



# Full wwPDB X-ray Structure Validation Report

Feb 28, 2014 – 01:58 PM GMT

PDB ID : 2D3O  
Title : Structure of Ribosome Binding Domain of the Trigger Factor on the 50S ribosomal subunit from *D. radiodurans*  
Authors : Schlutzen, F.; Wilson, D.N.; Hansen, H.A.; Tian, P.; Harms, J.M.; McInnes, S.J.; Albrecht, R.; Buerger, J.; Wilbanks, S.M.; Fucini, P.  
Deposited on : 2005-09-30  
Resolution : 3.35 Å(reported)

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

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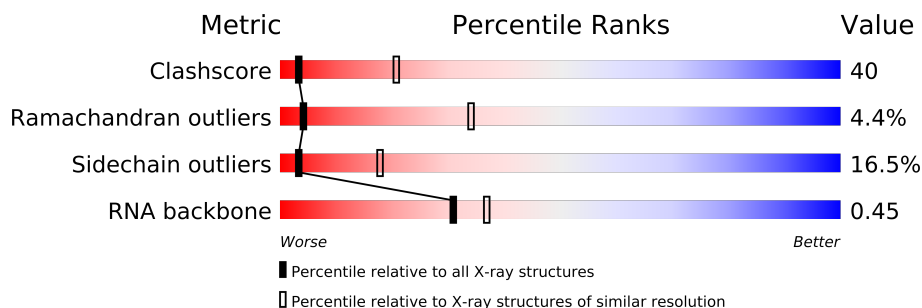
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : **NOT EXECUTED**  
EDS : **NOT EXECUTED**  
Percentile statistics : 21963  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable22683

# 1 Overall quality at a glance

The reported resolution of this entry is 3.35 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))
Clashscore	79885	1030 (3.48-3.24)
Ramachandran outliers	78287	1008 (3.48-3.24)
Sidechain outliers	78261	1007 (3.48-3.24)
RNA backbone	1838	1005 (4.00-2.72)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	
2	R	95	
3	S	115	
4	W	67	
5	1	112	

## 2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 63004 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	0	2802	Total	C	N	O	P	0	0	0
			60132	26824	11089	19418	2801			

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	R	93	Total	C	N	O	S	0	0	0
			726	458	136	130	2			

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	S	110	Total	C	N	O	S	0	0	0
			825	513	160	151	1			

- Molecule 4 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	W	66	Total	C	N	O	S	0	0	0
			533	327	107	96	3			

- Molecule 5 is a protein called Trigger Factor.

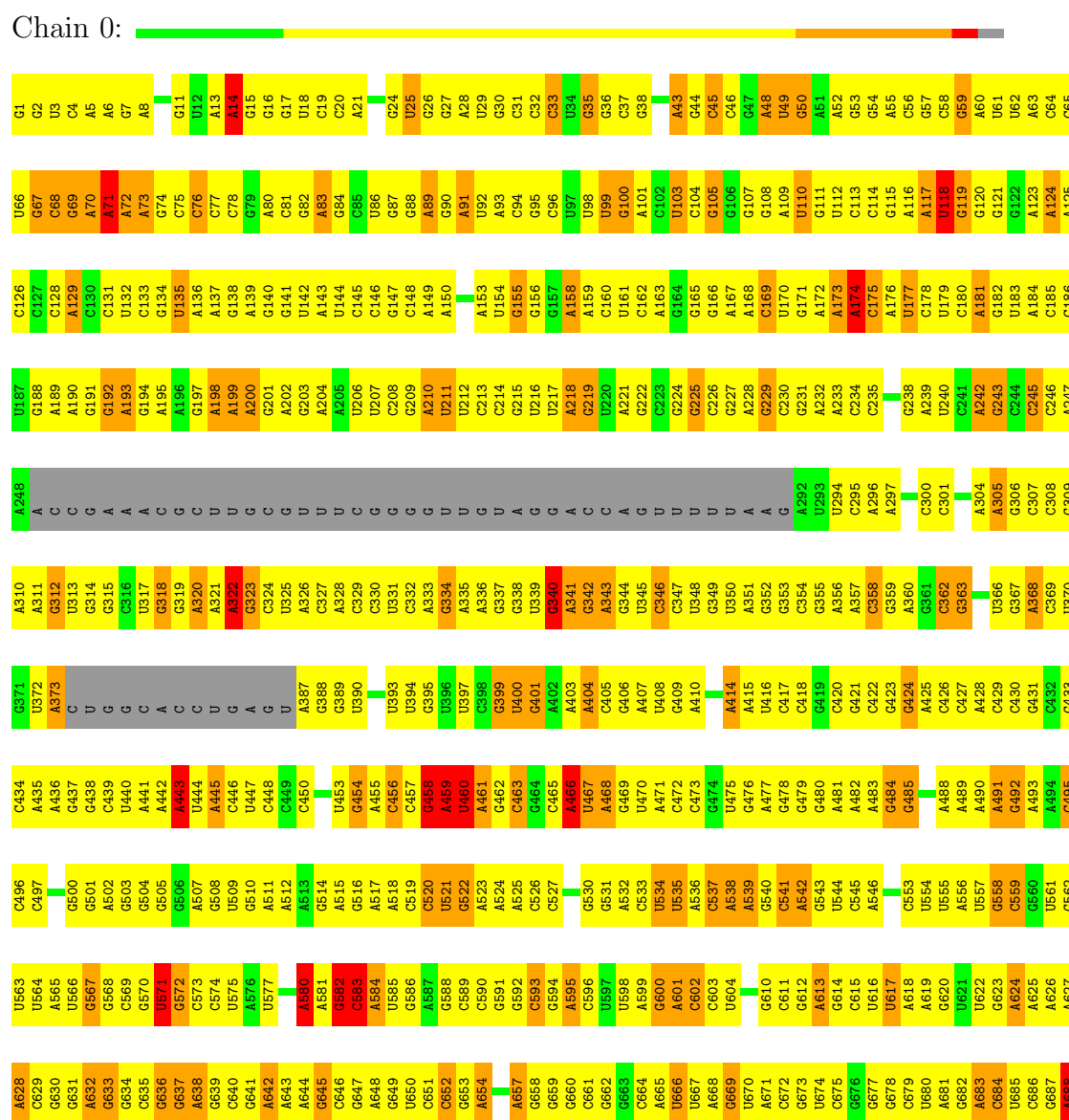
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
5	1	100	Total	C	N	O	0	0	0
			788	494	146	148			

### 3 Residue-property plots

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

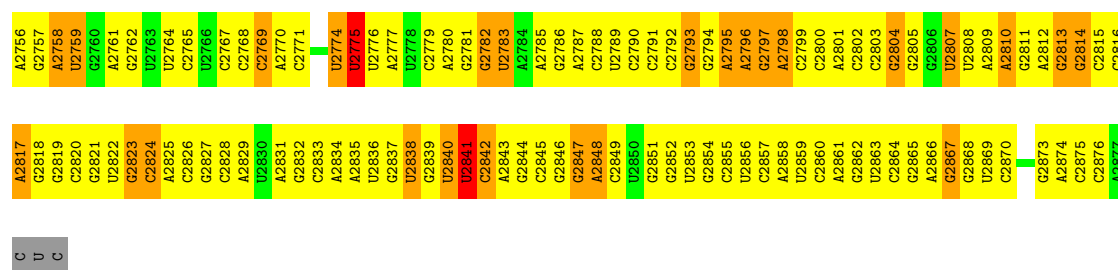
Note EDS was not executed.

#### • Molecule 1: 23S RIBOSOMAL RNA



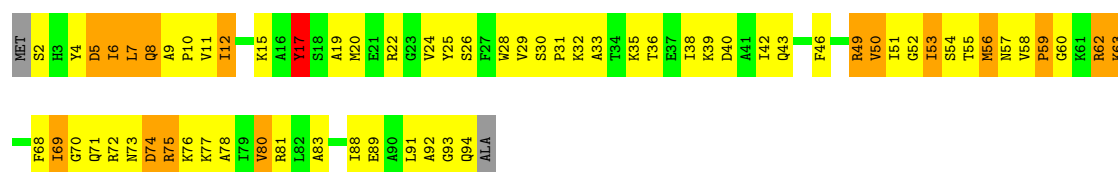
C1648	C1580	C1514	A1453	C1328	C1266	U1195	G1133	G1000	C935	U873	A813	G752	A689																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1581	U1515	G1393	U1454	U1329	U1257	G1196	C1134	A1001	A936	A874	G814	U752	A690																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1582	A1516	G1394	C1455	G1330	G1258	G1197	C1135	C1002	C937	G875	A815	U754	C691																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1652	C1517	A1395	C1456	G1331	A1259	C1198	C1136	C1003	G938	A876	U816	C755	C692																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1654	C1518	C1396	A1457	G1332	A1260	U1199	A1137	U1004	C939	G877	A817	C756	A693																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1655	G1519	C1397	A1458	G1333	G1261	G1200	A1138	U1005	G940	C878	G818	U757	G694																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1586	G1520	A1398	U1459	A1334	U1262	G1201	G1139	C1006	U941	A879	C819	C758	G695																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1587	U1522	G1399	C1460	A1335	G1263	U1202	A1140	C1007	U942	C880	U820	U760	G696																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1588	C1522	A1400	G1461	G1336	G1264	A1203	U1076	A1007	U943	U881	A821	U760	G697																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1659	A1523	G1401	C1462	G1337	G1265	G1204	A1077	G1008	A944	G882	A822	G761	A698																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1590	C1524	G1402	A1463	G1338	G1266	G1205	U1078	U1009	G945	A883	U823	A762	G699																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1591	U1403	U1339	A1464	U1340	G1269	G1206	A1080	A1011	U946	C884	U824	A763	C700																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1592	C1404	C1340	A1465	C1341	C1270	A1208	A1081	A1012	U947	A885	C825	A764	U701																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1593	A1405	G1341	C1466	G1342	C1271	G1209	G1082	G1013	C947	A886	U826	C765	A702																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1594	A1406	U1342	U1467	C1343	C1272	G1210	U1083	G1014	C948	G887	C827	A766	A703																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1595	G1407	C1344	A1468	C1345	C1274	C1211	C1086	U1015	U951	G888	C828	G767	G704																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1596	U1408	G1345	A1469	G1346	C1275	G1212	C1087	C1016	A952	C889	C829	U770	C705																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1597	A1409	C1346	G1470	C1347	G1276	U1215	A1088	C1017	G953	U890	G831	C771	A706																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1598	U1410	C1347	G1471	C1348	G1279	C1216	C1089	C1018	U954	A891	A832	C772	U707																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1599	C1411	C1348	U1472	C1349	G1280	A1217	C1090	U1019	G955	C	A833	C773	A709																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1600	C1412	A1349	U1473	A1350	G1281	C1218	C1091	A1020	A956	C	A834	A774	C710																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1601	G1413	G1351	U1474	G1352	U1282	C1219	U1092	A1021	G957	G	U835	U775	C711																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1602	G1414	U1352	U1475	G1353	U1283	C1220	C1093	A1022	C958	C	G836	G776	G712																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1603	C1415	C1352	C1476	G1354	U1284	G1221	U1094	U1023	U960	C	U837	A777	G713																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1540	A1416	A1353	U1477	U1355	A1285	C1222	A1095	A1024	G961	C	A838	C778	G714																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1541	C1417	A1354	U1478	A1356	A1286	G1223	A1096	U1025	C962	U	U840	U779	U715																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1542	C1418	A1355	U1479	A1357	A1287	G1224	A1097	C1026	C968	A	U841	U780	U716																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1543	G1419	A1356	A1480	A1358	A1288	C1225	C1098	G1027	C969	C	A842	C781	G717																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1544	A1420	U1357	U1481	G1359	A1289	G1226	A1099	C1028	U970	C	U843	U782	A718																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1545	U1421	U1357	U1482	C1360	A1290	C1227	G1100	U1030	A971	A	G844	G783	A719																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1546	C1422	C1358	G1483	G1361	U1291	A1228	U1101	C1031	C972	C	U845	U784	A720																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1611	A1423	G1359	U1484	C1362	U1292	G1229	G1102	A1032	C973	C	U846	U785	C721																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1549	U1424	C1363	U1485	C1363	G1293	C1230	C1103	G1033	A946	U	U847	C722	C722																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1550	G1425	A1364	A1486	U1365	A1294	C1231	G1104	U1034	U974	U	C847	A787	C723																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1551	U1426	C1364	C1487	G1366	G1295	C1232	U1105	G1035	C975	A	A848	C788	C724																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1552	G1427	U1366	G1488	A1367	A1296	U1232	A1106	G1036	C976	C	G849	G789	G725																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1553	A1428	A1366	C1489	A1367	A1300	A1233	A1107	U1037	G977	C	C850	A790	G726																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1557	U1429	A1367	U1490	G1368	U1301	C1234	U1108	U1038	U978	A911	U852	U792	G727																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1620	A1492	C1369	C1491	U1370	C1302	C1235	A1109	G1039	A979	A912	C853	G793	G728																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1558	C1493	C1371	A1492	G1371	U1303	G1236	C1113	A1040	C980	C914	G854	A794	G732																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1623	U1434	U1372	U1493	U1372	U1304	G1237	A1114	G1041	C981	C915	G855	A795	G733																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1624	G1435	A1372	G1494	G1373	C1305	U1238	C1115	U1042	C982	C915	A856	A796	G734																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1625	G1436	C1373	G1495	U1374	U1306	A1239	U1116	G1043	C983	A918	U857	A797	G735																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1626	A1437	G1374	C1497	C1375	G1309	G1240	U1117	U1044	A984	U919	U858	C798	G736																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1627	U1438	C1375	U1498	C1378	C1310	G1241	G1120	U1045	G985	G920	U859	C799	G737																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1567	G1439	A1378	A1499	U1379	C1311	A1242	C1121	G1046	A986	A921	U860	U800	G738																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1630	U1500	A1441	C1501	A1379	G1312	U1243	U1182	G1047	G987	A922	G861	A801	G739																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1631	C1501	C1380	G1502	C1380	U1313	G1244	C1183	C1054	G988	A923	A862	A802	G741																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1632	C1503	G1381	G1503	U1381	A1314	G1245	G1184	U1055	A989	C926	C863	C803	G742																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1570	G1443	C1382	U1504	C1382	A1315	U1246	U1122	A1056	A991	C927	C864	C804	A743																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
U1571	C1444	G1383	A1445	C1383	G1316	G1248	U1125	U1057	A992	G928	A865	G805	C744																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
C1572	U1505	C1384	U1446	G1384	G1317	G1249	A1126	G1058	A993	A929	U866	A806	C745																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
G1635	G1573	C1385	A1447	C1385	A1318	U1251	G1127	C1059	A994	A930	G867	A807	C746																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A1574	C1574	A1386	U1448	U1386	A1318	C1252	U1128	C1060	A995	A931	U868	C808	A747																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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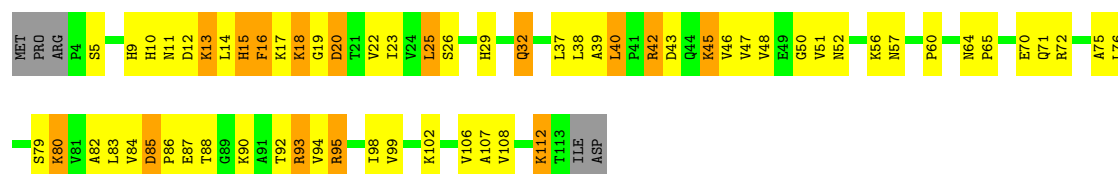
### • Molecule 2: 50S RIBOSOMAL PROTEIN L23

Chain R:



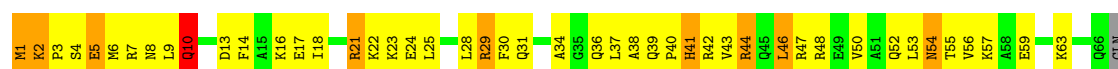
### • Molecule 3: 50S RIBOSOMAL PROTEIN L24

Chain S:



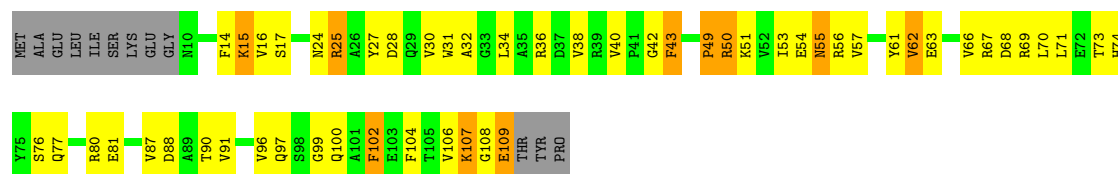
### • Molecule 4: 50S RIBOSOMAL PROTEIN L29

Chain W:



### • Molecule 5: Trigger Factor

Chain 1:



## 4 Data and refinement statistics

Xtriage (Phenix) and EDS were not executed - this section will therefore be incomplete.

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	169.50Å 410.50Å 695.20Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.84 – 3.35	Depositor
% Data completeness (in resolution range)	(Not available) (29.84-3.35)	Depositor
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.299 , 0.322	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	63004	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	54.0	wwPDB-VP



## 5 Model quality i

### 5.1 Standard geometry i

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	0.67	3/67338 (0.0%)	0.82	72/105044 (0.1%)
2	R	0.48	0/737	0.80	0/988
3	S	0.42	0/835	0.73	1/1121 (0.1%)
4	W	0.44	0/537	0.58	0/714
5	1	0.48	0/802	0.68	0/1084
All	All	0.66	3/70249 (0.0%)	0.82	73/108951 (0.1%)

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	169
2	R	0	1
All	All	0	170

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2776	U	C1'-N1	6.38	1.58	1.48
1	0	2775	U	C1'-N1	6.21	1.58	1.48
1	0	567	G	C5-C6	-5.13	1.37	1.42

All (73) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2034	A	N9-C1'-C2'	10.22	127.28	114.00
1	0	1342	U	N1-C1'-C2'	9.78	126.71	114.00
1	0	1467	U	N1-C1'-C2'	8.63	125.23	114.00
1	0	2775	U	C2-N1-C1'	-8.26	107.78	117.70
1	0	1631	C	N1-C1'-C2'	8.21	124.68	114.00
1	0	777	A	N9-C1'-C2'	7.87	124.24	114.00

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2776	U	C2-N1-C1'	-7.71	108.45	117.70
1	0	1715	A	N9-C1'-C2'	7.71	124.02	114.00
1	0	2841	U	N1-C1'-C2'	7.70	124.01	114.00
1	0	1278	A	N9-C1'-C2'	7.68	123.98	114.00
1	0	1263	G	N9-C1'-C2'	7.51	123.76	114.00
1	0	1975	G	C2'-C3'-O3'	7.27	125.50	109.50
3	S	38	LEU	CA-CB-CG	7.25	131.99	115.30
1	0	698	A	N9-C1'-C2'	7.23	123.39	114.00
1	0	1749	G	N9-C1'-C2'	7.21	123.38	114.00
1	0	2624	G	N9-C1'-C2'	7.17	123.32	114.00
1	0	582	G	N9-C1'-C2'	6.93	123.01	114.00
1	0	1698	C	N1-C1'-C2'	6.83	122.88	114.00
1	0	1141	U	C2'-C3'-O3'	6.82	124.61	113.70
1	0	1671	A	O5'-P-OP1	-6.82	99.56	105.70
1	0	1963	G	N9-C1'-C2'	6.80	122.84	114.00
1	0	1664	G	N9-C1'-C2'	6.76	122.79	114.00
1	0	1410	U	N1-C1'-C2'	6.74	122.77	114.00
1	0	1167	A	N9-C1'-C2'	6.66	122.65	114.00
1	0	571	U	N1-C1'-C2'	6.53	122.48	114.00
1	0	2560	G	N9-C1'-C2'	6.45	122.39	114.00
1	0	434	C	N1-C1'-C2'	6.38	122.29	114.00
1	0	2660	C	N1-C1'-C2'	6.38	122.29	114.00
1	0	2775	U	C6-N1-C1'	6.35	130.09	121.20
1	0	322	A	N9-C1'-C2'	6.35	122.25	114.00
1	0	818	G	N9-C1'-C2'	-6.30	105.06	112.00
1	0	789	G	N9-C1'-C2'	6.30	122.19	114.00
1	0	1410	U	OP1-P-O3'	6.29	119.03	105.20
1	0	1357	U	N1-C1'-C2'	6.26	122.14	114.00
1	0	443	A	N9-C1'-C2'	6.24	122.11	114.00
1	0	2237	C	N1-C1'-C2'	6.21	122.08	114.00
1	0	2476	A	N9-C1'-C2'	6.19	122.05	114.00
1	0	459	A	OP2-P-O3'	6.17	118.77	105.20
1	0	1337	G	N9-C1'-C2'	6.04	121.86	114.00
1	0	340	G	N9-C1'-C2'	6.03	121.84	114.00
1	0	1975	G	N9-C1'-C2'	6.00	121.80	114.00
1	0	2482	A	N9-C1'-C2'	5.91	121.69	114.00
1	0	2776	U	C6-N1-C1'	5.89	129.44	121.20
1	0	1469	U	OP1-P-O3'	-5.84	92.35	105.20
1	0	522	G	N9-C1'-C2'	5.82	121.57	114.00
1	0	804	C	N1-C1'-C2'	5.81	121.56	114.00
1	0	520	C	N1-C1'-C2'	-5.77	105.66	112.00
1	0	1685	A	OP2-P-O3'	5.74	117.83	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	458	G	N9-C1'-C2'	5.65	121.35	114.00
1	0	460	U	N1-C1'-C2'	5.56	121.22	114.00
1	0	1581	C	N1-C1'-C2'	5.54	121.20	114.00
1	0	2470	U	N1-C1'-C2'	-5.48	105.97	112.00
1	0	466	A	N9-C1'-C2'	5.45	121.08	114.00
1	0	1338	G	C1'-O4'-C4'	-5.43	105.55	109.90
1	0	600	G	N9-C1'-C2'	5.39	121.01	114.00
1	0	1723	U	N1-C1'-C2'	5.32	120.91	114.00
1	0	2028	C	N1-C1'-C2'	-5.29	106.18	112.00
1	0	312	G	N9-C1'-C2'	5.25	120.83	114.00
1	0	177	U	N1-C1'-C2'	5.25	120.82	114.00
1	0	1410	U	OP2-P-O3'	-5.23	93.70	105.20
1	0	753	U	N1-C1'-C2'	-5.23	106.25	112.00
1	0	805	G	N9-C1'-C2'	5.20	120.76	114.00
1	0	689	A	N9-C1'-C2'	5.18	120.73	114.00
1	0	860	U	N1-C1'-C2'	5.18	120.73	114.00
1	0	1469	U	OP2-P-O3'	5.16	116.55	105.20
1	0	1142	G	N9-C1'-C2'	5.14	120.68	114.00
1	0	580	A	N9-C1'-C2'	5.11	120.64	114.00
1	0	1634	A	N9-C1'-C2'	5.08	120.61	114.00
1	0	1775	A	C2'-C3'-O3'	5.08	121.83	113.70
1	0	2593	A	O4'-C1'-N9	-5.07	104.15	108.20
1	0	1199	U	N1-C1'-C2'	5.07	120.58	114.00
1	0	688	A	C5'-C4'-O4'	5.04	115.15	109.10
1	0	1807	A	O4'-C1'-N9	5.01	112.21	108.20

There are no chirality outliers.

All (170) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1000	G	Sidechain
1	0	1005	U	Sidechain
1	0	1009	C	Sidechain
1	0	1018	C	Sidechain
1	0	1141	U	Sidechain
1	0	1142	G	Sidechain
1	0	1158	A	Sidechain
1	0	1167	A	Sidechain
1	0	118	U	Sidechain
1	0	1206	G	Sidechain
1	0	1212	U	Sidechain
1	0	1247	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1250	A	Sidechain
1	0	1262	U	Sidechain
1	0	1263	G	Sidechain
1	0	1284	G	Sidechain
1	0	1285	A	Sidechain
1	0	1286	U	Sidechain
1	0	1309	G	Sidechain
1	0	1313	U	Sidechain
1	0	1315	A	Sidechain
1	0	1316	G	Sidechain
1	0	1324	G	Sidechain
1	0	1325	U	Sidechain
1	0	1329	U	Sidechain
1	0	1341	G	Sidechain
1	0	1342	U	Sidechain
1	0	1344	C	Sidechain
1	0	1350	G	Sidechain
1	0	1357	U	Sidechain
1	0	1370	U	Sidechain
1	0	1373	G	Sidechain
1	0	1381	G	Sidechain
1	0	14	A	Sidechain
1	0	1407	G	Sidechain
1	0	1410	U	Sidechain
1	0	1414	G	Sidechain
1	0	1467	U	Sidechain
1	0	1470	G	Sidechain
1	0	1481	U	Sidechain
1	0	1531	C	Sidechain
1	0	1581	C	Sidechain
1	0	1583	A	Sidechain
1	0	1631	C	Sidechain
1	0	1632	A	Sidechain
1	0	1647	U	Sidechain
1	0	1672	A	Sidechain
1	0	1681	A	Sidechain
1	0	169	C	Sidechain
1	0	1692	C	Sidechain
1	0	1697	U	Sidechain
1	0	1710	U	Sidechain
1	0	1727	C	Sidechain
1	0	174	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1740	G	Sidechain
1	0	1749	G	Sidechain
1	0	1757	C	Sidechain
1	0	1770	U	Sidechain
1	0	1771	A	Sidechain
1	0	1776	A	Sidechain
1	0	1810	U	Sidechain
1	0	1817	U	Sidechain
1	0	1818	G	Sidechain
1	0	1820	G	Sidechain
1	0	1834	G	Sidechain
1	0	1927	U	Sidechain
1	0	1933	G	Sidechain
1	0	1963	G	Sidechain
1	0	1964	A	Sidechain
1	0	1966	C	Sidechain
1	0	1967	U	Sidechain
1	0	1995	G	Sidechain
1	0	1999	U	Sidechain
1	0	2001	G	Sidechain
1	0	2004	U	Sidechain
1	0	2012	A	Sidechain
1	0	2025	A	Sidechain
1	0	2034	A	Sidechain
1	0	2047	C	Sidechain
1	0	2062	U	Sidechain
1	0	2074	U	Sidechain
1	0	211	U	Sidechain
1	0	2237	C	Sidechain
1	0	2246	A	Sidechain
1	0	2251	U	Sidechain
1	0	2312	A	Sidechain
1	0	2392	G	Sidechain
1	0	2393	G	Sidechain
1	0	2394	G	Sidechain
1	0	2404	A	Sidechain
1	0	2417	U	Sidechain
1	0	2428	U	Sidechain
1	0	2447	G	Sidechain
1	0	2469	G	Sidechain
1	0	2470	U	Sidechain
1	0	2472	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2476	A	Sidechain
1	0	2482	A	Sidechain
1	0	2485	U	Sidechain
1	0	2498	U	Sidechain
1	0	25	U	Sidechain
1	0	2502	G	Sidechain
1	0	2540	A	Sidechain
1	0	2541	U	Sidechain
1	0	2542	U	Sidechain
1	0	2543	A	Sidechain
1	0	2557	G	Sidechain
1	0	2559	U	Sidechain
1	0	2565	C	Sidechain
1	0	2584	U	Sidechain
1	0	2590	U	Sidechain
1	0	2592	U	Sidechain
1	0	2614	A	Sidechain
1	0	2624	G	Sidechain
1	0	2634	G	Sidechain
1	0	2635	U	Sidechain
1	0	2666	U	Sidechain
1	0	2693	U	Sidechain
1	0	2706	U	Sidechain
1	0	2793	G	Sidechain
1	0	2795	A	Sidechain
1	0	2797	G	Sidechain
1	0	2804	G	Sidechain
1	0	2807	U	Sidechain
1	0	2813	G	Sidechain
1	0	2814	G	Sidechain
1	0	2817	A	Sidechain
1	0	2838	U	Sidechain
1	0	2840	U	Sidechain
1	0	320	A	Sidechain
1	0	334	G	Sidechain
1	0	340	G	Sidechain
1	0	43	A	Sidechain
1	0	443	A	Sidechain
1	0	445	A	Sidechain
1	0	454	G	Sidechain
1	0	480	G	Sidechain
1	0	521	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	534	U	Sidechain
1	0	535	U	Sidechain
1	0	559	C	Sidechain
1	0	571	U	Sidechain
1	0	583	C	Sidechain
1	0	699	G	Sidechain
1	0	71	A	Sidechain
1	0	712	A	Sidechain
1	0	753	U	Sidechain
1	0	757	U	Sidechain
1	0	759	C	Sidechain
1	0	786	U	Sidechain
1	0	806	A	Sidechain
1	0	813	A	Sidechain
1	0	814	G	Sidechain
1	0	818	G	Sidechain
1	0	819	C	Sidechain
1	0	824	U	Sidechain
1	0	840	U	Sidechain
1	0	841	G	Sidechain
1	0	863	C	Sidechain
1	0	873	U	Sidechain
1	0	932	G	Sidechain
1	0	954	U	Sidechain
1	0	969	U	Sidechain
1	0	978	U	Sidechain
1	0	985	G	Sidechain
1	0	989	G	Sidechain
1	0	991	A	Sidechain
1	0	993	C	Sidechain
1	0	999	A	Sidechain
2	R	17	TYR	Sidechain

## 5.2 Close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	60132	0	30298	3519	0
2	R	726	0	753	126	0
3	S	825	0	881	117	0
4	W	533	0	558	81	0
5	1	788	0	784	74	0
All	All	63004	0	33274	3848	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 40.

