



wwPDB EM Map/Model Validation Report ⓘ

Apr 10, 2016 – 02:19 PM BST

PDB ID : 4D61
EMDB ID: : EMD-2813
Title : Cryo-EM structures of ribosomal 80S complexes with termination factors and cricket paralysis virus IRES reveal the IRES in the translocated state
Authors : Muhs, M.; Hilal, T.; Mielke, T.; Skabkin, M.A.; Sanbonmatsu, K.Y.; Pestova, T.V.; Spahn, C.M.T.
Deposited on : 2014-11-07
Resolution : 9.00 Å(reported)

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.

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

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>

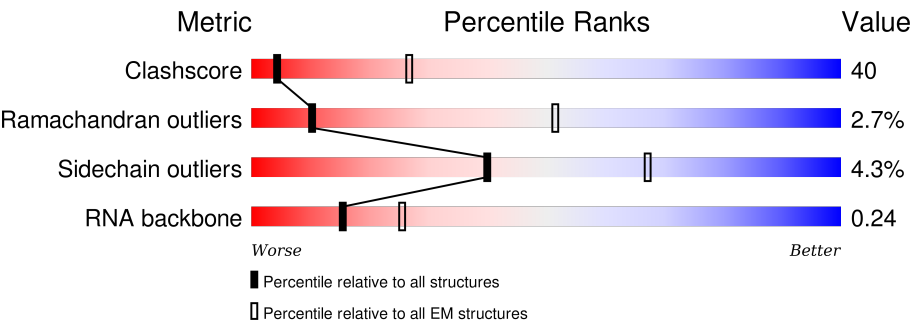
MolProbity : 4.02b-467
Mogul : unknown
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : trunk27241

1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 9.00 Å.

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






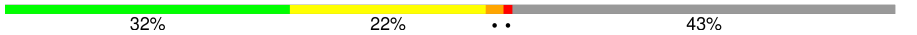




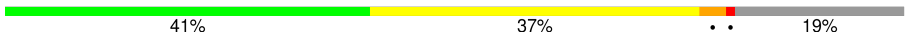

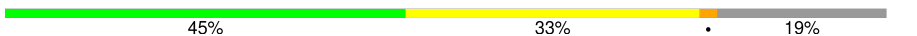

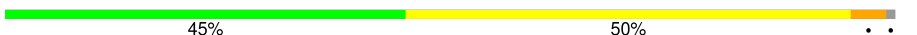
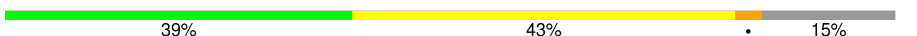











Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686
RNA backbone	3027	244

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	1	1869	<div><div>6%38%47%7%</div></div>
2	A	295	<div><div>42%31%26%</div></div>
3	B	264	<div><div>33%41%6%19%</div></div>
4	C	293	<div><div>49%23%24%</div></div>
5	D	243	<div><div>52%34%13%</div></div>
6	E	263	<div><div>54%40%</div></div>
7	F	204	<div><div>49%38%6%8%</div></div>
8	G	249	<div><div>51%39%7%</div></div>

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Mol	Chain	Length	Quality of chain
9	H	194	
10	I	208	
11	J	194	
12	K	165	
13	L	158	
14	M	132	
15	N	151	
16	O	151	
17	P	145	
18	Q	146	
19	R	135	
20	S	152	
21	T	145	
22	U	119	
23	V	83	
24	W	130	
25	X	143	
26	Y	133	
27	Z	125	
28	a	115	
29	b	84	
30	c	69	
31	d	56	
32	e	59	
33	f	156	

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Mol	Chain	Length	Quality of chain
34	g	317	<div><div></div><div>93%</div><div>5% •</div></div>
35	h	436	<div><div></div><div>97%</div><div>•</div></div>
36	i	426	<div><div></div><div>98%</div><div>•</div></div>
37	j	201	<div><div></div><div>45%</div><div>49%</div><div>6%</div></div>

2 Entry composition

There are 37 unique types of molecules in this entry. The entry contains 86384 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 18S RRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	1	1742	Total	C	N	O	P	0	0
			37159	16589	6665	12164	1741		

- Molecule 2 is a protein called 40S RIBOSOMAL PROTEIN SA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	A	218	Total	C	N	O	S	0	0
			1719	1091	301	319	8		

- Molecule 3 is a protein called 40S RIBOSOMAL PROTEIN S3A.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	B	213	Total	C	N	O	S	0	0
			1729	1098	309	308	14		

- Molecule 4 is a protein called 40S RIBOSOMAL PROTEIN S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	C	222	Total	C	N	O	S	0	0
			1724	1114	296	304	10		

- Molecule 5 is a protein called 40S RIBOSOMAL PROTEIN S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	D	212	Total	C	N	O	S	0	0
			1646	1050	299	290	7		

- Molecule 6 is a protein called 40S RIBOSOMAL PROTEIN S4, Y ISOFORM 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	E	257	Total	C	N	O	S	0	0
			2031	1298	381	344	8		

- Molecule 7 is a protein called 40S RIBOSOMAL PROTEIN S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	F	188	Total	C	N	O	S	0	0
			1486	930	283	266	7		

- Molecule 8 is a protein called 40S RIBOSOMAL PROTEIN S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	G	232	Total	C	N	O	S	0	0
			1884	1176	379	322	7		

- Molecule 9 is a protein called 40S RIBOSOMAL PROTEIN S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	H	191	Total	C	N	O	S	0	0
			1535	978	282	274	1		

- Molecule 10 is a protein called 40S RIBOSOMAL PROTEIN S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	I	207	Total	C	N	O	S	0	0
			1695	1064	334	292	5		

- Molecule 11 is a protein called 40S RIBOSOMAL PROTEIN S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	J	179	Total	C	N	O	S	0	0
			1495	953	299	241	2		

- Molecule 12 is a protein called 40S RIBOSOMAL PROTEIN S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	K	94	Total	C	N	O	S	0	0
			791	519	138	129	5		

- Molecule 13 is a protein called 40S RIBOSOMAL PROTEIN S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	L	146	Total	C	N	O	S	0	0
			1199	764	224	205	6		

- Molecule 14 is a protein called 40S RIBOSOMAL PROTEIN S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	M	120	Total	C	N	O	S	0	0
			931	584	164	174	9		

- Molecule 15 is a protein called 40S RIBOSOMAL PROTEIN S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	N	150	Total	C	N	O	S	0	0
			1207	773	229	204	1		

- Molecule 16 is a protein called 40S RIBOSOMAL PROTEIN S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	O	137	Total	C	N	O	S	0	0
			1023	627	200	190	6		

- Molecule 17 is a protein called 40S RIBOSOMAL PROTEIN S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	P	118	Total	C	N	O	S	0	0
			981	625	183	166	7		

- Molecule 18 is a protein called 40S RIBOSOMAL PROTEIN S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Q	139	Total	C	N	O	S	0	0
			1108	704	210	191	3		

- Molecule 19 is a protein called 40S RIBOSOMAL PROTEIN S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	R	109	Total	C	N	O	S	0	0
			893	561	170	159	3		

- Molecule 20 is a protein called 40S RIBOSOMAL PROTEIN S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	S	142	Total	C	N	O	S	0	0
			1172	736	236	199	1		

- Molecule 21 is a protein called 40S RIBOSOMAL PROTEIN S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	T	143	Total	C	N	O	S	0	0
			1112	697	214	198	3		

- Molecule 22 is a protein called 40S RIBOSOMAL PROTEIN S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	U	101	Total	C	N	O	S	0	0
			803	502	153	144	4		

- Molecule 23 is a protein called 40S RIBOSOMAL PROTEIN S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	V	83	Total	C	N	O	S	0	0
			636	393	117	121	5		

- Molecule 24 is a protein called 40S RIBOSOMAL PROTEIN S15A.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	W	129	Total	C	N	O	S	0	0
			1033	659	193	175	6		

- Molecule 25 is a protein called 40S RIBOSOMAL PROTEIN S23.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	X	134	Total	C	N	O	S	0	0
			1046	663	205	176	2		

- Molecule 26 is a protein called 40S RIBOSOMAL PROTEIN S24.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Y	122	Total	C	N	O	S	0	0
			1002	635	196	166	5		

- Molecule 27 is a protein called 40S RIBOSOMAL PROTEIN S25.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	Z	76	Total	C	N	O	S	0	0
			605	387	112	105	1		

- Molecule 28 is a protein called 40S RIBOSOMAL PROTEIN S26.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	a	96	Total	C	N	O	S	0	0
			767	476	159	127	5		

- Molecule 29 is a protein called 40S RIBOSOMAL PROTEIN S27.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	b	80	Total	C	N	O	S	0	0
			625	391	116	111	7		

- Molecule 30 is a protein called 40S RIBOSOMAL PROTEIN S28.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	c	62	Total	C	N	O	S	0	0
			490	298	99	91	2		

- Molecule 31 is a protein called 40S RIBOSOMAL PROTEIN S29.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	d	53	Total	C	N	O	S	0	0
			444	278	90	71	5		

- Molecule 32 is a protein called 40S RIBOSOMAL PROTEIN S30.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	e	51	Total	C	N	O	S	0	0
			412	258	90	63	1		

- Molecule 33 is a protein called UBIQUITIN-40S RIBOSOMAL PROTEIN S27A.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	f	61	Total	C	N	O	S	0	0
			497	312	94	84	7		

- Molecule 34 is a protein called GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-2-LIKE 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	g	314	Total	C	N	O	S	0	0
			2440	1537	425	466	12		

- Molecule 35 is a protein called EUKARYOTIC PEPTIDE CHAIN RELEASE FACTOR SUBUNIT 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	h	436	Total	C	N	O	S	0	0
			3450	2193	582	663	12		

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
h	438	LEU	-	EXPRESSION TAG	UNP P62495
h	439	GLU	-	EXPRESSION TAG	UNP P62495
h	440	HIS	-	EXPRESSION TAG	UNP P62495

- Molecule 36 is a protein called EUKARYOTIC PEPTIDE CHAIN RELEASE FACTOR GTP-BINDING SUBUNIT ERF3A.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	i	426	Total	C	N	O	S	0	0
			3357	2135	577	624	21		


- Molecule 37 is a RNA chain called CRICKET PARALYSIS VIRUS IRES RNA.

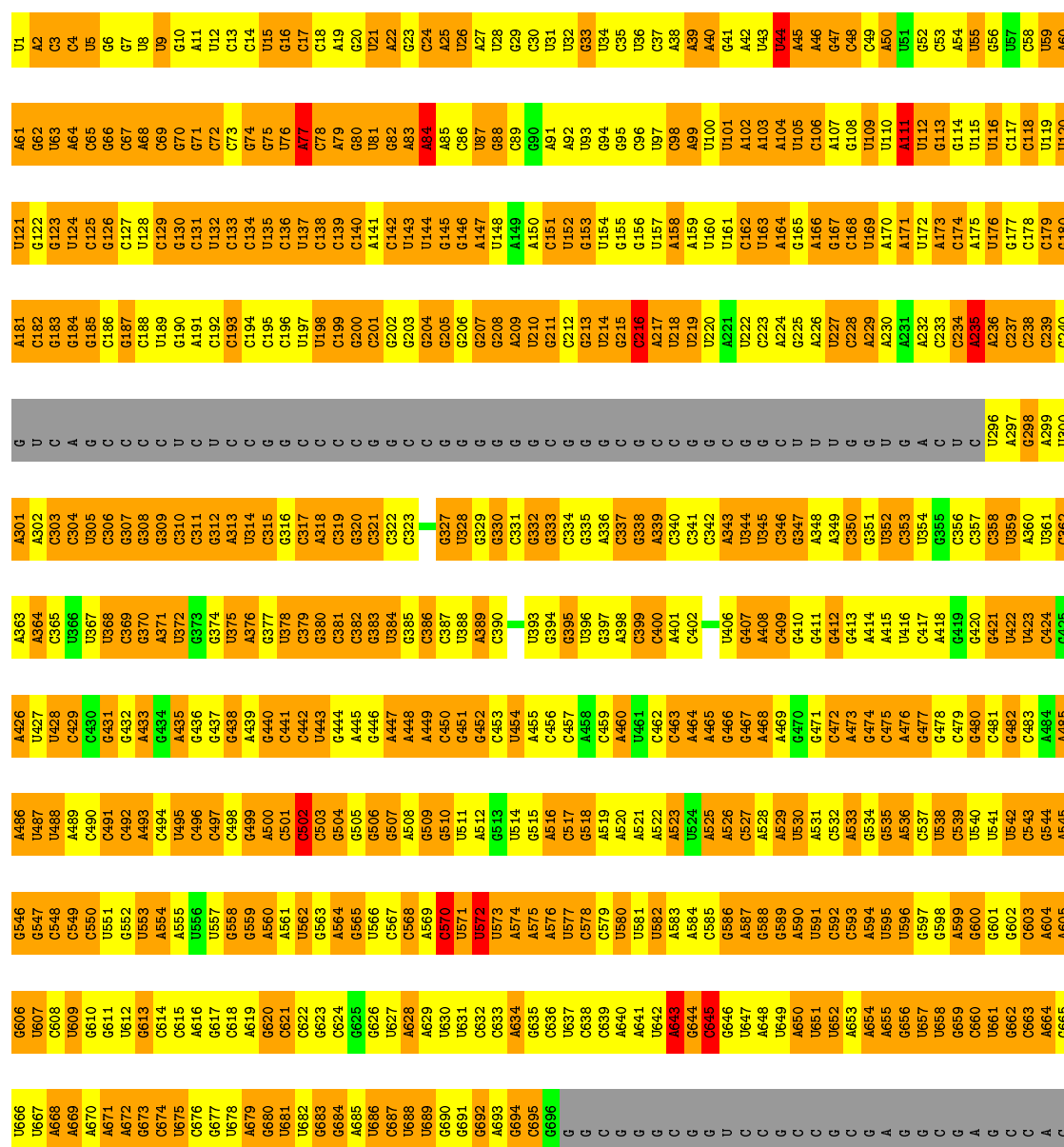
Mol	Chain	Residues	Atoms					AltConf	Trace
37	j	201	Total	C	N	O	P	0	0
			4257	1908	735	1413	201		

3 Residue-property plots

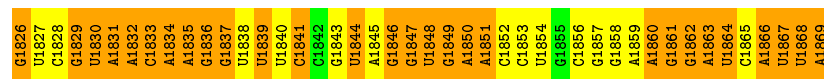
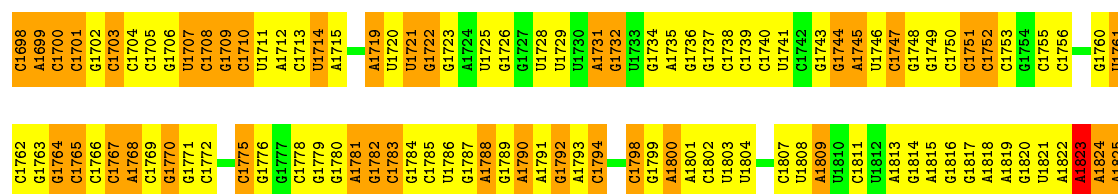
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric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

• Molecule 1: 18S rRNA

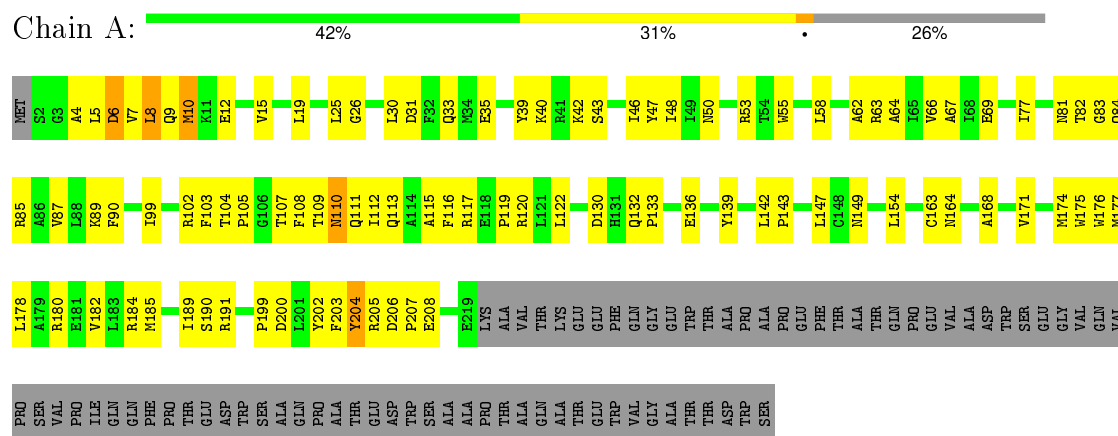
Chain 1: 



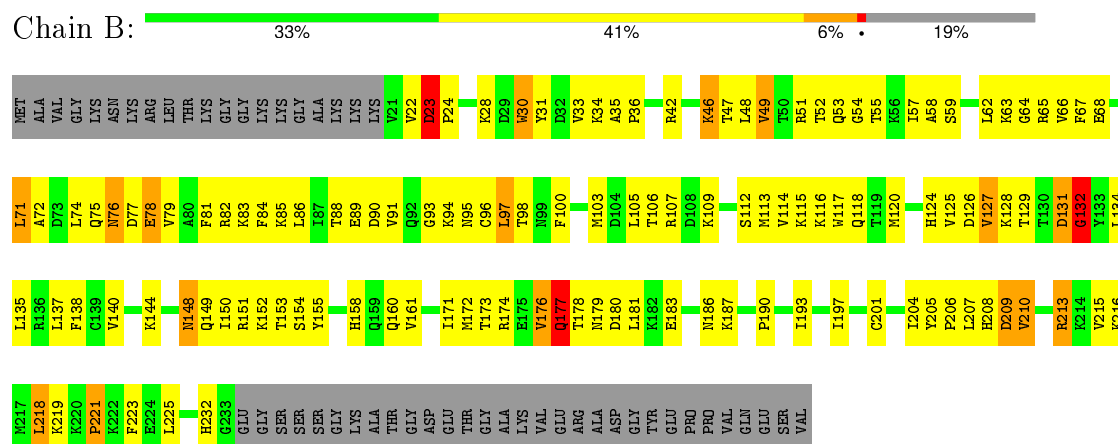
G1633	U1576	G1517	G1456	A1396	G1334	C1272	G1212	U1152	G1092	A1030	U968	G907	G846	C
G1639	A1579	C1518	U1457	U1397	G1335	C1273	C1213	C1153	A1093	A1031	U969	A908	A847	G
A1640	A1580	G1519	G1458	G1398	C1336	G1274	A1214	U1154	C1094	G1032	G970	G	U848	C
A1641	C1581	G1520	G1459	C1399	C1337	G1275	C1215	U1155	C1095	G1033	G971	C911	A849	C
G1642	A1582	C1521	G1461	U1400	G1338	C1276	C1216	U1156	G1096	A1034	A972	A912	C850	C
G1643	C1583	A1522	U1462	A1401	G1339	C1277	A1217	G1157	G1097	A1035	C973	A913	C851	G
G1644	G1584	C1523	U1463	A1402	U1340	C1278	C1218	G1158	C1098	A1036	C974	U914	C852	U
C1645	U1585	G1524	C1464	U1403	C1341	C1279	C1219	G1159	C1099	G1037	G975	G915	C853	C
G1646	U1586	G1525	A1465	U1404	U1342	G1280	A1220	G1160	A1100	U1038	G976	A916	C854	C
A1647	G1587	C1527	G1466	A1405	U1343	G1281	G1221	U1161	G1101	C1039	C977	U917	C855	C
G1648	A1588	G1528	C1467	G1406	A1344	A1282	C1222	C1162	G1102	G1040	G978	U918	C856	G
U1649	A1589	C1529	C1468	U1407	G1345	C1283	A1223	G1163	G1103	G1041	C979	A919	U857	G
A1650	C1590	U1530	A1469	U1408	U1346	C1284	G1224	G1164	G1104	A1042	A980	A920	U858	G
A1651	C1591	A1531	C1470	A1409	U1347	G1285	U1225	G1165	G1105	G1043	A981	G921	G859	G
G1652	C1592	C1532	C1471	C1410	G1348	G1286	G1226	G1166	C1106	G1044	G982	A922	G860	C
U1653	C1593	G1533	C1472	G1411	G1349	A1287	G1227	G1167	A1107	U1045	A983	G923	U861	C
G1654	A1594	C1534	G1473	C1412	U1350	U1288	A1228	G1168	G1108	U1046	C984	G924	A862	G
C1655	U1595	U1535	A1474	G1413	G1351	U1289	G1229	G1169	C1109	C1047	G985	G925	U863	G
G1656	U1596	G1536	G1475	A1414	G1352	G1290	C1230	A1170	G1110	G1048	G986	A926	A864	G
G1657	C1597	A1537	A1476	C1415	A1353	A1291	C1231	U1171	U1111	A1049	A987	C927	A865	G
G1658	U1598	C1538	U1477	C1416	G1354	C1292	U1232	U1172	U1112	U1050	C988	G928	U866	G
U1659	U1599	U1539	U1478	C1417	C1355	G1296	G1233	U1173	A1113	G1051	C989	G929	G867	G
C1660	G1600	G1540	G1479	C1418	G1356	C1300	C1234	U1174	U1114	A1052	A990	G930	G868	G
A1661	A1601	C1541	A1480	G1419	A1357	U1297	G1235	G1175	U1115	C1053	G991	C931	A869	G
U1662	U1602	G1542	G1481	G1420	U1358	U1298	G1236	G1176	U1116	G1054	A992	G932	A870	G
A1663	C1603	U1543	C1482	A1421	U1359	A1299	C1237	U1177	C1117	A1055	G993	G933	U871	G
A1664	G1604	A1544	A1483	G1422	U1360	U1300	U1238	U1178	C1118	U1056	C994	G934	A872	G
G1665	G1605	C1545	A1484	C1423	G1361	A1301	U1239	G1179	C1119	C1057	C995	G935	A873	G
C1666	G1606	G1546	U1485	G1424	C1362	G1302	A1240	U1180	U1120	A1058	G996	G936	G874	G
U1667	A1607	C1547	A1486	G1425	C1363	C1303	A1241	A1181	G1121	G1059	G999	C937	A875	G
G1668	U1608	G1548	A1487	U1426	U1364	U1304	U1242	A1182	A1122	A1060	A938	C938	C876	G
C1669	C1609	U1549	C1488	C1427	G1365	C1305	U1243	A1183	C1123	U1061	A1003	U939	C877	G
U1670	G1610	G1550	A1489	G1428	U1368	U1306	U1244	G1184	C1124	A1062	U1002	U940	A878	C
G1671	G1611	U1551	G1490	G1429	A1369	U1307	G1245	C1185	C1125	C1063	U1003	C941	C879	C
U1672	G1612	C1552	G1491	C1430	A1370	U1308	A1246	U1186	G1126	C1064	U1004	G942	U820	U
G1673	G1613	C1553	U1492	G1431	U1371	C1309	C1247	G1187	C1127	G1065	G1005	U943	G821	C
A1614	A1614	C1554	C1493	U1432	U1372	U1310	U1248	A1188	C1128	U1066	A944	A944	U822	G
U1615	U1615	U1555	U1494	C1433	C1373	C1311	C1249	A1189	G1129	C1067	C1007	U945	C884	A
U1676	U1616	A1556	G1495	C1434	C1374	G1312	A1250	A1190	G1130	G1068	A1008	U946	U885	U
U1677	G1617	C1557	U1496	C1435	G1375	A1313	A1251	C1191	G1131	U1069	A1009	G947	A886	G
A1678	C1618	C1558	G1497	C1436	A1376	U1314	C1252	U1192	C1132	A1070	G1010	C948	U887	C
A1679	A1619	C1559	A1498	C1437	U1377	U1315	A1253	U1193	A1133	G1071	A1011	G949	U888	U
G1680	A1620	U1560	U1499	A1438	A1378	C1316	C1254	A1194	G1134	A1012	A950	C951	U889	C
U1681	U1621	A1561	G1500	A1439	A1379	G1317	G1255	A1195	C1135	G1074	U1013	C951	U890	U
C1682	U1622	C1562	C1501	C1440	C1380	G1318	G1256	A1196	U1136	C1075	G1014	G952	G891	U
C1683	A1623	G1563	C1502	U1441	G1381	U1319	G1257	U1197	U1137	G1076	U1015	G953	U892	A
C1684	C1624	C1564	C1503	U1442	A1382	G1320	A1258	G1198	C1138	G1079	U1016	U954	U893	G
U1685	U1625	U1504	U1504	C1443	A1383	G1321	A1259	A1199	C1139	A955	U1017	A955	G894	C
G1686	C1626	G1566	U1505	U1444	C1384	G1322	A1260	A1200	G1140	A1080	U1018	G956	G895	U
C1687	G1627	G1567	A1506	U1445	G1385	U1323	C1261	U1201	G1141	U1081	C1019	A957	U896	G
C1688	C1628	C1568	G1507	A1446	A1386	G1324	C1262	U1202	G1142	A1082	A1020	G958	U897	A
C1689	C1629	A1569	G1447	G1448	G1387	G1325	U1263	G1203	A1143	U1083	U1021	G959	U898	G
U1690	U1630	G1570	U1509	A1448	A1388	U1326	C1264	A1204	U1144	A1084	U1022	U960	U899	U
U1691	U1631	G1571	G1510	G1449	C1389	G1327	A1265	C1205	A1145	C1085	A1023	G961	C900	G
U1692	G1632	C1572	U1511	G1450	U1390	G1328	C1266	G1206	C1146	G1086	A1024	A962	G901	U
G1693	A1633	G1573	G1451	C1391	C1391	U1329	C1267	G1207	C1147	A1087	U1025	A963	G902	U
U1694	A1634	C1574	C1513	A1452	U1392	G1330	C1268	A1208	A1148	U1088	C1026	A964	A903	C
A1695	C1635	G1575	G1514	C1453	G1393	C1331	C1269	A1209	U1149	G1089	A1027	U965	A904	C
C1696	G1636	G1576	G1515	A1454	G1394	A1332	G1270	A1150	A1150	C1090	U1028	U966	U844	G
A1697	A1637	G1577	G1516	A1455	C1395	U1333	C1271	G1211	G1151	C1091	G1029	C967	U906	C



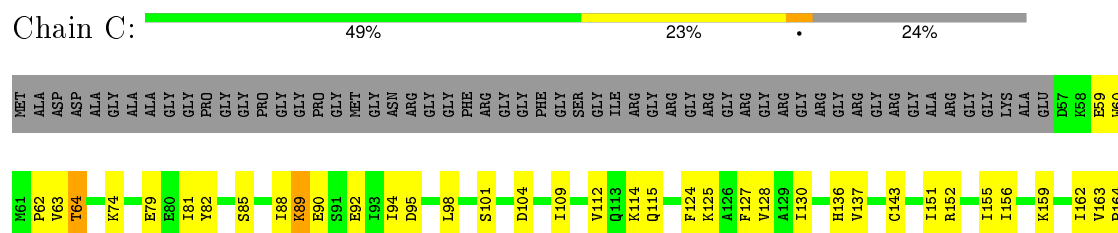
• Molecule 2: 40S RIBOSOMAL PROTEIN SA



• Molecule 3: 40S RIBOSOMAL PROTEIN S3A



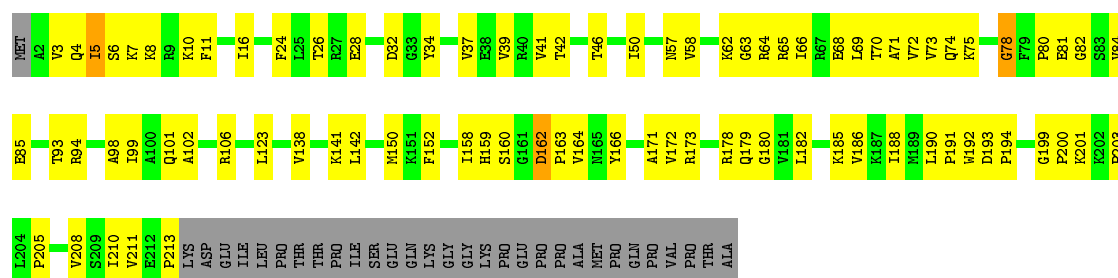
• Molecule 4: 40S RIBOSOMAL PROTEIN S2





- Molecule 5: 40S RIBOSOMAL PROTEIN S3

Chain D: 52% 34% 13%



- Molecule 6: 40S RIBOSOMAL PROTEIN S4, Y ISOFORM 1

Chain E: 54% 40%



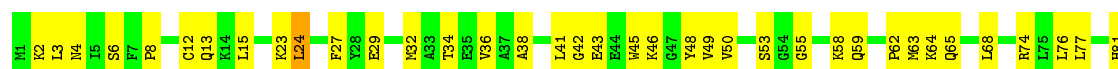
- Molecule 7: 40S RIBOSOMAL PROTEIN S5

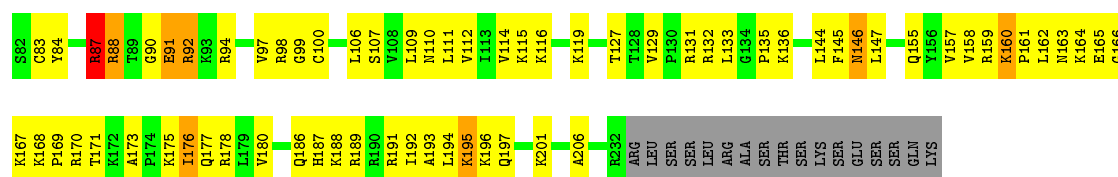
Chain F: 49% 38% 6% 8%



- Molecule 8: 40S RIBOSOMAL PROTEIN S6

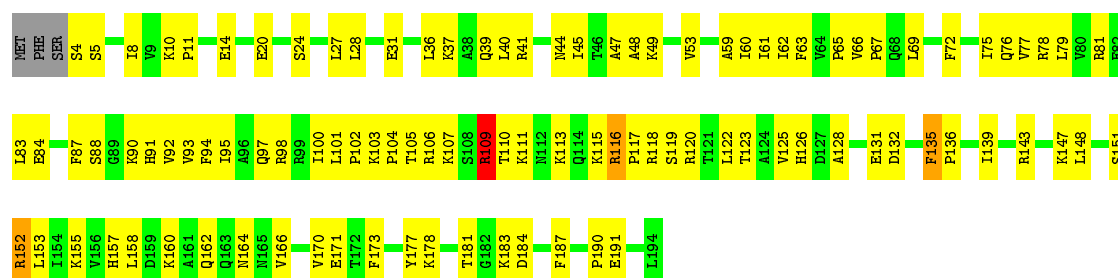
Chain G: 51% 39% 7%





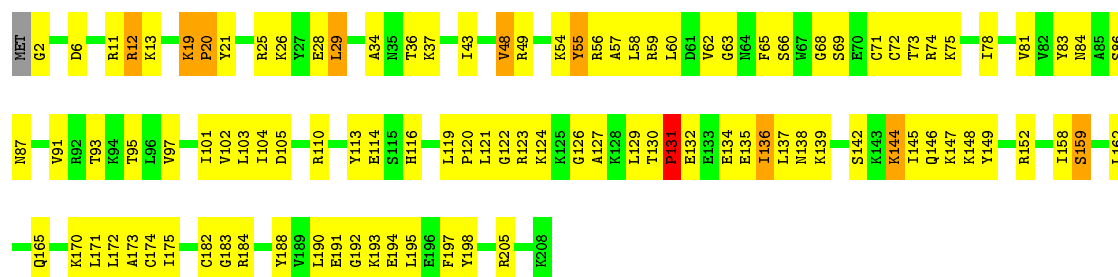
• Molecule 9: 40S RIBOSOMAL PROTEIN S7

Chain H: 46% 51%



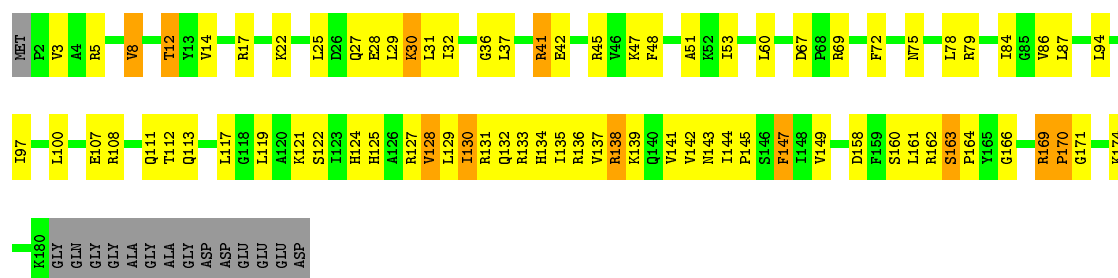
• Molecule 10: 40S RIBOSOMAL PROTEIN S8

Chain I: 50% 45%



• Molecule 11: 40S RIBOSOMAL PROTEIN S9

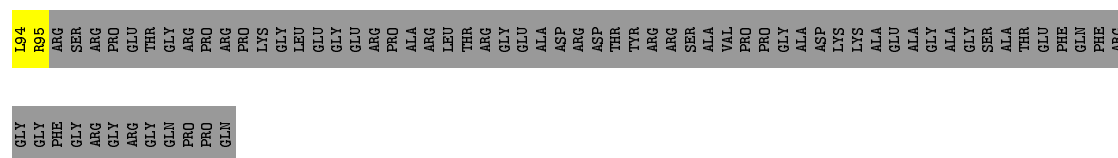
Chain J: 52% 35% 6% 8%



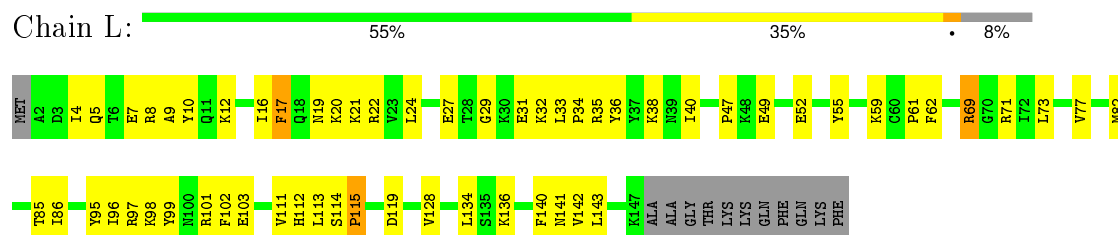
• Molecule 12: 40S RIBOSOMAL PROTEIN S10

Chain K: 32% 22% 43%

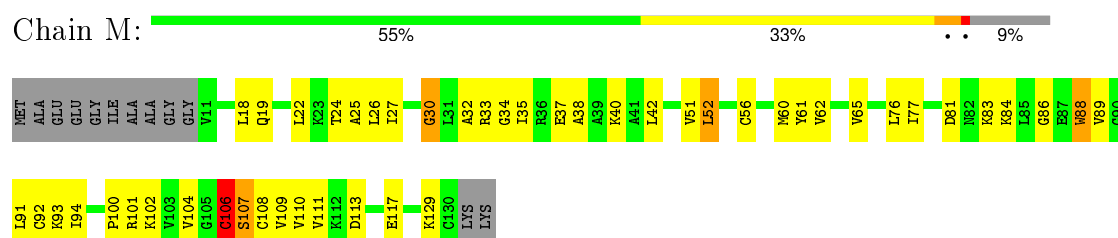




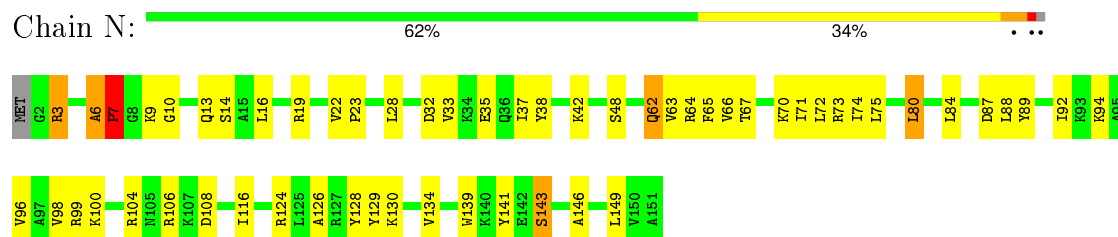
• Molecule 13: 40S RIBOSOMAL PROTEIN S11



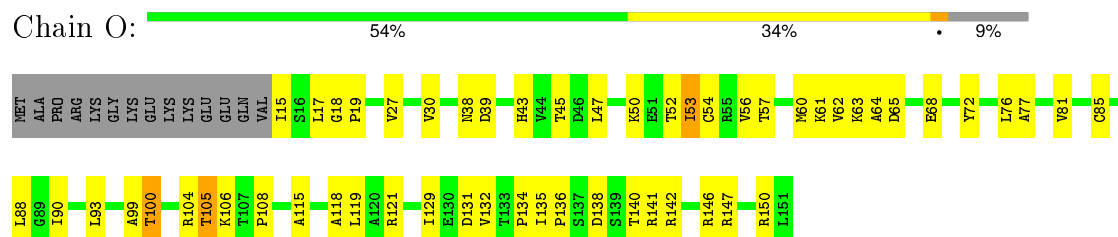
• Molecule 14: 40S RIBOSOMAL PROTEIN S12



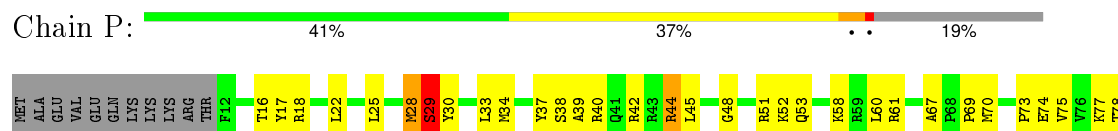
• Molecule 15: 40S RIBOSOMAL PROTEIN S13



• Molecule 16: 40S RIBOSOMAL PROTEIN S14



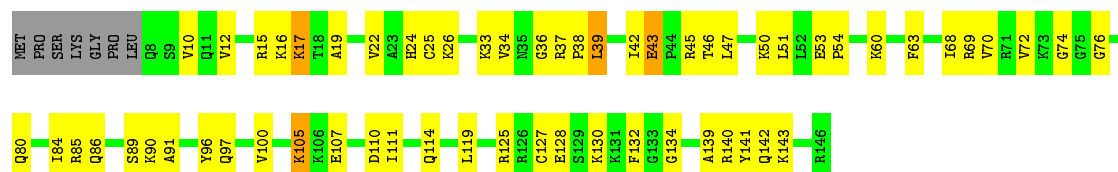
• Molecule 17: 40S RIBOSOMAL PROTEIN S15





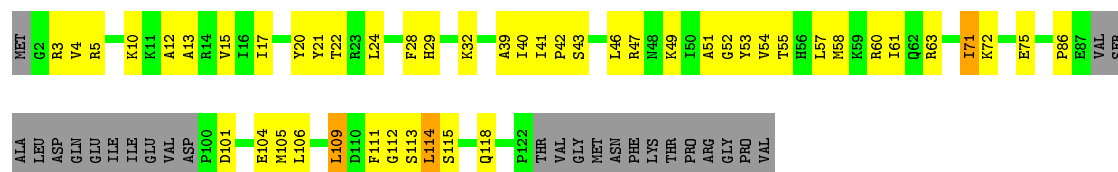
• Molecule 18: 40S RIBOSOMAL PROTEIN S16

Chain Q: 54% 38% 5%



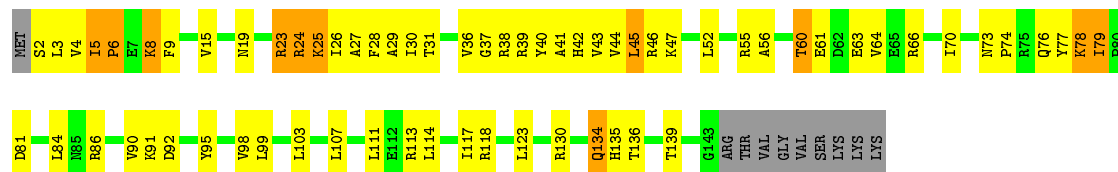
• Molecule 19: 40S RIBOSOMAL PROTEIN S17

Chain R: 45% 33% 19%



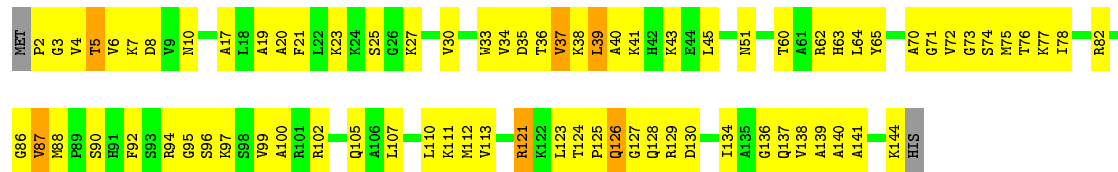
• Molecule 20: 40S RIBOSOMAL PROTEIN S18

Chain S: 49% 37% 7% 7%



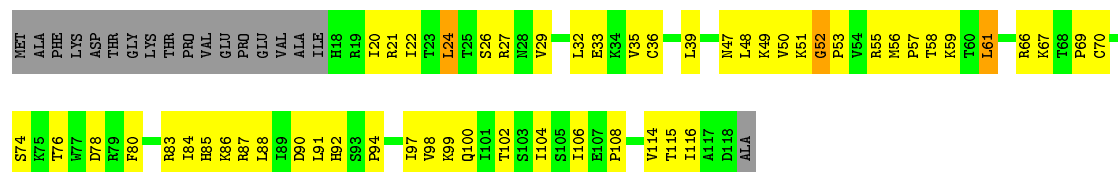
• Molecule 21: 40S RIBOSOMAL PROTEIN S19

Chain T: 45% 50% . .




• Molecule 22: 40S RIBOSOMAL PROTEIN S20

Chain U: 39% 43% 15%




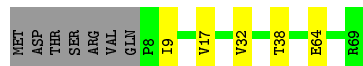
- Molecule 29: 40S RIBOSOMAL PROTEIN S27

Chain b:  90% 5% 5%




- Molecule 30: 40S RIBOSOMAL PROTEIN S28

Chain c:  83% 7% 10%




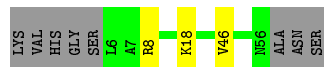
- Molecule 31: 40S RIBOSOMAL PROTEIN S29

Chain d:  88% 7% 5%



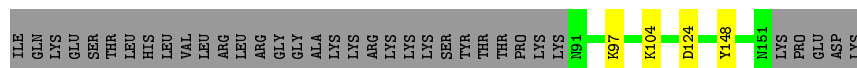
- Molecule 32: 40S RIBOSOMAL PROTEIN S30

Chain e:  81% 5% 14%



- Molecule 33: UBIQUITIN-40S RIBOSOMAL PROTEIN S27A

Chain f:  37% 61%



- Molecule 34: GUANINE NUCLEOTIDE-BINDING PROTEIN SUBUNIT BETA-2-LIKE 1

Chain g:  93% 5%



- Molecule 35: EUKARYOTIC PEPTIDE CHAIN RELEASE FACTOR SUBUNIT 1

Chain h:  97%



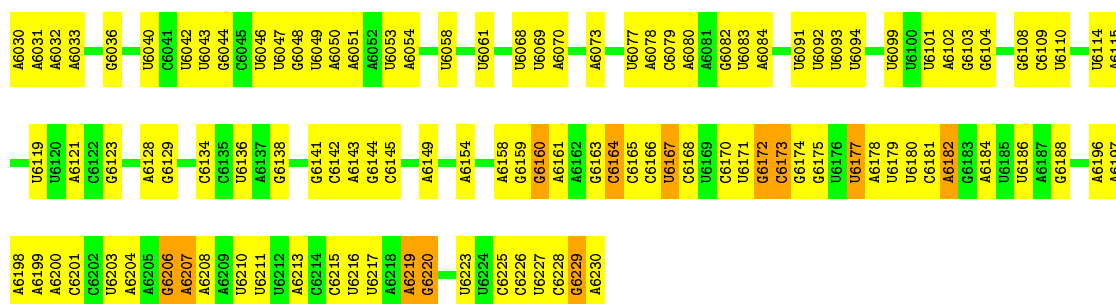
● Molecule 36: EUKARYOTIC PEPTIDE CHAIN RELEASE FACTOR GTP-BINDING SUB-UNIT ERF3A

Chain i:  98%



● Molecule 37: CRICKET PARALYSIS VIRUS IRES RNA

Chain j:  45%



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of images	Not provided	Depositor
Resolution determination method	Not provided	Depositor
CTF correction method	DEFOCUS GROUPS	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	20	Depositor
Minimum defocus (nm)	2000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	115000	Depositor
Image detector	TVIPS TEMCAM F416	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
1	1	0.37	2/41550 (0.0%)	0.80	6/64763 (0.0%)
10	I	0.48	0/1724	0.72	0/2298
11	J	0.45	0/1520	0.77	0/2030
12	K	0.48	0/815	0.68	0/1101
13	L	0.45	0/1220	0.72	0/1633
14	M	0.48	0/941	0.72	0/1264
15	N	0.43	0/1231	0.73	1/1656 (0.1%)
16	O	0.46	0/1036	0.71	0/1391
17	P	0.43	0/1000	0.67	0/1335
18	Q	0.43	0/1125	0.66	0/1506
19	R	0.42	0/904	0.67	0/1208
2	A	0.51	0/1756	0.68	0/2386
20	S	0.42	0/1190	0.68	0/1594
21	T	0.44	0/1131	0.69	0/1515
22	U	0.50	0/813	0.70	0/1092
23	V	0.47	0/643	0.71	0/860
24	W	0.44	0/1050	0.69	0/1406
25	X	0.46	0/1063	0.70	0/1421
26	Y	0.45	0/1019	0.70	0/1354
27	Z	0.46	0/611	0.71	0/820
28	a	0.48	0/778	0.75	1/1041 (0.1%)
29	b	0.48	0/637	0.68	0/854
3	B	0.51	0/1756	0.75	1/2350 (0.0%)
30	c	0.46	0/492	0.74	0/657
31	d	0.51	0/454	0.77	0/603
32	e	0.45	0/417	0.69	0/548
33	f	0.53	0/507	0.84	1/673 (0.1%)
34	g	0.45	0/2497	0.67	0/3399
35	h	0.35	0/3506	0.56	0/4709
36	i	0.37	0/3418	0.55	0/4600
37	j	1.42	85/4752 (1.8%)	1.74	207/7383 (2.8%)
4	C	0.42	0/1761	0.65	0/2379
5	D	0.41	0/1672	0.66	0/2250
6	E	0.47	0/2072	0.70	0/2793

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
7	F	0.43	0/1507	0.74	0/2026
8	G	0.48	0/1907	0.74	0/2538
9	H	0.46	0/1558	0.74	1/2087 (0.0%)
All	All	0.52	87/92033 (0.1%)	0.83	218/133523 (0.2%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	1	0	24
37	j	0	1
All	All	0	25

All (87) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	j	6173	C	O3'-P	-20.14	1.36	1.61
37	j	6229	G	O3'-P	19.64	1.84	1.61
37	j	6079	C	N3-C4	19.19	1.47	1.33
37	j	6177	U	O3'-P	-18.39	1.39	1.61
37	j	6219	A	O3'-P	-15.97	1.42	1.61
37	j	6215	C	O3'-P	-15.56	1.42	1.61
37	j	6206	G	O3'-P	14.96	1.79	1.61
37	j	6213	A	O3'-P	-14.33	1.44	1.61
37	j	6198	A	O3'-P	13.52	1.77	1.61
37	j	6182	A	O3'-P	-13.20	1.45	1.61
37	j	6078	A	N9-C4	12.20	1.45	1.37
37	j	6207	A	O3'-P	-11.97	1.46	1.61
37	j	6104	G	N3-C4	-10.58	1.28	1.35
37	j	6166	C	O3'-P	-10.38	1.48	1.61
37	j	6216	U	O3'-P	10.20	1.73	1.61
37	j	6199	A	O3'-P	-10.09	1.49	1.61
37	j	6104	G	C6-N1	10.05	1.46	1.39
37	j	6047	U	C4-O4	10.00	1.31	1.23
37	j	6115	A	C6-N1	9.87	1.42	1.35
37	j	6161	A	N7-C5	9.50	1.45	1.39
37	j	6145	C	N3-C4	9.47	1.40	1.33
37	j	6160	G	N7-C5	9.44	1.45	1.39
37	j	6144	G	N9-C8	-9.36	1.31	1.37
37	j	6091	U	N1-C2	9.30	1.47	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	j	6092	U	C2-N3	-8.70	1.31	1.37
37	j	6091	U	C5-C6	8.22	1.41	1.34
37	j	6050	A	C6-N1	7.82	1.41	1.35
37	j	6172	G	O3'-P	7.82	1.70	1.61
37	j	6104	G	C8-N7	7.79	1.35	1.30
37	j	6058	U	O3'-P	7.72	1.70	1.61
37	j	6108	G	C8-N7	-7.46	1.26	1.30
37	j	6144	G	N9-C4	-7.41	1.32	1.38
37	j	6109	C	N1-C6	-7.35	1.32	1.37
37	j	6170	C	O3'-P	7.34	1.70	1.61
37	j	6225	C	O3'-P	-7.27	1.52	1.61
37	j	6145	C	C2-O2	6.94	1.30	1.24
37	j	6167	U	O3'-P	-6.82	1.52	1.61
37	j	6109	C	N3-C4	6.82	1.38	1.33
37	j	6159	G	C6-O6	-6.68	1.18	1.24
37	j	6181	C	O3'-P	6.51	1.69	1.61
37	j	6046	U	N3-C4	-6.49	1.32	1.38
37	j	6142	C	N1-C6	-6.46	1.33	1.37
37	j	6104	G	N1-C2	-6.46	1.32	1.37
37	j	6082	G	N7-C5	6.41	1.43	1.39
37	j	6178	A	O3'-P	-6.33	1.53	1.61
1	1	992	A	C6-N6	-6.31	1.28	1.33
37	j	6048	G	N9-C8	-6.09	1.33	1.37
37	j	6197	A	O3'-P	-6.05	1.53	1.61
37	j	6040	U	C4-O4	6.04	1.28	1.23
37	j	6048	G	N7-C5	6.03	1.42	1.39
37	j	6141	G	C6-N1	-6.02	1.35	1.39
37	j	6159	G	N7-C5	-5.99	1.35	1.39
37	j	6091	U	N1-C6	-5.92	1.32	1.38
37	j	6149	A	N3-C4	5.91	1.38	1.34
37	j	6077	U	N3-C4	5.89	1.43	1.38
37	j	6142	C	N3-C4	5.83	1.38	1.33
37	j	6175	G	O3'-P	5.82	1.68	1.61
37	j	6161	A	N9-C4	5.73	1.41	1.37
37	j	6143	A	N7-C5	5.73	1.42	1.39
37	j	6040	U	C5-C6	5.72	1.39	1.34
37	j	6078	A	N3-C4	-5.71	1.31	1.34
37	j	6030	A	C5-C6	5.71	1.46	1.41
37	j	6094	U	N1-C6	-5.71	1.32	1.38
37	j	6108	G	C6-N1	5.68	1.43	1.39
37	j	6093	U	C2-N3	-5.60	1.33	1.37
37	j	6092	U	C4-O4	5.54	1.28	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
37	j	6144	G	C2-N2	5.44	1.40	1.34
37	j	6080	A	N7-C5	5.44	1.42	1.39
37	j	6092	U	C2-O2	5.42	1.27	1.22
37	j	6220	G	O3'-P	-5.41	1.54	1.61
37	j	6142	C	C5-C6	5.40	1.38	1.34
37	j	6049	U	C4-C5	5.40	1.48	1.43
37	j	6144	G	C2-N3	5.36	1.37	1.32
37	j	6091	U	N3-C4	-5.35	1.33	1.38
37	j	6051	A	N9-C4	-5.34	1.34	1.37
1	1	1286	G	C2-N2	-5.29	1.29	1.34
37	j	6114	U	C4-C5	5.21	1.48	1.43
37	j	6050	A	N7-C5	-5.20	1.36	1.39
37	j	6078	A	C6-N6	-5.18	1.29	1.33
37	j	6080	A	C5-C4	-5.16	1.35	1.38
37	j	6159	G	N9-C4	5.15	1.42	1.38
37	j	6092	U	C4-C5	-5.11	1.39	1.43
37	j	6164	C	O3'-P	-5.10	1.55	1.61
37	j	6180	U	O3'-P	-5.07	1.55	1.61
37	j	6080	A	N1-C2	5.05	1.38	1.34
37	j	6108	G	N3-C4	-5.05	1.31	1.35
37	j	6173	C	O4'-C1'	5.05	1.48	1.41

All (218) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	j	6079	C	C5-C6-N1	19.25	130.62	121.00
37	j	6114	U	C4-C5-C6	-18.58	108.55	119.70
37	j	6114	U	N3-C4-C5	17.39	125.03	114.60
37	j	6077	U	C2-N3-C4	-15.00	118.00	127.00
37	j	6161	A	N1-C2-N3	-15.00	121.80	129.30
37	j	6046	U	C2-N3-C4	-14.81	118.11	127.00
37	j	6103	G	N7-C8-N9	-14.81	105.70	113.10
37	j	6049	U	N3-C2-O2	-14.63	111.96	122.20
37	j	6103	G	C8-N9-C4	14.53	112.21	106.40
37	j	6092	U	N1-C2-N3	14.31	123.48	114.90
37	j	6077	U	N3-C4-C5	13.28	122.57	114.60
37	j	6046	U	N3-C4-C5	13.12	122.47	114.60
37	j	6048	G	C5-C6-O6	-13.05	120.77	128.60
37	j	6173	C	O4'-C1'-N1	12.97	118.58	108.20
37	j	6092	U	C2-N3-C4	-12.54	119.47	127.00
37	j	6114	U	C5-C4-O4	-12.39	118.47	125.90
37	j	6093	U	N3-C4-O4	-12.37	110.74	119.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	j	6160	G	C5-C6-O6	-12.02	121.39	128.60
37	j	6031	A	C6-N1-C2	11.89	125.74	118.60
37	j	6142	C	N1-C2-O2	11.82	125.99	118.90
37	j	6049	U	C5-C4-O4	-11.74	118.86	125.90
37	j	6078	A	C5-N7-C8	11.65	109.72	103.90
37	j	6149	A	C8-N9-C4	-11.49	101.20	105.80
37	j	6143	A	C5-C6-N1	-11.45	111.98	117.70
37	j	6103	G	C5-C6-N1	11.43	117.21	111.50
37	j	6104	G	C6-N1-C2	-11.37	118.28	125.10
37	j	6030	A	N3-C4-C5	11.15	134.60	126.80
37	j	6048	G	C2-N3-C4	11.11	117.46	111.90
37	j	6172	G	P-O3'-C3'	-11.10	106.38	119.70
37	j	6083	U	C5-C4-O4	-10.84	119.40	125.90
37	j	6114	U	C6-N1-C2	10.83	127.50	121.00
37	j	6078	A	N1-C6-N6	10.50	124.90	118.60
37	j	6108	G	C4-C5-N7	10.31	114.92	110.80
37	j	6031	A	N1-C2-N3	-10.26	124.17	129.30
37	j	6047	U	C2-N3-C4	-10.18	120.89	127.00
37	j	6161	A	C6-N1-C2	10.05	124.63	118.60
37	j	6049	U	N1-C2-O2	9.90	129.73	122.80
37	j	6079	C	C4-C5-C6	-9.86	112.47	117.40
37	j	6093	U	C2-N3-C4	-9.85	121.09	127.00
37	j	6109	C	N3-C4-N4	-9.80	111.14	118.00
37	j	6046	U	N1-C2-N3	9.78	120.77	114.90
37	j	6108	G	N3-C4-C5	9.74	133.47	128.60
37	j	6144	G	N7-C8-N9	9.69	117.95	113.10
37	j	6143	A	N1-C6-N6	9.68	124.41	118.60
37	j	6149	A	N7-C8-N9	9.66	118.63	113.80
37	j	6046	U	C5-C4-O4	-9.57	120.16	125.90
37	j	6143	A	C4-C5-C6	9.47	121.73	117.00
37	j	6083	U	N1-C2-N3	9.37	120.52	114.90
37	j	6109	C	C4-C5-C6	-9.30	112.75	117.40
37	j	6160	G	C6-C5-N7	9.29	135.97	130.40
37	j	6149	A	N9-C4-C5	9.28	109.51	105.80
37	j	6040	U	N1-C2-O2	-9.23	116.34	122.80
37	j	6149	A	N1-C2-N3	-9.22	124.69	129.30
37	j	6160	G	C4-C5-N7	-9.22	107.11	110.80
37	j	6144	G	C5-N7-C8	-9.19	99.70	104.30
37	j	6030	A	N3-C4-N9	-9.18	120.06	127.40
37	j	6149	A	C2-N3-C4	9.18	115.19	110.60
37	j	6079	C	C6-N1-C2	-9.17	116.63	120.30
37	j	6050	A	N9-C4-C5	9.13	109.45	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	j	6102	A	C8-N9-C4	-9.05	102.18	105.80
37	j	6110	U	N1-C2-O2	-9.04	116.47	122.80
37	j	6161	A	C2-N3-C4	8.99	115.10	110.60
37	j	6047	U	N1-C2-N3	8.90	120.24	114.90
37	j	6083	U	C2-N3-C4	-8.88	121.67	127.00
37	j	6144	G	N3-C4-C5	-8.87	124.17	128.60
37	j	6182	A	OP2-P-O3'	8.82	124.61	105.20
37	j	6077	U	N3-C4-O4	-8.82	113.23	119.40
37	j	6030	A	C4-C5-C6	-8.81	112.60	117.00
37	j	6049	U	C2-N3-C4	-8.78	121.73	127.00
37	j	6049	U	N3-C4-C5	8.77	119.86	114.60
37	j	6160	G	C5-C6-N1	8.62	115.81	111.50
37	j	6114	U	C2-N3-C4	-8.55	121.87	127.00
37	j	6145	C	N3-C4-N4	8.54	123.98	118.00
37	j	6109	C	C6-N1-C2	8.41	123.67	120.30
37	j	6196	A	P-O3'-C3'	-8.40	109.62	119.70
37	j	6104	G	N1-C2-N3	8.38	128.93	123.90
37	j	6144	G	N3-C2-N2	-8.37	114.04	119.90
37	j	6093	U	N3-C4-C5	8.20	119.52	114.60
37	j	6040	U	N3-C4-C5	8.16	119.49	114.60
37	j	6047	U	N1-C2-O2	-8.06	117.16	122.80
37	j	6103	G	C5-N7-C8	7.97	108.29	104.30
37	j	6141	G	N1-C2-N3	7.96	128.68	123.90
37	j	6080	A	N1-C2-N3	-7.94	125.33	129.30
37	j	6092	U	N3-C4-C5	7.94	119.36	114.60
37	j	6110	U	C5-C6-N1	7.94	126.67	122.70
37	j	6108	G	C6-N1-C2	-7.93	120.34	125.10
37	j	6103	G	C6-N1-C2	-7.90	120.36	125.10
37	j	6110	U	C6-N1-C2	-7.87	116.28	121.00
37	j	6145	C	N3-C2-O2	7.86	127.40	121.90
37	j	6200	A	P-O3'-C3'	-7.81	110.33	119.70
37	j	6050	A	C8-N9-C4	-7.67	102.73	105.80
37	j	6030	A	C2-N3-C4	-7.65	106.77	110.60
37	j	6102	A	N3-C4-N9	-7.60	121.32	127.40
37	j	6144	G	N3-C4-N9	7.58	130.55	126.00
37	j	6108	G	N9-C4-C5	-7.56	102.38	105.40
37	j	6079	C	C2-N3-C4	7.55	123.68	119.90
37	j	6048	G	C8-N9-C4	7.54	109.41	106.40
37	j	6102	A	N7-C8-N9	7.53	117.56	113.80
37	j	6145	C	N3-C4-C5	-7.46	118.92	121.90
37	j	6083	U	N3-C4-C5	7.41	119.04	114.60
37	j	6160	G	C8-N9-C4	7.39	109.36	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	j	6092	U	N1-C2-O2	-7.37	117.64	122.80
37	j	6102	A	N9-C4-C5	7.36	108.74	105.80
37	j	6108	G	C5-C6-N1	7.34	115.17	111.50
37	j	6109	C	C5-C4-N4	7.33	125.33	120.20
37	j	6040	U	C2-N3-C4	-7.29	122.62	127.00
37	j	6161	A	N1-C6-N6	7.27	122.96	118.60
37	j	6173	C	P-O3'-C3'	-7.23	111.03	119.70
37	j	6078	A	N1-C2-N3	-7.22	125.69	129.30
37	j	6031	A	N1-C6-N6	7.20	122.92	118.60
37	j	6198	A	O3'-P-O5'	-7.19	90.34	104.00
37	j	6115	A	C5-C6-N1	-7.17	114.11	117.70
37	j	6167	U	O3'-P-O5'	7.11	117.51	104.00
37	j	6143	A	C6-N1-C2	7.10	122.86	118.60
37	j	6048	G	C5-C6-N1	7.09	115.05	111.50
37	j	6141	G	C8-N9-C4	7.09	109.24	106.40
37	j	6159	G	C5-C6-N1	7.07	115.03	111.50
37	j	6141	G	C6-N1-C2	-7.04	120.88	125.10
37	j	6083	U	C6-N1-C2	-7.00	116.80	121.00
37	j	6173	C	OP1-P-O3'	-6.99	89.83	105.20
37	j	6079	C	N3-C4-C5	-6.96	119.11	121.90
37	j	6182	A	O3'-P-O5'	-6.91	90.86	104.00
37	j	6199	A	OP2-P-O3'	6.91	120.41	105.20
37	j	6078	A	N7-C8-N9	-6.91	110.35	113.80
37	j	6048	G	N1-C6-O6	6.87	124.02	119.90
37	j	6094	U	C5-C6-N1	6.85	126.12	122.70
37	j	6092	U	C5-C4-O4	-6.80	121.82	125.90
37	j	6070	A	P-O3'-C3'	6.74	127.79	119.70
37	j	6110	U	C5-C4-O4	-6.73	121.86	125.90
37	j	6093	U	C5-C6-N1	-6.72	119.34	122.70
37	j	6048	G	N3-C4-C5	-6.70	125.25	128.60
37	j	6093	U	N1-C2-N3	6.70	118.92	114.90
37	j	6199	A	P-O3'-C3'	6.61	127.63	119.70
37	j	6173	C	OP2-P-O3'	6.54	119.59	105.20
37	j	6141	G	N3-C4-C5	-6.54	125.33	128.60
37	j	6197	A	P-O3'-C3'	-6.51	111.89	119.70
37	j	6051	A	C6-N1-C2	6.50	122.50	118.60
37	j	6048	G	N3-C4-N9	6.47	129.88	126.00
37	j	6094	U	C6-N1-C2	-6.42	117.15	121.00
37	j	6079	C	C5-C4-N4	6.41	124.68	120.20
37	j	6159	G	C8-N9-C4	-6.40	103.84	106.40
37	j	6171	U	OP2-P-O3'	6.40	119.28	105.20
37	j	6184	A	P-O3'-C3'	6.37	127.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	j	6031	A	C5-C6-N1	-6.33	114.53	117.70
37	j	6175	G	OP2-P-O3'	6.28	119.00	105.20
37	j	6050	A	N3-C4-N9	-6.25	122.40	127.40
37	j	6108	G	C5-N7-C8	-6.23	101.18	104.30
37	j	6143	A	N7-C8-N9	6.21	116.90	113.80
37	j	6208	A	P-O3'-C3'	6.20	127.14	119.70
37	j	6103	G	N3-C4-N9	6.19	129.72	126.00
37	j	6110	U	N3-C4-C5	6.19	118.31	114.60
37	j	6109	C	C5-C6-N1	6.18	124.09	121.00
37	j	6078	A	C4-C5-N7	-6.15	107.62	110.70
37	j	6142	C	N3-C2-O2	-6.14	117.60	121.90
37	j	6048	G	C6-C5-N7	6.13	134.08	130.40
37	j	6093	U	C5-C4-O4	6.09	129.56	125.90
37	j	6078	A	C5-C6-N6	-6.07	118.84	123.70
37	j	6175	G	O3'-P-O5'	-6.05	92.50	104.00
1	1	502	C	C3'-C2'-C1'	-6.04	96.66	101.50
37	j	6141	G	C6-C5-N7	-6.04	126.78	130.40
37	j	6134	C	C5-C4-N4	6.00	124.40	120.20
37	j	6164	C	O4'-C1'-N1	5.97	112.98	108.20
37	j	6201	C	O4'-C1'-N1	5.96	112.97	108.20
37	j	6166	C	O3'-P-O5'	5.94	115.29	104.00
37	j	6048	G	N1-C2-N3	-5.92	120.35	123.90
37	j	6142	C	C6-N1-C2	5.90	122.66	120.30
37	j	6160	G	N3-C4-C5	-5.89	125.65	128.60
37	j	6114	U	N1-C2-N3	-5.87	111.38	114.90
37	j	6144	G	C4-C5-C6	5.84	122.31	118.80
37	j	6031	A	C2-N3-C4	5.80	113.50	110.60
37	j	6078	A	C6-C5-N7	5.79	136.35	132.30
37	j	6108	G	C4-C5-C6	-5.77	115.34	118.80
37	j	6047	U	C4-C5-C6	5.77	123.16	119.70
37	j	6077	U	C4-C5-C6	-5.77	116.24	119.70
37	j	6103	G	C6-C5-N7	5.76	133.86	130.40
37	j	6145	C	N1-C2-O2	-5.75	115.45	118.90
37	j	6188	G	O4'-C1'-N9	5.67	112.73	108.20
37	j	6149	A	C4-C5-N7	-5.64	107.88	110.70
37	j	6182	A	O4'-C1'-N9	5.64	112.71	108.20
37	j	6108	G	N7-C8-N9	5.62	115.91	113.10
37	j	6040	U	N3-C4-O4	-5.62	115.47	119.40
37	j	6092	U	C6-N1-C2	-5.61	117.63	121.00
37	j	6141	G	N3-C4-N9	5.61	129.37	126.00
37	j	6102	A	N1-C6-N6	5.60	121.96	118.60
37	j	6040	U	N1-C2-N3	5.58	118.25	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	j	6219	A	O3'-P-O5'	5.58	114.61	104.00
1	1	1441	U	C3'-C2'-C1'	-5.56	97.06	101.50
37	j	6082	G	C5-N7-C8	-5.54	101.53	104.30
1	1	645	C	C3'-C2'-C1'	-5.51	97.09	101.50
37	j	6114	U	C5-C6-N1	5.47	125.43	122.70
37	j	6186	U	P-O3'-C3'	5.44	126.23	119.70
37	j	6134	C	N3-C4-N4	-5.42	114.21	118.00
37	j	6115	A	C8-N9-C4	5.41	107.96	105.80
15	N	6	ALA	N-CA-C	-5.40	96.41	111.00
37	j	6103	G	C5-C6-O6	-5.38	125.37	128.60
37	j	6051	A	N1-C2-N3	-5.38	126.61	129.30
37	j	6094	U	N1-C2-N3	5.36	118.12	114.90
37	j	6110	U	N3-C2-O2	5.29	125.90	122.20
37	j	6108	G	N1-C6-O6	-5.28	116.73	119.90
9	H	109	ARG	N-CA-CB	5.26	120.08	110.60
1	1	1422	G	C3'-C2'-C1'	-5.25	97.30	101.50
1	1	797	C	N1-C1'-C2'	-5.24	106.23	112.00
3	B	132	GLY	N-CA-C	5.24	126.20	113.10
37	j	6083	U	P-O3'-C3'	5.22	125.96	119.70
37	j	6149	A	C6-N1-C2	5.14	121.69	118.60
37	j	6145	C	C2-N3-C4	5.14	122.47	119.90
33	f	124	ASP	N-CA-C	-5.13	97.14	111.00
37	j	6160	G	C2-N3-C4	5.10	114.45	111.90
37	j	6103	G	N3-C4-C5	-5.08	126.06	128.60
1	1	1147	C	C3'-C2'-C1'	-5.06	97.45	101.50
28	a	5	ARG	N-CA-CB	-5.06	101.49	110.60
37	j	6092	U	N3-C2-O2	-5.05	118.66	122.20
37	j	6110	U	C2-N3-C4	-5.04	123.98	127.00
37	j	6145	C	C5-C6-N1	5.04	123.52	121.00
37	j	6082	G	C8-N9-C1'	5.03	133.54	127.00
37	j	6144	G	N1-C2-N2	5.01	120.71	116.20
37	j	6177	U	OP2-P-O3'	5.01	116.23	105.20
37	j	6083	U	N1-C2-O2	-5.01	119.29	122.80

There are no chirality outliers.

