



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 27, 2014 – 12:06 AM GMT

PDB ID : 2VHN
Title : STRUCTURE OF PDF BINDING HELIX IN COMPLEX WITH THE RIBOSOME. (PART 2 OF 4)
Authors : Bingel-Erlenmeyer, R.; Kohler, R.; Kramer, G.; Sandikci, A.; Antolic, S.; Maier, T.; Schaffitzel, C.; Wiedmann, B.; Bukau, B.; Ban, N.
Deposited on : 2007-11-22
Resolution : 3.74 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

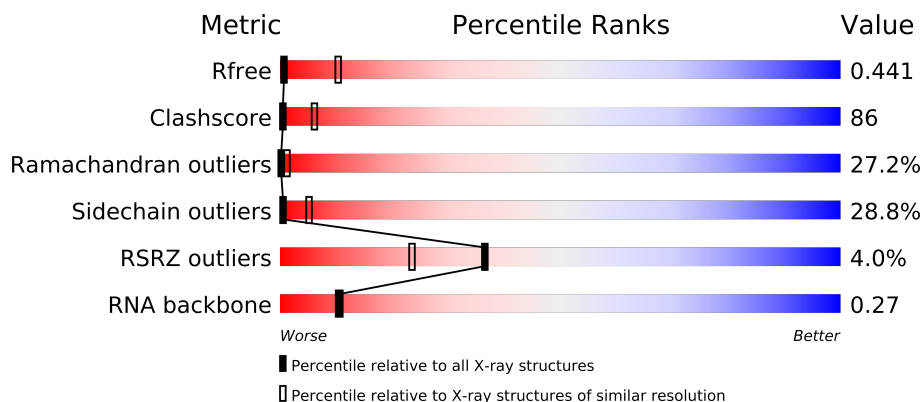
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : stable22639
Percentile statistics : 21963
Refmac : 5.8.0049
CCP4 : 6.3.0 (Settle)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable22683

1 Overall quality at a glance

The reported resolution of this entry is 3.74 Å.

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



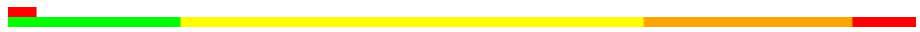
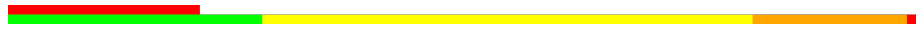


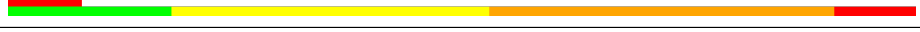
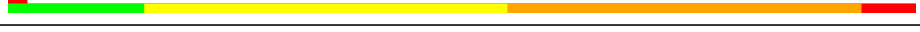
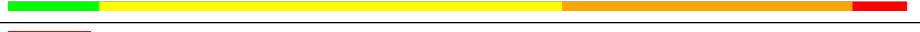



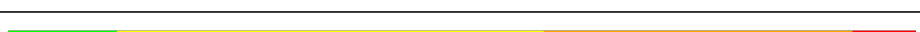
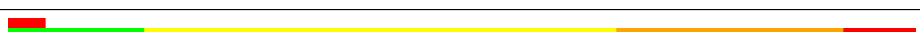
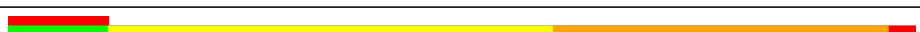
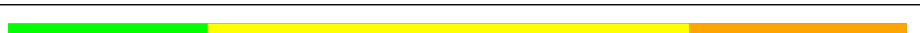
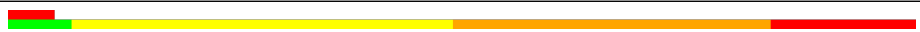
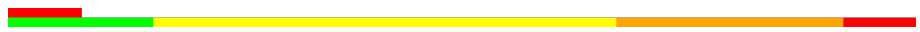
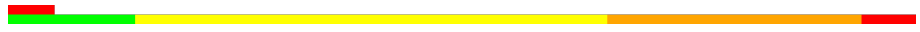
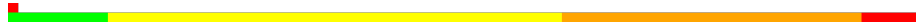

Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1103 (4.04-3.40)
Clashscore	79885	1072 (4.00-3.48)
Ramachandran outliers	78287	1023 (4.00-3.48)
Sidechain outliers	78261	1016 (4.00-3.48)
RSRZ outliers	66119	1104 (4.04-3.40)
RNA backbone	1838	1008 (4.52-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	0	56	
2	1	54	
3	2	46	
4	3	64	
5	4	38	
6	A	120	
7	B	2904	
8	C	273	
9	D	209	
10	E	201	
11	F	178	
12	G	176	

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Mol	Chain	Length	Quality of chain
13	H	149	
14	I	141	
15	J	142	
16	K	123	
17	L	144	
18	M	136	
19	N	127	
20	O	117	
21	P	114	
22	Q	117	
23	R	103	
24	S	110	
25	T	100	
26	U	103	
27	V	94	
28	W	84	
29	X	63	
30	Y	58	
31	Z	70	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
32	MG	Z	4001	-	X
32	MG	Z	4012	-	X
32	MG	Z	4013	-	X
32	MG	Z	4027	-	X
32	MG	Z	4028	-	X
32	MG	Z	4031	-	X
32	MG	Z	4038	-	X
32	MG	Z	4039	-	X
32	MG	Z	4040	-	X
32	MG	Z	4051	-	X
32	MG	Z	4059	-	X
32	MG	Z	4063	-	X
32	MG	Z	4065	-	X
32	MG	Z	4069	-	X
32	MG	Z	4074	-	X
32	MG	Z	4076	-	X
32	MG	Z	4078	-	X
32	MG	Z	4079	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
32	MG	Z	4082	-	X
32	MG	Z	4083	-	X
32	MG	Z	4090	-	X
32	MG	Z	4095	-	X
32	MG	Z	4100	-	X
32	MG	Z	4102	-	X
32	MG	Z	4105	-	X
32	MG	Z	4108	-	X
32	MG	Z	4109	-	X

2 Entry composition

There are 33 unique types of molecules in this entry. The entry contains 90314 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a protein called 50S RIBOSOMAL PROTEIN L32.

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

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
2	1	54	Total	C	N	O	0	0	0
			441	284	81	76			

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 4 is a protein called 50S RIBOSOMAL PROTEIN L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 5 is a protein called 50S RIBOSOMAL PROTEIN L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 6 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	A	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 7 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	B	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 8 is a protein called 50S RIBOSOMAL PROTEIN L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	C	268	Total	C	N	O	S	0	0	1
			2054	1271	417	359	7			

- Molecule 9 is a protein called 50S RIBOSOMAL PROTEIN L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	D	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 10 is a protein called 50S RIBOSOMAL PROTEIN L4.

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

- Molecule 11 is a protein called 50S RIBOSOMAL PROTEIN L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	F	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 12 is a protein called 50S RIBOSOMAL PROTEIN L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	G	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 13 is a protein called 50S RIBOSOMAL PROTEIN L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	H	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 14 is a protein called 50S RIBOSOMAL PROTEIN L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	I	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 15 is a protein called 50S RIBOSOMAL PROTEIN L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	J	141	Total	C	N	O	S	0	0	1
			1113	704	211	194	4			

- Molecule 16 is a protein called 50S RIBOSOMAL PROTEIN L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	K	122	Total	C	N	O	S	0	0	1
			931	582	180	164	5			

- Molecule 17 is a protein called 50S RIBOSOMAL PROTEIN L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	L	144	Total	C	N	O	S	0	0	0
			1053	654	207	190	2			

- Molecule 18 is a protein called 50S RIBOSOMAL PROTEIN L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	M	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 19 is a protein called 50S RIBOSOMAL PROTEIN L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	N	127	Total	C	N	O	S	0	0	0
			1008	621	204	178	5			

- Molecule 20 is a protein called 50S RIBOSOMAL PROTEIN L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	O	117	Total	C	N	O	S	0	0	0
			900	557	179	163	1			

- Molecule 21 is a protein called 50S RIBOSOMAL PROTEIN L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	P	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 22 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	Q	117	Total	C	N	O		0	0	0
			947	604	192	151				

- Molecule 23 is a protein called 50S RIBOSOMAL PROTEIN L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	R	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 24 is a protein called 50S RIBOSOMAL PROTEIN L22.

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

- Molecule 25 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	T	100	Total	C	N	O	S	0	0	1
			778	491	146	139	2			

- Molecule 26 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	U	103	Total	C	N	O		0	0	1
			780	492	147	141				

- Molecule 27 is a protein called 50S RIBOSOMAL PROTEIN L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	V	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 28 is a protein called 50S RIBOSOMAL PROTEIN L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	W	84	Total	C	N	O	S	0	0	0
			634	391	129	113	1			

- Molecule 29 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	X	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 30 is a protein called 50S RIBOSOMAL PROTEIN L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	Y	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 31 is a protein called 50S RIBOSOMAL PROTEIN L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	Z	70	Total	C	N	O	S	0	0	0
			549	339	104	100	6			

- Molecule 32 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
32	Z	111	Total	Mg	0	0
			111	111		

- Molecule 33 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	0	1	Total	O	0	0
			1	1		
33	2	2	Total	O	0	0
			2	2		
33	B	485	Total	O	0	0
			485	485		
33	C	3	Total	O	0	0
			3	3		
33	D	1	Total	O	0	0
			1	1		
33	E	2	Total	O	0	0
			2	2		

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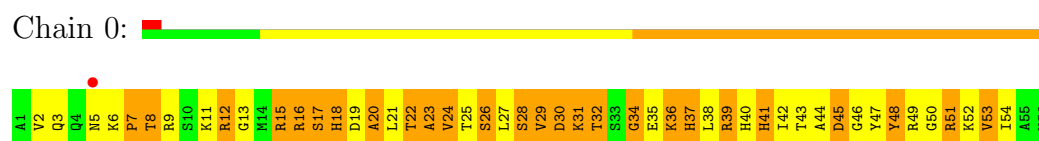
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	J	1	Total 1	O 1	0	0
33	K	1	Total 1	O 1	0	0
33	L	4	Total 4	O 4	0	0
33	N	4	Total 4	O 4	0	0
33	Q	1	Total 1	O 1	0	0
33	T	2	Total 2	O 2	0	0
33	U	1	Total 1	O 1	0	0

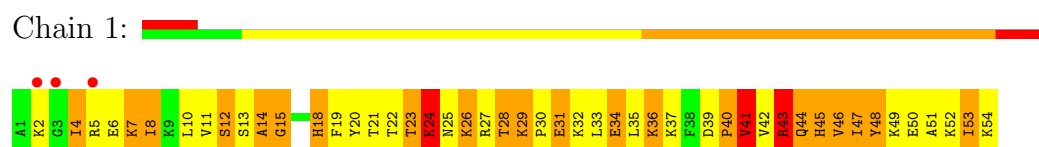
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

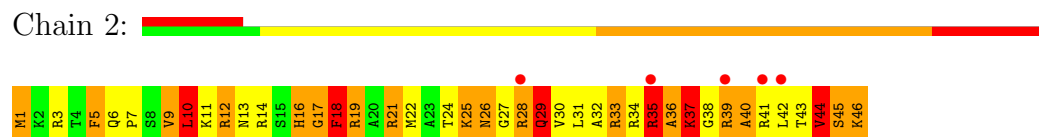
- Molecule 1: 50S RIBOSOMAL PROTEIN L32



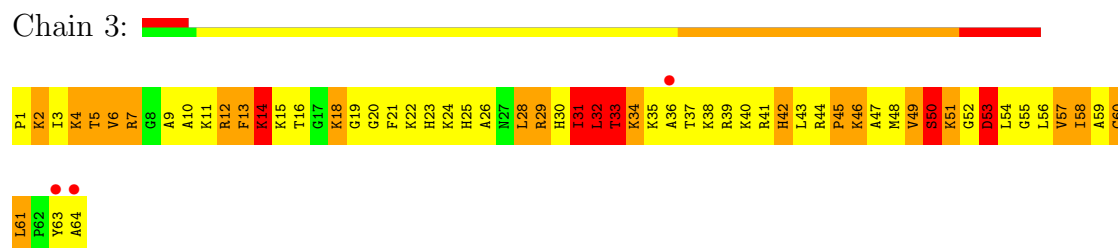
- Molecule 2: 50S RIBOSOMAL PROTEIN L33



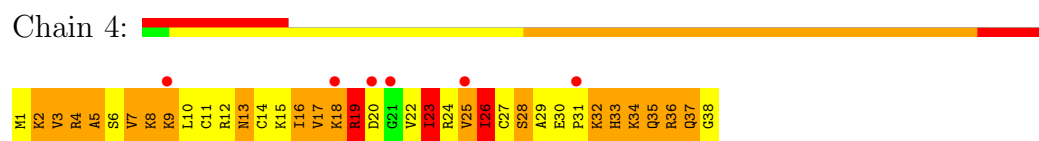
- Molecule 3: 50S RIBOSOMAL PROTEIN L34



- Molecule 4: 50S RIBOSOMAL PROTEIN L35

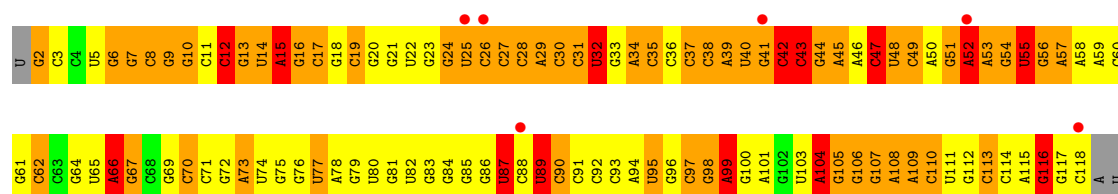


- Molecule 5: 50S RIBOSOMAL PROTEIN L36



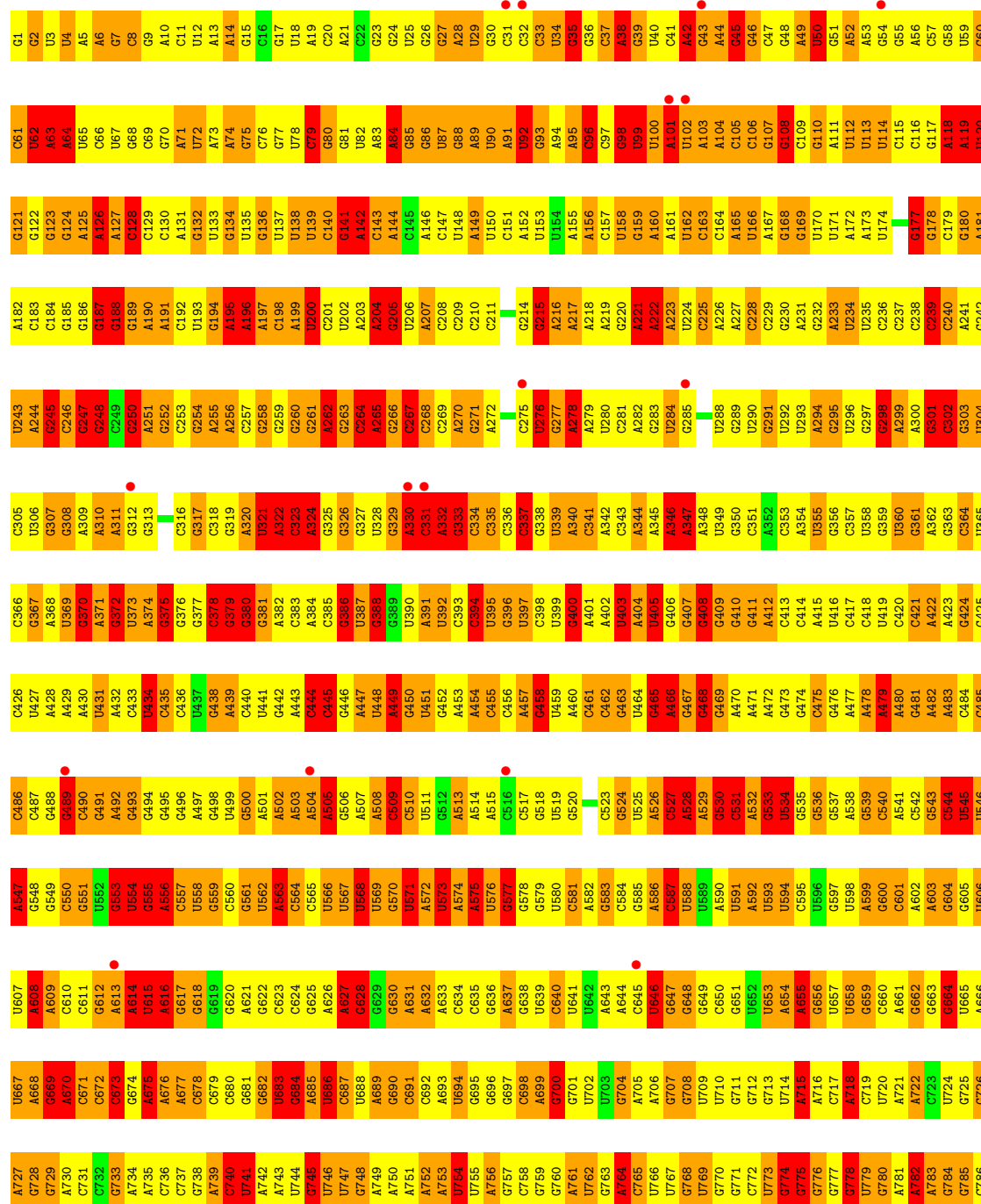
- Molecule 6: 5S RIBOSOMAL RNA





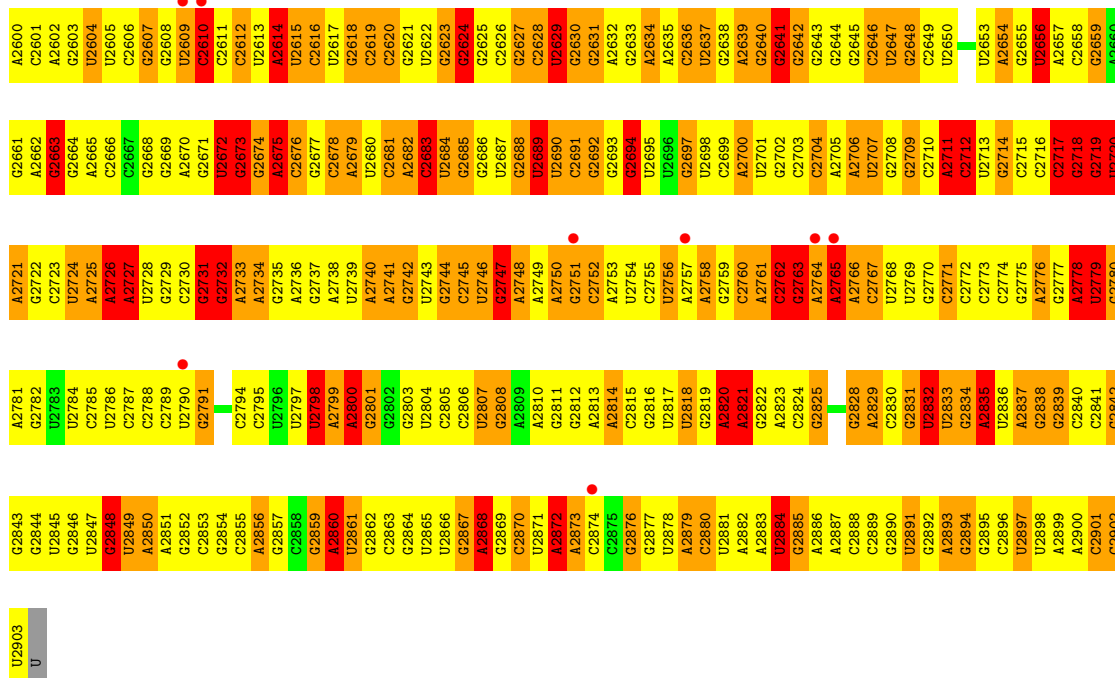
• Molecule 7: 23S RIBOSOMAL RNA

Chain B:



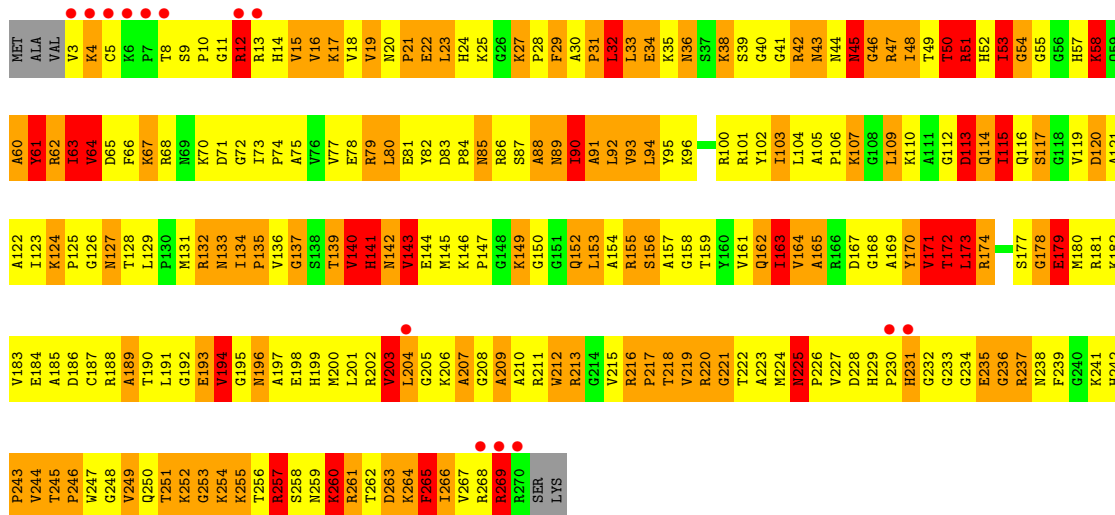
A1634	C1574	G1514	G1450	U1390	G1330	G1270	G1210	G1149	A1088	A1027	U967	G907	U847	C787
A1635	C1575	A1515	C1461	U1391	G1331	G1271	C1211	C1150	A1089	A1028	C968	C908	C848	A788
U1636	U1576	G1516	A1452	A1392	G1332	A1272	G1212	A1151	G1091	A1029	C969	C909	A849	A789
A1637	C1577	G1517	G1453	A1393	G1333	U1273	A1213	C1152	G1092	C1030	U970	A910	U850	U790
C1638	U1578	C1518	C1454	U1394	G1334	A1274	A1214	C1153	G1093	G1031	C971	C911	C851	C791
C1639	A1579	G1519	G1455	A1395	C1335	A1275	G1215	C1154	G1094	A1032	A972	C912	C852	A792
A1640	A1580	U1520	G1456	U1396	A1336	A1276	G1216	A1155	U1094	U1033	A973	U913	C853	A793
A1641	G1581	G1521	U1457	U1397	G1337	G1277	G1217	A1156	A1095	G1034	G974	C914	C854	A794
G1642	A1582	A1522	U1458	C1398	G1338	C1278	G1218	A1157	A1096	U1035	A975	C915	G855	C795
G1643	U1583	U1523	G1459	C1399	G1339	G1279	U1219	C1158	U1097	G1036	A976	C916	G856	C796
G1644	U1584	G1524	U1460	U1400	U1340	G1280	G1220	C1159	A1098	G1037	G977	A917	G857	C797
G1645	C1585	A1525	C1461	G1401	G1341	G1281	C1221	G1160	G1099	G1038	G978	A918	G858	C798
C1646	A1586	C1526	C1462	U1402	A1342	U1282	G1222	C1161	C1100	A1039	A979	U919	G859	C799
U1647	G1587	G1527		A1403	G1343	G1283	G1223	G1162	U1101	A1040	A980	A920	U860	A800
U1648	U1588	A1528	G1465	C1404	G1344	A1284	U1224	G1163	C1102	G1041	A981	C921	A861	G801
G1649	U1589	A1529	U1466	U1405	C1345	A1285	G1225	C1164	A1103	G1042	C982	C922	G862	A802
A1650	A1590	G1530		U1406	G1346	A1286	A1226	A1165	C1104	C1043	A983	G923	A863	U803
G1651	A1591	C1531	A1469	G1407	A1347	A1287	G1227	G1166	U1105	C1044	A984	G924	G864	A804
A1652	C1592	A1532	A1470	G1408	C1348	G1288	G1228	C1167	G1106	C1045	C985	A925	C865	G805
G1653	A1593	G1533	G1471	U1409	C1349	C1289	C1229	G1168	G1107	A1046	C986	G926	A866	C806
A1654	U1594	U1534	G1472	G1410	C1350	C1290	A1230	A1169	U1108	G1047	C987	A927	C867	U807
A1655	C1595	U1535	G1473	U1411	C1351	C1291	U1231	C1170	C1109	A1048	A988	A928	U868	G808
C1656	A1596	C1536	U1474	U1412	U1352	G1292	G1232	G1171	G1110	G1049	G989	U929	U869	G809
U1657	A1597	G1537	G1475	A1413	A1353	C1293	C1233	C1172	A1111	A1050	A990	G930	U870	U810
C1658	A1598	G1538	U1476	C1414	A1354	U1294	U1234	U1173	G1112	G1051	C991	U931	U871	U811
G1659	U1599	U1539	A1477	U1415	G1355	C1295	G1235	U1174	U1113	C1052	C992	U932	U872	C812
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A1665	C1605	A1545	G1483	G1421	G1361	A1301	A1241	U1180	U1119	U1058	C998	G938	A878	G818
G1666	C1606	G1546	U1484	G1422	C1362	A1302	U1242	U1181	G1120	G1059	U999	G939	G	A819
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A1669	A1609	A1549	U1487	G1425	A1365	C1305	G1245	U1184	C1123	G1062	G1002	G943	G	G822
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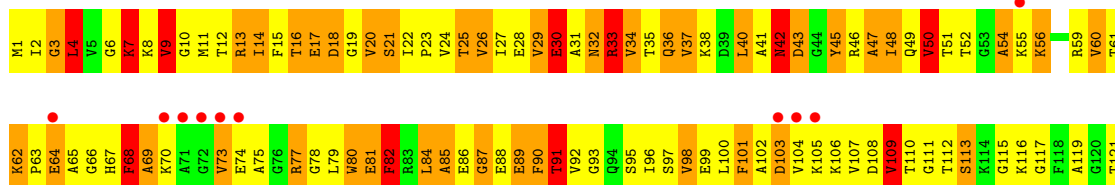
- Molecule 8: 50S RIBOSOMAL PROTEIN L2

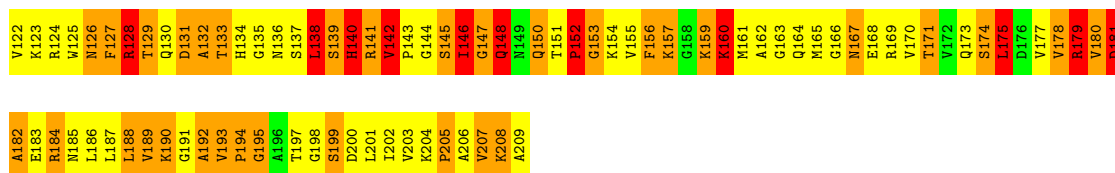
Chain C:



- Molecule 9: 50S RIBOSOMAL PROTEIN L3

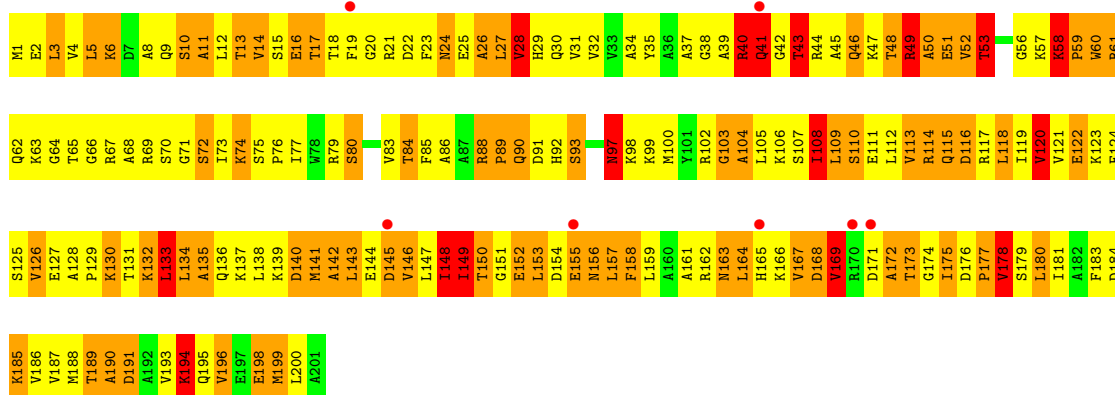
Chain D:





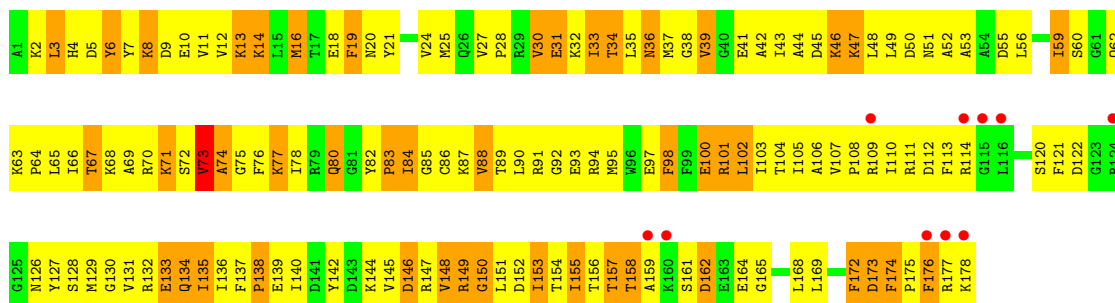
• Molecule 10: 50S RIBOSOMAL PROTEIN L4

Chain E:



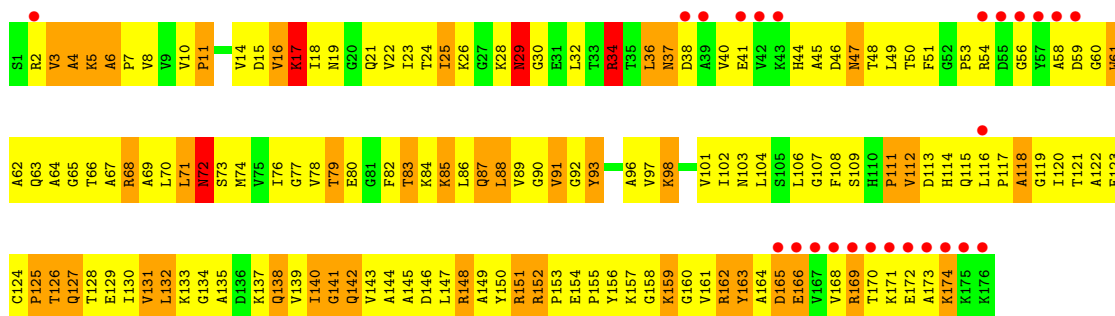
• Molecule 11: 50S RIBOSOMAL PROTEIN L5

Chain F:



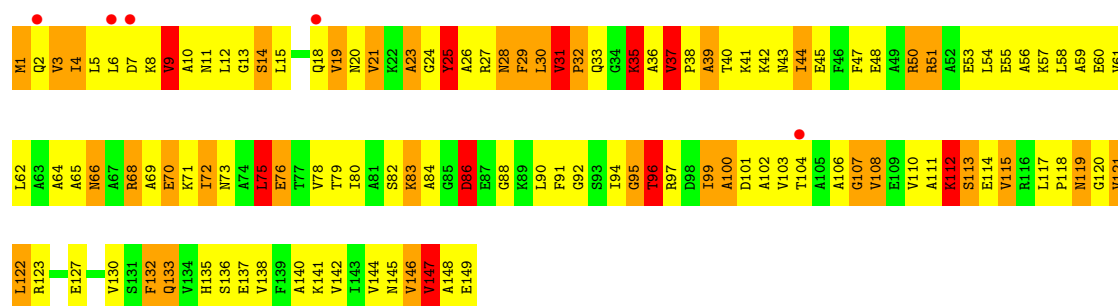
• Molecule 12: 50S RIBOSOMAL PROTEIN L6

Chain G:



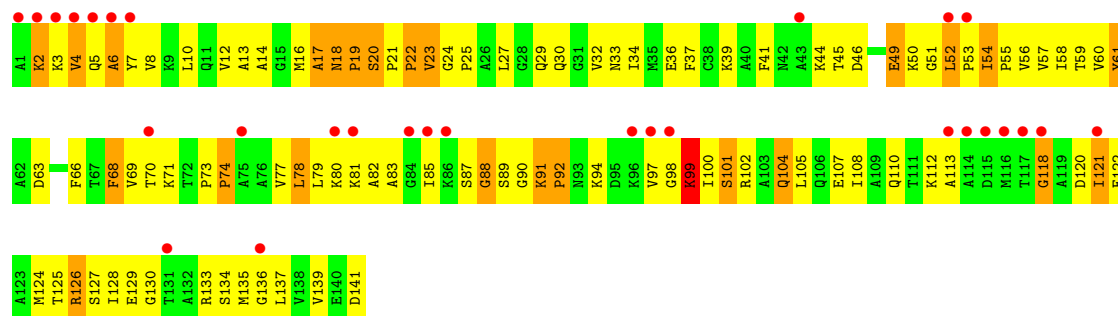
• Molecule 13: 50S RIBOSOMAL PROTEIN L9

Chain H:



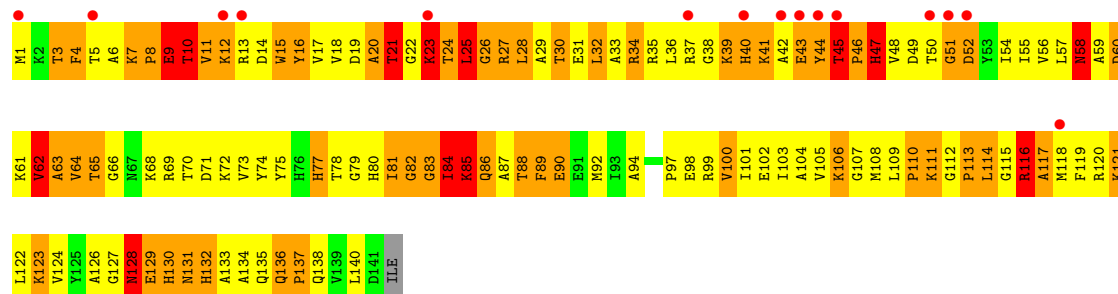
• Molecule 14: 50S RIBOSOMAL PROTEIN L11

Chain I:



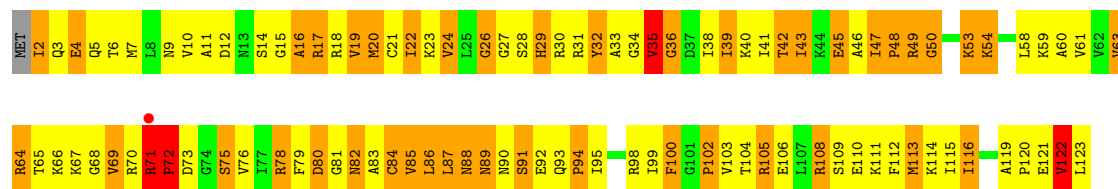
• Molecule 15: 50S RIBOSOMAL PROTEIN L13

Chain J:



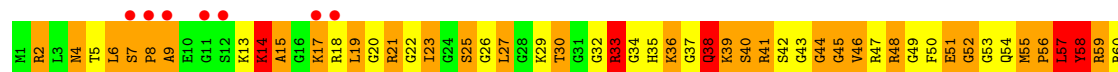
• Molecule 16: 50S RIBOSOMAL PROTEIN L14

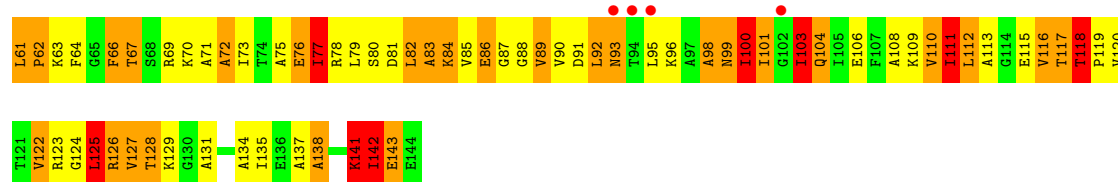
Chain K:



• Molecule 17: 50S RIBOSOMAL PROTEIN L15

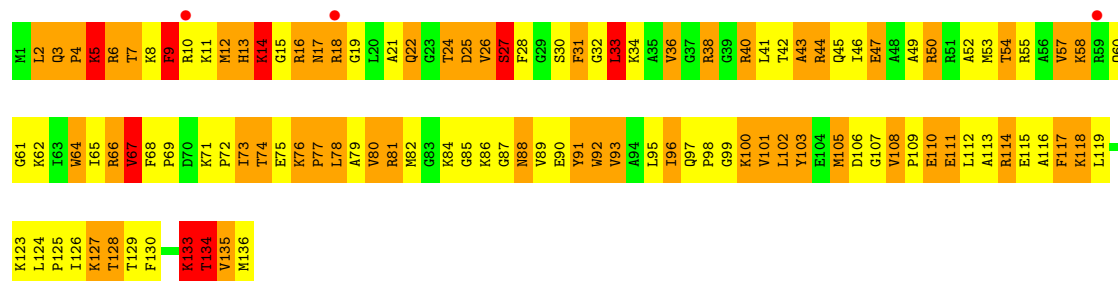
Chain L:





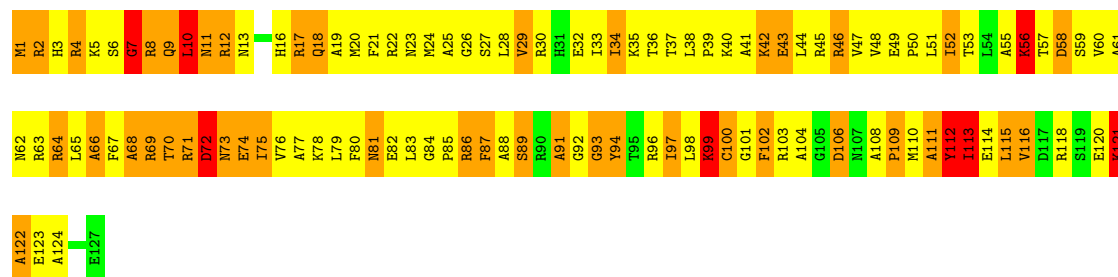
• Molecule 18: 50S RIBOSOMAL PROTEIN L16

Chain M:



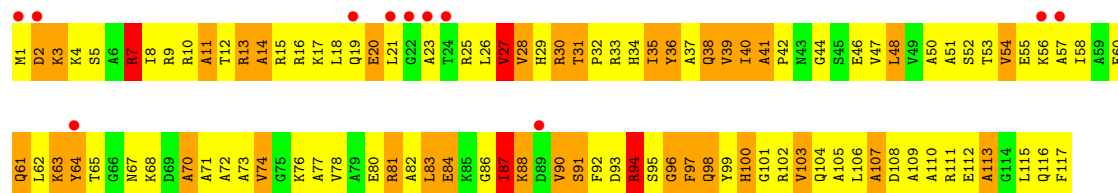
• Molecule 19: 50S RIBOSOMAL PROTEIN L17

Chain N:



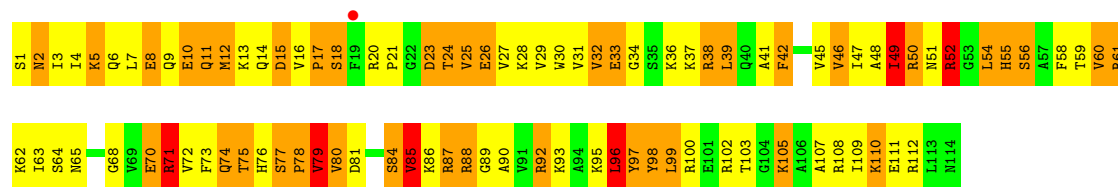
• Molecule 20: 50S RIBOSOMAL PROTEIN L18

Chain O:



• Molecule 21: 50S RIBOSOMAL PROTEIN L19

Chain P:



• Molecule 22: 50S RIBOSOMAL PROTEIN L20

Chain Q:



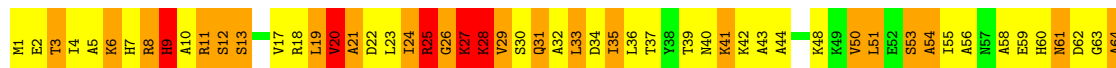
- Molecule 23: 50S RIBOSOMAL PROTEIN L21

Chain R:



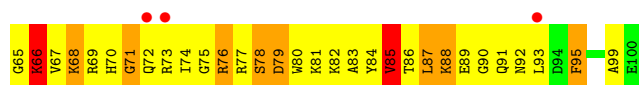
- Molecule 24: 50S RIBOSOMAL PROTEIN L22

Chain S:



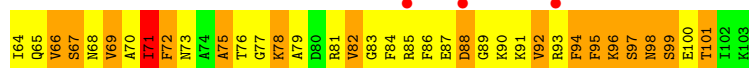
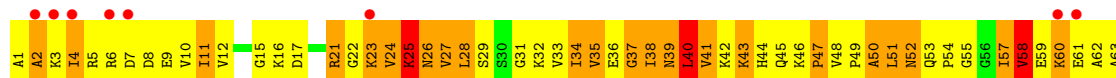
- Molecule 25: 50S RIBOSOMAL PROTEIN L23

Chain T:



- Molecule 26: 50S RIBOSOMAL PROTEIN L24

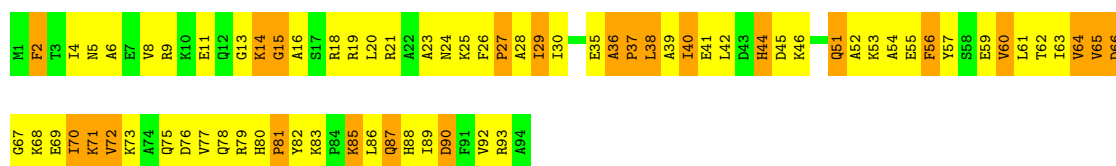
Chain U:



- Molecule 27: 50S RIBOSOMAL PROTEIN L25

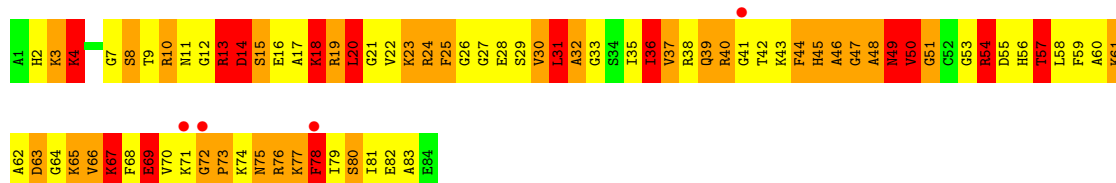
Chain V:





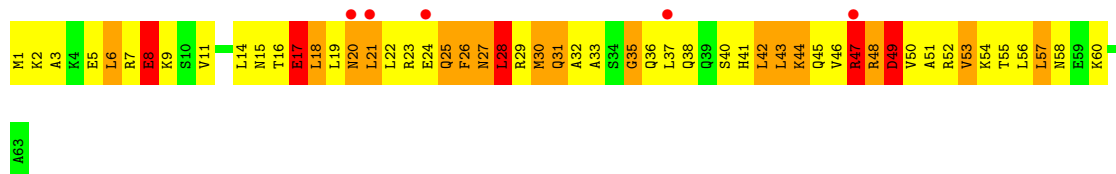
• Molecule 28: 50S RIBOSOMAL PROTEIN L27

Chain W:



• Molecule 29: 50S RIBOSOMAL PROTEIN L29

Chain X:



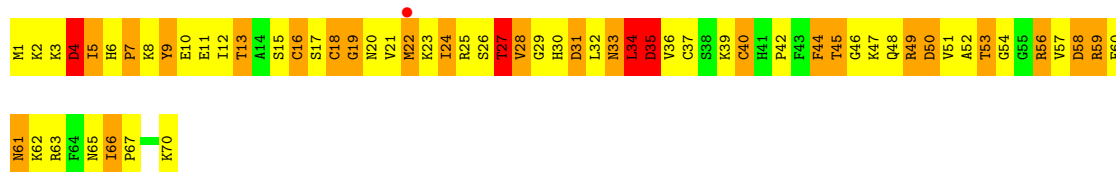
• Molecule 30: 50S RIBOSOMAL PROTEIN L30

Chain Y:



• Molecule 31: 50S RIBOSOMAL PROTEIN L31

Chain Z:



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.18Å 380.08Å 736.70Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	50.00 – 3.74 49.74 – 3.74	Depositor EDS
% Data completeness (in resolution range)	91.5 (50.00-3.74) 91.5 (49.74-3.74)	Depositor EDS
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.52 (at 3.77Å)	Xtriage
Refinement program	PHENIX (PHENIX.REFINE)	Depositor
R, R_{free}	0.259 , 0.323 0.422 , 0.441	Depositor DCC
R_{free} test set	5522 reflections (1.01%)	DCC
Wilson B-factor (Å ²)	90.4	Xtriage
Anisotropy	0.290	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.07 , -10.0	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.34$, $\langle L^2 \rangle = 0.17$	Xtriage
Outliers	0 of 546832 reflections	Xtriage
F_o, F_c correlation	0.65	EDS
Total number of atoms	90314	wwPDB-VP
Average B, all atoms (Å ²)	112.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.64% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0	0.48	0/450	0.78	0/599
2	1	0.46	0/448	0.73	0/594
3	2	0.46	0/380	0.83	1/498 (0.2%)
4	3	0.54	0/513	0.91	0/676
5	4	0.46	0/303	0.78	0/397
6	A	0.79	2/2803 (0.1%)	1.52	47/4371 (1.1%)
7	B	0.90	15/68314 (0.0%)	1.64	1204/106569 (1.1%)
8	C	0.55	0/2093	0.82	1/2815 (0.0%)
9	D	0.51	0/1586	0.77	0/2134
10	E	0.50	0/1571	0.75	0/2113
11	F	0.32	0/1444	0.54	0/1937
12	G	0.37	0/1343	0.62	0/1816
13	H	0.37	0/1122	0.64	0/1515
14	I	0.26	0/1045	0.52	0/1406
15	J	0.50	0/1136	0.75	0/1531
16	K	0.54	0/940	0.72	0/1260
17	L	0.44	0/1062	0.81	0/1413
18	M	0.48	0/1093	0.77	0/1460
19	N	0.49	0/1021	0.73	0/1364
20	O	0.45	0/910	0.77	0/1219
21	P	0.51	0/929	0.81	1/1242 (0.1%)
22	Q	0.53	0/960	0.81	1/1278 (0.1%)
23	R	0.46	0/829	0.75	0/1107
24	S	0.44	0/864	0.82	0/1156
25	T	0.43	0/785	0.69	0/1050
26	U	0.42	0/788	0.69	0/1053
27	V	0.36	0/766	0.52	0/1025
28	W	0.45	0/642	0.78	0/848
29	X	0.40	0/510	0.69	0/677
30	Y	0.34	0/453	0.67	0/605
31	Z	0.68	0/559	0.97	0/745
All	All	0.80	17/97662 (0.0%)	1.47	1255/146473 (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	0	0	2
4	3	0	2
10	E	0	3
13	H	0	1
15	J	0	1
17	L	0	1
19	N	0	2
21	P	0	4
23	R	0	1
24	S	0	2
25	T	0	1
29	X	0	1
31	Z	0	1
All	All	0	22

All (17) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
7	B	301	G	C3'-O3'	7.66	1.52	1.42
6	A	87	U	C1'-N1	7.10	1.59	1.48
7	B	2288	A	C5-C4	6.04	1.43	1.38
7	B	2288	A	N1-C2	-6.02	1.28	1.34
7	B	1440	U	C1'-N1	5.92	1.57	1.48
7	B	794	A	C3'-O3'	5.82	1.50	1.42
7	B	141	G	C3'-O3'	5.78	1.50	1.42
7	B	2288	A	C2-N3	-5.71	1.28	1.33
6	A	95	U	C1'-N1	5.67	1.57	1.48
7	B	2071	A	C3'-O3'	5.59	1.50	1.42
7	B	2687	U	C1'-N1	5.58	1.57	1.48
7	B	1831	G	N9-C4	5.43	1.42	1.38
7	B	641	U	C3'-O3'	5.25	1.49	1.42
7	B	380	G	C3'-O3'	-5.12	1.34	1.42
7	B	646	U	C1'-N1	5.07	1.56	1.48
7	B	1982	U	C3'-O3'	-5.07	1.35	1.42
7	B	2288	A	C5-C6	5.05	1.45	1.41

All (1255) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2288	A	C2-N3-C4	-69.49	75.85	110.60
7	B	2288	A	N1-C2-N3	59.84	159.22	129.30
7	B	2288	A	C6-N1-C2	-58.14	83.72	118.60
7	B	1996	C	C1'-O4'-C4'	-14.20	98.54	109.90
7	B	196	A	C1'-O4'-C4'	-14.15	98.58	109.90
7	B	265	A	C1'-O4'-C4'	-14.04	98.67	109.90
7	B	458	G	C1'-O4'-C4'	-13.75	98.90	109.90
7	B	2597	G	O4'-C1'-N9	-13.37	97.50	108.20
7	B	301	G	P-O3'-C3'	13.07	135.38	119.70
7	B	2453	A	C4'-C3'-C2'	-12.61	89.99	102.60
7	B	302	C	C1'-O4'-C4'	-12.53	99.88	109.90
7	B	2288	A	C4-C5-C6	12.32	123.16	117.00
7	B	2741	A	P-O3'-C3'	-11.93	105.38	119.70
6	A	87	U	O4'-C1'-N1	11.82	117.66	108.20
7	B	1204	A	C3'-C2'-C1'	-11.55	92.26	101.50
7	B	974	G	C3'-C2'-C1'	-11.54	92.26	101.50
7	B	2458	G	C1'-O4'-C4'	-11.34	100.83	109.90
7	B	2832	U	C1'-O4'-C4'	-11.28	100.88	109.90
7	B	1699	G	C3'-C2'-C1'	-11.27	92.48	101.50
7	B	2092	U	O4'-C1'-N1	11.07	117.06	108.20
7	B	1515	A	C1'-O4'-C4'	-11.04	101.07	109.90
7	B	204	A	C3'-C2'-C1'	-10.96	92.73	101.50
7	B	1973	G	C4'-C3'-C2'	-10.87	91.73	102.60
7	B	974	G	C1'-O4'-C4'	-10.79	101.26	109.90
7	B	752	A	C3'-C2'-C1'	-10.61	93.01	101.50
7	B	2030	A	C3'-C2'-C1'	-10.52	93.09	101.50
7	B	2211	A	C1'-O4'-C4'	-10.46	101.53	109.90
7	B	1365	A	P-O3'-C3'	-10.43	107.18	119.70
7	B	2458	G	O4'-C1'-N9	10.38	116.50	108.20
7	B	1691	C	C4'-C3'-C2'	-10.36	92.24	102.60
7	B	2683	C	P-O3'-C3'	-10.29	107.35	119.70
7	B	583	G	P-O3'-C3'	-10.27	107.38	119.70
7	B	1699	G	O4'-C1'-N9	10.21	116.37	108.20
7	B	250	G	C4'-C3'-C2'	-10.20	92.40	102.60
7	B	2596	U	P-O3'-C3'	-10.11	107.57	119.70
7	B	2607	G	O4'-C1'-N9	-10.04	100.17	108.20
7	B	322	A	O4'-C1'-N9	-9.95	100.24	108.20
7	B	321	U	C1'-O4'-C4'	-9.91	101.97	109.90
7	B	62	U	C1'-O4'-C4'	-9.87	102.00	109.90
7	B	1566	A	O4'-C1'-N9	-9.69	100.45	108.20
7	B	205	G	C3'-C2'-C1'	-9.66	93.77	101.50
7	B	126	A	C1'-O4'-C4'	-9.64	102.19	109.90
7	B	2441	U	C4'-C3'-C2'	-9.55	93.05	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2872	A	O4'-C1'-N9	9.52	115.81	108.20
6	A	42	C	P-O3'-C3'	-9.46	108.35	119.70
7	B	205	G	C1'-O4'-C4'	-9.41	102.37	109.90
7	B	974	G	C6-C5-N7	-9.37	124.78	130.40
7	B	2718	G	C4'-C3'-C2'	-9.25	93.35	102.60
7	B	187	G	C3'-C2'-C1'	-9.23	94.12	101.50
7	B	1382	G	C1'-O4'-C4'	-9.22	102.53	109.90
7	B	1996	C	C3'-C2'-C1'	-9.21	94.13	101.50
7	B	1695	G	C1'-O4'-C4'	-9.19	102.55	109.90
7	B	2614	A	C1'-O4'-C4'	-9.18	102.56	109.90
7	B	531	C	C3'-C2'-C1'	-9.05	94.26	101.50
7	B	954	G	P-O3'-C3'	-9.01	108.89	119.70
7	B	793	A	O4'-C1'-N9	-8.99	101.01	108.20
7	B	794	A	P-O3'-C3'	8.93	130.42	119.70
7	B	265	A	C4'-C3'-C2'	-8.88	93.72	102.60
7	B	247	G	P-O3'-C3'	8.86	130.34	119.70
7	B	2675	A	P-O3'-C3'	-8.83	109.11	119.70
7	B	1552	A	C3'-C2'-C1'	-8.79	94.46	101.50
7	B	561	G	N1-C6-O6	8.79	125.17	119.90
7	B	1770	G	C4'-C3'-C2'	-8.78	93.82	102.60
6	A	32	U	C1'-O4'-C4'	-8.77	102.88	109.90
7	B	2012	G	P-O3'-C3'	-8.76	109.19	119.70
6	A	104	A	P-O3'-C3'	8.73	130.17	119.70
7	B	974	G	C4-C5-N7	8.73	114.29	110.80
7	B	775	G	C4'-C3'-C2'	-8.71	93.89	102.60
7	B	2765	A	C3'-C2'-C1'	8.70	108.46	101.50
7	B	1354	A	P-O3'-C3'	-8.68	109.29	119.70
7	B	489	G	C3'-C2'-C1'	-8.67	94.57	101.50
7	B	2238	G	C1'-O4'-C4'	-8.66	102.97	109.90
7	B	646	U	O4'-C1'-N1	8.65	115.12	108.20
7	B	553	G	C4'-C3'-C2'	-8.64	93.96	102.60
7	B	974	G	N1-C6-O6	8.59	125.06	119.90
7	B	1301	A	C1'-O4'-C4'	-8.59	103.02	109.90
7	B	1162	G	C3'-C2'-C1'	-8.57	94.64	101.50
7	B	2592	G	C3'-C2'-C1'	-8.54	94.67	101.50
7	B	2406	A	C1'-O4'-C4'	-8.54	103.07	109.90
7	B	225	C	O4'-C1'-N1	8.53	115.03	108.20
7	B	101	A	C1'-O4'-C4'	-8.52	103.08	109.90
7	B	247	G	C4'-C3'-C2'	-8.52	94.08	102.60
7	B	1382	G	C4'-C3'-C2'	-8.51	94.09	102.60
7	B	587	C	N1-C2-O2	8.50	124.00	118.90
7	B	2106	U	P-O3'-C3'	8.46	129.85	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	949	G	P-O3'-C3'	-8.44	109.58	119.70
7	B	659	G	P-O3'-C3'	-8.41	109.61	119.70
7	B	323	C	O4'-C1'-N1	8.40	114.92	108.20
7	B	527	C	O4'-C1'-N1	8.38	114.90	108.20
7	B	2071	A	P-O3'-C3'	8.38	129.75	119.70
7	B	627	A	C4'-C3'-C2'	-8.36	94.24	102.60
7	B	1027	A	O4'-C1'-N9	-8.31	101.55	108.20
7	B	1130	U	C4'-C3'-C2'	-8.31	94.29	102.60
7	B	2088	A	C4'-C3'-C2'	-8.30	94.30	102.60
7	B	1699	G	C1'-O4'-C4'	-8.26	103.29	109.90
7	B	655	A	C3'-C2'-C1'	-8.21	94.93	101.50
7	B	2741	A	C1'-O4'-C4'	-8.21	103.33	109.90
7	B	250	G	C1'-O4'-C4'	-8.21	103.33	109.90
7	B	2212	A	C4'-C3'-C2'	-8.20	94.40	102.60
7	B	1027	A	N9-C1'-C2'	-8.20	102.98	112.00
7	B	2157	G	C1'-O4'-C4'	-8.18	103.36	109.90
7	B	439	A	C3'-C2'-C1'	-8.16	94.97	101.50
7	B	1631	G	C3'-C2'-C1'	-8.16	94.97	101.50
7	B	1378	A	O4'-C1'-N9	8.14	114.71	108.20
7	B	2607	G	C4'-C3'-C2'	-8.14	94.46	102.60
7	B	2576	G	N3-C4-C5	-8.13	124.53	128.60
7	B	2224	G	O4'-C1'-N9	-8.13	101.70	108.20
7	B	1819	A	C1'-O4'-C4'	-8.11	103.42	109.90
7	B	381	G	C4'-C3'-C2'	-8.09	94.51	102.60
7	B	2076	U	C3'-C2'-C1'	-8.09	95.03	101.50
7	B	1623	G	P-O3'-C3'	-8.08	110.00	119.70
7	B	968	C	C4'-C3'-C2'	-8.07	94.53	102.60
7	B	1929	G	C4'-C3'-C2'	-8.06	94.54	102.60
7	B	1111	A	C3'-C2'-C1'	-8.05	95.06	101.50
7	B	2087	G	C3'-C2'-C1'	-8.05	95.06	101.50
7	B	2072	C	C4'-C3'-C2'	-8.04	94.56	102.60
7	B	547	A	C4'-C3'-C2'	-8.04	94.56	102.60
7	B	534	U	C4'-C3'-C2'	-8.01	94.59	102.60
7	B	774	G	C1'-O4'-C4'	-8.01	103.49	109.90
7	B	1980	G	C1'-O4'-C4'	-8.00	103.50	109.90
7	B	2285	C	P-O3'-C3'	-7.99	110.11	119.70
7	B	1786	A	P-O3'-C3'	7.98	129.28	119.70
7	B	2156	G	C4'-C3'-C2'	-7.98	94.62	102.60
7	B	1606	C	C4'-C3'-C2'	-7.95	94.65	102.60
7	B	2762	C	O4'-C1'-N1	-7.92	101.86	108.20
7	B	748	G	O4'-C1'-N9	7.92	114.54	108.20
7	B	790	U	O4'-C1'-N1	-7.92	101.86	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	360	U	O4'-C1'-N1	7.92	114.53	108.20
7	B	800	A	C3'-C2'-C1'	-7.91	95.18	101.50
7	B	2460	U	O4'-C1'-N1	-7.89	101.89	108.20
7	B	1367	A	P-O3'-C3'	-7.86	110.27	119.70
7	B	2648	G	O4'-C1'-N9	-7.86	101.91	108.20
7	B	222	A	O4'-C1'-N9	7.86	114.48	108.20
7	B	408	G	C4'-C3'-C2'	-7.84	94.76	102.60
7	B	799	G	O4'-C1'-N9	7.83	114.46	108.20
7	B	1082	U	C3'-C2'-C1'	-7.82	95.25	101.50
7	B	14	A	O4'-C1'-N9	-7.82	101.95	108.20
7	B	2057	G	O4'-C1'-N9	-7.81	101.95	108.20
7	B	561	G	C5-C6-O6	-7.80	123.92	128.60
7	B	2765	A	P-O3'-C3'	7.78	129.03	119.70
7	B	795	C	C3'-C2'-C1'	-7.75	95.30	101.50
7	B	2609	U	P-O3'-C3'	7.75	129.01	119.70
7	B	505	A	N9-C1'-C2'	-7.73	103.49	112.00
7	B	1997	C	O4'-C1'-N1	7.72	114.37	108.20
7	B	2288	A	C3'-C2'-C1'	-7.72	95.33	101.50
7	B	544	C	C1'-O4'-C4'	-7.71	103.73	109.90
7	B	1937	A	C4'-C3'-C2'	-7.70	94.90	102.60
7	B	394	C	O4'-C1'-N1	-7.70	102.04	108.20
6	A	47	C	C4'-C3'-C2'	-7.67	94.92	102.60
7	B	809	G	P-O3'-C3'	7.67	128.90	119.70
7	B	2690	U	C1'-O4'-C4'	-7.66	103.77	109.90
7	B	2212	A	C3'-C2'-C1'	-7.65	95.38	101.50
7	B	1275	A	P-O3'-C3'	-7.65	110.52	119.70
7	B	2076	U	C4'-C3'-C2'	-7.65	94.95	102.60
7	B	2597	G	N9-C1'-C2'	7.64	123.94	114.00
7	B	1997	C	C1'-O4'-C4'	-7.62	103.80	109.90
6	A	15	A	C3'-C2'-C1'	-7.61	95.41	101.50
7	B	222	A	C1'-O4'-C4'	-7.61	103.81	109.90
7	B	1930	G	C1'-O4'-C4'	-7.59	103.83	109.90
7	B	2586	U	N1-C1'-C2'	-7.59	103.65	112.00
7	B	974	G	P-O3'-C3'	7.55	128.76	119.70
7	B	177	G	C1'-O4'-C4'	-7.55	103.86	109.90
7	B	2021	C	C4'-C3'-C2'	-7.55	95.05	102.60
7	B	118	A	O4'-C1'-N9	-7.54	102.17	108.20
7	B	544	C	P-O3'-C3'	7.54	128.75	119.70
7	B	564	C	O4'-C1'-N1	-7.54	102.17	108.20
7	B	1971	U	C4'-C3'-C2'	-7.53	95.07	102.60
7	B	246	C	C4'-C3'-C2'	-7.53	95.07	102.60
7	B	2581	G	P-O3'-C3'	7.53	128.73	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	245	G	C3'-C2'-C1'	-7.53	95.48	101.50
7	B	813	U	P-O3'-C3'	-7.53	110.67	119.70
7	B	1976	U	C2-N1-C1'	7.52	126.73	117.70
7	B	1296	G	C3'-C2'-C1'	-7.52	95.49	101.50
7	B	783	A	N9-C1'-C2'	-7.51	103.73	112.00
7	B	2030	A	C1'-O4'-C4'	-7.49	103.91	109.90
7	B	2453	A	C1'-O4'-C4'	-7.49	103.91	109.90
7	B	1817	G	N3-C4-N9	-7.48	121.51	126.00
7	B	262	A	C4'-C3'-C2'	-7.47	95.13	102.60
7	B	333	G	O4'-C1'-N9	-7.46	102.23	108.20
7	B	2860	A	P-O3'-C3'	-7.46	110.75	119.70
7	B	298	G	C3'-C2'-C1'	-7.45	95.54	101.50
7	B	444	C	C4'-C3'-C2'	-7.44	95.16	102.60
7	B	809	G	C4'-C3'-C2'	-7.44	95.16	102.60
7	B	1826	G	O4'-C1'-N9	-7.44	102.25	108.20
7	B	1980	G	O4'-C1'-N9	7.43	114.15	108.20
7	B	458	G	O4'-C1'-N9	7.43	114.14	108.20
7	B	1352	U	C4'-C3'-C2'	-7.42	95.19	102.60
7	B	337	C	C4'-C3'-C2'	-7.41	95.19	102.60
7	B	745	G	C8-N9-C4	-7.38	103.45	106.40
7	B	372	G	O4'-C1'-N9	7.38	114.10	108.20
7	B	1107	G	C4'-C3'-C2'	-7.38	95.22	102.60
7	B	107	G	C3'-C2'-C1'	-7.37	95.60	101.50
7	B	2442	C	C4'-C3'-C2'	-7.37	95.23	102.60
7	B	2451	A	C4'-C3'-C2'	-7.36	95.24	102.60
7	B	1936	A	O4'-C1'-N9	-7.36	102.31	108.20
7	B	1695	G	C2-N3-C4	-7.35	108.22	111.90
7	B	2157	G	O4'-C1'-N9	7.35	114.08	108.20
7	B	2350	C	P-O3'-C3'	-7.35	110.88	119.70
7	B	2336	A	P-O3'-C3'	7.34	128.51	119.70
7	B	982	C	C1'-O4'-C4'	-7.34	104.03	109.90
7	B	558	U	P-O3'-C3'	-7.33	110.90	119.70
7	B	575	A	O4'-C1'-N9	-7.33	102.33	108.20
7	B	1250	G	P-O3'-C3'	7.32	128.48	119.70
7	B	2082	A	C1'-O4'-C4'	-7.32	104.05	109.90
7	B	2094	A	O4'-C1'-N9	7.32	114.05	108.20
7	B	2726	A	C1'-O4'-C4'	-7.32	104.05	109.90
7	B	603	A	C1'-O4'-C4'	-7.31	104.05	109.90
7	B	1985	C	C4'-C3'-C2'	-7.30	95.30	102.60
7	B	779	U	C4'-C3'-C2'	-7.29	95.31	102.60
7	B	2015	A	P-O3'-C3'	-7.29	110.95	119.70
7	B	2780	G	N3-C4-C5	-7.29	124.95	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	982	C	C6-N1-C2	-7.28	117.39	120.30
7	B	1025	G	C3'-C2'-C1'	-7.28	95.67	101.50
7	B	2848	G	N1-C6-O6	7.28	124.27	119.90
7	B	2512	C	P-O3'-C3'	-7.28	110.97	119.70
7	B	573	U	N1-C1'-C2'	7.27	123.45	114.00
7	B	2543	G	P-O3'-C3'	-7.26	110.99	119.70
7	B	2585	U	P-O3'-C3'	7.25	128.40	119.70
7	B	2616	C	P-O3'-C3'	-7.25	111.00	119.70
7	B	1296	G	C4'-C3'-C2'	-7.25	95.35	102.60
7	B	465	G	C8-N9-C4	-7.24	103.50	106.40
7	B	445	C	C1'-O4'-C4'	-7.24	104.11	109.90
7	B	1395	A	C1'-O4'-C4'	-7.24	104.11	109.90
7	B	2697	G	C4'-C3'-C2'	-7.24	95.36	102.60
7	B	2445	G	O4'-C1'-N9	7.24	113.99	108.20
7	B	1616	A	C4'-C3'-C2'	-7.22	95.38	102.60
7	B	2800	A	C4'-C3'-C2'	-7.22	95.38	102.60
7	B	1933	G	O4'-C1'-N9	-7.21	102.43	108.20
7	B	84	A	C1'-O4'-C4'	-7.20	104.14	109.90
7	B	259	G	C4'-C3'-C2'	-7.20	95.40	102.60
7	B	1793	C	C4'-C3'-C2'	-7.20	95.40	102.60
7	B	2206	C	P-O3'-C3'	-7.20	111.06	119.70
7	B	2288	A	C5-C6-N1	-7.18	114.11	117.70
7	B	250	G	O4'-C4'-C3'	-7.18	96.82	104.00
7	B	694	U	P-O3'-C3'	-7.18	111.09	119.70
6	A	32	U	P-O3'-C3'	-7.17	111.10	119.70
7	B	1984	G	C4'-C3'-C2'	-7.17	95.44	102.60
7	B	2685	G	C8-N9-C4	-7.16	103.54	106.40
7	B	980	A	C3'-C2'-C1'	7.15	107.22	101.50
7	B	1783	A	P-O3'-C3'	-7.15	111.12	119.70
6	A	101	A	P-O3'-C3'	-7.14	111.13	119.70
7	B	1968	G	C4'-C3'-C2'	-7.13	95.47	102.60
7	B	479	A	O4'-C1'-C2'	-7.13	98.67	105.80
7	B	2362	C	P-O3'-C3'	-7.12	111.15	119.70
7	B	941	A	C1'-O4'-C4'	-7.12	104.20	109.90
7	B	796	C	C4'-C3'-C2'	-7.11	95.49	102.60
7	B	1633	G	O4'-C1'-N9	-7.11	102.51	108.20
7	B	2095	A	C3'-C2'-C1'	-7.08	95.83	101.50
7	B	132	G	N1-C6-O6	7.08	124.15	119.90
7	B	1297	C	C4'-C3'-C2'	-7.08	95.52	102.60
7	B	1684	G	C4'-C3'-C2'	-7.08	95.53	102.60
7	B	493	G	C4'-C3'-C2'	-7.07	95.53	102.60
7	B	1125	G	P-O3'-C3'	7.06	128.17	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2741	A	O4'-C1'-N9	7.06	113.85	108.20
7	B	63	A	O4'-C1'-N9	7.06	113.85	108.20
7	B	829	A	C4'-C3'-C2'	-7.05	95.55	102.60
7	B	2059	A	N9-C1'-C2'	-7.05	104.25	112.00
7	B	2740	A	P-O3'-C3'	7.03	128.13	119.70
7	B	2732	G	C6-C5-N7	-7.02	126.19	130.40
7	B	1914	C	C1'-O4'-C4'	-7.01	104.29	109.90
7	B	1360	G	O4'-C1'-N9	7.00	113.80	108.20
7	B	482	A	C1'-O4'-C4'	-7.00	104.30	109.90
7	B	1828	G	O4'-C1'-N9	-6.99	102.61	108.20
7	B	321	U	O4'-C1'-N1	6.99	113.79	108.20
7	B	972	A	N1-C6-N6	-6.99	114.41	118.60
7	B	962	G	C4'-C3'-C2'	-6.98	95.62	102.60
7	B	2076	U	P-O3'-C3'	6.98	128.08	119.70
7	B	2296	U	P-O3'-C3'	6.98	128.07	119.70
7	B	2620	C	C1'-O4'-C4'	-6.98	104.32	109.90
7	B	2320	U	C3'-C2'-C1'	-6.97	95.92	101.50
7	B	1241	A	C4'-C3'-C2'	-6.97	95.63	102.60
7	B	2448	A	O4'-C1'-N9	-6.96	102.63	108.20
7	B	752	A	C1'-O4'-C4'	-6.96	104.33	109.90
7	B	96	C	C4'-C3'-C2'	-6.95	95.65	102.60
7	B	2740	A	C3'-C2'-C1'	6.95	107.06	101.50
7	B	386	G	C4'-C3'-C2'	-6.95	95.65	102.60
7	B	183	C	P-O3'-C3'	-6.94	111.37	119.70
7	B	1378	A	N9-C1'-C2'	-6.94	104.36	112.00
7	B	1699	G	P-O3'-C3'	6.94	128.03	119.70
7	B	2083	G	O4'-C1'-N9	-6.94	102.65	108.20
7	B	1831	G	N3-C4-C5	-6.94	125.13	128.60
7	B	2250	G	N3-C4-N9	-6.94	121.84	126.00
7	B	563	A	P-O3'-C3'	-6.93	111.38	119.70
7	B	2679	A	O4'-C1'-N9	-6.92	102.66	108.20
7	B	1418	G	P-O3'-C3'	-6.92	111.40	119.70
7	B	1601	G	C4'-C3'-C2'	-6.91	95.69	102.60
7	B	1758	U	O4'-C1'-N1	-6.90	102.68	108.20
7	B	142	A	O4'-C1'-N9	-6.90	102.68	108.20
7	B	260	G	C4'-C3'-C2'	-6.89	95.70	102.60
7	B	2694	G	C8-N9-C4	-6.88	103.65	106.40
7	B	141	G	C3'-C2'-C1'	6.88	107.00	101.50
7	B	2477	U	C1'-O4'-C4'	-6.87	104.40	109.90
7	B	2106	U	C3'-C2'-C1'	-6.87	96.01	101.50
7	B	1818	U	O4'-C1'-N1	6.87	113.69	108.20
7	B	2259	U	O4'-C1'-N1	6.86	113.69	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2223	G	P-O3'-C3'	-6.86	111.47	119.70
7	B	2370	G	C4'-C3'-C2'	-6.85	95.75	102.60
7	B	2024	G	C3'-C2'-C1'	-6.84	96.03	101.50
7	B	573	U	C1'-O4'-C4'	-6.84	104.43	109.90
7	B	2821	A	C4'-C3'-C2'	-6.83	95.77	102.60
7	B	921	C	C4'-C3'-C2'	-6.83	95.77	102.60
7	B	1440	U	N1-C1'-C2'	6.82	122.87	114.00
7	B	1792	G	C4'-C3'-C2'	-6.82	95.78	102.60
7	B	1797	G	N9-C1'-C2'	-6.82	104.50	112.00
7	B	795	C	C4'-C3'-C2'	-6.81	95.79	102.60
7	B	683	U	C4'-C3'-C2'	-6.81	95.79	102.60
7	B	1187	G	O4'-C1'-N9	-6.81	102.75	108.20
7	B	571	U	C1'-O4'-C4'	-6.80	104.46	109.90
7	B	1040	A	P-O3'-C3'	-6.80	111.54	119.70
6	A	95	U	C4'-C3'-C2'	-6.79	95.81	102.60
7	B	2685	G	N3-C4-C5	-6.79	125.20	128.60
7	B	321	U	P-O3'-C3'	6.79	127.84	119.70
7	B	670	A	P-O3'-C3'	6.79	127.84	119.70
7	B	2480	C	O4'-C1'-N1	6.78	113.62	108.20
7	B	2734	A	N1-C6-N6	6.77	122.67	118.60
7	B	2880	C	N1-C1'-C2'	6.77	122.81	114.00
7	B	544	C	C5'-C4'-O4'	6.77	117.22	109.10
7	B	2016	U	C4'-C3'-C2'	-6.77	95.83	102.60
7	B	346	A	O4'-C1'-N9	6.76	113.61	108.20
7	B	50	U	O4'-C1'-N1	6.75	113.60	108.20
7	B	1829	A	P-O5'-C5'	-6.74	110.11	120.90
7	B	2608	G	C4'-C3'-C2'	-6.74	95.86	102.60
7	B	1204	A	O4'-C1'-N9	6.74	113.59	108.20
7	B	1441	G	C4'-C3'-C2'	-6.74	95.86	102.60
7	B	2015	A	N9-C1'-C2'	6.74	122.76	114.00
7	B	1850	G	N1-C6-O6	6.73	123.94	119.90
7	B	1720	U	C4'-C3'-C2'	-6.73	95.87	102.60
7	B	2105	U	C3'-C2'-C1'	6.72	106.88	101.50
7	B	90	U	C4'-C3'-C2'	-6.72	95.88	102.60
7	B	2201	G	C3'-C2'-C1'	-6.71	96.13	101.50
7	B	1294	U	C3'-C2'-C1'	-6.70	96.14	101.50
7	B	553	G	C3'-C2'-C1'	-6.70	96.14	101.50
7	B	2230	G	O4'-C1'-N9	6.69	113.56	108.20
7	B	1680	U	O4'-C1'-N1	6.69	113.55	108.20
7	B	2697	G	C8-N9-C4	-6.69	103.72	106.40
7	B	871	U	N1-C1'-C2'	-6.69	104.64	112.00
7	B	1124	G	O4'-C1'-N9	-6.69	102.85	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	1750	G	C4'-C3'-C2'	-6.68	95.92	102.60
7	B	1807	G	P-O3'-C3'	-6.68	111.69	119.70
7	B	444	C	C1'-O4'-C4'	-6.67	104.57	109.90
7	B	1695	G	C4'-C3'-C2'	-6.67	95.93	102.60
7	B	2512	C	O4'-C1'-N1	6.66	113.53	108.20
7	B	215	G	C3'-C2'-C1'	-6.66	96.17	101.50
7	B	1283	G	C3'-C2'-C1'	-6.64	96.18	101.50
6	A	52	A	O4'-C1'-N9	6.63	113.51	108.20
7	B	449	A	C4'-C3'-C2'	-6.63	95.97	102.60
7	B	307	G	C4'-C3'-C2'	-6.62	95.98	102.60
7	B	1982	U	P-O3'-C3'	-6.62	111.75	119.70
7	B	2629	U	C1'-O4'-C4'	-6.62	104.60	109.90
7	B	615	U	C3'-C2'-C1'	-6.62	96.20	101.50
7	B	1161	C	C4'-C3'-C2'	-6.62	95.98	102.60
7	B	465	G	C3'-C2'-C1'	6.62	106.79	101.50
7	B	2718	G	O4'-C1'-N9	6.62	113.49	108.20
7	B	408	G	C3'-C2'-C1'	-6.61	96.21	101.50
7	B	276	U	O4'-C1'-N1	6.60	113.48	108.20
7	B	982	C	N3-C4-C5	-6.59	119.26	121.90
7	B	2631	G	C3'-C2'-C1'	-6.59	96.22	101.50
7	B	571	U	P-O3'-C3'	6.59	127.61	119.70
7	B	559	G	N1-C6-O6	6.59	123.85	119.90
7	B	2456	C	P-O3'-C3'	-6.59	111.79	119.70
7	B	2156	G	O4'-C1'-N9	6.59	113.47	108.20
7	B	307	G	P-O3'-C3'	6.58	127.60	119.70
7	B	675	A	C3'-C2'-C1'	6.58	106.76	101.50
7	B	1657	U	P-O3'-C3'	-6.58	111.81	119.70
7	B	64	A	O4'-C1'-N9	6.57	113.46	108.20
7	B	940	G	C4'-C3'-C2'	-6.57	96.03	102.60
7	B	458	G	N3-C4-N9	-6.56	122.06	126.00
7	B	863	A	O4'-C1'-N9	-6.56	102.95	108.20
7	B	1035	U	C3'-C2'-C1'	-6.56	96.25	101.50
7	B	2297	A	O4'-C1'-N9	6.55	113.44	108.20
7	B	278	A	C3'-C2'-C1'	-6.55	96.26	101.50
7	B	748	G	C3'-C2'-C1'	6.54	106.73	101.50
7	B	1162	G	N1-C6-O6	6.54	123.82	119.90
7	B	141	G	P-O3'-C3'	6.52	127.53	119.70
7	B	797	G	O4'-C1'-N9	6.52	113.42	108.20
7	B	465	G	N3-C4-C5	-6.51	125.34	128.60
7	B	2687	U	C6-N1-C2	-6.51	117.09	121.00
7	B	2032	G	O4'-C1'-N9	-6.51	102.99	108.20
7	B	2692	G	C3'-C2'-C1'	6.51	106.71	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2849	U	O4'-C1'-N1	-6.51	102.99	108.20
7	B	370	G	C4'-C3'-C2'	-6.51	96.09	102.60
7	B	468	G	C4'-C3'-C2'	-6.51	96.09	102.60
7	B	2630	G	O4'-C1'-N9	6.51	113.41	108.20
7	B	2776	A	C4'-C3'-C2'	-6.51	96.09	102.60
7	B	614	A	N9-C1'-C2'	6.50	122.45	114.00
7	B	1819	A	O5'-C5'-C4'	-6.50	99.35	111.70
7	B	2880	C	C4'-C3'-C2'	-6.50	96.10	102.60
7	B	1010	A	C3'-C2'-C1'	-6.49	96.31	101.50
7	B	2876	G	C1'-O4'-C4'	-6.49	104.71	109.90
7	B	1659	G	O4'-C1'-N9	6.49	113.39	108.20
7	B	1199	U	N1-C2-O2	-6.49	118.26	122.80
7	B	1266	G	O4'-C1'-C2'	-6.49	99.31	105.80
7	B	1204	A	C1'-O4'-C4'	-6.48	104.72	109.90
7	B	2653	U	O4'-C1'-N1	6.48	113.38	108.20
7	B	2011	U	P-O3'-C3'	-6.46	111.94	119.70
7	B	2832	U	O4'-C1'-N1	6.46	113.37	108.20
7	B	1306	C	C4'-C3'-C2'	-6.45	96.15	102.60
7	B	1763	G	C8-N9-C4	-6.45	103.82	106.40
7	B	195	A	C3'-C2'-C1'	6.45	106.66	101.50
7	B	2092	U	C1'-O4'-C4'	-6.45	104.74	109.90
7	B	1975	G	P-O3'-C3'	-6.45	111.96	119.70
7	B	1261	C	O4'-C1'-N1	-6.44	103.05	108.20
7	B	544	C	O4'-C1'-N1	6.44	113.35	108.20
7	B	1191	G	N9-C1'-C2'	-6.44	104.92	112.00
7	B	2044	C	C3'-C2'-C1'	-6.44	96.35	101.50
7	B	1156	A	C3'-C2'-C1'	-6.43	96.35	101.50
7	B	1327	A	C3'-C2'-C1'	6.43	106.64	101.50
7	B	2893	A	C1'-O4'-C4'	-6.42	104.76	109.90
7	B	687	C	N1-C2-O2	-6.42	115.05	118.90
7	B	2233	U	C4'-C3'-C2'	-6.42	96.18	102.60
7	B	1988	G	C4'-C3'-C2'	-6.42	96.18	102.60
7	B	658	U	P-O3'-C3'	-6.42	112.00	119.70
7	B	2045	C	C6-N1-C2	6.42	122.87	120.30
7	B	42	A	C3'-C2'-C1'	-6.41	96.37	101.50
7	B	782	A	O4'-C1'-N9	6.40	113.32	108.20
7	B	1092	C	C4'-C3'-C2'	-6.40	96.20	102.60
7	B	509	C	C1'-O4'-C4'	-6.40	104.78	109.90
7	B	587	C	C2-N1-C1'	6.40	125.84	118.80
7	B	1914	C	O4'-C1'-N1	6.39	113.31	108.20
7	B	1913	A	C1'-O4'-C4'	-6.39	104.78	109.90
7	B	994	C	O4'-C1'-N1	-6.39	103.09	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2550	G	O4'-C1'-N9	-6.39	103.09	108.20
7	B	2553	G	C4'-C3'-C2'	-6.39	96.21	102.60
6	A	40	U	O4'-C1'-N1	6.39	113.31	108.20
7	B	575	A	C3'-C2'-C1'	6.39	106.61	101.50
6	A	55	U	C4'-C3'-C2'	-6.38	96.22	102.60
7	B	1658	C	C3'-C2'-C1'	-6.38	96.40	101.50
7	B	1699	G	O4'-C1'-C2'	-6.37	99.43	105.80
7	B	105	C	C4'-C3'-C2'	-6.37	96.23	102.60
7	B	2581	G	C8-N9-C4	-6.37	103.85	106.40
7	B	571	U	N1-C1'-C2'	6.37	122.28	114.00
7	B	1322	A	C4'-C3'-C2'	-6.37	96.23	102.60
7	B	1815	A	C4'-C3'-C2'	-6.37	96.23	102.60
7	B	101	A	P-O3'-C3'	6.37	127.34	119.70
7	B	2022	U	P-O3'-C3'	-6.37	112.06	119.70
7	B	410	G	C8-N9-C4	-6.36	103.86	106.40
7	B	1824	G	O4'-C1'-N9	6.36	113.29	108.20
7	B	974	G	N9-C1'-C2'	6.35	122.26	114.00
7	B	1606	C	P-O3'-C3'	6.35	127.33	119.70
7	B	204	A	C1'-O4'-C4'	-6.34	104.83	109.90
7	B	2213	U	C2-N1-C1'	6.34	125.31	117.70
7	B	445	C	C6-N1-C2	6.34	122.84	120.30
7	B	1818	U	C1'-O4'-C4'	-6.33	104.83	109.90
7	B	2642	G	C8-N9-C4	-6.32	103.87	106.40
6	A	116	G	C4'-C3'-C2'	-6.32	96.28	102.60
7	B	1989	G	C8-N9-C4	-6.32	103.87	106.40
7	B	2251	G	C4'-C3'-C2'	-6.32	96.28	102.60
7	B	551	G	C3'-C2'-C1'	-6.31	96.45	101.50
7	B	2576	G	N3-C4-N9	6.31	129.79	126.00
7	B	2017	U	O4'-C4'-C3'	-6.30	97.70	104.00
7	B	465	G	C4-C5-C6	6.30	122.58	118.80
7	B	599	A	C4'-C3'-C2'	-6.30	96.30	102.60
7	B	1273	U	O4'-C1'-N1	-6.30	103.16	108.20
7	B	1610	A	C8-N9-C4	-6.30	103.28	105.80
7	B	1633	G	N3-C4-C5	-6.29	125.45	128.60
7	B	718	A	O4'-C1'-N9	6.29	113.23	108.20
7	B	2288	A	N3-C4-C5	-6.29	122.40	126.80
7	B	465	G	N9-C1'-C2'	6.29	122.17	114.00
7	B	592	A	P-O3'-C3'	-6.28	112.16	119.70
7	B	1301	A	O4'-C1'-C2'	-6.28	99.52	105.80
7	B	1913	A	P-O3'-C3'	6.28	127.23	119.70
7	B	1768	C	C3'-C2'-C1'	-6.27	96.49	101.50
7	B	322	A	C4'-C3'-C2'	-6.26	96.33	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	1451	C	C3'-C2'-C1'	6.26	106.51	101.50
7	B	119	A	N1-C6-N6	6.26	122.36	118.60
7	B	37	C	C4'-C3'-C2'	-6.25	96.34	102.60
7	B	2465	C	C4'-C3'-C2'	-6.25	96.35	102.60
7	B	1031	G	C3'-C2'-C1'	-6.25	96.50	101.50
7	B	1251	C	O4'-C1'-N1	-6.25	103.20	108.20
7	B	701	G	C4'-C3'-C2'	-6.25	96.35	102.60
7	B	1789	A	P-O3'-C3'	-6.25	112.20	119.70
7	B	2310	C	C3'-C2'-C1'	-6.24	96.50	101.50
7	B	2598	A	O4'-C1'-N9	-6.24	103.21	108.20
7	B	408	G	P-O3'-C3'	6.24	127.19	119.70
7	B	184	C	C6-N1-C2	6.24	122.80	120.30
7	B	2717	C	C4'-C3'-C2'	-6.24	96.36	102.60
7	B	1475	G	C3'-C2'-C1'	-6.24	96.51	101.50
6	A	19	C	C3'-C2'-C1'	-6.23	96.51	101.50
7	B	575	A	P-O3'-C3'	6.23	127.18	119.70
7	B	2585	U	C4'-C3'-C2'	-6.23	96.37	102.60
6	A	66	A	P-O3'-C3'	6.23	127.18	119.70
7	B	1888	G	O4'-C1'-N9	6.23	113.18	108.20
7	B	711	G	C4'-C3'-C2'	-6.23	96.37	102.60
7	B	38	A	P-O3'-C3'	-6.22	112.24	119.70
7	B	2880	C	C2-N1-C1'	6.22	125.64	118.80
7	B	920	A	C4'-C3'-C2'	-6.21	96.39	102.60
7	B	184	C	C1'-O4'-C4'	-6.21	104.93	109.90
7	B	1889	A	C4'-C3'-C2'	-6.20	96.40	102.60
7	B	462	C	C3'-C2'-C1'	-6.19	96.55	101.50
7	B	449	A	P-O3'-C3'	6.19	127.13	119.70
7	B	2604	U	C4'-C3'-C2'	-6.18	96.42	102.60
7	B	2430	A	O4'-C1'-N9	-6.18	103.26	108.20
7	B	1831	G	C8-N9-C4	-6.17	103.93	106.40
7	B	2732	G	O4'-C1'-N9	6.17	113.14	108.20
7	B	958	U	P-O3'-C3'	-6.17	112.30	119.70
7	B	2097	A	P-O3'-C3'	-6.17	112.30	119.70
7	B	98	G	P-O3'-C3'	6.16	127.09	119.70
7	B	673	C	C4'-C3'-C2'	-6.15	96.45	102.60
7	B	259	G	C3'-C2'-C1'	-6.15	96.58	101.50
7	B	910	A	P-O3'-C3'	6.15	127.08	119.70
7	B	2324	U	P-O3'-C3'	6.15	127.08	119.70
7	B	1054	A	C3'-C2'-C1'	-6.14	96.59	101.50
7	B	39	G	C4'-C3'-C2'	-6.14	96.46	102.60
7	B	1288	G	C1'-O4'-C4'	-6.14	104.99	109.90
7	B	559	G	C5-C6-O6	-6.14	124.92	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	1122	G	P-O3'-C3'	-6.13	112.34	119.70
7	B	2068	U	O4'-C1'-N1	-6.13	103.29	108.20
7	B	2262	U	C1'-O4'-C4'	-6.13	104.99	109.90
7	B	951	C	P-O3'-C3'	-6.13	112.34	119.70
7	B	1066	U	C3'-C2'-C1'	-6.12	96.60	101.50
7	B	1782	U	C3'-C2'-C1'	6.12	106.40	101.50
7	B	2253	G	P-O3'-C3'	6.12	127.05	119.70
7	B	1854	A	O4'-C1'-N9	-6.12	103.31	108.20
7	B	2519	U	C3'-C2'-C1'	6.12	106.39	101.50
7	B	2030	A	O4'-C1'-N9	6.11	113.09	108.20
7	B	1610	A	N9-C1'-C2'	6.11	121.94	114.00
7	B	458	G	N3-C4-C5	6.10	131.65	128.60
7	B	1692	U	C4'-C3'-C2'	-6.10	96.50	102.60
7	B	2365	G	C1'-O4'-C4'	-6.10	105.02	109.90
7	B	1975	G	C2-N3-C4	6.10	114.95	111.90
7	B	110	G	C3'-C2'-C1'	-6.10	96.62	101.50
7	B	994	C	C6-N1-C1'	-6.10	113.48	120.80
7	B	2015	A	O4'-C1'-N9	-6.10	103.32	108.20
7	B	562	U	C3'-C2'-C1'	6.10	106.38	101.50
7	B	479	A	N9-C1'-C2'	6.09	121.92	114.00
7	B	2011	U	N1-C1'-C2'	-6.09	105.30	112.00
7	B	745	G	C4'-C3'-C2'	-6.09	96.51	102.60
7	B	2902	C	C3'-C2'-C1'	-6.09	96.63	101.50
7	B	1988	G	C3'-C2'-C1'	-6.09	96.63	101.50
7	B	2554	U	C1'-O4'-C4'	-6.09	105.03	109.90
7	B	2697	G	O4'-C1'-N9	6.09	113.07	108.20
7	B	819	A	O4'-C1'-N9	-6.08	103.33	108.20
7	B	811	U	C3'-C2'-C1'	-6.08	96.63	101.50
7	B	1675	C	C6-N1-C2	-6.08	117.87	120.30
7	B	2571	U	C4'-C3'-C2'	-6.08	96.52	102.60
7	B	909	A	P-O3'-C3'	6.08	126.99	119.70
7	B	1850	G	C5-C6-O6	-6.08	124.95	128.60
7	B	2389	G	O4'-C1'-N9	6.07	113.06	108.20
7	B	739	A	P-O3'-C3'	-6.06	112.43	119.70
7	B	1720	U	C3'-C2'-C1'	-6.06	96.65	101.50
7	B	258	G	C3'-C2'-C1'	-6.05	96.66	101.50
7	B	544	C	C4'-C3'-C2'	-6.05	96.55	102.60
7	B	1342	A	O4'-C1'-N9	-6.05	103.36	108.20
7	B	301	G	C3'-C2'-C1'	6.05	106.34	101.50
7	B	2189	U	C3'-C2'-C1'	-6.05	96.66	101.50
7	B	1205	A	C3'-C2'-C1'	-6.04	96.67	101.50
7	B	2560	A	C4'-C3'-C2'	-6.04	96.56	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	190	A	P-O3'-C3'	-6.04	112.45	119.70
7	B	984	A	C2-N3-C4	-6.04	107.58	110.60
7	B	603	A	C3'-C2'-C1'	-6.03	96.67	101.50
7	B	731	C	C6-N1-C2	6.03	122.71	120.30
7	B	505	A	C1'-O4'-C4'	-6.03	105.08	109.90
7	B	89	A	P-O3'-C3'	6.02	126.92	119.70
7	B	1429	G	C3'-C2'-C1'	-6.02	96.69	101.50
7	B	126	A	P-O3'-C3'	-6.02	112.48	119.70
7	B	2732	G	C3'-C2'-C1'	-6.01	96.69	101.50
7	B	1633	G	N3-C4-N9	6.01	129.61	126.00
7	B	2236	U	C4'-C3'-C2'	-6.01	96.59	102.60
7	B	1948	G	P-O3'-C3'	-6.01	112.49	119.70
7	B	1996	C	C5'-C4'-O4'	6.01	116.31	109.10
7	B	2221	G	P-O3'-C3'	-6.01	112.49	119.70
7	B	531	C	C4'-C3'-C2'	-6.00	96.60	102.60
7	B	1114	C	C4'-C3'-C2'	-6.00	96.60	102.60
7	B	559	G	O4'-C1'-N9	-6.00	103.40	108.20
7	B	2093	G	O4'-C1'-N9	6.00	113.00	108.20
7	B	554	U	C1'-O4'-C4'	-6.00	105.10	109.90
7	B	2332	C	C4'-C3'-C2'	-5.99	96.61	102.60
7	B	1817	G	N3-C4-C5	5.99	131.60	128.60
7	B	2034	U	N1-C1'-C2'	-5.99	105.41	112.00
7	B	2391	G	P-O3'-C3'	5.99	126.89	119.70
7	B	783	A	N1-C6-N6	5.99	122.19	118.60
7	B	2576	G	C4-N9-C1'	5.99	134.28	126.50
7	B	2641	G	N9-C1'-C2'	-5.99	105.42	112.00
7	B	811	U	C4'-C3'-C2'	-5.98	96.62	102.60
6	A	110	C	O4'-C1'-N1	5.98	112.98	108.20
7	B	264	C	O4'-C1'-N1	5.97	112.98	108.20
7	B	1369	G	N1-C6-O6	5.97	123.48	119.90
7	B	132	G	C6-C5-N7	-5.97	126.82	130.40
6	A	55	U	O4'-C1'-N1	5.96	112.97	108.20
7	B	974	G	C5-C6-O6	-5.96	125.02	128.60
7	B	168	G	P-O3'-C3'	-5.96	112.55	119.70
7	B	2094	A	C3'-C2'-C1'	-5.96	96.73	101.50
7	B	1943	U	C3'-C2'-C1'	-5.96	96.74	101.50
7	B	2049	G	C5-C6-N1	-5.95	108.52	111.50
7	B	1280	G	C8-N9-C4	-5.95	104.02	106.40
7	B	556	A	C3'-C2'-C1'	5.94	106.25	101.50
7	B	2234	G	C4'-C3'-C2'	-5.94	96.66	102.60
7	B	792	A	P-O3'-C3'	5.94	126.83	119.70
7	B	982	C	C5-C6-N1	5.94	123.97	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	1906	G	C4'-C3'-C2'	-5.94	96.66	102.60
7	B	1845	G	C4'-C3'-C2'	-5.94	96.66	102.60
7	B	1552	A	O4'-C1'-N9	5.93	112.95	108.20
7	B	2288	A	O4'-C1'-N9	5.93	112.95	108.20
7	B	1781	U	C1'-O4'-C4'	-5.93	105.16	109.90
7	B	2253	G	O4'-C1'-N9	-5.93	103.46	108.20
7	B	479	A	P-O3'-C3'	5.92	126.81	119.70
7	B	1606	C	N1-C2-O2	5.92	122.45	118.90
7	B	1251	C	N1-C2-O2	5.92	122.45	118.90
7	B	2016	U	O4'-C1'-N1	-5.92	103.47	108.20
7	B	1554	U	C4'-C3'-C2'	-5.91	96.69	102.60
7	B	1749	A	O4'-C1'-N9	5.91	112.93	108.20
7	B	628	G	N1-C6-O6	5.91	123.44	119.90
7	B	1375	U	C3'-C2'-C1'	5.90	106.22	101.50
7	B	2385	C	P-O3'-C3'	-5.89	112.63	119.70
7	B	860	U	O3'-P-O5'	-5.89	92.81	104.00
7	B	331	C	C1'-O4'-C4'	-5.89	105.19	109.90
7	B	2831	G	P-O3'-C3'	5.89	126.77	119.70
7	B	2469	A	C4'-C3'-C2'	-5.88	96.72	102.60
7	B	2820	A	P-O3'-C3'	5.88	126.76	119.70
7	B	479	A	C1'-O4'-C4'	-5.88	105.20	109.90
7	B	1645	G	O4'-C1'-N9	-5.88	103.50	108.20
7	B	2683	C	C4'-C3'-C2'	5.88	108.48	102.60
7	B	982	C	N3-C4-N4	5.88	122.11	118.00
7	B	93	G	C4'-C3'-C2'	-5.87	96.73	102.60
7	B	1791	A	O4'-C1'-N9	-5.87	103.50	108.20
7	B	1440	U	C6-N1-C2	-5.87	117.48	121.00
7	B	2469	A	C3'-C2'-C1'	-5.87	96.81	101.50
7	B	400	G	C4'-C3'-C2'	-5.87	96.73	102.60
7	B	847	U	C1'-O4'-C4'	-5.87	105.21	109.90
7	B	1973	G	P-O3'-C3'	5.86	126.73	119.70
7	B	2726	A	O5'-C5'-C4'	-5.86	100.57	111.70
7	B	1920	C	O4'-C1'-N1	-5.85	103.52	108.20
7	B	984	A	O4'-C1'-N9	-5.85	103.52	108.20
7	B	1322	A	C3'-C2'-C1'	-5.84	96.82	101.50
7	B	2712	C	C5'-C4'-O4'	-5.84	102.09	109.10
7	B	1382	G	O4'-C1'-N9	5.84	112.88	108.20
7	B	205	G	O4'-C1'-C2'	-5.84	99.96	105.80
7	B	1572	A	P-O3'-C3'	-5.84	112.69	119.70
7	B	2321	U	O4'-C1'-N1	5.84	112.87	108.20
7	B	905	A	C3'-C2'-C1'	-5.84	96.83	101.50
6	A	95	U	O4'-C1'-N1	5.84	112.87	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	1970	A	O4'-C1'-N9	-5.84	103.53	108.20
7	B	2372	U	C3'-C2'-C1'	-5.84	96.83	101.50
7	B	79	C	C4'-C3'-C2'	-5.83	96.77	102.60
7	B	2265	U	O4'-C1'-N1	-5.83	103.53	108.20
7	B	1125	G	C3'-C2'-C1'	-5.83	96.84	101.50
7	B	2742	G	C8-N9-C4	-5.83	104.07	106.40
7	B	2558	C	C6-N1-C2	5.83	122.63	120.30
7	B	1382	G	C5'-C4'-O4'	5.82	116.08	109.10
7	B	1487	U	C3'-C2'-C1'	-5.82	96.85	101.50
7	B	2553	G	O4'-C1'-N9	5.82	112.85	108.20
7	B	2282	G	P-O3'-C3'	5.81	126.67	119.70
7	B	245	G	N1-C6-O6	5.81	123.39	119.90
7	B	369	U	P-O3'-C3'	5.81	126.67	119.70
7	B	528	A	C5'-C4'-O4'	-5.81	102.13	109.10
7	B	1199	U	P-O3'-C3'	5.81	126.67	119.70
7	B	1975	G	N3-C4-C5	-5.81	125.70	128.60
7	B	2741	A	O4'-C4'-C3'	-5.81	98.19	104.00
7	B	1767	G	N9-C1'-C2'	-5.80	105.62	112.00
7	B	545	U	C3'-C2'-C1'	-5.80	96.86	101.50
7	B	796	C	P-O3'-C3'	5.80	126.66	119.70
7	B	974	G	C5-N7-C8	-5.80	101.40	104.30
7	B	2059	A	C3'-C2'-C1'	5.80	106.14	101.50
7	B	616	A	P-O3'-C3'	-5.79	112.75	119.70
7	B	2153	C	C4'-C3'-C2'	-5.79	96.81	102.60
7	B	187	G	C4'-C3'-C2'	-5.79	96.81	102.60
7	B	200	U	P-O3'-C3'	-5.79	112.75	119.70
7	B	745	G	C4-C5-C6	5.79	122.27	118.80
7	B	684	G	C6-C5-N7	-5.78	126.93	130.40
7	B	1706	C	N1-C2-O2	-5.78	115.43	118.90
7	B	168	G	C3'-C2'-C1'	-5.78	96.88	101.50
7	B	2780	G	N1-C6-O6	-5.78	116.43	119.90
7	B	2880	C	C6-N1-C2	-5.78	117.99	120.30
7	B	1456	G	C8-N9-C4	-5.78	104.09	106.40
7	B	2038	G	C4'-C3'-C2'	-5.78	96.82	102.60
7	B	673	C	O4'-C1'-N1	-5.78	103.58	108.20
7	B	1805	A	P-O3'-C3'	-5.78	112.77	119.70
7	B	2588	G	C3'-C2'-C1'	-5.77	96.88	101.50
7	B	587	C	N3-C2-O2	-5.77	117.86	121.90
7	B	2581	G	C3'-C2'-C1'	5.77	106.12	101.50
7	B	2017	U	N1-C1'-C2'	5.76	121.50	114.00
7	B	2673	G	C4'-C3'-C2'	-5.76	96.83	102.60
7	B	126	A	O4'-C1'-N9	5.76	112.81	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	608	A	C3'-C2'-C1'	5.76	106.11	101.50
7	B	1795	C	C4'-C3'-C2'	-5.76	96.84	102.60
7	B	2074	U	O4'-C1'-N1	-5.76	103.59	108.20
7	B	814	C	N1-C1'-C2'	-5.75	105.67	112.00
7	B	1888	G	C4'-C3'-C2'	-5.75	96.85	102.60
7	B	2356	U	P-O3'-C3'	-5.75	112.80	119.70
7	B	2433	A	O4'-C1'-N9	-5.75	103.60	108.20
6	A	32	U	O4'-C1'-N1	5.75	112.80	108.20
7	B	984	A	N1-C2-N3	5.75	132.17	129.30
7	B	1972	G	P-O3'-C3'	-5.74	112.81	119.70
6	A	95	U	C6-N1-C2	-5.74	117.56	121.00
7	B	2453	A	P-O3'-C3'	5.74	126.58	119.70
7	B	245	G	C6-C5-N7	-5.74	126.96	130.40
7	B	1034	G	C3'-C2'-C1'	-5.74	96.91	101.50
7	B	1034	G	O4'-C1'-N9	5.74	112.79	108.20
7	B	1826	G	C3'-C2'-C1'	-5.73	96.91	101.50
7	B	1945	G	P-O3'-C3'	5.73	126.58	119.70
7	B	114	U	C4'-C3'-C2'	-5.73	96.87	102.60
7	B	250	G	O4'-C1'-N9	5.73	112.78	108.20
7	B	780	G	C8-N9-C4	-5.73	104.11	106.40
7	B	748	G	C1'-O4'-C4'	-5.72	105.32	109.90
7	B	754	U	P-O3'-C3'	-5.72	112.84	119.70
7	B	949	G	C3'-C2'-C1'	-5.72	96.93	101.50
7	B	337	C	C1'-O4'-C4'	-5.72	105.33	109.90
7	B	1028	A	C3'-C2'-C1'	5.72	106.07	101.50
7	B	871	U	C3'-C2'-C1'	5.71	106.07	101.50
7	B	1201	U	C4'-C3'-C2'	-5.71	96.89	102.60
7	B	1131	G	N3-C4-C5	-5.71	125.75	128.60
7	B	2631	G	C4'-C3'-C2'	-5.71	96.89	102.60
7	B	1125	G	C4'-C3'-C2'	-5.71	96.89	102.60
7	B	405	U	C4'-C3'-C2'	-5.70	96.90	102.60
7	B	1512	C	C4'-C3'-C2'	-5.70	96.90	102.60
7	B	2386	A	C3'-C2'-C1'	5.70	106.06	101.50
7	B	2676	C	C6-N1-C2	-5.70	118.02	120.30
7	B	1340	U	C1'-O4'-C4'	-5.70	105.34	109.90
7	B	386	G	C1'-O4'-C4'	-5.70	105.34	109.90
7	B	792	A	O4'-C1'-N9	5.70	112.76	108.20
7	B	2798	U	C1'-O4'-C4'	-5.70	105.34	109.90
7	B	276	U	C1'-O4'-C4'	-5.69	105.35	109.90
7	B	733	G	C4'-C3'-C2'	-5.69	96.91	102.60
7	B	2207	C	P-O3'-C3'	-5.69	112.87	119.70
7	B	2800	A	O4'-C1'-N9	5.68	112.75	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	1185	G	P-O3'-C3'	5.68	126.52	119.70
7	B	2051	A	O4'-C1'-N9	-5.68	103.65	108.20
7	B	2060	A	C3'-C2'-C1'	-5.68	96.95	101.50
7	B	1692	U	C1'-O4'-C4'	-5.68	105.36	109.90
7	B	1747	U	P-O3'-C3'	5.68	126.52	119.70
7	B	865	C	O4'-C1'-N1	5.68	112.74	108.20
7	B	2225	A	O4'-C1'-N9	-5.68	103.66	108.20
7	B	2284	A	O4'-C1'-N9	-5.68	103.66	108.20
7	B	740	C	O4'-C1'-N1	-5.67	103.66	108.20
7	B	463	G	C4'-C3'-C2'	-5.67	96.93	102.60
7	B	1857	G	C1'-O4'-C4'	-5.67	105.36	109.90
7	B	994	C	C1'-O4'-C4'	-5.67	105.36	109.90
7	B	1908	C	O4'-C1'-N1	5.67	112.73	108.20
7	B	1934	C	P-O3'-C3'	5.67	126.50	119.70
7	B	2250	G	N3-C4-C5	5.67	131.43	128.60
7	B	867	C	P-O3'-C3'	-5.67	112.90	119.70
7	B	753	A	P-O3'-C3'	-5.66	112.90	119.70
7	B	2425	A	N1-C2-N3	5.66	132.13	129.30
7	B	2630	G	O4'-C4'-C3'	-5.66	98.34	104.00
7	B	1020	A	C3'-C2'-C1'	5.66	106.03	101.50
7	B	1730	C	C4'-C3'-C2'	-5.66	96.94	102.60
7	B	1953	A	C4'-C3'-C2'	-5.66	96.94	102.60
7	B	2060	A	C4'-C3'-C2'	-5.66	96.94	102.60
7	B	2319	G	O4'-C1'-N9	-5.65	103.68	108.20
7	B	1750	G	C3'-C2'-C1'	-5.65	96.98	101.50
7	B	1356	G	C8-N9-C4	-5.64	104.14	106.40
7	B	1369	G	C5-C6-O6	-5.64	125.21	128.60
7	B	1987	A	O4'-C4'-C3'	-5.64	98.36	104.00
7	B	741	U	C5-C4-O4	-5.64	122.51	125.90
7	B	1112	G	C4'-C3'-C2'	-5.64	96.96	102.60
7	B	1247	A	O4'-C1'-C2'	-5.64	100.16	105.80
7	B	45	G	C4'-C3'-C2'	-5.64	96.96	102.60
7	B	1695	G	N3-C4-C5	5.64	131.42	128.60
7	B	1212	G	N9-C1'-C2'	-5.63	105.80	112.00
7	B	2109	U	O4'-C1'-N1	5.63	112.71	108.20
7	B	1976	U	C5-C6-N1	5.63	125.52	122.70
7	B	2216	G	C4'-C3'-C2'	-5.63	96.97	102.60
7	B	530	G	P-O3'-C3'	5.62	126.45	119.70
7	B	1257	C	C4-C5-C6	5.62	120.21	117.40
7	B	2078	C	O4'-C1'-N1	-5.62	103.70	108.20
7	B	2288	A	C4-C5-N7	-5.62	107.89	110.70
7	B	2510	C	C3'-C2'-C1'	-5.62	97.00	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	A	99	A	P-O3'-C3'	5.62	126.44	119.70
7	B	242	G	O4'-C1'-C2'	-5.62	100.18	105.80
6	A	87	U	C5'-C4'-O4'	5.61	115.83	109.10
7	B	2025	C	C4'-C3'-C2'	-5.61	96.99	102.60
7	B	2015	A	C1'-O4'-C4'	-5.61	105.41	109.90
7	B	2189	U	C4'-C3'-C2'	-5.61	96.99	102.60
7	B	403	U	O4'-C1'-N1	5.60	112.68	108.20
7	B	1296	G	P-O3'-C3'	5.60	126.42	119.70
7	B	2281	A	P-O3'-C3'	5.60	126.42	119.70
7	B	2689	U	C4'-C3'-C2'	-5.60	97.00	102.60
7	B	1888	G	N9-C1'-C2'	5.59	121.27	114.00
7	B	2283	C	C4'-C3'-C2'	-5.59	97.00	102.60
6	A	47	C	C1'-O4'-C4'	-5.59	105.43	109.90
7	B	1959	G	C4'-C3'-C2'	-5.59	97.01	102.60
7	B	1374	G	N3-C4-C5	5.59	131.39	128.60
7	B	669	G	C3'-C2'-C1'	5.59	105.97	101.50
7	B	1301	A	N9-C1'-C2'	5.59	121.26	114.00
7	B	1996	C	O4'-C1'-C2'	-5.59	100.21	105.80
7	B	1009	A	P-O3'-C3'	-5.58	113.00	119.70
22	Q	38	VAL	N-CA-C	-5.58	95.93	111.00
7	B	1041	G	O4'-C1'-N9	5.58	112.66	108.20
7	B	775	G	C3'-C2'-C1'	-5.58	97.04	101.50
7	B	983	A	C3'-C2'-C1'	5.58	105.96	101.50
7	B	191	A	C8-N9-C4	-5.57	103.57	105.80
7	B	1929	G	C3'-C2'-C1'	-5.56	97.05	101.50
7	B	370	G	P-O3'-C3'	5.56	126.37	119.70
7	B	1796	U	O4'-C4'-C3'	-5.56	98.44	104.00
7	B	1907	G	C3'-C2'-C1'	-5.56	97.05	101.50
6	A	54	G	C4'-C3'-C2'	-5.55	97.05	102.60
6	A	53	A	C3'-C2'-C1'	-5.55	97.06	101.50
7	B	80	G	C3'-C2'-C1'	-5.55	97.06	101.50
7	B	2447	G	O4'-C1'-N9	-5.55	103.76	108.20
7	B	1364	G	P-O3'-C3'	-5.54	113.05	119.70
7	B	1707	G	P-O3'-C3'	5.54	126.35	119.70
6	A	17	C	O4'-C1'-N1	5.54	112.64	108.20
7	B	1973	G	O4'-C1'-C2'	-5.54	100.26	105.80
7	B	2082	A	C4'-C3'-C2'	-5.54	97.06	102.60
7	B	2514	U	P-O3'-C3'	-5.54	113.05	119.70
7	B	454	A	P-O3'-C3'	5.54	126.35	119.70
7	B	2473	U	C3'-C2'-C1'	5.54	105.93	101.50
7	B	875	G	O4'-C1'-N9	5.54	112.63	108.20
7	B	1937	A	O4'-C1'-N9	-5.54	103.77	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2672	U	P-O3'-C3'	-5.54	113.06	119.70
7	B	941	A	C4'-C3'-C2'	-5.53	97.07	102.60
6	A	89	U	C4'-C3'-C2'	-5.53	97.07	102.60
7	B	1378	A	C4'-C3'-C2'	-5.53	97.07	102.60
7	B	2066	C	C4'-C3'-C2'	-5.53	97.07	102.60
6	A	15	A	C4'-C3'-C2'	-5.53	97.07	102.60
7	B	2564	A	N9-C1'-C2'	5.52	121.18	114.00
7	B	2592	G	C4'-C3'-C2'	-5.52	97.08	102.60
8	C	173	LEU	N-CA-C	5.52	125.90	111.00
7	B	583	G	C8-N9-C4	-5.52	104.19	106.40
7	B	745	G	C6-C5-N7	-5.52	127.09	130.40
7	B	1664	A	C8-N9-C4	-5.52	103.59	105.80
7	B	136	G	C3'-C2'-C1'	-5.51	97.09	101.50
7	B	196	A	N1-C6-N6	5.51	121.91	118.60
7	B	1454	C	C1'-O4'-C4'	-5.51	105.49	109.90
7	B	2311	A	C3'-C2'-C1'	5.51	105.91	101.50
7	B	527	C	O3'-P-O5'	-5.51	93.53	104.00
7	B	973	A	N9-C1'-C2'	5.51	121.17	114.00
7	B	1241	A	C1'-O4'-C4'	-5.51	105.49	109.90
7	B	2363	G	P-O3'-C3'	-5.51	113.09	119.70
7	B	2659	G	C4'-C3'-C2'	-5.51	97.09	102.60
7	B	2663	G	C3'-C2'-C1'	-5.51	97.09	101.50
7	B	1263	U	N3-C4-C5	-5.51	111.30	114.60
7	B	332	A	N9-C1'-C2'	-5.51	105.94	112.00
7	B	1035	U	C4'-C3'-C2'	-5.51	97.09	102.60
7	B	1642	G	N1-C6-O6	5.51	123.20	119.90
7	B	1566	A	N9-C1'-C2'	5.50	121.16	114.00
7	B	486	C	C3'-C2'-C1'	-5.50	97.10	101.50
7	B	778	G	C8-N9-C4	-5.50	104.20	106.40
7	B	1712	U	P-O3'-C3'	5.50	126.30	119.70
7	B	1826	G	C4'-C3'-C2'	-5.50	97.10	102.60
7	B	2561	U	N3-C4-O4	5.50	123.25	119.40
6	A	106	G	N3-C4-C5	-5.50	125.85	128.60
7	B	2595	G	C4'-C3'-C2'	-5.50	97.11	102.60
7	B	228	C	C1'-O4'-C4'	-5.49	105.51	109.90
7	B	248	G	C5-C6-O6	-5.49	125.31	128.60
7	B	2009	A	C4'-C3'-C2'	-5.49	97.11	102.60
7	B	2776	A	C3'-C2'-C1'	-5.49	97.11	101.50
7	B	1790	C	O4'-C1'-N1	-5.49	103.81	108.20
7	B	2344	U	O4'-C1'-N1	-5.49	103.81	108.20
6	A	41	G	C3'-C2'-C1'	5.48	105.89	101.50
7	B	1293	C	O4'-C1'-N1	-5.48	103.81	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2458	G	O4'-C1'-C2'	-5.48	100.32	105.80
7	B	1312	U	C3'-C2'-C1'	-5.48	97.12	101.50
7	B	2593	U	P-O3'-C3'	-5.47	113.13	119.70
7	B	2709	G	C8-N9-C4	-5.47	104.21	106.40
7	B	1454	C	C5-C6-N1	5.47	123.73	121.00
7	B	80	G	C4'-C3'-C2'	-5.47	97.13	102.60
7	B	745	G	O4'-C1'-C2'	-5.47	100.33	105.80
7	B	2219	U	C4'-C3'-C2'	-5.47	97.13	102.60
7	B	128	C	P-O3'-C3'	5.46	126.25	119.70
7	B	1786	A	C5'-C4'-O4'	-5.46	102.55	109.10
7	B	1769	U	O4'-C4'-C3'	-5.46	98.54	104.00
7	B	1819	A	C5'-C4'-O4'	-5.46	102.55	109.10
7	B	2614	A	O4'-C1'-C2'	-5.45	100.35	105.80
6	A	54	G	C3'-C2'-C1'	-5.45	97.14	101.50
7	B	1147	A	O4'-C1'-N9	5.45	112.56	108.20
7	B	2391	G	C4'-C3'-C2'	-5.45	97.15	102.60
7	B	2018	G	P-O5'-C5'	-5.45	112.19	120.90
7	B	2594	C	N1-C1'-C2'	5.45	121.08	114.00
7	B	1255	U	N3-C2-O2	-5.44	118.39	122.20
7	B	1951	U	C4'-C3'-C2'	-5.44	97.16	102.60
7	B	347	A	O4'-C1'-N9	5.44	112.55	108.20
7	B	1285	A	O4'-C1'-N9	-5.44	103.85	108.20
7	B	2779	U	P-O3'-C3'	5.44	126.23	119.70
7	B	320	A	O5'-C5'-C4'	-5.44	101.37	111.70
7	B	2035	G	N1-C6-O6	5.44	123.16	119.90
7	B	555	G	C1'-O4'-C4'	-5.43	105.55	109.90
6	A	41	G	C8-N9-C4	-5.43	104.23	106.40
7	B	766	U	C4'-C3'-C2'	-5.43	97.17	102.60
7	B	1784	A	C3'-C2'-C1'	5.43	105.84	101.50
7	B	2034	U	O4'-C1'-N1	-5.43	103.86	108.20
7	B	2592	G	O4'-C1'-N9	5.43	112.54	108.20
7	B	748	G	P-O3'-C3'	5.43	126.21	119.70
7	B	1460	U	O4'-C1'-N1	-5.43	103.86	108.20
7	B	221	A	N9-C1'-C2'	-5.42	106.03	112.00
7	B	1696	G	C5-C6-O6	-5.42	125.35	128.60
7	B	926	G	C4'-C3'-C2'	-5.42	97.18	102.60
7	B	1383	A	O4'-C1'-N9	5.42	112.54	108.20
7	B	859	G	O4'-C1'-N9	5.42	112.54	108.20
7	B	1255	U	N1-C2-O2	5.42	126.59	122.80
7	B	2201	G	P-O3'-C3'	-5.42	113.20	119.70
7	B	664	G	P-O3'-C3'	-5.42	113.20	119.70
6	A	89	U	O4'-C1'-N1	5.41	112.53	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	337	C	O4'-C4'-C3'	-5.41	98.59	104.00
7	B	524	G	O4'-C1'-N9	5.41	112.53	108.20
7	B	850	U	C3'-C2'-C1'	5.41	105.83	101.50
7	B	2445	G	C8-N9-C4	-5.41	104.24	106.40
7	B	513	A	C8-N9-C4	-5.40	103.64	105.80
7	B	1444	G	C4'-C3'-C2'	-5.40	97.20	102.60
7	B	1621	U	P-O3'-C3'	5.40	126.18	119.70
7	B	2321	U	C1'-O4'-C4'	-5.40	105.58	109.90
7	B	2592	G	C5'-C4'-O4'	-5.40	102.62	109.10
7	B	207	A	O4'-C1'-N9	5.40	112.52	108.20
7	B	265	A	O4'-C1'-N9	5.40	112.52	108.20
7	B	684	G	N1-C6-O6	5.39	123.14	119.90
7	B	968	C	O4'-C1'-N1	5.39	112.52	108.20
7	B	2569	G	C4'-C3'-C2'	-5.39	97.21	102.60
7	B	1949	G	O4'-C1'-N9	-5.39	103.89	108.20
7	B	2034	U	C6-N1-C2	5.39	124.23	121.00
6	A	113	C	O4'-C1'-N1	5.39	112.51	108.20
7	B	807	U	C4'-C3'-C2'	-5.39	97.21	102.60
7	B	1207	C	C4'-C3'-C2'	-5.39	97.21	102.60
7	B	1825	U	P-O3'-C3'	-5.39	113.23	119.70
7	B	2029	G	C1'-O4'-C4'	-5.39	105.59	109.90
7	B	369	U	O3'-P-O5'	-5.39	93.77	104.00
7	B	2747	G	C3'-C2'-C1'	-5.38	97.19	101.50
7	B	972	A	C5-C6-N6	5.38	128.01	123.70
7	B	1374	G	C1'-O4'-C4'	-5.38	105.59	109.90
7	B	1020	A	P-O3'-C3'	5.38	126.16	119.70
7	B	1267	U	C3'-C2'-C1'	5.38	105.81	101.50
7	B	733	G	C6-C5-N7	-5.38	127.17	130.40
6	A	51	G	O4'-C1'-N9	5.38	112.50	108.20
7	B	687	C	N3-C2-O2	5.38	125.66	121.90
7	B	1114	C	C3'-C2'-C1'	-5.38	97.20	101.50
7	B	1949	G	N9-C1'-C2'	5.38	120.99	114.00
7	B	2731	G	C6-C5-N7	-5.37	127.18	130.40
7	B	553	G	O4'-C4'-C3'	-5.37	98.63	104.00
7	B	1082	U	C4'-C3'-C2'	-5.37	97.23	102.60
7	B	2814	A	N1-C6-N6	5.37	121.82	118.60
7	B	1683	U	C5-C4-O4	-5.37	122.68	125.90
7	B	326	G	C8-N9-C4	-5.37	104.25	106.40
7	B	369	U	O4'-C1'-N1	5.37	112.49	108.20
7	B	1984	G	O4'-C4'-C3'	-5.37	98.63	104.00
6	A	103	U	P-O3'-C3'	-5.37	113.26	119.70
7	B	1695	G	O4'-C4'-C3'	-5.37	98.64	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	1234	U	O4'-C1'-N1	-5.36	103.91	108.20
7	B	700	G	C3'-C2'-C1'	-5.36	97.21	101.50
7	B	1393	A	C3'-C2'-C1'	5.36	105.79	101.50
7	B	2211	A	O4'-C1'-N9	5.36	112.49	108.20
7	B	908	C	C4'-C3'-C2'	-5.36	97.24	102.60
7	B	463	G	C2-N3-C4	-5.36	109.22	111.90
7	B	827	U	N1-C1'-C2'	-5.36	106.11	112.00
7	B	2105	U	O4'-C1'-N1	5.36	112.48	108.20
7	B	2563	U	C1'-O4'-C4'	-5.36	105.62	109.90
7	B	2214	C	P-O3'-C3'	-5.35	113.28	119.70
7	B	630	G	O4'-C1'-N9	-5.35	103.92	108.20
7	B	1379	U	C3'-C2'-C1'	5.35	105.78	101.50
7	B	373	U	P-O3'-C3'	-5.35	113.28	119.70
7	B	1271	G	C8-N9-C4	-5.35	104.26	106.40
7	B	2196	C	C3'-C2'-C1'	5.35	105.78	101.50
7	B	1012	U	C3'-C2'-C1'	-5.35	97.22	101.50
7	B	2032	G	C5'-C4'-O4'	-5.35	102.68	109.10
7	B	215	G	P-O3'-C3'	5.34	126.11	119.70
7	B	2095	A	C1'-O4'-C4'	-5.34	105.63	109.90
7	B	2199	A	O4'-C1'-N9	-5.34	103.92	108.20
7	B	1631	G	P-O3'-C3'	-5.34	113.29	119.70
7	B	1784	A	O4'-C1'-N9	-5.34	103.93	108.20
7	B	2069	G	C3'-C2'-C1'	-5.34	97.23	101.50
7	B	2135	A	C3'-C2'-C1'	-5.34	97.23	101.50
7	B	591	U	P-O3'-C3'	-5.34	113.30	119.70
7	B	1007	C	C4'-C3'-C2'	-5.33	97.27	102.60
7	B	1620	G	C2-N3-C4	-5.33	109.23	111.90
7	B	1976	U	N1-C2-O2	5.33	126.53	122.80
7	B	2488	G	O4'-C1'-N9	5.33	112.47	108.20
7	B	2700	A	P-O3'-C3'	5.33	126.10	119.70
7	B	715	A	P-O3'-C3'	-5.33	113.30	119.70
7	B	1454	C	O4'-C1'-N1	5.33	112.47	108.20
7	B	1936	A	C3'-C2'-C1'	5.33	105.77	101.50
7	B	7	G	C4'-C3'-C2'	-5.33	97.27	102.60
7	B	500	G	C1'-O4'-C4'	-5.33	105.64	109.90
7	B	2511	U	C4'-C3'-C2'	-5.33	97.27	102.60
7	B	1898	U	C4'-C3'-C2'	-5.33	97.28	102.60
7	B	2351	G	C8-N9-C4	-5.33	104.27	106.40
6	A	106	G	C8-N9-C4	-5.32	104.27	106.40
7	B	1889	A	C3'-C2'-C1'	-5.32	97.24	101.50
7	B	2146	C	C3'-C2'-C1'	5.32	105.76	101.50
7	B	2508	G	C4'-C3'-C2'	-5.32	97.28	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	687	C	P-O3'-C3'	-5.32	113.32	119.70
7	B	1378	A	C3'-C2'-C1'	-5.32	97.24	101.50
7	B	600	G	N9-C1'-C2'	-5.32	106.15	112.00
7	B	864	G	O4'-C1'-N9	5.32	112.45	108.20
7	B	561	G	C4-C5-N7	5.32	112.93	110.80
7	B	1085	A	C3'-C2'-C1'	5.32	105.75	101.50
7	B	753	A	O4'-C1'-N9	-5.32	103.95	108.20
7	B	96	C	C3'-C2'-C1'	-5.31	97.25	101.50
7	B	536	G	O4'-C1'-N9	5.31	112.45	108.20
7	B	2656	U	P-O3'-C3'	5.31	126.07	119.70
7	B	2848	G	C3'-C2'-C1'	-5.31	97.25	101.50
6	A	52	A	O4'-C4'-C3'	-5.30	98.70	104.00
6	A	52	A	C1'-O4'-C4'	-5.30	105.66	109.90
7	B	627	A	C3'-C2'-C1'	-5.30	97.26	101.50
7	B	1458	U	P-O3'-C3'	5.30	126.07	119.70
7	B	2831	G	C8-N9-C4	-5.30	104.28	106.40
7	B	562	U	N3-C2-O2	-5.30	118.49	122.20
7	B	827	U	C4'-C3'-C2'	5.30	107.90	102.60
7	B	2799	A	C1'-O4'-C4'	-5.30	105.66	109.90
7	B	204	A	C8-N9-C4	5.30	107.92	105.80
7	B	1958	C	C4'-C3'-C2'	-5.30	97.30	102.60
7	B	189	G	C3'-C2'-C1'	-5.30	97.26	101.50
7	B	330	A	N9-C1'-C2'	5.30	120.89	114.00
7	B	1698	A	C5'-C4'-O4'	-5.30	102.74	109.10
7	B	1989	G	N9-C1'-C2'	5.30	120.89	114.00
7	B	691	C	C3'-C2'-C1'	5.30	105.74	101.50
7	B	1480	C	O4'-C1'-N1	5.30	112.44	108.20
7	B	1623	G	O4'-C1'-N9	5.30	112.44	108.20
7	B	2687	U	N1-C1'-C2'	5.30	120.88	114.00
7	B	434	U	C3'-C2'-C1'	-5.29	97.27	101.50
7	B	1699	G	N9-C1'-C2'	5.29	120.88	114.00
7	B	2610	C	C6-N1-C2	5.29	122.42	120.30
7	B	400	G	P-O5'-C5'	-5.29	112.43	120.90
7	B	539	G	O4'-C1'-N9	5.29	112.43	108.20
7	B	1664	A	O4'-C1'-N9	5.29	112.43	108.20
7	B	2019	A	P-O3'-C3'	-5.29	113.35	119.70
7	B	99	U	C3'-C2'-C1'	5.29	105.73	101.50
7	B	533	G	N3-C4-N9	5.29	129.17	126.00
7	B	2109	U	C4'-C3'-C2'	-5.29	97.31	102.60
7	B	764	A	O4'-C1'-N9	-5.29	103.97	108.20
7	B	1896	G	C3'-C2'-C1'	-5.29	97.27	101.50
7	B	225	C	C4'-C3'-C2'	-5.28	97.32	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	568	U	C3'-C2'-C1'	5.28	105.73	101.50
7	B	2240	U	C4'-C3'-C2'	-5.28	97.32	102.60
7	B	291	G	P-O3'-C3'	-5.28	113.36	119.70
7	B	577	G	O4'-C1'-N9	-5.28	103.97	108.20
7	B	581	C	C6-N1-C2	-5.28	118.19	120.30
7	B	2048	G	O4'-C1'-N9	-5.28	103.98	108.20
7	B	138	U	C3'-C2'-C1'	-5.28	97.28	101.50
7	B	239	C	C3'-C2'-C1'	5.28	105.72	101.50
7	B	1976	U	C6-N1-C1'	-5.28	113.81	121.20
7	B	1691	C	N1-C1'-C2'	5.27	120.86	114.00
7	B	2689	U	C3'-C2'-C1'	-5.27	97.28	101.50
7	B	2776	A	P-O3'-C3'	5.27	126.03	119.70
7	B	378	C	O4'-C1'-N1	-5.27	103.98	108.20
7	B	733	G	N1-C6-O6	5.27	123.06	119.90
7	B	504	A	C3'-C2'-C1'	-5.27	97.29	101.50
7	B	2351	G	P-O3'-C3'	5.27	126.02	119.70
7	B	2281	A	C3'-C2'-C1'	-5.26	97.29	101.50
7	B	128	C	C4'-C3'-C2'	-5.26	97.34	102.60
7	B	874	G	N1-C6-O6	5.26	123.06	119.90
7	B	1613	G	C4-C5-N7	-5.26	108.69	110.80
21	P	71	ARG	N-CA-C	5.26	125.20	111.00
7	B	222	A	O4'-C1'-C2'	-5.26	100.54	105.80
7	B	466	A	O4'-C1'-N9	-5.26	103.99	108.20
7	B	1283	G	C4'-C3'-C2'	-5.26	97.34	102.60
7	B	1391	U	C3'-C2'-C1'	-5.26	97.29	101.50
7	B	1398	C	C1'-O4'-C4'	-5.26	105.69	109.90
7	B	2198	A	C1'-O4'-C4'	-5.26	105.69	109.90
6	A	87	U	C6-N1-C2	-5.26	117.85	121.00
7	B	647	G	P-O3'-C3'	-5.26	113.39	119.70
7	B	1815	A	C1'-O4'-C4'	-5.25	105.70	109.90
7	B	828	U	C3'-C2'-C1'	5.25	105.70	101.50
7	B	1613	G	O4'-C4'-C3'	-5.25	98.75	104.00
7	B	1381	G	O4'-C1'-N9	-5.25	104.00	108.20
7	B	1955	U	O4'-C1'-N1	5.25	112.40	108.20
7	B	169	G	C4'-C3'-C2'	-5.25	97.36	102.60
7	B	410	G	C6-C5-N7	-5.24	127.25	130.40
7	B	527	C	C2-N1-C1'	5.24	124.57	118.80
7	B	612	G	O4'-C1'-N9	-5.24	104.00	108.20
7	B	1938	A	N1-C6-N6	-5.24	115.45	118.60
7	B	2294	G	P-O3'-C3'	-5.24	113.41	119.70
7	B	1749	A	C4'-C3'-C2'	-5.24	97.36	102.60
7	B	686	U	C4'-C3'-C2'	-5.24	97.36	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2712	C	O5'-C5'-C4'	-5.24	101.75	111.70
7	B	2133	G	C3'-C2'-C1'	5.24	105.69	101.50
7	B	794	A	C3'-C2'-C1'	5.23	105.69	101.50
7	B	2053	G	N1-C6-O6	5.23	123.04	119.90
7	B	533	G	P-O5'-C5'	-5.23	112.53	120.90
7	B	627	A	P-O3'-C3'	5.23	125.98	119.70
7	B	1107	G	C1'-O4'-C4'	-5.23	105.72	109.90
7	B	1273	U	C2-N1-C1'	5.23	123.98	117.70
7	B	2560	A	O4'-C4'-C3'	-5.23	98.77	104.00
7	B	324	A	C4'-C3'-C2'	-5.23	97.37	102.60
7	B	2351	G	C4'-C3'-C2'	-5.23	97.37	102.60
7	B	2446	G	C2-N3-C4	-5.23	109.29	111.90
7	B	2067	G	C1'-O4'-C4'	-5.23	105.72	109.90
7	B	1777	U	C3'-C2'-C1'	5.22	105.68	101.50
7	B	463	G	O4'-C1'-N9	-5.22	104.02	108.20
7	B	2236	U	C1'-O4'-C4'	-5.22	105.72	109.90
7	B	2425	A	C2-N3-C4	-5.22	107.99	110.60
7	B	974	G	N9-C4-C5	-5.22	103.31	105.40
7	B	1197	G	C3'-C2'-C1'	5.22	105.68	101.50
7	B	2711	A	P-O3'-C3'	5.22	125.96	119.70
7	B	2780	G	N3-C4-N9	5.22	129.13	126.00
7	B	987	C	P-O3'-C3'	-5.22	113.44	119.70
7	B	1520	U	C4'-C3'-C2'	-5.22	97.38	102.60
7	B	2015	A	C5'-C4'-O4'	-5.21	102.84	109.10
7	B	2876	G	C4'-C3'-C2'	-5.21	97.39	102.60
7	B	2345	G	C4'-C3'-C2'	-5.21	97.39	102.60
7	B	485	C	O4'-C1'-N1	5.21	112.37	108.20
7	B	1924	C	O4'-C1'-N1	5.21	112.37	108.20
7	B	1363	C	C3'-C2'-C1'	5.21	105.67	101.50
7	B	2746	U	C4'-C3'-C2'	-5.20	97.40	102.60
7	B	953	G	C5-C6-O6	-5.20	125.48	128.60
7	B	2072	C	C1'-O4'-C4'	-5.20	105.74	109.90
7	B	2198	A	C3'-C2'-C1'	-5.20	97.34	101.50
7	B	731	C	O4'-C1'-N1	-5.20	104.04	108.20
7	B	2353	G	P-O3'-C3'	-5.20	113.46	119.70
7	B	2505	G	C3'-C2'-C1'	5.20	105.66	101.50
7	B	2400	G	O4'-C1'-N9	5.20	112.36	108.20
7	B	1271	G	C4'-C3'-C2'	-5.20	97.40	102.60
7	B	1601	G	P-O3'-C3'	5.19	125.93	119.70
7	B	2835	A	C4'-C3'-C2'	-5.19	97.41	102.60
7	B	982	C	C2-N1-C1'	5.19	124.51	118.80
7	B	963	U	C1'-O4'-C4'	-5.19	105.75	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2592	G	O5'-C5'-C4'	-5.19	101.85	111.70
7	B	2001	C	C3'-C2'-C1'	-5.18	97.35	101.50
7	B	2451	A	C1'-O4'-C4'	-5.18	105.75	109.90
7	B	248	G	N1-C6-O6	5.18	123.01	119.90
7	B	2678	C	C3'-C2'-C1'	5.18	105.64	101.50
7	B	2281	A	C4'-C3'-C2'	-5.18	97.42	102.60
7	B	910	A	C1'-O4'-C4'	-5.18	105.76	109.90
7	B	2742	G	N1-C6-O6	5.17	123.00	119.90
3	2	16	HIS	N-CA-C	-5.17	97.03	111.00
6	A	55	U	C1'-O4'-C4'	-5.17	105.76	109.90
7	B	260	G	C3'-C2'-C1'	-5.17	97.36	101.50
7	B	2286	G	C3'-C2'-C1'	5.17	105.64	101.50
6	A	73	A	C5'-C4'-O4'	5.17	115.31	109.10
7	B	344	A	C1'-O4'-C4'	-5.17	105.76	109.90
7	B	2756	U	C3'-C2'-C1'	-5.17	97.36	101.50
7	B	35	G	N9-C1'-C2'	-5.17	106.31	112.00
7	B	447	A	O5'-C5'-C4'	-5.17	101.88	111.70
7	B	2549	G	C4'-C3'-C2'	-5.17	97.43	102.60
7	B	2732	G	C4-N9-C1'	5.17	133.22	126.50
7	B	834	G	C5-C6-O6	-5.16	125.50	128.60
7	B	2419	U	N3-C4-O4	5.16	123.01	119.40
7	B	1306	C	C3'-C2'-C1'	-5.16	97.37	101.50
7	B	1610	A	N7-C8-N9	5.16	116.38	113.80
7	B	1257	C	P-O3'-C3'	-5.16	113.51	119.70
7	B	1949	G	C6-C5-N7	-5.16	127.31	130.40
7	B	468	G	C5-C6-N1	5.16	114.08	111.50
7	B	1156	A	C4'-C3'-C2'	-5.16	97.44	102.60
7	B	1938	A	O4'-C1'-N9	5.15	112.32	108.20
7	B	48	G	C4'-C3'-C2'	-5.15	97.45	102.60
7	B	2136	G	C4'-C3'-C2'	-5.15	97.45	102.60
7	B	1629	U	P-O3'-C3'	-5.15	113.53	119.70
7	B	2440	C	N1-C1'-C2'	5.15	120.69	114.00
7	B	2107	G	C3'-C2'-C1'	5.14	105.62	101.50
7	B	2642	G	O4'-C1'-N9	5.14	112.31	108.20
6	A	95	U	C5-C6-N1	5.14	125.27	122.70
7	B	646	U	C4'-C3'-C2'	-5.14	97.46	102.60
7	B	1753	G	P-O3'-C3'	-5.14	113.54	119.70
7	B	2261	C	O4'-C1'-N1	-5.14	104.09	108.20
7	B	2742	G	C6-C5-N7	-5.14	127.32	130.40
7	B	1696	G	N1-C6-O6	5.13	122.98	119.90
7	B	1337	G	O4'-C1'-C2'	-5.13	100.67	105.80
7	B	191	A	O4'-C1'-C2'	-5.12	100.67	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	379	G	C8-N9-C4	-5.12	104.35	106.40
7	B	1927	A	O4'-C1'-N9	-5.12	104.10	108.20
7	B	2226	C	N1-C2-O2	5.12	121.97	118.90
7	B	1041	G	C1'-O4'-C4'	-5.12	105.81	109.90
7	B	1831	G	O4'-C1'-N9	5.12	112.30	108.20
7	B	945	A	C1'-O4'-C4'	-5.12	105.81	109.90
7	B	1535	A	O4'-C1'-N9	5.12	112.29	108.20
7	B	662	G	C4'-C3'-C2'	-5.11	97.49	102.60
7	B	2719	G	P-O3'-C3'	-5.11	113.56	119.70
7	B	242	G	P-O5'-C5'	5.11	129.08	120.90
7	B	431	U	O4'-C1'-N1	5.11	112.29	108.20
7	B	1203	U	C1'-O4'-C4'	-5.11	105.81	109.90
7	B	1855	U	O4'-C1'-N1	-5.11	104.11	108.20
7	B	421	C	C3'-C2'-C1'	5.11	105.59	101.50
7	B	2386	A	O4'-C1'-N9	5.11	112.29	108.20
7	B	606	U	P-O3'-C3'	-5.11	113.57	119.70
7	B	978	G	C1'-O4'-C4'	-5.11	105.81	109.90
7	B	1652	A	O3'-P-O5'	-5.11	94.30	104.00
7	B	1869	G	C3'-C2'-C1'	-5.11	97.42	101.50
7	B	2596	U	C4'-C3'-C2'	5.11	107.70	102.60
7	B	92	U	C3'-C2'-C1'	-5.10	97.42	101.50
7	B	971	G	P-O3'-C3'	-5.10	113.58	119.70
7	B	1257	C	N3-C4-C5	-5.10	119.86	121.90
7	B	1314	C	N1-C2-O2	5.10	121.96	118.90
7	B	618	G	C4'-C3'-C2'	-5.10	97.50	102.60
7	B	1587	G	C4'-C3'-C2'	-5.10	97.50	102.60
7	B	684	G	C4-C5-N7	5.10	112.84	110.80
7	B	62	U	O4'-C1'-N1	5.10	112.28	108.20
7	B	467	G	C4-C5-N7	-5.10	108.76	110.80
7	B	1202	G	C1'-O4'-C4'	-5.09	105.82	109.90
7	B	2282	G	C3'-C2'-C1'	5.09	105.58	101.50
7	B	2778	A	C3'-C2'-C1'	5.09	105.58	101.50
7	B	120	U	C3'-C2'-C1'	-5.09	97.43	101.50
7	B	1124	G	C2-N3-C4	-5.09	109.35	111.90
7	B	1163	G	C3'-C2'-C1'	-5.09	97.43	101.50
6	A	12	C	O4'-C1'-N1	5.09	112.27	108.20
7	B	528	A	P-O5'-C5'	-5.09	112.76	120.90
7	B	1301	A	O4'-C1'-N9	5.09	112.27	108.20
7	B	1632	A	C3'-C2'-C1'	5.09	105.57	101.50
7	B	2720	U	C4'-C3'-C2'	-5.09	97.51	102.60
7	B	2870	C	C6-N1-C2	5.09	122.33	120.30
7	B	2577	A	C8-N9-C4	-5.09	103.77	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	2002	G	C4'-C3'-C2'	-5.08	97.52	102.60
7	B	788	A	C4'-C3'-C2'	-5.08	97.52	102.60
7	B	1701	A	C4'-C3'-C2'	-5.08	97.52	102.60
7	B	2303	G	C3'-C2'-C1'	-5.08	97.43	101.50
7	B	2870	C	O4'-C1'-N1	-5.08	104.13	108.20
7	B	1665	A	N1-C6-N6	5.08	121.65	118.60
7	B	664	G	O4'-C1'-N9	-5.08	104.14	108.20
7	B	2384	U	P-O3'-C3'	5.08	125.79	119.70
7	B	2868	A	O4'-C1'-N9	5.08	112.26	108.20
7	B	2763	G	C8-N9-C4	-5.07	104.37	106.40
7	B	1019	U	O4'-C1'-N1	5.07	112.25	108.20
7	B	2732	G	N1-C6-O6	5.07	122.94	119.90
7	B	2780	G	O4'-C1'-N9	-5.07	104.15	108.20
7	B	188	G	P-O3'-C3'	-5.07	113.62	119.70
7	B	829	A	P-O3'-C3'	5.07	125.78	119.70
7	B	2614	A	O4'-C1'-N9	5.06	112.25	108.20
7	B	768	G	N3-C4-C5	5.06	131.13	128.60
7	B	2679	A	C3'-C2'-C1'	5.06	105.55	101.50
7	B	1595	C	C6-N1-C2	-5.06	118.28	120.30
7	B	2687	U	N3-C4-C5	-5.06	111.56	114.60
7	B	1692	U	P-O5'-C5'	-5.06	112.81	120.90
7	B	2543	G	C8-N9-C4	-5.06	104.38	106.40
7	B	375	G	N3-C4-C5	-5.05	126.07	128.60
7	B	704	G	O4'-C1'-N9	5.05	112.24	108.20
7	B	2727	A	C4'-C3'-C2'	-5.05	97.55	102.60
7	B	267	C	C2-N1-C1'	5.05	124.35	118.80
7	B	994	C	C6-N1-C2	5.05	122.32	120.30
7	B	1024	G	P-O3'-C3'	-5.05	113.64	119.70
7	B	2202	U	C4'-C3'-C2'	-5.05	97.55	102.60
6	A	19	C	C4'-C3'-C2'	-5.04	97.56	102.60
7	B	2434	A	P-O5'-C5'	-5.04	112.83	120.90
7	B	2884	U	C3'-C2'-C1'	-5.04	97.46	101.50
7	B	613	A	C3'-C2'-C1'	5.04	105.53	101.50
7	B	410	G	C4-C5-C6	5.04	121.83	118.80
7	B	701	G	C1'-O4'-C4'	-5.04	105.87	109.90
7	B	818	G	P-O3'-C3'	-5.04	113.65	119.70
7	B	388	G	O4'-C1'-N9	-5.04	104.17	108.20
7	B	2663	G	P-O3'-C3'	-5.04	113.65	119.70
6	A	98	G	O4'-C1'-N9	-5.04	104.17	108.20
7	B	533	G	C3'-C2'-C1'	5.04	105.53	101.50
7	B	1832	C	P-O3'-C3'	-5.04	113.66	119.70
7	B	2551	C	O4'-C1'-N1	-5.04	104.17	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	B	830	G	O4'-C1'-N9	-5.03	104.17	108.20
7	B	684	G	C5-C6-O6	-5.03	125.58	128.60
7	B	571	U	O4'-C1'-C2'	-5.03	100.77	105.80
7	B	2408	U	P-O3'-C3'	-5.03	113.66	119.70
7	B	2627	G	N9-C1'-C2'	5.03	120.54	114.00
7	B	2647	U	N1-C1'-C2'	-5.03	106.47	112.00
7	B	833	A	P-O3'-C3'	-5.03	113.67	119.70
7	B	2553	G	C8-N9-C4	-5.03	104.39	106.40
7	B	217	A	O4'-C1'-N9	5.03	112.22	108.20
7	B	223	A	C3'-C2'-C1'	5.02	105.52	101.50
7	B	940	G	C3'-C2'-C1'	-5.02	97.48	101.50
7	B	983	A	O4'-C1'-N9	5.02	112.22	108.20
7	B	1768	C	C4'-C3'-C2'	-5.02	97.58	102.60
7	B	2085	U	C4'-C3'-C2'	-5.02	97.58	102.60
7	B	1635	A	P-O3'-C3'	5.02	125.72	119.70
7	B	1933	G	N3-C4-C5	-5.02	126.09	128.60
7	B	2213	U	N3-C2-O2	-5.02	118.69	122.20
7	B	2406	A	C3'-C2'-C1'	-5.02	97.49	101.50
7	B	2501	C	C3'-C2'-C1'	5.02	105.51	101.50
7	B	559	G	N9-C4-C5	-5.01	103.39	105.40
7	B	1820	U	C5'-C4'-O4'	-5.01	103.08	109.10
7	B	2688	G	C4'-C3'-C2'	-5.01	97.59	102.60
7	B	108	G	N9-C1'-C2'	-5.01	106.49	112.00
7	B	1990	C	O4'-C1'-N1	5.01	112.21	108.20
7	B	2832	U	P-O3'-C3'	5.01	125.71	119.70
7	B	102	U	O4'-C1'-N1	-5.01	104.19	108.20
7	B	1629	U	O5'-C5'-C4'	-5.01	102.19	111.70
7	B	2436	G	N3-C4-C5	-5.01	126.10	128.60
7	B	2252	G	N3-C4-N9	-5.00	123.00	126.00
6	A	43	C	O4'-C1'-N1	5.00	112.20	108.20
7	B	234	U	O4'-C1'-N1	5.00	112.20	108.20
7	B	1823	G	C3'-C2'-C1'	-5.00	97.50	101.50
7	B	2458	G	N1-C6-O6	5.00	122.90	119.90
7	B	184	C	P-O3'-C3'	-5.00	113.70	119.70
7	B	779	U	N3-C4-O4	5.00	122.90	119.40
7	B	2624	G	C3'-C2'-C1'	-5.00	97.50	101.50

There are no chirality outliers.

All (22) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	26	SER	Peptide

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Mol	Chain	Res	Type	Group
1	0	28	SER	Peptide
4	3	32	LEU	Peptide
4	3	50	SER	Peptide
10	E	145	ASP	Peptide
10	E	27	LEU	Peptide
10	E	40	ARG	Peptide
13	H	37	VAL	Peptide
15	J	9	GLU	Peptide
17	L	57	LEU	Peptide
19	N	10	LEU	Peptide
19	N	7	GLY	Peptide
21	P	46	VAL	Peptide
21	P	70	GLU	Peptide
21	P	71	ARG	Peptide
21	P	85	VAL	Peptide
23	R	75	VAL	Peptide
24	S	108	SER	Peptide
24	S	93	ALA	Peptide
25	T	8	LEU	Peptide
29	X	28	LEU	Peptide
31	Z	27	THR	Peptide

5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	444	0	461	112	0
2	1	441	0	485	89	0
3	2	377	0	418	104	0
4	3	504	0	574	137	0
5	4	302	0	340	99	0
6	A	2507	0	1270	303	0
7	B	60995	0	30678	7134	0
8	C	2054	0	2122	625	0
9	D	1565	0	1616	508	0
10	E	1552	0	1619	401	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	F	1420	0	1460	214	0
12	G	1323	0	1374	226	0
13	H	1111	0	1148	191	0
14	I	1032	0	1088	131	0
15	J	1113	0	1147	307	0
16	K	931	0	1000	156	0
17	L	1053	0	1129	336	0
18	M	1074	0	1157	294	0
19	N	1008	0	1045	248	0
20	O	900	0	935	247	0
21	P	917	0	965	240	0
22	Q	947	0	1022	284	0
23	R	816	0	839	308	0
24	S	857	0	922	200	0
25	T	778	0	840	173	0
26	U	780	0	834	172	0
27	V	753	0	780	90	0
28	W	634	0	656	226	0
29	X	509	0	543	123	0
30	Y	449	0	491	84	0
31	Z	549	0	552	152	0
32	Z	111	0	0	0	0
33	0	1	0	0	0	0
33	2	2	0	0	0	0
33	B	485	0	0	65	0
33	C	3	0	0	0	0
33	D	1	0	0	0	0
33	E	2	0	0	0	0
33	J	1	0	0	0	0
33	K	1	0	0	0	0
33	L	4	0	0	1	0
33	N	4	0	0	2	0
33	Q	1	0	0	0	0
33	T	2	0	0	0	0
33	U	1	0	0	2	0
All	All	90314	0	59510	12780	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 86.

