



Full wwPDB X-ray Structure Validation Report

Feb 28, 2014 – 05:34 AM GMT

PDB ID : 2QBK
Title : Crystal structure of the bacterial ribosome from Escherichia coli in complex with gentamicin and ribosome recycling factor (RRF). This file contains the 50S subunit of the second 70S ribosome, with gentamicin and RRF bound. The entire crystal structure contains two 70S ribosomes and is described in remark 400.
Authors : Borovinskaya, M.A.; Pai, R.D.; Zhang, W.; Schuwirth, B.-S.; Holton, J.M.; Hirokawa, G.; Kaji, H.; Kaji, A.; Cate, J.H.D.
Deposited on : 2007-06-17
Resolution : 4.00 Å(reported)

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

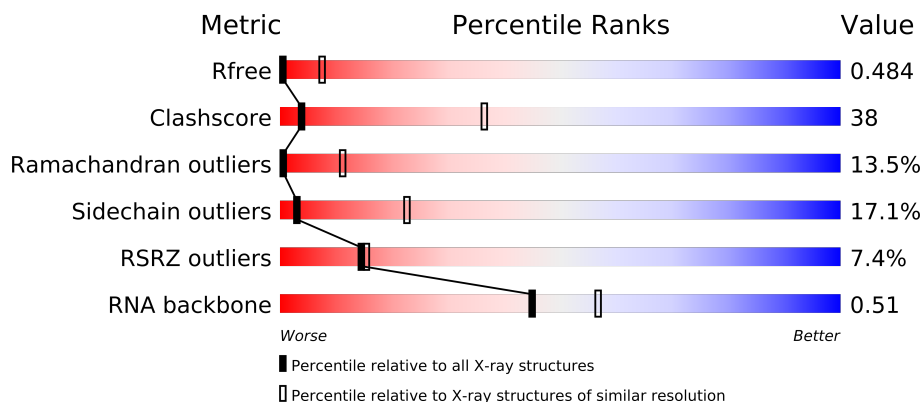
The following versions of software and data (see [references](#)) were used in the production of this report:

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

1 Overall quality at a glance

The reported resolution of this entry is 4.00 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	66092	1035 (4.52-3.46)
Clashscore	79885	1235 (4.50-3.50)
Ramachandran outliers	78287	1170 (4.50-3.50)
Sidechain outliers	78261	1156 (4.50-3.50)
RSRZ outliers	66119	1035 (4.52-3.46)
RNA backbone	1838	1018 (5.00-2.80)

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

Mol	Chain	Length	Quality of chain
1	A	120	
2	B	2904	
3	I	141	
4	C	272	
5	D	209	
6	K	123	
7	P	114	
8	E	201	
9	Y	58	
10	0	56	
11	4	38	
12	1	54	

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Mol	Chain	Length	Quality of chain
13	3	64	
14	V	94	
15	2	46	
16	L	144	
17	M	136	
18	X	63	
19	H	149	
20	J	142	
21	N	127	
22	O	117	
23	Q	117	
24	S	110	
25	U	103	
26	F	178	
27	G	176	
28	R	103	
29	T	100	
30	Z	78	
31	W	84	
32	6	185	

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

Mol	Type	Chain	Res	Geometry	Electron density
33	MG	B	2932	-	X
33	MG	B	2938	-	X
33	MG	B	2939	-	X
33	MG	B	2952	-	X
33	MG	B	2956	-	X
33	MG	B	2964	-	X
33	MG	B	2994	-	X
33	MG	B	2999	-	X
33	MG	B	3005	-	X
33	MG	B	3010	-	X
34	LLL	B	3016	-	X

2 Entry composition

There are 36 unique types of molecules in this entry. The entry contains 91772 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a RNA chain called 5S rRNA.

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

- Molecule 2 is a RNA chain called 23S rRNA.

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

- Molecule 3 is a protein called 50S ribosomal protein L11.

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

- Molecule 4 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	C	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 5 is a protein called 50S ribosomal protein L3.

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

- Molecule 6 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	K	121	Total	C	N	O	S	0	0	0
			930	582	179	164	5			

- Molecule 7 is a protein called 50S ribosomal protein L19.

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

- Molecule 8 is a protein called 50S ribosomal protein L4.

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

- Molecule 9 is a protein called 50S ribosomal protein L30.

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

- Molecule 10 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 11 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 12 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
12	1	50	Total	C	N	O	0	0	0
			409	263	75	71			

- Molecule 13 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 14 is a protein called 50S ribosomal protein L25.

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

- Molecule 15 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 16 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	L	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 17 is a protein called 50S ribosomal protein L16.

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

- Molecule 18 is a protein called 50S ribosomal protein L29.

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

- Molecule 19 is a protein called 50S ribosomal protein L9.

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

- Molecule 20 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	J	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 21 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	N	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 22 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	O	116	Total	C	N	O		0	0	0
			892	552	178	162				

- Molecule 23 is a protein called 50S ribosomal protein L20.

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

- Molecule 24 is a protein called 50S ribosomal protein L22.

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

- Molecule 25 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	U	102	Total	C	N	O		0	0	0
			779	492	146	141				

- Molecule 26 is a protein called 50S ribosomal protein L5.

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

- Molecule 27 is a protein called 50S ribosomal protein L6.

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

- Molecule 28 is a protein called 50S ribosomal protein L21.

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

- Molecule 29 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	T	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 30 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	Z	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 31 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	W	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

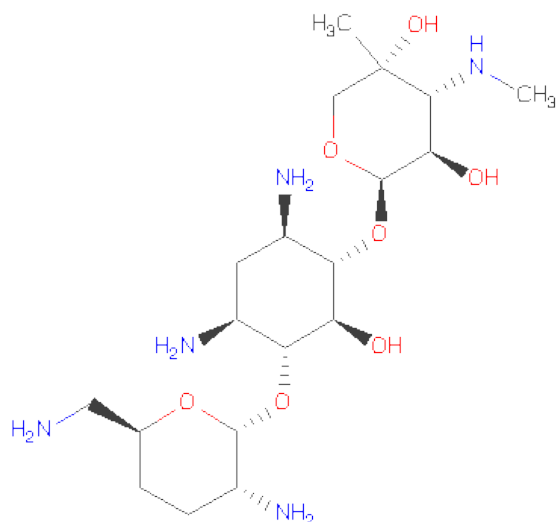
- Molecule 32 is a protein called 50S ribosomal protein RRF.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	6	185	Total	C	N	O	S	0	0	0
			1478	924	270	282	2			

- Molecule 33 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
33	B	111	Total	Mg	0	0
			111	111		

- Molecule 34 is (2R,3R,4R,5R)-2-((1S,2S,3R,4S,6R)-4,6-DIAMINO-3-((2R,3R,6S)-3-AMINO-6-(AMINOMETHYL)-TETRAHYDRO-2H-PYRAN-2-YLOXY)-2-HYDROXYCYCLOHEXYLOXY)-5-METHYL-4-(METHYLAMINO)-TETRAHYDRO-2H-PYRAN-3,5-DIOL (three-letter code: LLL) (formula: C₁₉H₃₉N₅O₇).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
34	B	1	Total	C	N	O	0	0
			31	19	5	7		

- Molecule 35 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
35	4	1	Total	Zn	0	0
			1	1		

- Molecule 36 is water.

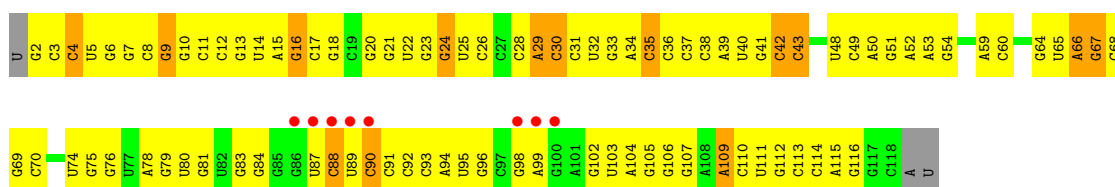
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
36	B	499	Total	O	0	0
			499	499		
36	C	6	Total	O	0	0
			6	6		
36	E	3	Total	O	0	0
			3	3		
36	L	2	Total	O	0	0
			2	2		
36	R	1	Total	O	0	0
			1	1		
36	T	1	Total	O	0	0
			1	1		

3 Residue-property plots

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

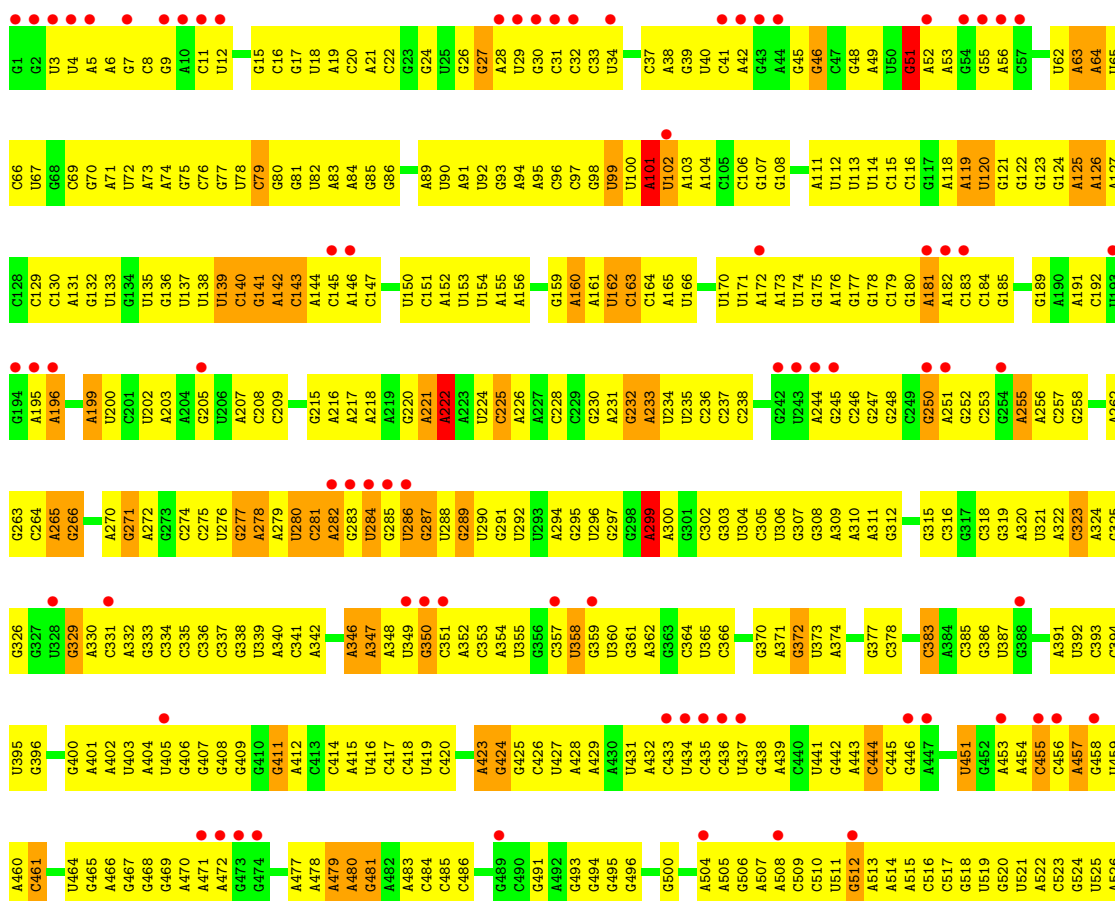
• Molecule 1: 5S rRNA

Chain A: 



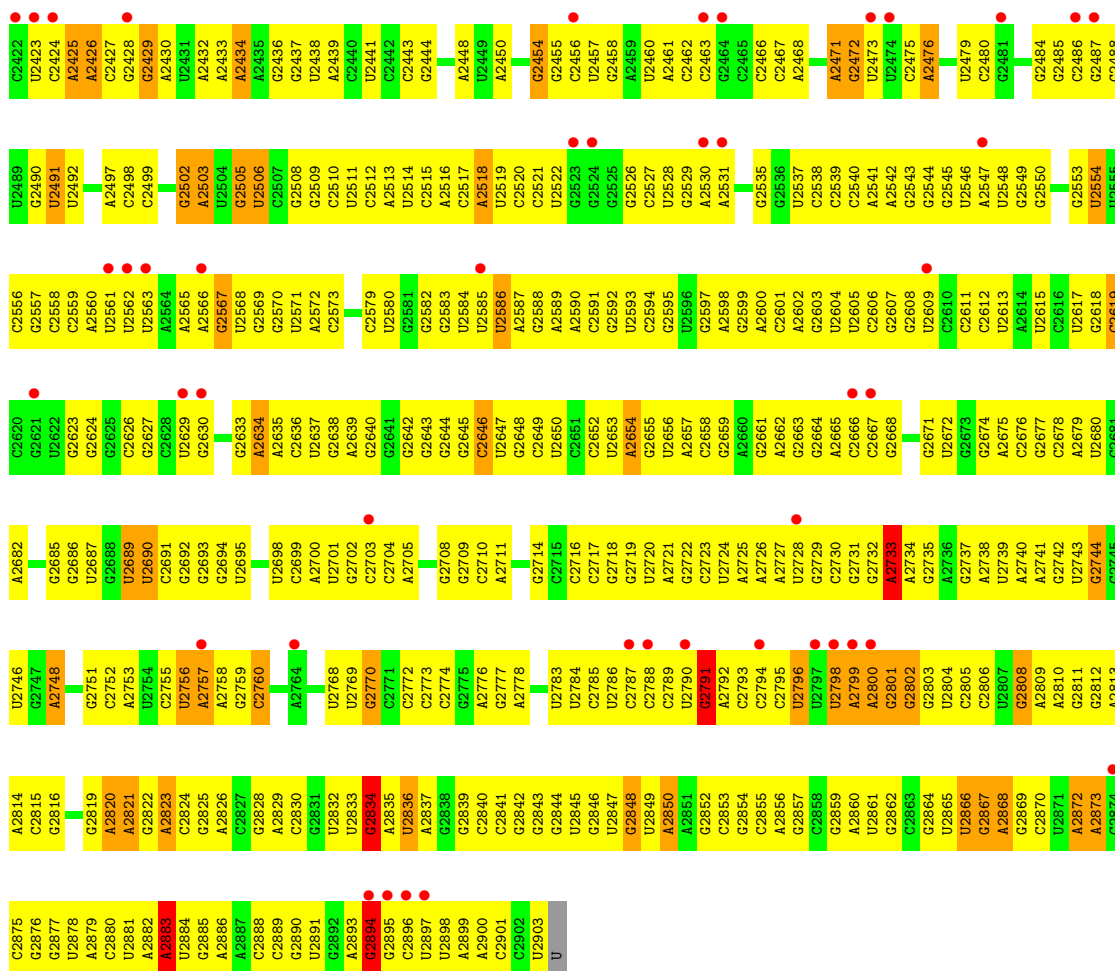
• Molecule 2: 23S rRNA

Chain B: 