All (3848) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:69:ILE:CG2	2:R:70:GLY:H	1.26	1.38
1:0:1325:U:H1'	1:0:1619:A:N1	1.50	1.25
2:R:69:ILE:HG22	2:R:70:GLY:N	1.30	1.19
3:S:92:THR:HB	3:S:95:ARG:HH22	1.05	1.18
1:0:67:G:H21	1:0:72:A:H2'	1.09	1.16
1:0:918:A:H2'	1:0:919:U:H5''	1.29	1.15
1:0:940:G:H3'	1:0:941:U:H5''	1.16	1.15
1:0:1625:A:H1'	1:0:1632:A:H1'	1.26	1.15
2:R:62:ARG:HH11	2:R:62:ARG:HB3	1.04	1.11
1:0:168:A:H2'	1:0:169:C:H6	1.14	1.10
1:0:1791:C:H2'	1:0:1792:C:H5''	1.19	1.09
1:0:1151:U:H5''	1:0:1153:A:H5'	1.33	1.09
1:0:1029:C:H2'	1:0:1030:U:H5''	1.31	1.08
1:0:2691:C:H2'	1:0:2692:A:C8	1.88	1.08
1:0:2581:A:H3'	1:0:2582:G:H5''	1.30	1.07
1:0:1072:U:H3'	1:0:1073:G:H5'	1.36	1.07
1:0:1467:U:H3'	1:0:1468:A:H5'	1.23	1.07
1:0:1345:G:H2'	1:0:1625:A:C2	1.90	1.06
1:0:788:G:H5'	1:0:790:A:H1'	1.34	1.06
1:0:2198:U:H3'	1:0:2199:C:H5''	1.31	1.06
4:W:1:MET:HG2	4:W:2:LYS:HG2	1.32	1.06
1:0:1537:U:H2'	1:0:1538:A:C8	1.90	1.06
1:0:1572:C:C2'	1:0:1573:G:H5''	1.86	1.05
1:0:460:U:O4	1:0:592:G:H1'	1.54	1.05
1:0:2106:G:H2'	1:0:2107:G:H5''	1.36	1.04
1:0:1572:C:H2'	1:0:1573:G:H5''	1.08	1.04
1:0:2245:A:H4'	1:0:2246:A:N7	1.71	1.03
5:1:55:ASN:HD22	5:1:55:ASN:N	1.56	1.03
1:0:100:G:H1	3:S:102:LYS:HB3	1.18	1.03
1:0:2466:G:H2'	1:0:2467:A:H8	1.21	1.03
1:0:942:U:H2'	1:0:943:U:O4'	1.59	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:104:C:H2'	1:0:105:G:H5''	1.36	1.02
1:0:1715:A:H1'	1:0:1717:A:H5''	1.41	1.02
1:0:1182:U:H3'	1:0:1183:C:H5''	1.39	1.02
1:0:168:A:H2'	1:0:169:C:C6	1.94	1.02
1:0:2548:G:H2'	1:0:2549:G:H5''	1.42	1.01
1:0:2197:U:H2'	1:0:2198:U:C6	1.96	1.01
1:0:1458:A:H3'	1:0:1459:U:C5'	1.87	1.01
1:0:2496:C:O2'	1:0:2497:A:H5'	1.60	1.00
1:0:701:U:O2	1:0:800:U:H4'	1.61	1.00
2:R:62:ARG:NH1	2:R:62:ARG:HB3	1.74	1.00
1:0:2507:U:H2'	1:0:2509:A:H5''	1.43	1.00
5:1:30:VAL:O	5:1:34:LEU:HG	1.60	1.00
1:0:67:G:N2	1:0:72:A:H2'	1.77	0.99
1:0:88:G:H3'	1:0:89:A:H5''	1.43	0.99
2:R:7:LEU:HB2	4:W:29:ARG:NH2	1.76	0.99
3:S:92:THR:HG22	3:S:106:VAL:HB	1.45	0.98
1:0:1754:G:N2	1:0:1756:C:H5''	1.77	0.98
1:0:1166:A:H2'	1:0:1167:A:H5''	1.42	0.98
1:0:813:A:H1'	1:0:815:A:H5'	1.45	0.98
1:0:2240:C:H2'	1:0:2241:U:H5'	1.42	0.98
1:0:1608:U:H2'	1:0:1609:G:H8	1.29	0.98
1:0:616:U:H2'	1:0:617:U:H5''	1.44	0.97
4:W:1:MET:HG2	4:W:2:LYS:CG	1.92	0.97
1:0:2030:U:H2'	1:0:2031:A:H8	1.30	0.97
1:0:681:A:H2'	1:0:683:A:N7	1.78	0.97
4:W:2:LYS:H	4:W:3:PRO:HD2	1.30	0.96
1:0:1313:U:H4'	1:0:1314:A:O5'	1.65	0.96
1:0:2482:A:H4'	1:0:2483:U:OP1	1.65	0.96
1:0:1057:A:H3'	1:0:1058:G:H5'	1.46	0.96
1:0:405:C:H2'	1:0:406:G:H8	1.26	0.96
3:S:16:PHE:HD2	3:S:80:LYS:HZ1	1.06	0.95
1:0:2299:A:H1'	1:0:2312:A:H62	1.32	0.95
1:0:1299:A:H2'	1:0:1301:U:OP2	1.66	0.94
3:S:92:THR:HB	3:S:95:ARG:NH2	1.82	0.94
1:0:161:U:H4'	1:0:194:G:H21	1.27	0.94
1:0:2057:U:H2'	1:0:2058:U:C6	2.03	0.93
1:0:357:A:H2'	1:0:358:C:H5'	1.48	0.93
1:0:564:U:H2'	1:0:565:A:C8	2.02	0.93
1:0:1071:U:H4'	1:0:1072:U:H5	1.31	0.93
1:0:1474:A:O2'	1:0:1475:U:H5'	1.68	0.93
1:0:1373:G:N2	1:0:2192:U:H3	1.66	0.93
1:0:210:A:H61	1:0:442:A:H61	1.08	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:S:83:LEU:O	3:S:90:LYS:HE2	1.69	0.93
1:0:1345:G:H2'	1:0:1625:A:H2	1.34	0.92
5:1:90:THR:HB	5:1:107:LYS:NZ	1.83	0.92
1:0:717:G:H2'	1:0:739:G:H22	1.31	0.92
1:0:1736:C:H2'	1:0:1737:G:H8	1.34	0.92
1:0:1748:U:H3	1:0:1753:A:H2	1.08	0.92
1:0:994:A:H62	1:0:995:A:H2	1.12	0.92
1:0:2198:U:H3'	1:0:2199:C:C5'	2.00	0.92
1:0:929:A:H3'	1:0:930:A:H5''	1.52	0.92
5:1:55:ASN:HD22	5:1:55:ASN:H	1.15	0.91
1:0:2691:C:H2'	1:0:2692:A:H8	1.35	0.91
1:0:689:A:H8	1:0:2052:G:H21	1.10	0.91
1:0:516:G:HO2'	1:0:517:A:H8	1.11	0.91
1:0:2634:G:H2'	1:0:2643:G:O6	1.69	0.91
1:0:401:G:H2'	1:0:403:A:N7	1.86	0.91
1:0:367:G:H2'	1:0:368:A:H5''	1.50	0.91
1:0:940:G:H3'	1:0:941:U:C5'	2.01	0.91
1:0:2187:A:H2'	1:0:2188:A:H8	1.36	0.91
1:0:872:G:H2'	1:0:928:G:C6	2.06	0.91
2:R:33:ALA:H	2:R:76:LYS:HE3	1.37	0.90
2:R:33:ALA:N	2:R:76:LYS:HE3	1.87	0.90
3:S:85:ASP:CG	3:S:86:PRO:HD3	1.90	0.90
2:R:10:PRO:HG3	4:W:30:PHE:HA	1.52	0.90
1:0:1166:A:C2'	1:0:1167:A:H5''	2.00	0.90
1:0:2770:A:H5''	1:0:2867:G:N2	1.87	0.90
1:0:490:A:O2'	1:0:491:A:H5'	1.70	0.90
1:0:2074:U:H3'	1:0:2075:U:H5''	1.52	0.90
1:0:63:A:H5''	2:R:71:GLN:HB3	1.52	0.90
1:0:516:G:O2'	1:0:517:A:H8	1.53	0.89
3:S:85:ASP:OD1	3:S:86:PRO:HD3	1.71	0.89
2:R:43:GLN:HG2	2:R:50:VAL:HG23	1.54	0.89
1:0:940:G:C3'	1:0:941:U:H5''	2.01	0.89
1:0:317:U:H3	1:0:321:A:N6	1.71	0.89
1:0:73:A:N1	4:W:44:ARG:HD3	1.88	0.89
1:0:2240:C:C2'	1:0:2241:U:H5'	2.01	0.89
1:0:1586:A:H2'	1:0:1587:A:C8	2.07	0.89
1:0:139:A:H2'	1:0:140:G:C8	2.08	0.89
1:0:941:U:H2'	1:0:942:U:O4'	1.71	0.89
1:0:139:A:H2'	1:0:140:G:H8	1.34	0.88
1:0:1586:A:H2'	1:0:1587:A:H8	1.36	0.88
1:0:136:A:H2'	1:0:137:A:O4'	1.73	0.88
1:0:1234:C:H6	1:0:1234:C:OP2	1.57	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:29:VAL:HG22	2:R:76:LYS:HB2	1.56	0.88
1:0:1345:G:N2	1:0:1625:A:H3'	1.87	0.88
1:0:2466:G:H2'	1:0:2467:A:C8	2.08	0.88
1:0:1011:A:H2'	1:0:1012:A:H8	1.38	0.88
1:0:2519:C:H2'	1:0:2520:A:H5'	1.55	0.88
1:0:1373:G:H22	1:0:2192:U:H3	0.90	0.88
1:0:1392:U:O2'	1:0:1393:G:H5'	1.73	0.88
1:0:2266:A:N6	1:0:2323:U:H1'	1.87	0.88
1:0:403:A:H5''	1:0:404:A:OP1	1.73	0.88
1:0:76:C:H6	1:0:76:C:H5'	1.39	0.88
1:0:2811:G:H2'	1:0:2812:A:C8	2.08	0.88
1:0:2524:G:O2'	1:0:2525:U:H5'	1.74	0.87
1:0:2548:G:C2'	1:0:2549:G:H5''	2.04	0.87
1:0:128:C:H2'	1:0:129:A:H5''	1.56	0.87
1:0:1914:U:H3	1:0:1952:A:H62	1.20	0.87
2:R:56:MET:HE2	2:R:57:ASN:O	1.75	0.87
1:0:788:G:H5'	1:0:790:A:C1'	2.03	0.87
1:0:765:C:HO2'	1:0:766:A:H8	1.17	0.87
1:0:1608:U:H2'	1:0:1609:G:C8	2.08	0.87
1:0:659:G:H2'	1:0:660:G:C8	2.10	0.87
5:1:50:ARG:HG3	5:1:51:LYS:H	1.39	0.87
5:1:73:THR:O	5:1:77:GLN:HG3	1.75	0.87
1:0:813:A:H1'	1:0:815:A:C5'	2.05	0.87
1:0:70:A:O2'	1:0:71:A:H5''	1.74	0.86
1:0:752:G:H5''	1:0:753:U:OP1	1.75	0.86
4:W:37:LEU:HD23	4:W:39:GLN:H	1.40	0.86
1:0:2418:A:N1	1:0:2564:U:H4'	1.90	0.86
1:0:1736:C:H2'	1:0:1737:G:C8	2.10	0.86
1:0:104:C:C2'	1:0:105:G:H5''	2.05	0.86
1:0:2598:C:H2'	1:0:2599:U:C6	2.11	0.86
1:0:2:G:H2'	1:0:3:U:C6	2.11	0.85
1:0:2441:U:H2'	1:0:2442:C:H6	1.39	0.85
1:0:918:A:C2'	1:0:919:U:H5''	2.06	0.85
1:0:1791:C:H2'	1:0:1792:C:C5'	2.06	0.85
1:0:1199:U:H3'	1:0:1200:G:H5''	1.58	0.85
1:0:2058:U:H3'	1:0:2217:G:H22	1.40	0.85
1:0:1083:C:H42	1:0:1103:C:N4	1.75	0.85
1:0:2259:G:H4'	1:0:2306:A:H5'	1.58	0.85
3:S:14:LEU:HD13	3:S:16:PHE:HE1	1.40	0.85
1:0:2598:C:H2'	1:0:2599:U:H6	1.40	0.85
1:0:1563:U:H2'	1:0:1564:U:C6	2.12	0.85
1:0:405:C:H2'	1:0:406:G:C8	2.11	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1190:C:H2'	1:0:1191:G:C8	2.12	0.85
1:0:82:G:O2'	1:0:83:A:H5'	1.74	0.85
1:0:1852:G:H2'	1:0:1853:C:H6	1.37	0.84
1:0:1493:A:H3'	1:0:1494:G:H8	1.39	0.84
1:0:1124:U:H2'	1:0:1125:G:H8	1.41	0.84
1:0:799:C:O2'	1:0:800:U:H5'	1.77	0.84
1:0:947:C:H2'	1:0:948:C:H6	1.42	0.84
1:0:865:A:H2'	1:0:866:U:H6	1.42	0.84
1:0:48:A:H2	1:0:118:U:H3	1.22	0.84
1:0:2054:A:H2'	1:0:2055:G:H8	1.41	0.84
1:0:2770:A:H5''	1:0:2867:G:H21	1.42	0.84
1:0:1921:A:H2'	1:0:1922:U:H4'	1.59	0.84
4:W:56:VAL:HA	4:W:59:GLU:OE1	1.77	0.84
3:S:57:ASN:HD22	3:S:72:ARG:HH12	1.26	0.84
3:S:14:LEU:HD13	3:S:16:PHE:CE1	2.13	0.83
1:0:161:U:H4'	1:0:194:G:N2	1.92	0.83
1:0:947:C:H2'	1:0:948:C:C6	2.13	0.83
1:0:1467:U:H3'	1:0:1468:A:C5'	2.06	0.83
1:0:577:U:H5'	1:0:956:A:N6	1.93	0.83
1:0:1071:U:H4'	1:0:1072:U:C5	2.13	0.83
1:0:1764:A:N7	1:0:1821:A:H1'	1.93	0.83
1:0:446:C:H2'	1:0:447:U:O4'	1.78	0.83
1:0:1380:C:H2'	1:0:1381:G:H5'	1.60	0.83
1:0:362:C:H2'	1:0:363:G:H4'	1.61	0.83
2:R:63:LYS:HD2	2:R:69:ILE:O	1.77	0.83
1:0:1223:G:H4'	1:0:1224:A:O5'	1.79	0.83
1:0:582:G:H2'	1:0:583:C:H3'	1.61	0.83
1:0:545:C:O2'	1:0:546:A:H5'	1.77	0.83
1:0:1902:A:H2'	1:0:1903:C:H5''	1.61	0.83
1:0:58:C:H3'	1:0:59:G:H5''	1.61	0.82
1:0:1457:A:H2'	1:0:1458:A:O4'	1.79	0.82
2:R:7:LEU:HB2	4:W:29:ARG:HH21	1.41	0.82
1:0:1882:G:H21	1:0:1885:C:N4	1.76	0.82
1:0:978:U:H2'	1:0:979:A:H8	1.44	0.82
1:0:2058:U:H3'	1:0:2217:G:N2	1.94	0.82
1:0:594:G:C6	1:0:1264:C:H2'	2.14	0.82
1:0:2197:U:H2'	1:0:2198:U:H6	1.45	0.82
2:R:32:LYS:N	2:R:76:LYS:HE2	1.95	0.82
1:0:584:A:O2'	1:0:585:U:H5'	1.80	0.82
1:0:2613:A:O2'	1:0:2614:A:H5'	1.80	0.82
1:0:1076:U:H3'	1:0:1077:U:C5'	2.09	0.82
1:0:2779:C:H2'	1:0:2780:A:C8	2.14	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:309:G:N2	1:0:350:U:H5	1.77	0.82
1:0:672:C:O2'	1:0:673:G:H5'	1.80	0.82
1:0:1211:G:O2'	1:0:1212:U:H5'	1.80	0.82
1:0:468:A:O2'	1:0:469:G:H4'	1.79	0.82
1:0:1791:C:O2'	1:0:1793:A:H5'	1.80	0.81
1:0:976:C:O2'	1:0:977:G:H5'	1.81	0.81
1:0:2404:A:H5'	1:0:2406:C:O4'	1.79	0.81
1:0:1006:C:H6	1:0:1006:C:H3'	1.44	0.81
1:0:1221:C:H2'	1:0:1222:G:H8	1.45	0.81
1:0:2598:C:O2'	1:0:2599:U:H5'	1.80	0.81
1:0:1043:A:H2	1:0:1133:G:H22	1.29	0.81
1:0:2124:C:H2'	1:0:2125:C:C6	2.15	0.81
1:0:693:A:H2'	1:0:694:G:C8	2.14	0.81
1:0:2708:U:H2'	1:0:2709:C:C6	2.16	0.81
1:0:29:U:H2'	1:0:30:G:H8	1.44	0.81
1:0:1029:C:C2'	1:0:1030:U:H5''	2.09	0.81
1:0:1011:A:H2'	1:0:1012:A:C8	2.15	0.81
1:0:564:U:H2'	1:0:565:A:H8	1.42	0.81
1:0:1610:A:H2'	1:0:1611:U:C6	2.16	0.81
1:0:1619:A:H8	1:0:1620:C:C6	1.99	0.81
1:0:2299:A:H1'	1:0:2312:A:N6	1.95	0.81
1:0:543:G:H2'	1:0:544:U:C6	2.16	0.81
1:0:2695:C:H2'	1:0:2696:A:H8	1.44	0.81
4:W:2:LYS:HG3	4:W:3:PRO:HD3	1.63	0.81
4:W:17:GLU:HB2	4:W:53:LEU:HD11	1.63	0.80
5:1:97:GLN:HG3	5:1:100:GLN:HE21	1.45	0.80
1:0:1595:A:H2'	1:0:1596:A:O4'	1.81	0.80
1:0:574:C:H4'	1:0:1266:G:C6	2.16	0.80
1:0:1528:C:H3'	1:0:1529:C:H5''	1.64	0.80
1:0:1030:U:H2'	1:0:1031:C:H5'	1.64	0.80
2:R:50:VAL:HG11	2:R:80:VAL:HB	1.64	0.80
1:0:771:C:H2'	1:0:772:G:H8	1.46	0.80
1:0:1083:C:H42	1:0:1103:C:H41	1.28	0.80
5:1:67:ARG:O	5:1:71:LEU:HG	1.80	0.80
1:0:1422:C:H2'	1:0:1423:A:H8	1.45	0.80
4:W:14:PHE:CE2	4:W:57:LYS:HB3	2.17	0.80
1:0:1016:C:C5	1:0:1154:A:H1'	2.16	0.80
1:0:1493:A:H2'	1:0:1494:G:O4'	1.82	0.80
1:0:2781:G:C2'	1:0:2782:G:H5''	2.11	0.80
1:0:693:A:H2'	1:0:694:G:H8	1.46	0.80
1:0:1354:A:O4'	1:0:1354:A:OP1	1.99	0.80
1:0:2737:A:H2'	1:0:2738:A:H5'	1.63	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:W:18:ILE:HG22	4:W:22:LYS:NZ	1.97	0.80
1:0:1791:C:C2'	1:0:1792:C:H5''	2.07	0.80
1:0:810:U:H2'	1:0:811:G:H8	1.47	0.80
1:0:1656:U:O2'	1:0:1657:A:H5''	1.81	0.80
1:0:1851:A:H61	1:0:1867:A:H1'	1.47	0.80
1:0:1966:C:H4'	1:0:2585:C:H4'	1.63	0.79
5:1:55:ASN:N	5:1:55:ASN:ND2	2.28	0.79
1:0:1938:U:O2'	1:0:1939:U:H5'	1.83	0.79
1:0:1563:U:H2'	1:0:1564:U:H6	1.46	0.79
1:0:1820:G:H4'	1:0:1821:A:OP1	1.81	0.79
1:0:1953:A:H5'	1:0:1954:A:OP1	1.82	0.79
1:0:2245:A:H4'	1:0:2246:A:C5	2.17	0.79
1:0:1358:C:H1'	1:0:1409:U:H3	1.47	0.79
1:0:2441:U:H2'	1:0:2442:C:C6	2.18	0.79
1:0:1190:C:H2'	1:0:1191:G:H8	1.46	0.79
1:0:1725:C:H2'	1:0:1726:C:H6	1.47	0.79
1:0:2507:U:H2'	1:0:2509:A:C5'	2.12	0.79
1:0:213:C:H42	1:0:238:G:H1	1.31	0.79
1:0:2642:G:O2'	1:0:2643:G:H5'	1.82	0.79
5:1:50:ARG:HG3	5:1:51:LYS:N	1.97	0.79
1:0:537:C:C6	1:0:2759:U:H2'	2.16	0.79
1:0:1588:A:H2'	1:0:1589:G:H8	1.47	0.79
1:0:466:A:C5'	1:0:467:U:H5'	2.12	0.79
1:0:1458:A:H3'	1:0:1459:U:H5'	1.62	0.78
1:0:2057:U:H2'	1:0:2058:U:H6	1.40	0.78
1:0:2054:A:H2'	1:0:2055:G:C8	2.18	0.78
1:0:211:U:O2	1:0:211:U:H2'	1.79	0.78
1:0:2187:A:H2'	1:0:2188:A:C8	2.18	0.78
1:0:1683:G:O2'	1:0:1684:G:H5'	1.84	0.78
1:0:1047:G:H1	1:0:1130:U:H3	1.30	0.78
2:R:28:TRP:HZ3	2:R:75:ARG:NE	1.81	0.78
1:0:983:G:C6	1:0:984:A:N6	2.50	0.78
1:0:1673:C:H2'	1:0:1674:C:H6	1.47	0.78
1:0:857:U:C2'	1:0:858:G:H5'	2.13	0.78
1:0:2124:C:H2'	1:0:2125:C:H6	1.47	0.78
1:0:1174:G:H2'	1:0:1175:A:C8	2.19	0.78
1:0:1830:C:H42	1:0:1881:U:H3'	1.48	0.78
1:0:48:A:N6	1:0:154:U:C5	2.51	0.78
1:0:2691:C:H3'	1:0:2691:C:C6	2.18	0.78
1:0:208:C:H2'	1:0:209:G:O4'	1.84	0.78
1:0:1766:U:H2'	1:0:1767:G:H5'	1.65	0.78
1:0:1495:G:H2'	1:0:1496:G:H8	1.47	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1720:G:O2'	1:0:1721:G:H5'	1.84	0.78
3:S:15:HIS:HE1	3:S:80:LYS:NZ	1.80	0.78
1:0:612:G:O3'	1:0:613:A:H4'	1.83	0.77
1:0:2604:G:H2'	1:0:2605:C:C6	2.19	0.77
1:0:1949:A:H1'	1:0:2572:U:H4'	1.65	0.77
1:0:2468:G:H2'	1:0:2469:G:O4'	1.84	0.77
1:0:659:G:H2'	1:0:660:G:H8	1.50	0.77
1:0:1852:G:H2'	1:0:1853:C:C6	2.19	0.77
1:0:103:U:H2'	1:0:104:C:H6	1.50	0.77
1:0:1124:U:H2'	1:0:1125:G:C8	2.18	0.77
1:0:2840:U:H2'	1:0:2841:U:C5	2.20	0.77
2:R:43:GLN:OE1	2:R:49:ARG:HA	1.83	0.77
1:0:668:A:H2'	1:0:669:G:O4'	1.83	0.77
1:0:337:G:H21	3:S:10:HIS:CD2	2.01	0.77
1:0:2570:C:H2'	1:0:2571:G:C8	2.19	0.77
1:0:774:A:O5'	1:0:774:A:H8	1.66	0.77
5:1:90:THR:HB	5:1:107:LYS:HZ3	1.49	0.77
1:0:1026:U:O2'	1:0:1027:C:H5'	1.85	0.77
1:0:1774:A:H2	1:0:2567:G:O4'	1.68	0.77
3:S:15:HIS:HE1	3:S:80:LYS:HZ2	1.32	0.77
1:0:1557:G:O2'	1:0:1558:C:H5'	1.85	0.77
1:0:2402:U:H4'	1:0:2404:A:N7	2.00	0.77
1:0:2736:U:O2'	1:0:2737:A:H5'	1.85	0.77
1:0:745:C:H2'	1:0:746:G:H5'	1.68	0.77
1:0:2270:U:O2'	1:0:2271:C:H5'	1.85	0.77
1:0:1452:U:O2'	1:0:1453:A:H5'	1.85	0.77
1:0:58:C:H5'	1:0:59:G:OP2	1.84	0.76
1:0:2548:G:C2	1:0:2549:G:C8	2.73	0.76
1:0:569:C:O2'	1:0:570:G:H5'	1.85	0.76
1:0:1337:G:H4'	1:0:1632:A:H62	1.49	0.76
1:0:1333:G:N2	1:0:1344:C:H41	1.82	0.76
1:0:1629:G:H22	1:0:1633:C:H2'	1.49	0.76
3:S:25:LEU:N	3:S:25:LEU:HD13	2.01	0.76
1:0:1493:A:C2	1:0:1494:G:H1'	2.21	0.76
1:0:978:U:H2'	1:0:979:A:C8	2.20	0.76
1:0:1174:G:H2'	1:0:1175:A:H8	1.50	0.76
2:R:38:ILE:HD13	2:R:53:ILE:HD11	1.66	0.76
1:0:2856:U:H2'	1:0:2857:C:H6	1.50	0.76
1:0:3:U:H2'	1:0:4:C:C6	2.20	0.76
1:0:1818:G:H2'	1:0:1819:U:C6	2.20	0.76
1:0:2661:G:O6	1:0:2708:U:H1'	1.84	0.76
3:S:18:LYS:H	3:S:18:LYS:HD3	1.50	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1468:A:H5''	1:0:1472:C:N4	2.01	0.76
1:0:873:U:O2	1:0:2247:A:H5''	1.85	0.76
1:0:2788:C:O2'	1:0:2789:U:H5'	1.84	0.76
1:0:1352:G:N2	1:0:1619:A:H1'	2.01	0.76
1:0:521:U:C5	1:0:522:G:N3	2.54	0.76
1:0:1108:U:H2'	1:0:1109:A:O4'	1.86	0.76
1:0:2585:C:O2'	1:0:2586:G:H5'	1.86	0.76
3:S:25:LEU:H	3:S:25:LEU:HD13	1.51	0.75
1:0:2074:U:H3'	1:0:2075:U:C5'	2.16	0.75
1:0:1979:C:H2'	1:0:1980:A:O4'	1.86	0.75
1:0:1778:U:O2'	1:0:1779:C:H5'	1.86	0.75
1:0:1865:C:H2'	1:0:1866:G:O4'	1.86	0.75
1:0:2581:A:H3'	1:0:2582:G:C5'	2.11	0.75
1:0:1021:A:N3	1:0:1164:C:H1'	2.00	0.75
1:0:833:A:H1'	1:0:954:U:O2'	1.86	0.75
1:0:857:U:H2'	1:0:858:G:H5'	1.69	0.75
3:S:45:LYS:CG	3:S:75:ALA:HB1	2.17	0.75
1:0:1354:A:H5''	1:0:1410:U:O2	1.86	0.75
1:0:1964:A:H3'	1:0:1965:U:C5'	2.17	0.75
1:0:2469:G:H5''	1:0:2470:U:OP1	1.85	0.75
1:0:88:G:H3'	1:0:89:A:C5'	2.15	0.75
1:0:2018:G:H5''	1:0:2019:C:OP2	1.86	0.75
3:S:17:LYS:HB2	3:S:20:ASP:OD2	1.86	0.75
1:0:929:A:H5''	1:0:2247:A:N6	2.02	0.75
1:0:861:G:C2	1:0:944:A:H1'	2.20	0.75
1:0:1939:U:H1'	1:0:2531:U:OP1	1.86	0.75
1:0:1418:C:H2'	1:0:1419:G:C8	2.21	0.75
5:1:50:ARG:CG	5:1:51:LYS:H	2.00	0.75
1:0:2:G:H2'	1:0:3:U:H6	1.48	0.75
1:0:2691:C:OP1	1:0:2694:G:H4'	1.87	0.75
1:0:1467:U:C3'	1:0:1468:A:H5'	2.12	0.75
1:0:2194:A:C3'	1:0:2195:C:H5''	2.16	0.75
4:W:29:ARG:CB	4:W:29:ARG:HH11	2.00	0.75
1:0:782:U:H2'	1:0:783:G:H8	1.50	0.75
1:0:2668:U:H5'	1:0:2669:C:H5'	1.68	0.75
2:R:94:GLN:HA	5:1:51:LYS:HD3	1.67	0.75
1:0:2066:G:H2'	1:0:2067:U:O4'	1.87	0.75
1:0:1775:A:H4'	1:0:1776:A:O5'	1.86	0.74
1:0:190:A:O2'	1:0:191:G:H5'	1.87	0.74
1:0:1006:C:C6	1:0:1006:C:H3'	2.22	0.74
1:0:1872:A:H1'	1:0:2070:G:H5'	1.68	0.74
1:0:1552:C:H2'	1:0:1553:G:O4'	1.87	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2184:C:H2'	1:0:2185:U:H6	1.50	0.74
4:W:37:LEU:CD2	4:W:39:GLN:H	2.01	0.74
1:0:1757:C:O2'	1:0:1758:C:H5'	1.88	0.74
1:0:1508:G:C5'	1:0:1509:A:H5''	2.17	0.74
1:0:70:A:OP2	1:0:111:G:H4'	1.87	0.74
4:W:29:ARG:HH11	4:W:29:ARG:HB3	1.53	0.74
1:0:2535:C:H2'	1:0:2536:G:O4'	1.87	0.74
1:0:2753:C:H2'	1:0:2754:C:H6	1.51	0.74
1:0:2106:G:C2'	1:0:2107:G:H5''	2.16	0.74
1:0:841:G:N1	1:0:2226:A:H4'	2.03	0.74
1:0:1072:U:H3'	1:0:1073:G:C5'	2.15	0.74
5:1:96:VAL:HG22	5:1:102:PHE:CE1	2.23	0.74
1:0:2180:U:O4	1:0:2203:G:H2'	1.87	0.74
1:0:2301:A:H2'	1:0:2302:G:O4'	1.87	0.74
1:0:2498:U:H2'	1:0:2520:A:N6	2.01	0.74
1:0:619:A:H2'	1:0:620:G:C8	2.23	0.74
2:R:93:GLY:C	5:1:50:ARG:HH21	1.90	0.74
1:0:2334:C:H6	1:0:2334:C:O5'	1.70	0.74
1:0:173:A:C6	1:0:818:G:N2	2.55	0.74
4:W:2:LYS:H	4:W:3:PRO:CD	2.00	0.74
1:0:689:A:H8	1:0:2052:G:N2	1.85	0.74
4:W:14:PHE:HE2	4:W:57:LYS:HB3	1.52	0.74
1:0:2522:G:H8	1:0:2522:G:H5'	1.53	0.74
1:0:1412:C:H4'	2:R:22:ARG:HH12	1.52	0.73
1:0:1570:C:H3'	1:0:1571:G:C5'	2.18	0.73
1:0:751:G:H2'	1:0:752:G:H5'	1.70	0.73
1:0:1949:A:O2'	1:0:2572:U:H5'	1.87	0.73
1:0:317:U:H3	1:0:321:A:H62	1.35	0.73
1:0:792:U:O2'	1:0:793:G:H5'	1.86	0.73
1:0:93:A:O2'	1:0:94:C:H5'	1.89	0.73
3:S:94:VAL:HB	3:S:107:ALA:HB3	1.70	0.73
1:0:2454:C:H42	1:0:2508:G:H22	1.36	0.73
1:0:27:G:N2	1:0:522:G:O2'	2.21	0.73
1:0:1179:A:H2'	1:0:1180:A:C8	2.24	0.73
1:0:745:C:C2'	1:0:746:G:H5'	2.18	0.73
1:0:2329:C:H2'	1:0:2330:G:O4'	1.88	0.73
1:0:820:U:H2'	1:0:821:A:H8	1.54	0.73
2:R:94:GLN:HG2	5:1:51:LYS:HE2	1.70	0.73
1:0:2005:U:H5''	1:0:2006:G:OP1	1.88	0.73
1:0:1191:G:H2'	1:0:1192:A:H8	1.54	0.73
5:1:25:ARG:H	5:1:25:ARG:HD2	1.51	0.73
4:W:21:ARG:N	4:W:21:ARG:HD2	2.03	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1537:U:H2'	1:0:1538:A:H8	1.47	0.73
1:0:460:U:C4	1:0:592:G:H1'	2.24	0.73
1:0:2107:G:C3'	1:0:2108:G:H5'	2.18	0.73
1:0:2321:C:H2'	1:0:2322:U:O4'	1.89	0.73
1:0:2826:C:C2'	1:0:2827:G:H5'	2.18	0.73
1:0:1345:G:H22	1:0:1625:A:H3'	1.54	0.73
1:0:2444:C:O2'	1:0:2445:C:H5'	1.89	0.73
1:0:445:A:O2'	1:0:446:C:H5'	1.88	0.73
1:0:751:G:C2'	1:0:752:G:H5'	2.18	0.73
1:0:1434:U:H2'	1:0:1435:G:H8	1.53	0.73
2:R:28:TRP:CZ3	2:R:75:ARG:NE	2.56	0.73
1:0:349:G:P	3:S:13:LYS:NZ	2.62	0.73
1:0:246:C:H5	1:0:373:A:N3	1.86	0.73
1:0:161:U:C4'	1:0:194:G:H21	2.01	0.72
1:0:577:U:H5'	1:0:956:A:H61	1.53	0.72
1:0:466:A:C4'	1:0:467:U:H5'	2.18	0.72
1:0:466:A:H4'	1:0:467:U:H5'	1.70	0.72
1:0:623:G:O4'	1:0:626:A:N6	2.23	0.72
4:W:10:GLN:H	4:W:10:GLN:CD	1.91	0.72
1:0:1182:U:H3'	1:0:1183:C:C5'	2.17	0.72
1:0:1333:G:N2	1:0:1344:C:N4	2.37	0.72
1:0:1651:U:H5''	1:0:1652:G:OP2	1.89	0.72
1:0:1228:G:H8	1:0:1228:G:O5'	1.73	0.72
1:0:1159:U:H2'	1:0:1160:C:H6	1.53	0.72
1:0:239:A:H5''	1:0:620:G:H5'	1.72	0.72
1:0:859:U:H4'	1:0:860:U:C5	2.24	0.72
1:0:1763:G:N2	1:0:1765:C:H5''	2.04	0.72
1:0:441:A:H2'	1:0:442:A:O4'	1.90	0.72
1:0:1252:C:C2'	1:0:1253:C:H5''	2.19	0.72
1:0:1493:A:H3'	1:0:1494:G:C8	2.24	0.72
1:0:2737:A:C2'	1:0:2738:A:H5'	2.20	0.72
1:0:2826:C:H2'	1:0:2827:G:H5'	1.71	0.72
1:0:1302:C:OP1	1:0:1664:G:N2	2.20	0.72
1:0:813:A:C1'	1:0:815:A:H5'	2.18	0.72
1:0:466:A:H5''	1:0:467:U:H5'	1.70	0.72
1:0:2840:U:H2'	1:0:2841:U:H5	1.54	0.72
1:0:2491:C:H3'	1:0:2492:G:H5''	1.70	0.72
1:0:174:A:N1	1:0:840:U:O4	2.23	0.72
1:0:1170:U:O2'	1:0:1171:A:H5'	1.90	0.72
1:0:537:C:H6	1:0:2759:U:H2'	1.53	0.72
3:S:57:ASN:ND2	3:S:72:ARG:HH12	1.85	0.72
1:0:1726:C:H2'	1:0:1727:C:C6	2.24	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:16:G:O5'	1:0:16:G:H8	1.73	0.72
1:0:1531:C:O2	1:0:1573:G:H1'	1.90	0.72
1:0:1730:G:H2'	1:0:1731:C:C6	2.24	0.72
1:0:1:G:H2'	1:0:2:G:C8	2.25	0.72
3:S:18:LYS:HE2	3:S:19:GLY:N	2.05	0.72
1:0:349:G:P	3:S:13:LYS:HZ2	2.12	0.72
1:0:2652:G:H2'	1:0:2653:A:H8	1.55	0.72
1:0:1888:C:H4'	1:0:1912:G:C8	2.24	0.72
1:0:1710:U:O5'	1:0:1710:U:H6	1.73	0.72
3:S:98:ILE:HG22	3:S:99:VAL:HG13	1.72	0.72
1:0:216:U:H2'	1:0:217:U:O4'	1.89	0.71
1:0:1495:G:N2	1:0:1529:C:H1'	2.05	0.71
1:0:792:U:C2'	1:0:793:G:H5'	2.20	0.71
1:0:2150:U:H1'	1:0:2154:A:H61	1.54	0.71
2:R:31:PRO:C	2:R:76:LYS:HE2	2.10	0.71
1:0:841:G:H1	1:0:2226:A:H4'	1.55	0.71
1:0:1226:A:H1'	1:0:1250:A:H2	1.55	0.71
1:0:415:A:H2'	1:0:416:U:H5'	1.72	0.71
1:0:2836:U:O2'	1:0:2837:G:H5'	1.88	0.71
1:0:1200:G:H5''	1:0:1200:G:H8	1.56	0.71
3:S:75:ALA:O	3:S:76:LEU:HD23	1.90	0.71
1:0:1369:G:H2'	1:0:1370:U:O4'	1.91	0.71
1:0:1825:C:O2'	1:0:1826:U:H5'	1.89	0.71
3:S:112:LYS:N	3:S:112:LYS:HD2	2.05	0.71
1:0:1635:G:O2'	1:0:1636:G:H5'	1.89	0.71
1:0:86:U:P	3:S:42:ARG:HH21	2.13	0.71
1:0:1774:A:C2	1:0:2567:G:O4'	2.43	0.71
1:0:2030:U:H2'	1:0:2031:A:C8	2.21	0.71
1:0:1902:A:C2'	1:0:1903:C:H5''	2.20	0.71
1:0:2397:A:H2'	1:0:2398:U:H6	1.54	0.71
1:0:2454:C:N4	1:0:2508:G:H22	1.87	0.71
1:0:598:U:H2'	1:0:599:A:O4'	1.90	0.71
1:0:782:U:H2'	1:0:783:G:C8	2.24	0.71
1:0:1631:C:H3'	1:0:1632:A:H5''	1.72	0.71
3:S:15:HIS:CE1	3:S:80:LYS:HZ2	2.09	0.71
1:0:1514:C:OP2	1:0:1514:C:H6	1.73	0.71
1:0:304:A:H2'	1:0:305:A:H5''	1.73	0.71
1:0:2811:G:H2'	1:0:2812:A:H8	1.53	0.71
1:0:2212:U:H2'	1:0:2213:G:C8	2.26	0.71
1:0:1854:G:O2'	1:0:1855:G:H5'	1.91	0.71
1:0:1528:C:C3'	1:0:1529:C:H5''	2.21	0.70
1:0:641:G:H2'	1:0:642:A:H5''	1.73	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1915:A:N1	1:0:1956:G:H1'	2.06	0.70
1:0:170:U:H2'	1:0:170:U:O2	1.90	0.70
5:1:107:LYS:HD3	5:1:107:LYS:H	1.56	0.70
1:0:2779:C:H2'	1:0:2780:A:H8	1.54	0.70
1:0:2781:G:H2'	1:0:2782:G:H5''	1.72	0.70
1:0:1220:G:H2'	1:0:1221:C:C6	2.26	0.70
1:0:1610:A:H2'	1:0:1611:U:H6	1.56	0.70
1:0:1101:U:H3	1:0:1113:C:H1'	1.56	0.70
2:R:69:ILE:CG2	2:R:70:GLY:N	2.05	0.70
1:0:815:A:N3	1:0:815:A:H2'	2.06	0.70
1:0:986:A:H2'	1:0:987:G:H5'	1.73	0.70
1:0:2024:U:O2'	1:0:2025:A:H5'	1.91	0.70
1:0:207:U:H2'	1:0:208:C:C6	2.25	0.70
1:0:2713:A:H2'	1:0:2714:A:H8	1.57	0.70
1:0:222:G:H1'	1:0:397:U:O2	1.92	0.70
1:0:230:C:H2'	1:0:231:G:H5'	1.74	0.70
1:0:1000:G:OP1	1:0:1168:G:H4'	1.91	0.70
3:S:52:ASN:ND2	3:S:71:GLN:HE21	1.89	0.70
1:0:1016:C:C6	1:0:1154:A:H1'	2.27	0.70
1:0:2569:A:H2'	1:0:2570:C:C6	2.26	0.70
1:0:930:A:OP1	1:0:930:A:H4'	1.90	0.70
1:0:2043:A:H1'	1:0:2481:G:C1'	2.22	0.70
1:0:1619:A:C8	1:0:1620:C:C6	2.79	0.70
1:0:603:C:H2'	1:0:604:U:H6	1.55	0.70
1:0:582:G:C2'	1:0:583:C:H3'	2.21	0.70
1:0:1683:G:C2'	1:0:1684:G:H5'	2.22	0.70
1:0:2519:C:C2'	1:0:2520:A:H5'	2.22	0.70
2:R:94:GLN:O	5:1:50:ARG:NH2	2.25	0.70
1:0:936:A:H2'	1:0:937:C:O4'	1.92	0.70
1:0:692:C:O2'	1:0:693:A:H5'	1.92	0.70
1:0:1818:G:H2'	1:0:1819:U:H6	1.54	0.70
1:0:2687:G:O2'	1:0:2688:G:H5'	1.91	0.70
1:0:973:U:H2'	1:0:974:U:H6	1.56	0.70
1:0:146:C:H2'	1:0:147:G:C8	2.26	0.70
2:R:69:ILE:HG22	2:R:70:GLY:CA	2.20	0.69
1:0:167:A:N6	1:0:184:A:H1'	2.07	0.69
1:0:2245:A:H2'	1:0:2245:A:N3	2.06	0.69
1:0:1226:A:C1'	1:0:1250:A:C2	2.74	0.69
1:0:2322:U:C2'	1:0:2323:U:H5'	2.22	0.69
1:0:2274:C:H2'	1:0:2275:U:H5'	1.72	0.69
1:0:2495:G:H2'	1:0:2496:C:O4'	1.91	0.69
1:0:103:U:H2'	1:0:104:C:C6	2.27	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1164:C:H2'	1:0:1165:G:O4'	1.93	0.69
1:0:540:G:N2	1:0:2004:U:C2	2.60	0.69
1:0:1226:A:C1'	1:0:1250:A:H2	2.05	0.69
1:0:860:U:H2'	1:0:860:U:O2	1.91	0.69
1:0:861:G:N2	1:0:944:A:H1'	2.07	0.69
1:0:482:A:H2'	1:0:483:A:O4'	1.92	0.69
1:0:1604:A:H2'	1:0:1605:A:H8	1.55	0.69
1:0:176:A:H2'	1:0:2412:A:H61	1.56	0.69
1:0:1619:A:H8	1:0:1620:C:C5	2.09	0.69
1:0:1151:U:H5''	1:0:1153:A:C5'	2.19	0.69
1:0:1888:C:H2'	1:0:1913:G:C5	2.28	0.69
1:0:2691:C:C3'	1:0:2691:C:C6	2.76	0.69
1:0:197:G:N3	1:0:210:A:H2	1.90	0.69
1:0:367:G:C2'	1:0:368:A:H5''	2.23	0.69
1:0:1888:C:O2'	1:0:1912:G:H2'	1.92	0.69
1:0:1787:U:H2'	1:0:1788:C:C6	2.28	0.69
1:0:2210:C:H2'	1:0:2211:U:C6	2.28	0.69
1:0:357:A:C2'	1:0:358:C:H5'	2.23	0.69
1:0:521:U:C5	1:0:522:G:C4	2.80	0.69
1:0:2262:C:H2'	1:0:2263:C:H5'	1.74	0.69
1:0:176:A:H3'	1:0:177:U:C5	2.26	0.69
1:0:2446:C:H2'	1:0:2447:G:O4'	1.93	0.69
1:0:2111:C:H2'	1:0:2112:C:C6	2.27	0.69
1:0:1197:U:H2'	1:0:1198:C:O4'	1.92	0.69
1:0:91:A:H2'	1:0:92:U:C6	2.27	0.69
1:0:2148:G:H3'	1:0:2149:G:C8	2.28	0.69
1:0:68:C:C2	1:0:72:A:C4	2.81	0.69
1:0:210:A:N6	1:0:442:A:H61	1.87	0.69
2:R:11:VAL:O	2:R:12:ILE:HG13	1.93	0.69
1:0:1690:U:O2'	1:0:1691:G:H5'	1.93	0.69
1:0:5:A:H2'	1:0:6:A:H8	1.58	0.69
1:0:58:C:H3'	1:0:59:G:C5'	2.21	0.69
2:R:4:TYR:CD2	4:W:23:LYS:HB3	2.28	0.69
1:0:317:U:N3	1:0:321:A:N6	2.40	0.69
1:0:521:U:O4	1:0:522:G:N3	2.26	0.69
1:0:2322:U:H2'	1:0:2323:U:H5'	1.73	0.69
2:R:2:SER:N	2:R:5:ASP:CG	2.46	0.69
1:0:2107:G:H2'	1:0:2108:G:H5'	1.75	0.69
1:0:2266:A:H62	1:0:2323:U:H1'	1.56	0.69
1:0:750:C:H2'	1:0:751:G:O4'	1.93	0.69
1:0:1462:C:H2'	1:0:1463:A:C8	2.28	0.69
1:0:91:A:H2'	1:0:92:U:H6	1.58	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2644:A:O2'	1:0:2645:C:H5'	1.93	0.69
1:0:28:A:H1'	1:0:523:A:C2	2.28	0.68
1:0:1727:C:H4'	1:0:2833:C:O2	1.93	0.68
1:0:1137:A:H5''	1:0:1138:A:OP1	1.93	0.68
1:0:688:A:C8	1:0:817:A:C2	2.81	0.68
1:0:1310:C:H2'	1:0:1311:C:H6	1.58	0.68
5:1:90:THR:HB	5:1:107:LYS:HZ1	1.55	0.68
1:0:717:G:C2'	1:0:739:G:H22	2.05	0.68
1:0:174:A:N1	1:0:840:U:C4	2.60	0.68
1:0:88:G:C3'	1:0:89:A:H5''	2.23	0.68
1:0:585:U:H2'	1:0:586:G:C8	2.29	0.68
1:0:2319:G:H2'	1:0:2320:G:H8	1.58	0.68
1:0:1429:A:H1'	1:0:1603:A:C6	2.28	0.68
1:0:1030:U:C2'	1:0:1031:C:H5'	2.24	0.68
1:0:2570:C:H2'	1:0:2571:G:H8	1.55	0.68
1:0:1567:A:H2'	1:0:1568:A:C8	2.28	0.68
1:0:2509:A:H2'	1:0:2510:A:H5''	1.74	0.68
1:0:490:A:O2'	1:0:491:A:H3'	1.93	0.68
1:0:2751:C:H2'	1:0:2752:C:C6	2.29	0.68
1:0:1096:A:H3'	1:0:1096:A:N3	2.08	0.68
1:0:638:A:N6	1:0:647:G:H2'	2.09	0.68
4:W:36:GLN:HE21	5:1:55:ASN:HB3	1.58	0.68
1:0:2708:U:H2'	1:0:2709:C:H6	1.58	0.68
1:0:48:A:N3	1:0:50:G:N2	2.42	0.68
1:0:192:G:C4'	1:0:193:A:H4'	2.23	0.68
1:0:1226:A:H1'	1:0:1250:A:C2	2.29	0.68
1:0:2007:G:O2'	1:0:2008:C:H5'	1.94	0.68
1:0:539:A:N7	1:0:2006:G:C5	2.61	0.68
4:W:17:GLU:HB2	4:W:53:LEU:CD1	2.22	0.68
1:0:2528:G:H2'	1:0:2529:G:H8	1.59	0.68
5:1:24:ASN:HD22	5:1:25:ARG:CZ	2.07	0.68
3:S:52:ASN:HD21	3:S:71:GLN:HE21	1.41	0.68
1:0:788:G:C5'	1:0:790:A:H1'	2.21	0.68
1:0:213:C:N4	1:0:238:G:H1	1.92	0.68
1:0:212:U:H1'	1:0:443:A:H2	1.57	0.68
1:0:2828:C:H2'	1:0:2829:A:H8	1.59	0.68
1:0:889:C:H2'	1:0:890:U:H6	1.59	0.68
1:0:2279:G:O2'	1:0:2280:A:H5'	1.93	0.68
3:S:48:VAL:HG12	3:S:50:GLY:H	1.59	0.68
1:0:1184:G:H2'	1:0:1185:C:H5''	1.74	0.68
1:0:48:A:H1'	1:0:50:G:N3	2.09	0.68
2:R:73:ASN:O	2:R:75:ARG:NH1	2.27	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:1:77:GLN:HA	5:1:80:ARG:HD2	1.76	0.68
1:0:1947:G:H2'	1:0:1950:C:OP1	1.94	0.68
1:0:1105:U:O2	1:0:1107:A:H8	1.77	0.68
1:0:1859:A:H2'	1:0:1860:A:O4'	1.94	0.68
1:0:1503:G:H2'	1:0:1504:G:C8	2.29	0.68
1:0:940:G:H2'	1:0:941:U:C4'	2.25	0.67
1:0:2633:A:H5''	1:0:2634:G:OP1	1.94	0.67
1:0:946:U:H2'	1:0:947:C:C6	2.29	0.67
1:0:865:A:H2'	1:0:866:U:C6	2.27	0.67
1:0:29:U:H2'	1:0:30:G:C8	2.27	0.67
1:0:2604:G:H2'	1:0:2605:C:H6	1.59	0.67
1:0:745:C:H2'	1:0:746:G:C5'	2.24	0.67
1:0:2380:U:H2'	1:0:2381:A:H5'	1.75	0.67
1:0:665:A:H3'	1:0:666:U:C5'	2.23	0.67
1:0:404:A:H5'	1:0:425:A:H4'	1.76	0.67
1:0:1437:A:O2'	1:0:1438:G:H5'	1.93	0.67
1:0:1122:A:O2'	1:0:1123:G:H4'	1.94	0.67
3:S:112:LYS:H	3:S:112:LYS:CD	2.08	0.67
1:0:846:A:H2'	1:0:847:C:C6	2.30	0.67
1:0:165:G:H2'	1:0:166:G:H5'	1.77	0.67
2:R:32:LYS:CA	2:R:76:LYS:HE2	2.23	0.67
1:0:2262:C:C2'	1:0:2263:C:H5'	2.24	0.67
1:0:561:U:H1'	1:0:1233:A:C2	2.29	0.67
5:1:32:ALA:HB1	5:1:36:ARG:HH21	1.58	0.67
1:0:489:A:H8	1:0:489:A:O5'	1.76	0.67
1:0:68:C:H2'	1:0:68:C:O2	1.94	0.67
1:0:2062:U:H2'	1:0:2063:A:H8	1.59	0.67
1:0:2740:C:O2'	1:0:2741:G:H5'	1.94	0.67
1:0:2133:G:H2'	1:0:2134:U:C6	2.30	0.67
1:0:1745:C:O2'	1:0:1746:A:H5'	1.95	0.67
1:0:1223:G:N1	1:0:1250:A:N7	2.42	0.67
1:0:640:C:H4'	1:0:660:G:H21	1.59	0.67
1:0:2839:G:C2	1:0:2840:U:C2	2.83	0.67
1:0:2148:G:H3'	1:0:2149:G:H8	1.58	0.67
5:1:31:TRP:CZ2	5:1:54:GLU:HG3	2.30	0.67
1:0:1842:G:O2'	1:0:1843:U:H5'	1.94	0.67
1:0:202:A:H2'	1:0:203:G:O4'	1.94	0.67
1:0:995:A:H5''	1:0:996:C:H5	1.58	0.67
1:0:2436:U:H2'	1:0:2437:G:O4'	1.94	0.67
1:0:1039:A:H61	1:0:1136:G:H2'	1.60	0.67
1:0:2311:U:C5'	1:0:2315:A:H61	2.07	0.67
1:0:2571:G:H2'	1:0:2572:U:O4'	1.94	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2145:A:H1'	1:0:2156:A:C6	2.29	0.67
4:W:41:HIS:C	4:W:41:HIS:CD2	2.68	0.67
1:0:629:C:H2'	1:0:630:G:O4'	1.95	0.67
1:0:2867:G:H8	1:0:2867:G:OP2	1.78	0.67
1:0:128:C:C2'	1:0:129:A:H5''	2.24	0.67
2:R:19:ALA:O	2:R:24:VAL:HG23	1.93	0.67
4:W:18:ILE:HG22	4:W:22:LYS:HZ1	1.57	0.67
1:0:1278:A:H2	1:0:1997:A:H62	1.41	0.67
1:0:653:G:H2'	1:0:654:A:H4'	1.76	0.67
1:0:2673:G:N2	1:0:2696:A:C4	2.63	0.67
1:0:930:A:H5'	1:0:931:G:C8	2.29	0.67
2:R:5:ASP:N	2:R:5:ASP:OD2	2.27	0.67
1:0:338:G:H5'	3:S:9:HIS:CE1	2.30	0.67
1:0:2698:G:H2'	1:0:2699:G:C8	2.30	0.67
1:0:1725:C:H2'	1:0:1726:C:C6	2.29	0.67
1:0:738:G:O5'	1:0:738:G:H8	1.78	0.67
1:0:1401:G:O2'	1:0:1541:G:H5'	1.95	0.67
1:0:2111:C:H2'	1:0:2112:C:H6	1.60	0.67
1:0:2194:A:H2'	1:0:2195:C:H5''	1.76	0.66
1:0:1532:A:H2'	1:0:1533:G:H8	1.60	0.66
1:0:341:A:H1'	1:0:1223:G:O6	1.95	0.66
1:0:1221:C:H2'	1:0:1222:G:C8	2.29	0.66
1:0:1418:C:H2'	1:0:1419:G:H8	1.58	0.66
1:0:2286:G:N3	1:0:2286:G:H2'	2.10	0.66
1:0:2833:C:O5'	1:0:2833:C:H6	1.78	0.66
1:0:2863:U:H2'	1:0:2864:C:H6	1.61	0.66
1:0:2182:A:C2	1:0:2183:C:H1'	2.30	0.66
1:0:1572:C:H2'	1:0:1573:G:C5'	2.04	0.66
1:0:1658:A:H2'	1:0:1659:G:O4'	1.95	0.66
1:0:1391:A:H2'	1:0:1392:U:C6	2.29	0.66
1:0:1824:C:O5'	1:0:1824:C:H6	1.79	0.66
1:0:2397:A:H2'	1:0:2398:U:C6	2.30	0.66
1:0:664:C:H2'	1:0:665:A:C8	2.30	0.66
1:0:2071:G:O2'	1:0:2072:C:H5'	1.95	0.66
1:0:1356:G:O4'	1:0:1613:G:H2'	1.95	0.66
1:0:1766:U:C2'	1:0:1767:G:H5'	2.25	0.66
1:0:976:C:O4'	1:0:2252:A:N3	2.28	0.66
1:0:689:A:H2	1:0:815:A:H61	1.43	0.66
1:0:1888:C:H4'	1:0:1912:G:H8	1.61	0.66
5:1:97:GLN:CG	5:1:100:GLN:HE21	2.08	0.66
5:1:31:TRP:HZ2	5:1:54:GLU:HG3	1.57	0.66
1:0:2705:A:O2'	1:0:2706:U:C6	2.49	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:876:A:H2'	1:0:877:G:C8	2.30	0.66
1:0:704:G:O2'	1:0:705:C:H5'	1.95	0.66
1:0:732:G:H2'	1:0:733:G:C8	2.31	0.66
1:0:1301:U:O4	1:0:1340:C:H1'	1.96	0.66
1:0:2691:C:H3'	1:0:2691:C:H6	1.57	0.66
1:0:1231:A:H2'	1:0:1232:U:C6	2.31	0.66
1:0:804:C:O2'	1:0:805:G:H5''	1.96	0.66
1:0:86:U:H1'	1:0:95:G:N2	2.11	0.66
2:R:7:LEU:CB	4:W:29:ARG:HH21	2.08	0.66
1:0:1975:G:H22	1:0:1979:C:H5	1.42	0.66
1:0:2246:A:N3	1:0:2246:A:H2'	2.11	0.66
1:0:1:G:H2'	1:0:2:G:H8	1.59	0.66
3:S:20:ASP:OD2	3:S:20:ASP:N	2.28	0.66
3:S:82:ALA:C	3:S:83:LEU:HD12	2.15	0.66
1:0:246:C:C5	1:0:373:A:N3	2.64	0.66
1:0:531:G:H2'	1:0:532:A:H8	1.61	0.66
1:0:20:C:H2'	1:0:21:A:H8	1.61	0.66
1:0:1763:G:H2'	1:0:1764:A:H5'	1.78	0.66
3:S:80:LYS:C	3:S:80:LYS:HD3	2.16	0.66
1:0:1514:C:O4'	1:0:1593:C:H4'	1.96	0.66
1:0:2787:A:O2'	1:0:2788:C:H5'	1.94	0.66
1:0:2437:G:O2'	1:0:2438:A:C8	2.49	0.66
1:0:792:U:H2'	1:0:793:G:C5'	2.26	0.66
5:1:32:ALA:O	5:1:36:ARG:HG3	1.95	0.66
1:0:1996:A:O2'	1:0:1997:A:H5'	1.96	0.66
1:0:1218:C:H2'	1:0:1219:C:C6	2.30	0.66
1:0:765:C:O2'	1:0:766:A:H8	1.78	0.65
4:W:28:LEU:HD11	4:W:42:ARG:HG3	1.77	0.65
1:0:441:A:O2'	1:0:442:A:H5'	1.96	0.65
1:0:2759:U:H6	1:0:2759:U:O5'	1.79	0.65
1:0:2459:C:H2'	1:0:2460:G:H5'	1.78	0.65
1:0:1350:G:H2'	1:0:1351:G:H8	1.59	0.65
1:0:1198:C:H5''	1:0:1199:U:H4'	1.78	0.65
1:0:1437:A:H2'	1:0:1438:G:H8	1.61	0.65
1:0:2826:C:H2'	1:0:2827:G:C5'	2.26	0.65
1:0:841:G:H22	1:0:2226:A:H5'	1.61	0.65
1:0:1515:U:O2'	1:0:1516:A:H5'	1.96	0.65
1:0:1626:A:H5''	1:0:1627:C:OP2	1.96	0.65
2:R:63:LYS:CD	2:R:69:ILE:O	2.44	0.65
1:0:603:C:H2'	1:0:604:U:C6	2.31	0.65
1:0:210:A:H61	1:0:442:A:N6	1.89	0.65
1:0:718:A:N6	1:0:739:G:H1'	2.11	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2372:A:H2'	1:0:2373:C:C6	2.31	0.65
1:0:76:C:O2'	1:0:77:C:H5'	1.95	0.65
1:0:1922:U:OP1	1:0:1923:U:H3'	1.95	0.65
1:0:1937:G:N3	1:0:2530:C:H5'	2.12	0.65
1:0:2658:A:O2'	1:0:2659:C:H5'	1.96	0.65
1:0:841:G:H1	1:0:2226:A:C4'	2.09	0.65
1:0:2179:C:H2'	1:0:2180:U:O4'	1.96	0.65
1:0:1218:C:H2'	1:0:1219:C:H6	1.60	0.65
1:0:169:C:H2'	1:0:170:U:H5'	1.79	0.65
1:0:460:U:H5	1:0:592:G:HO2'	1.45	0.65
1:0:700:C:H2'	1:0:701:U:O4'	1.97	0.65
1:0:119:G:H2'	1:0:120:G:H8	1.60	0.65
1:0:1422:C:H2'	1:0:1423:A:C8	2.30	0.65
1:0:889:C:H2'	1:0:890:U:C6	2.32	0.65
1:0:1416:A:O2'	1:0:1417:C:H5'	1.96	0.65
1:0:1803:G:O2'	1:0:1804:U:H5'	1.97	0.65
1:0:810:U:H2'	1:0:811:G:C8	2.29	0.65
1:0:1008:G:O2'	1:0:1009:C:H5'	1.95	0.65
