31:TYR:CE1	77:Sb:48:SER:HB3	2.54	0.43
82:Sg:32:LEU:HD13	82:Sg:92:LEU:CD1	2.49	0.43
82:Sg:230:LEU:HD22	82:Sg:259:TRP:CE3	2.53	0.43
1:5:6:C:O2	1:5:6:C:H2'	2.18	0.43
1:5:32:G:OP1	17:N:73:ARG:NH1	2.52	0.43
1:5:55:G:N1	1:5:56:A:C5	2.87	0.43
1:5:86:U:C2	1:5:87:A:N7	2.86	0.43
1:5:352:G:C6	6:C:196:MET:SD	3.12	0.43
1:5:371:A:H2'	1:5:372:A:C8	2.54	0.43
1:5:509:A:N3	30:a:105:ARG:CZ	2.82	0.43
1:5:687:U:C4	1:5:688:U:C4	3.07	0.43
1:5:1079:C:N4	1:5:1080:C:C5	2.87	0.43
1:5:1176:C:O2'	7:D:279:ARG:CG	2.66	0.43
1:5:1279:A:N3	1:5:1280:C:N3	2.67	0.43
1:5:1285:U:C4	1:5:1286:C:C5	3.07	0.43
1:5:1320:U:C2	1:5:1321:G:C8	3.06	0.43
1:5:1398:A:H2'	1:5:1398:A:P	2.59	0.43
1:5:1581:G:C6	1:5:1610:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1617:G:C2	1:5:1618:G:C4	3.07	0.43
1:5:1806:G:N1	1:5:1807:C:C5	2.87	0.43
1:5:1811:G:C6	1:5:1812:C:C4	3.07	0.43
1:5:1899:G:C6	1:5:1900:C:C4	3.05	0.43
1:5:1956:A:C6	1:5:2027:U:O4	2.72	0.43
1:5:2012:A:H2'	1:5:2013:A:O4'	2.19	0.43
1:5:2261:G:O2'	1:5:2262:G:C8	2.72	0.43
1:5:2276:A:C4	1:5:2277:C:C6	3.07	0.43
1:5:2437:C:H5''	1:5:2782:U:C4	2.48	0.43
1:5:2452:G:C6	1:5:2467:U:C4	3.02	0.43
1:5:2464:C:O2'	1:5:2465:C:C5'	2.67	0.43
1:5:2576:G:C6	1:5:2577:C:C6	3.06	0.43
1:5:2580:U:H1'	29:Z:38:TYR:OH	2.19	0.43
1:5:2587:A:H8	1:5:2588:C:N3	2.17	0.43
1:5:2650:G:C6	1:5:2651:C:C4	3.07	0.43
1:5:2666:U:C4	1:5:2669:C:C4	3.07	0.43
1:5:2666:U:C4	1:5:2669:C:C5	3.07	0.43
1:5:2889:G:N2	1:5:5034:A:H8	2.17	0.43
1:5:3694:U:O2	1:5:3694:U:H2'	2.17	0.43
1:5:3702:A:C6	1:5:3774:A:C6	3.07	0.43
1:5:3717:A:N1	1:5:3736:A:N1	2.66	0.43
1:5:3861:A:C6	1:5:3862:A:C5	3.06	0.43
1:5:3927:U:C4	1:5:4182:G:N2	2.87	0.43
1:5:4099:G:C4	1:5:4100:C:C5	3.07	0.43
1:5:4140:C:O2	1:5:4140:C:H2'	2.18	0.43
1:5:4165:C:C2	1:5:4166:G:H8	2.30	0.43
1:5:4238:G:H2'	1:5:4239:A:O4'	2.19	0.43
1:5:4352:U:H2'	1:5:4353:U:H5'	2.00	0.43
1:5:4692:A:OP2	1:5:4693:C:O2'	2.36	0.43
1:5:4734:A:N3	1:5:4735:G:C8	2.87	0.43
1:5:4945:G:H21	35:f:69:VAL:H	1.65	0.43
1:5:4991:U:O2	1:5:4992:G:C8	2.72	0.43
2:7:22:A:C6	7:D:266:TRP:CE2	3.07	0.43
2:7:27:G:C2	2:7:28:C:C2	3.07	0.43
2:7:54:A:N3	2:7:55:A:H8	2.06	0.43
2:7:113:G:N2	2:7:114:U:C2	2.87	0.43
3:8:28:C:N3	3:8:29:G:C8	2.87	0.43
3:8:94:G:C4'	3:8:95:A:OP1	2.63	0.43
3:8:97:A:C6	3:8:98:C:N4	2.87	0.43
3:8:101:C:N3	3:8:102:G:C8	2.87	0.43
3:8:116:C:C2	3:8:117:C:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:117:C:N4	3:8:118:C:C5	2.86	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
3:8:138:C:N3	3:8:139:G:N7	2.67	0.43
5:B:109:HIS:HB2	5:B:202:GLU:CD	2.44	0.43
5:B:190:VAL:O	5:B:191:ALA:HB3	2.18	0.43
6:C:47:ASN:OD1	6:C:47:ASN:N	2.52	0.43
6:C:266:THR:OG1	6:C:267:TRP:N	2.52	0.43
7:D:43:LYS:HB3	7:D:46:THR:HG22	2.01	0.43
13:J:105:PHE:HE1	13:J:132:VAL:CB	2.25	0.43
13:J:147:ARG:O	13:J:147:ARG:HG2	2.18	0.43
15:L:128:PRO:HB2	15:L:133:ALA:HB3	1.99	0.43
21:R:131:VAL:CB	21:R:132:PHE:CE2	2.99	0.43
21:R:177:LEU:HB3	21:R:178:GLN:OE1	2.18	0.43
22:S:13:VAL:HA	22:S:28:TYR:O	2.19	0.43
22:S:13:VAL:HG23	22:S:62:VAL:HB	2.00	0.43
23:T:3:ASN:CB	23:T:9:ARG:NH1	2.81	0.43
25:V:42:VAL:HB	25:V:45:ILE:HD12	2.01	0.43
29:Z:60:LYS:HA	29:Z:60:LYS:CE	2.49	0.43
46:q:26:LYS:CB	46:q:194:ASP:OD1	2.67	0.43
48:4:16:LYS:HG2	48:4:467:GLY:HA3	2.00	0.43
48:4:73:THR:CG2	48:4:74:ALA:N	2.39	0.43
48:4:713:ALA:HA	48:4:716:ARG:CZ	2.49	0.43
48:4:740:LEU:HD13	48:4:740:LEU:C	2.44	0.43
48:4:794:PHE:C	48:4:796:PHE:H	2.26	0.43
49:S2:31:U:O2	49:S2:644:G:C2	2.72	0.43
49:S2:217:A:H1'	49:S2:309:G:H22	1.84	0.43
49:S2:312:G:O2'	49:S2:313:A:P	2.76	0.43
49:S2:350:C:O2'	49:S2:383:G:C2	2.72	0.43
49:S2:377:G:C5	49:S2:378:U:C5	3.06	0.43
49:S2:377:G:N2	49:S2:378:U:N1	2.67	0.43
49:S2:440:G:C2	49:S2:454:U:N3	2.87	0.43
49:S2:463:C:H2'	49:S2:465:A:N7	2.34	0.43
49:S2:474:G:C2	49:S2:475:C:N1	2.87	0.43
49:S2:638:C:C2'	49:S2:639:C:O5'	2.67	0.43
49:S2:836:G:C2'	49:S2:837:A:C5'	2.96	0.43
49:S2:837:A:H62	74:SY:47:MET:CB	2.31	0.43
49:S2:916:A:C5	63:SN:73:ARG:HD3	2.54	0.43
49:S2:985:G:C2	49:S2:1002:U:C6	3.07	0.43
49:S2:1110:G:N3	49:S2:1111:U:C6	2.86	0.43
49:S2:1146:C:C2	49:S2:1147:C:C6	3.04	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1292:C:C5'	81:Sf:149:CYS:O	2.67	0.43
49:S2:1302:G:C5	81:Sf:138:ARG:CZ	3.02	0.43
49:S2:1447:G:P	70:SU:87:ARG:HH12	2.42	0.43
49:S2:1466:G:C2	49:S2:1467:C:C6	3.06	0.43
49:S2:1524:G:C4	49:S2:1525:C:C6	3.07	0.43
49:S2:1608:U:N3	49:S2:1609:C:C5	2.86	0.43
49:S2:1850:A:H2'	49:S2:1851:A:H5''	2.00	0.43
53:SD:156:LEU:HD13	53:SD:157:MET:N	2.33	0.43
55:SF:49:LEU:CD2	66:SQ:49:TYR:HB2	2.49	0.43
56:SG:145:PHE:CB	56:SG:147:LEU:HD13	2.48	0.43
59:SJ:32:ILE:HG21	80:Se:34:ARG:CG	2.48	0.43
72:SW:7:LEU:O	72:SW:8:ALA:C	2.62	0.43
72:SW:41:MET:HG2	72:SW:129:PHE:CG	2.54	0.43
72:SW:85:ASP:N	72:SW:85:ASP:OD1	2.51	0.43
76:Sa:7:ASN:C	76:Sa:8:ASN:O	2.57	0.43
1:5:268:G:C2	1:5:269:G:C8	3.07	0.42
1:5:294:G:C5	30:a:61:TYR:CD2	3.07	0.42
1:5:301:G:C4	1:5:302:C:C5	3.08	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
1:5:719:C:O2	1:5:720:G:C8	2.72	0.42
1:5:727:C:C2'	1:5:728:U:OP1	2.67	0.42
1:5:917:A:N3	1:5:918:G:C6	2.86	0.42
1:5:950:G:N2	1:5:951:G:C4	2.87	0.42
1:5:951:G:N3	1:5:952:G:C8	2.87	0.42
1:5:993:G:C4	1:5:994:G:C8	3.07	0.42
1:5:1086:C:O2	1:5:1086:C:C2'	2.67	0.42
1:5:1205:G:C5	1:5:1206:C:C5	3.07	0.42
1:5:1247:U:C4	1:5:1248:C:C4	3.07	0.42
1:5:1303:A:H2'	1:5:1303:A:N3	2.33	0.42
1:5:1349:G:C5	1:5:1350:C:C5	3.06	0.42
1:5:1355:G:C2'	1:5:1356:U:O5'	2.67	0.42
1:5:1355:G:N1	1:5:1385:G:N3	2.67	0.42
1:5:1384:C:O2'	1:5:1505:C:OP1	2.33	0.42
1:5:1421:G:C6	1:5:1465:G:C4	3.07	0.42
1:5:1422:G:C4	1:5:1423:U:C5	3.06	0.42
1:5:1438:U:O4	1:5:1444:G:O6	2.35	0.42
1:5:1483:C:H2'	1:5:1483:C:OP2	2.18	0.42
1:5:1554:A:N6	1:5:1573:G:H1'	2.34	0.42
1:5:1617:G:C6	1:5:1618:G:C6	3.07	0.42
1:5:1667:G:N3	1:5:2283:G:C6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1750:G:N3	1:5:1751:A:C8	2.87	0.42
1:5:1829:G:C2	1:5:1830:G:C5	3.07	0.42
1:5:1840:G:O2'	1:5:1842:G:O5'	2.37	0.42
1:5:1930:U:C4	18:O:48:TYR:CD2	3.07	0.42
1:5:1945:G:H2'	1:5:1946:G:C5'	2.45	0.42
1:5:2044:U:O2	1:5:2044:U:C2'	2.62	0.42
1:5:2124:G:H2'	1:5:2124:G:N3	2.34	0.42
1:5:2301:G:C5	1:5:2302:C:C5	3.06	0.42
1:5:2315:G:C2	1:5:2316:G:C4	3.07	0.42
1:5:2405:G:H3'	1:5:2405:G:C8	2.54	0.42
1:5:2505:C:H4'	1:5:2506:G:C5'	2.48	0.42
1:5:2538:U:C2	1:5:2539:C:C5	3.07	0.42
1:5:2645:G:C2	1:5:2646: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
1:5:3630:A:N3	1:5:3631:U:C6	2.87	0.42
1:5:3663:A:H5'	1:5:3663:A:C4	2.54	0.42
1:5:3737:A:H2'	1:5:3738:G:C1'	2.48	0.42
1:5:3775:A:H2'	1:5:3776:G:O4'	2.19	0.42
1:5:3795:A:C4	1:5:3796:U:C6	3.07	0.42
1:5:3806:G:C2	1:5:3807:A:C8	3.07	0.42
1:5:3834:C:N3	1:5:3835:C:C5	2.87	0.42
1:5:3873:G:C2	1:5:3883:U:N3	2.87	0.42
1:5:4085:A:N6	10:G:62:ARG:NH2	2.67	0.42
1:5:4101:C:N3	1:5:4102:C:C6	2.87	0.42
1:5:4193:C:H3'	1:5:4194:U:O2	2.19	0.42
1:5:4316:G:C6	1:5:4317:A:N7	2.86	0.42
1:5:4404:U:C4	1:5:4436:U:N3	2.87	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
1:5:4746:C:C4	1:5:4747:C:C4	3.07	0.42
1:5:4892:A:C2	1:5:4893:A:H1'	2.54	0.42
1:5:4910:G:N7	18:O:156:LEU:HD22	2.34	0.42
1:5:5025:C:P	58:SI:164:GLU:OE2	2.73	0.42
1:5:5063:G:O6	5:B:124:LYS:NZ	2.40	0.42
2:7:31:G:C2	2:7:47:G:C2	3.07	0.42
2:7:50:A:H2'	2:7:50:A:N3	2.34	0.42
2:7:73:U:O2	2:7:102:U:C5	2.72	0.42
3:8:73:U:OP1	28:Y:75:ARG:HD2	2.19	0.42
3:8:119:C:O2	3:8:119:C:H2'	2.19	0.42
3:8:121:G:H2'	3:8:122:G:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:8:149:G:C2	3:8:151:G:N7	2.87	0.42
6:C:14:LYS:C	6:C:173:LYS:HG2	2.44	0.42
6:C:310:HIS:O	6:C:311:ARG:C	2.62	0.42
7:D:82:GLU:OE2	7:D:108:ARG:NH1	2.48	0.42
7:D:109:LEU:HD21	7:D:142:PHE:CE1	2.54	0.42
7:D:198:HIS:CE1	7:D:203:ASN:CG	2.97	0.42
7:D:250:ASN:ND2	7:D:252:VAL:HG12	2.20	0.42
14:K:40:LYS:HD2	14:K:41:LYS:HB2	2.01	0.42
17:N:120:TRP:CZ2	17:N:123:GLU:HB3	2.54	0.42
23:T:141:VAL:HG12	23:T:142:ARG:N	2.34	0.42
33:d:87:ARG:HB2	33:d:87:ARG:HH11	1.83	0.42
35:f:57:THR:HG21	35:f:68:ARG:HD3	2.01	0.42
40:k:19:ASP:OD1	40:k:20:ALA:N	2.52	0.42
40:k:41:TYR:CB	40:k:43:TYR:HE1	2.31	0.42
46:q:6:ARG:CD	46:q:10:LYS:HE2	2.46	0.42
46:q:139:GLN:NE2	48:4:183:GLU:C	2.77	0.42
46:q:154:ILE:HG22	46:q:156:SER:O	2.19	0.42
47:r:7:TRP:CZ3	47:r:11:ARG:CB	3.01	0.42
48:4:45:ILE:CD1	48:4:78:PHE:HD1	2.22	0.42
48:4:311:GLU:H	48:4:311:GLU:HG2	1.49	0.42
48:4:402:VAL:HG22	48:4:403:PRO:HG2	2.00	0.42
48:4:447:ILE:HG21	48:4:472:LEU:HD22	2.00	0.42
48:4:448:GLN:HG3	48:4:449:ARG:HB2	2.01	0.42
48:4:521:VAL:HG21	73:5X:50:ILE:HD13	1.99	0.42
48:4:540:GLU:OE1	48:4:540:GLU:C	2.62	0.42
48:4:742:GLU:OE2	48:4:789:PRO:CB	2.67	0.42
49:S2:115:U:H2'	49:S2:116:U:H6	1.84	0.42
49:S2:122:G:N1	49:S2:123:G:C4	2.87	0.42
49:S2:154:U:H2'	56:SG:4:ASN:HD21	1.84	0.42
49:S2:166:A:N1	49:S2:167:G:C5	2.86	0.42
49:S2:185:G:N3	49:S2:186:C:C5	2.87	0.42
49:S2:309:G:C6	49:S2:310:C:C4	3.07	0.42
49:S2:371:A:C4	49:S2:372:U:C5	3.07	0.42
49:S2:428:U:C4	59:SJ:7:TRP:CZ2	3.05	0.42
49:S2:494:C:C2'	49:S2:495:U:O5'	2.66	0.42
49:S2:688:U:O2	49:S2:688:U:O4'	2.36	0.42
49:S2:881:G:C6	49:S2:882:U:C5	3.07	0.42
49:S2:1293:A:C8	81:Sf:150:PHE:CB	2.98	0.42
49:S2:1693:G:N2	49:S2:1834:A:H8	2.16	0.42
49:S2:1718:G:C6	49:S2:1814:G:C6	3.07	0.42
49:S2:1777:G:H2'	49:S2:1778:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:SB:68:GLU:OE2	51:SB:68:GLU:HA	2.19	0.42
51:SB:133:TYR:CZ	51:SB:181:LEU:HD12	2.51	0.42
53:SD:200:PRO:C	53:SD:202:LYS:H	2.27	0.42
59:SJ:38:ARG:HA	80:Se:31:ARG:CG	2.49	0.42
63:SN:105:ASN:N	63:SN:105:ASN:OD1	2.52	0.42
82:Sg:59:LEU:HB3	82:Sg:90:TRP:CE3	2.54	0.42
82:Sg:68:ASP:HB2	82:Sg:110:SER:HA	2.00	0.42
82:Sg:217:MET:CG	82:Sg:229:THR:HG23	2.49	0.42
1:5:38:A:C2	1:5:41:C:C4	3.07	0.42
1:5:52:G:C8	1:5:52:G:C3'	3.02	0.42
1:5:74:G:H5'	15:L:59:VAL:CG1	2.49	0.42
1:5:165:A:C4	1:5:166:C:C5	3.07	0.42
1:5:218:A:C8	6:C:181:LYS:HG3	2.54	0.42
1:5:269:G:N3	1:5:269:G:C2'	2.82	0.42
1:5:298:G:C4	1:5:299:C:C6	3.07	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
1:5:685:C:O2	1:5:685:C:H2'	2.19	0.42
1:5:717:U:C4	1:5:718:C:C5	3.07	0.42
1:5:919:C:C5	1:5:920:C:C5	3.07	0.42
1:5:919:C:O2'	1:5:920:C:H5'	2.18	0.42
1:5:1067:G:C5	1:5:1068:G:C8	3.07	0.42
1:5:1184:A:N1	1:5:1185:G:C5	2.87	0.42
1:5:1258:G:N3	1:5:1259:G:C8	2.87	0.42
1:5:1268:G:O5'	1:5:2109:G:H8	2.01	0.42
1:5:1398:A:H61	1:5:1419:G:H2'	1.83	0.42
1:5:1543:G:H1'	1:5:2513:A:C2	2.55	0.42
1:5:1556:C:H2'	1:5:1557:C:C6	2.51	0.42
1:5:1558:A:H1'	21:R:129:GLY:HA3	2.01	0.42
1:5:1641:G:C6	1:5:4386:C:O4'	2.72	0.42
1:5:1751:A:C2	1:5:1752:G:C1'	3.02	0.42
1:5:1805:A:C8	31:b:28:ARG:HB2	2.54	0.42
1:5:2290:C:H1'	1:5:2321:G:H1'	2.01	0.42
1:5:2316:G:C2	1:5:2317:C:N3	2.87	0.42
1:5:2316:G:H2'	1:5:2317:C:H6	1.83	0.42
1:5:2322:G:C2	1:5:2323:C:C2	3.07	0.42
1:5:2338:C:H5''	47:r:12:ASN:HD22	1.84	0.42
1:5:2546:G:H4'	1:5:2547:G:OP1	2.18	0.42
1:5:2560:C:N3	1:5:2561:C:C6	2.87	0.42
1:5:2576:G:N1	1:5:2577:C:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2588:C:H3'	1:5:2588:C:H6	1.83	0.42
1:5:2606:G:N3	1:5:2607:C:C5	2.87	0.42
1:5:2622:G:C6	1:5:2623:A:C8	3.07	0.42
1:5:2646:C:N4	1:5:2686:G:C6	2.87	0.42
1:5:2693:G:OP1	40:k:35:LYS:NZ	2.50	0.42
1:5:3593:C:H2'	1:5:3595:U:C5	2.54	0.42
1:5:3605:C:C4	1:5:3606:U:C5	3.07	0.42
1:5:3698:G:C4	1:5:3699:C:C5	3.08	0.42
1:5:3804:G:O2'	1:5:3832:U:H1'	2.19	0.42
1:5:3841:C:C2	1:5:3842:C:C5	3.08	0.42
1:5:4283:G:N3	1:5:4284:C:H6	2.04	0.42
1:5:4355:G:N2	1:5:4356:G:C8	2.87	0.42
1:5:4362:A:O2'	44:o:39:ARG:NH2	2.52	0.42
1:5:4487:A:O2'	1:5:4708:A:N1	2.49	0.42
1:5:4502:C:C4	1:5:4503:A:N7	2.87	0.42
1:5:4629:U:H2'	1:5:4630:G:O5'	2.19	0.42
1:5:4719:G:H4'	1:5:4720:C:OP1	2.18	0.42
1:5:4723:A:C2	1:5:4724:A:N7	2.88	0.42
1:5:4744:A:C2	1:5:4745:G:C8	3.07	0.42
1:5:4862:G:C2	1:5:4863:G:N9	2.87	0.42
1:5:4904:G:C2	1:5:4905:C:C6	3.06	0.42
1:5:4956:A:N6	1:5:4957:C:C5	2.87	0.42
1:5:4982:A:N6	1:5:4983:C:C4	2.87	0.42
3:8:82:A:H3'	3:8:82:A:C4	2.54	0.42
5:B:25:HIS:ND1	5:B:25:HIS:C	2.77	0.42
7:D:160:PHE:CE2	7:D:179:ARG:HB2	2.54	0.42
8:E:277:ILE:CD1	8:E:282:LEU:HD13	2.48	0.42
11:H:41:ILE:CD1	11:H:69:THR:HB	2.48	0.42
14:K:86:LYS:C	14:K:104:ILE:CG2	2.90	0.42
14:K:102:GLY:C	14:K:140:GLY:N	2.76	0.42
14:K:142:ASN:HB2	14:K:148:PRO:HA	1.92	0.42
17:N:156:HIS:O	17:N:159:ARG:HG3	2.19	0.42
22:S:28:TYR:CD2	23:T:151:LEU:HD11	2.53	0.42
22:S:173:ASN:OD1	22:S:174:THR:N	2.53	0.42
23:T:8:ARG:HH11	23:T:52:MET:HE1	1.83	0.42
24:U:23:LEU:HA	24:U:110:TYR:O	2.18	0.42
28:Y:126:ARG:HH11	28:Y:126:ARG:HG2	1.84	0.42
33:d:111:VAL:HB	33:d:114:PHE:HE1	1.84	0.42
48:4:19:ILE:CG2	48:4:20:ARG:N	2.81	0.42
48:4:22:MET:O	48:4:103:ILE:HG13	2.18	0.42
48:4:505:VAL:HG22	48:4:797:THR:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:713:ALA:O	48:4:716:ARG:CA	2.67	0.42
48:4:744:ILE:CD1	48:4:816:HIS:C	2.59	0.42
48:4:751:CYS:HB2	48:4:755:VAL:HB	0.47	0.42
48:4:791:ASN:HA	48:4:794:PHE:HE1	1.84	0.42
48:4:834:VAL:O	48:4:838:THR:HG23	2.18	0.42
49:S2:113:G:N2	49:S2:292:A:H1'	2.33	0.42
49:S2:315:C:C2	49:S2:316:G:C8	3.07	0.42
49:S2:862:A:C8	72:SW:107:SER:CA	3.00	0.42
49:S2:1107:G:C2	49:S2:1108:G:C8	3.07	0.42
49:S2:1123:C:C2	49:S2:1124:C:H6	2.37	0.42
49:S2:1231:C:C4'	49:S2:1665:G:C2	3.02	0.42
49:S2:1320:G:H2'	49:S2:1321:G:O4'	2.19	0.42
49:S2:1434:C:P	49:S2:1434:C:O4'	2.77	0.42
49:S2:1502:C:C4	49:S2:1503:C:C5	3.07	0.42
49:S2:1528:G:C2	49:S2:1529:C:C2	3.07	0.42
49:S2:1785:C:O2	49:S2:1786:U:C5	2.71	0.42
49:S2:1798:C:H2'	49:S2:1799:G:O4'	2.18	0.42
53:SD:35:SER:HB3	53:SD:91:VAL:HG21	1.99	0.42
55:SF:103:LEU:HD23	55:SF:178:ILE:HD13	2.01	0.42
56:SG:191:ARG:HH11	56:SG:191:ARG:HB3	1.84	0.42
58:SI:21:TYR:C	58:SI:21:TYR:CD1	2.97	0.42
59:SJ:136:ARG:CD	59:SJ:160:SER:HA	2.43	0.42
61:SL:92:TYR:O	61:SL:104:LYS:HA	2.20	0.42
67:SR:104:GLU:OE1	67:SR:107:LYS:HD2	2.19	0.42
69:ST:118:ASP:OD1	69:ST:118:ASP:N	2.53	0.42
78:Sc:14:VAL:HG22	78:Sc:32:VAL:HG12	2.00	0.42
81:Sf:123:SER:OG	81:Sf:144:CYS:SG	2.57	0.42
82:Sg:302:TYR:OH	82:Sg:310:TRP:HH2	2.03	0.42
1:5:199:G:C2	1:5:201:C:C4	3.07	0.42
1:5:227:A:N6	1:5:241:G:H2'	2.34	0.42
1:5:229:G:C2	1:5:240:G:C2	3.07	0.42
1:5:247:G:C6	1:5:248:C:C5	3.06	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
1:5:680:G:C6	1:5:681:G:N7	2.88	0.42
1:5:686:A:H3'	1:5:687:U:H5'	2.00	0.42
1:5:731:G:O6	1:5:732:A:C4	2.72	0.42
1:5:736:C:O5'	1:5:737:C:OP2	2.37	0.42
1:5:744:G:N1	1:5:921:C:C2	2.87	0.42
1:5:957:G:C5'	1:5:1284:G:C2	2.96	0.42
1:5:1186:U:C5	1:5:1187:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1189:G:N2	1:5:1190:C:C2	2.87	0.42
1:5:1274:A:H5'	1:5:2123:C:C6	2.54	0.42
1:5:1404:G:C2	1:5:1405:C:C2	3.07	0.42
1:5:1421:G:C2	1:5:1422:G:C4	3.07	0.42
1:5:1540:C:N3	1:5:1541:C:C5	2.87	0.42
1:5:1646:A:C6	1:5:1647:U:C4	3.07	0.42
1:5:1721:G:N1	1:5:1840:G:C8	2.82	0.42
1:5:1750:G:N2	1:5:1751:A:N9	2.67	0.42
1:5:1808:C:C4	1:5:1809:C:C5	3.07	0.42
1:5:1829:G:N1	1:5:1830:G:C5	2.88	0.42
1:5:1886:G:N1	1:5:1894:C:C4	2.87	0.42
1:5:1918:U:O2	1:5:1920:C:C4	2.73	0.42
1:5:1971:C:N3	1:5:1972:G:C5	2.87	0.42
1:5:2288:G:H5'	1:5:2289:C:OP1	2.19	0.42
1:5:2347:A:O2'	1:5:2348:G:C8	2.59	0.42
1:5:2657:G:C3'	1:5:2658:G:H8	2.31	0.42
1:5:2674:A:H4'	1:5:2675:G:OP2	2.18	0.42
1:5:2678:A:C2	1:5:2679:G:C8	3.07	0.42
1:5:2682:G:C4	1:5:2683:C:C5	3.07	0.42
1:5:2703:G:C2	1:5:2704:C:C2	3.07	0.42
1:5:2713:C:C2	1:5:2714:G:N7	2.87	0.42
1:5:2743:A:C4	1:5:2744:A:N7	2.85	0.42
1:5:3615:G:H1'	26:W:44:ARG:HD3	2.00	0.42
1:5:3723:A:N1	1:5:3724:A:C5	2.87	0.42
1:5:3759:A:C8	1:5:3765:G:N2	2.87	0.42
1:5:3832:U:H2'	1:5:3833:C:C6	2.53	0.42
1:5:3871:A:C5	1:5:3885:G:N2	2.88	0.42
1:5:3899:G:H5''	5:B:257:TRP:O	2.19	0.42
1:5:4154:G:C2	1:5:4155:C:C2	3.07	0.42
1:5:4301:U:C4'	23:T:54:HIS:HD2	2.27	0.42
1:5:4343:U:N3	1:5:4344:U:C4	2.87	0.42
1:5:4400:G:C6	1:5:4401:G:N7	2.87	0.42
1:5:4578:G:C2	1:5:4579:U:C6	3.07	0.42
1:5:4742:G:N1	1:5:4743:G:C5	2.88	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
5:B:89:ILE:CG2	5:B:197:ALA:HB1	2.50	0.42
5:B:145:ALA:C	5:B:146:LEU:HD13	2.44	0.42
11:H:54:ARG:HH11	11:H:54:ARG:HG3	1.84	0.42
12:I:9:TYR:CD1	12:I:9:TYR:N	2.88	0.42
12:I:12:CYS:SG	12:I:59:GLN:HG2	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:L:103:ARG:CZ	15:L:103:ARG:HB3	2.49	0.42
16:M:3:PHE:HB2	16:M:6:PHE:CE1	2.54	0.42
17:N:113:LEU:CD2	17:N:136:ASP:OD1	2.66	0.42
18:O:15:LEU:HA	18:O:42:ASN:O	2.19	0.42
21:R:107:ARG:HH11	21:R:107:ARG:HB3	1.84	0.42
23:T:121:GLU:OE2	23:T:122:LYS:HG3	2.19	0.42
25:V:85:ARG:NE	25:V:99:GLU:O	2.50	0.42
27:X:72:ASP:OD1	27:X:72:ASP:N	2.50	0.42
34:e:16:ARG:HD3	34:e:60:TYR:OH	2.20	0.42
35:f:11:PHE:HZ	35:f:14:TYR:CD1	2.37	0.42
37:h:84:ARG:CZ	37:h:84:ARG:HB3	2.49	0.42
46:q:85:ASN:C	46:q:86:VAL:HG23	2.44	0.42
48:4:10:ARG:CZ	48:4:465:PRO:HD2	2.40	0.42
48:4:306:ASN:O	48:4:307:PHE:HB2	2.19	0.42
48:4:451:ILE:HG22	48:4:460:PRO:HA	2.00	0.42
48:4:578:SER:C	48:4:579:TYR:CG	2.96	0.42
49:S2:30:C:O2'	49:S2:31:U:H5'	2.19	0.42
49:S2:149:A:O2'	49:S2:150:A:O4'	2.36	0.42
49:S2:178:C:O2	49:S2:178:C:H2'	2.19	0.42
49:S2:318:A:N6	56:SG:186:GLN:OE1	2.52	0.42
49:S2:429:C:O2	49:S2:429:C:C2'	2.64	0.42
49:S2:431:G:C5	49:S2:432:G:N7	2.86	0.42
49:S2:441:C:H6	49:S2:448:A:H2	1.65	0.42
49:S2:513:G:C6	49:S2:514:U:C4	3.08	0.42
49:S2:536:A:N6	49:S2:537:C:C6	2.87	0.42
49:S2:604:A:C6	49:S2:605:A:N6	2.87	0.42
49:S2:832:G:C4	49:S2:833:C:C6	3.07	0.42
49:S2:1042:A:N6	49:S2:1043:G:C5	2.87	0.42
49:S2:1110:G:N3	49:S2:1110:G:H2'	2.34	0.42
49:S2:1315:U:C4	49:S2:1316:C:C5	2.90	0.42
49:S2:1323:U:H2'	49:S2:1324:G:C8	2.54	0.42
49:S2:1335:G:C2	49:S2:1336:C:C2	3.06	0.42
49:S2:1363:C:C2	49:S2:1376:A:C2	3.07	0.42
49:S2:1450:G:C2	49:S2:1451:G:H1'	2.54	0.42
49:S2:1545:A:C6	49:S2:1588:A:C2	3.00	0.42
49:S2:1606:G:C6	49:S2:1632:G:N1	2.87	0.42
49:S2:1610:G:N2	49:S2:1611:G:C4	2.88	0.42
49:S2:1668:U:O2	49:S2:1669:G:C8	2.72	0.42
49:S2:1728:U:H5'	49:S2:1729:U:OP2	2.20	0.42
49:S2:1850:A:O2'	49:S2:1851:A:C4'	2.67	0.42
52:SC:252:THR:HB	72:SW:99:PHE:CE2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:SD:106:ARG:HG2	53:SD:175:VAL:HG23	2.00	0.42
58:SI:79:ILE:HG22	58:SI:103:LEU:C	2.44	0.42
58:SI:197:PHE:HZ	61:SL:5:GLN:HG3	1.84	0.42
63:SN:113:PHE:C	63:SN:115:LEU:N	2.73	0.42
65:SP:13:ARG:O	65:SP:15:PHE:N	2.52	0.42
68:SS:138:THR:HA	68:SS:141:ARG:HH21	1.84	0.42
73:SX:93:PHE:CE1	73:SX:133:LEU:HD22	2.54	0.42
1:5:83:C:P	1:5:84:A:HO2'	2.38	0.42
1:5:98:A:H1'	1:5:292:G:C6	2.54	0.42
1:5:177:G:C2	1:5:178:C:C2	3.08	0.42
1:5:212:A:C2	1:5:213:G:C6	3.08	0.42
1:5:274:C:C2'	1:5:275:C:O5'	2.67	0.42
1:5:289:C:N3	1:5:290:U:C4	2.85	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
1:5:506:C:C2	1:5:507:G:N7	2.87	0.42
1:5:910:G:C2	1:5:911:U:C6	3.07	0.42
1:5:975:C:C3'	1:5:976:G:O4'	2.67	0.42
1:5:1260:G:C6	1:5:1261:G:C5	3.08	0.42
1:5:1272:C:O2'	1:5:1273:G:C1'	2.67	0.42
1:5:1330:A:C2	1:5:1331:C:C6	3.07	0.42
1:5:1358:G:H2'	1:5:1359:G:C1'	2.44	0.42
1:5:1396:G:C8	1:5:1396:G:C3'	3.02	0.42
1:5:1421:G:N1	1:5:1422:G:N7	2.68	0.42
1:5:1460:C:H5''	20:Q:144:LYS:HB2	2.02	0.42
1:5:1557:C:C2	1:5:1558:A:C8	3.08	0.42
1:5:1570:G:C2	1:5:1571:G:H1'	2.54	0.42
1:5:1866:U:C5	1:5:4405:G:H1'	2.54	0.42
1:5:1921:C:H2'	16:M:17:PHE:CE2	2.55	0.42
1:5:1967:A:N1	1:5:1968:G:C6	2.87	0.42
1:5:2081:C:O2'	1:5:2082:G:C5'	2.67	0.42
1:5:2336:G:C4	1:5:2337:C:C5	3.07	0.42
1:5:2393:C:H1'	1:5:2398:U:C2	2.55	0.42
1:5:2442:G:C2'	1:5:2443:G:H5''	2.49	0.42
1:5:2448:G:O2'	1:5:2449:A:C8	2.63	0.42
1:5:2480:G:C5	1:5:2481:G:N7	2.87	0.42
1:5:2487:G:O6	1:5:2489:C:H1'	2.19	0.42
1:5:2529:A:H61	1:5:2532:C:H1'	1.84	0.42
1:5:2533:C:O2	1:5:2534:C:C4	2.72	0.42
1:5:2549:G:N2	1:5:2550:G:H1'	2.34	0.42
1:5:2574:G:O6	1:5:2762:G:O6	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2752:G:C5'	1:5:2752:G:H8	2.32	0.42
1:5:2752:G:H3'	1:5:2753:G:H8	1.85	0.42
1:5:2791:C:N3	1:5:2792:C:C5	2.87	0.42
1:5:3755:G:N1	1:5:3756:A:C8	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
1:5:3946:G:N1	1:5:3947:A:C5	2.87	0.42
1:5:4172:A:C2	1:5:4173:G:C5	3.08	0.42
1:5:4176:C:H2'	1:5:4177:C:H6	1.84	0.42
1:5:4200:G:C6	1:5:4201:G:C5	3.07	0.42
1:5:4322:G:N2	1:5:4326:G:C6	2.88	0.42
1:5:4342:C:O2	1:5:4342:C:H2'	2.18	0.42
1:5:4583:C:C4	1:5:4718:G:C2	3.07	0.42
1:5:4593:C:C2	1:5:4594:U:C6	3.07	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
1:5:4898:G:C2	1:5:4899:G:N7	2.87	0.42
1:5:4898:G:N2	1:5:4899:G:C4	2.87	0.42
1:5:4898:G:N3	1:5:4899:G:C8	2.87	0.42
1:5:4986:G:C2'	1:5:4987:C:O5'	2.67	0.42
1:5:5035:U:N3	1:5:5036:C:C6	2.87	0.42
2:7:27:G:C5	2:7:28:C:C5	3.08	0.42
2:7:44:C:C2	2:7:45:U:C6	3.08	0.42
2:7:66:G:H2'	2:7:67:C:C6	2.54	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
6:C:48:ASN:O	6:C:49:ARG:CB	2.66	0.42
7:D:44:TYR:HA	23:T:33:ILE:HB	2.00	0.42
9:F:88:GLU:CG	23:T:136:ARG:HG2	2.49	0.42
14:K:54:LYS:HB2	14:K:54:LYS:HE3	1.86	0.42
15:L:125:ILE:HD12	15:L:125:ILE:N	2.35	0.42
22:S:34:ALA:HB1	22:S:35:PRO:CD	2.49	0.42
22:S:84:TYR:HD2	22:S:113:MET:HE3	1.85	0.42
23:T:48:VAL:HG21	23:T:94:GLU:HG2	2.00	0.42
26:W:59:HIS:N	26:W:59:HIS:CD2	2.87	0.42
28:Y:5:PRO:O	28:Y:6:PHE:CB	2.67	0.42
29:Z:50:PRO:HB2	29:Z:122:TYR:HE2	1.85	0.42
30:a:75:LEU:HA	30:a:78:LEU:HD13	2.00	0.42
48:4:147:ILE:HD11	48:4:193:GLY:CA	2.49	0.42
48:4:223:PHE:CD1	48:4:223:PHE:C	2.97	0.42
48:4:433:ASN:O	48:4:435:THR:HG23	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:517:LEU:O	48:4:521:VAL:HG23	2.19	0.42
48:4:568:ILE:HG22	48:4:569:PRO:N	2.34	0.42
48:4:641:TRP:CH2	48:4:701:ARG:NH1	2.87	0.42
48:4:740:LEU:CD1	48:4:820:LEU:HD12	2.41	0.42
48:4:742:GLU:N	48:4:820:LEU:HG	2.33	0.42
49:S2:27:A:H2	49:S2:28:U:H1'	1.81	0.42
49:S2:104:A:H5'	49:S2:105:U:OP2	2.18	0.42
49:S2:298:G:N1	49:S2:299:A:N7	2.67	0.42
49:S2:358:C:C2	49:S2:405:G:C2	3.08	0.42
49:S2:443:U:N3	49:S2:444:G:N9	2.67	0.42
49:S2:507:G:H4'	49:S2:509:G:N7	2.33	0.42
49:S2:589:G:C5	49:S2:591:U:C6	3.08	0.42
49:S2:752:G:N2	49:S2:791:C:H1'	2.34	0.42
49:S2:885:U:H2'	49:S2:886:A:H8	1.83	0.42
49:S2:910:G:C2	49:S2:911:C:N1	2.88	0.42
49:S2:924:G:C2	49:S2:1019:C:C2	3.07	0.42
49:S2:941:C:H2'	49:S2:942:G:H8	1.84	0.42
49:S2:1093:A:C4	49:S2:1094:C:C6	3.07	0.42
49:S2:1110:G:N2	49:S2:1111:U:C2	2.88	0.42
49:S2:1204:A:C2	49:S2:1205:C:C2	3.07	0.42
49:S2:1295:A:N7	49:S2:1296:U:C6	2.88	0.42
49:S2:1310:U:O4'	81:Sf:143:LYS:CG	2.63	0.42
49:S2:1327:G:C2	49:S2:1503:C:C2	3.07	0.42
49:S2:1410:C:C4	49:S2:1411:G:C6	3.07	0.42
49:S2:1495:G:N7	49:S2:1496:U:C5	2.87	0.42
49:S2:1545:A:N3	49:S2:1546:G:C5	2.86	0.42
49:S2:1576:G:C6	49:S2:1577:G:N7	2.87	0.42
49:S2:1817:G:H2'	49:S2:1818:A:C8	2.54	0.42
52:SC:60:TRP:CZ2	52:SC:92:GLU:CB	3.02	0.42
53:SD:106:ARG:HH21	53:SD:110:LEU:HD13	1.84	0.42
55:SF:15:PRO:HB3	66:SQ:59:GLY:HA2	2.02	0.42
55:SF:77:MET:HE1	55:SF:86:LYS:HD2	2.01	0.42
55:SF:149:GLN:O	55:SF:150:ALA:C	2.62	0.42
64:SO:52:THR:OG1	64:SO:53:ILE:N	2.52	0.42
66:SQ:85:ARG:HD3	66:SQ:119:LEU:CD2	2.49	0.42
69:ST:21:PHE:C	69:ST:21:PHE:CD1	2.98	0.42
69:ST:63:HIS:CE1	69:ST:78:ILE:HG12	2.54	0.42
69:ST:97:LYS:O	69:ST:98:SER:C	2.62	0.42
75:SZ:91:LEU:HB2	75:SZ:97:ILE:HD11	2.01	0.42
1:5:28:C:O2	1:5:28:C:C2'	2.60	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)
1:5:62:A:O2'	1:5:63:G:H5'	2.19	0.42
1:5:212:A:C4	1:5:213:G:N7	2.86	0.42
1:5:273:U:H2'	1:5:274:C:O4'	2.20	0.42
1:5:405:U:H5'	1:5:406:C:OP2	2.18	0.42
1:5:423:G:C2'	19:P:118:GLN:HE21	2.32	0.42
1:5:689:U:H4'	47:r:85:ASN:HD22	1.84	0.42
1:5:982:U:H2'	1:5:983:C:C5	2.46	0.42
1:5:1194:G:N1	1:5:1195:G:C5	2.87	0.42
1:5:1211:G:N3	1:5:1212:G:C8	2.88	0.42
1:5:1321:G:C1'	1:5:1891:A:N6	2.83	0.42
1:5:1346:C:N3	1:5:1347:G:N7	2.67	0.42
1:5:1376:C:H2'	1:5:1378:C:C6	2.55	0.42
1:5:1398:A:H3'	30:a:132:ARG:HH22	1.84	0.42
1:5:1545:G:C4	1:5:1546:C:C5	3.07	0.42
1:5:1633:G:N1	4:A:207:VAL:HG11	2.35	0.42
1:5:1672:U:O2	1:5:1673:U:C4	2.71	0.42
1:5:1968:G:N3	1:5:1969:G:C8	2.87	0.42
1:5:2325:C:C4	1:5:2326:G:N7	2.84	0.42
1:5:2486:G:C4	1:5:2487:G:C8	3.07	0.42
1:5:2566:G:C2	1:5:2567:G:C5	3.07	0.42
1:5:2630:U:O2	1:5:2632:U:H1'	2.19	0.42
1:5:2667:C:O4'	21:R:96:MET:HG2	2.20	0.42
1:5:2782:U:O2	1:5:2782:U:H2'	2.17	0.42
1:5:3610:A:C2	1:5:3611:A:C5	3.08	0.42
1:5:3744:G:H2'	1:5:3745:U:C6	2.54	0.42
1:5:3753:G:C2	1:5:3754:G:N9	2.88	0.42
1:5:4139:G:C2	1:5:4140:C:C2	3.06	0.42
1:5:4139:G:N2	1:5:4140:C:C2	2.88	0.42
1:5:4189:U:C2	1:5:4190:U:C6	3.07	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
1:5:4503:A:C4	1:5:4504:C:C5	3.07	0.42
1:5:4725:C:O2	1:5:4725:C:H2'	2.19	0.42
1:5:4761:G:C2'	1:5:4762:A:O4'	2.60	0.42
1:5:4871:C:H3'	16:M:91:TRP:NE1	2.34	0.42
1:5:4898:G:N2	1:5:4923:C:C2	2.87	0.42
1:5:4998:G:C4	1:5:4999:G:C8	3.07	0.42
2:7:19:C:C2	2:7:60:G:N2	2.87	0.42
3:8:49:G:C6	3:8:50:C:C4	3.08	0.42
4:A:227:ARG:CZ	4:A:227:ARG:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:B:6:PHE:HB3	25:V:49:LEU:HD11	2.01	0.42
5:B:285:TYR:CE2	5:B:334:LYS:HB2	2.54	0.42
8:E:160:PHE:C	8:E:160:PHE:CD1	2.96	0.42
18:O:178:ARG:HH11	18:O:178:ARG:HG3	1.83	0.42
29:Z:4:PHE:N	29:Z:4:PHE:HD1	2.18	0.42
32:c:28:VAL:HG13	32:c:33:GLN:HB3	1.98	0.42
32:c:31:TYR:CE2	32:c:56:ARG:CD	2.89	0.42
38:i:45:ARG:NH2	38:i:50:PHE:HE1	2.14	0.42
46:q:63:LYS:HD3	46:q:78:LEU:HB3	2.02	0.42
46:q:97:GLU:CB	46:q:206:ILE:CD1	2.48	0.42
46:q:108:PRO:CB	46:q:109:ALA:HB3	2.50	0.42
46:q:174:LEU:HD12	46:q:175:LEU:CA	2.48	0.42
48:4:24:VAL:CG2	48:4:32:LYS:CG	2.97	0.42
48:4:158:ASN:CG	48:4:159:LYS:N	2.77	0.42
48:4:300:VAL:HG23	48:4:301:PHE:CD1	2.55	0.42
48:4:563:GLU:OE1	48:4:564:ASP:OD1	2.38	0.42
48:4:580:ARG:H	48:4:741:MET:HG2	1.84	0.42
48:4:597:ASN:O	48:4:598:LYS:CB	2.59	0.42
48:4:766:LYS:HD2	48:4:766:LYS:N	2.34	0.42
49:S2:25:A:N6	49:S2:648:A:H61	2.04	0.42
49:S2:113:G:O2'	49:S2:114:G:OP1	2.29	0.42
49:S2:158:A:N6	49:S2:466:G:C5	2.88	0.42
49:S2:189:U:C5	49:S2:190:G:C8	3.08	0.42
49:S2:219:U:C4	49:S2:220:U:C5	3.08	0.42
49:S2:387:C:O2	49:S2:388:U:H6	1.94	0.42
49:S2:435:A:H8	49:S2:435:A:OP2	2.02	0.42
49:S2:449:A:N6	49:S2:452:G:C2	2.87	0.42
49:S2:511:U:H2'	49:S2:512:A:H8	1.84	0.42
49:S2:610:G:N2	49:S2:611:G:H1'	2.35	0.42
49:S2:694:G:N1	49:S2:695:C:C4	2.88	0.42
49:S2:841:G:N1	49:S2:842:C:C4	2.88	0.42
49:S2:860:G:H2'	49:S2:861:A:O4'	2.20	0.42
49:S2:912:C:H3'	49:S2:913:A:H5''	2.02	0.42
49:S2:925:G:OP1	63:SN:121:ARG:NH1	2.53	0.42
49:S2:1110:G:C2	49:S2:1111:U:C6	3.07	0.42
49:S2:1160:U:P	73:SX:4:CYS:O	2.78	0.42
49:S2:1293:A:C3'	81:Sf:151:ASN:C	2.92	0.42
49:S2:1352:G:H1'	49:S2:1378:A:C2	2.54	0.42
49:S2:1371:U:O2	49:S2:1371:U:C2'	2.65	0.42
49:S2:1457:U:H2'	49:S2:1458:G:C8	2.55	0.42
49:S2:1468:C:OP1	67:SR:1:MET:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1551:U:H5'	49:S2:1558:C:H1'	2.01	0.42
49:S2:1753:C:N3	49:S2:1754:G:N7	2.68	0.42
49:S2:1862:G:H1	76:Sa:75:VAL:HB	1.84	0.42
50:SA:108:PHE:HB3	50:SA:140:VAL:HG21	2.01	0.42
52:SC:108:LYS:HB3	52:SC:233:LEU:HD23	2.01	0.42
53:SD:53:THR:O	53:SD:55:THR:N	2.53	0.42
54:SE:95:THR:HB	54:SE:97:GLU:HG3	2.01	0.42
55:SF:38:TYR:CD2	55:SF:143:PRO:HB2	2.54	0.42
64:SO:103:ASN:OD1	64:SO:103:ASN:N	2.52	0.42
66:SQ:71:ARG:HG3	66:SQ:73:LYS:HE2	2.00	0.42
73:SX:34:THR:OG1	73:SX:35:ALA:N	2.51	0.42
76:Sa:34:LYS:O	76:Sa:35:ALA:CB	2.68	0.42
81:Sf:138:ARG:NH1	81:Sf:138:ARG:HG3	2.33	0.42
1:5:101:A:N3	1:5:101:A:H2'	2.33	0.42
1:5:146:G:N2	1:5:147:A:C8	2.87	0.42
1:5:194:C:C2'	28:Y:121:ARG:NH2	2.82	0.42
1:5:298:G:C5	1:5:299:C:C6	3.07	0.42
1:5:444:G:N2	1:5:1304:C:C2	2.87	0.42
1:5:473:C:O2	1:5:473:C:H2'	2.19	0.42
1:5:681:G:C6	1:5:682:G:C5	3.07	0.42
1:5:1075:G:N2	1:5:1076:C:C2	2.88	0.42
1:5:1084:C:N3	1:5:1085:C:C6	2.87	0.42
1:5:1085:C:N4	1:5:1086:C:C5	2.88	0.42
1:5:1195:G:H2'	1:5:1196:G:H8	1.84	0.42
1:5:1355:G:H2'	1:5:1356:U:C6	2.55	0.42
1:5:1358:G:O2'	1:5:1359:G:C4'	2.67	0.42
1:5:1487:G:C2	1:5:1488:G:C1'	3.02	0.42
1:5:1520:C:H2'	1:5:1521:C:O4'	2.19	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
1:5:1644:C:N3	1:5:1645:C:C5	2.88	0.42
1:5:1667:G:N1	1:5:2280:G:H2'	2.34	0.42
1:5:1760:G:C2	1:5:1761:G:C1'	3.01	0.42
1:5:1761:G:N2	1:5:1762:C:C2	2.88	0.42
1:5:1806:G:C6	1:5:1807:C:C4	3.08	0.42
1:5:1968:G:C2	1:5:1969:G:C8	3.07	0.42
1:5:1982:G:O2'	1:5:2010:A:C5'	2.65	0.42
1:5:2076:G:C2	1:5:2077:C:H1'	2.53	0.42
1:5:2102:G:C2	1:5:2103:G:C5	3.07	0.42
1:5:2123:C:H3'	9:F:39:PHE:CE1	2.54	0.42
1:5:2453:A:N6	1:5:2454:U:C5	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2471:G:H3'	1:5:2472:A:H5''	2.01	0.42
1:5:2481:G:C6	1:5:2482:C:C5	3.07	0.42
1:5:2533:C:O2'	1:5:2534:C:O5'	2.37	0.42
1:5:2598:A:C2	1:5:2748:C:O2	2.72	0.42
1:5:2670:C:O2'	1:5:2671:C:C5'	2.68	0.42
1:5:2830:G:N1	1:5:2831:G:N7	2.68	0.42
1:5:2867:C:O2	1:5:2867:C:H2'	2.20	0.42
1:5:3701:C:N4	1:5:3745:U:H2'	2.35	0.42
1:5:3801:U:O2'	1:5:3802:U:C5'	2.68	0.42
1:5:3879:G:O4'	1:5:3879:G:P	2.78	0.42
1:5:4092:G:C5	1:5:4093:G:C2	3.05	0.42
1:5:4280:A:C6	7:D:29:ASP:OD1	2.72	0.42
1:5:4301:U:C4'	23:T:54:HIS:CD2	2.95	0.42
1:5:4336:A:C8	1:5:4336:A:C3'	3.02	0.42
1:5:4337:C:HO2'	1:5:4338:G:C5'	2.31	0.42
1:5:4550:G:N2	1:5:4551:U:C1'	2.82	0.42
1:5:4682:U:O2	1:5:4682:U:H2'	2.19	0.42
1:5:4745:G:N2	1:5:4746:C:H41	2.09	0.42
1:5:4977:A:C4	1:5:4978:G:N2	2.88	0.42
1:5:5042:A:N3	1:5:5042:A:H2'	2.33	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
2:7:56:G:H2'	2:7:57:C:C5'	2.49	0.42
3:8:131:G:H2'	3:8:131:G:N3	2.34	0.42
3:8:154:G:C2	3:8:155:C:C2	3.08	0.42
4:A:40:TYR:CE2	4:A:89:TYR:CD2	3.07	0.42
4:A:174:ARG:CZ	4:A:174:ARG:HB3	2.49	0.42
4:A:186:TYR:HA	4:A:196:TRP:HE3	1.84	0.42
4:A:242:ARG:CG	4:A:243:THR:N	2.83	0.42
7:D:107:ARG:HD3	7:D:248:ARG:HD2	2.01	0.42
7:D:163:LEU:HD21	7:D:175:HIS:CB	2.50	0.42
8:E:233:LYS:O	8:E:235:LYS:N	2.51	0.42
10:G:102:TYR:OH	10:G:208:ASN:N	2.50	0.42
14:K:65:GLN:HA	14:K:69:ALA:O	2.19	0.42
16:M:86:TRP:O	16:M:87:ALA:CB	2.68	0.42
20:Q:32:TYR:N	20:Q:32:TYR:HD1	2.17	0.42
22:S:84:TYR:C	22:S:84:TYR:HD1	2.28	0.42
25:V:13:LYS:HG2	25:V:128:LEU:HD13	2.02	0.42
25:V:128:LEU:HG	25:V:129:TRP:CD1	2.54	0.42
26:W:33:ASN:OD1	26:W:33:ASN:N	2.53	0.42
27:X:76:ILE:CD1	27:X:108:GLN:HB3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Y:72:GLN:HE21	28:Y:73:VAL:N	2.16	0.42
30:a:103:VAL:CG1	30:a:108:TYR:HB2	2.50	0.42
31:b:69:ALA:O	31:b:73:LYS:HB2	2.19	0.42
33:d:29:ILE:HD12	33:d:84:ILE:HG13	2.02	0.42
33:d:57:MET:O	33:d:59:THR:N	2.52	0.42
45:p:29:ILE:HG23	45:p:69:TRP:HD1	1.74	0.42
46:q:26:LYS:CE	46:q:94:ASP:OD1	2.66	0.42
46:q:28:PHE:HE1	46:q:192:VAL:CG2	2.10	0.42
46:q:80:PRO:CD	46:q:81:HIS:CE1	3.00	0.42
46:q:200:ASN:HD21	46:q:202:GLU:HG3	1.83	0.42
48:4:35:LEU:HD13	48:4:156:MET:CE	2.50	0.42
48:4:554:LEU:O	48:4:558:LEU:HG	2.19	0.42
48:4:602:LEU:C	48:4:602:LEU:CD2	2.93	0.42
48:4:685:TRP:CZ3	48:4:722:ILE:C	2.98	0.42
48:4:744:ILE:CD1	48:4:815:ASP:CB	2.96	0.42
49:S2:27:A:N3	49:S2:27:A:H2'	2.35	0.42
49:S2:49:C:C2	49:S2:478:G:N1	2.87	0.42
49:S2:104:A:C6	49:S2:105:U:C5	3.07	0.42
49:S2:170:A:C6	49:S2:171:A:C6	3.08	0.42
49:S2:340:C:C4	49:S2:341:C:C5	3.07	0.42
49:S2:549:C:N3	49:S2:550:C:C6	2.88	0.42
49:S2:616:A:C4	49:S2:617:G:H1'	2.54	0.42
49:S2:795:A:H2	49:S2:796:G:C5	2.23	0.42
49:S2:807:G:C2	49:S2:808:A:C8	3.07	0.42
49:S2:830:A:H2'	49:S2:831:G:O4'	2.20	0.42
49:S2:908:A:H2'	49:S2:909:G:C8	2.55	0.42
49:S2:936:G:C2	49:S2:937:C:C2	3.08	0.42
49:S2:961:G:C5	49:S2:962:A:N7	2.87	0.42
49:S2:1085:C:C4	49:S2:1087:A:C1'	3.03	0.42
49:S2:1099:G:C5	49:S2:1100:A:N7	2.88	0.42
49:S2:1283:C:O4'	62:SM:91:LEU:HD13	2.19	0.42
49:S2:1529:C:C2	49:S2:1530:U:C5	3.07	0.42
49:S2:1645:C:O2'	49:S2:1646:C:O5'	2.35	0.42
49:S2:1738:C:O2	49:S2:1738:C:H2'	2.18	0.42
49:S2:1752:C:N3	49:S2:1753:C:C5	2.87	0.42
49:S2:1809:A:H2'	49:S2:1810:U:O4'	2.19	0.42
49:S2:1832:A:N1	49:S2:1833:C:C4	2.88	0.42
49:S2:1835:A:C5	49:S2:1863:A:N7	2.87	0.42
50:SA:64:ALA:HB1	71:SV:34:MET:HE1	2.02	0.42
56:SG:21:GLU:O	56:SG:25:ARG:N	2.53	0.42
56:SG:132:ARG:HB3	56:SG:133:LEU:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SI:112:TRP:C	58:SI:112:TRP:CE3	2.97	0.42
59:SJ:75:ASN:O	59:SJ:79:ARG:HD2	2.20	0.42
60:SK:27:VAL:CG1	60:SK:43:LEU:HD23	2.43	0.42
62:SM:96:ARG:HB3	62:SM:100:PRO:CD	2.50	0.42
64:SO:56:VAL:HG23	64:SO:60:MET:HE2	2.01	0.42
65:SP:82:ASP:OD1	65:SP:83:MET:N	2.53	0.42
72:SW:11:LEU:HD21	72:SW:37:PHE:CE2	2.54	0.42
74:SY:37:LYS:HA	74:SY:40:ILE:HG22	2.01	0.42
1:5:74:G:C5'	15:L:59:VAL:CG1	2.98	0.42
1:5:106:A:P	15:L:39:ARG:HH21	2.42	0.42
1:5:109:G:N2	1:5:333:U:C2	2.87	0.42
1:5:113:A:C2	1:5:114:G:H1'	2.55	0.42
1:5:275:C:H2'	1:5:276:C:H5''	2.00	0.42
1:5:288:G:N3	1:5:289:C:C5	2.88	0.42
1:5:302:C:C2	1:5:303:C:C6	3.08	0.42
1:5:342:G:C2	1:5:343:C:C2	3.08	0.42
1:5:347:A:N3	1:5:348:G:C8	2.88	0.42
1:5:479:G:C5	1:5:480:C:C5	3.07	0.42
1:5:642:G:C6	1:5:643:C:N4	2.87	0.42
1:5:660:A:C2	1:5:661:C:N1	2.87	0.42
1:5:675:C:C2	1:5:676:C:C5	3.08	0.42
1:5:702:U:H2'	1:5:703:G:H4'	2.02	0.42
1:5:718:C:C2	1:5:719:C:C6	3.07	0.42
1:5:910:G:C4	1:5:911:U:C6	3.08	0.42
1:5:982:U:C2	1:5:983:C:C5	3.08	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
1:5:1210:C:H5'	9:F:72:ARG:HH22	1.85	0.42
1:5:1398:A:N1	1:5:1420:A:C8	2.87	0.42
1:5:1424:G:C4	1:5:1425:G:C8	3.07	0.42
1:5:1555:G:N3	1:5:1555:G:H2'	2.34	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
1:5:1769:G:C2	1:5:1770:A:N7	2.87	0.42
1:5:1827:C:N3	1:5:1828:C:C5	2.87	0.42
1:5:2008:U:N3	1:5:2010:A:OP2	2.53	0.42
1:5:2039:G:H8	1:5:2039:G:O5'	2.02	0.42