All (12780) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2822:G:OP2	19:N:2:ARG:HB3	1.29	1.26
1:0:27:LEU:HG	7:B:2886:A:C6	1.77	1.19
22:Q:49:ARG:HG3	23:R:77:PHE:CZ	1.79	1.18
22:Q:39:ILE:O	22:Q:43:GLN:HB3	1.40	1.18
7:B:1813:G:H2'	7:B:1814:G:H5''	1.24	1.17
2:1:47:ILE:HG22	2:1:48:TYR:H	1.08	1.17
7:B:322:A:H5'	7:B:340:A:H1'	1.24	1.16
19:N:55:ALA:HA	19:N:80:PHE:HD2	1.09	1.16
1:0:29:VAL:HG22	1:0:32:THR:HG23	1.27	1.15
7:B:2305:U:H5''	11:F:130:GLY:HA3	1.24	1.15
20:O:65:THR:HB	20:O:70:ALA:HB2	1.28	1.15
16:K:108:ARG:HG2	16:K:108:ARG:HH11	1.11	1.15
15:J:10:THR:HG21	15:J:50:THR:HB	1.29	1.14
8:C:20:ASN:HB2	8:C:202:ARG:HH11	1.09	1.14
8:C:20:ASN:HB2	8:C:202:ARG:NH1	1.63	1.13
7:B:2014:A:H2'	7:B:2015:A:C8	1.82	1.13
18:M:105:MET:HG3	18:M:106:ASP:H	1.12	1.13
7:B:1359:A:C2	7:B:1360:G:H1'	1.82	1.12
13:H:101:ASP:HA	13:H:104:THR:HB	1.27	1.12
17:L:92:LEU:HA	17:L:96:LYS:CB	1.78	1.12
22:Q:47:ARG:NH1	22:Q:50:ARG:HG3	1.64	1.11
19:N:56:LYS:HD3	19:N:57:THR:H	1.11	1.11
16:K:71:ARG:HB3	16:K:72:PRO:HD2	1.29	1.10
26:U:78:LYS:HD2	26:U:96:LYS:HG3	1.27	1.10
7:B:657:U:H2'	7:B:658:U:C6	1.87	1.10
2:1:12:SER:HA	2:1:50:GLU:HA	1.20	1.09
13:H:3:VAL:HB	13:H:37:VAL:HG11	1.29	1.09
7:B:2693:G:H2'	7:B:2694:G:H5''	1.18	1.09
8:C:51:ARG:HD3	8:C:51:ARG:O	1.52	1.09
7:B:398:C:H3'	31:Z:49:ARG:HH22	1.14	1.09
17:L:34:GLY:HA3	23:R:85:LYS:HD3	1.33	1.08
10:E:148:ILE:O	10:E:167:VAL:HG11	1.53	1.08
18:M:50:ARG:HA	18:M:50:ARG:CZ	1.82	1.08
5:4:1:MET:HG3	5:4:2:LYS:H	0.98	1.08
23:R:89:HIS:CG	23:R:90:ARG:H	1.71	1.08
7:B:1216:G:C5	7:B:1217:U:H5	1.71	1.07
9:D:33:ARG:HD3	9:D:89:GLU:CD	1.72	1.07
7:B:1258:U:H2'	7:B:1259:G:H8	1.11	1.07
10:E:139:LYS:HA	10:E:143:LEU:HD21	1.28	1.07
9:D:101:PHE:CZ	9:D:180:VAL:HG11	1.90	1.07
7:B:1804:C:H4'	8:C:247:TRP:HZ2	1.16	1.07
28:W:43:LYS:HB3	28:W:78:PHE:HB3	1.34	1.07
7:B:2591:C:H2'	7:B:2592:G:C8	1.89	1.07

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:10:VAL:HG13	12:G:14:VAL:HB	1.35	1.07
23:R:18:GLN:HB3	23:R:99:THR:HA	1.36	1.07
8:C:144:GLU:HG2	8:C:150:GLY:HA2	1.37	1.07
10:E:136:GLN:HA	10:E:139:LYS:HB3	1.24	1.06
7:B:41:C:H2'	7:B:42:A:O4'	1.55	1.06
3:2:21:ARG:HH21	7:B:466:A:H5''	1.17	1.06
22:Q:70:GLN:HG3	22:Q:71:ASN:H	1.15	1.06
8:C:68:ARG:HD2	8:C:127:ASN:HD21	1.10	1.06
7:B:1848:A:H2'	7:B:1849:G:H8	1.10	1.06
7:B:2205:A:H2'	7:B:2206:C:H6	1.16	1.06
11:F:28:PRO:HB2	11:F:168:LEU:HD11	1.30	1.06
7:B:2391:G:H22	7:B:2424:C:H2'	1.18	1.06
7:B:1752:C:N4	7:B:1756:G:H1	1.50	1.06
8:C:220:ARG:NE	8:C:220:ARG:HA	1.72	1.05
6:A:47:C:H5''	20:O:97:PHE:HZ	1.17	1.05
7:B:2205:A:H2'	7:B:2206:C:C6	1.90	1.05
24:S:110:ARG:HH11	24:S:110:ARG:HG3	1.18	1.05
3:2:5:PHE:HE2	3:2:7:PRO:HB3	1.15	1.05
7:B:1028:A:H2'	7:B:1029:A:H8	1.17	1.05
7:B:666:A:C4	7:B:667:U:H5	1.73	1.05
7:B:2239:G:H5'	8:C:246:PRO:HG2	1.37	1.05
18:M:49:ALA:HB1	18:M:116:ALA:HB1	1.36	1.05
7:B:2736:A:H2'	7:B:2737:G:C8	1.91	1.05
17:L:92:LEU:CA	17:L:96:LYS:HB2	1.85	1.05
25:T:68:LYS:HE2	25:T:75:GLY:HA3	1.32	1.05
7:B:2222:C:H2'	7:B:2223:G:H8	1.14	1.05
15:J:41:LYS:HZ3	15:J:46:PRO:HG3	1.22	1.04
29:X:28:LEU:HD22	29:X:42:LEU:HG	1.06	1.04
9:D:127:PHE:C	9:D:128:ARG:HD3	1.78	1.04
21:P:27:VAL:HG21	21:P:84:SER:O	1.56	1.04
20:O:19:GLN:HE21	28:W:76:ARG:HG2	1.17	1.04
21:P:62:LYS:HA	21:P:74:GLN:NE2	1.72	1.04
28:W:23:LYS:HE3	28:W:24:ARG:HB3	1.40	1.04
25:T:76:ARG:HG2	25:T:77:ARG:H	1.23	1.04
7:B:1716:U:H2'	7:B:1717:A:H8	1.22	1.04
22:Q:87:VAL:HB	23:R:54:VAL:HB	1.35	1.03
31:Z:36:VAL:HG13	31:Z:42:PRO:HG3	1.36	1.03
7:B:2678:C:H2'	7:B:2679:A:C8	1.94	1.03
7:B:608:A:H2'	7:B:609:A:C8	1.93	1.03
20:O:48:LEU:H	20:O:48:LEU:HD22	1.22	1.03
16:K:78:ARG:HE	21:P:72:VAL:HG21	1.22	1.03
27:V:29:ILE:HD13	27:V:30:ILE:H	1.22	1.03

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:16:ARG:NH1	18:M:72:PRO:HG2	1.73	1.03
19:N:12:ARG:HD2	19:N:16:HIS:HD2	1.21	1.03
7:B:1353:A:H2'	7:B:1354:A:H8	1.17	1.03
7:B:2749:A:H3'	7:B:2750:A:H2'	1.40	1.03
18:M:42:THR:OG1	18:M:45:GLN:HB2	1.59	1.03
12:G:97:VAL:HG21	12:G:124:CYS:H	1.18	1.03
7:B:851:C:H2'	7:B:852:U:C6	1.92	1.03
7:B:2512:C:OP1	9:D:128:ARG:HA	1.58	1.03
10:E:29:HIS:CD2	17:L:19:LEU:HD11	1.94	1.03
12:G:30:GLY:H	12:G:78:VAL:HG23	1.24	1.03
23:R:66:HIS:HA	23:R:98:ILE:HA	1.41	1.02
23:R:33:VAL:HG22	23:R:34:GLU:H	1.24	1.02
17:L:117:THR:HG23	17:L:118:THR:H	1.20	1.02
4:3:54:LEU:O	4:3:58:ILE:HG12	1.60	1.02
7:B:2330:G:H1'	28:W:36:ILE:HD13	1.41	1.02
5:4:26:ILE:HG21	5:4:35:GLN:H	1.21	1.02
26:U:82:VAL:HB	26:U:94:PHE:HB3	1.42	1.02
12:G:156:TYR:HA	12:G:171:LYS:HB3	1.39	1.02
7:B:2332:C:OP1	28:W:73:PRO:HG3	1.60	1.02
15:J:116:ARG:HH11	15:J:116:ARG:HG2	1.22	1.02
7:B:1256:G:C4	7:B:1257:C:H5	1.77	1.01
7:B:2591:C:H2'	7:B:2592:G:H8	1.19	1.01
7:B:826:U:H3'	7:B:828:U:H6	1.25	1.01
7:B:1848:A:H2'	7:B:1849:G:C8	1.94	1.01
10:E:29:HIS:HD2	17:L:19:LEU:HD11	1.22	1.01
23:R:32:THR:HB	23:R:35:PHE:HZ	1.25	1.01
7:B:2213:U:O2	7:B:2213:U:H3'	1.59	1.01
28:W:39:GLN:HA	28:W:68:PHE:HB2	1.41	1.01
7:B:2014:A:H2'	7:B:2015:A:H8	1.16	1.01
27:V:36:ALA:HB1	27:V:37:PRO:HD2	1.39	1.01
7:B:2645:G:H3'	7:B:2646:C:H5'	1.42	1.01
8:C:264:LYS:NZ	8:C:264:LYS:H	1.56	1.01
23:R:77:PHE:HB2	23:R:89:HIS:HE2	1.21	1.01
7:B:1784:A:H4'	7:B:1785:A:H5''	1.38	1.00
7:B:756:A:H8	7:B:756:A:H5'	1.23	1.00
24:S:74:ILE:HG22	24:S:105:VAL:HG22	1.39	1.00
7:B:1425:G:H2'	7:B:1426:G:C8	1.96	1.00
28:W:23:LYS:HE3	28:W:24:ARG:H	1.26	1.00
7:B:336:C:H4'	26:U:66:VAL:HG21	1.40	1.00
7:B:1030:C:OP1	18:M:117:PHE:HZ	1.42	1.00
7:B:482:A:H2'	7:B:482:A:N3	1.77	1.00
6:A:12:C:H5	28:W:50:VAL:HA	1.23	1.00