3:S:25:LEU:HD11	3:S:80:LYS:HA	1.79	0.65
1:0:841:G:C2	1:0:2226:A:H4'	2.32	0.65
1:0:931:G:H2'	1:0:932:G:H5'	1.79	0.65
1:0:2062:U:H2'	1:0:2063:A:C8	2.32	0.65
1:0:540:G:N2	1:0:2004:U:N3	2.45	0.65
1:0:1413:U:H2'	1:0:1414:G:C8	2.32	0.65
1:0:2153:A:H2'	1:0:2154:A:H5'	1.78	0.65
1:0:104:C:H2'	1:0:105:G:C5'	2.22	0.65
1:0:753:U:H2'	1:0:754:G:O5'	1.96	0.65
4:W:43:VAL:HG12	4:W:47:ARG:NH2	2.11	0.65
1:0:1468:A:H5''	1:0:1472:C:H41	1.61	0.65
1:0:930:A:H3'	1:0:931:G:C8	2.31	0.65
1:0:521:U:H5	1:0:522:G:C2	2.15	0.65
1:0:1081:A:H5'	1:0:1082:G:H5''	1.78	0.65
1:0:1159:U:H2'	1:0:1160:C:C6	2.31	0.65
1:0:1690:U:C2'	1:0:1691:G:H5'	2.27	0.65
1:0:2060:A:P	1:0:2060:A:H3'	2.38	0.65
1:0:1337:G:C4'	1:0:1632:A:H62	2.10	0.64
1:0:1794:A:H2	1:0:1814:G:N3	1.95	0.64
1:0:1456:C:O2'	1:0:1457:A:H5'	1.97	0.64
1:0:614:G:N2	1:0:634:G:N2	2.45	0.64
1:0:368:A:H2'	1:0:369:C:O4'	1.97	0.64
1:0:955:G:H5''	1:0:956:A:H5'	1.79	0.64
1:0:31:C:H2'	1:0:32:C:O4'	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2194:A:C2'	1:0:2195:C:H5''	2.27	0.64
1:0:2759:U:C6	1:0:2759:U:O5'	2.51	0.64
1:0:2838:U:H2'	1:0:2839:G:H8	1.61	0.64
1:0:792:U:H2'	1:0:793:G:H5'	1.77	0.64
1:0:2266:A:N3	1:0:2268:G:H1'	2.11	0.64
1:0:1404:C:N4	1:0:1407:G:C8	2.66	0.64
1:0:639:G:H4'	1:0:661:C:O2'	1.97	0.64
1:0:521:U:C4	1:0:522:G:N3	2.65	0.64
1:0:2266:A:C2	1:0:2268:G:H1'	2.32	0.64
1:0:1220:G:H2'	1:0:1221:C:H6	1.62	0.64
1:0:2327:U:O5'	1:0:2327:U:H6	1.80	0.64
1:0:794:A:H5'	1:0:795:A:N7	2.12	0.64
1:0:309:G:OP1	3:S:93:ARG:HA	1.98	0.64
1:0:58:C:H1'	1:0:72:A:C8	2.33	0.64
1:0:815:A:C2	1:0:816:U:C2	2.86	0.64
1:0:408:U:H2'	1:0:409:G:C8	2.32	0.64
1:0:26:G:N1	1:0:27:G:N2	2.45	0.64
5:1:40:VAL:HG12	5:1:42:GLY:H	1.63	0.64
1:0:1918:G:H1'	1:0:1947:G:N2	2.12	0.64
1:0:2825:A:H2'	1:0:2826:C:C6	2.32	0.64
1:0:1325:U:H1'	1:0:1619:A:C6	2.30	0.64
1:0:48:A:H4'	1:0:49:U:O5'	1.96	0.64
1:0:813:A:O2'	1:0:814:G:H3'	1.98	0.64
1:0:83:A:H8	1:0:83:A:O5'	1.81	0.64
1:0:1558:C:H2'	1:0:1559:G:O4'	1.98	0.64
3:S:18:LYS:C	3:S:18:LYS:HE2	2.18	0.64
1:0:2279:G:H2'	1:0:2280:A:H8	1.63	0.64
1:0:1501:C:H2'	1:0:1502:G:O4'	1.97	0.64
1:0:457:C:O2'	1:0:458:G:H5'	1.96	0.64
1:0:132:U:H2'	1:0:133:C:H6	1.62	0.64
1:0:2107:G:C2'	1:0:2108:G:H5'	2.27	0.64
3:S:42:ARG:HG2	3:S:42:ARG:HH11	1.62	0.64
1:0:2508:G:OP2	1:0:2509:A:H5'	1.98	0.64
1:0:583:C:H4'	1:0:584:A:O5'	1.98	0.64
1:0:2184:C:H2'	1:0:2185:U:C6	2.33	0.64
1:0:1921:A:H2'	1:0:1922:U:C4'	2.28	0.64
1:0:14:A:OP2	1:0:14:A:H3'	1.98	0.64
1:0:230:C:C2'	1:0:231:G:H5'	2.27	0.64
1:0:2722:C:H2'	1:0:2723:C:H6	1.62	0.64
1:0:2691:C:H2'	1:0:2692:A:N7	2.11	0.64
1:0:2241:U:H2'	1:0:2242:C:H6	1.63	0.64
1:0:2043:A:H1'	1:0:2481:G:H1'	1.79	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2756:A:N6	1:0:2762:G:N3	2.46	0.64
1:0:696:U:C2	1:0:697:G:C8	2.86	0.64
1:0:173:A:N1	1:0:818:G:N2	2.47	0.63
1:0:539:A:N7	1:0:2006:G:C6	2.66	0.63
1:0:1974:U:H2'	1:0:1975:G:H5'	1.80	0.63
3:S:112:LYS:HD2	3:S:112:LYS:H	1.62	0.63
1:0:427:C:H2'	1:0:428:A:C8	2.33	0.63
1:0:317:U:C3'	1:0:318:G:H5''	2.28	0.63
1:0:1356:G:N3	1:0:1356:G:H2'	2.13	0.63
1:0:155:G:O2'	1:0:156:G:H5'	1.97	0.63
1:0:929:A:C5'	1:0:2247:A:H61	2.12	0.63
1:0:1715:A:H1'	1:0:1717:A:C5'	2.24	0.63
3:S:90:LYS:HB2	3:S:108:VAL:HG21	1.79	0.63
1:0:1083:C:N4	1:0:1103:C:H41	1.94	0.63
1:0:1495:G:H2'	1:0:1496:G:C8	2.33	0.63
1:0:450:C:H6	1:0:450:C:O5'	1.82	0.63
1:0:309:G:N2	1:0:350:U:C5	2.64	0.63
1:0:1437:A:H2'	1:0:1438:G:C8	2.33	0.63
1:0:1681:A:C6	1:0:2706:U:C5	2.85	0.63
1:0:95:G:O2'	1:0:96:C:H5'	1.99	0.63
1:0:1754:G:N2	1:0:1756:C:C5'	2.58	0.63
1:0:1197:U:H6	1:0:1197:U:O5'	1.81	0.63
1:0:635:C:C3'	1:0:636:G:H5''	2.28	0.63
1:0:2032:G:O2'	1:0:2033:C:H5'	1.98	0.63
1:0:2826:C:O2'	1:0:2827:G:H5'	1.98	0.63
1:0:1541:G:N2	1:0:1562:G:H22	1.96	0.63
1:0:1866:G:O5'	1:0:1866:G:H8	1.80	0.63
1:0:2624:G:H4'	1:0:2712:G:O2'	1.98	0.63
1:0:2194:A:H3'	1:0:2195:C:H5''	1.81	0.63
1:0:403:A:C5'	1:0:404:A:OP1	2.45	0.63
1:0:1902:A:C3'	1:0:1903:C:H5''	2.29	0.63
1:0:841:G:N2	1:0:2226:A:H4'	2.12	0.63
1:0:1534:A:H2'	1:0:1535:C:H6	1.61	0.63
1:0:438:G:O2'	1:0:439:C:H5'	1.99	0.63
1:0:566:U:O2'	1:0:567:G:H5'	1.99	0.63
1:0:1511:A:H2	1:0:1594:U:H1'	1.63	0.63
1:0:640:C:C4'	1:0:660:G:H21	2.11	0.63
3:S:57:ASN:HD22	3:S:72:ARG:NH1	1.95	0.63
1:0:624:A:H3'	1:0:625:A:H8	1.63	0.63
1:0:1260:A:N6	1:0:1262:U:O2	2.32	0.63
1:0:983:G:OP2	1:0:985:G:H5''	1.98	0.63
2:R:39:LYS:O	2:R:43:GLN:HG3	1.98	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1404:C:H5'	1:0:1405:A:OP2	1.98	0.63
1:0:2847:G:C2	1:0:2848:A:N6	2.66	0.63
1:0:2640:G:H2'	1:0:2641:A:O4'	1.98	0.63
1:0:2632:U:O5'	1:0:2632:U:H6	1.80	0.63
1:0:921:A:O2'	1:0:922:A:H5'	1.99	0.63
1:0:1438:G:H2'	1:0:1439:G:H5'	1.81	0.63
1:0:1493:A:N3	1:0:1494:G:H1'	2.14	0.63
1:0:746:G:N7	1:0:774:A:C6	2.67	0.63
1:0:641:G:H4'	1:0:651:C:O2'	1.98	0.63
2:R:51:ILE:HD11	2:R:83:ALA:HB2	1.80	0.63
1:0:490:A:N6	1:0:492:G:N3	2.47	0.62
1:0:493:A:OP2	1:0:517:A:N6	2.28	0.62
1:0:471:A:C2	1:0:481:A:C4	2.87	0.62
1:0:1570:C:H3'	1:0:1571:G:H5'	1.81	0.62
1:0:1933:G:C8	1:0:1934:U:H5	2.17	0.62
1:0:641:G:C2'	1:0:642:A:H5''	2.28	0.62
1:0:1619:A:C8	1:0:1620:C:C5	2.87	0.62
1:0:1345:G:N2	1:0:1625:A:C3'	2.62	0.62
1:0:2241:U:H2'	1:0:2242:C:C6	2.34	0.62
5:1:15:LYS:C	5:1:15:LYS:HD2	2.19	0.62
1:0:2306:A:H2'	1:0:2307:A:C8	2.34	0.62
1:0:852:U:H1'	1:0:1205:G:H1'	1.81	0.62
1:0:347:C:H2'	1:0:348:U:H6	1.64	0.62
1:0:712:A:H4'	1:0:1651:U:C4	2.35	0.62
1:0:683:A:H5''	1:0:684:C:OP1	1.99	0.62
1:0:62:U:H2'	1:0:63:A:C8	2.34	0.62
1:0:1392:U:OP1	1:0:1392:U:H6	1.82	0.62
3:S:29:HIS:HB3	3:S:32:GLN:HG3	1.82	0.62
1:0:2764:U:H2'	1:0:2765:C:C6	2.35	0.62
1:0:929:A:H5''	1:0:2247:A:H61	1.64	0.62
1:0:1173:G:H2'	1:0:1174:G:H8	1.63	0.62
1:0:2438:A:H2'	1:0:2439:U:O4'	1.99	0.62
1:0:426:C:H4'	1:0:1863:U:O2'	1.99	0.62
1:0:2061:C:H1'	1:0:2413:A:N3	2.14	0.62
1:0:614:G:O2'	1:0:615:C:H5'	2.00	0.62
1:0:192:G:H4'	1:0:193:A:O5'	1.99	0.62
3:S:85:ASP:H	3:S:86:PRO:CD	2.12	0.62
1:0:1252:C:O2'	1:0:1253:C:H5''	2.00	0.62
1:0:574:C:H4'	1:0:1266:G:N1	2.15	0.62
1:0:1825:C:C2'	1:0:1826:U:H5'	2.29	0.62
1:0:488:A:OP1	1:0:488:A:H8	1.83	0.62
1:0:64:C:O4'	2:R:68:PHE:HB3	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1288:A:H2'	1:0:1289:A:O4'	2.00	0.62
2:R:63:LYS:HB2	2:R:63:LYS:NZ	2.15	0.62
1:0:1325:U:H5''	1:0:1326:U:OP1	1.99	0.62
1:0:75:C:H2'	1:0:76:C:H5'	1.82	0.62
1:0:1442:C:H2'	1:0:1443:G:OP1	2.00	0.62
1:0:622:U:H2'	1:0:623:G:O4'	2.00	0.62
1:0:2628:C:O2'	1:0:2629:U:H5'	2.00	0.62
1:0:1039:A:N6	1:0:1136:G:H2'	2.15	0.62
1:0:1339:U:H6	1:0:1339:U:H5'	1.64	0.62
1:0:2222:U:O2'	1:0:2223:U:H5'	2.00	0.62
1:0:1851:A:N6	1:0:1867:A:H1'	2.14	0.62
1:0:400:U:H2'	1:0:400:U:O2	2.00	0.62
1:0:1286:U:H4'	1:0:1288:A:OP2	2.00	0.62
1:0:1032:A:O2'	1:0:1134:C:H5''	1.99	0.62
1:0:2674:C:H2'	1:0:2675:U:C6	2.34	0.62
1:0:441:A:C2'	1:0:442:A:H5'	2.30	0.61
1:0:2739:G:H8	1:0:2739:G:O5'	1.82	0.61
1:0:1560:A:H2'	1:0:1561:A:O4'	2.00	0.61
1:0:2473:G:H2'	1:0:2474:G:H8	1.64	0.61
5:1:24:ASN:HD22	5:1:25:ARG:NH2	1.98	0.61
1:0:5:A:O2'	1:0:6:A:H5'	1.99	0.61
1:0:678:G:H2'	1:0:679:C:H6	1.64	0.61
1:0:1692:C:O2'	1:0:1693:A:H5'	2.00	0.61
1:0:2494:C:H2'	1:0:2495:G:H8	1.64	0.61
1:0:215:G:H21	1:0:632:A:H8	1.48	0.61
2:R:94:GLN:HA	5:1:51:LYS:CD	2.30	0.61
1:0:2862:G:O2'	1:0:2863:U:H5'	2.00	0.61
1:0:538:A:O5'	1:0:538:A:H8	1.82	0.61
5:1:63:GLU:H	5:1:63:GLU:CD	2.02	0.61
1:0:994:A:N7	1:0:995:A:N3	2.48	0.61
1:0:1231:A:H2'	1:0:1232:U:H6	1.64	0.61
1:0:1493:A:C3'	1:0:1494:G:H8	2.12	0.61
5:1:69:ARG:HH22	5:1:70:LEU:HD23	1.63	0.61
1:0:1408:A:N3	1:0:1411:C:C4	2.69	0.61
1:0:2827:G:H2'	1:0:2828:C:C6	2.34	0.61
4:W:7:ARG:HD2	4:W:8:ASN:N	2.15	0.61
1:0:2579:A:C6	1:0:2580:C:N4	2.69	0.61
1:0:311:A:H2'	1:0:345:U:O2'	2.01	0.61
1:0:987:G:H2'	1:0:988:G:H8	1.65	0.61
1:0:428:A:H2'	1:0:429:C:O4'	2.00	0.61
1:0:1730:G:H2'	1:0:1731:C:H6	1.63	0.61
1:0:1382:G:C6	1:0:1383:C:C5	2.88	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2657:G:H2'	1:0:2658:A:C8	2.34	0.61
1:0:313:U:O2'	1:0:314:G:H5'	2.01	0.61
2:R:91:LEU:HD22	2:R:91:LEU:N	2.15	0.61
1:0:988:G:O2'	1:0:989:G:H5'	2.01	0.61
1:0:613:A:H2'	1:0:614:G:H8	1.65	0.61
3:S:25:LEU:CD1	3:S:25:LEU:N	2.63	0.61
1:0:2059:U:OP2	1:0:2217:G:N2	2.33	0.61
1:0:2123:G:H2'	1:0:2124:C:C6	2.34	0.61
1:0:1478:U:H2'	1:0:1479:G:C8	2.36	0.61
1:0:230:C:H2'	1:0:231:G:C5'	2.31	0.61
1:0:18:U:O2'	1:0:19:C:H5'	2.01	0.61
1:0:635:C:H2'	1:0:636:G:H5''	1.82	0.61
1:0:1698:C:O2'	1:0:1753:A:H2'	2.00	0.61
1:0:1785:A:H4'	1:0:1883:A:C6	2.36	0.61
1:0:2677:U:H2'	1:0:2678:C:C6	2.36	0.61
1:0:1817:U:O5'	1:0:1817:U:H6	1.83	0.61
1:0:141:G:H2'	1:0:142:U:O4'	2.00	0.61
5:1:70:LEU:O	5:1:74:HIS:CD2	2.54	0.61
1:0:7:G:H2'	1:0:8:A:O4'	2.01	0.61
1:0:1046:U:H3	1:0:1131:G:H1	1.48	0.61
1:0:929:A:H3'	1:0:930:A:C5'	2.29	0.61
1:0:982:C:O2'	1:0:983:G:H5'	2.01	0.61
1:0:992:A:H2	1:0:2010:G:N3	1.99	0.61
1:0:1123:G:O2'	1:0:1124:U:H5'	2.01	0.61
1:0:2262:C:H2'	1:0:2263:C:C5'	2.31	0.61
1:0:2657:G:H2'	1:0:2658:A:H8	1.66	0.61
1:0:2210:C:H2'	1:0:2211:U:H6	1.64	0.61
1:0:488:A:H2'	1:0:489:A:C8	2.35	0.61
4:W:4:SER:HB3	4:W:7:ARG:NH2	2.15	0.61
1:0:2800:C:H2'	1:0:2801:A:O4'	2.01	0.61
1:0:627:A:H2'	1:0:628:A:C8	2.36	0.61
1:0:45:C:OP2	1:0:192:G:H3'	2.01	0.61
1:0:357:A:H8	1:0:357:A:O5'	1.83	0.61
1:0:2781:G:O2'	1:0:2782:G:H5''	2.01	0.61
1:0:1006:C:C6	1:0:1006:C:C3'	2.84	0.61
2:R:22:ARG:HE	2:R:24:VAL:CG2	2.13	0.61
1:0:207:U:H2'	1:0:208:C:H6	1.63	0.61
1:0:985:G:C4	1:0:1200:G:N2	2.69	0.60
1:0:1440:G:H3'	1:0:1441:A:C5'	2.31	0.60
1:0:2827:G:H2'	1:0:2828:C:H6	1.65	0.60
1:0:847:C:H1'	1:0:2337:A:C2	2.36	0.60
1:0:1750:A:H1'	1:0:2690:A:C2	2.36	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1715:A:O2'	1:0:1716:G:H3'	2.00	0.60
1:0:2506:C:O2'	1:0:2507:U:H5'	2.02	0.60
1:0:2779:C:O5'	1:0:2779:C:H6	1.84	0.60
1:0:1238:A:O2'	1:0:1239:A:H5'	2.00	0.60
3:S:82:ALA:CB	3:S:83:LEU:HD12	2.30	0.60
1:0:1252:C:H2'	1:0:1253:C:H5''	1.84	0.60
1:0:2839:G:H2'	1:0:2840:U:C6	2.37	0.60
1:0:1861:G:O2'	1:0:1862:C:H5'	2.01	0.60
1:0:245:C:H5'	1:0:372:U:O2'	2.02	0.60
1:0:65:C:H2'	1:0:66:U:O4'	2.02	0.60
1:0:2689:C:H2'	1:0:2690:A:H8	1.67	0.60
1:0:26:G:C6	1:0:27:G:N2	2.70	0.60
1:0:1615:C:OP1	2:R:35:LYS:HB2	2.02	0.60
1:0:1785:A:H2'	1:0:1786:C:C6	2.36	0.60
1:0:2793:G:N1	1:0:2794:G:C5	2.69	0.60
1:0:2335:U:O2'	1:0:2336:G:H5'	2.01	0.60
1:0:1326:U:O4	1:0:1619:A:N6	2.35	0.60
1:0:1468:A:O5'	1:0:1468:A:H8	1.84	0.60
1:0:1442:C:C2'	1:0:1443:G:OP1	2.50	0.60
1:0:2838:U:C4	1:0:2839:G:N7	2.70	0.60
1:0:2048:C:O2'	1:0:2049:C:H5'	2.02	0.60
1:0:2198:U:H2'	1:0:2199:C:O4'	2.02	0.60
1:0:591:G:H2'	1:0:592:G:C8	2.35	0.60
1:0:100:G:N1	3:S:102:LYS:HD3	2.15	0.60
1:0:304:A:C3'	1:0:305:A:H5''	2.32	0.60
1:0:1458:A:C3'	1:0:1459:U:C5'	2.72	0.60
1:0:2507:U:C2'	1:0:2509:A:H5''	2.27	0.60
1:0:2216:G:O5'	1:0:2216:G:H8	1.84	0.60
1:0:508:G:O2'	1:0:509:U:H5'	2.01	0.60
1:0:1438:G:P	1:0:1439:G:OP2	2.60	0.60
3:S:18:LYS:HD3	3:S:18:LYS:N	2.14	0.60
1:0:2785:A:H2'	1:0:2786:G:O4'	2.01	0.60
1:0:2660:C:C2	1:0:2704:U:O4	2.55	0.60
1:0:1582:A:C2'	1:0:1583:A:OP1	2.49	0.60
1:0:55:A:O2'	1:0:56:C:H5'	2.02	0.60
1:0:813:A:N3	1:0:813:A:H2'	2.17	0.60
1:0:173:A:N6	1:0:818:G:N2	2.49	0.60
1:0:539:A:OP2	1:0:2025:A:N6	2.35	0.60
1:0:1076:U:H3'	1:0:1077:U:H5''	1.83	0.60
1:0:2086:U:H6	1:0:2086:U:O5'	1.84	0.60
1:0:354:C:H2'	1:0:355:G:O4'	2.02	0.60
1:0:957:G:O2'	1:0:958:G:H5'	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2716:G:O2'	1:0:2717:G:H5'	2.01	0.60
1:0:1312:G:H5'	1:0:1314:A:H1'	1.84	0.60
1:0:192:G:C1'	1:0:193:A:H4'	2.31	0.60
1:0:194:G:H2'	1:0:195:A:O4'	2.01	0.60
1:0:1253:C:H2'	1:0:1254:G:C5'	2.32	0.60
1:0:1437:A:C4	1:0:1438:G:N7	2.70	0.60
1:0:876:A:H2'	1:0:877:G:H8	1.67	0.60
1:0:2591:C:C5	1:0:2592:U:H5	2.19	0.60
1:0:1470:G:O2'	1:0:1471:G:H5'	2.02	0.60
2:R:69:ILE:HG22	2:R:70:GLY:H	0.46	0.60
1:0:1298:G:N1	1:0:1342:U:OP1	2.32	0.60
1:0:2569:A:H2'	1:0:2570:C:H6	1.66	0.60
1:0:585:U:H4'	1:0:2481:G:N7	2.15	0.60
1:0:2407:G:H5''	1:0:2408:G:OP1	2.02	0.60
1:0:1339:U:C6	1:0:1339:U:H5'	2.37	0.60
1:0:1019:U:H5''	1:0:1020:A:OP1	2.02	0.60
1:0:2001:G:H2'	1:0:2002:A:C8	2.36	0.60
1:0:24:G:N2	1:0:527:C:C2	2.69	0.60
1:0:1337:G:H1'	1:0:1632:A:N6	2.16	0.59
1:0:77:C:H2'	1:0:78:C:C6	2.37	0.59
1:0:2324:G:N2	1:0:2360:C:H2'	2.17	0.59
1:0:672:C:C2'	1:0:673:G:H5'	2.32	0.59
1:0:826:U:H2'	1:0:827:C:C6	2.37	0.59
1:0:1302:C:O2'	1:0:1303:U:H5'	2.02	0.59
1:0:1345:G:C5	1:0:1625:A:C6	2.90	0.59
1:0:617:U:C6	1:0:632:A:N6	2.71	0.59
3:S:25:LEU:CD1	3:S:80:LYS:HA	2.32	0.59
2:R:43:GLN:HG2	2:R:50:VAL:CG2	2.29	0.59
1:0:1922:U:O5'	1:0:1923:U:H5''	2.03	0.59
1:0:773:G:O2'	1:0:774:A:H5'	2.02	0.59
1:0:2856:U:O2'	1:0:2857:C:H5'	2.01	0.59
1:0:1604:A:H2'	1:0:1605:A:C8	2.37	0.59
1:0:1690:U:H2'	1:0:1691:G:H5'	1.82	0.59
1:0:2591:C:C4	1:0:2592:U:C5	2.90	0.59
1:0:1578:U:H2'	1:0:1579:G:C8	2.37	0.59
1:0:803:C:H5'	1:0:804:C:OP2	2.02	0.59
2:R:29:VAL:CG2	2:R:76:LYS:HB2	2.31	0.59
1:0:1748:U:N3	1:0:1753:A:H2	1.91	0.59
1:0:1588:A:C5	1:0:1589:G:N7	2.70	0.59
5:1:25:ARG:N	5:1:25:ARG:HD2	2.17	0.59
1:0:2797:G:O5'	1:0:2797:G:H8	1.85	0.59
1:0:329:C:H2'	1:0:330:C:H6	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:S:95:ARG:HH12	3:S:106:VAL:HA	1.67	0.59
1:0:941:U:OP1	1:0:941:U:H4'	2.01	0.59
1:0:541:C:N4	1:0:572:G:H8	2.00	0.59
1:0:2829:A:C6	1:0:2839:G:C6	2.91	0.59
1:0:304:A:C2'	1:0:305:A:H5''	2.32	0.59
1:0:2240:C:C2'	1:0:2241:U:C5'	2.80	0.59
1:0:544:U:C4	1:0:545:C:N4	2.70	0.59
1:0:1391:A:H2'	1:0:1392:U:H6	1.66	0.59
1:0:2459:C:C2'	1:0:2460:G:H5'	2.31	0.59
1:0:732:G:H2'	1:0:733:G:H8	1.66	0.59
1:0:1330:G:H2'	1:0:1331:G:O4'	2.01	0.59
1:0:1941:C:O2'	1:0:1942:G:H5'	2.02	0.59
1:0:1301:U:O2'	1:0:1664:G:N2	2.35	0.59
1:0:1631:C:H3'	1:0:1632:A:C5'	2.32	0.59
1:0:1764:A:C5	1:0:1821:A:H1'	2.37	0.59
1:0:195:A:H2	1:0:212:U:H4'	1.68	0.59
1:0:520:C:O2'	1:0:1249:G:H5''	2.02	0.59
1:0:2588:U:H5'	1:0:2589:C:OP2	2.01	0.59
1:0:2487:G:O2'	1:0:2488:G:H5'	2.02	0.59
1:0:1708:C:H2'	1:0:1709:U:C6	2.37	0.59
1:0:1778:U:H5'	1:0:2568:A:O2'	2.01	0.59
1:0:2585:C:C2'	1:0:2586:G:H5'	2.31	0.59
1:0:198:A:H4'	1:0:199:A:OP2	2.02	0.59
1:0:2387:U:H2'	1:0:2388:G:C8	2.38	0.59
1:0:521:U:C5	1:0:522:G:C2	2.89	0.59
1:0:1567:A:O2'	1:0:1568:A:H5'	2.03	0.59
1:0:20:C:O2'	1:0:21:A:H5'	2.03	0.59
1:0:677:G:O2'	1:0:678:G:H5'	2.03	0.59
1:0:1544:A:O2'	1:0:1545:G:H5'	2.03	0.59
1:0:1350:G:H2'	1:0:1351:G:C8	2.37	0.59
1:0:113:C:O2'	1:0:114:C:H5'	2.02	0.59
1:0:2494:C:H2'	1:0:2495:G:C8	2.38	0.59
1:0:1697:U:H3	1:0:1754:G:H3'	1.68	0.59
1:0:1391:A:N7	1:0:1393:G:C5	2.70	0.59
1:0:1892:C:N4	1:0:1903:C:H42	2.00	0.59
1:0:1211:G:HO2'	1:0:1212:U:H5'	1.68	0.59
1:0:2151:G:H2'	1:0:2153:A:OP2	2.03	0.59
1:0:2706:U:O2	1:0:2706:U:H2'	2.01	0.59
1:0:2722:C:O2'	1:0:2723:C:H5'	2.03	0.59
1:0:2174:G:H2'	1:0:2175:A:C8	2.38	0.59
2:R:62:ARG:HH11	2:R:62:ARG:CB	1.96	0.59
1:0:2142:G:O2'	1:0:2143:G:H5'	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:95:G:H4'	4:W:41:HIS:ND1	2.17	0.59
1:0:100:G:H1	3:S:102:LYS:CB	2.05	0.59
1:0:2484:G:O2'	1:0:2485:U:H5'	2.03	0.59
1:0:192:G:O4'	1:0:193:A:H4'	2.03	0.59
1:0:2642:G:H2'	1:0:2643:G:O4'	2.03	0.59
5:1:69:ARG:HH21	5:1:69:ARG:HG2	1.67	0.59
1:0:1763:G:C2'	1:0:1764:A:H5'	2.33	0.59
1:0:742:G:C4	1:0:1766:U:O2	2.56	0.59
5:1:91:VAL:HA	5:1:106:VAL:HG22	1.84	0.59
1:0:1508:G:H5'	1:0:1509:A:H5''	1.84	0.59
5:1:51:LYS:O	5:1:51:LYS:HG2	2.03	0.59
3:S:45:LYS:HG3	3:S:75:ALA:HB1	1.84	0.59
1:0:19:C:H2'	1:0:20:C:C6	2.38	0.59
1:0:2546:G:H2'	1:0:2547:C:C6	2.38	0.58
1:0:582:G:H5'	1:0:583:C:OP2	2.03	0.58
1:0:1436:G:H22	1:0:1593:C:H1'	1.68	0.58
1:0:2758:A:O2'	1:0:2759:U:P	2.61	0.58
1:0:2859:U:C4	1:0:2860:C:C2	2.91	0.58
1:0:638:A:H61	1:0:647:G:H2'	1.67	0.58
1:0:1858:C:H2'	1:0:1859:A:C8	2.38	0.58
1:0:1844:C:O2'	1:0:1845:A:H5'	2.02	0.58
1:0:1029:C:H2'	1:0:1030:U:C5'	2.20	0.58
1:0:1309:G:N2	1:0:1662:G:C4	2.71	0.58
1:0:2742:G:O2'	1:0:2743:G:H5'	2.02	0.58
1:0:13:A:O2'	1:0:14:A:N7	2.36	0.58
1:0:1385:C:C2	1:0:1386:A:C8	2.91	0.58
1:0:67:G:N2	1:0:73:A:H4'	2.19	0.58
1:0:1793:A:O2'	1:0:1794:A:H5'	2.03	0.58
1:0:742:G:O6	1:0:1765:C:N3	2.36	0.58
1:0:1014:G:N2	1:0:1015:U:C2	2.71	0.58
1:0:619:A:H2'	1:0:620:G:H8	1.64	0.58
1:0:2012:A:H2'	1:0:2014:A:OP1	2.03	0.58
1:0:322:A:O2'	1:0:343:A:O4'	2.22	0.58
1:0:2176:U:O5'	1:0:2176:U:H6	1.85	0.58
1:0:172:A:C5	1:0:175:C:H5	2.22	0.58
1:0:2107:G:H3'	1:0:2108:G:H5'	1.84	0.58
2:R:58:VAL:O	2:R:75:ARG:NH1	2.35	0.58
1:0:984:A:H2	1:0:1201:G:N2	2.00	0.58
1:0:533:C:H2'	1:0:534:U:O4'	2.03	0.58
1:0:2677:U:H2'	1:0:2678:C:H6	1.68	0.58
1:0:1007:A:C2	1:0:1008:G:C8	2.91	0.58
1:0:613:A:H61	1:0:635:C:N4	2.01	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:581:A:O2'	1:0:2018:G:N2	2.36	0.58
1:0:490:A:C6	1:0:492:G:H1'	2.38	0.58
1:0:2769:C:C2'	1:0:2770:A:H5'	2.34	0.58
1:0:471:A:C2	1:0:481:A:C5	2.92	0.58
1:0:841:G:H22	1:0:2226:A:C5'	2.17	0.58
1:0:2209:G:C5	1:0:2210:C:H5	2.22	0.58
1:0:1262:U:H6	1:0:1262:U:H3'	1.69	0.58
1:0:985:G:H1'	1:0:1001:A:N6	2.18	0.58
1:0:2058:U:H3'	1:0:2217:G:C2	2.39	0.58
1:0:2427:A:OP2	1:0:2478:C:OP2	2.20	0.58
2:R:8:GLN:N	4:W:29:ARG:HH22	2.01	0.58
1:0:2043:A:H1'	1:0:2481:G:O4'	2.03	0.58
1:0:2610:G:H4'	1:0:2866:A:H5'	1.86	0.58
1:0:1174:G:C2	1:0:1175:A:C5	2.92	0.58
1:0:73:A:H3'	1:0:73:A:N3	2.19	0.58
1:0:2007:G:C2	1:0:2023:C:C2	2.92	0.58
1:0:1383:C:C2	1:0:1384:G:C8	2.91	0.58
1:0:1210:C:O2	1:0:1210:C:H2'	2.02	0.58
3:S:18:LYS:H	3:S:18:LYS:CD	2.17	0.58
1:0:221:A:H2'	1:0:222:G:C5'	2.33	0.58
1:0:1502:G:H2'	1:0:1503:G:H8	1.69	0.58
1:0:1545:G:O5'	1:0:1545:G:H8	1.87	0.58
1:0:1931:G:O2'	1:0:1932:G:H5'	2.04	0.58
1:0:2688:G:O2'	1:0:2689:C:H5'	2.04	0.58
1:0:1572:C:O5'	1:0:1572:C:H6	1.87	0.58
2:R:4:TYR:HD2	4:W:23:LYS:HB3	1.68	0.58
2:R:7:LEU:HD13	2:R:7:LEU:N	2.18	0.58
1:0:1673:C:H2'	1:0:1674:C:C6	2.34	0.58
1:0:199:A:N1	1:0:201:G:C2	2.72	0.58
1:0:2427:A:OP1	1:0:2478:C:OP1	2.22	0.58
1:0:2404:A:H4'	1:0:2405:A:O5'	2.04	0.58
1:0:1969:G:O2'	1:0:1970:G:H5'	2.04	0.58
1:0:1366:A:H2'	1:0:1367:A:C8	2.39	0.58
4:W:4:SER:HB3	4:W:7:ARG:HH21	1.69	0.58
1:0:2555:G:H5'	1:0:2557:G:N7	2.18	0.58
4:W:1:MET:HG2	4:W:2:LYS:HG3	1.81	0.58
1:0:2482:A:O2'	1:0:2484:G:OP2	2.22	0.58
1:0:356:A:H2'	1:0:357:A:C8	2.39	0.58
1:0:1081:A:H5'	1:0:1082:G:C5'	2.34	0.58
1:0:2492:G:H2'	1:0:2493:U:C6	2.39	0.58
1:0:338:G:H2'	1:0:339:U:C6	2.39	0.58
1:0:68:C:H1'	1:0:72:A:H1'	1.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1777:A:N6	1:0:2585:C:O4'	2.37	0.57
2:R:8:GLN:N	4:W:29:ARG:NH2	2.52	0.57
1:0:214:C:O2'	1:0:215:G:H5'	2.03	0.57
1:0:427:C:H1'	1:0:1856:U:H1'	1.86	0.57
1:0:201:G:H2'	1:0:202:A:C8	2.39	0.57
2:R:43:GLN:CG	2:R:50:VAL:HG23	2.30	0.57
1:0:2861:A:H2'	1:0:2862:G:H8	1.68	0.57
5:1:96:VAL:HG22	5:1:102:PHE:CZ	2.39	0.57
1:0:1653:C:O2	1:0:1751:A:H2	1.87	0.57
1:0:1629:G:N2	1:0:1633:C:H2'	2.20	0.57
1:0:27:G:H1'	1:0:523:A:H61	1.69	0.57
1:0:2616:U:H2'	1:0:2617:G:O4'	2.04	0.57
1:0:343:A:OP2	1:0:343:A:H8	1.87	0.57
5:1:69:ARG:NH1	5:1:70:LEU:HG	2.19	0.57
1:0:1574:A:OP1	1:0:1574:A:O4'	2.22	0.57
1:0:5:A:H2'	1:0:6:A:C8	2.39	0.57
1:0:2144:C:O2'	1:0:2156:A:H1'	2.04	0.57
1:0:1459:U:H6	1:0:1459:U:O5'	1.87	0.57
2:R:10:PRO:HD3	4:W:30:PHE:CD1	2.39	0.57
1:0:2447:G:O2'	1:0:2448:A:H5'	2.04	0.57
1:0:940:G:H2'	1:0:941:U:O4'	2.04	0.57
1:0:2053:G:C6	1:0:2054:A:C6	2.92	0.57
1:0:766:A:O2'	1:0:767:G:H5'	2.04	0.57
1:0:2197:U:H2'	1:0:2198:U:C5	2.37	0.57
1:0:1198:C:OP1	1:0:1199:U:H1'	2.04	0.57
2:R:71:GLN:HG3	2:R:72:ARG:N	2.19	0.57
1:0:1615:C:OP2	2:R:35:LYS:HE3	2.04	0.57
1:0:2177:U:H2'	1:0:2178:U:H6	1.67	0.57
1:0:200:A:H4'	1:0:200:A:OP2	2.03	0.57
3:S:95:ARG:HD2	3:S:95:ARG:N	2.20	0.57
1:0:810:U:O2'	1:0:811:G:H5'	2.05	0.57
1:0:356:A:H2'	1:0:357:A:N7	2.20	0.57
1:0:567:G:C4	1:0:568:G:C8	2.92	0.57
1:0:492:G:H2'	1:0:517:A:C6	2.39	0.57
1:0:1508:G:H5''	1:0:1509:A:H5''	1.84	0.57
1:0:1925:C:H2'	1:0:1926:U:H5	1.69	0.57
1:0:979:A:O2'	1:0:980:G:H5'	2.04	0.57
1:0:638:A:H2'	1:0:639:G:O4'	2.04	0.57
1:0:562:G:H2'	1:0:563:U:O4'	2.04	0.57
1:0:1544:A:H2'	1:0:1545:G:C8	2.39	0.57
4:W:23:LYS:HG3	4:W:24:GLU:N	2.20	0.57
1:0:428:A:O2'	1:0:429:C:H5'	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2770:A:O5'	1:0:2770:A:H8	1.88	0.57
5:1:69:ARG:HH22	5:1:70:LEU:CD2	2.18	0.57
1:0:2602:G:H2'	1:0:2603:G:H8	1.68	0.57
1:0:670:U:H2'	1:0:671:A:C8	2.40	0.57
1:0:2209:G:H2'	1:0:2210:C:H6	1.69	0.57
1:0:1429:A:H1'	1:0:1603:A:N1	2.20	0.57
1:0:1534:A:O2'	1:0:1535:C:H5'	2.04	0.57
1:0:2277:A:H2'	1:0:2278:A:O4'	2.04	0.57
1:0:1807:A:O2'	1:0:1808:C:H4'	2.05	0.57
1:0:2409:A:H2'	1:0:2410:U:C5'	2.34	0.57
1:0:2198:U:H2'	1:0:2199:C:C4'	2.35	0.57
2:R:31:PRO:O	2:R:76:LYS:NZ	2.33	0.57
1:0:401:G:C2'	1:0:403:A:N7	2.65	0.57
1:0:854:G:C2	1:0:855:G:C4	2.92	0.57
4:W:18:ILE:HG22	4:W:22:LYS:HZ3	1.69	0.57
1:0:2602:G:N3	1:0:2603:G:C8	2.73	0.57
1:0:415:A:C2'	1:0:416:U:H5'	2.34	0.57
1:0:760:U:O2	1:0:1997:A:H1'	2.04	0.57
3:S:85:ASP:OD1	3:S:90:LYS:NZ	2.38	0.57
1:0:1730:G:N1	1:0:1737:G:C6	2.72	0.57
1:0:521:U:OP2	1:0:522:G:C6	2.58	0.57
4:W:55:THR:O	4:W:59:GLU:HG3	2.04	0.57
1:0:623:G:O3'	1:0:625:A:OP2	2.23	0.57
1:0:2630:C:O2'	1:0:2631:C:H5'	2.05	0.57
1:0:665:A:H3'	1:0:666:U:H5''	1.85	0.57
1:0:677:G:C2	1:0:678:G:C8	2.93	0.57
1:0:1582:A:H2'	1:0:1583:A:OP1	2.05	0.57
1:0:2875:C:O2'	1:0:2876:C:H5'	2.04	0.57
1:0:137:A:H2'	1:0:138:G:H5'	1.85	0.57
1:0:2261:G:H4'	1:0:2262:C:OP2	2.02	0.57
1:0:1596:A:H2'	1:0:1597:A:O4'	2.05	0.57
1:0:2311:U:H5'	1:0:2315:A:H61	1.70	0.57
1:0:919:U:H2'	1:0:920:G:O5'	2.05	0.57
1:0:863:C:O2'	1:0:864:C:H5'	2.05	0.57
1:0:1457:A:C2'	1:0:1458:A:O4'	2.52	0.57
1:0:409:G:O2'	1:0:410:A:H5'	2.04	0.57
1:0:2634:G:H2'	1:0:2643:G:C6	2.39	0.57
1:0:1364:C:H2'	1:0:1365:U:C6	2.39	0.57
1:0:1445:A:C2	1:0:1446:U:C2	2.93	0.57
1:0:691:C:H2'	1:0:692:C:H6	1.68	0.57
1:0:2209:G:C5	1:0:2210:C:C5	2.93	0.57
1:0:1255:A:H2'	1:0:1256:C:H6	1.68	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:33:C:N4	1:0:458:G:O2'	2.35	0.57
1:0:1034:U:H2'	1:0:1035:G:O4'	2.05	0.57
1:0:2384:G:H21	1:0:2391:A:H62	1.53	0.57
1:0:2510:A:H2'	1:0:2511:G:H5'	1.85	0.56
1:0:394:U:H2'	1:0:395:G:H8	1.69	0.56
1:0:1436:G:H2'	1:0:1437:A:O4'	2.04	0.56
1:0:1830:C:N4	1:0:1881:U:H3'	2.19	0.56
1:0:19:C:H2'	1:0:20:C:H6	1.70	0.56
1:0:2793:G:O2'	1:0:2794:G:H5'	2.05	0.56
1:0:2170:C:H2'	1:0:2171:U:O4'	2.05	0.56
1:0:2053:G:C6	1:0:2054:A:C5	2.93	0.56
1:0:932:G:H2'	1:0:933:G:H8	1.70	0.56
1:0:1514:C:C6	1:0:1514:C:OP2	2.56	0.56
1:0:1917:C:H2'	1:0:1918:G:O4'	2.05	0.56
5:1:97:GLN:OE1	5:1:100:GLN:NE2	2.38	0.56
1:0:841:G:H22	1:0:2226:A:H4'	1.70	0.56
1:0:1398:G:C5	1:0:1416:A:C6	2.93	0.56
1:0:1518:C:H2'	1:0:1519:G:H8	1.70	0.56
1:0:66:U:O2	1:0:67:G:N7	2.39	0.56
1:0:167:A:H62	1:0:184:A:H1'	1.69	0.56
1:0:616:U:H5	1:0:630:G:C6	2.23	0.56
1:0:616:U:C2'	1:0:617:U:H5''	2.27	0.56
1:0:1736:C:C2	1:0:1737:G:N7	2.74	0.56
1:0:1209:G:C2	1:0:1210:C:C6	2.92	0.56
1:0:1451:C:H2'	1:0:1452:U:C6	2.39	0.56
1:0:1567:A:O2'	1:0:1568:A:C5'	2.54	0.56
3:S:11:ASN:OD1	3:S:12:ASP:N	2.38	0.56
1:0:622:U:C2	1:0:626:A:N6	2.73	0.56
1:0:1286:U:O3'	1:0:1288:A:OP2	2.23	0.56
1:0:2793:G:C2	1:0:2794:G:C8	2.92	0.56
1:0:1577:G:O2'	1:0:1578:U:H5'	2.05	0.56
1:0:2094:C:H2'	1:0:2096:U:OP2	2.04	0.56
1:0:333:A:H1'	1:0:351:A:C4	2.41	0.56
1:0:2053:G:C2	1:0:2054:A:C4	2.93	0.56
1:0:1764:A:N7	1:0:1821:A:C1'	2.67	0.56
1:0:540:G:O3'	1:0:541:C:H4'	2.06	0.56
1:0:1253:C:H2'	1:0:1254:G:H5'	1.85	0.56
1:0:317:U:H3'	1:0:318:G:H5''	1.87	0.56
1:0:858:G:H5''	1:0:859:U:OP1	2.06	0.56
1:0:346:C:OP1	1:0:346:C:C6	2.59	0.56
1:0:691:C:O2'	1:0:692:C:H5'	2.05	0.56
1:0:534:U:H2'	1:0:535:U:C6	2.40	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1278:A:O2'	1:0:1279:G:P	2.63	0.56
1:0:2338:C:H2'	1:0:2339:A:C8	2.40	0.56
1:0:1001:A:H62	1:0:1200:G:H1'	1.70	0.56
1:0:986:A:C2	1:0:1001:A:N9	2.74	0.56
1:0:619:A:H61	1:0:629:C:N4	2.04	0.56
3:S:80:LYS:CD	3:S:80:LYS:C	2.74	0.56
1:0:441:A:H2'	1:0:442:A:C5'	2.35	0.56
1:0:1244:U:H2'	1:0:1245:G:H8	1.70	0.56
1:0:246:C:C5	1:0:373:A:H1'	2.41	0.56
1:0:16:G:O5'	1:0:16:G:C8	2.56	0.56
1:0:2171:U:H2'	1:0:2172:U:C6	2.40	0.56
1:0:941:U:O2'	1:0:942:U:H5'	2.05	0.56
1:0:1468:A:C8	1:0:1468:A:O5'	2.59	0.56
4:W:3:PRO:HB2	4:W:5:GLU:HG3	1.87	0.56
1:0:1538:A:O2'	1:0:1539:U:H5'	2.06	0.56
1:0:1714:A:H5'	1:0:1715:A:O5'	2.06	0.56
1:0:1770:U:O4	1:0:1776:A:N6	2.39	0.56
1:0:2565:C:C5	1:0:2587:G:N2	2.72	0.56
2:R:75:ARG:HG3	2:R:75:ARG:HH11	1.70	0.56
1:0:1005:U:O2	1:0:1007:A:N7	2.38	0.56
1:0:1057:A:H3'	1:0:1058:G:C5'	2.30	0.56
1:0:2299:A:H5'	1:0:2300:G:C8	2.40	0.56
1:0:2770:A:C8	1:0:2770:A:OP2	2.59	0.56
1:0:1223:G:O2'	1:0:1224:A:OP2	2.21	0.56
1:0:346:C:H6	1:0:346:C:OP1	1.89	0.56
1:0:1478:U:H2'	1:0:1479:G:H8	1.68	0.56
1:0:1105:U:O2	1:0:1107:A:C8	2.58	0.56
1:0:1823:G:C6	1:0:1824:C:N4	2.74	0.56
1:0:2372:A:H2'	1:0:2373:C:H6	1.70	0.56
1:0:1305:C:H2'	1:0:1306:U:O4'	2.04	0.56
1:0:1767:G:N2	1:0:1768:U:C1'	2.69	0.56
2:R:56:MET:CE	2:R:58:VAL:HG22	2.36	0.56
3:S:15:HIS:CE1	3:S:80:LYS:NZ	2.68	0.56
1:0:2524:G:C2'	1:0:2525:U:H5'	2.35	0.56
1:0:2011:U:H2'	1:0:2012:A:C8	2.41	0.56
1:0:537:C:O2'	1:0:2025:A:C2	2.58	0.56
1:0:2818:G:O2'	1:0:2819:G:H5'	2.04	0.56
1:0:2690:A:OP1	1:0:2692:A:P	2.64	0.56
1:0:1748:U:N3	1:0:1753:A:C2	2.61	0.56
1:0:2831:A:H2'	1:0:2832:G:O4'	2.06	0.56
1:0:1079:G:H2'	1:0:1080:A:O4'	2.06	0.56
1:0:1860:A:H2'	1:0:1861:G:O4'	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2081:U:H6	1:0:2081:U:O5'	1.89	0.56
1:0:737:C:O5'	1:0:737:C:H6	1.88	0.56
1:0:67:G:C2	1:0:73:A:H4'	2.41	0.56
1:0:80:A:H2'	1:0:81:C:O4'	2.06	0.56
1:0:1164:C:H3'	1:0:1165:G:H8	1.70	0.56
1:0:1198:C:C5'	1:0:1199:U:H4'	2.35	0.56
1:0:956:A:C5	1:0:2427:A:H2	2.23	0.56
1:0:1080:A:H4'	1:0:1107:A:O2'	2.06	0.56
1:0:622:U:H2'	1:0:626:A:H61	1.69	0.56
1:0:695:G:O2'	1:0:696:U:H5'	2.06	0.56
1:0:1134:C:O2'	1:0:1135:C:H5'	2.06	0.56
1:0:1314:A:N7	1:0:1316:G:C8	2.74	0.56
1:0:1192:A:H2'	1:0:1193:G:H8	1.70	0.56
1:0:594:G:O6	1:0:1264:C:H2'	2.05	0.56
2:R:22:ARG:HE	2:R:24:VAL:HG21	1.72	0.56
1:0:2828:C:C2	1:0:2829:A:C8	2.94	0.56
1:0:2856:U:H2'	1:0:2857:C:C6	2.36	0.56
1:0:2334:C:O5'	1:0:2334:C:C6	2.58	0.56
1:0:2209:G:C4	1:0:2210:C:C5	2.94	0.56
1:0:125:A:H5''	1:0:126:C:O4'	2.06	0.56
1:0:2377:U:H6	1:0:2377:U:O5'	1.88	0.56
1:0:1302:C:H2'	1:0:1303:U:H6	1.70	0.55
1:0:1532:A:H2'	1:0:1533:G:C8	2.40	0.55
1:0:2107:G:H1	1:0:2156:A:N6	2.04	0.55
1:0:2324:G:H4'	1:0:2326:C:H5''	1.88	0.55
1:0:1076:U:H3'	1:0:1077:U:H5'	1.87	0.55
1:0:1220:G:O2'	1:0:1221:C:H5'	2.06	0.55
1:0:1358:C:H1'	1:0:1409:U:N3	2.20	0.55
1:0:1873:A:N7	1:0:1874:G:C8	2.74	0.55
1:0:2794:G:C6	1:0:2796:A:C2	2.94	0.55
1:0:2086:U:H2'	1:0:2087:U:H6	1.70	0.55
1:0:2560:G:N1	1:0:2589:C:C4	2.73	0.55
1:0:66:U:O2	1:0:67:G:C8	2.59	0.55
1:0:765:C:H5	1:0:1772:C:C1'	2.20	0.55
1:0:1474:A:HO2'	1:0:1475:U:H5'	1.71	0.55
1:0:1013:G:H22	1:0:1165:G:H1'	1.71	0.55
1:0:490:A:N7	1:0:492:G:C4	2.74	0.55
1:0:2630:C:H2'	1:0:2631:C:C6	2.41	0.55
1:0:2279:G:H2'	1:0:2280:A:C8	2.41	0.55
1:0:300:C:H2'	1:0:301:C:O4'	2.06	0.55
1:0:1871:G:H3'	1:0:1871:G:N3	2.21	0.55
1:0:165:G:C2'	1:0:166:G:H5'	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:6:ILE:C	2:R:7:LEU:HD13	2.27	0.55
1:0:1412:C:H2'	1:0:1413:U:C6	2.41	0.55
1:0:2522:G:C8	1:0:2522:G:H5'	2.40	0.55
1:0:647:G:H1'	1:0:649:G:O2'	2.06	0.55
1:0:1288:A:O2'	1:0:1289:A:H5'	2.06	0.55
1:0:878:C:N4	1:0:920:G:C8	2.75	0.55
1:0:2502:G:O6	1:0:2520:A:C2	2.59	0.55
1:0:439:C:H2'	1:0:440:U:O4'	2.06	0.55
1:0:546:A:N6	1:0:565:A:H61	2.05	0.55
1:0:1979:C:C2'	1:0:1980:A:O4'	2.54	0.55
1:0:1989:C:O2'	1:0:2798:A:N3	2.38	0.55
1:0:588:G:O2'	1:0:2002:A:OP1	2.23	0.55
3:S:37:LEU:HD12	3:S:47:VAL:HG12	1.87	0.55
1:0:2545:A:O2'	1:0:2546:G:OP2	2.24	0.55
1:0:1779:C:N4	1:0:1780:A:C6	2.74	0.55
1:0:2307:A:H2'	1:0:2308:A:C8	2.41	0.55
3:S:87:GLU:O	3:S:88:THR:HG23	2.06	0.55
1:0:2021:G:O2'	1:0:2022:C:H5'	2.07	0.55
1:0:1902:A:H3'	1:0:1903:C:H5''	1.88	0.55
1:0:1355:A:C8	1:0:1410:U:H1'	2.41	0.55
3:S:40:LEU:HD12	3:S:40:LEU:H	1.72	0.55
1:0:1454:U:H2'	1:0:1455:C:H6	1.71	0.55
4:W:1:MET:CG	4:W:2:LYS:HG2	2.22	0.55
1:0:1656:U:C2'	1:0:1657:A:H5''	2.37	0.55
1:0:199:A:C2	1:0:201:G:C4	2.95	0.55
1:0:204:A:N6	1:0:2386:G:C8	2.75	0.55
1:0:543:G:C5	1:0:570:G:N2	2.74	0.55
1:0:1698:C:O2'	1:0:1753:A:C2'	2.54	0.55
1:0:1404:C:O2	2:R:15:LYS:HG3	2.06	0.55
1:0:2829:A:N6	1:0:2839:G:O6	2.40	0.55
1:0:337:G:N2	3:S:10:HIS:CD2	2.73	0.55
1:0:974:U:HO2'	1:0:2229:G:N2	2.04	0.55
1:0:355:G:O5'	1:0:355:G:H8	1.90	0.55
1:0:309:G:OP1	3:S:95:ARG:NE	2.40	0.55
1:0:1777:A:HO2'	1:0:1778:U:P	2.30	0.55
1:0:1234:C:C6	1:0:1234:C:OP2	2.48	0.55
1:0:3:U:C2	1:0:4:C:C5	2.95	0.55
1:0:2426:G:H1'	1:0:2480:C:C5	2.42	0.55
1:0:1188:A:H62	1:0:1189:G:H21	1.54	0.55
1:0:1712:G:H3'	1:0:1712:G:N3	2.22	0.55
1:0:1794:A:H2'	1:0:1795:C:H5'	1.89	0.55
1:0:173:A:N1	1:0:818:G:C2	2.74	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1766:U:H2'	1:0:1767:G:C5'	2.36	0.55
2:R:7:LEU:HB2	4:W:29:ARG:HH22	1.69	0.55
1:0:982:C:H2'	1:0:983:G:C5'	2.37	0.55
1:0:955:G:H3'	1:0:955:G:C8	2.41	0.55
1:0:2858:A:H3'	1:0:2859:U:H5'	1.88	0.55
1:0:973:U:H2'	1:0:974:U:C6	2.40	0.55
1:0:2797:G:H2'	1:0:2798:A:H5''	1.89	0.55
1:0:98:U:H5'	1:0:99:U:H5''	1.89	0.55
1:0:2470:U:H2'	1:0:2471:U:H5'	1.89	0.55
1:0:2770:A:P	1:0:2770:A:H8	2.30	0.55
1:0:1440:G:H3'	1:0:1441:A:H5'	1.88	0.55
1:0:2025:A:N3	1:0:2025:A:H2'	2.22	0.55
1:0:2238:G:C5	1:0:2406:C:N4	2.74	0.55
1:0:1980:A:C2	1:0:1981:A:C4	2.94	0.55
1:0:2754:C:O2'	1:0:2755:A:H5'	2.07	0.55
1:0:221:A:H2'	1:0:222:G:H5'	1.88	0.55
1:0:1147:G:H2'	1:0:1148:G:C8	2.42	0.55
1:0:1347:C:O2'	1:0:1348:C:H5'	2.07	0.55
1:0:765:C:H5	1:0:1772:C:H1'	1.72	0.55
1:0:2053:G:H2'	1:0:2054:A:C8	2.42	0.55
1:0:790:A:N7	1:0:806:A:H2	2.04	0.55
1:0:2105:U:H2'	1:0:2106:G:H8	1.72	0.55
1:0:987:G:H4'	1:0:1167:A:N7	2.22	0.55
1:0:216:U:H5''	1:0:601:A:N6	2.22	0.55
1:0:2065:A:C4	1:0:2218:G:N2	2.74	0.55
1:0:136:A:H3'	1:0:137:A:C8	2.41	0.55
1:0:1541:G:H22	1:0:1562:G:N2	2.05	0.55
1:0:2785:A:H61	1:0:2865:G:H1'	1.71	0.55
1:0:1095:A:H3'	1:0:1096:A:H5''	1.88	0.55
1:0:2280:A:H2'	1:0:2281:C:H6	1.71	0.55
1:0:48:A:N1	1:0:154:U:O4	2.40	0.54
1:0:1299:A:C2'	1:0:1301:U:OP2	2.46	0.54
1:0:1793:A:N6	1:0:1809:G:H21	2.04	0.54
1:0:2548:G:H2'	1:0:2549:G:C5'	2.27	0.54
3:S:85:ASP:N	3:S:86:PRO:CD	2.70	0.54
1:0:2636:A:O2'	1:0:2637:C:H5'	2.07	0.54
1:0:1192:A:H2'	1:0:1193:G:C8	2.42	0.54
1:0:2252:A:C2'	1:0:2253:A:H5'	2.37	0.54
1:0:1528:C:H2'	1:0:1529:C:C4'	2.37	0.54
1:0:531:G:O2'	1:0:532:A:H5'	2.07	0.54
1:0:338:G:H2'	1:0:339:U:H6	1.72	0.54
1:0:54:G:C2	1:0:55:A:C8	2.95	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:225:G:C5'	1:0:226:C:H5'	2.38	0.54
1:0:789:G:H4'	1:0:790:A:O5'	2.07	0.54
1:0:2200:G:C5	1:0:2201:G:N7	2.75	0.54
1:0:1717:A:H2'	1:0:1718:A:H5'	1.88	0.54
1:0:616:U:O4	1:0:617:U:H5	1.89	0.54
1:0:2785:A:N6	1:0:2865:G:H1'	2.22	0.54
1:0:2712:G:H3'	1:0:2713:A:H5'	1.90	0.54
1:0:2446:C:O2'	1:0:2447:G:H5'	2.07	0.54
1:0:333:A:O4'	1:0:351:A:H1'	2.07	0.54
1:0:1116:U:H2'	1:0:1117:G:C8	2.42	0.54
1:0:722:C:H2'	1:0:723:C:H6	1.72	0.54
1:0:2415:G:N2	1:0:2577:A:C2	2.72	0.54
1:0:1484:G:O6	1:0:1538:A:N1	2.39	0.54
1:0:1572:C:C3'	1:0:1573:G:H5''	2.37	0.54
1:0:2502:G:O2'	1:0:2503:G:H5'	2.07	0.54
1:0:986:A:C2	1:0:1001:A:C4	2.95	0.54
1:0:851:C:O2'	1:0:852:U:H5'	2.06	0.54
1:0:635:C:C2'	1:0:636:G:H5''	2.37	0.54
1:0:2633:A:H1'	1:0:2635:U:C5	2.43	0.54
1:0:2787:A:H2	1:0:2864:C:C2	2.25	0.54
1:0:1978:U:H3'	1:0:1979:C:H5''	1.88	0.54
1:0:417:C:O5'	1:0:417:C:H6	1.89	0.54
1:0:1325:U:C1'	1:0:1619:A:N1	2.46	0.54
1:0:1301:U:C2'	1:0:1302:C:OP1	2.55	0.54
1:0:166:G:H1'	1:0:184:A:N6	2.21	0.54
1:0:2698:G:H2'	1:0:2699:G:H8	1.72	0.54
1:0:82:G:N1	1:0:100:G:H2'	2.22	0.54
2:R:32:LYS:CA	2:R:76:LYS:CE	2.84	0.54
4:W:29:ARG:NH1	4:W:29:ARG:CB	2.68	0.54
1:0:1887:G:N2	1:0:1911:A:H2	2.05	0.54
1:0:2823:G:O2'	1:0:2824:C:P	2.65	0.54
