



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 11:07 PM UTC

PDB ID : 1Y69 / pdb_00001y69
Title : RRF domain I in complex with the 50S ribosomal subunit from *Deinococcus radiodurans*
Authors : Wilson, D.N.; Schlutzen, F.; Harms, J.M.; Yoshida, T.; Ohkubo, T.; Albrecht, R.; Buerger, J.; Kobayashi, Y.; Fucini, P.
Deposited on : 2004-12-04
Resolution : 3.33 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

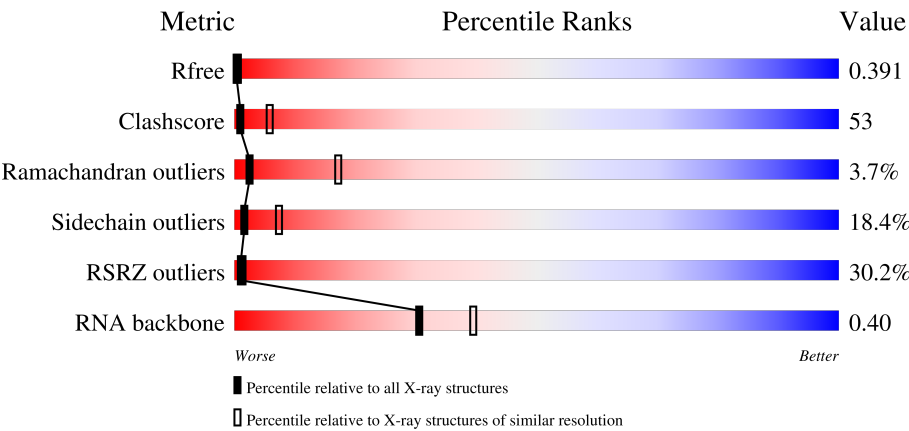
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.33 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}	180053	1434 (3.38-3.30)
Clashscore	190562	1479 (3.38-3.30)
Ramachandran outliers	187476	1456 (3.38-3.30)
Sidechain outliers	187428	1455 (3.38-3.30)
RSRZ outliers	180081	1434 (3.38-3.30)
RNA backbone	3983	1083 (3.68-3.00)

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 of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	0	2880	28% 10% 60% 21% 6%
2	9	124	53% 13% 68% 15% 5%
3	K	141	29% 33% 44% 18%
4	U	91	19% 41% 43% 9% 8%

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Mol	Chain	Length	Quality of chain
5	8	113	37% 38% 52% 8%

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 64484 atoms, of which 0 are hydrogens and 0 are deuteriums.

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 RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	0	2766	Total	C	N	O	P	0	0	0
			59359	26479	10949	19166	2765			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
0	1526	U	C	conflict	GB 1026245073

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	9	118	Total	C	N	O	P	0	0	0
			2516	1124	464	811	117			

- Molecule 3 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	K	136	Total	C	N	O	S	0	0	0
			1090	696	202	185	7			

- Molecule 4 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	U	84	Total	C	N	O	S	0	0	0
			625	393	122	109	1			

- Molecule 5 is a protein called Ribosome-recycling factor.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	8	113	Total	C	N	O	S	0	0	0
			894	541	170	179	4			

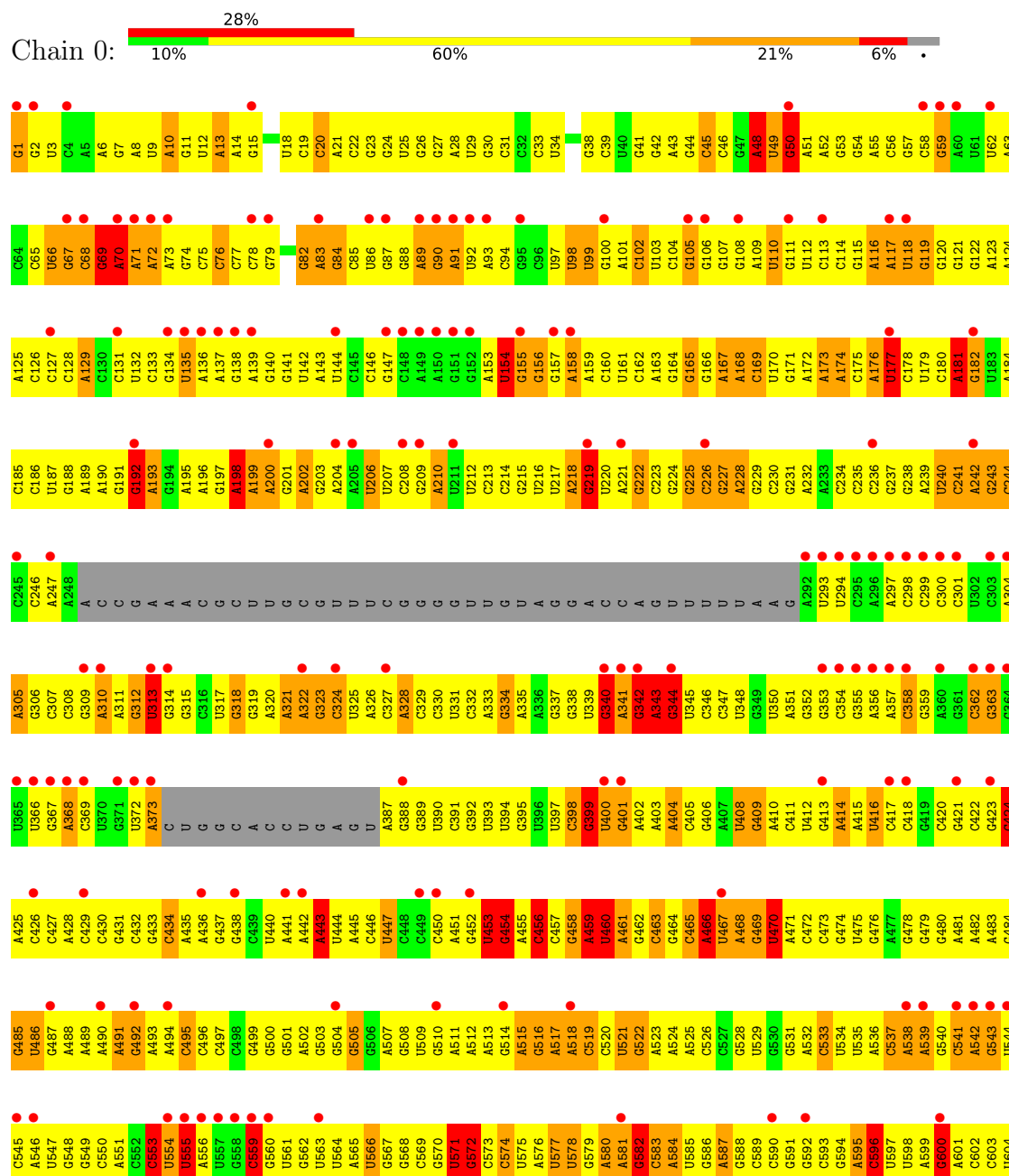
There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
8	31	GLY	-	linker	UNP P0A805
8	32	GLY	-	linker	UNP P0A805
8	33	GLY	-	linker	UNP P0A805

3 Residue-property plots

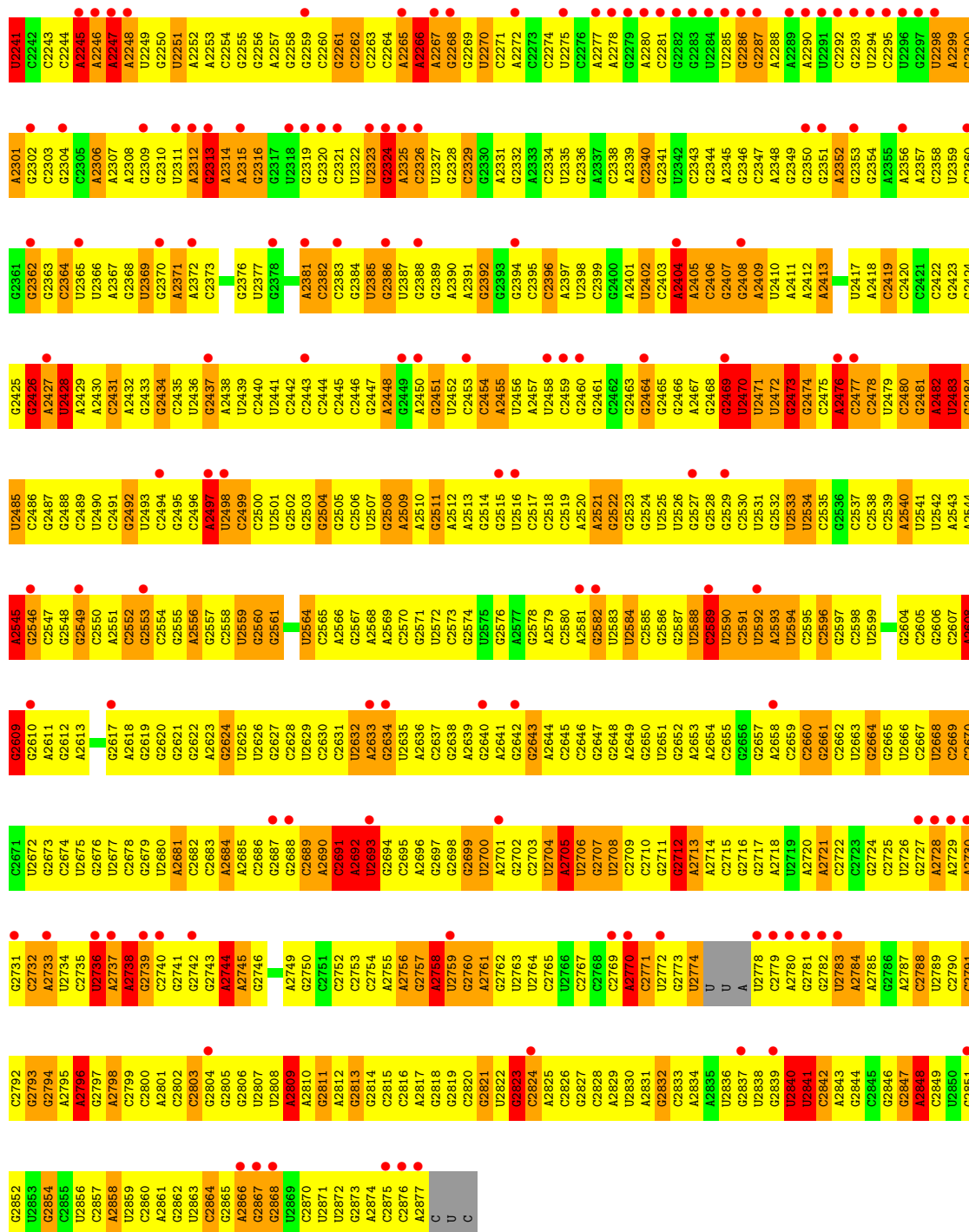
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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: 23S ribosomal RNA

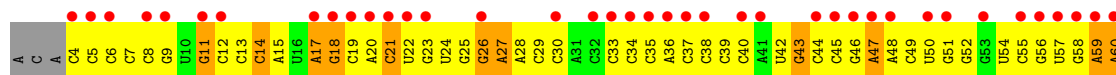
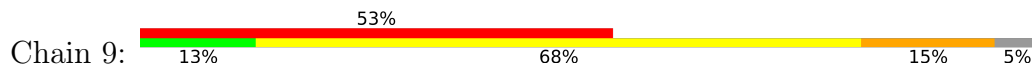


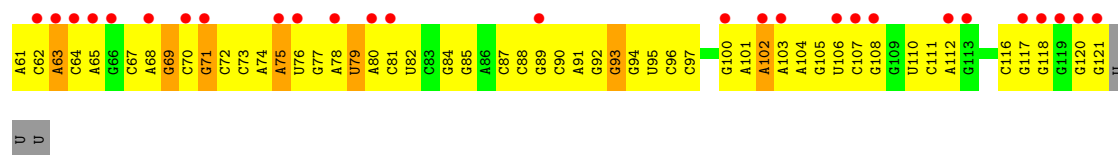
G1387	C1386	C1327	U1267	G1207	G1147	C1087	C1027	G967	U	G847	A787	U727	A665	G605
C1389	C1389	C1328	U1268	A1208	G1148	A1088	G1028	C968	A	A848	G788	G728	U666	A606
C1390	C1390	C1270	C1269	C1089	G1149	C1090	U1029	U969	C	G849	A790	C730	A667	C607
A1391	C1391	C1271	C1271	C1091	U1151	C1091	C1031	A971	C	C850	A791	C731	G669	U609
C1392	C1392	U1212	U1212	U1092	C1152	U1092	G1033	C972	A912	C851	U792	G732	U670	G610
G1393	C1393	U1213	U1213	U1093	A1153	U1093	G1033	U973	A913	C853	G793	G733	A671	C611
A1394	C1394	C1214	A1274	C1094	A1154	C1094	U1034	U974	C914	G854	A794	G734	C672	G612
A1395	C1395	A1215	A1275	A1095	G1155	A1095	G1035	C975	C915	G855	A795	G735	C673	A613
C1396	C1396	U1216	U1276	A1096	U1156	A1096	G1036	C976	U916	A856	A796	G736	U674	G614
A1397	G1397	U1217	G1277	A1097	G1157	A1097	U1037	C977	U917	A857	A797	C737	G675	C615
C1398	C1398	C1218	A1278	G1098	A1158	G1098	U1038	U978	A918	G858	G798	G738	G676	U616
U1399	C1399	C1219	U1279	U1099	U1159	G1099	A1039	A979	U919	U859	C799	G739	G677	U617
A1400	A1400	G1220	U1280	G1100	C1160	G1100	A1040	G980	G920	U860	U800	A740	G678	A618
G1401	G1401	C1221	A1281	U1101	U1161	U1101	G1041	C981	A921	G861	A801	G741	C679	A619
G1402	U1342	G1222	A1282	G1102	A1162	G1102	G1042	C982	A922	A862	A802	G742	U680	G620
C1403	C1343	C1223	C1283	C1103	C1163	C1103	A1043	G983	A923	C863	C903	A743	U621	U621
C1404	C1344	A1224	G1284	G1104	C1164	G1104	U1044	A984	A924	C864	C904	A744	U622	U622
A1405	G1345	G1225	A1285	U1105	G1165	U1105	G1045	G985	U925	A865	G805	C745	A683	G623
A1406	C1346	A1226	U1286	A1106	A1166	A1106	U1046	A986	C926	U866	A806	G746	C684	A624
G1407	C1347	A1227	U1287	A1107	A1167	A1107	G1047	G987	C927	G867	A807	A747	U685	A625
A1408	C1348	G1228	A1288	U1108	G1168	U1108	U1048	G988	G928	U868	C908	A748	C686	A626
A1409	A1289	C1229	A1289	A1109	C1169	A1109	C1049	G989	A929	C869	C909	C749	G687	A627
U1410	C1350	C1230	A1290	G1110	U1170	G1110	A1050	A990	A930	C870	U810	C750	A688	A628
C1411	G1351	A1231	G1291	C1111	A1171	G1111	U1051	A991	G931	U871	G811	G751	A689	C629
C1412	G1352	U1232	A1292	U1112	U1172	U1112	C1052	A992	G932	G872	C812	G752	G690	G630
U1413	A1353	A1233	A1293	C1113	G1173	C1113	G1053	C993	G933	U873	A813	U753	C691	G631
G1414	C1354	C1234	C1294	A1114	G1174	A1114	C1054	A994	G934	A874	G814	G754	A692	A632
C1415	A1355	C1235	U1295	C1115	A1175	C1115	A1055	A995	C935	G875	A815	C755	A693	G633
A1416	G1356	G1236	G1296	U1116	U1176	U1116	U1056	A996	A936	A876	U816	C756	A694	G634
C1417	U1357	G1237	A1297	G1117	U1177	G1117	A1057	C997	C937	G877	A817	U757	G695	C635
C1418	C1358	A1238	G1298	G1118	C1178	G1118	G1058	C998	G938	C878	G818	C758	U696	G636
G1419	A1299	A1239	A1299	U1119	A1179	U1119	A1059	A999	C939	A879	C819	C759	C697	G637
A1420	C1360	A1300	A1300	C1120	A1180	G1120	C1060	G980	G940	C880	U820	U760	A698	A638
U1421	U1301	G1241	U1301	G1121	C1181	G1121	A1061	A1001	U941	U881	A821	G761	G699	G639
C1422	C1362	A1242	C1302	A1122	U1182	A1122	G1062	C1002	U942	C882	G822	A762	C700	C640
C1423	C1363	G1243	U1303	G1123	U1183	G1123	G1063	C1003	U943	A883	U823	A763	U701	G641
U1424	U1304	U1244	U1304	U1124	G1184	U1124	C1064	A1004	A944	C884	U824	A764	A702	A642
G1425	U1365	G1245	C1305	G1125	C1185	G1125	A1065	U1005	G945	A885	C825	C765	A703	A643
U1426	A1366	G1246	U1306	A1126	G1186	G1126	G1066	C1006	U946	A886	U826	A766	G704	A644
G1427	A1367	U1247	U1307	C1127	A1187	G1127	G1067	A1007	C947	G887	C827	C767	C705	G645
G1428	C1368	G1248	U1308	G1128	A1188	G1128	A1068	G1008	C948	G888	C828	U768	A706	C646
A1429	G1369	G1249	C1309	A1129	G1189	G1129	G1069	C1009	G949	C889	C829	C769	U707	G647
G1430	C1370	A1250	G1310	U1130	G1190	U1130	G1070	U1010	G950	U890	C830	U770	G708	A648
U1431	C1371	G1251	C1311	G1131	G1191	G1131	U1071	A1011	G951	A891	G831	C771	A709	G649
A1432	A1372	C1252	G1312	C1132	A1192	G1132	U1072	A1012	A952	G	A832	G772	C710	U650
G1433	C1373	G1253	U1313	G1133	G1193	G1133	G1073	G1013	G953	G	A833	G773	C651	C651
A1434	C1374	A1254	A1314	C1134	U1194	G1134	C1074	G1014	U954	G	A834	A774	A712	G652
A1435	C1375	A1255	A1315	G1135	U1195	G1135	C1075	U1015	G955	G	U835	U775	G713	G653
G1436	C1376	C1256	G1316	G1136	U1196	G1136	U1076	G1016	A956	G	G836	G776	G654	A654
A1437	G1377	U1257	G1317	A1137	U1197	A1137	U1077	C1017	G957	C	U837	A777	G717	A655
A1438	A1378	G1258	A1318	A1138	C1198	A1138	A1078	C1018	G958	C	U838	G778	A718	U656
A1439	A1379	A1259	C1319	A1139	U1199	A1139	U1079	U1019	C959	U	U839	U779	A719	A657
C1440	C1380	A1320	A1320	A1140	G1200	A1140	A1080	A1020	U960	A	U840	U780	A720	G658
A1441	G1381	G1261	U1321	U1141	G1201	U1141	G1081	A1021	G961	C	A841	G781	C721	G659
C1442	C1382	U1262	G1322	G1142	U1202	G1142	G1082	A1022	C962	C	A842	U782	C722	G660
C1443	C1383	G1263	G1323	A1143	A1203	A1143	C1083	U1023	G963	A	G843	G783	C723	G661
G1444	G1384	C1264	G1324	U1144	G1204	U1144	A1084	G1024	A964	G	G844	U784	C724	G662
A1445	C1385	G1205	C1445	G1145	G1205	G1145	G1085	A1025	G965	C	U845	U785	C725	G663
A1446	A1386	G1206	U1326	G1146	G1206	G1146	C1086	U1026	A966	U	A846	U786	G726	C664



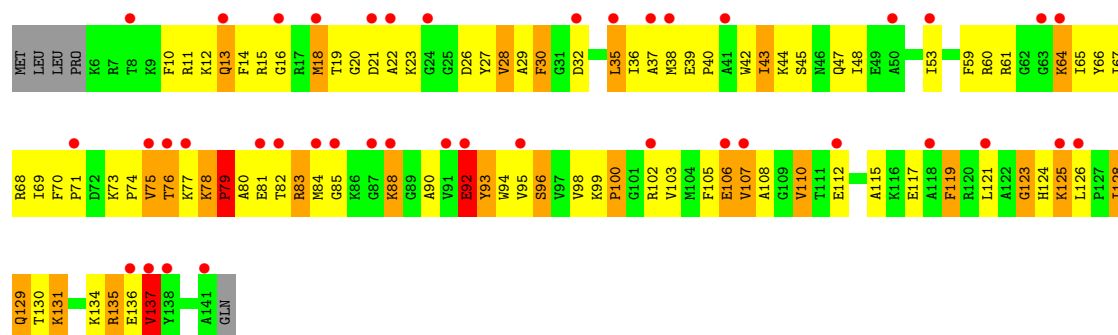


• Molecule 2: 5S ribosomal RNA

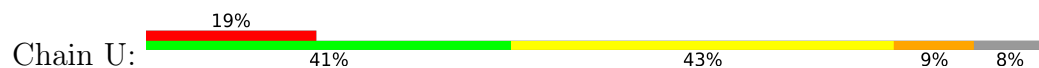




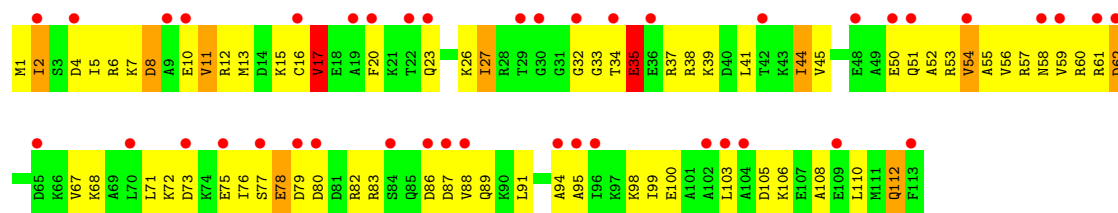
• Molecule 3: 50S ribosomal protein L16



• Molecule 4: 50S ribosomal protein L27



• Molecule 5: Ribosome-recycling factor



4 Data and refinement statistics

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	168.70Å 405.00Å 693.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	8.13 – 3.33 8.13 – 3.33	Depositor EDS
% Data completeness (in resolution range)	74.5 (8.13-3.33) 82.9 (8.13-3.33)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.10	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.85 (at 3.31Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.275 , 0.338 0.364 , 0.391	Depositor DCC
R_{free} test set	15675 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å ²)	74.3	Xtriage
Anisotropy	0.779	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.19 , 13.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.73	EDS
Total number of atoms	64484	wwPDB-VP
Average B, all atoms (Å ²)	50.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.27% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

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	0.50	0/66467	0.89	212/103673 (0.2%)
2	9	0.41	0/2813	0.78	1/4384 (0.0%)
3	K	0.60	0/1113	1.00	3/1486 (0.2%)
4	U	0.58	0/633	0.92	2/838 (0.2%)
5	8	0.56	0/895	0.96	3/1189 (0.3%)
All	All	0.50	0/71921	0.89	221/111570 (0.2%)

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	217
2	9	0	2
All	All	0	219

There are no bond length outliers.

All (221) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1301	U	C2'-C3'-O3'	10.61	125.42	109.50
1	0	1345	G	C4'-C3'-O3'	-9.51	98.73	113.00
1	0	1715	A	C2'-C3'-O3'	9.23	123.35	109.50
1	0	1314	A	C4'-C3'-O3'	-9.07	99.39	113.00
1	0	582	G	N9-C1'-C2'	9.05	127.58	114.00
1	0	788	G	N9-C1'-C2'	8.62	124.94	112.00
1	0	70	A	C2'-C3'-O3'	8.60	122.40	109.50
1	0	1249	G	C2'-C3'-O3'	8.58	122.36	109.50
1	0	985	G	N9-C1'-C2'	8.40	124.60	112.00
1	0	340	G	N9-C1'-C2'	8.37	124.55	112.00
1	0	1265	G	C4'-C3'-O3'	-8.31	100.53	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	8	67	VAL	CB-CA-C	-8.19	103.43	111.30
1	0	2551	A	C2'-C3'-O3'	-8.14	101.49	113.70
1	0	1279	G	C2'-C3'-O3'	8.13	121.70	109.50
1	0	1710	U	N1-C1'-C2'	7.78	123.67	112.00
1	0	443	A	N9-C1'-C2'	7.71	123.56	112.00
1	0	775	U	C2'-C3'-O3'	7.58	125.06	113.70
1	0	1265	G	N9-C1'-C2'	7.54	123.31	112.00
1	0	1264	C	N1-C1'-C2'	7.47	123.21	112.00
1	0	466	A	C4'-C3'-O3'	-7.45	98.22	109.40
1	0	459	A	C4'-C3'-O3'	-7.43	101.85	113.00
1	0	466	A	N9-C1'-C2'	7.40	125.10	114.00
1	0	2044	G	C2'-C3'-O3'	7.38	120.58	109.50
1	0	2560	G	N9-C1'-C2'	7.36	123.03	112.00
1	0	2237	C	C4'-C3'-O3'	-7.34	102.00	113.00
1	0	2608	A	N9-C1'-C2'	7.29	122.94	112.00
1	0	1631	C	C2'-C3'-O3'	7.20	120.30	109.50
1	0	312	G	N9-C1'-C2'	7.18	122.77	112.00
1	0	1979	C	N1-C1'-C2'	7.17	124.75	114.00
1	0	700	C	N1-C1'-C2'	7.15	122.72	112.00
1	0	1233	A	C2'-C3'-O3'	-7.11	103.03	113.70
1	0	596	C	N1-C1'-C2'	7.06	124.59	114.00
1	0	801	A	C2'-C3'-O3'	-7.01	103.18	113.70
1	0	2823	G	N9-C1'-C2'	6.95	124.42	114.00
1	0	2034	A	N9-C1'-C2'	6.87	124.30	114.00
1	0	1979	C	C2'-C3'-O3'	6.83	119.74	109.50
1	0	1791	C	O4'-C4'-C3'	-6.74	97.26	104.00
1	0	1617	G	C4'-C3'-O3'	-6.68	102.97	113.00
4	U	18	PRO	CA-C-N	-6.65	109.96	122.73
4	U	18	PRO	C-N-CA	-6.65	109.96	122.73
1	0	1260	A	C4'-C3'-O3'	-6.62	103.06	113.00
1	0	1342	U	N1-C1'-C2'	6.60	123.91	114.00
3	K	43	ILE	CB-CA-C	-6.60	102.87	111.25
1	0	2029	G	N9-C1'-C2'	6.59	121.88	112.00
1	0	938	G	N9-C1'-C2'	6.58	121.86	112.00
1	0	312	G	C4'-C3'-O3'	-6.53	103.20	113.00
1	0	1354	A	N9-C1'-C2'	6.52	121.78	112.00
1	0	1278	A	C2'-C3'-O3'	6.51	119.27	109.50
1	0	219	G	N9-C1'-C2'	6.46	121.69	112.00
1	0	1749	G	C2'-C3'-O3'	6.44	119.16	109.50
1	0	1771	A	N9-C1'-C2'	6.44	121.66	112.00
1	0	2059	U	C3'-C2'-O2'	6.43	120.35	110.70
1	0	1716	G	N9-C1'-C2'	6.38	123.58	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	443	A	C4'-C3'-O3'	-6.33	103.50	113.00
1	0	2469	G	C4'-C3'-O3'	6.28	118.83	109.40
1	0	2545	A	N9-C1'-C2'	6.27	121.40	112.00
1	0	69	G	N9-C1'-C2'	6.27	121.40	112.00
1	0	777	A	C2'-C3'-O3'	6.25	118.88	109.50
1	0	1807	A	N9-C1'-C2'	6.23	121.35	112.00
1	0	1670	G	C4'-C3'-O3'	-6.23	103.66	113.00
1	0	468	A	N9-C1'-C2'	6.23	121.34	112.00
1	0	1723	U	N1-C1'-C2'	6.22	121.33	112.00
1	0	1947	G	N9-C1'-C2'	6.21	121.31	112.00
1	0	1261	G	C4'-C3'-O3'	-6.21	103.69	113.00
1	0	460	U	C4'-C3'-O3'	-6.20	103.70	113.00
1	0	1632	A	C4'-C3'-O3'	-6.19	103.71	113.00
1	0	1154	A	C1'-C2'-O2'	-6.17	102.54	111.80
1	0	2756	A	C4'-C3'-O3'	-6.09	103.87	113.00
1	0	342	G	N9-C1'-C2'	6.06	121.09	112.00
1	0	571	U	C4'-C3'-O3'	-6.05	100.33	109.40
1	0	198	A	C2'-C3'-O3'	6.04	118.57	109.50
1	0	2564	U	N1-C1'-C2'	6.04	123.06	114.00
3	K	10	PHE	N-CA-CB	-6.04	100.63	110.59
1	0	2692	A	C4'-C3'-O3'	-6.03	103.95	113.00
1	0	2476	A	C2'-C3'-O3'	-6.03	104.66	113.70
1	0	2560	G	C4'-C3'-O3'	-6.02	103.97	113.00
1	0	2590	U	N1-C1'-C2'	6.02	121.03	112.00
1	0	878	C	N1-C1'-C2'	6.02	121.03	112.00
1	0	2791	C	C4'-C3'-O3'	-6.00	104.01	113.00
1	0	984	A	N9-C1'-C2'	5.97	120.95	112.00
1	0	2428	U	N1-C1'-C2'	5.96	122.94	114.00
1	0	343	A	N9-C1'-C2'	5.96	120.93	112.00
3	K	137	VAL	CB-CA-C	-5.95	104.48	111.09
1	0	434	C	C4'-C3'-O3'	-5.95	104.07	113.00
1	0	522	G	C4'-C3'-O3'	-5.95	104.08	113.00
1	0	2756	A	N9-C1'-C2'	5.94	120.91	112.00
1	0	468	A	C4'-C3'-O3'	-5.93	104.10	113.00
1	0	2404	A	C2'-C3'-O3'	5.90	118.36	109.50
1	0	2770	A	N9-C1'-C2'	5.87	120.81	112.00
1	0	13	A	C4'-C3'-O3'	-5.85	104.22	113.00
1	0	876	A	N9-C1'-C2'	5.85	120.78	112.00
1	0	1337	G	N9-C1'-C2'	5.85	120.77	112.00
1	0	192	G	C2'-C3'-O3'	5.85	118.27	109.50
1	0	572	G	C4'-C3'-O3'	-5.84	104.24	113.00
1	0	1749	G	C1'-C2'-O2'	-5.84	103.04	111.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	804	C	N1-C1'-C2'	5.83	120.75	112.00
1	0	313	U	C4'-C3'-O3'	-5.82	104.27	113.00
1	0	1469	U	N1-C1'-C2'	5.82	120.73	112.00
1	0	1670	G	O4'-C4'-C3'	5.82	109.81	104.00
1	0	600	G	N9-C1'-C2'	5.80	122.70	114.00
1	0	50	G	C4'-C3'-O3'	-5.79	104.32	113.00
1	0	2840	U	C2'-C3'-O3'	-5.78	105.03	113.70
1	0	2744	A	C3'-C2'-O2'	5.77	119.36	110.70
1	0	956	A	OP2-P-O3'	-5.77	90.70	108.00
1	0	460	U	N1-C1'-C2'	5.77	120.65	112.00
1	0	2841	U	C2'-C3'-O3'	5.75	118.13	109.50
1	0	13	A	N9-C1'-C2'	5.73	120.60	112.00
1	0	751	G	C4'-C3'-O3'	-5.73	104.41	113.00
1	0	2841	U	N1-C1'-C2'	5.72	122.58	114.00
1	0	2589	C	C4'-C3'-O3'	-5.70	104.44	113.00
1	0	1142	G	N9-C1'-C2'	5.69	120.54	112.00
1	0	167	A	C4'-C3'-O3'	-5.68	104.48	113.00
1	0	971	A	N9-C1'-C2'	5.68	120.52	112.00
1	0	2482	A	C1'-C2'-O2'	-5.68	103.28	111.80
1	0	1167	A	C4'-C3'-O3'	-5.66	104.51	113.00
1	0	841	G	N9-C1'-C2'	5.65	120.47	112.00
1	0	2426	G	C2'-C3'-O3'	5.62	117.94	109.50
1	0	219	G	C4'-C3'-O3'	-5.62	104.57	113.00
1	0	98	U	N1-C1'-C2'	5.60	120.40	112.00
1	0	2690	A	C4'-C3'-O3'	-5.59	104.62	113.00
1	0	1314	A	N9-C1'-C2'	5.59	120.38	112.00
1	0	1664	G	N9-C1'-C2'	5.57	120.35	112.00
1	0	2437	G	C4'-C3'-O3'	-5.57	104.65	113.00
1	0	1410	U	N1-C1'-C2'	5.56	122.34	114.00
1	0	1167	A	N9-C1'-C2'	5.55	120.33	112.00
1	0	1070	G	N9-C1'-C2'	5.54	120.31	112.00
1	0	1581	C	N1-C1'-C2'	5.53	120.30	112.00
1	0	698	A	C4'-C3'-O3'	-5.53	104.71	113.00
1	0	1800	A	N9-C1'-C2'	5.53	120.29	112.00
5	8	17	VAL	CB-CA-C	-5.53	104.68	112.14
1	0	2689	C	OP1-P-O3'	-5.53	91.42	108.00
1	0	2015	G	C4'-C3'-O3'	-5.52	101.11	109.40
1	0	2545	A	C4'-C3'-O3'	-5.52	104.71	113.00
1	0	741	G	C2'-C3'-O3'	-5.52	101.22	109.50
1	0	1963	G	C2'-C3'-O3'	5.50	121.96	113.70
1	0	1947	G	C4'-C3'-O3'	-5.50	104.75	113.00
1	0	1582	A	N9-C1'-C2'	5.49	120.24	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1975	G	N9-C1'-C2'	5.49	122.23	114.00
1	0	807	A	C4'-C3'-O3'	-5.48	104.78	113.00
1	0	775	U	C4'-C3'-O3'	-5.47	104.79	113.00
1	0	2247	A	C2'-C3'-O3'	-5.46	105.50	113.70
1	0	2624	G	C4'-C3'-O3'	-5.45	104.83	113.00
1	0	775	U	C3'-C2'-O2'	5.45	118.87	110.70
1	0	332	C	N1-C1'-C2'	5.45	120.17	112.00
1	0	2044	G	C4'-C3'-O3'	-5.44	101.25	109.40
1	0	342	G	C4'-C3'-O3'	-5.43	104.85	113.00
1	0	1154	A	OP1-P-O3'	5.43	124.30	108.00
1	0	181	A	C4'-C3'-O3'	5.43	117.55	109.40
1	0	1300	A	N9-C1'-C2'	5.42	120.13	112.00
1	0	2426	G	C4'-C3'-O3'	-5.42	101.27	109.40
1	0	465	C	C4'-C3'-O3'	-5.41	104.88	113.00
1	0	486	U	N1-C1'-C2'	5.39	120.09	112.00
1	0	1812	U	N1-C1'-C2'	5.37	120.05	112.00
1	0	1264	C	C4'-C3'-O3'	-5.37	104.95	113.00
1	0	2050	G	N9-C1'-C2'	5.36	120.04	112.00
1	0	1324	G	C4'-C3'-O3'	-5.36	104.96	113.00
1	0	1716	G	C4'-C3'-O3'	-5.35	101.38	109.40
1	0	873	U	O4'-C4'-C3'	-5.35	98.65	104.00
1	0	1249	G	N9-C1'-C2'	5.35	122.02	114.00
2	9	26	G	N9-C1'-C2'	5.33	119.99	112.00
1	0	2691	C	C3'-C2'-O2'	-5.33	102.71	110.70
1	0	2705	A	N9-C1'-C2'	5.32	119.98	112.00
1	0	1919	A	N9-C1'-C2'	5.32	119.97	112.00
1	0	2736	U	C4'-C3'-O3'	-5.31	105.03	113.00
1	0	2015	G	N9-C1'-C2'	5.31	121.97	114.00
1	0	1345	G	N9-C1'-C2'	5.31	119.96	112.00
1	0	518	A	N9-C1'-C2'	5.29	119.94	112.00
1	0	1477	C	C3'-C2'-O2'	5.29	118.64	110.70
1	0	841	G	C4'-C3'-O3'	-5.29	105.07	113.00
1	0	1333	G	C3'-C2'-O2'	5.28	118.62	110.70
1	0	1711	C	N1-C1'-C2'	5.27	119.90	112.00
1	0	1224	A	N9-C1'-C2'	5.26	119.89	112.00
1	0	1409	U	C2'-C3'-O3'	-5.25	105.83	113.70
1	0	795	A	N9-C1'-C2'	5.24	121.87	114.00
1	0	1573	G	C4'-C3'-O3'	-5.22	105.17	113.00
1	0	1154	A	C2'-C3'-O3'	5.22	117.33	109.50
1	0	2217	G	C2'-C3'-O3'	-5.22	105.88	113.70
1	0	2758	A	N9-C1'-C2'	5.20	119.81	112.00
1	0	776	G	C4'-C3'-O3'	-5.20	105.20	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	612	G	C4'-C3'-O3'	-5.18	105.23	113.00
1	0	1975	G	O4'-C1'-C2'	5.18	110.98	105.80
1	0	2712	G	N9-C1'-C2'	5.18	119.77	112.00
1	0	2470	U	C4'-C3'-O3'	-5.18	105.23	113.00
1	0	2454	C	N1-C1'-C2'	5.17	119.76	112.00
1	0	1584	G	C4'-C3'-O3'	-5.16	105.26	113.00
1	0	1747	G	C4'-C3'-O3'	-5.16	105.26	113.00
1	0	2324	G	N9-C1'-C2'	5.16	121.74	114.00
1	0	1337	G	C4'-C3'-O3'	-5.16	105.26	113.00
1	0	1674	C	C3'-C2'-O2'	5.15	118.43	110.70
1	0	2237	C	N1-C1'-C2'	5.15	119.73	112.00
1	0	2708	U	C4'-C3'-O3'	-5.15	105.27	113.00
1	0	2241	U	C4'-C3'-O3'	-5.15	105.28	113.00
1	0	1632	A	N9-C1'-C2'	5.14	119.71	112.00
1	0	1469	U	C4'-C3'-O3'	-5.14	105.29	113.00
1	0	48	A	C2'-C3'-O3'	-5.14	105.99	113.70
1	0	1669	A	C4'-C3'-O3'	-5.14	105.29	113.00
1	0	2043	A	C2'-C3'-O3'	-5.13	106.00	113.70
1	0	2303	C	C4'-C3'-O3'	-5.13	105.31	113.00
1	0	1949	A	N9-C1'-C2'	5.12	119.67	112.00
1	0	2823	G	C4'-C3'-O3'	-5.11	101.74	109.40
1	0	2013	A	C2'-C3'-O3'	-5.10	106.05	113.70
1	0	344	G	N9-C1'-C2'	5.09	119.63	112.00
5	8	54	VAL	CB-CA-C	-5.09	105.46	111.97
1	0	434	C	N1-C1'-C2'	5.09	119.63	112.00
1	0	469	G	C4'-C3'-O3'	-5.07	105.40	113.00
1	0	1698	C	N1-C1'-C2'	5.06	121.59	114.00
1	0	698	A	N9-C1'-C2'	5.06	119.59	112.00
1	0	1433	A	C2'-C3'-O3'	-5.05	106.12	113.70
1	0	2229	G	N9-C1'-C2'	5.05	121.58	114.00
1	0	742	G	N9-C1'-C2'	5.05	119.58	112.00
1	0	1633	C	N1-C1'-C2'	5.05	119.58	112.00
1	0	553	C	N1-C1'-C2'	5.05	119.58	112.00
1	0	2596	C	C4'-C3'-O3'	-5.04	105.43	113.00
1	0	1926	U	C2'-C3'-O3'	5.04	121.26	113.70
1	0	1626	A	C2'-C3'-O3'	-5.03	101.95	109.50
1	0	1723	U	C4'-C3'-O3'	-5.03	105.45	113.00
1	0	398	C	C4'-C3'-O3'	-5.03	105.46	113.00
1	0	1137	A	C4'-C3'-O3'	-5.01	105.48	113.00
1	0	1979	C	C1'-C2'-O2'	-5.01	104.29	111.80
1	0	1370	U	N1-C1'-C2'	5.00	119.51	112.00
1	0	2589	C	N1-C1'-C2'	5.00	119.50	112.00

There are no chirality outliers.

All (219) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1	G	Sidechain
1	0	10	A	Sidechain
1	0	1010	U	Sidechain
1	0	1016	C	Sidechain
1	0	1111	C	Sidechain
1	0	1136	G	Sidechain
1	0	1141	U	Sidechain
1	0	1142	G	Sidechain
1	0	1155	G	Sidechain
1	0	1165	G	Sidechain
1	0	1176	U	Sidechain
1	0	1200	G	Sidechain
1	0	1205	G	Sidechain
1	0	1212	U	Sidechain
1	0	1224	A	Sidechain
1	0	1231	A	Sidechain
1	0	1250	A	Sidechain
1	0	1251	G	Sidechain
1	0	1261	G	Sidechain
1	0	1265	G	Sidechain
1	0	1272	G	Sidechain
1	0	1277	G	Sidechain
1	0	1279	G	Sidechain
1	0	1281	A	Sidechain
1	0	1282	A	Sidechain
1	0	1288	A	Sidechain
1	0	1295	U	Sidechain
1	0	1299	A	Sidechain
1	0	1300	A	Sidechain
1	0	1306	U	Sidechain
1	0	1309	G	Sidechain
1	0	1314	A	Sidechain
1	0	1322	G	Sidechain
1	0	1323	G	Sidechain
1	0	1325	U	Sidechain
1	0	1335	A	Sidechain
1	0	1342	U	Sidechain
1	0	1357	U	Sidechain
1	0	1373	G	Sidechain
1	0	1423	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1424	U	Sidechain
1	0	1458	A	Sidechain
1	0	1469	U	Sidechain
1	0	1473	U	Sidechain
1	0	1479	G	Sidechain
1	0	1526	U	Sidechain
1	0	154	U	Sidechain
1	0	156	G	Sidechain
1	0	1582	A	Sidechain
1	0	1584	G	Sidechain
1	0	1585	A	Sidechain
1	0	1624	A	Sidechain
1	0	1633	C	Sidechain
1	0	165	G	Sidechain
1	0	1651	U	Sidechain
1	0	1667	A	Sidechain
1	0	1670	G	Sidechain
1	0	1672	A	Sidechain
1	0	1677	C	Sidechain
1	0	1682	A	Sidechain
1	0	1684	G	Sidechain
1	0	1686	A	Sidechain
1	0	1688	U	Sidechain
1	0	1698	C	Sidechain
1	0	1710	U	Sidechain
1	0	1712	G	Sidechain
1	0	1716	G	Sidechain
1	0	1723	U	Sidechain
1	0	1744	G	Sidechain
1	0	1749	G	Sidechain
1	0	177	U	Sidechain
1	0	1771	A	Sidechain
1	0	1783	G	Sidechain
1	0	1788	C	Sidechain
1	0	1791	C	Sidechain
1	0	1926	U	Sidechain
1	0	1938	U	Sidechain
1	0	1945	C	Sidechain
1	0	1947	G	Sidechain
1	0	1974	U	Sidechain
1	0	1975	G	Sidechain
1	0	1993	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	20	C	Sidechain
1	0	2004	U	Sidechain
1	0	2011	U	Sidechain
1	0	2014	A	Sidechain
1	0	2015	G	Sidechain
1	0	2030	U	Sidechain
1	0	2034	A	Sidechain
1	0	2036	G	Sidechain
1	0	2039	G	Sidechain
1	0	2047	C	Sidechain
1	0	2067	U	Sidechain
1	0	2070	G	Sidechain
1	0	2186	G	Sidechain
1	0	222	G	Sidechain
1	0	2237	C	Sidechain
1	0	2245	A	Sidechain
1	0	2251	U	Sidechain
1	0	2266	A	Sidechain
1	0	2270	U	Sidechain
1	0	228	A	Sidechain
1	0	2306	A	Sidechain
1	0	2313	G	Sidechain
1	0	2352	A	Sidechain
1	0	2369	U	Sidechain
1	0	2377	U	Sidechain
1	0	2392	G	Sidechain
1	0	240	U	Sidechain
1	0	2411	A	Sidechain
1	0	2434	G	Sidechain
1	0	2451	G	Sidechain
1	0	2464	G	Sidechain
1	0	2471	U	Sidechain
1	0	2472	U	Sidechain
1	0	2473	G	Sidechain
1	0	2482	A	Sidechain
1	0	2483	U	Sidechain
1	0	2497	A	Sidechain
1	0	2511	G	Sidechain
1	0	2513	A	Sidechain
1	0	2534	U	Sidechain
1	0	2540	A	Sidechain
1	0	2559	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2584	U	Sidechain
1	0	2608	A	Sidechain
1	0	2609	G	Sidechain
1	0	2632	U	Sidechain
1	0	2643	G	Sidechain
1	0	2657	G	Sidechain
1	0	2664	G	Sidechain
1	0	2684	A	Sidechain
1	0	2693	U	Sidechain
1	0	2700	U	Sidechain
1	0	2704	U	Sidechain
1	0	2705	A	Sidechain
1	0	2712	G	Sidechain
1	0	2721	A	Sidechain
1	0	2730	A	Sidechain
1	0	2738	A	Sidechain
1	0	2739	G	Sidechain
1	0	2788	C	Sidechain
1	0	2794	G	Sidechain
1	0	2796	A	Sidechain
1	0	2803	C	Sidechain
1	0	2809	A	Sidechain
1	0	2813	G	Sidechain
1	0	2821	G	Sidechain
1	0	2823	G	Sidechain
1	0	2832	G	Sidechain
1	0	2840	U	Sidechain
1	0	2848	A	Sidechain
1	0	310	A	Sidechain
1	0	328	A	Sidechain
1	0	340	G	Sidechain
1	0	342	G	Sidechain
1	0	399	G	Sidechain
1	0	408	U	Sidechain
1	0	424	G	Sidechain
1	0	443	A	Sidechain
1	0	453	U	Sidechain
1	0	454	G	Sidechain
1	0	456	C	Sidechain
1	0	466	A	Sidechain
1	0	470	U	Sidechain
1	0	476	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	48	A	Sidechain
1	0	505	G	Sidechain
1	0	521	U	Sidechain
1	0	533	C	Sidechain
1	0	539	A	Sidechain
1	0	555	U	Sidechain
1	0	559	C	Sidechain
1	0	566	U	Sidechain
1	0	578	U	Sidechain
1	0	582	G	Sidechain
1	0	593	C	Sidechain
1	0	596	C	Sidechain
1	0	600	G	Sidechain
1	0	617	U	Sidechain
1	0	621	U	Sidechain
1	0	632	A	Sidechain
1	0	66	U	Sidechain
1	0	67	G	Sidechain
1	0	676	G	Sidechain
1	0	682	G	Sidechain
1	0	69	G	Sidechain
1	0	700	C	Sidechain
1	0	701	U	Sidechain
1	0	703	A	Sidechain
1	0	704	G	Sidechain
1	0	711	C	Sidechain
1	0	752	G	Sidechain
1	0	755	C	Sidechain
1	0	760	U	Sidechain
1	0	771	C	Sidechain
1	0	780	U	Sidechain
1	0	786	U	Sidechain
1	0	788	G	Sidechain
1	0	804	C	Sidechain
1	0	813	A	Sidechain
1	0	814	G	Sidechain
1	0	818	G	Sidechain
1	0	845	U	Sidechain
1	0	861	G	Sidechain
1	0	862	A	Sidechain
1	0	873	U	Sidechain
1	0	886	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	942	U	Sidechain
1	0	951	G	Sidechain
1	0	954	U	Sidechain
1	0	960	U	Sidechain
1	0	971	A	Sidechain
1	0	975	C	Sidechain
1	0	984	A	Sidechain
1	0	992	A	Sidechain
1	0	994	A	Sidechain
2	9	60	A	Sidechain
2	9	79	U	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59359	0	29917	4720	0
2	9	2516	0	1286	166	0
3	K	1090	0	1125	186	0
4	U	625	0	655	85	0
5	8	894	0	925	104	0
All	All	64484	0	33908	5146	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 53.