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:948:C:H2'	7:B:949:G:H8	1.27	1.00
5:4:24:ARG:HE	5:4:37:GLN:HA	1.23	1.00
21:P:58:PHE:O	21:P:60:VAL:HG22	1.61	1.00
13:H:78:VAL:HG12	13:H:79:THR:H	1.27	1.00
6:A:42:C:H5	11:F:65:LEU:HD22	1.25	0.99
6:A:49:C:OP1	20:O:101:GLY:HA3	1.62	0.99
28:W:39:GLN:CA	28:W:68:PHE:HB2	1.91	0.99
6:A:30:C:H2'	6:A:31:C:H5'	1.43	0.99
7:B:2222:C:H2'	7:B:2223:G:C8	1.96	0.99
23:R:64:VAL:HG23	23:R:100:GLY:HA2	1.42	0.99
8:C:22:GLU:HB2	8:C:202:ARG:HG3	1.44	0.99
7:B:2354:C:H4'	28:W:30:VAL:HG13	1.41	0.99
7:B:1372:U:H2'	7:B:1373:A:H8	1.26	0.99
7:B:264:C:H2'	7:B:265:A:H5''	1.44	0.99
9:D:69:ALA:HB2	9:D:91:THR:HB	1.44	0.99
26:U:66:VAL:HG13	26:U:67:SER:H	1.23	0.99
28:W:47:GLY:HA2	28:W:72:GLY:HA3	1.41	0.99
7:B:1353:A:H2'	7:B:1354:A:C8	1.97	0.99
7:B:1613:G:H2'	7:B:1617:C:H42	1.26	0.99
8:C:51:ARG:HH22	8:C:54:GLY:HA3	1.24	0.99
24:S:33:LEU:HD21	24:S:51:LEU:HD12	1.44	0.99
22:Q:47:ARG:HH12	22:Q:50:ARG:HG3	1.20	0.99
27:V:29:ILE:HD13	27:V:30:ILE:N	1.76	0.99
9:D:184:ARG:NH1	21:P:4:ILE:HG21	1.78	0.98
15:J:45:THR:N	22:Q:63:ARG:HH21	1.61	0.98
8:C:179:GLU:HG2	8:C:266:ILE:HA	1.44	0.98
12:G:84:LYS:HB2	12:G:132:LEU:HD11	1.46	0.98
17:L:58:TYR:HD2	17:L:58:TYR:N	1.59	0.98
9:D:130:GLN:HB3	9:D:140:HIS:HA	1.44	0.98
16:K:71:ARG:HB3	16:K:72:PRO:CD	1.93	0.98
17:L:92:LEU:HA	17:L:96:LYS:HB2	0.99	0.98
7:B:1258:U:H2'	7:B:1259:G:C8	1.98	0.98
9:D:11:MET:O	9:D:23:PRO:HD2	1.63	0.98
7:B:443:A:OP1	10:E:40:ARG:HA	1.63	0.98
7:B:1019:U:H3	7:B:1142:A:H62	1.08	0.98
7:B:322:A:H5'	7:B:340:A:C1'	1.93	0.98
22:Q:79:ILE:HA	22:Q:82:LEU:HD12	1.43	0.98
24:S:11:ARG:HG3	24:S:11:ARG:HH11	1.24	0.98
7:B:1165:A:H2'	7:B:1166:G:H8	1.25	0.98
15:J:77:HIS:CE1	15:J:84:ILE:HD13	1.98	0.98
8:C:139:THR:HG22	8:C:193:GLU:HB3	1.46	0.98
19:N:25:ALA:HB2	19:N:44:LEU:HD11	1.45	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:R:77:PHE:HB2	23:R:89:HIS:NE2	1.77	0.98
17:L:19:LEU:H	17:L:19:LEU:HD13	1.26	0.98
7:B:1216:G:C6	7:B:1217:U:H5	1.80	0.98
15:J:41:LYS:NZ	15:J:46:PRO:HG3	1.76	0.98
20:O:73:ALA:HA	20:O:76:LYS:HD2	1.44	0.98
14:I:52:LEU:HD23	14:I:53:PRO:HD2	1.46	0.98
8:C:24:HIS:HB3	8:C:27:LYS:HE2	1.44	0.97
8:C:155:ARG:HD2	8:C:157:ALA:HB3	1.43	0.97
9:D:62:LYS:HG2	9:D:63:PRO:HD3	1.45	0.97
9:D:136:ASN:HA	9:D:139:SER:HB2	1.46	0.97
29:X:49:ASP:HA	29:X:52:ARG:HD2	1.46	0.97
10:E:20:GLY:HA2	10:E:106:LYS:HD2	1.43	0.97
7:B:283:G:H1	7:B:357:C:H42	1.12	0.97
8:C:68:ARG:HD2	8:C:127:ASN:ND2	1.79	0.97
15:J:41:LYS:HG3	22:Q:63:ARG:HH22	1.28	0.97
7:B:1298:C:N4	7:B:1642:G:H1	1.61	0.97
22:Q:49:ARG:HG3	23:R:77:PHE:HZ	1.17	0.97
31:Z:34:LEU:HD12	31:Z:35:ASP:H	1.27	0.97
7:B:1291:C:H6	7:B:1291:C:H5'	1.29	0.97
7:B:1028:A:H2'	7:B:1029:A:C8	1.99	0.96
7:B:2736:A:H2'	7:B:2737:G:H8	1.24	0.96
7:B:1799:G:OP1	8:C:255:LYS:HG2	1.64	0.96
15:J:84:ILE:HD12	15:J:84:ILE:H	1.29	0.96
18:M:50:ARG:HH22	18:M:53:MET:HB3	1.28	0.96
10:E:149:ILE:HG13	10:E:186:VAL:HA	1.47	0.96
13:H:115:VAL:HG22	13:H:117:LEU:HB2	1.42	0.96
17:L:77:ILE:HD11	17:L:110:VAL:HA	1.43	0.96
7:B:1392:A:H62	25:T:18:GLU:HG3	1.25	0.96
16:K:66:LYS:HA	16:K:79:PHE:O	1.64	0.96
21:P:27:VAL:HB	21:P:86:LYS:O	1.65	0.96
7:B:1803:A:O3'	8:C:254:LYS:HD2	1.65	0.96
16:K:19:VAL:HB	16:K:41:ILE:HD11	1.43	0.96
18:M:86:LYS:HG2	18:M:87:GLY:H	1.28	0.96
7:B:1809:A:H2'	7:B:1810:A:C8	2.00	0.96
10:E:194:LYS:HZ2	10:E:194:LYS:H	1.01	0.96
18:M:5:LYS:HZ3	18:M:8:LYS:HE3	1.31	0.96
7:B:1372:U:H2'	7:B:1373:A:C8	2.00	0.96
15:J:78:THR:H	15:J:84:ILE:HG21	1.27	0.96
16:K:17:ARG:HB3	16:K:45:GLU:HG2	1.48	0.96
7:B:654:A:H2'	7:B:655:A:H5''	1.44	0.96
7:B:1804:C:H4'	8:C:247:TRP:CZ2	2.00	0.96
7:B:2678:C:H2'	7:B:2679:A:H8	1.30	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:104:LEU:O	8:C:106:PRO:HD3	1.64	0.96
19:N:4:ARG:HE	19:N:4:ARG:C	1.69	0.96
19:N:55:ALA:HA	19:N:80:PHE:CD2	2.01	0.96
21:P:93:LYS:HE3	21:P:97:TYR:CZ	2.00	0.96
17:L:92:LEU:HD13	17:L:96:LYS:HB3	1.46	0.96
7:B:1752:C:H42	7:B:1756:G:H1	1.14	0.96
7:B:2282:G:C6	7:B:2425:A:C2	2.54	0.96
20:O:10:ARG:HG3	20:O:96:GLY:HA2	1.48	0.95
7:B:1053:C:H42	7:B:1106:G:H1	1.07	0.95
19:N:3:HIS:HB2	19:N:4:ARG:NH2	1.80	0.95
25:T:76:ARG:HH11	25:T:76:ARG:HB3	1.25	0.95
7:B:1665:A:O2'	16:K:67:LYS:HE2	1.67	0.95
7:B:2519:U:H4'	7:B:2520:C:OP1	1.67	0.95
7:B:6:A:H4'	15:J:133:ALA:HB1	1.48	0.95
30:Y:9:THR:HB	30:Y:53:MET:O	1.64	0.95
17:L:17:LYS:HG3	17:L:18:ARG:H	1.30	0.95
7:B:634:C:H2'	7:B:635:C:H6	1.30	0.95
14:I:23:VAL:HG12	14:I:27:LEU:HD22	1.48	0.95
19:N:32:GLU:HG3	19:N:33:ILE:HG13	1.47	0.95
7:B:2888:C:H2'	7:B:2889:C:H6	1.28	0.95
7:B:2807:U:H1'	7:B:2892:G:N2	1.80	0.95
7:B:196:A:H3'	7:B:197:A:C5'	1.94	0.95
7:B:56:A:H61	7:B:114:U:H3	1.01	0.95
7:B:398:C:H3'	31:Z:49:ARG:NH2	1.82	0.95
26:U:5:ARG:HG2	26:U:6:ARG:H	1.28	0.95
7:B:1820:U:C5	8:C:158:GLY:HA3	2.02	0.95
20:O:83:LEU:O	20:O:87:ILE:HD12	1.67	0.95
3:2:9:VAL:HG23	3:2:10:LEU:HD13	1.48	0.95
23:R:79:ARG:HD3	23:R:81:LYS:HE2	1.49	0.95
33:B:5462:HOH:O	9:D:135:GLY:HA2	1.67	0.95
7:B:2303:G:H1'	11:F:122:ASP:HA	1.47	0.95
3:2:5:PHE:CE2	3:2:7:PRO:HB3	2.02	0.95
7:B:1824:G:H21	8:C:249:VAL:HG12	1.32	0.95
17:L:35:HIS:HE1	23:R:84:ARG:O	1.50	0.95
2:1:26:LYS:HD2	2:1:29:LYS:HG2	1.47	0.94
7:B:1216:G:C5	7:B:1217:U:C5	2.54	0.94
7:B:397:U:OP1	31:Z:29:GLY:HA2	1.67	0.94
7:B:2693:G:C2'	7:B:2694:G:H5''	1.97	0.94
7:B:1291:C:C6	7:B:1291:C:H5'	2.02	0.94
9:D:156:PHE:HD1	15:J:81:ILE:HG12	1.31	0.94
7:B:1651:G:OP1	19:N:37:THR:HG21	1.67	0.94
12:G:23:ILE:HD13	12:G:36:LEU:HD11	1.49	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2640:G:H2'	7:B:2641:G:H5''	1.48	0.94
7:B:1729:U:H3'	7:B:1730:C:H4'	1.49	0.94
3:2:10:LEU:HB3	7:B:125:A:C2	2.00	0.94
18:M:133:LYS:HD2	18:M:134:THR:H	1.29	0.94
7:B:2239:G:H5'	8:C:246:PRO:CG	1.97	0.94
7:B:1816:C:H3'	8:C:62:ARG:HH12	1.30	0.94
21:P:73:PHE:CE2	21:P:75:THR:HG23	2.02	0.94
24:S:29:VAL:HG11	24:S:69:LEU:HB2	1.49	0.94
7:B:136:G:N2	25:T:3:ARG:HE	1.65	0.94
7:B:135:U:H3	7:B:144:A:H61	1.11	0.94
14:I:118:GLY:HA3	14:I:124:MET:HB3	1.49	0.94
6:A:47:C:H5''	20:O:97:PHE:CZ	2.02	0.94
7:B:2621:G:O2'	9:D:164:GLN:HB3	1.68	0.94
15:J:41:LYS:HG3	22:Q:63:ARG:NH2	1.82	0.94
20:O:7:ARG:HH21	20:O:8:ILE:HG12	1.32	0.94
26:U:41:VAL:HA	26:U:57:ILE:HD12	1.48	0.94
7:B:508:A:H2	24:S:9:HIS:HE2	1.14	0.94
8:C:264:LYS:HZ2	8:C:264:LYS:H	1.04	0.94
9:D:7:LYS:HB3	9:D:201:LEU:HD21	1.49	0.94
8:C:42:ARG:HG2	8:C:43:ASN:H	1.32	0.93
15:J:10:THR:HG21	15:J:50:THR:CB	1.97	0.93
30:Y:2:LYS:HB2	30:Y:37:ARG:N	1.84	0.93
25:T:80:TRP:HD1	25:T:81:LYS:H	1.13	0.93
5:4:1:MET:HG3	5:4:2:LYS:N	1.82	0.93
7:B:2307:G:H21	7:B:2308:G:H4'	1.33	0.93
15:J:81:ILE:HA	15:J:84:ILE:HD11	1.48	0.93
7:B:2438:U:O2'	7:B:2439:A:H5''	1.69	0.93
7:B:2724:U:O2'	7:B:2725:A:H5'	1.67	0.93
7:B:302:C:O2'	7:B:303:G:H8	1.50	0.93
25:T:15:HIS:HE2	25:T:80:TRP:HZ2	1.09	0.93
13:H:90:LEU:HG	13:H:92:GLY:H	1.30	0.93
7:B:1813:G:C2'	7:B:1814:G:H5''	1.99	0.93
7:B:784:G:H5''	8:C:225:ASN:HD21	1.34	0.93
9:D:184:ARG:HE	9:D:184:ARG:HA	1.34	0.93
7:B:2305:U:C5'	11:F:130:GLY:HA3	1.98	0.93
7:B:1318:U:H2'	7:B:1319:C:H6	1.31	0.93
15:J:81:ILE:HG23	15:J:82:GLY:H	1.33	0.93
19:N:8:ARG:HH21	19:N:46:ARG:HG3	1.32	0.93
7:B:2636:C:H5'	9:D:80:TRP:HZ2	1.34	0.93
18:M:8:LYS:HG2	18:M:9:PHE:H	1.32	0.93
17:L:123:ARG:HA	17:L:142:ILE:HA	1.49	0.93
7:B:2074:U:H2'	7:B:2075:U:H6	1.33	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2503:A:H4'	7:B:2504:U:OP1	1.62	0.93
28:W:67:LYS:HD2	28:W:71:LYS:HB3	1.47	0.93
23:R:35:PHE:HB3	23:R:64:VAL:HG13	1.51	0.93
7:B:1392:A:N6	25:T:18:GLU:HG3	1.84	0.93
6:A:42:C:C5	11:F:65:LEU:HD22	2.03	0.93
25:T:28:ASN:HB2	25:T:87:LEU:HB2	1.50	0.93
25:T:62:VAL:HG23	25:T:63:VAL:H	1.31	0.93
4:3:12:ARG:NH1	17:L:62:PRO:HG3	1.83	0.93
6:A:29:A:H2	6:A:30:C:C4	1.87	0.93
16:K:35:VAL:HG13	16:K:65:THR:HG23	1.49	0.93
15:J:89:PHE:HB2	15:J:92:MET:H	1.33	0.93
5:4:1:MET:CG	5:4:2:LYS:H	1.82	0.93
7:B:1216:G:C6	7:B:1217:U:C5	2.57	0.93
7:B:1617:C:H2'	7:B:1617:C:O2	1.65	0.93
9:D:184:ARG:HH11	21:P:4:ILE:HG21	1.33	0.93
7:B:271:G:H1'	7:B:272:A:C8	2.04	0.93
14:I:21:PRO:HB2	14:I:22:PRO:HD3	1.50	0.92
7:B:1225:G:H5''	23:R:90:ARG:HE	1.34	0.92
7:B:1651:G:H5''	19:N:39:PRO:HG2	1.49	0.92
24:S:32:ALA:HA	24:S:35:ILE:HG22	1.51	0.92
7:B:67:U:H2'	7:B:68:G:H8	1.29	0.92
7:B:98:G:O2'	7:B:103:A:H1'	1.68	0.92
6:A:44:G:H1'	6:A:47:C:N4	1.84	0.92
6:A:99:A:C4	6:A:100:G:C8	2.57	0.92
7:B:567:U:N3	7:B:568:U:C5	2.38	0.92
20:O:25:ARG:HB3	20:O:94:ARG:HH12	1.33	0.92
9:D:56:LYS:NZ	9:D:59:ARG:HA	1.84	0.92
7:B:1025:G:C8	7:B:1135:C:H1'	2.04	0.92
7:B:2682:A:H2	7:B:2683:C:C2	1.86	0.92
21:P:52:ARG:O	21:P:60:VAL:HG11	1.69	0.92
7:B:2345:G:H8	7:B:2345:G:H5'	1.35	0.92
12:G:34:ARG:NE	12:G:70:LEU:HD21	1.84	0.92
8:C:44:ASN:O	8:C:45:ASN:HB3	1.70	0.92
11:F:133:GLU:HG3	11:F:134:GLN:N	1.83	0.92
7:B:614:A:H5''	7:B:616:A:H62	1.32	0.92
7:B:485:C:O2	24:S:60:HIS:HE1	1.53	0.92
7:B:393:C:C2	7:B:394:C:H5	1.88	0.92
7:B:2866:U:O2	7:B:2868:A:H1'	1.70	0.92
20:O:92:PHE:CD2	20:O:93:ASP:N	2.36	0.92
10:E:138:LEU:C	10:E:143:LEU:HD11	1.89	0.92
17:L:19:LEU:N	17:L:19:LEU:HD13	1.85	0.92
7:B:65:U:H2'	7:B:66:C:H6	1.32	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:241:LYS:HB3	8:C:241:LYS:HZ2	1.34	0.92
27:V:36:ALA:HB1	27:V:37:PRO:CD	2.00	0.92
5:4:24:ARG:HB2	5:4:36:ARG:HA	1.51	0.91
7:B:782:A:H4'	7:B:783:A:OP1	1.68	0.91
17:L:58:TYR:N	17:L:58:TYR:CD2	2.33	0.91
6:A:29:A:C2	6:A:30:C:C4	2.56	0.91
7:B:615:U:H5''	7:B:616:A:H8	1.32	0.91
23:R:44:GLY:HA2	23:R:51:VAL:O	1.70	0.91
7:B:2078:C:H2'	7:B:2079:U:H6	1.36	0.91
8:C:261:ARG:HH11	8:C:261:ARG:HG2	1.33	0.91
21:P:13:LYS:HD3	21:P:78:PRO:HG3	1.50	0.91
7:B:1570:A:H2'	7:B:1571:A:C8	2.05	0.91
7:B:396:G:H8	7:B:396:G:H5'	1.32	0.91
12:G:19:ASN:HB3	12:G:22:VAL:HB	1.50	0.91
18:M:80:VAL:HG12	18:M:81:ARG:N	1.83	0.91
22:Q:63:ARG:HH11	22:Q:63:ARG:HB3	1.35	0.91
7:B:321:U:H4'	10:E:159:LEU:HB3	1.53	0.91
7:B:2311:A:C5	11:F:39:VAL:HG23	2.06	0.91
7:B:1066:U:H3'	7:B:1066:U:H6	1.36	0.91
5:4:16:ILE:HD11	7:B:1033:U:H2'	1.53	0.91
8:C:220:ARG:HH11	8:C:220:ARG:HG3	1.34	0.91
20:O:56:LYS:HB3	20:O:62:LEU:HG	1.52	0.91
8:C:179:GLU:CG	8:C:266:ILE:HA	2.01	0.91
10:E:130:LYS:O	10:E:132:LYS:HE2	1.71	0.91
19:N:67:PHE:HE1	19:N:72:ASP:H	1.16	0.91
14:I:4:VAL:HG22	14:I:5:GLN:HG3	1.52	0.90
7:B:681:G:H2'	7:B:682:G:H8	1.37	0.90
24:S:84:ARG:NH2	24:S:98:LYS:HE3	1.85	0.90
23:R:64:VAL:HA	23:R:101:ILE:H	1.33	0.90
7:B:624:C:H2'	7:B:625:G:H8	1.36	0.90
7:B:2333:A:O4'	7:B:2335:A:H1'	1.72	0.90
7:B:1825:U:H5'	8:C:244:VAL:HB	1.53	0.90
18:M:80:VAL:HG12	18:M:81:ARG:H	1.36	0.90
7:B:528:A:C2	7:B:2043:C:H4'	2.06	0.90
7:B:2658:C:OP1	12:G:159:LYS:HE3	1.71	0.90
7:B:251:A:OP1	17:L:59:ARG:NH2	2.03	0.90
28:W:39:GLN:N	28:W:68:PHE:HB2	1.87	0.90
3:2:25:LYS:HE2	3:2:25:LYS:H	1.34	0.90
7:B:533:G:H2'	7:B:534:U:C6	2.07	0.90
7:B:598:U:H5'	17:L:21:ARG:HG3	1.49	0.90
9:D:31:ALA:CB	9:D:95:SER:HB3	2.00	0.90
7:B:624:C:H2'	7:B:625:G:C8	2.06	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:141:G:H3'	7:B:142:A:O4'	1.72	0.90
7:B:402:A:H2'	7:B:403:U:H5'	1.52	0.90
18:M:50:ARG:HA	18:M:50:ARG:NH1	1.87	0.90
20:O:41:ALA:HB2	20:O:48:LEU:HD21	1.53	0.90
7:B:1903:G:OP1	8:C:239:PHE:HA	1.71	0.90
7:B:1295:C:H2'	7:B:1296:G:C8	2.07	0.90
7:B:1429:G:H5'	7:B:1429:G:H8	1.35	0.90
17:L:34:GLY:CA	23:R:85:LYS:HD3	2.02	0.90
23:R:89:HIS:CD2	23:R:90:ARG:H	1.90	0.90
10:E:142:ALA:HB1	10:E:145:ASP:HB2	1.53	0.90
7:B:2250:G:O6	18:M:82:MET:SD	2.30	0.90
7:B:104:A:H2'	7:B:105:C:H6	1.37	0.90
7:B:2763:G:C8	7:B:2763:G:H5'	2.04	0.90
19:N:3:HIS:HB2	19:N:4:ARG:CZ	2.02	0.90
7:B:2763:G:H8	7:B:2763:G:H5'	1.37	0.90
8:C:241:LYS:HB3	8:C:241:LYS:NZ	1.87	0.90
13:H:3:VAL:CB	13:H:37:VAL:HG11	2.02	0.90
18:M:108:VAL:O	18:M:112:LEU:HG	1.70	0.90
18:M:9:PHE:CE2	18:M:12:MET:HG2	2.07	0.90
7:B:1829:A:H8	7:B:1829:A:H5''	1.35	0.90
7:B:968:C:H2'	7:B:969:G:H5''	1.54	0.89
7:B:123:G:H5''	7:B:1375:U:O2'	1.71	0.89
7:B:2058:A:H5''	7:B:2058:A:H8	1.36	0.89
8:C:12:ARG:HH11	8:C:18:VAL:HG21	1.37	0.89
8:C:244:VAL:HG22	8:C:245:THR:H	1.34	0.89
7:B:24:G:H1'	24:S:77:ASP:HB3	1.52	0.89
2:1:44:GLN:HE21	2:1:45:HIS:N	1.70	0.89
7:B:85:G:N3	7:B:103:A:H2	1.71	0.89
7:B:347:A:H8	7:B:347:A:H5'	1.35	0.89
26:U:92:VAL:HG22	26:U:94:PHE:H	1.37	0.89
7:B:666:A:C2'	7:B:667:U:H5''	2.02	0.89
18:M:16:ARG:HH12	18:M:72:PRO:HG2	1.37	0.89
7:B:136:G:N2	25:T:3:ARG:HH21	1.69	0.89
12:G:79:THR:HG23	12:G:80:GLU:H	1.36	0.89
26:U:24:VAL:O	26:U:25:LYS:HB2	1.73	0.89
12:G:8:VAL:HB	12:G:49:LEU:HB2	1.53	0.89
7:B:458:G:H22	7:B:469:G:H2'	1.37	0.89
18:M:40:ARG:HG3	18:M:92:TRP:CE2	2.07	0.89
7:B:2324:U:H4'	7:B:2325:G:OP2	1.70	0.89
7:B:2747:G:N2	7:B:2748:A:N7	2.18	0.89
7:B:1050:A:H2'	7:B:1051:G:C8	2.07	0.89
7:B:1653:G:C6	19:N:10:LEU:HG	2.07	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2838:G:H8	7:B:2838:G:H5'	1.35	0.89
7:B:784:G:N2	7:B:792:A:C6	2.40	0.89
17:L:57:LEU:O	17:L:59:ARG:HG2	1.71	0.89
7:B:480:A:H4'	26:U:40:LEU:HD13	1.55	0.89
7:B:362:A:H2'	7:B:363:G:H8	1.35	0.89
7:B:2840:C:H5''	19:N:53:THR:HG21	1.52	0.89
25:T:53:VAL:HB	25:T:87:LEU:HD11	1.52	0.89
7:B:2031:A:H5'	7:B:2031:A:C8	2.08	0.89
15:J:98:GLU:O	15:J:102:GLU:HG2	1.72	0.89
7:B:2331:G:O2'	28:W:69:GLU:HG3	1.72	0.89
31:Z:49:ARG:HA	31:Z:52:ALA:HB3	1.54	0.89
29:X:53:VAL:O	29:X:57:LEU:HB3	1.73	0.89
7:B:1098:A:H2'	7:B:1099:G:H5''	1.51	0.89
7:B:1050:A:H2'	7:B:1051:G:H8	1.38	0.89
7:B:1967:C:H2'	7:B:1968:G:H5'	1.53	0.89
9:D:130:GLN:HB3	9:D:140:HIS:CA	2.02	0.89
19:N:38:LEU:HB3	19:N:39:PRO:HD3	1.51	0.89
1:O:21:LEU:HD22	24:S:23:LEU:HB2	1.54	0.89
7:B:2040:G:H2'	7:B:2041:U:H6	1.36	0.89
7:B:2334:U:O4'	20:O:11:ALA:HB1	1.73	0.89
17:L:55:MET:HB3	17:L:56:PRO:HD3	1.54	0.89
29:X:41:HIS:CE1	29:X:43:LEU:HB2	2.08	0.89
14:I:45:THR:HG21	14:I:54:ILE:HG21	1.54	0.89
7:B:2195:U:H2'	7:B:2196:C:H6	1.36	0.89
7:B:826:U:H3'	7:B:828:U:C6	2.06	0.88
20:O:30:ARG:HH12	20:O:97:PHE:HD2	1.21	0.88
12:G:6:ALA:HB3	12:G:7:PRO:HD3	1.54	0.88
1:O:41:HIS:CE1	1:O:42:ILE:HG22	2.08	0.88
23:R:79:ARG:HD3	23:R:81:LYS:CE	2.02	0.88
3:2:21:ARG:NH2	7:B:466:A:H5''	1.87	0.88
22:Q:44:TYR:O	22:Q:48:ASP:HB2	1.74	0.88
7:B:2285:C:H1'	7:B:2288:A:N7	1.87	0.88
7:B:454:A:H3'	7:B:455:C:H5'	1.53	0.88
9:D:124:ARG:O	9:D:160:LYS:HD2	1.74	0.88
7:B:2276:G:OP1	18:M:82:MET:HB3	1.73	0.88
20:O:9:ARG:O	20:O:13:ARG:HB2	1.72	0.88
31:Z:30:HIS:HB2	31:Z:48:GLN:HG2	1.56	0.88
9:D:59:ARG:HD2	9:D:60:VAL:HG23	1.54	0.88
7:B:1823:G:H8	7:B:1823:G:H5'	1.34	0.88
10:E:120:VAL:C	10:E:189:THR:HG21	1.94	0.88
7:B:2415:G:H2'	7:B:2416:C:H6	1.38	0.88
7:B:374:A:H2'	7:B:375:G:H8	1.38	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:K:78:ARG:NE	21:P:72:VAL:HG21	1.88	0.88
7:B:2561:U:H2'	7:B:2562:U:H5''	1.54	0.88
3:2:40:ALA:HA	7:B:459:U:OP1	1.73	0.88
7:B:1256:G:C4	7:B:1257:C:C5	2.61	0.88
7:B:1784:A:H4'	7:B:1785:A:C5'	2.04	0.88
13:H:2:GLN:HA	13:H:21:VAL:HG13	1.53	0.88
7:B:32:C:H42	7:B:473:G:H1	1.21	0.88
7:B:323:C:H1'	10:E:164:LEU:HB2	1.54	0.88
10:E:148:ILE:HD12	10:E:149:ILE:HD12	1.55	0.88
1:0:41:HIS:HB2	1:0:47:TYR:O	1.73	0.88
8:C:170:TYR:O	8:C:171:VAL:HG13	1.74	0.88
7:B:2179:C:H2'	7:B:2180:U:C5	2.09	0.88
7:B:2282:G:C6	7:B:2425:A:H2	1.91	0.88
20:O:40:ILE:HB	20:O:46:GLU:HG2	1.55	0.87
7:B:302:C:O2'	7:B:303:G:C8	2.22	0.87
17:L:4:ASN:HD22	17:L:5:THR:H	1.20	0.87
7:B:580:U:H2'	7:B:581:C:H6	1.38	0.87
23:R:32:THR:HB	23:R:35:PHE:CZ	2.10	0.87
31:Z:19:GLY:O	31:Z:21:VAL:HG12	1.74	0.87
4:3:31:ILE:HD12	4:3:32:LEU:HB2	1.56	0.87
7:B:1662:U:H2'	7:B:1663:G:H5''	1.56	0.87
9:D:113:SER:HB3	9:D:167:ASN:HA	1.56	0.87
7:B:2378:A:H1'	20:O:17:LYS:HE2	1.53	0.87
7:B:1205:A:N7	10:E:164:LEU:HD22	1.90	0.87
7:B:823:C:H2'	7:B:824:U:O4'	1.73	0.87
15:J:38:GLY:HA3	15:J:41:LYS:HE3	1.53	0.87
23:R:79:ARG:HH11	23:R:81:LYS:HE3	1.37	0.87
7:B:1179:G:H2'	7:B:1180:U:O4'	1.72	0.87
1:0:41:HIS:CG	1:0:42:ILE:H	1.92	0.87
7:B:27:G:HO2'	7:B:28:A:H8	0.91	0.87
8:C:107:LYS:H	8:C:194:VAL:HG21	1.38	0.87
17:L:77:ILE:CD1	17:L:110:VAL:HA	2.04	0.87
18:M:41:LEU:HD11	18:M:95:LEU:HD13	1.56	0.87
6:A:76:G:H2'	6:A:77:U:H6	1.39	0.87
7:B:1788:C:H2'	7:B:1789:A:O4'	1.73	0.87
7:B:1824:G:OP1	8:C:53:ILE:HD11	1.73	0.87
19:N:55:ALA:HB1	19:N:79:LEU:O	1.75	0.87
2:1:47:ILE:CG2	2:1:48:TYR:H	1.88	0.87
29:X:1:MET:HE3	29:X:5:GLU:HB3	1.55	0.87
2:1:29:LYS:HB3	2:1:30:PRO:HD2	1.56	0.87
7:B:2888:C:H2'	7:B:2889:C:C6	2.09	0.87
7:B:1335:C:H2'	7:B:1336:A:H8	1.39	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2592:G:H5''	7:B:2593:U:OP2	1.75	0.87
31:Z:49:ARG:C	31:Z:51:VAL:H	1.77	0.87
10:E:127:GLU:HA	10:E:157:LEU:HD22	1.54	0.87
7:B:657:U:H2'	7:B:658:U:C5	2.09	0.87
17:L:109:LYS:HG2	17:L:126:ARG:HG3	1.54	0.87
17:L:126:ARG:HD2	17:L:127:VAL:N	1.89	0.87
9:D:160:LYS:NZ	9:D:160:LYS:HB2	1.88	0.87
8:C:205:GLY:C	8:C:206:LYS:HE2	1.95	0.86
16:K:108:ARG:HG2	16:K:108:ARG:NH1	1.89	0.86
22:Q:108:LEU:HA	22:Q:111:LYS:HE3	1.57	0.86
7:B:570:G:O6	33:B:5094:HOH:O	1.92	0.86
7:B:993:G:C2	7:B:994:C:H5	1.93	0.86
6:A:12:C:C5	28:W:50:VAL:HA	2.09	0.86
7:B:1295:C:H2'	7:B:1296:G:H8	1.37	0.86
7:B:669:G:H2'	7:B:669:G:N3	1.88	0.86
17:L:33:ARG:HD2	23:R:85:LYS:NZ	1.89	0.86
7:B:1205:A:H4'	7:B:1206:G:OP2	1.73	0.86
9:D:29:VAL:O	9:D:51:THR:HG21	1.75	0.86
7:B:1829:A:C5'	7:B:1829:A:H8	1.87	0.86
4:3:12:ARG:HG2	4:3:23:HIS:HB2	1.58	0.86
7:B:1275:A:H3'	7:B:1275:A:N3	1.89	0.86
7:B:790:U:H5''	7:B:791:C:OP2	1.76	0.86
15:J:73:VAL:HG23	15:J:88:THR:H	1.39	0.86
7:B:608:A:H2'	7:B:609:A:H8	1.37	0.86
7:B:136:G:H22	25:T:3:ARG:NE	1.71	0.86
22:Q:35:PHE:HD1	22:Q:35:PHE:O	1.58	0.86
9:D:130:GLN:HB3	9:D:140:HIS:N	1.91	0.86
28:W:74:LYS:HG3	28:W:75:ASN:H	1.40	0.86
10:E:109:LEU:HD13	10:E:113:VAL:CG1	2.05	0.86
7:B:1708:C:H2'	7:B:1709:U:C6	2.10	0.86
7:B:604:G:H5''	7:B:604:G:H8	1.39	0.86
7:B:1364:G:H1'	7:B:1368:G:N2	1.91	0.86
7:B:1435:G:H2'	7:B:1436:G:H8	1.40	0.86
9:D:77:ARG:NH1	9:D:77:ARG:HB2	1.91	0.86
7:B:1661:G:C5	7:B:1662:U:C5	2.64	0.86
10:E:60:TRP:HD1	10:E:60:TRP:H	1.23	0.86
23:R:3:ALA:O	23:R:4:VAL:HG13	1.74	0.86
17:L:85:VAL:HG13	17:L:86:GLU:H	1.40	0.86
9:D:60:VAL:HG23	9:D:63:PRO:HG2	1.57	0.86
5:4:24:ARG:NE	5:4:37:GLN:HA	1.90	0.86
12:G:142:GLN:O	12:G:146:ASP:HB2	1.74	0.86
7:B:571:U:C4	7:B:2030:A:N1	2.44	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2231:U:H2'	7:B:2232:C:H6	1.40	0.86
7:B:2733:A:H8	7:B:2733:A:H3'	1.41	0.86
21:P:62:LYS:HA	21:P:74:GLN:HE22	1.36	0.86
7:B:484:C:H42	7:B:496:G:H1	1.20	0.86
7:B:1884:G:H8	7:B:1884:G:OP2	1.59	0.85
7:B:860:U:H1'	7:B:2268:A:H5'	1.56	0.85
7:B:2434:A:H5'	7:B:2434:A:C8	2.10	0.85
7:B:784:G:H5''	8:C:225:ASN:ND2	1.90	0.85
7:B:448:U:H5	7:B:583:G:N3	1.74	0.85
23:R:89:HIS:CG	23:R:90:ARG:N	2.42	0.85
10:E:146:VAL:HB	10:E:184:ASP:CG	1.97	0.85
7:B:67:U:H2'	7:B:68:G:C8	2.10	0.85
7:B:873:C:H2'	7:B:874:G:H8	1.40	0.85
12:G:79:THR:CG2	12:G:80:GLU:H	1.88	0.85
7:B:581:C:OP1	22:Q:32:ARG:HB2	1.75	0.85
7:B:962:G:H21	18:M:81:ARG:HD3	1.40	0.85
19:N:12:ARG:HD2	19:N:16:HIS:CD2	2.10	0.85
21:P:9:GLN:HB3	21:P:56:SER:HB3	1.57	0.85
22:Q:53:LYS:H	22:Q:53:LYS:HE2	1.41	0.85
7:B:2060:A:C2	7:B:2502:G:C5	2.65	0.85
7:B:586:A:H5'	10:E:84:THR:HG21	1.55	0.85
15:J:78:THR:HG23	15:J:84:ILE:HG21	1.59	0.85
17:L:33:ARG:CZ	17:L:33:ARG:HB2	2.07	0.85
18:M:31:PHE:HE2	18:M:113:ALA:HB3	1.41	0.85
12:G:125:PRO:HG2	12:G:129:GLU:HB3	1.56	0.85
12:G:30:GLY:N	12:G:78:VAL:HG23	1.89	0.85
7:B:1590:A:H2'	7:B:1591:A:H8	1.39	0.85
7:B:1422:G:H1'	7:B:1496:A:N1	1.92	0.85
9:D:179:ARG:HG3	9:D:179:ARG:HH11	1.40	0.85
9:D:179:ARG:HG3	9:D:179:ARG:NH1	1.90	0.85
16:K:35:VAL:HG21	16:K:69:VAL:HG22	1.58	0.85
5:4:1:MET:HE3	5:4:2:LYS:HG3	1.56	0.85
1:0:5:ASN:ND2	7:B:2019:A:H62	1.74	0.85
7:B:2365:G:H4'	28:W:65:LYS:HE2	1.57	0.85
7:B:994:C:H42	7:B:1160:G:H1	1.21	0.85
9:D:145:SER:OG	9:D:146:ILE:HD12	1.76	0.85
7:B:1616:A:H5'	7:B:1616:A:H8	1.39	0.85
7:B:1826:G:OP2	8:C:221:GLY:HA2	1.76	0.85
7:B:2333:A:H4'	7:B:2334:U:H5'	1.58	0.85
8:C:204:LEU:HD13	8:C:210:ALA:HB1	1.58	0.85
9:D:136:ASN:HA	9:D:139:SER:CB	2.06	0.85
7:B:136:G:H22	25:T:3:ARG:HE	1.20	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:544:C:H2'	7:B:545:U:C6	2.12	0.85
28:W:39:GLN:H	28:W:68:PHE:HB2	1.40	0.85
7:B:2345:G:C8	7:B:2345:G:H5'	2.11	0.85
7:B:1139:G:H5''	7:B:1139:G:H8	1.42	0.84
3:2:33:ARG:HD2	7:B:467:G:OP1	1.76	0.84
7:B:745:G:H5''	7:B:746:U:OP2	1.77	0.84
12:G:3:VAL:HG22	12:G:4:ALA:H	1.41	0.84
21:P:25:VAL:HA	21:P:89:GLY:H	1.42	0.84
2:1:47:ILE:HG22	2:1:48:TYR:N	1.91	0.84
7:B:1677:A:H5''	7:B:1677:A:C8	2.12	0.84
7:B:749:A:C6	7:B:1618:A:C2	2.65	0.84
17:L:57:LEU:HA	17:L:58:TYR:CD2	2.12	0.84
7:B:2821:A:OP2	19:N:2:ARG:HD2	1.77	0.84
19:N:64:ARG:HG2	19:N:65:LEU:N	1.93	0.84
7:B:1157:G:H5'	7:B:1157:G:H8	1.43	0.84
7:B:2199:A:H5''	7:B:2199:A:C8	2.11	0.84
7:B:828:U:O2	7:B:829:A:N7	2.09	0.84
7:B:1454:C:H5'	19:N:63:ARG:NE	1.92	0.84
22:Q:44:TYR:C	22:Q:48:ASP:HB2	1.98	0.84
15:J:45:THR:H	22:Q:63:ARG:HH21	1.23	0.84
12:G:10:VAL:HG21	12:G:44:HIS:NE2	1.93	0.84
7:B:666:A:C4	7:B:667:U:C5	2.64	0.84
7:B:861:A:H5'	7:B:862:G:OP2	1.77	0.84
25:T:24:MET:HE2	25:T:30:ILE:HG13	1.59	0.84
6:A:76:G:H1'	27:V:78:GLN:HE22	1.42	0.84
6:A:7:G:H5'	6:A:7:G:H8	1.42	0.84
7:B:384:A:O5'	7:B:384:A:H8	1.60	0.84
8:C:42:ARG:HG2	8:C:43:ASN:N	1.92	0.84
7:B:585:G:O2'	10:E:77:ILE:HD13	1.77	0.84
7:B:1548:A:H2'	7:B:1549:A:C8	2.12	0.84
26:U:21:ARG:HG2	26:U:21:ARG:HH11	1.42	0.84
7:B:1283:G:H22	7:B:1286:A:H5'	1.40	0.84
7:B:2882:A:OP1	19:N:96:ARG:HD3	1.77	0.84
17:L:33:ARG:HD2	23:R:85:LYS:HZ1	1.39	0.84
7:B:2365:G:H4'	28:W:65:LYS:CE	2.07	0.84
12:G:16:VAL:HG12	12:G:17:LYS:H	1.41	0.84
18:M:40:ARG:HA	18:M:92:TRP:NE1	1.92	0.84
8:C:257:ARG:HG2	8:C:261:ARG:NH1	1.92	0.84
11:F:83:PRO:O	11:F:84:ILE:HG12	1.76	0.84
23:R:92:TRP:HZ3	23:R:94:THR:HG23	1.42	0.84
7:B:1104:C:H2'	7:B:1105:U:C6	2.12	0.84
7:B:2699:C:H2'	7:B:2700:A:C8	2.13	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:937:C:H2'	7:B:938:G:C8	2.13	0.84
8:C:155:ARG:CD	8:C:157:ALA:HB3	2.07	0.84
1:O:41:HIS:CG	1:O:42:ILE:N	2.43	0.84
21:P:50:ARG:HD2	21:P:99:LEU:HD23	1.59	0.84
7:B:338:G:H5''	7:B:338:G:H8	1.42	0.84
10:E:194:LYS:H	10:E:194:LYS:NZ	1.75	0.84
25:T:68:LYS:HG3	25:T:74:ILE:O	1.77	0.84
7:B:871:U:H4'	18:M:68:PHE:CE1	2.13	0.84
7:B:1635:A:H8	7:B:1635:A:H5'	1.41	0.84
3:2:18:PHE:N	3:2:18:PHE:CD2	2.43	0.84
7:B:2694:G:N2	7:B:2716:C:H1'	1.92	0.84
7:B:2733:A:C8	7:B:2733:A:H3'	2.13	0.84
12:G:108:PHE:HZ	12:G:151:ARG:HG3	1.42	0.84
18:M:50:ARG:NH2	18:M:53:MET:HB3	1.92	0.84
10:E:195:GLN:HB2	10:E:198:GLU:O	1.78	0.84
7:B:1256:G:C6	7:B:1257:C:N4	2.46	0.84
11:F:33:ILE:HD11	11:F:90:LEU:HB2	1.59	0.84
13:H:3:VAL:H	13:H:21:VAL:HG11	1.41	0.84
15:J:85:LYS:HE2	15:J:85:LYS:HA	1.60	0.84
18:M:58:LYS:HD2	18:M:60:GLN:HB2	1.58	0.84
28:W:42:THR:HG21	28:W:67:LYS:HB2	1.59	0.84
24:S:88:ARG:HD2	24:S:94:ASP:OD1	1.77	0.84
7:B:1019:U:H3	7:B:1142:A:N6	1.73	0.83
7:B:2078:C:C2	7:B:2079:U:C5	2.65	0.83
28:W:68:PHE:O	28:W:69:GLU:HB3	1.76	0.83
7:B:2636:C:H5'	9:D:80:TRP:CZ2	2.13	0.83
7:B:1598:A:H2	7:B:1599:U:C2	1.95	0.83
7:B:1024:G:H3'	7:B:1025:G:H2'	1.59	0.83
7:B:756:A:H5'	7:B:756:A:C8	2.10	0.83
18:M:49:ALA:HA	18:M:52:ALA:HB3	1.60	0.83
22:Q:40:LYS:HD2	22:Q:44:TYR:HD2	1.42	0.83
2:1:44:GLN:HE21	2:1:45:HIS:H	1.24	0.83
15:J:85:LYS:CE	15:J:85:LYS:HA	2.08	0.83
7:B:665:U:H2'	7:B:666:A:C8	2.12	0.83
7:B:196:A:H3'	7:B:197:A:H5''	1.60	0.83
7:B:689:A:OP1	7:B:689:A:H4'	1.76	0.83
23:R:10:LYS:HD2	23:R:11:GLN:N	1.94	0.83
28:W:21:GLY:HA2	28:W:25:PHE:CD1	2.13	0.83
7:B:1454:C:N4	19:N:64:ARG:HB2	1.93	0.83
7:B:2396:G:H1	7:B:2420:C:H42	1.20	0.83
7:B:968:C:N3	7:B:969:G:N7	2.26	0.83
8:C:243:PRO:HA	8:C:249:VAL:HG23	1.60	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:O:38:GLN:HA	20:O:50:ALA:HB3	1.60	0.83
7:B:1913:A:H4'	7:B:1914:C:OP1	1.78	0.83
31:Z:67:PRO:HA	31:Z:70:LYS:HB3	1.60	0.83
26:U:60:LYS:HE3	26:U:61:GLU:H	1.42	0.83
3:2:10:LEU:O	3:2:14:ARG:HD2	1.78	0.83
7:B:2734:A:H2'	7:B:2735:G:H5'	1.59	0.83
7:B:975:A:H2'	7:B:976:G:H5'	1.59	0.83
7:B:2807:U:H1'	7:B:2892:G:H21	1.39	0.83
7:B:2255:G:H2'	7:B:2256:G:H8	1.43	0.83
24:S:56:ALA:HA	24:S:59:GLU:HB2	1.60	0.83
7:B:2358:A:N6	7:B:2428:G:H1	1.77	0.83
16:K:31:ARG:HB3	16:K:32:TYR:CD1	2.13	0.83
20:O:41:ALA:HB1	20:O:42:PRO:HD3	1.61	0.83
6:A:76:G:H2'	6:A:77:U:C6	2.14	0.83
3:2:18:PHE:HD2	3:2:18:PHE:N	1.74	0.83
5:4:2:LYS:HE2	5:4:38:GLY:HA3	1.60	0.83
7:B:796:C:H6	7:B:796:C:H3'	1.44	0.83
10:E:144:GLU:HG2	10:E:166:LYS:HE2	1.59	0.83
6:A:44:G:H1'	6:A:47:C:H42	1.42	0.83
7:B:2745:C:H42	7:B:2759:G:H1	1.25	0.83
21:P:23:ASP:OD1	21:P:49:ILE:HG22	1.79	0.83
31:Z:49:ARG:HG2	31:Z:50:ASP:H	1.43	0.83
7:B:623:C:OP2	17:L:100:ILE:HG21	1.79	0.83
12:G:104:LEU:O	12:G:111:PRO:HB3	1.79	0.83
6:A:56:G:H21	6:A:58:A:H61	1.23	0.83
7:B:2755:C:O5'	7:B:2755:C:H6	1.62	0.83
20:O:15:ARG:HE	20:O:18:LEU:HD13	1.42	0.83
9:D:178:VAL:HG23	9:D:179:ARG:H	1.41	0.83
7:B:429:A:H2'	7:B:430:A:C8	2.14	0.83
25:T:31:VAL:HG23	25:T:32:LEU:H	1.43	0.83
25:T:80:TRP:HD1	25:T:81:LYS:N	1.77	0.83
7:B:2303:G:H2'	11:F:128:SER:OG	1.78	0.83
7:B:571:U:N3	7:B:2030:A:C2	2.47	0.82
7:B:2352:A:H5'	7:B:2352:A:H8	1.43	0.82
7:B:910:A:C2	7:B:911:A:C6	2.67	0.82
22:Q:64:ILE:CD1	22:Q:95:ALA:HB2	2.08	0.82
12:G:73:SER:HB3	12:G:137:LYS:HE2	1.59	0.82
7:B:19:A:H2'	7:B:20:C:H6	1.44	0.82
7:B:1716:U:H2'	7:B:1717:A:C8	2.13	0.82
12:G:4:ALA:O	12:G:5:LYS:HB2	1.78	0.82
19:N:63:ARG:O	19:N:66:ALA:HB3	1.79	0.82
7:B:927:A:H2'	7:B:928:A:C8	2.13	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:545:U:H1'	7:B:550:C:O2	1.79	0.82
7:B:2738:A:H2	7:B:2767:C:N3	1.77	0.82
7:B:588:U:H1'	10:E:85:PHE:CD2	2.15	0.82
22:Q:29:ARG:HB3	22:Q:29:ARG:HH11	1.43	0.82
25:T:68:LYS:CE	25:T:75:GLY:HA3	2.09	0.82
17:L:126:ARG:C	17:L:126:ARG:HH11	1.83	0.82
15:J:121:LYS:HD2	15:J:121:LYS:N	1.93	0.82
7:B:1486:U:H3	7:B:1503:A:H61	1.26	0.82
7:B:2360:G:N2	7:B:2428:G:C5	2.47	0.82
12:G:26:LYS:O	12:G:78:VAL:HG11	1.79	0.82
20:O:83:LEU:C	20:O:87:ILE:HG21	1.99	0.82
7:B:1030:C:OP1	18:M:117:PHE:CZ	2.32	0.82
17:L:92:LEU:HD13	17:L:96:LYS:CB	2.08	0.82
26:U:83:GLY:HA2	26:U:92:VAL:HB	1.59	0.82
7:B:2636:C:C5'	9:D:80:TRP:HZ2	1.93	0.82
26:U:9:GLU:HB2	26:U:71:ILE:HB	1.60	0.82
7:B:1022:G:N2	7:B:1142:A:C2	2.47	0.82
7:B:396:G:C8	7:B:396:G:H5'	2.14	0.82
9:D:122:VAL:HG11	9:D:141:ARG:NH1	1.95	0.82
7:B:2032:G:N2	9:D:150:GLN:HB3	1.93	0.82
15:J:36:LEU:HA	15:J:51:GLY:O	1.80	0.82
16:K:2:ILE:HG21	16:K:67:LYS:HE3	1.61	0.82
19:N:115:LEU:HD23	19:N:115:LEU:H	1.43	0.82
25:T:66:LYS:C	25:T:66:LYS:HE3	2.00	0.82
25:T:68:LYS:HE2	25:T:75:GLY:CA	2.09	0.82
7:B:1667:G:OP1	16:K:6:THR:HA	1.79	0.82
7:B:124:G:H5'	7:B:124:G:C8	2.13	0.82
8:C:237:ARG:HE	8:C:237:ARG:C	1.83	0.82
7:B:915:C:C6	7:B:915:C:H5''	2.15	0.82
7:B:1631:G:H3'	7:B:1631:G:C8	2.15	0.82
7:B:994:C:N4	7:B:1160:G:H1	1.77	0.82
7:B:2455:G:H2'	7:B:2456:C:C6	2.15	0.82
7:B:1813:G:N3	8:C:50:THR:HG21	1.93	0.82
7:B:1205:A:H62	10:E:164:LEU:HD13	1.45	0.82
2:1:29:LYS:HB3	2:1:30:PRO:CD	2.08	0.82
20:O:86:GLY:O	20:O:87:ILE:HD13	1.80	0.82
23:R:27:ILE:HG12	23:R:29:THR:HG23	1.62	0.82
7:B:2360:G:H1'	17:L:61:LEU:HD21	1.61	0.82
7:B:979:A:C2	7:B:982:C:C2	2.68	0.82
28:W:3:LYS:HA	28:W:3:LYS:HE2	1.62	0.82
10:E:139:LYS:HA	10:E:143:LEU:CD2	2.10	0.82
7:B:85:G:H8	7:B:85:G:H5''	1.45	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:L:117:THR:HG23	17:L:118:THR:N	1.94	0.82
26:U:27:VAL:CG1	26:U:33:VAL:HA	2.09	0.82
7:B:2327:A:H2'	7:B:2328:A:C8	2.14	0.82
18:M:117:PHE:CD1	18:M:124:LEU:HD21	2.14	0.81
17:L:35:HIS:CE1	23:R:84:ARG:C	2.53	0.81
26:U:78:LYS:CD	26:U:96:LYS:HG3	2.08	0.81
7:B:1598:A:C2	7:B:1599:U:C2	2.68	0.81
7:B:948:C:H2'	7:B:949:G:C8	2.15	0.81
8:C:196:ASN:HB3	8:C:199:HIS:NE2	1.95	0.81
19:N:1:MET:HG2	19:N:3:HIS:CE1	2.14	0.81
7:B:103:A:H8	7:B:103:A:H5''	1.44	0.81
9:D:101:PHE:HB2	9:D:105:LYS:HD2	1.62	0.81
3:2:25:LYS:N	3:2:25:LYS:HE2	1.94	0.81
7:B:1049:C:H1'	7:B:1113:U:O2'	1.79	0.81
7:B:2682:A:C2	7:B:2683:C:C2	2.68	0.81
8:C:216:ARG:HB3	8:C:217:PRO:CD	2.09	0.81
13:H:18:GLN:HG3	13:H:18:GLN:O	1.78	0.81
22:Q:40:LYS:HD2	22:Q:44:TYR:CD2	2.15	0.81
7:B:2849:U:N3	7:B:2867:G:C8	2.48	0.81
7:B:831:G:C6	7:B:832:U:N3	2.48	0.81
20:O:41:ALA:HB1	20:O:42:PRO:CD	2.10	0.81
23:R:78:ARG:N	23:R:89:HIS:HE1	1.78	0.81
10:E:143:LEU:HA	10:E:148:ILE:HG21	1.61	0.81
10:E:17:THR:HG21	10:E:196:VAL:HG13	1.62	0.81
26:U:82:VAL:O	26:U:92:VAL:HG11	1.80	0.81
8:C:24:HIS:HB3	8:C:27:LYS:CE	2.08	0.81
7:B:631:A:H1'	17:L:66:PHE:HB3	1.61	0.81
7:B:2208:C:H2'	7:B:2209:G:C8	2.15	0.81
12:G:169:ARG:NE	12:G:170:THR:H	1.79	0.81
3:2:31:LEU:H	3:2:31:LEU:HD22	1.46	0.81
7:B:2230:G:H2'	7:B:2231:U:C6	2.16	0.81
7:B:2231:U:H2'	7:B:2232:C:C6	2.15	0.81
7:B:657:U:H2'	7:B:658:U:H6	1.42	0.81
27:V:63:ILE:HB	27:V:70:ILE:HG13	1.63	0.81
7:B:2891:U:H3'	7:B:2891:U:H6	1.45	0.81
7:B:163:C:H2'	7:B:164:C:O4'	1.78	0.81
4:3:11:LYS:HD2	17:L:62:PRO:O	1.80	0.81
7:B:2062:A:H2'	7:B:2063:C:H5'	1.61	0.81
7:B:737:C:O2'	7:B:738:G:H5'	1.80	0.81
18:M:54:THR:HA	18:M:57:VAL:HB	1.62	0.81
21:P:49:ILE:O	21:P:50:ARG:HD3	1.81	0.81
9:D:33:ARG:HG2	9:D:89:GLU:HB2	1.63	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:62:LYS:N	9:D:62:LYS:HZ2	1.79	0.81
7:B:158:U:H2'	7:B:159:G:H5'	1.62	0.81
17:L:57:LEU:HA	17:L:58:TYR:HD2	1.45	0.81
19:N:33:ILE:HG21	19:N:112:TYR:HD1	1.45	0.81
10:E:194:LYS:HZ2	10:E:194:LYS:N	1.76	0.81
7:B:2638:G:N2	7:B:2775:G:H2'	1.95	0.81
27:V:53:LYS:HD3	27:V:54:ALA:H	1.45	0.81
7:B:1139:G:H5''	7:B:1139:G:C8	2.16	0.81
7:B:2025:C:H5''	7:B:2026:U:OP2	1.81	0.81
19:N:12:ARG:CD	19:N:16:HIS:HD2	1.93	0.81
24:S:110:ARG:HG3	24:S:110:ARG:NH1	1.89	0.81
7:B:1024:G:O6	7:B:1025:G:N1	2.13	0.81
20:O:27:VAL:HG11	20:O:38:GLN:HB3	1.62	0.81
18:M:133:LYS:HD3	27:V:52:ALA:O	1.80	0.81
7:B:1590:A:H2'	7:B:1591:A:C8	2.16	0.81
7:B:1838:C:H4'	7:B:1839:G:H5'	1.63	0.81
11:F:67:THR:OG1	11:F:85:GLY:HA3	1.81	0.81
24:S:8:ARG:HA	24:S:102:HIS:HD2	1.46	0.81
10:E:109:LEU:HD13	10:E:113:VAL:HG13	1.62	0.81
9:D:101:PHE:O	9:D:105:LYS:HD2	1.81	0.81
17:L:117:THR:CG2	17:L:118:THR:H	1.94	0.81
7:B:1301:A:O2'	7:B:1302:A:H3'	1.81	0.81
7:B:1353:A:C4	7:B:1354:A:N7	2.49	0.81
7:B:2528:U:O2'	7:B:2529:G:H5''	1.80	0.81
7:B:1824:G:H1'	8:C:247:TRP:HZ3	1.45	0.81
9:D:122:VAL:HG21	9:D:141:ARG:HD2	1.63	0.81
22:Q:13:HIS:CD2	22:Q:31:TYR:CZ	2.69	0.81
25:T:29:THR:HG22	25:T:86:THR:HG22	1.61	0.81
11:F:135:ILE:HG13	11:F:140:ILE:HD13	1.63	0.81
7:B:2866:U:H4'	7:B:2867:G:H4'	1.63	0.80
7:B:688:U:H2'	7:B:689:A:H5''	1.63	0.80
29:X:36:GLN:HG3	29:X:40:SER:HB3	1.63	0.80
30:Y:1:ALA:O	30:Y:43:ILE:HG13	1.81	0.80
26:U:47:PRO:HB2	26:U:49:PRO:HD3	1.63	0.80
7:B:1661:G:C5	7:B:1662:U:H5	1.98	0.80
16:K:76:VAL:O	21:P:74:GLN:HB2	1.79	0.80
18:M:9:PHE:HE2	18:M:12:MET:HG2	1.42	0.80
7:B:1764:C:C2	7:B:1765:U:H5	1.99	0.80
3:2:21:ARG:HH11	3:2:21:ARG:HG2	1.45	0.80
7:B:814:C:H1'	7:B:1225:G:H21	1.46	0.80
7:B:1796:U:H4'	8:C:251:THR:H	1.46	0.80
7:B:2742:G:O5'	7:B:2742:G:H8	1.65	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:148:ARG:HH21	12:G:153:PRO:HG2	1.45	0.80
7:B:2841:C:H2'	7:B:2842:G:H8	1.46	0.80
7:B:541:A:H2'	7:B:542:C:O4'	1.80	0.80
10:E:48:THR:HA	10:E:83:VAL:CG2	2.10	0.80
10:E:139:LYS:CA	10:E:143:LEU:HD21	2.11	0.80
29:X:18:LEU:HA	29:X:22:LEU:HG	1.62	0.80
1:O:28:SER:HA	1:O:36:LYS:HB3	1.62	0.80
5:4:1:MET:CE	5:4:2:LYS:HG3	2.11	0.80
7:B:2645:G:H3'	7:B:2646:C:C5'	2.12	0.80
7:B:392:U:H2'	7:B:393:C:C6	2.17	0.80
7:B:685:A:C2	7:B:787:C:H1'	2.17	0.80
9:D:113:SER:O	9:D:167:ASN:HB3	1.81	0.80
16:K:78:ARG:HH21	21:P:72:VAL:HG11	1.47	0.80
7:B:634:C:H2'	7:B:635:C:C6	2.15	0.80
25:T:14:PRO:HA	25:T:32:LEU:HA	1.64	0.80
7:B:1598:A:H2	7:B:1599:U:N1	1.80	0.80
6:A:49:C:O3'	20:O:68:LYS:HE2	1.80	0.80
7:B:1990:C:H2'	7:B:1991:U:C6	2.17	0.80
7:B:2078:C:H2'	7:B:2079:U:C6	2.17	0.80
7:B:2592:G:C6	7:B:2593:U:N3	2.50	0.80
21:P:23:ASP:HB2	21:P:93:LYS:HE2	1.62	0.80
24:S:11:ARG:O	24:S:12:SER:HB2	1.79	0.80
28:W:23:LYS:CE	28:W:24:ARG:HB3	2.11	0.80
7:B:477:A:H2'	7:B:478:A:C8	2.16	0.80
7:B:1392:A:H2'	7:B:1393:A:C8	2.16	0.80
7:B:1058:U:H2'	7:B:1059:G:C8	2.16	0.80
7:B:2597:G:OP1	8:C:239:PHE:CG	2.35	0.80
20:O:16:ARG:NE	20:O:16:ARG:HA	1.95	0.80
3:2:10:LEU:HD13	3:2:10:LEU:H	1.43	0.80
3:2:18:PHE:CZ	3:2:45:SER:HA	2.16	0.80
7:B:126:A:O2'	7:B:127:A:H5'	1.81	0.80
7:B:2872:A:O2'	7:B:2873:A:H5''	1.81	0.80
8:C:53:ILE:HG12	8:C:218:THR:OG1	1.81	0.80
7:B:1816:C:H5	8:C:62:ARG:HD2	1.47	0.80
10:E:49:ARG:HB2	10:E:51:GLU:HG2	1.63	0.80
22:Q:50:ARG:HA	22:Q:53:LYS:HE3	1.61	0.80
7:B:2289:G:H5'	7:B:2289:G:C8	2.16	0.80
7:B:65:U:H2'	7:B:66:C:C6	2.15	0.80
11:F:28:PRO:CB	11:F:168:LEU:HD11	2.11	0.80
12:G:79:THR:HG23	12:G:80:GLU:N	1.96	0.80
7:B:2521:C:H6	7:B:2521:C:H5'	1.47	0.80
7:B:783:A:H8	7:B:784:G:H4'	1.46	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:44:TYR:OH	15:J:49:ASP:O	1.98	0.80
7:B:2415:G:H2'	7:B:2416:C:C6	2.17	0.80
7:B:2742:G:O6	7:B:2763:G:N2	2.15	0.80
7:B:374:A:H2'	7:B:375:G:C8	2.17	0.80
7:B:465:G:H2'	7:B:466:A:C8	2.17	0.80
7:B:831:G:C6	7:B:832:U:C2	2.70	0.80
15:J:41:LYS:HD3	15:J:44:TYR:HB3	1.64	0.80
23:R:77:PHE:HB2	23:R:89:HIS:CE1	2.16	0.80
17:L:6:LEU:HG	17:L:9:ALA:HB2	1.61	0.80
7:B:1022:G:C5	7:B:1140:C:N4	2.49	0.80
7:B:1263:U:H2'	7:B:1264:A:C8	2.16	0.80
7:B:1378:A:N7	7:B:1380:G:C6	2.49	0.80
7:B:2028:U:H2'	7:B:2029:G:C8	2.17	0.80
7:B:2822:G:OP2	19:N:2:ARG:CB	2.22	0.80
7:B:950:G:H2'	7:B:951:C:C6	2.17	0.80
8:C:205:GLY:O	8:C:206:LYS:HE2	1.81	0.80
9:D:146:ILE:HG12	9:D:155:VAL:HA	1.63	0.80
10:E:5:LEU:HD11	10:E:118:LEU:HA	1.64	0.80
7:B:862:G:H22	7:B:916:G:H1'	1.47	0.80
12:G:28:LYS:O	12:G:29:ASN:HB2	1.82	0.80
7:B:1053:C:N4	7:B:1106:G:H1	1.79	0.80
7:B:663:G:H5''	17:L:27:LEU:HD13	1.64	0.80
16:K:110:GLU:C	16:K:111:LYS:HG2	2.02	0.80
7:B:2250:G:C6	18:M:82:MET:HG3	2.16	0.79
16:K:78:ARG:HE	21:P:72:VAL:CG2	1.94	0.79
7:B:1829:A:C5'	7:B:1829:A:C8	2.64	0.79
7:B:418:C:H2'	7:B:419:U:H6	1.46	0.79
20:O:7:ARG:NH2	20:O:8:ILE:HG12	1.96	0.79
31:Z:3:LYS:O	31:Z:5:ILE:N	2.14	0.79
7:B:1752:C:N4	7:B:1756:G:N1	2.29	0.79
18:M:5:LYS:HE3	18:M:71:LYS:HE2	1.65	0.79
7:B:850:U:H2'	7:B:851:C:C5	2.18	0.79
14:I:56:VAL:HG22	14:I:57:VAL:H	1.47	0.79
13:H:96:THR:HG23	13:H:97:ARG:HG2	1.64	0.79
7:B:1256:G:C5	7:B:1257:C:H5	2.01	0.79
7:B:1661:G:C6	7:B:1662:U:C5	2.70	0.79
26:U:12:VAL:HA	26:U:68:ASN:OD1	1.83	0.79
18:M:18:ARG:HG2	18:M:19:GLY:H	1.47	0.79
7:B:2728:U:H2'	7:B:2729:G:C8	2.16	0.79
7:B:2820:A:H8	7:B:2820:A:H5''	1.48	0.79
8:C:58:LYS:HB2	8:C:58:LYS:NZ	1.96	0.79
15:J:44:TYR:HE1	15:J:48:VAL:O	1.65	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:18:ARG:CG	18:M:19:GLY:H	1.93	0.79
14:I:27:LEU:HD21	14:I:34:ILE:HD12	1.63	0.79
7:B:2230:G:H2'	7:B:2231:U:H6	1.48	0.79
15:J:109:LEU:HB2	15:J:110:PRO:HD2	1.63	0.79
16:K:10:VAL:HG21	16:K:16:ALA:HA	1.65	0.79
7:B:2341:G:H2'	7:B:2342:C:C6	2.17	0.79
6:A:104:A:C2	6:A:105:G:H1'	2.18	0.79
7:B:675:A:O2'	7:B:676:A:H5'	1.82	0.79
6:A:29:A:C2	6:A:30:C:C5	2.71	0.79
7:B:194:G:N3	7:B:194:G:H2'	1.95	0.79
19:N:2:ARG:NE	19:N:3:HIS:O	2.16	0.79
7:B:111:A:H8	7:B:111:A:O5'	1.66	0.79
7:B:2208:C:H2'	7:B:2209:G:H8	1.48	0.79
26:U:3:LYS:HB2	26:U:3:LYS:NZ	1.98	0.79
7:B:1941:C:H6	7:B:1941:C:H5'	1.48	0.79
1:0:29:VAL:H	1:0:36:LYS:HD2	1.47	0.79
7:B:1259:G:H2'	7:B:1260:A:C8	2.18	0.79
7:B:2692:G:H1'	7:B:2847:U:O2'	1.82	0.79
7:B:743:A:OP1	9:D:134:HIS:NE2	2.16	0.79
22:Q:64:ILE:HD11	22:Q:95:ALA:HB2	1.64	0.79
7:B:346:A:N3	7:B:346:A:H5'	1.97	0.79
7:B:76:C:N3	7:B:111:A:C2	2.50	0.79
9:D:33:ARG:HD3	9:D:89:GLU:OE2	1.82	0.79
7:B:637:A:P	17:L:112:LEU:HB2	2.22	0.79
18:M:6:ARG:HD2	18:M:71:LYS:NZ	1.97	0.79
30:Y:35:VAL:HG12	30:Y:36:GLU:H	1.47	0.79
9:D:36:GLN:C	9:D:36:GLN:HE21	1.86	0.79
7:B:283:G:H1	7:B:357:C:N4	1.80	0.79
7:B:1066:U:H3'	7:B:1066:U:C6	2.17	0.79
5:4:17:VAL:HG21	7:B:1032:A:H4'	1.65	0.79
7:B:2484:G:H1'	18:M:119:LEU:HD12	1.63	0.79
13:H:1:MET:HG3	13:H:21:VAL:HG22	1.64	0.79
17:L:34:GLY:H	23:R:85:LYS:HE2	1.46	0.79
23:R:92:TRP:CZ3	23:R:94:THR:HG23	2.17	0.79
7:B:2285:C:H1'	7:B:2288:A:C8	2.18	0.79
12:G:96:ALA:HB3	12:G:103:ASN:HB2	1.64	0.79
7:B:850:U:H2'	7:B:851:C:C6	2.18	0.79
7:B:1764:C:N3	7:B:1765:U:H5	1.80	0.79
7:B:2144:G:H21	7:B:2148:G:H21	1.27	0.79
3:2:21:ARG:HH11	3:2:21:ARG:CG	1.96	0.79
7:B:1838:C:N3	7:B:1899:A:C2	2.51	0.79
7:B:679:C:H2'	7:B:680:C:H6	1.48	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:264:LYS:N	8:C:264:LYS:HZ2	1.80	0.79
18:M:40:ARG:HA	18:M:92:TRP:HE1	1.46	0.79
7:B:851:C:H2'	7:B:852:U:H6	1.45	0.79
7:B:38:A:H1'	10:E:43:THR:O	1.82	0.79
7:B:1803:A:O2'	8:C:254:LYS:HE3	1.83	0.79
7:B:450:G:H2'	7:B:451:U:H5''	1.64	0.79
8:C:51:ARG:HH22	8:C:54:GLY:CA	1.96	0.79
9:D:208:LYS:HE3	9:D:209:ALA:N	1.98	0.79
20:O:74:VAL:HG23	20:O:106:LEU:HD12	1.63	0.79
7:B:320:A:H2'	10:E:131:THR:OG1	1.83	0.79
17:L:111:ILE:H	17:L:126:ARG:HH22	1.30	0.79
18:M:16:ARG:O	18:M:17:ASN:HB2	1.82	0.79
19:N:26:GLY:O	19:N:29:VAL:HG23	1.83	0.79
7:B:2341:G:H2'	7:B:2342:C:H6	1.47	0.79
7:B:1142:A:H5''	7:B:1142:A:C8	2.18	0.78
7:B:2267:A:H3'	7:B:2268:A:H5''	1.63	0.78
7:B:561:G:O5'	7:B:561:G:H8	1.66	0.78
7:B:1657:U:OP1	9:D:141:ARG:HB2	1.83	0.78
27:V:63:ILE:H	27:V:70:ILE:HD11	1.46	0.78
12:G:34:ARG:O	12:G:34:ARG:HG2	1.82	0.78
4:3:12:ARG:CG	4:3:23:HIS:HB2	2.13	0.78
7:B:687:C:C4	7:B:688:U:C2	2.72	0.78
24:S:83:LYS:O	24:S:84:ARG:HD3	1.82	0.78
17:L:101:ILE:O	17:L:103:ILE:HD13	1.83	0.78
7:B:1682:G:H8	7:B:1682:G:H5'	1.49	0.78
10:E:176:ASP:HB3	10:E:179:SER:OG	1.83	0.78
7:B:1837:C:C2	7:B:1899:A:N6	2.52	0.78
7:B:1786:A:C2	7:B:1938:A:C4	2.72	0.78
7:B:446:G:OP2	22:Q:2:ARG:CZ	2.32	0.78
28:W:55:ASP:CG	28:W:56:HIS:H	1.86	0.78
31:Z:34:LEU:HB3	31:Z:35:ASP:OD1	1.82	0.78
7:B:65:U:OP1	25:T:76:ARG:CB	2.32	0.78
17:L:14:LYS:HZ3	17:L:15:ALA:H	1.28	0.78
7:B:1003:G:H8	7:B:1003:G:H5''	1.49	0.78
7:B:1571:A:C2	7:B:1572:A:C5	2.72	0.78
7:B:1616:A:H5'	7:B:1616:A:C8	2.17	0.78
7:B:2029:G:O2'	7:B:2030:A:H5'	1.82	0.78
7:B:2841:C:H2'	7:B:2842:G:C8	2.19	0.78
7:B:556:A:H2'	7:B:556:A:N3	1.97	0.78
8:C:140:VAL:O	8:C:141:HIS:HB2	1.82	0.78
8:C:257:ARG:HG3	8:C:257:ARG:HH11	1.48	0.78
15:J:114:LEU:O	15:J:118:MET:HB2	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:N:56:LYS:HD3	19:N:57:THR:N	1.96	0.78
31:Z:8:LYS:O	31:Z:9:TYR:HB2	1.83	0.78
12:G:102:ILE:HD11	12:G:130:ILE:HD12	1.64	0.78
7:B:1099:G:H5'	7:B:1099:G:C8	2.19	0.78
6:A:34:A:H1'	6:A:36:C:H41	1.47	0.78
7:B:1028:A:C2	7:B:1029:A:C5	2.72	0.78
7:B:2691:C:O2	7:B:2872:A:N6	2.14	0.78
1:O:27:LEU:HG	7:B:2886:A:N6	1.99	0.78
7:B:463:G:N2	7:B:467:G:C5	2.51	0.78
7:B:780:G:H1	8:C:228:ASP:CG	1.86	0.78
15:J:24:THR:O	15:J:25:LEU:HD22	1.83	0.78
28:W:19:ARG:HA	28:W:33:GLY:HA2	1.66	0.78
7:B:103:A:N7	7:B:104:A:N3	2.31	0.78
23:R:4:VAL:HB	23:R:41:ILE:HG12	1.64	0.78
22:Q:105:PHE:HA	22:Q:108:LEU:HD12	1.64	0.78
5:4:15:LYS:HG2	5:4:28:SER:H	1.46	0.78
7:B:688:U:H6	7:B:688:U:H3'	1.47	0.78
8:C:20:ASN:CB	8:C:202:ARG:HH11	1.95	0.78
7:B:1653:G:O6	19:N:10:LEU:HG	1.83	0.78
2:1:46:VAL:HG13	2:1:47:ILE:HG13	1.65	0.78
7:B:2637:U:H5''	7:B:2638:G:OP2	1.83	0.78
6:A:53:A:H8	6:A:53:A:O5'	1.65	0.78
7:B:2331:G:H4'	28:W:69:GLU:HG2	1.65	0.78
8:C:63:ILE:O	8:C:64:VAL:HG13	1.84	0.78
9:D:151:THR:O	9:D:153:GLY:N	2.17	0.78
20:O:100:HIS:O	20:O:104:GLN:HB3	1.83	0.78
7:B:264:C:C2'	7:B:265:A:H5''	2.14	0.78
7:B:2143:C:O5'	7:B:2143:C:H6	1.67	0.78
9:D:10:GLY:HA2	9:D:24:VAL:HA	1.63	0.78
4:3:7:ARG:HD2	4:3:10:ALA:HB3	1.64	0.78
5:4:16:ILE:HG12	5:4:17:VAL:HG12	1.66	0.78
7:B:970:U:H2'	7:B:971:G:H8	1.49	0.78
19:N:25:ALA:HB2	19:N:44:LEU:CD1	2.14	0.78
23:R:79:ARG:HH11	23:R:81:LYS:CE	1.95	0.78
7:B:2073:C:O2	7:B:2437:G:C2	2.37	0.78
21:P:2:ASN:N	21:P:2:ASN:HD22	1.82	0.78
19:N:123:GLU:HG2	19:N:124:ALA:H	1.48	0.78
1:O:41:HIS:CD2	1:O:46:GLY:HA3	2.18	0.78
7:B:2452:C:C4	7:B:2453:A:N1	2.52	0.78
7:B:948:C:OP1	33:B:5191:HOH:O	2.02	0.78
9:D:128:ARG:N	9:D:128:ARG:HH11	1.81	0.78
20:O:36:TYR:HA	20:O:52:SER:HB3	1.66	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:K:78:ARG:NH2	21:P:102:ARG:HH12	1.82	0.78
16:K:39:ILE:HD12	16:K:40:LYS:H	1.48	0.78
7:B:56:A:N6	7:B:114:U:H3	1.81	0.78
7:B:1677:A:H5''	7:B:1677:A:H8	1.46	0.78
8:C:174:ARG:HB2	8:C:180:MET:HG3	1.66	0.78
19:N:52:ILE:HG21	19:N:94:TYR:CD2	2.18	0.78
17:L:82:LEU:O	17:L:85:VAL:HG12	1.84	0.78
30:Y:36:GLU:O	30:Y:37:ARG:HG2	1.83	0.78
7:B:1765:U:O2	7:B:1766:G:C8	2.37	0.78
5:4:26:ILE:CG2	5:4:35:GLN:H	1.95	0.77
7:B:1285:A:H2'	7:B:1286:A:H5''	1.64	0.77
7:B:2500:U:H5'	7:B:2501:C:OP2	1.84	0.77
19:N:37:THR:HG22	19:N:39:PRO:HD2	1.64	0.77
7:B:1756:G:H3'	7:B:1756:G:C8	2.19	0.77
9:D:63:PRO:C	9:D:65:ALA:H	1.85	0.77
7:B:2405:G:H2'	7:B:2411:A:N6	1.99	0.77
5:4:26:ILE:HG21	5:4:35:GLN:HG2	1.66	0.77
7:B:1021:A:H8	7:B:1021:A:H3'	1.49	0.77
7:B:515:A:H1'	7:B:581:C:H1'	1.65	0.77
7:B:1816:C:H3'	8:C:62:ARG:NH1	1.99	0.77
9:D:11:MET:HG3	9:D:12:THR:H	1.49	0.77
10:E:48:THR:HG23	10:E:85:PHE:O	1.84	0.77
7:B:298:G:N2	7:B:339:U:C5	2.51	0.77
9:D:69:ALA:HB2	9:D:91:THR:CB	2.13	0.77
28:W:40:ARG:HG3	28:W:41:GLY:N	1.98	0.77
7:B:1417:C:H2'	7:B:1418:G:H5'	1.65	0.77
7:B:1378:A:C8	7:B:1380:G:C6	2.73	0.77
7:B:530:G:N2	7:B:2023:C:H5	1.83	0.77
7:B:788:A:H5''	7:B:790:U:C4	2.19	0.77
9:D:129:THR:OG1	9:D:140:HIS:CE1	2.37	0.77
18:M:31:PHE:CE2	18:M:113:ALA:HB3	2.19	0.77
7:B:582:A:OP1	22:Q:31:TYR:CZ	2.37	0.77
24:S:6:LYS:HB3	24:S:104:THR:HG22	1.66	0.77
20:O:65:THR:CB	20:O:70:ALA:HB2	2.12	0.77
25:T:66:LYS:HE3	25:T:67:VAL:N	1.98	0.77
7:B:615:U:H5''	7:B:616:A:C8	2.17	0.77
7:B:1036:G:O6	7:B:1120:G:C5	2.37	0.77
7:B:1617:C:O2	7:B:1617:C:C2'	2.31	0.77
7:B:2838:G:H5'	7:B:2838:G:C8	2.19	0.77
7:B:2081:U:H4'	31:Z:23:LYS:HD3	1.66	0.77
7:B:1176:U:H2'	7:B:1177:G:O4'	1.85	0.77
29:X:8:GLU:CD	29:X:9:LYS:H	1.87	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1126:A:H8	7:B:1126:A:H5'	1.49	0.77
7:B:1361:G:C4	7:B:1362:C:H5	2.02	0.77
8:C:51:ARG:NH2	8:C:54:GLY:HA3	1.99	0.77
18:M:97:GLN:N	18:M:98:PRO:HD3	2.00	0.77
20:O:39:VAL:O	20:O:39:VAL:HG22	1.82	0.77
21:P:48:ALA:O	21:P:49:ILE:HB	1.84	0.77
7:B:322:A:C5'	7:B:340:A:H1'	2.13	0.77
7:B:2391:G:N2	7:B:2424:C:H2'	1.99	0.77
6:A:95:U:H2'	6:A:96:G:C8	2.19	0.77
25:T:25:GLU:HA	25:T:25:GLU:OE2	1.84	0.77
7:B:1912:A:C8	7:B:1918:A:C2	2.72	0.77
1:O:36:LYS:HG2	1:O:37:HIS:O	1.84	0.77
1:O:9:ARG:HD3	7:B:517:C:OP2	1.85	0.77
5:4:29:ALA:O	5:4:30:GLU:HG3	1.84	0.77
7:B:1361:G:C4	7:B:1362:C:C5	2.73	0.77
7:B:2442:C:N4	7:B:2443:C:H41	1.82	0.77
12:G:132:LEU:HD12	12:G:140:ILE:HD12	1.65	0.77
18:M:67:VAL:CG2	18:M:100:LYS:HB3	2.14	0.77
19:N:96:ARG:NH2	19:N:116:VAL:HG22	2.00	0.77
22:Q:38:VAL:HA	22:Q:42:GLY:H	1.49	0.77
7:B:2289:G:H5'	7:B:2289:G:H8	1.47	0.77
7:B:104:A:H2'	7:B:105:C:C6	2.18	0.77
9:D:68:PHE:HB2	9:D:90:PHE:CE2	2.20	0.77
7:B:1088:A:H4'	7:B:1089:A:C8	2.20	0.77
17:L:14:LYS:NZ	17:L:15:ALA:H	1.83	0.77
7:B:1025:G:N7	7:B:1135:C:H1'	1.99	0.77
8:C:253:GLY:HA2	8:C:254:LYS:NZ	1.99	0.77
9:D:181:ASP:HB3	9:D:184:ARG:HB2	1.66	0.77
7:B:1223:G:OP1	23:R:72:VAL:HG21	1.84	0.77
31:Z:48:GLN:HE22	31:Z:49:ARG:HD3	1.50	0.77
7:B:877:A:N1	7:B:899:A:H5'	2.00	0.77
16:K:35:VAL:HG12	16:K:63:VAL:O	1.85	0.77
7:B:2248:C:H2'	7:B:2249:U:H5'	1.64	0.77
7:B:289:G:H2'	7:B:290:U:O4'	1.84	0.77
7:B:1353:A:N3	7:B:1354:A:N7	2.33	0.77
7:B:2678:C:O2'	7:B:2679:A:H5'	1.83	0.77
3:2:5:PHE:CE1	7:B:464:U:H5'	2.20	0.77
28:W:24:ARG:HG2	28:W:24:ARG:O	1.85	0.77
9:D:33:ARG:HD3	9:D:89:GLU:OE1	1.84	0.77
17:L:117:THR:HG23	17:L:119:PRO:HD2	1.66	0.77
7:B:1178:C:H2'	7:B:1179:G:C8	2.19	0.77
7:B:2263:C:H2'	7:B:2264:C:H6	1.49	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:129:THR:HA	9:D:140:HIS:HE1	1.48	0.77
7:B:2305:U:H3	11:F:149:ARG:HB3	1.50	0.77
28:W:17:ALA:C	28:W:18:LYS:HG2	2.06	0.77
7:B:528:A:H8	7:B:528:A:H3'	1.50	0.77
7:B:1741:C:H2'	7:B:1742:U:C6	2.18	0.77
7:B:601:C:O2	7:B:605:G:H4'	1.85	0.77
13:H:115:VAL:HB	13:H:132:PHE:CE1	2.20	0.77
6:A:51:G:H1	20:O:33:ARG:NH2	1.83	0.77
7:B:1622:G:C2	7:B:1623:G:C8	2.72	0.77
7:B:2678:C:C2'	7:B:2679:A:H8	1.98	0.77
7:B:2881:U:H2'	7:B:2882:A:H8	1.48	0.77
7:B:2751:G:H5'	12:G:3:VAL:HG11	1.65	0.77
15:J:7:LYS:HE3	15:J:47:HIS:NE2	2.00	0.77
21:P:24:THR:HG21	21:P:111:GLU:HG2	1.66	0.77
13:H:27:ARG:HB2	31:Z:60:PHE:CZ	2.20	0.77
7:B:2344:U:H4'	7:B:2345:G:OP1	1.85	0.77
12:G:23:ILE:CD1	12:G:36:LEU:HD11	2.15	0.77
7:B:1318:U:H2'	7:B:1319:C:C6	2.18	0.77
26:U:27:VAL:HG12	26:U:33:VAL:HA	1.67	0.77
7:B:713:G:H21	7:B:718:A:H2	1.33	0.77
5:4:26:ILE:HG21	5:4:35:GLN:N	1.99	0.76
7:B:1783:A:OP2	33:B:5305:HOH:O	2.03	0.76
7:B:1814:G:H5'	7:B:1814:G:H8	1.50	0.76
9:D:130:GLN:HB3	9:D:140:HIS:H	1.50	0.76
15:J:27:ARG:HH11	15:J:27:ARG:HG3	1.49	0.76
18:M:80:VAL:CG1	18:M:81:ARG:H	1.98	0.76
23:R:63:VAL:HG13	23:R:101:ILE:HG23	1.67	0.76
7:B:237:C:H2'	7:B:238:C:H6	1.49	0.76
7:B:1247:A:O2'	7:B:1248:G:H5''	1.85	0.76
7:B:464:U:H2'	7:B:465:G:H8	1.51	0.76
11:F:133:GLU:HG3	11:F:134:GLN:H	1.50	0.76
18:M:108:VAL:HG21	18:M:111:GLU:OE2	1.85	0.76
18:M:97:GLN:H	18:M:98:PRO:HD3	1.50	0.76
31:Z:5:ILE:HD11	31:Z:47:LYS:HE2	1.66	0.76
10:E:148:ILE:HA	10:E:185:LYS:O	1.84	0.76
27:V:63:ILE:H	27:V:70:ILE:CD1	1.99	0.76
12:G:142:GLN:HG3	12:G:143:VAL:N	2.00	0.76
8:C:107:LYS:H	8:C:194:VAL:CG2	1.98	0.76
18:M:105:MET:HG3	18:M:106:ASP:N	1.94	0.76
7:B:646:U:OP2	7:B:646:U:H6	1.67	0.76
7:B:81:G:H1	7:B:105:C:N4	1.82	0.76
7:B:90:U:OP2	7:B:91:A:H3'	1.83	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:118:ALA:C	12:G:120:ILE:H	1.89	0.76
7:B:343:C:H2'	7:B:344:A:H5'	1.65	0.76
7:B:1564:C:H2'	7:B:1565:C:C6	2.20	0.76
7:B:1824:G:N2	8:C:249:VAL:HG12	1.99	0.76
17:L:35:HIS:HE1	23:R:84:ARG:C	1.88	0.76
22:Q:39:ILE:HG13	22:Q:40:LYS:N	1.99	0.76
10:E:136:GLN:O	10:E:139:LYS:HG2	1.84	0.76
10:E:143:LEU:HD13	10:E:143:LEU:N	2.00	0.76
7:B:2391:G:H1	7:B:2424:C:H3'	1.51	0.76
12:G:156:TYR:HD1	12:G:174:LYS:HZ3	1.34	0.76
7:B:1316:U:O2'	7:B:1317:G:H5'	1.86	0.76
7:B:2699:C:H2'	7:B:2700:A:H8	1.50	0.76
7:B:2765:A:H3'	7:B:2766:A:H8	1.49	0.76
22:Q:24:TYR:O	22:Q:27:ARG:HB3	1.85	0.76
7:B:2081:U:H4'	31:Z:23:LYS:CD	2.15	0.76
8:C:131:MET:HB2	8:C:185:ALA:O	1.86	0.76
22:Q:70:GLN:HG3	22:Q:71:ASN:N	1.96	0.76
9:D:62:LYS:HZ2	9:D:62:LYS:H	1.33	0.76
7:B:2682:A:H61	7:B:2728:U:H1'	1.51	0.76
7:B:450:G:N2	7:B:451:U:H5	1.83	0.76
7:B:537:G:C2	7:B:555:G:N2	2.53	0.76
7:B:2305:U:H1'	11:F:131:VAL:O	1.86	0.76
9:D:34:VAL:HG22	9:D:35:THR:N	2.00	0.76
1:O:40:HIS:HD1	1:O:41:HIS:C	1.88	0.76
3:2:33:ARG:HA	3:2:37:LYS:HG3	1.67	0.76
7:B:539:G:H2'	7:B:540:C:H6	1.50	0.76
22:Q:39:ILE:O	22:Q:43:GLN:CB	2.29	0.76
22:Q:40:LYS:NZ	22:Q:40:LYS:HB2	2.00	0.76
23:R:69:GLY:O	23:R:70:GLU:HG3	1.86	0.76
31:Z:34:LEU:CD1	31:Z:35:ASP:H	1.98	0.76
10:E:147:LEU:HB3	10:E:167:VAL:HG13	1.68	0.76
7:B:65:U:OP1	25:T:76:ARG:HB3	1.85	0.76
26:U:35:VAL:O	26:U:37:GLY:N	2.19	0.76
7:B:1210:G:H5''	7:B:1211:C:H3'	1.67	0.76
7:B:2011:U:H5''	24:S:11:ARG:HH22	1.50	0.76
7:B:2014:A:C2'	7:B:2015:A:C8	2.67	0.76
7:B:2739:U:H6	7:B:2739:U:H3'	1.49	0.76
8:C:257:ARG:HG2	8:C:261:ARG:HH12	1.48	0.76
8:C:264:LYS:O	8:C:265:PHE:HB2	1.83	0.76
9:D:138:LEU:HA	9:D:142:VAL:HG21	1.68	0.76
10:E:49:ARG:H	10:E:49:ARG:HD3	1.50	0.76
22:Q:13:HIS:CG	22:Q:31:TYR:CE2	2.73	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:R:4:VAL:HG12	23:R:43:ASN:HB2	1.68	0.76
7:B:2788:C:H2'	7:B:2789:C:C6	2.21	0.76
7:B:136:G:H22	25:T:3:ARG:CZ	1.98	0.76
7:B:1914:C:H2'	7:B:1915:U:C6	2.21	0.76
7:B:1861:G:C8	7:B:1861:G:H5''	2.20	0.76
7:B:2189:U:H2'	7:B:2190:G:C8	2.20	0.76
24:S:95:ARG:HG2	24:S:95:ARG:HH11	1.48	0.76
7:B:1375:U:H3'	7:B:1376:C:H5''	1.68	0.76
7:B:2337:G:N3	7:B:2337:G:H2'	1.98	0.76
7:B:2683:C:C2'	7:B:2684:U:H5'	2.16	0.76
7:B:2885:G:C6	7:B:2886:A:H8	2.04	0.76
7:B:584:C:H42	7:B:1256:G:H1	1.31	0.76
7:B:860:U:C1'	7:B:2268:A:H5'	2.16	0.76
4:3:12:ARG:CZ	17:L:62:PRO:HB3	2.15	0.76
17:L:126:ARG:HH21	17:L:128:THR:HG23	1.49	0.76
31:Z:17:SER:O	31:Z:18:CYS:HB2	1.86	0.76
21:P:105:LYS:HG3	21:P:107:ALA:H	1.49	0.76
7:B:2320:U:C6	7:B:2320:U:H3'	2.21	0.76
7:B:743:A:OP1	9:D:134:HIS:CE1	2.38	0.76
7:B:802:A:H2'	7:B:803:U:C6	2.21	0.76
10:E:83:VAL:O	10:E:85:PHE:N	2.18	0.76
7:B:1996:C:H5	16:K:32:TYR:HH	1.33	0.76
21:P:49:ILE:HA	21:P:62:LYS:O	1.86	0.76
9:D:56:LYS:HZ2	9:D:59:ARG:HA	1.47	0.76
17:L:80:SER:O	17:L:84:LYS:HD2	1.86	0.76
7:B:2444:G:P	10:E:63:LYS:HZ1	2.09	0.75
8:C:121:ALA:H	8:C:129:LEU:HD12	1.49	0.75
8:C:17:LYS:N	8:C:17:LYS:HE2	2.00	0.75
8:C:208:GLY:HA2	8:C:212:TRP:HB2	1.68	0.75
8:C:216:ARG:HB3	8:C:217:PRO:HD3	1.67	0.75
19:N:56:LYS:CD	19:N:57:THR:H	1.96	0.75
7:B:2717:C:H1'	21:P:95:LYS:NZ	2.00	0.75
10:E:199:MET:HG3	10:E:200:LEU:N	2.00	0.75
26:U:83:GLY:HA2	26:U:92:VAL:CB	2.16	0.75
9:D:3:GLY:O	9:D:4:LEU:HB3	1.84	0.75
7:B:263:G:H2'	7:B:264:C:O4'	1.85	0.75
18:M:41:LEU:HB2	18:M:93:VAL:HB	1.66	0.75
7:B:2563:U:H2'	7:B:2565:A:OP2	1.85	0.75
7:B:1040:A:C6	7:B:1041:G:C8	2.74	0.75
16:K:11:ALA:HB3	16:K:85:VAL:HG23	1.69	0.75
6:A:57:A:C4	11:F:25:MET:HG2	2.21	0.75
7:B:1802:A:C6	7:B:1817:G:N2	2.54	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:38:LEU:HD23	7:B:2815:C:H4'	1.69	0.75
7:B:565:C:O2	7:B:577:G:C2	2.39	0.75
8:C:15:VAL:HG12	8:C:16:VAL:HG22	1.69	0.75
8:C:261:ARG:HH11	8:C:261:ARG:CG	1.98	0.75
15:J:28:LEU:HD13	15:J:32:LEU:HD12	1.67	0.75
21:P:93:LYS:HB3	21:P:96:LEU:HA	1.66	0.75
28:W:47:GLY:CA	28:W:72:GLY:HA3	2.15	0.75
14:I:27:LEU:HB2	14:I:58:ILE:HD13	1.68	0.75
31:Z:16:CYS:HA	31:Z:21:VAL:HG21	1.68	0.75
7:B:1768:C:C6	7:B:1768:C:H3'	2.22	0.75
7:B:1532:A:C8	7:B:1532:A:H5''	2.22	0.75
7:B:2661:G:H2'	7:B:2662:A:C8	2.21	0.75
6:A:48:U:OP1	6:A:48:U:H4'	1.86	0.75
6:A:7:G:H5'	6:A:7:G:C8	2.21	0.75
7:B:2455:G:C2	7:B:2498:C:N4	2.54	0.75
7:B:582:A:OP1	22:Q:31:TYR:CE2	2.38	0.75
7:B:1804:C:OP1	8:C:254:LYS:HG2	1.86	0.75
23:R:4:VAL:HG12	23:R:43:ASN:CB	2.17	0.75
22:Q:69:ARG:HB2	22:Q:69:ARG:NH1	2.01	0.75
7:B:927:A:H2'	7:B:928:A:H8	1.49	0.75
7:B:32:C:N4	7:B:473:G:H1	1.84	0.75
7:B:257:C:H2'	7:B:258:G:O4'	1.85	0.75
5:4:22:VAL:O	5:4:22:VAL:HG12	1.85	0.75
4:3:54:LEU:C	4:3:56:LEU:H	1.89	0.75
7:B:529:A:C8	7:B:2023:C:N4	2.54	0.75
7:B:2739:U:C6	7:B:2739:U:H3'	2.21	0.75
7:B:1806:C:H3'	7:B:1806:C:H6	1.50	0.75
7:B:2230:G:C4	7:B:2231:U:C5	2.75	0.75
7:B:2031:A:C6	7:B:2498:C:H1'	2.21	0.75
7:B:2511:U:O2	9:D:144:GLY:HA3	1.84	0.75
7:B:468:G:H2'	7:B:469:G:C8	2.21	0.75
8:C:114:GLN:O	8:C:115:ILE:HD12	1.86	0.75
7:B:1816:C:H6	8:C:62:ARG:NH1	1.83	0.75
9:D:174:SER:HB2	9:D:208:LYS:HG3	1.69	0.75
9:D:174:SER:HB2	9:D:208:LYS:CG	2.17	0.75
16:K:32:TYR:N	16:K:32:TYR:CD1	2.51	0.75
18:M:61:GLY:HA3	18:M:105:MET:HB2	1.67	0.75
22:Q:87:VAL:O	23:R:53:PHE:HB3	1.85	0.75
10:E:15:SER:HB3	10:E:196:VAL:HG22	1.69	0.75
7:B:616:A:H2'	7:B:617:G:C8	2.21	0.75
7:B:1875:G:HO2'	7:B:1876:A:H8	1.34	0.75
7:B:1327:A:C2	7:B:1328:A:H1'	2.21	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:O:20:ALA:C	1:O:21:LEU:HD12	2.07	0.75
7:B:2498:C:O2'	7:B:2499:C:H5'	1.87	0.75
8:C:257:ARG:HG3	8:C:257:ARG:NH1	1.99	0.75
9:D:137:SER:O	9:D:138:LEU:HB2	1.87	0.75
13:H:50:ARG:HG3	13:H:51:ARG:H	1.52	0.75
7:B:496:G:H5''	7:B:496:G:H8	1.51	0.75
29:X:17:GLU:O	29:X:22:LEU:HG	1.87	0.75
23:R:12:HIS:CD2	23:R:14:VAL:O	2.40	0.75
7:B:221:A:C8	7:B:266:G:N7	2.55	0.75
6:A:109:A:H2'	6:A:110:C:O4'	1.85	0.75
7:B:1604:C:O2'	7:B:1610:A:N6	2.20	0.75
7:B:19:A:H2'	7:B:20:C:C6	2.21	0.75
7:B:2593:U:H2'	7:B:2594:C:H5''	1.68	0.75
8:C:12:ARG:NH1	8:C:18:VAL:HG11	2.02	0.75
7:B:1190:G:OP1	17:L:38:GLN:HB2	1.86	0.75
20:O:10:ARG:CG	20:O:96:GLY:HA2	2.17	0.75
9:D:13:ARG:NH2	21:P:12:MET:SD	2.59	0.75
23:R:80:ARG:HG3	23:R:85:LYS:HA	1.68	0.75
28:W:36:ILE:HG23	28:W:68:PHE:HD1	1.50	0.75
31:Z:50:ASP:HA	31:Z:53:THR:HG22	1.68	0.75
12:G:97:VAL:HG21	12:G:124:CYS:N	2.00	0.75
7:B:2303:G:C1'	11:F:122:ASP:HA	2.16	0.75
7:B:1960:A:C5	7:B:1961:C:C5	2.75	0.75
7:B:1570:A:H2'	7:B:1571:A:H8	1.51	0.75
7:B:1933:G:H8	7:B:1933:G:O5'	1.69	0.75
7:B:2273:A:H2'	7:B:2274:A:C8	2.21	0.75
7:B:2717:C:H1'	21:P:95:LYS:HZ3	1.51	0.75
7:B:725:G:C6	7:B:726:G:N1	2.55	0.75
23:R:18:GLN:HB3	23:R:99:THR:CA	2.16	0.75
23:R:97:LYS:O	23:R:98:ILE:HB	1.84	0.75
5:4:7:VAL:O	5:4:23:ILE:HD12	1.87	0.75
6:A:56:G:H5'	6:A:56:G:H8	1.52	0.75
7:B:1988:G:H2'	7:B:1989:G:H5'	1.68	0.75
7:B:2618:G:C5	7:B:2619:C:C5	2.75	0.75
22:Q:30:VAL:HG21	22:Q:33:VAL:CG2	2.17	0.75
28:W:2:HIS:O	28:W:3:LYS:HE2	1.87	0.75
7:B:85:G:N3	7:B:103:A:C2	2.54	0.75
7:B:63:A:H5''	25:T:69:ARG:HH22	1.52	0.75
9:D:31:ALA:HB3	9:D:95:SER:HB3	1.65	0.75
31:Z:17:SER:OG	31:Z:21:VAL:HB	1.86	0.75
7:B:292:U:O5'	7:B:292:U:H6	1.70	0.75
3:2:16:HIS:O	3:2:44:VAL:HG12	1.87	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:5:PHE:HE2	3:2:7:PRO:CB	1.97	0.74
7:B:530:G:H22	7:B:2023:C:H5	1.32	0.74
7:B:2071:A:H2'	7:B:2072:C:C6	2.22	0.74
7:B:2850:A:O2'	7:B:2851:A:H5'	1.87	0.74
8:C:12:ARG:NH1	8:C:18:VAL:HG21	2.02	0.74
15:J:10:THR:CG2	15:J:50:THR:HB	2.14	0.74
19:N:7:GLY:HA3	19:N:8:ARG:HH11	1.52	0.74
21:P:13:LYS:CD	21:P:78:PRO:HG3	2.16	0.74
7:B:2230:G:H1'	31:Z:30:HIS:CE1	2.21	0.74
10:E:29:HIS:HD2	17:L:19:LEU:CD1	2.00	0.74
8:C:169:ALA:O	8:C:170:TYR:HB2	1.83	0.74
18:M:6:ARG:HD2	18:M:71:LYS:HZ1	1.51	0.74
16:K:82:ASN:HD22	16:K:82:ASN:H	1.33	0.74
7:B:440:C:H3'	7:B:440:C:H6	1.52	0.74
17:L:90:VAL:HG13	17:L:122:VAL:HG13	1.69	0.74
6:A:42:C:O2	6:A:42:C:H2'	1.86	0.74
8:C:124:LYS:HB2	8:C:125:PRO:CD	2.17	0.74
8:C:12:ARG:HH12	8:C:18:VAL:HG11	1.53	0.74
8:C:244:VAL:HG22	8:C:245:THR:N	2.01	0.74
15:J:38:GLY:CA	15:J:41:LYS:HE3	2.18	0.74
7:B:508:A:C2	24:S:9:HIS:NE2	2.55	0.74
7:B:2331:G:C2'	28:W:69:GLU:HG3	2.16	0.74
7:B:64:A:O2'	25:T:74:ILE:HG21	1.86	0.74
18:M:40:ARG:HG3	18:M:92:TRP:NE1	2.00	0.74
9:D:42:ASN:HD22	9:D:43:ASP:N	1.85	0.74
11:F:106:ALA:HB1	11:F:136:ILE:HG23	1.66	0.74
7:B:1430:G:H2'	7:B:1431:A:H8	1.51	0.74
7:B:1562:U:H2'	7:B:1563:U:H6	1.52	0.74
7:B:1570:A:C6	7:B:1571:A:C6	2.76	0.74
7:B:2746:U:H2'	7:B:2747:G:H8	1.52	0.74
9:D:141:ARG:O	9:D:142:VAL:O	2.04	0.74
15:J:36:LEU:HD11	15:J:122:LEU:HG	1.69	0.74
31:Z:49:ARG:HG2	31:Z:50:ASP:N	2.02	0.74
17:L:92:LEU:HD22	17:L:96:LYS:HG2	1.68	0.74
7:B:2746:U:C2'	7:B:2747:G:H5'	2.17	0.74
7:B:1050:A:C2	7:B:2751:G:C6	2.76	0.74
7:B:393:C:C2	7:B:394:C:C5	2.75	0.74
7:B:2640:G:C2'	7:B:2641:G:H5''	2.17	0.74
12:G:10:VAL:HA	12:G:14:VAL:HG21	1.69	0.74
14:I:77:VAL:HA	14:I:80:LYS:HB2	1.68	0.74
4:3:54:LEU:HA	4:3:57:VAL:HG13	1.68	0.74
8:C:63:ILE:C	8:C:64:VAL:HG22	2.08	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:O:27:VAL:HG21	20:O:38:GLN:N	2.03	0.74
7:B:1225:G:H5''	23:R:90:ARG:NE	2.02	0.74
10:E:131:THR:C	10:E:132:LYS:HZ3	1.91	0.74
26:U:79:ALA:O	26:U:96:LYS:HB2	1.87	0.74
7:B:2498:C:O2	7:B:2498:C:H2'	1.86	0.74
7:B:538:A:C8	7:B:556:A:N6	2.56	0.74
7:B:968:C:C4	7:B:969:G:N7	2.56	0.74
16:K:2:ILE:HG23	16:K:33:ALA:O	1.86	0.74
19:N:4:ARG:HG2	19:N:5:LYS:O	1.87	0.74
24:S:21:ALA:O	24:S:74:ILE:HD12	1.87	0.74
7:B:2371:G:C2	7:B:2372:U:C6	2.76	0.74
9:D:77:ARG:NH2	9:D:79:LEU:HB2	2.02	0.74
7:B:220:G:H2'	7:B:427:U:O4	1.87	0.74
10:E:98:LYS:HE3	10:E:102:ARG:HH21	1.51	0.74
7:B:1342:A:O2'	7:B:1343:G:H5''	1.87	0.74
7:B:1366:A:C2'	7:B:1367:A:H5'	2.18	0.74
8:C:102:TYR:O	8:C:103:ILE:HG22	1.87	0.74
8:C:257:ARG:CG	8:C:257:ARG:HH11	2.00	0.74
8:C:62:ARG:CG	8:C:62:ARG:HH11	2.01	0.74
17:L:38:GLN:OE1	17:L:39:LYS:HG2	1.88	0.74
22:Q:87:VAL:HB	23:R:54:VAL:CB	2.13	0.74
18:M:8:LYS:HG2	18:M:9:PHE:N	2.03	0.74
7:B:1952:A:H5''	7:B:1953:A:OP2	1.87	0.74
9:D:197:THR:HG22	9:D:198:GLY:N	2.01	0.74
15:J:9:GLU:HG2	15:J:9:GLU:O	1.87	0.74
4:3:4:LYS:HZ1	4:3:61:LEU:N	1.85	0.74
7:B:1268:A:C2	7:B:1269:A:H1'	2.23	0.74
7:B:1568:G:H5''	8:C:60:ALA:HB3	1.68	0.74
8:C:80:LEU:HA	8:C:91:ALA:HA	1.70	0.74
22:Q:29:ARG:HH11	22:Q:29:ARG:CB	1.99	0.74
23:R:69:GLY:O	23:R:96:VAL:HG23	1.88	0.74
28:W:42:THR:H	28:W:65:LYS:HG3	1.53	0.74
7:B:2090:A:H4'	31:Z:49:ARG:HH12	1.51	0.74
17:L:126:ARG:NH2	17:L:128:THR:HG23	2.02	0.74
7:B:2138:G:C2	7:B:2139:U:H1'	2.23	0.74
27:V:77:VAL:HG12	27:V:89:ILE:HG23	1.70	0.74
7:B:2553:G:N3	7:B:2583:G:H1'	2.02	0.74
4:3:18:LYS:HB2	7:B:651:G:OP1	1.88	0.74
7:B:117:G:H5''	7:B:118:A:OP2	1.87	0.74
7:B:2040:G:H2'	7:B:2041:U:C6	2.22	0.74
7:B:2358:A:H5'	7:B:2358:A:H8	1.53	0.74
7:B:2366:A:H3'	7:B:2367:G:C8	2.23	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2421:G:H5'	7:B:2421:G:H8	1.53	0.74
7:B:976:G:H2'	7:B:977:G:H8	1.53	0.74
12:G:3:VAL:HG13	12:G:4:ALA:N	2.01	0.74
21:P:73:PHE:O	21:P:74:GLN:NE2	2.20	0.74
23:R:79:ARG:HD2	23:R:80:ARG:N	2.02	0.74
28:W:39:GLN:H	28:W:68:PHE:CB	2.00	0.74
20:O:15:ARG:HH22	28:W:74:LYS:HE2	1.53	0.74
23:R:39:LEU:HD12	23:R:61:ALA:HA	1.68	0.74
8:C:164:VAL:HG23	8:C:172:THR:HG22	1.69	0.74
7:B:420:C:H2'	7:B:421:C:H6	1.52	0.74
13:H:96:THR:HG23	13:H:97:ARG:H	1.51	0.74
7:B:2534:A:H5''	7:B:2534:A:H8	1.51	0.74
7:B:1663:G:H5'	7:B:1663:G:H8	1.51	0.74
7:B:1808:A:H3'	7:B:1809:A:H8	1.52	0.74
7:B:2523:G:N2	7:B:2541:A:H1'	2.03	0.74
1:O:27:LEU:CG	7:B:2886:A:C6	2.68	0.74
7:B:738:G:H2'	7:B:739:A:C8	2.22	0.74
9:D:140:HIS:O	9:D:141:ARG:HG2	1.87	0.74
20:O:48:LEU:N	20:O:48:LEU:HD22	2.02	0.74
7:B:110:G:O5'	7:B:110:G:H8	1.70	0.74
7:B:347:A:C8	7:B:347:A:H5'	2.21	0.74
7:B:654:A:C2'	7:B:655:A:H5''	2.18	0.74
7:B:2400:G:N2	7:B:2417:C:C2	2.56	0.74
3:2:16:HIS:CD2	3:2:44:VAL:HA	2.23	0.73
6:A:55:U:H2'	6:A:56:G:H5''	1.70	0.73
6:A:56:G:C8	6:A:56:G:H5'	2.22	0.73
7:B:817:C:H2'	7:B:818:G:O4'	1.87	0.73
13:H:27:ARG:HB2	31:Z:60:PHE:HZ	1.53	0.73
22:Q:64:ILE:HG12	22:Q:95:ALA:CB	2.17	0.73
28:W:44:PHE:HB3	28:W:77:LYS:C	2.08	0.73
10:E:3:LEU:HD11	10:E:194:LYS:HB3	1.70	0.73
25:T:56:GLU:HG3	25:T:88:LYS:HG3	1.70	0.73
22:Q:4:LYS:NZ	22:Q:4:LYS:HB2	2.03	0.73
3:2:28:ARG:HH22	3:2:32:ALA:N	1.87	0.73
7:B:2539:C:H2'	7:B:2540:C:H5''	1.68	0.73
7:B:468:G:H2'	7:B:469:G:H8	1.53	0.73
7:B:531:C:OP1	7:B:532:A:C8	2.41	0.73
7:B:539:G:O2'	7:B:540:C:H5'	1.88	0.73
7:B:564:C:O2	7:B:578:G:N2	2.14	0.73
7:B:2821:A:P	19:N:2:ARG:HD2	2.29	0.73
7:B:597:G:C2	7:B:661:A:C2	2.76	0.73
29:X:49:ASP:HA	29:X:52:ARG:HH11	1.52	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:X:57:LEU:O	29:X:60:LYS:HB2	1.88	0.73
9:D:101:PHE:HB2	9:D:105:LYS:CD	2.17	0.73
7:B:666:A:O2'	7:B:667:U:H5''	1.86	0.73
7:B:370:G:P	7:B:370:G:H8	2.11	0.73
7:B:420:C:H2'	7:B:421:C:C6	2.23	0.73
7:B:1126:A:H5'	7:B:1126:A:C8	2.22	0.73
7:B:1420:A:C2	7:B:2211:A:H8	2.05	0.73
7:B:2850:A:C4	7:B:2851:A:C8	2.77	0.73
7:B:831:G:N1	7:B:832:U:O2	2.21	0.73
8:C:156:SER:OG	8:C:195:GLY:HA3	1.89	0.73
8:C:36:ASN:HB3	8:C:63:ILE:H	1.53	0.73
19:N:2:ARG:O	19:N:2:ARG:CZ	2.36	0.73
22:Q:98:ALA:HB2	22:Q:105:PHE:CD1	2.23	0.73
7:B:900:A:H2'	7:B:901:C:H6	1.52	0.73
9:D:61:THR:HG23	9:D:62:LYS:H	1.53	0.73
14:I:17:ALA:O	14:I:18:ASN:HB2	1.87	0.73
7:B:2748:A:H1'	12:G:66:THR:OG1	1.87	0.73
7:B:532:A:H2'	7:B:532:A:N3	2.04	0.73
7:B:583:G:N2	7:B:584:C:C2	2.57	0.73
11:F:133:GLU:HG2	11:F:147:ARG:O	1.88	0.73
6:A:55:U:H5'	11:F:24:VAL:HG23	1.70	0.73
17:L:54:GLN:NE2	17:L:55:MET:HB3	2.02	0.73
21:P:23:ASP:OD2	21:P:93:LYS:HG2	1.88	0.73
7:B:1965:C:OP1	7:B:1966:A:H2'	1.88	0.73
7:B:1257:C:O2	7:B:1257:C:H2'	1.87	0.73
7:B:2051:A:N6	7:B:2614:A:C8	2.57	0.73
7:B:574:A:H4'	7:B:575:A:H5''	1.71	0.73
13:H:32:PRO:HD2	13:H:33:GLN:H	1.53	0.73
15:J:129:GLU:HA	15:J:132:HIS:ND1	2.03	0.73
28:W:31:LEU:HD11	28:W:39:GLN:NE2	2.03	0.73
28:W:38:ARG:HB3	28:W:68:PHE:CE1	2.24	0.73
7:B:2784:U:H2'	7:B:2785:C:H6	1.52	0.73
25:T:80:TRP:CD1	25:T:81:LYS:N	2.53	0.73
12:G:77:GLY:HA2	12:G:82:PHE:CE2	2.23	0.73
17:L:103:ILE:H	17:L:103:ILE:HD13	1.53	0.73
7:B:116:C:O2'	7:B:126:A:C8	2.42	0.73
7:B:1378:A:C8	7:B:1380:G:O6	2.41	0.73
7:B:749:A:C5	7:B:1618:A:C2	2.77	0.73
19:N:44:LEU:O	19:N:47:VAL:HG22	1.88	0.73
7:B:476:G:N2	7:B:479:A:C8	2.55	0.73
9:D:99:GLU:HA	9:D:99:GLU:OE1	1.86	0.73
8:C:163:ILE:HG22	8:C:172:THR:HG21	1.70	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2186:G:H2'	7:B:2187:U:O4'	1.88	0.73
7:B:1283:G:N2	7:B:1286:A:H5'	2.03	0.73
7:B:2452:C:H3'	7:B:2452:C:H6	1.53	0.73
26:U:97:SER:C	26:U:98:ASN:HD22	1.92	0.73
7:B:136:G:H2'	7:B:137:U:C6	2.23	0.73
7:B:1527:G:H21	7:B:1545:A:H62	1.35	0.73
7:B:2677:G:C6	7:B:2731:G:C6	2.77	0.73
7:B:2842:G:H5''	7:B:2843:G:OP2	1.88	0.73
7:B:464:U:H2'	7:B:465:G:C8	2.23	0.73
7:B:570:G:C4	7:B:2030:A:N7	2.56	0.73
9:D:115:GLY:O	19:N:2:ARG:HD3	1.88	0.73
17:L:55:MET:CB	17:L:56:PRO:HD3	2.19	0.73
20:O:3:LYS:O	20:O:7:ARG:HG2	1.88	0.73
21:P:29:VAL:O	21:P:31:VAL:HG23	1.88	0.73
26:U:82:VAL:HG21	26:U:95:PHE:O	1.88	0.73
7:B:136:G:H22	25:T:3:ARG:NH2	1.86	0.73
12:G:157:LYS:HB2	12:G:159:LYS:HG3	1.71	0.73
7:B:1364:G:N7	31:Z:1:MET:SD	2.62	0.73
7:B:2241:A:C2	7:B:2242:G:C5	2.77	0.73
7:B:2074:U:C4	7:B:2436:G:N2	2.57	0.73
7:B:378:C:H2'	7:B:379:G:H5'	1.69	0.73
7:B:563:A:N1	7:B:2018:G:C4	2.57	0.73
20:O:17:LYS:O	20:O:20:GLU:HG2	1.88	0.73
25:T:76:ARG:HH11	25:T:76:ARG:CB	2.02	0.73
29:X:28:LEU:HD22	29:X:42:LEU:CG	2.02	0.73
7:B:637:A:OP2	17:L:112:LEU:HB2	1.89	0.73
17:L:30:THR:HG22	17:L:36:LYS:HE3	1.70	0.73
22:Q:21:LYS:HD3	22:Q:21:LYS:O	1.89	0.73
20:O:2:ASP:CB	20:O:4:LYS:HB2	2.19	0.73
7:B:1381:G:C5	7:B:1382:G:N2	2.56	0.73
7:B:2074:U:H2'	7:B:2075:U:C6	2.21	0.73
8:C:243:PRO:HB3	8:C:248:GLY:HA2	1.71	0.73
15:J:58:ASN:HA	15:J:126:ALA:C	2.09	0.73
18:M:92:TRP:CD1	18:M:93:VAL:N	2.53	0.73
18:M:133:LYS:HD2	18:M:134:THR:N	2.02	0.73
15:J:94:ALA:CA	15:J:97:PRO:HG3	2.18	0.73
12:G:32:LEU:HD21	12:G:135:ALA:HB1	1.69	0.73
7:B:1220:G:H2'	7:B:1221:C:H6	1.53	0.72
7:B:1677:A:C2	7:B:1678:A:C4	2.77	0.72
7:B:532:A:N1	7:B:2020:A:H1'	2.04	0.72
7:B:968:C:C2'	7:B:969:G:H5''	2.19	0.72
9:D:157:LYS:HE3	15:J:80:HIS:CA	2.19	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:483:A:H4'	26:U:45:GLN:HB2	1.71	0.72
2:1:26:LYS:HD3	2:1:28:THR:OG1	1.88	0.72
7:B:1709:U:O2	7:B:1710:G:C8	2.42	0.72
7:B:2282:G:C5	7:B:2425:A:C2	2.77	0.72
7:B:1094:U:O2	7:B:1097:U:H5	1.73	0.72
7:B:1763:G:H2'	7:B:1764:C:H5'	1.71	0.72
7:B:37:C:H42	7:B:442:G:H1	1.37	0.72
16:K:102:PRO:HD3	21:P:68:GLY:HA3	1.70	0.72
7:B:1354:A:C2	7:B:1355:G:H1'	2.24	0.72
7:B:1645:G:H5''	7:B:1646:C:H5'	1.70	0.72
7:B:2366:A:H5''	7:B:2367:G:OP2	1.89	0.72
7:B:2740:A:C4	7:B:2741:A:C8	2.76	0.72
7:B:762:U:O2	7:B:763:G:C6	2.43	0.72
7:B:794:A:H2'	7:B:795:C:H6	1.54	0.72
11:F:37:MET:HG3	11:F:86:CYS:SG	2.29	0.72
21:P:23:ASP:CB	21:P:93:LYS:HE2	2.19	0.72
22:Q:91:ARG:HA	22:Q:94:LEU:HD23	1.71	0.72
24:S:5:ALA:HB3	24:S:54:ALA:HB2	1.71	0.72
7:B:1157:G:H5'	7:B:1157:G:C8	2.23	0.72
7:B:1286:A:C5	7:B:1289:C:N4	2.58	0.72
7:B:2074:U:N3	7:B:2436:G:N2	2.37	0.72
7:B:2307:G:N2	7:B:2308:G:H4'	2.03	0.72
7:B:792:A:C8	7:B:2440:C:C2	2.77	0.72
10:E:48:THR:HG22	10:E:49:ARG:N	2.04	0.72
7:B:86:G:O2'	7:B:104:A:H4'	1.89	0.72
26:U:82:VAL:HB	26:U:94:PHE:CB	2.18	0.72
7:B:2860:A:H5'	7:B:2860:A:H8	1.53	0.72
7:B:1220:G:H2'	7:B:1221:C:C6	2.24	0.72
7:B:2233:U:H2'	7:B:2234:G:C8	2.24	0.72
7:B:567:U:N3	7:B:568:U:H5	1.88	0.72
9:D:115:GLY:HA2	9:D:166:GLY:HA2	1.71	0.72
26:U:39:ASN:HB2	26:U:59:GLU:HB2	1.71	0.72
9:D:2:ILE:HG21	9:D:203:VAL:O	1.89	0.72
23:R:66:HIS:HB2	23:R:98:ILE:HG13	1.72	0.72
23:R:18:GLN:CB	23:R:99:THR:HA	2.18	0.72
25:T:24:MET:CE	25:T:30:ILE:HG13	2.18	0.72
16:K:17:ARG:CB	16:K:45:GLU:HG2	2.19	0.72
16:K:5:GLN:O	16:K:21:CYS:HB3	1.90	0.72
27:V:78:GLN:O	27:V:87:GLN:HB2	1.87	0.72
7:B:1152:C:H3'	33:B:5210:HOH:O	1.89	0.72
31:Z:25:ARG:HG2	31:Z:26:SER:H	1.54	0.72
7:B:1021:A:C8	7:B:1021:A:H3'	2.23	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1029:A:H3'	7:B:1030:C:C6	2.24	0.72
7:B:1228:G:H2'	7:B:1229:C:C6	2.25	0.72
7:B:1800:C:N3	7:B:1818:U:O2	2.22	0.72
7:B:2017:U:H5''	7:B:2018:G:P	2.30	0.72
7:B:2588:G:C5	7:B:2589:A:N7	2.57	0.72
10:E:143:LEU:H	10:E:143:LEU:HD22	1.55	0.72
7:B:1059:G:N1	7:B:1080:A:C2	2.57	0.72
26:U:3:LYS:O	26:U:4:ILE:HG12	1.88	0.72
1:O:40:HIS:ND1	1:O:41:HIS:N	2.37	0.72
7:B:2428:G:O2'	17:L:56:PRO:HG3	1.90	0.72
7:B:2591:C:C2'	7:B:2592:G:H8	2.01	0.72
7:B:2745:C:H3'	7:B:2746:U:H6	1.54	0.72
7:B:748:G:C8	7:B:750:A:N7	2.57	0.72
7:B:994:C:OP1	22:Q:49:ARG:CZ	2.36	0.72
9:D:122:VAL:HG11	9:D:141:ARG:HH11	1.54	0.72
9:D:14:ILE:HA	9:D:19:GLY:HA2	1.71	0.72
19:N:97:ILE:H	19:N:97:ILE:HD13	1.54	0.72
24:S:75:PHE:CE1	24:S:104:THR:OG1	2.43	0.72
7:B:188:G:H5''	31:Z:12:ILE:HG21	1.71	0.72
9:D:33:ARG:NH2	9:D:87:GLY:HA3	2.04	0.72
7:B:2201:G:H5''	7:B:2201:G:H8	1.53	0.72
7:B:1707:G:H2'	7:B:1708:C:H5'	1.70	0.72
12:G:97:VAL:CG2	12:G:124:CYS:H	1.96	0.72
30:Y:2:LYS:N	30:Y:37:ARG:HB2	2.04	0.72
7:B:1022:G:C6	7:B:1140:C:C4	2.78	0.72
7:B:2439:A:H4'	7:B:2440:C:O5'	1.90	0.72
7:B:2444:G:P	10:E:63:LYS:NZ	2.63	0.72
7:B:2856:A:H2'	7:B:2857:G:O4'	1.89	0.72
7:B:565:C:H4'	7:B:1253:A:N1	2.05	0.72
28:W:44:PHE:HB3	28:W:77:LYS:O	1.90	0.72
23:R:4:VAL:HA	23:R:43:ASN:CG	2.10	0.72
18:M:5:LYS:HG2	18:M:6:ARG:N	2.05	0.72
7:B:442:G:N3	7:B:444:C:C5	2.58	0.72
15:J:94:ALA:HA	15:J:97:PRO:HG3	1.70	0.72
1:O:47:TYR:CD2	1:O:51:ARG:HG2	2.25	0.72
7:B:1307:A:C2	7:B:1622:G:C2	2.77	0.72
7:B:1663:G:C5'	7:B:1663:G:H8	2.02	0.72
7:B:376:G:H2'	7:B:377:G:C8	2.25	0.72
7:B:533:G:H5''	7:B:533:G:H8	1.54	0.72
7:B:777:G:C2	7:B:778:G:C8	2.77	0.72
7:B:2811:G:H5'	9:D:62:LYS:HE3	1.70	0.72
7:B:2423:U:O4'	7:B:2425:A:N7	2.23	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:4:9:LYS:N	5:4:9:LYS:HD3	2.05	0.72
7:B:1568:G:H5''	8:C:60:ALA:CB	2.20	0.72
7:B:51:G:N2	7:B:119:A:C4	2.58	0.72
8:C:124:LYS:HB2	8:C:125:PRO:HD3	1.71	0.72
8:C:75:ALA:HA	8:C:94:LEU:O	1.90	0.72
7:B:584:C:OP2	22:Q:5:ARG:HD3	1.90	0.72
10:E:138:LEU:HD11	10:E:187:VAL:HG13	1.72	0.72
17:L:18:ARG:NH1	17:L:20:GLY:HA3	2.04	0.72
7:B:1756:G:H3'	7:B:1756:G:H8	1.55	0.72
7:B:2082:A:C6	7:B:2239:G:N3	2.58	0.72
25:T:43:ILE:O	25:T:47:VAL:HG12	1.90	0.72
7:B:2831:G:H1'	7:B:2883:A:H2'	1.71	0.72
3:2:18:PHE:HD1	7:B:126:A:O4'	1.72	0.72
7:B:1360:G:H2'	7:B:1361:G:H5'	1.72	0.72
7:B:1797:G:N2	7:B:1823:G:C4	2.58	0.72
7:B:572:A:C2	7:B:2033:A:C2	2.78	0.72
7:B:190:A:C8	7:B:207:A:C6	2.78	0.72
7:B:575:A:C2'	7:B:576:U:H5''	2.20	0.72
8:C:208:GLY:CA	8:C:212:TRP:HB2	2.20	0.72
9:D:129:THR:HA	9:D:140:HIS:CE1	2.25	0.72
9:D:153:GLY:C	9:D:155:VAL:H	1.93	0.72
11:F:89:THR:C	11:F:90:LEU:HD12	2.11	0.72
15:J:116:ARG:CG	15:J:116:ARG:HH11	2.02	0.72
21:P:59:THR:O	21:P:60:VAL:HG13	1.88	0.72
24:S:11:ARG:HG3	24:S:11:ARG:NH1	2.00	0.72
31:Z:3:LYS:HE3	31:Z:30:HIS:H	1.55	0.72
25:T:62:VAL:HG23	25:T:63:VAL:N	2.04	0.72
20:O:80:GLU:O	20:O:83:LEU:HD13	1.90	0.72
8:C:201:LEU:HD23	8:C:201:LEU:O	1.90	0.72
7:B:122:G:H3'	7:B:123:G:C8	2.26	0.71
7:B:749:A:H1'	7:B:1618:A:OP1	1.90	0.71
7:B:1675:C:C5	7:B:1676:A:N7	2.58	0.71
7:B:1975:G:H2'	7:B:1976:U:H6	1.54	0.71
7:B:2070:A:C2	7:B:2071:A:C4	2.77	0.71
7:B:2525:G:N2	7:B:2526:G:C6	2.58	0.71
7:B:2738:A:C2	7:B:2767:C:N3	2.57	0.71
7:B:811:U:O2	7:B:1251:C:C6	2.43	0.71
18:M:61:GLY:O	18:M:62:LYS:HG2	1.90	0.71
7:B:65:U:C1'	25:T:74:ILE:HD12	2.20	0.71
7:B:666:A:C5	7:B:667:U:H5	2.08	0.71
13:H:99:ILE:O	13:H:99:ILE:HG13	1.90	0.71
3:2:10:LEU:HD12	7:B:125:A:N1	2.05	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1272:A:OP1	33:B:5235:HOH:O	2.08	0.71
7:B:2358:A:H61	7:B:2428:G:H22	1.38	0.71
7:B:2683:C:H2'	7:B:2684:U:H5'	1.72	0.71
18:M:80:VAL:CG1	18:M:81:ARG:N	2.52	0.71
7:B:1771:C:N4	7:B:1772:A:H62	1.87	0.71
7:B:2074:U:N3	7:B:2436:G:C2	2.57	0.71
7:B:2478:A:H8	7:B:2478:A:H5''	1.55	0.71
7:B:2734:A:C8	7:B:2735:G:C8	2.78	0.71
7:B:378:C:C2'	7:B:379:G:H5'	2.19	0.71
10:E:49:ARG:O	10:E:51:GLU:N	2.23	0.71
15:J:132:HIS:O	15:J:136:GLN:HB2	1.91	0.71
10:E:6:LYS:HG2	10:E:119:ILE:HB	1.71	0.71
7:B:71:A:H4'	7:B:72:U:H5''	1.71	0.71
2:1:50:GLU:HG2	2:1:51:ALA:H	1.55	0.71
7:B:899:A:OP1	7:B:899:A:H4'	1.88	0.71
9:D:68:PHE:O	9:D:90:PHE:HB3	1.89	0.71
10:E:124:PHE:CZ	10:E:137:LYS:HG3	2.25	0.71
5:4:32:LYS:HE2	12:G:172:GLU:CB	2.20	0.71
7:B:2722:G:C4	7:B:2723:C:C5	2.78	0.71
7:B:2856:A:H5'	7:B:2856:A:H8	1.56	0.71
7:B:978:G:N1	7:B:986:C:C4	2.58	0.71
11:F:33:ILE:HG22	11:F:155:ILE:HG12	1.70	0.71
7:B:2276:G:O2'	7:B:2277:G:H5'	1.90	0.71
7:B:2456:C:C4	7:B:2457:U:H5	2.09	0.71
7:B:2769:U:H2'	7:B:2770:G:C8	2.26	0.71
23:R:10:LYS:O	23:R:11:GLN:HB2	1.90	0.71
7:B:65:U:O4'	25:T:74:ILE:HG23	1.91	0.71
9:D:4:LEU:O	9:D:4:LEU:HD23	1.89	0.71
7:B:615:U:H3'	7:B:616:A:C5'	2.18	0.71
7:B:2745:C:O2'	12:G:141:GLY:HA3	1.90	0.71
7:B:572:A:H8	7:B:572:A:O5'	1.72	0.71
8:C:89:ASN:OD1	8:C:199:HIS:HE1	1.72	0.71
10:E:60:TRP:N	10:E:60:TRP:CD1	2.55	0.71
7:B:2722:G:H4'	19:N:4:ARG:HB3	1.72	0.71
21:P:3:ILE:O	21:P:7:LEU:HD13	1.90	0.71
23:R:21:ARG:O	23:R:96:VAL:HG12	1.91	0.71
7:B:62:U:H2'	7:B:63:A:C8	2.25	0.71
9:D:101:PHE:HZ	9:D:180:VAL:HG11	1.51	0.71
7:B:2415:G:H4'	17:L:66:PHE:CD2	2.26	0.71
7:B:1541:C:H2'	7:B:1542:U:H6	1.55	0.71
7:B:1456:G:H2'	7:B:1457:U:H5'	1.72	0.71
7:B:679:C:H2'	7:B:680:C:C6	2.26	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:157:LYS:HE3	15:J:80:HIS:HA	1.72	0.71
7:B:319:G:C4	7:B:333:G:N2	2.58	0.71
10:E:114:ARG:HG3	10:E:115:GLN:N	2.05	0.71
13:H:135:HIS:HB3	13:H:138:VAL:HG23	1.73	0.71
7:B:814:C:H1'	7:B:1225:G:N2	2.05	0.71
7:B:2695:U:H3'	7:B:2695:U:H6	1.55	0.71
7:B:538:A:C2	7:B:556:A:N7	2.59	0.71
7:B:1567:G:H21	8:C:30:ALA:HB2	1.56	0.71
13:H:24:GLY:O	13:H:26:ALA:N	2.23	0.71
22:Q:46:TYR:OH	23:R:89:HIS:CD2	2.43	0.71
26:U:66:VAL:HG13	26:U:67:SER:N	2.03	0.71
7:B:79:C:H2'	7:B:346:A:C8	2.26	0.71
26:U:98:ASN:O	26:U:99:SER:HB2	1.91	0.71
8:C:144:GLU:HG2	8:C:150:GLY:CA	2.17	0.71
7:B:487:C:H2'	7:B:488:G:H5'	1.72	0.71
7:B:2599:G:C8	8:C:234:GLY:HA2	2.26	0.71
7:B:2777:G:H3'	7:B:2777:G:H8	1.55	0.71
7:B:1355:G:C6	7:B:1377:G:N2	2.58	0.71
7:B:523:C:O3'	7:B:539:G:N2	2.23	0.71
7:B:777:G:H5''	7:B:777:G:H8	1.54	0.71
15:J:99:ARG:HG2	15:J:103:ILE:HD13	1.72	0.71
18:M:105:MET:CE	18:M:105:MET:HA	2.21	0.71
7:B:1011:G:H5''	22:Q:76:SER:OG	1.91	0.71
7:B:1060:U:H4'	7:B:1061:U:O5'	1.89	0.71
7:B:545:U:C5	7:B:546:U:H4'	2.26	0.71
1:O:40:HIS:CE1	1:O:41:HIS:HB3	2.26	0.71
7:B:1026:G:N3	7:B:1027:A:C8	2.58	0.71
13:H:50:ARG:HB2	13:H:54:LEU:HD12	1.71	0.71
15:J:62:VAL:O	15:J:64:VAL:HG23	1.90	0.71
17:L:51:GLU:CD	17:L:52:GLY:N	2.43	0.71
20:O:37:ALA:O	20:O:38:GLN:HB2	1.90	0.71
24:S:83:LYS:HB2	24:S:83:LYS:NZ	2.06	0.71
7:B:863:A:O5'	7:B:863:A:H8	1.74	0.71
7:B:2552:U:H5''	7:B:2553:G:OP2	1.91	0.71
5:4:24:ARG:HB2	5:4:36:ARG:CA	2.21	0.70
7:B:1010:A:H3'	7:B:1010:A:C8	2.26	0.70
7:B:975:A:C2'	7:B:976:G:H5'	2.21	0.70
8:C:124:LYS:HG3	8:C:126:GLY:H	1.55	0.70
8:C:83:ASP:HB2	8:C:90:ILE:HD12	1.71	0.70
13:H:26:ALA:HB2	13:H:30:LEU:HG	1.71	0.70
22:Q:12:ARG:HH11	22:Q:12:ARG:CG	2.03	0.70
10:E:115:GLN:O	10:E:116:ASP:HB3	1.89	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:614:A:H5''	7:B:616:A:N6	2.05	0.70
7:B:485:C:O2	24:S:60:HIS:CE1	2.40	0.70
1:O:37:HIS:CE1	1:O:42:ILE:HD12	2.26	0.70
7:B:1224:U:O3'	23:R:90:ARG:HB2	1.90	0.70
7:B:1608:A:C8	7:B:1611:C:N4	2.58	0.70
7:B:2539:C:C2'	7:B:2540:C:H5''	2.21	0.70
7:B:27:G:O2'	7:B:28:A:H8	1.70	0.70
7:B:384:A:O5'	7:B:384:A:C8	2.44	0.70
7:B:592:A:C6	7:B:593:U:C4	2.80	0.70
7:B:856:G:O4'	28:W:23:LYS:HD2	1.91	0.70
7:B:1792:G:OP1	8:C:203:VAL:HG23	1.90	0.70
22:Q:90:ASP:OD2	23:R:10:LYS:HG2	1.90	0.70
24:S:84:ARG:HH22	24:S:98:LYS:HE3	1.55	0.70
10:E:189:THR:C	10:E:191:ASP:H	1.93	0.70
7:B:870:U:O2'	18:M:8:LYS:HE2	1.90	0.70
20:O:56:LYS:N	20:O:62:LEU:HD11	2.06	0.70
7:B:1415:U:H1'	7:B:1588:G:N2	2.06	0.70
7:B:2584:U:H6	7:B:2584:U:H3'	1.56	0.70
7:B:147:C:O2'	7:B:148:U:H5'	1.91	0.70
7:B:45:G:H5''	7:B:46:G:OP1	1.89	0.70
7:B:329:G:OP1	7:B:329:G:H8	1.74	0.70
7:B:2500:U:O2	7:B:2504:U:C5	2.45	0.70
7:B:2670:A:C2	7:B:2671:G:C4	2.79	0.70
7:B:2820:A:C8	7:B:2820:A:H5''	2.26	0.70
7:B:677:A:O2'	7:B:2071:A:H5'	1.91	0.70
15:J:47:HIS:ND1	15:J:47:HIS:O	2.24	0.70
19:N:4:ARG:H	19:N:4:ARG:NE	1.89	0.70
20:O:33:ARG:HG3	20:O:34:HIS:HD2	1.56	0.70
28:W:47:GLY:HA2	28:W:72:GLY:CA	2.20	0.70
12:G:124:CYS:HB2	12:G:129:GLU:O	1.92	0.70
17:L:27:LEU:O	17:L:27:LEU:HD23	1.92	0.70
7:B:2805:C:O5'	7:B:2805:C:H6	1.73	0.70
7:B:1032:A:H2'	7:B:1032:A:N3	2.04	0.70
7:B:1613:G:H2'	7:B:1617:C:N4	2.03	0.70
7:B:1760:C:H2'	7:B:1761:C:O4'	1.91	0.70
7:B:201:C:C5	7:B:202:U:C5	2.79	0.70
7:B:2396:G:H1	7:B:2420:C:N4	1.89	0.70
7:B:692:C:N4	7:B:770:G:N1	2.39	0.70
7:B:856:G:N2	7:B:922:C:C4	2.59	0.70
7:B:1255:U:H3	10:E:66:GLY:HA2	1.56	0.70
7:B:251:A:P	17:L:59:ARG:HH22	2.15	0.70
2:1:49:LYS:O	2:1:50:GLU:HB3	1.91	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2636:C:C5'	9:D:80:TRP:CZ2	2.72	0.70
7:B:1165:A:H2'	7:B:1166:G:C8	2.16	0.70
7:B:2811:G:H5'	9:D:62:LYS:CE	2.20	0.70
12:G:40:VAL:HG22	12:G:51:PHE:HE2	1.56	0.70
29:X:11:VAL:O	29:X:14:LEU:HG	1.90	0.70
7:B:1771:C:C2	7:B:1772:A:C8	2.79	0.70
3:2:16:HIS:ND1	3:2:44:VAL:O	2.23	0.70
7:B:1429:G:H5'	7:B:1429:G:C8	2.23	0.70
7:B:1815:A:C8	7:B:1815:A:O5'	2.45	0.70
9:D:122:VAL:HA	9:D:128:ARG:NE	2.06	0.70
9:D:181:ASP:OD2	9:D:184:ARG:HG3	1.91	0.70
15:J:10:THR:O	15:J:11:VAL:HB	1.90	0.70
22:Q:60:TRP:CZ2	22:Q:93:ILE:HG22	2.26	0.70
24:S:8:ARG:HA	24:S:102:HIS:CD2	2.27	0.70
7:B:381:G:H5'	31:Z:13:THR:HG22	1.74	0.70
31:Z:49:ARG:O	31:Z:51:VAL:N	2.25	0.70
7:B:481:G:OP2	26:U:42:LYS:HB3	1.90	0.70
7:B:81:G:H1	7:B:105:C:H42	1.36	0.70
25:T:67:VAL:HG12	25:T:68:LYS:H	1.56	0.70
9:D:81:GLU:O	9:D:82:PHE:HD1	1.74	0.70
27:V:63:ILE:N	27:V:70:ILE:HD11	2.06	0.70
18:M:16:ARG:HH11	18:M:16:ARG:HB2	1.55	0.70
18:M:41:LEU:HG	18:M:95:LEU:HD22	1.72	0.70
12:G:34:ARG:CZ	12:G:70:LEU:HD21	2.20	0.70
5:4:2:LYS:HG2	5:4:37:GLN:O	1.91	0.70
7:B:120:U:C5	7:B:149:A:C2	2.79	0.70
7:B:1:G:H2'	7:B:2:G:H8	1.56	0.70
7:B:2734:A:N7	7:B:2735:G:C8	2.59	0.70
7:B:2744:G:N7	7:B:2755:C:C2	2.59	0.70
7:B:2838:G:N2	19:N:93:GLY:H	1.90	0.70
7:B:508:A:H2	24:S:9:HIS:NE2	1.90	0.70
7:B:772:C:H2'	7:B:773:U:H6	1.56	0.70
7:B:831:G:N1	7:B:832:U:C2	2.59	0.70
15:J:78:THR:HG23	15:J:84:ILE:CG2	2.19	0.70
19:N:58:ASP:HA	19:N:62:ASN:HB2	1.72	0.70
7:B:2383:G:C2	7:B:2384:U:H5	2.10	0.70
7:B:82:U:H2'	7:B:83:A:O4'	1.90	0.70
7:B:907:G:C6	7:B:908:C:C4	2.80	0.70
12:G:15:ASP:HB2	12:G:26:LYS:HB2	1.73	0.70
7:B:1093:G:H21	7:B:1098:A:N6	1.90	0.70
27:V:5:ASN:HA	27:V:64:VAL:HB	1.71	0.70
6:A:28:C:C6	6:A:29:A:N7	2.60	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:123:G:H2'	7:B:124:G:H8	1.56	0.70
7:B:193:U:C2	7:B:194:G:C8	2.79	0.70
7:B:2091:C:H3'	7:B:2092:U:H5''	1.73	0.70
7:B:2751:G:OP2	12:G:2:ARG:HG3	1.91	0.70
7:B:563:A:C6	7:B:2018:G:C4	2.80	0.70
7:B:585:G:H1'	7:B:1256:G:N2	2.07	0.70
8:C:179:GLU:HB2	8:C:265:PHE:HB3	1.72	0.70
15:J:41:LYS:HD2	15:J:46:PRO:HD3	1.72	0.70
24:S:27:LYS:HB2	24:S:28:LYS:HE3	1.73	0.70
7:B:309:A:N1	7:B:330:A:C5	2.59	0.70
23:R:50:GLY:O	23:R:51:VAL:HB	1.90	0.70
7:B:1090:A:H2'	7:B:1091:G:C8	2.27	0.70
7:B:1771:C:H2'	7:B:1772:A:H8	1.54	0.70
7:B:498:G:C2	7:B:499:U:C6	2.80	0.70
28:W:81:ILE:HG12	28:W:82:GLU:H	1.55	0.70
3:2:5:PHE:HE1	7:B:464:U:H5'	1.56	0.70
7:B:2058:A:C5'	7:B:2058:A:H8	2.03	0.70
11:F:133:GLU:CG	11:F:134:GLN:N	2.53	0.70
15:J:127:GLY:O	15:J:128:ASN:O	2.09	0.70
17:L:33:ARG:HG2	23:R:85:LYS:CE	2.22	0.70
7:B:2345:G:C4	7:B:2381:A:C2	2.80	0.70
26:U:39:ASN:O	26:U:40:LEU:HB3	1.92	0.70
7:B:862:G:N2	7:B:916:G:H1'	2.06	0.70
7:B:1516:G:H2'	7:B:1517:G:H8	1.55	0.70
30:Y:7:THR:HA	30:Y:34:THR:HB	1.74	0.70
7:B:1652:A:C2	7:B:2006:C:N3	2.60	0.70
7:B:2671:G:C2	7:B:2672:U:O2	2.44	0.70
7:B:565:C:H2'	7:B:566:U:H5'	1.74	0.70
7:B:963:U:OP2	33:B:5191:HOH:O	2.10	0.70
21:P:26:GLU:HA	21:P:47:ILE:HB	1.73	0.70
21:P:93:LYS:HE3	21:P:97:TYR:CE2	2.26	0.70
28:W:10:ARG:HH11	28:W:10:ARG:HA	1.57	0.70
10:E:153:LEU:HG	10:E:172:ALA:C	2.12	0.70
7:B:64:A:C8	25:T:69:ARG:HD2	2.26	0.70
7:B:528:A:C8	7:B:528:A:H3'	2.25	0.70
25:T:30:ILE:HG12	25:T:31:VAL:H	1.57	0.70
25:T:15:HIS:NE2	25:T:80:TRP:HZ2	1.87	0.70
14:I:126:ARG:HA	14:I:129:GLU:HB2	1.73	0.70
13:H:114:GLU:HB2	13:H:133:GLN:HG3	1.73	0.70
6:A:113:C:C4	6:A:114:C:C5	2.79	0.70
6:A:43:C:H3'	6:A:44:G:H5'	1.74	0.70
7:B:1672:A:C6	7:B:1673:G:C5	2.80	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2471:A:H61	7:B:2479:U:H3	1.40	0.70
7:B:2733:A:H2'	7:B:2734:A:H5'	1.74	0.70
7:B:568:U:HO2'	7:B:569:U:H3'	1.57	0.70
7:B:692:C:N4	7:B:770:G:C6	2.59	0.70
8:C:161:VAL:H	8:C:193:GLU:CD	1.94	0.70
9:D:184:ARG:HA	9:D:184:ARG:NE	2.05	0.70
28:W:38:ARG:HB3	28:W:68:PHE:CD1	2.27	0.70
7:B:872:U:H5'	7:B:873:C:OP2	1.92	0.70
7:B:418:C:H2'	7:B:419:U:C6	2.26	0.70
6:A:107:G:O5'	6:A:107:G:C8	2.44	0.70
7:B:991:C:H5'	7:B:991:C:H6	1.57	0.70
7:B:1029:A:H3'	7:B:1030:C:H6	1.57	0.69
7:B:1162:G:N3	23:R:93:PHE:HZ	1.89	0.69
7:B:1803:A:H2	7:B:1822:C:O2	1.75	0.69
7:B:1805:A:C2	7:B:1813:G:C2	2.80	0.69
7:B:2593:U:H2'	7:B:2594:C:H6	1.57	0.69
6:A:47:C:OP1	20:O:1:MET:SD	2.50	0.69
7:B:482:A:N7	7:B:506:G:C2	2.60	0.69
7:B:173:A:H2'	7:B:174:U:C6	2.26	0.69
7:B:1362:C:O2'	7:B:1363:C:H5'	1.92	0.69
7:B:2460:U:H3'	7:B:2461:A:H8	1.57	0.69
7:B:985:C:H2'	7:B:986:C:H6	1.57	0.69
7:B:1566:A:N3	8:C:213:ARG:HG2	2.06	0.69
8:C:53:ILE:HG12	8:C:218:THR:CA	2.22	0.69
11:F:33:ILE:HD11	11:F:90:LEU:HD13	1.74	0.69
15:J:127:GLY:C	15:J:128:ASN:HD22	1.95	0.69
22:Q:38:VAL:O	22:Q:38:VAL:HG23	1.91	0.69
30:Y:8:GLN:NE2	30:Y:28:LEU:HB3	2.07	0.69
7:B:599:A:N3	7:B:659:G:C2	2.61	0.69
7:B:862:G:H2'	7:B:863:A:C8	2.26	0.69
7:B:137:U:H2'	7:B:138:U:O4'	1.92	0.69
7:B:136:G:N2	25:T:3:ARG:NH2	2.38	0.69
26:U:48:VAL:HG13	26:U:51:LEU:HA	1.74	0.69
7:B:2768:U:C4	7:B:2769:U:C5	2.80	0.69
19:N:8:ARG:NH2	19:N:46:ARG:HG3	2.07	0.69
9:D:31:ALA:HA	9:D:49:GLN:NE2	2.07	0.69
6:A:105:G:C2	6:A:106:G:C8	2.81	0.69
16:K:34:GLY:O	16:K:36:GLY:N	2.26	0.69
13:H:8:LYS:O	13:H:9:VAL:HG22	1.92	0.69
6:A:51:G:H2'	6:A:51:G:N3	2.05	0.69
7:B:1323:C:C3'	7:B:1324:G:H5''	2.23	0.69
7:B:1451:C:H2'	7:B:1458:U:O2	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2377:A:N3	20:O:92:PHE:HZ	1.89	0.69
7:B:2754:U:H2'	7:B:2755:C:H5''	1.73	0.69
7:B:749:A:C5	7:B:1618:A:N1	2.61	0.69
7:B:949:G:H5''	7:B:950:G:OP2	1.91	0.69
8:C:52:HIS:O	8:C:53:ILE:HD12	1.92	0.69
9:D:13:ARG:NE	9:D:13:ARG:HA	2.07	0.69
7:B:1996:C:H5	16:K:32:TYR:OH	1.75	0.69
9:D:11:MET:SD	21:P:9:GLN:NE2	2.65	0.69
7:B:300:A:N3	7:B:319:G:H1'	2.07	0.69
23:R:20:VAL:HG13	23:R:97:LYS:HD3	1.74	0.69
7:B:1601:G:P	25:T:62:VAL:HG11	2.33	0.69
7:B:1387:A:H2'	7:B:1388:G:H8	1.55	0.69
7:B:1687:G:C2	7:B:1688:U:C5	2.80	0.69
7:B:632:A:O3'	17:L:69:ARG:HB3	1.92	0.69
7:B:1259:G:H2'	7:B:1260:A:H8	1.55	0.69
7:B:2071:A:H2'	7:B:2072:C:H6	1.56	0.69
7:B:2539:C:C3'	7:B:2540:C:H5''	2.22	0.69
7:B:2853:C:H2'	7:B:2854:G:C8	2.27	0.69
7:B:448:U:C5	7:B:583:G:N3	2.58	0.69
7:B:566:U:H2'	7:B:567:U:H6	1.54	0.69
9:D:128:ARG:N	9:D:128:ARG:HD3	2.07	0.69
9:D:147:GLY:O	9:D:148:GLN:O	2.10	0.69
17:L:18:ARG:HD2	17:L:20:GLY:HA2	1.74	0.69
19:N:71:ARG:O	19:N:72:ASP:HB3	1.92	0.69
16:K:84:CYS:O	16:K:85:VAL:HB	1.90	0.69
27:V:41:GLU:O	27:V:42:LEU:HD23	1.93	0.69
3:2:31:LEU:O	3:2:35:ARG:HB2	1.91	0.69
4:3:54:LEU:O	4:3:56:LEU:N	2.26	0.69
7:B:1162:G:H3'	7:B:1162:G:C8	2.26	0.69
7:B:699:A:O3'	7:B:1554:U:H5	1.74	0.69
7:B:1838:C:N4	7:B:1899:A:C4	2.60	0.69
7:B:210:C:O2'	7:B:211:C:H5'	1.92	0.69
7:B:2764:A:H2'	7:B:2765:A:H5''	1.74	0.69
7:B:2765:A:H3'	7:B:2766:A:C8	2.27	0.69
7:B:2769:U:H2'	7:B:2770:G:H8	1.57	0.69
7:B:963:U:C4	7:B:964:C:N4	2.61	0.69
8:C:32:LEU:HB3	8:C:61:TYR:CE1	2.27	0.69
23:R:42:ALA:HA	23:R:53:PHE:HA	1.73	0.69
24:S:35:ILE:O	24:S:35:ILE:HG12	1.92	0.69
31:Z:24:ILE:O	31:Z:24:ILE:HD13	1.93	0.69
7:B:2637:U:C2	7:B:2782:G:N2	2.61	0.69
7:B:1494:A:H2'	7:B:1495:A:C8	2.28	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:96:ILE:HG22	9:D:98:VAL:H	1.56	0.69
12:G:101:VAL:HG12	12:G:115:GLN:HG3	1.74	0.69
7:B:1223:G:C6	23:R:90:ARG:NH2	2.61	0.69
7:B:1373:A:H5''	7:B:1374:G:OP2	1.92	0.69
7:B:1432:G:O2'	7:B:1433:A:H5'	1.93	0.69
7:B:1663:G:HO2'	7:B:1664:A:H8	1.40	0.69
7:B:828:U:O2	7:B:828:U:H2'	1.93	0.69
9:D:127:PHE:O	9:D:128:ARG:HD3	1.93	0.69
11:F:52:ALA:HB1	11:F:148:VAL:CG1	2.22	0.69
16:K:78:ARG:HH22	21:P:102:ARG:NH1	1.91	0.69
7:B:398:C:C3'	31:Z:49:ARG:HH22	1.99	0.69
29:X:6:LEU:HD12	29:X:56:LEU:HD12	1.75	0.69
16:K:80:ASP:HB2	21:P:70:GLU:CD	2.12	0.69
7:B:141:G:H5''	7:B:141:G:N3	2.08	0.69
12:G:73:SER:CB	12:G:137:LYS:HE2	2.22	0.69
7:B:2777:G:H3'	7:B:2777:G:C8	2.28	0.69
1:O:5:ASN:ND2	7:B:2019:A:N6	2.41	0.69
7:B:1220:G:N2	7:B:1221:C:C2	2.61	0.69
7:B:1613:G:C2'	7:B:1617:C:H42	2.02	0.69
7:B:23:G:H2'	7:B:24:G:H8	1.57	0.69
7:B:679:C:C2	7:B:680:C:C5	2.81	0.69
7:B:738:G:C6	7:B:739:A:C6	2.80	0.69
8:C:220:ARG:HA	8:C:220:ARG:CZ	2.22	0.69
9:D:121:THR:HG23	9:D:128:ARG:HG3	1.74	0.69
9:D:121:THR:O	9:D:128:ARG:HD2	1.92	0.69
7:B:2360:G:H5''	17:L:58:TYR:HE1	1.57	0.69
30:Y:50:VAL:O	30:Y:53:MET:HG2	1.92	0.69
5:4:9:LYS:O	5:4:25:VAL:HB	1.92	0.69
6:A:52:A:H2'	6:A:53:A:H5'	1.75	0.69
7:B:1353:A:C8	7:B:1378:A:N6	2.61	0.69
7:B:2765:A:O2'	7:B:2766:A:H5'	1.92	0.69
10:E:79:ARG:O	10:E:80:SER:HB3	1.92	0.69
18:M:58:LYS:HD2	18:M:60:GLN:CB	2.22	0.69
21:P:76:HIS:O	21:P:77:SER:OG	2.09	0.69
22:Q:85:ALA:HB3	22:Q:88:GLU:HG3	1.75	0.69
23:R:69:GLY:C	23:R:70:GLU:HG3	2.13	0.69
23:R:6:GLN:HA	23:R:10:LYS:HA	1.74	0.69
10:E:103:GLY:O	10:E:105:LEU:N	2.26	0.69
7:B:614:A:H4'	7:B:616:A:N7	2.08	0.69
7:B:615:U:H3'	7:B:616:A:H5'	1.74	0.69
27:V:70:ILE:HD13	27:V:71:LYS:H	1.56	0.69
7:B:866:A:N1	7:B:913:U:H4'	2.08	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:852:U:C4	7:B:853:C:C4	2.81	0.69
9:D:69:ALA:CB	9:D:91:THR:HB	2.19	0.69
12:G:118:ALA:O	12:G:120:ILE:N	2.24	0.69
7:B:1528:A:H2'	7:B:1529:G:H5'	1.73	0.69
7:B:268:C:H5''	7:B:268:C:H6	1.58	0.69
7:B:2019:A:H2	7:B:2035:G:H22	1.41	0.69
8:C:143:VAL:HG23	8:C:152:GLN:HG3	1.75	0.69
29:X:6:LEU:HD23	29:X:6:LEU:H	1.56	0.69
27:V:70:ILE:H	27:V:70:ILE:HD13	1.58	0.69
9:D:60:VAL:CG2	9:D:63:PRO:HG2	2.23	0.69
24:S:73:LYS:HB2	24:S:106:VAL:CG2	2.23	0.69
17:L:124:GLY:C	17:L:125:LEU:HG	2.13	0.69
11:F:102:LEU:O	11:F:107:VAL:HG23	1.93	0.69
4:3:12:ARG:CD	4:3:23:HIS:HB2	2.23	0.69
7:B:1643:G:N2	7:B:1644:C:H1'	2.06	0.69
7:B:563:A:C6	7:B:2018:G:C5	2.80	0.69
7:B:2885:G:C2	7:B:2886:A:H1'	2.26	0.69
7:B:56:A:H2'	7:B:57:C:C6	2.28	0.69
7:B:988:A:O5'	7:B:988:A:H8	1.74	0.69
15:J:113:PRO:HA	15:J:116:ARG:HB2	1.75	0.69
23:R:74:ILE:O	23:R:75:VAL:HG13	1.92	0.69
17:L:33:ARG:HB3	23:R:85:LYS:HE2	1.74	0.69
31:Z:21:VAL:O	31:Z:22:MET:HG3	1.93	0.69
7:B:551:G:C8	7:B:551:G:H3'	2.28	0.69
7:B:1443:U:H2'	7:B:1444:G:H8	1.58	0.69
18:M:64:TRP:N	18:M:64:TRP:CD1	2.59	0.69
7:B:1024:G:C6	7:B:1025:G:C6	2.80	0.68
7:B:1216:G:H2'	7:B:1217:U:H5'	1.75	0.68
7:B:1307:A:O5'	7:B:1307:A:H8	1.76	0.68
7:B:1309:G:H8	7:B:1309:G:H5''	1.56	0.68
7:B:1802:A:C5	7:B:1817:G:N2	2.61	0.68
7:B:2736:A:N1	7:B:2769:U:C2	2.59	0.68
7:B:402:A:C2'	7:B:403:U:H5'	2.24	0.68
7:B:839:U:H2'	7:B:840:C:C6	2.28	0.68
9:D:130:GLN:CB	9:D:140:HIS:HA	2.22	0.68
9:D:148:GLN:HB2	9:D:151:THR:OG1	1.92	0.68
13:H:4:ILE:O	13:H:4:ILE:HG12	1.91	0.68
19:N:4:ARG:NE	19:N:4:ARG:C	2.46	0.68
7:B:483:A:H1'	26:U:43:LYS:HB3	1.75	0.68
7:B:103:A:N7	7:B:104:A:C4	2.62	0.68
7:B:850:U:O3'	30:Y:22:THR:HG22	1.93	0.68
7:B:269:C:H2'	7:B:270:A:C8	2.28	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:A:51:G:H2'	6:A:52:A:H5''	1.75	0.68
7:B:1785:A:O2'	7:B:1786:A:H5'	1.92	0.68
7:B:2234:G:H2'	7:B:2235:G:H8	1.58	0.68
7:B:2359:C:H1'	7:B:2360:G:H5'	1.73	0.68
7:B:2478:A:C5'	7:B:2478:A:C8	2.76	0.68
7:B:2006:C:O2'	7:B:2823:A:H1'	1.93	0.68
7:B:398:C:O5'	31:Z:49:ARG:CZ	2.40	0.68
8:C:114:GLN:C	8:C:115:ILE:HD12	2.13	0.68
8:C:254:LYS:HZ1	8:C:254:LYS:H	1.41	0.68
20:O:48:LEU:CD2	20:O:48:LEU:H	2.02	0.68
22:Q:64:ILE:HG12	22:Q:95:ALA:HB1	1.73	0.68
23:R:76:LYS:O	23:R:77:PHE:CD2	2.47	0.68
7:B:2380:C:H2'	7:B:2381:A:H8	1.58	0.68
10:E:109:LEU:HD22	10:E:113:VAL:O	1.92	0.68
10:E:139:LYS:N	10:E:143:LEU:HD11	2.08	0.68
7:B:96:C:H5'	29:X:41:HIS:HB2	1.75	0.68
29:X:42:LEU:O	29:X:43:LEU:HD23	1.94	0.68
11:F:157:THR:HG22	11:F:158:THR:H	1.57	0.68
7:B:612:G:C6	7:B:614:A:N7	2.61	0.68
17:L:14:LYS:HZ3	17:L:15:ALA:N	1.90	0.68
11:F:18:GLU:O	11:F:19:PHE:HB2	1.92	0.68
14:I:136:GLY:O	14:I:137:LEU:HD23	1.93	0.68
16:K:59:LYS:HD2	16:K:89:ASN:O	1.93	0.68
7:B:1136:G:H5'	7:B:1136:G:H8	1.57	0.68
7:B:2032:G:H21	9:D:150:GLN:HB3	1.57	0.68
7:B:2396:G:C8	7:B:2396:G:H5''	2.28	0.68
8:C:140:VAL:O	8:C:193:GLU:HB2	1.94	0.68
11:F:151:LEU:HG	11:F:153:ILE:HG13	1.74	0.68
22:Q:82:LEU:O	22:Q:88:GLU:HG3	1.93	0.68
28:W:23:LYS:NZ	28:W:23:LYS:HB2	2.06	0.68
28:W:66:VAL:HG22	28:W:67:LYS:N	2.08	0.68
26:U:39:ASN:CB	26:U:59:GLU:HB2	2.23	0.68
29:X:18:LEU:HA	29:X:22:LEU:HB2	1.73	0.68
7:B:874:G:N3	7:B:875:G:H1'	2.08	0.68
7:B:1984:G:C6	7:B:1985:C:C5	2.81	0.68
7:B:1270:C:H4'	7:B:1271:G:O5'	1.92	0.68
7:B:1361:G:C6	7:B:1362:C:N4	2.61	0.68
7:B:1809:A:C2'	7:B:1810:A:C8	2.74	0.68
7:B:201:C:C5	7:B:202:U:H5	2.09	0.68
7:B:2333:A:H4'	7:B:2334:U:C5'	2.24	0.68
7:B:2358:A:H5'	7:B:2358:A:C8	2.29	0.68
7:B:2544:G:H2'	7:B:2545:G:H8	1.58	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2574:G:H2'	7:B:2575:C:H6	1.57	0.68
7:B:2679:A:C2	7:B:2680:U:C4	2.81	0.68
7:B:2821:A:H2'	7:B:2822:G:O4'	1.93	0.68
7:B:682:G:N2	7:B:683:U:C2	2.62	0.68
7:B:799:G:C6	7:B:800:A:C6	2.82	0.68
7:B:838:C:C2	7:B:941:A:C6	2.82	0.68
8:C:152:GLN:OE1	8:C:153:LEU:HB3	1.93	0.68
8:C:58:LYS:HB2	8:C:58:LYS:HZ2	1.58	0.68
19:N:103:ARG:H	19:N:108:ALA:H	1.41	0.68
20:O:26:LEU:O	20:O:27:VAL:HG13	1.93	0.68
22:Q:13:HIS:CE1	22:Q:31:TYR:CD1	2.81	0.68
7:B:298:G:H5''	7:B:299:A:OP1	1.93	0.68
7:B:104:A:H8	7:B:104:A:H3'	1.58	0.68
29:X:18:LEU:HA	29:X:22:LEU:CG	2.23	0.68
9:D:77:ARG:HH22	9:D:79:LEU:HB2	1.58	0.68
7:B:1710:G:H2'	7:B:1711:A:H8	1.58	0.68
9:D:22:ILE:O	9:D:22:ILE:HG23	1.94	0.68
1:O:52:LYS:HD3	1:O:52:LYS:O	1.93	0.68
10:E:163:ASN:OD1	10:E:163:ASN:N	2.27	0.68
7:B:1413:A:O5'	7:B:1413:A:H8	1.77	0.68
7:B:653:U:H4'	7:B:653:U:OP1	1.92	0.68
1:O:39:ARG:HD3	7:B:2816:G:H5'	1.74	0.68
6:A:32:U:H2'	6:A:33:G:C8	2.29	0.68
6:A:7:G:OP1	20:O:3:LYS:NZ	2.26	0.68
7:B:1190:G:H8	7:B:1190:G:O5'	1.77	0.68
7:B:1352:U:H1'	7:B:1570:A:H2	1.58	0.68
7:B:2051:A:C6	7:B:2614:A:C5	2.82	0.68
7:B:736:C:C2	7:B:737:C:C5	2.82	0.68
7:B:796:C:C6	7:B:796:C:H3'	2.28	0.68
8:C:253:GLY:HA2	8:C:254:LYS:HZ1	1.57	0.68
8:C:42:ARG:CG	8:C:43:ASN:H	1.99	0.68
15:J:116:ARG:NH1	15:J:116:ARG:HG2	2.02	0.68
15:J:33:ALA:HA	15:J:36:LEU:HB2	1.74	0.68
19:N:96:ARG:HG2	19:N:98:LEU:HD21	1.76	0.68
20:O:38:GLN:CA	20:O:50:ALA:HB3	2.23	0.68
7:B:99:U:O2'	7:B:100:U:H5''	1.92	0.68
7:B:867:C:N3	7:B:868:U:C5	2.62	0.68
7:B:906:U:H2'	7:B:907:G:O5'	1.93	0.68
11:F:46:LYS:C	11:F:48:LEU:H	1.97	0.68
5:4:16:ILE:O	5:4:17:VAL:HB	1.93	0.68
7:B:2511:U:C4	7:B:2512:C:C4	2.81	0.68
7:B:2617:U:C2'	7:B:2618:G:H5'	2.24	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:534:U:H4'	22:Q:45:ALA:HB2	1.75	0.68
12:G:140:ILE:HG22	12:G:144:ALA:HB2	1.76	0.68
7:B:2675:A:OP1	16:K:30:ARG:HA	1.93	0.68
28:W:36:ILE:O	28:W:37:VAL:HG22	1.93	0.68
26:U:9:GLU:HB2	26:U:71:ILE:CB	2.24	0.68
7:B:1765:U:H2'	7:B:1765:U:O2	1.93	0.68
7:B:1418:G:H8	7:B:1418:G:O5'	1.77	0.68
7:B:256:A:O2'	7:B:257:C:H5'	1.94	0.68
13:H:127:GLU:H	13:H:127:GLU:CD	1.97	0.68
7:B:1430:G:O2'	7:B:1431:A:H5'	1.94	0.68
7:B:2539:C:C5	7:B:2540:C:C5	2.82	0.68
8:C:115:ILE:HG22	8:C:127:ASN:OD1	1.94	0.68
7:B:1568:G:OP1	8:C:61:TYR:HB2	1.93	0.68
9:D:138:LEU:HD11	9:D:142:VAL:HG11	1.74	0.68
10:E:84:THR:HG23	10:E:85:PHE:H	1.57	0.68
28:W:23:LYS:HE3	28:W:24:ARG:N	2.05	0.68
7:B:85:G:C8	7:B:85:G:H5''	2.29	0.68
7:B:95:A:O3'	29:X:41:HIS:HA	1.93	0.68
7:B:901:C:H2'	7:B:902:C:H6	1.59	0.68
7:B:2425:A:O4'	7:B:2427:C:C5	2.47	0.68
6:A:17:C:H2'	6:A:18:G:H8	1.59	0.68
7:B:440:C:C6	7:B:440:C:H3'	2.29	0.68
7:B:46:G:C2	7:B:47:C:C5	2.82	0.68
23:R:47:VAL:HG22	23:R:48:LYS:H	1.57	0.68
4:3:7:ARG:HA	4:3:10:ALA:HB3	1.75	0.68
7:B:1233:C:H2'	7:B:1234:U:C6	2.29	0.68
7:B:1381:G:O2'	7:B:1382:G:H5'	1.94	0.68
7:B:192:C:H2'	7:B:193:U:H5'	1.75	0.68
13:H:27:ARG:H	13:H:31:VAL:HG23	1.58	0.68
7:B:644:A:H2	7:B:646:U:O4	1.75	0.68
7:B:1204:A:N1	7:B:1241:A:N1	2.41	0.68
7:B:321:U:OP2	10:E:130:LYS:HG3	1.93	0.68
10:E:181:ILE:HG22	10:E:181:ILE:O	1.93	0.68
23:R:64:VAL:HG23	23:R:100:GLY:CA	2.23	0.68
22:Q:109:VAL:HG12	22:Q:113:LYS:NZ	2.08	0.68
7:B:237:C:O2	7:B:261:G:C2	2.46	0.68
7:B:868:U:H2'	7:B:868:U:O2	1.94	0.68
7:B:900:A:H2'	7:B:901:C:C6	2.29	0.68
7:B:2258:C:C5'	7:B:2258:C:H6	2.06	0.68
9:D:110:THR:HB	9:D:202:ILE:HB	1.75	0.68
7:B:235:U:H2'	7:B:236:C:H6	1.58	0.68
5:4:3:VAL:HG12	5:4:5:ALA:N	2.09	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2056:G:OP2	33:B:5375:HOH:O	2.11	0.68
7:B:993:G:C2	7:B:1162:G:C2	2.82	0.68
8:C:82:TYR:HD1	8:C:83:ASP:H	1.42	0.68
13:H:18:GLN:O	13:H:19:VAL:HB	1.93	0.68
18:M:31:PHE:HA	18:M:128:THR:O	1.93	0.68
20:O:30:ARG:HH22	20:O:97:PHE:HB2	1.58	0.68
6:A:10:G:O2'	6:A:11:C:H5'	1.93	0.68
6:A:14:U:O2'	6:A:107:G:H1'	1.94	0.68
7:B:2096:C:H5'	7:B:2097:A:OP2	1.93	0.68
4:3:2:LYS:O	4:3:2:LYS:HE2	1.94	0.68
7:B:2358:A:H61	7:B:2428:G:N2	1.90	0.68
7:B:2505:G:O2'	7:B:2506:U:H5'	1.94	0.68
7:B:687:C:N4	7:B:688:U:H3	1.91	0.68
8:C:140:VAL:HG23	8:C:161:VAL:HB	1.75	0.68
8:C:220:ARG:HG3	8:C:220:ARG:NH1	2.09	0.68
8:C:220:ARG:CA	8:C:220:ARG:NE	2.50	0.68
13:H:3:VAL:HB	13:H:37:VAL:CG1	2.18	0.68
18:M:105:MET:CG	18:M:106:ASP:H	1.97	0.68
18:M:124:LEU:HD23	18:M:124:LEU:N	2.09	0.68
17:L:92:LEU:HA	17:L:96:LYS:CG	2.24	0.68
7:B:219:A:C6	7:B:220:G:C6	2.82	0.68
25:T:10:VAL:O	25:T:34:VAL:HG13	1.94	0.68
7:B:1248:G:P	10:E:44:ARG:HH12	2.16	0.68
7:B:1771:C:C2	7:B:1772:A:N7	2.61	0.68
7:B:390:U:H4'	7:B:391:A:C5'	2.23	0.68
8:C:268:ARG:O	8:C:269:ARG:HD2	1.94	0.68
7:B:2052:A:H1'	9:D:153:GLY:HA3	1.75	0.67
7:B:2684:U:H4'	16:K:76:VAL:HG21	1.76	0.67
7:B:2762:C:H2'	7:B:2763:G:H5''	1.74	0.67
7:B:705:A:O2'	7:B:706:A:H5'	1.92	0.67
7:B:810:U:C5	17:L:37:GLY:CA	2.77	0.67
8:C:217:PRO:O	8:C:218:THR:C	2.32	0.67
19:N:83:LEU:HD12	19:N:86:ARG:HD3	1.76	0.67
21:P:100:ARG:HG2	21:P:102:ARG:HH21	1.59	0.67
7:B:61:C:OP2	29:X:44:LYS:HD3	1.94	0.67
7:B:64:A:N1	7:B:91:A:N6	2.41	0.67
7:B:264:C:H2'	7:B:265:A:C5'	2.23	0.67
17:L:135:ILE:HG22	17:L:138:ALA:HB3	1.74	0.67
12:G:25:ILE:HG12	12:G:26:LYS:H	1.57	0.67
26:U:5:ARG:HG2	26:U:6:ARG:N	2.07	0.67
7:B:2303:G:H2'	11:F:128:SER:HG	1.56	0.67
10:E:175:ILE:CG2	10:E:176:ASP:N	2.56	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1882:U:O2'	7:B:1883:U:H5'	1.94	0.67
13:H:135:HIS:CG	13:H:136:SER:N	2.62	0.67
7:B:1506:U:H2'	7:B:1507:C:C6	2.28	0.67
7:B:2791:G:H5''	7:B:2791:G:H8	1.59	0.67
6:A:33:G:N2	6:A:34:A:C4	2.62	0.67
7:B:1130:U:O5'	7:B:1130:U:H2'	1.94	0.67
7:B:1162:G:H8	7:B:1162:G:O5'	1.77	0.67
7:B:1432:G:H2'	7:B:1433:A:H8	1.60	0.67
7:B:202:U:H2'	7:B:202:U:O2	1.94	0.67
7:B:2821:A:C8	7:B:2821:A:H3'	2.30	0.67
7:B:2849:U:H4'	7:B:2850:A:H5'	1.76	0.67
7:B:393:C:C3'	7:B:394:C:H5''	2.23	0.67
7:B:449:A:H2'	7:B:450:G:H5'	1.74	0.67
7:B:911:A:C5	18:M:13:HIS:HD2	2.11	0.67
8:C:22:GLU:HB2	8:C:202:ARG:CG	2.23	0.67
15:J:27:ARG:HG3	15:J:27:ARG:NH1	2.08	0.67
19:N:100:CYS:HG	19:N:112:TYR:HE2	1.41	0.67
20:O:51:ALA:HB1	20:O:55:GLU:HG3	1.76	0.67
22:Q:74:SER:O	22:Q:78:PHE:HB2	1.95	0.67
28:W:46:ALA:O	28:W:47:GLY:C	2.32	0.67
28:W:66:VAL:HG13	28:W:67:LYS:H	1.59	0.67
7:B:338:G:C2	7:B:339:U:C2	2.82	0.67
7:B:2636:C:H2'	7:B:2637:U:C6	2.29	0.67
23:R:35:PHE:O	23:R:37:GLU:HG2	1.95	0.67
7:B:1517:G:O2'	7:B:1518:C:H5'	1.94	0.67
14:I:37:PHE:HB2	14:I:66:PHE:HE2	1.59	0.67
11:F:161:SER:O	11:F:164:GLU:HB2	1.94	0.67
7:B:1008:A:H61	7:B:1136:G:H1	1.42	0.67
7:B:1366:A:H2'	7:B:1367:A:H5'	1.76	0.67
7:B:1842:G:N2	7:B:1901:A:C5	2.63	0.67
7:B:2047:C:H2'	7:B:2048:G:C8	2.29	0.67
7:B:35:G:N2	7:B:36:G:H1'	2.09	0.67
7:B:371:A:H61	7:B:401:A:H3'	1.60	0.67
7:B:494:G:H4'	24:S:6:LYS:HG2	1.74	0.67
7:B:27:G:H1'	7:B:513:A:N6	2.08	0.67
7:B:570:G:N7	7:B:2030:A:N6	2.41	0.67
7:B:814:C:C1'	7:B:1225:G:H21	2.07	0.67
7:B:985:C:O2'	7:B:986:C:H5''	1.94	0.67
13:H:6:LEU:HB2	13:H:35:LYS:HB3	1.76	0.67
15:J:36:LEU:O	15:J:51:GLY:HA2	1.94	0.67
22:Q:94:LEU:HD12	22:Q:95:ALA:N	2.08	0.67
17:L:35:HIS:CE1	23:R:84:ARG:O	2.41	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:107:G:H5'	7:B:294:A:OP1	1.94	0.67
7:B:2560:A:C5	7:B:2561:U:C5	2.83	0.67
7:B:1861:G:H8	7:B:1861:G:H5''	1.57	0.67
7:B:1238:G:C2	7:B:1239:G:C8	2.81	0.67
7:B:1453:A:H5''	7:B:1453:A:H8	1.58	0.67
7:B:1567:G:O4'	7:B:1568:G:C2	2.48	0.67
7:B:120:U:O4	7:B:177:G:C8	2.48	0.67
7:B:2623:G:C2'	7:B:2624:G:H5'	2.25	0.67
7:B:539:G:H2'	7:B:540:C:C6	2.30	0.67
7:B:682:G:C2	7:B:683:U:C4	2.83	0.67
11:F:33:ILE:HG13	11:F:34:THR:H	1.59	0.67
31:Z:49:ARG:HA	31:Z:52:ALA:CB	2.22	0.67
22:Q:68:ALA:HB1	22:Q:73:ILE:CG2	2.24	0.67
12:G:104:LEU:HD12	12:G:106:LEU:HG	1.77	0.67
26:U:48:VAL:HG13	26:U:51:LEU:H	1.59	0.67
7:B:343:C:N3	7:B:344:A:C8	2.62	0.67
7:B:2189:U:C6	7:B:2189:U:H3'	2.30	0.67
7:B:2320:U:C6	7:B:2320:U:C3'	2.78	0.67
20:O:2:ASP:HB2	20:O:4:LYS:NZ	2.10	0.67
3:2:39:ARG:O	3:2:40:ALA:O	2.13	0.67
7:B:2452:C:C5	7:B:2453:A:C6	2.82	0.67
7:B:28:A:H1'	7:B:513:A:C2	2.29	0.67
15:J:3:THR:OG1	15:J:4:PHE:N	2.27	0.67
9:D:156:PHE:CD1	15:J:81:ILE:HG12	2.22	0.67
16:K:2:ILE:HG21	16:K:67:LYS:CE	2.25	0.67
31:Z:56:ARG:HH11	31:Z:56:ARG:CG	2.07	0.67
10:E:199:MET:HG3	10:E:200:LEU:H	1.60	0.67
7:B:1719:G:C5	7:B:1720:U:C5	2.83	0.67
7:B:1092:C:H2'	7:B:1093:G:O4'	1.95	0.67
11:F:2:LYS:HA	11:F:2:LYS:HE2	1.75	0.67
24:S:72:THR:O	24:S:73:LYS:HG2	1.95	0.67
6:A:23:G:O2'	6:A:24:G:H5'	1.93	0.67
7:B:2243:U:H2'	7:B:2244:U:H6	1.59	0.67
7:B:2329:U:H2'	7:B:2330:G:O4'	1.95	0.67
7:B:2489:U:O2	7:B:2491:U:C5	2.48	0.67
8:C:244:VAL:O	8:C:245:THR:C	2.33	0.67
8:C:82:TYR:CD1	8:C:83:ASP:N	2.63	0.67
7:B:2377:A:N3	20:O:92:PHE:CZ	2.63	0.67
21:P:25:VAL:HG13	21:P:88:ARG:H	1.59	0.67
7:B:856:G:C1'	28:W:23:LYS:HD2	2.24	0.67
26:U:92:VAL:HG22	26:U:93:ARG:N	2.08	0.67
9:D:178:VAL:HG23	9:D:179:ARG:N	2.09	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:K:80:ASP:HB2	21:P:70:GLU:OE2	1.95	0.67
18:M:77:PRO:CD	18:M:86:LYS:HZ3	2.07	0.67
7:B:485:C:HO2'	24:S:60:HIS:CD2	2.13	0.67
7:B:2547:A:C2	7:B:2548:U:C4	2.83	0.67
7:B:1210:G:N3	7:B:1212:G:N2	2.42	0.67
13:H:135:HIS:HB3	13:H:138:VAL:CG2	2.25	0.67
1:O:24:VAL:HB	1:O:26:SER:OG	1.94	0.67
7:B:2713:U:H3'	7:B:2714:G:H5''	1.76	0.67
7:B:794:A:C2'	7:B:795:C:H5'	2.24	0.67
8:C:155:ARG:C	8:C:155:ARG:HD3	2.15	0.67
13:H:2:GLN:HA	13:H:21:VAL:CG1	2.25	0.67
17:L:35:HIS:CE1	23:R:84:ARG:HB3	2.30	0.67
19:N:8:ARG:HH21	19:N:46:ARG:CG	2.04	0.67
7:B:301:G:C2	7:B:302:C:C4	2.82	0.67
10:E:136:GLN:HA	10:E:139:LYS:CB	2.16	0.67
25:T:27:SER:HB3	25:T:29:THR:HG23	1.76	0.67
6:A:73:A:H2'	6:A:74:U:H5'	1.74	0.67
7:B:1861:G:C2	7:B:1882:U:O2	2.47	0.67
7:B:2138:G:H2'	7:B:2139:U:O4'	1.95	0.67
13:H:60:GLU:O	13:H:64:ALA:HB3	1.95	0.67
5:4:26:ILE:HD12	5:4:35:GLN:HG2	1.76	0.67
5:4:9:LYS:H	5:4:9:LYS:HD3	1.60	0.67
7:B:1668:A:N7	7:B:1674:G:C6	2.62	0.67
7:B:2031:A:N1	7:B:2498:C:H1'	2.10	0.67
7:B:2589:A:C2	7:B:2590:A:C5	2.83	0.67
8:C:197:ALA:C	8:C:199:HIS:H	1.98	0.67
8:C:10:PRO:O	8:C:202:ARG:NH1	2.28	0.67
8:C:209:ALA:O	8:C:213:ARG:CZ	2.43	0.67
18:M:103:TYR:HE2	18:M:113:ALA:HB2	1.58	0.67
31:Z:3:LYS:NZ	31:Z:28:VAL:O	2.27	0.67
2:1:37:LYS:HE3	7:B:2344:U:OP1	1.95	0.67
7:B:332:A:O2'	7:B:333:G:H5'	1.95	0.67
10:E:3:LEU:CD1	10:E:194:LYS:HB3	2.25	0.67
7:B:65:U:H1'	25:T:74:ILE:HD12	1.76	0.67
7:B:2221:G:O2'	7:B:2222:C:H5'	1.94	0.67
31:Z:39:LYS:HD2	31:Z:61:ASN:OD1	1.95	0.67
9:D:60:VAL:O	9:D:63:PRO:HD2	1.94	0.67
7:B:277:G:H1'	7:B:361:G:O6	1.95	0.67
16:K:110:GLU:O	16:K:111:LYS:HG2	1.95	0.67
7:B:2532:G:H2'	7:B:2533:U:C6	2.30	0.67
7:B:1232:G:H2'	7:B:1233:C:H6	1.60	0.67
7:B:1831:G:C2	7:B:1975:G:C2	2.83	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2575:C:H2'	7:B:2578:G:O6	1.95	0.67
7:B:2700:A:C2	7:B:2701:U:N3	2.63	0.67
7:B:2727:A:C5	7:B:2728:U:C5	2.83	0.67
7:B:2861:U:H2'	7:B:2862:G:H8	1.60	0.67
7:B:372:G:C2	7:B:400:G:N7	2.63	0.67
8:C:241:LYS:O	8:C:243:PRO:HD3	1.95	0.67
15:J:7:LYS:H	15:J:7:LYS:HD3	1.58	0.67
19:N:52:ILE:HG21	19:N:94:TYR:HD2	1.60	0.67
21:P:7:LEU:C	21:P:9:GLN:H	1.97	0.67
9:D:49:GLN:O	9:D:50:VAL:HG13	1.94	0.67
7:B:604:G:H5''	7:B:604:G:C8	2.28	0.67
7:B:906:U:H6	7:B:906:U:H5'	1.59	0.67
18:M:86:LYS:HG2	18:M:87:GLY:N	2.05	0.67
7:B:135:U:H3	7:B:144:A:N6	1.88	0.67
7:B:2803:G:H2'	7:B:2804:U:H6	1.59	0.67
7:B:2088:A:N7	7:B:2089:C:C5	2.63	0.67
1:O:9:ARG:HH22	22:Q:26:ALA:HB2	1.60	0.67
7:B:1025:G:C8	7:B:1135:C:C1'	2.78	0.67
7:B:1422:G:N2	7:B:1423:G:C4	2.63	0.67
7:B:197:A:N1	7:B:198:C:C2	2.62	0.67
7:B:2456:C:H6	7:B:2456:C:O5'	1.77	0.67
7:B:764:A:H5''	7:B:764:A:C8	2.30	0.67
5:4:32:LYS:HE2	12:G:172:GLU:HB3	1.77	0.67
15:J:44:TYR:CE1	15:J:48:VAL:O	2.48	0.67
20:O:25:ARG:CB	20:O:94:ARG:HH12	2.06	0.67
10:E:142:ALA:CB	10:E:145:ASP:HB2	2.25	0.67
10:E:105:LEU:HD21	10:E:177:PRO:HG3	1.77	0.67
23:R:64:VAL:CG2	23:R:100:GLY:HA2	2.23	0.67
17:L:109:LYS:HA	17:L:126:ARG:HB3	1.76	0.67
7:B:852:U:C4	7:B:853:C:N4	2.63	0.67
6:A:70:C:O2'	6:A:71:C:H5'	1.95	0.67
13:H:9:VAL:O	13:H:11:ASN:N	2.27	0.67
6:A:87:U:O2'	6:A:88:C:H2'	1.95	0.67
7:B:1233:C:H2'	7:B:1234:U:H6	1.59	0.66
7:B:2051:A:C6	7:B:2614:A:N7	2.63	0.66
7:B:2276:G:C2'	7:B:2277:G:H5'	2.25	0.66
7:B:810:U:C5	17:L:37:GLY:HA3	2.30	0.66
19:N:100:CYS:SG	19:N:112:TYR:HE2	2.18	0.66
19:N:38:LEU:HB3	19:N:39:PRO:CD	2.23	0.66
22:Q:46:TYR:CE1	23:R:89:HIS:CE1	2.83	0.66
28:W:20:LEU:O	28:W:32:ALA:HA	1.95	0.66
7:B:2371:G:C2	7:B:2372:U:C5	2.83	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:666:A:H2'	7:B:667:U:H5''	1.75	0.66
12:G:82:PHE:O	12:G:133:LYS:HA	1.95	0.66
7:B:1771:C:N3	7:B:1772:A:N7	2.44	0.66
7:B:945:A:H5'	7:B:946:C:OP2	1.94	0.66
28:W:13:ARG:HD2	28:W:14:ASP:N	2.10	0.66
4:3:41:ARG:C	4:3:43:LEU:H	1.99	0.66
7:B:1256:G:C5	7:B:1257:C:C5	2.83	0.66
7:B:1814:G:H5'	7:B:1814:G:C8	2.29	0.66
7:B:2577:A:O4'	7:B:2612:C:N4	2.29	0.66
7:B:2722:G:H4'	19:N:4:ARG:CB	2.25	0.66
7:B:772:C:C2	7:B:773:U:C5	2.83	0.66
7:B:789:A:H4'	33:B:5150:HOH:O	1.94	0.66
12:G:2:ARG:O	12:G:3:VAL:HB	1.94	0.66
13:H:31:VAL:H	13:H:32:PRO:HD3	1.60	0.66
21:P:73:PHE:CD2	21:P:75:THR:HG23	2.30	0.66
22:Q:23:TYR:HB3	22:Q:27:ARG:HD3	1.78	0.66
7:B:309:A:C2	7:B:330:A:C4	2.83	0.66
10:E:109:LEU:HD13	10:E:113:VAL:HG12	1.78	0.66
29:X:1:MET:N	29:X:6:LEU:HB3	2.09	0.66
9:D:36:GLN:HE21	9:D:37:VAL:N	1.93	0.66
9:D:61:THR:N	9:D:62:LYS:NZ	2.43	0.66
25:T:29:THR:HA	25:T:86:THR:HA	1.77	0.66
7:B:1764:C:H3'	7:B:1764:C:C6	2.30	0.66
7:B:2746:U:H2'	7:B:2747:G:H5'	1.77	0.66
7:B:727:A:H2	8:C:15:VAL:HG11	1.60	0.66
15:J:100:VAL:O	15:J:101:ILE:HB	1.95	0.66
19:N:12:ARG:CD	19:N:16:HIS:CD2	2.75	0.66
20:O:30:ARG:NH1	20:O:97:PHE:HD2	1.91	0.66
26:U:78:LYS:HD2	26:U:96:LYS:CG	2.16	0.66
7:B:2285:C:C1'	7:B:2288:A:N7	2.59	0.66
7:B:1092:C:H2'	7:B:1093:G:H8	1.60	0.66
28:W:21:GLY:HA2	28:W:25:PHE:HD1	1.57	0.66
27:V:53:LYS:HD3	27:V:54:ALA:N	2.10	0.66
9:D:111:GLY:HA3	9:D:194:PRO:HB2	1.77	0.66
7:B:1869:G:H2'	7:B:1871:A:N7	2.11	0.66
7:B:1313:U:H4'	7:B:1332:G:H4'	1.77	0.66
7:B:1785:A:C8	7:B:1787:A:N7	2.64	0.66
7:B:1853:A:N1	7:B:2087:G:H1'	2.11	0.66
7:B:2735:G:H2'	7:B:2736:A:C8	2.30	0.66
7:B:2885:G:C5	7:B:2886:A:H8	2.12	0.66
7:B:375:G:C8	7:B:375:G:H5''	2.30	0.66
7:B:799:G:C6	7:B:800:A:N6	2.63	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:941:A:H2'	7:B:941:A:N3	2.11	0.66
9:D:121:THR:O	9:D:128:ARG:CD	2.43	0.66
18:M:126:ILE:O	18:M:127:LYS:O	2.12	0.66
24:S:17:VAL:HG23	24:S:76:VAL:HG11	1.77	0.66
7:B:323:C:H3'	7:B:323:C:OP2	1.96	0.66
26:U:68:ASN:O	26:U:69:VAL:HG13	1.96	0.66
25:T:73:ARG:O	25:T:74:ILE:HD13	1.96	0.66
27:V:59:GLU:HG2	27:V:60:VAL:H	1.60	0.66
7:B:1341:G:C5	25:T:84:TYR:CE2	2.84	0.66
12:G:40:VAL:HG22	12:G:51:PHE:CE2	2.30	0.66
7:B:1566:A:N1	8:C:213:ARG:CZ	2.58	0.66
7:B:1824:G:C1'	8:C:247:TRP:HZ3	2.08	0.66
7:B:2439:A:N7	7:B:2586:U:H4'	2.10	0.66
7:B:2740:A:N3	7:B:2741:A:C8	2.64	0.66
7:B:784:G:N2	7:B:792:A:C5	2.63	0.66
7:B:986:C:H2'	7:B:987:C:H5'	1.77	0.66
10:E:84:THR:HG23	10:E:85:PHE:N	2.11	0.66
7:B:2394:C:OP2	17:L:63:LYS:HD2	1.95	0.66
19:N:11:ASN:O	19:N:12:ARG:HB2	1.93	0.66
20:O:92:PHE:CG	20:O:93:ASP:N	2.53	0.66
16:K:78:ARG:HH22	21:P:102:ARG:HH12	1.44	0.66
25:T:7:LEU:HD13	25:T:7:LEU:H	1.61	0.66
25:T:8:LEU:HD11	29:X:26:PHE:CZ	2.30	0.66
9:D:109:VAL:HG12	9:D:110:THR:H	1.60	0.66
14:I:85:ILE:HB	14:I:87:SER:O	1.95	0.66
7:B:1193:G:C2	7:B:1194:A:C4	2.83	0.66
1:O:9:ARG:NH2	22:Q:26:ALA:HB2	2.10	0.66
7:B:1640:A:H2'	7:B:1641:A:C8	2.30	0.66
7:B:2361:G:C2'	7:B:2362:C:H5'	2.25	0.66
1:O:48:TYR:OH	7:B:2884:U:C2	2.48	0.66
7:B:394:C:O2	7:B:395:U:C2	2.48	0.66
8:C:155:ARG:HD3	8:C:157:ALA:H	1.61	0.66
8:C:235:GLU:HG2	8:C:236:GLY:H	1.58	0.66
7:B:2621:G:O2'	9:D:164:GLN:CB	2.44	0.66
10:E:46:GLN:CD	10:E:86:ALA:HB1	2.16	0.66
12:G:162:ARG:HG3	12:G:166:GLU:HB2	1.76	0.66
31:Z:49:ARG:C	31:Z:51:VAL:N	2.48	0.66
20:O:65:THR:HB	20:O:70:ALA:CB	2.18	0.66
9:D:50:VAL:HB	9:D:75:ALA:CB	2.26	0.66
23:R:64:VAL:HA	23:R:101:ILE:N	2.09	0.66
7:B:1710:G:H2'	7:B:1711:A:C8	2.31	0.66
7:B:907:G:C5	7:B:908:C:C5	2.84	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2597:G:H2'	7:B:2598:A:C8	2.30	0.66
7:B:2561:U:O3'	16:K:40:LYS:HE2	1.96	0.66
7:B:544:C:N3	7:B:550:C:N4	2.44	0.66
7:B:8:C:H42	7:B:2895:G:H1	1.43	0.66
10:E:28:VAL:O	10:E:32:VAL:HG23	1.94	0.66
7:B:1232:G:C5	7:B:1233:C:C5	2.84	0.66
7:B:1376:C:H2'	7:B:1376:C:O2	1.95	0.66
7:B:2049:G:OP2	33:B:5370:HOH:O	2.14	0.66
7:B:750:A:H2'	7:B:751:A:H5''	1.78	0.66
7:B:800:A:OP1	33:B:5157:HOH:O	2.13	0.66
8:C:90:ILE:HD13	8:C:102:TYR:CD2	2.31	0.66
15:J:84:ILE:HD12	15:J:84:ILE:N	2.05	0.66
19:N:38:LEU:HB2	19:N:109:PRO:HB2	1.78	0.66
21:P:32:VAL:O	21:P:33:GLU:HB3	1.93	0.66
30:Y:53:MET:N	30:Y:53:MET:SD	2.64	0.66
7:B:2090:A:H4'	31:Z:49:ARG:NH1	2.09	0.66
31:Z:1:MET:C	31:Z:9:TYR:CE1	2.69	0.66
26:U:93:ARG:HB3	26:U:101:THR:HG22	1.77	0.66
7:B:2082:A:C6	7:B:2239:G:C2	2.84	0.66
7:B:1319:C:H1'	7:B:1334:G:N2	2.11	0.66
7:B:2560:A:C4	7:B:2561:U:C6	2.84	0.66
6:A:105:G:N3	6:A:106:G:C8	2.63	0.66
7:B:1522:A:H1'	7:B:1524:G:C5	2.31	0.66
9:D:170:VAL:O	9:D:171:THR:HB	1.94	0.66
1:O:48:TYR:CE2	1:O:49:ARG:HB2	2.30	0.66
7:B:1364:G:H1'	7:B:1368:G:H22	1.61	0.66
7:B:1298:C:H42	7:B:1642:G:H1	0.78	0.66
7:B:2241:A:N1	7:B:2242:G:C5	2.63	0.66
7:B:2453:A:C8	7:B:2453:A:H3'	2.29	0.66
7:B:565:C:C2'	7:B:566:U:H5'	2.24	0.66
18:M:67:VAL:HG22	18:M:100:LYS:HB3	1.78	0.66
19:N:4:ARG:O	19:N:4:ARG:NE	2.26	0.66
7:B:1323:C:OP1	24:S:84:ARG:NH2	2.29	0.66
7:B:85:G:H5'	26:U:28:LEU:CB	2.26	0.66
16:K:98:ARG:HG2	16:K:99:ILE:N	2.10	0.66
7:B:2137:U:H6	7:B:2137:U:H3'	1.60	0.66
1:O:29:VAL:HG21	1:O:34:GLY:CA	2.26	0.66
7:B:126:A:C5	7:B:127:A:C2	2.83	0.66
7:B:1451:C:H6	7:B:1451:C:H5''	1.61	0.66
7:B:2669:G:H2'	7:B:2670:A:H8	1.61	0.66
7:B:801:G:OP1	10:E:51:GLU:HB2	1.95	0.66
7:B:843:G:C6	7:B:844:A:C5	2.84	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:784:G:O4'	8:C:225:ASN:OD1	2.13	0.66
8:C:30:ALA:H	8:C:31:PRO:HD2	1.61	0.66
8:C:30:ALA:N	8:C:31:PRO:HD2	2.11	0.66
9:D:121:THR:O	9:D:128:ARG:NE	2.29	0.66
21:P:25:VAL:HG12	21:P:27:VAL:HG12	1.78	0.66
24:S:31:GLN:HG2	24:S:31:GLN:O	1.96	0.66
17:L:22:GLY:O	17:L:23:ILE:HD13	1.96	0.66
9:D:89:GLU:CG	9:D:93:GLY:HA3	2.26	0.66
11:F:157:THR:HG21	11:F:168:LEU:HD13	1.77	0.66
7:B:2144:G:H3'	7:B:2145:C:H5'	1.78	0.66
14:I:32:VAL:HG22	14:I:60:VAL:HG21	1.78	0.66
7:B:150:U:H2'	7:B:151:C:O4'	1.96	0.66
7:B:2314:A:H2'	7:B:2315:G:C8	2.30	0.66
7:B:2502:G:H5'	7:B:2503:A:H5''	1.77	0.66
7:B:2863:C:O2'	7:B:2864:G:H5'	1.95	0.66
7:B:465:G:C2	7:B:466:A:C6	2.83	0.66
7:B:533:G:H5''	7:B:533:G:C8	2.31	0.66
8:C:92:LEU:O	8:C:93:VAL:HB	1.95	0.66
13:H:5:LEU:HD13	13:H:35:LYS:HE3	1.78	0.66
15:J:77:HIS:NE2	15:J:84:ILE:HD13	2.11	0.66
19:N:3:HIS:CB	19:N:4:ARG:CZ	2.73	0.66
23:R:42:ALA:HB1	23:R:53:PHE:CD1	2.31	0.66
28:W:38:ARG:HG2	28:W:39:GLN:N	2.11	0.66
7:B:496:G:H5''	7:B:496:G:C8	2.31	0.66
10:E:120:VAL:H	10:E:189:THR:CG2	2.08	0.66
7:B:137:U:O5'	7:B:137:U:H6	1.79	0.66
5:4:26:ILE:CG2	5:4:35:GLN:HG2	2.26	0.65
7:B:1419:A:C2	7:B:2211:A:N6	2.65	0.65
7:B:2587:A:C8	7:B:2587:A:H5''	2.30	0.65
7:B:250:G:H5'	17:L:60:ARG:HD2	1.78	0.65
7:B:262:A:C8	7:B:262:A:H3'	2.30	0.65
7:B:901:C:H2'	7:B:902:C:C6	2.31	0.65
12:G:125:PRO:CG	12:G:129:GLU:HB3	2.25	0.65
7:B:1764:C:H3'	7:B:1764:C:H6	1.61	0.65
17:L:103:ILE:HB	17:L:104:GLN:NE2	2.10	0.65
7:B:2101:A:H2'	7:B:2102:G:H8	1.61	0.65
7:B:1516:G:H2'	7:B:1517:G:C8	2.30	0.65
7:B:2231:U:C2	7:B:2232:C:C5	2.85	0.65
7:B:2519:U:C2	7:B:2542:A:C6	2.84	0.65
7:B:379:G:N1	7:B:396:G:C6	2.63	0.65
7:B:828:U:O2'	7:B:829:A:H5''	1.97	0.65
12:G:162:ARG:HB2	12:G:166:GLU:CD	2.17	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:W:23:LYS:HE3	28:W:24:ARG:CB	2.23	0.65
26:U:92:VAL:HG22	26:U:94:PHE:N	2.09	0.65
9:D:31:ALA:HB3	9:D:95:SER:CB	2.27	0.65
12:G:67:ALA:O	12:G:70:LEU:HB3	1.96	0.65
7:B:1866:A:C8	7:B:1876:A:N6	2.65	0.65
4:3:2:LYS:HE2	4:3:2:LYS:C	2.15	0.65
6:A:84:G:N1	6:A:85:G:C5	2.64	0.65
4:3:58:ILE:HG22	17:L:51:GLU:HG3	1.78	0.65
7:B:1285:A:C6	7:B:1329:U:C4	2.84	0.65
7:B:1802:A:O2'	8:C:255:LYS:HE2	1.97	0.65
7:B:1809:A:C3'	7:B:1810:A:H8	2.09	0.65
7:B:2521:C:H5'	7:B:2521:C:C6	2.30	0.65
7:B:1452:G:C2	7:B:2702:G:C5	2.84	0.65
7:B:728:G:H3'	7:B:729:G:C5'	2.26	0.65
7:B:937:C:H2'	7:B:938:G:H8	1.59	0.65
8:C:153:LEU:O	8:C:153:LEU:HG	1.96	0.65
8:C:51:ARG:NH1	8:C:53:ILE:O	2.29	0.65
10:E:152:GLU:O	10:E:153:LEU:HB2	1.97	0.65
8:C:131:MET:O	8:C:134:ILE:HG22	1.96	0.65
17:L:14:LYS:CE	17:L:15:ALA:H	2.10	0.65
5:4:24:ARG:CB	5:4:36:ARG:HA	2.25	0.65
7:B:1313:U:OP1	33:B:5242:HOH:O	2.14	0.65
7:B:1889:A:O2'	7:B:2087:G:H5'	1.95	0.65
7:B:529:A:C5	7:B:2042:A:C2	2.84	0.65
7:B:2335:A:N7	7:B:2337:G:C5	2.64	0.65
7:B:2886:A:C2	7:B:2887:A:N7	2.65	0.65
7:B:371:A:C8	7:B:373:U:C2	2.84	0.65
7:B:580:U:H2'	7:B:581:C:C6	2.28	0.65
7:B:780:G:H2'	7:B:782:A:N7	2.11	0.65
7:B:959:A:H4'	7:B:959:A:OP2	1.97	0.65
7:B:962:G:OP1	33:B:5191:HOH:O	2.14	0.65
18:M:52:ALA:O	18:M:55:ARG:HB2	1.96	0.65
7:B:1454:C:H4'	19:N:60:VAL:HG22	1.77	0.65
22:Q:13:HIS:CG	22:Q:31:TYR:CZ	2.85	0.65
22:Q:38:VAL:CA	22:Q:42:GLY:H	2.08	0.65
28:W:22:VAL:HG12	28:W:23:LYS:HG2	1.77	0.65
17:L:19:LEU:CD1	17:L:19:LEU:H	1.99	0.65
25:T:76:ARG:HG2	25:T:77:ARG:N	2.06	0.65
29:X:52:ARG:O	29:X:56:LEU:HB2	1.96	0.65
2:1:24:LYS:N	2:1:24:LYS:HD3	2.11	0.65
27:V:21:ARG:NE	27:V:87:GLN:HG3	2.11	0.65
7:B:545:U:C6	7:B:545:U:H3'	2.31	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:63:ALA:HA	15:J:69:ARG:HH12	1.61	0.65
6:A:28:C:H6	6:A:29:A:N7	1.94	0.65
7:B:1313:U:OP1	33:B:5239:HOH:O	2.14	0.65
7:B:1610:A:O2'	7:B:1611:C:H5'	1.96	0.65
7:B:2452:C:H3'	7:B:2452:C:C6	2.31	0.65
7:B:2514:U:H2'	7:B:2515:C:H6	1.59	0.65
17:L:19:LEU:HD22	17:L:20:GLY:H	1.60	0.65
7:B:63:A:H5''	25:T:69:ARG:NH2	2.10	0.65
9:D:179:ARG:HH11	9:D:179:ARG:CG	2.04	0.65
18:M:4:PRO:HB2	18:M:69:PRO:HG2	1.77	0.65
30:Y:15:ARG:O	30:Y:20:LYS:HE2	1.96	0.65
26:U:22:GLY:CA	26:U:35:VAL:HG21	2.25	0.65
7:B:162:U:H4'	7:B:163:C:OP1	1.95	0.65
7:B:409:G:H2'	7:B:410:G:H8	1.62	0.65
7:B:1960:A:N7	7:B:1961:C:C5	2.64	0.65
6:A:87:U:H2'	6:A:88:C:O5'	1.96	0.65
17:L:45:GLY:C	17:L:47:ARG:H	2.00	0.65
7:B:2311:A:C6	11:F:39:VAL:HG23	2.32	0.65
7:B:773:U:H2'	7:B:773:U:O2	1.96	0.65
7:B:1566:A:N1	8:C:213:ARG:NH2	2.45	0.65
10:E:72:SER:HB3	10:E:74:LYS:HD2	1.78	0.65
20:O:27:VAL:HG23	20:O:28:VAL:H	1.62	0.65
17:L:35:HIS:ND1	23:R:84:ARG:HG3	2.11	0.65
28:W:42:THR:HG23	28:W:66:VAL:H	1.60	0.65
7:B:86:G:H1	7:B:96:C:H42	1.45	0.65
25:T:67:VAL:HG12	25:T:68:LYS:N	2.11	0.65
7:B:2811:G:H5''	9:D:60:VAL:HG12	1.79	0.65
13:H:119:ASN:O	13:H:121:VAL:N	2.30	0.65
6:A:15:A:C8	6:A:109:A:C6	2.85	0.65
18:M:135:VAL:HG12	18:M:136:MET:H	1.61	0.65
7:B:1360:G:C6	7:B:1372:U:C2	2.85	0.65
7:B:1652:A:N6	7:B:1653:G:N2	2.44	0.65
7:B:2318:G:O2'	7:B:2319:G:H5'	1.96	0.65
7:B:860:U:H1'	7:B:2268:A:C5'	2.27	0.65
8:C:143:VAL:CB	8:C:152:GLN:HG3	2.27	0.65
7:B:2751:G:H5'	12:G:3:VAL:CG1	2.26	0.65
21:P:59:THR:HG23	21:P:76:HIS:CG	2.32	0.65
23:R:40:MET:HG3	23:R:54:VAL:HG22	1.77	0.65
17:L:33:ARG:HG2	23:R:85:LYS:HE2	1.77	0.65
28:W:66:VAL:HG22	28:W:67:LYS:H	1.61	0.65
17:L:18:ARG:HD2	17:L:20:GLY:CA	2.27	0.65
29:X:28:LEU:CD2	29:X:42:LEU:HG	2.03	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1756:G:C3'	7:B:1756:G:C8	2.78	0.65
31:Z:36:VAL:HG22	31:Z:42:PRO:HB3	1.78	0.65
7:B:868:U:O4	7:B:909:A:N1	2.30	0.65
12:G:171:LYS:NZ	12:G:173:ALA:HA	2.12	0.65
9:D:56:LYS:HZ3	9:D:59:ARG:HA	1.59	0.65
7:B:2561:U:C2'	7:B:2562:U:H5''	2.26	0.65
26:U:48:VAL:HG12	26:U:48:VAL:O	1.96	0.65
14:I:60:VAL:CG2	14:I:66:PHE:HB3	2.27	0.65
7:B:525:U:O2'	7:B:526:A:H5''	1.97	0.65
13:H:39:ALA:O	13:H:43:ASN:HB2	1.96	0.65
1:O:27:LEU:HG	7:B:2886:A:C5	2.29	0.65
7:B:1353:A:N3	7:B:1354:A:C8	2.65	0.65
7:B:2512:C:H2'	7:B:2513:A:O4'	1.97	0.65
7:B:2692:G:H21	7:B:2693:G:H1'	1.61	0.65
7:B:2746:U:H2'	7:B:2747:G:C8	2.32	0.65
7:B:1799:G:OP1	8:C:255:LYS:HE3	1.96	0.65
18:M:66:ARG:NH1	18:M:66:ARG:HA	2.12	0.65
19:N:32:GLU:HG3	19:N:33:ILE:CG1	2.26	0.65
21:P:47:ILE:HG23	21:P:63:ILE:HG23	1.77	0.65
7:B:2386:A:H4'	28:W:38:ARG:HB2	1.78	0.65
2:1:45:HIS:O	2:1:46:VAL:HG12	1.97	0.65
7:B:1748:C:H5''	7:B:1748:C:H6	1.62	0.65
31:Z:37:CYS:H	31:Z:42:PRO:HA	1.61	0.65
27:V:30:ILE:HG22	27:V:93:ARG:NH2	2.12	0.65
13:H:78:VAL:HG12	13:H:79:THR:N	2.06	0.65
7:B:2179:C:H2'	7:B:2180:U:H5	1.61	0.65
7:B:675:A:C6	7:B:676:A:N1	2.65	0.65
26:U:3:LYS:HD2	26:U:81:ARG:HH11	1.61	0.65
20:O:90:VAL:HG22	20:O:116:GLN:HB3	1.78	0.65
4:3:33:THR:C	4:3:34:LYS:HD2	2.17	0.65
7:B:1567:G:C8	7:B:1567:G:H5''	2.31	0.65
7:B:1672:A:N6	7:B:1673:G:C6	2.65	0.65
7:B:1838:C:H4'	7:B:1839:G:C5'	2.27	0.65
7:B:1998:A:C6	7:B:1999:C:C4	2.85	0.65
7:B:2051:A:H5''	7:B:2051:A:H8	1.61	0.65
7:B:2487:G:H2'	7:B:2488:G:H5'	1.78	0.65
7:B:566:U:C5	7:B:567:U:H5	2.15	0.65
15:J:28:LEU:O	15:J:32:LEU:HB2	1.96	0.65
16:K:2:ILE:CG2	16:K:67:LYS:HE3	2.25	0.65
21:P:8:GLU:HA	21:P:11:GLN:CG	2.27	0.65
17:L:35:HIS:ND1	23:R:84:ARG:CG	2.60	0.65
24:S:27:LYS:HB2	24:S:28:LYS:CE	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:X:18:LEU:HA	29:X:22:LEU:CB	2.27	0.65
27:V:36:ALA:CB	27:V:37:PRO:HD2	2.21	0.65
25:T:15:HIS:H	25:T:31:VAL:HG23	1.62	0.65
7:B:1108:U:N3	7:B:1109:C:H5	1.94	0.65
12:G:120:ILE:HG23	12:G:133:LYS:O	1.97	0.65
12:G:69:ALA:O	12:G:72:ASN:HB3	1.96	0.65
14:I:77:VAL:HG22	14:I:80:LYS:HD2	1.78	0.65
16:K:95:ILE:O	16:K:95:ILE:HG23	1.96	0.65
11:F:121:PHE:CE1	11:F:127:TYR:HB2	2.32	0.65
6:A:56:G:H21	6:A:58:A:N6	1.95	0.65
7:B:1024:G:O6	7:B:1025:G:C6	2.50	0.65
7:B:2027:G:C6	7:B:2028:U:C4	2.85	0.65
7:B:2261:C:C2	7:B:2280:G:N2	2.65	0.65
7:B:2308:G:N3	7:B:2308:G:H3'	2.11	0.65
7:B:2455:G:C2	7:B:2456:C:C4	2.85	0.65
7:B:683:U:C2'	7:B:684:G:O5'	2.45	0.65
9:D:106:LYS:O	9:D:206:ALA:HA	1.97	0.65
15:J:19:ASP:O	15:J:20:ALA:HB3	1.96	0.65
6:A:48:U:OP2	20:O:97:PHE:CE2	2.50	0.65
9:D:33:ARG:HH21	9:D:87:GLY:N	1.95	0.65
7:B:1720:U:H2'	7:B:1721:G:H5'	1.78	0.65
7:B:141:G:C3'	7:B:142:A:O4'	2.44	0.65
7:B:1093:G:H21	7:B:1098:A:H62	1.45	0.65
7:B:2048:G:C2	7:B:2621:G:C2	2.85	0.64
7:B:2735:G:H2'	7:B:2736:A:H8	1.62	0.64
7:B:2764:A:N6	7:B:2766:A:C6	2.65	0.64
7:B:985:C:H2'	7:B:986:C:C6	2.32	0.64
15:J:59:ALA:C	15:J:61:LYS:H	2.00	0.64
7:B:2293:G:H5''	20:O:9:ARG:NH1	2.12	0.64
7:B:446:G:OP2	22:Q:2:ARG:NE	2.30	0.64
24:S:27:LYS:HB2	24:S:28:LYS:HD2	1.79	0.64
31:Z:56:ARG:HH11	31:Z:56:ARG:CB	2.09	0.64
7:B:307:G:H1'	7:B:309:A:N7	2.11	0.64
10:E:6:LYS:CG	10:E:119:ILE:HB	2.28	0.64
17:L:92:LEU:CD1	17:L:96:LYS:HB3	2.24	0.64
7:B:79:C:H42	7:B:107:G:H1	1.42	0.64
25:T:6:ARG:O	25:T:7:LEU:C	2.35	0.64
9:D:33:ARG:HH21	9:D:87:GLY:CA	2.09	0.64
7:B:2391:G:N1	7:B:2424:C:H3'	2.13	0.64
25:T:30:ILE:HG22	25:T:85:VAL:CG2	2.27	0.64
7:B:2304:G:H5'	11:F:128:SER:OG	1.98	0.64
7:B:226:A:O2'	7:B:227:A:H5'	1.96	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:E:154:ASP:OD1	10:E:155:GLU:N	2.29	0.64
7:B:2023:C:H5''	7:B:2023:C:H6	1.62	0.64
7:B:2027:G:C2	7:B:2037:A:C2	2.85	0.64
7:B:2850:A:HO2'	7:B:2851:A:H5'	1.62	0.64
7:B:990:A:H8	7:B:990:A:H5'	1.61	0.64
9:D:189:VAL:O	9:D:190:LYS:HB2	1.97	0.64
7:B:2469:A:O4'	18:M:55:ARG:HD3	1.96	0.64
9:D:186:LEU:HD21	21:P:5:LYS:HE2	1.79	0.64
24:S:30:SER:C	24:S:32:ALA:H	2.00	0.64
28:W:44:PHE:CE2	28:W:60:ALA:HB3	2.31	0.64
2:1:19:PHE:HD2	2:1:40:PRO:HA	1.60	0.64
7:B:483:A:H1'	26:U:43:LYS:CB	2.27	0.64
22:Q:99:VAL:HG13	22:Q:100:PHE:CD1	2.32	0.64
30:Y:2:LYS:CB	30:Y:37:ARG:HB2	2.27	0.64
9:D:37:VAL:HB	9:D:46:ARG:HB2	1.78	0.64
9:D:62:LYS:O	9:D:66:GLY:N	2.30	0.64
13:H:121:VAL:O	13:H:122:LEU:HB2	1.97	0.64
7:B:2562:U:H2'	7:B:2563:U:H5'	1.78	0.64
7:B:1764:C:C2	7:B:1765:U:C5	2.83	0.64
30:Y:11:SER:O	30:Y:12:ALA:HB2	1.97	0.64
7:B:1068:G:N2	7:B:1096:A:H5'	2.12	0.64
7:B:1450:G:H5''	7:B:1450:G:C8	2.32	0.64
7:B:1945:G:C2	7:B:1946:U:C6	2.85	0.64
7:B:1228:G:H2'	7:B:1229:C:H6	1.62	0.64
7:B:1761:C:H2'	7:B:1762:A:H5'	1.80	0.64
7:B:372:G:N7	31:Z:53:THR:HG23	2.12	0.64
7:B:464:U:C3'	7:B:465:G:H5''	2.27	0.64
7:B:574:A:H4'	7:B:575:A:C5'	2.28	0.64
7:B:806:C:C2'	7:B:807:U:H5'	2.27	0.64
20:O:27:VAL:HG22	20:O:38:GLN:O	1.97	0.64
21:P:71:ARG:NH2	21:P:102:ARG:HB3	2.13	0.64
22:Q:44:TYR:CD1	22:Q:48:ASP:CG	2.70	0.64
2:1:44:GLN:HB3	7:B:2371:G:H4'	1.78	0.64
10:E:132:LYS:C	10:E:134:LEU:H	2.00	0.64
9:D:81:GLU:HG3	9:D:82:PHE:H	1.61	0.64
23:R:33:VAL:HG22	23:R:34:GLU:N	2.05	0.64
7:B:2082:A:C5	7:B:2239:G:C2	2.86	0.64
25:T:30:ILE:HG22	25:T:85:VAL:HG22	1.80	0.64
16:K:20:MET:O	16:K:41:ILE:HD12	1.97	0.64
7:B:1052:C:H2'	7:B:1053:C:C5	2.33	0.64
26:U:25:LYS:O	26:U:34:ILE:HG13	1.98	0.64
6:A:75:G:H2'	6:A:76:G:H8	1.63	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1153:C:OP2	33:B:5209:HOH:O	2.15	0.64
7:B:2544:G:H2'	7:B:2545:G:C8	2.32	0.64
7:B:2766:A:N3	7:B:2766:A:H2'	2.11	0.64
7:B:687:C:N4	7:B:688:U:N3	2.46	0.64
7:B:969:G:C4	7:B:970:U:C5	2.84	0.64
8:C:68:ARG:HH22	8:C:190:THR:HG23	1.61	0.64
8:C:181:ARG:HB2	8:C:263:ASP:OD2	1.97	0.64
9:D:107:VAL:HG23	9:D:204:LYS:O	1.97	0.64
20:O:25:ARG:HB3	20:O:94:ARG:NH1	2.09	0.64
21:P:18:SER:HA	21:P:87:ARG:NH2	2.13	0.64
7:B:332:A:C8	7:B:335:C:N4	2.66	0.64
9:D:65:ALA:C	9:D:67:HIS:H	2.01	0.64
10:E:40:ARG:NH2	10:E:92:HIS:ND1	2.46	0.64
7:B:271:G:H1'	7:B:272:A:H8	1.57	0.64
7:B:1385:A:C4	7:B:1403:A:C2	2.86	0.64
13:H:8:LYS:C	13:H:9:VAL:HG22	2.17	0.64
23:R:47:VAL:HG22	23:R:48:LYS:N	2.12	0.64
7:B:1068:G:H21	7:B:1096:A:H5'	1.63	0.64
1:O:40:HIS:CG	1:O:41:HIS:N	2.65	0.64
7:B:1196:C:H2'	7:B:1197:G:C8	2.32	0.64
7:B:1819:A:OP2	8:C:153:LEU:HB2	1.98	0.64
7:B:204:A:O5'	7:B:204:A:H2'	1.98	0.64
7:B:2352:A:H5'	7:B:2352:A:C8	2.31	0.64
7:B:2840:C:H5''	19:N:53:THR:CG2	2.24	0.64
7:B:745:G:N2	7:B:753:A:N6	2.45	0.64
8:C:141:HIS:O	8:C:143:VAL:N	2.31	0.64
8:C:204:LEU:CD1	8:C:210:ALA:HB1	2.28	0.64
10:E:60:TRP:CZ3	10:E:67:ARG:HB2	2.32	0.64
4:3:12:ARG:HD2	17:L:62:PRO:HG2	1.79	0.64
18:M:127:LYS:C	18:M:127:LYS:HD3	2.17	0.64
7:B:2250:G:O6	18:M:82:MET:CG	2.46	0.64
7:B:323:C:C5	7:B:333:G:C8	2.86	0.64
7:B:98:G:C8	7:B:98:G:H5''	2.32	0.64
7:B:72:U:OP2	29:X:54:LYS:HE2	1.97	0.64
7:B:863:A:H2'	7:B:864:G:O4'	1.98	0.64
27:V:73:LYS:HB3	27:V:92:VAL:HG13	1.78	0.64
14:I:7:TYR:HA	14:I:59:THR:HA	1.77	0.64
7:B:1195:G:C2	7:B:1196:C:C5	2.84	0.64
7:B:690:G:H4'	8:C:216:ARG:HH22	1.62	0.64
13:H:50:ARG:HG3	13:H:51:ARG:N	2.11	0.64
16:K:32:TYR:HD1	16:K:32:TYR:N	1.95	0.64
28:W:32:ALA:O	28:W:66:VAL:HG21	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:E:130:LYS:C	10:E:132:LYS:HE2	2.18	0.64
17:L:17:LYS:HG3	17:L:18:ARG:N	2.10	0.64
29:X:2:LYS:H	29:X:6:LEU:HD23	1.62	0.64
29:X:44:LYS:O	29:X:44:LYS:HG3	1.96	0.64
22:Q:68:ALA:HB1	22:Q:73:ILE:HG22	1.80	0.64
31:Z:36:VAL:HA	31:Z:42:PRO:HB3	1.80	0.64
7:B:1069:A:H5'	7:B:1070:A:H8	1.62	0.64
7:B:473:G:H2'	7:B:474:G:H5'	1.79	0.64
7:B:1599:U:H2'	7:B:1600:C:C6	2.33	0.64
7:B:2143:C:O5'	7:B:2143:C:C6	2.50	0.64
7:B:37:C:O2'	10:E:45:ALA:O	2.15	0.64
7:B:720:U:H2'	7:B:721:A:C8	2.32	0.64
7:B:2104:C:C6	7:B:2104:C:H3'	2.32	0.64
7:B:1767:G:O2'	7:B:1768:C:H5'	1.96	0.64
7:B:1527:G:N2	7:B:1545:A:H62	1.96	0.64
7:B:1439:A:C2	7:B:1553:A:C6	2.85	0.64
5:4:25:VAL:O	5:4:26:ILE:HB	1.98	0.64
6:A:42:C:O2'	11:F:62:GLN:HB3	1.98	0.64
7:B:1285:A:H2'	7:B:1286:A:C5'	2.28	0.64
7:B:1816:C:C6	8:C:62:ARG:NH1	2.65	0.64
7:B:1837:C:N3	7:B:1899:A:N6	2.46	0.64
7:B:729:G:H2'	7:B:729:G:N3	2.11	0.64
7:B:993:G:N2	7:B:1162:G:C4	2.66	0.64
16:K:31:ARG:HB3	16:K:32:TYR:CE1	2.32	0.64
20:O:39:VAL:CG2	20:O:39:VAL:O	2.45	0.64
22:Q:44:TYR:O	22:Q:48:ASP:N	2.30	0.64
10:E:138:LEU:HB3	10:E:143:LEU:HD12	1.79	0.64
17:L:79:LEU:H	17:L:113:ALA:HB3	1.62	0.64
18:M:43:ALA:HB2	18:M:91:TYR:O	1.97	0.64
7:B:284:U:H2'	7:B:285:G:C8	2.33	0.64
13:H:111:ALA:O	13:H:113:SER:N	2.31	0.64
24:S:86:MET:HG2	24:S:87:PRO:HD2	1.78	0.64
7:B:1877:A:H8	7:B:1877:A:O5'	1.80	0.64
7:B:1984:G:C5	7:B:1985:C:C5	2.86	0.64
7:B:13:A:C2	7:B:526:A:N7	2.66	0.64
7:B:2014:A:C2'	7:B:2015:A:H8	2.01	0.64
7:B:2431:U:H2'	7:B:2432:A:H5''	1.78	0.64
7:B:2886:A:H2'	7:B:2887:A:H8	1.63	0.64
7:B:800:A:C4'	7:B:801:G:H5'	2.28	0.64
7:B:836:G:C5	7:B:837:C:C4	2.86	0.64
7:B:966:G:H1'	7:B:2267:A:N6	2.12	0.64
7:B:2024:G:H5''	9:D:154:LYS:NZ	2.12	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:73:VAL:HA	15:J:88:THR:O	1.98	0.64
7:B:911:A:C6	18:M:13:HIS:HD2	2.16	0.64
23:R:76:LYS:HD3	23:R:90:ARG:HD2	1.78	0.64
10:E:172:ALA:C	10:E:174:GLY:H	1.99	0.64
10:E:149:ILE:CG1	10:E:186:VAL:HA	2.25	0.64
18:M:9:PHE:CZ	18:M:12:MET:HB2	2.33	0.64
7:B:928:A:H1'	30:Y:1:ALA:HA	1.80	0.64
7:B:1069:A:C5'	7:B:1070:A:H8	2.11	0.64
26:U:49:PRO:HD2	26:U:52:ASN:OD1	1.98	0.64
7:B:1120:G:H2'	7:B:1121:C:C6	2.33	0.64
24:S:1:MET:HE3	24:S:4:ILE:HG13	1.78	0.64
7:B:2821:A:H5''	9:D:167:ASN:ND2	2.13	0.64
7:B:538:A:H4'	15:J:8:PRO:O	1.98	0.64
7:B:688:U:H3'	7:B:688:U:C6	2.31	0.64
7:B:797:G:C6	7:B:798:G:N7	2.66	0.64
7:B:836:G:C5	7:B:837:C:C5	2.85	0.64
7:B:910:A:C2	7:B:911:A:N1	2.66	0.64
8:C:254:LYS:HZ1	8:C:254:LYS:N	1.96	0.64
13:H:31:VAL:HG12	13:H:36:ALA:HA	1.80	0.64
15:J:102:GLU:OE1	15:J:124:VAL:HG22	1.97	0.64
15:J:130:HIS:C	15:J:132:HIS:N	2.50	0.64
19:N:47:VAL:O	19:N:51:LEU:HD13	1.96	0.64
21:P:8:GLU:HA	21:P:11:GLN:HG3	1.80	0.64
22:Q:14:LYS:HA	22:Q:17:LEU:HB3	1.79	0.64
23:R:80:ARG:CG	23:R:86:GLN:H	2.10	0.64
29:X:26:PHE:N	29:X:26:PHE:HD1	1.96	0.64
9:D:200:ASP:O	9:D:201:LEU:HB2	1.97	0.64
18:M:90:GLU:HA	18:M:91:TYR:CZ	2.33	0.64
30:Y:1:ALA:HB1	30:Y:37:ARG:HB3	1.79	0.64
9:D:61:THR:HG23	9:D:62:LYS:HD3	1.80	0.64
8:C:27:LYS:N	8:C:28:PRO:HD3	2.13	0.64
26:U:48:VAL:HG13	26:U:51:LEU:CA	2.28	0.64
7:B:1528:A:C4	7:B:1544:A:C6	2.86	0.64
7:B:1438:U:O2'	7:B:1439:A:O4'	2.16	0.64
1:O:22:THR:HG22	1:O:23:ALA:N	2.13	0.64
7:B:1191:G:C2'	7:B:1192:G:H5'	2.28	0.64
7:B:2270:A:H2'	7:B:2271:G:C5'	2.28	0.64
7:B:2722:G:O4'	19:N:4:ARG:HG3	1.98	0.64
7:B:2764:A:H2'	7:B:2765:A:C5'	2.27	0.64
7:B:379:G:N2	7:B:396:G:C5	2.66	0.64
7:B:673:C:H2'	7:B:674:G:H5'	1.79	0.64
8:C:84:PRO:C	8:C:86:ARG:H	2.02	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:N:25:ALA:CB	19:N:44:LEU:HD11	2.24	0.64
21:P:29:VAL:CG2	21:P:47:ILE:HD11	2.28	0.64
24:S:75:PHE:HD1	24:S:75:PHE:N	1.96	0.64
28:W:36:ILE:C	28:W:36:ILE:HD12	2.19	0.64
29:X:15:ASN:OD1	29:X:18:LEU:HD21	1.98	0.64
17:L:85:VAL:HG13	17:L:86:GLU:N	2.12	0.64
7:B:870:U:H3	7:B:907:G:H1	1.44	0.64
18:M:91:TYR:CD2	18:M:91:TYR:N	2.66	0.64
7:B:1335:C:H2'	7:B:1336:A:C8	2.28	0.64
11:F:3:LEU:HD23	11:F:3:LEU:O	1.97	0.64
16:K:98:ARG:C	16:K:99:ILE:HD12	2.19	0.64
7:B:697:G:H1	7:B:765:C:H42	1.45	0.64
7:B:187:G:H3'	7:B:187:G:C8	2.33	0.63
7:B:2525:G:N2	7:B:2526:G:C5	2.67	0.63
7:B:2650:U:C2	7:B:2671:G:N2	2.66	0.63
7:B:2821:A:OP2	9:D:115:GLY:HA3	1.98	0.63
7:B:585:G:C5	7:B:1251:C:C4	2.87	0.63
8:C:125:PRO:O	8:C:192:GLY:HA3	1.98	0.63
28:W:44:PHE:CZ	28:W:60:ALA:CB	2.81	0.63
28:W:44:PHE:HE2	28:W:80:SER:HA	1.63	0.63
28:W:74:LYS:HG3	28:W:75:ASN:N	2.11	0.63
7:B:298:G:N2	7:B:339:U:H5	1.93	0.63
10:E:114:ARG:O	10:E:115:GLN:C	2.36	0.63
7:B:322:A:OP2	10:E:162:ARG:HB3	1.97	0.63
17:L:92:LEU:N	17:L:96:LYS:HD3	2.13	0.63
29:X:51:ALA:C	29:X:52:ARG:HG3	2.17	0.63
7:B:2201:G:C6	7:B:2202:U:O2	2.51	0.63
7:B:1707:G:H5'	7:B:1707:G:H8	1.64	0.63
19:N:29:VAL:CG2	19:N:75:ILE:HD11	2.28	0.63
6:A:74:U:H2'	6:A:75:G:C8	2.32	0.63
27:V:51:GLN:HA	27:V:56:PHE:CD1	2.33	0.63
12:G:32:LEU:HD21	12:G:135:ALA:CB	2.27	0.63
1:O:29:VAL:CG1	1:O:30:ASP:N	2.62	0.63
7:B:1189:A:C2	7:B:1190:G:H1'	2.33	0.63
7:B:1283:G:H3'	7:B:1283:G:C8	2.33	0.63
7:B:1831:G:C5	7:B:1832:C:C5	2.86	0.63
7:B:2394:C:OP1	17:L:63:LYS:HG3	1.99	0.63
7:B:2466:C:H1'	18:M:118:LYS:NZ	2.12	0.63
7:B:2715:C:C2'	7:B:2716:C:H5'	2.29	0.63
7:B:2733:A:C8	7:B:2733:A:C3'	2.77	0.63
7:B:2885:G:C6	7:B:2886:A:C8	2.86	0.63
7:B:843:G:H5'	7:B:844:A:OP2	1.98	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:O:29:HIS:C	20:O:30:ARG:HD3	2.18	0.63
21:P:25:VAL:HG13	21:P:87:ARG:HA	1.80	0.63
22:Q:37:ALA:HA	22:Q:39:ILE:HG22	1.80	0.63
23:R:6:GLN:HA	23:R:10:LYS:HB2	1.80	0.63
24:S:7:HIS:CD2	24:S:10:ALA:HB2	2.33	0.63
7:B:527:C:H5''	7:B:2779:U:O2	1.98	0.63
23:R:39:LEU:H	23:R:61:ALA:HB2	1.63	0.63
18:M:43:ALA:C	18:M:45:GLN:N	2.52	0.63
7:B:871:U:H4'	18:M:68:PHE:CZ	2.34	0.63
7:B:1334:G:H2'	7:B:1335:C:H5'	1.79	0.63
7:B:1939:U:H3'	7:B:1940:U:H5'	1.80	0.63
6:A:51:G:N1	20:O:33:ARG:NH2	2.47	0.63
7:B:1566:A:C2	8:C:213:ARG:CZ	2.81	0.63
7:B:1796:U:C2	7:B:1797:G:C8	2.86	0.63
7:B:2728:U:H2'	7:B:2729:G:H8	1.61	0.63
7:B:763:G:C8	7:B:763:G:H3'	2.34	0.63
8:C:155:ARG:O	8:C:155:ARG:HD3	1.97	0.63
7:B:2052:A:H4'	9:D:148:GLN:O	1.98	0.63
13:H:3:VAL:N	13:H:21:VAL:HG11	2.13	0.63
21:P:25:VAL:O	21:P:27:VAL:N	2.30	0.63
21:P:61:ARG:NH1	21:P:61:ARG:HB3	2.13	0.63
18:M:86:LYS:CG	18:M:87:GLY:H	2.04	0.63
7:B:1047:G:H1'	7:B:1110:G:N2	2.14	0.63
26:U:10:VAL:HG12	26:U:70:ALA:HA	1.80	0.63
17:L:123:ARG:HB2	17:L:143:GLU:H	1.63	0.63
12:G:79:THR:CG2	12:G:80:GLU:N	2.54	0.63
7:B:2144:G:N2	7:B:2148:G:H21	1.93	0.63
29:X:9:LYS:HE2	29:X:11:VAL:HG11	1.80	0.63
7:B:1771:C:N4	7:B:1772:A:N6	2.46	0.63
7:B:2136:G:C6	7:B:2156:G:O2'	2.51	0.63
7:B:2798:U:H4'	7:B:2800:A:C2	2.34	0.63
3:2:24:THR:O	3:2:28:ARG:HB2	1.98	0.63
7:B:585:G:C4	7:B:1251:C:N4	2.66	0.63
7:B:1842:G:N2	7:B:1901:A:C4	2.66	0.63
7:B:2233:U:H2'	7:B:2234:G:H8	1.63	0.63
7:B:2682:A:C2	7:B:2683:C:N3	2.66	0.63
7:B:668:A:C2	7:B:670:A:C2	2.87	0.63
8:C:243:PRO:CA	8:C:249:VAL:HG23	2.27	0.63
15:J:98:GLU:HG2	15:J:126:ALA:HB2	1.80	0.63
20:O:36:TYR:HA	20:O:52:SER:CB	2.29	0.63
20:O:52:SER:HA	20:O:74:VAL:HG11	1.80	0.63
22:Q:88:GLU:HA	23:R:53:PHE:CD1	2.32	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:R:86:GLN:HB3	23:R:87:GLN:HG2	1.79	0.63
7:B:2380:C:H2'	7:B:2381:A:C8	2.33	0.63
27:V:59:GLU:HG2	27:V:60:VAL:N	2.12	0.63
18:M:40:ARG:NH2	18:M:92:TRP:CZ3	2.66	0.63
9:D:60:VAL:C	9:D:63:PRO:HD2	2.19	0.63
5:4:31:PRO:HG2	12:G:169:ARG:NH2	2.13	0.63
7:B:409:G:H2'	7:B:410:G:C8	2.34	0.63
6:A:34:A:H1'	6:A:36:C:N4	2.13	0.63
7:B:1010:A:H2'	7:B:1011:G:O5'	1.99	0.63
7:B:1217:U:O2	7:B:1218:G:C8	2.52	0.63
7:B:1663:G:O2'	7:B:1664:A:H8	1.81	0.63
7:B:2059:A:C6	7:B:2503:A:C2	2.87	0.63
7:B:2758:A:C2	7:B:2759:G:H1'	2.32	0.63
7:B:1:G:H2'	7:B:2:G:C8	2.33	0.63
7:B:738:G:N1	7:B:739:A:C2	2.67	0.63
8:C:243:PRO:HB3	8:C:248:GLY:CA	2.27	0.63
6:A:42:C:HO2'	11:F:62:GLN:HB3	1.63	0.63
15:J:128:ASN:O	15:J:130:HIS:N	2.31	0.63
18:M:31:PHE:CE1	18:M:126:ILE:O	2.51	0.63
21:P:25:VAL:O	21:P:47:ILE:HB	1.98	0.63
21:P:51:ASN:HD21	21:P:97:TYR:HD2	1.45	0.63
23:R:86:GLN:CG	23:R:87:GLN:HE21	2.10	0.63
2:1:46:VAL:HG22	2:1:47:ILE:HG13	1.80	0.63
7:B:104:A:C8	7:B:104:A:H3'	2.34	0.63
12:G:10:VAL:HG13	12:G:14:VAL:CB	2.20	0.63
8:C:134:ILE:HD13	8:C:135:PRO:HD2	1.79	0.63
30:Y:1:ALA:HB3	30:Y:38:GLU:H	1.62	0.63
7:B:2282:G:C5	7:B:2425:A:N1	2.66	0.63
7:B:2891:U:C6	7:B:2891:U:H3'	2.29	0.63
7:B:1550:C:H2'	7:B:1551:A:H8	1.64	0.63
7:B:173:A:H2'	7:B:174:U:H6	1.64	0.63
1:0:6:LYS:HD3	1:0:7:PRO:HD2	1.79	0.63
7:B:1274:A:N3	7:B:1297:C:H1'	2.14	0.63
7:B:1435:G:H2'	7:B:1436:G:C8	2.28	0.63
7:B:2306:C:N3	11:F:39:VAL:HB	2.13	0.63
7:B:396:G:C2	7:B:397:U:C2	2.86	0.63
8:C:103:ILE:HG23	8:C:104:LEU:O	1.99	0.63
7:B:2276:G:P	18:M:82:MET:HB3	2.38	0.63
31:Z:48:GLN:HE22	31:Z:49:ARG:CD	2.11	0.63
12:G:10:VAL:O	12:G:10:VAL:HG12	1.97	0.63
7:B:42:A:C6	7:B:43:G:N7	2.67	0.63
18:M:43:ALA:C	18:M:45:GLN:H	2.00	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1393:A:O2'	7:B:1394:U:H5'	1.97	0.63
7:B:1088:A:H4'	7:B:1089:A:H8	1.63	0.63
7:B:1595:C:H2'	7:B:1596:A:C8	2.33	0.63
14:I:32:VAL:HG22	14:I:60:VAL:CG2	2.28	0.63
7:B:215:G:H4'	7:B:216:A:H4'	1.81	0.63
7:B:1028:A:N3	7:B:1029:A:N7	2.46	0.63
7:B:2035:G:H4'	7:B:2036:C:OP2	1.99	0.63
7:B:2056:G:N3	7:B:2577:A:C2	2.67	0.63
7:B:978:G:C5	7:B:979:A:N7	2.67	0.63
12:G:3:VAL:O	12:G:4:ALA:HB2	1.99	0.63
15:J:47:HIS:C	15:J:47:HIS:ND1	2.51	0.63
20:O:30:ARG:N	20:O:30:ARG:HD3	2.14	0.63
22:Q:87:VAL:CB	23:R:54:VAL:HB	2.20	0.63
23:R:72:VAL:HG22	23:R:73:LYS:H	1.64	0.63
10:E:193:VAL:HA	10:E:199:MET:HB2	1.80	0.63
29:X:17:GLU:HA	29:X:21:LEU:CB	2.29	0.63
7:B:665:U:H2'	7:B:666:A:H8	1.59	0.63
7:B:862:G:H2'	7:B:863:A:H8	1.63	0.63
7:B:1829:A:H5'	7:B:1829:A:C8	2.34	0.63
7:B:544:C:C2	7:B:545:U:C2	2.87	0.63
7:B:1440:U:H2'	7:B:1441:G:C8	2.32	0.63
3:2:1:MET:O	7:B:1620:G:H1'	1.98	0.63
7:B:1225:G:OP1	23:R:90:ARG:CD	2.47	0.63
7:B:1611:C:H2'	7:B:1611:C:O2	1.97	0.63
7:B:1897:G:O2'	7:B:1898:U:H5'	1.98	0.63
7:B:2355:G:C6	7:B:2356:U:C2	2.87	0.63
7:B:2358:A:H2'	7:B:2359:C:H5'	1.81	0.63
7:B:23:G:H8	7:B:23:G:H5''	1.63	0.63
7:B:2420:C:C3'	7:B:2421:G:H5''	2.29	0.63
7:B:252:G:C2	7:B:253:C:C5	2.86	0.63
7:B:2569:G:C2	7:B:2570:G:N7	2.67	0.63
7:B:2764:A:N6	7:B:2766:A:N1	2.46	0.63
7:B:979:A:H3'	7:B:980:A:H5''	1.80	0.63
7:B:988:A:C2	7:B:989:G:N2	2.66	0.63
8:C:53:ILE:HG12	8:C:218:THR:HA	1.78	0.63
15:J:45:THR:H	22:Q:63:ARG:NH2	1.96	0.63
19:N:63:ARG:HG3	19:N:80:PHE:CE1	2.33	0.63
22:Q:12:ARG:HG2	22:Q:12:ARG:HH11	1.62	0.63
22:Q:60:TRP:CE2	22:Q:93:ILE:HG22	2.33	0.63
24:S:7:HIS:HB2	24:S:103:ILE:HB	1.79	0.63
23:R:37:GLU:O	23:R:37:GLU:HG3	1.98	0.63
27:V:36:ALA:CB	27:V:37:PRO:CD	2.75	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:905:A:H2'	7:B:906:U:H5''	1.80	0.63
7:B:2810:A:H61	7:B:2890:G:H1'	1.63	0.63
7:B:1279:G:N2	7:B:1292:G:C4	2.67	0.63
7:B:1055:G:P	7:B:1055:G:H8	2.21	0.63
28:W:21:GLY:HA2	28:W:25:PHE:CE1	2.32	0.63
28:W:40:ARG:HG3	28:W:41:GLY:H	1.63	0.63
7:B:1034:G:C6	7:B:1035:U:C4	2.87	0.63
20:O:2:ASP:HB2	20:O:4:LYS:HB2	1.80	0.63
7:B:1647:U:OP2	33:B:5274:HOH:O	2.15	0.63
3:2:34:ARG:O	3:2:35:ARG:C	2.37	0.63
4:3:12:ARG:NE	4:3:23:HIS:ND1	2.46	0.63
7:B:1419:A:C8	7:B:1421:G:C6	2.86	0.63
7:B:1670:C:H5''	7:B:1671:U:OP2	1.99	0.63
7:B:1797:G:N3	7:B:1823:G:C2	2.66	0.63
7:B:2679:A:H2'	7:B:2680:U:C6	2.34	0.63
7:B:2727:A:C4	7:B:2728:U:C5	2.86	0.63
7:B:2755:C:O2'	7:B:2756:U:H2'	1.99	0.63
7:B:911:A:C5	18:M:13:HIS:CD2	2.86	0.63
8:C:241:LYS:CB	8:C:241:LYS:NZ	2.61	0.63
13:H:25:TYR:O	13:H:31:VAL:HG22	1.98	0.63
9:D:116:LYS:O	19:N:1:MET:HA	1.99	0.63
26:U:66:VAL:O	26:U:67:SER:C	2.36	0.63
17:L:111:ILE:HD11	17:L:113:ALA:HB2	1.80	0.63
18:M:18:ARG:NH1	18:M:92:TRP:HZ3	1.97	0.63
6:A:10:G:H2'	6:A:11:C:O4'	1.98	0.63
25:T:16:VAL:O	25:T:17:SER:HB3	1.99	0.63
19:N:67:PHE:HE1	19:N:72:ASP:N	1.92	0.63
7:B:1768:C:C6	7:B:1768:C:C3'	2.81	0.63
7:B:2661:G:H2'	7:B:2662:A:H8	1.63	0.63
24:S:4:ILE:HG22	24:S:5:ALA:N	2.13	0.63
14:I:108:ILE:HG22	14:I:128:ILE:HD13	1.79	0.63
7:B:1172:C:H2'	7:B:1173:U:C1'	2.29	0.63
7:B:1453:A:N1	19:N:74:GLU:HA	2.14	0.62
7:B:1814:G:OP2	7:B:1815:A:H2'	1.99	0.62
7:B:1970:A:H5''	7:B:1970:A:H8	1.63	0.62
7:B:2226:C:H2'	7:B:2227:A:O4'	1.98	0.62
7:B:2529:G:H5'	7:B:2530:A:H5''	1.79	0.62
7:B:2761:A:C5	7:B:2762:C:C5	2.87	0.62
7:B:768:G:C6	7:B:769:U:N3	2.63	0.62
9:D:116:LYS:HB2	9:D:165:MET:HB3	1.80	0.62
9:D:186:LEU:HD11	21:P:5:LYS:HE2	1.80	0.62
9:D:186:LEU:O	9:D:188:LEU:HD13	1.98	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:L:58:TYR:CE2	17:L:61:LEU:HD22	2.34	0.62
19:N:4:ARG:N	19:N:4:ARG:NE	2.47	0.62
7:B:997:G:OP1	22:Q:92:LYS:HD2	1.98	0.62
7:B:493:G:O2'	24:S:7:HIS:O	2.08	0.62
23:R:57:GLY:O	23:R:61:ALA:HB2	1.99	0.62
18:M:5:LYS:HZ2	18:M:6:ARG:CA	2.12	0.62
7:B:2784:U:H2'	7:B:2785:C:C6	2.32	0.62
7:B:1337:G:H5''	7:B:1337:G:C8	2.33	0.62
7:B:1108:U:C2	7:B:1109:C:C5	2.87	0.62
7:B:1070:A:O2'	7:B:1097:U:H4'	1.99	0.62
7:B:631:A:O5'	7:B:631:A:H8	1.82	0.62
7:B:1853:A:N6	7:B:1889:A:C4	2.67	0.62
7:B:445:C:OP1	22:Q:1:ALA:HB1	1.98	0.62
8:C:153:LEU:O	8:C:153:LEU:CG	2.47	0.62
8:C:178:GLY:O	8:C:266:ILE:HG22	1.99	0.62
8:C:35:LYS:HE2	8:C:64:VAL:HG23	1.81	0.62
9:D:125:TRP:O	9:D:127:PHE:N	2.28	0.62
9:D:208:LYS:C	9:D:208:LYS:HE3	2.19	0.62
15:J:20:ALA:HB2	15:J:56:VAL:HG12	1.81	0.62
15:J:25:LEU:HG	15:J:64:VAL:HA	1.81	0.62
15:J:98:GLU:HB3	15:J:124:VAL:HG11	1.79	0.62
21:P:77:SER:HB2	21:P:78:PRO:HD3	1.80	0.62
23:R:77:PHE:CB	23:R:89:HIS:CE1	2.81	0.62
24:S:28:LYS:C	24:S:30:SER:H	2.01	0.62
24:S:32:ALA:HA	24:S:35:ILE:CG2	2.29	0.62
24:S:75:PHE:N	24:S:75:PHE:CD1	2.67	0.62
7:B:300:A:N6	7:B:334:C:H5'	2.14	0.62
7:B:78:U:H2'	7:B:79:C:C6	2.35	0.62
7:B:78:U:H2'	7:B:79:C:O4'	1.99	0.62
7:B:262:A:H2'	7:B:263:G:O5'	1.99	0.62
7:B:2889:C:O2'	7:B:2890:G:H5'	2.00	0.62
20:O:83:LEU:O	20:O:84:GLU:O	2.17	0.62
7:B:2093:G:H1'	7:B:2198:A:N1	2.14	0.62
7:B:2195:U:H2'	7:B:2196:C:C6	2.27	0.62
7:B:1178:C:H2'	7:B:1179:G:H8	1.63	0.62
7:B:543:G:C2	7:B:551:G:C2	2.87	0.62
7:B:2408:U:H2'	7:B:2409:G:C8	2.34	0.62
7:B:650:C:N3	7:B:651:G:C8	2.67	0.62
7:B:1575:C:H2'	7:B:1576:U:C6	2.34	0.62
20:O:35:ILE:HG12	20:O:71:ALA:CB	2.28	0.62
4:3:15:LYS:HE2	4:3:21:PHE:CE1	2.34	0.62
7:B:1153:C:P	33:B:5209:HOH:O	2.57	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1451:C:H2'	7:B:1458:U:C2	2.34	0.62
7:B:2618:G:H21	9:D:155:VAL:HG21	1.64	0.62
7:B:540:C:N3	7:B:541:A:N7	2.46	0.62
7:B:790:U:H5	7:B:791:C:C5	2.16	0.62
7:B:948:C:O4'	7:B:984:A:H2	1.82	0.62
8:C:11:GLY:O	8:C:12:ARG:HB2	1.97	0.62
8:C:257:ARG:HB3	8:C:261:ARG:NH2	2.15	0.62
22:Q:44:TYR:CE1	22:Q:48:ASP:CG	2.73	0.62
10:E:15:SER:HB3	10:E:196:VAL:CG2	2.29	0.62
9:D:7:LYS:HB3	9:D:201:LEU:CD2	2.28	0.62
18:M:5:LYS:HZ1	18:M:8:LYS:HB3	1.64	0.62
9:D:46:ARG:O	9:D:47:ALA:HB2	1.98	0.62
7:B:1291:C:C5'	7:B:1291:C:H6	2.07	0.62
26:U:22:GLY:HA2	26:U:35:VAL:HG21	1.79	0.62
7:B:2137:U:C6	7:B:2137:U:H3'	2.34	0.62
7:B:1432:G:H2'	7:B:1433:A:C8	2.34	0.62
7:B:1454:C:H4'	7:B:1455:G:OP1	1.99	0.62
7:B:2453:A:C8	7:B:2453:A:C3'	2.80	0.62
7:B:2485:G:H2'	7:B:2486:C:H5'	1.81	0.62
7:B:2617:U:H2'	7:B:2618:G:O4'	1.98	0.62
7:B:2683:C:H5''	7:B:2683:C:H6	1.65	0.62
7:B:465:G:H2'	7:B:466:A:N7	2.13	0.62
9:D:116:LYS:HB2	9:D:165:MET:CB	2.29	0.62
11:F:147:ARG:HD2	11:F:147:ARG:O	1.99	0.62
19:N:2:ARG:O	19:N:2:ARG:NE	2.32	0.62
22:Q:91:ARG:O	22:Q:94:LEU:HG	2.00	0.62
28:W:31:LEU:HD11	28:W:39:GLN:HE21	1.62	0.62
30:Y:9:THR:OG1	30:Y:10:ARG:N	2.31	0.62
10:E:190:ALA:HB3	10:E:194:LYS:HE2	1.82	0.62
7:B:2201:G:H5''	7:B:2201:G:C8	2.32	0.62
7:B:636:G:N7	17:L:109:LYS:NZ	2.39	0.62
25:T:62:VAL:CG2	25:T:63:VAL:H	2.09	0.62
7:B:1109:C:H2'	7:B:1109:C:O2	1.97	0.62
7:B:2507:C:H2'	7:B:2508:G:H8	1.64	0.62
7:B:1702:G:C5	7:B:1703:G:N7	2.68	0.62
7:B:2184:A:H2'	7:B:2185:U:C6	2.34	0.62
7:B:1256:G:C2	7:B:1257:C:C5	2.88	0.62
7:B:1353:A:C2	7:B:1354:A:N7	2.67	0.62
7:B:1431:A:O2'	7:B:1432:G:H5'	1.99	0.62
7:B:1612:C:N1	7:B:1620:G:N2	2.46	0.62
7:B:1823:G:H2'	7:B:1824:G:O4'	1.98	0.62
7:B:2438:U:O3'	7:B:2439:A:H3'	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:699:A:C2	7:B:734:A:H1'	2.34	0.62
8:C:21:PRO:O	8:C:22:GLU:HB2	2.00	0.62
7:B:1567:G:C5	8:C:82:TYR:HD2	2.18	0.62
9:D:174:SER:O	9:D:175:LEU:HB2	1.97	0.62
11:F:37:MET:H	11:F:86:CYS:HB2	1.65	0.62
15:J:128:ASN:O	15:J:129:GLU:C	2.37	0.62
15:J:7:LYS:HD3	15:J:7:LYS:N	2.14	0.62
18:M:128:THR:OG1	18:M:129:THR:N	2.32	0.62
7:B:2845:U:O3'	21:P:54:LEU:HG	2.00	0.62
22:Q:52:ARG:HD3	22:Q:53:LYS:HZ1	1.64	0.62
28:W:8:SER:O	28:W:10:ARG:HG2	1.98	0.62
7:B:2284:A:O2'	7:B:2288:A:N6	2.32	0.62
9:D:81:GLU:O	9:D:82:PHE:CD1	2.52	0.62
7:B:265:A:O2'	7:B:266:G:H4'	1.99	0.62
7:B:638:G:C6	7:B:639:U:N3	2.68	0.62
6:A:100:G:N3	7:B:863:A:O2'	2.31	0.62
14:I:4:VAL:HG13	14:I:5:GLN:H	1.63	0.62
26:U:48:VAL:HG13	26:U:51:LEU:N	2.15	0.62
7:B:413:C:H4'	7:B:1880:U:O2'	2.00	0.62
6:A:105:G:O2'	6:A:106:G:H5'	1.99	0.62
16:K:98:ARG:O	16:K:99:ILE:HD12	2.00	0.62
7:B:2507:C:H2'	7:B:2508:G:C8	2.35	0.62
7:B:181:A:H1'	7:B:435:C:H5"	1.81	0.62
7:B:1190:G:OP1	17:L:38:GLN:CA	2.48	0.62
7:B:123:G:N3	7:B:124:G:C8	2.67	0.62
7:B:1362:C:N3	7:B:1363:C:C5	2.68	0.62
7:B:1430:G:H2'	7:B:1431:A:C8	2.35	0.62
7:B:1566:A:C6	8:C:213:ARG:NH2	2.68	0.62
7:B:2060:A:H1'	33:B:5378:HOH:O	1.98	0.62
7:B:2488:G:C2	7:B:2489:U:C5	2.88	0.62
7:B:2678:C:C2'	7:B:2679:A:C8	2.77	0.62
7:B:685:A:C4	7:B:689:A:N6	2.67	0.62
7:B:7:G:H5'	15:J:134:ALA:O	1.99	0.62
7:B:827:U:OP2	7:B:828:U:H5	1.82	0.62
7:B:841:G:C2	7:B:938:G:N1	2.67	0.62
19:N:96:ARG:HH22	19:N:116:VAL:HG22	1.63	0.62
7:B:1225:G:OP1	23:R:90:ARG:HD2	2.00	0.62
24:S:70:LYS:O	24:S:71:VAL:HB	1.99	0.62
29:X:26:PHE:HA	29:X:29:ARG:HB2	1.80	0.62
7:B:528:A:C3'	7:B:528:A:C8	2.80	0.62
17:L:117:THR:CG2	17:L:119:PRO:HD2	2.30	0.62
18:M:5:LYS:NZ	18:M:8:LYS:HE3	2.10	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:90:GLU:HA	18:M:91:TYR:CE1	2.35	0.62
7:B:225:C:H2'	7:B:226:A:H8	1.64	0.62
24:S:79:GLY:HA3	24:S:100:THR:HG23	1.81	0.62
7:B:1286:A:C6	7:B:1289:C:N3	2.68	0.62
7:B:1351:C:O2'	7:B:1571:A:H1'	1.98	0.62
7:B:1857:G:O2'	7:B:1884:G:N2	2.33	0.62
7:B:2455:G:H2'	7:B:2456:C:C5	2.33	0.62
7:B:2697:G:N7	7:B:2698:U:C5	2.68	0.62
7:B:2851:A:O2'	7:B:2852:G:H5'	1.98	0.62
9:D:184:ARG:HH11	21:P:4:ILE:CG2	2.11	0.62
19:N:3:HIS:HD2	33:N:5003:HOH:O	1.82	0.62
7:B:309:A:C6	7:B:330:A:C5	2.88	0.62
2:1:12:SER:HA	2:1:50:GLU:CA	2.12	0.62
9:D:6:GLY:O	9:D:27:ILE:HG22	1.99	0.62
18:M:90:GLU:C	18:M:91:TYR:CG	2.73	0.62
7:B:1340:U:OP1	25:T:19:LYS:HE2	2.00	0.62
25:T:29:THR:HG22	25:T:86:THR:CG2	2.29	0.62
7:B:2073:C:O2	7:B:2437:G:N1	2.31	0.62
7:B:1342:A:N1	7:B:1345:C:C2	2.68	0.62
29:X:37:LEU:HD23	29:X:38:GLN:HG3	1.81	0.62
7:B:2023:C:H2'	7:B:2024:G:H8	1.65	0.62
7:B:253:C:O2	7:B:253:C:H2'	1.99	0.62
7:B:2685:G:O2'	7:B:2686:G:H5'	2.00	0.62
7:B:2733:A:C2'	7:B:2734:A:H5'	2.30	0.62
15:J:17:VAL:HG13	15:J:57:LEU:HD21	1.82	0.62
15:J:8:PRO:HB2	15:J:10:THR:O	2.00	0.62
21:P:92:ARG:O	21:P:92:ARG:HG3	2.00	0.62
7:B:2369:A:H2'	7:B:2370:G:H8	1.64	0.62
7:B:507:A:H1'	7:B:509:C:C4	2.34	0.62
7:B:75:G:O3'	29:X:48:ARG:HD3	2.00	0.62
30:Y:35:VAL:HG12	30:Y:36:GLU:N	2.15	0.62
22:Q:35:PHE:CD1	22:Q:35:PHE:O	2.48	0.62
7:B:1359:A:H5'	7:B:1359:A:C8	2.35	0.62
7:B:770:G:H1'	7:B:1379:U:O4	1.98	0.62
7:B:1300:G:H1'	7:B:1626:A:N1	2.15	0.62
7:B:1844:C:H5'	8:C:251:THR:HB	1.82	0.62
7:B:200:U:C5	7:B:201:C:C2	2.88	0.62
7:B:2528:U:C2'	7:B:2529:G:H5''	2.29	0.62
7:B:2734:A:H2	9:D:209:ALA:OXT	1.83	0.62
7:B:2719:G:O2'	7:B:2846:G:H4'	2.00	0.62
7:B:381:G:C6	7:B:382:A:N7	2.68	0.62
7:B:979:A:H2	7:B:982:C:C2	2.15	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:107:LYS:HB2	8:C:194:VAL:HG21	1.82	0.62
8:C:35:LYS:CE	8:C:64:VAL:HG23	2.30	0.62
12:G:148:ARG:HD2	12:G:163:TYR:CE2	2.33	0.62
7:B:1007:C:H4'	15:J:110:PRO:HD3	1.82	0.62
18:M:49:ALA:CB	18:M:116:ALA:HB1	2.23	0.62
7:B:578:G:H1'	22:Q:32:ARG:NH2	2.15	0.62
7:B:1203:U:C5	7:B:1204:A:C6	2.87	0.62
7:B:85:G:H5'	26:U:28:LEU:HB3	1.82	0.62
29:X:7:ARG:HH12	29:X:56:LEU:CD2	2.13	0.62
7:B:2221:G:C6	7:B:2222:C:C4	2.88	0.62
7:B:1165:A:C2	7:B:1185:G:C6	2.87	0.62
7:B:849:A:H2'	7:B:850:U:C6	2.34	0.62
17:L:141:LYS:O	17:L:142:ILE:HG23	2.00	0.62
7:B:1115:G:H8	7:B:1115:G:H5''	1.64	0.62
24:S:4:ILE:HG12	24:S:106:VAL:HG12	1.80	0.62
6:A:45:A:C2'	6:A:46:A:H5'	2.30	0.62
7:B:1298:C:N3	7:B:1642:G:N2	2.40	0.62
7:B:2358:A:N6	7:B:2428:G:N1	2.48	0.62
7:B:557:C:H2'	7:B:558:U:O4'	2.00	0.62
7:B:800:A:N7	7:B:802:A:O4'	2.33	0.62
8:C:143:VAL:CG2	8:C:152:GLN:HG3	2.30	0.62
11:F:133:GLU:HG2	11:F:147:ARG:C	2.19	0.62
21:P:47:ILE:HG22	21:P:48:ALA:N	2.13	0.62
26:U:87:GLU:O	26:U:89:GLY:N	2.33	0.62
9:D:77:ARG:HH11	9:D:77:ARG:HB2	1.65	0.62
7:B:1708:C:H2'	7:B:1709:U:H6	1.59	0.62
7:B:912:C:O2'	7:B:913:U:H5'	2.00	0.62
18:M:5:LYS:CG	18:M:6:ARG:N	2.63	0.62
30:Y:4:ILE:O	30:Y:5:LYS:HB3	2.00	0.62
7:B:2259:U:C2	7:B:2260:C:C5	2.88	0.62
7:B:1943:U:O2	7:B:1943:U:O4'	2.18	0.62
23:R:47:VAL:HG13	23:R:48:LYS:N	2.15	0.62
7:B:1022:G:N2	7:B:1142:A:H2	1.94	0.61
7:B:1668:A:N3	7:B:1670:C:C4	2.67	0.61
7:B:1853:A:H2'	7:B:1854:A:C8	2.36	0.61
7:B:2009:A:O3'	24:S:41:LYS:HB2	2.00	0.61
1:O:5:ASN:HD21	7:B:2019:A:H62	1.43	0.61
7:B:2056:G:C2	7:B:2577:A:N3	2.67	0.61
7:B:2250:G:H8	7:B:2250:G:O5'	1.83	0.61
7:B:778:G:C5	7:B:779:U:C5	2.87	0.61
8:C:264:LYS:N	8:C:264:LYS:NZ	2.40	0.61
18:M:31:PHE:O	18:M:102:LEU:HA	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:46:TYR:CZ	23:R:89:HIS:CE1	2.88	0.61
7:B:2352:A:C2	28:W:29:SER:CB	2.83	0.61
30:Y:9:THR:HB	30:Y:53:MET:C	2.20	0.61
2:1:14:ALA:O	2:1:48:TYR:HA	2.00	0.61
7:B:2290:G:H2'	7:B:2291:U:H6	1.64	0.61
7:B:300:A:N7	7:B:334:C:H4'	2.14	0.61
10:E:106:LYS:HG3	10:E:107:SER:N	2.15	0.61
13:H:108:VAL:HG12	13:H:108:VAL:O	2.00	0.61
22:Q:69:ARG:CZ	22:Q:69:ARG:CB	2.78	0.61
7:B:1707:G:C8	7:B:1756:G:C4	2.87	0.61
17:L:110:VAL:HG23	17:L:126:ARG:HH12	1.63	0.61
7:B:1829:A:C8	7:B:1829:A:H5''	2.25	0.61
7:B:1069:A:H5'	7:B:1070:A:C8	2.35	0.61
26:U:21:ARG:CG	26:U:21:ARG:HH11	2.10	0.61
7:B:1631:G:C3'	7:B:1631:G:C8	2.81	0.61
7:B:1478:G:O5'	7:B:1478:G:H8	1.81	0.61
1:0:30:ASP:O	1:0:31:LYS:HG3	2.00	0.61
1:0:29:VAL:HG21	1:0:34:GLY:HA2	1.82	0.61
7:B:1361:G:N3	7:B:1362:C:C5	2.68	0.61
7:B:1823:G:H5'	7:B:1823:G:C8	2.26	0.61
7:B:1824:G:N3	8:C:249:VAL:CG1	2.63	0.61
7:B:1988:G:H2'	7:B:1989:G:C5'	2.31	0.61
7:B:1998:A:H2'	7:B:1999:C:O4'	1.99	0.61
7:B:2721:A:C4	7:B:2722:G:C8	2.88	0.61
7:B:583:G:N1	7:B:584:C:C4	2.68	0.61
9:D:107:VAL:HG22	9:D:108:ASP:N	2.13	0.61
15:J:15:TRP:HB2	15:J:138:GLN:O	2.00	0.61
28:W:23:LYS:CE	28:W:24:ARG:H	2.08	0.61
28:W:71:LYS:O	28:W:72:GLY:O	2.18	0.61
28:W:75:ASN:CG	28:W:76:ARG:H	2.02	0.61
7:B:1204:A:C2	7:B:1241:A:N1	2.69	0.61
7:B:264:C:O2'	7:B:428:A:N1	2.33	0.61
17:L:111:ILE:HG12	17:L:112:LEU:N	2.15	0.61
7:B:903:C:H2'	7:B:904:G:O4'	1.99	0.61
9:D:63:PRO:C	9:D:65:ALA:N	2.52	0.61
25:T:15:HIS:H	25:T:31:VAL:CG2	2.13	0.61
7:B:2093:G:O2'	7:B:2094:A:H5'	1.99	0.61
7:B:2253:G:O5'	7:B:2253:G:H8	1.83	0.61
7:B:1764:C:C4	7:B:1765:U:H5	2.18	0.61
7:B:1199:U:H2'	7:B:1200:C:C6	2.35	0.61
7:B:1401:G:C6	7:B:1402:U:C4	2.88	0.61
13:H:68:ARG:CG	13:H:71:LYS:HD3	2.30	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:98:LYS:HG2	12:G:98:LYS:O	1.98	0.61
7:B:547:A:H2'	7:B:547:A:N3	2.15	0.61
14:I:102:ARG:HB3	14:I:102:ARG:NH1	2.15	0.61
7:B:116:C:O2'	7:B:126:A:H8	1.83	0.61
7:B:1275:A:C5	19:N:16:HIS:CE1	2.88	0.61
7:B:1611:C:N3	7:B:1612:C:C5	2.69	0.61
7:B:1796:U:H1'	7:B:1824:G:H22	1.65	0.61
7:B:2457:U:O2	7:B:2457:U:H2'	2.00	0.61
7:B:2723:C:OP1	19:N:2:ARG:NH2	2.33	0.61
7:B:2880:C:C6	19:N:91:ALA:HB3	2.35	0.61
15:J:41:LYS:O	22:Q:63:ARG:NH1	2.31	0.61
21:P:79:VAL:C	21:P:81:ASP:H	2.03	0.61
2:1:24:LYS:HZ1	7:B:2285:C:H41	1.46	0.61
6:A:99:A:C5	6:A:100:G:N7	2.68	0.61
7:B:1108:U:N3	7:B:1109:C:C5	2.69	0.61
31:Z:16:CYS:HA	31:Z:21:VAL:CG2	2.30	0.61
11:F:101:ARG:NH1	11:F:137:PHE:HB3	2.15	0.61
17:L:7:SER:HB3	17:L:8:PRO:CD	2.31	0.61
7:B:1387:A:H2'	7:B:1388:G:C8	2.36	0.61
20:O:57:ALA:HB1	20:O:61:GLN:HE21	1.65	0.61
1:0:48:TYR:CD2	1:0:49:ARG:HB2	2.36	0.61
7:B:1253:A:H8	33:B:5223:HOH:O	1.82	0.61
7:B:1309:G:H5''	7:B:1309:G:C8	2.35	0.61
7:B:18:U:OP1	22:Q:25:GLY:N	2.30	0.61
7:B:252:G:N3	7:B:253:C:C6	2.68	0.61
7:B:2722:G:H2'	7:B:2723:C:H6	1.65	0.61
7:B:2852:G:H2'	7:B:2853:C:C6	2.35	0.61
7:B:379:G:C2	7:B:396:G:C5	2.89	0.61
7:B:682:G:O2'	7:B:683:U:H5'	2.01	0.61
7:B:693:A:C2	7:B:694:U:C2	2.88	0.61
7:B:962:G:H2'	7:B:963:U:O4'	2.00	0.61
8:C:62:ARG:HG2	8:C:62:ARG:HH11	1.65	0.61
10:E:136:GLN:HB3	10:E:139:LYS:HD2	1.83	0.61
7:B:65:U:OP2	25:T:76:ARG:NH1	2.33	0.61
7:B:640:C:H5''	7:B:640:C:H6	1.66	0.61
25:T:34:VAL:HG11	25:T:43:ILE:CD1	2.31	0.61
26:U:23:LYS:O	26:U:25:LYS:HD2	2.01	0.61
7:B:1059:G:C8	7:B:1060:U:H2'	2.35	0.61
7:B:1069:A:H4'	7:B:1070:A:O5'	1.99	0.61
7:B:1486:U:H3	7:B:1503:A:N6	1.97	0.61
11:F:56:LEU:HD23	11:F:56:LEU:O	2.01	0.61
7:B:1941:C:C4	7:B:1942:C:N3	2.69	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:X:9:LYS:HB3	29:X:9:LYS:NZ	2.16	0.61
7:B:269:C:C2	7:B:270:A:N7	2.69	0.61
7:B:2294:G:C2	7:B:2295:C:C6	2.88	0.61
7:B:1024:G:P	7:B:1026:G:OP1	2.58	0.61
7:B:1381:G:C2'	7:B:1382:G:H5'	2.30	0.61
7:B:1779:U:H5	7:B:1784:A:N7	1.98	0.61
7:B:1809:A:C6	7:B:1810:A:C6	2.88	0.61
7:B:1970:A:OP1	7:B:1970:A:H4'	2.00	0.61
7:B:1989:G:H2'	7:B:1990:C:H5'	1.82	0.61
7:B:2046:G:C2	7:B:2047:C:C2	2.87	0.61
7:B:2358:A:H8	7:B:2358:A:C5'	2.13	0.61
7:B:792:A:N7	7:B:2440:C:N1	2.48	0.61
7:B:994:C:OP1	22:Q:49:ARG:NE	2.34	0.61
8:C:15:VAL:HG12	8:C:16:VAL:HG13	1.83	0.61
8:C:204:LEU:HB3	8:C:210:ALA:HB1	1.82	0.61
10:E:49:ARG:H	10:E:49:ARG:CD	2.13	0.61
18:M:105:MET:HE3	18:M:105:MET:HA	1.81	0.61
18:M:2:LEU:O	18:M:3:GLN:HB2	2.00	0.61
20:O:27:VAL:CG1	20:O:38:GLN:HB3	2.29	0.61
20:O:94:ARG:HA	20:O:94:ARG:NE	2.15	0.61
21:P:27:VAL:HG13	21:P:47:ILE:CD1	2.31	0.61
28:W:67:LYS:CD	28:W:71:LYS:HB3	2.28	0.61
7:B:100:U:H6	7:B:100:U:H5'	1.65	0.61
25:T:70:HIS:CD2	25:T:74:ILE:HG13	2.36	0.61
29:X:26:PHE:CD1	29:X:26:PHE:N	2.68	0.61
18:M:40:ARG:HG3	18:M:92:TRP:CD1	2.36	0.61
7:B:1066:U:C3'	7:B:1066:U:C6	2.83	0.61
7:B:2415:G:O2'	17:L:66:PHE:HB2	2.01	0.61
18:M:26:VAL:O	18:M:27:SER:HB2	2.01	0.61
1:O:16:ARG:O	1:O:17:SER:C	2.38	0.61
5:4:1:MET:SD	7:B:2527:C:H1'	2.39	0.61
7:B:150:U:H6	7:B:150:U:O5'	1.83	0.61
7:B:1615:C:C2	7:B:1617:C:H6	2.17	0.61
4:3:34:LYS:HE2	7:B:2420:C:OP1	2.01	0.61
7:B:2716:C:O2'	7:B:2717:C:H5'	1.99	0.61
7:B:741:U:C2	7:B:757:G:N2	2.69	0.61
9:D:160:LYS:HZ2	9:D:160:LYS:HB2	1.63	0.61
18:M:55:ARG:C	18:M:57:VAL:H	2.04	0.61
19:N:32:GLU:CG	19:N:33:ILE:HG13	2.26	0.61
10:E:109:LEU:CD2	10:E:113:VAL:O	2.48	0.61
10:E:138:LEU:HB3	10:E:143:LEU:CD1	2.30	0.61
10:E:151:GLY:O	10:E:158:PHE:HE1	1.84	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:79:C:N4	7:B:107:G:H1	1.98	0.61
7:B:605:G:C2	7:B:606:U:O2	2.54	0.61
7:B:2213:U:C2	7:B:2213:U:H3'	2.35	0.61
13:H:82:SER:HB2	13:H:90:LEU:HD13	1.82	0.61
7:B:1443:U:H6	7:B:1443:U:H3'	1.64	0.61
7:B:225:C:C2	7:B:226:A:C8	2.88	0.61
6:A:107:G:H8	6:A:107:G:O5'	1.81	0.61
7:B:1347:A:H2'	7:B:1348:C:C5'	2.30	0.61
7:B:2860:A:C5'	7:B:2860:A:H8	2.14	0.61
1:O:41:HIS:CD2	1:O:42:ILE:O	2.54	0.61
1:O:9:ARG:HA	1:O:12:ARG:HB2	1.82	0.61
7:B:1239:G:C5	7:B:1240:U:C5	2.88	0.61
7:B:1268:A:N6	7:B:1269:A:C2	2.68	0.61
7:B:1362:C:C2	7:B:1363:C:C6	2.89	0.61
7:B:1364:G:H5''	7:B:1365:A:P	2.41	0.61
7:B:1778:U:O4	7:B:1784:A:H1'	2.00	0.61
7:B:1889:A:H2'	7:B:1890:A:O4'	1.99	0.61
7:B:2014:A:H8	7:B:2014:A:O5'	1.84	0.61
7:B:2357:G:C5	7:B:2359:C:OP2	2.54	0.61
7:B:2358:A:C2'	7:B:2359:C:H5'	2.30	0.61
7:B:2884:U:C6	7:B:2884:U:H3'	2.36	0.61
7:B:2886:A:N3	7:B:2887:A:C8	2.68	0.61
7:B:28:A:C2'	7:B:29:U:H5'	2.30	0.61
7:B:537:G:H4'	15:J:7:LYS:NZ	2.16	0.61
7:B:566:U:H2'	7:B:567:U:C6	2.34	0.61
7:B:756:A:H8	7:B:756:A:C5'	2.06	0.61
8:C:156:SER:O	8:C:158:GLY:N	2.33	0.61
7:B:1568:G:H21	8:C:58:LYS:HE3	1.65	0.61
10:E:48:THR:HA	10:E:83:VAL:HG22	1.81	0.61
15:J:81:ILE:O	15:J:84:ILE:HG13	2.01	0.61
10:E:193:VAL:HG23	10:E:199:MET:HB3	1.83	0.61
7:B:1165:A:C4	7:B:1166:G:N7	2.69	0.61
14:I:49:GLU:HB2	14:I:52:LEU:HD12	1.83	0.61
13:H:113:SER:H	13:H:132:PHE:HE2	1.44	0.61
12:G:169:ARG:CD	12:G:170:THR:H	2.14	0.61
17:L:43:GLY:C	17:L:45:GLY:H	2.02	0.61
7:B:1222:U:O2	7:B:1228:G:C2	2.54	0.61
7:B:1651:G:N2	7:B:2007:U:C2	2.69	0.61
7:B:2736:A:O2'	7:B:2737:G:H5'	2.01	0.61
7:B:2753:A:C2	7:B:2754:U:C4	2.89	0.61
7:B:2812:G:N1	7:B:2813:A:C2	2.69	0.61
18:M:110:GLU:C	18:M:112:LEU:H	2.03	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:962:G:N2	18:M:81:ARG:HD3	2.14	0.61
20:O:27:VAL:HG21	20:O:37:ALA:C	2.21	0.61
20:O:41:ALA:CB	20:O:42:PRO:CD	2.78	0.61
7:B:2376:A:C8	20:O:99:TYR:CE2	2.88	0.61
24:S:76:VAL:HG12	24:S:103:ILE:HD13	1.83	0.61
7:B:83:A:H5''	33:U:5001:HOH:O	2.00	0.61
2:1:26:LYS:HD2	2:1:29:LYS:CG	2.27	0.61
7:B:1631:G:H3'	7:B:1631:G:H8	1.63	0.61
7:B:288:U:H2'	7:B:289:G:C8	2.36	0.61
4:3:16:THR:HG23	4:3:20:GLY:O	1.99	0.61
7:B:435:C:H5'	7:B:435:C:H6	1.65	0.61
7:B:2604:U:C2	7:B:2605:U:C5	2.89	0.61
6:A:27:C:C5	6:A:28:C:N4	2.66	0.61
7:B:1218:G:C6	7:B:1219:U:C4	2.88	0.61
7:B:1783:A:C2	7:B:2587:A:C5	2.89	0.61
7:B:2048:G:N1	7:B:2621:G:C2	2.69	0.61
7:B:566:U:C6	7:B:567:U:H5	2.19	0.61
7:B:568:U:O2'	7:B:569:U:H3'	2.00	0.61
7:B:685:A:H2	7:B:787:C:H1'	1.66	0.61
8:C:208:GLY:O	8:C:210:ALA:N	2.34	0.61
7:B:1675:C:O2	9:D:133:THR:HA	2.01	0.61
15:J:112:GLY:O	15:J:116:ARG:HB2	2.00	0.61
9:D:156:PHE:HB3	15:J:81:ILE:HG21	1.83	0.61
21:P:78:PRO:O	21:P:79:VAL:HG12	2.00	0.61
28:W:57:THR:O	28:W:59:PHE:N	2.34	0.61
28:W:38:ARG:HD3	28:W:68:PHE:CE2	2.36	0.61
7:B:599:A:H1'	7:B:659:G:N2	2.15	0.61
17:L:18:ARG:HH12	17:L:21:ARG:HH21	1.49	0.61
7:B:62:U:H2'	7:B:63:A:N9	2.16	0.61
25:T:9:LYS:NZ	29:X:47:ARG:NH1	2.48	0.61
9:D:49:GLN:NE2	9:D:51:THR:OG1	2.31	0.61
7:B:873:C:H2'	7:B:874:G:C8	2.30	0.61
30:Y:40:THR:HG23	30:Y:43:ILE:HG22	1.83	0.61
7:B:1109:C:O2'	7:B:1110:G:H5'	2.01	0.61
7:B:545:U:H6	7:B:545:U:H3'	1.64	0.61
24:S:86:MET:O	24:S:94:ASP:OD2	2.19	0.61
14:I:99:LYS:HD3	14:I:99:LYS:N	2.15	0.61
6:A:87:U:C2'	6:A:88:C:O5'	2.49	0.61
27:V:9:ARG:HG3	27:V:39:ALA:HB1	1.83	0.61
27:V:65:VAL:C	27:V:67:GLY:H	2.04	0.61
5:4:30:GLU:O	5:4:34:LYS:HD3	2.01	0.61
7:B:1258:U:C6	7:B:1259:G:N7	2.68	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1612:C:C2	7:B:1620:G:N2	2.69	0.61
7:B:2049:G:P	33:B:5371:HOH:O	2.57	0.61
7:B:2513:A:C6	7:B:2514:U:C4	2.89	0.61
7:B:2589:A:O2'	7:B:2590:A:H5'	2.00	0.61
7:B:2733:A:H2'	7:B:2734:A:C5'	2.31	0.61
8:C:116:GLN:N	8:C:127:ASN:HB2	2.16	0.61
8:C:190:THR:O	8:C:191:LEU:HB3	1.99	0.61
8:C:229:HIS:CG	8:C:230:PRO:CD	2.84	0.61
8:C:235:GLU:CG	8:C:236:GLY:N	2.64	0.61
11:F:52:ALA:HB1	11:F:148:VAL:HG11	1.81	0.61
19:N:4:ARG:NH2	33:N:5002:HOH:O	2.34	0.61
28:W:19:ARG:HH21	28:W:22:VAL:HG22	1.66	0.61
28:W:36:ILE:CG2	28:W:69:GLU:OE2	2.48	0.61
7:B:322:A:N1	7:B:340:A:C6	2.69	0.61
7:B:333:G:N3	7:B:333:G:H2'	2.15	0.61
10:E:157:LEU:HD23	10:E:157:LEU:H	1.65	0.61
2:1:24:LYS:H	2:1:24:LYS:HD3	1.64	0.61
7:B:1108:U:C2	7:B:1109:C:H5	2.18	0.61
7:B:2891:U:C6	7:B:2891:U:C3'	2.84	0.61
11:F:3:LEU:HD12	11:F:100:GLU:HB3	1.83	0.61
7:B:419:U:H2'	7:B:420:C:C6	2.36	0.61
14:I:85:ILE:HD12	14:I:88:GLY:HA2	1.82	0.61
7:B:116:C:H2'	7:B:117:G:O4'	2.01	0.60
7:B:1930:G:H22	7:B:1969:A:P	2.23	0.60
7:B:2001:C:N3	7:B:2002:G:C8	2.68	0.60
7:B:204:A:N7	7:B:206:U:N3	2.48	0.60
7:B:2643:G:C2'	7:B:2644:G:H5'	2.31	0.60
7:B:2711:A:OP2	33:B:5481:HOH:O	2.16	0.60
7:B:2739:U:C3'	7:B:2739:U:C6	2.82	0.60
7:B:2740:A:C8	7:B:2764:A:N6	2.69	0.60
7:B:2839:G:C2	7:B:2840:C:C2	2.89	0.60
7:B:381:G:C6	7:B:382:A:C8	2.88	0.60
7:B:554:U:H6	7:B:554:U:OP2	1.84	0.60
7:B:807:U:H2'	7:B:808:G:O5'	2.00	0.60
7:B:979:A:H3'	7:B:980:A:C5'	2.31	0.60
8:C:204:LEU:HB3	8:C:210:ALA:CB	2.30	0.60
10:E:49:ARG:CB	10:E:51:GLU:HG2	2.31	0.60
20:O:52:SER:H	20:O:55:GLU:HG3	1.65	0.60
22:Q:93:ILE:HD12	22:Q:93:ILE:O	2.01	0.60
10:E:146:VAL:HB	10:E:184:ASP:OD2	2.01	0.60
12:G:16:VAL:O	12:G:17:LYS:HB2	2.01	0.60
25:T:10:VAL:CG2	25:T:11:LEU:HD12	2.30	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:T:58:VAL:HG12	25:T:59:ASN:N	2.16	0.60
14:I:21:PRO:HB2	14:I:22:PRO:CD	2.29	0.60
7:B:1390:U:H2'	7:B:1391:U:H5'	1.81	0.60
6:A:43:C:O4'	6:A:43:C:OP2	2.18	0.60
7:B:1306:C:H42	7:B:1622:G:H1	1.47	0.60
7:B:694:U:OP1	7:B:1569:A:H1'	2.01	0.60
7:B:1668:A:C5	7:B:1674:G:C5	2.90	0.60
7:B:2692:G:O6	7:B:2718:G:C6	2.54	0.60
7:B:2745:C:H3'	7:B:2746:U:C6	2.36	0.60
7:B:451:U:C2	7:B:453:A:N7	2.69	0.60
7:B:826:U:H5''	7:B:827:U:OP2	2.00	0.60
7:B:692:C:H5''	8:C:42:ARG:H	1.65	0.60
8:C:45:ASN:O	8:C:47:ARG:N	2.34	0.60
20:O:1:MET:O	20:O:1:MET:HG3	1.99	0.60
21:P:7:LEU:O	21:P:9:GLN:N	2.34	0.60
31:Z:30:HIS:HB3	31:Z:32:LEU:CD2	2.31	0.60
7:B:64:A:C2	7:B:65:U:N3	2.69	0.60
25:T:70:HIS:O	25:T:74:ILE:HB	2.00	0.60
7:B:634:C:O5'	7:B:634:C:H6	1.83	0.60
14:I:10:LEU:HD13	14:I:23:VAL:HG22	1.81	0.60
7:B:1062:G:H2'	14:I:90:GLY:O	2.01	0.60
7:B:360:U:H2'	7:B:361:G:C1'	2.32	0.60
7:B:2216:G:H2'	7:B:2217:G:H5'	1.82	0.60
7:B:1117:C:H2'	7:B:1118:C:C6	2.36	0.60
7:B:1959:G:N1	7:B:1960:A:C4	2.69	0.60
5:4:6:SER:OG	7:B:1031:G:H1'	2.01	0.60
4:3:4:LYS:HZ1	4:3:60:CYS:C	2.04	0.60
7:B:1375:U:C3'	7:B:1376:C:H5''	2.31	0.60
7:B:1451:C:H4'	7:B:1451:C:OP1	2.02	0.60
7:B:1662:U:C2'	7:B:1663:G:H5''	2.31	0.60
7:B:463:G:C8	7:B:463:G:H3'	2.36	0.60
7:B:772:C:N3	7:B:773:U:C5	2.69	0.60
7:B:994:C:N4	7:B:1160:G:N1	2.48	0.60
15:J:84:ILE:H	15:J:84:ILE:CD1	2.08	0.60
16:K:30:ARG:HG2	16:K:31:ARG:N	2.15	0.60
19:N:96:ARG:O	19:N:113:ILE:HA	2.00	0.60
20:O:17:LYS:HD3	20:O:20:GLU:HG3	1.82	0.60
7:B:2287:A:C2	7:B:2289:G:C6	2.89	0.60
23:R:35:PHE:CB	23:R:64:VAL:HG13	2.29	0.60
7:B:217:A:C4	7:B:218:A:C8	2.90	0.60
27:V:63:ILE:N	27:V:70:ILE:CD1	2.63	0.60
9:D:62:LYS:CD	9:D:62:LYS:H	2.14	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:443:A:C8	10:E:40:ARG:HG3	2.36	0.60
7:B:1069:A:H4'	7:B:1070:A:C5'	2.31	0.60
7:B:223:A:C5	7:B:422:A:C8	2.89	0.60
7:B:1322:A:H4'	24:S:82:MET:CE	2.30	0.60
7:B:2459:A:N6	7:B:2494:G:C2	2.69	0.60
7:B:2214:C:H2'	7:B:2214:C:O2	2.00	0.60
6:A:25:U:H5'	6:A:25:U:C6	2.37	0.60
27:V:24:ASN:HB3	27:V:44:HIS:HB2	1.83	0.60
7:B:1661:G:O2'	7:B:1662:U:H5'	2.01	0.60
7:B:1673:G:N2	7:B:1675:C:H5'	2.17	0.60
7:B:1661:G:N2	7:B:2000:C:H1'	2.17	0.60
7:B:563:A:N6	7:B:2018:G:C8	2.69	0.60
7:B:2057:G:N1	7:B:2058:A:C2	2.69	0.60
7:B:2488:G:N2	7:B:2489:U:C2	2.70	0.60
7:B:2821:A:OP2	19:N:2:ARG:CD	2.48	0.60
7:B:381:G:H2'	7:B:382:A:H5'	1.83	0.60
7:B:449:A:C6	7:B:450:G:C5	2.89	0.60
11:F:88:VAL:HG12	11:F:90:LEU:HD11	1.84	0.60
15:J:59:ALA:O	15:J:61:LYS:N	2.35	0.60
20:O:27:VAL:CG2	20:O:28:VAL:H	2.13	0.60
22:Q:44:TYR:CD1	22:Q:48:ASP:CB	2.84	0.60
22:Q:53:LYS:HE2	22:Q:53:LYS:N	2.15	0.60
10:E:138:LEU:HD11	10:E:187:VAL:CG1	2.32	0.60
7:B:79:C:H2'	7:B:346:A:H8	1.64	0.60
7:B:2638:G:H22	7:B:2775:G:H2'	1.64	0.60
9:D:34:VAL:HG13	9:D:35:THR:H	1.66	0.60
9:D:101:PHE:C	9:D:101:PHE:HD1	2.04	0.60
30:Y:5:LYS:HE2	30:Y:56:VAL:O	2.01	0.60
14:I:8:VAL:HG22	14:I:58:ILE:HB	1.84	0.60
7:B:2303:G:H1'	11:F:122:ASP:CA	2.25	0.60
6:A:76:G:N2	6:A:77:U:C2	2.69	0.60
7:B:663:G:OP1	17:L:27:LEU:HD22	2.01	0.60
7:B:370:G:OP2	7:B:370:G:C8	2.54	0.60
7:B:1771:C:H2'	7:B:1772:A:C8	2.34	0.60
7:B:1586:A:H3'	7:B:1586:A:C8	2.37	0.60
7:B:1132:U:H6	7:B:1132:U:H5''	1.66	0.60
3:2:16:HIS:CE1	3:2:44:VAL:O	2.54	0.60
7:B:1779:U:C5	7:B:1784:A:N7	2.69	0.60
7:B:1890:A:C8	7:B:1891:G:C8	2.89	0.60
7:B:1268:A:C6	7:B:2013:A:C8	2.88	0.60
7:B:2061:G:C4	7:B:2063:C:N4	2.69	0.60
7:B:2430:A:N3	7:B:2430:A:H2'	2.16	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2446:G:N2	7:B:2501:C:C4	2.70	0.60
7:B:2678:C:C2	7:B:2679:A:N7	2.69	0.60
7:B:2881:U:H2'	7:B:2882:A:C8	2.35	0.60
7:B:460:A:H2'	7:B:461:C:O4'	2.01	0.60
7:B:790:U:H5	7:B:791:C:H5	1.49	0.60
10:E:58:LYS:HG2	10:E:71:GLY:HA2	1.83	0.60
18:M:47:GLU:HA	18:M:50:ARG:HB2	1.82	0.60
7:B:2722:G:O2'	19:N:4:ARG:HD3	2.01	0.60
23:R:79:ARG:CD	23:R:81:LYS:HE2	2.29	0.60
7:B:2263:C:H41	28:W:12:GLY:HA2	1.66	0.60
28:W:31:LEU:O	28:W:32:ALA:HB3	2.00	0.60
9:D:81:GLU:CG	9:D:82:PHE:N	2.64	0.60
31:Z:59:ARG:HG3	31:Z:62:LYS:H	1.64	0.60
27:V:28:ALA:HB3	27:V:40:ILE:HG12	1.82	0.60
14:I:23:VAL:HG12	14:I:24:GLY:H	1.67	0.60
6:A:73:A:C8	6:A:74:U:C5	2.90	0.60
7:B:2551:C:H2'	7:B:2552:U:O4'	2.01	0.60
28:W:81:ILE:HG23	28:W:83:ALA:H	1.65	0.60
7:B:630:G:C6	7:B:632:A:OP2	2.55	0.60
1:O:48:TYR:CG	1:O:49:ARG:N	2.68	0.60
7:B:1257:C:N3	7:B:1258:U:N3	2.50	0.60
7:B:1663:G:C8	7:B:1663:G:C5'	2.84	0.60
7:B:252:G:H8	7:B:252:G:O5'	1.85	0.60
7:B:2760:C:H2'	7:B:2760:C:O2	2.01	0.60
7:B:592:A:C4	7:B:593:U:C5	2.89	0.60
7:B:682:G:N3	7:B:683:U:C5	2.70	0.60
8:C:254:LYS:N	8:C:254:LYS:NZ	2.50	0.60
8:C:49:THR:HG22	8:C:50:THR:N	2.15	0.60
15:J:81:ILE:C	15:J:83:GLY:N	2.54	0.60
4:3:12:ARG:CZ	17:L:62:PRO:CB	2.80	0.60
18:M:103:TYR:CE2	18:M:113:ALA:HB2	2.36	0.60
18:M:13:HIS:C	18:M:14:LYS:HD2	2.21	0.60
16:K:78:ARG:NH2	21:P:102:ARG:NH1	2.45	0.60
21:P:92:ARG:HE	21:P:110:LYS:C	2.05	0.60
24:S:20:VAL:O	24:S:22:ASP:N	2.33	0.60
7:B:597:G:N2	7:B:661:A:N3	2.49	0.60
10:E:9:GLN:HG3	10:E:10:SER:H	1.66	0.60
2:1:28:THR:O	2:1:29:LYS:HD3	2.01	0.60
9:D:48:ILE:N	9:D:80:TRP:HB3	2.15	0.60
23:R:39:LEU:CD1	23:R:57:GLY:HA3	2.30	0.60
7:B:1717:A:H61	7:B:1743:G:H1'	1.67	0.60
7:B:909:A:C2	7:B:912:C:C2	2.89	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:121:THR:HG22	12:G:122:ALA:N	2.17	0.60
31:Z:17:SER:N	31:Z:21:VAL:HG21	2.17	0.60
11:F:2:LYS:O	11:F:3:LEU:HB2	1.99	0.60
26:U:3:LYS:HD3	26:U:81:ARG:HD2	1.81	0.60
7:B:2145:C:H3'	7:B:2146:C:H5'	1.82	0.60
7:B:1682:G:H5'	7:B:1682:G:C8	2.34	0.60
4:3:4:LYS:HG3	4:3:4:LYS:O	2.01	0.60
4:3:5:THR:HG22	4:3:58:ILE:O	2.02	0.60
6:A:31:C:HO2'	6:A:32:U:H6	1.49	0.60
7:B:1225:G:OP1	23:R:90:ARG:CZ	2.50	0.60
7:B:1824:G:H1'	8:C:247:TRP:CZ3	2.32	0.60
7:B:2044:C:N3	7:B:2045:C:C5	2.69	0.60
7:B:2525:G:C2	7:B:2539:C:N3	2.69	0.60
7:B:2698:U:H3	7:B:2699:C:N4	2.00	0.60
7:B:2740:A:C8	7:B:2764:A:C6	2.90	0.60
7:B:2742:G:C6	7:B:2763:G:N2	2.70	0.60
7:B:573:U:O4	7:B:2030:A:H3'	2.02	0.60
7:B:690:G:C5	7:B:691:C:C5	2.89	0.60
7:B:734:A:C5	7:B:735:A:C8	2.90	0.60
7:B:802:A:C5	7:B:803:U:C4	2.90	0.60
7:B:672:C:C4	7:B:809:G:N2	2.69	0.60
8:C:21:PRO:C	8:C:202:ARG:NE	2.55	0.60
33:B:5470:HOH:O	8:C:224:MET:HB2	2.02	0.60
9:D:11:MET:O	9:D:23:PRO:CD	2.46	0.60
9:D:153:GLY:C	9:D:155:VAL:N	2.53	0.60
9:D:13:ARG:HB2	9:D:21:SER:OG	2.01	0.60
15:J:3:THR:O	15:J:4:PHE:HD2	1.85	0.60
7:B:2330:G:C1'	28:W:36:ILE:HD13	2.26	0.60
28:W:45:HIS:O	28:W:77:LYS:HE2	2.02	0.60
7:B:636:G:O6	17:L:109:LYS:HD2	2.01	0.60
18:M:8:LYS:HD3	18:M:9:PHE:CE1	2.37	0.60
7:B:2213:U:C3'	7:B:2213:U:O2	2.43	0.60
17:L:81:ASP:O	17:L:84:LYS:HB3	2.02	0.60
30:Y:7:THR:HG22	30:Y:34:THR:HB	1.84	0.60
17:L:73:ILE:HG22	17:L:75:ALA:CA	2.32	0.60
27:V:65:VAL:O	27:V:67:GLY:N	2.33	0.60
7:B:2338:C:H2'	7:B:2339:C:C6	2.37	0.60
21:P:15:ASP:O	21:P:16:VAL:HG13	2.00	0.60
7:B:1922:G:H2'	7:B:1923:U:O4'	2.02	0.60
21:P:42:PHE:CD1	21:P:42:PHE:O	2.54	0.60
7:B:2794:C:H2'	7:B:2795:C:H6	1.65	0.60
3:2:16:HIS:HA	3:2:21:ARG:HH12	1.67	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1281:G:H1	7:B:1286:A:H62	1.48	0.60
7:B:1419:A:N7	7:B:1421:G:C6	2.69	0.60
7:B:1670:C:C4	7:B:1671:U:N3	2.70	0.60
7:B:1812:U:O2'	8:C:45:ASN:HB2	2.02	0.60
7:B:801:G:H3'	7:B:802:A:H5''	1.84	0.60
7:B:993:G:C2	7:B:994:C:C5	2.84	0.60
15:J:21:THR:HG22	15:J:58:ASN:OD1	2.01	0.60
21:P:9:GLN:HB3	21:P:56:SER:CB	2.30	0.60
22:Q:23:TYR:HB2	22:Q:28:SER:OG	2.02	0.60
22:Q:40:LYS:HZ2	22:Q:40:LYS:HB2	1.67	0.60
22:Q:41:ALA:O	22:Q:45:ALA:HB3	2.02	0.60
22:Q:49:ARG:HG3	23:R:77:PHE:CE1	2.33	0.60
10:E:172:ALA:O	10:E:173:THR:HG22	2.02	0.60
29:X:17:GLU:C	29:X:18:LEU:HD13	2.22	0.60
9:D:3:GLY:O	9:D:4:LEU:CB	2.49	0.60
12:G:171:LYS:HZ1	12:G:173:ALA:HA	1.66	0.60
6:A:11:C:C2'	6:A:12:C:H5'	2.32	0.60
25:T:57:VAL:O	25:T:85:VAL:HA	2.02	0.60
7:B:1877:A:H2'	7:B:1878:G:O4'	2.02	0.60
7:B:1021:A:C8	7:B:1021:A:C3'	2.85	0.60
7:B:1289:C:C2	7:B:1290:C:C5	2.90	0.60
7:B:1429:G:C8	7:B:1568:G:C8	2.90	0.60
7:B:1566:A:C2	8:C:213:ARG:HG2	2.37	0.60
15:J:4:PHE:CE1	15:J:6:ALA:HA	2.36	0.60
22:Q:46:TYR:OH	23:R:89:HIS:CG	2.54	0.60
7:B:993:G:H1'	23:R:93:PHE:CE1	2.36	0.60
10:E:194:LYS:HZ2	10:E:194:LYS:HB2	1.67	0.60
23:R:4:VAL:HA	23:R:43:ASN:OD1	2.01	0.60
15:J:89:PHE:CD2	15:J:92:MET:HB2	2.36	0.60
12:G:34:ARG:HE	12:G:70:LEU:HD21	1.66	0.60
16:K:21:CYS:SG	16:K:39:ILE:HD11	2.42	0.60
7:B:543:G:H2'	7:B:545:U:OP1	2.02	0.60
7:B:2405:G:H2'	7:B:2411:A:H62	1.63	0.60
6:A:72:G:H1'	6:A:105:G:H22	1.67	0.60
7:B:2105:U:O2	7:B:2106:U:C4	2.55	0.60
7:B:1256:G:N3	7:B:1257:C:C5	2.70	0.60
7:B:1806:C:H3'	7:B:1806:C:C6	2.34	0.60
7:B:1839:G:H2'	7:B:1840:G:H5'	1.84	0.60
7:B:1970:A:O4'	7:B:1972:G:C8	2.55	0.60
7:B:1989:G:H2'	7:B:1990:C:C5'	2.32	0.60
7:B:2064:C:H1'	7:B:2450:A:C6	2.37	0.60
7:B:2502:G:H5'	7:B:2503:A:C5'	2.32	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2514:U:H2'	7:B:2515:C:C6	2.36	0.60
7:B:783:A:C8	7:B:784:G:H4'	2.35	0.60
7:B:970:U:H2'	7:B:971:G:C8	2.35	0.60
7:B:978:G:C6	7:B:986:C:C4	2.89	0.60
8:C:179:GLU:CD	8:C:267:VAL:HG23	2.21	0.60
15:J:131:ASN:C	15:J:133:ALA:H	2.04	0.60
15:J:135:GLN:O	15:J:136:GLN:C	2.40	0.60
19:N:100:CYS:SG	19:N:112:TYR:CE2	2.94	0.60
19:N:16:HIS:O	19:N:17:ARG:C	2.38	0.60
19:N:7:GLY:HA3	19:N:8:ARG:NH1	2.16	0.60
23:R:80:ARG:HD2	23:R:86:GLN:H	1.66	0.60
7:B:874:G:C2	7:B:875:G:H1'	2.37	0.60
7:B:370:G:OP2	7:B:370:G:H8	1.84	0.60
7:B:423:A:H5''	7:B:424:G:H5''	1.83	0.60
6:A:104:A:N3	6:A:105:G:H1'	2.17	0.60
9:D:191:GLY:O	9:D:192:ALA:HB3	2.02	0.60
7:B:2186:G:C6	7:B:2187:U:C2	2.90	0.60
14:I:78:LEU:HA	14:I:81:LYS:HE2	1.84	0.60
7:B:1965:C:C4	7:B:1966:A:C5	2.89	0.60
15:J:94:ALA:C	15:J:97:PRO:HG3	2.23	0.60
7:B:215:G:C4'	7:B:216:A:H4'	2.32	0.60
7:B:2107:G:H2'	7:B:2108:A:C8	2.37	0.60
11:F:69:ALA:O	11:F:70:ARG:HG3	2.02	0.60
7:B:1306:C:N4	7:B:1622:G:H1	2.00	0.59
7:B:1970:A:C1'	7:B:1972:G:C8	2.84	0.59
7:B:246:C:H2'	7:B:247:G:H5'	1.83	0.59
7:B:2814:A:H2'	7:B:2815:C:H6	1.67	0.59
7:B:463:G:C2	7:B:467:G:C6	2.90	0.59
7:B:539:G:N2	7:B:540:C:H1'	2.17	0.59
7:B:797:G:C6	7:B:798:G:C8	2.89	0.59
8:C:53:ILE:CG1	8:C:218:THR:OG1	2.49	0.59
10:E:60:TRP:CD1	10:E:70:SER:CB	2.85	0.59
17:L:51:GLU:OE1	17:L:52:GLY:N	2.34	0.59
21:P:74:GLN:NE2	21:P:74:GLN:HA	2.04	0.59
22:Q:75:TYR:O	22:Q:79:ILE:HG12	2.01	0.59
2:1:36:LYS:NZ	7:B:2344:U:C2	2.70	0.59
7:B:317:G:C6	7:B:318:C:C2	2.90	0.59
7:B:484:C:N4	7:B:496:G:H1	1.97	0.59
26:U:44:HIS:HB2	26:U:46:LYS:NZ	2.16	0.59
7:B:2641:G:H8	7:B:2641:G:H5'	1.66	0.59
9:D:101:PHE:CZ	9:D:180:VAL:CG1	2.77	0.59
7:B:160:A:H2'	7:B:161:A:C8	2.37	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:226:A:C6	7:B:227:A:C6	2.90	0.59
7:B:2150:C:H2'	7:B:2151:U:C6	2.37	0.59
20:O:2:ASP:HB3	20:O:4:LYS:HB2	1.82	0.59
4:3:9:ALA:HB2	4:3:63:TYR:OH	2.03	0.59
5:4:26:ILE:CB	5:4:35:GLN:HG2	2.32	0.59
7:B:118:A:H3'	7:B:119:A:H5''	1.85	0.59
7:B:1272:A:C4	7:B:1618:A:C8	2.90	0.59
7:B:1616:A:H4'	7:B:1617:C:OP2	2.02	0.59
7:B:2847:U:C5	7:B:2848:G:C5	2.90	0.59
7:B:449:A:C2'	7:B:450:G:H5'	2.32	0.59
7:B:458:G:N2	7:B:469:G:N3	2.49	0.59
7:B:49:A:C6	7:B:118:A:C2	2.89	0.59
7:B:682:G:H2'	7:B:683:U:C6	2.37	0.59
8:C:124:LYS:HZ3	8:C:125:PRO:HD2	1.66	0.59
8:C:22:GLU:HA	8:C:22:GLU:OE1	2.02	0.59
8:C:53:ILE:HG22	8:C:54:GLY:H	1.66	0.59
8:C:63:ILE:HG13	8:C:90:ILE:HD11	1.83	0.59
8:C:87:SER:O	8:C:155:ARG:NH1	2.35	0.59
11:F:63:LYS:HE2	11:F:64:PRO:O	2.02	0.59
20:O:103:VAL:HG23	20:O:104:GLN:H	1.67	0.59
20:O:96:GLY:O	20:O:97:PHE:HB2	2.02	0.59
22:Q:28:SER:C	22:Q:29:ARG:HG2	2.22	0.59
22:Q:40:LYS:HG3	22:Q:44:TYR:CB	2.33	0.59
24:S:71:VAL:O	24:S:71:VAL:HG12	2.01	0.59
28:W:36:ILE:CG2	28:W:68:PHE:CD1	2.85	0.59
10:E:112:LEU:O	10:E:114:ARG:N	2.36	0.59
10:E:4:VAL:HA	10:E:14:VAL:HG13	1.84	0.59
26:U:66:VAL:CG1	26:U:67:SER:H	2.04	0.59
29:X:41:HIS:O	29:X:43:LEU:HD23	2.02	0.59
23:R:39:LEU:H	23:R:61:ALA:CB	2.15	0.59
7:B:2425:A:H5''	7:B:2427:C:O4'	2.02	0.59
7:B:2547:A:C2	7:B:2548:U:N3	2.70	0.59
7:B:1036:G:C6	7:B:1120:G:C5	2.90	0.59
31:Z:25:ARG:CG	31:Z:26:SER:H	2.15	0.59
7:B:1586:A:H3'	7:B:1586:A:H8	1.67	0.59
4:3:12:ARG:C	4:3:13:PHE:CG	2.75	0.59
7:B:1232:G:O2'	7:B:1233:C:H5'	2.01	0.59
7:B:1253:A:C8	33:B:5223:HOH:O	2.52	0.59
7:B:1265:A:N9	7:B:1267:U:C5	2.70	0.59
7:B:1453:A:H5''	7:B:1453:A:C8	2.37	0.59
7:B:1454:C:H41	19:N:64:ARG:HB2	1.65	0.59
7:B:1604:C:OP2	33:B:5270:HOH:O	2.17	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1664:A:H2'	7:B:1665:A:H8	1.67	0.59
7:B:1775:U:H2'	7:B:1776:G:C5'	2.32	0.59
7:B:1972:G:N2	7:B:1973:G:C5	2.71	0.59
7:B:24:G:C1'	24:S:77:ASP:HB3	2.28	0.59
7:B:2814:A:H2'	7:B:2815:C:C6	2.37	0.59
7:B:592:A:H2'	7:B:593:U:H6	1.67	0.59
8:C:17:LYS:N	8:C:17:LYS:CE	2.65	0.59
8:C:212:TRP:CZ2	8:C:216:ARG:HD2	2.37	0.59
28:W:72:GLY:C	28:W:74:LYS:H	2.06	0.59
7:B:307:G:N1	7:B:310:A:OP2	2.35	0.59
7:B:320:A:H4'	7:B:322:A:C8	2.38	0.59
10:E:145:ASP:O	10:E:146:VAL:HG23	2.01	0.59
7:B:92:U:O4	7:B:93:G:C6	2.56	0.59
29:X:18:LEU:N	29:X:18:LEU:HD22	2.16	0.59
7:B:1707:G:C6	7:B:1708:C:C4	2.91	0.59
7:B:1340:U:O2'	7:B:1341:G:P	2.59	0.59
7:B:1098:A:C2'	7:B:1099:G:H5''	2.27	0.59
16:K:12:ASP:HB3	16:K:85:VAL:HG22	1.85	0.59
7:B:2582:G:O2'	7:B:2583:G:H5'	2.02	0.59
7:B:1284:A:O5'	7:B:1284:A:H8	1.85	0.59
3:2:16:HIS:NE2	3:2:44:VAL:HA	2.16	0.59
4:3:24:LYS:HD2	4:3:26:ALA:HB2	1.84	0.59
6:A:33:G:N2	6:A:34:A:N3	2.49	0.59
7:B:1362:C:O2	7:B:1363:C:C6	2.56	0.59
7:B:1371:G:O5'	7:B:1371:G:H8	1.85	0.59
7:B:1681:G:C4	7:B:1762:A:C2	2.90	0.59
7:B:2240:U:C2	7:B:2241:A:C8	2.91	0.59
7:B:2270:A:H3'	33:B:5396:HOH:O	2.02	0.59
7:B:2514:U:C2	7:B:2515:C:C5	2.90	0.59
7:B:565:C:C2	7:B:577:G:N1	2.71	0.59
23:R:89:HIS:CD2	23:R:90:ARG:N	2.64	0.59
28:W:42:THR:O	28:W:65:LYS:HA	2.02	0.59
7:B:346:A:C2'	7:B:347:A:H5''	2.33	0.59
2:1:8:ILE:HG21	2:1:27:ARG:NE	2.18	0.59
9:D:1:MET:HG2	9:D:1:MET:O	2.01	0.59
22:Q:67:ALA:O	22:Q:69:ARG:N	2.35	0.59
7:B:1707:G:H5'	7:B:1707:G:C8	2.36	0.59
9:D:36:GLN:C	9:D:36:GLN:NE2	2.54	0.59
7:B:1080:A:C2	7:B:1081:U:C4	2.90	0.59
7:B:1763:G:H2'	7:B:1764:C:C5'	2.32	0.59
7:B:2794:C:H2'	7:B:2795:C:C6	2.36	0.59
7:B:647:G:H8	7:B:647:G:H5''	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:A:28:C:H5'	20:O:31:THR:HG21	1.85	0.59
7:B:678:C:OP1	7:B:2072:C:OP1	2.20	0.59
7:B:28:A:H2'	7:B:29:U:H5'	1.83	0.59
7:B:742:A:H2'	7:B:743:A:C8	2.38	0.59
7:B:748:G:C5	7:B:750:A:C5	2.91	0.59
7:B:959:A:H5''	7:B:959:A:H8	1.68	0.59
8:C:90:ILE:HD13	8:C:102:TYR:HD2	1.65	0.59
8:C:16:VAL:O	8:C:17:LYS:HB2	2.03	0.59
8:C:203:VAL:HG22	8:C:203:VAL:O	2.03	0.59
19:N:103:ARG:HB3	19:N:106:ASP:OD1	2.03	0.59
21:P:61:ARG:CZ	21:P:61:ARG:HB3	2.32	0.59
31:Z:31:ASP:O	31:Z:32:LEU:HB2	2.01	0.59
2:1:15:GLY:HA3	2:1:47:ILE:HG21	1.84	0.59
7:B:2369:A:H2'	7:B:2370:G:C8	2.37	0.59
7:B:324:A:P	10:E:162:ARG:HE	2.25	0.59
7:B:507:A:H1'	7:B:509:C:N3	2.18	0.59
10:E:2:GLU:O	10:E:3:LEU:HB2	2.02	0.59
17:L:95:LEU:C	17:L:96:LYS:HD2	2.22	0.59
7:B:2636:C:OP1	9:D:79:LEU:HA	2.03	0.59
7:B:867:C:C6	7:B:867:C:H3'	2.37	0.59
12:G:156:TYR:CA	12:G:171:LYS:HB3	2.24	0.59
9:D:37:VAL:HG13	9:D:42:ASN:CG	2.22	0.59
7:B:1062:G:H21	14:I:91:LYS:HA	1.66	0.59
19:N:70:THR:O	19:N:71:ARG:HB2	2.02	0.59
7:B:360:U:H2'	7:B:361:G:O4'	2.03	0.59
7:B:239:C:H2'	7:B:240:C:C6	2.36	0.59
7:B:1540:G:C6	7:B:1541:C:C4	2.90	0.59
30:Y:7:THR:CG2	30:Y:34:THR:HB	2.32	0.59
7:B:2776:A:O5'	7:B:2776:A:H2'	2.03	0.59
7:B:2602:A:OP1	7:B:2602:A:H2'	2.02	0.59
4:3:9:ALA:C	4:3:11:LYS:H	2.05	0.59
7:B:1003:G:C8	7:B:1003:G:H5''	2.34	0.59
7:B:1885:A:C2	7:B:1886:U:C2	2.90	0.59
7:B:2044:C:H42	7:B:2045:C:N4	1.99	0.59
7:B:2058:A:C5'	7:B:2058:A:C8	2.86	0.59
7:B:2241:A:C2	7:B:2242:G:C4	2.91	0.59
7:B:2378:A:H3'	7:B:2378:A:C8	2.38	0.59
7:B:588:U:C5'	17:L:29:LYS:HD2	2.32	0.59
7:B:738:G:H1'	7:B:759:G:N2	2.17	0.59
13:H:27:ARG:H	13:H:31:VAL:CG2	2.14	0.59
18:M:33:LEU:HD22	18:M:124:LEU:HD12	1.83	0.59
19:N:63:ARG:HG3	19:N:80:PHE:HE1	1.66	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:25:GLY:O	22:Q:29:ARG:HG3	2.02	0.59
24:S:29:VAL:HG22	24:S:71:VAL:HG23	1.85	0.59
7:B:305:C:C5	7:B:306:U:H5	2.20	0.59
7:B:323:C:OP2	7:B:324:A:OP1	2.20	0.59
7:B:2082:A:N6	7:B:2239:G:C4	2.71	0.59
7:B:2784:U:C2	7:B:2785:C:C5	2.91	0.59
7:B:2811:G:O5'	7:B:2811:G:H8	1.84	0.59
12:G:76:ILE:HA	12:G:79:THR:HG22	1.85	0.59
20:O:56:LYS:O	20:O:62:LEU:HD12	2.02	0.59
14:I:41:PHE:HE1	14:I:70:THR:HB	1.68	0.59
7:B:662:G:O2'	7:B:663:G:H5'	2.02	0.59
7:B:1041:G:H2'	7:B:1042:G:C8	2.37	0.59
7:B:2803:G:H2'	7:B:2804:U:C6	2.36	0.59
10:E:154:ASP:O	10:E:155:GLU:HB2	2.02	0.59
7:B:1218:G:C6	7:B:1219:U:N3	2.70	0.59
7:B:1833:C:O2	7:B:1969:A:H2	1.86	0.59
7:B:2016:U:H2'	7:B:2017:U:O4'	2.02	0.59
7:B:2028:U:H3'	7:B:2029:G:H8	1.68	0.59
7:B:2244:U:O2	7:B:2245:U:C6	2.56	0.59
7:B:953:G:O2'	7:B:2266:A:P	2.60	0.59
7:B:460:A:N1	7:B:470:A:C4	2.71	0.59
7:B:582:A:OP2	22:Q:31:TYR:CE1	2.56	0.59
7:B:789:A:N6	7:B:1614:A:OP2	2.36	0.59
8:C:124:LYS:NZ	8:C:125:PRO:HD2	2.16	0.59
19:N:111:ALA:O	19:N:112:TYR:HD2	1.86	0.59
19:N:59:SER:O	19:N:60:VAL:HB	1.99	0.59
7:B:1454:C:C4'	19:N:60:VAL:HG22	2.32	0.59
20:O:97:PHE:CG	20:O:98:GLN:N	2.68	0.59
21:P:26:GLU:HB3	21:P:46:VAL:HG12	1.84	0.59
24:S:21:ALA:HA	24:S:24:ILE:HG13	1.83	0.59
24:S:32:ALA:CA	24:S:35:ILE:HG22	2.28	0.59
28:W:36:ILE:CG2	28:W:68:PHE:HD1	2.15	0.59
7:B:80:G:H5'	7:B:346:A:C1'	2.32	0.59
17:L:110:VAL:CG2	17:L:126:ARG:HH12	2.15	0.59
6:A:12:C:H5	28:W:50:VAL:CA	2.08	0.59
14:I:49:GLU:HB2	14:I:52:LEU:CD1	2.33	0.59
13:H:117:LEU:C	13:H:119:ASN:H	2.05	0.59
7:B:138:U:O2'	7:B:139:U:H2'	2.02	0.59
7:B:364:C:H2'	7:B:365:U:C6	2.37	0.59
26:U:52:ASN:O	26:U:54:PRO:HD3	2.01	0.59
7:B:2144:G:C3'	7:B:2145:C:H5'	2.33	0.59
14:I:37:PHE:HB2	14:I:66:PHE:CE2	2.36	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:647:G:C6	7:B:648:G:C6	2.91	0.59
7:B:2452:C:C4	7:B:2453:A:C6	2.91	0.59
7:B:2469:A:N1	7:B:2482:A:C8	2.71	0.59
7:B:2529:G:H5'	7:B:2530:A:C5'	2.33	0.59
7:B:533:G:H8	7:B:533:G:C5'	2.15	0.59
7:B:774:G:O3'	7:B:777:G:H1'	2.02	0.59
7:B:2620:C:OP1	9:D:157:LYS:HG2	2.02	0.59
20:O:38:GLN:N	20:O:50:ALA:HB3	2.18	0.59
21:P:110:LYS:HA	21:P:110:LYS:HE2	1.84	0.59
28:W:36:ILE:O	28:W:37:VAL:CG2	2.51	0.59
28:W:42:THR:OG1	28:W:65:LYS:HA	2.02	0.59
7:B:83:A:H2'	7:B:84:A:C8	2.38	0.59
11:F:12:VAL:HG13	11:F:27:VAL:HG21	1.84	0.59
7:B:600:G:C5	7:B:601:C:C4	2.91	0.59
25:T:31:VAL:O	25:T:32:LEU:HD12	2.01	0.59
7:B:2807:U:H5'	7:B:2808:G:OP2	2.02	0.59
7:B:406:G:H2'	7:B:407:G:O4'	2.02	0.59
7:B:1036:G:C6	7:B:1120:G:C4	2.91	0.59
7:B:965:C:HO2'	7:B:2272:U:HO2'	1.50	0.59
7:B:1005:C:H2'	7:B:1006:C:H6	1.68	0.59
1:O:47:TYR:CG	1:O:51:ARG:HA	2.37	0.59
6:A:114:C:H5''	20:O:47:VAL:HG23	1.83	0.59
7:B:1003:G:H8	7:B:1003:G:C5'	2.15	0.59
7:B:2051:A:H5''	7:B:2051:A:C8	2.37	0.59
7:B:2439:A:H4'	7:B:2440:C:C5'	2.33	0.59
7:B:796:C:C3'	7:B:796:C:C6	2.85	0.59
8:C:107:LYS:HB2	8:C:194:VAL:HG11	1.84	0.59
8:C:63:ILE:HD11	8:C:83:ASP:OD1	2.03	0.59
10:E:46:GLN:OE1	10:E:86:ALA:HB1	2.03	0.59
10:E:59:PRO:HB2	10:E:60:TRP:CD1	2.38	0.59
15:J:64:VAL:HG21	15:J:90:GLU:OE2	2.03	0.59
28:W:36:ILE:HG23	28:W:68:PHE:CD1	2.35	0.59
28:W:43:LYS:O	28:W:44:PHE:HB2	2.02	0.59
7:B:347:A:H8	7:B:347:A:C5'	2.12	0.59
9:D:52:THR:O	9:D:75:ALA:HA	2.03	0.59
18:M:41:LEU:CD1	18:M:95:LEU:HD13	2.29	0.59
7:B:848:C:H2'	7:B:849:A:H8	1.68	0.59
9:D:54:ALA:C	9:D:56:LYS:H	2.04	0.59
7:B:1339:G:H5''	25:T:19:LYS:HG3	1.84	0.59
14:I:27:LEU:CD2	14:I:34:ILE:HD12	2.33	0.59
16:K:35:VAL:HG11	16:K:69:VAL:HG22	1.85	0.59
7:B:416:U:C4	7:B:417:C:N4	2.70	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1469:A:C2	7:B:1470:A:C4	2.90	0.59
5:4:32:LYS:O	5:4:34:LYS:N	2.35	0.59
7:B:2020:A:O2'	7:B:2021:C:H5'	2.03	0.59
7:B:2886:A:N3	7:B:2887:A:N7	2.51	0.59
7:B:529:A:N7	7:B:2023:C:N4	2.50	0.59
7:B:857:G:O2'	7:B:858:G:H5'	2.03	0.59
18:M:58:LYS:CD	18:M:60:GLN:HB2	2.29	0.59
20:O:14:ALA:O	20:O:17:LYS:N	2.35	0.59
7:B:75:G:H4'	29:X:48:ARG:NH1	2.18	0.59
25:T:77:ARG:HG2	25:T:78:SER:H	1.68	0.59
9:D:34:VAL:HG22	9:D:35:THR:H	1.68	0.59
7:B:1708:C:H2'	7:B:1709:U:C5	2.37	0.59
17:L:110:VAL:H	17:L:126:ARG:NH2	2.01	0.59
7:B:873:C:C6	7:B:874:G:C8	2.90	0.59
23:R:50:GLY:O	23:R:51:VAL:CB	2.50	0.59
7:B:2547:A:H2'	7:B:2548:U:C6	2.38	0.59
6:A:69:G:H5'	6:A:70:C:OP2	2.02	0.59
7:B:1581:G:C5	7:B:1582:C:C5	2.90	0.59
7:B:2103:C:H3'	7:B:2104:C:O2	2.03	0.59
7:B:1116:G:H2'	7:B:1117:C:H5'	1.83	0.59
1:O:53:VAL:HG13	1:O:54:ILE:H	1.67	0.59
23:R:47:VAL:HG13	23:R:48:LYS:H	1.67	0.59
16:K:4:GLU:OE2	16:K:23:LYS:HD2	2.02	0.59
7:B:1447:C:H2'	7:B:1448:G:C8	2.37	0.59
6:A:49:C:H2'	6:A:50:A:H8	1.68	0.58
7:B:565:C:H4'	7:B:1253:A:C6	2.37	0.58
7:B:1456:G:C5	7:B:1457:U:C5	2.91	0.58
7:B:2234:G:H2'	7:B:2235:G:C8	2.36	0.58
7:B:2307:G:N2	7:B:2308:G:O2'	2.36	0.58
7:B:2571:U:HO2'	7:B:2572:A:P	2.26	0.58
7:B:2595:G:O6	8:C:237:ARG:NH2	2.36	0.58
7:B:2744:G:C4	7:B:2761:A:C2	2.91	0.58
7:B:2856:A:H5'	7:B:2856:A:C8	2.38	0.58
7:B:748:G:C8	7:B:750:A:C8	2.90	0.58
7:B:813:U:H2'	7:B:814:C:C6	2.37	0.58
7:B:827:U:O5'	7:B:828:U:C5	2.56	0.58
17:L:33:ARG:CG	23:R:85:LYS:HE2	2.33	0.58
21:P:62:LYS:HE2	21:P:74:GLN:HG3	1.83	0.58
28:W:27:GLY:HA2	28:W:60:ALA:HA	1.84	0.58
28:W:46:ALA:O	28:W:48:ALA:N	2.36	0.58
7:B:64:A:H8	25:T:69:ARG:HD2	1.68	0.58
7:B:657:U:C2'	7:B:658:U:C6	2.77	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:K:43:ILE:HG22	16:K:54:LYS:HA	1.85	0.58
7:B:2303:G:C6	7:B:2304:G:N7	2.70	0.58
7:B:2304:G:H4'	11:F:129:MET:N	2.18	0.58
14:I:54:ILE:O	14:I:54:ILE:HG22	2.02	0.58
7:B:422:A:H2'	7:B:423:A:C8	2.38	0.58
24:S:4:ILE:HG22	24:S:5:ALA:H	1.67	0.58
5:4:26:ILE:O	5:4:27:CYS:HB2	2.03	0.58
7:B:1195:G:C8	7:B:1195:G:H5''	2.38	0.58
7:B:1569:A:N6	7:B:1570:A:C6	2.71	0.58
7:B:1899:A:O2'	7:B:1901:A:H5''	2.02	0.58
7:B:250:G:H5'	17:L:60:ARG:CD	2.32	0.58
7:B:2588:G:H2'	7:B:2589:A:H5'	1.85	0.58
7:B:465:G:N2	7:B:466:A:C2	2.72	0.58
7:B:568:U:O2	7:B:570:G:O5'	2.21	0.58
7:B:680:C:O2	7:B:681:G:C8	2.56	0.58
3:2:26:ASN:HB3	7:B:682:G:H4'	1.85	0.58
8:C:141:HIS:HB3	8:C:190:THR:HB	1.85	0.58
8:C:179:GLU:CG	8:C:266:ILE:CA	2.79	0.58
8:C:78:GLU:O	8:C:79:ARG:CB	2.50	0.58
9:D:23:PRO:HA	9:D:190:LYS:HA	1.84	0.58
11:F:67:THR:HG1	11:F:85:GLY:HA3	1.68	0.58
13:H:47:PHE:O	13:H:50:ARG:HG2	2.02	0.58
22:Q:13:HIS:CE1	22:Q:31:TYR:CE1	2.92	0.58
28:W:35:ILE:HG13	28:W:36:ILE:H	1.68	0.58
28:W:66:VAL:HG13	28:W:67:LYS:N	2.18	0.58
7:B:478:A:C6	7:B:480:A:C6	2.90	0.58
9:D:77:ARG:HH11	9:D:77:ARG:CB	2.15	0.58
7:B:1053:C:N3	7:B:1106:G:N2	2.50	0.58
7:B:136:G:N2	25:T:3:ARG:NE	2.36	0.58
7:B:277:G:H4'	7:B:278:A:N7	2.19	0.58
7:B:1093:G:N2	7:B:1098:A:H62	2.02	0.58
7:B:1598:A:C2	7:B:1599:U:N1	2.69	0.58
27:V:56:PHE:C	27:V:56:PHE:CD2	2.77	0.58
7:B:1959:G:C6	7:B:1960:A:C5	2.92	0.58
7:B:945:A:C2	7:B:2448:A:C1'	2.85	0.58
13:H:72:ILE:O	13:H:75:LEU:HG	2.04	0.58
3:2:44:VAL:O	3:2:45:SER:C	2.40	0.58
4:3:15:LYS:HE2	4:3:21:PHE:HE1	1.67	0.58
7:B:1275:A:C3'	7:B:1275:A:N3	2.64	0.58
7:B:1562:U:C2	7:B:1563:U:C6	2.92	0.58
7:B:1566:A:C6	8:C:213:ARG:CZ	2.87	0.58
7:B:252:G:N3	7:B:253:C:H6	2.01	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2519:U:C6	7:B:2542:A:N6	2.71	0.58
7:B:2048:G:H1	7:B:2620:C:N4	2.00	0.58
7:B:2843:G:O2'	7:B:2844:G:H5'	2.03	0.58
7:B:519:U:O2'	7:B:520:G:H5'	2.03	0.58
8:C:19:VAL:HG12	8:C:20:ASN:N	2.18	0.58
12:G:108:PHE:CZ	12:G:151:ARG:NH1	2.71	0.58
13:H:5:LEU:O	13:H:6:LEU:HD23	2.03	0.58
7:B:588:U:OP1	17:L:29:LYS:HD2	2.04	0.58
20:O:27:VAL:HG21	20:O:38:GLN:HB3	1.84	0.58
22:Q:44:TYR:O	22:Q:48:ASP:CB	2.49	0.58
24:S:17:VAL:HG12	24:S:43:ALA:HB1	1.86	0.58
7:B:2331:G:HO2'	28:W:69:GLU:HG3	1.68	0.58
7:B:2345:G:C2	7:B:2381:A:C5	2.91	0.58
7:B:1242:U:H2'	7:B:1243:C:C6	2.38	0.58
7:B:298:G:H8	7:B:298:G:O5'	1.85	0.58
10:E:24:ASN:ND2	10:E:107:SER:HB3	2.18	0.58
7:B:98:G:H8	7:B:98:G:H5''	1.68	0.58
22:Q:97:ILE:HD12	23:R:13:ARG:HG2	1.86	0.58
23:R:5:PHE:CB	23:R:12:HIS:ND1	2.66	0.58
7:B:221:A:C2	7:B:233:A:C8	2.91	0.58
24:S:56:ALA:HA	24:S:59:GLU:CB	2.31	0.58
6:A:105:G:C4	6:A:106:G:C8	2.91	0.58
7:B:1771:C:H42	7:B:1772:A:N6	2.01	0.58
7:B:1701:A:H2'	7:B:1702:G:H5'	1.83	0.58
7:B:1216:G:C2	7:B:1217:U:H6	2.21	0.58
7:B:1820:U:C6	8:C:157:ALA:O	2.57	0.58
7:B:20:C:H2'	7:B:21:A:H8	1.69	0.58
7:B:2210:U:H4'	7:B:2211:A:H5'	1.85	0.58
7:B:2265:U:O2	7:B:2276:G:N2	2.37	0.58
7:B:2366:A:H3'	7:B:2367:G:H8	1.68	0.58
7:B:688:U:C3'	7:B:688:U:C6	2.86	0.58
7:B:983:A:H2'	7:B:984:A:C8	2.37	0.58
21:P:25:VAL:O	21:P:25:VAL:HG12	2.01	0.58
22:Q:13:HIS:NE2	22:Q:31:TYR:CE1	2.71	0.58
7:B:301:G:N2	7:B:302:C:N3	2.51	0.58
17:L:22:GLY:C	17:L:23:ILE:HD13	2.23	0.58
29:X:1:MET:HB2	29:X:5:GLU:CB	2.32	0.58
29:X:26:PHE:O	29:X:29:ARG:HB2	2.03	0.58
29:X:51:ALA:O	29:X:53:VAL:N	2.33	0.58
7:B:2204:G:O6	7:B:2221:G:C6	2.56	0.58
18:M:18:ARG:HH12	18:M:92:TRP:HZ3	1.49	0.58
18:M:93:VAL:CG1	18:M:95:LEU:HB3	2.32	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:137:U:C4	7:B:138:U:N3	2.71	0.58
7:B:142:A:OP2	7:B:142:A:C8	2.57	0.58
7:B:364:C:H2'	7:B:365:U:H6	1.68	0.58
7:B:2101:A:H2'	7:B:2102:G:C8	2.37	0.58
13:H:114:GLU:OE1	13:H:133:GLN:HG3	2.04	0.58
7:B:2549:G:H2'	7:B:2550:G:H5'	1.85	0.58
7:B:709:U:H2'	7:B:710:U:O4'	2.04	0.58
10:E:126:VAL:HG13	10:E:128:ALA:H	1.68	0.58
15:J:106:LYS:HG3	15:J:106:LYS:O	2.03	0.58
4:3:40:LYS:O	4:3:43:LEU:HD13	2.03	0.58
4:3:46:LYS:HD2	4:3:47:ALA:O	2.03	0.58
7:B:1216:G:C2'	7:B:1217:U:H5'	2.33	0.58
7:B:2458:G:H1'	7:B:2460:U:O4	2.04	0.58
7:B:839:U:H2'	7:B:840:C:C5	2.38	0.58
8:C:15:VAL:CG1	8:C:16:VAL:HG13	2.33	0.58
8:C:220:ARG:HH11	8:C:220:ARG:CG	2.10	0.58
15:J:81:ILE:HA	15:J:84:ILE:CD1	2.30	0.58
22:Q:64:ILE:CG1	22:Q:95:ALA:HB2	2.32	0.58
23:R:84:ARG:HB2	23:R:84:ARG:NH1	2.18	0.58
31:Z:3:LYS:HE3	31:Z:30:HIS:N	2.17	0.58
7:B:321:U:O2'	10:E:159:LEU:HD12	2.03	0.58
26:U:82:VAL:CB	26:U:94:PHE:HB3	2.27	0.58
7:B:2284:A:H8	7:B:2284:A:O5'	1.87	0.58
9:D:1:MET:HB2	9:D:81:GLU:HG2	1.85	0.58
7:B:218:A:H2'	7:B:219:A:C8	2.39	0.58
7:B:1292:G:C6	7:B:1293:C:N4	2.71	0.58
7:B:2197:U:H1'	7:B:2198:A:H2'	1.85	0.58
7:B:1210:G:C5'	7:B:1211:C:H3'	2.32	0.58
15:J:94:ALA:HA	15:J:97:PRO:CG	2.32	0.58
7:B:1712:U:H2'	7:B:1713:A:N7	2.19	0.58
12:G:62:ALA:C	12:G:64:ALA:H	2.05	0.58
7:B:116:C:H2'	7:B:117:G:C8	2.38	0.58
7:B:1227:G:H8	7:B:1227:G:H5''	1.67	0.58
7:B:1854:A:H62	7:B:1888:G:H8	1.49	0.58
7:B:2058:A:H5''	7:B:2058:A:C8	2.28	0.58
7:B:2241:A:N1	7:B:2242:G:C6	2.71	0.58
7:B:2262:U:O4	7:B:2279:G:N1	2.36	0.58
7:B:2454:G:C2'	7:B:2455:G:H5'	2.34	0.58
7:B:255:A:H5''	7:B:255:A:H8	1.68	0.58
7:B:808:G:O5'	7:B:808:G:H8	1.86	0.58
7:B:978:G:C2	7:B:986:C:C2	2.91	0.58
8:C:34:GLU:CD	8:C:34:GLU:C	2.62	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:61:TYR:CD2	8:C:84:PRO:HD3	2.37	0.58
11:F:84:ILE:O	11:F:84:ILE:HG13	2.04	0.58
17:L:34:GLY:HA3	23:R:85:LYS:CD	2.21	0.58
22:Q:40:LYS:CD	22:Q:44:TYR:HD2	2.14	0.58
22:Q:40:LYS:HA	22:Q:44:TYR:HB2	1.86	0.58
29:X:1:MET:HB2	29:X:5:GLU:HB2	1.84	0.58
22:Q:101:ASP:O	22:Q:104:ALA:HB3	2.04	0.58
6:A:95:U:H2'	6:A:96:G:H8	1.66	0.58
13:H:90:LEU:HD12	13:H:91:PHE:H	1.69	0.58
19:N:29:VAL:HG21	19:N:75:ILE:HD11	1.84	0.58
7:B:1343:G:N2	7:B:1405:U:C4	2.72	0.58
7:B:1347:A:H2'	7:B:1348:C:H5''	1.85	0.58
7:B:1006:C:H1'	15:J:108:MET:SD	2.44	0.58
7:B:1907:G:N2	7:B:1924:C:H1'	2.18	0.58
7:B:1010:A:H8	7:B:1010:A:O5'	1.86	0.58
7:B:1456:G:C2'	7:B:1457:U:H5'	2.34	0.58
7:B:1809:A:C2	7:B:1810:A:C5	2.92	0.58
7:B:1885:A:H2'	7:B:1886:U:C6	2.38	0.58
7:B:2421:G:H8	7:B:2421:G:C5'	2.16	0.58
7:B:1050:A:C2	7:B:2751:G:C5	2.92	0.58
7:B:2885:G:C5	7:B:2886:A:C8	2.91	0.58
7:B:55:G:C2	7:B:56:A:C8	2.92	0.58
7:B:571:U:N3	7:B:575:A:N7	2.52	0.58
7:B:586:A:OP1	10:E:84:THR:HB	2.03	0.58
7:B:738:G:C6	7:B:739:A:N1	2.71	0.58
7:B:751:A:C5	7:B:789:A:C6	2.91	0.58
8:C:17:LYS:HA	8:C:17:LYS:HZ3	1.68	0.58
7:B:1797:G:O3'	8:C:253:GLY:HA2	2.03	0.58
8:C:179:GLU:HG3	8:C:266:ILE:HA	1.85	0.58
15:J:81:ILE:HG13	15:J:83:GLY:H	1.69	0.58
24:S:27:LYS:C	24:S:28:LYS:HD2	2.24	0.58
25:T:70:HIS:HD2	25:T:74:ILE:HG13	1.69	0.58
9:D:31:ALA:HB3	9:D:95:SER:H	1.68	0.58
9:D:61:THR:N	9:D:62:LYS:HZ1	2.01	0.58
9:D:68:PHE:O	9:D:90:PHE:CG	2.57	0.58
7:B:1443:U:H2'	7:B:1444:G:C8	2.38	0.58
7:B:2255:G:H2'	7:B:2256:G:C8	2.32	0.58
7:B:156:A:C5	7:B:157:C:C5	2.91	0.58
7:B:2584:U:C6	7:B:2584:U:H3'	2.37	0.58
14:I:126:ARG:HG2	14:I:129:GLU:HB2	1.85	0.58
7:B:1172:C:H2'	7:B:1173:U:H1'	1.86	0.58
7:B:1001:A:H2'	7:B:1002:G:O4'	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1130:U:C6	7:B:2026:U:OP2	2.56	0.58
7:B:1011:G:C6	7:B:1151:A:C6	2.92	0.58
7:B:123:G:C2'	7:B:124:G:H5''	2.34	0.58
7:B:1974:C:C4	7:B:1975:G:N7	2.71	0.58
7:B:2199:A:C2	7:B:2225:A:C2	2.92	0.58
7:B:2469:A:C6	7:B:2482:A:C8	2.92	0.58
7:B:2488:G:C2	7:B:2489:U:C4	2.92	0.58
7:B:463:G:C3'	7:B:463:G:C8	2.87	0.58
7:B:490:C:H4'	7:B:491:G:OP2	2.04	0.58
7:B:964:C:O2'	7:B:2273:A:H1'	2.04	0.58
7:B:691:C:OP1	8:C:216:ARG:NH1	2.37	0.58
8:C:235:GLU:CG	8:C:236:GLY:H	2.16	0.58
7:B:2025:C:P	9:D:154:LYS:NZ	2.76	0.58
13:H:47:PHE:CD2	13:H:47:PHE:C	2.76	0.58
15:J:78:THR:N	15:J:84:ILE:HG21	2.09	0.58
17:L:37:GLY:O	17:L:38:GLN:HG2	2.03	0.58
7:B:943:A:P	17:L:40:SER:HA	2.44	0.58
20:O:33:ARG:HG3	20:O:34:HIS:CD2	2.38	0.58
21:P:7:LEU:HA	21:P:10:GLU:HG3	1.86	0.58
22:Q:13:HIS:O	22:Q:14:LYS:C	2.41	0.58
23:R:79:ARG:C	23:R:79:ARG:HD2	2.23	0.58
24:S:7:HIS:O	24:S:8:ARG:HB2	2.04	0.58
28:W:44:PHE:CZ	28:W:60:ALA:HB3	2.38	0.58
10:E:148:ILE:HB	10:E:185:LYS:HB3	1.86	0.58
10:E:194:LYS:N	10:E:194:LYS:NZ	2.43	0.58
26:U:69:VAL:HB	26:U:77:GLY:HA2	1.84	0.58
7:B:85:G:C5	7:B:98:G:N2	2.71	0.58
9:D:101:PHE:CD1	9:D:101:PHE:C	2.75	0.58
22:Q:99:VAL:HG13	22:Q:100:PHE:CG	2.39	0.58
7:B:219:A:O2'	7:B:220:G:H5'	2.04	0.58
17:L:111:ILE:H	17:L:126:ARG:NH2	1.99	0.58
6:A:79:G:O2'	6:A:80:U:H5'	2.03	0.58
18:M:9:PHE:HZ	18:M:12:MET:HB2	1.69	0.58
13:H:84:ALA:HB2	13:H:148:ALA:HB2	1.85	0.58
7:B:1789:A:C2'	7:B:1790:C:H5'	2.34	0.58
7:B:1039:A:C2	7:B:1040:A:C4	2.92	0.58
7:B:1952:A:OP1	16:K:42:THR:HG21	2.04	0.58
7:B:45:G:N2	7:B:434:U:N3	2.52	0.58
17:L:69:ARG:C	17:L:71:ALA:H	2.07	0.58
10:E:25:GLU:O	10:E:26:ALA:O	2.22	0.58
7:B:387:U:C5	7:B:388:G:C6	2.92	0.58
7:B:740:C:O2	7:B:740:C:H2'	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:42:HIS:O	4:3:43:LEU:HD12	2.04	0.58
5:4:3:VAL:HG12	5:4:5:ALA:H	1.67	0.58
7:B:1256:G:H2'	7:B:1257:C:H6	1.68	0.58
7:B:1323:C:H3'	7:B:1324:G:H5''	1.84	0.58
7:B:1375:U:C4	7:B:1376:C:H5	2.20	0.58
7:B:194:G:C4	7:B:195:A:N7	2.71	0.58
7:B:1967:C:N4	7:B:1968:G:C5	2.72	0.58
7:B:961:C:C4	7:B:2031:A:C5	2.92	0.58
7:B:2695:U:H3'	7:B:2695:U:C6	2.37	0.58
7:B:2873:A:N3	19:N:6:SER:HA	2.19	0.58
7:B:535:G:O3'	22:Q:52:ARG:NH1	2.36	0.58
7:B:683:U:H2'	7:B:684:G:O5'	2.04	0.58
7:B:748:G:N3	7:B:750:A:N6	2.52	0.58
7:B:794:A:H2'	7:B:795:C:C6	2.38	0.58
7:B:836:G:C6	7:B:837:C:C4	2.92	0.58
17:L:58:TYR:HD2	17:L:58:TYR:H	1.49	0.58
18:M:110:GLU:OE1	18:M:126:ILE:HD12	2.03	0.58
20:O:17:LYS:HE3	20:O:92:PHE:HB3	1.86	0.58
7:B:93:G:C2	7:B:94:A:H1'	2.38	0.58
26:U:84:PHE:C	26:U:85:ARG:HG3	2.24	0.58
23:R:39:LEU:N	23:R:61:ALA:CB	2.66	0.58
8:C:188:ARG:O	8:C:189:ALA:HB2	2.03	0.58
7:B:2892:G:H5''	7:B:2894:G:H22	1.69	0.58
26:U:26:ASN:O	26:U:34:ILE:HD11	2.04	0.58
7:B:1764:C:C3'	7:B:1764:C:C6	2.87	0.58
7:B:223:A:C2	7:B:408:G:C8	2.91	0.58
7:B:2095:A:C6	7:B:2096:C:C4	2.92	0.58
6:A:23:G:H2'	6:A:24:G:C8	2.39	0.58
20:O:115:LEU:O	20:O:116:GLN:HG3	2.04	0.58
24:S:53:SER:C	24:S:55:ILE:H	2.05	0.58
7:B:702:U:H6	7:B:702:U:H5''	1.68	0.58
5:4:11:CYS:SG	5:4:26:ILE:O	2.61	0.58
7:B:1191:G:O2'	7:B:1192:G:H5'	2.04	0.58
7:B:120:U:C6	7:B:149:A:C4	2.92	0.58
7:B:122:G:H3'	7:B:123:G:H8	1.68	0.58
7:B:1265:A:O4'	7:B:1267:U:C6	2.57	0.58
7:B:1776:G:C6	7:B:1777:U:C4	2.92	0.58