All (25) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1	111	A	Sidechain
1	1	1120	U	Sidechain
1	1	1288	U	Sidechain
1	1	1308	U	Sidechain

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Mol	Chain	Res	Type	Group
1	1	1414	A	Sidechain
1	1	1548	G	Sidechain
1	1	1578	U	Sidechain
1	1	1624	U	Sidechain
1	1	1686	G	Sidechain
1	1	1823	A	Sidechain
1	1	216	C	Sidechain
1	1	235	A	Sidechain
1	1	44	U	Sidechain
1	1	570	C	Sidechain
1	1	572	U	Sidechain
1	1	643	A	Sidechain
1	1	645	C	Sidechain
1	1	747	U	Sidechain
1	1	77	A	Sidechain
1	1	799	U	Sidechain
1	1	84	A	Sidechain
1	1	867	G	Sidechain
1	1	88	G	Sidechain
1	1	897	U	Sidechain
37	j	6160	G	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	37159	0	18774	3646	0
2	A	1719	0	1717	129	0
3	B	1729	0	1803	135	0
4	C	1724	0	1808	63	0
5	D	1646	0	1736	81	0
6	E	2031	0	2138	116	0
7	F	1486	0	1545	99	0
8	G	1884	0	2044	151	0
9	H	1535	0	1632	130	0
10	I	1695	0	1785	113	0
11	J	1495	0	1615	89	0
12	K	791	0	811	45	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
13	L	1199	0	1269	69	0
14	M	931	0	961	40	0
15	N	1207	0	1294	63	0
16	O	1023	0	1050	51	0
17	P	981	0	1026	55	0
18	Q	1108	0	1174	73	0
19	R	893	0	946	57	0
20	S	1172	0	1229	77	0
21	T	1112	0	1146	116	0
22	U	803	0	866	68	0
23	V	636	0	637	42	0
24	W	1033	0	1080	61	0
25	X	1046	0	1110	68	0
26	Y	1002	0	1075	65	0
27	Z	605	0	665	58	0
28	a	767	0	816	0	0
29	b	625	0	642	0	0
30	c	490	0	520	0	0
31	d	444	0	442	0	0
32	e	412	0	463	0	0
33	f	497	0	497	0	0
34	g	2440	0	2396	0	0
35	h	3450	0	3446	0	0
36	i	3357	0	3398	0	0
37	j	4257	0	2143	0	0
All	All	86384	0	67699	5137	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 40.