All (5146) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1333:G:N2	1:0:1344:C:H41	1.39	1.21
1:0:2548:G:C2'	1:0:2549:G:H5''	1.73	1.17
1:0:1073:G:H2'	1:0:1074:G:H5''	1.18	1.17
1:0:1978:U:H3'	1:0:1979:C:H5''	1.28	1.15
3:K:76:THR:HG21	3:K:88:LYS:HB2	1.22	1.15
1:0:956:A:H2'	1:0:957:G:H5'	1.28	1.14
1:0:2306:A:H2'	1:0:2307:A:C8	1.81	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:11:ARG:NH1	3:K:15:ARG:HH12	1.45	1.12
1:0:2106:G:H2'	1:0:2107:G:C8	1.85	1.12
1:0:918:A:H2'	1:0:919:U:H5''	1.30	1.12
1:0:940:G:H3'	1:0:941:U:H5''	1.26	1.12
1:0:1437:A:H2'	1:0:1438:G:C8	1.83	1.11
1:0:1467:U:H3'	1:0:1468:A:H5'	1.13	1.10
1:0:362:C:H2'	1:0:363:G:H4'	1.34	1.09
1:0:2548:G:H2'	1:0:2549:G:H5''	1.19	1.09
1:0:922:A:H2'	1:0:923:A:C8	1.88	1.09
1:0:2447:G:O2'	1:0:2448:A:H5''	1.50	1.09
3:K:64:LYS:CE	3:K:64:LYS:H	1.66	1.09
1:0:1383:C:H2'	1:0:1384:G:C8	1.87	1.09
3:K:64:LYS:H	3:K:64:LYS:HE2	0.96	1.09
1:0:2334:C:H1'	4:U:39:ARG:HH21	1.12	1.08
3:K:81:GLU:HG3	3:K:82:THR:H	1.15	1.08
1:0:83:A:H2	1:0:98:U:H1'	1.14	1.08
1:0:1029:C:H2'	1:0:1030:U:H5''	1.29	1.08
3:K:13:GLN:HA	3:K:13:GLN:HE21	0.98	1.08
1:0:1437:A:H2'	1:0:1438:G:H8	0.91	1.07
1:0:2310:G:H4'	4:U:43:THR:H	1.17	1.07
1:0:1436:G:H22	1:0:1593:C:H1'	1.17	1.06
1:0:1685:A:H61	1:0:1693:A:N6	1.54	1.06
1:0:1458:A:H3'	1:0:1459:U:C5'	1.84	1.06
1:0:2691:C:H2'	1:0:2692:A:H5''	1.36	1.06
1:0:89:A:O2'	1:0:90:G:H5''	1.56	1.06
1:0:2344:G:H4'	4:U:60:PHE:CE2	1.89	1.06
3:K:64:LYS:HE2	3:K:64:LYS:N	1.70	1.06
1:0:2074:U:H3'	1:0:2075:U:H5''	1.38	1.04
1:0:2472:U:H3'	1:0:2473:G:H5''	1.35	1.03
1:0:968:C:H41	1:0:2437:G:H5''	1.20	1.03
3:K:74:PRO:HG3	3:K:94:TRP:NE1	1.72	1.03
3:K:13:GLN:HA	3:K:13:GLN:NE2	1.62	1.02
1:0:778:G:H2'	1:0:779:U:H6	1.21	1.02
1:0:1624:A:HO2'	1:0:1625:A:H8	1.04	1.02
2:9:36:A:H61	2:9:46:G:H2'	1.20	1.01
3:K:76:THR:CG2	3:K:88:LYS:HB2	1.89	1.01
1:0:2198:U:H3'	1:0:2199:C:H5''	1.42	1.01
1:0:1073:G:H2'	1:0:1074:G:C5'	1.90	1.01
1:0:1467:U:H3'	1:0:1468:A:C5'	1.90	1.01
1:0:2516:U:H2'	1:0:2517:C:C6	1.96	1.01
1:0:2866:A:H2'	1:0:2867:G:O4'	1.60	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2548:G:H2'	1:0:2549:G:C5'	1.91	1.00
1:0:765:C:C5	1:0:1772:C:H1'	1.95	1.00
1:0:2395:C:H2'	1:0:2396:C:H5''	1.42	1.00
4:U:14:ARG:HG2	4:U:15:ASP:H	1.27	1.00
1:0:2771:C:H42	1:0:2780:A:N6	1.58	1.00
1:0:940:G:H2'	1:0:941:U:H4'	1.44	0.99
1:0:2234:G:O4'	5:8:77:SER:HB3	1.60	0.99
1:0:1458:A:H3'	1:0:1459:U:H5''	1.38	0.99
1:0:755:C:H2'	1:0:756:C:H6	1.23	0.98
1:0:2094:C:H3'	1:0:2103:G:H4'	1.44	0.98
1:0:2633:A:H4'	1:0:2634:G:H4'	1.46	0.98
1:0:687:G:H2'	1:0:817:A:H61	1.27	0.98
1:0:88:G:H3'	1:0:89:A:H5''	1.45	0.98
3:K:83:ARG:O	3:K:83:ARG:HG2	1.61	0.98
1:0:1040:A:N3	1:0:2465:G:H1'	1.78	0.98
1:0:460:U:O4	1:0:592:G:H1'	1.62	0.98
1:0:929:A:H3'	1:0:930:A:H5''	1.46	0.97
1:0:1908:C:H42	1:0:1912:G:H1	1.04	0.97
3:K:27:TYR:HB2	3:K:137:VAL:HG11	1.46	0.97
1:0:2352:A:H2'	1:0:2353:G:C8	1.99	0.97
1:0:590:C:H2'	1:0:591:G:H8	1.28	0.97
1:0:1440:G:H3'	1:0:1441:A:C5'	1.93	0.97
3:K:11:ARG:HD2	3:K:15:ARG:HH22	1.29	0.97
1:0:1921:A:H2'	1:0:1922:U:H5''	1.45	0.96
1:0:1345:G:H1	1:0:1625:A:HO2'	1.14	0.96
1:0:805:G:H4'	1:0:806:A:OP2	1.64	0.96
1:0:2106:G:H2'	1:0:2107:G:H8	1.18	0.96
1:0:939:C:H2'	1:0:940:G:C8	2.01	0.96
1:0:699:G:H5'	1:0:700:C:OP2	1.66	0.95
1:0:109:A:C3'	1:0:110:U:H5''	1.97	0.95
1:0:2065:A:H2'	1:0:2066:G:O4'	1.66	0.95
1:0:2201:G:H2'	1:0:2202:G:H8	1.28	0.94
1:0:1055:A:H4'	1:0:1058:G:H4'	1.49	0.94
1:0:1383:C:H2'	1:0:1384:G:H8	1.26	0.94
3:K:92:GLU:HG3	3:K:93:TYR:N	1.81	0.94
1:0:765:C:C4	1:0:1772:C:H1'	2.03	0.94
1:0:2464:G:H4'	3:K:125:LYS:O	1.67	0.94
1:0:83:A:C2	1:0:98:U:H1'	2.01	0.94
1:0:1909:U:H2'	1:0:1910:A:H5''	1.49	0.94
1:0:778:G:H2'	1:0:779:U:C6	2.03	0.93
1:0:2588:U:H4'	1:0:2589:C:OP2	1.63	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:163:A:H2'	1:0:164:G:H8	1.30	0.93
1:0:930:A:H8	2:9:82:U:HO2'	1.00	0.93
3:K:92:GLU:HG3	3:K:93:TYR:H	1.34	0.93
1:0:651:C:H2'	1:0:652:C:H5''	1.51	0.93
1:0:2585:C:H2'	1:0:2586:G:H5'	1.50	0.93
1:0:2809:A:N6	1:0:2854:G:H1'	1.82	0.93
1:0:2395:C:C2'	1:0:2396:C:H5''	1.99	0.93
3:K:74:PRO:HG3	3:K:94:TRP:HE1	1.34	0.93
5:8:45:VAL:HG13	5:8:106:LYS:NZ	1.84	0.93
1:0:2511:G:H2'	1:0:2512:A:O4'	1.67	0.92
2:9:17:A:H4'	2:9:111:C:H4'	1.51	0.92
1:0:1690:U:H2'	1:0:1691:G:H5'	1.47	0.92
2:9:36:A:N6	2:9:46:G:H2'	1.84	0.92
1:0:2672:U:H2'	1:0:2673:G:H8	1.33	0.92
1:0:67:G:H2'	1:0:68:C:H6	1.33	0.92
1:0:1681:A:C2	1:0:2706:U:H1'	2.03	0.92
1:0:2503:G:H2'	1:0:2504:G:H5''	1.49	0.92
1:0:612:G:O3'	1:0:613:A:H4'	1.69	0.92
1:0:813:A:O2'	1:0:814:G:H3'	1.69	0.92
1:0:1313:U:H1'	1:0:1642:G:N2	1.84	0.91
1:0:2677:U:H3	1:0:2688:G:H1	1.19	0.91
1:0:2310:G:H4'	4:U:43:THR:N	1.85	0.91
1:0:1653:C:O2	1:0:1751:A:H2	1.52	0.91
1:0:2169:A:H2'	1:0:2170:C:O4'	1.70	0.91
1:0:2771:C:N4	1:0:2780:A:H61	1.69	0.91
1:0:67:G:C6	1:0:72:A:C2	2.59	0.91
1:0:1221:C:H2'	1:0:1222:G:H8	1.34	0.91
2:9:74:A:H1'	2:9:108:G:N2	1.84	0.91
1:0:640:C:H5''	1:0:660:G:O2'	1.71	0.91
1:0:941:U:H2'	1:0:942:U:O4'	1.69	0.91
1:0:1333:G:H21	1:0:1344:C:H41	1.08	0.91
1:0:1262:U:H2'	1:0:1263:G:C8	2.07	0.90
1:0:635:C:H2'	1:0:636:G:H5''	1.49	0.90
1:0:1804:U:H2'	1:0:1805:G:H8	1.36	0.90
1:0:128:C:H2'	1:0:129:A:H5''	1.49	0.90
1:0:658:G:H2'	1:0:659:G:H8	1.37	0.90
1:0:862:A:H2'	1:0:863:C:C6	2.06	0.90
1:0:138:G:H2'	1:0:139:A:C8	2.06	0.90
1:0:2239:C:H2'	1:0:2240:C:C6	2.06	0.90
1:0:1581:C:C4	1:0:1583:A:H1'	2.06	0.90
1:0:1587:A:H2'	1:0:1588:A:C8	2.07	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2234:G:C4'	5:8:77:SER:HB3	2.01	0.90
1:0:1468:A:H8	1:0:1468:A:O5'	1.55	0.90
1:0:1531:C:H2'	1:0:1532:A:H5'	1.53	0.90
1:0:2771:C:H42	1:0:2780:A:H61	0.90	0.89
1:0:872:G:HO2'	1:0:2247:A:H2	0.90	0.89
1:0:1293:A:O2'	1:0:1294:G:H5'	1.73	0.89
1:0:2198:U:H3'	1:0:2199:C:C5'	2.01	0.89
1:0:441:A:H2'	1:0:442:A:O4'	1.72	0.89
1:0:794:A:H2	1:0:1767:G:N3	1.70	0.89
1:0:861:G:C2	1:0:944:A:H1'	2.07	0.89
1:0:1920:A:H2'	1:0:1921:A:H8	1.37	0.89
1:0:796:A:H5'	1:0:2568:A:OP1	1.71	0.89
1:0:1764:A:C5	1:0:1821:A:H1'	2.08	0.89
1:0:2633:A:H2	1:0:2644:A:H5''	1.38	0.89
1:0:2248:A:H8	1:0:2248:A:OP1	1.57	0.88
1:0:1791:C:H2'	1:0:1792:C:H5''	1.54	0.88
3:K:42:TRP:CE3	3:K:95:VAL:HG21	2.07	0.88
1:0:2074:U:H3'	1:0:2075:U:C5'	2.01	0.88
1:0:468:A:O2'	1:0:469:G:H4'	1.73	0.88
1:0:1416:A:H2'	1:0:1417:C:C6	2.07	0.88
1:0:2691:C:C2'	1:0:2692:A:H5''	2.02	0.88
1:0:1333:G:N2	1:0:1344:C:N4	2.20	0.88
1:0:1420:A:H2'	1:0:1421:U:C6	2.09	0.88
1:0:2227:C:H2'	1:0:2228:U:H5'	1.56	0.87
1:0:2552:C:H4'	1:0:2552:C:OP1	1.71	0.87
1:0:2228:U:H5''	1:0:2229:G:OP2	1.74	0.87
3:K:36:ILE:HG12	3:K:102:ARG:O	1.74	0.87
1:0:2691:C:HO2'	1:0:2692:A:H8	1.18	0.87
1:0:1304:U:O2'	1:0:1305:C:H5'	1.73	0.87
4:U:14:ARG:HG2	4:U:15:ASP:N	1.84	0.87
1:0:859:U:H4'	1:0:860:U:C5	2.10	0.87
3:K:11:ARG:HH11	3:K:15:ARG:HH12	1.20	0.87
1:0:2014:A:N6	1:0:2477:C:H1'	1.90	0.87
1:0:451:A:H2'	1:0:452:G:C8	2.10	0.86
1:0:622:U:H2'	1:0:623:G:H5'	1.57	0.86
1:0:985:G:H1'	1:0:1001:A:N6	1.90	0.86
1:0:1045:G:H2'	1:0:1046:U:C6	2.10	0.86
1:0:1459:U:H3	1:0:1476:G:C5'	1.87	0.86
1:0:1685:A:H61	1:0:1693:A:H61	1.19	0.86
1:0:1763:G:H2'	1:0:1764:A:H4'	1.56	0.86
1:0:1924:C:H42	5:8:61:ARG:CD	1.89	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:38:MET:HG2	3:K:131:LYS:HE2	1.58	0.86
1:0:799:C:H2'	1:0:800:U:H6	1.40	0.86
1:0:935:C:H4'	4:U:29:GLU:OE2	1.75	0.86
1:0:162:C:H4'	1:0:195:A:H4'	1.57	0.86
1:0:734:G:H2'	1:0:735:G:H8	1.39	0.86
1:0:788:G:C5'	1:0:790:A:H1'	2.05	0.86
1:0:1212:U:H2'	1:0:1213:U:C6	2.10	0.86
1:0:590:C:H2'	1:0:591:G:C8	2.10	0.86
1:0:616:U:H2'	1:0:617:U:C5'	2.05	0.86
1:0:747:A:H2'	1:0:748:A:H8	1.40	0.86
2:9:54:U:H2'	2:9:55:C:C6	2.11	0.86
1:0:67:G:H2'	1:0:68:C:C6	2.11	0.86
1:0:1908:C:N4	1:0:1912:G:H1	1.72	0.85
1:0:2594:U:H2'	1:0:2595:C:H6	1.38	0.85
1:0:490:A:O2'	1:0:491:A:H5'	1.76	0.85
1:0:524:A:H2'	1:0:525:A:C8	2.11	0.85
1:0:840:U:H2'	1:0:2051:U:C2	2.10	0.85
1:0:1537:U:H2'	1:0:1538:A:C8	2.11	0.85
1:0:2493:U:H2'	1:0:2494:C:C6	2.11	0.85
3:K:124:HIS:N	3:K:125:LYS:HZ2	1.73	0.85
1:0:2170:C:H2'	1:0:2171:U:O4'	1.75	0.85
1:0:138:G:H2'	1:0:139:A:H8	1.41	0.85
1:0:38:G:H1	1:0:453:U:H3	1.18	0.85
1:0:2080:U:H2'	1:0:2081:U:C6	2.12	0.85
1:0:118:U:H1'	1:0:143:A:C8	2.12	0.85
1:0:1948:C:O5'	1:0:1948:C:H6	1.59	0.85
1:0:2233:C:C2'	5:8:77:SER:HB2	2.07	0.85
3:K:21:ASP:HA	3:K:99:LYS:HE2	1.56	0.85
1:0:1204:G:H2'	1:0:1205:G:H8	1.38	0.85
1:0:940:G:H3'	1:0:941:U:C5'	2.06	0.85
1:0:1851:A:N6	1:0:1867:A:H1'	1.92	0.84
1:0:591:G:H2'	1:0:592:G:C8	2.11	0.84
1:0:603:C:H2'	1:0:604:U:H6	1.40	0.84
1:0:1918:G:H1'	1:0:1947:G:N2	1.92	0.84
1:0:665:A:H3'	1:0:666:U:H5''	1.58	0.84
1:0:697:G:O2'	1:0:801:A:N6	2.10	0.84
4:U:25:LYS:HD2	4:U:29:GLU:HG2	1.60	0.84
1:0:464:G:H2'	1:0:465:C:C6	2.13	0.84
1:0:728:G:H3'	1:0:729:A:H8	1.40	0.84
1:0:940:G:H2'	1:0:941:U:C4'	2.07	0.84
1:0:2736:U:O2'	1:0:2737:A:H5'	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:555:U:H6	1:0:555:U:H3'	1.39	0.84
1:0:500:G:H2'	1:0:501:G:H5'	1.59	0.84
1:0:1184:G:H2'	1:0:1185:C:H5''	1.59	0.84
1:0:1252:C:C2'	1:0:1253:C:H5''	2.07	0.84
1:0:109:A:H3'	1:0:110:U:H5''	1.60	0.84
1:0:321:A:H2'	1:0:323:G:N7	1.93	0.84
1:0:760:U:H2'	1:0:2592:U:O4	1.77	0.84
1:0:1191:G:H2'	1:0:1192:A:H8	1.39	0.84
1:0:2384:G:H5''	1:0:2385:U:H5''	1.57	0.83
1:0:2609:G:O2'	1:0:2866:A:H1'	1.78	0.83
1:0:885:A:H4'	3:K:67:ILE:O	1.79	0.83
1:0:1354:A:H61	1:0:1407:G:H21	1.27	0.83
1:0:1684:G:N2	1:0:1977:C:H42	1.76	0.83
1:0:176:A:H3'	1:0:177:U:H5	1.43	0.83
1:0:555:U:H3'	1:0:555:U:C6	2.13	0.83
1:0:755:C:H2'	1:0:756:C:C6	2.13	0.83
1:0:1778:U:H2'	1:0:1779:C:O4'	1.77	0.83
1:0:58:C:H1'	1:0:72:A:C8	2.13	0.83
1:0:788:G:H2'	1:0:807:A:C5	2.13	0.83
1:0:956:A:H2'	1:0:957:G:C5'	2.09	0.83
1:0:1252:C:H2'	1:0:1253:C:H5''	1.58	0.83
1:0:2331:A:C2	4:U:33:ALA:O	2.32	0.83
1:0:2782:G:H3'	1:0:2783:U:H5''	1.60	0.83
2:9:15:A:N1	2:9:72:C:H5'	1.93	0.83
1:0:534:U:H2'	1:0:535:U:C6	2.14	0.83
3:K:81:GLU:HG3	3:K:82:THR:N	1.94	0.83
1:0:1345:G:N2	1:0:1626:A:H5'	1.94	0.82
1:0:2769:C:H3'	1:0:2770:A:C8	2.13	0.82
1:0:70:A:H4'	1:0:71:A:C5'	2.09	0.82
1:0:216:U:H2'	1:0:217:U:O4'	1.78	0.82
1:0:958:G:H2'	1:0:959:C:H6	1.43	0.82
1:0:955:G:C8	1:0:955:G:H3'	2.14	0.82
1:0:2320:G:H2'	1:0:2321:C:C6	2.14	0.82
1:0:652:C:H42	1:0:657:A:H61	1.26	0.82
1:0:2691:C:O2'	1:0:2692:A:H8	1.62	0.82
1:0:2799:C:H2'	1:0:2800:C:O4'	1.79	0.82
1:0:2825:A:H2'	1:0:2826:C:C6	2.15	0.82
1:0:2873:G:H2'	1:0:2874:A:H8	1.41	0.82
1:0:983:G:OP2	1:0:985:G:H5''	1.80	0.82
1:0:1004:A:H2'	1:0:1005:U:C5'	2.09	0.82
1:0:1073:G:C2'	1:0:1074:G:H5''	2.05	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1548:U:H2'	1:0:1549:C:C6	2.15	0.82
1:0:1996:A:O2'	1:0:1997:A:H5'	1.78	0.82
1:0:2674:C:H2'	1:0:2675:U:H6	1.43	0.82
1:0:1776:A:H2'	1:0:1777:A:H5''	1.62	0.82
2:9:78:A:H2'	2:9:79:U:C6	2.15	0.82
1:0:1436:G:H21	1:0:1514:C:H1'	1.45	0.82
5:8:16:CYS:HB3	5:8:20:PHE:CZ	2.14	0.82
1:0:955:G:H3'	1:0:955:G:H8	1.43	0.82
1:0:1458:A:C3'	1:0:1459:U:H5''	2.10	0.82
1:0:2245:A:H1'	1:0:2246:A:C6	2.15	0.82
2:9:45:C:H42	2:9:47:A:N6	1.76	0.82
1:0:2548:G:O2'	1:0:2549:G:H5''	1.80	0.82
5:8:94:ALA:O	5:8:98:LYS:HG3	1.80	0.82
1:0:158:A:H2'	1:0:159:A:O4'	1.80	0.81
1:0:649:G:H2'	1:0:650:U:H6	1.45	0.81
1:0:2239:C:H2'	1:0:2240:C:H6	1.42	0.81
1:0:2721:A:N6	1:0:2743:G:H1'	1.95	0.81
1:0:516:G:HO2'	1:0:517:A:H8	0.84	0.81
1:0:888:G:H2'	1:0:889:C:O4'	1.80	0.81
1:0:27:G:H1'	1:0:523:A:N6	1.95	0.81
1:0:357:A:H3'	1:0:358:C:O4'	1.79	0.81
1:0:401:G:H2'	1:0:403:A:N7	1.95	0.81
1:0:1473:U:H4'	1:0:1474:A:N7	1.95	0.81
1:0:1550:C:C5	1:0:1551:U:H1'	2.14	0.81
1:0:2194:A:H2'	1:0:2195:C:H5''	1.62	0.81
1:0:2618:A:H1'	1:0:2758:A:C2	2.15	0.81
1:0:1596:A:H2'	1:0:1597:A:O4'	1.81	0.81
1:0:658:G:H2'	1:0:659:G:C8	2.15	0.81
1:0:1364:C:H2'	1:0:1365:U:C6	2.14	0.81
1:0:2134:U:H2'	1:0:2135:C:C6	2.14	0.81
1:0:810:U:H2'	1:0:811:G:H8	1.45	0.81
1:0:870:C:H2'	1:0:871:U:H5'	1.63	0.81
1:0:874:A:H62	1:0:928:G:H21	1.26	0.81
1:0:163:A:H2'	1:0:164:G:C8	2.14	0.81
1:0:1473:U:H4'	1:0:1474:A:C8	2.16	0.81
1:0:2233:C:H2'	5:8:77:SER:HB2	1.62	0.81
1:0:538:A:O2'	1:0:539:A:H4'	1.81	0.81
1:0:1151:U:H5''	1:0:1153:A:OP1	1.81	0.81
1:0:2683:C:H2'	1:0:2684:A:O4'	1.80	0.81
1:0:28:A:H1'	1:0:523:A:C2	2.16	0.80
1:0:442:A:H2'	1:0:443:A:C8	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1288:A:N6	1:0:1309:G:O4'	2.14	0.80
1:0:2559:U:C5	1:0:2560:G:C8	2.70	0.80
1:0:566:U:H2'	1:0:567:G:H8	1.46	0.80
1:0:651:C:C2'	1:0:652:C:H5''	2.11	0.80
1:0:872:G:O2'	1:0:2247:A:H2	1.64	0.80
1:0:1045:G:H2'	1:0:1046:U:H6	1.45	0.80
1:0:1:G:H2'	1:0:2:G:C8	2.15	0.80
1:0:27:G:HO2'	1:0:28:A:H8	1.30	0.80
1:0:1684:G:H21	1:0:1977:C:H42	1.23	0.80
1:0:1851:A:H61	1:0:1867:A:H1'	1.43	0.80
1:0:2309:G:H2'	1:0:2310:G:O4'	1.80	0.80
1:0:306:G:H22	1:0:355:G:H1'	1.44	0.80
1:0:808:C:H2'	1:0:809:C:H6	1.45	0.80
1:0:640:C:H4'	1:0:660:G:N3	1.96	0.80
1:0:923:A:H5''	1:0:924:C:H5''	1.62	0.80
1:0:574:C:H4'	1:0:1266:G:O6	1.80	0.80
1:0:1850:G:H1	1:0:1867:A:H2'	1.47	0.80
1:0:2503:G:C2'	1:0:2504:G:H5''	2.11	0.80
1:0:1866:G:H8	1:0:1866:G:O5'	1.64	0.80
1:0:1920:A:H2'	1:0:1921:A:C8	2.16	0.80
1:0:2829:A:C2	1:0:2830:U:H1'	2.16	0.80
2:9:27:A:H2'	2:9:28:A:H8	1.46	0.80
1:0:1354:A:H3'	1:0:1410:U:O2	1.82	0.80
1:0:2873:G:H2'	1:0:2874:A:C8	2.17	0.80
1:0:575:U:H2'	1:0:576:A:O4'	1.80	0.80
1:0:2088:U:H2'	1:0:2089:C:C6	2.16	0.80
1:0:176:A:H3'	1:0:177:U:C5	2.17	0.79
1:0:542:A:H2'	1:0:543:G:H5'	1.62	0.79
1:0:1087:C:H2'	1:0:1088:A:O4'	1.82	0.79
2:9:17:A:H1'	2:9:112:A:C8	2.17	0.79
1:0:1353:A:H4'	1:0:1410:U:O4	1.82	0.79
1:0:516:G:O2'	1:0:517:A:H8	1.64	0.79
1:0:747:A:H2'	1:0:748:A:C8	2.17	0.79
1:0:1204:G:H2'	1:0:1205:G:C8	2.17	0.79
1:0:2634:G:H2'	1:0:2643:G:O6	1.82	0.79
1:0:697:G:H2'	1:0:698:A:H5'	1.61	0.79
1:0:958:G:H2'	1:0:959:C:C6	2.17	0.79
1:0:2725:C:H2'	1:0:2726:U:C6	2.17	0.79
1:0:488:A:H8	1:0:488:A:OP1	1.65	0.79
1:0:870:C:C2'	1:0:871:U:H5'	2.12	0.79
1:0:1440:G:H3'	1:0:1441:A:H5''	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2364:C:H2'	1:0:2365:U:H6	1.46	0.79
1:0:2769:C:H6	1:0:2770:A:H8	1.26	0.79
1:0:2773:G:H8	1:0:2774:U:HO3'	1.27	0.79
1:0:68:C:O2	1:0:68:C:H2'	1.79	0.79
1:0:1210:C:H1'	1:0:1239:A:C4	2.17	0.79
1:0:2245:A:H4'	1:0:2246:A:N7	1.97	0.79
1:0:83:A:H2	1:0:98:U:C1'	1.95	0.79
1:0:91:A:H2'	1:0:92:U:C6	2.17	0.79
1:0:70:A:H4'	1:0:71:A:H5''	1.65	0.79
1:0:1892:C:H42	1:0:1903:C:N4	1.81	0.79
1:0:490:A:N7	1:0:492:G:H1'	1.98	0.79
1:0:788:G:N2	1:0:801:A:P	2.56	0.79
1:0:840:U:H4'	1:0:841:G:N2	1.98	0.79
1:0:1563:U:H2'	1:0:1564:U:C6	2.17	0.79
1:0:159:A:H2'	1:0:160:C:C6	2.18	0.78
1:0:1991:C:H2'	1:0:1992:G:H8	1.48	0.78
1:0:136:A:H3'	1:0:137:A:C8	2.17	0.78
3:K:11:ARG:NH1	3:K:15:ARG:NH1	2.30	0.78
1:0:101:A:H3'	1:0:102:C:C5	2.18	0.78
1:0:401:G:H1'	1:0:403:A:H62	1.46	0.78
1:0:1821:A:H3'	1:0:1822:C:H6	1.47	0.78
1:0:541:C:N4	1:0:572:G:C8	2.51	0.78
1:0:1340:C:H2'	1:0:1341:G:O4'	1.83	0.78
1:0:2753:C:H2'	1:0:2754:C:H6	1.47	0.78
1:0:27:G:H1'	1:0:523:A:H62	1.49	0.78
1:0:1978:U:C3'	1:0:1979:C:H5''	2.11	0.78
1:0:1997:A:H2'	1:0:1998:A:C8	2.19	0.78
1:0:58:C:H5'	1:0:59:G:OP2	1.84	0.78
1:0:101:A:H3'	1:0:102:C:H5	1.46	0.78
1:0:109:A:C2'	1:0:110:U:H5''	2.13	0.78
1:0:1347:C:O2'	1:0:1348:C:H5'	1.84	0.78
1:0:1858:C:H2'	1:0:1859:A:C8	2.18	0.78
1:0:2395:C:H2'	1:0:2396:C:C5'	2.13	0.78
1:0:67:G:C5	1:0:72:A:C2	2.71	0.78
1:0:1004:A:C2'	1:0:1005:U:H5''	2.14	0.78
1:0:1830:C:H41	1:0:1881:U:H3'	1.47	0.78
1:0:1448:A:H61	1:0:1574:A:H61	1.32	0.78
1:0:2709:C:H2'	1:0:2710:C:H6	1.48	0.78
1:0:222:G:O2'	1:0:223:C:H5'	1.84	0.78
1:0:428:A:H2'	1:0:429:C:O4'	1.84	0.78
1:0:693:A:H2'	1:0:694:G:H8	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1197:U:H2'	1:0:1198:C:O4'	1.84	0.78
1:0:1209:G:O2'	1:0:1210:C:H5'	1.84	0.78
4:U:29:GLU:O	4:U:67:VAL:HG23	1.84	0.78
1:0:704:G:O2'	1:0:705:C:H5'	1.84	0.77
1:0:1268:U:H5'	1:0:1269:G:H5''	1.63	0.77
1:0:1821:A:H3'	1:0:1822:C:C6	2.20	0.77
3:K:13:GLN:HE21	3:K:13:GLN:CA	1.90	0.77
1:0:982:C:H2'	1:0:983:G:O4'	1.84	0.77
1:0:1909:U:C2'	1:0:1910:A:H5''	2.14	0.77
1:0:2871:U:H2'	1:0:2872:U:C6	2.19	0.77
1:0:574:C:H4'	1:0:1266:G:C6	2.20	0.77
1:0:2496:C:O2'	1:0:2497:A:H5'	1.83	0.77
1:0:2691:C:O2'	1:0:2692:A:C8	2.37	0.77
3:K:35:LEU:HD11	3:K:130:THR:HB	1.65	0.77
1:0:501:G:O2'	1:0:502:A:H5'	1.85	0.77
1:0:652:C:N4	1:0:657:A:H61	1.82	0.77
1:0:1690:U:C2'	1:0:1691:G:H5'	2.13	0.77
1:0:1734:C:H3'	1:0:1735:G:O4'	1.84	0.77
1:0:2034:A:N6	1:0:2593:A:N7	2.33	0.77
1:0:2058:U:H3'	1:0:2217:G:N1	1.99	0.77
1:0:2158:C:H2'	1:0:2159:A:C8	2.19	0.77
1:0:995:A:H5''	1:0:996:C:C5	2.18	0.77
1:0:1217:U:H2'	1:0:1218:C:C6	2.18	0.77
1:0:1849:G:H2'	1:0:1850:G:C8	2.20	0.77
1:0:2011:U:H2'	1:0:2012:A:C8	2.20	0.77
3:K:12:LYS:HG3	3:K:15:ARG:HE	1.50	0.77
1:0:1436:G:N2	1:0:1593:C:H1'	1.99	0.77
1:0:1528:C:H3'	1:0:1529:C:H5''	1.67	0.77
1:0:1714:A:H5''	1:0:1715:A:H3'	1.67	0.77
1:0:2687:G:H2'	1:0:2688:G:O4'	1.85	0.77
4:U:40:GLN:NE2	4:U:43:THR:HA	2.00	0.77
1:0:68:C:C2	1:0:72:A:N3	2.53	0.77
1:0:876:A:O2'	1:0:877:G:H5'	1.84	0.77
5:8:45:VAL:HG13	5:8:106:LYS:HZ2	1.49	0.77
1:0:48:A:N6	1:0:154:U:C5	2.53	0.77
1:0:788:G:C2	1:0:800:U:H2'	2.20	0.77
2:9:59:A:H2'	2:9:60:A:H5'	1.67	0.77
1:0:995:A:H5''	1:0:996:C:H5	1.50	0.76
1:0:1199:U:O5'	1:0:1200:G:H5'	1.84	0.76
1:0:1923:U:H5'	1:0:1924:C:OP1	1.85	0.76
1:0:27:G:N2	1:0:522:G:O2'	2.18	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:603:C:H2'	1:0:604:U:C6	2.19	0.76
1:0:700:C:H2'	1:0:701:U:C6	2.19	0.76
1:0:861:G:N3	1:0:944:A:H1'	1.99	0.76
1:0:968:C:H6	1:0:970:A:C8	2.02	0.76
1:0:1621:C:H5'	1:0:1626:A:N6	1.99	0.76
1:0:2088:U:H2'	1:0:2089:C:H6	1.50	0.76
1:0:2117:A:H2'	1:0:2118:A:H5'	1.68	0.76
1:0:66:U:H2'	1:0:67:G:C8	2.20	0.76
1:0:313:U:H2'	1:0:314:G:C8	2.20	0.76
1:0:573:C:O2'	1:0:574:C:H5'	1.86	0.76
1:0:616:U:H2'	1:0:617:U:H5''	1.67	0.76
1:0:755:C:O2'	1:0:756:C:H5'	1.85	0.76
1:0:1791:C:C6	1:0:1792:C:H5''	2.20	0.76
1:0:2212:U:H2'	1:0:2213:G:C8	2.21	0.76
1:0:2248:A:OP1	1:0:2248:A:C8	2.38	0.76
1:0:159:A:H2	1:0:192:G:H22	1.33	0.76
1:0:357:A:H2'	1:0:358:C:H5'	1.65	0.76
1:0:617:U:H2'	1:0:618:A:H8	1.50	0.76
1:0:1435:G:H2'	1:0:1435:G:N3	2.00	0.76
1:0:1666:G:H2'	1:0:1667:A:H8	1.50	0.76
1:0:1807:A:H1'	1:0:1809:G:C8	2.21	0.76
1:0:2432:A:O2'	1:0:2433:G:H5'	1.86	0.76
1:0:330:C:H2'	1:0:331:U:O4'	1.86	0.76
1:0:616:U:H2'	1:0:617:U:H5'	1.68	0.76
1:0:1198:C:H5''	1:0:1199:U:H4'	1.67	0.76
1:0:1409:U:H5''	1:0:1410:U:OP2	1.85	0.76
1:0:2246:A:H5''	1:0:2247:A:H5''	1.68	0.76
3:K:38:MET:CG	3:K:131:LYS:HE2	2.14	0.76
1:0:464:G:H2'	1:0:465:C:H6	1.48	0.76
1:0:839:U:H5''	1:0:2408:G:OP2	1.84	0.76
1:0:2301:A:H2'	1:0:2302:G:O4'	1.86	0.76
1:0:341:A:H3'	1:0:341:A:OP1	1.86	0.76
4:U:51:VAL:HG22	4:U:81:ILE:HD11	1.68	0.76
1:0:2238:G:H4'	1:0:2407:G:OP2	1.84	0.76
1:0:2457:A:H2'	1:0:2458:U:O4'	1.86	0.76
5:8:88:VAL:HG23	5:8:89:GLN:HE21	1.51	0.76
1:0:19:C:H2'	1:0:20:C:H6	1.51	0.75
1:0:403:A:H5''	1:0:404:A:OP1	1.86	0.75
1:0:212:U:C2	1:0:443:A:H2	2.05	0.75
1:0:729:A:H2'	1:0:730:C:H6	1.51	0.75
1:0:2466:G:O2'	1:0:2467:A:H5'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2585:C:C2'	1:0:2586:G:H5'	2.15	0.75
1:0:76:C:H6	1:0:76:C:H5'	1.51	0.75
1:0:109:A:H2'	1:0:110:U:H5''	1.68	0.75
1:0:537:C:O2'	1:0:2025:A:C2	2.39	0.75
1:0:1940:C:H2'	1:0:1941:C:C6	2.20	0.75
1:0:2005:U:H5''	1:0:2006:G:OP1	1.86	0.75
1:0:2227:C:C2'	1:0:2228:U:H5'	2.16	0.75
1:0:2286:G:N2	1:0:2287:G:H4'	2.01	0.75
2:9:45:C:N4	2:9:47:A:H62	1.84	0.75
4:U:5:LYS:HE3	5:8:1:MET:HE3	1.66	0.75
1:0:691:C:H2'	1:0:692:C:H6	1.51	0.75
1:0:2229:G:H8	1:0:2475:C:H5''	1.52	0.75
1:0:843:G:N3	1:0:2427:A:N7	2.35	0.75
1:0:2498:U:H5''	1:0:2499:C:OP1	1.87	0.75
1:0:597:U:H2'	1:0:598:U:H6	1.50	0.75
1:0:665:A:H3'	1:0:666:U:C5'	2.16	0.75
1:0:942:U:H2'	1:0:943:U:H5'	1.69	0.75
1:0:1882:G:H21	1:0:1885:C:N4	1.83	0.75
1:0:2866:A:N3	1:0:2867:G:H1'	2.00	0.75
1:0:1029:C:C2'	1:0:1030:U:H5''	2.12	0.75
1:0:1066:G:H3'	1:0:1067:G:H5''	1.68	0.75
1:0:2038:C:H4'	1:0:2039:G:H5''	1.69	0.75
1:0:2610:G:H5'	1:0:2866:A:O4'	1.87	0.75
1:0:2633:A:C2	1:0:2644:A:H5''	2.22	0.75
1:0:1021:A:H1'	1:0:1164:C:H1'	1.67	0.75
1:0:1465:G:H2'	1:0:1466:C:O4'	1.86	0.75
1:0:2691:C:H2'	1:0:2692:A:C5'	2.16	0.75
3:K:59:PHE:CE2	3:K:110:VAL:HG11	2.22	0.75
1:0:306:G:N2	1:0:355:G:H1'	2.01	0.74
1:0:1004:A:H2'	1:0:1005:U:H5''	1.67	0.74
3:K:124:HIS:H	3:K:125:LYS:NZ	1.85	0.74
1:0:70:A:OP1	1:0:110:U:H2'	1.87	0.74
1:0:788:G:N2	1:0:800:U:O3'	2.20	0.74
1:0:2014:A:C6	1:0:2477:C:H1'	2.22	0.74
1:0:1000:G:OP1	1:0:1168:G:H4'	1.86	0.74
1:0:2434:G:H2'	1:0:2435:C:C6	2.22	0.74
1:0:1006:C:H5'	1:0:1007:A:OP1	1.87	0.74
1:0:1217:U:H2'	1:0:1218:C:H6	1.52	0.74
1:0:873:U:O2	1:0:2247:A:O4'	2.05	0.74
1:0:920:G:OP1	3:K:23:LYS:HG3	1.87	0.74
1:0:1761:G:H1	1:0:1965:U:H3	1.32	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2254:C:O2'	3:K:85:GLY:C	2.31	0.74
1:0:2721:A:H61	1:0:2743:G:H1'	1.50	0.74
1:0:308:C:H2'	1:0:309:G:O4'	1.87	0.74
1:0:597:U:H2'	1:0:598:U:C6	2.22	0.74
1:0:887:G:H2'	1:0:888:G:H5'	1.70	0.74
1:0:1302:C:O2'	1:0:1303:U:H5'	1.88	0.74
1:0:59:G:N3	1:0:73:A:C8	2.56	0.74
1:0:975:C:O2'	1:0:2252:A:H1'	1.87	0.74
1:0:1280:U:C5	1:0:1995:G:C2	2.76	0.74
1:0:1427:G:H21	1:0:1604:A:H62	1.35	0.74
1:0:1503:G:H2'	1:0:1504:G:C8	2.22	0.74
1:0:2068:C:H1'	1:0:2214:G:N2	2.03	0.74
1:0:2080:U:H2'	1:0:2081:U:H6	1.51	0.74
5:8:71:LEU:C	5:8:71:LEU:HD12	2.13	0.74
1:0:10:A:O2'	1:0:11:G:H5'	1.87	0.74
1:0:1540:C:H2'	1:0:1541:G:O4'	1.88	0.74
1:0:635:C:C2'	1:0:636:G:H5''	2.17	0.74
1:0:1807:A:O2'	1:0:1808:C:H4'	1.88	0.74
1:0:2383:C:H2'	1:0:2384:G:O4'	1.88	0.74
3:K:128:ILE:H	3:K:128:ILE:HD12	1.53	0.74
1:0:617:U:H2'	1:0:618:A:C8	2.23	0.73
1:0:2346:G:O2'	1:0:2347:C:H5'	1.88	0.73
1:0:136:A:H3'	1:0:137:A:H8	1.53	0.73
1:0:325:U:H2'	1:0:326:A:C8	2.23	0.73
1:0:697:G:N1	1:0:807:A:C2	2.55	0.73
3:K:12:LYS:H	3:K:15:ARG:HH21	1.36	0.73
3:K:27:TYR:HB2	3:K:137:VAL:CG1	2.18	0.73
5:8:13:MET:O	5:8:17:VAL:HG23	1.86	0.73
1:0:128:C:C2'	1:0:129:A:H5''	2.18	0.73
1:0:788:G:N2	1:0:801:A:OP2	2.21	0.73
1:0:836:G:H2'	1:0:837:U:H6	1.53	0.73
1:0:1325:U:H5''	1:0:1326:U:OP1	1.87	0.73
1:0:1861:G:O2'	1:0:1862:C:H5'	1.88	0.73
1:0:2709:C:H2'	1:0:2710:C:C6	2.23	0.73
1:0:2782:G:N7	1:0:2784:A:OP2	2.21	0.73
3:K:74:PRO:HG3	3:K:94:TRP:CD1	2.22	0.73
1:0:787:A:H2'	1:0:788:G:H8	1.54	0.73
1:0:1118:G:H2'	1:0:1119:U:C6	2.23	0.73
1:0:2866:A:H2'	1:0:2867:G:C1'	2.17	0.73
1:0:697:G:C2'	1:0:698:A:H5'	2.18	0.73
1:0:726:G:H2'	1:0:727:U:O4'	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:930:A:C8	2:9:82:U:H4'	2.24	0.73
1:0:2257:A:OP1	3:K:13:GLN:HG3	1.87	0.73
1:0:2701:A:C2	1:0:2702:G:H1'	2.23	0.73
1:0:400:U:H4'	1:0:401:G:C5	2.23	0.73
1:0:788:G:H5'	1:0:790:A:H1'	1.69	0.73
1:0:813:A:H2'	1:0:813:A:N3	2.04	0.73
1:0:2783:U:H2'	1:0:2784:A:H4'	1.70	0.73
1:0:322:A:H1'	1:0:343:A:C4	2.23	0.73
1:0:693:A:H2'	1:0:694:G:C8	2.23	0.73
1:0:367:G:H3'	1:0:368:A:H5''	1.71	0.73
1:0:425:A:N7	1:0:2390:A:H2	1.87	0.73
1:0:521:U:H5	1:0:522:G:C4	2.07	0.73
1:0:1572:C:H2'	1:0:1573:G:H5''	1.68	0.73
1:0:2162:C:H2'	1:0:2163:U:C6	2.23	0.73
1:0:2782:G:H3'	1:0:2783:U:C5'	2.19	0.73
2:9:6:C:H2'	2:9:7:C:H6	1.54	0.73
4:U:40:GLN:NE2	4:U:44:LYS:H	1.87	0.73
1:0:65:C:H2'	1:0:66:U:O4'	1.89	0.73
1:0:146:C:H2'	1:0:147:G:C8	2.23	0.73
1:0:2174:G:N2	1:0:2175:A:H62	1.87	0.73
1:0:2198:U:H2'	1:0:2199:C:O4'	1.88	0.73
1:0:2555:G:H3'	1:0:2555:G:OP1	1.88	0.73
1:0:788:G:H22	1:0:801:A:P	2.12	0.72
1:0:788:G:H5''	1:0:790:A:H1'	1.71	0.72
1:0:1358:C:H2'	1:0:1359:G:H5''	1.70	0.72
1:0:1415:C:H2'	1:0:1416:A:H5'	1.71	0.72
1:0:1191:G:H2'	1:0:1192:A:C8	2.23	0.72
1:0:1354:A:N6	1:0:1407:G:H21	1.85	0.72
1:0:2382:C:O2	1:0:2382:C:H2'	1.89	0.72
1:0:1644:G:H2'	1:0:1645:U:H6	1.53	0.72
1:0:935:C:H2'	1:0:936:A:C8	2.25	0.72
1:0:1480:G:C2	1:0:1481:U:H1'	2.25	0.72
1:0:1883:A:H5'	1:0:1953:A:H5''	1.70	0.72
1:0:2277:A:H2'	1:0:2278:A:O4'	1.90	0.72
1:0:2863:U:H2'	1:0:2864:C:O4'	1.88	0.72
1:0:1437:A:C2'	1:0:1438:G:H8	1.87	0.72
1:0:1774:A:H2	1:0:2567:G:C8	2.08	0.72
1:0:525:A:H2'	1:0:526:C:O4'	1.90	0.72
1:0:836:G:H2'	1:0:837:U:C6	2.24	0.72
1:0:1850:G:H1	1:0:1867:A:C2'	2.02	0.72
1:0:2293:G:H2'	1:0:2294:U:H6	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1280:U:H5	1:0:1995:G:C2	2.08	0.72
1:0:173:A:H61	1:0:844:G:H21	1.38	0.72
1:0:923:A:N6	3:K:14:PHE:O	2.21	0.72
1:0:2473:G:H2'	1:0:2474:G:C8	2.25	0.72
1:0:2670:C:H6	1:0:2670:C:H5'	1.52	0.72
1:0:793:G:C2	1:0:795:A:C2	2.77	0.72
1:0:1921:A:C2'	1:0:1922:U:H5''	2.20	0.72
1:0:2229:G:H5''	3:K:84:MET:SD	2.29	0.72
1:0:2624:G:H4'	1:0:2712:G:O2'	1.90	0.72
1:0:2725:C:H2'	1:0:2726:U:H6	1.53	0.72
1:0:67:G:C2'	1:0:68:C:H6	2.03	0.72
1:0:1337:G:O2'	1:0:1632:A:N6	2.22	0.72
1:0:1921:A:H2'	1:0:1922:U:C5'	2.18	0.72
5:8:1:MET:HA	5:8:4:ASP:OD2	1.89	0.72
1:0:67:G:N2	1:0:73:A:H4'	2.05	0.71
1:0:2549:G:N2	1:0:2550:C:H1'	2.04	0.71
1:0:208:C:O2'	1:0:209:G:H5'	1.90	0.71
1:0:887:G:C2'	1:0:888:G:H5'	2.19	0.71
1:0:1221:C:H2'	1:0:1222:G:C8	2.22	0.71
1:0:2510:A:H61	1:0:2641:A:H61	1.36	0.71
1:0:482:A:C2'	1:0:483:A:H5'	2.21	0.71
1:0:810:U:H2'	1:0:811:G:C8	2.25	0.71
1:0:1310:C:H2'	1:0:1311:C:H6	1.55	0.71
1:0:1313:U:H4'	1:0:1314:A:O5'	1.90	0.71
1:0:1459:U:H3	1:0:1476:G:H5''	1.55	0.71
1:0:2081:U:H2'	1:0:2082:C:H5''	1.71	0.71
1:0:2233:C:H2'	5:8:77:SER:CB	2.20	0.71
1:0:2364:C:H2'	1:0:2365:U:C6	2.26	0.71
1:0:1277:G:C8	1:0:1278:A:N7	2.58	0.71
1:0:1515:U:H2'	1:0:1516:A:H8	1.55	0.71
1:0:48:A:H61	1:0:154:U:H5	1.36	0.71
1:0:1624:A:O2'	1:0:1625:A:H3'	1.91	0.71
1:0:2201:G:H2'	1:0:2202:G:C8	2.20	0.71
1:0:2451:G:H2'	1:0:2454:C:N4	2.06	0.71
1:0:2661:G:H2'	1:0:2662:C:H5'	1.72	0.71
3:K:37:ALA:HA	3:K:130:THR:HG22	1.72	0.71
1:0:451:A:H2'	1:0:452:G:H8	1.54	0.71
1:0:831:G:C2'	1:0:832:A:H5''	2.21	0.71
1:0:1026:U:O2'	1:0:1027:C:H5'	1.90	0.71
1:0:1587:A:H2'	1:0:1588:A:H8	1.55	0.71
1:0:1655:C:H4'	1:0:2689:C:O2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2522:G:H5'	1:0:2522:G:H8	1.55	0.71
1:0:877:G:H2'	1:0:878:C:H6	1.54	0.71
1:0:1288:A:H2'	1:0:1289:A:O4'	1.90	0.71
1:0:1821:A:H5''	1:0:1822:C:H5	1.53	0.71
1:0:2260:C:O2'	1:0:2261:G:H5'	1.89	0.71
1:0:2299:A:H5'	1:0:2300:G:C4	2.25	0.71
1:0:2713:A:O2'	1:0:2714:A:H5'	1.91	0.71
2:9:26:G:H2'	2:9:58:G:O6	1.91	0.71
1:0:102:C:H2'	1:0:103:U:C6	2.26	0.71
1:0:1055:A:N6	1:0:1122:A:H4'	2.05	0.71
1:0:1286:U:H4'	1:0:1288:A:OP1	1.90	0.71
1:0:1624:A:O2'	1:0:1625:A:H8	1.74	0.71
1:0:158:A:H5'	1:0:158:A:H8	1.55	0.71
1:0:195:A:H8	1:0:195:A:O5'	1.74	0.71
1:0:482:A:H2'	1:0:483:A:H5'	1.72	0.71
1:0:2362:G:H2'	1:0:2363:G:H8	1.54	0.71
1:0:2593:A:O2'	1:0:2594:U:H5'	1.90	0.71
1:0:2866:A:C2'	1:0:2867:G:O4'	2.36	0.71
1:0:306:G:H2'	1:0:307:C:H6	1.56	0.71
2:9:72:C:H2'	2:9:73:C:C6	2.26	0.71
1:0:314:G:H1	1:0:325:U:H3	1.37	0.70
1:0:710:C:H2'	1:0:711:C:H6	1.55	0.70
1:0:1075:C:H3'	1:0:1076:U:C6	2.26	0.70
1:0:1567:A:H2'	1:0:1568:A:C8	2.25	0.70
1:0:2334:C:H1'	4:U:39:ARG:NH2	1.97	0.70
1:0:2826:C:H2'	1:0:2827:G:H5'	1.73	0.70
3:K:81:GLU:CG	3:K:82:THR:H	1.97	0.70
1:0:9:U:H2'	1:0:10:A:H8	1.56	0.70
1:0:572:G:H22	1:0:587:A:H2	1.39	0.70
1:0:630:G:H5''	1:0:631:G:OP2	1.91	0.70
1:0:729:A:H2'	1:0:730:C:C6	2.25	0.70
1:0:994:A:N7	1:0:995:A:H1'	2.06	0.70
1:0:1234:C:H2'	1:0:1235:C:C6	2.26	0.70
1:0:2233:C:H1'	5:8:78:GLU:H	1.57	0.70
1:0:2737:A:H2'	1:0:2738:A:H5'	1.73	0.70
1:0:2802:C:O2'	1:0:2803:C:H5'	1.90	0.70
5:8:16:CYS:HB3	5:8:20:PHE:CE2	2.25	0.70
1:0:594:G:C6	1:0:1264:C:N3	2.59	0.70
1:0:1314:A:O2'	1:0:1315:A:H3'	1.92	0.70
1:0:2271:C:H4'	1:0:2354:G:O4'	1.91	0.70
1:0:1358:C:C2'	1:0:1359:G:H5''	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1427:G:H21	1:0:1604:A:N6	1.89	0.70
1:0:2158:C:H2'	1:0:2159:A:H8	1.56	0.70
3:K:92:GLU:CG	3:K:93:TYR:N	2.54	0.70
1:0:914:C:O2'	1:0:915:C:H5'	1.91	0.70
1:0:1337:G:N2	1:0:1344:C:C2	2.60	0.70
1:0:2225:G:H2'	1:0:2226:A:H8	1.57	0.70
1:0:2839:G:H2'	1:0:2840:U:C6	2.27	0.70
1:0:310:A:H2'	1:0:311:A:C8	2.26	0.70
1:0:1212:U:H2'	1:0:1213:U:H6	1.55	0.70
1:0:1445:A:H2'	1:0:1446:U:O4'	1.92	0.70
1:0:2229:G:H5''	3:K:84:MET:HE2	1.72	0.70
1:0:2370:G:H1'	1:0:2408:G:N2	2.06	0.70
1:0:2463:G:O2'	3:K:125:LYS:HB2	1.91	0.70
3:K:76:THR:HG21	3:K:88:LYS:CB	2.12	0.70
1:0:174:A:H1'	1:0:2409:A:N6	2.07	0.70
1:0:1145:C:H6	1:0:1147:G:OP2	1.74	0.70
1:0:1174:G:H2'	1:0:1175:A:H8	1.56	0.70
1:0:2344:G:H4'	4:U:60:PHE:HE2	1.50	0.70
1:0:2358:C:H2'	1:0:2359:U:C6	2.25	0.70
1:0:2594:U:H2'	1:0:2595:C:C6	2.26	0.70
3:K:13:GLN:HB3	3:K:14:PHE:CD2	2.27	0.70
3:K:124:HIS:H	3:K:125:LYS:HZ2	1.35	0.70
1:0:340:G:H1'	1:0:488:A:H1'	1.72	0.70
2:9:63:A:H2'	2:9:64:C:C6	2.25	0.70
2:9:76:U:H2'	2:9:77:G:H5'	1.73	0.70
2:9:110:U:H2'	2:9:111:C:H6	1.57	0.70
1:0:417:C:H3'	1:0:417:C:H6	1.57	0.70
1:0:2523:G:H2'	1:0:2524:G:H8	1.57	0.70
2:9:72:C:H2'	2:9:73:C:H6	1.57	0.70
2:9:93:G:H5''	3:K:19:THR:HB	1.73	0.70
1:0:478:G:O2'	1:0:479:G:H5'	1.91	0.69
1:0:876:A:H2'	1:0:877:G:C8	2.26	0.69
1:0:1002:C:H5'	1:0:1199:U:OP1	1.92	0.69
1:0:1103:C:H2'	1:0:1104:G:C8	2.27	0.69
1:0:1569:A:HO2'	1:0:1570:C:H5	1.40	0.69
1:0:2356:A:H2'	1:0:2357:A:C8	2.26	0.69
1:0:228:A:H2'	1:0:229:G:H5'	1.74	0.69
1:0:313:U:H2'	1:0:314:G:H8	1.58	0.69
1:0:728:G:H3'	1:0:729:A:C8	2.26	0.69
1:0:859:U:H4'	1:0:860:U:H5	1.54	0.69
1:0:985:G:H1'	1:0:1001:A:H62	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1681:A:C2	1:0:2706:U:C1'	2.75	0.69
1:0:1764:A:H2'	1:0:1765:C:H5'	1.74	0.69
1:0:414:A:H61	1:0:435:A:H61	1.40	0.69
1:0:1416:A:H2'	1:0:1417:C:H6	1.57	0.69
1:0:1474:A:O2'	1:0:1475:U:H5'	1.92	0.69
3:K:14:PHE:CE1	3:K:90:ALA:HB2	2.26	0.69
3:K:134:LYS:HE3	3:K:135:ARG:N	2.07	0.69
5:8:55:ALA:HA	5:8:58:ASN:HD22	1.56	0.69
1:0:940:G:OP2	1:0:941:U:H5''	1.91	0.69
1:0:1569:A:O2'	1:0:1570:C:H5	1.76	0.69
1:0:1939:U:H1'	1:0:2531:U:OP1	1.92	0.69
1:0:2194:A:C2'	1:0:2195:C:H5''	2.21	0.69
1:0:174:A:C2	1:0:175:C:H1'	2.26	0.69
1:0:624:A:H3'	1:0:625:A:C8	2.27	0.69
1:0:1791:C:O2'	1:0:1793:A:H5'	1.92	0.69
1:0:2827:G:H2'	1:0:2828:C:O4'	1.92	0.69
1:0:124:A:H2'	1:0:125:A:C8	2.27	0.69
1:0:212:U:O2'	1:0:213:C:H5'	1.92	0.69
1:0:773:G:C2'	1:0:774:A:H5'	2.22	0.69
1:0:1354:A:H61	1:0:1407:G:N2	1.89	0.69
1:0:2160:C:H2'	1:0:2161:C:C6	2.27	0.69
1:0:2396:C:H6	1:0:2396:C:H5'	1.57	0.69
1:0:2407:G:H4'	1:0:2408:G:C4	2.28	0.69
1:0:2436:U:H2'	1:0:2437:G:O4'	1.93	0.69
2:9:74:A:H1'	2:9:108:G:H22	1.54	0.69
1:0:936:A:O2'	1:0:937:C:H5'	1.93	0.69
1:0:953:G:H1'	1:0:1203:A:C2	2.28	0.69
1:0:1198:C:OP1	1:0:1199:U:H1'	1.93	0.69
1:0:1345:G:N1	1:0:1625:A:O2'	2.19	0.69
1:0:2194:A:H2'	1:0:2195:C:C5'	2.21	0.69
1:0:2391:A:H2'	1:0:2392:G:O4'	1.92	0.69
1:0:128:C:H2'	1:0:129:A:C5'	2.22	0.69
1:0:553:C:O2	1:0:553:C:H2'	1.90	0.69
1:0:619:A:H2'	1:0:620:G:H8	1.55	0.69
1:0:737:C:H2'	1:0:738:G:C8	2.28	0.69
1:0:984:A:H1'	1:0:1202:U:C6	2.27	0.69
1:0:1030:U:O2'	1:0:1031:C:H5'	1.92	0.69
1:0:1141:U:C2	1:0:2008:C:H5''	2.28	0.69
1:0:1355:A:C1'	1:0:1410:U:H4'	2.22	0.69
1:0:1355:A:C2	1:0:1358:C:C5	2.81	0.69
1:0:1368:G:H2'	1:0:1369:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1502:G:H2'	1:0:1503:G:H8	1.58	0.69
1:0:1618:U:C6	1:0:1618:U:O5'	2.46	0.69
1:0:1765:C:H4'	1:0:1962:C:O2	1.93	0.69
1:0:1851:A:H2'	1:0:1852:G:O4'	1.92	0.69
1:0:2362:G:H2'	1:0:2363:G:C8	2.26	0.69
1:0:2642:G:H2'	1:0:2643:G:O4'	1.93	0.69
2:9:116:C:H2'	2:9:117:G:O4'	1.93	0.69
1:0:652:C:H42	1:0:657:A:N6	1.90	0.69
1:0:882:C:H2'	1:0:883:A:H8	1.58	0.69
1:0:1681:A:H61	1:0:1979:C:H42	1.37	0.69
1:0:2059:U:OP2	1:0:2217:G:N2	2.21	0.69
1:0:2229:G:H2'	1:0:2475:C:OP1	1.93	0.69
1:0:2257:A:H2'	1:0:2258:G:H5'	1.75	0.69
1:0:2663:U:N3	1:0:2664:G:C8	2.60	0.69
1:0:2663:U:C2	1:0:2664:G:C8	2.81	0.69
1:0:877:G:H2'	1:0:878:C:C6	2.27	0.69
1:0:2322:U:O2'	1:0:2323:U:H5'	1.93	0.69
1:0:2667:C:N4	1:0:2699:G:H3'	2.08	0.69
1:0:62:U:H3'	1:0:63:A:C8	2.27	0.68
1:0:408:U:H2'	1:0:409:G:C8	2.27	0.68
1:0:1223:G:H5'	1:0:1225:G:O4'	1.93	0.68
1:0:306:G:H2'	1:0:307:C:C6	2.27	0.68
1:0:866:U:H2'	1:0:867:G:C8	2.28	0.68
1:0:200:A:H2'	1:0:421:G:H1'	1.76	0.68
1:0:325:U:H2'	1:0:326:A:H8	1.58	0.68
1:0:495:C:N4	1:0:507:A:C2	2.62	0.68
1:0:805:G:H2'	1:0:2419:C:N3	2.08	0.68
1:0:946:U:H2'	1:0:947:C:H6	1.58	0.68
1:0:1004:A:H2'	1:0:1005:U:H5'	1.74	0.68
1:0:1145:C:C6	1:0:1147:G:OP2	2.45	0.68
1:0:1153:A:H5''	1:0:1154:A:OP1	1.92	0.68
1:0:1998:A:H2'	1:0:1999:U:H5'	1.75	0.68
2:9:15:A:C6	2:9:72:C:H5'	2.29	0.68
1:0:1109:A:H3'	1:0:1110:G:H8	1.58	0.68
1:0:1391:A:N3	1:0:1392:U:H5	1.91	0.68
1:0:1411:C:H2'	1:0:1412:C:H6	1.56	0.68
1:0:1685:A:N6	1:0:1693:A:H61	1.92	0.68
1:0:1970:G:O2'	1:0:1971:C:H5'	1.92	0.68
1:0:2077:G:H1	1:0:2178:U:H3	1.40	0.68
1:0:835:U:H2'	1:0:836:G:H8	1.57	0.68
1:0:1199:U:O5'	1:0:1200:G:C5'	2.42	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2559:U:C2'	1:0:2560:G:H5'	2.22	0.68
1:0:2863:U:H2'	1:0:2864:C:H6	1.58	0.68
3:K:59:PHE:HE1	3:K:107:VAL:HG11	1.59	0.68
1:0:1536:G:C2'	1:0:1537:U:H5'	2.23	0.68
1:0:1687:C:H2'	1:0:1688:U:O4'	1.94	0.68
2:9:104:A:H2'	2:9:105:G:C8	2.29	0.68
3:K:35:LEU:CD1	3:K:130:THR:HB	2.23	0.68
1:0:190:A:H2'	1:0:191:G:C8	2.29	0.68
1:0:987:G:H4'	1:0:1167:A:N7	2.09	0.68
3:K:11:ARG:HD2	3:K:15:ARG:NH2	2.06	0.68
1:0:566:U:H2'	1:0:567:G:C8	2.29	0.68
1:0:573:C:C2'	1:0:574:C:H5'	2.22	0.68
1:0:924:C:H2'	1:0:925:U:O4'	1.93	0.68
1:0:1399:C:H2'	1:0:1400:A:H8	1.57	0.68
1:0:2014:A:O2'	1:0:2434:G:H4'	1.94	0.68
1:0:2782:G:H1	1:0:2784:A:H2	1.40	0.68
2:9:79:U:O2'	2:9:80:A:H5'	1.93	0.68
1:0:1069:G:H2'	1:0:1070:G:O4'	1.93	0.68
1:0:1253:C:H5'	1:0:1253:C:H6	1.59	0.68
1:0:2266:A:N6	1:0:2323:U:H1'	2.09	0.68
1:0:2338:C:H2'	1:0:2339:A:C8	2.29	0.68
2:9:63:A:H2'	2:9:64:C:H6	1.59	0.68
1:0:573:C:H2'	1:0:574:C:O4'	1.94	0.68
1:0:591:G:C3'	1:0:592:G:H8	2.07	0.68
1:0:1430:G:H2'	1:0:1431:U:C6	2.27	0.68
1:0:2352:A:H2'	1:0:2353:G:H8	1.58	0.68
1:0:2469:G:H4'	1:0:2470:U:OP1	1.92	0.68
2:9:45:C:N4	2:9:47:A:N6	2.41	0.68
1:0:162:C:H2'	1:0:163:A:H8	1.59	0.67
1:0:177:U:O5'	1:0:177:U:H6	1.77	0.67
1:0:191:G:O2'	1:0:192:G:H5'	1.93	0.67
1:0:1515:U:H2'	1:0:1516:A:C8	2.29	0.67
1:0:1816:G:H2'	1:0:1817:U:H6	1.59	0.67
1:0:1937:G:H2'	1:0:1939:U:C4	2.28	0.67
5:8:95:ALA:O	5:8:99:ILE:HG12	1.94	0.67
1:0:58:C:H3'	1:0:59:G:C4'	2.25	0.67
1:0:317:U:H2'	1:0:318:G:H5''	1.75	0.67
1:0:490:A:O2'	1:0:491:A:H3'	1.94	0.67
1:0:932:G:H2'	1:0:933:G:H8	1.58	0.67
1:0:979:A:H2'	1:0:980:G:H8	1.58	0.67
1:0:1365:U:O2'	1:0:1366:A:H5'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1550:C:C6	1:0:1551:U:H1'	2.28	0.67
1:0:2546:G:H2'	1:0:2547:C:H6	1.58	0.67
1:0:622:U:C2'	1:0:623:G:H5'	2.24	0.67
1:0:840:U:H4'	1:0:841:G:C2	2.28	0.67
1:0:870:C:H1'	4:U:26:PHE:HE2	1.58	0.67
1:0:1252:C:O2'	1:0:1253:C:H5''	1.94	0.67
1:0:1315:A:H5''	1:0:1316:G:OP2	1.95	0.67
1:0:2825:A:H2'	1:0:2826:C:H6	1.58	0.67
2:9:102:A:H2	2:9:103:A:N1	1.91	0.67
1:0:698:A:C1'	1:0:700:C:H41	2.07	0.67
1:0:1251:G:H2'	1:0:1252:C:H6	1.58	0.67
1:0:1763:G:N2	1:0:1765:C:H5''	2.09	0.67
1:0:2177:U:O2'	1:0:2178:U:H5'	1.93	0.67
3:K:44:LYS:HB2	3:K:47:GLN:NE2	2.09	0.67
1:0:82:G:H1	1:0:100:G:H2'	1.59	0.67
1:0:541:C:O2	1:0:2018:G:N2	2.27	0.67
1:0:624:A:H3'	1:0:625:A:H8	1.60	0.67
1:0:882:C:C4	1:0:883:A:N7	2.63	0.67
1:0:1466:C:H5'	1:0:1467:U:OP2	1.94	0.67
1:0:1940:C:H2'	1:0:1941:C:H6	1.59	0.67
1:0:2245:A:H1'	1:0:2246:A:N6	2.10	0.67
1:0:2338:C:H2'	1:0:2339:A:H8	1.60	0.67
1:0:2383:C:H3'	1:0:2384:G:H8	1.59	0.67
1:0:2863:U:H2'	1:0:2864:C:C6	2.29	0.67
5:8:27:ILE:HD11	5:8:44:ILE:CG2	2.25	0.67
1:0:979:A:H2'	1:0:980:G:C8	2.30	0.67
1:0:1384:G:H21	1:0:1385:C:H41	1.42	0.67
1:0:1495:G:H2'	1:0:1496:G:H8	1.59	0.67
1:0:1578:U:H2'	1:0:1579:G:O4'	1.94	0.67
1:0:1833:U:H2'	1:0:1834:G:H8	1.58	0.67
1:0:1892:C:H42	1:0:1903:C:H42	1.42	0.67
1:0:1999:U:H2'	1:0:2000:U:O4'	1.94	0.67
1:0:304:A:H2'	1:0:305:A:H5''	1.76	0.67
1:0:475:U:C2	1:0:801:A:C2	2.83	0.67
1:0:940:G:C3'	1:0:941:U:H5''	2.15	0.67
1:0:1290:A:H2'	1:0:1291:G:C8	2.30	0.67
1:0:1468:A:O5'	1:0:1468:A:C8	2.43	0.67
1:0:1468:A:H5''	1:0:1472:C:N4	2.10	0.67
1:0:1670:G:H4'	1:0:1670:G:OP1	1.95	0.67
1:0:1787:U:H2'	1:0:1788:C:H6	1.59	0.67
2:9:54:U:H2'	2:9:55:C:H6	1.56	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:92:G:N2	3:K:40:PRO:O	2.27	0.67
5:8:45:VAL:HG13	5:8:106:LYS:HZ1	1.57	0.67
1:0:98:U:H5'	1:0:99:U:H5''	1.77	0.67
1:0:611:C:O2	1:0:614:G:H4'	1.95	0.67
1:0:1055:A:H61	1:0:1123:G:H1'	1.59	0.67
1:0:1328:C:O2'	1:0:1405:A:H1'	1.95	0.67
1:0:735:G:H2'	1:0:736:G:H8	1.59	0.67
1:0:1791:C:H2'	1:0:1792:C:C5'	2.24	0.67
1:0:2051:U:H5'	1:0:2052:G:OP1	1.95	0.67
1:0:2637:C:H2'	1:0:2638:G:C8	2.30	0.67
1:0:2794:G:C6	1:0:2796:A:C2	2.83	0.67
1:0:441:A:C2'	1:0:442:A:H5'	2.25	0.67
1:0:840:U:H2'	1:0:2051:U:O2	1.95	0.67
1:0:918:A:C2'	1:0:919:U:H5''	2.17	0.67
1:0:922:A:H2'	1:0:923:A:H8	1.57	0.67
1:0:1199:U:P	1:0:1200:G:H5'	2.35	0.67
1:0:2286:G:H2'	1:0:2286:G:N3	2.10	0.67
1:0:2680:U:H5''	1:0:2681:A:H5'	1.74	0.67
1:0:457:C:H2'	1:0:458:G:O4'	1.95	0.66
1:0:799:C:H2'	1:0:800:U:C6	2.26	0.66
1:0:1209:G:C2	1:0:1210:C:C5	2.83	0.66
1:0:2034:A:C5	1:0:2593:A:N6	2.60	0.66
1:0:2434:G:H2'	1:0:2435:C:H6	1.58	0.66
1:0:840:U:H2'	1:0:2051:U:N3	2.09	0.66
1:0:1030:U:C2'	1:0:1031:C:H5'	2.24	0.66
1:0:1448:A:H61	1:0:1574:A:N6	1.92	0.66
1:0:2308:A:H2'	1:0:2309:G:C8	2.30	0.66
1:0:2348:A:O2'	1:0:2349:G:H5'	1.94	0.66
1:0:2520:A:H4'	1:0:2744:A:N1	2.10	0.66
1:0:2825:A:C2	1:0:2826:C:C2	2.84	0.66
2:9:50:U:H2'	2:9:51:G:C8	2.31	0.66
4:U:52:GLY:N	4:U:62:LEU:HD13	2.10	0.66
1:0:400:U:H4'	1:0:401:G:C4	2.31	0.66
1:0:421:G:O2'	1:0:422:C:H5'	1.95	0.66
1:0:555:U:C6	1:0:555:U:C3'	2.77	0.66
1:0:1166:A:C3'	1:0:1167:A:H5''	2.25	0.66
1:0:1438:G:H3'	1:0:1439:G:H5'	1.75	0.66
1:0:1837:G:N2	1:0:1838:G:H1'	2.10	0.66
1:0:2235:G:N2	1:0:2254:C:C4	2.64	0.66
1:0:2787:A:H2'	1:0:2788:C:C6	2.31	0.66
1:0:153:A:H2'	1:0:154:U:H6	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:700:C:O2	1:0:801:A:O5'	2.14	0.66
1:0:1684:G:H21	1:0:1977:C:N4	1.91	0.66
1:0:2058:U:H3'	1:0:2217:G:H1	1.60	0.66
1:0:2476:A:H4'	1:0:2477:C:OP1	1.95	0.66
1:0:2506:C:O2'	1:0:2507:U:H5'	1.94	0.66
1:0:706:A:H2'	1:0:707:U:H6	1.61	0.66
1:0:787:A:C2'	1:0:788:G:C8	2.79	0.66
1:0:1352:G:H2'	1:0:1353:A:C8	2.31	0.66
1:0:1452:U:O2'	1:0:1453:A:H5'	1.95	0.66
1:0:1919:A:H4'	1:0:1920:A:N7	2.11	0.66
1:0:2622:G:O2'	1:0:2623:A:H5'	1.95	0.66
1:0:243:G:H2'	1:0:244:C:O4'	1.95	0.66
1:0:787:A:C2'	1:0:788:G:H8	2.08	0.66
1:0:794:A:C2	1:0:1767:G:N3	2.60	0.66
1:0:964:A:H1'	1:0:2245:A:OP2	1.95	0.66
1:0:1281:A:N6	1:0:1995:G:H1'	2.11	0.66
1:0:1563:U:H2'	1:0:1564:U:H6	1.58	0.66
1:0:1801:C:H1'	1:0:2207:G:O2'	1.95	0.66
1:0:2197:U:H2'	1:0:2198:U:C5	2.31	0.66
1:0:2229:G:H5''	3:K:84:MET:HG3	1.78	0.66
1:0:2324:G:C2	1:0:2360:C:H2'	2.31	0.66
1:0:638:A:O2'	1:0:639:G:H5'	1.96	0.66
1:0:1770:U:O2	1:0:1774:A:C6	2.49	0.66
1:0:178:C:O2'	1:0:179:U:H5'	1.95	0.66
1:0:470:U:C5	1:0:480:G:N2	2.63	0.66
1:0:616:U:C2'	1:0:617:U:H5''	2.25	0.66
1:0:930:A:H2	1:0:2247:A:N7	1.93	0.66
1:0:1302:C:OP1	1:0:1664:G:N2	2.29	0.66
1:0:1791:C:C2'	1:0:1792:C:H5''	2.25	0.66
1:0:1835:C:H2'	1:0:1836:C:C6	2.31	0.66
1:0:2217:G:H5'	1:0:2218:G:N7	2.10	0.66
1:0:2277:A:H3'	1:0:2278:A:H8	1.61	0.66
1:0:2658:A:O2'	1:0:2659:C:H5'	1.94	0.66
1:0:459:A:O2'	1:0:461:A:N7	2.29	0.66
1:0:1278:A:H2	1:0:1279:G:H21	1.44	0.66
1:0:1542:G:H8	1:0:1542:G:O5'	1.78	0.66
1:0:1656:U:C2'	1:0:1657:A:H5''	2.26	0.66
1:0:2438:A:N6	1:0:2473:G:C4	2.63	0.66
4:U:40:GLN:HE22	4:U:43:THR:HA	1.59	0.66
1:0:321:A:C2	1:0:323:G:H1'	2.31	0.65
1:0:968:C:C6	1:0:970:A:C8	2.84	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1514:C:OP2	1:0:1514:C:H6	1.79	0.65
1:0:1779:C:H2'	1:0:1780:A:O4'	1.96	0.65
1:0:1804:U:H2'	1:0:1805:G:C8	2.27	0.65
1:0:2473:G:H2'	1:0:2474:G:H8	1.59	0.65
4:U:23:VAL:HA	4:U:38:VAL:HG13	1.77	0.65
1:0:68:C:C4	1:0:72:A:C2	2.84	0.65
1:0:169:C:H2'	1:0:170:U:H5'	1.78	0.65
1:0:930:A:H5'	1:0:931:G:C8	2.31	0.65
1:0:1438:G:C3'	1:0:1439:G:H5'	2.26	0.65
1:0:1702:C:O2'	1:0:1703:C:H5'	1.96	0.65
1:0:139:A:H2'	1:0:140:G:C8	2.32	0.65
1:0:187:U:H2'	1:0:188:G:C8	2.31	0.65
1:0:488:A:H2'	1:0:489:A:C8	2.31	0.65
1:0:585:U:H2'	1:0:586:G:C8	2.31	0.65
1:0:734:G:H2'	1:0:735:G:C8	2.28	0.65
1:0:832:A:H2	1:0:954:U:H1'	1.61	0.65
1:0:1016:C:H1'	1:0:1023:U:O2	1.96	0.65
1:0:1067:G:OP1	1:0:1068:A:H5'	1.96	0.65
1:0:1238:A:O2'	1:0:1239:A:H5'	1.97	0.65
1:0:2034:A:C4	1:0:2593:A:N6	2.63	0.65
1:0:2083:G:H22	1:0:2172:U:H3	1.44	0.65
1:0:2544:A:H2'	1:0:2545:A:H1'	1.78	0.65
1:0:229:G:H2'	1:0:230:C:H6	1.61	0.65
1:0:687:G:H2'	1:0:817:A:N6	2.07	0.65
1:0:768:U:C5	1:0:769:C:C5	2.84	0.65
1:0:814:G:H2'	1:0:815:A:OP1	1.96	0.65
1:0:1699:A:OP2	1:0:1699:A:C8	2.49	0.65
1:0:11:G:O6	1:0:2606:G:H5''	1.97	0.65
1:0:816:U:C2'	1:0:817:A:H5'	2.26	0.65
1:0:1354:A:C8	1:0:1410:U:C2	2.84	0.65
1:0:1930:C:H2'	1:0:1931:G:H5'	1.77	0.65
1:0:2180:U:O2'	1:0:2181:A:N7	2.30	0.65
1:0:762:A:C2	1:0:1634:A:H2'	2.32	0.65
1:0:1399:C:H2'	1:0:1400:A:C8	2.31	0.65
1:0:1415:C:C2'	1:0:1416:A:H5'	2.27	0.65
1:0:2266:A:H61	1:0:2323:U:H1'	1.62	0.65
1:0:2459:C:H2'	1:0:2460:G:H5'	1.79	0.65
3:K:134:LYS:NZ	3:K:136:GLU:HG2	2.11	0.65
1:0:58:C:C1'	1:0:72:A:C8	2.79	0.65
1:0:207:U:O2	1:0:207:U:H2'	1.96	0.65
1:0:572:G:OP2	1:0:581:A:H5'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:838:A:H4'	1:0:2407:G:C5	2.30	0.65
1:0:1313:U:H1'	1:0:1642:G:C2	2.32	0.65
1:0:1358:C:C3'	1:0:1359:G:H5''	2.26	0.65
1:0:1445:A:C2	1:0:1446:U:C2	2.85	0.65
1:0:1763:G:H2'	1:0:1764:A:C4'	2.26	0.65
1:0:239:A:C2	1:0:443:A:H1'	2.32	0.65
1:0:572:G:H2'	1:0:573:C:C6	2.32	0.65
1:0:577:U:H2'	1:0:579:G:OP2	1.96	0.65
1:0:1591:U:O2'	1:0:1592:U:H5'	1.96	0.65
1:0:2784:A:N7	1:0:2785:A:C4	2.64	0.65
1:0:2829:A:C2	1:0:2830:U:C1'	2.80	0.65
1:0:667:U:N3	1:0:669:G:O5'	2.30	0.65
1:0:922:A:N3	1:0:2243:C:O2'	2.29	0.65
1:0:977:G:H1'	1:0:2246:A:C4	2.32	0.65
1:0:1004:A:C2'	1:0:1005:U:C5'	2.74	0.65
1:0:1287:A:H2	1:0:1661:C:O2	1.78	0.65
1:0:38:G:H2'	1:0:39:C:O4'	1.96	0.65
1:0:133:C:H2'	1:0:134:G:O4'	1.95	0.65
1:0:312:G:H2'	1:0:313:U:H5''	1.79	0.65
1:0:500:G:C2'	1:0:501:G:H5'	2.27	0.65
1:0:830:C:O2'	1:0:852:U:H5''	1.97	0.65
1:0:835:U:H2'	1:0:836:G:C8	2.31	0.65
1:0:869:C:O2	1:0:934:G:C2	2.49	0.65
1:0:1200:G:H5''	1:0:1200:G:H8	1.62	0.65
1:0:1569:A:O2'	1:0:1570:C:C5	2.49	0.65
1:0:2528:G:O2'	1:0:2529:G:H5'	1.97	0.65
4:U:45:PHE:O	4:U:59:LEU:HD11	1.95	0.65
1:0:883:A:H1'	3:K:11:ARG:HH21	1.61	0.64
1:0:1325:U:H4'	1:0:1326:U:C5	2.32	0.64
1:0:1333:G:H21	1:0:1344:C:N4	1.88	0.64