1:5:2102:G:C2	1:5:2103:G:C8	3.08	0.42
1:5:2347:A:C2	1:5:2348:G:C6	3.07	0.42
1:5:2347:A:N3	1:5:2348:G:N1	2.66	0.42
1:5:2408:U:C6	1:5:2409:U:O4	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2481:G:N1	1:5:2482:C:C4	2.88	0.42
1:5:2528:G:C6	1:5:2529:A:C5	3.08	0.42
1:5:3690:U:C4	1:5:3691:G:C5	3.08	0.42
1:5:3725:G:H2'	1:5:3726:A:H2'	2.01	0.42
1:5:3751:G:N2	1:5:3775:A:C8	2.83	0.42
1:5:3756:A:C4	1:5:3757:G:C8	3.08	0.42
1:5:3846:C:C4	1:5:3847:C:H5	2.37	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
1:5:3896:C:H5''	1:5:3897:G:OP2	2.19	0.42
1:5:3909:C:H42	1:5:3910:C:N4	2.18	0.42
1:5:4077:A:N7	1:5:4078:C:C5	2.88	0.42
1:5:4081:G:N2	1:5:4082:G:C4	2.87	0.42
1:5:4107:G:N1	1:5:4108:G:C5	2.88	0.42
1:5:4129:G:C2	1:5:4130:C:C2	3.07	0.42
1:5:4147:G:C2	1:5:4148:C:C2	3.08	0.42
1:5:4238:G:N2	1:5:4287:G:C5	2.87	0.42
1:5:4240:G:N1	1:5:4241:C:C2	2.87	0.42
1:5:4416:G:C6	1:5:4417:C:C4	3.07	0.42
1:5:4495:G:C2	1:5:4506:C:C2	3.07	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
1:5:4652:G:H2'	1:5:4653:C:C6	2.54	0.42
1:5:4666:G:C5	1:5:4667:C:C5	3.07	0.42
1:5:5007:A:C5	1:5:5040:U:O4	2.73	0.42
2:7:93:G:C2	2:7:94:C:C2	3.07	0.42
3:8:13:G:H2'	3:8:14:U:O5'	2.20	0.42
6:C:109:ARG:HD2	6:C:111:TRP:CZ3	2.55	0.42
6:C:112:HIS:HE1	17:N:202:ARG:HE	1.65	0.42
8:E:43:ASN:C	8:E:43:ASN:HD22	2.27	0.42
8:E:276:GLY:C	8:E:278:TYR:HE2	2.27	0.42
9:F:155:LEU:HB3	9:F:213:PHE:CE2	2.54	0.42
11:H:129:ARG:HG2	11:H:156:ASN:ND2	2.34	0.42
14:K:31:LYS:HZ3	48:4:753:GLU:CD	2.13	0.42
14:K:47:ALA:HA	14:K:72:GLU:CB	2.50	0.42
14:K:58:ILE:O	14:K:59:THR:CG2	2.68	0.42
15:L:34:ARG:HH11	15:L:34:ARG:CB	2.33	0.42
15:L:103:ARG:HD2	15:L:105:LYS:HD2	2.02	0.42
16:M:123:ILE:HD11	18:O:182:GLU:CG	2.49	0.42
18:O:49:ARG:NH1	18:O:49:ARG:CG	2.83	0.42
19:P:23:ARG:HH11	19:P:23:ARG:HG2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:T:52:MET:HG2	23:T:95:HIS:CE1	2.54	0.42
30:a:74:ASN:HB3	30:a:114:LYS:HB3	2.02	0.42
48:4:114:GLU:HG2	48:4:532:PRO:CD	2.18	0.42
48:4:650:TRP:HZ3	48:4:679:VAL:HG12	1.81	0.42
48:4:745:TYR:OH	48:4:790:VAL:HG13	2.20	0.42
49:S2:85:A:H2'	49:S2:86:C:H6	1.84	0.42
49:S2:118:C:C1'	49:S2:445:A:N3	2.82	0.42
49:S2:351:G:N3	49:S2:351:G:H2'	2.34	0.42
49:S2:412:G:N2	49:S2:429:C:C2	2.88	0.42
49:S2:595:U:O2'	49:S2:596:U:O5'	2.37	0.42
49:S2:660:C:H2'	49:S2:661:U:O4'	2.19	0.42
49:S2:794:A:C2	49:S2:795:A:C1'	3.02	0.42
49:S2:862:A:H2	49:S2:863:U:H1'	1.84	0.42
49:S2:1065:G:C6	49:S2:1066:U:C5	3.08	0.42
49:S2:1137:U:H2'	49:S2:1138:C:H5''	2.01	0.42
49:S2:1271:C:O2	49:S2:1271:C:H2'	2.20	0.42
49:S2:1276:A:H3'	49:S2:1277:C:H6	1.82	0.42
49:S2:1291:A:O5'	81:Sf:146:LEU:O	2.38	0.42
49:S2:1294:G:C1'	81:Sf:137:ASP:OD2	2.68	0.42
49:S2:1311:C:N3	49:S2:1314:U:C5	2.86	0.42
49:S2:1388:A:H61	53:SD:161:GLY:HA3	1.84	0.42
49:S2:1454:A:N9	49:S2:1476:A:H1'	2.34	0.42
49:S2:1457:U:O2	49:S2:1458:G:C8	2.73	0.42
49:S2:1495:G:C6	49:S2:1496:U:N1	2.87	0.42
49:S2:1541:G:N1	49:S2:1593:C:C2	2.88	0.42
49:S2:1551:U:O4	49:S2:1577:G:H2'	2.20	0.42
49:S2:1561:A:C5	49:S2:1562:C:C5	3.07	0.42
49:S2:1567:G:C8	68:SS:82:TRP:CZ3	3.07	0.42
49:S2:1576:G:C2	49:S2:1577:G:C8	3.07	0.42
49:S2:1606:G:HO2'	49:S2:1633:A:H62	1.61	0.42
49:S2:1771:G:C2	49:S2:1772:C:C2	3.08	0.42
50:SA:42:LYS:C	50:SA:43:SER:O	2.62	0.42
53:SD:32:ASP:OD1	53:SD:57:ASN:HB2	2.20	0.42
53:SD:113:LEU:HD23	53:SD:114:ALA:N	2.35	0.42
55:SF:140:ASP:OD1	55:SF:140:ASP:N	2.52	0.42
55:SF:195:GLU:HA	55:SF:198:ARG:HB3	2.01	0.42
56:SG:186:GLN:HG2	56:SG:187:HIS:N	2.33	0.42
57:SH:137:SER:OG	57:SH:158:LEU:HB3	2.20	0.42
61:SL:124:ASP:OD1	61:SL:147:LYS:HA	2.20	0.42
62:SM:46:GLN:OE1	62:SM:112:LYS:CD	2.68	0.42
62:SM:95:ASP:O	62:SM:96:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:SN:108:ASP:HB3	63:SN:111:ALA:HB3	2.01	0.42
63:SN:128:TYR:O	63:SN:129:TYR:C	2.62	0.42
64:SO:116:LEU:HD22	76:Sa:53:ILE:CD1	2.49	0.42
67:SR:5:ARG:HG3	67:SR:49:LYS:CE	2.45	0.42
68:SS:10:GLN:NE2	68:SS:58:GLU:O	2.51	0.42
73:SX:46:HIS:CD2	73:SX:46:HIS:N	2.87	0.42
82:Sg:4:GLN:NE2	82:Sg:268:ASP:OD2	2.51	0.42
1:5:12:A:H8	1:5:12:A:H5''	1.84	0.42
1:5:69:A:N1	1:5:70:A:C6	2.88	0.42
1:5:72:C:C1'	38:i:15:HIS:HB3	2.50	0.42
1:5:96:U:C5	1:5:97:G:C8	3.08	0.42
1:5:107:G:N3	1:5:107:G:H2'	2.35	0.42
1:5:138:G:C3'	1:5:139:G:C5'	2.97	0.42
1:5:153:G:N2	1:5:154:G:C4	2.87	0.42
1:5:316:U:O4	1:5:4353:U:H1'	2.19	0.42
1:5:445:U:H1'	1:5:2313:A:N3	2.33	0.42
1:5:753:C:O2	1:5:754:U:C6	2.71	0.42
1:5:962:C:H4'	1:5:968:C:N4	2.35	0.42
1:5:964:A:OP1	47:r:94:ARG:HD3	2.20	0.42
1:5:972:C:C5	1:5:1282:G:N2	2.87	0.42
1:5:987:C:C2	1:5:1067:G:N2	2.88	0.42
1:5:1221:G:O2'	1:5:1222:A:P	2.78	0.42
1:5:1258:G:N1	1:5:1259:G:C5	2.88	0.42
1:5:1260:G:C2	1:5:1261:G:C5	3.07	0.42
1:5:1358:G:C4	1:5:1359:G:C8	3.08	0.42
1:5:1522:G:N3	1:5:1522:G:H2'	2.34	0.42
1:5:1545:G:O2'	1:5:1546:C:O5'	2.37	0.42
1:5:1566:C:C2'	1:5:1567:U:C6	2.81	0.42
1:5:1599:A:C2'	1:5:1600:A:H5''	2.47	0.42
1:5:1780:A:N3	12:I:198:LYS:NZ	2.68	0.42
1:5:1823:G:C3'	1:5:1825:A:P	3.04	0.42
1:5:1844:G:C4	1:5:1845:U:C5	3.08	0.42
1:5:2036:C:C2	1:5:2037:C:C5	3.07	0.42
1:5:2276:A:C2	1:5:2277:C:H1'	2.54	0.42
1:5:2308:A:C2'	1:5:2309:G:O5'	2.67	0.42
1:5:2370:A:H3'	1:5:2826:U:O2	2.20	0.42
1:5:2395:A:OP1	1:5:2395:A:H4'	2.20	0.42
1:5:2502:G:H4'	1:5:2503:G:OP1	2.20	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
1:5:2606:G:C6	1:5:2607:C:N4	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2666:U:C6	1:5:2666:U:H3'	2.55	0.42
1:5:2751:G:N1	1:5:2752:G:C5	2.88	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
1:5:2794:C:C2	19:P:136:ILE:CD1	3.02	0.42
1:5:3608:A:C2	1:5:3609:G:C4	3.08	0.42
1:5:3656:A:H2'	1:5:3657:U:C6	2.54	0.42
1:5:3668:C:C4	1:5:3669:G:C5	3.08	0.42
1:5:3775:A:H2'	1:5:3776:G:C1'	2.49	0.42
1:5:3896:C:O2'	5:B:268:ARG:NH2	2.53	0.42
1:5:4107:G:C2	1:5:4108:G:C4	3.08	0.42
1:5:4283:G:H21	1:5:4284:C:H1'	1.85	0.42
1:5:4344:U:N3	1:5:4345:C:H5	2.15	0.42
1:5:4390:A:H2'	1:5:4391:G:O4'	2.20	0.42
1:5:4411:G:N1	1:5:4412:C:C4	2.88	0.42
1:5:4651:A:C2	1:5:4652:G:C1'	3.02	0.42
1:5:4693:C:C6	1:5:4693:C:O5'	2.73	0.42
1:5:4743:G:C6	1:5:4744:A:C6	3.08	0.42
1:5:4956:A:C2	1:5:4957:C:C6	3.07	0.42
1:5:4990:C:H2'	1:5:4992:G:OP1	2.19	0.42
1:5:5000:G:H2'	1:5:5001:U:C5'	2.49	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
2:7:43:U:C4	2:7:44:C:N4	2.88	0.42
4:A:109:GLU:O	4:A:111:THR:N	2.53	0.42
6:C:270:ALA:HA	6:C:278:ASN:ND2	2.34	0.42
6:C:308:LYS:C	6:C:309:ILE:O	2.63	0.42
7:D:203:ASN:OD1	7:D:203:ASN:N	2.49	0.42
8:E:95:ASP:HB3	8:E:101:ARG:HB2	2.02	0.42
16:M:109:ARG:NH2	16:M:109:ARG:HB2	2.35	0.42
16:M:120:ASN:O	16:M:124:LYS:HB2	2.19	0.42
17:N:184:ILE:HG23	17:N:194:ARG:HH12	1.84	0.42
18:O:125:LYS:HD2	18:O:135:PHE:HZ	1.84	0.42
22:S:33:PHE:CE2	22:S:106:VAL:HG21	2.55	0.42
29:Z:5:MET:O	29:Z:28:ASN:HB3	2.20	0.42
36:g:76:ARG:NH2	36:g:84:ALA:HB2	2.27	0.42
38:i:38:LYS:O	38:i:42:ASP:OD1	2.38	0.42
46:q:202:GLU:CA	46:q:203:VAL:CG2	2.86	0.42
48:4:13:MET:HE2	48:4:468:ASN:ND2	2.35	0.42
48:4:123:ASP:OD2	48:4:361:PRO:HA	2.20	0.42
48:4:154:VAL:HA	48:4:205:ILE:CD1	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:485:ILE:N	48:4:485:ILE:CD1	2.83	0.42
49:S2:80:G:C5	49:S2:81:U:C5	3.08	0.42
49:S2:201:C:C5	49:S2:202:G:C8	3.08	0.42
49:S2:379:C:H2'	49:S2:380:G:C8	2.55	0.42
49:S2:443:U:O2	49:S2:443:U:H2'	2.19	0.42
49:S2:474:G:C6	49:S2:475:C:C4	3.08	0.42
49:S2:913:A:O2'	57:SH:67:PRO:HD3	2.19	0.42
49:S2:918:U:H5'	63:SN:20:ARG:HH11	1.85	0.42
49:S2:977:C:O2	49:S2:977:C:C2'	2.68	0.42
49:S2:1040:G:C2	49:S2:1041:G:H1'	2.55	0.42
49:S2:1040:G:H5'	49:S2:1041:G:OP2	2.20	0.42
49:S2:1110:G:C2	49:S2:1111:U:C2	3.08	0.42
49:S2:1134:G:N3	49:S2:1135:C:C5	2.82	0.42
49:S2:1160:U:O4	73:SX:2:GLY:N	2.52	0.42
49:S2:1194:A:O3'	49:S2:1195:A:H4'	2.19	0.42
49:S2:1276:A:C2	49:S2:1277:C:C1'	3.03	0.42
49:S2:1516:G:H2'	49:S2:1517:G:O4'	2.18	0.42
49:S2:1524:G:C2	49:S2:1525:C:N1	2.88	0.42
49:S2:1601:A:H61	49:S2:1635:C:H3'	1.85	0.42
49:S2:1648:G:H1'	49:S2:1649:U:H5	1.83	0.42
49:S2:1668:U:C2	49:S2:1669:G:N7	2.88	0.42
49:S2:1678:A:C2	49:S2:1679:A:N7	2.88	0.42
49:S2:1758:G:C6	49:S2:1759:G:N7	2.88	0.42
49:S2:1850:A:O2'	49:S2:1851:A:C5'	2.68	0.42
50:SA:145:ILE:HD13	50:SA:159:ILE:HG22	2.01	0.42
54:SE:15:PRO:HD2	54:SE:18:TRP:HH2	1.83	0.42
54:SE:179:ASN:O	54:SE:194:VAL:HA	2.20	0.42
58:SI:27:TYR:C	58:SI:27:TYR:CD1	2.97	0.42
58:SI:88:ASN:OD1	58:SI:205:ARG:NH2	2.53	0.42
72:SW:28:ARG:N	72:SW:29:PRO:CD	2.82	0.42
82:Sg:64:HIS:HB3	82:Sg:83:TRP:HB2	1.99	0.42
82:Sg:88:ARG:HB2	82:Sg:90:TRP:HE1	1.84	0.42
1:5:113:A:O2'	17:N:50:ARG:HA	2.20	0.42
1:5:127:G:C2	1:5:128:C:C2	3.08	0.42
1:5:145:G:N1	1:5:146:G:N7	2.68	0.42
1:5:177:G:C5	1:5:178:C:C5	3.08	0.42
1:5:209:U:C6	1:5:211:G:C8	3.08	0.42
1:5:287:U:O2	1:5:287:U:H2'	2.20	0.42
1:5:288:G:C2	1:5:289:C:C2	3.07	0.42
1:5:353:A:C4	1:5:379:G:N7	2.87	0.42
1:5:480:C:H2'	1:5:481:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:647:G:N3	1:5:647:G:H2'	2.34	0.42
1:5:671:G:N3	1:5:672:C:C6	2.88	0.42
1:5:682:G:H2'	1:5:682:G:N3	2.35	0.42
1:5:684:G:HO2'	1:5:685:C:P	2.43	0.42
1:5:962:C:N4	47:r:112:ARG:HD2	2.34	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
1:5:1267:C:C2	1:5:1271:G:N1	2.88	0.42
1:5:1349:G:N1	1:5:1350:C:C4	2.88	0.42
1:5:1377:G:C8	1:5:1377:G:C3'	3.03	0.42
1:5:1466:G:C2	1:5:1467:C:C5	3.08	0.42
1:5:1617:G:C2	1:5:1618:G:N9	2.88	0.42
1:5:1667:G:N3	1:5:2283:G:N1	2.67	0.42
1:5:1685:G:C2	1:5:1686:C:N3	2.88	0.42
1:5:1687:U:N3	1:5:1850:A:N6	2.68	0.42
1:5:1819:G:C8	7:D:142:PHE:CD2	3.07	0.42
1:5:1859:C:C4	1:5:1860:U:C4	3.08	0.42
1:5:1860:U:C2	1:5:1861:U:C6	3.08	0.42
1:5:1992:U:O2'	1:5:1992:U:O2	2.35	0.42
1:5:2054:U:H4'	1:5:2056:G:O4'	2.19	0.42
1:5:2106:G:N2	1:5:2107:C:C4	2.87	0.42
1:5:2401:A:N1	1:5:2402:G:N7	2.68	0.42
1:5:2453:A:H1'	1:5:2507:A:C5	2.55	0.42
1:5:2465:C:C2'	1:5:2466:G:O4'	2.68	0.42
1:5:2481:G:C2	1:5:2482:C:N1	2.88	0.42
1:5:2606:G:C5	1:5:2607:C:C5	3.07	0.42
1:5:2674:A:C3'	1:5:2675:G:H5'	2.49	0.42
1:5:2823:G:C6	1:5:2824:C:C4	3.08	0.42
1:5:2831:G:C2	1:5:2832:A:C5	3.08	0.42
1:5:2840:A:C6	1:5:2841:G:C8	3.08	0.42
1:5:2890:C:O4'	1:5:5034:A:H1'	2.20	0.42
1:5:3617:G:H2'	1:5:3618:C:O4'	2.20	0.42
1:5:3714:G:N1	1:5:3739:C:O2	2.53	0.42
1:5:3733:A:C5	1:5:3734:U:C5	3.08	0.42
1:5:3758:U:C4	1:5:3765:G:C6	3.08	0.42
1:5:3851:U:C4	1:5:3852:A:C5	3.08	0.42
1:5:3857:G:C2	1:5:3858:C:H1'	2.54	0.42
1:5:4215:C:O2	1:5:4215:C:C2'	2.68	0.42
1:5:4237:C:H4'	1:5:4327:C:O2	2.19	0.42
1:5:4277:G:N3	1:5:4282:A:H2	2.18	0.42
1:5:4330:G:C5	1:5:4331:G:C8	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4481:U:H2'	1:5:4482:U:O4'	2.20	0.42
1:5:4524:G:N1	1:5:4525:C:C4	2.88	0.42
1:5:4690:G:O2'	1:5:4691:A:O4'	2.30	0.42
1:5:4978:G:HO2'	1:5:4979:A:P	2.40	0.42
1:5:4985:U:H2'	1:5:4986:G:O5'	2.20	0.42
1:5:4997:G:N1	1:5:4998:G:C5	2.88	0.42
1:5:5051:C:C4	1:5:5052:C:C5	3.08	0.42
2:7:1:G:H2'	2:7:2:U:O4'	2.20	0.42
2:7:56:G:HO2'	2:7:57:C:P	2.43	0.42
2:7:72:U:H2'	2:7:73:U:C6	2.54	0.42
2:7:106:G:C6	2:7:107:G:C5	3.08	0.42
5:B:55:HIS:O	5:B:56:ILE:HD12	2.19	0.42
5:B:323:TYR:C	5:B:323:TYR:HD1	2.28	0.42
6:C:154:VAL:HG11	6:C:158:VAL:HG21	2.02	0.42
8:E:284:PHE:CD1	8:E:284:PHE:C	2.98	0.42
11:H:41:ILE:HD11	11:H:69:THR:HG21	2.01	0.42
12:I:112:GLN:HB2	12:I:116:ARG:NH1	2.34	0.42
13:J:19:LYS:HB3	13:J:75:ARG:HE	1.85	0.42
14:K:21:GLU:HG3	14:K:48:LYS:HE2	2.01	0.42
14:K:77:ALA:CB	14:K:80:LEU:CD1	2.83	0.42
14:K:110:VAL:O	14:K:110:VAL:CG1	2.67	0.42
16:M:17:PHE:C	16:M:17:PHE:HD1	2.27	0.42
24:U:27:HIS:N	24:U:28:PRO:HD2	2.34	0.42
33:d:83:ARG:HB3	33:d:114:PHE:CD2	2.54	0.42
35:f:23:GLU:N	35:f:23:GLU:OE1	2.52	0.42
46:q:86:VAL:HG22	46:q:190:GLN:OE1	2.20	0.42
48:4:46:ILE:HG23	48:4:454:MET:SD	2.60	0.42
48:4:60:ARG:HB3	48:4:63:GLU:HB2	2.02	0.42
48:4:267:ASP:CA	48:4:267:ASP:O	2.55	0.42
48:4:390:PRO:HD3	48:4:466:CYS:SG	2.59	0.42
48:4:499:PHE:O	48:4:500:SER:O	2.38	0.42
48:4:755:VAL:O	48:4:755:VAL:HG12	2.20	0.42
49:S2:293:C:O2'	49:S2:294:U:H3'	2.20	0.42
49:S2:295:C:H2'	49:S2:296:U:O4'	2.20	0.42
49:S2:443:U:C4	49:S2:444:G:C5	3.08	0.42
49:S2:454:U:H2'	49:S2:455:A:O5'	2.19	0.42
49:S2:547:G:C2'	49:S2:548:C:H5''	2.50	0.42
49:S2:550:C:C2	49:S2:551:U:C6	3.08	0.42
49:S2:600:G:N3	49:S2:601:G:C8	2.88	0.42
49:S2:678:U:N3	49:S2:679:A:N7	2.68	0.42
49:S2:867:G:C6	49:S2:868:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:953:C:C2	49:S2:954:U:C6	3.08	0.42
49:S2:968:U:O2	49:S2:968:U:H2'	2.16	0.42
49:S2:982:G:H1'	49:S2:1045:U:C6	2.55	0.42
49:S2:1278:A:C2	49:S2:1279:C:N1	2.88	0.42
49:S2:1313:A:O2'	62:SM:91:LEU:N	2.52	0.42
49:S2:1314:U:O2	49:S2:1315:U:C1'	2.67	0.42
49:S2:1381:G:N2	49:S2:1382:A:H1'	2.34	0.42
49:S2:1450:G:C5	49:S2:1451:G:C8	3.08	0.42
49:S2:1458:G:N1	49:S2:1459:G:C5	2.87	0.42
49:S2:1510:G:N1	49:S2:1511:U:N1	2.68	0.42
49:S2:1511:U:O4	49:S2:1512:C:C5	2.72	0.42
49:S2:1589:A:C2'	49:S2:1590:C:O5'	2.67	0.42
49:S2:1758:G:C2	49:S2:1759:G:C4	3.07	0.42
49:S2:1759:G:C6	49:S2:1760:G:N7	2.88	0.42
52:SC:158:ALA:O	52:SC:159:LYS:C	2.62	0.42
55:SF:20:PHE:O	55:SF:23:TRP:HB2	2.20	0.42
62:SM:47:ALA:O	62:SM:48:HIS:CD2	2.73	0.42
71:SV:69:ILE:O	71:SV:70:LEU:C	2.62	0.42
72:SW:51:GLU:OE1	77:Sb:8:LEU:CD1	2.67	0.42
1:5:31:U:C2'	1:5:32:G:O5'	2.67	0.42
1:5:117:C:H5'	1:5:118:C:P	2.60	0.42
1:5:128:C:C2	1:5:129:C:C6	3.08	0.42
1:5:258:G:C4	1:5:259:C:C5	3.07	0.42
1:5:343:C:C4	1:5:344:A:N7	2.88	0.42
1:5:455:C:N3	1:5:456:C:C5	2.87	0.42
1:5:744:G:C2	1:5:921:C:O2	2.73	0.42
1:5:945:U:C5	9:F:67:TYR:CZ	3.08	0.42
1:5:986:C:N1	1:5:1068:G:N2	2.68	0.42
1:5:1215:C:C2'	1:5:1216:C:H5'	2.49	0.42
1:5:1241:C:C4	1:5:1242:G:C2	3.08	0.42
1:5:1308:C:O2	1:5:1308:C:H2'	2.20	0.42
1:5:1330:A:C4	1:5:1331:C:C5	3.08	0.42
1:5:1374:G:C2	1:5:1375:C:C6	3.07	0.42
1:5:1380:G:H4'	1:5:1381:U:OP1	2.20	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
1:5:1561:G:N2	1:5:1567:U:H1'	2.34	0.42
1:5:1866:U:O2'	1:5:1867:A:P	2.78	0.42
1:5:1938:C:O4'	1:5:1939:A:O4'	2.38	0.42
1:5:2295:C:O2	1:5:2296:G:N7	2.52	0.42
1:5:2401:A:N3	1:5:2402:G:C8	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2450:G:O6	1:5:2451:A:C5	2.73	0.42
1:5:2470:C:C2	1:5:2470:C:C5'	3.02	0.42
1:5:2481:G:C2	1:5:2482:C:C6	3.07	0.42
1:5:2567:G:N2	1:5:2568:C:N1	2.68	0.42
1:5:2568:C:N3	1:5:2569:G:C5	2.87	0.42
1:5:2658:G:N1	1:5:2675:G:C6	2.88	0.42
1:5:2702:C:O2	1:5:2702:C:H2'	2.19	0.42
1:5:2743:A:H2	1:5:2744:A:C4	2.38	0.42
1:5:3604:A:C5	1:5:3605:C:C6	3.08	0.42
1:5:3623:C:C5	1:5:3624:A:C5	3.07	0.42
1:5:3625:G:N2	1:5:3626:G:O3'	2.43	0.42
1:5:3695:U:C4	1:5:3696:C:H5	2.32	0.42
1:5:3820:G:C5	1:5:3821:A:N7	2.87	0.42
1:5:3867:A:H3'	1:5:3868:G:C8	2.55	0.42
1:5:3907:G:C1'	1:5:4449:A:H1'	2.50	0.42
1:5:4086:G:N3	10:G:51:LEU:HD11	2.35	0.42
1:5:4215:C:C2	1:5:4216:G:N7	2.76	0.42
1:5:4344:U:C2	1:5:4345:C:C6	2.97	0.42
1:5:4565:C:C1'	5:B:262:VAL:CG2	2.97	0.42
1:5:4567:G:H2'	1:5:4568:A:C5'	2.50	0.42
1:5:4973:U:H1'	1:5:4986:G:N1	2.34	0.42
1:5:5047:C:H6	1:5:5050:C:C6	2.38	0.42
2:7:23:A:O2'	2:7:24:C:C5'	2.67	0.42
2:7:59:G:C2	2:7:60:G:C4	3.08	0.42
2:7:66:G:C4	2:7:67:C:C5	3.08	0.42
3:8:75:G:C4	3:8:76:C:C5	3.08	0.42
3:8:118:C:C4	3:8:119:C:C5	3.04	0.42
4:A:117:GLU:HB2	4:A:162:ASN:HB2	2.02	0.42
7:D:268:ARG:HH11	7:D:268:ARG:HG3	1.85	0.42
8:E:104:LYS:HG3	8:E:107:LYS:HB3	2.01	0.42
8:E:156:LYS:HB3	8:E:178:ASN:HD21	1.85	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:136:LEU:HD22	10:G:202:VAL:HG13	2.01	0.42
10:G:185:LYS:O	10:G:189:ARG:HD2	2.20	0.42
12:I:158:LYS:HD2	12:I:158:LYS:H	1.85	0.42
12:I:171:TRP:CG	12:I:181:PHE:CD2	3.08	0.42
14:K:142:ASN:HB3	14:K:147:HIS:C	2.36	0.42
17:N:30:TYR:CZ	17:N:63:ARG:HD3	2.54	0.42
18:O:65:ASN:ND2	18:O:65:ASN:C	2.77	0.42
19:P:122:ALA:HA	19:P:145:HIS:HE1	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:29:ARG:HH22	23:T:149:GLU:C	2.28	0.42
25:V:14:PHE:CE1	25:V:91:LYS:HD2	2.55	0.42
27:X:110:LYS:HD2	27:X:111:GLN:HE22	1.85	0.42
28:Y:72:GLN:HE21	28:Y:72:GLN:C	2.28	0.42
29:Z:52:LYS:O	29:Z:65:ARG:NH2	2.50	0.42
32:c:74:TYR:CD1	32:c:74:TYR:C	2.98	0.42
33:d:22:THR:OG1	33:d:122:VAL:HB	2.20	0.42
38:i:68:ARG:O	38:i:72:PHE:N	2.45	0.42
46:q:63:LYS:CD	46:q:78:LEU:HB3	2.50	0.42
47:r:16:PHE:O	47:r:26:SER:HA	2.19	0.42
48:4:106:PRO:HD2	48:4:115:VAL:CG2	2.13	0.42
48:4:243:GLN:O	48:4:249:ARG:CZ	2.66	0.42
48:4:421:VAL:O	48:4:421:VAL:HG13	2.20	0.42
48:4:559:LYS:HE3	48:4:559:LYS:HB2	1.46	0.42
48:4:650:TRP:CZ3	48:4:679:VAL:CB	3.00	0.42
48:4:652:PHE:O	48:4:656:GLY:C	2.63	0.42
48:4:739:ARG:HD2	48:4:821:PRO:C	2.45	0.42
48:4:823:ASP:CG	48:4:826:ASP:H	2.28	0.42
48:4:845:LYS:NZ	48:4:846:GLU:N	2.29	0.42
49:S2:14:C:H2'	49:S2:15:U:C6	2.55	0.42
49:S2:23:G:N1	49:S2:24:C:C2	2.88	0.42
49:S2:316:G:C6	49:S2:317:C:C4	3.08	0.42
49:S2:439:A:N1	49:S2:455:A:N1	2.67	0.42
49:S2:452:G:H2'	49:S2:453:C:H6	1.85	0.42
49:S2:460:A:C4	49:S2:461:U:C5	3.07	0.42
49:S2:523:A:OP2	59:SJ:38:ARG:HD3	2.20	0.42
49:S2:550:C:O2	49:S2:550:C:C2'	2.67	0.42
49:S2:688:U:OP1	57:SH:116:ARG:NH2	2.46	0.42
49:S2:922:A:C2	49:S2:1021:U:C2	3.08	0.42
49:S2:947:G:C4	49:S2:948:C:C6	3.07	0.42
49:S2:956:G:O2'	49:S2:957:A:H5'	2.20	0.42
49:S2:1110:G:H5''	49:S2:1111:U:P	2.60	0.42
49:S2:1299:A:C2'	49:S2:1301:A:H5'	2.50	0.42
49:S2:1418:C:O2	49:S2:1420:G:H3'	2.20	0.42
49:S2:1430:C:N4	49:S2:1431:G:C5	2.88	0.42
49:S2:1431:G:N3	49:S2:1431:G:H2'	2.35	0.42
49:S2:1490:G:C2	49:S2:1491:G:C5	3.08	0.42
49:S2:1495:G:N7	49:S2:1496:U:C6	2.87	0.42
49:S2:1575:G:N1	49:S2:1576:G:C6	2.88	0.42
49:S2:1586:U:H3'	49:S2:1587:G:H5'	2.00	0.42
49:S2:1781:A:N1	49:S2:1782:G:O6	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1792:G:N3	49:S2:1793:A:C8	2.88	0.42
49:S2:1826:G:C2	49:S2:1827:U:C6	3.07	0.42
50:SA:24:HIS:CD2	50:SA:25:LEU:HD12	2.55	0.42
50:SA:176:TRP:CE3	50:SA:199:PRO:HG3	2.49	0.42
54:SE:73:ASP:C	54:SE:164:LEU:HD11	2.45	0.42
55:SF:190:ILE:HA	55:SF:193:LYS:HB3	2.02	0.42
56:SG:1:MET:HE1	56:SG:106:LEU:O	2.20	0.42
57:SH:152:ARG:HB3	57:SH:152:ARG:NH1	2.35	0.42
58:SI:117:TYR:HB3	58:SI:156:ALA:CB	2.50	0.42
58:SI:141:ARG:HH12	58:SI:145:ILE:HG23	1.85	0.42
59:SJ:149:VAL:HG12	59:SJ:150:ARG:O	2.20	0.42
60:SK:16:PHE:CE1	60:SK:89:ILE:HD12	2.55	0.42
68:SS:113:ARG:CZ	68:SS:113:ARG:HB3	2.50	0.42
76:Sa:30:VAL:HG11	76:Sa:35:ALA:HB2	2.02	0.42
1:5:12:A:C4	1:5:14:C:C5	3.07	0.41
1:5:142:G:N1	1:5:144:G:C5	2.88	0.41
1:5:206:U:O2	1:5:206:U:H2'	2.20	0.41
1:5:218:A:C8	6:C:181:LYS:CG	3.02	0.41
1:5:419:A:N3	1:5:1332:C:O2'	2.49	0.41
1:5:479:G:N1	1:5:480:C:C5	2.88	0.41
1:5:483:G:C4	1:5:484:U:C5	3.08	0.41
1:5:509:A:H2	30:a:105:ARG:HE	1.65	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
1:5:720:G:C2	1:5:721:G:C8	3.08	0.41
1:5:980:U:C2	1:5:981:C:C5	3.08	0.41
1:5:1075:G:H2'	1:5:1076:C:H6	1.84	0.41
1:5:1199:G:C4	1:5:1200:G:C8	3.08	0.41
1:5:1233:G:C2	1:5:1234:G:N7	2.88	0.41
1:5:1268:G:C5	1:5:2111:G:N3	2.88	0.41
1:5:1367:C:H3'	1:5:1368:A:H5''	2.01	0.41
1:5:1390:G:N2	1:5:1394:G:N7	2.64	0.41
1:5:1488:G:C4	1:5:1489:G:C8	3.08	0.41
1:5:1552:G:N2	1:5:1574:G:C2	2.88	0.41
1:5:1577:G:OP1	45:p:17:ARG:NH2	2.53	0.41
1:5:1667:G:H1	1:5:2280:G:H2'	1.84	0.41
1:5:1818:G:N7	1:5:1821:G:O6	2.51	0.41
1:5:1920:C:C4'	1:5:1921:C:OP2	2.66	0.41
1:5:1979:A:H2	1:5:1982:G:N7	2.18	0.41
1:5:1999:A:OP1	46:q:9:TRP:CZ2	2.73	0.41
1:5:2271:C:C2	1:5:2272:C:C5	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2294:G:H2'	1:5:2295:C:H6	1.85	0.41
1:5:2311:C:N3	1:5:2312:U:C6	2.88	0.41
1:5:2336:G:C2	1:5:2337:C:C2	3.08	0.41
1:5:2485:U:H2'	1:5:2486:G:H8	1.85	0.41
1:5:2522:G:C2	1:5:2534:C:C2	3.08	0.41
1:5:2665:U:C4	21:R:124:TYR:OH	2.69	0.41
1:5:2673:G:H4'	1:5:2675:G:C1'	2.50	0.41
1:5:2673:G:N1	32:c:89:TYR:CZ	2.87	0.41
1:5:3590:G:C6	1:5:3591:C:C6	3.08	0.41
1:5:3605:C:N3	1:5:3606:U:C6	2.88	0.41
1:5:3611:A:H2	1:5:5016:A:N7	2.17	0.41
1:5:3616:U:C1'	1:5:3617:G:C6	3.03	0.41
1:5:3698:G:C2	1:5:3699:C:C4	3.07	0.41
1:5:3753:G:C8	1:5:3776:G:C5	3.08	0.41
1:5:4175:G:C4	1:5:4176:C:C6	3.08	0.41
1:5:4205:A:N3	1:5:4206:C:C6	2.88	0.41
1:5:4419:U:H6	1:5:4419:U:O5'	2.03	0.41
1:5:4455:G:H1	1:5:4524:G:H1	1.67	0.41
1:5:4551:U:H2'	1:5:4552:U:H6	1.86	0.41
1:5:4649:G:H2'	1:5:4650:G:O4'	2.20	0.41
1:5:4752:U:O2	1:5:4948:C:N3	2.52	0.41
1:5:4884:G:C6	1:5:4885:U:C5	3.07	0.41
1:5:4929:C:H6	1:5:4929:C:C5'	2.28	0.41
1:5:4944:C:H4'	1:5:4945:G:OP2	2.19	0.41
2:7:25:G:C2	2:7:26:C:C2	3.08	0.41
3:8:27:U:N3	3:8:28:C:C5	2.88	0.41
4:A:82:ILE:HD11	4:A:99:GLY:CA	2.49	0.41
7:D:177:THR:HB	7:D:190:PHE:CZ	2.55	0.41
8:E:84:VAL:HG13	8:E:87:THR:O	2.19	0.41
9:F:82:ASN:HD22	9:F:82:ASN:HA	1.49	0.41
10:G:82:GLN:HG3	10:G:83:PHE:CE1	2.55	0.41
20:Q:32:TYR:N	20:Q:32:TYR:CD1	2.88	0.41
20:Q:91:ARG:HH21	20:Q:91:ARG:CG	2.32	0.41
23:T:14:MET:HE3	23:T:58:HIS:CB	2.50	0.41
29:Z:41:ALA:HB2	29:Z:77:TYR:HE1	1.84	0.41
29:Z:121:ARG:CG	29:Z:121:ARG:HH11	2.33	0.41
45:p:68:ALA:C	45:p:69:TRP:CE3	2.98	0.41
46:q:33:ASP:OD1	46:q:33:ASP:N	2.51	0.41
47:r:28:GLU:OE1	47:r:31:ASN:HB3	2.20	0.41
48:4:72:SER:CB	48:4:104:ASP:CB	2.95	0.41
48:4:129:VAL:HG11	48:4:181:ILE:HG23	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:430:MET:HE2	48:4:486:THR:HG23	1.86	0.41
48:4:543:GLU:OE2	48:4:576:VAL:CB	2.45	0.41
48:4:645:GLU:OE1	48:4:665:ILE:HD13	2.20	0.41
48:4:686:ALA:HB1	48:4:726:ARG:HA	1.94	0.41
48:4:830:ARG:HE	48:4:830:ARG:N	2.18	0.41
49:S2:42:A:C6	49:S2:426:A:N6	2.70	0.41
49:S2:52:G:C2	49:S2:53:C:C2	3.08	0.41
49:S2:185:G:C2	49:S2:186:C:C2	3.08	0.41
49:S2:457:C:O2	49:S2:457:C:H2'	2.19	0.41
49:S2:559:G:C2	49:S2:560:A:C8	3.07	0.41
49:S2:601:G:O2'	49:S2:602:G:C8	2.59	0.41
49:S2:648:A:H1'	73:SX:46:HIS:NE2	2.35	0.41
49:S2:684:G:H2'	49:S2:685:A:O4'	2.20	0.41
49:S2:750:C:O2	49:S2:751:G:H8	1.96	0.41
49:S2:923:G:N2	49:S2:924:G:C4	2.88	0.41
49:S2:959:G:C8	49:S2:959:G:C3'	3.03	0.41
49:S2:1064:C:P	64:SO:150:ARG:NH2	2.93	0.41
49:S2:1146:C:O2	49:S2:1146:C:H2'	2.20	0.41
49:S2:1211:G:H5'	49:S2:1212:G:OP2	2.19	0.41
49:S2:1265:A:H2'	49:S2:1266:C:H6	1.82	0.41
49:S2:1284:A:C2	62:SM:34:GLY:CA	3.03	0.41
49:S2:1299:A:O2'	49:S2:1301:A:C5'	2.68	0.41
49:S2:1323:U:C2'	49:S2:1324:G:O4'	2.68	0.41
49:S2:1325:G:N3	49:S2:1327:G:C8	2.88	0.41
49:S2:1406:G:C6	49:S2:1407:U:C4	3.08	0.41
49:S2:1408:U:O4	49:S2:1439:A:C6	2.61	0.41
49:S2:1435:C:N4	49:S2:1436:C:C4	2.88	0.41
49:S2:1500:G:H4'	53:SD:179:GLN:O	2.20	0.41
49:S2:1539:U:N3	49:S2:1540:G:C8	2.52	0.41
49:S2:1641:A:C6	49:S2:1642:U:C4	3.08	0.41
49:S2:1710:C:O2	49:S2:1710:C:H2'	2.20	0.41
53:SD:65:ARG:O	53:SD:69:LEU:HG	2.20	0.41
53:SD:158:ILE:C	53:SD:159:HIS:HD1	2.28	0.41
56:SG:55:GLY:N	56:SG:63:MET:SD	2.93	0.41
59:SJ:91:LYS:O	59:SJ:92:MET:C	2.63	0.41
61:SL:76:VAL:HG12	61:SL:125:ILE:CD1	2.50	0.41
63:SN:101:HIS:CD2	63:SN:101:HIS:C	2.98	0.41
79:Sd:16:GLN:HA	79:Sd:19:ARG:NH1	2.35	0.41
82:Sg:130:LYS:HB2	82:Sg:132:TRP:HE1	1.84	0.41
1:5:98:A:C8	1:5:98:A:H3'	2.55	0.41
1:5:138:G:H2'	1:5:139:G:H5'	2.00	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:292:G:C4	1:5:293:G:C6	3.08	0.41
1:5:693:C:H2'	1:5:694:C:H6	1.86	0.41
1:5:738:C:N3	1:5:739:G:C5	2.88	0.41
1:5:744:G:C2	1:5:745:G:C5	3.08	0.41
1:5:961:G:C6	1:5:969:C:C5	3.08	0.41
1:5:962:C:O2	1:5:2264:C:O5'	2.38	0.41
1:5:963:G:N3	1:5:963:G:C2'	2.82	0.41
1:5:1065:G:H2'	1:5:1066:G:H8	1.84	0.41
1:5:1169:G:C2	1:5:1170:G:N9	2.88	0.41
1:5:1246:G:H2'	1:5:1247:U:O4'	2.20	0.41
1:5:1261:G:N1	1:5:1262:G:C8	2.88	0.41
1:5:1262:G:N3	1:5:1263:A:C8	2.87	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
1:5:1664:U:H2'	1:5:1665:C:H6	1.85	0.41
1:5:1727:U:O2	1:5:1727:U:H2'	2.20	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
1:5:1846:G:C2	1:5:1847:C:C2	3.08	0.41
1:5:1877:G:C5	1:5:1878:G:C8	3.08	0.41
1:5:1947:U:H5'	1:5:1947:U:C6	2.55	0.41
1:5:1996:C:C4	1:5:1997:U:H1'	2.55	0.41
1:5:2001:G:C5	1:5:2017:A:C2	3.08	0.41
1:5:2008:U:C5	1:5:2010:A:H3'	2.55	0.41
1:5:2083:C:H2'	1:5:2085:G:O4'	2.19	0.41
1:5:2243:C:O2	1:5:2243:C:H2'	2.20	0.41
1:5:2316:G:N1	1:5:2317:C:N4	2.68	0.41
1:5:2399:G:C6	1:5:2400:G:N7	2.88	0.41
1:5:2448:G:O6	1:5:2511:A:C5	2.73	0.41
1:5:2526:C:O2'	1:5:2527:A:O5'	2.37	0.41
1:5:2576:G:N3	1:5:2576:G:H2'	2.35	0.41
1:5:2577:C:N4	29:Z:17:ARG:CZ	2.83	0.41
1:5:2678:A:C4	1:5:2679:G:C8	3.09	0.41
1:5:2726:G:N2	1:5:2727:C:N3	2.68	0.41
1:5:2800:G:C5	1:5:2801:U:C5	3.08	0.41
1:5:3585:G:N3	1:5:3586:G:C8	2.88	0.41
1:5:3587:C:H2'	1:5:3588:C:H6	1.84	0.41
1:5:3630:A:C6	1:5:3631:U:C5	3.08	0.41
1:5:3718:A:C2'	1:5:3719:A:O4'	2.59	0.41
1:5:3836:A:H2'	1:5:3837:C:O4'	2.20	0.41
1:5:3907:G:C8	1:5:4449:A:Cl'	2.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:3924:C:H2'	1:5:3925:U:O5'	2.20	0.41
1:5:4167:G:N1	1:5:4168:G:C5	2.88	0.41
1:5:4229:U:H3'	1:5:4230:C:C6	2.52	0.41
1:5:4510:A:C4	1:5:4511:A:C6	3.08	0.41
1:5:4544:A:C8	1:5:4545:G:C1'	3.03	0.41
1:5:4737:G:C6	1:5:4963:G:N2	2.88	0.41
1:5:4879:C:H2'	1:5:4880:C:H6	1.85	0.41
1:5:4886:C:H41	8:E:268:ARG:HH22	1.68	0.41
1:5:4912:G:OP1	1:5:4913:G:OP2	2.37	0.41
1:5:4966:A:C2	1:5:4967:A:C2	3.08	0.41
1:5:5055:G:H2'	1:5:5056:A:C8	2.55	0.41
3:8:42:G:N3	3:8:43:A:C8	2.88	0.41
3:8:66:A:H2'	3:8:67:U:H6	1.82	0.41
3:8:154:G:H4'	10:G:189:ARG:NH1	2.35	0.41
6:C:39:PHE:CD1	6:C:39:PHE:C	2.98	0.41
7:D:8:LYS:HA	7:D:12:TYR:CB	2.50	0.41
12:I:12:CYS:HB3	12:I:128:ARG:HE	1.86	0.41
14:K:161:GLU:CA	14:K:163:PRO:HD3	2.49	0.41
16:M:112:VAL:O	16:M:113:MET:C	2.62	0.41
18:O:125:LYS:HD2	18:O:135:PHE:CZ	2.55	0.41
20:Q:54:SER:O	20:Q:55:ARG:C	2.63	0.41
21:R:110:ARG:CD	21:R:120:TYR:HE2	2.33	0.41
30:a:92:LYS:O	30:a:93:ASN:HB3	2.19	0.41
34:e:42:ASP:OD1	34:e:42:ASP:N	2.53	0.41
48:4:55:ARG:O	48:4:57:THR:N	2.52	0.41
48:4:343:TRP:CE3	48:4:343:TRP:C	2.96	0.41
48:4:592:LEU:CD2	48:4:603:TYR:HE2	2.24	0.41
48:4:662:LEU:N	48:4:683:PHE:CE2	2.87	0.41
48:4:667:LYS:HB2	48:4:667:LYS:HZ2	1.78	0.41
49:S2:23:G:C2	49:S2:24:C:C2	3.07	0.41
49:S2:126:G:H22	49:S2:181:A:P	2.43	0.41
49:S2:187:G:C4	49:S2:188:C:C6	3.08	0.41
49:S2:552:G:C3'	49:S2:553:U:H6	2.33	0.41
49:S2:982:G:C2	49:S2:1045:U:H1'	2.55	0.41
49:S2:1041:G:C6	49:S2:1042:A:C8	3.08	0.41
49:S2:1042:A:C2	49:S2:1043:G:C1'	3.03	0.41
49:S2:1126:G:C6	49:S2:1127:C:N4	2.88	0.41
49:S2:1168:G:C2	49:S2:1192:U:O2	2.72	0.41
49:S2:1175:G:C4	49:S2:1176:G:C8	3.08	0.41
49:S2:1280:G:C2	49:S2:1281:G:C8	3.08	0.41
49:S2:1283:C:C4'	62:SM:102:LYS:HE3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1291:A:O5'	81:Sf:146:LEU:HG	2.20	0.41
49:S2:1377:U:C4	50:SA:102:ARG:CZ	3.02	0.41
49:S2:1508:A:C6	49:S2:1510:G:H1'	2.54	0.41
49:S2:1551:U:C5'	49:S2:1558:C:H1'	2.50	0.41
49:S2:1715:A:C2	49:S2:1819:A:C2	3.08	0.41
49:S2:1757:G:N2	49:S2:1758:G:C4	2.88	0.41
53:SD:28:GLU:HA	53:SD:28:GLU:OE1	2.20	0.41
53:SD:100:ALA:O	53:SD:104:SER:N	2.50	0.41
54:SE:158:ASP:OD1	54:SE:158:ASP:N	2.52	0.41
56:SG:32:MET:CE	56:SG:63:MET:SD	3.08	0.41
56:SG:126:ASP:CG	56:SG:127:THR:N	2.77	0.41
59:SJ:33:GLY:HA3	80:Se:38:TYR:CE1	2.55	0.41
59:SJ:115:PHE:HD1	59:SJ:116:LYS:N	2.17	0.41
60:SK:52:LEU:C	60:SK:58:VAL:HG12	2.45	0.41
70:SU:19:ARG:HD2	70:SU:19:ARG:N	2.35	0.41
73:SX:11:ARG:O	73:SX:12:LYS:C	2.63	0.41
1:5:29:G:O6	1:5:53:C:N3	2.53	0.41
1:5:128:C:H2'	1:5:129:C:C6	2.55	0.41
1:5:150:U:OP2	10:G:200:THR:OG1	2.39	0.41
1:5:238:C:O2	1:5:239:C:C6	2.73	0.41
1:5:324:A:C2	1:5:325:U:C2	3.08	0.41
1:5:370:U:C5	1:5:1637:A:C2	3.08	0.41
1:5:483:G:N1	1:5:484:U:O4	2.54	0.41
1:5:496:G:N2	1:5:658:C:C2	2.87	0.41
1:5:684:G:O2'	1:5:685:C:O5'	2.37	0.41
1:5:689:U:O2	1:5:689:U:H2'	2.20	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:N4	1:5:739:G:O6	2.53	0.41
1:5:909:A:N3	1:5:910:G:C8	2.88	0.41
1:5:977:C:C3'	1:5:978:G:H5'	2.50	0.41
1:5:1070:G:N1	1:5:1071:C:C4	2.88	0.41
1:5:1078:A:H2'	1:5:1079:C:H5	1.85	0.41
1:5:1178:G:C5	1:5:1179:U:C5	3.08	0.41
1:5:1212:G:N1	1:5:1213:G:N7	2.67	0.41
1:5:1218:G:O6	1:5:1219:G:C8	2.74	0.41
1:5:1329:G:C2'	1:5:1330:A:OP1	2.69	0.41
1:5:1753:G:H2'	1:5:1755:C:C5'	2.50	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
1:5:1872:G:N1	1:5:1873:A:N7	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1891:A:C2'	1:5:1892:A:C8	3.03	0.41
1:5:1912:G:C2	1:5:1913:C:C5	3.09	0.41
1:5:1922:G:C2	1:5:1923:A:C8	3.08	0.41
1:5:2055:G:C8	1:5:2055:G:H3'	2.55	0.41
1:5:2060:G:C5	1:5:2061:U:C5	3.08	0.41
1:5:2090:U:C2'	1:5:2091:C:O5'	2.68	0.41
1:5:2247:C:H5''	1:5:2248:C:C6	2.55	0.41
1:5:2283:G:O2'	1:5:2284:G:H5'	2.20	0.41
1:5:2339:G:C2	1:5:2340:C:C2	3.09	0.41
1:5:2340:C:C4	1:5:2341:A:N7	2.88	0.41
1:5:2454:U:O2	1:5:2454:U:C2'	2.67	0.41
1:5:2479:G:C5	1:5:2480:G:C8	3.08	0.41
1:5:2493:G:C5	1:5:2494:U:C5	3.09	0.41
1:5:2562:G:C6	1:5:2564:G:OP2	2.73	0.41
1:5:2696:A:C8	40:k:69:LEU:HD12	2.56	0.41
1:5:3631:U:C2	1:5:3632:C:C6	3.08	0.41
1:5:3739:C:C6	1:5:3739:C:H5'	2.50	0.41
1:5:3904:G:H5''	1:5:3905:A:OP2	2.20	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
1:5:4108:G:N3	1:5:4109:G:C8	2.88	0.41
1:5:4137:C:C2	1:5:4138:C:C6	3.07	0.41
1:5:4315:A:C6	1:5:4316:G:N7	2.88	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
1:5:4489:G:C2	1:5:4490:C:N1	2.89	0.41
1:5:4897:G:C2	1:5:4898:G:C4	3.08	0.41
2:7:36:C:H2'	2:7:37:G:H8	1.85	0.41
3:8:102:G:H5''	39:j:39:TYR:OH	2.20	0.41
3:8:111:U:O2	3:8:111:U:C3'	2.68	0.41
3:8:134:G:N2	3:8:135:C:C1'	2.82	0.41
4:A:226:ARG:HB2	4:A:226:ARG:CZ	2.50	0.41
5:B:258:HIS:O	5:B:259:PRO:C	2.54	0.41
7:D:27:LYS:HE3	13:J:147:ARG:HH21	1.83	0.41
7:D:202:GLN:HA	7:D:205:ALA:HB3	2.02	0.41
10:G:29:ASN:HD22	10:G:29:ASN:HA	1.68	0.41
10:G:264:LYS:HG3	51:SB:93:GLY:H	1.85	0.41
11:H:31:ARG:HE	11:H:87:GLY:HA3	1.86	0.41
12:I:181:PHE:CD1	12:I:190:LEU:HD13	2.55	0.41
14:K:29:ALA:N	14:K:30:PRO:HD2	2.35	0.41
17:N:44:ARG:HD2	17:N:120:TRP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:R:120:TYR:O	21:R:121:HIS:C	2.63	0.41
23:T:105:PHE:CE1	23:T:109:VAL:HG23	2.56	0.41
24:U:104:ALA:HA	24:U:110:TYR:HD1	1.86	0.41
26:W:57:ARG:HG2	26:W:57:ARG:NH1	2.35	0.41
28:Y:13:LYS:HB3	28:Y:17:ARG:HH21	1.86	0.41
30:a:45:PHE:HD2	30:a:53:PHE:CE1	2.39	0.41
32:c:53:PRO:CD	32:c:56:ARG:NH1	2.84	0.41
41:l:21:ARG:CZ	41:l:21:ARG:HB2	2.50	0.41
41:l:44:TRP:CE3	41:l:45:ARG:HB2	2.55	0.41
44:o:57:ARG:HH11	44:o:57:ARG:CG	2.33	0.41
46:q:28:PHE:CD1	46:q:189:ILE:HD11	2.54	0.41
46:q:30:VAL:O	46:q:30:VAL:HG23	2.18	0.41
46:q:52:VAL:O	46:q:89:VAL:CB	2.68	0.41
46:q:65:ILE:HA	46:q:68:HIS:CD2	2.55	0.41
46:q:147:ILE:H	48:4:204:MET:HE1	1.86	0.41
48:4:56:PHE:CE1	48:4:456:ARG:N	2.69	0.41
48:4:91:GLN:O	48:4:92:SER:C	2.61	0.41
48:4:160:MET:HE2	48:4:174:LEU:HD21	2.01	0.41
48:4:275:LYS:CE	48:4:276:SER:CA	2.89	0.41
48:4:326:GLU:O	48:4:329:ASP:N	2.46	0.41
48:4:430:MET:HE3	48:4:486:THR:HG23	1.91	0.41
48:4:616:ASP:O	48:4:621:GLU:OE1	2.38	0.41
48:4:829:SER:HG	48:4:832:SER:C	2.23	0.41
49:S2:75:G:H1	56:SG:159:ARG:NE	2.16	0.41
49:S2:163:U:HO2'	49:S2:164:A:C5'	2.32	0.41
49:S2:165:G:C2'	49:S2:166:A:C8	2.86	0.41
49:S2:171:A:C5	49:S2:173:A:C8	3.08	0.41
49:S2:289:G:N2	49:S2:295:C:O2	2.53	0.41
49:S2:359:U:O2	49:S2:359:U:H2'	2.20	0.41
49:S2:370:G:H4'	49:S2:371:A:O5'	2.19	0.41
49:S2:403:G:C5	49:S2:404:G:N7	2.88	0.41
49:S2:436:G:O2'	49:S2:437:G:H5'	2.21	0.41
49:S2:440:G:N2	49:S2:454:U:N3	2.69	0.41
49:S2:445:A:N6	49:S2:446:G:C2	2.89	0.41
49:S2:462:C:N3	49:S2:463:C:C5	2.88	0.41
49:S2:501:C:C2	49:S2:501:C:C3'	3.04	0.41
49:S2:578:C:C4	49:S2:579:C:C5	3.08	0.41
49:S2:609:U:O2	49:S2:609:U:H2'	2.20	0.41
49:S2:827:A:N6	49:S2:828:G:C5	2.88	0.41
49:S2:931:C:H2'	49:S2:932:G:O4'	2.21	0.41
49:S2:997:A:O2'	49:S2:998:A:O5'	2.27	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1157:G:C6	72:SW:75:ILE:HD12	2.55	0.41
49:S2:1181:A:O2'	49:S2:1182:A:C5'	2.68	0.41
49:S2:1223:A:H3'	49:S2:1223:A:C8	2.55	0.41
49:S2:1292:C:O5'	81:Sf:149:CYS:O	2.39	0.41
49:S2:1303:C:N4	49:S2:1304:U:C5	2.88	0.41
49:S2:1310:U:O5'	81:Sf:143:LYS:HE2	2.19	0.41
49:S2:1311:C:C6	49:S2:1312:G:C8	3.09	0.41
49:S2:1500:G:C3'	49:S2:1501:C:H6	2.31	0.41
49:S2:1541:G:C2	49:S2:1593:C:O2	2.74	0.41
49:S2:1563:G:C6	49:S2:1564:C:N4	2.88	0.41
49:S2:1709:G:N2	49:S2:1710:C:N1	2.67	0.41
49:S2:1744:G:C2	49:S2:1789:G:N1	2.88	0.41
49:S2:1774:C:C2	49:S2:1775:U:C6	3.08	0.41
51:SB:139:CYS:SG	51:SB:140:VAL:N	2.93	0.41
52:SC:84:PHE:HE1	71:SV:33:GLN:HE22	1.62	0.41
52:SC:209:VAL:HG11	52:SC:233:LEU:CD1	2.50	0.41
62:SM:65:VAL:C	62:SM:69:LEU:HG	2.46	0.41
62:SM:90:GLY:C	62:SM:91:LEU:CG	2.93	0.41
64:SO:147:ARG:HH21	64:SO:150:ARG:HE	1.67	0.41
64:SO:147:ARG:HH21	64:SO:150:ARG:HH11	1.66	0.41
66:SQ:71:ARG:HH11	66:SQ:71:ARG:HG2	1.85	0.41
72:SW:42:MET:HE2	72:SW:49:GLU:HA	2.03	0.41
82:Sg:150:TRP:N	82:Sg:150:TRP:CD1	2.88	0.41
1:5:88:A:N1	1:5:97:G:H1'	2.35	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
1:5:442:G:H2'	1:5:443:G:C5'	2.50	0.41
1:5:732:A:C8	1:5:732:A:H5''	2.55	0.41
1:5:732:A:C5	1:5:733:A:N3	2.88	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
1:5:1288:G:O2'	1:5:1289:C:OP1	2.37	0.41
1:5:1334:A:C5	1:5:1335:G:N7	2.89	0.41
1:5:1371:A:C2	3:8:29:G:H1'	2.55	0.41
1:5:1534:A:N6	39:j:14:LYS:CA	2.79	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
1:5:1779:U:N3	1:5:1780:A:N7	2.68	0.41
1:5:1835:G:O2'	1:5:1836:G:OP2	2.22	0.41
1:5:1895:G:C2'	1:5:1896:A:O5'	2.68	0.41
1:5:1899:G:C8	1:5:2278:G:N2	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1945:G:C3'	1:5:1946:G:H5'	2.50	0.41
1:5:2342:G:N2	1:5:2344:U:O4'	2.53	0.41
1:5:2410:C:O2	1:5:2411:C:C5	2.73	0.41