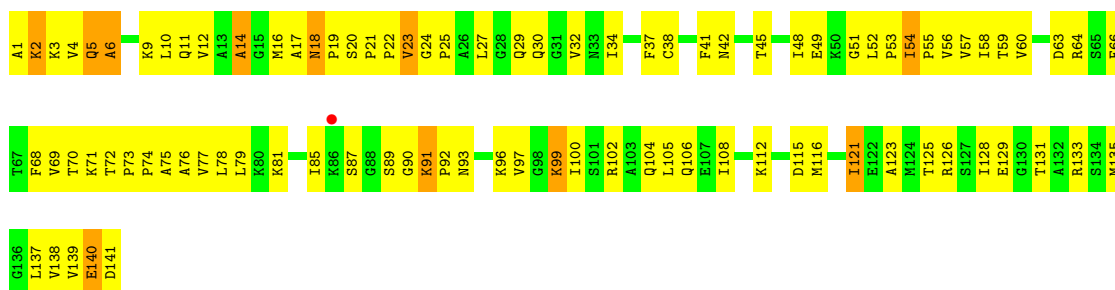
U1440	A1378	G1310	A1244	U1180	G1116	G1047	A980	A917	U850	A782	G713	U562	A590	C527
G1441	U1379	G1310	G1245	U1181	G1117	A1048	A981	A918	C551	A783	U714	U653	U591	A528
U1442	G1380	U1316	A1246	G1182	C1117	C1049	C982	A919	U852	G784	A715	A854	A592	A529
U1443	U1443	U1317	A1247	G1183	C1118	A1050	A983	U919	C953	G785	A716	A855	U593	G530
G1444	G1382	U1318	G1248	U1184	G1119	G1051	A984	A920	C854	C786	A717	G856	U594	C531
G1445	A1383	U1319	U1249	U1185	G1120	C1052	C985	C921	G855	C787	A718	U657	C595	A532
G1446	A1384	C1319	G1250	G1186	C1121	C1053	C986	C922	G856	A788	C719	U658	U596	G533
C1447	A1385	C1320	C1251	G1187	G1122	A1054	C987	A925	G857	A789	U720	G859	G597	U534
G1448	G1386	A1321	G1252	U1188	C1123	G1055	A989	G926	G858	A790	U721	C860	U598	G534
C1451	A1387	C1322	A1253	G1189	G1124	A1056	C991	A927	U860	C795	A722	A861	A599	A538
A1452	G1388	C1323	A1254	G1190	G1125	G1057	C992	G928	G861	C796	G725	G664	G600	G539
A1453	U1389	G1324	U1255	G1191	A1126	U1058	C993	U929	G862	G797	G726	U665	C601	C540
C1454	U1390	U1325	G1256	G1192	A1127	C1059	C994	G930	G863	G798	A727	A866	A603	A541
A1455	U1391	U1326	C1257	G1193	G1131	U1060	C995	U931	A864	G799	G728	U667	G604	C542
G1456	A1392	A1327	U1258	A1194	U1132	U1061	C996	U932	G865	A800	G729	A868	G605	C543
A1457	A1393	C1328	G1259	G1195	A1133	G1062	A996	U933	C965	G798	G730	G670	U606	U545
U1458	U1394	U1329	A1260	C1196	A1134	G1063	C997	U934	A866	A804	C731	C871	A608	U546
U1459	A1395	C1330	C1261	G1197	G1135	C1064	C998	U935	G869	G805	G740	A677	A609	A547
G1459	U1396	G1331	U1262	U1198	G1136	U1065	U999	C936	G870	C806	U741	C872	C610	G548
U1460	U1397	G1332	U1263	U1199	G1137	U1066	A1000	A936	U871	C807	C742	C873	C611	C550
C1461	C1398	G1333	A1264	C1200	G1138	G1068	A1001	C937	U872	U807	G743	C874	C612	G551
C1462	U1399	G1334	A1265	U1201	G1139	A1069	G1002	G938	U873	C808	G744	C875	C613	U552
C1463	U1400	C1335	G1266	G1202	C1140	A1070	G1007	G939	U874	U808	G745	C876	U615	U554
G1464	A1401	A1336	U1267	U1203	U1141	C1076	A1010	G940	G875	C809	U746	C877	A614	G555
G1465	U1402	G1337	A1268	A1204	A1142	A1077	A1011	G942	C876	U813	U747	C878	U616	U556
U1466	A1403	C1338	A1269	A1205	A1143	A1078	A1012	G943	C877	C814	U748	C879	A617	A557
U1467	A1404	G1339	C1270	G1206	A1144	A1079	A1013	A944	A878	C815	U749	C880	G617	C558
U1468	U1405	U1340	G1271	C1207	A1145	A1080	U1018	G945	G	C816	G750	C881	G620	U559
A1469	A1406	G1341	A1272	U1208	C1146	U1081	A1019	C951	G	C817	U751	C882	A621	C560
U1470	G1407	G1342	U1273	C1209	U1147	U1082	A1020	G952	A	C818	U752	C883	C622	G561
G1471	A1408	C1343	A1274	G1210	U1148	U1083	A1021	G953	U	C819	U753	C884	C623	C562
G1472	C1345	C1346	A1275	C1211	G1149	A1084	A1022	G954	C	A820	G754	C885	C624	U563
G1473	U1411	A1347	A1276	G1212	C1150	A1085	A1023	U955	C	G821	U755	C886	A626	C564
U1474	U1412	C1348	G1277	A1213	A1151	A1086	G1024	G956	C	A822	U756	C887	A627	U565
G1475	A1413	C1349	C1278	G1214	C1152	A1087	G1025	C957	G	G823	U757	C888	C630	U566
U1476	C1350	C1350	G1279	G1215	C1153	A1088	A1026	U958	C	U824	A761	C889	C631	U567
A1477	C1351	C1351	G1280	G1216	U1157	A1089	A1027	A959	C	A825	G764	C890	C632	U568
C1477	U1352	U1352	G1281	U1217	C1158	A1090	G1028	A960	C	U826	C765	C891	A633	U569
G1478	G1473	A1353	U1282	G1218	U1159	A1091	U1029	C961	C	U827	U766	C892	A634	G570
G1479	G1418	A1354	G1283	U1219	C1160	C1092	G1029	G962	C	U828	U767	C893	C635	U571
A1480	A1419	C1355	G1284	G1220	C1161	C1093	G1030	U963	A	G831	A768	C894	C636	U572
U1481	A1420	G1356	A1285	C1221	C1162	A1094	A1031	U964	C	A832	C769	C895	A637	U573
G1482	G1421	C1357	G1286	U1222	G1163	A1095	A1032	C965	C	G833	U770	C896	A638	A574
U1483	G1422	C1358	G1287	G1223	G1164	A1096	U1033	G966	C	U834	G771	C897	U639	U575
U1484	G1423	G1358	G1288	U1224	C1165	U1097	A1034	U967	U	U835	U772	C898	C640	G577
U1485	G1424	G1359	C1289	U1225	A1166	A1098	A1035	C968	U	A836	G773	C899	C641	U580
U1486	G1425	C1361	C1290	G1226	G1167	A1099	G1036	G969	A	A837	U774	C900	U642	C581
U1487	G1426	C1362	C1291	U1236	C1168	A1099	A1037	U970	C	G840	A775	A900	A643	A582
C1488	A1427	A1365	G1292	G1237	U1173	C1100	A1038	G971	C	G841	A776	A901	C645	G583
C1489	C1428	C1365	C1293	U1238	U1174	C1101	U1039	A972	C	U842	G777	A902	U646	C584
A1490	G1429	G1365	U1294	G1239	U1175	C1102	A1040	G973	C	A845	G778	A903	G708	G585
G1491	G1430	G1368	C1295	G1240	A1176	U1096	A1041	A974	C	U846	G779	A904	U709	A586
U1492	A1431	G1369	C1296	U1241	C1177	A1097	A1042	A975	C	U847	U780	A905	U710	U587
C1493	G1432	C1370	G1297	A1237	U1178	C1103	A1043	G976	C	G848	G781	A906	G711	C588
A1494	A1433	G1371	C1298	G1238	U1179	U1104	C1044	G977	C	U849	A781	A907	G712	U589
A1495	G1434	U1372	G1299	G1239	U1176	U1098	C1045	A978	C	A849		A908		
A1496	G1435	G1373	G1300	G1240	U1177	U1099	C1046	G979	C			A909		
U1497	G1436	G1374	A1301	U1242	U1178	G1100	C1047	G980	C			A910		
			A1302	A1243	C1179	G1101	C1048		C			A911		
G1501	U1438	C1376	G1309	C1243	G1179	G1112	A1049	A979	C			A912		
A1502	A1439	A1439												

U2356	G2295	G2048	C1974	C1905	C1843	C1774	C1704	A1635	C1565	A1503
G2357	U2296	G2049	A1977	G1906	C1844	U1775	A1705	U1636	A1566	A1504
A2358	A2297	G2050	G1983	C1907	G1845	G1776	C1708	C1637	G1567	U1506
C2359	U2232	A2051	G1984	C1908	A1846	U1777	C1709	C1638	G1568	C1507
G2360	G2234	A2052	G1985	C1909	A1847	U1778	G1710	A1640	C1569	A1508
C2361	G2235	G2053	C1986	G1910	A1848	U1779	A1711	A1570	U1570	U1509
C2362	U2236	A2054	G1987	U1911	G1849	A1783	U1712	A1571	A1571	G1510
G2363	G2237	G2055	A1987	A1912	A1853	U1784	U1713	A1572	G1511	G1511
G2238	G2238	G2056	G1988	A1913	A1854	A1785	U1714	C1574	U1512	U1512
U2179	C2179	A2060	G1989	C1914	A1855	A1786	U1715	C1575	U1513	U1513
U2180	U2180	G2061	G1991	U1915	A1856	A1787	U1716	C1576	G1514	G1514
U2181	U2181	A2062	G1992	U1916	A1857	A1788	U1717	C1577	U1515	U1515
U2182	U2182	C2063	U1993	A1917	A1858	A1789	U1718	U1578	G1516	G1516
A2183	A2183	G2064	U1994	A1918	A1859	C1790	G1719	A1579	C1517	C1517
A2184	A2184	C2065	U1995	U1923	A1860	C1791	U1720	A1580	C1518	C1518
U2185	U2185	C2066	C1996	C1924	G1861	G1792	U1721	A1581	G1519	G1519
U2186	U2186	G2067	C1997	C1925	A1862	G1793	A1722	C1582	U1520	U1520
U2187	U2187	G2068	A1998	U1926	G1863	A1794	G1723	A1583	G1521	G1521
U2188	U2188	C2069	C2001	A1927	A1864	C1795	U1726	U1584	A1522	A1522
U2189	U2189	A2070	U2007	A1928	A1865	U1796	C1727	C1585	U1523	U1523
U2190	U2190	A2071	C2008	G1929	A1866	G1797	C1728	A1586	G1524	G1524
A2191	A2191	C2072	C2009	U1930	A1867	U1798	U1729	A1590	C1526	C1526
U2192	U2192	G2073	C2010	U1931	A1868	C1800	G1730	A1591	G1527	G1527
U2193	U2193	U2074	G2011	A1932	A1869	A1801	G1731	C1592	A1528	A1528
U2194	U2194	U2075	U2011	C1933	C1870	A1802	C1732	A1593	G1529	G1529
U2195	U2195	U2076	C2012	U1934	A1871	A1803	G1733	A1594	U1530	U1530
C2196	C2196	A2077	A2013	C1935	A1872	C1804	G1734	A1595	C1533	C1533
G2233	G2233	G2078	A2014	U1936	A1873	A1805	A1735	A1596	U1534	U1534
A2198	A2198	U2079	A2015	A1937	A1874	C1806	G1736	A1597	A1535	A1535
A2199	A2199	A2080	U2016	U1938	A1875	G1807	G1737	A1598	C1536	C1536
C2200	C2200	U2081	U2016	U1939	A1876	G1807	G1738	A1599	U1539	U1539
U2201	U2201	A2082	A2019	U1940	A1877	G1807	G1739	C1600	G1540	G1540
U2202	U2202	A2083	A2020	C1941	A1878	U1811	G1740	A1603	C1541	C1541
U2203	U2203	G2083	C2021	C1942	A1879	G1812	G1741	G1604	U1542	U1542
A2204	A2204	C2084	C2022	U1943	A1880	G1813	U1742	C1605	G1943	G1943
C2205	C2205	U2085	U2022	U1944	A1881	G1814	G1743	C1606	U1544	U1544
C2206	C2206	U2086	C2023	G1945	U1882	A1815	A1744	C1607	A1545	A1545
C2207	C2207	G2087	C2024	U1946	U1883	G1816	A1745	A1608	G1546	G1546
C2208	C2208	A2088	G2025	U1947	G1884	U1817	A1746	A1609	C1547	C1547
G2209	G2209	A2090	U2026	G1948	A1885	A1818	U1746	A1610	A1548	A1548
U2210	U2210	C2091	G2027	U1949	A1886	A1819	U1746	A1611	A1549	A1549
A2211	A2211	U2092	U2028	U1955	A1887	U1820	A1754	C1612	U1550	U1550
U2212	U2212	G2093	G2029	U1956	A1888	A1821	A1755	G1613	A1551	A1551
C2214	C2214	A2094	A2030	U1957	A1889	A1822	U1758	A1614	A1552	A1552
C2215	C2215	A2095	A2031	C1957	A1890	G1823	A1759	A1615	U1553	U1553
G2216	G2216	C2096	C2032	C1958	A1891	G1824	C1760	A1616	G1554	G1554
G2217	G2217	A2097	A2033	C1959	A1892	U1825	C1761	A1617	G1555	G1555
G2218	G2218	U2098	U2034	U1959	A1893	G1826	C1762	U1628	C1557	C1557
U2219	U2219	C2099	G2035	U1963	A1894	U1827	G1763	U1629	U1559	U1559
U2220	U2220	G2100	C2036	G1964	C1895	G1828	C1764	U1630	G1560	G1560
G2221	G2221	A2101	A2037	C1965	A1896	A1829	U1765	A1631	G1561	G1561
C2222	C2222	G2102	G2038	U1966	A1897	G1830	U1766	A1632	U1562	U1562
G2223	G2223	C2103	U2039	C1967	A1898	G1831	G1767	A1633	U1563	U1563
G2224	G2224	C2104	G2040	U1968	A1899	G1832	G1768	A1634	A1634	A1634
C2225	C2225	U2105	U2041	A1969	A1900	A1833	U1769	G1695	G1628	G1628
G2226	G2226	U2106	A2042	A1970	A1901	U1834	G1770	G1696	G1633	G1633
A2227	A2227	C2107	C2043	U1971	G1902	U1841	C1771	A1700	U1662	U1662
G2228	G2228	A2108	U2043	G1972	G1903	U1841	A1772	A1633	U1663	U1663
U2229	U2229	U2109	C2047	G1973	G1904	G1842	A1773	A1634	G1634	G1634



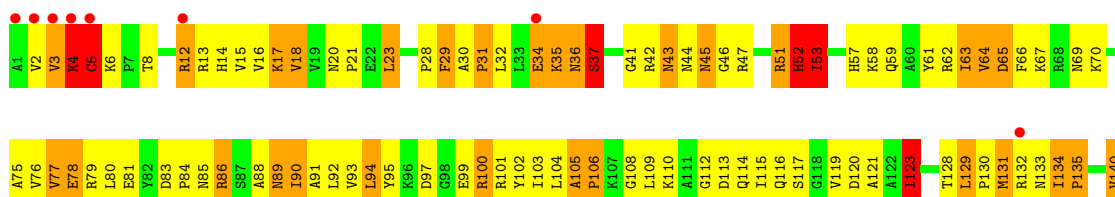
- Molecule 3: 50S ribosomal protein L11

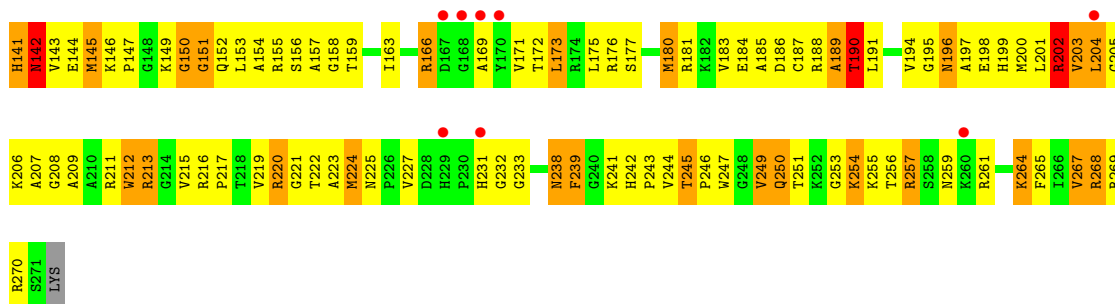
Chain I:



- Molecule 4: 50S ribosomal protein L2

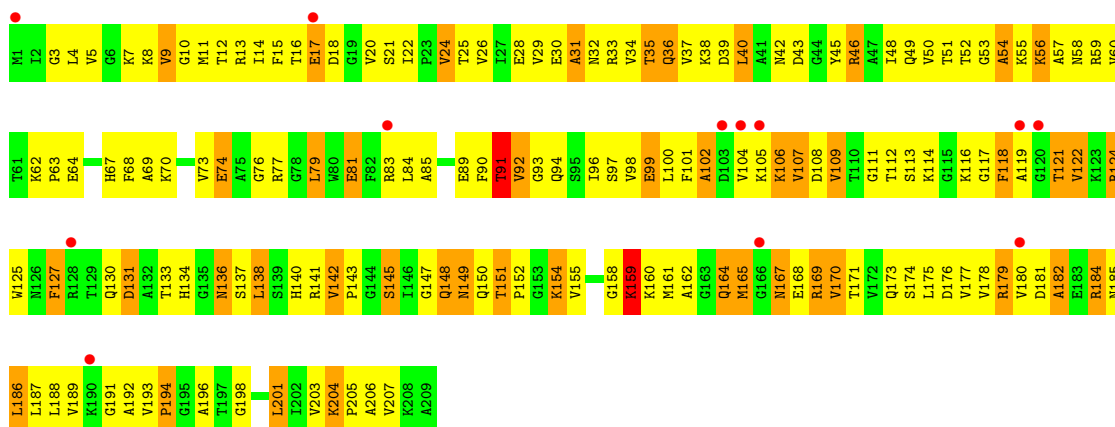
Chain C:





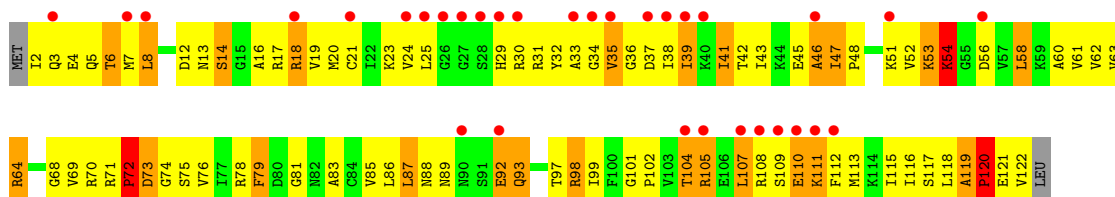
• Molecule 5: 50S ribosomal protein L3

Chain D:



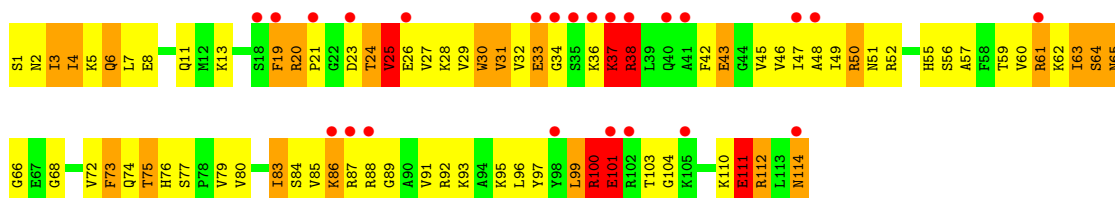
• Molecule 6: 50S ribosomal protein L14

Chain K:



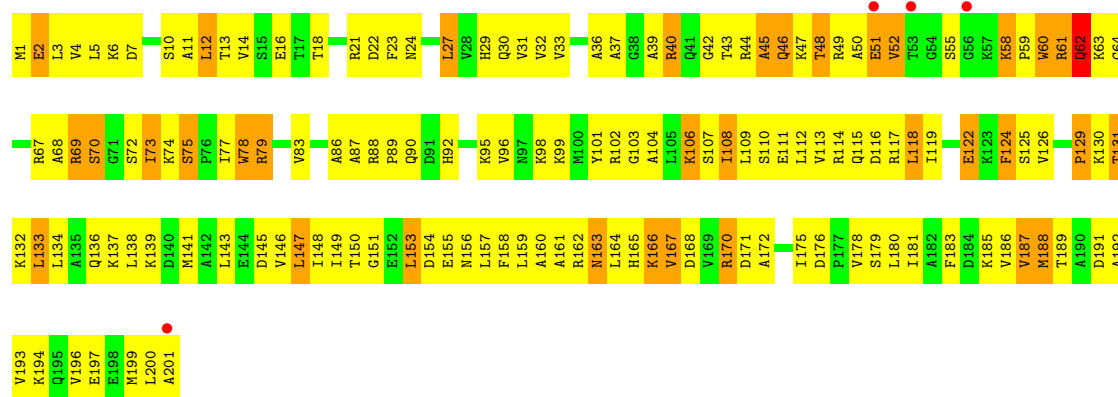
• Molecule 7: 50S ribosomal protein L19

Chain P:



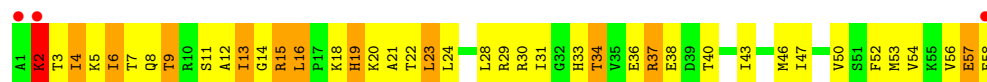
• Molecule 8: 50S ribosomal protein L4

Chain E:



• Molecule 9: 50S ribosomal protein L30

Chain Y:



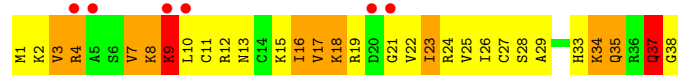
• Molecule 10: 50S ribosomal protein L32

Chain 0:



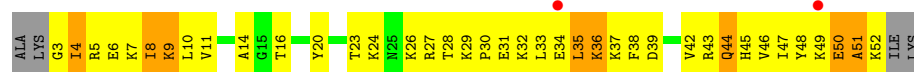
• Molecule 11: 50S ribosomal protein L36

Chain 4:



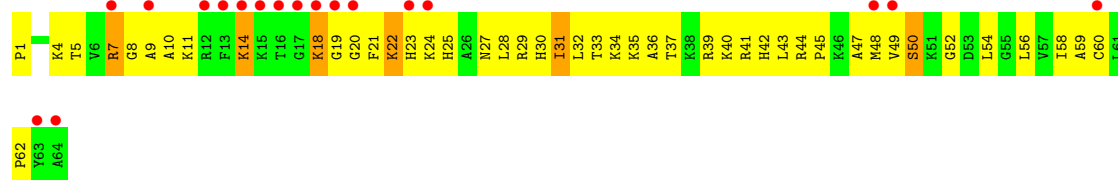
• Molecule 12: 50S ribosomal protein L33

Chain 1:



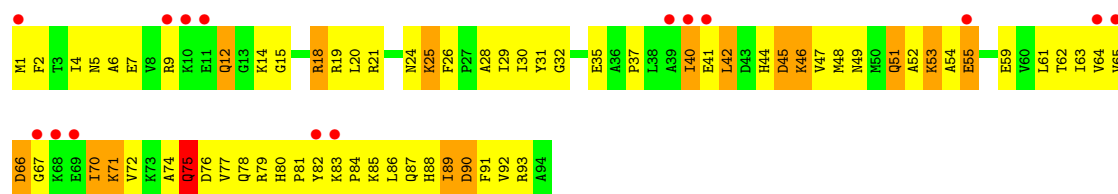
• Molecule 13: 50S ribosomal protein L35

Chain 3:



• Molecule 14: 50S ribosomal protein L25

Chain V:



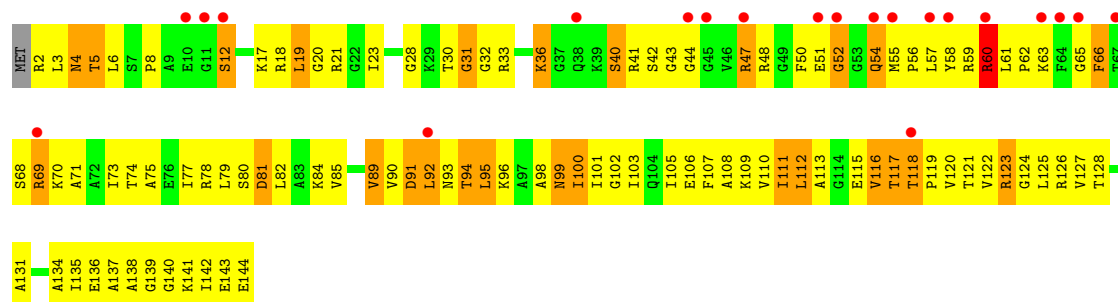
- Molecule 15: 50S ribosomal protein L34

Chain 2:



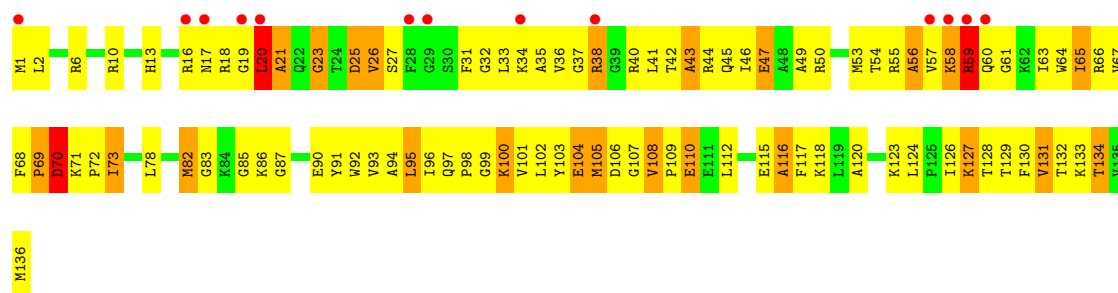
- Molecule 16: 50S ribosomal protein L15

Chain L:



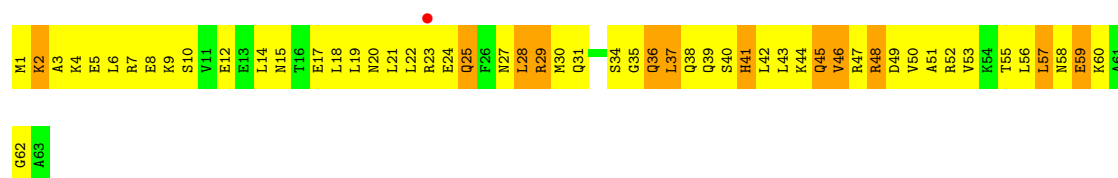
- Molecule 17: 50S ribosomal protein L16

Chain M:



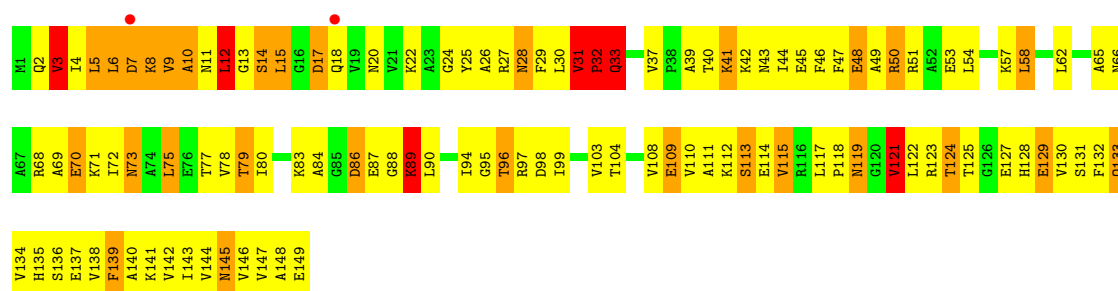
- Molecule 18: 50S ribosomal protein L29

Chain X:



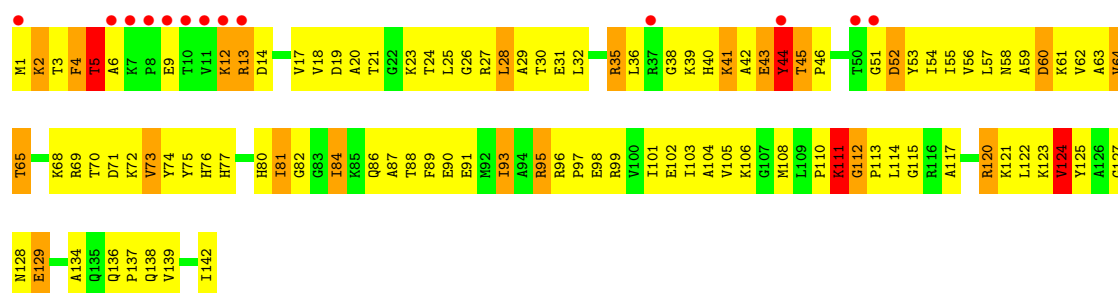
- Molecule 19: 50S ribosomal protein L9

Chain H:



• Molecule 20: 50S ribosomal protein L13

Chain J:



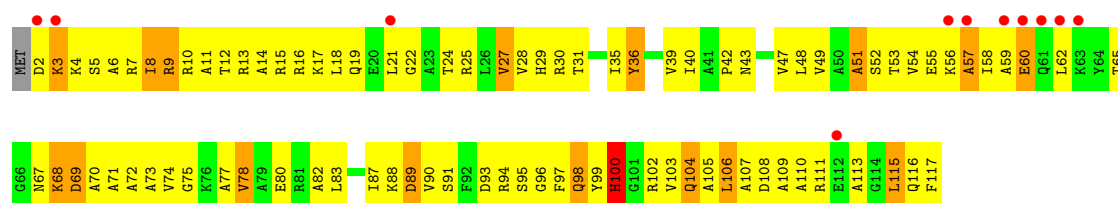
• Molecule 21: 50S ribosomal protein L17

Chain N:



• Molecule 22: 50S ribosomal protein L18

Chain O:



• Molecule 23: 50S ribosomal protein L20

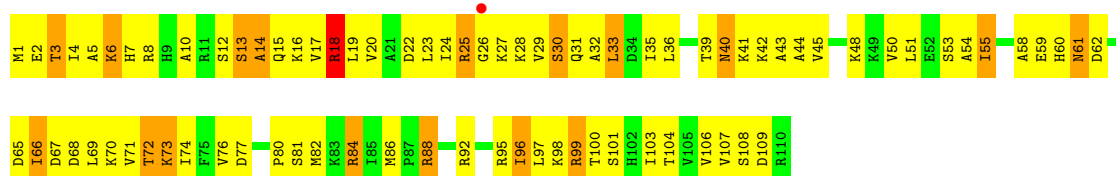
Chain Q:





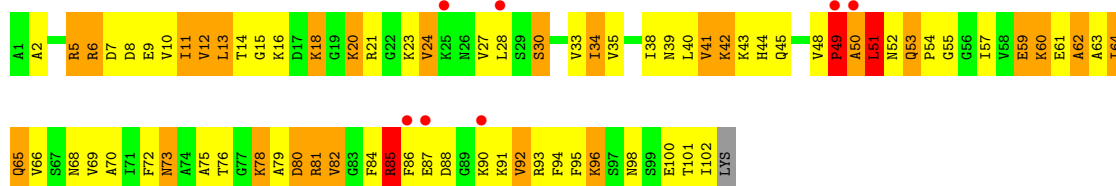
• Molecule 24: 50S ribosomal protein L22

Chain S:



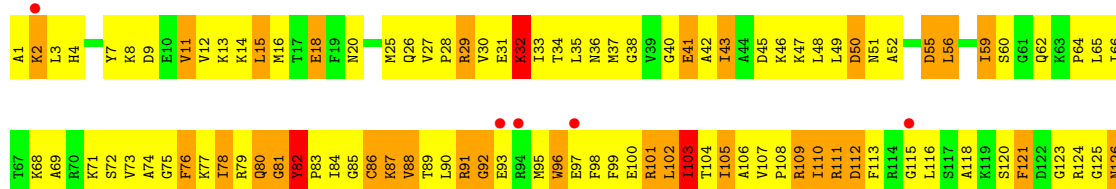
• Molecule 25: 50S ribosomal protein L24

Chain U:



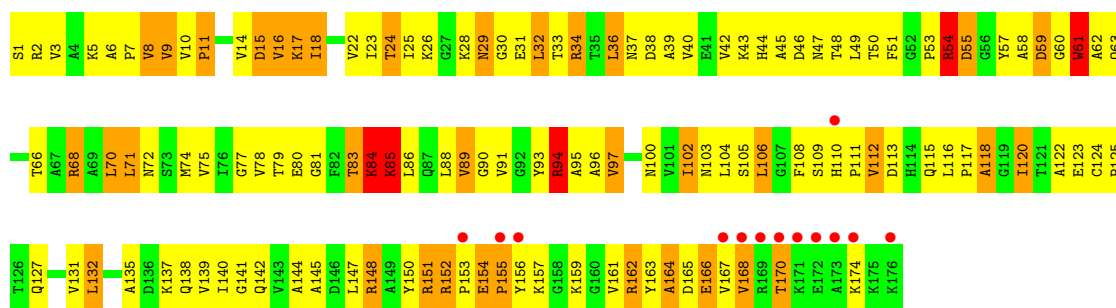
• Molecule 26: 50S ribosomal protein L5

Chain F:



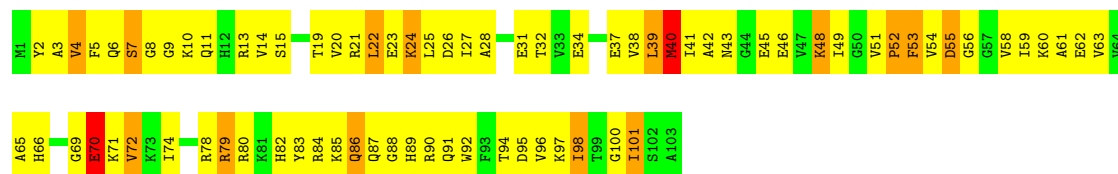
• Molecule 27: 50S ribosomal protein L6

Chain G:



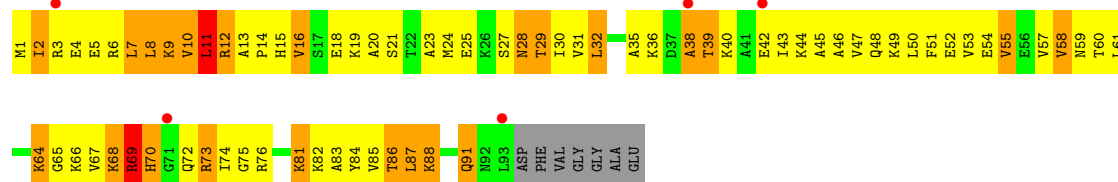
• Molecule 28: 50S ribosomal protein L21

Chain R: 



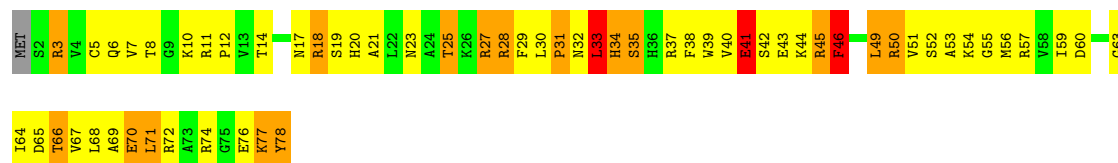
- Molecule 29: 50S ribosomal protein L23

Chain T: 



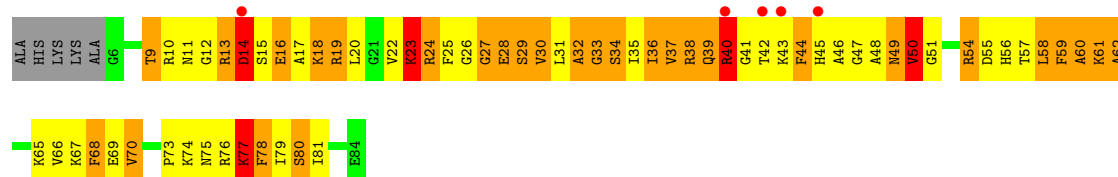
- Molecule 30: 50S ribosomal protein L28

Chain Z: 



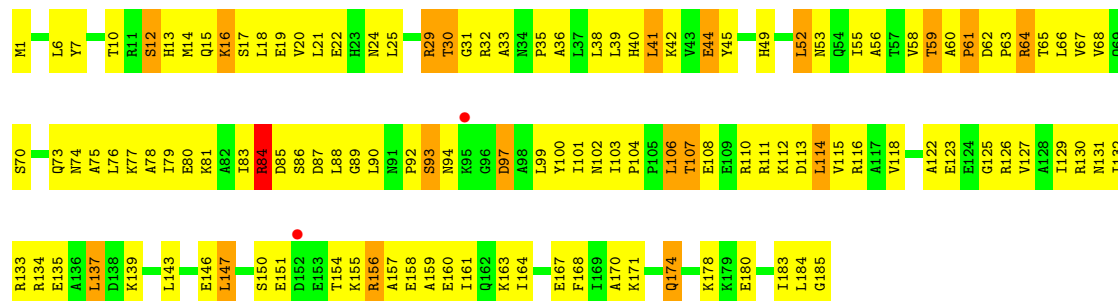
- Molecule 31: 50S ribosomal protein L27

Chain W: 



- Molecule 32: 50S ribosomal protein RRF

Chain 6: 



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	208.54Å 378.89Å 736.90Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 4.00 138.07 – 4.15	Depositor EDS
% Data completeness (in resolution range)	87.4 (40.00-4.00) 87.4 (138.07-4.15)	Depositor EDS
R_{merge}	0.08	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.14 (at 4.15Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.261 , 0.305 0.474 , 0.484	Depositor DCC
R_{free} test set	18864 reflections (4.93%)	DCC
Wilson B-factor (Å ²)	133.1	Xtriage
Anisotropy	0.323	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.21 , 9.6	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.31$	Xtriage
Outliers	0 of 382905 reflections	Xtriage
F_o, F_c correlation	0.64	EDS
Total number of atoms	91772	wwPDB-VP
Average B, all atoms (Å ²)	64.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.69% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG, LLL

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.28	0/2803	0.76	0/4371
2	B	0.30	6/68314 (0.0%)	0.79	48/106569 (0.0%)
3	I	0.25	0/1046	0.48	0/1410
4	C	0.22	0/2121	0.48	0/2852
5	D	0.24	0/1586	0.49	0/2134
6	K	0.24	0/939	0.55	0/1258
7	P	0.24	0/929	0.51	0/1242
8	E	0.24	0/1571	0.51	0/2113
9	Y	0.23	0/453	0.49	0/605
10	O	0.23	0/450	0.55	0/599
11	4	0.23	0/303	0.47	0/397
12	1	0.27	0/416	0.49	0/554
13	3	0.24	0/513	0.48	0/676
14	V	0.25	0/766	0.43	0/1025
15	2	0.25	0/380	0.48	0/498
16	L	0.23	0/1054	0.48	0/1403
17	M	0.25	0/1093	0.48	0/1460
18	X	0.24	0/510	0.53	0/677
19	H	0.25	0/1122	0.48	0/1515
20	J	0.23	0/1152	0.48	0/1551
21	N	0.24	0/973	0.51	0/1301
22	O	0.23	0/902	0.49	0/1209
23	Q	0.26	0/960	0.49	0/1278
24	S	0.22	0/864	0.52	0/1156
25	U	0.25	0/787	0.47	0/1051
26	F	0.26	0/1444	0.52	0/1937
27	G	0.23	0/1343	0.47	0/1816
28	R	0.25	0/829	0.50	0/1107
29	T	0.22	0/744	0.55	0/994
30	Z	0.25	0/635	0.52	0/848
31	W	0.28	0/603	0.51	0/797
32	6	0.30	0/1497	0.58	1/2017 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
All	All	0.29	6/99102 (0.0%)	0.73	49/148420 (0.0%)