All (5137) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1431:G:H2'	1:1:1432:U:C6	1.77	1.18
1:1:377:G:H4'	10:I:97:VAL:HG13	1.24	1.18
1:1:571:U:H3'	1:1:572:U:C5'	1.77	1.15
1:1:569:A:H2'	1:1:570:C:H5''	1.24	1.14
1:1:1547:C:H3'	1:1:1548:G:H5''	1.29	1.14
1:1:1416:C:H3'	1:1:1417:C:H5''	1.29	1.12
1:1:180:G:H1'	1:1:181:A:H5'	1.16	1.11
1:1:1631:U:H5'	1:1:1631:U:H6	1.16	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:179:C:H3'	1:1:180:G:H5''	1.17	1.10
1:1:797:C:H2'	1:1:798:G:H5''	1.28	1.10
1:1:561:A:H3'	1:1:562:U:H5''	1.23	1.09
1:1:1684:C:H2'	1:1:1685:U:H5'	1.19	1.09
1:1:181:A:H3'	1:1:182:C:H5''	1.29	1.08
1:1:1101:U:H2'	1:1:1102:G:C8	1.88	1.08
1:1:751:G:H2'	1:1:752:G:H8	1.17	1.08
1:1:1330:G:H4'	1:1:1331:C:H5'	1.29	1.08
1:1:211:G:H2'	1:1:212:C:H6	1.14	1.07
1:1:1258:A:H3'	1:1:1258:A:N3	1.69	1.07
1:1:1833:C:H6	1:1:1833:C:H5'	1.18	1.07
1:1:571:U:H3'	1:1:572:U:C4'	1.84	1.06
1:1:527:C:H3'	1:1:528:A:C8	1.89	1.06
1:1:475:C:H5'	1:1:475:C:H6	1.20	1.06
1:1:112:U:H5''	1:1:113:G:H5'	1.37	1.06
1:1:211:G:H5'	1:1:211:G:H8	1.20	1.05
1:1:211:G:H2'	1:1:212:C:C6	1.91	1.05
1:1:1768:A:H2'	1:1:1769:C:H5'	1.37	1.05
1:1:527:C:H4'	11:J:125:HIS:HB2	1.34	1.05
1:1:618:C:H1'	1:1:632:C:H5'	1.35	1.04
1:1:302:A:H2'	1:1:303:C:H5''	1.31	1.04
1:1:594:A:H1'	1:1:643:A:N6	1.72	1.04
1:1:500:A:H2'	1:1:501:C:H5''	1.39	1.03
1:1:929:G:H21	1:1:1104:G:H4'	1.23	1.03
1:1:43:U:H5'	1:1:44:U:H5	1.20	1.03
10:I:69:SER:HB3	13:L:24:LEU:HD11	1.37	1.03
1:1:900:C:H2'	1:1:901:G:C8	1.93	1.02
1:1:1441:U:H2'	1:1:1442:U:H4'	1.06	1.02
1:1:384:U:H2'	1:1:385:G:H5''	1.35	1.02
1:1:557:U:H3'	1:1:558:G:C8	1.94	1.02
1:1:1637:A:H4'	1:1:1638:G:C5'	1.88	1.02
1:1:76:U:H2'	1:1:77:A:H3'	1.40	1.01
1:1:302:A:C2'	1:1:303:C:H5''	1.90	1.01
1:1:689:U:H3'	1:1:690:G:C8	1.96	1.00
1:1:1442:U:H5'	1:1:1443:C:H6	1.22	1.00
1:1:1684:C:C2'	1:1:1685:U:H5'	1.90	1.00
1:1:307:G:H4'	1:1:308:G:H5''	1.41	1.00
1:1:1589:A:H4'	21:T:82:ARG:HD3	1.43	1.00
1:1:1698:C:H4'	1:1:1699:A:C8	1.97	0.99
1:1:572:U:H2'	1:1:573:U:C4	1.97	0.99
1:1:1258:A:H2'	1:1:1259:A:H4'	1.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:193:C:H4'	1:1:209:A:N6	1.79	0.98
1:1:1286:G:H1'	14:M:34:GLY:CA	1.92	0.98
1:1:1461:G:H21	1:1:1465:A:H62	1.01	0.98
1:1:683:G:H1'	1:1:1023:A:C2	1.99	0.98
1:1:1520:G:H5'	1:1:1521:C:C5	1.97	0.98
1:1:301:A:H2'	1:1:302:A:C8	1.97	0.98
1:1:655:A:H4'	1:1:656:G:H3'	1.45	0.98
1:1:1257:G:H4'	1:1:1258:A:OP2	1.63	0.98
1:1:235:A:HO2'	1:1:236:A:H8	1.00	0.97
2:A:6:ASP:HB3	23:V:42:VAL:HG13	1.43	0.97
1:1:1414:A:H2'	1:1:1415:C:C1'	1.94	0.97
1:1:525:A:H2	1:1:561:A:H61	1.11	0.97
1:1:1695:A:H2'	1:1:1696:C:O4'	1.65	0.97
1:1:1692:U:H2'	1:1:1693:G:C8	1.99	0.97
1:1:229:A:N1	1:1:900:C:H1'	1.80	0.97
1:1:184:G:H8	1:1:185:G:H4'	1.26	0.96
1:1:746:C:H1'	1:1:747:U:N3	1.79	0.96
1:1:1286:G:H1'	14:M:34:GLY:HA2	1.43	0.96
1:1:168:C:H4'	8:G:131:ARG:HD2	1.46	0.96
1:1:571:U:H3'	1:1:572:U:H5''	1.45	0.96
1:1:175:A:H3'	1:1:176:U:H5''	1.47	0.96
1:1:746:C:H1'	1:1:747:U:C4	2.01	0.96
1:1:694:G:H2'	1:1:695:C:C6	2.01	0.96
1:1:179:C:H3'	1:1:180:G:C5'	1.96	0.95
1:1:794:A:C2	1:1:795:A:H1'	2.01	0.95
1:1:1442:U:C5	1:1:1443:C:H1'	2.01	0.95
1:1:559:G:H3'	1:1:560:A:H5''	1.47	0.95
1:1:193:C:H2'	1:1:194:C:C6	2.01	0.95
1:1:561:A:H3'	1:1:562:U:C5'	1.95	0.95
20:S:45:LEU:HD23	20:S:52:LEU:HG	1.47	0.95
1:1:1832:A:H2'	1:1:1833:C:H5''	1.46	0.95
1:1:1253:A:H4'	1:1:1254:C:H5''	1.47	0.95
1:1:929:G:N2	1:1:1104:G:H4'	1.81	0.95
1:1:475:C:C6	1:1:475:C:H5'	2.02	0.95
1:1:1402:A:H2'	1:1:1403:C:C4	2.02	0.94
1:1:134:C:H3'	1:1:135:U:H4'	1.49	0.94
1:1:693:A:H3'	1:1:694:G:C4'	1.98	0.94
1:1:570:C:C2'	1:1:571:U:H5''	1.98	0.94
1:1:1750:C:H2'	1:1:1751:C:H5'	1.48	0.94
1:1:794:A:H2'	1:1:795:A:H4'	1.47	0.94
18:Q:12:VAL:HG21	18:Q:91:ALA:HA	1.47	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:926:A:H2'	1:1:927:C:O4'	1.69	0.93
1:1:302:A:H1'	10:I:73:THR:HB	1.49	0.93
1:1:1621:U:H2'	1:1:1622:U:H5'	1.49	0.93
1:1:573:U:H2'	1:1:576:A:C2	2.04	0.93
1:1:1766:C:H3'	1:1:1767:C:C5	2.04	0.93
1:1:609:U:H2'	1:1:610:G:H8	1.34	0.93
6:E:129:ILE:HG22	6:E:156:VAL:HG22	1.50	0.93
1:1:990:A:H62	1:1:992:A:H1'	1.31	0.93
1:1:754:G:H2'	1:1:755:C:C6	2.02	0.93
1:1:942:G:H2'	1:1:943:U:C6	2.04	0.92
1:1:1330:G:C4'	1:1:1331:C:H5'	1.98	0.92
1:1:570:C:H2'	1:1:571:U:H5''	1.51	0.92
13:L:40:ILE:HG21	13:L:143:LEU:HD11	1.52	0.92
1:1:574:A:H5'	1:1:575:A:N7	1.85	0.91
1:1:794:A:H2'	1:1:795:A:C4'	1.99	0.91
1:1:1276:A:H5'	1:1:1277:C:H5	1.34	0.91
1:1:751:G:H2'	1:1:752:G:C8	2.05	0.91
1:1:210:U:H2'	1:1:211:G:H5''	1.52	0.91
1:1:1546:G:H21	1:1:1670:C:H1'	1.32	0.91
1:1:1441:U:C2'	1:1:1442:U:H4'	1.98	0.91
1:1:1666:C:H3'	1:1:1667:U:H6	1.36	0.91
1:1:1602:U:H2'	1:1:1603:G:H2'	1.52	0.91
1:1:804:U:H2'	1:1:805:U:C6	2.04	0.91
1:1:75:G:H1'	1:1:76:U:C5	2.06	0.91
8:G:53:SER:HB2	8:G:112:VAL:HG23	1.51	0.91
1:1:1280:G:H2'	1:1:1281:G:H8	1.36	0.91
1:1:604:A:H2	1:1:605:A:C2	1.88	0.91
1:1:1397:U:H4'	1:1:1398:G:H21	1.34	0.91
1:1:60:A:H3'	1:1:501:C:H41	1.34	0.90
11:J:86:VAL:HG12	11:J:87:LEU:HD12	1.51	0.90
1:1:314:U:OP1	1:1:314:U:H4'	1.70	0.90
1:1:558:G:P	1:1:558:G:H8	1.94	0.90
1:1:184:G:C8	1:1:185:G:H4'	2.06	0.90
1:1:1631:U:H5'	1:1:1631:U:C6	2.06	0.90
1:1:1491:G:H2'	1:1:1492:U:C6	2.05	0.90
1:1:798:G:H8	1:1:867:G:N2	1.69	0.90
1:1:557:U:C3'	1:1:558:G:C8	2.55	0.90
1:1:958:G:H4'	1:1:958:G:OP1	1.69	0.90
1:1:744:G:H4'	9:H:102:PRO:HG3	1.53	0.89
1:1:1157:G:N3	1:1:1157:G:H5''	1.87	0.89
5:D:158:ILE:HG22	5:D:164:VAL:HG22	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:58:C:H5''	1:1:499:G:H21	1.36	0.89
1:1:806:U:H2'	1:1:807:G:H5'	1.53	0.89
1:1:1441:U:H2'	1:1:1442:U:C4'	1.99	0.89
1:1:1431:G:H2'	1:1:1432:U:C5	2.07	0.89
1:1:1531:A:H4'	1:1:1605:G:H4'	1.54	0.89
1:1:609:U:H2'	1:1:610:G:C8	2.08	0.89
1:1:222:U:H2'	1:1:223:C:H6	1.36	0.89
1:1:569:A:C2'	1:1:570:C:H5''	2.02	0.89
1:1:383:G:H3'	1:1:384:U:C6	2.07	0.89
1:1:1330:G:H4'	1:1:1331:C:C5'	2.01	0.88
1:1:444:G:H22	1:1:447:A:H5''	1.38	0.88
21:T:39:LEU:HD11	21:T:43:LYS:HB2	1.55	0.88
1:1:310:C:H4'	1:1:311:C:OP1	1.73	0.88
4:C:174:ILE:HG22	4:C:175:GLY:H	1.38	0.88
1:1:1308:U:H1'	1:1:1309:C:C6	2.08	0.88
1:1:339:A:H2'	1:1:340:C:C6	2.08	0.88
15:N:92:ILE:HG21	15:N:149:LEU:HD13	1.55	0.88
1:1:1638:G:N3	1:1:1638:G:H5'	1.89	0.88
3:B:28:LYS:HD3	3:B:48:LEU:HD13	1.55	0.88
1:1:1518:C:H5''	1:1:1519:U:H5'	1.56	0.88
1:1:1138:C:H5''	1:1:1139:C:OP1	1.74	0.88
17:P:34:MET:HG3	17:P:45:LEU:HD22	1.52	0.88
1:1:229:A:C6	1:1:900:C:H1'	2.09	0.88
19:R:109:LEU:HD13	19:R:111:PHE:H	1.38	0.88
1:1:1692:U:H2'	1:1:1693:G:H8	1.38	0.87
1:1:529:A:H2'	1:1:530:U:C6	2.08	0.87
1:1:66:G:H2'	8:G:132:ARG:O	1.74	0.87
1:1:1405:A:C2	1:1:1442:U:H6	1.92	0.87
1:1:1556:A:P	1:1:1556:A:H3'	2.14	0.87
1:1:76:U:H3'	1:1:77:A:H5''	1.57	0.87
1:1:1765:C:H2'	1:1:1766:C:O4'	1.74	0.87
1:1:851:C:H4'	1:1:852:G:C2	2.08	0.87
1:1:222:U:H2'	1:1:223:C:C6	2.09	0.87
1:1:68:A:H4'	1:1:69:C:O5'	1.74	0.87
1:1:193:C:H2'	1:1:194:C:H6	1.37	0.87
1:1:1690:U:H2'	1:1:1691:U:H5'	1.56	0.87
1:1:1768:A:C2'	1:1:1769:C:H5'	2.05	0.87
1:1:131:C:N4	1:1:215:G:H5'	1.89	0.86
1:1:1079:C:H4'	1:1:1181:A:N6	1.91	0.86
1:1:106:C:H5''	1:1:431:G:H1'	1.56	0.86
1:1:1298:G:H4'	17:P:78:THR:HA	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:84:A:HO2'	1:1:85:A:H8	0.89	0.86
1:1:1284:A:C5	1:1:1286:G:H5'	2.10	0.86
1:1:192:C:H42	1:1:207:G:H1	1.23	0.86
1:1:211:G:C8	1:1:211:G:H5'	2.10	0.86
1:1:184:G:H3'	1:1:185:G:H4'	1.55	0.86
1:1:1340:U:H5''	1:1:1341:C:H2'	1.56	0.86
1:1:181:A:C3'	1:1:182:C:H5''	2.05	0.86
1:1:748:C:H42	1:1:860:G:P	1.97	0.86
1:1:690:G:H2'	1:1:691:G:C8	2.11	0.86
1:1:1082:A:H2'	1:1:1084:A:H5''	1.57	0.86
19:R:109:LEU:HD11	19:R:111:PHE:HB2	1.57	0.86
1:1:1697:A:H1'	1:1:1698:C:OP2	1.75	0.86
1:1:1276:A:H5'	1:1:1277:C:C5	2.10	0.86
1:1:1390:U:H2'	1:1:1391:C:C6	2.11	0.86
1:1:1416:C:N4	1:1:1431:G:C2	2.44	0.86
1:1:1255:G:H5''	1:1:1256:G:H8	1.41	0.86
1:1:1832:A:C2'	1:1:1833:C:H5''	2.06	0.85
1:1:1442:U:H3'	1:1:1443:C:C5'	2.04	0.85
1:1:1554:C:H3'	1:1:1555:U:H5'	1.57	0.85
1:1:1424:G:H3'	1:1:1425:G:O4'	1.76	0.85
1:1:1261:C:OP1	1:1:1261:C:H4'	1.75	0.85
1:1:172:U:H3'	1:1:173:A:H5''	1.56	0.85
1:1:526:A:H2'	1:1:526:A:N3	1.90	0.85
1:1:1101:U:H2'	1:1:1102:G:H8	1.39	0.85
1:1:1825:A:H2'	1:1:1826:G:H5''	1.59	0.85
1:1:573:U:H2'	1:1:576:A:H2	1.42	0.85
1:1:1781:A:H1'	1:1:1782:G:OP2	1.77	0.85
1:1:1766:C:H3'	1:1:1767:C:C6	2.12	0.85
1:1:576:A:OP1	1:1:577:U:H3'	1.76	0.85
1:1:797:C:C2'	1:1:798:G:H5''	2.06	0.85
1:1:222:U:H5''	13:L:17:PHE:O	1.77	0.85
1:1:1684:C:H2'	1:1:1685:U:C5'	2.05	0.85
1:1:1217:A:H2'	1:1:1218:C:C6	2.11	0.84
1:1:1093:A:H5'	24:W:3:ARG:HE	1.39	0.84
1:1:1402:A:H2'	1:1:1403:C:C5	2.12	0.84
1:1:1079:C:H4'	1:1:1181:A:H61	1.40	0.84
1:1:1016:U:H1'	1:1:1017:U:H5''	1.58	0.84
1:1:1476:A:H4'	1:1:1477:U:C5'	2.07	0.84
1:1:1049:A:H2	1:1:1069:U:H3	1.24	0.84
1:1:377:G:H4'	10:I:97:VAL:CG1	2.05	0.84
1:1:210:U:C2'	1:1:211:G:H5''	2.08	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1476:A:H4'	1:1:1477:U:H5'	1.60	0.84
1:1:20:G:H4'	1:1:620:G:C2	2.12	0.84
1:1:162:C:H2'	1:1:163:U:O4'	1.76	0.84
1:1:1579:A:N3	1:1:1579:A:H3'	1.92	0.84
1:1:193:C:H4'	1:1:209:A:C6	2.13	0.84
1:1:398:A:H4'	1:1:399:C:H3'	1.60	0.84
1:1:447:A:H5'	10:I:26:LYS:HD2	1.60	0.84
1:1:1021:U:H5''	15:N:128:TYR:CE1	2.12	0.84
1:1:1542:C:H5''	1:1:1542:C:H6	1.43	0.84
1:1:1280:G:H2'	1:1:1281:G:C8	2.13	0.83
1:1:855:G:H2'	1:1:856:C:H5'	1.60	0.83
1:1:1418:C:H5''	21:T:129:ARG:CB	2.07	0.83
1:1:1418:C:H2'	1:1:1419:C:C6	2.13	0.83
1:1:893:U:H2'	1:1:894:G:C8	2.12	0.83
1:1:216:C:H2'	1:1:217:A:C8	2.12	0.83
1:1:693:A:H3'	1:1:694:G:H4'	1.61	0.83
1:1:1103:C:H2'	1:1:1104:G:H5'	1.59	0.83
1:1:1257:G:H5''	1:1:1257:G:H8	1.44	0.83
1:1:890:U:H3'	1:1:891:G:H5''	1.60	0.83
1:1:979:C:O2'	1:1:980:A:H5'	1.76	0.83
6:E:141:THR:HG22	6:E:143:ASP:H	1.42	0.83
1:1:1214:A:H2'	1:1:1215:C:H5'	1.57	0.83
1:1:798:G:C8	1:1:867:G:N2	2.47	0.83
1:1:1554:C:H3'	1:1:1555:U:C5'	2.09	0.83
1:1:199:C:H4'	1:1:200:G:OP1	1.79	0.83
1:1:1483:A:H4'	5:D:160:SER:CB	2.08	0.83
1:1:1491:G:H2'	1:1:1492:U:H6	1.40	0.83
1:1:1484:A:H5''	5:D:159:HIS:HB3	1.61	0.83
22:U:94:PRO:HD2	22:U:97:ILE:HD12	1.60	0.83
8:G:135:PRO:HG3	8:G:144:LEU:HD13	1.61	0.83
1:1:1440:C:H2'	1:1:1441:U:C5	2.14	0.83
1:1:1417:C:H2'	1:1:1418:C:C6	2.13	0.82
1:1:797:C:H4'	9:H:109:ARG:CB	2.07	0.82
11:J:128:VAL:O	11:J:132:GLN:HG2	1.78	0.82
1:1:59:U:C2'	1:1:60:A:H5''	2.09	0.82
1:1:1103:C:C2'	1:1:1104:G:H5'	2.09	0.82
1:1:1276:A:H4'	1:1:1277:C:O5'	1.78	0.82
1:1:1557:C:H3'	1:1:1557:C:OP2	1.79	0.82
1:1:1445:U:O2'	1:1:1446:A:H5'	1.80	0.82
1:1:640:A:H5''	11:J:25:LEU:HD11	1.59	0.82
1:1:1416:C:C3'	1:1:1417:C:H5''	2.08	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:70:G:H2'	1:1:71:G:H4'	1.61	0.82
1:1:1098:C:H2'	1:1:1099:G:C8	2.13	0.82
1:1:1775:C:H2'	1:1:1776:G:H8	1.42	0.82
2:A:30:LEU:HD21	2:A:35:GLU:HA	1.62	0.82
1:1:569:A:H2'	1:1:570:C:C5'	2.08	0.82
10:I:130:THR:HG22	10:I:136:ILE:HA	1.62	0.82
1:1:95:G:H1	1:1:435:A:H61	1.26	0.82
1:1:1405:A:C2'	1:1:1406:G:H5''	2.09	0.82
25:X:87:ASN:HB2	25:X:90:CYS:SG	2.19	0.82
1:1:1016:U:H1'	1:1:1017:U:C5'	2.10	0.82
1:1:302:A:H2'	1:1:303:C:C5'	2.08	0.82
1:1:1666:C:H3'	1:1:1667:U:C6	2.15	0.82
1:1:1133:A:H2'	1:1:1134:G:C8	2.15	0.82
1:1:1534:C:H4'	1:1:1535:U:H5'	1.61	0.82
1:1:1313:A:N1	14:M:104:VAL:HG21	1.94	0.82
2:A:6:ASP:HB2	23:V:42:VAL:HG22	1.62	0.82
1:1:1405:A:H2'	1:1:1406:G:H5''	1.62	0.81
3:B:103:MET:HB3	3:B:215:VAL:HG12	1.60	0.81
1:1:691:G:C2'	1:1:692:G:H5'	2.10	0.81
1:1:1403:C:H3'	1:1:1404:U:C6	2.16	0.81
1:1:175:A:C2	1:1:176:U:H1'	2.16	0.81
8:G:98:ARG:HD3	8:G:106:LEU:HD11	1.60	0.81
17:P:126:VAL:HG13	17:P:127:LYS:H	1.44	0.81
10:I:158:ILE:O	10:I:162:LEU:HB2	1.79	0.81
1:1:1214:A:C6	1:1:1686:G:C2	2.69	0.81
1:1:1834:A:H2	1:1:1837:G:H22	1.26	0.81
1:1:1456:G:H5''	1:1:1456:G:H8	1.45	0.81
1:1:364:A:OP1	1:1:364:A:H4'	1.79	0.81
1:1:559:G:H3'	1:1:560:A:C5'	2.10	0.81
1:1:920:A:H2'	1:1:922:A:H8	1.46	0.81
1:1:1411:G:H4'	1:1:1412:C:OP1	1.81	0.81
1:1:186:C:H2'	1:1:187:G:H8	1.46	0.81
1:1:1578:U:OP2	1:1:1578:U:H4'	1.80	0.81
1:1:527:C:C3'	1:1:528:A:C8	2.63	0.81
1:1:952:G:H2'	1:1:953:C:O4'	1.81	0.81
1:1:795:A:H2'	1:1:796:G:H8	1.46	0.81
1:1:380:G:H2'	1:1:382:C:H5	1.46	0.81
15:N:42:LYS:HE3	15:N:80:LEU:HD23	1.63	0.81
8:G:12:CYS:SG	8:G:127:THR:HB	2.21	0.81
1:1:1337:C:H2'	1:1:1338:G:C8	2.15	0.81
27:Z:69:THR:HG22	27:Z:70:PRO:HD2	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1413:G:O2'	1:1:1414:A:H5'	1.81	0.80
1:1:217:A:H4'	1:1:341:C:H5'	1.61	0.80
1:1:1442:U:O5'	1:1:1443:C:H5''	1.81	0.80
1:1:804:U:H2'	1:1:805:U:H6	1.42	0.80
1:1:886:A:P	1:1:886:A:H3'	2.21	0.80
1:1:1648:G:H4'	1:1:1649:U:OP2	1.81	0.80
1:1:306:C:H2'	10:I:43:ILE:O	1.81	0.80
26:Y:35:VAL:HG23	26:Y:40:ILE:HD11	1.61	0.80
1:1:66:G:H1'	8:G:160:LYS:HG2	1.61	0.80
1:1:1133:A:H2'	1:1:1134:G:H8	1.43	0.80
1:1:84:A:H5'	26:Y:123:ALA:HB2	1.62	0.80
1:1:406:U:H4'	1:1:407:G:N2	1.97	0.80
6:E:45:ILE:HD12	6:E:61:VAL:HG21	1.62	0.80
1:1:215:G:H2'	1:1:216:C:C6	2.15	0.80
1:1:1307:U:C2'	1:1:1308:U:H5'	2.12	0.80
1:1:1307:U:H2'	1:1:1308:U:H5'	1.64	0.80
20:S:66:ARG:O	20:S:70:ILE:HG12	1.82	0.80
1:1:822:U:H5'	1:1:822:U:H6	1.46	0.80
1:1:1253:A:H4'	1:1:1254:C:C5'	2.11	0.80
1:1:796:G:H22	1:1:797:C:H5	1.29	0.80
9:H:79:LEU:HD22	9:H:94:PHE:HZ	1.46	0.80
1:1:971:G:H4'	1:1:972:A:O5'	1.82	0.80
19:R:21:TYR:CE1	19:R:61:ILE:HG21	2.17	0.80
1:1:576:A:OP2	1:1:577:U:H5'	1.82	0.80
1:1:690:G:H2'	1:1:691:G:H8	1.46	0.80
1:1:1405:A:O5'	1:1:1405:A:H8	1.65	0.80
1:1:203:G:H2'	1:1:204:G:C8	2.16	0.80
1:1:1833:C:H5'	1:1:1833:C:C6	2.10	0.80
1:1:67:C:H41	8:G:163:ASN:HA	1.46	0.80
1:1:1442:U:H5'	1:1:1443:C:C6	2.12	0.80
1:1:106:C:H2'	1:1:107:A:C8	2.17	0.80
11:J:130:ILE:HG22	11:J:135:ILE:HD12	1.63	0.80
1:1:889:U:H3'	1:1:890:U:H5''	1.63	0.80
1:1:1348:G:N2	1:1:1381:G:H22	1.78	0.80
1:1:1634:A:H3'	1:1:1635:C:H6	1.47	0.79
1:1:745:C:H4'	1:1:746:C:C6	2.17	0.79
1:1:1030:A:H2'	1:1:1031:A:H8	1.46	0.79
1:1:500:A:H2'	1:1:501:C:C5'	2.12	0.79
1:1:1769:C:H2'	1:1:1770:G:C8	2.17	0.79
1:1:184:G:H2'	1:1:185:G:O3'	1.82	0.79
1:1:795:A:C2'	1:1:796:G:H5'	2.11	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:558:G:H2'	1:1:559:G:H5''	1.64	0.79
1:1:1743:G:H1'	1:1:1792:G:N2	1.97	0.79
1:1:1326:U:H4'	1:1:1327:G:O5'	1.82	0.79
25:X:61:GLN:HB3	25:X:62:PRO:CD	2.13	0.79
1:1:125:C:H4'	6:E:136:ILE:HA	1.63	0.79
1:1:1203:G:C8	1:1:1699:A:C2	2.70	0.79
1:1:1593:C:H5	27:Z:104:ARG:HH21	1.30	0.79
1:1:317:C:H3'	1:1:318:A:H5''	1.64	0.79
1:1:1547:C:H3'	1:1:1548:G:C5'	2.10	0.79
1:1:944:A:H1'	16:O:136:PRO:HB3	1.65	0.79
1:1:1604:G:C2'	1:1:1605:G:H5'	2.12	0.79
1:1:1049:A:H2	1:1:1069:U:N3	1.80	0.79
22:U:55:ARG:HD2	22:U:87:ARG:CZ	2.13	0.79
6:E:18:TRP:HE3	6:E:20:LEU:HD11	1.47	0.79
6:E:21:ASP:HB2	6:E:24:THR:OG1	1.83	0.79
1:1:1176:G:H2'	1:1:1177:U:C6	2.18	0.79
1:1:1442:U:C4	18:Q:22:VAL:HG22	2.18	0.79
17:P:60:LEU:HD21	17:P:92:SER:HB3	1.62	0.79
4:C:167:ARG:HA	4:C:181:PRO:HD3	1.65	0.79
1:1:1257:G:H5'	1:1:1258:A:C8	2.18	0.79
1:1:1699:A:O5'	1:1:1699:A:H8	1.66	0.79
1:1:1427:C:H2'	1:1:1428:G:O4'	1.83	0.79
1:1:179:C:H2'	1:1:180:G:C2	2.18	0.78
1:1:747:U:H1'	1:1:748:C:H2'	1.63	0.78
1:1:64:A:H2	1:1:84:A:N6	1.81	0.78
1:1:618:C:H1'	1:1:632:C:C5'	2.12	0.78
1:1:1698:C:H4'	1:1:1699:A:H8	1.49	0.78
1:1:1638:G:C4	1:1:1638:G:H5'	2.18	0.78
1:1:740:C:H2'	1:1:741:C:C6	2.18	0.78
1:1:309:G:H4'	1:1:310:C:OP2	1.81	0.78
1:1:1476:A:C4'	1:1:1477:U:H5'	2.14	0.78
1:1:1647:A:O2'	1:1:1648:G:H5'	1.82	0.78
1:1:331:C:H3'	1:1:332:G:H5''	1.66	0.78
1:1:1630:A:H2'	1:1:1631:U:H5''	1.64	0.78
5:D:8:LYS:HG2	22:U:61:LEU:HD21	1.65	0.78
17:P:22:LEU:HD21	17:P:109:PRO:HB3	1.64	0.78
1:1:376:A:H2'	1:1:377:G:C8	2.17	0.78
1:1:934:G:H5'	1:1:993:G:N2	1.99	0.78
7:F:49:LEU:HD21	18:Q:46:THR:HG22	1.63	0.78
1:1:1016:U:H4'	1:1:1017:U:OP1	1.81	0.78
1:1:300:U:H2'	1:1:301:A:C8	2.18	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1654:G:H3'	1:1:1655:C:H5	1.48	0.78
1:1:42:A:H2'	1:1:43:U:H5''	1.66	0.78
1:1:1456:G:C8	1:1:1456:G:H5''	2.18	0.78
1:1:1413:G:C2'	1:1:1414:A:H5'	2.14	0.78
1:1:179:C:OP2	1:1:179:C:H6	1.67	0.78
1:1:1769:C:H2'	1:1:1770:G:H8	1.46	0.78
1:1:1473:G:H2'	1:1:1475:G:N7	1.99	0.78
12:K:90:VAL:HG13	12:K:94:LEU:HD23	1.64	0.78
1:1:4:C:H2'	1:1:5:U:C6	2.19	0.78
1:1:1625:U:H2'	1:1:1626:C:C6	2.19	0.78
1:1:1833:C:H6	1:1:1833:C:C5'	1.97	0.77
1:1:1203:G:C8	1:1:1699:A:H2	2.02	0.77
1:1:91:A:H5''	1:1:92:A:H5''	1.66	0.77
1:1:815:U:H2'	1:1:816:A:C8	2.18	0.77
1:1:1536:G:H2'	1:1:1537:A:C8	2.19	0.77
1:1:1787:G:H2'	1:1:1788:A:C8	2.19	0.77
1:1:304:C:H4'	1:1:305:U:OP2	1.84	0.77
1:1:1276:A:H4'	1:1:1277:C:C5'	2.14	0.77
1:1:797:C:H5''	9:H:106:ARG:O	1.85	0.77
1:1:527:C:C4'	11:J:125:HIS:HB2	2.14	0.77
1:1:639:C:H2'	1:1:640:A:H8	1.48	0.77
1:1:315:C:N3	1:1:336:A:H2	1.81	0.77
1:1:1442:U:H2'	1:1:1442:U:O2	1.83	0.77
16:O:72:TYR:CE2	16:O:76:LEU:HD11	2.19	0.77
1:1:1848:U:O2'	1:1:1849:G:H5'	1.84	0.77
1:1:1100:A:H2'	1:1:1101:U:H5'	1.67	0.77
1:1:655:A:C5	1:1:657:U:H5	2.03	0.77
1:1:1217:A:H1'	1:1:1685:U:O2	1.85	0.77
1:1:179:C:H5''	1:1:180:G:N2	1.99	0.77
1:1:525:A:H2	1:1:561:A:N6	1.81	0.77
1:1:911:C:H3'	1:1:912:C:C6	2.20	0.77
1:1:1429:G:H5''	1:1:1430:C:OP2	1.85	0.77
1:1:746:C:H5''	9:H:104:PRO:O	1.84	0.76
1:1:1629:C:H5'	20:S:39:ARG:HH21	1.49	0.76
9:H:84:GLU:OE2	9:H:91:HIS:HA	1.85	0.76
1:1:1095:C:H5''	24:W:22:LYS:NZ	2.00	0.76
1:1:1574:C:H2'	1:1:1575:G:H5'	1.67	0.76
1:1:794:A:C2'	1:1:795:A:H4'	2.14	0.76
1:1:1406:G:HO2'	1:1:1408:U:H5	1.34	0.76
1:1:1241:A:H1'	1:1:1267:C:H1'	1.67	0.76
1:1:142:C:H4'	1:1:143:U:H4'	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1417:C:O2'	1:1:1418:C:H5'	1.86	0.76
1:1:1166:G:H1	1:1:1193:U:H3	1.33	0.76
1:1:1725:U:H2'	1:1:1726:G:C8	2.20	0.76
1:1:1418:C:H2'	1:1:1419:C:C5	2.21	0.76
1:1:313:A:H2'	8:G:191:ARG:NH2	2.00	0.76
18:Q:22:VAL:O	18:Q:70:VAL:HA	1.86	0.76
1:1:658:U:H5''	1:1:659:G:C5	2.21	0.76
1:1:1287:A:H3'	1:1:1312:G:H22	1.50	0.76
1:1:1260:A:C2	1:1:1620:A:H1'	2.21	0.76
1:1:147:A:H61	1:1:170:A:H8	1.33	0.76
1:1:1637:A:H4'	1:1:1638:G:H5''	1.68	0.76
1:1:798:G:H8	1:1:867:G:H22	1.30	0.76
1:1:855:G:C2'	1:1:856:C:H5'	2.14	0.76
1:1:1755:C:H2'	1:1:1756:C:C6	2.21	0.76
1:1:900:C:H2'	1:1:901:G:N7	1.99	0.76
1:1:959:G:H1	16:O:65:ASP:HB3	1.50	0.76
1:1:81:U:H6	1:1:81:U:H5''	1.50	0.76
1:1:745:C:C2	1:1:750:C:H5''	2.21	0.75
1:1:557:U:H3'	1:1:558:G:N7	2.00	0.75
1:1:1079:C:C2'	1:1:1080:A:H5'	2.16	0.75
1:1:59:U:H2'	1:1:60:A:H5''	1.66	0.75
1:1:933:G:O6	1:1:992:A:H2	1.69	0.75
1:1:1461:G:H21	1:1:1465:A:N6	1.82	0.75
1:1:1483:A:H4'	5:D:160:SER:HB3	1.67	0.75
1:1:1039:C:H2'	1:1:1040:G:C8	2.20	0.75
1:1:380:G:N1	1:1:382:C:H3'	2.02	0.75
1:1:590:A:H4'	1:1:591:U:OP1	1.86	0.75
3:B:131:ASP:HB3	3:B:180:ASP:OD2	1.87	0.75
17:P:30:TYR:HA	17:P:33:LEU:HD21	1.69	0.75
1:1:1079:C:H2'	1:1:1080:A:H5'	1.69	0.75
15:N:22:VAL:HG12	15:N:66:VAL:HA	1.68	0.75
1:1:689:U:H3'	1:1:690:G:H8	1.50	0.75
1:1:587:A:H2'	1:1:592:C:N4	2.01	0.75
1:1:193:C:H5'	1:1:193:C:H6	1.50	0.75
1:1:301:A:H2'	1:1:302:A:H8	1.47	0.75
1:1:1040:G:H2'	1:1:1041:G:C8	2.20	0.75
1:1:32:U:H1'	1:1:516:A:C2	2.21	0.75
1:1:1075:C:H2'	1:1:1076:G:C8	2.21	0.75
1:1:1353:A:H2'	1:1:1354:G:H5''	1.66	0.75
1:1:43:U:H5'	1:1:44:U:C5	2.13	0.75
1:1:44:U:C6	1:1:44:U:H5'	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:111:A:H4'	1:1:112:U:OP1	1.86	0.75
1:1:606:G:C3'	1:1:607:U:H4'	2.16	0.75
1:1:444:G:H21	1:1:446:G:H3'	1.51	0.75
1:1:91:A:H5''	1:1:92:A:C5'	2.17	0.75
5:D:41:VAL:HG22	5:D:46:THR:HG23	1.69	0.75
1:1:990:A:N6	1:1:992:A:H1'	2.01	0.75
1:1:589:G:H1'	1:1:590:A:OP1	1.85	0.75
1:1:64:A:C2	1:1:84:A:N6	2.54	0.75
6:E:220:THR:HG23	6:E:225:ILE:HD11	1.66	0.75
6:E:253:ASP:O	6:E:257:ALA:HA	1.86	0.75
1:1:1575:G:H2'	1:1:1576:G:C8	2.22	0.75
1:1:749:U:H2'	1:1:750:C:C6	2.22	0.75
1:1:444:G:N2	1:1:447:A:H5''	2.01	0.75
1:1:1116:C:O2	1:1:1116:C:H2'	1.87	0.75
1:1:130:G:H3'	1:1:131:C:H5''	1.69	0.75
1:1:342:C:N4	1:1:343:A:H62	1.85	0.75
1:1:560:A:H3'	11:J:171:GLY:HA3	1.68	0.75
1:1:207:G:H1'	1:1:208:G:N7	2.02	0.75
1:1:308:G:H4'	1:1:309:G:O5'	1.85	0.75
1:1:1518:C:H5''	1:1:1519:U:C5'	2.15	0.75
1:1:1261:C:C6	1:1:1261:C:H5''	2.21	0.75
1:1:1225:U:H2'	1:1:1226:G:H5'	1.67	0.75
1:1:186:C:H2'	1:1:187:G:C8	2.22	0.74
1:1:84:A:H4'	26:Y:119:GLY:O	1.85	0.74
1:1:120:U:H2'	1:1:121:U:O4'	1.86	0.74
3:B:62:LEU:O	3:B:65:ARG:HG3	1.86	0.74
1:1:1439:A:H2'	1:1:1440:C:C6	2.21	0.74
1:1:1164:G:H3'	1:1:1165:G:N2	2.02	0.74
1:1:1039:C:H2'	1:1:1040:G:H8	1.51	0.74
1:1:1296:U:H2'	1:1:1297:U:H5'	1.69	0.74
1:1:1644:C:H4'	1:1:1645:C:OP1	1.88	0.74
1:1:1331:C:H5''	1:1:1331:C:O2	1.87	0.74
1:1:10:G:C8	1:1:1697:A:C2	2.76	0.74
1:1:454:U:H2'	1:1:455:A:C8	2.23	0.74
1:1:574:A:H3'	1:1:575:A:H8	1.53	0.74
1:1:1016:U:C5	1:1:1017:U:C5	2.75	0.74
1:1:987:A:H3'	1:1:988:C:C5	2.22	0.74
1:1:1412:C:H2'	1:1:1414:A:OP1	1.88	0.74
1:1:683:G:H1'	1:1:1023:A:H2	1.48	0.74
3:B:49:VAL:HG11	3:B:58:ALA:HB2	1.69	0.74
1:1:112:U:H5''	1:1:113:G:C5'	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:112:U:C5'	1:1:113:G:H5'	2.15	0.74
1:1:1825:A:H8	1:1:1825:A:O5'	1.70	0.74
1:1:1117:C:H3'	1:1:1118:C:H5''	1.69	0.74
8:G:77:LEU:O	8:G:92:ARG:HA	1.88	0.74
1:1:169:U:H1'	8:G:133:LEU:HD12	1.69	0.74
1:1:1403:C:H3'	1:1:1404:U:H6	1.51	0.74
1:1:1286:G:H1'	14:M:34:GLY:HA3	1.68	0.74
1:1:952:G:H1'	16:O:52:THR:HB	1.70	0.74
1:1:886:A:OP1	1:1:886:A:H3'	1.87	0.74
1:1:1771:G:H2'	1:1:1772:C:C6	2.23	0.74
19:R:71:ILE:HD13	19:R:75:GLU:HB2	1.69	0.74
1:1:571:U:H3'	1:1:572:U:O4'	1.87	0.74
1:1:899:U:H2'	1:1:900:C:C6	2.22	0.74
1:1:384:U:C2'	1:1:385:G:H5''	2.14	0.74
2:A:6:ASP:O	23:V:83:PHE:HB3	1.88	0.74
1:1:1516:G:H2'	1:1:1517:G:H5'	1.68	0.74
4:C:193:VAL:HG11	4:C:240:THR:HG23	1.70	0.74
1:1:815:U:H2'	1:1:816:A:H8	1.51	0.74
1:1:368:U:H4'	1:1:369:C:OP1	1.87	0.74
1:1:838:G:N7	26:Y:8:ARG:HA	2.02	0.74
1:1:1070:A:H2'	1:1:1071:G:O4'	1.88	0.73
1:1:812:A:H2'	1:1:813:A:H8	1.53	0.73
1:1:193:C:H4'	1:1:209:A:H61	1.51	0.73
1:1:1427:C:H6	1:1:1427:C:H3'	1.51	0.73
1:1:1851:A:H8	1:1:1851:A:H5''	1.53	0.73
1:1:672:A:H2	1:1:1162:C:HO2'	1.36	0.73
1:1:399:C:H4'	1:1:400:C:OP2	1.89	0.73
1:1:834:C:H4'	1:1:835:C:O5'	1.86	0.73
1:1:1370:A:H2'	1:1:1372:U:H5'	1.70	0.73
1:1:1787:G:H2'	1:1:1788:A:H8	1.52	0.73
1:1:338:G:H2'	1:1:339:A:C8	2.23	0.73
1:1:1567:G:H2'	1:1:1568:C:H5'	1.68	0.73
1:1:1643:U:H1'	18:Q:142:GLN:OE1	1.88	0.73
1:1:491:C:H5''	1:1:574:A:N1	2.04	0.73
1:1:528:A:H2'	1:1:529:A:O4'	1.89	0.73
5:D:72:VAL:HG13	12:K:68:TYR:CD1	2.24	0.73
1:1:884:C:O2'	1:1:885:U:H5'	1.86	0.73
17:P:33:LEU:HD22	17:P:87:PRO:HG2	1.70	0.73
9:H:79:LEU:HD22	9:H:94:PHE:CZ	2.24	0.73
1:1:1378:A:C4	2:A:105:PRO:HB3	2.24	0.73
1:1:738:C:H2'	1:1:739:C:C6	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:574:A:H5'	1:1:575:A:C8	2.23	0.73
1:1:1606:G:H8	1:1:1606:G:OP2	1.72	0.73
1:1:849:A:H2'	1:1:850:C:H6	1.52	0.73
1:1:1542:C:H5''	1:1:1542:C:C6	2.23	0.73
1:1:60:A:H5'	1:1:501:C:H5	1.53	0.73
1:1:65:C:C2'	1:1:66:G:H3'	2.19	0.73
1:1:58:C:N4	1:1:88:G:C2	2.57	0.73
1:1:582:U:H3'	1:1:583:A:H8	1.54	0.73
1:1:1123:C:H5''	3:B:149:GLN:HE22	1.54	0.73
1:1:798:G:H1'	1:1:867:G:H21	1.53	0.73
2:A:9:GLN:HB2	23:V:83:PHE:CD2	2.23	0.73
1:1:487:U:H1'	1:1:488:U:OP1	1.87	0.73
1:1:1807:C:H2'	1:1:1808:U:C6	2.24	0.73
1:1:1543:U:H1'	1:1:1544:C:O5'	1.87	0.73
1:1:1217:A:O2'	1:1:1685:U:H1'	1.89	0.72
1:1:184:G:H8	1:1:185:G:C4'	1.99	0.72
1:1:35:C:H2'	1:1:36:U:C6	2.24	0.72
12:K:32:HIS:N	12:K:33:PRO:HD3	2.04	0.72
12:K:32:HIS:H	12:K:33:PRO:HD3	1.53	0.72
1:1:1815:A:H3'	1:1:1816:G:H8	1.54	0.72
1:1:70:G:H2'	1:1:71:G:C4'	2.18	0.72
1:1:673:G:H1'	1:1:1084:A:C4	2.23	0.72
1:1:1567:G:C2'	1:1:1568:C:H5'	2.19	0.72
1:1:15:U:C2'	1:1:16:G:H5'	2.19	0.72
1:1:862:A:N3	24:W:105:THR:HG22	2.03	0.72
1:1:1576:G:C2'	1:1:1577:G:H5'	2.19	0.72
1:1:1176:G:H2'	1:1:1177:U:H6	1.54	0.72
13:L:71:ARG:HH12	13:L:73:LEU:HD11	1.54	0.72
1:1:553:U:H3'	1:1:554:A:H5''	1.71	0.72
3:B:63:LYS:O	3:B:88:THR:HB	1.89	0.72
26:Y:91:LEU:HD22	26:Y:96:LEU:HD11	1.72	0.72
24:W:16:ASN:O	24:W:20:ARG:HD2	1.90	0.72
1:1:1503:C:H2'	1:1:1504:U:C6	2.24	0.72
27:Z:58:LEU:HD13	27:Z:77:LEU:HD22	1.70	0.72
1:1:312:G:H4'	1:1:313:A:OP2	1.88	0.72
1:1:933:G:O6	1:1:992:A:C2	2.43	0.72
1:1:1731:A:H2'	1:1:1732:G:C8	2.24	0.72
1:1:571:U:C3'	1:1:572:U:C4'	2.65	0.72
1:1:1338:G:H4'	22:U:74:SER:H	1.54	0.72
11:J:29:LEU:HA	11:J:32:ILE:HD12	1.70	0.72
17:P:83:MET:HB3	17:P:116:LEU:HD12	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:29:G:H4'	25:X:129:SER:CB	2.20	0.72
1:1:1416:C:H3'	1:1:1417:C:C5'	2.13	0.72
1:1:65:C:H4'	8:G:133:LEU:HD22	1.70	0.72
1:1:1082:A:H2'	1:1:1084:A:C5'	2.19	0.72
1:1:957:A:H4'	1:1:973:C:H1'	1.72	0.72
6:E:95:THR:HB	6:E:97:GLU:OE2	1.90	0.72
1:1:1255:G:H3'	1:1:1256:G:C5'	2.20	0.72
1:1:217:A:H4'	1:1:341:C:C5'	2.19	0.72
1:1:741:C:H3'	1:1:742:U:O3'	1.89	0.72
1:1:1414:A:H2'	1:1:1415:C:O4'	1.89	0.72
1:1:747:U:C2	1:1:748:C:H2'	2.25	0.72
1:1:1203:G:H8	1:1:1699:A:C2	2.08	0.72
1:1:604:A:C2	1:1:605:A:C2	2.76	0.72
1:1:1555:U:H4'	1:1:1556:A:OP1	1.89	0.72
1:1:1704:C:H1'	1:1:1832:A:N1	2.05	0.71
1:1:743:U:H4'	1:1:744:G:OP2	1.88	0.71
1:1:1579:A:H2'	1:1:1580:A:O4'	1.90	0.71
1:1:1036:A:H8	1:1:1036:A:O5'	1.73	0.71
1:1:184:G:N7	1:1:185:G:H1'	2.05	0.71
1:1:350:C:N4	1:1:351:G:C2	2.58	0.71
8:G:64:LYS:HE2	8:G:97:VAL:HG11	1.73	0.71
1:1:1405:A:H3'	1:1:1406:G:C5'	2.20	0.71
1:1:433:A:H5''	10:I:25:ARG:HH21	1.53	0.71
1:1:84:A:O2'	1:1:85:A:H8	1.67	0.71
27:Z:62:VAL:HG12	27:Z:68:ILE:HG13	1.72	0.71
1:1:321:C:H2'	1:1:322:C:C6	2.25	0.71
1:1:1552:G:H2'	5:D:3:VAL:HG21	1.72	0.71
6:E:124:CYS:SG	6:E:160:VAL:HG23	2.31	0.71
1:1:370:G:H5'	1:1:370:G:C8	2.25	0.71
1:1:414:A:H8	1:1:414:A:O5'	1.73	0.71
1:1:341:C:O5'	1:1:341:C:H6	1.73	0.71
6:E:38:LEU:HA	6:E:41:CYS:SG	2.30	0.71
1:1:912:C:H2'	1:1:912:C:OP2	1.90	0.71
1:1:1426:U:H3'	1:1:1427:C:H5'	1.71	0.71
10:I:36:THR:O	10:I:95:THR:HA	1.89	0.71
2:A:63:ARG:HG2	23:V:46:PHE:CZ	2.25	0.71
11:J:133:ARG:O	11:J:162:ARG:HD2	1.89	0.71
1:1:736:C:H2'	1:1:737:G:C8	2.26	0.71
1:1:750:C:H2'	1:1:751:G:H8	1.54	0.71
10:I:131:PRO:HG2	10:I:138:ASN:CG	2.10	0.71
1:1:180:G:Cl'	1:1:181:A:H5'	2.08	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:958:G:H3'	1:1:959:G:C8	2.26	0.71
1:1:1021:U:H1'	1:1:1022:U:OP2	1.90	0.71
1:1:1396:A:H2	1:1:1449:G:H1	1.35	0.71
1:1:442:C:H42	1:1:449:A:H62	1.36	0.71
1:1:992:A:OP1	1:1:1133:A:H1'	1.91	0.71
1:1:408:A:H2'	1:1:409:C:H4'	1.72	0.71
1:1:1144:A:H1'	1:1:1199:A:O2'	1.89	0.71
1:1:1853:C:H2'	1:1:1854:U:C6	2.25	0.71
7:F:40:ALA:HB3	7:F:68:ILE:HG13	1.73	0.71
8:G:161:PRO:HA	8:G:170:ARG:O	1.91	0.71
1:1:808:A:O5'	1:1:808:A:H8	1.74	0.71
1:1:319:C:H4'	1:1:320:G:OP2	1.90	0.70
1:1:77:A:N3	1:1:77:A:H2'	2.04	0.70
1:1:77:A:H4'	1:1:78:C:C5	2.26	0.70
1:1:1493:C:C3'	1:1:1494:U:H5'	2.21	0.70
25:X:51:VAL:HG13	25:X:70:VAL:HG13	1.73	0.70
1:1:745:C:H4'	1:1:746:C:C5	2.27	0.70
1:1:747:U:H5''	1:1:795:A:N6	2.06	0.70
1:1:527:C:H5'	11:J:122:SER:CB	2.21	0.70
1:1:95:G:H1	1:1:435:A:N6	1.90	0.70
1:1:1405:A:C3'	1:1:1406:G:H5''	2.22	0.70
1:1:1276:A:N6	1:1:1317:C:H42	1.89	0.70
1:1:1468:C:H2'	1:1:1469:A:H8	1.56	0.70
1:1:1469:A:H2'	1:1:1470:C:C6	2.26	0.70
1:1:465:A:H1'	1:1:466:G:OP2	1.90	0.70
4:C:81:ILE:HG21	4:C:88:ILE:HD11	1.72	0.70
1:1:1522:A:C2	17:P:128:HIS:HB2	2.25	0.70
1:1:1784:G:H2'	1:1:1785:C:C6	2.26	0.70
1:1:1408:U:H2'	1:1:1409:A:O4'	1.91	0.70
1:1:1440:C:H2'	1:1:1441:U:C6	2.26	0.70
1:1:1087:A:H3'	1:1:1088:U:H5'	1.71	0.70
1:1:1565:C:H2'	1:1:1566:G:H5'	1.72	0.70
1:1:1208:A:OP2	1:1:1208:A:H4'	1.90	0.70
1:1:376:A:H2'	1:1:377:G:H8	1.54	0.70
1:1:331:C:H2'	1:1:332:G:O4'	1.92	0.70
9:H:102:PRO:HB2	9:H:105:THR:CB	2.21	0.70
1:1:528:A:H8	1:1:528:A:P	2.14	0.70
1:1:738:C:H2'	1:1:739:C:H6	1.55	0.70
5:D:73:VAL:HG11	5:D:84:VAL:HG21	1.73	0.70
1:1:62:G:H2'	1:1:63:U:O4'	1.92	0.70
1:1:1129:G:H3'	1:1:1130:G:C8	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:99:TYR:CE1	25:X:14:ARG:HA	2.26	0.70
1:1:105:U:H2'	1:1:106:C:O4'	1.92	0.70
1:1:412:G:H5'	1:1:413:G:C8	2.26	0.70
1:1:216:C:H2'	1:1:217:A:H8	1.54	0.70
1:1:558:G:C2'	1:1:559:G:H5''	2.21	0.70
1:1:96:C:H1'	1:1:474:G:H5'	1.71	0.70
1:1:1120:U:H6	1:1:1120:U:H5''	1.54	0.70
2:A:67:ALA:HA	23:V:50:PHE:CE1	2.26	0.70
1:1:1287:A:H4'	1:1:1312:G:N1	2.07	0.70
1:1:1348:G:O5'	1:1:1348:G:H8	1.74	0.70
1:1:1030:A:H2'	1:1:1031:A:C8	2.25	0.70
5:D:11:PHE:CE1	22:U:27:ARG:HB2	2.27	0.70
1:1:1736:G:H2'	1:1:1737:G:C8	2.27	0.70
1:1:131:C:C4	1:1:215:G:H5'	2.26	0.70
1:1:332:G:H4'	1:1:333:G:OP1	1.92	0.70
1:1:1476:A:H4'	1:1:1477:U:O5'	1.92	0.70
1:1:444:G:N2	1:1:446:G:H3'	2.07	0.70
12:K:84:HIS:CD2	12:K:85:LEU:H	2.10	0.70
1:1:1833:C:OP1	1:1:1840:U:H4'	1.92	0.70
13:L:96:ILE:HD11	13:L:103:GLU:OE1	1.91	0.70
1:1:1520:G:H5'	1:1:1521:C:H5	1.53	0.70
1:1:1764:G:N3	1:1:1764:G:H3'	2.06	0.70
1:1:1060:A:H1'	1:1:1061:U:OP2	1.92	0.70
1:1:1840:U:H2'	1:1:1841:C:C6	2.26	0.70
1:1:1599:U:OP1	1:1:1599:U:H4'	1.92	0.70
1:1:528:A:P	11:J:122:SER:HB2	2.32	0.70
1:1:606:G:H3'	1:1:607:U:H4'	1.73	0.70
1:1:1558:C:H2'	1:1:1559:C:C6	2.27	0.70
13:L:99:TYR:CZ	25:X:14:ARG:HA	2.27	0.69
1:1:890:U:H3'	1:1:891:G:C5'	2.19	0.69
1:1:845:G:H4'	6:E:255:ARG:HH12	1.57	0.69
1:1:1700:C:H4'	1:1:1701:C:H5'	1.73	0.69
1:1:334:C:H2'	1:1:335:G:C8	2.27	0.69
1:1:351:G:C8	1:1:351:G:H3'	2.27	0.69
1:1:1483:A:H4'	5:D:160:SER:HB2	1.72	0.69
1:1:86:C:H3'	1:1:87:U:H5''	1.73	0.69
1:1:1814:G:O5'	1:1:1814:G:H8	1.75	0.69
1:1:215:G:OP2	1:1:215:G:H3'	1.93	0.69
1:1:1536:G:H2'	1:1:1537:A:H8	1.57	0.69
2:A:82:THR:HA	2:A:204:TYR:O	1.90	0.69
3:B:125:VAL:HG11	3:B:172:MET:HB3	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:78:C:H1'	1:1:79:A:OP1	1.93	0.69
1:1:749:U:O2	1:1:795:A:C2	2.46	0.69
1:1:890:U:H2'	1:1:890:U:O2	1.90	0.69
1:1:144:U:C6	8:G:180:VAL:HG22	2.27	0.69
1:1:1606:G:N2	1:1:1632:G:H2'	2.07	0.69
1:1:1477:U:H1'	1:1:1478:U:OP2	1.92	0.69
1:1:176:U:H3'	1:1:177:G:C8	2.27	0.69
13:L:20:LYS:HE3	13:L:21:LYS:NZ	2.08	0.69
1:1:448:A:N7	10:I:26:LYS:HA	2.06	0.69
1:1:1425:G:H2'	1:1:1426:U:C6	2.28	0.69
1:1:203:G:H2'	1:1:204:G:H8	1.55	0.69
1:1:1493:C:C6	1:1:1493:C:H5''	2.27	0.69
8:G:68:LEU:HD23	8:G:100:CYS:HB3	1.75	0.69
1:1:313:A:H2	1:1:315:C:N4	1.91	0.69
3:B:79:VAL:HG11	3:B:82:ARG:HD3	1.74	0.69
1:1:1092:G:H2'	1:1:1093:A:H8	1.58	0.69
12:K:15:LEU:HD23	12:K:21:MET:HG2	1.75	0.69
1:1:688:U:H1'	1:1:689:U:H6	1.57	0.69
1:1:1389:C:H2'	1:1:1389:C:OP2	1.92	0.69
20:S:43:VAL:HG22	21:T:37:VAL:HB	1.74	0.69
1:1:1634:A:H3'	1:1:1635:C:C6	2.27	0.69
27:Z:44:LEU:HD21	27:Z:78:LYS:HG2	1.74	0.69
1:1:795:A:C4	1:1:796:G:C8	2.81	0.69
1:1:1100:A:C2'	1:1:1101:U:H5'	2.22	0.69
1:1:1257:G:H5''	1:1:1257:G:C8	2.27	0.69
1:1:1284:A:N7	1:1:1286:G:H5'	2.07	0.69
1:1:1281:G:N2	1:1:1317:C:H1'	2.08	0.69
1:1:1663:A:H2	1:1:1664:A:C6	2.10	0.69
1:1:1690:U:C2'	1:1:1691:U:H5'	2.22	0.69
1:1:181:A:H4'	1:1:182:C:OP2	1.93	0.69
9:H:102:PRO:HB2	9:H:105:THR:HB	1.74	0.69
1:1:380:G:H1	1:1:383:G:P	2.15	0.69
1:1:1456:G:H2'	1:1:1457:U:C6	2.28	0.69
1:1:1750:C:C2'	1:1:1751:C:H5'	2.23	0.69
1:1:65:C:H2'	1:1:66:G:H3'	1.75	0.69
1:1:187:G:H2'	1:1:188:C:C6	2.27	0.68
1:1:1331:C:H6	1:1:1489:A:N6	1.90	0.68
1:1:1453:C:H4'	19:R:49:LYS:HA	1.75	0.68
20:S:6:PRO:HD3	27:Z:52:LYS:HD3	1.75	0.68
1:1:1383:A:O5'	1:1:1383:A:H8	1.76	0.68
1:1:673:G:H8	1:1:673:G:OP1	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:210:U:C3'	1:1:211:G:H5''	2.22	0.68
1:1:1397:U:O3'	1:1:1398:G:H2'	1.93	0.68
22:U:24:LEU:HD11	22:U:36:CYS:SG	2.32	0.68
1:1:12:U:H2'	1:1:13:C:C6	2.28	0.68
1:1:907:G:H2'	1:1:908:A:H8	1.58	0.68
1:1:377:G:H2'	1:1:378:U:C6	2.29	0.68
1:1:65:C:O2'	1:1:66:G:H3'	1.93	0.68
1:1:795:A:N3	1:1:796:G:C8	2.62	0.68
1:1:374:G:H2'	1:1:375:U:C6	2.27	0.68
1:1:1512:C:H2'	1:1:1513:C:C6	2.28	0.68
1:1:170:A:H2'	1:1:171:A:C8	2.28	0.68
5:D:75:LYS:HB3	12:K:22:VAL:HG11	1.75	0.68
1:1:227:U:H1'	1:1:228:C:OP2	1.92	0.68
3:B:66:VAL:HG22	3:B:85:LYS:HE3	1.75	0.68
1:1:66:G:H4'	1:1:67:C:OP2	1.93	0.68
1:1:693:A:C5	1:1:694:G:H1'	2.28	0.68
3:B:63:LYS:HE3	3:B:91:VAL:CG2	2.23	0.68
1:1:298:G:H2'	1:1:299:A:H8	1.57	0.68
1:1:124:U:H6	1:1:124:U:H3'	1.57	0.68
1:1:1228:A:H2'	1:1:1229:G:C8	2.28	0.68
1:1:140:C:OP1	1:1:140:C:H3'	1.94	0.68
1:1:1602:U:H2'	1:1:1603:G:H8	1.58	0.68
1:1:1630:A:C2'	1:1:1631:U:H5''	2.23	0.68
1:1:1397:U:H4'	1:1:1398:G:N2	2.08	0.68
1:1:1630:A:H2'	1:1:1631:U:C5'	2.23	0.68
1:1:1016:U:C6	1:1:1017:U:H5	2.12	0.68
1:1:1396:A:C2	1:1:1449:G:N1	2.59	0.68
1:1:448:A:H4'	1:1:449:A:O5'	1.93	0.68
1:1:912:C:O2'	1:1:913:A:H4'	1.93	0.68
1:1:808:A:H2'	1:1:809:A:C8	2.29	0.68
1:1:1591:C:H5'	7:F:85:LYS:HE3	1.75	0.68
1:1:1247:C:H4'	1:1:1248:U:OP1	1.93	0.68
1:1:59:U:H2'	1:1:60:A:C5'	2.24	0.68
21:T:41:LYS:HG2	21:T:95:GLY:HA2	1.76	0.68
1:1:310:C:H2'	1:1:340:C:H5'	1.75	0.68
1:1:1286:G:N3	1:1:1286:G:H2'	2.09	0.68
1:1:1519:U:H5''	1:1:1519:U:C6	2.29	0.68
1:1:1750:C:H2'	1:1:1751:C:C5'	2.23	0.68
1:1:164:A:H3'	1:1:165:G:C8	2.28	0.68
1:1:1587:G:H21	21:T:75:MET:HA	1.59	0.68
1:1:1405:A:C8	1:1:1405:A:H3'	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1648:G:H2'	18:Q:127:CYS:CA	2.24	0.68
1:1:845:G:H5''	6:E:108:ARG:HH12	1.58	0.68
13:L:5:GLN:HE22	13:L:12:LYS:H	1.42	0.68
1:1:1639:G:H2'	1:1:1639:G:N3	2.09	0.68
1:1:1561:A:C4'	1:1:1583:C:H4'	2.23	0.68
9:H:109:ARG:CG	9:H:113:LYS:HA	2.24	0.68
1:1:746:C:O5'	9:H:105:THR:HA	1.94	0.68
1:1:522:A:N1	1:1:643:A:H5'	2.09	0.68
1:1:901:G:O5'	1:1:901:G:H8	1.77	0.68
1:1:1405:A:C2	1:1:1442:U:C6	2.80	0.68
1:1:1285:G:H4'	1:1:1286:G:O5'	1.93	0.68
1:1:465:A:H4'	1:1:466:G:O5'	1.94	0.68
1:1:1516:G:C2'	1:1:1517:G:H5'	2.24	0.68
1:1:877:C:H2'	1:1:878:G:H8	1.59	0.68
1:1:1053:C:O2	1:1:1053:C:H2'	1.94	0.68
1:1:691:G:H2'	1:1:692:G:H5'	1.76	0.67
1:1:529:A:H2'	1:1:530:U:C5	2.29	0.67
18:Q:34:VAL:HA	18:Q:70:VAL:O	1.94	0.67
1:1:380:G:C2	1:1:382:C:H3'	2.29	0.67
1:1:1696:C:O2'	1:1:1697:A:H5''	1.94	0.67
1:1:1780:G:P	1:1:1781:A:H5''	2.33	0.67
23:V:70:LEU:HD12	23:V:79:VAL:HG23	1.76	0.67
17:P:97:TYR:HB2	17:P:102:PHE:CE2	2.28	0.67
1:1:1721:U:H4'	1:1:1722:G:O5'	1.94	0.67
1:1:1109:C:O2	1:1:1109:C:H3'	1.94	0.67
1:1:795:A:H2'	1:1:796:G:H5'	1.76	0.67
1:1:1240:A:H2'	1:1:1267:C:O2'	1.94	0.67
1:1:907:G:H2'	1:1:908:A:C8	2.29	0.67
1:1:67:C:H5	8:G:163:ASN:N	1.91	0.67
20:S:25:LYS:HE3	20:S:52:LEU:O	1.94	0.67
1:1:1622:U:OP2	1:1:1623:A:H5'	1.94	0.67
4:C:174:ILE:HG22	4:C:175:GLY:N	2.09	0.67
1:1:911:C:H2'	1:1:912:C:C2	2.29	0.67
1:1:1648:G:C8	18:Q:125:ARG:HA	2.29	0.67
1:1:124:U:H3'	1:1:124:U:C6	2.29	0.67
10:I:34:ALA:HB2	10:I:56:ARG:HD3	1.75	0.67
1:1:1328:G:H2'	1:1:1329:U:C6	2.29	0.67
1:1:1204:A:H2'	1:1:1205:C:O4'	1.93	0.67
7:F:103:LEU:HD21	27:Z:67:LEU:HD11	1.75	0.67
1:1:1468:C:H2'	1:1:1469:A:C8	2.29	0.67
1:1:943:U:H3'	1:1:944:A:H8	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1746:U:H2'	1:1:1747:C:C6	2.30	0.67
7:F:187:SER:OG	7:F:190:ILE:HG12	1.94	0.67
1:1:358:C:H5'	1:1:358:C:H6	1.59	0.67
1:1:794:A:N3	1:1:795:A:H1'	2.08	0.67
1:1:797:C:H4'	9:H:109:ARG:HB2	1.74	0.67
1:1:384:U:O5'	1:1:384:U:H6	1.77	0.67
1:1:195:C:H2'	1:1:196:C:C6	2.29	0.67
1:1:1005:G:H2'	1:1:1006:C:C6	2.29	0.67
1:1:576:A:P	1:1:577:U:H3'	2.34	0.67
1:1:746:C:C5	1:1:749:U:H4'	2.29	0.67
1:1:559:G:H5'	1:1:560:A:H5''	1.76	0.67
1:1:1663:A:C2	1:1:1664:A:C6	2.83	0.67
1:1:399:C:H5''	1:1:400:C:C5	2.30	0.67
1:1:371:A:H5''	10:I:11:ARG:HB2	1.76	0.67
25:X:100:VAL:CG1	25:X:122:VAL:HG13	2.24	0.67
1:1:124:U:H5'	6:E:148:ARG:HB3	1.74	0.67
1:1:380:G:H2'	1:1:382:C:C5	2.28	0.67
1:1:1296:U:C2'	1:1:1297:U:H5'	2.24	0.67
1:1:636:C:H6	1:1:636:C:O5'	1.77	0.67
18:Q:15:ARG:HA	18:Q:19:ALA:O	1.95	0.67
1:1:1587:G:N2	21:T:75:MET:HA	2.10	0.67
9:H:109:ARG:HA	9:H:113:LYS:H	1.59	0.67
1:1:1016:U:C5	1:1:1017:U:H5	2.13	0.67
1:1:1408:U:H5'	18:Q:69:ARG:NH2	2.10	0.67
1:1:1427:C:C6	1:1:1427:C:H3'	2.30	0.67
1:1:1673:U:H6	1:1:1673:U:C5'	2.06	0.67
1:1:1008:A:H2'	1:1:1009:A:O4'	1.94	0.67
1:1:817:G:H8	1:1:817:G:O5'	1.77	0.67
1:1:1688:C:O2	1:1:1688:C:H2'	1.94	0.67
1:1:217:A:H4'	1:1:341:C:C4'	2.25	0.67
1:1:527:C:H5'	11:J:122:SER:HB3	1.77	0.67
1:1:1023:A:H5''	15:N:124:ARG:NH2	2.09	0.67
1:1:42:A:C2'	1:1:43:U:H5''	2.24	0.67
1:1:1401:A:H1'	1:1:1402:A:OP1	1.95	0.67
1:1:1442:U:C4	1:1:1443:C:H1'	2.29	0.67
1:1:1284:A:N6	1:1:1313:A:C2	2.63	0.67
1:1:1391:C:H2'	1:1:1392:U:O4'	1.95	0.67
1:1:1076:G:H5'	15:N:106:ARG:NH1	2.09	0.67
1:1:1191:C:H2'	1:1:1192:U:C6	2.29	0.67
7:F:158:ALA:HB1	7:F:173:LEU:HA	1.76	0.67
1:1:381:C:O5'	1:1:381:C:H6	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:172:U:OP1	1:1:314:U:H2'	1.94	0.66
1:1:130:G:H1'	1:1:181:A:N1	2.10	0.66
1:1:1534:C:H2'	1:1:1599:U:C4	2.30	0.66
1:1:805:U:N3	1:1:858:A:C2	2.62	0.66
1:1:1298:G:H1'	17:P:79:HIS:HB2	1.77	0.66
1:1:1676:U:H6	1:1:1676:U:O5'	1.78	0.66
20:S:5:ILE:CG1	20:S:6:PRO:HD2	2.25	0.66
1:1:428:U:H4'	1:1:429:C:OP1	1.95	0.66
1:1:1230:C:C2'	1:1:1231:C:H5'	2.24	0.66
21:T:72:VAL:HG12	21:T:97:LYS:HE3	1.77	0.66
7:F:72:LEU:HD11	7:F:116:ILE:HD11	1.77	0.66
1:1:535:G:HO2'	1:1:536:A:H8	1.42	0.66
1:1:1048:G:H8	1:1:1048:G:O5'	1.79	0.66
1:1:338:G:H8	1:1:338:G:H5''	1.60	0.66
1:1:235:A:O2'	1:1:236:A:H8	1.76	0.66
3:B:186:ASN:O	3:B:190:PRO:HD2	1.95	0.66
3:B:97:LEU:HG	3:B:232:HIS:NE2	2.10	0.66
24:W:30:CYS:SG	24:W:61:ILE:HD12	2.36	0.66
11:J:27:GLN:OE1	11:J:30:LYS:HE2	1.96	0.66
1:1:172:U:C3'	1:1:173:A:H5''	2.26	0.66
20:S:24:ARG:HA	27:Z:48:VAL:HG11	1.77	0.66
1:1:795:A:C2'	1:1:796:G:H8	2.09	0.66
1:1:1160:U:O2'	1:1:1161:U:H5'	1.95	0.66
19:R:109:LEU:O	19:R:109:LEU:HD22	1.94	0.66
1:1:1361:G:H5'	1:1:1379:A:OP2	1.95	0.66
21:T:34:VAL:HG22	21:T:99:VAL:HG12	1.78	0.66
1:1:1389:C:H5'	5:D:205:PRO:HB3	1.77	0.66
1:1:640:A:H2'	1:1:641:A:C8	2.30	0.66
1:1:1167:G:H2'	1:1:1168:G:O4'	1.96	0.66
1:1:1721:U:H1'	1:1:1722:G:OP2	1.96	0.66
2:A:176:TRP:CD2	2:A:199:PRO:HB3	2.31	0.66
1:1:1684:C:C2'	1:1:1685:U:C5'	2.70	0.66
1:1:1410:C:P	1:1:1413:G:H5''	2.35	0.66
1:1:312:G:H22	8:G:195:LYS:HB2	1.61	0.66
1:1:658:U:H5''	1:1:659:G:N7	2.11	0.66
1:1:107:A:H2'	1:1:108:G:C8	2.31	0.66
1:1:1624:U:H2'	1:1:1624:U:O2	1.94	0.66
1:1:1377:U:O2'	1:1:1378:A:H4'	1.96	0.66
1:1:799:U:H1'	1:1:800:U:C6	2.30	0.66
3:B:30:TRP:CZ3	16:O:19:PRO:HB3	2.30	0.66
1:1:224:A:N1	1:1:297:A:N1	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:915:G:H2'	1:1:916:A:H5'	1.76	0.66
3:B:71:LEU:HD13	3:B:72:ALA:N	2.10	0.66
8:G:58:LYS:HA	8:G:107:SER:HB2	1.78	0.66
1:1:540:U:N3	1:1:542:U:H5''	2.10	0.66
1:1:1135:C:H2'	1:1:1136:U:C6	2.30	0.66
1:1:348:A:H2'	1:1:349:A:O4'	1.95	0.66
1:1:797:C:C6	9:H:106:ARG:HB3	2.30	0.66
1:1:307:G:H4'	1:1:308:G:C5'	2.21	0.66
1:1:1557:C:O2	1:1:1557:C:H2'	1.95	0.66
11:J:111:GLN:NE2	11:J:130:ILE:HD12	2.10	0.66
1:1:582:U:H3'	1:1:583:A:C8	2.31	0.66
1:1:421:G:N2	1:1:653:A:H5'	2.11	0.66
1:1:572:U:H3'	1:1:573:U:N3	2.11	0.66
18:Q:37:ARG:HB3	21:T:7:LYS:HG3	1.77	0.66
23:V:35:ASN:OD1	23:V:50:PHE:HB3	1.96	0.66
1:1:305:U:H2'	10:I:60:LEU:CD2	2.26	0.66
1:1:849:A:H2'	1:1:850:C:C6	2.31	0.66
1:1:1389:C:H2'	1:1:1389:C:P	2.36	0.66
1:1:869:A:C2	1:1:915:G:H1'	2.31	0.66
1:1:370:G:H8	1:1:370:G:H5'	1.60	0.66
1:1:1215:C:H4'	1:1:1216:C:OP1	1.96	0.65
1:1:1439:A:H2'	1:1:1440:C:N1	2.11	0.65
17:P:34:MET:CG	17:P:45:LEU:HD22	2.26	0.65
25:X:51:VAL:HG22	25:X:70:VAL:HG11	1.79	0.65
25:X:46:HIS:HB3	25:X:101:LEU:HD11	1.77	0.65
1:1:473:A:H5''	1:1:473:A:H8	1.62	0.65
1:1:1214:A:N1	1:1:1686:G:N3	2.44	0.65
1:1:575:A:H5''	1:1:576:A:N6	2.10	0.65
1:1:346:C:H6	1:1:346:C:H3'	1.61	0.65
7:F:111:VAL:HG12	7:F:177:LEU:HD21	1.78	0.65
1:1:413:G:H5'	1:1:814:U:O2	1.96	0.65
1:1:1431:G:H2'	1:1:1432:U:H6	1.54	0.65
1:1:796:G:N2	1:1:797:C:C5	2.65	0.65
1:1:526:A:C8	11:J:128:VAL:HG13	2.32	0.65
1:1:656:G:H5'	1:1:662:G:N2	2.10	0.65
1:1:1557:C:P	1:1:1557:C:H3'	2.36	0.65
6:E:154:ILE:HG23	6:E:158:ASP:OD2	1.95	0.65
4:C:210:PRO:HG3	4:C:236:PHE:CE2	2.31	0.65
1:1:185:G:H2'	1:1:186:C:H5	1.61	0.65
3:B:153:THR:HB	3:B:155:TYR:CE2	2.31	0.65
1:1:350:C:H2'	1:1:351:G:H5'	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:305:U:O2	10:I:43:ILE:HD11	1.97	0.65
1:1:1287:A:H2'	1:1:1287:A:N3	2.09	0.65
3:B:97:LEU:HG	3:B:232:HIS:CE1	2.31	0.65
1:1:505:G:C2'	1:1:506:G:H5'	2.26	0.65
1:1:1060:A:H4'	1:1:1061:U:O5'	1.96	0.65
1:1:790:C:H2'	1:1:791:C:C6	2.32	0.65
1:1:229:A:N6	1:1:900:C:H1'	2.12	0.65
1:1:1556:A:OP2	1:1:1556:A:H3'	1.95	0.65
1:1:1775:C:H2'	1:1:1776:G:C8	2.30	0.65
1:1:1649:U:N3	1:1:1675:A:H2	1.93	0.65
1:1:298:G:H2'	1:1:299:A:C8	2.31	0.65
1:1:879:C:H2'	1:1:880:G:H8	1.61	0.65
1:1:39:A:H1'	1:1:518:G:H22	1.62	0.65
1:1:1201:U:O5'	1:1:1201:U:H6	1.79	0.65
1:1:1840:U:H2'	1:1:1841:C:H6	1.61	0.65
1:1:1034:A:C2'	1:1:1035:A:H5'	2.27	0.65
1:1:928:G:HO2'	1:1:929:G:H8	1.43	0.65
1:1:549:C:H2'	1:1:550:C:C6	2.31	0.65
1:1:448:A:C8	10:I:26:LYS:N	2.65	0.65
1:1:639:C:H2'	1:1:640:A:C8	2.31	0.65
1:1:1648:G:H8	18:Q:125:ARG:HA	1.62	0.65
7:F:35:LEU:HD12	7:F:39:ILE:HD11	1.78	0.65
25:X:112:VAL:HB	25:X:115:ILE:HD13	1.78	0.65
1:1:1217:A:H2'	1:1:1218:C:C5	2.31	0.65
1:1:167:G:H5'	8:G:8:PRO:O	1.97	0.65
1:1:1408:U:H5'	18:Q:69:ARG:HH21	1.62	0.65
1:1:806:U:C2'	1:1:807:G:H5'	2.26	0.65
1:1:197:U:N3	1:1:198:U:C5	2.65	0.65
1:1:1303:C:H2'	1:1:1304:U:C6	2.32	0.65
1:1:1778:C:H2'	1:1:1779:G:C8	2.31	0.65
1:1:131:C:O3'	1:1:132:U:H4'	1.96	0.65
1:1:77:A:N6	8:G:155:GLN:HB3	2.12	0.65
1:1:1767:C:C2'	1:1:1768:A:H5'	2.27	0.65
1:1:385:G:H4'	1:1:386:C:H5''	1.79	0.65
1:1:1340:U:C5'	1:1:1341:C:H2'	2.27	0.65
1:1:1743:G:H1'	1:1:1792:G:H22	1.61	0.65
1:1:1258:A:C3'	1:1:1258:A:N3	2.55	0.65
1:1:234:C:H2'	1:1:235:A:H8	1.61	0.65
1:1:109:U:O2'	1:1:855:G:H1'	1.97	0.65
1:1:1515:G:H5''	1:1:1515:G:C8	2.30	0.65
1:1:62:G:H5'	1:1:172:U:C4	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1016:U:C6	1:1:1017:U:C5	2.85	0.65
1:1:207:G:H4'	1:1:208:G:OP1	1.97	0.65
2:A:9:GLN:HB2	23:V:83:PHE:HA	1.78	0.65
1:1:1446:A:N3	22:U:55:ARG:HG3	2.12	0.65
1:1:1372:U:H5''	1:1:1386:A:N3	2.12	0.65
1:1:1603:G:OP2	1:1:1603:G:H3'	1.97	0.64
1:1:526:A:N3	1:1:526:A:C2'	2.59	0.64
6:E:129:ILE:CG2	6:E:156:VAL:HG22	2.26	0.64
1:1:1673:U:C5'	1:1:1673:U:C6	2.80	0.64
1:1:1778:C:H2'	1:1:1779:G:H8	1.62	0.64
4:C:128:VAL:HG11	4:C:155:ILE:HG12	1.79	0.64
14:M:52:LEU:HD13	14:M:62:VAL:HG13	1.79	0.64
1:1:1587:G:C6	21:T:74:SER:HB3	2.31	0.64
1:1:747:U:H5''	1:1:795:A:H62	1.60	0.64
13:L:96:ILE:HD13	25:X:14:ARG:HD2	1.78	0.64
1:1:36:U:H2'	1:1:36:U:O2	1.97	0.64
1:1:988:C:H6	1:1:988:C:O5'	1.79	0.64
23:V:73:ALA:HB1	23:V:78:ILE:HG13	1.79	0.64
1:1:1642:U:O2'	1:1:1643:U:H5'	1.97	0.64
1:1:1413:G:H2'	1:1:1414:A:O4'	1.96	0.64
1:1:148:U:H6	1:1:148:U:H5''	1.61	0.64
1:1:215:G:H2'	1:1:216:C:H6	1.62	0.64
1:1:1654:G:H2'	1:1:1655:C:C5	2.33	0.64
21:T:70:ALA:HB3	21:T:121:ARG:HE	1.62	0.64
1:1:1034:A:H2'	1:1:1035:A:H5'	1.78	0.64
2:A:8:LEU:O	2:A:55:TRP:HZ2	1.80	0.64
1:1:1326:U:H4'	1:1:1327:G:C5'	2.28	0.64
1:1:821:G:H1	11:J:147:PHE:HE1	1.44	0.64
1:1:331:C:H3'	1:1:332:G:C5'	2.27	0.64
1:1:746:C:C5'	9:H:105:THR:HA	2.27	0.64
1:1:383:G:H3'	1:1:384:U:C5	2.32	0.64
1:1:1203:G:H2'	1:1:1699:A:C2	2.33	0.64
1:1:1340:U:H3'	1:1:1341:C:C6	2.33	0.64
21:T:34:VAL:CG2	21:T:99:VAL:HG12	2.27	0.64
1:1:539:C:H2'	1:1:540:U:C6	2.33	0.64
12:K:38:LYS:HG2	12:K:40:VAL:HG23	1.78	0.64
1:1:1013:U:H1'	1:1:1104:G:H1'	1.80	0.64
1:1:1493:C:H3'	1:1:1494:U:C5'	2.27	0.64
1:1:736:C:H2'	1:1:737:G:H8	1.61	0.64
7:F:73:THR:HG22	7:F:93:VAL:HG21	1.77	0.64
1:1:576:A:H3'	1:1:576:A:OP2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:342:C:H42	1:1:343:A:N6	1.96	0.64
1:1:562:U:H4'	11:J:132:GLN:OE1	1.98	0.64
1:1:343:A:H4'	6:E:128:LYS:NZ	2.13	0.64
1:1:1287:A:C3'	1:1:1312:G:H22	2.10	0.64
1:1:103:A:H2'	1:1:105:U:OP1	1.98	0.64
1:1:1337:C:H2'	1:1:1338:G:H8	1.60	0.64
1:1:1861:G:H5'	1:1:1861:G:N3	2.13	0.64
1:1:577:U:H4'	1:1:578:C:O5'	1.96	0.64
1:1:797:C:H2'	1:1:798:G:C5'	2.16	0.64
1:1:525:A:H3'	1:1:525:A:C8	2.32	0.64
26:Y:35:VAL:CG2	26:Y:40:ILE:HD11	2.28	0.64
1:1:1565:C:C2'	1:1:1566:G:H5'	2.27	0.64
24:W:86:LEU:HD22	24:W:113:HIS:HE1	1.63	0.64
1:1:1332:A:H8	1:1:1332:A:H5'	1.63	0.64
1:1:1700:C:H4'	1:1:1701:C:OP2	1.97	0.64
1:1:1330:G:H4'	1:1:1331:C:C4'	2.27	0.64
1:1:209:A:H4'	1:1:210:U:OP1	1.97	0.64
1:1:520:A:C8	1:1:521:A:C8	2.86	0.64
1:1:1204:A:O5'	1:1:1204:A:H8	1.81	0.64
10:I:174:CYS:HB2	10:I:190:LEU:HD21	1.80	0.64
1:1:911:C:O2'	1:1:912:C:H5'	1.97	0.64
1:1:1120:U:H2'	1:1:1121:G:H5'	1.77	0.64
2:A:63:ARG:HG2	23:V:46:PHE:CE2	2.32	0.64
1:1:1500:G:H2'	1:1:1501:C:O4'	1.97	0.64
18:Q:89:SER:CB	18:Q:119:LEU:HB3	2.28	0.64
1:1:571:U:C3'	1:1:572:U:O4'	2.45	0.64
1:1:744:G:H4'	9:H:102:PRO:CG	2.26	0.64
1:1:558:G:C8	1:1:558:G:P	2.84	0.64
1:1:559:G:C3'	1:1:560:A:H5''	2.25	0.64
1:1:615:C:H2'	1:1:616:A:H5'	1.80	0.64
1:1:1798:C:H4'	10:I:2:GLY:O	1.98	0.64
22:U:32:LEU:CD2	22:U:85:HIS:HB2	2.28	0.64
1:1:370:G:H4'	1:1:371:A:OP1	1.97	0.64
13:L:5:GLN:NE2	13:L:12:LYS:H	1.95	0.64
1:1:1292:C:H6	1:1:1292:C:O5'	1.80	0.64
1:1:498:C:H5'	6:E:7:LYS:HD3	1.77	0.64
1:1:1587:G:H1	21:T:70:ALA:HB1	1.63	0.64
1:1:5:U:O2'	1:1:602:G:H4'	1.98	0.64
1:1:670:A:H1'	1:1:1164:G:O4'	1.98	0.64
1:1:838:G:C8	26:Y:9:THR:N	2.63	0.64
1:1:215:G:O2'	1:1:216:C:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:N:129:TYR:O	15:N:134:VAL:HG12	1.98	0.63
1:1:519:A:H2	1:1:520:A:C2	2.16	0.63
1:1:1284:A:C5	1:1:1286:G:C5'	2.81	0.63
1:1:1864:U:O2'	1:1:1866:A:H2	1.81	0.63
1:1:222:U:H4'	13:L:21:LYS:HE2	1.80	0.63
2:A:48:ILE:HG21	19:R:105:MET:SD	2.38	0.63
1:1:1556:A:H2	1:1:1557:C:H5	1.46	0.63
1:1:1484:A:H2'	1:1:1485:U:O4'	1.98	0.63
1:1:1484:A:H4'	5:D:159:HIS:CB	2.28	0.63
1:1:464:A:H4'	1:1:465:A:OP2	1.96	0.63
1:1:1399:C:H5'	1:1:1399:C:H6	1.63	0.63
1:1:572:U:H3'	1:1:572:U:H6	1.62	0.63
1:1:789:G:H2'	1:1:790:C:C6	2.33	0.63
1:1:587:A:H2'	1:1:592:C:H41	1.62	0.63
1:1:1103:C:H6	1:1:1103:C:O5'	1.81	0.63
1:1:1130:G:N2	1:1:1131:G:C8	2.66	0.63
1:1:1443:C:H2'	1:1:1444:U:H5'	1.79	0.63
4:C:98:LEU:CD2	4:C:101:SER:HB2	2.28	0.63
1:1:1643:U:H2'	1:1:1644:C:C6	2.32	0.63
1:1:574:A:H3'	1:1:575:A:C8	2.34	0.63
1:1:1597:C:H5''	1:1:1598:G:OP2	1.98	0.63
1:1:455:A:H2'	1:1:456:C:C6	2.34	0.63
4:C:242:ASP:OD1	4:C:246:LYS:HE3	1.98	0.63
1:1:1214:A:C2'	1:1:1215:C:H5'	2.28	0.63
1:1:185:G:H2'	1:1:186:C:C5	2.33	0.63
8:G:193:ALA:O	8:G:197:GLN:HG2	1.98	0.63
3:B:31:TYR:CE2	3:B:94:LYS:HA	2.33	0.63
1:1:1454:A:N6	1:1:1467:C:C5	2.67	0.63
4:C:210:PRO:HG3	4:C:236:PHE:CZ	2.34	0.63
9:H:4:SER:N	9:H:24:SER:HG	1.95	0.63
6:E:36:HIS:CD2	6:E:85:GLY:HA3	2.33	0.63
1:1:1835:A:H2'	1:1:1835:A:N3	2.14	0.63
21:T:39:LEU:HD11	21:T:43:LYS:CB	2.28	0.63
26:Y:91:LEU:HB3	26:Y:97:TYR:HB2	1.79	0.63
1:1:1375:G:H2'	1:1:1376:A:H5'	1.80	0.63
13:L:61:PRO:HD3	13:L:141:ASN:ND2	2.13	0.63
1:1:496:C:H2'	1:1:497:C:C6	2.33	0.63
8:G:188:LYS:HA	8:G:191:ARG:NH2	2.14	0.63
1:1:753:C:H3'	1:1:754:G:C4'	2.29	0.63
1:1:380:G:C6	1:1:382:C:H5''	2.33	0.63
1:1:1284:A:C8	1:1:1286:G:C5'	2.82	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1677:U:O2	1:1:1677:U:H2'	1.98	0.63
4:C:167:ARG:CA	4:C:181:PRO:HD3	2.27	0.63
21:T:4:VAL:HG21	21:T:139:ALA:CB	2.27	0.63
1:1:1085:C:H1'	1:1:1086:G:H3'	1.81	0.63
1:1:1454:A:N6	1:1:1467:C:H5	1.96	0.63
1:1:1825:A:C8	1:1:1825:A:O5'	2.52	0.63
1:1:685:A:H2'	1:1:686:U:H5'	1.81	0.63
1:1:885:U:O2'	1:1:886:A:H2'	1.99	0.63
25:X:61:GLN:HB3	25:X:62:PRO:HD3	1.80	0.63
1:1:983:A:C2'	1:1:984:C:H5'	2.28	0.63
11:J:136:ARG:HB3	11:J:158:ASP:O	1.97	0.63
5:D:74:GLN:O	5:D:78:GLY:HA2	1.98	0.63
21:T:112:MET:HG2	21:T:127:GLY:HA2	1.81	0.63
1:1:312:G:C4	8:G:191:ARG:HD3	2.34	0.63
1:1:313:A:H5''	8:G:191:ARG:NH1	2.13	0.63
1:1:60:A:N3	1:1:60:A:H2'	2.14	0.63
1:1:1384:C:C2'	1:1:1385:G:H5'	2.29	0.63
1:1:1493:C:C4'	1:1:1494:U:H5'	2.28	0.63
20:S:98:VAL:HG21	20:S:103:LEU:HD13	1.81	0.63
1:1:38:A:H4'	11:J:5:ARG:HE	1.64	0.63
1:1:71:G:H22	1:1:80:G:H22	1.47	0.63
1:1:1057:C:H2'	1:1:1059:G:N7	2.14	0.63
1:1:69:C:H6	1:1:69:C:H5''	1.64	0.63
1:1:353:C:H5'	13:L:71:ARG:NH2	2.14	0.63
1:1:35:C:C3'	1:1:36:U:H6	2.12	0.62
1:1:902:G:H2'	1:1:903:A:H8	1.64	0.62
1:1:305:U:H2'	10:I:60:LEU:HD23	1.79	0.62
2:A:205:ARG:H	2:A:208:GLU:HB3	1.64	0.62
1:1:1135:C:H2'	1:1:1136:U:H6	1.64	0.62
1:1:1562:C:H5'	21:T:71:GLY:HA3	1.81	0.62
1:1:1404:U:H4'	1:1:1405:A:OP2	1.99	0.62
1:1:591:U:O2	1:1:591:U:H2'	1.99	0.62
1:1:431:G:H2'	1:1:432:G:H8	1.62	0.62
1:1:1260:A:H2	1:1:1620:A:H1'	1.62	0.62
1:1:1351:G:H5''	1:1:1351:G:H8	1.63	0.62
1:1:1734:G:O5'	1:1:1734:G:H8	1.82	0.62
1:1:132:U:H5'	1:1:133:C:C5	2.34	0.62
1:1:1587:G:C5	21:T:74:SER:HB3	2.35	0.62
1:1:1587:G:N3	21:T:78:ILE:HB	2.15	0.62
1:1:745:C:C5'	9:H:105:THR:HG23	2.28	0.62
3:B:63:LYS:HE3	3:B:91:VAL:HG23	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:190:G:H4'	10:I:116:HIS:O	1.99	0.62
1:1:1462:U:O2'	1:1:1463:U:H3'	1.99	0.62
1:1:812:A:H2'	1:1:813:A:C8	2.33	0.62
18:Q:134:GLY:HA3	18:Q:140:ARG:HA	1.82	0.62
1:1:313:A:C2	1:1:315:C:N4	2.67	0.62
1:1:693:A:C3'	1:1:694:G:H4'	2.28	0.62
1:1:682:U:H3	1:1:1023:A:H61	1.47	0.62
1:1:1162:C:H2'	1:1:1163:C:C6	2.33	0.62
1:1:438:G:H2'	1:1:439:A:C8	2.33	0.62
1:1:1672:U:H2'	1:1:1673:U:H5''	1.80	0.62
8:G:48:TYR:CD2	8:G:116:LYS:HA	2.35	0.62
9:H:162:GLN:O	9:H:166:VAL:HB	2.00	0.62
3:B:171:ILE:HD13	3:B:197:ILE:HD13	1.82	0.62
1:1:1307:U:C2'	1:1:1308:U:C5'	2.77	0.62
1:1:172:U:H3'	1:1:173:A:C5'	2.29	0.62
1:1:693:A:C4	1:1:694:G:H1'	2.35	0.62
1:1:343:A:H4'	6:E:128:LYS:HZ1	1.64	0.62
1:1:657:U:H3'	1:1:657:U:H6	1.64	0.62
1:1:928:G:O2'	1:1:929:G:H8	1.81	0.62
1:1:1023:A:H5'	15:N:3:ARG:HH21	1.64	0.62
1:1:920:A:C8	1:1:922:A:C8	2.87	0.62
1:1:582:U:H2'	1:1:583:A:O4'	2.00	0.62
1:1:1113:A:C2	1:1:1120:U:O4	2.53	0.62
1:1:1037:G:H4'	1:1:1845:A:H4'	1.82	0.62
1:1:1307:U:H2'	1:1:1308:U:C5'	2.29	0.62
1:1:76:U:H3'	1:1:77:A:C5'	2.27	0.62
1:1:1402:A:C2'	1:1:1403:C:C5	2.82	0.62
1:1:310:C:H2'	1:1:340:C:C5'	2.30	0.62
1:1:1389:C:O2'	1:1:1390:U:H6	1.83	0.62
1:1:412:G:N7	1:1:413:G:H1'	2.14	0.62
3:B:205:TYR:CG	3:B:206:PRO:HD2	2.34	0.62
1:1:39:A:OP2	11:J:3:VAL:HG13	2.00	0.62
3:B:134:LEU:HD12	3:B:219:LYS:HB2	1.82	0.62
10:I:120:PRO:HG2	10:I:126:GLY:O	2.00	0.62
1:1:1714:U:H3'	1:1:1715:A:C8	2.34	0.62
1:1:71:G:N2	1:1:72:C:H1'	2.15	0.62
1:1:1016:U:H1'	1:1:1017:U:O5'	1.99	0.62
1:1:886:A:H1'	1:1:887:U:H5'	1.80	0.62
1:1:547:G:H4'	1:1:548:C:OP2	2.00	0.62
1:1:367:U:H6	1:1:367:U:H5'	1.64	0.62
1:1:192:C:H2'	1:1:193:C:H5'	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1402:A:OP2	22:U:51:LYS:HB3	1.99	0.62
1:1:1648:G:H8	18:Q:125:ARG:CA	2.12	0.62
1:1:1225:U:C2'	1:1:1226:G:H5'	2.29	0.62
1:1:1566:G:O6	21:T:97:LYS:HB2	2.00	0.62
1:1:567:C:H2'	1:1:568:C:H5''	1.82	0.62
2:A:4:ALA:HB1	23:V:82:ASN:HB3	1.82	0.62
1:1:1291:A:O5'	1:1:1291:A:H8	1.81	0.62
1:1:1414:A:H2'	1:1:1415:C:H1'	1.79	0.62
1:1:571:U:H2'	1:1:572:U:O4'	1.99	0.62
1:1:77:A:H1'	1:1:78:C:OP2	1.99	0.62
1:1:746:C:C6	1:1:749:U:H4'	2.35	0.62
1:1:565:G:H2'	1:1:565:G:N3	2.14	0.62
1:1:1101:U:H2'	1:1:1102:G:N7	2.15	0.62
1:1:1767:C:O2'	1:1:1768:A:H5'	1.98	0.62
1:1:1397:U:H6	1:1:1397:U:H3'	1.65	0.62
1:1:1093:A:H5'	24:W:3:ARG:NE	2.13	0.62
20:S:5:ILE:HG13	20:S:6:PRO:HD2	1.81	0.62
1:1:350:C:H42	1:1:351:G:N2	1.98	0.62
1:1:1404:U:H2'	1:1:1406:G:N7	2.14	0.62
9:H:87:PHE:CD1	9:H:90:LYS:HE2	2.35	0.62
1:1:649:U:H2'	1:1:650:A:C8	2.34	0.62
24:W:10:ALA:O	24:W:14:ILE:HG12	1.99	0.62
9:H:148:LEU:HA	24:W:42:MET:HG2	1.82	0.62
11:J:107:GLU:HA	11:J:112:THR:HG21	1.80	0.62
11:J:117:LEU:HB3	11:J:119:LEU:HD13	1.82	0.62
1:1:1414:A:C2'	1:1:1415:C:O4'	2.46	0.61
1:1:168:C:H4'	8:G:131:ARG:CD	2.26	0.61
1:1:681:U:H4'	25:X:9:THR:HB	1.81	0.61
1:1:351:G:H3'	1:1:351:G:H8	1.62	0.61
1:1:1287:A:H4'	1:1:1312:G:C2	2.35	0.61
1:1:869:A:N3	1:1:915:G:H1'	2.14	0.61
1:1:1673:U:H6	1:1:1673:U:H5''	1.64	0.61
20:S:6:PRO:HD3	27:Z:52:LYS:CE	2.30	0.61
13:L:47:PRO:HD2	13:L:62:PHE:CE1	2.34	0.61
25:X:132:ALA:O	25:X:138:LYS:HB2	1.99	0.61
1:1:1148:A:H5'	1:1:1148:A:N3	2.15	0.61
1:1:1214:A:N1	1:1:1217:A:C4	2.68	0.61
1:1:320:G:OP1	1:1:320:G:C8	2.53	0.61
1:1:1023:A:H5'	15:N:3:ARG:NH2	2.15	0.61
1:1:1463:U:H2'	1:1:1464:C:C6	2.35	0.61
1:1:145:G:N3	1:1:145:G:H2'	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:180:ARG:HG2	2:A:184:ARG:NH1	2.13	0.61
13:L:20:LYS:HE3	13:L:21:LYS:HZ2	1.65	0.61
1:1:1387:G:H2'	1:1:1388:A:O4'	2.00	0.61
4:C:167:ARG:HA	4:C:181:PRO:CD	2.30	0.61
1:1:569:A:C5	1:1:570:C:C5	2.88	0.61
1:1:60:A:H4'	1:1:61:A:O5'	1.99	0.61
1:1:1576:G:O2'	1:1:1577:G:H5'	2.01	0.61
1:1:795:A:H2'	1:1:796:G:C8	2.33	0.61
1:1:659:G:N3	1:1:659:G:H2'	2.14	0.61
2:A:6:ASP:CB	23:V:42:VAL:HG22	2.30	0.61
24:W:77:PRO:HG2	24:W:79:PHE:CE1	2.35	0.61
1:1:1445:U:C2'	1:1:1446:A:H5'	2.29	0.61
1:1:684:G:C5	1:1:920:A:C8	2.88	0.61
7:F:48:TYR:CE1	18:Q:50:LYS:HG3	2.36	0.61
1:1:1808:U:H2'	1:1:1809:A:C8	2.35	0.61
1:1:367:U:H5'	1:1:367:U:C6	2.35	0.61
11:J:169:ARG:N	11:J:170:PRO:HD3	2.15	0.61
1:1:1529:C:H2'	1:1:1530:U:H5'	1.81	0.61
1:1:526:A:C2'	11:J:128:VAL:HG22	2.29	0.61
1:1:54:A:H3'	1:1:55:U:C5'	2.30	0.61
2:A:6:ASP:C	23:V:83:PHE:HB3	2.20	0.61
1:1:1771:G:H2'	1:1:1772:C:H6	1.66	0.61
1:1:1567:G:H8	1:1:1567:G:OP1	1.83	0.61
1:1:360:A:OP1	1:1:360:A:H2'	2.00	0.61
24:W:14:ILE:HD13	24:W:25:VAL:HG11	1.82	0.61
6:E:173:ILE:HD13	6:E:230:ASN:HB2	1.82	0.61
1:1:1540:G:H5'	1:1:1540:G:H8	1.65	0.61
1:1:321:C:H2'	1:1:322:C:H6	1.63	0.61
1:1:332:G:C8	8:G:186:GLN:HB2	2.36	0.61
1:1:1254:C:H4'	1:1:1254:C:OP1	2.00	0.61
1:1:1604:G:H2'	1:1:1605:G:H5'	1.81	0.61
1:1:602:G:H3'	1:1:603:C:H5''	1.80	0.61
1:1:1398:G:N3	1:1:1398:G:H2'	2.14	0.61
2:A:205:ARG:HG3	2:A:207:PRO:HD2	1.81	0.61
1:1:1378:A:C2	2:A:105:PRO:HB3	2.36	0.61
9:H:132:ASP:O	9:H:135:PHE:HB2	2.00	0.61
8:G:2:LYS:HE3	8:G:15:LEU:HD11	1.81	0.61
1:1:213:G:H2'	1:1:214:U:H6	1.66	0.61
1:1:751:G:C4	1:1:752:G:C8	2.88	0.61
1:1:753:C:N4	1:1:754:G:C2	2.69	0.61
1:1:10:G:N7	1:1:1697:A:C2	2.69	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1389:C:O2'	1:1:1390:U:C6	2.52	0.61
1:1:1348:G:H2'	1:1:1349:G:C8	2.36	0.61
1:1:1036:A:C2	1:1:1844:U:H4'	2.36	0.61
1:1:1375:G:C2'	1:1:1376:A:H5'	2.30	0.61
1:1:1147:C:C6	1:1:1147:C:H3'	2.36	0.61
1:1:747:U:C1'	1:1:748:C:H2'	2.30	0.61
1:1:1442:U:H3'	1:1:1443:C:H5''	1.82	0.61
1:1:806:U:H6	1:1:806:U:O5'	1.84	0.61
1:1:1620:A:H2'	1:1:1624:U:C4	2.35	0.61
1:1:884:C:H2'	1:1:885:U:H6	1.66	0.61
1:1:987:A:H3'	1:1:988:C:C6	2.36	0.61
10:I:165:GLN:HE21	10:I:172:LEU:HD23	1.65	0.61
1:1:1700:C:H4'	1:1:1701:C:C5'	2.29	0.61
1:1:925:G:H1	1:1:1017:U:H3	1.48	0.61
1:1:1405:A:H2	1:1:1442:U:H6	1.41	0.61
1:1:1443:C:C2'	1:1:1444:U:H5'	2.31	0.61
7:F:30:ILE:CD1	7:F:39:ILE:HD12	2.30	0.61
6:E:148:ARG:H	6:E:148:ARG:HD3	1.65	0.61
1:1:25:A:H2'	1:1:26:U:C6	2.35	0.61
1:1:1741:U:O4	1:1:1793:A:C2	2.54	0.61
1:1:1863:A:N3	1:1:1863:A:H2'	2.15	0.61
8:G:164:LYS:HG2	8:G:166:GLY:H	1.66	0.61
1:1:572:U:P	26:Y:59:GLY:N	2.74	0.61
1:1:1549:U:C2'	1:1:1550:G:H5'	2.30	0.61
1:1:796:G:N2	1:1:797:C:H5	1.96	0.61
1:1:1255:G:C5'	1:1:1256:G:H8	2.11	0.61
2:A:81:ASN:OD1	2:A:205:ARG:HD2	1.99	0.61
1:1:1298:G:H4'	17:P:78:THR:CA	2.28	0.61
1:1:1092:G:H2'	1:1:1093:A:C8	2.36	0.61
1:1:1800:A:H3'	1:1:1801:A:H8	1.66	0.61
1:1:1820:G:H2'	1:1:1821:U:C6	2.36	0.61
1:1:1416:C:C4	1:1:1431:G:N2	2.68	0.61
1:1:694:G:C2'	1:1:695:C:C6	2.83	0.61
1:1:746:C:P	1:1:746:C:H2'	2.41	0.61
18:Q:24:HIS:O	18:Q:68:ILE:HA	2.01	0.61
1:1:175:A:C2	1:1:176:U:C1'	2.83	0.61
2:A:40:LYS:NZ	19:R:101:ASP:HA	2.16	0.61
1:1:398:A:C4'	1:1:399:C:H3'	2.29	0.61
1:1:1335:G:C2'	1:1:1336:C:H5'	2.31	0.61
1:1:124:U:C3'	1:1:124:U:C6	2.84	0.61
19:R:51:ALA:HA	19:R:54:VAL:HG12	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:532:C:H2'	1:1:533:A:O4'	2.01	0.61
1:1:1214:A:C2	1:1:1217:A:C8	2.89	0.60
1:1:1859:A:H2'	1:1:1860:A:O4'	2.01	0.60
1:1:1253:A:H5''	1:1:1253:A:N3	2.15	0.60
1:1:1529:C:C2'	1:1:1530:U:H5'	2.31	0.60
1:1:1577:G:H1'	1:1:1582:C:O2	2.01	0.60
21:T:41:LYS:CG	21:T:95:GLY:HA2	2.31	0.60
1:1:867:G:H8	1:1:867:G:P	2.24	0.60
1:1:1202:U:C3'	1:1:1203:G:H5''	2.31	0.60
1:1:1493:C:H6	1:1:1493:C:H5''	1.65	0.60
1:1:1420:G:H8	1:1:1420:G:OP2	1.84	0.60
1:1:1415:C:H42	1:1:1431:G:H1	1.49	0.60
10:I:131:PRO:HG2	10:I:138:ASN:OD1	2.00	0.60
1:1:593:C:H1'	1:1:594:A:O5'	2.01	0.60
1:1:1277:C:H3'	1:1:1278:A:H8	1.66	0.60
7:F:111:VAL:HG12	7:F:177:LEU:CD2	2.32	0.60
12:K:27:VAL:O	12:K:28:HIS:HB3	2.01	0.60
1:1:1678:A:H2'	1:1:1679:A:H5'	1.82	0.60
1:1:863:U:O5'	1:1:863:U:H6	1.84	0.60
21:T:27:LYS:HD3	21:T:110:LEU:HD11	1.82	0.60
1:1:24:C:H42	1:1:650:A:H61	1.49	0.60
1:1:1124:C:H6	1:1:1124:C:O5'	1.84	0.60
1:1:1832:A:C3'	1:1:1833:C:H5''	2.29	0.60
1:1:1849:G:C2'	1:1:1850:A:H5'	2.31	0.60
1:1:131:C:H4'	1:1:132:U:O5'	2.01	0.60
1:1:1561:A:O4'	1:1:1583:C:H4'	2.00	0.60
1:1:435:A:N3	1:1:450:C:H5	1.98	0.60
1:1:1393:G:H5''	1:1:1394:G:OP2	2.02	0.60
22:U:21:ARG:HE	22:U:88:LEU:HB3	1.65	0.60
1:1:1351:G:H5''	1:1:1351:G:C8	2.36	0.60
1:1:862:A:H2'	1:1:863:U:C6	2.36	0.60
1:1:879:C:H2'	1:1:880:G:C8	2.35	0.60
1:1:1540:G:H2'	1:1:1541:G:O4'	2.00	0.60
24:W:11:LEU:HD11	24:W:37:PHE:CE2	2.36	0.60
1:1:237:C:H1'	1:1:238:C:H5'	1.83	0.60
1:1:1065:G:C2	1:1:1066:U:H1'	2.36	0.60
1:1:1654:G:C3'	1:1:1655:C:H5	2.14	0.60
1:1:741:C:C4	1:1:744:G:N1	2.70	0.60
18:Q:36:GLY:O	21:T:7:LYS:HG2	2.01	0.60
2:A:58:LEU:HD21	2:A:177:MET:HG2	1.83	0.60
10:I:194:GLU:OE1	13:L:20:LYS:HD3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:869:A:C2	1:1:915:G:C1'	2.84	0.60
1:1:15:U:H2'	1:1:16:G:H5'	1.83	0.60
1:1:1515:G:H5''	1:1:1515:G:H8	1.65	0.60
3:B:114:VAL:HG22	3:B:120:MET:SD	2.42	0.60
5:D:94:ARG:HG2	5:D:101:GLN:NE2	2.16	0.60
1:1:96:C:O4'	1:1:474:G:H4'	2.02	0.60
7:F:102:LEU:HB3	27:Z:67:LEU:HD22	1.84	0.60
1:1:605:A:H3'	1:1:607:U:OP2	2.02	0.60
22:U:49:LYS:HB3	22:U:92:HIS:HB3	1.83	0.60
1:1:181:A:H3'	1:1:182:C:C5'	2.19	0.60
1:1:688:U:H5''	9:H:103:LYS:HD2	1.84	0.60
1:1:342:C:H42	1:1:343:A:H62	1.48	0.60
1:1:525:A:H8	1:1:525:A:H3'	1.65	0.60
1:1:562:U:H2'	1:1:563:G:C8	2.36	0.60
1:1:587:A:H8	1:1:587:A:OP2	1.85	0.60
1:1:655:A:C8	1:1:657:U:H5	2.20	0.60
1:1:43:U:H3'	1:1:44:U:C5'	2.30	0.60
1:1:1663:A:H2	1:1:1664:A:N6	1.99	0.60
1:1:1714:U:H3'	1:1:1715:A:H8	1.66	0.60
24:W:50:PHE:HB2	24:W:62:VAL:O	2.01	0.60
11:J:117:LEU:CB	11:J:119:LEU:HD13	2.31	0.60
6:E:173:ILE:HG21	6:E:230:ASN:HB2	1.83	0.60
26:Y:84:LYS:HE2	26:Y:85:ASN:OD1	2.01	0.60
27:Z:94:LYS:O	27:Z:96:LEU:N	2.33	0.60
14:M:61:TYR:HE1	14:M:107:SER:CB	2.13	0.60
1:1:184:G:H3'	1:1:185:G:C4'	2.30	0.60
1:1:577:U:H4'	1:1:578:C:C4'	2.32	0.60
1:1:683:G:C2	1:1:1023:A:C5	2.89	0.60
1:1:1489:A:H5'	1:1:1490:G:H5'	1.84	0.60
1:1:193:C:H1'	1:1:208:G:C2	2.37	0.60
1:1:69:C:H5''	1:1:69:C:C6	2.36	0.60
1:1:1494:U:H1'	1:1:1495:G:OP2	2.01	0.60
2:A:62:ALA:O	2:A:66:VAL:HG23	2.01	0.60
1:1:1522:A:C2	17:P:128:HIS:CB	2.85	0.60
7:F:32:ASP:HB2	7:F:117:ILE:CG2	2.32	0.60
5:D:190:LEU:HB3	5:D:200:PRO:HD3	1.83	0.60
16:O:118:ALA:O	16:O:121:ARG:HG2	2.02	0.60
11:J:138:ARG:HG2	11:J:139:LYS:H	1.67	0.60
1:1:1320:G:C2	1:1:1321:G:H1'	2.36	0.60
1:1:1614:A:H2'	1:1:1615:U:H6	1.66	0.60
1:1:746:C:H3'	1:1:746:C:OP1	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:300:U:H2'	1:1:301:A:H8	1.63	0.60
1:1:1699:A:O5'	1:1:1699:A:C8	2.52	0.60
1:1:102:A:H4'	1:1:103:A:O5'	2.02	0.60
1:1:1021:U:H5''	15:N:128:TYR:HE1	1.63	0.60
1:1:1121:G:H2'	1:1:1122:A:C8	2.37	0.60
1:1:1223:A:C2	1:1:1224:G:H1'	2.37	0.60
1:1:1251:A:H2'	1:1:1252:C:H5'	1.83	0.60
1:1:1208:A:H61	1:1:1691:U:H3	1.49	0.60
1:1:1418:C:H5''	21:T:129:ARG:HB3	1.83	0.60
1:1:1587:G:O2'	21:T:77:LYS:HB3	2.01	0.60
1:1:1655:C:H2'	1:1:1656:G:C8	2.37	0.60
1:1:1331:C:H2'	1:1:1331:C:O2	2.00	0.60
10:I:130:THR:OG1	10:I:131:PRO:HD2	2.02	0.60
1:1:439:A:H4'	1:1:1799:G:H4'	1.84	0.60
1:1:1513:C:H6	1:1:1513:C:O5'	1.84	0.60
20:S:70:ILE:HD13	20:S:77:TYR:CD1	2.37	0.60
1:1:1322:G:H8	1:1:1322:G:O5'	1.85	0.60
1:1:479:C:C2'	1:1:480:G:H5'	2.32	0.60
1:1:571:U:C1'	26:Y:60:PHE:H	2.15	0.60
1:1:1561:A:H4'	1:1:1583:C:H4'	1.83	0.60
1:1:743:U:H5'	1:1:744:G:N7	2.16	0.60
1:1:600:G:H5''	1:1:601:G:OP2	2.02	0.60
1:1:1038:U:H1'	1:1:1181:A:C2	2.37	0.60
1:1:1445:U:H4'	22:U:57:PRO:HB3	1.82	0.60
1:1:1348:G:H2'	1:1:1349:G:H8	1.67	0.60
1:1:1325:G:C2'	1:1:1326:U:H5''	2.32	0.60
1:1:1755:C:H2'	1:1:1756:C:H6	1.67	0.60
1:1:195:C:H2'	1:1:196:C:H6	1.67	0.60
14:M:35:ILE:HD11	14:M:61:TYR:CZ	2.36	0.60
1:1:1196:A:H2'	1:1:1197:G:O4'	2.02	0.60
1:1:483:C:H5''	25:X:48:LYS:HG3	1.84	0.60
11:J:53:ILE:HG23	11:J:97:ILE:HD11	1.83	0.60
1:1:130:G:H5'	8:G:195:LYS:NZ	2.17	0.59
1:1:77:A:N7	8:G:155:GLN:HA	2.15	0.59
8:G:8:PRO:CG	8:G:112:VAL:HG13	2.32	0.59
1:1:1636:G:H1'	7:F:164:ARG:HH22	1.67	0.59
1:1:1331:C:H6	1:1:1489:A:H62	1.49	0.59
19:R:105:MET:HG2	19:R:106:LEU:N	2.17	0.59
1:1:1782:G:N3	1:1:1783:C:N4	2.49	0.59
1:1:1348:G:H8	1:1:1348:G:P	2.25	0.59
1:1:158:A:H2'	1:1:159:A:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1206:G:C2	1:1:1208:A:C8	2.90	0.59
1:1:1687:C:H3'	1:1:1688:C:H6	1.65	0.59
1:1:1416:C:N4	1:1:1417:C:C2	2.70	0.59
1:1:1534:C:H1'	1:1:1535:U:OP2	2.01	0.59
1:1:1549:U:H2'	1:1:1550:G:H8	1.67	0.59
1:1:797:C:H4'	9:H:109:ARG:HB3	1.83	0.59
1:1:211:G:C5'	1:1:211:G:H8	2.06	0.59
1:1:450:C:H2'	1:1:451:G:H4'	1.84	0.59
1:1:1683:C:O5'	1:1:1683:C:H6	1.85	0.59
21:T:39:LEU:CD1	21:T:43:LYS:HB2	2.30	0.59
1:1:16:G:H2'	1:1:17:C:C6	2.37	0.59
1:1:486:A:O5'	1:1:486:A:H8	1.85	0.59
1:1:897:U:O2'	1:1:898:U:H5''	2.03	0.59
25:X:105:PHE:CZ	25:X:121:LYS:HD2	2.37	0.59
10:I:55:TYR:N	10:I:55:TYR:CD1	2.70	0.59
1:1:671:A:H5''	1:1:671:A:C8	2.36	0.59
1:1:1616:U:O2	1:1:1616:U:H2'	2.02	0.59
1:1:130:G:H8	1:1:130:G:P	2.25	0.59
1:1:315:C:H6	1:1:315:C:H5''	1.66	0.59
1:1:508:A:H2'	1:1:508:A:N3	2.17	0.59
1:1:66:G:C8	8:G:160:LYS:HD2	2.36	0.59
20:S:25:LYS:HE2	20:S:27:ALA:HB3	1.82	0.59
1:1:1016:U:C1'	1:1:1017:U:H5''	2.32	0.59
1:1:101:U:O5'	1:1:101:U:H6	1.85	0.59
1:1:1658:G:H2'	1:1:1659:U:H5'	1.84	0.59
1:1:380:G:C2	1:1:382:C:C6	2.89	0.59
1:1:311:C:OP2	1:1:311:C:H2'	2.02	0.59
1:1:1466:G:C6	1:1:1467:C:C4	2.90	0.59
1:1:1617:G:H2'	1:1:1619:A:OP2	2.03	0.59
1:1:1021:U:OP2	1:1:1021:U:H2'	2.03	0.59
1:1:407:G:C5	25:X:36:LEU:HD13	2.36	0.59
1:1:144:U:C5	8:G:180:VAL:HG22	2.37	0.59
27:Z:62:VAL:N	27:Z:63:PRO:CD	2.64	0.59
1:1:945:U:H3'	1:1:946:U:C6	2.37	0.59
1:1:1230:C:H2'	1:1:1231:C:H5'	1.83	0.59
1:1:1848:U:H4'	1:1:1849:G:OP1	2.02	0.59
1:1:316:G:H2'	1:1:317:C:C6	2.37	0.59
1:1:1601:A:O2'	1:1:1602:U:H5''	2.02	0.59
2:A:12:GLU:HA	2:A:15:VAL:HG22	1.84	0.59
1:1:43:U:H3'	1:1:44:U:H5'	1.84	0.59
1:1:374:G:H2'	1:1:375:U:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:180:ARG:HG2	2:A:184:ARG:HH12	1.65	0.59
1:1:1389:C:HO2'	1:1:1390:U:H6	1.41	0.59
22:U:56:MET:HG3	22:U:57:PRO:HD2	1.84	0.59
1:1:957:A:C4'	1:1:973:C:H1'	2.32	0.59
20:S:86:ARG:NH2	20:S:107:LEU:HD21	2.17	0.59
8:G:2:LYS:CE	8:G:15:LEU:HD11	2.32	0.59
1:1:18:C:H5'	1:1:1194:A:N6	2.17	0.59
1:1:1014:G:H2'	1:1:1015:U:C6	2.37	0.59
1:1:999:G:OP1	1:1:1034:A:H1'	2.02	0.59
1:1:1401:A:H1'	1:1:1402:A:P	2.43	0.59
1:1:1473:G:H8	1:1:1475:G:OP2	1.85	0.59
1:1:1751:C:C2'	1:1:1752:C:H5'	2.32	0.59
1:1:858:A:C2	1:1:859:G:C5	2.90	0.59
1:1:1049:A:H2'	1:1:1050:A:C5'	2.33	0.59
10:I:104:ILE:HB	10:I:171:LEU:HB3	1.83	0.59
1:1:1684:C:C3'	1:1:1685:U:H5'	2.32	0.59
1:1:1834:A:C2	1:1:1837:G:N2	2.70	0.59
22:U:51:LYS:HB2	22:U:90:ASP:HB2	1.85	0.59
1:1:1461:G:N2	1:1:1466:G:C4	2.70	0.59
3:B:103:MET:CB	3:B:215:VAL:HG12	2.31	0.59
1:1:1648:G:H2'	18:Q:127:CYS:C	2.23	0.59
12:K:32:HIS:H	12:K:33:PRO:CD	2.13	0.59
1:1:1411:G:H2'	1:1:1411:G:N3	2.17	0.59
1:1:959:G:N1	16:O:65:ASP:HB3	2.17	0.59
17:P:28:MET:O	17:P:29:SER:HB3	2.00	0.59
1:1:684:G:H2'	1:1:685:A:C8	2.38	0.59
15:N:42:LYS:HE3	15:N:80:LEU:CD2	2.32	0.59
1:1:667:U:H5''	1:1:1087:A:C2	2.38	0.59
1:1:1784:G:H2'	1:1:1785:C:H6	1.67	0.59
1:1:514:U:H3'	1:1:515:G:C8	2.38	0.59
1:1:46:A:O5'	1:1:47:G:H5''	2.03	0.59
1:1:184:G:H3'	1:1:185:G:C5'	2.33	0.59
1:1:184:G:H3'	1:1:185:G:H5''	1.85	0.59
1:1:1488:C:O2'	1:1:1489:A:H4'	2.03	0.59
1:1:96:C:H1'	1:1:474:G:C5'	2.33	0.59
1:1:1157:G:H1'	24:W:76:SER:HB2	1.85	0.59
11:J:141:VAL:HG13	11:J:162:ARG:NH2	2.18	0.59
1:1:1534:C:H2'	1:1:1599:U:O4	2.03	0.59
20:S:24:ARG:O	20:S:55:ARG:HD3	2.02	0.59
1:1:602:G:H8	1:1:602:G:O5'	1.86	0.59
1:1:223:C:H2'	1:1:224:A:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Q:50:LYS:HG2	18:Q:85:ARG:HD2	1.85	0.59
1:1:158:A:O4'	1:1:464:A:C8	2.56	0.59
3:B:127:VAL:HG22	3:B:128:LYS:H	1.68	0.59
1:1:468:A:H2'	1:1:469:A:O4'	2.02	0.59
1:1:1127:C:O2'	1:1:1128:C:H5'	2.02	0.59
25:X:41:PHE:HE1	25:X:120:PHE:CE1	2.21	0.59
1:1:1551:U:H3'	1:1:1551:U:O2	2.03	0.59
1:1:965:U:H6	1:1:965:U:O5'	1.85	0.59
1:1:133:C:C5	1:1:134:C:H1'	2.38	0.59
1:1:167:G:H5''	1:1:168:C:OP2	2.03	0.59
1:1:76:U:H2'	1:1:77:A:C3'	2.25	0.59
5:D:68:GLU:O	5:D:72:VAL:HG23	2.02	0.59
1:1:522:A:H8	1:1:522:A:O5'	1.85	0.59
1:1:1405:A:C3'	1:1:1405:A:C8	2.86	0.59
1:1:382:C:H2'	1:1:383:G:N2	2.18	0.59
1:1:1344:A:N3	1:1:1345:G:H1'	2.18	0.59
1:1:428:U:H2'	1:1:429:C:C6	2.36	0.59
1:1:747:U:C2	1:1:748:C:C2'	2.86	0.58
1:1:991:G:H2'	1:1:991:G:N3	2.16	0.58
1:1:1439:A:H8	1:1:1439:A:P	2.25	0.58
1:1:1276:A:H4'	1:1:1277:C:H5''	1.85	0.58
1:1:1520:G:C4	1:1:1520:G:H5''	2.38	0.58
1:1:1649:U:H3'	1:1:1649:U:H6	1.68	0.58
1:1:1380:C:H2'	1:1:1381:G:C1'	2.33	0.58
1:1:170:A:H3'	1:1:171:A:C8	2.38	0.58
18:Q:134:GLY:HA3	18:Q:139:ALA:O	2.02	0.58
5:D:191:PRO:O	5:D:200:PRO:HD2	2.03	0.58
4:C:82:TYR:CE1	4:C:164:PRO:HD3	2.38	0.58
1:1:940:U:O2	1:1:940:U:H2'	2.02	0.58
1:1:184:G:C8	1:1:185:G:C4'	2.78	0.58
1:1:312:G:H22	8:G:195:LYS:CB	2.15	0.58
1:1:67:C:C5	8:G:162:LEU:C	2.77	0.58
1:1:1598:G:H4'	1:1:1600:G:O6	2.02	0.58
11:J:36:GLY:HA2	11:J:124:HIS:CE1	2.39	0.58
1:1:111:A:N6	1:1:351:G:N3	2.51	0.58
1:1:900:C:C2'	1:1:901:G:C8	2.78	0.58
1:1:1542:C:C6	1:1:1542:C:C5'	2.85	0.58
19:R:17:ILE:HG21	19:R:61:ILE:HD11	1.85	0.58
1:1:39:A:H8	1:1:39:A:O5'	1.85	0.58
22:U:49:LYS:HB3	22:U:92:HIS:CB	2.33	0.58
1:1:169:U:H5''	1:1:169:U:H6	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:102:PRO:HB2	9:H:105:THR:OG1	2.03	0.58
1:1:1102:G:H1	1:1:1130:G:H22	1.50	0.58
1:1:1160:U:C2'	1:1:1161:U:H5'	2.33	0.58
1:1:20:G:H2'	1:1:21:U:H5'	1.85	0.58
3:B:47:THR:HB	3:B:65:ARG:NH1	2.18	0.58
1:1:1242:U:O2'	1:1:1518:C:H4'	2.03	0.58
1:1:84:A:O3'	26:Y:119:GLY:HA3	2.03	0.58
1:1:535:G:O2'	1:1:536:A:H8	1.86	0.58
21:T:25:SER:HB3	21:T:27:LYS:HG3	1.84	0.58
1:1:1089:G:H2'	1:1:1090:C:C6	2.38	0.58
1:1:1701:C:H4'	1:1:1701:C:OP2	2.02	0.58
1:1:577:U:H4'	1:1:578:C:O4'	2.03	0.58
1:1:750:C:H2'	1:1:751:G:C8	2.37	0.58
3:B:31:TYR:OH	3:B:91:VAL:HG13	2.03	0.58
1:1:340:C:O5'	1:1:340:C:H6	1.87	0.58
1:1:1506:A:H5'	1:1:1508:A:N7	2.18	0.58
1:1:981:A:H8	1:1:981:A:O5'	1.85	0.58
1:1:1334:G:H2'	1:1:1335:G:O4'	2.04	0.58
27:Z:62:VAL:N	27:Z:63:PRO:HD2	2.18	0.58
1:1:360:A:H4'	1:1:361:U:O5'	2.04	0.58
1:1:1301:A:H3'	1:1:1301:A:N3	2.17	0.58
2:A:111:GLN:OE1	4:C:89:LYS:HG2	2.04	0.58
1:1:1141:G:O4'	1:1:1151:G:H4'	2.02	0.58
1:1:130:G:N7	1:1:131:C:C2	2.72	0.58
1:1:167:G:H3'	1:1:168:C:H5''	1.86	0.58
1:1:215:G:OP2	1:1:216:C:H5	1.86	0.58
1:1:573:U:H3'	1:1:573:U:O2	2.03	0.58
1:1:216:C:H5''	6:E:134:LYS:CE	2.33	0.58
1:1:1604:G:H2'	1:1:1605:G:O4'	2.03	0.58
1:1:1607:A:C2'	1:1:1608:U:H5'	2.33	0.58
1:1:1653:U:H2'	1:1:1654:G:C8	2.39	0.58
21:T:77:LYS:NZ	21:T:94:ARG:HE	2.01	0.58
1:1:672:A:H2	1:1:1162:C:O2'	1.85	0.58
1:1:1405:A:N3	1:1:1442:U:C6	2.71	0.58
1:1:1698:C:H3'	1:1:1699:A:H5'	1.84	0.58
1:1:1311:C:H5''	14:M:40:LYS:HZ1	1.69	0.58
10:I:68:GLY:C	13:L:21:LYS:HE3	2.23	0.58
6:E:125:LYS:HB2	6:E:226:PHE:CE1	2.39	0.58
1:1:1325:G:H2'	1:1:1326:U:H5''	1.86	0.58
24:W:102:ILE:HB	24:W:113:HIS:HB2	1.83	0.58
1:1:1002:U:C2'	1:1:1003:U:H5'	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:75:VAL:HG21	17:P:104:GLN:HG2	1.86	0.58
1:1:1497:G:H4'	1:1:1498:A:OP2	2.03	0.58
1:1:1431:G:C2	1:1:1432:U:N3	2.71	0.58
9:H:109:ARG:CA	9:H:113:LYS:H	2.16	0.58
1:1:593:C:C6	1:1:593:C:OP2	2.56	0.58
1:1:10:G:OP1	1:1:1697:A:H5'	2.04	0.58
1:1:1079:C:C4'	1:1:1181:A:H61	2.14	0.58
1:1:822:U:H5'	1:1:822:U:C6	2.34	0.58
7:F:36:GLN:O	7:F:37:ASP:HB2	2.02	0.58
1:1:1828:C:H3'	1:1:1829:G:H8	1.68	0.58
9:H:109:ARG:HG3	9:H:113:LYS:HA	1.84	0.58
1:1:1180:C:H3'	1:1:1180:C:H6	1.68	0.58
1:1:1271:C:OP1	1:1:1303:C:H1'	2.03	0.58
1:1:1002:U:H2'	1:1:1003:U:H5'	1.84	0.58
12:K:47:LYS:O	12:K:50:GLN:HG2	2.03	0.58
4:C:253:PRO:HD3	24:W:68:ARG:NH2	2.18	0.58
1:1:543:C:H6	1:1:543:C:H3'	1.69	0.58
1:1:1685:U:C5	1:1:1686:G:N7	2.71	0.58
1:1:1686:G:C6	1:1:1687:C:C4	2.92	0.58
1:1:1839:U:H3	1:1:1860:A:H61	1.51	0.58
1:1:77:A:H4'	1:1:78:C:C4	2.39	0.58
1:1:420:G:H1'	1:1:661:U:H3	1.69	0.58
1:1:1311:C:H6	1:1:1311:C:C5'	2.17	0.58
1:1:1311:C:H5''	1:1:1311:C:H6	1.68	0.58
1:1:604:A:H5'	11:J:22:LYS:HB2	1.85	0.58
19:R:12:ALA:O	19:R:15:VAL:HG12	2.04	0.58
1:1:827:A:C5'	11:J:8:VAL:HG13	2.34	0.58
1:1:871:U:H2'	1:1:871:U:O2	2.03	0.58
1:1:164:A:H2'	1:1:165:G:C8	2.39	0.58
1:1:1104:G:H2'	1:1:1105:G:O4'	2.04	0.58
1:1:1438:A:H3'	1:1:1439:A:C8	2.39	0.58
1:1:894:G:H2'	1:1:895:G:H8	1.69	0.58
1:1:1864:U:O2'	1:1:1866:A:C2	2.56	0.58
2:A:81:ASN:OD1	2:A:205:ARG:HA	2.04	0.58
20:S:6:PRO:HD3	27:Z:52:LYS:CD	2.34	0.58
1:1:1375:G:O5'	1:1:1375:G:H8	1.87	0.58
24:W:55:ASP:HB3	24:W:58:ALA:O	2.03	0.58
1:1:1860:A:C2	1:1:1862:G:O4'	2.57	0.58
1:1:134:C:H3'	1:1:135:U:C4'	2.28	0.58
1:1:67:C:H2'	8:G:162:LEU:HD23	1.86	0.58
26:Y:59:GLY:O	26:Y:71:GLY:HA2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:H:109:ARG:HA	9:H:113:LYS:N	2.18	0.58
1:1:528:A:O5'	1:1:528:A:H8	1.87	0.58
1:1:528:A:O4'	11:J:121:LYS:HB3	2.04	0.58
1:1:1404:U:H2'	1:1:1406:G:C5	2.39	0.58
1:1:307:G:H4'	1:1:308:G:OP2	2.02	0.58
1:1:1244:U:H2'	1:1:1245:G:C8	2.39	0.58
1:1:1389:C:H5''	19:R:43:SER:HB2	1.84	0.58
1:1:1385:G:H5''	5:D:160:SER:OG	2.04	0.58
1:1:988:C:C6	1:1:988:C:O5'	2.57	0.58
1:1:1544:C:H4'	18:Q:80:GLN:HE22	1.68	0.58
1:1:830:A:H3'	1:1:830:A:N3	2.19	0.58
1:1:1800:A:H5''	1:1:1801:A:OP2	2.04	0.58
20:S:23:ARG:H	20:S:23:ARG:HD3	1.68	0.58
1:1:1101:U:H5''	3:B:151:ARG:HD2	1.86	0.57
1:1:655:A:C5	1:1:657:U:C5	2.89	0.57
1:1:229:A:H2'	1:1:888:U:O2	2.04	0.57
1:1:606:G:H3'	1:1:607:U:C4'	2.33	0.57
1:1:454:U:H5''	8:G:76:LEU:HD22	1.85	0.57
1:1:913:A:N3	1:1:913:A:H2'	2.19	0.57
25:X:123:VAL:O	25:X:130:LEU:HG	2.05	0.57
10:I:103:LEU:HA	10:I:171:LEU:O	2.04	0.57
16:O:77:ALA:O	16:O:81:VAL:HG23	2.03	0.57
1:1:1263:U:H3'	1:1:1264:C:H6	1.69	0.57
8:G:160:LYS:HD3	8:G:161:PRO:O	2.04	0.57
1:1:1026:C:O2'	1:1:1161:U:H4'	2.04	0.57
3:B:24:PRO:O	3:B:28:LYS:HG3	2.04	0.57
1:1:1403:C:C5	1:1:1404:U:C2	2.93	0.57
1:1:1286:G:N2	1:1:1312:G:O6	2.37	0.57
1:1:1335:G:H2'	1:1:1336:C:H5'	1.85	0.57
12:K:84:HIS:CG	12:K:85:LEU:H	2.22	0.57
7:F:32:ASP:CB	7:F:117:ILE:HG23	2.34	0.57
1:1:1576:G:H2'	1:1:1577:G:O4'	2.04	0.57
1:1:1656:G:H2'	1:1:1657:G:C8	2.38	0.57
7:F:163:PHE:CD2	7:F:164:ARG:HG3	2.39	0.57
1:1:745:C:H5'	9:H:105:THR:HG23	1.86	0.57
1:1:999:G:H2'	1:1:1000:C:C6	2.39	0.57
1:1:455:A:H2'	1:1:456:C:H6	1.68	0.57
1:1:1354:G:H2'	1:1:1356:G:N7	2.19	0.57
1:1:876:C:H2'	1:1:877:C:C6	2.39	0.57
3:B:107:ARG:HG3	16:O:131:ASP:O	2.04	0.57
1:1:510:G:OP2	1:1:510:G:H8	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:130:ASP:O	2:A:133:PRO:HD2	2.05	0.57
9:H:63:PHE:CE2	9:H:95:ILE:HD11	2.39	0.57
14:M:32:ALA:HB3	14:M:110:VAL:HG22	1.86	0.57
8:G:8:PRO:HG2	8:G:112:VAL:HG13	1.86	0.57
2:A:33:GLN:HB2	2:A:154:LEU:HD12	1.86	0.57
1:1:206:G:H2'	1:1:207:G:H8	1.67	0.57
1:1:301:A:C2'	1:1:302:A:H8	2.17	0.57
1:1:1401:A:C1'	1:1:1402:A:OP1	2.53	0.57
1:1:1696:C:H6	1:1:1696:C:O5'	1.87	0.57
1:1:1520:G:C5'	1:1:1521:C:C5	2.82	0.57
1:1:893:U:H2'	1:1:894:G:H8	1.68	0.57
17:P:33:LEU:O	17:P:37:TYR:HD1	1.88	0.57
1:1:1340:U:H3'	1:1:1341:C:C5	2.39	0.57
1:1:143:U:O4	1:1:328:U:H4'	2.04	0.57
12:K:38:LYS:HE3	12:K:40:VAL:HG21	1.84	0.57
3:B:46:LYS:NZ	16:O:27:VAL:HA	2.19	0.57
1:1:184:G:C3'	1:1:185:G:H4'	2.29	0.57
1:1:337:C:C2'	1:1:337:C:O2	2.53	0.57
1:1:60:A:C5'	1:1:501:C:H5	2.16	0.57
20:S:42:HIS:HA	20:S:45:LEU:HD22	1.87	0.57
1:1:743:U:H5	9:H:97:GLN:HE22	1.51	0.57
1:1:1161:U:H3'	1:1:1161:U:H6	1.69	0.57
3:B:63:LYS:HE3	3:B:91:VAL:HB	1.86	0.57
9:H:158:LEU:HD11	9:H:187:PHE:CD2	2.40	0.57
27:Z:58:LEU:CD1	27:Z:77:LEU:HD22	2.35	0.57
1:1:636:C:H2'	1:1:637:U:C6	2.39	0.57
1:1:636:C:H2'	1:1:637:U:O4'	2.04	0.57
1:1:1413:G:N2	1:1:1414:A:H1'	2.20	0.57
1:1:130:G:H1'	1:1:181:A:C2	2.39	0.57
1:1:186:C:H6	1:1:186:C:O5'	1.88	0.57
1:1:319:C:H1'	1:1:320:G:OP1	2.04	0.57
1:1:492:C:H42	1:1:508:A:H62	1.52	0.57
1:1:1535:U:H6	7:F:82:ASN:OD1	1.88	0.57