1:5:2554:U:O4	1:5:2762:G:C2'	2.69	0.41
1:5:2702:C:C2	1:5:2715:G:N1	2.88	0.41
1:5:2712:G:C2	1:5:2713:C:C5	3.08	0.41
1:5:2788:U:O2	1:5:2798:A:H4'	2.21	0.41
1:5:2854:G:O6	1:5:2856:C:C1'	2.68	0.41
1:5:3643:A:N1	39:j:3:LYS:HG3	2.36	0.41
1:5:3901:A:OP1	1:5:3902:A:H5'	2.20	0.41
1:5:4111:U:N3	1:5:4112:C:C6	2.88	0.41
1:5:4152:G:C6	1:5:4153:C:N4	2.88	0.41
1:5:4274:A:H2'	1:5:4275:G:O4'	2.20	0.41
1:5:4280:A:N6	7:D:28:THR:C	2.75	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
1:5:4580:U:C4	1:5:4581:G:C5	3.08	0.41
1:5:4688:C:C4	1:5:4689:U:C4	3.08	0.41
1:5:4745:G:H2'	1:5:4746:C:H5	1.86	0.41
1:5:5004:C:C2'	1:5:5005:G:O4'	2.67	0.41
1:5:5005:G:H22	1:5:5041:G:H1'	1.85	0.41
1:5:5006:U:O4'	1:5:5042:A:C6	2.74	0.41
1:5:5047:C:N3	1:5:5048:A:N6	2.68	0.41
2:7:51:G:C4	2:7:52:C:C5	3.08	0.41
2:7:98:G:C2	2:7:99:G:H1'	2.55	0.41
2:7:113:G:C2	2:7:114:U:C5	3.08	0.41
4:A:10:LYS:HE2	4:A:16:PHE:CE2	2.55	0.41
5:B:142:GLY:HA2	5:B:146:LEU:HD21	2.03	0.41
6:C:167:ALA:CB	6:C:221:PHE:CE1	3.04	0.41
8:E:236:TYR:CE2	8:E:238:ILE:HA	2.47	0.41
9:F:148:ASN:HD22	9:F:149:LEU:H	1.69	0.41
10:G:73:ARG:HH11	10:G:73:ARG:CB	2.32	0.41
11:H:38:PHE:HB3	11:H:41:ILE:CG2	2.51	0.41
11:H:60:TRP:HE1	22:S:153:PRO:HG3	1.85	0.41
11:H:159:ALA:O	11:H:163:GLN:HB2	2.20	0.41
14:K:41:LYS:O	14:K:44:ASP:HB3	2.20	0.41
14:K:47:ALA:HB1	14:K:61:LYS:HZ1	1.85	0.41
14:K:148:PRO:HG2	14:K:149:HIS:H	1.85	0.41
15:L:45:ARG:HG2	15:L:46:ILE:HG23	2.03	0.41
16:M:86:TRP:CD1	16:M:92:ALA:HB2	2.55	0.41
18:O:27:VAL:HG12	18:O:98:ALA:HB1	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:S:84:TYR:CE1	22:S:91:HIS:HB2	2.55	0.41
25:V:27:ASN:OD1	25:V:101:ASN:O	2.38	0.41
28:Y:11:ARG:HH22	28:Y:15:ARG:HD3	1.85	0.41
29:Z:114:ALA:HB1	29:Z:118:PHE:HE2	1.85	0.41
29:Z:123:LYS:O	29:Z:124:THR:CB	2.68	0.41
31:b:12:GLN:CB	31:b:16:TRP:CZ2	3.00	0.41
35:f:76:ARG:NE	35:f:85:ARG:HH21	2.17	0.41
45:p:13:LYS:HG3	45:p:14:TYR:HD1	1.85	0.41
46:q:40:MET:O	46:q:44:ARG:HG2	2.20	0.41
46:q:188:VAL:CG1	46:q:189:ILE:N	2.83	0.41
48:4:79:TYR:HE2	48:4:351:LEU:HD12	1.75	0.41
48:4:86:LEU:HD21	48:4:96:ALA:CA	2.49	0.41
48:4:259:LYS:HG3	48:4:264:ARG:HD3	2.03	0.41
48:4:581:GLU:OE2	48:4:695:GLU:CG	2.68	0.41
48:4:650:TRP:HZ3	48:4:679:VAL:HG11	1.84	0.41
48:4:745:TYR:OH	48:4:790:VAL:HG22	2.20	0.41
48:4:759:ILE:CG2	48:4:760:TYR:N	2.83	0.41
49:S2:83:A:C6	49:S2:84:A:H1'	2.56	0.41
49:S2:189:U:C4	49:S2:190:G:C4	3.08	0.41
49:S2:217:A:C4	49:S2:309:G:C6	3.05	0.41
49:S2:302:A:O4'	58:SI:73:THR:HG23	2.19	0.41
49:S2:310:C:C2	49:S2:311:C:C4	3.09	0.41
49:S2:376:A:C4	49:S2:377:G:C8	3.08	0.41
49:S2:432:G:H2'	49:S2:432:G:N3	2.36	0.41
49:S2:443:U:C4'	56:SG:90:GLY:HA3	2.51	0.41
49:S2:563:G:C2'	49:S2:564:A:H5'	2.50	0.41
49:S2:601:G:O2'	49:S2:602:G:O5'	2.39	0.41
49:S2:642:U:C6	49:S2:642:U:C3'	3.04	0.41
49:S2:996:A:N7	63:SN:113:PHE:CE2	2.88	0.41
49:S2:1028:A:C6	49:S2:1029:G:H1'	2.56	0.41
49:S2:1029:G:C2	49:S2:1030:A:N9	2.88	0.41
49:S2:1136:U:C2'	49:S2:1137:U:O5'	2.68	0.41
49:S2:1252:C:H5''	49:S2:1254:C:C6	2.55	0.41
49:S2:1256:G:C8	79:Sd:40:ARG:CD	2.97	0.41
49:S2:1284:A:N1	62:SM:33:ARG:O	2.53	0.41
49:S2:1309:C:H3'	81:Sf:143:LYS:HE2	2.02	0.41
49:S2:1368:U:O2	49:S2:1372:U:C4	2.73	0.41
49:S2:1402:A:O2'	70:SU:54:VAL:HG13	2.20	0.41
49:S2:1457:U:C2	49:S2:1458:G:N7	2.89	0.41
49:S2:1573:G:C2	49:S2:1574:C:C1'	3.03	0.41
49:S2:1604:G:H2'	49:S2:1605:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1606:G:N3	49:S2:1632:G:N2	2.68	0.41
49:S2:1773:C:C2	49:S2:1774:C:C6	3.08	0.41
50:SA:63:ARG:NH2	71:SV:39:VAL:HG13	2.34	0.41
55:SF:138:ALA:HB2	55:SF:200:ALA:O	2.21	0.41
56:SG:223:LYS:O	56:SG:227:GLN:N	2.53	0.41
58:SI:142:SER:O	58:SI:144:LYS:N	2.54	0.41
58:SI:149:TYR:N	58:SI:149:TYR:CD1	2.89	0.41
59:SJ:39:ASN:OD1	59:SJ:39:ASN:C	2.62	0.41
59:SJ:104:ASP:OD1	59:SJ:104:ASP:N	2.53	0.41
60:SK:11:ILE:CD1	60:SK:45:VAL:HG22	2.49	0.41
61:SL:35:ARG:NH1	61:SL:53:GLY:O	2.53	0.41
61:SL:37:TYR:CD1	61:SL:37:TYR:C	2.99	0.41
62:SM:34:GLY:O	62:SM:36:ARG:N	2.53	0.41
66:SQ:78:VAL:HA	66:SQ:81:ILE:HD12	2.02	0.41
68:SS:23:ARG:HD3	75:SZ:48:VAL:CB	2.50	0.41
68:SS:23:ARG:HD3	75:SZ:48:VAL:HB	2.02	0.41
74:SY:57:VAL:HG11	74:SY:60:PHE:CE2	2.55	0.41
82:Sg:166:VAL:HG22	82:Sg:176:VAL:HG22	2.03	0.41
1:5:113:A:C5	1:5:114:G:C8	3.08	0.41
1:5:175:C:H2'	1:5:176:G:H8	1.86	0.41
1:5:291:U:C2'	1:5:292:G:C2'	2.78	0.41
1:5:308:G:H8	38:i:31:GLY:HA3	1.85	0.41
1:5:348:G:N2	1:5:350:C:N1	2.69	0.41
1:5:417:G:H1'	3:8:17:A:N6	2.35	0.41
1:5:426:A:C2'	1:5:427:A:O5'	2.68	0.41
1:5:465:G:N1	1:5:466:A:C5	2.88	0.41
1:5:505:G:N1	1:5:506:C:C4	2.89	0.41
1:5:671:G:C2	1:5:672:C:C5	3.09	0.41
1:5:708:G:N2	1:5:709:C:H1'	2.34	0.41
1:5:911:U:O2	1:5:911:U:H2'	2.21	0.41
1:5:919:C:N3	1:5:920:C: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
1:5:1281:G:O6	8:E:48:ARG:NH1	2.52	0.41
1:5:1341:U:H2'	1:5:1342:A:C8	2.56	0.41
1:5:1422:G:C2	1:5:1464:C:C2	3.09	0.41
1:5:1669:A:C2	1:5:1852:U:H4'	2.55	0.41
1:5:1696:C:H1'	1:5:1697:G:O5'	2.20	0.41
1:5:1777:C:C2	1:5:1778:C:C5	3.09	0.41
1:5:1876:U:O4	31:b:10:HIS:NE2	2.53	0.41
1:5:2270:G:C6	1:5:2271:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2477:A:C2	1:5:2478:C:C5	3.09	0.41
1:5:2597:G:C2'	1:5:2598:A:O5'	2.68	0.41
1:5:2605:G:C2	1:5:2606:G:C4	3.09	0.41
1:5:2793:G:C6	1:5:2797:C:N4	2.88	0.41
1:5:2843:U:C2	1:5:2844:A:N7	2.72	0.41
1:5:2850:A:O2'	25:V:52:LEU:HD21	2.20	0.41
1:5:3727:A:C2'	1:5:3728:A:C8	3.03	0.41
1:5:4100:C:H42	1:5:4101:C:N4	2.18	0.41
1:5:4147:G:C5	1:5:4148:C:C5	3.09	0.41
1:5:4266:G:C6	1:5:4279:A:C5	3.08	0.41
1:5:4346:U:H2'	1:5:4347:G:O5'	2.20	0.41
1:5:4404:U:C4	1:5:4436:U:O4	2.74	0.41
1:5:4868:G:C3'	1:5:4869:U:H5''	2.50	0.41
1:5:4988:U:O2	1:5:4988:U:C2'	2.66	0.41
1:5:5006:U:C2	1:5:5042:A:C8	3.08	0.41
1:5:5022:U:C4	1:5:5024:C:C5	3.08	0.41
2:7:59:G:C4	2:7:60:G:C8	3.08	0.41
4:A:5:ILE:HB	4:A:208:GLU:O	2.19	0.41
4:A:192:LYS:C	4:A:193:ARG:HD3	2.45	0.41
6:C:33:ARG:HD3	6:C:122:TYR:OH	2.20	0.41
6:C:77:PRO:O	6:C:90:GLY:HA2	2.21	0.41
7:D:41:LYS:CG	23:T:93:ILE:HD11	2.45	0.41
8:E:280:HIS:CB	35:f:42:TYR:HE1	2.34	0.41
9:F:120:PHE:CE2	9:F:217:SER:HA	2.54	0.41
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:179:ILE:C	11:H:180:TYR:CD1	2.99	0.41
12:I:47:PRO:CB	12:I:171:TRP:NE1	2.82	0.41
21:R:172:ARG:CG	49:S2:909:G:OP1	2.68	0.41
23:T:136:ARG:O	23:T:137:GLU:HB2	2.19	0.41
27:X:89:LYS:HE3	27:X:93:ASN:HD22	1.84	0.41
27:X:96:LEU:HB3	27:X:98:PHE:HE1	1.86	0.41
30:a:148:ALA:HA	38:i:8:ALA:HB2	2.01	0.41
33:d:78:ARG:HH11	33:d:78:ARG:CG	2.34	0.41
34:e:6:PRO:CA	34:e:74:PHE:HE1	2.34	0.41
34:e:20:PHE:HZ	34:e:60:TYR:HH	1.55	0.41
34:e:35:TRP:HZ3	34:e:55:MET:HA	1.86	0.41
34:e:91:CYS:HB3	34:e:95:TYR:CE1	2.55	0.41
38:i:63:VAL:O	38:i:64:SER:C	2.64	0.41
46:q:25:PRO:HG2	46:q:26:LYS:HD2	2.03	0.41
47:r:107:ARG:CG	47:r:107:ARG:HH11	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:4:700:VAL:HG11	48:4:702:PHE:CZ	2.55	0.41
49:S2:20:G:OP1	49:S2:620:G:C8	2.73	0.41
49:S2:27:A:C6	49:S2:28:U:C6	3.07	0.41
49:S2:85:A:C4	49:S2:86:C:C5	3.08	0.41
49:S2:108:G:N3	49:S2:854:A:H2	2.18	0.41
49:S2:127:C:C6	49:S2:181:A:N6	2.88	0.41
49:S2:344:U:N3	49:S2:345:U:C5	2.88	0.41
49:S2:369:C:O2	49:S2:369:C:C5'	2.69	0.41
49:S2:435:A:OP2	49:S2:435:A:O4'	2.39	0.41
49:S2:553:U:O4	49:S2:554:A:N6	2.53	0.41
49:S2:563:G:N2	49:S2:564:A:N9	2.68	0.41
49:S2:604:A:N1	49:S2:605:A:C6	2.88	0.41
49:S2:730:C:H2'	49:S2:731:G:O4'	2.20	0.41
49:S2:833:C:N3	49:S2:834:C:C6	2.89	0.41
49:S2:837:A:H61	74:SY:47:MET:C	2.28	0.41
49:S2:1040:G:C8	49:S2:1040:G:C5'	3.03	0.41
49:S2:1060:A:H4'	49:S2:1061:U:O5'	2.20	0.41
49:S2:1107:G:C6	49:S2:1108:G:N7	2.88	0.41
49:S2:1134:G:OP1	76:Sa:13:LYS:NZ	2.54	0.41
49:S2:1412:C:O2'	49:S2:1413:G:C8	2.73	0.41
49:S2:1425:G:C6	49:S2:1426:U:H1'	2.56	0.41
49:S2:1528:G:C2	49:S2:1529:C:C6	3.09	0.41
49:S2:1537:A:C2	49:S2:1538:C:N1	2.89	0.41
49:S2:1562:C:C2	49:S2:1563:G:N7	2.87	0.41
49:S2:1669:G:N2	49:S2:1670:C:C2	2.88	0.41
49:S2:1788:A:H2'	49:S2:1789:G:O4'	2.20	0.41
49:S2:1806:A:C6	49:S2:1807:C:C5	3.08	0.41
51:SB:228:LEU:HD13	51:SB:228:LEU:C	2.45	0.41
53:SD:71:ALA:HB1	60:SK:20:VAL:HG12	2.02	0.41
54:SE:103:TYR:CE1	54:SE:189:LEU:HD11	2.54	0.41
55:SF:125:SER:CB	55:SF:199:VAL:HG12	2.50	0.41
55:SF:152:TRP:O	55:SF:156:THR:N	2.34	0.41
59:SJ:38:ARG:HA	80:Se:31:ARG:HG3	2.00	0.41
59:SJ:173:VAL:O	59:SJ:177:ASN:ND2	2.53	0.41
60:SK:15:LEU:HD21	60:SK:71:LEU:HD13	2.02	0.41
62:SM:69:LEU:HD22	62:SM:75:ASN:OD1	2.21	0.41
64:SO:55:ARG:O	64:SO:56:VAL:C	2.64	0.41
64:SO:81:VAL:O	64:SO:82:ALA:C	2.64	0.41
78:Sc:15:THR:CG2	78:Sc:33:GLU:HG2	2.51	0.41
78:Sc:46:VAL:HG11	78:Sc:50:VAL:CG2	2.51	0.41
1:5:18:C:O2	1:5:19:G:C8	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:137:G:H2'	1:5:138:G:H8	1.86	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	2.20	0.41
1:5:258:G:C2	1:5:259:C:N1	2.89	0.41
1:5:275:C:C2'	1:5:276:C:H5''	2.50	0.41
1:5:718:C:O2	1:5:718:C:H2'	2.21	0.41
1:5:722:G:H21	6:C:343:GLN:CD	2.29	0.41
1:5:752:G:C2	1:5:753:C:H1'	2.55	0.41
1:5:1076:C:C4	1:5:1077:C:C6	3.04	0.41
1:5:1187:G:N3	1:5:1188:C:H5	2.17	0.41
1:5:1212:G:C4	1:5:1213:G:C8	3.08	0.41
1:5:1447:C:H2'	1:5:1448:G:H8	1.79	0.41
1:5:1511:U:H2'	1:5:1512:G:O4'	2.20	0.41
1:5:1556:C:O2	1:5:1556:C:H2'	2.19	0.41
1:5:1650:A:C3'	1:5:1651:G:H5''	2.50	0.41
1:5:1694:C:C2	1:5:1695:U:C6	3.09	0.41
1:5:1918:U:OP1	35:f:80:ASN:HB2	2.21	0.41
1:5:1971:C:C5	1:5:2000:G:C4	3.09	0.41
1:5:2021:G:C5	1:5:2022:C:N4	2.88	0.41
1:5:2027:U:O2'	1:5:2028:C:O4'	2.38	0.41
1:5:2068:C:C2'	1:5:2069:A:H5''	2.50	0.41
1:5:2108:G:N2	1:5:2125:C:C4	2.87	0.41
1:5:2392:C:O2	1:5:2392:C:C2'	2.68	0.41
1:5:2658:G:N2	1:5:2675:G:H2'	2.25	0.41
1:5:2682:G:C2	1:5:2683:C:C2	3.09	0.41
1:5:2688:G:N2	1:5:2689:C:N1	2.69	0.41
1:5:2782:U:H4'	1:5:2783:A:OP2	2.21	0.41
1:5:2851:G:N2	1:5:2856:C:N4	2.68	0.41
1:5:3590:G:N3	1:5:3591:C:H1'	2.35	0.41
1:5:3615:G:N3	1:5:3615:G:C2'	2.84	0.41
1:5:3692:A:C6	1:5:3693:U:C6	3.08	0.41
1:5:3733:A:C4	1:5:3734:U:C5	3.09	0.41
1:5:3756:A:N1	1:5:3757:G:C5	2.88	0.41
1:5:3869:C:N3	1:5:3870:C:C5	2.88	0.41
1:5:3898:G:O3'	5:B:257:TRP:HA	2.21	0.41
1:5:4068:U:N3	1:5:4069:U:H1'	2.36	0.41
1:5:4232:U:H1'	1:5:4233:A:OP2	2.21	0.41
1:5:4257:A:C8	13:J:60:PHE:HE2	2.39	0.41
1:5:4349:C:H3'	1:5:4350:C:H5''	2.03	0.41
1:5:4351:U:C2	1:5:4352:U:C6	3.08	0.41
1:5:4484:A:N1	1:5:4485:C:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4497:U:C4	1:5:4498:U:C6	3.08	0.41
1:5:4518:A:C3'	1:5:4519:C:H5'	2.50	0.41
1:5:4552:U:C2'	1:5:4553:A:O5'	2.68	0.41
1:5:4685:U:H2'	1:5:4686:G:O4'	2.20	0.41
1:5:4896:G:N3	1:5:4926:C:N4	2.66	0.41
1:5:4942:C:H4'	1:5:4944:C:P	2.61	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
2:7:29:C:O2'	2:7:30:C:H5'	2.21	0.41
3:8:30:U:C2	3:8:31:G:N7	2.89	0.41
3:8:80:A:C8	3:8:81:C:C1'	3.03	0.41
3:8:82:A:N1	3:8:83:C:H5''	2.35	0.41
5:B:219:VAL:HG21	5:B:333:LEU:HD21	2.02	0.41
6:C:67:TRP:CD1	6:C:71:ARG:HE	2.39	0.41
6:C:110:ARG:O	6:C:113:ARG:NH1	2.53	0.41
6:C:183:VAL:HA	6:C:204:ARG:HB2	2.03	0.41
6:C:197:ARG:O	6:C:198:ASN:ND2	2.54	0.41
10:G:46:GLN:HG3	10:G:47:PRO:HD2	2.01	0.41
10:G:220:GLU:CD	10:G:220:GLU:C	2.88	0.41
11:H:61:TRP:CZ2	16:M:33:GLN:CD	2.99	0.41
14:K:21:GLU:HB3	14:K:22:VAL:H	1.64	0.41
14:K:123:ARG:CB	14:K:129:ILE:HG13	2.20	0.41
14:K:141:CYS:O	14:K:148:PRO:CD	2.68	0.41
15:L:76:PHE:HD2	15:L:80:GLU:OE1	2.04	0.41
15:L:92:ARG:CZ	15:L:92:ARG:HB3	2.49	0.41
16:M:6:PHE:O	16:M:7:VAL:C	2.64	0.41
23:T:43:LYS:HA	23:T:58:HIS:CE1	2.56	0.41
24:U:60:VAL:HG11	24:U:76:VAL:HG22	2.02	0.41
34:e:43:ASN:HD22	34:e:44:ARG:N	2.18	0.41
35:f:6:TRP:O	35:f:6:TRP:CD2	2.74	0.41
44:o:3:ASN:OD1	44:o:3:ASN:C	2.64	0.41
46:q:72:ASN:HA	46:q:73:PRO:HD3	1.63	0.41
46:q:132:PRO:HA	46:q:152:ILE:HD11	2.03	0.41
48:4:224:THR:HG1	48:4:227:GLN:HG3	1.83	0.41
48:4:267:ASP:OD1	48:4:268:PRO:CD	2.68	0.41
48:4:410:PHE:CE2	48:4:530:SER:HB3	2.55	0.41
49:S2:55:U:N3	49:S2:91:A:O2'	2.49	0.41
49:S2:84:A:C2	49:S2:85:A:C8	3.09	0.41
49:S2:118:C:C1'	49:S2:445:A:C4	3.04	0.41
49:S2:304:C:O3'	49:S2:306:C:H1'	2.20	0.41
49:S2:449:A:O2'	54:SE:3:ARG:NH2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:632:C:C2	49:S2:633:C:C6	3.09	0.41
49:S2:871:U:H6	49:S2:871:U:C5'	2.33	0.41
49:S2:900:C:H2'	49:S2:901:G:H8	1.84	0.41
49:S2:947:G:C2	49:S2:948:C:C6	3.09	0.41
49:S2:1003:U:C2	49:S2:1004:U:C6	3.08	0.41
49:S2:1027:A:C6	49:S2:1028:A:H1'	2.56	0.41
49:S2:1052:A:C4	49:S2:1053:C:C5	3.09	0.41
49:S2:1129:G:H2'	49:S2:1130:G:C1'	2.51	0.41
49:S2:1130:G:O5'	49:S2:1130:G:C8	2.73	0.41
49:S2:1283:C:H4'	62:SM:102:LYS:CE	2.49	0.41
49:S2:1293:A:C2'	81:Sf:152:LYS:HB2	2.50	0.41
49:S2:1421:A:C2	49:S2:1422:G:H1'	2.56	0.41
49:S2:1449:G:N1	49:S2:1450:G:C5	2.88	0.41
49:S2:1452:A:C5	49:S2:1475:G:N1	2.89	0.41
49:S2:1552:G:C5	49:S2:1578:U:C4	3.07	0.41
49:S2:1631:U:C4	49:S2:1632:G:C5	3.08	0.41
49:S2:1826:G:C2	49:S2:1827:U:C4	3.09	0.41
53:SD:203:PRO:HG2	67:SR:42:PRO:HB3	2.01	0.41
57:SH:43:LEU:HD21	57:SH:71:SER:OG	2.20	0.41
60:SK:59:LYS:HB3	60:SK:70:TYR:HD2	1.85	0.41
63:SN:125:LEU:HD22	63:SN:129:TYR:HE2	1.83	0.41
67:SR:6:THR:HG1	67:SR:8:THR:HG1	1.62	0.41
69:ST:10:ASN:HB2	69:ST:13:GLU:OE2	2.21	0.41
69:ST:112:MET:HA	69:ST:127:GLY:CA	2.49	0.41
71:SV:53:TYR:OH	71:SV:73:ALA:HA	2.21	0.41
73:SX:87:ASN:ND2	73:SX:134:TYR:CE2	2.89	0.41
74:SY:86:GLU:CD	74:SY:86:GLU:HB3	2.41	0.41
76:Sa:2:THR:O	76:Sa:3:LYS:C	2.60	0.41
1:5:68:U:O4	1:5:69:A:C4	2.74	0.41
1:5:163:A:C6	1:5:164:G:C8	3.08	0.41
1:5:244:G:N1	1:5:246:G:N9	2.69	0.41
1:5:723:A:C2'	1:5:724:C:O5'	2.68	0.41
1:5:924:C:N3	1:5:925:C:C5	2.89	0.41
1:5:979:C:H4'	8:E:39:HIS:CB	2.50	0.41
1:5:1085:C:N3	1:5:1213:G:C6	2.88	0.41
1:5:1086:C:C2	1:5:1212:G:N1	2.89	0.41
1:5:1173:G:C4	1:5:1174:G:C8	3.08	0.41
1:5:1199:G:C6	1:5:1200:G:C5	3.08	0.41
1:5:1249:C:H1'	1:5:1262:G:N2	2.36	0.41
1:5:1258:G:C4	1:5:1259:G:C8	3.09	0.41
1:5:1269:G:C5	1:5:2111:G:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1274:A:O2'	1:5:1275:G:P	2.78	0.41
1:5:1281:G:H2'	6:C:323:ARG:HG2	2.03	0.41
1:5:1396:G:O6	30:a:110:LYS:HD3	2.20	0.41
1:5:1437:C:H1'	1:5:2097:U:H5'	2.03	0.41
1:5:1629:G:N3	1:5:1631:A:C5	2.88	0.41
1:5:1757:U:O2	1:5:1758:G:C8	2.71	0.41
1:5:1760:G:C6	1:5:1761:G:N7	2.89	0.41
1:5:1830:G:H2'	31:b:68:ARG:NH2	2.36	0.41
1:5:1912:G:C6	1:5:1913:C:C4	3.09	0.41
1:5:1943:A:H2'	1:5:1944:A:O4'	2.21	0.41
1:5:2000:G:N3	1:5:2000:G:C3'	2.84	0.41
1:5:2079:G:H4'	34:e:58:ILE:HD11	2.02	0.41
1:5:2092:G:C8	1:5:2093:A:N1	2.89	0.41
1:5:2245:G:C4	1:5:2246:C:C6	3.08	0.41
1:5:2259:G:OP2	1:5:2262:G:O6	2.38	0.41
1:5:2263:A:O2'	1:5:2264:C:H2'	2.21	0.41
1:5:2409:U:H5	1:5:2410:C:C5	2.38	0.41
1:5:2439:G:H1'	1:5:2777:G:C2	2.54	0.41
1:5:2509:C:HO2'	1:5:2510:G:H5'	1.82	0.41
1:5:2529:A:C4	1:5:2532:C:C5	3.09	0.41
1:5:2715:G:C6	1:5:2716:C:N4	2.88	0.41
1:5:3672:G:N7	1:5:3674:G:H1'	2.35	0.41
1:5:3698:G:C6	1:5:3699:C:N4	2.89	0.41
1:5:3702:A:C8	1:5:3774:A:C4	3.09	0.41
1:5:3779:A:C2	1:5:3816:A:C6	3.08	0.41
1:5:3800:A:C2	1:5:4496:A:H1'	2.55	0.41
1:5:3928:A:H5'	17:N:89:VAL:HG11	2.03	0.41
1:5:4113:U:C4	1:5:4114:C:C4	3.09	0.41
1:5:4162:C:O2	1:5:4162:C:O4'	2.38	0.41
1:5:4227:U:H2'	1:5:4228:G:O4'	2.21	0.41
1:5:4275:G:C5	1:5:4276:G:N7	2.88	0.41
1:5:4361:U:N3	1:5:4362:A:C8	2.88	0.41
1:5:4371:G:O2'	1:5:4372:U:OP2	2.35	0.41
1:5:4424:A:C5'	42:m:122:ARG:HE	2.34	0.41
1:5:4483:C:C2'	1:5:4484:A:O5'	2.68	0.41
1:5:4502:C:N4	1:5:4503:A:N7	2.68	0.41
1:5:4586:G:OP1	18:O:72:HIS:CD2	2.74	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
1:5:4753:U:P	35:f:4:ARG:NH1	2.93	0.41
1:5:4770:U:O2'	1:5:4771:C:C6	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4914:C:C2	1:5:4915:G:C8	3.08	0.41
1:5:4946:U:O2	1:5:4946:U:C2'	2.69	0.41
1:5:4981:G:O2'	19:P:69:ARG:HB3	2.20	0.41
1:5:4996:C:C4	1:5:4997:G:N7	2.88	0.41
2:7:8:G:N2	2:7:9:C:H1'	2.35	0.41
2:7:55:A:C2	2:7:56:G:N7	2.89	0.41
3:8:31:G:C4	3:8:32:C:C6	3.09	0.41
8:E:219:ARG:C	8:E:220:LYS:HG2	2.46	0.41
14:K:134:GLY:O	14:K:136:ALA:N	2.53	0.41
21:R:102:LEU:HD13	21:R:132:PHE:O	2.21	0.41
31:b:13:SER:HA	31:b:16:TRP:CZ2	2.55	0.41
34:e:57:ASN:OD1	34:e:60:TYR:HB3	2.21	0.41
40:k:25:ILE:HD13	40:k:57:LYS:HE2	2.03	0.41
41:l:44:TRP:HE3	41:l:45:ARG:N	2.19	0.41
46:q:188:VAL:HG12	46:q:189:ILE:O	2.21	0.41
48:4:45:ILE:HG21	48:4:77:LEU:HA	2.00	0.41
48:4:503:PRO:HA	48:4:549:ALA:CA	2.48	0.41
48:4:532:PRO:CD	48:4:533:MET:N	2.82	0.41
48:4:730:TYR:HB2	48:4:854:PHE:CZ	2.52	0.41
48:4:771:PHE:CB	48:4:785:LYS:O	2.69	0.41
48:4:797:THR:CG2	48:4:798:ALA:N	2.82	0.41
48:4:801:ARG:CD	48:4:801:ARG:C	2.92	0.41
49:S2:29:G:C2	49:S2:30:C:C5	3.09	0.41
49:S2:37:C:O2	49:S2:37:C:H2'	2.21	0.41
49:S2:60:A:C2'	49:S2:61:A:C5'	2.99	0.41
49:S2:84:A:C5	49:S2:85:A:N7	2.89	0.41
49:S2:126:G:O6	56:SG:196:LYS:HA	2.20	0.41
49:S2:165:G:H2'	49:S2:166:A:C8	2.50	0.41
49:S2:344:U:C2	49:S2:345:U:C6	3.08	0.41
49:S2:408:A:C2'	49:S2:409:C:O5'	2.68	0.41
49:S2:412:G:C2	49:S2:429:C:C2	3.09	0.41
49:S2:426:A:N3	49:S2:426:A:C2'	2.82	0.41
49:S2:447:A:N6	49:S2:449:A:C4	2.89	0.41
49:S2:475:C:N4	49:S2:476:A:N7	2.69	0.41
49:S2:499:G:C6	49:S2:501:C:C1'	3.04	0.41
49:S2:511:U:H2'	49:S2:512:A:C8	2.56	0.41
49:S2:529:A:C2	49:S2:530:U:C6	3.09	0.41
49:S2:563:G:N1	49:S2:564:A:N7	2.69	0.41
49:S2:574:A:H4'	74:SY:89:HIS:CB	2.51	0.41
49:S2:697:G:N1	49:S2:734:C:C2	2.89	0.41
49:S2:818:A:N6	49:S2:819:G:C5	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1078:C:O2	49:S2:1078:C:H2'	2.20	0.41
49:S2:1122:A:C6	49:S2:1123:C:C4	3.06	0.41
49:S2:1175:G:C6	49:S2:1176:G:N7	2.89	0.41
49:S2:1203:G:C5	49:S2:1204:A:N7	2.88	0.41
49:S2:1257:G:H4'	49:S2:1258:A:C5'	2.51	0.41
49:S2:1270:G:O2'	49:S2:1299:A:N6	2.54	0.41
49:S2:1291:A:C2	81:Sf:140:TYR:CB	3.04	0.41
49:S2:1336:C:C2	49:S2:1337:C:C6	3.08	0.41
49:S2:1350:U:C2	49:S2:1351:G:C8	3.09	0.41
49:S2:1393:G:C2	49:S2:1394:G:N9	2.89	0.41
49:S2:1523:C:O2	49:S2:1523:C:H2'	2.21	0.41
49:S2:1570:G:HO2'	49:S2:1614:A:HO2'	1.67	0.41
49:S2:1587:G:C2'	49:S2:1587:G:N3	2.83	0.41
49:S2:1771:G:N2	49:S2:1772:C:H1'	2.36	0.41
49:S2:1841:C:O2	49:S2:1841:C:C2'	2.67	0.41
49:S2:1855:G:P	64:SO:147:ARG:HH22	2.43	0.41
50:SA:66:VAL:HG22	50:SA:186:ARG:NH2	2.36	0.41
52:SC:134:ASN:C	52:SC:134:ASN:ND2	2.74	0.41
58:SI:82:VAL:CG2	58:SI:103:LEU:HG	2.51	0.41
64:SO:54:CYS:SG	64:SO:84:ARG:HB3	2.61	0.41
67:SR:41:ILE:HG21	67:SR:47:ARG:N	2.36	0.41
68:SS:42:HIS:HE1	69:ST:45:LEU:HD11	1.84	0.41
82:Sg:87:LEU:HD11	82:Sg:122:SER:HB3	2.02	0.41
82:Sg:163:PRO:CB	82:Sg:179:LEU:HB2	2.50	0.41
82:Sg:245:ARG:HD3	82:Sg:247:TRP:CZ3	2.56	0.41
82:Sg:260:ASP:HB3	82:Sg:263:GLY:O	2.20	0.41
1:5:96:U:C4	1:5:97:G:C4	3.09	0.41
1:5:186:G:H1'	1:5:187:U:C1'	2.51	0.41
1:5:423:G:H2'	1:5:424:U:C6	2.55	0.41
1:5:961:G:C4'	1:5:962:C:OP1	2.69	0.41
1:5:1095:A:C5	1:5:1096:C:C5	3.09	0.41
1:5:1095:A:C6	1:5:1096:C:C4	3.08	0.41
1:5:1219:G:N2	1:5:1220:G:C4	2.88	0.41
1:5:1261:G:C2	1:5:1262:G:C4	3.09	0.41
1:5:1367:C:C6	1:5:1367:C:H5''	2.55	0.41
1:5:1372:A:C5	1:5:1373:A:C8	3.08	0.41
1:5:1390:G:N3	1:5:1394:G:N1	2.69	0.41
1:5:1558:A:H2'	1:5:1559:G:H8	1.85	0.41
1:5:1697:G:C8	9:F:165:ASN:HA	2.55	0.41
1:5:1895:G:C6	1:5:1896:A:N3	2.88	0.41
1:5:1925:G:C2	1:5:1926:C:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2005:G:C2	1:5:2006:U:C6	3.08	0.41
1:5:2056:G:C2	1:5:2058:G:C6	3.09	0.41
1:5:2294:G:C6	1:5:2295: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
1:5:2479:G:O6	1:5:2480:G:O6	2.39	0.41
1:5:2623:A:N1	1:5:2624:G:C5	2.89	0.41
1:5:2765:A:H5''	1:5:2766:A:H2	1.84	0.41
1:5:2767:U:H3'	1:5:2769:U:H6	1.86	0.41
1:5:2855:G:H22	1:5:2859:G:N2	2.18	0.41
1:5:2891:U:H2'	1:5:2892:C:O4'	2.21	0.41
1:5:4095:G:N3	1:5:4096:C:C6	2.87	0.41
1:5:4097:G:C2	1:5:4098:A:C4	3.09	0.41
1:5:4101:C:N3	1:5:4102:C:C5	2.88	0.41
1:5:4122:G:O4'	36:g:93:ARG:HD3	2.21	0.41
1:5:4286:C:H2'	1:5:4287:G:C8	2.56	0.41
1:5:4413:C:H5	1:5:4429:C:N4	2.18	0.41
1:5:4608:G:C5	1:5:4609:G:C5	3.09	0.41
1:5:4906:C:O2	1:5:4916:G:C2	2.73	0.41
1:5:4981:G:C6	1:5:4982:A:C5	3.08	0.41
2:7:13:A:P	2:7:109:U:O2'	2.78	0.41
2:7:54:A:N7	13:J:12:MET:HG2	2.36	0.41
2:7:57:C:H2'	2:7:58:A:O4'	2.21	0.41
3:8:52:A:H2'	3:8:52:A:N3	2.36	0.41
3:8:120:G:C2	3:8:121:G:N9	2.87	0.41
4:A:211:PHE:HE1	4:A:219:ILE:HG23	1.81	0.41
6:C:335:MET:HE3	9:F:60:HIS:CE1	2.56	0.41
14:K:83:LYS:HG3	14:K:83:LYS:H	1.74	0.41
14:K:118:HIS:O	14:K:120:SER:N	2.53	0.41
22:S:37:HIS:O	22:S:38:VAL:C	2.64	0.41
30:a:45:PHE:HD2	30:a:53:PHE:HE1	1.67	0.41
30:a:75:LEU:HB3	30:a:117:LEU:HD13	2.03	0.41
31:b:11:ASN:O	31:b:13:SER:N	2.54	0.41
46:q:82:ILE:O	46:q:83:ARG:CD	2.68	0.41
46:q:135:THR:CA	46:q:138:PHE:HD1	2.34	0.41
47:r:44:ILE:HG22	47:r:45:HIS:N	2.36	0.41
48:4:93:LYS:O	48:4:93:LYS:CE	2.69	0.41
48:4:371:LEU:O	48:4:495:ARG:HD3	2.21	0.41
48:4:398:ILE:HG23	48:4:485:ILE:CD1	2.51	0.41
48:4:766:LYS:HG2	48:4:796:PHE:CD1	2.56	0.41
49:S2:301:A:C6	49:S2:302:A:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:379:C:N4	49:S2:380:G:C6	2.88	0.41
49:S2:403:G:C6	49:S2:404:G:C8	3.08	0.41
49:S2:454:U:OP1	56:SG:94:ARG:N	2.49	0.41
49:S2:468:A:C6	49:S2:469:A:C5	3.08	0.41
49:S2:493:A:O4'	49:S2:574:A:H5'	2.20	0.41
49:S2:496:C:O2'	49:S2:497:C:C5'	2.69	0.41
49:S2:558:G:H2'	49:S2:559:G:N9	2.36	0.41
49:S2:584:G:C2	49:S2:585:C:C2	3.09	0.41
49:S2:658:U:O2	73:SX:17:ARG:NH2	2.54	0.41
49:S2:996:A:O2'	49:S2:997:A:H5'	2.21	0.41
49:S2:1185:C:O2	49:S2:1185:C:C2'	2.69	0.41
49:S2:1231:C:H2'	49:S2:1232:U:C6	2.56	0.41
49:S2:1281:G:N7	62:SM:95:ASP:OD2	2.54	0.41
49:S2:1290:G:C2'	81:Sf:146:LEU:CB	2.93	0.41
49:S2:1293:A:H62	81:Sf:140:TYR:N	2.17	0.41
49:S2:1307:U:H3'	49:S2:1308:U:H5''	2.03	0.41
49:S2:1344:A:N6	49:S2:1386:A:C4'	2.84	0.41
49:S2:1454:A:C5	49:S2:1476:A:N3	2.89	0.41
49:S2:1539:U:O4	49:S2:1540:G:O6	2.39	0.41
49:S2:1727:G:N2	49:S2:1728:U:H1'	2.36	0.41
50:SA:125:THR:O	50:SA:147:LEU:HB2	2.21	0.41
51:SB:33:VAL:HG21	51:SB:67:PHE:CZ	2.53	0.41
61:SL:125:ILE:HB	61:SL:146:THR:CG2	2.51	0.41
62:SM:24:THR:HA	62:SM:27:ILE:HG22	2.02	0.41
62:SM:31:LEU:HD12	62:SM:33:ARG:CB	2.51	0.41
63:SN:57:SER:HA	77:Sb:54:VAL:HG13	2.03	0.41
66:SQ:30:GLY:HA2	66:SQ:67:ASP:HA	2.02	0.41
72:SW:70:ASN:OD1	72:SW:70:ASN:N	2.54	0.41
78:Sc:33:GLU:OE1	78:Sc:33:GLU:HA	2.21	0.41
82:Sg:87:LEU:HD11	82:Sg:122:SER:CB	2.50	0.41
1:5:70:A:C6	1:5:4355:G:O4'	2.72	0.41
1:5:82:U:O2	1:5:82:U:H2'	2.19	0.41
1:5:86:U:C4	1:5:97:G:N1	2.89	0.41
1:5:101:A:N1	1:5:102:G:C4	2.88	0.41
1:5:120:A:O4'	1:5:121:A:N1	2.54	0.41
1:5:183:C:C2	1:5:189:G:O6	2.74	0.41
1:5:250:C:H2'	1:5:251:C:O4'	2.20	0.41
1:5:330:G:N2	1:5:331:G:C8	2.86	0.41
1:5:381:U:C4'	1:5:414:C:H2'	2.51	0.41
1:5:435:A:H61	1:5:1312:A:H2	1.66	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)
1:5:466:A:N3	1:5:467:U:C5	2.86	0.41
1:5:911:U:C4	1:5:912:G:N7	2.89	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
1:5:957:G:H3'	1:5:2077:C:OP1	2.21	0.41
1:5:1070:G:N1	1:5:1071:C:C6	2.89	0.41
1:5:1173:G:C5	1:5:1174:G:C8	3.09	0.41
1:5:1195:G:C2	1:5:1196:G:C5	3.09	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
1:5:1302:U:C4	1:5:1303:A:N7	2.89	0.41
1:5:1351:G:C6	1:5:1352:C:C4	3.09	0.41
1:5:1379:C:H4'	1:5:1380:G:C1'	2.51	0.41
1:5:1410:U:O2'	1:5:1411:C:OP2	2.33	0.41
1:5:1446:C:N3	1:5:1447:C:C5	2.88	0.41
1:5:1478:C:O2	1:5:1478:C:H2'	2.20	0.41
1:5:1492:G:C5'	31:b:45:PHE:HZ	2.33	0.41
1:5:1571:G:N3	1:5:1571:G:H2'	2.36	0.41
1:5:1620:U:H2'	1:5:1621:A:H8	1.85	0.41
1:5:1642:A:N3	1:5:1642:A:C2'	2.82	0.41
1:5:1667:G:H2'	1:5:2280:G:H22	1.86	0.41
1:5:1669:A:C4'	1:5:1685:G:N2	2.69	0.41
1:5:1685:G:C2	1:5:1686:C:C4	3.09	0.41
1:5:1719:A:N3	1:5:1719:A:H5''	2.36	0.41
1:5:1734:G:H2'	23:T:13:TYR:CZ	2.56	0.41
1:5:1760:G:O6	1:5:1772:C:N3	2.52	0.41
1:5:1776:A:C2	1:5:1777:C:C2	3.08	0.41
1:5:1780:A:N6	1:5:1781:U:C6	2.88	0.41
1:5:1795:A:N3	2:7:79:U:O2'	2.50	0.41
1:5:1855:G:C2	1:5:1856:C:C2	3.08	0.41
1:5:1869:G:C8	1:5:3877:A:C6	3.09	0.41
1:5:1887:G:C6	1:5:1890:G:N7	2.87	0.41
1:5:1989:G:N2	1:5:1990:A:C5	2.89	0.41
1:5:1992:U:O2	1:5:1992:U:C2'	2.68	0.41
1:5:2059:C:O2	1:5:2060:G:C8	2.74	0.41
1:5:2081:C:N3	1:5:2082:G:C5	2.89	0.41
1:5:2084:C:H6	1:5:2084:C:OP1	2.03	0.41
1:5:2086:G:C2	1:5:2087:C:C2	3.08	0.41
1:5:2115:G:N7	1:5:2116:C:H1'	2.36	0.41
1:5:2301:G:C4	1:5:2302:C:C6	3.08	0.41
1:5:2320:G:O2'	1:5:2321:G:OP2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2399:G:C2	1:5:2400:G:C5	3.09	0.41
1:5:2463:G:C2	1:5:2464:C:C2	3.09	0.41
1:5:2591:A:H62	1:5:2753:G:N2	2.19	0.41
1:5:2605:G:C4	1:5:2606:G:C8	3.09	0.41
1:5:2606:G:C4	1:5:2607:C:C6	3.08	0.41
1:5:2633:U:C4	1:5:2634:C:C5	3.08	0.41
1:5:2664:G:C2	1:5:2671:C:N3	2.89	0.41
1:5:2727:C:C2	1:5:2728:U:C5	3.09	0.41
1:5:2732:G:C2	1:5:2733:C:C2	3.09	0.41
1:5:2745:A:H2'	1:5:2746:A:C8	2.56	0.41
1:5:2752:G:H8	1:5:2752:G:H5''	1.85	0.41
1:5:2823:G:H2'	1:5:2824:C:O4'	2.20	0.41
1:5:3641:U:C5	1:5:3646:A:N7	2.89	0.41
1:5:3653:A:H8	1:5:3653:A:P	2.43	0.41
1:5:3705:G:C5	1:5:3706:C:C4	3.08	0.41
1:5:3736:A:O2'	1:5:3737:A:P	2.79	0.41
1:5:3759:A:O2'	49:S2:1826:G:C2'	2.68	0.41
1:5:3786:U:H6	1:5:3786:U:C5'	2.33	0.41
1:5:3804:G:N2	1:5:3805:U:H1'	2.35	0.41
1:5:3806:G:N1	1:5:3807:A:C5	2.89	0.41
1:5:3841:C:O2	1:5:3841:C:C2'	2.69	0.41
1:5:3882:C:C2	1:5:3883:U:C5	3.08	0.41
1:5:4100:C:N4	1:5:4101:C:H41	2.19	0.41
1:5:4171:C:H2'	1:5:4172:A:O4'	2.21	0.41
1:5:4233:A:OP1	44:o:97:LYS:HA	2.21	0.41
1:5:4258:C:N3	1:5:4259:C:C4	2.88	0.41
1:5:4369:A:C2	1:5:4370:G:N9	2.87	0.41
1:5:4399:U:N3	1:5:4400:G:C8	2.89	0.41
1:5:4425:G:C5	1:5:4426:C:C6	3.08	0.41
1:5:4433:G:C2	1:5:4434:C:C2	3.09	0.41
1:5:4455:G:N2	1:5:4456:C:N1	2.69	0.41
1:5:4459:U:H4'	5:B:265:SER:O	2.21	0.41
1:5:4547:C:H2'	1:5:4549:G:C8	2.55	0.41
1:5:4550:G:C5	1:5:4551:U:C5	3.07	0.41
1:5:4608:G:C2	1:5:4609:G:H1'	2.55	0.41
1:5:4661:G:C2	1:5:4662:C:C2	3.09	0.41
1:5:4735:G:N1	1:5:4736:C:C5	2.88	0.41
1:5:4737:G:C6	1:5:4738:C:C4	3.08	0.41
1:5:4745:G:C2'	1:5:4746:C:H5	2.32	0.41
1:5:4748:U:H2'	1:5:4749:C:O4'	2.21	0.41
1:5:4754:G:N1	1:5:4880:C:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4865:C:C2	1:5:4866:C:C6	3.09	0.41
1:5:4871:C:C5	22:S:176:PHE:CD2	3.08	0.41
1:5:4896:G:C2	1:5:4897:G:N9	2.88	0.41
1:5:4914:C:H2'	1:5:4915:G:O4'	2.21	0.41
1:5:4990:C:N3	5:B:113:GLU:OE2	2.54	0.41
1:5:5006:U:N1	1:5:5042:A:N7	2.69	0.41
1:5:5036:C:C2	1:5:5037:U:C5	3.09	0.41
1:5:5047:C:N1	1:5:5048:A:C6	2.89	0.41
1:5:5048:A:C8	33:d:34:HIS:NE2	2.85	0.41
1:5:5061:A:O4'	1:5:5062:G:H5''	2.20	0.41
2:7:8:G:P	7:D:33:ARG:NH2	2.94	0.41
2:7:16:A:C4	2:7:17:C:C6	3.09	0.41
2:7:119:U:C4	7:D:261:VAL:HG21	2.56	0.41
3:8:31:G:C2	3:8:32:C:C2	3.09	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
3:8:78:G:O2'	37:h:45:SER:HB3	2.20	0.41
3:8:117:C:C4	3:8:118:C:H5	2.36	0.41
3:8:120:G:N1	3:8:121:G:N7	2.69	0.41
4:A:104:VAL:HG12	4:A:146:THR:HG21	2.03	0.41
5:B:235:TRP:HA	5:B:235:TRP:HE3	1.85	0.41
6:C:156:ASP:OD1	6:C:254:GLU:HB3	2.20	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:153:HIS:CD2	8:E:183:ARG:NH1	2.88	0.41
9:F:58:HIS:O	9:F:60:HIS:N	2.53	0.41
10:G:53:ARG:HB3	10:G:54:PHE:CE2	2.55	0.41
10:G:102:TYR:HH	10:G:208:ASN:H	1.69	0.41
10:G:108:GLN:CA	10:G:108:GLN:NE2	2.83	0.41
10:G:108:GLN:O	10:G:112:GLN:NE2	2.54	0.41
11:H:95:VAL:HG22	42:m:82:LEU:CD2	2.45	0.41
14:K:39:PRO:HB2	14:K:40:LYS:H	1.44	0.41
14:K:59:THR:O	14:K:80:LEU:HD11	2.21	0.41
14:K:62:LEU:HD21	14:K:73:VAL:HG11	2.02	0.41
14:K:80:LEU:HD23	14:K:83:LYS:HD2	2.02	0.41
14:K:82:ILE:HA	14:K:85:LEU:HD12	2.03	0.41
14:K:88:PRO:CB	14:K:89:PRO:HB3	2.49	0.41
14:K:142:ASN:CB	14:K:148:PRO:HA	2.51	0.41
15:L:9:ILE:HG13	30:a:52:TYR:CE2	2.55	0.41
16:M:9:VAL:HG11	16:M:66:HIS:HA	2.02	0.41
16:M:86:TRP:NE1	16:M:92:ALA:HB2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:O:191:ARG:HA	18:O:194:GLU:HB3	2.03	0.41
19:P:31:GLU:OE2	19:P:60:PHE:HA	2.21	0.41
21:R:38:ARG:O	21:R:39:GLN:HB3	2.21	0.41
22:S:29:ARG:HH12	23:T:150:LEU:CA	2.34	0.41
23:T:9:ARG:HG3	23:T:10:GLY:N	2.28	0.41
24:U:27:HIS:CD2	24:U:27:HIS:C	2.99	0.41
31:b:13:SER:CA	31:b:16:TRP:CH2	2.95	0.41
33:d:116:ASN:ND2	33:d:116:ASN:C	2.78	0.41
37:h:73:TYR:HE2	37:h:80:PRO:HG3	1.85	0.41
37:h:88:THR:O	37:h:89:ARG:C	2.64	0.41
38:i:55:ARG:HA	38:i:58:MET:HG2	2.03	0.41
39:j:39:TYR:HB3	39:j:40:PRO:HD3	2.01	0.41
39:j:79:ARG:HG3	39:j:82:ILE:CG2	2.51	0.41
41:l:38:ASN:OD1	41:l:38:ASN:C	2.64	0.41
46:q:18:ILE:HG13	46:q:66:ARG:CG	2.48	0.41
46:q:63:LYS:HD3	46:q:78:LEU:CB	2.51	0.41
46:q:79:LEU:O	46:q:81:HIS:N	2.54	0.41
46:q:147:ILE:CD1	48:4:204:MET:HE2	2.46	0.41
47:r:30:ASN:OD1	47:r:30:ASN:N	2.52	0.41
48:4:265:TYR:N	48:4:265:TYR:HD1	2.17	0.41
48:4:324:ASP:OD1	48:4:324:ASP:N	2.54	0.41
48:4:533:MET:SD	48:4:533:MET:O	2.79	0.41
48:4:743:PRO:C	48:4:790:VAL:N	2.75	0.41
48:4:762:VAL:CB	48:4:800:LEU:HD13	2.50	0.41
48:4:825:PHE:CZ	48:4:849:PRO:CG	2.96	0.41
49:S2:18:C:O2	49:S2:18:C:H2'	2.19	0.41
49:S2:61:A:H5'	49:S2:61:A:C8	2.56	0.41
49:S2:99:A:N3	49:S2:100:U:C6	2.89	0.41
49:S2:164:A:H2'	49:S2:165:G:N3	2.36	0.41
49:S2:184:G:N1	49:S2:185:G:C5	2.89	0.41
49:S2:200:G:C4	49:S2:201:C:C6	3.09	0.41
49:S2:292:A:C2	61:SL:69:ARG:HB3	2.56	0.41
49:S2:343:A:C6	49:S2:344:U:C6	3.09	0.41
49:S2:381:C:N1	49:S2:382:C:N4	2.69	0.41
49:S2:386:C:N4	49:S2:387:C:N4	2.69	0.41
49:S2:441:C:OP2	58:SI:2:GLY:HA3	2.20	0.41
49:S2:456:C:H2'	49:S2:457:C:O4'	2.21	0.41
49:S2:478:G:H2'	49:S2:479:C:H6	1.86	0.41
49:S2:531:A:C2	49:S2:532:C:H1'	2.56	0.41
49:S2:534:G:C2	49:S2:535:G:C5	3.09	0.41
49:S2:597:G:N1	49:S2:640:A:C6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:610:G:N1	49:S2:611:G:C5	2.89	0.41
49:S2:665:G:C1'	49:S2:670:A:N3	2.84	0.41
49:S2:746:C:C4	49:S2:747:U:C5	3.08	0.41
49:S2:901:G:C2	49:S2:902:G:C4	3.09	0.41
49:S2:959:G:C8	64:SO:38:ASN:ND2	2.89	0.41
49:S2:975:G:C5'	64:SO:32:HIS:CD2	3.04	0.41
49:S2:989:C:C2	49:S2:1001:A:N6	2.88	0.41
49:S2:1040:G:C8	49:S2:1040:G:H5''	2.55	0.41
49:S2:1092:G:N1	49:S2:1093:A:N7	2.69	0.41
49:S2:1109:C:C2	49:S2:1110:G:C1'	2.98	0.41
49:S2:1124:C:N3	49:S2:1125:C:C6	2.81	0.41
49:S2:1231:C:C4	49:S2:1232:U:C4	3.09	0.41
49:S2:1265:A:O4'	49:S2:1326:U:O2'	2.38	0.41
49:S2:1278:A:C4	49:S2:1279:C:C5	3.09	0.41
49:S2:1278:A:C2'	49:S2:1279:C:H5'	2.51	0.41
49:S2:1281:G:C5	49:S2:1282:A:C8	3.08	0.41
49:S2:1302:G:N1	49:S2:1305:C:N4	2.69	0.41
49:S2:1332:A:C2	49:S2:1333:U:H1'	2.56	0.41
49:S2:1352:G:O4'	49:S2:1378:A:H2	2.04	0.41
49:S2:1395:C:C6	49:S2:1395:C:H5'	2.55	0.41
49:S2:1447:G:O2'	70:SU:33:GLU:OE2	2.30	0.41
49:S2:1474:A:C2'	49:S2:1475:G:O5'	2.69	0.41
49:S2:1495:G:N3	79:Sd:41:GLN:HB3	2.36	0.41
49:S2:1531:A:H2'	49:S2:1532:C:O4'	2.20	0.41
49:S2:1541:G:N2	49:S2:1593:C:H1'	2.35	0.41
49:S2:1551:U:O5'	49:S2:1552:G:OP2	2.38	0.41
49:S2:1649:U:H4'	66:SQ:138:ARG:CG	2.51	0.41
49:S2:1686:G:C4	49:S2:1687:C:C5	3.09	0.41
49:S2:1723:G:C2	49:S2:1724:A:C8	3.08	0.41
49:S2:1838:U:O5'	49:S2:1838:U:H6	2.04	0.41
49:S2:1840:U:O2	49:S2:1840:U:H2'	2.21	0.41
49:S2:1846:G:C6	49:S2:1847:G:C5	3.09	0.41
50:SA:111:GLN:HA	50:SA:116:PHE:CD2	2.55	0.41
51:SB:171:ILE:O	51:SB:175:GLU:OE2	2.38	0.41
52:SC:170:TRP:CH2	72:SW:97:ARG:CD	3.03	0.41
53:SD:51:LEU:HG	53:SD:91:VAL:HG22	2.03	0.41
53:SD:106:ARG:HG2	53:SD:175:VAL:HB	2.02	0.41
53:SD:225:GLU:OE2	53:SD:226:GLN:N	2.53	0.41
56:SG:5:ILE:O	56:SG:13:GLN:HA	2.21	0.41
57:SH:144:ILE:CG2	57:SH:152:ARG:HH12	2.34	0.41
57:SH:144:ILE:HG21	57:SH:152:ARG:HH12	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SJ:19:PRO:C	59:SJ:20:PHE:CD1	2.99	0.41
59:SJ:63:LEU:HD11	59:SJ:69:ARG:NH2	2.35	0.41
59:SJ:63:LEU:O	59:SJ:70:ARG:NH1	2.53	0.41
59:SJ:94:LEU:HD12	59:SJ:97:ILE:HD12	2.03	0.41
59:SJ:149:VAL:HG11	59:SJ:157:ILE:HD11	2.03	0.41
61:SL:117:PHE:CE2	61:SL:144:LYS:HA	2.56	0.41
63:SN:23:PRO:O	77:Sb:83:GLN:NE2	2.46	0.41
63:SN:62:GLN:O	63:SN:63:VAL:C	2.64	0.41
63:SN:114:ARG:O	63:SN:118:ILE:CG1	2.68	0.41
63:SN:132:LYS:HA	63:SN:132:LYS:HE2	2.03	0.41
66:SQ:47:LEU:HD22	66:SQ:81:ILE:HD13	2.02	0.41
66:SQ:102:GLU:OE2	66:SQ:102:GLU:N	2.53	0.41
67:SR:59:LYS:O	67:SR:63:ARG:HB2	2.21	0.41
68:SS:61:GLU:HA	68:SS:64:VAL:HG22	2.02	0.41
69:ST:11:GLN:CD	69:ST:11:GLN:O	2.63	0.41
69:ST:56:ARG:HD3	69:ST:79:TYR:CD2	2.54	0.41
71:SV:24:ILE:HD11	71:SV:56:CYS:HA	2.02	0.41
81:Sf:116:ARG:HE	81:Sf:131:PHE:HE2	1.69	0.41
82:Sg:119:GLN:HE22	82:Sg:131:LEU:HG	1.86	0.41
82:Sg:176:VAL:HG11	82:Sg:221:LEU:HD11	2.03	0.41
82:Sg:251:ALA:HB1	82:Sg:286:CYS:SG	2.60	0.41
1:5:209:U:O2	1:5:233:U:N3	2.54	0.41
1:5:272:U:O2	1:5:272:U:H2'	2.21	0.41
1:5:289:C:O2	1:5:290:U:C6	2.73	0.41
1:5:294:G:C2	30:a:61:TYR:CZ	3.07	0.41
1:5:324:A:C2'	1:5:325:U:H5'	2.51	0.41
1:5:431:G:C1'	1:5:3889:G:C2	3.03	0.41
1:5:454:U:H4'	1:5:455:C:C5'	2.51	0.41
1:5:511:C:H2'	1:5:512:U:H6	1.86	0.41
1:5:689:U:O2	1:5:690:C:C6	2.74	0.41
1:5:692:A:N3	1:5:693:C:C5	2.88	0.41
1:5:993:G:N3	1:5:994:G:C8	2.89	0.41
1:5:1253:G:N2	1:5:1256:G:C8	2.89	0.41
1:5:1257:A:C5	1:5:1258:G:C8	3.09	0.41
1:5:1275:G:C5	1:5:1276:C:C5	3.09	0.41
1:5:1308:C:C2	1:5:1309:C:C6	3.10	0.41
1:5:1384:C:O2	1:5:1505:C:H4'	2.21	0.41
1:5:1570:G:C4	1:5:1571:G:C8	3.09	0.41
1:5:1675:C:C2	1:5:1681:G:N2	2.89	0.41
1:5:1782:U:C2	1:5:1783:C:C5	3.09	0.41
1:5:1949:U:N3	1:5:1950:U:H5	2.15	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1979:A:C2	1:5:1982:G:N7	2.89	0.41
1:5:2282:A:H5''	30:a:21:ARG:CD	2.48	0.41
1:5:2314:G:N1	1:5:2326:G:C8	2.89	0.41
1:5:2330:G:C2'	1:5:2331:G:O4'	2.69	0.41
1:5:2477:A:N1	1:5:2478:C:C4	2.88	0.41