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
2	B	0	47

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1086	A	C5-C6	-16.53	1.26	1.41
2	B	1088	A	C6-N1	-10.57	1.28	1.35
2	B	1060	U	C2-N3	7.78	1.43	1.37
2	B	1086	A	N7-C5	-6.75	1.35	1.39
2	B	2318	G	O3'-P	-6.33	1.53	1.61
2	B	1086	A	N3-C4	-5.95	1.31	1.34

All (49) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2204	G	O5'-P-OP1	-29.74	75.02	110.70
2	B	2791	G	O5'-P-OP2	-27.84	77.29	110.70
2	B	2791	G	O5'-P-OP1	17.87	132.15	110.70
2	B	2204	G	O5'-P-OP2	17.66	131.89	110.70
2	B	2790	U	OP2-P-O3'	14.53	137.17	105.20
2	B	2203	U	OP1-P-O3'	14.37	136.82	105.20
2	B	2272	U	C5-C4-O4	-9.11	120.43	125.90
2	B	1552	A	N9-C1'-C2'	-8.70	102.43	112.00
2	B	1088	A	N1-C6-N6	-8.31	113.61	118.60
2	B	1060	U	C5-C4-O4	-7.32	121.51	125.90
2	B	1350	C	C5'-C4'-C3'	-7.24	104.42	116.00
2	B	2733	A	N9-C1'-C2'	-7.02	104.28	112.00
2	B	1086	A	C4-C5-C6	6.93	120.47	117.00
2	B	1439	A	N9-C1'-C2'	-6.91	104.39	112.00
2	B	1088	A	C5-C6-N6	6.41	128.83	123.70
2	B	1086	A	C6-C5-N7	-6.30	127.89	132.30
32	6	29	ARG	NE-CZ-NH2	-6.26	117.17	120.30
2	B	1109	C	C5'-C4'-C3'	-6.08	106.28	116.00
2	B	1126	A	C5'-C4'-O4'	6.04	116.34	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	2619	C	C5'-C4'-C3'	-6.02	106.36	116.00
2	B	1552	A	C4'-C3'-O3'	5.95	124.90	113.00
2	B	2480	C	C5'-C4'-C3'	5.92	125.47	116.00
2	B	2790	U	O3'-P-O5'	-5.85	92.89	104.00
2	B	2203	U	O3'-P-O5'	-5.84	92.89	104.00
2	B	2322	A	OP2-P-O3'	5.83	118.03	105.20
2	B	101	A	C4'-C3'-O3'	-5.77	97.28	109.40
2	B	1060	U	N1-C2-O2	-5.74	118.78	122.80
2	B	2894	G	N9-C1'-C2'	-5.70	105.73	112.00
2	B	745	G	C5'-C4'-C3'	-5.68	106.91	116.00
2	B	353	C	C5'-C4'-C3'	-5.67	106.93	116.00
2	B	2267	A	O4'-C1'-N9	-5.62	103.70	108.20
2	B	461	C	C5'-C4'-C3'	-5.55	107.12	116.00
2	B	2267	A	C5-C6-N6	-5.53	119.28	123.70
2	B	2267	A	C4-N9-C1'	5.50	136.20	126.30
2	B	2272	U	N1-C1'-C2'	-5.50	105.95	112.00
2	B	1086	A	C2-N3-C4	-5.46	107.87	110.60
2	B	2267	A	C8-N9-C1'	-5.43	117.92	127.70
2	B	1519	G	C5'-C4'-C3'	-5.41	107.34	116.00
2	B	690	G	C5'-C4'-C3'	-5.40	107.37	116.00
2	B	1060	U	N3-C2-O2	5.37	125.96	122.20
2	B	1047	G	C5'-C4'-C3'	-5.34	107.45	116.00
2	B	2096	C	C5'-C4'-C3'	-5.24	107.62	116.00
2	B	1170	C	C5'-C4'-C3'	-5.22	107.64	116.00
2	B	1592	C	C5'-C4'-C3'	5.21	124.34	116.00
2	B	2585	U	C4'-C3'-O3'	-5.20	98.48	109.40
2	B	1397	U	C5'-C4'-C3'	-5.18	107.71	116.00
2	B	2272	U	N3-C4-O4	-5.16	115.79	119.40
2	B	1869	G	N9-C1'-C2'	-5.07	106.42	112.00
2	B	2336	A	C4'-C3'-O3'	-5.01	98.88	109.40

There are no chirality outliers.

All (47) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	1047	G	Sidechain
2	B	1060	U	Sidechain
2	B	1086	A	Sidechain
2	B	1088	A	Sidechain
2	B	1377	G	Sidechain
2	B	1426	G	Sidechain
2	B	1432	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1439	A	Sidechain
2	B	1533	C	Sidechain
2	B	1546	G	Sidechain
2	B	1572	A	Sidechain
2	B	1721	G	Sidechain
2	B	1734	G	Sidechain
2	B	1774	C	Sidechain
2	B	1814	G	Sidechain
2	B	1828	G	Sidechain
2	B	1869	G	Sidechain
2	B	2062	A	Sidechain
2	B	2135	A	Sidechain
2	B	221	A	Sidechain
2	B	222	A	Sidechain
2	B	2266	A	Sidechain
2	B	2267	A	Sidechain
2	B	2272	U	Sidechain
2	B	2279	G	Sidechain
2	B	232	G	Sidechain
2	B	2454	G	Sidechain
2	B	2471	A	Sidechain
2	B	2503	A	Sidechain
2	B	2508	G	Sidechain
2	B	2587	A	Sidechain
2	B	2638	G	Sidechain
2	B	2733	A	Sidechain
2	B	2770	G	Sidechain
2	B	2834	G	Sidechain
2	B	2848	G	Sidechain
2	B	2857	G	Sidechain
2	B	2868	A	Sidechain
2	B	2883	A	Sidechain
2	B	299	A	Sidechain
2	B	500	G	Sidechain
2	B	51	G	Sidechain
2	B	630	G	Sidechain
2	B	633	A	Sidechain
2	B	727	A	Sidechain
2	B	729	G	Sidechain
2	B	757	G	Sidechain

5.2 Close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2507	0	1270	108	0
2	B	60995	0	30678	2536	0
3	I	1032	0	1088	181	0
4	C	2082	0	2157	241	0
5	D	1565	0	1616	216	0
6	K	930	0	1000	122	0
7	P	917	0	965	106	0
8	E	1552	0	1619	181	0
9	Y	449	0	491	55	0
10	0	444	0	461	47	0
11	4	302	0	340	44	0
12	1	409	0	440	54	0
13	3	504	0	574	48	0
14	V	753	0	780	102	0
15	2	377	0	418	38	0
16	L	1045	0	1117	153	0
17	M	1074	0	1157	121	0
18	X	509	0	543	60	0
19	H	1111	0	1148	158	0
20	J	1129	0	1162	137	0
21	N	960	0	1000	129	0
22	O	892	0	923	96	0
23	Q	947	0	1022	178	0
24	S	857	0	922	101	0
25	U	779	0	834	109	0
26	F	1420	0	1460	212	0
27	G	1323	0	1374	195	0
28	R	816	0	839	128	0
29	T	738	0	807	120	0
30	Z	625	0	652	82	0
31	W	596	0	610	126	0
32	6	1478	0	1526	148	0
33	B	111	0	0	0	0
34	B	31	0	39	0	0
35	4	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	B	499	0	0	7	0
36	C	6	0	0	0	0
36	E	3	0	0	0	0
36	L	2	0	0	0	0
36	R	1	0	0	0	0
36	T	1	0	0	0	0
All	All	91772	0	61032	5785	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 38.