15:N:87:ASP:HB2	15:N:129:TYR:OH	2.04	0.57
9:H:44:ASN:O	9:H:65:PRO:HD2	2.05	0.57
1:1:435:A:C2	1:1:474:G:OP2	2.58	0.57
1:1:1311:C:C4	1:1:1312:G:O6	2.57	0.57
2:A:39:TYR:CE2	2:A:50:ASN:HB2	2.40	0.57
1:1:980:A:H2'	1:1:981:A:C8	2.40	0.57
1:1:987:A:H3'	1:1:988:C:H5	1.69	0.57
11:J:94:LEU:O	11:J:97:ILE:HG22	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:210:ILE:HG12	19:R:39:ALA:CB	2.34	0.57
20:S:26:ILE:HA	20:S:56:ALA:HB2	1.85	0.57
20:S:134:GLN:HG2	20:S:135:HIS:N	2.19	0.57
1:1:1828:C:H3'	1:1:1829:G:C8	2.39	0.57
1:1:1834:A:H2	1:1:1837:G:N2	2.00	0.57
1:1:1432:U:OP2	1:1:1432:U:C5	2.57	0.57
1:1:1641:A:H5''	1:1:1641:A:H8	1.68	0.57
1:1:129:C:H1'	1:1:182:C:N4	2.20	0.57
1:1:1575:G:H2'	1:1:1576:G:H8	1.70	0.57
1:1:1607:A:H2'	1:1:1608:U:H5'	1.86	0.57
1:1:1654:G:H3'	1:1:1655:C:C5	2.35	0.57
21:T:121:ARG:O	21:T:121:ARG:HD2	2.04	0.57
1:1:1017:U:H6	1:1:1017:U:H5''	1.70	0.57
1:1:176:U:H2'	1:1:177:G:O4'	2.05	0.57
1:1:1648:G:H8	18:Q:125:ARG:CB	2.18	0.57
1:1:124:U:H5'	6:E:148:ARG:CB	2.35	0.57
24:W:39:THR:HG22	24:W:43:LYS:HE3	1.86	0.57
1:1:1208:A:OP2	1:1:1835:A:C2	2.57	0.57
1:1:1231:C:H2'	1:1:1232:U:C6	2.40	0.57
1:1:1686:G:C2	1:1:1687:C:C2	2.92	0.57
1:1:67:C:H41	8:G:163:ASN:CA	2.16	0.57
11:J:122:SER:HB3	11:J:125:HIS:H	1.68	0.57
1:1:1405:A:C3'	1:1:1406:G:C5'	2.82	0.57
1:1:590:A:N3	1:1:590:A:H2'	2.19	0.57
1:1:1378:A:C5	2:A:105:PRO:HB3	2.40	0.57
17:P:17:TYR:O	20:S:91:LYS:HB3	2.03	0.57
12:K:90:VAL:HG11	12:K:95:ARG:HG2	1.87	0.57
1:1:27:A:H2'	1:1:28:U:C6	2.40	0.57
1:1:1471:C:H3'	1:1:1472:C:C6	2.39	0.57
25:X:68:LYS:HB2	25:X:85:VAL:HB	1.87	0.57
1:1:379:C:O2	1:1:379:C:H2'	2.04	0.57
1:1:1307:U:C3'	1:1:1308:U:H5'	2.33	0.57
1:1:1414:A:C2	1:1:1415:C:N3	2.72	0.57
1:1:179:C:H5''	1:1:180:G:H21	1.66	0.57
1:1:745:C:O2	1:1:750:C:H5''	2.04	0.57
1:1:346:C:H3'	1:1:346:C:C6	2.40	0.57
7:F:102:LEU:O	27:Z:66:LYS:HE2	2.04	0.57
1:1:941:C:H2'	1:1:942:G:O4'	2.03	0.57
1:1:1579:A:H2'	1:1:1580:A:C4'	2.35	0.57
1:1:471:G:H4'	1:1:472:C:OP1	2.05	0.57
14:M:26:LEU:HG	14:M:89:VAL:O	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:839:C:H42	26:Y:49:LYS:HB2	1.69	0.57
1:1:931:C:O5'	1:1:931:C:H6	1.87	0.57
1:1:187:G:H2'	1:1:188:C:H6	1.69	0.57
1:1:189:U:O5'	1:1:189:U:H6	1.87	0.57
1:1:572:U:H5	1:1:576:A:H62	1.52	0.57
1:1:67:C:H6	8:G:162:LEU:HD23	1.69	0.57
1:1:1586:U:H2'	1:1:1587:G:O5'	2.05	0.57
1:1:435:A:C2	1:1:450:C:H5	2.22	0.57
1:1:1442:U:C6	1:1:1443:C:H1'	2.38	0.57
1:1:1289:U:H3'	1:1:1289:U:O2	2.05	0.57
15:N:75:LEU:HA	15:N:80:LEU:HD12	1.86	0.57
22:U:67:LYS:HD3	22:U:76:THR:HG21	1.87	0.57
1:1:567:C:H3'	1:1:568:C:H5'	1.87	0.57
19:R:13:ALA:HB1	19:R:54:VAL:HB	1.87	0.57
1:1:67:C:H5'	8:G:162:LEU:HD23	1.87	0.56
1:1:77:A:C6	8:G:155:GLN:HB3	2.40	0.56
1:1:1600:G:H2'	1:1:1600:G:N3	2.19	0.56
21:T:76:THR:HG22	21:T:95:GLY:H	1.70	0.56
1:1:797:C:O2'	9:H:109:ARG:HD2	2.05	0.56
9:H:100:ILE:HD13	9:H:122:LEU:HA	1.87	0.56
16:O:18:GLY:H	16:O:19:PRO:HD2	1.70	0.56
1:1:306:C:O2'	1:1:307:G:H5'	2.05	0.56
1:1:604:A:H1'	1:1:605:A:OP1	2.04	0.56
15:N:139:TRP:HH2	15:N:149:LEU:HD21	1.70	0.56
17:P:30:TYR:HA	17:P:33:LEU:CD2	2.33	0.56
19:R:113:SER:O	19:R:114:LEU:HG	2.05	0.56
1:1:1426:U:C4	1:1:1427:C:C4	2.93	0.56
1:1:1426:U:C4	1:1:1427:C:C5	2.93	0.56
1:1:1579:A:C8	22:U:56:MET:HG2	2.40	0.56
16:O:57:THR:OG1	16:O:60:MET:HG3	2.04	0.56
19:R:60:ARG:O	19:R:63:ARG:HB2	2.05	0.56
1:1:1418:C:H5''	21:T:129:ARG:HB2	1.85	0.56
1:1:1418:C:O2'	1:1:1419:C:H5'	2.05	0.56
1:1:1631:U:C4	1:1:1632:G:C2	2.93	0.56
1:1:694:G:H2'	1:1:695:C:C5	2.40	0.56
1:1:748:C:N4	1:1:860:G:P	2.76	0.56
1:1:656:G:H4'	1:1:657:U:OP2	2.03	0.56
1:1:1768:A:H2'	1:1:1769:C:C5'	2.22	0.56
1:1:35:C:O5'	1:1:35:C:H6	1.88	0.56
7:F:103:LEU:CD2	27:Z:67:LEU:HD11	2.34	0.56
1:1:1351:G:C5'	1:1:1351:G:C8	2.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1095:C:H5''	24:W:22:LYS:HZ3	1.69	0.56
1:1:1143:A:H2'	1:1:1144:A:C8	2.40	0.56
1:1:15:U:H6	1:1:15:U:O5'	1.88	0.56
5:D:74:GLN:NE2	5:D:80:PRO:HA	2.20	0.56
1:1:876:C:C6	1:1:877:C:C5	2.93	0.56
1:1:396:U:H2'	1:1:397:G:O4'	2.05	0.56
6:E:205:PHE:CE1	6:E:221:ARG:HD3	2.41	0.56
1:1:1216:C:H3'	1:1:1217:A:C5'	2.35	0.56
1:1:125:C:H6	1:1:125:C:P	2.28	0.56
1:1:691:G:O2'	1:1:692:G:H5'	2.05	0.56
1:1:798:G:H1'	1:1:867:G:N2	2.20	0.56
1:1:1130:G:H4'	15:N:10:GLY:CA	2.36	0.56
1:1:1255:G:H3'	1:1:1256:G:H5'	1.86	0.56
1:1:99:A:H2'	1:1:100:U:O4'	2.06	0.56
1:1:1621:U:H2'	1:1:1622:U:C5'	2.32	0.56
1:1:893:U:O5'	1:1:893:U:H6	1.88	0.56
10:I:192:GLY:HA3	13:L:20:LYS:CB	2.36	0.56
1:1:81:U:H5'	1:1:82:G:OP2	2.05	0.56
1:1:911:C:H3'	1:1:912:C:C5	2.39	0.56
1:1:1783:C:H2'	1:1:1783:C:O2	2.05	0.56
1:1:1384:C:H2'	1:1:1385:G:H5'	1.87	0.56
20:S:77:TYR:O	20:S:78:LYS:HB2	2.05	0.56
1:1:327:G:H4'	1:1:328:U:OP1	2.05	0.56
1:1:983:A:H2'	1:1:984:C:H5'	1.87	0.56
1:1:1495:G:O6	22:U:69:PRO:HB3	2.05	0.56
1:1:539:C:H3'	1:1:539:C:C6	2.40	0.56
1:1:547:G:O5'	1:1:548:C:H5''	2.05	0.56
6:E:173:ILE:HD13	6:E:230:ASN:CB	2.35	0.56
11:J:48:PHE:O	11:J:51:ALA:HB3	2.06	0.56
9:H:177:TYR:CZ	9:H:181:THR:HG21	2.40	0.56
1:1:1802:C:H2'	1:1:1803:U:O4'	2.05	0.56
4:C:200:ARG:HA	4:C:221:ASP:OD2	2.06	0.56
1:1:365:C:O2	1:1:365:C:H2'	2.04	0.56
1:1:1644:C:H2'	1:1:1645:C:C6	2.40	0.56
1:1:1410:C:OP1	1:1:1413:G:H5''	2.05	0.56
1:1:77:A:N7	8:G:155:GLN:CA	2.69	0.56
1:1:125:C:H3'	6:E:149:TYR:OH	2.05	0.56
1:1:1602:U:H3'	1:1:1602:U:H6	1.70	0.56
1:1:1016:U:C5	15:N:14:SER:HB2	2.41	0.56
1:1:1698:C:C4'	1:1:1699:A:C8	2.83	0.56
1:1:426:A:H2'	1:1:426:A:N3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1624:U:O5'	1:1:1624:U:C6	2.59	0.56
10:I:158:ILE:HG13	10:I:158:ILE:O	2.05	0.56
8:G:38:ALA:HB1	8:G:41:LEU:HD12	1.87	0.56
7:F:42:LYS:HB2	7:F:45:TYR:CD1	2.41	0.56
3:B:134:LEU:HB2	3:B:219:LYS:HB2	1.86	0.56
1:1:1230:C:O2'	1:1:1231:C:H5'	2.05	0.56
1:1:1214:A:N1	1:1:1686:G:C2	2.74	0.56
1:1:217:A:H4'	1:1:341:C:H4'	1.88	0.56
1:1:797:C:C4'	9:H:109:ARG:HB2	2.34	0.56
1:1:924:G:H2'	1:1:925:G:H8	1.70	0.56
1:1:1284:A:N7	1:1:1286:G:C5'	2.68	0.56
1:1:869:A:C4	1:1:915:G:H1'	2.41	0.56
1:1:1618:C:H5''	1:1:1618:C:H6	1.69	0.56
1:1:170:A:C3'	1:1:171:A:H8	2.19	0.56
1:1:1116:C:O2	1:1:1116:C:C2'	2.52	0.56
1:1:838:G:H8	26:Y:9:THR:HG1	1.54	0.56
1:1:359:U:O5'	1:1:359:U:H6	1.88	0.56
1:1:23:G:H2'	1:1:24:C:C6	2.41	0.56
1:1:482:G:H22	1:1:485:A:H2	1.53	0.56
12:K:50:GLN:HA	12:K:53:LYS:HE2	1.86	0.56
24:W:28:ARG:HB3	24:W:29:PRO:CD	2.36	0.56
9:H:83:LEU:CB	9:H:92:VAL:HG21	2.36	0.56
7:F:19:LEU:HD11	7:F:22:LYS:HD3	1.86	0.56
1:1:1125:C:H4'	2:A:43:SER:O	2.05	0.56
1:1:133:C:H3'	1:1:134:C:H4'	1.85	0.56
1:1:1405:A:N3	1:1:1442:U:C5	2.73	0.56
1:1:684:G:C5	1:1:920:A:N7	2.74	0.56
1:1:1681:U:O5'	1:1:1681:U:H6	1.89	0.56
22:U:78:ASP:HB3	22:U:80:PHE:CZ	2.41	0.56
1:1:370:G:C4'	1:1:371:A:OP1	2.53	0.56
1:1:1499:U:O2'	1:1:1500:G:H5'	2.06	0.56
1:1:58:C:H5''	1:1:499:G:N2	2.13	0.56
1:1:1667:U:H5''	18:Q:141:TYR:OH	2.05	0.56
1:1:688:U:H1'	1:1:689:U:C6	2.39	0.56
3:B:65:ARG:HG2	16:O:50:LYS:HD2	1.88	0.56
1:1:209:A:O2'	1:1:210:U:H5''	2.05	0.56
1:1:97:U:H5'	1:1:98:C:OP2	2.04	0.56
1:1:1276:A:N6	1:1:1317:C:N4	2.54	0.56
1:1:1394:G:H2'	1:1:1395:C:H5'	1.87	0.56
1:1:1396:A:H2	1:1:1449:G:H22	1.53	0.56
1:1:1476:A:C3'	1:1:1477:U:H5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:549:C:H2'	1:1:550:C:H6	1.71	0.56
1:1:583:A:H2'	1:1:584:A:C8	2.41	0.56
1:1:1821:U:H2'	1:1:1822:A:C8	2.41	0.56
1:1:1043:G:H8	1:1:1043:G:O5'	1.88	0.56
1:1:93:U:H2'	1:1:94:G:O4'	2.06	0.56
1:1:423:U:H5''	1:1:424:C:OP2	2.05	0.56
22:U:29:VAL:O	22:U:33:GLU:HG2	2.06	0.56
1:1:1830:U:H1'	1:1:1831:A:OP2	2.06	0.56
1:1:61:A:H1'	1:1:62:G:P	2.45	0.56
1:1:385:G:H4'	1:1:386:C:C5'	2.35	0.56
1:1:1242:U:H4'	1:1:1243:U:O5'	2.04	0.56
1:1:84:A:O2'	1:1:85:A:C8	2.49	0.56
1:1:913:A:H61	9:H:119:SER:C	2.08	0.56
1:1:1579:A:C8	22:U:86:LYS:HD3	2.40	0.56
1:1:155:G:H2'	1:1:156:G:C8	2.40	0.56
22:U:22:ILE:HD11	22:U:91:LEU:HD11	1.88	0.56
1:1:372:U:H3'	1:1:372:U:C6	2.41	0.56
1:1:1686:G:H3'	1:1:1687:C:H6	1.71	0.56
1:1:65:C:H4'	8:G:133:LEU:CD2	2.36	0.56
1:1:1599:U:N3	7:F:165:ASN:N	2.54	0.56
1:1:1653:U:H3	1:1:1671:G:H1	1.54	0.56
1:1:693:A:H3'	1:1:694:G:O4'	2.05	0.56
1:1:672:A:O2'	1:1:673:G:H5''	2.06	0.56
1:1:193:C:H1'	1:1:208:G:N1	2.21	0.56
1:1:1405:A:C8	1:1:1406:G:H5'	2.40	0.56
2:A:81:ASN:HA	2:A:84:GLN:HB2	1.88	0.56
1:1:1557:C:H42	1:1:1661:A:C4'	2.19	0.56
1:1:1387:G:H8	1:1:1387:G:O5'	1.89	0.56
1:1:1261:C:H3'	1:1:1262:C:H5''	1.88	0.56
3:B:81:PHE:O	3:B:82:ARG:HB2	2.06	0.56
1:1:1649:U:C6	1:1:1649:U:H3'	2.41	0.56
1:1:1361:G:H1'	1:1:1380:C:H41	1.70	0.56
1:1:584:A:P	1:1:584:A:H8	2.29	0.56
12:K:32:HIS:N	12:K:33:PRO:CD	2.68	0.56
1:1:457:C:O4'	1:1:1801:A:H4'	2.06	0.56
2:A:120:ARG:O	2:A:143:PRO:HD2	2.06	0.56
1:1:125:C:H3'	6:E:149:TYR:CZ	2.41	0.56
1:1:386:C:O2	1:1:386:C:H2'	2.05	0.56
1:1:1520:G:H4'	1:1:1521:C:OP2	2.04	0.56
24:W:77:PRO:HG2	24:W:79:PHE:CZ	2.41	0.56
1:1:408:A:C2'	1:1:409:C:H4'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:952:G:H1'	16:O:52:THR:CB	2.36	0.56
1:1:1362:U:H4'	1:1:1363:C:OP2	2.06	0.56
5:D:32:ASP:HB3	5:D:57:ASN:HB2	1.88	0.56
1:1:1113:A:C2	1:1:1120:U:C4	2.93	0.56
11:J:141:VAL:HG22	11:J:162:ARG:HH22	1.71	0.56
1:1:381:C:H5''	10:I:48:VAL:HG22	1.88	0.56
1:1:1739:C:H6	1:1:1739:C:O5'	1.89	0.56
12:K:12:TYR:CE1	12:K:52:LEU:HD11	2.41	0.56
9:H:160:LYS:HE3	9:H:191:GLU:N	2.21	0.56
1:1:1011:A:O5'	1:1:1011:A:H8	1.89	0.56
1:1:130:G:C1'	1:1:181:A:N1	2.68	0.55
1:1:59:U:H5''	1:1:502:C:H5'	1.88	0.55
1:1:576:A:C8	1:1:576:A:OP2	2.58	0.55
1:1:1549:U:O2'	1:1:1550:G:H5'	2.06	0.55
21:T:63:HIS:CE1	21:T:78:ILE:HD13	2.40	0.55
1:1:1130:G:H4'	15:N:10:GLY:HA2	1.88	0.55
1:1:1461:G:N2	1:1:1466:G:C5	2.74	0.55
1:1:1272:C:H2'	1:1:1273:C:C6	2.42	0.55
2:A:110:ASN:HD21	2:A:113:GLN:HB2	1.70	0.55
1:1:136:C:H1'	1:1:137:U:OP1	2.06	0.55
14:M:65:VAL:HG21	14:M:108:CYS:SG	2.46	0.55
1:1:1431:G:N2	1:1:1432:U:C2	2.74	0.55
1:1:753:C:H3'	1:1:754:G:O4'	2.07	0.55
1:1:302:A:H4'	10:I:73:THR:O	2.07	0.55
5:D:64:ARG:O	5:D:68:GLU:HG3	2.05	0.55
9:H:87:PHE:CE1	9:H:90:LYS:HE2	2.41	0.55
1:1:1180:C:H2'	1:1:1181:A:H5'	1.87	0.55
3:B:68:GLU:OE2	3:B:83:LYS:HE2	2.06	0.55
1:1:1791:A:H2'	1:1:1792:G:O4'	2.06	0.55
1:1:504:G:C2'	1:1:505:G:H5'	2.36	0.55
1:1:1054:G:O5'	1:1:1054:G:H8	1.89	0.55
1:1:215:G:O5'	1:1:215:G:H8	1.89	0.55
1:1:59:U:H6	1:1:59:U:H3'	1.70	0.55
1:1:343:A:O5'	1:1:343:A:H8	1.89	0.55
1:1:351:G:C8	1:1:351:G:C3'	2.87	0.55
1:1:902:G:H2'	1:1:903:A:C8	2.41	0.55
2:A:205:ARG:HG3	2:A:206:ASP:N	2.21	0.55
1:1:805:U:N3	1:1:858:A:H2	2.05	0.55
11:J:87:LEU:HD11	11:J:100:LEU:HD11	1.87	0.55
10:I:194:GLU:HG2	10:I:195:LEU:N	2.19	0.55
1:1:915:G:C2'	1:1:916:A:H5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Z:69:THR:CG2	27:Z:70:PRO:HD2	2.34	0.55
24:W:22:LYS:O	24:W:65:LEU:HD12	2.05	0.55
1:1:429:C:O2	1:1:429:C:H2'	2.05	0.55
1:1:39:A:P	11:J:3:VAL:HG13	2.46	0.55
1:1:197:U:O5'	1:1:197:U:H6	1.89	0.55
16:O:27:VAL:HG12	16:O:90:ILE:HG12	1.88	0.55
22:U:50:VAL:HG22	22:U:91:LEU:HD22	1.86	0.55
20:S:8:LYS:HD3	20:S:8:LYS:O	2.06	0.55
3:B:153:THR:HB	3:B:155:TYR:CD2	2.41	0.55
1:1:29:G:H4'	25:X:129:SER:HB3	1.86	0.55
1:1:636:C:C6	1:1:636:C:O5'	2.59	0.55
1:1:1472:C:O2	1:1:1472:C:C2'	2.54	0.55
1:1:544:G:H4'	1:1:545:A:OP1	2.05	0.55
1:1:1835:A:C2'	1:1:1835:A:N3	2.69	0.55
1:1:1637:A:H4'	1:1:1638:G:O5'	1.94	0.55
1:1:743:U:O2	9:H:100:ILE:HB	2.07	0.55
12:K:29:MET:N	12:K:30:PRO:HD3	2.21	0.55
1:1:951:C:N3	1:1:975:G:O6	2.38	0.55
1:1:635:G:H2'	1:1:636:C:H6	1.71	0.55
1:1:819:G:H2'	1:1:820:U:C6	2.42	0.55
2:A:77:ILE:HG12	2:A:99:ILE:CG2	2.36	0.55
1:1:1410:C:H3'	1:1:1411:G:H3'	1.88	0.55
9:H:102:PRO:HG2	9:H:105:THR:HB	1.88	0.55
1:1:235:A:N6	1:1:894:G:C2	2.75	0.55
1:1:1578:U:H4'	1:1:1579:A:OP2	2.06	0.55
1:1:838:G:H8	26:Y:9:THR:H	1.45	0.55
1:1:46:A:H4'	1:1:47:G:H5'	1.89	0.55
3:B:116:LYS:HE2	3:B:117:TRP:CZ3	2.41	0.55
1:1:1413:G:H2'	1:1:1414:A:C8	2.42	0.55
1:1:72:C:H2'	1:1:73:C:O4'	2.06	0.55
1:1:125:C:O4'	6:E:136:ILE:HG22	2.07	0.55
20:S:38:ARG:O	20:S:42:HIS:HD2	1.90	0.55
1:1:1443:C:C3'	1:1:1444:U:H5'	2.36	0.55
1:1:1677:U:O2	1:1:1678:A:H8	1.89	0.55
17:P:17:TYR:HB3	17:P:25:LEU:HD11	1.88	0.55
1:1:1383:A:O5'	1:1:1383:A:C8	2.59	0.55
1:1:905:C:H2'	1:1:906:U:C6	2.41	0.55
10:I:122:GLY:O	10:I:124:LYS:N	2.40	0.55
7:F:56:TYR:O	7:F:62:ARG:HG3	2.06	0.55
1:1:628:A:N6	5:D:179:GLN:HE22	2.04	0.55
1:1:1214:A:C6	1:1:1217:A:C4	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1415:C:C2'	1:1:1416:C:H5'	2.37	0.55
1:1:743:U:H3'	1:1:744:G:H8	1.71	0.55
1:1:743:U:H2'	9:H:100:ILE:O	2.07	0.55
1:1:927:C:H2'	1:1:928:G:H5'	1.88	0.55
1:1:900:C:H2'	1:1:901:G:C5	2.41	0.55
1:1:1277:C:H3'	1:1:1278:A:C8	2.42	0.55
1:1:1473:G:C8	1:1:1475:G:OP2	2.59	0.55
1:1:83:A:O2'	26:Y:123:ALA:HB1	2.07	0.55
1:1:1790:A:C2'	1:1:1791:A:H5'	2.35	0.55
1:1:1266:C:H2'	1:1:1267:C:C6	2.41	0.55
1:1:29:G:H4'	25:X:129:SER:HB2	1.89	0.55
7:F:39:ILE:HG23	7:F:68:ILE:HG21	1.88	0.55
1:1:26:U:H6	1:1:26:U:O5'	1.90	0.55
11:J:113:GLN:O	11:J:117:LEU:HG	2.06	0.55
1:1:1669:G:H5'	18:Q:130:LYS:HB3	1.88	0.55
24:W:36:ARG:CG	24:W:110:ILE:HD12	2.37	0.55
25:X:32:LEU:HD22	25:X:34:THR:HB	1.89	0.55
1:1:572:U:H3'	1:1:572:U:C6	2.42	0.55
1:1:573:U:C2'	1:1:576:A:C2	2.86	0.55
5:D:39:VAL:O	22:U:108:PRO:HB3	2.07	0.55
1:1:1698:C:H5'	1:1:1699:A:C8	2.41	0.55
1:1:684:G:C6	1:1:920:A:C8	2.95	0.55
1:1:1164:G:H3'	1:1:1165:G:C2	2.41	0.55
1:1:1493:C:H3'	1:1:1494:U:H5'	1.85	0.55
1:1:86:C:C3'	1:1:87:U:H5''	2.36	0.55
11:J:41:ARG:HD3	11:J:42:GLU:N	2.21	0.55
1:1:581:U:H5''	26:Y:64:PHE:CE1	2.42	0.55
1:1:646:G:H5''	1:1:646:G:C8	2.42	0.55
6:E:149:TYR:CZ	8:G:206:ALA:HA	2.42	0.55
1:1:571:U:H1'	26:Y:60:PHE:H	1.72	0.55
1:1:1534:C:OP2	1:1:1599:U:H5	1.90	0.55
1:1:798:G:H5'	1:1:798:G:N3	2.22	0.55
1:1:4:C:H5	1:1:655:A:OP1	1.90	0.55
1:1:36:U:C2	1:1:520:A:C2	2.95	0.55
18:Q:33:LYS:HE3	18:Q:36:GLY:HA2	1.88	0.55
1:1:1578:U:C5	5:D:5:ILE:HA	2.42	0.55
1:1:1672:U:C2'	1:1:1673:U:H5''	2.37	0.55
1:1:144:U:H6	8:G:180:VAL:HG22	1.69	0.55
1:1:1168:G:C2'	1:1:1169:G:H5'	2.37	0.55
1:1:1539:U:H2'	1:1:1540:G:H5'	1.89	0.55
24:W:36:ARG:HG2	24:W:110:ILE:HD12	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:153:G:H1	1:1:165:G:H22	1.52	0.54
1:1:751:G:C2'	1:1:752:G:H8	2.04	0.54
1:1:526:A:N9	11:J:128:VAL:HG13	2.23	0.54
1:1:888:U:C6	1:1:888:U:H3'	2.43	0.54
1:1:305:U:C2'	1:1:305:U:O2	2.55	0.54
1:1:1202:U:H3'	1:1:1203:G:H5''	1.88	0.54
1:1:1204:A:C8	1:1:1204:A:O5'	2.60	0.54
2:A:205:ARG:HG3	2:A:206:ASP:H	1.71	0.54
2:A:5:LEU:O	2:A:6:ASP:HB2	2.07	0.54
1:1:1579:A:N6	22:U:88:LEU:HD22	2.22	0.54
1:1:970:G:H1'	1:1:971:G:OP1	2.06	0.54
11:J:28:GLU:O	11:J:32:ILE:HG13	2.07	0.54
2:A:185:MET:HG2	23:V:46:PHE:CE1	2.42	0.54
1:1:808:A:H4'	6:E:219:ALA:O	2.06	0.54
1:1:214:U:H2'	1:1:214:U:O2	2.07	0.54
7:F:51:HIS:CD2	7:F:86:LYS:HD3	2.42	0.54
1:1:919:A:N1	15:N:64:ARG:HD3	2.22	0.54
2:A:89:LYS:HB2	2:A:202:TYR:CE2	2.42	0.54
1:1:478:G:O5'	1:1:478:G:H8	1.91	0.54
1:1:1214:A:N6	1:1:1217:A:C2	2.75	0.54
1:1:572:U:P	26:Y:59:GLY:H	2.29	0.54
1:1:78:C:N3	8:G:173:ALA:HB3	2.22	0.54
1:1:1534:C:H5'	1:1:1536:G:C1'	2.37	0.54
1:1:798:G:N1	1:1:799:U:C4	2.75	0.54
1:1:586:G:C2	1:1:587:A:H1'	2.42	0.54
1:1:1012:A:H4'	1:1:1130:G:O2'	2.07	0.54
1:1:902:G:O2'	1:1:903:A:H5'	2.05	0.54
1:1:307:G:O6	1:1:1788:A:H4'	2.07	0.54
1:1:175:A:H3'	1:1:176:U:C5'	2.31	0.54
19:R:109:LEU:HD13	19:R:111:PHE:N	2.16	0.54
1:1:1556:A:C2	1:1:1557:C:C5	2.96	0.54
1:1:1557:C:O2	1:1:1557:C:C2'	2.56	0.54
1:1:1178:U:H1'	1:1:1184:G:N2	2.22	0.54
1:1:808:A:H5''	6:E:188:ASN:HD21	1.72	0.54
1:1:1746:U:H2'	1:1:1747:C:H6	1.70	0.54
10:I:101:ILE:HD11	10:I:198:TYR:CD1	2.42	0.54
1:1:1644:C:H6	1:1:1644:C:O5'	1.90	0.54
1:1:1654:G:H4'	21:T:82:ARG:NH2	2.22	0.54
27:Z:43:LYS:HG3	27:Z:44:LEU:O	2.07	0.54
1:1:789:G:H2'	1:1:790:C:H6	1.73	0.54
1:1:1023:A:H8	1:1:1023:A:O5'	1.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:664:A:H61	1:1:1163:C:H42	1.55	0.54
18:Q:33:LYS:HD3	18:Q:69:ARG:HD3	1.89	0.54
1:1:10:G:H1'	4:C:115:GLN:OE1	2.08	0.54
1:1:1452:A:C5	1:1:1475:G:C6	2.96	0.54
1:1:1494:U:H1'	1:1:1495:G:P	2.47	0.54
1:1:1332:A:H1'	5:D:141:LYS:NZ	2.22	0.54
26:Y:87:PRO:HD2	26:Y:90:ARG:HD2	1.90	0.54
1:1:476:A:H3'	1:1:477:G:H8	1.72	0.54
1:1:674:C:H2'	1:1:675:U:C6	2.43	0.54
15:N:67:THR:HG21	15:N:74:ILE:HD11	1.89	0.54
1:1:1689:C:H2'	1:1:1690:U:C6	2.42	0.54
1:1:689:U:H5'	1:1:690:G:OP2	2.08	0.54
1:1:345:U:C6	1:1:345:U:H3'	2.42	0.54
1:1:1033:G:H5''	1:1:1034:A:OP1	2.07	0.54
10:I:66:SER:HA	10:I:73:THR:HA	1.89	0.54
1:1:1461:G:N2	1:1:1465:A:H62	1.86	0.54
1:1:91:A:H5''	1:1:92:A:H5'	1.90	0.54
25:X:90:CYS:O	25:X:94:ILE:HG13	2.08	0.54
6:E:45:ILE:HD12	6:E:61:VAL:CG2	2.33	0.54
2:A:110:ASN:C	2:A:110:ASN:HD22	2.11	0.54
3:B:197:ILE:O	3:B:201:CYS:HB2	2.07	0.54
1:1:1422:G:H2'	1:1:1422:G:N3	2.21	0.54
1:1:1416:C:N4	1:1:1431:G:N2	2.55	0.54
1:1:569:A:C6	1:1:570:C:C4	2.95	0.54
3:B:91:VAL:HG22	3:B:96:CYS:HB2	1.89	0.54
1:1:1284:A:P	1:1:1284:A:C8	3.01	0.54
1:1:1454:A:H5'	19:R:5:ARG:NH2	2.23	0.54
1:1:448:A:N7	10:I:26:LYS:N	2.56	0.54
1:1:811:A:H1'	1:1:812:A:C8	2.42	0.54
1:1:460:A:H2	1:1:469:A:H61	1.56	0.54
21:T:124:THR:HB	21:T:125:PRO:HD2	1.89	0.54
1:1:656:G:C4'	1:1:657:U:OP2	2.55	0.54
1:1:211:G:C4	1:1:212:C:C5	2.96	0.54
1:1:35:C:H2'	1:1:36:U:H6	1.72	0.54
1:1:380:G:H1	1:1:382:C:H3'	1.71	0.54
1:1:1288:U:P	1:1:1311:C:N3	2.81	0.54
24:W:76:SER:HB3	24:W:77:PRO:HD3	1.89	0.54
1:1:223:C:H2'	1:1:224:A:C8	2.42	0.54
8:G:136:LYS:O	8:G:176:ILE:HG22	2.08	0.54
3:B:81:PHE:CD2	3:B:82:ARG:HG3	2.42	0.54
22:U:32:LEU:HD23	22:U:85:HIS:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:399:C:H5'	1:1:400:C:H5	1.71	0.54
1:1:686:U:O2'	1:1:687:C:H5'	2.06	0.54
1:1:465:A:C4'	1:1:466:G:O5'	2.56	0.54
24:W:86:LEU:HD22	24:W:113:HIS:CE1	2.43	0.54
1:1:1086:G:N3	1:1:1086:G:H2'	2.22	0.54
1:1:823:U:OP1	1:1:823:U:H3'	2.07	0.54
23:V:24:ILE:HG23	23:V:28:ASP:HB2	1.90	0.54
1:1:1419:C:H2'	1:1:1420:G:C8	2.43	0.54
1:1:172:U:H2'	1:1:172:U:O2	2.07	0.54
1:1:317:C:H3'	1:1:318:A:C5'	2.38	0.54
1:1:1490:G:N3	1:1:1490:G:H2'	2.22	0.54
1:1:350:C:N4	1:1:351:G:N2	2.55	0.54
1:1:386:C:P	13:L:136:LYS:HD3	2.48	0.54
1:1:1280:G:C2	1:1:1281:G:C5	2.95	0.54
1:1:1286:G:N2	1:1:1312:G:C6	2.75	0.54
7:F:100:ILE:HA	7:F:103:LEU:HD12	1.90	0.54
1:1:448:A:C5	10:I:26:LYS:HA	2.43	0.54
1:1:1068:G:H2'	1:1:1069:U:C5	2.43	0.54
1:1:1552:G:C8	1:1:1578:U:O4	2.60	0.54
1:1:1380:C:H2'	1:1:1381:G:C8	2.43	0.54
1:1:1743:G:H21	1:1:1791:A:H62	1.56	0.54
1:1:1120:U:C2'	1:1:1121:G:H5'	2.38	0.54
18:Q:51:LEU:HD11	18:Q:84:ILE:HG22	1.89	0.54
1:1:428:U:H2'	1:1:429:C:H6	1.71	0.54
3:B:193:ILE:O	3:B:197:ILE:HG12	2.08	0.54
9:H:148:LEU:HA	24:W:42:MET:SD	2.47	0.54
11:J:137:VAL:HB	11:J:142:VAL:HG23	1.88	0.54
8:G:91:GLU:O	8:G:91:GLU:HG2	2.08	0.54
1:1:854:A:O5'	1:1:854:A:H8	1.91	0.54
1:1:866:U:O5'	1:1:866:U:H6	1.91	0.54
1:1:1137:U:H6	1:1:1137:U:OP2	1.90	0.54
1:1:1686:G:H5'	1:1:1687:C:OP2	2.07	0.54
1:1:1691:U:O2'	1:1:1692:U:C6	2.59	0.54
1:1:1598:G:H4'	1:1:1600:G:N7	2.23	0.54
1:1:528:A:OP1	11:J:122:SER:HB2	2.06	0.54
1:1:655:A:C4	1:1:657:U:H5	2.25	0.54
1:1:1440:C:O5'	1:1:1440:C:H6	1.89	0.54
1:1:1508:A:H8	1:1:1508:A:OP2	1.91	0.54
11:J:60:LEU:HB2	11:J:94:LEU:HD11	1.88	0.54
1:1:611:G:N2	1:1:633:C:H1'	2.22	0.54
1:1:558:G:O5'	1:1:558:G:H8	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:59:SER:O	3:B:63:LYS:HD3	2.08	0.54
3:B:63:LYS:HE3	3:B:91:VAL:CB	2.38	0.54
22:U:53:PRO:HB2	22:U:55:ARG:HH12	1.73	0.54
27:Z:103:HIS:CG	27:Z:104:ARG:H	2.26	0.54
1:1:1165:G:H4'	1:1:1166:G:C5'	2.38	0.54
9:H:135:PHE:HB3	9:H:136:PRO:HD3	1.89	0.54
1:1:1472:C:H2'	1:1:1472:C:O2	2.06	0.54
1:1:847:A:N3	1:1:847:A:H2'	2.22	0.54
20:S:81:ASP:HB2	20:S:95:TYR:CD1	2.43	0.54
6:E:49:ARG:HA	6:E:55:ALA:O	2.07	0.54
1:1:963:A:H2'	1:1:964:A:O4'	2.08	0.54
1:1:133:C:C4	1:1:134:C:H1'	2.43	0.54
1:1:1101:U:C6	1:1:1101:U:H3'	2.44	0.54
1:1:192:C:N4	1:1:207:G:H1	1.99	0.54
1:1:609:U:H6	1:1:609:U:O5'	1.91	0.54
1:1:1662:U:H2'	1:1:1663:A:H5'	1.90	0.54
1:1:1426:U:O4	1:1:1427:C:C4	2.61	0.54
3:B:35:ALA:HB1	3:B:36:PRO:HD2	1.88	0.54
1:1:684:G:C8	1:1:920:A:C6	2.96	0.54
1:1:170:A:C3'	1:1:171:A:C8	2.91	0.54
17:P:53:GLN:OE1	17:P:83:MET:HG3	2.08	0.54
7:F:33:ILE:O	7:F:34:SER:HB3	2.08	0.54
1:1:635:G:H2'	1:1:636:C:C6	2.43	0.54
1:1:505:G:H2'	1:1:506:G:H5'	1.90	0.54
1:1:37:C:H3'	1:1:38:A:H5"	1.90	0.54
1:1:1714:U:O5'	1:1:1714:U:H6	1.91	0.54
25:X:39:ASN:OD1	25:X:41:PHE:HB2	2.08	0.54
22:U:99:LYS:HA	22:U:102:THR:OG1	2.07	0.54
1:1:490:C:H6	1:1:490:C:O5'	1.91	0.54
1:1:1035:A:OP2	1:1:1035:A:C8	2.60	0.53
1:1:1129:G:C3'	1:1:1130:G:C8	2.92	0.53
1:1:35:C:C2'	1:1:36:U:H6	2.21	0.53
18:Q:33:LYS:CE	18:Q:36:GLY:HA2	2.38	0.53
1:1:804:U:H2'	1:1:805:U:C5	2.40	0.53
1:1:1649:U:C6	1:1:1649:U:O5'	2.61	0.53
1:1:465:A:H4'	1:1:466:G:O4'	2.09	0.53
1:1:369:C:C2'	1:1:370:G:H5"	2.38	0.53
9:H:148:LEU:HA	24:W:42:MET:CG	2.38	0.53
7:F:162:ALA:HB2	7:F:172:CYS:HB2	1.89	0.53
5:D:208:VAL:HG13	19:R:40:ILE:O	2.08	0.53
1:1:1221:G:H2'	1:1:1222:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:195:ILE:HA	6:E:210:VAL:HG12	1.89	0.53
7:F:128:ILE:HG22	7:F:130:ARG:HG2	1.90	0.53
1:1:148:U:H6	1:1:148:U:C5'	2.21	0.53
1:1:169:U:H1'	8:G:133:LEU:CD1	2.36	0.53
1:1:1631:U:C5'	1:1:1631:U:H6	2.05	0.53
1:1:525:A:C3'	1:1:525:A:C8	2.90	0.53
1:1:1035:A:H3'	1:1:1035:A:C8	2.43	0.53
1:1:1403:C:C5	1:1:1404:U:N1	2.75	0.53
1:1:1492:U:H4'	22:U:70:CYS:SG	2.48	0.53
7:F:60:ARG:HH11	7:F:60:ARG:HG2	1.72	0.53
12:K:29:MET:N	12:K:30:PRO:CD	2.71	0.53
1:1:1350:U:O2'	2:A:110:ASN:HB2	2.09	0.53
1:1:1165:G:H4'	1:1:1166:G:H5''	1.90	0.53
1:1:358:C:H5'	1:1:358:C:C6	2.40	0.53
4:C:98:LEU:HD23	4:C:101:SER:HB2	1.90	0.53
9:H:123:THR:HA	9:H:126:HIS:CE1	2.44	0.53
1:1:1274:G:N2	1:1:1510:G:H21	2.06	0.53
18:Q:97:GLN:HB2	18:Q:105:LYS:HE3	1.90	0.53
1:1:1533:A:N3	1:1:1533:A:H2'	2.22	0.53
1:1:530:U:H2'	1:1:531:A:O4'	2.09	0.53
1:1:193:C:H1'	1:1:208:G:N2	2.24	0.53
1:1:618:C:O4'	1:1:632:C:H4'	2.08	0.53
5:D:24:PHE:HE1	5:D:72:VAL:HG11	1.73	0.53
2:A:9:GLN:CB	23:V:83:PHE:HA	2.38	0.53
2:A:177:MET:HG3	2:A:180:ARG:HH12	1.72	0.53
1:1:448:A:N7	10:I:26:LYS:CA	2.71	0.53
1:1:851:C:H4'	1:1:852:G:N2	2.22	0.53
1:1:1512:C:H2'	1:1:1513:C:C5	2.44	0.53
1:1:833:C:H4'	1:1:834:C:OP2	2.07	0.53
2:A:77:ILE:HD12	2:A:122:LEU:HD11	1.91	0.53
1:1:1047:C:H1'	16:O:141:ARG:HG2	1.91	0.53
1:1:795:A:C2	1:1:796:G:N9	2.77	0.53
1:1:800:U:C5'	1:1:800:U:H6	2.21	0.53
9:H:102:PRO:HG3	9:H:105:THR:HG21	1.90	0.53
1:1:557:U:C2'	1:1:558:G:C8	2.91	0.53
1:1:562:U:H3'	1:1:562:U:H6	1.72	0.53
1:1:1131:G:H2'	1:1:1132:C:C6	2.43	0.53
10:I:69:SER:CB	13:L:24:LEU:HD11	2.25	0.53
1:1:1752:C:C2'	1:1:1753:C:H5'	2.39	0.53
1:1:951:C:H1'	1:1:976:G:C2	2.43	0.53
16:O:43:HIS:CE1	16:O:52:THR:HG23	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1170:A:O3'	1:1:1171:G:H4'	2.08	0.53
1:1:862:A:H2'	1:1:863:U:H6	1.74	0.53
24:W:14:ILE:HD11	24:W:27:ILE:HD11	1.91	0.53
24:W:37:PHE:CD1	24:W:103:VAL:HG21	2.43	0.53
5:D:166:TYR:CD1	5:D:200:PRO:HB3	2.44	0.53
1:1:919:A:N3	1:1:919:A:H2'	2.23	0.53
20:S:47:LYS:HE2	20:S:79:ILE:CG1	2.38	0.53
1:1:1004:U:O5'	1:1:1004:U:H6	1.92	0.53
1:1:201:C:O2	1:1:201:C:H3'	2.08	0.53
1:1:66:G:C1'	8:G:160:LYS:HG2	2.33	0.53
8:G:164:LYS:HG2	8:G:165:GLU:N	2.24	0.53
1:1:1602:U:H2'	1:1:1603:G:C8	2.43	0.53
1:1:743:U:O2	1:1:743:U:H5''	2.08	0.53
1:1:746:C:C5'	9:H:104:PRO:C	2.77	0.53
1:1:562:U:OP1	1:1:562:U:H4'	2.08	0.53
1:1:657:U:H3'	1:1:657:U:C6	2.43	0.53
1:1:301:A:C2'	1:1:302:A:C8	2.84	0.53
10:I:57:ALA:HB2	10:I:183:GLY:HA2	1.91	0.53
1:1:803:C:H2'	1:1:804:U:C6	2.44	0.53
1:1:803:C:H4'	24:W:80:ASP:OD2	2.09	0.53
1:1:850:C:H2'	1:1:851:C:H5''	1.90	0.53
1:1:1425:G:H2'	1:1:1426:U:C1'	2.38	0.53
1:1:684:G:C8	1:1:920:A:C5	2.96	0.53
1:1:886:A:O2'	1:1:887:U:H5'	2.08	0.53
25:X:36:LEU:O	25:X:42:GLY:HA2	2.09	0.53
6:E:97:GLU:HB3	6:E:99:PHE:CE2	2.44	0.53
1:1:213:G:H2'	1:1:214:U:O4'	2.07	0.53
1:1:1822:A:C6	1:1:1823:A:C6	2.97	0.53
12:K:3:MET:SD	12:K:47:LYS:HD3	2.48	0.53
1:1:1043:G:H4'	1:1:1044:G:OP1	2.09	0.53
18:Q:96:TYR:HA	18:Q:100:VAL:HG23	1.90	0.53
9:H:75:ILE:HG22	9:H:75:ILE:O	2.08	0.53
1:1:1413:G:C2	1:1:1414:A:C4	2.97	0.53
1:1:1414:A:H2'	1:1:1415:C:N1	2.22	0.53
1:1:316:G:C2	1:1:335:G:C2	2.97	0.53
8:G:160:LYS:HG3	8:G:160:LYS:O	2.06	0.53
1:1:563:G:C4	1:1:564:A:C8	2.97	0.53
1:1:587:A:C8	1:1:587:A:OP2	2.62	0.53
1:1:1102:G:H22	1:1:1130:G:N2	2.06	0.53
1:1:890:U:C2'	1:1:890:U:O2	2.55	0.53
1:1:307:G:C4'	1:1:308:G:H5''	2.27	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1461:G:H5''	1:1:1462:U:OP2	2.09	0.53
1:1:1621:U:H3'	1:1:1621:U:O2	2.08	0.53
1:1:958:G:H5'	1:1:959:G:N7	2.24	0.53
1:1:1825:A:H2'	1:1:1826:G:C5'	2.34	0.53
1:1:1493:C:H4'	1:1:1494:U:H5'	1.90	0.53
1:1:39:A:C2	1:1:517:C:H1'	2.44	0.53
5:D:99:ILE:HG12	5:D:171:ALA:HB2	1.89	0.53
15:N:28:LEU:HD11	15:N:32:ASP:CB	2.38	0.53
1:1:1215:C:H5'	1:1:1217:A:H62	1.74	0.53
1:1:153:G:H1	1:1:165:G:N2	2.06	0.53
1:1:577:U:C4'	1:1:578:C:O4'	2.56	0.53
1:1:1549:U:H6	1:1:1549:U:O5'	1.92	0.53
1:1:344:U:H2'	1:1:345:U:N1	2.23	0.53
1:1:527:C:H5''	1:1:528:A:OP2	2.09	0.53
1:1:96:C:H2'	1:1:97:U:O4'	2.08	0.53
1:1:1282:A:H2'	1:1:1283:C:H5'	1.88	0.53
1:1:1313:A:C5'	1:1:1314:U:H5	2.22	0.53
21:T:4:VAL:CG2	21:T:136:GLY:HA2	2.38	0.53
1:1:546:G:H1'	1:1:548:C:H5	1.74	0.53
25:X:82:THR:OG1	25:X:118:VAL:HG22	2.09	0.53
1:1:164:A:C3'	1:1:165:G:C8	2.91	0.53
8:G:46:LYS:HB2	8:G:119:LYS:HG2	1.91	0.53
1:1:747:U:N1	1:1:748:C:H2'	2.24	0.53
1:1:799:U:C6	1:1:800:U:C2	2.96	0.53
9:H:105:THR:HG22	9:H:105:THR:O	2.09	0.53
1:1:36:U:C2	1:1:520:A:N1	2.77	0.53
2:A:40:LYS:HD2	19:R:104:GLU:HB2	1.90	0.53
1:1:970:G:H4'	1:1:971:G:OP2	2.08	0.53
1:1:1592:C:H2'	1:1:1593:C:C6	2.43	0.53
1:1:553:U:H3'	1:1:554:A:C5'	2.38	0.53
1:1:1504:U:H6	1:1:1504:U:O5'	1.91	0.53
25:X:95:GLU:HB2	25:X:98:ASP:OD2	2.09	0.53
1:1:452:G:H2'	1:1:453:C:H6	1.74	0.53
5:D:98:ALA:CA	5:D:188:ILE:HD12	2.38	0.53
10:I:113:TYR:HE2	10:I:119:LEU:HD23	1.74	0.53
1:1:1571:G:C2	1:1:1572:C:H1'	2.44	0.53
1:1:613:G:O2'	1:1:626:G:H4'	2.09	0.53
1:1:523:A:O5'	1:1:523:A:H8	1.91	0.53
1:1:1419:C:O2'	21:T:3:GLY:HA2	2.09	0.53
1:1:172:U:C2'	1:1:172:U:O2	2.57	0.53
1:1:67:C:C5	8:G:163:ASN:C	2.82	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1406:G:O4'	1:1:1407:U:H5'	2.08	0.53
1:1:1457:U:H2'	1:1:1458:G:C8	2.44	0.53
1:1:1663:A:C2	1:1:1664:A:N1	2.77	0.53
9:H:170:VAL:HG13	9:H:187:PHE:CD1	2.44	0.53
1:1:28:U:H4'	25:X:124:LYS:NZ	2.23	0.53
7:F:116:ILE:HD13	7:F:154:LEU:HD12	1.90	0.53
12:K:11:ILE:CG1	12:K:38:LYS:HE2	2.39	0.53
1:1:1700:C:C2	1:1:1834:A:N6	2.77	0.53
9:H:102:PRO:CG	9:H:105:THR:HB	2.39	0.53
1:1:526:A:O2'	11:J:124:HIS:O	2.25	0.53
1:1:602:G:H3'	1:1:603:C:C5'	2.39	0.53
1:1:1396:A:H2	1:1:1449:G:N1	2.00	0.53
1:1:604:A:H4'	1:1:605:A:OP2	2.09	0.53
1:1:589:G:C1'	1:1:590:A:OP1	2.54	0.53
10:I:192:GLY:HA3	13:L:20:LYS:HA	1.91	0.53
1:1:91:A:P	1:1:446:G:H22	2.32	0.53
1:1:1428:G:H5''	1:1:1428:G:H8	1.74	0.53
1:1:1050:A:OP1	1:1:1846:G:N2	2.40	0.53
9:H:158:LEU:HD11	9:H:187:PHE:HD2	1.73	0.53
1:1:1648:G:H3'	1:1:1648:G:N3	2.23	0.53
2:A:110:ASN:OD1	2:A:113:GLN:HG2	2.08	0.53
1:1:1344:A:O2'	1:1:1345:G:C8	2.62	0.53
14:M:33:ARG:HH21	14:M:91:LEU:HD23	1.73	0.53
9:H:83:LEU:HB2	9:H:92:VAL:HG21	1.90	0.53
24:W:104:LEU:CD2	24:W:125:ILE:HG12	2.39	0.53
1:1:675:U:O5'	1:1:675:U:H6	1.92	0.53
23:V:41:LYS:C	23:V:43:THR:H	2.13	0.53
10:I:81:VAL:O	10:I:91:VAL:HG13	2.09	0.53
20:S:15:VAL:O	20:S:19:ASN:HB2	2.09	0.53
19:R:55:THR:O	19:R:58:MET:HB2	2.09	0.53
3:B:177:GLN:O	3:B:177:GLN:HG2	2.09	0.53
1:1:314:U:O2	1:1:314:U:C2'	2.57	0.52
1:1:336:A:C2	1:1:337:C:H5	2.27	0.52
1:1:1561:A:N6	1:1:1574:C:N3	2.56	0.52
1:1:1606:G:H21	1:1:1632:G:H2'	1.70	0.52
1:1:747:U:O2	1:1:748:C:H3'	2.09	0.52
1:1:655:A:N7	1:1:657:U:H5	2.06	0.52
3:B:31:TYR:CZ	3:B:91:VAL:HG13	2.44	0.52
1:1:1682:C:H2'	1:1:1683:C:C6	2.44	0.52
5:D:7:LYS:HD3	5:D:10:LYS:HE2	1.91	0.52
11:J:111:GLN:HE22	11:J:130:ILE:HD12	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1265:A:H2'	1:1:1265:A:N3	2.24	0.52
22:U:78:ASP:HB3	22:U:80:PHE:CE2	2.43	0.52
3:B:120:MET:HE2	3:B:140:VAL:HG21	1.90	0.52
4:C:82:TYR:CZ	4:C:164:PRO:HD3	2.44	0.52
1:1:1497:G:H4'	1:1:1498:A:H5'	1.91	0.52
3:B:33:VAL:HG11	3:B:67:PHE:CZ	2.43	0.52
1:1:918:U:C5	1:1:919:A:C8	2.97	0.52
6:E:87:MET:HE1	6:E:123:LEU:HB2	1.91	0.52
1:1:1152:U:O5'	1:1:1152:U:H6	1.92	0.52
6:E:238:LEU:HD23	6:E:238:LEU:H	1.74	0.52
1:1:1415:C:H2'	1:1:1416:C:H5'	1.91	0.52
1:1:188:C:H2'	1:1:189:U:C6	2.44	0.52
1:1:314:U:H2'	1:1:314:U:O2	2.08	0.52
1:1:1635:C:O5'	1:1:1635:C:H6	1.92	0.52
1:1:745:C:C5	9:H:107:LYS:HD3	2.44	0.52
1:1:1049:A:H2'	1:1:1050:A:H5'	1.91	0.52
1:1:640:A:H5''	11:J:25:LEU:CD1	2.33	0.52
1:1:1095:C:H5''	24:W:22:LYS:HZ1	1.75	0.52
1:1:1815:A:H3'	1:1:1816:G:C8	2.40	0.52
1:1:138:C:OP1	1:1:138:C:H4'	2.09	0.52
1:1:151:C:OP1	26:Y:120:THR:HA	2.09	0.52
1:1:1414:A:H2'	1:1:1415:C:C6	2.44	0.52
1:1:1602:U:C2'	1:1:1603:G:H2'	2.34	0.52
1:1:599:A:H5''	1:1:600:G:OP1	2.09	0.52
1:1:302:A:C4'	10:I:73:THR:O	2.58	0.52
1:1:10:G:H2'	1:1:11:A:C8	2.44	0.52
1:1:1619:A:N3	1:1:1619:A:H2'	2.23	0.52
1:1:1266:C:H2'	1:1:1267:C:H6	1.75	0.52
8:G:23:LYS:HD3	8:G:41:LEU:HD23	1.90	0.52
1:1:1747:C:H2'	1:1:1748:G:C8	2.44	0.52
22:U:50:VAL:HG22	22:U:91:LEU:CD2	2.39	0.52
1:1:1221:G:O2'	1:1:1222:G:H5'	2.09	0.52
10:I:119:LEU:HG	10:I:121:LEU:HD12	1.91	0.52
9:H:147:LYS:HE3	9:H:153:LEU:HD11	1.90	0.52
1:1:595:U:H2'	1:1:596:U:C6	2.45	0.52
8:G:55:GLY:O	8:G:62:PRO:HA	2.08	0.52
1:1:1410:C:OP2	1:1:1413:G:H5''	2.10	0.52
1:1:178:C:H3'	1:1:179:C:C6	2.44	0.52
1:1:67:C:C6	8:G:164:LYS:HB2	2.45	0.52
1:1:571:U:H1'	26:Y:60:PHE:N	2.23	0.52
1:1:748:C:H5''	1:1:749:U:C5	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1161:U:H3'	1:1:1161:U:C6	2.44	0.52
5:D:28:GLU:HG2	12:K:61:GLN:HG3	1.90	0.52
1:1:1442:U:H3'	1:1:1443:C:C4'	2.39	0.52
1:1:1622:U:H6	1:1:1622:U:H3'	1.73	0.52
18:Q:86:GLN:HE21	18:Q:90:LYS:NZ	2.07	0.52
1:1:1239:U:H2'	1:1:1241:A:OP2	2.10	0.52
3:B:179:ASN:O	3:B:180:ASP:HB2	2.10	0.52
1:1:829:C:H4'	1:1:830:A:OP1	2.08	0.52
1:1:1148:A:N3	1:1:1148:A:C5'	2.72	0.52
1:1:1420:G:H1'	21:T:3:GLY:N	2.24	0.52
1:1:571:U:C2'	1:1:572:U:O4'	2.56	0.52
1:1:1530:U:H4'	21:T:86:GLY:O	2.10	0.52
1:1:693:A:C8	1:1:694:G:H1'	2.44	0.52
1:1:740:C:H2'	1:1:741:C:H6	1.69	0.52
1:1:557:U:H2'	1:1:558:G:C8	2.45	0.52
1:1:591:U:O2	1:1:591:U:C2'	2.57	0.52
6:E:23:LEU:HG	6:E:23:LEU:O	2.08	0.52
1:1:84:A:H5'	26:Y:123:ALA:CB	2.37	0.52
1:1:1272:C:O2'	1:1:1273:C:H5'	2.10	0.52
1:1:1673:U:H5'	1:1:1673:U:C6	2.44	0.52
3:B:129:THR:HG22	3:B:176:VAL:HG12	1.91	0.52
1:1:835:C:C2'	1:1:835:C:O2	2.57	0.52
1:1:1368:U:H2'	1:1:1370:A:OP2	2.09	0.52
1:1:39:A:H1'	1:1:518:G:N2	2.23	0.52
21:T:102:ARG:HA	21:T:105:GLN:OE1	2.10	0.52
1:1:315:C:O2'	1:1:316:G:H5'	2.10	0.52
1:1:495:U:H2'	1:1:496:C:O4'	2.09	0.52
1:1:65:C:H2'	1:1:66:G:C3'	2.40	0.52
1:1:1440:C:H2'	1:1:1441:U:H5	1.69	0.52
1:1:1389:C:H6	1:1:1389:C:O5'	1.92	0.52
1:1:1430:C:O2'	21:T:5:THR:HB	2.09	0.52
11:J:37:LEU:HD23	11:J:127:ARG:NH2	2.23	0.52
14:M:24:THR:O	14:M:27:ILE:HG12	2.10	0.52
12:K:15:LEU:O	12:K:15:LEU:HD22	2.09	0.52
1:1:847:A:H3'	1:1:848:U:H6	1.75	0.52
16:O:93:LEU:HD12	16:O:119:LEU:HD23	1.90	0.52
6:E:72:ILE:HB	6:E:77:ARG:HG3	1.91	0.52
1:1:1705:C:H2'	1:1:1706:G:C8	2.45	0.52
4:C:74:LYS:HG3	4:C:272:HIS:CD2	2.45	0.52
1:1:1174:U:O5'	1:1:1174:U:H6	1.93	0.52
1:1:1599:U:H3	7:F:165:ASN:C	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1016:U:C4'	1:1:1017:U:OP1	2.53	0.52
1:1:1161:U:H2'	1:1:1162:C:O5'	2.10	0.52
1:1:20:G:H4'	1:1:620:G:N1	2.25	0.52
1:1:901:G:C5	1:1:902:G:N7	2.78	0.52
1:1:1402:A:C8	1:1:1403:C:H5	2.27	0.52
1:1:1427:C:C6	1:1:1427:C:C3'	2.89	0.52
27:Z:70:PRO:HD3	27:Z:107:VAL:HB	1.92	0.52
25:X:32:LEU:C	25:X:34:THR:H	2.14	0.52
21:T:111:LYS:O	21:T:126:GLN:HB2	2.08	0.52
21:T:129:ARG:HG3	21:T:130:ASP:N	2.24	0.52
1:1:499:G:N2	1:1:502:C:C4	2.78	0.52
8:G:133:LEU:N	8:G:133:LEU:HD23	2.25	0.52
1:1:1588:A:H2'	1:1:1589:A:C8	2.44	0.52
1:1:1603:G:H4'	1:1:1604:G:OP2	2.04	0.52
1:1:1607:A:H1'	1:1:1633:A:C2	2.45	0.52
1:1:564:A:N6	1:1:586:G:H1	2.07	0.52
1:1:301:A:H1'	10:I:71:CYS:O	2.09	0.52
1:1:1203:G:H2'	1:1:1699:A:H2	1.74	0.52
1:1:1556:A:C2	1:1:1557:C:H5	2.26	0.52
1:1:920:A:C8	1:1:922:A:N7	2.78	0.52
27:Z:97:ILE:HD12	27:Z:109:TYR:CG	2.44	0.52
1:1:1648:G:O2'	18:Q:127:CYS:HA	2.10	0.52
1:1:1324:G:H2'	1:1:1325:G:C8	2.44	0.52
1:1:904:A:H2'	1:1:905:C:H6	1.73	0.52
1:1:37:C:H6	1:1:37:C:O5'	1.91	0.52
4:C:104:ASP:HB3	4:C:130:ILE:HG22	1.92	0.52
1:1:914:U:H5''	1:1:914:U:H6	1.74	0.52
1:1:552:G:O5'	1:1:552:G:H8	1.93	0.52
1:1:1655:C:O5'	1:1:1655:C:H6	1.92	0.52
1:1:791:C:H2'	1:1:792:C:C6	2.45	0.52
1:1:345:U:H2'	1:1:346:C:C5'	2.40	0.52
1:1:19:A:O2'	1:1:621:C:H1'	2.09	0.52
3:B:58:ALA:O	3:B:63:LYS:HG3	2.10	0.52
1:1:1403:C:C4	1:1:1404:U:H1'	2.44	0.52
16:O:136:PRO:HB2	16:O:138:ASP:O	2.09	0.52
1:1:1446:A:O2'	1:1:1447:G:H5''	2.10	0.52
5:D:3:VAL:HG13	5:D:5:ILE:HG13	1.91	0.52
1:1:1672:U:C3'	1:1:1673:U:H5''	2.40	0.52
12:K:26:ASP:OD2	12:K:33:PRO:HG2	2.09	0.52
1:1:1853:C:H2'	1:1:1854:U:H6	1.71	0.52
1:1:877:C:H2'	1:1:878:G:C8	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:904:A:H2'	1:1:905:C:C6	2.45	0.52
6:E:158:ASP:OD1	6:E:174:LYS:HG2	2.09	0.52
1:1:1562:C:H5'	21:T:71:GLY:CA	2.40	0.52
1:1:48:C:H2'	1:1:49:C:O4'	2.09	0.52
25:X:18:ARG:O	25:X:21:LYS:HB3	2.10	0.52
1:1:313:A:H2'	8:G:191:ARG:HH21	1.74	0.52
1:1:572:U:C6	1:1:572:U:C3'	2.93	0.52
1:1:1654:G:O5'	1:1:1654:G:H8	1.93	0.52
20:S:30:ILE:HG22	20:S:36:VAL:HG11	1.92	0.52
1:1:1630:A:H5''	20:S:37:GLY:N	2.25	0.52
1:1:1017:U:H2'	1:1:1018:U:O4'	2.10	0.52
1:1:475:C:C5'	1:1:475:C:C6	2.86	0.52
21:T:39:LEU:HD21	21:T:43:LYS:H	1.74	0.52
15:N:92:ILE:O	15:N:96:VAL:HG23	2.10	0.52
1:1:1557:C:N3	1:1:1661:A:H4'	2.25	0.52
1:1:850:C:O2	1:1:850:C:H2'	2.10	0.52
12:K:27:VAL:HG23	12:K:30:PRO:HD3	1.92	0.52
1:1:170:A:C2'	1:1:171:A:C8	2.93	0.52
1:1:1761:U:H3	1:1:1771:G:H1	1.58	0.52
3:B:208:HIS:O	3:B:209:ASP:HB2	2.10	0.52
17:P:18:ARG:NH2	17:P:38:SER:HB2	2.24	0.52
1:1:1534:C:C1'	1:1:1535:U:OP2	2.59	0.51
1:1:1534:C:OP1	1:1:1534:C:H3'	2.09	0.51
1:1:529:A:C2'	1:1:530:U:C6	2.88	0.51
1:1:1132:C:O5'	1:1:1132:C:H6	1.93	0.51
1:1:889:U:H3'	1:1:890:U:C5'	2.36	0.51
1:1:1696:C:O2'	1:1:1697:A:C8	2.58	0.51
1:1:1311:C:OP2	1:1:1311:C:C5	2.64	0.51
1:1:913:A:C6	9:H:120:ARG:HB3	2.45	0.51
1:1:1782:G:P	1:1:1782:G:O4'	2.68	0.51
3:B:71:LEU:C	3:B:71:LEU:HD13	2.31	0.51
2:A:30:LEU:HD22	2:A:35:GLU:OE1	2.10	0.51
27:Z:92:LEU:HD13	27:Z:109:TYR:HE1	1.75	0.51
1:1:1567:G:H1'	21:T:38:LYS:HG3	1.91	0.51
1:1:973:C:H3'	1:1:973:C:H6	1.75	0.51
20:S:4:VAL:HG12	20:S:5:ILE:O	2.10	0.51
1:1:1562:C:C5'	21:T:71:GLY:HA3	2.40	0.51
5:D:94:ARG:HG2	5:D:101:GLN:HE22	1.75	0.51
1:1:1042:A:H2'	1:1:1043:G:O5'	2.09	0.51
1:1:138:C:OP2	1:1:139:C:H5''	2.10	0.51
5:D:106:ARG:HH12	5:D:173:ARG:CB	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:194:PRO:HA	5:D:201:LYS:HA	1.92	0.51
4:C:94:ILE:HD13	4:C:159:LYS:O	2.10	0.51
2:A:189:ILE:HG22	2:A:190:SER:O	2.10	0.51
1:1:1694:U:O2'	1:1:1834:A:H5''	2.11	0.51
1:1:1549:U:H3	1:1:1584:G:N2	2.08	0.51
1:1:797:C:P	9:H:109:ARG:H	2.33	0.51
9:H:109:ARG:HG3	9:H:113:LYS:HD2	1.92	0.51
1:1:310:C:C2'	1:1:340:C:H5'	2.41	0.51
2:A:8:LEU:HG	2:A:191:ARG:NE	2.26	0.51
1:1:455:A:C8	1:1:455:A:H3'	2.46	0.51
1:1:83:A:H2'	26:Y:123:ALA:CB	2.40	0.51
8:G:45:TRP:HA	8:G:48:TYR:CE1	2.44	0.51
1:1:1567:G:C8	1:1:1567:G:OP1	2.62	0.51
4:C:267:GLN:HE22	23:V:35:ASN:HB2	1.75	0.51
4:C:209:VAL:HB	4:C:210:PRO:HD3	1.92	0.51
1:1:39:A:H2'	1:1:40:A:O4'	2.09	0.51
4:C:252:THR:OG1	4:C:253:PRO:HD2	2.10	0.51
7:F:51:HIS:HA	7:F:86:LYS:NZ	2.25	0.51
1:1:1868:U:H4'	1:1:1868:U:OP2	2.02	0.51
4:C:260:VAL:O	4:C:261:PHE:HB2	2.10	0.51
1:1:67:C:H5	8:G:162:LEU:C	2.13	0.51
1:1:934:G:H5'	1:1:993:G:H22	1.75	0.51
1:1:643:A:H4'	1:1:644:G:H5'	1.92	0.51
18:Q:24:HIS:HB3	18:Q:69:ARG:H	1.74	0.51
1:1:944:A:N3	1:1:944:A:H2'	2.25	0.51
19:R:109:LEU:CD1	19:R:111:PHE:HB2	2.36	0.51
1:1:1362:U:H3'	1:1:1363:C:C2	2.46	0.51
1:1:368:U:OP1	1:1:369:C:H4'	2.10	0.51
24:W:52:ILE:HG12	24:W:61:ILE:HG12	1.92	0.51
1:1:1500:G:O4'	5:D:180:GLY:HA2	2.11	0.51
21:T:4:VAL:HG21	21:T:139:ALA:HB3	1.92	0.51
1:1:452:G:H2'	1:1:453:C:C6	2.46	0.51
16:O:30:VAL:HG21	16:O:47:LEU:HA	1.92	0.51
1:1:571:U:C2'	1:1:572:U:C4'	2.89	0.51
1:1:1548:G:O6	1:1:1584:G:C2	2.64	0.51
1:1:746:C:H1'	1:1:747:U:C2	2.42	0.51
9:H:103:LYS:HB2	9:H:104:PRO:HD3	1.91	0.51
1:1:1099:G:C2	1:1:1134:G:N2	2.79	0.51
1:1:111:A:C4'	1:1:112:U:OP1	2.56	0.51
1:1:1767:C:H3'	1:1:1767:C:C6	2.46	0.51
1:1:1461:G:C2	1:1:1466:G:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:894:G:H2'	1:1:895:G:C8	2.46	0.51
1:1:551:U:H6	1:1:551:U:O5'	1.93	0.51
1:1:438:G:N2	1:1:439:A:C6	2.78	0.51
1:1:1349:G:H2'	1:1:1350:U:C6	2.46	0.51
25:X:122:VAL:O	25:X:130:LEU:HD11	2.11	0.51
6:E:95:THR:HB	6:E:97:GLU:CD	2.30	0.51
1:1:1559:C:H6	1:1:1559:C:O5'	1.92	0.51
1:1:547:G:OP2	1:1:548:C:C5	2.64	0.51
16:O:104:ARG:HA	16:O:142:ARG:NH1	2.26	0.51
3:B:144:LYS:HB2	3:B:208:HIS:HB2	1.92	0.51
16:O:99:ALA:CB	16:O:108:PRO:HA	2.41	0.51
1:1:1413:G:H2'	1:1:1414:A:H8	1.74	0.51
1:1:88:G:C2	1:1:89:C:C2	2.99	0.51
1:1:1130:G:C5'	15:N:10:GLY:HA2	2.41	0.51
1:1:1132:C:OP2	1:1:1132:C:C5	2.64	0.51
1:1:35:C:C2'	1:1:36:U:C6	2.92	0.51
1:1:448:A:H4'	1:1:449:A:C5'	2.41	0.51
1:1:1138:C:H5''	1:1:1139:C:P	2.49	0.51
22:U:58:THR:HG23	22:U:84:ILE:O	2.10	0.51
1:1:1649:U:C6	1:1:1649:U:C3'	2.93	0.51
1:1:1678:A:C2'	1:1:1679:A:H5'	2.40	0.51
1:1:1790:A:O2'	1:1:1791:A:H5'	2.11	0.51
17:P:85:ILE:HD13	17:P:111:MET:HB3	1.93	0.51
1:1:1117:C:H5''	1:1:1118:C:OP2	2.11	0.51
1:1:369:C:H2'	1:1:370:G:H5'	1.93	0.51
5:D:70:THR:O	5:D:74:GLN:HG3	2.11	0.51
1:1:1109:C:O2	1:1:1109:C:C3'	2.59	0.51
1:1:1005:G:H2'	1:1:1006:C:H6	1.73	0.51
7:F:89:THR:O	7:F:93:VAL:HG23	2.10	0.51
1:1:547:G:OP2	1:1:548:C:C6	2.63	0.51
21:T:138:VAL:O	21:T:141:ALA:HB3	2.11	0.51
1:1:1709:G:H8	1:1:1709:G:OP2	1.94	0.51
6:E:180:LEU:HD13	6:E:232:ASN:H	1.75	0.51
1:1:1214:A:C2	1:1:1686:G:N3	2.79	0.51
1:1:181:A:H2'	1:1:181:A:N3	2.24	0.51
1:1:1597:C:H3'	1:1:1598:G:C8	2.46	0.51
1:1:1133:A:C2	1:1:1134:G:C5	2.98	0.51
1:1:1279:C:O2'	1:1:1280:G:H5'	2.10	0.51
1:1:1426:U:C3'	1:1:1427:C:H5'	2.39	0.51
5:D:3:VAL:HG13	5:D:5:ILE:CG1	2.41	0.51
22:U:104:ILE:HD13	22:U:106:ILE:HG22	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1356:G:H2'	1:1:1357:A:C8	2.46	0.51
1:1:584:A:O2'	1:1:585:C:H5'	2.11	0.51
2:A:63:ARG:HG2	23:V:46:PHE:HZ	1.74	0.51
1:1:671:A:H8	1:1:671:A:H5''	1.76	0.51
1:1:1635:C:C6	1:1:1635:C:O5'	2.64	0.51
1:1:587:A:C2'	1:1:592:C:N4	2.71	0.51
1:1:601:G:H5''	1:1:602:G:OP2	2.10	0.51
1:1:924:G:H2'	1:1:925:G:C8	2.45	0.51
1:1:994:C:H2'	1:1:995:G:O4'	2.11	0.51
1:1:191:A:C2	1:1:192:C:N1	2.79	0.51
9:H:28:LEU:O	9:H:31:GLU:HG2	2.10	0.51
9:H:72:PHE:CZ	9:H:94:PHE:HB2	2.45	0.51
1:1:1427:C:C4	1:1:1428:G:C8	2.99	0.51
1:1:1673:U:H3'	1:1:1674:G:H8	1.74	0.51
21:T:96:SER:O	21:T:99:VAL:HG22	2.10	0.51
1:1:198:U:H6	1:1:198:U:H5''	1.76	0.51
1:1:45:A:H8	1:1:45:A:OP1	1.93	0.51
2:A:200:ASP:HB3	19:R:86:PRO:HB2	1.92	0.51
1:1:572:U:C3'	1:1:573:U:N3	2.73	0.51
20:S:24:ARG:HG3	20:S:25:LYS:H	1.75	0.51
1:1:992:A:H8	1:1:992:A:O5'	1.94	0.51
1:1:1130:G:H5'	15:N:10:GLY:HA2	1.91	0.51
1:1:111:A:N6	1:1:351:G:H21	2.09	0.51
1:1:519:A:C2	1:1:520:A:C2	2.98	0.51
1:1:890:U:C3'	1:1:891:G:H5''	2.38	0.51
1:1:1618:C:H5'	1:1:1619:A:OP2	2.10	0.51
22:U:32:LEU:O	22:U:35:VAL:HG12	2.10	0.51
6:E:125:LYS:HB3	6:E:142:HIS:ND1	2.26	0.51
2:A:110:ASN:HD21	2:A:113:GLN:CG	2.23	0.51
1:1:1370:A:H62	19:R:4:VAL:HB	1.76	0.51
20:S:5:ILE:O	20:S:6:PRO:C	2.49	0.51
11:J:147:PHE:CE2	11:J:149:VAL:HG22	2.46	0.51
1:1:956:G:O5'	16:O:60:MET:HA	2.10	0.51
1:1:1217:A:H2'	1:1:1218:C:H6	1.71	0.51
1:1:1415:C:C3'	1:1:1416:C:H5'	2.41	0.51
1:1:337:C:H2'	1:1:337:C:O2	2.10	0.51
1:1:1531:A:H2'	1:1:1532:C:C6	2.46	0.51
1:1:346:C:C3'	1:1:346:C:C6	2.94	0.51
1:1:888:U:C3'	1:1:888:U:C6	2.94	0.51
1:1:1506:A:C5'	1:1:1508:A:N7	2.74	0.51
2:A:58:LEU:HD11	2:A:178:LEU:HB2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:68:GLY:HA3	13:L:21:LYS:HE3	1.93	0.51
26:Y:91:LEU:CB	26:Y:97:TYR:HB2	2.41	0.51
1:1:1147:C:C6	1:1:1147:C:C3'	2.94	0.51
1:1:482:G:N2	1:1:485:A:H2	2.09	0.51
1:1:660:C:C2	13:L:98:LYS:O	2.64	0.51
1:1:678:U:O5'	1:1:678:U:C6	2.64	0.51
1:1:1417:C:H2'	1:1:1418:C:O4'	2.09	0.51
1:1:571:U:H2'	1:1:572:U:C4'	2.41	0.51
1:1:67:C:C2	8:G:164:LYS:HB2	2.45	0.51
1:1:752:G:N2	1:1:753:C:C5	2.79	0.51
2:A:33:GLN:NE2	23:V:63:GLY:HA3	2.25	0.51
1:1:1283:C:H6	1:1:1283:C:O5'	1.94	0.51
1:1:1284:A:OP2	1:1:1284:A:C8	2.64	0.51
11:J:86:VAL:HG12	11:J:87:LEU:CD1	2.34	0.51
1:1:1484:A:O2'	1:1:1485:U:H5'	2.11	0.51
1:1:412:G:H5'	1:1:413:G:H8	1.72	0.51
1:1:1569:A:H5''	1:1:1570:G:OP2	2.10	0.51
12:K:84:HIS:CG	12:K:85:LEU:N	2.79	0.51
1:1:428:U:C2'	1:1:429:C:H6	2.24	0.51
4:C:124:PHE:O	4:C:143:CYS:HA	2.10	0.51
1:1:1359:U:OP2	1:1:1359:U:H6	1.93	0.51
1:1:571:U:C3'	1:1:572:U:H5''	2.31	0.50
8:G:135:PRO:HG3	8:G:144:LEU:CD1	2.39	0.50
20:S:41:ALA:O	20:S:45:LEU:HD13	2.11	0.50
1:1:743:U:C4	9:H:98:ARG:O	2.63	0.50
1:1:1018:U:H1'	15:N:48:SER:OG	2.11	0.50
1:1:210:U:C3'	1:1:211:G:C5'	2.89	0.50
5:D:24:PHE:CE1	5:D:72:VAL:HG11	2.46	0.50
1:1:1788:A:H2'	1:1:1788:A:N3	2.26	0.50
9:H:5:SER:HA	9:H:8:ILE:HD12	1.93	0.50
1:1:83:A:C2'	26:Y:123:ALA:HB1	2.42	0.50
1:1:1049:A:C2	1:1:1069:U:N3	2.71	0.50
9:H:170:VAL:HA	9:H:173:PHE:CD2	2.46	0.50
1:1:1135:C:O2'	1:1:1136:U:H5'	2.10	0.50
1:1:1089:G:H2'	1:1:1090:C:H6	1.74	0.50
1:1:1301:A:HO2'	1:1:1302:G:P	2.34	0.50
4:C:63:VAL:O	4:C:64:THR:CB	2.59	0.50
5:D:213:PRO:HD3	19:R:20:TYR:CZ	2.46	0.50
13:L:22:ARG:HG3	13:L:27:GLU:O	2.11	0.50
1:1:1704:C:C1'	1:1:1832:A:N1	2.75	0.50
1:1:148:U:H5''	1:1:148:U:C6	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:73:C:O2'	1:1:74:G:H5'	2.12	0.50
1:1:65:C:O3'	8:G:133:LEU:HD22	2.11	0.50
1:1:797:C:C2'	1:1:798:G:C5'	2.82	0.50
1:1:867:G:H8	1:1:867:G:O5'	1.94	0.50
1:1:193:C:H4'	1:1:209:A:N1	2.27	0.50
1:1:100:U:H2'	1:1:101:U:O5'	2.11	0.50
1:1:11:A:O5'	1:1:11:A:H8	1.94	0.50
1:1:1479:G:H2'	1:1:1479:G:N3	2.25	0.50
1:1:222:U:C4'	13:L:21:LYS:HE2	2.40	0.50
1:1:978:G:C6	1:1:979:C:N4	2.79	0.50
1:1:1648:G:H2'	18:Q:127:CYS:HA	1.93	0.50
27:Z:73:VAL:HG13	27:Z:77:LEU:HD12	1.94	0.50
11:J:169:ARG:H	11:J:170:PRO:HD3	1.77	0.50
15:N:84:LEU:HD23	15:N:89:TYR:HD2	1.75	0.50
7:F:79:HIS:O	7:F:81:ARG:N	2.44	0.50
1:1:1217:A:C1'	1:1:1685:U:O2	2.58	0.50
1:1:499:G:N3	1:1:499:G:H2'	2.25	0.50
1:1:76:U:C2'	1:1:77:A:H3'	2.27	0.50
1:1:1547:C:H4'	1:1:1547:C:OP1	2.12	0.50
1:1:1586:U:C2'	1:1:1587:G:O5'	2.59	0.50
1:1:798:G:C2	1:1:799:U:C4	2.99	0.50
1:1:925:G:H1'	15:N:87:ASP:OD1	2.12	0.50
1:1:53:C:H2'	1:1:54:A:H5'	1.92	0.50
1:1:1202:U:H4'	4:C:114:LYS:HE3	1.93	0.50
1:1:1397:U:C6	1:1:1397:U:C3'	2.95	0.50
19:R:5:ARG:O	19:R:10:LYS:HE2	2.11	0.50
10:I:191:GLU:HG3	13:L:20:LYS:HD2	1.92	0.50
15:N:63:VAL:HB	15:N:71:ILE:HD11	1.94	0.50
25:X:50:ILE:HG23	25:X:97:ASN:HA	1.93	0.50
16:O:15:ILE:HG13	16:O:15:ILE:O	2.10	0.50
1:1:1523:C:O5'	1:1:1523:C:H6	1.94	0.50
1:1:1231:C:H1'	1:1:1528:G:N2	2.27	0.50
1:1:75:G:N2	1:1:78:C:H4'	2.26	0.50
8:G:53:SER:CB	8:G:112:VAL:HG23	2.34	0.50
1:1:1574:C:C2'	1:1:1575:G:H5'	2.39	0.50
1:1:794:A:N3	1:1:795:A:C1'	2.72	0.50
9:H:102:PRO:CB	9:H:105:THR:HB	2.38	0.50
1:1:1255:G:OP2	1:1:1256:G:N7	2.44	0.50
1:1:1452:A:H4'	1:1:1453:C:O5'	2.11	0.50
1:1:1454:A:O2'	1:1:1455:A:C8	2.64	0.50
1:1:1622:U:H3'	1:1:1623:A:C5'	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:39:TYR:CE2	19:R:109:LEU:HG	2.46	0.50
1:1:1648:G:C2'	18:Q:127:CYS:HA	2.42	0.50
1:1:411:G:N2	1:1:412:G:H1'	2.27	0.50
12:K:31:LYS:O	12:K:32:HIS:HB2	2.12	0.50
8:G:109:LEU:HD22	8:G:109:LEU:N	4.50	0.50
1:1:808:A:C8	1:1:808:A:O5'	2.59	0.50
1:1:876:C:C6	1:1:876:C:P	3.04	0.50
1:1:197:U:N3	1:1:198:U:H5	2.07	0.50
1:1:649:U:H2'	1:1:650:A:H8	1.74	0.50
25:X:86:PRO:HB3	25:X:121:LYS:HZ2	1.76	0.50
12:K:12:TYR:HB3	12:K:79:LEU:HD22	1.94	0.50
5:D:213:PRO:HD3	19:R:20:TYR:CE1	2.46	0.50
1:1:1700:C:H5''	1:1:1701:C:H5'	1.93	0.50
1:1:132:U:OP2	1:1:133:C:H5	1.94	0.50
21:T:107:LEU:HB3	21:T:113:VAL:CG2	2.42	0.50
1:1:1016:U:C4	1:1:1017:U:C5	2.99	0.50
1:1:1101:U:H5''	3:B:151:ARG:CD	2.40	0.50
1:1:1203:G:C2'	1:1:1699:A:C2	2.95	0.50
1:1:1243:U:H2'	1:1:1244:U:O4'	2.12	0.50
2:A:168:ALA:HB3	2:A:203:PHE:CE1	2.46	0.50
2:A:40:LYS:HZ3	19:R:101:ASP:HA	1.77	0.50
1:1:1664:A:H4'	1:1:1664:A:OP1	2.09	0.50
1:1:684:G:C2	1:1:920:A:O4'	2.65	0.50
1:1:1649:U:O2'	1:1:1650:A:H5'	2.11	0.50
25:X:61:GLN:HB3	25:X:62:PRO:HD2	1.90	0.50
1:1:369:C:H2'	1:1:370:G:C5'	2.42	0.50
9:H:37:LYS:HE2	9:H:41:ARG:NH2	2.27	0.50
5:D:98:ALA:HA	5:D:188:ILE:HD12	1.93	0.50
10:I:83:TYR:HD1	10:I:205:ARG:HD2	1.76	0.50
11:J:12:THR:O	11:J:45:ARG:HA	2.11	0.50
1:1:1818:A:H8	1:1:1818:A:O5'	1.94	0.50
20:S:36:VAL:HG13	20:S:40:TYR:HD1	1.76	0.50
1:1:525:A:H2'	1:1:526:A:OP2	2.11	0.50
1:1:1013:U:H6	1:1:1013:U:O5'	1.94	0.50
19:R:5:ARG:HH11	19:R:53:TYR:HB2	1.75	0.50
2:A:9:GLN:CA	23:V:83:PHE:HA	2.41	0.50
1:1:443:U:C6	1:1:443:U:H5'	2.47	0.50
1:1:142:C:H2'	1:1:142:C:O2	2.11	0.50
8:G:38:ALA:HB3	8:G:48:TYR:HB2	1.94	0.50
7:F:116:ILE:HD13	7:F:154:LEU:CD1	2.42	0.50
18:Q:89:SER:HB2	18:Q:119:LEU:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:85:SER:HA	23:V:26:ALA:O	2.11	0.50
1:1:543:C:C6	1:1:543:C:H3'	2.46	0.50
4:C:104:ASP:CB	4:C:130:ILE:HG22	2.41	0.50
1:1:1869:A:H8	1:1:1869:A:O5'	1.93	0.50
6:E:42:LEU:CD1	6:E:47:PHE:HB2	2.42	0.50
14:M:38:ALA:O	14:M:42:LEU:HG	2.12	0.50
1:1:498:C:H5''	1:1:499:G:OP2	2.12	0.50
1:1:70:G:H3'	1:1:71:G:H5''	1.94	0.50
1:1:44:U:H6	1:1:44:U:H5'	1.69	0.50
1:1:382:C:C6	1:1:382:C:OP2	2.65	0.50
1:1:1397:U:C6	1:1:1397:U:H3'	2.47	0.50
1:1:1452:A:C6	1:1:1475:G:C5	3.00	0.50
2:A:83:GLY:O	2:A:87:VAL:HG23	2.12	0.50
1:1:204:G:C2'	1:1:205:G:H5'	2.42	0.50
1:1:369:C:H2'	1:1:370:G:H8	1.75	0.50
1:1:214:U:C6	1:1:214:U:O5'	2.64	0.50
17:P:75:VAL:HG23	17:P:93:MET:HG3	1.94	0.50
1:1:1373:C:H2'	1:1:1374:C:H6	1.76	0.50
3:B:132:GLY:HA3	3:B:221:PRO:HB3	1.94	0.50
13:L:35:ARG:HG2	13:L:36:TYR:N	2.27	0.50
1:1:840:C:O2	26:Y:14:THR:HG23	2.10	0.50
6:E:252:ARG:NH1	6:E:252:ARG:HB3	2.26	0.50
27:Z:50:PHE:CE2	27:Z:55:TYR:CD1	2.99	0.50
20:S:118:ARG:HA	20:S:123:LEU:HD11	1.92	0.50
23:V:22:ARG:HH21	23:V:56:CYS:HB2	1.76	0.50
1:1:1685:U:C4	1:1:1686:G:N7	2.80	0.50
1:1:131:C:N3	1:1:215:G:O4'	2.45	0.50
1:1:1606:G:H5'	21:T:86:GLY:CA	2.42	0.50
27:Z:43:LYS:HZ1	27:Z:44:LEU:H	1.60	0.50
1:1:867:G:N2	1:1:868:G:C2	2.79	0.50
1:1:1132:C:O5'	1:1:1132:C:C6	2.65	0.50
2:A:33:GLN:CB	2:A:154:LEU:HD12	2.41	0.50
1:1:1442:U:C2'	1:1:1442:U:O2	2.57	0.50
1:1:1234:C:H4'	1:1:1246:A:N1	2.27	0.50
1:1:1180:C:C2'	1:1:1181:A:H5'	2.40	0.50
1:1:1038:U:H1'	1:1:1181:A:H2	1.75	0.50
1:1:834:C:H5'	1:1:836:G:OP2	2.12	0.50
1:1:973:C:H5	1:1:974:C:C4	2.30	0.50
1:1:809:A:C6	1:1:810:A:N6	2.80	0.50
1:1:77:A:H5''	1:1:78:C:H41	1.77	0.50
1:1:695:C:OP2	1:1:695:C:C5	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:752:G:O2'	1:1:753:C:H5'	2.12	0.50
11:J:129:LEU:O	11:J:134:HIS:HB2	2.12	0.50
1:1:1132:C:OP2	1:1:1132:C:H5	1.95	0.50
1:1:661:U:H5'	1:1:662:G:H3'	1.94	0.50
1:1:928:G:O2'	1:1:929:G:H5''	2.12	0.50
10:I:57:ALA:HB1	10:I:60:LEU:HD21	1.92	0.50
2:A:7:VAL:HG23	2:A:191:ARG:HG2	1.94	0.50
1:1:1546:G:N2	1:1:1670:C:H1'	2.14	0.50
1:1:1446:A:H5''	22:U:58:THR:OG1	2.11	0.50
1:1:1676:U:O5'	1:1:1676:U:C6	2.61	0.50
1:1:15:U:O4'	1:1:668:A:C2	2.64	0.50
25:X:100:VAL:HA	25:X:124:LYS:O	2.12	0.50
1:1:1191:C:O2'	1:1:1192:U:H5'	2.12	0.50
1:1:504:G:H2'	1:1:505:G:H5'	1.94	0.50
3:B:218:LEU:HD22	3:B:219:LYS:H	1.77	0.50
1:1:1195:A:C2	1:1:1196:A:C5	3.00	0.50
14:M:93:LYS:HE2	14:M:101:ARG:HH21	1.77	0.50
5:D:172:VAL:HG22	5:D:185:LYS:HG2	1.93	0.50
18:Q:60:LYS:NZ	18:Q:60:LYS:HB2	2.27	0.50
1:1:1308:U:H1'	1:1:1309:C:N1	2.27	0.49
7:F:91:ARG:HA	7:F:91:ARG:HE	1.76	0.49
1:1:61:A:H4'	1:1:62:G:OP2	2.12	0.49
9:H:109:ARG:CG	9:H:110:THR:N	2.74	0.49
1:1:1157:G:H1'	24:W:76:SER:CB	2.41	0.49
3:B:71:LEU:HD22	3:B:75:GLN:HB2	1.93	0.49
1:1:1447:G:P	22:U:87:ARG:HH22	2.35	0.49
2:A:110:ASN:O	2:A:116:PHE:HD1	1.95	0.49
8:G:23:LYS:HE2	8:G:42:GLY:H	1.77	0.49
1:1:37:C:C3'	1:1:38:A:H5''	2.42	0.49
7:F:26:ASP:O	7:F:27:ASP:HB2	2.11	0.49
1:1:1762:C:H2'	1:1:1763:G:C8	2.47	0.49
1:1:872:A:H2'	1:1:874:G:N2	2.26	0.49
1:1:1860:A:C4	1:1:1862:G:C8	2.99	0.49
1:1:219:U:C6	1:1:219:U:C5'	2.95	0.49
8:G:6:SER:O	8:G:8:PRO:HD3	2.13	0.49
1:1:746:C:H5''	9:H:104:PRO:C	2.32	0.49
9:H:109:ARG:CG	9:H:110:THR:H	2.23	0.49
1:1:4:C:H2'	1:1:5:U:H6	1.71	0.49
1:1:655:A:C8	1:1:657:U:C5	3.00	0.49
3:B:30:TRP:HE1	16:O:17:LEU:CD2	2.24	0.49
1:1:1452:A:C6	1:1:1476:A:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1477:U:H1'	1:1:1478:U:P	2.52	0.49
1:1:1624:U:O2	1:1:1624:U:C2'	2.58	0.49
1:1:1483:A:N3	1:1:1483:A:H2'	2.27	0.49
1:1:1350:U:O2'	2:A:112:ILE:HB	2.12	0.49
1:1:1075:C:H2'	1:1:1076:G:H8	1.75	0.49
1:1:973:C:C5	1:1:974:C:C4	2.99	0.49
2:A:67:ALA:HA	23:V:50:PHE:CZ	2.47	0.49
3:B:140:VAL:O	3:B:210:VAL:HA	2.11	0.49
1:1:238:C:O2'	1:1:239:C:C6	2.63	0.49
1:1:1196:A:C2'	1:1:1197:G:H5'	2.42	0.49
14:M:32:ALA:HB3	14:M:110:VAL:CG2	2.42	0.49
1:1:387:C:H2'	1:1:388:U:C6	2.47	0.49
24:W:114:GLU:O	24:W:117:ARG:HG2	2.12	0.49
15:N:33:VAL:HG12	15:N:37:ILE:CD1	2.41	0.49
1:1:1656:G:H2'	1:1:1657:G:H8	1.76	0.49
1:1:682:U:H3	1:1:1023:A:N6	2.08	0.49
1:1:350:C:C2'	1:1:351:G:H5'	2.43	0.49
1:1:1406:G:C4'	1:1:1407:U:C5'	2.90	0.49
1:1:1260:A:O5'	1:1:1260:A:H8	1.95	0.49
3:B:35:ALA:HB3	3:B:42:ARG:HA	1.94	0.49
24:W:18:GLU:OE2	24:W:65:LEU:HD22	2.12	0.49
1:1:1168:G:H2'	1:1:1169:G:H5'	1.94	0.49
1:1:985:G:H8	1:1:985:G:OP2	1.93	0.49
25:X:123:VAL:HA	25:X:130:LEU:CD1	2.42	0.49
1:1:22:A:C2	1:1:653:A:C2	3.00	0.49
4:C:256:TRP:NE1	24:W:68:ARG:HD3	2.27	0.49
1:1:1416:C:C5	1:1:1417:C:C6	3.00	0.49
1:1:1431:G:C2	1:1:1432:U:C2	3.00	0.49
1:1:181:A:C8	8:G:196:LYS:HB2	2.48	0.49
1:1:500:A:H2	1:1:502:C:O5'	1.96	0.49
6:E:133:VAL:O	6:E:136:ILE:HG23	2.12	0.49
1:1:743:U:H2'	9:H:100:ILE:H	1.77	0.49
1:1:746:C:C1'	1:1:747:U:C4	2.88	0.49
1:1:860:G:C6	1:1:861:A:N1	2.80	0.49
1:1:559:G:H2'	1:1:561:A:H1'	1.94	0.49
1:1:1453:C:H3'	1:1:1453:C:O2	2.12	0.49
1:1:1555:U:O2'	1:1:1556:A:H5'	2.11	0.49
1:1:1579:A:H62	22:U:88:LEU:HD22	1.75	0.49
1:1:813:A:H2'	1:1:814:U:H5'	1.93	0.49
1:1:1731:A:H2'	1:1:1732:G:H8	1.75	0.49
6:E:19:MET:CE	6:E:108:ARG:HG2	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:I:146:GLN:O	10:I:149:TYR:HB2	2.12	0.49
13:L:59:LYS:HD3	13:L:134:LEU:HD23	1.94	0.49
1:1:1707:U:C2'	1:1:1708:C:H5'	2.42	0.49
1:1:219:U:H5''	1:1:219:U:H6	1.78	0.49
1:1:59:U:C3'	1:1:60:A:H5''	2.40	0.49
1:1:79:A:N3	1:1:79:A:H2'	2.27	0.49
1:1:1589:A:H2'	1:1:1653:U:O2'	2.13	0.49
1:1:683:G:C4	1:1:1023:A:N1	2.80	0.49
1:1:435:A:H2	1:1:474:G:OP2	1.96	0.49
1:1:1658:G:C6	1:1:1659:U:N3	2.80	0.49
1:1:36:U:O2	1:1:520:A:H2	1.93	0.49
1:1:380:G:H3'	1:1:382:C:OP2	2.11	0.49
1:1:1284:A:C8	1:1:1286:G:H5''	2.47	0.49
1:1:234:C:H2'	1:1:235:A:C8	2.45	0.49
1:1:440:G:H2'	1:1:441:C:O4'	2.13	0.49
1:1:684:G:O4'	1:1:920:A:C2	2.66	0.49
1:1:1241:A:C1'	1:1:1267:C:H1'	2.40	0.49
1:1:1198:G:N3	1:1:1198:G:H2'	2.26	0.49
12:K:84:HIS:HD2	14:M:27:ILE:HD12	1.77	0.49
3:B:128:LYS:HB2	3:B:134:LEU:CD2	2.43	0.49
16:O:56:VAL:HG21	16:O:81:VAL:HG22	1.93	0.49
11:J:163:SER:N	11:J:164:PRO:HD2	2.26	0.49
1:1:1432:U:H6	1:1:1432:U:O5'	1.95	0.49
1:1:313:A:C8	8:G:191:ARG:NE	2.81	0.49
1:1:71:G:H1	1:1:80:G:H1	1.60	0.49
1:1:1597:C:H4'	1:1:1603:G:O6	2.12	0.49
1:1:1635:C:H2'	1:1:1635:C:O2	2.11	0.49
1:1:751:G:N3	1:1:752:G:C8	2.80	0.49
1:1:343:A:C2	1:1:344:U:C2	3.00	0.49
1:1:527:C:O2'	11:J:121:LYS:HB2	2.12	0.49
1:1:672:A:H3'	1:1:672:A:OP2	2.11	0.49
1:1:858:A:C2	1:1:859:G:C6	3.01	0.49
6:E:52:LEU:O	6:E:53:LYS:HB2	2.13	0.49
4:C:270:THR:HA	4:C:273:LEU:HD12	1.95	0.49
1:1:83:A:H2'	26:Y:123:ALA:HB1	1.93	0.49
17:P:111:MET:HG2	17:P:119:PHE:CE1	2.47	0.49
1:1:1493:C:C3'	1:1:1494:U:C5'	2.86	0.49
8:G:32:MET:HE1	8:G:65:GLN:HB2	1.94	0.49
1:1:1191:C:H2'	1:1:1192:U:H6	1.74	0.49
1:1:1614:A:H2'	1:1:1615:U:C6	2.47	0.49
1:1:1196:A:H2'	1:1:1197:G:C5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:372:U:C6	1:1:372:U:C3'	2.95	0.49
1:1:1418:C:C2'	1:1:1419:C:C6	2.92	0.49
1:1:89:C:H5''	1:1:89:C:H6	1.77	0.49
8:G:186:GLN:HA	8:G:189:ARG:NH2	2.27	0.49
21:T:73:GLY:O	21:T:76:THR:HB	2.13	0.49
1:1:794:A:C2	1:1:795:A:C1'	2.88	0.49
1:1:586:G:N2	1:1:587:A:H1'	2.27	0.49
1:1:893:U:H2'	1:1:894:G:O4'	2.12	0.49
22:U:26:SER:HB2	22:U:32:LEU:HB2	1.95	0.49
1:1:1851:A:C8	1:1:1851:A:H5''	2.41	0.49
1:1:1558:C:H2'	1:1:1559:C:H6	1.76	0.49
23:V:74:LYS:HA	23:V:79:VAL:HG12	1.94	0.49
1:1:539:C:C3'	1:1:539:C:C6	2.95	0.49
7:F:32:ASP:HB3	7:F:117:ILE:HG23	1.95	0.49
1:1:1823:A:H4'	1:1:1824:A:O5'	2.11	0.49
11:J:161:LEU:HA	11:J:166:GLY:HA3	1.94	0.49
1:1:1415:C:N3	1:1:1416:C:C5	2.80	0.49
1:1:331:C:C3'	1:1:332:G:H5''	2.40	0.49
1:1:508:A:H3'	1:1:509:G:H8	1.77	0.49
1:1:571:U:O3'	26:Y:59:GLY:HA2	2.13	0.49
1:1:572:U:H3'	1:1:573:U:C2	2.48	0.49
1:1:76:U:O2'	1:1:77:A:H2'	2.13	0.49
1:1:1583:C:N4	1:1:1584:G:C6	2.80	0.49
1:1:1016:U:C6	15:N:14:SER:OG	2.60	0.49
1:1:211:G:C5'	1:1:211:G:C8	2.88	0.49
10:I:191:GLU:CG	13:L:20:LYS:HD2	2.43	0.49
1:1:442:C:C3'	1:1:443:U:H5''	2.43	0.49
19:R:111:PHE:CD1	19:R:114:LEU:HD11	2.48	0.49
1:1:359:U:H2'	1:1:362:C:H5	1.78	0.49
12:K:50:GLN:HA	12:K:53:LYS:HG2	1.94	0.49
2:A:77:ILE:HG12	2:A:99:ILE:HG22	1.95	0.49
10:I:197:PHE:HE1	13:L:10:TYR:O	1.96	0.49
1:1:1206:G:H1'	1:1:1834:A:N3	2.28	0.49
1:1:1687:C:O2	1:1:1687:C:H2'	2.12	0.49
1:1:1419:C:H2'	1:1:1420:G:H8	1.78	0.49
1:1:125:C:OP1	1:1:125:C:H6	1.96	0.49
1:1:71:G:C2	1:1:72:C:H1'	2.48	0.49
1:1:312:G:H22	8:G:195:LYS:HG3	1.76	0.49
20:S:37:GLY:H	20:S:40:TYR:HB3	1.76	0.49
1:1:345:U:H2'	1:1:346:C:O5'	2.13	0.49
1:1:990:A:H1'	1:1:991:G:N2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:96:C:C1'	1:1:474:G:H4'	2.43	0.49
18:Q:24:HIS:NE2	18:Q:26:LYS:HD3	2.27	0.49
1:1:1469:A:C2	1:1:1470:C:C2	3.01	0.49
1:1:1482:C:C5	1:1:1483:A:H8	2.30	0.49
1:1:370:G:O4'	1:1:371:A:C8	2.66	0.49
1:1:1113:A:H2	1:1:1120:U:C4	2.30	0.49
1:1:1087:A:H3'	1:1:1088:U:C5'	2.42	0.49
1:1:668:A:H1'	1:1:1198:G:H1'	1.95	0.49
20:S:43:VAL:HG22	21:T:37:VAL:CB	2.41	0.49
1:1:1052:A:H5''	1:1:1053:C:OP2	2.13	0.49
1:1:483:C:OP1	25:X:47:ALA:HA	2.13	0.49
16:O:27:VAL:CG1	16:O:90:ILE:HG12	2.42	0.49
24:W:101:PHE:HB3	24:W:129:PHE:CZ	2.48	0.49
1:1:572:U:H2'	1:1:573:U:N3	2.26	0.49
1:1:1576:G:H2'	1:1:1577:G:H5'	1.94	0.49
1:1:1607:A:N6	1:1:1632:G:H1'	2.28	0.49
1:1:563:G:H2'	1:1:564:A:H8	1.78	0.49
1:1:1129:G:C3'	1:1:1130:G:H8	2.26	0.49
3:B:31:TYR:CZ	3:B:94:LYS:HA	2.47	0.49
1:1:593:C:OP2	1:1:593:C:H6	1.96	0.49
1:1:1406:G:O2'	1:1:1408:U:H5	1.95	0.49
1:1:448:A:N7	10:I:25:ARG:C	2.66	0.49
1:1:1020:A:H8	1:1:1020:A:O5'	1.96	0.49
1:1:884:C:H2'	1:1:885:U:C6	2.47	0.49
25:X:61:GLN:CB	25:X:62:PRO:CD	2.89	0.49
1:1:540:U:C2	1:1:542:U:H5''	2.48	0.49
2:A:103:PHE:CD2	2:A:132:GLN:HB2	2.47	0.49
12:K:12:TYR:CD1	12:K:52:LEU:HD11	2.47	0.49
4:C:62:PRO:HA	4:C:90:GLU:OE2	2.13	0.49
20:S:74:PRO:CG	20:S:84:LEU:HD21	2.43	0.49
1:1:130:G:H4'	1:1:181:A:H61	1.77	0.48
1:1:1560:U:H2'	1:1:1561:A:H8	1.78	0.48
1:1:563:G:O6	1:1:592:C:N3	2.46	0.48
1:1:933:G:H2'	1:1:993:G:N2	2.28	0.48
1:1:1407:U:OP2	1:1:1408:U:C6	2.66	0.48
1:1:1448:A:H2'	1:1:1449:G:H8	1.77	0.48
1:1:1866:A:C4'	1:1:1866:A:OP1	2.61	0.48
1:1:1483:A:C2'	1:1:1483:A:N3	2.75	0.48
12:K:31:LYS:O	12:K:32:HIS:CB	2.61	0.48
1:1:213:G:H2'	1:1:214:U:C6	2.48	0.48
15:N:33:VAL:HG12	15:N:37:ILE:HD11	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:167:LYS:HG2	8:G:167:LYS:O	2.13	0.48
1:1:1643:U:C4	1:1:1644:C:N4	2.81	0.48
1:1:129:C:C3'	1:1:130:G:C8	2.96	0.48
1:1:67:C:H1'	8:G:164:LYS:HD2	1.94	0.48
8:G:194:LEU:HA	8:G:197:GLN:HB2	1.94	0.48
1:1:1590:C:O4'	1:1:1653:U:H4'	2.13	0.48
1:1:1606:G:C8	1:1:1606:G:OP2	2.61	0.48
3:B:30:TRP:NE1	3:B:48:LEU:HB3	2.28	0.48
18:Q:37:ARG:CB	21:T:7:LYS:HG3	2.41	0.48
18:Q:37:ARG:HB3	21:T:7:LYS:HE2	1.94	0.48
19:R:106:LEU:HB3	19:R:112:GLY:HA2	1.95	0.48
1:1:1120:U:H6	1:1:1120:U:C5'	2.24	0.48
2:A:185:MET:HG2	23:V:46:PHE:CD1	2.48	0.48
1:1:421:G:H21	1:1:653:A:H5'	1.76	0.48
1:1:154:U:C4'	8:G:13:GLN:HB3	2.43	0.48
2:A:25:LEU:O	2:A:164:ASN:HB2	2.13	0.48
9:H:20:GLU:HG2	9:H:48:ALA:HB3	1.94	0.48
25:X:54:LYS:HD2	25:X:91:LEU:HD11	1.94	0.48
1:1:1214:A:C4	1:1:1686:G:N2	2.81	0.48
1:1:332:G:N7	8:G:186:GLN:HB2	2.27	0.48
1:1:1654:G:H4'	21:T:82:ARG:CZ	2.43	0.48
1:1:751:G:O2'	1:1:752:G:H5'	2.12	0.48
1:1:746:C:H5'	9:H:104:PRO:C	2.34	0.48
1:1:562:U:C4'	11:J:132:GLN:OE1	2.60	0.48
1:1:657:U:C6	1:1:657:U:C3'	2.95	0.48
1:1:1439:A:C8	1:1:1439:A:P	3.05	0.48
1:1:380:G:N2	1:1:382:C:C6	2.81	0.48
1:1:380:G:N3	1:1:382:C:C5	2.81	0.48
1:1:1280:G:N2	1:1:1318:G:C4	2.81	0.48
1:1:106:C:H2'	1:1:107:A:H8	1.72	0.48
17:P:125:PRO:O	17:P:126:VAL:HB	2.13	0.48
2:A:63:ARG:HA	23:V:46:PHE:CE2	2.47	0.48
25:X:51:VAL:HG13	25:X:70:VAL:CG1	2.43	0.48
7:F:179:ASN:CB	7:F:187:SER:HB3	2.43	0.48
25:X:25:LYS:O	25:X:28:LYS:HB3	2.14	0.48
4:C:79:GLU:OE1	23:V:12:TYR:HD1	1.97	0.48
1:1:1208:A:N6	1:1:1691:U:H3	2.11	0.48
1:1:59:U:OP2	1:1:59:U:H4'	2.13	0.48
1:1:740:C:O5'	1:1:740:C:H6	1.97	0.48
1:1:345:U:C3'	1:1:345:U:C6	2.96	0.48
1:1:564:A:H61	1:1:586:G:H1	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:990:A:H2'	1:1:991:G:O5'	2.13	0.48
1:1:193:C:C4'	1:1:209:A:C6	2.93	0.48
1:1:616:A:H8	1:1:616:A:O5'	1.96	0.48
1:1:1401:A:C1'	1:1:1402:A:P	3.01	0.48
1:1:1281:G:N1	1:1:1282:A:C6	2.82	0.48
1:1:1286:G:N3	1:1:1286:G:C2'	2.76	0.48
1:1:102:A:C5	1:1:408:A:C2	3.01	0.48
1:1:431:G:H2'	1:1:432:G:C8	2.47	0.48
1:1:1425:G:C5	1:1:1426:U:C4	3.01	0.48
1:1:1678:A:H2	1:1:1680:G:P	2.36	0.48
1:1:905:C:H2'	1:1:906:U:H6	1.78	0.48
6:E:49:ARG:HH21	6:E:58:GLY:CA	2.26	0.48
18:Q:107:GLU:O	18:Q:111:ILE:HG12	2.13	0.48
1:1:1187:G:O5'	1:1:1187:G:H8	1.97	0.48
1:1:1060:A:C8	1:1:1062:A:C5	3.02	0.48
1:1:1836:G:OP1	1:1:1839:U:H4'	2.12	0.48
1:1:1418:C:H5''	21:T:129:ARG:CA	2.43	0.48
1:1:1420:G:H1'	21:T:3:GLY:H	1.78	0.48
1:1:60:A:H5'	1:1:501:C:C5	2.42	0.48
1:1:77:A:N3	1:1:77:A:C2'	2.74	0.48
1:1:1548:G:O6	1:1:1584:G:N3	2.47	0.48
1:1:691:G:H2'	1:1:692:G:H8	1.78	0.48
9:H:109:ARG:NE	9:H:113:LYS:HD3	2.28	0.48
1:1:4:C:H4'	4:C:207:ALA:HB2	1.94	0.48
1:1:191:A:OP1	10:I:147:LYS:N	2.47	0.48
1:1:232:A:OP2	1:1:890:U:H1'	2.12	0.48
1:1:1402:A:H3'	1:1:1403:C:C5	2.48	0.48
1:1:1404:U:OP2	1:1:1404:U:C6	2.66	0.48
1:1:92:A:N7	1:1:446:G:H2'	2.28	0.48
1:1:911:C:H2'	1:1:912:C:N3	2.29	0.48
1:1:1261:C:C5	1:1:1619:A:N6	2.81	0.48
1:1:1781:A:C4	1:1:1782:G:N2	2.80	0.48
3:B:83:LYS:HD2	3:B:106:THR:HG22	1.95	0.48
9:H:178:LYS:HE2	9:H:184:ASP:OD1	2.13	0.48
26:Y:98:GLU:HG2	26:Y:99:LYS:N	2.29	0.48
1:1:1036:A:H2'	1:1:1037:G:H5'	1.94	0.48
1:1:1135:C:C2'	1:1:1136:U:H5'	2.43	0.48
24:W:83:LEU:O	24:W:86:LEU:HG	2.13	0.48
21:T:25:SER:HB3	21:T:27:LYS:HE3	1.94	0.48
1:1:1613:G:H2'	1:1:1614:A:O5'	2.13	0.48
1:1:1373:C:H2'	1:1:1374:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:37:VAL:HG12	5:D:50:ILE:HG12	1.95	0.48
1:1:319:C:H4'	1:1:319:C:OP1	2.14	0.48
1:1:1535:U:C6	7:F:82:ASN:OD1	2.67	0.48
20:S:42:HIS:NE2	21:T:45:LEU:HD11	2.28	0.48
1:1:754:G:H2'	1:1:755:C:H6	1.73	0.48
1:1:794:A:H2'	1:1:795:A:O4'	2.12	0.48
1:1:793:G:H2'	1:1:794:A:O4'	2.14	0.48
1:1:743:U:C2'	9:H:100:ILE:O	2.61	0.48
9:H:109:ARG:HG3	9:H:113:LYS:CD	2.43	0.48
1:1:560:A:O3'	1:1:561:A:H8	1.97	0.48
16:O:18:GLY:H	16:O:19:PRO:CD	2.26	0.48
1:1:385:G:H5'	1:1:386:C:C5	2.48	0.48
1:1:1396:A:H2	1:1:1449:G:N2	2.12	0.48
1:1:550:C:H2'	1:1:551:U:C6	2.48	0.48
1:1:1261:C:H3'	1:1:1262:C:C5'	2.42	0.48
22:U:83:ARG:HB3	22:U:85:HIS:CE1	2.49	0.48
1:1:978:G:H2'	1:1:979:C:C6	2.49	0.48
1:1:1677:U:O2	1:1:1677:U:C2'	2.62	0.48
1:1:1648:G:H21	18:Q:128:GLU:HG3	1.78	0.48
1:1:1351:G:C4'	2:A:110:ASN:HB3	2.44	0.48
17:P:22:LEU:HA	17:P:25:LEU:HD12	1.95	0.48
1:1:1225:U:H6	1:1:1225:U:O5'	1.96	0.48
6:E:91:SER:HA	6:E:97:GLU:O	2.14	0.48
21:T:34:VAL:HG22	21:T:99:VAL:CG1	2.43	0.48
22:U:20:ILE:CD1	22:U:116:ILE:HG12	2.43	0.48
1:1:1432:U:N3	1:1:1433:C:N4	2.62	0.48
1:1:63:U:H6	1:1:63:U:H5''	1.79	0.48
1:1:79:A:H3'	1:1:80:G:C8	2.49	0.48
6:E:136:ILE:O	6:E:136:ILE:HG12	2.12	0.48
1:1:741:C:N4	1:1:744:G:H22	2.11	0.48
1:1:527:C:H3'	1:1:528:A:N7	2.25	0.48
10:I:138:ASN:OD1	10:I:144:LYS:HE3	2.13	0.48
1:1:1258:A:N7	1:1:1259:A:N3	2.62	0.48
1:1:232:A:OP2	1:1:890:U:C6	2.66	0.48
2:A:5:LEU:HD22	2:A:8:LEU:CD1	2.44	0.48
2:A:5:LEU:HD21	23:V:39:VAL:HG11	1.96	0.48
2:A:40:LYS:HB2	19:R:105:MET:HA	1.96	0.48
19:R:106:LEU:HA	19:R:109:LEU:HD12	1.96	0.48
9:H:143:ARG:HD3	24:W:51:GLU:OE2	2.13	0.48
1:1:1647:A:C5	7:F:57:ALA:HB1	2.48	0.48
1:1:1649:U:C5	1:1:1674:G:N2	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1649:U:H5	1:1:1674:G:N2	2.10	0.48
1:1:1169:G:OP2	1:1:1170:A:H2'	2.14	0.48
8:G:32:MET:CE	8:G:65:GLN:HB2	2.43	0.48
1:1:369:C:C2'	1:1:370:G:C5'	2.92	0.48
1:1:836:G:O6	26:Y:9:THR:O	2.32	0.48
26:Y:94:HIS:HB3	26:Y:96:LEU:HD23	1.95	0.48
10:I:193:LYS:HE2	13:L:5:GLN:OE1	2.14	0.48
1:1:24:C:O5'	1:1:24:C:H6	1.96	0.48
19:R:24:LEU:HB3	19:R:58:MET:SD	2.53	0.48
21:T:123:LEU:HD12	21:T:128:GLN:OE1	2.13	0.48
27:Z:113:THR:O	27:Z:113:THR:HG22	2.14	0.48
11:J:67:ASP:OD1	11:J:69:ARG:HB3	2.14	0.48
1:1:1704:C:H1'	1:1:1832:A:C6	2.48	0.48
1:1:377:G:H2'	1:1:378:U:H6	1.75	0.48
1:1:218:U:H2'	1:1:219:U:O4'	2.14	0.48
1:1:572:U:H3'	1:1:573:U:H3	1.77	0.48
8:G:36:VAL:HB	8:G:50:VAL:O	2.14	0.48
1:1:1587:G:H4'	1:1:1588:A:OP2	2.14	0.48
1:1:558:G:C2	1:1:559:G:N7	2.82	0.48
1:1:929:G:H5'	1:1:930:C:OP2	2.14	0.48
2:A:6:ASP:HB3	23:V:42:VAL:CG1	2.27	0.48
6:E:11:ARG:HD3	6:E:28:ALA:HB2	1.95	0.48
1:1:224:A:H61	1:1:297:A:H61	1.62	0.48
1:1:455:A:H2'	1:1:456:C:O4'	2.13	0.48
1:1:1663:A:O2'	1:1:1664:A:H5''	2.14	0.48
1:1:69:C:N4	1:1:82:G:N3	2.62	0.48
1:1:426:A:C8	1:1:426:A:OP1	2.67	0.48
27:Z:69:THR:HG22	27:Z:70:PRO:CD	2.39	0.48
1:1:886:A:P	1:1:886:A:C3'	3.00	0.48
7:F:48:TYR:HD1	7:F:49:LEU:H	1.61	0.48
1:1:1166:G:C2	1:1:1167:G:C8	3.02	0.48
1:1:159:A:O5'	1:1:159:A:H8	1.97	0.48
1:1:46:A:H4'	1:1:47:G:C5'	2.43	0.48
15:N:70:LYS:HG3	15:N:73:ARG:HB2	1.96	0.48
7:F:156:THR:HA	7:F:159:ARG:NH1	2.28	0.48
5:D:138:VAL:CG1	5:D:182:LEU:HD11	2.44	0.48
1:1:1061:U:O4	1:1:1849:G:H5''	2.14	0.48
1:1:1417:C:C4	1:1:1418:C:C4	3.01	0.48
1:1:1419:C:H1'	21:T:3:GLY:HA3	1.94	0.48
1:1:332:G:C4'	1:1:333:G:OP1	2.60	0.48
1:1:693:A:C8	1:1:694:G:C1'	2.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:795:A:H3'	1:1:796:G:C8	2.48	0.48
1:1:798:G:N2	1:1:799:U:C2	2.82	0.48
1:1:342:C:N4	1:1:343:A:N6	2.55	0.48
1:1:382:C:H2'	1:1:383:G:C2	2.49	0.48
1:1:1625:U:H4'	1:1:1663:A:H4'	1.94	0.48
1:1:976:G:H2'	1:1:977:C:C6	2.49	0.48
1:1:170:A:H3'	1:1:171:A:H8	1.79	0.48
1:1:120:U:H6	1:1:120:U:H5'	1.78	0.48
1:1:838:G:H21	1:1:838:G:P	2.36	0.48
1:1:1083:A:C2'	1:1:1858:G:H21	2.26	0.48
13:L:71:ARG:NH2	13:L:140:PHE:HZ	2.11	0.48
1:1:906:U:H2'	1:1:907:G:C8	2.49	0.48
1:1:504:G:O2'	1:1:505:G:H5'	2.14	0.48
25:X:86:PRO:HB3	25:X:121:LYS:NZ	2.29	0.48
1:1:467:G:C2'	1:1:468:A:H5'	2.43	0.48
14:M:86:GLY:HA2	14:M:91:LEU:HB2	1.95	0.48
24:W:28:ARG:HB3	24:W:29:PRO:HD3	1.96	0.48
1:1:633:C:H2'	1:1:634:A:C8	2.49	0.48
22:U:20:ILE:HG21	22:U:98:VAL:CG2	2.44	0.48
21:T:62:ARG:O	21:T:65:TYR:HB3	2.14	0.48
3:B:77:ASP:O	3:B:78:GLU:HB2	2.13	0.48
17:P:48:GLY:O	17:P:52:LYS:HE2	2.14	0.48
1:1:1206:G:C6	1:1:1208:A:N7	2.82	0.48
1:1:78:C:H1'	1:1:79:A:P	2.53	0.48
1:1:216:C:H5''	6:E:134:LYS:HE3	1.95	0.48
8:G:131:ARG:HB2	8:G:131:ARG:NH1	2.29	0.48
8:G:4:ASN:HB3	8:G:110:ASN:OD1	2.13	0.48
21:T:60:THR:HG23	21:T:121:ARG:HH12	1.79	0.48
21:T:70:ALA:HB3	21:T:121:ARG:NE	2.28	0.48
1:1:35:C:N3	1:1:520:A:N6	2.62	0.48
1:1:305:U:H3'	1:1:305:U:O2	2.13	0.48
1:1:338:G:C8	1:1:338:G:H5''	2.46	0.48
1:1:1557:C:C3'	1:1:1557:C:P	3.02	0.48
3:B:135:LEU:HD12	3:B:215:VAL:HG21	1.96	0.48
1:1:1678:A:H2	1:1:1679:A:O3'	1.96	0.48
17:P:119:PHE:CE1	20:S:117:ILE:HG23	2.48	0.48
25:X:100:VAL:HG13	25:X:122:VAL:HG13	1.94	0.48
7:F:66:CYS:SG	7:F:67:PRO:HD2	2.54	0.48
1:1:1822:A:N1	1:1:1823:A:C6	2.82	0.48
1:1:1142:G:O5'	1:1:1142:G:H8	1.96	0.48
2:A:107:THR:HG23	2:A:115:ALA:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1:U:H3'	1:1:1:U:O2	2.14	0.48
1:1:59:U:H3'	1:1:59:U:C6	2.48	0.47
1:1:62:G:H5'	1:1:172:U:N3	2.29	0.47
1:1:345:U:H2'	1:1:346:C:H5'	1.94	0.47
1:1:33:G:H2'	1:1:34:U:H6	1.78	0.47
1:1:1439:A:O5'	1:1:1439:A:H8	1.97	0.47
2:A:48:ILE:CG2	19:R:105:MET:SD	3.02	0.47
1:1:1051:G:OP1	1:1:1847:G:H4'	2.14	0.47
27:Z:103:HIS:CG	27:Z:104:ARG:N	2.82	0.47
24:W:18:GLU:HG3	24:W:69:LEU:HB2	1.96	0.47
1:1:158:A:H62	8:G:59:GLN:HE21	1.62	0.47
8:G:24:LEU:HA	8:G:27:PHE:CD2	2.49	0.47
1:1:836:G:OP1	1:1:836:G:H8	1.96	0.47
7:F:34:SER:C	7:F:36:GLN:H	2.16	0.47
1:1:1053:C:O2	1:1:1053:C:C2'	2.61	0.47
4:C:98:LEU:HG	4:C:101:SER:HB2	1.95	0.47
11:J:60:LEU:CB	11:J:94:LEU:HD11	2.43	0.47
10:I:84:ASN:OD1	10:I:86:SER:HB2	2.13	0.47
2:A:108:PHE:HD2	2:A:136:GLU:OE1	1.97	0.47
1:1:1214:A:C5	1:1:1217:A:C6	3.03	0.47
1:1:1013:U:C1'	1:1:1104:G:H1'	2.44	0.47
1:1:1016:U:C5	15:N:14:SER:CB	2.97	0.47
1:1:1161:U:H2'	1:1:1162:C:C5'	2.44	0.47
1:1:659:G:N3	1:1:659:G:C2'	2.77	0.47
1:1:899:U:H2'	1:1:900:C:N1	2.29	0.47
1:1:305:U:H2'	1:1:305:U:O2	2.15	0.47
2:A:5:LEU:CD2	23:V:44:GLY:HA2	2.44	0.47
1:1:1751:C:H2'	1:1:1752:C:H5'	1.96	0.47
2:A:58:LEU:HD11	2:A:178:LEU:CA	2.44	0.47
10:I:192:GLY:HA3	13:L:20:LYS:CA	2.45	0.47
1:1:1388:A:H2'	1:1:1389:C:O5'	2.13	0.47
1:1:911:C:H5''	1:1:912:C:C4	2.48	0.47
22:U:97:ILE:O	22:U:100:GLN:HB3	2.14	0.47
27:Z:92:LEU:HD13	27:Z:109:TYR:CE1	2.48	0.47
1:1:1351:G:C5'	2:A:110:ASN:HB3	2.44	0.47
1:1:1743:G:O2'	1:1:1744:G:H5'	2.14	0.47
1:1:158:A:O4'	1:1:464:A:H8	1.95	0.47
20:S:6:PRO:HD3	27:Z:52:LYS:HE2	1.95	0.47
1:1:358:C:H6	1:1:358:C:C5'	2.27	0.47
7:F:113:VAL:O	7:F:117:ILE:HD13	2.14	0.47
25:X:48:LYS:HD3	25:X:99:GLU:OE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:827:A:H2'	1:1:828:G:H5'	1.96	0.47
1:1:396:U:O2'	1:1:397:G:H5'	2.14	0.47
11:J:161:LEU:O	11:J:161:LEU:HG	2.14	0.47
1:1:14:C:H5'	4:C:190:SER:OG	2.14	0.47
1:1:189:U:H6	1:1:189:U:P	2.37	0.47
1:1:63:U:OP1	1:1:315:C:H4'	2.14	0.47
1:1:75:G:H22	1:1:78:C:H4'	1.78	0.47
8:G:189:ARG:O	8:G:192:ILE:HG22	2.14	0.47
9:H:109:ARG:HG2	9:H:113:LYS:HA	1.97	0.47
1:1:525:A:C4	1:1:588:G:O6	2.66	0.47
1:1:1396:A:H2'	1:1:1397:U:H5'	1.96	0.47
10:I:191:GLU:C	13:L:20:LYS:HB2	2.35	0.47
1:1:1344:A:H5''	1:1:1370:A:H4'	1.96	0.47
3:B:171:ILE:HG12	3:B:174:ARG:HH22	1.80	0.47
1:1:18:C:H6	1:1:18:C:O5'	1.97	0.47
1:1:545:A:C8	1:1:545:A:H3'	2.50	0.47
7:F:162:ALA:HB2	7:F:172:CYS:SG	2.54	0.47
26:Y:11:LYS:O	26:Y:23:MET:HA	2.14	0.47
1:1:1307:U:H4'	1:1:1308:U:OP1	2.15	0.47
1:1:1859:A:H8	1:1:1859:A:O5'	1.97	0.47
1:1:186:C:C6	1:1:186:C:O5'	2.66	0.47
7:F:167:LYS:HA	27:Z:71:ALA:CB	2.44	0.47
1:1:795:A:O2'	1:1:796:G:H5'	2.14	0.47
3:B:65:ARG:HG2	16:O:50:LYS:CE	2.44	0.47
1:1:450:C:H6	1:1:450:C:H5''	1.80	0.47
1:1:1698:C:H4'	1:1:1699:A:OP2	2.13	0.47
1:1:684:G:H2'	1:1:685:A:H8	1.79	0.47
1:1:1336:C:H2'	1:1:1337:C:O4'	2.13	0.47
1:1:1649:U:N3	1:1:1675:A:C2	2.80	0.47
1:1:1357:A:O2'	4:C:112:VAL:HB	2.14	0.47
1:1:1114:U:H1'	1:1:1115:U:H2'	1.96	0.47
1:1:157:U:H5'	8:G:58:LYS:O	2.14	0.47
9:H:181:THR:HG22	9:H:183:LYS:HD3	1.97	0.47
23:V:41:LYS:O	23:V:43:THR:N	2.46	0.47
15:N:94:LYS:O	15:N:98:VAL:HG23	2.14	0.47
4:C:125:LYS:HE2	4:C:127:PHE:CZ	2.50	0.47
19:R:28:PHE:HE1	19:R:52:GLY:N	2.12	0.47
20:S:61:GLU:O	20:S:64:VAL:HB	2.13	0.47
1:1:1417:C:C2'	1:1:1418:C:H5'	2.44	0.47
1:1:125:C:C6	1:1:125:C:P	3.08	0.47
1:1:167:G:H4'	8:G:8:PRO:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:746:C:H5'	9:H:105:THR:N	2.30	0.47
1:1:520:A:H8	1:1:521:A:C8	2.33	0.47
1:1:1392:U:O2	1:1:1392:U:H2'	2.13	0.47
1:1:1428:G:H5''	1:1:1428:G:C8	2.49	0.47
1:1:1825:A:H3'	1:1:1825:A:C8	2.49	0.47
1:1:1580:A:H3'	1:1:1581:C:C5'	2.45	0.47
25:X:100:VAL:HG11	25:X:122:VAL:HG13	1.94	0.47
3:B:197:ILE:HG13	3:B:210:VAL:HG11	1.97	0.47
3:B:134:LEU:HD12	3:B:219:LYS:CB	2.44	0.47
13:L:36:TYR:CE2	13:L:38:LYS:HB2	2.49	0.47
1:1:841:G:H8	26:Y:12:PHE:CE2	2.33	0.47
5:D:37:VAL:CG1	5:D:50:ILE:HG12	2.45	0.47
11:J:131:ARG:HB3	11:J:131:ARG:NH1	2.29	0.47
1:1:1060:A:N3	1:1:1060:A:H2'	2.29	0.47
1:1:1693:G:H2'	1:1:1694:U:O4'	2.15	0.47
1:1:1862:G:HO2'	1:1:1863:A:P	2.37	0.47
1:1:172:U:C5	1:1:337:C:H1'	2.50	0.47
1:1:125:C:H5'	6:E:136:ILE:HB	1.95	0.47
7:F:163:PHE:CE2	7:F:164:ARG:HG3	2.49	0.47
3:B:49:VAL:HG21	3:B:58:ALA:HB2	1.96	0.47
1:1:100:U:H2'	1:1:101:U:C5'	2.45	0.47
1:1:1285:G:C4'	1:1:1286:G:O5'	2.61	0.47
18:Q:12:VAL:HG11	18:Q:91:ALA:N	2.29	0.47
1:1:1617:G:H2'	1:1:1618:C:H5'	1.96	0.47
1:1:1091:C:O2'	1:1:1092:G:H5'	2.15	0.47
6:E:122:LYS:O	6:E:162:ILE:HG22	2.14	0.47
1:1:641:A:H2'	1:1:642:U:H5'	1.97	0.47
1:1:1678:A:C2	1:1:1679:A:O3'	2.67	0.47
1:1:1771:G:O2'	1:1:1772:C:H5'	2.14	0.47
1:1:1087:A:N7	1:1:1861:G:C6	2.83	0.47
1:1:1481:G:H8	1:1:1481:G:O5'	1.97	0.47
1:1:1559:C:C6	1:1:1559:C:O5'	2.66	0.47
1:1:567:C:C3'	1:1:568:C:H5'	2.44	0.47
1:1:1824:A:N3	1:1:1824:A:H5''	2.29	0.47
1:1:93:U:H3'	1:1:94:G:H8	1.80	0.47
16:O:115:ALA:O	16:O:119:LEU:HD13	2.14	0.47
5:D:106:ARG:HH12	5:D:173:ARG:HB2	1.78	0.47
27:Z:50:PHE:HE2	27:Z:55:TYR:CD1	2.32	0.47
9:H:78:ARG:O	9:H:81:ARG:HB3	2.15	0.47
14:M:76:LEU:HB3	14:M:129:LYS:O	2.14	0.47
1:1:1179:G:H8	1:1:1179:G:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1704:C:H6	1:1:1704:C:O5'	1.97	0.47
1:1:125:C:C6	1:1:125:C:OP2	2.68	0.47
1:1:181:A:O5'	1:1:182:C:C5'	2.63	0.47
26:Y:59:GLY:O	26:Y:71:GLY:CA	2.62	0.47
8:G:53:SER:HB3	8:G:110:ASN:C	2.34	0.47
20:S:27:ALA:HB1	20:S:41:ALA:HB1	1.97	0.47
1:1:1547:C:H5''	1:1:1547:C:H6	1.79	0.47
1:1:527:C:C5'	1:1:527:C:H6	2.28	0.47
1:1:993:G:C2'	1:1:994:C:H5'	2.45	0.47
1:1:1015:U:C5	15:N:13:GLN:O	2.68	0.47
1:1:934:G:H5'	1:1:993:G:H21	1.75	0.47
1:1:192:C:C2'	1:1:193:C:H5'	2.43	0.47
1:1:36:U:N3	1:1:520:A:N1	2.63	0.47
1:1:380:G:N2	1:1:382:C:H3'	2.30	0.47
19:R:5:ARG:HB2	19:R:10:LYS:HE2	1.96	0.47
1:1:1245:G:H2'	1:1:1246:A:C8	2.49	0.47
2:A:5:LEU:HD22	2:A:8:LEU:HD12	1.97	0.47
1:1:912:C:O2'	1:1:913:A:C4'	2.61	0.47
1:1:1624:U:C5	1:1:1624:U:OP2	2.67	0.47
3:B:71:LEU:HA	3:B:74:LEU:HB3	1.97	0.47
9:H:53:VAL:HG11	9:H:171:GLU:HG3	1.97	0.47
1:1:684:G:C4	1:1:920:A:C8	3.03	0.47
1:1:884:C:C2'	1:1:885:U:H5'	2.45	0.47
1:1:1649:U:C2'	1:1:1650:A:H5'	2.44	0.47
1:1:1361:G:N7	1:1:1362:U:C5	2.83	0.47
2:A:110:ASN:HD21	2:A:113:GLN:CB	2.28	0.47
1:1:1074:C:H2'	1:1:1075:C:C6	2.49	0.47
1:1:1356:G:O5'	1:1:1356:G:H8	1.96	0.47
1:1:159:A:H8	1:1:159:A:P	2.38	0.47
1:1:583:A:C3'	1:1:584:A:C8	2.97	0.47
1:1:515:G:H8	1:1:515:G:O5'	1.98	0.47
1:1:1714:U:C3'	1:1:1715:A:H8	2.27	0.47
1:1:23:G:C5	1:1:24:C:C4	3.02	0.47
1:1:1195:A:C2	1:1:1196:A:N7	2.83	0.47
18:Q:96:TYR:HA	18:Q:100:VAL:CG2	2.44	0.47
6:E:87:MET:CE	6:E:123:LEU:HD12	2.45	0.47
1:1:1867:U:H1'	1:1:1868:U:O5'	2.14	0.47
1:1:841:G:C8	26:Y:12:PHE:CZ	3.02	0.47
18:Q:39:LEU:O	18:Q:42:ILE:HG13	2.14	0.47
14:M:30:GLY:HA3	14:M:113:ASP:OD1	2.15	0.47
4:C:255:LEU:O	4:C:255:LEU:HG	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:160:GLN:HE21	3:B:204:ILE:CG2	2.28	0.47
1:1:1208:A:C6	1:1:1692:U:O2	2.68	0.47
1:1:691:G:C4	1:1:692:G:C8	3.02	0.47
1:1:475:C:C5'	1:1:475:C:H6	2.07	0.47
1:1:888:U:H5'	1:1:889:U:OP2	2.14	0.47
3:B:71:LEU:O	3:B:71:LEU:HD22	2.15	0.47
26:Y:41:ARG:HH12	26:Y:94:HIS:CD2	2.32	0.47
20:S:46:ARG:CZ	21:T:37:VAL:HG22	2.44	0.47
10:I:48:VAL:HG21	10:I:54:LYS:HD3	1.97	0.47
8:G:87:ARG:O	8:G:88:ARG:HB3	2.15	0.47
3:B:124:HIS:HB3	3:B:138:PHE:CE2	2.50	0.47
16:O:85:CYS:HA	16:O:88:LEU:HD12	1.95	0.47
6:E:114:ILE:HG23	6:E:118:GLU:HB2	1.94	0.47
1:1:949:G:O5'	1:1:949:G:H8	1.98	0.47
1:1:1208:A:P	1:1:1835:A:C2	3.08	0.47
1:1:1689:C:H2'	1:1:1690:U:H6	1.79	0.47
1:1:1411:G:C2'	1:1:1411:G:N3	2.77	0.47
1:1:78:C:C1'	1:1:79:A:OP1	2.61	0.47
21:T:41:LYS:HG2	21:T:94:ARG:O	2.15	0.47
1:1:558:G:OP2	1:1:558:G:C8	2.68	0.47
1:1:563:G:C5	1:1:564:A:N7	2.83	0.47
3:B:57:ILE:HG22	3:B:59:SER:H	1.78	0.47
1:1:1769:C:C6	1:1:1769:C:O5'	2.67	0.47
1:1:521:A:N6	1:1:522:A:C2	2.83	0.47
1:1:869:A:N7	9:H:115:LYS:HB3	2.30	0.47
6:E:124:CYS:HB2	6:E:141:THR:CG2	2.45	0.47
10:I:158:ILE:O	10:I:159:SER:O	2.33	0.47
1:1:953:C:H2'	1:1:954:U:O4'	2.15	0.47
7:F:40:ALA:O	7:F:42:LYS:HG3	2.14	0.47
1:1:876:C:H2'	1:1:877:C:H6	1.79	0.47
1:1:298:G:O2'	1:1:299:A:H5'	2.14	0.47
4:C:63:VAL:O	4:C:64:THR:HB	2.15	0.47
24:W:99:PHE:O	24:W:101:PHE:N	2.48	0.47