1:0:1184:G:C2'	1:0:1185:C:H5''	2.38	0.54
1:0:188:G:H2'	1:0:189:A:C8	2.43	0.54
1:0:820:U:O2'	1:0:821:A:H5'	2.07	0.54
1:0:2195:C:C4	1:0:2196:U:C4	2.96	0.54
5:1:34:LEU:O	5:1:38:VAL:HG23	2.07	0.54
1:0:984:A:H1'	1:0:1202:U:C5	2.43	0.54
1:0:317:U:H2'	1:0:318:G:H5''	1.90	0.54
1:0:1441:A:O2'	1:0:1442:C:H5''	2.06	0.54
1:0:2326:C:H2'	1:0:2327:U:C6	2.42	0.54
5:1:50:ARG:CG	5:1:51:LYS:N	2.62	0.54
1:0:749:C:H2'	1:0:750:C:H6	1.73	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2126:U:H3'	1:0:2127:U:C5'	2.37	0.54
1:0:1557:G:H2'	1:0:1558:C:O4'	2.08	0.54
1:0:2492:G:C6	1:0:2493:U:C4	2.96	0.54
1:0:134:G:H2'	1:0:135:U:H5'	1.89	0.54
1:0:1460:G:C2	1:0:1461:C:C2	2.95	0.54
1:0:2232:G:H2'	1:0:2233:C:H6	1.73	0.54
1:0:2005:U:H2'	1:0:2595:C:O2'	2.08	0.54
1:0:2477:C:O2	1:0:2478:C:C5	2.61	0.54
1:0:1557:G:C2'	1:0:1558:C:H5'	2.37	0.54
1:0:1332:G:N1	1:0:1333:G:C2	2.74	0.54
1:0:2860:C:H2'	1:0:2861:A:H5'	1.89	0.54
1:0:2182:A:H2'	1:0:2183:C:O4'	2.07	0.54
1:0:793:G:C4	1:0:795:A:C2	2.95	0.54
1:0:623:G:H4'	1:0:625:A:H62	1.72	0.54
1:0:2232:G:H2'	1:0:2233:C:C6	2.43	0.54
1:0:2513:A:C2	1:0:2514:G:H1'	2.43	0.54
1:0:2376:G:C2	1:0:2399:C:C2	2.95	0.54
1:0:67:G:H3'	1:0:68:C:H6	1.72	0.54
1:0:175:C:N4	1:0:225:G:H1	2.06	0.54
1:0:2569:A:O2'	1:0:2570:C:H5'	2.08	0.54
1:0:2782:G:H5'	1:0:2782:G:N3	2.22	0.54
4:W:52:GLN:O	4:W:53:LEU:HD23	2.08	0.54
1:0:1726:C:H2'	1:0:1727:C:H6	1.72	0.54
1:0:2838:U:O2'	1:0:2839:G:H5'	2.08	0.54
1:0:1545:G:O2'	1:0:1546:C:H5'	2.07	0.54
1:0:2080:U:H2'	1:0:2081:U:C6	2.43	0.54
1:0:2391:A:H8	1:0:2391:A:O5'	1.90	0.54
1:0:2355:A:H2'	1:0:2356:A:O4'	2.07	0.54
1:0:1242:A:H2'	1:0:1243:G:C8	2.43	0.54
1:0:525:A:O2'	1:0:526:C:H5'	2.08	0.54
1:0:167:A:C2	1:0:168:A:C4	2.96	0.54
1:0:100:G:N1	3:S:102:LYS:HB3	2.03	0.54
1:0:199:A:N1	1:0:201:G:C4	2.75	0.54
1:0:1443:G:H2'	1:0:1444:C:H6	1.73	0.54
1:0:1452:U:C2	1:0:1571:G:N2	2.76	0.54
1:0:1685:A:O2'	1:0:1686:A:OP2	2.24	0.54
1:0:1974:U:O2'	1:0:1975:G:H5''	2.08	0.54
1:0:2396:C:O2'	1:0:2397:A:H5'	2.08	0.54
1:0:2713:A:O2'	1:0:2714:A:H5'	2.08	0.54
1:0:2799:C:H2'	1:0:2800:C:O4'	2.08	0.54
1:0:11:G:H8	1:0:11:G:O5'	1.91	0.54
1:0:1660:G:N2	1:0:1661:C:H1'	2.23	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1392:U:OP1	1:0:1392:U:C6	2.61	0.54
1:0:867:G:C2	1:0:936:A:C2	2.96	0.54
1:0:2204:A:O2'	1:0:2205:C:P	2.65	0.54
1:0:674:U:H2'	1:0:675:C:O4'	2.08	0.54
1:0:472:C:H6	1:0:472:C:O5'	1.91	0.54
1:0:1706:A:C4	1:0:1717:A:N1	2.76	0.54
1:0:1779:C:H6	1:0:1779:C:O5'	1.91	0.54
1:0:742:G:H3'	1:0:742:G:N3	2.23	0.54
1:0:1202:U:O2'	1:0:1203:A:H5'	2.08	0.54
1:0:1661:C:O2	1:0:1661:C:H2'	2.08	0.54
1:0:191:G:O2'	1:0:192:G:H5'	2.06	0.54
1:0:541:C:N4	1:0:572:G:C8	2.76	0.54
1:0:1141:U:O2'	1:0:1142:G:H5'	2.08	0.54
1:0:1040:A:H2'	1:0:1041:G:O4'	2.08	0.54
1:0:805:G:N7	1:0:2419:C:H1'	2.24	0.53
1:0:1717:A:H2'	1:0:1718:A:C5'	2.38	0.53
1:0:634:G:H8	1:0:634:G:O5'	1.91	0.53
1:0:442:A:H2'	1:0:443:A:C8	2.43	0.53
1:0:1448:A:C6	1:0:1449:C:N4	2.76	0.53
1:0:1449:C:O2'	1:0:1450:G:H5'	2.08	0.53
1:0:1958:G:H2'	1:0:1959:U:C6	2.43	0.53
1:0:1869:A:O2'	1:0:1870:U:H5'	2.08	0.53
1:0:1549:C:H2'	1:0:1550:C:C6	2.43	0.53
1:0:2670:C:C2	1:0:2671:C:C5	2.96	0.53
1:0:788:G:O2'	1:0:789:G:OP2	2.23	0.53
1:0:192:G:H4'	1:0:193:A:H4'	1.89	0.53
1:0:1246:G:N3	1:0:1247:U:C6	2.76	0.53
4:W:37:LEU:HD23	4:W:38:ALA:N	2.22	0.53
1:0:1453:A:C4	1:0:1569:A:N6	2.76	0.53
1:0:2860:C:C2'	1:0:2861:A:H5'	2.37	0.53
1:0:347:C:H2'	1:0:348:U:C6	2.44	0.53
1:0:15:G:C6	1:0:16:G:C6	2.96	0.53
1:0:1369:G:C6	1:0:1370:U:N3	2.76	0.53
1:0:775:U:H5'	1:0:776:G:C8	2.42	0.53
1:0:2431:C:O2'	1:0:2432:A:H5'	2.07	0.53
1:0:232:A:C2	1:0:233:A:C4	2.96	0.53
1:0:1215:A:H2'	1:0:1216:G:H8	1.73	0.53
1:0:493:A:H4'	3:S:56:LYS:HE3	1.88	0.53
1:0:1255:A:H2'	1:0:1256:C:C6	2.43	0.53
1:0:1260:A:HO2'	1:0:1261:G:H8	1.53	0.53
1:0:2174:G:H2'	1:0:2175:A:H8	1.72	0.53
1:0:1766:U:O5'	1:0:1766:U:H6	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1962:C:C2'	1:0:1963:G:H5'	2.39	0.53
1:0:1758:C:C4	1:0:1759:A:N7	2.77	0.53
1:0:2619:G:C6	1:0:2755:A:C2	2.96	0.53
1:0:349:G:OP1	3:S:13:LYS:NZ	2.37	0.53
1:0:387:A:H2'	1:0:387:A:N3	2.24	0.53
1:0:1842:G:H5'	1:0:1842:G:H8	1.73	0.53
1:0:476:G:H2'	1:0:477:A:C8	2.42	0.53
1:0:942:U:H2'	1:0:943:U:C4'	2.39	0.53
1:0:1301:U:C4	1:0:1340:C:H1'	2.43	0.53
1:0:1636:G:O2'	1:0:1637:U:H5'	2.08	0.53
1:0:1002:C:OP2	1:0:1200:G:OP2	2.26	0.53
1:0:441:A:H2'	1:0:442:A:H5'	1.91	0.53
1:0:2014:A:C6	1:0:2477:C:H1'	2.43	0.53
1:0:574:C:C4'	1:0:1266:G:N1	2.72	0.53
1:0:2828:C:H2'	1:0:2829:A:C8	2.40	0.53
1:0:641:G:C3'	1:0:642:A:H5''	2.38	0.53
1:0:678:G:H2'	1:0:679:C:C6	2.43	0.53
1:0:2086:U:H2'	1:0:2087:U:C6	2.44	0.53
1:0:2170:C:H2'	1:0:2171:U:C4'	2.39	0.53
1:0:2084:G:H2'	1:0:2085:G:C8	2.43	0.53
1:0:1086:C:N4	1:0:1087:C:N3	2.57	0.53
1:0:2670:C:N3	1:0:2671:C:C5	2.77	0.53
1:0:2196:U:H2'	1:0:2197:U:O4'	2.09	0.53
1:0:798:G:H2'	1:0:799:C:H5'	1.89	0.53
1:0:1514:C:H5'	1:0:1593:C:C5'	2.38	0.53
1:0:640:C:H4'	1:0:660:G:N2	2.24	0.53
1:0:362:C:H2'	1:0:363:G:C4'	2.36	0.53
1:0:2252:A:O2'	1:0:2253:A:H5'	2.08	0.53
1:0:2754:C:C2'	1:0:2755:A:H5'	2.39	0.53
1:0:839:U:N3	1:0:841:G:H1'	2.24	0.53
1:0:623:G:C1'	1:0:626:A:H62	2.21	0.53
1:0:2796:A:H2'	1:0:2797:G:C8	2.44	0.53
1:0:57:G:N2	1:0:72:A:C8	2.76	0.53
1:0:1300:A:C2	1:0:1666:G:H4'	2.44	0.53
1:0:2519:C:H2'	1:0:2520:A:C5'	2.33	0.53
1:0:2548:G:N1	1:0:2549:G:N7	2.57	0.53
1:0:583:C:O2'	1:0:584:A:OP2	2.21	0.53
1:0:62:U:H3'	1:0:63:A:C8	2.44	0.53
1:0:1407:G:H2'	1:0:1408:A:C8	2.43	0.53
1:0:2491:C:C3'	1:0:2492:G:H5''	2.36	0.53
1:0:1218:C:O2'	1:0:1219:C:H5'	2.08	0.53
1:0:1064:C:H6	1:0:1064:C:O5'	1.92	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1296:G:H2'	1:0:1298:G:OP2	2.09	0.53
1:0:2689:C:O2'	1:0:2690:A:H5'	2.09	0.53
1:0:2198:U:C3'	1:0:2199:C:C5'	2.82	0.53
1:0:1140:A:H2	1:0:2548:G:N3	2.07	0.53
1:0:1459:U:C6	1:0:1459:U:O5'	2.62	0.53
1:0:1446:U:H2'	1:0:1447:U:H6	1.74	0.53
1:0:2362:G:H2'	1:0:2363:G:O4'	2.08	0.53
1:0:1404:C:C4	1:0:1407:G:N7	2.76	0.53
1:0:1725:C:C2	1:0:1726:C:C5	2.97	0.53
5:1:15:LYS:HD2	5:1:16:VAL:N	2.24	0.53
1:0:827:C:O2'	1:0:828:C:H5'	2.08	0.53
1:0:2335:U:H6	1:0:2335:U:O5'	1.90	0.53
1:0:1054:C:H2'	1:0:1055:A:C4'	2.39	0.53
1:0:1054:C:H2'	1:0:1055:A:H4'	1.91	0.53
1:0:797:A:N6	1:0:805:G:H1'	2.24	0.53
4:W:28:LEU:HA	4:W:31:GLN:OE1	2.09	0.53
1:0:1777:A:O2'	1:0:1778:U:OP1	2.27	0.53
2:R:30:SER:O	2:R:76:LYS:HG3	2.08	0.53
1:0:1166:A:C3'	1:0:1167:A:H5''	2.39	0.53
1:0:603:C:C2	1:0:604:U:C5	2.97	0.53
1:0:753:U:C2'	1:0:754:G:O5'	2.57	0.53
1:0:946:U:C2	1:0:947:C:C5	2.97	0.53
1:0:1724:C:C4	1:0:1747:G:C6	2.97	0.53
1:0:1974:U:H2'	1:0:1975:G:C5'	2.39	0.53
1:0:1873:A:H2	1:0:2213:G:N3	2.06	0.53
1:0:705:C:H2'	1:0:706:A:C8	2.43	0.53
1:0:19:C:C2	1:0:20:C:C5	2.97	0.53
1:0:922:A:C2	1:0:923:A:C2	2.97	0.53
1:0:1987:G:C5	1:0:1988:A:C8	2.97	0.53
1:0:1653:C:H2'	1:0:1654:A:C8	2.44	0.53
2:R:32:LYS:HA	2:R:76:LYS:CE	2.39	0.53
1:0:2031:A:C2	1:0:2032:G:C4	2.97	0.53
1:0:407:A:H2'	1:0:408:U:C6	2.44	0.53
1:0:2324:G:O2'	1:0:2325:A:H5''	2.09	0.53
1:0:1358:C:C2'	1:0:1359:G:H5''	2.39	0.53
1:0:2204:A:O2'	1:0:2205:C:OP2	2.25	0.53
1:0:2111:C:O2'	1:0:2112:C:H5'	2.08	0.53
1:0:2235:G:O2'	1:0:2236:U:H5'	2.09	0.53
1:0:131:C:O2'	1:0:132:U:H5'	2.08	0.52
1:0:2420:C:H2'	1:0:2421:C:H6	1.74	0.52
1:0:1960:A:C2	1:0:1961:A:C4	2.98	0.52
1:0:2217:G:H5''	1:0:2218:G:OP1	2.08	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:541:C:H41	1:0:572:G:H8	1.55	0.52
1:0:718:A:C2	1:0:740:A:H1'	2.45	0.52
1:0:2074:U:C5	1:0:2075:U:C5	2.97	0.52
1:0:770:U:O2'	1:0:771:C:H5'	2.08	0.52
1:0:2006:G:H2'	1:0:2007:G:O5'	2.09	0.52
1:0:2026:C:OP2	1:0:2759:U:O4	2.27	0.52
1:0:2026:C:OP2	1:0:2759:U:C4	2.62	0.52
1:0:1892:C:H6	1:0:1892:C:O5'	1.91	0.52
1:0:1903:C:H2'	1:0:1904:G:C8	2.43	0.52
1:0:1542:G:C6	1:0:1559:G:H2'	2.43	0.52
1:0:1333:G:H22	1:0:1344:C:N4	2.07	0.52
1:0:792:U:C2'	1:0:793:G:C5'	2.87	0.52
1:0:1518:C:H2'	1:0:1519:G:C8	2.43	0.52
1:0:1999:U:H2'	1:0:2000:U:O4'	2.09	0.52
1:0:1633:C:H5''	1:0:1634:A:OP2	2.09	0.52
1:0:690:A:C6	1:0:815:A:C6	2.97	0.52
1:0:590:C:H2'	1:0:591:G:H8	1.75	0.52
5:1:30:VAL:HG13	5:1:34:LEU:HD21	1.92	0.52
1:0:1246:G:C2	1:0:1247:U:C6	2.97	0.52
1:0:708:G:OP1	1:0:1393:G:O2'	2.27	0.52
1:0:1887:G:N2	1:0:1911:A:C2	2.76	0.52
1:0:1834:G:N2	1:0:1884:A:C4	2.77	0.52
1:0:1434:U:O2'	1:0:1435:G:H5'	2.09	0.52
2:R:2:SER:N	2:R:5:ASP:OD2	2.42	0.52
1:0:2487:G:C4	1:0:2488:G:C8	2.97	0.52
1:0:1305:C:H2'	1:0:1306:U:C6	2.45	0.52
1:0:2822:U:H6	1:0:2822:U:O5'	1.92	0.52
1:0:2845:C:O2'	1:0:2846:G:H5'	2.10	0.52
1:0:1325:U:H4'	1:0:1326:U:C5	2.44	0.52
1:0:2494:C:N3	1:0:2549:G:C6	2.77	0.52
1:0:613:A:H2'	1:0:614:G:C8	2.44	0.52
1:0:1287:A:N1	1:0:1662:G:H5'	2.24	0.52
1:0:211:U:O2	1:0:211:U:C2'	2.53	0.52
1:0:2387:U:H2'	1:0:2388:G:H8	1.72	0.52
1:0:2010:G:C5	1:0:2011:U:C4	2.98	0.52
1:0:1986:G:C6	1:0:1987:G:C5	2.98	0.52
1:0:218:A:O2'	1:0:219:G:H4'	2.08	0.52
1:0:1090:C:H2'	1:0:1091:C:C6	2.44	0.52
1:0:141:G:H2'	1:0:142:U:H6	1.75	0.52
1:0:883:A:C6	1:0:920:G:C6	2.97	0.52
1:0:765:C:C5	1:0:1772:C:H1'	2.44	0.52
1:0:1696:C:O2	1:0:1973:C:H1'	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1767:G:N2	1:0:1768:U:H1'	2.25	0.52
1:0:2866:A:H2'	1:0:2867:G:C8	2.45	0.52
3:S:70:GLU:OE1	3:S:72:ARG:HD2	2.09	0.52
4:W:17:GLU:CB	4:W:53:LEU:HD11	2.38	0.52
1:0:2528:G:H2'	1:0:2529:G:C8	2.43	0.52
1:0:1228:G:C6	1:0:1229:C:N3	2.77	0.52
1:0:1859:A:H2'	1:0:1860:A:C8	2.44	0.52
1:0:1127:C:H2'	1:0:1128:G:H8	1.74	0.52
1:0:1301:U:C5	1:0:1340:C:O2	2.63	0.52
1:0:2672:U:O2'	1:0:2673:G:H5'	2.10	0.52
1:0:872:G:H2'	1:0:928:G:O6	2.10	0.52
1:0:2549:G:H5'	1:0:2549:G:C8	2.44	0.52
2:R:8:GLN:H	4:W:29:ARG:HH22	1.55	0.52
1:0:201:G:C2	1:0:202:A:C4	2.98	0.52
1:0:194:G:O6	1:0:444:U:O2	2.27	0.52
1:0:1404:C:N4	1:0:1407:G:N7	2.57	0.52
1:0:2836:U:H3'	1:0:2836:U:C6	2.44	0.52
1:0:2863:U:C2	1:0:2864:C:C6	2.98	0.52
1:0:664:C:H2'	1:0:665:A:N7	2.25	0.52
3:S:92:THR:CG2	3:S:106:VAL:HB	2.32	0.52
1:0:109:A:H2'	1:0:110:U:H5''	1.92	0.52
1:0:67:G:C3'	1:0:68:C:H6	2.23	0.52
1:0:165:G:H2'	1:0:166:G:C5'	2.38	0.52
1:0:2197:U:O2'	1:0:2198:U:H5'	2.08	0.52
1:0:1531:C:H2'	1:0:1532:A:H5'	1.92	0.52
1:0:930:A:H5'	1:0:931:G:N7	2.24	0.52
1:0:582:G:H2'	1:0:583:C:C3'	2.38	0.52
1:0:2352:A:H2'	1:0:2353:G:C8	2.45	0.52
1:0:1211:G:C2'	1:0:1212:U:H5'	2.39	0.52
1:0:536:A:N6	1:0:2605:C:H4'	2.25	0.52
1:0:1790:G:N2	1:0:1811:A:OP2	2.42	0.52
1:0:1693:A:N6	1:0:1694:A:N1	2.58	0.52
1:0:2555:G:H2'	1:0:2555:G:N3	2.23	0.52
1:0:312:G:C4	1:0:328:A:C2	2.97	0.52
1:0:1349:A:O2'	1:0:1350:G:H5'	2.09	0.52
1:0:2420:C:O2'	1:0:2421:C:H5'	2.09	0.52
1:0:2443:C:C2	1:0:2466:G:N2	2.77	0.52
1:0:635:C:H3'	1:0:636:G:H5''	1.90	0.52
1:0:1440:G:O5'	1:0:1440:G:H8	1.93	0.52
1:0:875:G:C2'	1:0:876:A:H5'	2.40	0.52
1:0:707:U:O5'	1:0:707:U:H6	1.92	0.52
1:0:828:C:H2'	1:0:829:C:H6	1.74	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1385:C:H2'	1:0:1386:A:O4'	2.10	0.52
1:0:37:C:H2'	1:0:38:G:C8	2.45	0.52
1:0:1766:U:H3'	1:0:1766:U:C6	2.45	0.52
1:0:799:C:C2'	1:0:800:U:H5'	2.39	0.52
1:0:242:A:N7	1:0:442:A:N1	2.57	0.52
1:0:1543:G:N2	1:0:1560:A:C2	2.78	0.52
1:0:839:U:OP1	1:0:2408:G:OP2	2.28	0.52
1:0:1854:G:C2	1:0:1855:G:C8	2.98	0.52
1:0:1994:U:H2'	1:0:1995:G:H5'	1.91	0.52
5:1:57:VAL:HB	5:1:61:TYR:HB2	1.91	0.52
1:0:1837:G:O2'	1:0:1838:G:H5'	2.09	0.52
1:0:168:A:C4	1:0:169:C:C5	2.98	0.52
1:0:2196:U:C4	1:0:2197:U:C4	2.98	0.52
1:0:1011:A:N6	1:0:1012:A:N6	2.57	0.52
1:0:986:A:H2	1:0:1001:A:N9	2.08	0.52
1:0:987:G:O6	1:0:999:A:C2	2.63	0.52
1:0:585:U:O2'	1:0:2481:G:C6	2.63	0.52
1:0:2042:A:C5	1:0:2482:A:C2	2.97	0.52
1:0:405:C:C2	1:0:406:G:C8	2.98	0.52
1:0:408:U:H2'	1:0:409:G:N7	2.25	0.52
1:0:565:A:H2'	1:0:566:U:C6	2.45	0.52
1:0:1373:G:C5	1:0:1374:G:C8	2.97	0.52
2:R:81:ARG:HH11	2:R:81:ARG:HG3	1.73	0.52
1:0:1141:U:C5	1:0:2009:U:OP2	2.63	0.52
1:0:2261:G:C6	1:0:2404:A:C2	2.98	0.52
1:0:1982:C:H4'	1:0:2703:C:O2	2.09	0.52
1:0:2701:A:H2'	1:0:2702:G:O4'	2.10	0.52
1:0:1215:A:H2'	1:0:1216:G:C8	2.45	0.52
1:0:2288:A:C8	1:0:2289:A:N7	2.78	0.52
1:0:43:A:C2	1:0:44:G:C2	2.97	0.52
1:0:2548:G:C3'	1:0:2549:G:H5''	2.40	0.52
1:0:1458:A:H3'	1:0:1459:U:H5''	1.88	0.52
1:0:199:A:N6	1:0:201:G:C6	2.78	0.52
1:0:2076:G:C6	1:0:2204:A:N7	2.78	0.52
1:0:1997:A:H2'	1:0:1998:A:C8	2.45	0.52
1:0:1356:G:H5'	1:0:1614:C:OP2	2.10	0.52
1:0:351:A:C6	1:0:352:G:C4	2.98	0.52
1:0:185:C:H2'	1:0:186:C:H6	1.75	0.52
1:0:2040:A:H2'	1:0:2041:A:C8	2.45	0.52
1:0:863:C:H42	1:0:939:C:H42	1.57	0.51
1:0:1636:G:H2'	1:0:1637:U:C6	2.44	0.51
1:0:1746:A:C2	1:0:2696:A:H1'	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2497:A:OP2	1:0:2498:U:C5	2.64	0.51
1:0:2546:G:H2'	1:0:2547:C:H6	1.74	0.51
1:0:1709:U:H6	1:0:1709:U:O5'	1.94	0.51
2:R:28:TRP:CZ3	2:R:75:ARG:HB2	2.46	0.51
1:0:1856:U:OP1	1:0:2389:G:O2'	2.26	0.51
1:0:211:U:O2	1:0:212:U:O4'	2.28	0.51
1:0:1372:A:H2'	1:0:1373:G:O4'	2.10	0.51
1:0:137:A:C2'	1:0:138:G:H5'	2.40	0.51
1:0:2011:U:O2'	1:0:2012:A:H5'	2.10	0.51
1:0:1892:C:H42	1:0:1903:C:H42	1.58	0.51
2:R:11:VAL:HG23	2:R:26:SER:O	2.10	0.51
1:0:525:A:C8	1:0:526:C:C6	2.98	0.51
1:0:2084:G:H2'	1:0:2085:G:H8	1.75	0.51
1:0:2670:C:O2	1:0:2671:C:C6	2.63	0.51
1:0:2050:G:H5''	1:0:2051:U:OP2	2.11	0.51
1:0:2052:G:C2	1:0:2053:G:C8	2.99	0.51
1:0:212:U:O2	1:0:443:A:C2	2.63	0.51
1:0:1735:G:O2'	1:0:1736:C:H5'	2.10	0.51
1:0:1250:A:O2'	1:0:1251:G:O4'	2.28	0.51
1:0:26:G:H1'	1:0:524:A:N6	2.24	0.51
1:0:317:U:C2'	1:0:318:G:H5''	2.41	0.51
1:0:1142:G:H2'	1:0:1143:A:H8	1.75	0.51
3:S:45:LYS:HG2	3:S:75:ALA:CB	2.40	0.51
1:0:230:C:O2'	1:0:231:G:H5'	2.10	0.51
1:0:2264:C:O4'	1:0:2267:A:N6	2.43	0.51
1:0:940:G:N7	1:0:941:U:C6	2.78	0.51
1:0:1337:G:H1'	1:0:1632:A:H61	1.75	0.51
1:0:765:C:O2'	1:0:766:A:P	2.68	0.51
1:0:2141:A:H2'	1:0:2142:G:H4'	1.92	0.51
1:0:584:A:H2'	1:0:585:U:H6	1.75	0.51
1:0:1210:C:N3	1:0:1211:G:C5	2.78	0.51
1:0:847:C:H1'	1:0:2337:A:N3	2.25	0.51
1:0:2048:C:H1'	1:0:2428:U:O2	2.09	0.51
1:0:720:A:H2'	1:0:721:C:H6	1.76	0.51
1:0:700:C:O2'	1:0:701:U:H5'	2.09	0.51
1:0:982:C:OP2	1:0:985:G:N1	2.44	0.51
1:0:2016:A:H2'	1:0:2018:G:OP2	2.10	0.51
1:0:659:G:C6	1:0:660:G:C6	2.98	0.51
1:0:824:U:H1'	1:0:1264:C:C6	2.45	0.51
1:0:823:U:OP1	1:0:1266:G:N7	2.44	0.51
1:0:1404:C:C4	1:0:1406:A:C8	2.98	0.51
1:0:1850:G:O2'	1:0:1851:A:H5'	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2459:C:H2'	1:0:2460:G:C5'	2.40	0.51
1:0:1693:A:C2'	1:0:1694:A:H5'	2.40	0.51
1:0:2105:U:H2'	1:0:2106:G:C8	2.45	0.51
1:0:1708:C:N3	1:0:1714:A:C2	2.78	0.51
1:0:2310:G:N2	1:0:2364:C:C4	2.79	0.51
1:0:136:A:H3'	1:0:137:A:H8	1.74	0.51
1:0:2780:A:H2'	1:0:2781:G:H8	1.75	0.51
1:0:1427:G:H2'	1:0:1428:G:O4'	2.11	0.51
1:0:2487:G:H2'	1:0:2488:G:H8	1.75	0.51
1:0:2383:C:H2'	1:0:2384:G:O4'	2.10	0.51
1:0:2818:G:C2'	1:0:2819:G:H5'	2.41	0.51
1:0:55:A:N6	1:0:69:G:H1	2.09	0.51
1:0:68:C:C1'	1:0:72:A:H1'	2.40	0.51
1:0:171:G:C2	1:0:179:U:C2	2.99	0.51
1:0:1393:G:C2	1:0:1394:G:C8	2.98	0.51
1:0:1514:C:O4'	1:0:1593:C:C4'	2.59	0.51
1:0:2811:G:C6	1:0:2812:A:N6	2.79	0.51
1:0:2011:U:H2'	1:0:2012:A:H8	1.75	0.51
1:0:2833:C:H2'	1:0:2834:A:O4'	2.11	0.51
1:0:624:A:H2'	1:0:625:A:H5'	1.91	0.51
1:0:414:A:H2'	1:0:415:A:H8	1.75	0.51
1:0:2280:A:H2'	1:0:2281:C:C6	2.45	0.51
1:0:18:U:H2'	1:0:19:C:H6	1.76	0.51
1:0:789:G:O6	1:0:2055:G:OP1	2.28	0.51
1:0:1139:A:O2'	1:0:1140:A:O4'	2.28	0.51
1:0:2309:G:N2	1:0:2365:U:C2	2.79	0.51
1:0:976:C:C2'	1:0:977:G:H5'	2.41	0.51
1:0:2836:U:C6	1:0:2836:U:C3'	2.94	0.51
1:0:1541:G:H2'	1:0:1542:G:H5'	1.93	0.51
3:S:52:ASN:HD21	3:S:71:GLN:HG3	1.75	0.51
1:0:846:A:C5	1:0:847:C:C4	2.99	0.51
1:0:502:A:H2'	1:0:503:G:O4'	2.10	0.51
1:0:110:U:H2'	1:0:111:G:O4'	2.11	0.51
1:0:117:A:H4'	1:0:118:U:O5'	2.11	0.51
1:0:76:C:C6	1:0:76:C:H5'	2.32	0.51
1:0:543:G:C4	1:0:570:G:N2	2.79	0.51
1:0:1225:G:H2'	1:0:1249:G:H22	1.75	0.51
1:0:1724:C:N3	1:0:1725:C:C4	2.78	0.51
1:0:2836:U:H6	1:0:2836:U:H5''	1.75	0.51
1:0:2225:G:H2'	1:0:2226:A:C8	2.46	0.51
1:0:838:A:H2'	1:0:839:U:H6	1.76	0.51
1:0:808:C:H2'	1:0:809:C:H6	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:940:G:C3'	1:0:941:U:C5'	2.75	0.51
1:0:2053:G:H2'	1:0:2054:A:H8	1.76	0.51
1:0:2549:G:H5'	1:0:2549:G:H8	1.76	0.51
1:0:1776:A:HO2'	1:0:1777:A:P	2.34	0.51
1:0:1164:C:H3'	1:0:1165:G:C8	2.46	0.51
1:0:982:C:P	1:0:985:G:N2	2.84	0.51
1:0:1925:C:H2'	1:0:1926:U:C5	2.44	0.51
1:0:1077:U:H2'	1:0:1078:A:H5''	1.93	0.51
1:0:2404:A:O2'	1:0:2405:A:P	2.69	0.51
5:1:70:LEU:O	5:1:74:HIS:NE2	2.44	0.51
1:0:2492:G:C5	1:0:2493:U:C4	2.99	0.51
3:S:112:LYS:N	3:S:112:LYS:CD	2.63	0.51
1:0:2133:G:H2'	1:0:2134:U:H6	1.75	0.51
1:0:1035:G:OP1	1:0:1037:U:OP1	2.29	0.51
1:0:459:A:OP1	1:0:459:A:H4'	2.10	0.51
1:0:169:C:C2'	1:0:170:U:H5'	2.41	0.51
1:0:1761:G:O2'	1:0:1762:C:H5'	2.11	0.51
1:0:2770:A:C5'	1:0:2867:G:H21	2.19	0.51
1:0:26:G:C2	1:0:27:G:N2	2.79	0.51
1:0:755:C:O2'	1:0:756:C:H5'	2.11	0.51
1:0:860:U:C2'	1:0:860:U:O2	2.59	0.51
1:0:1882:G:H21	1:0:1885:C:H42	1.56	0.51
1:0:2397:A:H2'	1:0:2398:U:O4'	2.11	0.51
1:0:1255:A:C4	1:0:1256:C:C5	2.99	0.51
1:0:2764:U:H2'	1:0:2765:C:H6	1.74	0.51
1:0:2799:C:C4	1:0:2800:C:C2	2.98	0.51
1:0:2429:A:OP1	1:0:2476:A:C8	2.64	0.51
1:0:503:G:H2'	1:0:504:G:O4'	2.11	0.51
1:0:2069:U:H6	1:0:2069:U:O5'	1.93	0.51
1:0:141:G:H2'	1:0:142:U:C6	2.46	0.50
1:0:1631:C:OP2	1:0:1633:C:N4	2.44	0.50
1:0:80:A:O4'	1:0:305:A:C2	2.64	0.50
1:0:394:U:H3	1:0:406:G:H1	1.59	0.50
1:0:45:C:C2	1:0:46:C:C5	2.99	0.50
1:0:516:G:H4'	1:0:519:C:H1'	1.92	0.50
1:0:482:A:O2'	1:0:483:A:H5'	2.11	0.50
1:0:1404:C:H41	1:0:1406:A:H3'	1.75	0.50
1:0:1358:C:H2'	1:0:1359:G:H5''	1.92	0.50
1:0:2836:U:C2'	1:0:2837:G:H5'	2.40	0.50
1:0:1682:A:O2'	1:0:1683:G:H5'	2.11	0.50
1:0:1975:G:O2'	1:0:1976:U:OP2	2.20	0.50
1:0:622:U:C2'	1:0:626:A:H61	2.23	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2701:A:C2	1:0:2848:A:C4	2.99	0.50
1:0:2764:U:O2'	1:0:2765:C:H5'	2.11	0.50
1:0:2048:C:H2'	1:0:2049:C:O4'	2.11	0.50
1:0:2173:G:O2'	1:0:2174:G:H5'	2.11	0.50
1:0:43:A:C6	1:0:44:G:C6	2.99	0.50
1:0:2689:C:H2'	1:0:2690:A:C8	2.46	0.50
1:0:698:A:H1'	1:0:701:U:O4	2.11	0.50
1:0:983:G:N1	1:0:984:A:N6	2.56	0.50
1:0:600:G:C6	1:0:602:C:C4	2.99	0.50
1:0:1315:A:H5''	1:0:1316:G:OP2	2.11	0.50
1:0:2389:G:N2	1:0:2390:A:H1'	2.26	0.50
1:0:715:U:H2'	1:0:716:U:O4'	2.11	0.50
1:0:490:A:O2'	1:0:491:A:C5'	2.52	0.50
1:0:62:U:H3'	1:0:63:A:H8	1.76	0.50
1:0:754:G:C2	1:0:770:U:O2	2.64	0.50
1:0:944:A:O2'	1:0:945:G:H5'	2.12	0.50
1:0:1210:C:C2	1:0:1211:G:C8	3.00	0.50
1:0:2720:A:C6	1:0:2744:A:C8	3.00	0.50
1:0:1683:G:HO2'	1:0:1684:G:H5'	1.76	0.50
1:0:2838:U:H2'	1:0:2839:G:C8	2.44	0.50
1:0:2473:G:O2'	1:0:2474:G:H5'	2.11	0.50
1:0:2492:G:C2	1:0:2493:U:C2	2.99	0.50
1:0:18:U:HO2'	1:0:19:C:H5'	1.75	0.50
1:0:538:A:N6	1:0:2027:C:OP1	2.45	0.50
1:0:2648:G:N2	1:0:2649:A:H1'	2.27	0.50
1:0:2550:C:N4	1:0:2553:G:C8	2.79	0.50
1:0:1001:A:O5'	1:0:1002:C:OP2	2.29	0.50
1:0:619:A:H61	1:0:629:C:H42	1.59	0.50
1:0:640:C:H4'	1:0:660:G:N3	2.26	0.50
1:0:2756:A:H4'	1:0:2758:A:OP1	2.12	0.50
1:0:2404:A:O2'	1:0:2405:A:OP2	2.25	0.50
1:0:1934:U:O2	1:0:1936:A:C8	2.64	0.50
1:0:2357:A:H2'	1:0:2358:C:H5'	1.92	0.50
1:0:1838:G:H2'	1:0:1839:A:O4'	2.11	0.50
1:0:1498:G:O2'	1:0:1499:A:H5'	2.12	0.50
1:0:2621:G:H2'	1:0:2622:G:H8	1.77	0.50
1:0:2527:G:C2	1:0:2540:A:C2	2.99	0.50
1:0:709:A:C2	1:0:710:C:C2	2.99	0.50
1:0:939:C:H2'	1:0:940:G:C8	2.47	0.50
1:0:690:A:N1	1:0:815:A:C6	2.79	0.50
1:0:1763:G:N2	1:0:1765:C:C5'	2.73	0.50
1:0:1511:A:H2'	1:0:1512:A:O4'	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1586:A:C6	1:0:1587:A:C6	2.99	0.50
1:0:2595:C:O2'	1:0:2596:C:H5'	2.11	0.50
1:0:979:A:H2'	1:0:980:G:C8	2.46	0.50
1:0:322:A:H1'	1:0:343:A:C5	2.46	0.50
1:0:2724:G:H1'	1:0:2741:G:N2	2.27	0.50
1:0:2834:A:N6	1:0:2835:A:N6	2.59	0.50
1:0:2860:C:H2'	1:0:2861:A:C5'	2.41	0.50
1:0:1975:G:N2	1:0:1979:C:H5	2.07	0.50
1:0:1982:C:O2'	1:0:1983:G:H5'	2.11	0.50
1:0:24:G:C2	1:0:527:C:C2	2.99	0.50
1:0:1800:A:C6	1:0:1802:A:C6	3.00	0.50
1:0:68:C:C2'	1:0:72:A:H1'	2.42	0.50
1:0:2549:G:C2	1:0:2550:C:C2	3.00	0.50
1:0:2511:G:H2'	1:0:2512:A:O4'	2.11	0.50
1:0:1672:A:C2	1:0:2032:G:H5''	2.46	0.50
1:0:1512:A:H2'	1:0:1514:C:C5	2.47	0.50
2:R:93:GLY:C	5:1:50:ARG:NH2	2.62	0.50
1:0:1552:C:O2'	1:0:1553:G:H5'	2.12	0.50
1:0:2447:G:N2	1:0:2460:G:H2'	2.27	0.50
1:0:1352:G:N2	1:0:1619:A:N3	2.55	0.50
1:0:71:A:O5'	1:0:71:A:H8	1.94	0.50
1:0:788:G:H4'	1:0:789:G:O5'	2.12	0.50
1:0:820:U:C2	1:0:821:A:C8	3.00	0.50
1:0:984:A:H2	1:0:1201:G:H21	1.57	0.50
1:0:987:G:H2'	1:0:988:G:C8	2.45	0.50
1:0:604:U:H2'	1:0:604:U:O2	2.12	0.50
1:0:994:A:N7	1:0:995:A:C2	2.80	0.50
1:0:2618:A:H1'	1:0:2758:A:C2	2.47	0.50
1:0:961:G:C5	1:0:962:C:C5	2.99	0.50
1:0:1404:C:N4	1:0:1406:A:H3'	2.27	0.50
1:0:1743:C:O2'	1:0:1744:G:H5'	2.12	0.50
1:0:337:G:N2	3:S:10:HIS:NE2	2.59	0.50
1:0:1615:C:P	2:R:35:LYS:HB2	2.52	0.50
1:0:2474:G:C6	1:0:2475:C:C4	3.00	0.50
1:0:2210:C:O2'	1:0:2211:U:H5'	2.11	0.50
1:0:2591:C:C4	1:0:2592:U:H5	2.30	0.50
1:0:2851:G:H2'	1:0:2852:G:C8	2.46	0.50
1:0:2355:A:C8	1:0:2355:A:OP1	2.65	0.50
1:0:1491:C:H2'	1:0:1492:A:O4'	2.12	0.50
1:0:296:A:N6	1:0:297:A:N6	2.59	0.50
1:0:2526:U:C6	1:0:2545:A:C5	2.99	0.50
1:0:159:A:H61	1:0:192:G:H1	1.58	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1882:G:H21	1:0:1885:C:H41	1.58	0.50
1:0:2182:A:C6	1:0:2204:A:C2	3.00	0.50
1:0:5:A:HO2'	1:0:6:A:H5'	1.75	0.50
1:0:1289:A:C2	1:0:1290:A:C8	2.99	0.50
1:0:1578:U:H2'	1:0:1579:G:H8	1.76	0.50
1:0:1092:U:H2'	1:0:1093:U:C6	2.46	0.50
1:0:1949:A:H61	1:0:2581:A:H61	1.60	0.50
1:0:2502:G:C6	1:0:2520:A:C2	2.99	0.50
1:0:1780:A:O5'	1:0:1780:A:H8	1.94	0.50
1:0:831:G:C2'	1:0:832:A:H5''	2.42	0.50
1:0:953:G:C6	1:0:954:U:C2	3.00	0.50
1:0:617:U:H2'	1:0:618:A:C8	2.46	0.50
1:0:1919:A:O4'	1:0:1923:U:C4	2.65	0.50
1:0:322:A:C2	1:0:342:G:OP2	2.65	0.50
3:S:45:LYS:HG2	3:S:75:ALA:HB1	1.93	0.50
1:0:14:A:OP2	1:0:15:G:OP2	2.28	0.50
1:0:914:C:H2'	1:0:915:C:C6	2.46	0.50
1:0:1804:U:O2'	1:0:1805:G:H5'	2.11	0.50
1:0:313:U:H2'	1:0:314:G:H8	1.77	0.50
1:0:2002:A:H2'	1:0:2003:A:O5'	2.12	0.50
1:0:496:C:O2'	1:0:497:C:H5'	2.12	0.50
1:0:1625:A:H2'	1:0:1625:A:N3	2.27	0.50
1:0:170:U:C2'	1:0:170:U:O2	2.60	0.50
1:0:765:C:O2'	1:0:766:A:O5'	2.30	0.50
4:W:2:LYS:HG3	4:W:3:PRO:CD	2.38	0.50
1:0:1139:A:H1'	1:0:2495:G:O2'	2.12	0.50
1:0:1606:C:O2'	1:0:1607:A:H5'	2.12	0.50
1:0:1438:G:C2'	1:0:1439:G:H5'	2.42	0.50
1:0:1834:G:H2'	1:0:1835:C:O4'	2.12	0.50
1:0:2840:U:H2'	1:0:2841:U:C6	2.46	0.50
1:0:2630:C:H2'	1:0:2631:C:H6	1.77	0.50
1:0:2692:A:H5''	1:0:2693:U:OP2	2.12	0.49
1:0:1474:A:C6	1:0:1476:G:C5	3.00	0.49
1:0:1004:A:H2'	1:0:1005:U:H5'	1.94	0.49
1:0:1008:G:H2'	1:0:1009:C:H6	1.77	0.49
1:0:1313:U:HO2'	1:0:1314:A:P	2.35	0.49
1:0:718:A:C8	1:0:740:A:C2	3.00	0.49
1:0:1921:A:C2'	1:0:1922:U:H4'	2.37	0.49
1:0:712:A:H2'	1:0:713:G:O4'	2.12	0.49
1:0:2817:A:O2'	1:0:2818:G:H5'	2.12	0.49
1:0:2415:G:N3	1:0:2577:A:H2	2.10	0.49
1:0:1389:C:C5	1:0:1390:G:C5	2.99	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:172:A:N1	1:0:178:C:N3	2.59	0.49
1:0:2145:A:H1'	1:0:2156:A:N1	2.28	0.49
1:0:932:G:H2'	1:0:933:G:C8	2.47	0.49
1:0:989:G:O4'	1:0:1012:A:H2	1.94	0.49
1:0:602:C:H2'	1:0:603:C:H6	1.76	0.49
1:0:567:G:H2'	1:0:568:G:H8	1.76	0.49
1:0:1569:A:C2	1:0:1571:G:C8	3.00	0.49
2:R:11:VAL:C	2:R:12:ILE:HG13	2.33	0.49
1:0:2588:U:H3'	1:0:2589:C:H5'	1.95	0.49
1:0:188:G:H2'	1:0:189:A:H8	1.78	0.49
1:0:1389:C:H2'	1:0:1390:G:O4'	2.12	0.49
1:0:311:A:C5	1:0:345:U:H4'	2.47	0.49
1:0:614:G:H22	1:0:634:G:N2	2.06	0.49
1:0:2529:G:C6	1:0:2530:C:C4	3.00	0.49
1:0:1757:C:O2	1:0:1970:G:C2	2.65	0.49
5:1:25:ARG:HA	5:1:28:ASP:OD2	2.12	0.49
1:0:1651:U:C5'	1:0:1652:G:OP2	2.59	0.49
1:0:1515:U:H2'	1:0:1516:A:O4'	2.12	0.49
1:0:1286:U:C6	1:0:1986:G:H4'	2.47	0.49
1:0:1116:U:H2'	1:0:1117:G:H8	1.76	0.49
1:0:430:C:H2'	1:0:431:G:H8	1.77	0.49
1:0:2295:C:H2'	1:0:2296:U:O4'	2.12	0.49
1:0:2691:C:C3'	1:0:2691:C:H6	2.20	0.49
1:0:2698:G:O2'	1:0:2699:G:H5'	2.12	0.49
1:0:688:A:N3	1:0:2422:C:O2'	2.43	0.49
4:W:2:LYS:N	4:W:3:PRO:HD2	2.13	0.49
1:0:2526:U:C2	1:0:2545:A:N6	2.81	0.49
1:0:404:A:C6	1:0:405:C:C4	3.00	0.49
1:0:160:C:O2'	1:0:445:A:N3	2.42	0.49
1:0:568:G:H2'	1:0:569:C:H6	1.77	0.49
1:0:1698:C:H2'	1:0:1753:A:N3	2.28	0.49
1:0:516:G:C2'	1:0:517:A:OP2	2.60	0.49
1:0:2125:C:H3'	1:0:2126:U:C5'	2.42	0.49
2:R:53:ILE:HD13	2:R:53:ILE:C	2.33	0.49
1:0:1980:A:C2'	1:0:1981:A:H5'	2.43	0.49
1:0:497:C:O2	1:0:505:G:C2	2.65	0.49
2:R:25:TYR:CE2	2:R:88:ILE:HD13	2.47	0.49
1:0:1397:A:O5'	1:0:1397:A:H8	1.95	0.49
1:0:1831:G:O2'	1:0:1832:G:H5'	2.11	0.49
1:0:1349:A:P	2:R:63:LYS:O	2.70	0.49
1:0:1949:A:C2	1:0:2572:U:H1'	2.48	0.49
1:0:1949:A:N3	1:0:2572:U:H4'	2.27	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:687:G:C2	1:0:817:A:C2	3.01	0.49
1:0:2517:C:O2'	1:0:2518:C:H5'	2.12	0.49
1:0:1774:A:H8	1:0:1774:A:O5'	1.95	0.49
1:0:830:C:N4	1:0:831:G:C6	2.80	0.49
1:0:198:A:O4'	1:0:210:A:H1'	2.12	0.49
5:1:104:PHE:CD1	5:1:106:VAL:HG23	2.48	0.49
1:0:318:G:H5'	1:0:318:G:H8	1.78	0.49
1:0:2268:G:H1	1:0:2322:U:H3	1.59	0.49
1:0:2266:A:H61	1:0:2323:U:H1'	1.70	0.49
1:0:1381:G:C2	1:0:1382:G:C8	3.00	0.49
1:0:1221:C:C2	1:0:1222:G:C8	3.01	0.49
3:S:40:LEU:HD11	3:S:45:LYS:HB2	1.95	0.49
1:0:2275:U:P	1:0:2275:U:C6	3.05	0.49
1:0:218:A:OP1	1:0:218:A:H8	1.95	0.49
1:0:1216:G:C6	1:0:1217:U:C4	3.00	0.49
1:0:1670:G:H4'	1:0:1671:A:O5'	2.12	0.49
1:0:114:C:O2'	1:0:115:G:H5'	2.12	0.49
1:0:953:G:H1'	1:0:1203:A:C2	2.48	0.49
1:0:243:G:OP2	1:0:243:G:O4'	2.31	0.49
1:0:2791:C:H2'	1:0:2792:C:H6	1.78	0.49
1:0:2578:G:O2'	1:0:2579:A:H5'	2.12	0.49
1:0:436:A:OP1	1:0:437:G:H5''	2.11	0.49
1:0:1340:C:N4	1:0:1341:G:N1	2.61	0.49
1:0:2696:A:C2	1:0:2697:G:C5	3.00	0.49
1:0:688:A:C6	1:0:689:A:N6	2.81	0.49
1:0:811:G:N1	1:0:812:G:C5	2.81	0.49
1:0:2550:C:C4	1:0:2553:G:C8	3.01	0.49
2:R:6:ILE:N	2:R:7:LEU:HD13	2.28	0.49
2:R:8:GLN:HB3	2:R:28:TRP:HB2	1.94	0.49
1:0:830:C:O2'	1:0:852:U:H5''	2.11	0.49
1:0:2308:A:H2'	1:0:2309:G:O4'	2.13	0.49
1:0:442:A:C6	1:0:443:A:N6	2.81	0.49
3:S:22:VAL:HG22	3:S:82:ALA:HA	1.94	0.49
1:0:956:A:C6	1:0:2427:A:C2	3.01	0.49
1:0:2792:C:C2	1:0:2805:G:N2	2.81	0.49
1:0:2787:A:C2	1:0:2864:C:C2	3.00	0.49
3:S:17:LYS:HB2	3:S:20:ASP:CG	2.32	0.49
1:0:2438:A:N6	1:0:2473:G:C6	2.80	0.49
1:0:1416:A:H2'	1:0:1417:C:H6	1.77	0.49
1:0:332:C:H5''	1:0:333:A:OP2	2.13	0.49
1:0:306:G:H2'	1:0:307:C:H6	1.77	0.49
1:0:685:U:O2'	1:0:686:C:H5'	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:765:C:H5	1:0:1772:C:O2	1.96	0.49
1:0:2518:C:H2'	1:0:2519:C:H6	1.77	0.49
1:0:2549:G:C4	1:0:2550:C:C6	3.01	0.49
1:0:1438:G:C2	1:0:1591:U:C2	3.00	0.49
1:0:2825:A:C4	1:0:2826:C:C5	3.00	0.49
1:0:336:A:H2'	1:0:337:G:C8	2.47	0.49
1:0:1685:A:HO2'	1:0:1686:A:P	2.34	0.49
1:0:794:A:H5'	1:0:795:A:C8	2.47	0.49
1:0:1681:A:N1	1:0:2706:U:C6	2.80	0.49
1:0:526:C:H1'	1:0:1274:C:O2'	2.13	0.49
1:0:324:C:H2'	1:0:325:U:O4'	2.13	0.49
1:0:2292:C:C4	1:0:2293:G:N7	2.81	0.49
1:0:309:G:P	3:S:95:ARG:HE	2.36	0.49
1:0:636:G:H2'	1:0:637:G:H5'	1.94	0.49
1:0:1443:G:H2'	1:0:1444:C:C6	2.47	0.49
1:0:2320:G:H2'	1:0:2321:C:C6	2.48	0.49
1:0:1887:G:N2	1:0:1888:C:C2	2.81	0.49
1:0:856:A:H2'	1:0:857:U:O4'	2.13	0.49
1:0:1174:G:N2	1:0:1175:A:C4	2.81	0.49
1:0:1542:G:H1'	1:0:1561:A:N6	2.28	0.49
1:0:228:A:C5	1:0:229:G:H1'	2.47	0.49
1:0:1501:C:C2	1:0:1502:G:C8	3.00	0.49
1:0:2380:U:C2'	1:0:2381:A:H5'	2.43	0.49
1:0:1041:G:C6	1:0:1136:G:N2	2.81	0.49
1:0:1327:C:H2'	1:0:1328:C:C6	2.46	0.49
1:0:2873:G:O2'	1:0:2874:A:H5'	2.13	0.49
1:0:48:A:N6	1:0:154:U:H5	2.05	0.49
1:0:1474:A:H3'	1:0:1474:A:N3	2.27	0.49
2:R:7:LEU:CG	4:W:29:ARG:HH21	2.26	0.49
1:0:1004:A:H2'	1:0:1005:U:C5'	2.43	0.49
1:0:2064:U:H2'	1:0:2065:A:H8	1.78	0.49
1:0:546:A:N6	1:0:565:A:N6	2.61	0.49
1:0:751:G:H2'	1:0:752:G:C5'	2.41	0.49
1:0:958:G:H2'	1:0:959:C:H6	1.77	0.49
1:0:947:C:C2	1:0:948:C:C5	3.01	0.49
2:R:53:ILE:HG23	2:R:53:ILE:O	2.12	0.49
1:0:2205:C:O2'	1:0:2206:C:H5'	2.12	0.49
1:0:679:C:C2	1:0:680:U:C5	3.01	0.49
1:0:1692:C:H2'	1:0:1693:A:O5'	2.12	0.49
1:0:311:A:O2'	1:0:329:C:O2	2.31	0.48
1:0:940:G:C5	1:0:941:U:C6	3.01	0.48
1:0:2195:C:O2'	1:0:2196:U:H5'	2.12	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:4:TYR:CD2	4:W:23:LYS:CB	2.96	0.48
4:W:41:HIS:C	4:W:41:HIS:HD2	2.15	0.48
1:0:105:G:H5'	1:0:105:G:H8	1.78	0.48
1:0:952:A:H2'	1:0:953:G:O4'	2.13	0.48
1:0:1287:A:C6	1:0:1315:A:C2	3.01	0.48
2:R:10:PRO:CG	4:W:30:PHE:HA	2.36	0.48
1:0:2523:G:O2'	1:0:2524:G:H5'	2.12	0.48
1:0:1407:G:N2	1:0:1411:C:C6	2.81	0.48
1:0:2531:U:C2	1:0:2533:U:H5''	2.47	0.48
1:0:1463:A:C2	1:0:1479:G:C2	3.01	0.48
1:0:1685:A:H4'	1:0:1686:A:O5'	2.13	0.48
1:0:2627:G:C5	1:0:2652:G:C2	3.00	0.48
1:0:1956:G:H8	1:0:1956:G:H5'	1.78	0.48
1:0:228:A:H2'	1:0:229:G:O4'	2.13	0.48
4:W:43:VAL:HG12	4:W:47:ARG:CZ	2.43	0.48
1:0:1993:G:O2'	1:0:1994:U:H5'	2.13	0.48
1:0:829:C:C2	1:0:1206:G:N2	2.81	0.48
1:0:351:A:H2'	1:0:352:G:H5'	1.94	0.48
1:0:1910:A:H8	1:0:1910:A:O5'	1.96	0.48
1:0:113:C:N3	1:0:114:C:C5	2.81	0.48
1:0:2469:G:H8	1:0:2469:G:O5'	1.96	0.48
2:R:29:VAL:HG23	2:R:30:SER:O	2.14	0.48
2:R:28:TRP:CE3	2:R:75:ARG:HB2	2.48	0.48
2:R:7:LEU:HD23	4:W:29:ARG:HH21	1.78	0.48
1:0:982:C:C2'	1:0:983:G:H5'	2.43	0.48
1:0:718:A:H61	1:0:739:G:H1'	1.78	0.48
1:0:2532:G:H2'	1:0:2533:U:O4'	2.13	0.48
1:0:2823:G:HO2'	1:0:2824:C:P	2.36	0.48
1:0:336:A:H2'	1:0:337:G:H8	1.79	0.48
1:0:2272:A:C6	1:0:2273:C:C4	3.01	0.48
1:0:2379:G:O2'	1:0:2380:U:H5'	2.12	0.48
1:0:1261:G:O2'	1:0:1262:U:P	2.70	0.48
1:0:2849:C:O5'	1:0:2849:C:H6	1.95	0.48
2:R:91:LEU:HD22	2:R:91:LEU:H	1.78	0.48
1:0:145:C:C2	1:0:153:A:C2	3.00	0.48
1:0:764:A:N7	1:0:802:A:C5	2.81	0.48
1:0:2039:G:N3	1:0:2039:G:H2'	2.27	0.48
1:0:2063:A:H2'	1:0:2064:U:C6	2.48	0.48
1:0:2359:U:H2'	1:0:2360:C:C6	2.48	0.48
1:0:1829:C:H4'	1:0:1911:A:H1'	1.95	0.48
1:0:754:G:H2'	1:0:755:C:O5'	2.14	0.48
1:0:3:U:H2'	1:0:4:C:H6	1.71	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1132:C:H2'	1:0:1133:G:O4'	2.14	0.48
1:0:574:C:H4'	1:0:1266:G:O6	2.13	0.48
1:0:2834:A:O2'	1:0:2835:A:H5'	2.13	0.48
1:0:746:G:C8	1:0:774:A:C6	3.01	0.48
1:0:1419:G:O2'	1:0:1420:A:H5'	2.12	0.48
1:0:839:U:C2	1:0:841:G:H1'	2.47	0.48
1:0:2210:C:C2	1:0:2211:U:C6	3.02	0.48
1:0:2559:U:H2'	1:0:2560:G:H5'	1.95	0.48
1:0:836:G:H2'	1:0:837:U:H6	1.78	0.48
1:0:2729:A:N6	1:0:2730:A:N7	2.60	0.48
1:0:2625:U:H6	1:0:2625:U:O5'	1.96	0.48
1:0:344:G:C5	1:0:345:U:C5	3.01	0.48
1:0:590:C:H2'	1:0:591:G:C8	2.49	0.48
1:0:2106:G:H2'	1:0:2107:G:C5'	2.25	0.48
1:0:1007:A:C6	1:0:1171:A:C2	3.01	0.48
1:0:317:U:H3'	1:0:318:G:C5'	2.44	0.48
1:0:1514:C:H4'	1:0:1592:U:O2'	2.12	0.48
1:0:754:G:C6	1:0:755:C:N4	2.82	0.48
1:0:838:A:H2'	1:0:839:U:C6	2.48	0.48
1:0:1469:U:O5'	1:0:1470:G:OP2	2.30	0.48
1:0:2355:A:H8	1:0:2355:A:OP1	1.97	0.48
1:0:2845:C:C4	1:0:2846:G:N7	2.81	0.48
2:R:54:SER:O	2:R:78:ALA:HA	2.14	0.48
1:0:344:G:C4	1:0:345:U:C6	3.00	0.48
3:S:93:ARG:HG2	3:S:93:ARG:O	2.12	0.48
1:0:2696:A:O2'	1:0:2697:G:H5'	2.13	0.48
4:W:24:GLU:OE2	4:W:42:ARG:NH2	2.47	0.48
1:0:83:A:H8	1:0:83:A:P	2.36	0.48
1:0:2547:C:C2	1:0:2548:G:C8	3.01	0.48
1:0:1476:G:C2	1:0:1477:C:C2	3.01	0.48
2:R:59:PRO:HA	2:R:73:ASN:O	2.14	0.48
1:0:613:A:H61	1:0:635:C:H42	1.62	0.48
1:0:1313:U:O2'	1:0:1314:A:P	2.71	0.48
1:0:2770:A:C8	1:0:2770:A:O5'	2.66	0.48
1:0:961:G:H2'	1:0:962:C:H6	1.77	0.48
1:0:2738:A:H2'	1:0:2739:G:H5'	1.96	0.48
1:0:1933:G:H2'	1:0:1934:U:H6	1.78	0.48
3:S:40:LEU:HD12	3:S:40:LEU:N	2.29	0.48
1:0:657:A:C2	1:0:658:G:C4	3.01	0.48
1:0:2627:G:H2'	1:0:2628:C:C6	2.48	0.48
1:0:1460:G:O2'	1:0:1461:C:H5'	2.13	0.48
1:0:2293:G:H2'	1:0:2294:U:C6	2.49	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2497:A:OP2	1:0:2498:U:C4	2.67	0.48
1:0:2585:C:H2'	1:0:2586:G:O4'	2.13	0.48
1:0:405:C:C4	1:0:406:G:N7	2.82	0.48
1:0:1077:U:C2'	1:0:1078:A:H5''	2.44	0.48
1:0:1683:G:H2'	1:0:1684:G:H5'	1.92	0.48
1:0:2841:U:O2'	1:0:2842:C:P	2.71	0.48