All (5785) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1099:G:H8	3:I:3:LYS:N	1.36	1.20
4:C:144:GLU:HA	4:C:151:GLY:HA2	1.33	1.11
16:L:143:GLU:HG2	16:L:144:GLU:H	1.10	1.10
19:H:31:VAL:HB	19:H:32:PRO:HD2	1.23	1.10
2:B:1099:G:C8	3:I:3:LYS:N	2.20	1.09
26:F:126:ASN:HB3	26:F:156:THR:HA	1.34	1.05
2:B:1098:A:H3'	3:I:3:LYS:CA	1.86	1.05
2:B:1098:A:H3'	3:I:3:LYS:HA	1.36	1.04
32:6:33:ALA:HA	32:6:103:ILE:HD13	1.36	1.04
8:E:155:GLU:HA	8:E:158:PHE:HB3	1.40	1.03
22:O:67:ASN:H	22:O:70:ALA:HB3	1.22	1.03
2:B:1099:G:O5'	3:I:4:VAL:N	1.92	1.02
6:K:71:ARG:HB3	6:K:72:PRO:HD2	1.41	1.02
6:K:35:VAL:HG23	6:K:36:GLY:H	1.22	1.01
24:S:73:LYS:HE3	24:S:74:ILE:H	1.26	1.00
2:B:2379:G:H4'	22:O:21:LEU:HD11	1.43	1.00
19:H:2:GLN:HA	19:H:20:ASN:HA	1.41	1.00
19:H:31:VAL:HB	19:H:32:PRO:CD	1.92	0.99
5:D:148:GLN:HB2	5:D:152:PRO:HG2	1.43	0.99
8:E:5:LEU:HD12	8:E:10:SER:HB2	1.42	0.99
16:L:124:GLY:N	16:L:143:GLU:HG3	1.76	0.98
31:W:39:GLN:HE21	31:W:42:THR:HB	1.24	0.98
5:D:29:VAL:HB	5:D:98:VAL:HG22	1.42	0.98
18:X:28:LEU:HD13	18:X:37:LEU:HD11	1.46	0.97
2:B:45:G:H5''	2:B:46:G:H5'	1.46	0.97
2:B:898:C:H2'	2:B:899:A:H5''	1.46	0.97
2:B:855:G:H21	31:W:23:LYS:HG2	1.28	0.96
2:B:704:G:H2'	2:B:726:G:H22	1.30	0.96
14:V:62:THR:HG22	14:V:71:LYS:HG2	1.47	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:65:ALA:HB1	19:H:138:VAL:HG21	1.48	0.95
19:H:62:LEU:HG	19:H:66:ASN:HD21	1.31	0.95
4:C:129:LEU:HD23	4:C:130:PRO:HD2	1.45	0.95
27:G:8:VAL:HG11	27:G:49:LEU:HB2	1.47	0.95
25:U:70:ALA:HB1	25:U:79:ALA:HB3	1.45	0.95
5:D:5:VAL:H	5:D:32:ASN:ND2	1.62	0.95
19:H:80:ILE:HD11	19:H:147:VAL:H	1.32	0.95
1:A:98:G:H1	14:V:14:LYS:HB2	1.29	0.95
19:H:7:ASP:HA	19:H:15:LEU:HD22	1.49	0.95
2:B:138:U:H4'	2:B:139:U:H2'	1.45	0.95
24:S:66:ILE:HD13	24:S:66:ILE:H	1.32	0.94
27:G:34:ARG:HH11	27:G:34:ARG:H	1.16	0.94
23:Q:111:LYS:HB2	28:R:48:LYS:HZ2	1.33	0.94
29:T:53:VAL:HG11	29:T:87:LEU:HD13	1.47	0.94
20:J:3:THR:HG21	23:Q:60:TRP:HE1	1.32	0.93
5:D:5:VAL:H	5:D:32:ASN:HD21	0.93	0.93
19:H:72:ILE:HG12	19:H:108:VAL:HG11	1.51	0.93
26:F:109:ARG:HB3	26:F:135:ILE:HD13	1.51	0.92
23:Q:54:ARG:HB3	23:Q:58:GLN:HE22	1.34	0.92
27:G:84:LYS:HG2	27:G:85:LYS:H	1.31	0.92
2:B:161:A:H3'	2:B:162:U:H5''	1.50	0.92
7:P:4:ILE:HG22	7:P:5:LYS:H	1.34	0.92
9:Y:16:LEU:HD22	9:Y:16:LEU:H	1.34	0.91
2:B:1099:G:H8	3:I:3:LYS:H	1.04	0.91
2:B:281:C:H2'	2:B:282:A:C8	2.06	0.91
2:B:2266:A:H4'	2:B:2267:A:N7	1.85	0.91
20:J:81:ILE:HG23	20:J:82:GLY:H	1.36	0.91
4:C:76:VAL:HG12	4:C:114:GLN:HG2	1.51	0.90
11:4:2:LYS:HD3	11:4:4:ARG:HE	1.34	0.90
29:T:38:ALA:HB1	29:T:43:ILE:HD11	1.52	0.90
12:1:33:LEU:HB3	12:1:51:ALA:HB3	1.51	0.90
26:F:36:ASN:HA	26:F:87:LYS:HA	1.54	0.90
31:W:50:VAL:HG23	31:W:61:LYS:HD3	1.53	0.90
5:D:106:LYS:HB3	5:D:206:ALA:H	1.37	0.90
2:B:972:A:H3'	2:B:973:A:H5''	1.54	0.90
21:N:37:THR:HG22	21:N:39:PRO:HD2	1.52	0.90
24:S:24:ILE:HG22	24:S:71:VAL:HG11	1.50	0.89
27:G:79:THR:HG22	27:G:80:GLU:HG2	1.55	0.89
4:C:183:VAL:HG13	4:C:185:ALA:H	1.37	0.89
26:F:163:GLU:HA	26:F:166:ARG:HD2	1.50	0.89
2:B:2798:U:H1'	2:B:2800:A:N6	1.87	0.89
2:B:1060:U:N3	2:B:1088:A:N7	2.21	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:35:LEU:HD23	26:F:153:ILE:HG12	1.55	0.89
4:C:103:ILE:HG22	4:C:105:ALA:H	1.37	0.89
2:B:1024:G:H3'	2:B:1025:G:H5''	1.53	0.88
28:R:8:GLY:HA3	28:R:23:GLU:HB2	1.55	0.88
2:B:1099:G:H8	3:I:3:LYS:CA	1.86	0.88
2:B:2109:U:H3	2:B:2180:U:H2'	1.37	0.88
1:A:2:G:H2'	1:A:3:C:C6	2.08	0.88
2:B:1124:G:H1'	11:4:38:GLY:OXT	1.73	0.88
16:L:143:GLU:HG2	16:L:144:GLU:N	1.89	0.88
27:G:15:ASP:HB3	27:G:26:LYS:H	1.36	0.88
32:6:38:LEU:HD12	32:6:58:VAL:HG11	1.53	0.88
2:B:2355:G:H4'	31:W:20:LEU:HD13	1.54	0.88
26:F:135:ILE:HD11	26:F:137:PHE:HB3	1.55	0.87
7:P:91:VAL:HG11	7:P:96:LEU:HD11	1.54	0.87
5:D:5:VAL:N	5:D:32:ASN:HD21	1.73	0.87
2:B:1019:U:H2'	2:B:1020:A:H8	1.39	0.87
20:J:29:ALA:HA	20:J:32:LEU:HD12	1.55	0.87
32:6:32:ARG:HB2	32:6:103:ILE:HG23	1.56	0.87
2:B:962:G:H21	2:B:2250:G:H22	1.22	0.87
32:6:92:PRO:HA	32:6:101:ILE:HG12	1.56	0.86
31:W:43:LYS:HD2	31:W:79:ILE:HD11	1.57	0.86
23:Q:111:LYS:HB2	28:R:48:LYS:NZ	1.88	0.86
29:T:57:VAL:HG22	29:T:58:VAL:H	1.39	0.86
5:D:105:LYS:HD2	5:D:177:VAL:HG22	1.57	0.86
5:D:24:VAL:HG21	5:D:188:LEU:HB3	1.56	0.86
21:N:101:GLY:HA2	21:N:110:MET:N	1.91	0.86
2:B:558:U:OP1	20:J:113:PRO:HG2	1.75	0.86
21:N:101:GLY:HA2	21:N:110:MET:H	1.41	0.86
8:E:119:ILE:HD11	8:E:185:LYS:HE3	1.56	0.86
30:Z:71:LEU:HD13	30:Z:76:GLU:HB3	1.57	0.86
28:R:60:LYS:H	28:R:100:GLY:HA3	1.41	0.86
29:T:67:VAL:HB	29:T:76:ARG:HG3	1.57	0.85
5:D:178:VAL:HB	5:D:188:LEU:HB2	1.56	0.85
28:R:2:TYR:HB2	28:R:42:ALA:HB2	1.56	0.85
14:V:42:LEU:HD12	14:V:47:VAL:HG21	1.57	0.85
2:B:2502:G:H5'	2:B:2503:A:H5''	1.58	0.85
25:U:85:ARG:HD3	25:U:86:PHE:H	1.42	0.85
26:F:62:GLN:HG3	26:F:91:ARG:HH11	1.41	0.85
32:6:35:PRO:HD3	32:6:60:ALA:HB2	1.59	0.85
5:D:10:GLY:HA3	5:D:26:VAL:H	1.39	0.85
2:B:1412:U:H2'	2:B:1413:A:C8	2.11	0.85
2:B:1244:A:H5''	16:L:8:PRO:HD3	1.57	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:68:PHE:HB3	5:D:73:VAL:HG23	1.56	0.85
23:Q:63:ARG:HH22	23:Q:96:ASP:HA	1.41	0.85
30:Z:76:GLU:HG3	30:Z:77:LYS:H	1.42	0.85
2:B:1141:U:H4'	2:B:1142:A:O4'	1.77	0.85
26:F:45:ASP:HB3	26:F:48:LEU:HD22	1.57	0.85
8:E:110:SER:HB3	8:E:114:ARG:HH12	1.41	0.84
14:V:70:ILE:HD13	14:V:71:LYS:H	1.43	0.84
22:O:53:THR:HB	22:O:65:THR:HG22	1.60	0.84
30:Z:38:PHE:HE2	30:Z:51:VAL:HG21	1.42	0.84
17:M:19:GLY:H	17:M:38:ARG:HH12	1.24	0.84
16:L:116:VAL:HG13	16:L:117:THR:H	1.43	0.84
15:2:21:ARG:HD2	15:2:43:THR:HG21	1.59	0.84
2:B:1203:U:H1'	16:L:4:ASN:HD21	1.43	0.84
3:I:27:LEU:H	3:I:27:LEU:HD23	1.42	0.84
31:W:17:ALA:HA	31:W:35:ILE:HG23	1.59	0.84
24:S:66:ILE:HA	24:S:69:LEU:HD22	1.59	0.84
23:Q:63:ARG:HH12	23:Q:96:ASP:HB2	1.42	0.84
2:B:2109:U:N3	2:B:2180:U:H2'	1.93	0.84
2:B:1019:U:H2'	2:B:1020:A:C8	2.12	0.84
7:P:56:SER:HB2	7:P:75:THR:HG21	1.60	0.83
27:G:94:ARG:HB2	27:G:127:GLN:HG2	1.60	0.83
25:U:95:PHE:HE1	25:U:102:ILE:HB	1.42	0.83
31:W:37:VAL:HG12	31:W:38:ARG:H	1.43	0.83
24:S:36:LEU:HD22	24:S:36:LEU:H	1.43	0.83
2:B:1080:A:H4'	3:I:126:ARG:HD3	1.61	0.83
26:F:33:ILE:HD12	26:F:95:MET:HG2	1.58	0.83
32:6:38:LEU:HA	32:6:41:LEU:HD13	1.59	0.83
1:A:98:G:N1	14:V:14:LYS:HB2	1.94	0.83
2:B:2039:U:H2'	2:B:2040:G:H8	1.41	0.83
2:B:2769:U:H2'	2:B:2770:G:H8	1.43	0.83
2:B:2720:U:H5''	7:P:52:ARG:NH2	1.94	0.83
26:F:65:LEU:HD23	26:F:87:LYS:HD2	1.61	0.83
26:F:11:VAL:HG12	26:F:12:VAL:H	1.43	0.83
2:B:181:A:H2'	2:B:182:A:C8	2.13	0.83
4:C:144:GLU:HG3	4:C:151:GLY:H	1.41	0.83
7:P:75:THR:HG23	7:P:76:HIS:H	1.43	0.83
22:O:3:LYS:HD3	22:O:3:LYS:H	1.43	0.83
2:B:96:C:H4'	18:X:41:HIS:ND1	1.91	0.83
24:S:24:ILE:HD11	24:S:36:LEU:HD11	1.61	0.82
8:E:188:MET:HG2	8:E:193:VAL:HG22	1.61	0.82
25:U:12:VAL:HG22	25:U:69:VAL:HG12	1.60	0.82
2:B:1287:A:OP1	21:N:104:ALA:HB3	1.79	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1060:U:C2	2:B:1088:A:N7	2.48	0.82
23:Q:87:VAL:HB	28:R:52:PRO:HG3	1.61	0.82
2:B:1412:U:H2'	2:B:1413:A:H8	1.44	0.82
3:I:121:ILE:HD13	3:I:121:ILE:H	1.44	0.82
2:B:2548:U:H1'	6:K:23:LYS:NZ	1.93	0.82
16:L:6:LEU:HD23	16:L:6:LEU:H	1.44	0.82
11:4:17:VAL:HG12	11:4:18:LYS:H	1.42	0.82
19:H:46:PHE:HA	19:H:50:ARG:HH21	1.44	0.82
26:F:125:GLY:HA2	26:F:162:ASP:HA	1.61	0.82
2:B:1098:A:H2'	3:I:4:VAL:N	1.95	0.82
12:1:49:LYS:HG3	12:1:50:GLU:H	1.44	0.82
6:K:41:ILE:HG13	6:K:42:THR:N	1.95	0.82
2:B:1099:G:P	3:I:3:LYS:HA	2.20	0.81
2:B:322:A:H2'	8:E:163:ASN:HD21	1.45	0.81
30:Z:30:LEU:H	30:Z:30:LEU:HD23	1.44	0.81
12:1:47:ILE:HD12	12:1:47:ILE:H	1.45	0.81
2:B:2366:A:H4'	31:W:61:LYS:HE2	1.62	0.81
14:V:77:VAL:HG23	14:V:89:ILE:HG23	1.62	0.81
24:S:10:ALA:HB3	24:S:101:SER:HB2	1.61	0.81
2:B:1099:G:P	3:I:4:VAL:H	2.02	0.81
5:D:34:VAL:HG12	5:D:94:GLN:H	1.45	0.81
28:R:34:GLU:HG2	28:R:60:LYS:HG2	1.62	0.81
18:X:3:ALA:HA	18:X:6:LEU:HD23	1.61	0.81
2:B:460:A:H4'	29:T:72:GLN:HB2	1.60	0.81
2:B:126:A:H5'	15:2:19:ARG:HG3	1.62	0.81
2:B:2179:C:H2'	2:B:2179:C:O2	1.80	0.81
2:B:404:A:H4'	2:B:405:U:H5'	1.63	0.81
19:H:132:PHE:O	19:H:139:PHE:HA	1.80	0.81
29:T:15:HIS:H	29:T:32:LEU:HA	1.46	0.81
2:B:616:A:H3'	2:B:617:G:H8	1.45	0.81
20:J:25:LEU:HD22	20:J:26:GLY:H	1.44	0.80
8:E:47:LYS:HB3	8:E:51:GLU:HB2	1.61	0.80
13:3:49:VAL:HG21	13:3:54:LEU:HD13	1.63	0.80
2:B:1437:C:H2'	2:B:1438:U:C6	2.16	0.80
26:F:110:ILE:HA	26:F:111:ARG:CZ	2.12	0.80
4:C:156:SER:O	4:C:194:VAL:HG11	1.81	0.80
22:O:27:VAL:HG21	22:O:40:ILE:HD12	1.63	0.80
21:N:33:ILE:HG22	21:N:114:GLU:HB2	1.62	0.80
17:M:134:THR:HG22	17:M:136:MET:H	1.45	0.80
21:N:80:PHE:O	21:N:85:PRO:HD3	1.81	0.80
3:I:21:PRO:HB2	3:I:22:PRO:HD3	1.64	0.80
6:K:47:ILE:HG12	6:K:48:PRO:HD2	1.64	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2579:C:H1'	5:D:130:GLN:HE22	1.46	0.80
3:I:11:GLN:HG2	3:I:55:PRO:HB3	1.64	0.79
21:N:2:ARG:HG2	21:N:5:LYS:HB2	1.65	0.79
2:B:1099:G:H5''	3:I:3:LYS:N	1.98	0.79
2:B:858:G:N3	2:B:2268:A:H2'	1.97	0.79
15:2:30:VAL:HA	15:2:33:ARG:NH2	1.96	0.79
2:B:1796:U:H2'	2:B:1797:G:H8	1.48	0.79
30:Z:35:SER:HA	30:Z:50:ARG:HA	1.62	0.79
22:O:5:SER:HA	22:O:8:ILE:HD12	1.65	0.79
2:B:2741:A:H2'	2:B:2742:G:O4'	1.82	0.79
2:B:1199:U:H2'	2:B:1200:C:H6	1.48	0.79
1:A:2:G:H2'	1:A:3:C:H6	1.47	0.79
2:B:1283:G:H22	2:B:1286:A:H5'	1.45	0.79
19:H:86:ASP:HB2	19:H:89:LYS:HD3	1.65	0.79
20:J:58:ASN:HA	20:J:127:GLY:HA2	1.62	0.79
14:V:61:LEU:HD11	14:V:74:ALA:HB2	1.64	0.79
8:E:29:HIS:NE2	16:L:8:PRO:HG3	1.98	0.79
2:B:1916:A:H2'	2:B:1917:U:O4'	1.83	0.79
2:B:90:U:H3'	2:B:91:A:H5''	1.64	0.78
7:P:20:ARG:HG3	7:P:21:PRO:HD2	1.65	0.78
4:C:41:GLY:HA3	4:C:53:ILE:HG21	1.66	0.78
7:P:63:ILE:HA	7:P:68:GLY:HA2	1.66	0.78
14:V:31:TYR:HB3	14:V:37:PRO:HG3	1.65	0.78
27:G:84:LYS:HB3	27:G:132:LEU:O	1.83	0.78
2:B:2144:G:O2'	2:B:2146:C:H5''	1.83	0.78
2:B:2346:A:H3'	2:B:2347:C:H5''	1.63	0.78
2:B:1804:C:OP1	4:C:256:THR:HB	1.82	0.78
20:J:112:GLY:H	20:J:113:PRO:HD2	1.47	0.78
26:F:33:ILE:HD13	26:F:98:PHE:HD2	1.46	0.78
2:B:1324:G:H1'	2:B:1616:A:N6	1.97	0.78
17:M:43:ALA:O	17:M:46:ILE:HG12	1.84	0.78
2:B:1097:U:H2'	2:B:1098:A:O4'	1.82	0.78
31:W:49:ASN:HB2	31:W:60:ALA:HA	1.64	0.78
2:B:163:C:H2'	2:B:164:C:O4'	1.84	0.78
21:N:85:PRO:HA	21:N:88:ALA:HB2	1.66	0.78
2:B:38:A:O2'	8:E:43:THR:HA	1.84	0.78
14:V:72:VAL:HG21	14:V:91:PHE:HB3	1.66	0.78
3:I:45:THR:HA	3:I:48:ILE:HG22	1.66	0.78
2:B:1447:C:H2'	2:B:1448:G:H8	1.49	0.78
2:B:1175:A:H3'	2:B:1176:U:H5'	1.64	0.78
8:E:145:ASP:HA	8:E:166:LYS:HB3	1.66	0.78
31:W:39:GLN:HG2	31:W:40:ARG:N	1.99	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:281:C:H2'	2:B:282:A:H8	1.47	0.78
2:B:181:A:H2'	2:B:182:A:H8	1.46	0.77
31:W:9:THR:HG23	31:W:10:ARG:HD3	1.66	0.77
2:B:547:A:H5'	2:B:548:G:H21	1.48	0.77
17:M:71:LYS:HE3	17:M:73:ILE:HD11	1.65	0.77
11:4:7:VAL:HG13	11:4:8:LYS:H	1.48	0.77
17:M:19:GLY:HA2	17:M:97:GLN:HB2	1.64	0.77
13:3:18:LYS:HD2	13:3:20:GLY:H	1.50	0.77
2:B:142:A:H2'	2:B:143:C:C6	2.19	0.77
7:P:26:GLU:HB3	7:P:84:SER:HB3	1.67	0.77