25:X:106:GLY:O	25:X:107:ARG:O	2.33	0.47
15:N:100:LYS:HG2	15:N:104:ARG:NH1	2.29	0.47
26:Y:100:LYS:HG2	26:Y:100:LYS:O	2.14	0.47
1:1:1829:G:O5'	1:1:1829:G:C8	2.68	0.47
1:1:178:C:H2'	1:1:179:C:C1'	2.44	0.47
1:1:215:G:P	1:1:215:G:H3'	2.55	0.47
1:1:1638:G:C5	1:1:1638:G:OP2	2.68	0.47
1:1:743:U:H5"	1:1:743:U:C2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:745:C:H3'	9:H:105:THR:HG23	1.98	0.47
1:1:525:A:C2	1:1:561:A:N6	2.71	0.47
1:1:1017:U:C5	1:1:1018:U:C5	3.03	0.47
1:1:1161:U:C6	1:1:1161:U:C3'	2.98	0.47
1:1:673:G:H1'	1:1:1084:A:N3	2.30	0.47
1:1:1298:G:H1'	17:P:79:HIS:CB	2.43	0.47
1:1:1618:C:H5''	1:1:1618:C:C6	2.49	0.47
17:P:22:LEU:HD11	17:P:109:PRO:CG	2.45	0.47
10:I:48:VAL:HG21	10:I:54:LYS:CD	2.44	0.47
9:H:125:VAL:O	9:H:128:ALA:HB3	2.15	0.47
3:B:140:VAL:HB	3:B:213:ARG:HH12	1.80	0.47
6:E:173:ILE:HG21	6:E:230:ASN:HD22	1.78	0.47
1:1:919:A:H2	15:N:64:ARG:NH1	2.12	0.47
1:1:1709:G:H2'	1:1:1710:C:H5''	1.97	0.47
3:B:160:GLN:NE2	3:B:204:ILE:HG23	2.29	0.47
1:1:462:C:H2'	1:1:463:C:O5'	2.15	0.47
3:B:105:LEU:HD11	3:B:109:LYS:HG2	1.97	0.47
1:1:1352:G:H5''	2:A:139:TYR:CZ	2.50	0.47
1:1:67:C:N4	8:G:168:LYS:O	2.46	0.46
1:1:1534:C:H5'	1:1:1536:G:H1'	1.97	0.46
1:1:1654:G:C3'	1:1:1655:C:C5	2.98	0.46
27:Z:44:LEU:HD22	27:Z:46:ASN:OD1	2.14	0.46
11:J:122:SER:O	11:J:125:HIS:HB3	2.14	0.46
1:1:526:A:O3'	11:J:124:HIS:HB3	2.14	0.46
1:1:664:A:H2'	1:1:664:A:N3	2.29	0.46
10:I:131:PRO:HG3	10:I:147:LYS:HE3	1.96	0.46
1:1:305:U:C6	1:1:305:U:OP1	2.68	0.46
1:1:944:A:H4'	16:O:134:PRO:HB2	1.95	0.46
1:1:1426:U:C5	1:1:1427:C:C5	3.02	0.46
17:P:84:ILE:HD11	17:P:115:TYR:CE2	2.50	0.46
1:1:1512:C:H5'	12:K:29:MET:SD	2.55	0.46
4:C:167:ARG:C	4:C:181:PRO:HD3	2.35	0.46
1:1:28:U:H4'	25:X:124:LYS:HZ1	1.80	0.46
1:1:1006:C:H6	1:1:1006:C:O5'	1.98	0.46
4:C:82:TYR:CD1	23:V:26:ALA:HB1	2.50	0.46
22:U:22:ILE:HG12	22:U:114:VAL:HG12	1.96	0.46
1:1:388:U:H3'	1:1:389:A:H8	1.81	0.46
2:A:171:VAL:O	2:A:175:TRP:HD1	1.97	0.46
1:1:61:A:P	1:1:61:A:H3'	2.55	0.46
1:1:1529:C:H6	1:1:1529:C:O5'	1.99	0.46
1:1:927:C:C2'	1:1:928:G:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:474:G:OP1	1:1:474:G:H8	1.97	0.46
1:1:311:C:C2'	1:1:311:C:O2	2.63	0.46
1:1:1282:A:C2'	1:1:1283:C:H5'	2.45	0.46
6:E:44:LEU:HD12	6:E:79:ASP:O	2.16	0.46
1:1:684:G:H2'	1:1:685:A:O4'	2.15	0.46
20:S:4:VAL:HG21	27:Z:49:LEU:HD11	1.97	0.46
23:V:67:ASP:O	23:V:70:LEU:HB3	2.16	0.46
1:1:1304:U:O5'	1:1:1304:U:H6	1.99	0.46
14:M:35:ILE:HD11	14:M:61:TYR:OH	2.15	0.46
1:1:543:C:C6	1:1:543:C:C3'	2.97	0.46
16:O:56:VAL:HG12	16:O:77:ALA:HB1	1.97	0.46
25:X:68:LYS:CB	25:X:85:VAL:HB	2.45	0.46
1:1:1803:U:H2'	1:1:1804:U:C6	2.50	0.46
1:1:1137:U:C6	1:1:1137:U:OP2	2.68	0.46
1:1:1610:G:H2'	1:1:1611:G:O4'	2.15	0.46
17:P:44:ARG:HD3	17:P:44:ARG:C	2.36	0.46
1:1:173:A:H2'	1:1:174:C:C6	2.50	0.46
8:G:8:PRO:HG3	8:G:112:VAL:HG13	1.97	0.46
1:1:20:G:H4'	1:1:620:G:N2	2.28	0.46
1:1:1767:C:C6	1:1:1767:C:C3'	2.99	0.46
10:I:65:PHE:O	10:I:73:THR:HA	2.15	0.46
1:1:1406:G:O4'	1:1:1407:U:C5'	2.64	0.46
18:Q:33:LYS:HD3	18:Q:69:ARG:CD	2.45	0.46
1:1:1202:U:H3	1:1:1697:A:H61	1.62	0.46
1:1:1284:A:H3'	1:1:1285:G:C4'	2.46	0.46
1:1:852:G:H2'	1:1:852:G:N3	2.29	0.46
17:P:111:MET:HG2	17:P:119:PHE:CZ	2.50	0.46
1:1:985:G:C3'	1:1:986:G:H5'	2.45	0.46
11:J:136:ARG:HD2	11:J:160:SER:HB2	1.97	0.46
6:E:19:MET:HE3	6:E:108:ARG:HG2	1.98	0.46
1:1:197:U:C4	1:1:198:U:H5	2.33	0.46
9:H:131:GLU:OE2	9:H:139:ILE:HD11	2.15	0.46
1:1:1085:C:H4'	1:1:1086:G:H21	1.79	0.46
24:W:25:VAL:O	24:W:62:VAL:HA	2.15	0.46
1:1:1220:A:N6	1:1:1221:G:C6	2.83	0.46
13:L:4:ILE:HG21	13:L:55:TYR:HA	1.95	0.46
1:1:417:C:H5'	1:1:418:A:OP2	2.15	0.46
1:1:1153:C:H2'	1:1:1153:C:O2	2.14	0.46
1:1:1414:A:C6	1:1:1415:C:N4	2.84	0.46
1:1:331:C:C3'	1:1:332:G:C5'	2.92	0.46
1:1:77:A:H5''	1:1:78:C:N4	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:133:VAL:O	6:E:136:ILE:CG2	2.63	0.46
21:T:82:ARG:HG3	21:T:90:SER:OG	2.16	0.46
1:1:743:U:H5	9:H:97:GLN:NE2	2.12	0.46
1:1:520:A:H2'	1:1:521:A:O4'	2.14	0.46
1:1:1288:U:OP2	1:1:1311:C:C2	2.68	0.46
1:1:1521:C:H2'	20:S:136:THR:OG1	2.16	0.46
1:1:805:U:O5'	1:1:805:U:C6	2.68	0.46
1:1:1555:U:C2'	1:1:1556:A:H5'	2.45	0.46
1:1:856:C:C2'	1:1:857:U:H5'	2.45	0.46
1:1:1338:G:H4'	22:U:74:SER:N	2.27	0.46
6:E:18:TRP:HB3	6:E:20:LEU:HG	1.98	0.46
17:P:85:ILE:CD1	17:P:111:MET:HB3	2.46	0.46
17:P:17:TYR:CB	17:P:25:LEU:HD11	2.45	0.46
1:1:1076:G:H5'	15:N:106:ARG:HH11	1.78	0.46
1:1:668:A:C1'	1:1:1198:G:H1'	2.45	0.46
1:1:1332:A:OP1	1:1:1332:A:H3'	2.16	0.46
1:1:1085:C:H1'	1:1:1086:G:H5''	1.96	0.46
1:1:423:U:C4	1:1:424:C:C5	3.04	0.46
15:N:70:LYS:HE3	15:N:73:ARG:NH1	2.29	0.46
1:1:1862:G:H4'	1:1:1863:A:OP2	2.15	0.46
4:C:109:ILE:HD11	4:C:151:ILE:HD11	1.96	0.46
1:1:577:U:O4'	1:1:577:U:O2	2.33	0.46
1:1:78:C:O3'	8:G:175:LYS:HG2	2.15	0.46
1:1:1607:A:C2	1:1:1608:U:H1'	2.50	0.46
21:T:40:ALA:O	21:T:41:LYS:HB2	2.15	0.46
2:A:12:GLU:HB3	19:R:115:SER:HB2	1.98	0.46
2:A:12:GLU:O	2:A:15:VAL:HG22	2.16	0.46
3:B:30:TRP:CD1	3:B:48:LEU:HB3	2.50	0.46
18:Q:34:VAL:O	18:Q:37:ARG:HG2	2.15	0.46
1:1:1697:A:O2'	1:1:1698:C:P	2.73	0.46
1:1:1284:A:C4	1:1:1286:G:H5''	2.50	0.46
7:F:100:ILE:CD1	7:F:177:LEU:HD22	2.46	0.46
1:1:1286:G:C1'	14:M:34:GLY:HA3	2.43	0.46
1:1:958:G:C6	1:1:959:G:C2	3.03	0.46
20:S:39:ARG:HH11	21:T:39:LEU:H	1.63	0.46
1:1:1447:G:H1'	22:U:55:ARG:HE	1.80	0.46
6:E:108:ARG:NH2	6:E:240:ARG:HH12	2.14	0.46
1:1:1043:G:H1'	1:1:1044:G:O5'	2.15	0.46
1:1:1740:C:H5''	10:I:58:LEU:HD11	1.97	0.46
8:G:62:PRO:HG2	8:G:83:CYS:SG	2.55	0.46
14:M:25:ALA:HB1	14:M:111:VAL:HG13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:395:G:C8	1:1:395:G:O5'	2.69	0.46
1:1:1688:C:C2	1:1:1689:C:C5	3.04	0.46
1:1:1432:U:C4	1:1:1433:C:N4	2.83	0.46
1:1:1529:C:H5'	1:1:1666:C:OP1	2.16	0.46
1:1:746:C:O2'	1:1:747:U:C2	2.65	0.46
1:1:751:G:C4	1:1:752:G:N7	2.84	0.46
1:1:1766:C:H2'	1:1:1766:C:O2	2.15	0.46
1:1:593:C:C6	1:1:593:C:P	3.09	0.46
1:1:522:A:C6	1:1:643:A:H5'	2.50	0.46
1:1:1473:G:H5'	1:1:1474:A:OP2	2.15	0.46
13:L:20:LYS:HE3	13:L:21:LYS:HZ3	1.80	0.46
1:1:438:G:H8	1:1:438:G:O5'	1.99	0.46
22:U:24:LEU:HD23	22:U:24:LEU:N	2.30	0.46
1:1:920:A:H2'	1:1:922:A:C8	2.37	0.46
1:1:1175:G:H2'	1:1:1176:G:C8	2.51	0.46
20:S:91:LYS:HE3	20:S:113:ARG:HH12	1.81	0.46
1:1:1539:U:H2'	1:1:1540:G:C5'	2.46	0.46
1:1:1668:U:H5''	18:Q:132:PHE:HA	1.98	0.46
7:F:78:MET:O	7:F:79:HIS:HB3	2.15	0.46
7:F:92:ILE:HG23	7:F:170:ALA:HB2	1.97	0.46
1:1:1142:G:N2	1:1:1145:A:OP2	2.48	0.46
1:1:2:A:H3'	1:1:3:C:H5'	1.98	0.46
1:1:1712:A:H2'	1:1:1713:C:C6	2.50	0.46
1:1:1431:G:C4	1:1:1432:U:C4	3.04	0.46
1:1:217:A:C2'	1:1:218:U:H5'	2.46	0.46
1:1:1601:A:N1	1:1:1635:C:C4	2.84	0.46
1:1:1253:A:N7	1:1:1666:C:H4'	2.30	0.46
1:1:564:A:H2'	1:1:565:G:OP1	2.15	0.46
1:1:1058:A:C2'	1:1:1059:G:H5'	2.46	0.46
1:1:21:U:H3	1:1:654:A:H2	1.64	0.46
10:I:144:LYS:O	10:I:147:LYS:HG2	2.16	0.46
1:1:42:A:H4'	1:1:98:C:OP2	2.16	0.46
1:1:891:G:H8	1:1:891:G:O5'	1.98	0.46
1:1:1864:U:HO2'	1:1:1866:A:H2	1.54	0.46
2:A:8:LEU:HG	2:A:191:ARG:CZ	2.46	0.46
1:1:440:G:H5''	1:1:1798:C:O2'	2.15	0.46
17:P:34:MET:O	17:P:42:ARG:HG2	2.16	0.46
1:1:105:U:C4	1:1:106:C:C4	3.03	0.46
1:1:1387:G:H2'	1:1:1388:A:H8	1.80	0.46
3:B:84:PHE:CD1	3:B:100:PHE:CE2	3.04	0.46
6:E:88:ASP:HA	6:E:122:LYS:HE3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:39:A:N6	1:1:515:G:H21	2.14	0.46
1:1:467:G:OP2	1:1:467:G:C8	2.68	0.46
10:I:83:TYR:N	10:I:91:VAL:HG21	2.31	0.46
3:B:77:ASP:O	3:B:78:GLU:CB	2.63	0.46
15:N:62:GLN:CG	15:N:65:PHE:HD1	2.29	0.46
20:S:60:THR:O	20:S:63:GLU:HB2	2.14	0.46
1:1:1416:C:C3'	1:1:1417:C:C5'	2.86	0.46
1:1:572:U:C2'	1:1:573:U:C4	2.85	0.46
1:1:67:C:C5	8:G:162:LEU:HG	2.51	0.46
1:1:74:G:N3	1:1:74:G:H2'	2.31	0.46
20:S:24:ARG:HA	27:Z:48:VAL:CG1	2.43	0.46
9:H:105:THR:CG2	9:H:105:THR:O	2.64	0.46
1:1:342:C:C6	1:1:342:C:H5''	2.51	0.46
1:1:600:G:C2	1:1:601:G:C5	3.04	0.46
1:1:615:C:C2'	1:1:616:A:H5'	2.45	0.46
1:1:1406:G:H4'	1:1:1407:U:C5'	2.46	0.46
1:1:1288:U:C2	1:1:1315:U:H1'	2.50	0.46
1:1:175:A:C6	1:1:176:U:C6	3.04	0.46
1:1:604:A:OP2	1:1:604:A:H3'	2.16	0.46
1:1:441:C:C5	1:1:448:A:N3	2.84	0.46
1:1:1387:G:H2'	1:1:1388:A:C8	2.51	0.46
1:1:1350:U:H4'	2:A:112:ILE:HD13	1.98	0.46
1:1:984:C:H2'	1:1:985:G:C8	2.51	0.46
1:1:369:C:O2'	1:1:370:G:H5''	2.15	0.46
1:1:371:A:C5'	10:I:11:ARG:HB2	2.44	0.46
1:1:935:G:C2	1:1:1008:A:C2	3.03	0.46
14:M:89:VAL:CG1	14:M:91:LEU:HG	2.46	0.46
1:1:1352:G:OP1	2:A:109:THR:HB	2.16	0.46
6:E:246:LEU:HD23	6:E:250:GLU:HB3	1.97	0.46
1:1:316:G:C6	1:1:317:C:N4	2.84	0.46
1:1:745:C:O5'	9:H:105:THR:HG23	2.15	0.46
1:1:798:G:H3'	1:1:798:G:N3	2.31	0.46
1:1:346:C:H5''	6:E:38:LEU:CD1	2.46	0.46
1:1:656:G:H4'	1:1:657:U:H5'	1.98	0.46
1:1:594:A:C1'	1:1:643:A:N6	2.62	0.46
1:1:901:G:O2'	1:1:902:G:H5'	2.15	0.46
1:1:1454:A:H61	1:1:1467:C:H41	1.62	0.46
1:1:1556:A:H2	1:1:1557:C:C5	2.26	0.46
1:1:1079:C:C3'	1:1:1080:A:H5'	2.46	0.46
1:1:1552:G:H2'	5:D:3:VAL:CG2	2.44	0.46
1:1:1225:U:C6	1:1:1225:U:O5'	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Z:54:THR:HB	27:Z:58:LEU:HD11	1.97	0.46
1:1:1778:C:H6	1:1:1778:C:O5'	1.99	0.46
1:1:1375:G:H3'	1:1:1375:G:C8	2.50	0.46
1:1:532:C:C5	1:1:533:A:C8	3.04	0.46
22:U:66:ARG:H	22:U:66:ARG:HD2	1.80	0.46
1:1:1850:A:O5'	1:1:1850:A:H8	1.99	0.46
1:1:215:G:C8	1:1:215:G:O5'	2.68	0.46
1:1:570:C:C3'	1:1:571:U:H5''	2.41	0.46
1:1:797:C:H41	9:H:104:PRO:HA	1.81	0.46
1:1:1403:C:C6	1:1:1404:U:C6	3.04	0.46
1:1:1695:A:H3'	1:1:1696:C:C6	2.51	0.46
1:1:1465:A:C5	1:1:1466:G:H1'	2.50	0.46
1:1:1752:C:O2'	1:1:1753:C:H5'	2.15	0.46
10:I:191:GLU:HG3	13:L:20:LYS:HB2	1.98	0.46
1:1:1628:C:H2'	1:1:1629:C:C6	2.51	0.46
1:1:1341:C:O5'	1:1:1341:C:H6	1.98	0.46
1:1:685:A:O5'	1:1:685:A:H8	1.99	0.46
1:1:1348:G:N2	1:1:1381:G:N2	2.56	0.46
1:1:1808:U:H6	1:1:1808:U:O5'	1.99	0.46
26:Y:41:ARG:NH2	26:Y:53:ASP:HA	2.31	0.46
2:A:62:ALA:HB1	2:A:185:MET:SD	2.56	0.46
5:D:190:LEU:CB	5:D:200:PRO:HD3	2.46	0.46
1:1:1616:U:C2'	1:1:1616:U:O2	2.64	0.46
1:1:154:U:O4'	8:G:13:GLN:HB3	2.16	0.46
1:1:831:G:H2'	1:1:832:G:H8	1.81	0.46
1:1:77:A:C4'	1:1:78:C:C5	2.99	0.45
1:1:743:U:O2	1:1:743:U:H2'	2.15	0.45
1:1:1082:A:H2'	1:1:1084:A:O5'	2.16	0.45
1:1:681:U:H6	1:1:681:U:O5'	1.98	0.45
1:1:302:A:O2'	10:I:74:ARG:HA	2.16	0.45
1:1:1203:G:C2'	1:1:1699:A:H2	2.29	0.45
1:1:1280:G:O2'	1:1:1281:G:H5'	2.16	0.45
1:1:1454:A:H5''	19:R:3:ARG:HD2	1.96	0.45
1:1:235:A:C4	1:1:236:A:C8	3.04	0.45
1:1:1780:G:OP2	1:1:1781:A:C8	2.69	0.45
8:G:106:LEU:H	8:G:106:LEU:HD22	1.81	0.45
1:1:1348:G:H22	1:1:1381:G:H1	1.65	0.45
1:1:1348:G:C2	1:1:1382:A:C2	3.03	0.45
16:O:61:LYS:HD3	16:O:76:LEU:HD13	1.98	0.45
26:Y:97:TYR:O	26:Y:98:GLU:CB	2.63	0.45
20:S:9:PHE:CD2	27:Z:49:LEU:HD22	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1721:U:C4'	1:1:1722:G:O5'	2.64	0.45
1:1:538:U:H5''	1:1:539:C:OP2	2.16	0.45
9:H:147:LYS:HD2	9:H:151:SER:HB2	1.97	0.45
8:G:114:VAL:HG12	8:G:115:LYS:HG3	1.99	0.45
1:1:179:C:OP2	1:1:179:C:C6	2.58	0.45
1:1:332:G:H1'	1:1:333:G:N7	2.31	0.45
1:1:569:A:C3'	1:1:570:C:H5''	2.46	0.45
1:1:1534:C:P	1:1:1534:C:H3'	2.56	0.45
1:1:1602:U:H3'	1:1:1602:U:C6	2.50	0.45
1:1:1630:A:C6	1:1:1631:U:C4	3.04	0.45
20:S:27:ALA:HB2	20:S:45:LEU:HD21	1.97	0.45
1:1:1600:G:P	27:Z:43:LYS:HD2	2.56	0.45
1:1:1035:A:C3'	1:1:1035:A:C8	2.99	0.45
1:1:681:U:H2'	1:1:682:U:H5'	1.98	0.45
1:1:193:C:C5'	1:1:193:C:H6	2.24	0.45
9:H:27:LEU:O	9:H:40:LEU:HD11	2.17	0.45
1:1:1204:A:O2'	1:1:1699:A:H2'	2.16	0.45
1:1:1695:A:C6	1:1:1696:C:O2	2.69	0.45
1:1:1284:A:N7	1:1:1286:G:OP2	2.49	0.45
1:1:1394:G:C6	1:1:1474:A:C2	3.05	0.45
1:1:1395:C:O2'	1:1:1396:A:H5'	2.16	0.45
1:1:1622:U:C6	1:1:1622:U:H3'	2.50	0.45
2:A:178:LEU:O	2:A:182:VAL:HG23	2.15	0.45
2:A:39:TYR:CZ	2:A:50:ASN:HB2	2.51	0.45
1:1:84:A:H3'	26:Y:122:LYS:HD2	1.98	0.45
1:1:1647:A:O2'	1:1:1648:G:C5'	2.61	0.45
1:1:1648:G:H21	18:Q:128:GLU:CB	2.29	0.45
20:S:70:ILE:HD13	20:S:77:TYR:CE1	2.52	0.45
1:1:667:U:H2'	1:1:668:A:H5''	1.96	0.45
20:S:74:PRO:HG2	20:S:84:LEU:HD21	1.96	0.45
1:1:831:G:H2'	1:1:832:G:C8	2.51	0.45
5:D:58:VAL:HA	5:D:65:ARG:HD3	1.97	0.45
11:J:75:ASN:O	11:J:79:ARG:HB2	2.16	0.45
24:W:94:LEU:HD12	24:W:97:ARG:HH22	1.80	0.45
20:S:73:ASN:HD22	20:S:76:GLN:HB2	1.81	0.45
1:1:1738:C:O5'	1:1:1738:C:H6	1.99	0.45
1:1:1415:C:H5''	1:1:1415:C:C6	2.52	0.45
1:1:1639:G:C2'	1:1:1639:G:N3	2.79	0.45
1:1:1532:C:H3'	1:1:1637:A:H62	1.81	0.45
1:1:1654:G:C2'	1:1:1655:C:C5	2.99	0.45
1:1:683:G:Cl'	1:1:1023:A:C2	2.86	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1101:U:C6	1:1:1101:U:C3'	2.98	0.45
1:1:1132:C:C5'	1:1:1132:C:H6	2.30	0.45
1:1:621:C:H2'	1:1:621:C:O2	2.15	0.45
1:1:899:U:C2'	1:1:900:C:C6	2.98	0.45
1:1:386:C:OP2	13:L:136:LYS:HD3	2.16	0.45
1:1:1277:C:H2'	1:1:1277:C:O2	2.16	0.45
1:1:1289:U:C5	1:1:1311:C:O2	2.70	0.45
1:1:446:G:OP1	10:I:49:ARG:O	2.34	0.45
2:A:40:LYS:HB2	19:R:105:MET:CA	2.46	0.45
1:1:850:C:H2'	1:1:851:C:C5'	2.45	0.45
1:1:1260:A:C8	1:1:1260:A:O5'	2.70	0.45
1:1:1579:A:N7	22:U:56:MET:HG2	2.32	0.45
1:1:1593:C:H5	27:Z:104:ARG:NH2	2.05	0.45
16:O:106:LYS:HE3	16:O:135:ILE:HG22	1.97	0.45
1:1:1814:G:O5'	1:1:1814:G:C8	2.62	0.45
1:1:381:C:H5''	10:I:48:VAL:CG2	2.46	0.45
1:1:1201:U:C6	1:1:1201:U:O5'	2.67	0.45
1:1:567:C:H2'	1:1:568:C:C5'	2.44	0.45
18:Q:45:ARG:HH21	21:T:10:ASN:HD21	1.65	0.45
12:K:59:LYS:HB2	12:K:70:TYR:CD2	2.51	0.45
1:1:1413:G:C4	1:1:1414:A:C8	3.05	0.45
1:1:1586:U:O2	1:1:1587:G:C8	2.69	0.45
1:1:794:A:O5'	1:1:794:A:H8	2.00	0.45
1:1:794:A:O2'	1:1:795:A:H4'	2.16	0.45
1:1:559:G:C5'	1:1:560:A:H5''	2.46	0.45
1:1:1484:A:C5'	5:D:159:HIS:HB3	2.37	0.45
1:1:685:A:C8	1:1:685:A:O5'	2.69	0.45
8:G:127:THR:CG2	8:G:129:VAL:HG23	2.46	0.45
1:1:1338:G:H2'	1:1:1339:U:C6	2.51	0.45
3:B:176:VAL:O	3:B:178:THR:N	2.50	0.45
1:1:1120:U:O4	1:1:1121:G:C5	2.69	0.45
27:Z:54:THR:O	27:Z:58:LEU:HG	2.16	0.45
1:1:428:U:C3'	1:1:429:C:H6	2.28	0.45
21:T:110:LEU:HB3	21:T:112:MET:HG3	1.99	0.45
1:1:1322:G:H3'	1:1:1322:G:C8	2.51	0.45
6:E:49:ARG:HH21	6:E:58:GLY:HA2	1.82	0.45
4:C:94:ILE:HG13	4:C:95:ASP:N	2.31	0.45
1:1:598:G:C8	1:1:598:G:O5'	2.69	0.45
1:1:133:C:H3'	1:1:134:C:C5'	2.47	0.45
1:1:313:A:H5''	8:G:191:ARG:HH12	1.81	0.45
1:1:494:C:O2'	1:1:495:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1632:G:H4'	1:1:1632:G:OP1	2.17	0.45
1:1:694:G:H4'	1:1:694:G:OP2	2.16	0.45
1:1:100:U:H2'	1:1:101:U:H5'	1.99	0.45
1:1:1765:C:H2'	1:1:1766:C:C1'	2.46	0.45
1:1:901:G:H8	1:1:901:G:P	2.38	0.45
1:1:1395:C:H2'	1:1:1396:A:O4'	2.16	0.45
1:1:69:C:C3'	1:1:69:C:C6	2.99	0.45
1:1:1782:G:C2	1:1:1783:C:N4	2.84	0.45
22:U:32:LEU:HD21	22:U:87:ARG:HG2	1.97	0.45
6:E:125:LYS:H	6:E:142:HIS:CE1	2.34	0.45
1:1:1326:U:O2	1:1:1326:U:O4'	2.35	0.45
1:1:1177:U:H2'	1:1:1178:U:H6	1.80	0.45
1:1:143:U:C2	8:G:180:VAL:HG11	2.52	0.45
1:1:1292:C:C6	1:1:1292:C:O5'	2.65	0.45
14:M:61:TYR:CE1	14:M:107:SER:CB	2.98	0.45
1:1:93:U:H3'	1:1:94:G:C8	2.52	0.45
1:1:1210:G:H4'	2:A:85:ARG:CZ	47.66	0.45
7:F:184:SER:O	7:F:186:ASN:N	2.49	0.45
3:B:158:HIS:O	3:B:161:VAL:HB	2.17	0.45
26:Y:103:SER:HB2	26:Y:107:ARG:CG	2.46	0.45
14:M:19:GLN:HA	14:M:88:TRP:CD1	2.51	0.45
5:D:162:ASP:N	5:D:163:PRO:HD2	2.32	0.45
1:1:1849:G:H2'	1:1:1850:A:H5'	1.99	0.45
1:1:1013:U:C4'	1:1:1129:G:H21	2.29	0.45
1:1:1394:G:C2'	1:1:1395:C:H5'	2.46	0.45
1:1:1518:C:H5''	1:1:1519:U:H5''	1.97	0.45
3:B:84:PHE:CE1	3:B:100:PHE:HE2	2.35	0.45
3:B:172:MET:O	3:B:176:VAL:HG23	2.16	0.45
1:1:1494:U:C1'	1:1:1495:G:OP2	2.65	0.45
6:E:99:PHE:CD1	6:E:111:VAL:HB	2.51	0.45
2:A:42:LYS:HB3	2:A:46:ILE:H	1.82	0.45
1:1:381:C:C5'	1:1:381:C:H6	2.30	0.45
1:1:1195:A:H5''	1:1:1195:A:H8	1.81	0.45
8:G:84:TYR:OH	8:G:91:GLU:HB3	2.15	0.45
1:1:840:C:H4'	1:1:841:G:OP2	2.17	0.45
1:1:422:U:O2	1:1:652:U:H5''	2.17	0.45
1:1:1188:A:OP1	1:1:1188:A:H4'	2.17	0.45
1:1:1684:C:C3'	1:1:1685:U:C5'	2.95	0.45
1:1:1420:G:O2'	21:T:2:PRO:HA	2.16	0.45
1:1:1639:G:OP1	1:1:1639:G:H4'	2.17	0.45
1:1:133:C:C6	1:1:134:C:H4'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:178:C:H2'	1:1:179:C:O4'	2.15	0.45
1:1:184:G:C8	1:1:185:G:H1'	2.51	0.45
1:1:67:C:C4	8:G:164:LYS:N	2.85	0.45
21:T:113:VAL:HG13	21:T:121:ARG:HB2	1.99	0.45
1:1:753:C:C4	1:1:754:G:C4	3.04	0.45
1:1:753:C:N4	1:1:754:G:N3	2.65	0.45
13:L:101:ARG:CB	25:X:10:ALA:HB2	2.47	0.45
1:1:1401:A:H4'	22:U:52:GLY:HA3	1.99	0.45
1:1:374:G:O6	1:1:385:G:O6	2.35	0.45
1:1:1277:C:H5''	1:1:1277:C:C6	2.52	0.45
10:I:68:GLY:CA	13:L:21:LYS:HE3	2.47	0.45
19:R:105:MET:CG	19:R:106:LEU:N	2.79	0.45
26:Y:7:ILE:HG23	26:Y:25:ILE:HG23	1.98	0.45
1:1:203:G:O5'	1:1:203:G:H8	1.99	0.45
1:1:1377:U:O2	1:1:1379:A:H5'	2.17	0.45
1:1:1083:A:C2	1:1:1861:G:C4	3.04	0.45
1:1:548:C:O2	1:1:548:C:H2'	2.17	0.45
8:G:15:LEU:HD13	8:G:15:LEU:C	2.37	0.45
15:N:99:ARG:HH12	15:N:143:SER:HA	1.82	0.45
13:L:128:VAL:HG12	13:L:142:VAL:HA	1.98	0.45
1:1:104:A:H62	1:1:352:U:H5	1.63	0.45
1:1:1206:G:N3	1:1:1834:A:H1'	2.32	0.45
1:1:1420:G:OP2	1:1:1420:G:C8	2.68	0.45
1:1:189:U:C6	1:1:189:U:P	3.10	0.45
1:1:336:A:N3	1:1:337:C:H5	2.15	0.45
1:1:1602:U:C6	1:1:1602:U:C3'	3.00	0.45
1:1:1608:U:H5''	20:S:130:ARG:NH1	2.32	0.45
21:T:76:THR:CG2	21:T:95:GLY:H	2.29	0.45
1:1:594:A:H1'	1:1:643:A:H62	1.75	0.45
1:1:1750:C:C6	1:1:1750:C:O5'	2.70	0.45
6:E:52:LEU:HB3	6:E:54:TYR:CD2	2.51	0.45
1:1:1661:A:C5	1:1:1662:U:N3	2.85	0.45
1:1:1676:U:H3'	1:1:1677:U:H5''	1.98	0.45
26:Y:29:HIS:CG	26:Y:35:VAL:HG13	2.51	0.45
6:E:29:PRO:HB3	6:E:45:ILE:HG21	1.99	0.45
5:D:62:LYS:HB3	12:K:94:LEU:O	2.16	0.45
25:X:98:ASP:O	25:X:100:VAL:HG23	2.16	0.45
1:1:1565:C:H2'	1:1:1566:G:C5'	2.45	0.45
24:W:17:ALA:CB	24:W:25:VAL:HG22	2.46	0.45
7:F:20:PHE:CD2	7:F:21:GLY:N	2.81	0.45
7:F:162:ALA:HB2	7:F:172:CYS:CB	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:87:MET:HE1	6:E:123:LEU:HD12	1.99	0.45
15:N:141:TYR:CE1	15:N:146:ALA:HB2	2.51	0.45
14:M:18:LEU:O	14:M:22:LEU:HD13	2.17	0.45
18:Q:53:GLU:HB3	18:Q:54:PRO:HD3	1.99	0.45
1:1:1214:A:C5	1:1:1686:G:C2	3.04	0.45
1:1:1833:C:C5'	1:1:1833:C:C6	2.85	0.45
1:1:181:A:P	1:1:182:C:H5'	2.57	0.45
8:G:177:GLN:O	8:G:178:ARG:HB2	2.17	0.45
1:1:1598:G:H4'	1:1:1600:G:C6	2.51	0.45
1:1:1603:G:H5'	20:S:38:ARG:NE	2.32	0.45
1:1:1635:C:H3'	1:1:1636:G:C5'	2.47	0.45
1:1:746:C:C3'	1:1:746:C:OP1	2.65	0.45
1:1:212:C:H2'	1:1:212:C:O2	2.15	0.45
1:1:190:G:C4'	10:I:116:HIS:O	2.64	0.45
1:1:1406:G:C1'	1:1:1407:U:O5'	2.65	0.45
1:1:1452:A:C6	1:1:1475:G:C6	3.05	0.45
1:1:157:U:H6	1:1:157:U:O5'	1.99	0.45
1:1:411:G:C2	1:1:412:G:H1'	2.52	0.45
1:1:23:G:H2'	1:1:24:C:O4'	2.17	0.45
8:G:159:ARG:HB3	8:G:171:THR:CG2	2.47	0.45
18:Q:16:LYS:HD3	18:Q:17:LYS:HG2	1.97	0.45
1:1:1230:C:H2'	1:1:1231:C:C5'	2.46	0.45
7:F:91:ARG:HA	7:F:91:ARG:NE	2.31	0.45
1:1:1418:C:H5''	21:T:129:ARG:HA	1.99	0.45
1:1:1641:A:H5''	1:1:1641:A:C8	2.50	0.45
1:1:133:C:C2	1:1:179:C:OP1	2.69	0.45
8:G:194:LEU:O	8:G:197:GLN:HB2	2.17	0.45
1:1:1532:C:OP1	1:1:1533:A:H1'	2.16	0.45
1:1:1561:A:N6	1:1:1575:G:C4	2.85	0.45
1:1:1576:G:H2'	1:1:1577:G:C8	2.52	0.45
1:1:1605:G:H21	1:1:1634:A:H62	1.65	0.45
3:B:62:LEU:HD23	3:B:65:ARG:HH21	1.81	0.45
1:1:191:A:OP1	10:I:147:LYS:HB3	2.17	0.45
1:1:35:C:C3'	1:1:36:U:C6	2.97	0.45
1:1:519:A:N1	1:1:520:A:C6	2.85	0.45
1:1:36:U:H5'	1:1:580:U:O2'	2.17	0.45
1:1:1315:U:O5'	1:1:1315:U:H6	2.00	0.45
19:R:5:ARG:HG3	19:R:53:TYR:CD1	2.52	0.45
2:A:203:PHE:HE2	2:A:208:GLU:OE1	2.00	0.45
24:W:80:ASP:OD1	24:W:124:LYS:HG2	2.16	0.45
1:1:870:A:C6	1:1:916:A:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1484:A:H4'	5:D:159:HIS:HB3	1.99	0.45
3:B:186:ASN:O	3:B:190:PRO:CD	2.63	0.45
1:1:1370:A:C5	1:1:1372:U:O4'	2.70	0.45
1:1:1087:A:H4'	1:1:1088:U:OP2	2.16	0.45
9:H:47:ALA:O	9:H:63:PHE:HD1	2.00	0.45
2:A:120:ARG:HA	2:A:120:ARG:NE	2.32	0.45
10:I:37:LYS:HB2	10:I:59:ARG:HG2	1.98	0.45
1:1:1028:A:H3'	1:1:1029:G:C8	2.52	0.45
1:1:1547:C:H42	1:1:1656:G:H4'	1.82	0.44
1:1:1655:C:H2'	1:1:1656:G:H8	1.78	0.44
20:S:25:LYS:HD2	20:S:28:PHE:H	1.82	0.44
1:1:1034:A:C6	1:1:1082:A:C4	3.05	0.44
1:1:95:G:O2'	1:1:96:C:H5'	2.17	0.44
10:I:68:GLY:HA3	13:L:21:LYS:NZ	2.32	0.44
1:1:969:U:H1'	1:1:971:G:O6	2.17	0.44
8:G:38:ALA:O	8:G:41:LEU:HB2	2.17	0.44
1:1:1071:G:H8	1:1:1071:G:O5'	2.00	0.44
13:L:71:ARG:HH12	13:L:73:LEU:CD1	2.28	0.44
1:1:1854:U:H5''	16:O:150:ARG:HH22	1.81	0.44
1:1:845:G:H5''	6:E:108:ARG:NH1	2.28	0.44
1:1:876:C:C6	1:1:877:C:H5	2.35	0.44
3:B:66:VAL:HA	3:B:86:LEU:O	2.17	0.44
4:C:98:LEU:CG	4:C:101:SER:HB2	2.47	0.44
1:1:1375:G:H2'	1:1:1376:A:C5'	2.46	0.44
9:H:83:LEU:HB3	9:H:92:VAL:HG21	1.98	0.44
18:Q:60:LYS:HA	18:Q:63:PHE:CE1	2.52	0.44
21:T:6:VAL:HG22	21:T:65:TYR:CE2	2.52	0.44
1:1:1665:G:C2	21:T:87:VAL:HB	2.51	0.44
8:G:63:MET:HE2	8:G:99:GLY:O	2.17	0.44
2:A:142:LEU:HD12	2:A:142:LEU:O	2.16	0.44
6:E:30:ARG:O	6:E:30:ARG:HG3	2.17	0.44
1:1:1417:C:C4	1:1:1418:C:N4	2.85	0.44
1:1:174:C:H6	1:1:174:C:H5''	1.83	0.44
1:1:573:U:C3'	1:1:573:U:O2	2.65	0.44
1:1:59:U:C3'	1:1:59:U:C6	3.00	0.44
1:1:1081:U:C2'	1:1:1082:A:H5'	2.47	0.44
1:1:1130:G:C8	1:1:1130:G:O5'	2.71	0.44
10:I:130:THR:O	10:I:132:GLU:N	2.50	0.44
1:1:311:C:O2	1:1:311:C:H2'	2.18	0.44
1:1:338:G:H2'	1:1:339:A:N7	2.32	0.44
1:1:1695:A:C5	1:1:1696:C:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:9:GLN:HG3	2:A:10:MET:N	2.32	0.44
1:1:1340:U:H3'	1:1:1341:C:H6	1.77	0.44
1:1:1846:G:H3'	1:1:1847:G:H8	1.81	0.44
8:G:64:LYS:O	8:G:100:CYS:HB2	2.18	0.44
1:1:1321:G:N2	1:1:1322:G:C4	2.85	0.44
1:1:1196:A:O2'	1:1:1197:G:H5'	2.16	0.44
1:1:1127:C:C2'	1:1:1128:C:H5'	2.48	0.44
1:1:611:G:O5'	1:1:611:G:H8	2.01	0.44
15:N:28:LEU:HD11	15:N:32:ASP:HB3	1.99	0.44
1:1:1417:C:C5	1:1:1418:C:N4	2.85	0.44
1:1:130:G:H5'	8:G:195:LYS:HZ3	1.82	0.44
1:1:130:G:O6	1:1:131:C:C5	2.71	0.44
1:1:320:G:HO2'	1:1:321:C:P	2.40	0.44
1:1:574:A:N7	1:1:575:A:H1'	2.33	0.44
1:1:1561:A:C6	1:1:1575:G:N3	2.85	0.44
1:1:746:C:OP1	1:1:746:C:H2'	2.17	0.44
1:1:1099:G:O5'	1:1:1099:G:H8	2.00	0.44
1:1:190:G:H8	1:1:190:G:O5'	2.01	0.44
9:H:31:GLU:HB3	9:H:40:LEU:HD13	1.98	0.44
1:1:1280:G:C2	1:1:1281:G:C6	3.06	0.44
1:1:1620:A:H5'	17:P:115:TYR:OH	2.17	0.44
1:1:1579:A:N3	1:1:1579:A:C3'	2.71	0.44
1:1:1679:A:C4'	1:1:1679:A:OP2	2.65	0.44
1:1:1348:G:C8	1:1:1348:G:O5'	2.62	0.44
1:1:1120:U:H3'	1:1:1120:U:C6	2.52	0.44
1:1:1544:C:H4'	18:Q:80:GLN:NE2	2.32	0.44
6:E:251:GLU:O	6:E:255:ARG:HG3	2.17	0.44
4:C:163:VAL:HB	4:C:164:PRO:HD2	1.99	0.44
22:U:20:ILE:HG21	22:U:98:VAL:HG22	1.99	0.44
21:T:6:VAL:HG22	21:T:65:TYR:HE2	1.82	0.44
13:L:95:TYR:HB2	13:L:102:PHE:CE2	2.52	0.44
1:1:1609:C:C5'	1:1:1609:C:C6	3.00	0.44
1:1:1214:A:H61	1:1:1685:U:H3	1.64	0.44
1:1:1416:C:C6	1:1:1417:C:H5''	2.53	0.44
1:1:125:C:H4'	6:E:136:ILE:CA	2.40	0.44
1:1:571:U:C2'	1:1:572:U:H4'	2.47	0.44
1:1:578:C:OP2	1:1:578:C:C6	2.71	0.44
1:1:1631:U:H2'	1:1:1632:G:O4'	2.17	0.44
1:1:749:U:O2	1:1:795:A:N1	2.50	0.44
1:1:1403:C:H2'	1:1:1404:U:O5'	2.17	0.44
1:1:1407:U:OP2	1:1:1408:U:C5	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:A:205:ARG:HD2	2:A:205:ARG:HA	1.88	0.44
2:A:82:THR:HG22	2:A:205:ARG:HB2	1.99	0.44
10:I:68:GLY:HA3	13:L:21:LYS:CE	2.46	0.44
9:H:117:PRO:HD2	9:H:120:ARG:HD3	1.99	0.44
6:E:160:VAL:HG12	6:E:172:PHE:HB3	1.99	0.44
1:1:1378:A:N3	2:A:105:PRO:HB3	2.32	0.44
1:1:1371:U:O2'	1:1:1372:U:P	2.76	0.44
1:1:946:U:H2'	1:1:947:G:O4'	2.17	0.44
9:H:63:PHE:CD2	9:H:95:ILE:HD11	2.51	0.44
6:E:177:THR:HG23	6:E:196:THR:O	2.18	0.44
1:1:824:C:O2	11:J:144:ILE:HG21	2.17	0.44
14:M:51:VAL:HG22	14:M:109:VAL:O	2.16	0.44
1:1:181:A:C3'	1:1:182:C:C5'	2.87	0.44
1:1:312:G:H22	8:G:195:LYS:CG	2.31	0.44
1:1:743:U:C5	9:H:98:ARG:O	2.70	0.44
1:1:528:A:C8	1:1:528:A:P	3.04	0.44
1:1:1103:C:H2'	1:1:1104:G:H8	1.82	0.44
1:1:1769:C:O5'	1:1:1769:C:H6	2.00	0.44
1:1:33:G:H2'	1:1:34:U:C6	2.53	0.44
1:1:1402:A:C8	1:1:1403:C:C5	3.05	0.44
1:1:308:G:N3	1:1:308:G:OP2	2.51	0.44
1:1:1314:U:H3	12:K:2:LEU:HD11	1.82	0.44
1:1:1242:U:H4'	1:1:1243:U:C5'	2.48	0.44
17:P:29:SER:O	17:P:33:LEU:HD23	2.17	0.44
1:1:1782:G:O2'	1:1:1783:C:C6	2.68	0.44
17:P:126:VAL:HG13	17:P:127:LYS:N	2.23	0.44
6:E:21:ASP:HB2	6:E:24:THR:HG1	1.78	0.44
5:D:74:GLN:O	5:D:78:GLY:CA	2.64	0.44
21:T:36:THR:O	21:T:37:VAL:HB	2.17	0.44
1:1:9:U:O2	1:1:12:U:H5	2.00	0.44
12:K:11:ILE:HG12	12:K:38:LYS:HE2	1.99	0.44
1:1:1223:A:O2'	1:1:1651:A:H4'	2.18	0.44
10:I:104:ILE:HG22	10:I:105:ASP:N	2.33	0.44
1:1:1043:G:O2'	1:1:1044:G:H8	2.01	0.44
10:I:83:TYR:CD1	10:I:205:ARG:HD2	2.53	0.44
5:D:192:TRP:CD1	5:D:203:PRO:HA	2.53	0.44
8:G:74:ARG:HB3	8:G:94:ARG:HE	1.83	0.44
1:1:479:C:O2'	1:1:480:G:H5'	2.17	0.44
8:G:50:VAL:HG11	8:G:111:LEU:HB3	1.99	0.44
8:G:195:LYS:HD3	8:G:195:LYS:C	2.38	0.44
1:1:1657:G:H1	1:1:1667:U:H3	1.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:T:107:LEU:HB3	21:T:113:VAL:HG23	1.98	0.44
21:T:75:MET:HA	21:T:78:ILE:HG22	1.98	0.44
1:1:742:U:H6	9:H:49:LYS:HZ2	1.64	0.44
1:1:746:C:H4'	1:1:747:U:OP2	2.17	0.44
1:1:663:C:C2	1:1:664:A:C8	3.05	0.44
1:1:999:G:H2'	1:1:1000:C:H6	1.81	0.44
1:1:1696:C:O2	1:1:1697:A:C8	2.71	0.44
10:I:26:LYS:O	10:I:29:LEU:HD23	2.17	0.44
22:U:53:PRO:HB2	22:U:55:ARG:NH1	2.32	0.44
1:1:398:A:H4'	1:1:399:C:C3'	2.41	0.44
15:N:35:GLU:HA	15:N:38:TYR:CE2	2.52	0.44
15:N:38:TYR:HB2	15:N:80:LEU:HD22	2.00	0.44
1:1:1363:C:O2	1:1:1363:C:O4'	2.34	0.44
1:1:1348:G:H22	1:1:1381:G:H22	1.63	0.44
1:1:1495:G:N7	22:U:69:PRO:HB2	2.32	0.44
8:G:90:GLY:C	8:G:92:ARG:H	2.20	0.44
3:B:66:VAL:HG22	3:B:85:LYS:HG3	2.00	0.44
11:J:117:LEU:HB2	11:J:119:LEU:HD13	2.00	0.44
1:1:1196:A:C2	1:1:1197:G:H1'	2.53	0.44
1:1:1739:C:C6	1:1:1739:C:O5'	2.70	0.44
15:N:84:LEU:HD11	15:N:88:LEU:HD23	2.00	0.44
18:Q:17:LYS:O	18:Q:17:LYS:HG3	2.18	0.44
21:T:30:VAL:HG11	21:T:35:ASP:OD1	2.17	0.44
1:1:1214:A:C6	1:1:1217:A:C2	3.05	0.44
1:1:181:A:C8	8:G:192:ILE:HG13	2.53	0.44
1:1:497:C:H2'	1:1:498:C:C6	2.53	0.44
1:1:572:U:H6	1:1:572:U:C3'	2.27	0.44
1:1:66:G:H1'	1:1:67:C:OP1	2.18	0.44
1:1:528:A:C2'	1:1:529:A:H5'	2.47	0.44
13:L:101:ARG:C	25:X:10:ALA:HB2	2.38	0.44
3:B:65:ARG:HA	16:O:50:LYS:NZ	2.33	0.44
10:I:131:PRO:HG3	10:I:147:LYS:HZ1	1.83	0.44
2:A:204:TYR:HA	2:A:208:GLU:HG2	2.00	0.44
10:I:29:LEU:HD21	10:I:49:ARG:HD3	1.98	0.44
19:R:105:MET:HG2	19:R:106:LEU:H	1.82	0.44
9:H:115:LYS:O	9:H:117:PRO:HD3	2.18	0.44
1:1:1579:A:C3'	1:1:1580:A:H5''	2.47	0.44
1:1:1790:A:H4'	8:G:81:HIS:CE1	2.52	0.44
8:G:59:GLN:HG2	8:G:59:GLN:O	2.18	0.44
1:1:876:C:H6	1:1:876:C:H3'	1.81	0.44
3:B:66:VAL:CG2	3:B:85:LYS:HE3	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:360:A:N3	1:1:362:C:H3'	2.33	0.44
7:F:158:ALA:CB	7:F:173:LEU:HA	2.47	0.44
1:1:505:G:O2'	1:1:506:G:H5'	2.18	0.44
14:M:56:CYS:SG	14:M:61:TYR:CD1	3.09	0.44
7:F:59:LYS:HB3	7:F:62:ARG:HG2	2.00	0.44
3:B:173:THR:O	3:B:177:GLN:NE2	2.51	0.44
6:E:252:ARG:HH11	11:J:72:PHE:HD1	1.64	0.44
1:1:1665:G:N2	21:T:87:VAL:HB	2.33	0.44
11:J:84:ILE:CG2	11:J:108:ARG:HG3	2.48	0.44
1:1:1149:A:O2'	1:1:1150:A:H3'	2.18	0.44
10:I:173:ALA:HB1	10:I:188:TYR:O	2.17	0.44
1:1:1831:A:C2'	1:1:1832:A:H5'	2.48	0.44
1:1:502:C:H1'	1:1:503:C:O5'	2.18	0.44
1:1:573:U:N3	1:1:576:A:C5	2.86	0.44
8:G:195:LYS:O	8:G:195:LYS:HD3	2.17	0.44
1:1:1598:G:C4'	1:1:1600:G:O6	2.66	0.44
16:O:18:GLY:N	16:O:19:PRO:CD	2.80	0.44
1:1:1256:G:C5	1:1:1257:G:H1'	2.53	0.44
1:1:644:G:H2'	1:1:645:C:C6	2.51	0.44
1:1:1425:G:C6	1:1:1426:U:O4	2.71	0.44
22:U:94:PRO:CD	22:U:97:ILE:HD12	2.38	0.44
12:K:13:GLU:OE1	12:K:83:LEU:HD13	2.17	0.44
1:1:906:U:H2'	1:1:907:G:H8	1.82	0.44
1:1:1510:G:C8	1:1:1510:G:OP2	2.71	0.44
14:M:51:VAL:HG12	14:M:77:ILE:CG1	2.48	0.44
24:W:74:VAL:HG13	24:W:126:LEU:O	2.18	0.44
1:1:315:C:H6	1:1:315:C:C5'	2.31	0.44
1:1:334:C:H2'	1:1:335:G:H8	1.76	0.44
1:1:1016:U:O2'	1:1:1017:U:H5''	2.17	0.44
9:H:31:GLU:HB3	9:H:40:LEU:HD22	2.00	0.44
1:1:899:U:H3'	1:1:900:C:C6	2.52	0.44
1:1:1317:C:O5'	1:1:1506:A:N6	2.51	0.44
18:Q:12:VAL:CG1	18:Q:90:LYS:HB2	2.48	0.44
1:1:1670:C:O5'	1:1:1670:C:H6	2.01	0.44
7:F:48:TYR:CD1	7:F:49:LEU:N	2.86	0.44
3:B:179:ASN:HB2	3:B:183:GLU:HB2	2.00	0.44
3:B:180:ASP:HB3	3:B:181:LEU:H	1.57	0.44
1:1:1115:U:O3'	1:1:1116:C:H3'	2.18	0.44
7:F:39:ILE:HG23	7:F:68:ILE:HG12	2.00	0.44
18:Q:89:SER:OG	18:Q:119:LEU:HD13	2.18	0.44
1:1:1762:C:H2'	1:1:1763:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:389:A:N3	1:1:389:A:H2'	2.33	0.44
13:L:55:TYR:CD2	13:L:115:PRO:HG2	2.53	0.44
6:E:203:GLY:O	6:E:204:SER:HB2	2.17	0.44
13:L:86:ILE:HG13	13:L:111:VAL:HG13	2.00	0.44
13:L:82:MET:HG2	13:L:85:THR:CG2	2.48	0.44
7:F:131:ALA:O	7:F:133:THR:N	2.51	0.43
1:1:125:C:O2'	1:1:126:G:H5''	2.18	0.43
1:1:317:C:H4'	1:1:317:C:OP1	2.19	0.43
1:1:67:C:C5	8:G:164:LYS:HB2	2.53	0.43
1:1:1533:A:C5	1:1:1604:G:O4'	2.71	0.43
1:1:795:A:C2	1:1:796:G:H1'	2.53	0.43
3:B:47:THR:HB	3:B:65:ARG:HH11	1.81	0.43
1:1:1767:C:H3'	1:1:1767:C:H6	1.80	0.43
1:1:593:C:C4'	1:1:594:A:OP2	2.66	0.43
1:1:1406:G:C4'	1:1:1407:U:H5'	2.48	0.43
7:F:99:ILE:HD11	27:Z:106:GLN:OE1	2.18	0.43
1:1:1447:G:OP1	22:U:85:HIS:ND1	2.51	0.43
3:B:129:THR:HB	3:B:180:ASP:HA	1.99	0.43
3:B:66:VAL:CG2	3:B:85:LYS:HG3	2.48	0.43
1:1:1109:C:O2	1:1:1109:C:C2'	2.66	0.43
1:1:1745:A:N3	1:1:1745:A:H3'	2.32	0.43
6:E:36:HIS:CG	6:E:85:GLY:HA3	2.53	0.43
11:J:137:VAL:HB	11:J:142:VAL:CG2	2.48	0.43
1:1:1471:C:O5'	1:1:1471:C:H6	2.01	0.43
2:A:77:ILE:HG12	2:A:99:ILE:HG21	1.99	0.43
1:1:1221:G:H2'	1:1:1222:G:O4'	2.17	0.43
26:Y:12:PHE:HA	26:Y:22:GLN:O	2.18	0.43
17:P:58:LYS:HG2	17:P:61:ARG:HH21	1.83	0.43
17:P:100:LYS:O	17:P:101:THR:HB	2.18	0.43
18:Q:110:ASP:O	18:Q:114:GLN:HG2	2.18	0.43
1:1:1237:C:H2'	1:1:1238:U:O4'	2.18	0.43
4:C:191:VAL:HA	4:C:227:ARG:O	2.17	0.43
22:U:39:LEU:C	22:U:39:LEU:HD13	2.38	0.43
1:1:1829:G:O5'	1:1:1829:G:H8	2.01	0.43
1:1:1418:C:C5'	21:T:129:ARG:HA	2.49	0.43
1:1:1654:G:H5'	21:T:82:ARG:NH2	2.33	0.43
1:1:900:C:C4	1:1:901:G:O6	2.71	0.43
1:1:10:G:C8	1:1:1697:A:H2	2.32	0.43
7:F:100:ILE:HD11	7:F:177:LEU:HD22	2.00	0.43
1:1:805:U:OP1	24:W:82:GLN:HG3	2.18	0.43
1:1:438:G:H2'	1:1:439:A:H8	1.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:69:C:H3'	1:1:69:C:C6	2.53	0.43
1:1:1050:A:H2'	1:1:1051:G:C5'	2.48	0.43
1:1:1511:U:H2'	1:1:1512:C:O4'	2.18	0.43
17:P:60:LEU:HD21	17:P:92:SER:CB	2.43	0.43
1:1:973:C:C6	1:1:973:C:H3'	2.53	0.43
3:B:112:SER:O	3:B:115:LYS:HE2	2.18	0.43
25:X:41:PHE:HB3	25:X:44:ALA:HB3	1.99	0.43
4:C:60:TRP:CD1	4:C:92:GLU:OE1	2.71	0.43
1:1:1571:G:H2'	1:1:1572:C:O4'	2.18	0.43
3:B:109:LYS:O	3:B:113:MET:HG2	2.18	0.43
1:1:401:A:N7	1:1:402:C:C5	2.85	0.43
26:Y:45:ALA:HB1	26:Y:50:THR:O	2.18	0.43
1:1:1347:U:H2'	1:1:1347:U:O2	2.17	0.43
1:1:164:A:H3'	1:1:165:G:H8	1.81	0.43
1:1:165:G:O2'	1:1:166:A:H5'	2.18	0.43
1:1:313:A:C6	8:G:187:HIS:NE2	2.86	0.43
21:T:75:MET:HB2	21:T:121:ARG:NH2	2.33	0.43
1:1:1606:G:H5'	21:T:86:GLY:HA3	1.99	0.43
1:1:20:G:C2'	1:1:21:U:H5'	2.48	0.43
1:1:659:G:H3'	25:X:17:ARG:HH21	1.82	0.43
1:1:1404:U:H6	1:1:1404:U:OP2	1.99	0.43
1:1:1442:U:C5'	1:1:1443:C:H5''	2.47	0.43
1:1:92:A:C8	1:1:446:G:H2'	2.53	0.43
3:B:75:GLN:O	3:B:76:ASN:CB	2.66	0.43
20:S:77:TYR:O	20:S:78:LYS:CB	2.66	0.43
1:1:1083:A:H2'	1:1:1858:G:H21	1.83	0.43
25:X:123:VAL:HA	25:X:130:LEU:HD12	2.00	0.43
19:R:51:ALA:CA	19:R:54:VAL:HG12	2.46	0.43
10:I:102:VAL:HG12	10:I:103:LEU:N	2.33	0.43
1:1:1043:G:C8	1:1:1043:G:O5'	2.71	0.43
23:V:17:CYS:SG	23:V:56:CYS:N	2.91	0.43
14:M:19:GLN:HB3	14:M:88:TRP:CE2	2.53	0.43
18:Q:10:VAL:HB	18:Q:25:CYS:HB3	1.98	0.43
24:W:7:LEU:HA	24:W:34:ILE:HG12	2.00	0.43
10:I:19:LYS:HA	10:I:20:PRO:HD3	1.85	0.43
1:1:123:G:OP1	1:1:123:G:H4'	2.19	0.43
1:1:1700:C:C4'	1:1:1701:C:OP2	2.67	0.43
7:F:129:GLY:HA2	7:F:134:VAL:HG12	1.99	0.43
1:1:164:A:C2'	1:1:165:G:C8	3.01	0.43
1:1:493:A:O2'	1:1:494:C:H5'	2.18	0.43
8:G:162:LEU:HG	8:G:163:ASN:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:99:A:H2'	1:1:100:U:C6	2.53	0.43
9:H:31:GLU:CD	9:H:40:LEU:HD22	2.39	0.43
18:Q:38:PRO:HD2	21:T:7:LYS:O	2.19	0.43
1:1:1275:G:O6	1:1:1506:A:H8	2.01	0.43
1:1:1311:C:C6	1:1:1311:C:OP2	2.71	0.43
2:A:90:PHE:CZ	2:A:178:LEU:HD22	2.53	0.43
1:1:441:C:H41	1:1:448:A:H1'	1.82	0.43
2:A:50:ASN:HD21	2:A:53:ARG:CG	2.32	0.43
1:1:1341:C:O5'	1:1:1341:C:C6	2.71	0.43
7:F:49:LEU:HD22	18:Q:47:LEU:HD23	2.00	0.43
1:1:1265:A:N3	1:1:1265:A:C2'	2.81	0.43
1:1:1353:A:C2'	1:1:1354:G:H5''	2.45	0.43
1:1:835:C:H2'	1:1:835:C:O2	2.18	0.43
1:1:1120:U:C6	1:1:1120:U:C3'	3.00	0.43
1:1:1122:A:H4'	3:B:205:TYR:CD1	2.53	0.43
1:1:29:G:C5'	25:X:129:SER:HB3	2.47	0.43
1:1:428:U:H3'	1:1:429:C:C5	2.53	0.43
7:F:69:VAL:O	7:F:72:LEU:HB2	2.18	0.43
23:V:78:ILE:HB	23:V:81:LYS:NZ	2.34	0.43
9:H:148:LEU:N	24:W:42:MET:HE2	2.34	0.43
19:R:51:ALA:HA	19:R:54:VAL:CG1	2.48	0.43
9:H:47:ALA:H	9:H:63:PHE:HB2	1.84	0.43
1:1:1043:G:N3	1:1:1044:G:C8	2.86	0.43
14:M:65:VAL:CG2	14:M:108:CYS:SG	3.07	0.43
7:F:59:LYS:HB3	7:F:62:ARG:CG	2.49	0.43
6:E:123:LEU:HD23	6:E:161:GLN:HA	2.00	0.43
21:T:123:LEU:H	21:T:123:LEU:HD23	1.83	0.43
13:L:95:TYR:CE2	13:L:97:ARG:HA	2.53	0.43
1:1:118:C:H2'	1:1:119:U:O4'	2.18	0.43
1:1:1217:A:N3	1:1:1685:U:O2	2.51	0.43
1:1:1829:G:H1'	1:1:1850:A:H2	1.84	0.43
1:1:1431:G:C2'	1:1:1432:U:C6	2.73	0.43
1:1:133:C:O5'	1:1:133:C:H6	2.01	0.43
1:1:313:A:OP2	1:1:313:A:H4'	2.18	0.43
1:1:67:C:C4	8:G:164:LYS:HB2	2.53	0.43
8:G:36:VAL:O	8:G:49:VAL:HA	2.18	0.43
1:1:1547:C:H42	1:1:1656:G:C4'	2.31	0.43
7:F:165:ASN:ND2	7:F:167:LYS:HB2	2.33	0.43
1:1:692:G:O2'	1:1:693:A:H5'	2.19	0.43
1:1:557:U:H2'	1:1:558:G:N9	2.34	0.43
1:1:621:C:H5''	1:1:622:C:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:435:A:H2'	1:1:450:C:C6	2.54	0.43
1:1:380:G:C2	1:1:382:C:H6	2.34	0.43
1:1:338:G:H8	1:1:338:G:C5'	2.30	0.43
1:1:1453:C:H2'	1:1:1454:A:O3'	2.18	0.43
1:1:1622:U:C6	1:1:1622:U:C3'	3.01	0.43
10:I:190:LEU:HD22	10:I:194:GLU:HG3	2.01	0.43
3:B:135:LEU:HD23	3:B:135:LEU:N	2.34	0.43
3:B:137:LEU:HB3	3:B:215:VAL:HG23	2.01	0.43
1:1:951:C:O2	1:1:975:G:N1	2.51	0.43
1:1:977:C:C6	1:1:977:C:OP2	2.71	0.43
1:1:1094:C:C2'	1:1:1095:C:H5'	2.49	0.43
1:1:583:A:O3'	1:1:584:A:H8	2.01	0.43
23:V:79:VAL:HG13	23:V:80:SER:N	2.33	0.43
1:1:1747:C:H2'	1:1:1748:G:H8	1.82	0.43
3:B:90:ASP:OD1	3:B:97:LEU:HB2	2.19	0.43
10:I:103:LEU:HD23	10:I:170:LYS:HB2	1.99	0.43
1:1:136:C:H4'	1:1:137:U:OP2	2.17	0.43
27:Z:87:ALA:O	27:Z:91:LEU:HD13	2.18	0.43
1:1:1700:C:N3	1:1:1834:A:N6	2.66	0.43
1:1:65:C:C4'	8:G:133:LEU:HD22	2.46	0.43
20:S:24:ARG:HE	20:S:29:ALA:HA	1.84	0.43
1:1:562:U:C6	1:1:562:U:C3'	3.01	0.43
3:B:49:VAL:HG22	3:B:65:ARG:NH2	2.33	0.43
1:1:901:G:C4	1:1:902:G:C8	3.07	0.43
1:1:941:C:H2'	1:1:942:G:C8	2.53	0.43
26:Y:119:GLY:HA2	26:Y:122:LYS:HB3	2.01	0.43
5:D:205:PRO:O	19:R:42:PRO:HG2	2.18	0.43
3:B:82:ARG:HG2	3:B:103:MET:CE	2.48	0.43
1:1:985:G:H4'	1:1:986:G:H5'	2.00	0.43
1:1:1815:A:O5'	1:1:1815:A:H8	2.01	0.43
1:1:28:U:H2'	1:1:29:G:H8	1.82	0.43
5:D:82:GLY:O	5:D:85:GLU:HB2	2.18	0.43
3:B:86:LEU:HB3	3:B:98:THR:OG1	2.19	0.43
20:S:86:ARG:HH22	20:S:107:LEU:HD21	1.84	0.43
1:1:1066:U:H2'	1:1:1067:C:C6	2.54	0.43
1:1:827:A:O5'	11:J:8:VAL:HG13	2.19	0.43
5:D:210:ILE:HG12	19:R:39:ALA:HB1	2.00	0.43
1:1:1668:U:H3'	1:1:1669:G:H5''	1.99	0.43
1:1:1188:A:H3'	1:1:1189:A:C8	2.53	0.43
23:V:30:ALA:HB1	23:V:60:ARG:HD3	2.01	0.43
3:B:54:GLY:O	3:B:55:THR:HB	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1794:C:O5'	1:1:1794:C:H6	2.00	0.43
1:1:152:U:OP2	1:1:152:U:C6	2.71	0.43
1:1:1703:C:C4	1:1:1704:C:C4	3.06	0.43
1:1:1830:U:C6	1:1:1830:U:O5'	2.72	0.43
1:1:1216:C:H1'	18:Q:143:LYS:NZ	2.33	0.43
1:1:331:C:H41	8:G:189:ARG:HH12	1.66	0.43
1:1:1535:U:H1'	7:F:88:MET:SD	2.59	0.43
1:1:1638:G:C5'	1:1:1638:G:N3	2.73	0.43
1:1:751:G:C2'	1:1:752:G:C8	2.90	0.43
1:1:211:G:H2'	1:1:212:C:C5	2.48	0.43
1:1:616:A:N3	6:E:12:VAL:HG21	61.27	0.43
1:1:1438:A:OP1	1:1:1438:A:C4'	2.67	0.43
1:1:1398:G:OP1	1:1:1398:G:C2	2.71	0.43
1:1:1627:C:H2'	1:1:1628:C:C6	2.53	0.43
3:B:84:PHE:CZ	3:B:103:MET:SD	3.12	0.43
8:G:127:THR:HG23	8:G:129:VAL:HG23	2.01	0.43
1:1:1648:G:H8	18:Q:125:ARG:HB2	1.82	0.43
1:1:1377:U:C5	2:A:102:ARG:HD3	2.54	0.43
1:1:1494:U:C1'	1:1:1495:G:P	3.06	0.43
1:1:465:A:OP2	1:1:465:A:H8	2.02	0.43
1:1:360:A:H4'	1:1:361:U:C5'	2.49	0.43
7:F:72:LEU:HD22	7:F:151:ILE:HG12	2.00	0.43
7:F:32:ASP:CB	7:F:117:ILE:CG2	2.94	0.43
1:1:1086:G:OP1	1:1:1086:G:C2	2.71	0.43
25:X:32:LEU:O	25:X:34:THR:N	2.51	0.43
3:B:22:VAL:O	3:B:23:ASP:C	2.57	0.43
5:D:65:ARG:O	5:D:69:LEU:HG	2.19	0.43
1:1:1173:A:C6	1:1:1188:A:C8	3.06	0.43
10:I:6:ASP:HB3	10:I:28:GLU:CD	2.38	0.43
19:R:41:ILE:HG21	19:R:47:ARG:HB2	2.00	0.43
7:F:52:SER:C	7:F:54:GLY:H	2.21	0.43
1:1:116:U:H3	1:1:347:G:H1	1.67	0.43
1:1:1412:C:C4	1:1:1414:A:H5''	2.53	0.43
1:1:1416:C:C4	1:1:1417:C:O4'	2.71	0.43
1:1:493:A:H1'	1:1:573:U:O3'	2.18	0.43
1:1:77:A:C5	8:G:155:GLN:HB3	2.53	0.43
1:1:571:U:O2'	26:Y:59:GLY:HA2	2.18	0.43
1:1:1561:A:H1'	1:1:1583:C:H5'	2.00	0.43
1:1:1597:C:OP2	27:Z:82:SER:HB3	2.19	0.43
20:S:41:ALA:O	20:S:44:VAL:HB	2.17	0.43
1:1:560:A:O3'	1:1:561:A:C8	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:587:A:C2'	1:1:592:C:H41	2.27	0.43
1:1:526:A:O2'	11:J:128:VAL:HG22	2.19	0.43
1:1:474:G:N2	1:1:507:G:O2'	2.51	0.43
22:U:51:LYS:HE3	22:U:90:ASP:CB	2.48	0.43
1:1:1620:A:C2	1:1:1624:U:H1'	2.54	0.43
1:1:952:G:C2	1:1:975:G:N1	2.86	0.43
1:1:1647:A:H1'	1:1:1649:U:O4'	2.19	0.43
6:E:208:VAL:HG11	6:E:225:ILE:CD1	2.49	0.43
1:1:1543:U:C4'	1:1:1544:C:OP1	2.66	0.43
5:D:166:TYR:CE1	5:D:200:PRO:HB3	2.54	0.43
1:1:982:G:H5'	1:1:1044:G:OP1	2.19	0.43
4:C:261:PHE:HE1	23:V:16:LYS:O	2.02	0.43
10:I:63:GLY:O	10:I:75:LYS:HD2	2.19	0.43
9:H:10:LYS:N	9:H:11:PRO:HD3	2.34	0.43
14:M:81:ASP:OD1	14:M:84:LYS:HB2	2.19	0.43
6:E:139:LEU:HD22	6:E:147:ILE:HD12	2.01	0.43
1:1:1829:G:C4	1:1:1830:U:H5	2.37	0.43
1:1:1416:C:N4	1:1:1417:C:N1	2.67	0.43
1:1:571:U:O5'	1:1:572:U:H5''	2.19	0.43
1:1:77:A:H62	8:G:155:GLN:HB3	1.84	0.43
8:G:50:VAL:HG13	8:G:112:VAL:O	2.19	0.43
1:1:1575:G:C2	1:1:1576:G:C6	3.06	0.43
1:1:1589:A:H2'	1:1:1590:C:C6	2.54	0.43
1:1:1129:G:H3'	1:1:1130:G:N7	2.33	0.43
1:1:1438:A:OP1	1:1:1438:A:H4'	2.17	0.43
1:1:439:A:C2'	1:1:440:G:H5'	2.48	0.43
1:1:426:A:C2'	1:1:426:A:N3	2.82	0.43
1:1:1031:A:H1'	15:N:116:ILE:CD1	2.48	0.43
1:1:1325:G:H8	1:1:1325:G:OP2	2.02	0.43
1:1:863:U:O5'	1:1:863:U:C6	2.69	0.43
1:1:810:A:H3'	1:1:810:A:C8	2.54	0.43
1:1:876:C:O2'	1:1:877:C:H5'	2.19	0.43
7:F:179:ASN:HB2	7:F:187:SER:HB3	2.00	0.43
1:1:25:A:C8	1:1:25:A:H3'	2.53	0.43
25:X:41:PHE:CE1	25:X:120:PHE:CE1	3.06	0.43
24:W:28:ARG:CB	24:W:29:PRO:CD	2.96	0.43
1:1:678:U:H3'	1:1:678:U:H6	1.83	0.43
15:N:84:LEU:HD23	15:N:89:TYR:CD2	2.53	0.43
6:E:126:VAL:HG13	6:E:139:LEU:HG	2.00	0.43
21:T:134:ILE:O	21:T:137:GLN:HG2	2.19	0.43
10:I:12:ARG:HG3	10:I:13:LYS:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:52:G:O5'	1:1:52:G:H8	2.02	0.43
4:C:173:LYS:N	4:C:173:LYS:HD2	2.34	0.43
1:1:1218:C:C2'	1:1:1219:C:H5'	2.48	0.43
1:1:1689:C:H2'	1:1:1690:U:O4'	2.19	0.43
10:I:97:VAL:O	10:I:175:ILE:HD11	2.18	0.43
1:1:500:A:C2'	1:1:501:C:C5'	2.91	0.43
1:1:558:G:O5'	1:1:558:G:C8	2.70	0.43
1:1:343:A:C4'	6:E:128:LYS:HZ1	2.31	0.43
1:1:1130:G:C2	1:1:1131:G:C8	3.07	0.43
1:1:1102:G:N2	1:1:1130:G:N2	2.66	0.43
1:1:1130:G:C4'	15:N:10:GLY:HA2	2.49	0.43
1:1:924:G:H5''	15:N:3:ARG:HD2	2.01	0.43
1:1:43:U:C5'	1:1:44:U:H5	2.08	0.43
1:1:618:C:C1'	1:1:632:C:H5'	2.25	0.43
1:1:1261:C:H2'	1:1:1261:C:O2	2.18	0.43
1:1:684:G:C4	1:1:920:A:C4	3.07	0.43
25:X:60:LYS:O	25:X:61:GLN:HB2	2.19	0.43
1:1:1177:U:H2'	1:1:1178:U:C6	2.53	0.43
5:D:80:PRO:C	5:D:82:GLY:H	2.21	0.43
1:1:875:A:O3'	1:1:876:C:C6	2.71	0.43
1:1:878:G:N2	1:1:908:A:C2	2.87	0.43
1:1:361:U:H4'	1:1:362:C:H5'	2.01	0.43
7:F:77:MET:HB3	7:F:89:THR:OG1	2.19	0.43
6:E:56:LEU:HB2	26:Y:22:GLN:HE22	1.84	0.43
26:Y:78:SER:HB3	26:Y:81:TYR:CD2	2.54	0.43
1:1:936:G:H2'	1:1:937:C:C6	2.53	0.43
15:N:16:LEU:H	24:W:57:ARG:HH21	1.67	0.43
1:1:853:C:O2	1:1:853:C:O4'	2.36	0.43
1:1:217:A:O2'	1:1:218:U:H5'	2.18	0.42
8:G:197:GLN:O	8:G:201:LYS:HG3	2.18	0.42
27:Z:43:LYS:HE3	27:Z:44:LEU:O	2.19	0.42
1:1:792:C:H2'	1:1:793:G:C8	2.54	0.42
1:1:527:C:C1'	11:J:125:HIS:ND1	2.82	0.42
11:J:125:HIS:NE2	11:J:129:LEU:HD11	2.33	0.42
1:1:1766:C:H5'	1:1:1767:C:OP2	2.18	0.42
1:1:1313:A:O5'	1:1:1314:U:H5	2.02	0.42
1:1:1387:G:C4	1:1:1388:A:C8	3.07	0.42
1:1:911:C:H5''	1:1:912:C:N4	2.34	0.42
9:H:101:LEU:HB2	9:H:116:ARG:HG3	2.01	0.42
9:H:59:ALA:CB	9:H:91:HIS:HB2	2.49	0.42
1:1:1430:C:H2'	1:1:1430:C:O2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:124:CYS:SG	6:E:162:ILE:HB	2.59	0.42
3:B:183:GLU:HG3	3:B:187:LYS:HE3	2.01	0.42
1:1:1115:U:H4'	1:1:1116:C:OP2	2.17	0.42
8:G:64:LYS:HE2	8:G:97:VAL:CG1	2.44	0.42
1:1:1764:G:C3'	1:1:1764:G:N3	2.80	0.42
1:1:22:A:H1'	11:J:17:ARG:HH11	1.83	0.42
1:1:839:C:C4	26:Y:48:TYR:O	2.72	0.42
20:S:118:ARG:HA	20:S:123:LEU:CD1	2.49	0.42
1:1:401:A:H2'	1:1:402:C:H5'	2.01	0.42
16:O:53:ILE:HG22	16:O:54:CYS:N	2.34	0.42
4:C:136:HIS:HB3	4:C:162:ILE:HD11	2.01	0.42
1:1:1719:A:H8	1:1:1719:A:O5'	2.02	0.42
1:1:148:U:C4	1:1:169:U:C4	3.06	0.42
1:1:1637:A:H4'	1:1:1638:G:H5'	1.91	0.42
1:1:797:C:C5	9:H:106:ARG:HB3	2.53	0.42
1:1:346:C:O4'	6:E:33:THR:HG22	2.19	0.42
1:1:527:C:O2'	11:J:121:LYS:HE3	2.18	0.42
1:1:1456:G:C8	1:1:1456:G:C5'	2.96	0.42
1:1:1180:C:C6	1:1:1180:C:H3'	2.49	0.42
1:1:1181:A:H2'	1:1:1182:A:O4'	2.19	0.42
1:1:409:C:H5	1:1:426:A:H5'	1.84	0.42
1:1:1781:A:O2'	1:1:1782:G:P	2.76	0.42
1:1:1092:G:H1'	24:W:2:VAL:O	2.18	0.42
22:U:55:ARG:HD2	22:U:87:ARG:NH1	2.34	0.42
2:A:30:LEU:HD23	2:A:31:ASP:O	2.20	0.42
17:P:110:GLU:OE1	20:S:113:ARG:HG3	2.19	0.42
1:1:1165:G:N2	25:X:23:HIS:CG	2.87	0.42
1:1:553:U:C3'	1:1:554:A:H5''	2.46	0.42
20:S:43:VAL:HA	21:T:37:VAL:HG21	2.00	0.42
1:1:905:C:O5'	1:1:905:C:H6	2.02	0.42
1:1:1746:U:H6	1:1:1746:U:O5'	2.02	0.42
19:R:51:ALA:O	19:R:54:VAL:HG12	2.19	0.42
1:1:237:C:HO2'	1:1:238:C:P	2.42	0.42
14:M:111:VAL:HG12	14:M:113:ASP:O	2.19	0.42
1:1:1711:U:H2'	1:1:1712:A:C8	2.54	0.42
1:1:129:C:H3'	1:1:130:G:C8	2.55	0.42
1:1:180:G:H2'	1:1:180:G:N3	2.34	0.42
1:1:169:U:C1'	8:G:133:LEU:HD12	2.44	0.42
1:1:1548:G:C6	1:1:1584:G:N2	2.87	0.42
1:1:1588:A:C6	1:1:1589:A:C6	3.06	0.42
1:1:867:G:C8	1:1:867:G:OP2	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:343:A:C8	1:1:343:A:O5'	2.71	0.42
1:1:672:A:OP2	1:1:673:G:H5'	2.19	0.42
3:B:65:ARG:HG2	16:O:50:LYS:CD	2.49	0.42
1:1:659:G:H3'	25:X:17:ARG:NH2	2.34	0.42
1:1:95:G:C2'	1:1:96:C:H5'	2.49	0.42
18:Q:38:PRO:HG2	21:T:8:ASP:HA	2.01	0.42
1:1:1276:A:O5'	1:1:1276:A:N3	2.52	0.42
1:1:1456:G:H2'	1:1:1457:U:H6	1.82	0.42
1:1:444:G:H22	1:1:447:A:C5'	2.22	0.42
1:1:64:A:P	8:G:136:LYS:HZ1	2.41	0.42
1:1:1261:C:H6	1:1:1261:C:H5''	1.79	0.42
1:1:1578:U:C6	5:D:6:SER:N	2.88	0.42
1:1:1334:G:C2'	1:1:1335:G:H5'	2.49	0.42
17:P:60:LEU:C	17:P:60:LEU:HD13	2.40	0.42
1:1:838:G:H8	26:Y:9:THR:OG1	2.01	0.42
1:1:534:G:H2'	1:1:535:G:C4'	2.49	0.42
4:C:128:VAL:HG11	4:C:155:ILE:CG1	2.49	0.42
1:1:650:A:H3'	1:1:651:U:H6	1.84	0.42
1:1:1065:G:N3	1:1:1065:G:H2'	2.34	0.42
9:H:177:TYR:HE2	9:H:183:LYS:HB2	1.84	0.42
24:W:104:LEU:O	24:W:110:ILE:HG23	2.20	0.42
1:1:1421:A:H3'	1:1:1422:G:C8	2.54	0.42
27:Z:113:THR:O	27:Z:114:LYS:HB3	2.19	0.42
10:I:114:GLU:OE2	10:I:129:LEU:HD13	2.19	0.42
2:A:117:ARG:HG2	2:A:119:PRO:HD3	2.01	0.42
1:1:837:A:H5'	1:1:837:A:N3	2.34	0.42
1:1:67:C:C5	8:G:163:ASN:N	2.79	0.42
1:1:1227:G:N7	1:1:1638:G:C8	2.87	0.42
1:1:790:C:H2'	1:1:791:C:H6	1.81	0.42
1:1:798:G:N3	1:1:798:G:C5'	2.81	0.42
1:1:559:G:H3'	1:1:560:A:C4'	2.49	0.42
11:J:171:GLY:O	11:J:174:LYS:HB2	2.18	0.42
13:L:96:ILE:HD12	25:X:10:ALA:HB1	2.01	0.42
1:1:1331:C:C2'	1:1:1331:C:O2	2.65	0.42
1:1:211:G:C8	1:1:211:G:H3'	2.55	0.42
1:1:616:A:N1	1:1:632:C:H1'	2.35	0.42
5:D:26:THR:HB	5:D:34:TYR:OH	2.18	0.42
1:1:1520:G:N3	1:1:1520:G:H5''	2.34	0.42
2:A:180:ARG:HB3	2:A:180:ARG:NH1	2.34	0.42
17:P:86:LEU:CD1	17:P:88:GLU:HB3	2.50	0.42
26:Y:27:VAL:HG11	26:Y:35:VAL:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:813:A:H2'	1:1:814:U:C5'	2.49	0.42
1:1:1122:A:H2'	1:1:1123:C:H5'	2.01	0.42
18:Q:80:GLN:O	18:Q:84:ILE:HG13	2.20	0.42
20:S:86:ARG:NH1	20:S:98:VAL:HG11	2.35	0.42
3:B:128:LYS:HB2	3:B:134:LEU:HD23	2.00	0.42
1:1:1195:A:H2'	1:1:1196:A:H8	1.85	0.42
1:1:486:A:C8	1:1:486:A:O5'	2.70	0.42
5:D:210:ILE:HG12	19:R:39:ALA:HB2	2.01	0.42
21:T:124:THR:HB	21:T:125:PRO:CD	2.50	0.42
5:D:106:ARG:HH22	5:D:173:ARG:HG3	1.84	0.42
2:A:200:ASP:O	19:R:86:PRO:HG2	2.19	0.42
10:I:145:ILE:HA	10:I:148:LYS:CE	2.49	0.42
1:1:1215:C:C5'	1:1:1217:A:H62	2.32	0.42
1:1:1643:U:H4'	18:Q:143:LYS:O	2.19	0.42
1:1:168:C:H2'	1:1:169:U:C6	2.54	0.42
1:1:317:C:H5''	1:1:317:C:C6	2.55	0.42
8:G:160:LYS:HE2	8:G:161:PRO:HD2	2.01	0.42
20:S:27:ALA:HB1	20:S:41:ALA:CB	2.49	0.42
1:1:1587:G:H1'	21:T:78:ILE:HB	2.01	0.42
1:1:746:C:C2'	1:1:746:C:OP1	2.67	0.42
1:1:745:C:O2'	9:H:107:LYS:HB3	2.19	0.42
1:1:682:U:C2	1:1:1024:A:N1	2.87	0.42
1:1:662:G:H4'	1:1:663:C:O5'	2.20	0.42
1:1:1258:A:OP2	1:1:1258:A:C4	2.73	0.42
1:1:33:G:O6	1:1:522:A:H2	2.03	0.42
1:1:1288:U:OP2	1:1:1311:C:N3	2.52	0.42
12:K:43:LEU:HD23	12:K:44:HIS:H	1.85	0.42
1:1:175:A:C3'	1:1:176:U:H5''	2.34	0.42
1:1:1139:C:O2	1:1:1139:C:O4'	2.37	0.42
3:B:34:LYS:HD2	3:B:95:ASN:OD1	2.20	0.42
3:B:72:ALA:HB1	3:B:79:VAL:O	2.20	0.42
1:1:1649:U:O5'	1:1:1649:U:H6	2.03	0.42
1:1:1647:A:C6	7:F:57:ALA:CB	3.02	0.42
1:1:1378:A:C6	2:A:105:PRO:HB3	2.54	0.42
20:S:113:ARG:O	20:S:117:ILE:HG13	2.20	0.42
7:F:47:LYS:CE	7:F:67:PRO:HG2	2.49	0.42
13:L:9:ALA:CB	13:L:12:LYS:HE2	2.49	0.42
27:Z:94:LYS:C	27:Z:96:LEU:H	2.23	0.42
1:1:1270:G:O2'	1:1:1301:A:N7	2.52	0.42
3:B:46:LYS:HZ1	16:O:27:VAL:HA	1.85	0.42
1:1:823:U:H5'	26:Y:64:PHE:HD2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:158:HIS:HA	3:B:161:VAL:HB	2.01	0.42
5:D:71:ALA:HB3	12:K:20:VAL:HG21	2.01	0.42
13:L:31:GLU:HG2	13:L:32:LYS:N	2.35	0.42
4:C:168:GLY:N	4:C:179:THR:O	2.47	0.42
9:H:152:ARG:HD3	9:H:152:ARG:N	2.35	0.42
1:1:883:U:H6	1:1:883:U:O5'	2.02	0.42
1:1:500:A:C2'	1:1:501:C:H5''	2.30	0.42
1:1:572:U:C2'	1:1:573:U:N3	2.83	0.42
6:E:133:VAL:O	6:E:134:LYS:HB2	2.20	0.42
1:1:1161:U:C5	1:1:1162:C:C5	3.08	0.42
1:1:1255:G:C5'	1:1:1256:G:C8	2.98	0.42
1:1:1766:C:C5	1:1:1767:C:N4	2.88	0.42
1:1:1659:U:H6	1:1:1660:C:O2	2.03	0.42
1:1:35:C:H3'	1:1:36:U:C6	2.54	0.42
1:1:10:G:H2'	1:1:11:A:H8	1.84	0.42
1:1:1698:C:C5'	1:1:1699:A:C8	3.03	0.42
1:1:1245:G:H2'	1:1:1246:A:H8	1.84	0.42
1:1:1519:U:C6	1:1:1623:A:N6	2.87	0.42
1:1:1750:C:C2'	1:1:1751:C:C5'	2.92	0.42
1:1:296:U:C2	1:1:297:A:C8	3.08	0.42
20:S:39:ARG:NH1	21:T:39:LEU:H	2.16	0.42
1:1:913:A:N6	9:H:120:ARG:HA	2.35	0.42
1:1:1425:G:C2'	1:1:1426:U:C6	3.01	0.42
22:U:48:LEU:HD21	22:U:97:ILE:HG21	2.02	0.42
1:1:16:G:H5''	1:1:669:A:N1	2.34	0.42
6:E:97:GLU:HG3	6:E:113:ARG:CZ	2.49	0.42
11:J:136:ARG:HB2	11:J:162:ARG:NH2	2.33	0.42
21:T:36:THR:O	21:T:37:VAL:CB	2.67	0.42
1:1:876:C:C5	1:1:876:C:OP2	2.73	0.42
1:1:428:U:C3'	1:1:429:C:C6	3.02	0.42
7:F:69:VAL:O	7:F:73:THR:HG23	2.19	0.42
7:F:31:ASN:OD1	7:F:117:ILE:HG21	2.18	0.42
1:1:1332:A:H1'	5:D:141:LYS:HZ1	1.82	0.42
1:1:1124:C:C5'	3:B:150:ILE:HG12	2.50	0.42
25:X:41:PHE:HE1	25:X:120:PHE:CD1	2.38	0.42
12:K:3:MET:CG	12:K:47:LYS:HD3	2.50	0.42
14:M:33:ARG:HE	14:M:91:LEU:HD21	1.84	0.42
13:L:16:ILE:CG1	13:L:36:TYR:HD1	2.33	0.42
2:A:147:LEU:HB3	2:A:163:CYS:SG	2.59	0.42
17:P:96:VAL:HB	17:P:120:SER:HB2	2.01	0.42
4:C:183:LYS:CE	24:W:95:PRO:HA	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1214:A:C6	1:1:1686:G:N1	2.87	0.42
1:1:1849:G:O2'	1:1:1850:A:H5'	2.18	0.42
6:E:136:ILE:HD11	6:E:138:HIS:CE1	2.55	0.42
1:1:1576:G:H2'	1:1:1577:G:H8	1.85	0.42
1:1:746:C:C6	1:1:749:U:C4'	3.02	0.42
1:1:561:A:C3'	1:1:562:U:C5'	2.84	0.42
1:1:1023:A:H5''	15:N:124:ARG:HH21	1.84	0.42
1:1:1130:G:H2'	1:1:1131:G:H5''	2.01	0.42
1:1:474:G:C6	1:1:475:C:N4	2.88	0.42
1:1:1442:U:C6	1:1:1443:C:C1'	3.02	0.42
1:1:1455:A:H5''	1:1:1456:G:OP2	2.18	0.42
1:1:1458:G:N1	1:1:1469:A:C6	2.88	0.42
2:A:69:GLU:HB2	4:C:270:THR:HG21	2.02	0.42
1:1:1782:G:H1'	1:1:1783:C:C5	2.54	0.42
1:1:1484:A:H4'	5:D:159:HIS:HB2	2.01	0.42
24:W:47:ILE:HG22	24:W:69:LEU:HD11	2.01	0.42
1:1:670:A:N3	1:1:1164:G:H1'	2.34	0.42
8:G:45:TRP:HA	8:G:48:TYR:CD1	2.54	0.42
1:1:846:G:H2'	6:E:19:MET:SD	2.60	0.42
1:1:1591:C:O2	1:1:1591:C:H2'	2.18	0.42
17:P:77:LYS:HD3	17:P:102:PHE:CD1	2.54	0.42
1:1:1500:G:H4'	5:D:178:ARG:O	2.20	0.42
11:J:137:VAL:O	11:J:138:ARG:HB3	2.19	0.42
1:1:485:A:H5''	1:1:486:A:OP1	2.19	0.42
24:W:36:ARG:O	24:W:40:VAL:HG23	2.20	0.42
21:T:102:ARG:HD3	21:T:102:ARG:O	2.20	0.42
1:1:1106:C:H2'	1:1:1107:G:C8	2.54	0.42
6:E:80:VAL:HG13	6:E:81:THR:HG23	2.02	0.42
7:F:63:LYS:HB2	7:F:63:LYS:HZ2	1.85	0.42
1:1:1212:G:N1	1:1:1688:C:C2	2.88	0.42
1:1:1860:A:C2	1:1:1862:G:C8	3.08	0.42
1:1:166:A:H2'	1:1:167:G:C8	2.55	0.42
1:1:500:A:N1	1:1:502:C:OP2	2.52	0.42
6:E:149:TYR:CE2	8:G:206:ALA:HA	2.55	0.42
1:1:1549:U:H2'	1:1:1550:G:C8	2.51	0.42
1:1:1604:G:O2'	1:1:1605:G:H5'	2.17	0.42
1:1:1035:A:H8	1:1:1035:A:OP2	2.02	0.42
1:1:54:A:O2'	1:1:451:G:N1	2.47	0.42
1:1:618:C:C1'	1:1:632:C:C5'	2.91	0.42
5:D:24:PHE:HE1	5:D:72:VAL:CG1	2.32	0.42
1:1:1402:A:C3'	1:1:1403:C:C5	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1404:U:H3	1:1:1440:C:N4	2.18	0.42
22:U:51:LYS:HE3	22:U:90:ASP:HB3	2.01	0.42
1:1:1282:A:H2'	1:1:1283:C:C5'	2.50	0.42
22:U:47:ASN:C	22:U:48:LEU:HD12	2.40	0.42
1:1:977:C:H6	1:1:977:C:OP2	2.03	0.42
1:1:1543:U:H4'	1:1:1544:C:OP1	2.19	0.42
27:Z:58:LEU:HD22	27:Z:77:LEU:HD22	2.01	0.42
11:J:133:ARG:HA	11:J:143:ASN:HD22	1.84	0.42
7:F:47:LYS:HE3	7:F:67:PRO:HG2	2.02	0.42
20:S:4:VAL:HG21	27:Z:49:LEU:CD1	2.49	0.42
8:G:2:LYS:HE2	8:G:15:LEU:HD11	2.02	0.42
1:1:1822:A:C3'	1:1:1823:A:H5''	2.49	0.42
19:R:13:ALA:HB1	19:R:54:VAL:CB	2.48	0.42
1:1:827:A:C2'	1:1:828:G:H5'	2.49	0.42
1:1:49:C:O2	1:1:49:C:H2'	2.19	0.42
6:E:203:GLY:O	6:E:204:SER:CB	2.67	0.42
9:H:76:GLN:HG3	9:H:77:VAL:N	2.33	0.42
4:C:196:ILE:HB	4:C:223:TYR:HB2	2.01	0.42
5:D:123:LEU:HD11	5:D:152:PHE:HB3	2.01	0.42
15:N:6:ALA:HB1	15:N:7:PRO:HD2	2.01	0.42
1:1:1839:U:H1'	1:1:1863:A:N7	2.35	0.42
1:1:179:C:H2'	1:1:180:G:N3	2.34	0.42
6:E:133:VAL:O	6:E:136:ILE:HD13	2.19	0.42
1:1:1227:G:N3	1:1:1227:G:H2'	2.35	0.42
1:1:1057:C:O2	1:1:1057:C:O4'	2.38	0.42
1:1:190:G:C2	1:1:191:A:C8	3.08	0.42
1:1:1682:C:H3'	1:1:1682:C:H6	1.83	0.42
1:1:1284:A:H4'	1:1:1287:A:N6	2.35	0.42
1:1:1311:C:H5''	14:M:40:LYS:NZ	2.34	0.42
1:1:222:U:H6	1:1:222:U:O5'	2.03	0.42
10:I:191:GLU:HG3	13:L:20:LYS:CG	2.49	0.42
1:1:1628:C:H6	1:1:1628:C:O5'	2.02	0.42
9:H:157:HIS:HD1	9:H:190:PRO:HG3	1.85	0.42
1:1:1578:U:C2	5:D:4:GLN:O	2.73	0.42
9:H:143:ARG:HB2	9:H:155:LYS:O	2.20	0.42
2:A:30:LEU:HB2	2:A:47:TYR:CE2	2.55	0.42
1:1:1353:A:H2'	1:1:1354:G:C5'	2.43	0.42
7:F:40:ALA:CB	7:F:67:PRO:HA	2.50	0.42
1:1:37:C:H2'	1:1:38:A:H5''	2.01	0.42
7:F:20:PHE:HD2	7:F:21:GLY:H	1.58	0.42
4:C:60:TRP:C	4:C:60:TRP:CD1	2.93	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:L:22:ARG:HD2	13:L:27:GLU:CD	2.41	0.42
22:U:20:ILE:HG13	22:U:98:VAL:CG2	2.50	0.42
3:B:223:PHE:HE1	3:B:225:LEU:HD13	1.85	0.42
1:1:1686:G:H5'	1:1:1687:C:P	2.60	0.42
1:1:1688:C:O2	1:1:1688:C:C2'	2.60	0.42
1:1:1703:C:H3'	1:1:1704:C:C5	2.54	0.42
1:1:1848:U:C6	1:1:1848:U:H3'	2.55	0.42
21:T:126:GLN:HA	21:T:129:ARG:HG2	2.02	0.42
1:1:71:G:C2	1:1:72:C:C1'	3.03	0.42
1:1:1630:A:H2'	1:1:1631:U:H5'	2.01	0.42
1:1:746:C:O5'	1:1:746:C:H2'	2.20	0.42
1:1:342:C:H6	1:1:342:C:H5''	1.84	0.42
3:B:51:ARG:C	3:B:53:GLN:H	2.22	0.42
1:1:1204:A:C2	1:1:1205:C:C2	3.08	0.42
1:1:1478:U:H2'	1:1:1479:G:O4'	2.20	0.42
1:1:441:C:O2	1:1:441:C:H2'	2.20	0.42
1:1:1139:C:H2'	1:1:1140:G:C5'	2.49	0.42
1:1:979:C:HO2'	1:1:980:A:H5'	1.80	0.42
15:N:80:LEU:H	15:N:80:LEU:HG	1.70	0.42
16:O:61:LYS:HD3	16:O:76:LEU:HB3	2.02	0.42
1:1:142:C:H4'	1:1:143:U:O5'	2.20	0.42
19:R:29:HIS:O	19:R:32:LYS:HG2	2.20	0.42
1:1:973:C:C6	1:1:973:C:C3'	3.03	0.42
21:T:72:VAL:HG13	21:T:100:ALA:HB1	2.02	0.42
6:E:173:ILE:CD1	6:E:235:TRP:HZ2	2.33	0.42
1:1:239:C:C4	1:1:240:G:N7	2.88	0.42
16:O:56:VAL:HG21	16:O:81:VAL:CG2	2.50	0.42
7:F:21:GLY:O	7:F:22:LYS:HB2	2.20	0.42
4:C:59:GLU:HG2	4:C:60:TRP:N	2.35	0.42
1:1:1236:G:H3'	1:1:1237:C:H6	1.85	0.42
1:1:950:C:H2'	1:1:950:C:O2	2.20	0.42
7:F:130:ARG:O	7:F:131:ALA:HB3	2.20	0.41
1:1:125:C:H42	1:1:129:C:P	2.43	0.41
1:1:502:C:O2'	1:1:503:C:C6	2.71	0.41
1:1:1599:U:C5	7:F:164:ARG:HA	2.55	0.41
21:T:82:ARG:HD2	21:T:82:ARG:HA	1.86	0.41
1:1:688:U:O4'	1:1:688:U:O2	2.37	0.41
1:1:343:A:P	1:1:343:A:H8	2.43	0.41
1:1:527:C:OP1	11:J:124:HIS:HB2	2.20	0.41
1:1:1025:U:H2'	1:1:1026:C:O5'	2.19	0.41
1:1:1081:U:O2'	1:1:1082:A:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:4:C:H2'	1:1:5:U:C5	2.53	0.41
1:1:683:G:C4	1:1:1023:A:C6	3.08	0.41
3:B:151:ARG:CZ	3:B:153:THR:OG1	2.68	0.41
3:B:63:LYS:C	3:B:65:ARG:H	2.23	0.41
1:1:1402:A:H3'	1:1:1403:C:C6	2.55	0.41
1:1:1403:C:C5	1:1:1404:U:C1'	3.03	0.41
1:1:1475:G:H8	1:1:1475:G:OP2	2.03	0.41
1:1:942:G:OP2	1:1:942:G:H8	2.03	0.41
1:1:1554:C:C3'	1:1:1555:U:C5'	2.89	0.41
1:1:1180:C:C6	1:1:1180:C:C3'	3.02	0.41
1:1:85:A:OP1	26:Y:119:GLY:N	2.52	0.41
1:1:1570:G:H8	1:1:1570:G:O5'	2.03	0.41
1:1:15:U:O2'	1:1:16:G:H5'	2.20	0.41
7:F:30:ILE:HD13	7:F:39:ILE:HD12	2.02	0.41
6:E:173:ILE:HD12	6:E:235:TRP:HZ2	1.84	0.41
7:F:22:LYS:O	7:F:22:LYS:HG3	2.20	0.41
1:1:1739:C:H2'	1:1:1740:C:O4'	2.19	0.41
1:1:389:A:H2'	1:1:390:C:C6	2.55	0.41
16:O:62:VAL:HG12	16:O:64:ALA:H	1.85	0.41
7:F:199:VAL:HG13	7:F:203:ASN:ND2	2.35	0.41
21:T:144:LYS:O	21:T:144:LYS:HG2	2.20	0.41
1:1:1214:A:C2	1:1:1217:A:C5	3.08	0.41
1:1:59:U:C5	1:1:501:C:H2'	2.55	0.41
1:1:61:A:C1'	1:1:62:G:P	3.08	0.41
1:1:571:U:O3'	26:Y:59:GLY:N	2.53	0.41
1:1:1561:A:N1	1:1:1575:G:H1'	2.35	0.41
1:1:746:C:O5'	1:1:746:C:C2'	2.68	0.41
1:1:795:A:C2	1:1:796:G:C8	3.08	0.41
1:1:526:A:H2	1:1:527:C:C6	2.38	0.41
1:1:659:G:C2	1:1:663:C:C4	3.08	0.41
1:1:1406:G:H1'	1:1:1407:U:O5'	2.20	0.41
1:1:145:G:N2	1:1:146:G:N7	2.68	0.41
1:1:870:A:C6	1:1:916:A:C6	3.08	0.41
22:U:55:ARG:HD2	22:U:87:ARG:NE	2.34	0.41
27:Z:97:ILE:HD12	27:Z:109:TYR:CD1	2.55	0.41
1:1:1567:G:C3'	1:1:1568:C:H5'	2.50	0.41
27:Z:68:ILE:HG23	27:Z:73:VAL:HG23	2.01	0.41
1:1:845:G:H4'	6:E:255:ARG:NH1	2.31	0.41
3:B:126:ASP:O	3:B:127:VAL:HB	2.20	0.41
1:1:213:G:O5'	1:1:213:G:C8	2.73	0.41
3:B:115:LYS:H	3:B:118:GLN:HE21	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1089:G:C2'	1:1:1090:C:H5'	2.50	0.41
1:1:820:U:H3	1:1:828:G:H1	1.67	0.41
1:1:1263:U:C6	1:1:1264:C:C6	3.08	0.41
1:1:1043:G:C4	1:1:1044:G:C8	3.08	0.41
1:1:872:A:N3	1:1:872:A:H5''	2.36	0.41
4:C:250:TYR:HE2	24:W:99:PHE:CZ	2.37	0.41
2:A:147:LEU:HD13	2:A:174:MET:HE3	2.00	0.41
3:B:89:GLU:HG3	3:B:223:PHE:CE2	2.55	0.41
15:N:126:ALA:O	15:N:130:LYS:HG3	2.20	0.41
10:I:135:GLU:HG2	10:I:135:GLU:O	2.19	0.41
1:1:330:G:N3	1:1:330:G:H2'	2.35	0.41
1:1:1690:U:N3	1:1:1691:U:C5	2.89	0.41
1:1:1411:G:C2'	1:1:1412:C:H5''	2.50	0.41
1:1:694:G:H3'	1:1:695:C:C5	2.56	0.41
1:1:586:G:H2'	1:1:586:G:N3	2.35	0.41
1:1:586:G:C2	1:1:587:A:C1'	3.03	0.41
3:B:93:GLY:O	3:B:94:LYS:HB2	2.20	0.41
1:1:1130:G:H4'	15:N:9:LYS:O	2.20	0.41
1:1:300:U:C2'	1:1:301:A:C8	2.98	0.41
1:1:1204:A:O4'	1:1:1699:A:C2	2.73	0.41
12:K:2:LEU:O	12:K:44:HIS:HE1	2.03	0.41
1:1:454:U:H5''	8:G:76:LEU:CD2	2.50	0.41
17:P:34:MET:O	17:P:37:TYR:HB2	2.20	0.41
1:1:1426:U:H2'	1:1:1426:U:O2	2.21	0.41
2:A:64:ALA:O	2:A:67:ALA:HB3	2.21	0.41
16:O:147:ARG:HH12	16:O:150:ARG:HH11	1.68	0.41
1:1:214:U:O2	1:1:214:U:C2'	2.67	0.41
10:I:84:ASN:HB3	10:I:87:ASN:O	2.20	0.41
1:1:1609:C:C5'	1:1:1609:C:H6	2.33	0.41
21:T:137:GLN:O	21:T:140:ALA:HB3	2.21	0.41
6:E:65:CYS:O	6:E:78:VAL:HG12	2.21	0.41
1:1:323:C:H6	1:1:323:C:O5'	2.03	0.41
1:1:1685:U:C6	1:1:1686:G:C8	3.08	0.41
1:1:1835:A:H5''	1:1:1863:A:H1'	2.02	0.41
1:1:1431:G:C2'	1:1:1432:U:C5	2.92	0.41
1:1:494:C:C2'	1:1:495:U:H5'	2.50	0.41
1:1:495:U:H6	1:1:495:U:OP2	2.03	0.41
1:1:1631:U:N3	1:1:1632:G:N2	2.67	0.41
9:H:49:LYS:O	9:H:60:ILE:HD12	2.19	0.41
1:1:190:G:C2	1:1:191:A:N7	2.88	0.41
1:1:211:G:C3'	1:1:211:G:C8	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:193:C:OP1	10:I:139:LYS:HE2	2.20	0.41
1:1:98:C:H4'	1:1:99:A:OP1	2.21	0.41
1:1:1205:C:O2	1:1:1205:C:H2'	2.19	0.41
1:1:1283:C:O3'	1:1:1284:A:C8	2.74	0.41
1:1:1397:U:H6	1:1:1397:U:C3'	2.30	0.41
1:1:944:A:H5'	16:O:134:PRO:CB	2.51	0.41
13:L:40:ILE:HD13	13:L:143:LEU:HD11	2.02	0.41
1:1:912:C:C6	1:1:912:C:OP2	2.73	0.41
1:1:1260:A:C5	1:1:1619:A:N1	2.89	0.41
1:1:1447:G:H1'	22:U:55:ARG:HH21	1.85	0.41
1:1:954:U:N3	1:1:971:G:N2	2.69	0.41
1:1:1673:U:H3'	1:1:1674:G:C8	2.54	0.41
1:1:1120:U:C6	1:1:1120:U:C4'	3.03	0.41
11:J:28:GLU:O	11:J:31:LEU:HB3	2.20	0.41
20:S:46:ARG:NH1	21:T:37:VAL:HG22	2.35	0.41
1:1:358:C:H2'	1:1:359:U:O5'	2.21	0.41
1:1:359:U:H2'	1:1:362:C:C5	2.55	0.41
12:K:11:ILE:HA	12:K:38:LYS:HE2	2.02	0.41
25:X:32:LEU:CD2	25:X:34:THR:HB	2.49	0.41
1:1:45:A:N6	1:1:481:C:H4'	2.35	0.41
6:E:206:ASP:HB2	6:E:222:LEU:CD1	2.51	0.41
1:1:1342:U:H4'	1:1:1343:U:OP1	2.20	0.41
1:1:1643:U:C2	1:1:1644:C:C5	3.08	0.41
1:1:1686:G:C5	1:1:1687:C:C5	3.08	0.41
1:1:378:U:H6	1:1:378:U:O5'	2.03	0.41
1:1:1639:G:OP1	1:1:1639:G:C4'	2.68	0.41
1:1:130:G:H3'	1:1:131:C:C5'	2.46	0.41
1:1:132:U:OP2	1:1:133:C:C5	2.73	0.41
1:1:569:A:O2'	26:Y:36:PRO:HA	2.21	0.41
8:G:145:PHE:O	8:G:146:ASN:CB	2.68	0.41
1:1:66:G:N2	8:G:158:VAL:HG21	2.35	0.41
1:1:1535:U:HO2'	1:1:1536:G:P	2.44	0.41
20:S:52:LEU:HD12	20:S:52:LEU:N	2.36	0.41
1:1:790:C:C6	1:1:790:C:O5'	2.73	0.41
1:1:795:A:C3'	1:1:796:G:H8	2.33	0.41
1:1:527:C:H1'	11:J:125:HIS:ND1	2.36	0.41
1:1:206:G:O5'	1:1:206:G:H8	2.02	0.41
1:1:36:U:O2	1:1:520:A:C2	2.72	0.41
1:1:1483:A:H3'	1:1:1483:A:N3	2.35	0.41
1:1:885:U:O3'	1:1:886:A:H2'	2.20	0.41
1:1:157:U:O5'	1:1:157:U:C6	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:23:LYS:HB3	8:G:41:LEU:HD23	2.03	0.41
1:1:1745:A:C2	1:1:1746:U:C5	3.08	0.41
1:1:1748:G:H1	1:1:1786:U:H3	1.67	0.41
25:X:39:ASN:HB2	25:X:40:PRO:HD2	2.02	0.41
10:I:83:TYR:H	10:I:91:VAL:HG21	1.85	0.41
13:L:59:LYS:HB2	13:L:112:HIS:CE1	2.56	0.41
5:D:102:ALA:HB2	5:D:186:VAL:HG21	2.02	0.41
17:P:69:PRO:O	17:P:70:MET:HB2	2.20	0.41
21:T:20:ALA:O	21:T:23:LYS:HB2	2.20	0.41
17:P:51:ARG:HG2	17:P:51:ARG:O	2.21	0.41
6:E:166:THR:OG1	6:E:168:LYS:HG3	2.20	0.41
1:1:1214:A:N6	1:1:1686:G:C6	2.88	0.41
1:1:1829:G:H2'	1:1:1829:G:N3	2.35	0.41
1:1:1528:G:OP2	18:Q:142:GLN:HG2	2.21	0.41
1:1:740:C:C4	1:1:741:C:N4	2.88	0.41
1:1:750:C:H6	1:1:750:C:O5'	2.03	0.41
1:1:790:C:O5'	1:1:790:C:H6	2.04	0.41
9:H:109:ARG:HD3	9:H:110:THR:H	1.85	0.41
1:1:1057:C:C6	1:1:1059:G:OP2	2.74	0.41
3:B:153:THR:HB	3:B:155:TYR:HE2	1.85	0.41
1:1:1257:G:C8	1:1:1257:G:C5'	2.99	0.41
1:1:958:G:OP2	16:O:39:ASP:HB3	2.21	0.41
3:B:82:ARG:HG2	3:B:103:MET:HE1	2.03	0.41
6:E:159:THR:HG23	6:E:226:PHE:CE1	2.56	0.41
1:1:1675:A:H2'	1:1:1676:U:O4'	2.20	0.41
26:Y:7:ILE:HG12	26:Y:27:VAL:HG22	2.02	0.41
3:B:183:GLU:O	3:B:186:ASN:HB3	2.21	0.41
1:1:534:G:H2'	1:1:535:G:H4'	2.02	0.41
1:1:476:A:H3'	1:1:477:G:C8	2.53	0.41
1:1:1868:U:O2'	1:1:1869:A:P	2.78	0.41
15:N:33:VAL:O	15:N:37:ILE:HG13	2.19	0.41
4:C:152:ARG:O	4:C:156:ILE:HG12	2.20	0.41
20:S:111:LEU:HD23	20:S:114:LEU:HD12	2.03	0.41
1:1:1636:G:OP1	1:1:1638:G:N2	2.53	0.41
1:1:1666:C:H5'	1:1:1667:U:OP2	2.21	0.41
1:1:526:A:H1'	11:J:128:VAL:HG13	2.02	0.41
1:1:600:G:H2'	1:1:601:G:C8	2.55	0.41
9:H:31:GLU:HA	9:H:36:LEU:HB2	2.03	0.41
1:1:1312:G:C8	14:M:37:GLU:CG	3.04	0.41
1:1:1469:A:C5	1:1:1470:C:C4	3.09	0.41
1:1:1492:U:C4'	22:U:70:CYS:SG	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:P:86:LEU:HB2	17:P:87:PRO:HD2	2.03	0.41
6:E:124:CYS:HB2	6:E:141:THR:HG23	2.02	0.41
1:1:1672:U:H2'	1:1:1673:U:H6	1.86	0.41
1:1:1649:U:C2	1:1:1675:A:H2	2.39	0.41
7:F:55:ARG:O	7:F:57:ALA:N	2.53	0.41
1:1:1743:G:C2'	1:1:1744:G:H5'	2.51	0.41
1:1:1239:U:H6	1:1:1239:U:O5'	2.04	0.41
1:1:466:G:N3	1:1:466:G:H3'	2.36	0.41
1:1:1568:C:N4	1:1:1569:A:C6	2.89	0.41
5:D:70:THR:HG23	5:D:84:VAL:O	2.20	0.41
12:K:83:LEU:O	12:K:84:HIS:HB3	2.21	0.41
1:1:9:U:O2	1:1:12:U:C5	2.73	0.41
1:1:25:A:C2	1:1:649:U:O2	2.74	0.41
1:1:467:G:H8	1:1:467:G:H5''	1.85	0.41
1:1:545:A:C3'	1:1:545:A:C8	3.03	0.41
21:T:123:LEU:N	21:T:123:LEU:HD23	2.35	0.41
1:1:1142:G:H8	1:1:1142:G:P	2.44	0.41
21:T:87:VAL:HG23	21:T:88:MET:H	1.86	0.41
13:L:77:VAL:HG22	13:L:86:ILE:HD12	2.02	0.41
14:M:92:CYS:SG	14:M:94:ILE:HG23	2.60	0.41
1:1:393:U:H4'	1:1:394:G:OP1	2.21	0.41
9:H:66:VAL:N	9:H:67:PRO:CD	2.83	0.41
16:O:38:ASN:O	16:O:68:GLU:HG3	2.21	0.41
1:1:1206:G:C6	1:1:1693:G:C2	3.08	0.41
1:1:182:C:HO2'	1:1:183:G:H8	1.68	0.41
1:1:313:A:C4'	1:1:313:A:OP2	2.68	0.41
1:1:601:G:H1	1:1:621:C:H42	1.69	0.41
1:1:655:A:C4	1:1:657:U:C5	3.08	0.41
1:1:191:A:H4'	10:I:147:LYS:NZ	2.35	0.41
1:1:1439:A:OP2	1:1:1439:A:C8	2.73	0.41
2:A:205:ARG:O	2:A:208:GLU:HB3	2.21	0.41
1:1:176:U:C4	1:1:177:G:C2	3.09	0.41
1:1:1391:C:H2'	1:1:1392:U:C1'	2.51	0.41
1:1:1579:A:H3'	1:1:1580:A:H5''	2.03	0.41
1:1:1484:A:C2'	1:1:1485:U:H5'	2.51	0.41
1:1:1265:A:C2	1:1:1266:C:C6	3.08	0.41
1:1:986:G:H22	16:O:135:ILE:HD12	1.85	0.41
15:N:19:ARG:NH2	15:N:23:PRO:HA	2.36	0.41
1:1:158:A:O5'	1:1:158:A:H8	2.04	0.41
1:1:813:A:C5	1:1:814:U:C5	3.08	0.41
1:1:583:A:C2'	1:1:584:A:C8	3.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1122:A:C2'	1:1:1123:C:H5'	2.49	0.41
1:1:29:G:H5''	25:X:129:SER:HB3	2.02	0.41
1:1:504:G:H2'	1:1:505:G:C5'	2.51	0.41
9:H:37:LYS:HE2	9:H:41:ARG:HH21	1.86	0.41
1:1:567:C:C3'	1:1:568:C:C5'	2.99	0.41
1:1:23:G:H2'	1:1:24:C:H6	1.85	0.41
14:M:106:CYS:O	14:M:107:SER:CB	2.69	0.41
1:1:1322:G:H2'	1:1:1323:U:O4'	2.21	0.41
2:A:103:PHE:CD1	2:A:133:PRO:HG3	2.55	0.41
1:1:50:A:OP2	1:1:472:C:N4	2.54	0.41
11:J:14:VAL:CG2	11:J:48:PHE:HD1	2.33	0.41
1:1:93:U:O4'	1:1:93:U:O2	2.38	0.41
20:S:47:LYS:HE2	20:S:79:ILE:HG13	2.01	0.41
6:E:252:ARG:HH11	6:E:252:ARG:HB3	1.84	0.41
1:1:422:U:C6	1:1:422:U:C5'	3.04	0.41
1:1:402:C:O5'	1:1:402:C:C6	2.74	0.41
21:T:19:ALA:O	21:T:23:LYS:HG3	2.21	0.41
17:P:67:ALA:HB2	17:P:73:PRO:HB3	2.03	0.41
13:L:33:LEU:HB2	13:L:34:PRO:HD3	2.02	0.41
9:H:61:ILE:HG22	9:H:93:VAL:CG2	2.50	0.41
9:H:62:ILE:HG22	9:H:93:VAL:O	2.21	0.41
1:1:1216:C:OP1	1:1:1217:A:C8	2.74	0.41
1:1:1862:G:O2'	1:1:1863:A:P	2.78	0.41
1:1:172:U:P	1:1:314:U:H2'	2.61	0.41
1:1:319:C:C4'	1:1:320:G:OP2	2.64	0.41
1:1:186:C:O2'	1:1:187:G:H5'	2.21	0.41
1:1:571:U:O3'	26:Y:59:GLY:CA	2.69	0.41
1:1:574:A:C5'	1:1:575:A:N7	2.69	0.41
1:1:576:A:H3'	1:1:576:A:P	2.61	0.41
1:1:1599:U:O2'	1:1:1600:G:H5''	2.21	0.41
1:1:1636:G:H1'	7:F:164:ARG:NH2	2.34	0.41
1:1:690:G:C2	1:1:691:G:C5	3.09	0.41
1:1:693:A:P	1:1:694:G:H5''	2.61	0.41
1:1:563:G:O5'	1:1:563:G:H8	2.04	0.41
6:E:31:PRO:HG2	6:E:38:LEU:HG	2.02	0.41
1:1:1024:A:H2'	1:1:1025:U:C6	2.56	0.41
1:1:450:C:H2'	1:1:451:G:C4'	2.48	0.41
1:1:301:A:O2'	10:I:72:CYS:HA	2.21	0.41
1:1:522:A:N1	1:1:643:A:C5'	2.82	0.41
1:1:382:C:C2'	1:1:383:G:N2	2.83	0.41
1:1:1204:A:C6	1:1:1205:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1285:G:OP2	1:1:1286:G:N7	2.53	0.41
1:1:1313:A:H5''	1:1:1314:U:H5	1.86	0.41
1:1:1518:C:OP1	1:1:1520:G:H8	2.03	0.41
1:1:1491:G:C4	1:1:1492:U:C5	3.09	0.41
5:D:158:ILE:CG2	5:D:164:VAL:HG22	2.39	0.41
15:N:92:ILE:CG2	15:N:149:LEU:HD13	2.39	0.41
9:H:8:ILE:HG23	9:H:45:ILE:O	2.21	0.41
1:1:1556:A:C3'	1:1:1556:A:P	2.98	0.41
1:1:1781:A:C2	1:1:1782:G:N2	2.89	0.41
22:U:35:VAL:HG21	22:U:106:ILE:HD13	2.02	0.41
6:E:125:LYS:O	6:E:141:THR:HA	2.21	0.41
27:Z:107:VAL:CG1	27:Z:109:TYR:HE2	2.34	0.41
11:J:130:ILE:HD11	11:J:145:PRO:HB3	2.03	0.41
1:1:1350:U:O3'	2:A:110:ASN:HB2	2.20	0.41
1:1:1344:A:N6	1:1:1386:A:H5'	2.36	0.41
1:1:1113:A:N1	1:1:1120:U:O4	2.54	0.41
1:1:353:C:C5'	13:L:71:ARG:NH2	2.82	0.41
26:Y:99:LYS:H	26:Y:99:LYS:HG3	1.63	0.41
1:1:1731:A:C6	1:1:1732:G:C6	3.09	0.41
1:1:830:A:C6	1:1:845:G:C2	3.09	0.41
1:1:1066:U:H2'	1:1:1067:C:H6	1.85	0.41
1:1:1614:A:O2'	1:1:1615:U:H5'	2.21	0.41
1:1:1250:A:H4'	1:1:1251:A:OP2	2.20	0.41
1:1:1251:A:C2'	1:1:1252:C:H5'	2.49	0.41
24:W:39:THR:O	24:W:43:LYS:HG3	2.20	0.41
1:1:93:U:C5	1:1:94:G:H1'	2.56	0.41
2:A:120:ARG:HA	2:A:120:ARG:HE	1.86	0.41
1:1:1222:G:O5'	1:1:1222:G:H8	2.02	0.41
23:V:43:THR:HG22	23:V:45:ARG:CB	2.51	0.41
16:O:30:VAL:CG2	16:O:47:LEU:HA	2.51	0.41
13:L:22:ARG:HD2	13:L:27:GLU:HB3	2.03	0.41
15:N:62:GLN:HG2	15:N:65:PHE:CD1	2.56	0.41
4:C:171:GLY:O	4:C:172:ASN:CB	2.69	0.41
25:X:80:LYS:H	25:X:80:LYS:HG3	1.71	0.41
1:1:679:A:H2'	1:1:680:G:H5'	2.03	0.41
1:1:679:A:C2'	1:1:680:G:H5'	2.51	0.41
1:1:168:C:C4	1:1:169:U:O4	2.74	0.41
1:1:183:G:O2'	1:1:184:G:H5'	2.21	0.41
1:1:569:A:C4	1:1:570:C:C6	3.09	0.41
1:1:1530:U:O2'	1:1:1531:A:H8	2.03	0.41
27:Z:43:LYS:NZ	27:Z:44:LEU:H	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:743:U:P	1:1:743:U:O4'	2.78	0.41
1:1:754:G:C5	1:1:755:C:C4	3.09	0.41
1:1:1102:G:C2'	1:1:1103:C:H5'	2.51	0.41
1:1:673:G:C8	1:1:1084:A:C6	3.10	0.41
1:1:302:A:C3'	1:1:303:C:H5''	2.49	0.41
1:1:1519:U:H5''	1:1:1519:U:H6	1.80	0.41
1:1:1663:A:C2	1:1:1664:A:N6	2.86	0.41
1:1:1580:A:H3'	1:1:1581:C:H5'	2.03	0.41
1:1:1647:A:H1'	1:1:1649:U:C1'	2.51	0.41
15:N:22:VAL:HB	15:N:23:PRO:HD2	2.02	0.41
7:F:34:SER:O	7:F:35:LEU:HB2	2.21	0.41
9:H:39:GLN:HG3	9:H:75:ILE:HB	2.03	0.41
10:I:119:LEU:HD12	10:I:127:ALA:O	2.21	0.41
21:T:65:TYR:CE1	21:T:128:GLN:OE1	2.73	0.41
6:E:100:ARG:NH2	6:E:118:GLU:HB3	2.36	0.41
1:1:679:A:H3'	1:1:680:G:H8	1.86	0.41
26:Y:20:ARG:HD2	26:Y:20:ARG:C	2.41	0.41
1:1:1411:G:C2	1:1:1412:C:H5	2.39	0.40
1:1:189:U:C5	1:1:189:U:OP2	2.74	0.40
1:1:491:C:H2'	1:1:492:C:O4'	2.20	0.40
1:1:495:U:C6	1:1:495:U:OP2	2.74	0.40
21:T:77:LYS:O	21:T:92:PHE:HZ	2.04	0.40
27:Z:43:LYS:HZ1	27:Z:44:LEU:N	2.19	0.40
1:1:796:G:H2'	1:1:797:C:C5'	2.51	0.40
1:1:1013:U:O2'	1:1:1104:G:H1'	2.21	0.40
1:1:990:A:C1'	1:1:991:G:N2	2.84	0.40
1:1:593:C:H4'	1:1:594:A:OP2	2.21	0.40
1:1:1284:A:H4'	1:1:1287:A:C6	2.56	0.40
27:Z:106:GLN:OE1	27:Z:108:ILE:HD11	2.20	0.40
1:1:1798:C:H2'	1:1:1799:G:O4'	2.21	0.40
1:1:1427:C:C5	1:1:1428:G:C8	3.09	0.40
1:1:1021:U:H4'	1:1:1022:U:O5'	2.21	0.40
1:1:641:A:C2'	1:1:642:U:H5'	2.50	0.40
1:1:969:U:H4'	1:1:969:U:OP1	2.21	0.40
1:1:1350:U:C6	1:1:1350:U:O5'	2.73	0.40
7:F:36:GLN:O	7:F:37:ASP:CB	2.68	0.40
1:1:540:U:H3	1:1:542:U:H5''	1.85	0.40
10:I:110:ARG:HG3	10:I:120:PRO:O	2.21	0.40
1:1:510:G:O2'	1:1:511:U:H5'	2.21	0.40
1:1:847:A:H5'	1:1:848:U:OP2	2.21	0.40
9:H:11:PRO:HA	9:H:14:GLU:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1305:C:H2'	1:1:1306:U:C6	2.56	0.40
1:1:1096:G:HO2'	1:1:1097:G:P	2.44	0.40
13:L:113:LEU:HD22	13:L:114:SER:N	2.37	0.40
27:Z:59:CYS:SG	27:Z:60:LYS:HD2	2.61	0.40
1:1:1639:G:C5'	1:1:1640:A:OP2	2.69	0.40
1:1:59:U:H5	1:1:501:C:H2'	1.86	0.40
1:1:745:C:C6	9:H:107:LYS:HD3	2.56	0.40
1:1:753:C:OP2	1:1:754:G:H8	2.04	0.40
1:1:527:C:H5'	11:J:122:SER:HB2	2.00	0.40
1:1:559:G:H5'	1:1:560:A:OP1	2.21	0.40
1:1:1102:G:H1	1:1:1130:G:N2	2.17	0.40
1:1:925:G:H2'	1:1:925:G:N3	2.36	0.40
1:1:211:G:C8	1:1:211:G:C4'	3.04	0.40
1:1:212:C:C5	1:1:212:C:OP2	2.74	0.40
10:I:138:ASN:ND2	10:I:139:LYS:H	2.19	0.40
1:1:300:U:C2'	1:1:301:A:H8	2.31	0.40
1:1:36:U:C2'	1:1:36:U:O2	2.63	0.40
1:1:1442:U:N3	18:Q:22:VAL:HG22	2.35	0.40
1:1:1698:C:C3'	1:1:1699:A:H5'	2.50	0.40
1:1:1285:G:H5''	1:1:1286:G:C8	2.57	0.40
1:1:1287:A:N3	1:1:1287:A:C2'	2.82	0.40
1:1:1454:A:H61	1:1:1467:C:N4	2.19	0.40
1:1:1621:U:O2	1:1:1621:U:C3'	2.68	0.40
2:A:9:GLN:CB	23:V:83:PHE:CD2	2.99	0.40
1:1:958:G:C5'	1:1:959:G:N7	2.84	0.40
1:1:1139:C:H2'	1:1:1140:G:H5'	2.03	0.40
17:P:34:MET:HA	17:P:37:TYR:CD1	2.56	0.40
1:1:1180:C:C5	1:1:1181:A:C5	3.09	0.40
1:1:870:A:C5	1:1:916:A:C6	3.09	0.40
1:1:1825:A:C3'	1:1:1825:A:C8	3.04	0.40
1:1:1020:A:O2'	1:1:1021:U:P	2.79	0.40
1:1:979:C:H6	1:1:979:C:OP2	2.04	0.40
1:1:1325:G:C8	1:1:1325:G:OP2	2.74	0.40
1:1:31:U:H2'	1:1:32:U:O5'	2.21	0.40
1:1:1562:C:P	21:T:71:GLY:HA3	2.61	0.40
14:M:56:CYS:SG	14:M:61:TYR:CE1	3.10	0.40
1:1:1320:G:H2'	1:1:1321:G:O4'	2.20	0.40
1:1:1002:U:O2'	1:1:1003:U:H5'	2.21	0.40
15:N:64:ARG:NH1	15:N:64:ARG:HB3	2.36	0.40
1:1:201:C:C3'	1:1:201:C:O2	2.69	0.40
1:1:840:C:H1'	26:Y:14:THR:OG1	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:246:LEU:HB3	6:E:250:GLU:HB2	2.03	0.40
10:I:182:CYS:O	10:I:184:ARG:HG3	2.22	0.40
1:1:1686:G:H2'	1:1:1686:G:N3	2.35	0.40
1:1:78:C:O2	1:1:78:C:C2'	2.69	0.40
1:1:795:A:C2	1:1:796:G:C1'	3.04	0.40
1:1:654:A:C5	1:1:655:A:N1	2.90	0.40
1:1:928:G:O5'	1:1:928:G:H2'	2.21	0.40
1:1:992:A:H5''	1:1:1132:C:O2	2.21	0.40
13:L:99:TYR:OH	25:X:17:ARG:HB2	2.20	0.40
1:1:1330:G:H4'	1:1:1331:C:H4'	2.00	0.40
1:1:1489:A:C3'	1:1:1490:G:H5'	2.52	0.40
1:1:1403:C:O5'	1:1:1403:C:H6	2.04	0.40
1:1:437:G:C5	1:1:438:G:C5	3.10	0.40
2:A:39:TYR:CD2	2:A:50:ASN:HA	2.56	0.40
26:Y:114:MET:HG3	26:Y:122:LYS:HG3	2.02	0.40
7:F:60:ARG:HG2	7:F:60:ARG:NH1	2.36	0.40
3:B:135:LEU:HD23	3:B:135:LEU:H	1.85	0.40
3:B:71:LEU:HD11	3:B:79:VAL:HG21	2.04	0.40
2:A:26:GLY:HA2	2:A:149:ASN:HD21	1.86	0.40
1:1:1673:U:P	18:Q:76:GLY:HA3	2.61	0.40
7:F:55:ARG:C	7:F:57:ALA:H	2.25	0.40
1:1:156:G:H3'	1:1:157:U:C5	2.56	0.40
1:1:1543:U:C2	18:Q:43:GLU:HG2	2.55	0.40
1:1:1036:A:C2'	1:1:1037:G:H5'	2.51	0.40
1:1:24:C:O2'	1:1:415:A:H4'	2.21	0.40
16:O:104:ARG:HG2	16:O:105:THR:N	2.37	0.40
22:U:22:ILE:HD11	22:U:91:LEU:CD1	2.50	0.40
2:A:108:PHE:HB2	2:A:136:GLU:HB3	2.03	0.40
3:B:223:PHE:CE1	3:B:225:LEU:HD13	2.56	0.40
9:H:69:LEU:C	9:H:69:LEU:HD13	2.42	0.40
1:1:1208:A:C2	1:1:1209:A:C5	3.09	0.40
1:1:1232:U:H3	1:1:1526:G:H1	1.69	0.40
1:1:1643:U:H1'	18:Q:142:GLN:CD	2.41	0.40
1:1:219:U:H6	1:1:219:U:C5'	2.33	0.40
1:1:60:A:N3	1:1:60:A:C2'	2.83	0.40
1:1:741:C:N4	1:1:744:G:H1	2.19	0.40
1:1:528:A:O2'	1:1:529:A:H5'	2.21	0.40
1:1:558:G:H4'	1:1:559:G:OP2	2.22	0.40
1:1:1016:U:O2'	1:1:1017:U:C5'	2.70	0.40
1:1:190:G:C6	1:1:191:A:N7	2.89	0.40
1:1:193:C:H5'	1:1:193:C:C6	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:1405:A:N3	1:1:1442:U:H5	2.17	0.40
1:1:1448:A:H2'	1:1:1449:G:C8	2.56	0.40
1:1:235:A:O2'	1:1:236:A:P	2.80	0.40
1:1:439:A:O2'	1:1:440:G:H5'	2.21	0.40
1:1:69:C:C5'	1:1:69:C:H6	2.32	0.40
1:1:1430:C:C6	1:1:1430:C:O5'	2.75	0.40
1:1:1050:A:H2'	1:1:1051:G:O5'	2.22	0.40
1:1:980:A:OP2	1:1:980:A:H8	2.03	0.40
21:T:27:LYS:HD3	21:T:110:LEU:CD1	2.49	0.40
20:S:98:VAL:CG2	20:S:103:LEU:HD13	2.48	0.40
19:R:54:VAL:O	19:R:57:LEU:HB2	2.21	0.40
15:N:64:ARG:HB3	15:N:64:ARG:HH11	1.85	0.40
20:S:2:SER:HB2	27:Z:50:PHE:CE1	2.57	0.40
10:I:148:LYS:HB3	10:I:152:ARG:HE	1.87	0.40
26:Y:20:ARG:HB3	26:Y:76:TYR:CD2	2.57	0.40
13:L:49:GLU:HA	13:L:52:GLU:OE2	2.21	0.40
21:T:17:ALA:HB1	21:T:21:PHE:HE2	1.85	0.40
1:1:1316:C:O5'	1:1:1316:C:H6	2.05	0.40
13:L:69:ARG:HD3	13:L:69:ARG:H	1.87	0.40
1:1:164:A:C3'	1:1:165:G:H8	2.33	0.40
1:1:181:A:C4'	1:1:182:C:OP2	2.67	0.40
1:1:337:C:H3'	1:1:337:C:O2	2.21	0.40
1:1:573:U:C4	1:1:576:A:C5	3.08	0.40
1:1:59:U:H2'	1:1:60:A:H5'	2.02	0.40
1:1:79:A:H3'	1:1:80:G:H8	1.85	0.40
1:1:1587:G:C6	21:T:74:SER:CB	3.03	0.40
27:Z:71:ALA:O	27:Z:75:GLU:HG2	2.20	0.40
1:1:343:A:O2'	1:1:344:U:P	2.79	0.40
10:I:144:LYS:HB2	10:I:144:LYS:HE2	1.87	0.40
1:1:301:A:C1'	10:I:71:CYS:O	2.70	0.40
1:1:1699:A:P	1:1:1699:A:H8	2.45	0.40
5:D:205:PRO:HA	19:R:42:PRO:HG2	2.03	0.40
1:1:1428:G:C6	1:1:1429:G:C5	3.10	0.40
22:U:24:LEU:HG	22:U:87:ARG:HB2	2.02	0.40
1:1:1726:G:H1	1:1:1808:U:H3	1.70	0.40
17:P:83:MET:SD	17:P:89:MET:SD	3.20	0.40
1:1:227:U:H1'	1:1:228:C:P	2.61	0.40
1:1:514:U:H3'	1:1:515:G:H8	1.82	0.40
12:K:10:ALA:C	12:K:38:LYS:HZ3	2.24	0.40
13:L:61:PRO:HD3	13:L:141:ASN:HD21	1.83	0.40
8:G:3:LEU:O	8:G:15:LEU:HD22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:S:23:ARG:HD3	20:S:23:ARG:N	2.36	0.40
1:1:1221:G:H2'	1:1:1222:G:H8	1.85	0.40
11:J:12:THR:CG2	11:J:45:ARG:HG3	2.52	0.40
15:N:72:LEU:HD13	15:N:72:LEU:O	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	A	216/295 (73%)	209 (97%)	5 (2%)	2 (1%)	21	67
3	B	211/264 (80%)	176 (83%)	18 (8%)	17 (8%)	1	19
4	C	220/293 (75%)	213 (97%)	2 (1%)	5 (2%)	8	48
5	D	210/243 (86%)	201 (96%)	4 (2%)	5 (2%)	7	47
6	E	255/263 (97%)	237 (93%)	13 (5%)	5 (2%)	9	51
7	F	186/204 (91%)	163 (88%)	13 (7%)	10 (5%)	2	29
8	G	230/249 (92%)	216 (94%)	5 (2%)	9 (4%)	4	36
9	H	189/194 (97%)	178 (94%)	7 (4%)	4 (2%)	9	50
10	I	205/208 (99%)	184 (90%)	14 (7%)	7 (3%)	5	40
11	J	177/194 (91%)	168 (95%)	6 (3%)	3 (2%)	11	55
12	K	92/165 (56%)	84 (91%)	1 (1%)	7 (8%)	1	20
13	L	144/158 (91%)	133 (92%)	5 (4%)	6 (4%)	3	34
14	M	118/132 (89%)	111 (94%)	1 (1%)	6 (5%)	2	30
15	N	148/151 (98%)	138 (93%)	5 (3%)	5 (3%)	5	40
16	O	135/151 (89%)	129 (96%)	3 (2%)	3 (2%)	8	49
17	P	116/145 (80%)	106 (91%)	5 (4%)	5 (4%)	3	34