7:B:563:A:C2	7:B:2018:G:N3	2.72	0.58
7:B:2024:G:C6	7:B:2025:C:C4	2.92	0.58
7:B:203:A:H3'	7:B:204:A:H2'	1.86	0.58
7:B:2261:C:H5''	7:B:2262:U:OP2	2.04	0.58
7:B:2355:G:H1'	7:B:2363:G:N2	2.19	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:244:A:H2'	7:B:245:G:O5'	2.03	0.58
7:B:2575:C:H5''	7:B:2576:G:OP2	2.04	0.58
7:B:2581:G:H2'	7:B:2610:C:H41	1.69	0.58
7:B:2677:G:C6	7:B:2678:C:C4	2.92	0.58
7:B:2866:U:C2	7:B:2868:A:H1'	2.39	0.58
7:B:689:A:H61	7:B:773:U:H3	1.51	0.58
7:B:969:G:C2	7:B:970:U:C2	2.91	0.58
8:C:143:VAL:HB	8:C:152:GLN:HG3	1.86	0.58
9:D:128:ARG:H	9:D:128:ARG:HH11	1.49	0.58
15:J:110:PRO:HB2	15:J:115:GLY:HA3	1.85	0.58
18:M:50:ARG:CA	18:M:50:ARG:CZ	2.70	0.58
21:P:51:ASN:ND2	21:P:97:TYR:HD2	2.00	0.58
7:B:323:C:H1'	10:E:164:LEU:CB	2.32	0.58
30:Y:23:LEU:O	30:Y:24:LEU:HD22	2.04	0.58
7:B:1427:A:H1'	7:B:1428:C:C5	2.39	0.58
13:H:79:THR:O	13:H:80:ILE:HG23	2.04	0.58
7:B:1062:G:H2'	7:B:1063:G:C8	2.38	0.58
14:I:130:GLY:HA2	14:I:133:ARG:NH1	2.19	0.58
12:G:157:LYS:CB	12:G:159:LYS:HG3	2.34	0.58
7:B:2415:G:H4'	17:L:66:PHE:HD2	1.67	0.58
16:K:22:ILE:HG23	16:K:40:LYS:O	2.03	0.58
7:B:2110:G:N1	7:B:2180:U:O4	2.25	0.58
6:A:71:C:H2'	6:A:72:G:H8	1.68	0.58
17:L:90:VAL:O	17:L:122:VAL:HG13	2.02	0.58
7:B:1578:U:H5''	7:B:1578:U:H6	1.69	0.58
7:B:13:A:C2	7:B:525:U:O2	2.57	0.58
24:S:63:GLY:O	24:S:64:ALA:HB2	2.03	0.58
6:A:53:A:C6	6:A:54:G:C5	2.92	0.57
6:A:52:A:C2'	6:A:53:A:H5'	2.34	0.57
7:B:1003:G:N2	7:B:1153:C:C4	2.72	0.57
7:B:1431:A:H2'	7:B:1432:G:O4'	2.04	0.57
7:B:1799:G:C6	7:B:1819:A:C8	2.91	0.57
7:B:1820:U:H4'	7:B:1821:A:OP2	2.04	0.57
7:B:192:C:N4	7:B:203:A:H1'	2.18	0.57
7:B:195:A:H3'	7:B:196:A:H4'	1.84	0.57
7:B:2031:A:N1	7:B:2498:C:C6	2.72	0.57
7:B:208:C:C2	7:B:209:C:C5	2.93	0.57
7:B:2231:U:C2	7:B:2232:C:C6	2.92	0.57
7:B:2279:G:N2	7:B:2280:G:H1'	2.19	0.57
7:B:2455:G:N1	7:B:2498:C:N4	2.51	0.57
7:B:2861:U:H2'	7:B:2862:G:C8	2.39	0.57
7:B:377:G:C2	7:B:398:C:O2	2.57	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:452:G:C2	7:B:458:G:C8	2.92	0.57
8:C:203:VAL:O	8:C:204:LEU:C	2.41	0.57
7:B:1843:C:O3'	8:C:252:LYS:HA	2.04	0.57
18:M:117:PHE:C	18:M:117:PHE:CD1	2.77	0.57
31:Z:48:GLN:O	31:Z:51:VAL:HB	2.03	0.57
10:E:189:THR:C	10:E:191:ASP:N	2.57	0.57
2:1:34:GLU:HB2	2:1:50:GLU:OE1	2.03	0.57
17:L:86:GLU:O	17:L:86:GLU:HG3	2.04	0.57
30:Y:24:LEU:C	30:Y:26:LEU:N	2.55	0.57
7:B:1291:C:H2'	7:B:1292:G:O4'	2.03	0.57
7:B:2547:A:N1	7:B:2548:U:C4	2.72	0.57
7:B:160:A:H1'	7:B:2208:C:O2'	2.03	0.57
7:B:343:C:N3	7:B:344:A:H8	2.01	0.57
7:B:1531:C:H2'	7:B:1532:A:H8	1.69	0.57
7:B:2860:A:C8	7:B:2860:A:C5'	2.87	0.57
14:I:82:ALA:CB	14:I:108:ILE:HD11	2.34	0.57
7:B:1574:C:H2'	7:B:1575:C:C6	2.39	0.57
13:H:42:LYS:HG2	13:H:45:GLU:OE2	2.03	0.57
4:3:54:LEU:C	4:3:56:LEU:N	2.56	0.57
7:B:1195:G:H5''	7:B:1195:G:H8	1.68	0.57
7:B:2311:A:H3'	7:B:2311:A:OP1	2.05	0.57
7:B:2442:C:N4	7:B:2443:C:N4	2.52	0.57
7:B:2623:G:H5''	7:B:2623:G:C8	2.39	0.57
7:B:779:U:O2'	7:B:780:G:H5'	2.04	0.57
7:B:966:G:C6	7:B:967:U:O2	2.56	0.57
8:C:179:GLU:HG3	8:C:266:ILE:CA	2.34	0.57
8:C:42:ARG:CG	8:C:43:ASN:N	2.61	0.57
8:C:78:GLU:O	8:C:79:ARG:HB2	2.03	0.57
18:M:100:LYS:O	18:M:101:VAL:HG23	2.04	0.57
21:P:61:ARG:HH12	21:P:63:ILE:HD11	1.69	0.57
22:Q:90:ASP:CG	23:R:10:LYS:HG2	2.23	0.57
23:R:40:MET:HA	23:R:54:VAL:HA	1.85	0.57
23:R:6:GLN:HA	23:R:10:LYS:CB	2.34	0.57
31:Z:32:LEU:C	31:Z:33:ASN:OD1	2.42	0.57
7:B:2290:G:C4	7:B:2291:U:C5	2.92	0.57
25:T:72:GLN:O	25:T:73:ARG:HB2	2.04	0.57
7:B:39:G:H2'	7:B:40:U:H6	1.69	0.57
13:H:117:LEU:HG	13:H:119:ASN:O	2.03	0.57
7:B:411:G:P	7:B:2407:A:OP2	2.62	0.57
9:D:24:VAL:HG23	9:D:191:GLY:HA2	1.86	0.57
7:B:2534:A:C8	7:B:2534:A:H5''	2.37	0.57
7:B:1960:A:N7	7:B:1961:C:H5	2.01	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:F:113:PHE:HZ	11:F:175:PRO:HB3	1.69	0.57
7:B:945:A:C2	7:B:2448:A:C4	2.92	0.57
18:M:115:GLU:N	18:M:115:GLU:OE2	2.37	0.57
7:B:1136:G:H5'	7:B:1136:G:C8	2.39	0.57
7:B:1754:A:H2'	7:B:1755:A:H8	1.70	0.57
7:B:196:A:C3'	7:B:197:A:H5''	2.32	0.57
7:B:2002:G:O6	7:B:2003:A:N6	2.37	0.57
7:B:2049:G:O2'	7:B:2050:C:H5'	2.04	0.57
7:B:2060:A:N1	7:B:2502:G:C6	2.72	0.57
7:B:2310:C:H5'	7:B:2311:A:OP2	2.03	0.57
7:B:2469:A:C6	7:B:2482:A:N7	2.71	0.57
7:B:586:A:C2	7:B:810:U:O4'	2.57	0.57
7:B:948:C:H1'	7:B:984:A:N3	2.20	0.57
8:C:197:ALA:C	8:C:199:HIS:N	2.58	0.57
8:C:44:ASN:CG	8:C:48:ILE:O	2.42	0.57
9:D:175:LEU:HD22	9:D:189:VAL:HG12	1.86	0.57
9:D:184:ARG:O	9:D:186:LEU:HD13	2.03	0.57
15:J:25:LEU:O	15:J:27:ARG:N	2.36	0.57
7:B:1454:C:C6	19:N:60:VAL:HG13	2.39	0.57
21:P:25:VAL:CG1	21:P:87:ARG:HA	2.33	0.57
25:T:65:GLY:O	25:T:66:LYS:HB2	2.04	0.57
23:R:4:VAL:C	23:R:41:ILE:HG12	2.25	0.57
18:M:18:ARG:CG	18:M:19:GLY:N	2.67	0.57
13:H:115:VAL:CB	13:H:132:PHE:CE1	2.88	0.57
7:B:1057:A:N1	7:B:1082:U:C2	2.73	0.57
8:C:222:THR:HG21	8:C:238:ASN:ND2	2.19	0.57
7:B:363:G:H2'	7:B:364:C:C6	2.39	0.57
7:B:1177:G:H2'	7:B:1178:C:C6	2.39	0.57
7:B:257:C:H3'	7:B:258:G:H8	1.69	0.57
7:B:649:G:H2'	7:B:650:C:H6	1.70	0.57
7:B:1526:C:H2'	7:B:1527:G:O4'	2.05	0.57
7:B:695:G:C2	7:B:696:G:C8	2.92	0.57
7:B:740:C:C6	7:B:740:C:H5''	2.39	0.57
7:B:1693:U:H5''	7:B:1694:C:H5	1.69	0.57
24:S:58:ALA:HA	24:S:62:ASP:HB2	1.85	0.57
1:O:29:VAL:HG21	1:O:34:GLY:N	2.20	0.57
6:A:50:A:OP1	20:O:68:LYS:CG	2.52	0.57
7:B:942:G:H4'	7:B:1189:A:O2'	2.05	0.57
7:B:1255:U:H3	10:E:66:GLY:CA	2.16	0.57
7:B:2087:G:N2	7:B:2233:U:O2	2.38	0.57
7:B:207:A:H2'	7:B:208:C:O4'	2.05	0.57
7:B:245:G:N3	7:B:384:A:C2	2.72	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:7:ARG:CZ	7:B:250:G:OP2	2.52	0.57
7:B:2571:U:N3	7:B:2574:G:C8	2.73	0.57
7:B:2712:C:C6	7:B:2715:C:OP1	2.57	0.57
8:C:177:SER:O	8:C:179:GLU:CD	2.41	0.57
10:E:67:ARG:HD2	10:E:67:ARG:H	1.68	0.57
13:H:27:ARG:HG2	13:H:28:ASN:OD1	2.04	0.57
20:O:40:ILE:HG22	20:O:46:GLU:HB3	1.85	0.57
28:W:28:GLU:OE1	28:W:61:LYS:HD2	2.04	0.57
26:U:98:ASN:N	26:U:98:ASN:HD22	2.02	0.57
9:D:7:LYS:HA	9:D:26:VAL:HA	1.86	0.57
7:B:1710:G:C2	7:B:1749:A:N3	2.72	0.57
7:B:624:C:H41	17:L:100:ILE:HD11	1.68	0.57
17:L:131:ALA:HA	17:L:134:ALA:HB3	1.84	0.57
7:B:870:U:H2'	7:B:871:U:H5'	1.86	0.57
7:B:851:C:O2'	30:Y:45:GLY:HA3	2.03	0.57
7:B:2213:U:C2	7:B:2213:U:O5'	2.57	0.57
7:B:1334:G:H8	7:B:1334:G:O5'	1.87	0.57
12:G:143:VAL:HG22	12:G:147:LEU:CD1	2.34	0.57
4:3:16:THR:O	4:3:19:GLY:N	2.37	0.57
7:B:1687:G:H1'	7:B:1702:G:N2	2.19	0.57
27:V:13:GLY:O	27:V:14:LYS:C	2.43	0.57
7:B:2024:G:C8	7:B:2024:G:O5'	2.58	0.57
7:B:23:G:C8	7:B:23:G:H5''	2.39	0.57
7:B:23:G:H2'	7:B:24:G:C8	2.39	0.57
7:B:2623:G:H2'	7:B:2624:G:H5'	1.86	0.57
7:B:2714:G:O2'	7:B:2715:C:H5'	2.04	0.57
7:B:375:G:O6	7:B:400:G:N3	2.38	0.57
7:B:35:G:H22	7:B:450:G:H1'	1.68	0.57
7:B:573:U:O2'	7:B:574:A:H3'	2.04	0.57
8:C:174:ARG:HA	8:C:180:MET:HA	1.85	0.57
8:C:244:VAL:H	8:C:249:VAL:HG21	1.69	0.57
8:C:62:ARG:CG	8:C:62:ARG:NH1	2.66	0.57
19:N:111:ALA:O	19:N:112:TYR:CD2	2.58	0.57
22:Q:44:TYR:CD1	22:Q:48:ASP:HB2	2.39	0.57
28:W:28:GLU:H	28:W:61:LYS:HB2	1.68	0.57
10:E:31:VAL:HG21	10:E:104:ALA:HB2	1.86	0.57
7:B:62:U:C5	7:B:63:A:C6	2.92	0.57
29:X:28:LEU:HB2	29:X:42:LEU:HD12	1.86	0.57
8:C:136:VAL:HA	8:C:165:ALA:C	2.24	0.57
9:D:54:ALA:C	9:D:56:LYS:N	2.57	0.57
9:D:62:LYS:HD3	9:D:62:LYS:H	1.70	0.57
18:M:77:PRO:HG3	18:M:86:LYS:NZ	2.19	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:94:ASP:O	24:S:96:ILE:HG22	2.05	0.57
12:G:169:ARG:HD2	12:G:170:THR:HG23	1.85	0.57
17:L:7:SER:HB3	17:L:8:PRO:HD3	1.85	0.57
7:B:1771:C:N3	7:B:1772:A:C5	2.72	0.57
7:B:329:G:P	7:B:329:G:H8	2.28	0.57
27:V:15:GLY:O	27:V:19:ARG:HG3	2.05	0.57
7:B:1932:A:N3	7:B:1932:A:H2'	2.20	0.57
7:B:1535:A:H8	7:B:1537:G:O6	1.88	0.57
7:B:1479:G:O2'	7:B:1480:C:H5'	2.05	0.57
7:B:1028:A:N3	7:B:1029:A:C8	2.72	0.57
7:B:1611:C:N3	7:B:1612:C:H5	2.02	0.57
7:B:1998:A:N6	7:B:1999:C:N4	2.52	0.57
7:B:681:G:H2'	7:B:682:G:C8	2.29	0.57
7:B:969:G:H2'	7:B:970:U:C6	2.39	0.57
7:B:1658:C:OP1	9:D:136:ASN:O	2.22	0.57
18:M:32:GLY:HA2	18:M:102:LEU:H	1.69	0.57
24:S:20:VAL:HG22	24:S:21:ALA:N	2.19	0.57
28:W:60:ALA:O	28:W:80:SER:HB3	2.05	0.57
10:E:106:LYS:O	10:E:108:ILE:HG12	2.05	0.57
7:B:321:U:C4'	10:E:159:LEU:HB3	2.32	0.57
7:B:58:G:C5	7:B:59:U:C5	2.93	0.57
12:G:10:VAL:N	12:G:11:PRO:HD3	2.19	0.57
27:V:70:ILE:CD1	27:V:71:LYS:H	2.15	0.57
7:B:906:U:C2'	7:B:907:G:O5'	2.53	0.57
7:B:1183:U:H2'	7:B:1184:U:C6	2.39	0.57
7:B:2787:C:H1'	9:D:62:LYS:HB3	1.86	0.57
7:B:2341:G:C5	7:B:2342:C:C4	2.93	0.57
7:B:1531:C:O5'	7:B:1531:C:H6	1.88	0.57
7:B:1404:C:H2'	7:B:1405:U:H6	1.70	0.57
7:B:1702:G:C5	7:B:1703:G:C8	2.93	0.57
21:P:42:PHE:O	21:P:42:PHE:HD1	1.88	0.57
11:F:169:LEU:HD12	11:F:176:PHE:HE2	1.69	0.57
25:T:38:ALA:O	25:T:42:GLU:HB3	2.04	0.57
3:2:16:HIS:HA	3:2:21:ARG:NH1	2.19	0.57
6:A:55:U:H5'	11:F:24:VAL:CG2	2.35	0.57
7:B:1003:G:N2	7:B:1153:C:C2	2.73	0.57
7:B:1375:U:C4	7:B:1376:C:C5	2.91	0.57
7:B:1805:A:O2'	8:C:50:THR:HA	2.04	0.57
7:B:192:C:C2'	7:B:193:U:H5'	2.34	0.57
7:B:2455:G:C2	7:B:2456:C:N3	2.72	0.57
7:B:2754:U:O2'	7:B:2755:C:H3'	2.04	0.57
7:B:2841:C:H2'	7:B:2842:G:O4'	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2841:C:C2	7:B:2877:G:N2	2.73	0.57
7:B:583:G:OP2	33:B:5106:HOH:O	2.17	0.57
7:B:734:A:C4	7:B:735:A:C8	2.92	0.57
7:B:810:U:C5	17:L:37:GLY:HA2	2.39	0.57
8:C:218:THR:O	8:C:220:ARG:HD2	2.05	0.57
9:D:126:ASN:HA	9:D:128:ARG:CZ	2.34	0.57
12:G:141:GLY:HA2	12:G:144:ALA:HB3	1.87	0.57
12:G:162:ARG:HB2	12:G:166:GLU:OE2	2.04	0.57
18:M:34:LYS:HA	18:M:99:GLY:HA2	1.87	0.57
10:E:133:LEU:O	10:E:133:LEU:HD22	2.05	0.57
7:B:2223:G:C2'	7:B:2224:G:H5'	2.35	0.57
7:B:868:U:C2'	7:B:868:U:O2	2.53	0.57
7:B:1045:C:H4'	7:B:1047:G:C8	2.39	0.57
7:B:2093:G:C2'	7:B:2094:A:H5'	2.34	0.57
7:B:2834:G:O6	7:B:2879:A:H2'	2.04	0.57
12:G:101:VAL:O	12:G:101:VAL:HG23	2.04	0.57
7:B:1506:U:H2'	7:B:1507:C:H6	1.68	0.57
22:Q:112:ALA:O	22:Q:114:ALA:N	2.37	0.57
8:C:96:LYS:HA	8:C:96:LYS:HE2	1.87	0.57
4:3:12:ARG:NH1	17:L:62:PRO:CG	2.62	0.57
7:B:1783:A:H5''	7:B:1784:A:P	2.45	0.57
7:B:1778:U:C5	7:B:1784:A:N3	2.72	0.57
7:B:2024:G:H8	7:B:2024:G:O5'	1.87	0.57
7:B:911:A:H2	7:B:2277:G:N3	2.02	0.57
7:B:2307:G:H2'	7:B:2307:G:N3	2.19	0.57
7:B:2618:G:C4	7:B:2619:C:C5	2.92	0.57
7:B:35:G:C2	7:B:36:G:H1'	2.40	0.57
7:B:493:G:HO2'	24:S:7:HIS:C	2.03	0.57
7:B:772:C:N3	7:B:773:U:H5	2.01	0.57
7:B:968:C:C2	7:B:969:G:C8	2.93	0.57
8:C:44:ASN:ND2	8:C:47:ARG:O	2.37	0.57
15:J:99:ARG:CG	15:J:103:ILE:HD13	2.35	0.57
15:J:12:LYS:O	15:J:50:THR:HG21	2.04	0.57
17:L:57:LEU:CA	17:L:58:TYR:HD2	2.14	0.57
20:O:95:SER:C	20:O:97:PHE:H	2.08	0.57
24:S:11:ARG:CG	24:S:11:ARG:HH11	2.08	0.57
7:B:2387:U:O2'	28:W:37:VAL:HG11	2.04	0.57
28:W:42:THR:HG21	28:W:67:LYS:CB	2.32	0.57
7:B:304:U:O2	7:B:313:G:N2	2.35	0.57
7:B:346:A:H2'	7:B:347:A:H5''	1.85	0.57
7:B:93:G:H2'	7:B:94:A:O4'	2.04	0.57
9:D:3:GLY:C	9:D:4:LEU:HD22	2.25	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:R:65:ALA:H	23:R:100:GLY:C	2.08	0.57
23:R:5:PHE:N	23:R:41:ILE:HG12	2.20	0.57
27:V:62:THR:HA	27:V:70:ILE:HD11	1.86	0.57
7:B:915:C:H3'	7:B:916:G:H8	1.70	0.57
17:L:4:ASN:HD22	17:L:5:THR:N	1.95	0.57
7:B:1322:A:H4'	24:S:82:MET:HE3	1.86	0.57
7:B:182:A:H8	7:B:182:A:O5'	1.88	0.57
7:B:1870:C:O2	7:B:1870:C:H2'	2.03	0.57
4:3:22:LYS:O	4:3:23:HIS:HB3	2.05	0.57
7:B:1190:G:OP1	17:L:38:GLN:HA	2.03	0.57
7:B:1285:A:C6	7:B:1329:U:C5	2.93	0.57
7:B:1366:A:C4	7:B:1367:A:C8	2.93	0.57
7:B:1429:G:H2'	7:B:1430:G:H5'	1.87	0.57
7:B:1652:A:N6	7:B:1653:G:H22	2.03	0.57
7:B:2394:C:H5''	17:L:64:PHE:CE2	2.39	0.57
7:B:2592:G:C2	7:B:2593:U:C2	2.93	0.57
7:B:2753:A:C2	7:B:2754:U:N3	2.73	0.57
7:B:2:G:N2	7:B:2902:C:H1'	2.19	0.57
7:B:381:G:N2	7:B:394:C:C6	2.72	0.57
7:B:672:C:O2	7:B:672:C:H2'	2.05	0.57
7:B:999:U:O2	7:B:1157:G:C2	2.58	0.57
8:C:123:ILE:H	8:C:123:ILE:HD12	1.68	0.57
15:J:44:TYR:CE1	15:J:48:VAL:HG23	2.40	0.57
15:J:62:VAL:O	15:J:64:VAL:N	2.38	0.57
21:P:7:LEU:O	21:P:11:GLN:HG3	2.05	0.57
28:W:28:GLU:CA	28:W:61:LYS:HB2	2.35	0.57
31:Z:3:LYS:HD3	31:Z:9:TYR:CD1	2.40	0.57
7:B:2371:G:N3	7:B:2372:U:C6	2.73	0.57
10:E:151:GLY:O	10:E:158:PHE:CE1	2.58	0.57
7:B:600:G:H2'	7:B:601:C:C6	2.39	0.57
6:A:78:A:O2'	7:B:862:G:H4'	2.05	0.57
7:B:874:G:H5''	7:B:875:G:OP2	2.05	0.57
30:Y:40:THR:HG23	30:Y:43:ILE:H	1.70	0.57
25:T:57:VAL:HG23	25:T:86:THR:HG23	1.87	0.57
7:B:172:A:H2'	7:B:173:A:C8	2.40	0.57
17:L:2:ARG:NH1	17:L:6:LEU:HD22	2.20	0.57
11:F:71:LYS:HE2	11:F:72:SER:O	2.05	0.57
14:I:121:ILE:H	14:I:121:ILE:HD13	1.70	0.57
7:B:1906:G:H3'	7:B:1906:G:C8	2.40	0.57
4:3:4:LYS:HZ1	4:3:60:CYS:CA	2.18	0.57
5:4:8:LYS:HB3	7:B:1032:A:OP1	2.05	0.57
7:B:1613:G:N1	7:B:1617:C:O2	2.38	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2079:U:N3	7:B:2080:A:N7	2.52	0.57
8:C:141:HIS:CD2	8:C:193:GLU:H	2.22	0.57
8:C:62:ARG:HG2	8:C:62:ARG:NH1	2.17	0.57
9:D:160:LYS:HE3	9:D:160:LYS:HA	1.87	0.57
9:D:25:THR:HA	9:D:188:LEU:HD12	1.86	0.57
13:H:36:ALA:O	13:H:37:VAL:HG22	2.05	0.57
15:J:85:LYS:NZ	15:J:86:GLN:H	2.03	0.57
16:K:2:ILE:HG21	16:K:67:LYS:HD2	1.87	0.57
7:B:1162:G:N3	23:R:93:PHE:CZ	2.73	0.57
2:1:37:LYS:HB2	7:B:2344:U:C3'	2.35	0.57
10:E:146:VAL:O	10:E:146:VAL:HG12	2.05	0.57
7:B:527:C:H5''	7:B:2779:U:C2	2.40	0.57
22:Q:96:ASP:O	22:Q:97:ILE:HD13	2.05	0.57
7:B:260:G:C6	7:B:261:G:C8	2.92	0.57
30:Y:3:THR:O	30:Y:4:ILE:C	2.42	0.57
14:I:12:VAL:HB	14:I:23:VAL:CG2	2.34	0.57
14:I:21:PRO:CB	14:I:22:PRO:HD3	2.29	0.57
12:G:116:LEU:HD12	12:G:117:PRO:O	2.05	0.57
12:G:120:ILE:HD12	12:G:139:VAL:HG12	1.87	0.57
12:G:169:ARG:H	12:G:169:ARG:HE	1.53	0.57
26:U:3:LYS:CB	26:U:3:LYS:NZ	2.68	0.57
7:B:2143:C:H3'	7:B:2144:G:H8	1.68	0.57
7:B:1326:U:O2'	7:B:1327:A:H5'	2.05	0.57
14:I:125:THR:O	14:I:129:GLU:HG3	2.05	0.57
7:B:269:C:N4	7:B:270:A:N6	2.52	0.57
30:Y:11:SER:O	30:Y:12:ALA:CB	2.53	0.57
1:0:36:LYS:HE3	1:0:48:TYR:HE1	1.70	0.56
6:A:50:A:C5	6:A:51:G:C8	2.93	0.56
7:B:1149:G:H2'	7:B:1150:C:C6	2.40	0.56
7:B:1434:A:H2'	7:B:1435:G:O5'	2.04	0.56
7:B:2363:G:H2'	7:B:2364:C:H6	1.69	0.56
7:B:2455:G:C6	7:B:2456:C:N4	2.73	0.56
7:B:2721:A:H2'	7:B:2722:G:H8	1.70	0.56
7:B:2722:G:C5	7:B:2723:C:C5	2.93	0.56
7:B:2771:C:O2	7:B:2772:C:C4	2.58	0.56
7:B:728:G:H3'	7:B:729:G:H5''	1.87	0.56
7:B:1792:G:P	8:C:203:VAL:HG23	2.45	0.56
8:C:70:LYS:HD3	8:C:73:ILE:HG21	1.87	0.56
8:C:86:ARG:CZ	8:C:86:ARG:HB3	2.34	0.56
15:J:85:LYS:NZ	15:J:85:LYS:HA	2.19	0.56
17:L:63:LYS:CG	17:L:64:PHE:H	2.17	0.56
18:M:81:ARG:HH11	18:M:81:ARG:HB2	1.70	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:45:THR:CA	22:Q:63:ARG:HH21	2.17	0.56
23:R:75:VAL:H	23:R:76:LYS:HG3	1.69	0.56
28:W:68:PHE:O	28:W:69:GLU:CB	2.51	0.56
7:B:599:A:H1'	7:B:659:G:H22	1.70	0.56
26:U:41:VAL:HG23	26:U:57:ILE:HG23	1.86	0.56
7:B:89:A:H2'	7:B:90:U:C6	2.40	0.56
22:Q:102:LYS:O	22:Q:105:PHE:N	2.38	0.56
30:Y:1:ALA:HB2	30:Y:38:GLU:OE1	2.05	0.56
7:B:2787:C:H1'	9:D:62:LYS:HD3	1.86	0.56
16:K:16:ALA:HB3	16:K:47:ILE:HD13	1.87	0.56
7:B:1035:U:C6	7:B:1035:U:O5'	2.58	0.56
7:B:1596:A:C2'	7:B:1597:A:H5'	2.35	0.56
6:A:59:A:H2'	6:A:60:C:C6	2.39	0.56
7:B:1150:C:N3	7:B:1151:A:N7	2.53	0.56
7:B:1264:A:N6	7:B:1265:A:C6	2.73	0.56
7:B:1286:A:C2	7:B:1329:U:C5	2.93	0.56
7:B:1309:G:H1'	7:B:1611:C:O2'	2.05	0.56
7:B:186:G:N2	7:B:211:C:C2	2.72	0.56
7:B:1991:U:H2'	7:B:1992:G:H5'	1.87	0.56
7:B:2210:U:H4'	7:B:2211:A:C5'	2.35	0.56
7:B:2361:G:H2'	7:B:2362:C:H5'	1.87	0.56
7:B:396:G:O2'	7:B:397:U:H5'	2.05	0.56
7:B:448:U:H3'	7:B:449:A:H5'	1.86	0.56
7:B:471:A:N6	7:B:472:A:C2	2.73	0.56
7:B:792:A:N7	7:B:2440:C:C6	2.73	0.56
7:B:821:A:H2	33:B:5168:HOH:O	1.87	0.56
16:K:75:SER:HA	21:P:76:HIS:HE2	1.71	0.56
18:M:99:GLY:C	18:M:100:LYS:HG3	2.24	0.56
21:P:56:SER:HA	21:P:58:PHE:CD2	2.40	0.56
7:B:1323:C:OP1	24:S:84:ARG:NH1	2.37	0.56
28:W:15:SER:O	28:W:16:GLU:HG2	2.05	0.56
10:E:143:LEU:C	10:E:144:GLU:HG3	2.25	0.56
7:B:238:C:H2'	7:B:238:C:O2	2.04	0.56
17:L:110:VAL:O	17:L:111:ILE:HG23	2.05	0.56
7:B:873:C:C2'	7:B:874:G:H8	2.15	0.56
9:D:37:VAL:HG13	9:D:38:LYS:N	2.19	0.56
7:B:485:C:O2'	7:B:486:C:H5'	2.05	0.56
6:A:72:G:H1'	6:A:105:G:N2	2.19	0.56
18:M:64:TRP:HD1	18:M:64:TRP:H	1.52	0.56
7:B:1049:C:O2	7:B:1113:U:H4'	2.05	0.56
7:B:1258:U:C2'	7:B:1259:G:C8	2.83	0.56
7:B:1285:A:C8	7:B:1285:A:H3'	2.40	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1421:G:C2	7:B:1422:G:N7	2.74	0.56
7:B:1806:C:C3'	7:B:1806:C:C6	2.89	0.56
7:B:2567:G:H2'	7:B:2568:U:H6	1.70	0.56
7:B:2643:G:H2'	7:B:2644:G:H5'	1.87	0.56
7:B:2673:G:C2'	7:B:2674:G:H5'	2.35	0.56
7:B:571:U:C4	7:B:575:A:C5	2.93	0.56
12:G:161:VAL:O	12:G:161:VAL:HG13	2.04	0.56
13:H:6:LEU:HB2	13:H:35:LYS:CB	2.34	0.56
16:K:2:ILE:HG22	16:K:32:TYR:CB	2.35	0.56
31:Z:32:LEU:O	31:Z:33:ASN:OD1	2.22	0.56
6:A:45:A:H2'	6:A:46:A:H5'	1.87	0.56
7:B:1136:G:C5'	7:B:1136:G:H8	2.18	0.56
7:B:1255:U:O4	7:B:2060:A:H5'	2.05	0.56
3:2:10:LEU:HB3	7:B:125:A:N1	2.18	0.56
7:B:1268:A:C6	7:B:1269:A:N3	2.73	0.56
7:B:2444:G:OP1	10:E:63:LYS:NZ	2.38	0.56
7:B:2715:C:H2'	7:B:2716:C:H5'	1.88	0.56
7:B:2748:A:OP1	7:B:2752:C:OP1	2.24	0.56
7:B:398:C:H5''	31:Z:49:ARG:NH1	2.20	0.56
7:B:812:C:N3	7:B:813:U:C5	2.72	0.56
7:B:910:A:H2	7:B:911:A:N1	2.01	0.56
7:B:988:A:O5'	7:B:988:A:C8	2.58	0.56
8:C:125:PRO:O	8:C:192:GLY:CA	2.54	0.56
8:C:220:ARG:O	8:C:221:GLY:O	2.23	0.56
9:D:138:LEU:CD1	9:D:142:VAL:HG11	2.35	0.56
9:D:97:SER:HG	9:D:185:ASN:HA	1.70	0.56
15:J:3:THR:O	15:J:4:PHE:CD2	2.58	0.56
15:J:73:VAL:HG22	15:J:74:TYR:N	2.20	0.56
21:P:47:ILE:HA	21:P:63:ILE:CG2	2.35	0.56
21:P:92:ARG:NE	21:P:110:LYS:HB3	2.20	0.56
17:L:33:ARG:CD	23:R:85:LYS:NZ	2.66	0.56
7:B:2345:G:N3	7:B:2381:A:C4	2.73	0.56
7:B:68:G:H2'	7:B:69:C:O4'	2.06	0.56
7:B:85:G:H1	7:B:97:C:H42	1.53	0.56
26:U:85:ARG:O	26:U:87:GLU:HG3	2.06	0.56
9:D:33:ARG:HH21	9:D:87:GLY:HA3	1.67	0.56
23:R:5:PHE:CE1	23:R:37:GLU:HB2	2.41	0.56
8:C:128:THR:HG23	8:C:189:ALA:O	2.05	0.56
18:M:16:ARG:HB3	18:M:18:ARG:NH2	2.20	0.56
7:B:443:A:N7	10:E:40:ARG:HG3	2.20	0.56
7:B:140:C:H4'	7:B:141:G:C2	2.40	0.56
7:B:142:A:H2'	7:B:143:C:C4	2.40	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1056:G:H4'	7:B:1086:A:C8	2.41	0.56
14:I:124:MET:HA	14:I:127:SER:OG	2.05	0.56
14:I:54:ILE:HG23	14:I:70:THR:OG1	2.05	0.56
7:B:2093:G:H3'	7:B:2093:G:C8	2.41	0.56
7:B:370:G:P	7:B:370:G:C8	2.96	0.56
6:A:18:G:N2	6:A:19:C:H1'	2.19	0.56
24:S:95:ARG:CG	24:S:95:ARG:HH11	2.16	0.56
7:B:440:C:C3'	7:B:440:C:C6	2.88	0.56
7:B:2150:C:H2'	7:B:2151:U:H6	1.70	0.56
20:O:2:ASP:HB2	20:O:4:LYS:HZ3	1.68	0.56
14:I:60:VAL:HG22	14:I:66:PHE:HB3	1.86	0.56
7:B:2605:U:O2	7:B:2606:C:C5	2.58	0.56
10:E:126:VAL:HG13	10:E:128:ALA:N	2.20	0.56
24:S:53:SER:O	24:S:55:ILE:N	2.39	0.56
7:B:1895:C:H6	7:B:1895:C:O5'	1.88	0.56
7:B:2518:A:O5'	33:B:5446:HOH:O	2.18	0.56
7:B:1218:G:C2	7:B:1232:G:C5	2.94	0.56
7:B:1260:A:N6	33:B:5227:HOH:O	2.38	0.56
7:B:131:A:C6	7:B:132:G:C6	2.93	0.56
7:B:2498:C:C2'	7:B:2499:C:H5'	2.35	0.56
7:B:1255:U:H6	7:B:2502:G:H21	1.49	0.56
7:B:252:G:C2	7:B:253:C:C6	2.94	0.56
7:B:2543:G:C6	7:B:2765:A:C6	2.94	0.56
7:B:792:A:N7	7:B:2440:C:C2	2.73	0.56
7:B:998:C:OP2	22:Q:57:ARG:NH2	2.38	0.56
6:A:57:A:C2	11:F:25:MET:HG2	2.41	0.56
13:H:4:ILE:HG13	13:H:47:PHE:CE1	2.41	0.56
15:J:81:ILE:HG23	15:J:82:GLY:N	2.12	0.56
7:B:305:C:C2'	7:B:306:U:H5'	2.36	0.56
10:E:120:VAL:HG23	10:E:189:THR:OG1	2.05	0.56
6:A:80:U:O2'	6:A:81:G:H5'	2.06	0.56
18:M:16:ARG:O	18:M:17:ASN:CB	2.51	0.56
30:Y:5:LYS:H	30:Y:36:GLU:HB3	1.70	0.56
7:B:1394:U:N3	7:B:1395:A:C6	2.74	0.56
12:G:143:VAL:HA	12:G:146:ASP:HB2	1.88	0.56
31:Z:63:ARG:C	31:Z:65:ASN:H	2.07	0.56
26:U:48:VAL:N	26:U:49:PRO:HD3	2.21	0.56
13:H:96:THR:O	13:H:100:ALA:HB2	2.05	0.56
7:B:2147:A:O3'	7:B:2148:G:C8	2.58	0.56
13:H:135:HIS:CG	13:H:136:SER:H	2.22	0.56
7:B:1801:A:OP2	8:C:149:LYS:NZ	2.33	0.56
7:B:878:A:H2'	7:B:878:A:N3	2.18	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1134:A:H2'	7:B:1134:A:O5'	2.05	0.56
7:B:1797:G:O2'	8:C:254:LYS:NZ	2.38	0.56
7:B:2058:A:H5'	7:B:2059:A:OP2	2.06	0.56
7:B:2466:C:C2	7:B:2467:C:C5	2.93	0.56
7:B:246:C:H42	7:B:252:G:H1	1.53	0.56
7:B:2758:A:C2	7:B:2759:G:C1'	2.89	0.56
7:B:449:A:C3'	7:B:450:G:H5'	2.36	0.56
7:B:492:A:H3'	7:B:493:G:O4'	2.06	0.56
7:B:699:A:H2'	7:B:700:G:O4'	2.05	0.56
8:C:209:ALA:O	8:C:213:ARG:NH1	2.39	0.56
8:C:229:HIS:CE1	8:C:231:HIS:CD2	2.94	0.56
15:J:21:THR:HG22	15:J:58:ASN:CG	2.26	0.56
18:M:33:LEU:CD2	18:M:124:LEU:HD12	2.35	0.56
19:N:103:ARG:HH11	19:N:103:ARG:HG2	1.70	0.56
19:N:11:ASN:O	19:N:12:ARG:CB	2.53	0.56
20:O:95:SER:O	20:O:97:PHE:N	2.38	0.56
21:P:47:ILE:CG2	21:P:48:ALA:N	2.68	0.56
15:J:42:ALA:HA	22:Q:63:ARG:NH1	2.20	0.56
24:S:91:GLY:O	24:S:92:ARG:O	2.23	0.56
28:W:55:ASP:CG	28:W:56:HIS:N	2.58	0.56
9:D:81:GLU:HG3	9:D:82:PHE:N	2.20	0.56
7:B:39:G:H2'	7:B:40:U:C6	2.41	0.56
27:V:70:ILE:HG12	27:V:72:VAL:HG22	1.87	0.56
7:B:2193:G:N2	7:B:2194:U:C2	2.74	0.56
6:A:76:G:H1'	27:V:78:GLN:NE2	2.17	0.56
7:B:1550:C:H2'	7:B:1551:A:C8	2.40	0.56
26:U:27:VAL:HB	26:U:32:LYS:O	2.06	0.56
26:U:49:PRO:HD2	26:U:52:ASN:CG	2.26	0.56
7:B:1764:C:C4	7:B:1765:U:C5	2.93	0.56
7:B:407:G:N2	7:B:421:C:C6	2.74	0.56
6:A:15:A:N3	6:A:15:A:H5''	2.20	0.56
26:U:3:LYS:HZ1	26:U:3:LYS:HB2	1.71	0.56
7:B:2297:A:C8	7:B:2298:A:N7	2.73	0.56
7:B:1407:G:H22	7:B:1596:A:H1'	1.69	0.56
7:B:2550:G:C2	7:B:2559:C:O2	2.59	0.56
7:B:30:G:H2'	7:B:31:C:O4'	2.05	0.56
7:B:30:G:H8	7:B:30:G:O5'	1.87	0.56
7:B:854:C:H2'	7:B:855:G:H8	1.70	0.56
3:2:18:PHE:CE1	7:B:126:A:H5''	2.40	0.56
6:A:45:A:C8	11:F:91:ARG:HD3	2.39	0.56
7:B:1003:G:H2'	7:B:1010:A:N1	2.20	0.56
7:B:769:U:H1'	7:B:1379:U:C6	2.40	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1380:G:C2	7:B:1381:G:N7	2.73	0.56
7:B:208:C:H2'	7:B:209:C:H6	1.70	0.56
7:B:2261:C:N3	7:B:2280:G:C2	2.74	0.56
7:B:2461:A:C5	7:B:2462:C:C5	2.92	0.56
7:B:2673:G:H2'	7:B:2674:G:H5'	1.88	0.56
7:B:556:A:C2	7:B:557:C:C1'	2.89	0.56
8:C:260:LYS:O	8:C:261:ARG:HB2	2.06	0.56
9:D:129:THR:HG23	9:D:130:GLN:N	2.18	0.56
17:L:34:GLY:N	23:R:85:LYS:HD3	2.20	0.56
22:Q:90:ASP:OD1	22:Q:91:ARG:N	2.37	0.56
2:1:39:ASP:HB2	2:1:45:HIS:CE1	2.41	0.56
10:E:116:ASP:OD1	10:E:186:VAL:N	2.38	0.56
7:B:321:U:H1'	10:E:159:LEU:HD12	1.87	0.56
10:E:2:GLU:HG3	10:E:16:GLU:HA	1.88	0.56
20:O:64:TYR:O	20:O:65:THR:HG23	2.05	0.56
16:K:106:GLU:C	16:K:108:ARG:H	2.07	0.56
7:B:103:A:C8	7:B:103:A:H5''	2.34	0.56
7:B:83:A:C2	7:B:104:A:C2	2.94	0.56
17:L:117:THR:HG23	17:L:119:PRO:CD	2.35	0.56
12:G:102:ILE:CD1	12:G:130:ILE:HD12	2.35	0.56
13:H:113:SER:CB	13:H:132:PHE:CE2	2.89	0.56
7:B:2194:U:H2'	7:B:2195:U:H6	1.71	0.56
11:F:137:PHE:O	11:F:139:GLU:N	2.38	0.56
7:B:2144:G:N2	7:B:2148:G:N2	2.53	0.56
7:B:501:A:N6	7:B:502:A:N1	2.53	0.56
13:H:68:ARG:HG3	13:H:71:LYS:HD3	1.88	0.56
7:B:1846:G:N2	7:B:1895:C:C2	2.73	0.56
7:B:1028:A:C2	7:B:1029:A:N7	2.74	0.56
7:B:120:U:O5'	7:B:120:U:H2'	2.05	0.56
7:B:1313:U:P	33:B:5240:HOH:O	2.63	0.56
7:B:1809:A:C2	7:B:1810:A:C4	2.94	0.56
7:B:2087:G:C2	7:B:2233:U:O2	2.59	0.56
7:B:2428:G:H5''	7:B:2429:G:OP1	2.06	0.56
7:B:2589:A:H2	7:B:2590:A:C4	2.23	0.56
7:B:536:G:OP2	33:B:5084:HOH:O	2.18	0.56
7:B:670:A:H8	7:B:670:A:O5'	1.87	0.56
7:B:705:A:H4'	8:C:13:ARG:HG2	1.87	0.56
7:B:955:U:H5''	7:B:956:G:OP2	2.05	0.56
7:B:948:C:O4'	7:B:984:A:C2	2.58	0.56
8:C:53:ILE:HG12	8:C:218:THR:CB	2.36	0.56
7:B:587:C:OP1	17:L:29:LYS:HE3	2.05	0.56
18:M:53:MET:HE2	18:M:101:VAL:HG22	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1275:A:N7	19:N:16:HIS:CE1	2.74	0.56
20:O:8:ILE:O	20:O:11:ALA:HB3	2.06	0.56
24:S:41:LYS:HG3	24:S:42:LYS:N	2.20	0.56
28:W:28:GLU:N	28:W:61:LYS:HB2	2.19	0.56
10:E:29:HIS:CD2	17:L:19:LEU:CD1	2.79	0.56
17:L:92:LEU:H	17:L:96:LYS:HD3	1.69	0.56
9:D:30:GLU:OE2	9:D:51:THR:HG23	2.06	0.56
31:Z:59:ARG:HG3	31:Z:62:LYS:HB2	1.87	0.56
6:A:94:A:C6	6:A:95:U:C2	2.93	0.56
12:G:25:ILE:HG12	12:G:26:LYS:N	2.21	0.56
13:H:78:VAL:CG1	13:H:79:THR:H	2.11	0.56
24:S:33:LEU:HD21	24:S:51:LEU:CD1	2.28	0.56
7:B:1053:C:H2'	7:B:1054:A:H5'	1.88	0.56
7:B:1108:U:C4	7:B:1109:C:H5	2.24	0.56
7:B:1088:A:H61	14:I:92:PRO:HB3	1.71	0.56
15:J:117:ALA:O	15:J:121:LYS:HD3	2.06	0.56
7:B:160:A:C2	7:B:161:A:C5	2.94	0.56
7:B:1507:C:C6	7:B:1507:C:H5''	2.40	0.56
7:B:13:A:C2	7:B:526:A:C8	2.94	0.56
6:A:112:G:O5'	6:A:112:G:H8	1.88	0.56
3:2:21:ARG:NH1	3:2:21:ARG:CG	2.62	0.56
6:A:50:A:OP1	20:O:68:LYS:HG3	2.05	0.56
7:B:1233:C:O2'	7:B:1234:U:H5'	2.06	0.56
7:B:1361:G:H2'	7:B:1362:C:H6	1.71	0.56
7:B:770:G:H1'	7:B:1379:U:C4	2.40	0.56
7:B:1797:G:H2'	7:B:1798:U:C6	2.41	0.56
7:B:1814:G:N7	7:B:1815:A:C6	2.73	0.56
7:B:1130:U:C5	7:B:2026:U:OP2	2.59	0.56
7:B:204:A:C8	7:B:206:U:C2	2.93	0.56
7:B:2485:G:H8	7:B:2485:G:O5'	1.88	0.56
7:B:250:G:H4'	17:L:60:ARG:NH1	2.20	0.56
7:B:2592:G:N1	7:B:2593:U:C2	2.74	0.56
7:B:26:G:H1'	7:B:514:A:N6	2.21	0.56
7:B:452:G:N1	7:B:458:G:C8	2.74	0.56
7:B:764:A:H4'	7:B:764:A:OP2	2.05	0.56
7:B:978:G:N2	7:B:986:C:N1	2.54	0.56
8:C:34:GLU:OE1	8:C:35:LYS:HG2	2.05	0.56
8:C:77:VAL:N	8:C:112:GLY:HA2	2.20	0.56
9:D:107:VAL:CG2	9:D:108:ASP:N	2.69	0.56
13:H:50:ARG:HA	13:H:53:GLU:OE1	2.05	0.56
15:J:16:TYR:H	15:J:16:TYR:HD1	1.53	0.56
17:L:57:LEU:C	17:L:58:TYR:HD2	2.09	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:A:28:C:H4'	20:O:36:TYR:OH	2.06	0.56
21:P:7:LEU:HA	21:P:10:GLU:CG	2.34	0.56
23:R:86:GLN:HG2	23:R:87:GLN:HE21	1.71	0.56
7:B:2354:C:C4'	28:W:30:VAL:HG13	2.26	0.56
28:W:44:PHE:HB2	28:W:78:PHE:HA	1.87	0.56
23:R:39:LEU:C	23:R:41:ILE:N	2.59	0.56
8:C:169:ALA:O	8:C:170:TYR:CB	2.52	0.56
18:M:44:ARG:HH11	18:M:91:TYR:HE2	1.53	0.56
7:B:1315:C:H2'	7:B:1316:U:H6	1.70	0.56
7:B:1336:A:C2	7:B:1337:G:C4	2.93	0.56
25:T:84:TYR:C	25:T:85:VAL:HG13	2.26	0.56
6:A:14:U:H1'	6:A:107:G:O4'	2.05	0.56
7:B:1945:G:N3	7:B:1946:U:C6	2.74	0.56
7:B:2107:G:H2'	7:B:2108:A:H8	1.67	0.56
7:B:854:C:H2'	7:B:855:G:C8	2.40	0.56
1:O:18:HIS:ND1	1:O:18:HIS:N	2.52	0.56
4:3:26:ALA:O	7:B:2393:U:OP1	2.24	0.56
7:B:1004:U:H1'	7:B:1010:A:C4	2.40	0.56
7:B:1196:C:H1'	7:B:1226:A:C4	2.41	0.56
7:B:1268:A:H2'	7:B:1269:A:O5'	2.06	0.56
7:B:1378:A:C8	7:B:1380:G:C5	2.94	0.56
7:B:729:G:C4	7:B:1775:U:O2	2.58	0.56
7:B:1890:A:N7	7:B:1891:G:C8	2.74	0.56
7:B:2074:U:C4	7:B:2436:G:C2	2.94	0.56
7:B:2745:C:C4	7:B:2746:U:C4	2.93	0.56
7:B:2762:C:O2	7:B:2762:C:H2'	2.05	0.56
7:B:2848:G:H2'	21:P:96:LEU:HB2	1.86	0.56
7:B:536:G:N7	7:B:537:G:C5	2.74	0.56
7:B:537:G:N1	7:B:555:G:N2	2.54	0.56
7:B:673:C:C2'	7:B:674:G:H5'	2.35	0.56
7:B:743:A:C2'	7:B:744:U:H5'	2.36	0.56
15:J:39:LYS:O	15:J:40:HIS:C	2.42	0.56
20:O:36:TYR:H	20:O:52:SER:HB2	1.69	0.56
21:P:27:VAL:CG1	21:P:47:ILE:HD12	2.36	0.56
7:B:475:C:C4	7:B:481:G:O6	2.59	0.56
10:E:153:LEU:HG	10:E:172:ALA:CA	2.34	0.56
7:B:83:A:C2	7:B:104:A:N1	2.74	0.56
7:B:347:A:H2'	7:B:348:A:O4'	2.06	0.56
7:B:83:A:N6	26:U:90:LYS:HZ3	2.04	0.56
7:B:92:U:C4	7:B:93:G:N7	2.74	0.56
23:R:5:PHE:HB2	23:R:12:HIS:ND1	2.20	0.56
6:A:82:U:H3	6:A:94:A:H61	1.53	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:869:G:C5	7:B:870:U:C5	2.94	0.56
17:L:104:GLN:H	17:L:104:GLN:NE2	2.04	0.56
7:B:1417:C:H4'	7:B:1588:G:O4'	2.06	0.56
17:L:43:GLY:C	17:L:45:GLY:N	2.59	0.56
3:2:28:ARG:NH2	3:2:31:LEU:HB2	2.21	0.56
7:B:1296:G:C4	7:B:1645:G:N2	2.74	0.56
7:B:1661:G:C4	7:B:1662:U:C6	2.94	0.56
7:B:1796:U:O2'	7:B:1797:G:H5'	2.07	0.56
7:B:1809:A:N3	7:B:1809:A:H2'	2.21	0.56
7:B:563:A:N1	7:B:2018:G:N9	2.54	0.56
7:B:2048:G:H1	7:B:2620:C:H42	1.53	0.56
7:B:2331:G:C4'	28:W:69:GLU:CG	2.83	0.56
7:B:2521:C:C5'	7:B:2521:C:H6	2.18	0.56
7:B:2592:G:N1	7:B:2593:U:O2	2.39	0.56
7:B:2747:G:H21	7:B:2757:A:H62	1.54	0.56
7:B:467:G:C2	7:B:468:G:C8	2.94	0.56
10:E:64:GLY:O	10:E:66:GLY:N	2.39	0.56
7:B:2311:A:C6	11:F:39:VAL:CG2	2.89	0.56
20:O:30:ARG:HH22	20:O:97:PHE:CB	2.18	0.56
10:E:143:LEU:HA	10:E:148:ILE:CG2	2.34	0.56
10:E:181:ILE:CG2	10:E:181:ILE:O	2.54	0.56
26:U:66:VAL:O	26:U:68:ASN:HB2	2.06	0.56
7:B:1707:G:C2	7:B:1708:C:C2	2.94	0.56
7:B:220:G:C5	7:B:427:U:C5	2.94	0.56
7:B:612:G:N2	7:B:617:G:O6	2.39	0.56
8:C:24:HIS:HB3	8:C:27:LYS:NZ	2.20	0.56
17:L:123:ARG:HA	17:L:142:ILE:CA	2.29	0.56
5:4:27:CYS:O	5:4:28:SER:O	2.24	0.55
7:B:51:G:N2	7:B:119:A:N3	2.54	0.55
7:B:1676:A:C4	7:B:1677:A:C8	2.95	0.55
7:B:1680:U:C2'	7:B:1681:G:H5'	2.37	0.55
7:B:1821:A:H2'	7:B:1822:C:H6	1.71	0.55
7:B:192:C:P	33:B:5054:HOH:O	2.63	0.55
7:B:2055:C:H5'	7:B:2056:G:O5'	2.07	0.55
7:B:2200:C:H3'	7:B:2200:C:H6	1.71	0.55
7:B:2489:U:C4	7:B:2490:G:C6	2.94	0.55
7:B:2498:C:C2'	7:B:2498:C:O2	2.54	0.55
7:B:2837:A:C6	7:B:2838:G:N7	2.74	0.55
7:B:553:G:C6	7:B:554:U:C4	2.93	0.55
7:B:772:C:C2	7:B:773:U:C6	2.95	0.55
7:B:672:C:OP1	7:B:801:G:N2	2.39	0.55
7:B:936:A:H2'	7:B:937:C:C6	2.41	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:F:52:ALA:HB1	11:F:148:VAL:HG13	1.88	0.55
13:H:35:LYS:NZ	13:H:37:VAL:CG2	2.69	0.55
7:B:2360:G:C1'	17:L:61:LEU:HD21	2.32	0.55
19:N:96:ARG:CG	19:N:98:LEU:HD21	2.35	0.55
10:E:147:LEU:CB	10:E:167:VAL:HG13	2.36	0.55
7:B:80:G:N1	7:B:81:G:N7	2.54	0.55
26:U:98:ASN:O	26:U:99:SER:CB	2.54	0.55
22:Q:113:LYS:O	22:Q:115:ALA:N	2.30	0.55
7:B:612:G:H1'	7:B:616:A:H61	1.70	0.55
18:M:76:LYS:HG2	18:M:77:PRO:N	2.21	0.55
7:B:142:A:O2'	7:B:143:C:C2	2.44	0.55
14:I:56:VAL:HG22	14:I:57:VAL:N	2.19	0.55
10:E:175:ILE:HG23	10:E:176:ASP:H	1.71	0.55
7:B:2190:G:O2'	7:B:2191:A:H5'	2.04	0.55
7:B:2531:A:C2	7:B:2532:G:C8	2.95	0.55
7:B:1343:G:N2	7:B:1384:A:C2	2.74	0.55
7:B:2137:U:H2'	7:B:2138:G:H8	1.71	0.55
15:J:94:ALA:HA	15:J:97:PRO:CB	2.36	0.55
7:B:1128:G:H1'	7:B:2516:A:O2'	2.06	0.55
7:B:1190:G:OP1	17:L:38:GLN:CB	2.52	0.55
7:B:538:A:N1	7:B:539:G:C5	2.74	0.55
7:B:592:A:H2'	7:B:593:U:C6	2.40	0.55
7:B:1824:G:OP1	8:C:52:HIS:CD2	2.60	0.55
8:C:89:ASN:N	8:C:89:ASN:HD22	2.03	0.55
15:J:102:GLU:CD	15:J:124:VAL:HG13	2.27	0.55
17:L:37:GLY:O	17:L:38:GLN:CG	2.54	0.55
9:D:184:ARG:HH12	21:P:4:ILE:HD13	1.72	0.55
22:Q:30:VAL:HG21	22:Q:33:VAL:HG21	1.87	0.55
22:Q:30:VAL:O	22:Q:31:TYR:HB2	2.05	0.55
28:W:42:THR:CG2	28:W:66:VAL:H	2.20	0.55
7:B:86:G:H1	7:B:96:C:N4	2.03	0.55
17:L:110:VAL:O	17:L:111:ILE:CD1	2.54	0.55
17:L:79:LEU:HG	17:L:113:ALA:H	1.71	0.55
7:B:443:A:C5	10:E:40:ARG:NH1	2.73	0.55
13:H:113:SER:N	13:H:132:PHE:CZ	2.74	0.55
26:U:25:LYS:O	26:U:26:ASN:HB2	2.06	0.55
7:B:2656:U:C5	7:B:2664:G:N2	2.75	0.55
7:B:2194:U:H2'	7:B:2195:U:C6	2.41	0.55
17:L:6:LEU:O	17:L:7:SER:CB	2.54	0.55
7:B:2312:U:OP1	11:F:69:ALA:HA	2.06	0.55
8:C:226:PRO:HG3	8:C:232:GLY:O	2.06	0.55
7:B:1471:G:H2'	7:B:1472:C:C6	2.41	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1476:U:H1'	7:B:1732:C:O2	2.06	0.55
7:B:1995:U:O2	7:B:1995:U:H2'	2.06	0.55
6:A:29:A:N3	6:A:29:A:H2'	2.22	0.55
7:B:818:G:N2	7:B:1190:G:C6	2.74	0.55
7:B:1195:G:C2	7:B:1196:C:C6	2.93	0.55
3:2:10:LEU:CB	7:B:125:A:C2	2.83	0.55
7:B:1363:C:H2'	7:B:1364:G:H8	1.72	0.55
7:B:1809:A:H5''	7:B:1810:A:OP2	2.06	0.55
7:B:2235:G:C8	7:B:2235:G:O5'	2.59	0.55
7:B:2866:U:C4'	7:B:2867:G:H4'	2.33	0.55
7:B:2867:G:H2'	7:B:2867:G:N3	2.20	0.55
7:B:563:A:N6	7:B:2018:G:N7	2.54	0.55
8:C:63:ILE:O	8:C:64:VAL:HG22	2.06	0.55
9:D:124:ARG:HB3	9:D:160:LYS:HD3	1.87	0.55
9:D:185:ASN:O	9:D:186:LEU:HD12	2.07	0.55
15:J:3:THR:O	15:J:4:PHE:HB3	2.05	0.55
19:N:10:LEU:HB3	19:N:17:ARG:NH2	2.21	0.55
19:N:55:ALA:CB	19:N:79:LEU:O	2.51	0.55
19:N:99:LYS:H	19:N:99:LYS:HD2	1.70	0.55
1:0:21:LEU:HB2	24:S:23:LEU:CD2	2.36	0.55
7:B:2286:G:C4	7:B:2346:A:N6	2.73	0.55
7:B:338:G:C6	7:B:339:U:C4	2.94	0.55
22:Q:109:VAL:HG12	22:Q:113:LYS:HZ3	1.69	0.55
12:G:51:PHE:HB3	12:G:68:ARG:NH1	2.21	0.55
7:B:2324:U:H5'	7:B:2325:G:H5'	1.86	0.55
7:B:2216:G:C2'	7:B:2217:G:H5'	2.37	0.55
17:L:6:LEU:O	17:L:7:SER:HB2	2.06	0.55
7:B:38:A:C2	7:B:442:G:C2	2.94	0.55
19:N:27:SER:O	19:N:30:ARG:N	2.39	0.55
7:B:2053:G:N2	7:B:2054:A:C4	2.75	0.55
4:3:32:LEU:HD13	4:3:33:THR:HA	1.88	0.55
4:3:32:LEU:O	4:3:33:THR:O	2.24	0.55
7:B:1000:A:C6	7:B:1001:A:C5	2.94	0.55
7:B:1214:A:H2'	7:B:1215:G:C8	2.42	0.55
7:B:123:G:C2	7:B:124:G:C8	2.95	0.55
7:B:1351:C:O4'	7:B:1572:A:H1'	2.06	0.55
7:B:1649:G:N2	7:B:2008:C:O2	2.39	0.55
7:B:1809:A:C2'	7:B:1810:A:H8	2.18	0.55
7:B:1905:C:N4	7:B:1930:G:C2	2.74	0.55
7:B:2243:U:O2	7:B:2434:A:C2	2.59	0.55
7:B:2331:G:C1'	28:W:69:GLU:HG3	2.35	0.55
7:B:2351:G:O2'	7:B:2352:A:H5''	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2625:G:H8	7:B:2625:G:H5''	1.71	0.55
7:B:2739:U:H5	7:B:2763:G:C4	2.24	0.55
7:B:554:U:H2'	7:B:555:G:H8	1.71	0.55
7:B:571:U:C2	7:B:2030:A:C2	2.94	0.55
7:B:687:C:C4	7:B:688:U:N3	2.75	0.55
8:C:153:LEU:HD11	8:C:159:THR:HB	1.89	0.55
9:D:122:VAL:C	9:D:128:ARG:HH21	2.10	0.55
16:K:70:ARG:HB2	16:K:75:SER:O	2.06	0.55
18:M:50:ARG:HA	18:M:50:ARG:NE	2.20	0.55
21:P:61:ARG:CZ	21:P:61:ARG:CB	2.84	0.55
21:P:64:SER:CB	21:P:71:ARG:HH11	2.19	0.55
22:Q:40:LYS:HD3	22:Q:44:TYR:HB2	1.88	0.55
28:W:75:ASN:CG	28:W:76:ARG:N	2.60	0.55
7:B:2290:G:C5	7:B:2291:U:C5	2.95	0.55
10:E:17:THR:HG21	10:E:196:VAL:CG1	2.35	0.55
10:E:1:MET:HB2	10:E:18:THR:HG21	1.88	0.55
25:T:8:LEU:HD11	29:X:26:PHE:CE2	2.41	0.55
9:D:32:ASN:O	9:D:34:VAL:N	2.35	0.55
7:B:2205:A:C2	7:B:2206:C:C2	2.95	0.55
7:B:428:A:H2'	7:B:429:A:C8	2.41	0.55
7:B:872:U:H3	7:B:873:C:N4	2.04	0.55
7:B:1765:U:O2	7:B:1766:G:H8	1.85	0.55
7:B:2835:A:C8	7:B:2879:A:N1	2.74	0.55
14:I:126:ARG:HA	14:I:129:GLU:CB	2.35	0.55
7:B:2604:U:C2	7:B:2605:U:C6	2.95	0.55
7:B:933:A:C8	7:B:933:A:H3'	2.40	0.55
7:B:2404:U:O2	7:B:2404:U:H2'	2.06	0.55
1:O:41:HIS:CD2	1:O:46:GLY:CA	2.89	0.55
7:B:1028:A:C6	7:B:2487:G:O2'	2.59	0.55
7:B:131:A:N6	7:B:132:G:O6	2.39	0.55
7:B:2047:C:H2'	7:B:2048:G:H8	1.69	0.55
7:B:2064:C:H1'	7:B:2450:A:C5	2.41	0.55
7:B:2519:U:H3'	7:B:2519:U:OP1	2.06	0.55
7:B:2587:A:H8	7:B:2587:A:H5''	1.71	0.55
7:B:2593:U:C2'	7:B:2594:C:H5''	2.37	0.55
7:B:2819:G:C6	7:B:2821:A:C2	2.94	0.55
7:B:373:U:N3	7:B:374:A:N7	2.54	0.55
7:B:857:G:H2'	7:B:858:G:O4'	2.07	0.55
12:G:3:VAL:O	12:G:4:ALA:CB	2.53	0.55
15:J:25:LEU:H	15:J:62:VAL:HG12	1.72	0.55
15:J:65:THR:OG1	15:J:66:GLY:N	2.38	0.55
17:L:33:ARG:CZ	17:L:33:ARG:CB	2.80	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:22:GLN:HA	18:M:97:GLN:HE22	1.72	0.55
18:M:25:ASP:OD2	18:M:25:ASP:C	2.45	0.55
7:B:1009:A:H5'	22:Q:58:GLN:OE1	2.06	0.55
7:B:302:C:HO2'	7:B:303:G:H8	0.71	0.55
7:B:338:G:C8	7:B:338:G:H5''	2.31	0.55
26:U:57:ILE:O	26:U:57:ILE:CG2	2.54	0.55
7:B:39:G:C4	7:B:40:U:C5	2.94	0.55
7:B:873:C:C6	7:B:874:G:N7	2.75	0.55
7:B:158:U:C2'	7:B:159:G:H5'	2.34	0.55
7:B:223:A:N7	7:B:422:A:N9	2.54	0.55
7:B:424:G:C2	7:B:425:G:C8	2.94	0.55
21:P:103:THR:O	21:P:105:LYS:HG2	2.06	0.55
13:H:95:GLY:HA2	13:H:99:ILE:HG23	1.87	0.55
7:B:1647:U:P	7:B:1647:U:H3'	2.46	0.55
7:B:957:C:N4	7:B:2459:A:C8	2.74	0.55
11:F:10:GLU:HA	11:F:13:LYS:HB2	1.88	0.55
3:2:19:ARG:HG2	7:B:125:A:OP2	2.07	0.55
6:A:7:G:H4'	20:O:29:HIS:CD2	2.41	0.55
7:B:1004:U:O4'	7:B:1010:A:C6	2.60	0.55
7:B:1010:A:C3'	7:B:1010:A:C8	2.90	0.55
7:B:124:G:H8	7:B:124:G:H5'	1.68	0.55
7:B:1359:A:N3	7:B:1360:G:H1'	2.20	0.55
7:B:1358:G:N7	7:B:1371:G:O6	2.40	0.55
7:B:1651:G:C6	7:B:1652:A:C6	2.94	0.55
7:B:1664:A:H2'	7:B:1665:A:C8	2.41	0.55
7:B:1997:C:O2'	7:B:1998:A:C5'	2.54	0.55
7:B:2001:C:H2'	7:B:2002:G:O5'	2.07	0.55
7:B:2244:U:C2	7:B:2245:U:C5	2.95	0.55
7:B:1783:A:C2	7:B:2587:A:C6	2.93	0.55
7:B:2681:C:H4'	7:B:2682:A:H5'	1.89	0.55
7:B:795:C:N3	7:B:796:C:C4	2.74	0.55
7:B:834:G:H1'	7:B:2358:A:H1'	1.89	0.55
7:B:983:A:H2'	7:B:984:A:N7	2.21	0.55
7:B:1816:C:C5	8:C:62:ARG:HD2	2.34	0.55
9:D:208:LYS:O	9:D:208:LYS:HG2	2.07	0.55
10:E:67:ARG:CD	10:E:67:ARG:H	2.20	0.55
18:M:61:GLY:CA	18:M:105:MET:SD	2.95	0.55
22:Q:47:ARG:HH11	22:Q:50:ARG:HG3	1.65	0.55
23:R:6:GLN:HA	23:R:10:LYS:CA	2.36	0.55
31:Z:3:LYS:C	31:Z:5:ILE:H	2.08	0.55
7:B:307:G:C2	7:B:310:A:OP2	2.60	0.55
7:B:324:A:C8	7:B:324:A:H3'	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:U:57:ILE:O	26:U:57:ILE:HG23	2.06	0.55
23:R:4:VAL:HG12	23:R:43:ASN:HB3	1.88	0.55
7:B:1707:G:C8	7:B:1756:G:C5	2.94	0.55
18:M:42:THR:O	18:M:44:ARG:N	2.40	0.55
12:G:126:THR:O	12:G:128:THR:N	2.37	0.55
14:I:27:LEU:HD21	14:I:34:ILE:HG23	1.89	0.55
7:B:2807:U:C2	7:B:2892:G:N2	2.75	0.55
12:G:147:LEU:C	12:G:149:ALA:N	2.59	0.55
7:B:419:U:C2	7:B:420:C:C5	2.94	0.55
7:B:1211:C:H4'	7:B:1212:G:OP2	2.05	0.55
14:I:14:ALA:CB	14:I:51:GLY:H	2.20	0.55
1:O:13:GLY:O	1:O:17:SER:N	2.36	0.55
1:O:20:ALA:CA	1:O:21:LEU:HD12	2.36	0.55
6:A:113:C:H2'	6:A:114:C:H5'	1.87	0.55
7:B:1232:G:C4	7:B:1233:C:C6	2.94	0.55
7:B:1378:A:N7	7:B:1380:G:C5	2.75	0.55
7:B:1901:A:O2'	7:B:1902:C:H5'	2.06	0.55
7:B:1973:G:C8	7:B:1973:G:H3'	2.42	0.55
7:B:2199:A:C6	7:B:2200:C:O2	2.59	0.55
7:B:2396:G:C8	7:B:2396:G:C5'	2.90	0.55
7:B:2464:G:C4	7:B:2487:G:N2	2.74	0.55
7:B:246:C:C5	7:B:247:G:N7	2.75	0.55
7:B:2867:G:O6	21:P:96:LEU:HD21	2.05	0.55
7:B:699:A:O3'	7:B:1554:U:C5	2.58	0.55
7:B:792:A:C6	7:B:2440:C:C5	2.94	0.55
7:B:797:G:C2	7:B:798:G:H1'	2.41	0.55
20:O:104:GLN:O	20:O:107:ALA:N	2.40	0.55
6:A:31:C:N4	20:O:32:PRO:HB3	2.21	0.55
23:R:72:VAL:C	23:R:73:LYS:HD2	2.27	0.55
23:R:80:ARG:CD	23:R:86:GLN:H	2.20	0.55
24:S:66:ILE:C	24:S:68:ASP:H	2.10	0.55
2:1:14:ALA:HA	2:1:48:TYR:CD2	2.42	0.55
10:E:123:LYS:HE3	10:E:157:LEU:HG	1.88	0.55
22:Q:70:GLN:HE22	22:Q:106:THR:HA	1.71	0.55
7:B:1708:C:C2'	7:B:1709:U:H6	2.19	0.55
7:B:622:G:C2	7:B:623:C:C2	2.95	0.55
7:B:2259:U:N3	7:B:2260:C:C5	2.75	0.55
17:L:123:ARG:HB2	17:L:143:GLU:OE2	2.07	0.55
7:B:2415:G:C4'	17:L:66:PHE:CD2	2.90	0.55
7:B:160:A:N1	7:B:161:A:C6	2.75	0.55
11:F:140:ILE:HG22	11:F:142:TYR:H	1.71	0.55
11:F:6:TYR:HD2	11:F:6:TYR:H	1.53	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2148:G:H5''	7:B:2149:U:OP1	2.06	0.55
18:M:123:LYS:HB3	18:M:123:LYS:NZ	2.22	0.55
7:B:1584:U:O2	7:B:1584:U:H2'	2.07	0.55
6:A:45:A:C5	6:A:46:A:C8	2.95	0.55
6:A:56:G:C5'	6:A:56:G:C8	2.90	0.55
1:O:5:ASN:HD21	7:B:2019:A:N6	2.03	0.55
7:B:2485:G:C2'	7:B:2486:C:H5'	2.37	0.55
7:B:2748:A:C8	7:B:2757:A:N6	2.75	0.55
7:B:969:G:H21	7:B:985:C:P	2.29	0.55
9:D:129:THR:CA	9:D:140:HIS:CE1	2.90	0.55
17:L:33:ARG:CB	23:R:85:LYS:HE2	2.37	0.55
19:N:102:PHE:H	19:N:109:PRO:HA	1.71	0.55
19:N:2:ARG:O	19:N:2:ARG:CD	2.55	0.55
22:Q:43:GLN:NE2	23:R:81:LYS:HB3	2.22	0.55
23:R:76:LYS:O	23:R:77:PHE:CB	2.55	0.55
23:R:82:HIS:O	23:R:82:HIS:CG	2.60	0.55
24:S:27:LYS:HB2	24:S:28:LYS:CD	2.36	0.55
28:W:30:VAL:HG12	28:W:31:LEU:HB2	1.89	0.55
28:W:57:THR:CG2	28:W:77:LYS:HE3	2.37	0.55
31:Z:30:HIS:HB3	31:Z:32:LEU:HD23	1.89	0.55
31:Z:48:GLN:OE1	31:Z:49:ARG:O	2.24	0.55
7:B:598:U:H5'	17:L:21:ARG:CG	2.30	0.55
7:B:67:U:C2	7:B:68:G:N7	2.74	0.55
23:R:39:LEU:HD12	23:R:57:GLY:HA3	1.88	0.55
7:B:1426:G:O5'	7:B:1426:G:H8	1.90	0.55
7:B:1334:G:C6	7:B:1335:C:N3	2.74	0.55
7:B:1392:A:C5	7:B:1393:A:N6	2.75	0.55
25:T:10:VAL:HG23	25:T:11:LEU:HD12	1.89	0.55
25:T:19:LYS:HE3	25:T:84:TYR:OH	2.07	0.55
7:B:2656:U:C4	7:B:2664:G:N2	2.75	0.55
7:B:1960:A:N6	7:B:1961:C:N4	2.55	0.55
7:B:1345:C:H3'	7:B:1345:C:C6	2.42	0.55
20:O:90:VAL:HG22	20:O:116:GLN:CB	2.36	0.55
14:I:7:TYR:HB2	14:I:59:THR:HB	1.87	0.55
27:V:85:LYS:C	27:V:86:LEU:HD12	2.26	0.55
7:B:714:U:H2'	7:B:716:A:N7	2.21	0.55
7:B:1139:G:H8	7:B:1139:G:C5'	2.18	0.55
7:B:993:G:N2	7:B:1162:G:C2	2.75	0.55
7:B:1360:G:O6	7:B:1372:U:C2	2.60	0.55
7:B:1361:G:C2	7:B:1362:C:C5	2.94	0.55
7:B:1997:C:O2'	7:B:1998:A:H5'	2.06	0.55
7:B:2250:G:C2	18:M:81:ARG:HG2	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:7:ARG:CZ	7:B:250:G:P	2.95	0.55
7:B:2853:C:O2'	7:B:2854:G:H5'	2.07	0.55
7:B:458:G:H22	7:B:469:G:C2'	2.15	0.55
7:B:575:A:O2'	7:B:576:U:H5''	2.07	0.55
7:B:751:A:C6	7:B:789:A:C5	2.95	0.55
7:B:788:A:H5''	7:B:790:U:O4	2.06	0.55
7:B:969:G:C6	7:B:970:U:C4	2.95	0.55
8:C:140:VAL:O	8:C:141:HIS:CB	2.53	0.55
8:C:208:GLY:C	8:C:210:ALA:N	2.59	0.55
8:C:30:ALA:N	8:C:31:PRO:CD	2.70	0.55
8:C:80:LEU:HD22	8:C:91:ALA:HB2	1.89	0.55
7:B:2574:G:H21	9:D:147:GLY:HA2	1.71	0.55
10:E:49:ARG:HB2	10:E:51:GLU:CG	2.34	0.55
16:K:2:ILE:HG22	16:K:32:TYR:HB3	1.89	0.55
7:B:2276:G:OP2	18:M:82:MET:O	2.25	0.55
20:O:18:LEU:N	20:O:20:GLU:OE2	2.40	0.55
21:P:25:VAL:O	21:P:27:VAL:HG12	2.07	0.55
21:P:45:VAL:HG13	21:P:65:ASN:ND2	2.21	0.55
21:P:64:SER:HB3	21:P:71:ARG:HH11	1.72	0.55
22:Q:38:VAL:HA	22:Q:42:GLY:N	2.19	0.55
24:S:20:VAL:HG13	24:S:21:ALA:H	1.70	0.55
31:Z:2:LYS:O	31:Z:3:LYS:HB2	2.06	0.55
17:L:18:ARG:HD2	17:L:20:GLY:N	2.22	0.55
26:U:38:ILE:HG13	26:U:39:ASN:N	2.21	0.55
22:Q:113:LYS:C	22:Q:115:ALA:H	2.09	0.55
7:B:639:U:H2'	7:B:640:C:H6	1.72	0.55
7:B:929:U:O2'	30:Y:24:LEU:O	2.18	0.55
12:G:156:TYR:HD1	12:G:174:LYS:NZ	2.05	0.55
7:B:1052:C:H2'	7:B:1053:C:H5	1.70	0.55
7:B:2553:G:C2	7:B:2583:G:H1'	2.41	0.55
10:E:35:TYR:O	10:E:38:GLY:N	2.39	0.55
20:O:35:ILE:HG12	20:O:71:ALA:HB1	1.87	0.55
6:A:26:C:H2'	6:A:27:C:C6	2.42	0.55
7:B:1018:U:H2'	7:B:1019:U:H6	1.72	0.55
7:B:1213:A:N3	7:B:1238:G:H1'	2.21	0.55
7:B:1236:G:O2'	7:B:1237:A:H8	1.90	0.55
7:B:1809:A:C4	7:B:1810:A:N7	2.75	0.55
7:B:2046:G:C6	7:B:2047:C:C4	2.95	0.55
7:B:2199:A:C2	7:B:2225:A:N3	2.75	0.55
7:B:2280:G:C2	7:B:2281:A:N7	2.75	0.55
7:B:2305:U:C2	7:B:2306:C:C6	2.95	0.55
7:B:2443:C:H2'	7:B:2444:G:H8	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2461:A:C4	7:B:2462:C:C5	2.94	0.55
7:B:2527:C:C2	7:B:2528:U:C6	2.94	0.55
7:B:2740:A:H2'	7:B:2741:A:O4'	2.07	0.55
7:B:2899:A:O2'	7:B:2900:A:H5'	2.07	0.55
7:B:467:G:N1	7:B:468:G:C5	2.75	0.55
7:B:570:G:OP1	7:B:972:A:H4'	2.06	0.55
7:B:764:A:C2	7:B:781:A:C2	2.95	0.55
7:B:802:A:C4	7:B:803:U:C5	2.95	0.55
7:B:972:A:OP2	7:B:974:G:H5''	2.06	0.55
8:C:32:LEU:HD23	8:C:61:TYR:HE1	1.72	0.55
12:G:148:ARG:O	12:G:152:ARG:HA	2.07	0.55
15:J:13:ARG:HG2	15:J:50:THR:CG2	2.37	0.55
15:J:50:THR:O	15:J:50:THR:HG22	2.06	0.55
20:O:40:ILE:HA	20:O:46:GLU:HB3	1.88	0.55
21:P:23:ASP:CG	21:P:93:LYS:NZ	2.59	0.55
31:Z:6:HIS:O	31:Z:8:LYS:N	2.39	0.55
7:B:2384:U:H3'	7:B:2385:C:C5'	2.37	0.55
10:E:103:GLY:O	10:E:104:ALA:C	2.45	0.55
26:U:68:ASN:C	26:U:69:VAL:HG22	2.27	0.55
2:1:11:VAL:HB	2:1:51:ALA:HB3	1.88	0.55
9:D:88:GLU:O	9:D:89:GLU:O	2.24	0.55
7:B:639:U:H2'	7:B:640:C:C6	2.41	0.55
9:D:61:THR:HG23	9:D:62:LYS:N	2.20	0.55
7:B:2561:U:H4'	16:K:22:ILE:HD11	1.88	0.55
7:B:2256:G:N2	7:B:2257:U:C2	2.75	0.55
7:B:2258:C:H5''	7:B:2258:C:H6	1.70	0.55
7:B:411:G:OP2	7:B:2407:A:OP2	2.24	0.55
7:B:2798:U:H3'	7:B:2798:U:OP2	2.07	0.55
24:S:58:ALA:O	24:S:62:ASP:O	2.24	0.55
24:S:2:GLU:O	24:S:3:THR:O	2.24	0.55
27:V:69:GLU:HA	27:V:69:GLU:OE2	2.07	0.55
5:4:28:SER:O	5:4:29:ALA:C	2.44	0.54
7:B:1162:G:C3'	7:B:1162:G:C8	2.90	0.54
7:B:1219:U:H2'	7:B:1220:G:H8	1.72	0.54
7:B:1220:G:C6	7:B:1230:A:C6	2.95	0.54
7:B:1451:C:C5'	7:B:1451:C:H6	2.21	0.54
7:B:2266:A:C3'	7:B:2267:A:H5'	2.37	0.54
7:B:2590:A:OP2	8:C:224:MET:HE3	2.06	0.54
7:B:2639:A:O2'	15:J:99:ARG:NH2	2.37	0.54
7:B:2736:A:C2'	7:B:2737:G:H8	2.10	0.54
7:B:2745:C:N3	7:B:2759:G:N2	2.40	0.54
7:B:375:G:H5''	7:B:375:G:H8	1.70	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:689:A:C2	7:B:690:G:C4	2.95	0.54
7:B:964:C:OP2	33:B:5194:HOH:O	2.17	0.54
22:Q:63:ARG:NH1	22:Q:63:ARG:HB3	2.16	0.54
28:W:39:GLN:HA	28:W:68:PHE:CB	2.27	0.54
7:B:2280:G:O6	28:W:3:LYS:HD2	2.07	0.54
31:Z:48:GLN:NE2	31:Z:49:ARG:HD3	2.22	0.54
10:E:147:LEU:C	10:E:148:ILE:HG23	2.26	0.54
13:H:101:ASP:CA	13:H:104:THR:HB	2.18	0.54
2:1:50:GLU:HG2	2:1:51:ALA:N	2.20	0.54
7:B:2773:C:H2'	7:B:2774:C:H6	1.72	0.54
22:Q:70:GLN:CG	22:Q:71:ASN:H	1.97	0.54
7:B:443:A:N7	10:E:40:ARG:CG	2.70	0.54
7:B:144:A:C6	25:T:3:ARG:NH2	2.76	0.54
12:G:118:ALA:C	12:G:120:ILE:N	2.60	0.54
7:B:1635:A:C8	7:B:1635:A:H5'	2.32	0.54
7:B:498:G:C6	7:B:499:U:C5	2.96	0.54
14:I:126:ARG:HD2	14:I:126:ARG:O	2.07	0.54
17:L:42:SER:C	17:L:44:GLY:H	2.10	0.54
7:B:14:A:C6	7:B:526:A:C2	2.95	0.54
7:B:1862:G:N1	7:B:1881:C:C4	2.75	0.54
7:B:2557:G:H8	7:B:2557:G:O5'	1.90	0.54
7:B:1359:A:C2	7:B:1360:G:C1'	2.74	0.54
7:B:1663:G:H2'	33:B:5349:HOH:O	2.06	0.54
7:B:1974:C:H2'	7:B:1975:G:O5'	2.07	0.54
7:B:2317:A:H2'	7:B:2318:G:H5'	1.87	0.54
7:B:2435:A:H2'	7:B:2436:G:O5'	2.07	0.54
7:B:2854:G:N2	7:B:2864:G:C4	2.76	0.54
7:B:672:C:N3	7:B:673:C:C5	2.75	0.54
8:C:34:GLU:CD	8:C:35:LYS:N	2.61	0.54
9:D:122:VAL:HG21	9:D:141:ARG:CD	2.35	0.54
10:E:58:LYS:HZ1	10:E:62:GLN:N	2.05	0.54
13:H:4:ILE:HD13	13:H:37:VAL:HG13	1.88	0.54
15:J:113:PRO:HA	15:J:116:ARG:CB	2.37	0.54
16:K:78:ARG:CZ	21:P:102:ARG:HH12	2.20	0.54
23:R:40:MET:O	23:R:40:MET:HG3	2.06	0.54
17:L:35:HIS:CE1	23:R:84:ARG:CB	2.90	0.54
17:L:34:GLY:H	23:R:85:LYS:CE	2.18	0.54
7:B:1323:C:H5"	24:S:84:ARG:HH12	1.72	0.54
24:S:7:HIS:O	24:S:8:ARG:CB	2.54	0.54
28:W:3:LYS:HZ3	28:W:10:ARG:NE	2.05	0.54
7:B:2331:G:C4'	28:W:69:GLU:HG2	2.35	0.54
7:B:316:C:H2'	7:B:317:G:O4'	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:339:U:O5'	7:B:339:U:H6	1.90	0.54
20:O:63:LYS:O	20:O:65:THR:N	2.40	0.54
7:B:93:G:C4	7:B:94:A:C8	2.95	0.54
29:X:49:ASP:O	29:X:51:ALA:O	2.25	0.54
22:Q:107:ALA:O	22:Q:110:GLU:HB2	2.07	0.54
7:B:1744:A:H2'	7:B:1745:A:C8	2.42	0.54
6:A:99:A:C5	6:A:100:G:C8	2.94	0.54
9:D:36:GLN:HB3	9:D:47:ALA:HA	1.89	0.54
26:U:5:ARG:O	26:U:25:LYS:HG2	2.07	0.54
16:K:35:VAL:CG2	16:K:69:VAL:HG22	2.34	0.54
7:B:1551:A:H3'	7:B:1552:A:H5''	1.89	0.54
11:F:35:LEU:HD11	11:F:60:SER:HB3	1.90	0.54
29:X:9:LYS:HE2	29:X:11:VAL:CG1	2.36	0.54
16:K:42:THR:HG22	16:K:42:THR:O	2.06	0.54
11:F:103:ILE:HD12	11:F:173:ASP:HA	1.89	0.54
7:B:1015:U:H3'	7:B:1015:U:H6	1.72	0.54
5:4:26:ILE:HD12	5:4:35:GLN:CG	2.36	0.54
7:B:1156:A:P	22:Q:54:ARG:HH21	2.29	0.54
7:B:1254:A:H5''	7:B:1255:U:C5'	2.37	0.54
7:B:1329:U:O2'	7:B:1330:C:H5'	2.07	0.54
7:B:1350:C:C6	7:B:1351:C:H5	2.25	0.54
7:B:2067:G:H5'	7:B:2068:U:OP2	2.08	0.54
7:B:2498:C:OP2	7:B:2499:C:OP2	2.26	0.54
7:B:2524:G:O6	7:B:2540:C:C4	2.59	0.54
7:B:2574:G:N3	7:B:2575:C:C6	2.75	0.54
7:B:2581:G:C2'	7:B:2610:C:H41	2.20	0.54
7:B:2592:G:C2	7:B:2593:U:O2	2.61	0.54
7:B:2821:A:C8	7:B:2821:A:C3'	2.90	0.54
7:B:396:G:OP2	31:Z:8:LYS:NZ	2.39	0.54
7:B:969:G:N2	7:B:970:U:C2	2.76	0.54
9:D:144:GLY:O	9:D:145:SER:O	2.24	0.54
15:J:37:ARG:HG3	15:J:118:MET:CE	2.38	0.54
19:N:115:LEU:HD23	19:N:115:LEU:N	2.19	0.54
19:N:99:LYS:HD2	19:N:99:LYS:N	2.21	0.54
7:B:2334:U:N3	20:O:15:ARG:HG3	2.23	0.54
24:S:29:VAL:HG21	24:S:69:LEU:C	2.27	0.54
31:Z:56:ARG:HH11	31:Z:56:ARG:HG3	1.72	0.54
7:B:644:A:H2'	7:B:644:A:N3	2.22	0.54
7:B:86:G:C2	7:B:97:C:C4	2.95	0.54
25:T:65:GLY:O	25:T:66:LYS:CB	2.54	0.54
7:B:2636:C:P	9:D:79:LEU:HD12	2.47	0.54
7:B:909:A:C2	7:B:912:C:N1	2.76	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:104:LEU:C	12:G:111:PRO:HB3	2.28	0.54
13:H:113:SER:N	13:H:132:PHE:CE2	2.72	0.54
7:B:2788:C:H2'	7:B:2789:C:H6	1.69	0.54
7:B:137:U:O4	7:B:142:A:N1	2.41	0.54
7:B:2597:G:OP1	8:C:239:PHE:CD2	2.60	0.54
7:B:2147:A:H4'	7:B:2148:G:C8	2.41	0.54
7:B:1288:G:C8	7:B:1327:A:N6	2.75	0.54
27:V:85:LYS:O	27:V:86:LEU:HD12	2.07	0.54
7:B:1873:G:C2'	7:B:1874:C:H5'	2.37	0.54
5:4:24:ARG:O	5:4:35:GLN:O	2.25	0.54
6:A:31:C:O2'	6:A:32:U:O4'	2.26	0.54
7:B:1217:U:O2	7:B:1217:U:H2'	2.07	0.54
7:B:1218:G:C6	7:B:1232:G:O6	2.61	0.54
7:B:1223:G:O6	23:R:90:ARG:NH2	2.38	0.54
7:B:1287:A:OP1	19:N:104:ALA:O	2.25	0.54
7:B:1889:A:H3'	7:B:1889:A:C8	2.43	0.54
7:B:1899:A:H3'	7:B:1899:A:C8	2.42	0.54
7:B:2367:G:H8	7:B:2367:G:O5'	1.90	0.54
7:B:2360:G:N2	7:B:2428:G:C4	2.76	0.54
7:B:402:A:N7	7:B:403:U:C5	2.76	0.54
7:B:517:C:H2'	7:B:518:G:O5'	2.06	0.54
7:B:532:A:H5'	7:B:533:G:O4'	2.07	0.54
7:B:993:G:H2'	7:B:994:C:H5'	1.89	0.54
8:C:21:PRO:HD2	8:C:202:ARG:NH1	2.23	0.54
8:C:72:GLY:O	8:C:73:ILE:HG13	2.07	0.54
11:F:64:PRO:HA	11:F:88:VAL:CG2	2.37	0.54
13:H:50:ARG:HB2	13:H:54:LEU:CD1	2.37	0.54
22:Q:64:ILE:HG12	22:Q:95:ALA:HB2	1.87	0.54
22:Q:90:ASP:O	22:Q:91:ARG:HB3	2.07	0.54
23:R:80:ARG:CG	23:R:85:LYS:HA	2.37	0.54
2:1:42:VAL:O	2:1:43:ARG:HB2	2.07	0.54
10:E:116:ASP:OD1	10:E:185:LYS:HA	2.07	0.54
7:B:661:A:H4'	17:L:23:ILE:HG23	1.88	0.54
23:R:39:LEU:N	23:R:61:ALA:HB1	2.23	0.54
11:F:126:ASN:ND2	11:F:157:THR:H	2.05	0.54
7:B:1707:G:H2'	7:B:1708:C:C5'	2.36	0.54
7:B:1742:U:H2'	7:B:1743:G:C8	2.42	0.54
7:B:848:C:H2'	7:B:849:A:C8	2.43	0.54
7:B:1063:G:O4'	14:I:90:GLY:CA	2.55	0.54
12:G:37:ASN:OD1	12:G:63:GLN:HG3	2.08	0.54
12:G:67:ALA:O	12:G:70:LEU:N	2.41	0.54
11:F:135:ILE:HD11	11:F:138:PRO:HA	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2409:G:H2'	7:B:2410:G:O4'	2.08	0.54
7:B:2777:G:C8	7:B:2777:G:C3'	2.90	0.54
7:B:1935:G:N2	7:B:1964:G:C4	2.75	0.54
7:B:1737:G:C2	7:B:1738:G:N2	2.75	0.54
7:B:1397:U:O2'	7:B:1398:C:H5'	2.08	0.54
7:B:1733:G:H5'	7:B:1733:G:H8	1.72	0.54
1:0:27:LEU:O	1:0:28:SER:OG	2.25	0.54
1:0:48:TYR:OH	7:B:2884:U:N3	2.41	0.54
6:A:46:A:O3'	20:O:1:MET:HB2	2.06	0.54
7:B:1021:A:C2	7:B:1023:U:C2	2.96	0.54
7:B:1025:G:C6	7:B:1135:C:C6	2.95	0.54
7:B:1609:A:C2	7:B:1616:A:C5	2.96	0.54
7:B:1775:U:H2'	7:B:1776:G:H5'	1.90	0.54
7:B:1809:A:H3'	7:B:1810:A:H8	1.73	0.54
7:B:1831:G:O2'	7:B:1832:C:H5'	2.08	0.54
7:B:2335:A:N7	7:B:2337:G:C6	2.76	0.54
7:B:2467:C:O4'	18:M:118:LYS:HG2	2.08	0.54
7:B:2515:C:C2'	7:B:2516:A:O5'	2.56	0.54
7:B:2676:C:C6	7:B:2676:C:H3'	2.43	0.54
7:B:26:G:H2'	7:B:27:G:O4'	2.07	0.54
7:B:572:A:N7	7:B:573:U:C5	2.75	0.54
7:B:833:A:H1'	17:L:54:GLN:HB3	1.89	0.54
8:C:212:TRP:CH2	8:C:217:PRO:HD3	2.43	0.54
8:C:22:GLU:HA	8:C:202:ARG:HH21	1.71	0.54
8:C:229:HIS:NE2	8:C:244:VAL:HG23	2.23	0.54
8:C:80:LEU:HD23	8:C:80:LEU:N	2.23	0.54
7:B:2050:C:H1'	9:D:161:MET:HE1	1.90	0.54
22:Q:12:ARG:O	22:Q:15:LYS:HB3	2.08	0.54
23:R:79:ARG:HG2	23:R:80:ARG:H	1.73	0.54
16:K:108:ARG:HH11	16:K:108:ARG:CG	2.00	0.54
7:B:77:G:N3	7:B:110:G:N2	2.56	0.54
18:M:18:ARG:NH1	18:M:92:TRP:CZ3	2.75	0.54
7:B:2259:U:H1'	7:B:2427:C:C2	2.42	0.54
7:B:409:G:H8	7:B:409:G:O5'	1.90	0.54
7:B:236:C:O2'	7:B:431:U:H4'	2.08	0.54
7:B:524:G:C5	7:B:525:U:C5	2.96	0.54
20:O:60:GLU:O	20:O:61:GLN:O	2.24	0.54
7:B:1476:U:O2'	7:B:1477:A:H5'	2.07	0.54
7:B:1466:U:H3'	7:B:1466:U:C6	2.43	0.54
2:1:23:THR:HG22	4:3:34:LYS:O	2.08	0.54
4:3:51:LYS:C	4:3:53:ASP:N	2.61	0.54
7:B:1368:G:H2'	7:B:1369:G:H8	1.72	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1802:A:N6	7:B:1817:G:N2	2.55	0.54
7:B:2011:U:H2'	7:B:2012:G:C8	2.43	0.54
7:B:449:A:H2'	7:B:450:G:C5'	2.37	0.54
7:B:699:A:H4'	7:B:1634:A:N7	2.23	0.54
7:B:748:G:C2	7:B:750:A:N6	2.76	0.54
7:B:790:U:C5	7:B:791:C:H5	2.25	0.54
8:C:19:VAL:HG12	8:C:20:ASN:H	1.73	0.54
15:J:79:GLY:C	15:J:81:ILE:H	2.11	0.54
21:P:4:ILE:HA	21:P:7:LEU:HB2	1.89	0.54
7:B:309:A:O3'	26:U:15:GLY:HA2	2.07	0.54
7:B:311:A:H3'	7:B:312:G:N7	2.22	0.54
26:U:43:LYS:HA	26:U:57:ILE:HB	1.89	0.54
7:B:104:A:C4	7:B:105:C:C5	2.96	0.54
7:B:2636:C:C4'	9:D:80:TRP:HZ2	2.21	0.54
7:B:2636:C:H2'	7:B:2637:U:H6	1.69	0.54
9:D:49:GLN:O	9:D:78:GLY:HA2	2.07	0.54
12:G:18:ILE:HD11	12:G:44:HIS:H	1.73	0.54
22:Q:108:LEU:HA	22:Q:111:LYS:CE	2.34	0.54
7:B:265:A:H2'	7:B:266:G:O4'	2.06	0.54
25:T:20:ALA:HA	25:T:23:ALA:HB2	1.90	0.54
12:G:53:PRO:HG3	12:G:61:TRP:CE3	2.42	0.54
26:U:33:VAL:HG12	26:U:33:VAL:O	2.08	0.54
7:B:2141:G:N2	7:B:2151:U:H1'	2.23	0.54
7:B:1469:A:C2	7:B:1470:A:C2	2.96	0.54
7:B:2835:A:N7	7:B:2879:A:N1	2.56	0.54
13:H:8:LYS:HG3	13:H:9:VAL:N	2.23	0.54
10:E:154:ASP:CG	10:E:155:GLU:N	2.61	0.54
24:S:63:GLY:O	24:S:64:ALA:CB	2.55	0.54
6:A:31:C:H41	20:O:32:PRO:CG	2.21	0.54
7:B:1157:G:C8	7:B:1157:G:C5'	2.90	0.54
7:B:1615:C:C2	7:B:1617:C:C6	2.95	0.54
7:B:120:U:O4	7:B:177:G:H8	1.90	0.54
7:B:1820:U:H5	8:C:158:GLY:O	1.90	0.54
7:B:1820:U:O2'	8:C:157:ALA:HB3	2.07	0.54
7:B:2090:A:N1	7:B:2230:G:C6	2.76	0.54
7:B:2454:G:C6	7:B:2499:C:N4	2.75	0.54
7:B:2526:G:O2'	7:B:2527:C:H5'	2.08	0.54
7:B:49:A:H5'	7:B:50:U:H2'	1.89	0.54
7:B:691:C:O2'	7:B:692:C:H5'	2.06	0.54
7:B:800:A:O4'	7:B:801:G:H5'	2.08	0.54
10:E:48:THR:O	10:E:49:ARG:C	2.46	0.54
15:J:100:VAL:HG22	15:J:101:ILE:N	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:71:ASP:O	15:J:72:LYS:C	2.45	0.54
20:O:27:VAL:CG2	20:O:38:GLN:N	2.69	0.54
20:O:27:VAL:HG21	20:O:38:GLN:CB	2.37	0.54
28:W:3:LYS:HZ2	28:W:10:ARG:HH21	1.56	0.54
10:E:133:LEU:HD22	10:E:136:GLN:HG3	1.89	0.54
7:B:443:A:C8	10:E:40:ARG:CG	2.91	0.54
7:B:1591:A:C6	7:B:1592:C:N4	2.76	0.54
7:B:169:G:C6	7:B:170:U:C4	2.95	0.54
9:D:197:THR:HG22	9:D:198:GLY:H	1.72	0.54
14:I:100:ILE:HG22	14:I:105:LEU:HG	1.90	0.54
14:I:105:LEU:HD22	14:I:128:ILE:HG22	1.90	0.54
7:B:1390:U:C2'	7:B:1391:U:H5'	2.37	0.54
7:B:1005:C:C2	7:B:1006:C:C5	2.96	0.54
7:B:2870:C:H2'	7:B:2871:U:C6	2.42	0.54
1:O:21:LEU:HD21	24:S:20:VAL:HA	1.89	0.54
3:2:46:LYS:C	3:2:46:LYS:HE3	2.28	0.54
4:3:4:LYS:NZ	4:3:61:LEU:N	2.54	0.54
5:4:2:LYS:NZ	5:4:2:LYS:HB2	2.22	0.54
6:A:50:A:C2	6:A:51:G:H1'	2.42	0.54
7:B:123:G:O2'	7:B:124:G:H5''	2.08	0.54
7:B:1435:G:O5'	7:B:1435:G:H8	1.91	0.54
7:B:1819:A:P	8:C:153:LEU:HB2	2.48	0.54
7:B:1838:C:C4	7:B:1899:A:C2	2.96	0.54
7:B:186:G:C2	7:B:211:C:C2	2.96	0.54
7:B:2020:A:C5	7:B:2022:U:C5	2.96	0.54
7:B:2269:G:H2'	7:B:2270:A:H5'	1.90	0.54
7:B:2704:C:C2	7:B:2705:A:C8	2.96	0.54
7:B:2738:A:H2	7:B:2767:C:C2	2.26	0.54
7:B:736:C:H2'	7:B:737:C:H6	1.72	0.54
7:B:778:G:C5	7:B:779:U:C6	2.95	0.54
8:C:141:HIS:CG	8:C:190:THR:HB	2.42	0.54
8:C:142:ASN:CG	8:C:142:ASN:O	2.44	0.54
8:C:156:SER:O	8:C:194:VAL:O	2.26	0.54
12:G:108:PHE:CE2	12:G:151:ARG:NH1	2.75	0.54
19:N:33:ILE:CG2	19:N:112:TYR:HD1	2.17	0.54
19:N:58:ASP:O	19:N:59:SER:HB2	2.08	0.54
19:N:55:ALA:O	19:N:80:PHE:HB3	2.08	0.54
22:Q:40:LYS:CD	22:Q:44:TYR:CD2	2.90	0.54
31:Z:56:ARG:NH1	31:Z:56:ARG:HG3	2.23	0.54
17:L:18:ARG:CD	17:L:20:GLY:HA2	2.38	0.54
17:L:92:LEU:HD22	17:L:96:LYS:CG	2.37	0.54
2:1:7:LYS:HZ1	7:B:2285:C:H5	1.56	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:99:GLU:HB3	9:D:101:PHE:HB3	1.90	0.54
7:B:899:A:H2'	7:B:900:A:C5'	2.38	0.54
7:B:905:A:O5'	7:B:905:A:H8	1.90	0.54
7:B:917:A:H2'	7:B:918:A:H5'	1.90	0.54
9:D:59:ARG:CZ	9:D:63:PRO:HB3	2.37	0.54
13:H:113:SER:HB2	13:H:132:PHE:CE2	2.43	0.54
7:B:2892:G:H3'	7:B:2892:G:C8	2.43	0.54
7:B:1099:G:N1	7:B:1100:C:C2	2.76	0.54
7:B:1591:A:H2'	7:B:1592:C:C6	2.43	0.54
17:L:8:PRO:O	17:L:9:ALA:HB3	2.07	0.54
7:B:1863:G:H4'	7:B:2411:A:H4'	1.90	0.54
7:B:425:G:C2	7:B:426:C:C6	2.96	0.54
17:L:72:ALA:C	17:L:73:ILE:HD12	2.28	0.54
9:D:170:VAL:HG11	9:D:194:PRO:HG3	1.89	0.54
7:B:503:A:C2	7:B:505:A:C4	2.96	0.54
8:C:146:LYS:HB3	8:C:147:PRO:HD2	1.89	0.54
7:B:1000:A:N6	7:B:1155:A:C8	2.76	0.54
7:B:1003:G:N3	7:B:1010:A:H2	2.06	0.54
7:B:1429:G:C2'	7:B:1430:G:H5'	2.38	0.54
7:B:193:U:H2'	7:B:194:G:H8	1.73	0.54
7:B:188:G:H1	7:B:208:C:H42	1.55	0.54
7:B:2317:A:C2'	7:B:2318:G:H5'	2.37	0.54
7:B:2074:U:C2	7:B:2436:G:N2	2.75	0.54
7:B:2456:C:C4	7:B:2457:U:C5	2.95	0.54
7:B:2574:G:H2'	7:B:2575:C:C6	2.41	0.54
7:B:2618:G:H2'	7:B:2619:C:H6	1.73	0.54
7:B:2704:C:H2'	7:B:2705:A:C8	2.42	0.54
7:B:2867:G:C2'	7:B:2867:G:N3	2.71	0.54
7:B:461:C:H5''	7:B:462:C:OP2	2.07	0.54
7:B:464:U:C2'	7:B:465:G:H5''	2.38	0.54
7:B:464:U:C5	7:B:465:G:N7	2.76	0.54
7:B:553:G:O6	7:B:554:U:C4	2.61	0.54
7:B:537:G:N2	7:B:557:C:N4	2.56	0.54
7:B:687:C:C4	7:B:688:U:O2	2.61	0.54
7:B:816:C:N4	7:B:1192:G:N1	2.55	0.54
7:B:984:A:H8	7:B:984:A:O5'	1.91	0.54
8:C:220:ARG:NH1	8:C:220:ARG:CG	2.68	0.54
7:B:692:C:H5'	8:C:42:ARG:HB2	1.89	0.54
8:C:61:TYR:CD2	8:C:84:PRO:CD	2.90	0.54
7:B:2821:A:H5''	9:D:167:ASN:HD21	1.72	0.54
10:E:61:ARG:HH21	10:E:64:GLY:HA3	1.72	0.54
12:G:85:LYS:CD	12:G:164:ALA:HB3	2.38	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:P:93:LYS:CE	21:P:97:TYR:CZ	2.82	0.54
28:W:66:VAL:O	28:W:67:LYS:O	2.26	0.54
30:Y:46:MET:O	30:Y:50:VAL:HG22	2.08	0.54
10:E:136:GLN:CA	10:E:139:LYS:HB3	2.17	0.54
7:B:77:G:C2	7:B:110:G:C2	2.96	0.54
7:B:2811:G:OP1	9:D:61:THR:HG22	2.07	0.54
7:B:137:U:O5'	7:B:137:U:C6	2.59	0.54
31:Z:17:SER:O	31:Z:19:GLY:N	2.41	0.54
7:B:1445:G:C2	7:B:1446:C:C2	2.96	0.54
14:I:57:VAL:HB	14:I:69:VAL:HG22	1.90	0.54
6:A:16:G:N2	6:A:69:G:H1'	2.23	0.54
10:E:42:GLY:O	10:E:43:THR:HG23	2.07	0.54
28:W:40:ARG:CG	28:W:41:GLY:N	2.67	0.54
7:B:2298:A:N1	7:B:2299:U:O2	2.41	0.54
7:B:1343:G:H1'	7:B:1597:A:C4	2.43	0.54
7:B:1687:G:H2'	7:B:1688:U:H6	1.73	0.54
7:B:632:A:O3'	17:L:69:ARG:CB	2.56	0.54
14:I:98:GLY:C	14:I:99:LYS:HD3	2.28	0.54
6:A:65:U:C2'	6:A:66:A:H5'	2.38	0.54
7:B:1519:G:C5	7:B:1520:U:C5	2.95	0.54
7:B:1733:G:H5'	7:B:1733:G:C8	2.43	0.54
24:S:61:ASN:N	24:S:61:ASN:OD1	2.40	0.54
4:3:60:CYS:SG	4:3:61:LEU:N	2.81	0.54
5:4:7:VAL:O	5:4:23:ILE:HG21	2.08	0.54
6:A:28:C:C5	6:A:29:A:N7	2.76	0.54
7:B:1652:A:C3'	7:B:1653:G:H5'	2.37	0.54
7:B:2091:C:H3'	7:B:2092:U:C5'	2.37	0.54
7:B:2230:G:H4'	31:Z:29:GLY:O	2.08	0.54
7:B:2574:G:C2	7:B:2575:C:C2	2.96	0.54
7:B:2849:U:N3	7:B:2867:G:N7	2.55	0.54
7:B:463:G:N2	7:B:467:G:C4	2.75	0.54
7:B:514:A:H2'	7:B:515:A:O4'	2.08	0.54
7:B:777:G:N3	7:B:778:G:C8	2.76	0.54
8:C:219:VAL:C	8:C:220:ARG:HD2	2.29	0.54
8:C:264:LYS:HZ3	8:C:264:LYS:H	1.51	0.54
7:B:2313:C:O2'	11:F:34:THR:HG21	2.07	0.54
15:J:4:PHE:CZ	15:J:6:ALA:HA	2.43	0.54
4:3:11:LYS:HG3	17:L:63:LYS:O	2.07	0.54
18:M:30:SER:O	18:M:31:PHE:CB	2.56	0.54
20:O:10:ARG:CD	20:O:94:ARG:HD3	2.38	0.54
20:O:15:ARG:NE	20:O:18:LEU:HD13	2.17	0.54
21:P:13:LYS:HD3	21:P:78:PRO:CG	2.29	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:66:ILE:O	24:S:68:ASP:N	2.41	0.54
18:M:5:LYS:CG	18:M:6:ARG:H	2.20	0.54
18:M:5:LYS:NZ	18:M:8:LYS:HB3	2.23	0.54
7:B:852:U:O4	7:B:853:C:N4	2.40	0.54
30:Y:17:PRO:C	30:Y:19:HIS:N	2.60	0.54
7:B:2786:U:H4'	9:D:65:ALA:O	2.08	0.54
7:B:1334:G:C2'	7:B:1335:C:H5'	2.38	0.54
7:B:2664:G:H8	7:B:2664:G:O5'	1.90	0.54
7:B:363:G:C2	7:B:364:C:N3	2.76	0.54
27:V:56:PHE:HD2	27:V:56:PHE:C	2.12	0.54
7:B:1541:C:C2	7:B:1542:U:C6	2.95	0.54
11:F:174:PHE:H	11:F:175:PRO:CD	2.21	0.54
11:F:44:ALA:O	11:F:48:LEU:HD12	2.08	0.54
7:B:2338:C:H2'	7:B:2339:C:H6	1.71	0.54
3:2:17:GLY:C	3:2:18:PHE:CD2	2.81	0.53
7:B:1309:G:H8	7:B:1309:G:C5'	2.20	0.53
7:B:1656:C:H42	7:B:2004:G:H1	1.55	0.53
7:B:1807:G:C2	7:B:1811:G:O6	2.61	0.53
7:B:1848:A:C4	7:B:1849:G:N7	2.77	0.53
7:B:2024:G:H5''	9:D:154:LYS:HZ3	1.73	0.53
7:B:2684:U:H3'	7:B:2684:U:H6	1.73	0.53
7:B:2857:G:N2	7:B:2861:U:N3	2.56	0.53
7:B:797:G:N2	7:B:798:G:H1'	2.23	0.53
8:C:141:HIS:CB	8:C:190:THR:HB	2.37	0.53
19:N:82:GLU:O	19:N:86:ARG:HG3	2.08	0.53
19:N:7:GLY:CA	19:N:8:ARG:HH11	2.19	0.53
22:Q:44:TYR:HE1	22:Q:51:GLN:NE2	2.05	0.53
7:B:482:A:C8	7:B:506:G:N1	2.76	0.53
29:X:26:PHE:CA	29:X:29:ARG:HB2	2.37	0.53
7:B:2773:C:OP1	9:D:169:ARG:NH2	2.40	0.53
7:B:1746:A:N3	7:B:1746:A:H2'	2.22	0.53
30:Y:2:LYS:HB2	30:Y:37:ARG:HB2	1.89	0.53
12:G:23:ILE:O	12:G:25:ILE:N	2.41	0.53
7:B:170:U:H2'	7:B:171:U:O4'	2.08	0.53
7:B:224:U:C4	7:B:225:C:C5	2.96	0.53
7:B:2104:C:O2'	7:B:2105:U:C6	2.61	0.53
7:B:1767:G:N2	7:B:1768:C:C2	2.76	0.53
9:D:20:VAL:O	9:D:22:ILE:HB	2.08	0.53
11:F:104:THR:HG22	11:F:105:ILE:HD12	1.88	0.53
4:3:4:LYS:NZ	4:3:60:CYS:N	2.56	0.53
4:3:9:ALA:C	4:3:11:LYS:N	2.62	0.53
7:B:1125:G:H3'	7:B:1126:A:C8	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1218:G:C5	7:B:1232:G:C6	2.96	0.53
7:B:1422:G:C2	7:B:1423:G:C8	2.95	0.53
7:B:1672:A:C6	7:B:1673:G:C6	2.97	0.53
7:B:18:U:C5	7:B:19:A:N7	2.76	0.53
7:B:2025:C:H3'	7:B:2026:U:H6	1.73	0.53
7:B:2842:G:H2'	7:B:2842:G:N3	2.22	0.53
7:B:536:G:O6	7:B:537:G:C2	2.61	0.53
7:B:778:G:C4	7:B:779:U:C6	2.97	0.53
7:B:792:A:H4'	7:B:793:A:H5'	1.91	0.53
8:C:204:LEU:CG	8:C:210:ALA:HB1	2.38	0.53
8:C:22:GLU:HB2	8:C:202:ARG:HE	1.73	0.53
8:C:36:ASN:OD1	8:C:36:ASN:N	2.41	0.53
9:D:125:TRP:O	9:D:128:ARG:CD	2.56	0.53
9:D:157:LYS:CE	15:J:80:HIS:HB3	2.38	0.53
18:M:50:ARG:HH22	18:M:53:MET:HE3	1.73	0.53
23:R:74:ILE:HG13	23:R:76:LYS:HD2	1.89	0.53
24:S:98:LYS:O	24:S:99:ARG:O	2.26	0.53
28:W:16:GLU:O	28:W:18:LYS:HD3	2.08	0.53
28:W:44:PHE:CZ	28:W:60:ALA:HB2	2.43	0.53
7:B:85:G:C6	7:B:98:G:C2	2.96	0.53
25:T:66:LYS:NZ	25:T:67:VAL:O	2.34	0.53
29:X:22:LEU:CD2	29:X:25:GLN:HE22	2.21	0.53
23:R:67:GLY:H	23:R:98:ILE:HA	1.74	0.53
7:B:1715:G:N2	7:B:1744:A:OP2	2.42	0.53
7:B:262:A:H8	7:B:262:A:H3'	1.71	0.53
7:B:612:G:C2	7:B:617:G:O6	2.61	0.53
7:B:1316:U:C2'	7:B:1317:G:H5'	2.37	0.53
7:B:1601:G:OP2	25:T:62:VAL:HG11	2.07	0.53
7:B:2807:U:C1'	7:B:2892:G:N2	2.63	0.53
7:B:1936:A:H2	7:B:1943:U:O4	1.90	0.53
7:B:1417:C:C2'	7:B:1418:G:H5'	2.37	0.53
17:L:88:GLY:O	17:L:90:VAL:HG12	2.08	0.53
7:B:633:A:H8	7:B:633:A:O5'	1.91	0.53
7:B:628:G:H8	7:B:628:G:O5'	1.91	0.53
26:U:16:LYS:O	26:U:16:LYS:HG3	2.09	0.53
3:2:9:VAL:C	3:2:11:LYS:H	2.12	0.53
3:2:7:PRO:HG2	7:B:1309:G:H4'	1.89	0.53
6:A:33:G:N3	6:A:33:G:H2'	2.22	0.53
7:B:1028:A:C2'	7:B:1029:A:H8	2.06	0.53
7:B:1235:G:H5''	7:B:1236:G:OP2	2.09	0.53
7:B:123:G:C4	7:B:124:G:N7	2.76	0.53
7:B:1561:C:H2'	7:B:1562:U:C6	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1623:G:C4	7:B:1624:U:C5	2.96	0.53
7:B:1796:U:N3	7:B:1797:G:N7	2.57	0.53
7:B:1807:G:H3'	7:B:1808:A:C5'	2.38	0.53
7:B:2487:G:C2'	7:B:2488:G:H5'	2.38	0.53
7:B:2645:G:C5'	7:B:2645:G:H8	2.21	0.53
7:B:2679:A:H2'	7:B:2680:U:H6	1.73	0.53
7:B:2697:G:N1	7:B:2711:A:C6	2.75	0.53
7:B:669:G:C2'	7:B:669:G:N3	2.68	0.53
7:B:808:G:C8	7:B:808:G:C5'	2.92	0.53
7:B:1842:G:O4'	8:C:241:LYS:HE3	2.08	0.53
8:C:262:THR:O	8:C:263:ASP:HB3	2.09	0.53
8:C:50:THR:O	8:C:51:ARG:O	2.26	0.53
9:D:14:ILE:O	9:D:15:PHE:HB2	2.08	0.53
10:E:71:GLY:O	10:E:72:SER:HB2	2.09	0.53
9:D:17:GLU:O	16:K:72:PRO:HB3	2.08	0.53
17:L:52:GLY:O	17:L:53:GLY:C	2.44	0.53
18:M:47:GLU:HA	18:M:50:ARG:CB	2.39	0.53
21:P:7:LEU:C	21:P:9:GLN:N	2.61	0.53
22:Q:78:PHE:CE1	22:Q:82:LEU:HD11	2.43	0.53
22:Q:92:LYS:C	22:Q:94:LEU:H	2.11	0.53
28:W:44:PHE:HE1	28:W:57:THR:OG1	1.92	0.53
7:B:2289:G:C2	7:B:2290:G:C8	2.97	0.53
13:H:107:GLY:O	13:H:108:VAL:HG23	2.07	0.53
7:B:73:A:C2'	7:B:74:A:OP2	2.56	0.53
29:X:51:ALA:C	29:X:53:VAL:H	2.10	0.53
23:R:35:PHE:CG	23:R:64:VAL:O	2.62	0.53
8:C:171:VAL:HB	8:C:182:LYS:HB3	1.88	0.53
7:B:1719:G:C4	7:B:1720:U:C6	2.96	0.53
7:B:606:U:H2'	7:B:607:U:O4'	2.08	0.53
17:L:110:VAL:C	17:L:111:ILE:HG23	2.28	0.53
6:A:96:G:N2	6:A:97:C:H1'	2.23	0.53
18:M:46:ILE:HD11	18:M:93:VAL:HG21	1.89	0.53
13:H:115:VAL:HG13	13:H:115:VAL:O	2.08	0.53
7:B:1081:U:C4	7:B:1082:U:C5	2.97	0.53
7:B:2654:A:H4'	7:B:2655:G:H4'	1.89	0.53
12:G:114:HIS:HD2	12:G:147:LEU:HD21	1.73	0.53
7:B:551:G:C3'	7:B:551:G:C8	2.91	0.53
7:B:160:A:N6	7:B:167:A:H1'	2.23	0.53
11:F:59:ILE:HD11	11:F:137:PHE:HB2	1.90	0.53
7:B:2408:U:H6	7:B:2408:U:O5'	1.91	0.53
10:E:124:PHE:CZ	10:E:137:LYS:CG	2.90	0.53
14:I:7:TYR:HB2	14:I:59:THR:CB	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2606:C:C2'	7:B:2607:G:H5'	2.38	0.53
1:O:41:HIS:NE2	1:O:42:ILE:HG22	2.23	0.53
7:B:1262:A:C2'	7:B:1263:U:H5'	2.38	0.53
7:B:1821:A:C4	7:B:1822:C:C5	2.96	0.53
7:B:197:A:H5'	7:B:197:A:C8	2.44	0.53
7:B:2270:A:C8	7:B:2271:G:C8	2.96	0.53
7:B:2420:C:H3'	7:B:2421:G:H5''	1.89	0.53
7:B:2568:U:H2'	7:B:2569:G:O4'	2.09	0.53
7:B:2692:G:O6	7:B:2718:G:C5	2.60	0.53
7:B:2739:U:H2'	7:B:2740:A:H5'	1.89	0.53
7:B:379:G:C2	7:B:396:G:C6	2.96	0.53
7:B:464:U:C1'	7:B:686:U:H5	2.21	0.53
7:B:55:G:C2	7:B:116:C:N3	2.76	0.53
7:B:677:A:N1	7:B:802:A:C5	2.77	0.53
7:B:986:C:C6	7:B:986:C:H5'	2.44	0.53
7:B:1824:G:N3	8:C:249:VAL:HG12	2.22	0.53
8:C:41:GLY:O	8:C:42:ARG:O	2.26	0.53
8:C:78:GLU:HB2	8:C:92:LEU:HB3	1.90	0.53
9:D:126:ASN:HA	9:D:128:ARG:NH2	2.22	0.53
11:F:33:ILE:CD1	11:F:90:LEU:HB2	2.35	0.53
19:N:38:LEU:O	19:N:41:ALA:HB3	2.09	0.53
20:O:34:HIS:HA	20:O:53:THR:CB	2.39	0.53
21:P:24:THR:O	21:P:26:GLU:HG3	2.08	0.53
24:S:20:VAL:HG21	24:S:44:ALA:HA	1.91	0.53
7:B:188:G:OP2	31:Z:12:ILE:HG12	2.08	0.53
7:B:319:G:C6	7:B:333:G:N1	2.77	0.53
7:B:310:A:C5	7:B:330:A:N6	2.75	0.53
10:E:149:ILE:CG2	10:E:186:VAL:HG13	2.39	0.53
10:E:151:GLY:O	10:E:152:GLU:HG2	2.08	0.53
17:L:17:LYS:CG	17:L:18:ARG:H	2.06	0.53
7:B:899:A:H2'	7:B:900:A:H5'	1.90	0.53
18:M:71:LYS:HA	18:M:91:TYR:HA	1.90	0.53
12:G:97:VAL:O	12:G:97:VAL:HG12	2.07	0.53
11:F:121:PHE:HE2	11:F:165:GLY:HA3	1.74	0.53
9:D:84:LEU:O	9:D:85:ALA:CB	2.57	0.53
4:3:46:LYS:HD2	4:3:47:ALA:N	2.24	0.53
5:4:9:LYS:HG2	5:4:10:LEU:H	1.74	0.53
7:B:1049:C:C5	7:B:1050:A:N7	2.76	0.53
7:B:1220:G:N3	7:B:1221:C:C6	2.77	0.53
7:B:1231:U:O2'	7:B:1232:G:H5'	2.08	0.53
7:B:1362:C:C2'	7:B:1363:C:H5'	2.39	0.53
7:B:1455:G:H5'	19:N:60:VAL:HG21	1.90	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1561:C:H2'	7:B:1562:U:H6	1.72	0.53
7:B:1569:A:C6	7:B:1570:A:C5	2.96	0.53
7:B:1816:C:H5	8:C:62:ARG:CD	2.19	0.53
7:B:1848:A:C4	7:B:1849:G:C8	2.96	0.53
7:B:2029:G:C2'	7:B:2030:A:H5'	2.38	0.53
7:B:2306:C:OP2	7:B:2307:G:N7	2.42	0.53
7:B:2357:G:N3	7:B:2361:G:C6	2.77	0.53
7:B:2361:G:O2'	7:B:2362:C:H5'	2.09	0.53
7:B:2593:U:C6	7:B:2594:C:H5	2.27	0.53
7:B:2850:A:C5	7:B:2851:A:N7	2.77	0.53
7:B:809:G:OP2	33:B:5163:HOH:O	2.19	0.53
7:B:969:G:H2'	7:B:970:U:H6	1.74	0.53
8:C:244:VAL:CG2	8:C:245:THR:H	2.15	0.53
15:J:132:HIS:O	15:J:132:HIS:CD2	2.62	0.53
22:Q:79:ILE:HD13	22:Q:79:ILE:N	2.22	0.53
31:Z:56:ARG:NH1	31:Z:57:VAL:N	2.57	0.53
10:E:17:THR:CG2	10:E:196:VAL:HG13	2.37	0.53
16:K:113:MET:C	16:K:115:ILE:N	2.60	0.53
7:B:68:G:H2'	7:B:69:C:H6	1.74	0.53
26:U:92:VAL:HG13	26:U:93:ARG:H	1.74	0.53
8:C:134:ILE:HD13	8:C:135:PRO:CD	2.38	0.53
6:A:99:A:H2'	6:A:100:G:H5'	1.90	0.53
7:B:862:G:O5'	7:B:862:G:H8	1.92	0.53
7:B:906:U:C6	7:B:906:U:H5'	2.43	0.53
9:D:61:THR:O	9:D:64:GLU:N	2.42	0.53
9:D:90:PHE:O	9:D:91:THR:OG1	2.24	0.53
7:B:2256:G:H21	7:B:2257:U:H1'	1.73	0.53
9:D:202:ILE:O	9:D:202:ILE:CG2	2.56	0.53
7:B:2583:G:N1	7:B:2584:U:O2	2.42	0.53
7:B:1541:C:H2'	7:B:1542:U:C6	2.42	0.53
7:B:2599:G:N7	8:C:234:GLY:HA2	2.22	0.53
7:B:2183:A:H2'	7:B:2184:A:C8	2.44	0.53
22:Q:16:ILE:O	22:Q:19:GLN:N	2.41	0.53
7:B:2207:C:N3	7:B:2218:G:C2	2.77	0.53
8:C:4:LYS:HE2	8:C:5:CYS:SG	2.49	0.53
6:A:55:U:C2'	6:A:56:G:H5''	2.38	0.53
7:B:1623:G:C5	7:B:1624:U:C5	2.96	0.53
7:B:1897:G:N1	7:B:1898:U:C2	2.76	0.53
7:B:2386:A:C2	7:B:2387:U:C2	2.97	0.53
7:B:2488:G:H2'	7:B:2489:U:H6	1.74	0.53
7:B:2648:G:O5'	7:B:2648:G:H8	1.91	0.53
7:B:2671:G:C2	7:B:2672:U:C2	2.96	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2852:G:C5	7:B:2853:C:C4	2.97	0.53
7:B:565:C:C4	7:B:566:U:O4	2.61	0.53
7:B:707:G:C5'	7:B:708:G:OP2	2.56	0.53
7:B:768:G:C5	7:B:769:U:N3	2.77	0.53
7:B:797:G:C5	7:B:798:G:C8	2.97	0.53
10:E:56:GLY:O	10:E:57:LYS:HD2	2.08	0.53
13:H:27:ARG:N	13:H:31:VAL:HG23	2.23	0.53
7:B:1651:G:C5'	19:N:39:PRO:HG2	2.32	0.53
20:O:37:ALA:CB	20:O:78:VAL:HG21	2.38	0.53
2:1:14:ALA:HA	2:1:48:TYR:CE2	2.44	0.53
17:L:91:ASP:O	17:L:93:ASN:N	2.42	0.53
9:D:1:MET:CA	9:D:81:GLU:HG2	2.39	0.53
7:B:1707:G:N1	7:B:1708:C:C2	2.77	0.53
17:L:110:VAL:CB	17:L:126:ARG:HH12	2.21	0.53
17:L:112:LEU:HD21	17:L:134:ALA:HB2	1.91	0.53
7:B:928:A:H4'	30:Y:37:ARG:HH11	1.73	0.53
16:K:20:MET:O	16:K:20:MET:HG3	2.08	0.53
26:U:8:ASP:O	26:U:10:VAL:HG13	2.09	0.53
12:G:58:ALA:O	12:G:60:GLY:N	2.38	0.53
7:B:1773:A:C2	7:B:1774:C:H1'	2.44	0.53
7:B:1094:U:O2	7:B:1097:U:C5	2.60	0.53
12:G:143:VAL:HA	12:G:146:ASP:CB	2.39	0.53
31:Z:66:ILE:HB	31:Z:67:PRO:HD3	1.90	0.53
7:B:2147:A:H4'	7:B:2148:G:N7	2.24	0.53
7:B:1345:C:C4	7:B:1346:G:N7	2.77	0.53
7:B:1343:G:N2	7:B:1384:A:H2	2.07	0.53
7:B:2859:G:C2'	7:B:2860:A:H5''	2.37	0.53
7:B:269:C:C4	7:B:270:A:N6	2.76	0.53
14:I:60:VAL:HG23	14:I:66:PHE:HB3	1.91	0.53
7:B:2869:G:H2'	7:B:2870:C:O4'	2.09	0.53
7:B:1024:G:OP1	7:B:1026:G:OP1	2.27	0.53
7:B:1265:A:C1'	7:B:1267:U:C5	2.91	0.53
7:B:1639:C:H2'	7:B:1640:A:H5'	1.91	0.53
7:B:1840:G:N2	7:B:1841:U:H1'	2.24	0.53
7:B:1933:G:N2	7:B:1967:C:N3	2.56	0.53
7:B:2087:G:H3'	7:B:2087:G:C8	2.42	0.53
7:B:2267:A:H3'	7:B:2268:A:C5'	2.35	0.53
7:B:2270:A:H2'	7:B:2271:G:H5'	1.90	0.53
7:B:2279:G:H5''	7:B:2279:G:H8	1.73	0.53
7:B:2360:G:H2'	7:B:2361:G:O5'	2.08	0.53
7:B:533:G:H2'	7:B:534:U:H6	1.69	0.53
7:B:692:C:H2'	7:B:693:A:H8	1.73	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:751:A:C4	7:B:789:A:C2	2.97	0.53
7:B:979:A:C2	7:B:982:C:N3	2.76	0.53
13:H:26:ALA:N	13:H:30:LEU:HD12	2.23	0.53
15:J:132:HIS:O	15:J:133:ALA:C	2.46	0.53
22:Q:49:ARG:CG	23:R:77:PHE:CZ	2.72	0.53
7:B:104:A:C8	7:B:104:A:C3'	2.91	0.53
7:B:85:G:H5'	26:U:28:LEU:CG	2.39	0.53
25:T:68:LYS:HE2	25:T:74:ILE:O	2.08	0.53
29:X:7:ARG:HH12	29:X:56:LEU:HD22	1.73	0.53
23:R:41:ILE:HG13	23:R:43:ASN:HB2	1.90	0.53
8:C:128:THR:HG23	8:C:189:ALA:H	1.73	0.53
7:B:2204:G:O2'	7:B:2205:A:H5'	2.07	0.53
7:B:867:C:H3'	7:B:867:C:H6	1.74	0.53
13:H:79:THR:HG23	13:H:145:ASN:O	2.09	0.53
7:B:2784:U:H4'	9:D:41:ALA:C	2.28	0.53
25:T:30:ILE:HG23	25:T:32:LEU:HD11	1.90	0.53
7:B:1942:C:H3'	7:B:1943:U:H5''	1.91	0.53
7:B:1120:G:H2'	7:B:1121:C:H6	1.74	0.53
7:B:1347:A:H2'	7:B:1348:C:O4'	2.09	0.53
7:B:45:G:H5''	7:B:46:G:H5'	1.91	0.53
7:B:933:A:C8	7:B:933:A:C3'	2.91	0.53
7:B:2706:A:O5'	7:B:2706:A:H8	1.91	0.53
26:U:75:ALA:O	26:U:76:THR:HG23	2.08	0.53
11:F:78:ILE:HG23	11:F:82:TYR:HD1	1.73	0.53
6:A:39:A:C2	6:A:40:U:N3	2.76	0.53
7:B:818:G:N1	7:B:1188:U:OP2	2.29	0.53
7:B:1232:G:C4	7:B:1233:C:C5	2.96	0.53
7:B:131:A:H8	7:B:131:A:H5''	1.74	0.53
7:B:1557:C:C5	7:B:1558:C:H2'	2.43	0.53
7:B:2003:A:H2'	7:B:2004:G:O5'	2.09	0.53
7:B:2438:U:C2'	7:B:2439:A:H5''	2.38	0.53
7:B:2503:A:H2'	7:B:2503:A:N3	2.24	0.53
7:B:2737:G:C2	7:B:2768:U:N3	2.76	0.53
7:B:2865:U:C2	7:B:2866:U:C5	2.97	0.53
7:B:396:G:N1	7:B:397:U:C2	2.77	0.53
7:B:682:G:H2'	7:B:683:U:H6	1.74	0.53
7:B:947:A:O5'	7:B:947:A:H8	1.91	0.53
8:C:158:GLY:N	8:C:197:ALA:HB2	2.24	0.53
6:A:57:A:N3	11:F:25:MET:HG2	2.24	0.53
15:J:113:PRO:O	15:J:115:GLY:N	2.41	0.53
15:J:13:ARG:HG2	15:J:50:THR:HG23	1.91	0.53
7:B:2496:C:OP1	18:M:81:ARG:CB	2.57	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:N:17:ARG:O	19:N:20:MET:N	2.41	0.53
20:O:34:HIS:HA	20:O:53:THR:HB	1.91	0.53
21:P:1:SER:CB	21:P:5:LYS:HG2	2.39	0.53
7:B:335:C:C6	7:B:335:C:H5'	2.44	0.53
7:B:108:G:N1	7:B:109:C:C2	2.77	0.53
7:B:64:A:H2	7:B:65:U:H3	1.55	0.53
29:X:25:GLN:NE2	29:X:46:VAL:HG11	2.23	0.53
7:B:2641:G:H8	7:B:2641:G:C5'	2.22	0.53
17:L:79:LEU:HD11	17:L:112:LEU:CD2	2.39	0.53
7:B:905:A:C2'	7:B:906:U:H5''	2.38	0.53
7:B:1184:U:C2	7:B:1185:G:N7	2.77	0.53
9:D:68:PHE:CB	9:D:90:PHE:CE2	2.92	0.53
7:B:358:U:C2	7:B:359:G:C8	2.96	0.53
26:U:24:VAL:O	26:U:25:LYS:HD2	2.09	0.53
7:B:1057:A:C2'	7:B:1058:U:H5'	2.38	0.53
7:B:1914:C:H2'	7:B:1915:U:H6	1.72	0.53
7:B:2327:A:H8	7:B:2327:A:H5'	1.74	0.53
16:K:12:ASP:N	16:K:85:VAL:HG22	2.23	0.53
7:B:181:A:H1'	7:B:435:C:C5'	2.38	0.53
7:B:1736:U:H3'	7:B:1737:G:C8	2.43	0.53
6:A:90:C:O2'	6:A:91:C:H5'	2.09	0.53
5:4:2:LYS:HA	5:4:36:ARG:O	2.08	0.53
6:A:6:G:H2'	6:A:7:G:C8	2.44	0.53
7:B:1020:A:C2	7:B:1141:U:C2	2.97	0.53
7:B:1025:G:N7	7:B:1135:C:C1'	2.72	0.53
7:B:1813:G:H8	7:B:1813:G:O5'	1.91	0.53
7:B:194:G:C5	7:B:195:A:N7	2.77	0.53
7:B:2211:A:OP2	7:B:2211:A:H4'	2.09	0.53
7:B:2539:C:C5	7:B:2540:C:H5	2.26	0.53
7:B:593:U:H2'	7:B:594:U:C6	2.43	0.53
7:B:825:A:C6	7:B:826:U:C4	2.97	0.53
7:B:825:A:H5''	7:B:825:A:C8	2.44	0.53
15:J:20:ALA:HB2	15:J:56:VAL:CG1	2.39	0.53
15:J:98:GLU:O	15:J:102:GLU:CG	2.53	0.53
19:N:17:ARG:O	19:N:18:GLN:C	2.47	0.53
20:O:92:PHE:CD1	20:O:117:PHE:HB2	2.44	0.53
6:A:47:C:C5'	20:O:97:PHE:HZ	2.07	0.53
24:S:21:ALA:O	24:S:74:ILE:CD1	2.57	0.53
2:1:37:LYS:HB2	7:B:2344:U:C2'	2.39	0.53
10:E:134:LEU:HD23	10:E:135:ALA:N	2.24	0.53
10:E:193:VAL:C	10:E:195:GLN:H	2.13	0.53
23:R:65:ALA:H	23:R:100:GLY:CA	2.22	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:666:A:C5	7:B:667:U:C5	2.91	0.53
7:B:2239:G:O5'	7:B:2239:G:H8	1.92	0.53
17:L:78:ARG:HA	17:L:111:ILE:HD11	1.90	0.53
6:A:99:A:N3	6:A:100:G:C8	2.77	0.53
7:B:870:U:H2'	7:B:870:U:O2	2.08	0.53
7:B:1317:G:H2'	7:B:1318:U:O4'	2.09	0.53
7:B:1340:U:HO2'	7:B:1341:G:P	2.31	0.53
11:F:6:TYR:CD2	11:F:6:TYR:N	2.77	0.53
7:B:222:A:C8	7:B:224:U:C6	2.96	0.53
7:B:2102:G:C2	7:B:2188:U:C2	2.97	0.53
4:3:38:LYS:HZ1	7:B:2350:C:H5	1.57	0.53
20:O:108:ASP:O	20:O:112:GLU:HG3	2.08	0.53
7:B:1026:G:O4'	7:B:1134:A:C2	2.62	0.53
7:B:1000:A:C5	7:B:1155:A:C5	2.97	0.53
7:B:1233:C:C2	7:B:1234:U:C5	2.97	0.53
7:B:126:A:C6	7:B:127:A:N1	2.77	0.53
7:B:1354:A:H2'	7:B:1355:G:O4'	2.09	0.53
7:B:1369:G:H1'	7:B:1809:A:N1	2.23	0.53
7:B:1564:C:N3	7:B:1565:C:N4	2.57	0.53
7:B:197:A:C6	7:B:198:C:C2	2.97	0.53
7:B:2200:C:H3'	7:B:2200:C:C6	2.44	0.53
7:B:2393:U:H2'	7:B:2394:C:O4'	2.09	0.53
7:B:2682:A:N3	7:B:2682:A:H2'	2.23	0.53
7:B:1452:G:C4	7:B:2702:G:C6	2.97	0.53
7:B:2708:G:O2'	7:B:2709:G:H5'	2.07	0.53
7:B:2719:G:H8	7:B:2719:G:H5''	1.73	0.53
7:B:2761:A:C5	7:B:2762:C:H5	2.26	0.53
7:B:758:C:O2	7:B:1981:A:C2	2.62	0.53
7:B:775:G:H5''	7:B:777:G:H1'	1.90	0.53
7:B:798:G:H2'	7:B:798:G:N3	2.24	0.53
7:B:841:G:C2	7:B:938:G:C6	2.97	0.53
7:B:941:A:H2	7:B:1189:A:H2	1.55	0.53
8:C:156:SER:CB	8:C:195:GLY:HA3	2.39	0.53
9:D:146:ILE:HD13	9:D:155:VAL:HG22	1.90	0.53
12:G:162:ARG:HG3	12:G:166:GLU:CB	2.39	0.53
15:J:64:VAL:HG12	15:J:68:LYS:HB2	1.90	0.53
16:K:2:ILE:HA	16:K:33:ALA:H	1.74	0.53
16:K:71:ARG:CB	16:K:72:PRO:CD	2.75	0.53
20:O:72:ALA:O	20:O:76:LYS:NZ	2.42	0.53
7:B:857:G:H4'	28:W:71:LYS:NZ	2.23	0.53
7:B:398:C:OP1	31:Z:49:ARG:HD2	2.08	0.53
7:B:301:G:C4	7:B:317:G:N1	2.77	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:483:A:H5'	26:U:45:GLN:HB2	1.90	0.53
29:X:57:LEU:HG	29:X:58:ASN:N	2.23	0.53
31:Z:59:ARG:HG3	31:Z:62:LYS:N	2.24	0.53
7:B:260:G:H21	7:B:609:A:H1'	1.74	0.53
7:B:609:A:C6	7:B:610:C:O2	2.62	0.53
7:B:871:U:O2'	7:B:872:U:H5''	2.09	0.53
30:Y:2:LYS:O	30:Y:38:GLU:O	2.27	0.53
30:Y:43:ILE:C	30:Y:43:ILE:HD13	2.30	0.53
7:B:443:A:OP1	10:E:40:ARG:CA	2.49	0.53
13:H:94:ILE:HG22	13:H:122:LEU:HG	1.90	0.53
7:B:1339:G:H5''	25:T:19:LYS:CG	2.39	0.53
7:B:137:U:N3	7:B:138:U:C2	2.77	0.53
12:G:145:ALA:C	12:G:147:LEU:N	2.60	0.53
7:B:442:G:C4	7:B:444:C:H5	2.27	0.53
7:B:1465:G:H2'	7:B:1466:U:O4'	2.09	0.53
21:P:37:LYS:O	21:P:38:ARG:HB2	2.09	0.53
3:2:18:PHE:CE2	3:2:45:SER:HA	2.44	0.52
3:2:27:GLY:O	3:2:28:ARG:C	2.46	0.52
7:B:1008:A:O5'	7:B:1008:A:H8	1.93	0.52
7:B:1458:U:O2'	7:B:1459:G:H5''	2.09	0.52
7:B:2061:G:N7	7:B:2501:C:H4'	2.24	0.52
7:B:1421:G:H1'	7:B:2211:A:C6	2.44	0.52
7:B:2086:U:N3	7:B:2234:G:C6	2.77	0.52
7:B:2461:A:C4	7:B:2462:C:C6	2.97	0.52
7:B:2588:G:C6	7:B:2589:A:N7	2.76	0.52
7:B:2648:G:C4	7:B:2673:G:C2	2.96	0.52
7:B:2692:G:H1'	7:B:2847:U:HO2'	1.74	0.52
7:B:2736:A:C2	7:B:2769:U:C2	2.96	0.52
7:B:517:C:C2'	7:B:518:G:O5'	2.57	0.52
7:B:523:C:H3'	7:B:523:C:C6	2.44	0.52
7:B:689:A:C2	7:B:690:G:C5	2.97	0.52
7:B:763:G:C3'	7:B:763:G:C8	2.91	0.52
7:B:799:G:H3'	7:B:800:A:H2'	1.89	0.52
7:B:970:U:H6	7:B:970:U:O5'	1.91	0.52
7:B:976:G:H2'	7:B:977:G:C8	2.39	0.52
8:C:254:LYS:NZ	8:C:254:LYS:H	2.06	0.52
8:C:63:ILE:C	8:C:64:VAL:CG2	2.77	0.52
20:O:98:GLN:O	20:O:103:VAL:HG21	2.10	0.52
20:O:25:ARG:HH21	20:O:40:ILE:HD11	1.74	0.52
22:Q:27:ARG:O	22:Q:27:ARG:HG2	2.09	0.52
22:Q:52:ARG:O	22:Q:55:GLN:HB2	2.07	0.52
22:Q:88:GLU:C	23:R:53:PHE:HD1	2.12	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:88:GLU:HA	23:R:53:PHE:HD1	1.73	0.52
23:R:85:LYS:O	23:R:86:GLN:OE1	2.27	0.52
28:W:27:GLY:O	28:W:28:GLU:HB3	2.09	0.52
7:B:2345:G:C5	7:B:2381:A:C2	2.96	0.52
7:B:318:C:H2'	7:B:319:G:C8	2.44	0.52
7:B:476:G:C2	7:B:479:A:C8	2.96	0.52
7:B:478:A:O5'	7:B:478:A:H8	1.93	0.52
10:E:115:GLN:HE22	17:L:13:LYS:HD2	1.74	0.52
10:E:9:GLN:C	10:E:11:ALA:H	2.11	0.52
16:K:113:MET:O	16:K:115:ILE:N	2.43	0.52
7:B:85:G:H1	7:B:97:C:N4	2.06	0.52
23:R:39:LEU:HB2	23:R:61:ALA:CB	2.39	0.52
23:R:64:VAL:HG22	23:R:65:ALA:O	2.09	0.52
8:C:167:ASP:CB	8:C:172:THR:HG23	2.39	0.52
7:B:1335:C:H3'	7:B:1335:C:H6	1.75	0.52
15:J:89:PHE:CD2	15:J:89:PHE:N	2.76	0.52
7:B:422:A:C2	7:B:423:A:C4	2.97	0.52
7:B:2508:G:C6	7:B:2582:G:O6	2.62	0.52
10:E:124:PHE:HZ	10:E:137:LYS:CG	2.22	0.52
7:B:269:C:H2'	7:B:270:A:H8	1.74	0.52
14:I:61:TYR:HB2	14:I:63:ASP:H	1.74	0.52
13:H:146:VAL:HG12	13:H:147:VAL:H	1.74	0.52
3:2:17:GLY:O	3:2:19:ARG:N	2.42	0.52
6:A:45:A:C4	6:A:46:A:C8	2.97	0.52
7:B:819:A:N7	7:B:1189:A:C5	2.76	0.52
7:B:1196:C:C2	7:B:1197:G:N7	2.76	0.52
7:B:1452:G:N2	7:B:2702:G:C4	2.77	0.52
7:B:2051:A:N6	7:B:2614:A:N7	2.57	0.52
7:B:247:G:H3'	7:B:247:G:C8	2.45	0.52
7:B:2519:U:N1	7:B:2542:A:N6	2.57	0.52
7:B:2623:G:H8	7:B:2623:G:H5''	1.74	0.52
7:B:2695:U:C6	7:B:2695:U:C3'	2.92	0.52
7:B:2740:A:C2	7:B:2741:A:C4	2.98	0.52
7:B:2753:A:C2	7:B:2754:U:C2	2.97	0.52
7:B:995:C:O2	15:J:3:THR:HG23	2.08	0.52
8:C:62:ARG:O	8:C:62:ARG:HD3	2.08	0.52
9:D:146:ILE:HG12	9:D:155:VAL:HG13	1.90	0.52
7:B:2748:A:H4'	12:G:65:GLY:C	2.30	0.52
18:M:36:VAL:HG12	18:M:125:PRO:HD3	1.90	0.52
7:B:2483:C:O2	18:M:55:ARG:NH2	2.42	0.52
20:O:39:VAL:HG13	20:O:48:LEU:HB2	1.91	0.52
22:Q:12:ARG:NH1	22:Q:12:ARG:CG	2.68	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:74:SER:O	22:Q:78:PHE:CB	2.57	0.52
7:B:305:C:H2'	7:B:306:U:H5'	1.92	0.52
25:T:9:LYS:NZ	29:X:22:LEU:HD13	2.24	0.52
2:1:10:LEU:HB2	2:1:24:LYS:HA	1.91	0.52
7:B:428:A:H2'	7:B:429:A:H8	1.73	0.52
7:B:617:G:H2'	7:B:618:G:H8	1.74	0.52
18:M:5:LYS:HZ3	18:M:8:LYS:CE	2.14	0.52
9:D:65:ALA:C	9:D:67:HIS:N	2.62	0.52
25:T:23:ALA:HB3	25:T:24:MET:SD	2.49	0.52
7:B:1054:A:H1'	7:B:1106:G:N2	2.24	0.52
26:U:34:ILE:O	26:U:35:VAL:HB	2.08	0.52
7:B:361:G:H2'	7:B:362:A:H8	1.75	0.52
7:B:2196:C:O2'	7:B:2197:U:H5'	2.09	0.52
20:O:16:ARG:HE	20:O:16:ARG:HA	1.72	0.52
7:B:2294:G:N2	7:B:2295:C:H1'	2.25	0.52
11:F:76:PHE:CD1	11:F:78:ILE:HD12	2.44	0.52
7:B:295:G:C2	7:B:296:U:C5	2.97	0.52
3:2:21:ARG:NH2	7:B:466:A:C5'	2.65	0.52
3:2:21:ARG:HE	3:2:30:VAL:HG21	1.74	0.52
6:A:49:C:OP1	20:O:101:GLY:CA	2.48	0.52
7:B:1375:U:C5	7:B:1376:C:H5	2.28	0.52
7:B:1570:A:C6	7:B:1571:A:C5	2.97	0.52
7:B:2358:A:N6	7:B:2428:G:H22	2.07	0.52
7:B:2464:G:C4	7:B:2487:G:C2	2.97	0.52
7:B:2589:A:C2	7:B:2590:A:C8	2.98	0.52
7:B:2645:G:C3'	7:B:2646:C:H5'	2.27	0.52
7:B:2646:C:N4	7:B:2675:A:N1	2.57	0.52
7:B:2675:A:H2'	7:B:2676:C:H5'	1.91	0.52
7:B:2898:U:O2'	15:J:137:PRO:HB3	2.10	0.52
7:B:470:A:C6	7:B:471:A:C6	2.97	0.52
7:B:747:U:O2	7:B:2014:A:H1'	2.09	0.52
7:B:770:G:C4	7:B:771:G:C8	2.97	0.52
7:B:970:U:C2	7:B:971:G:C8	2.97	0.52
7:B:978:G:O6	7:B:986:C:N4	2.42	0.52
12:G:108:PHE:CZ	12:G:151:ARG:HG3	2.33	0.52
18:M:67:VAL:HG21	18:M:100:LYS:HB3	1.90	0.52
10:E:2:GLU:HG3	10:E:16:GLU:CA	2.39	0.52
7:B:657:U:C2'	7:B:658:U:H6	2.16	0.52
23:R:66:HIS:CA	23:R:98:ILE:HA	2.28	0.52
7:B:622:G:C6	7:B:623:C:C4	2.97	0.52
7:B:2137:U:C3'	7:B:2137:U:C6	2.92	0.52
7:B:1965:C:N4	7:B:1966:A:C6	2.77	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2829:A:C2	7:B:2830:C:C2	2.97	0.52
7:B:1275:A:C2	7:B:1645:G:N2	2.77	0.52
7:B:1854:A:C2'	7:B:1855:U:H5'	2.40	0.52
7:B:1889:A:O5'	7:B:1889:A:H8	1.93	0.52
7:B:1930:G:H2'	7:B:1968:G:O6	2.09	0.52
7:B:2360:G:C5'	17:L:58:TYR:HE1	2.22	0.52
7:B:2060:A:C2	7:B:2502:G:C4	2.97	0.52
7:B:2588:G:C2'	7:B:2589:A:H5'	2.40	0.52
7:B:2722:G:O2'	7:B:2723:C:H5'	2.10	0.52
7:B:2823:A:O5'	7:B:2823:A:H8	1.92	0.52
7:B:588:U:OP1	17:L:29:LYS:HG3	2.09	0.52
7:B:592:A:C5	7:B:593:U:C5	2.97	0.52
8:C:30:ALA:O	8:C:32:LEU:N	2.39	0.52
9:D:122:VAL:HA	9:D:128:ARG:HE	1.70	0.52
12:G:163:TYR:CD2	12:G:166:GLU:HG3	2.45	0.52
15:J:44:TYR:OH	15:J:50:THR:O	2.25	0.52
22:Q:44:TYR:CE1	22:Q:51:GLN:NE2	2.78	0.52
22:Q:64:ILE:CG1	22:Q:95:ALA:CB	2.85	0.52
27:V:82:TYR:O	27:V:82:TYR:CG	2.61	0.52
31:Z:5:ILE:O	31:Z:6:HIS:C	2.48	0.52
9:D:77:ARG:NH1	9:D:77:ARG:CB	2.67	0.52
23:R:66:HIS:HA	23:R:98:ILE:CA	2.28	0.52
24:S:110:ARG:N	24:S:110:ARG:HD2	2.24	0.52
17:L:110:VAL:HG23	17:L:126:ARG:NH1	2.24	0.52
12:G:125:PRO:HD3	12:G:131:VAL:HG12	1.92	0.52
16:K:80:ASP:N	16:K:80:ASP:OD1	2.42	0.52
7:B:1054:A:H2'	7:B:1055:G:C1'	2.40	0.52
7:B:226:A:C2'	7:B:227:A:H5'	2.40	0.52
26:U:3:LYS:O	26:U:4:ILE:CG1	2.56	0.52
7:B:1947:C:C2	7:B:1960:A:H2	2.28	0.52
7:B:215:G:O3'	7:B:216:A:H4'	2.10	0.52
27:V:24:ASN:HB3	27:V:44:HIS:CB	2.38	0.52
7:B:33:C:O5'	7:B:33:C:H2'	2.09	0.52
5:4:5:ALA:HB2	7:B:2465:C:H4'	1.92	0.52
7:B:987:C:O2'	7:B:1000:A:N3	2.40	0.52
7:B:1008:A:H4'	7:B:1009:A:OP1	2.09	0.52
7:B:1213:A:C5	7:B:1214:A:N7	2.77	0.52
7:B:579:G:N2	7:B:1262:A:C4	2.78	0.52
7:B:131:A:C8	7:B:131:A:H5''	2.45	0.52
7:B:1557:C:H5	7:B:1558:C:H2'	1.75	0.52
7:B:1797:G:C2	7:B:1823:G:C4	2.97	0.52
7:B:1808:A:H3'	7:B:1809:A:C8	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1831:G:C4	7:B:1832:C:C5	2.97	0.52
7:B:1967:C:C2'	7:B:1968:G:H5'	2.34	0.52
7:B:19:A:C4	7:B:20:C:C5	2.98	0.52
7:B:2010:G:O2'	7:B:2011:U:H5'	2.09	0.52
7:B:2016:U:C2	7:B:2017:U:C6	2.97	0.52
7:B:2051:A:C2	7:B:2614:A:C6	2.98	0.52
7:B:2358:A:O2'	7:B:2359:C:H5'	2.09	0.52
7:B:197:A:H62	7:B:2430:A:H2'	1.74	0.52
7:B:2741:A:H2'	7:B:2742:G:C8	2.45	0.52
7:B:470:A:C2	7:B:471:A:C4	2.98	0.52
7:B:834:G:C2	7:B:835:C:C2	2.97	0.52
7:B:973:A:C8	7:B:1188:U:N3	2.78	0.52
8:C:32:LEU:HD23	8:C:61:TYR:CE1	2.45	0.52
9:D:174:SER:O	9:D:175:LEU:CB	2.58	0.52
10:E:66:GLY:O	10:E:67:ARG:C	2.46	0.52
19:N:10:LEU:CB	19:N:17:ARG:HH22	2.21	0.52
21:P:26:GLU:HG2	21:P:47:ILE:O	2.10	0.52
28:W:64:GLY:O	28:W:65:LYS:HB3	2.09	0.52
31:Z:3:LYS:HZ1	31:Z:29:GLY:HA3	1.75	0.52
7:B:2289:G:C6	7:B:2290:G:N7	2.78	0.52
7:B:644:A:N6	7:B:2369:A:H1'	2.24	0.52
10:E:123:LYS:CE	10:E:157:LEU:HG	2.39	0.52
10:E:1:MET:HA	10:E:18:THR:HG21	1.92	0.52
7:B:79:C:C2'	7:B:346:A:H8	2.23	0.52
7:B:68:G:N2	7:B:74:A:O5'	2.43	0.52
7:B:2636:C:OP1	9:D:79:LEU:HD12	2.10	0.52
23:R:20:VAL:HG13	23:R:97:LYS:HA	1.91	0.52
7:B:2082:A:C6	7:B:2239:G:C4	2.97	0.52
6:A:12:C:H41	28:W:50:VAL:CG1	2.22	0.52
7:B:631:A:O2'	17:L:66:PHE:HB3	2.10	0.52
7:B:1503:A:C5	7:B:1504:A:C8	2.97	0.52
7:B:2407:A:C6	7:B:2408:U:O4	2.62	0.52
7:B:2584:U:C6	7:B:2584:U:C3'	2.92	0.52
7:B:2097:A:C6	7:B:2098:U:C4	2.97	0.52
7:B:2631:G:C6	7:B:2632:A:C8	2.98	0.52
6:A:47:C:OP2	6:A:47:C:H3'	2.09	0.52
7:B:117:G:C6	7:B:119:A:C6	2.98	0.52
7:B:1254:A:H5''	7:B:1255:U:H5''	1.92	0.52
7:B:1570:A:N6	7:B:1571:A:C6	2.78	0.52
7:B:749:A:C6	7:B:1618:A:N1	2.76	0.52
7:B:1854:A:N6	7:B:1888:G:H1'	2.25	0.52
7:B:1930:G:H2'	7:B:1968:G:C6	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2265:U:C5	7:B:2266:A:C6	2.98	0.52
7:B:2031:A:N1	7:B:2498:C:C1'	2.73	0.52
7:B:2727:A:C6	7:B:2728:U:C4	2.97	0.52
7:B:2738:A:C8	7:B:2738:A:H3'	2.45	0.52
7:B:2750:A:H4'	7:B:2751:G:OP1	2.04	0.52
7:B:466:A:C2	7:B:796:C:O4'	2.62	0.52
7:B:531:C:H4'	7:B:531:C:OP1	2.10	0.52
7:B:569:U:H2'	7:B:570:G:O4'	2.09	0.52
8:C:53:ILE:HG23	8:C:218:THR:H	1.75	0.52
7:B:1824:G:OP1	8:C:52:HIS:NE2	2.42	0.52
7:B:1817:G:OP1	8:C:62:ARG:NH2	2.40	0.52
9:D:152:PRO:O	9:D:153:GLY:C	2.47	0.52
10:E:79:ARG:O	10:E:80:SER:CB	2.58	0.52
12:G:87:GLN:O	12:G:161:VAL:HG23	2.09	0.52
19:N:83:LEU:HD11	19:N:115:LEU:HD12	1.90	0.52
19:N:87:PHE:C	19:N:89:SER:H	2.12	0.52
20:O:41:ALA:H	20:O:46:GLU:CG	2.22	0.52
21:P:26:GLU:HA	21:P:47:ILE:CA	2.39	0.52
1:O:21:LEU:HD13	24:S:23:LEU:HD23	1.90	0.52
28:W:10:ARG:CA	28:W:10:ARG:HH11	2.20	0.52
18:M:40:ARG:NH2	18:M:92:TRP:CH2	2.77	0.52
12:G:93:TYR:HD1	12:G:93:TYR:N	2.08	0.52
17:L:142:ILE:O	17:L:142:ILE:HG13	2.09	0.52
7:B:1863:G:H2'	7:B:1864:U:O4'	2.09	0.52
7:B:223:A:N7	7:B:422:A:C8	2.77	0.52
17:L:98:ALA:HB3	17:L:101:ILE:CG1	2.40	0.52
7:B:1437:C:O2'	7:B:1516:G:H4'	2.10	0.52
11:F:71:LYS:HG2	11:F:72:SER:N	2.24	0.52
7:B:2053:G:H2'	7:B:2054:A:O4'	2.09	0.52
19:N:121:LYS:HD2	19:N:122:ALA:N	2.25	0.52
7:B:1010:A:H3'	7:B:1010:A:H8	1.74	0.52
7:B:1350:C:N4	7:B:1382:G:C6	2.78	0.52
7:B:1783:A:H5''	7:B:1784:A:OP2	2.09	0.52
7:B:2444:G:OP2	10:E:63:LYS:NZ	2.43	0.52
7:B:2669:G:H2'	7:B:2670:A:C8	2.44	0.52
7:B:2701:U:H3'	7:B:2701:U:H6	1.73	0.52
7:B:2770:G:C4	7:B:2771:C:H5	2.27	0.52
7:B:2813:A:N6	7:B:2814:A:N6	2.58	0.52
7:B:372:G:H8	31:Z:54:GLY:CA	2.23	0.52
7:B:401:A:H2'	7:B:402:A:C8	2.45	0.52
7:B:571:U:C4	7:B:2030:A:C2	2.98	0.52
7:B:812:C:H5'	17:L:32:GLY:O	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:161:VAL:HG12	8:C:173:LEU:HD21	1.90	0.52
8:C:177:SER:C	8:C:179:GLU:H	2.13	0.52
8:C:261:ARG:N	8:C:261:ARG:HD3	2.25	0.52
24:S:65:ASP:OD1	24:S:65:ASP:N	2.42	0.52
28:W:39:GLN:HG2	28:W:66:VAL:O	2.09	0.52
7:B:2380:C:O2'	7:B:2381:A:H5'	2.09	0.52
7:B:597:G:O2'	17:L:21:ARG:HG3	2.10	0.52
7:B:65:U:P	25:T:76:ARG:HB3	2.50	0.52
29:X:25:GLN:HE22	29:X:46:VAL:HG11	1.74	0.52
7:B:2627:G:H2'	7:B:2628:C:C6	2.44	0.52
8:C:135:PRO:O	8:C:165:ALA:O	2.27	0.52
7:B:1720:U:H2'	7:B:1721:G:C5'	2.39	0.52
31:Z:59:ARG:HG3	31:Z:62:LYS:CB	2.39	0.52
7:B:909:A:P	33:B:5180:HOH:O	2.67	0.52
12:G:88:LEU:HD12	12:G:88:LEU:N	2.24	0.52
12:G:26:LYS:O	12:G:78:VAL:HG21	2.09	0.52
25:T:58:VAL:HG12	25:T:59:ASN:H	1.74	0.52
16:K:66:LYS:CG	16:K:80:ASP:HA	2.39	0.52
18:M:77:PRO:CG	18:M:86:LYS:HZ3	2.21	0.52
7:B:2259:U:C2	7:B:2260:C:C6	2.98	0.52
7:B:136:G:OP2	7:B:136:G:C8	2.63	0.52
7:B:370:G:H8	7:B:370:G:O5'	1.92	0.52
7:B:721:A:H2'	7:B:722:A:C8	2.45	0.52
7:B:2189:U:C3'	7:B:2189:U:C6	2.93	0.52
7:B:487:C:C2'	7:B:488:G:H5'	2.40	0.52
6:A:66:A:N3	6:A:108:A:C6	2.78	0.52
15:J:63:ALA:HA	15:J:69:ARG:NH1	2.23	0.52
10:E:97:ASN:OD1	10:E:97:ASN:N	2.43	0.52
5:4:24:ARG:HG2	5:4:36:ARG:O	2.10	0.52
7:B:1364:G:C1'	7:B:1368:G:N2	2.70	0.52
7:B:1614:A:O5'	7:B:1614:A:H8	1.92	0.52
7:B:1823:G:H3'	7:B:1823:G:C8	2.44	0.52
7:B:1855:U:C5	7:B:1856:U:C4	2.97	0.52
7:B:2007:U:H5''	7:B:2007:U:C6	2.45	0.52
7:B:2315:G:H5'	11:F:156:THR:HG21	1.91	0.52
7:B:792:A:C5	7:B:2440:C:C5	2.98	0.52
7:B:2574:G:N3	9:D:147:GLY:HA3	2.25	0.52
7:B:2721:A:H2'	7:B:2722:G:O4'	2.10	0.52
7:B:2854:G:O2'	7:B:2855:C:H5'	2.09	0.52
7:B:395:U:H4'	31:Z:11:GLU:OE2	2.10	0.52
7:B:400:G:H3'	7:B:400:G:C8	2.45	0.52
7:B:794:A:H2'	7:B:795:C:H5'	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:796:C:H5	33:B:5153:HOH:O	1.92	0.52
7:B:673:C:C2	7:B:808:G:N2	2.78	0.52
7:B:831:G:O6	7:B:832:U:N3	2.41	0.52
7:B:830:G:H4'	7:B:831:G:OP2	2.09	0.52
7:B:911:A:C6	18:M:13:HIS:CD2	2.97	0.52
7:B:1818:U:OP1	8:C:86:ARG:HG3	2.10	0.52
15:J:77:HIS:HB2	15:J:85:LYS:CE	2.40	0.52
7:B:588:U:H5''	17:L:29:LYS:HD2	1.91	0.52
19:N:87:PHE:HB3	19:N:94:TYR:CZ	2.44	0.52
20:O:31:THR:HG22	20:O:33:ARG:H	1.74	0.52
7:B:311:A:O5'	7:B:332:A:C2	2.63	0.52
7:B:358:U:H2'	7:B:359:G:O4'	2.10	0.52
7:B:155:A:O5'	7:B:155:A:H8	1.92	0.52
11:F:3:LEU:HA	11:F:6:TYR:CD2	2.45	0.52
7:B:663:G:C6	7:B:664:G:C5	2.98	0.52
13:H:97:ARG:O	13:H:100:ALA:HB3	2.10	0.52
7:B:2341:G:C5	7:B:2342:C:C5	2.98	0.52
7:B:1418:G:H1'	7:B:1581:G:N2	2.25	0.52
7:B:2100:G:C2	7:B:2101:A:C4	2.98	0.52
7:B:1344:U:H5'	7:B:1345:C:C5	2.45	0.52
13:H:68:ARG:HG2	13:H:71:LYS:HD3	1.92	0.52
6:A:42:C:O2	6:A:42:C:C2'	2.58	0.52
7:B:1263:U:N3	7:B:1264:A:N1	2.57	0.52
7:B:1353:A:C5	7:B:1378:A:C6	2.98	0.52
7:B:1798:U:C4	7:B:1819:A:C2	2.98	0.52
7:B:2071:A:C5	7:B:2072:C:C5	2.98	0.52
7:B:2386:A:H2'	7:B:2387:U:C6	2.44	0.52
7:B:2645:G:H8	7:B:2645:G:H5''	1.74	0.52
7:B:464:U:H1'	7:B:686:U:H5	1.74	0.52
7:B:689:A:C2	7:B:779:U:H4'	2.45	0.52
7:B:735:A:C8	7:B:736:C:C5	2.98	0.52
7:B:729:G:H5''	7:B:763:G:OP2	2.10	0.52
7:B:770:G:H2'	7:B:771:G:O4'	2.10	0.52
8:C:161:VAL:N	8:C:193:GLU:CD	2.62	0.52
15:J:19:ASP:O	15:J:20:ALA:CB	2.58	0.52
15:J:34:ARG:O	15:J:38:GLY:N	2.43	0.52
19:N:73:ASN:O	19:N:74:GLU:C	2.48	0.52
22:Q:61:ILE:HA	22:Q:64:ILE:HG13	1.92	0.52
24:S:68:ASP:C	24:S:69:LEU:HD22	2.30	0.52
29:X:17:GLU:HA	29:X:21:LEU:HB3	1.90	0.52
23:R:5:PHE:HB3	23:R:12:HIS:ND1	2.25	0.52
23:R:36:ALA:O	23:R:37:GLU:HB3	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:L:126:ARG:HD2	17:L:127:VAL:H	1.71	0.52
18:M:9:PHE:CD1	18:M:10:ARG:N	2.78	0.52
18:M:16:ARG:HB3	18:M:18:ARG:HH21	1.74	0.52
18:M:95:LEU:H	18:M:95:LEU:HD23	1.74	0.52
7:B:141:G:H3'	7:B:142:A:C1'	2.40	0.52
7:B:1087:G:N7	7:B:1089:A:N3	2.57	0.52
19:N:71:ARG:O	19:N:72:ASP:CB	2.58	0.52
7:B:1863:G:C2	7:B:1880:U:O2	2.62	0.52
26:U:3:LYS:O	26:U:4:ILE:CB	2.57	0.52
13:H:61:VAL:HG21	13:H:135:HIS:ND1	2.25	0.52
16:K:86:LEU:C	16:K:87:LEU:HD23	2.30	0.52
7:B:1694:C:C5'	7:B:1694:C:H6	2.23	0.52
14:I:94:LYS:HG2	14:I:94:LYS:O	2.09	0.52
4:3:30:HIS:O	4:3:31:ILE:HG22	2.10	0.52
4:3:4:LYS:HZ1	4:3:60:CYS:N	2.08	0.52
7:B:1139:G:C8	7:B:1139:G:C5'	2.91	0.52
7:B:1420:A:C2	7:B:2211:A:C8	2.94	0.52
7:B:1807:G:C8	7:B:1807:G:H3'	2.45	0.52
7:B:194:G:C2'	7:B:194:G:N3	2.71	0.52
7:B:1988:G:C8	7:B:1988:G:H3'	2.45	0.52
7:B:2050:C:N4	7:B:2051:A:N1	2.58	0.52
7:B:2675:A:C6	7:B:2676:C:C2	2.98	0.52
7:B:2849:U:H4'	7:B:2850:A:C5'	2.39	0.52
7:B:571:U:C4	7:B:575:A:C6	2.98	0.52
7:B:794:A:O2'	7:B:795:C:H5'	2.10	0.52
7:B:1791:A:P	8:C:211:ARG:HE	2.33	0.52
7:B:2593:U:O4	8:C:235:GLU:OE2	2.27	0.52
15:J:112:GLY:HA2	15:J:116:ARG:NH2	2.25	0.52
15:J:54:ILE:HG22	15:J:55:ILE:N	2.24	0.52
15:J:72:LYS:HE3	15:J:74:TYR:OH	2.10	0.52
7:B:372:G:C5	31:Z:57:VAL:HG21	2.45	0.52
10:E:194:LYS:NZ	10:E:194:LYS:HB2	2.25	0.52
7:B:109:C:H2'	7:B:110:G:C8	2.45	0.52
29:X:20:ASN:N	29:X:20:ASN:HD22	2.06	0.52
22:Q:72:GLY:O	22:Q:73:ILE:O	2.28	0.52
7:B:1717:A:N6	7:B:1743:G:H1'	2.25	0.52
6:A:11:C:O2'	6:A:12:C:H5'	2.09	0.52
9:D:40:LEU:O	9:D:41:ALA:HB3	2.10	0.52
9:D:59:ARG:HD2	9:D:60:VAL:CG2	2.33	0.52
7:B:2633:G:H1'	9:D:62:LYS:HG3	1.90	0.52
7:B:1336:A:N3	7:B:1336:A:H2'	2.25	0.52
14:I:18:ASN:N	14:I:19:PRO:CD	2.73	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:F:97:GLU:HA	11:F:100:GLU:OE1	2.10	0.52
7:B:2144:G:H3'	7:B:2145:C:C5'	2.40	0.52
10:E:175:ILE:HG23	10:E:176:ASP:N	2.25	0.52
9:D:20:VAL:O	9:D:22:ILE:N	2.43	0.52
6:A:66:A:C2	6:A:108:A:C5	2.97	0.52
7:B:8:C:C4	7:B:9:G:N7	2.78	0.52
16:K:112:PHE:O	16:K:114:LYS:N	2.43	0.52
7:B:182:A:N3	7:B:433:C:O2'	2.37	0.52
7:B:327:G:N2	7:B:328:U:C2	2.78	0.52
4:3:24:LYS:HG2	4:3:45:PRO:HG3	1.91	0.51
5:4:34:LYS:C	5:4:35:GLN:OE1	2.49	0.51
7:B:1150:C:C2	7:B:1151:A:C8	2.98	0.51
7:B:1285:A:C8	7:B:1285:A:C3'	2.93	0.51
7:B:1787:A:C8	7:B:1787:A:H5'	2.45	0.51
7:B:1900:A:C2	7:B:1970:A:C5	2.99	0.51
7:B:204:A:O5'	7:B:204:A:C2'	2.57	0.51
7:B:243:U:O2'	7:B:244:A:H5'	2.11	0.51
7:B:2519:U:C2	7:B:2541:A:N1	2.78	0.51
7:B:2525:G:N2	7:B:2539:C:N3	2.58	0.51
7:B:465:G:O2'	7:B:466:A:H5'	2.10	0.51
7:B:565:C:C4	7:B:566:U:C4	2.98	0.51
7:B:673:C:N3	7:B:808:G:N2	2.57	0.51
7:B:788:A:OP1	7:B:790:U:O4	2.27	0.51
7:B:807:U:C2'	7:B:808:G:O5'	2.58	0.51
7:B:962:G:H21	18:M:81:ARG:CD	2.18	0.51
19:N:39:PRO:O	19:N:40:LYS:C	2.49	0.51
21:P:8:GLU:HA	21:P:11:GLN:CD	2.30	0.51
21:P:65:ASN:H	21:P:71:ARG:HA	1.75	0.51
21:P:73:PHE:HE2	21:P:75:THR:HG23	1.67	0.51
7:B:1243:C:H2'	7:B:1244:A:H8	1.75	0.51
7:B:481:G:H1'	7:B:507:A:N6	2.24	0.51
8:C:131:MET:O	8:C:132:ARG:C	2.46	0.51
7:B:600:G:H1'	10:E:100:MET:CE	2.40	0.51
18:M:40:ARG:CZ	18:M:92:TRP:CZ3	2.93	0.51
7:B:1077:A:H2	7:B:1088:A:C2	2.28	0.51
15:J:89:PHE:H	15:J:89:PHE:HD2	1.53	0.51
14:I:2:LYS:C	14:I:3:LYS:HD2	2.31	0.51
7:B:1915:U:C2'	7:B:1916:A:H5'	2.41	0.51
11:F:56:LEU:HA	11:F:59:ILE:HB	1.92	0.51
6:A:14:U:H4'	6:A:70:C:O2	2.10	0.51
7:B:442:G:C4	7:B:444:C:C5	2.98	0.51
7:B:1343:G:N3	7:B:1384:A:H2	2.09	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:Z:44:PHE:O	31:Z:45:THR:HB	2.09	0.51
2:1:52:LYS:N	2:1:52:LYS:HD2	2.25	0.51
13:H:12:LEU:HD23	13:H:12:LEU:O	2.10	0.51
7:B:1499:C:C6	7:B:1499:C:H3'	2.45	0.51
4:3:36:ALA:HB1	4:3:39:ARG:HB2	1.92	0.51
6:A:46:A:C6	6:A:47:C:C2	2.98	0.51
6:A:50:A:C4	6:A:51:G:C8	2.98	0.51
7:B:1008:A:N6	7:B:1136:G:H1	2.08	0.51
7:B:1022:G:C5	7:B:1140:C:C4	2.99	0.51
7:B:1355:G:C2	7:B:1356:G:N7	2.78	0.51
7:B:1797:G:O3'	8:C:253:GLY:CA	2.58	0.51
7:B:1814:G:H3'	7:B:1815:A:C5'	2.39	0.51
7:B:2031:A:C5'	7:B:2031:A:C8	2.88	0.51
7:B:2744:G:C6	7:B:2745:C:C5	2.98	0.51
7:B:2841:C:N3	7:B:2877:G:C2	2.78	0.51
7:B:392:U:H2'	7:B:393:C:H6	1.70	0.51
7:B:691:C:O4'	8:C:42:ARG:NH1	2.44	0.51
7:B:736:C:H2'	7:B:737:C:C6	2.45	0.51
7:B:773:U:C2'	7:B:773:U:O2	2.58	0.51
7:B:808:G:H8	7:B:808:G:C5'	2.22	0.51
8:C:12:ARG:HH11	8:C:18:VAL:CG2	2.17	0.51
8:C:257:ARG:HB3	8:C:261:ARG:CZ	2.40	0.51
10:E:83:VAL:HG23	10:E:83:VAL:O	2.10	0.51
15:J:128:ASN:O	15:J:130:HIS:HB2	2.10	0.51
15:J:41:LYS:HZ2	15:J:46:PRO:HG3	1.73	0.51
21:P:79:VAL:O	21:P:81:ASP:N	2.41	0.51
21:P:84:SER:O	21:P:85:VAL:C	2.48	0.51
2:1:40:PRO:HB2	2:1:42:VAL:HG22	1.91	0.51
7:B:1205:A:C4'	7:B:1206:G:OP2	2.52	0.51
7:B:86:G:C2	7:B:97:C:N3	2.78	0.51
29:X:16:THR:C	29:X:18:LEU:H	2.13	0.51
29:X:41:HIS:NE2	29:X:43:LEU:HB2	2.24	0.51
7:B:2779:U:C5	7:B:2781:A:C2	2.99	0.51
23:R:4:VAL:HG23	23:R:5:PHE:H	1.75	0.51
7:B:428:A:O2'	7:B:429:A:H5'	2.11	0.51
7:B:615:U:C3'	7:B:616:A:H5'	2.40	0.51
27:V:70:ILE:N	27:V:70:ILE:HD13	2.22	0.51
7:B:861:A:N6	7:B:862:G:C2	2.79	0.51
9:D:37:VAL:CG1	9:D:38:LYS:N	2.72	0.51
10:E:90:GLN:HG3	10:E:92:HIS:CD2	2.45	0.51
16:K:54:LYS:HD3	16:K:54:LYS:H	1.75	0.51
7:B:1107:G:C2'	7:B:1108:U:H5'	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:277:G:H2'	7:B:277:G:N3	2.24	0.51
7:B:1092:C:H2'	7:B:1093:G:C8	2.42	0.51
7:B:2407:A:C5	7:B:2408:U:O4	2.64	0.51
7:B:290:U:H2'	7:B:291:G:C8	2.44	0.51
7:B:647:G:H5'	7:B:648:G:OP2	2.10	0.51
7:B:1584:U:H3'	7:B:1585:C:H5'	1.91	0.51
30:Y:13:ILE:HD13	30:Y:13:ILE:H	1.74	0.51
4:3:12:ARG:O	4:3:13:PHE:CD1	2.63	0.51
7:B:1235:G:C5'	7:B:1236:G:OP2	2.59	0.51
7:B:1567:G:H5''	7:B:1567:G:H8	1.74	0.51
7:B:1672:A:N1	7:B:1673:G:C5	2.78	0.51
7:B:1795:C:N3	7:B:1824:G:O6	2.43	0.51
7:B:1975:G:C5	7:B:1976:U:C5	2.98	0.51
7:B:2061:G:C2	7:B:2063:C:C4	2.99	0.51
7:B:2231:U:P	31:Z:28:VAL:HG23	2.50	0.51
7:B:2250:G:C6	18:M:82:MET:CG	2.91	0.51
7:B:2840:C:C4	7:B:2841:C:N4	2.78	0.51
7:B:518:G:H8	7:B:518:G:H5''	1.74	0.51
7:B:687:C:H2'	7:B:688:U:O4'	2.10	0.51
7:B:841:G:C2	7:B:842:U:C2	2.98	0.51
7:B:953:G:N2	7:B:964:C:O2	2.42	0.51
7:B:980:A:N7	7:B:1136:G:C5'	2.73	0.51
8:C:9:SER:HB2	8:C:22:GLU:OE1	2.10	0.51
9:D:140:HIS:O	9:D:141:ARG:CG	2.58	0.51
12:G:151:ARG:O	12:G:161:VAL:HG12	2.11	0.51
15:J:128:ASN:N	15:J:128:ASN:HD22	2.05	0.51
15:J:41:LYS:CD	15:J:44:TYR:HB3	2.36	0.51
18:M:127:LYS:HD3	18:M:128:THR:N	2.24	0.51
19:N:8:ARG:NH2	19:N:46:ARG:CG	2.70	0.51
20:O:39:VAL:HG13	20:O:48:LEU:C	2.31	0.51
21:P:21:PRO:O	21:P:97:TYR:HE2	1.93	0.51
21:P:62:LYS:HA	21:P:74:GLN:CD	2.29	0.51
2:1:37:LYS:HB2	7:B:2344:U:H3'	1.90	0.51
7:B:2384:U:H3'	7:B:2385:C:H5'	1.93	0.51
7:B:1204:A:N1	7:B:1241:A:C2	2.79	0.51
7:B:482:A:N7	7:B:506:G:C6	2.79	0.51
10:E:157:LEU:O	10:E:157:LEU:HG	2.09	0.51
7:B:323:C:C1'	10:E:164:LEU:HB2	2.34	0.51
7:B:345:A:C2	7:B:347:A:N6	2.78	0.51
7:B:80:G:C2	7:B:81:G:C8	2.98	0.51
8:C:163:ILE:O	8:C:164:VAL:HG22	2.10	0.51
7:B:217:A:C5	7:B:218:A:C8	2.99	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:5:LYS:NZ	18:M:8:LYS:CB	2.74	0.51
30:Y:16:LEU:HB2	30:Y:19:HIS:HD2	1.75	0.51
25:T:23:ALA:C	25:T:25:GLU:H	2.13	0.51
7:B:410:G:H2'	7:B:2407:A:C8	2.45	0.51
7:B:1116:G:O5'	7:B:1116:G:H8	1.94	0.51
16:K:82:ASN:H	16:K:82:ASN:ND2	2.04	0.51
7:B:2603:G:C6	7:B:2604:U:C4	2.98	0.51
7:B:647:G:O6	7:B:648:G:C6	2.63	0.51
6:A:111:U:O2'	6:A:112:G:H5'	2.11	0.51
7:B:2076:U:C2	7:B:2076:U:H3'	2.44	0.51
3:2:42:LEU:HD11	7:B:127:A:N6	2.25	0.51
7:B:199:A:H1'	31:Z:20:ASN:HB2	1.92	0.51
7:B:2231:U:O2	7:B:2232:C:C6	2.64	0.51
7:B:2355:G:O3'	28:W:20:LEU:HD22	2.10	0.51
7:B:2358:A:C8	7:B:2358:A:C5'	2.92	0.51
7:B:2396:G:C2'	7:B:2397:G:H5'	2.40	0.51
7:B:2520:C:H2'	7:B:2521:C:H5'	1.92	0.51
7:B:2710:C:O2'	7:B:2711:A:H5'	2.10	0.51
7:B:540:C:C2	7:B:541:A:N7	2.79	0.51
8:C:153:LEU:O	8:C:153:LEU:HD23	2.09	0.51
10:E:58:LYS:HZ1	10:E:62:GLN:CA	2.23	0.51
15:J:130:HIS:O	15:J:132:HIS:N	2.44	0.51
15:J:44:TYR:O	15:J:45:THR:HB	2.11	0.51
18:M:2:LEU:HD22	18:M:47:GLU:OE1	2.11	0.51
7:B:2250:G:O6	18:M:82:MET:HG3	2.08	0.51
19:N:115:LEU:CD2	19:N:115:LEU:H	2.18	0.51
19:N:87:PHE:CB	19:N:94:TYR:CZ	2.93	0.51
20:O:78:VAL:HA	20:O:81:ARG:HB2	1.92	0.51
22:Q:40:LYS:CD	22:Q:44:TYR:HB2	2.41	0.51
23:R:74:ILE:HG13	23:R:76:LYS:CD	2.40	0.51
7:B:2345:G:C4	7:B:2381:A:N3	2.78	0.51
7:B:597:G:C2	7:B:661:A:N3	2.77	0.51
26:U:44:HIS:HB2	26:U:46:LYS:HZ1	1.74	0.51
29:X:1:MET:H3	29:X:6:LEU:HB3	1.75	0.51
22:Q:113:LYS:C	22:Q:115:ALA:N	2.63	0.51
31:Z:58:ASP:C	31:Z:59:ARG:HD3	2.30	0.51
7:B:867:C:C6	7:B:867:C:C3'	2.93	0.51
30:Y:19:HIS:O	30:Y:22:THR:N	2.43	0.51
16:K:7:MET:SD	16:K:20:MET:HB3	2.50	0.51
7:B:141:G:C5'	7:B:141:G:N3	2.73	0.51
7:B:1598:A:C2	7:B:1599:U:C6	2.98	0.51
7:B:1486:U:O2	7:B:1504:A:C2	2.64	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:R:25:LEU:C	23:R:27:ILE:N	2.63	0.51
7:B:1348:C:C6	7:B:1348:C:H5''	2.46	0.51
7:B:1193:G:N2	7:B:1194:A:N3	2.58	0.51
7:B:8:C:N4	7:B:9:G:C5	2.79	0.51
16:K:87:LEU:N	16:K:87:LEU:HD23	2.26	0.51
7:B:327:G:N2	7:B:328:U:O2	2.42	0.51
7:B:230:G:C2	7:B:231:A:C4	2.99	0.51
7:B:1509:A:C8	7:B:1509:A:H5''	2.46	0.51
1:O:9:ARG:O	1:O:12:ARG:HB2	2.11	0.51
7:B:1162:G:C6	7:B:1163:G:N7	2.78	0.51
7:B:1265:A:OP1	33:B:5228:HOH:O	2.19	0.51
7:B:1808:A:C3'	7:B:1809:A:H8	2.22	0.51
7:B:1854:A:H2'	7:B:1855:U:H5'	1.91	0.51
7:B:2230:G:H2'	7:B:2231:U:C5	2.46	0.51
7:B:2079:U:H4'	7:B:2433:A:C2	2.45	0.51
7:B:2464:G:C6	7:B:2487:G:C6	2.98	0.51
7:B:2611:C:O2	7:B:2611:C:H2'	2.10	0.51
7:B:2719:G:C8	7:B:2719:G:H5''	2.45	0.51
7:B:669:G:H3'	7:B:670:A:C8	2.46	0.51
7:B:736:C:C2	7:B:737:C:H5	2.27	0.51
7:B:756:A:H2'	7:B:757:G:O4'	2.10	0.51
7:B:771:G:C2	7:B:772:C:C4	2.99	0.51
7:B:820:A:O2'	7:B:821:A:H5'	2.10	0.51
7:B:826:U:C3'	7:B:828:U:H6	2.08	0.51
7:B:839:U:H2'	7:B:840:C:H6	1.72	0.51
7:B:968:C:C6	7:B:968:C:H3'	2.45	0.51
7:B:1824:G:C2	8:C:249:VAL:HG12	2.45	0.51
8:C:251:THR:O	8:C:253:GLY:N	2.43	0.51
9:D:155:VAL:O	9:D:156:PHE:C	2.48	0.51
9:D:182:ALA:C	9:D:184:ARG:H	2.14	0.51
11:F:49:LEU:HA	11:F:52:ALA:HB2	1.93	0.51
13:H:27:ARG:CG	13:H:27:ARG:O	2.58	0.51
15:J:122:LEU:O	15:J:123:LYS:HB2	2.10	0.51
21:P:59:THR:O	21:P:60:VAL:CG1	2.57	0.51
21:P:5:LYS:N	21:P:5:LYS:HD2	2.25	0.51
21:P:5:LYS:HZ3	21:P:5:LYS:HA	1.74	0.51
23:R:10:LYS:HD2	23:R:11:GLN:H	1.72	0.51
24:S:9:HIS:C	24:S:11:ARG:H	2.13	0.51
28:W:31:LEU:O	28:W:32:ALA:CB	2.58	0.51
7:B:477:A:H2'	7:B:478:A:N7	2.25	0.51
10:E:151:GLY:C	10:E:152:GLU:HG2	2.30	0.51
10:E:151:GLY:HA2	10:E:171:ASP:HB3	1.91	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:E:190:ALA:N	10:E:194:LYS:HE2	2.26	0.51
10:E:191:ASP:N	10:E:194:LYS:HZ3	2.09	0.51
7:B:111:A:C8	7:B:111:A:O5'	2.55	0.51
7:B:2779:U:H5''	7:B:2780:G:H3'	1.93	0.51
7:B:265:A:N6	7:B:427:U:O2'	2.43	0.51
7:B:600:G:H1'	10:E:100:MET:HE3	1.92	0.51
7:B:2810:A:O3'	9:D:61:THR:CG2	2.59	0.51
9:D:54:ALA:HB1	9:D:56:LYS:CB	2.41	0.51
13:H:148:ALA:O	13:H:149:GLU:O	2.28	0.51
7:B:631:A:H2'	17:L:66:PHE:HD1	1.75	0.51
7:B:2258:C:C6	7:B:2258:C:C5'	2.91	0.51
7:B:162:U:C5	7:B:165:A:N1	2.79	0.51
7:B:1545:A:H2'	7:B:1546:G:O4'	2.11	0.51
7:B:1771:C:C4	7:B:1772:A:N7	2.79	0.51
7:B:46:G:C2	7:B:47:C:C6	2.99	0.51
9:D:111:GLY:CA	9:D:194:PRO:HB2	2.40	0.51
7:B:2214:C:H5'	7:B:2215:C:OP2	2.11	0.51
4:3:29:ARG:CZ	7:B:2419:U:O4	2.59	0.51
1:0:41:HIS:NE2	1:0:45:ASP:O	2.40	0.51
7:B:1024:G:C2'	7:B:1025:G:OP1	2.57	0.51
7:B:1225:G:OP1	23:R:90:ARG:HB3	2.10	0.51
7:B:1223:G:C6	7:B:1227:G:N1	2.78	0.51
7:B:1642:G:C2	7:B:1643:G:C8	2.98	0.51
7:B:1826:G:C6	7:B:1827:U:C4	2.99	0.51
7:B:1991:U:C2'	7:B:1992:G:H5'	2.41	0.51
7:B:2011:U:H2'	7:B:2012:G:H8	1.76	0.51
7:B:2016:U:HO2'	7:B:2017:U:P	2.34	0.51
7:B:2452:C:N4	7:B:2453:A:H61	2.08	0.51
7:B:245:G:C8	7:B:245:G:H3'	2.46	0.51
7:B:2461:A:H1'	7:B:2492:U:C2	2.45	0.51
7:B:2578:G:O2'	9:D:138:LEU:CD2	2.59	0.51
7:B:2049:G:N2	7:B:2619:C:O2	2.44	0.51
7:B:2754:U:H6	7:B:2754:U:O5'	1.93	0.51
7:B:567:U:O2	7:B:567:U:H2'	2.10	0.51
7:B:578:G:H8	7:B:578:G:O5'	1.94	0.51
7:B:682:G:C2	7:B:683:U:C5	2.99	0.51
8:C:193:GLU:O	8:C:194:VAL:HG13	2.11	0.51
8:C:229:HIS:HE1	8:C:231:HIS:NE2	2.09	0.51
8:C:73:ILE:HG22	8:C:95:TYR:HD1	1.76	0.51
9:D:13:ARG:O	9:D:14:ILE:C	2.49	0.51
10:E:57:LYS:O	10:E:58:LYS:O	2.29	0.51
15:J:32:LEU:O	15:J:36:LEU:HD12	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:97:GLN:N	18:M:98:PRO:CD	2.72	0.51
19:N:114:GLU:HG2	19:N:116:VAL:H	1.75	0.51
20:O:30:ARG:O	20:O:33:ARG:O	2.28	0.51
21:P:27:VAL:HG13	21:P:47:ILE:HD12	1.91	0.51
22:Q:52:ARG:HD3	22:Q:53:LYS:NZ	2.25	0.51
22:Q:46:TYR:CD1	23:R:79:ARG:HB3	2.46	0.51
23:R:91:GLN:HG3	23:R:92:TRP:N	2.26	0.51
10:E:149:ILE:HD13	10:E:152:GLU:OE2	2.11	0.51
26:U:65:GLN:O	26:U:66:VAL:C	2.48	0.51
7:B:2082:A:C5	7:B:2239:G:N2	2.79	0.51
7:B:1741:C:H2'	7:B:1742:U:H6	1.73	0.51
7:B:871:U:O2	7:B:907:G:C2	2.63	0.51
7:B:1182:G:C2	7:B:1183:U:H1'	2.46	0.51
30:Y:4:ILE:HA	30:Y:36:GLU:OE1	2.11	0.51
9:D:63:PRO:O	9:D:65:ALA:N	2.44	0.51
7:B:1341:G:OP2	7:B:1394:U:O2'	2.24	0.51
25:T:59:ASN:C	25:T:60:THR:HG23	2.31	0.51
12:G:73:SER:HB3	12:G:137:LYS:CE	2.35	0.51
7:B:2597:G:P	8:C:239:PHE:HB2	2.51	0.51
11:F:35:LEU:HD12	11:F:56:LEU:HD21	1.92	0.51
7:B:1942:C:C5	7:B:1943:U:C5	2.99	0.51
7:B:1528:A:C6	7:B:1529:G:H1'	2.46	0.51
14:I:126:ARG:HB3	14:I:126:ARG:NH1	2.25	0.51
7:B:2459:A:H61	7:B:2493:U:H3	1.58	0.51
28:W:62:ALA:O	28:W:63:ASP:HB2	2.09	0.51
30:Y:6:ILE:HD13	30:Y:6:ILE:O	2.11	0.51
4:3:33:THR:CG2	4:3:40:LYS:HE2	2.41	0.51
6:A:53:A:C8	6:A:53:A:H3'	2.46	0.51
6:A:6:G:H2'	6:A:7:G:H8	1.76	0.51
7:B:1268:A:N6	7:B:1269:A:N3	2.58	0.51
7:B:1672:A:N6	7:B:1673:G:O6	2.44	0.51
7:B:1890:A:H2	7:B:2234:G:N3	2.09	0.51
7:B:1970:A:H5''	7:B:1970:A:C8	2.43	0.51
7:B:2023:C:O2'	7:B:2618:G:H5''	2.10	0.51
7:B:2060:A:C2	7:B:2502:G:C6	2.98	0.51
7:B:2334:U:C4	20:O:15:ARG:HG3	2.45	0.51
7:B:2542:A:H4'	7:B:2543:G:H5''	1.93	0.51
7:B:2543:G:C6	7:B:2544:G:C6	2.98	0.51
7:B:530:G:HO2'	7:B:531:C:C5'	2.24	0.51
4:3:1:PRO:HD3	7:B:591:U:H1'	1.93	0.51
7:B:672:C:C3'	7:B:673:C:H5'	2.41	0.51
7:B:758:C:O2	7:B:1981:A:H2	1.93	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:692:C:N4	7:B:770:G:H1	2.08	0.51
8:C:155:ARG:CD	8:C:157:ALA:CB	2.87	0.51
8:C:22:GLU:CB	8:C:202:ARG:HE	2.24	0.51
13:H:26:ALA:HB2	13:H:30:LEU:CG	2.39	0.51
15:J:56:VAL:O	15:J:57:LEU:HD13	2.11	0.51
15:J:65:THR:OG1	15:J:68:LYS:HB2	2.10	0.51
15:J:81:ILE:CA	15:J:84:ILE:HD11	2.31	0.51
18:M:2:LEU:HD13	18:M:47:GLU:OE2	2.11	0.51
19:N:4:ARG:HG2	19:N:5:LYS:N	2.26	0.51
21:P:55:HIS:O	21:P:58:PHE:CG	2.63	0.51
22:Q:89:ILE:O	22:Q:91:ARG:HD2	2.11	0.51
23:R:79:ARG:CD	23:R:80:ARG:N	2.71	0.51
17:L:89:VAL:O	17:L:89:VAL:HG22	2.11	0.51
17:L:92:LEU:HD22	17:L:96:LYS:CB	2.41	0.51
9:D:81:GLU:CG	9:D:82:PHE:H	2.20	0.51
23:R:39:LEU:HB3	23:R:56:GLY:O	2.11	0.51
7:B:260:G:H3'	7:B:260:G:C8	2.45	0.51
7:B:608:A:N6	7:B:621:A:C8	2.79	0.51
10:E:90:GLN:CG	10:E:92:HIS:CD2	2.94	0.51
7:B:1317:G:C2	7:B:1318:U:O2	2.63	0.51
11:F:129:MET:O	11:F:152:ASP:O	2.29	0.51
13:H:82:SER:HB2	13:H:90:LEU:CD1	2.41	0.51
7:B:2657:A:H2'	7:B:2658:C:H5'	1.93	0.51
12:G:147:LEU:C	12:G:149:ALA:H	2.12	0.51
11:F:100:GLU:OE2	11:F:101:ARG:N	2.41	0.51
7:B:2103:C:H3'	7:B:2104:C:C2	2.46	0.51
7:B:1041:G:C2	7:B:1115:G:N1	2.78	0.51
7:B:1704:C:O2	7:B:1704:C:H2'	2.10	0.51
6:A:25:U:C5'	6:A:25:U:C6	2.93	0.51
7:B:1014:A:H61	7:B:1148:U:H3	1.57	0.51
7:B:1994:C:O2	7:B:1994:C:H2'	2.10	0.51
1:0:21:LEU:HB2	24:S:23:LEU:HD23	1.92	0.51
1:0:8:THR:HG21	7:B:2021:C:P	2.51	0.51
4:3:41:ARG:NE	4:3:41:ARG:HA	2.25	0.51
5:4:26:ILE:CD1	5:4:35:GLN:HG2	2.40	0.51
6:A:50:A:C6	6:A:51:G:C8	2.98	0.51
7:B:980:A:N7	7:B:1136:G:H5'	2.26	0.51
3:2:10:LEU:HD12	7:B:125:A:C2	2.46	0.51
7:B:1378:A:C5	7:B:1380:G:C5	2.99	0.51
7:B:1562:U:H2'	7:B:1563:U:C6	2.39	0.51
7:B:1571:A:C2	7:B:1572:A:C4	2.99	0.51
7:B:1761:C:C2'	7:B:1762:A:H5'	2.40	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1833:C:H6	7:B:1833:C:H5''	1.75	0.51
7:B:1856:U:H2'	7:B:1857:G:O4'	2.11	0.51
7:B:2092:U:O4	7:B:2226:C:OP2	2.29	0.51
7:B:2233:U:H6	7:B:2233:U:H3'	1.75	0.51
7:B:2270:A:H4'	28:W:18:LYS:HB3	1.92	0.51
7:B:2435:A:C2	7:B:2436:G:C1'	2.94	0.51
7:B:2701:U:H5	7:B:2703:C:OP2	1.93	0.51
7:B:2739:U:C2'	7:B:2740:A:H5'	2.41	0.51
7:B:2754:U:O2	7:B:2756:U:OP1	2.29	0.51
7:B:2756:U:C2	7:B:2759:G:O6	2.63	0.51
7:B:463:G:N1	7:B:467:G:C6	2.78	0.51
7:B:834:G:N2	7:B:835:C:O2	2.43	0.51
7:B:988:A:H2	7:B:989:G:N2	2.08	0.51
8:C:21:PRO:O	8:C:22:GLU:CB	2.58	0.51
8:C:61:TYR:CD2	8:C:63:ILE:HD12	2.45	0.51
7:B:2618:G:O2'	9:D:154:LYS:O	2.26	0.51
10:E:85:PHE:O	10:E:86:ALA:HB3	2.11	0.51
7:B:2250:G:N1	18:M:81:ARG:HG2	2.26	0.51
19:N:25:ALA:HB1	19:N:48:VAL:HG22	1.93	0.51
20:O:77:ALA:O	20:O:81:ARG:N	2.39	0.51
22:Q:40:LYS:HB2	22:Q:40:LYS:HZ3	1.73	0.51
7:B:748:G:N7	24:S:90:LYS:HE2	2.26	0.51
7:B:2291:U:OP1	7:B:2380:C:O2'	2.29	0.51
7:B:1203:U:C5	7:B:1204:A:N6	2.79	0.51
10:E:132:LYS:C	10:E:134:LEU:N	2.65	0.51
7:B:65:U:O4'	25:T:74:ILE:HD12	2.11	0.51
9:D:29:VAL:HG23	9:D:51:THR:HG22	1.93	0.51
9:D:77:ARG:NH2	9:D:79:LEU:CB	2.72	0.51
7:B:666:A:H2'	7:B:667:U:C5'	2.39	0.51
17:L:76:GLU:O	17:L:77:ILE:HG23	2.10	0.51
12:G:124:CYS:HB3	12:G:130:ILE:HD13	1.92	0.51
13:H:94:ILE:O	13:H:122:LEU:HG	2.11	0.51
25:T:11:LEU:HD21	25:T:47:VAL:HG23	1.92	0.51
6:A:75:G:C5	6:A:76:G:N7	2.79	0.51
7:B:545:U:C6	7:B:545:U:C3'	2.94	0.51
6:A:20:G:H1'	6:A:64:G:N2	2.25	0.51
11:F:75:GLY:C	11:F:77:LYS:H	2.15	0.51
8:C:120:ASP:H	8:C:133:ASN:ND2	2.09	0.51
11:F:41:GLU:H	11:F:45:ASP:HB3	1.76	0.51
24:S:37:THR:HA	24:S:48:LYS:HE2	1.93	0.51
7:B:1534:U:H2'	7:B:1536:C:N3	2.26	0.51
4:3:41:ARG:C	4:3:43:LEU:N	2.64	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1286:A:C6	7:B:1289:C:C4	2.99	0.51
7:B:1351:C:HO2'	7:B:1571:A:H1'	1.75	0.51
7:B:579:G:H4'	7:B:2017:U:H2'	1.93	0.51
7:B:2230:G:N3	7:B:2231:U:C6	2.79	0.51
7:B:2250:G:C5	18:M:82:MET:HG3	2.46	0.51
7:B:953:G:O2'	7:B:2266:A:OP1	2.28	0.51
7:B:23:G:C2	7:B:518:G:C2	2.99	0.51
7:B:2490:G:H4'	7:B:2491:U:H5'	1.91	0.51
7:B:2587:A:C8	7:B:2587:A:C5'	2.94	0.51
7:B:2679:A:C2	7:B:2680:U:C5	2.99	0.51
7:B:460:A:C2	7:B:470:A:C4	2.99	0.51
7:B:735:A:H3'	7:B:736:C:H6	1.75	0.51
8:C:124:LYS:CB	8:C:125:PRO:CD	2.88	0.51
8:C:204:LEU:CB	8:C:210:ALA:HB1	2.40	0.51
9:D:117:GLY:O	9:D:165:MET:HB2	2.09	0.51
12:G:3:VAL:HG22	12:G:4:ALA:N	2.19	0.51
19:N:103:ARG:NH1	19:N:103:ARG:HG2	2.26	0.51
19:N:20:MET:O	19:N:23:ASN:HB2	2.10	0.51
19:N:21:PHE:O	19:N:25:ALA:HB3	2.11	0.51
19:N:42:LYS:HE3	19:N:45:ARG:HH11	1.75	0.51
23:R:10:LYS:HD2	23:R:11:GLN:CA	2.40	0.51
23:R:23:GLU:HA	23:R:96:VAL:HB	1.93	0.51
31:Z:3:LYS:NZ	31:Z:29:GLY:HA3	2.26	0.51
7:B:319:G:N2	7:B:320:A:C4	2.79	0.51
7:B:332:A:N7	7:B:335:C:C4	2.79	0.51
26:U:85:ARG:HB2	26:U:86:PHE:HD1	1.74	0.51
26:U:91:LYS:HB3	26:U:93:ARG:HG2	1.92	0.51
9:D:2:ILE:O	9:D:3:GLY:O	2.29	0.51
12:G:14:VAL:HG12	12:G:16:VAL:HG22	1.92	0.51
11:F:7:TYR:HA	11:F:11:VAL:HB	1.92	0.51
7:B:262:A:C3'	7:B:262:A:C8	2.93	0.51
27:V:70:ILE:N	27:V:70:ILE:CD1	2.74	0.51
18:M:16:ARG:NH1	18:M:72:PRO:CG	2.62	0.51
7:B:1047:G:N2	7:B:1110:G:C4	2.78	0.51
7:B:138:U:H3'	7:B:138:U:C6	2.46	0.51
7:B:1064:C:H2'	7:B:1065:U:O4'	2.10	0.51
7:B:362:A:H2'	7:B:363:G:C8	2.28	0.51
7:B:1685:C:O2'	7:B:1686:C:H5'	2.11	0.51
17:L:71:ALA:O	17:L:72:ALA:C	2.49	0.51
11:F:46:LYS:C	11:F:48:LEU:N	2.64	0.51
27:V:80:HIS:CD2	27:V:83:LYS:HB2	2.45	0.51
14:I:101:SER:O	14:I:139:VAL:HG13	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:4:28:SER:OG	5:4:29:ALA:N	2.44	0.51
7:B:1355:G:O2'	7:B:1356:G:H5'	2.10	0.51
7:B:1566:A:C5	8:C:213:ARG:NH1	2.79	0.51
7:B:1810:A:H2'	7:B:1811:G:O4'	2.11	0.51
7:B:1797:G:C2	7:B:1823:G:C2	2.98	0.51
1:0:5:ASN:HD22	7:B:2019:A:H62	1.57	0.51
7:B:2025:C:C3'	7:B:2026:U:H6	2.24	0.51
7:B:805:G:O6	7:B:2068:U:H5''	2.09	0.51
7:B:2387:U:H5	33:B:5411:HOH:O	1.93	0.51
7:B:2439:A:H4'	7:B:2440:C:H5''	1.92	0.51
7:B:2443:C:H2'	7:B:2444:G:C8	2.46	0.51
7:B:2766:A:H5''	7:B:2767:C:OP2	2.11	0.51
7:B:382:A:C2	7:B:383:C:C1'	2.93	0.51
7:B:565:C:C2	7:B:577:G:C2	2.99	0.51
18:M:61:GLY:N	18:M:105:MET:SD	2.84	0.51
20:O:14:ALA:O	20:O:15:ARG:C	2.49	0.51
20:O:40:ILE:HG22	20:O:46:GLU:CB	2.40	0.51
7:B:993:G:H5''	23:R:77:PHE:HE2	1.75	0.51
28:W:23:LYS:HB2	28:W:23:LYS:HZ1	1.74	0.51
31:Z:33:ASN:HB3	31:Z:46:GLY:HA2	1.93	0.51
31:Z:56:ARG:NH1	31:Z:56:ARG:CG	2.71	0.51
7:B:107:G:C8	7:B:107:G:H3'	2.46	0.51
7:B:2774:C:H2'	7:B:2775:G:O4'	2.10	0.51
9:D:88:GLU:O	9:D:89:GLU:C	2.49	0.51
22:Q:97:ILE:CD1	23:R:13:ARG:HG2	2.41	0.51
7:B:2811:G:C6	7:B:2890:G:N2	2.79	0.51
9:D:54:ALA:HB1	9:D:56:LYS:HB2	1.93	0.51
7:B:1394:U:H3	7:B:1395:A:N6	2.09	0.51
14:I:27:LEU:CB	14:I:58:ILE:HD13	2.40	0.51
12:G:120:ILE:HG12	12:G:134:GLY:HA3	1.92	0.51
12:G:37:ASN:OD1	12:G:63:GLN:CG	2.59	0.51
7:B:2328:A:O5'	7:B:2328:A:H8	1.94	0.51
17:L:83:ALA:O	17:L:84:LYS:HB2	2.10	0.51
7:B:1947:C:N3	7:B:1960:A:C2	2.79	0.51
24:S:4:ILE:HG12	24:S:106:VAL:CG1	2.41	0.51
7:B:147:C:O5'	7:B:147:C:H6	1.94	0.51
7:B:2088:A:H3'	7:B:2088:A:C8	2.45	0.51
3:2:26:ASN:H	3:2:26:ASN:ND2	2.09	0.50
3:2:36:ALA:O	3:2:37:LYS:C	2.50	0.50
3:2:44:VAL:O	3:2:45:SER:O	2.30	0.50
6:A:46:A:N1	6:A:47:C:C2	2.79	0.50
7:B:1017:G:H2'	7:B:1018:U:C6	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1679:A:C2'	7:B:1680:U:H5'	2.41	0.50
7:B:2455:G:N2	7:B:2456:C:C2	2.80	0.50
7:B:2471:A:N6	7:B:2479:U:H3	2.08	0.50
7:B:2719:G:H8	7:B:2719:G:C5'	2.24	0.50
7:B:2747:G:H21	7:B:2757:A:N6	2.09	0.50
7:B:585:G:C4	7:B:1251:C:C4	3.00	0.50
7:B:822:G:C6	7:B:836:G:C2	3.00	0.50
8:C:244:VAL:H	8:C:249:VAL:CG2	2.24	0.50
9:D:137:SER:O	9:D:138:LEU:CB	2.58	0.50
13:H:44:ILE:O	13:H:48:GLU:HB3	2.11	0.50
21:P:26:GLU:HA	21:P:47:ILE:CB	2.39	0.50
7:B:336:C:O2'	7:B:337:C:H5'	2.10	0.50
10:E:134:LEU:CD2	10:E:135:ALA:N	2.74	0.50
10:E:144:GLU:CG	10:E:166:LYS:HE2	2.37	0.50
7:B:665:U:O2'	7:B:666:A:H5'	2.11	0.50
7:B:237:C:C2	7:B:261:G:C2	2.99	0.50
7:B:638:G:C2	7:B:639:U:C2	2.99	0.50
17:L:128:THR:O	17:L:129:LYS:C	2.49	0.50
7:B:861:A:C5'	7:B:862:G:OP2	2.53	0.50
7:B:863:A:O5'	7:B:863:A:C8	2.61	0.50
18:M:40:ARG:HG3	18:M:92:TRP:CD2	2.46	0.50
30:Y:40:THR:CG2	30:Y:43:ILE:HG22	2.41	0.50
7:B:1392:A:C5	7:B:1393:A:C6	2.99	0.50
7:B:1063:G:N2	7:B:1074:G:H1	2.09	0.50
24:S:60:HIS:O	24:S:60:HIS:CG	2.64	0.50
12:G:6:ALA:CB	12:G:7:PRO:HD3	2.35	0.50
6:A:76:G:N3	6:A:77:U:C6	2.79	0.50
7:B:2255:G:C4	7:B:2256:G:C8	3.00	0.50
27:V:51:GLN:HB2	27:V:57:TYR:OH	2.10	0.50
11:F:2:LYS:CE	11:F:2:LYS:HA	2.38	0.50
7:B:370:G:O2'	7:B:424:G:OP1	2.29	0.50
7:B:1408:G:N7	7:B:1409:U:C5	2.79	0.50
7:B:1956:U:H1'	7:B:2552:U:OP1	2.12	0.50
9:D:22:ILE:CG2	9:D:22:ILE:O	2.59	0.50
7:B:945:A:C4	7:B:2448:A:C2	2.99	0.50
7:B:2800:A:C2	7:B:2801:G:C4	2.99	0.50
7:B:387:U:C5	7:B:388:G:O6	2.65	0.50
22:Q:112:ALA:C	22:Q:114:ALA:N	2.63	0.50
8:C:119:VAL:HG13	8:C:133:ASN:ND2	2.27	0.50
28:W:53:GLY:O	28:W:54:ARG:HB2	2.10	0.50
11:F:30:VAL:O	11:F:31:GLU:C	2.50	0.50
30:Y:58:GLU:OXT	30:Y:58:GLU:HG3	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:53:ASP:O	4:3:57:VAL:HG12	2.11	0.50
6:A:38:C:C2	6:A:44:G:N2	2.75	0.50
6:A:42:C:O2	6:A:43:C:H1'	2.10	0.50
7:B:1227:G:H2'	7:B:1228:G:O4'	2.10	0.50
7:B:577:G:O2'	7:B:1254:A:OP1	2.28	0.50
7:B:1275:A:C2'	7:B:1276:A:O5'	2.59	0.50
7:B:1608:A:C5	7:B:1611:C:C5	2.99	0.50
7:B:1840:G:C4	7:B:1841:U:C6	2.99	0.50
7:B:2044:C:N4	7:B:2045:C:H41	2.09	0.50
7:B:2225:A:H5''	7:B:2226:C:H5'	1.93	0.50
7:B:2610:C:O2'	7:B:2611:C:OP2	2.28	0.50
7:B:2668:G:C2	7:B:2669:G:C8	3.00	0.50
7:B:2685:G:H2'	7:B:2686:G:H8	1.75	0.50
7:B:2755:C:O5'	7:B:2755:C:C6	2.53	0.50
7:B:458:G:N2	7:B:469:G:H2'	2.18	0.50
7:B:755:U:H2'	7:B:756:A:C8	2.45	0.50
7:B:799:G:C5	7:B:800:A:C6	2.99	0.50
7:B:671:C:H42	7:B:809:G:H1	1.57	0.50
8:C:52:HIS:C	8:C:53:ILE:HD12	2.31	0.50
11:F:133:GLU:CA	11:F:150:GLY:HA2	2.41	0.50
13:H:3:VAL:HG22	13:H:21:VAL:HG21	1.93	0.50
15:J:103:ILE:HG22	15:J:104:ALA:N	2.26	0.50
15:J:25:LEU:HG	15:J:64:VAL:CA	2.40	0.50
7:B:2496:C:OP1	18:M:81:ARG:HB3	2.11	0.50
28:W:19:ARG:CA	28:W:33:GLY:HA2	2.39	0.50
7:B:2641:G:C8	7:B:2641:G:H5'	2.46	0.50
9:D:27:ILE:HG12	9:D:28:GLU:N	2.26	0.50
9:D:31:ALA:HB3	9:D:95:SER:CA	2.41	0.50
12:G:14:VAL:O	12:G:14:VAL:HG12	2.09	0.50
23:R:32:THR:OG1	23:R:33:VAL:N	2.45	0.50
7:B:41:C:H6	7:B:41:C:O5'	1.94	0.50
27:V:40:ILE:O	27:V:40:ILE:HG12	2.10	0.50
7:B:1164:C:N4	7:B:1165:A:N6	2.59	0.50
7:B:1601:G:OP1	25:T:62:VAL:HG11	2.11	0.50
16:K:19:VAL:HG12	16:K:43:ILE:HA	1.93	0.50
6:A:73:A:N7	6:A:74:U:C5	2.79	0.50
6:A:71:C:C2	6:A:72:G:C8	2.99	0.50
7:B:1581:G:O5'	7:B:1581:G:H8	1.95	0.50
29:X:9:LYS:HB3	29:X:9:LYS:HZ3	1.75	0.50
7:B:2104:C:C6	7:B:2104:C:C3'	2.89	0.50
7:B:1541:C:H2'	7:B:1542:U:O4'	2.11	0.50
7:B:630:G:C5	7:B:632:A:OP2	2.65	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1413:A:O5'	7:B:1413:A:C8	2.60	0.50
6:A:59:A:C5	6:A:60:C:C4	3.00	0.50
28:W:13:ARG:HD2	28:W:14:ASP:H	1.74	0.50
7:B:524:G:C6	7:B:525:U:C5	3.00	0.50
24:S:80:PRO:O	24:S:100:THR:HG22	2.11	0.50
7:B:1737:G:N1	7:B:1738:G:N2	2.60	0.50
2:1:53:ILE:HG22	2:1:54:LYS:H	1.76	0.50
15:J:26:GLY:O	15:J:29:ALA:N	2.44	0.50
3:2:25:LYS:O	3:2:29:GLN:HB2	2.11	0.50
4:3:30:HIS:O	4:3:31:ILE:CG2	2.60	0.50
7:B:1050:A:O2'	7:B:1051:G:H5'	2.11	0.50
7:B:1153:C:H5'	22:Q:75:TYR:HE2	1.77	0.50
7:B:1431:A:C2'	7:B:1432:G:H5'	2.42	0.50
7:B:194:G:C5'	7:B:195:A:OP2	2.58	0.50
7:B:1265:A:N6	7:B:2013:A:H5''	2.27	0.50
7:B:200:U:C2'	7:B:201:C:H5'	2.42	0.50
7:B:2070:A:C2	7:B:2442:C:O2	2.65	0.50
7:B:2230:G:H1'	31:Z:30:HIS:NE2	2.26	0.50
7:B:2378:A:H3'	7:B:2378:A:H8	1.76	0.50
7:B:2059:A:C5	7:B:2503:A:C2	3.00	0.50
7:B:2569:G:C2	7:B:2570:G:C8	3.00	0.50
7:B:2694:G:H5'	7:B:2694:G:H8	1.74	0.50
7:B:751:A:H3'	7:B:789:A:H2	1.75	0.50
7:B:824:U:O4	7:B:833:A:N1	2.43	0.50
7:B:989:G:O2'	7:B:990:A:C5'	2.59	0.50
7:B:992:C:O2'	7:B:993:G:H5'	2.11	0.50
19:N:10:LEU:HB3	19:N:17:ARG:HH22	1.77	0.50
22:Q:75:TYR:CD1	22:Q:79:ILE:HD11	2.46	0.50
24:S:9:HIS:H	24:S:102:HIS:CD2	2.30	0.50
24:S:21:ALA:HA	24:S:24:ILE:CG1	2.41	0.50
7:B:323:C:H5	10:E:165:HIS:CD2	2.29	0.50
10:E:127:GLU:CA	10:E:157:LEU:HD22	2.32	0.50
7:B:66:C:H2'	7:B:67:U:H5'	1.93	0.50
7:B:93:G:H2'	7:B:94:A:H8	1.76	0.50
7:B:607:U:H2'	7:B:608:A:H5'	1.92	0.50
18:M:6:ARG:O	18:M:8:LYS:HB2	2.11	0.50
25:T:58:VAL:HA	25:T:85:VAL:HA	1.93	0.50
16:K:66:LYS:HG3	16:K:81:GLY:H	1.76	0.50
18:M:86:LYS:CG	18:M:87:GLY:N	2.71	0.50
18:M:77:PRO:HG3	18:M:86:LYS:HZ3	1.77	0.50
7:B:2562:U:H2'	7:B:2563:U:C5'	2.41	0.50
7:B:662:G:C2'	7:B:663:G:H5'	2.41	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2148:G:H8	7:B:2148:G:O5'	1.95	0.50
7:B:1912:A:C8	7:B:1918:A:H2	2.28	0.50
7:B:1041:G:C2	7:B:1042:G:C5	2.99	0.50
22:Q:4:LYS:HB2	22:Q:4:LYS:HZ3	1.74	0.50
7:B:2605:U:C2	7:B:2606:C:C5	3.00	0.50
7:B:1921:G:O2'	7:B:1922:G:H5'	2.12	0.50
7:B:2312:U:H5'	11:F:68:LYS:O	2.11	0.50
1:O:9:ARG:O	1:O:12:ARG:N	2.44	0.50
4:3:34:LYS:HD2	4:3:34:LYS:N	2.27	0.50
7:B:55:G:C2	7:B:116:C:C2	3.00	0.50
7:B:1897:G:N1	7:B:1898:U:O2	2.45	0.50
7:B:2027:G:C2	7:B:2028:U:C2	2.99	0.50
7:B:2697:G:C8	7:B:2698:U:C5	2.99	0.50
7:B:465:G:C2	7:B:466:A:N1	2.80	0.50
7:B:49:A:H1'	7:B:51:G:C5	2.47	0.50
7:B:953:G:HO2'	7:B:2266:A:P	2.34	0.50
8:C:140:VAL:C	8:C:193:GLU:HB2	2.31	0.50
8:C:208:GLY:C	8:C:210:ALA:H	2.15	0.50
8:C:229:HIS:ND1	8:C:231:HIS:CD2	2.80	0.50
9:D:122:VAL:CA	9:D:128:ARG:HE	2.24	0.50
7:B:2574:G:H21	9:D:147:GLY:CA	2.25	0.50
6:A:43:C:O2	11:F:91:ARG:HD2	2.12	0.50
7:B:2666:C:H41	12:G:108:PHE:HA	1.76	0.50
12:G:148:ARG:HH21	12:G:153:PRO:CG	2.18	0.50
15:J:11:VAL:HG12	15:J:43:GLU:OE2	2.12	0.50
16:K:2:ILE:HG21	16:K:67:LYS:CD	2.41	0.50
7:B:1275:A:C6	19:N:16:HIS:CE1	2.99	0.50
19:N:4:ARG:CA	19:N:4:ARG:NE	2.75	0.50
7:B:994:C:H3'	22:Q:50:ARG:HH22	1.76	0.50
7:B:305:C:C4	7:B:306:U:C5	2.99	0.50
10:E:3:LEU:HD11	10:E:194:LYS:O	2.10	0.50
29:X:16:THR:O	29:X:16:THR:HG23	2.10	0.50
29:X:22:LEU:HD22	29:X:25:GLN:HE22	1.76	0.50
7:B:656:G:H2'	7:B:657:U:C6	2.47	0.50
9:D:77:ARG:HB2	9:D:77:ARG:CZ	2.40	0.50
23:R:32:THR:HA	23:R:66:HIS:CD2	2.47	0.50
11:F:7:TYR:O	11:F:12:VAL:HG23	2.10	0.50
7:B:625:G:N2	7:B:626:A:C2	2.80	0.50
7:B:617:G:OP1	10:E:102:ARG:HD3	2.10	0.50
6:A:79:G:H2'	6:A:80:U:O4'	2.11	0.50
7:B:906:U:C6	7:B:906:U:H3'	2.46	0.50
12:G:93:TYR:CD1	12:G:93:TYR:N	2.78	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:848:C:O2'	7:B:849:A:H5'	2.11	0.50
7:B:2633:G:H2'	7:B:2634:A:O4'	2.10	0.50
7:B:2810:A:O3'	9:D:61:THR:HG22	2.11	0.50
25:T:59:ASN:HB2	25:T:84:TYR:HB2	1.92	0.50
7:B:2892:G:H8	7:B:2892:G:H3'	1.75	0.50
7:B:143:C:H2'	25:T:3:ARG:NH1	2.27	0.50
7:B:1040:A:N1	7:B:1041:G:C8	2.79	0.50
7:B:1984:G:C6	7:B:1985:C:C4	3.00	0.50
7:B:2348:U:C6	7:B:2348:U:H3'	2.45	0.50
3:2:9:VAL:O	3:2:12:ARG:N	2.45	0.50
6:A:113:C:C5	6:A:114:C:H5	2.29	0.50
7:B:1350:C:C5	7:B:1351:C:H5	2.29	0.50
7:B:1361:G:H2'	7:B:1362:C:C6	2.46	0.50
7:B:1368:G:O2'	7:B:1369:G:H5'	2.11	0.50
7:B:1359:A:N7	7:B:1373:A:N1	2.59	0.50
7:B:187:G:C2	7:B:210:C:O2	2.64	0.50
7:B:2023:C:H2'	7:B:2024:G:C8	2.46	0.50
4:3:39:ARG:NH2	7:B:2363:G:H5''	2.27	0.50
5:4:7:VAL:HG13	7:B:2467:C:OP1	2.11	0.50
7:B:741:U:N3	7:B:757:G:C2	2.80	0.50
8:C:68:ARG:NH1	8:C:127:ASN:HA	2.26	0.50
9:D:16:THR:O	9:D:17:GLU:HB2	2.12	0.50
13:H:36:ALA:O	13:H:37:VAL:CG2	2.59	0.50
20:O:17:LYS:C	20:O:20:GLU:HG2	2.31	0.50
22:Q:39:ILE:HG13	22:Q:40:LYS:H	1.76	0.50
23:R:21:ARG:O	23:R:22:LEU:C	2.49	0.50
24:S:11:ARG:CG	24:S:11:ARG:NH1	2.70	0.50
31:Z:3:LYS:CE	31:Z:29:GLY:HA3	2.42	0.50
31:Z:48:GLN:O	31:Z:52:ALA:N	2.45	0.50
7:B:321:U:H1'	10:E:159:LEU:CD1	2.42	0.50
7:B:321:U:C4	7:B:341:C:H4'	2.46	0.50
29:X:40:SER:OG	29:X:42:LEU:HD23	2.12	0.50
22:Q:71:ASN:O	22:Q:72:GLY:C	2.50	0.50
7:B:638:G:N1	7:B:639:U:C2	2.80	0.50
17:L:85:VAL:CG1	17:L:86:GLU:H	2.20	0.50
7:B:919:U:C4	7:B:920:A:C5	3.00	0.50
7:B:2810:A:H2'	7:B:2811:G:O4'	2.11	0.50
7:B:356:G:H3'	7:B:356:G:C8	2.47	0.50
25:T:18:GLU:O	25:T:20:ALA:O	2.30	0.50
14:I:24:GLY:O	14:I:27:LEU:HD23	2.12	0.50
20:O:86:GLY:C	20:O:87:ILE:HG23	2.32	0.50
13:H:84:ALA:O	13:H:91:PHE:CE1	2.64	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:K:39:ILE:HD12	16:K:40:LYS:N	2.24	0.50
7:B:1788:C:H5''	33:B:5312:HOH:O	2.10	0.50
26:U:21:ARG:CG	26:U:21:ARG:NH1	2.73	0.50
31:Z:63:ARG:O	31:Z:67:PRO:HD2	2.12	0.50
26:U:51:LEU:O	26:U:53:GLN:N	2.45	0.50
20:O:16:ARG:NE	20:O:16:ARG:CA	2.73	0.50
9:D:202:ILE:O	9:D:202:ILE:HG22	2.10	0.50
7:B:390:U:O5'	7:B:390:U:H6	1.94	0.50
7:B:2295:C:O2	7:B:2295:C:H2'	2.10	0.50
7:B:326:G:H2'	7:B:327:G:H8	1.75	0.50
23:R:58:VAL:O	23:R:59:ILE:HB	2.10	0.50
13:H:86:ASP:N	13:H:86:ASP:OD1	2.42	0.50
7:B:1153:C:N4	7:B:1154:G:C6	2.79	0.50
7:B:1359:A:H2'	7:B:1360:G:O4'	2.11	0.50
7:B:1675:C:C5	7:B:1676:A:C5	3.00	0.50
7:B:1824:G:O2'	8:C:249:VAL:HG11	2.12	0.50
7:B:2039:U:H6	7:B:2039:U:C5'	2.25	0.50
7:B:20:C:H2'	7:B:21:A:C8	2.44	0.50
7:B:2697:G:N2	7:B:2711:A:C4	2.79	0.50
7:B:2736:A:C2	7:B:2769:U:O2	2.65	0.50
7:B:2751:G:C2'	7:B:2752:C:H6	2.25	0.50
7:B:2884:U:C6	7:B:2884:U:C3'	2.89	0.50
7:B:743:A:C5	7:B:744:U:C5	2.99	0.50
7:B:769:U:H2'	7:B:770:G:C8	2.45	0.50
7:B:837:C:H6	7:B:837:C:O5'	1.95	0.50
8:C:11:GLY:O	8:C:12:ARG:CB	2.59	0.50
8:C:34:GLU:OE1	8:C:35:LYS:N	2.45	0.50
11:F:63:LYS:O	11:F:88:VAL:HG22	2.12	0.50
13:H:32:PRO:CD	13:H:33:GLN:H	2.22	0.50
18:M:124:LEU:CD2	18:M:124:LEU:N	2.75	0.50
24:S:17:VAL:HA	24:S:20:VAL:HG12	1.94	0.50
7:B:62:U:H3'	7:B:63:A:C8	2.47	0.50
29:X:41:HIS:O	29:X:42:LEU:C	2.48	0.50
7:B:637:A:H4'	7:B:638:G:C4'	2.42	0.50
17:L:77:ILE:HD12	17:L:77:ILE:O	2.11	0.50
7:B:872:U:H3'	7:B:872:U:O2	2.12	0.50
7:B:1338:G:C2'	7:B:1339:G:H5'	2.42	0.50
7:B:2282:G:C4	7:B:2425:A:N1	2.80	0.50
6:A:69:G:H3'	6:A:70:C:C6	2.46	0.50
17:L:98:ALA:CB	17:L:101:ILE:HD11	2.42	0.50
7:B:1193:G:N1	7:B:1194:A:C4	2.80	0.50
11:F:45:ASP:O	11:F:45:ASP:OD1	2.29	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:10:A:H2'	7:B:11:C:C6	2.47	0.50
7:B:2476:A:H2	7:B:2481:G:O6	1.95	0.50
7:B:179:C:H5'	7:B:180:G:OP2	2.12	0.50
7:B:1461:C:H2'	7:B:1462:C:C6	2.47	0.50
7:B:405:U:H4'	7:B:405:U:OP2	2.11	0.50
24:S:50:VAL:HG23	24:S:50:VAL:O	2.10	0.50
4:3:25:HIS:ND1	4:3:42:HIS:O	2.45	0.50
7:B:1234:U:C2'	7:B:1235:G:O5'	2.60	0.50
7:B:1307:A:C5	7:B:1308:A:C8	3.00	0.50
7:B:1368:G:H2'	7:B:1369:G:C8	2.46	0.50
7:B:1452:G:O2'	7:B:1453:A:OP2	2.28	0.50
7:B:1332:G:O6	7:B:1609:A:C8	2.65	0.50
7:B:1677:A:C2	7:B:1678:A:N3	2.80	0.50
7:B:2052:A:O5'	7:B:2052:A:H8	1.95	0.50
7:B:2243:U:C2	7:B:2244:U:C5	3.00	0.50
7:B:2269:G:OP1	33:B:5395:HOH:O	2.20	0.50
7:B:2360:G:C2'	7:B:2361:G:O5'	2.60	0.50
7:B:250:G:H5'	17:L:60:ARG:NE	2.27	0.50
7:B:2708:G:C4	7:B:2709:G:C8	2.99	0.50
7:B:2759:G:C2	7:B:2760:C:C6	2.99	0.50
7:B:784:G:OP1	7:B:2588:G:H5''	2.12	0.50
7:B:826:U:OP1	7:B:2428:G:H3'	2.12	0.50
8:C:22:GLU:CA	8:C:202:ARG:HE	2.24	0.50
8:C:32:LEU:HD12	8:C:32:LEU:N	2.26	0.50
9:D:12:THR:OG1	9:D:19:GLY:O	2.30	0.50
15:J:36:LEU:O	15:J:51:GLY:CA	2.58	0.50
18:M:61:GLY:HA3	18:M:105:MET:SD	2.52	0.50
20:O:25:ARG:HH21	20:O:40:ILE:CD1	2.24	0.50
2:1:14:ALA:HA	2:1:48:TYR:CG	2.47	0.50
7:B:322:A:H2'	7:B:322:A:O5'	2.11	0.50
10:E:17:THR:HG23	10:E:18:THR:N	2.26	0.50
10:E:191:ASP:C	10:E:194:LYS:HZ3	2.14	0.50
26:U:40:LEU:O	26:U:41:VAL:HB	2.12	0.50
29:X:27:ASN:C	29:X:29:ARG:H	2.15	0.50
7:B:528:A:H2	7:B:2043:C:H4'	1.73	0.50
9:D:7:LYS:CB	9:D:201:LEU:HD21	2.32	0.50
18:M:4:PRO:HG2	18:M:43:ALA:O	2.12	0.50
14:I:16:MET:O	14:I:17:ALA:HB2	2.11	0.50
7:B:2892:G:H5''	7:B:2894:G:N2	2.27	0.50
7:B:2254:C:C5	7:B:2255:G:N7	2.80	0.50
7:B:855:G:C4	7:B:923:G:N2	2.80	0.50
16:K:88:ASN:OD1	16:K:91:SER:HB2	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:4:18:LYS:CE	5:4:19:ARG:H	2.24	0.50
5:4:24:ARG:CB	5:4:36:ARG:C	2.80	0.50
7:B:1010:A:C2'	7:B:1011:G:O5'	2.59	0.50
7:B:1134:A:C2'	7:B:1134:A:O5'	2.60	0.50
7:B:1215:G:C3'	7:B:1216:G:H5''	2.42	0.50
7:B:1275:A:H2'	7:B:1276:A:O5'	2.11	0.50
7:B:1286:A:O2'	7:B:1287:A:H5''	2.12	0.50
7:B:1357:C:H2'	7:B:1358:G:O4'	2.12	0.50
7:B:1570:A:C5	7:B:1571:A:C5	3.00	0.50
7:B:2025:C:P	9:D:154:LYS:HZ2	2.34	0.50
7:B:2279:G:H5''	7:B:2279:G:C8	2.46	0.50
7:B:2261:C:N3	7:B:2280:G:N2	2.59	0.50
7:B:2316:G:C2	7:B:2317:A:C8	3.00	0.50
7:B:539:G:H21	7:B:540:C:H1'	1.76	0.50
7:B:571:U:C5	7:B:575:A:N6	2.80	0.50
7:B:577:G:H2'	7:B:578:G:C8	2.47	0.50
7:B:587:C:N3	7:B:671:C:C6	2.79	0.50
7:B:812:C:H2'	7:B:813:U:H5'	1.94	0.50
7:B:2821:A:OP2	9:D:115:GLY:CA	2.60	0.50
10:E:52:VAL:C	10:E:53:THR:OG1	2.49	0.50
7:B:2305:U:C6	11:F:151:LEU:N	2.80	0.50
13:H:35:LYS:HZ1	13:H:37:VAL:HG22	1.76	0.50
7:B:506:G:H4'	7:B:507:A:O4'	2.11	0.50
29:X:26:PHE:C	29:X:29:ARG:HB2	2.32	0.50
2:1:34:GLU:HB3	2:1:50:GLU:HB2	1.93	0.50
7:B:42:A:H5''	7:B:43:G:OP2	2.11	0.50
18:M:74:THR:HA	18:M:88:ASN:HA	1.94	0.50
16:K:48:PRO:C	16:K:49:ARG:HD3	2.32	0.50
12:G:60:GLY:HA2	12:G:63:GLN:HB2	1.94	0.50
19:N:67:PHE:CD1	19:N:67:PHE:O	2.64	0.50
7:B:2655:G:N2	7:B:2664:G:C4	2.80	0.50
7:B:473:G:C2'	7:B:474:G:H5'	2.41	0.50
7:B:1444:G:H2'	7:B:1445:G:C8	2.47	0.50
11:F:56:LEU:O	11:F:59:ILE:HG22	2.12	0.50
26:U:3:LYS:C	26:U:4:ILE:HG12	2.32	0.50
7:B:718:A:H3'	7:B:719:C:H6	1.76	0.50
7:B:1515:A:H2'	7:B:1516:G:O4'	2.11	0.50
30:Y:7:THR:OG1	30:Y:55:LYS:O	2.27	0.50
7:B:390:U:H4'	7:B:391:A:H5''	1.92	0.50
7:B:696:G:C6	7:B:767:U:O2	2.64	0.50
14:I:105:LEU:HD23	14:I:108:ILE:HD12	1.94	0.50
23:R:59:ILE:O	23:R:59:ILE:HG22	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:H:59:ALA:HA	13:H:62:LEU:HB2	1.92	0.50
6:A:61:G:C5	6:A:62:C:C5	3.00	0.50
1:0:29:VAL:HG22	1:0:32:THR:CG2	2.19	0.50
1:0:2:VAL:HG22	1:0:3:GLN:N	2.27	0.50
5:4:2:LYS:HD2	7:B:2526:G:H1'	1.93	0.50
7:B:115:C:H2'	7:B:116:C:H5'	1.94	0.50
7:B:1358:G:N7	7:B:1371:G:C6	2.80	0.50
7:B:1805:A:H2'	7:B:1806:C:C5'	2.42	0.50
7:B:191:A:H2'	7:B:192:C:O4'	2.12	0.50
7:B:2019:A:H2'	7:B:2020:A:O5'	2.11	0.50
7:B:2049:G:N2	7:B:2619:C:C2	2.80	0.50
7:B:2241:A:H2	7:B:2242:G:C4	2.30	0.50
7:B:2240:U:N3	7:B:2241:A:N7	2.59	0.50
7:B:2242:G:H2'	7:B:2243:U:O4'	2.11	0.50
7:B:197:A:N6	7:B:2430:A:H2'	2.27	0.50
7:B:2450:A:C2	7:B:2451:A:C4	3.00	0.50
7:B:2453:A:H2'	7:B:2454:G:O5'	2.11	0.50
7:B:2478:A:H5'	7:B:2478:A:C8	2.47	0.50
7:B:2524:G:H2'	7:B:2525:G:H8	1.76	0.50
1:0:3:GLN:HB3	7:B:2615:U:H1'	1.93	0.50
7:B:1452:G:C2	7:B:2702:G:C4	3.00	0.50
7:B:538:A:C6	7:B:539:G:C5	3.00	0.50
7:B:753:A:C2	7:B:754:U:C4	3.00	0.50
7:B:795:C:O2'	7:B:796:C:OP1	2.26	0.50
7:B:832:U:H2'	7:B:833:A:C8	2.47	0.50
8:C:193:GLU:C	8:C:194:VAL:HG22	2.32	0.50
8:C:21:PRO:HD2	8:C:202:ARG:HH12	1.75	0.50
8:C:256:THR:O	8:C:258:SER:N	2.45	0.50
8:C:36:ASN:HB3	8:C:63:ILE:N	2.26	0.50
9:D:108:ASP:OD1	9:D:207:VAL:HG22	2.12	0.50
10:E:60:TRP:CZ3	10:E:67:ARG:CB	2.95	0.50
11:F:133:GLU:O	11:F:134:GLN:O	2.30	0.50
12:G:163:TYR:N	12:G:163:TYR:CD2	2.68	0.50
13:H:25:TYR:CD1	13:H:31:VAL:HG21	2.47	0.50
15:J:79:GLY:C	15:J:81:ILE:N	2.65	0.50
19:N:103:ARG:HG3	19:N:103:ARG:O	2.11	0.50
19:N:33:ILE:HG23	19:N:113:ILE:O	2.11	0.50
6:A:28:C:C5'	20:O:31:THR:HG21	2.42	0.50
6:A:31:C:N4	20:O:32:PRO:CB	2.74	0.50
22:Q:59:LEU:O	22:Q:60:TRP:C	2.51	0.50
23:R:72:VAL:HG23	23:R:92:TRP:CE3	2.47	0.50
24:S:89:ALA:O	24:S:90:LYS:HB2	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2370:G:H2'	7:B:2371:G:O5'	2.12	0.50
29:X:17:GLU:HA	29:X:21:LEU:HB2	1.92	0.50
9:D:195:GLY:HA3	9:D:199:SER:OG	2.12	0.50
7:B:605:G:N2	7:B:624:C:C2	2.80	0.50
17:L:118:THR:HA	17:L:137:ALA:O	2.12	0.50
7:B:869:G:H2'	7:B:870:U:H6	1.77	0.50
7:B:282:A:H2'	7:B:283:G:C8	2.47	0.50
7:B:1088:A:N6	14:I:134:SER:OG	2.44	0.50
7:B:1548:A:C2	7:B:1549:A:C5	2.99	0.50
7:B:163:C:C2'	7:B:164:C:O4'	2.56	0.50
21:P:103:THR:HG22	21:P:105:LYS:HD3	1.94	0.50
7:B:2299:U:H3'	7:B:2299:U:H6	1.77	0.50
1:O:41:HIS:CD2	1:O:42:ILE:N	2.79	0.49
3:2:21:ARG:NH2	7:B:466:A:OP1	2.45	0.49
3:2:16:HIS:CG	3:2:44:VAL:O	2.64	0.49
4:3:32:LEU:HD22	4:3:34:LYS:HD3	1.94	0.49
7:B:1432:G:C2'	7:B:1433:A:H5'	2.42	0.49
7:B:1754:A:H2'	7:B:1755:A:C8	2.45	0.49
7:B:2027:G:C5	7:B:2028:U:C5	3.00	0.49
7:B:2452:C:C3'	7:B:2452:C:C6	2.93	0.49
7:B:2699:C:N3	7:B:2709:G:C6	2.80	0.49
7:B:458:G:N2	7:B:469:G:C4	2.80	0.49
7:B:539:G:C2'	7:B:540:C:H5'	2.42	0.49
7:B:540:C:C2	7:B:541:A:C8	3.00	0.49
7:B:856:G:H1'	28:W:23:LYS:HD2	1.94	0.49
8:C:20:ASN:CB	8:C:202:ARG:NH1	2.56	0.49
7:B:2595:G:H1	8:C:237:ARG:HH22	1.58	0.49
8:C:61:TYR:HD2	8:C:84:PRO:CD	2.25	0.49
12:G:85:LYS:HD3	12:G:164:ALA:HB3	1.92	0.49
15:J:37:ARG:HG3	15:J:118:MET:HE1	1.94	0.49
15:J:20:ALA:O	15:J:21:THR:C	2.50	0.49
15:J:85:LYS:HZ3	15:J:86:GLN:H	1.59	0.49
19:N:12:ARG:NH1	19:N:20:MET:SD	2.85	0.49
7:B:2820:A:OP1	19:N:5:LYS:HG2	2.12	0.49
20:O:53:THR:O	20:O:54:VAL:HB	2.12	0.49
21:P:52:ARG:O	21:P:52:ARG:HG2	2.11	0.49
10:E:27:LEU:C	10:E:29:HIS:N	2.62	0.49
9:D:6:GLY:HA2	9:D:201:LEU:HD13	1.94	0.49
7:B:1740:G:H2'	7:B:1741:C:C6	2.46	0.49
6:A:99:A:C2'	6:A:100:G:H5'	2.41	0.49
7:B:909:A:N1	7:B:912:C:C2	2.80	0.49
7:B:1315:C:H2'	7:B:1316:U:C6	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2258:C:H5'	7:B:2258:C:H6	1.76	0.49
9:D:191:GLY:O	9:D:192:ALA:CB	2.60	0.49
7:B:440:C:C5	7:B:441:U:H5	2.29	0.49
15:J:94:ALA:HA	15:J:97:PRO:HB3	1.94	0.49
17:L:75:ALA:O	17:L:108:ALA:O	2.30	0.49
7:B:268:C:H5''	7:B:268:C:C6	2.43	0.49
7:B:390:U:H4'	7:B:391:A:H5'	1.92	0.49
6:A:85:G:O2'	6:A:86:G:H5'	2.12	0.49
7:B:1478:G:C8	7:B:1478:G:C5'	2.95	0.49
7:B:1012:U:O4	15:J:30:THR:HG21	2.12	0.49
4:3:11:LYS:HD2	17:L:62:PRO:C	2.33	0.49
7:B:1283:G:C8	7:B:1283:G:C3'	2.95	0.49
7:B:1296:G:C2	7:B:1297:C:C5	3.00	0.49
7:B:149:A:C2	7:B:150:U:C2	2.99	0.49
7:B:2069:G:C6	7:B:2070:A:N7	2.80	0.49
7:B:208:C:H2'	7:B:209:C:C6	2.46	0.49
7:B:2305:U:H5''	11:F:130:GLY:CA	2.18	0.49
7:B:2466:C:H1'	18:M:118:LYS:HZ2	1.77	0.49
7:B:2478:A:H5''	7:B:2478:A:C8	2.38	0.49
7:B:2748:A:C4	7:B:2757:A:C6	3.00	0.49
7:B:371:A:C8	7:B:373:U:N3	2.80	0.49
7:B:523:C:H3'	7:B:523:C:H6	1.77	0.49
7:B:56:A:C2	7:B:115:C:O2	2.64	0.49
7:B:708:G:N2	7:B:724:U:H1'	2.27	0.49
7:B:771:G:N2	7:B:772:C:C2	2.80	0.49
7:B:795:C:HO2'	7:B:796:C:P	2.35	0.49
8:C:13:ARG:HG3	8:C:15:VAL:HG23	1.95	0.49
8:C:17:LYS:H	8:C:17:LYS:HE2	1.73	0.49
13:H:4:ILE:HG22	13:H:18:GLN:HB3	1.93	0.49
13:H:25:TYR:OH	31:Z:56:ARG:HD2	2.13	0.49
15:J:73:VAL:CG2	15:J:74:TYR:N	2.75	0.49
19:N:63:ARG:HA	19:N:80:PHE:HZ	1.76	0.49
21:P:52:ARG:HG3	21:P:54:LEU:HB2	1.94	0.49
23:R:10:LYS:CD	23:R:11:GLN:N	2.71	0.49
7:B:1225:G:OP1	23:R:90:ARG:NE	2.45	0.49
24:S:28:LYS:C	24:S:30:SER:N	2.66	0.49
28:W:36:ILE:HG21	28:W:69:GLU:OE2	2.11	0.49
10:E:127:GLU:HA	10:E:157:LEU:CD2	2.33	0.49
26:U:84:PHE:H	26:U:92:VAL:HB	1.76	0.49
29:X:22:LEU:HA	29:X:25:GLN:NE2	2.27	0.49
23:R:63:VAL:HG22	23:R:64:VAL:H	1.77	0.49
8:C:137:GLY:HA3	8:C:163:ILE:HG13	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:40:ARG:HA	18:M:92:TRP:CD1	2.47	0.49
18:M:43:ALA:O	18:M:45:GLN:N	2.45	0.49
7:B:1165:A:O5'	7:B:1165:A:H8	1.95	0.49
7:B:1054:A:H1'	7:B:1106:G:H21	1.78	0.49
7:B:1590:A:C6	7:B:1591:A:N6	2.80	0.49
7:B:2413:G:N2	7:B:2414:G:H1'	2.27	0.49
7:B:290:U:H2'	7:B:291:G:H8	1.77	0.49
7:B:257:C:H3'	7:B:258:G:C8	2.45	0.49
7:B:1343:G:C2	7:B:1384:A:H2	2.30	0.49
20:O:2:ASP:CB	20:O:4:LYS:HZ3	2.25	0.49
7:B:45:G:N2	7:B:434:U:H3	2.08	0.49
7:B:2088:A:C5	7:B:2089:C:C5	3.00	0.49
6:A:84:G:C6	6:A:85:G:N7	2.80	0.49
7:B:1487:U:C6	7:B:1487:U:H3'	2.46	0.49
7:B:1321:A:H8	7:B:1321:A:H5''	1.77	0.49
4:3:14:LYS:HB2	4:3:22:LYS:HE2	1.94	0.49
5:4:8:LYS:HB2	5:4:9:LYS:HD3	1.93	0.49
7:B:1263:U:C4	7:B:1264:A:C6	3.00	0.49
7:B:1434:A:C2'	7:B:1435:G:O5'	2.60	0.49
7:B:1642:G:C6	7:B:1643:G:N7	2.80	0.49
7:B:2090:A:N6	7:B:2091:C:N4	2.60	0.49
7:B:2461:A:H2'	7:B:2462:C:H6	1.78	0.49
7:B:2466:C:O5'	7:B:2466:C:H6	1.95	0.49
7:B:2500:U:O2	7:B:2504:U:C4	2.65	0.49
7:B:382:A:C2	7:B:383:C:N1	2.80	0.49
7:B:565:C:C4'	7:B:1253:A:N1	2.75	0.49
7:B:777:G:H5''	7:B:777:G:C8	2.40	0.49
7:B:786:C:H3'	7:B:786:C:C6	2.48	0.49
12:G:148:ARG:NH2	12:G:153:PRO:HD2	2.28	0.49
21:P:97:TYR:O	21:P:98:TYR:HB2	2.13	0.49
22:Q:36:GLN:O	22:Q:39:ILE:HG22	2.12	0.49
23:R:76:LYS:O	23:R:77:PHE:HB2	2.12	0.49
23:R:84:ARG:CZ	23:R:84:ARG:HB2	2.42	0.49
24:S:30:SER:C	24:S:32:ALA:N	2.65	0.49
31:Z:23:LYS:HG2	31:Z:24:ILE:N	2.25	0.49
7:B:301:G:H1'	7:B:302:C:O4'	2.12	0.49
17:L:92:LEU:O	17:L:93:ASN:C	2.50	0.49
7:B:79:C:N3	7:B:107:G:N2	2.54	0.49
7:B:1740:G:C2	7:B:1741:C:C2	3.00	0.49
17:L:110:VAL:HB	17:L:126:ARG:HH12	1.77	0.49
12:G:30:GLY:H	12:G:78:VAL:CG2	2.09	0.49
9:D:68:PHE:O	9:D:90:PHE:CB	2.57	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:86:MET:HG2	24:S:87:PRO:CD	2.43	0.49
17:L:26:GLY:O	17:L:27:LEU:C	2.50	0.49
7:B:227:A:N3	7:B:2407:A:H1'	2.27	0.49
7:B:2413:G:H2'	7:B:2414:G:O4'	2.12	0.49
7:B:1581:G:C6	7:B:1582:C:C5	3.00	0.49
14:I:89:SER:HA	14:I:97:VAL:HG22	1.93	0.49
6:A:84:G:C2	6:A:85:G:C8	3.00	0.49
7:B:1519:G:H5'	7:B:1520:U:OP2	2.12	0.49
7:B:1909:C:H2'	7:B:1910:G:O4'	2.12	0.49
7:B:1944:U:H2'	7:B:1944:U:O5'	2.11	0.49
4:3:51:LYS:O	4:3:53:ASP:N	2.45	0.49
7:B:120:U:H4'	7:B:121:G:H5'	1.93	0.49
7:B:1296:G:C2	7:B:1297:C:C6	3.01	0.49
7:B:1353:A:C6	7:B:1354:A:N6	2.80	0.49
7:B:1782:U:O5'	7:B:1782:U:H6	1.94	0.49
7:B:1838:C:C6	7:B:1898:U:C5	3.00	0.49
7:B:1831:G:C4	7:B:1975:G:N2	2.81	0.49
7:B:2511:U:C2'	7:B:2512:C:H5'	2.42	0.49
7:B:2694:G:H8	7:B:2694:G:C5'	2.26	0.49
7:B:2740:A:H2'	7:B:2741:A:C8	2.47	0.49
7:B:375:G:H2'	7:B:376:G:O4'	2.13	0.49
7:B:396:G:N2	7:B:397:U:H1'	2.26	0.49
7:B:460:A:C2	7:B:470:A:C2	3.01	0.49
7:B:688:U:C2'	7:B:689:A:H5''	2.40	0.49
8:C:155:ARG:O	8:C:159:THR:HG23	2.13	0.49
8:C:21:PRO:C	8:C:202:ARG:CZ	2.81	0.49
9:D:157:LYS:HE3	15:J:80:HIS:CB	2.42	0.49
13:H:5:LEU:HG	13:H:13:GLY:HA3	1.95	0.49
15:J:87:ALA:O	15:J:88:THR:HG23	2.12	0.49
17:L:40:SER:O	17:L:41:ARG:HG2	2.11	0.49
18:M:79:ALA:O	18:M:80:VAL:O	2.30	0.49
19:N:37:THR:OG1	19:N:40:LYS:HD2	2.13	0.49
20:O:25:ARG:NH2	20:O:40:ILE:HD12	2.26	0.49
9:D:14:ILE:HG21	21:P:78:PRO:HB2	1.94	0.49
22:Q:30:VAL:HG21	22:Q:33:VAL:HG23	1.93	0.49
31:Z:49:ARG:CG	31:Z:50:ASP:N	2.74	0.49
10:E:4:VAL:HG23	10:E:14:VAL:CG1	2.42	0.49
10:E:181:ILE:HG23	17:L:13:LYS:HB3	1.94	0.49
7:B:105:C:H2'	7:B:106:C:O5'	2.12	0.49
7:B:1708:C:O2'	7:B:1709:U:H5'	2.13	0.49
7:B:666:A:N3	7:B:667:U:C5	2.81	0.49
7:B:217:A:C2	7:B:218:A:H1'	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:V:70:ILE:CG1	27:V:71:LYS:N	2.75	0.49
9:D:67:HIS:O	9:D:68:PHE:HD1	1.94	0.49
7:B:284:U:H5'	7:B:285:G:OP2	2.13	0.49
12:G:121:THR:CG2	12:G:122:ALA:N	2.75	0.49
7:B:2195:U:C2	7:B:2196:C:C5	3.00	0.49
7:B:1199:U:N3	7:B:1247:A:H2	2.10	0.49
7:B:2186:G:C5	7:B:2187:U:C2	3.01	0.49
7:B:1866:A:H5'	7:B:1867:G:OP2	2.13	0.49
1:O:24:VAL:HB	1:O:26:SER:CB	2.41	0.49
7:B:1096:A:H8	7:B:1096:A:O5'	1.95	0.49
7:B:2604:U:O2	7:B:2605:U:C6	2.65	0.49
14:I:73:PRO:O	14:I:112:LYS:HD3	2.12	0.49
7:B:1278:C:OP1	19:N:36:THR:HG22	2.12	0.49
13:H:103:VAL:HA	13:H:106:ALA:HB3	1.94	0.49
7:B:2246:G:O5'	7:B:2246:G:H8	1.95	0.49
27:V:75:GLN:OE1	27:V:75:GLN:HA	2.13	0.49
1:O:39:ARG:HH11	7:B:2816:G:H4'	1.77	0.49
4:3:25:HIS:NE2	4:3:46:LYS:HG2	2.27	0.49
4:3:7:ARG:HA	4:3:10:ALA:CB	2.42	0.49
5:4:24:ARG:CB	5:4:36:ARG:CA	2.86	0.49
7:B:1131:G:C4	7:B:2025:C:O2'	2.66	0.49
7:B:51:G:N3	7:B:119:A:C2	2.80	0.49
7:B:1272:A:O2'	7:B:1273:U:H5'	2.12	0.49
7:B:1298:C:O4'	7:B:1302:A:C2	2.66	0.49
7:B:1351:C:N3	7:B:1381:G:O6	2.45	0.49
7:B:1663:G:H5'	7:B:1663:G:C8	2.41	0.49
7:B:783:A:H4'	7:B:1779:U:O2	2.13	0.49
7:B:1819:A:H1'	7:B:1821:A:C5	2.47	0.49
7:B:1855:U:C5	7:B:1856:U:C5	3.00	0.49
7:B:1972:G:N3	7:B:1972:G:H2'	2.28	0.49
7:B:2300:C:C2'	7:B:2301:C:H5'	2.43	0.49
7:B:2454:G:C5	7:B:2455:G:N7	2.80	0.49
7:B:2489:U:H2'	7:B:2490:G:H5'	1.93	0.49
7:B:2577:A:C4'	7:B:2612:C:N4	2.76	0.49
7:B:556:A:H2	7:B:557:C:H1'	1.76	0.49
7:B:448:U:C5	7:B:583:G:H1'	2.47	0.49
7:B:677:A:O2'	7:B:678:C:H5'	2.11	0.49
7:B:5:A:H5''	7:B:6:A:OP2	2.12	0.49
7:B:796:C:H2'	7:B:797:G:O4'	2.12	0.49
7:B:812:C:H2'	7:B:813:U:C5'	2.43	0.49
7:B:843:G:O6	7:B:844:A:C6	2.64	0.49
7:B:1804:C:P	8:C:254:LYS:HD2	2.52	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:108:PHE:HZ	12:G:151:ARG:CG	2.17	0.49
13:H:47:PHE:HD2	13:H:48:GLU:N	2.10	0.49
18:M:101:VAL:HG11	18:M:113:ALA:HB1	1.94	0.49
19:N:92:GLY:O	19:N:94:TYR:N	2.45	0.49
20:O:73:ALA:O	20:O:76:LYS:HB2	2.11	0.49
7:B:322:A:C2	7:B:340:A:C6	3.00	0.49
7:B:482:A:N7	7:B:506:G:C4	2.80	0.49
10:E:198:GLU:O	10:E:199:MET:HB2	2.11	0.49
17:L:19:LEU:CD1	17:L:19:LEU:N	2.58	0.49
7:B:93:G:C5	7:B:94:A:C5	3.01	0.49
7:B:94:A:C8	7:B:94:A:O5'	2.66	0.49
7:B:86:G:OP1	26:U:29:SER:O	2.31	0.49
9:D:31:ALA:HB3	9:D:95:SER:N	2.27	0.49
12:G:16:VAL:HG12	12:G:17:LYS:N	2.20	0.49
27:V:70:ILE:HG12	27:V:71:LYS:N	2.27	0.49
7:B:866:A:C8	7:B:914:G:C6	3.01	0.49
16:K:47:ILE:HB	16:K:48:PRO:HD2	1.95	0.49
7:B:442:G:C2	7:B:444:C:C5	3.01	0.49
7:B:2859:G:H2'	7:B:2860:A:H5''	1.95	0.49
7:B:2804:U:C4	7:B:2805:C:N4	2.80	0.49
7:B:1495:A:H2	7:B:1578:U:O2	1.96	0.49
17:L:43:GLY:O	17:L:45:GLY:N	2.46	0.49
7:B:1584:U:H5''	7:B:1585:C:C5	2.47	0.49
11:F:76:PHE:HD1	11:F:78:ILE:HD12	1.77	0.49
7:B:1083:U:OP2	7:B:1083:U:H6	1.96	0.49
3:2:46:LYS:O	3:2:46:LYS:HE3	2.12	0.49
4:3:13:PHE:O	4:3:14:LYS:HB2	2.12	0.49
7:B:973:A:C8	7:B:1188:U:C2	3.01	0.49
7:B:1225:G:C5	7:B:1226:A:C6	3.01	0.49
7:B:1299:G:H5''	7:B:1300:G:OP1	2.12	0.49
7:B:1658:C:N3	7:B:1659:G:N7	2.61	0.49
7:B:201:C:O2'	7:B:202:U:H5'	2.13	0.49
7:B:2028:U:C2'	7:B:2029:G:C8	2.93	0.49
1:0:15:ARG:HA	7:B:2046:G:H4'	1.94	0.49
7:B:2394:C:OP1	17:L:64:PHE:CD2	2.66	0.49
7:B:2060:A:N3	7:B:2502:G:C4	2.81	0.49
7:B:2574:G:C4	7:B:2575:C:C6	2.99	0.49
7:B:2820:A:OP1	19:N:5:LYS:CG	2.60	0.49
7:B:371:A:N6	7:B:401:A:H3'	2.26	0.49
7:B:394:C:H2'	7:B:394:C:O2	2.11	0.49
7:B:445:C:O2'	7:B:446:G:H5'	2.12	0.49
7:B:534:U:H3	7:B:559:G:H1	1.60	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:575:A:H2'	7:B:576:U:H5''	1.95	0.49
7:B:581:C:H2'	7:B:582:A:C8	2.47	0.49
7:B:771:G:C6	7:B:772:C:N4	2.81	0.49
7:B:911:A:C2	7:B:2277:G:N3	2.79	0.49
8:C:229:HIS:CE1	8:C:231:HIS:NE2	2.80	0.49
9:D:125:TRP:C	9:D:127:PHE:H	2.13	0.49
10:E:50:ALA:O	10:E:51:GLU:HB3	2.12	0.49
15:J:44:TYR:CZ	15:J:49:ASP:O	2.64	0.49
18:M:55:ARG:O	18:M:57:VAL:N	2.44	0.49
19:N:32:GLU:HA	19:N:115:LEU:HD21	1.93	0.49
19:N:24:MET:CE	19:N:44:LEU:HD13	2.42	0.49
21:P:45:VAL:HG13	21:P:65:ASN:HD21	1.77	0.49
22:Q:82:LEU:O	22:Q:88:GLU:CG	2.59	0.49
24:S:69:LEU:HB3	24:S:107:VAL:HB	1.93	0.49
24:S:10:ALA:O	24:S:11:ARG:HB3	2.11	0.49
28:W:42:THR:OG1	28:W:66:VAL:N	2.46	0.49
7:B:307:G:H2'	7:B:309:A:OP2	2.12	0.49
7:B:311:A:H3'	7:B:312:G:C8	2.48	0.49
7:B:98:G:H3'	7:B:99:U:H5''	1.93	0.49
29:X:28:LEU:HD21	29:X:35:GLY:HA3	1.94	0.49
7:B:666:A:OP2	17:L:48:ARG:HD2	2.11	0.49
18:M:41:LEU:HD23	18:M:41:LEU:N	2.26	0.49
18:M:46:ILE:HD12	18:M:69:PRO:HG3	1.93	0.49
14:I:17:ALA:O	14:I:18:ASN:CB	2.59	0.49
7:B:2303:G:C6	7:B:2304:G:C8	3.01	0.49
7:B:1729:U:H3'	7:B:1730:C:C4'	2.33	0.49
7:B:361:G:O2'	7:B:362:A:H5'	2.13	0.49
7:B:2195:U:O2'	7:B:2196:C:H5'	2.13	0.49
11:F:106:ALA:HB1	11:F:136:ILE:CG2	2.41	0.49
7:B:2189:U:C2	7:B:2190:G:N7	2.80	0.49
7:B:2190:G:C2'	7:B:2191:A:H5'	2.43	0.49
7:B:2606:C:H2'	7:B:2607:G:H5'	1.94	0.49
7:B:1471:G:H1	7:B:1520:U:H3	1.59	0.49
12:G:45:ALA:HB3	12:G:48:THR:OG1	2.13	0.49
3:2:12:ARG:C	3:2:14:ARG:H	2.16	0.49
7:B:1018:U:C2	7:B:1019:U:C5	3.01	0.49
7:B:1225:G:C5'	23:R:90:ARG:NE	2.74	0.49
7:B:1364:G:H5''	7:B:1365:A:OP2	2.13	0.49
7:B:1429:G:H2'	7:B:1430:G:C5'	2.43	0.49
7:B:1803:A:H2'	7:B:1804:C:O4'	2.13	0.49
7:B:1822:C:O2'	7:B:1823:G:H5''	2.13	0.49
7:B:529:A:C6	7:B:2042:A:C2	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:208:C:N3	7:B:209:C:C5	2.80	0.49
7:B:2265:U:O2	7:B:2276:G:C2	2.65	0.49
7:B:2331:G:H4'	28:W:69:GLU:CG	2.38	0.49
7:B:2057:G:C2	7:B:2612:C:O2	2.65	0.49
7:B:2898:U:H2'	7:B:2899:A:C8	2.47	0.49
8:C:211:ARG:O	8:C:213:ARG:N	2.46	0.49
8:C:179:GLU:OE1	8:C:267:VAL:HG23	2.13	0.49
10:E:64:GLY:C	10:E:66:GLY:H	2.16	0.49
15:J:7:LYS:HG2	15:J:48:VAL:HG11	1.95	0.49
19:N:113:ILE:O	19:N:113:ILE:HG22	2.13	0.49
19:N:6:SER:O	19:N:7:GLY:C	2.48	0.49
20:O:104:GLN:O	20:O:105:ALA:C	2.51	0.49
22:Q:26:ALA:O	22:Q:30:VAL:CG2	2.61	0.49
24:S:66:ILE:CG2	24:S:67:ASP:N	2.75	0.49
28:W:45:HIS:NE2	28:W:55:ASP:OD2	2.34	0.49
2:I:15:GLY:CA	2:I:47:ILE:HG21	2.42	0.49
10:E:22:ASP:O	10:E:110:SER:O	2.31	0.49
7:B:346:A:C3'	7:B:347:A:H5''	2.43	0.49
7:B:65:U:OP1	25:T:76:ARG:HB2	2.11	0.49
8:C:168:GLY:O	8:C:169:ALA:HB3	2.13	0.49
7:B:604:G:H2'	7:B:605:G:C8	2.48	0.49
17:L:141:LYS:C	17:L:142:ILE:HG23	2.33	0.49
7:B:486:C:O4'	24:S:60:HIS:CG	2.66	0.49
7:B:1099:G:C5'	7:B:1099:G:C8	2.91	0.49
7:B:418:C:C4	7:B:419:U:C4	3.00	0.49
7:B:418:C:C2	7:B:419:U:C5	3.00	0.49
7:B:343:C:C2'	7:B:344:A:H5'	2.39	0.49
7:B:1042:G:C5	7:B:1043:C:C4	3.01	0.49
7:B:1118:C:O5'	7:B:1119:U:OP2	2.31	0.49
7:B:1384:A:O2'	7:B:1385:A:H5'	2.13	0.49
7:B:1539:U:C2	7:B:1540:G:C8	3.00	0.49
20:O:4:LYS:HB2	20:O:4:LYS:HZ3	1.78	0.49
7:B:633:A:OP1	17:L:71:ALA:CB	2.61	0.49
11:F:177:ARG:HG2	11:F:178:LYS:N	2.28	0.49
20:O:111:ARG:O	20:O:113:ALA:O	2.30	0.49
7:B:1977:A:N1	7:B:1978:A:N3	2.60	0.49
7:B:1159:U:H2'	7:B:1160:G:C8	2.48	0.49
7:B:126:A:O2'	7:B:127:A:C5'	2.58	0.49
7:B:1324:G:N2	7:B:1331:G:C4	2.80	0.49
7:B:1821:A:C2	7:B:1822:C:C4	3.00	0.49
7:B:188:G:H5''	31:Z:12:ILE:CG2	2.42	0.49
7:B:197:A:N3	7:B:197:A:H2'	2.26	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2013:A:H2'	7:B:2013:A:N3	2.27	0.49
7:B:2030:A:H4'	7:B:2031:A:C5'	2.42	0.49
7:B:2278:A:N6	28:W:11:ASN:O	2.45	0.49
7:B:2579:C:O4'	9:D:138:LEU:HD22	2.13	0.49
7:B:2593:U:C5	7:B:2594:C:H5	2.30	0.49
7:B:2851:A:H2'	7:B:2852:G:C8	2.48	0.49
7:B:452:G:C2	7:B:458:G:C5	3.01	0.49
7:B:539:G:H2'	7:B:540:C:O4'	2.13	0.49
7:B:743:A:C6	7:B:744:U:C5	3.00	0.49
7:B:797:G:C6	7:B:798:G:C5	3.01	0.49
7:B:834:G:O5'	7:B:834:G:H8	1.96	0.49
11:F:33:ILE:CG1	11:F:34:THR:H	2.17	0.49
13:H:2:GLN:O	13:H:3:VAL:HG13	2.13	0.49
15:J:22:GLY:O	15:J:24:THR:N	2.45	0.49
15:J:81:ILE:C	15:J:83:GLY:H	2.14	0.49
21:P:49:ILE:C	21:P:50:ARG:HD3	2.33	0.49
28:W:3:LYS:HZ3	28:W:10:ARG:HE	1.59	0.49
7:B:340:A:H3'	7:B:341:C:C6	2.48	0.49
7:B:482:A:N7	7:B:506:G:N1	2.61	0.49
7:B:92:U:C4	7:B:93:G:C5	3.01	0.49
25:T:5:GLU:O	25:T:7:LEU:N	2.46	0.49
7:B:65:U:OP1	25:T:76:ARG:N	2.46	0.49
26:U:83:GLY:HA2	26:U:92:VAL:CG2	2.43	0.49
7:B:608:A:C8	7:B:621:A:N6	2.81	0.49
7:B:2633:G:C6	7:B:2634:A:C5	3.01	0.49
7:B:283:G:N2	7:B:358:U:C2	2.81	0.49
25:T:41:ALA:C	25:T:43:ILE:H	2.15	0.49
13:H:84:ALA:O	13:H:91:PHE:HE1	1.96	0.49
7:B:1829:A:N7	7:B:1830:C:C5	2.80	0.49
11:F:139:GLU:C	11:F:140:ILE:HD12	2.33	0.49
6:A:18:G:C2	6:A:67:G:O6	2.66	0.49
7:B:1040:A:C6	7:B:1041:G:N7	2.80	0.49
7:B:1525:A:C4	7:B:1526:C:C6	3.01	0.49
7:B:1528:A:C8	7:B:1544:A:N6	2.80	0.49
7:B:2832:U:C4	7:B:2834:G:N2	2.81	0.49
3:2:34:ARG:HD2	7:B:467:G:OP2	2.11	0.49
6:A:8:C:H5''	20:O:10:ARG:NH1	2.28	0.49
7:B:819:A:OP2	7:B:1187:G:N2	2.45	0.49
7:B:1218:G:C2	7:B:1219:U:C2	3.00	0.49
7:B:1225:G:OP1	23:R:90:ARG:NH1	2.46	0.49
7:B:1355:G:C5	7:B:1377:G:N2	2.81	0.49
7:B:1455:G:C2	7:B:1456:G:H1'	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1648:U:C2	7:B:2010:G:N2	2.80	0.49
7:B:1987:A:H2'	7:B:1988:G:C8	2.47	0.49
7:B:2026:U:O2	7:B:2026:U:H2'	2.13	0.49
7:B:2026:U:C2	7:B:2027:G:C8	3.01	0.49
7:B:2051:A:C8	7:B:2051:A:C5'	2.96	0.49
7:B:2078:C:N3	7:B:2079:U:C5	2.80	0.49
7:B:2442:C:C4	7:B:2443:C:C5	3.01	0.49
7:B:2821:A:H8	7:B:2821:A:H3'	1.78	0.49
7:B:468:G:HO2'	7:B:469:G:P	2.36	0.49
7:B:681:G:C4	7:B:682:G:C8	3.00	0.49
7:B:704:G:N2	7:B:726:G:C4	2.80	0.49
7:B:975:A:H5'	7:B:975:A:H8	1.78	0.49
8:C:48:ILE:HG22	8:C:49:THR:N	2.28	0.49
9:D:187:LEU:HD23	9:D:188:LEU:N	2.28	0.49
13:H:4:ILE:O	13:H:37:VAL:HG22	2.13	0.49
4:3:11:LYS:CD	17:L:62:PRO:O	2.57	0.49
20:O:17:LYS:C	20:O:20:GLU:OE2	2.50	0.49
20:O:9:ARG:HG3	20:O:13:ARG:HD3	1.95	0.49
7:B:332:A:C5	7:B:335:C:C5	3.01	0.49
10:E:122:GLU:HG3	10:E:189:THR:O	2.12	0.49
26:U:45:GLN:C	26:U:46:LYS:HD2	2.32	0.49
26:U:38:ILE:HG12	26:U:62:ALA:HB1	1.95	0.49
2:1:29:LYS:CB	2:1:30:PRO:CD	2.87	0.49
7:B:1709:U:H2'	7:B:1709:U:O2	2.11	0.49
18:M:6:ARG:O	18:M:8:LYS:N	2.46	0.49
7:B:1168:G:N2	7:B:1182:G:H1'	2.28	0.49
30:Y:19:HIS:O	30:Y:20:LYS:C	2.51	0.49
7:B:2810:A:N6	7:B:2890:G:H1'	2.26	0.49
9:D:37:VAL:HG21	9:D:46:ARG:HD3	1.94	0.49
7:B:2303:G:N1	7:B:2304:G:C8	2.80	0.49
12:G:72:ASN:O	12:G:76:ILE:HG13	2.12	0.49
7:B:631:A:N3	17:L:66:PHE:CD1	2.81	0.49
31:Z:16:CYS:CA	31:Z:21:VAL:HG21	2.39	0.49
7:B:1445:G:C2	7:B:1547:C:N3	2.81	0.49
7:B:408:G:C8	7:B:408:G:H3'	2.48	0.49
7:B:1036:G:O6	7:B:1120:G:C6	2.66	0.49
7:B:1911:U:O5'	7:B:1911:U:H6	1.96	0.49
7:B:1344:U:H5'	7:B:1345:C:H5	1.78	0.49
7:B:1401:G:C6	7:B:1402:U:O4	2.66	0.49
7:B:1956:U:H2'	7:B:1956:U:O2	2.11	0.49
7:B:1522:A:H1'	7:B:1524:G:C6	2.46	0.49
17:L:73:ILE:HG22	17:L:75:ALA:N	2.28	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:I:6:ALA:O	14:I:7:TYR:HB3	2.13	0.49
7:B:503:A:N3	7:B:505:A:H2'	2.27	0.49
5:4:13:ASN:O	5:4:29:ALA:HB3	2.11	0.49
6:A:46:A:C2'	6:A:47:C:O5'	2.61	0.49
7:B:973:A:O4'	7:B:1188:U:C6	2.66	0.49
7:B:1286:A:C2	7:B:1329:U:C4	3.01	0.49
7:B:1350:C:C5	7:B:1351:C:C5	3.01	0.49
7:B:1452:G:HO2'	7:B:1453:A:P	2.36	0.49
7:B:1777:U:O2'	7:B:1778:U:H5'	2.13	0.49
7:B:1891:G:H2'	7:B:1892:C:C6	2.48	0.49
7:B:1786:A:C2	7:B:1938:A:C5	3.01	0.49
7:B:2454:G:H2'	7:B:2455:G:H5'	1.95	0.49
7:B:252:G:O2'	7:B:253:C:H5'	2.12	0.49
7:B:1629:U:O2	7:B:2698:U:H5''	2.13	0.49
7:B:381:G:N1	7:B:394:C:C5	2.79	0.49
7:B:538:A:C4	7:B:556:A:N6	2.81	0.49
7:B:567:U:O2	7:B:568:U:H6	1.96	0.49
7:B:936:A:C6	7:B:937:C:C4	3.01	0.49
7:B:984:A:H8	7:B:984:A:C5'	2.25	0.49
9:D:159:LYS:O	9:D:161:MET:N	2.46	0.49
7:B:2727:A:O2'	16:K:70:ARG:NH2	2.45	0.49
18:M:96:ILE:HG22	18:M:97:GLN:NE2	2.28	0.49
20:O:101:GLY:C	20:O:103:VAL:N	2.66	0.49
22:Q:26:ALA:O	22:Q:30:VAL:HG22	2.13	0.49
23:R:23:GLU:C	23:R:24:LYS:HG2	2.33	0.49
24:S:11:ARG:HG3	24:S:11:ARG:O	2.12	0.49
24:S:17:VAL:O	24:S:20:VAL:HG13	2.12	0.49
24:S:23:LEU:HB3	24:S:35:ILE:HD11	1.95	0.49
7:B:1364:G:OP2	31:Z:1:MET:HB2	2.13	0.49
7:B:398:C:P	31:Z:49:ARG:CZ	3.01	0.49
10:E:172:ALA:C	10:E:174:GLY:N	2.65	0.49
10:E:149:ILE:HG21	10:E:186:VAL:HG13	1.93	0.49
7:B:80:G:N1	7:B:81:G:C5	2.81	0.49
7:B:84:A:HO2'	7:B:99:U:H6	1.60	0.49
29:X:1:MET:O	29:X:2:LYS:HG3	2.13	0.49
29:X:27:ASN:C	29:X:29:ARG:N	2.67	0.49
9:D:101:PHE:CB	9:D:105:LYS:HD2	2.38	0.49
22:Q:69:ARG:HB2	22:Q:69:ARG:HH11	1.77	0.49
7:B:260:G:C6	7:B:261:G:N7	2.81	0.49
7:B:637:A:H4'	7:B:638:G:O5'	2.12	0.49
7:B:871:U:O2'	7:B:872:U:O4'	2.30	0.49
18:M:18:ARG:HD2	18:M:18:ARG:H	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:849:A:H2'	7:B:850:U:H6	1.75	0.49
7:B:1065:U:H2'	7:B:1066:U:C2	2.48	0.49
7:B:1060:U:O4	14:I:134:SER:HB3	2.13	0.49
23:R:51:VAL:O	23:R:51:VAL:HG12	2.11	0.49
7:B:1098:A:N7	7:B:1099:G:N7	2.61	0.49
7:B:1090:A:C2	7:B:1102:C:C2	3.01	0.49
7:B:2563:U:O2	7:B:2566:A:C5	2.66	0.49
31:Z:16:CYS:C	31:Z:21:VAL:HG21	2.34	0.49
7:B:544:C:N3	7:B:545:U:C2	2.81	0.49
7:B:415:A:C2	7:B:2409:G:C2	3.00	0.49
7:B:417:C:H2'	7:B:418:C:H6	1.77	0.49
7:B:2147:A:O3'	7:B:2148:G:H8	1.95	0.49
7:B:1038:G:C2	7:B:1118:C:N3	2.81	0.49
24:S:73:LYS:HB2	24:S:106:VAL:HG21	1.95	0.49
11:F:103:ILE:HA	11:F:107:VAL:HG21	1.94	0.49
7:B:945:A:C4	7:B:2448:A:N3	2.81	0.49
7:B:8:C:N4	7:B:2895:G:H1	2.08	0.49
21:P:38:ARG:HG3	21:P:39:LEU:H	1.78	0.49
3:2:31:LEU:CD2	3:2:31:LEU:H	2.23	0.48
4:3:12:ARG:HB3	4:3:13:PHE:CE2	2.48	0.48
6:A:114:C:H2'	6:A:115:A:O4'	2.12	0.48
7:B:1140:C:H1'	7:B:1143:A:O2'	2.13	0.48
7:B:1188:U:H2'	7:B:1189:A:H5'	1.95	0.48
7:B:1369:G:H1'	7:B:1809:A:H61	1.78	0.48
7:B:1784:A:H5''	7:B:1785:A:OP1	2.12	0.48
7:B:1897:G:H2'	7:B:1898:U:O5'	2.13	0.48
7:B:1933:G:H2'	7:B:1934:C:H5'	1.93	0.48
7:B:2020:A:C2	7:B:2035:G:N1	2.81	0.48
7:B:2306:C:O2	11:F:149:ARG:HD2	2.13	0.48
7:B:2435:A:C2'	7:B:2436:G:O5'	2.61	0.48
7:B:2697:G:C2	7:B:2711:A:C2	3.01	0.48
7:B:2724:U:H5''	7:B:2724:U:H6	1.77	0.48
7:B:376:G:H2'	7:B:377:G:H8	1.75	0.48
7:B:590:A:C5	7:B:591:U:C4	3.01	0.48
8:C:180:MET:O	8:C:264:LYS:NZ	2.43	0.48
7:B:2085:U:OP1	8:C:256:THR:HG21	2.13	0.48
8:C:265:PHE:O	8:C:266:ILE:O	2.31	0.48
11:F:33:ILE:O	11:F:34:THR:CB	2.61	0.48
15:J:17:VAL:HG22	15:J:55:ILE:HB	1.94	0.48
15:J:32:LEU:CD2	15:J:122:LEU:HD21	2.43	0.48
15:J:4:PHE:CZ	15:J:6:ALA:CA	2.95	0.48
17:L:33:ARG:HG2	23:R:85:LYS:NZ	2.28	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:N:52:ILE:O	19:N:55:ALA:HB3	2.13	0.48
20:O:26:LEU:N	20:O:92:PHE:O	2.46	0.48
2:1:47:ILE:O	2:1:48:TYR:HB2	2.13	0.48
7:B:324:A:C3'	7:B:324:A:C8	2.96	0.48
10:E:148:ILE:O	10:E:148:ILE:HG13	2.13	0.48
7:B:73:A:H2'	7:B:74:A:OP2	2.13	0.48
29:X:15:ASN:HD21	29:X:50:VAL:HG12	1.78	0.48
29:X:54:LYS:HA	29:X:57:LEU:HD23	1.95	0.48
8:C:163:ILE:HG22	8:C:172:THR:CG2	2.40	0.48
7:B:2391:G:N2	7:B:2424:C:C2	2.81	0.48
27:V:62:THR:CA	27:V:70:ILE:HD11	2.43	0.48
7:B:906:U:H4'	7:B:906:U:OP1	2.13	0.48
12:G:8:VAL:HG11	12:G:71:LEU:HD12	1.95	0.48
7:B:1092:C:C2'	7:B:1093:G:H8	2.26	0.48
28:W:25:PHE:HD2	28:W:25:PHE:O	1.96	0.48
6:A:16:G:O2'	6:A:17:C:H5'	2.13	0.48
7:B:1031:G:H8	7:B:1031:G:O5'	1.95	0.48
7:B:1586:A:C8	7:B:1586:A:C3'	2.96	0.48
7:B:1801:A:C8	7:B:2203:U:H2'	2.48	0.48
1:0:27:LEU:H	1:0:38:LEU:HD11	1.77	0.48
4:3:46:LYS:CD	4:3:47:ALA:H	2.24	0.48
7:B:1304:A:H2'	7:B:1305:C:O4'	2.13	0.48
7:B:1286:A:C2	7:B:1329:U:C6	3.01	0.48
7:B:133:U:C6	7:B:133:U:H3'	2.48	0.48
7:B:1609:A:C2	7:B:1616:A:N7	2.81	0.48
7:B:1998:A:H3'	7:B:1998:A:C8	2.48	0.48
7:B:2232:C:H2'	7:B:2232:C:O2	2.12	0.48
7:B:2378:A:C3'	7:B:2378:A:C8	2.95	0.48
7:B:2453:A:C2	7:B:2504:U:O2	2.66	0.48
7:B:2488:G:N3	7:B:2489:U:C6	2.81	0.48
7:B:2589:A:C2	7:B:2590:A:C4	3.02	0.48
7:B:2720:U:C2	7:B:2872:A:N7	2.81	0.48
7:B:381:G:C5	7:B:382:A:C8	3.01	0.48
7:B:672:C:O2	7:B:672:C:C2'	2.61	0.48
7:B:820:A:H2'	7:B:821:A:O4'	2.13	0.48
8:C:140:VAL:HG23	8:C:193:GLU:OE1	2.14	0.48
8:C:153:LEU:HD13	8:C:161:VAL:HG22	1.95	0.48
8:C:125:PRO:HA	8:C:192:GLY:HA2	1.95	0.48
7:B:574:A:N1	9:D:150:GLN:OE1	2.46	0.48
9:D:18:ASP:O	16:K:73:ASP:HA	2.13	0.48
11:F:37:MET:CE	11:F:148:VAL:HG12	2.43	0.48
15:J:113:PRO:O	15:J:114:LEU:HB3	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:50:ARG:CA	18:M:50:ARG:NE	2.76	0.48
20:O:27:VAL:HG21	20:O:38:GLN:CA	2.43	0.48
23:R:11:GLN:HB3	23:R:21:ARG:NH1	2.28	0.48
24:S:40:ASN:O	24:S:41:LYS:HG2	2.13	0.48
28:W:39:GLN:HE21	28:W:66:VAL:HG23	1.78	0.48
16:K:113:MET:SD	16:K:113:MET:N	2.86	0.48
29:X:22:LEU:HB3	29:X:25:GLN:OE1	2.13	0.48
29:X:44:LYS:O	29:X:44:LYS:CG	2.60	0.48
9:D:31:ALA:O	9:D:32:ASN:ND2	2.46	0.48
23:R:39:LEU:C	23:R:41:ILE:H	2.16	0.48
7:B:2391:G:C2	7:B:2424:C:C6	3.01	0.48
9:D:37:VAL:HG22	9:D:42:ASN:CB	2.42	0.48
13:H:117:LEU:H	13:H:130:VAL:HG13	1.77	0.48
25:T:10:VAL:HG23	25:T:11:LEU:N	2.28	0.48
7:B:1045:C:O2	7:B:1047:G:C2	2.66	0.48
7:B:1076:C:C2	7:B:1077:A:C8	3.01	0.48
7:B:1076:C:O2'	7:B:1077:A:H5'	2.13	0.48
7:B:486:C:C2	7:B:495:G:N2	2.81	0.48
7:B:1788:C:C4	7:B:1789:A:C8	3.01	0.48
7:B:223:A:N6	7:B:422:A:C6	2.80	0.48
7:B:2341:G:C8	7:B:2342:C:C5	3.01	0.48
16:K:11:ALA:O	16:K:99:ILE:HG23	2.13	0.48
14:I:77:VAL:CA	14:I:80:LYS:HB2	2.39	0.48
7:B:1383:A:C2	7:B:1384:A:C5	3.01	0.48
7:B:134:G:N3	7:B:146:A:C2	2.80	0.48
7:B:501:A:N6	7:B:502:A:C6	2.81	0.48
7:B:2097:A:C5	7:B:2098:U:C5	3.01	0.48
20:O:90:VAL:HA	20:O:116:GLN:HB2	1.95	0.48
7:B:1095:A:C2	7:B:1096:A:C6	3.01	0.48
7:B:1945:G:C4	7:B:1946:U:C5	3.02	0.48
7:B:2800:A:H2'	7:B:2801:G:C1'	2.43	0.48
7:B:1127:A:C2	7:B:2518:A:C4	3.01	0.48
27:V:80:HIS:O	27:V:81:PRO:C	2.51	0.48
2:1:18:HIS:CE1	7:B:2399:G:O2'	2.66	0.48
11:F:98:PHE:CD2	11:F:98:PHE:C	2.86	0.48
5:4:24:ARG:CD	5:4:37:GLN:HA	2.43	0.48
7:B:1113:U:O5'	7:B:1113:U:H6	1.97	0.48
7:B:1608:A:C4	7:B:1611:C:C5	3.00	0.48
7:B:1754:A:OP1	21:P:95:LYS:HB2	2.14	0.48
7:B:1681:G:C4	7:B:1762:A:N3	2.82	0.48
7:B:1999:C:O2'	7:B:2000:C:H5'	2.13	0.48
7:B:2027:G:N2	7:B:2028:U:C2	2.82	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2361:G:H2'	7:B:2362:C:C5'	2.43	0.48
7:B:2485:G:C6	7:B:2486:C:C5	3.01	0.48
7:B:2747:G:N2	7:B:2757:A:H62	2.11	0.48
7:B:2884:U:H2'	7:B:2885:G:O5'	2.13	0.48
7:B:733:G:H3'	7:B:733:G:C8	2.48	0.48
7:B:738:G:C2	7:B:759:G:C6	3.01	0.48
7:B:762:U:H4'	7:B:763:G:O5'	2.13	0.48
7:B:790:U:C5	7:B:791:C:C5	2.98	0.48
7:B:827:U:P	7:B:828:U:H5	2.35	0.48
17:L:33:ARG:HD2	23:R:85:LYS:HZ3	1.76	0.48
18:M:110:GLU:C	18:M:112:LEU:N	2.67	0.48
18:M:13:HIS:N	18:M:13:HIS:ND1	2.61	0.48
19:N:1:MET:HG2	19:N:3:HIS:ND1	2.28	0.48
20:O:106:LEU:HD23	20:O:106:LEU:C	2.34	0.48
21:P:52:ARG:HG2	21:P:60:VAL:HG11	1.94	0.48
21:P:93:LYS:CE	21:P:97:TYR:CE2	2.94	0.48
22:Q:82:LEU:O	22:Q:85:ALA:HB3	2.13	0.48
23:R:7:SER:CB	23:R:24:LYS:HZ3	2.24	0.48
7:B:1323:C:C5'	24:S:84:ARG:HH12	2.26	0.48
28:W:3:LYS:HZ2	28:W:10:ARG:NH2	2.10	0.48
28:W:42:THR:HG23	28:W:66:VAL:C	2.34	0.48
28:W:44:PHE:O	28:W:44:PHE:CD1	2.65	0.48
7:B:2199:A:O2'	31:Z:34:LEU:HD21	2.12	0.48
7:B:482:A:C8	7:B:506:G:C2	3.01	0.48
26:U:92:VAL:CG2	26:U:94:PHE:HB2	2.43	0.48
8:C:170:TYR:C	8:C:171:VAL:HG22	2.33	0.48
7:B:438:G:H2'	7:B:439:A:C8	2.48	0.48
7:B:1720:U:H2'	7:B:1720:U:O2	2.14	0.48
8:C:27:LYS:N	8:C:28:PRO:CD	2.76	0.48
7:B:1291:C:C6	7:B:1291:C:C5'	2.86	0.48
13:H:112:LYS:HA	13:H:132:PHE:HZ	1.78	0.48
7:B:1056:G:P	7:B:1057:A:H5'	2.53	0.48
6:A:74:U:C4	6:A:75:G:C6	3.01	0.48
7:B:1960:A:C8	7:B:1961:C:C5	3.01	0.48
20:O:57:ALA:CB	20:O:61:GLN:HG3	2.42	0.48
27:V:8:VAL:HA	27:V:39:ALA:O	2.13	0.48
7:B:715:A:C6	7:B:716:A:C6	3.01	0.48
7:B:2829:A:C6	7:B:2830:C:C4	3.00	0.48
11:F:4:HIS:O	11:F:8:LYS:HG3	2.13	0.48
9:D:92:VAL:O	9:D:92:VAL:HG23	2.12	0.48
6:A:34:A:O2'	6:A:35:C:H5''	2.14	0.48
6:A:46:A:H5''	20:O:1:MET:HG2	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1026:G:C2	7:B:1027:A:C8	3.01	0.48
7:B:1048:A:N6	7:B:1111:A:C5	2.81	0.48
7:B:123:G:C2	7:B:129:C:N3	2.81	0.48
7:B:1651:G:O6	7:B:1652:A:C6	2.67	0.48
7:B:2010:G:C8	7:B:2010:G:H3'	2.48	0.48
7:B:2027:G:N1	7:B:2028:U:C4	2.82	0.48
7:B:2039:U:H2'	7:B:2040:G:O4'	2.13	0.48
7:B:2048:G:C5'	7:B:2048:G:H8	2.25	0.48
7:B:2331:G:H2'	7:B:2332:C:O4'	2.13	0.48
7:B:2396:G:H8	7:B:2396:G:C5'	2.26	0.48
7:B:2435:A:C2	7:B:2436:G:H1'	2.48	0.48
5:4:5:ALA:CB	7:B:2465:C:O3'	2.61	0.48
7:B:2849:U:C4	7:B:2867:G:N7	2.82	0.48
7:B:4:U:N3	7:B:2900:A:C2	2.81	0.48
7:B:553:G:N7	7:B:554:U:C5	2.82	0.48
8:C:17:LYS:O	8:C:18:VAL:HG13	2.12	0.48
8:C:63:ILE:O	8:C:64:VAL:CG1	2.59	0.48
15:J:10:THR:HG21	15:J:50:THR:OG1	2.13	0.48
15:J:109:LEU:O	15:J:111:LYS:HG3	2.13	0.48
19:N:21:PHE:N	19:N:21:PHE:HD1	2.12	0.48
22:Q:75:TYR:CE1	22:Q:79:ILE:HD11	2.48	0.48
23:R:79:ARG:CG	23:R:80:ARG:N	2.75	0.48
28:W:3:LYS:HA	28:W:3:LYS:CE	2.32	0.48
7:B:310:A:O2'	7:B:311:A:H5''	2.12	0.48
7:B:308:G:N2	7:B:477:A:C8	2.81	0.48
10:E:2:GLU:OE2	10:E:4:VAL:HB	2.13	0.48
10:E:6:LYS:O	10:E:11:ALA:HB1	2.13	0.48
7:B:92:U:O4	7:B:93:G:C5	2.66	0.48
26:U:84:PHE:H	26:U:92:VAL:HG23	1.79	0.48
26:U:90:LYS:O	26:U:91:LYS:HG3	2.12	0.48
7:B:2221:G:C2	7:B:2222:C:C2	3.01	0.48
27:V:29:ILE:CD1	27:V:30:ILE:N	2.64	0.48
7:B:873:C:H3'	7:B:873:C:C6	2.47	0.48
18:M:133:LYS:O	18:M:134:THR:HG23	2.13	0.48
7:B:1076:C:C2	7:B:1077:A:H8	2.30	0.48
13:H:82:SER:C	13:H:83:LYS:HD2	2.33	0.48
12:G:37:ASN:HB2	12:G:40:VAL:HG23	1.96	0.48
12:G:40:VAL:HG13	12:G:51:PHE:CE2	2.48	0.48
17:L:14:LYS:HE2	17:L:15:ALA:H	1.77	0.48
7:B:696:G:H2'	7:B:697:G:C8	2.48	0.48
1:0:6:LYS:HD3	1:0:7:PRO:CD	2.43	0.48
7:B:1695:G:H2'	7:B:1696:G:O4'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:P:36:LYS:O	21:P:38:ARG:N	2.43	0.48
3:2:18:PHE:HD2	3:2:18:PHE:H	1.59	0.48
7:B:999:U:C5	7:B:1154:G:C5	3.01	0.48
7:B:117:G:C6	7:B:119:A:N6	2.82	0.48
7:B:1296:G:N3	7:B:1645:G:C2	2.82	0.48
7:B:1805:A:C2'	7:B:1806:C:H5''	2.44	0.48
7:B:1970:A:C4	7:B:1972:G:N7	2.82	0.48
7:B:1273:U:C5	7:B:2003:A:O4'	2.66	0.48
7:B:563:A:C2	7:B:2018:G:C4	3.01	0.48
7:B:2046:G:N1	7:B:2047:C:N3	2.61	0.48
7:B:2319:G:O5'	7:B:2319:G:C8	2.67	0.48
7:B:2486:C:H2'	7:B:2487:G:O5'	2.13	0.48
7:B:2489:U:C2'	7:B:2490:G:H5'	2.44	0.48
7:B:2515:C:H2'	7:B:2516:A:H8	1.78	0.48
7:B:2760:C:C3'	7:B:2761:A:H5''	2.42	0.48
7:B:449:A:N6	7:B:450:G:C6	2.81	0.48
7:B:462:C:H3'	7:B:462:C:C6	2.49	0.48
7:B:680:C:C2	7:B:681:G:C8	3.01	0.48
7:B:988:A:C2	7:B:989:G:C2	3.02	0.48
8:C:104:LEU:C	8:C:106:PRO:HD3	2.32	0.48
8:C:237:ARG:HE	8:C:237:ARG:CA	2.26	0.48
8:C:35:LYS:NZ	8:C:101:ARG:HA	2.28	0.48
9:D:11:MET:HG3	9:D:12:THR:N	2.22	0.48
13:H:5:LEU:HA	13:H:35:LYS:HE3	1.95	0.48
15:J:130:HIS:N	15:J:132:HIS:HB2	2.28	0.48
15:J:85:LYS:CA	15:J:85:LYS:HE2	2.40	0.48
22:Q:10:ARG:HB3	22:Q:14:LYS:HZ3	1.78	0.48
22:Q:46:TYR:HD1	23:R:79:ARG:CB	2.26	0.48
24:S:29:VAL:HG11	24:S:69:LEU:CB	2.34	0.48
28:W:44:PHE:CB	28:W:78:PHE:HA	2.44	0.48
2:1:46:VAL:CG1	2:1:47:ILE:HG13	2.40	0.48
7:B:110:G:O5'	7:B:110:G:C8	2.59	0.48
29:X:36:GLN:HA	29:X:40:SER:HB2	1.95	0.48
22:Q:69:ARG:HB2	22:Q:69:ARG:CZ	2.42	0.48
7:B:601:C:H6	7:B:601:C:O5'	1.96	0.48
7:B:614:A:H4'	7:B:615:U:OP1	2.13	0.48
6:A:78:A:H2'	6:A:79:G:H8	1.78	0.48
7:B:870:U:C2'	7:B:871:U:H5'	2.44	0.48
18:M:93:VAL:HG13	18:M:93:VAL:O	2.13	0.48
7:B:1392:A:C6	7:B:1393:A:C6	3.02	0.48
25:T:31:VAL:HG23	25:T:32:LEU:N	2.21	0.48
7:B:144:A:C5	25:T:3:ARG:NH2	2.82	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1063:G:O4'	14:I:90:GLY:HA3	2.13	0.48
12:G:120:ILE:HG23	12:G:133:LYS:C	2.34	0.48
7:B:1097:U:H2'	7:B:1098:A:O4'	2.14	0.48
27:V:54:ALA:C	27:V:56:PHE:H	2.17	0.48
7:B:420:C:C2	7:B:421:C:C5	3.01	0.48
7:B:1387:A:H8	7:B:1387:A:O5'	1.96	0.48
7:B:1521:G:O5'	7:B:1521:G:H8	1.96	0.48
27:V:26:PHE:CE1	27:V:42:LEU:HD12	2.48	0.48
7:B:1024:G:H2'	7:B:1025:G:OP1	2.13	0.48
7:B:1796:U:O2'	8:C:251:THR:N	2.46	0.48
7:B:196:A:C3'	7:B:197:A:C5'	2.82	0.48
7:B:2500:U:O2	7:B:2504:U:C6	2.66	0.48
7:B:2580:U:H4'	9:D:134:HIS:HB3	1.95	0.48
7:B:2587:A:H8	7:B:2587:A:C5'	2.26	0.48
7:B:2760:C:C2'	7:B:2761:A:H5''	2.43	0.48
7:B:464:U:H2'	7:B:465:G:H5''	1.94	0.48
7:B:856:G:C2	7:B:857:G:O6	2.67	0.48
7:B:856:G:C2	7:B:922:C:N4	2.81	0.48
7:B:978:G:H5''	7:B:979:A:OP2	2.13	0.48
7:B:974:G:C6	7:B:989:G:C6	3.02	0.48
8:C:22:GLU:N	8:C:202:ARG:NH2	2.61	0.48
8:C:62:ARG:O	8:C:62:ARG:CD	2.62	0.48
9:D:125:TRP:CD1	9:D:127:PHE:HB2	2.48	0.48
9:D:138:LEU:O	9:D:139:SER:C	2.51	0.48
15:J:116:ARG:CG	15:J:116:ARG:NH1	2.67	0.48
15:J:38:GLY:HA3	15:J:41:LYS:HB2	1.95	0.48
16:K:73:ASP:O	21:P:76:HIS:CE1	2.66	0.48
18:M:81:ARG:O	18:M:82:MET:HB2	2.14	0.48
19:N:64:ARG:CG	19:N:65:LEU:N	2.70	0.48
20:O:13:ARG:HG2	20:O:95:SER:HB2	1.95	0.48
7:B:646:U:OP2	7:B:646:U:C6	2.57	0.48
7:B:305:C:C5	7:B:306:U:C5	3.00	0.48
7:B:101:A:OP2	7:B:101:A:H4'	2.07	0.48
7:B:86:G:N2	7:B:97:C:C4	2.82	0.48
7:B:527:C:H5''	7:B:2779:U:H3	1.79	0.48
7:B:527:C:H5'	33:B:5082:HOH:O	2.13	0.48
9:D:80:TRP:C	9:D:80:TRP:HE3	2.17	0.48
23:R:35:PHE:HB3	23:R:64:VAL:CG1	2.34	0.48
17:L:111:ILE:HD11	17:L:113:ALA:CB	2.42	0.48
18:M:5:LYS:HG3	18:M:68:PHE:CE1	2.49	0.48
12:G:123:GLU:O	12:G:131:VAL:HG13	2.14	0.48
30:Y:24:LEU:HA	30:Y:24:LEU:HD13	1.59	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:T:25:GLU:CA	25:T:25:GLU:OE2	2.60	0.48
25:T:84:TYR:O	25:T:85:VAL:HG22	2.14	0.48
12:G:61:TRP:O	12:G:61:TRP:CE3	2.67	0.48
7:B:167:A:N6	7:B:168:G:C2	2.81	0.48
11:F:140:ILE:HG22	11:F:142:TYR:N	2.28	0.48
7:B:1864:U:C2'	7:B:1865:U:H5'	2.44	0.48
7:B:222:A:C8	7:B:224:U:C5	3.02	0.48
7:B:2405:G:N2	7:B:2413:G:O6	2.46	0.48
7:B:223:A:N6	7:B:422:A:C5	2.80	0.48
10:E:175:ILE:HG22	10:E:176:ASP:N	2.29	0.48
7:B:1437:C:H1'	7:B:1515:A:H2	1.78	0.48
1:0:52:LYS:HD3	1:0:52:LYS:C	2.34	0.48
7:B:2798:U:H3'	7:B:2798:U:P	2.53	0.48
11:F:75:GLY:O	11:F:77:LYS:N	2.37	0.48
7:B:2631:G:C5	7:B:2632:A:C8	3.02	0.48
6:A:49:C:H4'	20:O:68:LYS:HE2	1.96	0.48
7:B:1254:A:N6	10:E:77:ILE:HD12	2.29	0.48
7:B:1255:U:H6	7:B:2502:G:N2	2.12	0.48
7:B:1620:G:C6	7:B:1621:U:N3	2.82	0.48
7:B:700:G:O2'	7:B:1632:A:H1'	2.12	0.48
7:B:1848:A:C2'	7:B:1849:G:H8	2.02	0.48
7:B:2316:G:O5'	7:B:2316:G:H8	1.97	0.48
7:B:2428:G:O2'	17:L:56:PRO:CG	2.62	0.48
7:B:2683:C:C5'	7:B:2683:C:H6	2.26	0.48
7:B:682:G:N3	7:B:683:U:C6	2.82	0.48
7:B:705:A:C2	7:B:706:A:C4	3.01	0.48
7:B:737:C:O2	7:B:737:C:H2'	2.13	0.48
7:B:952:G:H3'	7:B:953:G:H5''	1.95	0.48
7:B:974:G:O4'	7:B:1186:G:N2	2.47	0.48
7:B:986:C:C2'	7:B:987:C:H5'	2.43	0.48
8:C:51:ARG:HD3	8:C:51:ARG:C	2.23	0.48
7:B:2620:C:H4'	9:D:161:MET:HB2	1.96	0.48
20:O:25:ARG:NH2	20:O:40:ILE:CD1	2.76	0.48
24:S:84:ARG:HH21	24:S:98:LYS:HD3	1.79	0.48
7:B:323:C:O2	7:B:323:C:H2'	2.14	0.48
7:B:597:G:N1	7:B:661:A:C2	2.82	0.48
10:E:134:LEU:O	10:E:136:GLN:N	2.47	0.48
16:K:113:MET:HA	16:K:116:ILE:CG1	2.43	0.48
7:B:98:G:C3'	7:B:99:U:H5''	2.44	0.48
9:D:1:MET:CB	9:D:81:GLU:HG2	2.44	0.48
9:D:80:TRP:HE3	9:D:81:GLU:N	2.12	0.48
23:R:4:VAL:HB	23:R:41:ILE:CG1	2.39	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:103:VAL:HA	22:Q:106:THR:HB	1.95	0.48
7:B:219:A:H2'	7:B:220:G:C8	2.49	0.48
10:E:89:PRO:O	10:E:90:GLN:HG2	2.13	0.48
7:B:655:A:H2'	7:B:655:A:O5'	2.14	0.48
7:B:279:A:C2	7:B:362:A:H4'	2.49	0.48
7:B:226:A:H2'	7:B:227:A:C8	2.48	0.48
9:D:109:VAL:HG21	9:D:193:VAL:HB	1.95	0.48
7:B:2298:A:C2	7:B:2299:U:O2	2.66	0.48
6:A:65:U:O2'	6:A:66:A:H5'	2.14	0.48
16:K:95:ILE:O	16:K:95:ILE:CG2	2.61	0.48
7:B:2603:G:C5	7:B:2604:U:C5	3.02	0.48
11:F:176:PHE:O	11:F:177:ARG:HB3	2.13	0.48
7:B:1801:A:C4	7:B:2203:U:C5	3.01	0.48
7:B:1399:C:H2'	7:B:1400:U:C6	2.49	0.48
1:O:29:VAL:HG13	1:O:30:ASP:N	2.29	0.48
4:3:59:ALA:HB1	4:3:63:TYR:OH	2.14	0.48
4:3:5:THR:HG23	4:3:5:THR:O	2.14	0.48
5:4:9:LYS:HG2	5:4:10:LEU:N	2.28	0.48
5:4:3:VAL:HG12	5:4:4:ARG:N	2.29	0.48
6:A:31:C:H41	20:O:32:PRO:CB	2.26	0.48
7:B:1455:G:N2	7:B:1456:G:H1'	2.28	0.48
7:B:1459:G:C8	7:B:1459:G:O5'	2.67	0.48
7:B:1796:U:H1'	7:B:1824:G:N2	2.29	0.48
7:B:187:G:C3'	7:B:187:G:C8	2.96	0.48
7:B:1675:C:H42	7:B:1993:U:H1'	1.79	0.48
7:B:2535:G:C8	7:B:2535:G:H5''	2.48	0.48
7:B:244:A:N3	7:B:255:A:C6	2.82	0.48
7:B:2588:G:C4	7:B:2589:A:C8	3.02	0.48
7:B:2722:G:C4	7:B:2723:C:C6	3.02	0.48
7:B:2824:C:C5	7:B:2825:G:C5	3.01	0.48
7:B:2886:A:C2	7:B:2887:A:C5	3.02	0.48
7:B:398:C:P	31:Z:49:ARG:NE	2.87	0.48
7:B:825:A:C2	7:B:826:U:C2	3.01	0.48
7:B:836:G:N7	7:B:837:C:N4	2.62	0.48
8:C:89:ASN:N	8:C:89:ASN:ND2	2.61	0.48
9:D:119:ALA:HB1	9:D:123:LYS:HB2	1.94	0.48
7:B:2750:A:H4'	12:G:2:ARG:HE	1.79	0.48
21:P:29:VAL:O	21:P:30:TRP:C	2.52	0.48
22:Q:53:LYS:O	22:Q:55:GLN:N	2.46	0.48
22:Q:90:ASP:OD2	23:R:10:LYS:CG	2.59	0.48
24:S:28:LYS:O	24:S:30:SER:N	2.47	0.48
10:E:116:ASP:O	10:E:117:ARG:HD3	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:E:140:ASP:O	10:E:141:MET:HB2	2.14	0.48
10:E:156:ASN:CG	10:E:157:LEU:H	2.15	0.48
7:B:80:G:H4'	7:B:346:A:C4	2.49	0.48
26:U:84:PHE:H	26:U:92:VAL:CB	2.27	0.48
12:G:10:VAL:HG22	12:G:14:VAL:HG11	1.96	0.48
6:A:78:A:H2'	6:A:79:G:O4'	2.14	0.48
30:Y:2:LYS:HA	30:Y:43:ILE:HG13	1.96	0.48
10:E:88:ARG:HD2	10:E:88:ARG:H	1.78	0.48
16:K:66:LYS:HG2	16:K:80:ASP:HA	1.94	0.48
7:B:1107:G:H2'	7:B:1108:U:H5'	1.96	0.48
7:B:1443:U:C3'	7:B:1443:U:C6	2.97	0.48
24:S:56:ALA:CA	24:S:59:GLU:HB2	2.38	0.48
6:A:13:G:H1'	6:A:69:G:N2	2.28	0.48
7:B:1035:U:H6	7:B:1035:U:O5'	1.97	0.48
24:S:95:ARG:CG	24:S:95:ARG:NH1	2.76	0.48
7:B:1531:C:C2	7:B:1532:A:C8	3.02	0.48
7:B:2532:G:H2'	7:B:2533:U:H6	1.77	0.48
7:B:1401:G:C2	7:B:1402:U:C2	3.01	0.48
7:B:2065:C:C5	7:B:2066:C:H5	2.31	0.48
7:B:1801:A:C8	7:B:2203:U:C6	3.02	0.48
7:B:31:C:H3'	7:B:31:C:C6	2.49	0.48
3:2:33:ARG:CA	3:2:37:LYS:HG3	2.40	0.48
3:2:3:ARG:HG3	7:B:1613:G:H4'	1.96	0.48
4:3:23:HIS:CD2	4:3:47:ALA:O	2.67	0.48
5:4:24:ARG:HB2	5:4:36:ARG:C	2.34	0.48
7:B:1257:C:O2	7:B:1257:C:C2'	2.59	0.48
7:B:1356:G:H2'	7:B:1357:C:C6	2.48	0.48
7:B:1559:U:C6	7:B:1559:U:H5''	2.48	0.48
7:B:1812:U:H2'	7:B:1813:G:C8	2.49	0.48
7:B:2003:A:O5'	7:B:2003:A:H8	1.97	0.48
7:B:2011:U:C5	7:B:2012:G:N7	2.82	0.48
7:B:2090:A:C2	7:B:2230:G:C6	3.01	0.48
4:3:39:ARG:HH21	7:B:2363:G:H5''	1.78	0.48
7:B:2519:U:C4	7:B:2542:A:C5	3.02	0.48
7:B:2542:A:H5''	7:B:2766:A:O2'	2.14	0.48
7:B:2685:G:N3	7:B:2686:G:C8	2.82	0.48
7:B:2689:U:C2	7:B:2713:U:C6	3.01	0.48
7:B:2688:G:N7	7:B:2719:G:C6	2.82	0.48
7:B:2760:C:H5'	7:B:2761:A:OP2	2.14	0.48
7:B:374:A:N3	7:B:375:G:C8	2.82	0.48
7:B:518:G:C8	7:B:518:G:H5''	2.48	0.48
7:B:570:G:H22	7:B:2498:C:H4'	1.79	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:583:G:C2	7:B:584:C:C4	3.01	0.48
7:B:690:G:H5'	7:B:690:G:C8	2.48	0.48
7:B:748:G:N7	7:B:750:A:C8	2.81	0.48
7:B:796:C:C3'	7:B:796:C:H6	2.17	0.48
7:B:910:A:H2	7:B:911:A:C2	2.31	0.48
9:D:112:THR:O	9:D:113:SER:C	2.51	0.48
7:B:1657:U:OP2	9:D:141:ARG:HG3	2.14	0.48
7:B:2574:G:C2	9:D:147:GLY:HA3	2.49	0.48
9:D:186:LEU:O	9:D:187:LEU:C	2.52	0.48
10:E:50:ALA:O	10:E:74:LYS:CE	2.61	0.48
10:E:49:ARG:C	10:E:51:GLU:N	2.67	0.48
10:E:67:ARG:HD2	10:E:67:ARG:N	2.29	0.48
15:J:40:HIS:O	15:J:41:LYS:C	2.52	0.48
18:M:114:ARG:HE	18:M:117:PHE:HD2	1.62	0.48
19:N:21:PHE:N	19:N:21:PHE:CD1	2.82	0.48
20:O:100:HIS:H	20:O:103:VAL:HG23	1.77	0.48
20:O:10:ARG:NE	20:O:94:ARG:HD3	2.29	0.48
21:P:109:ILE:O	21:P:110:LYS:O	2.31	0.48
23:R:76:LYS:O	23:R:77:PHE:CG	2.66	0.48
28:W:43:LYS:HB2	28:W:76:ARG:O	2.13	0.48
31:Z:31:ASP:O	31:Z:32:LEU:CB	2.62	0.48
26:U:59:GLU:CD	26:U:62:ALA:HB2	2.35	0.48
2:1:8:ILE:O	2:1:24:LYS:HB2	2.14	0.48
23:R:35:PHE:CE1	23:R:65:ALA:O	2.67	0.48
22:Q:68:ALA:HB1	22:Q:73:ILE:HG21	1.92	0.48
7:B:2213:U:C3'	7:B:2213:U:C2	2.97	0.48
25:T:62:VAL:O	25:T:80:TRP:HB3	2.14	0.48
16:K:7:MET:HA	16:K:19:VAL:O	2.14	0.48
16:K:49:ARG:HB2	16:K:49:ARG:HH11	1.78	0.48
20:O:83:LEU:N	20:O:87:ILE:HG21	2.29	0.48
31:Z:18:CYS:O	31:Z:19:GLY:O	2.31	0.48
6:A:109:A:O2'	6:A:110:C:H5'	2.14	0.48
7:B:1960:A:C8	7:B:1961:C:H5	2.32	0.48
7:B:2552:U:C4	7:B:2554:U:C5'	2.97	0.48
7:B:1684:G:C5	7:B:1685:C:C4	3.01	0.48
7:B:945:A:C2	7:B:2448:A:N9	2.82	0.48
17:L:42:SER:OG	17:L:47:ARG:NH2	2.46	0.48
7:B:2135:A:C6	7:B:2136:G:C8	3.01	0.48
7:B:2549:G:C2'	7:B:2550:G:H5'	2.43	0.48
7:B:1734:G:N3	7:B:1735:A:C8	2.82	0.48
11:F:172:PHE:N	11:F:172:PHE:CD1	2.80	0.48
30:Y:31:ILE:HD13	30:Y:31:ILE:H	1.79	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:A:29:A:C2	6:A:56:G:N2	2.80	0.48
7:B:1027:A:C6	7:B:1126:A:N3	2.82	0.48
7:B:1026:G:N3	7:B:1027:A:N7	2.61	0.48
7:B:1028:A:C2	7:B:1029:A:C6	3.01	0.48
7:B:1223:G:C6	7:B:1227:G:C6	3.01	0.48
7:B:1265:A:C8	7:B:1267:U:C5	3.01	0.48
7:B:1276:A:H8	7:B:1276:A:H5''	1.79	0.48
7:B:1430:G:C4	7:B:1431:A:C8	3.01	0.48
7:B:1433:A:C2	7:B:1434:A:C5	3.02	0.48
7:B:1662:U:H2'	7:B:1662:U:O2	2.14	0.48
7:B:1797:G:C5	7:B:1798:U:C4	3.02	0.48
7:B:185:G:O2'	7:B:186:G:H5'	2.13	0.48
7:B:1890:A:N1	7:B:2234:G:O2'	2.41	0.48
7:B:1998:A:C5	7:B:1999:C:C5	3.02	0.48
7:B:2199:A:N1	7:B:2225:A:C4	2.82	0.48
7:B:2280:G:H2'	7:B:2388:A:N1	2.29	0.48
7:B:2309:A:H5''	7:B:2310:C:OP2	2.14	0.48
7:B:2526:G:C2'	7:B:2527:C:H5'	2.43	0.48
7:B:2682:A:C2	7:B:2683:C:C4	3.01	0.48
7:B:2837:A:C5	7:B:2838:G:N7	2.82	0.48
7:B:751:A:C5	7:B:789:A:N1	2.82	0.48
7:B:780:G:N2	8:C:228:ASP:OD2	2.44	0.48
13:H:25:TYR:O	13:H:31:VAL:CG2	2.61	0.48
16:K:68:GLY:HA3	16:K:78:ARG:HB3	1.95	0.48
17:L:55:MET:CB	17:L:56:PRO:CD	2.89	0.48
18:M:36:VAL:CG1	18:M:125:PRO:HD3	2.44	0.48
19:N:18:GLN:O	19:N:19:ALA:C	2.49	0.48
19:N:2:ARG:HH21	19:N:3:HIS:C	2.17	0.48
20:O:93:ASP:OD2	20:O:117:PHE:CE2	2.66	0.48
21:P:13:LYS:NZ	21:P:13:LYS:HB3	2.28	0.48
21:P:18:SER:C	21:P:20:ARG:N	2.67	0.48
24:S:27:LYS:HD3	24:S:28:LYS:HE3	1.95	0.48
28:W:42:THR:CG2	28:W:67:LYS:HB2	2.40	0.48
7:B:644:A:C2	7:B:646:U:O4	2.62	0.48
7:B:321:U:H1'	10:E:159:LEU:HG	1.94	0.48
7:B:300:A:C5	7:B:334:C:H4'	2.48	0.48
10:E:113:VAL:O	10:E:114:ARG:C	2.51	0.48
7:B:92:U:N3	7:B:93:G:C8	2.82	0.48
26:U:98:ASN:ND2	26:U:98:ASN:N	2.62	0.48
22:Q:99:VAL:HG13	22:Q:100:PHE:N	2.28	0.48
22:Q:67:ALA:HB1	22:Q:105:PHE:CE2	2.48	0.48
6:A:99:A:C6	6:A:100:G:C5	3.02	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:71:LYS:O	18:M:73:ILE:N	2.44	0.48
9:D:41:ALA:O	9:D:42:ASN:HB3	2.14	0.48
24:S:56:ALA:C	24:S:59:GLU:H	2.17	0.48
7:B:1765:U:C2'	7:B:1765:U:O2	2.61	0.48
7:B:2104:C:H3'	7:B:2104:C:H6	1.75	0.48
7:B:1042:G:C6	7:B:1043:C:C4	3.01	0.48
7:B:1115:G:H5''	7:B:1115:G:C8	2.48	0.48
7:B:1947:C:C2	7:B:1948:G:C8	3.01	0.48
7:B:2207:C:C2	7:B:2218:G:C2	3.02	0.48
8:C:119:VAL:O	8:C:120:ASP:C	2.52	0.48
7:B:1734:G:H8	7:B:1734:G:O5'	1.97	0.48
2:1:31:GLU:O	2:1:33:LEU:N	2.47	0.48
4:3:24:LYS:O	4:3:25:HIS:C	2.53	0.47
5:4:26:ILE:HB	5:4:35:GLN:HG2	1.96	0.47
7:B:1024:G:P	7:B:1025:G:HO2'	2.37	0.47
7:B:1141:U:OP2	15:J:65:THR:HG22	2.14	0.47
7:B:1011:G:O6	7:B:1151:A:C6	2.66	0.47
7:B:1273:U:H5'	7:B:1274:A:OP1	2.14	0.47
7:B:1611:C:C2	7:B:1612:C:C5	3.02	0.47
7:B:1641:A:H5''	7:B:1642:G:OP2	2.13	0.47
7:B:1815:A:H8	7:B:1815:A:O5'	1.97	0.47
7:B:1967:C:N4	7:B:1968:G:C6	2.82	0.47
7:B:2025:C:H3'	7:B:2026:U:C6	2.49	0.47
7:B:2071:A:C4	7:B:2072:C:C5	3.01	0.47
7:B:2080:A:N6	7:B:2241:A:N6	2.62	0.47
7:B:197:A:N7	7:B:2430:A:C5	2.82	0.47
7:B:2051:A:C4	7:B:2614:A:N6	2.82	0.47
7:B:2697:G:C6	7:B:2711:A:C6	3.02	0.47
7:B:2814:A:C6	7:B:2815:C:C4	3.02	0.47
7:B:692:C:O2'	7:B:693:A:H5'	2.14	0.47
7:B:782:A:C4'	7:B:783:A:OP1	2.46	0.47
7:B:979:A:H2'	7:B:979:A:N3	2.29	0.47
8:C:255:LYS:NZ	8:C:258:SER:OG	2.47	0.47
8:C:92:LEU:O	8:C:93:VAL:CB	2.60	0.47
9:D:146:ILE:CD1	9:D:155:VAL:HG22	2.43	0.47
12:G:140:ILE:O	12:G:141:GLY:C	2.52	0.47
15:J:112:GLY:O	15:J:116:ARG:N	2.46	0.47
19:N:61:ALA:C	19:N:63:ARG:H	2.16	0.47
19:N:4:ARG:NH2	19:N:6:SER:OG	2.47	0.47
6:A:47:C:P	20:O:1:MET:SD	3.12	0.47
21:P:31:VAL:HG12	21:P:33:GLU:H	1.79	0.47
24:S:70:LYS:O	24:S:71:VAL:CB	2.61	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:381:G:C5'	31:Z:13:THR:HG22	2.44	0.47
7:B:308:G:H2'	7:B:309:A:O4'	2.14	0.47
7:B:479:A:H4'	7:B:480:A:H5'	1.96	0.47
7:B:597:G:C6	7:B:598:U:N3	2.82	0.47
10:E:139:LYS:C	10:E:141:MET:H	2.18	0.47
10:E:138:LEU:O	10:E:143:LEU:HD11	2.11	0.47
10:E:156:ASN:CG	10:E:157:LEU:N	2.66	0.47
26:U:78:LYS:CD	26:U:96:LYS:CG	2.85	0.47
29:X:49:ASP:C	29:X:49:ASP:OD1	2.52	0.47
7:B:2637:U:O2	7:B:2782:G:N2	2.47	0.47
8:C:171:VAL:HG12	8:C:183:VAL:C	2.34	0.47
22:Q:69:ARG:CZ	22:Q:69:ARG:HB3	2.44	0.47
7:B:221:A:C2	7:B:233:A:C4	3.02	0.47
7:B:627:A:H2'	7:B:627:A:H5''	1.62	0.47
7:B:930:G:H5''	7:B:931:U:P	2.53	0.47
12:G:82:PHE:CZ	12:G:137:LYS:HD3	2.49	0.47
7:B:160:A:H2'	7:B:161:A:H8	1.78	0.47
17:L:7:SER:CB	17:L:8:PRO:CD	2.92	0.47
7:B:1687:G:C2	7:B:1688:U:C4	3.02	0.47
7:B:235:U:C2	7:B:236:C:C5	3.02	0.47
7:B:697:G:C6	7:B:698:C:N4	2.82	0.47
7:B:1736:U:H3'	7:B:1737:G:H8	1.79	0.47
8:C:3:VAL:HG12	8:C:4:LYS:H	1.79	0.47
1:O:21:LEU:HD21	24:S:20:VAL:O	2.14	0.47
1:O:40:HIS:ND1	1:O:41:HIS:C	2.63	0.47
3:2:3:ARG:NH2	7:B:789:A:C4	2.82	0.47
5:4:1:MET:HE2	5:4:2:LYS:CD	2.44	0.47
7:B:1218:G:C6	7:B:1232:G:C6	3.01	0.47
7:B:1794:A:O4'	7:B:1900:A:C2	2.67	0.47
7:B:1899:A:O2'	7:B:1900:A:H5''	2.14	0.47
7:B:982:C:H6	7:B:2029:G:OP1	1.97	0.47
7:B:961:C:N4	7:B:2031:A:C8	2.82	0.47
7:B:2614:A:H5''	33:B:5228:HOH:O	2.14	0.47
7:B:2676:C:H3'	7:B:2676:C:H6	1.78	0.47
7:B:2815:C:C2	7:B:2816:G:C8	3.02	0.47
7:B:529:A:C6	7:B:2042:A:N3	2.83	0.47
7:B:567:U:C4	7:B:568:U:C5	3.00	0.47
7:B:677:A:C2'	7:B:678:C:H5'	2.44	0.47
7:B:6:A:H4'	15:J:133:ALA:CB	2.32	0.47
7:B:737:C:HO2'	7:B:738:G:H5'	1.76	0.47
7:B:769:U:C6	7:B:770:G:N7	2.82	0.47
7:B:968:C:C3'	7:B:969:G:H5''	2.43	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:174:SER:HB2	9:D:208:LYS:CB	2.44	0.47
11:F:87:LYS:HB3	11:F:88:VAL:H	1.52	0.47
12:G:84:LYS:O	12:G:132:LEU:HG	2.14	0.47
21:P:27:VAL:O	21:P:47:ILE:HG13	2.14	0.47
7:B:582:A:P	22:Q:31:TYR:CZ	3.07	0.47
22:Q:86:SER:O	22:Q:88:GLU:HB2	2.14	0.47
23:R:74:ILE:C	23:R:75:VAL:HG22	2.34	0.47
7:B:1323:C:P	24:S:84:ARG:HH12	2.37	0.47
7:B:298:G:O5'	7:B:298:G:C8	2.66	0.47
10:E:131:THR:C	10:E:132:LYS:NZ	2.66	0.47
10:E:15:SER:O	10:E:16:GLU:C	2.51	0.47
10:E:2:GLU:CB	10:E:16:GLU:HA	2.43	0.47
26:U:66:VAL:HG22	26:U:67:SER:N	2.29	0.47
2:1:26:LYS:HG3	2:1:26:LYS:O	2.13	0.47
9:D:35:THR:HB	9:D:48:ILE:HD12	1.96	0.47
7:B:42:A:C5	7:B:43:G:N7	2.82	0.47
7:B:906:U:C6	7:B:906:U:C3'	2.97	0.47
18:M:16:ARG:CG	18:M:18:ARG:HH21	2.26	0.47
9:D:59:ARG:NE	9:D:63:PRO:CB	2.77	0.47
7:B:283:G:H2'	7:B:284:U:H6	1.79	0.47
18:M:134:THR:OG1	27:V:52:ALA:HA	2.14	0.47
7:B:486:C:C2	7:B:495:G:C2	3.02	0.47
19:N:29:VAL:HG23	19:N:75:ILE:HD11	1.95	0.47
7:B:1175:A:H2'	7:B:1176:U:H5'	1.96	0.47
7:B:1866:A:C2	7:B:1867:G:H1'	2.49	0.47
7:B:434:U:O5'	7:B:434:U:H2'	2.14	0.47
7:B:1703:G:H2'	7:B:1704:C:H6	1.78	0.47
14:I:88:GLY:O	14:I:97:VAL:HG21	2.14	0.47
7:B:1096:A:C8	7:B:1096:A:H3'	2.48	0.47
7:B:1694:C:O5'	7:B:1694:C:H6	1.97	0.47
7:B:1127:A:C2	7:B:2518:A:C5	3.02	0.47
7:B:2828:G:C2'	7:B:2829:A:H5'	2.44	0.47
4:3:29:ARG:C	4:3:29:ARG:HD3	2.34	0.47
1:0:15:ARG:NH1	1:0:16:ARG:NH1	2.62	0.47
7:B:1010:A:H4'	22:Q:75:TYR:HD2	1.79	0.47
7:B:1018:U:H2'	7:B:1019:U:C6	2.50	0.47
7:B:1027:A:N1	7:B:1126:A:O4'	2.47	0.47
7:B:1560:G:C6	7:B:1561:C:C4	3.02	0.47
7:B:1809:A:C3'	7:B:1810:A:C8	2.92	0.47
7:B:1842:G:C5	7:B:1843:C:C4	3.03	0.47
7:B:2061:G:N3	7:B:2063:C:C4	2.82	0.47
7:B:2386:A:O2'	7:B:2387:U:H5'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:255:A:H5''	7:B:255:A:C8	2.48	0.47
7:B:2881:U:C4	7:B:2882:A:N7	2.83	0.47
7:B:393:C:H2'	7:B:394:C:C6	2.49	0.47
7:B:393:C:H5''	7:B:394:C:OP2	2.13	0.47
7:B:523:C:C3'	7:B:523:C:C6	2.97	0.47
7:B:560:C:H2'	7:B:561:G:C5'	2.43	0.47
7:B:567:U:C4	7:B:568:U:H5	2.33	0.47
7:B:936:A:H2'	7:B:937:C:H6	1.79	0.47
8:C:155:ARG:HD3	8:C:157:ALA:N	2.26	0.47
7:B:1828:G:H1	8:C:219:VAL:HG11	1.78	0.47
8:C:22:GLU:C	8:C:22:GLU:CD	2.70	0.47
7:B:1797:G:OP1	8:C:251:THR:HG22	2.13	0.47
8:C:261:ARG:NH1	8:C:261:ARG:CG	2.67	0.47
13:H:24:GLY:HA2	13:H:27:ARG:HH21	1.78	0.47
13:H:56:ALA:O	13:H:57:LYS:C	2.52	0.47
9:D:157:LYS:HE3	15:J:80:HIS:HB3	1.95	0.47
24:S:71:VAL:H	24:S:107:VAL:HA	1.79	0.47
28:W:44:PHE:CE1	28:W:60:ALA:HB2	2.50	0.47
28:W:32:ALA:C	28:W:66:VAL:HG21	2.34	0.47
7:B:317:G:N7	7:B:318:C:C4	2.82	0.47
10:E:109:LEU:O	10:E:113:VAL:HG22	2.14	0.47
10:E:161:ALA:HB1	10:E:169:VAL:HB	1.96	0.47
7:B:2204:G:C2	7:B:2205:A:C8	3.02	0.47
7:B:2223:G:N3	7:B:2223:G:H2'	2.29	0.47
12:G:96:ALA:O	12:G:102:ILE:HG13	2.14	0.47
25:T:23:ALA:C	25:T:25:GLU:N	2.67	0.47
25:T:11:LEU:HD23	25:T:32:LEU:HD22	1.96	0.47
18:M:86:LYS:HE3	18:M:87:GLY:N	2.29	0.47
7:B:1100:C:H2'	7:B:1101:U:C6	2.49	0.47
7:B:631:A:C2'	17:L:66:PHE:HD1	2.28	0.47
7:B:158:U:O2	7:B:169:G:C2	2.67	0.47
7:B:172:A:O2'	7:B:173:A:H5'	2.14	0.47
7:B:415:A:H2'	7:B:416:U:H5'	1.97	0.47
7:B:2073:C:H1'	7:B:2437:G:N2	2.28	0.47
16:K:60:ALA:HB1	16:K:85:VAL:O	2.14	0.47
7:B:1947:C:C4	7:B:1948:G:N7	2.83	0.47
7:B:1596:A:H2'	7:B:1597:A:H5'	1.96	0.47
7:B:2400:G:C6	7:B:2401:U:O4	2.67	0.47
25:T:37:ASP:OD1	25:T:37:ASP:N	2.46	0.47
7:B:1268:A:C6	7:B:2013:A:N7	2.83	0.47
7:B:1564:C:C4	7:B:1565:C:N4	2.73	0.47
7:B:1567:G:O4'	7:B:1568:G:N2	2.46	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1270:C:H2'	7:B:1648:U:H5''	1.96	0.47
7:B:1655:A:H2'	7:B:1656:C:O4'	2.13	0.47
7:B:1792:G:O5'	8:C:203:VAL:HG23	2.14	0.47
7:B:1814:G:C8	7:B:1814:G:C5'	2.97	0.47
7:B:1933:G:C3'	7:B:1933:G:C8	2.98	0.47
7:B:2013:A:H2'	7:B:2014:A:H5'	1.95	0.47
7:B:204:A:N7	7:B:206:U:C2	2.82	0.47
7:B:2262:U:C4	7:B:2279:G:C2	3.03	0.47
7:B:2335:A:C5	7:B:2337:G:C5	3.01	0.47
7:B:2587:A:H5'	7:B:2588:G:OP2	2.13	0.47
7:B:24:G:H2'	7:B:25:U:O4'	2.14	0.47
7:B:2714:G:H2'	7:B:2715:C:C6	2.50	0.47
7:B:2738:A:C2	7:B:2739:U:O2	2.68	0.47
7:B:2854:G:H2'	7:B:2855:C:O4'	2.15	0.47
7:B:553:G:C5	7:B:554:U:C5	3.02	0.47
7:B:566:U:C4	7:B:567:U:C5	3.03	0.47
7:B:759:G:H2'	7:B:760:G:H5'	1.96	0.47
7:B:856:G:N2	7:B:921:C:O2	2.47	0.47
7:B:978:G:N1	7:B:986:C:C5	2.82	0.47
8:C:254:LYS:O	8:C:255:LYS:C	2.52	0.47
15:J:41:LYS:HD3	15:J:44:TYR:CB	2.40	0.47
7:B:810:U:C6	17:L:37:GLY:HA2	2.49	0.47
7:B:1654:A:OP2	19:N:3:HIS:NE2	2.47	0.47
20:O:72:ALA:HA	20:O:106:LEU:HA	1.97	0.47
20:O:94:ARG:CZ	20:O:94:ARG:HA	2.44	0.47
21:P:25:VAL:HG12	21:P:27:VAL:CG1	2.42	0.47
21:P:50:ARG:CG	21:P:99:LEU:HB3	2.44	0.47
22:Q:43:GLN:O	22:Q:44:TYR:C	2.50	0.47
7:B:975:A:H5''	23:R:83:TYR:OH	2.15	0.47
24:S:28:LYS:HB3	24:S:31:GLN:C	2.34	0.47
28:W:28:GLU:OE1	28:W:28:GLU:HA	2.14	0.47
28:W:31:LEU:HB3	28:W:32:ALA:H	1.50	0.47
7:B:2384:U:O2	7:B:2384:U:H2'	2.13	0.47
10:E:113:VAL:O	10:E:115:GLN:N	2.47	0.47
10:E:17:THR:HG23	10:E:18:THR:H	1.79	0.47
10:E:190:ALA:H	10:E:194:LYS:HE2	1.79	0.47
7:B:81:G:N1	7:B:105:C:N4	2.58	0.47
7:B:263:G:C2	7:B:264:C:C2	3.01	0.47
7:B:604:G:O6	7:B:625:G:N1	2.48	0.47
27:V:4:ILE:O	27:V:63:ILE:HA	2.15	0.47
7:B:2282:G:C5	7:B:2425:A:H2	2.22	0.47
7:B:2808:G:N3	7:B:2891:U:C2	2.82	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:238:ASN:O	8:C:239:PHE:C	2.53	0.47
16:K:110:GLU:C	16:K:111:LYS:CG	2.79	0.47
7:B:1348:C:H5'	7:B:1349:C:H5	1.78	0.47
1:0:48:TYR:CD2	1:0:49:ARG:N	2.83	0.47
3:2:9:VAL:O	3:2:11:LYS:N	2.47	0.47
4:3:34:LYS:CE	7:B:2420:C:OP1	2.62	0.47
7:B:123:G:H2'	7:B:124:G:H5''	1.96	0.47
7:B:1268:A:C5	7:B:2013:A:N7	2.82	0.47
3:2:18:PHE:CD1	7:B:126:A:C5'	2.97	0.47
7:B:1605:C:O4'	7:B:1610:A:C6	2.67	0.47
7:B:1652:A:C2'	7:B:1653:G:H5'	2.45	0.47
7:B:1809:A:H3'	7:B:1810:A:C8	2.49	0.47
7:B:1823:G:C3'	7:B:1823:G:C8	2.97	0.47
7:B:191:A:H8	7:B:191:A:O5'	1.97	0.47
7:B:1827:U:O2'	7:B:1970:A:N3	2.40	0.47
7:B:1988:G:C6	7:B:1989:G:C5	3.02	0.47
7:B:2081:U:H4'	31:Z:23:LYS:HD2	1.95	0.47
7:B:1421:G:H1'	7:B:2211:A:N1	2.30	0.47
7:B:2280:G:C2	7:B:2281:A:C8	3.03	0.47
7:B:2354:C:H6	7:B:2354:C:H5''	1.79	0.47
7:B:2676:C:C6	7:B:2676:C:C3'	2.97	0.47
7:B:2856:A:C2	7:B:2862:G:C2	3.03	0.47
7:B:2885:G:N1	7:B:2886:A:H8	2.13	0.47
7:B:672:C:C2'	7:B:673:C:H5'	2.45	0.47
7:B:699:A:C2'	7:B:700:G:O5'	2.62	0.47
7:B:738:G:C5	7:B:739:A:C6	3.02	0.47
7:B:760:G:H2'	7:B:761:A:H8	1.79	0.47
7:B:799:G:O2'	7:B:800:A:OP1	2.25	0.47
7:B:837:C:H2'	7:B:838:C:H5'	1.97	0.47
7:B:949:G:C5'	7:B:950:G:OP2	2.62	0.47
7:B:985:C:C2'	7:B:986:C:H5''	2.43	0.47
9:D:184:ARG:O	9:D:185:ASN:HB2	2.15	0.47
15:J:136:GLN:O	15:J:138:GLN:N	2.47	0.47
15:J:58:ASN:O	15:J:59:ALA:HB3	2.13	0.47
15:J:59:ALA:HB1	15:J:101:ILE:HD12	1.96	0.47
22:Q:40:LYS:HG3	22:Q:44:TYR:HB3	1.95	0.47
15:J:41:LYS:CG	22:Q:63:ARG:NH2	2.66	0.47
22:Q:49:ARG:CG	23:R:77:PHE:HZ	2.06	0.47
22:Q:46:TYR:HB2	23:R:78:ARG:O	2.15	0.47
7:B:2330:G:H21	28:W:36:ILE:HG12	1.80	0.47
28:W:42:THR:HB	28:W:75:ASN:CB	2.44	0.47
10:E:2:GLU:O	10:E:15:SER:HB2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:U:41:VAL:HA	26:U:57:ILE:CD1	2.33	0.47
29:X:1:MET:H3	29:X:6:LEU:CB	2.27	0.47
2:1:26:LYS:HE3	7:B:2285:C:OP1	2.15	0.47
7:B:527:C:N4	7:B:2779:U:OP2	2.39	0.47
23:R:3:ALA:HB1	23:R:12:HIS:CD2	2.50	0.47
7:B:2201:G:N2	7:B:2223:G:C4	2.82	0.47
11:F:157:THR:HG21	11:F:168:LEU:CD1	2.44	0.47
24:S:110:ARG:CG	24:S:110:ARG:NH1	2.68	0.47
7:B:237:C:C5	7:B:238:C:H5	2.32	0.47
27:V:63:ILE:HB	27:V:70:ILE:CG1	2.40	0.47
12:G:92:GLY:C	12:G:93:TYR:HD1	2.18	0.47
9:D:59:ARG:NE	9:D:63:PRO:HB3	2.29	0.47
18:M:86:LYS:O	18:M:87:GLY:C	2.52	0.47
7:B:1053:C:N4	7:B:1107:G:O6	2.48	0.47
14:I:20:SER:HA	14:I:25:PRO:HD2	1.95	0.47
7:B:1773:A:H2'	7:B:1774:C:O5'	2.15	0.47
7:B:1176:U:C6	7:B:1176:U:O5'	2.67	0.47
7:B:224:U:O4	7:B:420:C:H5'	2.15	0.47
6:A:13:G:H3'	6:A:13:G:C8	2.50	0.47
16:K:98:ARG:HD2	16:K:100:PHE:CE2	2.49	0.47
7:B:44:A:H2'	7:B:45:G:O4'	2.14	0.47
11:F:120:SER:O	11:F:127:TYR:CD1	2.67	0.47
7:B:2869:G:C5	7:B:2870:C:C5	3.02	0.47
7:B:2707:U:H2'	7:B:2707:U:O2	2.15	0.47
19:N:85:PRO:O	19:N:88:ALA:HB3	2.13	0.47
7:B:1122:G:H8	7:B:1122:G:H5''	1.79	0.47
3:2:1:MET:SD	7:B:752:A:H5''	2.54	0.47
5:4:18:LYS:HE2	5:4:19:ARG:H	1.78	0.47
7:B:1254:A:N6	10:E:77:ILE:CD1	2.77	0.47
7:B:1429:G:O2'	7:B:1430:G:H5'	2.15	0.47
7:B:1836:C:H2'	7:B:1837:C:H5'	1.97	0.47
7:B:2070:A:C2	7:B:2071:A:N3	2.83	0.47
7:B:784:G:C2	7:B:792:A:C5	3.02	0.47
7:B:784:G:N1	7:B:792:A:C4	2.83	0.47
7:B:960:A:O5'	7:B:960:A:H8	1.96	0.47
8:C:153:LEU:HD22	8:C:161:VAL:HG21	1.97	0.47
8:C:174:ARG:CG	8:C:174:ARG:O	2.62	0.47
33:B:5121:HOH:O	10:E:58:LYS:HG3	2.15	0.47
11:F:149:ARG:O	11:F:150:GLY:C	2.53	0.47
13:H:5:LEU:HA	13:H:35:LYS:CE	2.45	0.47
15:J:45:THR:N	22:Q:63:ARG:NH2	2.44	0.47
15:J:3:THR:O	15:J:4:PHE:CB	2.61	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:N:61:ALA:C	19:N:63:ARG:N	2.65	0.47
10:E:4:VAL:HG23	10:E:14:VAL:HG11	1.95	0.47
7:B:88:G:O2'	7:B:89:A:H5'	2.15	0.47
29:X:22:LEU:O	29:X:25:GLN:CD	2.53	0.47
2:1:24:LYS:HG2	2:1:25:ASN:N	2.28	0.47
7:B:220:G:C6	7:B:427:U:C5	3.03	0.47
7:B:866:A:N1	7:B:867:C:C2	2.82	0.47
7:B:873:C:C3'	7:B:873:C:C6	2.97	0.47
30:Y:1:ALA:CB	30:Y:37:ARG:HB3	2.42	0.47
9:D:45:TYR:O	9:D:46:ARG:HB2	2.14	0.47
17:L:141:LYS:O	17:L:142:ILE:HG12	2.15	0.47
7:B:363:G:O2'	7:B:364:C:H5'	2.15	0.47
7:B:2560:A:C2	7:B:2561:U:C1'	2.98	0.47
7:B:1551:A:C3'	7:B:1552:A:H5''	2.45	0.47
11:F:135:ILE:HG13	11:F:140:ILE:CD1	2.41	0.47
6:A:14:U:O2'	6:A:15:A:OP1	2.31	0.47
10:E:178:VAL:HG23	10:E:179:SER:H	1.79	0.47
7:B:2100:G:C6	7:B:2101:A:C6	3.03	0.47
1:0:52:LYS:HE2	1:0:53:VAL:HG12	1.96	0.47
7:B:1906:G:C3'	7:B:1906:G:C8	2.97	0.47
11:F:50:ASP:CG	11:F:51:ASN:H	2.17	0.47
7:B:280:U:O5'	7:B:280:U:H6	1.97	0.47
2:1:2:LYS:O	2:1:2:LYS:HG3	2.15	0.47
25:T:50:LEU:HD12	25:T:50:LEU:O	2.14	0.47
7:B:1139:G:OP1	15:J:104:ALA:HB2	2.15	0.47
7:B:123:G:H2'	7:B:124:G:C5'	2.43	0.47
7:B:1351:C:O2	7:B:1352:U:C2	2.67	0.47
7:B:1821:A:C6	7:B:1822:C:N4	2.82	0.47
7:B:1926:U:H5'	7:B:1927:A:OP2	2.15	0.47
7:B:570:G:C5	7:B:2030:A:N6	2.82	0.47
7:B:2075:U:N3	7:B:2238:G:C6	2.83	0.47
7:B:2376:A:H2'	7:B:2377:A:O4'	2.15	0.47
7:B:2421:G:C8	7:B:2421:G:C5'	2.98	0.47
7:B:2478:A:H3'	7:B:2479:U:H6	1.78	0.47
7:B:2486:C:C2'	7:B:2487:G:O5'	2.63	0.47
7:B:2574:G:N2	7:B:2575:C:C2	2.82	0.47
7:B:2689:U:OP2	7:B:2719:G:N2	2.44	0.47
7:B:2751:G:HO2'	7:B:2752:C:H6	1.61	0.47
7:B:452:G:N2	7:B:458:G:N9	2.63	0.47