2:B:1080:A:H2'	2:B:1081:U:H6	1.48	0.77
2:B:2039:U:H2'	2:B:2040:G:C8	2.19	0.77
3:I:72:THR:HG21	3:I:112:LYS:HA	1.67	0.77
18:X:12:GLU:HA	18:X:15:ASN:HD21	1.48	0.77
21:N:107:ASN:HD21	24:S:40:ASN:HD22	1.32	0.77
2:B:102:U:H2'	18:X:2:LYS:HE3	1.66	0.77
2:B:1911:U:H2'	2:B:1918:A:N1	1.99	0.77
2:B:2800:A:H2'	2:B:2801:G:O4'	1.85	0.77
2:B:1082:U:C4	2:B:1086:A:C2	2.73	0.77
2:B:1551:A:H3'	2:B:1552:A:H5''	1.67	0.77
2:B:547:A:H5'	2:B:548:G:N2	1.99	0.77
21:N:45:ARG:HG3	21:N:95:THR:HG21	1.66	0.77
27:G:36:LEU:HD22	27:G:36:LEU:H	1.50	0.77
2:B:856:G:H1'	31:W:23:LYS:HB3	1.66	0.76
29:T:29:THR:H	29:T:91:GLN:HE22	1.32	0.76
19:H:54:LEU:HD22	19:H:58:LEU:HD11	1.65	0.76
28:R:28:ALA:O	28:R:63:VAL:HG21	1.84	0.76
18:X:37:LEU:HD23	18:X:39:GLN:H	1.50	0.76
7:P:7:LEU:H	7:P:7:LEU:HD12	1.51	0.76
2:B:2103:C:H3'	2:B:2104:C:C2	2.21	0.76
30:Z:7:VAL:HG13	30:Z:8:THR:HG23	1.66	0.76
2:B:2732:G:H3'	2:B:2733:A:H5'	1.68	0.76
30:Z:54:LYS:HA	30:Z:57:ARG:HD3	1.67	0.76
2:B:1099:G:OP2	3:I:3:LYS:HA	1.85	0.76
14:V:70:ILE:HG12	14:V:72:VAL:HG13	1.68	0.76
2:B:2674:G:H4'	6:K:30:ARG:HG3	1.67	0.76
19:H:96:THR:HG23	19:H:97:ARG:H	1.50	0.76
3:I:105:LEU:HD13	3:I:129:GLU:HG2	1.65	0.76
19:H:127:GLU:HA	19:H:145:ASN:HA	1.66	0.76
32:6:137:LEU:HD13	32:6:161:ILE:HG21	1.68	0.76
2:B:2813:A:H2'	2:B:2814:A:H8	1.51	0.76
1:A:66:A:H61	1:A:107:G:H2'	1.51	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:D:91:THR:HG23	5:D:92:VAL:H	1.51	0.76
3:I:55:PRO:HD3	3:I:74:PRO:HD3	1.67	0.76
20:J:57:LEU:HG	20:J:128:ASN:H	1.50	0.76
32:6:30:THR:C	32:6:32:ARG:H	1.86	0.76
25:U:78:LYS:HD3	25:U:79:ALA:H	1.48	0.76
29:T:11:LEU:HD22	29:T:11:LEU:H	1.51	0.76
2:B:590:A:H2'	2:B:591:U:C6	2.21	0.76
20:J:17:VAL:HG23	20:J:137:PRO:HB2	1.67	0.76
6:K:102:PRO:HA	6:K:120:PRO:HB3	1.67	0.76
5:D:106:LYS:HB3	5:D:206:ALA:N	2.00	0.76
27:G:157:LYS:HB3	27:G:159:LYS:HG3	1.67	0.76
17:M:19:GLY:HA2	17:M:98:PRO:HD2	1.67	0.75
2:B:1993:U:H4'	5:D:133:THR:HG21	1.68	0.75
2:B:1535:A:H3'	2:B:1536:C:H6	1.51	0.75
27:G:71:LEU:HA	27:G:74:MET:SD	2.26	0.75
2:B:1080:A:H4'	3:I:126:ARG:CD	2.15	0.75
13:3:37:THR:HA	13:3:40:LYS:HE2	1.68	0.75
25:U:27:VAL:HG23	25:U:33:VAL:HG12	1.67	0.75
2:B:2305:U:H5''	26:F:130:GLY:HA3	1.67	0.75
2:B:1099:G:O4'	3:I:3:LYS:C	2.24	0.75
32:6:61:PRO:HG2	32:6:67:VAL:HG13	1.65	0.75
31:W:39:GLN:NE2	31:W:42:THR:HB	2.00	0.75
30:Z:76:GLU:HG3	30:Z:77:LYS:N	1.99	0.75
2:B:1597:A:H5''	2:B:1598:A:H5'	1.67	0.75
2:B:1406:U:H2'	2:B:1407:G:C8	2.22	0.75
27:G:115:GLN:H	27:G:115:GLN:CD	1.89	0.75
4:C:132:ARG:HD3	4:C:166:ARG:HH12	1.48	0.75
2:B:1230:A:H2'	2:B:1231:U:C6	2.22	0.75
2:B:1098:A:H2'	3:I:4:VAL:CA	2.17	0.75
2:B:878:A:H1'	2:B:899:A:H62	1.52	0.75
14:V:44:HIS:HE1	14:V:86:LEU:H	1.32	0.75
27:G:30:GLY:HA3	27:G:78:VAL:HA	1.69	0.75
12:1:33:LEU:HB3	12:1:51:ALA:CB	2.17	0.75
2:B:1550:C:H2'	2:B:1551:A:H8	1.51	0.75
23:Q:29:ARG:HB3	23:Q:29:ARG:HH11	1.52	0.75
2:B:1338:G:H4'	29:T:18:GLU:HG3	1.69	0.75
2:B:2471:A:O2'	2:B:2472:G:H8	1.69	0.75
27:G:37:ASN:HD21	27:G:40:VAL:HB	1.52	0.75
17:M:108:VAL:HG13	17:M:112:LEU:HB3	1.69	0.75
28:R:4:VAL:O	28:R:38:VAL:HA	1.87	0.75
29:T:39:THR:HG22	29:T:42:GLU:HG2	1.67	0.75
16:L:82:LEU:HD23	16:L:90:VAL:HG21	1.69	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:106:C:H2'	2:B:107:G:H8	1.52	0.75
2:B:580:U:H2'	2:B:581:C:C6	2.22	0.74
23:Q:26:ALA:HA	23:Q:29:ARG:HG3	1.69	0.74
17:M:37:GLY:HA3	17:M:127:LYS:NZ	2.02	0.74
22:O:35:ILE:HG13	22:O:71:ALA:HB2	1.69	0.74
24:S:26:GLY:H	24:S:71:VAL:HG13	1.52	0.74
26:F:41:GLU:HB2	26:F:48:LEU:HD11	1.67	0.74
16:L:121:THR:HB	16:L:141:LYS:HD2	1.70	0.74
2:B:1169:A:H2'	2:B:1170:C:C6	2.22	0.74
2:B:1178:C:H2'	2:B:1179:G:H8	1.51	0.74
2:B:2795:C:H2'	2:B:2796:U:O4'	1.87	0.74
32:6:107:THR:O	32:6:111:ARG:HB2	1.87	0.74
14:V:77:VAL:HG12	17:M:136:MET:HG2	1.68	0.74
24:S:27:LYS:O	24:S:32:ALA:HB2	1.88	0.74
7:P:50:ARG:HB2	7:P:56:SER:HB3	1.67	0.74
19:H:84:ALA:HA	19:H:90:LEU:HA	1.69	0.74
12:1:9:LYS:HD3	12:1:9:LYS:H	1.51	0.74
19:H:54:LEU:HA	19:H:58:LEU:HG	1.70	0.74
2:B:2814:A:H4'	10:0:25:THR:HG21	1.69	0.74
2:B:721:A:H2'	2:B:722:A:H8	1.53	0.74
26:F:49:LEU:HD11	26:F:66:ILE:HD12	1.68	0.74
14:V:42:LEU:HD23	14:V:42:LEU:H	1.51	0.74
5:D:37:VAL:HG23	5:D:91:THR:HA	1.69	0.74
14:V:9:ARG:NH2	14:V:12:GLN:HA	2.03	0.74
2:B:1654:A:O2'	5:D:118:PHE:HB2	1.88	0.74
29:T:69:ARG:HB3	29:T:74:ILE:HA	1.68	0.74
2:B:1168:G:H2'	2:B:1169:A:C8	2.23	0.74
2:B:138:U:O3'	2:B:139:U:H3'	1.87	0.74
29:T:55:VAL:HA	29:T:87:LEU:HA	1.70	0.74
23:Q:89:ILE:HB	28:R:11:GLN:HE22	1.51	0.74
2:B:1199:U:H2'	2:B:1200:C:C6	2.21	0.74
21:N:49:GLU:HB2	21:N:50:PRO:HD3	1.70	0.74
6:K:107:LEU:H	6:K:107:LEU:HD12	1.52	0.74
16:L:79:LEU:HB3	16:L:115:GLU:O	1.88	0.74
5:D:34:VAL:CG1	5:D:94:GLN:H	2.01	0.74
28:R:7:SER:HB2	28:R:22:LEU:HB3	1.69	0.74
19:H:117:LEU:HD12	19:H:118:PRO:HD2	1.69	0.74
25:U:14:THR:HB	25:U:68:ASN:HB3	1.70	0.74
25:U:11:ILE:HG22	25:U:70:ALA:HB3	1.70	0.73
2:B:2443:C:H2'	2:B:2444:G:H8	1.51	0.73
2:B:2728:U:H5'	6:K:70:ARG:NH2	2.03	0.73
9:Y:6:ILE:HG22	9:Y:56:VAL:HA	1.69	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:L:135:ILE:HG12	16:L:140:GLY:HA3	1.68	0.73
7:P:75:THR:HG23	7:P:76:HIS:N	2.02	0.73
2:B:1024:G:C3'	2:B:1025:G:H5''	2.18	0.73
8:E:148:ILE:HD13	8:E:187:VAL:HG21	1.70	0.73
8:E:148:ILE:HA	8:E:187:VAL:HB	1.68	0.73
2:B:2425:A:H5'	2:B:2427:C:O4'	1.88	0.73
20:J:45:THR:H	20:J:46:PRO:HD3	1.53	0.73
2:B:2471:A:HO2'	2:B:2472:G:H8	1.35	0.73
1:A:104:A:H2'	1:A:105:G:O4'	1.87	0.73
2:B:137:U:H2'	2:B:138:U:O4'	1.89	0.73
2:B:423:A:H5'	2:B:424:G:H5'	1.71	0.73
19:H:133:GLN:HA	19:H:138:VAL:O	1.89	0.73
2:B:359:G:H2'	2:B:360:U:H5'	1.70	0.73
27:G:167:VAL:HG23	27:G:168:VAL:H	1.52	0.73
19:H:115:VAL:HB	19:H:132:PHE:CD1	2.22	0.73
16:L:79:LEU:HG	16:L:112:LEU:HA	1.69	0.73
22:O:24:THR:HG22	22:O:42:PRO:HD3	1.71	0.73
26:F:102:LEU:HD22	26:F:103:ILE:N	2.04	0.73
20:J:6:ALA:HB3	20:J:45:THR:HG21	1.69	0.73
4:C:140:VAL:HG12	4:C:141:HIS:H	1.54	0.73
30:Z:49:LEU:HD12	30:Z:49:LEU:H	1.53	0.73
2:B:495:G:N2	24:S:61:ASN:HD21	1.85	0.73
14:V:72:VAL:HG12	14:V:93:ARG:HA	1.70	0.73
15:2:26:ASN:HA	15:2:29:GLN:HB3	1.71	0.73
2:B:1172:C:H2'	2:B:1173:U:O4'	1.88	0.73
29:T:73:ARG:HH21	29:T:73:ARG:HB3	1.53	0.73
27:G:89:VAL:HB	27:G:159:LYS:HA	1.70	0.73
3:I:20:SER:HB3	3:I:21:PRO:HD3	1.68	0.73
2:B:2078:C:H2'	2:B:2079:U:C6	2.24	0.73
2:B:286:U:H2'	2:B:287:G:C8	2.24	0.73
2:B:898:C:C2'	2:B:899:A:H5''	2.19	0.73
2:B:2748:A:H4'	27:G:3:VAL:HG21	1.71	0.73
29:T:54:GLU:HB3	29:T:88:LYS:HB2	1.71	0.73
1:A:49:C:H2'	1:A:50:A:H8	1.53	0.73
32:6:106:LEU:HG	32:6:111:ARG:HD2	1.68	0.73
25:U:81:ARG:HH21	25:U:81:ARG:H	1.37	0.73
3:I:105:LEU:HD11	3:I:139:VAL:HG21	1.69	0.72
6:K:112:PHE:O	6:K:115:ILE:HG22	1.88	0.72
13:3:5:THR:HG22	13:3:62:PRO:HD2	1.69	0.72
16:L:103:ILE:H	16:L:103:ILE:HD12	1.52	0.72
16:L:124:GLY:H	16:L:143:GLU:HG3	1.53	0.72
21:N:83:LEU:HA	21:N:86:ARG:HG3	1.70	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2895:G:H2'	2:B:2896:C:C6	2.24	0.72
17:M:67:VAL:HG11	17:M:102:LEU:HD13	1.70	0.72
2:B:773:U:H5'	2:B:774:G:OP2	1.88	0.72
2:B:873:C:H4'	17:M:64:TRP:HE1	1.55	0.72
16:L:121:THR:HG22	16:L:141:LYS:HB3	1.71	0.72
19:H:27:ARG:NH1	30:Z:60:ASP:HA	2.05	0.72
2:B:2769:U:H2'	2:B:2770:G:C8	2.22	0.72
2:B:2105:U:H2'	2:B:2106:U:O4'	1.89	0.72
2:B:423:A:H5'	2:B:424:G:C5'	2.19	0.72
2:B:1459:G:H4'	2:B:1461:C:N4	2.03	0.72
2:B:742:A:H2'	2:B:743:A:H8	1.55	0.72
8:E:108:ILE:HD11	8:E:181:ILE:HB	1.72	0.72
2:B:455:C:N3	2:B:472:A:H2'	2.04	0.72
2:B:918:A:H2'	2:B:919:U:H5'	1.69	0.72
30:Z:7:VAL:HG21	30:Z:59:ILE:HD11	1.70	0.72
17:M:36:VAL:HB	17:M:127:LYS:O	1.89	0.72
2:B:1459:G:H4'	2:B:1461:C:H42	1.52	0.72
4:C:116:GLN:HG2	4:C:117:SER:H	1.55	0.72
27:G:61:TRP:HA	27:G:61:TRP:CE3	2.24	0.72
21:N:38:LEU:HB3	21:N:39:PRO:HD3	1.71	0.72
28:R:66:HIS:ND1	28:R:94:THR:HG22	2.04	0.72
14:V:53:LYS:HD3	14:V:55:GLU:H	1.53	0.72
2:B:2722:G:H4'	21:N:4:ARG:HB2	1.71	0.72
27:G:51:PHE:CD2	27:G:68:ARG:HG2	2.24	0.72
2:B:2531:A:OP2	27:G:174:LYS:HB3	1.90	0.72
2:B:721:A:H2'	2:B:722:A:C8	2.25	0.72
2:B:95:A:H4'	18:X:38:GLN:O	1.90	0.72
2:B:1266:G:N2	2:B:2012:G:H2'	2.03	0.72
20:J:36:LEU:HD12	20:J:121:LYS:HE3	1.71	0.72
2:B:1993:U:H4'	5:D:133:THR:CG2	2.20	0.72
2:B:165:A:H2'	2:B:166:U:H6	1.55	0.72
26:F:137:PHE:HB2	26:F:138:PRO:HD2	1.72	0.72
13:3:22:LYS:HA	13:3:48:MET:HA	1.72	0.72
2:B:140:C:H4'	2:B:141:G:C6	2.25	0.71
2:B:1454:C:H1'	21:N:60:VAL:HG13	1.72	0.71
2:B:2591:C:H2'	2:B:2592:G:C8	2.25	0.71
23:Q:63:ARG:NH2	23:Q:96:ASP:HA	2.04	0.71
25:U:49:PRO:HA	25:U:53:GLN:HG3	1.73	0.71
2:B:2866:U:H4'	2:B:2867:G:H4'	1.72	0.71
18:X:39:GLN:HB3	18:X:42:LEU:HD13	1.71	0.71
27:G:51:PHE:HD2	27:G:68:ARG:HG2	1.56	0.71
2:B:1287:A:H3'	2:B:1288:G:N2	2.05	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1796:U:H2'	2:B:1797:G:C8	2.25	0.71
11:4:15:LYS:O	11:4:16:ILE:HB	1.88	0.71
2:B:2787:C:H1'	5:D:63:PRO:HG3	1.73	0.71
2:B:2461:A:H2'	2:B:2462:C:C6	2.25	0.71
2:B:709:U:H2'	2:B:710:U:C6	2.25	0.71
18:X:31:GLN:HG2	18:X:37:LEU:HB2	1.73	0.71
19:H:14:SER:HB3	19:H:17:ASP:HB2	1.71	0.71
2:B:1060:U:C4	2:B:1088:A:N6	2.58	0.71
30:Z:33:LEU:HA	30:Z:52:SER:HA	1.72	0.71
2:B:2306:C:H3'	2:B:2307:G:H5'	1.70	0.71
8:E:60:TRP:O	8:E:61:ARG:HB2	1.89	0.71
6:K:13:ASN:HD21	6:K:98:ARG:H	1.37	0.71
2:B:2365:G:H4'	31:W:59:PHE:CD1	2.25	0.71
23:Q:105:PHE:HA	23:Q:108:LEU:HD12	1.70	0.71
2:B:165:A:H2'	2:B:166:U:C6	2.25	0.71
5:D:113:SER:HB2	5:D:168:GLU:H	1.56	0.71
16:L:123:ARG:HA	16:L:143:GLU:HB3	1.71	0.71
6:K:19:VAL:HG12	6:K:43:ILE:HA	1.72	0.71
2:B:1548:A:H2'	2:B:1549:A:C8	2.25	0.71
17:M:2:LEU:HD23	17:M:46:ILE:HD11	1.70	0.71
23:Q:30:VAL:CG1	23:Q:33:VAL:HG22	2.21	0.71
3:I:85:ILE:HD13	3:I:137:LEU:HD21	1.73	0.71
29:T:11:LEU:HD21	29:T:46:ALA:HB1	1.72	0.71
19:H:131:SER:HB2	19:H:141:LYS:HA	1.73	0.71
28:R:31:GLU:H	28:R:63:VAL:HG22	1.55	0.71
8:E:150:THR:HG21	8:E:153:LEU:HA	1.72	0.71
2:B:608:A:H2'	2:B:609:A:C8	2.26	0.71
2:B:2144:G:N3	2:B:2146:C:H5'	2.06	0.71
2:B:1729:U:H3'	2:B:1730:C:H4'	1.72	0.71
2:B:289:G:H2'	2:B:290:U:C6	2.25	0.71
26:F:168:LEU:HD13	26:F:169:LEU:H	1.55	0.71
26:F:35:LEU:HD13	26:F:56:LEU:HD11	1.71	0.71
32:6:81:LYS:C	32:6:84:ARG:HH21	1.94	0.71
2:B:118:A:OP2	2:B:119:A:H5''	1.91	0.71
16:L:93:ASN:HD22	16:L:94:THR:H	1.36	0.71
25:U:85:ARG:HD3	25:U:86:PHE:N	2.04	0.71
1:A:49:C:H2'	1:A:50:A:C8	2.26	0.71
2:B:2886:A:H62	10:0:39:ARG:NE	1.88	0.71
2:B:152:A:H2'	2:B:153:U:C6	2.26	0.71
4:C:143:VAL:HB	4:C:153:LEU:HB2	1.72	0.70
26:F:62:GLN:HG3	26:F:91:ARG:NH1	2.06	0.70
2:B:30:G:H2'	2:B:31:C:C6	2.25	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:J:73:VAL:HG23	20:J:74:TYR:H	1.56	0.70
30:Z:18:ARG:HA	30:Z:23:ASN:O	1.91	0.70
7:P:56:SER:HB2	7:P:75:THR:CG2	2.20	0.70
32:6:25:LEU:HD21	32:6:118:VAL:HG13	1.72	0.70
2:B:1935:G:H1'	2:B:1964:G:N2	2.06	0.70
2:B:1099:G:H5''	3:I:2:LYS:C	2.11	0.70
7:P:4:ILE:C	7:P:6:GLN:H	1.93	0.70
4:C:144:GLU:HG3	4:C:151:GLY:N	2.07	0.70
19:H:62:LEU:HG	19:H:66:ASN:ND2	2.05	0.70