1:5:2560:C:O2	1:5:2560:C:H2'	2.20	0.41
1:5:2614:C:H1'	1:5:2726:G:N2	2.36	0.41
1:5:2714:G:N2	1:5:2715:G:C5	2.89	0.41
1:5:2724:G:N1	1:5:2726:G:C6	2.89	0.41
1:5:3656:A:C2	1:5:3657:U:C4	3.08	0.41
1:5:3683:C:H4'	1:5:3684:G:OP2	2.21	0.41
1:5:3703:G:C4	1:5:3704:U:C6	3.09	0.41
1:5:3724:A:C6	1:5:3725:G:C6	3.09	0.41
1:5:3747:A:O4'	1:5:3817:A:H2'	2.21	0.41
1:5:3774:A:O2'	1:5:3775:A:N3	2.44	0.41
1:5:3867:A:H2'	1:5:3868:G:C8	2.56	0.41
1:5:3874:G:C5	1:5:3875:G:C8	3.09	0.41
1:5:4097:G:C2	1:5:4098:A:N9	2.86	0.41
1:5:4100:C:N4	1:5:4101:C:N4	2.69	0.41
1:5:4123:C:H3'	1:5:4124:G:H8	1.84	0.41
1:5:4184:G:N2	1:5:4185:G:H1'	2.36	0.41
1:5:4313:A:C2	1:5:4314:C:N1	2.89	0.41
1:5:4372:U:O2	1:5:4377:G:H1'	2.20	0.41
1:5:4524:G:N3	1:5:4525:C:C6	2.89	0.41
1:5:4615:C:H5''	5:B:357:ARG:HD2	2.03	0.41
1:5:4741:C:O2	1:5:4741:C:H2'	2.19	0.41
1:5:4946:U:C4	1:5:4947:U:C5	3.09	0.41
1:5:4984:C:H2'	1:5:4985:U:C5'	2.51	0.41
2:7:34:C:H2'	2:7:34:C:O2	2.21	0.41
2:7:45:U:O3'	7:D:157:ASN:HB2	2.20	0.41
2:7:56:G:C2'	2:7:57:C:O4'	2.64	0.41
2:7:82:G:C2	2:7:95:C:N3	2.89	0.41
3:8:63:U:O2	3:8:63:U:C3'	2.69	0.41
3:8:147:G:C2	3:8:148:A:C8	3.09	0.41
6:C:71:ARG:HB3	6:C:71:ARG:CZ	2.51	0.41
6:C:142:HIS:HD2	6:C:249:PHE:HB3	1.85	0.41
8:E:174:PRO:O	8:E:175:LEU:C	2.64	0.41
9:F:100:ILE:N	9:F:101:ASN:OD1	2.53	0.41
10:G:136:LEU:HD21	10:G:204:PHE:HE1	1.82	0.41
11:H:34:LEU:HD21	11:H:150:ASP:OD1	2.21	0.41
11:H:55:LEU:HD22	11:H:77:VAL:HG11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:H:59:LYS:O	11:H:59:LYS:HE3	2.21	0.41
11:H:96:TYR:CE2	11:H:100:PRO:CA	2.99	0.41
14:K:73:VAL:HG12	14:K:74:VAL:N	2.35	0.41
14:K:97:ASN:OD1	14:K:98:ILE:HG13	2.21	0.41
15:L:145:LYS:HG3	15:L:146:LEU:N	2.36	0.41
15:L:179:PHE:CE1	15:L:183:ARG:HD3	2.56	0.41
17:N:61:ILE:HD12	17:N:131:GLU:OE2	2.20	0.41
17:N:135:ILE:CG2	17:N:142:ILE:HD13	2.50	0.41
19:P:94:MET:HE3	19:P:94:MET:HB2	1.97	0.41
22:S:28:TYR:CE2	22:S:52:LYS:HG3	2.56	0.41
26:W:21:TYR:HB2	26:W:31:PHE:CE2	2.56	0.41
27:X:142:PRO:C	27:X:144:TYR:H	2.29	0.41
36:g:49:CYS:SG	36:g:86:CYS:SG	3.19	0.41
41:l:44:TRP:HZ3	41:l:45:ARG:HD3	1.87	0.41
43:n:4:LYS:HE2	49:S2:1844:U:O4	2.21	0.41
46:q:82:ILE:O	46:q:83:ARG:HG2	2.19	0.41
46:q:123:VAL:CG2	46:q:160:LEU:HD11	2.49	0.41
46:q:147:ILE:CG1	48:4:204:MET:CE	2.97	0.41
48:4:73:THR:HG22	48:4:104:ASP:OD2	2.20	0.41
48:4:105:SER:HA	48:4:106:PRO:HD3	1.83	0.41
48:4:153:PRO:C	48:4:205:ILE:HD12	2.45	0.41
48:4:420:LEU:HB2	48:4:464:VAL:C	2.46	0.41
48:4:507:VAL:CG1	48:4:554:LEU:CD2	2.99	0.41
48:4:823:ASP:O	48:4:824:PRO:C	2.63	0.41
48:4:845:LYS:HZ1	48:4:846:GLU:CG	2.17	0.41
49:S2:9:U:C6	49:S2:9:U:H3'	2.56	0.41
49:S2:85:A:O2'	49:S2:149:A:H1'	2.21	0.41
49:S2:155:G:C6	49:S2:156:G:C8	3.09	0.41
49:S2:217:A:H1'	49:S2:309:G:N2	2.36	0.41
49:S2:316:G:C2	49:S2:317:C:N3	2.89	0.41
49:S2:338:G:N1	49:S2:339:A:C5	2.89	0.41
49:S2:431:G:C6	49:S2:432:G:C5	3.09	0.41
49:S2:448:A:C8	58:SI:26:LYS:HA	2.56	0.41
49:S2:476:A:C5	49:S2:477:G:C8	3.08	0.41
49:S2:533:A:N1	49:S2:534:G:C5	2.89	0.41
49:S2:569:A:C2	49:S2:570:C:C6	3.09	0.41
49:S2:592:C:O2	49:S2:592:C:O4'	2.39	0.41
49:S2:834:C:H3'	49:S2:835:C:C4'	2.51	0.41
49:S2:1053:C:H2'	49:S2:1054:G:H5'	2.03	0.41
49:S2:1290:G:N2	81:Sf:142:GLY:O	2.54	0.41
49:S2:1302:G:C5	81:Sf:140:TYR:CD2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1449:G:C2	49:S2:1450:G:N9	2.89	0.41
49:S2:1466:G:C2	49:S2:1467:C:C2	3.09	0.41
49:S2:1524:G:N2	49:S2:1525:C:C2	2.89	0.41
49:S2:1545:A:C6	49:S2:1588:A:C5	3.08	0.41
49:S2:1571:G:H2'	49:S2:1572:C:O4'	2.21	0.41
49:S2:1578:U:H6	53:SD:6:SER:HA	1.79	0.41
49:S2:1628:C:H2'	49:S2:1629:C:O4'	2.21	0.41
49:S2:1709:G:C4	49:S2:1710:C:C6	3.09	0.41
53:SD:157:MET:CG	53:SD:159:HIS:CE1	3.01	0.41
57:SH:83:LEU:HD12	57:SH:84:GLU:N	2.36	0.41
64:SO:64:ALA:HB3	64:SO:67:ASP:OD1	2.21	0.41
64:SO:150:ARG:HH21	64:SO:150:ARG:CG	2.30	0.41
65:SP:21:ASP:OD1	65:SP:21:ASP:N	2.54	0.41
67:SR:37:GLU:CG	82:Sg:150:TRP:HE1	2.33	0.41
68:SS:27:ALA:HA	68:SS:41:ALA:HB1	2.02	0.41
73:SX:103:ALA:HB2	73:SX:123:VAL:HG21	2.02	0.41
76:Sa:91:ALA:O	76:Sa:92:ARG:C	2.64	0.41
80:Se:40:ARG:HE	80:Se:40:ARG:HB2	1.76	0.41
82:Sg:32:LEU:HB2	82:Sg:71:ILE:HD11	2.03	0.41
82:Sg:251:ALA:HB1	82:Sg:286:CYS:O	2.21	0.41
1:5:147:A:H2'	1:5:148:C:C5'	2.51	0.40
1:5:189:G:N2	1:5:190:G:C8	2.90	0.40
1:5:190:G:N2	1:5:252:C:H1'	2.36	0.40
1:5:225:G:N3	1:5:243:A:C2	2.89	0.40
1:5:231:U:O2'	28:Y:100:HIS:HD2	2.04	0.40
1:5:349:A:H2'	1:5:349:A:O5'	2.21	0.40
1:5:496:G:N1	1:5:658:C:N3	2.69	0.40
1:5:715:G:N2	1:5:954:C:C2	2.89	0.40
1:5:1212:G:N2	1:5:1213:G:C4	2.89	0.40
1:5:1388:A:C6	1:5:1389:U:C2	3.09	0.40
1:5:1634:A:N1	1:5:1635:C:C5	2.88	0.40
1:5:1697:G:H8	9:F:165:ASN:HA	1.86	0.40
1:5:1817:U:C2'	1:5:1818:G:O5'	2.69	0.40
1:5:1995:G:H4'	14:K:128:THR:HB	2.02	0.40
1:5:2027:U:H2'	1:5:2028:C:O4'	2.20	0.40
1:5:2046:G:N9	18:O:60:LYS:HD3	2.36	0.40
1:5:2065:G:O2'	35:f:80:ASN:ND2	2.54	0.40
1:5:2264:C:HO2'	1:5:2265:G:H2'	1.82	0.40
1:5:2447:U:HO2'	1:5:2448:G:P	2.44	0.40
1:5:2470:C:C3'	1:5:2470:C:C6	3.04	0.40
1:5:2498:C:N3	1:5:2499:C:C6	2.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2549:G:C6	1:5:2550:G:C5	3.09	0.40
1:5:2618:G:C6	1:5:2619:G:N7	2.88	0.40
1:5:2664:G:C6	1:5:2665:U:C2	3.09	0.40
1:5:2688:G:C2	1:5:2689:C:C4	3.08	0.40
1:5:2791:C:O2	1:5:2792:C:C6	2.74	0.40
1:5:2830:G:C2	1:5:2831:G:C5	3.09	0.40
1:5:2838:G:C8	1:5:2838:G:H5''	2.56	0.40
1:5:2907:G:C2	1:5:3588:C:C2	3.10	0.40
1:5:3740:G:C2	1:5:3741:C:O4'	2.74	0.40
1:5:3883:U:O2'	1:5:3884:U:C5'	2.70	0.40
1:5:4125:C:C5	4:A:69:PHE:CD2	3.09	0.40
1:5:4269:G:C2	1:5:4270:C:C1'	3.04	0.40
1:5:4361:U:N3	1:5:4362:A:N7	2.68	0.40
1:5:4546:A:N7	4:A:215:ASN:ND2	2.69	0.40
1:5:4552:U:O2	1:5:4553:A:C8	2.74	0.40
1:5:4665:A:C6	1:5:4666:G:C5	3.09	0.40
1:5:4742:G:H2'	1:5:4742:G:N3	2.35	0.40
1:5:4897:G:C2	1:5:4924:C:C2	3.09	0.40
1:5:4905:C:C4	1:5:4906:C:C5	3.09	0.40
1:5:4997:G:N1	1:5:4998:G:C4	2.89	0.40
1:5:5021:C:C4	1:5:5022:U:C5	3.09	0.40
2:7:69:U:O2	2:7:70:G:C8	2.74	0.40
3:8:42:G:N2	3:8:43:A:H1'	2.36	0.40
3:8:62:A:OP1	37:h:52:LYS:NZ	2.42	0.40
3:8:70:G:C2	3:8:87:G:N2	2.89	0.40
3:8:75:G:C2	3:8:76:C:C2	3.09	0.40
3:8:94:G:C8	3:8:94:G:C4'	3.03	0.40
3:8:97:A:C6	3:8:98:C:C4	3.09	0.40
4:A:225:ILE:HD12	4:A:233:ARG:CZ	2.50	0.40
5:B:195:ASP:O	5:B:196:TRP:HB2	2.21	0.40
6:C:288:ASP:OD2	6:C:291:ARG:HB3	2.21	0.40
6:C:339:THR:HA	6:C:342:ARG:HB3	2.03	0.40
9:F:83:PHE:CD2	22:S:62:VAL:HG11	2.56	0.40
9:F:239:GLU:C	9:F:241:GLN:N	2.78	0.40
10:G:32:PHE:CD2	29:Z:55:ALA:HB2	2.56	0.40
10:G:32:PHE:N	10:G:32:PHE:CD1	2.89	0.40
12:I:148:VAL:O	12:I:149:ILE:C	2.64	0.40
14:K:56:LEU:O	14:K:91:ASP:OD1	2.39	0.40
14:K:92:ARG:CG	14:K:95:GLN:OE1	2.68	0.40
19:P:128:ARG:NH1	19:P:136:ILE:HG21	2.36	0.40
21:R:8:LYS:HG3	21:R:22:VAL:CG1	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:R:74:ARG:O	21:R:75:HIS:HB2	2.21	0.40
33:d:25:TYR:HB3	33:d:52:PHE:HE2	1.85	0.40
33:d:63:ARG:CD	33:d:103:TYR:CE1	3.04	0.40
36:g:3:GLN:HE22	36:g:30:ILE:HB	1.85	0.40
38:i:85:ARG:HH11	38:i:85:ARG:CG	2.34	0.40
44:o:45:GLN:NE2	44:o:45:GLN:CA	2.81	0.40
48:4:470:VAL:CG2	48:4:471:GLY:N	2.82	0.40
48:4:578:SER:O	48:4:579:TYR:CG	2.74	0.40
48:4:605:LYS:HD2	48:4:705:HIS:NE2	2.36	0.40
48:4:745:TYR:CB	48:4:813:VAL:O	2.66	0.40
48:4:845:LYS:HZ1	48:4:845:LYS:C	2.26	0.40
49:S2:14:C:C2	49:S2:1198:G:C2	3.09	0.40
49:S2:62:G:C1'	49:S2:172:U:O2	2.66	0.40
49:S2:92:A:C2	49:S2:447:A:C2	3.09	0.40
49:S2:113:G:N2	49:S2:293:C:C2	2.89	0.40
49:S2:381:C:O2'	49:S2:382:C:C6	2.67	0.40
49:S2:390:C:C2	49:S2:391:C:C6	3.09	0.40
49:S2:536:A:N6	49:S2:547:G:H21	2.19	0.40
49:S2:598:G:N1	49:S2:639:C:C4	2.89	0.40
49:S2:673:G:C2	49:S2:674:C:C2	3.08	0.40
49:S2:689:U:H2'	49:S2:690:G:O4'	2.21	0.40
49:S2:832:G:C2	49:S2:833:C:C2	3.08	0.40
49:S2:855:G:C5	49:S2:856:C:C5	3.09	0.40
49:S2:949:G:H2'	49:S2:950:C:O4'	2.20	0.40
49:S2:975:G:C6	49:S2:976:G:C5	3.09	0.40
49:S2:1085:C:N4	49:S2:1087:A:H1'	2.34	0.40
49:S2:1291:A:H2'	81:Sf:149:CYS:HB3	2.03	0.40
49:S2:1333:U:O2	49:S2:1333:U:H2'	2.20	0.40
49:S2:1373:C:H4'	67:SR:10:LYS:CE	2.51	0.40
49:S2:1378:A:N6	50:SA:106:GLY:N	2.69	0.40
49:S2:1544:C:O2	66:SQ:76:GLY:HA2	2.21	0.40
49:S2:1545:A:C2	49:S2:1546:G:N1	2.89	0.40
49:S2:1563:G:C2	49:S2:1564:C:C6	3.10	0.40
49:S2:1621:U:O2'	49:S2:1622:U:H2'	2.21	0.40
49:S2:1668:U:H4'	70:SU:77:TRP:CZ3	2.56	0.40
49:S2:1700:C:C2	49:S2:1834:A:N6	2.89	0.40
49:S2:1757:G:N3	49:S2:1757:G:H2'	2.37	0.40
49:S2:1839:U:H2'	49:S2:1840:U:H6	1.85	0.40
51:SB:137:LEU:HD11	51:SB:176:VAL:HG21	2.02	0.40
52:SC:65:LYS:HB2	52:SC:273:LEU:HD22	2.02	0.40
53:SD:19:ALA:HB1	79:Sd:46:TYR:HD2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SG:156:TYR:CD1	56:SG:156:TYR:N	2.89	0.40
57:SH:122:LEU:HD13	57:SH:126:HIS:CD2	2.56	0.40
57:SH:148:LEU:HD23	57:SH:148:LEU:O	2.21	0.40
63:SN:87:ASP:OD2	63:SN:125:LEU:HD11	2.22	0.40
65:SP:51:ARG:C	65:SP:53:GLN:OE1	2.64	0.40
65:SP:60:LEU:HD13	65:SP:89:MET:HG2	2.04	0.40
68:SS:117:ILE:O	68:SS:119:ALA:N	2.55	0.40
68:SS:120:HIS:CD2	68:SS:120:HIS:C	2.99	0.40
75:SZ:63:PRO:HA	75:SZ:112:ASN:OD1	2.21	0.40
78:Sc:13:ARG:NH1	78:Sc:33:GLU:HB3	2.35	0.40
81:Sf:116:ARG:HH21	81:Sf:131:PHE:HD2	1.68	0.40
82:Sg:83:TRP:HH2	82:Sg:125:ARG:HH12	1.69	0.40
1:5:98:A:N7	1:5:99:A:C8	2.90	0.40
1:5:138:G:H3'	1:5:139:G:H5'	2.02	0.40
1:5:468:U:O2'	1:5:469:C:H4'	2.21	0.40
1:5:471:A:N1	1:5:472:C:N1	2.69	0.40
1:5:938:C:C2	1:5:939:G:C8	3.10	0.40
1:5:963:G:O3'	47:r:107:ARG:NH2	2.54	0.40
1:5:1072:C:O2	1:5:1072:C:H2'	2.21	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
1:5:1219:G:C2	1:5:1220:G:C4	3.09	0.40
1:5:1377:G:C8	1:5:1378:C:C5'	3.04	0.40
1:5:1380:G:H1'	1:5:1381:U:H3	1.87	0.40
1:5:1475:G:N2	1:5:1489:G:N1	2.59	0.40
1:5:1494:U:O2	1:5:1495:G:C8	2.73	0.40
1:5:1529:G:C2'	39:j:47:TYR:OH	2.70	0.40
1:5:1601:A:C5	1:5:3643:A:O4'	2.74	0.40
1:5:1619:G:C2'	1:5:1620:U:O5'	2.69	0.40
1:5:1638:A:H5'	39:j:8:PHE:HE1	1.85	0.40
1:5:1886:G:C6	1:5:1887:G:C8	3.09	0.40
1:5:1899:G:C4	1:5:1900:C:H5	2.34	0.40
1:5:1995:G:C6	1:5:1996:C:N4	2.89	0.40
1:5:2008:U:H1'	1:5:2011:C:H5	1.86	0.40
1:5:2034:G:H1'	22:S:116:ARG:O	2.21	0.40
1:5:2290:C:C4	1:5:2291:G:N7	2.90	0.40
1:5:2326:G:C2	1:5:2327:G:C4	3.10	0.40
1:5:2327:G:N2	1:5:2328:G:C8	2.88	0.40
1:5:2513:A:N6	36:g:13:TYR:CE2	2.74	0.40
1:5:2559:G:C4	1:5:2560:C:C6	3.09	0.40
1:5:2583:C:N4	36:g:75:SER:OG	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:2843:U:N3	1:5:2844:A:C5	2.89	0.40
1:5:3636:C:N4	1:5:3637:U:C5	2.88	0.40
1:5:3738:G:C8	1:5:3738:G:C3'	3.04	0.40
1:5:3772:U:C2	1:5:3773:U:C5	3.10	0.40
1:5:3848:U:O2	1:5:3849:A:C8	2.74	0.40
1:5:3858:C:N3	1:5:3859:G:N9	2.69	0.40
1:5:3894:A:C4'	1:5:4979:A:N1	2.84	0.40
1:5:4096:C:N4	1:5:4097:G:N9	2.70	0.40
1:5:4101:C:C2	1:5:4102:C:C6	3.09	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
1:5:4381:A:C6	1:5:4382:G:N7	2.89	0.40
1:5:4518:A:OP2	5:B:258:HIS:HB2	2.21	0.40
1:5:4534:G:C2	1:5:4535:A:H1'	2.57	0.40
1:5:4628:U:C2	1:5:4629:U:H5	2.36	0.40
1:5:4683:U:C2'	1:5:4684:A:O5'	2.70	0.40
1:5:4737:G:H5'	1:5:4737:G:C8	2.55	0.40
1:5:4752:U:C2	1:5:4948:C:N3	2.90	0.40
1:5:4933:C:OP1	1:5:4933:C:H4'	2.21	0.40
1:5:4981:G:H1'	19:P:69:ARG:HH11	1.85	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
2:7:110:G:C5	2:7:111:C:C5	3.09	0.40
3:8:123:U:O2	3:8:125:C:O2	2.38	0.40
4:A:209:HIS:CD2	4:A:210:PRO:HD2	2.57	0.40
5:B:393:LYS:O	5:B:395:ASP:N	2.53	0.40
6:C:130:ALA:HB3	6:C:246:VAL:CG1	2.51	0.40
7:D:99:TYR:O	7:D:100:CYS:C	2.65	0.40
7:D:278:ASP:O	7:D:279:ARG:C	2.64	0.40
11:H:31:ARG:NE	11:H:87:GLY:HA3	2.35	0.40
12:I:106:ALA:HB1	12:I:109:ASP:HA	2.03	0.40
13:J:165:TRP:CH2	13:J:169:LYS:HG2	2.56	0.40
14:K:79:ALA:C	14:K:83:LYS:HG3	2.21	0.40
15:L:58:VAL:C	15:L:59:VAL:HG23	2.46	0.40
17:N:6:TYR:CE1	38:i:40:VAL:HG13	2.56	0.40
23:T:19:PHE:O	23:T:21:LYS:HG3	2.20	0.40
23:T:43:LYS:CG	23:T:58:HIS:HE1	2.35	0.40
25:V:48:ARG:HD2	25:V:51:ARG:HH22	1.86	0.40
30:a:9:ARG:NE	30:a:9:ARG:HA	2.37	0.40
33:d:71:ALA:HB3	33:d:108:TYR:CE2	2.55	0.40
34:e:74:PHE:HB3	34:e:95:TYR:HA	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:h:8:ASP:OD1	37:h:8:ASP:N	2.52	0.40
38:i:3:LEU:HD12	38:i:5:TYR:CZ	2.56	0.40
46:q:77:LYS:HZ2	46:q:198:ILE:HD13	1.81	0.40
48:4:72:SER:C	48:4:104:ASP:CG	2.87	0.40
48:4:568:ILE:HG23	48:4:569:PRO:HD2	2.04	0.40
48:4:650:TRP:CZ3	48:4:679:VAL:HG11	2.57	0.40
48:4:692:LEU:CD2	48:4:692:LEU:N	2.84	0.40
49:S2:39:A:H2'	49:S2:39:A:N3	2.36	0.40
49:S2:143:U:H1'	49:S2:144:U:C5	2.56	0.40
49:S2:143:U:H1'	49:S2:144:U:H5	1.86	0.40
49:S2:161:U:C6	74:SY:116:LYS:HA	2.56	0.40
49:S2:188:C:C4	49:S2:189:U:C5	3.09	0.40
49:S2:309:G:N2	49:S2:310:C:N1	2.69	0.40
49:S2:849:A:C2'	49:S2:850:C:O5'	2.69	0.40
49:S2:855:G:C6	49:S2:856:C:C5	3.10	0.40
49:S2:878:G:O6	49:S2:908:A:N1	2.54	0.40
49:S2:936:G:C5	49:S2:937:C:C5	3.10	0.40
49:S2:954:U:N3	49:S2:971:G:N2	2.69	0.40
49:S2:957:A:C2	49:S2:967:C:C2	3.08	0.40
49:S2:991:G:C6	76:Sa:95:ARG:NH2	2.90	0.40
49:S2:999:G:N2	49:S2:1000:C:C1'	2.85	0.40
49:S2:1063:C:C2'	49:S2:1838:U:C4	3.04	0.40
49:S2:1285:G:H3'	49:S2:1286:G:H5'	2.03	0.40
49:S2:1292:C:C2	81:Sf:150:PHE:CG	3.09	0.40
49:S2:1304:U:O2	49:S2:1304:U:C2'	2.69	0.40
49:S2:1324:G:C2'	49:S2:1510:G:HO2'	2.20	0.40
49:S2:1383:A:N1	49:S2:1384:C:C4	2.89	0.40
49:S2:1745:A:C4	49:S2:1790:A:C2	3.10	0.40
49:S2:1757:G:C2	49:S2:1758:G:N7	2.89	0.40
49:S2:1840:U:C4	49:S2:1841:C:H5	2.36	0.40
51:SB:136:ARG:NH2	51:SB:218:LEU:HD11	2.35	0.40
53:SD:213:PRO:O	53:SD:215:ASP:N	2.54	0.40
54:SE:67:GLN:HG2	54:SE:69:PHE:CE2	2.56	0.40
55:SF:98:GLU:O	55:SF:102:LEU:HG	2.22	0.40
55:SF:188:TYR:CD2	55:SF:188:TYR:C	3.00	0.40
57:SH:16:PRO:O	57:SH:17:ASP:C	2.64	0.40
59:SJ:108:ARG:HA	59:SJ:108:ARG:HE	1.85	0.40
74:SY:56:PHE:HE1	74:SY:94:HIS:CE1	2.39	0.40
77:Sb:33:MET:HB2	77:Sb:79:PHE:HB2	2.03	0.40
79:Sd:24:CYS:SG	79:Sd:26:ASN:OD1	2.80	0.40
82:Sg:4:GLN:HG3	82:Sg:268:ASP:OD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:Sg:101:PHE:CD2	82:Sg:136:GLY:HA2	2.57	0.40
82:Sg:170:TRP:CD1	82:Sg:194:TYR:HB2	2.56	0.40
82:Sg:194:TYR:CE1	82:Sg:212:LYS:HB2	2.57	0.40
1:5:12:A:C6	1:5:14:C:N4	2.89	0.40
1:5:167:C:N1	1:5:269:G:N2	2.69	0.40
1:5:209:U:N3	1:5:211:G:C8	2.88	0.40
1:5:226:G:C4	1:5:236:G:C8	3.09	0.40
1:5:248:C:N3	1:5:249:C:C5	2.89	0.40
1:5:410:A:N3	1:5:410:A:H2'	2.36	0.40
1:5:731:G:N1	1:5:732:A:H1'	2.36	0.40
1:5:925:C:C4	1:5:926:G:N7	2.89	0.40
1:5:931:C:C5	1:5:932:A:N7	2.89	0.40
1:5:979:C:C6	1:5:979:C:OP2	2.74	0.40
1:5:988:C:C4	1:5:989:U:C4	3.09	0.40
1:5:1337:A:C2	1:5:1658:G:N3	2.87	0.40
1:5:1408:G:C2'	1:5:1411:C:H41	2.35	0.40
1:5:1617:G:N3	1:5:1618:G:C8	2.90	0.40
1:5:1627:G:C2	1:5:1628:C:H1'	2.56	0.40
1:5:1681:G:H21	30:a:40:HIS:HB2	1.86	0.40
1:5:1742:A:H2	1:5:1743:A:N7	2.18	0.40
1:5:1764:G:C5	1:5:1766:A:OP2	2.73	0.40
1:5:1811:G:C6	1:5:1812:C:C5	3.09	0.40
1:5:1843:A:N1	1:5:1844:G:N7	2.70	0.40
1:5:1949:U:O2	1:5:1949:U:C2'	2.69	0.40
1:5:1994:C:C4	1:5:1995:G:N7	2.89	0.40
1:5:2076:G:C4	1:5:2077:C:C6	3.10	0.40
1:5:2101:C:N3	1:5:2102:G:N7	2.70	0.40
1:5:2384:U:H2'	1:5:2385:U:C6	2.57	0.40
1:5:2408:U:O4'	1:5:2409:U:C4	2.74	0.40
1:5:2515:G:C5	1:5:2516:G:N7	2.89	0.40
1:5:2590:G:H2'	1:5:2755:A:N6	2.36	0.40
1:5:2833:A:C2'	1:5:2834:C:O5'	2.69	0.40
1:5:3621:A:H3'	1:5:3622:C:C6	2.57	0.40
1:5:3751:G:N2	1:5:3775:A:H8	2.17	0.40
1:5:3930:U:N3	1:5:3931:C:C5	2.90	0.40
1:5:4074:C:O2'	1:5:4075:U:C5'	2.69	0.40
1:5:4079:C:O2	1:5:4080:C:C6	2.75	0.40
1:5:4166:G:C6	1:5:4167:G:C5	3.09	0.40
1:5:4278:C:O2	1:5:4278:C:H2'	2.21	0.40
1:5:4489:G:N3	1:5:4490:C:C6	2.89	0.40
1:5:4586:G:H8	1:5:4586:G:H5''	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4608:G:C4	1:5:4609:G:C8	3.09	0.40
1:5:4901:G:N1	1:5:4921:C:C4	2.90	0.40
1:5:4959:U:O2	1:5:4959:U:H2'	2.21	0.40
2:7:11:A:N6	7:D:16:TYR:O	2.49	0.40
2:7:18:C:H42	2:7:19:C:H41	1.69	0.40
3:8:70:G:C6	3:8:87:G:C6	3.09	0.40
3:8:106:G:C4	3:8:107:C:C5	3.09	0.40
5:B:175:GLN:NE2	5:B:179:HIS:HE1	2.14	0.40
6:C:85:HIS:CD2	6:C:85:HIS:N	2.89	0.40
6:C:92:PHE:C	6:C:100:ARG:NH1	2.80	0.40
10:G:164:ILE:O	10:G:168:VAL:HG23	2.21	0.40
17:N:150:TRP:C	17:N:150:TRP:CE3	2.99	0.40
22:S:62:VAL:HG13	23:T:141:VAL:HG21	2.03	0.40
25:V:38:TYR:CB	25:V:66:LYS:HD3	2.51	0.40
30:a:113:GLY:N	30:a:133:ALA:HB2	2.37	0.40
43:n:3:ALA:HB3	49:S2:1842:C:OP1	2.22	0.40
45:p:14:TYR:N	45:p:14:TYR:HD1	2.19	0.40
45:p:26:VAL:O	45:p:27:LYS:C	2.63	0.40
46:q:82:ILE:O	46:q:83:ARG:CG	2.70	0.40
48:4:42:LYS:HA	48:4:42:LYS:HD2	1.79	0.40
48:4:160:MET:HE1	48:4:178:PHE:HE2	1.78	0.40
48:4:267:ASP:OD1	48:4:268:PRO:HD2	2.22	0.40
48:4:279:SER:OG	48:4:280:PRO:HD2	2.22	0.40
48:4:431:GLY:H	48:4:441:ASP:HB3	1.86	0.40
48:4:745:TYR:CD2	48:4:813:VAL:O	2.70	0.40
48:4:752:PRO:HB3	48:4:780:PRO:CA	2.48	0.40
49:S2:29:G:N3	49:S2:30:C:C6	2.90	0.40
49:S2:81:U:C5	49:S2:82:G:C8	3.08	0.40
49:S2:217:A:H1'	49:S2:309:G:N1	2.36	0.40
49:S2:223:C:C2	49:S2:224:A:N7	2.89	0.40
49:S2:299:A:C5	49:S2:300:U:C5	3.09	0.40
49:S2:377:G:C4	49:S2:378:U:C5	3.09	0.40
49:S2:421:G:H2'	49:S2:422:U:C6	2.57	0.40
49:S2:427:U:O2	49:S2:427:U:H2'	2.21	0.40
49:S2:429:C:C2	49:S2:430:C:C6	3.09	0.40
49:S2:461:U:H2'	49:S2:462:C:H6	1.87	0.40
49:S2:534:G:N3	49:S2:535:G:C8	2.89	0.40
49:S2:555:A:C2	49:S2:557:U:C4	3.10	0.40
49:S2:598:G:C2	49:S2:639:C:C2	3.07	0.40
49:S2:793:G:C2	49:S2:794:A:C1'	3.05	0.40
49:S2:827:A:C4	49:S2:828:G:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1004:U:C2	49:S2:1005:G:N7	2.90	0.40
49:S2:1032:C:N4	49:S2:1033:G:C6	2.89	0.40
49:S2:1123:C:C2'	51:SB:148:ASN:ND2	2.81	0.40
49:S2:1231:C:C3'	49:S2:1232:U:H6	2.35	0.40
49:S2:1234:C:N3	49:S2:1235:G:C8	2.89	0.40
49:S2:1310:U:OP1	62:SM:40:LYS:HG2	2.20	0.40
49:S2:1431:G:C2	49:S2:1432:U:C6	3.09	0.40
49:S2:1435:C:C4	49:S2:1436:C:C4	3.10	0.40
49:S2:1447:G:C6	49:S2:1448:A:C5	3.09	0.40
49:S2:1526:G:H2'	49:S2:1527:C:O4'	2.21	0.40
49:S2:1553:C:H5'	49:S2:1556:A:N6	2.37	0.40
49:S2:1584:G:C4	49:S2:1586:U:O4'	2.74	0.40
49:S2:1588:A:C2	49:S2:1589:A:N1	2.90	0.40
56:SG:110:ASN:N	56:SG:110:ASN:HD22	2.19	0.40
58:SI:74:ARG:HB3	58:SI:108:PRO:HB2	2.02	0.40
60:SK:39:ASN:N	60:SK:39:ASN:HD22	2.19	0.40
61:SL:2:ALA:O	61:SL:3:ASP:CB	2.70	0.40
64:SO:146:ARG:O	76:Sa:28:ARG:HA	2.21	0.40
66:SQ:109:LYS:CG	66:SQ:113:ILE:HD12	2.52	0.40
72:SW:53:ILE:HD13	77:Sb:24:LEU:HG	2.04	0.40
74:SY:86:GLU:CG	74:SY:86:GLU:OE2	2.68	0.40
81:Sf:135:HIS:HD1	81:Sf:138:ARG:HB2	1.86	0.40
82:Sg:85:GLY:HA2	82:Sg:108:VAL:HG23	2.03	0.40
82:Sg:251:ALA:HB2	82:Sg:289:LEU:HD22	2.03	0.40
1:5:101:A:N1	1:5:102:G:C8	2.90	0.40
1:5:133:C:O2	1:5:133:C:C2'	2.69	0.40
1:5:294:G:H5''	44:o:43:ARG:HH12	1.86	0.40
1:5:297:U:H2'	1:5:298:G:O4'	2.21	0.40
1:5:487:G:C2	1:5:488:G:C4	3.09	0.40
1:5:504:G:N3	1:5:505:G:C8	2.90	0.40
1:5:642:G:C2	1:5:643:C:C2	3.09	0.40
1:5:753:C:C4	1:5:754:U:H5	2.33	0.40
1:5:986:C:N3	1:5:987:C:C5	2.90	0.40
1:5:1205:G:N3	1:5:1206:C:C6	2.89	0.40
1:5:1243:C:O2'	1:5:1244:G:C8	2.66	0.40
1:5:1258:G:N2	1:5:1259:G:C4	2.90	0.40
1:5:1310:C:O2	1:5:1310:C:C2'	2.69	0.40
1:5:1320:U:H1'	1:5:1856:C:O4'	2.22	0.40
1:5:1327:C:H2'	1:5:1328:G:C8	2.56	0.40
1:5:1349:G:N3	1:5:1350:C:C6	2.90	0.40
1:5:1358:G:H3'	1:5:1358:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:1397:A:H2	1:5:1498:G:N3	2.18	0.40
1:5:1400:G:C2	1:5:1418:C:O2	2.74	0.40
1:5:1453:G:N1	1:5:1454:G:C5	2.89	0.40
1:5:1645:C:H2'	1:5:1646:A:H8	1.85	0.40
1:5:1811:G:N3	1:5:1812:C:C5	2.89	0.40
1:5:1867:A:O2'	1:5:1868:A:C5'	2.69	0.40
1:5:1870:C:C4	1:5:1871:A:N7	2.89	0.40
1:5:1941:A:C2'	1:5:1942:A:O5'	2.70	0.40
1:5:1983:A:H62	1:5:1987:C:H5'	1.86	0.40
1:5:2045:G:O6	1:5:3870:C:O2'	2.39	0.40
1:5:2108:G:H2'	1:5:2109:G:C4'	2.49	0.40
1:5:2244:C:N3	1:5:2245:G:N7	2.70	0.40
1:5:2396:A:N3	1:5:2396:A:O4'	2.54	0.40
1:5:2453:A:C5	1:5:2507:A:C8	3.09	0.40
1:5:2483:G:N1	1:5:2484:A:C5	2.89	0.40
1:5:2634:C:O2	1:5:2635:U:C6	2.74	0.40
1:5:2677:G:N3	1:5:2677:G:H2'	2.36	0.40
1:5:2830:G:N1	1:5:2831:G:C5	2.89	0.40
1:5:3639:U:H2'	1:5:3640:U:O4'	2.22	0.40
1:5:3644:U:H2'	1:5:3645:U:H5'	2.03	0.40
1:5:3682:A:C2	4:A:152:SER:HB3	2.57	0.40
1:5:3683:C:O3'	4:A:174:ARG:NH2	2.55	0.40
1:5:3699:C:O2	1:5:3699:C:H2'	2.20	0.40
1:5:3801:U:O2'	1:5:3802:U:O5'	2.38	0.40
1:5:3879:G:N1	1:5:3882:C:C5	2.86	0.40
1:5:3945:A:C2	1:5:3946:G:N7	2.90	0.40
1:5:4099:G:N3	1:5:4100:C:C6	2.89	0.40
1:5:4139:G:C5	1:5:4140:C:C5	3.09	0.40
1:5:4198:G:N3	1:5:4198:G:H2'	2.37	0.40
1:5:4212:A:N6	1:5:4218:U:H2'	2.36	0.40
1:5:4237:C:O2'	1:5:4326:G:N2	2.53	0.40
1:5:4308:C:C2	1:5:4309:G:C8	3.09	0.40
1:5:4344:U:C2	1:5:4345:C:H5	2.30	0.40
1:5:4476:C:C6	11:H:171:ASP:OD2	2.75	0.40
1:5:4501:U:C4	1:5:4502:C:C1'	3.04	0.40
1:5:4540:C:C2	1:5:4541:G:C8	3.10	0.40
1:5:4562:C:O2	1:5:4562:C:C2'	2.69	0.40
1:5:4645:C:O2	1:5:4645:C:H2'	2.21	0.40
1:5:4697:U:C5'	1:5:4698:C:OP2	2.70	0.40
1:5:4739:C:C2	1:5:4961:G:C2	3.09	0.40
1:5:4900:C:H4'	1:5:4901:G:OP2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:4966:A:H2'	1:5:4967:A:C8	2.56	0.40
1:5:4975:G:C6	1:5:4977:A:C6	3.08	0.40
1:5:4978:G:HO2'	1:5:4979:A:H3'	1.86	0.40
1:5:5028:G:N1	1:5:5029:C:C4	2.90	0.40
1:5:5042:A:C6	1:5:5043:A:C6	3.10	0.40
1:5:5063:G:N2	1:5:5064:G:C4	2.89	0.40
2:7:48:G:O2'	7:D:222:GLN:O	2.36	0.40
2:7:62:U:C5'	7:D:279:ARG:HH12	2.35	0.40
3:8:82:A:C5	3:8:83:C:H5''	2.57	0.40
3:8:99:U:O2	3:8:100:U:C6	2.74	0.40
8:E:277:ILE:HD11	8:E:282:LEU:HD22	2.04	0.40
9:F:202:ARG:N	9:F:202:ARG:CD	2.85	0.40
10:G:231:ASN:HD22	10:G:231:ASN:H	1.64	0.40
14:K:31:LYS:HZ1	48:4:753:GLU:CD	2.25	0.40
16:M:34:ASN:ND2	16:M:34:ASN:N	2.69	0.40
17:N:180:PHE:CD2	17:N:180:PHE:N	2.89	0.40
17:N:195:ARG:C	17:N:196:ASN:HD22	2.28	0.40
18:O:36:VAL:CG1	18:O:108:ILE:HB	2.52	0.40
23:T:144:ASN:OD1	23:T:144:ASN:N	2.54	0.40
28:Y:127:GLN:HE21	28:Y:127:GLN:C	2.28	0.40
29:Z:76:ASN:HB3	29:Z:78:ASN:H	1.86	0.40
30:a:78:LEU:C	30:a:80:THR:N	2.78	0.40
36:g:75:SER:O	36:g:76:ARG:CG	2.64	0.40
40:k:41:TYR:HB3	40:k:43:TYR:HE1	1.85	0.40
44:o:97:LYS:HB2	44:o:99:ARG:HH21	1.87	0.40
46:q:161:ILE:CD1	46:q:167:VAL:HG13	2.51	0.40
46:q:171:GLU:O	46:q:175:LEU:HG	2.22	0.40
47:r:31:ASN:OD1	47:r:40:TYR:HB3	2.21	0.40
48:4:297:ILE:HG23	48:4:301:PHE:HE1	1.85	0.40
48:4:672:LEU:O	48:4:676:LYS:HB2	2.22	0.40
49:S2:54:A:C2	49:S2:451:G:C4	3.09	0.40
49:S2:61:A:H2	49:S2:334:C:H2'	1.87	0.40
49:S2:403:G:N1	49:S2:404:G:C5	2.89	0.40
49:S2:410:G:C2	49:S2:411:G:C4	3.09	0.40
49:S2:522:A:N1	49:S2:643:A:C5'	2.84	0.40
49:S2:554:A:C2	49:S2:555:A:C8	3.09	0.40
49:S2:563:G:O2'	49:S2:564:A:C5'	2.69	0.40
49:S2:675:U:O2	49:S2:676:C:C6	2.75	0.40
49:S2:690:G:C2	49:S2:691:G:C8	3.10	0.40
49:S2:827:A:N7	49:S2:828:G:N7	2.69	0.40
49:S2:834:C:C2	49:S2:841:G:N2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:848:U:C2'	49:S2:849:A:C8	2.98	0.40
49:S2:939:U:C2	49:S2:940:U:C5	3.09	0.40
49:S2:1018:U:C2	49:S2:1019:C:C6	2.98	0.40
49:S2:1034:A:C2	49:S2:1082:A:C2	3.09	0.40
49:S2:1043:G:O2'	49:S2:1044:G:O5'	2.35	0.40
49:S2:1121:G:N2	49:S2:1122:A:H1'	2.37	0.40
49:S2:1228:A:C6	49:S2:1531:A:N1	2.89	0.40
49:S2:1246:A:C2	49:S2:1251:A:N3	2.89	0.40
49:S2:1259:A:N1	49:S2:1519:U:C5	2.90	0.40
49:S2:1280:G:H5'	62:SM:96:ARG:CG	2.51	0.40
49:S2:1407:U:C3'	49:S2:1408:U:C6	3.04	0.40
49:S2:1410:C:C4	49:S2:1411:G:N7	2.90	0.40
49:S2:1508:A:C6	49:S2:1510:G:C1'	3.04	0.40
49:S2:1545:A:N6	49:S2:1588:A:N3	2.70	0.40
49:S2:1559:C:C2	49:S2:1577:G:C2	3.09	0.40
49:S2:1603:G:C8	68:SS:28:PHE:CE2	3.00	0.40
49:S2:1654:G:N2	49:S2:1671:G:C2	2.89	0.40
49:S2:1795:G:C2	49:S2:1796:G:C5	3.10	0.40
49:S2:1835:A:H5'	49:S2:1835:A:C8	2.57	0.40
49:S2:1839:U:O2	49:S2:1840:U:N1	2.54	0.40
49:S2:1860:A:C6	49:S2:1862:G:C6	3.10	0.40
49:S2:1867:U:HO2'	76:Sa:38:LYS:HG2	1.86	0.40
51:SB:201:CYS:HB2	51:SB:207:LEU:HD12	2.03	0.40
52:SC:170:TRP:HZ3	72:SW:97:ARG:HH11	1.69	0.40
53:SD:21:LEU:HD13	53:SD:48:ILE:HD12	2.03	0.40
59:SJ:158:ASP:OD1	59:SJ:159:PHE:N	2.55	0.40
60:SK:64:TRP:CE3	79:Sd:23:VAL:HA	2.56	0.40
73:SX:115:ILE:HG22	73:SX:118:VAL:CB	2.47	0.40
1:5:44:A:C4	1:5:45:U:C6	3.10	0.40
1:5:151:G:O6	10:G:141:ASN:ND2	2.54	0.40
1:5:183:C:O2	1:5:189:G:C6	2.74	0.40
1:5:229:G:H5''	28:Y:11:ARG:NH1	2.37	0.40
1:5:238:C:O2'	1:5:239:C:H5'	2.22	0.40
1:5:440:U:O2	1:5:440:U:H2'	2.22	0.40
1:5:447:C:O2	1:5:448:G:C8	2.74	0.40
1:5:497:G:N2	1:5:657:C:N3	2.65	0.40
1:5:509:A:H3'	1:5:510:U:C5'	2.52	0.40
1:5:722:G:H2'	1:5:723:A:C8	2.57	0.40
1:5:907:C:C4	1:5:908:G:N7	2.90	0.40
1:5:932:A:N3	1:5:932:A:C2'	2.85	0.40
1:5:962:C:C5	47:r:112:ARG:CZ	3.05	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:5:993:G:C6	1:5:994:G:N7	2.89	0.40
1:5:1065:G:N1	1:5:1066:G:C5	2.90	0.40
1:5:1098:G:H2'	1:5:1099:C:H6	1.86	0.40
1:5:1169:G:C4	1:5:1170:G:C8	3.10	0.40
1:5:1234:G:C3'	1:5:1235:G:H8	2.33	0.40
1:5:1280:C:C4	1:5:1282:G:C6	3.05	0.40
1:5:1334:A:C2	1:5:1335:G:C8	3.09	0.40
1:5:1337:A:H4'	6:C:102:PHE:CE2	2.56	0.40
1:5:1447:C:N3	1:5:2098:G:C6	2.89	0.40
1:5:1571:G:C4	1:5:1572:U:C6	3.10	0.40
1:5:1634:A:N1	1:5:1635:C:N3	2.69	0.40
1:5:1724:G:N2	9:F:105:PRO:CB	2.76	0.40
1:5:1919:G:O6	35:f:29:LYS:HE2	2.21	0.40
1:5:1927:U:H5'	1:5:2034:G:N2	2.36	0.40
1:5:1965:G:C5	1:5:1966:C:C5	3.10	0.40
1:5:1970:A:C2	1:5:2016:C:C4	3.10	0.40
1:5:2090:U:C1'	6:C:305:PRO:HG2	2.51	0.40
1:5:2107:C:O2	1:5:2107:C:C2'	2.66	0.40
1:5:2263:A:H5''	1:5:2263:A:C8	2.56	0.40
1:5:2294:G:C5	1:5:2295:C:C5	3.10	0.40
1:5:2312:U:O2	1:5:2312:U:C2'	2.65	0.40
1:5:2326:G:N3	1:5:2326:G:H2'	2.36	0.40
1:5:2467:U:H5''	1:5:2468:U:OP1	2.22	0.40
1:5:2480:G:C2	1:5:2481:G:C4	3.09	0.40
1:5:2821:U:H2'	1:5:2822:G:O4'	2.22	0.40
1:5:4143:G:N7	1:5:4145:C:C4	2.89	0.40
1:5:4287:G:C5	1:5:4288:C:C4	3.09	0.40
1:5:4456:C:O2	1:5:4456:C:C2'	2.69	0.40
1:5:4498:U:N3	1:5:4500:U:O5'	2.51	0.40
1:5:4582:C:OP2	5:B:28:LYS:NZ	2.36	0.40
1:5:4680:G:C2	1:5:4681:A:C5	3.09	0.40
1:5:5022:U:C5	1:5:5024:C:C4	3.10	0.40
2:7:11:A:C8	7:D:18:VAL:CG1	3.03	0.40
2:7:27:G:C4	2:7:28:C:C6	3.10	0.40
2:7:117:G:C4	2:7:118:C:C5	3.09	0.40
3:8:13:G:N2	3:8:14:U:C2	2.90	0.40
4:A:5:ILE:HG23	4:A:8:GLN:HG2	2.02	0.40
4:A:33:ASP:C	4:A:37:ARG:NH2	2.80	0.40
4:A:189:TYR:HA	4:A:192:LYS:HG3	2.03	0.40
5:B:379:PHE:HE2	5:B:385:LYS:HG3	1.87	0.40
6:C:11:TYR:HE2	6:C:148:PRO:HG2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:C:102:PHE:HD1	6:C:103:ALA:N	2.19	0.40
7:D:31:TYR:CD1	7:D:35:ARG:NH2	2.90	0.40
8:E:173:GLY:O	8:E:174:PRO:C	2.64	0.40
9:F:32:ILE:N	9:F:32:ILE:HD12	2.36	0.40
9:F:71:ILE:O	9:F:73:MET:N	2.54	0.40
9:F:219:ARG:HB3	9:F:219:ARG:NH1	2.34	0.40
10:G:166:LEU:HD23	17:N:7:ILE:HD13	2.02	0.40
11:H:16:VAL:HG21	11:H:81:ILE:HG23	2.04	0.40
14:K:147:HIS:HB2	14:K:149:HIS:HB2	1.39	0.40
22:S:94:TYR:CZ	22:S:96:GLU:HG3	2.56	0.40
24:U:34:MET:HE1	24:U:39:PHE:CE2	2.57	0.40
25:V:57:VAL:HG23	25:V:84:GLN:CG	2.45	0.40
36:g:108:LYS:O	36:g:112:GLN:HG2	2.21	0.40
42:m:96:CYS:HB3	42:m:99:CYS:H	1.86	0.40
43:n:4:LYS:CE	49:S2:1844:U:O4	2.69	0.40
46:q:11:SER:HA	46:q:14:PHE:CD2	2.56	0.40
46:q:135:THR:HB	46:q:138:PHE:CD1	2.56	0.40
46:q:147:ILE:HG23	46:q:150:GLY:C	2.47	0.40
48:4:158:ASN:CG	48:4:159:LYS:H	2.29	0.40
48:4:228:PHE:CD1	48:4:232:TYR:CZ	3.09	0.40
48:4:597:ASN:HD22	48:4:597:ASN:HA	1.66	0.40
49:S2:289:G:C2	49:S2:295:C:O2	2.75	0.40
49:S2:376:A:C2	49:S2:377:G:C1'	3.05	0.40
49:S2:380:G:N2	49:S2:382:C:C2'	2.85	0.40
49:S2:384:U:C6	49:S2:384:U:C3'	3.05	0.40
49:S2:448:A:C8	58:SI:25:ARG:C	2.99	0.40
49:S2:552:G:C2	49:S2:553:U:N3	2.90	0.40
49:S2:582:C:O2	49:S2:582:C:C2'	2.69	0.40
49:S2:656:G:H5'	49:S2:662:G:H22	1.85	0.40
49:S2:878:G:O6	49:S2:908:A:C2	2.75	0.40
49:S2:926:A:N1	49:S2:927:C:C4	2.89	0.40
49:S2:947:G:C2	49:S2:948:C:N1	2.89	0.40
49:S2:979:C:O2	49:S2:979:C:C2'	2.69	0.40
49:S2:984:C:O2	64:SO:138:ASP:OD2	2.40	0.40
49:S2:999:G:H5''	76:Sa:17:HIS:HB3	2.04	0.40
49:S2:999:G:H21	49:S2:1000:C:H1'	1.85	0.40
49:S2:1002:U:N3	49:S2:1003:U:C5	2.90	0.40
49:S2:1015:U:O2'	63:SN:55:ARG:NH2	2.55	0.40
49:S2:1100:A:C4	49:S2:1101:U:C5	3.10	0.40
49:S2:1134:G:C6	49:S2:1135:C:N4	2.90	0.40
49:S2:1277:C:H5''	60:SK:51:SER:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:S2:1305:C:N3	81:Sf:135:HIS:CE1	2.90	0.40
49:S2:1330:G:C2	49:S2:1333:U:O4	2.75	0.40
49:S2:1335:G:H2'	49:S2:1336:C:O4'	2.22	0.40
49:S2:1406:G:C4	49:S2:1407:U:C6	3.09	0.40
49:S2:1427:C:H2'	49:S2:1428:G:C8	2.55	0.40
49:S2:1459:G:C2	49:S2:1460:C:N1	2.90	0.40
49:S2:1501:C:O2	49:S2:1502:C:C6	2.75	0.40
49:S2:1541:G:N3	49:S2:1542:C:C5	2.89	0.40
49:S2:1588:A:C6	49:S2:1589:A:N6	2.90	0.40
49:S2:1648:G:C2	49:S2:1674:G:N7	2.90	0.40
49:S2:1757:G:C2	49:S2:1758:G:C5	3.09	0.40
49:S2:1847:G:N2	49:S2:1853:C:C2	2.89	0.40
50:SA:55:TRP:HE1	50:SA:59:LEU:HG	1.86	0.40
52:SC:72:ASP:O	52:SC:73:MET:C	2.64	0.40
52:SC:105:GLU:CB	52:SC:216:MET:HE1	2.51	0.40
57:SH:158:LEU:HB2	57:SH:189:PHE:CE1	2.56	0.40
58:SI:8:TRP:CD1	58:SI:8:TRP:C	3.00	0.40
58:SI:103:LEU:C	58:SI:104:ILE:HG23	2.47	0.40
58:SI:129:LEU:O	58:SI:133:GLU:HB2	2.22	0.40
59:SJ:159:PHE:CZ	59:SJ:165:TYR:CD2	3.10	0.40
60:SK:64:TRP:O	60:SK:65:ARG:C	2.64	0.40
62:SM:51:VAL:CG1	62:SM:85:LEU:HD21	2.51	0.40
64:SO:114:SER:HA	64:SO:117:ARG:HB3	2.04	0.40
69:ST:51:ASN:OD1	69:ST:51:ASN:N	2.55	0.40
74:SY:12:PHE:CZ	74:SY:21:LYS:HB3	2.56	0.40
82:Sg:130:LYS:CG	82:Sg:141:THR:HG23	2.51	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	A	242/257 (94%)	203 (84%)	30 (12%)	9 (4%)	2	21
5	B	392/394 (100%)	319 (81%)	40 (10%)	33 (8%)	0	7
6	C	365/367 (100%)	304 (83%)	46 (13%)	15 (4%)	2	19
7	D	290/297 (98%)	235 (81%)	33 (11%)	22 (8%)	1	8
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	17
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%)	166 (79%)	31 (15%)	14 (7%)	1	11
13	J	168/178 (94%)	137 (82%)	23 (14%)	8 (5%)	2	16
14	K	147/163 (90%)	83 (56%)	31 (21%)	33 (22%)	0	1
15	L	208/211 (99%)	172 (83%)	25 (12%)	11 (5%)	1	14
16	M	136/213 (64%)	118 (87%)	16 (12%)	2 (2%)	8	37
17	N	201/204 (98%)	172 (86%)	23 (11%)	6 (3%)	3	25
18	O	199/204 (98%)	182 (92%)	14 (7%)	3 (2%)	8	37
19	P	151/153 (99%)	140 (93%)	9 (6%)	2 (1%)	9	39
20	Q	185/188 (98%)	160 (86%)	20 (11%)	5 (3%)	4	27
21	R	178/196 (91%)	153 (86%)	21 (12%)	4 (2%)	5	30
22	S	173/224 (77%)	146 (84%)	24 (14%)	3 (2%)	7	35
23	T	157/160 (98%)	128 (82%)	26 (17%)	3 (2%)	6	33
24	U	97/128 (76%)	74 (76%)	21 (22%)	2 (2%)	5	31
25	V	129/140 (92%)	112 (87%)	14 (11%)	3 (2%)	5	30
26	W	61/157 (39%)	57 (93%)	3 (5%)	1 (2%)	7	36
27	X	117/156 (75%)	108 (92%)	7 (6%)	2 (2%)	7	35
28	Y	132/145 (91%)	112 (85%)	14 (11%)	6 (4%)	2	17
29	Z	133/136 (98%)	113 (85%)	15 (11%)	5 (4%)	2	20
30	a	145/148 (98%)	111 (77%)	26 (18%)	8 (6%)	1	13
31	b	73/160 (46%)	58 (80%)	11 (15%)	4 (6%)	1	13
32	c	92/115 (80%)	78 (85%)	10 (11%)	4 (4%)	2	18
33	d	105/125 (84%)	85 (81%)	16 (15%)	4 (4%)	2	20
34	e	126/135 (93%)	110 (87%)	15 (12%)	1 (1%)	16	49
35	f	107/110 (97%)	95 (89%)	7 (6%)	5 (5%)	2	17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	g	112/117 (96%)	103 (92%)	7 (6%)	2 (2%)	6	34
37	h	120/123 (98%)	102 (85%)	15 (12%)	3 (2%)	4	28
38	i	100/105 (95%)	91 (91%)	7 (7%)	2 (2%)	6	32
39	j	84/86 (98%)	67 (80%)	13 (16%)	4 (5%)	2	16
40	k	67/70 (96%)	55 (82%)	7 (10%)	5 (8%)	1	9
41	l	48/51 (94%)	42 (88%)	4 (8%)	2 (4%)	2	19
42	m	50/128 (39%)	44 (88%)	6 (12%)	0	100	100
43	n	21/25 (84%)	21 (100%)	0	0	100	100
44	o	102/106 (96%)	85 (83%)	11 (11%)	6 (6%)	1	12
45	p	89/91 (98%)	79 (89%)	9 (10%)	1 (1%)	11	43
46	q	200/202 (99%)	133 (66%)	27 (14%)	40 (20%)	0	1
47	r	123/125 (98%)	97 (79%)	20 (16%)	6 (5%)	1	16
48	4	854/856 (100%)	754 (88%)	58 (7%)	42 (5%)	1	16
50	SA	206/295 (70%)	176 (85%)	24 (12%)	6 (3%)	3	26
51	SB	211/264 (80%)	170 (81%)	27 (13%)	14 (7%)	1	11
52	SC	216/218 (99%)	189 (88%)	19 (9%)	8 (4%)	2	21
53	SD	225/243 (93%)	170 (76%)	44 (20%)	11 (5%)	1	16
54	SE	260/263 (99%)	202 (78%)	41 (16%)	17 (6%)	1	11
55	SF	189/204 (93%)	160 (85%)	19 (10%)	10 (5%)	1	14
56	SG	235/249 (94%)	194 (83%)	35 (15%)	6 (3%)	4	27
57	SH	187/194 (96%)	143 (76%)	29 (16%)	15 (8%)	1	8
58	SI	204/208 (98%)	176 (86%)	21 (10%)	7 (3%)	3	23
59	SJ	183/194 (94%)	145 (79%)	24 (13%)	14 (8%)	1	8
60	SK	96/165 (58%)	60 (62%)	26 (27%)	10 (10%)	0	5
61	SL	150/158 (95%)	122 (81%)	21 (14%)	7 (5%)	2	17
62	SM	122/124 (98%)	77 (63%)	25 (20%)	20 (16%)	0	2
63	SN	148/151 (98%)	115 (78%)	28 (19%)	5 (3%)	3	23
64	SO	134/151 (89%)	102 (76%)	18 (13%)	14 (10%)	0	5
65	SP	94/145 (65%)	65 (69%)	18 (19%)	11 (12%)	0	4
66	SQ	139/146 (95%)	112 (81%)	21 (15%)	6 (4%)	2	18
67	SR	127/135 (94%)	95 (75%)	24 (19%)	8 (6%)	1	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
68	SS	135/152 (89%)	104 (77%)	23 (17%)	8 (6%)	1	12
69	ST	139/145 (96%)	116 (84%)	17 (12%)	6 (4%)	2	18
70	SU	102/119 (86%)	80 (78%)	18 (18%)	4 (4%)	2	20
71	SV	80/83 (96%)	63 (79%)	10 (12%)	7 (9%)	0	7
72	SW	127/130 (98%)	112 (88%)	11 (9%)	4 (3%)	3	25
73	SX	139/143 (97%)	116 (84%)	18 (13%)	5 (4%)	2	22
74	SY	124/132 (94%)	92 (74%)	23 (18%)	9 (7%)	1	9
75	SZ	73/125 (58%)	54 (74%)	13 (18%)	6 (8%)	0	8
76	Sa	96/115 (84%)	74 (77%)	15 (16%)	7 (7%)	1	9
77	Sb	81/84 (96%)	61 (75%)	15 (18%)	5 (6%)	1	12
78	Sc	62/69 (90%)	46 (74%)	16 (26%)	0	100	100
79	Sd	50/56 (89%)	38 (76%)	9 (18%)	3 (6%)	1	12
80	Se	55/133 (41%)	40 (73%)	14 (26%)	1 (2%)	6	34
81	Sf	69/156 (44%)	39 (56%)	21 (30%)	9 (13%)	0	3
82	Sg	311/317 (98%)	250 (80%)	45 (14%)	16 (5%)	1	15
All	All	12341/13747 (90%)	10066 (82%)	1613 (13%)	662 (5%)	2	14