7:B:4:U:C2	7:B:2900:A:H2	2.32	0.47
7:B:706:A:C2	7:B:707:G:H1'	2.49	0.47
7:B:760:G:H2'	7:B:761:A:C8	2.50	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:966:G:C6	7:B:967:U:C2	3.03	0.47
7:B:974:G:H8	7:B:990:A:H62	1.61	0.47
8:C:20:ASN:HD21	8:C:203:VAL:CG1	2.27	0.47
9:D:125:TRP:HB2	9:D:160:LYS:HG2	1.96	0.47
11:F:147:ARG:O	11:F:148:VAL:C	2.53	0.47
15:J:59:ALA:C	15:J:61:LYS:N	2.67	0.47
7:B:1131:G:C5	15:J:77:HIS:NE2	2.83	0.47
21:P:92:ARG:HG2	21:P:110:LYS:HB2	1.97	0.47
21:P:26:GLU:CA	21:P:47:ILE:HB	2.42	0.47
22:Q:89:ILE:HG22	22:Q:90:ASP:N	2.30	0.47
3:2:9:VAL:C	3:2:11:LYS:N	2.68	0.47
3:2:43:THR:OG1	3:2:44:VAL:HG22	2.15	0.47
6:A:53:A:H2'	6:A:54:G:O4'	2.15	0.47
7:B:1026:G:OP2	7:B:1135:C:OP2	2.33	0.47
7:B:1819:A:H1'	7:B:1821:A:C6	2.50	0.47
7:B:570:G:H2'	7:B:2030:A:N7	2.30	0.47
7:B:2281:A:O4'	7:B:2388:A:C2	2.68	0.47
7:B:2648:G:O5'	7:B:2648:G:C8	2.67	0.47
7:B:989:G:HO2'	7:B:990:A:C5'	2.27	0.47
8:C:53:ILE:CD1	8:C:218:THR:OG1	2.63	0.47
9:D:130:GLN:HG2	9:D:138:LEU:O	2.15	0.47
12:G:150:TYR:O	12:G:151:ARG:HB2	2.13	0.47
13:H:35:LYS:NZ	13:H:37:VAL:HG22	2.29	0.47
15:J:114:LEU:C	15:J:116:ARG:N	2.68	0.47
20:O:30:ARG:C	20:O:31:THR:O	2.53	0.47
22:Q:44:TYR:O	22:Q:45:ALA:C	2.52	0.47
23:R:96:VAL:O	23:R:96:VAL:HG13	2.13	0.47
28:W:3:LYS:NZ	28:W:10:ARG:HE	2.13	0.47
7:B:2346:A:C2	7:B:2383:G:C6	3.03	0.47
2:1:19:PHE:CD2	2:1:40:PRO:HA	2.44	0.47
2:1:46:VAL:HG13	2:1:47:ILE:CG1	2.40	0.47
7:B:2286:G:H5''	7:B:2286:G:N3	2.30	0.47
10:E:2:GLU:CG	10:E:16:GLU:HA	2.45	0.47
7:B:506:G:H4'	7:B:507:A:H5'	1.97	0.47
7:B:321:U:H1'	10:E:159:LEU:CG	2.45	0.47
17:L:21:ARG:C	17:L:23:ILE:N	2.67	0.47
7:B:77:G:C4	7:B:110:G:N2	2.83	0.47
29:X:25:GLN:HG2	29:X:26:PHE:HD1	1.80	0.47
9:D:7:LYS:H	9:D:201:LEU:HD13	1.78	0.47
9:D:34:VAL:CG2	9:D:35:THR:N	2.71	0.47
23:R:35:PHE:CZ	23:R:66:HIS:HB3	2.49	0.47
8:C:185:ALA:C	8:C:187:CYS:H	2.16	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:67:ALA:O	22:Q:70:GLN:N	2.48	0.47
7:B:2391:G:N2	7:B:2424:C:N1	2.63	0.47
7:B:621:A:H2'	7:B:622:G:O4'	2.14	0.47
7:B:901:C:O2'	7:B:902:C:H5'	2.15	0.47
18:M:43:ALA:HB3	18:M:91:TYR:CD2	2.50	0.47
6:A:94:A:C5	6:A:95:U:C2	3.02	0.47
7:B:903:C:C4	7:B:904:G:C8	3.02	0.47
30:Y:43:ILE:O	30:Y:43:ILE:HD13	2.15	0.47
7:B:1427:A:C1'	7:B:1428:C:C5	2.97	0.47
7:B:2787:C:C1'	9:D:62:LYS:HB3	2.44	0.47
9:D:73:VAL:HB	9:D:91:THR:HG22	1.95	0.47
25:T:15:HIS:O	25:T:16:VAL:O	2.33	0.47
7:B:2788:C:C2	7:B:2789:C:C5	3.02	0.47
7:B:1081:U:H2'	7:B:1082:U:H6	1.80	0.47
14:I:20:SER:HB2	14:I:21:PRO:HD3	1.96	0.47
7:B:2195:U:C2	7:B:2196:C:C6	3.03	0.47
7:B:2562:U:C2'	7:B:2563:U:H5'	2.45	0.47
7:B:1551:A:C5	7:B:1552:A:C2	3.03	0.47
24:S:93:ALA:C	24:S:94:ASP:CG	2.72	0.47
7:B:2208:C:C2	7:B:2217:G:N2	2.83	0.47
7:B:1864:U:H2'	7:B:1865:U:H5'	1.96	0.47
6:A:18:G:H21	6:A:19:C:H1'	1.78	0.47
7:B:1581:G:H2'	7:B:1582:C:O4'	2.14	0.47
7:B:712:G:C2	7:B:720:U:O2	2.67	0.47
7:B:1040:A:C2'	7:B:1041:G:H5'	2.45	0.47
7:B:1959:G:N2	7:B:1960:A:N3	2.62	0.47
7:B:1383:A:H3'	7:B:1383:A:P	2.54	0.47
14:I:122:GLU:HA	14:I:125:THR:HB	1.97	0.47
6:A:21:G:C6	6:A:22:U:C4	3.03	0.47
1:O:22:THR:O	1:O:23:ALA:O	2.32	0.47
7:B:2604:U:N3	7:B:2605:U:C5	2.83	0.47
7:B:2459:A:H2'	7:B:2459:A:N3	2.29	0.47
11:F:69:ALA:C	11:F:70:ARG:HG3	2.35	0.47
7:B:1931:U:H2'	7:B:1932:A:H8	1.80	0.47
7:B:1801:A:H8	7:B:2203:U:H2'	1.79	0.47
11:F:76:PHE:O	11:F:77:LYS:CB	2.62	0.47
7:B:845:A:N1	7:B:847:U:H1'	2.30	0.47
4:3:48:MET:O	4:3:49:VAL:HB	2.14	0.47
16:K:121:GLU:O	16:K:122:VAL:C	2.53	0.47
8:C:38:LYS:O	8:C:39:SER:CB	2.61	0.47
11:F:114:ARG:HG3	11:F:114:ARG:O	2.15	0.47
4:3:7:ARG:NH2	4:3:11:LYS:CE	2.78	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:A:52:A:C5	6:A:53:A:C4	3.02	0.47
7:B:1150:C:C2'	7:B:1151:A:H5'	2.45	0.47
7:B:1003:G:N2	7:B:1153:C:N3	2.62	0.47
7:B:1267:U:H2'	7:B:1267:U:O2	2.14	0.47
3:2:9:VAL:HG22	7:B:1309:G:OP1	2.14	0.47
7:B:1658:C:C5'	7:B:1659:G:OP2	2.63	0.47
7:B:1835:G:H2'	7:B:1836:C:C6	2.50	0.47
7:B:2027:G:C6	7:B:2028:U:C5	3.03	0.47
7:B:2044:C:N4	7:B:2045:C:N4	2.62	0.47
7:B:2199:A:C6	7:B:2225:A:C4	3.03	0.47
7:B:373:U:C2	7:B:374:A:N7	2.83	0.47
7:B:687:C:N4	7:B:688:U:C2	2.83	0.47
7:B:749:A:C6	7:B:1618:A:H2	2.31	0.47
7:B:814:C:N3	7:B:815:C:C5	2.83	0.47
8:C:253:GLY:CA	8:C:254:LYS:HZ1	2.24	0.47
8:C:87:SER:O	8:C:88:ALA:HB2	2.14	0.47
9:D:14:ILE:HG21	21:P:79:VAL:N	2.30	0.47
10:E:84:THR:CG2	10:E:85:PHE:H	2.27	0.47
13:H:27:ARG:HA	13:H:31:VAL:HG23	1.97	0.47
15:J:123:LYS:HD2	15:J:123:LYS:N	2.30	0.47
18:M:117:PHE:CG	18:M:124:LEU:HD21	2.48	0.47
18:M:25:ASP:HB3	18:M:98:PRO:HA	1.97	0.47
20:O:92:PHE:CE2	20:O:93:ASP:O	2.67	0.47
21:P:49:ILE:C	21:P:50:ARG:HH11	2.18	0.47
21:P:59:THR:HG23	21:P:76:HIS:CD2	2.49	0.47
7:B:1225:G:OP1	23:R:90:ARG:CB	2.63	0.47
24:S:84:ARG:NH2	24:S:98:LYS:CE	2.68	0.47
7:B:199:A:H1'	31:Z:20:ASN:CB	2.45	0.47
7:B:305:C:C6	7:B:306:U:H5	2.33	0.47
7:B:309:A:N1	7:B:330:A:C4	2.83	0.47
7:B:307:G:N2	7:B:310:A:O5'	2.48	0.47
10:E:152:GLU:HA	10:E:188:MET:SD	2.55	0.47
17:L:21:ARG:O	17:L:23:ILE:O	2.33	0.47
26:U:43:LYS:CD	26:U:57:ILE:HG22	2.45	0.47
7:B:91:A:H1'	7:B:92:U:C5	2.49	0.47
7:B:84:A:P	26:U:2:ALA:HB2	2.54	0.47
8:C:164:VAL:O	8:C:165:ALA:HB3	2.15	0.47
7:B:1707:G:C5	7:B:1756:G:C6	3.03	0.47
7:B:265:A:H2'	7:B:266:G:C1'	2.44	0.47
7:B:634:C:C2	7:B:635:C:C5	3.02	0.47
7:B:2890:G:O5'	7:B:2890:G:H8	1.97	0.47
7:B:1338:G:H2'	7:B:1339:G:C5'	2.45	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:K:10:VAL:HG23	16:K:10:VAL:O	2.15	0.47
7:B:2259:U:H2'	7:B:2259:U:O2	2.15	0.47
7:B:1053:C:C2'	7:B:1054:A:H5'	2.45	0.47
7:B:1080:A:C2	7:B:1081:U:C5	3.02	0.47
23:R:44:GLY:CA	23:R:51:VAL:O	2.52	0.47
7:B:424:G:N2	7:B:425:G:C4	2.82	0.47
9:D:24:VAL:HB	9:D:193:VAL:CG1	2.44	0.47
21:P:2:ASN:ND2	21:P:2:ASN:N	2.51	0.47
17:L:90:VAL:HG22	17:L:90:VAL:O	2.15	0.47
6:A:66:A:C4	6:A:108:A:C6	3.03	0.47
16:K:61:VAL:HG13	16:K:87:LEU:HG	1.97	0.47
7:B:1438:U:H2'	7:B:1439:A:H8	1.80	0.47
13:H:65:ALA:HA	13:H:68:ARG:HD2	1.96	0.47
24:S:53:SER:C	24:S:55:ILE:N	2.67	0.47
11:F:5:ASP:HA	11:F:8:LYS:HB2	1.97	0.47
7:B:1483:G:H8	7:B:1483:G:H5''	1.79	0.47
1:O:43:THR:O	1:O:44:ALA:HB3	2.15	0.47
6:A:46:A:H4'	20:O:1:MET:HB2	1.96	0.47
6:A:49:C:H2'	6:A:50:A:C8	2.49	0.47
7:B:1614:A:N6	24:S:91:GLY:O	2.46	0.47
7:B:1973:G:C8	7:B:1973:G:C3'	2.98	0.47
7:B:2024:G:N1	7:B:2025:C:C4	2.83	0.47
7:B:2243:U:O2	7:B:2434:A:H2	1.98	0.47
7:B:2357:G:C2	7:B:2361:G:C6	3.03	0.47
7:B:253:C:C2'	7:B:253:C:O2	2.63	0.47
7:B:244:A:C4	7:B:255:A:C6	3.03	0.47
7:B:2618:G:C8	7:B:2619:C:H5	2.33	0.47
7:B:465:G:H5''	7:B:465:G:H8	1.80	0.47
7:B:684:G:N1	7:B:774:G:C2	2.83	0.47
7:B:751:A:C6	7:B:789:A:C6	3.03	0.47
7:B:768:G:C2	7:B:769:U:O2	2.68	0.47
7:B:783:A:C5	7:B:785:G:H1'	2.50	0.47
7:B:817:C:C2'	7:B:818:G:H5'	2.45	0.47
7:B:838:C:C2	7:B:941:A:N6	2.83	0.47
7:B:964:C:H6	7:B:964:C:O5'	1.97	0.47
8:C:124:LYS:H	8:C:191:LEU:HD21	1.79	0.47
15:J:110:PRO:O	15:J:111:LYS:HB2	2.15	0.47
15:J:85:LYS:HZ3	15:J:85:LYS:HA	1.78	0.47
7:B:1275:A:N7	19:N:16:HIS:CG	2.83	0.47
19:N:4:ARG:CZ	19:N:6:SER:OG	2.63	0.47
21:P:18:SER:HA	21:P:87:ARG:HH21	1.78	0.47
22:Q:87:VAL:HB	23:R:54:VAL:CG2	2.45	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:91:ARG:CA	22:Q:94:LEU:HD23	2.41	0.47
24:S:9:HIS:O	24:S:10:ALA:HB3	2.15	0.47
28:W:26:GLY:O	28:W:59:PHE:HB3	2.15	0.47
28:W:35:ILE:CG1	28:W:70:VAL:HB	2.45	0.47
28:W:3:LYS:O	28:W:4:LYS:C	2.53	0.47
7:B:2291:U:H2'	7:B:2292:U:C6	2.50	0.47
7:B:319:G:C5	7:B:333:G:N2	2.83	0.47
7:B:72:U:O2'	7:B:73:A:H5'	2.15	0.47
7:B:85:G:H1'	7:B:103:A:C2	2.49	0.47
9:D:89:GLU:HG2	9:D:93:GLY:CA	2.45	0.47
7:B:609:A:H2'	7:B:610:C:O4'	2.15	0.47
27:V:60:VAL:HB	27:V:72:VAL:O	2.14	0.47
7:B:1339:G:O4'	7:B:1393:A:C2	2.68	0.47
7:B:2282:G:H4'	7:B:2283:C:OP2	2.15	0.47
7:B:1057:A:H2'	7:B:1058:U:H5'	1.96	0.47
27:V:87:GLN:HB3	27:V:88:HIS:H	1.38	0.47
24:S:85:ILE:CD1	24:S:86:MET:H	2.27	0.47
7:B:166:U:C2'	7:B:167:A:H5'	2.44	0.47
10:E:42:GLY:O	10:E:43:THR:OG1	2.29	0.47
7:B:239:C:H42	7:B:258:G:H1	1.63	0.47
7:B:1386:C:H6	7:B:1386:C:H5''	1.79	0.47
7:B:1528:A:C2'	7:B:1529:G:H5'	2.42	0.47
7:B:2065:C:C6	7:B:2066:C:H5	2.32	0.47
20:O:90:VAL:HG13	20:O:116:GLN:O	2.15	0.47
11:F:144:LYS:HG3	11:F:145:VAL:N	2.30	0.47
18:M:107:GLY:O	18:M:109:PRO:HD3	2.15	0.47
4:3:53:ASP:O	4:3:56:LEU:HB3	2.15	0.47
6:A:46:A:C6	6:A:47:C:N3	2.83	0.47
7:B:1136:G:H2'	7:B:1137:G:O4'	2.15	0.47
7:B:1135:C:N4	7:B:1139:G:C6	2.83	0.47
7:B:579:G:C2	7:B:1262:A:C4	3.03	0.47
7:B:1361:G:O5'	7:B:1361:G:H8	1.97	0.47
7:B:1429:G:C1'	7:B:1568:G:H1'	2.45	0.47
7:B:1839:G:C5	7:B:1840:G:N7	2.83	0.47
7:B:193:U:N3	7:B:194:G:N7	2.62	0.47
7:B:2059:A:C2	7:B:2503:A:N1	2.83	0.47
7:B:2671:G:C6	7:B:2672:U:N3	2.83	0.47
7:B:2850:A:C6	7:B:2851:A:N7	2.82	0.47
7:B:568:U:H2'	7:B:570:G:OP2	2.15	0.47
7:B:791:C:N4	7:B:794:A:H1'	2.29	0.47
7:B:1820:U:O2'	8:C:155:ARG:HD2	2.15	0.47
8:C:174:ARG:O	8:C:174:ARG:HG3	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:156:SER:O	8:C:195:GLY:HA3	2.14	0.47
8:C:235:GLU:HG2	8:C:237:ARG:HG3	1.97	0.47
15:J:57:LEU:O	15:J:59:ALA:N	2.48	0.47
18:M:32:GLY:O	18:M:33:LEU:HB2	2.15	0.47
7:B:1275:A:N7	19:N:16:HIS:ND1	2.63	0.47
20:O:34:HIS:HA	20:O:53:THR:HG21	1.96	0.47
22:Q:14:LYS:O	22:Q:15:LYS:C	2.53	0.47
23:R:6:GLN:CA	23:R:10:LYS:HA	2.44	0.47
24:S:36:LEU:HA	24:S:39:THR:HG22	1.97	0.47
7:B:2345:G:C2	7:B:2381:A:C4	3.03	0.47
7:B:59:U:O2'	7:B:60:G:H5''	2.15	0.47
29:X:17:GLU:O	29:X:18:LEU:HD13	2.14	0.47
9:D:49:GLN:HG2	9:D:50:VAL:N	2.30	0.47
8:C:136:VAL:O	8:C:137:GLY:C	2.53	0.47
7:B:140:C:H4'	7:B:141:G:N2	2.30	0.47
12:G:71:LEU:O	12:G:72:ASN:C	2.53	0.47
7:B:1403:A:H2'	7:B:1404:C:O4'	2.15	0.47
7:B:2137:U:N3	7:B:2154:A:N6	2.60	0.47
14:I:79:LEU:HD23	14:I:108:ILE:HD13	1.97	0.47
7:B:1734:G:C2	7:B:1735:A:C8	3.02	0.47
12:G:158:GLY:O	12:G:160:GLY:N	2.48	0.47
7:B:2133:G:OP2	7:B:2133:G:C8	2.68	0.47
4:3:7:ARG:NH1	7:B:250:G:P	2.87	0.46
6:A:33:G:C2	6:A:34:A:C4	3.04	0.46
7:B:816:C:N4	7:B:1192:G:C6	2.84	0.46
7:B:1281:G:C8	7:B:1281:G:H3'	2.50	0.46
7:B:1820:U:C5	8:C:158:GLY:CA	2.88	0.46
7:B:1885:A:H2'	7:B:1886:U:H6	1.78	0.46
7:B:187:G:H2'	7:B:188:G:O5'	2.15	0.46
7:B:2034:U:O2'	7:B:2035:G:O5'	2.31	0.46
7:B:2360:G:H3'	7:B:2360:G:H8	1.80	0.46
7:B:2447:G:N3	7:B:2501:C:C4	2.83	0.46
7:B:2454:G:O2'	7:B:2455:G:H5'	2.15	0.46
7:B:2478:A:C5'	7:B:2478:A:H8	2.14	0.46
5:4:2:LYS:CD	7:B:2526:G:H1'	2.45	0.46
7:B:2571:U:O2'	7:B:2572:A:P	2.72	0.46
7:B:382:A:H2	7:B:383:C:H1'	1.80	0.46
7:B:452:G:N2	7:B:458:G:C4	2.83	0.46
7:B:725:G:O5'	7:B:725:G:H8	1.98	0.46
7:B:990:A:H5'	7:B:990:A:C8	2.48	0.46
8:C:141:HIS:HE1	8:C:156:SER:OG	1.98	0.46
9:D:206:ALA:O	9:D:208:LYS:N	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1258:U:H4'	10:E:79:ARG:HD3	1.97	0.46
13:H:3:VAL:H	13:H:21:VAL:CG1	2.22	0.46
17:L:38:GLN:CD	17:L:39:LYS:HG2	2.35	0.46
19:N:46:ARG:O	19:N:50:PRO:HG2	2.16	0.46
20:O:104:GLN:O	20:O:107:ALA:HB3	2.15	0.46
22:Q:38:VAL:O	22:Q:43:GLN:N	2.46	0.46
24:S:9:HIS:N	24:S:9:HIS:ND1	2.63	0.46
28:W:22:VAL:O	28:W:23:LYS:HG3	2.15	0.46
2:1:36:LYS:NZ	7:B:2344:U:C4	2.84	0.46
7:B:599:A:C2	7:B:659:G:N1	2.83	0.46
10:E:9:GLN:C	10:E:11:ALA:N	2.69	0.46
17:L:21:ARG:O	17:L:22:GLY:C	2.54	0.46
25:T:70:HIS:HB3	25:T:74:ILE:HG21	1.97	0.46
26:U:84:PHE:H	26:U:92:VAL:CG2	2.27	0.46
9:D:29:VAL:O	9:D:30:GLU:O	2.32	0.46
9:D:29:VAL:C	9:D:51:THR:HG21	2.34	0.46
11:F:16:MET:HE3	11:F:21:TYR:HB2	1.97	0.46
7:B:867:C:H2'	7:B:868:U:C5'	2.45	0.46
30:Y:16:LEU:O	30:Y:19:HIS:HB2	2.14	0.46
30:Y:38:GLU:O	30:Y:40:THR:HG22	2.14	0.46
9:D:37:VAL:HG22	9:D:42:ASN:OD1	2.15	0.46
16:K:49:ARG:HB3	16:K:50:GLY:H	1.51	0.46
7:B:1088:A:N6	14:I:92:PRO:HB3	2.28	0.46
7:B:2415:G:C4	7:B:2416:C:C5	3.03	0.46
7:B:2412:A:C8	7:B:2413:G:C8	3.04	0.46
7:B:1861:G:C5'	7:B:1861:G:C8	2.96	0.46
7:B:2186:G:C6	7:B:2187:U:O2	2.67	0.46
7:B:1768:C:H3'	7:B:1768:C:H6	1.76	0.46
7:B:1410:G:H2'	7:B:1410:G:N3	2.30	0.46
16:K:61:VAL:HG11	16:K:112:PHE:CE2	2.50	0.46
7:B:1439:A:H2'	7:B:1440:U:H5'	1.97	0.46
13:H:65:ALA:HA	13:H:68:ARG:HB3	1.97	0.46
7:B:965:C:H6	7:B:965:C:H5''	1.79	0.46
7:B:386:G:H2'	7:B:386:G:H5'	1.66	0.46
4:3:12:ARG:HD3	4:3:23:HIS:HB2	1.96	0.46
4:3:12:ARG:HB3	4:3:13:PHE:CD2	2.49	0.46
4:3:23:HIS:N	4:3:46:LYS:O	2.48	0.46
7:B:1019:U:H5''	7:B:1020:A:OP2	2.15	0.46
7:B:1142:A:H5''	7:B:1142:A:H8	1.74	0.46
7:B:1190:G:O2'	7:B:1191:G:H5'	2.15	0.46
7:B:1225:G:P	23:R:90:ARG:CZ	3.04	0.46
7:B:811:U:O2	7:B:1251:C:N1	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1286:A:C4	7:B:1289:C:N4	2.83	0.46
7:B:1640:A:H2'	7:B:1641:A:H8	1.76	0.46
7:B:1779:U:C6	7:B:1783:A:N7	2.83	0.46
7:B:2045:C:C2	7:B:2624:G:N2	2.84	0.46
7:B:244:A:C2'	7:B:245:G:O5'	2.60	0.46
7:B:2519:U:C4	7:B:2542:A:N7	2.82	0.46
7:B:2674:G:H8	7:B:2674:G:O5'	1.98	0.46
7:B:2692:G:N2	7:B:2693:G:C4	2.84	0.46
7:B:2701:U:C3'	7:B:2701:U:C6	2.98	0.46
7:B:2819:G:C5	7:B:2821:A:C2	3.03	0.46
7:B:371:A:H8	7:B:373:U:C2	2.32	0.46
7:B:491:G:C5	7:B:492:A:C5	3.03	0.46
7:B:53:A:H5''	7:B:54:G:OP2	2.16	0.46
7:B:565:C:N4	7:B:566:U:O4	2.49	0.46
7:B:680:C:N3	7:B:681:G:N7	2.63	0.46
8:C:244:VAL:CG2	8:C:245:THR:N	2.73	0.46
13:H:26:ALA:HB1	13:H:28:ASN:H	1.80	0.46
15:J:7:LYS:HE3	15:J:47:HIS:CD2	2.49	0.46
18:M:55:ARG:C	18:M:57:VAL:N	2.68	0.46
19:N:20:MET:HE3	19:N:21:PHE:CE1	2.50	0.46
22:Q:13:HIS:CB	22:Q:31:TYR:CE2	2.99	0.46
24:S:90:LYS:HA	24:S:90:LYS:HD3	1.50	0.46
28:W:43:LYS:N	28:W:75:ASN:OD1	2.43	0.46
2:1:14:ALA:HA	2:1:48:TYR:CD1	2.50	0.46
2:1:14:ALA:HA	2:1:48:TYR:CZ	2.50	0.46
10:E:23:PHE:HA	10:E:110:SER:O	2.15	0.46
26:U:40:LEU:HD11	26:U:57:ILE:HD11	1.98	0.46
7:B:601:C:O2	7:B:605:G:C4'	2.61	0.46
17:L:110:VAL:O	17:L:111:ILE:HD13	2.14	0.46
17:L:126:ARG:C	17:L:126:ARG:HD2	2.31	0.46
7:B:1169:A:C2	7:B:1181:U:O2	2.68	0.46
7:B:1425:G:O2'	7:B:1426:G:H5'	2.14	0.46
7:B:443:A:H2	7:B:1245:G:N3	2.13	0.46
7:B:1064:C:N3	7:B:1074:G:N2	2.62	0.46
7:B:2562:U:OP1	16:K:40:LYS:NZ	2.44	0.46
16:K:21:CYS:SG	16:K:22:ILE:N	2.88	0.46
7:B:1635:A:H2'	7:B:1636:U:H5'	1.96	0.46
7:B:2327:A:C8	7:B:2327:A:H5'	2.51	0.46
11:F:109:ARG:HG2	11:F:136:ILE:HA	1.96	0.46
7:B:1943:U:O2	7:B:1943:U:O5'	2.32	0.46
7:B:1861:G:N2	7:B:1882:U:C2	2.83	0.46
7:B:1947:C:N3	7:B:1948:G:N7	2.63	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1959:G:C2	7:B:1960:A:C4	3.03	0.46
7:B:45:G:C5'	7:B:46:G:H5'	2.45	0.46
7:B:1005:C:O5'	7:B:1005:C:H6	1.98	0.46
7:B:1398:C:H2'	7:B:1399:C:H6	1.81	0.46
7:B:925:A:C2	7:B:926:G:C4	3.03	0.46
3:2:42:LEU:HA	3:2:42:LEU:HD12	1.63	0.46
4:3:4:LYS:NZ	4:3:61:LEU:H	2.14	0.46
6:A:51:G:H1	20:O:33:ARG:HH22	1.63	0.46
7:B:993:G:N2	7:B:1162:G:N3	2.63	0.46
7:B:149:A:O2'	7:B:150:U:H5'	2.15	0.46
7:B:1609:A:N1	7:B:1616:A:C5	2.84	0.46
7:B:2026:U:H5''	7:B:2027:G:OP2	2.15	0.46
7:B:570:G:N9	7:B:2030:A:N7	2.63	0.46
7:B:2090:A:N6	7:B:2091:C:H42	2.14	0.46
7:B:2211:A:O2'	7:B:2212:A:P	2.73	0.46
7:B:2872:A:O2'	7:B:2873:A:C5'	2.58	0.46
7:B:470:A:N1	7:B:471:A:C2	2.82	0.46
7:B:537:G:C6	7:B:555:G:N2	2.84	0.46
7:B:559:G:H2'	7:B:560:C:H6	1.81	0.46
7:B:566:U:O2	7:B:576:U:O2	2.33	0.46
7:B:839:U:C2	7:B:940:G:N1	2.83	0.46
7:B:948:C:P	33:B:5190:HOH:O	2.73	0.46
7:B:992:C:C2'	7:B:993:G:H5'	2.46	0.46
8:C:180:MET:O	8:C:264:LYS:O	2.34	0.46
8:C:45:ASN:OD1	8:C:46:GLY:N	2.48	0.46
9:D:124:ARG:C	9:D:160:LYS:HG2	2.35	0.46
11:F:63:LYS:HA	11:F:64:PRO:HD3	1.78	0.46
13:H:53:GLU:HG2	13:H:57:LYS:HE2	1.98	0.46
15:J:32:LEU:HD22	15:J:122:LEU:HD21	1.97	0.46
22:Q:34:ALA:O	22:Q:37:ALA:HB3	2.16	0.46
24:S:19:LEU:O	24:S:20:VAL:C	2.53	0.46
24:S:83:LYS:HB2	24:S:83:LYS:HZ3	1.77	0.46
31:Z:48:GLN:NE2	31:Z:49:ARG:N	2.64	0.46
2:1:13:SER:O	2:1:48:TYR:CD2	2.68	0.46
16:K:108:ARG:HA	16:K:116:ILE:CD1	2.45	0.46
7:B:345:A:C2	7:B:347:A:C6	3.03	0.46
26:U:87:GLU:O	26:U:88:ASP:C	2.53	0.46
7:B:1707:G:N7	7:B:1756:G:C5	2.83	0.46
17:L:109:LYS:HA	17:L:126:ARG:CB	2.44	0.46
27:V:70:ILE:H	27:V:70:ILE:CD1	2.28	0.46
18:M:18:ARG:H	18:M:18:ARG:CD	2.27	0.46
18:M:42:THR:HG23	18:M:45:GLN:NE2	2.30	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:74:THR:HG21	18:M:85:GLY:HA2	1.97	0.46
9:D:37:VAL:HG21	9:D:46:ARG:CZ	2.46	0.46
25:T:20:ALA:O	25:T:21:SER:HB2	2.15	0.46
16:K:16:ALA:O	16:K:17:ARG:O	2.34	0.46
7:B:1055:G:OP2	7:B:1055:G:H8	1.97	0.46
26:U:10:VAL:HG22	26:U:22:GLY:O	2.15	0.46
7:B:2656:U:H2'	7:B:2657:A:C8	2.50	0.46
7:B:1788:C:C2'	7:B:1789:A:H5'	2.45	0.46
7:B:1038:G:C2	7:B:1039:A:C5	3.03	0.46
7:B:1348:C:H6	7:B:1348:C:H5''	1.80	0.46
7:B:12:U:H2'	7:B:12:U:O2	2.14	0.46
5:4:16:ILE:CG1	5:4:17:VAL:HG12	2.43	0.46
6:A:29:A:C2	6:A:56:G:N1	2.82	0.46
7:B:1358:G:H8	7:B:1358:G:O5'	1.98	0.46
7:B:1558:C:H4'	7:B:1559:U:H5'	1.98	0.46
7:B:1624:U:O2'	7:B:1625:C:H5'	2.15	0.46
7:B:1809:A:C6	7:B:1810:A:N6	2.83	0.46
7:B:1885:A:H2'	7:B:1886:U:O4'	2.16	0.46
7:B:2316:G:C2	7:B:2317:A:N7	2.84	0.46
7:B:2515:C:C2	7:B:2516:A:C8	3.04	0.46
7:B:2535:G:H5''	7:B:2535:G:H8	1.80	0.46
7:B:2543:G:H2'	7:B:2544:G:O4'	2.15	0.46
7:B:2648:G:C2	7:B:2649:C:C2	3.03	0.46
7:B:378:C:C3'	7:B:379:G:H5'	2.44	0.46
7:B:556:A:H2	7:B:557:C:C1'	2.28	0.46
7:B:725:G:C5	7:B:726:G:C6	3.03	0.46
7:B:743:A:H2'	7:B:744:U:H5'	1.96	0.46
8:C:141:HIS:O	8:C:142:ASN:C	2.53	0.46
8:C:229:HIS:HD1	8:C:231:HIS:CD2	2.34	0.46
7:B:1567:G:N7	8:C:82:TYR:CD2	2.84	0.46
15:J:7:LYS:HG2	15:J:7:LYS:O	2.16	0.46
18:M:33:LEU:O	18:M:99:GLY:HA2	2.16	0.46
21:P:73:PHE:CE2	21:P:75:THR:CG2	2.88	0.46
23:R:76:LYS:NZ	23:R:90:ARG:HH11	2.13	0.46
24:S:66:ILE:C	24:S:68:ASP:N	2.68	0.46
7:B:322:A:H2'	7:B:322:A:OP2	2.15	0.46
7:B:2627:G:H2'	7:B:2628:C:H6	1.80	0.46
7:B:2773:C:H2'	7:B:2774:C:C6	2.50	0.46
12:G:10:VAL:HB	12:G:47:ASN:HA	1.98	0.46
22:Q:96:ASP:C	22:Q:97:ILE:HD13	2.35	0.46
7:B:616:A:C2	7:B:617:G:C4	3.04	0.46
14:I:16:MET:CE	14:I:19:PRO:HG2	2.45	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:136:G:P	7:B:136:G:H8	2.39	0.46
7:B:1788:C:N4	7:B:1789:A:C5	2.83	0.46
7:B:1788:C:O2'	7:B:1789:A:H5'	2.16	0.46
17:L:73:ILE:HG22	17:L:75:ALA:HA	1.98	0.46
17:L:45:GLY:C	17:L:47:ARG:N	2.68	0.46
7:B:11:C:N4	7:B:2629:U:N3	2.63	0.46
3:2:30:VAL:HG12	3:2:31:LEU:N	2.30	0.46
3:2:44:VAL:HG21	7:B:126:A:C2	2.51	0.46
4:3:32:LEU:HD13	4:3:33:THR:N	2.31	0.46
4:3:39:ARG:HA	4:3:39:ARG:HD3	1.61	0.46
5:4:17:VAL:HG23	5:4:23:ILE:HG22	1.98	0.46
7:B:1007:C:N4	7:B:1008:A:C6	2.84	0.46
7:B:1197:G:O2'	7:B:1198:U:H5'	2.14	0.46
7:B:1216:G:C5'	7:B:1216:G:H8	2.29	0.46
7:B:1269:A:C6	7:B:1270:C:N4	2.83	0.46
7:B:1297:C:N3	7:B:1643:G:O6	2.48	0.46
7:B:1298:C:H1'	7:B:1302:A:N3	2.31	0.46
7:B:1313:U:O2	7:B:1313:U:H2'	2.15	0.46
7:B:131:A:N1	7:B:132:G:C6	2.84	0.46
7:B:1365:A:C4	7:B:1366:A:C8	3.04	0.46
7:B:1369:G:N2	7:B:1370:C:C2	2.84	0.46
7:B:1353:A:C5	7:B:1378:A:C5	3.03	0.46
7:B:1380:G:C8	7:B:1380:G:O5'	2.68	0.46
7:B:1563:U:O2'	7:B:1564:C:H5'	2.16	0.46
7:B:1796:U:C2'	7:B:1797:G:H5'	2.45	0.46
7:B:188:G:N1	7:B:209:C:N4	2.64	0.46
7:B:190:A:H2'	7:B:191:A:C8	2.51	0.46
7:B:193:U:C4	7:B:194:G:N7	2.83	0.46
7:B:1973:G:C2	7:B:1974:C:O2	2.68	0.46
7:B:1975:G:C4	7:B:1976:U:C6	3.02	0.46
7:B:2028:U:H3'	7:B:2029:G:C8	2.50	0.46
7:B:2310:C:H5''	7:B:2310:C:H6	1.80	0.46
7:B:2519:U:C2	7:B:2542:A:N6	2.83	0.46
7:B:2617:U:H2'	7:B:2618:G:H5'	1.96	0.46
7:B:2726:A:O2'	7:B:2727:A:H5'	2.15	0.46
7:B:2838:G:N2	19:N:93:GLY:N	2.62	0.46
7:B:680:C:O2'	7:B:681:G:H5'	2.16	0.46
7:B:771:G:N1	7:B:772:C:C4	2.84	0.46
7:B:800:A:H4'	7:B:801:G:H5'	1.97	0.46
7:B:806:C:O2'	7:B:807:U:H5'	2.13	0.46
8:C:153:LEU:O	8:C:153:LEU:CD2	2.63	0.46
8:C:161:VAL:HG12	8:C:173:LEU:CD2	2.44	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:257:ARG:CG	8:C:261:ARG:NH1	2.72	0.46
8:C:48:ILE:HG22	8:C:49:THR:H	1.79	0.46
17:L:54:GLN:HE22	17:L:55:MET:HB3	1.80	0.46
20:O:31:THR:HG23	20:O:32:PRO:HD2	1.98	0.46
23:R:11:GLN:N	23:R:21:ARG:NH2	2.64	0.46
28:W:65:LYS:HE3	28:W:65:LYS:HB3	1.65	0.46
2:1:43:ARG:HB3	2:1:44:GLN:H	1.42	0.46
7:B:659:G:C6	7:B:660:C:C4	3.03	0.46
7:B:597:G:N2	7:B:661:A:C4	2.83	0.46
16:K:116:ILE:HG12	16:K:116:ILE:H	1.25	0.46
7:B:79:C:H5''	7:B:80:G:OP2	2.16	0.46
29:X:3:ALA:N	29:X:6:LEU:HD21	2.31	0.46
29:X:41:HIS:CE1	29:X:43:LEU:CB	2.91	0.46
7:B:612:G:H1'	7:B:616:A:N6	2.31	0.46
7:B:612:G:O5'	7:B:612:G:H8	1.98	0.46
18:M:42:THR:OG1	18:M:45:GLN:NE2	2.48	0.46
9:D:61:THR:N	9:D:62:LYS:HZ2	2.14	0.46
13:H:117:LEU:HD12	13:H:130:VAL:HG21	1.97	0.46
7:B:1338:G:H2'	7:B:1339:G:H5'	1.98	0.46
25:T:11:LEU:HD21	25:T:47:VAL:CG2	2.46	0.46
18:M:77:PRO:N	18:M:86:LYS:HZ3	2.13	0.46
26:U:24:VAL:O	26:U:25:LYS:CB	2.52	0.46
7:B:1059:G:N2	14:I:134:SER:OG	2.49	0.46
7:B:271:G:H22	7:B:366:C:N4	2.14	0.46
12:G:67:ALA:O	12:G:68:ARG:C	2.54	0.46
19:N:67:PHE:O	19:N:68:ALA:O	2.33	0.46
7:B:1100:C:OP1	14:I:2:LYS:HA	2.16	0.46
7:B:170:U:H2'	7:B:171:U:C6	2.51	0.46
7:B:1936:A:C2	7:B:1943:U:O4	2.69	0.46
16:K:64:ARG:O	16:K:82:ASN:HA	2.16	0.46
16:K:82:ASN:N	16:K:82:ASN:ND2	2.63	0.46
11:F:107:VAL:HB	11:F:108:PRO:HD3	1.97	0.46
7:B:696:G:H2'	7:B:697:G:H8	1.80	0.46
7:B:2294:G:C4	7:B:2295:C:C6	3.03	0.46
7:B:31:C:C6	7:B:31:C:C3'	2.98	0.46
7:B:933:A:H2'	7:B:934:U:H5'	1.97	0.46
7:B:2631:G:C6	7:B:2632:A:N7	2.84	0.46
27:V:16:ALA:O	27:V:20:LEU:HG	2.15	0.46
7:B:2192:U:C5'	7:B:2192:U:H6	2.28	0.46
3:2:5:PHE:HE1	7:B:464:U:C5'	2.23	0.46
7:B:1011:G:OP1	22:Q:76:SER:OG	2.34	0.46
7:B:1805:A:N3	7:B:1813:G:C2	2.83	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1839:G:C6	7:B:1840:G:N7	2.84	0.46
7:B:1839:G:C6	7:B:1927:A:C2	3.04	0.46
7:B:194:G:O6	7:B:195:A:N6	2.49	0.46
7:B:2229:U:C2	7:B:2230:G:N7	2.84	0.46
7:B:2264:C:N3	7:B:2265:U:N3	2.64	0.46
7:B:2466:C:C2	7:B:2485:G:C2	3.03	0.46
7:B:2684:U:C3'	7:B:2684:U:C6	2.99	0.46
7:B:2729:G:H2'	7:B:2730:C:H6	1.80	0.46
7:B:2823:A:C6	7:B:2824:C:C4	3.03	0.46
7:B:2824:C:N4	7:B:2825:G:N7	2.64	0.46
7:B:2850:A:N3	7:B:2851:A:C8	2.82	0.46
1:O:27:LEU:HD21	7:B:2886:A:C2	2.50	0.46
7:B:379:G:H3'	7:B:379:G:C8	2.50	0.46
7:B:536:G:C5	7:B:537:G:C5	3.04	0.46
7:B:679:C:C2	7:B:680:C:H5	2.33	0.46
7:B:744:U:H2'	7:B:745:G:O5'	2.16	0.46
7:B:794:A:C5	7:B:795:C:C5	3.04	0.46
8:C:260:LYS:HG2	8:C:262:THR:OG1	2.16	0.46
8:C:62:ARG:C	8:C:62:ARG:HD3	2.35	0.46
8:C:80:LEU:HA	8:C:91:ALA:CA	2.43	0.46
33:B:5155:HOH:O	10:E:57:LYS:HE2	2.16	0.46
13:H:29:PHE:HA	13:H:33:GLN:HB2	1.97	0.46
13:H:35:LYS:HZ3	13:H:37:VAL:CG2	2.28	0.46
15:J:8:PRO:HG2	15:J:11:VAL:HG11	1.98	0.46
21:P:50:ARG:CZ	21:P:50:ARG:HB2	2.46	0.46
21:P:50:ARG:N	21:P:50:ARG:HH11	2.14	0.46
22:Q:78:PHE:CZ	22:Q:82:LEU:HD11	2.51	0.46
23:R:96:VAL:O	23:R:96:VAL:CG1	2.63	0.46
24:S:40:ASN:O	24:S:41:LYS:CB	2.63	0.46
7:B:644:A:H2	7:B:646:U:C4	2.34	0.46
7:B:312:G:H4'	7:B:331:C:N3	2.30	0.46
7:B:72:U:C5	7:B:112:U:O2'	2.69	0.46
26:U:89:GLY:C	26:U:91:LYS:H	2.18	0.46
7:B:2636:C:C4'	9:D:80:TRP:CZ2	2.98	0.46
8:C:134:ILE:CD1	8:C:135:PRO:HD2	2.44	0.46
7:B:635:C:C2	7:B:636:G:C8	3.04	0.46
6:A:99:A:C2	6:A:100:G:H1'	2.51	0.46
6:A:99:A:C2	6:A:100:G:N9	2.84	0.46
7:B:917:A:C2'	7:B:918:A:H5'	2.46	0.46
7:B:1426:G:N1	7:B:1427:A:N6	2.64	0.46
7:B:2784:U:H4'	9:D:41:ALA:O	2.15	0.46
7:B:1340:U:O4'	7:B:1340:U:O2	2.34	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2891:U:C2'	7:B:2892:G:H5'	2.45	0.46
23:R:46:GLU:HG3	23:R:51:VAL:HB	1.98	0.46
7:B:277:G:H1'	7:B:361:G:C6	2.50	0.46
31:Z:17:SER:CB	31:Z:21:VAL:HB	2.45	0.46
12:G:86:LEU:CD2	12:G:147:LEU:HB2	2.46	0.46
14:I:57:VAL:O	14:I:68:PHE:HA	2.16	0.46
7:B:1702:G:C8	7:B:1702:G:H3'	2.51	0.46
7:B:1488:C:H2'	7:B:1489:C:H6	1.81	0.46
10:E:19:PHE:CD1	10:E:19:PHE:O	2.68	0.46
4:3:30:HIS:C	4:3:31:ILE:CG2	2.84	0.46
5:4:18:LYS:O	5:4:19:ARG:HG3	2.15	0.46
5:4:23:ILE:HG13	5:4:24:ARG:H	1.81	0.46
6:A:27:C:H5''	6:A:27:C:H6	1.81	0.46
5:4:16:ILE:HD12	7:B:1033:U:C6	2.50	0.46
7:B:1188:U:H2'	7:B:1188:U:O2	2.15	0.46
7:B:1381:G:N7	7:B:1382:G:N2	2.64	0.46
7:B:1606:C:C3'	7:B:1606:C:C6	2.99	0.46
7:B:1649:G:H1'	19:N:106:ASP:HB2	1.96	0.46
7:B:1797:G:N7	7:B:1798:U:C5	2.84	0.46
7:B:1821:A:H2'	7:B:1822:C:C6	2.49	0.46
7:B:2061:G:O4'	7:B:2503:A:C5	2.68	0.46
7:B:2359:C:O2'	7:B:2360:G:P	2.74	0.46
7:B:2396:G:H8	7:B:2396:G:H5''	1.80	0.46
7:B:2521:C:C4	7:B:2522:U:C4	3.04	0.46
7:B:2529:G:H5'	7:B:2530:A:O5'	2.15	0.46
7:B:2567:G:O2'	7:B:2568:U:H5'	2.16	0.46
7:B:2044:C:C2	7:B:2625:G:N2	2.84	0.46
7:B:2722:G:N3	7:B:2723:C:C6	2.83	0.46
7:B:2741:A:H62	7:B:2763:G:H1'	1.80	0.46
7:B:2838:G:N2	7:B:2839:G:H1'	2.31	0.46
7:B:2846:G:OP1	21:P:54:LEU:HD12	2.15	0.46
7:B:445:C:O2'	7:B:449:A:N3	2.49	0.46
7:B:725:G:C6	7:B:726:G:C6	3.04	0.46
7:B:792:A:C5	7:B:2440:C:C6	3.04	0.46
7:B:943:A:OP2	17:L:40:SER:CB	2.64	0.46
8:C:105:ALA:O	8:C:195:GLY:HA2	2.16	0.46
8:C:229:HIS:CD2	8:C:230:PRO:HD3	2.50	0.46
8:C:231:HIS:CE1	8:C:242:HIS:ND1	2.84	0.46
7:B:2086:U:OP1	8:C:257:ARG:NH2	2.49	0.46
7:B:2512:C:P	9:D:128:ARG:HA	2.54	0.46
9:D:130:GLN:OE1	9:D:138:LEU:HD23	2.16	0.46
10:E:52:VAL:O	10:E:53:THR:OG1	2.33	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1255:U:N3	10:E:66:GLY:O	2.49	0.46
11:F:49:LEU:HD22	11:F:52:ALA:HB2	1.96	0.46
15:J:55:ILE:HG12	15:J:123:LYS:HB2	1.97	0.46
15:J:127:GLY:O	15:J:130:HIS:ND1	2.48	0.46
15:J:131:ASN:O	15:J:133:ALA:N	2.48	0.46
16:K:2:ILE:CB	16:K:67:LYS:HE3	2.45	0.46
19:N:8:ARG:HD2	19:N:43:GLU:CD	2.36	0.46
21:P:6:GLN:N	21:P:6:GLN:OE1	2.49	0.46
22:Q:24:TYR:CD1	22:Q:24:TYR:C	2.87	0.46
23:R:11:GLN:HB3	23:R:21:ARG:NH2	2.30	0.46
22:Q:46:TYR:HA	23:R:77:PHE:CD1	2.51	0.46
28:W:24:ARG:HH12	28:W:56:HIS:HE1	1.64	0.46
28:W:72:GLY:C	28:W:74:LYS:N	2.69	0.46
7:B:1203:U:H3	7:B:1243:C:H42	1.63	0.46
7:B:319:G:N1	7:B:320:A:C5	2.84	0.46
29:X:47:ARG:O	29:X:50:VAL:HG22	2.16	0.46
23:R:33:VAL:CG2	23:R:34:GLU:H	2.07	0.46
7:B:624:C:O2'	7:B:625:G:H5'	2.15	0.46
27:V:6:ALA:HB1	27:V:40:ILE:HB	1.97	0.46
16:K:43:ILE:O	16:K:54:LYS:HA	2.16	0.46
7:B:486:C:O2	7:B:495:G:C2	2.68	0.46
7:B:411:G:OP2	7:B:2407:A:P	2.74	0.46
6:A:104:A:H2'	6:A:105:G:O4'	2.15	0.46
7:B:37:C:N4	7:B:442:G:H1	2.08	0.46
9:D:24:VAL:HB	9:D:193:VAL:HG11	1.98	0.46
7:B:1418:G:H2'	7:B:1579:A:N6	2.30	0.46
7:B:2531:A:C2'	7:B:2532:G:H5'	2.45	0.46
7:B:2834:G:O6	7:B:2879:A:C2'	2.64	0.46
14:I:99:LYS:O	14:I:99:LYS:HG2	2.16	0.46
6:A:92:C:O2'	6:A:93:C:H5'	2.14	0.46
7:B:1449:G:N2	7:B:1450:G:H1'	2.31	0.46
13:H:42:LYS:HE2	13:H:42:LYS:HB3	1.69	0.46
7:B:1473:G:H2'	7:B:1474:U:H6	1.81	0.46
8:C:23:LEU:O	8:C:23:LEU:HD12	2.16	0.46
6:A:32:U:O4	6:A:51:G:C6	2.69	0.46
7:B:579:G:N2	7:B:1262:A:H1'	2.31	0.46
7:B:1364:G:C1'	7:B:1368:G:H22	2.29	0.46
7:B:1459:G:H3'	7:B:1459:G:H8	1.81	0.46
7:B:1651:G:C6	7:B:1652:A:C5	3.04	0.46
7:B:1899:A:C8	7:B:1899:A:C3'	2.99	0.46
7:B:200:U:H5'	31:Z:20:ASN:HA	1.97	0.46
7:B:210:C:HO2'	7:B:211:C:H5'	1.81	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2235:G:H8	7:B:2235:G:O5'	1.97	0.46
7:B:2488:G:H2'	7:B:2489:U:C6	2.50	0.46
7:B:2519:U:C4'	7:B:2520:C:OP1	2.50	0.46
7:B:2543:G:H3'	7:B:2544:G:H8	1.80	0.46
7:B:2737:G:N2	7:B:2768:U:C2	2.84	0.46
7:B:2543:G:C5	7:B:2765:A:C2	3.04	0.46
7:B:687:C:N3	7:B:688:U:O2	2.49	0.46
7:B:738:G:C2	7:B:739:A:C2	3.03	0.46
7:B:819:A:C2	7:B:820:A:C4	3.03	0.46
8:C:116:GLN:HG3	8:C:116:GLN:O	2.16	0.46
7:B:1842:G:C1'	8:C:241:LYS:HE3	2.46	0.46
8:C:32:LEU:HB3	8:C:61:TYR:HE1	1.77	0.46
9:D:133:THR:HG22	9:D:134:HIS:N	2.29	0.46
17:L:40:SER:C	17:L:41:ARG:HG2	2.37	0.46
19:N:78:LYS:HD2	19:N:82:GLU:OE2	2.16	0.46
20:O:37:ALA:HB3	20:O:51:ALA:O	2.16	0.46
21:P:24:THR:O	21:P:26:GLU:N	2.49	0.46
21:P:26:GLU:HA	21:P:47:ILE:H	1.80	0.46
7:B:312:G:C2	7:B:313:G:C5	3.03	0.46
17:L:92:LEU:HA	17:L:96:LYS:CD	2.46	0.46
8:C:135:PRO:C	8:C:137:GLY:H	2.18	0.46
30:Y:56:VAL:O	30:Y:57:GLU:O	2.34	0.46
7:B:2811:G:P	9:D:61:THR:HG22	2.56	0.46
9:D:61:THR:HG23	9:D:62:LYS:CD	2.46	0.46
7:B:282:A:H2'	7:B:283:G:O4'	2.16	0.46
7:B:1341:G:O6	25:T:26:LYS:HE3	2.16	0.46
16:K:54:LYS:H	16:K:54:LYS:CD	2.27	0.46
7:B:2807:U:O2	7:B:2892:G:N2	2.48	0.46
7:B:271:G:H1'	7:B:272:A:N7	2.26	0.46
17:L:66:PHE:C	17:L:66:PHE:CD2	2.89	0.46
17:L:66:PHE:CD2	17:L:67:THR:N	2.84	0.46
7:B:543:G:H8	7:B:543:G:H5''	1.81	0.46
7:B:1861:G:N1	7:B:1882:U:C2	2.84	0.46
7:B:1037:G:C2	7:B:1038:G:C8	3.04	0.46
7:B:1959:G:H3'	7:B:1959:G:C8	2.50	0.46
7:B:1702:G:C6	7:B:1703:G:C5	3.03	0.46
12:G:101:VAL:HG12	12:G:115:GLN:CG	2.46	0.46
7:B:2097:A:C5	7:B:2098:U:C4	3.04	0.46
7:B:524:G:C2	7:B:525:U:C6	3.04	0.46
7:B:2214:C:C2'	7:B:2214:C:O2	2.64	0.46
25:T:39:THR:HG1	25:T:42:GLU:HB3	1.80	0.46
7:B:933:A:H8	7:B:933:A:H3'	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:4:14:CYS:HA	5:4:27:CYS:HB3	1.77	0.46
6:A:30:C:H2'	6:A:31:C:C5'	2.31	0.46
7:B:1023:U:O5'	7:B:1024:G:OP2	2.34	0.46
7:B:1216:G:C5'	7:B:1216:G:C8	2.99	0.46
7:B:1225:G:C6	7:B:1226:A:N6	2.84	0.46
7:B:811:U:O2	7:B:1251:C:C5	2.69	0.46
7:B:1285:A:C5	7:B:1329:U:C4	3.04	0.46
7:B:1350:C:C5'	7:B:1351:C:OP2	2.64	0.46
7:B:1433:A:C2	7:B:1434:A:C6	3.04	0.46
7:B:1353:A:O4'	7:B:1569:A:H2	1.99	0.46
7:B:1850:G:N2	7:B:1892:C:O2	2.49	0.46
7:B:1972:G:N2	7:B:1973:G:N7	2.64	0.46
7:B:197:A:N1	7:B:198:C:O2	2.48	0.46
7:B:2052:A:H5'	9:D:146:ILE:O	2.16	0.46
7:B:2262:U:O4	7:B:2279:G:C6	2.69	0.46
7:B:2672:U:H3'	7:B:2673:G:H5''	1.98	0.46
7:B:2684:U:C4	7:B:2685:G:N7	2.84	0.46
7:B:801:G:H4'	7:B:802:A:OP2	2.15	0.46
7:B:856:G:C4'	28:W:23:LYS:HZ2	2.28	0.46
7:B:971:G:H5''	7:B:974:G:H2'	1.97	0.46
7:B:974:G:O6	7:B:989:G:C5	2.69	0.46
8:C:116:GLN:HG3	8:C:121:ALA:HB1	1.97	0.46
8:C:178:GLY:O	8:C:266:ILE:CG2	2.64	0.46
8:C:204:LEU:HD22	8:C:210:ALA:HB1	1.98	0.46
8:C:243:PRO:CB	8:C:248:GLY:H	2.28	0.46
8:C:52:HIS:C	8:C:53:ILE:CG1	2.85	0.46
9:D:129:THR:CA	9:D:140:HIS:HE1	2.22	0.46
11:F:36:ASN:HA	11:F:86:CYS:HB2	1.98	0.46
21:P:60:VAL:HB	21:P:61:ARG:H	1.55	0.46
16:K:76:VAL:O	21:P:74:GLN:N	2.47	0.46
21:P:80:VAL:HG22	21:P:80:VAL:O	2.15	0.46
28:W:36:ILE:HG21	28:W:68:PHE:CD1	2.50	0.46
7:B:297:G:H2'	7:B:298:G:O5'	2.16	0.46
7:B:337:C:N3	7:B:338:G:H1'	2.31	0.46
10:E:1:MET:HG3	10:E:2:GLU:N	2.31	0.46
26:U:43:LYS:HD2	26:U:57:ILE:HB	1.96	0.46
7:B:74:A:N7	7:B:88:G:O6	2.49	0.46
25:T:67:VAL:CG1	25:T:68:LYS:H	2.27	0.46
26:U:28:LEU:HD12	26:U:28:LEU:N	2.30	0.46
9:D:34:VAL:CG1	9:D:48:ILE:HG22	2.46	0.46
7:B:869:G:C4	7:B:870:U:C6	3.04	0.46
7:B:1045:C:O5'	7:B:1046:A:H5'	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2658:C:OP1	12:G:159:LYS:CE	2.55	0.46
24:S:87:PRO:O	24:S:88:ARG:CB	2.64	0.46
7:B:1248:G:OP1	10:E:44:ARG:NH1	2.48	0.46
7:B:1861:G:N2	7:B:1882:U:O2	2.49	0.46
7:B:1405:U:H2'	7:B:1406:U:C6	2.51	0.46
7:B:2138:G:H22	7:B:2152:G:H22	1.62	0.46
7:B:2154:A:C8	7:B:2155:U:C5	3.04	0.46
6:A:20:G:N1	6:A:21:G:C5	2.84	0.46
7:B:1935:G:N2	7:B:1964:G:N9	2.64	0.46
7:B:2829:A:O2'	7:B:2830:C:H5'	2.15	0.46
14:I:74:PRO:HA	14:I:112:LYS:NZ	2.30	0.46
16:K:9:ASN:O	16:K:83:ALA:HA	2.15	0.46
24:S:108:SER:OG	24:S:109:ASP:N	2.48	0.46
1:O:43:THR:HG21	19:N:100:CYS:HA	1.98	0.46
6:A:29:A:C2	6:A:30:C:N4	2.83	0.46
7:B:1153:C:OP2	33:B:5208:HOH:O	2.19	0.46
7:B:118:A:H3'	7:B:119:A:C5'	2.45	0.46
7:B:1265:A:H61	7:B:2013:A:H5''	1.81	0.46
7:B:1282:U:H2'	7:B:1283:G:O4'	2.16	0.46
7:B:1560:G:C2	7:B:1561:C:C2	3.03	0.46
7:B:1654:A:N3	7:B:1654:A:H2'	2.31	0.46
7:B:1933:G:C8	7:B:1933:G:H3'	2.51	0.46
7:B:2277:G:C6	7:B:2278:A:N7	2.84	0.46
7:B:2280:G:N1	7:B:2281:A:N7	2.64	0.46
7:B:2392:A:C8	7:B:2429:G:C6	3.03	0.46
7:B:2483:C:C2'	7:B:2484:G:O5'	2.64	0.46
7:B:2568:U:O2	7:B:2569:G:N9	2.49	0.46
7:B:2717:C:H1'	21:P:95:LYS:HZ1	1.80	0.46
3:2:40:ALA:HA	7:B:458:G:H3'	1.98	0.46
7:B:763:G:O2'	7:B:764:A:H5'	2.16	0.46
7:B:569:U:H1'	7:B:947:A:O4'	2.15	0.46
8:C:257:ARG:CB	8:C:261:ARG:CZ	2.94	0.46
16:K:30:ARG:HG2	16:K:31:ARG:H	1.81	0.46
7:B:1453:A:C2	19:N:74:GLU:HA	2.51	0.46
20:O:17:LYS:HD3	20:O:20:GLU:CG	2.46	0.46
20:O:25:ARG:CG	20:O:94:ARG:HH12	2.29	0.46
7:B:480:A:H4'	26:U:40:LEU:CD1	2.36	0.46
10:E:141:MET:SD	10:E:185:LYS:HE3	2.57	0.46
10:E:186:VAL:HG12	10:E:186:VAL:O	2.16	0.46
7:B:599:A:O2'	10:E:27:LEU:HD22	2.16	0.46
26:U:96:LYS:O	26:U:97:SER:HB3	2.16	0.46
29:X:49:ASP:CA	29:X:52:ARG:HD2	2.31	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:178:VAL:CG2	9:D:179:ARG:H	2.11	0.46
7:B:262:A:H2'	7:B:263:G:C5'	2.46	0.46
7:B:616:A:C2	7:B:617:G:H1'	2.51	0.46
7:B:626:A:H3'	7:B:627:A:H5'	1.97	0.46
30:Y:4:ILE:HA	30:Y:36:GLU:HB2	1.98	0.46
9:D:46:ARG:O	9:D:47:ALA:CB	2.63	0.46
9:D:68:PHE:HB2	9:D:90:PHE:CZ	2.49	0.46
24:S:56:ALA:HA	24:S:59:GLU:CG	2.46	0.46
7:B:2065:C:O2'	7:B:2449:U:N3	2.48	0.46
7:B:945:A:H2	7:B:2448:A:O4'	1.99	0.46
7:B:2294:G:C6	7:B:2295:C:C5	3.04	0.46
10:E:126:VAL:HG22	10:E:128:ALA:H	1.80	0.46
7:B:926:G:H3'	7:B:926:G:C8	2.51	0.46
7:B:1473:G:H2'	7:B:1474:U:C6	2.51	0.46
7:B:2220:U:H6	7:B:2220:U:O5'	1.98	0.46
1:0:41:HIS:NE2	1:0:42:ILE:CG2	2.78	0.45
3:2:17:GLY:O	3:2:18:PHE:C	2.53	0.45
7:B:120:U:H5''	7:B:122:G:OP2	2.17	0.45
7:B:1267:U:H1'	33:B:5229:HOH:O	2.15	0.45
7:B:1358:G:C2	7:B:1374:G:O6	2.69	0.45
7:B:1650:A:H2'	7:B:1651:G:O4'	2.16	0.45
7:B:178:G:H8	7:B:178:G:O5'	1.99	0.45
7:B:1797:G:H2'	7:B:1798:U:H6	1.80	0.45
7:B:2048:G:O4'	7:B:2823:A:N1	2.49	0.45
7:B:2090:A:C2	7:B:2230:G:C5	3.04	0.45
7:B:2305:U:C2	11:F:150:GLY:HA3	2.51	0.45
7:B:2487:G:N3	7:B:2488:G:C8	2.85	0.45
7:B:2622:U:O2'	7:B:2825:G:N7	2.49	0.45
7:B:2648:G:N3	7:B:2673:G:C2	2.84	0.45
7:B:556:A:C2	7:B:557:C:N1	2.84	0.45
7:B:561:G:O5'	7:B:561:G:C8	2.56	0.45
8:C:207:ALA:O	8:C:208:GLY:C	2.55	0.45
8:C:47:ARG:HB3	8:C:48:ILE:H	1.48	0.45
9:D:140:HIS:O	9:D:141:ARG:CB	2.64	0.45
11:F:33:ILE:HD11	11:F:90:LEU:CB	2.39	0.45
13:H:53:GLU:O	13:H:53:GLU:HG2	2.16	0.45
7:B:2820:A:O3'	19:N:2:ARG:HD2	2.15	0.45
19:N:97:ILE:O	19:N:97:ILE:HG12	2.16	0.45
20:O:54:VAL:HG13	20:O:54:VAL:O	2.15	0.45
21:P:92:ARG:NH2	21:P:111:GLU:O	2.49	0.45
22:Q:46:TYR:HD1	23:R:79:ARG:HB3	1.80	0.45
23:R:82:HIS:CD2	23:R:84:ARG:HH21	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:L:18:ARG:CZ	17:L:20:GLY:HA3	2.47	0.45
17:L:89:VAL:O	17:L:96:LYS:HE2	2.16	0.45
25:T:8:LEU:HD11	29:X:26:PHE:HZ	1.75	0.45
7:B:2201:G:H5'	7:B:2202:U:OP2	2.16	0.45
7:B:2204:G:C5	7:B:2221:G:C2	3.04	0.45
24:S:110:ARG:CG	24:S:110:ARG:HH11	2.05	0.45
7:B:263:G:C6	7:B:264:C:C4	3.04	0.45
7:B:635:C:OP2	17:L:109:LYS:HE2	2.16	0.45
7:B:636:G:H3'	17:L:128:THR:HG22	1.99	0.45
27:V:37:PRO:O	27:V:38:LEU:HB2	2.16	0.45
18:M:92:TRP:CG	18:M:93:VAL:N	2.81	0.45
7:B:2891:U:H2'	7:B:2892:G:H5'	1.98	0.45
7:B:278:A:N1	7:B:362:A:C5	2.84	0.45
12:G:143:VAL:O	12:G:147:LEU:HD12	2.16	0.45
7:B:406:G:H2'	7:B:407:G:O5'	2.16	0.45
7:B:418:C:C2	7:B:419:U:C6	3.04	0.45
7:B:1931:U:H2'	7:B:1932:A:O4'	2.16	0.45
8:C:119:VAL:HG13	8:C:133:ASN:HD21	1.81	0.45
7:B:153:U:H3'	7:B:153:U:C6	2.51	0.45
13:H:7:ASP:O	13:H:14:SER:O	2.34	0.45
7:B:1268:A:C2'	7:B:1269:A:O5'	2.64	0.45
7:B:1661:G:C4	7:B:1662:U:C5	3.03	0.45
7:B:1677:A:N1	7:B:1678:A:C2	2.85	0.45
7:B:1803:A:O3'	8:C:254:LYS:CD	2.50	0.45
7:B:1890:A:C2	7:B:2234:G:H1'	2.51	0.45
7:B:1897:G:C2	7:B:1898:U:C2	3.05	0.45
7:B:1897:G:C2	7:B:1898:U:O2	2.69	0.45
7:B:2442:C:C6	7:B:2442:C:H3'	2.51	0.45
7:B:2575:C:C5'	7:B:2576:G:OP2	2.64	0.45
7:B:2734:A:N7	7:B:2735:G:N9	2.63	0.45
7:B:2813:A:H2'	7:B:2814:A:H8	1.82	0.45
1:O:27:LEU:CD1	7:B:2886:A:C5	2.99	0.45
7:B:451:U:O2	7:B:453:A:N6	2.49	0.45
7:B:453:A:H4'	7:B:472:A:N6	2.31	0.45
7:B:571:U:O4	7:B:575:A:C5	2.69	0.45
7:B:751:A:N7	7:B:789:A:N1	2.64	0.45
7:B:752:A:C3'	7:B:753:A:H5'	2.45	0.45
7:B:824:U:C4	7:B:825:A:N7	2.84	0.45
8:C:15:VAL:HG12	8:C:16:VAL:CG2	2.44	0.45
8:C:62:ARG:O	8:C:63:ILE:C	2.54	0.45
8:C:66:PHE:O	8:C:68:ARG:N	2.46	0.45
21:P:93:LYS:NZ	21:P:97:TYR:CE2	2.84	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:10:ARG:HB3	22:Q:14:LYS:NZ	2.31	0.45
22:Q:46:TYR:CD1	23:R:78:ARG:C	2.89	0.45
28:W:36:ILE:HD12	28:W:37:VAL:HG23	1.98	0.45
7:B:396:G:H5''	31:Z:11:GLU:CD	2.35	0.45
31:Z:1:MET:HA	31:Z:9:TYR:CZ	2.50	0.45
31:Z:48:GLN:NE2	31:Z:49:ARG:H	2.13	0.45
17:L:18:ARG:NH1	17:L:20:GLY:CA	2.76	0.45
16:K:105:ARG:O	16:K:108:ARG:HB2	2.15	0.45
7:B:93:G:H2'	7:B:94:A:C8	2.51	0.45
29:X:51:ALA:C	29:X:53:VAL:N	2.70	0.45
7:B:527:C:H5''	7:B:2779:U:N3	2.31	0.45
7:B:1708:C:O5'	7:B:1708:C:H6	1.99	0.45
7:B:602:A:H4'	7:B:604:G:H4'	1.98	0.45
7:B:1181:U:H2'	7:B:1182:G:C8	2.51	0.45
7:B:1317:G:C2	7:B:1318:U:C2	3.04	0.45
7:B:1057:A:N6	7:B:1082:U:N3	2.64	0.45
26:U:3:LYS:O	26:U:4:ILE:HB	2.15	0.45
7:B:1911:U:O2'	7:B:1912:A:H5'	2.16	0.45
7:B:1861:G:C2	7:B:1882:U:C2	3.04	0.45
7:B:2189:U:H6	7:B:2189:U:H3'	1.80	0.45
7:B:2298:A:H2'	7:B:2298:A:N3	2.30	0.45
7:B:1410:G:H5''	7:B:1411:U:OP2	2.16	0.45
14:I:125:THR:HG22	14:I:129:GLU:OE2	2.16	0.45
14:I:102:ARG:HH11	14:I:102:ARG:HB3	1.78	0.45
7:B:1332:G:OP2	33:B:5245:HOH:O	2.20	0.45
7:B:1796:U:N3	7:B:1797:G:C8	2.84	0.45
7:B:1858:A:C2	7:B:1885:A:C8	3.05	0.45
7:B:2269:G:C2'	7:B:2270:A:H5'	2.46	0.45
7:B:2511:U:H2'	7:B:2512:C:H5'	1.98	0.45
7:B:2568:U:C2	7:B:2569:G:C8	3.04	0.45
7:B:2755:C:HO2'	7:B:2756:U:H6	1.64	0.45
7:B:2759:G:C2	7:B:2760:C:C5	3.04	0.45
7:B:2768:U:C4	7:B:2769:U:C4	3.04	0.45
7:B:707:G:H2'	7:B:707:G:N3	2.31	0.45
7:B:743:A:H8	7:B:743:A:O5'	1.98	0.45
7:B:856:G:N2	7:B:921:C:C2	2.80	0.45
8:C:251:THR:HB	8:C:252:LYS:H	1.59	0.45
9:D:146:ILE:CG1	9:D:155:VAL:HG13	2.45	0.45
15:J:135:GLN:C	15:J:137:PRO:HD2	2.37	0.45
15:J:81:ILE:CG2	15:J:82:GLY:H	2.16	0.45
16:K:75:SER:HA	21:P:76:HIS:NE2	2.32	0.45
19:N:49:GLU:O	19:N:53:THR:HG23	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:319:G:C2	7:B:320:A:C4	3.04	0.45
7:B:323:C:C5	10:E:165:HIS:CD2	3.04	0.45
10:E:9:GLN:O	10:E:11:ALA:N	2.38	0.45
7:B:112:U:C5	7:B:113:U:C2	3.05	0.45
7:B:71:A:H5''	7:B:73:A:C8	2.52	0.45
26:U:28:LEU:HD13	26:U:31:GLY:HA3	1.98	0.45
2:1:7:LYS:HD2	7:B:2284:A:OP2	2.17	0.45
22:Q:67:ALA:C	22:Q:69:ARG:N	2.69	0.45
18:M:71:LYS:N	18:M:72:PRO:HD3	2.31	0.45
7:B:928:A:C2	7:B:929:U:C2	3.04	0.45
13:H:119:ASN:O	13:H:121:VAL:HG13	2.17	0.45
7:B:142:A:OP2	7:B:142:A:H8	2.00	0.45
7:B:1059:G:O2'	14:I:135:MET:HG3	2.16	0.45
11:F:106:ALA:O	11:F:136:ILE:HG23	2.15	0.45
7:B:422:A:C2	7:B:423:A:C5	3.04	0.45
6:A:14:U:HO2'	6:A:15:A:P	2.39	0.45
7:B:2297:A:N7	7:B:2298:A:N7	2.64	0.45
7:B:1326:U:C5	7:B:1327:A:N7	2.84	0.45
7:B:2583:G:C6	7:B:2584:U:O2	2.69	0.45
22:Q:3:VAL:O	22:Q:4:LYS:C	2.54	0.45
7:B:1704:C:C2	7:B:1705:A:C8	3.04	0.45
7:B:235:U:H2'	7:B:236:C:C6	2.44	0.45
7:B:1945:G:C2	7:B:1946:U:C5	3.04	0.45
7:B:214:G:O2'	7:B:215:G:H5'	2.16	0.45
7:B:2776:A:N1	7:B:2778:A:C2	2.85	0.45
7:B:1466:U:C3'	7:B:1466:U:C6	2.99	0.45
24:S:25:ARG:HB2	24:S:26:GLY:H	1.60	0.45
7:B:2600:A:O2'	7:B:2601:C:H5'	2.17	0.45
6:A:53:A:H2'	6:A:54:G:H5'	1.99	0.45
7:B:813:U:H1'	7:B:1226:A:N3	2.31	0.45
7:B:1228:G:C4	7:B:1229:C:C5	3.04	0.45
7:B:1232:G:H2'	7:B:1233:C:C6	2.47	0.45
7:B:1298:C:O2	7:B:1302:A:O2'	2.33	0.45
7:B:1454:C:H5'	19:N:63:ARG:CZ	2.44	0.45
7:B:1632:A:H2'	7:B:1633:G:C8	2.51	0.45
7:B:1680:U:H2'	7:B:1681:G:H5'	1.97	0.45
7:B:1807:G:C8	7:B:1807:G:C3'	2.98	0.45
7:B:1652:A:C2	7:B:2006:C:C2	3.05	0.45
7:B:2353:G:O6	7:B:2364:C:N3	2.49	0.45
7:B:2432:A:N6	7:B:2433:A:N6	2.64	0.45
7:B:2511:U:O4	7:B:2512:C:N4	2.49	0.45
7:B:2519:U:N3	7:B:2542:A:C6	2.84	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2592:G:C5'	7:B:2593:U:OP2	2.55	0.45
7:B:2688:G:H3'	7:B:2688:G:C8	2.51	0.45
7:B:2738:A:C8	7:B:2738:A:C3'	3.00	0.45
7:B:2852:G:H2'	7:B:2853:C:H6	1.79	0.45
7:B:537:G:N1	7:B:555:G:C2	2.85	0.45
7:B:565:C:H1'	7:B:577:G:N2	2.31	0.45
7:B:794:A:C4	7:B:795:C:C5	3.05	0.45
7:B:828:U:O2	7:B:829:A:C8	2.68	0.45
7:B:944:C:C5'	7:B:944:C:H6	2.29	0.45
7:B:978:G:C4	7:B:979:A:C8	3.04	0.45
7:B:988:A:H2	7:B:989:G:H21	1.63	0.45
8:C:229:HIS:ND1	8:C:231:HIS:HD2	2.15	0.45
10:E:50:ALA:O	10:E:74:LYS:HE3	2.15	0.45
10:E:84:THR:CG2	10:E:85:PHE:N	2.79	0.45
7:B:1131:G:C5	15:J:77:HIS:CE1	3.04	0.45
18:M:98:PRO:O	18:M:100:LYS:HD2	2.15	0.45
21:P:58:PHE:O	21:P:59:THR:C	2.55	0.45
28:W:28:GLU:HB3	28:W:30:VAL:HG23	1.97	0.45
7:B:2287:A:H2'	7:B:2287:A:N3	2.32	0.45
10:E:162:ARG:HA	10:E:162:ARG:HD2	1.53	0.45
10:E:142:ALA:HB3	10:E:185:LYS:NZ	2.31	0.45
26:U:11:ILE:CG2	26:U:12:VAL:N	2.79	0.45
7:B:91:A:H1'	7:B:92:U:C6	2.51	0.45
2:1:49:LYS:O	2:1:50:GLU:CB	2.58	0.45
22:Q:100:PHE:CE2	23:R:13:ARG:NH2	2.85	0.45
23:R:67:GLY:H	23:R:98:ILE:H	1.64	0.45
27:V:63:ILE:HB	27:V:70:ILE:HG21	1.97	0.45
30:Y:35:VAL:CG1	30:Y:36:GLU:H	2.15	0.45
6:A:12:C:H41	28:W:50:VAL:HG13	1.82	0.45
9:D:59:ARG:HG3	9:D:60:VAL:O	2.17	0.45
25:T:15:HIS:O	25:T:16:VAL:HG12	2.17	0.45
25:T:60:THR:HA	25:T:83:ALA:HA	1.97	0.45
25:T:87:LEU:HB3	25:T:88:LYS:H	1.35	0.45
7:B:139:U:O2	25:T:49:LYS:HE2	2.17	0.45
7:B:1060:U:O4	14:I:134:SER:C	2.55	0.45
7:B:360:U:C2'	7:B:361:G:O4'	2.64	0.45
7:B:2094:A:C2	7:B:2196:C:C2	3.04	0.45
7:B:412:A:N6	7:B:2412:A:O4'	2.50	0.45
26:U:3:LYS:CD	26:U:81:ARG:HH11	2.29	0.45
21:P:103:THR:HG22	21:P:105:LYS:CD	2.46	0.45
7:B:2832:U:N3	7:B:2834:G:N2	2.65	0.45
7:B:2835:A:C5	7:B:2879:A:C6	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:H:135:HIS:H	13:H:138:VAL:HB	1.80	0.45
13:H:8:LYS:O	13:H:9:VAL:HG13	2.16	0.45
13:H:127:GLU:HA	13:H:144:VAL:O	2.17	0.45
7:B:2776:A:C2	7:B:2778:A:C4	3.05	0.45
7:B:1907:G:C2	7:B:1924:C:O2	2.69	0.45
7:B:2828:G:H2'	7:B:2829:A:H5'	1.98	0.45
6:A:32:U:H2'	6:A:33:G:H8	1.81	0.45
7:B:1670:C:C5'	7:B:1671:U:OP2	2.64	0.45
7:B:2519:U:C6	7:B:2541:A:N6	2.84	0.45
7:B:2589:A:C2	7:B:2590:A:N7	2.85	0.45
7:B:2704:C:H2'	7:B:2705:A:H8	1.81	0.45
7:B:1296:G:OP1	7:B:2709:G:H4'	2.17	0.45
7:B:2837:A:H2'	7:B:2838:G:H5''	1.99	0.45
7:B:2876:G:C5	7:B:2877:G:C8	3.05	0.45
7:B:382:A:C2	7:B:383:C:H1'	2.51	0.45
7:B:398:C:OP2	31:Z:49:ARG:NE	2.49	0.45
7:B:450:G:N2	7:B:451:U:C5	2.74	0.45
7:B:35:G:C5	7:B:454:A:C2	3.05	0.45
7:B:586:A:H4'	10:E:85:PHE:HE1	1.81	0.45
7:B:586:A:N6	7:B:1254:A:C6	2.84	0.45
7:B:693:A:C2	7:B:694:U:O2	2.70	0.45
8:C:10:PRO:HD2	8:C:202:ARG:NH2	2.31	0.45
8:C:50:THR:O	8:C:51:ARG:HD3	2.17	0.45
8:C:66:PHE:CZ	8:C:154:ALA:HB2	2.52	0.45
9:D:160:LYS:HB2	9:D:160:LYS:HZ1	1.74	0.45
15:J:136:GLN:N	15:J:137:PRO:HD2	2.31	0.45
15:J:25:LEU:HD13	15:J:25:LEU:N	2.32	0.45
15:J:34:ARG:HB3	15:J:39:LYS:HE2	1.98	0.45
19:N:2:ARG:C	19:N:2:ARG:CD	2.85	0.45
23:R:83:TYR:O	23:R:84:ARG:C	2.54	0.45
7:B:857:G:H1'	28:W:19:ARG:NH1	2.31	0.45
28:W:75:ASN:OD1	28:W:76:ARG:N	2.50	0.45
2:1:37:LYS:HE3	7:B:2344:U:P	2.57	0.45
6:A:10:G:H8	6:A:10:G:O5'	1.99	0.45
7:B:2889:C:N4	7:B:2890:G:N1	2.65	0.45
9:D:61:THR:HG23	9:D:62:LYS:CE	2.46	0.45
25:T:10:VAL:CG2	25:T:11:LEU:N	2.79	0.45
7:B:1443:U:C6	7:B:1443:U:H3'	2.47	0.45
24:S:86:MET:HB3	24:S:94:ASP:HB3	1.99	0.45
7:B:155:A:C2	7:B:172:A:C2	3.04	0.45
11:F:135:ILE:HG23	11:F:136:ILE:H	1.81	0.45
7:B:1120:G:C2	7:B:1121:C:C4	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1866:A:C6	7:B:1876:A:N7	2.85	0.45
7:B:1521:G:C6	7:B:1522:A:N1	2.84	0.45
7:B:1526:C:O2'	7:B:1527:G:H5'	2.16	0.45
24:S:34:ASP:HA	24:S:37:THR:HG22	1.98	0.45
7:B:1978:A:H2'	7:B:1979:U:O4'	2.16	0.45
7:B:2896:C:H2'	7:B:2897:U:O4'	2.16	0.45
1:O:38:LEU:O	1:O:39:ARG:NE	2.45	0.45
1:O:39:ARG:HD3	7:B:2816:G:C5'	2.44	0.45
5:4:3:VAL:CG1	5:4:5:ALA:HB3	2.47	0.45
7:B:812:C:C4	7:B:1250:G:O6	2.70	0.45
7:B:1649:G:O2'	7:B:1650:A:H5'	2.17	0.45
7:B:1657:U:P	9:D:141:ARG:CG	3.05	0.45
7:B:1886:U:O5'	7:B:1886:U:H6	2.00	0.45
7:B:1897:G:C2'	7:B:1898:U:O5'	2.65	0.45
7:B:1974:C:C2'	7:B:1975:G:O5'	2.64	0.45
7:B:2003:A:C2'	7:B:2004:G:O5'	2.64	0.45
7:B:2261:C:C4	7:B:2280:G:N2	2.84	0.45
7:B:2446:G:N2	7:B:2501:C:N4	2.65	0.45
7:B:247:G:C8	7:B:247:G:C3'	3.00	0.45
7:B:2495:G:C6	7:B:2496:C:C4	3.04	0.45
7:B:2684:U:C5	7:B:2685:G:N7	2.85	0.45
7:B:2718:G:N2	7:B:2846:G:O2'	2.50	0.45
7:B:463:G:C2	7:B:467:G:C5	3.04	0.45
7:B:529:A:C5	7:B:2042:A:H2	2.34	0.45
7:B:566:U:C2'	7:B:567:U:O5'	2.65	0.45
7:B:802:A:H2'	7:B:803:U:H6	1.78	0.45
7:B:834:G:H1'	7:B:2358:A:N3	2.32	0.45
7:B:860:U:O2'	7:B:2267:A:H4'	2.16	0.45
8:C:224:MET:HG2	8:C:233:GLY:H	1.81	0.45
7:B:780:G:N1	8:C:228:ASP:CG	2.63	0.45
8:C:83:ASP:HA	8:C:84:PRO:HD3	1.77	0.45
9:D:136:ASN:HA	9:D:139:SER:HB3	1.91	0.45
7:B:2620:C:P	9:D:157:LYS:HG2	2.57	0.45
10:E:60:TRP:CD1	10:E:70:SER:HB3	2.51	0.45
11:F:133:GLU:C	11:F:134:GLN:O	2.54	0.45
13:H:44:ILE:HA	13:H:47:PHE:HB3	1.99	0.45
15:J:120:ARG:CZ	15:J:123:LYS:HZ2	2.30	0.45
15:J:16:TYR:CD1	15:J:16:TYR:N	2.85	0.45
7:B:995:C:C2	15:J:3:THR:HG23	2.51	0.45
15:J:38:GLY:O	15:J:41:LYS:HB3	2.17	0.45
15:J:58:ASN:HA	15:J:126:ALA:CA	2.47	0.45
15:J:8:PRO:HG2	15:J:11:VAL:CG1	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:M:31:PHE:HE1	18:M:126:ILE:O	1.99	0.45
18:M:61:GLY:HA3	18:M:105:MET:CB	2.43	0.45
19:N:52:ILE:HD13	19:N:79:LEU:HD23	1.98	0.45
7:B:1652:A:OP1	19:N:9:GLN:NE2	2.49	0.45
22:Q:23:TYR:H	22:Q:28:SER:HG	1.62	0.45
22:Q:86:SER:O	22:Q:88:GLU:N	2.50	0.45
22:Q:89:ILE:O	23:R:53:PHE:HE1	2.00	0.45
7:B:396:G:H1'	31:Z:27:THR:HG23	1.99	0.45
7:B:2090:A:O2'	31:Z:49:ARG:HD2	2.16	0.45
7:B:2346:A:C2	7:B:2383:G:N1	2.84	0.45
7:B:1241:A:C5	7:B:1242:U:C2	3.05	0.45
10:E:139:LYS:O	10:E:141:MET:N	2.42	0.45
10:E:159:LEU:C	10:E:161:ALA:H	2.19	0.45
10:E:150:THR:OG1	10:E:167:VAL:HB	2.15	0.45
10:E:193:VAL:O	10:E:198:GLU:O	2.34	0.45
10:E:3:LEU:O	10:E:13:THR:O	2.35	0.45
9:D:101:PHE:HB2	9:D:105:LYS:HD3	1.98	0.45
7:B:266:G:C5	7:B:267:C:C6	3.04	0.45
7:B:266:G:N7	7:B:267:C:C5	2.84	0.45
6:A:81:G:N2	6:A:82:U:H1'	2.32	0.45
7:B:862:G:C8	7:B:862:G:H3'	2.52	0.45
7:B:862:G:H2'	7:B:863:A:O4'	2.17	0.45
7:B:869:G:H2'	7:B:870:U:O4'	2.17	0.45
7:B:2259:U:O2	7:B:2260:C:C6	2.69	0.45
7:B:2657:A:C2'	7:B:2658:C:H5'	2.46	0.45
8:C:222:THR:OG1	8:C:223:ALA:N	2.49	0.45
7:B:2110:G:H2'	7:B:2110:G:OP2	2.16	0.45
29:X:9:LYS:HG2	29:X:11:VAL:HB	1.97	0.45
7:B:1210:G:H4'	7:B:1211:C:O5'	2.17	0.45
7:B:1347:A:O5'	7:B:1347:A:H8	1.99	0.45
7:B:2154:A:N7	7:B:2155:U:C5	2.85	0.45
7:B:498:G:N1	7:B:499:U:C5	2.85	0.45
6:A:20:G:N1	6:A:21:G:C6	2.84	0.45
7:B:1724:G:H2'	7:B:1725:U:O4'	2.16	0.45
7:B:2247:A:H8	7:B:2247:A:O5'	1.99	0.45
7:B:1246:A:O5'	7:B:1246:A:H8	1.99	0.45
1:O:16:ARG:HD3	1:O:16:ARG:HA	1.28	0.45
4:3:51:LYS:HZ1	7:B:2359:C:C1'	2.29	0.45
6:A:43:C:H3'	6:A:44:G:C5'	2.45	0.45
7:B:1130:U:N3	7:B:2025:C:OP1	2.50	0.45
7:B:1000:A:N7	7:B:1155:A:N7	2.65	0.45
7:B:1229:C:H2'	7:B:1230:A:H8	1.80	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1230:A:H2'	7:B:1231:U:H6	1.82	0.45
7:B:1353:A:C4	7:B:1378:A:C6	3.05	0.45
7:B:1652:A:C6	7:B:1653:G:N2	2.85	0.45
7:B:1672:A:C2	7:B:1673:G:C4	3.05	0.45
7:B:1822:C:C2'	7:B:1823:G:H5''	2.46	0.45
7:B:192:C:C5	7:B:193:U:C6	3.04	0.45
7:B:1900:A:C6	7:B:1970:A:N7	2.85	0.45
7:B:2007:U:C5'	7:B:2007:U:C6	3.00	0.45
7:B:2020:A:N7	7:B:2022:U:C4	2.85	0.45
7:B:2270:A:N7	7:B:2271:G:C5	2.84	0.45
7:B:2360:G:N2	7:B:2428:G:C6	2.83	0.45
7:B:2466:C:H1'	18:M:118:LYS:HZ3	1.78	0.45
7:B:2520:C:H6	7:B:2520:C:O5'	2.00	0.45
7:B:2837:A:H2'	7:B:2838:G:C5'	2.47	0.45
7:B:738:G:C4	7:B:759:G:N1	2.85	0.45
7:B:989:G:O2'	7:B:990:A:H5'	2.17	0.45
8:C:121:ALA:H	8:C:129:LEU:CD1	2.26	0.45
8:C:206:LYS:O	8:C:207:ALA:C	2.54	0.45
9:D:112:THR:O	9:D:113:SER:O	2.34	0.45
15:J:113:PRO:CA	15:J:116:ARG:HB2	2.43	0.45
15:J:54:ILE:CG2	15:J:55:ILE:N	2.79	0.45
18:M:47:GLU:O	18:M:50:ARG:HB3	2.17	0.45
21:P:61:ARG:NH2	21:P:75:THR:OG1	2.48	0.45
10:E:112:LEU:O	10:E:114:ARG:HG2	2.16	0.45
10:E:27:LEU:HB3	10:E:30:GLN:HB3	1.97	0.45
10:E:9:GLN:HG3	10:E:10:SER:N	2.30	0.45
7:B:80:G:C6	7:B:81:G:N7	2.84	0.45
8:C:145:MET:HA	8:C:183:VAL:HG21	1.99	0.45
7:B:2201:G:N1	7:B:2223:G:C5	2.84	0.45
7:B:1426:G:C4	7:B:1427:A:N7	2.85	0.45
7:B:1427:A:C4	7:B:1428:C:C5	3.05	0.45
7:B:1056:G:C4'	7:B:1086:A:C8	3.00	0.45
12:G:145:ALA:O	12:G:147:LEU:N	2.49	0.45
17:L:8:PRO:O	17:L:9:ALA:CB	2.65	0.45
7:B:2297:A:H2'	7:B:2298:A:H8	1.82	0.45
7:B:1038:G:N1	7:B:1118:C:N4	2.64	0.45
7:B:2137:U:H2'	7:B:2138:G:C8	2.50	0.45
7:B:1694:C:C6	7:B:1694:C:H5''	2.52	0.45
7:B:281:C:O5'	7:B:281:C:H6	2.00	0.45
8:C:29:PHE:CZ	8:C:81:GLU:OE1	2.70	0.45
6:A:118:C:O5'	6:A:118:C:H6	1.99	0.45
3:2:24:THR:HG22	3:2:25:LYS:N	2.32	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:4:LYS:O	4:3:5:THR:C	2.55	0.45
7:B:1000:A:C6	7:B:1001:A:C6	3.05	0.45
7:B:1191:G:H2'	7:B:1192:G:O4'	2.16	0.45
7:B:1220:G:O6	7:B:1230:A:C6	2.69	0.45
7:B:1220:G:O6	7:B:1230:A:N6	2.49	0.45
7:B:1606:C:O2'	7:B:1608:A:N1	2.40	0.45
7:B:1658:C:OP1	9:D:136:ASN:CG	2.54	0.45
7:B:1681:G:C5	7:B:1762:A:C2	3.05	0.45
7:B:1791:A:H3'	7:B:1791:A:H8	1.82	0.45
7:B:1803:A:N6	7:B:1814:G:H1'	2.32	0.45
7:B:1889:A:H1'	7:B:2086:U:O2'	2.16	0.45
7:B:2263:C:H2'	7:B:2264:C:C6	2.38	0.45
7:B:2315:G:H2'	7:B:2316:G:C8	2.51	0.45
7:B:23:G:O2'	7:B:24:G:H5'	2.17	0.45
7:B:2756:U:H4'	7:B:2757:A:OP1	2.15	0.45
7:B:2861:U:O2'	7:B:2862:G:H5'	2.16	0.45
7:B:393:C:H2'	7:B:394:C:H6	1.82	0.45
7:B:554:U:H2'	7:B:555:G:C8	2.51	0.45
7:B:571:U:O2'	7:B:572:A:H5''	2.17	0.45
7:B:579:G:C4'	7:B:2017:U:H2'	2.47	0.45
8:C:156:SER:OG	8:C:195:GLY:CA	2.63	0.45
9:D:165:MET:HB3	9:D:166:GLY:H	1.64	0.45
9:D:206:ALA:O	9:D:207:VAL:C	2.54	0.45
11:F:53:ALA:HB1	11:F:64:PRO:HG2	1.98	0.45
19:N:103:ARG:O	19:N:104:ALA:HB3	2.17	0.45
19:N:45:ARG:O	19:N:47:VAL:N	2.50	0.45
20:O:13:ARG:O	20:O:17:LYS:HB2	2.16	0.45
21:P:96:LEU:O	21:P:97:TYR:O	2.35	0.45
24:S:39:THR:HG23	24:S:39:THR:O	2.16	0.45
28:W:44:PHE:N	28:W:76:ARG:O	2.49	0.45
7:B:1206:G:N2	7:B:1241:A:C2	2.85	0.45
7:B:1241:A:H2'	7:B:1242:U:O5'	2.17	0.45
10:E:148:ILE:HG22	10:E:185:LYS:CB	2.46	0.45
10:E:4:VAL:CA	10:E:14:VAL:HG13	2.47	0.45
9:D:4:LEU:HD11	9:D:77:ARG:HE	1.82	0.45
7:B:1708:C:HO2'	7:B:1709:U:H6	1.65	0.45
7:B:237:C:O2	7:B:261:G:N3	2.49	0.45
7:B:607:U:H2'	7:B:608:A:C5'	2.46	0.45
7:B:915:C:H3'	7:B:916:G:C8	2.49	0.45
18:M:91:TYR:O	18:M:92:TRP:O	2.35	0.45
9:D:38:LYS:C	9:D:42:ASN:HD21	2.19	0.45
7:B:1279:G:C2	7:B:1292:G:C2	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1292:G:C4	7:B:1293:C:C5	3.05	0.45
26:U:25:LYS:HB3	26:U:26:ASN:H	1.51	0.45
12:G:40:VAL:C	12:G:41:GLU:HG3	2.37	0.45
7:B:1445:G:N2	7:B:1547:C:C4	2.84	0.45
7:B:2405:G:C2'	7:B:2411:A:N6	2.77	0.45
7:B:1404:C:C2	7:B:1405:U:C5	3.05	0.45
7:B:1411:U:H2'	7:B:1412:U:C6	2.52	0.45
7:B:1684:G:H1	7:B:1704:C:N4	2.13	0.45
17:L:69:ARG:C	17:L:71:ALA:N	2.70	0.45
11:F:76:PHE:O	11:F:77:LYS:HB3	2.16	0.45
20:O:109:ALA:O	20:O:112:GLU:HB2	2.17	0.45
7:B:1977:A:N6	7:B:1978:A:C6	2.84	0.45
10:E:37:ALA:C	10:E:39:ALA:H	2.20	0.45
21:P:90:ALA:HB3	21:P:112:ARG:HA	1.99	0.45
9:D:131:ASP:O	9:D:132:ALA:HB2	2.16	0.45
1:O:28:SER:O	1:O:29:VAL:HB	2.17	0.45
4:3:4:LYS:CG	4:3:4:LYS:O	2.64	0.45
4:3:60:CYS:O	4:3:61:LEU:C	2.55	0.45
5:4:34:LYS:O	7:B:2527:C:H4'	2.16	0.45
7:B:1264:A:H8	7:B:1264:A:C5'	2.30	0.45
7:B:1274:A:C8	7:B:1274:A:H3'	2.52	0.45
7:B:132:G:H2'	7:B:133:U:C6	2.52	0.45
7:B:1558:C:C2	7:B:1560:G:C5	3.04	0.45
7:B:1802:A:N6	7:B:1817:G:H21	2.14	0.45
7:B:1930:G:N2	7:B:1969:A:OP2	2.46	0.45
7:B:2232:C:H2'	7:B:2233:U:H5'	1.99	0.45
7:B:2487:G:H2'	7:B:2488:G:H8	1.82	0.45
7:B:2625:G:C8	7:B:2625:G:H5''	2.49	0.45
7:B:2763:G:C5'	7:B:2763:G:H8	2.18	0.45
7:B:2867:G:O2'	7:B:2868:A:OP2	2.27	0.45
7:B:2691:C:H5'	7:B:2872:A:C2	2.51	0.45
7:B:464:U:H3'	7:B:465:G:H5''	1.97	0.45
7:B:538:A:C5	7:B:556:A:N6	2.81	0.45
7:B:560:C:H2'	7:B:561:G:H5'	1.98	0.45
7:B:685:A:C5	7:B:689:A:N6	2.84	0.45
7:B:690:G:C6	7:B:691:C:C5	3.05	0.45
8:C:225:ASN:HD22	8:C:225:ASN:HA	1.55	0.45
7:B:2305:U:C6	11:F:151:LEU:C	2.90	0.45
12:G:163:TYR:HD2	12:G:166:GLU:HG3	1.81	0.45
15:J:19:ASP:OD2	15:J:20:ALA:N	2.48	0.45
17:L:55:MET:HB3	17:L:56:PRO:CD	2.36	0.45
18:M:66:ARG:O	18:M:67:VAL:O	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:P:23:ASP:CG	21:P:93:LYS:HZ1	2.17	0.45
21:P:50:ARG:HG3	21:P:99:LEU:HB3	1.99	0.45
22:Q:13:HIS:CD2	22:Q:31:TYR:CE1	3.05	0.45
23:R:80:ARG:O	23:R:81:LYS:O	2.34	0.45
7:B:747:U:H1'	24:S:92:ARG:CZ	2.46	0.45
31:Z:5:ILE:HG13	31:Z:51:VAL:CG1	2.47	0.45
7:B:2291:U:O2	7:B:2292:U:C2	2.70	0.45
16:K:106:GLU:C	16:K:108:ARG:N	2.68	0.45
16:K:113:MET:C	16:K:115:ILE:H	2.18	0.45
7:B:62:U:O2'	7:B:63:A:H5'	2.17	0.45
7:B:93:G:C2'	7:B:94:A:H5'	2.47	0.45
29:X:20:ASN:O	29:X:21:LEU:HG	2.16	0.45
2:1:8:ILE:CG2	2:1:27:ARG:HG2	2.47	0.45
2:1:8:ILE:HG21	2:1:27:ARG:HG2	1.98	0.45
7:B:2636:C:H4'	9:D:80:TRP:HE1	1.81	0.45
7:B:1747:U:H2'	7:B:1748:C:C6	2.52	0.45
31:Z:59:ARG:HB2	31:Z:61:ASN:H	1.80	0.45
7:B:265:A:O2'	7:B:266:G:C4'	2.65	0.45
7:B:616:A:H2'	7:B:617:G:H8	1.77	0.45
17:L:137:ALA:O	17:L:138:ALA:HB2	2.17	0.45
18:M:40:ARG:CG	18:M:92:TRP:CD1	3.00	0.45
7:B:1183:U:H2'	7:B:1184:U:H6	1.81	0.45
6:A:9:G:H2'	6:A:10:G:C8	2.52	0.45
13:H:117:LEU:C	13:H:119:ASN:N	2.70	0.45
13:H:115:VAL:CG2	13:H:117:LEU:HB2	2.30	0.45
7:B:1788:C:H2'	7:B:1789:A:C4'	2.46	0.45
6:A:13:G:H8	6:A:13:G:H3'	1.81	0.45
7:B:675:A:C6	7:B:676:A:C6	3.05	0.45
7:B:1116:G:C5	7:B:1117:C:C5	3.05	0.45
7:B:1531:C:H2'	7:B:1532:A:C8	2.51	0.45
7:B:630:G:H1	17:L:69:ARG:NH1	2.15	0.45
1:0:6:LYS:HZ3	1:0:7:PRO:HD2	1.80	0.45
7:B:1935:G:N2	7:B:1964:G:C8	2.85	0.45
4:3:37:THR:HG21	7:B:2348:U:OP1	2.17	0.45
30:Y:29:ARG:C	30:Y:30:ARG:HG2	2.37	0.45
14:I:29:GLN:HB2	14:I:30:GLN:NE2	2.31	0.45
3:2:12:ARG:HG2	7:B:686:U:H3	1.82	0.45
4:3:12:ARG:NH2	4:3:23:HIS:CE1	2.85	0.45
4:3:12:ARG:HG2	4:3:24:LYS:H	1.82	0.45
6:A:53:A:C3'	6:A:53:A:C8	2.99	0.45
7:B:1217:U:O2	7:B:1217:U:C2'	2.65	0.45
7:B:1268:A:C5	7:B:1269:A:C4	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1362:C:C2	7:B:1363:C:C5	3.05	0.45
7:B:1655:A:C8	7:B:1656:C:C6	3.05	0.45
7:B:2270:A:C2'	7:B:2271:G:H5'	2.47	0.45
7:B:2573:C:OP1	7:B:2574:G:OP1	2.35	0.45
7:B:2614:A:N3	7:B:2615:U:O4	2.50	0.45
7:B:2684:U:H3'	7:B:2684:U:C6	2.51	0.45
7:B:2703:C:H2'	7:B:2704:C:C6	2.52	0.45
7:B:2704:C:H2'	7:B:2705:A:O4'	2.17	0.45
7:B:2817:U:H2'	7:B:2818:U:O5'	2.17	0.45
7:B:2691:C:C2	7:B:2872:A:N1	2.85	0.45
7:B:2886:A:H2	7:B:2887:A:C5	2.35	0.45
7:B:381:G:H2'	7:B:382:A:C5'	2.46	0.45
7:B:383:C:N4	7:B:385:C:H2'	2.32	0.45
7:B:55:G:C8	7:B:55:G:H5''	2.52	0.45
7:B:578:G:H1'	22:Q:32:ARG:HH22	1.82	0.45
7:B:582:A:C5	7:B:583:G:N7	2.85	0.45
7:B:968:C:C6	7:B:968:C:C3'	2.99	0.45
7:B:993:G:O4'	23:R:91:GLN:NE2	2.49	0.45
7:B:1566:A:C6	8:C:213:ARG:NH1	2.85	0.45
33:B:5470:HOH:O	8:C:224:MET:CB	2.62	0.45
9:D:124:ARG:O	9:D:160:LYS:CD	2.56	0.45
9:D:152:PRO:O	9:D:153:GLY:O	2.34	0.45
9:D:124:ARG:HB3	9:D:160:LYS:CD	2.47	0.45
11:F:37:MET:HE2	11:F:148:VAL:HG12	1.99	0.45
13:H:54:LEU:O	13:H:58:LEU:HB2	2.16	0.45
15:J:116:ARG:C	15:J:118:MET:H	2.20	0.45
15:J:135:GLN:O	15:J:135:GLN:CD	2.55	0.45
18:M:47:GLU:O	18:M:47:GLU:HG3	2.17	0.45
22:Q:90:ASP:O	23:R:53:PHE:CE1	2.70	0.45
23:R:6:GLN:O	23:R:7:SER:CB	2.65	0.45
24:S:9:HIS:H	24:S:102:HIS:HD2	1.65	0.45
7:B:324:A:H2'	7:B:325:G:O4'	2.17	0.45
10:E:6:LYS:HE2	10:E:119:ILE:HG22	1.98	0.45
26:U:39:ASN:HA	26:U:59:GLU:HG3	1.99	0.45
7:B:104:A:C2'	7:B:105:C:C6	2.96	0.45
7:B:64:A:C6	7:B:91:A:N6	2.84	0.45
26:U:95:PHE:HD2	26:U:100:GLU:O	2.00	0.45
7:B:429:A:C2	7:B:430:A:C6	3.05	0.45
7:B:601:C:H2'	7:B:605:G:H5''	1.99	0.45
7:B:919:U:C5	7:B:920:A:N7	2.85	0.45
18:M:5:LYS:CB	18:M:69:PRO:HB2	2.47	0.45
18:M:43:ALA:HB2	18:M:91:TYR:HB2	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:37:VAL:HG13	9:D:42:ASN:ND2	2.32	0.45
7:B:1392:A:C6	7:B:1393:A:N6	2.85	0.45
13:H:90:LEU:HD12	13:H:91:PHE:N	2.32	0.45
12:G:41:GLU:OE2	12:G:54:ARG:NE	2.50	0.45
7:B:1829:A:N7	7:B:1830:C:C6	2.85	0.45
7:B:362:A:O2'	7:B:363:G:H5'	2.16	0.45
17:L:101:ILE:H	17:L:101:ILE:HG12	1.54	0.45
7:B:289:G:C2	7:B:290:U:H1'	2.52	0.45
7:B:1401:G:H2'	7:B:1402:U:C6	2.52	0.45
7:B:1409:U:C2	7:B:1410:G:C8	3.05	0.45
7:B:1470:A:N6	7:B:1521:G:H1'	2.32	0.45
7:B:2088:A:H62	7:B:2089:C:N4	2.13	0.45
7:B:1067:A:N1	7:B:1068:G:C2	2.85	0.45
10:E:128:ALA:HA	10:E:129:PRO:HD2	1.87	0.45
7:B:1713:A:H8	7:B:1713:A:O5'	2.00	0.45
7:B:1873:G:C5	7:B:1874:C:C5	3.04	0.45
23:R:60:LYS:O	23:R:62:GLU:N	2.50	0.45
7:B:1714:U:O2	7:B:1714:U:H2'	2.17	0.45
6:A:54:G:C8	6:A:54:G:H3'	2.53	0.44
7:B:1331:G:C6	7:B:1333:G:C8	3.06	0.44
7:B:1359:A:C2'	7:B:1360:G:H5'	2.47	0.44
7:B:1452:G:N3	7:B:2702:G:C5	2.85	0.44
7:B:1625:C:H2'	7:B:1626:A:O4'	2.17	0.44
7:B:2023:C:O2'	7:B:2024:G:H5'	2.16	0.44
7:B:2041:U:H2'	7:B:2042:A:C8	2.52	0.44
7:B:2444:G:OP1	10:E:62:GLN:NE2	2.36	0.44
7:B:2464:G:C5	7:B:2487:G:N1	2.84	0.44
7:B:2542:A:O5'	7:B:2542:A:H2'	2.16	0.44
7:B:2543:G:N1	7:B:2765:A:C5	2.85	0.44
7:B:2729:G:C5	7:B:2730:C:C5	3.05	0.44
7:B:2734:A:C8	7:B:2734:A:C3'	3.00	0.44
7:B:2765:A:C2'	7:B:2766:A:H5'	2.47	0.44
7:B:2866:U:H4'	7:B:2867:G:C4'	2.42	0.44
7:B:567:U:N3	7:B:568:U:C6	2.82	0.44
7:B:669:G:H3'	7:B:670:A:N7	2.33	0.44
7:B:690:G:C4	7:B:691:C:C6	3.05	0.44
7:B:986:C:O2	7:B:986:C:H2'	2.17	0.44
8:C:259:ASN:C	8:C:261:ARG:HE	2.21	0.44
7:B:1817:G:P	8:C:62:ARG:HH22	2.40	0.44
9:D:154:LYS:CA	9:D:154:LYS:HE2	2.46	0.44
9:D:157:LYS:HZ1	9:D:157:LYS:C	2.19	0.44
11:F:33:ILE:HG13	11:F:34:THR:N	2.30	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:131:ASN:C	15:J:133:ALA:N	2.70	0.44
18:M:57:VAL:O	18:M:58:LYS:O	2.34	0.44
20:O:19:GLN:N	20:O:20:GLU:OE2	2.50	0.44
20:O:27:VAL:HG23	20:O:28:VAL:N	2.29	0.44
20:O:74:VAL:HG23	20:O:106:LEU:CD1	2.40	0.44
20:O:9:ARG:HE	20:O:95:SER:HB3	1.81	0.44
20:O:9:ARG:HH21	20:O:95:SER:HB3	1.82	0.44
22:Q:86:SER:OG	22:Q:87:VAL:N	2.50	0.44
7:B:306:U:O4	7:B:307:G:C6	2.70	0.44
26:U:40:LEU:HG	26:U:58:VAL:O	2.17	0.44
29:X:19:LEU:O	29:X:20:ASN:HB2	2.17	0.44
2:1:34:GLU:CB	2:1:50:GLU:OE1	2.65	0.44
8:C:144:GLU:CG	8:C:150:GLY:HA2	2.26	0.44
18:M:88:ASN:O	18:M:90:GLU:N	2.48	0.44
12:G:97:VAL:HG11	12:G:123:GLU:HA	1.99	0.44
7:B:282:A:H2	7:B:359:G:C4	2.35	0.44
25:T:27:SER:C	25:T:29:THR:H	2.20	0.44
16:K:49:ARG:HD3	16:K:49:ARG:N	2.31	0.44
7:B:543:G:H8	7:B:543:G:C5'	2.30	0.44
7:B:544:C:O3'	7:B:544:C:O5'	2.35	0.44
11:F:6:TYR:HD2	11:F:6:TYR:N	2.13	0.44
7:B:223:A:C8	7:B:422:A:C1'	3.00	0.44
6:A:13:G:C3'	6:A:13:G:C8	3.00	0.44
6:A:14:U:H5''	6:A:71:C:O4'	2.17	0.44
7:B:1942:C:C5	7:B:1943:U:C6	3.05	0.44
7:B:1544:A:C6	7:B:1545:A:C6	3.05	0.44
7:B:45:G:H4'	7:B:46:G:O4'	2.17	0.44
7:B:2791:G:H5''	7:B:2791:G:C8	2.46	0.44
7:B:1478:G:H8	7:B:1478:G:C5'	2.30	0.44
14:I:102:ARG:HB2	14:I:141:ASP:HA	1.98	0.44
27:V:65:VAL:C	27:V:67:GLY:N	2.70	0.44
11:F:93:GLU:OE1	11:F:94:ARG:HB2	2.17	0.44
1:0:29:VAL:H	1:0:36:LYS:CD	2.25	0.44
3:2:13:ASN:O	3:2:17:GLY:HA3	2.17	0.44
4:3:23:HIS:HD2	4:3:47:ALA:O	2.01	0.44
6:A:29:A:O4'	6:A:29:A:P	2.76	0.44
7:B:1269:A:H2'	7:B:1270:C:C6	2.51	0.44
7:B:1351:C:H2'	7:B:1352:U:O4'	2.17	0.44
7:B:1355:G:C2	7:B:1356:G:C8	3.06	0.44
7:B:1668:A:C5	7:B:1674:G:C6	3.04	0.44
7:B:1679:A:C5	7:B:1680:U:C5	3.05	0.44
7:B:1804:C:OP1	8:C:254:LYS:CG	2.61	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1891:G:H2'	7:B:1892:C:H6	1.82	0.44
7:B:1970:A:N3	7:B:1972:G:N7	2.64	0.44
7:B:2009:A:H3'	7:B:2009:A:C8	2.53	0.44
7:B:2230:G:O3'	31:Z:28:VAL:HG23	2.16	0.44
7:B:2241:A:C2	7:B:2242:G:C8	3.05	0.44
5:4:1:MET:SD	7:B:2527:C:C1'	3.05	0.44
7:B:2045:C:N3	7:B:2624:G:C2	2.86	0.44
7:B:841:G:C2	7:B:938:G:C2	3.05	0.44
7:B:949:G:C2	7:B:950:G:N7	2.85	0.44
7:B:2306:C:O2	11:F:149:ARG:CZ	2.65	0.44
11:F:149:ARG:O	11:F:150:GLY:O	2.35	0.44
6:A:57:A:C5	11:F:25:MET:HG2	2.53	0.44
15:J:25:LEU:HD12	15:J:64:VAL:H	1.81	0.44
7:B:250:G:H5'	17:L:60:ARG:CZ	2.47	0.44
23:R:84:ARG:O	23:R:85:LYS:O	2.34	0.44
7:B:2384:U:O2	7:B:2384:U:C2'	2.64	0.44
10:E:132:LYS:HZ2	10:E:132:LYS:HA	1.81	0.44
10:E:147:LEU:O	10:E:148:ILE:HG23	2.17	0.44
10:E:17:THR:O	10:E:18:THR:OG1	2.32	0.44
10:E:195:GLN:HB2	10:E:198:GLU:C	2.37	0.44
7:B:347:A:C8	7:B:347:A:C5'	2.94	0.44
29:X:7:ARG:CZ	29:X:56:LEU:HD11	2.47	0.44
2:1:6:GLU:O	2:1:7:LYS:C	2.55	0.44
7:B:2627:G:O2'	7:B:2781:A:N1	2.41	0.44
7:B:1709:U:C6	7:B:1750:G:N2	2.85	0.44
7:B:2082:A:N6	7:B:2239:G:C5	2.85	0.44
7:B:1745:A:H8	7:B:1745:A:O5'	2.00	0.44
6:A:81:G:H4'	7:B:919:U:H4'	1.99	0.44
7:B:919:U:O4	7:B:920:A:C6	2.71	0.44
18:M:6:ARG:HD2	18:M:71:LYS:HZ2	1.78	0.44
18:M:90:GLU:HA	18:M:91:TYR:CE2	2.52	0.44
7:B:1182:G:H2'	7:B:1183:U:H5'	1.99	0.44
10:E:90:GLN:HG3	10:E:92:HIS:HD2	1.83	0.44
7:B:1056:G:O4'	7:B:1086:A:H8	1.99	0.44
7:B:1093:G:N2	7:B:1098:A:N6	2.58	0.44
7:B:2257:U:C3'	7:B:2258:C:H5''	2.46	0.44
7:B:407:G:N2	7:B:421:C:C2	2.86	0.44
6:A:105:G:C2'	6:A:106:G:H5'	2.47	0.44
7:B:1345:C:C6	7:B:1345:C:C3'	3.00	0.44
13:H:75:LEU:O	13:H:76:GLU:C	2.55	0.44
13:H:73:ASN:HD21	13:H:140:ALA:HA	1.82	0.44
5:4:1:MET:HE2	5:4:2:LYS:HG3	1.96	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1030:C:C4	7:B:1125:G:N2	2.85	0.44
7:B:1365:A:O4'	31:Z:10:GLU:HG2	2.17	0.44
7:B:1571:A:N1	7:B:1572:A:C6	2.86	0.44
7:B:1661:G:C2'	7:B:1662:U:H5'	2.48	0.44
7:B:1668:A:H4'	7:B:1669:A:O5'	2.17	0.44
7:B:1675:C:H6	7:B:1675:C:O5'	2.00	0.44
7:B:1795:C:O2'	7:B:1901:A:OP1	2.30	0.44
7:B:1970:A:H1'	7:B:1972:G:C8	2.52	0.44
7:B:1992:G:C4	7:B:1997:C:N4	2.86	0.44
7:B:2330:G:N3	28:W:36:ILE:CD1	2.80	0.44
7:B:2358:A:H2'	7:B:2359:C:C5'	2.46	0.44
7:B:2431:U:C2'	7:B:2432:A:H5''	2.44	0.44
7:B:2045:C:C2	7:B:2624:G:C2	3.05	0.44
7:B:2648:G:C2	7:B:2649:C:O2	2.70	0.44
7:B:2674:G:H2'	7:B:2675:A:O4'	2.17	0.44
7:B:2692:G:H2'	7:B:2693:G:C8	2.52	0.44
7:B:2523:G:C4	7:B:2765:A:N6	2.85	0.44
7:B:2819:G:O2'	7:B:2820:A:H5'	2.17	0.44
7:B:567:U:C2	7:B:568:U:C6	3.06	0.44
7:B:699:A:C4'	7:B:1634:A:N7	2.80	0.44
7:B:943:A:OP2	17:L:40:SER:OG	2.26	0.44
7:B:970:U:C6	7:B:970:U:O5'	2.71	0.44
8:C:46:GLY:O	8:C:47:ARG:CB	2.66	0.44
9:D:125:TRP:C	9:D:127:PHE:N	2.70	0.44
9:D:138:LEU:HG	9:D:142:VAL:HB	1.99	0.44
16:K:2:ILE:HG22	16:K:32:TYR:HB2	1.99	0.44
16:K:76:VAL:O	21:P:74:GLN:CB	2.58	0.44
17:L:61:LEU:N	17:L:62:PRO:HD3	2.32	0.44
18:M:14:LYS:HB3	18:M:14:LYS:HE3	1.57	0.44
19:N:28:LEU:HD13	19:N:34:ILE:CD1	2.46	0.44
19:N:37:THR:HG22	19:N:38:LEU:N	2.33	0.44
20:O:38:GLN:N	20:O:50:ALA:CB	2.80	0.44
6:A:116:G:H4'	20:O:54:VAL:HG13	1.98	0.44
23:R:42:ALA:HB1	23:R:53:PHE:CE1	2.52	0.44
7:B:199:A:H1'	31:Z:20:ASN:ND2	2.32	0.44
10:E:24:ASN:OD1	10:E:181:ILE:HD11	2.17	0.44
26:U:43:LYS:HB3	26:U:43:LYS:HZ2	1.82	0.44
13:H:104:THR:HA	13:H:108:VAL:O	2.16	0.44
7:B:346:A:H2'	7:B:347:A:C5'	2.47	0.44
26:U:85:ARG:HH21	26:U:86:PHE:HE1	1.62	0.44
7:B:656:G:H2'	7:B:657:U:O4'	2.18	0.44
7:B:2201:G:C5	7:B:2202:U:O2	2.70	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:E:98:LYS:HE2	10:E:99:LYS:HD3	1.98	0.44
27:V:38:LEU:O	27:V:40:ILE:HG23	2.18	0.44
9:D:36:GLN:HB2	9:D:37:VAL:H	1.67	0.44
14:I:16:MET:HE3	14:I:19:PRO:HG2	2.00	0.44
26:U:9:GLU:O	26:U:10:VAL:HG13	2.17	0.44
7:B:1773:A:H4'	7:B:1773:A:OP2	2.17	0.44
7:B:1070:A:H2	7:B:1097:U:HO2'	1.61	0.44
7:B:1098:A:N7	7:B:1099:G:C8	2.85	0.44
7:B:223:A:C8	7:B:422:A:H1'	2.51	0.44
6:A:70:C:H2'	6:A:71:C:C6	2.52	0.44
7:B:2073:C:C2	7:B:2437:G:N1	2.86	0.44
7:B:1199:U:H2'	7:B:1200:C:H6	1.80	0.44
14:I:98:GLY:HA3	14:I:137:LEU:HD22	1.98	0.44
7:B:2800:A:C2	7:B:2801:G:N3	2.85	0.44
7:B:1031:G:C8	7:B:1031:G:H3'	2.52	0.44
14:I:120:ASP:OD1	14:I:120:ASP:N	2.47	0.44
5:4:17:VAL:HG23	5:4:23:ILE:CG2	2.47	0.44
7:B:1221:C:O2'	7:B:1222:U:H5'	2.17	0.44
7:B:123:G:N2	7:B:129:C:C2	2.85	0.44
7:B:1434:A:H4'	7:B:1434:A:OP1	2.17	0.44
7:B:1434:A:N6	7:B:1558:C:H42	2.15	0.44
7:B:1799:G:H4'	7:B:1800:C:H6	1.82	0.44
7:B:1807:G:C6	7:B:1809:A:OP2	2.71	0.44
7:B:1933:G:H2'	7:B:1934:C:C5'	2.47	0.44
7:B:1973:G:C2	7:B:1974:C:C2	3.05	0.44
7:B:1988:G:C8	7:B:1988:G:C3'	3.00	0.44
7:B:2010:G:C8	7:B:2010:G:C3'	3.01	0.44
7:B:1372:U:O2'	7:B:2212:A:C8	2.70	0.44
7:B:2483:C:H2'	7:B:2484:G:O5'	2.17	0.44
7:B:2685:G:OP1	21:P:62:LYS:NZ	2.48	0.44
7:B:2734:A:H2'	7:B:2735:G:C5'	2.39	0.44
7:B:2743:U:H3'	7:B:2744:G:H5''	2.00	0.44
7:B:2761:A:H8	7:B:2761:A:H5'	1.81	0.44
7:B:460:A:C2	7:B:470:A:C5	3.06	0.44
7:B:538:A:N1	7:B:556:A:N7	2.65	0.44
7:B:841:G:N1	7:B:938:G:C6	2.86	0.44
7:B:993:G:C2'	7:B:994:C:H5'	2.47	0.44
8:C:121:ALA:O	8:C:123:ILE:HD12	2.17	0.44
7:B:1258:U:C4'	10:E:79:ARG:HD3	2.47	0.44
18:M:108:VAL:O	18:M:112:LEU:CG	2.55	0.44
18:M:117:PHE:CD1	18:M:124:LEU:CD2	2.95	0.44
7:B:1029:A:O2'	18:M:118:LYS:HE3	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:60:TRP:O	22:Q:64:ILE:HG13	2.18	0.44
28:W:36:ILE:CG2	28:W:68:PHE:HB3	2.48	0.44
28:W:66:VAL:CG2	28:W:67:LYS:H	2.26	0.44
31:Z:48:GLN:C	31:Z:49:ARG:O	2.52	0.44
31:Z:4:ASP:OD1	31:Z:46:GLY:O	2.36	0.44
7:B:2343:U:H5''	7:B:2343:U:H6	1.82	0.44
7:B:1206:G:C6	7:B:1207:C:C4	3.05	0.44
10:E:24:ASN:CG	10:E:107:SER:HB3	2.37	0.44
10:E:138:LEU:O	10:E:139:LYS:C	2.56	0.44
10:E:5:LEU:O	10:E:6:LYS:CB	2.65	0.44
7:B:58:G:C4	7:B:59:U:C5	3.06	0.44
7:B:78:U:H2'	7:B:79:C:H6	1.78	0.44
7:B:80:G:H5'	7:B:346:A:H1'	1.99	0.44
25:T:67:VAL:CG1	25:T:68:LYS:N	2.80	0.44
7:B:2285:C:O2	7:B:2288:A:C8	2.70	0.44
23:R:18:GLN:HG2	23:R:99:THR:HB	1.98	0.44
7:B:260:G:C5	7:B:261:G:C8	3.05	0.44
7:B:604:G:C6	7:B:625:G:C2	3.05	0.44
6:A:81:G:C4	6:A:82:U:C6	3.06	0.44
7:B:871:U:H4'	18:M:68:PHE:CD1	2.51	0.44
18:M:4:PRO:HG2	18:M:43:ALA:C	2.37	0.44
30:Y:18:LYS:O	30:Y:22:THR:HG23	2.18	0.44
30:Y:2:LYS:NZ	30:Y:37:ARG:HG3	2.32	0.44
25:T:30:ILE:CG2	25:T:32:LEU:HD11	2.46	0.44
25:T:60:THR:HB	25:T:81:LYS:CE	2.48	0.44
12:G:120:ILE:HG12	12:G:134:GLY:CA	2.48	0.44
6:A:13:G:H4'	6:A:15:A:H2'	1.99	0.44
7:B:1405:U:O2'	7:B:1406:U:H5'	2.18	0.44
7:B:2138:G:N2	7:B:2139:U:H1'	2.32	0.44
13:H:99:ILE:HA	13:H:102:ALA:HB3	2.00	0.44
17:L:42:SER:C	17:L:44:GLY:N	2.70	0.44
7:B:2706:A:H2'	7:B:2707:U:H5''	1.98	0.44
7:B:1483:G:C8	7:B:1483:G:H5''	2.52	0.44
15:J:14:ASP:OD2	15:J:52:ASP:OD1	2.35	0.44
3:2:18:PHE:HA	3:2:44:VAL:HG11	1.99	0.44
6:A:29:A:C8	6:A:29:A:OP1	2.71	0.44
7:B:1000:A:C4	7:B:1001:A:C8	3.06	0.44
7:B:1238:G:N3	7:B:1239:G:C8	2.85	0.44
7:B:1296:G:H3'	7:B:1296:G:C8	2.52	0.44
7:B:1435:G:O2'	7:B:1436:G:H5'	2.17	0.44
7:B:1608:A:C5	7:B:1611:C:C4	3.05	0.44
7:B:1611:C:C2	7:B:1612:C:H5	2.35	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1613:G:C4	7:B:1617:C:N3	2.85	0.44
7:B:193:U:H2'	7:B:194:G:C8	2.50	0.44
7:B:1989:G:N7	7:B:1990:C:C5	2.85	0.44
7:B:18:U:C6	7:B:19:A:N7	2.85	0.44
7:B:2071:A:H2'	7:B:2072:C:O4'	2.18	0.44
7:B:2570:G:C2	7:B:2571:U:C6	3.06	0.44
7:B:2590:A:O2'	7:B:2591:C:H5'	2.18	0.44
7:B:2702:G:O2'	7:B:2703:C:H5'	2.18	0.44
7:B:373:U:H2'	7:B:373:U:O2	2.16	0.44
7:B:460:A:C8	7:B:461:C:C6	3.06	0.44
7:B:583:G:C2	7:B:584:C:C5	3.06	0.44
7:B:672:C:O2	7:B:673:C:C6	2.71	0.44
7:B:795:C:N3	7:B:796:C:N4	2.65	0.44
7:B:947:A:C6	7:B:948:C:N4	2.85	0.44
7:B:974:G:C6	7:B:989:G:C5	3.05	0.44
7:B:994:C:H2'	7:B:994:C:O2	2.17	0.44
8:C:106:PRO:HD2	8:C:109:LEU:CD2	2.47	0.44
8:C:262:THR:O	8:C:263:ASP:CB	2.65	0.44
11:F:65:LEU:C	11:F:67:THR:H	2.20	0.44
21:P:1:SER:OG	21:P:6:GLN:NE2	2.39	0.44
21:P:52:ARG:HG2	21:P:60:VAL:CG1	2.47	0.44
23:R:40:MET:O	23:R:54:VAL:HG22	2.18	0.44
24:S:76:VAL:HG12	24:S:103:ILE:CD1	2.46	0.44
31:Z:5:ILE:O	31:Z:6:HIS:O	2.35	0.44
7:B:598:U:H2'	7:B:599:A:O4'	2.18	0.44
10:E:199:MET:CG	10:E:200:LEU:H	2.23	0.44
7:B:2635:A:C2'	7:B:2636:C:O5'	2.65	0.44
7:B:2636:C:H4'	9:D:80:TRP:CZ2	2.53	0.44
22:Q:66:ALA:HA	22:Q:69:ARG:HH11	1.83	0.44
7:B:602:A:O4'	7:B:604:G:O2'	2.33	0.44
18:M:73:ILE:HD11	18:M:92:TRP:CB	2.48	0.44
12:G:97:VAL:HG23	12:G:124:CYS:SG	2.58	0.44
12:G:26:LYS:C	12:G:78:VAL:HG21	2.38	0.44
7:B:443:A:C6	10:E:40:ARG:NH1	2.86	0.44
10:E:91:ASP:O	10:E:92:HIS:HB2	2.17	0.44
7:B:282:A:O5'	7:B:282:A:H8	2.01	0.44
18:M:76:LYS:HA	18:M:77:PRO:HD3	1.74	0.44
33:B:5462:HOH:O	9:D:135:GLY:CA	2.45	0.44
16:K:39:ILE:HG23	16:K:40:LYS:N	2.31	0.44
7:B:2180:U:H6	7:B:2180:U:O5'	1.99	0.44
7:B:1104:C:H2'	7:B:1105:U:C5	2.51	0.44
10:E:41:GLN:HB2	10:E:42:GLY:H	1.66	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1418:G:H2'	7:B:1579:A:H61	1.82	0.44
7:B:713:G:O5'	7:B:713:G:H8	2.00	0.44
7:B:1882:U:H2'	7:B:1883:U:H6	1.83	0.44
1:0:52:LYS:HE2	1:0:53:VAL:CG1	2.48	0.44
10:E:32:VAL:O	10:E:35:TYR:HB3	2.16	0.44
7:B:1067:A:H2'	7:B:1068:G:C8	2.53	0.44
7:B:1694:C:C6	7:B:1694:C:C5'	3.00	0.44
7:B:715:A:N6	7:B:716:A:C6	2.86	0.44
11:F:78:ILE:HG22	11:F:80:GLN:H	1.82	0.44
28:W:79:ILE:C	28:W:79:ILE:HD12	2.37	0.44
1:0:11:LYS:O	1:0:12:ARG:C	2.56	0.44
1:0:21:LEU:HD22	24:S:23:LEU:CB	2.38	0.44
1:0:31:LYS:NZ	1:0:49:ARG:O	2.40	0.44
3:2:28:ARG:O	3:2:30:VAL:N	2.50	0.44
7:B:1299:G:O2'	7:B:1640:A:N6	2.51	0.44
7:B:1933:G:C2'	7:B:1934:C:H5'	2.46	0.44
7:B:195:A:H2'	7:B:198:C:H41	1.82	0.44
7:B:2035:G:H8	7:B:2035:G:H5''	1.83	0.44
7:B:2080:A:H2'	7:B:2081:U:H6	1.82	0.44
7:B:2230:G:O2'	7:B:2231:U:H5'	2.18	0.44
7:B:2270:A:H8	33:B:5396:HOH:O	2.00	0.44
7:B:2446:G:C2	7:B:2501:C:C4	3.06	0.44
7:B:245:G:C8	7:B:245:G:C3'	3.01	0.44
7:B:2466:C:H2'	7:B:2467:C:H6	1.83	0.44
7:B:2455:G:N2	7:B:2498:C:C5	2.85	0.44
7:B:2512:C:H2'	7:B:2513:A:O5'	2.17	0.44
7:B:2522:U:H1'	7:B:2647:U:OP1	2.18	0.44
7:B:393:C:H3'	7:B:394:C:H5''	1.97	0.44
7:B:692:C:H2'	7:B:693:A:C8	2.52	0.44
7:B:699:A:H2'	7:B:700:G:O5'	2.18	0.44
7:B:738:G:H1	7:B:758:C:H42	1.64	0.44
8:C:261:ARG:NH1	8:C:261:ARG:HG2	2.15	0.44
7:B:585:G:HO2'	10:E:77:ILE:HD13	1.78	0.44
15:J:18:VAL:O	15:J:56:VAL:HA	2.18	0.44
15:J:58:ASN:HA	15:J:126:ALA:HA	1.99	0.44
15:J:84:ILE:HG22	15:J:85:LYS:N	2.32	0.44
19:N:62:ASN:O	19:N:66:ALA:HB2	2.17	0.44
21:P:71:ARG:HH21	21:P:102:ARG:HB3	1.83	0.44
21:P:79:VAL:C	21:P:81:ASP:N	2.71	0.44
28:W:45:HIS:CD2	28:W:45:HIS:C	2.90	0.44
2:1:14:ALA:HA	2:1:48:TYR:CE1	2.53	0.44
7:B:300:A:H1'	7:B:319:G:O4'	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:303:G:C2	7:B:304:U:O4'	2.71	0.44
10:E:134:LEU:HD22	10:E:135:ALA:H	1.82	0.44
10:E:190:ALA:HB3	10:E:193:VAL:HG13	1.99	0.44
26:U:40:LEU:O	26:U:41:VAL:CB	2.64	0.44
7:B:66:C:C2'	7:B:67:U:H5'	2.47	0.44
7:B:2635:A:H2'	7:B:2636:C:O5'	2.18	0.44
8:C:134:ILE:HA	8:C:135:PRO:HD3	1.66	0.44
8:C:167:ASP:CG	8:C:172:THR:HG23	2.38	0.44
7:B:265:A:H2'	7:B:266:G:H1'	2.00	0.44
7:B:611:C:C2'	7:B:612:G:H5'	2.48	0.44
7:B:863:A:C5'	7:B:863:A:C8	3.01	0.44
7:B:1338:G:O2'	7:B:1339:G:H5'	2.18	0.44
7:B:1085:A:C2	7:B:1086:A:N7	2.85	0.44
7:B:1076:C:O2	14:I:91:LYS:HG2	2.18	0.44
7:B:2257:U:H3'	7:B:2258:C:H5''	2.00	0.44
26:U:51:LEU:C	26:U:53:GLN:N	2.69	0.44
7:B:222:A:N7	7:B:224:U:C4	2.86	0.44
7:B:2142:A:H2'	7:B:2143:C:O4'	2.17	0.44
10:E:175:ILE:HA	10:E:175:ILE:HD13	1.91	0.44
7:B:713:G:N2	7:B:718:A:H2	2.10	0.44
7:B:329:G:C8	7:B:329:G:OP1	2.61	0.44
7:B:1684:G:H1	7:B:1704:C:H42	1.66	0.44
6:A:66:A:C4	6:A:108:A:N6	2.85	0.44
6:A:83:G:C5	6:A:84:G:C8	3.05	0.44
16:K:86:LEU:HB2	16:K:95:ILE:HG22	2.00	0.44
27:V:14:LYS:O	27:V:15:GLY:C	2.56	0.44
6:A:61:G:H8	6:A:61:G:O5'	2.01	0.44
9:D:8:LYS:O	9:D:9:VAL:O	2.35	0.44
7:B:2536:G:C6	7:B:2537:U:N3	2.86	0.44
23:R:26:ASP:OD1	23:R:26:ASP:N	2.48	0.44
13:H:55:GLU:O	13:H:55:GLU:HG2	2.17	0.44
3:2:44:VAL:HG21	7:B:126:A:N1	2.32	0.44
6:A:47:C:O3'	20:O:97:PHE:CZ	2.71	0.44
7:B:1153:C:C5'	22:Q:75:TYR:HE2	2.30	0.44
7:B:1239:G:C4	7:B:1240:U:C5	3.06	0.44
7:B:1558:C:H1'	7:B:1560:G:C8	2.52	0.44
7:B:1567:G:H8	7:B:1567:G:C5'	2.31	0.44
7:B:1758:U:H3'	7:B:1759:A:H8	1.81	0.44
7:B:1805:A:H2'	7:B:1806:C:H5''	1.99	0.44
7:B:1884:G:C8	7:B:1884:G:OP2	2.51	0.44
7:B:194:G:C2	7:B:195:A:C8	3.06	0.44
7:B:2244:U:C2	7:B:2245:U:C6	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2439:A:C8	7:B:2586:U:O3'	2.71	0.44
7:B:2590:A:C6	7:B:2591:C:C4	3.05	0.44
7:B:2672:U:C3'	7:B:2673:G:H5''	2.48	0.44
7:B:2671:G:N2	7:B:2672:U:O2	2.51	0.44
7:B:553:G:H2'	7:B:554:U:H5'	1.98	0.44
7:B:583:G:C6	7:B:584:C:N4	2.86	0.44
7:B:681:G:N3	7:B:682:G:C8	2.86	0.44
7:B:796:C:H2'	7:B:797:G:H8	1.82	0.44
7:B:838:C:N3	7:B:941:A:N6	2.66	0.44
7:B:971:G:OP1	7:B:974:G:N3	2.50	0.44
8:C:9:SER:HA	8:C:10:PRO:HD3	1.65	0.44
9:D:157:LYS:NZ	9:D:157:LYS:C	2.71	0.44
11:F:33:ILE:HD11	11:F:90:LEU:CD1	2.46	0.44
12:G:84:LYS:H	12:G:132:LEU:HG	1.83	0.44
15:J:20:ALA:O	15:J:22:GLY:N	2.50	0.44
7:B:2469:A:H4'	18:M:55:ARG:HG2	2.00	0.44
18:M:61:GLY:O	18:M:62:LYS:CG	2.63	0.44
18:M:96:ILE:HG22	18:M:97:GLN:HE22	1.83	0.44
20:O:107:ALA:O	20:O:110:ALA:N	2.51	0.44
21:P:100:ARG:HG2	21:P:102:ARG:NH2	2.31	0.44
21:P:24:THR:HG23	21:P:109:ILE:HG21	1.99	0.44
21:P:47:ILE:HG21	21:P:49:ILE:HG13	1.99	0.44
22:Q:44:TYR:CD1	22:Q:48:ASP:OD2	2.70	0.44
7:B:748:G:C5	24:S:90:LYS:HE2	2.53	0.44
2:1:36:LYS:HE2	7:B:2286:G:C8	2.52	0.44
7:B:1203:U:C4	7:B:1204:A:N6	2.86	0.44
10:E:104:ALA:O	10:E:107:SER:N	2.37	0.44
10:E:109:LEU:HD22	10:E:113:VAL:HA	2.00	0.44
26:U:94:PHE:HE2	26:U:98:ASN:CB	2.31	0.44
29:X:7:ARG:HH12	29:X:56:LEU:HD21	1.82	0.44
23:R:67:GLY:H	23:R:98:ILE:N	2.15	0.44
11:F:16:MET:HG2	11:F:27:VAL:CG2	2.48	0.44
7:B:1750:G:C5	7:B:1751:U:C5	3.05	0.44
7:B:1752:C:N4	7:B:1756:G:C6	2.86	0.44
7:B:637:A:H4'	7:B:638:G:H4'	2.00	0.44
12:G:124:CYS:HA	12:G:125:PRO:HD2	1.84	0.44
24:S:33:LEU:CD2	24:S:51:LEU:HD12	2.32	0.44
7:B:283:G:H2'	7:B:284:U:O4'	2.17	0.44
13:H:130:VAL:O	13:H:142:VAL:HB	2.18	0.44
25:T:56:GLU:O	25:T:57:VAL:HG13	2.16	0.44
18:M:77:PRO:HB2	18:M:78:LEU:H	1.62	0.44
7:B:1080:A:H4'	14:I:133:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:U:51:LEU:C	26:U:53:GLN:H	2.21	0.44
29:X:11:VAL:HG13	29:X:14:LEU:N	2.33	0.44
7:B:289:G:C6	7:B:290:U:C2	3.05	0.44
7:B:2531:A:H2'	7:B:2532:G:H5'	2.00	0.44
6:A:64:G:C5	6:A:65:U:C5	3.06	0.44
7:B:2088:A:C3'	7:B:2088:A:C8	3.00	0.44
7:B:647:G:N2	7:B:2350:C:H4'	2.33	0.44
7:B:1712:U:H2'	7:B:1713:A:C8	2.52	0.44
7:B:2473:U:O2'	7:B:2474:U:H5'	2.17	0.44
15:J:35:ARG:NE	15:J:35:ARG:HA	2.32	0.44
4:3:30:HIS:C	4:3:31:ILE:HG23	2.38	0.44
6:A:30:C:C5	6:A:31:C:C5	3.05	0.44
7:B:1307:A:N7	7:B:1308:A:N7	2.65	0.44
7:B:1381:G:C6	7:B:1382:G:N2	2.86	0.44
7:B:1930:G:O2'	7:B:1968:G:N1	2.49	0.44
7:B:1975:G:C4	7:B:1976:U:C5	3.05	0.44
7:B:2051:A:N1	7:B:2614:A:C5	2.86	0.44
7:B:2359:C:O2	17:L:58:TYR:OH	2.36	0.44
7:B:2524:G:H2'	7:B:2525:G:C8	2.53	0.44
7:B:2526:G:C2	7:B:2538:C:O2	2.71	0.44
7:B:2545:G:O2'	7:B:2546:U:H5'	2.18	0.44
7:B:2692:G:H2'	7:B:2693:G:H8	1.82	0.44
7:B:2720:U:H2'	7:B:2721:A:H8	1.83	0.44
7:B:400:G:C3'	7:B:400:G:C8	3.01	0.44
7:B:453:A:N3	7:B:457:A:O2'	2.51	0.44
7:B:489:G:C3'	7:B:490:C:H5''	2.48	0.44
7:B:779:U:C2'	7:B:780:G:H5'	2.48	0.44
8:C:141:HIS:O	8:C:143:VAL:HG22	2.18	0.44
9:D:119:ALA:HB3	9:D:124:ARG:HG3	1.99	0.44
9:D:125:TRP:C	9:D:125:TRP:CD1	2.91	0.44
9:D:124:ARG:CZ	9:D:163:GLY:HA3	2.48	0.44
9:D:17:GLU:HA	21:P:80:VAL:HG12	2.00	0.44
12:G:132:LEU:CD1	12:G:140:ILE:HD12	2.43	0.44
13:H:23:ALA:O	13:H:24:GLY:C	2.55	0.44
15:J:103:ILE:C	15:J:105:VAL:H	2.20	0.44
20:O:74:VAL:O	20:O:78:VAL:HB	2.18	0.44
21:P:7:LEU:O	21:P:10:GLU:N	2.51	0.44
21:P:23:ASP:N	21:P:93:LYS:HE2	2.33	0.44
22:Q:46:TYR:C	22:Q:46:TYR:CD2	2.91	0.44
28:W:55:ASP:OD1	28:W:56:HIS:N	2.48	0.44
7:B:1000:A:O4'	30:Y:10:ARG:HD3	2.17	0.44
30:Y:8:GLN:HG2	30:Y:8:GLN:O	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:42:VAL:HG23	2:1:42:VAL:O	2.18	0.44
7:B:2373:G:N2	7:B:2381:A:H1'	2.32	0.44
7:B:1203:U:C5	7:B:1204:A:C5	3.06	0.44
10:E:136:GLN:C	10:E:139:LYS:H	2.20	0.44
7:B:78:U:O5'	7:B:78:U:H6	2.00	0.44
26:U:78:LYS:HB3	26:U:96:LYS:HB3	2.00	0.44
29:X:17:GLU:N	29:X:18:LEU:HD22	2.33	0.44
7:B:527:C:H1'	7:B:528:A:C5	2.53	0.44
23:R:101:ILE:O	23:R:102:SER:O	2.36	0.44
23:R:18:GLN:HB3	23:R:98:ILE:O	2.17	0.44
23:R:66:HIS:CB	23:R:98:ILE:HG13	2.46	0.44
8:C:187:CYS:C	8:C:188:ARG:HG3	2.37	0.44
7:B:666:A:C2'	7:B:667:U:C5'	2.85	0.44
7:B:623:C:H5	17:L:100:ILE:HD11	1.83	0.44
18:M:5:LYS:HZ2	18:M:5:LYS:HG2	1.65	0.44
9:D:61:THR:CG2	9:D:62:LYS:CE	2.96	0.44
7:B:356:G:C6	7:B:357:C:C4	3.06	0.44
25:T:55:VAL:CG1	25:T:56:GLU:N	2.80	0.44
7:B:137:U:OP2	7:B:137:U:H5	2.00	0.44
12:G:8:VAL:HB	12:G:49:LEU:CB	2.36	0.44
7:B:1485:U:O2'	7:B:1486:U:H5'	2.17	0.44
7:B:1764:C:N3	7:B:1765:U:C5	2.72	0.44
7:B:222:A:N7	7:B:224:U:C5	2.86	0.44
7:B:422:A:H2'	7:B:422:A:N3	2.32	0.44
7:B:1040:A:N6	7:B:1041:G:N7	2.65	0.44
7:B:1327:A:H2'	7:B:1327:A:N3	2.33	0.44
7:B:2584:U:H2'	7:B:2585:U:H5'	2.00	0.44
7:B:499:U:O4	7:B:500:G:C6	2.71	0.44
7:B:500:G:N2	7:B:502:A:H3'	2.33	0.44
6:A:87:U:C2	6:A:89:U:OP1	2.71	0.44
11:F:121:PHE:HB3	11:F:162:ASP:OD1	2.18	0.44
13:H:71:LYS:HE2	13:H:71:LYS:HB3	1.55	0.44
7:B:1499:C:C6	7:B:1499:C:C3'	3.00	0.44
7:B:1683:U:H6	7:B:1683:U:O5'	2.00	0.44
4:3:40:LYS:HE3	4:3:40:LYS:HB2	1.66	0.44
5:4:23:ILE:H	5:4:23:ILE:HG12	1.62	0.44
6:A:29:A:O4'	6:A:29:A:OP2	2.36	0.44
7:B:1000:A:N6	7:B:1001:A:C6	2.85	0.44
7:B:1025:G:O2'	7:B:1026:G:OP1	2.31	0.44
7:B:1831:G:N2	7:B:1975:G:C4	2.86	0.44
7:B:2439:A:H1'	7:B:2587:A:OP1	2.18	0.44
7:B:2442:C:C6	7:B:2442:C:C3'	3.01	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2524:G:N2	7:B:2525:G:H1'	2.33	0.44
7:B:2543:G:C2	7:B:2765:A:C5	3.06	0.44
7:B:2645:G:H5''	7:B:2645:G:C8	2.52	0.44
7:B:2694:G:N1	7:B:2695:U:O2	2.51	0.44
7:B:2763:G:C5'	7:B:2763:G:C8	2.91	0.44
7:B:27:G:H1'	7:B:513:A:H61	1.82	0.44
7:B:2816:G:N1	7:B:2817:U:C4	2.86	0.44
7:B:2885:G:C4	7:B:2886:A:H8	2.35	0.44
7:B:402:A:N7	7:B:403:U:C6	2.86	0.44
7:B:838:C:N3	7:B:941:A:C6	2.86	0.44
8:C:141:HIS:CE1	8:C:156:SER:OG	2.71	0.44
7:B:1820:U:O2	8:C:200:MET:O	2.36	0.44
9:D:125:TRP:O	9:D:128:ARG:NE	2.51	0.44
17:L:33:ARG:HG2	23:R:85:LYS:HZ3	1.83	0.44
17:L:61:LEU:N	17:L:62:PRO:CD	2.81	0.44
4:3:11:LYS:HD3	17:L:64:PHE:CD2	2.53	0.44
19:N:98:LEU:O	19:N:111:ALA:HA	2.18	0.44
21:P:100:ARG:CG	21:P:102:ARG:HH21	2.29	0.44
21:P:45:VAL:HG21	21:P:73:PHE:CD1	2.53	0.44
21:P:26:GLU:HA	21:P:47:ILE:N	2.33	0.44
21:P:54:LEU:HD22	21:P:55:HIS:CD2	2.53	0.44
21:P:71:ARG:NH2	21:P:102:ARG:HA	2.32	0.44
7:B:1009:A:H5'	22:Q:58:GLN:CD	2.37	0.44
28:W:27:GLY:CA	28:W:60:ALA:HA	2.48	0.44
28:W:7:GLY:O	28:W:8:SER:CB	2.65	0.44
7:B:643:A:N7	7:B:644:A:N7	2.66	0.44
10:E:152:GLU:O	10:E:153:LEU:CB	2.66	0.44
10:E:122:GLU:OE2	10:E:190:ALA:HA	2.18	0.44
8:C:171:VAL:O	8:C:172:THR:OG1	2.32	0.44
27:V:72:VAL:HG12	27:V:93:ARG:HA	1.99	0.44
7:B:875:G:N3	7:B:875:G:H2'	2.33	0.44
7:B:904:G:H5'	7:B:905:A:OP2	2.18	0.44
12:G:90:GLY:O	12:G:91:VAL:C	2.56	0.44
30:Y:2:LYS:HB2	30:Y:37:ARG:CB	2.48	0.44
7:B:1201:U:O2	7:B:1245:G:C2	2.71	0.44
19:N:75:ILE:O	19:N:75:ILE:HG12	2.18	0.44
7:B:2664:G:C8	7:B:2664:G:O5'	2.69	0.44
7:B:160:A:C5	7:B:167:A:C2	3.06	0.44
7:B:1417:C:O5'	7:B:1588:G:H1'	2.18	0.44
7:B:1040:A:O2'	7:B:1041:G:H5'	2.18	0.44
7:B:499:U:H2'	7:B:499:U:O2	2.17	0.44
6:A:83:G:H1	6:A:93:C:N4	2.15	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:26:GLY:O	15:J:29:ALA:HB3	2.18	0.44
7:B:2348:U:C6	7:B:2348:U:C3'	3.01	0.44
13:H:62:LEU:HD23	13:H:66:ASN:OD1	2.18	0.44
19:N:84:GLY:O	19:N:88:ALA:HB2	2.18	0.44
7:B:925:A:C6	7:B:926:G:C5	3.06	0.44
7:B:152:A:O2'	7:B:153:U:H5'	2.18	0.44
7:B:153:U:H3'	7:B:153:U:H6	1.83	0.44
1:O:35:GLU:O	1:O:36:LYS:O	2.36	0.43
7:B:1129:A:C4	7:B:2570:G:H1'	2.54	0.43
7:B:1214:A:H61	7:B:1235:G:C2'	2.30	0.43
7:B:1364:G:C2	7:B:1366:A:OP2	2.71	0.43
7:B:1558:C:C2	7:B:1560:G:C6	3.06	0.43
7:B:1629:U:H5''	7:B:1630:A:OP2	2.18	0.43
7:B:1673:G:H5''	7:B:1674:G:OP2	2.17	0.43
7:B:1776:G:OP2	33:B:5300:HOH:O	2.21	0.43
7:B:1805:A:O5'	7:B:1805:A:H8	2.01	0.43
7:B:1836:C:C4	7:B:1837:C:C5	3.06	0.43
7:B:2009:A:C3'	7:B:2009:A:C8	3.01	0.43
7:B:2010:G:C2'	7:B:2011:U:H5'	2.48	0.43
7:B:2236:U:C4	7:B:2237:G:C5	3.06	0.43
7:B:2268:A:O2'	7:B:2269:G:H5''	2.18	0.43
7:B:2270:A:C8	7:B:2270:A:H3'	2.53	0.43
7:B:2703:C:H2'	7:B:2704:C:H6	1.82	0.43
7:B:2739:U:C5	7:B:2763:G:C4	3.05	0.43
7:B:591:U:C4	7:B:592:A:N7	2.85	0.43
7:B:682:G:N2	7:B:683:U:N3	2.65	0.43
7:B:773:U:H4'	7:B:774:G:OP2	2.17	0.43
7:B:808:G:H5''	7:B:808:G:C8	2.53	0.43
7:B:812:C:H2'	7:B:813:U:O5'	2.17	0.43
8:C:210:ALA:O	8:C:211:ARG:C	2.56	0.43
7:B:2822:G:P	9:D:115:GLY:HA3	2.58	0.43
9:D:127:PHE:O	9:D:128:ARG:CD	2.65	0.43
9:D:14:ILE:HD13	9:D:19:GLY:HA2	2.00	0.43
11:F:49:LEU:CD2	11:F:52:ALA:HB2	2.48	0.43
15:J:102:GLU:OE2	15:J:124:VAL:HG13	2.18	0.43
15:J:24:THR:C	15:J:25:LEU:HD13	2.38	0.43
15:J:99:ARG:O	15:J:100:VAL:C	2.57	0.43
18:M:60:GLN:HG2	18:M:105:MET:SD	2.58	0.43
20:O:94:ARG:NH1	20:O:94:ARG:HB2	2.33	0.43
21:P:61:ARG:O	21:P:74:GLN:OE1	2.35	0.43
22:Q:30:VAL:CB	22:Q:33:VAL:HG23	2.48	0.43
22:Q:40:LYS:CB	22:Q:40:LYS:NZ	2.75	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:Q:65:ASN:HA	22:Q:75:TYR:HB2	1.99	0.43
2:1:40:PRO:HB2	2:1:42:VAL:H	1.83	0.43
7:B:2345:G:C8	7:B:2345:G:C5'	2.94	0.43
7:B:301:G:N3	7:B:317:G:C2	2.86	0.43
10:E:185:LYS:HD2	10:E:185:LYS:HA	1.87	0.43
7:B:58:G:C6	7:B:59:U:C4	3.06	0.43
7:B:2636:C:H4'	9:D:80:TRP:NE1	2.33	0.43
9:D:34:VAL:HG13	9:D:35:THR:N	2.32	0.43
22:Q:103:VAL:O	22:Q:107:ALA:N	2.46	0.43
7:B:912:C:H2'	7:B:913:U:C6	2.53	0.43
25:T:28:ASN:HB2	25:T:87:LEU:CB	2.36	0.43
7:B:1074:G:C2	7:B:1075:C:C2	3.06	0.43
14:I:20:SER:HA	14:I:25:PRO:CD	2.48	0.43
7:B:1773:A:H5''	7:B:1829:A:OP2	2.17	0.43
7:B:663:G:C5'	17:L:27:LEU:HD13	2.43	0.43
7:B:1768:C:N4	7:B:1769:U:C4	2.86	0.43
11:F:174:PHE:N	11:F:175:PRO:CD	2.80	0.43
7:B:1193:G:N2	7:B:1194:A:H1'	2.33	0.43
7:B:215:G:N2	7:B:432:A:C2	2.86	0.43
13:H:70:GLU:C	13:H:72:ILE:H	2.21	0.43
7:B:2517:C:O2'	7:B:2518:A:P	2.76	0.43
7:B:1727:C:C4	7:B:1728:C:N4	2.86	0.43
3:2:41:ARG:HD3	3:2:41:ARG:HA	1.64	0.43
6:A:53:A:C6	6:A:54:G:C6	3.06	0.43
7:B:1003:G:C2'	7:B:1010:A:N1	2.81	0.43
7:B:1022:G:H22	7:B:1142:A:H2	1.40	0.43
5:4:16:ILE:CD1	7:B:1033:U:H6	2.31	0.43
7:B:1137:G:N2	15:J:107:GLY:O	2.51	0.43
7:B:1276:A:C6	7:B:1295:C:C2	3.06	0.43
7:B:1451:C:H5''	7:B:1451:C:C6	2.47	0.43
7:B:1454:C:C4'	7:B:1455:G:OP1	2.65	0.43
7:B:1557:C:H3'	7:B:1557:C:C6	2.53	0.43
7:B:1786:A:C6	7:B:1938:A:C2	3.06	0.43
7:B:1926:U:H2'	7:B:1928:A:N7	2.33	0.43
7:B:197:A:C6	7:B:198:C:N3	2.87	0.43
7:B:2230:G:C5	7:B:2231:U:C5	3.06	0.43
7:B:2360:G:H3'	7:B:2360:G:C8	2.53	0.43
7:B:2453:A:H2	7:B:2504:U:O2	2.01	0.43
7:B:2673:G:O2'	7:B:2674:G:H5'	2.18	0.43
7:B:2683:C:O2'	7:B:2684:U:H5'	2.18	0.43
7:B:2711:A:P	33:B:5481:HOH:O	2.75	0.43
7:B:2762:C:C2'	7:B:2763:G:H5''	2.43	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2881:U:H2'	7:B:2882:A:O4'	2.17	0.43
7:B:733:G:C3'	7:B:733:G:C8	3.01	0.43
7:B:773:U:H2'	7:B:778:G:O2'	2.19	0.43
7:B:783:A:H2'	7:B:784:G:O5'	2.18	0.43
7:B:838:C:C4	7:B:941:A:N6	2.87	0.43
7:B:970:U:O2	7:B:971:G:C8	2.71	0.43
7:B:973:A:H5'	7:B:1188:U:H1'	1.99	0.43
8:C:241:LYS:O	8:C:243:PRO:CD	2.66	0.43
11:F:38:GLY:O	11:F:39:VAL:C	2.56	0.43
15:J:122:LEU:HD23	15:J:122:LEU:HA	1.70	0.43
15:J:135:GLN:O	15:J:135:GLN:CG	2.66	0.43
18:M:50:ARG:HH22	18:M:53:MET:CE	2.31	0.43
19:N:97:ILE:O	19:N:98:LEU:HD23	2.18	0.43
20:O:47:VAL:O	20:O:47:VAL:HG22	2.18	0.43
7:B:584:C:P	22:Q:5:ARG:HD3	2.57	0.43
31:Z:3:LYS:HB2	31:Z:8:LYS:O	2.17	0.43
7:B:309:A:C2	7:B:330:A:C5	3.06	0.43
10:E:10:SER:O	10:E:12:LEU:N	2.46	0.43
7:B:64:A:N3	7:B:65:U:N3	2.66	0.43
7:B:77:G:C6	7:B:78:U:N3	2.86	0.43
7:B:95:A:H4'	29:X:41:HIS:HA	2.00	0.43
2:1:24:LYS:NZ	7:B:2285:C:H41	2.16	0.43
7:B:617:G:OP1	10:E:102:ARG:HG2	2.18	0.43
7:B:849:A:C4	7:B:850:U:C5	3.06	0.43
9:D:69:ALA:C	9:D:70:LYS:HG2	2.38	0.43
7:B:1293:C:H2'	7:B:1294:U:C6	2.54	0.43
7:B:1340:U:H4'	7:B:1341:G:OP2	2.18	0.43
7:B:1341:G:C6	25:T:84:TYR:CE2	3.06	0.43
7:B:1445:G:H2'	7:B:1446:C:O4'	2.18	0.43
7:B:1878:G:C6	7:B:1879:C:N3	2.85	0.43
29:X:11:VAL:HG13	29:X:14:LEU:H	1.83	0.43
28:W:81:ILE:HG12	28:W:82:GLU:N	2.29	0.43
7:B:991:C:C6	7:B:991:C:H5'	2.45	0.43
7:B:1702:G:C4	7:B:1703:G:C8	3.06	0.43
7:B:34:U:H2'	7:B:34:U:H6	1.52	0.43
5:4:32:LYS:HB3	5:4:32:LYS:HE3	1.80	0.43
6:A:29:A:C8	6:A:29:A:P	3.11	0.43
7:B:1276:A:C8	7:B:1276:A:H5''	2.53	0.43
7:B:1451:C:H1'	7:B:1452:G:N7	2.33	0.43
7:B:1558:C:H1'	7:B:1560:G:N7	2.33	0.43
7:B:1815:A:N7	7:B:1817:G:C4	2.87	0.43
7:B:2000:C:H2'	7:B:2001:C:H6	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2016:U:O2'	7:B:2017:U:OP1	2.30	0.43
7:B:2027:G:C2	7:B:2028:U:C6	3.06	0.43
7:B:201:C:C4	7:B:202:U:C5	3.06	0.43
7:B:245:G:C6	7:B:246:C:C5	3.06	0.43
7:B:2647:U:HO2'	7:B:2648:G:H8	1.66	0.43
7:B:2760:C:H2'	7:B:2761:A:H5''	2.00	0.43
7:B:397:U:OP1	31:Z:29:GLY:CA	2.52	0.43
7:B:467:G:C6	7:B:468:G:N7	2.86	0.43
7:B:55:G:N2	7:B:116:C:C2	2.86	0.43
7:B:685:A:HO2'	7:B:686:U:P	2.41	0.43
7:B:974:G:C2	7:B:1186:G:C6	3.06	0.43
7:B:974:G:P	7:B:1186:G:N2	2.92	0.43
7:B:978:G:N2	7:B:986:C:H1'	2.32	0.43
8:C:204:LEU:HB3	8:C:210:ALA:HB2	2.01	0.43
8:C:20:ASN:HA	8:C:21:PRO:HD3	1.47	0.43
8:C:32:LEU:CD1	8:C:32:LEU:N	2.82	0.43
8:C:70:LYS:HB2	8:C:101:ARG:NH2	2.33	0.43
8:C:92:LEU:HD21	8:C:100:ARG:HD3	2.00	0.43
7:B:2024:G:H5''	9:D:154:LYS:HZ2	1.81	0.43
15:J:39:LYS:HD3	15:J:39:LYS:HA	1.74	0.43
16:K:31:ARG:C	16:K:32:TYR:HD1	2.21	0.43
19:N:108:ALA:HA	19:N:109:PRO:HD2	1.79	0.43
19:N:52:ILE:HA	19:N:52:ILE:HD13	1.76	0.43
21:P:54:LEU:N	21:P:58:PHE:CE1	2.87	0.43
22:Q:94:LEU:HD12	22:Q:94:LEU:C	2.38	0.43
24:S:22:ASP:C	24:S:24:ILE:H	2.21	0.43
24:S:23:LEU:HD22	24:S:23:LEU:HA	1.76	0.43
28:W:67:LYS:HE2	28:W:67:LYS:HB2	1.84	0.43
7:B:1202:G:N7	7:B:1203:U:C2	2.87	0.43
7:B:298:G:H22	7:B:339:U:H5	1.65	0.43
7:B:482:A:N7	7:B:506:G:C5	2.86	0.43
10:E:120:VAL:CA	10:E:189:THR:HG21	2.48	0.43
9:D:6:GLY:HA3	9:D:199:SER:O	2.17	0.43
7:B:2205:A:C4	7:B:2206:C:C5	3.06	0.43
7:B:1707:G:C5'	7:B:1707:G:C8	3.01	0.43
7:B:1745:A:H3'	7:B:1746:A:H8	1.82	0.43
17:L:79:LEU:HD11	17:L:112:LEU:HD22	2.01	0.43
17:L:126:ARG:NH1	17:L:127:VAL:CA	2.81	0.43
6:A:99:A:H2'	6:A:100:G:H8	1.83	0.43
18:M:11:LYS:HG3	18:M:12:MET:H	1.83	0.43
18:M:42:THR:CG2	18:M:45:GLN:NE2	2.81	0.43
7:B:849:A:C6	7:B:850:U:C4	3.05	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:I:19:PRO:O	14:I:24:GLY:HA3	2.18	0.43
7:B:1088:A:O3'	7:B:1089:A:H8	2.01	0.43
12:G:145:ALA:O	12:G:146:ASP:C	2.57	0.43
23:R:25:LEU:C	23:R:27:ILE:H	2.19	0.43
7:B:415:A:C2'	7:B:416:U:H5'	2.49	0.43
7:B:1417:C:H42	7:B:1581:G:H1	1.65	0.43
7:B:2153:C:H2'	7:B:2154:A:C8	2.53	0.43
7:B:1523:U:H3'	7:B:1524:G:H5'	2.00	0.43
7:B:2831:G:H5'	7:B:2834:G:O2'	2.18	0.43
7:B:134:G:C2	7:B:146:A:C2	3.05	0.43
7:B:2604:U:H2'	7:B:2605:U:H6	1.84	0.43
27:V:23:ALA:O	27:V:24:ASN:HB2	2.17	0.43
8:C:250:GLN:OE1	8:C:250:GLN:N	2.51	0.43
1:O:40:HIS:HB2	19:N:99:LYS:O	2.19	0.43
4:3:54:LEU:HG	4:3:54:LEU:H	1.62	0.43
5:4:11:CYS:O	5:4:12:ARG:HD2	2.17	0.43
6:A:49:C:O2'	6:A:50:A:H5'	2.18	0.43
7:B:1022:G:C4	7:B:1140:C:N4	2.86	0.43
7:B:123:G:C4	7:B:124:G:C8	3.07	0.43
7:B:123:G:C2	7:B:124:G:N7	2.86	0.43
7:B:1254:A:H5''	7:B:1255:U:H5'	2.00	0.43
7:B:131:A:C6	7:B:132:G:O6	2.71	0.43
7:B:1668:A:C8	7:B:1674:G:O6	2.71	0.43
7:B:1759:A:O2'	7:B:1760:C:H5'	2.19	0.43
7:B:1823:G:C6	7:B:1824:G:C5	3.06	0.43
7:B:197:A:C2	7:B:198:C:C2	3.06	0.43
7:B:1989:G:C8	7:B:1990:C:C5	3.06	0.43
7:B:202:U:C2'	7:B:202:U:O2	2.63	0.43
7:B:2296:U:C2	7:B:2333:A:C2	3.06	0.43
7:B:2307:G:H2'	33:B:5405:HOH:O	2.19	0.43
7:B:2316:G:N3	7:B:2317:A:C8	2.86	0.43
7:B:2375:G:C2	7:B:2379:G:C6	3.06	0.43
7:B:2850:A:C2	7:B:2851:A:C8	3.06	0.43
7:B:2851:A:H2'	7:B:2852:G:H8	1.83	0.43
7:B:2900:A:H2'	7:B:2901:C:O5'	2.18	0.43
7:B:400:G:H8	7:B:400:G:H3'	1.81	0.43
7:B:464:U:O4'	7:B:686:U:H5	2.01	0.43
7:B:564:C:H5''	7:B:565:C:OP2	2.17	0.43
7:B:741:U:C2	7:B:757:G:C2	3.06	0.43
7:B:949:G:N3	7:B:949:G:H2'	2.34	0.43
7:B:727:A:C2	8:C:15:VAL:HG11	2.46	0.43
8:C:206:LYS:O	8:C:207:ALA:O	2.35	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:44:ASN:OD1	8:C:48:ILE:O	2.36	0.43
9:D:14:ILE:HG22	21:P:79:VAL:HA	2.00	0.43
12:G:165:ASP:O	12:G:166:GLU:O	2.36	0.43
12:G:84:LYS:HD3	12:G:85:LYS:NZ	2.34	0.43
15:J:101:ILE:O	15:J:104:ALA:N	2.52	0.43
15:J:135:GLN:O	15:J:137:PRO:N	2.51	0.43
17:L:39:LYS:O	17:L:40:SER:O	2.37	0.43
19:N:2:ARG:O	19:N:2:ARG:NH1	2.51	0.43
20:O:37:ALA:CB	20:O:50:ALA:HB1	2.49	0.43
7:B:994:C:P	22:Q:49:ARG:HD2	2.58	0.43
23:R:6:GLN:O	23:R:7:SER:HB3	2.18	0.43
31:Z:48:GLN:CD	31:Z:49:ARG:O	2.56	0.43
7:B:335:C:H6	7:B:335:C:H5'	1.82	0.43
10:E:21:ARG:O	10:E:110:SER:HB3	2.19	0.43
26:U:40:LEU:HD21	26:U:59:GLU:HA	2.00	0.43
13:H:101:ASP:HA	13:H:104:THR:CB	2.20	0.43
29:X:44:LYS:O	29:X:45:GLN:C	2.56	0.43
29:X:6:LEU:CD2	29:X:6:LEU:H	2.19	0.43
23:R:12:HIS:NE2	23:R:14:VAL:O	2.51	0.43
22:Q:67:ALA:C	22:Q:69:ARG:H	2.22	0.43
7:B:608:A:C5	7:B:621:A:C5	3.06	0.43
27:V:30:ILE:HG22	27:V:93:ARG:HH21	1.83	0.43
7:B:861:A:H1'	7:B:917:A:N6	2.33	0.43
6:A:10:G:HO2'	6:A:11:C:H5'	1.82	0.43
14:I:52:LEU:CD2	14:I:53:PRO:HD2	2.32	0.43
16:K:43:ILE:HG21	16:K:53:LYS:C	2.39	0.43
7:B:138:U:O2	7:B:141:G:N2	2.47	0.43
12:G:71:LEU:O	12:G:74:MET:N	2.51	0.43
7:B:2547:A:C6	7:B:2548:U:O4	2.70	0.43
7:B:2299:U:H3'	7:B:2299:U:C6	2.53	0.43
7:B:1957:C:O2'	7:B:1985:C:H1'	2.18	0.43
7:B:2184:A:H2'	7:B:2185:U:H6	1.83	0.43
11:F:177:ARG:HG2	11:F:178:LYS:H	1.82	0.43
1:O:27:LEU:HD11	7:B:2886:A:C4	2.54	0.43
4:3:14:LYS:O	4:3:21:PHE:HA	2.19	0.43
4:3:41:ARG:HG2	4:3:41:ARG:HH11	1.83	0.43
4:3:63:TYR:HB3	4:3:64:ALA:H	1.49	0.43
7:B:1150:C:H2'	7:B:1151:A:H5'	2.00	0.43
7:B:1191:G:C3'	7:B:1191:G:C8	3.02	0.43
7:B:1197:G:N2	7:B:1198:U:C2	2.86	0.43
7:B:1218:G:C5	7:B:1232:G:O6	2.72	0.43
7:B:1253:A:H4'	7:B:1254:A:OP2	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1274:A:C8	7:B:1274:A:C3'	3.01	0.43
7:B:1452:G:H8	7:B:1452:G:O5'	2.02	0.43
7:B:1603:A:C6	7:B:1604:C:C2	3.06	0.43
7:B:1638:C:O2'	7:B:2709:G:N2	2.51	0.43
7:B:1668:A:C2	7:B:1670:C:N3	2.86	0.43
7:B:1791:A:C8	7:B:1791:A:H3'	2.54	0.43
7:B:1797:G:H5'	8:C:251:THR:HA	2.00	0.43
7:B:1805:A:H1'	8:C:50:THR:OG1	2.18	0.43
7:B:1370:C:O4'	7:B:1810:A:H2	2.01	0.43
7:B:1889:A:C3'	7:B:1889:A:C8	3.02	0.43
7:B:194:G:C6	7:B:195:A:N6	2.87	0.43
7:B:579:G:H5'	7:B:2017:U:H3'	2.01	0.43
7:B:982:C:C6	7:B:2029:G:OP1	2.70	0.43
7:B:2061:G:N3	7:B:2063:C:N4	2.67	0.43
7:B:2062:A:C2'	7:B:2063:C:H5'	2.40	0.43
7:B:2306:C:P	7:B:2307:G:N7	2.91	0.43
7:B:2351:G:O2'	7:B:2352:A:C5'	2.66	0.43
7:B:2355:G:N1	7:B:2356:U:C2	2.87	0.43
7:B:2648:G:C2	7:B:2673:G:N3	2.86	0.43
7:B:2665:A:O2'	7:B:2666:C:H5'	2.19	0.43
7:B:728:G:O2'	8:C:16:VAL:HG21	2.19	0.43
7:B:798:G:C6	7:B:799:G:N7	2.86	0.43
7:B:806:C:O2	7:B:2444:G:O2'	2.34	0.43
7:B:806:C:H2'	7:B:807:U:H5'	1.98	0.43
7:B:838:C:O2'	7:B:839:U:H5'	2.18	0.43
8:C:141:HIS:CD2	8:C:190:THR:HB	2.54	0.43
8:C:66:PHE:O	8:C:67:LYS:HG3	2.19	0.43
9:D:122:VAL:O	9:D:128:ARG:NH2	2.43	0.43
7:B:1657:U:OP1	9:D:140:HIS:O	2.37	0.43
13:H:36:ALA:C	13:H:37:VAL:CG2	2.87	0.43
15:J:12:LYS:HE3	15:J:12:LYS:HB3	1.78	0.43
21:P:13:LYS:HE2	21:P:77:SER:HB3	1.99	0.43
21:P:92:ARG:HE	21:P:111:GLU:N	2.15	0.43
21:P:99:LEU:O	21:P:99:LEU:HG	2.19	0.43
22:Q:10:ARG:O	22:Q:14:LYS:N	2.50	0.43
7:B:995:C:C4	22:Q:56:PHE:HE2	2.36	0.43
23:R:42:ALA:HB1	23:R:53:PHE:CG	2.53	0.43
24:S:24:ILE:O	24:S:71:VAL:HG11	2.18	0.43
24:S:89:ALA:O	24:S:90:LYS:CB	2.66	0.43
7:B:300:A:H1'	7:B:319:G:C1'	2.48	0.43
13:H:108:VAL:HG12	13:H:110:VAL:HG12	2.01	0.43
25:T:70:HIS:O	25:T:71:GLY:O	2.36	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:U:78:LYS:HD3	26:U:78:LYS:HA	1.83	0.43
23:R:33:VAL:O	23:R:35:PHE:CE2	2.72	0.43
7:B:40:U:H2'	7:B:41:C:C6	2.53	0.43
17:L:79:LEU:HD11	17:L:112:LEU:HD23	2.00	0.43
7:B:862:G:H2'	7:B:863:A:O5'	2.18	0.43
7:B:864:G:O6	7:B:912:C:N3	2.51	0.43
7:B:849:A:C6	7:B:850:U:O4	2.71	0.43
9:D:59:ARG:HB3	9:D:74:GLU:OE2	2.19	0.43
24:S:51:LEU:HD22	24:S:51:LEU:HA	1.35	0.43
7:B:1601:G:N3	7:B:1601:G:H2'	2.32	0.43
7:B:2789:C:O2	7:B:2892:G:H4'	2.19	0.43
12:G:73:SER:O	12:G:74:MET:HG3	2.18	0.43
7:B:1101:U:C4	7:B:1102:C:C5	3.07	0.43
14:I:2:LYS:NZ	14:I:2:LYS:HB3	2.33	0.43
7:B:1408:G:C6	7:B:1595:C:O2	2.71	0.43
7:B:1525:A:C5	7:B:1526:C:C5	3.06	0.43
13:H:95:GLY:O	13:H:99:ILE:HG12	2.18	0.43
30:Y:7:THR:CA	30:Y:34:THR:HB	2.46	0.43
11:F:107:VAL:HG12	11:F:113:PHE:CZ	2.53	0.43
7:B:1173:U:H2'	7:B:1174:U:O4'	2.17	0.43
7:B:1389:G:H2'	7:B:1390:U:O4'	2.18	0.43
27:V:24:ASN:O	27:V:44:HIS:N	2.52	0.43
7:B:1862:G:C2	7:B:1881:C:N3	2.86	0.43
28:W:79:ILE:HD12	28:W:79:ILE:O	2.18	0.43
14:I:110:GLN:HA	14:I:113:ALA:HB2	2.00	0.43
8:C:113:ASP:N	8:C:113:ASP:OD1	2.51	0.43
18:M:24:THR:HG23	18:M:24:THR:O	2.17	0.43
11:F:92:GLY:O	11:F:95:MET:HB3	2.18	0.43
4:3:3:ILE:HD12	7:B:253:C:OP2	2.18	0.43
6:A:46:A:C5	6:A:47:C:C5	3.07	0.43
6:A:52:A:C2	6:A:53:A:H1'	2.53	0.43
7:B:1026:G:C2	7:B:1027:A:N7	2.86	0.43
7:B:999:U:H5	7:B:1154:G:N7	2.17	0.43
7:B:1361:G:N1	7:B:1371:G:N2	2.67	0.43
7:B:1358:G:N2	7:B:1374:G:O6	2.51	0.43
7:B:1615:C:C4	7:B:1617:C:C6	3.06	0.43
7:B:190:A:C4	7:B:207:A:C2	3.07	0.43
7:B:1663:G:N2	7:B:1997:C:C2	2.86	0.43
7:B:190:A:OP2	7:B:205:G:N2	2.50	0.43
7:B:2090:A:C6	7:B:2091:C:N3	2.87	0.43
7:B:2268:A:H3'	7:B:2268:A:C8	2.54	0.43
7:B:2363:G:H2'	7:B:2364:C:C6	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:252:G:H2'	7:B:253:C:O5'	2.19	0.43
7:B:2567:G:C5	7:B:2568:U:C5	3.07	0.43
7:B:2616:C:C4	7:B:2617:U:C5	3.06	0.43
7:B:2624:G:H3'	7:B:2624:G:C8	2.53	0.43
7:B:2645:G:C5'	7:B:2645:G:C8	3.00	0.43
7:B:2720:U:C2	7:B:2721:A:N7	2.87	0.43
7:B:2007:U:HO2'	7:B:2824:C:HO2'	1.64	0.43
7:B:2852:G:C6	7:B:2853:C:C4	3.07	0.43
7:B:2876:G:N7	7:B:2877:G:N7	2.67	0.43
7:B:379:G:N2	7:B:396:G:C4	2.87	0.43
7:B:578:G:H5'	7:B:1254:A:OP1	2.18	0.43
7:B:672:C:C2	7:B:809:G:N2	2.87	0.43
7:B:671:C:C2	7:B:672:C:C6	3.07	0.43
7:B:690:G:C5'	7:B:690:G:C8	3.01	0.43
7:B:843:G:C6	7:B:844:A:C6	3.07	0.43
7:B:976:G:H4'	7:B:1156:A:H62	1.83	0.43
8:C:74:PRO:O	8:C:95:TYR:CD1	2.72	0.43
10:E:60:TRP:CD1	10:E:70:SER:HB2	2.53	0.43
13:H:47:PHE:CD2	13:H:48:GLU:N	2.86	0.43
18:M:57:VAL:O	18:M:58:LYS:C	2.57	0.43
19:N:4:ARG:H	19:N:4:ARG:CZ	2.31	0.43
21:P:25:VAL:HG13	21:P:88:ARG:N	2.28	0.43
23:R:80:ARG:CD	23:R:85:LYS:HA	2.48	0.43
23:R:82:HIS:CE1	23:R:84:ARG:HE	2.36	0.43
28:W:42:THR:CG2	28:W:66:VAL:C	2.87	0.43
28:W:39:GLN:HA	28:W:67:LYS:O	2.18	0.43
7:B:380:G:O2'	31:Z:13:THR:HB	2.18	0.43
7:B:300:A:N6	7:B:334:C:C5'	2.80	0.43
7:B:338:G:C5	7:B:339:U:C4	3.07	0.43
10:E:138:LEU:C	10:E:140:ASP:N	2.69	0.43
10:E:142:ALA:O	10:E:185:LYS:HG2	2.18	0.43
7:B:76:C:H5'	29:X:48:ARG:CG	2.48	0.43
29:X:47:ARG:O	29:X:49:ASP:N	2.51	0.43
29:X:58:ASN:C	29:X:60:LYS:H	2.21	0.43
23:R:32:THR:HG22	23:R:66:HIS:HD2	1.83	0.43
17:L:126:ARG:NH1	17:L:127:VAL:HA	2.33	0.43
12:G:29:ASN:HB3	12:G:78:VAL:HA	2.01	0.43
7:B:1425:G:C2	7:B:1426:G:C2	3.07	0.43
7:B:136:G:H1'	25:T:1:MET:CA	2.48	0.43
7:B:1056:G:H21	7:B:1103:A:N6	2.16	0.43
19:N:67:PHE:CD1	19:N:67:PHE:C	2.91	0.43
31:Z:63:ARG:O	31:Z:67:PRO:CD	2.67	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2253:G:O2'	7:B:2254:C:H5'	2.19	0.43
7:B:408:G:C2	7:B:409:G:C4	3.07	0.43
7:B:1937:A:C6	7:B:1939:U:O2	2.71	0.43
27:V:68:LYS:HB3	27:V:68:LYS:HE2	1.86	0.43
7:B:1005:C:O2'	7:B:1006:C:H5'	2.18	0.43
4:3:49:VAL:HG22	4:3:50:SER:H	1.82	0.43
7:B:1727:C:N4	7:B:1728:C:N4	2.67	0.43
3:2:13:ASN:HB3	3:2:46:LYS:HB3	2.00	0.43
7:B:1305:C:N4	7:B:1306:C:H5	2.16	0.43
7:B:1332:G:N7	7:B:1609:A:C4	2.86	0.43
7:B:1836:C:C2'	7:B:1837:C:H5'	2.49	0.43
7:B:19:A:C5	7:B:20:C:C5	3.07	0.43
7:B:2276:G:H2'	7:B:2277:G:H5'	2.00	0.43
7:B:2504:U:H5''	7:B:2505:G:OP2	2.19	0.43
7:B:2513:A:C5	7:B:2514:U:C5	3.06	0.43
7:B:2615:U:O2	7:B:2616:C:C6	2.72	0.43
7:B:2674:G:H2'	7:B:2675:A:O5'	2.18	0.43
7:B:2682:A:HO2'	7:B:2683:C:P	2.42	0.43
7:B:2682:A:N1	7:B:2683:C:N3	2.66	0.43
7:B:2761:A:C6	7:B:2762:C:C5	3.06	0.43
7:B:2819:G:O2'	7:B:2820:A:C5'	2.67	0.43
7:B:2839:G:C6	7:B:2840:C:C4	3.07	0.43
7:B:375:G:C2'	7:B:376:G:H5'	2.48	0.43
7:B:379:G:C6	7:B:396:G:O6	2.72	0.43
7:B:466:A:C5'	7:B:466:A:H8	2.32	0.43
7:B:554:U:C5	7:B:555:G:N7	2.87	0.43
7:B:538:A:N9	7:B:556:A:N6	2.66	0.43
7:B:571:U:C4	7:B:575:A:N6	2.87	0.43
7:B:826:U:N3	7:B:828:U:H1'	2.33	0.43
7:B:969:G:C5	7:B:970:U:C4	3.07	0.43
7:B:977:G:C2	7:B:978:G:C8	3.06	0.43
8:C:116:GLN:C	8:C:127:ASN:HB3	2.39	0.43
8:C:243:PRO:HB2	8:C:248:GLY:H	1.82	0.43
7:B:2822:G:OP2	9:D:115:GLY:O	2.37	0.43
9:D:107:VAL:HA	9:D:205:PRO:O	2.18	0.43
11:F:36:ASN:HA	11:F:87:LYS:H	1.84	0.43
11:F:63:LYS:HD2	11:F:64:PRO:HD2	1.99	0.43
19:N:2:ARG:HD3	19:N:2:ARG:O	2.19	0.43
21:P:31:VAL:HG12	21:P:33:GLU:N	2.34	0.43
21:P:47:ILE:HA	21:P:63:ILE:HG23	1.99	0.43
21:P:76:HIS:C	21:P:77:SER:HG	2.13	0.43
22:Q:46:TYR:CZ	23:R:89:HIS:NE2	2.86	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:103:ILE:HA	24:S:103:ILE:HD13	1.76	0.43
24:S:41:LYS:HB3	24:S:41:LYS:HE2	1.86	0.43
7:B:599:A:C2	7:B:659:G:C6	3.07	0.43
10:E:120:VAL:H	10:E:189:THR:HG21	1.79	0.43
2:1:8:ILE:HG21	2:1:27:ARG:HE	1.83	0.43
8:C:183:VAL:O	8:C:184:GLU:C	2.57	0.43
7:B:1710:G:C2	7:B:1749:A:C2	3.07	0.43
7:B:1717:A:H1'	7:B:1744:A:N6	2.34	0.43
17:L:111:ILE:HA	17:L:128:THR:HG21	2.01	0.43
12:G:90:GLY:O	12:G:93:TYR:CD1	2.72	0.43
7:B:850:U:H2'	7:B:851:C:H6	1.77	0.43
9:D:42:ASN:ND2	9:D:43:ASP:N	2.61	0.43
7:B:2093:G:C3'	7:B:2093:G:C8	3.00	0.43
7:B:1177:G:H2'	7:B:1178:C:O4'	2.18	0.43
7:B:160:A:C2	7:B:161:A:C4	3.07	0.43
7:B:166:U:H2'	7:B:167:A:H5'	2.00	0.43
26:U:48:VAL:C	26:U:50:ALA:H	2.22	0.43
14:I:44:LYS:NZ	14:I:68:PHE:HD2	2.17	0.43
7:B:1034:G:N3	7:B:1034:G:H2'	2.34	0.43
7:B:289:G:N1	7:B:290:U:C2	2.87	0.43
7:B:650:C:N4	33:B:5116:HOH:O	2.51	0.43
7:B:1965:C:C4	7:B:1966:A:C6	3.06	0.43
14:I:126:ARG:HA	14:I:129:GLU:CG	2.48	0.43
18:M:135:VAL:HG12	18:M:136:MET:N	2.32	0.43
7:B:14:A:C6	7:B:526:A:N1	2.87	0.43
7:B:2798:U:H1'	7:B:2800:A:C6	2.53	0.43
27:V:76:ASP:O	27:V:90:ASP:N	2.44	0.43
19:N:69:ARG:HA	19:N:69:ARG:HD2	1.48	0.43
3:2:24:THR:HB	3:2:27:GLY:H	1.84	0.43
4:3:12:ARG:O	4:3:13:PHE:CB	2.66	0.43
5:4:26:ILE:HD12	5:4:35:GLN:CD	2.38	0.43
6:A:53:A:C8	6:A:53:A:O5'	2.57	0.43
7:B:1125:G:C6	7:B:1126:A:N6	2.86	0.43
7:B:114:U:O5'	7:B:114:U:H6	2.02	0.43
7:B:1150:C:N4	7:B:1151:A:H62	2.17	0.43
7:B:1195:G:C4	7:B:1196:C:C5	3.07	0.43
7:B:1262:A:C5	7:B:1263:U:C5	3.06	0.43
7:B:1275:A:H5''	7:B:1275:A:N3	2.34	0.43
7:B:1323:C:OP1	24:S:84:ARG:CZ	2.65	0.43
7:B:1618:A:O2'	7:B:1619:G:H5'	2.18	0.43
7:B:1858:A:N6	7:B:1884:G:H1'	2.34	0.43
7:B:20:C:O2	7:B:21:A:C8	2.72	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2200:C:C6	7:B:2200:C:C3'	3.02	0.43
7:B:2305:U:H2'	7:B:2306:C:O4'	2.19	0.43
7:B:2454:G:C4	7:B:2455:G:C8	3.07	0.43
7:B:448:U:H3'	7:B:449:A:C5'	2.48	0.43
7:B:588:U:H5'	17:L:29:LYS:HD2	1.99	0.43
7:B:827:U:P	7:B:828:U:C5	3.11	0.43
7:B:993:G:N1	7:B:994:C:H5	2.14	0.43
8:C:84:PRO:C	8:C:86:ARG:N	2.68	0.43
9:D:13:ARG:NE	9:D:13:ARG:CA	2.74	0.43
13:H:27:ARG:CA	13:H:31:VAL:HG23	2.48	0.43
13:H:48:GLU:O	13:H:48:GLU:HG3	2.19	0.43
15:J:34:ARG:HG3	15:J:39:LYS:NZ	2.34	0.43
15:J:73:VAL:CG2	15:J:74:TYR:H	2.32	0.43
17:L:54:GLN:CD	17:L:54:GLN:C	2.77	0.43
19:N:24:MET:HE3	19:N:44:LEU:HD13	2.01	0.43
20:O:100:HIS:H	20:O:103:VAL:CG2	2.32	0.43
20:O:26:LEU:HB3	20:O:27:VAL:H	1.74	0.43
6:A:51:G:P	20:O:67:ASN:HD22	2.41	0.43
23:R:10:LYS:O	23:R:11:GLN:CB	2.62	0.43
23:R:80:ARG:O	23:R:81:LYS:C	2.57	0.43
24:S:103:ILE:O	24:S:104:THR:O	2.36	0.43
28:W:17:ALA:O	28:W:18:LYS:HG2	2.18	0.43
7:B:301:G:C6	7:B:317:G:O6	2.72	0.43
7:B:309:A:N1	7:B:330:A:C8	2.86	0.43
26:U:42:LYS:H	26:U:57:ILE:HG13	1.84	0.43
7:B:81:G:C2'	7:B:82:U:H5'	2.49	0.43
7:B:2640:G:C3'	7:B:2641:G:H5''	2.48	0.43
9:D:4:LEU:CD2	9:D:4:LEU:N	2.81	0.43
9:D:101:PHE:O	9:D:102:ALA:C	2.54	0.43
7:B:1710:G:N2	7:B:1749:A:H1'	2.33	0.43
7:B:1748:C:H5''	7:B:1748:C:C6	2.48	0.43
7:B:237:C:C6	7:B:238:C:H5	2.36	0.43
7:B:602:A:C1'	7:B:604:G:O2'	2.67	0.43
17:L:131:ALA:O	17:L:135:ILE:HG13	2.18	0.43
7:B:870:U:C3'	7:B:871:U:H5'	2.49	0.43
30:Y:38:GLU:O	30:Y:40:THR:N	2.51	0.43
7:B:1101:U:H2'	7:B:1102:C:O4'	2.19	0.43
7:B:2562:U:C5	7:B:2563:U:C5	3.07	0.43
7:B:2256:G:N2	7:B:2257:U:H1'	2.34	0.43
7:B:1863:G:H22	7:B:1880:U:H1'	1.83	0.43
17:L:103:ILE:HG12	17:L:104:GLN:N	2.34	0.43
7:B:1115:G:H2'	7:B:1116:G:C8	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1407:G:C2	7:B:1596:A:N3	2.87	0.43
7:B:2800:A:H2'	7:B:2801:G:C4'	2.49	0.43
14:I:105:LEU:HD23	14:I:105:LEU:HA	1.79	0.43
2:1:54:LYS:HG3	2:1:54:LYS:OXT	2.18	0.43
7:B:1734:G:C8	7:B:1734:G:O5'	2.72	0.43
7:B:1593:A:C6	7:B:1594:U:C4	3.07	0.43
25:T:12:ARG:HB3	25:T:13:ALA:H	1.55	0.43
1:0:47:TYR:CD2	1:0:51:ARG:CG	3.00	0.43
4:3:46:LYS:CD	4:3:47:ALA:N	2.82	0.43
6:A:34:A:O2'	6:A:35:C:C5'	2.67	0.43
6:A:52:A:H2'	6:A:53:A:C5'	2.46	0.43
7:B:1017:G:H2'	7:B:1018:U:H6	1.82	0.43
7:B:1000:A:C8	7:B:1155:A:N6	2.86	0.43
7:B:1223:G:O6	7:B:1227:G:C6	2.72	0.43
7:B:1313:U:H4'	7:B:1332:G:C4'	2.47	0.43
7:B:1364:G:H1	7:B:1366:A:H5''	1.83	0.43
7:B:1361:G:C6	7:B:1371:G:N2	2.87	0.43
7:B:1641:A:N6	7:B:1642:G:C2	2.87	0.43
7:B:1831:G:H2'	7:B:1832:C:H6	1.81	0.43
7:B:1854:A:H61	7:B:1888:G:H1'	1.83	0.43
7:B:2212:A:H2'	7:B:2212:A:H5'	1.63	0.43
7:B:2244:U:O2	7:B:2244:U:H2'	2.18	0.43
7:B:2244:U:H2'	7:B:2245:U:C6	2.54	0.43
7:B:2266:A:H4'	7:B:2267:A:C4	2.54	0.43
7:B:2330:G:H1'	28:W:36:ILE:CD1	2.30	0.43
7:B:2623:G:C3'	7:B:2624:G:H5'	2.47	0.43
7:B:2648:G:N2	7:B:2649:C:O2	2.51	0.43
7:B:1664:A:H1'	7:B:2726:A:N1	2.33	0.43
7:B:2758:A:C4	7:B:2759:G:C8	3.07	0.43
7:B:2744:G:C2	7:B:2761:A:C4	3.07	0.43
7:B:2762:C:O2	7:B:2762:C:C2'	2.66	0.43
7:B:2850:A:H2'	7:B:2851:A:O4'	2.18	0.43
7:B:384:A:C2'	7:B:385:C:H5'	2.48	0.43
7:B:533:G:N2	7:B:560:C:N3	2.62	0.43
7:B:566:U:C5	7:B:567:U:C5	3.03	0.43
7:B:776:G:C8	7:B:793:A:N3	2.87	0.43
7:B:977:G:H5'	7:B:978:G:OP2	2.19	0.43
7:B:978:G:C6	7:B:986:C:N4	2.87	0.43
7:B:993:G:N1	7:B:994:C:C5	2.87	0.43
8:C:129:LEU:C	8:C:129:LEU:HD23	2.39	0.43
8:C:219:VAL:O	8:C:220:ARG:HD2	2.19	0.43
8:C:90:ILE:CG2	8:C:91:ALA:N	2.81	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:138:LEU:HA	9:D:142:VAL:CG2	2.43	0.43
9:D:186:LEU:HD21	21:P:5:LYS:CE	2.47	0.43
10:E:49:ARG:O	10:E:52:VAL:HG22	2.18	0.43
11:F:133:GLU:N	11:F:150:GLY:HA2	2.33	0.43
15:J:16:TYR:O	15:J:17:VAL:HG23	2.19	0.43
18:M:50:ARG:C	18:M:52:ALA:N	2.72	0.43
19:N:58:ASP:O	19:N:62:ASN:HB2	2.19	0.43
20:O:30:ARG:N	20:O:30:ARG:CD	2.79	0.43
20:O:50:ALA:HB2	20:O:78:VAL:HG13	2.01	0.43
20:O:95:SER:C	20:O:97:PHE:N	2.73	0.43
21:P:100:ARG:HG2	21:P:102:ARG:HE	1.84	0.43
16:K:78:ARG:CZ	21:P:72:VAL:HG21	2.46	0.43
23:R:11:GLN:C	23:R:21:ARG:HH22	2.22	0.43
23:R:80:ARG:HG3	23:R:86:GLN:H	1.84	0.43
31:Z:6:HIS:HA	31:Z:7:PRO:HD2	1.78	0.43
7:B:2289:G:C5'	7:B:2289:G:C8	2.97	0.43
7:B:496:G:C2'	7:B:497:A:H5'	2.48	0.43
7:B:597:G:O2'	17:L:21:ARG:CB	2.67	0.43
10:E:1:MET:CA	10:E:108:ILE:HD11	2.49	0.43
7:B:83:A:N3	7:B:104:A:C2	2.87	0.43
7:B:2773:C:O2'	7:B:2774:C:H5'	2.19	0.43
9:D:86:GLU:O	9:D:87:GLY:O	2.37	0.43
11:F:12:VAL:HG13	11:F:27:VAL:HG11	2.00	0.43
7:B:1719:G:C2	7:B:1742:U:O2	2.72	0.43
7:B:233:A:C2	7:B:234:U:H1'	2.54	0.43
18:M:46:ILE:HD11	18:M:93:VAL:CG2	2.48	0.43
7:B:931:U:H2'	7:B:931:U:H6	1.56	0.43
9:D:42:ASN:HD22	9:D:42:ASN:C	2.20	0.43
25:T:48:GLN:HB2	25:T:53:VAL:O	2.19	0.43
25:T:60:THR:HA	25:T:82:LYS:O	2.19	0.43
7:B:361:G:H8	7:B:361:G:C5'	2.32	0.43
7:B:1667:G:P	16:K:6:THR:HA	2.57	0.43
7:B:1914:C:H2'	7:B:1915:U:C5	2.53	0.43
7:B:2258:C:C2	7:B:2426:A:H4'	2.54	0.43
23:R:27:ILE:HG12	23:R:29:THR:CG2	2.42	0.43
7:B:1879:C:H2'	7:B:1880:U:O4'	2.19	0.43
7:B:414:C:H4'	7:B:1879:C:O2	2.19	0.43
7:B:227:A:C2	7:B:2407:A:H1'	2.54	0.43
7:B:1936:A:N3	7:B:1940:U:C5	2.87	0.43
7:B:2248:C:O5'	7:B:2248:C:H6	2.01	0.43
24:S:95:ARG:HD3	24:S:95:ARG:HA	1.92	0.43
7:B:2533:U:H2'	7:B:2534:A:O4'	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1948:G:C5	7:B:1949:G:N7	2.87	0.43
7:B:1959:G:C2	7:B:1960:A:N3	2.87	0.43
17:L:88:GLY:O	17:L:90:VAL:N	2.52	0.43
13:H:61:VAL:HB	13:H:135:HIS:HB2	2.00	0.43
14:I:36:GLU:HB3	14:I:66:PHE:HZ	1.84	0.43
11:F:41:GLU:O	11:F:43:ILE:N	2.52	0.43
24:S:34:ASP:O	24:S:37:THR:HG22	2.19	0.43
3:2:18:PHE:HB2	3:2:19:ARG:H	1.61	0.43
4:3:4:LYS:HZ1	4:3:61:LEU:H	1.62	0.43
5:4:2:LYS:O	5:4:3:VAL:O	2.37	0.43
6:A:46:A:C4	6:A:47:C:C6	3.07	0.43
6:A:53:A:H8	6:A:53:A:C5'	2.32	0.43
7:B:1113:U:H2'	7:B:1114:C:O4'	2.19	0.43
7:B:120:U:C5	7:B:149:A:N1	2.86	0.43
7:B:123:G:N2	7:B:129:C:N3	2.67	0.43
7:B:1564:C:H2'	7:B:1565:C:H6	1.78	0.43
7:B:1652:A:H2'	7:B:1653:G:H5'	2.01	0.43
7:B:1998:A:N6	7:B:1999:C:C4	2.86	0.43
7:B:2574:G:C2	7:B:2575:C:N1	2.87	0.43
7:B:2625:G:C6	7:B:2626:C:C4	3.06	0.43
7:B:2700:A:H2	7:B:2701:U:H3	1.66	0.43
7:B:2751:G:C2'	7:B:2752:C:C6	3.02	0.43
7:B:568:U:H1'	7:B:570:G:N7	2.34	0.43
7:B:571:U:C4	7:B:575:A:N7	2.87	0.43
7:B:729:G:H4'	7:B:763:G:H4'	2.01	0.43
7:B:786:C:C3'	7:B:786:C:C6	3.02	0.43
7:B:819:A:N6	7:B:1189:A:H1'	2.33	0.43
7:B:822:G:O2'	7:B:823:C:H5'	2.19	0.43
7:B:977:G:C2	7:B:987:C:O2	2.72	0.43
10:E:58:LYS:HZ1	10:E:62:GLN:HA	1.84	0.43
15:J:130:HIS:C	15:J:132:HIS:H	2.21	0.43
15:J:20:ALA:HB3	15:J:57:LEU:O	2.19	0.43
17:L:38:GLN:CG	17:L:39:LYS:N	2.82	0.43
18:M:34:LYS:HB2	18:M:34:LYS:HE3	1.77	0.43
19:N:20:MET:HE3	19:N:21:PHE:HE1	1.84	0.43
7:B:2723:C:H5"	19:N:2:ARG:HH22	1.83	0.43
20:O:101:GLY:O	20:O:103:VAL:N	2.51	0.43
20:O:37:ALA:O	20:O:38:GLN:CB	2.62	0.43
20:O:30:ARG:HH12	20:O:97:PHE:HB3	1.83	0.43
21:P:49:ILE:O	21:P:50:ARG:CD	2.60	0.43
23:R:79:ARG:NH1	23:R:81:LYS:HE3	2.20	0.43
28:W:35:ILE:HG21	28:W:71:LYS:H	1.84	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:1:36:LYS:HB3	2:1:37:LYS:H	1.49	0.43
10:E:109:LEU:HD23	10:E:117:ARG:CG	2.49	0.43
10:E:194:LYS:HZ2	10:E:194:LYS:CB	2.30	0.43
10:E:1:MET:O	10:E:18:THR:HG23	2.19	0.43
7:B:94:A:N6	7:B:95:A:N6	2.66	0.43
9:D:48:ILE:CG2	9:D:49:GLN:N	2.82	0.43
27:V:35:GLU:HG3	27:V:93:ARG:CZ	2.49	0.43
6:A:94:A:H2'	6:A:95:U:O4'	2.19	0.43
18:M:43:ALA:CB	18:M:91:TYR:HB2	2.49	0.43
18:M:69:PRO:HB3	18:M:91:TYR:O	2.18	0.43
30:Y:1:ALA:HB3	30:Y:38:GLU:N	2.30	0.43
7:B:1340:U:H3'	25:T:61:LEU:HD22	2.00	0.43
25:T:58:VAL:HG13	25:T:85:VAL:HG12	2.00	0.43
20:O:56:LYS:O	20:O:62:LEU:CD1	2.66	0.43
14:I:4:VAL:HG13	14:I:5:GLN:N	2.32	0.43
7:B:165:A:C8	7:B:165:A:H3'	2.54	0.43
7:B:2413:G:C2	7:B:2414:G:H1'	2.54	0.43
14:I:56:VAL:CG2	14:I:57:VAL:H	2.26	0.43
19:N:123:GLU:HG2	19:N:124:ALA:N	2.25	0.43
7:B:2662:A:C4	7:B:2663:G:H1'	2.54	0.43
7:B:2553:G:N3	7:B:2583:G:C1'	2.79	0.43
7:B:1527:G:H21	7:B:1545:A:N6	2.10	0.43
7:B:1439:A:N7	7:B:1440:U:C2	2.87	0.43
21:P:36:LYS:C	21:P:38:ARG:N	2.73	0.43
16:K:103:VAL:O	16:K:123:LEU:N	2.52	0.43
4:3:34:LYS:CD	4:3:34:LYS:N	2.82	0.42
5:4:4:ARG:O	5:4:5:ALA:O	2.38	0.42
6:A:54:G:N2	11:F:25:MET:SD	2.92	0.42
7:B:116:C:C2'	7:B:117:G:O4'	2.66	0.42
7:B:1295:C:O2'	7:B:1296:G:H5'	2.19	0.42
7:B:1355:G:C2	7:B:1356:G:C5	3.07	0.42
7:B:1608:A:N7	7:B:1611:C:C4	2.87	0.42
7:B:1658:C:H5''	7:B:1659:G:OP2	2.19	0.42
7:B:1989:G:C2'	7:B:1990:C:H5'	2.48	0.42
7:B:2056:G:C4	7:B:2577:A:C2	3.06	0.42
7:B:2056:G:C8	7:B:2056:G:H5'	2.54	0.42
7:B:2080:A:H2'	7:B:2081:U:C6	2.54	0.42
7:B:2458:G:C8	7:B:2490:G:N2	2.87	0.42
7:B:2482:A:C2	7:B:2483:C:C2	3.06	0.42
7:B:384:A:N7	7:B:385:C:C5	2.87	0.42
7:B:690:G:C4	7:B:691:C:C5	3.06	0.42
7:B:777:G:H2'	7:B:778:G:O5'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:805:G:C6	7:B:2068:U:H5''	2.54	0.42
7:B:836:G:C5	7:B:837:C:N4	2.87	0.42
7:B:960:A:N7	7:B:962:G:C8	2.87	0.42
7:B:994:C:O2'	7:B:995:C:H3'	2.19	0.42
9:D:157:LYS:HE2	15:J:80:HIS:HB3	2.00	0.42
9:D:15:PHE:O	9:D:16:THR:HB	2.19	0.42
10:E:58:LYS:NZ	10:E:62:GLN:HA	2.34	0.42
10:E:60:TRP:HZ3	10:E:67:ARG:HB2	1.83	0.42
7:B:672:C:O3'	10:E:76:PRO:HG3	2.19	0.42
7:B:558:U:H5'	15:J:114:LEU:HD23	2.01	0.42
20:O:74:VAL:O	20:O:78:VAL:N	2.48	0.42
21:P:52:ARG:C	21:P:60:VAL:HG11	2.36	0.42
21:P:71:ARG:NH2	21:P:102:ARG:CA	2.81	0.42
7:B:294:A:H4'	7:B:294:A:OP1	2.19	0.42
7:B:72:U:C4	7:B:112:U:O2'	2.64	0.42
7:B:83:A:N3	7:B:104:A:H2	2.16	0.42
9:D:6:GLY:CA	9:D:199:SER:O	2.67	0.42
12:G:16:VAL:HG21	12:G:44:HIS:CD2	2.54	0.42
7:B:42:A:N3	7:B:438:G:C2	2.86	0.42
7:B:849:A:C5	7:B:850:U:C4	3.08	0.42
7:B:2785:C:N3	7:B:2786:U:C4	2.87	0.42
25:T:87:LEU:HD12	25:T:91:GLN:O	2.19	0.42
17:L:141:LYS:HB3	17:L:142:ILE:H	1.52	0.42
23:R:51:VAL:HA	23:R:52:PRO:HD3	1.71	0.42
7:B:363:G:H2'	7:B:364:C:C5	2.54	0.42
7:B:631:A:C1'	17:L:66:PHE:HB3	2.41	0.42
7:B:2560:A:N1	7:B:2561:U:C2	2.87	0.42
7:B:1551:A:N7	7:B:1552:A:C2	2.87	0.42
7:B:1915:U:H2'	7:B:1916:A:O4'	2.18	0.42
12:G:169:ARG:CD	12:G:170:THR:N	2.81	0.42
7:B:1702:G:C6	7:B:1703:G:N7	2.86	0.42
7:B:2295:C:OP1	20:O:5:SER:HB2	2.19	0.42
7:B:231:A:O2'	7:B:232:G:H5'	2.19	0.42
7:B:2181:U:H2'	7:B:2182:U:H6	1.83	0.42
1:O:29:VAL:HG12	1:O:30:ASP:N	2.34	0.42
4:3:41:ARG:O	4:3:43:LEU:N	2.46	0.42
7:B:1195:G:N1	7:B:1196:C:C5	2.87	0.42
7:B:1606:C:H3'	7:B:1606:C:C6	2.54	0.42
7:B:1274:A:N7	7:B:1646:C:C4	2.87	0.42
7:B:1778:U:C5	7:B:1784:A:C4	3.07	0.42
7:B:1791:A:C8	7:B:1791:A:C3'	3.02	0.42
7:B:1797:G:C5	7:B:1798:U:C5	3.08	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2030:A:H4'	7:B:2031:A:H5''	2.00	0.42
7:B:2074:U:H2'	7:B:2075:U:O4'	2.19	0.42
7:B:2225:A:H4'	7:B:2226:C:H6	1.85	0.42
7:B:2225:A:H5''	7:B:2226:C:C5'	2.48	0.42
7:B:2322:A:N6	7:B:2333:A:H62	2.17	0.42
7:B:2452:C:HO2'	7:B:2453:A:P	2.41	0.42
7:B:2539:C:C5	7:B:2540:C:C6	3.07	0.42
7:B:2543:G:N2	7:B:2765:A:C8	2.87	0.42
1:O:39:ARG:HH11	7:B:2816:G:C4'	2.32	0.42
7:B:2900:A:H3'	7:B:2900:A:C8	2.55	0.42
7:B:553:G:C2'	7:B:554:U:H5'	2.49	0.42
7:B:693:A:O2'	7:B:694:U:H5'	2.18	0.42
7:B:689:A:H2	7:B:779:U:H4'	1.83	0.42
7:B:837:C:C6	7:B:837:C:O5'	2.72	0.42
7:B:840:C:O2'	7:B:841:G:H5'	2.19	0.42
8:C:161:VAL:HB	8:C:193:GLU:OE2	2.19	0.42
7:B:1824:G:N3	8:C:249:VAL:HG11	2.33	0.42
13:H:25:TYR:O	13:H:25:TYR:HD1	2.01	0.42
7:B:2722:G:C4'	19:N:4:ARG:HG3	2.49	0.42
19:N:56:LYS:HD3	19:N:57:THR:OG1	2.20	0.42
19:N:8:ARG:N	19:N:8:ARG:HD3	2.34	0.42
19:N:99:LYS:H	19:N:99:LYS:CD	2.31	0.42
21:P:26:GLU:CA	21:P:47:ILE:H	2.31	0.42
21:P:59:THR:CG2	21:P:76:HIS:CE1	3.02	0.42
22:Q:18:LYS:C	22:Q:20:ALA:H	2.21	0.42
28:W:67:LYS:HG2	28:W:74:LYS:O	2.19	0.42
30:Y:52:PHE:O	30:Y:53:MET:C	2.57	0.42
7:B:483:A:C5'	26:U:45:GLN:HB2	2.49	0.42
29:X:1:MET:H3	29:X:6:LEU:CA	2.32	0.42
9:D:29:VAL:HG23	9:D:51:THR:CG2	2.49	0.42
7:B:623:C:C5	17:L:100:ILE:HD11	2.53	0.42
7:B:869:G:C6	7:B:909:A:N6	2.87	0.42
7:B:875:G:H5''	7:B:876:C:OP2	2.19	0.42
7:B:907:G:C4	7:B:908:C:C6	3.07	0.42
12:G:102:ILE:HG23	12:G:104:LEU:CD2	2.49	0.42
7:B:1291:C:C6	7:B:1291:C:C3'	3.02	0.42
25:T:41:ALA:C	25:T:43:ILE:N	2.72	0.42
20:O:82:ALA:CA	20:O:87:ILE:HB	2.48	0.42
7:B:370:G:H2'	7:B:370:G:O5'	2.18	0.42
7:B:2341:G:C4	7:B:2342:C:C5	3.07	0.42
6:A:14:U:O2'	6:A:15:A:P	2.77	0.42
7:B:2531:A:N1	7:B:2532:G:C5	2.87	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:3:16:THR:OG1	7:B:651:G:OP1	2.33	0.42
7:B:1845:G:H5'	8:C:268:ARG:HD2	2.01	0.42
13:H:68:ARG:HE	13:H:71:LYS:NZ	2.18	0.42
27:V:24:ASN:CB	27:V:44:HIS:HB2	2.49	0.42
7:B:1692:U:H3'	7:B:1694:C:H41	1.84	0.42
7:B:1122:G:C8	7:B:1122:G:H5''	2.54	0.42
11:F:50:ASP:CG	11:F:51:ASN:N	2.73	0.42
7:B:2600:A:C2'	7:B:2601:C:H5'	2.49	0.42
7:B:1396:U:O2	7:B:1396:U:O4'	2.36	0.42
1:0:38:LEU:HA	1:0:38:LEU:HD12	1.91	0.42
4:3:28:LEU:O	4:3:43:LEU:HD21	2.18	0.42
5:4:25:VAL:O	5:4:26:ILE:CB	2.66	0.42
6:A:29:A:C8	6:A:29:A:OP2	2.72	0.42
6:A:40:U:N3	6:A:43:C:H5''	2.34	0.42
7:B:1267:U:C2'	7:B:1267:U:O2	2.65	0.42
7:B:1281:G:O6	7:B:1286:A:N7	2.53	0.42
7:B:1604:C:C2'	7:B:1610:A:H62	2.32	0.42
7:B:1670:C:N4	7:B:1671:U:H3	2.18	0.42
7:B:1678:A:C2	7:B:1989:G:N2	2.87	0.42
7:B:1791:A:C2'	7:B:1792:G:O5'	2.67	0.42
7:B:1268:A:N6	7:B:2013:A:C8	2.87	0.42
7:B:2229:U:H2'	7:B:2230:G:H8	1.84	0.42
7:B:2231:U:OP1	31:Z:28:VAL:HG23	2.18	0.42
7:B:1890:A:C2	7:B:2234:G:N3	2.86	0.42
7:B:2330:G:N3	28:W:36:ILE:HG12	2.33	0.42
7:B:2526:G:C4	7:B:2527:C:C5	3.08	0.42
7:B:1787:A:O4'	7:B:2589:A:H4'	2.19	0.42
7:B:2740:A:N7	7:B:2764:A:C6	2.87	0.42
7:B:738:G:C2	7:B:759:G:C5	3.07	0.42
7:B:780:G:H21	7:B:783:A:H62	1.67	0.42
7:B:671:C:N4	7:B:809:G:H1	2.17	0.42
7:B:819:A:C8	7:B:1189:A:C6	3.07	0.42
15:J:136:GLN:O	15:J:137:PRO:C	2.57	0.42
15:J:59:ALA:O	15:J:62:VAL:HG22	2.19	0.42
19:N:56:LYS:HE2	19:N:57:THR:OG1	2.19	0.42
21:P:26:GLU:O	21:P:46:VAL:HG13	2.19	0.42
22:Q:88:GLU:HA	23:R:53:PHE:HB3	2.01	0.42
7:B:2263:C:N4	28:W:12:GLY:HA2	2.32	0.42
28:W:69:GLU:OE2	28:W:70:VAL:N	2.48	0.42
7:B:298:G:O3'	7:B:299:A:H8	2.02	0.42
7:B:339:U:C3'	7:B:339:U:C6	3.02	0.42
17:L:20:GLY:HA3	17:L:21:ARG:HE	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:101:A:OP2	26:U:90:LYS:NZ	2.52	0.42
7:B:93:G:C6	7:B:94:A:C4	3.08	0.42
26:U:85:ARG:HE	26:U:86:PHE:HE1	1.67	0.42
9:D:1:MET:HB2	9:D:81:GLU:CG	2.48	0.42
9:D:33:ARG:O	9:D:34:VAL:C	2.58	0.42
23:R:39:LEU:HB2	23:R:61:ALA:HB2	2.02	0.42
23:R:41:ILE:O	23:R:41:ILE:HG23	2.20	0.42
8:C:163:ILE:HG22	8:C:164:VAL:H	1.84	0.42
11:F:11:VAL:O	11:F:14:LYS:HB3	2.19	0.42
7:B:1718:G:O2'	7:B:1719:G:H5'	2.19	0.42
31:Z:37:CYS:SG	31:Z:39:LYS:HB2	2.59	0.42
7:B:220:G:C4	7:B:427:U:C4	3.08	0.42
6:A:81:G:H2'	6:A:82:U:H6	1.84	0.42
18:M:71:LYS:HZ2	18:M:91:TYR:HD1	1.67	0.42
13:H:113:SER:HG	13:H:132:PHE:HE2	1.67	0.42
7:B:271:G:C2	7:B:367:G:N1	2.87	0.42
24:S:85:ILE:CG2	24:S:85:ILE:O	2.64	0.42
7:B:415:A:C2	7:B:2409:G:N1	2.87	0.42
6:A:105:G:C5	6:A:106:G:N7	2.87	0.42
7:B:1942:C:H5	7:B:1943:U:C6	2.36	0.42
7:B:2143:C:H2'	7:B:2144:G:O4'	2.20	0.42
7:B:1769:U:O2	7:B:1984:G:C2	2.72	0.42
7:B:239:C:H2'	7:B:240:C:H6	1.83	0.42
14:I:77:VAL:O	14:I:81:LYS:HG3	2.19	0.42
7:B:1596:A:N6	7:B:1597:A:N6	2.68	0.42
7:B:1524:G:C4	7:B:1525:A:C8	3.06	0.42
7:B:1437:C:C1'	7:B:1515:A:H2	2.31	0.42
7:B:2065:C:HO2'	7:B:2449:U:H3	1.62	0.42
7:B:525:U:C2'	7:B:526:A:H5''	2.49	0.42
7:B:1438:U:H2'	7:B:1439:A:C8	2.53	0.42
7:B:547:A:N3	7:B:547:A:C2'	2.82	0.42
21:P:16:VAL:HA	21:P:17:PRO:HD3	1.78	0.42
13:H:70:GLU:C	13:H:72:ILE:N	2.72	0.42
13:H:76:GLU:HG3	13:H:76:GLU:H	1.69	0.42
7:B:11:C:N4	7:B:2629:U:H3	2.18	0.42
14:I:46:ASP:O	14:I:50:LYS:HE2	2.18	0.42
7:B:1048:A:C2	7:B:1049:C:C5	3.07	0.42
7:B:1263:U:C4	7:B:1264:A:N1	2.87	0.42
7:B:1453:A:H4'	7:B:1454:C:OP2	2.19	0.42
7:B:1459:G:C8	7:B:1459:G:C3'	3.03	0.42
7:B:1823:G:C2'	7:B:1824:G:H5'	2.50	0.42
7:B:2001:C:C2'	7:B:2002:G:O5'	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2087:G:C3'	7:B:2087:G:C8	3.03	0.42
7:B:2230:G:C6	7:B:2231:U:C4	3.08	0.42
7:B:2357:G:N2	7:B:2361:G:C5	2.88	0.42
7:B:2472:G:H2'	7:B:2529:G:N2	2.35	0.42
7:B:2488:G:C2	7:B:2489:U:C6	3.07	0.42
7:B:2676:C:H2'	7:B:2677:G:O4'	2.19	0.42
7:B:2727:A:C5	7:B:2728:U:C4	3.08	0.42
7:B:52:A:H2'	7:B:53:A:C8	2.54	0.42
7:B:576:U:O4	7:B:577:G:O6	2.38	0.42
7:B:671:C:N3	7:B:672:C:C5	2.87	0.42
7:B:856:G:N2	7:B:922:C:N4	2.67	0.42
7:B:969:G:C2	7:B:970:U:N3	2.87	0.42
7:B:984:A:C8	7:B:984:A:O5'	2.72	0.42
7:B:985:C:O5'	7:B:985:C:H6	2.01	0.42
8:C:129:LEU:O	8:C:129:LEU:HD23	2.19	0.42
8:C:231:HIS:HD1	8:C:242:HIS:CE1	2.38	0.42
8:C:263:ASP:HB2	8:C:264:LYS:NZ	2.35	0.42
8:C:82:TYR:HD1	8:C:83:ASP:N	2.04	0.42
12:G:87:GLN:OE1	12:G:164:ALA:HA	2.18	0.42
13:H:24:GLY:C	13:H:26:ALA:N	2.72	0.42
15:J:109:LEU:CB	15:J:110:PRO:HD2	2.34	0.42
7:B:1275:A:N6	19:N:16:HIS:CE1	2.88	0.42
7:B:1252:G:N3	22:Q:32:ARG:HG2	2.34	0.42
22:Q:88:GLU:HA	23:R:53:PHE:CB	2.50	0.42
23:R:80:ARG:CG	23:R:80:ARG:O	2.67	0.42
28:W:3:LYS:NZ	28:W:10:ARG:NE	2.68	0.42
28:W:28:GLU:HA	28:W:61:LYS:HB2	2.01	0.42
28:W:74:LYS:CG	28:W:75:ASN:N	2.78	0.42
30:Y:8:GLN:O	30:Y:9:THR:O	2.37	0.42
31:Z:47:LYS:HD3	31:Z:52:ALA:HA	2.01	0.42
7:B:1242:U:C4	7:B:1243:C:N4	2.87	0.42
7:B:301:G:C6	7:B:317:G:C6	3.07	0.42
7:B:307:G:N2	7:B:310:A:OP2	2.52	0.42
10:E:27:LEU:O	10:E:31:VAL:HG23	2.19	0.42
7:B:93:G:C2'	7:B:94:A:H8	2.31	0.42
26:U:96:LYS:O	26:U:97:SER:CB	2.67	0.42
9:D:33:ARG:NH2	9:D:87:GLY:CA	2.72	0.42
8:C:185:ALA:C	8:C:187:CYS:N	2.72	0.42
7:B:2204:G:N3	7:B:2205:A:C8	2.87	0.42
7:B:2391:G:H22	7:B:2424:C:C2'	2.08	0.42
7:B:617:G:H2'	7:B:618:G:O4'	2.19	0.42
7:B:905:A:H3'	7:B:905:A:C8	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:93:TYR:CD1	12:G:106:LEU:O	2.72	0.42
25:T:58:VAL:CG1	25:T:59:ASN:N	2.82	0.42
26:U:5:ARG:HE	26:U:6:ARG:HG2	1.85	0.42
7:B:144:A:N6	25:T:3:ARG:HH22	2.17	0.42
7:B:144:A:N6	25:T:3:ARG:NH2	2.68	0.42
7:B:1666:G:O2'	7:B:1667:G:H5'	2.19	0.42
7:B:2560:A:C5	7:B:2561:U:C6	3.06	0.42
6:A:18:G:C2	6:A:19:C:C2	3.07	0.42
6:A:70:C:HO2'	6:A:71:C:H5'	1.82	0.42
7:B:2102:G:H2'	7:B:2103:C:O4'	2.19	0.42
16:K:82:ASN:HD22	16:K:82:ASN:N	2.06	0.42
7:B:1528:A:N9	7:B:1544:A:N6	2.68	0.42
20:O:2:ASP:HB2	20:O:4:LYS:CE	2.50	0.42
4:3:38:LYS:HD3	4:3:38:LYS:HA	1.62	0.42
7:B:1015:U:C6	7:B:1015:U:C3'	3.02	0.42
11:F:104:THR:CG2	11:F:105:ILE:HD12	2.49	0.42
16:K:93:GLN:CD	16:K:94:PRO:HD2	2.40	0.42
1:0:48:TYR:C	1:0:48:TYR:CD1	2.88	0.42
4:3:12:ARG:CZ	17:L:62:PRO:CG	2.97	0.42
7:B:1234:U:O2	7:B:1235:G:C1'	2.67	0.42
7:B:1236:G:O2'	7:B:1237:A:O5'	2.37	0.42
7:B:1571:A:N3	7:B:1572:A:C8	2.87	0.42
7:B:1571:A:N1	7:B:1572:A:C5	2.87	0.42
7:B:1369:G:C1'	7:B:1809:A:H61	2.31	0.42
7:B:1803:A:C2	7:B:1822:C:O2	2.64	0.42
7:B:2017:U:H5''	7:B:2018:G:OP1	2.19	0.42
7:B:2050:C:C4	7:B:2051:A:C6	3.08	0.42
7:B:2060:A:O4'	7:B:2502:G:H1'	2.19	0.42
7:B:2199:A:C3'	7:B:2200:C:H5'	2.48	0.42
7:B:2228:G:C5	7:B:2229:U:C4	3.07	0.42
7:B:2313:C:H2'	7:B:2314:A:C8	2.55	0.42
7:B:2331:G:H21	7:B:2336:A:H8	1.64	0.42
7:B:2700:A:O2'	7:B:2701:U:H5'	2.20	0.42
7:B:2714:G:H2'	7:B:2715:C:H6	1.85	0.42
7:B:2732:G:H3'	7:B:2733:A:C5'	2.49	0.42
7:B:2734:A:H8	7:B:2734:A:H3'	1.84	0.42
7:B:2751:G:H2'	7:B:2752:C:C6	2.54	0.42
7:B:2760:C:C3'	7:B:2761:A:C5'	2.97	0.42
7:B:2901:C:H3'	7:B:2902:C:C5	2.55	0.42
7:B:464:U:H2'	7:B:465:G:O4'	2.18	0.42
7:B:536:G:C6	7:B:537:G:C4	3.08	0.42
7:B:563:A:C2	7:B:564:C:O2	2.72	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:688:U:H5'	7:B:1780:A:C2	2.54	0.42
7:B:790:U:H5''	33:B:5152:HOH:O	2.18	0.42
7:B:825:A:C5	7:B:826:U:C5	3.08	0.42
12:G:108:PHE:CZ	12:G:151:ARG:CG	2.99	0.42
15:J:41:LYS:HD2	15:J:46:PRO:CD	2.46	0.42
15:J:44:TYR:OH	15:J:49:ASP:C	2.58	0.42
18:M:101:VAL:O	18:M:102:LEU:HB2	2.19	0.42
7:B:2496:C:OP1	18:M:81:ARG:HB2	2.19	0.42
20:O:34:HIS:HA	20:O:53:THR:CG2	2.48	0.42
22:Q:24:TYR:CD1	22:Q:25:GLY:N	2.88	0.42
22:Q:46:TYR:HD1	23:R:78:ARG:C	2.21	0.42
23:R:38:VAL:C	23:R:40:MET:H	2.23	0.42
23:R:80:ARG:HG3	23:R:86:GLN:N	2.35	0.42
7:B:492:A:H2	24:S:7:HIS:NE2	2.17	0.42
7:B:372:G:H8	31:Z:54:GLY:HA3	1.85	0.42
7:B:318:C:H2'	7:B:319:G:H8	1.84	0.42
7:B:483:A:H3'	7:B:484:C:H6	1.85	0.42
10:E:148:ILE:CB	10:E:185:LYS:HB3	2.49	0.42
7:B:108:G:C6	7:B:109:C:N3	2.87	0.42
9:D:31:ALA:CB	9:D:95:SER:O	2.67	0.42
23:R:39:LEU:HD13	23:R:57:GLY:HA3	2.02	0.42
7:B:618:G:N3	7:B:618:G:H2'	2.34	0.42
18:M:15:GLY:N	18:M:72:PRO:HB3	2.34	0.42
18:M:5:LYS:H	18:M:69:PRO:HG2	1.84	0.42
7:B:851:C:H2'	7:B:852:U:C5	2.48	0.42
16:K:66:LYS:HG3	16:K:80:ASP:HA	2.01	0.42
20:O:82:ALA:O	20:O:83:LEU:HD13	2.19	0.42
7:B:1077:A:H2'	7:B:1077:A:N3	2.34	0.42
7:B:2415:G:C4	7:B:2416:C:C6	3.08	0.42
7:B:411:G:H4'	7:B:412:A:C5'	2.49	0.42
7:B:146:A:H2'	7:B:147:C:C6	2.55	0.42
1:O:52:LYS:O	1:O:54:ILE:N	2.52	0.42
7:B:8:C:N4	7:B:9:G:C6	2.87	0.42
14:I:14:ALA:HB3	14:I:51:GLY:H	1.83	0.42
6:A:37:C:H2'	6:A:37:C:O2	2.20	0.42
1:O:29:VAL:HG13	1:O:30:ASP:H	1.85	0.42
4:3:12:ARG:C	4:3:13:PHE:CD1	2.93	0.42
7:B:1429:G:C8	7:B:1429:G:C5'	3.00	0.42
7:B:1559:U:H6	7:B:1559:U:C5'	2.33	0.42
7:B:1755:A:C2	7:B:1758:U:C6	3.08	0.42
7:B:1786:A:N1	7:B:1938:A:C4	2.88	0.42
7:B:2079:U:N3	7:B:2080:A:C8	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2447:G:C4	7:B:2501:C:C4	3.07	0.42
7:B:2691:C:O2'	7:B:2692:G:H5'	2.19	0.42
7:B:2902:C:O5'	7:B:2902:C:H6	2.02	0.42
7:B:467:G:C2'	7:B:468:G:H5'	2.49	0.42
7:B:672:C:H5'	7:B:673:C:OP2	2.20	0.42
7:B:741:U:H2'	7:B:742:A:C8	2.53	0.42
7:B:785:G:C6	7:B:786:C:C4	3.08	0.42
7:B:1844:C:OP1	8:C:252:LYS:HA	2.19	0.42
8:C:70:LYS:O	8:C:71:ASP:OD1	2.37	0.42
9:D:142:VAL:HA	9:D:143:PRO:HD3	1.43	0.42
11:F:33:ILE:HG12	11:F:90:LEU:O	2.20	0.42
7:B:2751:G:C5'	12:G:3:VAL:HG11	2.43	0.42
15:J:135:GLN:OE1	15:J:137:PRO:HB2	2.20	0.42
15:J:81:ILE:CG1	15:J:83:GLY:H	2.32	0.42
15:J:81:ILE:O	15:J:83:GLY:N	2.53	0.42
19:N:34:ILE:N	19:N:34:ILE:HD13	2.34	0.42
19:N:92:GLY:O	19:N:93:GLY:C	2.56	0.42
19:N:97:ILE:C	19:N:98:LEU:HD23	2.40	0.42
21:P:31:VAL:O	21:P:33:GLU:N	2.53	0.42
21:P:18:SER:CA	21:P:87:ARG:NH2	2.82	0.42
22:Q:79:ILE:CA	22:Q:82:LEU:HD12	2.32	0.42
23:R:38:VAL:C	23:R:40:MET:N	2.71	0.42
17:L:34:GLY:H	23:R:85:LYS:HD3	1.83	0.42
7:B:372:G:C8	31:Z:54:GLY:CA	3.01	0.42
2:1:40:PRO:CB	2:1:42:VAL:HG22	2.49	0.42
7:B:309:A:N1	7:B:330:A:N7	2.67	0.42
10:E:122:GLU:HB3	10:E:123:LYS:H	1.52	0.42
10:E:6:LYS:HB2	10:E:11:ALA:C	2.38	0.42
25:T:70:HIS:HB3	25:T:74:ILE:HG13	2.00	0.42
29:X:3:ALA:CA	29:X:6:LEU:HD21	2.50	0.42
2:1:26:LYS:HE2	2:1:26:LYS:HB2	1.70	0.42
9:D:101:PHE:C	9:D:105:LYS:HD2	2.38	0.42
23:R:12:HIS:C	23:R:13:ARG:HG3	2.40	0.42
8:C:136:VAL:O	8:C:165:ALA:HA	2.19	0.42
7:B:439:A:H3'	7:B:439:A:C8	2.55	0.42
7:B:2391:G:N2	7:B:2424:C:C6	2.87	0.42
7:B:1710:G:H1	7:B:1748:C:H42	1.68	0.42
7:B:261:G:H2'	7:B:262:A:H5'	2.02	0.42
25:T:41:ALA:O	25:T:43:ILE:N	2.53	0.42
7:B:1108:U:C2'	7:B:1109:C:H5'	2.49	0.42
7:B:2807:U:H1'	7:B:2892:G:H22	1.77	0.42
7:B:142:A:H2'	7:B:143:C:N3	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:H:83:LYS:H	13:H:90:LEU:CD1	2.33	0.42
31:Z:21:VAL:O	31:Z:22:MET:CB	2.66	0.42
7:B:544:C:H2'	7:B:545:U:C5	2.52	0.42
7:B:416:U:H6	7:B:416:U:O5'	2.03	0.42
7:B:406:G:N2	7:B:421:C:O2	2.51	0.42
7:B:1985:C:C2	7:B:1986:C:C6	3.07	0.42
7:B:2151:U:O2'	7:B:2152:G:H5'	2.19	0.42
7:B:2400:G:C6	7:B:2401:U:C4	3.07	0.42
7:B:1524:G:N2	7:B:1525:A:H1'	2.34	0.42
7:B:1701:A:C2'	7:B:1702:G:H5'	2.46	0.42
7:B:1862:G:C2	7:B:1881:C:C4	3.08	0.42
7:B:1977:A:N6	7:B:1978:A:N1	2.67	0.42
7:B:87:U:H6	7:B:87:U:H3'	1.84	0.42
7:B:118:A:C8	7:B:119:A:C8	3.08	0.42
7:B:1613:G:H3'	7:B:1614:A:C5'	2.50	0.42
7:B:1905:C:H2'	7:B:1930:G:O4'	2.19	0.42
7:B:2070:A:H2'	7:B:2071:A:O4'	2.20	0.42
7:B:2231:U:H2'	7:B:2232:C:O4'	2.20	0.42
7:B:2334:U:O4'	20:O:11:ALA:CB	2.55	0.42
7:B:2357:G:H1'	7:B:2361:G:N2	2.34	0.42
7:B:197:A:C6	7:B:2430:A:C2	3.08	0.42
7:B:2512:C:H2'	7:B:2513:A:C4'	2.48	0.42
7:B:2589:A:H2	7:B:2590:A:C5	2.34	0.42
5:4:19:ARG:HG2	7:B:2756:U:OP2	2.20	0.42
7:B:2854:G:C2	7:B:2864:G:C2	3.08	0.42
7:B:462:C:C3'	7:B:462:C:C6	3.02	0.42
7:B:464:U:H1'	7:B:686:U:C5	2.55	0.42
7:B:532:A:H5''	22:Q:27:ARG:NH2	2.35	0.42
7:B:568:U:H1'	7:B:570:G:C8	2.55	0.42
7:B:700:G:N2	7:B:733:G:H1'	2.34	0.42
7:B:763:G:H8	7:B:763:G:H3'	1.81	0.42
7:B:771:G:H2'	7:B:771:G:N3	2.35	0.42
7:B:688:U:O2'	7:B:786:C:O2'	2.32	0.42
8:C:177:SER:O	8:C:179:GLU:OE1	2.37	0.42
8:C:229:HIS:CG	8:C:230:PRO:HD2	2.53	0.42
8:C:254:LYS:N	8:C:254:LYS:CE	2.82	0.42
7:B:2734:A:C2	9:D:209:ALA:OXT	2.67	0.42
10:E:74:LYS:O	10:E:75:SER:C	2.57	0.42
12:G:152:ARG:HG3	12:G:152:ARG:H	1.60	0.42
15:J:100:VAL:O	15:J:101:ILE:CB	2.62	0.42
4:3:11:LYS:NZ	17:L:59:ARG:O	2.44	0.42
21:P:32:VAL:O	21:P:34:GLY:N	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:P:95:LYS:O	21:P:96:LEU:O	2.38	0.42
22:Q:40:LYS:CG	22:Q:44:TYR:HB2	2.50	0.42
24:S:17:VAL:HG12	24:S:43:ALA:CB	2.48	0.42
10:E:109:LEU:HD22	10:E:113:VAL:C	2.40	0.42
10:E:108:ILE:HG13	10:E:109:LEU:H	1.85	0.42
10:E:5:LEU:O	10:E:6:LYS:HG3	2.20	0.42
7:B:111:A:H2'	7:B:112:U:O4'	2.20	0.42
7:B:656:G:H2'	7:B:657:U:H6	1.85	0.42
9:D:103:ASP:OD2	9:D:104:VAL:HG23	2.20	0.42
7:B:262:A:C2'	7:B:263:G:O5'	2.64	0.42
17:L:111:ILE:C	17:L:111:ILE:HD13	2.40	0.42
18:M:5:LYS:HB2	18:M:69:PRO:HB2	2.01	0.42
12:G:88:LEU:HD23	12:G:106:LEU:HD21	2.02	0.42
30:Y:37:ARG:HB3	30:Y:38:GLU:H	1.73	0.42
7:B:1424:G:H2'	7:B:1425:G:C5'	2.50	0.42
25:T:23:ALA:HB1	25:T:29:THR:O	2.19	0.42
7:B:2892:G:C8	7:B:2892:G:C3'	3.02	0.42
20:O:87:ILE:HG12	20:O:88:LYS:N	2.29	0.42
7:B:1075:C:N3	7:B:1076:C:C5	2.87	0.42
12:G:70:LEU:O	12:G:73:SER:N	2.51	0.42
19:N:22:ARG:HD3	19:N:71:ARG:HB2	2.02	0.42
7:B:279:A:C6	7:B:362:A:O4'	2.73	0.42
7:B:1178:C:C2	7:B:1179:G:N7	2.88	0.42
7:B:1549:A:C6	7:B:1550:C:C4	3.08	0.42
7:B:1915:U:C5	7:B:1916:A:N7	2.88	0.42
7:B:416:U:C4	7:B:417:C:C4	3.08	0.42
6:A:106:G:C6	6:A:107:G:C6	3.07	0.42
16:K:100:PHE:N	16:K:100:PHE:CD2	2.87	0.42
7:B:1575:C:H2'	7:B:1576:U:H6	1.81	0.42
7:B:2459:A:N6	7:B:2494:G:C4	2.87	0.42
7:B:1466:U:H6	7:B:1466:U:H3'	1.85	0.42
7:B:2497:A:H5''	33:B:5434:HOH:O	2.18	0.42
17:L:99:ASN:HA	17:L:99:ASN:HD22	1.64	0.42
3:2:1:MET:HE1	3:2:3:ARG:NH1	2.34	0.42
3:2:43:THR:C	3:2:44:VAL:HG22	2.40	0.42
6:A:44:G:C2	6:A:48:U:O2	2.73	0.42
7:B:1214:A:H2'	7:B:1215:G:H8	1.84	0.42
7:B:126:A:C4	7:B:127:A:C2	3.08	0.42
7:B:1281:G:C3'	7:B:1281:G:C8	3.03	0.42
7:B:1354:A:O2'	7:B:1355:G:H5'	2.20	0.42
7:B:1606:C:H6	7:B:1606:C:H3'	1.83	0.42
7:B:1644:C:O2'	7:B:1645:G:H5'	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1813:G:C2'	7:B:1814:G:C5'	2.87	0.42
7:B:197:A:H8	7:B:2068:U:H3	1.68	0.42
7:B:2027:G:C2	7:B:2028:U:N1	2.88	0.42
7:B:2052:A:H4'	9:D:147:GLY:O	2.20	0.42
7:B:2329:U:O2'	7:B:2330:G:H5'	2.20	0.42
7:B:2360:G:C4'	17:L:58:TYR:CE1	3.03	0.42
7:B:2431:U:H6	7:B:2431:U:H3'	1.84	0.42
7:B:2454:G:C2	7:B:2499:C:C4	3.07	0.42
7:B:2460:U:O5'	7:B:2460:U:H6	2.01	0.42
7:B:2519:U:C4	7:B:2541:A:C6	3.07	0.42
7:B:252:G:C4	7:B:253:C:C5	3.08	0.42
7:B:2570:G:C6	7:B:2571:U:C5	3.08	0.42
7:B:455:C:H6	7:B:455:C:H2'	1.68	0.42
7:B:532:A:N3	7:B:532:A:C2'	2.79	0.42
7:B:689:A:N3	7:B:690:G:C8	2.88	0.42
7:B:836:G:C8	7:B:837:C:C5	3.07	0.42
7:B:949:G:N1	7:B:950:G:N7	2.68	0.42
7:B:948:C:C1'	7:B:984:A:N3	2.83	0.42
8:C:140:VAL:HB	8:C:141:HIS:H	1.48	0.42
8:C:245:THR:O	8:C:247:TRP:N	2.52	0.42
7:B:2574:G:N2	9:D:147:GLY:CA	2.83	0.42
10:E:50:ALA:HB1	10:E:74:LYS:HE2	2.02	0.42
11:F:153:ILE:HG22	11:F:154:THR:N	2.34	0.42
15:J:24:THR:O	15:J:25:LEU:O	2.37	0.42
15:J:44:TYR:O	15:J:45:THR:CB	2.67	0.42
4:3:12:ARG:NH2	17:L:62:PRO:HB3	2.34	0.42
4:3:12:ARG:HH11	17:L:62:PRO:HG3	1.73	0.42
19:N:32:GLU:HB2	19:N:115:LEU:HD21	2.02	0.42
20:O:31:THR:O	20:O:32:PRO:C	2.56	0.42
20:O:18:LEU:HD22	28:W:76:ARG:HD2	2.02	0.42
7:B:644:A:C2	7:B:646:U:C4	3.08	0.42
7:B:299:A:N3	7:B:319:G:O2'	2.34	0.42
10:E:12:LEU:O	10:E:13:THR:O	2.38	0.42
10:E:142:ALA:HB3	10:E:185:LYS:HZ3	1.84	0.42
10:E:184:ASP:OD1	10:E:185:LYS:N	2.53	0.42
7:B:85:G:O5'	26:U:28:LEU:HA	2.20	0.42
29:X:22:LEU:HD22	29:X:25:GLN:NE2	2.34	0.42
2:1:10:LEU:HD22	2:1:50:GLU:HG3	2.02	0.42
8:C:144:GLU:HB2	8:C:187:CYS:HB3	2.00	0.42
7:B:2201:G:N1	7:B:2202:U:O2	2.53	0.42
11:F:16:MET:HG2	11:F:27:VAL:HG23	2.01	0.42
7:B:217:A:H2'	7:B:218:A:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:265:A:C8	7:B:266:G:H1'	2.55	0.42
7:B:625:G:O2'	7:B:626:A:H5'	2.20	0.42
18:M:73:ILE:HD13	18:M:73:ILE:N	2.35	0.42
7:B:1394:U:H6	7:B:1394:U:O5'	2.03	0.42
25:T:90:GLY:O	25:T:91:GLN:HG3	2.19	0.42
7:B:1729:U:H3'	7:B:1730:C:C5'	2.50	0.42
12:G:121:THR:CG2	12:G:122:ALA:H	2.33	0.42
7:B:2655:G:C2	7:B:2664:G:C6	3.07	0.42
7:B:1098:A:C8	7:B:1099:G:C8	3.07	0.42
31:Z:21:VAL:HG22	31:Z:22:MET:N	2.34	0.42
7:B:1179:G:C6	7:B:1180:U:C4	3.08	0.42
7:B:1788:C:H2'	7:B:1789:A:C5'	2.50	0.42
24:S:86:MET:HB3	24:S:94:ASP:CB	2.50	0.42
7:B:1877:A:C8	7:B:1877:A:H3'	2.55	0.42
7:B:1941:C:O2'	7:B:1942:C:H5'	2.19	0.42
7:B:2532:G:C2	7:B:2662:A:N1	2.88	0.42
7:B:1347:A:C4	7:B:1348:C:C6	3.07	0.42
7:B:1540:G:H5''	7:B:1540:G:C8	2.54	0.42
11:F:107:VAL:N	11:F:108:PRO:CD	2.83	0.42
9:D:170:VAL:O	9:D:171:THR:CB	2.66	0.42
7:B:280:U:C4	7:B:281:C:N4	2.87	0.42
12:G:127:GLN:O	12:G:127:GLN:HG3	2.20	0.42
7:B:1512:C:O5'	7:B:1512:C:H6	2.02	0.42
7:B:1982:U:H6	7:B:1982:U:P	2.43	0.42
1:O:49:ARG:HB3	1:O:50:GLY:H	1.73	0.42
7:B:1275:A:N1	7:B:1296:G:H1'	2.35	0.42
7:B:1376:C:N3	7:B:1377:G:C5	2.88	0.42
7:B:1633:G:O2'	7:B:1634:A:H5''	2.20	0.42
7:B:1661:G:H2'	7:B:1662:U:C5'	2.49	0.42
7:B:1853:A:O2'	7:B:1854:A:H5'	2.20	0.42
7:B:1998:A:C8	7:B:1998:A:C3'	3.02	0.42
7:B:563:A:N6	7:B:2018:G:C5	2.88	0.42
7:B:2026:U:N3	7:B:2027:G:N7	2.68	0.42
7:B:2355:G:N1	7:B:2356:U:O2	2.52	0.42
7:B:2469:A:N6	7:B:2470:G:C4	2.88	0.42
7:B:2543:G:C2	7:B:2765:A:C4	3.08	0.42
7:B:2567:G:C4	7:B:2568:U:C5	3.07	0.42
7:B:2578:G:O2'	9:D:138:LEU:HD21	2.20	0.42
7:B:2666:C:O4'	7:B:2666:C:O2	2.37	0.42
7:B:2740:A:C2	7:B:2741:A:C5	3.08	0.42
7:B:2901:C:C5'	7:B:2901:C:H6	2.33	0.42
7:B:3:U:H2'	7:B:4:U:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:448:U:OP2	7:B:448:U:C4'	2.66	0.42
7:B:554:U:C2'	7:B:555:G:O5'	2.68	0.42
7:B:583:G:C2	7:B:584:C:C2	3.08	0.42
7:B:686:U:O2'	7:B:686:U:C6	2.70	0.42
7:B:742:A:N1	7:B:756:A:N1	2.68	0.42
7:B:948:C:C2'	7:B:949:G:O5'	2.67	0.42
9:D:208:LYS:O	9:D:209:ALA:C	2.58	0.42
7:B:2311:A:O2'	11:F:84:ILE:HD11	2.20	0.42
13:H:1:MET:HG3	13:H:21:VAL:CG2	2.41	0.42
13:H:35:LYS:HB2	13:H:35:LYS:HE2	1.64	0.42
15:J:114:LEU:C	15:J:116:ARG:H	2.23	0.42
15:J:15:TRP:CD1	15:J:15:TRP:N	2.88	0.42
19:N:101:GLY:C	19:N:102:PHE:CG	2.91	0.42
22:Q:46:TYR:CE1	23:R:89:HIS:ND1	2.87	0.42
23:R:74:ILE:HG13	23:R:76:LYS:HE3	2.02	0.42
23:R:87:GLN:HG2	23:R:87:GLN:H	1.62	0.42
7:B:323:C:C4	7:B:333:G:C8	3.08	0.42
10:E:111:GLU:OE1	10:E:181:ILE:HD13	2.19	0.42
26:U:11:ILE:HA	26:U:11:ILE:HD13	1.70	0.42
7:B:83:A:H2	7:B:104:A:N1	2.15	0.42
7:B:2775:G:H3'	7:B:2775:G:C8	2.54	0.42
7:B:1750:G:H2'	7:B:1751:U:H5'	2.01	0.42
17:L:77:ILE:HD12	17:L:110:VAL:HA	1.94	0.42
27:V:29:ILE:HD11	27:V:37:PRO:HA	2.01	0.42
7:B:862:G:C8	7:B:862:G:C3'	3.03	0.42
18:M:71:LYS:HZ3	18:M:91:TYR:HB3	1.85	0.42
12:G:97:VAL:HG21	12:G:123:GLU:HA	2.01	0.42
30:Y:2:LYS:HZ2	30:Y:37:ARG:HG3	1.84	0.42
20:O:84:GLU:O	20:O:87:ILE:HG23	2.20	0.42
7:B:362:A:C4	7:B:363:G:C8	3.08	0.42
7:B:1099:G:H8	7:B:1099:G:H5'	1.79	0.42
12:G:145:ALA:C	12:G:147:LEU:H	2.24	0.42
7:B:1916:A:H2'	7:B:1917:U:O4'	2.20	0.42
7:B:1469:A:C2	7:B:1470:A:N3	2.88	0.42
30:Y:54:VAL:CG1	30:Y:55:LYS:N	2.82	0.42
7:B:1686:C:O5'	7:B:1686:C:H6	2.02	0.42
17:L:124:GLY:C	17:L:125:LEU:CG	2.86	0.42
11:F:120:SER:O	11:F:127:TYR:HD1	2.02	0.42
11:F:72:SER:O	11:F:74:ALA:N	2.52	0.42
7:B:1460:U:H4'	7:B:1461:C:OP2	2.20	0.42
7:B:2181:U:H2'	7:B:2181:U:O2	2.19	0.42
7:B:1929:G:N3	7:B:1929:G:H2'	2.35	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:2:9:VAL:HG23	3:2:10:LEU:H	1.85	0.42
3:2:24:THR:HB	3:2:27:GLY:HA3	2.01	0.42
6:A:34:A:O2'	6:A:35:C:O5'	2.37	0.42
7:B:1050:A:C6	7:B:1051:G:C6	3.08	0.42
7:B:1216:G:C2	7:B:1217:U:C6	3.07	0.42
7:B:585:G:C6	7:B:1251:C:C4	3.08	0.42
7:B:1256:G:H2'	7:B:1257:C:C6	2.53	0.42
7:B:1307:A:C8	7:B:1307:A:H3'	2.55	0.42
7:B:1620:G:H2'	7:B:1621:U:H5'	2.02	0.42
7:B:1299:G:N1	7:B:1640:A:OP2	2.46	0.42
7:B:188:G:H1	7:B:209:C:N4	2.17	0.42
7:B:200:U:H2'	7:B:201:C:H5'	2.01	0.42
7:B:2020:A:N6	7:B:2022:U:N3	2.68	0.42
7:B:2530:A:P	7:B:2535:G:H22	2.43	0.42
7:B:2592:G:H2'	7:B:2592:G:N3	2.35	0.42
7:B:2617:U:O2'	7:B:2618:G:H5'	2.20	0.42
7:B:2679:A:N3	7:B:2680:U:C6	2.88	0.42
7:B:2684:U:C3'	7:B:2684:U:H6	2.32	0.42
7:B:567:U:O2	7:B:568:U:C6	2.72	0.42
7:B:576:U:H2'	7:B:577:G:C8	2.55	0.42
7:B:682:G:C2'	7:B:683:U:H5'	2.50	0.42
9:D:13:ARG:CZ	9:D:13:ARG:HA	2.50	0.42
9:D:151:THR:C	9:D:153:GLY:N	2.73	0.42
10:E:58:LYS:HA	10:E:59:PRO:HD3	1.51	0.42
18:M:110:GLU:CD	18:M:126:ILE:HD12	2.39	0.42
7:B:2722:G:H1'	19:N:4:ARG:HD3	2.01	0.42
20:O:8:ILE:O	20:O:11:ALA:CB	2.67	0.42
20:O:94:ARG:NE	20:O:94:ARG:CA	2.81	0.42
21:P:27:VAL:CG2	21:P:84:SER:O	2.47	0.42
28:W:76:ARG:O	28:W:78:PHE:N	2.53	0.42
30:Y:52:PHE:O	30:Y:53:MET:O	2.37	0.42
31:Z:3:LYS:HD3	31:Z:9:TYR:HD1	1.83	0.42
7:B:310:A:C4	7:B:330:A:C6	3.07	0.42
7:B:332:A:C8	7:B:335:C:C4	3.07	0.42
7:B:339:U:H3'	7:B:339:U:C6	2.55	0.42
7:B:599:A:C2	7:B:659:G:C2	3.08	0.42
10:E:134:LEU:CD2	10:E:135:ALA:H	2.32	0.42
10:E:159:LEU:C	10:E:161:ALA:N	2.73	0.42
10:E:187:VAL:CG2	10:E:187:VAL:O	2.67	0.42
7:B:90:U:O4	7:B:91:A:N7	2.52	0.42
8:C:135:PRO:C	8:C:137:GLY:N	2.74	0.42
11:F:27:VAL:HA	11:F:28:PRO:HD3	1.80	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1707:G:N1	7:B:1708:C:N3	2.68	0.42
6:A:78:A:N6	6:A:98:G:O2'	2.45	0.42
6:A:12:C:N4	28:W:50:VAL:HG12	2.35	0.42
9:D:59:ARG:O	9:D:60:VAL:C	2.59	0.42
13:H:117:LEU:HD12	13:H:130:VAL:CG2	2.50	0.42
14:I:27:LEU:CD1	14:I:58:ILE:HD13	2.50	0.42
12:G:51:PHE:HE1	12:G:53:PRO:HG3	1.85	0.42
19:N:72:ASP:OD1	19:N:75:ILE:HG22	2.20	0.42
7:B:2658:C:O2'	7:B:2659:G:H5'	2.19	0.42
7:B:1773:A:N7	7:B:1829:A:C1'	2.83	0.42
7:B:2547:A:N3	7:B:2562:U:O2	2.53	0.42
7:B:161:A:N6	7:B:162:U:H5	2.17	0.42
7:B:292:U:C6	7:B:292:U:O5'	2.60	0.42
7:B:1385:A:C4	7:B:1386:C:C5	3.07	0.42
7:B:1385:A:C5	7:B:1386:C:C4	3.08	0.42
7:B:2553:G:N2	7:B:2583:G:H1'	2.34	0.42
17:L:124:GLY:O	17:L:125:LEU:HD12	2.20	0.42
14:I:104:GLN:O	14:I:108:ILE:HG13	2.20	0.42
7:B:2459:A:C6	7:B:2494:G:N3	2.88	0.42
7:B:647:G:H21	7:B:2350:C:H4'	1.85	0.42
7:B:30:G:H2'	7:B:31:C:C6	2.55	0.42
7:B:1734:G:H2'	7:B:1735:A:H8	1.84	0.42
30:Y:32:GLY:O	30:Y:33:HIS:C	2.58	0.42
4:3:6:VAL:O	4:3:10:ALA:HB2	2.20	0.41
6:A:43:C:H6	6:A:43:C:OP2	2.02	0.41
7:B:1268:A:C6	7:B:1269:A:C4	3.08	0.41
7:B:1566:A:C2	8:C:213:ARG:NE	2.88	0.41
7:B:1796:U:H2'	7:B:1797:G:O4'	2.20	0.41
7:B:19:A:C6	7:B:20:C:C4	3.08	0.41
7:B:1420:A:C4	7:B:2211:A:C8	3.08	0.41
7:B:2314:A:H5''	11:F:32:LYS:NZ	2.35	0.41
7:B:2316:G:O5'	7:B:2316:G:C8	2.73	0.41
7:B:2352:A:N1	28:W:29:SER:HB3	2.34	0.41
7:B:2367:G:C8	7:B:2367:G:O5'	2.71	0.41
7:B:248:G:N7	7:B:250:G:H1'	2.35	0.41
7:B:2510:C:H2'	7:B:2511:U:H5'	2.02	0.41
7:B:2648:G:C2	7:B:2673:G:C4	3.08	0.41
7:B:2694:G:H5'	7:B:2694:G:C8	2.54	0.41
7:B:398:C:O5'	31:Z:49:ARG:NH2	2.53	0.41
7:B:2:G:H2'	7:B:3:U:C6	2.55	0.41
7:B:538:A:C2	7:B:539:G:C4	3.08	0.41
7:B:566:U:H4'	33:B:5163:HOH:O	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:582:A:C4	7:B:583:G:C8	3.08	0.41
7:B:592:A:C2	7:B:593:U:C2	3.08	0.41
7:B:773:U:C4'	7:B:774:G:OP2	2.67	0.41
7:B:784:G:H5''	8:C:225:ASN:CG	2.38	0.41
7:B:814:C:C4	7:B:815:C:C5	3.08	0.41
8:C:158:GLY:CA	8:C:197:ALA:HB2	2.50	0.41
8:C:83:ASP:CB	8:C:90:ILE:HD12	2.47	0.41
9:D:181:ASP:O	9:D:184:ARG:HB2	2.20	0.41
11:F:64:PRO:HA	11:F:88:VAL:HG22	2.01	0.41
15:J:40:HIS:O	15:J:41:LYS:O	2.38	0.41
15:J:68:LYS:HD3	15:J:72:LYS:HB2	2.02	0.41
19:N:20:MET:HB3	19:N:20:MET:HE3	1.79	0.41
21:P:71:ARG:NH2	21:P:102:ARG:CB	2.83	0.41
22:Q:56:PHE:O	22:Q:60:TRP:CD2	2.73	0.41
22:Q:61:ILE:HG21	22:Q:75:TYR:OH	2.20	0.41
24:S:24:ILE:HD12	24:S:36:LEU:CD1	2.50	0.41
18:M:36:VAL:HB	27:V:82:TYR:HD1	1.84	0.41
2:1:36:LYS:NZ	7:B:2344:U:N3	2.61	0.41
7:B:303:G:C2'	7:B:304:U:O5'	2.69	0.41
7:B:321:U:O4	7:B:341:C:H4'	2.20	0.41
7:B:324:A:H61	7:B:338:G:C2'	2.33	0.41
7:B:341:C:H2'	7:B:342:A:C8	2.55	0.41
7:B:103:A:N7	7:B:104:A:C2	2.87	0.41
7:B:58:G:C2	7:B:70:G:C2	3.07	0.41
26:U:82:VAL:C	26:U:92:VAL:HG21	2.40	0.41
26:U:85:ARG:C	26:U:87:GLU:H	2.23	0.41
29:X:27:ASN:O	29:X:29:ARG:N	2.53	0.41
7:B:2285:C:H3'	7:B:2285:C:C6	2.54	0.41
8:C:134:ILE:HD13	8:C:135:PRO:N	2.34	0.41
7:B:870:U:OP1	7:B:870:U:H4'	2.20	0.41
10:E:88:ARG:HB3	10:E:89:PRO:HD2	2.02	0.41
7:B:284:U:O2	7:B:356:G:O6	2.38	0.41
25:T:55:VAL:HG12	25:T:56:GLU:N	2.35	0.41
7:B:1074:G:N2	7:B:1075:C:C2	2.88	0.41
24:S:88:ARG:HG3	24:S:88:ARG:NH1	2.34	0.41
7:B:1941:C:H6	7:B:1941:C:C5'	2.26	0.41
17:L:14:LYS:O	17:L:15:ALA:C	2.58	0.41
7:B:2100:G:N1	7:B:2101:A:C4	2.88	0.41
7:B:1288:G:C8	7:B:1327:A:C6	3.08	0.41
31:Z:25:ARG:CG	31:Z:26:SER:N	2.83	0.41
12:G:62:ALA:C	12:G:64:ALA:N	2.72	0.41
14:I:14:ALA:HB2	14:I:51:GLY:H	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:G:112:VAL:HG12	12:G:113:ASP:H	1.85	0.41
21:P:14:GLN:HG2	21:P:14:GLN:O	2.20	0.41
3:2:36:ALA:O	3:2:38:GLY:N	2.53	0.41
5:4:26:ILE:HD13	5:4:33:HIS:C	2.40	0.41
5:4:8:LYS:HG2	5:4:8:LYS:H	1.57	0.41
6:A:46:A:H4'	20:O:1:MET:CB	2.50	0.41
7:B:1274:A:H2'	7:B:1275:A:C5'	2.50	0.41
7:B:1364:G:N1	7:B:1366:A:H5''	2.35	0.41
7:B:1613:G:H3'	7:B:1614:A:H5'	2.01	0.41
7:B:1628:G:C5	7:B:1629:U:C5	3.08	0.41
7:B:1791:A:H2'	7:B:1792:G:O4'	2.20	0.41
7:B:1786:A:N1	7:B:1938:A:N3	2.68	0.41
7:B:201:C:C5	7:B:202:U:C6	3.08	0.41
7:B:2021:C:H3'	7:B:2022:U:H5'	2.01	0.41
7:B:1891:G:O2'	7:B:2235:G:O2'	2.33	0.41
7:B:2522:U:H2'	7:B:2523:G:H5'	2.01	0.41
7:B:2592:G:N1	7:B:2593:U:N3	2.69	0.41
7:B:2677:G:C5	7:B:2678:C:C5	3.08	0.41
7:B:2753:A:N1	7:B:2754:U:C4	2.88	0.41
7:B:2813:A:C6	7:B:2814:A:C6	3.08	0.41
7:B:2880:C:N3	7:B:2881:U:C4	2.88	0.41
7:B:559:G:H2'	7:B:560:C:C6	2.55	0.41
7:B:727:A:H2'	7:B:728:G:C8	2.54	0.41
7:B:762:U:H4'	7:B:763:G:C5'	2.50	0.41
8:C:117:SER:HB3	8:C:127:ASN:ND2	2.36	0.41
9:D:139:SER:O	9:D:140:HIS:O	2.37	0.41
9:D:14:ILE:CG2	21:P:79:VAL:HB	2.49	0.41
4:3:58:ILE:CG2	17:L:51:GLU:HG3	2.48	0.41
7:B:1654:A:OP2	19:N:3:HIS:CE1	2.73	0.41
19:N:28:LEU:HD23	19:N:48:VAL:HG21	2.01	0.41
7:B:2376:A:H1'	20:O:99:TYR:OH	2.20	0.41
21:P:92:ARG:HG2	21:P:110:LYS:O	2.20	0.41
24:S:29:VAL:O	24:S:29:VAL:HG12	2.20	0.41
2:1:40:PRO:HB2	2:1:42:VAL:CG2	2.50	0.41
7:B:2239:G:C8	7:B:2239:G:O5'	2.70	0.41
18:M:90:GLU:HA	18:M:91:TYR:CD1	2.55	0.41
9:D:62:LYS:NZ	9:D:62:LYS:H	2.08	0.41
13:H:119:ASN:HB3	13:H:121:VAL:HG13	2.02	0.41
7:B:1341:G:C6	25:T:84:TYR:HE2	2.38	0.41
16:K:19:VAL:HB	16:K:41:ILE:CD1	2.32	0.41
7:B:2259:U:C6	7:B:2427:C:C4	3.08	0.41
20:O:56:LYS:CB	20:O:62:LEU:HG	2.37	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:85:ILE:CD1	24:S:86:MET:N	2.83	0.41
11:F:136:ILE:O	11:F:138:PRO:HD3	2.20	0.41
7:B:2405:G:C2	7:B:2413:G:O6	2.73	0.41
7:B:1405:U:C2	7:B:1406:U:C5	3.08	0.41
13:H:95:GLY:CA	13:H:99:ILE:HG23	2.50	0.41
30:Y:7:THR:HG1	30:Y:7:THR:H	1.63	0.41
7:B:1687:G:N3	7:B:1688:U:C5	2.88	0.41
7:B:633:A:C3'	7:B:633:A:C8	3.03	0.41
7:B:632:A:H2'	7:B:633:A:C8	2.55	0.41
14:I:36:GLU:HB3	14:I:66:PHE:CZ	2.55	0.41
7:B:1945:G:C6	7:B:1946:U:C4	3.09	0.41
7:B:647:G:C8	7:B:647:G:H5''	2.51	0.41
7:B:387:U:C6	7:B:388:G:C5	3.09	0.41
11:F:169:LEU:HA	11:F:169:LEU:HD23	1.79	0.41
7:B:1801:A:C5	7:B:2203:U:C5	3.08	0.41
7:B:2076:U:O2	7:B:2076:U:H3'	2.20	0.41
4:3:46:LYS:HD2	4:3:47:ALA:C	2.39	0.41
6:A:113:C:C5	6:A:114:C:C5	3.06	0.41
6:A:115:A:H2'	6:A:116:G:O4'	2.20	0.41
7:B:1027:A:C6	7:B:1126:A:C4	3.08	0.41
7:B:1198:U:O5'	7:B:1198:U:H6	2.03	0.41
7:B:1223:G:O6	23:R:90:ARG:NH1	2.53	0.41
7:B:130:C:C2'	7:B:131:A:O5'	2.68	0.41
7:B:1350:C:C4	7:B:1351:C:C5	3.08	0.41
7:B:1644:C:C2'	7:B:1645:G:H5'	2.50	0.41
7:B:2010:G:H2'	7:B:2011:U:C5'	2.50	0.41
7:B:2075:U:P	33:B:5384:HOH:O	2.78	0.41
7:B:2335:A:C6	7:B:2337:G:C4	3.08	0.41
7:B:23:G:N1	7:B:518:G:C6	2.88	0.41
7:B:2734:A:C8	7:B:2734:A:H3'	2.54	0.41
7:B:2745:C:N4	7:B:2759:G:H1	2.05	0.41
7:B:2816:G:C2	7:B:2817:U:C5	3.07	0.41
7:B:748:G:C5	7:B:750:A:N7	2.88	0.41
7:B:802:A:C6	7:B:803:U:C4	3.09	0.41
7:B:836:G:C4	7:B:837:C:C5	3.09	0.41
8:C:112:GLY:O	8:C:115:ILE:HD11	2.20	0.41
8:C:61:TYR:HD2	8:C:84:PRO:HD2	1.84	0.41
8:C:94:LEU:HG	8:C:95:TYR:O	2.19	0.41
10:E:49:ARG:CD	10:E:49:ARG:N	2.82	0.41
15:J:64:VAL:O	15:J:65:THR:C	2.58	0.41
17:L:33:ARG:CD	23:R:85:LYS:HZ3	2.31	0.41
18:M:53:MET:HG2	18:M:53:MET:O	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:O:27:VAL:CG2	20:O:38:GLN:HB3	2.48	0.41
20:O:30:ARG:O	20:O:31:THR:O	2.38	0.41
20:O:44:GLY:HA2	20:O:46:GLU:OE1	2.19	0.41
7:B:2376:A:N9	20:O:99:TYR:CE2	2.89	0.41
24:S:83:LYS:HB2	24:S:83:LYS:HZ2	1.79	0.41
28:W:10:ARG:HD2	28:W:10:ARG:HA	1.76	0.41
28:W:66:VAL:CG1	28:W:67:LYS:H	2.24	0.41
28:W:67:LYS:HA	28:W:67:LYS:HD3	1.87	0.41
2:1:37:LYS:CB	7:B:2344:U:H3'	2.50	0.41
7:B:77:G:N3	7:B:110:G:C2	2.88	0.41
7:B:76:C:N3	7:B:111:A:H2	2.13	0.41
25:T:6:ARG:H	25:T:6:ARG:NE	2.18	0.41
29:X:1:MET:HB2	29:X:5:GLU:HB3	1.99	0.41
7:B:2223:G:C3'	7:B:2224:G:H5'	2.50	0.41
7:B:221:A:C2	7:B:233:A:N9	2.88	0.41
7:B:625:G:N2	7:B:626:A:C4	2.88	0.41
7:B:862:G:C8	7:B:863:A:N7	2.89	0.41
25:T:30:ILE:CG1	25:T:31:VAL:H	2.30	0.41
12:G:41:GLU:OE2	12:G:54:ARG:CZ	2.69	0.41
24:S:85:ILE:CD1	24:S:94:ASP:HB2	2.50	0.41
7:B:2252:G:H2'	7:B:2253:G:H5'	2.02	0.41
11:F:56:LEU:HD23	11:F:56:LEU:C	2.40	0.41
7:B:663:G:O6	7:B:664:G:C6	2.73	0.41
7:B:408:G:H2'	7:B:409:G:O5'	2.20	0.41
7:B:419:U:H2'	7:B:420:C:H6	1.81	0.41
7:B:404:A:N1	7:B:421:C:O2	2.53	0.41
7:B:2297:A:N1	7:B:2320:U:O4'	2.53	0.41
7:B:1523:U:H3'	7:B:1524:G:C5'	2.50	0.41
7:B:1684:G:H3'	7:B:1684:G:C8	2.55	0.41
7:B:1006:C:C6	7:B:1138:G:N2	2.89	0.41
7:B:1000:A:C5	7:B:1155:A:N7	2.88	0.41
7:B:1025:G:C5	7:B:1135:C:C6	3.08	0.41
7:B:1252:G:C2	22:Q:32:ARG:HG2	2.56	0.41
7:B:127:A:OP1	7:B:128:C:H1'	2.20	0.41
7:B:1356:G:O2'	7:B:1357:C:H5'	2.20	0.41
7:B:1379:U:C6	7:B:1379:U:H5'	2.55	0.41
7:B:1452:G:C2	7:B:2702:G:C6	3.08	0.41
7:B:1562:U:H2'	7:B:1563:U:O4'	2.19	0.41
7:B:1615:C:N3	7:B:1617:C:C6	2.88	0.41
7:B:1847:A:N6	7:B:1891:G:OP2	2.54	0.41
7:B:1847:A:H1'	7:B:1848:A:N7	2.35	0.41
7:B:190:A:N7	7:B:207:A:C5	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1967:C:N4	7:B:1968:G:C4	2.89	0.41
7:B:1987:A:C6	7:B:1988:G:C6	3.08	0.41
7:B:2199:A:C6	7:B:2225:A:C5	3.09	0.41
7:B:2365:G:H4'	28:W:65:LYS:CD	2.50	0.41
7:B:2392:A:H2'	7:B:2393:U:H6	1.86	0.41
7:B:2443:C:O2'	7:B:2444:G:H5'	2.20	0.41
7:B:2478:A:H3'	7:B:2479:U:C6	2.55	0.41
7:B:2675:A:C2'	7:B:2676:C:H5'	2.50	0.41
7:B:2692:G:N2	7:B:2693:G:H1'	2.33	0.41
7:B:2758:A:H2'	7:B:2759:G:H8	1.85	0.41
7:B:2813:A:C5	7:B:2814:A:N7	2.88	0.41
1:O:27:LEU:CG	7:B:2886:A:C5	2.99	0.41
7:B:36:G:C6	7:B:445:C:N4	2.88	0.41
7:B:538:A:C2	7:B:556:A:C8	3.08	0.41
7:B:566:U:C6	7:B:567:U:C5	3.05	0.41
7:B:575:A:O2'	7:B:576:U:C5'	2.68	0.41
7:B:788:A:C5'	7:B:790:U:O4	2.68	0.41
7:B:822:G:O6	7:B:943:A:H2	2.04	0.41
7:B:941:A:C2'	7:B:941:A:N3	2.83	0.41
8:C:196:ASN:HB3	8:C:199:HIS:CD2	2.55	0.41
7:B:774:G:OP1	8:C:48:ILE:HG12	2.21	0.41
9:D:108:ASP:O	9:D:108:ASP:OD2	2.38	0.41
9:D:157:LYS:HE3	9:D:157:LYS:HB3	1.97	0.41
15:J:42:ALA:HA	22:Q:63:ARG:HH12	1.86	0.41
15:J:58:ASN:C	15:J:60:ASP:H	2.23	0.41
18:M:34:LYS:O	18:M:125:PRO:HD2	2.21	0.41
19:N:38:LEU:O	19:N:39:PRO:C	2.58	0.41
20:O:17:LYS:CD	20:O:20:GLU:HG3	2.48	0.41
21:P:12:MET:HE3	21:P:12:MET:HA	2.03	0.41
22:Q:63:ARG:HH11	22:Q:63:ARG:CB	2.20	0.41
22:Q:93:ILE:HG13	23:R:10:LYS:NZ	2.34	0.41
7:B:1224:U:H4'	23:R:89:HIS:O	2.20	0.41
28:W:47:GLY:CA	28:W:72:GLY:CA	2.91	0.41
20:O:19:GLN:NE2	28:W:76:ARG:HG2	2.03	0.41
7:B:1155:A:N6	30:Y:10:ARG:NH1	2.68	0.41
30:Y:8:GLN:O	30:Y:9:THR:C	2.59	0.41
17:L:92:LEU:HD22	17:L:96:LYS:HB3	2.02	0.41
7:B:64:A:O2'	25:T:74:ILE:CG2	2.62	0.41
25:T:6:ARG:O	25:T:8:LEU:N	2.53	0.41
9:D:99:GLU:CA	9:D:99:GLU:OE1	2.60	0.41
23:R:65:ALA:HB3	23:R:100:GLY:N	2.34	0.41
23:R:32:THR:HA	23:R:66:HIS:HD2	1.84	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2201:G:C6	7:B:2223:G:C6	3.09	0.41
7:B:625:G:C2	7:B:626:A:C5	3.08	0.41
7:B:627:A:C6	7:B:637:A:C8	3.08	0.41
7:B:917:A:N6	7:B:918:A:C6	2.88	0.41
18:M:95:LEU:H	18:M:95:LEU:CD2	2.32	0.41
30:Y:2:LYS:HB2	30:Y:37:ARG:H	1.77	0.41
7:B:1425:G:N1	7:B:1426:G:C2	2.88	0.41
13:H:113:SER:OG	13:H:132:PHE:HE2	2.03	0.41
13:H:121:VAL:HB	13:H:122:LEU:H	1.47	0.41
25:T:54:GLU:OE1	25:T:91:GLN:CD	2.58	0.41
25:T:63:VAL:O	25:T:64:LYS:HD2	2.21	0.41
7:B:2425:A:O4'	7:B:2427:C:C6	2.72	0.41
7:B:1055:G:C8	7:B:1055:G:OP2	2.72	0.41
7:B:1108:U:C2	7:B:1109:C:C6	3.09	0.41
14:I:54:ILE:HA	14:I:55:PRO:HD2	1.87	0.41
6:A:104:A:N3	6:A:105:G:C1'	2.83	0.41
7:B:1942:C:H3'	7:B:1942:C:H6	1.86	0.41
7:B:2186:G:H2'	7:B:2187:U:C5'	2.50	0.41
7:B:1957:C:H6	7:B:1957:C:O5'	2.03	0.41
7:B:1684:G:H2'	7:B:1685:C:O4'	2.20	0.41
7:B:1687:G:N3	7:B:1688:U:C6	2.88	0.41
7:B:1705:A:C6	7:B:1706:C:C4	3.09	0.41
7:B:633:A:H3'	7:B:633:A:C8	2.56	0.41
27:V:26:PHE:HE1	27:V:42:LEU:HD12	1.86	0.41
7:B:2095:A:N6	7:B:2096:C:C4	2.89	0.41
7:B:2459:A:N6	7:B:2493:U:H3	2.18	0.41
7:B:1696:G:H2'	7:B:1696:G:N3	2.34	0.41
7:B:1398:C:H2'	7:B:1399:C:C6	2.55	0.41
31:Z:44:PHE:CG	31:Z:45:THR:N	2.86	0.41
7:B:1498:C:C5	7:B:1499:C:C4	3.09	0.41
7:B:230:G:N2	7:B:231:A:C4	2.89	0.41
7:B:1944:U:O5'	7:B:1944:U:C2'	2.67	0.41
3:2:1:MET:HE2	3:2:1:MET:HB2	1.91	0.41
4:3:12:ARG:HD2	17:L:62:PRO:CG	2.48	0.41
5:4:29:ALA:O	5:4:30:GLU:CG	2.64	0.41
6:A:30:C:H1'	6:A:58:A:N1	2.35	0.41
7:B:1191:G:C8	7:B:1191:G:H3'	2.54	0.41
7:B:1218:G:H5''	7:B:1218:G:H8	1.86	0.41
7:B:1224:U:H4'	23:R:90:ARG:O	2.20	0.41
7:B:1567:G:C8	7:B:1567:G:C5'	3.02	0.41
7:B:1632:A:O2'	7:B:1633:G:O4'	2.37	0.41
7:B:1933:G:H1	7:B:1967:C:H42	1.66	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1973:G:H2'	7:B:1974:C:C5'	2.51	0.41
7:B:2077:A:C4	7:B:2435:A:C8	3.08	0.41
7:B:2092:U:H6	7:B:2092:U:HO2'	1.68	0.41
7:B:2361:G:H2'	7:B:2362:C:O4'	2.20	0.41
7:B:2462:C:H2'	7:B:2462:C:O2	2.20	0.41
7:B:2685:G:C4	7:B:2686:G:C8	3.09	0.41
7:B:2768:U:O4	7:B:2769:U:C4	2.74	0.41
7:B:27:G:O2'	7:B:28:A:O5'	2.37	0.41
7:B:2842:G:C4	7:B:2876:G:N1	2.89	0.41
7:B:379:G:N2	7:B:396:G:C8	2.88	0.41
7:B:374:A:C5	7:B:401:A:N7	2.89	0.41
7:B:956:G:O2'	18:M:81:ARG:NH2	2.52	0.41
7:B:963:U:N3	7:B:964:C:N4	2.69	0.41
7:B:968:C:N3	7:B:969:G:C8	2.88	0.41
7:B:969:G:N3	7:B:970:U:C6	2.87	0.41
7:B:978:G:N2	7:B:986:C:C1'	2.84	0.41
8:C:178:GLY:O	8:C:179:GLU:O	2.38	0.41
8:C:253:GLY:CA	8:C:254:LYS:NZ	2.77	0.41
8:C:42:ARG:C	8:C:43:ASN:ND2	2.73	0.41
11:F:33:ILE:HG22	11:F:155:ILE:CG1	2.45	0.41
16:K:24:VAL:HG21	16:K:31:ARG:O	2.20	0.41
19:N:115:LEU:CD2	19:N:115:LEU:N	2.79	0.41
7:B:2880:C:H6	19:N:91:ALA:HB3	1.81	0.41
21:P:71:ARG:HB3	21:P:72:VAL:HG13	2.01	0.41
22:Q:57:ARG:HH21	22:Q:92:LYS:NZ	2.17	0.41
23:R:79:ARG:HG2	23:R:80:ARG:N	2.36	0.41
7:B:478:A:N6	7:B:480:A:N6	2.68	0.41
7:B:324:A:P	10:E:162:ARG:HH21	2.44	0.41
29:X:27:ASN:HB3	29:X:28:LEU:H	1.73	0.41
23:R:20:VAL:CG1	23:R:97:LYS:HA	2.51	0.41
7:B:871:U:OP1	18:M:7:THR:O	2.38	0.41
7:B:1108:U:C4	7:B:1109:C:C5	3.05	0.41
7:B:278:A:N1	7:B:362:A:C6	2.88	0.41
7:B:1179:G:C2	7:B:1180:U:C2	3.08	0.41
7:B:1444:G:H2'	7:B:1445:G:H8	1.86	0.41
31:Z:66:ILE:CB	31:Z:67:PRO:HD3	2.49	0.41
7:B:171:U:O2'	7:B:172:A:H5'	2.21	0.41
7:B:2412:A:N7	7:B:2413:G:N7	2.68	0.41
7:B:2320:U:O2	7:B:2320:U:OP2	2.37	0.41
7:B:1524:G:C2	7:B:1525:A:H1'	2.56	0.41
26:U:72:PHE:CD1	26:U:73:ASN:N	2.87	0.41
22:Q:8:ILE:O	22:Q:9:ALA:O	2.38	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:23:LYS:H	15:J:23:LYS:HG3	1.71	0.41
4:3:33:THR:HG22	4:3:40:LYS:HE2	2.03	0.41
7:B:1150:C:O5'	7:B:1150:C:H6	2.04	0.41
7:B:1157:G:OP2	7:B:1158:C:OP2	2.38	0.41
7:B:1218:G:N1	7:B:1219:U:N3	2.69	0.41
7:B:1459:G:C8	7:B:1459:G:H3'	2.56	0.41
7:B:1270:C:C2'	7:B:1648:U:H5''	2.50	0.41
7:B:1675:C:O2	9:D:133:THR:CA	2.67	0.41
7:B:1754:A:C4	7:B:1755:A:N7	2.88	0.41
7:B:2235:G:N2	7:B:2236:U:H1'	2.35	0.41
7:B:2364:C:H2'	7:B:2365:G:O4'	2.20	0.41
7:B:2511:U:O4	7:B:2512:C:C4	2.73	0.41
7:B:2522:U:C2'	7:B:2523:G:H5'	2.50	0.41
7:B:375:G:O6	7:B:400:G:C2	2.74	0.41
7:B:529:A:C4'	7:B:530:G:OP1	2.69	0.41
7:B:590:A:C2	7:B:668:A:C2	3.08	0.41
7:B:670:A:C8	7:B:670:A:O5'	2.72	0.41
7:B:692:C:C5	7:B:693:A:N7	2.88	0.41
7:B:789:A:H3'	7:B:789:A:OP1	2.20	0.41
7:B:979:A:C2	7:B:982:C:O2	2.72	0.41
8:C:17:LYS:O	8:C:206:LYS:HD2	2.20	0.41
8:C:235:GLU:HG3	8:C:236:GLY:N	2.36	0.41
9:D:181:ASP:HB3	9:D:184:ARG:CB	2.45	0.41
10:E:58:LYS:NZ	10:E:61:ARG:C	2.74	0.41
6:A:42:C:C6	11:F:65:LEU:HD22	2.53	0.41
13:H:27:ARG:HG3	13:H:27:ARG:O	2.21	0.41
15:J:57:LEU:C	15:J:58:ASN:OD1	2.58	0.41
15:J:78:THR:C	15:J:80:HIS:H	2.23	0.41
7:B:942:G:OP1	17:L:39:LYS:CD	2.68	0.41
19:N:6:SER:O	19:N:7:GLY:O	2.39	0.41
20:O:97:PHE:CD1	20:O:98:GLN:N	2.89	0.41
21:P:64:SER:HB3	21:P:71:ARG:NH1	2.36	0.41
22:Q:93:ILE:HG13	23:R:10:LYS:HZ1	1.84	0.41
23:R:74:ILE:O	23:R:75:VAL:HG22	2.20	0.41
7:B:188:G:OP2	31:Z:12:ILE:CD1	2.69	0.41
2:1:40:PRO:HB2	2:1:41:VAL:H	1.65	0.41
7:B:475:C:N4	7:B:481:G:O6	2.53	0.41
29:X:1:MET:HE3	29:X:5:GLU:CB	2.39	0.41
9:D:32:ASN:C	9:D:34:VAL:H	2.23	0.41
9:D:101:PHE:O	9:D:103:ASP:N	2.53	0.41
22:Q:101:ASP:O	22:Q:102:LYS:C	2.58	0.41
7:B:2201:G:N1	7:B:2223:G:C4	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:L:79:LEU:HA	17:L:82:LEU:HD12	2.01	0.41
17:L:86:GLU:O	17:L:86:GLU:CG	2.68	0.41
6:A:78:A:C8	6:A:99:A:N6	2.89	0.41
30:Y:24:LEU:C	30:Y:26:LEU:H	2.23	0.41
7:B:1291:C:O2'	7:B:1292:G:H5'	2.20	0.41
7:B:1106:G:H3'	7:B:1106:G:C8	2.56	0.41
12:G:116:LEU:HD11	12:G:121:THR:HA	2.02	0.41
7:B:2560:A:C2	7:B:2561:U:H1'	2.55	0.41
7:B:157:C:H2'	7:B:158:U:O4'	2.20	0.41
7:B:407:G:N2	7:B:421:C:N1	2.69	0.41
6:A:17:C:C5	6:A:18:G:N7	2.88	0.41
17:L:14:LYS:HZ1	17:L:15:ALA:HB2	1.85	0.41
7:B:719:C:C2'	7:B:720:U:H5'	2.51	0.41
7:B:2320:U:C2	7:B:2320:U:OP2	2.74	0.41
7:B:1495:A:C2	7:B:1578:U:O2	2.73	0.41
11:F:159:ALA:HB1	11:F:164:GLU:CB	2.50	0.41
14:I:104:GLN:HA	14:I:107:GLU:HB2	2.03	0.41
14:I:82:ALA:HB3	14:I:108:ILE:HD11	2.03	0.41
7:B:387:U:H5'	7:B:387:U:H6	1.84	0.41
6:A:112:G:O5'	6:A:112:G:C8	2.71	0.41
7:B:1519:G:C6	7:B:1520:U:C4	3.09	0.41
6:A:46:A:C5	6:A:47:C:C4	3.08	0.41
6:A:6:G:C4	6:A:7:G:N7	2.89	0.41
7:B:1213:A:C4	7:B:1214:A:C8	3.09	0.41
7:B:1262:A:O2'	7:B:1263:U:H5'	2.20	0.41
7:B:1353:A:C8	7:B:1378:A:C6	3.08	0.41
7:B:1557:C:H3'	7:B:1558:C:C5'	2.51	0.41
7:B:1571:A:C2	7:B:1572:A:N7	2.88	0.41
7:B:1761:C:C6	7:B:1762:A:N7	2.89	0.41
7:B:1681:G:N3	7:B:1762:A:C4	2.89	0.41
7:B:1761:C:C4	7:B:1762:A:C5	3.09	0.41
7:B:1805:A:H2'	7:B:1806:C:H5'	2.02	0.41
7:B:1838:C:C6	7:B:1898:U:H5	2.39	0.41
7:B:2011:U:C6	7:B:2012:G:C8	3.08	0.41
7:B:2048:G:C6	7:B:2621:G:N2	2.88	0.41
7:B:2050:C:C4	7:B:2051:A:N1	2.89	0.41
7:B:2300:C:C6	7:B:2300:C:H3'	2.54	0.41
7:B:2359:C:O2'	7:B:2360:G:H5'	2.20	0.41
7:B:2472:G:C5	7:B:2475:C:C4	3.09	0.41
7:B:2472:G:C8	7:B:2472:G:H3'	2.56	0.41
7:B:200:U:O4	7:B:248:G:C2	2.74	0.41
7:B:247:G:C2'	7:B:248:G:O5'	2.69	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2848:G:HO2'	7:B:2849:U:H5	1.67	0.41
7:B:2850:A:C5	7:B:2851:A:C8	3.08	0.41
7:B:587:C:C2	7:B:671:C:C6	3.09	0.41
7:B:673:C:N3	7:B:808:G:C2	2.89	0.41
7:B:687:C:O2'	7:B:688:U:H5'	2.21	0.41
7:B:704:G:N3	7:B:726:G:C2	2.88	0.41
7:B:826:U:C2	7:B:828:U:H1'	2.56	0.41
7:B:988:A:N1	7:B:989:G:N2	2.69	0.41
8:C:161:VAL:HG23	8:C:193:GLU:OE2	2.21	0.41
8:C:180:MET:CE	8:C:265:PHE:CE2	3.04	0.41
8:C:35:LYS:O	8:C:63:ILE:HA	2.21	0.41
7:B:1657:U:P	9:D:141:ARG:HG3	2.61	0.41
9:D:15:PHE:O	9:D:18:ASP:HB2	2.20	0.41
10:E:58:LYS:HZ2	10:E:61:ARG:C	2.24	0.41
11:F:84:ILE:CG1	11:F:84:ILE:O	2.68	0.41
13:H:35:LYS:HB2	13:H:36:ALA:H	1.76	0.41
15:J:84:ILE:CG2	15:J:85:LYS:H	2.33	0.41
17:L:41:ARG:HG2	17:L:41:ARG:NH1	2.35	0.41
18:M:47:GLU:OE1	18:M:50:ARG:HG2	2.21	0.41
22:Q:61:ILE:HG22	22:Q:64:ILE:HD12	2.02	0.41
23:R:82:HIS:CE1	23:R:84:ARG:HH21	2.39	0.41
24:S:27:LYS:CB	24:S:28:LYS:HD2	2.48	0.41
24:S:41:LYS:HG3	24:S:42:LYS:H	1.83	0.41
28:W:35:ILE:HG12	28:W:70:VAL:HB	2.03	0.41
7:B:309:A:C6	7:B:330:A:N7	2.88	0.41
10:E:191:ASP:C	10:E:194:LYS:NZ	2.73	0.41
10:E:30:GLN:O	10:E:34:ALA:HB2	2.20	0.41
20:O:63:LYS:HB3	20:O:64:TYR:H	1.66	0.41
7:B:62:U:C2'	7:B:63:A:C8	3.00	0.41
26:U:1:ALA:N	33:U:5001:HOH:O	2.48	0.41
29:X:40:SER:CA	29:X:42:LEU:HD23	2.51	0.41
9:D:51:THR:O	9:D:52:THR:C	2.59	0.41
9:D:86:GLU:O	9:D:88:GLU:OE2	2.39	0.41
22:Q:100:PHE:HE2	23:R:13:ARG:NH2	2.19	0.41
7:B:218:A:H2'	7:B:219:A:H8	1.85	0.41
17:L:126:ARG:HH11	17:L:127:VAL:N	2.16	0.41
25:T:16:VAL:O	25:T:17:SER:CB	2.65	0.41
16:K:45:GLU:HA	16:K:45:GLU:OE2	2.21	0.41
14:I:18:ASN:N	14:I:19:PRO:HD2	2.36	0.41
7:B:1062:G:N2	14:I:91:LYS:HG3	2.36	0.41
7:B:1100:C:H2'	7:B:1101:U:C5	2.56	0.41
7:B:1959:G:N1	7:B:1960:A:C2	2.89	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2583:G:O2'	7:B:2584:U:H5'	2.20	0.41
8:C:268:ARG:O	8:C:269:ARG:CD	2.65	0.41
14:I:82:ALA:O	14:I:100:ILE:HG12	2.20	0.41
7:B:1574:C:C4	7:B:1575:C:N4	2.88	0.41
27:V:9:ARG:NH1	27:V:27:PRO:HB2	2.35	0.41
7:B:925:A:C6	7:B:926:G:C6	3.08	0.41
29:X:32:ALA:O	29:X:33:ALA:HB3	2.20	0.41
7:B:510:C:C4	7:B:511:U:C5	3.08	0.41
20:O:23:ALA:HB1	20:O:91:SER:HA	2.03	0.41
7:B:1071:G:C2	7:B:1072:C:C2	3.09	0.41
7:B:350:G:H2'	7:B:351:C:O4'	2.21	0.41
4:3:7:ARG:NH2	4:3:11:LYS:HE3	2.35	0.41
6:A:47:C:OP2	6:A:47:C:H6	2.04	0.41
7:B:1021:A:N1	7:B:1023:U:C2	2.89	0.41
7:B:997:G:N1	7:B:1159:U:C2	2.89	0.41
7:B:1225:G:O2'	7:B:1226:A:H5'	2.20	0.41
7:B:1231:U:H2'	7:B:1232:G:H8	1.84	0.41
7:B:584:C:N4	7:B:1256:G:H1	2.07	0.41
7:B:579:G:N2	7:B:1262:A:N9	2.68	0.41
7:B:1277:G:O2'	19:N:24:MET:HB2	2.21	0.41
7:B:1422:G:N3	7:B:1423:G:C8	2.89	0.41
7:B:1300:G:C1'	7:B:1626:A:C2	3.03	0.41
7:B:1676:A:C2	7:B:1677:A:C4	3.09	0.41
7:B:17:G:C2	7:B:18:U:C2	3.09	0.41
7:B:1853:A:N7	7:B:1889:A:C6	2.89	0.41
7:B:189:G:C6	7:B:205:G:C4	3.09	0.41
7:B:1973:G:C6	7:B:1974:C:N3	2.89	0.41
7:B:2046:G:N1	7:B:2047:C:C2	2.89	0.41
7:B:2456:C:C5	7:B:2457:U:H5	2.38	0.41
7:B:2453:A:C2	7:B:2504:U:C2	3.09	0.41
7:B:2817:U:H1'	7:B:2836:U:O2	2.20	0.41
7:B:583:G:C2	7:B:584:C:C6	3.09	0.41
7:B:673:C:H2'	7:B:674:G:C5'	2.47	0.41
7:B:757:G:H5''	7:B:757:G:H8	1.85	0.41
7:B:773:U:C5'	7:B:774:G:OP2	2.69	0.41
7:B:775:G:H1	7:B:787:C:N4	2.18	0.41
7:B:783:A:H2'	7:B:784:G:H4'	2.01	0.41
7:B:795:C:H2'	7:B:796:C:O5'	2.21	0.41
7:B:820:A:H1'	7:B:943:A:O2'	2.21	0.41
7:B:959:A:C6	7:B:960:A:C6	3.09	0.41
8:C:161:VAL:O	8:C:174:ARG:O	2.38	0.41
8:C:264:LYS:O	8:C:265:PHE:CB	2.61	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:15:PHE:CG	9:D:16:THR:N	2.88	0.41
10:E:58:LYS:HE2	10:E:70:SER:O	2.21	0.41
12:G:162:ARG:HD3	12:G:166:GLU:OE1	2.21	0.41
13:H:53:GLU:OE2	13:H:57:LYS:CE	2.68	0.41
15:J:39:LYS:O	15:J:41:LYS:HB3	2.20	0.41
15:J:77:HIS:HB2	15:J:85:LYS:HE2	2.02	0.41
7:B:2360:G:C5'	17:L:58:TYR:CE1	3.02	0.41
19:N:110:MET:O	19:N:111:ALA:C	2.58	0.41
21:P:63:ILE:O	21:P:72:VAL:HA	2.20	0.41
7:B:2010:G:P	24:S:41:LYS:HB2	2.60	0.41
2:1:36:LYS:CE	7:B:2344:U:C2	3.03	0.41
10:E:153:LEU:HG	10:E:172:ALA:HA	2.02	0.41
7:B:66:C:C2	7:B:67:U:C6	3.08	0.41
7:B:73:A:O5'	7:B:73:A:H8	2.04	0.41
26:U:94:PHE:O	26:U:100:GLU:O	2.39	0.41
2:1:25:ASN:CG	2:1:26:LYS:H	2.24	0.41
9:D:4:LEU:HB2	9:D:201:LEU:O	2.21	0.41
9:D:49:GLN:HG2	9:D:50:VAL:H	1.86	0.41
7:B:2201:G:C2	7:B:2223:G:C4	3.09	0.41
7:B:614:A:C4'	7:B:616:A:N7	2.82	0.41
33:B:5115:HOH:O	17:L:100:ILE:HA	2.20	0.41
6:A:78:A:H2	7:B:861:A:C2	2.38	0.41
7:B:873:C:H6	7:B:873:C:H3'	1.83	0.41
12:G:21:GLN:O	12:G:23:ILE:HG23	2.20	0.41
13:H:115:VAL:HA	13:H:132:PHE:CD1	2.55	0.41
7:B:1334:G:C8	7:B:1334:G:O5'	2.71	0.41
18:M:77:PRO:HD3	18:M:86:LYS:HZ3	1.85	0.41
7:B:136:G:OP2	7:B:136:G:H8	2.02	0.41
7:B:1547:C:C4	7:B:1548:A:N7	2.89	0.41
24:S:85:ILE:HD13	24:S:85:ILE:HA	1.78	0.41
7:B:2258:C:C2	7:B:2426:A:C4'	3.04	0.41
12:G:169:ARG:HD2	12:G:170:THR:N	2.36	0.41
11:F:110:ILE:HG22	11:F:112:ASP:H	1.84	0.41
14:I:57:VAL:HG23	14:I:71:LYS:HZ2	1.86	0.41
7:B:1531:C:C6	7:B:1531:C:H3'	2.56	0.41
22:Q:4:LYS:O	22:Q:6:GLY:N	2.54	0.41
7:B:709:U:H3'	7:B:709:U:H6	1.86	0.41
7:B:1873:G:O2'	7:B:1874:C:H5'	2.21	0.41
7:B:1935:G:C2	7:B:1964:G:C4	3.09	0.41
7:B:2829:A:H2'	7:B:2830:C:O4'	2.21	0.41
13:H:69:ALA:O	13:H:73:ASN:HB2	2.21	0.41
27:V:2:PHE:HB2	27:V:61:LEU:HD22	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:N:77:ALA:O	19:N:81:ASN:N	2.54	0.41
4:3:9:ALA:O	4:3:11:LYS:N	2.54	0.41
6:A:27:C:H1'	6:A:117:G:O2'	2.20	0.41
7:B:1024:G:H21	7:B:1144:A:C4'	2.34	0.41
7:B:53:A:H62	7:B:117:G:N2	2.19	0.41
7:B:1216:G:C4	7:B:1217:U:C6	3.09	0.41
7:B:1606:C:H4'	7:B:1608:A:C2	2.56	0.41
7:B:1795:C:C2	7:B:1796:U:C6	3.09	0.41
7:B:1805:A:C4	7:B:1813:G:N2	2.89	0.41
7:B:201:C:H2'	7:B:202:U:O5'	2.21	0.41
7:B:2077:A:C5	7:B:2435:A:C5	3.08	0.41
7:B:2081:U:C4	7:B:2237:G:C2	3.09	0.41
7:B:2442:C:C4	7:B:2443:C:H5	2.39	0.41
7:B:2495:G:C6	7:B:2496:C:N3	2.88	0.41
7:B:253:C:O2	7:B:254:G:O4'	2.38	0.41
7:B:2570:G:C5	7:B:2571:U:C5	3.09	0.41
7:B:746:U:O2'	7:B:2611:C:O2'	2.37	0.41
7:B:2817:U:C2'	7:B:2818:U:O5'	2.68	0.41
7:B:2720:U:C5	7:B:2872:A:N6	2.89	0.41
7:B:462:C:O5'	7:B:462:C:H6	2.04	0.41
7:B:55:G:N1	7:B:56:A:N7	2.68	0.41
7:B:580:U:C5	7:B:581:C:H5	2.39	0.41
7:B:754:U:H5''	7:B:755:U:OP2	2.21	0.41
7:B:775:G:H5'	7:B:775:G:H2'	1.73	0.41
7:B:799:G:O2'	7:B:800:A:P	2.79	0.41
7:B:973:A:C8	7:B:1188:U:C4	3.09	0.41
7:B:987:C:H2'	7:B:988:A:C8	2.55	0.41
8:C:12:ARG:HB2	8:C:21:PRO:HD3	2.02	0.41
8:C:155:ARG:O	8:C:159:THR:CG2	2.69	0.41
8:C:107:LYS:N	8:C:194:VAL:HG21	2.20	0.41
9:D:155:VAL:O	9:D:155:VAL:HG12	2.20	0.41
9:D:97:SER:OG	9:D:185:ASN:HA	2.21	0.41
11:F:65:LEU:N	11:F:86:CYS:O	2.54	0.41
13:H:53:GLU:OE2	13:H:57:LYS:HE3	2.21	0.41
15:J:130:HIS:O	15:J:131:ASN:C	2.60	0.41
7:B:6:A:O2'	15:J:134:ALA:O	2.24	0.41
15:J:39:LYS:HB3	15:J:40:HIS:H	1.76	0.41
15:J:44:TYR:CD1	15:J:48:VAL:HG23	2.56	0.41
7:B:1131:G:C6	15:J:77:HIS:NE2	2.89	0.41
17:L:56:PRO:HB2	17:L:57:LEU:H	1.71	0.41
18:M:111:GLU:HG2	18:M:111:GLU:O	2.21	0.41
19:N:60:VAL:O	19:N:63:ARG:CB	2.69	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:D:184:ARG:HH12	21:P:4:ILE:HG21	1.78	0.41
28:W:23:LYS:CG	28:W:24:ARG:N	2.83	0.41
28:W:3:LYS:CD	28:W:10:ARG:HE	2.34	0.41
28:W:47:GLY:O	28:W:48:ALA:O	2.38	0.41
30:Y:50:VAL:O	30:Y:51:SER:C	2.59	0.41
1:O:41:HIS:CD2	1:O:42:ILE:H	2.33	0.41
7:B:1136:G:C5'	7:B:1136:G:C8	3.01	0.41
7:B:118:A:H1'	7:B:178:G:O4'	2.20	0.41
7:B:1232:G:C6	7:B:1233:C:C4	3.09	0.41
7:B:1361:G:N1	7:B:1362:C:N4	2.69	0.41
7:B:120:U:C6	7:B:149:A:C5	3.09	0.41
7:B:1568:G:H5''	8:C:60:ALA:HB2	1.99	0.41
7:B:1310:G:N2	7:B:1610:A:C8	2.89	0.41
7:B:1640:A:H2'	7:B:1641:A:O4'	2.21	0.41
7:B:1649:G:C2'	7:B:1650:A:O5'	2.69	0.41
7:B:1797:G:C6	7:B:1798:U:C4	3.09	0.41
7:B:2020:A:C2	7:B:2035:G:C6	3.09	0.41
7:B:2488:G:N1	7:B:2489:U:C4	2.88	0.41
7:B:2647:U:O2'	7:B:2648:G:H8	2.02	0.41
7:B:445:C:O2	7:B:449:A:H2	2.04	0.41
7:B:539:G:C2	7:B:540:C:C2	3.08	0.41
7:B:590:A:N7	7:B:591:U:C4	2.89	0.41
8:C:174:ARG:CB	8:C:180:MET:HG3	2.45	0.41
8:C:63:ILE:HD13	8:C:63:ILE:N	2.36	0.41
8:C:75:ALA:HB1	8:C:93:VAL:HG13	2.02	0.41
9:D:122:VAL:HG21	9:D:141:ARG:HH11	1.86	0.41
11:F:153:ILE:O	11:F:154:THR:OG1	2.34	0.41
12:G:144:ALA:O	12:G:163:TYR:CE1	2.74	0.41
20:O:30:ARG:O	20:O:102:ARG:NH2	2.54	0.41
21:P:27:VAL:N	21:P:47:ILE:HG13	2.36	0.41
21:P:60:VAL:O	21:P:61:ARG:HB2	2.20	0.41
23:R:76:LYS:HD3	23:R:90:ARG:CD	2.49	0.41
7:B:2290:G:H2'	7:B:2291:U:C6	2.49	0.41
10:E:190:ALA:C	10:E:194:LYS:NZ	2.74	0.41
17:L:21:ARG:O	17:L:23:ILE:N	2.54	0.41
7:B:323:C:C4	7:B:333:G:N7	2.89	0.41
7:B:483:A:H2'	7:B:483:A:N3	2.36	0.41
10:E:104:ALA:O	10:E:106:LYS:N	2.54	0.41
10:E:132:LYS:CB	10:E:134:LEU:HD13	2.51	0.41
26:U:39:ASN:N	26:U:39:ASN:OD1	2.53	0.41
13:H:108:VAL:O	13:H:110:VAL:HG12	2.21	0.41
7:B:346:A:H3'	7:B:347:A:H5''	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:96:C:C4'	29:X:41:HIS:ND1	2.84	0.41
29:X:44:LYS:HD2	29:X:47:ARG:HG3	2.03	0.41
29:X:7:ARG:HH22	29:X:56:LEU:HD21	1.86	0.41
7:B:106:C:O2	7:B:106:C:H2'	2.21	0.41
7:B:107:G:H8	7:B:107:G:O5'	2.03	0.41
7:B:2640:G:N2	7:B:2774:C:O2	2.54	0.41
7:B:2635:A:C2	7:B:2636:C:H1'	2.55	0.41
23:R:5:PHE:CE1	23:R:37:GLU:CB	3.03	0.41
8:C:184:GLU:O	8:C:187:CYS:SG	2.74	0.41
7:B:1750:G:C6	7:B:1751:U:C4	3.09	0.41
7:B:1740:G:C5	7:B:1741:C:C4	3.08	0.41
18:M:73:ILE:HD11	18:M:92:TRP:HB3	2.02	0.41
7:B:1165:A:N3	7:B:1166:G:N7	2.68	0.41
30:Y:2:LYS:HA	30:Y:43:ILE:CD1	2.51	0.41
12:G:125:PRO:HB2	12:G:126:THR:H	1.59	0.41
7:B:849:A:H61	7:B:929:U:H3	1.69	0.41
12:G:28:LYS:O	12:G:78:VAL:O	2.38	0.41
7:B:1425:G:C2'	7:B:1426:G:C8	2.86	0.41
9:D:61:THR:CG2	9:D:62:LYS:HE3	2.51	0.41
9:D:62:LYS:N	9:D:63:PRO:CD	2.84	0.41
9:D:60:VAL:HB	9:D:62:LYS:HZ3	1.86	0.41
7:B:1341:G:H4'	33:B:5249:HOH:O	2.19	0.41
7:B:1601:G:H5''	7:B:1602:U:OP2	2.21	0.41
7:B:2808:G:N3	7:B:2891:U:O2	2.54	0.41
26:U:35:VAL:O	26:U:35:VAL:HG13	2.20	0.41
18:M:133:LYS:HD2	18:M:134:THR:O	2.21	0.41
7:B:136:G:H1'	25:T:1:MET:O	2.20	0.41
7:B:1060:U:C4'	7:B:1061:U:O5'	2.66	0.41
7:B:2547:A:H4'	16:K:29:HIS:CD2	2.56	0.41
7:B:2560:A:C6	7:B:2561:U:C4	3.08	0.41
12:G:143:VAL:HG22	12:G:147:LEU:HD11	2.01	0.41
7:B:1442:U:C4	7:B:1443:U:N3	2.89	0.41
7:B:2255:G:C2'	7:B:2256:G:H8	2.22	0.41
27:V:51:GLN:HB2	27:V:51:GLN:HE21	1.63	0.41
26:U:53:GLN:HA	26:U:54:PRO:HD3	1.87	0.41
7:B:410:G:C2	7:B:2407:A:C5	3.09	0.41
7:B:1863:G:N2	7:B:1880:U:H1'	2.36	0.41
7:B:414:C:C6	7:B:414:C:H3'	2.56	0.41
7:B:675:A:C5	7:B:676:A:C6	3.09	0.41
6:A:105:G:N3	6:A:106:G:H8	2.16	0.41
6:A:105:G:C6	6:A:106:G:N7	2.89	0.41
7:B:722:A:H8	7:B:722:A:O5'	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1247:A:N7	7:B:1249:U:C5	2.89	0.41
7:B:2100:G:O6	7:B:2190:G:C6	2.74	0.41
7:B:1959:G:N1	7:B:1960:A:C5	2.89	0.41
14:I:77:VAL:HG12	14:I:77:VAL:O	2.20	0.41
7:B:1342:A:C3'	7:B:1343:G:H5''	2.51	0.41
7:B:1402:U:C2'	7:B:1403:A:O5'	2.69	0.41
7:B:649:G:H2'	7:B:650:C:C6	2.54	0.41
7:B:1524:G:C5	7:B:1525:A:C8	3.09	0.41
20:O:2:ASP:CB	20:O:4:LYS:NZ	2.81	0.41
7:B:2805:C:H2'	7:B:2806:C:C6	2.56	0.41
13:H:8:LYS:HG3	13:H:9:VAL:H	1.86	0.41
7:B:1704:C:O2	7:B:1705:A:C8	2.73	0.41
7:B:235:U:C2	7:B:236:C:C6	3.09	0.41
6:A:22:U:O2'	6:A:23:G:H5'	2.21	0.41
6:A:83:G:C6	6:A:84:G:N7	2.88	0.41
7:B:1170:C:C5	7:B:1171:G:N7	2.89	0.41
7:B:1171:G:H2'	7:B:1172:C:O4'	2.21	0.41
27:V:65:VAL:HG13	27:V:68:LYS:HG3	2.03	0.41
7:B:1322:A:H4'	24:S:82:MET:HE1	2.00	0.41
7:B:2776:A:O5'	7:B:2776:A:C2'	2.67	0.41
13:H:70:GLU:H	13:H:70:GLU:HG3	1.60	0.41
7:B:1870:C:O2	7:B:1870:C:C2'	2.68	0.41
7:B:2219:U:C4	7:B:2220:U:C4	3.09	0.41
7:B:2600:A:H2'	7:B:2601:C:H5'	2.02	0.41
6:A:2:G:H8	6:A:2:G:C5'	2.34	0.41
13:H:41:LYS:HG2	13:H:41:LYS:H	1.71	0.41
5:4:2:LYS:HG2	5:4:36:ARG:O	2.21	0.41
7:B:1020:A:C2	7:B:1141:U:O2	2.74	0.41
7:B:1195:G:N1	7:B:1196:C:C4	2.89	0.41
7:B:1196:C:O4'	7:B:1226:A:C6	2.74	0.41
7:B:1257:C:N3	7:B:1258:U:C4	2.89	0.41
7:B:1289:C:H2'	7:B:1290:C:H6	1.86	0.41
7:B:769:U:O2	7:B:1379:U:H1'	2.21	0.41
7:B:194:G:N3	7:B:195:A:C8	2.89	0.41
7:B:1987:A:H2'	7:B:1988:G:H8	1.87	0.41
7:B:2013:A:C2	7:B:2014:A:C4	3.09	0.41
7:B:2024:G:C5	7:B:2025:C:C5	3.09	0.41
7:B:2079:U:C2	7:B:2080:A:C8	3.08	0.41
7:B:2375:G:H2'	7:B:2377:A:N7	2.36	0.41
7:B:246:C:N4	7:B:247:G:C5	2.89	0.41
7:B:2487:G:C2	7:B:2488:G:C8	3.09	0.41
7:B:2645:G:C3'	7:B:2646:C:C5'	2.90	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2723:C:C2	7:B:2724:U:C2	3.09	0.41
7:B:2737:G:N2	7:B:2738:A:N3	2.70	0.41
7:B:2877:G:O2'	7:B:2878:U:H5'	2.21	0.41
7:B:538:A:C2	7:B:539:G:C5	3.08	0.41
7:B:668:A:C2	7:B:670:A:N1	2.89	0.41
7:B:705:A:N6	7:B:726:G:H1'	2.36	0.41
7:B:754:U:C4	7:B:755:U:C4	3.09	0.41
8:C:126:GLY:O	8:C:191:LEU:HD23	2.21	0.41
8:C:62:ARG:HG3	8:C:62:ARG:HH11	1.82	0.41
9:D:125:TRP:HD1	9:D:126:ASN:N	2.19	0.41
9:D:145:SER:HA	9:D:159:LYS:NZ	2.36	0.41
13:H:26:ALA:HB1	13:H:29:PHE:N	2.36	0.41
17:L:38:GLN:HG3	17:L:39:LYS:N	2.36	0.41
7:B:2881:U:H1'	19:N:45:ARG:HH21	1.85	0.41
22:Q:20:ALA:O	22:Q:23:TYR:CD2	2.74	0.41
23:R:11:GLN:HB3	23:R:21:ARG:HH12	1.86	0.41
23:R:6:GLN:HB3	23:R:6:GLN:HE21	1.53	0.41
24:S:65:ASP:CG	24:S:66:ILE:H	2.23	0.41
7:B:1202:G:O6	7:B:1203:U:O2	2.39	0.41
7:B:307:G:N2	7:B:310:A:C8	2.88	0.41
10:E:195:GLN:O	10:E:196:VAL:C	2.59	0.41
7:B:598:U:H1'	17:L:22:GLY:HA2	2.01	0.41
26:U:92:VAL:O	26:U:93:ARG:CB	2.68	0.41
9:D:31:ALA:HA	9:D:51:THR:OG1	2.21	0.41
7:B:260:G:C8	7:B:260:G:C3'	3.03	0.41
10:E:98:LYS:O	10:E:100:MET:N	2.54	0.41
7:B:871:U:C2	7:B:907:G:N1	2.89	0.41
18:M:73:ILE:CG1	18:M:90:GLU:HG3	2.50	0.41
13:H:115:VAL:HB	13:H:132:PHE:HE1	1.77	0.41
7:B:1084:A:H1'	7:B:1106:G:H5'	2.02	0.41
26:U:10:VAL:HG22	26:U:25:LYS:HE2	2.01	0.41
20:O:84:GLU:O	20:O:86:GLY:N	2.53	0.41
7:B:1081:U:O2'	14:I:127:SER:HA	2.21	0.41
7:B:2560:A:C2	7:B:2561:U:N1	2.88	0.41
7:B:2563:U:OP1	16:K:26:GLY:N	2.54	0.41
7:B:1788:C:C4	7:B:1789:A:N7	2.88	0.41
7:B:1590:A:C4	7:B:1591:A:N7	2.88	0.41
7:B:1444:G:N2	7:B:1445:G:H1'	2.36	0.41
24:S:85:ILE:HD12	24:S:86:MET:N	2.35	0.41
11:F:2:LYS:CA	11:F:2:LYS:HE2	2.49	0.41
26:U:48:VAL:N	26:U:49:PRO:CD	2.84	0.41
7:B:1877:A:C8	7:B:1877:A:C3'	3.04	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:415:A:N6	7:B:2407:A:H61	2.18	0.41
7:B:2531:A:N3	7:B:2532:G:C8	2.89	0.41
7:B:2833:U:H4'	7:B:2834:G:OP2	2.20	0.41
7:B:134:G:N2	7:B:146:A:C4	2.89	0.41
7:B:1688:U:O2	7:B:1700:A:H8	2.04	0.41
6:A:20:G:C2	6:A:21:G:C5	3.09	0.41
9:D:170:VAL:HB	9:D:194:PRO:HG2	2.03	0.41
7:B:1096:A:C8	7:B:1096:A:C3'	3.03	0.41
7:B:2800:A:H2'	7:B:2801:G:O4'	2.21	0.41
7:B:1479:G:C2'	7:B:1480:C:H5'	2.51	0.41
7:B:1479:G:N1	7:B:1513:U:C2	2.90	0.41
7:B:925:A:N6	7:B:926:G:C6	2.88	0.41
8:C:162:GLN:HB3	8:C:162:GLN:HE21	1.64	0.41
16:K:27:GLY:O	16:K:28:SER:C	2.59	0.41
7:B:51:G:C2	7:B:119:A:C2	3.08	0.40
7:B:1215:G:H2'	7:B:1216:G:H5''	2.03	0.40
7:B:1227:G:C4	7:B:1228:G:C8	3.09	0.40
7:B:1233:C:H2'	7:B:1234:U:C5	2.57	0.40
7:B:1263:U:N3	7:B:1264:A:C2	2.89	0.40
7:B:127:A:OP1	7:B:128:C:C1'	2.68	0.40
7:B:1309:G:C5'	7:B:1309:G:C8	3.00	0.40
7:B:1372:U:C2	7:B:1373:A:C8	3.09	0.40
7:B:1658:C:OP1	9:D:136:ASN:ND2	2.54	0.40
7:B:1760:C:C6	7:B:1761:C:C6	3.09	0.40
7:B:1813:G:N3	8:C:50:THR:CG2	2.76	0.40
7:B:1835:G:C6	7:B:1836:C:N4	2.89	0.40
7:B:1650:A:N1	7:B:2007:U:O4	2.54	0.40
7:B:2063:C:O2	7:B:2450:A:N1	2.54	0.40
7:B:2262:U:O2'	7:B:2263:C:H5'	2.22	0.40
7:B:2268:A:C3'	7:B:2268:A:C8	3.04	0.40
7:B:2356:U:C2'	7:B:2357:G:O5'	2.69	0.40
7:B:2352:A:C4	7:B:2366:A:C2	3.08	0.40
7:B:2515:C:H2'	7:B:2516:A:O5'	2.21	0.40
7:B:2595:G:H1	8:C:237:ARG:NH2	2.18	0.40
7:B:2644:G:N7	7:B:2645:G:C6	2.89	0.40
7:B:735:A:C4	7:B:736:C:C6	3.09	0.40
7:B:836:G:N7	7:B:837:C:C5	2.89	0.40
7:B:842:U:H2'	7:B:843:G:O4'	2.20	0.40
8:C:115:ILE:HG22	8:C:127:ASN:CG	2.41	0.40
8:C:155:ARG:C	8:C:157:ALA:N	2.74	0.40
8:C:62:ARG:O	8:C:63:ILE:HG12	2.21	0.40
10:E:46:GLN:OE1	10:E:86:ALA:CB	2.68	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:J:123:LYS:CD	15:J:123:LYS:N	2.84	0.40
15:J:102:GLU:HG3	15:J:124:VAL:HG21	2.02	0.40
15:J:28:LEU:O	15:J:28:LEU:HD22	2.20	0.40
20:O:30:ARG:NH2	20:O:97:PHE:HB2	2.32	0.40
23:R:80:ARG:HB2	23:R:86:GLN:H	1.86	0.40
24:S:40:ASN:O	24:S:41:LYS:HB3	2.21	0.40
28:W:27:GLY:O	28:W:28:GLU:CB	2.69	0.40
31:Z:50:ASP:HA	31:Z:53:THR:CG2	2.46	0.40
7:B:108:G:C6	7:B:109:C:C4	3.09	0.40
25:T:5:GLU:O	25:T:6:ARG:C	2.59	0.40
9:D:3:GLY:HA3	9:D:28:GLU:OE1	2.21	0.40
23:R:3:ALA:O	23:R:4:VAL:CG1	2.60	0.40
7:B:873:C:C2'	7:B:874:G:O5'	2.69	0.40
7:B:282:A:C2	7:B:359:G:C4	3.09	0.40
7:B:2093:G:N2	7:B:2197:U:C2	2.89	0.40
16:K:5:GLN:O	16:K:6:THR:HB	2.22	0.40
7:B:1789:A:H2'	7:B:1790:C:H5'	2.03	0.40
7:B:663:G:N2	7:B:939:G:H4'	2.36	0.40
7:B:226:A:N6	7:B:227:A:N6	2.69	0.40
7:B:2100:G:H2'	7:B:2100:G:N3	2.36	0.40
16:K:12:ASP:CB	16:K:85:VAL:HG22	2.50	0.40
7:B:1387:A:H5'	7:B:1469:A:H1'	2.03	0.40
13:H:135:HIS:CD2	13:H:137:GLU:H	2.39	0.40
11:F:46:LYS:HB3	11:F:47:LYS:H	1.59	0.40
7:B:945:A:N3	7:B:2448:A:N3	2.69	0.40
7:B:2800:A:H2'	7:B:2801:G:H1'	2.02	0.40
11:F:41:GLU:C	11:F:43:ILE:H	2.25	0.40
7:B:1483:G:H3'	7:B:1484:U:C6	2.57	0.40
7:B:2247:A:P	33:B:5392:HOH:O	2.79	0.40
5:4:1:MET:HE2	5:4:2:LYS:HD3	2.03	0.40
5:4:28:SER:O	5:4:30:GLU:HB2	2.21	0.40
7:B:1150:C:C2	7:B:1151:A:N7	2.89	0.40
7:B:1218:G:N1	7:B:1219:U:C2	2.89	0.40
7:B:1264:A:H2'	7:B:2015:A:N6	2.36	0.40
7:B:120:U:C6	7:B:149:A:C2	3.10	0.40
7:B:1653:G:C6	19:N:10:LEU:CG	2.93	0.40
7:B:1758:U:H5'	7:B:1759:A:OP2	2.21	0.40
7:B:1842:G:C6	7:B:1843:C:N3	2.89	0.40
7:B:1844:C:P	8:C:252:LYS:HA	2.61	0.40
7:B:1933:G:O2'	7:B:1974:C:H4'	2.21	0.40
7:B:2019:A:O5'	7:B:2019:A:H8	2.03	0.40
7:B:2048:G:C4'	7:B:2048:G:C8	3.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2087:G:O5'	7:B:2087:G:H8	2.04	0.40
7:B:2337:G:N3	7:B:2337:G:C2'	2.76	0.40
7:B:2568:U:N3	7:B:2569:G:C5	2.89	0.40
7:B:2717:C:C2'	7:B:2718:G:O5'	2.70	0.40
7:B:2771:C:O2	7:B:2771:C:H2'	2.21	0.40
7:B:2813:A:H2'	7:B:2814:A:C8	2.57	0.40
7:B:2824:C:C4	7:B:2825:G:C5	3.10	0.40
7:B:2837:A:C2'	7:B:2838:G:H5''	2.52	0.40
7:B:583:G:C6	7:B:584:C:C4	3.10	0.40
7:B:733:G:O5'	7:B:733:G:H8	2.04	0.40
7:B:744:U:N3	7:B:745:G:C4	2.90	0.40
7:B:756:A:C8	7:B:756:A:C5'	2.91	0.40
7:B:757:G:C2'	7:B:758:C:H5'	2.51	0.40
7:B:814:C:C2	7:B:815:C:C6	3.10	0.40
7:B:987:C:H2'	7:B:988:A:O4'	2.21	0.40
8:C:208:GLY:O	8:C:212:TRP:N	2.54	0.40
9:D:130:GLN:N	9:D:140:HIS:ND1	2.68	0.40
10:E:48:THR:OG1	10:E:86:ALA:HB3	2.21	0.40
11:F:146:ASP:O	11:F:147:ARG:HB3	2.20	0.40
11:F:133:GLU:HB2	11:F:150:GLY:HA2	2.02	0.40
21:P:29:VAL:HG13	21:P:84:SER:HB3	2.03	0.40
22:Q:37:ALA:HA	22:Q:39:ILE:CG2	2.49	0.40
7:B:995:C:C4	22:Q:56:PHE:CE2	3.09	0.40
23:R:78:ARG:N	23:R:89:HIS:CE1	2.71	0.40
22:Q:46:TYR:CZ	23:R:89:HIS:CD2	3.08	0.40
10:E:110:SER:HA	10:E:113:VAL:HG22	2.03	0.40
10:E:5:LEU:O	10:E:6:LYS:HB2	2.20	0.40
16:K:108:ARG:CG	16:K:108:ARG:NH1	2.68	0.40
16:K:109:SER:O	16:K:113:MET:SD	2.79	0.40
7:B:90:U:O5'	7:B:91:A:H5''	2.20	0.40
29:X:18:LEU:O	29:X:22:LEU:HB2	2.21	0.40
29:X:28:LEU:HB2	29:X:42:LEU:CD1	2.50	0.40
2:1:8:ILE:HD12	2:1:27:ARG:CZ	2.52	0.40
23:R:67:GLY:N	23:R:98:ILE:HA	2.33	0.40
7:B:617:G:H2'	7:B:618:G:C8	2.56	0.40
18:M:6:ARG:HB3	18:M:7:THR:H	1.71	0.40
7:B:928:A:C1'	30:Y:1:ALA:HA	2.50	0.40
10:E:40:ARG:CD	10:E:40:ARG:H	2.34	0.40
10:E:89:PRO:HB2	10:E:90:GLN:H	1.69	0.40
10:E:92:HIS:CD2	10:E:92:HIS:N	2.89	0.40
25:T:20:ALA:O	25:T:22:THR:N	2.51	0.40
7:B:1052:C:H2'	7:B:1053:C:C6	2.56	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:136:G:H2'	7:B:137:U:H6	1.80	0.40
7:B:1056:G:H5''	7:B:1057:A:H8	1.86	0.40
26:U:27:VAL:CB	26:U:33:VAL:HA	2.50	0.40
7:B:411:G:H4'	7:B:412:A:H5''	2.02	0.40
10:E:179:SER:O	10:E:183:PHE:CD2	2.74	0.40
7:B:2106:U:H3'	7:B:2106:U:C6	2.56	0.40
7:B:1402:U:H2'	7:B:1403:A:O5'	2.20	0.40
22:Q:4:LYS:HB2	22:Q:4:LYS:HZ2	1.80	0.40
30:Y:54:VAL:HG13	30:Y:55:LYS:N	2.37	0.40
7:B:2096:C:H5''	7:B:2096:C:H6	1.86	0.40
7:B:2095:A:N6	7:B:2096:C:N4	2.69	0.40
8:C:268:ARG:NH1	8:C:268:ARG:HB2	2.36	0.40
7:B:14:A:N6	7:B:526:A:C2	2.89	0.40
8:C:226:PRO:HB3	8:C:232:GLY:O	2.22	0.40
7:B:2870:C:C2'	7:B:2871:U:H5'	2.51	0.40
20:O:109:ALA:O	20:O:112:GLU:N	2.53	0.40
3:2:30:VAL:O	3:2:33:ARG:HG3	2.21	0.40
4:3:44:ARG:O	4:3:45:PRO:C	2.59	0.40
6:A:46:A:H2'	6:A:47:C:O5'	2.21	0.40
6:A:51:G:N3	6:A:51:G:C2'	2.81	0.40
7:B:1195:G:C6	7:B:1196:C:C5	3.09	0.40
7:B:1266:G:O2'	7:B:1267:U:OP2	2.39	0.40
7:B:1273:U:O2'	7:B:1275:A:OP1	2.36	0.40
7:B:1300:G:C1'	7:B:1626:A:N1	2.83	0.40
7:B:1642:G:C4	7:B:1643:G:C8	3.10	0.40
7:B:1674:G:N2	7:B:1677:A:N1	2.70	0.40
7:B:2033:A:O5'	7:B:2033:A:H8	2.04	0.40
7:B:2233:U:C3'	7:B:2233:U:C6	3.04	0.40
7:B:2250:G:O5'	7:B:2250:G:C8	2.69	0.40
7:B:2276:G:HO2'	7:B:2277:G:H5'	1.85	0.40
7:B:2446:G:H21	7:B:2501:C:N4	2.20	0.40
7:B:2478:A:C6	7:B:2529:G:C2	3.09	0.40
7:B:2455:G:N2	7:B:2498:C:H41	2.19	0.40
7:B:2513:A:C6	7:B:2574:G:C6	3.09	0.40
7:B:2524:G:H5'	7:B:2764:A:H4'	2.04	0.40
7:B:2625:G:C5	7:B:2626:C:C4	3.10	0.40
7:B:2719:G:C8	7:B:2719:G:C5'	3.03	0.40
7:B:2752:C:O2'	7:B:2753:A:H5'	2.21	0.40
7:B:2759:G:N2	7:B:2760:C:C2	2.89	0.40
7:B:2819:G:C2'	7:B:2820:A:H5'	2.52	0.40
7:B:381:G:N1	7:B:382:A:C8	2.89	0.40
7:B:534:U:OP1	22:Q:23:TYR:OH	2.37	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:684:G:C6	7:B:774:G:C5	3.09	0.40
7:B:783:A:H2'	7:B:783:A:H8	1.57	0.40
7:B:978:G:N2	7:B:986:C:C2	2.90	0.40
8:C:140:VAL:H	8:C:193:GLU:CD	2.21	0.40
7:B:1818:U:H5''	8:C:155:ARG:HB2	2.03	0.40
8:C:157:ALA:C	8:C:197:ALA:HB2	2.42	0.40
8:C:21:PRO:CD	8:C:202:ARG:NH1	2.85	0.40
9:D:15:PHE:CD1	9:D:16:THR:N	2.89	0.40
12:G:3:VAL:HG13	12:G:4:ALA:H	1.83	0.40
9:D:157:LYS:O	15:J:81:ILE:HG22	2.21	0.40
18:M:53:MET:HE2	18:M:101:VAL:CG2	2.50	0.40
19:N:2:ARG:C	19:N:2:ARG:NE	2.74	0.40
19:N:57:THR:O	19:N:58:ASP:CG	2.59	0.40
21:P:50:ARG:NH1	21:P:50:ARG:HB2	2.36	0.40
21:P:52:ARG:HH11	21:P:54:LEU:HD13	1.87	0.40
23:R:40:MET:HE3	23:R:40:MET:HB2	1.88	0.40
24:S:71:VAL:HG22	24:S:107:VAL:HG12	2.02	0.40
28:W:31:LEU:CD1	28:W:39:GLN:HE21	2.31	0.40
28:W:76:ARG:HB3	28:W:77:LYS:H	1.28	0.40
31:Z:12:ILE:O	31:Z:13:THR:OG1	2.34	0.40
7:B:324:A:P	10:E:162:ARG:NE	2.94	0.40
10:E:146:VAL:HG13	10:E:147:LEU:HG	2.03	0.40
10:E:138:LEU:HD21	10:E:187:VAL:HG11	2.03	0.40
17:L:89:VAL:O	17:L:96:LYS:CE	2.70	0.40
26:U:85:ARG:O	26:U:87:GLU:N	2.54	0.40
7:B:2635:A:C2	7:B:2636:C:C1'	3.05	0.40
7:B:2641:G:C8	7:B:2641:G:C5'	3.02	0.40
7:B:2781:A:H5''	7:B:2782:G:H5'	2.03	0.40
9:D:30:GLU:HB2	9:D:31:ALA:H	1.41	0.40
22:Q:110:GLU:O	22:Q:113:LYS:N	2.54	0.40
11:F:12:VAL:CG1	11:F:27:VAL:HG21	2.49	0.40
7:B:1718:G:H2'	7:B:1719:G:H8	1.85	0.40
7:B:261:G:H2'	7:B:262:A:C5'	2.52	0.40
25:T:14:PRO:HA	25:T:32:LEU:CA	2.44	0.40
12:G:117:PRO:O	12:G:118:ALA:O	2.40	0.40
12:G:77:GLY:CA	12:G:82:PHE:CE2	2.99	0.40
7:B:1590:A:N6	7:B:1591:A:N6	2.70	0.40
7:B:408:G:C3'	7:B:408:G:C8	3.04	0.40
10:E:179:SER:O	10:E:183:PHE:HD2	2.04	0.40
7:B:2298:A:C2	7:B:2299:U:C2	3.10	0.40
7:B:1957:C:O2'	7:B:1984:G:N2	2.54	0.40
7:B:1959:G:C3'	7:B:1959:G:C8	3.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1541:C:O2'	7:B:1542:U:H5'	2.21	0.40
7:B:1684:G:C6	7:B:1685:C:C4	3.09	0.40
27:V:25:LYS:HA	27:V:42:LEU:O	2.21	0.40
7:B:2448:A:H5'	7:B:2449:U:OP2	2.21	0.40
6:A:84:G:N2	6:A:93:C:O2	2.55	0.40
7:B:696:G:C6	7:B:767:U:C2	3.10	0.40
7:B:2403:C:C2	7:B:2404:U:C5	3.09	0.40
12:G:83:THR:CG2	12:G:83:THR:O	2.69	0.40
14:I:39:LYS:HA	14:I:39:LYS:HD3	1.84	0.40
1:0:30:ASP:OD1	1:0:30:ASP:N	2.54	0.40
1:0:3:GLN:OE1	1:0:3:GLN:N	2.41	0.40
3:2:10:LEU:CD1	7:B:125:A:C2	3.05	0.40
3:2:10:LEU:HD22	3:2:10:LEU:N	2.36	0.40
3:2:17:GLY:HA2	3:2:18:PHE:CD2	2.56	0.40
7:B:122:G:N1	7:B:130:C:C2	2.90	0.40
7:B:1256:G:C6	7:B:1257:C:C4	3.09	0.40
7:B:1285:A:H8	7:B:1285:A:H3'	1.84	0.40
7:B:1380:G:C2	7:B:1381:G:C8	3.10	0.40
7:B:749:A:C1'	7:B:1618:A:OP1	2.65	0.40
7:B:1622:G:N1	7:B:1623:G:N7	2.69	0.40
7:B:1626:A:HO2'	7:B:1627:G:P	2.44	0.40
7:B:1791:A:H2'	7:B:1792:G:O5'	2.21	0.40
7:B:190:A:C8	7:B:207:A:N1	2.89	0.40
7:B:2019:A:C2'	7:B:2020:A:O5'	2.66	0.40
7:B:2034:U:H5'	33:B:5368:HOH:O	2.21	0.40
7:B:1420:A:N3	7:B:2211:A:H8	2.20	0.40
7:B:2453:A:OP2	33:B:5427:HOH:O	2.21	0.40
7:B:2512:C:OP1	9:D:128:ARG:CA	2.49	0.40
7:B:2568:U:O2	7:B:2569:G:C4	2.74	0.40
7:B:2723:C:N3	7:B:2724:U:N3	2.69	0.40
7:B:468:G:C2'	7:B:469:G:C8	2.98	0.40
7:B:492:A:H5'	7:B:493:G:OP2	2.21	0.40
7:B:584:C:C5	7:B:585:G:N7	2.89	0.40
7:B:592:A:C6	7:B:593:U:O4	2.74	0.40
7:B:670:A:O4'	7:B:671:C:H5''	2.21	0.40
7:B:693:A:C6	7:B:770:G:N1	2.90	0.40
7:B:727:A:H3'	7:B:728:G:C8	2.57	0.40
7:B:744:U:C2'	7:B:745:G:O5'	2.69	0.40
7:B:684:G:C2	7:B:774:G:N1	2.89	0.40
7:B:839:U:O2'	7:B:1191:G:H1'	2.21	0.40
7:B:978:G:H2'	7:B:979:A:H8	1.86	0.40
8:C:155:ARG:HE	8:C:155:ARG:HA	1.86	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:C:181:ARG:HG3	8:C:181:ARG:O	2.21	0.40
8:C:254:LYS:HB2	8:C:254:LYS:HE2	1.66	0.40
8:C:258:SER:N	8:C:261:ARG:HD2	2.37	0.40
8:C:265:PHE:HB3	8:C:266:ILE:H	1.59	0.40
9:D:127:PHE:O	9:D:128:ARG:HB3	2.22	0.40
9:D:136:ASN:OD1	9:D:139:SER:HB3	2.21	0.40
9:D:148:GLN:CB	9:D:151:THR:OG1	2.66	0.40
11:F:133:GLU:OE1	11:F:134:GLN:O	2.40	0.40
11:F:148:VAL:O	11:F:149:ARG:C	2.60	0.40
15:J:114:LEU:O	15:J:116:ARG:N	2.55	0.40
19:N:28:LEU:HD22	19:N:113:ILE:HG21	2.03	0.40
22:Q:29:ARG:NH1	22:Q:29:ARG:CB	2.76	0.40
22:Q:85:ALA:O	22:Q:86:SER:O	2.38	0.40
22:Q:88:GLU:C	23:R:53:PHE:CD1	2.93	0.40
23:R:11:GLN:HB3	23:R:21:ARG:CZ	2.51	0.40
23:R:40:MET:HE3	23:R:54:VAL:HG13	2.02	0.40
23:R:86:GLN:HG2	23:R:87:GLN:NE2	2.36	0.40
7:B:2352:A:C2	28:W:29:SER:HB3	2.55	0.40
28:W:36:ILE:HG22	28:W:69:GLU:OE2	2.18	0.40
7:B:2346:A:O2'	7:B:2347:C:OP1	2.36	0.40
7:B:332:A:H8	7:B:332:A:H2'	1.75	0.40
10:E:194:LYS:CE	10:E:194:LYS:N	2.84	0.40
9:D:101:PHE:HZ	9:D:180:VAL:CG1	2.27	0.40
7:B:221:A:C2	7:B:233:A:C5	3.09	0.40
17:L:79:LEU:HD12	17:L:113:ALA:C	2.42	0.40
17:L:78:ARG:HA	17:L:111:ILE:CD1	2.52	0.40
7:B:1316:U:H2'	7:B:1317:G:H8	1.87	0.40
16:K:15:GLY:O	16:K:16:ALA:O	2.39	0.40
7:B:2807:U:O2	7:B:2892:G:C2	2.74	0.40
12:G:138:GLN:HE21	12:G:139:VAL:HA	1.87	0.40
11:F:109:ARG:C	11:F:110:ILE:HG13	2.41	0.40
7:B:663:G:H21	7:B:939:G:H4'	1.87	0.40
7:B:226:A:N6	7:B:227:A:C6	2.89	0.40
7:B:1407:G:N1	7:B:1596:A:C2	2.90	0.40
17:L:36:LYS:NZ	33:L:5002:HOH:O	2.47	0.40
17:L:108:ALA:HB3	17:L:125:LEU:HD12	2.03	0.40
11:F:72:SER:O	11:F:73:VAL:C	2.59	0.40
22:Q:7:VAL:C	22:Q:9:ALA:H	2.23	0.40
28:W:49:ASN:C	28:W:51:GLY:H	2.24	0.40
5:4:16:ILE:HG23	5:4:17:VAL:H	1.87	0.40
6:A:52:A:C6	6:A:53:A:N3	2.89	0.40
6:A:5:U:C4	6:A:6:G:N7	2.90	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:1125:G:H3'	7:B:1125:G:C8	2.55	0.40
7:B:114:U:C3'	7:B:114:U:C6	3.05	0.40
7:B:1195:G:N3	7:B:1196:C:C6	2.90	0.40
7:B:1359:A:H5'	7:B:1359:A:H8	1.83	0.40
7:B:1609:A:N1	7:B:1616:A:C6	2.90	0.40
7:B:1622:G:O2'	7:B:1623:G:H5'	2.22	0.40
7:B:1786:A:C5	7:B:1938:A:C2	3.10	0.40
7:B:1833:C:H2'	7:B:1834:U:O4'	2.20	0.40
7:B:1899:A:H3'	7:B:1899:A:H8	1.83	0.40
7:B:2199:A:N1	7:B:2200:C:O2	2.55	0.40
7:B:2539:C:H3'	7:B:2540:C:H5''	2.00	0.40
7:B:2046:G:N2	7:B:2623:G:H1'	2.36	0.40
7:B:2642:G:O2'	7:B:2643:G:H5'	2.21	0.40
7:B:2855:C:H2'	7:B:2856:A:H5'	2.02	0.40
7:B:381:G:C4'	31:Z:13:THR:HG22	2.52	0.40
3:2:39:ARG:CB	7:B:458:G:H5''	2.52	0.40
7:B:585:G:C5	7:B:1251:C:C5	3.09	0.40
7:B:836:G:C6	7:B:837:C:N4	2.89	0.40
8:C:229:HIS:CE1	8:C:230:PRO:HD2	2.56	0.40
8:C:241:LYS:O	8:C:243:PRO:HG3	2.22	0.40
9:D:157:LYS:O	15:J:81:ILE:CG2	2.69	0.40
9:D:188:LEU:HD12	9:D:188:LEU:HA	1.89	0.40
9:D:207:VAL:HG23	9:D:208:LYS:N	2.36	0.40
15:J:55:ILE:CD1	15:J:134:ALA:HB1	2.52	0.40
17:L:63:LYS:HG2	17:L:64:PHE:H	1.86	0.40
28:W:68:PHE:CG	28:W:68:PHE:O	2.75	0.40
7:B:334:C:OP2	7:B:335:C:N4	2.55	0.40
7:B:338:G:C5'	7:B:338:G:H8	2.23	0.40
10:E:190:ALA:CB	10:E:194:LYS:HE2	2.50	0.40
7:B:2288:A:H8	7:B:2288:A:HO2'	1.69	0.40
9:D:89:GLU:HG2	9:D:93:GLY:HA3	1.99	0.40
9:D:179:ARG:O	9:D:180:VAL:HG13	2.22	0.40
7:B:1707:G:C2'	7:B:1708:C:H5'	2.44	0.40
7:B:1719:G:H2'	7:B:1720:U:O4'	2.22	0.40
7:B:915:C:C5'	7:B:915:C:C6	2.97	0.40
18:M:6:ARG:C	18:M:8:LYS:N	2.75	0.40
18:M:9:PHE:CD1	18:M:9:PHE:C	2.95	0.40
7:B:1183:U:C2	7:B:1184:U:C5	3.10	0.40
7:B:1337:G:H5'	7:B:1338:G:OP2	2.22	0.40
25:T:26:LYS:C	25:T:27:SER:O	2.59	0.40
7:B:1062:G:H2'	7:B:1063:G:H8	1.82	0.40
19:N:67:PHE:O	19:N:68:ALA:C	2.59	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:B:2547:A:C6	7:B:2548:U:C4	3.09	0.40
7:B:2258:C:H5''	7:B:2258:C:C6	2.54	0.40
7:B:2327:A:H8	7:B:2327:A:OP2	2.05	0.40
7:B:1034:G:C6	7:B:1035:U:O4	2.75	0.40
29:X:9:LYS:CB	29:X:9:LYS:NZ	2.83	0.40
7:B:1346:G:C2'	7:B:1347:A:H5'	2.51	0.40
27:V:65:VAL:HG22	27:V:65:VAL:O	2.21	0.40
27:V:24:ASN:CA	27:V:44:HIS:HB2	2.51	0.40
11:F:4:HIS:CD2	11:F:8:LYS:HE2	2.57	0.40
7:B:275:C:N4	7:B:276:U:C5	2.89	0.40
7:B:355:U:H2'	7:B:355:U:O2	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	0	54/56 (96%)	24 (44%)	12 (22%)	18 (33%)	0	0
2	1	52/54 (96%)	18 (35%)	12 (23%)	22 (42%)	0	0
3	2	44/46 (96%)	16 (36%)	16 (36%)	12 (27%)	0	1
4	3	62/64 (97%)	29 (47%)	20 (32%)	13 (21%)	0	4
5	4	36/38 (95%)	9 (25%)	16 (44%)	11 (31%)	0	1
8	C	266/273 (97%)	101 (38%)	70 (26%)	95 (36%)	0	0
9	D	207/209 (99%)	72 (35%)	65 (31%)	70 (34%)	0	0
10	E	199/201 (99%)	71 (36%)	63 (32%)	65 (33%)	0	0
11	F	176/178 (99%)	95 (54%)	45 (26%)	36 (20%)	0	4
12	G	174/176 (99%)	89 (51%)	52 (30%)	33 (19%)	0	5
13	H	147/149 (99%)	74 (50%)	39 (26%)	34 (23%)	0	2
14	I	137/141 (97%)	87 (64%)	32 (23%)	18 (13%)	0	13
15	J	139/142 (98%)	57 (41%)	37 (27%)	45 (32%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	K	120/123 (98%)	66 (55%)	29 (24%)	25 (21%)	0	4
17	L	142/144 (99%)	54 (38%)	39 (28%)	49 (34%)	0	0
18	M	134/136 (98%)	55 (41%)	45 (34%)	34 (25%)	0	2
19	N	125/127 (98%)	55 (44%)	44 (35%)	26 (21%)	0	4
20	O	115/117 (98%)	46 (40%)	41 (36%)	28 (24%)	0	2
21	P	112/114 (98%)	48 (43%)	31 (28%)	33 (30%)	0	1
22	Q	115/117 (98%)	57 (50%)	30 (26%)	28 (24%)	0	2
23	R	101/103 (98%)	37 (37%)	23 (23%)	41 (41%)	0	0
24	S	108/110 (98%)	52 (48%)	29 (27%)	27 (25%)	0	2
25	T	98/100 (98%)	42 (43%)	33 (34%)	23 (24%)	0	2
26	U	101/103 (98%)	38 (38%)	31 (31%)	32 (32%)	0	0
27	V	92/94 (98%)	57 (62%)	21 (23%)	14 (15%)	0	8
28	W	82/84 (98%)	17 (21%)	29 (35%)	36 (44%)	0	0
29	X	61/63 (97%)	26 (43%)	22 (36%)	13 (21%)	0	3
30	Y	56/58 (97%)	26 (46%)	19 (34%)	11 (20%)	0	4
31	Z	68/70 (97%)	34 (50%)	21 (31%)	13 (19%)	0	5
All	All	3323/3390 (98%)	1452 (44%)	966 (29%)	905 (27%)	0	1