26:F:11:VAL:HG21	26:F:172:PHE:CE1	2.26	0.70
15:2:30:VAL:HA	15:2:33:ARG:HH22	1.53	0.70
18:X:1:MET:O	18:X:5:GLU:HG2	1.92	0.70
2:B:1709:U:H2'	2:B:1710:G:H8	1.56	0.70
2:B:626:A:H2'	16:L:78:ARG:NH1	2.05	0.70
20:J:1:MET:HG2	20:J:2:LYS:HG2	1.72	0.70
12:1:7:LYS:HD2	13:3:33:THR:HG21	1.74	0.70
2:B:1812:U:H1'	4:C:43:ASN:HD21	1.57	0.70
5:D:105:LYS:HE3	5:D:176:ASP:HB3	1.72	0.70
21:N:107:ASN:HD21	24:S:40:ASN:ND2	1.89	0.70
2:B:2813:A:H2'	2:B:2814:A:C8	2.27	0.70
2:B:1583:A:H4'	2:B:1585:C:C4	2.27	0.70
2:B:278:A:N3	2:B:278:A:H2'	2.06	0.70
16:L:90:VAL:HB	16:L:122:VAL:HA	1.74	0.70
31:W:51:GLY:HA3	31:W:59:PHE:CB	2.22	0.70
11:4:7:VAL:HG23	11:4:35:GLN:HB2	1.73	0.70
2:B:2867:G:H2'	2:B:2867:G:N3	2.07	0.70
32:6:131:ASN:O	32:6:135:GLU:HG3	1.92	0.70
2:B:458:G:N2	2:B:469:G:H2'	2.06	0.70
20:J:13:ARG:O	20:J:52:ASP:HA	1.91	0.70
26:F:64:PRO:HA	26:F:88:VAL:HG22	1.73	0.70
2:B:2266:A:C4'	2:B:2267:A:N7	2.55	0.70
31:W:18:LYS:HE2	31:W:19:ARG:NH2	2.06	0.70
24:S:26:GLY:N	24:S:71:VAL:HG13	2.07	0.70
2:B:162:U:H4'	2:B:163:C:OP1	1.92	0.70
8:E:153:LEU:HG	8:E:154:ASP:N	2.05	0.70
2:B:855:G:N2	31:W:23:LYS:HG2	2.04	0.69
2:B:1080:A:O2'	3:I:126:ARG:HD2	1.92	0.69
14:V:40:ILE:H	14:V:40:ILE:HD13	1.57	0.69
2:B:1416:G:HO2'	2:B:1417:C:H6	1.40	0.69
2:B:1593:A:H2'	2:B:1594:U:C6	2.27	0.69
2:B:2354:C:H4'	31:W:31:LEU:HD22	1.73	0.69
2:B:27:G:H22	2:B:512:G:H2'	1.55	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:G:84:LYS:HG2	27:G:85:LYS:N	2.07	0.69
2:B:877:A:H2'	2:B:900:A:H61	1.58	0.69
27:G:17:LYS:HZ2	27:G:17:LYS:HA	1.58	0.69
2:B:360:U:H2'	2:B:361:G:C8	2.28	0.69
21:N:34:ILE:O	21:N:112:TYR:HA	1.93	0.69
2:B:2484:G:OP1	17:M:44:ARG:HD3	1.91	0.69
2:B:1241:A:H2'	2:B:1242:U:H5'	1.74	0.69
16:L:93:ASN:O	16:L:95:LEU:HD12	1.92	0.69
31:W:49:ASN:HB3	31:W:81:ILE:HG12	1.74	0.69
4:C:102:TYR:O	4:C:103:ILE:HG13	1.93	0.69
26:F:115:GLY:HA2	26:F:177:ARG:HH11	1.56	0.69
2:B:729:G:C8	4:C:206:LYS:HE3	2.28	0.69
27:G:17:LYS:HZ2	27:G:18:ILE:H	1.38	0.69
2:B:2109:U:H2'	2:B:2180:U:H3	1.58	0.69
2:B:2108:A:N3	2:B:2108:A:H2'	2.07	0.69
2:B:2073:C:H5''	4:C:227:VAL:HG12	1.73	0.69
6:K:54:LYS:H	6:K:54:LYS:HD2	1.58	0.69
2:B:79:C:HO2'	2:B:346:A:H1'	1.57	0.69
26:F:161:SER:OG	26:F:164:GLU:HG3	1.92	0.69
32:6:86:SER:HB3	32:6:88:LEU:HD13	1.74	0.69
32:6:93:SER:HB3	32:6:100:TYR:O	1.92	0.69
2:B:878:A:C1'	2:B:899:A:H62	2.06	0.69
14:V:4:ILE:HB	14:V:63:ILE:HG13	1.73	0.69
19:H:68:ARG:HH12	19:H:134:VAL:HG11	1.57	0.69
2:B:543:G:C6	2:B:544:C:H1'	2.27	0.69
2:B:571:U:H3'	28:R:80:ARG:HH12	1.56	0.69
20:J:93:ILE:O	20:J:97:PRO:HG3	1.92	0.69
4:C:209:ALA:O	4:C:213:ARG:HB2	1.93	0.69
2:B:1047:G:H1'	2:B:1110:G:N2	2.08	0.69
2:B:2415:G:H4'	16:L:66:PHE:HB2	1.74	0.69
2:B:1138:G:H2'	2:B:1139:G:O4'	1.93	0.69
2:B:1309:G:H4'	15:2:7:PRO:HB2	1.74	0.69
2:B:2653:U:H3'	2:B:2654:A:H2'	1.75	0.69
24:S:73:LYS:HB3	24:S:106:VAL:HB	1.73	0.69
19:H:41:LYS:O	19:H:44:ILE:HG12	1.92	0.69
2:B:858:G:H21	2:B:2268:A:H3'	1.58	0.69
31:W:18:LYS:HA	31:W:18:LYS:HE3	1.74	0.69
4:C:91:ALA:HB2	4:C:105:ALA:HB2	1.73	0.69
21:N:102:PHE:H	21:N:109:PRO:HA	1.56	0.69
19:H:49:ALA:HB3	19:H:50:ARG:NH2	2.06	0.69
8:E:131:THR:HG22	8:E:160:ALA:HA	1.73	0.69
2:B:2340:A:H2'	2:B:2341:G:H8	1.56	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1161:C:H4'	28:R:8:GLY:O	1.93	0.68
2:B:1550:C:H2'	2:B:1551:A:C8	2.28	0.68
27:G:10:VAL:CG2	27:G:48:THR:HA	2.22	0.68
2:B:845:A:C2	2:B:847:U:H1'	2.28	0.68
2:B:852:U:H2'	2:B:853:C:C6	2.29	0.68
11:4:10:LEU:HD12	11:4:33:HIS:HA	1.74	0.68
2:B:580:U:H2'	2:B:581:C:H6	1.58	0.68
2:B:2443:C:H2'	2:B:2444:G:C8	2.28	0.68
5:D:53:GLY:HA3	5:D:77:ARG:HG3	1.74	0.68
2:B:2804:U:H2'	2:B:2805:C:C6	2.29	0.68
2:B:532:A:H4'	2:B:533:G:C8	2.28	0.68
2:B:171:U:H2'	2:B:172:A:C8	2.28	0.68
29:T:29:THR:H	29:T:91:GLN:NE2	1.89	0.68
20:J:4:PHE:HB3	20:J:44:TYR:CD1	2.28	0.68
6:K:43:ILE:HG21	6:K:46:ALA:HB2	1.75	0.68
2:B:1181:U:H2'	2:B:1182:G:H8	1.58	0.68
2:B:784:G:O2'	2:B:785:G:H5''	1.94	0.68
2:B:833:A:H2'	2:B:834:G:C8	2.28	0.68
27:G:102:ILE:HG13	27:G:116:LEU:HD11	1.75	0.68
2:B:1406:U:H2'	2:B:1407:G:H8	1.56	0.68
2:B:742:A:H2'	2:B:743:A:C8	2.28	0.68
2:B:1709:U:H2'	2:B:1710:G:C8	2.29	0.68
2:B:2384:U:H5''	2:B:2386:A:OP1	1.93	0.68
4:C:81:GLU:HB2	4:C:90:ILE:HG22	1.75	0.68
21:N:34:ILE:HB	21:N:113:ILE:HG22	1.76	0.68
2:B:2529:G:H4'	27:G:174:LYS:HG3	1.75	0.68
30:Z:17:ASN:HB2	30:Z:25:THR:HB	1.73	0.68
5:D:148:GLN:HG3	5:D:152:PRO:HB3	1.74	0.68
2:B:141:G:H3'	2:B:141:G:N3	2.09	0.68
23:Q:57:ARG:NH1	23:Q:61:ILE:HD11	2.08	0.68
2:B:189:G:H2'	2:B:205:G:H22	1.58	0.68
23:Q:78:PHE:CZ	23:Q:82:LEU:HD11	2.28	0.68
32:6:52:LEU:HD21	32:6:58:VAL:HG23	1.74	0.68
6:K:36:GLY:HA2	6:K:62:VAL:O	1.93	0.68
3:I:9:LYS:HG2	3:I:57:VAL:HG13	1.76	0.68
4:C:2:VAL:HG23	4:C:3:VAL:H	1.59	0.68
7:P:112:ARG:HB2	7:P:112:ARG:HH11	1.58	0.68
23:Q:30:VAL:HG13	23:Q:31:TYR:N	2.07	0.68
2:B:1387:A:H2'	2:B:1388:G:H8	1.59	0.68
2:B:1872:A:H2'	2:B:1873:G:O4'	1.92	0.68
8:E:118:LEU:HA	8:E:186:VAL:HG13	1.76	0.68
27:G:166:GLU:HG2	27:G:168:VAL:HG23	1.74	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:90:U:H3'	2:B:91:A:C5'	2.24	0.68
2:B:571:U:H3'	28:R:80:ARG:NH1	2.08	0.68
2:B:1684:G:H2'	2:B:1685:C:H6	1.59	0.68
2:B:1260:A:H2'	2:B:1261:C:C6	2.29	0.68
24:S:6:LYS:HB2	24:S:103:ILE:O	1.94	0.68
26:F:16:MET:O	26:F:20:ASN:HA	1.94	0.68
27:G:10:VAL:HG23	27:G:48:THR:HA	1.74	0.68
2:B:2243:U:H2'	2:B:2244:U:C6	2.29	0.68
24:S:17:VAL:C	24:S:19:LEU:H	1.97	0.68
2:B:224:U:O4	2:B:420:C:H5'	1.94	0.68
23:Q:94:LEU:HD12	28:R:13:ARG:HB2	1.76	0.67
19:H:68:ARG:NH1	19:H:134:VAL:HG11	2.08	0.67
5:D:8:LYS:HB2	5:D:201:LEU:HD11	1.77	0.67
2:B:1913:A:H4'	2:B:1914:C:H5''	1.77	0.67
2:B:2075:U:H2'	2:B:2238:G:N2	2.09	0.67
5:D:124:ARG:HA	5:D:165:MET:SD	2.34	0.67
2:B:1104:C:H2'	2:B:1105:U:C6	2.30	0.67
17:M:40:ARG:HD3	17:M:93:VAL:HG21	1.76	0.67
2:B:286:U:H2'	2:B:287:G:H8	1.57	0.67
2:B:848:C:H2'	2:B:849:A:H8	1.58	0.67
2:B:1437:C:H2'	2:B:1438:U:H6	1.57	0.67
2:B:2728:U:H2'	2:B:2729:G:H8	1.58	0.67
8:E:58:LYS:HD3	8:E:58:LYS:N	2.09	0.67
26:F:115:GLY:HA3	26:F:177:ARG:HD2	1.75	0.67
4:C:239:PHE:O	4:C:241:LYS:HG3	1.93	0.67
2:B:2213:U:O2	2:B:2213:U:H2'	1.93	0.67
1:A:111:U:H2'	1:A:112:G:C8	2.30	0.67
26:F:101:ARG:NH1	26:F:138:PRO:HB2	2.10	0.67
9:Y:40:THR:O	9:Y:43:ILE:HG22	1.94	0.67
31:W:33:GLY:O	31:W:34:SER:HB2	1.92	0.67
27:G:84:LYS:CB	27:G:132:LEU:H	2.06	0.67
26:F:41:GLU:O	26:F:43:ILE:HG22	1.94	0.67
2:B:1535:A:H3'	2:B:1536:C:C6	2.29	0.67
2:B:1655:A:H5'	5:D:118:PHE:HB2	1.74	0.67
4:C:77:VAL:HG23	4:C:112:GLY:H	1.58	0.67
2:B:2216:G:H2'	2:B:2217:G:C8	2.29	0.67
5:D:20:VAL:HA	6:K:72:PRO:HB3	1.77	0.67
6:K:35:VAL:HG23	6:K:36:GLY:N	2.02	0.67
2:B:1060:U:O2	2:B:1088:A:N7	2.27	0.67
2:B:2591:C:H2'	2:B:2592:G:H8	1.58	0.67
2:B:150:U:H2'	2:B:151:C:C6	2.30	0.67
31:W:37:VAL:HG12	31:W:38:ARG:N	2.10	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2306:C:C5	2:B:2307:G:H2'	2.30	0.67
2:B:718:A:H3'	2:B:719:C:H6	1.58	0.67
27:G:17:LYS:NZ	27:G:18:ILE:H	1.92	0.67
20:J:64:VAL:O	20:J:65:THR:HG22	1.95	0.67
7:P:89:GLY:HA2	7:P:112:ARG:N	2.10	0.67
9:Y:6:ILE:O	9:Y:34:THR:HA	1.95	0.67
4:C:204:LEU:HD22	4:C:209:ALA:HB1	1.76	0.67
18:X:10:SER:H	18:X:60:LYS:HE2	1.60	0.67
26:F:147:ARG:HD2	26:F:148:VAL:HG22	1.75	0.67
28:R:34:GLU:HA	28:R:59:ILE:O	1.95	0.67
27:G:83:THR:HA	27:G:84:LYS:NZ	2.10	0.67
2:B:2799:A:H4'	2:B:2800:A:O4'	1.94	0.67
4:C:158:GLY:N	4:C:194:VAL:HG13	2.09	0.67
2:B:1125:G:H5'	11:4:37:GLN:HE21	1.59	0.67
2:B:2485:G:O2'	2:B:2486:C:H5'	1.95	0.67
18:X:48:ARG:O	18:X:51:ALA:HB3	1.95	0.67
2:B:120:U:H4'	2:B:121:G:H5''	1.76	0.67
2:B:62:U:H3'	2:B:63:A:C8	2.29	0.67
22:O:51:ALA:HB3	22:O:78:VAL:HG22	1.75	0.67
2:B:2366:A:H2'	2:B:2367:G:O4'	1.94	0.67
2:B:704:G:H1'	2:B:727:A:H61	1.60	0.67
27:G:84:LYS:HB2	27:G:132:LEU:H	1.60	0.67
2:B:1082:U:N3	2:B:1086:A:C2	2.63	0.67
2:B:28:A:N6	2:B:512:G:H1'	2.10	0.67
1:A:35:C:H2'	1:A:36:C:H5'	1.75	0.67
2:B:19:A:H2'	2:B:20:C:C6	2.30	0.67
2:B:1727:C:H2'	2:B:1728:C:C6	2.30	0.67
4:C:128:THR:HG23	4:C:190:THR:HG22	1.75	0.66
19:H:69:ALA:HA	19:H:140:ALA:HB2	1.78	0.66
2:B:173:A:H2'	2:B:174:U:C6	2.30	0.66
2:B:1684:G:H2'	2:B:1685:C:C6	2.28	0.66
22:O:47:VAL:HG12	22:O:48:LEU:H	1.58	0.66
2:B:479:A:N3	2:B:481:G:H5''	2.09	0.66
26:F:107:VAL:HG11	26:F:175:PRO:HG3	1.75	0.66
8:E:18:THR:HG22	8:E:106:LYS:NZ	2.10	0.66
2:B:1178:C:H2'	2:B:1179:G:C8	2.29	0.66
9:Y:6:ILE:HG21	9:Y:47:ILE:HD12	1.77	0.66
8:E:58:LYS:HD3	8:E:58:LYS:H	1.60	0.66
2:B:172:A:H2'	2:B:173:A:C8	2.30	0.66
27:G:152:ARG:NH2	27:G:162:ARG:HA	2.11	0.66
19:H:125:THR:HA	19:H:146:VAL:HB	1.76	0.66
3:I:25:PRO:O	3:I:29:GLN:HG3	1.94	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1177:G:H2'	2:B:1178:C:C6	2.31	0.66
5:D:148:GLN:HB2	5:D:152:PRO:CG	2.22	0.66
5:D:149:ASN:C	5:D:152:PRO:HD2	2.16	0.66
28:R:3:ALA:O	28:R:13:ARG:HA	1.95	0.66
3:I:73:PRO:HG2	3:I:78:LEU:HD21	1.75	0.66
2:B:1535:A:H5''	2:B:1536:C:H5	1.61	0.66
2:B:1657:U:O2'	2:B:1658:C:H5'	1.96	0.66
2:B:593:U:H2'	2:B:594:U:C6	2.30	0.66
2:B:365:U:H2'	2:B:366:C:C6	2.29	0.66
2:B:2331:G:H4'	31:W:39:GLN:HA	1.76	0.66
2:B:704:G:H1'	2:B:727:A:N6	2.11	0.66
23:Q:91:ARG:NH1	28:R:11:GLN:H	1.92	0.66
4:C:91:ALA:CB	4:C:105:ALA:HB2	2.24	0.66
3:I:27:LEU:HD12	3:I:32:VAL:HG11	1.76	0.66
2:B:1080:A:H2'	2:B:1081:U:C6	2.28	0.66
2:B:743:A:O2'	2:B:744:U:H5'	1.96	0.66
8:E:176:ASP:HB3	8:E:179:SER:HB2	1.76	0.66
2:B:1166:G:H2'	2:B:1167:C:C6	2.30	0.66
2:B:850:U:O2'	9:Y:22:THR:HG22	1.96	0.66
2:B:135:U:H2'	2:B:136:G:C8	2.31	0.66
17:M:96:ILE:HD11	17:M:126:ILE:HD13	1.78	0.66
2:B:2557:G:H2'	2:B:2558:C:C6	2.30	0.66
21:N:114:GLU:HG2	21:N:115:LEU:N	2.08	0.66
2:B:581:C:H2'	2:B:582:A:C8	2.30	0.66
2:B:1192:G:O2'	2:B:1193:G:H5'	1.95	0.66
32:6:42:LYS:HB3	32:6:49:HIS:HB3	1.78	0.66
29:T:38:ALA:O	29:T:39:THR:HB	1.95	0.66
15:2:26:ASN:O	15:2:30:VAL:HG23	1.96	0.66
22:O:49:VAL:HG11	22:O:82:ALA:HA	1.77	0.66
3:I:72:THR:HG22	3:I:115:ASP:OD2	1.95	0.66
6:K:76:VAL:H	7:P:72:VAL:HG23	1.60	0.66
2:B:27:G:HO2'	2:B:28:A:H8	1.44	0.66
2:B:784:G:N1	4:C:227:VAL:HG11	2.11	0.66
2:B:1469:A:H2'	2:B:1470:A:C8	2.31	0.66
2:B:2639:A:H2'	2:B:2640:G:O4'	1.96	0.66
2:B:2267:A:H5''	2:B:2268:A:H5'	1.78	0.66
23:Q:104:ALA:HA	28:R:46:GLU:OE1	1.96	0.66
7:P:50:ARG:CB	7:P:56:SER:HB3	2.25	0.66
21:N:79:LEU:HA	21:N:83:LEU:HD12	1.77	0.66
2:B:2646:C:H2'	2:B:2647:U:O4'	1.95	0.66
2:B:2333:A:H5'	2:B:2335:A:H1'	1.77	0.66
26:F:31:GLU:O	26:F:32:LYS:HD3	1.96	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2728:U:H5'	6:K:70:ARG:HH21	1.61	0.66
1:A:90:C:OP1	17:M:16:ARG:HB2	1.96	0.66
5:D:51:THR:HG21	5:D:76:GLY:HA3	1.78	0.66
2:B:782:A:N3	4:C:224:MET:HB3	2.10	0.66
2:B:2098:U:H2'	2:B:2099:U:C1'	2.26	0.66
20:J:117:ALA:HA	20:J:120:ARG:HD2	1.78	0.66
26:F:72:SER:HB2	26:F:80:GLN:H	1.60	0.66
22:O:67:ASN:N	22:O:70:ALA:HB3	2.05	0.65
25:U:12:VAL:HA	25:U:69:VAL:HA	1.78	0.65
28:R:66:HIS:CG	28:R:94:THR:HG22	2.31	0.65
8:E:110:SER:HB3	8:E:114:ARG:NH1	2.10	0.65