All (662) 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	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

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Mol	Chain	Res	Type
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
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	K	28	LEU
14	K	30	PRO
14	K	38	SER
14	K	39	PRO
14	K	58	ILE
14	K	86	LYS
14	K	89	PRO
14	K	92	ARG
14	K	98	ILE
14	K	105	THR
14	K	117	ARG
14	K	120	SER
14	K	126	SER
14	K	135	THR
14	K	141	CYS
14	K	142	ASN

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Mol	Chain	Res	Type
14	K	144	ASP
14	K	149	HIS
14	K	159	ALA
15	L	62	PRO
15	L	64	VAL
15	L	67	HIS
15	L	82	ARG
15	L	83	VAL
15	L	134	PRO
16	M	7	VAL
17	N	30	TYR
17	N	89	VAL
18	O	5	GLN
18	O	111	PRO
19	P	41	ILE
20	Q	177	ALA
21	R	36	ASN
22	S	146	HIS
22	S	165	PRO
25	V	14	PHE
25	V	99	GLU
27	X	131	ASP
30	a	76	ASP
30	a	92	LYS
30	a	96	GLY
31	b	7	HIS
31	b	12	GLN
35	f	4	ARG
36	g	7	TYR
37	h	119	PHE
38	i	64	SER
40	k	23	VAL
40	k	59	SER
41	l	22	PRO
44	o	90	HIS
44	o	94	GLY
46	q	51	ALA
46	q	60	MET
46	q	69	LEU
46	q	70	GLU
46	q	73	PRO
46	q	74	ALA