1:0:1434:U:C2	1:0:1435:G:C8	3.01	0.48
1:0:2264:C:C4'	1:0:2267:A:H62	2.27	0.48
1:0:2284:U:H2'	1:0:2285:U:H5''	1.95	0.48
1:0:1523:A:O5'	1:0:1523:A:H8	1.97	0.48
1:0:115:G:C6	1:0:117:A:N6	2.82	0.48
1:0:1295:U:C5	1:0:1296:G:N7	2.82	0.48
1:0:2197:U:C4	1:0:2198:U:O4	2.67	0.48
1:0:928:G:H8	1:0:928:G:O5'	1.97	0.48
1:0:83:A:OP2	1:0:83:A:C8	2.66	0.48
1:0:1763:G:H22	1:0:1765:C:H5''	1.78	0.48
1:0:1765:C:H6	1:0:1765:C:O5'	1.97	0.48
1:0:2637:C:H6	1:0:2637:C:O5'	1.96	0.48
1:0:1250:A:O2'	1:0:1251:G:C4'	2.61	0.48
1:0:1914:U:H3	1:0:1952:A:N6	2.00	0.48
1:0:976:C:C1'	1:0:2252:A:C2	2.97	0.48
1:0:1174:G:N2	1:0:1175:A:C5	2.81	0.48
1:0:1558:C:O2'	1:0:1559:G:H5'	2.13	0.48
1:0:1080:A:H4'	1:0:1107:A:HO2'	1.78	0.48
1:0:2274:C:C2'	1:0:2275:U:H5'	2.43	0.48
1:0:538:A:O5'	1:0:538:A:C8	2.66	0.48
1:0:477:A:H2'	1:0:478:G:H5'	1.94	0.48
1:0:162:C:H2'	1:0:163:A:O4'	2.12	0.48
1:0:116:A:H2'	1:0:118:U:C5	2.49	0.48
1:0:803:C:H5'	1:0:804:C:P	2.54	0.48
1:0:93:A:HO2'	1:0:94:C:H5'	1.79	0.48
1:0:2565:C:H5	1:0:2587:G:N2	2.12	0.48
1:0:1198:C:OP1	1:0:1199:U:C1'	2.62	0.48
1:0:984:A:O2'	1:0:1201:G:O2'	2.27	0.48
1:0:568:G:H2'	1:0:569:C:C6	2.49	0.48
1:0:673:G:H8	1:0:673:G:O5'	1.96	0.48
1:0:692:C:O2'	1:0:693:A:C5'	2.61	0.48
1:0:1742:G:O2'	1:0:1743:C:H5'	2.13	0.48
1:0:2603:G:N2	1:0:2604:G:C1'	2.77	0.48
1:0:668:A:C2'	1:0:669:G:O4'	2.60	0.48
1:0:1825:C:H2'	1:0:1826:U:C5'	2.44	0.48
1:0:2848:A:H5''	1:0:2849:C:OP2	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2061:C:O4'	1:0:2413:A:H1'	2.13	0.48
1:0:245:C:H2'	1:0:245:C:O2	2.13	0.48
1:0:2873:G:H2'	1:0:2874:A:O4'	2.14	0.48
1:0:421:G:C5	1:0:422:C:C5	3.02	0.48
1:0:359:G:N2	1:0:360:A:H1'	2.29	0.48
1:0:330:C:H2'	1:0:331:U:H5'	1.95	0.48
1:0:109:A:C2'	1:0:110:U:H5''	2.44	0.48
1:0:2695:C:H2'	1:0:2696:A:C8	2.34	0.48
1:0:1949:A:H1'	1:0:2572:U:C4'	2.40	0.48
1:0:1949:A:H1'	1:0:2572:U:C5'	2.44	0.48
1:0:2196:U:C2'	1:0:2197:U:H5'	2.43	0.48
1:0:1764:A:N7	1:0:1782:A:H2	2.10	0.48
1:0:1003:C:H2'	1:0:1004:A:H8	1.78	0.48
1:0:543:G:H2'	1:0:544:U:H6	1.73	0.48
1:0:1610:A:C4	1:0:1611:U:C5	3.02	0.48
1:0:2735:C:O2	1:0:2735:C:H2'	2.13	0.48
1:0:2834:A:H62	1:0:2835:A:N6	2.12	0.48
1:0:1588:A:C4	1:0:1589:G:C8	3.02	0.48
1:0:1541:G:H2'	1:0:1542:G:C5'	2.43	0.48
1:0:224:G:H4'	1:0:399:G:C6	2.48	0.48
1:0:37:C:O2	1:0:456:C:O2	2.32	0.48
1:0:1491:C:H2'	1:0:1492:A:H8	1.78	0.48
1:0:2401:A:H2'	1:0:2403:C:C5	2.49	0.48
1:0:2409:A:H2'	1:0:2410:U:H5'	1.96	0.48
1:0:1972:G:O2'	1:0:1973:C:H5'	2.14	0.48
1:0:2585:C:H2'	1:0:2586:G:C5'	2.44	0.48
2:R:8:GLN:HG2	2:R:75:ARG:HB3	1.95	0.48
1:0:1309:G:C2	1:0:1662:G:C4	3.02	0.48
3:S:22:VAL:HG13	3:S:82:ALA:HA	1.96	0.48
1:0:2020:G:H2'	1:0:2021:G:C8	2.49	0.48
1:0:2262:C:N3	1:0:2368:G:C2	2.82	0.48
1:0:2825:A:C6	1:0:2826:C:C4	3.01	0.48
1:0:841:G:H2'	1:0:842:A:C8	2.49	0.48
1:0:2626:U:O2'	1:0:2627:G:H5'	2.14	0.48
1:0:414:A:H2'	1:0:415:A:C8	2.49	0.48
1:0:1168:G:C6	1:0:1169:C:N4	2.82	0.48
1:0:1168:G:C6	1:0:1169:C:C4	3.02	0.48
1:0:2446:C:O5'	1:0:2446:C:H6	1.97	0.48
1:0:1859:A:H2'	1:0:1860:A:H8	1.79	0.48
1:0:2176:U:O2'	1:0:2177:U:H5'	2.14	0.48
1:0:2177:U:O2'	1:0:2178:U:H5'	2.13	0.48
1:0:1352:G:H21	1:0:1619:A:H1'	1.78	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1313:U:O2	1:0:1642:G:C6	2.67	0.47
1:0:161:U:H4'	1:0:194:G:C2	2.48	0.47
1:0:1250:A:HO2'	1:0:1251:G:C4'	2.27	0.47
1:0:945:G:C5	1:0:946:U:C5	3.01	0.47
1:0:209:G:N2	1:0:433:G:OP1	2.47	0.47
1:0:2204:A:C2'	1:0:2205:C:OP2	2.62	0.47
1:0:1681:A:N6	1:0:2706:U:C5	2.82	0.47
1:0:1469:U:H6	1:0:1470:G:N7	2.12	0.47
1:0:326:A:N6	1:0:327:C:H42	2.12	0.47
1:0:310:A:OP1	3:S:93:ARG:HB2	2.13	0.47
1:0:57:G:OP1	2:R:74:ASP:OD1	2.32	0.47
1:0:2691:C:C2'	1:0:2692:A:N7	2.76	0.47
1:0:819:C:C2	1:0:820:U:C5	3.02	0.47
1:0:930:A:C5'	1:0:931:G:C8	2.97	0.47
1:0:1766:U:C3'	1:0:1766:U:C6	2.97	0.47
1:0:1770:U:O2	1:0:1774:A:C6	2.67	0.47
1:0:1821:A:N6	1:0:1960:A:N6	2.61	0.47
1:0:619:A:N6	1:0:629:C:H42	2.13	0.47
1:0:1246:G:C4	1:0:1247:U:C5	3.02	0.47
2:R:94:GLN:O	5:1:50:ARG:CZ	2.62	0.47
5:1:77:GLN:O	5:1:81:GLU:HG3	2.14	0.47
1:0:1411:C:O2'	1:0:1412:C:H5'	2.14	0.47
4:W:18:ILE:O	4:W:22:LYS:HE2	2.14	0.47
1:0:1964:A:H5''	1:0:1965:U:OP2	2.14	0.47
1:0:314:G:H2'	1:0:315:G:H8	1.78	0.47
1:0:1207:G:N2	1:0:1208:A:C4	2.82	0.47
1:0:765:C:C5	1:0:1772:C:O2	2.67	0.47
1:0:2498:U:OP2	1:0:2498:U:H6	1.96	0.47
1:0:1003:C:H2'	1:0:1004:A:C8	2.49	0.47
1:0:1230:C:O2'	1:0:1231:A:H5'	2.14	0.47
1:0:1247:U:H2'	1:0:1248:G:O4'	2.13	0.47
1:0:2320:G:C2	1:0:2321:C:C2	3.02	0.47
1:0:1918:G:N2	1:0:1947:G:C5	2.83	0.47
1:0:2614:A:H2'	1:0:2615:U:O5'	2.14	0.47
1:0:692:C:H2'	1:0:693:A:C8	2.49	0.47
1:0:1403:U:H3	1:0:1408:A:N6	2.12	0.47
1:0:2665:G:H2'	1:0:2666:U:C6	2.50	0.47
1:0:2652:G:N3	1:0:2653:A:C8	2.82	0.47
1:0:1218:C:H42	1:0:1255:A:N6	2.13	0.47
1:0:1262:U:C6	1:0:1262:U:H3'	2.49	0.47
1:0:1147:G:H2'	1:0:1148:G:H8	1.79	0.47
1:0:1215:A:N1	1:0:1257:U:O4	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1486:A:H2'	1:0:1487:C:C6	2.49	0.47
1:0:112:U:C2	1:0:113:C:C5	3.02	0.47
1:0:919:U:C2'	1:0:920:G:O5'	2.62	0.47
1:0:984:A:H1'	1:0:1202:U:C6	2.48	0.47
1:0:45:C:H2'	1:0:46:C:C6	2.49	0.47
1:0:1226:A:N9	1:0:1250:A:C2	2.82	0.47
1:0:1381:G:O2'	1:0:1382:G:H5'	2.14	0.47
1:0:841:G:H22	1:0:2226:A:C4'	2.27	0.47
1:0:2379:G:H2'	1:0:2380:U:O4'	2.15	0.47
1:0:847:C:O2'	1:0:848:A:H5'	2.14	0.47
1:0:929:A:C2	1:0:930:A:H1'	2.50	0.47
1:0:1011:A:N1	1:0:1166:A:C4	2.82	0.47
1:0:2043:A:N3	1:0:2481:G:C4	2.83	0.47
1:0:1141:U:N3	1:0:2008:C:OP1	2.42	0.47
1:0:1947:G:C6	1:0:1950:C:C5	3.03	0.47
1:0:1404:C:H1'	2:R:15:LYS:HD3	1.97	0.47
1:0:1970:G:N2	1:0:1971:C:C2	2.82	0.47
1:0:652:C:H42	1:0:657:A:H61	1.60	0.47
1:0:146:C:H2'	1:0:147:G:H8	1.74	0.47
1:0:1278:A:O2'	1:0:1279:G:O5'	2.28	0.47
1:0:2401:A:HO2'	1:0:2403:C:H6	1.61	0.47
1:0:67:G:C4	1:0:72:A:C2	3.03	0.47
1:0:1140:A:C2	1:0:2549:G:O4'	2.68	0.47
1:0:1779:C:N4	1:0:1780:A:N6	2.62	0.47
1:0:583:C:C6	1:0:2038:C:H5''	2.50	0.47
5:1:76:SER:HB3	5:1:80:ARG:CZ	2.44	0.47
1:0:854:G:N2	1:0:855:G:C4	2.83	0.47
1:0:1726:C:O2'	1:0:2834:A:N3	2.44	0.47
3:S:11:ASN:OD1	3:S:13:LYS:HD3	2.14	0.47
1:0:2383:C:N1	1:0:2393:G:N2	2.62	0.47
1:0:525:A:C8	1:0:526:C:C5	3.02	0.47
1:0:1091:C:H6	1:0:1091:C:O5'	1.97	0.47
1:0:421:G:O2'	1:0:422:C:H5'	2.15	0.47
1:0:310:A:C6	1:0:311:A:C2	3.03	0.47
1:0:67:G:N2	1:0:73:A:C4'	2.77	0.47
1:0:1625:A:C4	1:0:1632:A:N3	2.82	0.47
1:0:225:G:H5'	1:0:226:C:H5'	1.96	0.47
1:0:805:G:N7	1:0:2419:C:C1'	2.77	0.47
1:0:2200:G:C4	1:0:2201:G:C8	3.03	0.47
1:0:742:G:C5	1:0:1766:U:O2	2.68	0.47
1:0:1001:A:N6	1:0:1200:G:H1'	2.29	0.47
1:0:682:G:H5''	1:0:683:A:OP2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:406:G:C6	1:0:407:A:N7	2.82	0.47
1:0:2058:U:H3'	1:0:2217:G:N1	2.29	0.47
1:0:1373:G:N7	1:0:1374:G:C8	2.82	0.47
1:0:468:A:N3	1:0:470:U:C5	2.83	0.47
1:0:1359:G:H8	1:0:1359:G:H5'	1.79	0.47
1:0:466:A:H4'	1:0:467:U:OP2	2.14	0.47
1:0:1175:A:O2'	1:0:1176:U:H5'	2.15	0.47
1:0:1482:U:N1	1:0:1562:G:N2	2.63	0.47
1:0:1332:G:C6	1:0:1333:G:N1	2.82	0.47
1:0:2665:G:C2	1:0:2704:U:O2	2.68	0.47
1:0:838:A:O2'	1:0:839:U:H5'	2.15	0.47
1:0:644:A:H2'	1:0:645:G:C5'	2.45	0.47
1:0:349:G:P	3:S:13:LYS:HZ1	2.34	0.47
1:0:246:C:N3	1:0:247:A:N7	2.62	0.47
1:0:16:G:O2'	1:0:17:G:H5'	2.14	0.47
1:0:13:A:C2	1:0:535:U:H2'	2.49	0.47
1:0:2209:G:C4	1:0:2210:C:H5	2.32	0.47
1:0:1994:U:H2'	1:0:1995:G:C5'	2.45	0.47
1:0:372:U:H6	1:0:372:U:H3'	1.80	0.47
1:0:200:A:C4'	1:0:200:A:OP2	2.63	0.47
1:0:2429:A:H2'	1:0:2429:A:N3	2.30	0.47
1:0:2537:C:C4	1:0:2538:C:C4	3.03	0.47
4:W:9:LEU:N	4:W:9:LEU:HD23	2.30	0.47
1:0:67:G:H2'	1:0:68:C:C6	2.50	0.47
1:0:1629:G:C2	1:0:1633:C:C2	3.03	0.47
1:0:2469:G:C5'	1:0:2470:U:OP1	2.59	0.47
1:0:475:U:C2	1:0:801:A:N6	2.82	0.47
1:0:1177:U:C2	1:0:1197:U:O2	2.67	0.47
1:0:2364:C:O2'	1:0:2365:U:H5'	2.15	0.47
1:0:600:G:H3'	1:0:601:A:H5''	1.96	0.47
1:0:1313:U:H5'	1:0:1314:A:N3	2.30	0.47
3:S:87:GLU:O	3:S:88:THR:CG2	2.62	0.47
1:0:366:U:H2'	1:0:367:G:H8	1.79	0.47
1:0:1446:U:H2'	1:0:1447:U:C6	2.50	0.47
1:0:1595:A:H2'	1:0:1596:A:C8	2.50	0.47
1:0:1725:C:O2	1:0:1742:G:C2	2.68	0.47
1:0:1173:G:O2'	1:0:1174:G:H5'	2.15	0.47
1:0:2789:U:H2'	1:0:2790:C:H6	1.79	0.47
2:R:11:VAL:CG2	2:R:26:SER:O	2.63	0.47
1:0:1428:G:O3'	1:0:1429:A:H8	1.97	0.47
1:0:2802:C:H2'	1:0:2803:C:H6	1.79	0.47
1:0:308:C:H2'	1:0:309:G:O4'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1791:C:H1'	1:0:1793:A:H5'	1.97	0.47
1:0:2198:U:C4	1:0:2199:C:C6	3.02	0.47
1:0:2451:G:C2	1:0:2454:C:N3	2.83	0.47
1:0:404:A:C2	1:0:424:G:N2	2.83	0.47
2:R:17:TYR:OH	2:R:94:GLN:O	2.29	0.47
1:0:755:C:H2'	1:0:756:C:C6	2.49	0.47
1:0:322:A:OP1	1:0:322:A:H8	1.98	0.47
1:0:1741:G:N1	1:0:1742:G:C5	2.83	0.47
1:0:2832:G:C4	1:0:2834:A:OP2	2.68	0.47
1:0:669:G:H2'	1:0:670:U:O4'	2.15	0.47
1:0:2271:C:C2'	1:0:2272:A:O5'	2.63	0.47
1:0:1970:G:C2	1:0:1971:C:C2	3.03	0.47
1:0:2437:G:O2'	1:0:2438:A:N7	2.47	0.47
1:0:2712:G:H5'	1:0:2713:A:C8	2.50	0.47
1:0:107:G:C6	1:0:108:G:C5	3.03	0.47
2:R:63:LYS:HZ3	2:R:63:LYS:HB2	1.80	0.47
1:0:1745:C:H2'	1:0:1746:A:O4'	2.15	0.47
1:0:174:A:N6	1:0:2409:A:N7	2.61	0.47
1:0:803:C:P	1:0:1772:C:N4	2.88	0.47
1:0:2108:G:H5''	1:0:2109:A:H5'	1.97	0.47
1:0:930:A:H3'	1:0:931:G:H8	1.78	0.47
1:0:986:A:C2	1:0:1001:A:C8	3.03	0.47
3:S:23:ILE:HD12	3:S:23:ILE:C	2.36	0.47
1:0:516:G:O2'	1:0:517:A:C8	2.41	0.47
1:0:1514:C:H4'	1:0:1593:C:H5'	1.95	0.47
1:0:2327:U:H2'	1:0:2328:G:H8	1.79	0.47
1:0:865:A:C4	1:0:866:U:C5	3.03	0.47
1:0:2708:U:C2	1:0:2709:C:C5	3.03	0.47
3:S:40:LEU:CD1	3:S:45:LYS:HB2	2.45	0.47
1:0:2560:G:N1	1:0:2589:C:C5	2.82	0.47
1:0:2081:U:H2'	1:0:2082:C:C6	2.50	0.47
1:0:1520:G:H2'	1:0:1521:U:H6	1.80	0.47
1:0:2077:G:H8	1:0:2077:G:O5'	1.98	0.47
1:0:882:C:C4	1:0:883:A:N7	2.83	0.46
1:0:2695:C:O2'	1:0:2696:A:H5'	2.14	0.46
1:0:812:G:C6	1:0:813:A:N6	2.83	0.46
1:0:80:A:O4'	1:0:305:A:H2	1.97	0.46
1:0:1961:A:O2'	1:0:1962:C:H5'	2.15	0.46
2:R:28:TRP:HA	2:R:77:LYS:HA	1.97	0.46
1:0:998:C:C2'	1:0:999:A:O5'	2.64	0.46
1:0:596:C:O2	1:0:684:C:O4'	2.33	0.46
1:0:2484:G:O2'	1:0:2485:U:C5'	2.62	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2217:G:C5'	1:0:2218:G:N7	2.78	0.46
1:0:1445:A:N1	1:0:1446:U:C2	2.83	0.46
1:0:1380:C:C2'	1:0:1381:G:H5'	2.39	0.46
1:0:29:U:O2'	1:0:30:G:H5'	2.15	0.46
1:0:2736:U:C2'	1:0:2737:A:H5'	2.44	0.46
1:0:2720:A:C2	1:0:2744:A:C4	3.02	0.46
1:0:2602:G:C2	1:0:2603:G:C8	3.03	0.46
1:0:2841:U:O2	1:0:2843:A:H1'	2.15	0.46
1:0:1450:G:H2'	1:0:1451:C:C6	2.50	0.46
1:0:1105:U:C2	1:0:1107:A:H5''	2.50	0.46
1:0:1965:U:H6	1:0:1965:U:O5'	1.99	0.46
1:0:229:G:H2'	1:0:230:C:H6	1.80	0.46
1:0:922:A:C2	1:0:923:A:H2	2.33	0.46
1:0:1692:C:C2'	1:0:1693:A:O5'	2.63	0.46
1:0:472:C:O2'	1:0:473:C:H5'	2.15	0.46
1:0:422:C:O2'	1:0:423:G:H5'	2.15	0.46
1:0:388:G:H2'	1:0:389:G:H8	1.79	0.46
1:0:934:G:O2'	1:0:935:C:H5'	2.15	0.46
1:0:179:U:O2'	1:0:180:C:H5'	2.15	0.46
1:0:1153:A:C4	1:0:1155:G:N7	2.83	0.46
1:0:931:G:C2'	1:0:932:G:H5'	2.44	0.46
2:R:33:ALA:N	2:R:76:LYS:CE	2.68	0.46
1:0:1196:G:H2'	1:0:1197:U:O4'	2.15	0.46
1:0:2780:A:H2'	1:0:2781:G:C8	2.49	0.46
1:0:2405:A:OP1	1:0:2405:A:C8	2.68	0.46
1:0:1358:C:C3'	1:0:1359:G:H5''	2.45	0.46
1:0:1725:C:N4	1:0:1726:C:H41	2.14	0.46
1:0:2831:A:C5	1:0:2837:G:N2	2.83	0.46
1:0:1933:G:C8	1:0:1934:U:C5	3.01	0.46
1:0:641:G:N2	1:0:644:A:OP2	2.48	0.46
1:0:1228:G:H3'	1:0:1228:G:C8	2.50	0.46
1:0:224:G:C2	1:0:229:G:C6	3.04	0.46
1:0:888:G:N2	1:0:915:C:C2	2.83	0.46
1:0:888:G:H2'	1:0:889:C:O4'	2.16	0.46
1:0:828:C:H2'	1:0:829:C:C6	2.49	0.46
1:0:1098:G:C6	1:0:1114:A:C2	3.03	0.46
1:0:2810:A:C2	1:0:2853:U:OP2	2.69	0.46
1:0:68:C:C5	1:0:72:A:C2	3.04	0.46
1:0:1636:G:H2'	1:0:1637:U:H6	1.78	0.46
1:0:982:C:OP2	1:0:985:G:C2	2.69	0.46
1:0:2241:U:H4'	1:0:2307:A:C2	2.50	0.46
1:0:1425:G:C2	1:0:1607:A:C2	3.03	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:R:42:ILE:HG12	2:R:80:VAL:HG11	1.97	0.46
1:0:1246:G:C5	1:0:1247:U:C5	3.03	0.46
1:0:1395:A:C6	1:0:1396:C:N3	2.82	0.46
1:0:2324:G:C2	1:0:2360:C:H2'	2.50	0.46
1:0:2418:A:N1	1:0:2564:U:C4'	2.71	0.46
1:0:2023:C:H2'	1:0:2024:U:C6	2.50	0.46
1:0:537:C:O2'	1:0:2025:A:N1	2.48	0.46
1:0:468:A:HO2'	1:0:469:G:H4'	1.80	0.46
1:0:2737:A:O2'	1:0:2738:A:H5'	2.14	0.46
1:0:2838:U:N3	1:0:2839:G:N7	2.64	0.46
1:0:2824:C:O2	1:0:2841:U:O2'	2.33	0.46
1:0:1464:A:C2	1:0:1478:U:O2	2.68	0.46
1:0:971:A:C3'	1:0:972:C:H5''	2.44	0.46
1:0:2371:A:C4	1:0:2372:A:C8	3.04	0.46
1:0:2674:C:H2'	1:0:2675:U:H6	1.79	0.46
1:0:1785:A:H4'	1:0:1883:A:N1	2.30	0.46
1:0:873:U:H6	1:0:873:U:H3'	1.80	0.46
1:0:2451:G:H2'	1:0:2454:C:H42	1.80	0.46
4:W:29:ARG:HB2	4:W:29:ARG:NH1	2.31	0.46
1:0:2217:G:H5'	1:0:2218:G:N7	2.30	0.46
1:0:491:A:H2'	1:0:492:G:OP1	2.15	0.46
1:0:516:G:H2'	1:0:517:A:OP2	2.16	0.46
1:0:1888:C:O2'	1:0:1912:G:C2'	2.63	0.46
1:0:2006:G:C2'	1:0:2007:G:O5'	2.64	0.46
1:0:2433:G:O2'	1:0:2434:G:H5'	2.16	0.46
1:0:958:G:H2'	1:0:959:C:C6	2.50	0.46
1:0:1850:G:O6	1:0:1867:A:H2'	2.16	0.46
1:0:2823:G:O2'	1:0:2824:C:OP2	2.31	0.46
1:0:622:U:C2'	1:0:623:G:H5'	2.46	0.46
1:0:2623:A:H2'	1:0:2624:G:O4'	2.15	0.46
1:0:720:A:H2'	1:0:721:C:C6	2.49	0.46
1:0:319:G:C6	1:0:320:A:C6	3.04	0.46
1:0:818:G:H5'	1:0:819:C:H5	1.80	0.46
5:1:55:ASN:H	5:1:55:ASN:ND2	1.94	0.46
1:0:698:A:C5	1:0:787:A:C2	3.04	0.46
1:0:796:A:C4	1:0:798:G:H1'	2.51	0.46
1:0:830:C:C4	1:0:831:G:C5	3.03	0.46
1:0:600:G:N1	1:0:602:C:N3	2.63	0.46
1:0:394:U:O2'	1:0:395:G:H5'	2.14	0.46
3:S:23:ILE:HD13	3:S:25:LEU:HD12	1.97	0.46
4:W:30:PHE:CD1	4:W:30:PHE:N	2.83	0.46
1:0:318:G:H21	1:0:341:A:H62	1.63	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1364:C:N3	1:0:1394:G:C6	2.84	0.46
1:0:1540:C:H2'	1:0:1541:G:O5'	2.16	0.46
1:0:1936:A:C2	1:0:2529:G:O4'	2.69	0.46
1:0:2229:G:C8	1:0:2475:C:H5''	2.50	0.46
1:0:43:A:C2	1:0:44:G:C4	3.03	0.46
1:0:2815:C:H2'	1:0:2816:C:C6	2.50	0.46
1:0:927:C:H2'	1:0:928:G:C8	2.51	0.46
1:0:627:A:C2	1:0:628:A:C6	3.03	0.46
1:0:78:C:O2	1:0:357:A:H2	1.97	0.46
1:0:994:A:N6	1:0:995:A:C2	2.66	0.46
1:0:318:G:H21	1:0:341:A:N6	2.13	0.46
1:0:2598:C:O2'	1:0:2599:U:C5'	2.59	0.46
1:0:2758:A:O2'	1:0:2759:U:OP1	2.31	0.46
1:0:1076:U:C3'	1:0:1077:U:C5'	2.88	0.46
1:0:2238:G:C5	1:0:2239:C:C5	3.03	0.46
1:0:2262:C:O2'	1:0:2263:C:H5'	2.16	0.46
1:0:2825:A:H2'	1:0:2826:C:H6	1.80	0.46
1:0:2458:U:C4	1:0:2459:C:C5	3.03	0.46
1:0:679:C:H2'	1:0:680:U:C6	2.51	0.46
1:0:2560:G:O6	1:0:2589:C:C2	2.69	0.46
1:0:736:G:H2'	1:0:737:C:C6	2.49	0.46
1:0:1044:U:C6	1:0:2730:A:C2	3.02	0.46
1:0:2814:G:N2	1:0:2815:C:H1'	2.31	0.46
1:0:1598:C:H2'	1:0:1599:G:O4'	2.15	0.46
1:0:2230:G:H2'	1:0:2230:G:N3	2.30	0.46
1:0:819:C:H2'	1:0:820:U:H6	1.81	0.46
1:0:874:A:C2	1:0:929:A:C2	3.04	0.46
1:0:1782:A:H61	1:0:1820:G:H2'	1.81	0.46
1:0:599:A:C2	1:0:681:A:C2	3.03	0.46
1:0:1735:G:C6	1:0:1736:C:C4	3.04	0.46
1:0:27:G:H1'	1:0:523:A:N6	2.31	0.46
1:0:1440:G:C6	1:0:1441:A:N7	2.84	0.46
1:0:2226:A:H2'	1:0:2227:C:C6	2.51	0.46
1:0:974:U:O2'	1:0:2229:G:N2	2.47	0.46
1:0:2203:G:O2'	1:0:2204:A:C1'	2.64	0.46
1:0:2751:C:H2'	1:0:2752:C:H6	1.76	0.46
1:0:155:G:H2'	1:0:156:G:O4'	2.15	0.46
1:0:1054:C:O2'	1:0:1055:A:H4'	2.16	0.46
1:0:149:A:H2'	1:0:150:A:C8	2.51	0.46
2:R:62:ARG:NH1	2:R:62:ARG:CB	2.64	0.46
1:0:171:G:C2'	1:0:172:A:H5'	2.46	0.46
1:0:629:C:O2'	1:0:630:G:H5'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:1:90:THR:O	5:1:106:VAL:HG13	2.15	0.46
1:0:1391:A:C2'	1:0:1392:U:C6	2.99	0.46
1:0:1364:C:C2	1:0:1394:G:C2	3.03	0.46
1:0:2268:G:H5'	1:0:2363:G:O2'	2.16	0.46
1:0:2009:U:H3	1:0:2020:G:H1	1.63	0.46
1:0:2597:G:O2'	1:0:2598:C:H5'	2.15	0.46
1:0:955:G:C3'	1:0:955:G:C8	2.98	0.46
1:0:2787:A:O2'	1:0:2788:C:C5'	2.63	0.46
1:0:2791:C:O2	1:0:2858:A:O2'	2.34	0.46
1:0:1825:C:H2'	1:0:1826:U:H5'	1.98	0.46
1:0:1095:A:N3	1:0:1095:A:H3'	2.31	0.46
1:0:1290:A:H2'	1:0:1291:G:C8	2.51	0.46
1:0:1583:A:H5'	1:0:1584:G:N2	2.30	0.46
1:0:1831:G:C5	1:0:1832:G:C8	3.04	0.46
1:0:2681:A:C6	1:0:2682:C:C4	3.04	0.46
3:S:64:ASN:ND2	5:1:68:ASP:HB3	2.30	0.46
1:0:2608:A:N7	1:0:2869:U:C4	2.84	0.46
3:S:93:ARG:CG	3:S:93:ARG:O	2.62	0.46
1:0:48:A:H2	1:0:118:U:N3	2.03	0.46
1:0:1766:U:C5	1:0:1767:G:C8	3.04	0.46
1:0:1770:U:C5	1:0:1775:A:N7	2.84	0.46
1:0:367:G:C3'	1:0:368:A:H5''	2.46	0.46
1:0:1741:G:C2	1:0:1742:G:C8	3.03	0.46
1:0:2836:U:H2'	1:0:2837:G:O4'	2.15	0.46
1:0:745:C:O2'	1:0:746:G:H5'	2.16	0.46
3:S:46:VAL:H	3:S:76:LEU:H	1.64	0.46
4:W:7:ARG:C	4:W:7:ARG:HD2	2.36	0.46
1:0:2333:A:N6	1:0:2343:C:N4	2.63	0.46
1:0:1292:A:C2'	1:0:1293:A:H5'	2.46	0.46
1:0:1807:A:H1'	1:0:1809:G:C4	2.51	0.46
4:W:2:LYS:N	4:W:3:PRO:CD	2.69	0.46
1:0:2155:U:H2'	1:0:2156:A:H5'	1.99	0.46
1:0:801:A:OP2	1:0:801:A:H8	1.98	0.46
1:0:239:A:C2	1:0:240:U:O2	2.69	0.46
1:0:198:A:HO2'	1:0:199:A:P	2.39	0.46
1:0:199:A:N1	1:0:201:G:N3	2.63	0.46
1:0:2386:G:C6	1:0:2387:U:O4	2.68	0.46
3:S:85:ASP:C	3:S:87:GLU:H	2.19	0.46
1:0:1249:G:O2'	1:0:1250:A:P	2.73	0.46
1:0:753:U:C4	1:0:771:C:O2	2.68	0.46
1:0:2068:C:H1'	1:0:2214:G:N2	2.31	0.46
1:0:2559:U:C2'	1:0:2560:G:H5'	2.46	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1931:G:C4	1:0:1932:G:C8	3.04	0.46
1:0:2429:A:C2	1:0:2430:A:C4	3.04	0.46
1:0:1064:C:C4	1:0:1065:A:N7	2.84	0.46
1:0:764:A:N7	1:0:802:A:C6	2.84	0.46
1:0:70:A:C2'	1:0:71:A:OP2	2.64	0.45
1:0:2673:G:C2	1:0:2696:A:C4	3.04	0.45
1:0:2471:U:O2	1:0:2471:U:H2'	2.17	0.45
2:R:6:ILE:HG22	2:R:29:VAL:HB	1.98	0.45
1:0:1200:G:H2'	1:0:1201:G:H5'	1.98	0.45
1:0:1659:G:C4	1:0:1660:G:C8	3.04	0.45
1:0:441:A:C2'	1:0:442:A:C5'	2.94	0.45
1:0:1439:G:H2'	1:0:1440:G:C8	2.51	0.45
1:0:2325:A:HO2'	1:0:2326:C:P	2.39	0.45
1:0:1902:A:H3'	1:0:1903:C:C5'	2.45	0.45
1:0:2261:G:N1	1:0:2404:A:C2	2.84	0.45
1:0:322:A:H1'	1:0:343:A:C4	2.51	0.45
5:1:69:ARG:HG2	5:1:69:ARG:NH2	2.30	0.45
1:0:1453:A:N6	1:0:1568:A:O2'	2.49	0.45
1:0:2395:C:C2'	1:0:2396:C:H5'	2.47	0.45
1:0:1788:C:C4	1:0:1789:U:C5	3.04	0.45
1:0:2797:G:H2'	1:0:2798:A:C5'	2.46	0.45
1:0:2048:C:C2	1:0:2425:G:N2	2.85	0.45
1:0:2293:G:H2'	1:0:2294:U:H6	1.79	0.45
1:0:2293:G:O2'	1:0:2294:U:H5'	2.16	0.45
1:0:2869:U:H2'	1:0:2870:C:C6	2.50	0.45
1:0:118:U:C2	1:0:143:A:C6	3.03	0.45
1:0:2464:G:O2'	1:0:2465:G:H5'	2.15	0.45
1:0:1754:G:H4'	1:0:1754:G:OP1	2.16	0.45
2:R:9:ALA:O	2:R:28:TRP:CD1	2.68	0.45
2:R:8:GLN:HB3	2:R:28:TRP:CB	2.45	0.45
3:S:23:ILE:CD1	3:S:23:ILE:C	2.84	0.45
1:0:1223:G:H21	1:0:1225:G:N2	2.15	0.45
1:0:577:U:H2'	1:0:577:U:O2	2.17	0.45
1:0:2741:G:O2'	1:0:2742:G:H5'	2.16	0.45
1:0:2659:C:N4	1:0:2660:C:H41	2.15	0.45
1:0:679:C:H2'	1:0:680:U:H6	1.81	0.45
1:0:333:A:H1'	1:0:351:A:N9	2.31	0.45
1:0:2621:G:O2'	1:0:2622:G:H5'	2.17	0.45
1:0:2343:C:O2'	1:0:2344:G:H5'	2.15	0.45
1:0:725:C:HO2'	1:0:726:G:H8	1.59	0.45
1:0:110:U:H6	1:0:110:U:H5'	1.82	0.45
1:0:1199:U:H3'	1:0:1200:G:C5'	2.39	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:510:G:N2	1:0:512:A:H3'	2.31	0.45
1:0:2265:A:H5''	1:0:2266:A:O4'	2.16	0.45
1:0:2533:U:H2'	1:0:2534:U:C6	2.50	0.45
1:0:1969:G:N3	1:0:1970:G:C8	2.85	0.45
1:0:1368:G:O2'	1:0:1369:G:H5'	2.16	0.45
1:0:228:A:H2'	1:0:229:G:C4'	2.46	0.45
1:0:2177:U:C4	1:0:2178:U:C5	3.05	0.45
1:0:1491:C:H2'	1:0:1492:A:C8	2.52	0.45
1:0:2608:A:HO2'	1:0:2609:G:P	2.39	0.45
1:0:2348:A:O2'	1:0:2349:G:H5'	2.17	0.45
1:0:179:U:H6	1:0:179:U:O5'	1.99	0.45
1:0:2470:U:O2'	1:0:2549:G:OP1	2.21	0.45
1:0:202:A:N6	1:0:203:G:C2	2.84	0.45
1:0:1698:C:H5''	1:0:1699:A:OP2	2.17	0.45
1:0:859:U:H4'	1:0:860:U:C6	2.50	0.45
1:0:1872:A:C1'	1:0:2070:G:H5'	2.42	0.45
1:0:6:A:O2'	1:0:7:G:H5'	2.16	0.45
1:0:2721:A:H2'	1:0:2722:C:O4'	2.16	0.45
1:0:2431:C:H2'	1:0:2432:A:O4'	2.17	0.45
1:0:35:G:O2'	1:0:36:G:O5'	2.30	0.45
5:1:62:VAL:O	5:1:66:VAL:HG23	2.16	0.45
1:0:1162:A:C2	1:0:1163:C:C2	3.04	0.45
1:0:117:A:H5'	1:0:118:U:OP1	2.16	0.45
1:0:132:U:O2	1:0:140:G:C2	2.70	0.45
1:0:2199:C:H2'	1:0:2200:G:O4'	2.16	0.45
1:0:2245:A:C2'	1:0:2245:A:N3	2.78	0.45
1:0:2467:A:N1	1:0:2468:G:C5	2.85	0.45
1:0:2519:C:O2	1:0:2519:C:H2'	2.15	0.45
1:0:1444:C:H2'	1:0:1445:A:H8	1.81	0.45
1:0:752:G:C5'	1:0:753:U:OP1	2.56	0.45
1:0:2477:C:O2'	1:0:2478:C:H5'	2.17	0.45
3:S:18:LYS:CD	3:S:18:LYS:N	2.79	0.45
1:0:1033:G:O6	1:0:1150:C:C5	2.70	0.45
1:0:1216:G:C2	1:0:1257:U:O2	2.70	0.45
1:0:2295:C:H2'	1:0:2296:U:C6	2.50	0.45
1:0:1928:G:H2'	1:0:1929:U:O4'	2.15	0.45
1:0:495:C:N4	1:0:507:A:C2	2.85	0.45
1:0:1722:G:C2	1:0:1723:U:O2	2.70	0.45
4:W:63:LYS:HA	4:W:63:LYS:HE3	1.98	0.45
1:0:2694:G:N2	1:0:2695:C:C2	2.85	0.45
1:0:369:C:O2'	1:0:370:U:H5'	2.17	0.45
1:0:1246:G:C4	1:0:1247:U:C6	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2594:U:C2	1:0:2595:C:C5	3.05	0.45
1:0:1682:A:H2'	1:0:1683:G:O4'	2.17	0.45
1:0:1448:A:H61	1:0:1574:A:H61	1.65	0.45
1:0:1979:C:OP1	1:0:1979:C:O4'	2.35	0.45
1:0:2212:U:N3	1:0:2213:G:C6	2.85	0.45
1:0:1035:G:N7	1:0:1036:G:N7	2.65	0.45
1:0:314:G:H2'	1:0:315:G:C8	2.52	0.45
1:0:825:C:H2'	1:0:826:U:H6	1.82	0.45
1:0:1653:C:H2'	1:0:1654:A:H8	1.80	0.45
1:0:1086:C:C4	1:0:1087:C:C2	3.04	0.45
1:0:1207:G:O2'	1:0:1208:A:H5'	2.16	0.45
1:0:2541:U:H2'	1:0:2542:U:O4'	2.17	0.45
1:0:2098:G:H3'	1:0:2099:G:H5'	1.98	0.45
1:0:595:A:N1	1:0:822:G:O2'	2.44	0.45
1:0:168:A:O2'	1:0:169:C:H5'	2.17	0.45
1:0:1028:G:O2'	1:0:1029:C:H5'	2.17	0.45
1:0:1457:A:H2'	1:0:1458:A:C8	2.52	0.45
1:0:1962:C:O2'	1:0:1963:G:H5'	2.17	0.45
1:0:1015:U:O4'	1:0:1021:A:C5	2.70	0.45
1:0:1313:U:H1'	1:0:1642:G:C2	2.52	0.45
1:0:569:C:C2'	1:0:570:G:H5'	2.46	0.45
1:0:1923:U:O2'	1:0:1924:C:C5	2.70	0.45
1:0:2826:C:C2'	1:0:2827:G:C5'	2.88	0.45
1:0:773:G:C2'	1:0:774:A:H5'	2.47	0.45
1:0:2492:G:C6	1:0:2493:U:O4	2.70	0.45
1:0:1033:G:C6	1:0:1150:C:C4	3.05	0.45
1:0:2800:C:C6	1:0:2801:A:C8	3.05	0.45
1:0:124:A:H3'	1:0:125:A:C8	2.52	0.45
1:0:2077:G:C8	1:0:2077:G:O5'	2.70	0.45
4:W:34:ALA:HA	5:1:56:ARG:NH2	2.32	0.45
1:0:2733:A:C2'	1:0:2734:U:H5'	2.46	0.45
1:0:140:G:O2'	1:0:141:G:H5'	2.17	0.45
1:0:1338:G:OP2	1:0:1632:A:N7	2.50	0.45
1:0:171:G:O2'	1:0:172:A:H5'	2.17	0.45
1:0:2672:U:H2'	1:0:2673:G:C8	2.52	0.45
1:0:2144:C:O2	1:0:2156:A:H2	2.00	0.45
1:0:2309:G:H2'	1:0:2310:G:O4'	2.16	0.45
1:0:2058:U:C3'	1:0:2217:G:H22	2.21	0.45
1:0:1225:G:H2'	1:0:1249:G:N2	2.32	0.45
1:0:2359:U:H2'	1:0:2360:C:H6	1.81	0.45
1:0:824:U:O2	1:0:1264:C:C5	2.70	0.45
1:0:2237:C:O2'	1:0:2238:G:P	2.74	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2839:G:C2	1:0:2840:U:O2	2.70	0.45
1:0:532:A:H2'	1:0:533:C:C6	2.51	0.45
1:0:2348:A:H2'	1:0:2349:G:C8	2.52	0.45
5:1:43:PHE:N	5:1:43:PHE:CD1	2.84	0.45
1:0:71:A:N6	1:0:110:U:H4'	2.31	0.45
1:0:171:G:H2'	1:0:172:A:O4'	2.17	0.45
1:0:1949:A:N6	1:0:2581:A:H61	2.14	0.45
1:0:592:G:C2'	1:0:593:C:O5'	2.65	0.45
1:0:2518:C:O2'	1:0:2519:C:H5'	2.17	0.45
1:0:1766:U:H3'	1:0:1766:U:H6	1.82	0.45
1:0:615:C:N4	1:0:631:G:H21	2.14	0.45
1:0:616:U:C4	1:0:617:U:H5	2.35	0.45
1:0:202:A:N6	1:0:203:G:N2	2.64	0.45
1:0:956:A:C5	1:0:2427:A:C2	3.03	0.45
1:0:1720:G:C2	1:0:1721:G:C8	3.05	0.45
1:0:746:G:C8	1:0:774:A:N6	2.85	0.45
1:0:782:U:C2	1:0:783:G:C8	3.05	0.45
1:0:876:A:O2'	1:0:877:G:H5'	2.16	0.45
1:0:1693:A:N6	1:0:1694:A:C6	2.85	0.45
1:0:1786:C:H6	1:0:1786:C:O5'	2.00	0.45
1:0:36:G:N2	1:0:37:C:C2	2.85	0.45
2:R:20:MET:CE	2:R:92:ALA:HA	2.45	0.45
1:0:778:G:H5'	1:0:778:G:H8	1.82	0.45
1:0:1701:C:H2'	1:0:1701:C:O2	2.17	0.45
1:0:1625:A:C5	1:0:1632:A:H2	2.34	0.45
1:0:929:A:C2	1:0:930:A:C1'	3.00	0.45
1:0:1782:A:N6	1:0:1820:G:O2'	2.50	0.45
1:0:1177:U:N3	1:0:1197:U:O2	2.50	0.45
1:0:1195:U:H2'	1:0:1196:G:C8	2.52	0.45
1:0:614:G:H2'	1:0:615:C:H6	1.82	0.45
1:0:159:A:C5	1:0:160:C:C4	3.05	0.45
1:0:543:G:C5	1:0:544:U:C4	3.05	0.45
1:0:717:G:H2'	1:0:739:G:N2	2.14	0.45
2:R:93:GLY:O	5:1:50:ARG:NH2	2.40	0.45
1:0:961:G:H2'	1:0:962:C:O4'	2.17	0.45
1:0:1938:U:O3'	1:0:1939:U:H6	2.00	0.45
1:0:208:C:C2'	1:0:209:G:H5'	2.47	0.45
1:0:705:C:H2'	1:0:706:A:H8	1.82	0.45
1:0:1693:A:H2'	1:0:1694:A:H5'	1.99	0.45
1:0:2336:G:C4	1:0:2338:C:OP2	2.69	0.45
1:0:188:G:C6	1:0:189:A:C6	3.05	0.45
1:0:575:U:H4'	1:0:822:G:OP2	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:610:G:C6	1:0:611:C:C4	3.05	0.45
1:0:463:C:C2	1:0:465:C:C5	3.04	0.45
1:0:1016:C:C2	1:0:1017:C:C5	3.05	0.44
1:0:2201:G:O2'	1:0:2202:G:H5'	2.17	0.44
1:0:593:C:H6	1:0:593:C:O5'	2.00	0.44
1:0:82:G:N2	1:0:101:A:OP2	2.45	0.44
1:0:1782:A:N6	1:0:1820:G:H2'	2.31	0.44
2:R:55:THR:OG1	2:R:76:LYS:HD3	2.17	0.44
1:0:1177:U:N3	1:0:1196:G:N1	2.65	0.44
1:0:1672:A:C6	1:0:1673:C:C2	3.05	0.44
1:0:1314:A:C2	1:0:1642:G:N2	2.81	0.44
1:0:1314:A:C8	1:0:1316:G:C8	3.05	0.44
1:0:2038:C:H2'	1:0:2483:U:H5'	1.98	0.44
1:0:1433:A:N7	1:0:1594:U:O4	2.50	0.44
1:0:756:C:H2'	1:0:757:U:H6	1.82	0.44
1:0:2842:C:OP1	1:0:2842:C:H6	2.00	0.44
1:0:2659:C:N3	1:0:2660:C:C5	2.85	0.44
1:0:2665:G:C6	1:0:2666:U:N3	2.85	0.44
1:0:2473:G:N3	1:0:2474:G:C8	2.85	0.44
3:S:98:ILE:HG22	3:S:99:VAL:N	2.32	0.44
1:0:1825:C:HO2'	1:0:1826:U:H5'	1.82	0.44
1:0:2275:U:OP1	1:0:2275:U:C5	2.70	0.44
1:0:1859:A:C2'	1:0:1860:A:O4'	2.64	0.44
1:0:1998:A:O5'	1:0:1998:A:H8	2.00	0.44
1:0:1704:G:C6	1:0:1705:U:C4	3.05	0.44
1:0:308:C:C2'	1:0:309:G:H5'	2.47	0.44
1:0:1016:C:C6	1:0:1154:A:C1'	2.99	0.44
1:0:2051:U:H6	1:0:2051:U:H3'	1.81	0.44
1:0:2196:U:C5	1:0:2197:U:C5	3.05	0.44
1:0:460:U:H5	1:0:592:G:O2'	1.97	0.44
1:0:873:U:O2	1:0:2247:A:C5'	2.62	0.44
1:0:700:C:N3	1:0:801:A:O4'	2.50	0.44
1:0:602:C:C4	1:0:603:C:C5	3.05	0.44
1:0:1312:G:N2	1:0:1657:A:C8	2.86	0.44
1:0:2220:A:C2	1:0:2221:G:C5	3.05	0.44
1:0:1223:G:C6	1:0:1250:A:N7	2.85	0.44
1:0:1244:U:H2'	1:0:1245:G:C8	2.51	0.44
1:0:1586:A:C4	1:0:1587:A:C8	3.05	0.44
1:0:120:G:O2'	1:0:121:G:H5'	2.17	0.44
1:0:2125:C:N4	1:0:2126:U:H5	2.15	0.44
1:0:1595:A:O2'	1:0:1596:A:H5'	2.17	0.44
1:0:2602:G:C2	1:0:2603:G:N7	2.86	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1686:A:H5''	1:0:2529:G:OP1	2.18	0.44
1:0:838:A:H2'	1:0:839:U:O4'	2.18	0.44
1:0:2150:U:O5'	1:0:2150:U:H6	2.00	0.44
1:0:1369:G:N1	1:0:1370:U:C2	2.85	0.44
1:0:2148:G:H2'	1:0:2149:G:O4'	2.17	0.44
1:0:875:G:H2'	1:0:876:A:H5'	1.99	0.44
1:0:60:A:OP2	4:W:47:ARG:NH2	2.51	0.44
1:0:2793:G:C6	1:0:2794:G:N7	2.84	0.44
1:0:52:A:N6	1:0:115:G:O2'	2.49	0.44
1:0:940:G:C6	1:0:941:U:C2	3.06	0.44
1:0:1337:G:H3'	1:0:1338:G:H5'	1.99	0.44
4:W:31:GLN:HB3	4:W:36:GLN:HB2	1.98	0.44
1:0:2449:G:O2'	1:0:2450:A:H5'	2.17	0.44
1:0:198:A:N7	1:0:243:G:C6	2.85	0.44
1:0:198:A:H62	1:0:440:U:H3	1.65	0.44
1:0:2186:G:O2'	1:0:2187:A:H5'	2.17	0.44
1:0:1913:G:HO2'	1:0:1914:U:H5	1.66	0.44
1:0:2433:G:C2'	1:0:2434:G:H5'	2.47	0.44
1:0:2253:A:N6	1:0:2255:G:N3	2.66	0.44
1:0:1541:G:N2	1:0:1562:G:N2	2.62	0.44
1:0:1686:A:H5''	1:0:1687:C:OP2	2.18	0.44
1:0:1978:U:C4	1:0:1979:C:C5	3.05	0.44
1:0:2474:G:C5	1:0:2475:C:C5	3.05	0.44
1:0:1227:A:O2'	1:0:1228:G:H5'	2.17	0.44
1:0:2501:U:O2'	1:0:2626:U:H5''	2.17	0.44
1:0:1516:A:C5	1:0:1517:C:C5	3.05	0.44
1:0:826:U:O2	1:0:1238:A:H2	2.00	0.44
1:0:1469:U:H5'	1:0:1470:G:C8	2.52	0.44
1:0:2375:G:C2	1:0:2400:G:C2	3.05	0.44
1:0:234:C:C5	1:0:235:C:C5	3.05	0.44
1:0:1257:U:O2'	1:0:1258:G:H5'	2.18	0.44
1:0:2288:A:H2'	1:0:2289:A:C8	2.53	0.44
1:0:2810:A:H2	1:0:2853:U:OP2	2.00	0.44
2:R:8:GLN:O	4:W:29:ARG:NH1	2.50	0.44
1:0:831:G:O2'	1:0:832:A:H5''	2.17	0.44
1:0:630:G:H8	1:0:630:G:O5'	2.00	0.44
1:0:203:G:C2	1:0:204:A:C2	3.05	0.44
1:0:2219:U:O2'	1:0:2220:A:H5'	2.18	0.44
2:R:52:GLY:O	2:R:80:VAL:HA	2.18	0.44
1:0:2010:G:N2	1:0:2020:G:C4	2.85	0.44
1:0:2596:C:H2'	1:0:2597:G:H8	1.82	0.44
1:0:1882:G:N2	1:0:1885:C:N4	2.56	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2786:G:N2	1:0:2787:A:N3	2.65	0.44
1:0:2792:C:C2	1:0:2805:G:C2	3.05	0.44
1:0:973:U:C2	1:0:974:U:C5	3.06	0.44
1:0:642:A:N6	1:0:643:A:C2	2.85	0.44
1:0:1469:U:OP2	1:0:1471:G:OP2	2.36	0.44
1:0:1469:U:H5'	1:0:1470:G:N7	2.32	0.44
1:0:1188:A:H2'	1:0:1189:G:O4'	2.17	0.44
1:0:1145:C:N3	1:0:1149:G:C6	2.85	0.44
1:0:1073:G:H2'	1:0:1073:G:N3	2.32	0.44
1:0:100:G:C6	3:S:102:LYS:HD3	2.53	0.44
1:0:1199:U:O5'	1:0:1200:G:C5'	2.66	0.44
1:0:1673:C:O2'	1:0:1674:C:H5'	2.18	0.44
1:0:428:A:C2'	1:0:429:C:H5'	2.48	0.44
1:0:45:C:OP2	1:0:192:G:H8	1.99	0.44
1:0:754:G:N1	1:0:770:U:C2	2.86	0.44
1:0:2826:C:C4	1:0:2827:G:N7	2.86	0.44
1:0:1159:U:O2'	1:0:1160:C:H5'	2.17	0.44
1:0:1329:U:O2'	1:0:1330:G:H5'	2.17	0.44
1:0:2415:G:H21	1:0:2577:A:H2	1.57	0.44
1:0:473:C:C2	1:0:479:G:C2	3.05	0.44
1:0:1086:C:N3	1:0:1087:C:C2	2.86	0.44
1:0:1054:C:C2'	1:0:1055:A:H4'	2.47	0.44
1:0:116:A:H2'	1:0:118:U:H5	1.82	0.44
1:0:1016:C:O2	1:0:1016:C:H2'	2.18	0.44
1:0:1140:A:C2	1:0:2548:G:N3	2.86	0.44
1:0:799:C:H2'	1:0:800:U:O4'	2.18	0.44
1:0:543:G:C2	1:0:544:U:C2	3.05	0.44
1:0:565:A:H2'	1:0:566:U:H6	1.83	0.44
1:0:491:A:H2	1:0:509:U:O2	1.99	0.44
1:0:1365:U:H1'	1:0:1586:A:C2	2.52	0.44
1:0:1514:C:H5'	1:0:1593:C:H5''	2.00	0.44
1:0:1920:A:C6	1:0:1922:U:C5	3.06	0.44
1:0:19:C:H5'	1:0:563:U:OP1	2.18	0.44
1:0:1579:G:O2'	1:0:1580:C:H5'	2.16	0.44
1:0:2555:G:C2'	1:0:2555:G:N3	2.81	0.44
1:0:233:A:O2'	1:0:234:C:H5'	2.17	0.44
1:0:1207:G:C2	1:0:1208:A:C4	3.06	0.44
1:0:1235:C:O2'	1:0:1236:G:H5'	2.18	0.44
4:W:46:LEU:HD23	4:W:46:LEU:HA	1.76	0.44
1:0:880:C:O5'	1:0:880:C:H6	2.00	0.44
1:0:58:C:N4	1:0:59:G:N3	2.66	0.44
1:0:1303:U:H2'	1:0:1304:U:C6	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:817:A:H5''	1:0:818:G:OP1	2.18	0.44
1:0:1007:A:C5	1:0:1171:A:C2	3.05	0.44
1:0:633:G:H8	1:0:633:G:O5'	2.01	0.44
1:0:2016:A:N6	1:0:2019:C:C2	2.86	0.44
1:0:404:A:C5	1:0:405:C:C4	3.05	0.44
1:0:959:C:H2'	1:0:960:U:C6	2.52	0.44
1:0:1938:U:C2'	1:0:1939:U:H5'	2.48	0.44
1:0:1974:U:C2'	1:0:1975:G:C5'	2.96	0.44
1:0:1038:U:O2'	1:0:1039:A:H5'	2.18	0.44
4:W:7:ARG:CD	4:W:7:ARG:C	2.86	0.44
1:0:2576:G:C6	1:0:2577:A:N6	2.86	0.44
1:0:2098:G:O6	1:0:2100:A:OP1	2.36	0.44
1:0:2749:A:C2'	1:0:2750:G:H5'	2.47	0.44
1:0:67:G:C2	1:0:72:A:N3	2.85	0.44
1:0:1153:A:C5	1:0:1155:G:O6	2.71	0.44
1:0:1459:U:H6	1:0:1459:U:P	2.41	0.44
1:0:2454:C:H42	1:0:2508:G:N2	2.10	0.44
1:0:1198:C:H5''	1:0:1199:U:C4'	2.48	0.44
3:S:15:HIS:HE1	3:S:80:LYS:HZ1	1.64	0.44
1:0:754:G:C2'	1:0:755:C:O5'	2.65	0.44
1:0:1142:G:C2'	1:0:1143:A:O5'	2.66	0.44
1:0:1920:A:H2'	1:0:1921:A:C8	2.53	0.44
1:0:1938:U:O2'	1:0:1939:U:OP1	2.26	0.44
1:0:2603:G:N2	1:0:2604:G:N9	2.66	0.44
1:0:1969:G:C4	1:0:1970:G:C8	3.06	0.44
1:0:2706:U:C2'	1:0:2706:U:O2	2.66	0.44
1:0:829:C:C4	1:0:1206:G:N1	2.86	0.44
1:0:344:G:N2	1:0:345:U:H1'	2.33	0.44
1:0:68:C:C2'	1:0:68:C:O2	2.65	0.44
1:0:2687:G:C2'	1:0:2688:G:H5'	2.47	0.44
1:0:2198:U:C2	1:0:2199:C:O4'	2.71	0.44
1:0:2548:G:C2	1:0:2549:G:N7	2.86	0.44
1:0:986:A:H2	1:0:1001:A:C1'	2.31	0.44
1:0:394:U:H2'	1:0:395:G:C8	2.50	0.44
1:0:137:A:H2'	1:0:138:G:O4'	2.18	0.44
1:0:2726:U:C2	1:0:2739:G:N2	2.86	0.44
1:0:2395:C:H2'	1:0:2396:C:H5'	1.99	0.44
1:0:1168:G:OP2	1:0:1169:C:OP2	2.34	0.44
1:0:2601:C:H1'	1:0:2799:C:H42	1.83	0.44
1:0:2002:A:C2'	1:0:2003:A:O5'	2.66	0.44
1:0:1305:C:O2'	1:0:1306:U:H5'	2.18	0.44
1:0:218:A:N1	1:0:232:A:H5''	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:143:A:H2'	1:0:144:U:C6	2.52	0.43
1:0:1295:U:C5	1:0:1296:G:C5	3.06	0.43
1:0:2198:U:H2'	1:0:2199:C:H4'	1.98	0.43
2:R:29:VAL:CG2	2:R:76:LYS:HD2	2.47	0.43
1:0:1200:G:C2'	1:0:1201:G:H5'	2.48	0.43
1:0:405:C:C2'	1:0:406:G:H8	2.13	0.43
1:0:1511:A:C2	1:0:1594:U:H1'	2.47	0.43
1:0:1209:G:C2	1:0:1210:C:C5	3.07	0.43
1:0:2125:C:C3'	1:0:2126:U:C5'	2.96	0.43
1:0:1480:G:H2'	1:0:1481:U:O4'	2.17	0.43
1:0:2228:U:H5''	1:0:2229:G:OP2	2.18	0.43
1:0:246:C:N3	1:0:247:A:C5	2.86	0.43
1:0:1824:C:H2'	1:0:1825:C:H5'	1.99	0.43
1:0:1339:U:O2'	1:0:1993:G:O2'	2.32	0.43
5:1:27:TYR:OH	5:1:63:GLU:HB3	2.18	0.43
1:0:2081:U:H3	1:0:2174:G:H1	1.64	0.43
1:0:2170:C:H2'	1:0:2171:U:H4'	2.00	0.43
1:0:836:G:H2'	1:0:837:U:C6	2.53	0.43
1:0:2767:C:C4	1:0:2768:C:C5	3.06	0.43
1:0:1807:A:H1'	1:0:1809:G:N9	2.33	0.43
1:0:2422:C:H2'	1:0:2423:G:H8	1.82	0.43
1:0:589:C:N4	1:0:590:C:N4	2.66	0.43
1:0:1715:A:O2'	1:0:1716:G:C3'	2.66	0.43
1:0:832:A:C2	1:0:833:A:H1'	2.54	0.43
1:0:214:C:C2	1:0:215:G:C8	3.06	0.43