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	Q	137/146 (94%)	129 (94%)	6 (4%)	2 (2%)	13	57
19	R	105/135 (78%)	99 (94%)	4 (4%)	2 (2%)	10	52
20	S	140/152 (92%)	125 (89%)	7 (5%)	8 (6%)	2	28
21	T	141/145 (97%)	135 (96%)	4 (3%)	2 (1%)	14	58
22	U	99/119 (83%)	95 (96%)	3 (3%)	1 (1%)	19	65
23	V	81/83 (98%)	78 (96%)	1 (1%)	2 (2%)	7	46
24	W	127/130 (98%)	118 (93%)	7 (6%)	2 (2%)	12	56
25	X	132/143 (92%)	120 (91%)	5 (4%)	7 (5%)	2	29
26	Y	120/133 (90%)	114 (95%)	2 (2%)	4 (3%)	5	40
27	Z	74/125 (59%)	71 (96%)	0	3 (4%)	3	35
28	a	94/115 (82%)	85 (90%)	5 (5%)	4 (4%)	3	34
29	b	78/84 (93%)	70 (90%)	8 (10%)	0	100	100
30	c	60/69 (87%)	57 (95%)	1 (2%)	2 (3%)	5	40
31	d	51/56 (91%)	44 (86%)	7 (14%)	0	100	100
32	e	49/59 (83%)	43 (88%)	5 (10%)	1 (2%)	9	51
33	f	59/156 (38%)	53 (90%)	6 (10%)	0	100	100
34	g	312/317 (98%)	291 (93%)	14 (4%)	7 (2%)	8	49
35	h	428/436 (98%)	410 (96%)	14 (3%)	4 (1%)	21	67
36	i	414/426 (97%)	403 (97%)	9 (2%)	2 (0%)	34	77
All	All	5553/6338 (88%)	5186 (93%)	215 (4%)	152 (3%)	10	45