1:0:1830:C:N4	1:0:1881:U:H3'	2.11	0.64
1:0:1919:A:H4'	1:0:1920:A:C5	2.31	0.64
1:0:2038:C:H2'	1:0:2483:U:H4'	1.79	0.64
2:9:100:G:H2'	2:9:101:A:H5'	1.79	0.64
1:0:65:C:O2'	1:0:66:U:H5'	1.98	0.64
1:0:224:G:C6	1:0:229:G:O6	2.50	0.64
1:0:692:C:O2'	1:0:693:A:H5'	1.96	0.64
1:0:1666:G:H2'	1:0:1667:A:C8	2.32	0.64
1:0:473:C:H2'	1:0:474:G:H5'	1.77	0.64
1:0:1215:A:H2'	1:0:1216:G:C8	2.32	0.64
1:0:1644:G:O2'	1:0:1645:U:H5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1839:A:H8	1:0:1839:A:O5'	1.79	0.64
1:0:320:A:H1'	1:0:340:G:N3	2.12	0.64
1:0:710:C:H2'	1:0:711:C:C6	2.33	0.64
1:0:788:G:C2	1:0:800:U:C2'	2.81	0.64
1:0:1057:A:H3'	1:0:1058:G:H5''	1.79	0.64
1:0:1431:U:H5''	1:0:1604:A:H1'	1.79	0.64
1:0:1770:U:O2	1:0:1774:A:C5	2.51	0.64
1:0:2169:A:OP1	1:0:2169:A:H3'	1.97	0.64
1:0:2692:A:H5'	1:0:2693:U:H5'	1.79	0.64
1:0:200:A:OP2	1:0:434:C:H4'	1.98	0.64
1:0:242:A:N6	1:0:441:A:N7	2.45	0.64
1:0:510:G:C8	1:0:510:G:H3'	2.32	0.64
1:0:876:A:H2'	1:0:877:G:H8	1.63	0.64
1:0:1699:A:OP2	1:0:1699:A:H8	1.81	0.64
1:0:2320:G:H2'	1:0:2321:C:H6	1.60	0.64
1:0:2384:G:H5''	1:0:2385:U:C5'	2.25	0.64
1:0:48:A:N6	1:0:154:U:H5	1.92	0.64
1:0:178:C:O2	1:0:228:A:H2	1.81	0.64
1:0:700:C:O2	1:0:800:U:O3'	2.15	0.64
1:0:1339:U:C2'	1:0:1340:C:H5'	2.28	0.64
1:0:2240:C:H2'	1:0:2241:U:C5'	2.27	0.64
1:0:2528:G:H2'	1:0:2529:G:H8	1.63	0.64
1:0:539:A:N6	1:0:2006:G:C4	2.65	0.64
1:0:568:G:H2'	1:0:569:C:C6	2.32	0.64
1:0:668:A:H2'	1:0:669:G:C4'	2.27	0.64
1:0:718:A:H2'	1:0:719:A:C8	2.33	0.64
1:0:793:G:C2	1:0:795:A:H2	2.15	0.64
1:0:940:G:OP2	1:0:940:G:H8	1.81	0.64
1:0:1453:A:H2'	1:0:1454:U:H5'	1.80	0.64
1:0:1536:G:H2'	1:0:1537:U:H5'	1.78	0.64
1:0:1541:G:N2	1:0:1562:G:H22	1.95	0.64
1:0:1992:G:O2'	1:0:1993:G:H5'	1.98	0.64
1:0:2376:G:N2	1:0:2399:C:H1'	2.13	0.64
1:0:2824:C:H2'	1:0:2841:U:O2	1.98	0.64
1:0:58:C:H3'	1:0:59:G:C5'	2.28	0.64
1:0:200:A:OP1	1:0:435:A:H5'	1.97	0.64
1:0:994:A:N7	1:0:995:A:N3	2.46	0.64
1:0:1333:G:H22	1:0:1344:C:H41	1.42	0.64
1:0:2293:G:H2'	1:0:2294:U:C6	2.32	0.64
2:9:33:C:H2'	2:9:34:C:H6	1.61	0.64
1:0:127:C:O2'	1:0:128:C:H5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:668:A:H2'	1:0:669:G:O4'	1.98	0.64
1:0:796:A:H2'	1:0:798:G:OP1	1.97	0.64
1:0:1190:C:H2'	1:0:1191:G:C8	2.33	0.64
1:0:1234:C:H2'	1:0:1235:C:H6	1.62	0.64
1:0:1455:C:H2'	1:0:1456:C:H6	1.62	0.64
1:0:2234:G:O4'	5:8:77:SER:CB	2.43	0.64
1:0:2546:G:H2'	1:0:2547:C:C6	2.33	0.64
1:0:2724:G:N7	1:0:2735:C:H1'	2.13	0.64
1:0:221:A:C2	1:0:222:G:H1'	2.32	0.64
1:0:732:G:H2'	1:0:733:G:C8	2.32	0.64
1:0:1384:G:N2	1:0:1385:C:H41	1.95	0.64
1:0:1439:G:O2'	1:0:1440:G:O4'	2.11	0.64
1:0:2340:C:H2'	1:0:2341:G:O4'	1.97	0.64
1:0:2544:A:H2'	1:0:2545:A:C1'	2.27	0.64
1:0:467:U:OP2	1:0:467:U:H6	1.80	0.63
1:0:706:A:H2'	1:0:707:U:C6	2.33	0.63
1:0:838:A:H2'	1:0:839:U:O4'	1.98	0.63
1:0:1019:U:H3'	1:0:1019:U:H6	1.63	0.63
1:0:1751:A:O2'	1:0:1752:U:H5'	1.97	0.63
1:0:2456:U:H1'	1:0:2460:G:H1	1.62	0.63
1:0:2738:A:H2'	1:0:2739:G:H5'	1.79	0.63
2:9:46:G:H1'	2:9:49:C:N4	2.13	0.63
3:K:44:LYS:HB2	3:K:47:GLN:HE21	1.62	0.63
1:0:110:U:H6	1:0:110:U:H5'	1.63	0.63
1:0:822:G:O2'	1:0:823:U:H5'	1.97	0.63
1:0:931:G:H2'	1:0:932:G:H5'	1.80	0.63
1:0:955:G:C8	1:0:955:G:C3'	2.77	0.63
1:0:1341:G:H2'	1:0:1343:C:C5	2.33	0.63
1:0:2522:G:N3	1:0:2745:A:H2'	2.12	0.63
1:0:2732:C:H6	1:0:2732:C:H5''	1.63	0.63
2:9:6:C:H2'	2:9:7:C:C6	2.34	0.63
2:9:102:A:C2	2:9:103:A:C6	2.86	0.63
1:0:212:U:C2	1:0:443:A:C2	2.85	0.63
1:0:876:A:C2	1:0:877:G:C4	2.87	0.63
1:0:2233:C:O2'	5:8:77:SER:HA	1.99	0.63
1:0:638:A:OP2	1:0:638:A:H4'	1.99	0.63
1:0:679:C:H2'	1:0:680:U:H6	1.63	0.63
1:0:789:G:C6	1:0:2055:G:OP1	2.50	0.63
1:0:887:G:O2'	1:0:888:G:H5'	1.98	0.63
1:0:1242:A:O2'	1:0:1243:G:H5'	1.98	0.63
1:0:1572:C:H2'	1:0:1573:G:C5'	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2471:U:N3	1:0:2472:U:C5	2.67	0.63
1:0:2490:U:H2'	1:0:2491:C:H6	1.63	0.63
1:0:67:G:H2'	1:0:68:C:O4'	1.97	0.63
1:0:514:G:N3	1:0:514:G:H2'	2.13	0.63
1:0:672:C:O2'	1:0:673:G:H5'	1.99	0.63
1:0:841:G:H2'	1:0:842:A:C8	2.32	0.63
1:0:922:A:N1	1:0:2256:G:H1'	2.13	0.63
1:0:1032:A:H3'	1:0:1033:G:H4'	1.78	0.63
1:0:1956:G:H8	1:0:1956:G:H5'	1.62	0.63
1:0:2019:C:O2'	1:0:2020:G:H5'	1.97	0.63
1:0:2426:G:H3'	1:0:2479:U:OP2	1.98	0.63
1:0:2470:U:H2'	1:0:2471:U:H5'	1.81	0.63
1:0:228:A:C2'	1:0:229:G:H5'	2.28	0.63
1:0:354:C:H2'	1:0:355:G:O4'	1.98	0.63
1:0:541:C:H5''	1:0:542:A:C5	2.33	0.63
1:0:649:G:H2'	1:0:650:U:C6	2.32	0.63
1:0:698:A:C8	1:0:787:A:H2	2.16	0.63
1:0:831:G:H1'	1:0:1204:G:N2	2.14	0.63
3:K:124:HIS:N	3:K:125:LYS:NZ	2.43	0.63
1:0:362:C:H2'	1:0:363:G:C4'	2.21	0.63
1:0:591:G:C2'	1:0:592:G:C8	2.82	0.63
1:0:1142:G:O2'	1:0:1143:A:O5'	2.16	0.63
1:0:2826:C:C2'	1:0:2827:G:H5'	2.29	0.63
3:K:125:LYS:NZ	3:K:125:LYS:H	1.96	0.63
5:8:58:ASN:OD1	5:8:61:ARG:NH2	2.32	0.63
1:0:91:A:H2'	1:0:92:U:H6	1.59	0.63
1:0:521:U:C5	1:0:522:G:C4	2.87	0.63
1:0:1070:G:H3'	1:0:1071:U:C6	2.33	0.63
1:0:1092:U:H2'	1:0:1093:U:C6	2.34	0.63
1:0:1512:A:H2'	1:0:1514:C:C5	2.33	0.63
1:0:2187:A:H2'	1:0:2188:A:H8	1.64	0.63
1:0:2299:A:C2'	1:0:2312:A:H62	2.12	0.63
1:0:2422:C:O2'	1:0:2423:G:H5'	1.98	0.63
1:0:2470:U:C2'	1:0:2471:U:H5'	2.28	0.63
1:0:2651:U:C2	1:0:2652:G:C8	2.87	0.63
3:K:106:GLU:N	3:K:106:GLU:CD	2.56	0.63
1:0:65:C:C2'	1:0:66:U:H5'	2.29	0.63
1:0:562:G:C6	1:0:563:U:N3	2.67	0.63
1:0:773:G:H2'	1:0:774:A:H5'	1.79	0.63
1:0:926:C:H2'	1:0:927:C:H5'	1.81	0.63
1:0:1833:U:H2'	1:0:1834:G:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2559:U:C5	1:0:2560:G:N7	2.67	0.63
1:0:2764:U:H2'	1:0:2765:C:C6	2.33	0.63
1:0:401:G:C4	1:0:403:A:N7	2.67	0.62
1:0:540:G:O3'	1:0:541:C:H4'	1.97	0.62
1:0:588:G:C2	1:0:1275:A:C5	2.86	0.62
1:0:1448:A:N6	1:0:1574:A:H61	1.97	0.62
1:0:1683:G:O2'	1:0:1684:G:H5'	1.99	0.62
1:0:1923:U:C2	1:0:1947:G:H4'	2.34	0.62
1:0:1984:A:C2	1:0:1985:G:C4	2.87	0.62
1:0:2176:U:H2'	1:0:2177:U:O4'	1.98	0.62
1:0:2292:C:O2'	1:0:2293:G:H5'	1.99	0.62
3:K:45:SER:HB3	3:K:71:PRO:HG2	1.79	0.62
1:0:405:C:H2'	1:0:406:G:H8	1.64	0.62
1:0:501:G:H2'	1:0:502:A:O4'	1.99	0.62
1:0:710:C:C2	1:0:711:C:C5	2.87	0.62
1:0:1293:A:C2'	1:0:1294:G:H5'	2.28	0.62
1:0:1483:G:H1	1:0:1539:U:H3	1.47	0.62
1:0:2705:A:O2'	1:0:2706:U:C6	2.51	0.62
1:0:334:G:N3	1:0:344:G:H1'	2.14	0.62
1:0:787:A:O2'	1:0:788:G:H5'	1.98	0.62
1:0:930:A:OP1	1:0:930:A:H4'	1.99	0.62
1:0:1057:A:O5'	1:0:1058:G:H5'	1.99	0.62
1:0:1086:C:H2'	1:0:1087:C:H5''	1.81	0.62
1:0:1653:C:H2'	1:0:1654:A:H8	1.63	0.62
1:0:1885:C:H2'	1:0:1886:G:H5'	1.80	0.62
1:0:578:U:OP1	1:0:956:A:N6	2.31	0.62
1:0:814:G:C2'	1:0:815:A:OP1	2.47	0.62
1:0:1212:U:H2'	1:0:1213:U:C5	2.33	0.62
1:0:1310:C:H2'	1:0:1311:C:C6	2.35	0.62
1:0:1644:G:H2'	1:0:1645:U:C6	2.34	0.62
1:0:1764:A:C2'	1:0:1765:C:H5'	2.29	0.62
1:0:1861:G:C2'	1:0:1862:C:H5'	2.29	0.62
1:0:1937:G:H2'	1:0:1939:U:O4	1.99	0.62
1:0:2538:C:O2'	1:0:2539:C:H5'	1.99	0.62
3:K:15:ARG:HG3	3:K:74:PRO:HD2	1.80	0.62
1:0:239:A:H4'	1:0:620:G:OP1	1.97	0.62
1:0:246:C:C5	1:0:373:A:N3	2.67	0.62
1:0:875:G:N2	1:0:876:A:H1'	2.15	0.62
1:0:1606:C:H2'	1:0:1607:A:H8	1.64	0.62
1:0:1697:U:H2'	1:0:1698:C:O4'	2.00	0.62
1:0:1919:A:C2	1:0:1923:U:H2'	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1925:C:O2'	5:8:60:ARG:HD3	1.99	0.62
1:0:2569:A:H2'	1:0:2570:C:C6	2.34	0.62
1:0:71:A:N7	1:0:110:U:O2'	2.33	0.62
1:0:629:C:H2'	1:0:630:G:O4'	1.99	0.62
1:0:1107:A:O5'	1:0:1107:A:H8	1.82	0.62
1:0:1443:G:H2'	1:0:1444:C:H6	1.65	0.62
1:0:1653:C:O2	1:0:1751:A:C2	2.43	0.62
2:9:59:A:H2'	2:9:60:A:C5'	2.30	0.62
1:0:1235:C:C2	1:0:1241:G:N2	2.67	0.62
1:0:1287:A:N1	1:0:1661:C:O2'	2.27	0.62
1:0:1305:C:H2'	1:0:1306:U:O4'	1.99	0.62
1:0:1993:G:H2'	1:0:1994:U:H6	1.64	0.62
1:0:2198:U:H2'	1:0:2199:C:C4'	2.29	0.62
1:0:187:U:H2'	1:0:188:G:H8	1.63	0.62
1:0:446:C:H2'	1:0:447:U:O4'	2.00	0.62
1:0:912:A:C2'	1:0:913:A:H5'	2.30	0.62
1:0:1354:A:C3'	1:0:1410:U:O2	2.48	0.62
1:0:1526:U:H5'	1:0:1527:G:OP2	1.98	0.62
1:0:1729:C:H2'	1:0:1730:G:C8	2.35	0.62
1:0:1836:C:O2'	1:0:1837:G:H5'	2.00	0.62
1:0:1966:C:O2'	1:0:1967:U:H5'	1.99	0.62
1:0:2014:A:N6	1:0:2477:C:C1'	2.63	0.62
1:0:404:A:H2'	1:0:405:C:C6	2.34	0.62
1:0:644:A:C8	1:0:645:G:O4'	2.53	0.62
1:0:1005:U:O2	1:0:1007:A:N7	2.33	0.62
1:0:1333:G:H22	1:0:1344:C:H5	1.46	0.62
1:0:1568:A:H8	1:0:1568:A:O5'	1.83	0.62
5:8:8:ASP:O	5:8:12:ARG:HG3	1.99	0.62
1:0:62:U:H3'	1:0:63:A:H8	1.65	0.62
1:0:121:G:O2'	1:0:122:G:H5'	2.00	0.62
1:0:175:C:H2'	1:0:177:U:O4	1.99	0.62
1:0:340:G:O4'	1:0:340:G:OP2	2.18	0.62
1:0:2051:U:C5'	1:0:2052:G:OP1	2.48	0.62
1:0:2472:U:H3'	1:0:2473:G:C5'	2.20	0.62
2:9:14:C:H2'	2:9:14:C:O2	2.00	0.62
1:0:78:C:H2'	1:0:79:G:H8	1.64	0.61
1:0:104:C:H2'	1:0:105:G:H5''	1.81	0.61
1:0:763:A:H2'	1:0:764:A:H5''	1.81	0.61
1:0:834:A:O3'	1:0:957:G:OP2	2.18	0.61
1:0:930:A:C2	1:0:2247:A:N7	2.68	0.61
1:0:946:U:H2'	1:0:947:C:C6	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1463:A:C1'	1:0:1543:G:H22	2.12	0.61
1:0:1788:C:N3	1:0:1789:U:C4	2.68	0.61
1:0:2199:C:H2'	1:0:2200:G:C8	2.35	0.61
1:0:2229:G:H5''	3:K:84:MET:CG	2.30	0.61
3:K:83:ARG:O	3:K:83:ARG:NH1	2.32	0.61
1:0:141:G:H2'	1:0:142:U:H6	1.64	0.61
1:0:236:C:H1'	1:0:632:A:O2'	2.00	0.61
1:0:401:G:C1'	1:0:403:A:H62	2.12	0.61
1:0:1223:G:C4	1:0:1250:A:N6	2.68	0.61
1:0:1256:C:H2'	1:0:1257:U:C6	2.35	0.61
1:0:1329:U:H2'	1:0:1330:G:H8	1.66	0.61
1:0:2753:C:H2'	1:0:2754:C:C6	2.32	0.61
2:9:75:A:O2'	2:9:76:U:H5'	2.00	0.61
1:0:1004:A:O2'	1:0:1005:U:H5''	2.00	0.61
1:0:1025:A:H2'	1:0:1026:U:H6	1.65	0.61
1:0:1438:G:H2'	1:0:1439:G:C5'	2.30	0.61
1:0:1463:A:H1'	1:0:1543:G:N2	2.14	0.61
1:0:1924:C:H42	5:8:61:ARG:HD3	1.62	0.61
1:0:2325:A:H4'	1:0:2362:G:O4'	2.00	0.61
1:0:2787:A:H2'	1:0:2788:C:H6	1.65	0.61
1:0:67:G:C5	1:0:72:A:H2	2.15	0.61
1:0:471:A:C2	1:0:481:A:C4	2.89	0.61
1:0:1427:G:N2	1:0:1604:A:H62	1.98	0.61
1:0:1540:C:H2'	1:0:1541:G:H8	1.64	0.61
1:0:2611:A:C2	1:0:2767:C:C2	2.89	0.61
1:0:2871:U:H2'	1:0:2872:U:H6	1.65	0.61
1:0:541:C:H5''	1:0:542:A:N7	2.16	0.61
1:0:616:U:C2'	1:0:617:U:C5'	2.78	0.61
1:0:829:C:H2'	1:0:830:C:C6	2.36	0.61
1:0:839:U:C5	1:0:841:G:H8	2.19	0.61
1:0:887:G:H2'	1:0:888:G:C5'	2.31	0.61
1:0:1345:G:H22	1:0:1626:A:H5'	1.66	0.61
1:0:2229:G:H5''	3:K:84:MET:CE	2.30	0.61
1:0:221:A:C2	1:0:232:A:C2	2.88	0.61
1:0:589:C:H2'	1:0:590:C:C6	2.35	0.61
1:0:689:A:H8	1:0:2052:G:H21	1.46	0.61
1:0:1064:C:H2'	1:0:1065:A:C8	2.35	0.61
1:0:1323:G:H1'	1:0:1627:C:H5'	1.82	0.61
1:0:1531:C:C2'	1:0:1532:A:H5'	2.28	0.61
1:0:1844:C:O2'	1:0:1845:A:H5'	2.00	0.61
1:0:1998:A:C2'	1:0:1999:U:H5'	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2461:G:N2	3:K:53:ILE:HD12	2.15	0.61
1:0:2588:U:C4'	1:0:2589:C:OP2	2.42	0.61
1:0:2651:U:O2	1:0:2652:G:C8	2.54	0.61
1:0:2837:G:O2'	1:0:2838:U:H5'	2.01	0.61
3:K:11:ARG:CD	3:K:15:ARG:HH22	2.09	0.61
4:U:46:LYS:NZ	4:U:76:ALA:HB2	2.16	0.61
1:0:728:G:H2'	1:0:729:A:O4'	2.01	0.61
1:0:930:A:H5'	1:0:931:G:N7	2.16	0.61
1:0:1059:A:H2'	1:0:1060:C:H5	1.66	0.61
1:0:1368:G:N2	1:0:1390:G:H1'	2.16	0.61
1:0:1496:G:H1	1:0:1527:G:H1	1.48	0.61
1:0:1523:A:H8	1:0:1523:A:O5'	1.84	0.61
1:0:1674:C:O2'	1:0:1675:C:H5'	2.00	0.61
1:0:2182:A:H2'	1:0:2183:C:C5'	2.30	0.61
1:0:2856:U:H2'	1:0:2857:C:C6	2.35	0.61
1:0:2875:C:O2'	1:0:2876:C:H5'	2.01	0.61
1:0:705:C:H2'	1:0:706:A:H8	1.66	0.61
1:0:757:U:O2	1:0:767:G:C2	2.54	0.61
1:0:918:A:H2'	1:0:919:U:C5'	2.19	0.61
1:0:987:G:H5'	1:0:1167:A:N6	2.15	0.61
1:0:1869:A:H2'	1:0:1870:U:O4'	2.01	0.61
1:0:2674:C:H2'	1:0:2675:U:C6	2.31	0.61
2:9:75:A:C2	2:9:76:U:C5	2.88	0.61
1:0:367:G:C3'	1:0:368:A:H5''	2.31	0.61
1:0:528:G:H2'	1:0:529:U:C6	2.35	0.61
1:0:678:G:O2'	1:0:679:C:H5'	2.01	0.61
1:0:875:G:H21	2:9:103:A:H1'	1.66	0.61
1:0:1055:A:C4'	1:0:1058:G:H4'	2.27	0.61
1:0:1152:C:O5'	1:0:1152:C:H6	1.83	0.61
1:0:1210:C:C1'	1:0:1239:A:C4	2.83	0.61
1:0:1262:U:H2'	1:0:1263:G:N7	2.16	0.61
1:0:2650:G:O2'	1:0:2651:U:H5'	2.01	0.61
1:0:2811:G:H2'	1:0:2812:A:C8	2.36	0.61
1:0:922:A:C2'	1:0:923:A:C8	2.76	0.61
1:0:1210:C:H1'	1:0:1239:A:N9	2.15	0.61
1:0:1288:A:N6	1:0:1308:C:H2'	2.15	0.61
1:0:1288:A:N7	1:0:1309:G:H1'	2.15	0.61
1:0:1329:U:H2'	1:0:1330:G:C8	2.36	0.61
1:0:93:A:O2'	1:0:94:C:H5'	2.01	0.60
1:0:1127:C:H2'	1:0:1128:G:H8	1.66	0.60
1:0:1339:U:H5	1:0:1664:G:O2'	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1856:U:H2'	1:0:1857:G:C8	2.36	0.60
1:0:2182:A:H2'	1:0:2183:C:H5'	1.83	0.60
1:0:2262:C:H2'	1:0:2263:C:O4'	2.00	0.60
1:0:2590:U:O2	1:0:2590:U:H2'	2.01	0.60
1:0:2755:A:O2'	1:0:2756:A:H5'	2.00	0.60
2:9:8:C:H5'	2:9:29:C:O2'	2.01	0.60
5:8:57:ARG:O	5:8:61:ARG:HG3	2.01	0.60
1:0:591:G:H3'	1:0:592:G:H8	1.66	0.60
1:0:1350:G:H2'	1:0:1351:G:O4'	2.01	0.60
1:0:1459:U:H3	1:0:1476:G:P	2.23	0.60
1:0:524:A:H2'	1:0:525:A:H8	1.65	0.60
1:0:611:C:H6	1:0:611:C:H5''	1.66	0.60
1:0:958:G:O2'	1:0:959:C:H5'	2.02	0.60
1:0:1028:G:O2'	1:0:1029:C:H5'	2.01	0.60
1:0:1363:C:O2'	1:0:1364:C:H5'	2.02	0.60
1:0:1495:G:H2'	1:0:1496:G:C8	2.35	0.60
1:0:2138:U:H2'	1:0:2139:G:H8	1.66	0.60
1:0:2552:C:OP1	1:0:2552:C:C4'	2.47	0.60
1:0:2691:C:O2'	1:0:2692:A:OP1	2.18	0.60
1:0:2824:C:O3'	1:0:2843:A:C2	2.54	0.60
1:0:939:C:H2'	1:0:940:G:N7	2.16	0.60
1:0:1755:G:H2'	1:0:1756:C:C6	2.36	0.60
1:0:2571:G:H2'	1:0:2572:U:O4'	2.01	0.60
3:K:48:ILE:HG13	3:K:69:ILE:HD11	1.83	0.60
1:0:66:U:C2	1:0:67:G:N7	2.70	0.60
1:0:404:A:C5	1:0:424:G:N2	2.69	0.60
1:0:488:A:OP1	1:0:488:A:C8	2.51	0.60
1:0:562:G:H2'	1:0:563:U:O4'	2.01	0.60
1:0:874:A:H62	1:0:928:G:N2	1.98	0.60
1:0:1948:C:O5'	1:0:1948:C:C6	2.50	0.60
1:0:1981:A:H4'	1:0:2704:U:O2'	2.01	0.60
1:0:2124:C:H2'	1:0:2125:C:C6	2.37	0.60
1:0:2162:C:H2'	1:0:2163:U:H6	1.65	0.60
1:0:2691:C:C3'	1:0:2692:A:H5''	2.32	0.60
1:0:9:U:H2'	1:0:10:A:C8	2.37	0.60
1:0:67:G:N2	1:0:73:A:C4'	2.64	0.60
1:0:228:A:H2'	1:0:229:G:C5'	2.31	0.60
1:0:372:U:H3'	1:0:372:U:H6	1.66	0.60
1:0:609:U:O2'	1:0:610:G:H5'	2.01	0.60
1:0:1326:U:C2	1:0:1626:A:H2	2.19	0.60
1:0:1332:G:H3'	1:0:1333:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1979:C:H2'	1:0:1980:A:O4'	2.01	0.60
1:0:2493:U:O2	1:0:2549:G:O6	2.19	0.60
1:0:2856:U:H2'	1:0:2857:C:H6	1.66	0.60
2:9:75:A:H2	2:9:76:U:C5	2.19	0.60
1:0:210:A:N6	1:0:442:A:H61	1.99	0.60
1:0:602:C:H2'	1:0:603:C:C6	2.37	0.60
1:0:758:G:N2	1:0:766:A:C6	2.70	0.60
1:0:1156:U:H2'	1:0:1157:G:C8	2.37	0.60
1:0:2233:C:C2'	5:8:77:SER:CB	2.80	0.60
1:0:2670:C:N4	1:0:2699:G:N2	2.49	0.60
3:K:29:ALA:CB	3:K:68:ARG:NH2	2.64	0.60
1:0:581:A:N1	1:0:2012:A:H2	1.99	0.60
1:0:585:U:H2'	1:0:586:G:H8	1.66	0.60
1:0:651:C:C3'	1:0:652:C:H5''	2.32	0.60
1:0:787:A:C1'	1:0:788:G:C8	2.84	0.60
1:0:870:C:H5'	4:U:69:PHE:CE2	2.37	0.60
1:0:1174:G:H2'	1:0:1175:A:C8	2.37	0.60
1:0:1459:U:OP1	1:0:1459:U:H3'	2.02	0.60
1:0:1684:G:N2	1:0:1977:C:N4	2.47	0.60
1:0:2029:G:H2'	1:0:2030:U:H6	1.65	0.60
1:0:2559:U:H2'	1:0:2560:G:H5'	1.82	0.60
1:0:2666:U:H2'	1:0:2667:C:O4'	2.01	0.60
2:9:15:A:H2	2:9:71:G:H21	1.50	0.60
2:9:105:G:O2'	2:9:106:U:H5'	2.02	0.60
1:0:157:G:N2	1:0:192:G:O6	2.33	0.60
1:0:636:G:H2'	1:0:637:G:H5'	1.84	0.60
1:0:670:U:H2'	1:0:671:A:C8	2.37	0.60
1:0:852:U:H2'	1:0:853:C:C6	2.36	0.60
1:0:857:U:C2'	1:0:858:G:H5'	2.32	0.60
1:0:1459:U:N3	1:0:1476:G:H5''	2.16	0.60
1:0:2257:A:C2'	1:0:2258:G:H5'	2.31	0.60
1:0:2503:G:C3'	1:0:2504:G:H5''	2.32	0.60
1:0:2559:U:C5	1:0:2560:G:H8	2.19	0.60
1:0:2691:C:H5''	1:0:2694:G:H4'	1.82	0.60
3:K:60:ARG:HG2	3:K:60:ARG:HH11	1.66	0.60
4:U:50:GLY:O	4:U:81:ILE:HD12	2.01	0.60
1:0:682:G:C5	1:0:814:G:O6	2.54	0.60
1:0:862:A:H2'	1:0:863:C:H6	1.62	0.60
1:0:1229:C:H2'	1:0:1230:C:H6	1.67	0.60
1:0:1299:A:C6	1:0:1302:C:C4	2.90	0.60
1:0:1474:A:N1	1:0:1476:G:C5	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1782:A:N6	1:0:1820:G:H2'	2.16	0.60
1:0:1811:A:H1'	1:0:1813:A:C4	2.36	0.60
1:0:2029:G:C4	1:0:2030:U:C5	2.89	0.60
1:0:2045:A:H5''	1:0:2046:C:OP2	2.02	0.60
1:0:2253:A:N1	1:0:2255:G:H1'	2.17	0.60
1:0:2280:A:H2'	1:0:2281:C:C6	2.36	0.60
1:0:2799:C:C4	1:0:2800:C:C2	2.90	0.60
1:0:2843:A:H5'	1:0:2844:G:OP2	2.02	0.60
1:0:7:G:H2'	1:0:8:A:O4'	2.01	0.59
1:0:311:A:H2	1:0:344:G:N3	1.99	0.59
1:0:646:C:H2'	1:0:647:G:H8	1.65	0.59
1:0:919:U:C2	1:0:920:G:C8	2.90	0.59
1:0:940:G:C2'	1:0:941:U:H4'	2.27	0.59
1:0:1089:C:H2'	1:0:1099:A:O4'	2.01	0.59
1:0:1686:A:C2	1:0:1977:C:H1'	2.37	0.59
1:0:2233:C:H1'	5:8:78:GLU:CG	2.32	0.59
4:U:40:GLN:NE2	4:U:43:THR:CA	2.64	0.59
5:8:58:ASN:CG	5:8:61:ARG:HH21	2.10	0.59
1:0:27:G:H22	1:0:522:G:HO2'	1.47	0.59
1:0:788:G:H2'	1:0:807:A:N7	2.17	0.59
1:0:944:A:C2	1:0:945:G:H1'	2.36	0.59
1:0:1002:C:C4	1:0:1003:C:H5	2.20	0.59
1:0:1139:A:H61	1:0:2497:A:N6	2.00	0.59
1:0:1164:C:H2'	1:0:1165:G:C1'	2.32	0.59
1:0:1459:U:H2'	1:0:1475:U:O2'	2.01	0.59
1:0:1673:C:H2'	1:0:1674:C:C6	2.37	0.59
1:0:2096:U:H2'	1:0:2097:A:H5''	1.83	0.59
1:0:2240:C:H2'	1:0:2241:U:H5'	1.84	0.59
1:0:2670:C:H5'	1:0:2670:C:C6	2.36	0.59
3:K:125:LYS:H	3:K:125:LYS:HD2	1.65	0.59
1:0:104:C:C2'	1:0:105:G:H5''	2.32	0.59
1:0:141:G:H2'	1:0:142:U:O4'	2.03	0.59
1:0:169:C:C3'	1:0:170:U:H5'	2.32	0.59
1:0:812:G:C6	1:0:813:A:N6	2.71	0.59
1:0:1223:G:N1	1:0:1250:A:N7	2.51	0.59
1:0:1748:U:H5'	1:0:1749:G:H5''	1.82	0.59
1:0:1974:U:O5'	1:0:1974:U:H6	1.85	0.59
1:0:2705:A:O2'	1:0:2706:U:O5'	2.19	0.59
1:0:2769:C:H6	1:0:2770:A:C8	2.16	0.59
1:0:2793:G:C6	1:0:2794:G:N7	2.70	0.59
5:8:106:LYS:HD3	5:8:110:LEU:HD11	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:75:C:H2'	1:0:76:C:H5'	1.84	0.59
1:0:923:A:H5''	1:0:924:C:C5'	2.32	0.59
1:0:930:A:H3'	1:0:931:G:H8	1.66	0.59
1:0:1502:G:H2'	1:0:1503:G:C8	2.36	0.59
1:0:1846:A:H2'	1:0:1847:G:O4'	2.03	0.59
1:0:1982:C:OP1	1:0:2704:U:H5'	2.02	0.59
1:0:2005:U:H2'	1:0:2595:C:O2'	2.03	0.59
1:0:2386:G:H2'	1:0:2387:U:C6	2.37	0.59
1:0:2534:U:H5	1:0:2535:C:C4	2.20	0.59
1:0:2692:A:OP1	1:0:2692:A:O4'	2.20	0.59
1:0:68:C:O2	1:0:72:A:H1'	2.02	0.59
1:0:153:A:H2'	1:0:154:U:C6	2.37	0.59
1:0:192:G:C1'	1:0:193:A:H4'	2.32	0.59
1:0:213:C:O2'	1:0:214:C:H5'	2.02	0.59
1:0:421:G:C2'	1:0:422:C:H5'	2.32	0.59
1:0:425:A:N7	1:0:2390:A:C2	2.69	0.59
1:0:503:G:H2'	1:0:504:G:O4'	2.02	0.59
1:0:968:C:N4	1:0:2437:G:H5''	2.05	0.59
1:0:1021:A:H1'	1:0:1164:C:C1'	2.33	0.59
1:0:1757:C:O2	1:0:1970:G:C2	2.56	0.59
1:0:2225:G:C8	1:0:2405:A:C2	2.90	0.59
2:9:5:C:H2'	2:9:6:C:O4'	2.02	0.59
1:0:118:U:H1'	1:0:143:A:N9	2.17	0.59
1:0:198:A:C2	1:0:243:G:OP2	2.56	0.59
1:0:224:G:H4'	1:0:399:G:C4	2.38	0.59
1:0:591:G:C6	1:0:1272:G:N1	2.71	0.59
1:0:597:U:O4	1:0:683:A:H1'	2.03	0.59
1:0:827:C:H2'	1:0:828:C:H6	1.67	0.59
1:0:882:C:H2'	1:0:883:A:C8	2.37	0.59
1:0:1703:C:H2'	1:0:1704:G:O4'	2.03	0.59
1:0:2225:G:H2'	1:0:2226:A:C8	2.35	0.59
1:0:2229:G:C5'	3:K:84:MET:SD	2.91	0.59
2:9:56:G:O2'	2:9:57:U:H5'	2.02	0.59
5:8:50:GLU:O	5:8:54:VAL:HG23	2.02	0.59
1:0:317:U:C2'	1:0:318:G:H5''	2.32	0.59
1:0:317:U:C3'	1:0:318:G:H5''	2.32	0.59
1:0:789:G:C4	1:0:806:A:N7	2.70	0.59
1:0:1484:G:O6	1:0:1538:A:N1	2.35	0.59
1:0:1512:A:H2'	1:0:1514:C:C4	2.37	0.59
1:0:2645:C:H2'	1:0:2646:C:O4'	2.03	0.59
2:9:12:C:H2'	2:9:13:C:O4'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:51:G:H2'	2:9:52:G:H8	1.68	0.59
2:9:93:G:H5''	3:K:19:THR:CB	2.33	0.59
1:0:29:U:H2'	1:0:30:G:H8	1.68	0.59
1:0:55:A:O2'	1:0:56:C:H5'	2.02	0.59
1:0:872:G:N2	1:0:928:G:H3'	2.18	0.59
1:0:1217:U:O2'	1:0:1218:C:H5'	2.02	0.59
1:0:1364:C:C2	1:0:1394:G:C2	2.91	0.59
1:0:1494:G:O5'	1:0:1494:G:H8	1.86	0.59
1:0:1588:A:H2'	1:0:1589:G:H8	1.67	0.59
1:0:2690:A:OP1	1:0:2692:A:OP2	2.20	0.59
1:0:2708:U:H2'	1:0:2709:C:C6	2.37	0.59
4:U:23:VAL:HG22	4:U:38:VAL:HG13	1.84	0.59
1:0:1197:U:O5'	1:0:1197:U:H6	1.86	0.59
1:0:2619:G:C2	1:0:2620:G:C8	2.90	0.59
1:0:2677:U:H2'	1:0:2678:C:C6	2.38	0.59
1:0:2813:G:O2'	1:0:2814:G:H5'	2.02	0.59
3:K:125:LYS:H	3:K:125:LYS:CD	2.15	0.59
1:0:70:A:H4'	1:0:71:A:H5'	1.85	0.59
1:0:324:C:O2'	1:0:325:U:H5'	2.02	0.59
1:0:872:G:O2'	1:0:2247:A:C2	2.47	0.59
1:0:1138:A:C2	1:0:2497:A:C4	2.90	0.59
1:0:1440:G:H8	1:0:1441:A:H5'	1.68	0.59
1:0:1935:A:H2'	1:0:1936:A:C8	2.37	0.59
1:0:2169:A:P	1:0:2169:A:H8	2.25	0.59
1:0:2359:U:C4	1:0:2360:C:C5	2.90	0.59
1:0:2427:A:OP2	1:0:2478:C:OP2	2.21	0.59
1:0:2534:U:C5	1:0:2535:C:C2	2.91	0.59
1:0:2534:U:H5''	1:0:2535:C:OP2	2.03	0.59
1:0:2720:A:C6	1:0:2744:A:C8	2.91	0.59
2:9:102:A:O2'	2:9:103:A:H5'	2.02	0.59
3:K:26:ASP:C	3:K:26:ASP:OD1	2.45	0.59
1:0:240:U:H2'	1:0:241:C:O4'	2.03	0.58
1:0:1002:C:OP2	1:0:1200:G:OP2	2.21	0.58
1:0:1299:A:C4	1:0:1342:U:C4	2.91	0.58
1:0:1427:G:OP2	1:0:1428:G:C2	2.56	0.58
1:0:1514:C:OP2	1:0:1514:C:C6	2.56	0.58
1:0:1897:C:H2'	1:0:1898:U:O4'	2.03	0.58
1:0:2118:A:H3'	1:0:2118:A:H8	1.68	0.58
1:0:2662:C:H2'	1:0:2663:U:H6	1.67	0.58
1:0:2668:U:OP2	1:0:2847:G:N2	2.32	0.58
1:0:789:G:N1	1:0:2055:G:OP1	2.35	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1105:U:H2'	1:0:1107:A:OP2	2.03	0.58
1:0:1223:G:O2'	1:0:1224:A:OP2	2.21	0.58
1:0:1329:U:H5'	1:0:1405:A:H1'	1.84	0.58
1:0:1354:A:C2'	1:0:1410:U:O2	2.52	0.58
1:0:1355:A:C8	1:0:1410:U:H1'	2.37	0.58
1:0:1540:C:H2'	1:0:1541:G:C8	2.38	0.58
1:0:1783:G:N2	1:0:1820:G:H1'	2.18	0.58
1:0:2093:G:O3'	1:0:2103:G:H5'	2.02	0.58
1:0:2488:G:H2'	1:0:2489:C:C6	2.38	0.58
1:0:2826:C:H2'	1:0:2827:G:C5'	2.32	0.58
2:9:4:C:O2'	2:9:5:C:H5'	2.02	0.58
1:0:70:A:HO2'	1:0:71:A:C5'	2.16	0.58
1:0:617:U:N3	1:0:632:A:N7	2.51	0.58
1:0:627:A:H2'	1:0:628:A:O4'	2.04	0.58
1:0:705:C:H2'	1:0:706:A:C8	2.38	0.58
1:0:745:C:H2'	1:0:746:G:H5'	1.85	0.58
1:0:1479:G:H2'	1:0:1480:G:H8	1.68	0.58
1:0:1673:C:H2'	1:0:1674:C:H6	1.68	0.58
1:0:1744:G:N2	1:0:1746:A:H3'	2.17	0.58
1:0:2365:U:O2'	1:0:2366:U:H5'	2.03	0.58
1:0:2636:A:H2'	1:0:2637:C:H5'	1.85	0.58
5:8:27:ILE:HD11	5:8:44:ILE:HB	1.84	0.58
1:0:204:A:H2	1:0:431:G:O2'	1.87	0.58
1:0:762:A:N3	1:0:1634:A:H2'	2.19	0.58
1:0:958:G:C6	1:0:982:C:N3	2.71	0.58
1:0:1171:A:H2'	1:0:1172:U:C6	2.38	0.58
1:0:1325:U:H4'	1:0:1326:U:C6	2.38	0.58
1:0:1383:C:C2'	1:0:1384:G:H8	2.11	0.58
1:0:1825:C:O2	1:0:1825:C:H2'	2.01	0.58
1:0:1966:C:H4'	1:0:2585:C:H4'	1.86	0.58
1:0:2034:A:C2	1:0:2035:G:O6	2.56	0.58
1:0:2095:G:C3'	1:0:2096:U:H5''	2.33	0.58
1:0:2463:G:O2'	1:0:2464:G:H5'	2.03	0.58
1:0:940:G:C3'	1:0:941:U:C5'	2.80	0.58
1:0:1353:A:H8	1:0:1353:A:O5'	1.87	0.58
1:0:1530:U:O5'	1:0:1530:U:H6	1.87	0.58
1:0:1692:C:C2'	1:0:1693:A:H5'	2.33	0.58
1:0:2264:C:O2'	1:0:2267:A:N7	2.32	0.58
2:9:56:G:H2'	2:9:57:U:O4'	2.03	0.58
1:0:71:A:H5''	1:0:71:A:H8	1.67	0.58
1:0:415:A:C2'	1:0:416:U:H5'	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:537:C:O4'	1:0:2759:U:C2	2.57	0.58
1:0:818:G:H5'	1:0:819:C:C5	2.38	0.58
1:0:1606:C:H2'	1:0:1607:A:C8	2.39	0.58
1:0:1699:A:OP2	1:0:1699:A:O4'	2.22	0.58
1:0:1764:A:N7	1:0:1821:A:H1'	2.19	0.58
1:0:2195:C:H2'	1:0:2196:U:O4'	2.04	0.58
1:0:2439:U:H1'	1:0:2472:U:H3	1.69	0.58
1:0:2511:G:O2'	1:0:2512:A:H5'	2.04	0.58
1:0:2522:G:C2	1:0:2745:A:H2'	2.38	0.58
3:K:12:LYS:H	3:K:15:ARG:NH2	2.02	0.58
1:0:103:U:H2'	1:0:104:C:C6	2.39	0.58
1:0:391:C:O2'	1:0:392:G:H5'	2.03	0.58
1:0:695:G:H2'	1:0:696:U:H6	1.68	0.58
1:0:701:U:H2'	1:0:702:A:H5'	1.86	0.58
1:0:859:U:H4'	1:0:860:U:C6	2.39	0.58
1:0:934:G:O2'	1:0:935:C:H5'	2.04	0.58
1:0:977:G:O2'	1:0:978:U:H5'	2.04	0.58
1:0:2196:U:H2'	1:0:2197:U:C6	2.39	0.58
1:0:2484:G:HO2'	1:0:2485:U:H6	1.49	0.58
1:0:104:C:H2'	1:0:105:G:C5'	2.34	0.58
1:0:441:A:H2'	1:0:442:A:C4'	2.33	0.58
1:0:827:C:H2'	1:0:828:C:C6	2.38	0.58
1:0:880:C:O2	1:0:925:U:H4'	2.03	0.58
1:0:972:C:O2'	1:0:973:U:OP1	2.21	0.58
1:0:1088:A:H2'	1:0:1089:C:H5'	1.86	0.58
1:0:1200:G:H5''	1:0:1200:G:C8	2.39	0.58
1:0:1366:A:C6	1:0:1367:A:C6	2.92	0.58
1:0:1681:A:H2	1:0:2706:U:H1'	1.67	0.58
1:0:1958:G:H2'	1:0:1959:U:C6	2.39	0.58
1:0:2082:C:N4	1:0:2174:G:N2	2.52	0.58
1:0:2366:U:H1'	4:U:41:ARG:HH22	1.69	0.58
2:9:45:C:H42	2:9:47:A:H62	1.42	0.58
2:9:47:A:H2'	2:9:47:A:N3	2.18	0.58
1:0:132:U:O2'	1:0:133:C:H5'	2.04	0.58
1:0:159:A:H2'	1:0:160:C:H6	1.68	0.58
1:0:880:C:C4	1:0:881:U:C4	2.92	0.58
1:0:1920:A:H3'	1:0:1920:A:H8	1.69	0.58
1:0:2366:U:H1'	4:U:41:ARG:HH12	1.69	0.58
1:0:2526:U:H2'	1:0:2527:G:H8	1.68	0.58
1:0:2793:G:C2'	1:0:2794:G:H5'	2.33	0.58
5:8:20:PHE:HA	5:8:23:GLN:CD	2.28	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:732:G:H2'	1:0:733:G:H8	1.67	0.58
1:0:940:G:C8	1:0:941:U:O4'	2.57	0.58
1:0:996:C:O5'	1:0:996:C:H6	1.87	0.58
1:0:1032:A:N6	1:0:1033:G:H21	2.02	0.58
1:0:1411:C:H2'	1:0:1412:C:C6	2.39	0.58
1:0:2472:U:C5	1:0:2473:G:C8	2.91	0.58
5:8:11:VAL:O	5:8:15:LYS:HB2	2.04	0.58
1:0:458:G:H8	1:0:458:G:OP2	1.87	0.57
1:0:765:C:O2'	1:0:766:A:H8	1.87	0.57
1:0:1067:G:O5'	1:0:1068:A:H5'	2.04	0.57
1:0:1459:U:N3	1:0:1476:G:O5'	2.32	0.57
1:0:1761:G:H2'	1:0:1762:C:H6	1.69	0.57
1:0:2198:U:H3'	1:0:2199:C:C4'	2.32	0.57
1:0:2434:G:N1	1:0:2477:C:N4	2.52	0.57
1:0:2516:U:H2'	1:0:2517:C:H6	1.62	0.57
1:0:2557:G:H21	1:0:2558:C:H1'	1.69	0.57
3:K:60:ARG:HG2	3:K:60:ARG:NH1	2.19	0.57
4:U:46:LYS:HZ1	4:U:76:ALA:HB2	1.69	0.57
5:8:13:MET:CE	5:8:59:VAL:HB	2.34	0.57
1:0:109:A:H2'	1:0:110:U:O4'	2.04	0.57
1:0:520:C:O2	1:0:520:C:H2'	2.04	0.57
1:0:1124:U:H2'	1:0:1125:G:C8	2.39	0.57
1:0:1259:A:O2'	1:0:1260:A:H5'	2.04	0.57
1:0:1339:U:OP2	1:0:1339:U:H6	1.87	0.57
1:0:1399:C:O2'	1:0:1400:A:H5'	2.04	0.57
1:0:1452:U:H3	1:0:1569:A:H62	1.50	0.57
1:0:1727:C:H4'	1:0:2833:C:O2	2.04	0.57
1:0:1747:G:H4'	1:0:1749:G:O4'	2.03	0.57
1:0:1924:C:N4	5:8:61:ARG:HD3	2.20	0.57
1:0:2067:U:O5'	1:0:2067:U:H6	1.87	0.57
1:0:2490:U:O4	1:0:2554:C:N3	2.36	0.57
5:8:41:LEU:O	5:8:44:ILE:HG12	2.04	0.57
1:0:108:G:H2'	1:0:109:A:O4'	2.03	0.57
1:0:353:G:H2'	1:0:354:C:O4'	2.04	0.57
1:0:410:A:H2'	1:0:411:C:O4'	2.04	0.57
1:0:473:C:C2'	1:0:474:G:H5'	2.34	0.57
1:0:708:G:H1	1:0:780:U:H3	1.52	0.57
1:0:878:C:N4	1:0:921:A:H62	2.02	0.57
1:0:1075:C:H2'	1:0:1076:U:O4'	2.05	0.57
1:0:1198:C:C5'	1:0:1199:U:H4'	2.32	0.57
1:0:1503:G:H2'	1:0:1504:G:O4'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1707:A:N7	1:0:1714:A:H2	2.02	0.57
1:0:1791:C:H3'	1:0:1791:C:H6	1.69	0.57
1:0:1920:A:H3'	1:0:1920:A:C8	2.40	0.57
1:0:1936:A:H2	1:0:2528:G:N3	2.02	0.57
1:0:2234:G:H2'	1:0:2235:G:O4'	2.03	0.57
1:0:2368:G:H5''	1:0:2369:U:O4'	2.04	0.57
1:0:2549:G:O2'	1:0:2550:C:H5'	2.04	0.57
1:0:68:C:O2	1:0:68:C:C2'	2.52	0.57
1:0:230:C:C2	1:0:231:G:C8	2.92	0.57
1:0:357:A:H8	1:0:357:A:O5'	1.86	0.57
1:0:424:G:O2'	1:0:425:A:H5''	2.04	0.57
1:0:485:G:C5	1:0:520:C:C5	2.93	0.57
1:0:538:A:O5'	1:0:538:A:H8	1.87	0.57
1:0:674:U:H2'	1:0:675:C:C6	2.39	0.57
1:0:930:A:H3'	1:0:931:G:C8	2.39	0.57
1:0:1436:G:O2'	1:0:1515:U:H1'	2.05	0.57
1:0:1510:A:H2'	1:0:1511:A:O4'	2.03	0.57
1:0:2074:U:OP2	1:0:2075:U:H3'	2.05	0.57
1:0:2732:C:N4	1:0:2733:A:C6	2.72	0.57
1:0:2867:G:H2'	1:0:2867:G:N3	2.19	0.57
2:9:29:C:H6	2:9:29:C:O5'	1.87	0.57
1:0:536:A:H62	1:0:2605:C:H4'	1.70	0.57
1:0:816:U:H2'	1:0:817:A:O4'	2.04	0.57
1:0:1220:G:H2'	1:0:1221:C:C6	2.39	0.57
1:0:1455:C:O2'	1:0:1456:C:H5'	2.03	0.57
1:0:2060:A:OP2	1:0:2217:G:O6	2.22	0.57
1:0:2488:G:H2'	1:0:2489:C:H6	1.69	0.57
1:0:70:A:O2'	1:0:71:A:O5'	2.19	0.57
1:0:333:A:O4'	1:0:351:A:H1'	2.05	0.57
1:0:532:A:C2	1:0:533:C:C2	2.93	0.57
1:0:646:C:H2'	1:0:647:G:C8	2.38	0.57
1:0:712:A:C2	1:0:1650:A:N3	2.73	0.57
1:0:1145:C:H3'	1:0:1147:G:OP2	2.04	0.57
1:0:1292:A:H2'	1:0:1293:A:H8	1.69	0.57
1:0:1429:A:H1'	1:0:1603:A:C5	2.39	0.57
1:0:1480:G:N1	1:0:1481:U:O2	2.38	0.57
1:0:1918:G:H22	1:0:1947:G:P	2.27	0.57
1:0:2094:C:P	1:0:2103:G:H5'	2.44	0.57
1:0:2270:U:H1'	1:0:2353:G:H1'	1.86	0.57
1:0:2452:U:OP1	1:0:2508:G:N2	2.38	0.57
1:0:48:A:H5'	1:0:49:U:OP1	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:554:U:O3'	1:0:555:U:H4'	2.05	0.57
1:0:768:U:O2'	1:0:769:C:H5'	2.04	0.57
1:0:1325:U:H1'	1:0:1619:A:N6	2.19	0.57
1:0:1341:G:H2'	1:0:1343:C:C4	2.40	0.57
1:0:1528:C:H5'	1:0:1529:C:OP2	2.04	0.57
1:0:1544:A:H62	1:0:1559:G:H21	1.52	0.57
1:0:1821:A:H5''	1:0:1822:C:C5	2.39	0.57
1:0:1856:U:OP1	1:0:2389:G:O2'	2.23	0.57
1:0:1866:G:O5'	1:0:1866:G:C8	2.54	0.57
1:0:2036:G:C2'	1:0:2037:A:H5'	2.34	0.57
1:0:2225:G:H2'	1:0:2226:A:O4'	2.04	0.57
1:0:2670:C:C4	1:0:2699:G:N2	2.73	0.57
1:0:2755:A:O2'	1:0:2756:A:C5'	2.53	0.57
1:0:781:G:H2'	1:0:782:U:H6	1.70	0.57
1:0:807:A:O2'	1:0:808:C:H5'	2.04	0.57
1:0:818:G:H5'	1:0:819:C:H5	1.70	0.57
1:0:989:G:H2'	1:0:990:A:H8	1.70	0.57
1:0:1228:G:C6	1:0:1229:C:N3	2.72	0.57
1:0:1370:U:O2'	1:0:1371:G:H5'	2.04	0.57
1:0:1498:G:H2'	1:0:1499:A:H8	1.70	0.57
1:0:1883:A:H2	1:0:1953:A:N6	2.02	0.57
1:0:1909:U:C3'	1:0:1910:A:H5''	2.35	0.57
1:0:2059:U:P	1:0:2217:G:H1	2.27	0.57
1:0:2232:G:C6	1:0:2233:C:N4	2.72	0.57
3:K:28:VAL:CG1	3:K:137:VAL:HB	2.34	0.57
1:0:26:G:H1'	1:0:525:A:H61	1.68	0.57
1:0:806:A:OP2	1:0:806:A:O4'	2.22	0.57
1:0:1109:A:C2	1:0:1110:G:H1'	2.39	0.57
1:0:1213:U:H2'	1:0:1214:C:C6	2.40	0.57
1:0:2029:G:H2'	1:0:2030:U:C6	2.39	0.57
1:0:2534:U:H5	1:0:2535:C:C2	2.23	0.57
1:0:2712:G:H5'	1:0:2713:A:C8	2.40	0.57
1:0:169:C:C2'	1:0:170:U:H5'	2.35	0.57
1:0:229:G:H2'	1:0:230:C:C6	2.40	0.57
1:0:243:G:C2	1:0:244:C:H1'	2.39	0.57
1:0:491:A:OP2	1:0:492:G:H5''	2.05	0.57
1:0:561:U:H1'	1:0:1233:A:C2	2.40	0.57
1:0:1023:U:O2	1:0:1154:A:N7	2.38	0.57
1:0:1216:G:C2	1:0:1257:U:O2	2.57	0.57
1:0:1314:A:C2'	1:0:1315:A:O5'	2.53	0.57
1:0:2083:G:H2'	1:0:2084:G:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2451:G:H2'	1:0:2454:C:H42	1.66	0.57
1:0:2809:A:H62	1:0:2854:G:H1'	1.66	0.57
1:0:30:G:H2'	1:0:31:C:C6	2.40	0.56
1:0:564:U:H2'	1:0:565:A:C8	2.40	0.56
1:0:585:U:O2'	1:0:2481:G:C6	2.58	0.56
1:0:709:A:C6	1:0:710:C:C4	2.93	0.56
1:0:826:U:O2	1:0:827:C:C2	2.58	0.56
1:0:936:A:H2'	1:0:937:C:O4'	2.05	0.56
1:0:939:C:N4	1:0:941:U:O4	2.38	0.56
1:0:1129:A:H2'	1:0:1130:U:C6	2.39	0.56
1:0:1175:A:C2	1:0:1176:U:C2	2.93	0.56
1:0:1339:U:H2'	1:0:1340:C:H5'	1.86	0.56
1:0:1355:A:H1'	1:0:1410:U:H4'	1.87	0.56
1:0:1720:G:O2'	1:0:1721:G:H5'	2.04	0.56
1:0:1996:A:H2	1:0:2592:U:H3	1.50	0.56
1:0:2169:A:H8	1:0:2169:A:O5'	1.88	0.56
1:0:2762:G:O2'	1:0:2763:U:H5'	2.05	0.56
1:0:2866:A:H2'	1:0:2867:G:C8	2.40	0.56
4:U:52:GLY:N	4:U:62:LEU:CD1	2.68	0.56
5:8:2:ILE:HD12	5:8:83:ARG:HE	1.69	0.56
1:0:210:A:H61	1:0:442:A:H61	1.53	0.56
1:0:540:G:O6	1:0:2006:G:OP1	2.22	0.56
1:0:912:A:H2'	1:0:913:A:O4'	2.04	0.56
1:0:989:G:H2'	1:0:990:A:C8	2.41	0.56
1:0:1102:G:O2'	1:0:1103:C:H5'	2.05	0.56
1:0:1322:G:O2'	1:0:1323:G:H5'	2.04	0.56
1:0:1509:A:H2'	1:0:1510:A:H5'	1.86	0.56
1:0:1830:C:H41	1:0:1882:G:P	2.28	0.56
1:0:2293:G:O2'	1:0:2294:U:H5'	2.04	0.56
1:0:2630:C:O2'	1:0:2631:C:H5'	2.05	0.56
1:0:2809:A:H61	1:0:2854:G:H1'	1.66	0.56
1:0:2829:A:H2'	1:0:2830:U:O4'	2.05	0.56
1:0:23:G:N3	1:0:24:G:C8	2.74	0.56
1:0:65:C:H2'	1:0:66:U:C5'	2.35	0.56
1:0:167:A:C2	1:0:184:A:C2	2.92	0.56
1:0:297:A:O2'	1:0:298:C:H5'	2.06	0.56
1:0:343:A:H2'	1:0:345:U:OP2	2.05	0.56
1:0:486:U:O2	1:0:486:U:H2'	2.05	0.56
1:0:563:U:H2'	1:0:564:U:H6	1.69	0.56
1:0:698:A:O4'	1:0:700:C:N4	2.31	0.56
1:0:767:G:O2'	1:0:768:U:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1002:C:C4	1:0:1003:C:C5	2.93	0.56
1:0:1164:C:H2'	1:0:1165:G:O4'	2.05	0.56
1:0:1411:C:O2'	1:0:1412:C:H5'	2.05	0.56
1:0:1426:U:P	1:0:1428:G:H22	2.28	0.56
1:0:1463:A:O2'	1:0:1464:A:H5'	2.05	0.56
1:0:1662:G:H5''	1:0:1663:C:H5'	1.88	0.56
1:0:1944:C:H2'	1:0:1945:C:O4'	2.05	0.56
1:0:2082:C:H42	1:0:2174:G:N2	2.03	0.56
1:0:2134:U:O5'	1:0:2134:U:H6	1.88	0.56
1:0:2204:A:H5'	1:0:2205:C:OP1	2.05	0.56
1:0:2229:G:H3'	3:K:84:MET:HG3	1.86	0.56
1:0:2232:G:N1	5:8:79:ASP:OD2	2.38	0.56
1:0:2264:C:C1'	1:0:2267:A:H62	2.19	0.56
1:0:2306:A:H2'	1:0:2307:A:N7	2.19	0.56
1:0:2310:G:O3'	4:U:43:THR:HB	2.05	0.56
2:9:39:C:H3'	2:9:40:C:C6	2.41	0.56
1:0:165:G:O2'	1:0:166:G:H5'	2.05	0.56
1:0:403:A:C5'	1:0:404:A:OP1	2.54	0.56
1:0:550:C:H2'	1:0:551:A:H8	1.70	0.56
1:0:1332:G:H3'	1:0:1333:G:H8	1.69	0.56
1:0:1459:U:O5'	1:0:1459:U:H6	1.89	0.56
1:0:1760:G:C2	1:0:1967:U:C2	2.93	0.56
1:0:2195:C:O2'	1:0:2196:U:H5'	2.06	0.56
1:0:2328:G:H2'	1:0:2329:C:H5''	1.87	0.56
1:0:2550:C:O5'	1:0:2550:C:H6	1.88	0.56
1:0:2672:U:H2'	1:0:2673:G:C8	2.25	0.56
1:0:25:U:H2'	1:0:26:G:O4'	2.06	0.56
1:0:59:G:N3	1:0:73:A:H8	2.01	0.56
1:0:178:C:O2	1:0:228:A:C2	2.58	0.56
1:0:471:A:H2'	1:0:472:C:O4'	2.04	0.56
1:0:493:A:OP2	1:0:517:A:N6	2.37	0.56
1:0:889:C:H2'	1:0:890:U:H6	1.71	0.56
1:0:1498:G:H2'	1:0:1499:A:C8	2.41	0.56
1:0:1581:C:C2'	1:0:1582:A:H5''	2.36	0.56
1:0:2757:G:OP2	1:0:2761:A:O2'	2.23	0.56
1:0:2764:U:H2'	1:0:2765:C:H6	1.69	0.56
3:K:12:LYS:HG2	3:K:15:ARG:HH21	1.71	0.56
1:0:388:G:H2'	1:0:389:G:H8	1.71	0.56
1:0:790:A:C2	1:0:791:G:C5	2.94	0.56
1:0:857:U:H2'	1:0:858:G:H5'	1.87	0.56
1:0:1145:C:N3	1:0:1149:G:C6	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1194:U:H2'	1:0:1195:U:C6	2.40	0.56
1:0:1622:G:H4'	1:0:1624:A:N3	2.21	0.56
1:0:1789:U:C4	1:0:1811:A:C2	2.93	0.56
1:0:2034:A:H2	1:0:2035:G:O6	1.88	0.56
1:0:2245:A:O4'	1:0:2245:A:OP1	2.24	0.56
1:0:2514:G:N2	1:0:2515:G:H1'	2.20	0.56
1:0:2537:C:O2'	1:0:2538:C:H5'	2.06	0.56
3:K:44:LYS:HG2	3:K:93:TYR:CD2	2.41	0.56
3:K:76:THR:CG2	3:K:88:LYS:CB	2.77	0.56
1:0:48:A:N1	1:0:154:U:O4	2.39	0.56
1:0:457:C:O2'	1:0:458:G:H5'	2.06	0.56
1:0:490:A:O2'	1:0:491:A:C8	2.56	0.56
1:0:502:A:H2'	1:0:503:G:O4'	2.06	0.56
1:0:521:U:C5	1:0:522:G:N3	2.74	0.56
1:0:1392:U:O2'	1:0:1393:G:H5'	2.05	0.56
1:0:1692:C:O2'	1:0:1693:A:H5'	2.06	0.56
1:0:2357:A:H2'	1:0:2358:C:H5'	1.86	0.56
1:0:2846:G:O2'	1:0:2847:G:H5''	2.05	0.56
2:9:64:C:O2'	2:9:65:A:H5'	2.05	0.56
3:K:117:GLU:O	3:K:121:LEU:HG	2.06	0.56
1:0:58:C:O2	1:0:72:A:H2'	2.06	0.56
1:0:102:C:O5'	1:0:102:C:H6	1.89	0.56
1:0:808:C:H2'	1:0:809:C:C6	2.34	0.56
1:0:830:C:H2'	1:0:831:G:O4'	2.06	0.56
1:0:851:C:H2'	1:0:852:U:C6	2.41	0.56
1:0:998:C:O2'	1:0:1011:A:N3	2.35	0.56
1:0:1026:U:H2'	1:0:1027:C:H6	1.70	0.56
1:0:1032:A:H5'	1:0:1033:G:OP2	2.06	0.56
1:0:2095:G:H3'	1:0:2096:U:H5''	1.87	0.56
1:0:2394:G:N2	1:0:2395:C:H1'	2.21	0.56
1:0:2560:G:O6	1:0:2589:C:H6	1.89	0.56
1:0:2820:C:O2'	1:0:2821:G:H5'	2.05	0.56
3:K:35:LEU:H	3:K:103:VAL:HG13	1.71	0.56
1:0:82:G:O2'	1:0:83:A:H5'	2.06	0.56
1:0:404:A:C2	1:0:405:C:C2	2.94	0.56
1:0:584:A:O2'	1:0:585:U:H5'	2.06	0.56
1:0:635:C:C3'	1:0:636:G:H5''	2.36	0.56
1:0:964:A:H1'	1:0:2245:A:H5'	1.87	0.56
1:0:1055:A:C2	1:0:1121:G:H2'	2.41	0.56
1:0:1312:G:H5''	1:0:1313:U:OP1	2.06	0.56
1:0:1436:G:N7	1:0:1437:A:C6	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1634:A:O2'	1:0:1635:G:OP1	2.22	0.56
1:0:1776:A:C2'	1:0:1777:A:H5''	2.33	0.56
1:0:2836:U:H6	1:0:2836:U:H5''	1.70	0.56
3:K:30:PHE:HE2	3:K:68:ARG:HD3	1.70	0.56
1:0:7:G:O2'	1:0:8:A:H5'	2.06	0.56
1:0:356:A:H2'	1:0:357:A:C8	2.41	0.56
1:0:567:G:H2'	1:0:568:G:H8	1.70	0.56
1:0:704:G:H2'	1:0:705:C:H6	1.70	0.56
1:0:757:U:H2'	1:0:758:G:O4'	2.06	0.56
1:0:788:G:H5''	1:0:789:G:OP1	2.05	0.56
1:0:953:G:C6	1:0:954:U:N3	2.74	0.56
1:0:1287:A:C6	1:0:1315:A:C2	2.94	0.56
1:0:1441:A:HO2'	1:0:1442:C:H6	1.48	0.56
1:0:1514:C:O4'	1:0:1593:C:H4'	2.06	0.56
1:0:1614:C:H6	1:0:1614:C:O5'	1.89	0.56
1:0:2245:A:O2'	1:0:2246:A:C4	2.58	0.56
1:0:2509:A:H2'	1:0:2510:A:H5''	1.87	0.56
1:0:2778:U:O2'	1:0:2779:C:H5'	2.06	0.56
1:0:2788:C:O2'	1:0:2789:U:H5'	2.06	0.56
1:0:2805:G:O2'	1:0:2858:A:N1	2.36	0.56
2:9:58:G:H5''	2:9:59:A:OP1	2.06	0.56
3:K:29:ALA:HB3	3:K:68:ARG:NH2	2.21	0.56
3:K:35:LEU:HD11	3:K:130:THR:CB	2.34	0.56
1:0:77:C:O2'	1:0:78:C:H5'	2.05	0.55
1:0:174:A:C2	1:0:175:C:C1'	2.89	0.55
1:0:199:A:N6	1:0:209:G:N3	2.54	0.55
1:0:531:G:H2'	1:0:532:A:H8	1.70	0.55
1:0:571:U:O2'	1:0:581:A:O4'	2.24	0.55
1:0:688:A:C4	1:0:817:A:C2	2.93	0.55
1:0:873:U:C4	1:0:930:A:N6	2.73	0.55
1:0:1681:A:N6	1:0:1979:C:H42	2.04	0.55
1:0:1713:G:C6	1:0:1714:A:C5	2.94	0.55
1:0:1724:C:H2'	1:0:1725:C:H6	1.70	0.55
1:0:2016:A:N6	1:0:2019:C:C2	2.75	0.55
1:0:2025:A:N3	1:0:2025:A:H2'	2.20	0.55
1:0:2265:A:H5''	1:0:2266:A:H1'	1.88	0.55
1:0:2540:A:C2'	1:0:2541:U:O5'	2.54	0.55
1:0:2651:U:O2'	1:0:2652:G:H5'	2.05	0.55
1:0:2771:C:N4	1:0:2780:A:N6	2.39	0.55
2:9:37:C:H2'	2:9:38:C:O4'	2.06	0.55
1:0:583:C:H4'	1:0:584:A:C5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:831:G:H2'	1:0:832:A:H5''	1.88	0.55
1:0:982:C:P	1:0:1000:G:H1	2.29	0.55
1:0:1001:A:H1'	1:0:1167:A:C2	2.41	0.55
1:0:1055:A:H61	1:0:1123:G:C1'	2.18	0.55
1:0:1166:A:H3'	1:0:1167:A:H5''	1.88	0.55
1:0:1361:G:C2	1:0:1615:C:N3	2.74	0.55
1:0:1646:G:O4'	1:0:2677:U:OP1	2.24	0.55
1:0:1780:A:N7	1:0:1781:C:C5	2.73	0.55
1:0:1876:C:H2'	1:0:1877:C:O4'	2.06	0.55
1:0:2071:G:O2'	1:0:2072:C:H5'	2.06	0.55
1:0:2652:G:O2'	1:0:2653:A:H5'	2.06	0.55
1:0:2846:G:O2'	1:0:2847:G:C5'	2.54	0.55
2:9:90:C:H2'	2:9:91:A:O4'	2.05	0.55
1:0:30:G:C6	1:0:521:U:O2	2.60	0.55
1:0:174:A:N1	1:0:175:C:H1'	2.22	0.55
1:0:176:A:C3'	1:0:177:U:H5	2.16	0.55
1:0:394:U:H2'	1:0:395:G:C8	2.41	0.55
1:0:401:G:N9	1:0:403:A:N7	2.54	0.55
1:0:581:A:N3	1:0:582:G:H1'	2.20	0.55
1:0:627:A:C6	1:0:628:A:C6	2.94	0.55
1:0:644:A:H1'	1:0:2382:C:H4'	1.89	0.55
1:0:787:A:H1'	1:0:788:G:C8	2.41	0.55
1:0:931:G:H2'	1:0:932:G:C5'	2.36	0.55
1:0:1147:G:H2'	1:0:1148:G:O4'	2.06	0.55
1:0:1251:G:O2'	1:0:1252:C:H5'	2.06	0.55
1:0:1544:A:O2'	1:0:1545:G:H5'	2.06	0.55
1:0:1710:U:H6	1:0:1710:U:O5'	1.88	0.55
1:0:1807:A:OP2	1:0:1814:G:H5''	2.06	0.55
1:0:1809:G:C2'	1:0:1810:U:H5'	2.36	0.55
1:0:2036:G:H2'	1:0:2037:A:H5'	1.88	0.55
1:0:2070:G:O2'	1:0:2071:G:H5'	2.05	0.55
1:0:2313:G:O2'	1:0:2314:A:OP1	2.21	0.55
1:0:2496:C:O2'	1:0:2497:A:H3'	2.06	0.55
1:0:2793:G:O2'	1:0:2794:G:H5'	2.06	0.55
1:0:2824:C:H4'	1:0:2843:A:C2	2.41	0.55
3:K:12:LYS:CG	3:K:15:ARG:HE	2.16	0.55
1:0:45:C:H2'	1:0:46:C:H6	1.70	0.55
1:0:58:C:H3'	1:0:59:G:H4'	1.89	0.55
1:0:165:G:H4'	1:0:1378:A:C6	2.42	0.55
1:0:174:A:H3'	1:0:175:C:C6	2.41	0.55
1:0:215:G:N2	1:0:216:U:H1'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:594:G:N1	1:0:1266:G:OP1	2.37	0.55
1:0:768:U:H2'	1:0:769:C:H6	1.71	0.55
1:0:932:G:H2'	1:0:933:G:C8	2.40	0.55
1:0:1365:U:H1'	1:0:1586:A:H2	1.72	0.55
1:0:1486:A:H2'	1:0:1487:C:C6	2.41	0.55
1:0:2199:C:H2'	1:0:2200:G:H8	1.69	0.55
1:0:2266:A:C2	1:0:2325:A:N7	2.75	0.55
1:0:166:G:N2	1:0:185:C:H41	2.05	0.55
1:0:174:A:H3'	1:0:175:C:C5	2.41	0.55
1:0:510:G:H3'	1:0:510:G:H8	1.70	0.55
1:0:697:G:O2'	1:0:698:A:H5'	2.06	0.55
1:0:698:A:C4'	1:0:700:C:H41	2.19	0.55
1:0:833:A:H1'	1:0:954:U:O2'	2.06	0.55
1:0:1014:G:N2	1:0:1164:C:C2	2.75	0.55
1:0:1067:G:P	1:0:1068:A:H5'	2.46	0.55
1:0:1164:C:H3'	1:0:1165:G:C8	2.42	0.55
1:0:1336:G:C2	1:0:1346:C:H1'	2.40	0.55
1:0:1443:G:H2'	1:0:1444:C:C6	2.42	0.55
1:0:1942:G:H2'	1:0:1943:A:O4'	2.06	0.55
1:0:2180:U:O4	1:0:2203:G:H2'	2.05	0.55
1:0:2438:A:C5	1:0:2439:U:C5	2.95	0.55
5:8:73:ASP:HB2	5:8:75:GLU:OE1	2.06	0.55
1:0:189:A:O2'	1:0:190:A:H5'	2.06	0.55
1:0:486:U:C6	1:0:519:C:N3	2.75	0.55
1:0:605:G:H2'	1:0:606:A:C8	2.41	0.55
1:0:605:G:H2'	1:0:606:A:H8	1.72	0.55
1:0:642:A:H2'	1:0:643:A:O4'	2.07	0.55
1:0:833:A:N3	1:0:954:U:O2'	2.40	0.55
1:0:1030:U:H2'	1:0:1031:C:H5'	1.89	0.55
1:0:1352:G:C6	1:0:1353:A:N6	2.73	0.55
1:0:1764:A:C6	1:0:1821:A:H1'	2.40	0.55
1:0:2053:G:H2'	1:0:2054:A:H8	1.72	0.55
1:0:2248:A:C2'	1:0:2249:U:H5'	2.37	0.55
1:0:2366:U:C1'	4:U:41:ARG:HH22	2.20	0.55
1:0:2631:C:C2	1:0:2648:G:C2	2.94	0.55
1:0:83:A:H8	1:0:83:A:O5'	1.90	0.55
1:0:541:C:N4	1:0:2001:G:H22	2.04	0.55
1:0:543:G:C5	1:0:544:U:C4	2.95	0.55
1:0:684:C:H2'	1:0:685:U:H6	1.71	0.55
1:0:782:U:H2'	1:0:783:G:C8	2.42	0.55
1:0:857:U:H2'	1:0:858:G:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1008:G:C6	1:0:1170:U:N3	2.75	0.55
1:0:1230:C:O2'	1:0:1231:A:H5'	2.07	0.55
1:0:1440:G:C8	1:0:1441:A:H5'	2.41	0.55
1:0:1719:G:O2'	1:0:1720:G:H5'	2.07	0.55
1:0:1830:C:H41	1:0:1881:U:C3'	2.17	0.55
1:0:2119:A:H8	1:0:2119:A:O5'	1.89	0.55
1:0:2624:G:H4'	1:0:2712:G:C2'	2.36	0.55
1:0:2633:A:H4'	1:0:2634:G:O5'	2.06	0.55
3:K:48:ILE:CG1	3:K:69:ILE:HD11	2.37	0.55
1:0:469:G:N2	1:0:481:A:OP2	2.40	0.55
1:0:555:U:O4	1:0:1234:C:H5''	2.07	0.55
1:0:826:U:C6	1:0:1209:G:N2	2.74	0.55
1:0:848:A:C2'	1:0:849:G:H5'	2.37	0.55
1:0:1084:A:H4'	1:0:2454:C:OP1	2.07	0.55
1:0:1177:U:H2'	1:0:1178:C:H6	1.72	0.55
1:0:2170:C:H3'	1:0:2171:U:C6	2.40	0.55
1:0:2331:A:H2	4:U:33:ALA:O	1.88	0.55
1:0:2338:C:O5'	1:0:2338:C:H6	1.89	0.55
1:0:2344:G:H4'	4:U:60:PHE:CD2	2.39	0.55
1:0:2468:G:H2'	1:0:2469:G:C8	2.41	0.55
1:0:2636:A:H62	1:0:2643:G:H21	1.52	0.55
1:0:2812:A:O2'	1:0:2813:G:H5'	2.06	0.55
3:K:16:GLY:O	3:K:73:LYS:HD2	2.07	0.55
1:0:201:G:N7	1:0:433:G:H4'	2.22	0.55
1:0:794:A:C6	1:0:1768:U:H5'	2.42	0.55
1:0:824:U:H4'	1:0:1264:C:O2'	2.07	0.55
1:0:1156:U:H2'	1:0:1157:G:H8	1.70	0.55
1:0:1208:A:C2	1:0:1209:G:C4	2.94	0.55
1:0:1279:G:N2	1:0:1996:A:OP2	2.40	0.55
1:0:1371:G:H2'	1:0:1384:G:H22	1.72	0.55
1:0:1908:C:N4	1:0:1912:G:N1	2.49	0.55
1:0:2576:G:H8	1:0:2576:G:O5'	1.90	0.55
1:0:2652:G:H2'	1:0:2653:A:H8	1.71	0.55
1:0:20:C:O2'	1:0:21:A:H5'	2.07	0.55
1:0:198:A:N7	1:0:243:G:C6	2.74	0.55
1:0:222:G:N2	1:0:231:G:H1'	2.22	0.55
1:0:223:C:O2'	1:0:398:C:H5'	2.06	0.55
1:0:547:U:H2'	1:0:548:G:C8	2.42	0.55
1:0:636:G:HO2'	1:0:668:A:HO2'	1.55	0.55
1:0:645:G:H2'	1:0:646:C:C6	2.42	0.55
1:0:1067:G:H2'	1:0:1114:A:H61	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1202:U:H2'	1:0:1203:A:H8	1.72	0.55
1:0:1692:C:H2'	1:0:1693:A:H5'	1.87	0.55
1:0:2172:U:H2'	1:0:2173:G:H5'	1.89	0.55
1:0:2370:G:H1'	1:0:2408:G:H22	1.71	0.55
1:0:2628:C:O2'	1:0:2629:U:H5'	2.07	0.55
1:0:2741:G:C6	1:0:2742:G:N7	2.75	0.55
3:K:26:ASP:OD1	3:K:27:TYR:N	2.39	0.55
1:0:166:G:N2	1:0:185:C:N4	2.55	0.54
1:0:195:A:H2'	1:0:196:A:O4'	2.07	0.54
1:0:467:U:OP2	1:0:467:U:C6	2.60	0.54
1:0:813:A:C4	1:0:815:A:H5'	2.41	0.54
1:0:1018:C:C2	1:0:1147:G:N2	2.76	0.54
1:0:1368:G:C4	1:0:1369:G:C8	2.95	0.54
1:0:1402:G:H2'	1:0:1403:U:O4'	2.07	0.54
1:0:1535:C:N3	1:0:1536:G:C6	2.75	0.54
1:0:1572:C:C2'	1:0:1573:G:H5''	2.37	0.54
1:0:1926:U:H6	1:0:1926:U:H3'	1.72	0.54
1:0:2082:C:H3'	1:0:2082:C:H6	1.72	0.54
1:0:2268:G:H5''	1:0:2363:G:O2'	2.07	0.54
2:9:100:G:C2	2:9:101:A:H1'	2.41	0.54
1:0:216:U:H2'	1:0:217:U:C6	2.42	0.54
1:0:441:A:H2'	1:0:442:A:C5'	2.37	0.54
1:0:459:A:C2	1:0:466:A:C8	2.96	0.54
1:0:587:A:OP1	1:0:1268:U:H1'	2.07	0.54
1:0:633:G:H8	1:0:633:G:O5'	1.89	0.54
1:0:829:C:N3	1:0:1206:G:C2	2.75	0.54
1:0:864:C:O2'	1:0:865:A:H5'	2.07	0.54
1:0:1179:A:H2'	1:0:1180:A:C8	2.42	0.54
1:0:1354:A:H2'	1:0:1410:U:O2	2.07	0.54
1:0:1654:A:H2'	1:0:1655:C:C6	2.43	0.54
1:0:1724:C:H2'	1:0:1725:C:C6	2.43	0.54
1:0:1948:C:OP2	1:0:1949:A:H3'	2.07	0.54
1:0:2199:C:H5'	1:0:2199:C:H6	1.72	0.54
1:0:198:A:H4'	1:0:199:A:OP2	2.07	0.54