1:0:2058:U:H3'	1:0:2217:G:H1	1.83	0.43
1:0:1827:G:H1'	1:0:1914:U:N3	2.33	0.43
1:0:470:U:O4	1:0:481:A:N7	2.51	0.43
1:0:2253:A:N6	1:0:2255:G:C4	2.86	0.43
1:0:1685:A:O2'	1:0:1686:A:P	2.76	0.43
1:0:1933:G:H2'	1:0:1934:U:C6	2.53	0.43
3:S:75:ALA:C	3:S:76:LEU:HD23	2.39	0.43
1:0:794:A:H4'	1:0:795:A:C8	2.53	0.43
1:0:15:G:C6	1:0:16:G:C5	3.06	0.43
1:0:2380:U:H2'	1:0:2381:A:C5'	2.47	0.43
1:0:1366:A:C6	1:0:1367:A:C6	3.06	0.43
1:0:2488:G:C2	1:0:2489:C:C6	3.06	0.43
1:0:126:C:H3'	1:0:126:C:C6	2.53	0.43
1:0:2084:G:HO2'	1:0:2085:G:H8	1.62	0.43
1:0:1061:A:N1	1:0:2731:G:O6	2.51	0.43
1:0:1466:C:H5''	1:0:1466:C:H6	1.83	0.43
1:0:311:A:H1'	1:0:330:C:H1'	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1299:A:O2'	1:0:1300:A:OP1	2.35	0.43
1:0:172:A:C6	1:0:175:C:H5	2.36	0.43
1:0:179:U:H2'	1:0:180:C:C6	2.53	0.43
1:0:1717:A:C2'	1:0:1718:A:H5'	2.48	0.43
1:0:998:C:H2'	1:0:999:A:O5'	2.17	0.43
3:S:14:LEU:HA	3:S:14:LEU:HD23	1.83	0.43
1:0:158:A:C2	1:0:159:A:C4	3.07	0.43
5:1:90:THR:CB	5:1:107:LYS:NZ	2.70	0.43
1:0:2185:U:H2'	1:0:2186:G:C8	2.53	0.43
1:0:62:U:C3'	1:0:63:A:H8	2.31	0.43
1:0:1142:G:O2'	1:0:1143:A:O5'	2.35	0.43
1:0:956:A:O2'	1:0:957:G:OP1	2.28	0.43
1:0:2863:U:C2	1:0:2864:C:C5	3.06	0.43
1:0:1964:A:H5''	1:0:1965:U:P	2.58	0.43
1:0:777:A:C2	1:0:794:A:C2	3.06	0.43
1:0:713:G:H5''	1:0:713:G:H8	1.84	0.43
1:0:1368:G:C6	1:0:1369:G:C5	3.06	0.43
1:0:1416:A:H2'	1:0:1417:C:C6	2.52	0.43
1:0:1262:U:C6	1:0:1262:U:C3'	3.01	0.43
1:0:1289:A:O2'	1:0:1290:A:H5'	2.18	0.43
1:0:2717:G:O2'	1:0:2718:A:H5'	2.19	0.43
1:0:300:C:H2'	1:0:301:C:C5'	2.48	0.43
1:0:2431:C:N4	1:0:2432:A:C6	2.87	0.43
1:0:1236:G:C6	1:0:1240:G:C6	3.07	0.43
1:0:968:C:H6	1:0:968:C:H3'	1.83	0.43
1:0:53:G:N2	1:0:54:G:H1'	2.34	0.43
1:0:1629:G:C6	1:0:1635:G:O6	2.71	0.43
1:0:929:A:C3'	1:0:930:A:H5''	2.35	0.43
1:0:1715:A:O2'	1:0:1716:G:C5'	2.66	0.43
1:0:1754:G:H21	1:0:1756:C:H5''	1.70	0.43
1:0:197:G:N3	1:0:210:A:C2	2.79	0.43
1:0:2388:G:C4	1:0:2389:G:C8	3.07	0.43
1:0:356:A:C2	1:0:357:A:N6	2.86	0.43
1:0:128:C:H2'	1:0:129:A:C5'	2.37	0.43
1:0:2477:C:O2	1:0:2477:C:H2'	2.18	0.43
1:0:1919:A:H2	1:0:1925:C:N4	2.17	0.43
1:0:1462:C:C2	1:0:1480:G:N2	2.87	0.43
1:0:1811:A:H1'	1:0:1813:A:C4	2.54	0.43
1:0:339:U:C6	1:0:339:U:O5'	2.71	0.43
1:0:1385:C:O2	1:0:1386:A:C1'	2.66	0.43
1:0:1385:C:N3	1:0:1386:A:C5	2.87	0.43
1:0:2231:G:O2'	1:0:2232:G:H5'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1127:C:C2	1:0:1128:G:C8	3.07	0.43
1:0:326:A:N6	1:0:327:C:N4	2.66	0.43
1:0:2733:A:H2'	1:0:2734:U:H5'	2.00	0.43
1:0:1783:G:O2'	1:0:1784:C:H5'	2.18	0.43
4:W:54:ASN:ND2	4:W:54:ASN:H	2.17	0.43
1:0:1489:C:H3'	1:0:1490:U:C5'	2.47	0.43
1:0:55:A:C2	1:0:56:C:C2	3.06	0.43
1:0:1792:C:H6	1:0:1792:C:O5'	2.02	0.43
1:0:304:A:H3'	1:0:305:A:H5''	2.01	0.43
1:0:1773:C:O2'	1:0:1774:A:H5'	2.17	0.43
1:0:1167:A:OP1	1:0:1167:A:O4'	2.36	0.43
1:0:1287:A:C2	1:0:1310:C:O2	2.71	0.43
1:0:211:U:H2'	1:0:212:U:H5'	1.99	0.43
1:0:45:C:H2'	1:0:46:C:H6	1.83	0.43
1:0:75:C:OP1	4:W:48:ARG:NE	2.51	0.43
1:0:523:A:H4'	1:0:1230:C:H5'	2.01	0.43
1:0:1355:A:OP1	1:0:1411:C:OP1	2.36	0.43
3:S:45:LYS:CG	3:S:75:ALA:CB	2.91	0.43
1:0:534:U:C2	1:0:535:U:C5	3.06	0.43
1:0:2629:U:O2	1:0:2650:G:C2	2.72	0.43
1:0:2705:A:O2'	1:0:2706:U:C5	2.63	0.43
1:0:462:G:O6	1:0:465:C:OP1	2.37	0.43
1:0:329:C:O2'	1:0:330:C:H5'	2.18	0.43
1:0:139:A:C2	1:0:140:G:C5	3.06	0.43
1:0:55:A:N6	1:0:69:G:N1	2.66	0.43
1:0:1628:C:C4	1:0:1629:G:N7	2.86	0.43
2:R:62:ARG:HD2	2:R:62:ARG:C	2.39	0.43
1:0:2549:G:N2	1:0:2550:C:H1'	2.33	0.43
1:0:1763:G:N2	1:0:1765:C:OP1	2.49	0.43
1:0:2585:C:C2'	1:0:2586:G:C5'	2.96	0.43
1:0:630:G:H5''	1:0:631:G:OP2	2.18	0.43
1:0:2219:U:H2'	1:0:2220:A:H8	1.83	0.43
1:0:2635:U:H2'	1:0:2635:U:O2	2.18	0.43
1:0:317:U:O2'	1:0:1224:A:N7	2.52	0.43
1:0:537:C:O4'	1:0:2759:U:C2	2.72	0.43
1:0:2782:G:H2'	1:0:2783:U:O5'	2.17	0.43
1:0:793:G:H2'	1:0:795:A:C5	2.54	0.43
1:0:644:A:H2'	1:0:645:G:O4'	2.19	0.43
1:0:2799:C:C4	1:0:2800:C:N3	2.86	0.43
1:0:525:A:C2'	1:0:526:C:H5'	2.48	0.43
1:0:2165:A:H2'	1:0:2166:G:C8	2.54	0.43
1:0:2728:A:H3'	1:0:2728:A:C8	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:940:G:H2'	1:0:941:U:H4'	1.98	0.43
1:0:2697:G:O2'	1:0:2698:G:H5'	2.18	0.43
1:0:2053:G:C4	1:0:2054:A:C8	3.06	0.43
1:0:2450:A:N6	1:0:2451:G:C2	2.87	0.43
1:0:581:A:H2'	1:0:582:G:O4'	2.19	0.43
1:0:2218:G:O5'	1:0:2218:G:H8	2.02	0.43
1:0:1223:G:C5	1:0:1250:A:N6	2.87	0.43
1:0:1887:G:C2	1:0:1911:A:H2	2.37	0.43
1:0:1913:G:O2'	1:0:1914:U:H5	2.01	0.43
1:0:2021:G:C2	1:0:2022:C:C2	3.07	0.43
1:0:2758:A:C2'	1:0:2759:U:OP1	2.66	0.43
1:0:855:G:C6	1:0:856:A:C6	3.07	0.43
1:0:1885:C:C5	1:0:1886:G:C8	3.06	0.43
1:0:1081:A:H3'	1:0:1108:U:H4'	2.01	0.43
1:0:2227:C:H2'	1:0:2228:U:H5'	2.00	0.43
1:0:2228:U:H5''	1:0:2229:G:P	2.58	0.43
1:0:971:A:C2	1:0:2475:C:H1'	2.54	0.43
1:0:971:A:C6	1:0:973:U:H1'	2.54	0.43
1:0:706:A:H1'	1:0:1367:A:H1'	2.00	0.43
1:0:1621:C:H4'	1:0:1626:A:C6	2.54	0.43
1:0:1621:C:H4'	1:0:1626:A:N6	2.34	0.43
1:0:2817:A:N6	1:0:2818:G:C6	2.87	0.43
1:0:188:G:C2	1:0:189:A:C4	3.07	0.43
1:0:2873:G:C6	1:0:2874:A:C5	3.06	0.43
1:0:1345:G:C6	1:0:1625:A:C5	3.06	0.43
1:0:2495:G:C2	1:0:2496:C:C2	3.07	0.43
1:0:1768:U:N3	1:0:1769:U:C4	2.87	0.43
1:0:833:A:H2'	1:0:834:A:O4'	2.18	0.43
1:0:1737:G:H2'	1:0:1738:U:C6	2.54	0.43
1:0:2811:G:O6	1:0:2812:A:N6	2.52	0.43
1:0:1920:A:N1	1:0:1922:U:C5	2.87	0.43
1:0:2661:G:H2'	1:0:2662:C:O5'	2.19	0.43
1:0:2832:G:H2'	1:0:2834:A:OP2	2.19	0.43
1:0:1588:A:C4	1:0:1589:G:N7	2.87	0.43
1:0:746:G:N7	1:0:774:A:C5	2.86	0.43
1:0:1081:A:N6	1:0:1107:A:C2	2.86	0.43
1:0:1964:A:H3'	1:0:1965:U:H5'	1.98	0.43
5:1:24:ASN:ND2	5:1:25:ARG:NH2	2.66	0.43
1:0:1356:G:C6	1:0:1357:U:O4	2.71	0.43
1:0:2817:A:C2'	1:0:2818:G:H5'	2.49	0.43
1:0:35:G:C2'	1:0:36:G:O5'	2.66	0.43
1:0:912:A:H3'	1:0:912:A:C8	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1336:G:O2'	1:0:1337:G:H5'	2.19	0.43
1:0:1030:U:C4	1:0:1153:A:N6	2.87	0.43
1:0:818:G:N1	1:0:2051:U:OP1	2.45	0.43
1:0:2052:G:O2'	1:0:2053:G:H5'	2.18	0.43
1:0:2549:G:H2'	1:0:2550:C:H6	1.83	0.43
1:0:1200:G:C8	1:0:1200:G:H5''	2.45	0.43
1:0:627:A:H2'	1:0:628:A:H8	1.83	0.43
1:0:201:G:H2'	1:0:202:A:H8	1.84	0.43
1:0:521:U:OP2	1:0:522:G:O6	2.37	0.43
1:0:1391:A:O2'	1:0:1392:U:C5	2.71	0.43
1:0:770:U:C2'	1:0:771:C:H5'	2.49	0.43
4:W:37:LEU:C	4:W:37:LEU:HD23	2.39	0.43
1:0:2825:A:C2	1:0:2826:C:C2	3.07	0.43
1:0:1854:G:O2'	1:0:1855:G:C5'	2.64	0.43
1:0:1096:A:N3	1:0:1096:A:C3'	2.80	0.43
1:0:2579:A:C2	1:0:2580:C:C4	3.06	0.43
1:0:353:G:O2'	1:0:354:C:H5'	2.18	0.43
1:0:2429:A:N6	1:0:2480:C:O2	2.52	0.43
1:0:2844:G:H2'	1:0:2845:C:O5'	2.19	0.43
1:0:389:G:H2'	1:0:390:U:C6	2.53	0.43
1:0:2347:C:C2'	1:0:2348:A:H5'	2.49	0.43
1:0:885:A:H2'	1:0:886:A:C8	2.54	0.43
1:0:1794:A:C2	1:0:1814:G:N3	2.81	0.43
1:0:2699:G:O2'	1:0:2700:U:H5'	2.19	0.43
1:0:2409:A:H2'	1:0:2410:U:O5'	2.19	0.43
1:0:818:G:H5'	1:0:819:C:C5	2.54	0.43
1:0:86:U:H1'	1:0:95:G:H22	1.80	0.43
1:0:93:A:H2	4:W:40:PRO:HG2	1.83	0.43
1:0:1775:A:H4'	1:0:1776:A:C5'	2.49	0.43
1:0:1011:A:C8	1:0:1165:G:N2	2.87	0.43
1:0:2241:U:H4'	1:0:2307:A:H2	1.82	0.43
1:0:2364:C:OP1	1:0:2365:U:OP2	2.37	0.43
1:0:2216:G:H2'	1:0:2218:G:O6	2.18	0.43
1:0:1441:A:HO2'	1:0:1442:C:H6	1.60	0.43
1:0:1142:G:H2'	1:0:1143:A:C8	2.53	0.43
1:0:2616:U:C2	1:0:2762:G:N2	2.86	0.43
1:0:855:G:C6	1:0:856:A:C5	3.07	0.43
1:0:1922:U:O4	1:0:1950:C:H1'	2.18	0.43
1:0:979:A:H2'	1:0:980:G:H8	1.83	0.43
1:0:1412:C:C5'	2:R:22:ARG:HH22	2.32	0.43
1:0:2603:G:N2	1:0:2604:G:C4	2.87	0.43
1:0:703:A:O2'	1:0:793:G:OP1	2.34	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:658:G:H1'	1:0:2330:G:OP1	2.18	0.43
3:S:13:LYS:H	3:S:13:LYS:HG2	1.71	0.43
1:0:1501:C:O2'	1:0:1502:G:H5'	2.19	0.43
1:0:2286:G:N3	1:0:2286:G:C2'	2.81	0.43
1:0:761:G:OP1	1:0:2591:C:N4	2.51	0.43
1:0:1545:G:H2'	1:0:1546:C:O4'	2.19	0.43
1:0:43:A:O5'	1:0:43:A:H8	2.02	0.43
1:0:310:A:H2'	1:0:311:A:O4'	2.19	0.42
1:0:112:U:C2	1:0:113:C:C6	3.06	0.42
1:0:1153:A:O2'	1:0:1154:A:H3'	2.19	0.42
1:0:2700:U:C6	1:0:2700:U:H5'	2.53	0.42
1:0:2053:G:C2	1:0:2421:C:C2	3.07	0.42
1:0:870:C:O2	1:0:933:G:C2	2.72	0.42
1:0:1773:C:N3	1:0:2565:C:N4	2.56	0.42
1:0:1002:C:N4	1:0:1003:C:N4	2.67	0.42
1:0:213:C:H42	1:0:239:A:N6	2.17	0.42
1:0:614:G:N2	1:0:634:G:C2	2.84	0.42
1:0:2482:A:O2'	1:0:2483:U:P	2.76	0.42
3:S:25:LEU:HD22	3:S:25:LEU:C	2.40	0.42
1:0:201:G:O2'	1:0:202:A:H5'	2.19	0.42
1:0:2063:A:C2	1:0:2064:U:C2	3.07	0.42
5:1:107:LYS:HD3	5:1:107:LYS:N	2.23	0.42
1:0:1393:G:N2	1:0:1586:A:N1	2.67	0.42
1:0:481:A:C6	1:0:482:A:C6	3.06	0.42
1:0:1724:C:C4	1:0:1747:G:O6	2.71	0.42
1:0:876:A:H2'	1:0:877:G:O4'	2.19	0.42
1:0:69:G:H3'	1:0:111:G:O2'	2.19	0.42
1:0:762:A:H4'	1:0:1284:G:N3	2.35	0.42
1:0:1296:G:H22	1:0:1299:A:H5''	1.83	0.42
1:0:1632:A:O2'	1:0:1633:C:P	2.77	0.42
1:0:1794:A:C8	1:0:1795:C:C6	3.07	0.42
1:0:1949:A:N3	1:0:2572:U:C4'	2.82	0.42
1:0:765:C:H41	1:0:1772:C:H1'	1.84	0.42
1:0:1780:A:C6	1:0:1781:C:C4	3.07	0.42
1:0:1011:A:N6	1:0:1166:A:C8	2.88	0.42
1:0:616:U:C5	1:0:630:G:C6	3.07	0.42
1:0:193:A:N1	1:0:194:G:N3	2.66	0.42
1:0:567:G:C5	1:0:568:G:N7	2.87	0.42
1:0:1374:G:C2	1:0:1375:C:C6	3.07	0.42
1:0:960:U:H2'	1:0:961:G:H8	1.84	0.42
1:0:976:C:H1'	1:0:2252:A:C2	2.54	0.42
1:0:1006:C:H6	1:0:1006:C:C3'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2859:U:C4	1:0:2860:C:O2	2.73	0.42
1:0:229:G:O2'	1:0:230:C:H5'	2.19	0.42
1:0:1811:A:C2'	1:0:1812:U:OP2	2.67	0.42
1:0:339:U:H6	1:0:339:U:O5'	2.02	0.42
1:0:126:C:H5''	1:0:126:C:H6	1.84	0.42
1:0:2749:A:H2'	1:0:2750:G:H5'	2.00	0.42
1:0:69:G:C2	1:0:112:U:C4	3.07	0.42
1:0:1299:A:O2'	1:0:1300:A:P	2.76	0.42
1:0:797:A:N7	1:0:805:G:N3	2.67	0.42
1:0:2200:G:C6	1:0:2201:G:C5	3.08	0.42
1:0:2143:G:H2'	1:0:2144:C:C6	2.54	0.42
1:0:873:U:O2	1:0:2247:A:O4'	2.38	0.42
1:0:94:C:C2'	1:0:95:G:O5'	2.67	0.42
1:0:2443:C:C2	1:0:2466:G:C2	3.07	0.42
1:0:2526:U:C5	1:0:2545:A:C5	3.08	0.42
1:0:542:A:H2'	1:0:543:G:H5'	2.01	0.42
1:0:1251:G:C2	1:0:1252:C:C2	3.06	0.42
1:0:321:A:OP1	3:S:26:SER:C	2.57	0.42
1:0:2325:A:C2	1:0:2362:G:N1	2.87	0.42
1:0:1908:C:H5	1:0:1912:G:O6	2.02	0.42
1:0:2014:A:C6	1:0:2477:C:C1'	3.03	0.42
1:0:594:G:H3'	1:0:1264:C:H42	1.84	0.42
1:0:573:C:H2'	1:0:574:C:O4'	2.19	0.42
1:0:773:G:H2'	1:0:774:A:O4'	2.19	0.42
1:0:1448:A:H2'	1:0:1449:C:C6	2.55	0.42
1:0:846:A:H2'	1:0:847:C:H6	1.79	0.42
1:0:876:A:C2	1:0:877:G:C4	3.06	0.42
1:0:2819:G:H2'	1:0:2820:C:H6	1.84	0.42
1:0:1460:G:H2'	1:0:1461:C:H6	1.85	0.42
1:0:37:C:H2'	1:0:38:G:H8	1.84	0.42
1:0:2621:G:N3	1:0:2622:G:C8	2.87	0.42
1:0:306:G:O2'	1:0:307:C:H5'	2.19	0.42
1:0:2802:C:H2'	1:0:2803:C:C6	2.54	0.42
1:0:2346:G:O2'	1:0:2347:C:H5'	2.18	0.42
1:0:646:C:O2	1:0:650:U:H4'	2.19	0.42
1:0:2571:G:C2	1:0:2582:G:C2	3.07	0.42
1:0:2055:G:O2'	1:0:2056:C:H5'	2.19	0.42
1:0:1456:C:C2'	1:0:1457:A:H5'	2.50	0.42
1:0:1762:C:C2	1:0:1763:G:C8	3.08	0.42
1:0:2509:A:C2'	1:0:2510:A:H5''	2.45	0.42
1:0:1312:G:H2'	1:0:1656:U:O4	2.18	0.42
1:0:1657:A:H2'	1:0:1658:A:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2312:A:H2'	1:0:2313:G:OP2	2.19	0.42
1:0:492:G:H2'	1:0:517:A:N1	2.34	0.42
1:0:2184:C:C2	1:0:2185:U:C5	3.07	0.42
1:0:2610:G:C6	1:0:2611:A:N7	2.87	0.42
1:0:867:G:C6	1:0:868:U:C4	3.08	0.42
5:1:71:LEU:HA	5:1:74:HIS:ND1	2.34	0.42
1:0:668:A:O2'	1:0:669:G:C4'	2.68	0.42
1:0:420:C:O2'	1:0:421:G:H5'	2.20	0.42
1:0:112:U:N3	1:0:113:C:C5	2.87	0.42
1:0:1664:G:O5'	1:0:1665:C:OP1	2.38	0.42
1:0:590:C:O2'	1:0:591:G:H5'	2.19	0.42
1:0:2465:G:C2	1:0:2466:G:C4	3.08	0.42
1:0:1778:U:H2'	1:0:1779:C:C6	2.54	0.42
1:0:833:A:C2'	1:0:834:A:H5'	2.50	0.42
1:0:584:A:H2'	1:0:585:U:C6	2.54	0.42
1:0:541:C:HO2'	1:0:542:A:P	2.43	0.42
1:0:2020:G:C6	1:0:2021:G:C6	3.07	0.42
1:0:1918:G:C4	1:0:1945:C:N4	2.87	0.42
1:0:1685:A:N1	1:0:1976:U:C6	2.88	0.42
1:0:1969:G:C2	1:0:1970:G:C8	3.07	0.42
1:0:623:G:C5'	1:0:625:A:H62	2.33	0.42
1:0:914:C:H2'	1:0:915:C:H6	1.84	0.42
2:R:91:LEU:CD2	2:R:91:LEU:N	2.81	0.42
1:0:1785:A:H2'	1:0:1786:C:C5	2.55	0.42
1:0:2332:G:H2'	1:0:2333:A:O5'	2.20	0.42
1:0:912:A:H8	1:0:912:A:H3'	1.84	0.42
1:0:784:U:H2'	1:0:785:U:C6	2.55	0.42
1:0:1270:C:H2'	1:0:1271:C:C6	2.55	0.42
1:0:1745:C:C2'	1:0:1746:A:H5'	2.49	0.42
1:0:929:A:H5'	1:0:2247:A:H61	1.83	0.42
1:0:81:C:C4	1:0:82:G:C2	3.08	0.42
1:0:617:U:N1	1:0:632:A:N6	2.67	0.42
3:S:85:ASP:H	3:S:86:PRO:HD3	1.84	0.42
1:0:2636:A:H2'	1:0:2637:C:C5'	2.50	0.42
1:0:2811:G:C6	1:0:2812:A:C6	3.07	0.42
1:0:749:C:C4	1:0:750:C:C5	3.07	0.42
1:0:2007:G:H2'	1:0:2008:C:H6	1.85	0.42
1:0:2598:C:H2'	1:0:2599:U:C5	2.54	0.42
1:0:955:G:H5''	1:0:956:A:C5'	2.48	0.42
1:0:1355:A:C5	1:0:1410:U:C6	3.07	0.42
1:0:1462:C:O2	1:0:1560:A:H2	2.02	0.42
1:0:1873:A:C8	1:0:1874:G:C8	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2491:C:H2'	1:0:2492:G:O4'	2.19	0.42
1:0:2793:G:C6	1:0:2794:G:C5	3.07	0.42
1:0:2503:G:C4	1:0:2504:G:C8	3.07	0.42
1:0:2526:U:C6	1:0:2545:A:C6	3.07	0.42
1:0:618:A:H2'	1:0:619:A:H5'	2.01	0.42
1:0:393:U:H2'	1:0:394:U:H6	1.85	0.42
1:0:716:U:O4	1:0:717:G:C2	2.73	0.42
1:0:2184:C:C4	1:0:2185:U:C4	3.08	0.42
1:0:28:A:H1'	1:0:523:A:N1	2.34	0.42
1:0:317:U:O5'	1:0:317:U:H6	2.03	0.42
1:0:2010:G:H2'	1:0:2011:U:C6	2.55	0.42
1:0:2433:G:C5	1:0:2434:G:C8	3.08	0.42
1:0:861:G:C5	1:0:862:A:N7	2.88	0.42
1:0:1408:A:C2	1:0:1411:C:N3	2.88	0.42
1:0:2787:A:C2	1:0:2864:C:N3	2.88	0.42
3:S:39:ALA:C	3:S:40:LEU:HG	2.39	0.42
1:0:1553:G:O5'	1:0:1553:G:H8	2.03	0.42
1:0:792:U:H2'	1:0:793:G:O5'	2.20	0.42
1:0:623:G:H4'	1:0:625:A:N6	2.34	0.42
1:0:1032:A:C2	1:0:1034:U:C2	3.07	0.42
1:0:430:C:H2'	1:0:431:G:C8	2.55	0.42
1:0:430:C:H6	1:0:430:C:O5'	2.03	0.42
1:0:1120:C:N4	1:0:1121:G:C2	2.87	0.42
2:R:46:PHE:N	2:R:46:PHE:CD1	2.87	0.42
1:0:53:G:C6	1:0:115:G:N2	2.88	0.42
1:0:56:C:H6	1:0:56:C:O5'	2.03	0.42
1:0:1337:G:C2	1:0:1341:G:N1	2.87	0.42
1:0:1673:C:O5'	1:0:1673:C:H6	2.02	0.42
1:0:192:G:O2'	1:0:193:A:H5''	2.20	0.42
2:R:80:VAL:HG23	2:R:81:ARG:N	2.35	0.42
1:0:1363:C:O2'	1:0:1364:C:H5'	2.20	0.42
1:0:708:G:C6	1:0:781:G:C6	3.08	0.42
1:0:2320:G:C6	1:0:2321:C:C4	3.08	0.42
1:0:859:U:H2'	1:0:860:U:OP2	2.19	0.42
1:0:979:A:C2	1:0:980:G:C4	3.08	0.42
1:0:481:A:N6	1:0:482:A:C6	2.88	0.42
1:0:1411:C:N3	1:0:1412:C:C4	2.88	0.42
1:0:1588:A:O2'	1:0:1589:G:H5'	2.20	0.42
1:0:1228:G:C3'	1:0:1228:G:C8	3.02	0.42
1:0:2490:U:H2'	1:0:2491:C:C6	2.55	0.42
1:0:2376:G:N2	1:0:2399:C:H1'	2.35	0.42
1:0:2647:G:O2'	1:0:2648:G:H5'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1236:G:N1	1:0:1240:G:C6	2.88	0.42
1:0:132:U:O2	1:0:140:G:N2	2.53	0.42
1:0:225:G:O5'	1:0:226:C:H5'	2.19	0.42
1:0:1139:A:HO2'	1:0:1140:A:C4'	2.32	0.42
1:0:2445:C:C2	1:0:2464:G:C2	3.08	0.42
1:0:2471:U:C2	1:0:2472:U:C5	3.07	0.42
1:0:600:G:C2	1:0:602:C:C2	3.08	0.42
3:S:85:ASP:CG	3:S:86:PRO:CD	2.75	0.42
1:0:717:G:H1'	1:0:740:A:N6	2.35	0.42
1:0:1737:G:H2'	1:0:1738:U:H6	1.85	0.42
1:0:1752:U:H2'	1:0:1753:A:H5'	2.02	0.42
1:0:1223:G:O2'	1:0:1224:A:P	2.77	0.42
1:0:2036:G:C2	1:0:2596:C:C2	3.07	0.42
1:0:860:U:C4	1:0:945:G:N2	2.88	0.42
1:0:672:C:H2'	1:0:673:G:H5'	2.02	0.42
1:0:2661:G:O2'	1:0:2662:C:H5'	2.20	0.42
1:0:1720:G:N3	1:0:1721:G:C8	2.87	0.42
1:0:1976:U:H2'	1:0:1976:U:O2	2.18	0.42
1:0:1980:A:H2'	1:0:1981:A:H5'	2.01	0.42
1:0:2665:G:C5	1:0:2666:U:C4	3.08	0.42
1:0:2660:C:C4	1:0:2704:U:C5	3.08	0.42
1:0:2394:G:C6	1:0:2395:C:N4	2.88	0.42
1:0:20:C:C2	1:0:21:A:C8	3.08	0.42
1:0:1986:G:C6	1:0:1987:G:N7	2.88	0.42
1:0:2377:U:C2'	1:0:2378:G:O5'	2.68	0.42
1:0:2356:A:H2'	1:0:2357:A:C8	2.54	0.42
1:0:720:A:C4	1:0:721:C:C5	3.08	0.42
2:R:40:ASP:C	2:R:40:ASP:OD1	2.58	0.42
1:0:1625:A:C4	1:0:1632:A:C2	3.07	0.42
1:0:167:A:H2'	1:0:168:A:C8	2.55	0.42
1:0:170:U:O2	1:0:171:G:C8	2.73	0.42
1:0:1029:C:C3'	1:0:1030:U:H5''	2.49	0.42
1:0:2196:U:O2'	1:0:2197:U:H5'	2.20	0.42
1:0:2465:G:C2'	1:0:2466:G:O5'	2.68	0.42
1:0:104:C:C3'	1:0:105:G:H5''	2.49	0.42
1:0:1767:G:C2	1:0:1768:U:C6	3.07	0.42
1:0:1780:A:C2'	1:0:1781:C:H5'	2.50	0.42
1:0:1013:G:N2	1:0:1165:G:H1'	2.33	0.42
1:0:951:G:H2'	1:0:952:A:C4'	2.49	0.42
1:0:982:C:H2'	1:0:983:G:H5'	2.02	0.42
1:0:404:A:C4	1:0:424:G:N2	2.86	0.42
1:0:357:A:C3'	1:0:358:C:H5'	2.50	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1248:G:N1	1:0:1249:G:N2	2.67	0.42
1:0:119:G:N2	1:0:129:A:C4	2.88	0.42
1:0:957:G:N1	1:0:958:G:C5	2.87	0.42
5:1:71:LEU:N	5:1:71:LEU:HD23	2.34	0.42
1:0:1184:G:C3'	1:0:1185:C:H5''	2.50	0.42
1:0:2821:G:H2'	1:0:2822:U:C6	2.55	0.42
1:0:721:C:H6	1:0:721:C:O5'	2.03	0.42
1:0:326:A:C6	1:0:327:C:N3	2.88	0.42
1:0:2813:G:H2'	1:0:2814:G:O4'	2.19	0.42
1:0:1293:A:C2	1:0:1294:G:C4	3.08	0.41
1:0:1030:U:C5	1:0:1153:A:N6	2.73	0.41
1:0:2697:G:C2'	1:0:2698:G:H5'	2.51	0.41
1:0:930:A:H3'	1:0:931:G:O4'	2.20	0.41
1:0:2498:U:OP2	1:0:2498:U:C6	2.73	0.41
1:0:2552:C:OP1	1:0:2553:G:OP1	2.38	0.41
1:0:1715:A:OP1	1:0:1715:A:H8	2.03	0.41
1:0:982:C:P	1:0:985:G:C2	3.13	0.41
1:0:617:U:N3	1:0:632:A:N7	2.68	0.41
1:0:1656:U:H2'	1:0:1657:A:C5'	2.50	0.41
1:0:1440:G:H8	1:0:1440:G:P	2.43	0.41
1:0:128:C:C3'	1:0:129:A:H5''	2.50	0.41
1:0:945:G:O2'	1:0:946:U:H5'	2.20	0.41
1:0:1076:U:C3'	1:0:1077:U:H5''	2.50	0.41
1:0:2840:U:H3'	1:0:2841:U:H6	1.85	0.41
1:0:745:C:H2'	1:0:746:G:O4'	2.20	0.41
1:0:1333:G:H8	1:0:1333:G:O5'	2.03	0.41
1:0:1872:A:O2'	1:0:1873:A:H5'	2.20	0.41
1:0:2624:G:C5'	1:0:2712:G:O2'	2.68	0.41
1:0:340:G:C1'	1:0:488:A:H1'	2.50	0.41
1:0:678:G:O2'	1:0:679:C:H5'	2.20	0.41
1:0:1694:A:C2'	1:0:1695:U:O5'	2.68	0.41
1:0:1817:U:H3'	1:0:1817:U:C6	2.55	0.41
1:0:500:G:C2	1:0:501:G:H1'	2.55	0.41
1:0:142:U:H5''	1:0:143:A:OP1	2.20	0.41
1:0:931:G:C6	1:0:932:G:C5	3.09	0.41
1:0:1459:U:O2	1:0:1477:C:OP2	2.37	0.41
1:0:1011:A:C2	1:0:1166:A:C2	3.07	0.41
1:0:1011:A:C5	1:0:1012:A:N7	2.88	0.41
1:0:1363:C:H2'	1:0:1364:C:H5'	2.01	0.41
1:0:2321:C:O2'	1:0:2322:U:H5'	2.19	0.41
5:1:49:PRO:HB2	5:1:50:ARG:H	1.68	0.41
2:R:15:LYS:HD2	2:R:15:LYS:HA	1.83	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1479:G:O2'	1:0:1480:G:H5'	2.19	0.41
1:0:1558:C:C2'	1:0:1559:G:H5'	2.50	0.41
1:0:643:A:N3	1:0:2382:C:H1'	2.34	0.41
1:0:399:G:O2'	1:0:400:U:P	2.78	0.41
1:0:2793:G:C2	1:0:2794:G:N9	2.88	0.41
1:0:2377:U:H2'	1:0:2378:G:O5'	2.19	0.41
5:1:14:PHE:N	5:1:14:PHE:CD1	2.88	0.41
1:0:1371:G:O5'	1:0:1371:G:H8	2.03	0.41
1:0:226:C:C5	1:0:2374:C:OP1	2.73	0.41
1:0:1795:C:N4	1:0:1806:G:N2	2.67	0.41
1:0:765:C:C5	1:0:1772:C:C1'	3.01	0.41
1:0:2144:C:O2	1:0:2156:A:C2	2.73	0.41
3:S:42:ARG:HG2	3:S:42:ARG:NH1	2.32	0.41
1:0:2516:U:H2'	1:0:2517:C:H6	1.85	0.41
1:0:1199:U:C5	1:0:1201:G:O6	2.73	0.41
1:0:2310:G:N2	1:0:2364:C:N3	2.67	0.41
1:0:215:G:C6	1:0:216:U:C2	3.09	0.41
1:0:1656:U:C2'	1:0:1657:A:C5'	2.98	0.41
1:0:1249:G:HO2'	1:0:1250:A:P	2.43	0.41
1:0:1444:C:H2'	1:0:1445:A:C8	2.56	0.41
1:0:1192:A:C2	1:0:1193:G:N7	2.88	0.41
1:0:343:A:N6	1:0:346:C:C4	2.88	0.41
1:0:2838:U:O4	1:0:2839:G:O6	2.39	0.41
1:0:1541:G:H2'	1:0:1542:G:O5'	2.21	0.41
1:0:702:A:H2'	1:0:792:U:O2'	2.20	0.41
1:0:641:G:N1	1:0:645:G:C6	2.89	0.41
1:0:2652:G:O2'	1:0:2653:A:H5'	2.20	0.41
1:0:2396:C:H6	1:0:2396:C:H5'	1.85	0.41
1:0:224:G:C4'	1:0:399:G:C6	3.03	0.41
1:0:224:G:H4'	1:0:399:G:C5	2.55	0.41
1:0:1501:C:C4	1:0:1502:G:N7	2.88	0.41
1:0:1996:A:O2'	1:0:1997:A:C5'	2.65	0.41
4:W:25:LEU:CD1	4:W:43:VAL:HG22	2.49	0.41
1:0:1583:A:O2'	1:0:1584:G:OP2	2.33	0.41
1:0:36:G:C2	1:0:37:C:C2	3.09	0.41
1:0:459:A:C4'	1:0:459:A:OP1	2.68	0.41
1:0:295:C:H42	1:0:296:A:N6	2.18	0.41
1:0:2347:C:O2'	1:0:2348:A:H5'	2.20	0.41
1:0:849:G:C8	1:0:850:C:C5	3.08	0.41
1:0:180:C:C4	1:0:181:A:N7	2.89	0.41
1:0:804:C:O2'	1:0:805:G:C5'	2.68	0.41
1:0:1139:A:O2'	1:0:1140:A:O5'	2.38	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:1780:A:N6	1:0:1781:C:N4	2.67	0.41
1:0:2451:G:C4	1:0:2454:C:N4	2.88	0.41
1:0:985:G:H1'	1:0:1001:A:H62	1.84	0.41
1:0:1607:A:C6	1:0:1608:U:C4	3.08	0.41
1:0:211:U:H2'	1:0:212:U:C5'	2.51	0.41
1:0:2218:G:C2'	1:0:2219:U:H5'	2.51	0.41
1:0:994:A:N7	1:0:995:A:C4	2.87	0.41
1:0:1508:G:C5	1:0:1512:A:N6	2.88	0.41
1:0:2418:A:C2	1:0:2564:U:H4'	2.55	0.41
1:0:2006:G:N2	1:0:2024:U:O2	2.53	0.41
1:0:2617:G:HO2'	1:0:2618:A:H8	1.68	0.41
1:0:2252:A:H2'	1:0:2253:A:O4'	2.21	0.41
4:W:13:ASP:O	4:W:16:LYS:HB3	2.21	0.41
1:0:1408:A:H2	1:0:1411:C:C2	2.39	0.41
1:0:1851:A:O5'	1:0:1851:A:H8	2.03	0.41
1:0:2837:G:H8	1:0:2837:G:O5'	2.02	0.41
1:0:2842:C:OP1	1:0:2842:C:C6	2.74	0.41
1:0:2528:G:C2	1:0:2529:G:N7	2.88	0.41
1:0:1759:A:C6	1:0:1968:G:C6	3.08	0.41
1:0:1956:G:C6	1:0:1957:C:C4	3.08	0.41
1:0:147:G:C5	1:0:148:C:H1'	2.54	0.41
1:0:2339:A:C2	1:0:2340:C:H1'	2.56	0.41
1:0:2177:U:H2'	1:0:2178:U:C6	2.53	0.41
1:0:1460:G:H2'	1:0:1461:C:C6	2.55	0.41
1:0:497:C:C2	1:0:505:G:C2	3.08	0.41
1:0:2333:A:N6	1:0:2343:C:H42	2.18	0.41
1:0:500:G:C6	1:0:501:G:C4	3.08	0.41
1:0:762:A:C6	1:0:1634:A:C2	3.09	0.41
1:0:2410:U:OP2	1:0:2411:A:OP2	2.39	0.41
1:0:1171:A:C5	1:0:1172:U:C4	3.09	0.41
1:0:580:A:N7	1:0:584:A:N6	2.68	0.41
1:0:1363:C:C2'	1:0:1364:C:H5'	2.50	0.41
1:0:1391:A:N7	1:0:1393:G:N7	2.68	0.41
4:W:37:LEU:C	4:W:37:LEU:CD2	2.89	0.41
1:0:2035:G:O2'	1:0:2036:G:H5'	2.20	0.41
1:0:867:G:C5	1:0:868:U:C5	3.08	0.41
1:0:2614:A:C2'	1:0:2615:U:O5'	2.68	0.41
1:0:2779:C:H3'	1:0:2779:C:C6	2.55	0.41
1:0:2836:U:H3'	1:0:2836:U:H6	1.83	0.41
1:0:2603:G:C2	1:0:2604:G:C8	3.08	0.41
1:0:387:A:H1'	1:0:414:A:N6	2.36	0.41
1:0:829:C:C4	1:0:1206:G:C2	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2803:C:H2'	1:0:2804:G:H8	1.85	0.41
1:0:1928:G:OP1	1:0:1928:G:C8	2.73	0.41
3:S:51:VAL:HG12	3:S:51:VAL:O	2.21	0.41
1:0:109:A:H2'	1:0:110:U:C5'	2.51	0.41
1:0:114:C:H2'	1:0:115:G:O4'	2.20	0.41
1:0:1294:G:O2'	1:0:1295:U:H5'	2.20	0.41
1:0:2055:G:C2	1:0:2417:U:O2	2.74	0.41
1:0:798:G:O2'	1:0:1770:U:H5''	2.20	0.41
2:R:56:MET:HE2	2:R:58:VAL:HG22	2.02	0.41
1:0:239:A:C5'	1:0:620:G:H5'	2.45	0.41
1:0:1310:C:H2'	1:0:1311:C:C6	2.45	0.41
1:0:520:C:C4	1:0:521:U:C6	3.08	0.41
1:0:1441:A:C4	1:0:1586:A:OP2	2.73	0.41
1:0:770:U:C6	1:0:770:U:H3'	2.56	0.41
1:0:1923:U:O2'	1:0:1924:C:H5	2.04	0.41
1:0:468:A:C2	1:0:470:U:C4	3.08	0.41
1:0:29:U:O5'	1:0:29:U:H6	2.03	0.41
1:0:668:A:O2'	1:0:669:G:H4'	2.21	0.41
1:0:1567:A:H2'	1:0:1568:A:H8	1.83	0.41
2:R:38:ILE:HG21	2:R:53:ILE:HD11	2.02	0.41
1:0:644:A:H2'	1:0:645:G:H5'	2.02	0.41
1:0:1690:U:H2'	1:0:1691:G:C5'	2.50	0.41
1:0:638:A:C5	1:0:647:G:N2	2.89	0.41
1:0:1859:A:C4	1:0:1860:A:C8	3.09	0.41
1:0:60:A:H2'	1:0:61:U:H5'	2.02	0.41
1:0:1999:U:O2'	1:0:2000:U:H5'	2.20	0.41
1:0:162:C:H6	1:0:162:C:O5'	2.03	0.41
1:0:2526:U:C4	1:0:2545:A:N7	2.89	0.41
1:0:1474:A:C2'	1:0:1475:U:H5'	2.49	0.41
1:0:1011:A:C6	1:0:1166:A:C5	3.09	0.41
1:0:953:G:C6	1:0:954:U:N3	2.89	0.41
3:S:85:ASP:H	3:S:86:PRO:HD2	1.86	0.41
1:0:2074:U:C5	1:0:2075:U:C6	3.09	0.41
1:0:1253:C:H2'	1:0:1254:G:O5'	2.20	0.41
1:0:1981:A:H4'	1:0:2704:U:O2'	2.21	0.41
1:0:1964:A:H3'	1:0:1965:U:H5''	1.98	0.41
1:0:970:A:N6	1:0:971:A:N6	2.69	0.41
1:0:1604:A:O2'	1:0:1605:A:H5'	2.21	0.41
2:R:91:LEU:CD2	2:R:91:LEU:H	2.34	0.41
1:0:1958:G:H2'	1:0:1959:U:H6	1.83	0.41
1:0:1055:A:H3'	1:0:1056:U:C5'	2.51	0.41
2:R:88:ILE:HG13	2:R:89:GLU:N	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2537:C:H2'	1:0:2538:C:O4'	2.21	0.41
1:0:941:U:C2'	1:0:942:U:H5'	2.50	0.41
1:0:2526:U:C5	1:0:2545:A:N7	2.89	0.41
1:0:1716:G:O6	1:0:1754:G:C4	2.74	0.41
1:0:199:A:O4'	1:0:199:A:OP2	2.38	0.41
1:0:2007:G:C6	1:0:2008:C:N4	2.88	0.41
1:0:1103:C:C5	1:0:1104:G:N7	2.88	0.41
1:0:1918:G:N2	1:0:1947:G:C8	2.89	0.41
1:0:1412:C:H5'	2:R:22:ARG:HH22	1.85	0.41
1:0:1359:G:C8	1:0:1359:G:H5'	2.56	0.41
2:R:35:LYS:HD3	2:R:53:ILE:O	2.20	0.41
1:0:1108:U:C2'	1:0:1109:A:H5'	2.51	0.41
1:0:644:A:N3	1:0:2382:C:H4'	2.36	0.41
1:0:644:A:H2'	1:0:645:G:C4'	2.51	0.41
1:0:348:U:O3'	3:S:13:LYS:NZ	2.52	0.41
1:0:624:A:C2'	1:0:625:A:H5'	2.51	0.41
1:0:1160:C:O2'	1:0:1161:U:H5'	2.20	0.41
1:0:1369:G:C2	1:0:1370:U:C2	3.08	0.41
1:0:2713:A:H8	1:0:2713:A:O5'	2.04	0.41
1:0:661:C:H2'	1:0:662:G:H8	1.85	0.41
1:0:1817:U:C3'	1:0:1817:U:C6	3.04	0.41
1:0:2799:C:C5	1:0:2800:C:C4	3.09	0.41
1:0:829:C:C6	1:0:1206:G:N2	2.89	0.41
1:0:1837:G:H2'	1:0:1838:G:H8	1.85	0.41
1:0:1069:G:H8	1:0:1069:G:O5'	2.03	0.41
1:0:484:G:N2	1:0:485:G:C4	2.89	0.41
1:0:55:A:C2'	1:0:56:C:H5'	2.51	0.41
1:0:1745:C:H2'	1:0:1746:A:C5'	2.51	0.41
1:0:2671:C:O2'	1:0:2672:U:H5'	2.20	0.41
1:0:1472:C:H5''	1:0:1473:U:OP2	2.21	0.41
1:0:173:A:N3	1:0:173:A:H2'	2.36	0.41
1:0:2419:C:N4	1:0:2420:C:O2	2.54	0.41
1:0:2199:C:C2	1:0:2200:G:C8	3.09	0.41
1:0:2198:U:C3'	1:0:2199:C:C4'	2.99	0.41
1:0:1532:A:C2	1:0:1533:G:C5	3.09	0.41
1:0:931:G:C5	1:0:932:G:C8	3.09	0.41
1:0:1696:C:C5	1:0:1697:U:C5	3.09	0.41
1:0:1201:G:O5'	1:0:1201:G:H8	2.04	0.41
1:0:982:C:C2'	1:0:983:G:C5'	2.99	0.41
1:0:2242:C:N4	1:0:2257:A:C6	2.89	0.41
1:0:614:G:C5	1:0:615:C:C5	3.09	0.41
1:0:582:G:C3'	1:0:583:C:H3'	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:1:107:LYS:HG2	5:1:108:GLY:N	2.35	0.41
1:0:1223:G:C4	1:0:1250:A:N6	2.83	0.41
1:0:1231:A:C6	1:0:1245:G:C6	3.09	0.41
1:0:1512:A:H5''	1:0:1513:U:OP1	2.21	0.41
1:0:137:A:H2'	1:0:138:G:C5'	2.50	0.41
1:0:2322:U:H4'	1:0:2352:A:O3'	2.21	0.41
2:R:94:GLN:HA	5:1:51:LYS:CE	2.50	0.41
1:0:756:C:H2'	1:0:757:U:O4'	2.21	0.41
1:0:961:G:C4	1:0:962:C:C6	3.09	0.41
1:0:2014:A:H1'	1:0:2434:G:O2'	2.20	0.41
1:0:2024:U:C2	1:0:2025:A:H8	2.38	0.41
1:0:857:U:O2'	1:0:858:G:H5'	2.21	0.41
1:0:2724:G:N7	1:0:2735:C:H1'	2.36	0.41
1:0:2739:G:H2'	1:0:2740:C:O4'	2.21	0.41
1:0:1683:G:H2'	1:0:1684:G:C5'	2.51	0.41
1:0:2271:C:H2'	1:0:2272:A:O5'	2.21	0.41
1:0:1332:G:C2	1:0:1333:G:C2	3.09	0.41
1:0:2666:U:H2'	1:0:2667:C:O4'	2.21	0.41
1:0:2213:G:O2'	1:0:2214:G:H5'	2.20	0.41
1:0:2436:U:O2'	1:0:2437:G:H5'	2.20	0.41
1:0:1789:U:C4	1:0:1811:A:C2	3.09	0.41
1:0:1788:C:N3	1:0:1815:G:C6	2.89	0.41
1:0:1626:A:C5'	1:0:1627:C:OP2	2.65	0.41
1:0:1941:C:H2'	1:0:1942:G:H8	1.86	0.41
1:0:2375:G:O2'	1:0:2376:G:H5'	2.21	0.41
1:0:2355:A:H8	1:0:2355:A:P	2.44	0.41
1:0:525:A:H2'	1:0:526:C:C5'	2.51	0.41
1:0:294:U:H2'	1:0:295:C:H6	1.86	0.41
1:0:389:G:H2'	1:0:390:U:C5	2.55	0.41
1:0:1181:C:O5'	1:0:1181:C:H6	2.02	0.41
1:0:1317:G:O2'	1:0:1318:A:H5'	2.21	0.41
1:0:747:A:H2'	1:0:748:A:O5'	2.20	0.41
5:1:109:GLU:H	5:1:109:GLU:HG3	1.60	0.41
1:0:2146:A:O2'	1:0:2147:C:H5'	2.21	0.41
1:0:819:C:C2	1:0:820:U:H5	2.38	0.41
4:W:28:LEU:CD1	4:W:42:ARG:HG3	2.49	0.41
1:0:632:A:C2	1:0:633:G:C5	3.09	0.41
3:S:15:HIS:C	3:S:15:HIS:ND1	2.74	0.41
1:0:1729:C:H2'	1:0:1730:G:C8	2.55	0.41
1:0:1210:C:N3	1:0:1211:G:N7	2.69	0.41
1:0:1850:G:O6	1:0:1867:A:C2'	2.69	0.41
1:0:2603:G:N2	1:0:2604:G:H1'	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2225:G:H2'	1:0:2226:A:H8	1.85	0.41
1:0:1787:U:H2'	1:0:1788:C:H6	1.82	0.41
1:0:2447:G:O2'	1:0:2448:A:C5'	2.67	0.41
1:0:1626:A:C4'	1:0:1627:C:OP2	2.69	0.41
1:0:2764:U:O2'	1:0:2765:C:C5'	2.69	0.41
1:0:2264:C:H4'	1:0:2267:A:H62	1.84	0.41
1:0:1928:G:C2	1:0:1929:U:C2	3.09	0.41
1:0:2046:C:N4	1:0:2047:C:N4	2.69	0.41
1:0:2774:U:H2'	1:0:2775:U:H5''	2.03	0.41
1:0:1073:G:C8	1:0:1099:A:N3	2.89	0.40
1:0:1537:U:C4	1:0:1538:A:N6	2.90	0.40
1:0:460:U:C5	1:0:592:G:H1'	2.55	0.40
1:0:873:U:OP1	1:0:2245:A:N6	2.55	0.40
1:0:82:G:HO2'	1:0:83:A:H5'	1.82	0.40
1:0:1713:G:C6	1:0:1714:A:C4	3.09	0.40
1:0:2306:A:C5	1:0:2307:A:C6	3.09	0.40
1:0:404:A:C6	1:0:405:C:N3	2.89	0.40
1:0:212:U:C2	1:0:443:A:C2	3.09	0.40
1:0:545:C:O2'	1:0:546:A:C5'	2.60	0.40
3:S:84:VAL:HG13	3:S:88:THR:O	2.21	0.40
1:0:492:G:H2'	1:0:517:A:N6	2.35	0.40
1:0:1437:A:O2'	1:0:1438:G:C5'	2.68	0.40
1:0:2524:G:C2'	1:0:2525:U:C5'	2.99	0.40
1:0:2593:A:O2'	1:0:2594:U:H5'	2.21	0.40
1:0:2598:C:HO2'	1:0:2599:U:H5'	1.79	0.40
1:0:2440:C:O2'	1:0:2441:U:H5'	2.21	0.40
1:0:672:C:HO2'	1:0:673:G:H5'	1.82	0.40
1:0:1881:U:H6	1:0:1881:U:O5'	2.04	0.40
1:0:2841:U:O2'	1:0:2842:C:OP2	2.37	0.40
1:0:1982:C:C2'	1:0:1983:G:H5'	2.52	0.40
1:0:2180:U:C5	1:0:2203:G:C5	3.09	0.40
1:0:1502:G:H2'	1:0:1503:G:C8	2.53	0.40
1:0:2079:A:O2'	1:0:2080:U:H5'	2.21	0.40
1:0:2817:A:N1	1:0:2851:G:C6	2.89	0.40
1:0:388:G:H2'	1:0:389:G:C8	2.55	0.40
1:0:319:G:C1'	1:0:511:A:O4'	2.69	0.40
1:0:110:U:C6	1:0:110:U:H5'	2.56	0.40
1:0:942:U:O2'	1:0:943:U:H5'	2.21	0.40
1:0:1399:C:O2'	1:0:1484:G:O2'	2.39	0.40
1:0:2467:A:C2	1:0:2468:G:C5	3.09	0.40
1:0:2504:G:H2'	1:0:2504:G:N3	2.36	0.40
1:0:1660:G:C2	1:0:1661:C:N1	2.89	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:509:U:O2	1:0:510:G:O4'	2.39	0.40
1:0:341:A:H3'	1:0:341:A:H8	1.86	0.40
1:0:120:G:N2	1:0:121:G:H1'	2.36	0.40
1:0:866:U:O2'	1:0:867:G:H5'	2.21	0.40
1:0:1834:G:H2'	1:0:1835:C:C6	2.55	0.40
1:0:2652:G:C4	1:0:2653:A:C8	3.09	0.40
1:0:472:C:C6	1:0:472:C:H3'	2.57	0.40
1:0:461:A:N6	1:0:462:G:C6	2.89	0.40
1:0:1073:G:C8	1:0:1099:A:C2	3.10	0.40
1:0:86:U:P	3:S:42:ARG:NH2	2.88	0.40
1:0:1962:C:H2'	1:0:1963:G:H5'	2.02	0.40
1:0:1313:U:O2'	1:0:1314:A:OP2	2.35	0.40
1:0:62:U:C2'	1:0:63:A:C8	3.02	0.40
1:0:63:A:H5''	2:R:71:GLN:CB	2.37	0.40
1:0:27:G:N2	1:0:522:G:HO2'	2.18	0.40
1:0:867:G:H2'	1:0:868:U:O4'	2.21	0.40
1:0:1884:A:O2'	1:0:1885:C:H5'	2.21	0.40
1:0:2260:C:H2'	1:0:2261:G:H8	1.87	0.40
4:W:13:ASP:O	4:W:17:GLU:OE2	2.39	0.40
1:0:573:C:C2	1:0:574:C:C6	3.10	0.40
1:0:2738:A:C2'	1:0:2739:G:H5'	2.50	0.40
1:0:2826:C:O5'	1:0:2826:C:H6	2.04	0.40
1:0:530:G:C6	1:0:531:G:C6	3.09	0.40
1:0:1094:C:H4'	1:0:1096:A:C2	2.56	0.40
1:0:1804:U:O2'	1:0:1805:G:C5'	2.70	0.40
1:0:1032:A:H3'	1:0:1033:G:H4'	2.04	0.40
1:0:2845:C:C2'	1:0:2846:G:H5'	2.52	0.40
1:0:43:A:C2	1:0:44:G:N3	2.89	0.40
1:0:435:A:N6	1:0:436:A:N6	2.70	0.40
1:0:968:C:C6	1:0:968:C:H3'	2.57	0.40
1:0:2201:G:C2	1:0:2202:G:C8	3.10	0.40
1:0:2549:G:H2'	1:0:2550:C:O4'	2.21	0.40
1:0:1768:U:C2	1:0:1769:U:C5	3.09	0.40
1:0:2031:A:C6	1:0:2600:A:N1	2.90	0.40
1:0:1248:G:C6	1:0:1249:G:N1	2.88	0.40
1:0:1394:G:H2'	1:0:1395:A:O5'	2.21	0.40
1:0:749:C:C5	1:0:750:C:H5	2.40	0.40
1:0:2418:A:O5'	1:0:2418:A:H8	2.04	0.40
1:0:2781:G:H2'	1:0:2782:G:C5'	2.46	0.40
1:0:2260:C:O4'	1:0:2367:A:C2	2.75	0.40
1:0:322:A:O2'	1:0:323:G:OP1	2.39	0.40
1:0:2825:A:C6	1:0:2826:C:N4	2.89	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:0:2827:G:H2'	1:0:2828:C:O4'	2.20	0.40
1:0:1979:C:O2'	1:0:1980:A:C4'	2.69	0.40
1:0:1964:A:C3'	1:0:1965:U:C5'	2.95	0.40
1:0:2629:U:O2'	1:0:2630:C:H5'	2.22	0.40
1:0:1369:G:C6	1:0:1370:U:C2	3.08	0.40
1:0:2713:A:C4	1:0:2714:A:C8	3.09	0.40
1:0:1788:C:N4	1:0:1789:U:O4	2.54	0.40
1:0:1785:A:H2'	1:0:1786:C:H6	1.84	0.40
1:0:2818:G:H2'	1:0:2819:G:C5'	2.51	0.40
1:0:1148:G:C5	1:0:1149:G:H1'	2.57	0.40
1:0:1900:U:O2'	1:0:1901:A:H5'	2.22	0.40
1:0:2710:C:O5'	1:0:2710:C:H6	2.04	0.40
1:0:1943:A:H2'	1:0:1944:C:O4'	2.21	0.40
3:S:95:ARG:NH1	3:S:106:VAL:HA	2.34	0.40
1:0:70:A:OP1	1:0:111:G:H1'	2.22	0.40
1:0:71:A:HO2'	1:0:72:A:P	2.45	0.40
1:0:1293:A:O2'	1:0:1294:G:H5'	2.21	0.40
1:0:1340:C:H3'	1:0:1341:G:C8	2.57	0.40
1:0:2143:G:C5	1:0:2144:C:C4	3.10	0.40
4:W:41:HIS:CD2	4:W:42:ARG:N	2.89	0.40
1:0:203:G:O2'	1:0:204:A:H5'	2.22	0.40
1:0:2610:G:C6	1:0:2611:A:C5	3.08	0.40
1:0:521:U:H2'	1:0:522:G:H5'	2.02	0.40
1:0:1436:G:C8	1:0:1437:A:C8	3.10	0.40
1:0:780:U:H2'	1:0:781:G:H8	1.86	0.40
1:0:2320:G:C5	1:0:2321:C:C4	3.10	0.40
1:0:1382:G:C2	1:0:1383:C:C6	3.09	0.40
1:0:482:A:C2'	1:0:483:A:H5'	2.51	0.40
1:0:2753:C:H2'	1:0:2754:C:C6	2.42	0.40
1:0:2073:A:C2	1:0:2209:G:C2	3.09	0.40
1:0:339:U:O2'	3:S:79:SER:HB3	2.21	0.40
1:0:706:A:O2'	1:0:707:U:H5'	2.21	0.40
1:0:2338:C:H2'	1:0:2339:A:H8	1.83	0.40
1:0:2425:G:H8	1:0:2425:G:O5'	2.04	0.40
1:0:674:U:O5'	1:0:674:U:H6	2.04	0.40
1:0:2749:A:H2'	1:0:2750:G:C5'	2.50	0.40
1:0:557:U:H5''	1:0:558:G:OP1	2.22	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	R	91/95 (96%)	70 (77%)	16 (18%)	5 (6%)	3	26
3	S	108/115 (94%)	79 (73%)	24 (22%)	5 (5%)	4	32
4	W	64/67 (96%)	54 (84%)	8 (12%)	2 (3%)	7	46
5	1	98/112 (88%)	81 (83%)	13 (13%)	4 (4%)	4	37
All	All	361/389 (93%)	284 (79%)	61 (17%)	16 (4%)	4	34