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Mol	Chain	Res	Type
46	q	98	ILE
46	q	100	ASP
46	q	104	ALA
46	q	118	PRO
46	q	136	SER
46	q	149	ARG
46	q	150	GLY
46	q	182	PRO
46	q	183	PHE
46	q	184	SER
46	q	185	PHE
47	r	34	ALA
47	r	45	HIS
47	r	107	ARG
48	4	4	PHE
48	4	43	ALA
48	4	44	GLY
48	4	45	ILE
48	4	47	ALA
48	4	61	LYS
48	4	71	LYS
48	4	206	ASP
48	4	207	PRO
48	4	240	GLY
48	4	241	GLU
48	4	481	LYS
48	4	498	LYS
48	4	499	PHE
48	4	500	SER
48	4	504	VAL
48	4	576	VAL
48	4	577	VAL
48	4	716	ARG
48	4	743	PRO
48	4	744	ILE
48	4	753	GLU
48	4	776	VAL
48	4	812	CYS
48	4	813	VAL
48	4	849	PRO
50	SA	3	GLY
51	SB	57	ILE

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Mol	Chain	Res	Type
51	SB	179	ASN
51	SB	191	ASP
51	SB	223	PHE
52	SC	253	PRO
52	SC	254	ASP
53	SD	54	ARG
53	SD	202	LYS
53	SD	223	ILE
54	SE	12	VAL
54	SE	95	THR
54	SE	101	LEU
54	SE	196	THR
55	SF	34	SER
55	SF	37	ASP
57	SH	16	PRO
57	SH	17	ASP
57	SH	18	GLU
57	SH	66	VAL
57	SH	116	ARG
57	SH	170	VAL
57	SH	190	PRO
58	SI	155	ASN
59	SJ	3	VAL
59	SJ	69	ARG
59	SJ	70	ARG
59	SJ	119	LEU
59	SJ	121	LYS
59	SJ	159	PHE
60	SK	30	PRO
60	SK	58	VAL
61	SL	19	ASN
61	SL	100	ASN
62	SM	15	ASN
62	SM	77	ILE
62	SM	91	LEU
62	SM	96	ARG
62	SM	102	LYS
62	SM	114	TYR
63	SN	143	SER
64	SO	56	VAL
64	SO	65	ASP
64	SO	140	THR

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Mol	Chain	Res	Type
65	SP	14	LYS
65	SP	38	SER
66	SQ	48	GLN
66	SQ	77	HIS
67	SR	88	VAL
68	SS	12	ILE
68	SS	90	VAL
68	SS	118	ARG
69	ST	29	LYS
70	SU	50	VAL
70	SU	107	GLU
71	SV	41	LYS
71	SV	65	SER
72	SW	77	PRO
72	SW	107	SER
73	SX	34	THR
73	SX	129	SER
75	SZ	113	THR
81	Sf	89	LYS
81	Sf	98	VAL
81	Sf	137	ASP
82	Sg	96	THR
82	Sg	142	VAL
82	Sg	161	SER
82	Sg	182	CYS
82	Sg	282	GLU
4	A	110	GLY
5	B	47	LEU
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

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Mol	Chain	Res	Type
7	D	293	ARG
8	E	43	ASN
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	158	LYS
12	I	210	ARG
13	J	26	VAL
13	J	88	LYS
13	J	169	LYS
14	K	24	ALA
14	K	34	PRO
14	K	60	VAL
14	K	94	LYS
14	K	140	GLY
15	L	143	GLU
16	M	87	ALA
17	N	79	ALA
20	Q	178	ARG
21	R	39	GLN
23	T	18	PRO
23	T	44	GLY
23	T	55	LYS
27	X	86	ALA
28	Y	6	PHE
29	Z	91	LEU
30	a	60	HIS
30	a	62	HIS
30	a	97	ALA
32	c	32	LYS
32	c	80	GLU
32	c	81	LEU
33	d	93	ASN
34	e	34	ASN
37	h	122	LYS
40	k	61	PRO

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Mol	Chain	Res	Type
44	o	33	LEU
44	o	98	LYS
46	q	46	SER
46	q	84	GLY
46	q	128	THR
46	q	158	VAL
46	q	179	ASN
46	q	180	ILE
46	q	202	GLU
46	q	203	VAL
47	r	123	PRO
48	4	48	SER
48	4	53	GLU
48	4	54	THR
48	4	62	ASP
48	4	532	PRO
50	SA	110	ASN
50	SA	187	GLY
51	SB	83	LYS
51	SB	108	ASP
51	SB	152	LYS
51	SB	204	ILE
52	SC	134	ASN
52	SC	255	LEU
53	SD	219	PRO
54	SE	76	VAL
54	SE	98	ASN
54	SE	109	PHE
55	SF	21	GLY
55	SF	121	PRO
56	SG	99	GLY
57	SH	160	LYS
58	SI	126	GLY
58	SI	137	LEU
58	SI	138	ASN
59	SJ	5	ARG
59	SJ	118	GLY
61	SL	3	ASP
62	SM	35	ILE
62	SM	48	HIS
62	SM	79	VAL
63	SN	38	TYR

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Mol	Chain	Res	Type
64	SO	32	HIS
64	SO	33	ILE
64	SO	64	ALA
64	SO	105	THR
64	SO	129	ILE
64	SO	146	ARG
65	SP	12	PHE
66	SQ	32	ILE
66	SQ	35	ASN
67	SR	93	GLN
67	SR	95	ILE
67	SR	110	ASP
67	SR	123	THR
68	SS	7	GLU
68	SS	133	GLY
69	ST	28	LEU
69	ST	34	VAL
69	ST	39	LEU
69	ST	49	ASP
72	SW	45	GLY
73	SX	99	GLU
74	SY	60	PHE
74	SY	84	LYS
74	SY	118	ARG
74	SY	120	THR
75	SZ	42	ASP
75	SZ	102	LYS
75	SZ	104	ARG
75	SZ	108	ILE
76	Sa	8	ASN
76	Sa	25	ASN
77	Sb	6	ASP
77	Sb	59	CYS
81	Sf	112	GLY
82	Sg	97	THR
82	Sg	139	LYS
82	Sg	141	THR
4	A	180	LEU
4	A	196	TRP
5	B	295	ASP
6	C	73	VAL
6	C	97	ARG

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Mol	Chain	Res	Type
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	61	ARG
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	K	56	LEU
14	K	67	ARG
14	K	90	ARG
14	K	139	VAL
15	L	172	GLU
19	P	54	GLN
20	Q	52	PHE
20	Q	146	ARG
21	R	130	ASN
22	S	153	PRO
24	U	38	ASN
28	Y	11	ARG
28	Y	18	HIS
29	Z	8	GLY
29	Z	33	THR
30	a	93	ASN
33	d	38	PHE
35	f	80	ASN
35	f	107	PRO
41	l	47	THR
44	o	49	GLY
46	q	115	ALA
48	4	269	ALA
48	4	434	TYR

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Mol	Chain	Res	Type
48	4	810	PRO
50	SA	105	PRO
51	SB	43	ASN
52	SC	264	SER
53	SD	178	ARG
53	SD	179	GLN
54	SE	24	THR
54	SE	163	ASP
54	SE	171	ASP
55	SF	163	PHE
57	SH	107	LYS
57	SH	110	THR
58	SI	143	LYS
60	SK	63	ALA
60	SK	92	ALA
61	SL	28	THR
62	SM	36	ARG
62	SM	65	VAL
62	SM	95	ASP
62	SM	103	VAL
62	SM	116	LYS
62	SM	117	GLU
64	SO	128	ARG
65	SP	50	ARG
65	SP	73	PRO
65	SP	74	GLU
65	SP	87	PRO
67	SR	127	ASN
68	SS	92	ASP
69	ST	128	GLN
71	SV	3	ASN
72	SW	30	CYS
73	SX	114	ASP
74	SY	104	ARG
75	SZ	80	ARG
76	Sa	61	ALA
76	Sa	62	TYR
76	Sa	97	PRO
79	Sd	7	TYR
81	Sf	83	LYS
81	Sf	99	LYS
81	Sf	100	LEU

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Mol	Chain	Res	Type
82	Sg	65	PHE
82	Sg	144	ASP
82	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
14	K	40	LYS
14	K	54	LYS
17	N	182	HIS
20	Q	55	ARG
21	R	131	VAL
24	U	98	ASP
25	V	110	GLY
26	W	43	LYS
30	a	98	ALA
31	b	10	HIS
32	c	77	ASN
33	d	58	GLY
33	d	102	LEU
35	f	5	LEU
40	k	29	LYS
44	o	8	ARG
46	q	61	MET

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Mol	Chain	Res	Type
46	q	130	LEU
46	q	134	LYS
46	q	156	SER
46	q	191	GLN
46	q	199	TYR
46	q	201	PRO
48	4	502	SER
50	SA	188	THR
51	SB	77	ASP
53	SD	218	LEU
54	SE	132	GLY
55	SF	131	ALA
55	SF	132	GLY
55	SF	143	PRO
56	SG	146	ASN
56	SG	152	ASP
57	SH	35	ASP
57	SH	57	ARG
57	SH	111	LYS
59	SJ	39	ASN
59	SJ	92	MET
59	SJ	120	ALA
59	SJ	125	HIS
60	SK	3	MET
60	SK	65	ARG
61	SL	8	ARG
62	SM	76	LEU
62	SM	119	GLN
65	SP	8	LYS
65	SP	75	VAL
66	SQ	116	ASP
71	SV	10	ASP
74	SY	30	PRO
74	SY	34	THR
76	Sa	35	ALA
77	Sb	75	GLU
79	Sd	8	TRP
81	Sf	87	THR
82	Sg	37	ASP
82	Sg	160	SER
82	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
14	K	36	GLY
14	K	96	LYS
17	N	40	PRO
17	N	55	ALA
28	Y	85	VAL
29	Z	124	THR
31	b	21	ILE
35	f	106	TYR
36	g	84	ALA
39	j	5	THR
39	j	38	GLY
45	p	4	ARG
46	q	82	ILE
48	4	246	PRO
48	4	574	ASP
51	SB	76	ASN
51	SB	93	GLY
52	SC	181	PRO
52	SC	189	GLY
53	SD	199	GLY
53	SD	214	LYS
54	SE	38	LEU
55	SF	68	ILE
56	SG	20	ASP
57	SH	100	ILE
57	SH	159	ASP
60	SK	39	ASN
60	SK	67	PHE

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Mol	Chain	Res	Type
60	SK	69	TRP
61	SL	147	LYS
62	SM	81	ASP
63	SN	58	HIS
63	SN	138	ASN
64	SO	39	ASP
64	SO	149	ARG
66	SQ	43	GLU
68	SS	82	TRP
70	SU	118	ASP
71	SV	42	VAL
71	SV	45	ARG
76	Sa	72	HIS
79	Sd	10	HIS
81	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	K	138	SER
15	L	169	ILE
18	O	110	PRO
28	Y	63	LYS
28	Y	79	VAL
29	Z	4	PHE
39	j	9	GLY
39	j	75	ARG
46	q	85	ASN
46	q	198	ILE
47	r	103	ARG
48	4	7	ASP
48	4	503	PRO
50	SA	43	SER
51	SB	22	VAL
53	SD	222	PRO
54	SE	30	ARG
54	SE	35	PRO
56	SG	59	GLN

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Mol	Chain	Res	Type
58	SI	131	PRO
60	SK	41	PRO
61	SL	69	ARG
65	SP	27	ASP
65	SP	49	LEU
67	SR	121	GLN
68	SS	117	ILE
71	SV	81	LYS
73	SX	104	GLY
77	Sb	48	SER
5	B	110	ILE
5	B	259	PRO
7	D	114	GLY
40	k	63	GLY
46	q	196	GLY
48	4	517	LEU
48	4	699	GLY
52	SC	171	GLY
55	SF	166	ILE
74	SY	95	GLY
82	Sg	190	GLY
15	L	100	PRO
46	q	80	PRO
46	q	116	ILE
48	4	109	VAL
54	SE	15	PRO
56	SG	161	PRO
63	SN	37	ILE
80	Se	54	GLY
7	D	261	VAL
12	I	47	PRO
37	h	38	GLY
53	SD	194	PRO
54	SE	131	VAL
59	SJ	8	VAL
59	SJ	169	ARG
62	SM	94	ILE
67	SR	86	PRO
70	SU	52	GLY
74	SY	67	GLY
77	Sb	58	GLY
82	Sg	163	PRO

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Mol	Chain	Res	Type
5	B	321	VAL
8	E	90	LYS
9	F	100	ILE
10	G	58	PRO
15	L	28	GLN
38	i	63	VAL
47	r	44	ILE
51	SB	114	VAL
54	SE	90	ILE
62	SM	104	VAL
64	SO	24	GLY
64	SO	53	ILE
9	F	199	VAL
46	q	117	ALA
58	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	7
6	C	305/305 (100%)	242 (79%)	63 (21%)	1	6
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	3
12	I	180/180 (100%)	138 (77%)	42 (23%)	1	5
13	J	143/149 (96%)	111 (78%)	32 (22%)	1	5
14	K	124/136 (91%)	98 (79%)	26 (21%)	1	6
15	L	176/177 (99%)	135 (77%)	41 (23%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	M	116/160 (72%)	95 (82%)	21 (18%)	2	10
17	N	171/172 (99%)	132 (77%)	39 (23%)	1	5
18	O	172/174 (99%)	144 (84%)	28 (16%)	2	14
19	P	134/134 (100%)	113 (84%)	21 (16%)	2	15
20	Q	163/164 (99%)	133 (82%)	30 (18%)	1	9
21	R	159/175 (91%)	118 (74%)	41 (26%)	0	3
22	S	156/192 (81%)	121 (78%)	35 (22%)	1	5
23	T	139/140 (99%)	117 (84%)	22 (16%)	2	15
24	U	89/114 (78%)	70 (79%)	19 (21%)	1	6
25	V	101/107 (94%)	79 (78%)	22 (22%)	1	6
26	W	55/126 (44%)	42 (76%)	13 (24%)	1	4
27	X	107/133 (80%)	87 (81%)	20 (19%)	1	9
28	Y	124/135 (92%)	92 (74%)	32 (26%)	0	3
29	Z	117/118 (99%)	94 (80%)	23 (20%)	1	8
30	a	119/120 (99%)	104 (87%)	15 (13%)	4	21
31	b	63/123 (51%)	46 (73%)	17 (27%)	0	3
32	c	79/97 (81%)	61 (77%)	18 (23%)	1	5
33	d	98/110 (89%)	66 (67%)	32 (33%)	0	2
34	e	114/121 (94%)	87 (76%)	27 (24%)	1	4
35	f	88/89 (99%)	69 (78%)	19 (22%)	1	6
36	g	98/100 (98%)	80 (82%)	18 (18%)	1	9
37	h	109/110 (99%)	91 (84%)	18 (16%)	2	13
38	i	86/89 (97%)	69 (80%)	17 (20%)	1	7
39	j	73/73 (100%)	61 (84%)	12 (16%)	2	14
40	k	64/65 (98%)	54 (84%)	10 (16%)	2	15
41	l	47/48 (98%)	39 (83%)	8 (17%)	2	12
42	m	48/116 (41%)	36 (75%)	12 (25%)	0	4
43	n	22/24 (92%)	19 (86%)	3 (14%)	3	19
44	o	92/94 (98%)	71 (77%)	21 (23%)	1	5
45	p	74/74 (100%)	62 (84%)	12 (16%)	2	14
46	q	170/170 (100%)	130 (76%)	40 (24%)	1	4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
47	r	109/109 (100%)	92 (84%)	17 (16%)	2	15
48	4	728/728 (100%)	583 (80%)	145 (20%)	1	7
50	SA	174/245 (71%)	142 (82%)	32 (18%)	1	9
51	SB	194/231 (84%)	163 (84%)	31 (16%)	2	14
52	SC	184/184 (100%)	149 (81%)	35 (19%)	1	8
53	SD	190/202 (94%)	160 (84%)	30 (16%)	2	15
54	SE	224/225 (100%)	180 (80%)	44 (20%)	1	8
55	SF	161/170 (95%)	130 (81%)	31 (19%)	1	8
56	SG	207/218 (95%)	170 (82%)	37 (18%)	2	10
57	SH	169/174 (97%)	149 (88%)	20 (12%)	5	23
58	SI	178/180 (99%)	153 (86%)	25 (14%)	3	19
59	SJ	161/168 (96%)	130 (81%)	31 (19%)	1	8
60	SK	89/136 (65%)	70 (79%)	19 (21%)	1	6
61	SL	136/142 (96%)	114 (84%)	22 (16%)	2	14
62	SM	104/104 (100%)	77 (74%)	27 (26%)	0	3
63	SN	130/131 (99%)	98 (75%)	32 (25%)	1	4
64	SO	106/119 (89%)	82 (77%)	24 (23%)	1	5
65	SP	88/130 (68%)	77 (88%)	11 (12%)	4	22
66	SQ	117/121 (97%)	102 (87%)	15 (13%)	4	21
67	SR	117/121 (97%)	101 (86%)	16 (14%)	3	19
68	SS	119/132 (90%)	100 (84%)	19 (16%)	2	14
69	ST	112/115 (97%)	87 (78%)	25 (22%)	1	5
70	SU	94/107 (88%)	83 (88%)	11 (12%)	5	24
71	SV	66/67 (98%)	55 (83%)	11 (17%)	2	13
72	SW	112/113 (99%)	93 (83%)	19 (17%)	2	12
73	SX	113/115 (98%)	96 (85%)	17 (15%)	3	17
74	SY	108/114 (95%)	90 (83%)	18 (17%)	2	13
75	SZ	66/103 (64%)	55 (83%)	11 (17%)	2	13
76	Sa	85/98 (87%)	77 (91%)	8 (9%)	8	31
77	Sb	75/76 (99%)	64 (85%)	11 (15%)	3	17
78	Sc	57/62 (92%)	42 (74%)	15 (26%)	0	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
79	Sd	45/48 (94%)	33 (73%)	12 (27%)	0	3
80	Se	46/105 (44%)	36 (78%)	10 (22%)	1	6
81	Sf	64/140 (46%)	44 (69%)	20 (31%)	0	2
82	Sg	272/275 (99%)	246 (90%)	26 (10%)	8	30
All	All	10721/11706 (92%)	8603 (80%)	2118 (20%)	3	7

All (2118) 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

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Mol	Chain	Res	Type
4	A	193	ARG
4	A	194	ASN
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

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Mol	Chain	Res	Type
5	B	146	LEU
5	B	149	ASP
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

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Mol	Chain	Res	Type
6	C	36	ILE
6	C	47	ASN
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

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Mol	Chain	Res	Type
6	C	219	LYS
6	C	222	ARG
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

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Mol	Chain	Res	Type
7	D	111	ASN
7	D	113	PHE
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

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Mol	Chain	Res	Type
7	D	292	GLU
7	D	293	ARG
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

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Mol	Chain	Res	Type
8	E	252	GLN
8	E	262	GLN
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

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Mol	Chain	Res	Type
9	F	201	LYS
9	F	202	ARG
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

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Mol	Chain	Res	Type
10	G	131	LYS
10	G	141	ASN
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

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Mol	Chain	Res	Type
11	H	92	MET
11	H	96	TYR
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

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Mol	Chain	Res	Type
12	I	95	HIS
12	I	97	ILE
12	I	99	ILE
12	I	100	ASN
12	I	101	LYS
12	I	102	MET
12	I	110	ARG
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	158	LYS
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	26	VAL
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

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Mol	Chain	Res	Type
13	J	97	ASN
13	J	98	ASN
13	J	101	ASP
13	J	110	GLN
13	J	113	ILE
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	K	14	TYR
14	K	16	ARG
14	K	21	GLU
14	K	30	PRO
14	K	40	LYS
14	K	44	ASP
14	K	54	LYS
14	K	56	LEU
14	K	61	LYS
14	K	90	ARG
14	K	91	ASP
14	K	92	ARG
14	K	96	LYS
14	K	99	LYS
14	K	104	ILE
14	K	107	ASP
14	K	108	GLU
14	K	114	ARG
14	K	116	MET
14	K	117	ARG
14	K	119	ARG
14	K	120	SER
14	K	121	LEU
14	K	125	LEU
14	K	130	LYS
14	K	147	HIS
15	L	5	ARG

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Mol	Chain	Res	Type
15	L	10	LEU
15	L	13	HIS
15	L	19	GLN
15	L	28	GLN
15	L	31	ARG
15	L	34	ARG
15	L	36	ARG
15	L	39	ARG
15	L	45	ARG
15	L	49	ARG
15	L	56	ARG
15	L	65	ARG
15	L	66	TYR
15	L	67	HIS
15	L	74	ARG
15	L	79	GLU
15	L	80	GLU
15	L	82	ARG
15	L	83	VAL
15	L	92	ARG
15	L	99	ASP
15	L	101	ARG
15	L	103	ARG
15	L	111	GLN
15	L	115	GLN
15	L	119	GLU
15	L	123	LYS
15	L	127	PHE
15	L	129	ARG
15	L	130	LYS
15	L	146	LEU
15	L	158	ARG
15	L	162	LYS
15	L	163	ARG
15	L	165	LYS
15	L	172	GLU
15	L	176	PHE
15	L	186	ARG
15	L	201	GLU
15	L	205	GLN
16	M	8	GLU
16	M	11	ARG

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Mol	Chain	Res	Type
16	M	17	PHE
16	M	29	ASP
16	M	32	ASP
16	M	33	GLN
16	M	34	ASN
16	M	37	LEU
16	M	38	VAL
16	M	47	ARG
16	M	56	GLN
16	M	57	LEU
16	M	59	ASP
16	M	61	ILE
16	M	66	HIS
16	M	70	GLN
16	M	79	LYS
16	M	89	THR
16	M	90	ARG
16	M	91	TRP
16	M	119	ARG
17	N	4	TYR
17	N	9	GLU
17	N	11	TRP
17	N	26	ARG
17	N	29	GLN
17	N	43	THR
17	N	49	ARG
17	N	50	ARG
17	N	59	TYR
17	N	63	ARG
17	N	64	ILE
17	N	71	ARG
17	N	80	THR
17	N	87	HIS
17	N	89	VAL
17	N	91	GLN
17	N	92	LEU
17	N	104	GLU
17	N	108	ARG
17	N	119	TYR
17	N	123	GLU
17	N	126	THR
17	N	127	TYR

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Mol	Chain	Res	Type
17	N	131	GLU
17	N	136	ASP
17	N	138	PHE
17	N	139	HIS
17	N	150	TRP
17	N	158	HIS
17	N	169	ARG
17	N	174	LEU
17	N	178	HIS
17	N	182	HIS
17	N	189	ARG
17	N	192	TRP
17	N	195	ARG
17	N	196	ASN
17	N	199	GLN
17	N	203	TYR
18	O	5	GLN
18	O	16	LEU
18	O	42	ASN
18	O	46	ASN
18	O	49	ARG
18	O	59	ARG
18	O	60	LYS
18	O	61	ARG
18	O	62	MET
18	O	74	ARG
18	O	78	ARG
18	O	82	ARG
18	O	85	ARG
18	O	108	ILE
18	O	110	PRO
18	O	113	ASP
18	O	140	ARG
18	O	160	ARG
18	O	167	HIS
18	O	169	ARG
18	O	173	GLN
18	O	176	ARG
18	O	178	ARG
18	O	184	ASN
18	O	187	LYS
18	O	188	LYS

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Mol	Chain	Res	Type
18	O	192	PHE
18	O	194	GLU
19	P	3	ARG
19	P	9	GLU
19	P	10	ASN
19	P	13	LYS
19	P	18	ARG
19	P	23	ARG
19	P	24	VAL
19	P	28	ASN
19	P	40	HIS
19	P	42	ARG
19	P	69	ARG
19	P	70	CYS
19	P	78	TRP
19	P	90	PHE
19	P	91	LEU
19	P	110	ASP
19	P	126	ARG
19	P	128	ARG
19	P	133	HIS
19	P	135	ARG
19	P	154	GLU
20	Q	3	VAL
20	Q	5	ILE
20	Q	9	LYS
20	Q	14	ARG
20	Q	32	TYR
20	Q	37	ARG
20	Q	44	ASN
20	Q	54	SER
20	Q	58	ARG
20	Q	61	LEU
20	Q	65	ARG
20	Q	68	ARG
20	Q	72	LEU
20	Q	75	ARG
20	Q	79	THR
20	Q	85	THR
20	Q	89	ASP
20	Q	91	ARG
20	Q	93	GLN

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Mol	Chain	Res	Type
20	Q	97	LYS
20	Q	108	ARG
20	Q	110	ARG
20	Q	112	ARG
20	Q	146	ARG
20	Q	150	ARG
20	Q	166	TYR
20	Q	173	LYS
20	Q	178	ARG
20	Q	180	ARG
20	Q	181	ARG
21	R	5	ARG
21	R	6	LEU
21	R	9	ARG
21	R	15	LEU
21	R	23	TRP
21	R	30	ASN
21	R	39	GLN
21	R	40	GLN
21	R	45	ILE
21	R	47	ASP
21	R	50	ILE
21	R	58	HIS
21	R	60	ARG
21	R	74	ARG
21	R	80	LYS
21	R	81	ARG
21	R	86	ASN
21	R	89	MET
21	R	94	THR
21	R	99	MET
21	R	103	ARG
21	R	105	LEU
21	R	107	ARG
21	R	108	ARG
21	R	109	TYR
21	R	113	LYS
21	R	114	LYS
21	R	117	ARG
21	R	118	HIS
21	R	120	TYR
21	R	124	TYR

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Mol	Chain	Res	Type
21	R	131	VAL
21	R	136	ARG
21	R	138	LEU
21	R	141	HIS
21	R	163	ARG
21	R	168	GLU
21	R	172	ARG
21	R	175	GLU
21	R	177	LEU
21	R	178	GLN
22	S	2	LYS
22	S	15	ARG
22	S	28	TYR
22	S	29	ARG
22	S	37	HIS
22	S	39	VAL
22	S	44	PHE
22	S	48	VAL
22	S	53	LYS
22	S	57	SER
22	S	64	CYS
22	S	68	PHE
22	S	70	LYS
22	S	82	LEU
22	S	83	ARG
22	S	84	TYR
22	S	86	SER
22	S	90	THR
22	S	95	ARG
22	S	99	ASP
22	S	100	LEU
22	S	101	THR
22	S	127	MET
22	S	128	LYS
22	S	138	ARG
22	S	146	HIS
22	S	147	ASP
22	S	150	ILE
22	S	151	LYS
22	S	156	HIS
22	S	159	LEU
22	S	162	GLN

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Mol	Chain	Res	Type
22	S	166	ARG
22	S	168	THR
22	S	171	ARG
23	T	5	LYS
23	T	7	LYS
23	T	19	PHE
23	T	30	TYR
23	T	32	ARG
23	T	33	ILE
23	T	35	LYS
23	T	38	ASP
23	T	41	ASP
23	T	54	HIS
23	T	67	VAL
23	T	70	HIS
23	T	76	VAL
23	T	96	ILE
23	T	102	ARG
23	T	103	ASP
23	T	107	LYS
23	T	117	LYS
23	T	118	GLU
23	T	121	GLU
23	T	144	ASN
23	T	152	GLU
24	U	23	LEU
24	U	27	HIS
24	U	33	ILE
24	U	38	ASN
24	U	39	PHE
24	U	40	GLU
24	U	46	ARG
24	U	50	ASN
24	U	52	LYS
24	U	62	THR
24	U	64	GLU
24	U	65	ARG
24	U	67	LYS
24	U	69	LYS
24	U	82	TYR
24	U	90	TYR
24	U	98	ASP

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Mol	Chain	Res	Type
24	U	101	ARG
24	U	113	ARG
25	V	13	LYS
25	V	15	ARG
25	V	18	LEU
25	V	27	ASN
25	V	30	ASP
25	V	36	ASN
25	V	48	ARG
25	V	50	ASN
25	V	51	ARG
25	V	60	MET
25	V	69	LYS
25	V	73	ARG
25	V	77	HIS
25	V	84	GLN
25	V	91	LYS
25	V	98	PHE
25	V	100	ASP
25	V	107	ASN
25	V	109	LYS
25	V	111	GLU
25	V	123	LYS
25	V	128	LEU
26	W	3	VAL
26	W	4	GLU
26	W	8	PHE
26	W	12	LYS
26	W	17	HIS
26	W	25	ASP
26	W	33	ASN
26	W	44	ARG
26	W	50	ASN
26	W	55	TYR
26	W	56	ARG
26	W	57	ARG
26	W	59	HIS
27	X	39	LYS
27	X	41	ARG
27	X	45	THR
27	X	48	ARG
27	X	55	ARG

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Mol	Chain	Res	Type
27	X	62	ARG
27	X	63	LYS
27	X	72	ASP
27	X	79	PHE
27	X	84	GLU
27	X	94	ASN
27	X	111	GLN
27	X	117	TYR
27	X	120	ASP
27	X	129	ARG
27	X	133	GLU
27	X	137	TYR
27	X	139	ARG
27	X	144	TYR
27	X	151	ASN
28	Y	2	LYS
28	Y	4	ASN
28	Y	11	ARG
28	Y	14	ASN
28	Y	15	ARG
28	Y	17	ARG
28	Y	18	HIS
28	Y	19	PHE
28	Y	27	ARG
28	Y	36	LYS
28	Y	45	ARG
28	Y	49	ILE
28	Y	50	ARG
28	Y	53	ASP
28	Y	55	VAL
28	Y	56	GLN
28	Y	62	TYR
28	Y	65	GLN
28	Y	72	GLN
28	Y	82	ILE
28	Y	83	GLU
28	Y	84	ARG
28	Y	87	ARG
28	Y	91	ASN
28	Y	100	HIS
28	Y	104	VAL
28	Y	112	ASP

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Mol	Chain	Res	Type
28	Y	114	ASP
28	Y	115	ARG
28	Y	121	ARG
28	Y	126	ARG
28	Y	127	GLN
29	Z	3	LYS
29	Z	4	PHE
29	Z	17	ARG
29	Z	21	ARG
29	Z	27	LYS
29	Z	30	ASP
29	Z	36	ARG
29	Z	38	TYR
29	Z	46	ILE
29	Z	54	THR
29	Z	57	MET
29	Z	60	LYS
29	Z	78	ASN
29	Z	88	ASP
29	Z	92	ASP
29	Z	93	LYS
29	Z	97	ASN
29	Z	98	LYS
29	Z	102	ARG
29	Z	113	GLU
29	Z	121	ARG
29	Z	127	ASN
29	Z	136	PHE
30	a	7	LYS
30	a	14	HIS
30	a	19	HIS
30	a	40	HIS
30	a	41	HIS
30	a	46	ASP
30	a	52	TYR
30	a	59	ARG
30	a	61	TYR
30	a	63	LEU
30	a	67	GLN
30	a	77	LYS
30	a	85	GLN
30	a	127	LYS

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Mol	Chain	Res	Type
30	a	132	ARG
31	b	6	ASN
31	b	7	HIS
31	b	12	GLN
31	b	16	TRP
31	b	18	ARG
31	b	19	ASN
31	b	22	LYS
31	b	23	LYS
31	b	25	ARG
31	b	27	GLN
31	b	28	ARG
31	b	30	GLU
31	b	43	MET
31	b	44	ARG
31	b	51	LYS
31	b	55	LYS
31	b	65	MET
32	c	18	LEU
32	c	27	TYR
32	c	37	MET
32	c	42	LYS
32	c	44	LYS
32	c	52	CYS
32	c	55	LEU
32	c	56	ARG
32	c	59	GLU
32	c	65	MET
32	c	66	LEU
32	c	72	HIS
32	c	73	HIS
32	c	74	TYR
32	c	77	ASN
32	c	78	ASN
32	c	81	LEU
32	c	88	TYR
33	d	18	ASN
33	d	19	GLU
33	d	21	VAL
33	d	23	ARG
33	d	26	THR
33	d	28	ASN

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Mol	Chain	Res	Type
33	d	31	LYS
33	d	32	ARG
33	d	38	PHE
33	d	39	LYS
33	d	44	ARG
33	d	67	ARG
33	d	73	TRP
33	d	77	ILE
33	d	78	ARG
33	d	79	ASN
33	d	83	ARG
33	d	85	ARG
33	d	86	VAL
33	d	87	ARG
33	d	91	LYS
33	d	94	GLU
33	d	95	ASP
33	d	101	LYS
33	d	103	TYR
33	d	108	TYR
33	d	109	VAL
33	d	116	ASN
33	d	117	LEU
33	d	118	GLN
33	d	119	THR
33	d	123	ASP
34	e	5	ARG
34	e	9	LYS
34	e	11	LYS
34	e	16	ARG
34	e	21	ILE
34	e	26	ASP
34	e	39	ARG
34	e	42	ASP
34	e	43	ASN
34	e	46	ARG
34	e	52	GLN
34	e	57	ASN
34	e	64	LYS
34	e	68	HIS
34	e	78	LEU
34	e	85	LEU

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Mol	Chain	Res	Type
34	e	92	ASN
34	e	95	TYR
34	e	106	LYS
34	e	107	ASN
34	e	108	ARG
34	e	109	LYS
34	e	113	GLU
34	e	117	GLN
34	e	124	ASN
34	e	126	ASN
34	e	128	ARG
35	f	4	ARG
35	f	5	LEU
35	f	7	SER
35	f	14	TYR
35	f	19	ARG
35	f	22	ARG
35	f	24	HIS
35	f	28	LEU
35	f	36	ARG
35	f	51	TYR
35	f	52	LYS
35	f	65	ASN
35	f	69	VAL
35	f	71	TRP
35	f	89	ARG
35	f	100	ARG
35	f	101	ILE
35	f	103	VAL
35	f	109	ARG
36	g	4	ARG
36	g	5	LEU
36	g	12	SER
36	g	14	ASN
36	g	29	ARG
36	g	32	TYR
36	g	43	LYS
36	g	52	ARG
36	g	53	LEU
36	g	57	ARG
36	g	60	ARG
36	g	66	ARG

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Mol	Chain	Res	Type
36	g	75	SER
36	g	81	SER
36	g	93	ARG
36	g	95	PHE
36	g	114	GLN
36	g	115	LYS
37	h	3	LYS
37	h	8	ASP
37	h	10	ARG
37	h	23	ASP
37	h	28	LEU
37	h	48	ARG
37	h	51	ARG
37	h	67	GLU
37	h	68	ASN
37	h	72	PHE
37	h	73	TYR
37	h	77	LYS
37	h	89	ARG
37	h	93	ARG
37	h	97	LYS
37	h	102	LEU
37	h	119	PHE
37	h	122	LYS
38	i	3	LEU
38	i	4	ARG
38	i	12	ASN
38	i	18	THR
38	i	20	ASN
38	i	27	SER
38	i	30	ARG
38	i	33	LEU
38	i	36	HIS
38	i	42	ASP
38	i	45	ARG
38	i	46	GLU
38	i	54	GLU
38	i	85	ARG
38	i	88	GLU
38	i	89	GLU
38	i	103	LYS
39	j	10	LYS

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Mol	Chain	Res	Type
39	j	25	LYS
39	j	27	TYR
39	j	45	ARG
39	j	47	TYR
39	j	48	ASN
39	j	55	ARG
39	j	56	ARG
39	j	57	ASN
39	j	71	TYR
39	j	79	ARG
39	j	80	GLU
40	k	14	THR
40	k	19	ASP
40	k	35	LYS
40	k	37	ARG
40	k	44	THR
40	k	51	GLU
40	k	54	GLU
40	k	56	LEU
40	k	60	LEU
40	k	70	LYS
41	l	12	PHE
41	l	13	LEU
41	l	16	LYS
41	l	17	GLN
41	l	21	ARG
41	l	36	ARG
41	l	46	ARG
41	l	49	LEU
42	m	79	GLU
42	m	84	GLN
42	m	87	GLN
42	m	90	ASN
42	m	96	CYS
42	m	97	ARG
42	m	98	LYS
42	m	104	HIS
42	m	106	ARG
42	m	109	ASN
42	m	111	ARG
42	m	119	ASN
43	n	8	LYS