1:0:640:C:H5''	1:0:660:G:C2'	2.38	0.54
1:0:813:A:N9	1:0:815:A:H5'	2.21	0.54
1:0:872:G:N2	1:0:929:A:OP2	2.40	0.54
1:0:1064:C:H2'	1:0:1065:A:H8	1.72	0.54
1:0:1177:U:H2'	1:0:1178:C:C6	2.43	0.54
1:0:1438:G:C2'	1:0:1439:G:H5'	2.37	0.54
1:0:1872:A:H2'	1:0:1873:A:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1973:C:H2'	1:0:1974:U:O4'	2.08	0.54
1:0:2023:C:H2'	1:0:2024:U:C6	2.42	0.54
1:0:2118:A:H3'	1:0:2118:A:C8	2.41	0.54
1:0:166:G:H21	1:0:185:C:N4	2.04	0.54
1:0:414:A:H2'	1:0:415:A:O4'	2.08	0.54
1:0:625:A:H5''	1:0:626:A:OP2	2.07	0.54
1:0:824:U:H1'	1:0:1264:C:C6	2.43	0.54
1:0:922:A:C6	1:0:923:A:C6	2.96	0.54
1:0:959:C:O2'	1:0:960:U:H5'	2.07	0.54
1:0:1391:A:N7	1:0:1393:G:C5	2.74	0.54
1:0:1457:A:H2'	1:0:1458:A:O4'	2.07	0.54
1:0:2233:C:H2'	1:0:2234:G:O4'	2.07	0.54
1:0:2397:A:H2'	1:0:2398:U:O4'	2.08	0.54
1:0:2792:C:H2'	1:0:2793:G:O5'	2.07	0.54
3:K:71:PRO:HB2	3:K:94:TRP:HB3	1.89	0.54
4:U:52:GLY:HA3	4:U:60:PHE:HE1	1.72	0.54
1:0:50:G:H2'	1:0:117:A:N1	2.23	0.54
1:0:859:U:H2'	1:0:860:U:OP2	2.07	0.54
1:0:931:G:C2'	1:0:932:G:H5'	2.38	0.54
1:0:1089:C:C2	1:0:1099:A:H4'	2.42	0.54
1:0:1354:A:H8	1:0:1410:U:N3	2.04	0.54
1:0:1398:G:OP1	1:0:1398:G:H4'	2.07	0.54
1:0:1441:A:C2	1:0:1586:A:OP1	2.61	0.54
1:0:1489:C:H3'	1:0:1490:U:C5'	2.38	0.54
1:0:1631:C:O2'	1:0:1632:A:P	2.65	0.54
1:0:1780:A:H2'	1:0:1781:C:O4'	2.07	0.54
1:0:1824:C:O5'	1:0:1824:C:H6	1.90	0.54
1:0:2034:A:C6	1:0:2593:A:N7	2.75	0.54
1:0:2348:A:C2'	1:0:2349:G:H5'	2.38	0.54
1:0:2549:G:C2	1:0:2550:C:H1'	2.42	0.54
1:0:2817:A:C2	1:0:2851:G:C2	2.95	0.54
3:K:44:LYS:HG2	3:K:93:TYR:CE2	2.43	0.54
1:0:746:G:C8	1:0:774:A:N6	2.75	0.54
1:0:804:C:O2	1:0:804:C:H2'	2.07	0.54
1:0:813:A:C1'	1:0:815:A:H5'	2.37	0.54
1:0:912:A:H2'	1:0:913:A:H5'	1.89	0.54
1:0:1064:C:O5'	1:0:1064:C:H6	1.91	0.54
1:0:1138:A:N1	1:0:2497:A:C4	2.75	0.54
1:0:1229:C:O2'	1:0:1230:C:H5'	2.08	0.54
1:0:1299:A:C6	1:0:1302:C:N3	2.76	0.54
1:0:1873:A:H2	1:0:2213:G:N3	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1962:C:H3'	1:0:1962:C:C6	2.42	0.54
1:0:2124:C:H2'	1:0:2125:C:H6	1.71	0.54
1:0:2198:U:C3'	1:0:2199:C:C4'	2.86	0.54
1:0:2198:U:H6	1:0:2198:U:O5'	1.90	0.54
1:0:2612:G:H2'	1:0:2613:A:O4'	2.08	0.54
5:8:41:LEU:HD23	5:8:41:LEU:C	2.32	0.54
1:0:166:G:H21	1:0:185:C:H41	1.56	0.54
1:0:487:G:O4'	1:0:515:A:C2	2.61	0.54
1:0:575:U:C4	1:0:576:A:C5	2.94	0.54
1:0:594:G:N2	1:0:1269:G:C5	2.76	0.54
1:0:684:C:H2'	1:0:685:U:C6	2.43	0.54
1:0:886:A:H1'	3:K:66:TYR:HE2	1.72	0.54
1:0:1033:G:HO2'	1:0:1034:U:H6	1.56	0.54
1:0:1345:G:H1	1:0:1625:A:C2'	2.21	0.54
1:0:1447:U:H1'	1:0:1577:G:N2	2.23	0.54
1:0:1467:U:C6	1:0:1468:A:H5'	2.43	0.54
1:0:1666:G:C6	1:0:1992:G:O6	2.61	0.54
1:0:1924:C:N4	5:8:61:ARG:CD	2.67	0.54
1:0:2327:U:O5'	1:0:2327:U:H6	1.90	0.54
1:0:2424:G:O2'	1:0:2425:G:H5'	2.07	0.54
1:0:2700:U:C4	1:0:2701:A:N7	2.76	0.54
2:9:37:C:H2'	2:9:38:C:C6	2.43	0.54
1:0:14:A:N6	1:0:15:G:N3	2.56	0.54
1:0:58:C:N4	1:0:73:A:H8	2.06	0.54
1:0:500:G:C5	1:0:1297:A:C2	2.96	0.54
1:0:572:G:O2'	1:0:573:C:H5'	2.07	0.54
1:0:788:G:C5'	1:0:789:G:OP1	2.56	0.54
1:0:872:G:H22	1:0:928:G:H3'	1.71	0.54
1:0:881:U:O2	1:0:924:C:H1'	2.08	0.54
1:0:1219:C:H2'	1:0:1220:G:C4'	2.37	0.54
1:0:1299:A:N1	1:0:1302:C:C2	2.76	0.54
1:0:1429:A:H1'	1:0:1603:A:C6	2.43	0.54
1:0:1523:A:O5'	1:0:1523:A:C8	2.60	0.54
1:0:1639:U:O2'	1:0:1640:C:H5'	2.08	0.54
1:0:2809:A:N6	1:0:2854:G:C1'	2.64	0.54
1:0:2870:C:H2'	1:0:2871:U:C6	2.42	0.54
1:0:171:G:H2'	1:0:172:A:O4'	2.07	0.54
1:0:236:C:O2'	1:0:632:A:H4'	2.08	0.54
1:0:534:U:H2'	1:0:535:U:C5	2.43	0.54
1:0:697:G:H2'	1:0:698:A:C5'	2.35	0.54
1:0:1047:G:H1'	1:0:1131:G:N2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1761:G:N2	1:0:1965:U:O2	2.40	0.54
1:0:2040:A:H2'	1:0:2041:A:O4'	2.08	0.54
1:0:2134:U:H2'	1:0:2135:C:C5	2.41	0.54
1:0:2199:C:H2'	1:0:2200:G:O4'	2.08	0.54
1:0:2423:G:N2	1:0:2424:G:H1'	2.23	0.54
1:0:2609:G:H1'	1:0:2868:G:H1'	1.90	0.54
1:0:2829:A:N1	1:0:2830:U:C2	2.76	0.54
2:9:73:C:H2'	2:9:74:A:C8	2.42	0.54
4:U:20:TYR:O	4:U:21:LEU:HG	2.08	0.54
1:0:562:G:C6	1:0:563:U:C2	2.96	0.54
1:0:697:G:C2'	1:0:698:A:C5'	2.86	0.54
1:0:700:C:O2	1:0:801:A:P	2.66	0.54
1:0:706:A:O2'	1:0:707:U:H5'	2.08	0.54
1:0:870:C:O2'	1:0:871:U:H5'	2.08	0.54
1:0:939:C:N3	1:0:940:G:O6	2.41	0.54
1:0:1040:A:C8	1:0:1041:G:C8	2.96	0.54
1:0:1276:U:H2'	1:0:1277:G:O4'	2.08	0.54
1:0:1925:C:O2	5:8:61:ARG:HD3	2.08	0.54
1:0:2011:U:H2'	1:0:2012:A:H8	1.71	0.54
1:0:2225:G:C2	1:0:2405:A:H1'	2.43	0.54
1:0:2432:A:H5''	1:0:2552:C:H5''	1.89	0.54
1:0:2500:C:H2'	1:0:2501:U:O4'	2.08	0.54
1:0:2737:A:H2'	1:0:2738:A:C5'	2.37	0.54
1:0:66:U:N3	1:0:67:G:O6	2.41	0.53
1:0:353:G:H2'	1:0:354:C:C6	2.44	0.53
1:0:368:A:H2'	1:0:369:C:O4'	2.07	0.53
1:0:697:G:N2	1:0:788:G:C2	2.76	0.53
1:0:857:U:H2'	1:0:858:G:C5'	2.38	0.53
1:0:1697:U:O2	1:0:1755:G:H5''	2.08	0.53
1:0:2298:U:H4'	1:0:2299:A:N7	2.23	0.53
1:0:2307:A:H8	1:0:2307:A:O5'	1.91	0.53
1:0:2772:U:O2'	1:0:2773:G:H5'	2.08	0.53
2:9:84:G:H2'	2:9:85:G:H8	1.73	0.53
1:0:85:C:H2'	1:0:86:U:O4'	2.08	0.53
1:0:229:G:N3	1:0:230:C:C6	2.77	0.53
1:0:629:C:C2'	1:0:630:G:H5'	2.37	0.53
1:0:794:A:N1	1:0:1768:U:H5'	2.22	0.53
1:0:848:A:H2'	1:0:849:G:H5'	1.90	0.53
1:0:1467:U:H6	1:0:1468:A:H5'	1.72	0.53
1:0:1488:G:C4	1:0:1536:G:N2	2.77	0.53
1:0:1780:A:C8	1:0:1781:C:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2028:C:H2'	1:0:2029:G:O5'	2.07	0.53
1:0:2205:C:C2'	1:0:2206:C:H5'	2.37	0.53
1:0:2205:C:H2'	1:0:2206:C:H5'	1.91	0.53
1:0:2238:G:OP1	1:0:2406:C:OP2	2.26	0.53
1:0:2523:G:O2'	1:0:2524:G:H5'	2.08	0.53
1:0:2644:A:O2'	1:0:2645:C:H5'	2.08	0.53
1:0:2662:C:C4	1:0:2663:U:C5	2.96	0.53
1:0:2720:A:C8	1:0:2743:G:N2	2.76	0.53
1:0:2829:A:H1'	1:0:2839:G:N2	2.23	0.53
2:9:27:A:C8	2:9:28:A:N7	2.76	0.53
4:U:23:VAL:HG22	4:U:38:VAL:CG1	2.39	0.53
1:0:2:G:H2'	1:0:3:U:C6	2.43	0.53
1:0:30:G:H2'	1:0:31:C:H6	1.73	0.53
1:0:750:C:O2'	1:0:751:G:H5'	2.09	0.53
1:0:763:A:C2'	1:0:764:A:H5''	2.38	0.53
1:0:841:G:C2'	1:0:842:A:C8	2.92	0.53
1:0:1002:C:N4	1:0:1003:C:H41	2.06	0.53
1:0:1016:C:H5'	1:0:1023:U:O5'	2.07	0.53
1:0:1033:G:O2'	1:0:1034:U:H6	1.91	0.53
1:0:1103:C:H2'	1:0:1104:G:H8	1.69	0.53
1:0:1141:U:O2'	1:0:1142:G:P	2.66	0.53
1:0:1154:A:O2'	1:0:1155:G:OP1	2.23	0.53
1:0:1474:A:H2'	1:0:1475:U:OP2	2.08	0.53
1:0:1617:G:H3'	1:0:1618:U:H6	1.72	0.53
1:0:141:G:H2'	1:0:142:U:C6	2.42	0.53
1:0:357:A:C2'	1:0:358:C:H5'	2.35	0.53
1:0:538:A:H2	1:0:540:G:N2	2.06	0.53
1:0:624:A:C6	1:0:625:A:H1'	2.43	0.53
1:0:657:A:C2	1:0:658:G:C4	2.96	0.53
1:0:708:G:H1'	1:0:781:G:N2	2.23	0.53
1:0:787:A:O2'	1:0:788:G:C5'	2.56	0.53
1:0:1283:C:H5''	1:0:1284:G:O5'	2.08	0.53
1:0:1533:G:O2'	1:0:1534:A:H5'	2.09	0.53
1:0:1685:A:N6	1:0:1693:A:N6	2.39	0.53
1:0:1815:G:C5	1:0:1816:G:N7	2.76	0.53
1:0:1978:U:H3'	1:0:1979:C:C5'	2.19	0.53
1:0:2173:G:H2'	1:0:2174:G:O4'	2.08	0.53
1:0:2582:G:H2'	1:0:2583:U:H6	1.74	0.53
1:0:2585:C:H2'	1:0:2586:G:C5'	2.30	0.53
5:8:7:LYS:O	5:8:10:GLU:HG2	2.07	0.53
1:0:54:G:C2	1:0:55:A:C8	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:317:U:O4	1:0:321:A:N7	2.41	0.53
1:0:471:A:H61	1:0:480:G:H1'	1.74	0.53
1:0:553:C:O2	1:0:553:C:C2'	2.57	0.53
1:0:591:G:C3'	1:0:592:G:C8	2.90	0.53
1:0:617:U:C6	1:0:632:A:N6	2.77	0.53
1:0:791:G:H8	1:0:791:G:O5'	1.90	0.53
1:0:825:C:H2'	1:0:826:U:H6	1.74	0.53
1:0:878:C:H42	1:0:921:A:H62	1.56	0.53
1:0:913:A:H2'	1:0:914:C:H6	1.74	0.53
1:0:957:G:C2	1:0:958:G:N7	2.76	0.53
1:0:977:G:H1'	1:0:2246:A:C5	2.42	0.53
1:0:1139:A:O2'	1:0:1140:A:O4'	2.26	0.53
1:0:1196:G:O2'	1:0:1197:U:H5'	2.09	0.53
1:0:1471:G:O6	1:0:2682:C:N3	2.42	0.53
1:0:1474:A:H3'	1:0:1474:A:N3	2.24	0.53
1:0:1656:U:H2'	1:0:1657:A:H5''	1.91	0.53
1:0:1715:A:HO2'	1:0:1716:G:C5'	2.21	0.53
1:0:2219:U:C2'	1:0:2220:A:H5'	2.39	0.53
1:0:2528:G:C2	1:0:2529:G:N7	2.76	0.53
1:0:2820:C:H2'	1:0:2821:G:H8	1.73	0.53
1:0:399:G:O2'	1:0:400:U:P	2.67	0.53
1:0:461:A:H2'	1:0:462:G:C8	2.43	0.53
1:0:859:U:C4'	1:0:860:U:C5	2.89	0.53
1:0:1268:U:C5'	1:0:1269:G:H5''	2.38	0.53
1:0:1377:G:H8	1:0:1377:G:O5'	1.92	0.53
1:0:1433:A:C6	1:0:1434:U:C4	2.96	0.53
1:0:1948:C:OP2	1:0:1948:C:C5	2.62	0.53
1:0:2240:C:H2'	1:0:2241:U:H5''	1.91	0.53
1:0:2422:C:H2'	1:0:2423:G:H8	1.74	0.53
1:0:2496:C:C5	1:0:2521:A:N7	2.77	0.53
1:0:2816:C:C2	1:0:2852:G:N2	2.76	0.53
1:0:143:A:C2	1:0:144:U:C2	2.96	0.53
1:0:186:C:H2'	1:0:187:U:C6	2.43	0.53
1:0:312:G:C2'	1:0:313:U:H5''	2.38	0.53
1:0:500:G:H2'	1:0:501:G:C5'	2.34	0.53
1:0:789:G:O2'	1:0:790:A:OP2	2.23	0.53
1:0:1033:G:O2'	1:0:1034:U:C6	2.62	0.53
1:0:1039:A:H2	1:0:2465:G:N3	2.06	0.53
1:0:1088:A:C2'	1:0:1089:C:H5'	2.39	0.53
1:0:1388:C:O2'	1:0:1389:C:H5'	2.09	0.53
1:0:1924:C:H2'	5:8:60:ARG:NH2	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1979:C:H6	1:0:1979:C:OP1	1.92	0.53
1:0:2029:G:O2'	1:0:2030:U:H5'	2.09	0.53
1:0:2210:C:H2'	1:0:2211:U:O4'	2.09	0.53
1:0:2490:U:H2'	1:0:2491:C:C6	2.43	0.53
1:0:2578:G:C2	1:0:2579:A:C8	2.96	0.53
1:0:2792:C:C2'	1:0:2793:G:O5'	2.57	0.53
3:K:83:ARG:O	3:K:83:ARG:CG	2.43	0.53
1:0:417:C:H3'	1:0:417:C:C6	2.40	0.53
1:0:982:C:O2'	1:0:983:G:H5'	2.08	0.53
1:0:1008:G:N1	1:0:1170:U:C2	2.77	0.53
1:0:1115:C:O2'	1:0:1116:U:H5'	2.09	0.53
1:0:1349:A:O2'	1:0:1350:G:H5'	2.08	0.53
1:0:1414:G:H2'	1:0:1415:C:O4'	2.09	0.53
1:0:1474:A:C2	1:0:1476:G:N7	2.77	0.53
1:0:2048:C:H1'	1:0:2428:U:H3	1.74	0.53
1:0:2781:G:C2	1:0:2782:G:N3	2.77	0.53
2:9:67:C:H2'	2:9:68:A:C5'	2.39	0.53
3:K:11:ARG:HH11	3:K:15:ARG:NH1	1.98	0.53
3:K:44:LYS:H	3:K:47:GLN:NE2	2.05	0.53
5:8:88:VAL:HG23	5:8:89:GLN:NE2	2.23	0.53
1:0:30:G:H1'	1:0:1227:A:C2	2.44	0.53
1:0:400:U:H4'	1:0:401:G:C8	2.44	0.53
1:0:441:A:H2'	1:0:442:A:H5'	1.90	0.53
1:0:624:A:H2'	1:0:625:A:H5'	1.91	0.53
1:0:760:U:C2	1:0:2592:U:O4	2.61	0.53
1:0:808:C:O2'	1:0:809:C:H5'	2.09	0.53
1:0:1017:C:O2	1:0:1018:C:C6	2.62	0.53
1:0:1329:U:C2	1:0:1330:G:N7	2.76	0.53
1:0:1830:C:N4	1:0:1882:G:O5'	2.42	0.53
1:0:2229:G:C5'	3:K:84:MET:HE2	2.37	0.53
1:0:2428:U:H6	1:0:2428:U:OP1	1.92	0.53
1:0:2633:A:C4'	1:0:2634:G:H4'	2.29	0.53
1:0:2707:G:H2'	1:0:2708:U:C6	2.44	0.53
1:0:2805:G:O2'	1:0:2806:G:H5'	2.09	0.53
5:8:2:ILE:HD12	5:8:83:ARG:NE	2.23	0.53
1:0:78:C:O2'	1:0:79:G:H5'	2.09	0.53
1:0:777:A:O2'	1:0:778:G:OP1	2.25	0.53
1:0:796:A:H5'	1:0:2568:A:P	2.49	0.53
1:0:837:U:H2'	1:0:838:A:H8	1.73	0.53
1:0:845:U:O2'	1:0:846:A:H5'	2.08	0.53
1:0:883:A:C6	1:0:920:G:C6	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1166:A:C5'	1:0:1167:A:OP2	2.57	0.53
1:0:1561:A:H3'	1:0:1562:G:C8	2.44	0.53
1:0:1815:G:O2'	1:0:1816:G:H5'	2.09	0.53
1:0:2039:G:H2'	1:0:2039:G:N3	2.24	0.53
1:0:2306:A:C2'	1:0:2307:A:C8	2.74	0.53
1:0:2633:A:C4	1:0:2635:U:N3	2.77	0.53
1:0:2691:C:H5''	1:0:2694:G:C5'	2.39	0.53
1:0:26:G:N1	1:0:27:G:N2	2.57	0.52
1:0:103:U:H2'	1:0:104:C:H6	1.73	0.52
1:0:141:G:O2'	1:0:142:U:H5'	2.09	0.52
1:0:223:C:C5	1:0:224:G:N7	2.77	0.52
1:0:629:C:O2'	1:0:630:G:H5'	2.09	0.52
1:0:829:C:C4	1:0:1206:G:N1	2.77	0.52
1:0:1054:C:H4'	1:0:1057:A:N6	2.24	0.52
1:0:1234:C:O2	1:0:1242:A:C2	2.62	0.52
1:0:1459:U:H6	1:0:1459:U:P	2.32	0.52
1:0:1511:A:H2'	1:0:1512:A:O4'	2.08	0.52
1:0:1558:C:O2'	1:0:1559:G:H5'	2.09	0.52
1:0:1635:G:C2	1:0:1636:G:C8	2.97	0.52
1:0:2674:C:O2'	1:0:2675:U:H5'	2.08	0.52
1:0:2701:A:H2'	1:0:2702:G:O4'	2.08	0.52
1:0:2847:G:C2	1:0:2848:A:N6	2.77	0.52
1:0:54:G:N3	1:0:125:A:H2	2.07	0.52
1:0:143:A:H2'	1:0:144:U:O4'	2.08	0.52
1:0:239:A:H5''	1:0:620:G:H5'	1.89	0.52
1:0:317:U:H3'	1:0:318:G:H5''	1.91	0.52
1:0:486:U:H6	1:0:519:C:C4	2.27	0.52
1:0:516:G:O2'	1:0:517:A:P	2.66	0.52
1:0:653:G:H2'	1:0:654:A:H4'	1.91	0.52
1:0:788:G:H5''	1:0:790:A:C1'	2.37	0.52
1:0:1008:G:N2	1:0:1170:U:H1'	2.23	0.52
1:0:1017:C:H2'	1:0:1018:C:H6	1.75	0.52
1:0:1120:C:H5	1:0:1121:G:C5	2.27	0.52
1:0:1128:G:O2'	1:0:1129:A:H5'	2.10	0.52
1:0:1438:G:H2'	1:0:1439:G:H5'	1.90	0.52
1:0:1947:G:O2'	1:0:1950:C:OP2	2.28	0.52
1:0:2012:A:N6	1:0:2016:A:OP2	2.42	0.52
1:0:2076:G:C5	1:0:2204:A:N7	2.78	0.52
1:0:2172:U:C2'	1:0:2173:G:H5'	2.39	0.52
1:0:2234:G:H4'	5:8:77:SER:HB3	1.90	0.52
1:0:2478:C:C5	1:0:2479:U:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2698:G:H2'	1:0:2699:G:C8	2.43	0.52
1:0:2848:A:H5''	1:0:2849:C:OP2	2.10	0.52
1:0:22:C:H2'	1:0:23:G:O5'	2.10	0.52
1:0:53:G:H2'	1:0:54:G:O4'	2.08	0.52
1:0:488:A:C6	1:0:489:A:C6	2.98	0.52
1:0:842:A:H5'	1:0:844:G:N7	2.23	0.52
1:0:851:C:H2'	1:0:852:U:H6	1.74	0.52
1:0:972:C:N4	1:0:2014:A:C1'	2.73	0.52
1:0:1213:U:N3	1:0:1260:A:H2	2.08	0.52
1:0:1300:A:C2	1:0:1666:G:H5'	2.44	0.52
1:0:1301:U:O2'	1:0:1302:C:OP1	2.20	0.52
1:0:1549:C:H2'	1:0:1550:C:C6	2.45	0.52
1:0:1933:G:N7	1:0:1934:U:C5	2.77	0.52
1:0:2447:G:C2'	1:0:2448:A:H5''	2.37	0.52
1:0:2511:G:C2'	1:0:2512:A:H5'	2.40	0.52
1:0:2822:U:C5	1:0:2823:G:C5	2.98	0.52
4:U:40:GLN:NE2	4:U:44:LYS:N	2.57	0.52
4:U:51:VAL:HG22	4:U:81:ILE:CD1	2.38	0.52
4:U:59:LEU:N	4:U:59:LEU:HD23	2.25	0.52
5:8:58:ASN:HA	5:8:61:ARG:HE	1.75	0.52
1:0:320:A:N3	1:0:340:G:H2'	2.25	0.52
1:0:495:C:H2'	1:0:496:C:H6	1.74	0.52
1:0:543:G:H2'	1:0:544:U:O4'	2.09	0.52
1:0:1008:G:O2'	1:0:1009:C:H5'	2.09	0.52
1:0:1054:C:H4'	1:0:1057:A:N7	2.24	0.52
1:0:1211:G:N2	1:0:1263:G:C5	2.77	0.52
1:0:1581:C:N4	1:0:1583:A:H1'	2.21	0.52
1:0:1684:G:HO2'	1:0:1685:A:P	2.33	0.52
1:0:1849:G:H8	1:0:1849:G:O5'	1.93	0.52
1:0:1991:C:O2'	1:0:1992:G:H5'	2.09	0.52
1:0:2203:G:O3'	1:0:2204:A:H4'	2.10	0.52
1:0:2315:A:H2'	1:0:2316:G:H5'	1.92	0.52
1:0:2639:A:H2'	1:0:2640:G:O4'	2.09	0.52
1:0:2679:G:C2	1:0:2687:G:C2	2.97	0.52
2:9:50:U:H2'	2:9:51:G:H8	1.74	0.52
4:U:20:TYR:O	4:U:21:LEU:CB	2.56	0.52
1:0:192:G:O2'	1:0:193:A:H5''	2.09	0.52
1:0:466:A:O3'	1:0:467:U:O4'	2.28	0.52
1:0:475:U:C2	1:0:801:A:N1	2.78	0.52
1:0:489:A:C6	1:0:491:A:N6	2.77	0.52
1:0:542:A:C8	1:0:542:A:H3'	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:594:G:C2	1:0:1269:G:C6	2.98	0.52
1:0:882:C:N4	1:0:883:A:H62	2.06	0.52
1:0:886:A:O4'	3:K:66:TYR:CD2	2.61	0.52
1:0:978:U:H2'	1:0:979:A:C8	2.45	0.52
1:0:983:G:P	1:0:985:G:H5''	2.49	0.52
1:0:1083:C:N4	1:0:1104:G:O6	2.43	0.52
1:0:1281:A:H2'	1:0:1282:A:C8	2.45	0.52
1:0:1337:G:N2	1:0:1344:C:N3	2.57	0.52
1:0:1610:A:H2'	1:0:1611:U:C6	2.44	0.52
1:0:1673:C:O2'	1:0:1674:C:H5'	2.08	0.52
1:0:1794:A:H2'	1:0:1795:C:H5'	1.91	0.52
1:0:1932:G:C6	1:0:1933:G:N1	2.78	0.52
1:0:1941:C:O2'	1:0:1942:G:H5'	2.09	0.52
1:0:2016:A:H2'	1:0:2018:G:OP2	2.09	0.52
1:0:2063:A:H2'	1:0:2064:U:O4'	2.10	0.52
1:0:2255:G:C2	1:0:2256:G:C8	2.98	0.52
2:9:77:G:O2'	2:9:78:A:H5'	2.09	0.52
1:0:162:C:H2'	1:0:163:A:C8	2.40	0.52
1:0:175:C:O2'	1:0:176:A:C8	2.49	0.52
1:0:185:C:O2'	1:0:186:C:H5'	2.10	0.52
1:0:422:C:H2'	1:0:423:G:O4'	2.09	0.52
1:0:501:G:H2'	1:0:502:A:C8	2.45	0.52
1:0:1037:U:H6	1:0:1037:U:H5'	1.74	0.52
1:0:1039:A:O2'	1:0:1040:A:H5'	2.09	0.52
1:0:1169:C:O2'	1:0:1170:U:H5'	2.09	0.52
1:0:1441:A:O2'	1:0:1442:C:C6	2.62	0.52
1:0:1443:G:H1'	1:0:1584:G:N3	2.25	0.52
1:0:1553:G:H2'	1:0:1554:G:O4'	2.10	0.52
1:0:1588:A:H2'	1:0:1589:G:C8	2.45	0.52
1:0:1591:U:C2'	1:0:1592:U:H5'	2.39	0.52
1:0:1662:G:H5''	1:0:1663:C:C5'	2.40	0.52
1:0:1783:G:C2	1:0:1820:G:H1'	2.44	0.52
1:0:1849:G:O6	1:0:1867:A:N6	2.43	0.52
1:0:2438:A:N6	1:0:2472:U:C4	2.77	0.52
2:9:100:G:N1	2:9:101:A:H1'	2.25	0.52
3:K:125:LYS:HD2	3:K:125:LYS:N	2.24	0.52
4:U:20:TYR:C	4:U:21:LEU:HG	2.34	0.52
1:0:159:A:HO2'	1:0:446:C:HO2'	1.54	0.52
1:0:495:C:H2'	1:0:496:C:C6	2.44	0.52
1:0:780:U:H2'	1:0:781:G:C8	2.44	0.52
1:0:1011:A:C2	1:0:1166:A:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1260:A:H2'	1:0:1261:G:H5''	1.92	0.52
1:0:1281:A:C4	1:0:1996:A:C6	2.98	0.52
1:0:1313:U:O2'	1:0:1314:A:OP2	2.26	0.52
1:0:1478:U:H2'	1:0:1479:G:O4'	2.10	0.52
1:0:1879:G:H2'	1:0:1880:G:O4'	2.09	0.52
1:0:2241:U:H5	4:U:17:ASN:HD21	1.55	0.52
1:0:2245:A:O2'	1:0:2246:A:C5	2.60	0.52
1:0:23:G:C2	1:0:24:G:C8	2.98	0.52
1:0:521:U:H5	1:0:522:G:N3	2.07	0.52
1:0:738:G:O5'	1:0:738:G:H8	1.92	0.52
1:0:1211:G:H2'	1:0:1212:U:H6	1.75	0.52
1:0:1361:G:N2	1:0:1615:C:C2	2.78	0.52
1:0:1441:A:O2'	1:0:1442:C:H6	1.92	0.52
1:0:1479:G:H2'	1:0:1480:G:C8	2.44	0.52
1:0:1560:A:C6	1:0:1561:A:C6	2.98	0.52
1:0:1685:A:O2'	1:0:1686:A:P	2.68	0.52
1:0:1826:U:H4'	1:0:1952:A:C2	2.45	0.52
1:0:1882:G:H21	1:0:1885:C:H41	1.53	0.52
1:0:2059:U:O2	1:0:2059:U:H2'	2.08	0.52
1:0:2338:C:C2'	1:0:2339:A:H8	2.22	0.52
1:0:2729:A:O5'	1:0:2729:A:H8	1.92	0.52
1:0:2794:G:C6	1:0:2796:A:N3	2.78	0.52
3:K:28:VAL:HG12	3:K:137:VAL:HB	1.92	0.52
1:0:29:U:O5'	1:0:29:U:H6	1.92	0.52
1:0:431:G:H2'	1:0:432:C:H6	1.75	0.52
1:0:594:G:H2'	1:0:1264:C:N4	2.24	0.52
1:0:695:G:C4	1:0:696:U:C5	2.98	0.52
1:0:1043:A:H2	1:0:1045:G:N7	2.07	0.52
1:0:1226:A:C8	1:0:1250:A:C2	2.97	0.52
1:0:1336:G:C2'	1:0:1337:G:H5'	2.40	0.52
1:0:1895:A:C8	1:0:1895:A:H3'	2.44	0.52
1:0:2198:U:C2'	1:0:2199:C:O4'	2.57	0.52
1:0:2501:U:H5'	1:0:2502:G:OP2	2.10	0.52
1:0:2605:C:H2'	1:0:2606:G:O4'	2.10	0.52
1:0:2805:G:C2'	1:0:2806:G:H5'	2.40	0.52
1:0:2811:G:C6	1:0:2812:A:C6	2.98	0.52
2:9:21:C:H2'	2:9:22:U:O4'	2.10	0.52
2:9:77:G:H2'	2:9:78:A:O4'	2.09	0.52
1:0:109:A:H2'	1:0:110:U:C5'	2.37	0.52
1:0:165:G:C2'	1:0:166:G:H5'	2.39	0.52
1:0:346:C:O2'	1:0:347:C:H5'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:401:G:C2'	1:0:403:A:N7	2.70	0.52
1:0:689:A:H2'	1:0:690:A:O4'	2.10	0.52
1:0:708:G:N3	1:0:781:G:C2	2.78	0.52
1:0:794:A:N1	1:0:1767:G:H2'	2.24	0.52
1:0:1236:G:H2'	1:0:1238:A:OP2	2.10	0.52
1:0:1681:A:H61	1:0:1979:C:N4	2.08	0.52
1:0:1998:A:H2'	1:0:1999:U:C5'	2.39	0.52
1:0:2001:G:C5	1:0:2002:A:N7	2.78	0.52
1:0:2095:G:H3'	1:0:2096:U:C5'	2.40	0.52
1:0:2243:C:H2'	1:0:2244:C:O4'	2.09	0.52
1:0:2427:A:OP1	1:0:2478:C:OP1	2.28	0.52
1:0:33:C:C2'	1:0:34:U:O5'	2.58	0.51
1:0:162:C:C4'	1:0:195:A:H4'	2.36	0.51
1:0:431:G:H2'	1:0:432:C:C6	2.45	0.51
1:0:569:C:O2'	1:0:570:G:H5'	2.10	0.51
1:0:610:G:C2	1:0:671:A:C2	2.98	0.51
1:0:614:G:H1'	1:0:670:U:H1'	1.91	0.51
1:0:682:G:H5''	1:0:683:A:OP2	2.10	0.51
1:0:689:A:C8	1:0:2422:C:H1'	2.45	0.51
1:0:697:G:C2'	1:0:801:A:N6	2.73	0.51
1:0:811:G:O2'	1:0:812:G:H5'	2.10	0.51
1:0:867:G:O2'	1:0:868:U:H5'	2.10	0.51
1:0:1453:A:C2'	1:0:1454:U:H5'	2.40	0.51
1:0:1754:G:OP1	1:0:1754:G:H4'	2.09	0.51
1:0:1865:C:H2'	1:0:1866:G:O4'	2.10	0.51
1:0:1919:A:H5'	1:0:1920:A:C6	2.44	0.51
1:0:2178:U:O2'	1:0:2179:C:H5'	2.10	0.51
1:0:2202:G:N2	1:0:2203:G:H1'	2.25	0.51
1:0:2232:G:H1	5:8:79:ASP:CG	2.17	0.51
1:0:2493:U:O5'	1:0:2493:U:H6	1.93	0.51
2:9:7:C:H2'	2:9:8:C:H6	1.74	0.51
2:9:59:A:C8	2:9:60:A:C8	2.98	0.51
1:0:7:G:H2'	1:0:8:A:H8	1.75	0.51
1:0:8:A:C2	1:0:2870:C:O2	2.63	0.51
1:0:68:C:N3	1:0:72:A:C2	2.78	0.51
1:0:186:C:H2'	1:0:187:U:O4'	2.10	0.51
1:0:192:G:H4'	1:0:193:A:O5'	2.09	0.51
1:0:217:U:C4	1:0:218:A:C6	2.99	0.51
1:0:540:G:C2	1:0:2005:U:OP1	2.64	0.51
1:0:944:A:C2	1:0:945:G:C1'	2.93	0.51
1:0:994:A:H8	1:0:994:A:H3'	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1067:G:C2'	1:0:1114:A:H61	2.23	0.51
1:0:1207:G:H2'	1:0:1208:A:O4'	2.10	0.51
1:0:1425:G:H2'	1:0:1426:U:O4'	2.09	0.51
1:0:1617:G:H2'	1:0:1618:U:H5'	1.92	0.51
1:0:1804:U:O2'	1:0:1805:G:H5'	2.10	0.51
1:0:1851:A:C2	1:0:1852:G:H1'	2.44	0.51
1:0:1876:C:H2'	1:0:1877:C:H6	1.76	0.51
1:0:2195:C:C2'	1:0:2196:U:H5'	2.41	0.51
1:0:2232:G:N2	5:8:78:GLU:HB2	2.25	0.51
1:0:2311:U:HO2'	1:0:2312:A:H8	1.55	0.51
1:0:2325:A:HO2'	1:0:2326:C:P	2.33	0.51
1:0:2350:G:N1	1:0:2351:G:C5	2.79	0.51
1:0:2381:A:H5''	1:0:2382:C:OP1	2.11	0.51
1:0:2736:U:O4	1:0:2739:G:C6	2.63	0.51
5:8:51:GLN:OE1	5:8:51:GLN:O	2.29	0.51
1:0:391:C:C2	1:0:410:A:C2	2.99	0.51
1:0:514:G:N3	1:0:514:G:C2'	2.73	0.51
1:0:836:G:C4	1:0:837:U:C5	2.99	0.51
1:0:880:C:N4	1:0:881:U:O4	2.43	0.51
1:0:929:A:H3'	1:0:930:A:C5'	2.29	0.51
1:0:1009:C:H42	1:0:1169:C:H42	1.57	0.51
1:0:1721:G:O2'	1:0:1722:G:H5'	2.10	0.51
1:0:1792:C:H2'	1:0:1793:A:OP1	2.11	0.51
1:0:2240:C:N4	1:0:2259:G:C6	2.78	0.51
1:0:2270:U:O2'	1:0:2353:G:N3	2.38	0.51
1:0:2484:G:O2'	1:0:2485:U:H6	1.93	0.51
1:0:2667:C:H42	1:0:2699:G:H3'	1.75	0.51
1:0:2867:G:O2'	1:0:2868:G:O4'	2.22	0.51
1:0:12:U:H2'	1:0:13:A:H5'	1.92	0.51
1:0:143:A:H2'	1:0:144:U:C6	2.45	0.51
1:0:208:C:N4	1:0:209:G:N2	2.58	0.51
1:0:229:G:O2'	1:0:230:C:H5'	2.10	0.51
1:0:337:G:H2'	1:0:338:G:O4'	2.10	0.51
1:0:701:U:H2'	1:0:702:A:C5'	2.40	0.51
1:0:765:C:O2'	1:0:766:A:P	2.69	0.51
1:0:1074:G:C8	1:0:1075:C:H5	2.29	0.51
1:0:1352:G:N2	1:0:1619:A:C8	2.78	0.51
1:0:1540:C:C2'	1:0:1541:G:O4'	2.59	0.51
1:0:1983:G:H2'	1:0:1984:A:O4'	2.09	0.51
1:0:2107:G:H3'	1:0:2108:G:H8	1.76	0.51
3:K:12:LYS:CG	3:K:15:ARG:HH21	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:48:A:H2	1:0:118:U:H3	1.58	0.51
1:0:91:A:H3'	1:0:91:A:P	2.50	0.51
1:0:229:G:O2'	1:0:230:C:C5'	2.59	0.51
1:0:347:C:H2'	1:0:348:U:O4'	2.11	0.51
1:0:579:G:C6	1:0:2013:A:C2	2.98	0.51
1:0:1162:A:O2'	1:0:1163:C:H5'	2.09	0.51
1:0:1339:U:C5	1:0:1664:G:O2'	2.63	0.51
1:0:1362:A:C2	1:0:1614:C:N3	2.79	0.51
1:0:1431:U:O2'	1:0:1432:G:H5'	2.11	0.51
1:0:1549:C:H6	1:0:1549:C:O5'	1.94	0.51
1:0:1930:C:C4	1:0:1931:G:C8	2.99	0.51
1:0:2239:C:C2	1:0:2240:C:C5	2.98	0.51
1:0:2550:C:N4	1:0:2553:G:C8	2.79	0.51
1:0:2662:C:O2'	1:0:2663:U:H5'	2.10	0.51
2:9:30:C:O2	2:9:58:G:N2	2.43	0.51
1:0:22:C:C2'	1:0:23:G:O5'	2.59	0.51
1:0:939:C:H2'	1:0:940:G:H8	1.69	0.51
1:0:953:G:H2'	1:0:954:U:O4'	2.11	0.51
1:0:970:A:C2	1:0:971:A:C5	2.99	0.51
1:0:1149:G:C6	1:0:1150:C:C4	2.98	0.51
1:0:1287:A:C6	1:0:1315:A:H2	2.27	0.51
1:0:1390:G:H8	1:0:1390:G:O5'	1.93	0.51
1:0:2483:U:O5'	1:0:2483:U:H6	1.94	0.51
1:0:2515:G:C5	1:0:2516:U:C4	2.98	0.51
1:0:2548:G:C2'	1:0:2549:G:C5'	2.62	0.51
1:0:2716:G:H2'	1:0:2717:G:H8	1.74	0.51
2:9:75:A:C6	2:9:107:C:C2	2.99	0.51
3:K:78:LYS:HA	3:K:88:LYS:NZ	2.26	0.51
4:U:51:VAL:HG21	4:U:79:ILE:O	2.11	0.51
1:0:154:U:O2	1:0:154:U:H2'	2.09	0.51
1:0:237:G:N2	1:0:238:G:H1'	2.26	0.51
1:0:468:A:N3	1:0:470:U:C5	2.78	0.51
1:0:700:C:C6	1:0:701:U:C5	2.99	0.51
1:0:796:A:N6	1:0:798:G:C4	2.79	0.51
1:0:857:U:H2'	1:0:858:G:C4'	2.41	0.51
1:0:965:G:N3	1:0:2253:A:C2	2.78	0.51
1:0:1345:G:H21	1:0:1626:A:H5'	1.72	0.51
1:0:1439:G:N2	1:0:1440:G:N2	2.58	0.51
1:0:1618:U:C6	1:0:1618:U:P	3.04	0.51
1:0:1639:U:H2'	1:0:1640:C:H6	1.76	0.51
1:0:1773:C:O4'	1:0:2588:U:C2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2185:U:H1'	1:0:2201:G:N2	2.25	0.51
1:0:2203:G:H4'	1:0:2205:C:C2	2.46	0.51
1:0:2209:G:H2'	1:0:2210:C:H6	1.76	0.51
1:0:2228:U:H4'	1:0:2254:C:C5	2.46	0.51
1:0:2454:C:H2'	1:0:2455:A:H5'	1.93	0.51
1:0:2565:C:O2'	1:0:2566:A:H5'	2.10	0.51
1:0:2678:C:O2'	1:0:2679:G:H5'	2.10	0.51
1:0:2679:G:N2	1:0:2687:G:C4	2.79	0.51
1:0:2833:C:N4	1:0:2834:A:N1	2.58	0.51
3:K:78:LYS:HA	3:K:88:LYS:HZ1	1.75	0.51
5:8:35:GLU:C	5:8:37:ARG:H	2.19	0.51
1:0:342:G:O2'	1:0:343:A:OP1	2.26	0.51
1:0:536:A:N6	1:0:2605:C:H4'	2.26	0.51
1:0:678:G:H2'	1:0:679:C:H6	1.76	0.51
1:0:1004:A:C5	1:0:1005:U:H5	2.28	0.51
1:0:1019:U:H3'	1:0:1019:U:C6	2.45	0.51
1:0:1430:G:H2'	1:0:1431:U:C5	2.46	0.51
1:0:1619:A:H2'	1:0:1620:C:H5'	1.93	0.51
1:0:2233:C:H1'	5:8:78:GLU:HG2	1.92	0.51
1:0:2476:A:C4'	1:0:2477:C:OP1	2.58	0.51
1:0:2676:G:O6	1:0:2688:G:O6	2.29	0.51
1:0:2863:U:C2'	1:0:2864:C:O4'	2.58	0.51
2:9:21:C:O2'	2:9:22:U:H5'	2.10	0.51
3:K:44:LYS:HG3	3:K:95:VAL:HG12	1.93	0.51
3:K:115:ALA:O	3:K:119:PHE:HD1	1.92	0.51
5:8:13:MET:HE3	5:8:59:VAL:HB	1.93	0.51
1:0:114:C:O2'	1:0:124:A:N3	2.37	0.51
1:0:387:A:C2	1:0:388:G:H1'	2.46	0.51
1:0:740:A:N6	1:0:741:G:C6	2.78	0.51
1:0:941:U:C2'	1:0:942:U:O4'	2.53	0.51
1:0:1032:A:N7	1:0:1151:U:O4	2.44	0.51
1:0:1184:G:C2'	1:0:1185:C:H5''	2.35	0.51
1:0:1282:A:N6	1:0:1995:G:N2	2.58	0.51
1:0:1391:A:N7	1:0:1393:G:C6	2.78	0.51
1:0:1594:U:O2'	1:0:1595:A:H5'	2.11	0.51
1:0:1668:G:O2'	1:0:1669:A:H5'	2.11	0.51
1:0:1918:G:N2	1:0:1947:G:C4	2.79	0.51
1:0:2074:U:C3'	1:0:2075:U:C5'	2.83	0.51
1:0:2265:A:H5''	1:0:2266:A:C1'	2.40	0.51
1:0:2676:G:C2	1:0:2690:A:C2	2.99	0.51
1:0:2761:A:O5'	1:0:2762:G:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:33:C:H2'	2:9:34:C:C6	2.46	0.51
1:0:52:A:H2'	1:0:53:G:H5'	1.92	0.51
1:0:516:G:H1'	1:0:517:A:C8	2.46	0.51
1:0:587:A:OP2	1:0:587:A:H8	1.93	0.51
1:0:594:G:C5	1:0:1264:C:N3	2.79	0.51
1:0:648:A:H5'	1:0:649:G:O5'	2.11	0.51
1:0:830:C:O2	1:0:852:U:H4'	2.11	0.51
1:0:1030:U:H2'	1:0:1031:C:C5'	2.41	0.51
1:0:1087:C:OP1	3:K:61:ARG:HD2	2.11	0.51
1:0:1294:G:H1	1:0:1299:A:N6	2.08	0.51
1:0:1363:C:C2'	1:0:1364:C:H5'	2.40	0.51
1:0:1384:G:H21	1:0:1385:C:N4	2.09	0.51
1:0:2299:A:H5''	1:0:2300:G:O4'	2.11	0.51
1:0:2325:A:O2'	1:0:2326:C:OP2	2.27	0.51
1:0:2437:G:O2'	1:0:2438:A:C8	2.64	0.51
1:0:2505:G:N1	1:0:2517:C:C2	2.79	0.51
5:8:27:ILE:HD11	5:8:44:ILE:CB	2.41	0.51
1:0:6:A:C6	1:0:7:G:C6	2.99	0.50
1:0:181:A:H4'	1:0:182:G:OP1	2.09	0.50
1:0:329:C:O2'	1:0:330:C:H5'	2.11	0.50
1:0:391:C:C2'	1:0:392:G:H5'	2.40	0.50
1:0:600:G:C6	1:0:602:C:C4	2.99	0.50
1:0:607:C:O2'	1:0:608:G:H5'	2.11	0.50
1:0:646:C:O2	1:0:650:U:H4'	2.11	0.50
1:0:700:C:H3'	1:0:701:U:C6	2.46	0.50
1:0:765:C:O2'	1:0:766:A:C8	2.63	0.50
1:0:1227:A:H4'	1:0:1252:C:H4'	1.92	0.50
1:0:1354:A:C8	1:0:1410:U:N3	2.79	0.50
1:0:1422:C:O2'	1:0:1423:A:H5'	2.11	0.50
1:0:1437:A:C2'	1:0:1438:G:C8	2.75	0.50
1:0:1861:G:H2'	1:0:1862:C:H5'	1.93	0.50
1:0:2221:G:C5	1:0:2222:U:C6	2.99	0.50
1:0:2607:C:O2'	1:0:2761:A:H2'	2.10	0.50
1:0:2793:G:H2'	1:0:2794:G:H5'	1.94	0.50
2:9:59:A:C2'	2:9:60:A:H5'	2.37	0.50
3:K:75:VAL:HG23	3:K:76:THR:O	2.11	0.50
1:0:91:A:C5	1:0:92:U:C4	2.99	0.50
1:0:131:C:O2'	1:0:132:U:H5'	2.11	0.50
1:0:199:A:C2	1:0:201:G:N3	2.80	0.50
1:0:221:A:H2	1:0:397:U:C2	2.29	0.50
1:0:473:C:H3'	1:0:473:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:510:G:C8	1:0:510:G:C3'	2.94	0.50
1:0:674:U:H2'	1:0:675:C:H6	1.76	0.50
1:0:747:A:C4	1:0:748:A:C8	2.99	0.50
1:0:777:A:HO2'	1:0:778:G:P	2.34	0.50
1:0:794:A:H2	1:0:1767:G:C2	2.25	0.50
1:0:799:C:C2	1:0:800:U:C5	3.00	0.50
1:0:820:U:H2'	1:0:821:A:C8	2.46	0.50
1:0:953:G:H1'	1:0:1203:A:H2	1.74	0.50
1:0:1464:A:H61	1:0:1477:C:N4	2.08	0.50
1:0:1464:A:N6	1:0:1477:C:H42	2.09	0.50
1:0:1482:U:H2'	1:0:1483:G:H8	1.75	0.50
1:0:1503:G:C2'	1:0:1504:G:C8	2.94	0.50
1:0:1507:A:H4'	1:0:1510:A:OP1	2.11	0.50
1:0:2007:G:O2'	1:0:2008:C:H5'	2.11	0.50
1:0:2055:G:C6	1:0:2056:C:C4	2.99	0.50
1:0:2519:C:C4	1:0:2520:A:N7	2.80	0.50
1:0:2701:A:H2'	1:0:2702:G:C8	2.47	0.50
1:0:2785:A:N6	1:0:2865:G:H1'	2.25	0.50
3:K:44:LYS:HE2	3:K:93:TYR:CE2	2.47	0.50
1:0:995:A:C5'	1:0:996:C:H5	2.20	0.50
1:0:1055:A:C6	1:0:1122:A:H5'	2.46	0.50
1:0:1200:G:H2'	1:0:1201:G:H5'	1.94	0.50
1:0:1479:G:H21	1:0:1543:G:N2	2.09	0.50
1:0:1791:C:C6	1:0:1791:C:H3'	2.47	0.50
1:0:2221:G:C5	1:0:2222:U:C5	2.99	0.50
1:0:2349:G:H2'	1:0:2350:G:O4'	2.11	0.50
1:0:2517:C:N3	1:0:2518:C:C5	2.80	0.50
1:0:2661:G:H2'	1:0:2662:C:C5'	2.41	0.50
1:0:2678:C:C2	1:0:2688:G:N2	2.79	0.50
1:0:2761:A:C5'	1:0:2762:G:H5'	2.40	0.50
1:0:2785:A:H61	1:0:2865:G:H1'	1.76	0.50
5:8:58:ASN:O	5:8:62:ASP:HB2	2.12	0.50
1:0:405:C:H2'	1:0:406:G:C8	2.45	0.50
1:0:490:A:N7	1:0:492:G:C1'	2.73	0.50
1:0:643:A:N3	1:0:2382:C:H1'	2.26	0.50
1:0:773:G:O2'	1:0:774:A:H5'	2.12	0.50
1:0:787:A:H1'	1:0:788:G:N7	2.27	0.50
1:0:830:C:O2'	1:0:852:U:OP1	2.29	0.50
1:0:837:U:H2'	1:0:838:A:C8	2.45	0.50
1:0:890:U:O2	1:0:911:A:N7	2.44	0.50
1:0:988:G:O2'	1:0:989:G:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1227:A:H2'	1:0:1228:G:O4'	2.11	0.50
1:0:1287:A:C5	1:0:1315:A:C2	2.99	0.50
1:0:1433:A:H62	1:0:1594:U:H3	1.57	0.50
1:0:1442:C:C2'	1:0:1443:G:OP1	2.59	0.50
1:0:1452:U:C5	1:0:1568:A:C2	3.00	0.50
1:0:1482:U:H2'	1:0:1483:G:C8	2.46	0.50
1:0:1723:U:HO2'	1:0:1724:C:P	2.34	0.50
1:0:1976:U:H2'	1:0:1976:U:O2	2.11	0.50
1:0:1993:G:O2'	1:0:1994:U:H5'	2.10	0.50
1:0:2204:A:O2'	1:0:2205:C:C5	2.65	0.50
1:0:2290:A:H8	1:0:2290:A:O5'	1.95	0.50
1:0:2429:A:OP1	1:0:2476:A:C8	2.65	0.50
1:0:2504:G:C2	1:0:2518:C:C2	2.99	0.50
1:0:2567:G:O2'	1:0:2568:A:H5'	2.11	0.50
1:0:50:G:H2'	1:0:117:A:C2	2.46	0.50
1:0:163:A:O2'	1:0:164:G:H5'	2.10	0.50
1:0:168:A:O2'	1:0:169:C:O4'	2.21	0.50
1:0:293:U:H2'	1:0:294:U:H6	1.76	0.50
1:0:300:C:H2'	1:0:301:C:O4'	2.12	0.50
1:0:304:A:C2'	1:0:305:A:H5''	2.40	0.50
1:0:426:C:O5'	1:0:426:C:H6	1.95	0.50
1:0:441:A:O2'	1:0:442:A:H5'	2.11	0.50
1:0:507:A:H2'	1:0:508:G:O4'	2.11	0.50
1:0:734:G:C4	1:0:735:G:N7	2.80	0.50
1:0:768:U:C6	1:0:769:C:C5	2.99	0.50
1:0:830:C:H2'	1:0:831:G:C8	2.45	0.50
1:0:1181:C:H2'	1:0:1182:U:C5'	2.42	0.50
1:0:1404:C:C2	1:0:1406:A:N7	2.80	0.50
1:0:1442:C:H2'	1:0:1443:G:OP1	2.12	0.50
1:0:1692:C:H2'	1:0:1693:A:C5'	2.40	0.50
1:0:1991:C:C2	1:0:1992:G:N7	2.79	0.50
1:0:2233:C:C1'	5:8:77:SER:HB2	2.42	0.50
1:0:2248:A:H2'	1:0:2249:U:H5'	1.93	0.50
1:0:2522:G:H2'	1:0:2523:G:O4'	2.11	0.50
1:0:2672:U:O2'	1:0:2673:G:H5'	2.11	0.50
2:9:71:G:H2'	2:9:71:G:N3	2.26	0.50
5:8:44:ILE:HD13	5:8:44:ILE:N	2.27	0.50
1:0:98:U:H2'	1:0:98:U:O2	2.10	0.50
1:0:1008:G:C6	1:0:1170:U:C2	3.00	0.50
1:0:1035:G:H3'	1:0:1036:G:H5''	1.92	0.50
1:0:1059:A:C2	1:0:1123:G:N2	2.80	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1430:G:H2'	1:0:1431:U:H6	1.72	0.50
1:0:1553:G:C4	1:0:1554:G:H1'	2.47	0.50
1:0:1604:A:H2'	1:0:1605:A:H5'	1.94	0.50
1:0:1724:C:H3'	1:0:1724:C:OP2	2.12	0.50
1:0:1837:G:O2'	1:0:1838:G:H5'	2.11	0.50
1:0:2209:G:C5	1:0:2210:C:C5	2.99	0.50
1:0:2264:C:O4'	1:0:2267:A:N6	2.40	0.50
1:0:2438:A:N3	1:0:2438:A:H2'	2.26	0.50
1:0:2476:A:H1'	1:0:2477:C:H5	1.76	0.50
1:0:2623:A:C6	1:0:2624:G:C2	3.00	0.50
1:0:2668:U:O2	1:0:2693:U:O4'	2.29	0.50
2:9:35:C:H2'	2:9:36:A:O4'	2.12	0.50
3:K:71:PRO:HA	3:K:96:SER:HB3	1.92	0.50
5:8:41:LEU:CD2	5:8:110:LEU:HD13	2.42	0.50
5:8:78:GLU:C	5:8:80:ASP:H	2.19	0.50
1:0:775:U:O2'	1:0:776:G:OP2	2.28	0.50
1:0:785:U:O2'	1:0:786:U:H5'	2.11	0.50
1:0:982:C:C5	1:0:983:G:N7	2.79	0.50
1:0:1025:A:H2'	1:0:1026:U:C6	2.47	0.50
1:0:1291:G:O2'	1:0:1292:A:H5'	2.12	0.50
1:0:1465:G:O6	1:0:1476:G:O6	2.30	0.50
1:0:1777:A:H5'	1:0:1778:U:OP2	2.12	0.50
1:0:1791:C:C2'	1:0:1793:A:H5'	2.41	0.50
1:0:1895:A:H3'	1:0:1895:A:H8	1.75	0.50
1:0:2082:C:H3'	1:0:2082:C:C6	2.46	0.50
1:0:2269:G:C2	1:0:2322:U:O2	2.65	0.50
2:9:76:U:C2'	2:9:77:G:H5'	2.40	0.50
3:K:123:GLY:H	3:K:125:LYS:NZ	2.10	0.50
1:0:442:A:H2'	1:0:443:A:N7	2.26	0.50
1:0:499:G:C2	1:0:503:G:O6	2.65	0.50
1:0:512:A:H2'	1:0:513:A:H5'	1.92	0.50
1:0:580:A:C8	1:0:2013:A:N6	2.80	0.50
1:0:693:A:N1	1:0:811:G:C6	2.80	0.50
1:0:805:G:H2'	1:0:2419:C:C2	2.47	0.50
1:0:820:U:H2'	1:0:821:A:H8	1.77	0.50
1:0:889:C:H2'	1:0:890:U:C6	2.47	0.50
1:0:1277:G:C6	1:0:1278:A:N6	2.80	0.50
1:0:1359:G:H5'	1:0:1359:G:H8	1.76	0.50
1:0:1466:C:H2'	1:0:1467:U:O4'	2.11	0.50
1:0:1608:U:H2'	1:0:1609:G:C8	2.47	0.50
1:0:1766:U:H2'	1:0:1767:G:H5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1898:U:H3'	1:0:1899:A:C5'	2.42	0.50
1:0:2311:U:H4'	1:0:2315:A:N6	2.26	0.50
1:0:2376:G:H22	1:0:2399:C:H1'	1.76	0.50
1:0:2439:U:H2'	1:0:2440:C:H5'	1.94	0.50
1:0:2594:U:C2	1:0:2595:C:C5	2.99	0.50
1:0:212:U:C2'	1:0:213:C:H5'	2.42	0.50
1:0:225:G:O5'	1:0:226:C:H5''	2.11	0.50
1:0:352:G:C2'	1:0:353:G:H5'	2.41	0.50
1:0:700:C:C2'	1:0:701:U:C6	2.94	0.50
1:0:791:G:H2'	1:0:792:U:O4'	2.12	0.50
1:0:873:U:O4	1:0:930:A:N6	2.45	0.50
1:0:974:U:O2	1:0:974:U:H2'	2.12	0.50
1:0:1076:U:H6	1:0:1076:U:O5'	1.94	0.50
1:0:1108:U:C2'	1:0:1109:A:H5'	2.42	0.50
1:0:1174:G:N2	1:0:1175:A:C4	2.80	0.50
1:0:1215:A:N3	1:0:1258:G:C2	2.80	0.50
1:0:1333:G:H22	1:0:1344:C:N4	2.01	0.50
1:0:1346:C:N4	1:0:1347:C:H41	2.10	0.50
1:0:1379:A:C5	1:0:1380:C:C4	3.00	0.50
1:0:1408:A:C6	1:0:1411:C:C2	3.00	0.50
1:0:1750:A:C2	1:0:1751:A:C5	3.00	0.50
1:0:1947:G:C6	1:0:1950:C:C4	3.00	0.50
1:0:1962:C:C6	1:0:1962:C:C3'	2.95	0.50
1:0:2178:U:H2'	1:0:2179:C:O4'	2.11	0.50
1:0:2184:C:C4	1:0:2185:U:C4	3.00	0.50
1:0:2689:C:H2'	1:0:2690:A:O4'	2.12	0.50
1:0:2756:A:C2	1:0:2758:A:C6	3.00	0.50
1:0:2843:A:N6	1:0:2844:G:C2	2.80	0.50
2:9:88:C:H2'	2:9:89:G:C8	2.47	0.50
3:K:134:LYS:HZ3	3:K:136:GLU:HG2	1.76	0.50
1:0:67:G:C6	1:0:72:A:N1	2.80	0.49
1:0:488:A:N1	1:0:489:A:C6	2.80	0.49
1:0:616:U:O2'	1:0:617:U:H5''	2.12	0.49
1:0:813:A:C5	1:0:815:A:O4'	2.65	0.49
1:0:829:C:C2	1:0:1206:G:C2	3.00	0.49
1:0:831:G:O2'	1:0:832:A:H5''	2.12	0.49
1:0:982:C:H2'	1:0:983:G:H8	1.77	0.49
1:0:1141:U:N3	1:0:2008:C:H5''	2.26	0.49
1:0:1514:C:C4'	1:0:1593:C:H4'	2.42	0.49
1:0:1684:G:O2'	1:0:1685:A:O5'	2.28	0.49
1:0:1863:U:H2'	1:0:1863:U:O2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1977:C:O2'	1:0:1978:U:H5'	2.11	0.49
1:0:2001:G:H2'	1:0:2002:A:C8	2.47	0.49
1:0:2038:C:C4'	1:0:2039:G:H5''	2.40	0.49
1:0:2210:C:H2'	1:0:2211:U:C6	2.47	0.49
1:0:2344:G:C5'	4:U:60:PHE:HE2	2.25	0.49
1:0:2720:A:C2	1:0:2744:A:C4	3.00	0.49
2:9:27:A:H2'	2:9:28:A:C8	2.36	0.49
3:K:64:LYS:O	3:K:64:LYS:HG2	2.12	0.49
3:K:125:LYS:H	3:K:125:LYS:CE	2.25	0.49
1:0:479:G:H2'	1:0:480:G:H8	1.78	0.49
1:0:617:U:C2	1:0:632:A:N7	2.80	0.49
1:0:788:G:N2	1:0:800:U:C3'	2.75	0.49
1:0:880:C:OP2	1:0:880:C:H6	1.95	0.49
1:0:983:G:C6	1:0:984:A:N6	2.80	0.49
1:0:1018:C:OP2	1:0:1020:A:OP2	2.30	0.49
1:0:1054:C:H4'	1:0:1057:A:H62	1.77	0.49
1:0:1107:A:H8	1:0:1107:A:P	2.35	0.49
1:0:1391:A:N3	1:0:1392:U:C5	2.76	0.49
1:0:1485:U:H2'	1:0:1486:A:H8	1.77	0.49
1:0:1687:C:C5	1:0:1688:U:N3	2.80	0.49
1:0:1886:G:O2'	1:0:1887:G:H5'	2.12	0.49
1:0:2246:A:H2	1:0:2250:G:H1	1.60	0.49
1:0:2597:G:H2'	1:0:2598:C:O4'	2.13	0.49
2:9:102:A:H8	2:9:102:A:OP2	1.95	0.49
5:8:41:LEU:HD22	5:8:110:LEU:HD13	1.94	0.49
1:0:128:C:C3'	1:0:129:A:H5''	2.41	0.49
1:0:165:G:N1	1:0:186:C:C4	2.80	0.49
1:0:760:U:O2	1:0:1997:A:H1'	2.12	0.49
1:0:871:U:O2	1:0:2247:A:H2'	2.12	0.49
1:0:880:C:OP2	1:0:880:C:C6	2.65	0.49
1:0:940:G:C8	1:0:940:G:OP2	2.64	0.49
1:0:1011:A:O2'	1:0:1012:A:H5'	2.12	0.49
1:0:1120:C:H5'	1:0:1121:G:OP2	2.11	0.49
1:0:1136:G:N7	1:0:1137:A:N6	2.59	0.49
1:0:1223:G:C2	1:0:1250:A:N7	2.81	0.49
1:0:1463:A:C1'	1:0:1543:G:N2	2.75	0.49
1:0:1563:U:C2	1:0:1564:U:C5	3.01	0.49
1:0:1681:A:C2	1:0:2706:U:C2	3.00	0.49
1:0:1908:C:O5'	1:0:1908:C:H6	1.95	0.49
1:0:2277:A:C2	1:0:2278:A:H1'	2.48	0.49
1:0:2395:C:O2'	1:0:2396:C:H5''	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2396:C:C5'	1:0:2396:C:H6	2.24	0.49
1:0:2459:C:N4	1:0:2460:G:C2	2.81	0.49
1:0:2604:G:H2'	1:0:2605:C:C6	2.48	0.49
1:0:2697:G:O2'	1:0:2698:G:H5'	2.12	0.49
1:0:2818:G:O2'	1:0:2819:G:H5'	2.13	0.49
2:9:59:A:H3'	2:9:60:A:H8	1.78	0.49
3:K:115:ALA:O	3:K:119:PHE:CD1	2.65	0.49
1:0:164:G:C2	1:0:187:U:O2	2.66	0.49
1:0:172:A:H2'	1:0:175:C:H42	1.78	0.49
1:0:353:G:H2'	1:0:354:C:H6	1.77	0.49
1:0:819:C:O2	1:0:2423:G:O2'	2.31	0.49
1:0:927:C:H2'	1:0:928:G:H5'	1.95	0.49
1:0:1019:U:O2'	1:0:1020:A:H5'	2.12	0.49
1:0:1054:C:H4'	1:0:1057:A:C5	2.47	0.49
1:0:1055:A:N6	1:0:1123:G:H1'	2.26	0.49
1:0:1055:A:H2	1:0:1121:G:O2'	1.94	0.49
1:0:1129:A:C2	1:0:1130:U:C2	3.00	0.49
1:0:1759:A:H2'	1:0:1760:G:O4'	2.12	0.49
1:0:1838:G:H2'	1:0:1839:A:O4'	2.13	0.49
1:0:2182:A:C2'	1:0:2183:C:H5'	2.42	0.49
1:0:2277:A:H3'	1:0:2278:A:C8	2.45	0.49
1:0:2498:U:C5'	1:0:2499:C:OP1	2.58	0.49
1:0:2550:C:C4	1:0:2553:G:C8	3.01	0.49
1:0:2568:A:N1	1:0:2585:C:N4	2.59	0.49
1:0:2685:A:C2	1:0:2686:C:H1'	2.47	0.49
1:0:2761:A:H5''	1:0:2762:G:H5'	1.94	0.49
1:0:2773:G:H2'	1:0:2774:U:H3'	1.93	0.49
2:9:45:C:H3'	2:9:46:G:H5'	1.94	0.49
2:9:75:A:H2'	2:9:75:A:N3	2.27	0.49
2:9:96:C:H2'	2:9:97:C:C6	2.47	0.49
3:K:29:ALA:HB2	3:K:68:ARG:HH22	1.76	0.49
1:0:62:U:C3'	1:0:63:A:C8	2.93	0.49
1:0:105:G:O2'	1:0:106:G:H5'	2.12	0.49
1:0:242:A:N7	1:0:441:A:N6	2.59	0.49
1:0:299:C:H2'	1:0:300:C:C5	2.47	0.49
1:0:417:C:C6	1:0:417:C:C3'	2.96	0.49
1:0:717:G:HO2'	1:0:718:A:P	2.34	0.49
1:0:848:A:N6	1:0:849:G:C6	2.80	0.49
1:0:1192:A:C2	1:0:1193:G:C5	3.01	0.49
1:0:1291:G:C2	1:0:1292:A:C4	3.00	0.49
1:0:1786:C:H1'	1:0:1884:A:OP2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1920:A:N1	1:0:1922:U:C4	2.81	0.49
1:0:1949:A:H1'	1:0:2572:U:H5'	1.93	0.49
1:0:2496:C:O2'	1:0:2497:A:C5'	2.57	0.49
1:0:2568:A:O2'	1:0:2569:A:H5'	2.12	0.49
1:0:2582:G:OP1	5:8:82:ARG:NH2	2.46	0.49
1:0:2721:A:H2'	1:0:2722:C:O4'	2.12	0.49
1:0:2725:C:H6	1:0:2725:C:O5'	1.95	0.49
1:0:2860:C:H2'	1:0:2861:A:O4'	2.11	0.49
1:0:116:A:OP2	1:0:117:A:C8	2.66	0.49
1:0:176:A:N6	1:0:2410:U:C2	2.80	0.49
1:0:427:C:H2'	1:0:428:A:H8	1.76	0.49
1:0:450:C:O5'	1:0:450:C:H6	1.95	0.49
1:0:542:A:H2'	1:0:543:G:C5'	2.37	0.49
1:0:548:G:C2	1:0:549:G:N7	2.81	0.49
1:0:664:C:H3'	1:0:664:C:C6	2.47	0.49
1:0:873:U:H2'	1:0:874:A:H5'	1.94	0.49
1:0:967:G:H2'	1:0:968:C:H5'	1.93	0.49
1:0:973:U:H2'	1:0:974:U:H6	1.78	0.49
1:0:1004:A:C6	1:0:1005:U:H5	2.30	0.49
1:0:1370:U:H2'	1:0:1371:G:O4'	2.12	0.49
1:0:1459:U:N3	1:0:1476:G:P	2.86	0.49
1:0:1792:C:C2'	1:0:1793:A:OP1	2.60	0.49
1:0:1920:A:C6	1:0:1922:U:C5	3.01	0.49
1:0:1920:A:H5''	1:0:1921:A:OP2	2.13	0.49
1:0:1936:A:H1'	1:0:2539:C:O4'	2.13	0.49
1:0:2620:G:C2	1:0:2621:G:C8	3.00	0.49
1:0:2718:A:N1	1:0:2746:G:O6	2.46	0.49
3:K:93:TYR:CD1	3:K:93:TYR:C	2.89	0.49
5:8:108:ALA:O	5:8:112:GLN:HB2	2.12	0.49
1:0:114:C:O2'	1:0:115:G:H5'	2.13	0.49
1:0:198:A:C6	1:0:210:A:C2	3.00	0.49
1:0:241:C:C2'	1:0:242:A:H5''	2.42	0.49
1:0:442:A:C6	1:0:443:A:N6	2.77	0.49
1:0:571:U:O2	1:0:581:A:C8	2.66	0.49
1:0:691:C:O2'	1:0:692:C:H5'	2.13	0.49
1:0:870:C:H4'	4:U:23:VAL:HG21	1.95	0.49
1:0:926:C:C2'	1:0:927:C:H5'	2.41	0.49
1:0:1035:G:OP2	1:0:1036:G:H3'	2.11	0.49
1:0:1119:U:O5'	1:0:1119:U:H6	1.95	0.49
1:0:1439:G:C2'	1:0:1440:G:O4'	2.60	0.49
1:0:1993:G:C5	1:0:1994:U:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2001:G:H2'	1:0:2002:A:O4'	2.13	0.49
1:0:2069:U:H2'	1:0:2070:G:C8	2.48	0.49
1:0:2209:G:C5	1:0:2210:C:H5	2.31	0.49
1:0:2225:G:C4	1:0:2405:A:N3	2.81	0.49
1:0:2387:U:O2'	1:0:2388:G:H5'	2.13	0.49
1:0:2469:G:C4'	1:0:2470:U:OP1	2.58	0.49
1:0:2560:G:H1	1:0:2589:C:H6	1.56	0.49
1:0:2660:C:C4	1:0:2704:U:C5	3.01	0.49
1:0:2838:U:O2'	1:0:2839:G:H5'	2.13	0.49
1:0:460:U:C5	1:0:592:G:O2'	2.65	0.49
1:0:491:A:N3	1:0:509:U:O2'	2.40	0.49
1:0:599:A:C2	1:0:681:A:C2	3.01	0.49
1:0:712:A:H2'	1:0:713:G:O4'	2.13	0.49
1:0:988:G:C6	1:0:989:G:N7	2.81	0.49
1:0:994:A:H3'	1:0:994:A:C8	2.47	0.49
1:0:1001:A:C6	1:0:1200:G:H1'	2.48	0.49
1:0:1002:C:O2	1:0:1175:A:C2	2.66	0.49
1:0:1272:G:H2'	1:0:1273:G:C8	2.48	0.49
1:0:1436:G:H22	1:0:1593:C:C1'	2.06	0.49
1:0:1443:G:O4'	1:0:1584:G:H1'	2.13	0.49
1:0:1685:A:O4'	1:0:1686:A:C6	2.66	0.49
1:0:1697:U:C5	1:0:1698:C:C4	3.01	0.49
1:0:1699:A:C2	1:0:1700:C:C2	3.00	0.49
1:0:1784:C:O5'	1:0:1784:C:H6	1.95	0.49
1:0:1884:A:O2'	1:0:1885:C:H5'	2.12	0.49
1:0:1920:A:N1	1:0:1922:U:C5	2.80	0.49
1:0:2219:U:H2'	1:0:2220:A:H5'	1.94	0.49
1:0:2246:A:H2'	1:0:2246:A:N3	2.28	0.49
1:0:2560:G:C6	1:0:2589:C:H6	2.30	0.49
2:9:73:C:H2'	2:9:74:A:H8	1.78	0.49
2:9:110:U:O2'	2:9:111:C:H5'	2.12	0.49
3:K:79:PRO:HD3	3:K:88:LYS:HZ3	1.78	0.49
1:0:71:A:H5''	1:0:71:A:C8	2.47	0.49
1:0:132:U:H2'	1:0:133:C:C6	2.47	0.49
1:0:216:U:C2'	1:0:217:U:O4'	2.56	0.49
1:0:228:A:H2'	1:0:229:G:O4'	2.13	0.49
1:0:427:C:H2'	1:0:428:A:C8	2.47	0.49
1:0:427:C:O2	1:0:1856:U:H4'	2.13	0.49
1:0:1138:A:H61	1:0:2442:C:H1'	1.78	0.49
1:0:1538:A:H2'	1:0:1539:U:H6	1.78	0.49
1:0:1682:A:O2'	1:0:1683:G:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1886:G:H2'	1:0:1887:G:H8	1.77	0.49
1:0:1923:U:N3	1:0:1947:G:H4'	2.28	0.49
1:0:1997:A:H2'	1:0:1998:A:N7	2.28	0.49
1:0:2328:G:C3'	1:0:2329:C:H5''	2.42	0.49
1:0:2436:U:O2	1:0:2474:G:C2	2.66	0.49
1:0:2442:C:H2'	1:0:2443:C:C6	2.48	0.49
1:0:2661:G:C2'	1:0:2662:C:H5'	2.41	0.49
1:0:2662:C:C2'	1:0:2663:U:H5'	2.43	0.49
1:0:161:U:N3	1:0:162:C:C4	2.81	0.49
1:0:242:A:C2'	1:0:243:G:OP2	2.61	0.49
1:0:299:C:H2'	1:0:300:C:C6	2.47	0.49
1:0:832:A:H2'	1:0:833:A:H8	1.77	0.49
1:0:839:U:H5''	1:0:2408:G:P	2.53	0.49
1:0:973:U:O2'	1:0:974:U:H5'	2.13	0.49
1:0:1041:G:C4	1:0:1042:G:C8	3.01	0.49
1:0:1323:G:H1'	1:0:1627:C:C5'	2.43	0.49
1:0:1473:U:C4'	1:0:1474:A:N7	2.74	0.49
1:0:1817:U:H2'	1:0:1818:G:O4'	2.13	0.49
1:0:2253:A:C2	1:0:2255:G:H1'	2.47	0.49
1:0:2286:G:N3	1:0:2286:G:C2'	2.74	0.49
1:0:14:A:C6	1:0:536:A:H2	2.30	0.48
1:0:201:G:H2'	1:0:202:A:O4'	2.13	0.48
1:0:305:A:H2'	1:0:306:G:H5'	1.95	0.48
1:0:415:A:H2'	1:0:416:U:H5'	1.95	0.48
1:0:816:U:O2'	1:0:817:A:H5'	2.12	0.48
1:0:859:U:C4'	1:0:860:U:H5	2.24	0.48
1:0:1031:C:H1'	1:0:1151:U:H3	1.78	0.48
1:0:1185:C:C2	1:0:1187:A:OP2	2.66	0.48
1:0:1200:G:C6	1:0:1201:G:C4	3.01	0.48
1:0:1229:C:H2'	1:0:1230:C:C6	2.46	0.48
1:0:1332:G:H2'	1:0:1333:G:C8	2.48	0.48
1:0:1383:C:C2	1:0:1384:G:N7	2.81	0.48
1:0:1427:G:OP2	1:0:1428:G:N1	2.46	0.48
1:0:2062:U:C2'	1:0:2063:A:O5'	2.61	0.48
1:0:2225:G:C4	1:0:2226:A:C8	3.01	0.48
1:0:2619:G:C6	1:0:2755:A:C2	3.01	0.48
1:0:2649:A:O2'	1:0:2650:G:H5'	2.12	0.48
2:9:48:A:C5	2:9:49:C:C4	3.00	0.48
2:9:102:A:OP2	2:9:102:A:C8	2.66	0.48
1:0:1:G:H2'	1:0:2:G:H8	1.71	0.48
1:0:309:G:N2	1:0:350:U:H5	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:723:C:H2'	1:0:724:C:C6	2.49	0.48
1:0:860:U:H2'	1:0:860:U:O2	2.12	0.48
1:0:1039:A:C5	1:0:1136:G:N2	2.81	0.48
1:0:1247:U:H2'	1:0:1248:G:O4'	2.13	0.48
1:0:1278:A:O2'	1:0:1279:G:O5'	2.25	0.48
1:0:1305:C:C4	1:0:1306:U:C4	3.01	0.48
1:0:2064:U:C4	1:0:2216:G:C2	3.01	0.48
1:0:2168:A:OP2	1:0:2169:A:OP2	2.31	0.48
1:0:2560:G:O6	1:0:2589:C:C6	2.66	0.48
2:9:51:G:H2'	2:9:52:G:C8	2.46	0.48
3:K:42:TRP:CD2	3:K:95:VAL:HG21	2.47	0.48
4:U:40:GLN:HE22	4:U:44:LYS:N	2.12	0.48
1:0:201:G:C2	1:0:202:A:C4	3.00	0.48
1:0:322:A:O2'	1:0:323:G:P	2.72	0.48
1:0:422:C:H2'	1:0:423:G:C8	2.47	0.48
1:0:691:C:H2'	1:0:692:C:C6	2.39	0.48
1:0:971:A:H5''	1:0:972:C:OP1	2.14	0.48
1:0:1344:C:C2'	1:0:1345:G:H5''	2.43	0.48
1:0:1378:A:H2'	1:0:1379:A:H8	1.77	0.48
1:0:1537:U:H2'	1:0:1538:A:H8	1.72	0.48
1:0:1784:C:O2'	1:0:1785:A:H5'	2.13	0.48
1:0:1840:A:O2'	1:0:1841:G:H5'	2.14	0.48
1:0:1849:G:N2	1:0:1869:A:N6	2.60	0.48
1:0:2175:A:O2'	1:0:2176:U:H5'	2.12	0.48
1:0:2522:G:H5'	1:0:2522:G:C8	2.44	0.48
1:0:2789:U:H2'	1:0:2790:C:O4'	2.13	0.48
2:9:23:G:H2'	2:9:24:U:C6	2.48	0.48
2:9:89:G:H2'	2:9:91:A:OP2	2.13	0.48
1:0:167:A:H5''	1:0:181:A:N1	2.28	0.48
1:0:196:A:O2'	1:0:197:G:H5'	2.12	0.48
1:0:246:C:H5	1:0:373:A:C2	2.32	0.48
1:0:442:A:C5	1:0:443:A:N6	2.75	0.48
1:0:456:C:H3'	1:0:456:C:H6	1.78	0.48
1:0:521:U:H2'	1:0:522:G:H5'	1.94	0.48
1:0:538:A:H2'	1:0:539:A:O4'	2.13	0.48
1:0:594:G:H1	1:0:1266:G:P	2.36	0.48
1:0:704:G:C5	1:0:705:C:C5	3.01	0.48
1:0:829:C:O2'	1:0:830:C:H5'	2.13	0.48
1:0:927:C:C2'	1:0:928:G:H5'	2.43	0.48
1:0:1083:C:H42	1:0:1103:C:H41	1.61	0.48