All (152) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	B	76	ASN
3	B	132	GLY
3	B	148	ASN
3	B	154	SER
3	B	176	VAL
3	B	177	GLN
3	B	207	LEU
3	B	221	PRO
4	C	64	THR
4	C	172	ASN
4	C	176	LYS

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Mol	Chain	Res	Type
5	D	78	GLY
5	D	199	GLY
6	E	204	SER
6	E	205	PHE
7	F	20	PHE
7	F	22	LYS
7	F	40	ALA
7	F	48	TYR
7	F	80	GLY
7	F	132	GLY
7	F	185	SER
8	G	43	GLU
8	G	146	ASN
8	G	147	LEU
8	G	169	PRO
9	H	88	SER
9	H	135	PHE
10	I	123	ARG
10	I	131	PRO
10	I	134	GLU
10	I	142	SER
10	I	159	SER
12	K	30	PRO
12	K	32	HIS
12	K	36	ALA
12	K	84	HIS
12	K	87	PRO
13	L	8	ARG
13	L	19	ASN
15	N	7	PRO
15	N	108	ASP
16	O	100	THR
16	O	146	ARG
17	P	29	SER
17	P	126	VAL
19	R	72	LYS
20	S	78	LYS
20	S	79	ILE
20	S	134	GLN
21	T	37	VAL
22	U	52	GLY
23	V	42	VAL