All (905) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	23	ALA
1	0	29	VAL
1	0	30	ASP
1	0	36	LYS
1	0	53	VAL
2	1	20	TYR
2	1	29	LYS
2	1	45	HIS
2	1	46	VAL
2	1	47	ILE
3	2	36	ALA
3	2	37	LYS
3	2	40	ALA
4	3	14	LYS
4	3	33	THR

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Mol	Chain	Res	Type
4	3	49	VAL
4	3	53	ASP
4	3	60	CYS
5	4	3	VAL
5	4	4	ARG
5	4	5	ALA
5	4	8	LYS
5	4	17	VAL
5	4	19	ARG
5	4	23	ILE
5	4	26	ILE
5	4	28	SER
5	4	33	HIS
8	C	12	ARG
8	C	21	PRO
8	C	22	GLU
8	C	25	LYS
8	C	32	LEU
8	C	33	LEU
8	C	42	ARG
8	C	45	ASN
8	C	47	ARG
8	C	48	ILE
8	C	51	ARG
8	C	53	ILE
8	C	60	ALA
8	C	61	TYR
8	C	65	ASP
8	C	79	ARG
8	C	88	ALA
8	C	92	LEU
8	C	103	ILE
8	C	107	LYS
8	C	110	LYS
8	C	122	ALA
8	C	124	LYS
8	C	135	PRO
8	C	142	ASN
8	C	149	LYS
8	C	163	ILE
8	C	165	ALA
8	C	170	TYR