1:0:1141:U:O2	1:0:2008:C:H5''	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1255:A:C4	1:0:1256:C:C5	3.01	0.48
1:0:1264:C:H2'	1:0:1264:C:O2	2.13	0.48
1:0:1356:G:O5'	1:0:1357:U:OP2	2.31	0.48
1:0:1356:G:N2	1:0:1418:C:C2	2.81	0.48
1:0:1740:G:O2'	1:0:1741:G:H5'	2.13	0.48
1:0:1784:C:O2'	1:0:1953:A:N6	2.45	0.48
1:0:1830:C:N4	1:0:1881:U:C3'	2.74	0.48
1:0:2668:U:H5'	1:0:2669:C:H5'	1.96	0.48
2:9:14:C:H4'	2:9:17:A:H61	1.76	0.48
4:U:3:HIS:NE2	4:U:6:GLY:C	2.71	0.48
1:0:184:A:H2'	1:0:185:C:C6	2.48	0.48
1:0:368:A:O2'	1:0:369:C:H5'	2.13	0.48
1:0:581:A:C2	1:0:582:G:C4	3.02	0.48
1:0:1280:U:C5	1:0:1995:G:N2	2.81	0.48
1:0:1326:U:C2	1:0:1626:A:C2	3.01	0.48
1:0:1773:C:H5'	1:0:2588:U:O2	2.14	0.48
1:0:1807:A:P	1:0:1814:G:H4'	2.53	0.48
1:0:1835:C:O5'	1:0:1835:C:H6	1.97	0.48
1:0:2552:C:OP1	1:0:2552:C:O3'	2.32	0.48
1:0:2809:A:H2'	1:0:2810:A:H5'	1.96	0.48
2:9:91:A:H8	2:9:91:A:O5'	1.96	0.48
3:K:64:LYS:O	3:K:107:VAL:HG12	2.12	0.48
4:U:40:GLN:HE22	4:U:44:LYS:H	1.61	0.48
5:8:7:LYS:HD3	5:8:10:GLU:CD	2.38	0.48
5:8:71:LEU:HD12	5:8:72:LYS:N	2.27	0.48
1:0:65:C:H2'	1:0:66:U:H5'	1.95	0.48
1:0:620:G:C4	1:0:621:U:C5	3.00	0.48
1:0:747:A:C5	1:0:748:A:C5	3.02	0.48
1:0:788:G:H5'	1:0:790:A:N3	2.29	0.48
1:0:1279:G:O2'	1:0:1280:U:OP2	2.22	0.48
1:0:1339:U:O2'	1:0:1340:C:H5'	2.14	0.48
1:0:1636:G:C6	1:0:1637:U:C4	3.02	0.48
1:0:1639:U:H2'	1:0:1640:C:O4'	2.14	0.48
1:0:1749:G:O2'	1:0:1750:A:OP1	2.22	0.48
1:0:2093:G:C4	1:0:2094:C:H5	2.32	0.48
1:0:2217:G:C5'	1:0:2218:G:N7	2.77	0.48
1:0:2371:A:C4	1:0:2372:A:C8	3.02	0.48
1:0:2498:U:C2	1:0:2520:A:C2	3.02	0.48
1:0:2738:A:C2'	1:0:2739:G:H5'	2.44	0.48
3:K:28:VAL:HG12	3:K:137:VAL:CB	2.43	0.48
3:K:119:PHE:HD1	3:K:119:PHE:H	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:U:14:ARG:CG	4:U:15:ASP:N	2.67	0.48
1:0:76:C:H5'	1:0:76:C:C6	2.39	0.48
1:0:513:A:C6	1:0:516:G:C6	3.02	0.48
1:0:970:A:N3	1:0:970:A:H2'	2.29	0.48
1:0:1174:G:C2	1:0:1175:A:C5	3.02	0.48
1:0:1211:G:H2'	1:0:1212:U:C6	2.49	0.48
1:0:1269:G:C6	1:0:1270:C:C4	3.01	0.48
1:0:1281:A:H2'	1:0:1282:A:H8	1.78	0.48
1:0:1586:A:H2'	1:0:1587:A:C8	2.49	0.48
1:0:1699:A:H5'	1:0:1753:A:O2'	2.14	0.48
1:0:1815:G:C5	1:0:1816:G:C8	3.02	0.48
1:0:1861:G:H2'	1:0:1862:C:C5'	2.43	0.48
1:0:1924:C:H42	5:8:61:ARG:HD2	1.73	0.48
1:0:2312:A:H1'	1:0:2314:A:C4	2.49	0.48
1:0:2402:U:H4'	1:0:2404:A:N7	2.28	0.48
1:0:2441:U:H2'	1:0:2442:C:C6	2.49	0.48
2:9:7:C:C2	2:9:8:C:C5	3.01	0.48
2:9:71:G:C5	2:9:72:C:C5	3.02	0.48
5:8:87:ASP:O	5:8:91:LEU:HG	2.14	0.48
1:0:58:C:H3'	1:0:59:G:H5''	1.95	0.48
1:0:165:G:H2'	1:0:166:G:C5'	2.44	0.48
1:0:459:A:H1'	1:0:461:A:N6	2.29	0.48
1:0:490:A:O2'	1:0:491:A:C5'	2.56	0.48
1:0:942:U:C6	1:0:942:U:H3'	2.49	0.48
1:0:983:G:N1	1:0:984:A:N6	2.62	0.48
1:0:1374:G:O2'	1:0:1375:C:H5'	2.14	0.48
1:0:1454:U:H2'	1:0:1455:C:C6	2.48	0.48
1:0:1550:C:H3'	1:0:1551:U:O4'	2.13	0.48
1:0:1617:G:C3'	1:0:1618:U:H6	2.27	0.48
1:0:2095:G:H2'	1:0:2096:U:H5''	1.94	0.48
1:0:2434:G:C2	1:0:2477:C:N4	2.81	0.48
1:0:2439:U:H2'	1:0:2439:U:O2	2.12	0.48
1:0:2441:U:H2'	1:0:2442:C:H6	1.78	0.48
1:0:2452:U:O2	1:0:2452:U:H2'	2.14	0.48
1:0:2555:G:O2'	1:0:2556:A:H5'	2.13	0.48
1:0:2623:A:N6	1:0:2624:G:C2	2.81	0.48
1:0:2681:A:H2'	1:0:2682:C:H5'	1.96	0.48
1:0:2759:U:H4'	1:0:2761:A:C5	2.49	0.48
1:0:220:U:C2	1:0:221:A:C8	3.01	0.48
1:0:318:G:H21	1:0:341:A:H62	1.62	0.48
1:0:352:G:H2'	1:0:353:G:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:641:G:H4'	1:0:651:C:O2'	2.13	0.48
1:0:677:G:C2	1:0:678:G:C8	3.02	0.48
1:0:759:C:C5	1:0:2591:C:OP1	2.66	0.48
1:0:962:C:C2'	1:0:963:G:O5'	2.62	0.48
1:0:971:A:O2'	1:0:973:U:H5'	2.14	0.48
1:0:1142:G:HO2'	1:0:1143:A:C5'	2.27	0.48
1:0:1514:C:H5'	1:0:1593:C:C5'	2.44	0.48
1:0:2053:G:H2'	1:0:2054:A:C8	2.49	0.48
1:0:2105:U:H2'	1:0:2106:G:O4'	2.14	0.48
1:0:2261:G:H4'	1:0:2262:C:OP2	2.14	0.48
1:0:2407:G:OP1	1:0:2408:G:OP1	2.31	0.48
1:0:2813:G:C6	1:0:2814:G:C5	3.02	0.48
1:0:2820:C:O2'	1:0:2821:G:C5'	2.62	0.48
1:0:2838:U:N3	1:0:2839:G:N7	2.62	0.48
3:K:79:PRO:HD3	3:K:88:LYS:CE	2.44	0.48
1:0:311:A:C2	1:0:345:U:O4'	2.67	0.48
1:0:401:G:C2'	1:0:403:A:H62	2.27	0.48
1:0:520:C:N3	1:0:521:U:C2	2.82	0.48
1:0:726:G:O2'	1:0:727:U:H5'	2.13	0.48
1:0:735:G:C4	1:0:736:G:C8	3.02	0.48
1:0:964:A:OP1	3:K:18:MET:SD	2.72	0.48
1:0:1211:G:C2	1:0:1263:G:C6	3.02	0.48
1:0:1302:C:P	1:0:1664:G:H22	2.37	0.48
1:0:1393:G:N3	1:0:1393:G:H2'	2.28	0.48
1:0:1424:U:H2'	1:0:1425:G:C8	2.49	0.48
1:0:1445:A:C4	1:0:1446:U:C6	3.02	0.48
1:0:1747:G:H4'	1:0:1749:G:C1'	2.43	0.48
1:0:1975:G:C4	1:0:1980:A:C6	3.01	0.48
1:0:2062:U:H2'	1:0:2063:A:O5'	2.14	0.48
1:0:2267:A:C2	1:0:2304:G:C8	3.02	0.48
1:0:2546:G:C4	1:0:2547:C:C5	3.02	0.48
5:8:33:GLY:HA2	5:8:38:ARG:HG3	1.95	0.48
1:0:58:C:N4	1:0:59:G:N3	2.62	0.47
1:0:70:A:OP2	1:0:111:G:H4'	2.14	0.47
1:0:92:U:H2'	1:0:93:A:O4'	2.14	0.47
1:0:433:G:H21	1:0:434:C:H1'	1.79	0.47
1:0:788:G:C5'	1:0:790:A:C1'	2.87	0.47
1:0:874:A:H1'	2:9:81:C:O2'	2.14	0.47
1:0:881:U:C4	1:0:882:C:N4	2.82	0.47
1:0:1007:A:C6	1:0:1171:A:C2	3.02	0.47
1:0:1040:A:H2	1:0:2444:C:O2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1175:A:H2'	1:0:1176:U:H6	1.79	0.47
1:0:1448:A:C2	1:0:1576:G:N2	2.82	0.47
1:0:1845:A:C2	1:0:1846:A:C4	3.02	0.47
1:0:2007:G:C2	1:0:2023:C:C2	3.02	0.47
1:0:2036:G:N1	1:0:2037:A:C4	2.82	0.47
1:0:2227:C:H2'	1:0:2228:U:C5'	2.36	0.47
1:0:2431:C:N4	1:0:2432:A:N6	2.62	0.47
1:0:2488:G:C6	1:0:2489:C:C4	3.02	0.47
1:0:2510:A:C2	1:0:2638:G:H1'	2.48	0.47
1:0:2714:A:O2'	1:0:2715:C:H5'	2.14	0.47
1:0:2803:C:O2'	1:0:2804:G:H5'	2.14	0.47
2:9:48:A:H2'	2:9:49:C:O4'	2.14	0.47
1:0:229:G:C4	1:0:230:C:C5	3.02	0.47
1:0:320:A:O2'	1:0:340:G:C4	2.62	0.47
1:0:801:A:O5'	1:0:801:A:H8	1.96	0.47
1:0:825:C:H1'	1:0:1263:G:C2	2.49	0.47
1:0:870:C:H5''	4:U:45:PHE:CE2	2.49	0.47
1:0:872:G:H2'	1:0:928:G:N1	2.29	0.47
1:0:875:G:C2'	1:0:876:A:H5'	2.45	0.47
1:0:1070:G:H2'	1:0:1071:U:O4'	2.15	0.47
1:0:1112:U:O5'	1:0:1112:U:H6	1.97	0.47
1:0:1238:A:C2	1:0:1239:A:C2	3.03	0.47
1:0:1507:A:O2'	1:0:1509:A:H4'	2.15	0.47
1:0:1618:U:H2'	1:0:1619:A:H5'	1.96	0.47
1:0:1685:A:H61	1:0:1693:A:H62	1.54	0.47
1:0:1712:G:H2'	1:0:1713:G:O5'	2.13	0.47
1:0:1774:A:O2'	1:0:2586:G:H1'	2.14	0.47
1:0:1948:C:H4'	5:8:61:ARG:HB3	1.96	0.47
1:0:2071:G:H2'	1:0:2072:C:H6	1.79	0.47
1:0:2438:A:C4	1:0:2439:U:C6	3.02	0.47
1:0:2557:G:N2	1:0:2558:C:C2	2.82	0.47
1:0:2579:A:C2	1:0:2580:C:C4	3.01	0.47
1:0:2781:G:N3	1:0:2782:G:H1'	2.28	0.47
2:9:102:A:C2	2:9:103:A:N1	2.77	0.47
1:0:158:A:C6	1:0:159:A:C2	3.03	0.47
1:0:216:U:N3	1:0:217:U:C2	2.83	0.47
1:0:479:G:H2'	1:0:480:G:C8	2.50	0.47
1:0:594:G:C6	1:0:1264:C:C2	3.02	0.47
1:0:613:A:C2	1:0:614:G:C5	3.02	0.47
1:0:824:U:O2	1:0:1264:C:C5	2.68	0.47
1:0:883:A:C6	1:0:920:G:N1	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:953:G:C5	1:0:954:U:C4	3.03	0.47
1:0:978:U:H2'	1:0:979:A:H8	1.79	0.47
1:0:1181:C:O5'	1:0:1181:C:H6	1.98	0.47
1:0:1282:A:H2'	1:0:1283:C:C6	2.49	0.47
1:0:1294:G:N1	1:0:1299:A:N6	2.63	0.47
1:0:1383:C:H2'	1:0:1384:G:N7	2.23	0.47
1:0:1925:C:H3'	1:0:1926:U:C5'	2.44	0.47
1:0:2173:G:H3'	1:0:2174:G:C8	2.49	0.47
1:0:2198:U:C3'	1:0:2199:C:H4'	2.45	0.47
1:0:2267:A:H2	1:0:2304:G:C8	2.32	0.47
1:0:2336:G:N2	1:0:2339:A:OP2	2.47	0.47
1:0:2366:U:O2'	4:U:41:ARG:NH2	2.44	0.47
1:0:2701:A:C2	1:0:2702:G:C1'	2.96	0.47
2:9:95:U:O2'	2:9:96:C:H5'	2.14	0.47
1:0:224:G:N7	1:0:226:C:O2	2.47	0.47
1:0:545:C:O2'	1:0:546:A:H5'	2.14	0.47
1:0:679:C:H2'	1:0:680:U:C6	2.48	0.47
1:0:698:A:H5'	1:0:801:A:N6	2.29	0.47
1:0:762:A:C4	1:0:763:A:C8	3.02	0.47
1:0:810:U:H3'	1:0:810:U:H6	1.80	0.47
1:0:841:G:O2'	1:0:842:A:O4'	2.31	0.47
1:0:982:C:H2'	1:0:983:G:C8	2.49	0.47
1:0:1392:U:C2'	1:0:1393:G:H5'	2.44	0.47
1:0:1454:U:O2'	1:0:1455:C:H5'	2.14	0.47
1:0:1483:G:C2	1:0:1540:C:C2	3.03	0.47
1:0:1768:U:O2'	1:0:1769:U:H5'	2.14	0.47
1:0:1794:A:C2'	1:0:1795:C:H5'	2.44	0.47
1:0:2048:C:H1'	1:0:2428:U:N3	2.29	0.47
1:0:2076:G:C1'	1:0:2204:A:H62	2.27	0.47
1:0:2229:G:O5'	3:K:84:MET:SD	2.72	0.47
1:0:2277:A:C3'	1:0:2278:A:H8	2.27	0.47
1:0:2540:A:H2'	1:0:2541:U:O5'	2.14	0.47
1:0:2670:C:H6	1:0:2670:C:C5'	2.25	0.47
1:0:2708:U:H2'	1:0:2709:C:H6	1.77	0.47
1:0:2762:G:C2'	1:0:2763:U:H5'	2.44	0.47
2:9:42:U:H3'	2:9:43:G:H5''	1.96	0.47
2:9:78:A:H2'	2:9:79:U:H6	1.76	0.47
3:K:42:TRP:HZ3	3:K:75:VAL:HG11	1.78	0.47
1:0:238:G:C4'	1:0:618:A:H2	2.28	0.47
1:0:436:A:H5''	1:0:437:G:H5'	1.96	0.47
1:0:541:C:N4	1:0:572:G:O4'	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:575:U:H4'	1:0:822:G:OP2	2.14	0.47
1:0:590:C:C2	1:0:591:G:N7	2.83	0.47
1:0:1040:A:H1'	1:0:2465:G:O4'	2.15	0.47
1:0:1477:C:O2'	1:0:2681:A:H1'	2.15	0.47
1:0:1681:A:C2	1:0:2706:U:N1	2.83	0.47
1:0:2109:A:H2'	1:0:2110:G:O4'	2.14	0.47
1:0:2173:G:H3'	1:0:2174:G:H8	1.80	0.47
1:0:2247:A:H2'	1:0:2248:A:OP2	2.14	0.47
1:0:2718:A:H2	1:0:2746:G:H1	1.61	0.47
1:0:2876:C:H2'	1:0:2877:A:O4'	2.14	0.47
2:9:78:A:H2'	2:9:79:U:C5	2.48	0.47
4:U:46:LYS:HB2	4:U:78:PHE:CD1	2.50	0.47
5:8:71:LEU:C	5:8:71:LEU:CD1	2.81	0.47
1:0:311:A:C6	1:0:345:U:C4'	2.98	0.47
1:0:343:A:N7	1:0:346:C:N4	2.63	0.47
1:0:352:G:O2'	1:0:353:G:H5'	2.15	0.47
1:0:486:U:C6	1:0:519:C:C4	3.03	0.47
1:0:787:A:N9	1:0:788:G:N7	2.62	0.47
1:0:790:A:O2'	1:0:791:G:H5'	2.15	0.47
1:0:927:C:H2'	1:0:928:G:C5'	2.44	0.47
1:0:1153:A:HO2'	1:0:1155:G:H8	1.54	0.47
1:0:1480:G:C6	1:0:1481:U:C2	3.03	0.47
1:0:1554:G:H2'	1:0:1555:A:H8	1.80	0.47
1:0:1774:A:N1	1:0:2566:A:H2'	2.29	0.47
1:0:1791:C:O2'	1:0:1793:A:C5'	2.63	0.47
1:0:2205:C:H2'	1:0:2206:C:C5'	2.44	0.47
1:0:2324:G:N3	1:0:2360:C:H2'	2.29	0.47
1:0:2372:A:H2'	1:0:2373:C:C6	2.50	0.47
1:0:2517:C:C2	1:0:2518:C:C5	3.03	0.47
1:0:2560:G:N1	1:0:2589:C:H6	2.13	0.47
2:9:15:A:H2	2:9:71:G:N3	2.12	0.47
1:0:106:G:H2'	1:0:107:G:H8	1.80	0.47
1:0:300:C:H2'	1:0:301:C:C6	2.50	0.47
1:0:321:A:C8	1:0:323:G:C6	3.02	0.47
1:0:399:G:HO2'	1:0:400:U:P	2.38	0.47
1:0:470:U:O4	1:0:481:A:C8	2.68	0.47
1:0:619:A:H2'	1:0:620:G:C8	2.42	0.47
1:0:632:A:C2	1:0:633:G:C5	3.03	0.47
1:0:681:A:C5	1:0:683:A:C8	3.03	0.47
1:0:719:A:H2'	1:0:720:A:O4'	2.14	0.47
1:0:854:G:C2	1:0:949:G:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:890:U:H2'	1:0:891:A:H8	1.80	0.47
1:0:926:C:H2'	1:0:927:C:C5'	2.44	0.47
1:0:927:C:O2'	2:9:103:A:H5''	2.15	0.47
1:0:967:G:H2'	1:0:968:C:C5'	2.43	0.47
1:0:1017:C:O2'	1:0:1018:C:H5'	2.15	0.47
1:0:1107:A:O5'	1:0:1107:A:C8	2.67	0.47
1:0:1112:U:O2'	1:0:1113:C:H5'	2.15	0.47
1:0:1299:A:N1	1:0:1302:C:N3	2.63	0.47
1:0:1343:C:O2'	1:0:1344:C:H5'	2.14	0.47
1:0:1353:A:O2'	1:0:1410:U:O4	2.31	0.47
1:0:1579:G:H2'	1:0:1580:C:C6	2.50	0.47
1:0:1629:G:C2	1:0:1633:C:C2	3.02	0.47
1:0:1643:A:H1'	1:0:1657:A:C2	2.50	0.47
1:0:2027:C:O2'	1:0:2028:C:H5'	2.15	0.47
1:0:2032:G:N2	1:0:2599:U:C2	2.83	0.47
1:0:2051:U:N3	1:0:2409:A:C2	2.82	0.47
1:0:2076:G:H2'	1:0:2077:G:H8	1.79	0.47
1:0:2299:A:C5'	1:0:2300:G:C4	2.97	0.47
1:0:2343:C:H2'	1:0:2344:G:O4'	2.15	0.47
1:0:2363:G:H5''	1:0:2365:U:OP1	2.14	0.47
1:0:2441:U:H2'	1:0:2442:C:O4'	2.14	0.47
1:0:2488:G:C2	1:0:2559:U:O2	2.68	0.47
1:0:2495:G:C4	1:0:2548:G:N2	2.82	0.47
1:0:2503:G:H2'	1:0:2504:G:C5'	2.32	0.47
1:0:2647:G:C5	1:0:2648:G:N7	2.83	0.47
1:0:2666:U:C4	1:0:2667:C:C4	3.02	0.47
1:0:2733:A:C2'	1:0:2734:U:H5'	2.45	0.47
1:0:2749:A:C6	1:0:2750:G:C4	3.02	0.47
2:9:100:G:C2'	2:9:101:A:H5'	2.43	0.47
4:U:3:HIS:HB2	5:8:75:GLU:CD	2.39	0.47
1:0:55:A:C2	1:0:113:C:C2	3.03	0.47
1:0:462:G:H2'	1:0:463:C:H5'	1.96	0.47
1:0:501:G:H2'	1:0:502:A:H8	1.79	0.47
1:0:636:G:H2'	1:0:637:G:C5'	2.43	0.47
1:0:746:G:N7	1:0:774:A:C5	2.83	0.47
1:0:1304:U:O2'	1:0:1305:C:C5'	2.55	0.47
1:0:1310:C:O2'	1:0:1315:A:N1	2.47	0.47
1:0:1619:A:C2'	1:0:1620:C:H5'	2.45	0.47
1:0:1687:C:O2	1:0:1976:U:H1'	2.15	0.47
1:0:1924:C:N4	1:0:1925:C:O2	2.48	0.47
1:0:1982:C:O2'	1:0:1983:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2055:G:C5	1:0:2056:C:C4	3.03	0.47
1:0:2497:A:O2'	1:0:2498:U:OP1	2.30	0.47
1:0:2631:C:N3	1:0:2648:G:C2	2.82	0.47
1:0:2735:C:H6	1:0:2735:C:O5'	1.98	0.47
1:0:62:U:H2'	1:0:63:A:C8	2.50	0.47
1:0:88:G:C2	1:0:89:A:N7	2.82	0.47
1:0:109:A:H2'	1:0:110:U:C4'	2.45	0.47
1:0:112:U:O2	1:0:112:U:H2'	2.14	0.47
1:0:330:C:C2	1:0:331:U:C6	3.03	0.47
1:0:460:U:H5	1:0:592:G:O2'	1.98	0.47
1:0:467:U:H6	1:0:467:U:P	2.37	0.47
1:0:551:A:C4	1:0:562:G:N2	2.83	0.47
1:0:644:A:H8	1:0:645:G:O4'	1.98	0.47
1:0:751:G:O2'	1:0:752:G:O4'	2.33	0.47
1:0:859:U:C2'	1:0:860:U:OP2	2.63	0.47
1:0:886:A:C2	1:0:887:G:C4	3.02	0.47
1:0:1345:G:C6	1:0:1632:A:N3	2.83	0.47
1:0:1438:G:C2	1:0:1591:U:C2	3.03	0.47
1:0:1604:A:H8	1:0:1604:A:O5'	1.97	0.47
1:0:1685:A:H5'	1:0:1686:A:N7	2.30	0.47
1:0:1729:C:H2'	1:0:1730:G:H8	1.80	0.47
1:0:1763:G:H21	1:0:1765:C:H5''	1.79	0.47
1:0:2412:A:O2'	1:0:2413:A:H5'	2.13	0.47
1:0:2684:A:N6	1:0:2685:A:C6	2.83	0.47
1:0:2733:A:H2'	1:0:2734:U:H5'	1.97	0.47
2:9:67:C:H2'	2:9:68:A:H5''	1.96	0.47
3:K:12:LYS:HG2	3:K:15:ARG:NH2	2.29	0.47
3:K:64:LYS:HE3	3:K:108:ALA:H	1.80	0.47
3:K:134:LYS:HZ1	3:K:136:GLU:HG2	1.80	0.47
5:8:89:GLN:NE2	5:8:89:GLN:HA	2.30	0.47
1:0:10:A:C2'	1:0:11:G:H5'	2.45	0.47
1:0:27:G:O2'	1:0:28:A:H8	1.94	0.47
1:0:55:A:H2'	1:0:56:C:O4'	2.15	0.47
1:0:165:G:H2'	1:0:166:G:H5'	1.96	0.47
1:0:319:G:N1	1:0:320:A:C2	2.83	0.47
1:0:450:C:H2'	1:0:451:A:H8	1.79	0.47
1:0:488:A:C6	1:0:489:A:N6	2.83	0.47
1:0:649:G:C4	1:0:650:U:C5	3.03	0.47
1:0:1077:U:O2	1:0:1079:G:C8	2.68	0.47
1:0:1200:G:C5	1:0:1201:G:C8	3.03	0.47
1:0:1317:G:O2'	1:0:1318:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1384:G:H21	1:0:1385:C:H5	1.62	0.47
1:0:1880:G:H2'	1:0:1881:U:C6	2.49	0.47
1:0:1991:C:H2'	1:0:1992:G:C8	2.38	0.47
1:0:1994:U:H2'	1:0:1995:G:H5'	1.95	0.47
1:0:2232:G:H2'	1:0:2233:C:C6	2.50	0.47
1:0:2351:G:C2	1:0:2352:A:C5	3.03	0.47
1:0:2402:U:H4'	1:0:2404:A:C8	2.49	0.47
1:0:2633:A:H5''	1:0:2634:G:OP1	2.14	0.47
1:0:2716:G:O2'	1:0:2717:G:H5'	2.15	0.47
2:9:25:G:H2'	2:9:26:G:C8	2.50	0.47
3:K:119:PHE:CD1	3:K:119:PHE:N	2.83	0.47
4:U:25:LYS:HD3	4:U:25:LYS:HA	1.51	0.47
4:U:52:GLY:HA3	4:U:60:PHE:CE1	2.50	0.47
1:0:430:C:C2	1:0:431:G:C8	3.02	0.46
1:0:433:G:N2	1:0:434:C:C2	2.83	0.46
1:0:735:G:H2'	1:0:736:G:C8	2.44	0.46
1:0:760:U:C2	1:0:2592:U:C4	3.03	0.46
1:0:1033:G:O6	1:0:1150:C:C6	2.68	0.46
1:0:1135:C:C4	1:0:1136:G:N7	2.84	0.46
1:0:1169:C:C2'	1:0:1170:U:H5'	2.44	0.46
1:0:1201:G:C8	1:0:1201:G:O5'	2.69	0.46
1:0:1216:G:C6	1:0:1217:U:C4	3.03	0.46
1:0:1299:A:N6	1:0:1302:C:N3	2.63	0.46
1:0:1332:G:H2'	1:0:1333:G:O4'	2.15	0.46
1:0:1412:C:N3	1:0:1413:U:C5	2.83	0.46
1:0:1422:C:H2'	1:0:1423:A:C8	2.51	0.46
1:0:1835:C:H2'	1:0:1836:C:H6	1.77	0.46
1:0:2042:A:C2	1:0:2482:A:C6	3.03	0.46
1:0:2062:U:O4	1:0:2063:A:N6	2.48	0.46
1:0:2198:U:H2'	1:0:2199:C:H4'	1.97	0.46
1:0:2198:U:C3'	1:0:2199:C:C5'	2.86	0.46
1:0:2236:U:H2'	1:0:2237:C:C6	2.50	0.46
1:0:2250:G:O2'	1:0:2251:U:H5'	2.15	0.46
1:0:2270:U:O2'	1:0:2271:C:H5'	2.14	0.46
1:0:2391:A:C8	1:0:2392:G:C8	3.02	0.46
1:0:2438:A:C8	1:0:2439:U:H5	2.33	0.46
1:0:2549:G:C2	1:0:2550:C:C1'	2.98	0.46
1:0:2586:G:H2'	1:0:2587:G:O4'	2.14	0.46
2:9:5:C:O2'	2:9:6:C:H5'	2.15	0.46
2:9:110:U:H2'	2:9:111:C:C6	2.43	0.46
4:U:25:LYS:HD2	4:U:29:GLU:CG	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:57:G:N2	1:0:72:A:C8	2.84	0.46
1:0:198:A:C5	1:0:243:G:C5	3.03	0.46
1:0:475:U:O2	1:0:801:A:N1	2.47	0.46
1:0:550:C:H2'	1:0:551:A:C8	2.48	0.46
1:0:682:G:N7	1:0:814:G:O6	2.49	0.46
1:0:695:G:H2'	1:0:696:U:C6	2.49	0.46
1:0:702:A:N7	1:0:703:A:C8	2.83	0.46
1:0:832:A:O2'	1:0:833:A:H5'	2.15	0.46
1:0:861:G:H1'	1:0:945:G:O4'	2.15	0.46
1:0:961:G:C6	1:0:962:C:C4	3.03	0.46
1:0:1028:G:H2'	1:0:1029:C:H6	1.80	0.46
1:0:1073:G:C2'	1:0:1074:G:C5'	2.78	0.46
1:0:1279:G:O2'	1:0:1995:G:N1	2.47	0.46
1:0:1450:G:O2'	1:0:1451:C:H5'	2.15	0.46
1:0:1619:A:H2'	1:0:1620:C:C5'	2.44	0.46
1:0:1678:G:C4	1:0:1983:G:N2	2.84	0.46
1:0:1683:G:C6	1:0:1684:G:N2	2.83	0.46
1:0:1838:G:N2	1:0:1878:C:C2	2.82	0.46
1:0:1919:A:N3	1:0:1923:U:H2'	2.30	0.46
1:0:2049:C:N4	1:0:2050:G:O6	2.48	0.46
1:0:2094:C:O5'	1:0:2103:G:H5'	2.15	0.46
1:0:2277:A:C8	1:0:2278:A:C8	3.03	0.46
1:0:2442:C:O2'	1:0:2443:C:H5'	2.15	0.46
1:0:2652:G:N3	1:0:2653:A:C8	2.84	0.46
1:0:2841:U:O2'	1:0:2842:C:P	2.73	0.46
1:0:206:U:O2	1:0:431:G:H5''	2.16	0.46
1:0:405:C:H2'	1:0:406:G:O4'	2.15	0.46
1:0:565:A:H2'	1:0:566:U:C6	2.50	0.46
1:0:702:A:N6	1:0:703:A:C6	2.84	0.46
1:0:876:A:C2	1:0:877:G:C5	3.04	0.46
1:0:985:G:O2'	1:0:986:A:C8	2.66	0.46
1:0:1046:U:O2'	1:0:1047:G:H5'	2.15	0.46
1:0:1184:G:H2'	1:0:1185:C:C5'	2.38	0.46
1:0:1281:A:C2	1:0:1996:A:C4	3.03	0.46
1:0:1326:U:O2'	1:0:1345:G:H4'	2.16	0.46
1:0:1364:C:C1'	1:0:1394:G:N2	2.78	0.46
1:0:1769:U:O4	1:0:1775:A:H1'	2.14	0.46
1:0:1780:A:C5	1:0:1781:C:C4	3.02	0.46
1:0:1921:A:C2'	1:0:1922:U:C5'	2.87	0.46
1:0:2056:C:H2'	1:0:2057:U:H6	1.79	0.46
1:0:2224:U:H5''	1:0:2225:G:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2250:G:C2	1:0:2251:U:O2	2.68	0.46
1:0:2262:C:C2	1:0:2368:G:N2	2.83	0.46
1:0:2269:G:N2	1:0:2322:U:H1'	2.30	0.46
1:0:2299:A:OP1	1:0:2300:G:C8	2.68	0.46
1:0:2519:C:C5	1:0:2520:A:N7	2.84	0.46
1:0:2647:G:C4	1:0:2648:G:C8	3.03	0.46
1:0:2876:C:O2'	1:0:2877:A:H5'	2.16	0.46
2:9:73:C:H2'	2:9:74:A:O4'	2.16	0.46
3:K:38:MET:HG2	3:K:131:LYS:CE	2.39	0.46
3:K:65:ILE:HG12	3:K:107:VAL:CG1	2.45	0.46
3:K:75:VAL:HG23	3:K:76:THR:N	2.30	0.46
1:0:66:U:O5'	1:0:66:U:H6	1.98	0.46
1:0:118:U:H5''	1:0:120:G:OP2	2.16	0.46
1:0:200:A:N1	1:0:435:A:C6	2.83	0.46
1:0:510:G:C4	1:0:512:A:OP2	2.68	0.46
1:0:546:A:H2'	1:0:547:U:C6	2.50	0.46
1:0:580:A:O2'	1:0:581:A:P	2.73	0.46
1:0:627:A:C2'	1:0:628:A:O4'	2.63	0.46
1:0:876:A:H2'	1:0:877:G:O4'	2.16	0.46
1:0:1004:A:C6	1:0:1005:U:C5	3.03	0.46
1:0:1329:U:C2	1:0:1330:G:C8	3.03	0.46
1:0:1573:G:H3'	1:0:1574:A:H5''	1.98	0.46
1:0:1687:C:C5	1:0:1688:U:C2	3.03	0.46
1:0:1998:A:O5'	1:0:1998:A:H8	1.98	0.46
1:0:2059:U:O2'	1:0:2060:A:OP1	2.27	0.46
1:0:2237:C:C2'	1:0:2238:G:OP1	2.63	0.46
1:0:2269:G:H2'	1:0:2270:U:C6	2.51	0.46
1:0:2274:C:H2'	1:0:2275:U:C5'	2.46	0.46
1:0:2484:G:O2'	1:0:2485:U:H5''	2.15	0.46
1:0:2708:U:O2'	1:0:2709:C:H5'	2.15	0.46
2:9:8:C:H2'	2:9:9:G:O4'	2.15	0.46
2:9:17:A:C2	2:9:112:A:C2	3.03	0.46
2:9:18:G:N2	2:9:71:G:H1'	2.31	0.46
2:9:88:C:C2	2:9:89:G:N7	2.83	0.46
5:8:8:ASP:OD2	5:8:12:ARG:NH2	2.48	0.46
1:0:246:C:N3	1:0:247:A:C5	2.84	0.46
1:0:322:A:H3'	1:0:323:G:C8	2.51	0.46
1:0:454:G:C2	1:0:456:C:C2	3.03	0.46
1:0:464:G:N3	1:0:469:G:C2	2.84	0.46
1:0:620:G:H2'	1:0:621:U:H6	1.80	0.46
1:0:698:A:N7	1:0:786:U:C4	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:717:G:H2'	1:0:739:G:H22	1.80	0.46
1:0:787:A:C1'	1:0:788:G:N7	2.78	0.46
1:0:989:G:C6	1:0:997:C:N3	2.83	0.46
1:0:1059:A:H2'	1:0:1060:C:C5	2.50	0.46
1:0:1356:G:H2'	1:0:1397:A:C2	2.50	0.46
1:0:1391:A:O2'	1:0:1392:U:OP1	2.33	0.46
1:0:1422:C:H2'	1:0:1423:A:H8	1.80	0.46
1:0:1518:C:H2'	1:0:1519:G:O4'	2.15	0.46
1:0:1669:A:H2'	1:0:1670:G:O4'	2.16	0.46
1:0:1825:C:H2'	1:0:1826:U:H5'	1.98	0.46
1:0:1952:A:O2'	1:0:1955:G:H1'	2.16	0.46
1:0:2031:A:H2'	1:0:2032:G:O4'	2.16	0.46
1:0:2266:A:C2	1:0:2268:G:H1'	2.50	0.46
1:0:2311:U:C5'	1:0:2315:A:H61	2.28	0.46
1:0:2322:U:C2'	1:0:2323:U:H5'	2.46	0.46
1:0:2623:A:H2'	1:0:2624:G:O4'	2.15	0.46
1:0:2700:U:C2	1:0:2701:A:C8	3.02	0.46
1:0:2796:A:H2'	1:0:2797:G:O4'	2.15	0.46
3:K:29:ALA:CB	3:K:68:ARG:HH22	2.27	0.46
1:0:221:A:C2	1:0:222:G:C1'	2.99	0.46
1:0:585:U:H4'	1:0:2481:G:N7	2.30	0.46
1:0:670:U:N3	1:0:671:A:C5	2.84	0.46
1:0:689:A:C2	1:0:815:A:N6	2.79	0.46
1:0:698:A:C1'	1:0:700:C:N4	2.76	0.46
1:0:807:A:H2'	1:0:808:C:O4'	2.16	0.46
1:0:853:C:H2'	1:0:854:G:O4'	2.14	0.46
1:0:956:A:C4	1:0:957:G:H4'	2.51	0.46
1:0:1139:A:H61	1:0:2497:A:H62	1.62	0.46
1:0:1279:G:HO2'	1:0:1280:U:P	2.35	0.46
1:0:1349:A:H2'	1:0:1350:G:O4'	2.15	0.46
1:0:1453:A:C2	1:0:1569:A:C6	3.04	0.46
1:0:1467:U:H6	1:0:1467:U:H5''	1.80	0.46
1:0:1699:A:H2'	1:0:1700:C:C6	2.51	0.46
1:0:1930:C:C2'	1:0:1931:G:H5'	2.45	0.46
1:0:2198:U:C2'	1:0:2199:C:C4'	2.94	0.46
1:0:2579:A:H2'	1:0:2580:C:C6	2.50	0.46
3:K:20:GLY:O	3:K:99:LYS:HD3	2.15	0.46
1:0:102:C:H2'	1:0:103:U:H6	1.75	0.46
1:0:615:C:H4'	1:0:671:A:O2'	2.16	0.46
1:0:961:G:O2'	1:0:962:C:H5'	2.14	0.46
1:0:1007:A:C6	1:0:1171:A:N1	2.84	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1054:C:O3'	1:0:1057:A:C8	2.68	0.46
1:0:1089:C:O2	1:0:1099:A:H4'	2.15	0.46
1:0:1288:A:N6	1:0:1308:C:C2'	2.78	0.46
1:0:1317:G:N2	1:0:1641:C:C2	2.84	0.46
1:0:1726:C:O2'	1:0:2834:A:H1'	2.16	0.46
1:0:1745:C:C2	1:0:1746:A:C8	3.04	0.46
1:0:1801:C:H1'	1:0:2207:G:HO2'	1.77	0.46
1:0:2043:A:C2	1:0:2481:G:C6	3.04	0.46
1:0:2335:U:O2'	1:0:2336:G:H5'	2.16	0.46
1:0:2464:G:H1'	3:K:125:LYS:HA	1.98	0.46
1:0:2506:C:C2'	1:0:2507:U:H5'	2.45	0.46
1:0:2694:G:H8	1:0:2694:G:OP1	1.98	0.46
1:0:2811:G:H2'	1:0:2812:A:H8	1.76	0.46
2:9:117:G:C6	2:9:118:G:C6	3.04	0.46
1:0:23:G:C6	1:0:528:G:C6	3.03	0.46
1:0:62:U:C3'	1:0:63:A:H8	2.28	0.46
1:0:308:C:O2'	1:0:309:G:H5'	2.15	0.46
1:0:389:G:H2'	1:0:390:U:C6	2.51	0.46
1:0:468:A:O2'	1:0:469:G:C4'	2.55	0.46
1:0:538:A:C2	1:0:540:G:N2	2.84	0.46
1:0:600:G:C6	1:0:602:C:N3	2.83	0.46
1:0:611:C:C2'	1:0:614:G:H5''	2.45	0.46
1:0:668:A:H2'	1:0:669:G:H4'	1.96	0.46
1:0:813:A:N3	1:0:813:A:C2'	2.77	0.46
1:0:886:A:C1'	3:K:66:TYR:CE2	2.99	0.46
1:0:1215:A:H2'	1:0:1216:G:H8	1.79	0.46
1:0:1233:A:H8	1:0:1233:A:O5'	1.98	0.46
1:0:1447:U:O2'	1:0:1448:A:H5'	2.15	0.46
1:0:1636:G:H2'	1:0:1637:U:C6	2.51	0.46
1:0:1653:C:H2'	1:0:1654:A:C8	2.48	0.46
1:0:1750:A:H5'	1:0:2695:C:H1'	1.97	0.46
1:0:1926:U:H3'	1:0:1926:U:C6	2.51	0.46
1:0:2354:G:N2	1:0:2357:A:OP2	2.45	0.46
1:0:2472:U:C5	1:0:2473:G:N7	2.84	0.46
1:0:2522:G:H2'	1:0:2523:G:C8	2.50	0.46
1:0:2534:U:H5	1:0:2535:C:N3	2.13	0.46
1:0:2557:G:N2	1:0:2558:C:N1	2.63	0.46
1:0:2756:A:O4'	1:0:2758:A:C8	2.68	0.46
3:K:59:PHE:CE1	3:K:107:VAL:HG11	2.46	0.46
4:U:41:ARG:CG	4:U:41:ARG:HH11	2.29	0.46
1:0:59:G:N3	1:0:73:A:N7	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:154:U:O2	1:0:154:U:C2'	2.64	0.46
1:0:372:U:H3'	1:0:372:U:C6	2.49	0.46
1:0:618:A:H2'	1:0:619:A:O4'	2.16	0.46
1:0:632:A:C2	1:0:633:G:C8	3.04	0.46
1:0:647:G:O2'	1:0:649:G:H4'	2.15	0.46
1:0:831:G:H2'	1:0:1201:G:H22	1.81	0.46
1:0:941:U:H4'	1:0:941:U:OP1	2.14	0.46
1:0:985:G:H2'	1:0:1000:G:N2	2.31	0.46
1:0:1164:C:H3'	1:0:1165:G:H8	1.81	0.46
1:0:1440:G:C6	1:0:1441:A:N7	2.84	0.46
1:0:1455:C:O2'	1:0:1456:C:C5'	2.63	0.46
1:0:1498:G:O2'	1:0:1499:A:H5'	2.16	0.46
1:0:1563:U:N3	1:0:1564:U:C4	2.84	0.46
1:0:1639:U:H2'	1:0:1640:C:C6	2.51	0.46
1:0:2182:A:H2'	1:0:2183:C:O4'	2.16	0.46
1:0:2493:U:H2'	1:0:2494:C:H6	1.74	0.46
1:0:2578:G:O2'	1:0:2579:A:H5'	2.15	0.46
1:0:2587:G:H8	1:0:2587:G:O5'	1.98	0.46
1:0:2684:A:N7	1:0:2685:A:N7	2.64	0.46
2:9:93:G:H21	2:9:94:G:H1'	1.80	0.46
2:9:95:U:H2'	2:9:96:C:C6	2.50	0.46
3:K:11:ARG:HH11	3:K:11:ARG:HG3	1.80	0.46
4:U:30:VAL:O	4:U:30:VAL:HG12	2.16	0.46
5:8:8:ASP:OD2	5:8:12:ARG:CZ	2.64	0.46
5:8:20:PHE:HD1	5:8:23:GLN:HE22	1.62	0.46
1:0:48:A:N6	1:0:154:U:C4	2.77	0.46
1:0:423:G:C2	1:0:431:G:C2	3.04	0.46
1:0:461:A:H2'	1:0:462:G:H8	1.81	0.46
1:0:483:A:H2'	1:0:484:G:H5'	1.98	0.46
1:0:587:A:OP1	1:0:1268:U:O2'	2.27	0.46
1:0:611:C:H2'	1:0:614:G:H5''	1.97	0.46
1:0:632:A:H2'	1:0:633:G:O5'	2.15	0.46
1:0:804:C:O2	1:0:804:C:C2'	2.63	0.46
1:0:831:G:H1'	1:0:1204:G:H22	1.78	0.46
1:0:913:A:C8	1:0:914:C:C5	3.03	0.46
1:0:1249:G:O2'	1:0:1250:A:P	2.74	0.46
1:0:1290:A:H2'	1:0:1291:G:H8	1.78	0.46
1:0:1353:A:C4'	1:0:1410:U:O4	2.59	0.46
1:0:1379:A:C8	1:0:1380:C:C5	3.04	0.46
1:0:1503:G:H2'	1:0:1504:G:C1'	2.45	0.46
1:0:1569:A:C2	1:0:1571:G:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1726:C:O2'	1:0:1727:C:H5'	2.16	0.46
1:0:1744:G:C6	1:0:1747:G:C6	3.04	0.46
1:0:1818:G:H2'	1:0:1819:U:O4'	2.16	0.46
1:0:2011:U:H2'	1:0:2012:A:O4'	2.15	0.46
1:0:2221:G:N7	1:0:2222:U:C5	2.84	0.46
1:0:2250:G:OP1	4:U:19:LYS:O	2.32	0.46
1:0:2426:G:O2'	1:0:2427:A:OP2	2.30	0.46
1:0:2429:A:OP1	1:0:2476:A:H2'	2.15	0.46
1:0:2445:C:N4	1:0:2446:C:N4	2.64	0.46
1:0:2463:G:C2'	3:K:125:LYS:HB2	2.46	0.46
1:0:2548:G:H2'	1:0:2549:G:H5'	1.92	0.46
1:0:2556:A:H5''	1:0:2557:G:H5'	1.97	0.46
1:0:2593:A:H2'	1:0:2594:U:OP2	2.16	0.46
1:0:2805:G:N3	1:0:2858:A:H2	2.14	0.46
5:8:13:MET:HE2	5:8:59:VAL:HB	1.97	0.46
1:0:538:A:N6	1:0:2026:C:O3'	2.49	0.45
1:0:591:G:H3'	1:0:592:G:C8	2.48	0.45
1:0:624:A:C2'	1:0:625:A:H5'	2.46	0.45
1:0:647:G:H1'	1:0:649:G:O2'	2.16	0.45
1:0:796:A:C5'	1:0:2568:A:OP1	2.53	0.45
1:0:852:U:C2	1:0:853:C:C5	3.04	0.45
1:0:1016:C:C2	1:0:1017:C:C5	3.04	0.45
1:0:1112:U:H2'	1:0:1113:C:H6	1.81	0.45
1:0:1141:U:OP2	1:0:2549:G:N2	2.49	0.45
1:0:1219:C:O5'	1:0:1219:C:H6	1.98	0.45
1:0:1439:G:C2	1:0:1440:G:N2	2.84	0.45
1:0:1629:G:N2	1:0:1633:C:C2	2.84	0.45
1:0:1681:A:C4	1:0:2706:U:C2	3.05	0.45
1:0:1688:U:H2'	1:0:1690:U:OP2	2.15	0.45
1:0:1732:U:O2'	1:0:1735:G:C6	2.69	0.45
1:0:1760:G:C2	1:0:1761:G:C8	3.04	0.45
1:0:1924:C:H42	5:8:61:ARG:CG	2.29	0.45
1:0:2026:C:OP2	1:0:2759:U:C4	2.69	0.45
1:0:2344:G:C4'	4:U:60:PHE:HE2	2.25	0.45
1:0:2357:A:C2'	1:0:2358:C:H5'	2.46	0.45
1:0:2593:A:O2'	1:0:2594:U:C5'	2.62	0.45
1:0:2624:G:H4'	1:0:2712:G:H2'	1.98	0.45
4:U:46:LYS:HD2	4:U:76:ALA:HB1	1.96	0.45
1:0:6:A:H2'	1:0:7:G:C8	2.51	0.45
1:0:14:A:N6	1:0:536:A:C2	2.84	0.45
1:0:20:C:C2'	1:0:21:A:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:67:G:H21	1:0:73:A:H4'	1.80	0.45
1:0:84:G:N2	1:0:85:C:H1'	2.31	0.45
1:0:134:G:O2'	1:0:135:U:H5'	2.16	0.45
1:0:159:A:C5	1:0:160:C:C4	3.05	0.45
1:0:178:C:C2'	1:0:179:U:H5'	2.44	0.45
1:0:459:A:N6	1:0:484:G:H1'	2.30	0.45
1:0:534:U:H2'	1:0:535:U:H6	1.74	0.45
1:0:549:G:H2'	1:0:550:C:C6	2.51	0.45
1:0:633:G:C6	1:0:634:G:C5	3.05	0.45
1:0:667:U:C4	1:0:669:G:O5'	2.68	0.45
1:0:882:C:C2	1:0:883:A:C8	3.03	0.45
1:0:944:A:O2'	1:0:945:G:H5'	2.16	0.45
1:0:953:G:H8	1:0:953:G:O5'	1.98	0.45
1:0:1002:C:C4	1:0:1198:C:N3	2.85	0.45
1:0:1019:U:C6	1:0:1019:U:C3'	2.98	0.45
1:0:1289:A:C2	1:0:1290:A:C5	3.04	0.45
1:0:1426:U:P	1:0:1428:G:N2	2.89	0.45
1:0:1631:C:O2'	1:0:1632:A:OP1	2.34	0.45
1:0:1664:G:O5'	1:0:1665:C:OP1	2.34	0.45
1:0:1696:C:C2'	1:0:1697:U:H5'	2.46	0.45
1:0:1791:C:C6	1:0:1791:C:C3'	2.99	0.45
1:0:1969:G:O2'	1:0:1970:G:H5'	2.17	0.45
1:0:2046:C:O2	1:0:2429:A:N1	2.49	0.45
1:0:2220:A:O2'	1:0:2221:G:H5'	2.16	0.45
1:0:2233:C:O2	5:8:78:GLU:N	2.50	0.45
1:0:2256:G:C6	1:0:2257:A:N7	2.84	0.45
1:0:2339:A:C2	1:0:2340:C:H1'	2.51	0.45
1:0:2430:A:H2'	1:0:2431:C:H5''	1.98	0.45
1:0:2450:A:H2'	1:0:2451:G:O4'	2.15	0.45
1:0:2510:A:C5	1:0:2511:G:N7	2.84	0.45
1:0:2597:G:O2'	1:0:2598:C:H5'	2.16	0.45
1:0:2781:G:H2'	1:0:2782:G:O4'	2.16	0.45
4:U:56:ASP:C	4:U:57:HIS:CD2	2.95	0.45
1:0:142:U:H5''	1:0:143:A:OP1	2.16	0.45
1:0:214:C:C2	1:0:215:G:C8	3.04	0.45
1:0:473:C:C6	1:0:473:C:C3'	2.99	0.45
1:0:491:A:OP2	1:0:492:G:C5'	2.63	0.45
1:0:542:A:C8	1:0:542:A:C3'	2.99	0.45
1:0:542:A:H3'	1:0:542:A:H8	1.81	0.45
1:0:562:G:N7	1:0:563:U:C5	2.85	0.45
1:0:693:A:C6	1:0:811:G:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:796:A:C8	1:0:796:A:H3'	2.52	0.45
1:0:886:A:C1'	3:K:66:TYR:HE2	2.29	0.45
1:0:1005:U:H3	1:0:1007:A:H62	1.63	0.45
1:0:1069:G:C8	1:0:1069:G:OP2	2.69	0.45
1:0:1174:G:O2'	1:0:1175:A:H5'	2.16	0.45
1:0:1391:A:H2'	1:0:1392:U:C6	2.51	0.45
1:0:1518:C:C4	1:0:1519:G:N7	2.84	0.45
1:0:1687:C:C5	1:0:1688:U:C4	3.05	0.45
1:0:1924:C:H2'	1:0:1925:C:H5'	1.99	0.45
1:0:2037:A:N1	1:0:2595:C:C4	2.84	0.45
1:0:2118:A:C8	1:0:2118:A:C3'	3.00	0.45
1:0:2200:G:H2'	1:0:2201:G:H8	1.81	0.45
1:0:2221:G:C2'	1:0:2222:U:O5'	2.64	0.45
1:0:2394:G:C2	1:0:2395:C:C6	3.05	0.45
1:0:2401:A:H2'	1:0:2403:C:C5	2.51	0.45
1:0:2559:U:C4	1:0:2560:G:C8	3.04	0.45
1:0:2866:A:O2'	1:0:2867:G:O4'	2.34	0.45
1:0:185:C:H2'	1:0:186:C:H6	1.81	0.45
1:0:197:G:C8	1:0:440:U:O4	2.70	0.45
1:0:309:G:N2	1:0:350:U:C5	2.85	0.45
1:0:366:U:H2'	1:0:367:G:C8	2.51	0.45
1:0:699:G:C5'	1:0:700:C:OP2	2.52	0.45
1:0:743:A:O2'	1:0:744:C:H5'	2.17	0.45
1:0:745:C:C2'	1:0:746:G:H5'	2.45	0.45
1:0:839:U:C5	1:0:841:G:C8	3.01	0.45
1:0:1315:A:C5'	1:0:1316:G:OP2	2.65	0.45
1:0:1337:G:C4	1:0:1341:G:O6	2.70	0.45
1:0:1376:C:O2	1:0:1382:G:C2	2.69	0.45
1:0:1455:C:H2'	1:0:1456:C:C6	2.48	0.45
1:0:1491:C:C2'	1:0:1492:A:H5'	2.46	0.45
1:0:1531:C:O2	1:0:1573:G:O4'	2.35	0.45
1:0:1789:U:O2'	1:0:1793:A:H1'	2.16	0.45
1:0:1920:A:C8	1:0:1920:A:C3'	2.99	0.45
1:0:2328:G:C2'	1:0:2329:C:H5''	2.46	0.45
1:0:2529:G:O2'	1:0:2530:C:H5'	2.17	0.45
2:9:100:G:C5	2:9:101:A:C8	3.04	0.45
3:K:128:ILE:HD12	3:K:128:ILE:N	2.22	0.45
1:0:533:C:C2'	1:0:534:U:H5'	2.47	0.45
1:0:591:G:C6	1:0:1272:G:C6	3.05	0.45
1:0:607:C:C2'	1:0:608:G:H5'	2.46	0.45
1:0:614:G:H21	1:0:670:U:H4'	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:705:C:C2	1:0:706:A:N7	2.84	0.45
1:0:751:G:HO2'	1:0:752:G:C4'	2.29	0.45
1:0:841:G:H2'	1:0:842:A:H8	1.76	0.45
1:0:854:G:H2'	1:0:855:G:C8	2.52	0.45
1:0:869:C:H4'	4:U:69:PHE:HB2	1.98	0.45
1:0:1055:A:H2	1:0:1121:G:H2'	1.82	0.45
1:0:1162:A:H2'	1:0:1163:C:O4'	2.16	0.45
1:0:1207:G:H2'	1:0:1208:A:H8	1.82	0.45
1:0:1361:G:N1	1:0:1615:C:C4	2.85	0.45
1:0:1399:C:N4	1:0:1400:A:H62	2.15	0.45
1:0:1454:U:H2'	1:0:1455:C:H6	1.82	0.45
1:0:1760:G:N2	1:0:1967:U:C2	2.84	0.45
1:0:1764:A:H2'	1:0:1765:C:C5'	2.44	0.45
1:0:2202:G:C2	1:0:2203:G:H1'	2.51	0.45
1:0:2476:A:H1'	1:0:2477:C:C5	2.51	0.45
1:0:2476:A:C1'	1:0:2477:C:H5	2.28	0.45
1:0:2557:G:H21	1:0:2558:C:C1'	2.29	0.45
1:0:2678:C:O2	1:0:2688:G:N2	2.50	0.45
3:K:76:THR:HG22	3:K:77:LYS:H	1.82	0.45
1:0:26:G:C2	1:0:27:G:N2	2.84	0.45
1:0:45:C:H2'	1:0:46:C:C6	2.51	0.45
1:0:48:A:H1'	1:0:50:G:N3	2.32	0.45
1:0:65:C:C2'	1:0:66:U:C5'	2.93	0.45
1:0:485:G:H5'	1:0:486:U:OP2	2.17	0.45
1:0:538:A:N7	1:0:2025:A:C2	2.85	0.45
1:0:602:C:H2'	1:0:603:C:H6	1.79	0.45
1:0:985:G:H1'	1:0:1001:A:H61	1.77	0.45
1:0:1083:C:H42	1:0:1103:C:N4	2.14	0.45
1:0:1250:A:O2'	1:0:1251:G:C4'	2.64	0.45
1:0:1328:C:C2	1:0:1329:U:C6	3.05	0.45
1:0:1452:U:H5	1:0:1568:A:C2	2.35	0.45
1:0:1583:A:H8	1:0:1583:A:OP2	1.98	0.45
1:0:1936:A:C2	1:0:2528:G:N3	2.82	0.45
1:0:1949:A:C2	1:0:2572:U:H1'	2.52	0.45
1:0:2076:G:H2'	1:0:2077:G:C8	2.52	0.45
1:0:2238:G:C5	1:0:2239:C:C5	3.05	0.45
1:0:2410:U:O2	1:0:2412:A:C8	2.70	0.45
1:0:2642:G:O2'	1:0:2643:G:H5'	2.17	0.45
2:9:95:U:H2'	2:9:96:C:H6	1.81	0.45
5:8:72:LYS:HD2	5:8:72:LYS:HA	1.84	0.45
1:0:322:A:C2	1:0:339:U:O4	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:798:G:C6	1:0:799:C:C4	3.04	0.45
1:0:853:C:N3	1:0:950:G:C6	2.85	0.45
1:0:921:A:C6	1:0:924:C:C2	3.05	0.45
1:0:973:U:H4'	1:0:2475:C:O2'	2.17	0.45
1:0:1175:A:H2'	1:0:1176:U:C6	2.52	0.45
1:0:1356:G:OP2	1:0:1357:U:OP2	2.35	0.45
1:0:1761:G:H2'	1:0:1762:C:C6	2.50	0.45
1:0:1883:A:C2	1:0:1953:A:N6	2.84	0.45
1:0:2038:C:H5'	1:0:2039:G:C5'	2.46	0.45
1:0:2271:C:N4	1:0:2272:A:H62	2.14	0.45
1:0:2343:C:C5'	4:U:56:ASP:OD2	2.65	0.45
1:0:2424:G:C2'	1:0:2425:G:H5'	2.46	0.45
1:0:2517:C:O2'	1:0:2518:C:H5'	2.17	0.45
1:0:2543:A:C2	1:0:2626:U:H5'	2.51	0.45
1:0:2557:G:H2'	1:0:2558:C:H6	1.81	0.45
1:0:2651:U:N3	1:0:2652:G:N7	2.65	0.45
2:9:26:G:N2	2:9:30:C:C2	2.85	0.45
1:0:110:U:C5	1:0:111:G:C4	3.04	0.45
1:0:402:A:C5	1:0:2392:G:O2'	2.69	0.45
1:0:559:C:H3'	1:0:559:C:C6	2.52	0.45
1:0:681:A:C2	1:0:683:A:C5	3.05	0.45
1:0:804:C:C2'	1:0:805:G:OP2	2.65	0.45
1:0:816:U:H2'	1:0:817:A:H5'	1.99	0.45
1:0:833:A:C2	1:0:834:A:C4	3.05	0.45
1:0:992:A:C2	1:0:2011:U:O4'	2.69	0.45
1:0:1271:C:O2'	1:0:1272:G:H5'	2.17	0.45
1:0:1328:C:C2	1:0:1351:G:N2	2.85	0.45
1:0:1356:G:OP2	1:0:1357:U:P	2.75	0.45
1:0:1597:A:H2'	1:0:1598:C:C6	2.52	0.45
1:0:1875:C:H2'	1:0:1876:C:H6	1.81	0.45
1:0:1883:A:N3	1:0:1953:A:N7	2.65	0.45
1:0:1887:G:N2	1:0:1888:C:H1'	2.32	0.45
1:0:1888:C:C4	1:0:1913:G:N2	2.84	0.45
1:0:2027:C:C2'	1:0:2028:C:H5'	2.46	0.45
1:0:2036:G:O2'	1:0:2037:A:H5'	2.16	0.45
1:0:2177:U:N3	1:0:2178:U:C5	2.85	0.45
1:0:2197:U:H2'	1:0:2198:U:C6	2.51	0.45
1:0:2240:C:C2'	1:0:2241:U:C5'	2.94	0.45
1:0:2474:G:OP1	3:K:82:THR:HG22	2.17	0.45
1:0:2505:G:H22	1:0:2517:C:H1'	1.82	0.45
1:0:2545:A:O2'	1:0:2546:G:OP2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2733:A:H2'	1:0:2734:U:C5'	2.45	0.45
1:0:2817:A:N1	1:0:2851:G:C6	2.85	0.45
1:0:2859:U:C5	1:0:2860:C:N1	2.85	0.45
3:K:38:MET:HG3	3:K:131:LYS:HE2	1.93	0.45
3:K:78:LYS:HD2	3:K:79:PRO:N	2.32	0.45
1:0:48:A:C2	1:0:50:G:N2	2.85	0.45
1:0:70:A:C4'	1:0:71:A:C5'	2.90	0.45
1:0:571:U:C2	1:0:581:A:C8	3.04	0.45
1:0:584:A:C2	1:0:585:U:C5	3.05	0.45
1:0:786:U:H6	1:0:786:U:O5'	2.00	0.45
1:0:874:A:C6	1:0:929:A:N7	2.85	0.45
1:0:1066:G:H2'	1:0:1067:G:H4'	1.99	0.45
1:0:1069:G:OP2	1:0:1069:G:H8	2.00	0.45
1:0:1181:C:H2'	1:0:1182:U:H5''	1.98	0.45
1:0:1207:G:O2'	1:0:1208:A:H5'	2.17	0.45
1:0:1255:A:H2'	1:0:1256:C:H6	1.82	0.45
1:0:1434:U:C2	1:0:1435:G:C8	3.04	0.45
1:0:1508:G:N1	1:0:1515:U:N3	2.64	0.45
1:0:1740:G:H2'	1:0:1741:G:O4'	2.17	0.45
1:0:1763:G:H2'	1:0:1764:A:C5'	2.46	0.45
1:0:1846:A:H8	1:0:1846:A:O5'	1.99	0.45
1:0:1849:G:H2'	1:0:1850:G:H8	1.75	0.45
1:0:2108:G:N2	1:0:2157:C:C4	2.85	0.45
1:0:2203:G:O2'	1:0:2205:C:C4	2.68	0.45
1:0:2439:U:C2'	1:0:2440:C:H5'	2.47	0.45
1:0:2519:C:C2	1:0:2520:A:C8	3.05	0.45
2:9:11:G:C2	2:9:12:C:C2	3.05	0.45
1:0:30:G:C6	1:0:31:C:N4	2.85	0.45
1:0:536:A:N6	1:0:2605:C:C4'	2.80	0.45
1:0:697:G:N1	1:0:788:G:C5	2.84	0.45
1:0:916:U:C4	1:0:917:U:C4	3.05	0.45
1:0:929:A:OP1	1:0:929:A:H4'	2.17	0.45
1:0:955:G:H5'	1:0:956:A:C5'	2.47	0.45
1:0:958:G:N2	1:0:959:C:C2	2.85	0.45
1:0:976:C:C2'	1:0:977:G:H5'	2.46	0.45
1:0:1312:G:H1'	1:0:1658:A:H61	1.80	0.45
1:0:1351:G:C6	1:0:1352:G:C6	3.04	0.45
1:0:1510:A:N7	1:0:1511:A:C5	2.85	0.45
1:0:1934:U:H2'	1:0:1936:A:OP2	2.16	0.45
1:0:2082:C:C6	1:0:2082:C:C3'	3.00	0.45
1:0:2526:U:C5	1:0:2545:A:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2695:C:O2'	1:0:2696:A:H5'	2.17	0.45
1:0:2743:G:H8	1:0:2743:G:O5'	2.00	0.45
2:9:15:A:C2	2:9:71:G:N2	2.76	0.45
3:K:20:GLY:O	3:K:99:LYS:CD	2.65	0.45
1:0:13:A:C2	1:0:536:A:C8	3.04	0.44
1:0:197:G:C5	1:0:440:U:C4	3.05	0.44
1:0:204:A:N6	1:0:2386:G:C8	2.85	0.44
1:0:322:A:O2'	1:0:343:A:O4'	2.32	0.44
1:0:464:G:C2	1:0:465:C:C4	3.05	0.44
1:0:589:C:C4	1:0:590:C:N4	2.85	0.44
1:0:594:G:N2	1:0:1269:G:C6	2.85	0.44
1:0:620:G:H2'	1:0:621:U:C6	2.51	0.44
1:0:717:G:O2'	1:0:718:A:O5'	2.33	0.44
1:0:730:C:O2	1:0:731:A:C8	2.70	0.44
1:0:789:G:N3	1:0:806:A:N7	2.65	0.44
1:0:838:A:H4'	1:0:2407:G:N7	2.31	0.44
1:0:929:A:H2	2:9:81:C:O2	2.00	0.44
1:0:1129:A:H2'	1:0:1130:U:H6	1.81	0.44
1:0:1255:A:C6	1:0:1256:C:N4	2.86	0.44
1:0:1359:G:N2	1:0:1617:G:H1'	2.32	0.44
1:0:1489:C:H3'	1:0:1490:U:H5'	1.97	0.44
1:0:1621:C:C5'	1:0:1626:A:N6	2.75	0.44
1:0:1760:G:C2	1:0:1761:G:N7	2.85	0.44
1:0:1926:U:C6	1:0:1926:U:C3'	3.01	0.44
1:0:2368:G:H5''	1:0:2369:U:C5'	2.47	0.44
1:0:2464:G:C1'	3:K:125:LYS:HA	2.48	0.44
1:0:2464:G:C4'	3:K:125:LYS:O	2.53	0.44
1:0:2522:G:C2	1:0:2745:A:C2'	2.99	0.44
1:0:2593:A:OP2	1:0:2593:A:O4'	2.35	0.44
1:0:2727:G:H2'	1:0:2728:A:H5''	1.99	0.44
4:U:40:GLN:HE21	4:U:42:GLY:C	2.25	0.44
4:U:46:LYS:HD2	4:U:78:PHE:HE1	1.82	0.44
1:0:459:A:H4'	1:0:459:A:OP1	2.17	0.44
1:0:767:G:H2'	1:0:768:U:C6	2.53	0.44
1:0:836:G:H1	1:0:847:C:H42	1.65	0.44
1:0:861:G:H1'	1:0:944:A:N3	2.32	0.44
1:0:1179:A:H2	1:0:1195:U:O2	2.01	0.44
1:0:1468:A:H3'	1:0:1469:U:H5''	1.98	0.44
1:0:1712:G:C2'	1:0:1713:G:O5'	2.66	0.44
1:0:1743:C:H5'	1:0:2836:U:O2'	2.18	0.44
1:0:2522:G:N1	1:0:2745:A:C8	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2628:C:H2'	1:0:2629:U:O4'	2.17	0.44
1:0:2756:A:N3	1:0:2758:A:C5	2.85	0.44
2:9:70:C:C4	2:9:71:G:N7	2.85	0.44
3:K:11:ARG:HB3	3:K:15:ARG:NH2	2.31	0.44
5:8:5:ILE:CG2	5:8:6:ARG:N	2.80	0.44
5:8:7:LYS:HD3	5:8:10:GLU:OE2	2.17	0.44
1:0:76:C:H6	1:0:76:C:C5'	2.26	0.44
1:0:160:C:O2'	1:0:161:U:H5'	2.17	0.44
1:0:166:G:O6	1:0:182:G:H2'	2.17	0.44
1:0:204:A:H1'	1:0:207:U:C5	2.52	0.44
1:0:311:A:C6	1:0:345:U:H4'	2.52	0.44
1:0:464:G:H2'	1:0:465:C:C5	2.52	0.44
1:0:525:A:O2'	1:0:526:C:H5'	2.18	0.44
1:0:543:G:H2'	1:0:544:U:C6	2.53	0.44
1:0:616:U:C4	1:0:617:U:H5	2.36	0.44
1:0:650:U:O2	1:0:651:C:C6	2.70	0.44
1:0:701:U:C2'	1:0:702:A:H5'	2.47	0.44
1:0:704:G:C6	1:0:705:C:C4	3.05	0.44
1:0:706:A:H2'	1:0:707:U:O4'	2.18	0.44
1:0:807:A:C5	1:0:808:C:C4	3.05	0.44
1:0:836:G:N2	1:0:847:C:N3	2.65	0.44
1:0:870:C:H5''	4:U:45:PHE:HE2	1.83	0.44
1:0:940:G:C2'	1:0:941:U:C4'	2.87	0.44
1:0:1000:G:P	1:0:1168:G:H4'	2.57	0.44
1:0:1025:A:O2'	1:0:1026:U:H5'	2.18	0.44
1:0:1094:C:N3	1:0:1097:A:OP2	2.51	0.44
1:0:1138:A:C2	1:0:2497:A:C5	3.06	0.44
1:0:1198:C:OP1	1:0:1199:U:C1'	2.62	0.44
1:0:1212:U:C2	1:0:1213:U:C5	3.06	0.44
1:0:1328:C:O2'	1:0:1405:A:C1'	2.63	0.44
1:0:1356:G:N3	1:0:1397:A:H2	2.15	0.44
1:0:1438:G:H2'	1:0:1439:G:H5''	1.98	0.44
1:0:1439:G:H3'	1:0:1439:G:OP2	2.17	0.44
1:0:1581:C:H2'	1:0:1582:A:H5''	1.99	0.44
1:0:1608:U:H2'	1:0:1609:G:H8	1.82	0.44
1:0:1764:A:N7	1:0:1821:A:C1'	2.80	0.44
1:0:1846:A:N6	1:0:1871:G:H1'	2.32	0.44
1:0:1911:A:H2'	1:0:1912:G:H5'	1.99	0.44
1:0:1999:U:O2'	1:0:2000:U:H5'	2.18	0.44
1:0:2196:U:O2'	1:0:2197:U:H5'	2.17	0.44
1:0:2571:G:N1	1:0:2582:G:C6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2867:G:C8	1:0:2867:G:OP2	2.71	0.44
2:9:104:A:C8	2:9:105:G:N7	2.85	0.44
3:K:70:PHE:HA	3:K:71:PRO:HD3	1.85	0.44
1:0:136:A:C8	1:0:137:A:C8	3.06	0.44
1:0:172:A:C5	1:0:175:C:C4	3.05	0.44
1:0:180:C:C2	1:0:181:A:N7	2.86	0.44
1:0:242:A:HO2'	1:0:243:G:C4'	2.30	0.44
1:0:300:C:O2'	1:0:301:C:H5'	2.17	0.44
1:0:319:G:N2	1:0:511:A:C5	2.86	0.44
1:0:485:G:C6	1:0:520:C:C4	3.06	0.44
1:0:617:U:C2	1:0:618:A:C8	3.05	0.44
1:0:741:G:C4	1:0:743:A:C8	3.05	0.44
1:0:773:G:H2'	1:0:774:A:C5'	2.44	0.44
1:0:854:G:H2'	1:0:855:G:H8	1.82	0.44
1:0:987:G:C2	1:0:988:G:C5	3.05	0.44
1:0:1368:G:C5	1:0:1369:G:N7	2.85	0.44
1:0:1404:C:C5	1:0:1407:G:C5	3.06	0.44
1:0:1494:G:O5'	1:0:1494:G:C8	2.70	0.44
1:0:1774:A:C2	1:0:2567:G:O4'	2.71	0.44
1:0:1826:U:C4'	1:0:1952:A:C2	3.01	0.44
1:0:1885:C:C2'	1:0:1886:G:H5'	2.46	0.44
1:0:2057:U:O2'	1:0:2576:G:H1'	2.17	0.44
1:0:2165:A:H2'	1:0:2166:G:O4'	2.17	0.44
1:0:2221:G:H2'	1:0:2222:U:O5'	2.17	0.44
1:0:2298:U:O3'	1:0:2299:A:H8	2.00	0.44
1:0:2573:C:C2'	1:0:2574:G:H5'	2.47	0.44
1:0:2624:G:C4'	1:0:2712:G:O2'	2.61	0.44
1:0:2797:G:O2'	1:0:2800:C:N4	2.50	0.44
2:9:15:A:H2	2:9:71:G:N2	2.14	0.44
2:9:93:G:N2	2:9:94:G:H1'	2.32	0.44
3:K:43:ILE:HG13	3:K:98:VAL:HG21	2.00	0.44
1:0:23:G:C4	1:0:24:G:C8	3.06	0.44
1:0:29:U:H2'	1:0:30:G:C8	2.48	0.44
1:0:48:A:O2'	1:0:50:G:C4	2.67	0.44
1:0:203:G:N2	1:0:204:A:C2	2.86	0.44
1:0:243:G:N1	1:0:244:C:C2	2.85	0.44
1:0:333:A:C2	1:0:351:A:C6	3.06	0.44
1:0:456:C:H3'	1:0:456:C:C6	2.52	0.44
1:0:853:C:C2	1:0:950:G:N1	2.86	0.44
1:0:1016:C:O5'	1:0:1016:C:H6	2.01	0.44
1:0:1061:A:N3	1:0:1061:A:H2'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1109:A:H3'	1:0:1110:G:C8	2.45	0.44
1:0:1250:A:HO2'	1:0:1251:G:C4'	2.31	0.44
1:0:1400:A:C6	1:0:1414:G:N1	2.85	0.44
1:0:1950:C:H2'	1:0:1951:G:C8	2.51	0.44
1:0:2039:G:C4	1:0:2556:A:C2	3.05	0.44
1:0:2107:G:C4	1:0:2108:G:C8	3.06	0.44
1:0:2404:A:H5'	1:0:2406:C:O4'	2.17	0.44
1:0:2553:G:N2	1:0:2554:C:H1'	2.33	0.44
1:0:2560:G:H4'	1:0:2561:G:C8	2.52	0.44
2:9:120:G:N1	2:9:121:G:C5	2.85	0.44
1:0:146:C:H2'	1:0:147:G:H8	1.80	0.44
1:0:171:G:C2	1:0:179:U:H1'	2.53	0.44
1:0:195:A:O2'	1:0:196:A:H5'	2.17	0.44
1:0:473:C:H3'	1:0:473:C:H6	1.81	0.44
1:0:491:A:H2	1:0:509:U:O2	2.00	0.44
1:0:683:A:H4'	1:0:684:C:O5'	2.17	0.44
1:0:839:U:C5'	1:0:2408:G:OP2	2.60	0.44
1:0:881:U:H2'	1:0:882:C:C6	2.52	0.44
1:0:1045:G:C5	1:0:1133:G:C2	3.06	0.44
1:0:1055:A:C2	1:0:1121:G:C2'	3.01	0.44
1:0:1145:C:N4	1:0:1149:G:C5	2.85	0.44
1:0:1223:G:C5	1:0:1250:A:N6	2.85	0.44
1:0:1283:C:C4	1:0:1665:C:H5	2.35	0.44
1:0:1479:G:N2	1:0:1543:G:N2	2.64	0.44
1:0:1581:C:O2'	1:0:1582:A:H5''	2.17	0.44
1:0:1588:A:O2'	1:0:1589:G:H5'	2.18	0.44
1:0:1794:A:H61	1:0:1806:G:C2'	2.31	0.44
1:0:1850:G:O6	1:0:1867:A:C4	2.70	0.44
1:0:2028:C:C2'	1:0:2029:G:O5'	2.66	0.44
1:0:2161:C:O5'	1:0:2161:C:H6	2.01	0.44
1:0:2228:U:O2	1:0:2232:G:OP2	2.35	0.44
1:0:2395:C:N3	1:0:2396:C:C5	2.86	0.44
1:0:2407:G:H4'	1:0:2408:G:C5	2.52	0.44
1:0:2687:G:C2'	1:0:2688:G:O4'	2.63	0.44
1:0:2762:G:N2	1:0:2763:U:H1'	2.32	0.44
4:U:46:LYS:HB2	4:U:78:PHE:CE1	2.52	0.44
5:8:1:MET:CA	5:8:4:ASP:OD2	2.63	0.44
5:8:53:ARG:NH2	5:8:100:GLU:OE2	2.51	0.44
1:0:27:G:O2'	1:0:28:A:O5'	2.35	0.44
1:0:172:A:C8	1:0:175:C:N4	2.86	0.44
1:0:421:G:H2'	1:0:422:C:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:554:U:O3'	1:0:555:U:C4'	2.66	0.44
1:0:574:C:C4'	1:0:1266:G:O6	2.60	0.44
1:0:888:G:C2	1:0:889:C:H1'	2.53	0.44
1:0:1011:A:N1	1:0:1012:A:C2	2.86	0.44
1:0:1237:G:H2'	1:0:1238:A:C8	2.52	0.44
1:0:1307:U:H6	1:0:1307:U:H5''	1.82	0.44
1:0:1503:G:C6	1:0:1504:G:C6	3.05	0.44
1:0:1614:C:H2'	1:0:1615:C:C6	2.53	0.44
1:0:1927:U:H3'	1:0:1928:G:C5'	2.48	0.44
1:0:1956:G:H5'	1:0:1956:G:C8	2.49	0.44
1:0:2663:U:N3	1:0:2664:G:N7	2.66	0.44
5:8:7:LYS:HA	5:8:10:GLU:HG2	2.00	0.44
1:0:158:A:H5'	1:0:158:A:C8	2.43	0.44
1:0:351:A:C6	1:0:352:G:C4	3.06	0.44
1:0:483:A:H2'	1:0:484:G:C5'	2.48	0.44
1:0:621:U:O2'	1:0:622:U:H5'	2.18	0.44
1:0:685:U:O2'	1:0:686:C:H5'	2.17	0.44
1:0:785:U:H2'	1:0:786:U:C6	2.53	0.44
1:0:856:A:H8	1:0:856:A:O5'	2.01	0.44
1:0:921:A:N1	1:0:924:C:C2	2.85	0.44
1:0:1430:G:N2	1:0:1599:G:H1'	2.33	0.44
1:0:1474:A:C2	1:0:1476:G:C8	3.05	0.44
1:0:1503:G:H3'	1:0:1504:G:H8	1.82	0.44
1:0:1684:G:H2'	1:0:1974:U:O4	2.18	0.44
1:0:1714:A:H2'	1:0:1714:A:N3	2.33	0.44
1:0:1931:G:H1'	1:0:1942:G:N2	2.33	0.44
1:0:2428:U:OP1	1:0:2428:U:O4'	2.36	0.44
1:0:2633:A:H61	1:0:2646:C:N4	2.16	0.44
1:0:2658:A:C2	1:0:2709:C:C2	3.06	0.44
1:0:2674:C:C2	1:0:2675:U:C5	3.06	0.44
1:0:2733:A:H8	1:0:2733:A:O5'	2.01	0.44
1:0:2794:G:C5	1:0:2796:A:C2	3.06	0.44
1:0:2862:G:O2'	1:0:2863:U:H5'	2.17	0.44
5:8:8:ASP:OD1	5:8:8:ASP:C	2.61	0.44
5:8:52:ALA:O	5:8:56:VAL:HG23	2.18	0.44
1:0:7:G:H2'	1:0:8:A:C8	2.53	0.44
1:0:88:G:H3'	1:0:89:A:C5'	2.34	0.44
1:0:88:G:C6	1:0:89:A:N7	2.86	0.44
1:0:180:C:C4	1:0:181:A:N7	2.86	0.44
1:0:224:G:H4'	1:0:399:G:C5	2.53	0.44
1:0:334:G:C2	1:0:344:G:H1'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:532:A:H2'	1:0:533:C:C6	2.52	0.44
1:0:633:G:H2'	1:0:634:G:H8	1.83	0.44
1:0:672:C:O5'	1:0:672:C:H6	2.01	0.44
1:0:709:A:C2	1:0:710:C:C2	3.06	0.44
1:0:912:A:C8	1:0:913:A:C8	3.06	0.44
1:0:1142:G:C8	1:0:2008:C:O2'	2.62	0.44
1:0:1336:G:O2'	1:0:1337:G:H5'	2.17	0.44
1:0:1346:C:N4	1:0:1347:C:N4	2.66	0.44
1:0:1484:G:C6	1:0:1538:A:N1	2.86	0.44