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Mol	Chain	Res	Type
24	W	100	GLY
25	X	61	GLN
25	X	106	GLY
25	X	107	ARG
25	X	116	PRO
26	Y	33	ALA
26	Y	98	GLU
27	Z	95	GLY
34	g	255	SER
34	g	284	PRO
35	h	244	GLN
35	h	273	GLU
35	h	278	VAL
36	i	356	VAL
2	A	6	ASP
3	B	52	THR
3	B	78	GLU
3	B	127	VAL
3	B	209	ASP
4	C	174	ILE
5	D	81	GLU
6	E	231	GLY
6	E	243	GLY
7	F	34	SER
7	F	56	TYR
8	G	87	ARG
8	G	157	VAL
9	H	164	ASN
12	K	64	TRP
13	L	119	ASP
14	M	30	GLY
14	M	60	MET
14	M	106	CYS
14	M	107	SER
15	N	143	SER
19	R	114	LEU
20	S	24	ARG
20	S	31	THR
20	S	90	VAL
20	S	92	ASP
23	V	48	GLY
28	a	61	ALA

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Mol	Chain	Res	Type
34	g	276	SER
3	B	49	VAL
3	B	213	ARG
5	D	142	LEU
6	E	203	GLY
7	F	79	HIS
8	G	91	GLU
8	G	92	ARG
9	H	109	ARG
13	L	7	GLU
14	M	102	LYS
15	N	3	ARG
18	Q	17	LYS
18	Q	74	GLY
25	X	33	GLY
25	X	86	PRO
26	Y	64	PHE
27	Z	113	THR
28	a	81	SER
30	c	38	THR
36	i	352	ASP
15	N	62	GLN
17	P	39	ALA
24	W	28	ARG
25	X	75	ILE
26	Y	119	GLY
30	c	64	GLU
34	g	146	SER
4	C	261	PHE
8	G	88	ARG
11	J	138	ARG
11	J	169	ARG
13	L	115	PRO
17	P	28	MET
17	P	125	PRO
21	T	51	ASN
27	Z	114	LYS
28	a	38	LYS
32	e	8	ARG
35	h	118	LYS
2	A	104	THR
3	B	23	ASP

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Mol	Chain	Res	Type
3	B	210	VAL
10	I	12	ARG
20	S	6	PRO
28	a	84	VAL
3	B	64	GLY
11	J	170	PRO
12	K	86	PRO
13	L	29	GLY
14	M	100	PRO
34	g	103	GLY
10	I	20	PRO
16	O	53	ILE
34	g	61	GLY
34	g	265	ILE
5	D	63	GLY

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	A	181/243 (74%)	176 (97%)	5 (3%)	51	78
3	B	194/231 (84%)	183 (94%)	11 (6%)	25	62
4	C	188/225 (84%)	181 (96%)	7 (4%)	41	73
5	D	175/202 (87%)	166 (95%)	9 (5%)	29	66
6	E	220/225 (98%)	208 (94%)	12 (6%)	27	63
7	F	158/170 (93%)	151 (96%)	7 (4%)	35	69
8	G	202/218 (93%)	195 (96%)	7 (4%)	43	74
9	H	171/174 (98%)	167 (98%)	4 (2%)	58	83
10	I	179/180 (99%)	167 (93%)	12 (7%)	20	57
11	J	160/168 (95%)	150 (94%)	10 (6%)	22	59
12	K	85/136 (62%)	82 (96%)	3 (4%)	43	74
13	L	133/142 (94%)	131 (98%)	2 (2%)	72	88

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	M	102/108 (94%)	97 (95%)	5 (5%)	31	67
15	N	130/131 (99%)	128 (98%)	2 (2%)	72	88
16	O	107/119 (90%)	100 (94%)	7 (6%)	21	58
17	P	107/130 (82%)	102 (95%)	5 (5%)	32	68
18	Q	115/121 (95%)	111 (96%)	4 (4%)	43	74
19	R	99/122 (81%)	94 (95%)	5 (5%)	29	66
20	S	123/132 (93%)	114 (93%)	9 (7%)	17	54
21	T	113/115 (98%)	106 (94%)	7 (6%)	23	60
22	U	93/107 (87%)	89 (96%)	4 (4%)	35	70
23	V	67/67 (100%)	66 (98%)	1 (2%)	72	88
24	W	112/113 (99%)	107 (96%)	5 (4%)	34	69
25	X	108/115 (94%)	103 (95%)	5 (5%)	33	68
26	Y	107/115 (93%)	101 (94%)	6 (6%)	26	62
27	Z	67/103 (65%)	63 (94%)	4 (6%)	24	60
28	a	83/98 (85%)	76 (92%)	7 (8%)	14	48
29	b	72/76 (95%)	68 (94%)	4 (6%)	26	62
30	c	55/62 (89%)	52 (94%)	3 (6%)	27	63
31	d	47/49 (96%)	43 (92%)	4 (8%)	13	48
32	e	42/48 (88%)	40 (95%)	2 (5%)	31	67
33	f	54/140 (39%)	51 (94%)	3 (6%)	26	62
34	g	272/275 (99%)	260 (96%)	12 (4%)	35	69
35	h	376/376 (100%)	368 (98%)	8 (2%)	61	84
36	i	371/371 (100%)	364 (98%)	7 (2%)	65	86
All	All	4868/5407 (90%)	4660 (96%)	208 (4%)	40	70

All (208) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	A	8	LEU
2	A	10	MET
2	A	19	LEU
2	A	110	ASN
2	A	204	TYR
3	B	23	ASP

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Mol	Chain	Res	Type
3	B	30	TRP
3	B	46	LYS
3	B	71	LEU
3	B	97	LEU
3	B	131	ASP
3	B	148	ASN
3	B	152	LYS
3	B	177	GLN
3	B	216	LYS
3	B	218	LEU
4	C	89	LYS
4	C	137	VAL
4	C	205	VAL
4	C	209	VAL
4	C	240	THR
4	C	252	THR
4	C	256	TRP
5	D	5	ILE
5	D	16	ILE
5	D	42	THR
5	D	66	ILE
5	D	93	THR
5	D	150	MET
5	D	162	ASP
5	D	193	ASP
5	D	211	VAL
6	E	23	LEU
6	E	37	LYS
6	E	51	ARG
6	E	95	THR
6	E	114	ILE
6	E	115	THR
6	E	128	LYS
6	E	136	ILE
6	E	148	ARG
6	E	166	THR
6	E	189	LEU
6	E	205	PHE
7	F	47	LYS
7	F	63	LYS
7	F	68	ILE
7	F	72	LEU

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Mol	Chain	Res	Type
7	F	103	LEU
7	F	135	ARG
7	F	195	GLU
8	G	24	LEU
8	G	29	GLU
8	G	34	THR
8	G	87	ARG
8	G	160	LYS
8	G	176	ILE
8	G	195	LYS
9	H	111	LYS
9	H	116	ARG
9	H	118	ARG
9	H	152	ARG
10	I	19	LYS
10	I	21	TYR
10	I	29	LEU
10	I	48	VAL
10	I	55	TYR
10	I	62	VAL
10	I	78	ILE
10	I	93	THR
10	I	131	PRO
10	I	136	ILE
10	I	137	LEU
10	I	144	LYS
11	J	8	VAL
11	J	12	THR
11	J	30	LYS
11	J	41	ARG
11	J	47	LYS
11	J	78	LEU
11	J	128	VAL
11	J	130	ILE
11	J	147	PHE
11	J	163	SER
12	K	15	LEU
12	K	70	TYR
12	K	84	HIS
13	L	17	PHE
13	L	69	ARG
14	M	52	LEU

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Mol	Chain	Res	Type
14	M	83	LYS
14	M	88	TRP
14	M	106	CYS
14	M	117	GLU
15	N	7	PRO
15	N	80	LEU
16	O	45	THR
16	O	63	LYS
16	O	100	THR
16	O	105	THR
16	O	129	ILE
16	O	132	VAL
16	O	140	THR
17	P	16	THR
17	P	29	SER
17	P	40	ARG
17	P	44	ARG
17	P	74	GLU
18	Q	39	LEU
18	Q	43	GLU
18	Q	72	VAL
18	Q	105	LYS
19	R	22	THR
19	R	46	LEU
19	R	71	ILE
19	R	109	LEU
19	R	118	GLN
20	S	3	LEU
20	S	5	ILE
20	S	8	LYS
20	S	23	ARG
20	S	25	LYS
20	S	45	LEU
20	S	60	THR
20	S	99	LEU
20	S	139	THR
21	T	5	THR
21	T	33	TRP
21	T	39	LEU
21	T	64	LEU
21	T	87	VAL
21	T	121	ARG

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Mol	Chain	Res	Type
21	T	126	GLN
22	U	24	LEU
22	U	59	LYS
22	U	61	LEU
22	U	115	THR
23	V	2	GLN
24	W	4	MET
24	W	11	LEU
24	W	20	ARG
24	W	97	ARG
24	W	98	GLN
25	X	17	ARG
25	X	31	HIS
25	X	37	LYS
25	X	80	LYS
25	X	81	ILE
26	Y	20	ARG
26	Y	21	LYS
26	Y	54	VAL
26	Y	84	LYS
26	Y	99	LYS
26	Y	100	LYS
27	Z	43	LYS
27	Z	62	VAL
27	Z	67	LEU
27	Z	111	ARG
28	a	21	ILE
28	a	23	CYS
28	a	32	LYS
28	a	37	LYS
28	a	64	LEU
28	a	71	LEU
28	a	84	VAL
29	b	7	LEU
29	b	56	CYS
29	b	59	CYS
29	b	63	LEU
30	c	9	ILE
30	c	17	VAL
30	c	32	VAL
31	d	28	HIS
31	d	40	ARG

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Mol	Chain	Res	Type
31	d	44	ARG
31	d	48	LYS
32	e	18	LYS
32	e	46	VAL
33	f	97	LYS
33	f	104	LYS
33	f	148	TYR
34	g	20	GLN
34	g	26	GLN
34	g	54	ILE
34	g	94	THR
34	g	99	ARG
34	g	157	SER
34	g	164	ILE
34	g	189	ILE
34	g	255	SER
34	g	266	ILE
34	g	287	THR
34	g	289	LEU
35	h	30	ASN
35	h	44	GLN
35	h	140	LEU
35	h	226	LEU
35	h	278	VAL
35	h	302	CYS
35	h	333	LEU
35	h	342	LYS
36	i	227	THR
36	i	256	LEU
36	i	330	ARG
36	i	414	ILE
36	i	444	THR
36	i	534	ILE
36	i	602	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (100) such sidechains are listed below:

Mol	Chain	Res	Type
2	A	50	ASN
2	A	110	ASN
2	A	215	GLN
3	B	40	ASN

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Mol	Chain	Res	Type
3	B	53	GLN
3	B	149	GLN
3	B	157	GLN
3	B	160	GLN
3	B	177	GLN
4	C	267	GLN
5	D	4	GLN
5	D	56	GLN
5	D	57	ASN
5	D	101	GLN
5	D	179	GLN
6	E	36	HIS
6	E	138	HIS
6	E	188	ASN
6	E	216	ASN
6	E	230	ASN
7	F	29	GLN
7	F	82	ASN
7	F	95	HIS
7	F	107	ASN
7	F	110	GLN
7	F	114	ASN
7	F	165	ASN
7	F	203	ASN
8	G	65	GLN
8	G	81	HIS
8	G	105	ASN
9	H	25	GLN
9	H	76	GLN
9	H	97	GLN
9	H	112	ASN
10	I	22	HIS
11	J	124	HIS
11	J	143	ASN
12	K	44	HIS
12	K	84	HIS
13	L	5	GLN
13	L	112	HIS
14	M	19	GLN
15	N	105	ASN
16	O	32	HIS
16	O	43	HIS

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Mol	Chain	Res	Type
17	P	35	GLN
17	P	104	GLN
18	Q	11	GLN
18	Q	48	GLN
18	Q	80	GLN
18	Q	86	GLN
19	R	62	GLN
20	S	19	ASN
20	S	73	ASN
20	S	85	ASN
20	S	87	GLN
21	T	63	HIS
21	T	126	GLN
22	U	100	GLN
23	V	2	GLN
24	W	24	GLN
24	W	82	GLN
24	W	113	HIS
25	X	61	GLN
25	X	73	GLN
25	X	77	ASN
26	Y	19	GLN
26	Y	22	GLN
26	Y	29	HIS
27	Z	103	HIS
28	a	19	GLN
29	b	49	HIS
30	c	45	ASN
31	d	5	GLN
31	d	16	GLN
31	d	26	ASN
31	d	41	GLN
32	e	22	GLN
32	e	44	ASN
34	g	20	GLN
34	g	26	GLN
34	g	56	GLN
34	g	64	HIS
34	g	117	ASN
34	g	196	ASN
35	h	44	GLN
35	h	79	GLN

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Mol	Chain	Res	Type
35	h	111	ASN
35	h	121	ASN
35	h	164	ASN
35	h	199	HIS
35	h	266	GLN
35	h	397	GLN
35	h	425	GLN
36	i	291	HIS
36	i	360	ASN
36	i	419	ASN
36	i	514	ASN
36	i	578	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	1	1738/1869 (92%)	1037 (59%)	152 (8%)
37	j	195/201 (97%)	50 (25%)	0
All	All	1933/2070 (93%)	1087 (56%)	152 (7%)

All (1087) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	1	2	A
1	1	3	C
1	1	4	C
1	1	5	U
1	1	6	G
1	1	7	G
1	1	8	U
1	1	9	U
1	1	15	U
1	1	16	G
1	1	17	C
1	1	21	U
1	1	22	A
1	1	24	C
1	1	25	A
1	1	26	U
1	1	30	C
1	1	33	G

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Mol	Chain	Res	Type
1	1	39	A
1	1	40	A
1	1	41	G
1	1	44	U
1	1	45	A
1	1	46	A
1	1	47	G
1	1	48	C
1	1	50	A
1	1	55	U
1	1	56	G
1	1	59	U
1	1	60	A
1	1	61	A
1	1	62	G
1	1	63	U
1	1	64	A
1	1	65	C
1	1	66	G
1	1	67	C
1	1	68	A
1	1	69	C
1	1	70	G
1	1	71	G
1	1	72	C
1	1	74	G
1	1	75	G
1	1	76	U
1	1	77	A
1	1	78	C
1	1	79	A
1	1	80	G
1	1	81	U
1	1	82	G
1	1	83	A
1	1	84	A
1	1	87	U
1	1	98	C
1	1	99	A
1	1	101	U
1	1	103	A
1	1	104	A

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Mol	Chain	Res	Type
1	1	105	U
1	1	106	C
1	1	109	U
1	1	110	U
1	1	111	A
1	1	112	U
1	1	113	G
1	1	114	G
1	1	115	U
1	1	116	U
1	1	117	C
1	1	118	C
1	1	120	U
1	1	121	U
1	1	122	G
1	1	123	G
1	1	124	U
1	1	125	C
1	1	126	G
1	1	127	C
1	1	128	U
1	1	129	C
1	1	130	G
1	1	131	C
1	1	132	U
1	1	133	C
1	1	134	C
1	1	135	U
1	1	136	C
1	1	137	U
1	1	138	C
1	1	139	C
1	1	140	C
1	1	141	A
1	1	142	C
1	1	143	U
1	1	144	U
1	1	145	G
1	1	146	G
1	1	147	A
1	1	150	A
1	1	151	C

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Mol	Chain	Res	Type
1	1	152	U
1	1	153	G
1	1	158	A
1	1	160	U
1	1	161	U
1	1	162	C
1	1	163	U
1	1	164	A
1	1	166	A
1	1	167	G
1	1	168	C
1	1	169	U
1	1	171	A
1	1	173	A
1	1	174	C
1	1	176	U
1	1	179	C
1	1	180	G
1	1	181	A
1	1	182	C
1	1	183	G
1	1	184	G
1	1	185	G
1	1	187	G
1	1	193	C
1	1	198	U
1	1	199	C
1	1	200	G
1	1	201	C
1	1	202	G
1	1	204	G
1	1	205	G
1	1	207	G
1	1	208	G
1	1	209	A
1	1	210	U
1	1	211	G
1	1	213	G
1	1	214	U
1	1	215	G
1	1	216	C
1	1	217	A

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Mol	Chain	Res	Type
1	1	218	U
1	1	219	U
1	1	220	U
1	1	225	G
1	1	226	A
1	1	227	U
1	1	228	C
1	1	229	A
1	1	230	A
1	1	233	C
1	1	234	C
1	1	235	A
1	1	236	A
1	1	237	C
1	1	238	C
1	1	239	C
1	1	298	G
1	1	301	A
1	1	303	C
1	1	304	C
1	1	305	U
1	1	306	C
1	1	307	G
1	1	308	G
1	1	309	G
1	1	310	C
1	1	311	C
1	1	312	G
1	1	313	A
1	1	314	U
1	1	315	C
1	1	317	C
1	1	318	A
1	1	319	C
1	1	320	G
1	1	321	C
1	1	327	G
1	1	328	U
1	1	329	G
1	1	330	G
1	1	332	G
1	1	333	G

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Mol	Chain	Res	Type
1	1	337	C
1	1	338	G
1	1	339	A
1	1	343	A
1	1	344	U
1	1	345	U
1	1	346	C
1	1	347	G
1	1	350	C
1	1	352	U
1	1	353	C
1	1	354	U
1	1	356	C
1	1	357	C
1	1	358	C
1	1	359	U
1	1	362	C
1	1	363	A
1	1	364	A
1	1	368	U
1	1	369	C
1	1	371	A
1	1	372	U
1	1	375	U
1	1	376	A
1	1	378	U
1	1	379	C
1	1	380	G
1	1	381	C
1	1	382	C
1	1	383	G
1	1	384	U
1	1	386	C
1	1	389	A
1	1	395	G
1	1	399	C
1	1	400	C
1	1	407	G
1	1	408	A
1	1	409	C
1	1	410	G
1	1	412	G

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Mol	Chain	Res	Type
1	1	416	U
1	1	421	G
1	1	422	U
1	1	423	U
1	1	424	C
1	1	426	A
1	1	427	U
1	1	429	C
1	1	431	G
1	1	433	A
1	1	435	A
1	1	436	G
1	1	438	G
1	1	440	G
1	1	441	C
1	1	442	C
1	1	443	U
1	1	445	A
1	1	447	A
1	1	448	A
1	1	449	A
1	1	450	C
1	1	451	G
1	1	452	G
1	1	454	U
1	1	459	C
1	1	460	A
1	1	463	C
1	1	464	A
1	1	465	A
1	1	466	G
1	1	467	G
1	1	468	A
1	1	472	C
1	1	473	A
1	1	474	G
1	1	475	C
1	1	476	A
1	1	477	G
1	1	480	G
1	1	482	G
1	1	485	A

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Mol	Chain	Res	Type
1	1	487	U
1	1	488	U
1	1	489	A
1	1	491	C
1	1	492	C
1	1	493	A
1	1	495	U
1	1	496	C
1	1	497	C
1	1	499	G
1	1	500	A
1	1	501	C
1	1	502	C
1	1	503	C
1	1	504	G
1	1	506	G
1	1	507	G
1	1	509	G
1	1	510	G
1	1	512	A
1	1	516	A
1	1	517	C
1	1	518	G
1	1	523	A
1	1	525	A
1	1	526	A
1	1	527	C
1	1	529	A
1	1	530	U
1	1	533	A
1	1	535	G
1	1	536	A
1	1	537	C
1	1	538	U
1	1	539	C
1	1	541	U
1	1	542	U
1	1	543	C
1	1	544	G
1	1	545	A
1	1	546	G
1	1	547	G

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Mol	Chain	Res	Type
1	1	548	C
1	1	549	C
1	1	550	C
1	1	553	U
1	1	554	A
1	1	555	A
1	1	559	G
1	1	560	A
1	1	562	U
1	1	564	A
1	1	565	G
1	1	566	U
1	1	568	C
1	1	570	C
1	1	571	U
1	1	572	U
1	1	573	U
1	1	574	A
1	1	575	A
1	1	576	A
1	1	577	U
1	1	578	C
1	1	579	C
1	1	580	U
1	1	582	U
1	1	586	G
1	1	587	A
1	1	588	G
1	1	589	G
1	1	590	A
1	1	591	U
1	1	592	C
1	1	593	C
1	1	594	A
1	1	595	U
1	1	596	U
1	1	597	G
1	1	599	A
1	1	600	G
1	1	603	C
1	1	604	A
1	1	605	A

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Mol	Chain	Res	Type
1	1	606	G
1	1	607	U
1	1	608	C
1	1	609	U
1	1	612	U
1	1	613	G
1	1	614	C
1	1	617	G
1	1	619	A
1	1	620	G
1	1	621	C
1	1	623	G
1	1	624	C
1	1	627	U
1	1	628	A
1	1	629	A
1	1	630	U
1	1	631	U
1	1	634	A
1	1	638	C
1	1	643	A
1	1	644	G
1	1	645	C
1	1	647	U
1	1	648	A
1	1	650	A
1	1	651	U
1	1	652	U
1	1	654	A
1	1	655	A
1	1	656	G
1	1	657	U
1	1	658	U
1	1	659	G
1	1	660	C
1	1	661	U
1	1	663	C
1	1	664	A
1	1	665	G
1	1	666	U
1	1	668	A
1	1	669	A

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Mol	Chain	Res	Type
1	1	671	A
1	1	672	A
1	1	673	G
1	1	674	C
1	1	675	U
1	1	676	C
1	1	677	G
1	1	679	A
1	1	680	G
1	1	681	U
1	1	683	G
1	1	684	G
1	1	686	U
1	1	688	U
1	1	689	U
1	1	692	G
1	1	694	G
1	1	695	C
1	1	742	U
1	1	743	U
1	1	744	G
1	1	745	C
1	1	746	C
1	1	747	U
1	1	748	C
1	1	749	U
1	1	750	C
1	1	754	G
1	1	755	C
1	1	793	G
1	1	795	A
1	1	796	G
1	1	797	C
1	1	798	G
1	1	799	U
1	1	800	U
1	1	801	U
1	1	802	A
1	1	803	C
1	1	804	U
1	1	807	G
1	1	810	A

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Mol	Chain	Res	Type
1	1	812	A
1	1	815	U
1	1	816	A
1	1	818	A
1	1	819	G
1	1	820	U
1	1	821	G
1	1	822	U
1	1	823	U
1	1	825	A
1	1	827	A
1	1	829	C
1	1	830	A
1	1	831	G
1	1	834	C
1	1	835	C
1	1	837	A
1	1	838	G
1	1	839	C
1	1	840	C
1	1	841	G
1	1	842	C
1	1	844	U
1	1	845	G
1	1	847	A
1	1	848	U
1	1	851	C
1	1	852	G
1	1	856	C
1	1	861	A
1	1	862	A
1	1	863	U
1	1	865	A
1	1	869	A
1	1	870	A
1	1	873	G
1	1	874	G
1	1	875	A
1	1	876	C
1	1	886	A
1	1	887	U
1	1	888	U

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Mol	Chain	Res	Type
1	1	889	U
1	1	890	U
1	1	891	G
1	1	896	U
1	1	897	U
1	1	898	U
1	1	899	U
1	1	900	C
1	1	911	C
1	1	912	C
1	1	913	A
1	1	914	U
1	1	915	G
1	1	917	U
1	1	918	U
1	1	919	A
1	1	920	A
1	1	921	G
1	1	924	G
1	1	930	C
1	1	933	G
1	1	937	C
1	1	938	A
1	1	943	U
1	1	946	U
1	1	950	C
1	1	951	C
1	1	953	C
1	1	955	A
1	1	956	G
1	1	957	A
1	1	958	G
1	1	959	G
1	1	960	U
1	1	961	G
1	1	962	A
1	1	963	A
1	1	966	U
1	1	967	C
1	1	968	U
1	1	969	U
1	1	970	G

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Mol	Chain	Res	Type
1	1	971	G
1	1	972	A
1	1	975	G
1	1	977	C
1	1	979	C
1	1	980	A
1	1	984	C
1	1	985	G
1	1	988	C
1	1	990	A
1	1	991	G
1	1	995	G
1	1	999	G
1	1	1000	C
1	1	1004	U
1	1	1006	C
1	1	1007	C
1	1	1009	A
1	1	1011	A
1	1	1015	U
1	1	1016	U
1	1	1017	U
1	1	1018	U
1	1	1019	C
1	1	1020	A
1	1	1021	U
1	1	1022	U
1	1	1023	A
1	1	1024	A
1	1	1029	G
1	1	1033	G
1	1	1034	A
1	1	1035	A
1	1	1036	A
1	1	1040	G
1	1	1044	G
1	1	1045	U
1	1	1049	A
1	1	1050	A
1	1	1051	G
1	1	1052	A
1	1	1053	C

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Mol	Chain	Res	Type
1	1	1055	A
1	1	1057	C
1	1	1058	A
1	1	1060	A
1	1	1061	U
1	1	1062	A
1	1	1064	C
1	1	1065	G
1	1	1067	C
1	1	1076	G
1	1	1083	A
1	1	1084	A
1	1	1085	C
1	1	1086	G
1	1	1087	A
1	1	1088	U
1	1	1089	G
1	1	1090	C
1	1	1096	G
1	1	1097	G
1	1	1101	U
1	1	1104	G
1	1	1108	G
1	1	1109	C
1	1	1110	G
1	1	1112	U
1	1	1115	U
1	1	1116	C
1	1	1117	C
1	1	1118	C
1	1	1120	U
1	1	1121	G
1	1	1124	C
1	1	1131	G
1	1	1132	C
1	1	1133	A
1	1	1136	U
1	1	1137	U
1	1	1139	C
1	1	1140	G
1	1	1141	G
1	1	1143	A

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Mol	Chain	Res	Type
1	1	1144	A
1	1	1147	C
1	1	1148	A
1	1	1149	A
1	1	1150	A
1	1	1151	G
1	1	1153	C
1	1	1154	U
1	1	1155	U
1	1	1157	G
1	1	1158	G
1	1	1161	U
1	1	1163	C
1	1	1164	G
1	1	1165	G
1	1	1166	G
1	1	1169	G
1	1	1170	A
1	1	1171	G
1	1	1176	G
1	1	1182	A
1	1	1183	A
1	1	1186	U
1	1	1189	A
1	1	1194	A
1	1	1195	A
1	1	1198	G
1	1	1199	A
1	1	1200	A
1	1	1203	G
1	1	1205	C
1	1	1206	G
1	1	1207	G
1	1	1215	C
1	1	1216	C
1	1	1217	A
1	1	1218	C
1	1	1219	C
1	1	1221	G
1	1	1223	A
1	1	1224	G
1	1	1235	G

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Mol	Chain	Res	Type
1	1	1236	G
1	1	1237	C
1	1	1242	U
1	1	1243	U
1	1	1245	G
1	1	1246	A
1	1	1247	C
1	1	1248	U
1	1	1249	C
1	1	1251	A
1	1	1253	A
1	1	1254	C
1	1	1255	G
1	1	1256	G
1	1	1257	G
1	1	1258	A
1	1	1259	A
1	1	1260	A
1	1	1261	C
1	1	1262	C
1	1	1263	U
1	1	1264	C
1	1	1265	A
1	1	1266	C
1	1	1267	C
1	1	1268	C
1	1	1269	G
1	1	1270	G
1	1	1273	C
1	1	1274	G
1	1	1275	G
1	1	1276	A
1	1	1277	C
1	1	1278	A
1	1	1279	C
1	1	1282	A
1	1	1284	A
1	1	1285	G
1	1	1286	G
1	1	1287	A
1	1	1288	U
1	1	1289	U

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Mol	Chain	Res	Type
1	1	1297	U
1	1	1300	U
1	1	1301	A
1	1	1302	G
1	1	1303	C
1	1	1307	U
1	1	1308	U
1	1	1310	U
1	1	1311	C
1	1	1312	G
1	1	1313	A
1	1	1314	U
1	1	1315	U
1	1	1317	C
1	1	1318	G
1	1	1323	U
1	1	1324	G
1	1	1325	G
1	1	1326	U
1	1	1327	G
1	1	1330	G
1	1	1331	C
1	1	1332	A
1	1	1333	U
1	1	1335	G
1	1	1343	U
1	1	1344	A
1	1	1345	G
1	1	1347	U
1	1	1349	G
1	1	1351	G
1	1	1352	G
1	1	1354	G
1	1	1357	A
1	1	1358	U
1	1	1359	U
1	1	1360	U
1	1	1363	C
1	1	1364	U
1	1	1368	U
1	1	1369	A
1	1	1371	U

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Mol	Chain	Res	Type
1	1	1372	U
1	1	1378	A
1	1	1381	G
1	1	1382	A
1	1	1384	C
1	1	1389	C
1	1	1390	U
1	1	1392	U
1	1	1393	G
1	1	1394	G
1	1	1395	C
1	1	1397	U
1	1	1399	C
1	1	1401	A
1	1	1402	A
1	1	1403	C
1	1	1404	U
1	1	1405	A
1	1	1406	G
1	1	1407	U
1	1	1408	U
1	1	1409	A
1	1	1410	C
1	1	1411	G
1	1	1412	C
1	1	1413	G
1	1	1415	C
1	1	1416	C
1	1	1417	C
1	1	1419	C
1	1	1420	G
1	1	1421	A
1	1	1422	G
1	1	1423	C
1	1	1424	G
1	1	1425	G
1	1	1426	U
1	1	1427	C
1	1	1428	G
1	1	1429	G
1	1	1430	C
1	1	1431	G

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Mol	Chain	Res	Type
1	1	1432	U
1	1	1433	C
1	1	1434	C
1	1	1435	C
1	1	1436	C
1	1	1437	C
1	1	1438	A
1	1	1440	C
1	1	1441	U
1	1	1442	U
1	1	1443	C
1	1	1444	U
1	1	1445	U
1	1	1446	A
1	1	1447	G
1	1	1448	A
1	1	1451	G
1	1	1453	C
1	1	1454	A
1	1	1455	A
1	1	1456	G
1	1	1457	U
1	1	1461	G
1	1	1462	U
1	1	1463	U
1	1	1464	C
1	1	1465	A
1	1	1466	G
1	1	1467	C
1	1	1471	C
1	1	1472	C
1	1	1473	G
1	1	1475	G
1	1	1476	A
1	1	1477	U
1	1	1478	U
1	1	1480	A
1	1	1481	G
1	1	1482	C
1	1	1484	A
1	1	1486	A
1	1	1489	A

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Mol	Chain	Res	Type
1	1	1490	G
1	1	1493	C
1	1	1494	U
1	1	1495	G
1	1	1496	U
1	1	1498	A
1	1	1500	G
1	1	1505	U
1	1	1507	G
1	1	1508	A
1	1	1509	U
1	1	1510	G
1	1	1511	U
1	1	1513	C
1	1	1514	G
1	1	1517	G
1	1	1520	G
1	1	1521	C
1	1	1522	A
1	1	1523	C
1	1	1528	G
1	1	1529	C
1	1	1530	U
1	1	1531	A
1	1	1535	U
1	1	1536	G
1	1	1539	U
1	1	1540	G
1	1	1541	G
1	1	1542	C
1	1	1543	U
1	1	1544	C
1	1	1545	A
1	1	1546	G
1	1	1547	C
1	1	1548	G
1	1	1549	U
1	1	1550	G
1	1	1551	U
1	1	1553	C
1	1	1554	C
1	1	1555	U

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Mol	Chain	Res	Type
1	1	1556	A
1	1	1557	C
1	1	1558	C
1	1	1560	U
1	1	1561	A
1	1	1563	G
1	1	1568	C
1	1	1569	A
1	1	1570	G
1	1	1573	G
1	1	1574	C
1	1	1577	G
1	1	1578	U
1	1	1579	A
1	1	1580	A
1	1	1581	C
1	1	1582	C
1	1	1585	U
1	1	1586	U
1	1	1587	G
1	1	1588	A
1	1	1589	A
1	1	1591	C
1	1	1595	U
1	1	1597	C
1	1	1598	G
1	1	1599	U
1	1	1600	G
1	1	1601	A
1	1	1602	U
1	1	1603	G
1	1	1604	G
1	1	1605	G
1	1	1607	A
1	1	1609	C
1	1	1610	G
1	1	1612	G
1	1	1614	A
1	1	1615	U
1	1	1617	G
1	1	1618	C
1	1	1620	A

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Mol	Chain	Res	Type
1	1	1621	U
1	1	1622	U
1	1	1623	A
1	1	1624	U
1	1	1625	U
1	1	1627	C
1	1	1631	U
1	1	1632	G
1	1	1635	C
1	1	1636	G
1	1	1637	A
1	1	1638	G
1	1	1639	G
1	1	1640	A
1	1	1644	C
1	1	1645	C
1	1	1647	A
1	1	1648	G
1	1	1649	U
1	1	1651	A
1	1	1652	G
1	1	1654	G
1	1	1655	C
1	1	1656	G
1	1	1660	C
1	1	1661	A
1	1	1662	U
1	1	1664	A
1	1	1665	G
1	1	1666	C
1	1	1669	G
1	1	1671	G
1	1	1672	U
1	1	1673	U
1	1	1674	G
1	1	1677	U
1	1	1678	A
1	1	1679	A
1	1	1680	G
1	1	1682	C
1	1	1684	C
1	1	1685	U

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Mol	Chain	Res	Type
1	1	1686	G
1	1	1687	C
1	1	1688	C
1	1	1689	C
1	1	1691	U
1	1	1692	U
1	1	1694	U
1	1	1696	C
1	1	1697	A
1	1	1698	C
1	1	1699	A
1	1	1700	C
1	1	1701	C
1	1	1702	G
1	1	1703	C
1	1	1707	U
1	1	1708	C
1	1	1709	G
1	1	1710	C
1	1	1714	U
1	1	1719	A
1	1	1720	U
1	1	1721	U
1	1	1722	G
1	1	1723	G
1	1	1728	U
1	1	1729	U
1	1	1731	A
1	1	1732	G
1	1	1735	A
1	1	1744	G
1	1	1745	A
1	1	1747	C
1	1	1749	G
1	1	1751	C
1	1	1752	C
1	1	1760	G
1	1	1761	U
1	1	1764	G
1	1	1765	C
1	1	1767	C
1	1	1768	A

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Mol	Chain	Res	Type
1	1	1770	G
1	1	1775	C
1	1	1781	A
1	1	1782	G
1	1	1783	C
1	1	1788	A
1	1	1789	G
1	1	1790	A
1	1	1792	G
1	1	1794	C
1	1	1798	C
1	1	1800	A
1	1	1809	A
1	1	1811	C
1	1	1813	A
1	1	1817	G
1	1	1819	A
1	1	1823	A
1	1	1824	A
1	1	1825	A
1	1	1826	G
1	1	1827	U
1	1	1829	G
1	1	1831	A
1	1	1832	A
1	1	1833	C
1	1	1834	A
1	1	1835	A
1	1	1836	G
1	1	1837	G
1	1	1838	U
1	1	1839	U
1	1	1841	C
1	1	1843	G
1	1	1844	U
1	1	1846	G
1	1	1847	G
1	1	1849	G
1	1	1850	A
1	1	1851	A
1	1	1852	C
1	1	1856	C

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Mol	Chain	Res	Type
1	1	1857	G
1	1	1860	A
1	1	1861	G
1	1	1862	G
1	1	1863	A
1	1	1864	U
1	1	1865	C
1	1	1866	A
1	1	1867	U
1	1	1868	U
1	1	1869	A
37	j	6032	A
37	j	6033	A
37	j	6036	G
37	j	6042	U
37	j	6043	U
37	j	6044	G
37	j	6053	U
37	j	6054	A
37	j	6061	U
37	j	6068	U
37	j	6069	U
37	j	6073	A
37	j	6084	A
37	j	6099	U
37	j	6101	U
37	j	6119	U
37	j	6121	A
37	j	6123	G
37	j	6128	A
37	j	6129	G
37	j	6136	U
37	j	6138	G
37	j	6154	A
37	j	6158	A
37	j	6163	G
37	j	6164	C
37	j	6165	C
37	j	6167	U
37	j	6168	C
37	j	6172	G
37	j	6173	C

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Mol	Chain	Res	Type
37	j	6174	G
37	j	6177	U
37	j	6179	U
37	j	6182	A
37	j	6203	U
37	j	6204	A
37	j	6206	G
37	j	6207	A
37	j	6210	U
37	j	6211	U
37	j	6217	U
37	j	6219	A
37	j	6220	G
37	j	6223	U
37	j	6226	C
37	j	6227	U
37	j	6228	C
37	j	6229	G
37	j	6230	A

All (152) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	1	24	C
1	1	44	U
1	1	61	A
1	1	64	A
1	1	66	G
1	1	68	A
1	1	77	A
1	1	78	C
1	1	102	A
1	1	111	A
1	1	113	G
1	1	124	U
1	1	131	C
1	1	136	C
1	1	139	C
1	1	140	C
1	1	147	A
1	1	162	C
1	1	181	A

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Mol	Chain	Res	Type
1	1	183	G
1	1	199	C
1	1	200	G
1	1	207	G
1	1	209	A
1	1	227	U
1	1	304	C
1	1	307	G
1	1	308	G
1	1	310	C
1	1	312	G
1	1	317	C
1	1	319	C
1	1	332	G
1	1	338	G
1	1	356	C
1	1	363	A
1	1	368	U
1	1	370	G
1	1	383	G
1	1	399	C
1	1	428	U
1	1	448	A
1	1	465	A
1	1	475	C
1	1	486	A
1	1	487	U
1	1	501	C
1	1	517	C
1	1	544	G
1	1	546	G
1	1	547	G
1	1	558	G
1	1	577	U
1	1	578	C
1	1	589	G
1	1	590	A
1	1	593	C
1	1	604	A
1	1	656	G
1	1	662	G
1	1	671	A

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Mol	Chain	Res	Type
1	1	687	C
1	1	743	U
1	1	799	U
1	1	811	A
1	1	821	G
1	1	822	U
1	1	833	C
1	1	834	C
1	1	840	C
1	1	899	U
1	1	913	A
1	1	970	G
1	1	971	G
1	1	1015	U
1	1	1016	U
1	1	1020	A
1	1	1021	U
1	1	1043	G
1	1	1060	A
1	1	1088	U
1	1	1108	G
1	1	1114	U
1	1	1115	U
1	1	1138	C
1	1	1150	A
1	1	1164	G
1	1	1198	G
1	1	1215	C
1	1	1242	U
1	1	1247	C
1	1	1250	A
1	1	1253	A
1	1	1257	G
1	1	1259	A
1	1	1261	C
1	1	1264	C
1	1	1277	C
1	1	1285	G
1	1	1301	A
1	1	1307	U
1	1	1308	U
1	1	1311	C

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Mol	Chain	Res	Type
1	1	1313	A
1	1	1326	U
1	1	1342	U
1	1	1351	G
1	1	1362	U
1	1	1401	A
1	1	1404	U
1	1	1406	G
1	1	1411	G
1	1	1456	G
1	1	1476	A
1	1	1477	U
1	1	1494	U
1	1	1497	G
1	1	1508	A
1	1	1520	G
1	1	1534	C
1	1	1542	C
1	1	1543	U
1	1	1555	U
1	1	1556	A
1	1	1578	U
1	1	1586	U
1	1	1603	G
1	1	1624	U
1	1	1631	U
1	1	1635	C
1	1	1637	A
1	1	1638	G
1	1	1644	C
1	1	1648	G
1	1	1654	G
1	1	1655	C
1	1	1673	U
1	1	1697	A
1	1	1698	C
1	1	1700	C
1	1	1721	U
1	1	1781	A
1	1	1823	A
1	1	1824	A
1	1	1830	U

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Mol	Chain	Res	Type
1	1	1833	C
1	1	1834	A
1	1	1836	G
1	1	1848	U
1	1	1860	A
1	1	1862	G
1	1	1867	U

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.