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Mol	Chain	Res	Type
43	n	9	ARG
43	n	18	ARG
44	o	3	ASN
44	o	17	LYS
44	o	24	THR
44	o	26	TYR
44	o	28	LYS
44	o	33	LEU
44	o	36	GLN
44	o	45	GLN
44	o	48	TYR
44	o	57	ARG
44	o	59	LYS
44	o	61	LYS
44	o	64	LYS
44	o	69	ARG
44	o	76	ASN
44	o	78	ARG
44	o	79	SER
44	o	81	ARG
44	o	82	MET
44	o	99	ARG
44	o	102	GLN
45	p	3	LYS
45	p	4	ARG
45	p	16	THR
45	p	29	ILE
45	p	30	GLU
45	p	48	LYS
45	p	49	ARG
45	p	69	TRP
45	p	84	ARG
45	p	85	ARG
45	p	87	LYS
45	p	92	GLN
46	q	5	ASP
46	q	6	ARG
46	q	14	PHE
46	q	16	LYS
46	q	18	ILE
46	q	26	LYS
46	q	33	ASP

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Mol	Chain	Res	Type
46	q	42	GLN
46	q	44	ARG
46	q	45	MET
46	q	48	ARG
46	q	57	LYS
46	q	59	THR
46	q	62	ARG
46	q	69	LEU
46	q	77	LYS
46	q	81	HIS
46	q	83	ARG
46	q	98	ILE
46	q	100	ASP
46	q	102	LEU
46	q	103	ARG
46	q	116	ILE
46	q	123	VAL
46	q	127	ASN
46	q	130	LEU
46	q	141	LEU
46	q	143	ILE
46	q	149	ARG
46	q	155	LEU
46	q	158	VAL
46	q	162	LYS
46	q	183	PHE
46	q	187	LEU
46	q	191	GLN
46	q	194	ASP
46	q	197	SER
46	q	202	GLU
46	q	203	VAL
46	q	206	ILE
47	r	7	TRP
47	r	11	ARG
47	r	13	CYS
47	r	15	SER
47	r	16	PHE
47	r	18	ILE
47	r	26	SER
47	r	28	GLU
47	r	30	ASN

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Mol	Chain	Res	Type
47	r	35	ARG
47	r	64	ILE
47	r	67	ARG
47	r	83	ASN
47	r	102	TYR
47	r	106	LEU
47	r	107	ARG
47	r	115	SER
48	4	3	ASN
48	4	5	THR
48	4	6	VAL
48	4	12	ILE
48	4	15	LYS
48	4	16	LYS
48	4	27	HIS
48	4	45	ILE
48	4	46	ILE
48	4	48	SER
48	4	50	ARG
48	4	53	GLU
48	4	60	ARG
48	4	61	LYS
48	4	64	GLN
48	4	71	LYS
48	4	75	ILE
48	4	79	TYR
48	4	91	GLN
48	4	92	SER
48	4	93	LYS
48	4	109	VAL
48	4	110	ASP
48	4	113	SER
48	4	114	GLU
48	4	122	THR
48	4	141	THR
48	4	144	ARG
48	4	159	LYS
48	4	162	ARG
48	4	166	GLU
48	4	167	LEU
48	4	168	GLN
48	4	169	LEU

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Mol	Chain	Res	Type
48	4	183	GLU
48	4	194	GLU
48	4	196	GLU
48	4	200	MET
48	4	209	LEU
48	4	216	SER
48	4	225	LEU
48	4	226	LYS
48	4	228	PHE
48	4	236	PHE
48	4	239	LYS
48	4	244	LEU
48	4	248	GLU
48	4	251	LYS
48	4	252	LYS
48	4	256	MET
48	4	264	ARG
48	4	265	TYR
48	4	267	ASP
48	4	272	LYS
48	4	275	LYS
48	4	281	GLU
48	4	284	LYS
48	4	311	GLU
48	4	314	LYS
48	4	317	GLU
48	4	322	LYS
48	4	326	GLU
48	4	330	LYS
48	4	331	GLU
48	4	333	LYS
48	4	343	TRP
48	4	359	PRO
48	4	366	LYS
48	4	368	ARG
48	4	370	GLU
48	4	371	LEU
48	4	393	PRO
48	4	400	LYS
48	4	409	ARG
48	4	411	TYR
48	4	420	LEU

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Mol	Chain	Res	Type
48	4	430	MET
48	4	438	LYS
48	4	439	LYS
48	4	448	GLN
48	4	461	ILE
48	4	462	GLU
48	4	477	GLN
48	4	481	LYS
48	4	488	PHE
48	4	489	GLU
48	4	492	HIS
48	4	493	ASN
48	4	495	ARG
48	4	497	MET
48	4	498	LYS
48	4	499	PHE
48	4	502	SER
48	4	512	LYS
48	4	519	LYS
48	4	524	LEU
48	4	525	LYS
48	4	526	ARG
48	4	540	GLU
48	4	541	SER
48	4	559	LYS
48	4	560	ASP
48	4	563	GLU
48	4	570	ILE
48	4	571	LYS
48	4	572	LYS
48	4	579	TYR
48	4	592	LEU
48	4	607	ARG
48	4	609	PHE
48	4	613	LEU
48	4	615	GLU
48	4	619	LYS
48	4	625	ARG
48	4	630	GLN
48	4	641	TRP
48	4	647	ARG
48	4	667	LYS

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Mol	Chain	Res	Type
48	4	669	VAL
48	4	672	LEU
48	4	673	ASN
48	4	689	GLU
48	4	726	ARG
48	4	727	ARG
48	4	744	ILE
48	4	745	TYR
48	4	746	LEU
48	4	747	VAL
48	4	748	GLU
48	4	754	GLN
48	4	775	GLN
48	4	794	PHE
48	4	801	ARG
48	4	807	GLN
48	4	809	PHE
48	4	817	TRP
48	4	823	ASP
48	4	827	ASN
48	4	830	ARG
48	4	842	LYS
48	4	845	LYS
48	4	848	ILE
48	4	849	PRO
48	4	855	LEU
48	4	858	LEU
50	SA	8	LEU
50	SA	11	LYS
50	SA	32	PHE
50	SA	39	TYR
50	SA	44	ASP
50	SA	53	ARG
50	SA	58	LEU
50	SA	60	LEU
50	SA	73	ASP
50	SA	79	SER
50	SA	81	ASN
50	SA	88	LEU
50	SA	90	PHE
50	SA	99	ILE
50	SA	102	ARG

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Mol	Chain	Res	Type
50	SA	105	PRO
50	SA	111	GLN
50	SA	116	PHE
50	SA	130	ASP
50	SA	140	VAL
50	SA	141	ASN
50	SA	158	ASP
50	SA	169	HIS
50	SA	177	MET
50	SA	178	LEU
50	SA	180	ARG
50	SA	181	GLU
50	SA	185	MET
50	SA	186	ARG
50	SA	195	TRP
50	SA	203	PHE
50	SA	206	ASP
51	SB	27	LYS
51	SB	31	TYR
51	SB	34	LYS
51	SB	51	ARG
51	SB	52	THR
51	SB	55	THR
51	SB	56	LYS
51	SB	67	PHE
51	SB	68	GLU
51	SB	76	ASN
51	SB	77	ASP
51	SB	78	GLU
51	SB	81	PHE
51	SB	85	LYS
51	SB	105	LEU
51	SB	107	ARG
51	SB	119	THR
51	SB	133	TYR
51	SB	136	ARG
51	SB	142	PHE
51	SB	146	ARG
51	SB	148	ASN
51	SB	150	ILE
51	SB	155	TYR
51	SB	158	HIS

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Mol	Chain	Res	Type
51	SB	162	ARG
51	SB	180	ASP
51	SB	181	LEU
51	SB	191	ASP
51	SB	196	ASP
51	SB	208	HIS
52	SC	60	TRP
52	SC	61	MET
52	SC	65	LYS
52	SC	71	LYS
52	SC	72	ASP
52	SC	78	LEU
52	SC	79	GLU
52	SC	92	GLU
52	SC	97	PHE
52	SC	101	SER
52	SC	104	ASP
52	SC	110	MET
52	SC	113	GLN
52	SC	115	GLN
52	SC	120	GLN
52	SC	121	ARG
52	SC	134	ASN
52	SC	137	VAL
52	SC	142	LYS
52	SC	152	ARG
52	SC	167	ARG
52	SC	169	TYR
52	SC	200	ARG
52	SC	215	MET
52	SC	221	ASP
52	SC	227	ARG
52	SC	235	ASN
52	SC	242	ASP
52	SC	245	SER
52	SC	250	TYR
52	SC	251	LEU
52	SC	253	PRO
52	SC	255	LEU
52	SC	262	THR
52	SC	272	HIS
53	SD	6	SER

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Mol	Chain	Res	Type
53	SD	8	LYS
53	SD	9	ARG
53	SD	22	ASN
53	SD	23	GLU
53	SD	32	ASP
53	SD	53	THR
53	SD	61	GLU
53	SD	67	ARG
53	SD	74	GLN
53	SD	87	TYR
53	SD	94	ARG
53	SD	103	GLU
53	SD	113	LEU
53	SD	135	GLU
53	SD	152	PHE
53	SD	154	ASP
53	SD	158	ILE
53	SD	167	TYR
53	SD	169	ASP
53	SD	177	LEU
53	SD	178	ARG
53	SD	182	LEU
53	SD	187	LYS
53	SD	206	ASP
53	SD	212	GLU
53	SD	214	LYS
53	SD	216	GLU
53	SD	218	LEU
53	SD	225	GLU
54	SE	3	ARG
54	SE	8	HIS
54	SE	9	LEU
54	SE	11	ARG
54	SE	15	PRO
54	SE	21	ASP
54	SE	30	ARG
54	SE	39	ARG
54	SE	42	LEU
54	SE	49	ARG
54	SE	51	ARG
54	SE	54	TYR
54	SE	66	MET

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Mol	Chain	Res	Type
54	SE	67	GLN
54	SE	73	ASP
54	SE	76	VAL
54	SE	93	ASP
54	SE	95	THR
54	SE	98	ASN
54	SE	99	PHE
54	SE	117	GLU
54	SE	118	GLU
54	SE	122	LYS
54	SE	151	ASP
54	SE	158	ASP
54	SE	164	LEU
54	SE	165	GLU
54	SE	174	LYS
54	SE	179	ASN
54	SE	180	LEU
54	SE	191	ARG
54	SE	198	ARG
54	SE	205	PHE
54	SE	206	ASP
54	SE	220	THR
54	SE	224	ASN
54	SE	226	PHE
54	SE	240	ARG
54	SE	242	LYS
54	SE	248	ILE
54	SE	253	ASP
54	SE	255	ARG
54	SE	259	LYS
54	SE	260	GLN
55	SF	23	TRP
55	SF	29	GLN
55	SF	38	TYR
55	SF	42	LYS
55	SF	49	LEU
55	SF	65	GLN
55	SF	79	HIS
55	SF	82	ASN
55	SF	83	ASN
55	SF	94	LYS
55	SF	95	HIS

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Mol	Chain	Res	Type
55	SF	106	GLU
55	SF	109	LEU
55	SF	110	GLN
55	SF	118	ASN
55	SF	122	ARG
55	SF	123	GLU
55	SF	130	ARG
55	SF	136	ARG
55	SF	137	GLN
55	SF	140	ASP
55	SF	145	ARG
55	SF	168	THR
55	SF	171	GLU
55	SF	173	LEU
55	SF	176	GLU
55	SF	186	ASN
55	SF	190	ILE
55	SF	194	ASP
55	SF	195	GLU
55	SF	197	GLU
56	SG	12	CYS
56	SG	20	ASP
56	SG	21	GLU
56	SG	30	LYS
56	SG	31	ARG
56	SG	56	ASN
56	SG	58	LYS
56	SG	64	LYS
56	SG	70	HIS
56	SG	74	ARG
56	SG	76	LEU
56	SG	79	LYS
56	SG	87	ARG
56	SG	88	ARG
56	SG	109	LEU
56	SG	110	ASN
56	SG	120	ASP
56	SG	121	ILE
56	SG	126	ASP
56	SG	136	LYS
56	SG	140	ARG
56	SG	143	LYS

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Mol	Chain	Res	Type
56	SG	152	ASP
56	SG	159	ARG
56	SG	162	LEU
56	SG	164	LYS
56	SG	170	ARG
56	SG	171	THR
56	SG	172	LYS
56	SG	186	GLN
56	SG	191	ARG
56	SG	196	LYS
56	SG	198	ARG
56	SG	213	LEU
56	SG	225	GLN
56	SG	227	GLN
56	SG	236	SER
57	SH	16	PRO
57	SH	23	ILE
57	SH	35	ASP
57	SH	36	LEU
57	SH	40	LEU
57	SH	57	ARG
57	SH	66	VAL
57	SH	81	ARG
57	SH	83	LEU
57	SH	99	ARG
57	SH	135	PHE
57	SH	148	LEU
57	SH	151	SER
57	SH	152	ARG
57	SH	159	ASP
57	SH	160	LYS
57	SH	162	GLN
57	SH	166	VAL
57	SH	184	ASP
57	SH	186	ASN
58	SI	6	ASP
58	SI	22	HIS
58	SI	49	ARG
58	SI	52	ASN
58	SI	58	LEU
58	SI	67	TRP
58	SI	70	GLU

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Mol	Chain	Res	Type
58	SI	73	THR
58	SI	74	ARG
58	SI	83	TYR
58	SI	87	ASN
58	SI	105	ASP
58	SI	106	SER
58	SI	110	ARG
58	SI	112	TRP
58	SI	128	LYS
58	SI	130	THR
58	SI	140	LYS
58	SI	143	LYS
58	SI	149	TYR
58	SI	155	ASN
58	SI	191	GLU
58	SI	196	GLU
58	SI	197	PHE
58	SI	203	LYS
59	SJ	5	ARG
59	SJ	9	CYS
59	SJ	10	ARG
59	SJ	17	ARG
59	SJ	18	ARG
59	SJ	20	PHE
59	SJ	26	ASP
59	SJ	29	LEU
59	SJ	37	LEU
59	SJ	39	ASN
59	SJ	67	ASP
59	SJ	69	ARG
59	SJ	101	LYS
59	SJ	108	ARG
59	SJ	109	ARG
59	SJ	110	LEU
59	SJ	115	PHE
59	SJ	116	LYS
59	SJ	123	ILE
59	SJ	124	HIS
59	SJ	127	ARG
59	SJ	131	ARG
59	SJ	138	ARG
59	SJ	139	LYS

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Mol	Chain	Res	Type
59	SJ	147	PHE
59	SJ	150	ARG
59	SJ	152	ASP
59	SJ	159	PHE
59	SJ	162	ARG
59	SJ	165	TYR
59	SJ	174	LYS
60	SK	1	MET
60	SK	2	LEU
60	SK	5	LYS
60	SK	8	ARG
60	SK	13	GLU
60	SK	28	HIS
60	SK	37	ASP
60	SK	40	VAL
60	SK	43	LEU
60	SK	46	MET
60	SK	60	GLU
60	SK	61	GLN
60	SK	65	ARG
60	SK	66	HIS
60	SK	80	ARG
60	SK	81	ASP
60	SK	84	HIS
60	SK	89	ILE
60	SK	95	ARG
61	SL	5	GLN
61	SL	8	ARG
61	SL	16	ILE
61	SL	19	ASN
61	SL	20	LYS
61	SL	22	ARG
61	SL	27	GLU
61	SL	35	ARG
61	SL	39	ASN
61	SL	40	ILE
61	SL	44	PHE
61	SL	65	ASN
61	SL	69	ARG
61	SL	92	TYR
61	SL	97	ARG
61	SL	103	GLU

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Mol	Chain	Res	Type
61	SL	108	ASN
61	SL	113	LEU
61	SL	116	CYS
61	SL	117	PHE
61	SL	121	GLN
61	SL	124	ASP
62	SM	12	MET
62	SM	18	LEU
62	SM	26	LEU
62	SM	29	ASP
62	SM	31	LEU
62	SM	33	ARG
62	SM	45	ARG
62	SM	48	HIS
62	SM	52	GLN
62	SM	73	GLN
62	SM	75	ASN
62	SM	76	LEU
62	SM	77	ILE
62	SM	78	LYS
62	SM	83	LYS
62	SM	88	TRP
62	SM	91	LEU
62	SM	95	ASP
62	SM	96	ARG
62	SM	99	ASN
62	SM	101	ARG
62	SM	102	LYS
62	SM	104	VAL
62	SM	109	VAL
62	SM	113	ASP
62	SM	114	TYR
62	SM	127	TYR
63	SN	3	ARG
63	SN	24	THR
63	SN	25	TRP
63	SN	26	LEU
63	SN	27	LYS
63	SN	31	ASP
63	SN	38	TYR
63	SN	55	ARG
63	SN	56	ASP

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Mol	Chain	Res	Type
63	SN	58	HIS
63	SN	62	GLN
63	SN	64	ARG
63	SN	69	ASN
63	SN	78	LYS
63	SN	83	ASP
63	SN	84	LEU
63	SN	86	GLU
63	SN	87	ASP
63	SN	89	TYR
63	SN	99	ARG
63	SN	101	HIS
63	SN	104	ARG
63	SN	105	ASN
63	SN	113	PHE
63	SN	125	LEU
63	SN	127	ARG
63	SN	128	TYR
63	SN	130	LYS
63	SN	132	LYS
63	SN	133	ARG
63	SN	134	VAL
63	SN	144	SER
64	SO	17	LEU
64	SO	21	VAL
64	SO	34	PHE
64	SO	39	ASP
64	SO	41	PHE
64	SO	43	HIS
64	SO	51	GLU
64	SO	52	THR
64	SO	63	LYS
64	SO	65	ASP
64	SO	80	ASP
64	SO	84	ARG
64	SO	86	LYS
64	SO	94	HIS
64	SO	103	ASN
64	SO	106	LYS
64	SO	116	LEU
64	SO	117	ARG
64	SO	121	ARG

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Mol	Chain	Res	Type
64	SO	128	ARG
64	SO	130	GLU
64	SO	146	ARG
64	SO	147	ARG
64	SO	150	ARG
65	SP	5	GLU
65	SP	6	GLN
65	SP	7	LYS
65	SP	10	ARG
65	SP	41	GLN
65	SP	42	ARG
65	SP	43	ARG
65	SP	50	ARG
65	SP	52	LYS
65	SP	79	HIS
65	SP	86	LEU
66	SQ	15	ARG
66	SQ	26	LYS
66	SQ	35	ASN
66	SQ	45	ARG
66	SQ	62	ARG
66	SQ	72	VAL
66	SQ	73	LYS
66	SQ	85	ARG
66	SQ	99	TYR
66	SQ	114	GLN
66	SQ	126	ARG
66	SQ	128	GLU
66	SQ	138	ARG
66	SQ	140	ARG
66	SQ	145	TYR
67	SR	3	ARG
67	SR	18	GLU
67	SR	31	ASN
67	SR	36	GLU
67	SR	37	GLU
67	SR	56	HIS
67	SR	78	ARG
67	SR	79	GLU
67	SR	83	ASN
67	SR	87	GLU
67	SR	91	LEU

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Mol	Chain	Res	Type
67	SR	93	GLN
67	SR	104	GLU
67	SR	109	LEU
67	SR	118	GLN
67	SR	120	THR
68	SS	8	LYS
68	SS	10	GLN
68	SS	14	ARG
68	SS	18	THR
68	SS	23	ARG
68	SS	28	PHE
68	SS	63	GLU
68	SS	78	LYS
68	SS	82	TRP
68	SS	85	ASN
68	SS	86	ARG
68	SS	87	GLN
68	SS	95	TYR
68	SS	108	ARG
68	SS	118	ARG
68	SS	124	ARG
68	SS	125	HIS
68	SS	134	GLN
68	SS	135	HIS
69	ST	13	GLU
69	ST	23	LYS
69	ST	28	LEU
69	ST	33	TRP
69	ST	35	ASP
69	ST	37	VAL
69	ST	39	LEU
69	ST	42	HIS
69	ST	53	PHE
69	ST	62	ARG
69	ST	63	HIS
69	ST	74	SER
69	ST	79	TYR
69	ST	82	ARG
69	ST	83	GLN
69	ST	84	ARG
69	ST	92	PHE
69	ST	94	ARG

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Mol	Chain	Res	Type
69	ST	97	LYS
69	ST	108	GLU
69	ST	118	ASP
69	ST	121	ARG
69	ST	128	GLN
69	ST	129	ARG
69	ST	130	ASP
70	SU	19	ARG
70	SU	20	ILE
70	SU	47	ASN
70	SU	48	LEU
70	SU	49	LYS
70	SU	55	ARG
70	SU	56	MET
70	SU	70	CYS
70	SU	77	TRP
70	SU	87	ARG
70	SU	111	GLU
71	SV	1	MET
71	SV	2	GLN
71	SV	4	ASP
71	SV	11	LEU
71	SV	18	SER
71	SV	21	ASN
71	SV	39	VAL
71	SV	45	ARG
71	SV	49	GLN
71	SV	50	PHE
71	SV	81	LYS
72	SW	2	VAL
72	SW	3	ARG
72	SW	6	VAL
72	SW	12	LYS
72	SW	24	GLN
72	SW	28	ARG
72	SW	36	ARG
72	SW	37	PHE
72	SW	52	ILE
72	SW	57	ARG
72	SW	70	ASN
72	SW	74	VAL
72	SW	78	ARG

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Mol	Chain	Res	Type
72	SW	80	ASP
72	SW	84	LYS
72	SW	85	ASP
72	SW	90	GLN
72	SW	91	ASN
72	SW	98	GLN
73	SX	5	ARG
73	SX	7	LEU
73	SX	9	THR
73	SX	14	ARG
73	SX	17	ARG
73	SX	19	ASP
73	SX	32	LEU
73	SX	37	LYS
73	SX	45	SER
73	SX	46	HIS
73	SX	67	ARG
73	SX	87	ASN
73	SX	88	ASP
73	SX	105	PHE
73	SX	107	ARG
73	SX	114	ASP
73	SX	131	LEU
74	SY	3	ASP
74	SY	16	ARG
74	SY	17	LEU
74	SY	19	GLN
74	SY	20	ARG
74	SY	23	MET
74	SY	47	MET
74	SY	54	VAL
74	SY	63	HIS
74	SY	64	PHE
74	SY	69	THR
74	SY	80	ASP
74	SY	96	LEU
74	SY	98	GLU
74	SY	99	LYS
74	SY	101	LYS
74	SY	107	ARG
74	SY	111	LYS
75	SZ	44	LEU

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Mol	Chain	Res	Type
75	SZ	45	ASN
75	SZ	49	LEU
75	SZ	64	ASN
75	SZ	69	THR
75	SZ	85	ARG
75	SZ	94	LYS
75	SZ	97	ILE
75	SZ	109	TYR
75	SZ	110	THR
75	SZ	114	LYS
76	Sa	28	ARG
76	Sa	41	ILE
76	Sa	51	ARG
76	Sa	52	ASP
76	Sa	62	TYR
76	Sa	72	HIS
76	Sa	94	ASP
76	Sa	95	ARG
77	Sb	14	GLU
77	Sb	17	ARG
77	Sb	26	GLN
77	Sb	34	ASP
77	Sb	37	CYS
77	Sb	47	PHE
77	Sb	59	CYS
77	Sb	72	ARG
77	Sb	75	GLU
77	Sb	78	SER
77	Sb	84	HIS
78	Sc	5	ARG
78	Sc	7	GLN
78	Sc	13	ARG
78	Sc	21	THR
78	Sc	26	GLN
78	Sc	31	ARG
78	Sc	33	GLU
78	Sc	34	PHE
78	Sc	40	ARG
78	Sc	42	ILE
78	Sc	44	ARG
78	Sc	51	ARG
78	Sc	54	ASP

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Mol	Chain	Res	Type
78	Sc	60	GLU
78	Sc	67	ARG
79	Sd	6	PHE
79	Sd	8	TRP
79	Sd	10	HIS
79	Sd	12	ARG
79	Sd	16	GLN
79	Sd	23	VAL
79	Sd	26	ASN
79	Sd	30	LEU
79	Sd	36	LEU
79	Sd	43	PHE
79	Sd	54	LYS
79	Sd	56	ASP
80	Se	13	ARG
80	Se	15	GLN
80	Se	18	LYS
80	Se	25	LYS
80	Se	28	LYS
80	Se	31	ARG
80	Se	35	ARG
80	Se	40	ARG
80	Se	41	ARG
80	Se	52	LYS
81	Sf	87	THR
81	Sf	89	LYS
81	Sf	95	ARG
81	Sf	98	VAL
81	Sf	106	TYR
81	Sf	119	ARG
81	Sf	120	GLU
81	Sf	126	CYS
81	Sf	131	PHE
81	Sf	136	PHE
81	Sf	138	ARG
81	Sf	139	HIS
81	Sf	140	TYR
81	Sf	141	CYS
81	Sf	143	LYS
81	Sf	146	LEU
81	Sf	148	TYR
81	Sf	149	CYS

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Mol	Chain	Res	Type
81	Sf	150	PHE
81	Sf	152	LYS
82	Sg	8	ARG
82	Sg	15	ASN
82	Sg	17	TRP
82	Sg	20	GLN
82	Sg	24	THR
82	Sg	44	LYS
82	Sg	47	ARG
82	Sg	49	GLU
82	Sg	60	ARG
82	Sg	74	ASP
82	Sg	84	ASP
82	Sg	100	ARG
82	Sg	107	ASP
82	Sg	118	ARG
82	Sg	133	ASN
82	Sg	143	GLN
82	Sg	167	SER
82	Sg	215	GLN
82	Sg	226	HIS
82	Sg	229	THR
82	Sg	234	ASP
82	Sg	258	ILE
82	Sg	268	ASP
82	Sg	282	GLU
82	Sg	297	THR
82	Sg	306	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (307) 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

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Mol	Chain	Res	Type
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	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	97	ASN
8	E	124	HIS
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	153	ASN
9	F	174	ASN
9	F	194	HIS

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Mol	Chain	Res	Type
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	213	HIS
13	J	46	GLN
13	J	155	HIS
13	J	170	HIS
14	K	149	HIS
15	L	6	ASN
15	L	28	GLN
15	L	87	HIS
15	L	113	ASN
15	L	159	ASN
16	M	20	HIS
16	M	33	GLN
16	M	34	ASN
16	M	48	GLN
17	N	8	GLN
17	N	29	GLN
17	N	90	ASN
17	N	109	HIS
17	N	158	HIS
17	N	178	HIS
17	N	181	HIS
17	N	182	HIS
17	N	196	ASN
17	N	201	HIS

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Mol	Chain	Res	Type
18	O	14	HIS
18	O	65	ASN
18	O	96	GLN
18	O	173	GLN
18	O	184	ASN
19	P	28	ASN
19	P	56	GLN
19	P	64	ASN
19	P	80	GLN
19	P	133	HIS
19	P	145	HIS
20	Q	7	HIS
20	Q	8	ASN
20	Q	40	ASN
20	Q	44	ASN
20	Q	57	ASN
20	Q	93	GLN
20	Q	188	ASN
21	R	66	ASN
21	R	75	HIS
21	R	118	HIS
21	R	143	HIS
22	S	37	HIS
22	S	50	GLN
22	S	91	HIS
22	S	122	HIS
22	S	125	GLN
22	S	163	HIS
23	T	58	HIS
23	T	70	HIS
23	T	139	HIS
24	U	27	HIS
24	U	38	ASN
24	U	55	ASN
24	U	105	ASN
25	V	36	ASN
25	V	135	ASN
26	W	17	HIS
26	W	59	HIS
27	X	57	GLN
27	X	93	ASN
27	X	111	GLN

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Mol	Chain	Res	Type
28	Y	24	HIS
28	Y	56	GLN
28	Y	72	GLN
28	Y	86	GLN
28	Y	100	HIS
28	Y	127	GLN
29	Z	79	HIS
30	a	19	HIS
30	a	34	ASN
30	a	40	HIS
30	a	41	HIS
30	a	62	HIS
30	a	67	GLN
31	b	7	HIS
31	b	19	ASN
31	b	27	GLN
31	b	42	ASN
32	c	19	GLN
32	c	40	GLN
32	c	77	ASN
33	d	30	HIS
33	d	93	ASN
33	d	100	ASN
34	e	24	GLN
34	e	43	ASN
34	e	126	ASN
35	f	21	GLN
35	f	24	HIS
35	f	55	ASN
35	f	56	ASN
35	f	65	ASN
35	f	80	ASN
36	g	18	ASN
36	g	112	GLN
37	h	68	ASN
37	h	98	HIS
39	j	16	HIS
39	j	48	ASN
42	m	84	GLN
42	m	87	GLN
42	m	109	ASN
42	m	120	ASN

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Mol	Chain	Res	Type
44	o	21	HIS
44	o	25	GLN
44	o	45	GLN
44	o	76	ASN
44	o	90	HIS
46	q	41	GLN
46	q	58	ASN
46	q	126	GLN
46	q	139	GLN
46	q	191	GLN
46	q	200	ASN
47	r	6	GLN
47	r	12	ASN
47	r	31	ASN
47	r	36	ASN
47	r	70	GLN
47	r	83	ASN
48	4	3	ASN
48	4	21	ASN
48	4	27	HIS
48	4	64	GLN
48	4	158	ASN
48	4	168	GLN
48	4	179	GLN
48	4	448	GLN
48	4	477	GLN
48	4	493	ASN
48	4	684	GLN
48	4	705	HIS
48	4	710	HIS
48	4	715	HIS
48	4	737	GLN
48	4	803	ASN
48	4	807	GLN
48	4	811	GLN
48	4	816	HIS
48	4	827	ASN
50	SA	24	HIS
50	SA	29	ASN
50	SA	33	GLN
50	SA	110	ASN
50	SA	141	ASN

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Mol	Chain	Res	Type
50	SA	169	HIS
51	SB	99	ASN
51	SB	118	GLN
51	SB	124	HIS
51	SB	148	ASN
52	SC	113	GLN
52	SC	115	GLN
52	SC	120	GLN
52	SC	134	ASN
52	SC	272	HIS
53	SD	4	GLN
53	SD	22	ASN
53	SD	159	HIS
53	SD	226	GLN
54	SE	36	HIS
54	SE	138	HIS
54	SE	161	GLN
55	SF	29	GLN
55	SF	65	GLN
55	SF	82	ASN
55	SF	95	HIS
55	SF	137	GLN
55	SF	186	ASN
55	SF	203	ASN
56	SG	59	GLN
56	SG	65	GLN
56	SG	110	ASN
57	SH	76	GLN
58	SI	9	HIS
58	SI	44	HIS
59	SJ	111	GLN
59	SJ	143	ASN
60	SK	28	HIS
60	SK	39	ASN
61	SL	65	ASN
61	SL	100	ASN
61	SL	106	HIS
61	SL	141	ASN
62	SM	48	HIS
62	SM	52	GLN
62	SM	99	ASN
63	SN	5	HIS

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Mol	Chain	Res	Type
63	SN	69	ASN
65	SP	24	GLN
65	SP	79	HIS
66	SQ	24	HIS
66	SQ	48	GLN
66	SQ	114	GLN
66	SQ	142	GLN
67	SR	83	ASN
68	SS	10	GLN
68	SS	42	HIS
68	SS	120	HIS
68	SS	125	HIS
69	ST	11	GLN
69	ST	51	ASN
69	ST	63	HIS
70	SU	47	ASN
71	SV	29	HIS
71	SV	47	ASN
71	SV	49	GLN
72	SW	82	GLN
72	SW	98	GLN
73	SX	20	HIS
73	SX	23	HIS
73	SX	61	GLN
73	SX	87	ASN
73	SX	97	ASN
74	SY	15	ASN
74	SY	85	ASN
74	SY	94	HIS
75	SZ	103	HIS
76	Sa	72	HIS
77	Sb	19	HIS
77	Sb	26	GLN
77	Sb	51	GLN
78	Sc	7	GLN
78	Sc	24	GLN
78	Sc	26	GLN
79	Sd	10	HIS
79	Sd	26	ASN
79	Sd	28	HIS
80	Se	37	GLN
80	Se	58	ASN

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Mol	Chain	Res	Type
81	Sf	111	ASN
82	Sg	181	ASN
82	Sg	215	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	5	3652/3664 (99%)	1671 (45%)	621 (17%)
2	7	119/120 (99%)	31 (26%)	9 (7%)
3	8	155/156 (99%)	61 (39%)	22 (14%)
49	S2	1716/1742 (98%)	770 (44%)	269 (15%)
All	All	5642/5682 (99%)	2533 (44%)	921 (16%)

All (2533) 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	55	G
1	5	56	A
1	5	58	G

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Mol	Chain	Res	Type
1	5	59	A
1	5	64	A
1	5	65	A
1	5	66	A
1	5	69	A
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

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Mol	Chain	Res	Type
1	5	134	G
1	5	135	G
1	5	136	C
1	5	137	G
1	5	138	G
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

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Mol	Chain	Res	Type
1	5	218	A
1	5	219	G
1	5	220	C
1	5	221	C
1	5	224	U
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

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Mol	Chain	Res	Type
1	5	309	C
1	5	310	G
1	5	315	G
1	5	316	U
1	5	317	A
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

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Mol	Chain	Res	Type
1	5	389	A
1	5	390	C
1	5	395	A
1	5	399	G
1	5	406	C
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

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Mol	Chain	Res	Type
1	5	491	G
1	5	496	G
1	5	498	C
1	5	500	G
1	5	502	C
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

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Mol	Chain	Res	Type
1	5	694	C
1	5	695	G
1	5	696	C
1	5	697	G
1	5	702	U
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

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Mol	Chain	Res	Type
1	5	933	G
1	5	934	C
1	5	935	A
1	5	936	C
1	5	937	U
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

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Mol	Chain	Res	Type
1	5	1051	G
1	5	1068	G
1	5	1069	G
1	5	1072	C
1	5	1075	G
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

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Mol	Chain	Res	Type
1	5	1266	G
1	5	1267	C
1	5	1268	G
1	5	1269	G
1	5	1270	A
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

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Mol	Chain	Res	Type
1	5	1344	C
1	5	1354	A
1	5	1357	C
1	5	1358	G
1	5	1359	G
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

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Mol	Chain	Res	Type
1	5	1439	C
1	5	1440	U
1	5	1441	C
1	5	1444	G
1	5	1445	U
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

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Mol	Chain	Res	Type
1	5	1523	A
1	5	1525	A
1	5	1530	G
1	5	1534	A
1	5	1535	C
1	5	1542	U
1	5	1543	G
1	5	1547	A
1	5	1562	G
1	5	1563	A
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

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Mol	Chain	Res	Type
1	5	1662	C
1	5	1670	G
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

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Mol	Chain	Res	Type
1	5	1755	C
1	5	1756	U
1	5	1757	U
1	5	1758	G
1	5	1759	G
1	5	1760	G
1	5	1761	G
1	5	1762	C
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

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Mol	Chain	Res	Type
1	5	1840	G
1	5	1842	G
1	5	1843	A
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

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Mol	Chain	Res	Type
1	5	1925	G
1	5	1929	A
1	5	1930	U
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	1944	A
1	5	1945	G
1	5	1946	G
1	5	1947	U
1	5	1948	G
1	5	1951	G
1	5	1952	G
1	5	1956	A
1	5	1958	A
1	5	1959	U
1	5	1960	A
1	5	1961	G
1	5	1962	A
1	5	1963	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	1991	A
1	5	1992	U
1	5	1993	C

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Mol	Chain	Res	Type
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
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	2022	C
1	5	2024	G
1	5	2025	A
1	5	2026	A
1	5	2027	U
1	5	2033	A
1	5	2034	G
1	5	2038	U
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
1	5	2511	A
1	5	2512	A
1	5	2513	A
1	5	2514	G
1	5	2526	C
1	5	2527	A
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

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Mol	Chain	Res	Type
1	5	2630	U
1	5	2631	U
1	5	2638	G
1	5	2639	U
1	5	2640	G
1	5	2643	G
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

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Mol	Chain	Res	Type
1	5	2726	G
1	5	2735	G
1	5	2737	C
1	5	2740	U
1	5	2743	A
1	5	2744	A
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

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Mol	Chain	Res	Type
1	5	2826	U
1	5	2827	G
1	5	2828	U
1	5	2829	U
1	5	2832	A
1	5	2833	A
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

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Mol	Chain	Res	Type
1	5	3605	C
1	5	3606	U
1	5	3615	G
1	5	3616	U
1	5	3617	G
1	5	3620	G
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

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Mol	Chain	Res	Type
1	5	3692	A
1	5	3698	G
1	5	3699	C
1	5	3709	U
1	5	3710	G
1	5	3711	A
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

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Mol	Chain	Res	Type
1	5	3803	A
1	5	3807	A
1	5	3809	G
1	5	3810	C
1	5	3811	G
1	5	3813	A
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

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Mol	Chain	Res	Type
1	5	3912	U
1	5	3913	G
1	5	3914	U
1	5	3915	U
1	5	3916	G
1	5	3917	A
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	4069	U
1	5	4070	U
1	5	4073	A
1	5	4075	U
1	5	4076	G
1	5	4083	U
1	5	4084	G
1	5	4085	A
1	5	4086	G
1	5	4087	G
1	5	4088	C
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
49	S2	3	C
49	S2	4	C
49	S2	9	U
49	S2	10	G
49	S2	17	C
49	S2	18	C
49	S2	20	G
49	S2	23	G
49	S2	24	C
49	S2	25	A
49	S2	27	A
49	S2	33	G
49	S2	39	A
49	S2	44	U
49	S2	45	A
49	S2	46	A
49	S2	49	C
49	S2	51	U
49	S2	53	C
49	S2	56	G
49	S2	57	U
49	S2	58	C
49	S2	59	U
49	S2	60	A
49	S2	61	A
49	S2	62	G

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Mol	Chain	Res	Type
49	S2	63	U
49	S2	64	A
49	S2	65	C
49	S2	66	G
49	S2	67	C
49	S2	68	A
49	S2	71	G
49	S2	72	C
49	S2	73	C
49	S2	74	G
49	S2	75	G
49	S2	76	U
49	S2	77	A
49	S2	78	C
49	S2	79	A
49	S2	80	G
49	S2	84	A
49	S2	88	G
49	S2	89	C
49	S2	92	A
49	S2	98	C
49	S2	99	A
49	S2	101	U
49	S2	103	A
49	S2	104	A
49	S2	105	U
49	S2	111	A
49	S2	113	G
49	S2	114	G
49	S2	115	U
49	S2	116	U
49	S2	117	C
49	S2	123	G
49	S2	125	C
49	S2	127	C
49	S2	140	C
49	S2	141	A
49	S2	142	C
49	S2	143	U
49	S2	144	U
49	S2	146	G
49	S2	147	A

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Mol	Chain	Res	Type
49	S2	148	U
49	S2	150	A
49	S2	153	G
49	S2	154	U
49	S2	155	G
49	S2	156	G
49	S2	158	A
49	S2	159	A
49	S2	160	U
49	S2	161	U
49	S2	162	C
49	S2	163	U
49	S2	164	A
49	S2	165	G
49	S2	167	G
49	S2	169	U
49	S2	170	A
49	S2	173	A
49	S2	176	U
49	S2	180	G
49	S2	181	A
49	S2	182	C
49	S2	183	G
49	S2	184	G
49	S2	188	C
49	S2	189	U
49	S2	191	A
49	S2	192	C
49	S2	200	G
49	S2	202	G
49	S2	206	G
49	S2	209	A
49	S2	210	U
49	S2	211	G
49	S2	213	G
49	S2	215	G
49	S2	216	C
49	S2	217	A
49	S2	290	U
49	S2	291	G
49	S2	292	A
49	S2	293	C

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Mol	Chain	Res	Type
49	S2	295	C
49	S2	302	A
49	S2	305	U
49	S2	306	C
49	S2	307	G
49	S2	308	G
49	S2	309	G
49	S2	310	C
49	S2	311	C
49	S2	312	G
49	S2	313	A
49	S2	314	U
49	S2	316	G
49	S2	317	C
49	S2	318	A
49	S2	319	C
49	S2	321	C
49	S2	324	C
49	S2	325	C
49	S2	326	C
49	S2	327	G
49	S2	328	U
49	S2	338	G
49	S2	340	C
49	S2	341	C
49	S2	342	C
49	S2	343	A
49	S2	346	C
49	S2	347	G
49	S2	350	C
49	S2	355	G
49	S2	356	C
49	S2	357	C
49	S2	360	A
49	S2	362	C
49	S2	364	A
49	S2	365	C
49	S2	367	U
49	S2	368	U
49	S2	369	C
49	S2	370	G
49	S2	373	G

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Mol	Chain	Res	Type
49	S2	377	G
49	S2	380	G
49	S2	381	C
49	S2	382	C
49	S2	384	U
49	S2	385	G
49	S2	386	C
49	S2	394	G
49	S2	398	A
49	S2	400	C
49	S2	407	G
49	S2	408	A
49	S2	409	C
49	S2	411	G
49	S2	414	A
49	S2	416	U
49	S2	417	C
49	S2	418	A
49	S2	419	G
49	S2	421	G
49	S2	422	U
49	S2	425	G
49	S2	426	A
49	S2	427	U
49	S2	428	U
49	S2	429	C
49	S2	435	A
49	S2	436	G
49	S2	438	G
49	S2	441	C
49	S2	444	G
49	S2	445	A
49	S2	447	A
49	S2	448	A
49	S2	449	A
49	S2	450	C
49	S2	453	C
49	S2	454	U
49	S2	455	A
49	S2	459	C
49	S2	460	A
49	S2	464	A

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Mol	Chain	Res	Type
49	S2	465	A
49	S2	466	G
49	S2	467	G
49	S2	468	A
49	S2	469	A
49	S2	471	G
49	S2	472	C
49	S2	473	A
49	S2	474	G
49	S2	476	A
49	S2	482	G
49	S2	487	U
49	S2	488	U
49	S2	489	A
49	S2	492	C
49	S2	493	A
49	S2	496	C
49	S2	499	G
49	S2	500	A
49	S2	501	C
49	S2	507	G
49	S2	508	A
49	S2	516	A
49	S2	518	G
49	S2	523	A
49	S2	525	A
49	S2	528	A
49	S2	530	U
49	S2	532	C
49	S2	533	A
49	S2	534	G
49	S2	542	U
49	S2	544	G
49	S2	548	C
49	S2	549	C
49	S2	550	C
49	S2	551	U
49	S2	552	G
49	S2	554	A
49	S2	555	A
49	S2	556	U
49	S2	557	U

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Mol	Chain	Res	Type
49	S2	559	G
49	S2	560	A
49	S2	562	U
49	S2	563	G
49	S2	564	A
49	S2	568	C
49	S2	575	A
49	S2	576	A
49	S2	578	C
49	S2	579	C
49	S2	580	U
49	S2	583	C
49	S2	588	G
49	S2	589	G
49	S2	590	A
49	S2	591	U
49	S2	592	C
49	S2	593	C
49	S2	595	U
49	S2	596	U
49	S2	598	G
49	S2	600	G
49	S2	601	G
49	S2	602	G
49	S2	604	A
49	S2	605	A
49	S2	606	G
49	S2	607	U
49	S2	608	C
49	S2	612	U
49	S2	614	C
49	S2	616	A
49	S2	617	G
49	S2	621	C
49	S2	623	G
49	S2	626	G
49	S2	627	U
49	S2	628	A
49	S2	629	A
49	S2	630	U
49	S2	631	U
49	S2	632	C

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Mol	Chain	Res	Type
49	S2	643	A
49	S2	644	G
49	S2	646	G
49	S2	649	U
49	S2	655	A
49	S2	657	U
49	S2	660	C
49	S2	662	G
49	S2	666	U
49	S2	667	U
49	S2	668	A
49	S2	669	A
49	S2	671	A
49	S2	672	A
49	S2	673	G
49	S2	679	A
49	S2	683	G
49	S2	684	G
49	S2	687	C
49	S2	688	U
49	S2	689	U
49	S2	690	G
49	S2	693	A
49	S2	694	G
49	S2	695	C
49	S2	698	G
49	S2	731	G
49	S2	733	C
49	S2	734	C
49	S2	735	C
49	S2	736	C
49	S2	738	C
49	S2	739	C
49	S2	745	C
49	S2	747	U
49	S2	748	C
49	S2	749	U
49	S2	751	G
49	S2	752	G
49	S2	753	C
49	S2	788	G
49	S2	791	C

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Mol	Chain	Res	Type
49	S2	797	C
49	S2	798	A
49	S2	799	U
49	S2	800	U
49	S2	809	A
49	S2	810	A
49	S2	811	A
49	S2	812	A
49	S2	815	U
49	S2	816	A
49	S2	820	U
49	S2	821	G
49	S2	822	U
49	S2	827	A
49	S2	830	A
49	S2	833	C
49	S2	834	C
49	S2	835	C
49	S2	836	G
49	S2	837	A
49	S2	838	G
49	S2	840	C
49	S2	841	G
49	S2	842	C
49	S2	843	C
49	S2	845	G
49	S2	847	A
49	S2	848	U
49	S2	856	C
49	S2	861	A
49	S2	867	G
49	S2	868	G
49	S2	869	A
49	S2	870	A
49	S2	871	U
49	S2	872	A
49	S2	873	G
49	S2	875	A
49	S2	877	C
49	S2	878	G
49	S2	879	C
49	S2	880	G

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Mol	Chain	Res	Type
49	S2	881	G
49	S2	887	U
49	S2	888	U
49	S2	890	U
49	S2	891	G
49	S2	892	U
49	S2	897	U
49	S2	898	U
49	S2	903	A
49	S2	910	G
49	S2	913	A
49	S2	914	U
49	S2	915	G
49	S2	917	U
49	S2	918	U
49	S2	919	A
49	S2	920	A
49	S2	921	G
49	S2	930	C
49	S2	933	G
49	S2	934	G
49	S2	938	A
49	S2	943	U
49	S2	954	U
49	S2	955	A
49	S2	956	G
49	S2	957	A
49	S2	958	G
49	S2	959	G
49	S2	960	U
49	S2	961	G
49	S2	962	A
49	S2	964	A
49	S2	965	U
49	S2	966	U
49	S2	968	U
49	S2	969	U
49	S2	970	G
49	S2	971	G
49	S2	979	C
49	S2	980	A
49	S2	981	A