1:0:1570:C:C6	1:0:1570:C:H3'	2.53	0.44
1:0:1621:C:H5'	1:0:1626:A:H62	1.76	0.44
1:0:1627:C:N4	1:0:1628:C:H41	2.16	0.44
1:0:1776:A:C8	1:0:1778:U:C5	3.05	0.44
1:0:1918:G:N2	1:0:1947:G:N9	2.65	0.44
1:0:1976:U:C2	1:0:1977:C:C6	3.06	0.44
1:0:2037:A:N7	1:0:2039:G:H1'	2.32	0.44
1:0:2104:G:O2'	1:0:2105:U:H5'	2.18	0.44
1:0:2526:U:C2	1:0:2527:G:C8	3.06	0.44
1:0:2559:U:C6	1:0:2560:G:H8	2.35	0.44
1:0:2732:C:H6	1:0:2732:C:C5'	2.27	0.44
1:0:2763:U:O2'	1:0:2764:U:H5'	2.18	0.44
2:9:56:G:C2'	2:9:57:U:H5'	2.47	0.44
2:9:71:G:C6	2:9:72:C:C4	3.06	0.44
3:K:13:GLN:HB3	3:K:14:PHE:CE2	2.52	0.44
1:0:340:G:O4'	1:0:340:G:P	2.75	0.43
1:0:403:A:O2'	1:0:404:A:N7	2.50	0.43
1:0:541:C:OP1	1:0:570:G:C6	2.70	0.43
1:0:543:G:C4	1:0:570:G:N2	2.85	0.43
1:0:632:A:H2'	1:0:633:G:C5'	2.48	0.43
1:0:638:A:C2'	1:0:639:G:H5'	2.48	0.43
1:0:717:G:O2'	1:0:718:A:P	2.75	0.43
1:0:777:A:O2'	1:0:778:G:P	2.76	0.43
1:0:781:G:H2'	1:0:782:U:C6	2.52	0.43
1:0:848:A:H2'	1:0:849:G:C5'	2.47	0.43
1:0:1166:A:H5''	1:0:1167:A:OP2	2.17	0.43
1:0:1358:C:OP2	1:0:1358:C:H6	2.01	0.43
1:0:1514:C:H6	1:0:1514:C:P	2.40	0.43
1:0:1661:C:H2'	1:0:1662:G:H8	1.82	0.43
1:0:1737:G:H8	1:0:1737:G:O5'	2.00	0.43
1:0:1917:C:O2'	1:0:1918:G:H5'	2.18	0.43
1:0:1964:A:OP1	1:0:1965:U:OP2	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2200:G:H2'	1:0:2201:G:C8	2.53	0.43
1:0:2240:C:C2'	1:0:2241:U:H5''	2.48	0.43
1:0:2364:C:OP1	1:0:2365:U:OP2	2.36	0.43
1:0:2866:A:C4	1:0:2867:G:C8	3.06	0.43
2:9:19:C:H2'	2:9:20:A:C8	2.53	0.43
5:8:39:LYS:HE2	5:8:39:LYS:HB3	1.85	0.43
1:0:26:G:C6	1:0:27:G:N2	2.85	0.43
1:0:242:A:O2'	1:0:243:G:O4'	2.33	0.43
1:0:243:G:OP2	1:0:243:G:O4'	2.35	0.43
1:0:304:A:C3'	1:0:305:A:H5''	2.48	0.43
1:0:494:A:C4	1:0:495:C:C6	3.06	0.43
1:0:529:U:O5'	1:0:529:U:H6	2.01	0.43
1:0:588:G:N2	1:0:1275:A:C4	2.86	0.43
1:0:793:G:N1	1:0:795:A:H2	2.15	0.43
1:0:870:C:H2'	1:0:871:U:C5'	2.42	0.43
1:0:1226:A:C1'	1:0:1250:A:C2	3.01	0.43
1:0:1354:A:N6	1:0:1407:G:N2	2.57	0.43
1:0:1479:G:C2	1:0:1480:G:C4	3.05	0.43
1:0:1605:A:H8	1:0:1605:A:O5'	1.99	0.43
1:0:1655:C:H5''	1:0:2689:C:O2'	2.18	0.43
1:0:1750:A:C2	1:0:1751:A:C4	3.06	0.43
1:0:1794:A:H61	1:0:1806:G:H2'	1.83	0.43
1:0:1925:C:N3	5:8:57:ARG:NH1	2.65	0.43
1:0:1993:G:H2'	1:0:1994:U:C6	2.50	0.43
1:0:2056:C:O2'	1:0:2057:U:H5'	2.18	0.43
1:0:2061:C:N3	1:0:2062:U:C6	2.86	0.43
1:0:2343:C:H5'	4:U:56:ASP:OD2	2.17	0.43
1:0:2439:U:H2'	1:0:2440:C:C5'	2.48	0.43
1:0:2466:G:C2'	1:0:2467:A:H5'	2.46	0.43
1:0:2560:G:N1	1:0:2589:C:C6	2.80	0.43
1:0:2609:G:HO2'	1:0:2866:A:H1'	1.80	0.43
1:0:2680:U:H3'	1:0:2681:A:H5'	2.00	0.43
1:0:2760:G:O2'	1:0:2761:A:P	2.76	0.43
1:0:2787:A:C6	1:0:2788:C:C4	3.06	0.43
3:K:93:TYR:O	3:K:93:TYR:HD1	2.01	0.43
1:0:67:G:H2'	1:0:68:C:C1'	2.48	0.43
1:0:67:G:N2	1:0:72:A:H2'	2.32	0.43
1:0:108:G:C2	1:0:109:A:C4	3.06	0.43
1:0:242:A:H2'	1:0:243:G:OP2	2.18	0.43
1:0:246:C:H5	1:0:373:A:N3	2.15	0.43
1:0:428:A:C6	1:0:2388:G:N1	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:624:A:H2'	1:0:625:A:O4'	2.17	0.43
1:0:790:A:N1	1:0:791:G:C6	2.86	0.43
1:0:813:A:H1'	1:0:815:A:H5'	2.00	0.43
1:0:1075:C:C4	1:0:1076:U:C2	3.06	0.43
1:0:1139:A:O2'	1:0:1140:A:C5'	2.66	0.43
1:0:1178:C:C2	1:0:1196:G:N2	2.87	0.43
1:0:1468:A:H5''	1:0:1472:C:H41	1.81	0.43
1:0:1604:A:H2'	1:0:1605:A:C5'	2.48	0.43
1:0:1682:A:C2'	1:0:1683:G:H5'	2.48	0.43
1:0:1764:A:C5	1:0:1821:A:C1'	2.92	0.43
1:0:1785:A:H4'	1:0:1883:A:C2	2.53	0.43
1:0:1990:U:H2'	1:0:1991:C:C6	2.52	0.43
1:0:2060:A:C6	1:0:2061:C:C5	3.07	0.43
1:0:2233:C:N3	5:8:79:ASP:OD2	2.51	0.43
1:0:2542:U:O2	1:0:2544:A:C8	2.71	0.43
1:0:2623:A:N6	1:0:2624:G:N1	2.66	0.43
1:0:2646:C:H2'	1:0:2647:G:O4'	2.18	0.43
1:0:2720:A:N6	1:0:2721:A:C6	2.86	0.43
1:0:2815:C:H2'	1:0:2816:C:H6	1.83	0.43
2:9:75:A:N6	2:9:107:C:C2	2.86	0.43
1:0:13:A:C2	1:0:536:A:C5	3.07	0.43
1:0:192:G:O4'	1:0:193:A:H4'	2.18	0.43
1:0:201:G:O6	1:0:433:G:H5'	2.19	0.43
1:0:215:G:C2	1:0:216:U:H1'	2.54	0.43
1:0:234:C:H2'	1:0:235:C:O4'	2.18	0.43
1:0:327:C:H2'	1:0:328:A:H5'	2.00	0.43
1:0:329:C:N3	1:0:330:C:C5	2.86	0.43
1:0:428:A:C2'	1:0:429:C:O4'	2.62	0.43
1:0:459:A:N7	1:0:484:G:C5	2.87	0.43
1:0:632:A:C2'	1:0:633:G:O5'	2.67	0.43
1:0:794:A:N1	1:0:1767:G:C2'	2.81	0.43
1:0:801:A:O5'	1:0:801:A:C8	2.71	0.43
1:0:810:U:H3'	1:0:810:U:C6	2.53	0.43
1:0:873:U:O2	1:0:2247:A:C1'	2.67	0.43
1:0:1005:U:O2	1:0:1005:U:H2'	2.17	0.43
1:0:1090:C:O2'	1:0:1091:C:H5'	2.18	0.43
1:0:1684:G:O2'	1:0:1685:A:C5'	2.66	0.43
1:0:1718:A:H2'	1:0:1719:G:H5'	1.98	0.43
1:0:1809:G:H2'	1:0:1810:U:H5'	2.00	0.43
1:0:1940:C:H2'	1:0:1941:C:C5	2.52	0.43
1:0:1975:G:C5	1:0:1980:A:N1	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2196:U:H2'	1:0:2197:U:O4'	2.18	0.43
1:0:2233:C:O2'	5:8:77:SER:CA	2.64	0.43
1:0:2260:C:O2'	1:0:2261:G:C5'	2.63	0.43
1:0:2299:A:O2'	1:0:2312:A:N6	2.51	0.43
1:0:2534:U:C5	1:0:2535:C:C6	3.06	0.43
1:0:2847:G:N2	1:0:2848:A:N6	2.65	0.43
2:9:107:C:H3'	2:9:107:C:C6	2.53	0.43
3:K:70:PHE:CD1	3:K:71:PRO:HD2	2.54	0.43
1:0:69:G:O2'	1:0:72:A:H5''	2.19	0.43
1:0:121:G:C2'	1:0:122:G:H5'	2.48	0.43
1:0:192:G:C4'	1:0:193:A:H4'	2.49	0.43
1:0:612:G:H4'	1:0:613:A:O3'	2.18	0.43
1:0:882:C:N4	1:0:883:A:N6	2.67	0.43
1:0:1002:C:N3	1:0:1003:C:C5	2.87	0.43
1:0:1154:A:HO2'	1:0:1155:G:P	2.40	0.43
1:0:1174:G:N3	1:0:1175:A:C8	2.86	0.43
1:0:1313:U:O2'	1:0:1314:A:P	2.75	0.43
1:0:1573:G:C6	1:0:1574:A:N6	2.87	0.43
1:0:1949:A:H1'	1:0:2572:U:C5'	2.49	0.43
1:0:2093:G:H2'	1:0:2094:C:C6	2.53	0.43
1:0:2199:C:C5'	1:0:2199:C:H6	2.31	0.43
1:0:2259:G:C2	1:0:2260:C:C6	3.06	0.43
1:0:2272:A:OP1	1:0:2356:A:N6	2.49	0.43
1:0:2325:A:C4'	1:0:2362:G:O4'	2.66	0.43
1:0:2358:C:H2'	1:0:2359:U:H6	1.79	0.43
1:0:2472:U:C6	1:0:2473:G:C8	3.07	0.43
1:0:2500:C:O2'	1:0:2543:A:H1'	2.19	0.43
1:0:2658:A:C2	1:0:2709:C:N3	2.86	0.43
2:9:93:G:C5'	3:K:19:THR:CB	2.96	0.43
3:K:35:LEU:HD22	3:K:119:PHE:HD2	1.83	0.43
1:0:114:C:H2'	1:0:115:G:O4'	2.19	0.43
1:0:310:A:O4'	1:0:333:A:N6	2.52	0.43
1:0:481:A:C6	1:0:482:A:C6	3.07	0.43
1:0:484:G:N2	1:0:485:G:C4	2.87	0.43
1:0:583:C:H5''	1:0:584:A:H5''	2.00	0.43
1:0:667:U:C4	1:0:669:G:P	3.12	0.43
1:0:934:G:C6	1:0:935:C:C4	3.07	0.43
1:0:944:A:C2'	1:0:945:G:H5'	2.49	0.43
1:0:1235:C:N3	1:0:1241:G:C2	2.86	0.43
1:0:1280:U:H5	1:0:1995:G:N1	2.16	0.43
1:0:1537:U:C4	1:0:1538:A:N6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1629:G:C6	1:0:1633:C:C5	3.07	0.43
1:0:1698:C:C4	1:0:1753:A:C6	3.06	0.43
1:0:1845:A:H1'	1:0:2212:U:O2'	2.19	0.43
1:0:1953:A:O2'	1:0:1955:G:O4'	2.37	0.43
1:0:1975:G:C6	1:0:1980:A:C2	3.06	0.43
1:0:2079:A:H2'	1:0:2080:U:C6	2.53	0.43
1:0:2354:G:H8	1:0:2354:G:O5'	2.02	0.43
1:0:2524:G:C2	1:0:2525:U:C2	3.07	0.43
1:0:2569:A:H2'	1:0:2570:C:H6	1.81	0.43
1:0:2665:G:C2	1:0:2704:U:O2	2.72	0.43
1:0:2756:A:C2	1:0:2758:A:C5	3.06	0.43
3:K:28:VAL:HG12	3:K:137:VAL:HG21	2.01	0.43
4:U:31:VAL:HG21	4:U:61:ALA:HB2	2.01	0.43
5:8:68:LYS:O	5:8:71:LEU:HG	2.19	0.43
1:0:198:A:H2	1:0:243:G:OP2	2.01	0.43
1:0:242:A:O2'	1:0:243:G:C4'	2.66	0.43
1:0:372:U:C6	1:0:372:U:C3'	3.01	0.43
1:0:444:U:O2'	1:0:445:A:H5'	2.18	0.43
1:0:625:A:C8	1:0:625:A:O5'	2.72	0.43
1:0:670:U:C2	1:0:671:A:C5	3.06	0.43
1:0:730:C:O2	1:0:730:C:H2'	2.19	0.43
1:0:755:C:C2	1:0:756:C:C6	3.06	0.43
1:0:1151:U:OP1	1:0:1153:A:OP1	2.37	0.43
1:0:1173:G:C2	1:0:1174:G:C8	3.07	0.43
1:0:1299:A:N1	1:0:1302:C:C4	2.86	0.43
1:0:1464:A:H2'	1:0:1465:G:O4'	2.18	0.43
1:0:1474:A:O2'	1:0:1475:U:C5'	2.66	0.43
1:0:1744:G:O6	1:0:1747:G:C6	2.72	0.43
1:0:1806:G:H5'	1:0:1807:A:O5'	2.18	0.43
1:0:1895:A:C8	1:0:1895:A:C3'	3.02	0.43
1:0:2074:U:O4	1:0:2075:U:C4	2.71	0.43
1:0:2181:A:O5'	1:0:2181:A:H8	2.02	0.43
1:0:2340:C:C2'	1:0:2341:G:H5'	2.49	0.43
1:0:2376:G:N1	1:0:2399:C:C2	2.87	0.43
1:0:2376:G:C2	1:0:2399:C:O2	2.71	0.43
1:0:2549:G:C2'	1:0:2550:C:H5'	2.48	0.43
1:0:2567:G:C5	1:0:2568:A:N7	2.86	0.43
1:0:2707:G:H2'	1:0:2708:U:H6	1.83	0.43
1:0:2771:C:C4	1:0:2772:U:C5	3.07	0.43
3:K:16:GLY:O	3:K:73:LYS:CD	2.66	0.43
3:K:129:GLN:H	3:K:129:GLN:HG3	1.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:U:19:LYS:O	4:U:20:TYR:CG	2.72	0.43
5:8:60:ARG:HD2	5:8:89:GLN:HE22	1.84	0.43
1:0:192:G:O2'	1:0:193:A:C5'	2.67	0.43
1:0:222:G:H22	1:0:231:G:H1'	1.84	0.43
1:0:426:C:H4'	1:0:1863:U:O2'	2.19	0.43
1:0:442:A:H2'	1:0:443:A:H8	1.76	0.43
1:0:580:A:C4	1:0:2013:A:C6	3.07	0.43
1:0:636:G:O2'	1:0:668:A:O2'	2.30	0.43
1:0:688:A:C5	1:0:817:A:C2	3.06	0.43
1:0:782:U:C2	1:0:783:G:C8	3.07	0.43
1:0:874:A:N6	1:0:928:G:H21	2.03	0.43
1:0:912:A:H2'	1:0:913:A:C5'	2.48	0.43
1:0:973:U:C2	1:0:974:U:C6	3.07	0.43
1:0:1021:A:N3	1:0:1164:C:H1'	2.33	0.43
1:0:1365:U:H1'	1:0:1586:A:C2	2.53	0.43
1:0:1654:A:H2'	1:0:1655:C:H6	1.84	0.43
1:0:1654:A:C6	1:0:1655:C:C4	3.07	0.43
1:0:1918:G:H2'	1:0:1945:C:H42	1.84	0.43
1:0:1924:C:H2'	5:8:60:ARG:HH22	1.84	0.43
1:0:2059:U:O2	1:0:2059:U:C2'	2.67	0.43
1:0:2174:G:N2	1:0:2175:A:N6	2.61	0.43
1:0:2301:A:C4	1:0:2302:G:C8	3.06	0.43
1:0:2468:G:H2'	1:0:2469:G:O4'	2.18	0.43
1:0:2511:G:C4	1:0:2512:A:C8	3.07	0.43
1:0:2527:G:C4	1:0:2540:A:C2	3.07	0.43
1:0:2527:G:N1	1:0:2528:G:C5	2.87	0.43
1:0:2543:A:OP1	1:0:2627:G:H4'	2.18	0.43
1:0:2660:C:N3	1:0:2704:U:C5	2.86	0.43
1:0:2846:G:O2'	1:0:2847:G:P	2.77	0.43
3:K:35:LEU:C	3:K:35:LEU:HD12	2.43	0.43
3:K:98:VAL:O	3:K:98:VAL:HG12	2.19	0.43
4:U:20:TYR:HB3	4:U:21:LEU:H	1.34	0.43
1:0:132:U:C2	1:0:140:G:N2	2.86	0.43
1:0:167:A:H2'	1:0:168:A:C8	2.54	0.43
1:0:168:A:H2'	1:0:169:C:C6	2.54	0.43
1:0:229:G:N2	1:0:230:C:C2	2.87	0.43
1:0:350:U:O5'	1:0:350:U:C6	2.72	0.43
1:0:478:G:C2'	1:0:479:G:H5'	2.48	0.43
1:0:542:A:H62	1:0:570:G:N2	2.16	0.43
1:0:652:C:H5'	1:0:652:C:H6	1.84	0.43
1:0:735:G:N2	1:0:736:G:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:849:G:N7	1:0:850:C:C4	2.87	0.43
1:0:946:U:C2	1:0:947:C:C5	3.07	0.43
1:0:1002:C:OP2	1:0:1200:G:P	2.77	0.43
1:0:1373:G:N7	1:0:1374:G:C8	2.87	0.43
1:0:1672:A:C5	1:0:1673:C:C6	3.07	0.43
1:0:1683:G:H2'	1:0:1684:G:O4'	2.19	0.43
1:0:1737:G:C6	1:0:1738:U:O4	2.72	0.43
1:0:1794:A:H2	1:0:1814:G:N3	2.16	0.43
1:0:2122:G:O2'	1:0:2123:G:H5'	2.19	0.43
1:0:2223:U:H2'	1:0:2224:U:O4'	2.18	0.43
1:0:2484:G:O2'	1:0:2485:U:C5'	2.67	0.43
1:0:2681:A:C2'	1:0:2682:C:H5'	2.49	0.43
1:0:2782:G:H8	1:0:2782:G:H5''	1.84	0.43
1:0:246:C:C5	1:0:373:A:C2	3.07	0.43
1:0:367:G:H3'	1:0:368:A:C5'	2.44	0.43
1:0:388:G:C4	1:0:389:G:C8	3.07	0.43
1:0:604:U:C2	1:0:605:G:C8	3.07	0.43
1:0:651:C:C3'	1:0:652:C:C5'	2.97	0.43
1:0:684:C:H6	1:0:684:C:H5'	1.83	0.43
1:0:722:C:H2'	1:0:723:C:O4'	2.18	0.43
1:0:777:A:N7	1:0:1767:G:H1'	2.34	0.43
1:0:886:A:H1'	3:K:66:TYR:CE2	2.53	0.43
1:0:955:G:H5'	1:0:956:A:H5''	2.01	0.43
1:0:1120:C:C5	1:0:1121:G:C5	3.07	0.43
1:0:1124:U:O2'	1:0:1125:G:H5'	2.19	0.43
1:0:1287:A:C2	1:0:1315:A:H2	2.36	0.43
1:0:1415:C:H2'	1:0:1416:A:C5'	2.44	0.43
1:0:1543:G:C6	1:0:1560:A:C6	3.07	0.43
1:0:1883:A:H1'	1:0:1953:A:C8	2.54	0.43
1:0:2064:U:H6	1:0:2064:U:O5'	2.02	0.43
1:0:2245:A:O4'	1:0:2245:A:P	2.77	0.43
1:0:2496:C:C5	1:0:2521:A:C5	3.07	0.43
1:0:2679:G:C2	1:0:2687:G:N1	2.87	0.43
1:0:2769:C:H3'	1:0:2770:A:H8	1.78	0.43
2:9:11:G:N1	2:9:12:C:C2	2.87	0.43
2:9:79:U:C4	2:9:102:A:N6	2.86	0.43
1:0:41:G:O2'	1:0:42:G:H5'	2.19	0.42
1:0:488:A:N6	1:0:510:G:O3'	2.45	0.42
1:0:545:C:H2'	1:0:546:A:C8	2.54	0.42
1:0:588:G:N1	1:0:1275:A:C5	2.87	0.42
1:0:639:G:H2'	1:0:640:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:794:A:C2	1:0:1767:G:N2	2.86	0.42
1:0:814:G:O2'	1:0:815:A:P	2.77	0.42
1:0:837:U:O2'	1:0:838:A:H5'	2.18	0.42
1:0:972:C:H41	1:0:2014:A:H1'	1.83	0.42
1:0:1166:A:H5'	1:0:1167:A:OP2	2.19	0.42
1:0:1359:G:H5'	1:0:1359:G:C8	2.54	0.42
1:0:1439:G:H2'	1:0:1440:G:O4'	2.19	0.42
1:0:1443:G:C2	1:0:1444:C:C2	3.07	0.42
1:0:1474:A:C2'	1:0:1475:U:OP2	2.66	0.42
1:0:1541:G:H2'	1:0:1541:G:N3	2.34	0.42
1:0:2002:A:C6	1:0:2003:A:C5	3.07	0.42
1:0:2325:A:O2'	1:0:2326:C:P	2.77	0.42
1:0:2417:U:O2'	1:0:2419:C:OP1	2.35	0.42
1:0:2544:A:H2'	1:0:2545:A:O4'	2.17	0.42
1:0:2684:A:N6	1:0:2685:A:C5	2.87	0.42
2:9:107:C:H2'	2:9:108:G:O4'	2.19	0.42
1:0:202:A:C2	1:0:203:G:H1'	2.54	0.42
1:0:330:C:O2'	1:0:331:U:H5'	2.19	0.42
1:0:404:A:H2'	1:0:405:C:H6	1.82	0.42
1:0:420:C:O2'	1:0:421:G:H5'	2.19	0.42
1:0:610:G:N2	1:0:614:G:O2'	2.52	0.42
1:0:687:G:N2	1:0:2423:G:O3'	2.48	0.42
1:0:797:A:H5'	1:0:798:G:OP1	2.19	0.42
1:0:929:A:C2	2:9:81:C:O2	2.72	0.42
1:0:930:A:N7	2:9:82:U:O3'	2.51	0.42
1:0:989:G:C2	1:0:997:C:C2	3.07	0.42
1:0:1156:U:H3'	1:0:1156:U:H6	1.85	0.42
1:0:1255:A:H2'	1:0:1256:C:C6	2.54	0.42
1:0:1263:G:O2'	1:0:1264:C:P	2.77	0.42
1:0:1366:A:H2'	1:0:1367:A:C8	2.53	0.42
1:0:1368:G:H2'	1:0:1369:G:C8	2.46	0.42
1:0:1375:C:N3	1:0:1376:C:C6	2.87	0.42
1:0:1375:C:N4	1:0:1376:C:C4	2.88	0.42
1:0:1430:G:O3'	1:0:1603:A:H2	2.02	0.42
1:0:1439:G:N2	1:0:1440:G:H21	2.17	0.42
1:0:1459:U:N3	1:0:1476:G:C5'	2.66	0.42
1:0:1462:C:N4	1:0:1463:A:N6	2.67	0.42
1:0:1815:G:C4	1:0:1816:G:C8	3.07	0.42
1:0:1818:G:O2'	1:0:1819:U:H5'	2.19	0.42
1:0:1892:C:O2'	1:0:1893:G:H5'	2.18	0.42
1:0:1946:U:C2	5:8:54:VAL:HG13	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1985:G:H2'	1:0:1986:G:H8	1.82	0.42
1:0:2021:G:O2'	1:0:2022:C:H5'	2.18	0.42
1:0:2299:A:N3	1:0:2312:A:N6	2.67	0.42
1:0:2331:A:C5	1:0:2345:A:C2	3.07	0.42
1:0:2505:G:C2	1:0:2517:C:O2	2.73	0.42
1:0:2642:G:C2'	1:0:2643:G:O5'	2.67	0.42
1:0:14:A:C6	1:0:536:A:C2	3.07	0.42
1:0:171:G:N2	1:0:228:A:C2	2.87	0.42
1:0:225:G:C4	1:0:2410:U:H4'	2.55	0.42
1:0:321:A:O2'	1:0:322:A:C8	2.72	0.42
1:0:520:C:O2	1:0:520:C:C2'	2.67	0.42
1:0:523:A:N6	1:0:524:A:N6	2.67	0.42
1:0:588:G:H2'	1:0:589:C:C6	2.55	0.42
1:0:617:U:N1	1:0:632:A:N6	2.66	0.42
1:0:708:G:C6	1:0:781:G:C6	3.07	0.42
1:0:831:G:H2'	1:0:1201:G:N2	2.34	0.42
1:0:926:C:O2'	1:0:927:C:H5'	2.19	0.42
1:0:984:A:H1'	1:0:1202:U:C5	2.54	0.42
1:0:1060:C:O5'	1:0:1060:C:H6	2.03	0.42
1:0:1246:G:C6	1:0:1247:U:C4	3.07	0.42
1:0:1288:A:H62	1:0:1308:C:H2'	1.81	0.42
1:0:1353:A:C8	1:0:1353:A:H3'	2.54	0.42
1:0:1385:C:C2	1:0:1386:A:C8	3.07	0.42
1:0:1502:G:O2'	1:0:1503:G:H5'	2.19	0.42
1:0:1685:A:N6	1:0:1691:G:N3	2.67	0.42
1:0:2139:G:C8	1:0:2139:G:O5'	2.72	0.42
1:0:2299:A:H5'	1:0:2300:G:N9	2.34	0.42
1:0:2673:G:O2'	1:0:2674:C:H5'	2.19	0.42
1:0:2710:C:O2'	1:0:2711:G:H5'	2.20	0.42
1:0:2859:U:C5	1:0:2860:C:C6	3.08	0.42
2:9:42:U:N3	2:9:45:C:OP2	2.52	0.42
3:K:29:ALA:CB	3:K:68:ARG:CZ	2.97	0.42
5:8:27:ILE:CD1	5:8:44:ILE:HB	2.47	0.42
1:0:111:G:H8	1:0:111:G:H5''	1.85	0.42
1:0:174:A:C4	1:0:175:C:C6	3.07	0.42
1:0:199:A:N6	1:0:209:G:H1'	2.34	0.42
1:0:224:G:C8	1:0:226:C:O2	2.72	0.42
1:0:789:G:N2	1:0:2220:A:OP1	2.52	0.42
1:0:871:U:H2'	1:0:872:G:O4'	2.19	0.42
1:0:1074:G:C8	1:0:1075:C:C5	3.06	0.42
1:0:1108:U:H2'	1:0:1109:A:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1110:G:C6	1:0:1111:C:N4	2.88	0.42
1:0:1254:G:H2'	1:0:1255:A:H8	1.84	0.42
1:0:1269:G:C6	1:0:1270:C:N4	2.88	0.42
1:0:1302:C:H2'	1:0:1303:U:H6	1.84	0.42
1:0:1313:U:H3'	1:0:1652:G:OP1	2.18	0.42
1:0:1347:C:H2'	1:0:1348:C:O4'	2.19	0.42
1:0:1441:A:C4	1:0:1586:A:OP2	2.73	0.42
1:0:1578:U:H2'	1:0:1579:G:C8	2.54	0.42
1:0:1656:U:O2'	1:0:1657:A:H5''	2.18	0.42
1:0:1767:G:C2	1:0:1768:U:C6	3.07	0.42
1:0:2081:U:H3'	1:0:2082:C:H5'	2.00	0.42
1:0:2095:G:C2'	1:0:2096:U:H5''	2.49	0.42
1:0:2160:C:O2'	1:0:2161:C:H5'	2.18	0.42
1:0:2306:A:C5	1:0:2367:A:N1	2.87	0.42
1:0:2357:A:H8	1:0:2357:A:O5'	2.03	0.42
1:0:2492:G:C2	1:0:2493:U:O2	2.72	0.42
1:0:2522:G:O2'	1:0:2624:G:C4	2.73	0.42
1:0:2584:U:H2'	1:0:2585:C:C6	2.54	0.42
1:0:2752:C:O5'	1:0:2752:C:H6	2.02	0.42
2:9:61:A:H2'	2:9:62:C:O4'	2.20	0.42
2:9:75:A:N6	2:9:106:U:C4	2.86	0.42
3:K:79:PRO:HD3	3:K:88:LYS:NZ	2.33	0.42
4:U:20:TYR:O	4:U:21:LEU:HB2	2.18	0.42
1:0:128:C:H2'	1:0:129:A:C4'	2.49	0.42
1:0:202:A:C6	1:0:203:G:H1'	2.53	0.42
1:0:319:G:C2	1:0:511:A:C4	3.08	0.42
1:0:532:A:H2'	1:0:533:C:H6	1.84	0.42
1:0:541:C:C5'	1:0:542:A:N7	2.81	0.42
1:0:586:G:C6	1:0:587:A:N6	2.88	0.42
1:0:591:G:O6	1:0:1272:G:C6	2.73	0.42
1:0:708:G:C4	1:0:781:G:N1	2.87	0.42
1:0:809:C:N3	1:0:810:U:C4	2.88	0.42
1:0:968:C:OP1	3:K:78:LYS:HA	2.19	0.42
1:0:1119:U:N3	1:0:1120:C:C4	2.88	0.42
1:0:1245:G:N2	1:0:1246:G:H1'	2.34	0.42
1:0:1330:G:C6	1:0:1349:A:N1	2.87	0.42
1:0:1786:C:N4	1:0:1787:U:C4	2.87	0.42
1:0:2048:C:O5'	1:0:2048:C:H6	2.02	0.42
1:0:2052:G:C2	1:0:2422:C:C2	3.08	0.42
1:0:2055:G:H2'	1:0:2056:C:O4'	2.20	0.42
1:0:2205:C:H2'	1:0:2206:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2225:G:N3	1:0:2226:A:C8	2.88	0.42
1:0:2382:C:N4	1:0:2394:G:C2	2.87	0.42
1:0:2383:C:C2	1:0:2384:G:C8	3.08	0.42
1:0:2632:U:H3'	1:0:2633:A:H8	1.85	0.42
1:0:2814:G:H2'	1:0:2815:C:O5'	2.19	0.42
2:9:14:C:C6	4:U:72:LYS:HD2	2.54	0.42
3:K:12:LYS:HB3	3:K:12:LYS:HE2	1.75	0.42
3:K:40:PRO:HD3	3:K:100:PRO:HG2	2.01	0.42
1:0:71:A:H2'	1:0:72:A:OP1	2.20	0.42
1:0:116:A:OP2	1:0:117:A:H8	2.02	0.42
1:0:155:G:H8	1:0:155:G:O5'	2.03	0.42
1:0:202:A:H2'	1:0:203:G:H5'	2.02	0.42
1:0:357:A:H3'	1:0:358:C:C5'	2.50	0.42
1:0:475:U:H6	1:0:475:U:O5'	2.02	0.42
1:0:516:G:O2'	1:0:517:A:C8	2.53	0.42
1:0:562:G:C5	1:0:563:U:C4	3.08	0.42
1:0:566:U:O2'	1:0:567:G:H5'	2.19	0.42
1:0:569:C:C2'	1:0:570:G:H5'	2.50	0.42
1:0:876:A:OP1	3:K:21:ASP:OD1	2.37	0.42
1:0:985:G:O2'	1:0:1001:A:N6	2.53	0.42
1:0:1312:G:C5'	1:0:1313:U:OP1	2.67	0.42
1:0:1468:A:H5''	1:0:1472:C:H42	1.84	0.42
1:0:1556:A:O2'	1:0:1557:G:H5'	2.19	0.42
1:0:1670:G:OP1	1:0:1670:G:C4'	2.65	0.42
1:0:1708:C:H2'	1:0:1709:U:C6	2.55	0.42
1:0:1840:A:C2'	1:0:1841:G:H5'	2.49	0.42
1:0:1872:A:H1'	1:0:2069:U:O2'	2.20	0.42
1:0:2009:U:H6	1:0:2009:U:O5'	2.02	0.42
1:0:2226:A:H2'	1:0:2227:C:C6	2.54	0.42
1:0:2446:C:H5'	3:K:124:HIS:CD2	2.55	0.42
1:0:2486:C:H2'	1:0:2487:G:O4'	2.19	0.42
1:0:2498:U:C4'	1:0:2499:C:OP1	2.67	0.42
1:0:2504:G:C6	1:0:2518:C:N4	2.87	0.42
1:0:2567:G:C2'	1:0:2568:A:H5'	2.50	0.42
1:0:2582:G:H2'	1:0:2583:U:C6	2.52	0.42
1:0:2829:A:C2	1:0:2830:U:N1	2.88	0.42
5:8:27:ILE:HD11	5:8:44:ILE:HG22	1.97	0.42
1:0:105:G:N1	1:0:106:G:C5	2.88	0.42
1:0:125:A:H5''	1:0:126:C:O4'	2.20	0.42
1:0:322:A:H1'	1:0:343:A:N9	2.34	0.42
1:0:344:G:C5	1:0:345:U:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:391:C:H2'	1:0:392:G:H5'	2.02	0.42
1:0:697:G:C6	1:0:788:G:C5	3.07	0.42
1:0:805:G:N7	1:0:2419:C:H1'	2.34	0.42
1:0:829:C:H2'	1:0:830:C:H6	1.80	0.42
1:0:878:C:O2'	1:0:879:A:H8	2.02	0.42
1:0:1033:G:H2'	1:0:1034:U:OP2	2.20	0.42
1:0:1214:C:O2	1:0:1259:A:C2	2.72	0.42
1:0:1235:C:C2	1:0:1241:G:C2	3.08	0.42
1:0:1316:G:C2	1:0:1317:G:C4	3.08	0.42
1:0:1400:A:H2'	1:0:1401:G:O4'	2.19	0.42
1:0:1622:G:H4'	1:0:1624:A:C2	2.54	0.42
1:0:1732:U:C2'	1:0:1733:U:O5'	2.67	0.42
1:0:1733:U:H5'	1:0:1734:C:O5'	2.20	0.42
1:0:1782:A:C2	1:0:1821:A:H4'	2.55	0.42
1:0:1786:C:C4	1:0:1787:U:C5	3.07	0.42
1:0:1880:G:H2'	1:0:1881:U:H6	1.84	0.42
1:0:2187:A:O2'	1:0:2188:A:H5'	2.20	0.42
1:0:2328:G:H3'	1:0:2329:C:H5''	2.01	0.42
1:0:2430:A:P	1:0:2476:A:N1	2.92	0.42
1:0:2499:C:C4	1:0:2546:G:C8	3.08	0.42
1:0:2626:U:H2'	1:0:2627:G:H8	1.84	0.42
2:9:15:A:C2	2:9:72:C:H5'	2.52	0.42
1:0:23:G:O2'	1:0:24:G:H5'	2.19	0.42
1:0:121:G:H2'	1:0:122:G:O4'	2.20	0.42
1:0:195:A:N6	1:0:196:A:C6	2.88	0.42
1:0:238:G:H4'	1:0:618:A:C2	2.55	0.42
1:0:239:A:H2	1:0:443:A:H1'	1.82	0.42
1:0:297:A:H2'	1:0:298:C:H6	1.85	0.42
1:0:486:U:H6	1:0:519:C:N3	2.17	0.42
1:0:584:A:C2	1:0:585:U:C6	3.08	0.42
1:0:614:G:N2	1:0:670:U:H4'	2.34	0.42
1:0:788:G:N2	1:0:800:U:C2'	2.83	0.42
1:0:944:A:C4	1:0:945:G:C8	3.07	0.42
1:0:1022:A:C2'	1:0:1024:G:O4'	2.68	0.42
1:0:1055:A:H4'	1:0:1058:G:C4'	2.35	0.42
1:0:1057:A:O5'	1:0:1058:G:C5'	2.64	0.42
1:0:1203:A:H2'	1:0:1204:G:H5'	2.02	0.42
1:0:1231:A:C5	1:0:1232:U:C5	3.07	0.42
1:0:1354:A:C8	1:0:1410:U:O2	2.73	0.42
1:0:1358:C:C3'	1:0:1359:G:C5'	2.97	0.42
1:0:1460:G:C2	1:0:1563:U:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1467:U:O4	1:0:1473:U:C2	2.72	0.42
1:0:1491:C:H2'	1:0:1492:A:H5'	2.02	0.42
1:0:1540:C:C2	1:0:1541:G:C8	3.08	0.42
1:0:1947:G:OP1	1:0:1947:G:C8	2.72	0.42
1:0:1979:C:O2'	1:0:1980:A:P	2.78	0.42
1:0:2161:C:O2'	1:0:2162:C:OP1	2.34	0.42
1:0:2240:C:N4	1:0:2259:G:O6	2.53	0.42
1:0:2245:A:C1'	1:0:2246:A:N6	2.81	0.42
1:0:2384:G:C2'	1:0:2391:A:H61	2.32	0.42
1:0:2501:U:O4	1:0:2520:A:H2	2.03	0.42
1:0:2733:A:C8	1:0:2733:A:H3'	2.55	0.42
1:0:2739:G:O2'	1:0:2740:C:H5'	2.20	0.42
1:0:2749:A:C6	1:0:2750:G:C5	3.07	0.42
3:K:66:TYR:N	3:K:106:GLU:OE1	2.51	0.42
1:0:48:A:H5'	1:0:49:U:P	2.60	0.42
1:0:70:A:O2'	1:0:71:A:P	2.77	0.42
1:0:322:A:C2	1:0:339:U:N3	2.86	0.42
1:0:547:U:H2'	1:0:548:G:H8	1.84	0.42
1:0:549:G:H2'	1:0:550:C:H6	1.84	0.42
1:0:649:G:C5	1:0:650:U:C5	3.08	0.42
1:0:664:C:C6	1:0:664:C:C3'	3.03	0.42
1:0:778:G:C4	1:0:779:U:C5	3.08	0.42
1:0:834:A:N6	1:0:957:G:C2	2.88	0.42
1:0:1054:C:H4'	1:0:1057:A:C6	2.54	0.42
1:0:1066:G:H3'	1:0:1067:G:C5'	2.45	0.42
1:0:1302:C:P	1:0:1664:G:N2	2.92	0.42
1:0:1433:A:N7	1:0:1595:A:C6	2.87	0.42
1:0:1445:A:C6	1:0:1446:U:C4	3.08	0.42
1:0:1678:G:C6	1:0:1983:G:N1	2.87	0.42
1:0:1685:A:HO2'	1:0:1686:A:P	2.42	0.42
1:0:2001:G:C6	1:0:2002:A:C6	3.07	0.42
1:0:2052:G:C6	1:0:2053:G:N7	2.88	0.42
1:0:2320:G:H2'	1:0:2321:C:O4'	2.19	0.42
1:0:2350:G:C6	1:0:2351:G:N7	2.87	0.42
1:0:2520:A:H4'	1:0:2744:A:C2	2.55	0.42
1:0:2522:G:C6	1:0:2523:G:C6	3.08	0.42
1:0:2557:G:C2	1:0:2558:C:C6	3.08	0.42
1:0:2654:A:C2	1:0:2655:C:C2	3.08	0.42
1:0:2825:A:C4	1:0:2826:C:C5	3.08	0.42
1:0:169:C:C3'	1:0:170:U:C5'	2.97	0.42
1:0:307:C:C4	1:0:308:C:H5	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:740:A:H2'	1:0:741:G:O4'	2.20	0.42
1:0:869:C:H6	1:0:869:C:O5'	2.03	0.42
1:0:916:U:N3	1:0:917:U:C4	2.88	0.42
1:0:1055:A:H2	1:0:1121:G:C2'	2.32	0.42
1:0:1246:G:C6	1:0:1247:U:N3	2.88	0.42
1:0:1314:A:H2	1:0:1658:A:H61	1.67	0.42
1:0:1329:U:N3	1:0:1330:G:N7	2.67	0.42
1:0:1416:A:C2	1:0:1417:C:C2	3.07	0.42
1:0:1649:A:N6	1:0:1650:A:N6	2.68	0.42
1:0:2229:G:C8	1:0:2475:C:H5''	2.41	0.42
1:0:2261:G:N2	1:0:2404:A:C8	2.88	0.42
1:0:2319:G:H2'	1:0:2320:G:H8	1.85	0.42
1:0:2332:G:C6	1:0:2344:G:N2	2.87	0.42
1:0:2346:G:C2'	1:0:2347:C:H5'	2.50	0.42
1:0:2368:G:H5''	1:0:2369:U:H5'	2.01	0.42
1:0:2404:A:O2'	1:0:2405:A:OP2	2.30	0.42
1:0:2424:G:C2	1:0:2425:G:C8	3.08	0.42
1:0:2440:C:O2'	1:0:2441:U:H5'	2.20	0.42
1:0:2503:G:N3	1:0:2721:A:H2	2.18	0.42
1:0:2555:G:H3'	1:0:2555:G:P	2.59	0.42
1:0:2689:C:O2'	1:0:2690:A:H5'	2.19	0.42
1:0:2773:G:H3'	1:0:2774:U:C3'	2.49	0.42
1:0:2811:G:O6	1:0:2812:A:N6	2.53	0.42
3:K:79:PRO:HD2	3:K:88:LYS:HE2	2.01	0.42
1:0:208:C:C4	1:0:209:G:N2	2.88	0.41
1:0:344:G:C4	1:0:345:U:C5	3.08	0.41
1:0:537:C:H1'	1:0:2759:U:C4	2.55	0.41
1:0:546:A:H2'	1:0:547:U:H6	1.85	0.41
1:0:627:A:O2'	1:0:628:A:O4'	2.34	0.41
1:0:694:G:C2	1:0:695:G:C4	3.08	0.41
1:0:704:G:C4	1:0:705:C:C6	3.07	0.41
1:0:765:C:O2'	1:0:766:A:OP2	2.38	0.41
1:0:773:G:O6	1:0:774:A:C2	2.73	0.41
1:0:1015:U:O2	1:0:1163:C:O2	2.38	0.41
1:0:1279:G:O2'	1:0:1280:U:P	2.77	0.41
1:0:1281:A:N6	1:0:1282:A:C2	2.88	0.41
1:0:1305:C:N4	1:0:1306:U:C4	2.88	0.41
1:0:1344:C:H2'	1:0:1345:G:H5''	2.00	0.41
1:0:1431:U:H6	1:0:1431:U:O5'	2.03	0.41
1:0:1621:C:C5'	1:0:1626:A:H62	2.31	0.41
1:0:1697:U:O2	1:0:1755:G:C4'	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1763:G:C2'	1:0:1764:A:H5'	2.50	0.41
1:0:1824:C:C4	1:0:1825:C:C6	3.08	0.41
1:0:1903:C:N4	1:0:1904:G:C6	2.88	0.41
1:0:1919:A:N7	1:0:1928:G:O6	2.53	0.41
1:0:1993:G:C6	1:0:1994:U:C4	3.08	0.41
1:0:2034:A:N6	1:0:2593:A:C8	2.88	0.41
1:0:2043:A:C2	1:0:2481:G:N1	2.87	0.41
1:0:2054:A:C2	1:0:2055:G:C5	3.07	0.41
1:0:2065:A:H2'	1:0:2066:G:C4'	2.49	0.41
1:0:2245:A:H4'	1:0:2246:A:C8	2.54	0.41
1:0:2248:A:O2'	1:0:2249:U:H5'	2.19	0.41
1:0:2268:G:OP1	1:0:2364:C:OP2	2.38	0.41
1:0:2484:G:C6	1:0:2555:G:C4	3.08	0.41
1:0:2632:U:H3	1:0:2646:C:H42	1.68	0.41
1:0:2737:A:C2'	1:0:2738:A:C5'	2.98	0.41
1:0:2811:G:C6	1:0:2812:A:N6	2.88	0.41
2:9:67:C:H2'	2:9:68:A:H5'	2.01	0.41
1:0:41:G:N2	1:0:451:A:C4	2.89	0.41
1:0:174:A:C6	1:0:175:C:C2	3.08	0.41
1:0:293:U:H2'	1:0:294:U:C6	2.54	0.41
1:0:297:A:H2'	1:0:298:C:O4'	2.20	0.41
1:0:413:G:H3'	1:0:413:G:C8	2.55	0.41
1:0:455:A:H1'	1:0:1215:A:O4'	2.21	0.41
1:0:469:G:C2'	1:0:470:U:OP2	2.68	0.41
1:0:538:A:O5'	1:0:538:A:C8	2.71	0.41
1:0:538:A:H61	1:0:2027:C:P	2.43	0.41
1:0:580:A:C6	1:0:584:A:N7	2.88	0.41
1:0:743:A:C2	1:0:744:C:C6	3.08	0.41
1:0:961:G:C5	1:0:962:C:C4	3.08	0.41
1:0:972:C:H41	1:0:2014:A:C1'	2.34	0.41
1:0:972:C:C2'	1:0:973:U:OP1	2.68	0.41
1:0:1022:A:C4	1:0:1024:G:C8	3.08	0.41
1:0:1092:U:H2'	1:0:1093:U:H6	1.82	0.41
1:0:1145:C:N3	1:0:1149:G:O6	2.53	0.41
1:0:1293:A:H2'	1:0:1294:G:H5'	2.03	0.41
1:0:1322:G:C6	1:0:1323:G:N7	2.88	0.41
1:0:1327:C:OP2	1:0:1328:C:OP2	2.38	0.41
1:0:1378:A:O2'	1:0:1379:A:H5'	2.20	0.41
1:0:1514:C:H5'	1:0:1593:C:H5''	2.01	0.41
1:0:1614:C:O5'	1:0:1614:C:C6	2.71	0.41
1:0:1627:C:C2	1:0:1628:C:C5	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1755:G:H2'	1:0:1756:C:H6	1.81	0.41
1:0:1938:U:H3'	1:0:2530:C:O2'	2.20	0.41
1:0:1978:U:C3'	1:0:1979:C:C5'	2.92	0.41
1:0:2038:C:H5'	1:0:2039:G:H5''	2.02	0.41
1:0:2055:G:O2'	1:0:2056:C:H5'	2.21	0.41
1:0:2094:C:C2	1:0:2103:G:H1'	2.55	0.41
1:0:2180:U:C5	1:0:2203:G:C6	3.07	0.41
1:0:2461:G:H22	3:K:53:ILE:HD12	1.82	0.41
1:0:2703:C:O5'	1:0:2703:C:H6	2.03	0.41
1:0:2769:C:H2'	1:0:2770:A:O4'	2.20	0.41
1:0:2791:C:O2'	1:0:2792:C:H5'	2.20	0.41
1:0:2826:C:H6	1:0:2826:C:O5'	2.02	0.41
1:0:76:C:H2'	1:0:77:C:C6	2.55	0.41
1:0:174:A:C8	1:0:175:C:C5	3.08	0.41
1:0:221:A:C2	1:0:397:U:C2	3.07	0.41
1:0:322:A:N1	1:0:339:U:C4	2.88	0.41
1:0:780:U:H2'	1:0:781:G:H8	1.84	0.41
1:0:789:G:O2'	1:0:790:A:P	2.78	0.41
1:0:822:G:C6	1:0:823:U:C4	3.09	0.41
1:0:1016:C:N3	1:0:1154:A:C2	2.89	0.41
1:0:1431:U:H2'	1:0:1432:G:O4'	2.19	0.41
1:0:1488:G:N3	1:0:1536:G:N2	2.68	0.41
1:0:1494:G:O2'	1:0:1495:G:H5'	2.21	0.41
1:0:1686:A:N3	1:0:1686:A:H2'	2.35	0.41
1:0:1769:U:C4	1:0:1775:A:H1'	2.55	0.41
1:0:1771:A:O2'	1:0:1772:C:OP1	2.35	0.41
1:0:1777:A:N6	1:0:2584:U:O2'	2.53	0.41
1:0:1917:C:H2'	1:0:1918:G:O4'	2.20	0.41
1:0:2047:C:O2	1:0:2429:A:C6	2.73	0.41
1:0:2078:G:C6	1:0:2079:A:N6	2.88	0.41
1:0:2078:G:N1	1:0:2079:A:C6	2.88	0.41
1:0:2194:A:C2'	1:0:2195:C:C5'	2.91	0.41
1:0:2199:C:C2'	1:0:2200:G:H8	2.32	0.41
1:0:2258:G:C4	1:0:2259:G:C8	3.08	0.41
1:0:2344:G:C4'	4:U:60:PHE:CE2	2.81	0.41
1:0:2376:G:C6	1:0:2399:C:C2	3.08	0.41
1:0:2437:G:C2	1:0:2469:G:N2	2.87	0.41
1:0:2447:G:O6	1:0:2460:G:C5	2.74	0.41
1:0:2529:G:C6	1:0:2530:C:C4	3.08	0.41
1:0:2662:C:C6	1:0:2663:U:H5	2.39	0.41
1:0:2738:A:H2'	1:0:2739:G:C5'	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2824:C:O2'	1:0:2843:A:C4	2.67	0.41
2:9:21:C:O5'	2:9:21:C:H6	2.03	0.41
2:9:74:A:O2'	2:9:75:A:C8	2.72	0.41
2:9:80:A:H2'	2:9:81:C:O4'	2.21	0.41
3:K:39:GLU:HB2	3:K:128:ILE:HG21	2.02	0.41
1:0:225:G:N7	1:0:227:G:C2	2.88	0.41
1:0:456:C:C6	1:0:456:C:C3'	3.03	0.41
1:0:500:G:C6	1:0:501:G:C4	3.09	0.41
1:0:541:C:H41	1:0:572:G:C1'	2.31	0.41
1:0:560:G:H21	1:0:1233:A:H2	1.68	0.41
1:0:708:G:C4	1:0:781:G:C2	3.09	0.41
1:0:765:C:C5	1:0:1772:C:C1'	2.85	0.41
1:0:794:A:N1	1:0:1767:G:O2'	2.54	0.41
1:0:843:G:H1'	1:0:2427:A:N6	2.35	0.41
1:0:874:A:H2'	1:0:875:G:O4'	2.20	0.41
1:0:982:C:C6	1:0:983:G:C8	3.09	0.41
1:0:1202:U:O2'	1:0:1203:A:H5'	2.21	0.41
1:0:1252:C:H2'	1:0:1253:C:C5'	2.40	0.41
1:0:1295:U:H3	1:0:1299:A:N6	2.19	0.41
1:0:1372:A:H2'	1:0:1373:G:H5'	2.02	0.41
1:0:1479:G:N2	1:0:1543:G:H21	2.19	0.41
1:0:1553:G:C5	1:0:1554:G:H1'	2.55	0.41
1:0:1617:G:O3'	1:0:1618:U:C6	2.73	0.41
1:0:1762:C:C2	1:0:1763:G:C8	3.08	0.41
1:0:2002:A:H61	1:0:2018:G:H22	1.68	0.41
1:0:2294:U:N3	1:0:2295:C:C4	2.88	0.41
1:0:2319:G:O2'	1:0:2320:G:H5'	2.20	0.41
1:0:2489:C:C4	1:0:2490:U:C5	3.08	0.41
1:0:2665:G:C6	1:0:2666:U:N3	2.88	0.41
1:0:2749:A:N6	1:0:2750:G:C6	2.89	0.41
1:0:167:A:N6	1:0:812:G:O2'	2.49	0.41
1:0:544:U:N3	1:0:545:C:C4	2.88	0.41
1:0:677:G:N3	1:0:678:G:C8	2.88	0.41
1:0:917:U:H3'	1:0:917:U:H6	1.85	0.41
1:0:1223:G:H4'	1:0:1224:A:O5'	2.20	0.41
1:0:1355:A:C8	1:0:1410:U:C1'	3.03	0.41
1:0:1480:G:N3	1:0:1561:A:H2	2.18	0.41
1:0:1624:A:O3'	1:0:1625:A:C8	2.74	0.41
1:0:1836:C:C2	1:0:1880:G:N2	2.89	0.41
1:0:1959:U:H6	1:0:1959:U:O5'	2.03	0.41
1:0:2048:C:O2'	1:0:2049:C:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2068:C:O2	1:0:2068:C:H2'	2.21	0.41
1:0:2245:A:OP1	1:0:2245:A:C4	2.73	0.41
1:0:2459:C:N4	1:0:2460:G:N2	2.68	0.41
1:0:2484:G:O2'	1:0:2485:U:C6	2.70	0.41
1:0:2489:C:C4	1:0:2490:U:C4	3.08	0.41
1:0:2831:A:N6	1:0:2832:G:C6	2.88	0.41
2:9:14:C:C5	4:U:72:LYS:HD2	2.55	0.41
1:0:44:G:H2'	1:0:192:G:C8	2.55	0.41
1:0:428:A:H2'	1:0:429:C:C6	2.55	0.41
1:0:437:G:H2'	1:0:438:G:O4'	2.21	0.41
1:0:555:U:H6	1:0:555:U:C3'	2.15	0.41
1:0:609:U:C2'	1:0:610:G:H5'	2.50	0.41
1:0:667:U:C5	1:0:669:G:OP2	2.74	0.41
1:0:678:G:H2'	1:0:679:C:C6	2.55	0.41
1:0:841:G:C5	1:0:842:A:N6	2.88	0.41
1:0:888:G:O2'	1:0:889:C:H5'	2.19	0.41
1:0:919:U:H2'	1:0:920:G:H8	1.85	0.41
1:0:927:C:O2'	1:0:928:G:H5'	2.21	0.41
1:0:997:C:C4	1:0:998:C:C5	3.09	0.41
1:0:1142:G:O2'	1:0:1143:A:C5'	2.69	0.41
1:0:1251:G:C5	1:0:1252:C:C5	3.08	0.41
1:0:1284:G:C2	1:0:1633:C:H4'	2.56	0.41
1:0:1372:A:H3'	1:0:1372:A:C8	2.56	0.41
1:0:1467:U:C6	1:0:1467:U:C3'	3.03	0.41
1:0:1479:G:H21	1:0:1543:G:H21	1.69	0.41
1:0:1774:A:O5'	1:0:1774:A:H8	2.03	0.41
1:0:1964:A:H5''	1:0:1965:U:OP2	2.20	0.41
1:0:2219:U:O2'	1:0:2220:A:H5'	2.21	0.41
1:0:2250:G:N2	1:0:2251:U:O2	2.53	0.41
1:0:2459:C:C2'	1:0:2460:G:H5'	2.49	0.41
1:0:2593:A:C2'	1:0:2594:U:OP2	2.68	0.41
1:0:2645:C:H3'	1:0:2646:C:C6	2.56	0.41
1:0:2773:G:C8	1:0:2774:U:O3'	2.63	0.41
3:K:64:LYS:HE2	3:K:64:LYS:CA	2.46	0.41
1:0:238:G:O4'	1:0:618:A:H2	2.03	0.41
1:0:319:G:C6	1:0:320:A:C6	3.09	0.41
1:0:633:G:H2'	1:0:634:G:C8	2.56	0.41
1:0:913:A:C8	1:0:914:C:H5	2.39	0.41
1:0:1025:A:C5	1:0:1026:U:C5	3.09	0.41
1:0:1262:U:C2'	1:0:1263:G:C8	2.91	0.41
1:0:1328:C:C2	1:0:1329:U:C5	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1339:U:H2'	1:0:1340:C:C5'	2.50	0.41
1:0:1591:U:H2'	1:0:1592:U:C5'	2.51	0.41
1:0:1732:U:H2'	1:0:1733:U:O5'	2.21	0.41
1:0:1779:C:O2'	1:0:1780:A:H5'	2.20	0.41
1:0:1809:G:H2'	1:0:1810:U:O4'	2.21	0.41
1:0:1816:G:H2'	1:0:1817:U:C6	2.47	0.41
1:0:2051:U:H6	1:0:2051:U:H3'	1.85	0.41
1:0:2184:C:C4	1:0:2185:U:C5	3.08	0.41
1:0:2301:A:C2	1:0:2302:G:H1'	2.56	0.41
1:0:2386:G:H2'	1:0:2387:U:C5	2.55	0.41
1:0:2514:G:C2	1:0:2515:G:N9	2.89	0.41
1:0:2604:G:H2'	1:0:2605:C:H6	1.84	0.41
1:0:2623:A:O2'	1:0:2624:G:H5'	2.21	0.41
1:0:2728:A:H2'	1:0:2729:A:O4'	2.20	0.41
1:0:2781:G:N2	1:0:2782:G:N3	2.69	0.41
1:0:2784:A:H8	1:0:2785:A:O4'	2.03	0.41
4:U:14:ARG:NE	4:U:15:ASP:OD2	2.51	0.41
4:U:46:LYS:NZ	4:U:76:ALA:CB	2.83	0.41
1:0:13:A:H2	1:0:536:A:C4	2.39	0.41
1:0:18:U:O2'	1:0:563:U:OP1	2.25	0.41
1:0:41:G:C6	1:0:42:G:C5	3.09	0.41
1:0:110:U:O4	1:0:111:G:C2	2.74	0.41
1:0:174:A:H1'	1:0:2409:A:C6	2.56	0.41
1:0:219:G:O2'	1:0:231:G:N1	2.51	0.41
1:0:450:C:H2'	1:0:451:A:C8	2.54	0.41
1:0:460:U:C4	1:0:592:G:N3	2.89	0.41
1:0:586:G:N2	1:0:587:A:C2	2.88	0.41
1:0:651:C:H42	1:0:658:G:H1	1.67	0.41
1:0:652:C:O2'	1:0:2329:C:OP1	2.38	0.41
1:0:745:C:H2'	1:0:746:G:C5'	2.49	0.41
1:0:810:U:C6	1:0:810:U:C3'	3.03	0.41
1:0:880:C:C5	1:0:881:U:C4	3.09	0.41
1:0:986:A:C4	1:0:987:G:C8	3.09	0.41
1:0:988:G:C2	1:0:998:C:C2	3.08	0.41
1:0:1005:U:O2	1:0:1007:A:C8	2.74	0.41
1:0:1009:C:N4	1:0:1169:C:H42	2.19	0.41
1:0:1020:A:H2'	1:0:1021:A:O4'	2.20	0.41
1:0:1054:C:O2	1:0:1054:C:H2'	2.20	0.41
1:0:1126:A:C2	1:0:1127:C:C2	3.08	0.41
1:0:1272:G:O2'	1:0:1273:G:H5'	2.19	0.41
1:0:1398:G:H2'	1:0:1399:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1465:G:H2'	1:0:1466:C:C1'	2.50	0.41
1:0:1541:G:H1	1:0:1562:G:H1	1.68	0.41
1:0:1572:C:C2'	1:0:1573:G:C5'	2.98	0.41
1:0:1635:G:N1	1:0:1636:G:C5	2.89	0.41
1:0:1793:A:C6	1:0:1809:G:N2	2.88	0.41
1:0:2047:C:H1'	1:0:2429:A:C6	2.55	0.41
1:0:2196:U:C4	1:0:2197:U:C4	3.09	0.41
1:0:2246:A:N3	1:0:2246:A:C2'	2.83	0.41
1:0:2371:A:C4	1:0:2372:A:N7	2.88	0.41
1:0:2397:A:H2'	1:0:2398:U:C6	2.56	0.41
1:0:2404:A:H5'	1:0:2406:C:C6	2.56	0.41
1:0:2661:G:C5	1:0:2662:C:C6	3.09	0.41
1:0:2783:U:H2'	1:0:2784:A:C4'	2.45	0.41
1:0:2784:A:C8	1:0:2785:A:N9	2.89	0.41
1:0:2824:C:O3'	1:0:2843:A:N3	2.53	0.41
1:0:2864:C:O2	1:0:2864:C:H2'	2.19	0.41
1:0:2867:G:N3	1:0:2867:G:C2'	2.82	0.41
2:9:59:A:H3'	2:9:60:A:C8	2.56	0.41
3:K:39:GLU:HB2	3:K:128:ILE:CG2	2.51	0.41
1:0:109:A:N1	1:0:110:U:C2	2.89	0.41
1:0:119:G:N3	1:0:129:A:C2	2.89	0.41
1:0:156:G:C6	1:0:157:G:N7	2.89	0.41
1:0:177:U:O5'	1:0:177:U:C6	2.65	0.41
1:0:192:G:H1'	1:0:193:A:H4'	2.02	0.41
1:0:238:G:C4'	1:0:618:A:C2	3.04	0.41
1:0:304:A:C2	1:0:359:G:C2	3.08	0.41
1:0:457:C:N4	1:0:458:G:C6	2.88	0.41
1:0:471:A:C8	1:0:472:C:C5	3.08	0.41
1:0:495:C:N4	1:0:507:A:H2	2.17	0.41
1:0:543:G:C6	1:0:544:U:C4	3.09	0.41
1:0:590:C:C2	1:0:591:G:C8	3.08	0.41
1:0:595:A:O5'	1:0:595:A:H8	2.04	0.41
1:0:625:A:N7	1:0:625:A:OP2	2.54	0.41
1:0:634:G:H2'	1:0:635:C:H6	1.86	0.41
1:0:640:C:C1'	1:0:660:G:H21	2.33	0.41
1:0:664:C:C2	1:0:665:A:N7	2.88	0.41
1:0:681:A:C4	1:0:683:A:N7	2.89	0.41
1:0:688:A:C6	1:0:689:A:N6	2.88	0.41
1:0:698:A:H5'	1:0:801:A:H61	1.85	0.41
1:0:761:G:N7	1:0:763:A:C4	2.89	0.41
1:0:874:A:C4	1:0:875:G:C8	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:981:C:O2'	1:0:982:C:H5'	2.21	0.41
1:0:994:A:C8	1:0:994:A:C3'	3.03	0.41
1:0:1055:A:OP1	1:0:1057:A:H5'	2.21	0.41
1:0:1075:C:H3'	1:0:1076:U:H6	1.82	0.41
1:0:1142:G:N2	1:0:1143:A:C2	2.89	0.41
1:0:1160:C:H2'	1:0:1161:U:C6	2.56	0.41
1:0:1254:G:O6	1:0:1255:A:N6	2.54	0.41
1:0:1301:U:C6	1:0:1340:C:O2	2.74	0.41
1:0:1320:A:H62	1:0:1622:G:H2'	1.85	0.41
1:0:1363:C:H2'	1:0:1364:C:H5'	2.03	0.41
1:0:1386:A:H2'	1:0:1387:G:O4'	2.21	0.41
1:0:1464:A:N6	1:0:1477:C:N4	2.68	0.41
1:0:1512:A:N3	1:0:1514:C:N3	2.69	0.41
1:0:1520:G:O2'	1:0:1521:U:H5'	2.21	0.41
1:0:1610:A:C6	1:0:1611:U:C4	3.09	0.41
1:0:1649:A:H8	1:0:1649:A:O5'	2.03	0.41
1:0:1687:C:N4	1:0:1691:G:O5'	2.54	0.41
1:0:1814:G:C2	1:0:1815:G:C5	3.09	0.41
1:0:1878:C:O2'	1:0:1879:G:H5'	2.20	0.41
1:0:1912:G:H8	1:0:1912:G:O5'	2.03	0.41
1:0:1947:G:O2'	1:0:1950:C:P	2.78	0.41
1:0:2081:U:C4	1:0:2082:C:C5	3.09	0.41
1:0:2104:G:H2'	1:0:2105:U:H6	1.86	0.41
1:0:2213:G:H2'	1:0:2214:G:O4'	2.21	0.41
1:0:2357:A:C3'	1:0:2358:C:H5'	2.51	0.41
1:0:2451:G:C4	1:0:2454:C:N4	2.88	0.41
1:0:2531:U:C6	1:0:2533:U:OP2	2.74	0.41
1:0:2653:A:H2'	1:0:2654:A:C8	2.56	0.41
1:0:2815:C:H2'	1:0:2816:C:C6	2.55	0.41
1:0:2860:C:N4	1:0:2861:A:C2	2.89	0.41
2:9:69:G:H2'	2:9:70:C:O4'	2.21	0.41
2:9:102:A:H8	2:9:102:A:H5''	1.86	0.41
3:K:77:LYS:O	3:K:88:LYS:NZ	2.43	0.41
4:U:21:LEU:HD13	4:U:41:ARG:HG2	2.02	0.41
4:U:46:LYS:HD2	4:U:78:PHE:CE1	2.56	0.41
4:U:56:ASP:C	4:U:56:ASP:OD1	2.64	0.41
1:0:9:U:O2	1:0:2608:A:N7	2.54	0.41
1:0:132:U:C2	1:0:140:G:C2	3.09	0.41
1:0:164:G:N2	1:0:165:G:C4	2.89	0.41
1:0:366:U:H2'	1:0:367:G:H8	1.84	0.41
1:0:401:G:C8	1:0:401:G:H3'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:598:U:H2'	1:0:599:A:O4'	2.21	0.41
1:0:706:A:C4	1:0:783:G:N2	2.89	0.41
1:0:726:G:C2'	1:0:727:U:H5'	2.51	0.41
1:0:747:A:C2'	1:0:748:A:H8	2.21	0.41
1:0:762:A:C5	1:0:763:A:N7	2.89	0.41
1:0:836:G:O2'	1:0:837:U:H5'	2.20	0.41
1:0:839:U:H5'	1:0:2407:G:H2'	2.03	0.41
1:0:973:U:N3	1:0:974:U:C5	2.89	0.41
1:0:1436:G:C8	1:0:1437:A:C5	3.09	0.41
1:0:1459:U:P	1:0:1459:U:C6	3.13	0.41
1:0:1754:G:H2'	1:0:1755:G:O5'	2.21	0.41
1:0:1860:A:H2'	1:0:1861:G:O4'	2.21	0.41
1:0:1982:C:OP1	1:0:2703:C:O2'	2.21	0.41
1:0:2005:U:C5'	1:0:2006:G:OP1	2.63	0.41
1:0:2006:G:H4'	1:0:2596:C:O2'	2.21	0.41
1:0:2225:G:C2	1:0:2226:A:C4	3.09	0.41
1:0:2334:C:O2'	4:U:24:LYS:HE3	2.21	0.41
1:0:2385:U:C2'	1:0:2386:G:OP2	2.68	0.41
1:0:2542:U:H3	1:0:2544:A:H3'	1.86	0.41
1:0:2732:C:C4	1:0:2733:A:C6	3.09	0.41
1:0:2802:C:C2'	1:0:2803:C:H5'	2.51	0.41
1:0:2870:C:C4	1:0:2871:U:O4	2.74	0.41
3:K:126:LEU:HD23	3:K:126:LEU:HA	1.69	0.41
3:K:134:LYS:HE3	3:K:135:ARG:CA	2.51	0.41
4:U:31:VAL:HG13	4:U:67:VAL:CG2	2.51	0.41
5:8:7:LYS:HA	5:8:10:GLU:CD	2.45	0.41
1:0:33:C:H2'	1:0:34:U:O5'	2.21	0.40
1:0:228:A:C8	1:0:229:G:C8	3.10	0.40
1:0:488:A:C2	1:0:489:A:C4	3.10	0.40
1:0:497:C:C2	1:0:505:G:C2	3.09	0.40
1:0:512:A:N6	1:0:515:A:C6	2.89	0.40
1:0:596:C:O2	1:0:684:C:O4'	2.39	0.40
1:0:635:C:H2'	1:0:636:G:C5'	2.35	0.40
1:0:708:G:N2	1:0:709:A:H1'	2.36	0.40
1:0:742:G:C4	1:0:1766:U:C2	3.08	0.40
1:0:832:A:C4	1:0:833:A:C8	3.09	0.40
1:0:931:G:O2'	1:0:932:G:H5'	2.21	0.40
1:0:942:U:C6	1:0:942:U:C3'	3.04	0.40
1:0:1253:C:C5	1:0:1254:G:N7	2.89	0.40
1:0:1458:A:N6	1:0:1460:G:O6	2.54	0.40
1:0:1658:A:H2'	1:0:1659:G:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1685:A:C5	1:0:1691:G:C4	3.09	0.40
1:0:1809:G:H8	1:0:1809:G:O5'	2.04	0.40
1:0:1927:U:H3'	1:0:1928:G:H5''	2.02	0.40
1:0:1983:G:HO2'	1:0:2668:U:H6	1.64	0.40
1:0:1993:G:C4	1:0:1994:U:C5	3.09	0.40
1:0:2091:C:O5'	1:0:2091:C:H6	2.04	0.40
1:0:2250:G:H2'	1:0:2251:U:O4'	2.21	0.40
1:0:2491:C:H2'	1:0:2492:G:O4'	2.21	0.40
1:0:2586:G:O2'	1:0:2587:G:H5'	2.21	0.40
1:0:2594:U:H5'	1:0:2594:U:C6	2.56	0.40
1:0:2715:C:H2'	1:0:2716:G:O4'	2.20	0.40
1:0:2732:C:N4	1:0:2733:A:N6	2.70	0.40
1:0:2847:G:C4	1:0:2848:A:N7	2.89	0.40
2:9:107:C:C6	2:9:107:C:C3'	3.05	0.40
3:K:35:LEU:HD23	3:K:105:PHE:HB2	2.01	0.40
5:8:23:GLN:HA	5:8:26:LYS:HG3	2.03	0.40
1:0:26:G:C2'	1:0:524:A:N6	2.84	0.40
1:0:161:U:O2	1:0:161:U:H2'	2.21	0.40
1:0:167:A:H5''	1:0:181:A:C2	2.56	0.40
1:0:181:A:O2'	1:0:182:G:O5'	2.39	0.40
1:0:195:A:C2'	1:0:196:A:H5'	2.52	0.40
1:0:241:C:H4'	1:0:442:A:H2	1.85	0.40
1:0:387:A:N3	1:0:387:A:H2'	2.37	0.40
1:0:559:C:C6	1:0:559:C:C3'	3.04	0.40
1:0:604:U:O2	1:0:605:G:C8	2.73	0.40
1:0:651:C:N4	1:0:658:G:H1	2.19	0.40
1:0:657:A:C2	1:0:658:G:C5	3.09	0.40
1:0:841:G:N7	1:0:842:A:N6	2.68	0.40
1:0:972:C:O2'	1:0:973:U:P	2.80	0.40
1:0:1012:A:H2'	1:0:1013:G:O4'	2.21	0.40
1:0:1067:G:N1	1:0:1113:C:OP2	2.54	0.40
1:0:1124:U:H2'	1:0:1125:G:H8	1.83	0.40
1:0:1138:A:H2	1:0:2497:A:C5	2.39	0.40
1:0:1153:A:O2'	1:0:1155:G:C8	2.65	0.40
1:0:1327:C:H2'	1:0:1327:C:O2	2.21	0.40
1:0:1697:U:O2	1:0:1755:G:C5'	2.68	0.40
1:0:1800:A:C5	1:0:1802:A:C6	3.08	0.40
1:0:1915:A:C4	1:0:1952:A:N6	2.89	0.40
1:0:1920:A:N6	1:0:1922:U:C5	2.89	0.40
1:0:2232:G:C6	1:0:2233:C:C4	3.09	0.40
1:0:2371:A:C2	1:0:2372:A:N7	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2387:U:H6	1:0:2387:U:O5'	2.04	0.40
1:0:2425:G:C2	1:0:2480:C:C4	3.09	0.40
1:0:2438:A:N6	1:0:2472:U:O4	2.55	0.40
1:0:2497:A:C2'	1:0:2498:U:OP1	2.69	0.40
1:0:2544:A:H5''	1:0:2545:A:OP2	2.21	0.40
2:9:87:C:H6	2:9:87:C:H5''	1.86	0.40
1:0:43:A:H2'	1:0:44:G:O4'	2.21	0.40
1:0:239:A:H5''	1:0:620:G:C5'	2.51	0.40
1:0:314:G:H2'	1:0:315:G:O4'	2.20	0.40
1:0:488:A:C2	1:0:489:A:C5	3.10	0.40
1:0:544:U:C4	1:0:545:C:N4	2.90	0.40
1:0:548:G:O2'	1:0:549:G:H5'	2.21	0.40
1:0:586:G:C2	1:0:587:A:C2	3.10	0.40
1:0:753:U:C2	1:0:754:G:C8	3.10	0.40
1:0:848:A:O2'	1:0:849:G:H5'	2.21	0.40
1:0:922:A:C6	1:0:923:A:N6	2.89	0.40
1:0:1177:U:N3	1:0:1197:U:O2	2.54	0.40
1:0:1270:C:C4	1:0:1271:C:N4	2.89	0.40
1:0:1339:U:OP2	1:0:1339:U:C6	2.71	0.40
1:0:1454:U:O2	1:0:1567:A:H2	2.04	0.40
1:0:1457:A:C6	1:0:1458:A:C6	3.10	0.40
1:0:1514:C:H2'	1:0:1515:U:C6	2.57	0.40
1:0:1538:A:H2'	1:0:1539:U:C6	2.56	0.40
1:0:1610:A:C5	1:0:1611:U:C4	3.10	0.40
1:0:1625:A:O4'	1:0:1625:A:OP1	2.39	0.40
1:0:1666:G:N1	1:0:1992:G:C6	2.89	0.40
1:0:1698:C:H2'	1:0:1753:A:N3	2.35	0.40
1:0:1712:G:H3'	1:0:1712:G:N3	2.36	0.40
1:0:1755:G:O2'	1:0:1756:C:H5'	2.21	0.40
1:0:2018:G:O2'	1:0:2019:C:OP1	2.37	0.40
1:0:2055:G:C5	1:0:2056:C:C5	3.09	0.40
1:0:2307:A:H2'	1:0:2308:A:C8	2.57	0.40
1:0:2320:G:C5	1:0:2321:C:C4	3.08	0.40
1:0:2543:A:C2	1:0:2626:U:H4'	2.56	0.40
1:0:2573:C:H2'	1:0:2574:G:O4'	2.22	0.40
1:0:2617:G:O2'	1:0:2618:A:O5'	2.37	0.40
1:0:14:A:C6	1:0:15:G:H1'	2.56	0.40
1:0:83:A:O5'	1:0:83:A:C8	2.71	0.40
1:0:175:C:O2	1:0:177:U:O4	2.40	0.40
1:0:343:A:N6	1:0:346:C:C2	2.90	0.40
1:0:503:G:C4	1:0:504:G:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:545:C:N3	1:0:568:G:C6	2.89	0.40
1:0:569:C:H2'	1:0:570:G:C5'	2.51	0.40
1:0:682:G:C4	1:0:814:G:N1	2.88	0.40
1:0:704:G:H2'	1:0:705:C:C6	2.52	0.40
1:0:709:A:C5	1:0:710:C:C5	3.09	0.40
1:0:734:G:C4	1:0:735:G:C8	3.10	0.40
1:0:847:C:O2'	1:0:848:A:H5'	2.21	0.40
1:0:991:A:N7	1:0:992:A:N6	2.69	0.40
1:0:999:A:O2'	1:0:1166:A:C2	2.71	0.40
1:0:1164:C:H2'	1:0:1165:G:C8	2.56	0.40
1:0:1209:G:C4	1:0:1210:C:C5	3.10	0.40
1:0:1373:G:H1	1:0:2192:U:H3	1.68	0.40
1:0:1441:A:N1	1:0:1586:A:OP1	2.55	0.40
1:0:1457:A:N6	1:0:1458:A:C6	2.90	0.40
1:0:1558:C:C2'	1:0:1559:G:H5'	2.51	0.40
1:0:1781:C:H5''	1:0:1782:A:OP2	2.21	0.40
1:0:1872:A:C1'	1:0:2070:G:H5'	2.51	0.40
1:0:1979:C:H2'	1:0:1979:C:O2	2.21	0.40
1:0:2001:G:C6	1:0:2002:A:C5	3.09	0.40
1:0:2020:G:O2'	1:0:2021:G:H5'	2.22	0.40
1:0:2227:C:OP2	1:0:2228:U:C5	2.74	0.40
1:0:2340:C:H2'	1:0:2341:G:C5'	2.52	0.40
1:0:2366:U:C1'	4:U:41:ARG:HH12	2.34	0.40
1:0:2433:G:N2	1:0:2478:C:C5	2.89	0.40
1:0:2437:G:C4	1:0:2469:G:N1	2.90	0.40
1:0:2661:G:C5	1:0:2662:C:C5	3.09	0.40
1:0:2760:G:C2'	1:0:2761:A:OP1	2.70	0.40
1:0:2784:A:C6	1:0:2866:A:N6	2.89	0.40
2:9:14:C:O2	2:9:14:C:C2'	2.67	0.40
3:K:22:ALA:N	3:K:99:LYS:HG2	2.37	0.40
5:8:10:GLU:CG	5:8:11:VAL:N	2.84	0.40
1:0:167:A:C5'	1:0:181:A:N1	2.84	0.40
1:0:190:A:H2'	1:0:191:G:H8	1.81	0.40
1:0:393:U:H2'	1:0:394:U:O4'	2.21	0.40
1:0:533:C:H2'	1:0:534:U:H5'	2.02	0.40
1:0:883:A:H1'	3:K:11:ARG:HE	1.86	0.40
1:0:922:A:C4	1:0:923:A:C5	3.10	0.40
1:0:1199:U:H3'	1:0:1200:G:H5''	2.04	0.40
1:0:1277:G:N7	1:0:1278:A:N7	2.69	0.40
1:0:1443:G:O2'	1:0:1444:C:H5'	2.21	0.40
1:0:1455:C:C2	1:0:1456:C:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1503:G:H3'	1:0:1504:G:C8	2.56	0.40
1:0:1766:U:H2'	1:0:1767:G:C5'	2.51	0.40
1:0:1845:A:C6	1:0:1846:A:C6	3.10	0.40
1:0:2234:G:C1'	5:8:77:SER:HB3	2.49	0.40
1:0:2271:C:N4	1:0:2272:A:N6	2.69	0.40
1:0:2338:C:C5	1:0:2339:A:N7	2.90	0.40
1:0:2394:G:C2	1:0:2395:C:N1	2.89	0.40
1:0:2789:U:C2	1:0:2790:C:C6	3.10	0.40
1:0:2797:G:H2'	1:0:2798:A:H5''	2.04	0.40
2:9:70:C:C2	2:9:71:G:C8	3.09	0.40
2:9:84:G:H2'	2:9:85:G:C8	2.55	0.40
2:9:93:G:N2	2:9:94:G:C4	2.89	0.40
2:9:102:A:H2	2:9:103:A:C6	2.32	0.40
5:8:58:ASN:CA	5:8:61:ARG:HH21	2.35	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	
3	K	134/141 (95%)	109 (81%)	19 (14%)	6 (4%)	2	13
4	U	82/91 (90%)	63 (77%)	16 (20%)	3 (4%)	2	17
5	8	111/113 (98%)	95 (86%)	13 (12%)	3 (3%)	4	22
All	All	327/345 (95%)	267 (82%)	48 (15%)	12 (4%)	2	17