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Mol	Chain	Res	Type
8	C	171	VAL
8	C	172	THR
8	C	173	LEU
8	C	194	VAL
8	C	207	ALA
8	C	216	ARG
8	C	217	PRO
8	C	219	VAL
8	C	221	GLY
8	C	243	PRO
8	C	246	PRO
8	C	257	ARG
8	C	265	PHE
8	C	266	ILE
9	D	3	GLY
9	D	4	LEU
9	D	7	LYS
9	D	9	VAL
9	D	17	GLU
9	D	18	ASP
9	D	30	GLU
9	D	32	ASN
9	D	33	ARG
9	D	34	VAL
9	D	42	ASN
9	D	47	ALA
9	D	50	VAL
9	D	64	GLU
9	D	82	PHE
9	D	85	ALA
9	D	89	GLU
9	D	126	ASN
9	D	132	ALA
9	D	140	HIS
9	D	141	ARG
9	D	142	VAL
9	D	148	GLN
9	D	152	PRO
9	D	153	GLY
9	D	160	LYS
9	D	175	LEU
9	D	181	ASP

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Mol	Chain	Res	Type
9	D	182	ALA
9	D	190	LYS
9	D	192	ALA
9	D	199	SER
10	E	3	LEU
10	E	13	THR
10	E	16	GLU
10	E	26	ALA
10	E	41	GLN
10	E	43	THR
10	E	48	THR
10	E	50	ALA
10	E	51	GLU
10	E	58	LYS
10	E	59	PRO
10	E	69	ARG
10	E	80	SER
10	E	84	THR
10	E	97	ASN
10	E	104	ALA
10	E	113	VAL
10	E	118	LEU
10	E	122	GLU
10	E	135	ALA
10	E	146	VAL
10	E	168	ASP
10	E	169	VAL
10	E	175	ILE
10	E	199	MET
11	F	3	LEU
11	F	8	LYS
11	F	19	PHE
11	F	34	THR
11	F	39	VAL
11	F	66	ILE
11	F	67	THR
11	F	73	VAL
11	F	74	ALA
11	F	77	LYS
11	F	83	PRO
11	F	133	GLU
11	F	134	GLN