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	S	42	ARG
3	S	65	PRO
4	W	2	LYS
5	1	49	PRO
2	R	69	ILE
5	1	50	ARG
3	S	60	PRO
3	S	93	ARG
5	1	99	GLY
2	R	8	GLN
2	R	6	ILE
4	W	10	GLN
2	R	12	ILE
2	R	60	GLY
5	1	87	VAL
3	S	85	ASP

### 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	
2	R	75/76 (99%)	61 (81%)	14 (19%)	2	11
3	S	91/96 (95%)	77 (85%)	14 (15%)	4	21
4	W	54/55 (98%)	43 (80%)	11 (20%)	2	8
5	1	83/93 (89%)	72 (87%)	11 (13%)	6	27
All	All	303/320 (95%)	253 (84%)	50 (16%)	3	18

All (50) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	R	5	ASP
2	R	7	LEU
2	R	17	TYR
2	R	36	THR
2	R	49	ARG
2	R	50	VAL
2	R	53	ILE
2	R	56	MET
2	R	59	PRO
2	R	62	ARG
2	R	63	LYS
2	R	74	ASP
2	R	75	ARG
2	R	80	VAL
3	S	5	SER
3	S	13	LYS
3	S	15	HIS
3	S	16	PHE
3	S	18	LYS
3	S	20	ASP
3	S	25	LEU
3	S	32	GLN
3	S	40	LEU
3	S	43	ASP
3	S	45	LYS
3	S	80	LYS
3	S	95	ARG
3	S	112	LYS
4	W	1	MET
4	W	5	GLU
4	W	6	MET
4	W	10	GLN
4	W	21	ARG