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Mol	Chain	Res	Type
49	S2	990	A
49	S2	991	G
49	S2	992	A
49	S2	996	A
49	S2	997	A
49	S2	999	G
49	S2	1001	A
49	S2	1002	U
49	S2	1008	A
49	S2	1017	U
49	S2	1023	A
49	S2	1033	G
49	S2	1034	A
49	S2	1035	A
49	S2	1040	G
49	S2	1041	G
49	S2	1044	G
49	S2	1045	U
49	S2	1049	A
49	S2	1050	A
49	S2	1060	A
49	S2	1062	A
49	S2	1067	C
49	S2	1070	A
49	S2	1072	U
49	S2	1073	U
49	S2	1077	A
49	S2	1078	C
49	S2	1083	A
49	S2	1084	A
49	S2	1085	C
49	S2	1087	A
49	S2	1088	U
49	S2	1089	G
49	S2	1091	C
49	S2	1096	G
49	S2	1099	G
49	S2	1100	A
49	S2	1102	G
49	S2	1109	C
49	S2	1110	G
49	S2	1111	U

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Mol	Chain	Res	Type
49	S2	1114	U
49	S2	1115	U
49	S2	1116	C
49	S2	1117	C
49	S2	1118	C
49	S2	1120	U
49	S2	1123	C
49	S2	1126	G
49	S2	1130	G
49	S2	1131	G
49	S2	1133	A
49	S2	1137	U
49	S2	1138	C
49	S2	1139	C
49	S2	1143	A
49	S2	1144	A
49	S2	1146	C
49	S2	1148	A
49	S2	1149	A
49	S2	1150	A
49	S2	1151	G
49	S2	1153	C
49	S2	1154	U
49	S2	1157	G
49	S2	1165	G
49	S2	1166	G
49	S2	1171	G
49	S2	1172	U
49	S2	1181	A
49	S2	1182	A
49	S2	1186	U
49	S2	1187	G
49	S2	1192	U
49	S2	1194	A
49	S2	1195	A
49	S2	1199	A
49	S2	1200	A
49	S2	1206	G
49	S2	1207	G
49	S2	1208	A
49	S2	1211	G
49	S2	1212	G

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Mol	Chain	Res	Type
49	S2	1214	A
49	S2	1215	C
49	S2	1216	C
49	S2	1217	A
49	S2	1221	G
49	S2	1224	G
49	S2	1234	C
49	S2	1242	U
49	S2	1243	U
49	S2	1244	U
49	S2	1247	C
49	S2	1248	U
49	S2	1250	A
49	S2	1251	A
49	S2	1253	A
49	S2	1254	C
49	S2	1256	G
49	S2	1257	G
49	S2	1258	A
49	S2	1259	A
49	S2	1264	C
49	S2	1265	A
49	S2	1266	C
49	S2	1267	C
49	S2	1268	C
49	S2	1269	G
49	S2	1271	C
49	S2	1273	C
49	S2	1274	G
49	S2	1275	G
49	S2	1276	A
49	S2	1280	G
49	S2	1282	A
49	S2	1283	C
49	S2	1284	A
49	S2	1285	G
49	S2	1286	G
49	S2	1288	U
49	S2	1289	U
49	S2	1292	C
49	S2	1293	A
49	S2	1296	U

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Mol	Chain	Res	Type
49	S2	1298	G
49	S2	1299	A
49	S2	1301	A
49	S2	1302	G
49	S2	1303	C
49	S2	1304	U
49	S2	1305	C
49	S2	1306	U
49	S2	1308	U
49	S2	1309	C
49	S2	1312	G
49	S2	1313	A
49	S2	1314	U
49	S2	1315	U
49	S2	1316	C
49	S2	1322	G
49	S2	1324	G
49	S2	1326	U
49	S2	1330	G
49	S2	1332	A
49	S2	1333	U
49	S2	1337	C
49	S2	1342	U
49	S2	1343	U
49	S2	1345	G
49	S2	1348	G
49	S2	1352	G
49	S2	1367	U
49	S2	1368	U
49	S2	1369	A
49	S2	1370	A
49	S2	1371	U
49	S2	1372	U
49	S2	1373	C
49	S2	1378	A
49	S2	1379	A
49	S2	1380	C
49	S2	1385	G
49	S2	1394	G
49	S2	1395	C
49	S2	1396	A
49	S2	1397	U

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Mol	Chain	Res	Type
49	S2	1401	A
49	S2	1402	A
49	S2	1403	C
49	S2	1404	U
49	S2	1405	A
49	S2	1407	U
49	S2	1410	C
49	S2	1411	G
49	S2	1412	C
49	S2	1414	A
49	S2	1417	C
49	S2	1418	C
49	S2	1419	C
49	S2	1420	G
49	S2	1424	G
49	S2	1426	U
49	S2	1429	G
49	S2	1430	C
49	S2	1431	G
49	S2	1432	U
49	S2	1433	C
49	S2	1434	C
49	S2	1435	C
49	S2	1437	C
49	S2	1438	A
49	S2	1441	U
49	S2	1442	U
49	S2	1449	G
49	S2	1450	G
49	S2	1452	A
49	S2	1454	A
49	S2	1455	A
49	S2	1456	G
49	S2	1462	U
49	S2	1463	U
49	S2	1464	C
49	S2	1466	G
49	S2	1467	C
49	S2	1474	A
49	S2	1475	G
49	S2	1476	A
49	S2	1477	U

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Mol	Chain	Res	Type
49	S2	1478	U
49	S2	1489	A
49	S2	1490	G
49	S2	1493	C
49	S2	1494	U
49	S2	1495	G
49	S2	1496	U
49	S2	1506	A
49	S2	1507	G
49	S2	1508	A
49	S2	1509	U
49	S2	1510	G
49	S2	1512	C
49	S2	1513	C
49	S2	1514	G
49	S2	1515	G
49	S2	1520	G
49	S2	1521	C
49	S2	1522	A
49	S2	1525	C
49	S2	1527	C
49	S2	1531	A
49	S2	1534	C
49	S2	1535	U
49	S2	1536	G
49	S2	1537	A
49	S2	1540	G
49	S2	1541	G
49	S2	1542	C
49	S2	1543	U
49	S2	1544	C
49	S2	1545	A
49	S2	1546	G
49	S2	1548	G
49	S2	1550	G
49	S2	1551	U
49	S2	1552	G
49	S2	1553	C
49	S2	1554	C
49	S2	1555	U
49	S2	1556	A
49	S2	1557	C

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Mol	Chain	Res	Type
49	S2	1558	C
49	S2	1560	U
49	S2	1567	G
49	S2	1568	C
49	S2	1569	A
49	S2	1570	G
49	S2	1574	C
49	S2	1578	U
49	S2	1579	A
49	S2	1580	A
49	S2	1581	C
49	S2	1585	U
49	S2	1586	U
49	S2	1587	G
49	S2	1588	A
49	S2	1589	A
49	S2	1590	C
49	S2	1593	C
49	S2	1594	A
49	S2	1595	U
49	S2	1596	U
49	S2	1598	G
49	S2	1599	U
49	S2	1600	G
49	S2	1601	A
49	S2	1602	U
49	S2	1603	G
49	S2	1604	G
49	S2	1605	G
49	S2	1606	G
49	S2	1609	C
49	S2	1610	G
49	S2	1621	U
49	S2	1622	U
49	S2	1623	A
49	S2	1624	U
49	S2	1625	U
49	S2	1633	A
49	S2	1637	A
49	S2	1638	G
49	S2	1643	U
49	S2	1644	C

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Mol	Chain	Res	Type
49	S2	1648	G
49	S2	1649	U
49	S2	1656	G
49	S2	1660	C
49	S2	1663	A
49	S2	1664	A
49	S2	1665	G
49	S2	1666	C
49	S2	1674	G
49	S2	1679	A
49	S2	1680	G
49	S2	1682	C
49	S2	1683	C
49	S2	1684	C
49	S2	1689	C
49	S2	1695	A
49	S2	1696	C
49	S2	1699	A
49	S2	1700	C
49	S2	1701	C
49	S2	1702	G
49	S2	1707	U
49	S2	1720	U
49	S2	1721	U
49	S2	1722	G
49	S2	1729	U
49	S2	1730	U
49	S2	1734	G
49	S2	1742	C
49	S2	1744	G
49	S2	1745	A
49	S2	1746	U
49	S2	1751	C
49	S2	1753	C
49	S2	1783	C
49	S2	1785	C
49	S2	1786	U
49	S2	1792	G
49	S2	1793	A
49	S2	1795	G
49	S2	1797	U
49	S2	1798	C

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Mol	Chain	Res	Type
49	S2	1804	U
49	S2	1805	G
49	S2	1816	G
49	S2	1823	A
49	S2	1824	A
49	S2	1825	A
49	S2	1826	G
49	S2	1827	U
49	S2	1830	U
49	S2	1831	A
49	S2	1835	A
49	S2	1836	G
49	S2	1837	G
49	S2	1838	U
49	S2	1839	U
49	S2	1841	C
49	S2	1849	G
49	S2	1850	A
49	S2	1851	A
49	S2	1852	C
49	S2	1857	G
49	S2	1858	G
49	S2	1860	A
49	S2	1861	G
49	S2	1862	G
49	S2	1863	A
49	S2	1864	U
49	S2	1865	C
49	S2	1868	U
49	S2	1869	A

All (921) 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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
1	5	1930	U
1	5	1935	C
1	5	1938	C
1	5	1959	U
1	5	1960	A
1	5	1974	U
1	5	1975	G
1	5	1980	U
1	5	1983	A
1	5	1998	A
1	5	2007	G
1	5	2008	U
1	5	2009	A
1	5	2014	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

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Mol	Chain	Res	Type
1	5	2257	C
1	5	2258	C
1	5	2260	C
1	5	2261	G
1	5	2262	G
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

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Mol	Chain	Res	Type
1	5	2479	G
1	5	2487	G
1	5	2490	U
1	5	2502	G
1	5	2507	A
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

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Mol	Chain	Res	Type
1	5	2711	G
1	5	2732	G
1	5	2744	A
1	5	2761	U
1	5	2768	C
1	5	2769	U
1	5	2782	U
1	5	2786	C
1	5	2787	A
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

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Mol	Chain	Res	Type
1	5	3667	C
1	5	3671	G
1	5	3676	G
1	5	3679	U
1	5	3681	G
1	5	3683	C
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	3944	G
1	5	4069	U
1	5	4075	U
1	5	4084	G
1	5	4085	A

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Mol	Chain	Res	Type
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	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
1	5	4276	G
1	5	4280	A
1	5	4282	A
1	5	4283	G

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Mol	Chain	Res	Type
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
1	5	4527	G
1	5	4528	G
1	5	4531	U
1	5	4533	A

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Mol	Chain	Res	Type
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
1	5	4887	C
1	5	4888	U
1	5	4889	G
1	5	4900	C

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Mol	Chain	Res	Type
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
3	8	33	G
3	8	34	U
3	8	37	A
3	8	64	U

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Mol	Chain	Res	Type
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
49	S2	1	U
49	S2	2	A
49	S2	9	U
49	S2	19	A
49	S2	24	C
49	S2	50	A
49	S2	55	U
49	S2	60	A
49	S2	61	A
49	S2	65	C
49	S2	66	G
49	S2	67	C
49	S2	72	C
49	S2	73	C
49	S2	74	G
49	S2	90	G
49	S2	91	A
49	S2	98	C
49	S2	102	A
49	S2	104	A
49	S2	110	U
49	S2	113	G
49	S2	126	G
49	S2	127	C
49	S2	139	C
49	S2	140	C
49	S2	141	A
49	S2	142	C

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Mol	Chain	Res	Type
49	S2	158	A
49	S2	160	U
49	S2	163	U
49	S2	164	A
49	S2	180	G
49	S2	181	A
49	S2	182	C
49	S2	183	G
49	S2	190	G
49	S2	215	G
49	S2	291	G
49	S2	294	U
49	S2	304	C
49	S2	305	U
49	S2	312	G
49	S2	313	A
49	S2	327	G
49	S2	333	G
49	S2	340	C
49	S2	349	A
49	S2	355	G
49	S2	357	C
49	S2	360	A
49	S2	368	U
49	S2	369	C
49	S2	377	G
49	S2	381	C
49	S2	384	U
49	S2	385	G
49	S2	409	C
49	S2	421	G
49	S2	427	U
49	S2	435	A
49	S2	443	U
49	S2	444	G
49	S2	446	G
49	S2	448	A
49	S2	452	G
49	S2	453	C
49	S2	458	A
49	S2	465	A
49	S2	468	A

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Mol	Chain	Res	Type
49	S2	471	G
49	S2	473	A
49	S2	482	G
49	S2	492	C
49	S2	499	G
49	S2	515	G
49	S2	532	C
49	S2	539	C
49	S2	548	C
49	S2	550	C
49	S2	577	U
49	S2	578	C
49	S2	579	C
49	S2	601	G
49	S2	604	A
49	S2	606	G
49	S2	607	U
49	S2	613	G
49	S2	615	C
49	S2	618	C
49	S2	642	U
49	S2	646	G
49	S2	649	U
49	S2	656	G
49	S2	671	A
49	S2	687	C
49	S2	688	U
49	S2	732	U
49	S2	733	C
49	S2	746	C
49	S2	747	U
49	S2	751	G
49	S2	752	G
49	S2	797	C
49	S2	798	A
49	S2	799	U
49	S2	800	U
49	S2	810	A
49	S2	815	U
49	S2	821	G
49	S2	827	A
49	S2	833	C

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Mol	Chain	Res	Type
49	S2	841	G
49	S2	855	G
49	S2	867	G
49	S2	868	G
49	S2	869	A
49	S2	870	A
49	S2	871	U
49	S2	872	A
49	S2	918	U
49	S2	919	A
49	S2	924	G
49	S2	950	C
49	S2	956	G
49	S2	957	A
49	S2	958	G
49	S2	959	G
49	S2	960	U
49	S2	964	A
49	S2	967	C
49	S2	970	G
49	S2	980	A
49	S2	991	G
49	S2	992	A
49	S2	993	G
49	S2	999	G
49	S2	1001	A
49	S2	1016	U
49	S2	1039	C
49	S2	1050	A
49	S2	1051	G
49	S2	1083	A
49	S2	1085	C
49	S2	1087	A
49	S2	1088	U
49	S2	1093	A
49	S2	1097	G
49	S2	1098	C
49	S2	1109	C
49	S2	1110	G
49	S2	1114	U
49	S2	1115	U
49	S2	1121	G

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Mol	Chain	Res	Type
49	S2	1132	C
49	S2	1133	A
49	S2	1137	U
49	S2	1138	C
49	S2	1141	G
49	S2	1142	G
49	S2	1150	A
49	S2	1153	C
49	S2	1165	G
49	S2	1171	G
49	S2	1181	A
49	S2	1194	A
49	S2	1199	A
49	S2	1206	G
49	S2	1207	G
49	S2	1223	A
49	S2	1244	U
49	S2	1247	C
49	S2	1249	C
49	S2	1250	A
49	S2	1253	A
49	S2	1265	A
49	S2	1273	C
49	S2	1275	G
49	S2	1283	C
49	S2	1292	C
49	S2	1298	G
49	S2	1302	G
49	S2	1312	G
49	S2	1313	A
49	S2	1315	U
49	S2	1341	C
49	S2	1367	U
49	S2	1368	U
49	S2	1372	U
49	S2	1393	G
49	S2	1395	C
49	S2	1396	A
49	S2	1401	A
49	S2	1404	U
49	S2	1416	C
49	S2	1417	C

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Mol	Chain	Res	Type
49	S2	1418	C
49	S2	1419	C
49	S2	1421	A
49	S2	1429	G
49	S2	1433	C
49	S2	1434	C
49	S2	1440	C
49	S2	1441	U
49	S2	1442	U
49	S2	1446	A
49	S2	1454	A
49	S2	1462	U
49	S2	1463	U
49	S2	1474	A
49	S2	1475	G
49	S2	1477	U
49	S2	1489	A
49	S2	1493	C
49	S2	1494	U
49	S2	1506	A
49	S2	1512	C
49	S2	1521	C
49	S2	1522	A
49	S2	1534	C
49	S2	1537	A
49	S2	1540	G
49	S2	1542	C
49	S2	1543	U
49	S2	1552	G
49	S2	1555	U
49	S2	1556	A
49	S2	1557	C
49	S2	1561	A
49	S2	1568	C
49	S2	1579	A
49	S2	1585	U
49	S2	1588	A
49	S2	1593	C
49	S2	1597	C
49	S2	1598	G
49	S2	1599	U
49	S2	1603	G

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Mol	Chain	Res	Type
49	S2	1605	G
49	S2	1623	A
49	S2	1629	C
49	S2	1637	A
49	S2	1643	U
49	S2	1648	G
49	S2	1659	U
49	S2	1664	A
49	S2	1678	A
49	S2	1679	A
49	S2	1682	C
49	S2	1694	U
49	S2	1695	A
49	S2	1700	C
49	S2	1703	C
49	S2	1720	U
49	S2	1744	G
49	S2	1756	C
49	S2	1823	A
49	S2	1825	A
49	S2	1826	G
49	S2	1830	U
49	S2	1835	A
49	S2	1836	G
49	S2	1838	U
49	S2	1849	G
49	S2	1857	G
49	S2	1858	G
49	S2	1860	A
49	S2	1863	A
49	S2	1868	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 170 ligands modelled in this entry, 170 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	5	13
49	S2	4
8	E	1
14	K	1
48	4	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	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	5	3950:U	O3'	4065:G	P	13.97
1	5	1051:G	O3'	1064:G	P	9.59
1	S2	739:C	O3'	744:G	P	7.74

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	S2	225:G	O3'	287:U	P	6.54
1	5	1222:A	O3'	1232:G	P	3.97
1	5	1699:A	O3'	1718:C	P	3.33
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	K	154:ASP	C	155:ILE	N	2.32
1	4	269:ALA	C	270:ASN	N	1.60

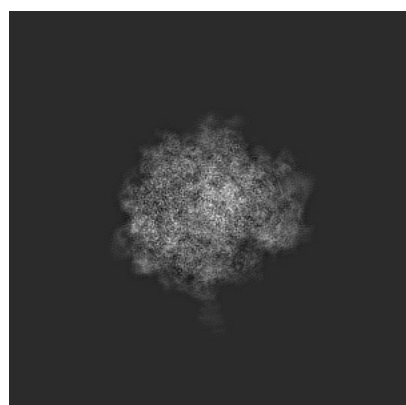
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-2646. These allow visual inspection of the internal detail of the map and identification of artifacts.

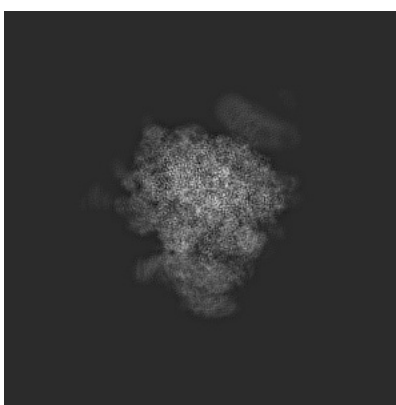
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

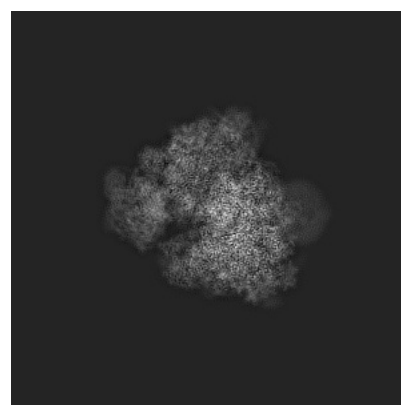
6.1.1 Primary map



X



Y

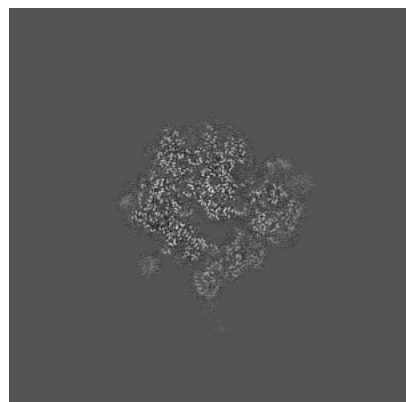


Z

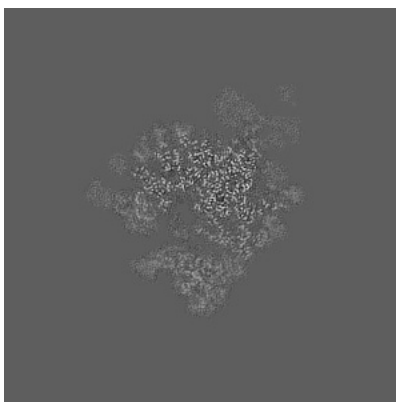
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

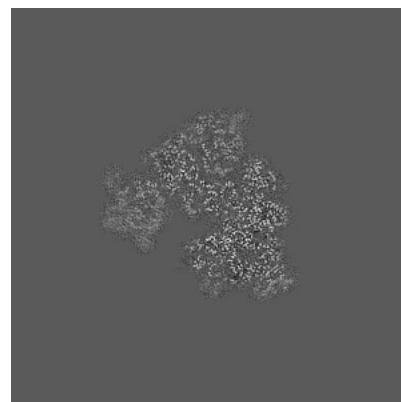
6.2.1 Primary map



X Index: 210



Y Index: 210

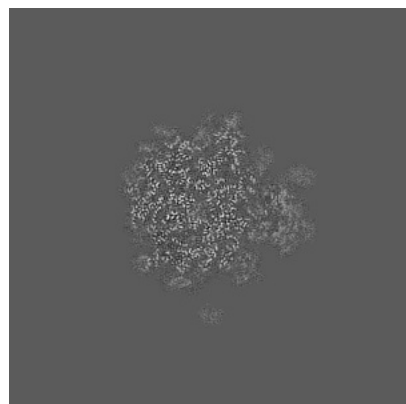


Z Index: 210

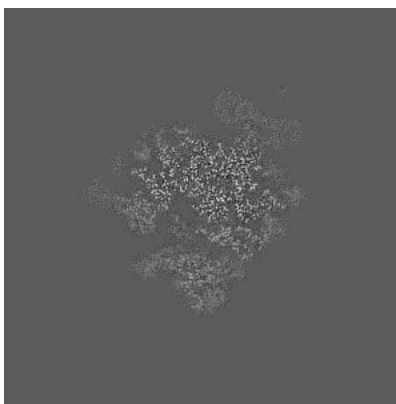
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

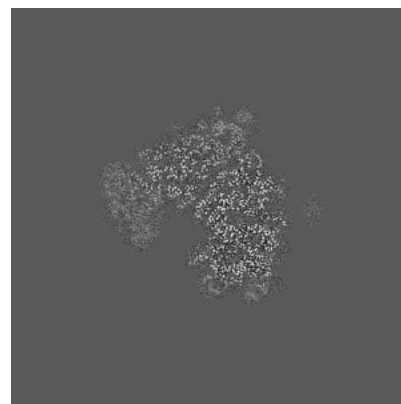
6.3.1 Primary map



X Index: 232



Y Index: 212

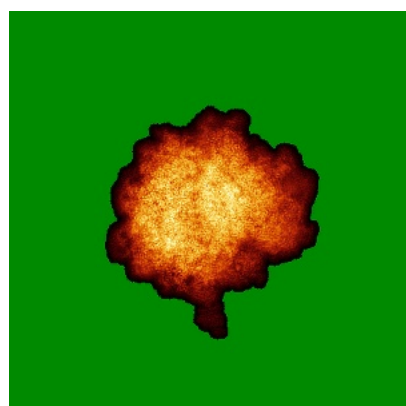


Z Index: 221

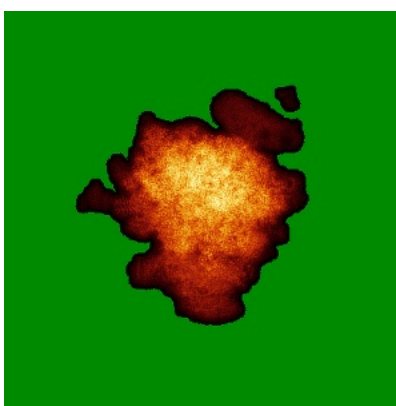
The images above show the largest variance slices of the map in three orthogonal directions.

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

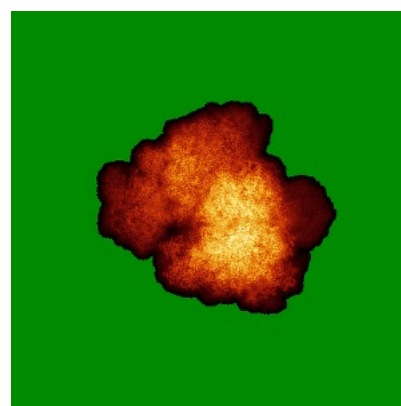
6.4.1 Primary map



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

This section was not generated.

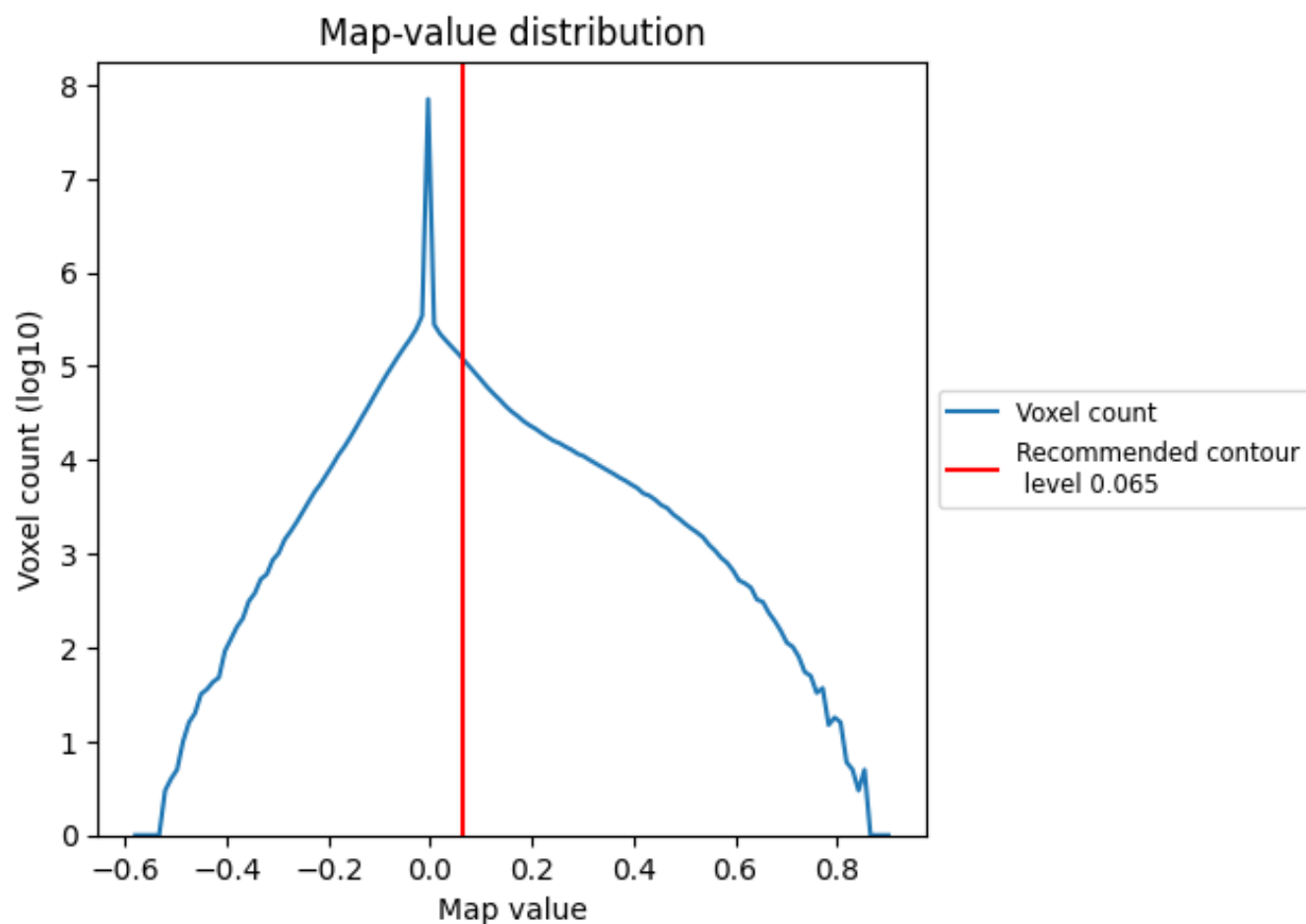
6.6 Mask visualisation

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

7 Map analysis [i](#)

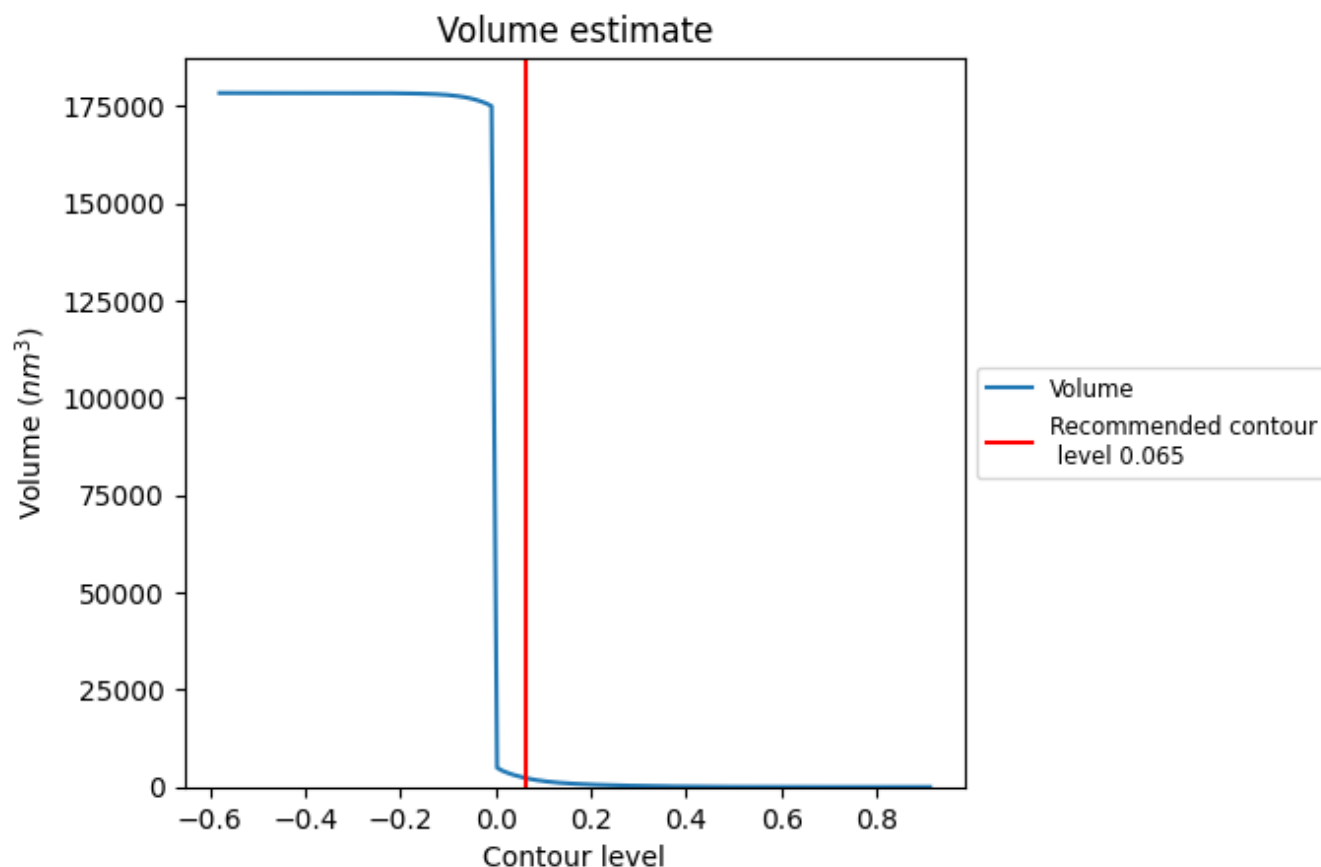
This section contains the results of statistical analysis of the map.

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.

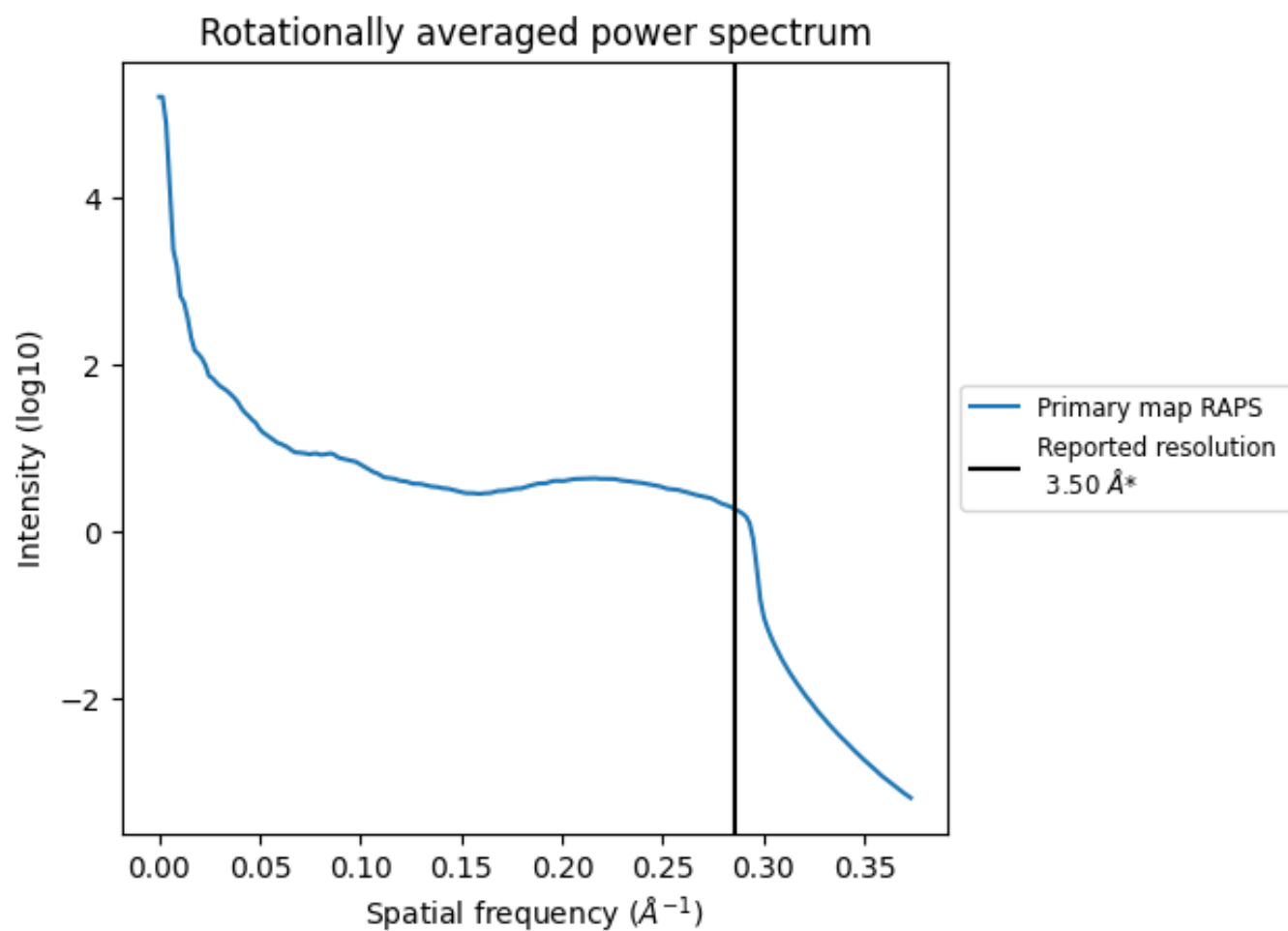
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2236 nm³; this corresponds to an approximate mass of 2020 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 0.286 Å⁻¹

8 Fourier-Shell correlation ⓘ

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

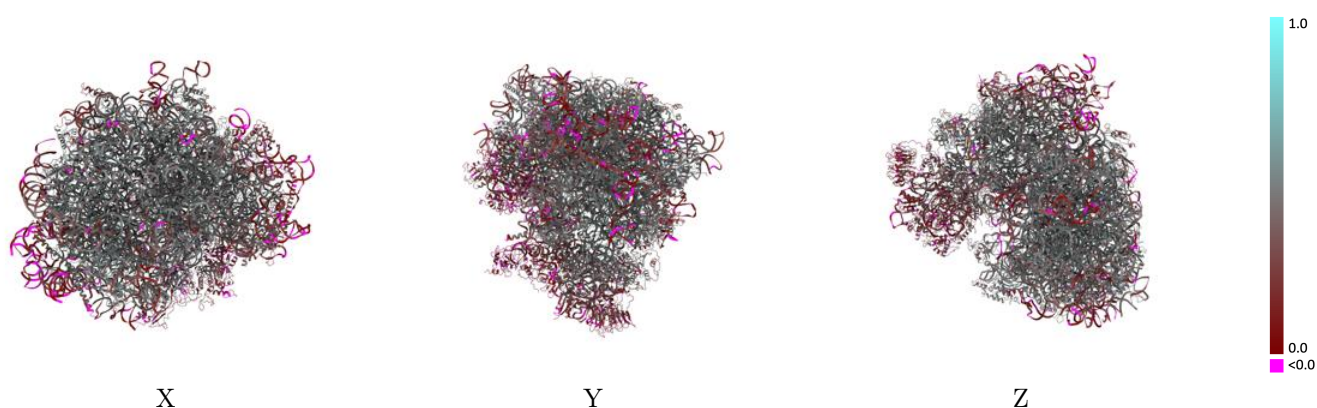
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-2646 and PDB model 3J7P. Per-residue inclusion information can be found in section 3 on page 20.

9.1 Map-model overlay [i](#)

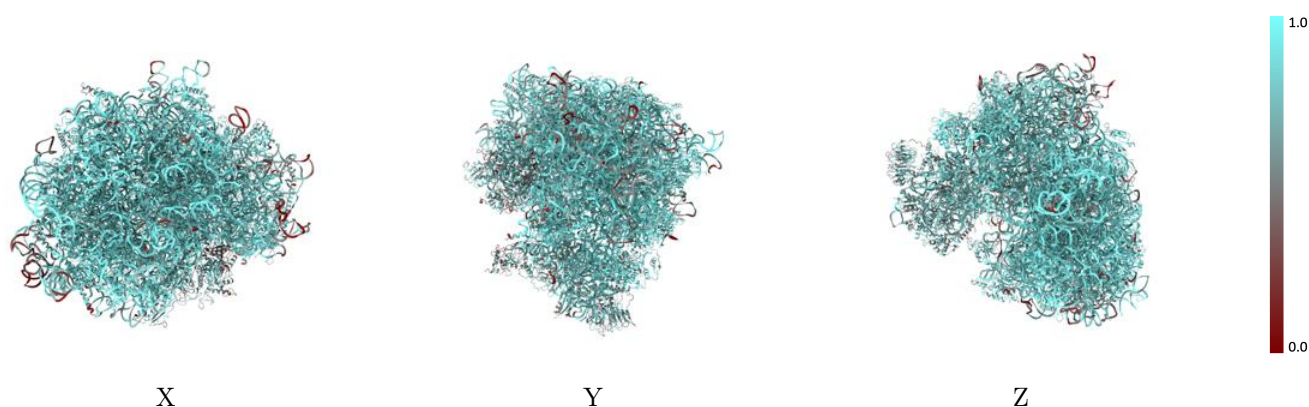
This section was not generated.

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



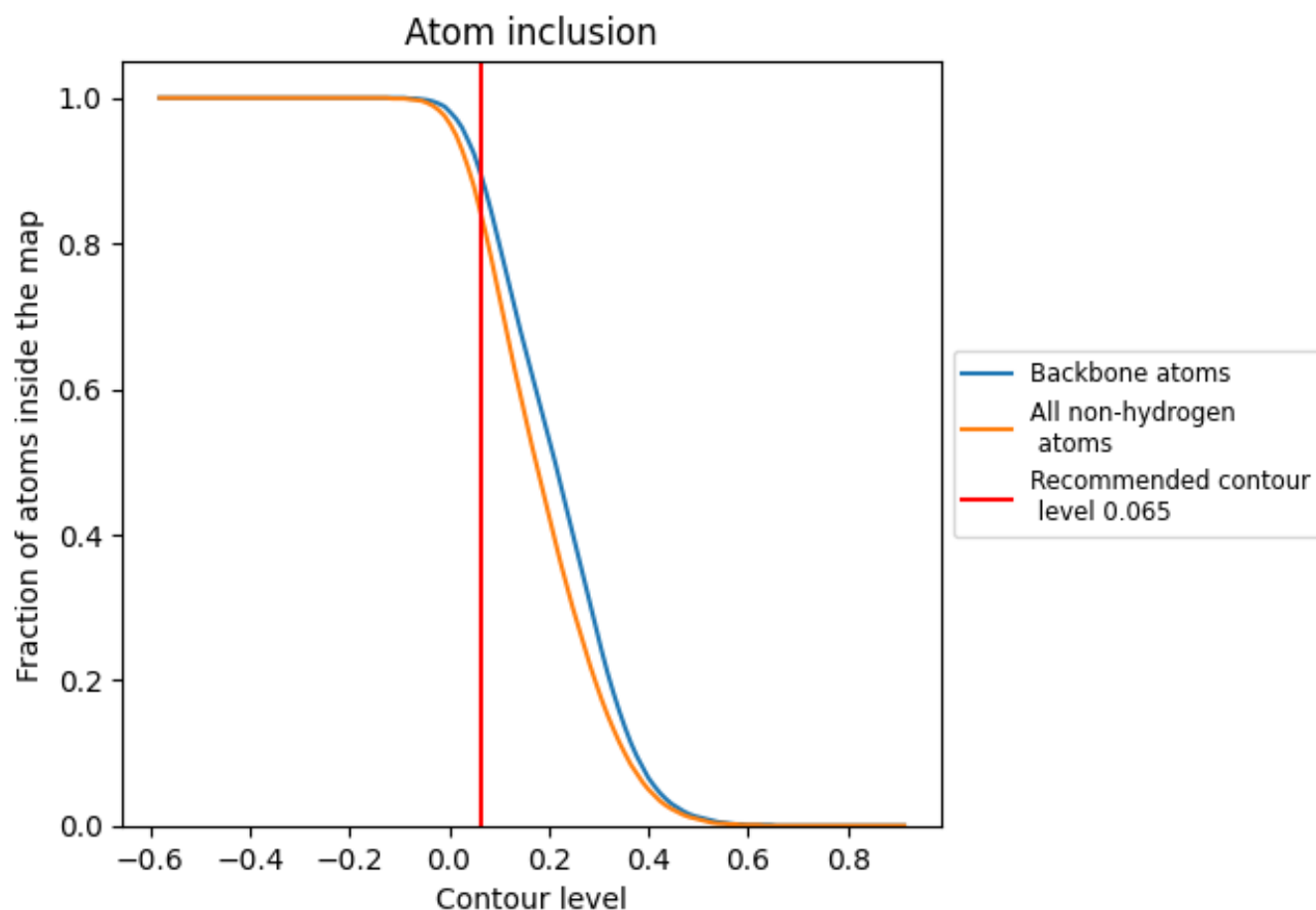
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.065).

9.4 Atom inclusion [i](#)



At the recommended contour level, 89% of all backbone atoms, 84% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.065) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8380	 0.3940
4	 0.5770	 0.2090
5	 0.8680	 0.4020
7	 0.9510	 0.4630
8	 0.8960	 0.4310
A	 0.8930	 0.5000
B	 0.8910	 0.4950
C	 0.8700	 0.4840
D	 0.8730	 0.4340
E	 0.8350	 0.4260
F	 0.8780	 0.4820
G	 0.8430	 0.4340
H	 0.8800	 0.4840
I	 0.8490	 0.4640
J	 0.8300	 0.4140
K	 0.5230	 0.1450
L	 0.8440	 0.4520
M	 0.8800	 0.4790
N	 0.9040	 0.5080
O	 0.8970	 0.5060
P	 0.8870	 0.5030
Q	 0.8970	 0.5060
R	 0.8480	 0.4450
S	 0.9100	 0.4990
S2	 0.8580	 0.3540
SA	 0.8830	 0.4570
SB	 0.8420	 0.4280
SC	 0.8890	 0.4900
SD	 0.7090	 0.2870
SE	 0.8440	 0.4430
SF	 0.6230	 0.2060
SG	 0.7240	 0.2970
SH	 0.7840	 0.3730
SI	 0.7810	 0.3810
SJ	 0.8510	 0.4450



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Chain	Atom inclusion	Q-score
SK	 0.6700	 0.2230
SL	 0.8190	 0.4330
SM	 0.4670	 0.0930
SN	 0.8720	 0.4550
SO	 0.8510	 0.4440
SP	 0.6490	 0.2520
SQ	 0.6910	 0.2540
SR	 0.7290	 0.3230
SS	 0.6950	 0.2300
ST	 0.7390	 0.2670
SU	 0.6980	 0.2790
SV	 0.8640	 0.4650
SW	 0.9160	 0.5060
SX	 0.8760	 0.5020
SY	 0.8080	 0.3850
SZ	 0.6110	 0.1690
Sa	 0.8700	 0.4610
Sb	 0.8780	 0.4540
Sc	 0.5410	 0.2010
Sd	 0.8320	 0.3900
Se	 0.7940	 0.4090
Sf	 0.4120	 0.0550
Sg	 0.6390	 0.2040
T	 0.8790	 0.4820
U	 0.7960	 0.3830
V	 0.8630	 0.4880
W	 0.8550	 0.4750
X	 0.8370	 0.4700
Y	 0.8600	 0.4710
Z	 0.8800	 0.4690
a	 0.8990	 0.5040
b	 0.7610	 0.3830
c	 0.8600	 0.4600
d	 0.8530	 0.4540
e	 0.8920	 0.5010
f	 0.9220	 0.5060
g	 0.8560	 0.4830
h	 0.8500	 0.4650
i	 0.8530	 0.4570
j	 0.9050	 0.4880
k	 0.8100	 0.4220
l	 0.8820	 0.5080

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Chain	Atom inclusion	Q-score
m	 0.8580	 0.4980
n	 0.8860	 0.4620
o	 0.8490	 0.4690
p	 0.8650	 0.4870
q	 0.6420	 0.2130
r	 0.8830	 0.4930