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Mol	Chain	Res	Type
11	F	153	ILE
11	F	176	PHE
12	G	3	VAL
12	G	4	ALA
12	G	5	LYS
12	G	11	PRO
12	G	24	THR
12	G	29	ASN
12	G	37	ASN
12	G	109	SER
12	G	118	ALA
12	G	125	PRO
12	G	151	ARG
12	G	159	LYS
12	G	165	ASP
12	G	166	GLU
13	H	10	ALA
13	H	14	SER
13	H	23	ALA
13	H	25	TYR
13	H	32	PRO
13	H	37	VAL
13	H	38	PRO
13	H	39	ALA
13	H	96	THR
13	H	112	LYS
13	H	113	SER
13	H	115	VAL
14	I	13	ALA
14	I	18	ASN
14	I	19	PRO
14	I	22	PRO
14	I	101	SER
15	J	3	THR
15	J	9	GLU
15	J	11	VAL
15	J	23	LYS
15	J	25	LEU
15	J	41	LYS
15	J	58	ASN
15	J	63	ALA
15	J	81	ILE

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Mol	Chain	Res	Type
15	J	84	ILE
15	J	110	PRO
15	J	128	ASN
15	J	129	GLU
16	K	16	ALA
16	K	17	ARG
16	K	35	VAL
16	K	72	PRO
16	K	92	GLU
16	K	122	VAL
17	L	7	SER
17	L	14	LYS
17	L	15	ALA
17	L	17	LYS
17	L	38	GLN
17	L	40	SER
17	L	55	MET
17	L	72	ALA
17	L	77	ILE
17	L	82	LEU
17	L	84	LYS
17	L	86	GLU
17	L	92	LEU
17	L	93	ASN
17	L	111	ILE
17	L	116	VAL
17	L	118	THR
17	L	120	VAL
18	M	3	GLN
18	M	5	LYS
18	M	7	THR
18	M	12	MET
18	M	17	ASN
18	M	31	PHE
18	M	33	LEU
18	M	67	VAL
18	M	77	PRO
18	M	80	VAL
18	M	89	VAL
18	M	92	TRP
18	M	127	LYS
18	M	134	THR

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Mol	Chain	Res	Type
19	N	12	ARG
19	N	56	LYS
19	N	68	ALA
19	N	72	ASP
19	N	74	GLU
19	N	86	ARG
19	N	91	ALA
19	N	111	ALA
19	N	122	ALA
20	O	11	ALA
20	O	21	LEU
20	O	27	VAL
20	O	41	ALA
20	O	54	VAL
20	O	61	GLN
20	O	63	LYS
20	O	64	TYR
20	O	84	GLU
20	O	90	VAL
20	O	107	ALA
21	P	23	ASP
21	P	42	PHE
21	P	49	ILE
21	P	60	VAL
21	P	71	ARG
21	P	77	SER
21	P	79	VAL
21	P	80	VAL
21	P	92	ARG
21	P	97	TYR
21	P	105	LYS
22	Q	9	ALA
22	Q	30	VAL
22	Q	41	ALA
22	Q	46	TYR
22	Q	54	ARG
22	Q	73	ILE
22	Q	86	SER
22	Q	89	ILE
22	Q	93	ILE
22	Q	114	ALA
23	R	2	TYR

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Mol	Chain	Res	Type
23	R	4	VAL
23	R	5	PHE
23	R	11	GLN
23	R	22	LEU
23	R	27	ILE
23	R	32	THR
23	R	33	VAL
23	R	37	GLU
23	R	51	VAL
23	R	59	ILE
23	R	71	LYS
23	R	75	VAL
23	R	77	PHE
23	R	80	ARG
23	R	81	LYS
23	R	85	LYS
23	R	97	LYS
23	R	102	SER
24	S	3	THR
24	S	8	ARG
24	S	12	SER
24	S	19	LEU
24	S	20	VAL
24	S	29	VAL
24	S	41	LYS
24	S	64	ALA
24	S	92	ARG
24	S	96	ILE
24	S	99	ARG
24	S	104	THR
24	S	109	ASP
25	T	6	ARG
25	T	7	LEU
25	T	12	ARG
25	T	17	SER
25	T	63	VAL
25	T	66	LYS
25	T	71	GLY
25	T	85	VAL
25	T	95	PHE
26	U	2	ALA
26	U	4	ILE

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Mol	Chain	Res	Type
26	U	24	VAL
26	U	25	LYS
26	U	26	ASN
26	U	35	VAL
26	U	36	GLU
26	U	40	LEU
26	U	41	VAL
26	U	50	ALA
26	U	63	ALA
26	U	66	VAL
26	U	71	ILE
26	U	75	ALA
26	U	94	PHE
26	U	97	SER
26	U	99	SER
26	U	101	THR
27	V	14	LYS
27	V	38	LEU
28	W	14	ASP
28	W	32	ALA
28	W	44	PHE
28	W	48	ALA
28	W	58	LEU
28	W	61	LYS
28	W	66	VAL
28	W	67	LYS
28	W	72	GLY
28	W	77	LYS
28	W	80	SER
29	X	30	MET
29	X	31	GLN
29	X	49	ASP
30	Y	9	THR
30	Y	12	ALA
30	Y	51	SER
30	Y	53	MET
30	Y	57	GLU
31	Z	4	ASP
31	Z	22	MET
31	Z	50	ASP
1	0	7	PRO
1	0	17	SER

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Mol	Chain	Res	Type
1	0	19	ASP
1	0	37	HIS
1	0	48	TYR
2	1	18	HIS
2	1	40	PRO
2	1	48	TYR
2	1	53	ILE
3	2	17	GLY
3	2	29	GLN
4	3	5	THR
4	3	13	PHE
4	3	32	LEU
4	3	45	PRO
4	3	55	GLY
5	4	37	GLN
8	C	19	VAL
8	C	31	PRO
8	C	46	GLY
8	C	54	GLY
8	C	67	LYS
8	C	93	VAL
8	C	113	ASP
8	C	137	GLY
8	C	141	HIS
8	C	143	VAL
8	C	179	GLU
8	C	196	ASN
8	C	204	LEU
8	C	255	LYS
8	C	260	LYS
8	C	263	ASP
9	D	21	SER
9	D	54	ALA
9	D	56	LYS
9	D	69	ALA
9	D	81	GLU
9	D	84	LEU
9	D	87	GLY
9	D	109	VAL
9	D	113	SER
9	D	138	LEU
9	D	145	SER

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Mol	Chain	Res	Type
9	D	147	GLY
9	D	162	ALA
9	D	173	GLN
9	D	174	SER
9	D	178	VAL
9	D	205	PRO
10	E	6	LYS
10	E	8	ALA
10	E	17	THR
10	E	49	ARG
10	E	53	THR
10	E	89	PRO
10	E	93	SER
10	E	114	ARG
10	E	116	ASP
10	E	120	VAL
10	E	140	ASP
10	E	141	MET
10	E	148	ILE
10	E	155	GLU
10	E	178	VAL
11	F	9	ASP
11	F	33	ILE
11	F	46	LYS
11	F	84	ILE
11	F	138	PRO
11	F	148	VAL
11	F	150	GLY
12	G	46	ASP
12	G	68	ARG
12	G	119	GLY
12	G	140	ILE
12	G	141	GLY
13	H	9	VAL
13	H	19	VAL
13	H	29	PHE
13	H	35	LYS
13	H	75	LEU
13	H	76	GLU
13	H	100	ALA
13	H	108	VAL
13	H	120	GLY

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Mol	Chain	Res	Type
13	H	123	ARG
13	H	147	VAL
14	I	17	ALA
14	I	83	ALA
14	I	88	GLY
15	J	8	PRO
15	J	26	GLY
15	J	30	THR
15	J	39	LYS
15	J	47	HIS
15	J	65	THR
15	J	116	ARG
15	J	131	ASN
16	K	3	GLN
16	K	4	GLU
16	K	85	VAL
16	K	89	ASN
17	L	27	LEU
17	L	33	ARG
17	L	39	LYS
17	L	44	GLY
17	L	46	VAL
17	L	56	PRO
17	L	57	LEU
17	L	58	TYR
17	L	87	GLY
17	L	103	ILE
17	L	117	THR
17	L	138	ALA
17	L	142	ILE
18	M	9	PHE
18	M	14	LYS
18	M	21	ALA
18	M	26	VAL
18	M	43	ALA
18	M	58	LYS
18	M	84	LYS
18	M	101	VAL
18	M	133	LYS
19	N	11	ASN
19	N	17	ARG
19	N	46	ARG

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Mol	Chain	Res	Type
19	N	73	ASN
19	N	93	GLY
19	N	121	LYS
20	O	7	ARG
20	O	35	ILE
20	O	38	GLN
20	O	40	ILE
20	O	87	ILE
20	O	97	PHE
20	O	100	HIS
21	P	8	GLU
21	P	15	ASP
21	P	17	PRO
21	P	18	SER
21	P	26	GLU
21	P	39	LEU
21	P	55	HIS
21	P	85	VAL
21	P	96	LEU
21	P	110	LYS
22	Q	4	LYS
22	Q	31	TYR
22	Q	68	ALA
22	Q	72	GLY
22	Q	91	ARG
22	Q	102	LYS
23	R	7	SER
23	R	50	GLY
23	R	65	ALA
23	R	78	ARG
23	R	89	HIS
23	R	98	ILE
24	S	25	ARG
24	S	54	ALA
24	S	87	PRO
24	S	90	LYS
25	T	11	LEU
25	T	16	VAL
25	T	62	VAL
26	U	39	ASN
26	U	52	ASN
26	U	55	GLY

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Mol	Chain	Res	Type
26	U	67	SER
26	U	88	ASP
27	V	15	GLY
27	V	36	ALA
27	V	37	PRO
27	V	44	HIS
27	V	85	LYS
28	W	4	LYS
28	W	9	THR
28	W	20	LEU
28	W	36	ILE
28	W	40	ARG
28	W	45	HIS
28	W	47	GLY
28	W	51	GLY
28	W	57	THR
28	W	63	ASP
28	W	69	GLU
28	W	75	ASN
29	X	27	ASN
29	X	28	LEU
29	X	48	ARG
30	Y	4	ILE
30	Y	30	ARG
31	Z	9	TYR
31	Z	40	CYS
1	0	31	LYS
1	0	34	GLY
1	0	41	HIS
2	1	7	LYS
2	1	12	SER
2	1	24	LYS
2	1	32	LYS
2	1	43	ARG
3	2	10	LEU
3	2	35	ARG
4	3	12	ARG
4	3	52	GLY
8	C	40	GLY
8	C	58	LYS
8	C	63	ILE
8	C	85	ASN

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Mol	Chain	Res	Type
8	C	91	ALA
8	C	114	GLN
8	C	120	ASP
8	C	162	GLN
8	C	189	ALA
8	C	193	GLU
8	C	209	ALA
8	C	252	LYS
9	D	91	THR
9	D	156	PHE
9	D	179	ARG
9	D	194	PRO
10	E	5	LEU
10	E	10	SER
10	E	28	VAL
10	E	65	THR
10	E	103	GLY
10	E	115	GLN
10	E	125	SER
10	E	156	ASN
10	E	172	ALA
10	E	194	LYS
10	E	198	GLU
11	F	14	LYS
11	F	20	ASN
11	F	36	ASN
11	F	42	ALA
11	F	80	GLN
11	F	149	ARG
12	G	6	ALA
12	G	17	LYS
12	G	34	ARG
12	G	59	ASP
12	G	98	LYS
12	G	111	PRO
12	G	127	GLN
12	G	155	PRO
13	H	86	ASP
13	H	107	GLY
13	H	119	ASN
13	H	121	VAL
14	I	4	VAL

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Mol	Chain	Res	Type
14	I	23	VAL
14	I	49	GLU
14	I	61	TYR
14	I	74	PRO
15	J	21	THR
15	J	52	ASP
15	J	60	ASP
15	J	62	VAL
15	J	77	HIS
15	J	137	PRO
17	L	9	ALA
17	L	62	PRO
17	L	70	LYS
17	L	98	ALA
17	L	125	LEU
18	M	4	PRO
18	M	24	THR
18	M	38	ARG
19	N	99	LYS
19	N	109	PRO
20	O	14	ALA
20	O	28	VAL
20	O	91	SER
20	O	96	GLY
21	P	25	VAL
21	P	28	LYS
21	P	32	VAL
21	P	38	ARG
21	P	41	ALA
21	P	52	ARG
21	P	87	ARG
22	Q	5	ARG
22	Q	6	GLY
22	Q	43	GLN
23	R	66	HIS
23	R	84	ARG
23	R	88	GLY
24	S	13	SER
24	S	21	ALA
24	S	27	LYS
24	S	31	GLN
24	S	65	ASP

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Mol	Chain	Res	Type
24	S	88	ARG
25	T	3	ARG
25	T	39	THR
25	T	78	SER
25	T	79	ASP
26	U	64	ILE
27	V	55	GLU
27	V	71	LYS
27	V	81	PRO
28	W	8	SER
28	W	18	LYS
28	W	49	ASN
28	W	78	PHE
29	X	42	LEU
30	Y	5	LYS
30	Y	39	ASP
31	Z	7	PRO
31	Z	15	SER
31	Z	18	CYS
31	Z	19	GLY
31	Z	45	THR
1	0	51	ARG
2	1	21	THR
3	2	5	PHE
3	2	6	GLN
3	2	18	PHE
8	C	4	LYS
8	C	16	VAL
8	C	115	ILE
8	C	140	VAL
8	C	218	THR
8	C	235	GLU
9	D	14	ILE
9	D	103	ASP
9	D	128	ARG
9	D	193	VAL
10	E	72	SER
10	E	133	LEU
10	E	142	ALA
10	E	180	LEU
10	E	189	THR
10	E	191	ASP

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Mol	Chain	Res	Type
10	E	196	VAL
11	F	13	LYS
11	F	31	GLU
11	F	102	LEU
12	G	16	VAL
12	G	72	ASN
13	H	40	THR
13	H	51	ARG
14	I	20	SER
15	J	10	THR
15	J	20	ALA
15	J	45	THR
15	J	46	PRO
15	J	64	VAL
15	J	75	TYR
15	J	111	LYS
15	J	113	PRO
15	J	114	LEU
15	J	132	HIS
16	K	14	SER
16	K	46	ALA
16	K	94	PRO
16	K	113	MET
17	L	25	SER
18	M	27	SER
18	M	44	ARG
19	N	18	GLN
19	N	58	ASP
19	N	116	VAL
20	O	36	TYR
20	O	70	ALA
20	O	88	LYS
20	O	94	ARG
21	P	84	SER
21	P	98	TYR
22	Q	15	LYS
22	Q	53	LYS
22	Q	78	PHE
22	Q	87	VAL
22	Q	113	LYS
23	R	9	GLY
23	R	24	LYS

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Mol	Chain	Res	Type
23	R	29	THR
23	R	47	VAL
23	R	52	PRO
23	R	61	ALA
23	R	86	GLN
24	S	9	HIS
24	S	28	LYS
24	S	71	VAL
25	T	23	ALA
25	T	42	GLU
25	T	99	ALA
26	U	23	LYS
27	V	66	ASP
28	W	13	ARG
28	W	31	LEU
28	W	54	ARG
28	W	65	LYS
29	X	8	GLU
30	Y	42	ALA
31	Z	35	ASP
1	0	20	ALA
1	0	22	THR
1	0	24	VAL
1	0	25	THR
2	1	5	ARG
2	1	23	THR
2	1	36	LYS
3	2	44	VAL
3	2	45	SER
8	C	14	HIS
8	C	50	THR
8	C	64	VAL
8	C	156	SER
8	C	269	ARG
9	D	48	ILE
9	D	55	LYS
9	D	68	PHE
9	D	129	THR
9	D	139	SER
9	D	171	THR
10	E	11	ALA
10	E	68	ALA

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Mol	Chain	Res	Type
10	E	121	VAL
10	E	190	ALA
11	F	162	ASP
13	H	31	VAL
14	I	6	ALA
15	J	123	LYS
16	K	45	GLU
17	L	23	ILE
17	L	36	LYS
17	L	83	ALA
17	L	89	VAL
18	M	2	LEU
18	M	111	GLU
19	N	8	ARG
19	N	66	ALA
19	N	112	TYR
19	N	113	ILE
21	P	33	GLU
21	P	61	ARG
22	Q	39	ILE
22	Q	49	ARG
22	Q	67	ALA
23	R	15	SER
23	R	23	GLU
23	R	30	GLY
25	T	32	LEU
26	U	43	LYS
26	U	78	LYS
28	W	37	VAL
28	W	73	PRO
29	X	21	LEU
29	X	24	GLU
29	X	47	ARG
31	Z	58	ASP
2	1	14	ALA
8	C	55	GLY
8	C	89	ASN
8	C	203	VAL
8	C	245	THR
9	D	73	VAL
9	D	180	VAL
9	D	183	GLU

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Mol	Chain	Res	Type
9	D	207	VAL
11	F	47	LYS
12	G	56	GLY
13	H	30	LEU
13	H	95	GLY
13	H	118	PRO
14	I	99	LYS
14	I	118	GLY
15	J	83	GLY
15	J	85	LYS
15	J	117	ALA
16	K	71	ARG
16	K	91	SER
17	L	141	LYS
18	M	57	VAL
19	N	7	GLY
19	N	102	PHE
20	O	31	THR
20	O	113	ALA
23	R	28	ALA
23	R	90	ARG
25	T	30	ILE
25	T	31	VAL
25	T	60	THR
26	U	38	ILE
26	U	51	LEU
27	V	2	PHE
27	V	64	VAL
28	W	46	ALA
29	X	17	GLU
30	Y	35	VAL
31	Z	34	LEU
8	C	90	ILE
8	C	178	GLY
8	C	225	ASN
8	C	249	VAL
11	F	88	VAL
12	G	107	GLY
12	G	152	ARG
14	I	92	PRO
17	L	8	PRO
18	M	96	ILE

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Mol	Chain	Res	Type
22	Q	3	VAL
26	U	58	VAL
28	W	30	VAL
28	W	50	VAL
29	X	35	GLY
2	1	4	ILE
8	C	227	VAL
8	C	253	GLY
9	D	195	GLY
10	E	108	ILE
12	G	91	VAL
15	J	51	GLY
15	J	100	VAL
15	J	136	GLN
16	K	48	PRO
16	K	102	PRO
17	L	49	GLY
17	L	52	GLY
17	L	110	VAL
21	P	78	PRO
26	U	47	PRO
27	V	65	VAL
8	C	164	VAL
8	C	244	VAL
9	D	189	VAL
11	F	174	PHE
16	K	36	GLY
16	K	119	ALA
17	L	45	GLY
17	L	61	LEU
18	M	108	VAL
18	M	135	VAL
26	U	37	GLY
2	1	15	GLY
4	3	31	ILE
8	C	236	GLY
9	D	146	ILE
10	E	177	PRO
13	H	88	GLY
16	K	26	GLY
16	K	50	GLY
16	K	120	PRO

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Mol	Chain	Res	Type
17	L	100	ILE
23	R	54	VAL
2	1	41	VAL
10	E	149	ILE
11	F	30	VAL
15	J	82	GLY
16	K	63	VAL
24	S	26	GLY

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 X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	0	47/47 (100%)	39 (83%)	8 (17%)	3	23
2	1	48/48 (100%)	36 (75%)	12 (25%)	1	8
3	2	38/38 (100%)	20 (53%)	18 (47%)	0	0
4	3	51/51 (100%)	30 (59%)	21 (41%)	0	1
5	4	34/34 (100%)	19 (56%)	15 (44%)	0	0
8	C	213/218 (98%)	147 (69%)	66 (31%)	0	5
9	D	164/164 (100%)	111 (68%)	53 (32%)	0	4
10	E	165/165 (100%)	118 (72%)	47 (28%)	0	5
11	F	149/149 (100%)	131 (88%)	18 (12%)	7	42
12	G	137/137 (100%)	106 (77%)	31 (23%)	1	10
13	H	114/114 (100%)	85 (75%)	29 (25%)	1	8
14	I	109/109 (100%)	98 (90%)	11 (10%)	11	52
15	J	114/116 (98%)	76 (67%)	38 (33%)	0	3
16	K	102/104 (98%)	65 (64%)	37 (36%)	0	2
17	L	103/103 (100%)	63 (61%)	40 (39%)	0	1
18	M	109/109 (100%)	66 (61%)	43 (39%)	0	1
19	N	103/103 (100%)	69 (67%)	34 (33%)	0	4
20	O	87/87 (100%)	69 (79%)	18 (21%)	2	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	P	99/99 (100%)	81 (82%)	18 (18%)	2	19
22	Q	89/89 (100%)	55 (62%)	34 (38%)	0	1
23	R	84/84 (100%)	52 (62%)	32 (38%)	0	1
24	S	93/93 (100%)	66 (71%)	27 (29%)	0	5
25	T	83/84 (99%)	59 (71%)	24 (29%)	0	5
26	U	83/84 (99%)	63 (76%)	20 (24%)	1	8
27	V	78/78 (100%)	62 (80%)	16 (20%)	2	14
28	W	62/62 (100%)	39 (63%)	23 (37%)	0	2
29	X	55/55 (100%)	38 (69%)	17 (31%)	0	5
30	Y	48/48 (100%)	32 (67%)	16 (33%)	0	3
31	Z	62/62 (100%)	43 (69%)	19 (31%)	0	5
All	All	2723/2734 (100%)	1938 (71%)	785 (29%)	0	5

All (785) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	8	THR
1	0	12	ARG
1	0	15	ARG
1	0	16	ARG
1	0	18	HIS
1	0	32	THR
1	0	39	ARG
1	0	45	ASP
2	1	4	ILE
2	1	8	ILE
2	1	22	THR
2	1	24	LYS
2	1	26	LYS
2	1	28	THR
2	1	31	GLU
2	1	34	GLU
2	1	35	LEU
2	1	41	VAL
2	1	43	ARG
2	1	44	GLN
3	2	1	MET
3	2	9	VAL

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Mol	Chain	Res	Type
3	2	10	LEU
3	2	12	ARG
3	2	18	PHE
3	2	19	ARG
3	2	21	ARG
3	2	22	MET
3	2	25	LYS
3	2	26	ASN
3	2	28	ARG
3	2	29	GLN
3	2	33	ARG
3	2	35	ARG
3	2	37	LYS
3	2	39	ARG
3	2	44	VAL
3	2	46	LYS
4	3	2	LYS
4	3	4	LYS
4	3	6	VAL
4	3	7	ARG
4	3	14	LYS
4	3	18	LYS
4	3	28	LEU
4	3	29	ARG
4	3	31	ILE
4	3	32	LEU
4	3	33	THR
4	3	34	LYS
4	3	35	LYS
4	3	42	HIS
4	3	46	LYS
4	3	50	SER
4	3	51	LYS
4	3	53	ASP
4	3	57	VAL
4	3	58	ILE
4	3	61	LEU
5	4	2	LYS
5	4	7	VAL
5	4	9	LYS
5	4	13	ASN
5	4	16	ILE

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Mol	Chain	Res	Type
5	4	18	LYS
5	4	19	ARG
5	4	20	ASP
5	4	23	ILE
5	4	25	VAL
5	4	26	ILE
5	4	32	LYS
5	4	34	LYS
5	4	35	GLN
5	4	36	ARG
8	C	8	THR
8	C	12	ARG
8	C	15	VAL
8	C	17	LYS
8	C	23	LEU
8	C	27	LYS
8	C	29	PHE
8	C	32	LEU
8	C	33	LEU
8	C	34	GLU
8	C	36	ASN
8	C	38	LYS
8	C	43	ASN
8	C	45	ASN
8	C	50	THR
8	C	51	ARG
8	C	53	ILE
8	C	57	HIS
8	C	58	LYS
8	C	61	TYR
8	C	62	ARG
8	C	63	ILE
8	C	64	VAL
8	C	80	LEU
8	C	85	ASN
8	C	90	ILE
8	C	94	LEU
8	C	109	LEU
8	C	113	ASP
8	C	115	ILE
8	C	117	SER
8	C	127	ASN

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Mol	Chain	Res	Type
8	C	132	ARG
8	C	133	ASN
8	C	134	ILE
8	C	139	THR
8	C	140	VAL
8	C	141	HIS
8	C	143	VAL
8	C	152	GLN
8	C	153	LEU
8	C	155	ARG
8	C	163	ILE
8	C	171	VAL
8	C	172	THR
8	C	174	ARG
8	C	179	GLU
8	C	186	ASP
8	C	194	VAL
8	C	198	GLU
8	C	203	VAL
8	C	212	TRP
8	C	213	ARG
8	C	215	VAL
8	C	220	ARG
8	C	225	ASN
8	C	231	HIS
8	C	237	ARG
8	C	251	THR
8	C	254	LYS
8	C	257	ARG
8	C	260	LYS
8	C	261	ARG
8	C	264	LYS
8	C	265	PHE
8	C	269	ARG
9	D	4	LEU
9	D	7	LYS
9	D	9	VAL
9	D	13	ARG
9	D	16	THR
9	D	20	VAL
9	D	25	THR
9	D	26	VAL

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Mol	Chain	Res	Type
9	D	29	VAL
9	D	30	GLU
9	D	33	ARG
9	D	36	GLN
9	D	37	VAL
9	D	40	LEU
9	D	42	ASN
9	D	43	ASP
9	D	45	TYR
9	D	50	VAL
9	D	60	VAL
9	D	62	LYS
9	D	68	PHE
9	D	77	ARG
9	D	80	TRP
9	D	82	PHE
9	D	90	PHE
9	D	91	THR
9	D	98	VAL
9	D	100	LEU
9	D	101	PHE
9	D	109	VAL
9	D	127	PHE
9	D	128	ARG
9	D	131	ASP
9	D	133	THR
9	D	138	LEU
9	D	140	HIS
9	D	142	VAL
9	D	146	ILE
9	D	148	GLN
9	D	150	GLN
9	D	152	PRO
9	D	157	LYS
9	D	159	LYS
9	D	160	LYS
9	D	167	ASN
9	D	168	GLU
9	D	175	LEU
9	D	177	VAL
9	D	179	ARG
9	D	181	ASP

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Mol	Chain	Res	Type
9	D	184	ARG
9	D	188	LEU
9	D	208	LYS
10	E	14	VAL
10	E	24	ASN
10	E	28	VAL
10	E	40	ARG
10	E	41	GLN
10	E	43	THR
10	E	46	GLN
10	E	47	LYS
10	E	49	ARG
10	E	52	VAL
10	E	53	THR
10	E	58	LYS
10	E	60	TRP
10	E	61	ARG
10	E	73	ILE
10	E	74	LYS
10	E	88	ARG
10	E	90	GLN
10	E	93	SER
10	E	97	ASN
10	E	108	ILE
10	E	109	LEU
10	E	110	SER
10	E	120	VAL
10	E	126	VAL
10	E	130	LYS
10	E	132	LYS
10	E	133	LEU
10	E	134	LEU
10	E	143	LEU
10	E	148	ILE
10	E	149	ILE
10	E	150	THR
10	E	152	GLU
10	E	153	LEU
10	E	157	LEU
10	E	158	PHE
10	E	163	ASN
10	E	164	LEU

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Mol	Chain	Res	Type
10	E	167	VAL
10	E	168	ASP
10	E	169	VAL
10	E	173	THR
10	E	178	VAL
10	E	180	LEU
10	E	185	LYS
10	E	194	LYS
11	F	6	TYR
11	F	16	MET
11	F	55	ASP
11	F	59	ILE
11	F	71	LYS
11	F	73	VAL
11	F	98	PHE
11	F	100	GLU
11	F	101	ARG
11	F	111	ARG
11	F	132	ARG
11	F	135	ILE
11	F	146	ASP
11	F	155	ILE
11	F	157	THR
11	F	158	THR
11	F	172	PHE
11	F	173	ASP
12	G	17	LYS
12	G	25	ILE
12	G	29	ASN
12	G	34	ARG
12	G	36	LEU
12	G	38	ASP
12	G	47	ASN
12	G	50	THR
12	G	61	TRP
12	G	71	LEU
12	G	72	ASN
12	G	79	THR
12	G	83	THR
12	G	85	LYS
12	G	87	GLN
12	G	88	LEU

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Mol	Chain	Res	Type
12	G	89	VAL
12	G	93	TYR
12	G	112	VAL
12	G	126	THR
12	G	131	VAL
12	G	132	LEU
12	G	138	GLN
12	G	142	GLN
12	G	148	ARG
12	G	154	GLU
12	G	162	ARG
12	G	163	TYR
12	G	168	VAL
12	G	169	ARG
12	G	174	LYS
13	H	1	MET
13	H	3	VAL
13	H	4	ILE
13	H	9	VAL
13	H	15	LEU
13	H	20	ASN
13	H	21	VAL
13	H	25	TYR
13	H	28	ASN
13	H	31	VAL
13	H	35	LYS
13	H	44	ILE
13	H	50	ARG
13	H	66	ASN
13	H	68	ARG
13	H	70	GLU
13	H	72	ILE
13	H	75	LEU
13	H	83	LYS
13	H	86	ASP
13	H	96	THR
13	H	99	ILE
13	H	112	LYS
13	H	122	LEU
13	H	132	PHE
13	H	133	GLN
13	H	141	LYS

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Mol	Chain	Res	Type
13	H	146	VAL
13	H	147	VAL
14	I	2	LYS
14	I	33	ASN
14	I	52	LEU
14	I	54	ILE
14	I	68	PHE
14	I	78	LEU
14	I	91	LYS
14	I	99	LYS
14	I	104	GLN
14	I	121	ILE
14	I	126	ARG
15	J	1	MET
15	J	4	PHE
15	J	5	THR
15	J	7	LYS
15	J	10	THR
15	J	12	LYS
15	J	15	TRP
15	J	16	TYR
15	J	21	THR
15	J	23	LYS
15	J	24	THR
15	J	25	LEU
15	J	27	ARG
15	J	28	LEU
15	J	31	GLU
15	J	32	LEU
15	J	34	ARG
15	J	40	HIS
15	J	43	GLU
15	J	44	TYR
15	J	45	THR
15	J	47	HIS
15	J	58	ASN
15	J	62	VAL
15	J	70	THR
15	J	84	ILE
15	J	85	LYS
15	J	86	GLN
15	J	88	THR

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Mol	Chain	Res	Type
15	J	89	PHE
15	J	90	GLU
15	J	106	LYS
15	J	116	ARG
15	J	119	PHE
15	J	121	LYS
15	J	128	ASN
15	J	130	HIS
15	J	140	LEU
16	K	2	ILE
16	K	18	ARG
16	K	19	VAL
16	K	20	MET
16	K	22	ILE
16	K	24	VAL
16	K	29	HIS
16	K	32	TYR
16	K	35	VAL
16	K	38	ILE
16	K	39	ILE
16	K	42	THR
16	K	43	ILE
16	K	47	ILE
16	K	49	ARG
16	K	53	LYS
16	K	54	LYS
16	K	58	LEU
16	K	64	ARG
16	K	69	VAL
16	K	71	ARG
16	K	72	PRO
16	K	75	SER
16	K	78	ARG
16	K	80	ASP
16	K	82	ASN
16	K	84	CYS
16	K	86	LEU
16	K	87	LEU
16	K	88	ASN
16	K	90	ASN
16	K	100	PHE
16	K	104	THR

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Mol	Chain	Res	Type
16	K	105	ARG
16	K	108	ARG
16	K	116	ILE
16	K	122	VAL
17	L	2	ARG
17	L	4	ASN
17	L	6	LEU
17	L	14	LYS
17	L	19	LEU
17	L	21	ARG
17	L	25	SER
17	L	30	THR
17	L	33	ARG
17	L	38	GLN
17	L	41	ARG
17	L	46	VAL
17	L	48	ARG
17	L	50	PHE
17	L	51	GLU
17	L	58	TYR
17	L	59	ARG
17	L	66	PHE
17	L	67	THR
17	L	76	GLU
17	L	77	ILE
17	L	99	ASN
17	L	100	ILE
17	L	101	ILE
17	L	103	ILE
17	L	104	GLN
17	L	106	GLU
17	L	111	ILE
17	L	112	LEU
17	L	115	GLU
17	L	116	VAL
17	L	118	THR
17	L	122	VAL
17	L	125	LEU
17	L	126	ARG
17	L	127	VAL
17	L	128	THR
17	L	141	LYS

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Mol	Chain	Res	Type
17	L	142	ILE
17	L	143	GLU
18	M	5	LYS
18	M	6	ARG
18	M	9	PHE
18	M	13	HIS
18	M	14	LYS
18	M	16	ARG
18	M	18	ARG
18	M	22	GLN
18	M	25	ASP
18	M	27	SER
18	M	28	PHE
18	M	33	LEU
18	M	36	VAL
18	M	38	ARG
18	M	40	ARG
18	M	47	GLU
18	M	50	ARG
18	M	54	THR
18	M	64	TRP
18	M	65	ILE
18	M	66	ARG
18	M	67	VAL
18	M	73	ILE
18	M	74	THR
18	M	75	GLU
18	M	76	LYS
18	M	78	LEU
18	M	81	ARG
18	M	88	ASN
18	M	91	TYR
18	M	93	VAL
18	M	100	LYS
18	M	102	LEU
18	M	103	TYR
18	M	105	MET
18	M	110	GLU
18	M	114	ARG
18	M	117	PHE
18	M	118	LYS
18	M	128	THR

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Mol	Chain	Res	Type
18	M	130	PHE
18	M	133	LYS
18	M	134	THR
19	N	1	MET
19	N	2	ARG
19	N	4	ARG
19	N	9	GLN
19	N	10	LEU
19	N	13	ASN
19	N	29	VAL
19	N	34	ILE
19	N	35	LYS
19	N	42	LYS
19	N	43	GLU
19	N	52	ILE
19	N	56	LYS
19	N	64	ARG
19	N	69	ARG
19	N	70	THR
19	N	71	ARG
19	N	72	ASP
19	N	75	ILE
19	N	76	VAL
19	N	81	ASN
19	N	87	PHE
19	N	89	SER
19	N	94	TYR
19	N	97	ILE
19	N	99	LYS
19	N	100	CYS
19	N	106	ASP
19	N	112	TYR
19	N	113	ILE
19	N	115	LEU
19	N	118	ARG
19	N	120	GLU
19	N	121	LYS
20	O	2	ASP
20	O	3	LYS
20	O	7	ARG
20	O	12	THR
20	O	13	ARG

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Mol	Chain	Res	Type
20	O	20	GLU
20	O	27	VAL
20	O	30	ARG
20	O	39	VAL
20	O	48	LEU
20	O	58	ILE
20	O	74	VAL
20	O	81	ARG
20	O	83	LEU
20	O	87	ILE
20	O	94	ARG
20	O	98	GLN
20	O	103	VAL
21	P	2	ASN
21	P	5	LYS
21	P	10	GLU
21	P	11	GLN
21	P	12	MET
21	P	24	THR
21	P	49	ILE
21	P	50	ARG
21	P	52	ARG
21	P	54	LEU
21	P	56	SER
21	P	74	GLN
21	P	75	THR
21	P	79	VAL
21	P	88	ARG
21	P	96	LEU
21	P	99	LEU
21	P	108	ARG
22	Q	2	ARG
22	Q	3	VAL
22	Q	4	LYS
22	Q	5	ARG
22	Q	7	VAL
22	Q	12	ARG
22	Q	14	LYS
22	Q	16	ILE
22	Q	21	LYS
22	Q	23	TYR
22	Q	29	ARG

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Mol	Chain	Res	Type
22	Q	30	VAL
22	Q	35	PHE
22	Q	36	GLN
22	Q	39	ILE
22	Q	40	LYS
22	Q	44	TYR
22	Q	46	TYR
22	Q	51	GLN
22	Q	52	ARG
22	Q	53	LYS
22	Q	57	ARG
22	Q	58	GLN
22	Q	59	LEU
22	Q	63	ARG
22	Q	73	ILE
22	Q	80	ASN
22	Q	84	LYS
22	Q	91	ARG
22	Q	93	ILE
22	Q	94	LEU
22	Q	101	ASP
22	Q	103	VAL
22	Q	113	LYS
23	R	4	VAL
23	R	5	PHE
23	R	6	GLN
23	R	10	LYS
23	R	11	GLN
23	R	12	HIS
23	R	14	VAL
23	R	18	GLN
23	R	20	VAL
23	R	22	LEU
23	R	24	LYS
23	R	26	ASP
23	R	27	ILE
23	R	38	VAL
23	R	39	LEU
23	R	40	MET
23	R	55	ASP
23	R	64	VAL
23	R	66	HIS

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Mol	Chain	Res	Type
23	R	73	LYS
23	R	75	VAL
23	R	78	ARG
23	R	79	ARG
23	R	81	LYS
23	R	84	ARG
23	R	85	LYS
23	R	86	GLN
23	R	87	GLN
23	R	91	GLN
23	R	93	PHE
23	R	99	THR
23	R	102	SER
24	S	6	LYS
24	S	9	HIS
24	S	11	ARG
24	S	13	SER
24	S	18	ARG
24	S	20	VAL
24	S	24	ILE
24	S	25	ARG
24	S	27	LYS
24	S	28	LYS
24	S	33	LEU
24	S	35	ILE
24	S	50	VAL
24	S	51	LEU
24	S	53	SER
24	S	61	ASN
24	S	75	PHE
24	S	83	LYS
24	S	84	ARG
24	S	85	ILE
24	S	88	ARG
24	S	95	ARG
24	S	96	ILE
24	S	98	LYS
24	S	101	SER
24	S	109	ASP
24	S	110	ARG
25	T	6	ARG
25	T	7	LEU

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Mol	Chain	Res	Type
25	T	12	ARG
25	T	16	VAL
25	T	18	GLU
25	T	22	THR
25	T	24	MET
25	T	25	GLU
25	T	32	LEU
25	T	37	ASP
25	T	40	LYS
25	T	60	THR
25	T	64	LYS
25	T	66	LYS
25	T	68	LYS
25	T	76	ARG
25	T	79	ASP
25	T	85	VAL
25	T	87	LEU
25	T	88	LYS
25	T	89	GLU
25	T	92	ASN
25	T	93	LEU
25	T	95	PHE
26	U	7	ASP
26	U	11	ILE
26	U	17	ASP
26	U	21	ARG
26	U	25	LYS
26	U	27	VAL
26	U	28	LEU
26	U	34	ILE
26	U	40	LEU
26	U	57	ILE
26	U	58	VAL
26	U	60	LYS
26	U	69	VAL
26	U	71	ILE
26	U	72	PHE
26	U	82	VAL
26	U	92	VAL
26	U	95	PHE
26	U	96	LYS
26	U	98	ASN

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Mol	Chain	Res	Type
27	V	11	GLU
27	V	18	ARG
27	V	27	PRO
27	V	29	ILE
27	V	40	ILE
27	V	45	ASP
27	V	46	LYS
27	V	51	GLN
27	V	56	PHE
27	V	60	VAL
27	V	66	ASP
27	V	70	ILE
27	V	72	VAL
27	V	79	ARG
27	V	87	GLN
27	V	90	ASP
28	W	3	LYS
28	W	4	LYS
28	W	10	ARG
28	W	13	ARG
28	W	14	ASP
28	W	15	SER
28	W	18	LYS
28	W	19	ARG
28	W	20	LEU
28	W	23	LYS
28	W	24	ARG
28	W	25	PHE
28	W	31	LEU
28	W	36	ILE
28	W	39	GLN
28	W	49	ASN
28	W	50	VAL
28	W	54	ARG
28	W	57	THR
28	W	67	LYS
28	W	69	GLU
28	W	76	ARG
28	W	78	PHE
29	X	6	LEU
29	X	8	GLU
29	X	17	GLU

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Mol	Chain	Res	Type
29	X	18	LEU
29	X	20	ASN
29	X	23	ARG
29	X	25	GLN
29	X	26	PHE
29	X	30	MET
29	X	31	GLN
29	X	43	LEU
29	X	44	LYS
29	X	47	ARG
29	X	49	ASP
29	X	53	VAL
29	X	55	THR
29	X	57	LEU
30	Y	4	ILE
30	Y	6	ILE
30	Y	13	ILE
30	Y	22	THR
30	Y	23	LEU
30	Y	24	LEU
30	Y	29	ARG
30	Y	30	ARG
30	Y	31	ILE
30	Y	34	THR
30	Y	43	ILE
30	Y	46	MET
30	Y	47	ILE
30	Y	53	MET
30	Y	56	VAL
30	Y	57	GLU
31	Z	4	ASP
31	Z	5	ILE
31	Z	13	THR
31	Z	16	CYS
31	Z	24	ILE
31	Z	27	THR
31	Z	28	VAL
31	Z	31	ASP
31	Z	33	ASN
31	Z	34	LEU
31	Z	35	ASP
31	Z	40	CYS

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Mol	Chain	Res	Type
31	Z	44	PHE
31	Z	49	ARG
31	Z	53	THR
31	Z	56	ARG
31	Z	59	ARG
31	Z	61	ASN
31	Z	66	ILE

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (95) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	4	GLN
1	0	5	ASN
1	0	37	HIS
2	1	18	HIS
2	1	44	GLN
2	1	45	HIS
3	2	26	ASN
5	4	13	ASN
5	4	37	GLN
8	C	43	ASN
8	C	85	ASN
8	C	116	GLN
8	C	127	ASN
8	C	141	HIS
8	C	162	GLN
8	C	196	ASN
8	C	199	HIS
8	C	225	ASN
8	C	231	HIS
8	C	238	ASN
9	D	32	ASN
9	D	36	GLN
9	D	67	HIS
9	D	126	ASN
9	D	140	HIS
9	D	148	GLN
9	D	149	ASN
9	D	150	GLN
9	D	167	ASN
9	D	173	GLN
10	E	24	ASN

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Mol	Chain	Res	Type
10	E	29	HIS
10	E	90	GLN
10	E	115	GLN
10	E	136	GLN
10	E	165	HIS
11	F	36	ASN
11	F	126	ASN
12	G	29	ASN
12	G	100	ASN
12	G	138	GLN
14	I	5	GLN
14	I	30	GLN
14	I	104	GLN
14	I	110	GLN
15	J	80	HIS
15	J	128	ASN
16	K	5	GLN
16	K	29	HIS
16	K	82	ASN
17	L	4	ASN
17	L	35	HIS
17	L	93	ASN
17	L	99	ASN
17	L	104	GLN
18	M	13	HIS
18	M	45	GLN
18	M	97	GLN
19	N	16	HIS
20	O	19	GLN
20	O	29	HIS
20	O	98	GLN
21	P	65	ASN
21	P	74	GLN
22	Q	43	GLN
22	Q	51	GLN
22	Q	55	GLN
22	Q	70	GLN
22	Q	80	ASN
23	R	6	GLN
23	R	43	ASN
23	R	82	HIS
23	R	86	GLN

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Mol	Chain	Res	Type
23	R	87	GLN
23	R	89	HIS
23	R	91	GLN
24	S	57	ASN
25	T	48	GLN
25	T	70	HIS
26	U	65	GLN
26	U	98	ASN
27	V	51	GLN
27	V	78	GLN
27	V	80	HIS
28	W	39	GLN
28	W	49	ASN
29	X	20	ASN
29	X	36	GLN
29	X	45	GLN
29	X	58	ASN
30	Y	8	GLN
30	Y	19	HIS
31	Z	6	HIS
31	Z	30	HIS
31	Z	48	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
6	A	117/120 (97%)	48 (41%)	15 (12%)
7	B	2838/2904 (97%)	1137 (40%)	386 (13%)
All	All	2955/3024 (97%)	1185 (40%)	401 (13%)

All (1185) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
6	A	3	C
6	A	6	G
6	A	7	G
6	A	8	C
6	A	9	G
6	A	12	C
6	A	13	G
6	A	14	U

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Mol	Chain	Res	Type
6	A	15	A
6	A	16	G
6	A	24	G
6	A	25	U
6	A	26	C
6	A	27	C
6	A	28	C
6	A	29	A
6	A	30	C
6	A	31	C
6	A	32	U
6	A	34	A
6	A	35	C
6	A	37	C
6	A	38	C
6	A	39	A
6	A	41	G
6	A	42	C
6	A	43	C
6	A	45	A
6	A	47	C
6	A	48	U
6	A	49	C
6	A	52	A
6	A	55	U
6	A	57	A
6	A	62	C
6	A	67	G
6	A	70	C
6	A	77	U
6	A	87	U
6	A	89	U
6	A	90	C
6	A	97	C
6	A	99	A
6	A	105	G
6	A	107	G
6	A	108	A
6	A	109	A
6	A	116	G
7	B	2	G
7	B	4	U

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Mol	Chain	Res	Type
7	B	6	A
7	B	8	C
7	B	15	G
7	B	28	A
7	B	29	U
7	B	34	U
7	B	35	G
7	B	38	A
7	B	42	A
7	B	43	G
7	B	44	A
7	B	45	G
7	B	46	G
7	B	49	A
7	B	50	U
7	B	52	A
7	B	60	G
7	B	61	C
7	B	63	A
7	B	64	A
7	B	71	A
7	B	72	U
7	B	74	A
7	B	75	G
7	B	79	C
7	B	84	A
7	B	85	G
7	B	86	G
7	B	87	U
7	B	88	G
7	B	91	A
7	B	92	U
7	B	95	A
7	B	96	C
7	B	98	G
7	B	99	U
7	B	100	U
7	B	101	A
7	B	102	U
7	B	103	A
7	B	104	A
7	B	106	C

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Mol	Chain	Res	Type
7	B	108	G
7	B	112	U
7	B	113	U
7	B	118	A
7	B	119	A
7	B	120	U
7	B	121	G
7	B	123	G
7	B	124	G
7	B	125	A
7	B	128	C
7	B	134	G
7	B	139	U
7	B	140	C
7	B	141	G
7	B	142	A
7	B	143	C
7	B	144	A
7	B	149	A
7	B	156	A
7	B	158	U
7	B	160	A
7	B	162	U
7	B	163	C
7	B	165	A
7	B	166	U
7	B	177	G
7	B	178	G
7	B	180	G
7	B	181	A
7	B	187	G
7	B	188	G
7	B	194	G
7	B	195	A
7	B	196	A
7	B	197	A
7	B	198	C
7	B	199	A
7	B	200	U
7	B	204	A
7	B	205	G
7	B	216	A

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Mol	Chain	Res	Type
7	B	221	A
7	B	222	A
7	B	228	C
7	B	229	C
7	B	233	A
7	B	239	C
7	B	240	C
7	B	241	A
7	B	244	A
7	B	245	G
7	B	247	G
7	B	248	G
7	B	250	G
7	B	251	A
7	B	252	G
7	B	254	G
7	B	255	A
7	B	256	A
7	B	261	G
7	B	262	A
7	B	263	G
7	B	264	C
7	B	265	A
7	B	266	G
7	B	267	C
7	B	268	C
7	B	270	A
7	B	271	G
7	B	276	U
7	B	277	G
7	B	278	A
7	B	284	U
7	B	293	U
7	B	294	A
7	B	295	G
7	B	298	G
7	B	299	A
7	B	301	G
7	B	302	C
7	B	303	G
7	B	304	U
7	B	308	G

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Mol	Chain	Res	Type
7	B	310	A
7	B	311	A
7	B	317	G
7	B	321	U
7	B	322	A
7	B	323	C
7	B	324	A
7	B	329	G
7	B	330	A
7	B	331	C
7	B	332	A
7	B	333	G
7	B	334	C
7	B	335	C
7	B	339	U
7	B	340	A
7	B	341	C
7	B	346	A
7	B	347	A
7	B	349	U
7	B	353	C
7	B	354	A
7	B	355	U
7	B	361	G
7	B	364	C
7	B	367	G
7	B	368	A
7	B	369	U
7	B	370	G
7	B	371	A
7	B	372	G
7	B	375	G
7	B	378	C
7	B	379	G
7	B	380	G
7	B	386	G
7	B	387	U
7	B	388	G
7	B	391	A
7	B	392	U
7	B	394	C
7	B	395	U

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Mol	Chain	Res	Type
7	B	396	G
7	B	397	U
7	B	399	U
7	B	400	G
7	B	403	U
7	B	404	A
7	B	405	U
7	B	407	G
7	B	409	G
7	B	411	G
7	B	412	A
7	B	422	A
7	B	424	G
7	B	434	U
7	B	435	C
7	B	436	C
7	B	438	G
7	B	444	C
7	B	445	C
7	B	448	U
7	B	449	A
7	B	450	G
7	B	451	U
7	B	455	C
7	B	456	C
7	B	457	A
7	B	458	G
7	B	461	C
7	B	465	G
7	B	466	A
7	B	468	G
7	B	469	G
7	B	475	C
7	B	479	A
7	B	480	A
7	B	481	G
7	B	483	A
7	B	489	G
7	B	490	C
7	B	491	G
7	B	492	A
7	B	502	A

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Mol	Chain	Res	Type
7	B	503	A
7	B	504	A
7	B	505	A
7	B	508	A
7	B	509	C
7	B	510	C
7	B	526	A
7	B	527	C
7	B	528	A
7	B	529	A
7	B	530	G
7	B	531	C
7	B	532	A
7	B	533	G
7	B	534	U
7	B	540	C
7	B	543	G
7	B	544	C
7	B	545	U
7	B	546	U
7	B	547	A
7	B	548	G
7	B	549	G
7	B	550	C
7	B	553	G
7	B	554	U
7	B	555	G
7	B	556	A
7	B	557	C
7	B	563	A
7	B	566	U
7	B	567	U
7	B	568	U
7	B	569	U
7	B	570	G
7	B	571	U
7	B	572	A
7	B	573	U
7	B	574	A
7	B	575	A
7	B	576	U
7	B	577	G

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Mol	Chain	Res	Type
7	B	586	A
7	B	587	C
7	B	588	U
7	B	593	U
7	B	594	U
7	B	595	C
7	B	601	C
7	B	603	A
7	B	608	A
7	B	609	A
7	B	613	A
7	B	614	A
7	B	615	U
7	B	616	A
7	B	617	G
7	B	620	G
7	B	627	A
7	B	628	G
7	B	631	A
7	B	632	A
7	B	637	A
7	B	640	C
7	B	645	C
7	B	646	U
7	B	648	G
7	B	653	U
7	B	654	A
7	B	655	A
7	B	656	G
7	B	664	G
7	B	667	U
7	B	668	A
7	B	669	G
7	B	670	A
7	B	671	C
7	B	673	C
7	B	675	A
7	B	676	A
7	B	677	A
7	B	678	C
7	B	683	U
7	B	684	G

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Mol	Chain	Res	Type
7	B	685	A
7	B	686	U
7	B	689	A
7	B	690	G
7	B	698	C
7	B	699	A
7	B	700	G
7	B	707	G
7	B	708	G
7	B	715	A
7	B	717	C
7	B	718	A
7	B	722	A
7	B	726	G
7	B	727	A
7	B	728	G
7	B	729	G
7	B	730	A
7	B	740	C
7	B	741	U
7	B	745	G
7	B	746	U
7	B	747	U
7	B	754	U
7	B	756	A
7	B	761	A
7	B	762	U
7	B	764	A
7	B	765	C
7	B	769	U
7	B	773	U
7	B	774	G
7	B	775	G
7	B	776	G
7	B	778	G
7	B	782	A
7	B	784	G
7	B	785	G
7	B	788	A
7	B	789	A
7	B	790	U
7	B	792	A

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Mol	Chain	Res	Type
7	B	793	A
7	B	795	C
7	B	796	C
7	B	797	G
7	B	798	G
7	B	799	G
7	B	800	A
7	B	801	G
7	B	802	A
7	B	803	U
7	B	805	G
7	B	806	C
7	B	807	U
7	B	808	G
7	B	809	G
7	B	811	U
7	B	812	C
7	B	819	A
7	B	822	G
7	B	826	U
7	B	827	U
7	B	829	A
7	B	830	G
7	B	833	A
7	B	843	G
7	B	845	A
7	B	846	U
7	B	859	G
7	B	862	G
7	B	863	A
7	B	864	G
7	B	870	U
7	B	871	U
7	B	873	C
7	B	874	G
7	B	875	G
7	B	876	C
7	B	877	A
7	B	878	A
7	B	899	A
7	B	900	A
7	B	905	A

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Mol	Chain	Res	Type
7	B	906	U
7	B	910	A
7	B	911	A
7	B	912	C
7	B	914	G
7	B	915	C
7	B	916	G
7	B	918	A
7	B	919	U
7	B	931	U
7	B	932	U
7	B	933	A
7	B	934	U
7	B	939	G
7	B	941	A
7	B	944	C
7	B	946	C
7	B	949	G
7	B	953	G
7	B	954	G
7	B	955	U
7	B	961	C
7	B	969	G
7	B	970	U
7	B	971	G
7	B	973	A
7	B	974	G
7	B	975	A
7	B	976	G
7	B	978	G
7	B	983	A
7	B	986	C
7	B	988	A
7	B	989	G
7	B	990	A
7	B	991	C
7	B	995	C
7	B	996	A
7	B	1000	A
7	B	1005	C
7	B	1008	A
7	B	1011	G

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Mol	Chain	Res	Type
7	B	1012	U
7	B	1013	C
7	B	1017	G
7	B	1019	U
7	B	1020	A
7	B	1022	G
7	B	1023	U
7	B	1026	G
7	B	1027	A
7	B	1028	A
7	B	1029	A
7	B	1033	U
7	B	1034	G
7	B	1040	A
7	B	1044	C
7	B	1045	C
7	B	1046	A
7	B	1056	G
7	B	1057	A
7	B	1058	U
7	B	1060	U
7	B	1061	U
7	B	1063	G
7	B	1064	C
7	B	1069	A
7	B	1070	A
7	B	1071	G
7	B	1073	A
7	B	1082	U
7	B	1083	U
7	B	1085	A
7	B	1088	A
7	B	1089	A
7	B	1094	U
7	B	1099	G
7	B	1100	C
7	B	1106	G
7	B	1108	U
7	B	1111	A
7	B	1112	G
7	B	1113	U
7	B	1115	G

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Mol	Chain	Res	Type
7	B	1116	G
7	B	1119	U
7	B	1120	G
7	B	1122	G
7	B	1123	C
7	B	1126	A
7	B	1127	A
7	B	1130	U
7	B	1132	U
7	B	1133	A
7	B	1135	C
7	B	1136	G
7	B	1141	U
7	B	1142	A
7	B	1143	A
7	B	1147	A
7	B	1156	A
7	B	1157	G
7	B	1158	C
7	B	1168	G
7	B	1173	U
7	B	1175	A
7	B	1176	U
7	B	1186	G
7	B	1195	G
7	B	1199	U
7	B	1200	C
7	B	1202	G
7	B	1204	A
7	B	1205	A
7	B	1206	G
7	B	1210	G
7	B	1211	C
7	B	1216	G
7	B	1217	U
7	B	1224	U
7	B	1227	G
7	B	1235	G
7	B	1237	A
7	B	1238	G
7	B	1241	A
7	B	1242	U

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Mol	Chain	Res	Type
7	B	1244	A
7	B	1247	A
7	B	1248	G
7	B	1249	U
7	B	1251	C
7	B	1253	A
7	B	1254	A
7	B	1256	G
7	B	1257	C
7	B	1258	U
7	B	1264	A
7	B	1265	A
7	B	1266	G
7	B	1269	A
7	B	1270	C
7	B	1271	G
7	B	1272	A
7	B	1273	U
7	B	1274	A
7	B	1275	A
7	B	1276	A
7	B	1284	A
7	B	1286	A
7	B	1287	A
7	B	1288	G
7	B	1289	C
7	B	1291	C
7	B	1292	G
7	B	1296	G
7	B	1297	C
7	B	1299	G
7	B	1300	G
7	B	1301	A
7	B	1305	C
7	B	1312	U
7	B	1321	A
7	B	1322	A
7	B	1325	U
7	B	1326	U
7	B	1328	A
7	B	1329	U
7	B	1333	G

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Mol	Chain	Res	Type
7	B	1337	G
7	B	1340	U
7	B	1341	G
7	B	1342	A
7	B	1345	C
7	B	1348	C
7	B	1349	C
7	B	1351	C
7	B	1352	U
7	B	1353	A
7	B	1359	A
7	B	1360	G
7	B	1364	G
7	B	1365	A
7	B	1366	A
7	B	1367	A
7	B	1369	G
7	B	1375	U
7	B	1376	C
7	B	1378	A
7	B	1379	U
7	B	1380	G
7	B	1383	A
7	B	1384	A
7	B	1385	A
7	B	1386	C
7	B	1393	A
7	B	1395	A
7	B	1396	U
7	B	1397	U
7	B	1398	C
7	B	1402	U
7	B	1410	G
7	B	1416	G
7	B	1419	A
7	B	1421	G
7	B	1427	A
7	B	1428	C
7	B	1429	G
7	B	1433	A
7	B	1434	A
7	B	1435	G

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Mol	Chain	Res	Type
7	B	1450	G
7	B	1451	C
7	B	1452	G
7	B	1453	A
7	B	1454	C
7	B	1455	G
7	B	1456	G
7	B	1459	G
7	B	1460	U
7	B	1461	C
7	B	1478	G
7	B	1479	G
7	B	1480	C
7	B	1482	G
7	B	1485	U
7	B	1490	A
7	B	1491	G
7	B	1493	C
7	B	1494	A
7	B	1498	C
7	B	1503	A
7	B	1504	A
7	B	1507	C
7	B	1508	A
7	B	1509	A
7	B	1510	G
7	B	1515	A
7	B	1522	A
7	B	1523	U
7	B	1524	G
7	B	1532	A
7	B	1535	A
7	B	1536	C
7	B	1538	G
7	B	1540	G
7	B	1552	A
7	B	1554	U
7	B	1555	G
7	B	1558	C
7	B	1559	U
7	B	1560	G
7	B	1565	C

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Mol	Chain	Res	Type
7	B	1566	A
7	B	1567	G
7	B	1569	A
7	B	1572	A
7	B	1578	U
7	B	1583	A
7	B	1584	U
7	B	1585	C
7	B	1599	U
7	B	1601	G
7	B	1602	U
7	B	1607	C
7	B	1608	A
7	B	1609	A
7	B	1610	A
7	B	1614	A
7	B	1616	A
7	B	1617	C
7	B	1618	A
7	B	1619	G
7	B	1633	G
7	B	1634	A
7	B	1635	A
7	B	1636	U
7	B	1640	A
7	B	1644	C
7	B	1647	U
7	B	1648	U
7	B	1654	A
7	B	1663	G
7	B	1664	A
7	B	1673	G
7	B	1674	G
7	B	1677	A
7	B	1678	A
7	B	1682	G
7	B	1683	U
7	B	1692	U
7	B	1693	U
7	B	1694	C
7	B	1695	G
7	B	1696	G

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Mol	Chain	Res	Type
7	B	1697	G
7	B	1698	A
7	B	1699	G
7	B	1700	A
7	B	1701	A
7	B	1703	G
7	B	1707	G
7	B	1708	C
7	B	1713	A
7	B	1715	G
7	B	1716	U
7	B	1722	A
7	B	1730	C
7	B	1731	G
7	B	1732	C
7	B	1733	G
7	B	1738	G
7	B	1745	A
7	B	1748	C
7	B	1756	G
7	B	1758	U
7	B	1759	A
7	B	1763	G
7	B	1764	C
7	B	1772	A
7	B	1773	A
7	B	1774	C
7	B	1775	U
7	B	1776	G
7	B	1781	U
7	B	1782	U
7	B	1783	A
7	B	1784	A
7	B	1785	A
7	B	1787	A
7	B	1788	C
7	B	1791	A
7	B	1792	G
7	B	1798	U
7	B	1800	C
7	B	1801	A
7	B	1806	C

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Mol	Chain	Res	Type
7	B	1808	A
7	B	1809	A
7	B	1814	G
7	B	1815	A
7	B	1816	C
7	B	1817	G
7	B	1818	U
7	B	1819	A
7	B	1820	U
7	B	1821	A
7	B	1822	C
7	B	1823	G
7	B	1828	G
7	B	1829	A
7	B	1830	C
7	B	1831	G
7	B	1840	G
7	B	1841	U
7	B	1847	A
7	B	1848	A
7	B	1857	G
7	B	1858	A
7	B	1870	C
7	B	1871	A
7	B	1873	G
7	B	1875	G
7	B	1884	G
7	B	1885	A
7	B	1898	U
7	B	1900	A
7	B	1903	G
7	B	1906	G
7	B	1913	A
7	B	1914	C
7	B	1920	C
7	B	1929	G
7	B	1930	G
7	B	1936	A
7	B	1937	A
7	B	1938	A
7	B	1939	U
7	B	1940	U

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Mol	Chain	Res	Type
7	B	1941	C
7	B	1942	C
7	B	1943	U
7	B	1944	U
7	B	1952	A
7	B	1955	U
7	B	1956	U
7	B	1965	C
7	B	1966	A
7	B	1967	C
7	B	1970	A
7	B	1971	U
7	B	1972	G
7	B	1973	G
7	B	1974	C
7	B	1975	G
7	B	1976	U
7	B	1977	A
7	B	1987	A
7	B	1989	G
7	B	1991	U
7	B	1992	G
7	B	1993	U
7	B	1996	C
7	B	1997	C
7	B	2004	G
7	B	2007	U
7	B	2012	G
7	B	2014	A
7	B	2015	A
7	B	2017	U
7	B	2020	A
7	B	2022	U
7	B	2023	C
7	B	2026	U
7	B	2030	A
7	B	2031	A
7	B	2032	G
7	B	2033	A
7	B	2034	U
7	B	2035	G
7	B	2039	U

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Mol	Chain	Res	Type
7	B	2040	G
7	B	2042	A
7	B	2043	C
7	B	2046	G
7	B	2051	A
7	B	2052	A
7	B	2055	C
7	B	2056	G
7	B	2058	A
7	B	2059	A
7	B	2060	A
7	B	2061	G
7	B	2062	A
7	B	2063	C
7	B	2067	G
7	B	2068	U
7	B	2069	G
7	B	2073	C
7	B	2075	U
7	B	2076	U
7	B	2077	A
7	B	2078	C
7	B	2090	A
7	B	2092	U
7	B	2093	G
7	B	2094	A
7	B	2096	C
7	B	2097	A
7	B	2100	G
7	B	2105	U
7	B	2106	U
7	B	2107	G
7	B	2108	A
7	B	2110	G
7	B	2134	A
7	B	2135	A
7	B	2136	G
7	B	2138	G
7	B	2144	G
7	B	2145	C
7	B	2146	C
7	B	2147	A

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Mol	Chain	Res	Type
7	B	2148	G
7	B	2149	U
7	B	2150	C
7	B	2156	G
7	B	2157	G
7	B	2180	U
7	B	2181	U
7	B	2183	A
7	B	2184	A
7	B	2192	U
7	B	2198	A
7	B	2199	A
7	B	2200	C
7	B	2202	U
7	B	2203	U
7	B	2204	G
7	B	2209	G
7	B	2210	U
7	B	2211	A
7	B	2212	A
7	B	2213	U
7	B	2214	C
7	B	2215	C
7	B	2223	G
7	B	2224	G
7	B	2225	A
7	B	2226	C
7	B	2230	G
7	B	2234	G
7	B	2238	G
7	B	2239	G
7	B	2243	U
7	B	2250	G
7	B	2258	C
7	B	2259	U
7	B	2261	C
7	B	2266	A
7	B	2267	A
7	B	2268	A
7	B	2270	A
7	B	2271	G
7	B	2275	C

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Mol	Chain	Res	Type
7	B	2277	G
7	B	2278	A
7	B	2281	A
7	B	2282	G
7	B	2283	C
7	B	2285	C
7	B	2287	A
7	B	2289	G
7	B	2297	A
7	B	2303	G
7	B	2304	G
7	B	2305	U
7	B	2307	G
7	B	2308	G
7	B	2309	A
7	B	2310	C
7	B	2312	U
7	B	2320	U
7	B	2321	U
7	B	2322	A
7	B	2324	U
7	B	2325	G
7	B	2326	C
7	B	2327	A
7	B	2328	A
7	B	2333	A
7	B	2334	U
7	B	2335	A
7	B	2336	A
7	B	2337	G
7	B	2338	C
7	B	2344	U
7	B	2345	G
7	B	2347	C
7	B	2352	A
7	B	2353	G
7	B	2358	A
7	B	2359	C
7	B	2360	G
7	B	2361	G
7	B	2363	G
7	B	2366	A

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Mol	Chain	Res	Type
7	B	2371	G
7	B	2382	G
7	B	2383	G
7	B	2384	U
7	B	2385	C
7	B	2389	G
7	B	2391	G
7	B	2393	U
7	B	2396	G
7	B	2398	U
7	B	2402	U
7	B	2403	C
7	B	2406	A
7	B	2408	U
7	B	2410	G
7	B	2420	C
7	B	2421	G
7	B	2422	C
7	B	2423	U
7	B	2425	A
7	B	2426	A
7	B	2427	C
7	B	2428	G
7	B	2429	G
7	B	2430	A
7	B	2431	U
7	B	2432	A
7	B	2434	A
7	B	2435	A
7	B	2439	A
7	B	2440	C
7	B	2441	U
7	B	2447	G
7	B	2448	A
7	B	2449	U
7	B	2450	A
7	B	2452	C
7	B	2453	A
7	B	2454	G
7	B	2459	A
7	B	2460	U
7	B	2464	G

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Mol	Chain	Res	Type
7	B	2470	G
7	B	2473	U
7	B	2474	U
7	B	2476	A
7	B	2478	A
7	B	2479	U
7	B	2484	G
7	B	2487	G
7	B	2488	G
7	B	2489	U
7	B	2491	U
7	B	2497	A
7	B	2501	C
7	B	2502	G
7	B	2504	U
7	B	2505	G
7	B	2506	U
7	B	2512	C
7	B	2513	A
7	B	2514	U
7	B	2516	A
7	B	2517	C
7	B	2518	A
7	B	2520	C
7	B	2521	C
7	B	2523	G
7	B	2525	G
7	B	2526	G
7	B	2529	G
7	B	2530	A
7	B	2534	A
7	B	2535	G
7	B	2540	C
7	B	2542	A
7	B	2543	G
7	B	2547	A
7	B	2550	G
7	B	2552	U
7	B	2554	U
7	B	2562	U
7	B	2563	U
7	B	2566	A

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Mol	Chain	Res	Type
7	B	2567	G
7	B	2572	A
7	B	2573	C
7	B	2574	G
7	B	2575	C
7	B	2576	G
7	B	2577	A
7	B	2581	G
7	B	2582	G
7	B	2585	U
7	B	2586	U
7	B	2588	G
7	B	2589	A
7	B	2592	G
7	B	2593	U
7	B	2594	C
7	B	2595	G
7	B	2596	U
7	B	2609	U
7	B	2610	C
7	B	2612	C
7	B	2613	U
7	B	2614	A
7	B	2615	U
7	B	2618	G
7	B	2619	C
7	B	2623	G
7	B	2624	G
7	B	2628	C
7	B	2629	U
7	B	2630	G
7	B	2634	A
7	B	2637	U
7	B	2639	A
7	B	2640	G
7	B	2641	G
7	B	2646	C
7	B	2654	A
7	B	2656	U
7	B	2663	G
7	B	2672	U
7	B	2673	G

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Mol	Chain	Res	Type
7	B	2675	A
7	B	2681	C
7	B	2682	A
7	B	2683	C
7	B	2684	U
7	B	2689	U
7	B	2690	U
7	B	2691	C
7	B	2694	G
7	B	2704	C
7	B	2707	U
7	B	2712	C
7	B	2714	G
7	B	2717	C
7	B	2718	G
7	B	2719	G
7	B	2720	U
7	B	2721	A
7	B	2724	U
7	B	2725	A
7	B	2726	A
7	B	2727	A
7	B	2731	G
7	B	2732	G
7	B	2733	A
7	B	2744	G
7	B	2745	C
7	B	2747	G
7	B	2748	A
7	B	2750	A
7	B	2751	G
7	B	2752	C
7	B	2758	A
7	B	2760	C
7	B	2761	A
7	B	2762	C
7	B	2763	G
7	B	2764	A
7	B	2765	A
7	B	2766	A
7	B	2767	C
7	B	2771	C

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Mol	Chain	Res	Type
7	B	2778	A
7	B	2779	U
7	B	2790	U
7	B	2791	G
7	B	2797	U
7	B	2798	U
7	B	2799	A
7	B	2800	A
7	B	2801	G
7	B	2808	G
7	B	2818	U
7	B	2820	A
7	B	2821	A
7	B	2825	G
7	B	2828	G
7	B	2829	A
7	B	2832	U
7	B	2833	U
7	B	2834	G
7	B	2837	A
7	B	2838	G
7	B	2839	G
7	B	2842	G
7	B	2848	G
7	B	2850	A
7	B	2856	A
7	B	2859	G
7	B	2860	A
7	B	2861	U
7	B	2867	G
7	B	2868	A
7	B	2872	A
7	B	2873	A
7	B	2874	C
7	B	2879	A
7	B	2884	U
7	B	2885	G
7	B	2891	U
7	B	2893	A
7	B	2894	G
7	B	2897	U
7	B	2901	C

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Mol	Chain	Res	Type
7	B	2903	U

All (401) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
6	A	2	G
6	A	7	G
6	A	10	G
6	A	12	C
6	A	14	U
6	A	15	A
6	A	25	U
6	A	31	C
6	A	34	A
6	A	44	G
6	A	48	U
6	A	56	G
6	A	66	A
6	A	104	A
6	A	107	G
7	B	27	G
7	B	33	C
7	B	34	U
7	B	49	A
7	B	60	G
7	B	62	U
7	B	63	A
7	B	84	A
7	B	99	U
7	B	100	U
7	B	101	A
7	B	102	U
7	B	124	G
7	B	126	A
7	B	127	A
7	B	139	U
7	B	141	G
7	B	143	C
7	B	159	G
7	B	162	U
7	B	177	G
7	B	187	G

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Mol	Chain	Res	Type
7	B	196	A
7	B	197	A
7	B	198	C
7	B	199	A
7	B	204	A
7	B	215	G
7	B	222	A
7	B	228	C
7	B	243	U
7	B	247	G
7	B	250	G
7	B	255	A
7	B	262	A
7	B	299	A
7	B	301	G
7	B	302	C
7	B	310	A
7	B	322	A
7	B	329	G
7	B	330	A
7	B	331	C
7	B	332	A
7	B	333	G
7	B	335	C
7	B	337	C
7	B	347	A
7	B	353	C
7	B	364	C
7	B	369	U
7	B	370	G
7	B	374	A
7	B	375	G
7	B	386	G
7	B	387	U
7	B	391	A
7	B	394	C
7	B	396	G
7	B	403	U
7	B	404	A
7	B	408	G
7	B	434	U
7	B	447	A

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Mol	Chain	Res	Type
7	B	456	C
7	B	458	G
7	B	465	G
7	B	468	G
7	B	478	A
7	B	479	A
7	B	489	G
7	B	492	A
7	B	503	A
7	B	504	A
7	B	526	A
7	B	529	A
7	B	530	G
7	B	531	C
7	B	532	A
7	B	533	G
7	B	544	C
7	B	546	U
7	B	553	G
7	B	555	G
7	B	562	U
7	B	568	U
7	B	569	U
7	B	571	U
7	B	573	U
7	B	575	A
7	B	576	U
7	B	604	G
7	B	608	A
7	B	613	A
7	B	614	A
7	B	620	G
7	B	627	A
7	B	631	A
7	B	655	A
7	B	667	U
7	B	669	G
7	B	670	A
7	B	672	C
7	B	675	A
7	B	677	A
7	B	682	G

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Mol	Chain	Res	Type
7	B	683	U
7	B	689	A
7	B	726	G
7	B	740	C
7	B	761	A
7	B	773	U
7	B	774	G
7	B	775	G
7	B	776	G
7	B	784	G
7	B	788	A
7	B	793	A
7	B	795	C
7	B	796	C
7	B	799	G
7	B	800	A
7	B	801	G
7	B	802	A
7	B	808	G
7	B	811	U
7	B	827	U
7	B	829	A
7	B	863	A
7	B	870	U
7	B	871	U
7	B	910	A
7	B	915	C
7	B	931	U
7	B	932	U
7	B	933	A
7	B	944	C
7	B	945	A
7	B	970	U
7	B	975	A
7	B	980	A
7	B	982	C
7	B	988	A
7	B	990	A
7	B	995	C
7	B	1010	A
7	B	1011	G
7	B	1020	A

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Mol	Chain	Res	Type
7	B	1025	G
7	B	1027	A
7	B	1028	A
7	B	1045	C
7	B	1060	U
7	B	1063	G
7	B	1069	A
7	B	1070	A
7	B	1083	U
7	B	1099	G
7	B	1111	A
7	B	1115	G
7	B	1122	G
7	B	1125	G
7	B	1126	A
7	B	1128	G
7	B	1130	U
7	B	1134	A
7	B	1141	U
7	B	1142	A
7	B	1156	A
7	B	1157	G
7	B	1199	U
7	B	1204	A
7	B	1205	A
7	B	1210	G
7	B	1211	C
7	B	1216	G
7	B	1234	U
7	B	1236	G
7	B	1250	G
7	B	1253	A
7	B	1257	C
7	B	1264	A
7	B	1265	A
7	B	1266	G
7	B	1270	C
7	B	1272	A
7	B	1275	A
7	B	1288	G
7	B	1291	C
7	B	1296	G

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Mol	Chain	Res	Type
7	B	1300	G
7	B	1301	A
7	B	1311	G
7	B	1320	C
7	B	1321	A
7	B	1340	U
7	B	1341	G
7	B	1359	A
7	B	1378	A
7	B	1379	U
7	B	1382	G
7	B	1392	A
7	B	1395	A
7	B	1419	A
7	B	1420	A
7	B	1427	A
7	B	1434	A
7	B	1450	G
7	B	1451	C
7	B	1454	C
7	B	1458	U
7	B	1459	G
7	B	1460	U
7	B	1490	A
7	B	1497	U
7	B	1522	A
7	B	1554	U
7	B	1559	U
7	B	1565	C
7	B	1567	G
7	B	1583	A
7	B	1602	U
7	B	1607	C
7	B	1610	A
7	B	1616	A
7	B	1617	C
7	B	1626	A
7	B	1632	A
7	B	1644	C
7	B	1646	C
7	B	1647	U
7	B	1652	A

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Mol	Chain	Res	Type
7	B	1663	G
7	B	1677	A
7	B	1693	U
7	B	1694	C
7	B	1696	G
7	B	1713	A
7	B	1721	G
7	B	1732	C
7	B	1737	G
7	B	1758	U
7	B	1781	U
7	B	1782	U
7	B	1784	A
7	B	1786	A
7	B	1787	A
7	B	1791	A
7	B	1814	G
7	B	1815	A
7	B	1817	G
7	B	1819	A
7	B	1829	A
7	B	1847	A
7	B	1857	G
7	B	1870	C
7	B	1885	A
7	B	1913	A
7	B	1929	G
7	B	1936	A
7	B	1937	A
7	B	1938	A
7	B	1939	U
7	B	1940	U
7	B	1941	C
7	B	1943	U
7	B	1964	G
7	B	1966	A
7	B	1973	G
7	B	1996	C
7	B	2003	A
7	B	2014	A
7	B	2016	U
7	B	2021	C

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Mol	Chain	Res	Type
7	B	2031	A
7	B	2033	A
7	B	2034	U
7	B	2035	G
7	B	2046	G
7	B	2051	A
7	B	2058	A
7	B	2060	A
7	B	2061	G
7	B	2062	A
7	B	2067	G
7	B	2076	U
7	B	2100	G
7	B	2105	U
7	B	2106	U
7	B	2107	G
7	B	2146	C
7	B	2147	A
7	B	2179	C
7	B	2180	U
7	B	2199	A
7	B	2210	U
7	B	2211	A
7	B	2212	A
7	B	2214	C
7	B	2223	G
7	B	2225	A
7	B	2238	G
7	B	2250	G
7	B	2258	C
7	B	2281	A
7	B	2282	G
7	B	2289	G
7	B	2296	U
7	B	2307	G
7	B	2324	U
7	B	2327	A
7	B	2331	G
7	B	2333	A
7	B	2334	U
7	B	2336	A
7	B	2343	U

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Mol	Chain	Res	Type
7	B	2344	U
7	B	2345	G
7	B	2352	A
7	B	2358	A
7	B	2370	G
7	B	2382	G
7	B	2407	A
7	B	2423	U
7	B	2425	A
7	B	2432	A
7	B	2434	A
7	B	2448	A
7	B	2452	C
7	B	2453	A
7	B	2458	G
7	B	2473	U
7	B	2478	A
7	B	2488	G
7	B	2500	U
7	B	2503	A
7	B	2505	G
7	B	2516	A
7	B	2517	C
7	B	2519	U
7	B	2521	C
7	B	2525	G
7	B	2529	G
7	B	2543	G
7	B	2566	A
7	B	2571	U
7	B	2581	G
7	B	2585	U
7	B	2587	A
7	B	2594	C
7	B	2609	U
7	B	2613	U
7	B	2614	A
7	B	2629	U
7	B	2636	C
7	B	2674	G
7	B	2681	C
7	B	2683	C

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Mol	Chain	Res	Type
7	B	2689	U
7	B	2690	U
7	B	2706	A
7	B	2711	A
7	B	2717	C
7	B	2718	G
7	B	2719	G
7	B	2724	U
7	B	2726	A
7	B	2750	A
7	B	2751	G
7	B	2763	G
7	B	2765	A
7	B	2778	A
7	B	2799	A
7	B	2800	A
7	B	2807	U
7	B	2808	G
7	B	2820	A
7	B	2832	U
7	B	2833	U
7	B	2835	A
7	B	2850	A
7	B	2860	A
7	B	2867	G
7	B	2873	A
7	B	2884	U
7	B	2893	A

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 111 ligands modelled in this entry, 111 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.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	0	56/56 (100%)	0.13	1 (1%) 65 43	97, 120, 190, 244	0
2	1	54/54 (100%)	0.29	3 (5%) 24 15	92, 113, 223, 254	0
3	2	46/46 (100%)	0.85	5 (10%) 6 7	68, 103, 198, 264	0
4	3	64/64 (100%)	0.32	3 (4%) 30 20	69, 99, 174, 229	0
5	4	38/38 (100%)	0.75	6 (15%) 3 4	124, 144, 238, 298	0
6	A	117/120 (97%)	0.25	6 (5%) 27 17	71, 127, 170, 285	0
7	B	2841/2904 (97%)	0.04	63 (2%) 59 37	41, 89, 202, 421	0
8	C	268/273 (98%)	0.23	14 (5%) 26 17	63, 91, 165, 248	0
9	D	209/209 (100%)	0.18	10 (4%) 29 19	11, 94, 186, 271	0
10	E	201/201 (100%)	0.07	7 (3%) 42 26	88, 117, 224, 290	0
11	F	178/178 (100%)	0.33	10 (5%) 24 15	92, 155, 224, 286	0
12	G	176/176 (100%)	0.55	25 (14%) 3 4	88, 138, 222, 271	0
13	H	149/149 (100%)	0.10	5 (3%) 43 27	107, 147, 233, 274	0
14	I	141/141 (100%)	1.01	29 (20%) 1 2	219, 343, 422, 470	0
15	J	141/142 (99%)	0.54	15 (10%) 7 7	104, 121, 207, 250	0
16	K	122/123 (99%)	-0.02	1 (0%) 83 63	80, 94, 127, 208	0
17	L	144/144 (100%)	0.53	11 (7%) 14 10	83, 128, 275, 315	0
18	M	136/136 (100%)	0.20	3 (2%) 59 37	77, 108, 223, 279	0
19	N	127/127 (100%)	-0.00	0 100 100	58, 78, 155, 257	0
20	O	117/117 (100%)	0.34	11 (9%) 9 8	52, 118, 211, 255	0
21	P	114/114 (100%)	0.09	1 (0%) 81 61	77, 96, 196, 257	0
22	Q	117/117 (100%)	0.17	2 (1%) 67 44	70, 93, 148, 225	0
23	R	103/103 (100%)	-0.05	0 100 100	87, 132, 229, 286	0
24	S	110/110 (100%)	0.01	0 100 100	49, 85, 152, 211	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	T	100/100 (100%)	0.33	4 (4%) 36 23	85, 120, 248, 278	0
26	U	103/103 (100%)	0.48	11 (10%) 6 7	118, 162, 256, 281	0
27	V	94/94 (100%)	-0.14	0 100 100	87, 125, 194, 215	0
28	W	84/84 (100%)	0.51	4 (4%) 29 19	111, 136, 238, 275	0
29	X	63/63 (100%)	0.36	5 (7%) 13 10	86, 150, 233, 320	0
30	Y	58/58 (100%)	0.28	3 (5%) 26 17	126, 138, 240, 249	0
31	Z	70/70 (100%)	0.06	1 (1%) 72 48	70, 91, 169, 255	0
All	All	6341/6414 (98%)	0.17	259 (4%) 36 23	11, 103, 239, 470	0

All (259) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
7	B	645	C	10.0
14	I	113	ALA	9.1
8	C	270	ARG	8.3
15	J	43	GLU	8.3
17	L	8	PRO	7.7
14	I	3	LYS	7.6
2	1	2	LYS	7.5
20	O	22	GLY	7.4
8	C	5	CYS	7.4
14	I	114	ALA	7.0
12	G	172	GLU	6.9
14	I	1	ALA	6.8
20	O	23	ALA	6.7
9	D	74	GLU	6.5
7	B	1058	U	6.3
12	G	173	ALA	6.3
14	I	2	LYS	6.3
12	G	54	ARG	6.0
26	U	61	GLU	6.0
20	O	21	LEU	5.8
12	G	169	ARG	5.8
29	X	21	LEU	5.7
12	G	174	LYS	5.6
12	G	175	LYS	5.6
12	G	171	LYS	5.5
6	A	26	C	5.4
9	D	71	ALA	5.4
29	X	24	GLU	5.2

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Mol	Chain	Res	Type	RSRZ
8	C	3	VAL	5.2
14	I	116	MET	5.2
14	I	97	VAL	5.2
6	A	118	C	5.2
14	I	131	THR	5.2
3	2	41	ARG	5.0
29	X	20	ASN	5.0
17	L	18	ARG	4.9
15	J	1	MET	4.9
8	C	269	ARG	4.9
7	B	2110	G	4.8
15	J	40	HIS	4.6
9	D	73	VAL	4.5
14	I	84	GLY	4.5
6	A	41	G	4.5
7	B	330	A	4.5
14	I	4	VAL	4.5
7	B	613	A	4.5
12	G	56	GLY	4.5
7	B	1057	A	4.4
11	F	178	LYS	4.4
12	G	176	LYS	4.4
12	G	58	ALA	4.4
7	B	2213	U	4.4
14	I	115	ASP	4.4
2	1	3	GLY	4.4
6	A	52	A	4.3
12	G	57	TYR	4.2
7	B	331	C	4.2
15	J	42	ALA	4.2
17	L	9	ALA	4.2
26	U	60	LYS	4.2
25	T	93	LEU	4.1
14	I	96	LYS	4.1
7	B	2149	U	4.0
7	B	1731	G	4.0
12	G	2	ARG	4.0
3	2	42	LEU	3.9
12	G	168	VAL	3.9
12	G	42	VAL	3.9
11	F	177	ARG	3.8
17	L	11	GLY	3.8

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Mol	Chain	Res	Type	RSRZ
15	J	44	TYR	3.8
15	J	51	GLY	3.8
7	B	2609	U	3.8
12	G	41	GLU	3.7
17	L	95	LEU	3.7
17	L	17	LYS	3.7
14	I	52	LEU	3.7
22	Q	117	ALA	3.7
7	B	2764	A	3.6
7	B	1396	U	3.6
14	I	81	LYS	3.6
14	I	86	LYS	3.5
8	C	7	PRO	3.5
7	B	275	C	3.5
7	B	2757	A	3.5
20	O	1	MET	3.5
14	I	117	THR	3.5
26	U	3	LYS	3.5
7	B	2368	C	3.5
4	3	64	ALA	3.4
15	J	50	THR	3.4
12	G	170	THR	3.4
26	U	7	ASP	3.4
26	U	85	ARG	3.4
7	B	1400	U	3.4
11	F	109	ARG	3.3
7	B	915	C	3.3
18	M	59	ARG	3.3
2	1	5	ARG	3.3
5	4	20	ASP	3.3
26	U	4	ILE	3.3
17	L	7	SER	3.2
9	D	72	GLY	3.2
20	O	24	THR	3.2
18	M	18	ARG	3.2
20	O	64	TYR	3.2
10	E	170	ARG	3.2
15	J	12	LYS	3.2
28	W	71	LYS	3.1
26	U	23	LYS	3.1
4	3	36	ALA	3.1
7	B	1490	A	3.1

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Mol	Chain	Res	Type	RSRZ
12	G	59	ASP	3.1
8	C	8	THR	3.0
7	B	31	C	3.0
7	B	1345	C	3.0
7	B	914	G	3.0
28	W	41	GLY	3.0
13	H	6	LEU	3.0
10	E	165	HIS	3.0
7	B	1634	A	3.0
14	I	70	THR	3.0
11	F	116	LEU	2.9
8	C	4	LYS	2.9
11	F	114	ARG	2.9
13	H	2	GLN	2.9
7	B	1081	U	2.9
7	B	1465	G	2.9
9	D	70	LYS	2.9
14	I	6	ALA	2.9
9	D	105	LYS	2.9
4	3	63	TYR	2.9
7	B	2150	C	2.9
7	B	2765	A	2.9
8	C	6	LYS	2.8
7	B	1095	A	2.8
14	I	53	PRO	2.8
25	T	73	ARG	2.8
7	B	101	A	2.8
7	B	2147	A	2.8
14	I	136	GLY	2.8
3	2	39	ARG	2.8
20	O	57	ALA	2.8
7	B	1469	A	2.8
1	0	5	ASN	2.8
11	F	159	ALA	2.8
10	E	155	GLU	2.7
5	4	31	PRO	2.7
8	C	13	ARG	2.7
6	A	88	C	2.7
12	G	167	VAL	2.7
12	G	43	LYS	2.7
7	B	2874	C	2.7
9	D	64	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
3	2	35	ARG	2.7
13	H	7	ASP	2.7
7	B	2148	G	2.7
8	C	268	ARG	2.6
12	G	55	ASP	2.6
14	I	98	GLY	2.6
30	Y	29	ARG	2.6
15	J	13	ARG	2.6
7	B	2523	G	2.6
7	B	1808	A	2.6
14	I	7	TYR	2.6
29	X	37	LEU	2.6
7	B	1056	G	2.6
7	B	1091	G	2.6
7	B	2273	A	2.6
11	F	176	PHE	2.6
18	M	10	ARG	2.6
15	J	5	THR	2.6
11	F	115	GLY	2.5
6	A	25	U	2.5
30	Y	2	LYS	2.5
7	B	2751	G	2.5
28	W	72	GLY	2.5
14	I	85	ILE	2.5
14	I	121	ILE	2.5
29	X	47	ARG	2.5
7	B	2790	U	2.5
17	L	93	ASN	2.4
16	K	71	ARG	2.4
25	T	72	GLN	2.4
7	B	1702	G	2.4
7	B	489	G	2.4
10	E	145	ASP	2.4
12	G	165	ASP	2.4
10	E	19	PHE	2.4
7	B	102	U	2.4
7	B	1430	G	2.4
8	C	12	ARG	2.4
26	U	6	ARG	2.4
14	I	75	ALA	2.4
7	B	2610	C	2.4
7	B	54	G	2.4

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Mol	Chain	Res	Type	RSRZ
22	Q	4	LYS	2.3
8	C	204	LEU	2.3
5	4	25	VAL	2.3
10	E	41	GLN	2.3
9	D	103	ASP	2.3
14	I	80	LYS	2.3
14	I	118	GLY	2.3
7	B	504	A	2.3
14	I	43	ALA	2.3
15	J	23	LYS	2.3
12	G	166	GLU	2.3
14	I	5	GLN	2.3
20	O	2	ASP	2.3
15	J	45	THR	2.3
17	L	12	SER	2.3
5	4	18	LYS	2.3
7	B	1064	C	2.3
12	G	38	ASP	2.3
7	B	2530	A	2.2
7	B	1061	U	2.2
30	Y	1	ALA	2.2
26	U	88	ASP	2.2
7	B	953	G	2.2
20	O	56	LYS	2.2
26	U	2	ALA	2.2
12	G	39	ALA	2.2
9	D	55	LYS	2.2
13	H	104	THR	2.2
7	B	43	G	2.2
17	L	94	THR	2.2
21	P	19	PHE	2.2
10	E	171	ASP	2.2
31	Z	22	MET	2.2
15	J	37	ARG	2.2
7	B	1321	A	2.2
11	F	124	ARG	2.2
11	F	160	LYS	2.1
7	B	952	G	2.1
13	H	18	GLN	2.1
8	C	231	HIS	2.1
25	T	56	GLU	2.1
7	B	2524	G	2.1

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Mol	Chain	Res	Type	RSRZ
15	J	52	ASP	2.1
28	W	78	PHE	2.1
17	L	102	GLY	2.1
12	G	116	LEU	2.1
3	2	28	ARG	2.1
7	B	2449	U	2.1
7	B	1607	C	2.1
5	4	21	GLY	2.1
7	B	312	G	2.1
26	U	93	ARG	2.1
8	C	230	PRO	2.1
7	B	946	C	2.1
7	B	32	C	2.0
7	B	516	C	2.0
20	O	89	ASP	2.0
7	B	285	G	2.0
5	4	9	LYS	2.0
7	B	2142	A	2.0
20	O	19	GLN	2.0
9	D	104	VAL	2.0
15	J	118	MET	2.0

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. LLDF column lists the quality of electron density of the group with respect to its neighbouring residues in protein, DNA or RNA chains. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
32	MG	Z	4109	1/1	0.88	91.12	53,53,53,53	1

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
32	MG	Z	4090	1/1	0.45	53.02	42,42,42,42	0
32	MG	Z	4059	1/1	0.67	21.61	78,78,78,78	0
32	MG	Z	4079	1/1	1.10	19.10	55,55,55,55	1
32	MG	Z	4102	1/1	0.32	16.29	8,8,8,8	0
32	MG	Z	4108	1/1	0.34	9.25	22,22,22,22	0
32	MG	Z	4051	1/1	0.29	8.43	43,43,43,43	0
32	MG	Z	4063	1/1	0.59	8.04	63,63,63,63	0
32	MG	Z	4038	1/1	0.49	7.31	27,27,27,27	0
32	MG	Z	4031	1/1	0.36	6.56	52,52,52,52	0
32	MG	Z	4040	1/1	0.25	4.94	19,19,19,19	0
32	MG	Z	4095	1/1	0.38	4.31	38,38,38,38	0
32	MG	Z	4013	1/1	0.23	4.18	33,33,33,33	0
32	MG	Z	4082	1/1	0.34	4.11	9,9,9,9	0
32	MG	Z	4001	1/1	0.30	3.65	54,54,54,54	0
32	MG	Z	4027	1/1	0.37	3.16	46,46,46,46	0
32	MG	Z	4076	1/1	0.24	3.12	76,76,76,76	0
32	MG	Z	4100	1/1	0.26	3.07	43,43,43,43	0
32	MG	Z	4028	1/1	0.36	2.82	39,39,39,39	0
32	MG	Z	4105	1/1	0.37	2.71	6,6,6,6	0
32	MG	Z	4078	1/1	0.46	2.65	54,54,54,54	0
32	MG	Z	4039	1/1	0.37	2.51	46,46,46,46	0
32	MG	Z	4012	1/1	0.22	2.36	14,14,14,14	0
32	MG	Z	4065	1/1	0.34	2.32	45,45,45,45	0
32	MG	Z	4083	1/1	0.28	2.22	24,24,24,24	0
32	MG	Z	4074	1/1	0.51	2.16	61,61,61,61	0
32	MG	Z	4069	1/1	0.27	2.08	33,33,33,33	0
32	MG	Z	4062	1/1	0.29	1.82	11,11,11,11	0
32	MG	Z	4044	1/1	0.24	1.58	67,67,67,67	0
32	MG	Z	4106	1/1	0.29	1.37	20,20,20,20	0
32	MG	Z	4042	1/1	0.23	1.20	69,69,69,69	0
32	MG	Z	4002	1/1	0.30	0.88	8,8,8,8	0
32	MG	Z	4066	1/1	0.29	0.70	9,9,9,9	0
32	MG	Z	4003	1/1	0.28	0.61	9,9,9,9	0
32	MG	Z	4091	1/1	0.18	0.48	7,7,7,7	0
32	MG	Z	4056	1/1	0.25	0.48	7,7,7,7	0
32	MG	Z	4070	1/1	0.21	0.23	52,52,52,52	0
32	MG	Z	4092	1/1	0.20	0.14	3,3,3,3	0
32	MG	Z	4055	1/1	0.24	0.06	8,8,8,8	0
32	MG	Z	4049	1/1	0.15	0.04	45,45,45,45	0
32	MG	Z	4036	1/1	0.20	0.00	10,10,10,10	0
32	MG	Z	4053	1/1	0.21	-0.05	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
32	MG	Z	4030	1/1	0.20	-0.11	55,55,55,55	0
32	MG	Z	4080	1/1	0.17	-0.30	10,10,10,10	0
32	MG	Z	4019	1/1	0.20	-0.30	8,8,8,8	0
32	MG	Z	4075	1/1	0.17	-0.34	15,15,15,15	0
32	MG	Z	4029	1/1	0.20	-0.34	17,17,17,17	0
32	MG	Z	4058	1/1	0.15	-0.40	12,12,12,12	0
32	MG	Z	4098	1/1	0.17	-0.61	43,43,43,43	0
32	MG	Z	4068	1/1	0.19	-0.69	10,10,10,10	0
32	MG	Z	4096	1/1	0.21	-0.73	89,89,89,89	0
32	MG	Z	4077	1/1	0.16	-0.74	57,57,57,57	0
32	MG	Z	4097	1/1	0.18	-0.82	9,9,9,9	0
32	MG	Z	4046	1/1	0.14	-0.95	10,10,10,10	0
32	MG	Z	4000	1/1	0.13	-0.95	9,9,9,9	0
32	MG	Z	4009	1/1	0.16	-0.98	30,30,30,30	0
32	MG	Z	4043	1/1	0.16	-1.01	83,83,83,83	0
32	MG	Z	4035	1/1	0.16	-1.09	19,19,19,19	0
32	MG	Z	4021	1/1	0.14	-1.13	21,21,21,21	0
32	MG	Z	4064	1/1	0.15	-1.15	26,26,26,26	0
32	MG	Z	4048	1/1	0.09	-1.16	30,30,30,30	1
32	MG	Z	4088	1/1	0.15	-1.21	38,38,38,38	0
32	MG	Z	4057	1/1	0.13	-1.34	31,31,31,31	0
32	MG	Z	4087	1/1	0.12	-1.41	52,52,52,52	0
32	MG	Z	4081	1/1	0.13	-1.43	17,17,17,17	0
32	MG	Z	4085	1/1	0.13	-1.44	17,17,17,17	0
32	MG	Z	4007	1/1	0.17	-1.47	16,16,16,16	0
32	MG	Z	4041	1/1	0.14	-1.47	18,18,18,18	0
32	MG	Z	4067	1/1	0.15	-1.52	59,59,59,59	0
32	MG	Z	4024	1/1	0.13	-1.52	27,27,27,27	0
32	MG	Z	4061	1/1	0.13	-1.63	7,7,7,7	0
32	MG	Z	4026	1/1	0.19	-1.65	40,40,40,40	0
32	MG	Z	4089	1/1	0.12	-1.66	67,67,67,67	0
32	MG	Z	4086	1/1	0.15	-1.69	25,25,25,25	0
32	MG	Z	4033	1/1	0.10	-1.71	7,7,7,7	0
32	MG	Z	4005	1/1	0.15	-1.74	19,19,19,19	0
32	MG	Z	4073	1/1	0.14	-1.75	33,33,33,33	0
32	MG	Z	4050	1/1	0.10	-1.82	12,12,12,12	0
32	MG	Z	4018	1/1	0.12	-1.83	11,11,11,11	0
32	MG	Z	4110	1/1	0.13	-1.97	16,16,16,16	0
32	MG	Z	4017	1/1	0.12	-2.01	25,25,25,25	0
32	MG	Z	4099	1/1	0.09	-2.16	7,7,7,7	0
32	MG	Z	4022	1/1	0.08	-2.42	7,7,7,7	0
32	MG	Z	4011	1/1	0.12	-2.43	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
32	MG	Z	4060	1/1	0.17	-2.44	31,31,31,31	0
32	MG	Z	4023	1/1	0.12	-2.45	21,21,21,21	0
32	MG	Z	4004	1/1	0.09	-2.47	26,26,26,26	0
32	MG	Z	4032	1/1	0.10	-2.62	33,33,33,33	0
32	MG	Z	4015	1/1	0.08	-2.72	18,18,18,18	0
32	MG	Z	4025	1/1	0.09	-2.74	10,10,10,10	0
32	MG	Z	4047	1/1	0.07	-3.14	4,4,4,4	0
32	MG	Z	4072	1/1	0.07	-3.16	14,14,14,14	0
32	MG	Z	4020	1/1	0.09	-3.20	22,22,22,22	0
32	MG	Z	4008	1/1	0.10	-3.24	13,13,13,13	0
32	MG	Z	4094	1/1	0.08	-3.43	22,22,22,22	0
32	MG	Z	4084	1/1	0.09	-3.88	16,16,16,16	0
32	MG	Z	4016	1/1	0.11	-3.96	13,13,13,13	0
32	MG	Z	4104	1/1	0.18	-4.02	10,10,10,10	0
32	MG	Z	4071	1/1	0.12	-4.29	42,42,42,42	0
32	MG	Z	4034	1/1	0.09	-4.30	20,20,20,20	0
32	MG	Z	4045	1/1	0.06	-4.65	29,29,29,29	0
32	MG	Z	4010	1/1	0.10	-6.38	33,33,33,33	0
32	MG	Z	4052	1/1	0.10	-6.58	5,5,5,5	0
32	MG	Z	4054	1/1	0.07	-6.58	5,5,5,5	0
32	MG	Z	4037	1/1	0.07	-7.14	58,58,58,58	0
32	MG	Z	4006	1/1	0.10	-9.88	25,25,25,25	0
32	MG	Z	4014	1/1	0.07	-34.60	9,9,9,9	0
32	MG	Z	4093	1/1	0.09	-36.33	16,16,16,16	0
32	MG	Z	4101	1/1	0.18	-	43,43,43,43	0
32	MG	Z	4107	1/1	0.32	-	20,20,20,20	0
32	MG	Z	4103	1/1	0.21	-	17,17,17,17	0

6.5 Other polymers ⓘ

There are no such residues in this entry.