All (12) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	K	79	PRO
5	8	112	GLN
3	K	80	ALA

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Mol	Chain	Res	Type
3	K	135	ARG
4	U	13	GLY
4	U	20	TYR
4	U	21	LEU
5	8	35	GLU
3	K	92	GLU
3	K	123	GLY
5	8	32	GLY
3	K	100	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	
3	K	110/115 (96%)	84 (76%)	26 (24%)	1	3
4	U	62/67 (92%)	53 (86%)	9 (14%)	3	14
5	8	95/95 (100%)	81 (85%)	14 (15%)	3	14
All	All	267/277 (96%)	218 (82%)	49 (18%)	1	7

All (49) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	K	13	GLN
3	K	18	MET
3	K	28	VAL
3	K	30	PHE
3	K	32	ASP
3	K	35	LEU
3	K	64	LYS
3	K	75	VAL
3	K	76	THR
3	K	78	LYS
3	K	79	PRO
3	K	83	ARG
3	K	88	LYS

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Mol	Chain	Res	Type
3	K	92	GLU
3	K	93	TYR
3	K	96	SER
3	K	106	GLU
3	K	107	VAL
3	K	110	VAL
3	K	112	GLU
3	K	119	PHE
3	K	125	LYS
3	K	128	ILE
3	K	129	GLN
3	K	131	LYS
3	K	137	VAL
4	U	5	LYS
4	U	7	VAL
4	U	16	SER
4	U	19	LYS
4	U	29	GLU
4	U	41	ARG
4	U	58	THR
4	U	60	PHE
4	U	67	VAL
5	8	2	ILE
5	8	8	ASP
5	8	11	VAL
5	8	17	VAL
5	8	27	ILE
5	8	34	THR
5	8	35	GLU
5	8	44	ILE
5	8	62	ASP
5	8	76	ILE
5	8	78	GLU
5	8	86	ASP
5	8	103	LEU
5	8	105	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
3	K	13	GLN
3	K	47	GLN