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Mol	Chain	Res	Type
4	W	29	ARG
4	W	41	HIS
4	W	44	ARG
4	W	46	LEU
4	W	50	VAL
4	W	54	ASN
5	1	15	LYS
5	1	17	SER
5	1	25	ARG
5	1	43	PHE
5	1	53	ILE
5	1	55	ASN
5	1	62	VAL
5	1	88	ASP
5	1	102	PHE
5	1	107	LYS
5	1	109	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (11) such sidechains are listed below:

Mol	Chain	Res	Type
2	R	94	GLN
3	S	15	HIS
3	S	32	GLN
3	S	57	ASN
3	S	64	ASN
3	S	71	GLN
4	W	36	GLN
5	1	24	ASN
5	1	55	ASN
5	1	97	GLN
5	1	100	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2798/2880 (97%)	580 (20%)	88 (3%)

All (580) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	14	A
1	0	25	U
1	0	33	C
1	0	35	G
1	0	45	C
1	0	49	U
1	0	50	G
1	0	59	G
1	0	67	G
1	0	68	C
1	0	69	G
1	0	70	A
1	0	71	A
1	0	72	A
1	0	73	A
1	0	74	G
1	0	76	C
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	99	U
1	0	100	G
1	0	103	U
1	0	105	G
1	0	110	U
1	0	117	A
1	0	118	U
1	0	119	G
1	0	123	A
1	0	124	A
1	0	129	A
1	0	135	U
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	175	C
1	0	181	A
1	0	182	G
1	0	183	U

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Mol	Chain	Res	Type
1	0	193	A
1	0	199	A
1	0	200	A
1	0	206	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	225	G
1	0	227	G
1	0	229	G
1	0	242	A
1	0	243	G
1	0	245	C
1	0	305	A
1	0	318	G
1	0	322	A
1	0	323	G
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
1	0	342	G
1	0	343	A
1	0	346	C
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	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	448	C
1	0	453	U
1	0	454	G
1	0	455	A
1	0	456	C

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Mol	Chain	Res	Type
1	0	459	A
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	468	A
1	0	484	G
1	0	491	A
1	0	492	G
1	0	495	C
1	0	514	G
1	0	515	A
1	0	518	A
1	0	537	C
1	0	538	A
1	0	539	A
1	0	541	C
1	0	542	A
1	0	553	C
1	0	554	U
1	0	555	U
1	0	556	A
1	0	558	G
1	0	559	C
1	0	572	G
1	0	580	A
1	0	582	G
1	0	583	C
1	0	584	A
1	0	593	C
1	0	595	A
1	0	601	A
1	0	602	C
1	0	613	A
1	0	617	U
1	0	624	A
1	0	628	A
1	0	632	A
1	0	633	G
1	0	636	G
1	0	637	G
1	0	638	A

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Mol	Chain	Res	Type
1	0	642	A
1	0	645	G
1	0	648	A
1	0	652	C
1	0	654	A
1	0	657	A
1	0	666	U
1	0	667	U
1	0	669	G
1	0	684	C
1	0	688	A
1	0	690	A
1	0	699	G
1	0	700	C
1	0	703	A
1	0	728	G
1	0	741	G
1	0	742	G
1	0	743	A
1	0	752	G
1	0	753	U
1	0	754	G
1	0	760	U
1	0	765	C
1	0	766	A
1	0	775	U
1	0	776	G
1	0	778	G
1	0	789	G
1	0	790	A
1	0	794	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	803	C
1	0	806	A
1	0	807	A
1	0	813	A
1	0	814	G

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Mol	Chain	Res	Type
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	919	U
1	0	920	G
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	941	U
1	0	944	A
1	0	952	A
1	0	957	G
1	0	968	C
1	0	970	A
1	0	972	C
1	0	973	U
1	0	981	C
1	0	984	A
1	0	994	A
1	0	995	A
1	0	996	C
1	0	1005	U
1	0	1006	C
1	0	1016	C
1	0	1019	U
1	0	1022	A
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G

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Mol	Chain	Res	Type
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1045	G
1	0	1056	U
1	0	1057	A
1	0	1058	G
1	0	1059	A
1	0	1072	U
1	0	1073	G
1	0	1077	U
1	0	1078	A
1	0	1081	A
1	0	1089	C
1	0	1090	C
1	0	1095	A
1	0	1096	A
1	0	1101	U
1	0	1120	C
1	0	1137	A
1	0	1138	A
1	0	1140	A
1	0	1142	G
1	0	1143	A
1	0	1145	C
1	0	1146	G
1	0	1149	G
1	0	1152	C
1	0	1153	A
1	0	1154	A
1	0	1155	G
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	1224	A
1	0	1226	A
1	0	1233	A
1	0	1234	C

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Mol	Chain	Res	Type
1	0	1240	G
1	0	1249	G
1	0	1250	A
1	0	1253	C
1	0	1254	G
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1266	G
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1288	A
1	0	1289	A
1	0	1300	A
1	0	1302	C
1	0	1313	U
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1326	U
1	0	1327	C
1	0	1334	A
1	0	1337	G
1	0	1338	G
1	0	1339	U
1	0	1340	C
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1354	A
1	0	1358	C
1	0	1359	G
1	0	1378	A
1	0	1381	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G

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Mol	Chain	Res	Type
1	0	1405	A
1	0	1409	U
1	0	1411	C
1	0	1428	G
1	0	1430	G
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1465	G
1	0	1467	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1484	G
1	0	1490	U
1	0	1491	C
1	0	1498	G
1	0	1505	U
1	0	1513	U
1	0	1514	C
1	0	1524	C
1	0	1528	C
1	0	1529	C
1	0	1552	C
1	0	1562	G
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1576	G
1	0	1583	A
1	0	1585	A
1	0	1595	A
1	0	1601	U
1	0	1619	A
1	0	1623	C
1	0	1625	A
1	0	1627	C

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Mol	Chain	Res	Type
1	0	1632	A
1	0	1633	C
1	0	1634	A
1	0	1635	G
1	0	1648	C
1	0	1651	U
1	0	1652	G
1	0	1657	A
1	0	1661	C
1	0	1664	G
1	0	1665	C
1	0	1671	A
1	0	1686	A
1	0	1691	G
1	0	1692	C
1	0	1698	C
1	0	1709	U
1	0	1712	G
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1723	U
1	0	1724	C
1	0	1732	U
1	0	1747	G
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1775	A
1	0	1776	A
1	0	1777	A
1	0	1778	U
1	0	1791	C
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C

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Mol	Chain	Res	Type
1	0	1811	A
1	0	1812	U
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1842	G
1	0	1884	A
1	0	1890	G
1	0	1903	C
1	0	1906	U
1	0	1919	A
1	0	1920	A
1	0	1922	U
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1948	C
1	0	1949	A
1	0	1950	C
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1965	U
1	0	1974	U
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2004	U
1	0	2006	G
1	0	2007	G
1	0	2009	U
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

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Mol	Chain	Res	Type
1	0	2034	A
1	0	2035	G
1	0	2038	C
1	0	2039	G
1	0	2043	A
1	0	2044	G
1	0	2045	A
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2064	U
1	0	2075	U
1	0	2076	G
1	0	2099	G
1	0	2107	G
1	0	2110	G
1	0	2115	C
1	0	2116	G
1	0	2117	A
1	0	2126	U
1	0	2127	U
1	0	2128	U
1	0	2129	U
1	0	2140	G
1	0	2142	G
1	0	2181	A
1	0	2188	A
1	0	2189	A
1	0	2191	A
1	0	2192	U
1	0	2195	C
1	0	2199	C
1	0	2204	A
1	0	2205	C
1	0	2217	G
1	0	2218	G
1	0	2222	U
1	0	2229	G
1	0	2230	G
1	0	2238	G
1	0	2241	U
1	0	2245	A

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Mol	Chain	Res	Type
1	0	2246	A
1	0	2247	A
1	0	2252	A
1	0	2262	C
1	0	2268	G
1	0	2275	U
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2291	U
1	0	2298	U
1	0	2300	G
1	0	2306	A
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2369	U
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2410	U
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	2448	A
1	0	2454	C
1	0	2455	A

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Mol	Chain	Res	Type
1	0	2470	U
1	0	2476	A
1	0	2477	C
1	0	2481	G
1	0	2482	A
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	2508	G
1	0	2509	A
1	0	2521	A
1	0	2522	G
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2552	C
1	0	2561	G
1	0	2565	C
1	0	2582	G
1	0	2588	U
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2609	G
1	0	2624	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	2670	C
1	0	2691	C
1	0	2693	U
1	0	2694	G
1	0	2700	U
1	0	2707	G
1	0	2712	G

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Mol	Chain	Res	Type
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2731	G
1	0	2732	C
1	0	2737	A
1	0	2745	A
1	0	2757	G
1	0	2758	A
1	0	2759	U
1	0	2761	A
1	0	2769	C
1	0	2771	C
1	0	2774	U
1	0	2775	U
1	0	2777	A
1	0	2782	G
1	0	2783	U
1	0	2795	A
1	0	2796	A
1	0	2798	A
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2824	C
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2854	G
1	0	2855	C
1	0	2867	G
1	0	2868	G

All (88) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	48	A
1	0	67	G
1	0	117	A
1	0	192	G
1	0	198	A

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Mol	Chain	Res	Type
1	0	399	G
1	0	454	G
1	0	458	G
1	0	466	A
1	0	485	G
1	0	571	U
1	0	583	C
1	0	683	A
1	0	698	A
1	0	741	G
1	0	765	C
1	0	777	A
1	0	788	G
1	0	789	G
1	0	795	A
1	0	801	A
1	0	804	C
1	0	814	G
1	0	956	A
1	0	1139	A
1	0	1141	U
1	0	1223	G
1	0	1225	G
1	0	1249	G
1	0	1261	G
1	0	1263	G
1	0	1264	C
1	0	1266	G
1	0	1278	A
1	0	1299	A
1	0	1301	U
1	0	1313	U
1	0	1337	G
1	0	1338	G
1	0	1342	U
1	0	1355	A
1	0	1357	U
1	0	1410	U
1	0	1442	C
1	0	1626	A
1	0	1632	A
1	0	1633	C

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Mol	Chain	Res	Type
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1670	G
1	0	1684	G
1	0	1685	A
1	0	1691	G
1	0	1698	C
1	0	1715	A
1	0	1775	A
1	0	1777	A
1	0	1807	A
1	0	1811	A
1	0	1820	G
1	0	1889	G
1	0	1938	U
1	0	1963	G
1	0	1975	G
1	0	2016	A
1	0	2018	G
1	0	2034	A
1	0	2059	U
1	0	2204	A
1	0	2228	U
1	0	2237	C
1	0	2254	C
1	0	2261	G
1	0	2404	A
1	0	2409	A
1	0	2418	A
1	0	2476	A
1	0	2482	A
1	0	2624	G
1	0	2633	A
1	0	2660	C
1	0	2693	U
1	0	2758	A
1	0	2823	G
1	0	2841	U
1	0	2848	A
1	0	2867	G

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

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

There are no ligands in this entry.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

### 6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

### 6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

### 6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.