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Mol	Chain	Res	Type
4	U	12	ASN
4	U	40	GLN
4	U	57	HIS
5	8	23	GLN
5	8	51	GLN
5	8	58	ASN
5	8	89	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	636 (23%)	121 (4%)
2	9	117/124 (94%)	16 (13%)	0
All	All	2874/3004 (95%)	652 (22%)	121 (4%)

All (652) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	45	C
1	0	48	A
1	0	49	U
1	0	50	G
1	0	51	A
1	0	59	G
1	0	68	C
1	0	70	A
1	0	71	A
1	0	72	A
1	0	74	G
1	0	76	C
1	0	82	G
1	0	83	A
1	0	84	G
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	97	U
1	0	99	U
1	0	102	C
1	0	105	G

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Mol	Chain	Res	Type
1	0	110	U
1	0	116	A
1	0	117	A
1	0	118	U
1	0	119	G
1	0	123	A
1	0	129	A
1	0	135	U
1	0	154	U
1	0	155	G
1	0	158	A
1	0	168	A
1	0	169	C
1	0	173	A
1	0	174	A
1	0	176	A
1	0	177	U
1	0	181	A
1	0	182	G
1	0	193	A
1	0	199	A
1	0	200	A
1	0	202	A
1	0	206	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	225	G
1	0	226	C
1	0	227	G
1	0	241	C
1	0	242	A
1	0	243	G
1	0	244	C
1	0	305	A
1	0	313	U
1	0	318	G
1	0	321	A
1	0	322	A
1	0	323	G
1	0	324	C
1	0	334	G

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Mol	Chain	Res	Type
1	0	335	A
1	0	340	G
1	0	341	A
1	0	343	A
1	0	344	G
1	0	358	C
1	0	362	C
1	0	363	G
1	0	368	A
1	0	373	A
1	0	399	G
1	0	400	U
1	0	401	G
1	0	404	A
1	0	409	G
1	0	412	U
1	0	414	A
1	0	416	U
1	0	418	C
1	0	424	G
1	0	443	A
1	0	447	U
1	0	453	U
1	0	454	G
1	0	456	C
1	0	458	G
1	0	459	A
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	470	U
1	0	491	A
1	0	492	G
1	0	495	C
1	0	515	A
1	0	517	A
1	0	518	A
1	0	519	C
1	0	537	C
1	0	538	A
1	0	541	C

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Mol	Chain	Res	Type
1	0	542	A
1	0	543	G
1	0	553	C
1	0	554	U
1	0	555	U
1	0	556	A
1	0	559	C
1	0	571	U
1	0	572	G
1	0	574	C
1	0	577	U
1	0	580	A
1	0	581	A
1	0	582	G
1	0	584	A
1	0	587	A
1	0	595	A
1	0	601	A
1	0	613	A
1	0	617	U
1	0	624	A
1	0	632	A
1	0	633	G
1	0	636	G
1	0	637	G
1	0	638	A
1	0	648	A
1	0	652	C
1	0	654	A
1	0	656	U
1	0	666	U
1	0	667	U
1	0	682	G
1	0	683	A
1	0	684	C
1	0	685	U
1	0	690	A
1	0	697	G
1	0	699	G
1	0	700	C
1	0	717	G
1	0	718	A

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Mol	Chain	Res	Type
1	0	726	G
1	0	728	G
1	0	739	G
1	0	741	G
1	0	742	G
1	0	743	A
1	0	760	U
1	0	766	A
1	0	776	G
1	0	777	A
1	0	778	G
1	0	789	G
1	0	790	A
1	0	795	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	801	A
1	0	802	A
1	0	805	G
1	0	806	A
1	0	807	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	819	C
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	843	G
1	0	844	G
1	0	859	U
1	0	873	U
1	0	874	A
1	0	879	A
1	0	880	C
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G

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Mol	Chain	Res	Type
1	0	938	G
1	0	939	C
1	0	940	G
1	0	941	U
1	0	944	A
1	0	952	A
1	0	957	G
1	0	958	G
1	0	963	G
1	0	967	G
1	0	968	C
1	0	969	U
1	0	970	A
1	0	972	C
1	0	973	U
1	0	984	A
1	0	985	G
1	0	994	A
1	0	996	C
1	0	1005	U
1	0	1006	C
1	0	1007	A
1	0	1016	C
1	0	1019	U
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1035	G
1	0	1036	G
1	0	1037	U
1	0	1043	A
1	0	1044	U
1	0	1045	G
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1058	G
1	0	1059	A
1	0	1062	G
1	0	1066	G

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Mol	Chain	Res	Type
1	0	1067	G
1	0	1068	A
1	0	1073	G
1	0	1074	G
1	0	1081	A
1	0	1087	C
1	0	1090	C
1	0	1094	C
1	0	1099	A
1	0	1101	U
1	0	1112	U
1	0	1122	A
1	0	1137	A
1	0	1138	A
1	0	1141	U
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1152	C
1	0	1154	A
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1199	U
1	0	1200	G
1	0	1220	G
1	0	1224	A
1	0	1233	A
1	0	1234	C
1	0	1240	G
1	0	1250	A
1	0	1253	C
1	0	1260	A
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1267	A

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Mol	Chain	Res	Type
1	0	1268	U
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1280	U
1	0	1284	G
1	0	1285	A
1	0	1288	A
1	0	1289	A
1	0	1302	C
1	0	1313	U
1	0	1314	A
1	0	1315	A
1	0	1316	G
1	0	1324	G
1	0	1326	U
1	0	1327	C
1	0	1333	G
1	0	1334	A
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1345	G
1	0	1346	C
1	0	1354	A
1	0	1356	G
1	0	1358	C
1	0	1359	G
1	0	1381	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1409	U
1	0	1410	U
1	0	1411	C
1	0	1428	G
1	0	1430	G
1	0	1433	A
1	0	1434	U
1	0	1435	G

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Mol	Chain	Res	Type
1	0	1439	G
1	0	1440	G
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1466	C
1	0	1467	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1473	U
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1484	G
1	0	1488	G
1	0	1489	C
1	0	1490	U
1	0	1491	C
1	0	1498	G
1	0	1505	U
1	0	1508	G
1	0	1513	U
1	0	1514	C
1	0	1524	C
1	0	1526	U
1	0	1527	G
1	0	1529	C
1	0	1531	C
1	0	1532	A
1	0	1551	U
1	0	1552	C
1	0	1563	U
1	0	1573	G
1	0	1574	A
1	0	1575	C
1	0	1582	A
1	0	1583	A
1	0	1585	A
1	0	1601	U

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Mol	Chain	Res	Type
1	0	1617	G
1	0	1618	U
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1632	A
1	0	1633	C
1	0	1634	A
1	0	1635	G
1	0	1648	C
1	0	1649	A
1	0	1651	U
1	0	1652	G
1	0	1657	A
1	0	1663	C
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1673	C
1	0	1686	A
1	0	1691	G
1	0	1692	C
1	0	1697	U
1	0	1698	C
1	0	1699	A
1	0	1712	G
1	0	1713	G
1	0	1714	A
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1724	C
1	0	1734	C
1	0	1735	G
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A

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Mol	Chain	Res	Type
1	0	1771	A
1	0	1772	C
1	0	1776	A
1	0	1777	A
1	0	1781	C
1	0	1791	C
1	0	1793	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1810	U
1	0	1811	A
1	0	1812	U
1	0	1821	A
1	0	1825	C
1	0	1831	G
1	0	1840	A
1	0	1868	A
1	0	1884	A
1	0	1890	G
1	0	1896	A
1	0	1899	A
1	0	1902	A
1	0	1910	A
1	0	1919	A
1	0	1920	A
1	0	1921	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1947	G
1	0	1948	C
1	0	1949	A
1	0	1950	C
1	0	1954	A
1	0	1955	G
1	0	1956	G

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Mol	Chain	Res	Type
1	0	1964	A
1	0	1975	G
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2004	U
1	0	2005	U
1	0	2006	G
1	0	2011	U
1	0	2014	A
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2026	C
1	0	2029	G
1	0	2034	A
1	0	2035	G
1	0	2038	C
1	0	2039	G
1	0	2044	G
1	0	2045	A
1	0	2051	U
1	0	2052	G
1	0	2059	U
1	0	2060	A
1	0	2073	A
1	0	2075	U
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2118	A
1	0	2119	A
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2183	C
1	0	2191	A
1	0	2192	U
1	0	2195	C
1	0	2199	C
1	0	2204	A

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Mol	Chain	Res	Type
1	0	2205	C
1	0	2218	G
1	0	2225	G
1	0	2229	G
1	0	2230	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2248	A
1	0	2262	C
1	0	2265	A
1	0	2266	A
1	0	2267	A
1	0	2268	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2316	G
1	0	2323	U
1	0	2325	A
1	0	2326	C
1	0	2329	C
1	0	2340	C
1	0	2362	G
1	0	2364	C
1	0	2371	A
1	0	2381	A
1	0	2382	C
1	0	2385	U
1	0	2386	G
1	0	2396	C
1	0	2402	U
1	0	2404	A

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Mol	Chain	Res	Type
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2413	A
1	0	2418	A
1	0	2419	C
1	0	2420	C
1	0	2426	G
1	0	2427	A
1	0	2428	U
1	0	2431	C
1	0	2448	A
1	0	2453	C
1	0	2455	A
1	0	2470	U
1	0	2473	G
1	0	2474	G
1	0	2477	C
1	0	2478	C
1	0	2480	C
1	0	2481	G
1	0	2483	U
1	0	2484	G
1	0	2485	U
1	0	2492	G
1	0	2497	A
1	0	2498	U
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2509	A
1	0	2521	A
1	0	2522	G
1	0	2532	G
1	0	2533	U
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2552	C
1	0	2553	G

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Mol	Chain	Res	Type
1	0	2556	A
1	0	2561	G
1	0	2564	U
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2608	A
1	0	2609	G
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2660	C
1	0	2661	G
1	0	2668	U
1	0	2669	C
1	0	2670	C
1	0	2681	A
1	0	2691	C
1	0	2692	A
1	0	2693	U
1	0	2699	G
1	0	2706	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2731	G
1	0	2732	C
1	0	2733	A
1	0	2736	U
1	0	2737	A
1	0	2738	A
1	0	2744	A
1	0	2745	A
1	0	2757	G
1	0	2758	A
1	0	2759	U

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Mol	Chain	Res	Type
1	0	2761	A
1	0	2770	A
1	0	2771	C
1	0	2774	U
1	0	2783	U
1	0	2784	A
1	0	2793	G
1	0	2795	A
1	0	2796	A
1	0	2798	A
1	0	2801	A
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2811	G
1	0	2824	C
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2854	G
1	0	2858	A
1	0	2864	C
1	0	2866	A
1	0	2867	G
1	0	2868	G
2	9	11	G
2	9	14	C
2	9	17	A
2	9	18	G
2	9	21	C
2	9	27	A
2	9	43	G
2	9	44	C
2	9	47	A
2	9	59	A
2	9	63	A
2	9	69	G
2	9	71	G
2	9	75	A
2	9	93	G
2	9	102	A

All (121) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	70	A
1	0	173	A
1	0	181	A
1	0	192	G
1	0	198	A
1	0	242	A
1	0	322	A
1	0	342	G
1	0	399	G
1	0	447	U
1	0	454	G
1	0	460	U
1	0	466	A
1	0	485	G
1	0	516	G
1	0	571	U
1	0	582	G
1	0	583	C
1	0	596	C
1	0	600	G
1	0	682	G
1	0	683	A
1	0	699	G
1	0	717	G
1	0	741	G
1	0	765	C
1	0	775	U
1	0	777	A
1	0	789	G
1	0	795	A
1	0	801	A
1	0	805	G
1	0	814	G
1	0	972	C
1	0	1000	G
1	0	1141	U
1	0	1154	A
1	0	1223	G
1	0	1233	A
1	0	1249	G
1	0	1263	G
1	0	1266	G
1	0	1278	A

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Mol	Chain	Res	Type
1	0	1279	G
1	0	1301	U
1	0	1313	U
1	0	1315	A
1	0	1333	G
1	0	1338	G
1	0	1342	U
1	0	1391	A
1	0	1410	U
1	0	1530	U
1	0	1574	A
1	0	1626	A
1	0	1631	C
1	0	1633	C
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1685	A
1	0	1691	G
1	0	1698	C
1	0	1715	A
1	0	1716	G
1	0	1723	U
1	0	1749	G
1	0	1775	A
1	0	1777	A
1	0	1791	C
1	0	1792	C
1	0	1820	G
1	0	1919	A
1	0	1926	U
1	0	1938	U
1	0	1963	G
1	0	1975	G
1	0	1979	C
1	0	2004	U
1	0	2005	U
1	0	2015	G
1	0	2016	A
1	0	2018	G
1	0	2028	C
1	0	2032	G

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Mol	Chain	Res	Type
1	0	2034	A
1	0	2044	G
1	0	2045	A
1	0	2059	U
1	0	2093	G
1	0	2161	C
1	0	2228	U
1	0	2229	G
1	0	2261	G
1	0	2312	A
1	0	2324	G
1	0	2325	A
1	0	2404	A
1	0	2418	A
1	0	2426	G
1	0	2428	U
1	0	2469	G
1	0	2476	A
1	0	2482	A
1	0	2485	U
1	0	2497	A
1	0	2498	U
1	0	2521	A
1	0	2564	U
1	0	2588	U
1	0	2592	U
1	0	2633	A
1	0	2660	C
1	0	2691	C
1	0	2706	U
1	0	2757	G
1	0	2758	A
1	0	2760	G
1	0	2823	G
1	0	2841	U
1	0	2848	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 [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

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	2766/2880 (96%)	1.60	805 (29%) 1 1	20, 43, 100, 131	0
2	9	118/124 (95%)	2.19	66 (55%) 0 0	33, 70, 94, 106	0
3	K	136/141 (96%)	1.60	41 (30%) 1 1	20, 50, 68, 80	0
4	U	84/91 (92%)	1.26	17 (20%) 3 3	21, 49, 63, 66	0
5	8	113/113 (100%)	1.87	42 (37%) 1 1	28, 52, 66, 82	0
All	All	3217/3349 (96%)	1.62	971 (30%) 1 1	20, 45, 98, 131	0

All (971) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	0	1459	U	9.0
1	0	940	G	8.4
1	0	1812	U	8.3
1	0	1111	C	7.9
1	0	2782	G	7.8
1	0	1354	A	7.6
1	0	2108	G	7.5
1	0	1071	U	7.5
1	0	2247	A	7.5
1	0	2246	A	7.4
5	8	102	ALA	6.9
1	0	1905	G	6.9
4	U	80	SER	6.8
1	0	1036	G	6.8
1	0	1792	C	6.8
1	0	803	C	6.6
1	0	1072	U	6.6
1	0	813	A	6.5
1	0	363	G	6.5
1	0	788	G	6.5

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Mol	Chain	Res	Type	RSRZ
1	0	2104	G	6.5
1	0	1183	C	6.5
1	0	2124	C	6.5
1	0	1948	C	6.3
1	0	1850	G	6.3
1	0	2103	G	6.3
1	0	1507	A	6.3
1	0	372	U	6.3
1	0	91	A	6.2
1	0	625	A	6.2
5	8	29	THR	6.2
1	0	358	C	6.2
1	0	1185	C	6.2
1	0	2105	U	6.1
1	0	1791	C	5.9
1	0	413	G	5.9
1	0	623	G	5.9
1	0	295	C	5.8
1	0	1523	A	5.8
3	K	53	ILE	5.8
1	0	1073	G	5.7
1	0	985	G	5.7
1	0	1196	G	5.7
1	0	665	A	5.7
1	0	1067	G	5.6
1	0	2640	G	5.6
1	0	72	A	5.6
1	0	2311	U	5.6
1	0	2313	G	5.6
1	0	2427	A	5.6
1	0	341	A	5.6
1	0	2093	G	5.6
1	0	1086	C	5.5
1	0	1524	C	5.5
1	0	879	A	5.5
1	0	1625	A	5.5
1	0	2165	A	5.5
1	0	2091	C	5.4
1	0	136	A	5.4
3	K	141	ALA	5.4
1	0	62	U	5.4
1	0	2291	U	5.4

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Mol	Chain	Res	Type	RSRZ
1	0	2160	C	5.4
2	9	76	U	5.4
1	0	1920	A	5.4
1	0	2168	A	5.4
1	0	1069	G	5.4
1	0	1189	G	5.4
1	0	514	G	5.3
1	0	1184	G	5.3
1	0	2589	C	5.3
1	0	177	U	5.3
1	0	2136	G	5.3
1	0	1901	A	5.2
1	0	1110	G	5.2
1	0	1436	G	5.2
1	0	2088	U	5.2
1	0	730	C	5.2
2	9	51	G	5.1
1	0	2824	C	5.1
1	0	2164	G	5.1
1	0	668	A	5.1
1	0	1514	C	5.1
1	0	1550	C	5.1
3	K	21	ASP	5.1
1	0	697	G	5.1
1	0	1438	G	5.1
1	0	1095	A	5.1
1	0	2159	A	5.1
1	0	2877	A	5.1
1	0	1866	G	5.0
1	0	558	G	5.0
1	0	1435	G	5.0
1	0	1058	G	5.0
1	0	1503	G	5.0
1	0	2076	G	5.0
4	U	54	GLY	5.0
1	0	2174	G	4.9
1	0	723	C	4.9
1	0	2170	C	4.9
1	0	1439	G	4.9
1	0	2739	G	4.9
1	0	1060	C	4.9
1	0	1091	C	4.9

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Mol	Chain	Res	Type	RSRZ
1	0	1199	U	4.9
1	0	2083	G	4.9
1	0	2137	G	4.9
1	0	1127	C	4.8
1	0	2107	G	4.8
2	9	113	G	4.8
4	U	73	GLY	4.8
1	0	814	G	4.8
1	0	1066	G	4.8
1	0	943	U	4.7
1	0	1900	U	4.7
1	0	2094	C	4.7
1	0	2312	A	4.7
1	0	2866	A	4.7
1	0	1117	G	4.7
1	0	2122	G	4.7
1	0	2283	G	4.7
5	8	19	ALA	4.7
1	0	1093	U	4.7
1	0	205	A	4.7
1	0	1865	C	4.7
1	0	2135	C	4.7
5	8	65	ASP	4.7
1	0	938	G	4.7
1	0	1903	C	4.7
1	0	1103	C	4.7
1	0	1469	U	4.6
1	0	2783	U	4.6
1	0	1097	A	4.6
1	0	1525	A	4.6
2	9	38	C	4.6
1	0	1393	G	4.6
1	0	1019	U	4.6
1	0	648	A	4.6
2	9	60	A	4.6
1	0	556	A	4.5
1	0	624	A	4.5
1	0	1902	A	4.5
1	0	2162	C	4.5
1	0	1193	G	4.5
1	0	1527	G	4.5
1	0	2079	A	4.5

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Mol	Chain	Res	Type	RSRZ
1	0	555	U	4.5
1	0	1090	C	4.5
1	0	1498	G	4.5
1	0	1545	G	4.5
1	0	2084	G	4.5
1	0	890	U	4.5
5	8	34	THR	4.4
1	0	1618	U	4.4
1	0	1118	G	4.4
2	9	5	C	4.4
1	0	297	A	4.4
1	0	729	A	4.4
1	0	1089	C	4.4
1	0	1119	U	4.4
1	0	1098	G	4.4
1	0	2217	G	4.4
1	0	1055	A	4.4
1	0	92	U	4.4
1	0	2196	U	4.4
1	0	1921	A	4.3
1	0	417	C	4.3
1	0	1120	C	4.3
3	K	22	ALA	4.3
1	0	79	G	4.3
1	0	2742	G	4.3
1	0	2867	G	4.3
1	0	1908	C	4.3
1	0	1849	G	4.3
1	0	1153	A	4.3
1	0	1474	A	4.3
1	0	1080	A	4.2
1	0	1904	G	4.2
1	0	2086	U	4.2
4	U	3	HIS	4.2
1	0	2198	U	4.2
1	0	1596	A	4.2
1	0	2189	A	4.2
1	0	134	G	4.2
1	0	1052	C	4.2
1	0	2077	G	4.2
1	0	2133	G	4.2
1	0	1505	U	4.2

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Mol	Chain	Res	Type	RSRZ
1	0	360	A	4.2
1	0	1552	C	4.2
2	9	37	C	4.2
1	0	872	G	4.2
1	0	1075	C	4.2
1	0	1522	C	4.2
1	0	1897	C	4.2
1	0	660	G	4.2
1	0	1079	G	4.2
1	0	1520	G	4.2
1	0	1101	U	4.1
1	0	296	A	4.1
1	0	236	C	4.1
1	0	1024	G	4.1
1	0	1123	G	4.1
1	0	1430	G	4.1
1	0	1044	U	4.1
1	0	371	G	4.1
1	0	2134	U	4.1
1	0	2498	U	4.1
1	0	787	A	4.1
1	0	2082	C	4.1
1	0	1521	U	4.1
1	0	2759	U	4.1
1	0	1422	C	4.0
1	0	726	G	4.0
1	0	1085	G	4.0
1	0	1499	A	4.0
3	K	63	GLY	4.0
1	0	699	G	4.0
1	0	728	G	4.0
3	K	87	GLY	4.0
1	0	658	G	4.0
1	0	875	G	4.0
1	0	1254	G	4.0
1	0	1734	C	4.0
5	8	62	ASP	4.0
1	0	1906	U	3.9
1	0	2051	U	3.9
5	8	20	PHE	3.9
1	0	858	G	3.9
1	0	1839	A	3.9

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Mol	Chain	Res	Type	RSRZ
1	0	1031	C	3.9
1	0	1087	C	3.9
1	0	2087	U	3.9
1	0	1602	G	3.9
1	0	1683	G	3.9
5	8	104	ALA	3.9
1	0	93	A	3.9
1	0	539	A	3.9
2	9	75	A	3.9
1	0	1082	G	3.9
1	0	1428	G	3.9
1	0	1928	G	3.9
1	0	2106	G	3.9
1	0	2202	G	3.9
1	0	2298	U	3.9
5	8	79	ASP	3.9
1	0	1081	A	3.8
1	0	2265	A	3.8
3	K	16	GLY	3.8
1	0	418	C	3.8
1	0	2158	C	3.8
1	0	942	U	3.8
1	0	2197	U	3.8
1	0	300	C	3.8
2	9	40	C	3.8
1	0	669	G	3.8
1	0	789	G	3.8
1	0	2139	G	3.8
1	0	1078	A	3.8
1	0	1532	A	3.8
1	0	1899	A	3.8
2	9	53	G	3.8
1	0	149	A	3.8
2	9	36	A	3.8
1	0	1054	C	3.7
1	0	1501	C	3.7
1	0	1570	C	3.7
1	0	957	G	3.7
1	0	1074	G	3.7
1	0	1128	G	3.7
1	0	557	U	3.7
1	0	2280	A	3.7

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Mol	Chain	Res	Type	RSRZ
1	0	541	C	3.7
1	0	724	C	3.7
1	0	1546	C	3.7
1	0	219	G	3.7
1	0	342	G	3.7
1	0	364	G	3.7
1	0	313	U	3.7
1	0	1437	A	3.7
1	0	2191	A	3.7
1	0	1549	C	3.7
3	K	37	ALA	3.7
1	0	736	G	3.7
1	0	2140	G	3.7
2	9	100	G	3.7
1	0	2245	A	3.7
1	0	2476	A	3.7
4	U	51	VAL	3.7
5	8	54	VAL	3.7
1	0	303	C	3.7
1	0	1489	C	3.7
1	0	1858	C	3.7
1	0	2120	C	3.7
1	0	2166	G	3.6
1	0	1475	U	3.6
1	0	1867	A	3.6
1	0	2169	A	3.6
1	0	1115	C	3.6
1	0	2138	U	3.6
1	0	90	G	3.6
1	0	1053	G	3.6
1	0	2201	G	3.6
4	U	77	ARG	3.6
1	0	2234	G	3.6
2	9	23	G	3.6
1	0	2187	A	3.6
1	0	1049	C	3.6
4	U	84	ALA	3.6
1	0	1848	U	3.6
1	0	73	A	3.5
1	0	1711	C	3.5
1	0	1526	U	3.5
1	0	2778	U	3.5

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Mol	Chain	Res	Type	RSRZ
1	0	373	A	3.5
1	0	1096	A	3.5
1	0	510	G	3.5
1	0	861	G	3.5
1	0	1356	G	3.5
1	0	1971	C	3.5
2	9	33	C	3.5
1	0	247	A	3.5
1	0	613	A	3.5
1	0	1187	A	3.5
1	0	1062	G	3.5
1	0	2085	G	3.5
1	0	1162	A	3.5
1	0	1896	A	3.5
1	0	58	C	3.5
1	0	299	C	3.5
2	9	19	C	3.5
1	0	1577	G	3.5
1	0	2268	G	3.5
1	0	2731	G	3.5
3	K	38	MET	3.4
5	8	4	ASP	3.4
1	0	2161	C	3.4
1	0	1070	G	3.4
1	0	1425	G	3.4
1	0	1898	U	3.4
1	0	2287	G	3.4
1	0	1065	A	3.4
1	0	2089	C	3.4
1	0	2195	C	3.4
3	K	85	GLY	3.4
1	0	868	U	3.4
1	0	2173	G	3.4
4	U	29	GLU	3.4
1	0	2267	A	3.4
1	0	450	C	3.4
1	0	701	U	3.4
2	9	121	G	3.4
1	0	369	C	3.3
1	0	1037	U	3.3
1	0	1116	U	3.3
1	0	1497	C	3.3

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Mol	Chain	Res	Type	RSRZ
1	0	1927	U	3.3
1	0	1033	G	3.3
1	0	1554	G	3.3
1	0	2132	G	3.3
1	0	2286	G	3.3
1	0	1840	A	3.3
1	0	2188	A	3.3
1	0	2284	U	3.3
1	0	298	C	3.3
1	0	15	G	3.3
1	0	2581	A	3.3
2	9	48	A	3.3
2	9	57	U	3.3
1	0	429	C	3.3
1	0	700	C	3.3
1	0	1907	C	3.3
1	0	2125	C	3.3
3	K	137	VAL	3.3
5	8	75	GLU	3.3
1	0	877	G	3.3
1	0	1050	G	3.3
1	0	1121	G	3.3
1	0	2282	G	3.3
1	0	2617	G	3.3
1	0	913	A	3.3
3	K	81	GLU	3.3
3	K	126	LEU	3.2
3	K	88	LYS	3.2
1	0	1	G	3.2
1	0	1030	U	3.2
1	0	2092	U	3.2
1	0	2294	U	3.2
1	0	2549	G	3.2
1	0	117	A	3.2
1	0	2289	A	3.2
1	0	2780	A	3.2
1	0	362	C	3.2
1	0	2199	C	3.2
2	9	107	C	3.2
5	8	32	GLY	3.2
1	0	666	U	3.2
1	0	941	U	3.2

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Mol	Chain	Res	Type	RSRZ
1	0	2081	U	3.2
1	0	83	A	3.2
1	0	355	G	3.2
1	0	1895	A	3.2
1	0	1947	G	3.2
1	0	2729	A	3.2
5	8	2	ILE	3.2
1	0	1510	A	3.2
1	0	1883	A	3.2
1	0	2119	A	3.2
1	0	147	G	3.2
1	0	914	C	3.2
1	0	2453	C	3.2
1	0	2096	U	3.1
1	0	2736	U	3.1
1	0	137	A	3.1
1	0	1114	A	3.1
1	0	87	G	3.1
1	0	353	G	3.1
1	0	614	G	3.1
1	0	1191	G	3.1
5	8	96	ILE	3.1
3	K	82	THR	3.1
1	0	1473	U	3.1
1	0	2323	U	3.1
1	0	2109	A	3.1
3	K	50	ALA	3.1
1	0	1094	C	3.1
1	0	1113	C	3.1
1	0	818	G	3.1
1	0	1186	G	3.1
1	0	2123	G	3.1
1	0	2171	U	3.1
4	U	61	ALA	3.1
1	0	1910	A	3.1
1	0	633	G	3.1
1	0	732	G	3.1
1	0	1890	G	3.1
1	0	2304	G	3.1
2	9	26	G	3.1
1	0	1262	U	3.1
1	0	1068	A	3.1

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Mol	Chain	Res	Type	RSRZ
1	0	2167	A	3.1
1	0	2633	A	3.1
1	0	155	G	3.0
1	0	204	A	3.0
1	0	368	A	3.0
1	0	891	A	3.0
2	9	17	A	3.0
5	8	51	GLN	3.0
1	0	646	C	3.0
1	0	1063	C	3.0
1	0	1182	U	3.0
1	0	1548	U	3.0
1	0	1909	U	3.0
1	0	2172	U	3.0
1	0	2324	G	3.0
1	0	1859	A	3.0
1	0	1506	C	3.0
2	9	21	C	3.0
3	K	112	GLU	3.0
1	0	365	U	3.0
1	0	2180	U	3.0
1	0	1398	G	3.0
2	9	66	G	3.0
5	8	58	ASN	3.0
5	8	36	GLU	3.0
1	0	1137	A	3.0
1	0	2175	A	3.0
1	0	2277	A	3.0
2	9	65	A	3.0
1	0	1152	C	3.0
2	9	30	C	3.0
1	0	2592	U	3.0
1	0	108	G	2.9
1	0	138	G	2.9
1	0	733	G	2.9
1	0	1553	G	2.9
1	0	918	A	2.9
1	0	1192	A	2.9
1	0	2056	C	2.9
1	0	2292	C	2.9
1	0	1912	G	2.9
1	0	2737	A	2.9

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Mol	Chain	Res	Type	RSRZ
3	K	8	THR	2.9
1	0	327	C	2.9
1	0	725	C	2.9
1	0	1892	C	2.9
1	0	2779	C	2.9
3	K	41	ALA	2.9
3	K	136	GLU	2.9
1	0	2178	U	2.9
1	0	2365	U	2.9
1	0	1102	G	2.9
1	0	1504	G	2.9
1	0	2546	G	2.9
2	9	18	G	2.9
1	0	654	A	2.9
1	0	1285	A	2.9
1	0	629	C	2.9
1	0	2281	C	2.9
2	9	64	C	2.9
5	8	48	GLU	2.9
5	8	50	GLU	2.9
1	0	436	A	2.9
1	0	1109	A	2.9
1	0	889	C	2.8
1	0	1891	C	2.8
1	0	2275	U	2.8
3	K	75	VAL	2.8
5	8	16	CYS	2.8
1	0	1512	A	2.8
5	8	84	SER	2.8
1	0	106	G	2.8
1	0	560	G	2.8
1	0	631	G	2.8
1	0	1476	G	2.8
1	0	78	C	2.8
1	0	1224	A	2.8
1	0	2770	A	2.8
1	0	1051	U	2.8
3	K	24	GLY	2.8
1	0	208	C	2.8
1	0	452	G	2.8
1	0	968	C	2.8
1	0	1104	G	2.8

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Mol	Chain	Res	Type	RSRZ
1	0	1670	G	2.8
1	0	2408	G	2.8
1	0	2582	G	2.8
1	0	2781	G	2.8
1	0	2839	G	2.8
2	9	35	C	2.8
2	9	108	G	2.8
4	U	23	VAL	2.8
1	0	667	U	2.8
1	0	838	A	2.8
1	0	917	U	2.8
1	0	1190	C	2.8
1	0	1830	C	2.8
1	0	2740	C	2.8
1	0	2875	C	2.8
2	9	34	C	2.8
1	0	543	G	2.8
1	0	2362	G	2.8
2	9	58	G	2.8
1	0	150	A	2.7
1	0	956	A	2.7
1	0	1107	A	2.7
1	0	1434	U	2.7
1	0	2090	U	2.7
1	0	2450	A	2.7
2	9	80	A	2.7
1	0	301	C	2.7
1	0	2295	C	2.7
1	0	59	G	2.7
1	0	492	G	2.7
1	0	734	G	2.7
1	0	1168	G	2.7
1	0	1533	G	2.7
1	0	2121	U	2.7
3	K	92	GLU	2.7
1	0	441	A	2.7
1	0	518	A	2.7
2	9	45	C	2.7
1	0	504	G	2.7
1	0	637	G	2.7
1	0	1374	G	2.7
1	0	1599	G	2.7

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Mol	Chain	Res	Type	RSRZ
1	0	2388	G	2.7
1	0	2394	G	2.7
1	0	2515	G	2.7
5	8	30	GLY	2.7
5	8	22	THR	2.7
1	0	293	U	2.7
1	0	400	U	2.7
1	0	1551	U	2.7
1	0	618	A	2.7
1	0	638	A	2.7
3	K	95	VAL	2.7
1	0	927	C	2.7
1	0	1218	C	2.7
1	0	2360	C	2.7
1	0	2769	C	2.7
5	8	23	GLN	2.7
1	0	752	G	2.7
1	0	1432	G	2.7
1	0	2015	G	2.7
1	0	2516	U	2.7
3	K	32	ASP	2.7
1	0	60	A	2.6
1	0	310	A	2.6
1	0	1699	A	2.6
1	0	2290	A	2.6
3	K	77	LYS	2.6
1	0	962	C	2.6
1	0	1518	C	2.6
2	9	62	C	2.6
1	0	1000	G	2.6
1	0	1536	G	2.6
1	0	2293	G	2.6
1	0	2464	G	2.6
1	0	2642	G	2.6
2	9	117	G	2.6
1	0	2004	U	2.6
1	0	683	A	2.6
1	0	1106	A	2.6
1	0	1188	A	2.6
1	0	1851	A	2.6
1	0	2658	A	2.6
2	9	41	A	2.6

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Mol	Chain	Res	Type	RSRZ
2	9	78	A	2.6
2	9	103	A	2.6
5	8	109	GLU	2.6
1	0	1529	C	2.6
1	0	1598	C	2.6
1	0	1824	C	2.6
1	0	1979	C	2.6
1	0	2321	C	2.6
1	0	554	U	2.6
1	0	340	G	2.6
1	0	423	G	2.6
1	0	673	G	2.6
1	0	735	G	2.6
1	0	1042	G	2.6
1	0	89	A	2.6
1	0	1869	A	2.6
1	0	449	C	2.6
1	0	1535	C	2.6
1	0	86	U	2.6
1	0	656	U	2.6
1	0	2185	U	2.6
2	9	106	U	2.6
5	8	61	ARG	2.6
3	K	18	MET	2.6
1	0	182	G	2.6
1	0	314	G	2.6
1	0	2078	G	2.6
3	K	138	TYR	2.6
1	0	70	A	2.6
1	0	1032	A	2.6
1	0	1179	A	2.6
1	0	1441	A	2.6
1	0	2497	A	2.6
1	0	2701	A	2.6
2	9	59	A	2.6
1	0	652	C	2.6
1	0	1870	U	2.5
1	0	50	G	2.5
1	0	95	G	2.5
1	0	105	G	2.5
1	0	659	G	2.5
1	0	1205	G	2.5

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Mol	Chain	Res	Type	RSRZ
1	0	2018	G	2.5
3	K	107	VAL	2.5
1	0	242	A	2.5
1	0	304	A	2.5
1	0	322	A	2.5
1	0	2118	A	2.5
1	0	4	C	2.5
1	0	1112	U	2.5
1	0	1578	U	2.5
1	0	1594	U	2.5
1	0	357	A	2.5
1	0	2278	A	2.5
1	0	2728	A	2.5
1	0	111	G	2.5
1	0	157	G	2.5
1	0	1427	G	2.5
1	0	1749	G	2.5
1	0	1841	G	2.5
1	0	2370	G	2.5
1	0	2727	G	2.5
1	0	2851	G	2.5
2	9	71	G	2.5
5	8	103	LEU	2.5
1	0	1064	C	2.5
2	9	22	U	2.5
5	8	86	ASP	2.5
1	0	200	A	2.5
1	0	292	A	2.5
1	0	1597	A	2.5
1	0	1860	A	2.5
1	0	2204	A	2.5
1	0	605	G	2.5
1	0	1100	G	2.5
1	0	1149	G	2.5
1	0	1243	G	2.5
1	0	1502	G	2.5
1	0	1852	G	2.5
1	0	1880	G	2.5
1	0	2213	G	2.5
1	0	2469	G	2.5
1	0	2688	G	2.5
2	9	120	G	2.5

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Mol	Chain	Res	Type	RSRZ
1	0	545	C	2.5
2	9	8	C	2.5
1	0	135	U	2.5
1	0	2005	U	2.5
1	0	1122	A	2.4
1	0	1544	A	2.4
1	0	367	G	2.4
1	0	438	G	2.4
1	0	641	G	2.4
1	0	920	G	2.4
1	0	939	C	2.4
1	0	1125	G	2.4
1	0	1831	G	2.4
1	0	1931	G	2.4
1	0	2326	C	2.4
1	0	2386	G	2.4
1	0	2876	C	2.4
2	9	11	G	2.4
1	0	925	U	2.4
1	0	1490	U	2.4
1	0	2772	U	2.4
5	8	94	ALA	2.4
1	0	2325	A	2.4
2	9	63	A	2.4
5	8	80	ASP	2.4
1	0	1221	C	2.4
1	0	1876	C	2.4
1	0	100	G	2.4
1	0	152	G	2.4
1	0	388	G	2.4
1	0	727	U	2.4
1	0	974	U	2.4
1	0	1159	U	2.4
1	0	1861	G	2.4
1	0	1942	G	2.4
1	0	2080	U	2.4
1	0	2297	G	2.4
1	0	2320	G	2.4
1	0	2350	G	2.4
1	0	2351	G	2.4
5	8	77	SER	2.4
3	K	76	THR	2.4

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Mol	Chain	Res	Type	RSRZ
1	0	1538	A	2.4
1	0	1605	A	2.4
1	0	2181	A	2.4
1	0	2190	A	2.4
1	0	366	U	2.4
1	0	1181	C	2.4
1	0	1217	U	2.4
1	0	1736	C	2.4
1	0	1922	U	2.4
1	0	2163	U	2.4
1	0	2477	C	2.4
1	0	2693	U	2.4
3	K	121	LEU	2.4
1	0	67	G	2.4
1	0	421	G	2.4
1	0	1147	G	2.4
1	0	2804	G	2.4
2	9	119	G	2.4
3	K	102	ARG	2.4
1	0	490	A	2.4
1	0	995	A	2.4
2	9	68	A	2.4
2	9	102	A	2.4
5	8	10	GLU	2.4
1	0	467	U	2.4
1	0	859	U	2.4
1	0	1926	U	2.4
1	0	2177	U	2.4
1	0	354	C	2.3
1	0	1558	C	2.3
1	0	1606	C	2.3
2	9	4	C	2.3
1	0	1465	G	2.3
1	0	1864	G	2.3
1	0	1933	G	2.3
1	0	885	A	2.3
1	0	2356	A	2.3
4	U	47	ALA	2.3
1	0	1076	U	2.3
1	0	1124	U	2.3
1	0	2296	U	2.3
1	0	1396	C	2.3

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Mol	Chain	Res	Type	RSRZ
1	0	1853	C	2.3
2	9	55	C	2.3
1	0	698	A	2.3
1	0	1088	A	2.3
1	0	1429	A	2.3
1	0	294	U	2.3
1	0	969	U	2.3
1	0	68	C	2.3
1	0	245	C	2.3
1	0	559	C	2.3
5	8	95	ALA	2.3
1	0	209	G	2.3
1	0	592	G	2.3
1	0	1377	G	2.3
1	0	1496	G	2.3
1	0	2309	G	2.3
1	0	2378	G	2.3
1	0	442	A	2.3
1	0	538	A	2.3
1	0	2381	A	2.3
2	9	20	A	2.3
1	0	1946	U	2.3
1	0	2285	U	2.3
1	0	915	C	2.3
1	0	1875	C	2.3
3	K	84	MET	2.3
5	8	70	LEU	2.3
5	8	113	PHE	2.3
1	0	344	G	2.2
1	0	612	G	2.2
1	0	761	G	2.2
1	0	791	G	2.2
1	0	1279	G	2.2
1	0	1324	G	2.2
1	0	1450	G	2.2
1	0	2529	G	2.2
1	0	2553	G	2.2
1	0	2868	G	2.2
1	0	650	U	2.2
1	0	1057	A	2.2
1	0	1161	U	2.2
2	9	50	U	2.2

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Mol	Chain	Res	Type	RSRZ
2	9	32	C	2.2
5	8	59	VAL	2.2
5	8	73	ASP	2.2
4	U	83	ALA	2.2
1	0	2	G	2.2
1	0	151	G	2.2
1	0	694	G	2.2
1	0	1790	G	2.2
1	0	1913	G	2.2
1	0	2279	G	2.2
1	0	144	U	2.2
1	0	1048	U	2.2
1	0	1056	U	2.2
1	0	2733	A	2.2
1	0	426	C	2.2
1	0	1772	C	2.2
2	9	12	C	2.2
2	9	44	C	2.2
3	K	35	LEU	2.2
3	K	71	PRO	2.2
1	0	1092	U	2.2
1	0	600	G	2.2
1	0	620	G	2.2
1	0	1099	A	2.2
1	0	2010	G	2.2
1	0	2065	A	2.2
1	0	2353	G	2.2
1	0	2527	G	2.2
1	0	2730	A	2.2
2	9	9	G	2.2
2	9	112	A	2.2
4	U	13	GLY	2.2
1	0	324	C	2.2
1	0	1358	C	2.2
1	0	1743	C	2.2
5	8	88	VAL	2.2
1	0	211	U	2.2
1	0	1431	U	2.2
5	8	87	ASP	2.2
1	0	542	A	2.2
1	0	2272	A	2.2
2	9	47	A	2.2

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Mol	Chain	Res	Type	RSRZ
1	0	647	G	2.2
1	0	933	G	2.2
1	0	1035	G	2.2
1	0	1886	G	2.2
1	0	2214	G	2.2
1	0	2259	G	2.2
1	0	2460	G	2.2
1	0	2837	G	2.2
1	0	131	C	2.1
1	0	148	C	2.1
1	0	226	C	2.1
1	0	664	C	2.1
1	0	2459	C	2.1
4	U	9	SER	2.1
5	8	9	ALA	2.1
4	U	71	ASN	2.1
1	0	356	A	2.1
1	0	1061	A	2.1
1	0	1846	A	2.1
1	0	1868	A	2.1
1	0	742	G	2.1
1	0	1330	G	2.1
1	0	1579	G	2.1
1	0	1716	G	2.1
1	0	1737	G	2.1
1	0	1882	G	2.1
1	0	1968	G	2.1
1	0	2302	G	2.1
1	0	2437	G	2.1
2	9	46	G	2.1
2	9	89	G	2.1
2	9	118	G	2.1
1	0	127	C	2.1
1	0	1018	C	2.1
1	0	1256	C	2.1
1	0	2443	C	2.1
3	K	91	VAL	2.1
1	0	118	U	2.1
1	0	563	U	2.1
1	0	1410	U	2.1
1	0	1413	U	2.1
1	0	2458	U	2.1

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Mol	Chain	Res	Type	RSRZ
3	K	64	LYS	2.1
1	0	71	A	2.1
1	0	139	A	2.1
1	0	1610	A	2.1
1	0	309	G	2.1
1	0	610	G	2.1
1	0	989	G	2.1
1	0	1488	G	2.1
1	0	1666	G	2.1
1	0	1854	G	2.1
1	0	1887	G	2.1
1	0	2052	G	2.1
1	0	2095	G	2.1
1	0	2610	G	2.1
1	0	2634	G	2.1
1	0	2687	G	2.1
2	9	70	C	2.1
3	K	125	LYS	2.1
5	8	42	THR	2.1
1	0	544	U	2.1
1	0	873	U	2.1
1	0	1467	U	2.1
3	K	13	GLN	2.1
1	0	158	A	2.1
1	0	731	A	2.1
1	0	886	A	2.1
1	0	1607	A	2.1
1	0	1667	A	2.1
1	0	2248	A	2.1
1	0	2404	A	2.1
4	U	58	THR	2.1
1	0	590	C	2.1
1	0	1620	C	2.1
1	0	1731	C	2.1
2	9	6	C	2.1
2	9	81	C	2.1
1	0	662	G	2.1
1	0	1228	G	2.1
1	0	1261	G	2.1
1	0	1809	G	2.1
1	0	2319	G	2.1
1	0	2449	G	2.1

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Mol	Chain	Res	Type	RSRZ
2	9	56	G	2.1
1	0	2074	U	2.0
1	0	2318	U	2.0
1	0	923	A	2.0
1	0	2315	A	2.0
1	0	2372	A	2.0
4	U	2	ALA	2.0
3	K	106	GLU	2.0
1	0	113	C	2.0
1	0	1364	C	2.0
1	0	2383	C	2.0
1	0	2494	C	2.0
1	0	192	G	2.0
1	0	401	G	2.0
1	0	487	G	2.0
1	0	888	G	2.0
1	0	1041	G	2.0
1	0	1730	G	2.0
1	0	1077	U	2.0
1	0	1923	U	2.0
3	K	118	ALA	2.0
1	0	221	A	2.0
1	0	494	A	2.0
1	0	546	A	2.0
1	0	581	A	2.0
1	0	1391	A	2.0
1	0	1718	A	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.