2:B:1283:G:N2	2:B:1286:A:H5'	2.10	0.65
3:I:42:ASN:HA	3:I:45:THR:OG1	1.96	0.65
2:B:2834:G:H1'	2:B:2883:A:N6	2.11	0.65
2:B:702:U:H2'	2:B:703:U:C6	2.31	0.65
26:F:32:LYS:HB2	26:F:90:LEU:O	1.96	0.65
19:H:2:GLN:O	19:H:3:VAL:HG22	1.97	0.65
23:Q:63:ARG:HH12	23:Q:96:ASP:CB	2.07	0.65
28:R:19:THR:HG22	28:R:97:LYS:HG3	1.77	0.65
2:B:947:A:H2'	2:B:948:C:C6	2.31	0.65
2:B:2637:U:OP1	5:D:83:ARG:HD3	1.97	0.65
2:B:1826:G:H2'	2:B:1827:U:H6	1.61	0.65
32:6:67:VAL:HG12	32:6:100:TYR:CE1	2.31	0.65
24:S:76:VAL:HG12	24:S:103:ILE:HA	1.76	0.65
2:B:1012:U:O4	20:J:30:THR:HG21	1.97	0.65
2:B:2722:G:H2'	2:B:2723:C:C6	2.31	0.65
2:B:1117:C:O2'	2:B:1118:C:H5'	1.96	0.65
17:M:19:GLY:N	17:M:38:ARG:HH12	1.93	0.65
8:E:46:GLN:HG3	8:E:87:ALA:HB3	1.78	0.65
2:B:2895:G:H2'	2:B:2896:C:H6	1.62	0.65
2:B:28:A:H61	2:B:512:G:H1'	1.60	0.65
2:B:2875:C:H2'	2:B:2876:G:H8	1.62	0.65
2:B:1013:C:H2'	2:B:1014:A:H8	1.59	0.65
16:L:70:LYS:O	16:L:73:ILE:HG12	1.96	0.65
2:B:1515:A:H2'	2:B:1516:G:O4'	1.96	0.65
26:F:101:ARG:CZ	26:F:138:PRO:HB2	2.27	0.65
2:B:2216:G:H2'	2:B:2217:G:H8	1.60	0.65
26:F:30:VAL:HG21	26:F:96:TRP:HE1	1.62	0.65
22:O:11:ALA:HB2	22:O:96:GLY:N	2.10	0.65
32:6:58:VAL:HG22	32:6:68:VAL:HG13	1.79	0.65
26:F:8:LYS:HA	26:F:12:VAL:HG21	1.78	0.65
23:Q:27:ARG:HA	23:Q:33:VAL:HG23	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:78:U:H2'	2:B:79:C:C6	2.32	0.65
28:R:72:VAL:HG23	28:R:89:HIS:HB3	1.78	0.65
2:B:1099:G:C8	3:I:3:LYS:CA	2.75	0.65
2:B:849:A:H2'	2:B:850:U:C6	2.32	0.65
27:G:43:LYS:HB2	27:G:50:THR:HB	1.77	0.65
2:B:532:A:N3	2:B:532:A:H2'	2.11	0.65
5:D:182:ALA:O	5:D:184:ARG:HG2	1.97	0.65
24:S:81:SER:HA	24:S:99:ARG:HA	1.79	0.65
2:B:2734:A:H2'	2:B:2735:G:H5'	1.79	0.65
2:B:919:U:H2'	2:B:920:A:C8	2.31	0.65
27:G:7:PRO:O	27:G:8:VAL:HB	1.95	0.65
2:B:280:U:H2'	2:B:281:C:C6	2.31	0.65
20:J:17:VAL:HG22	20:J:55:ILE:HD11	1.77	0.65
2:B:458:G:H22	2:B:469:G:H2'	1.61	0.65
6:K:24:VAL:HG13	6:K:33:ALA:HB2	1.79	0.65
2:B:968:C:H2'	2:B:969:G:H8	1.61	0.65
1:A:14:U:H4'	1:A:70:C:O2	1.96	0.65
17:M:59:ARG:NH1	17:M:60:GLN:HB3	2.12	0.65
16:L:90:VAL:HB	16:L:122:VAL:HG12	1.79	0.65
8:E:21:ARG:HH11	8:E:106:LYS:HD2	1.62	0.65
2:B:1440:U:H2'	2:B:1441:G:C8	2.32	0.65
18:X:1:MET:HG2	18:X:4:LYS:NZ	2.11	0.65
2:B:170:U:H2'	2:B:171:U:C6	2.32	0.65
26:F:141:ASP:O	26:F:145:VAL:HG13	1.97	0.65
32:6:92:PRO:CA	32:6:101:ILE:HG12	2.27	0.65
26:F:7:TYR:O	26:F:11:VAL:HB	1.97	0.65
2:B:2548:U:H1'	6:K:23:LYS:HZ1	1.62	0.65
21:N:83:LEU:HA	21:N:86:ARG:HB2	1.79	0.65
6:K:8:LEU:N	6:K:8:LEU:HD12	2.11	0.65
22:O:89:ASP:HA	22:O:116:GLN:O	1.96	0.65
2:B:176:A:O2'	2:B:177:G:H5'	1.97	0.65
2:B:1923:U:H2'	2:B:1924:C:C6	2.31	0.65
16:L:93:ASN:ND2	16:L:94:THR:H	1.94	0.64
19:H:31:VAL:O	19:H:32:PRO:C	2.34	0.64
1:A:43:C:O2'	26:F:91:ARG:HD2	1.97	0.64
19:H:8:LYS:O	19:H:13:GLY:HA3	1.96	0.64
29:T:69:ARG:CZ	29:T:69:ARG:HA	2.26	0.64
3:I:41:PHE:O	3:I:45:THR:HG23	1.98	0.64
2:B:2108:A:H4'	2:B:2150:C:H4'	1.79	0.64
17:M:59:ARG:HH11	17:M:60:GLN:HB3	1.61	0.64
20:J:18:VAL:HG12	20:J:54:ILE:HD11	1.78	0.64
4:C:131:MET:HA	4:C:134:ILE:HG23	1.79	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:168:LEU:HD13	26:F:169:LEU:N	2.12	0.64
29:T:5:GLU:HA	29:T:8:LEU:HB2	1.79	0.64
2:B:544:C:H2'	2:B:545:U:C5	2.32	0.64
2:B:2784:U:H2'	2:B:2785:C:H6	1.63	0.64
20:J:124:VAL:HG23	20:J:125:TYR:H	1.63	0.64
2:B:1350:C:H5'	2:B:1351:C:OP2	1.97	0.64
32:6:93:SER:OG	32:6:100:TYR:HB2	1.97	0.64
23:Q:63:ARG:HH22	23:Q:96:ASP:CA	2.10	0.64
2:B:1203:U:H3'	2:B:1204:A:C5'	2.28	0.64
8:E:130:LYS:C	8:E:132:LYS:H	2.01	0.64
2:B:1458:U:H5''	2:B:1459:G:OP1	1.97	0.64
2:B:680:C:H2'	2:B:681:G:H8	1.62	0.64
2:B:2071:A:H2'	2:B:2072:C:C6	2.33	0.64
2:B:2537:U:H2'	2:B:2538:C:C6	2.32	0.64
2:B:659:G:H21	8:E:30:GLN:NE2	1.95	0.64
3:I:1:ALA:HB1	3:I:2:LYS:HD2	1.79	0.64
2:B:1098:A:OP2	3:I:3:LYS:HG2	1.97	0.64
2:B:2103:C:H5''	2:B:2104:C:OP2	1.98	0.64
6:K:99:ILE:HD13	6:K:118:LEU:HD22	1.79	0.64
2:B:155:A:H2'	2:B:156:A:C8	2.32	0.64
2:B:1742:U:H2'	2:B:1743:G:C8	2.33	0.64
25:U:78:LYS:CD	25:U:79:ALA:H	2.10	0.64
4:C:128:THR:HA	4:C:190:THR:HA	1.79	0.64
20:J:25:LEU:HD22	20:J:26:GLY:N	2.13	0.64
2:B:1081:U:H5'	3:I:126:ARG:NH1	2.13	0.64
2:B:2849:U:H4'	2:B:2850:A:H5'	1.80	0.64
8:E:58:LYS:HE2	8:E:60:TRP:HD1	1.62	0.64
2:B:784:G:C6	4:C:227:VAL:HG11	2.32	0.64
2:B:1523:U:H5''	2:B:1524:G:C8	2.33	0.64
2:B:904:G:H2'	2:B:905:A:H8	1.62	0.64
16:L:110:VAL:HB	16:L:127:VAL:HG23	1.80	0.64
32:6:93:SER:O	32:6:99:LEU:HA	1.98	0.64
2:B:528:A:C2	2:B:2042:A:H2'	2.32	0.64
26:F:7:TYR:O	26:F:12:VAL:HG23	1.98	0.64
2:B:464:U:H2'	2:B:465:G:O4'	1.98	0.64
2:B:934:U:H2'	2:B:935:C:C6	2.33	0.64
25:U:82:VAL:HG13	25:U:93:ARG:HB3	1.80	0.64
2:B:2859:G:H2'	2:B:2860:A:C8	2.32	0.64
26:F:31:GLU:HB3	26:F:156:THR:O	1.97	0.64
2:B:279:A:H2'	2:B:280:U:H5'	1.79	0.64
8:E:189:THR:O	8:E:193:VAL:HG23	1.98	0.64
2:B:1812:U:H2'	2:B:1813:G:H8	1.63	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:19:A:H2'	2:B:20:C:H6	1.62	0.64
2:B:1301:A:O2'	2:B:1302:A:H2'	1.97	0.64
2:B:942:G:H2'	2:B:943:A:O4'	1.98	0.64
2:B:72:U:O2'	2:B:73:A:H5'	1.98	0.64
26:F:62:GLN:HE22	26:F:90:LEU:HD13	1.61	0.64
30:Z:5:CYS:HB3	30:Z:10:LYS:N	2.12	0.64
27:G:89:VAL:HG12	27:G:90:GLY:H	1.61	0.64
2:B:95:A:H1'	18:X:40:SER:OG	1.98	0.64
26:F:177:ARG:CZ	26:F:177:ARG:HA	2.27	0.64
4:C:57:HIS:CG	4:C:58:LYS:H	2.15	0.64
30:Z:64:ILE:HD12	30:Z:64:ILE:H	1.61	0.64
25:U:84:PHE:O	25:U:85:ARG:HB2	1.98	0.64
7:P:52:ARG:HG2	7:P:52:ARG:HH11	1.63	0.64
2:B:1082:U:N3	2:B:1086:A:C6	2.65	0.64
2:B:27:G:H1'	2:B:513:A:N6	2.13	0.64
2:B:69:C:O2'	2:B:70:G:H5'	1.98	0.64
23:Q:10:ARG:HA	23:Q:13:HIS:HB2	1.78	0.64
2:B:2776:A:H4'	2:B:2777:G:H5''	1.79	0.64
19:H:4:ILE:HG13	19:H:18:GLN:HB2	1.80	0.64
20:J:36:LEU:HD21	20:J:122:LEU:HB2	1.80	0.64
30:Z:66:THR:O	30:Z:69:ALA:HB3	1.99	0.64
2:B:958:U:H3	17:M:16:ARG:HB3	1.63	0.64
2:B:125:A:O2'	15:2:13:ASN:HB3	1.97	0.64
28:R:14:VAL:HG22	28:R:15:SER:N	2.12	0.64
2:B:2563:U:H2'	2:B:2565:A:OP2	1.98	0.64
2:B:2010:G:H5''	24:S:42:LYS:HB2	1.80	0.64
25:U:70:ALA:HB1	25:U:79:ALA:CB	2.25	0.63
29:T:32:LEU:H	29:T:83:ALA:HB3	1.62	0.63
16:L:110:VAL:HG23	16:L:126:ARG:O	1.98	0.63
5:D:36:GLN:HG3	5:D:36:GLN:O	1.98	0.63
2:B:1681:G:N3	2:B:1762:A:H2'	2.12	0.63
2:B:1224:U:H4'	28:R:88:GLY:O	1.98	0.63
2:B:1475:G:H1'	2:B:1476:U:H5	1.62	0.63
27:G:148:ARG:HA	27:G:161:VAL:HB	1.80	0.63
2:B:1552:A:H2'	2:B:1553:A:H5'	1.80	0.63
2:B:2645:G:H3'	2:B:2646:C:H5'	1.81	0.63
2:B:969:G:H2'	2:B:970:U:C6	2.33	0.63
32:6:10:THR:O	32:6:14:MET:HG3	1.96	0.63
2:B:730:A:H3'	36:B:3425:HOH:O	1.98	0.63
32:6:61:PRO:HG2	32:6:67:VAL:CG1	2.29	0.63
2:B:1060:U:C5	3:I:131:THR:HG22	2.34	0.63
30:Z:64:ILE:O	30:Z:68:LEU:HG	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:T:68:LYS:O	29:T:69:ARG:CB	2.46	0.63
2:B:609:A:H2'	2:B:610:C:O4'	1.98	0.63
2:B:655:A:H4'	2:B:656:G:H5'	1.79	0.63
2:B:2341:G:H2'	2:B:2342:C:C6	2.33	0.63
19:H:70:GLU:OE1	19:H:71:LYS:HG3	1.98	0.63
2:B:2359:C:O3'	13:3:50:SER:HB3	1.98	0.63
16:L:95:LEU:HA	16:L:98:ALA:HB3	1.78	0.63
26:F:128:SER:HB3	26:F:154:THR:HG23	1.80	0.63
27:G:26:LYS:HB2	27:G:32:LEU:HG	1.79	0.63
24:S:82:MET:HB2	24:S:98:LYS:HB2	1.81	0.63
2:B:2636:C:H4'	5:D:81:GLU:OE2	1.99	0.63
2:B:969:G:H2'	2:B:970:U:H6	1.63	0.63
2:B:1098:A:C8	3:I:3:LYS:HB3	2.33	0.63
31:W:59:PHE:CE2	31:W:61:LYS:HD2	2.34	0.63
23:Q:93:ILE:HG23	23:Q:94:LEU:HD22	1.79	0.63
27:G:122:ALA:HB2	27:G:132:LEU:HB3	1.80	0.63
2:B:357:C:H2'	2:B:358:U:C6	2.33	0.63
19:H:94:ILE:HG22	19:H:122:LEU:CB	2.29	0.63
2:B:1273:U:H4'	2:B:1275:A:OP2	1.98	0.63
17:M:42:THR:O	17:M:44:ARG:N	2.32	0.63
2:B:1242:U:H2'	2:B:1243:C:C6	2.33	0.63
2:B:2786:U:H5'	5:D:70:LYS:HG3	1.80	0.63
2:B:1268:A:H2'	2:B:1269:A:O4'	1.98	0.63
19:H:31:VAL:CB	19:H:32:PRO:CD	2.73	0.63
31:W:24:ARG:HB2	31:W:65:LYS:HB3	1.79	0.63
4:C:32:LEU:HD22	4:C:63:ILE:HG13	1.80	0.63
2:B:2102:G:H2'	2:B:2103:C:O4'	1.98	0.63
2:B:495:G:H21	24:S:61:ASN:HD21	1.45	0.63
2:B:2241:A:H2'	2:B:2242:G:C8	2.33	0.63
2:B:1790:C:O2'	4:C:207:ALA:HB2	1.98	0.63
2:B:2377:A:H2'	2:B:2378:A:C8	2.33	0.63
2:B:1099:G:C5'	3:I:3:LYS:N	2.62	0.63
28:R:3:ALA:HB2	28:R:101:ILE:HD11	1.80	0.63
7:P:3:ILE:HD13	7:P:7:LEU:HD11	1.79	0.63
1:A:8:C:O2'	22:O:40:ILE:HD13	1.99	0.63
2:B:2142:A:H2'	2:B:2143:C:O4'	1.99	0.63
2:B:79:C:O2'	2:B:346:A:H1'	1.98	0.63
2:B:5:A:H2'	2:B:6:A:C8	2.34	0.63
2:B:642:U:O2	2:B:644:A:H3'	1.99	0.63
4:C:180:MET:O	4:C:267:VAL:HG23	1.98	0.63
26:F:111:ARG:HH11	26:F:135:ILE:HG21	1.63	0.63
2:B:2387:U:H1'	31:W:38:ARG:CZ	2.29	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:31:GLN:O	24:S:35:ILE:HG12	1.99	0.63
2:B:1440:U:H2'	2:B:1441:G:H8	1.64	0.63
3:I:20:SER:O	3:I:25:PRO:HD2	1.98	0.63
11:4:22:VAL:HB	11:4:24:ARG:HE	1.64	0.63
2:B:2537:U:H2'	2:B:2538:C:H6	1.64	0.63
2:B:2394:C:OP1	16:L:63:LYS:HG2	1.99	0.63
6:K:71:ARG:CB	6:K:72:PRO:HD2	2.23	0.63
14:V:4:ILE:HB	14:V:63:ILE:HA	1.81	0.63
4:C:80:LEU:HD11	4:C:109:LEU:HG	1.80	0.63
3:I:121:ILE:HD13	3:I:121:ILE:N	2.13	0.63
9:Y:50:VAL:O	9:Y:54:VAL:HG22	1.99	0.63
2:B:64:A:H2'	2:B:65:U:H6	1.63	0.63
23:Q:18:LYS:C	23:Q:20:ALA:H	2.02	0.63
2:B:559:G:H21	23:Q:51:GLN:NE2	1.96	0.62
8:E:161:ALA:HA	8:E:164:LEU:HB2	1.80	0.62
2:B:1439:A:H1'	2:B:1553:A:N6	2.14	0.62
2:B:1266:G:H22	2:B:2012:G:H2'	1.64	0.62
2:B:2803:G:H2'	2:B:2804:U:H6	1.64	0.62
5:D:114:LYS:HD2	5:D:116:LYS:NZ	2.13	0.62
2:B:62:U:H2'	2:B:63:A:O4'	1.99	0.62
26:F:72:SER:HA	26:F:78:ILE:HG22	1.80	0.62
2:B:2064:C:H2'	2:B:2065:C:C6	2.33	0.62
2:B:1501:G:O2'	2:B:1502:A:H5'	1.99	0.62
2:B:2455:G:H2'	2:B:2456:C:C6	2.33	0.62
12:1:3:GLY:O	12:1:4:ILE:HG12	1.98	0.62
6:K:71:ARG:HA	6:K:71:ARG:NE	2.13	0.62
28:R:38:VAL:O	28:R:53:PHE:HB3	1.99	0.62
28:R:24:LYS:HA	28:R:94:THR:HG23	1.80	0.62
8:E:161:ALA:HA	8:E:164:LEU:HD12	1.80	0.62
19:H:88:GLY:O	19:H:124:THR:HA	2.00	0.62
22:O:18:LEU:HD23	22:O:25:ARG:HD3	1.80	0.62
2:B:717:C:H3'	2:B:718:A:H5''	1.79	0.62
4:C:43:ASN:ND2	4:C:44:ASN:H	1.96	0.62
2:B:2439:A:N7	2:B:2586:U:H4'	2.14	0.62
26:F:37:MET:SD	26:F:52:ALA:HB1	2.39	0.62
2:B:1098:A:C2'	3:I:4:VAL:N	2.62	0.62
14:V:61:LEU:O	14:V:71:LYS:HA	1.99	0.62
7:P:56:SER:O	7:P:75:THR:HG22	1.99	0.62
20:J:58:ASN:HA	20:J:127:GLY:CA	2.28	0.62
2:B:1179:G:H2'	2:B:1180:U:O4'	1.99	0.62
13:3:31:ILE:HD11	13:3:34:LYS:HD3	1.79	0.62
2:B:27:G:N2	2:B:512:G:H2'	2.14	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1260:A:H2'	2:B:1261:C:H6	1.63	0.62
2:B:2086:U:H2'	2:B:2087:G:C8	2.33	0.62
4:C:86:ARG:NH1	4:C:86:ARG:HB3	2.14	0.62
16:L:23:ILE:HD12	28:R:84:ARG:HE	1.65	0.62
27:G:102:ILE:HD12	27:G:147:LEU:HD21	1.80	0.62
2:B:1060:U:O4	2:B:1088:A:N6	2.31	0.62
3:I:27:LEU:H	3:I:27:LEU:CD2	2.11	0.62
20:J:57:LEU:HD21	20:J:128:ASN:HA	1.80	0.62
5:D:51:THR:CG2	5:D:76:GLY:HA3	2.28	0.62
2:B:17:G:H2'	2:B:18:U:C6	2.34	0.62
2:B:594:U:H2'	2:B:595:C:C6	2.35	0.62
2:B:947:A:H2'	2:B:948:C:H6	1.63	0.62
21:N:9:GLN:O	21:N:17:ARG:HD3	1.99	0.62
23:Q:77:LYS:HA	23:Q:80:ASN:HB3	1.81	0.62
30:Z:71:LEU:HD12	30:Z:78:TYR:HD2	1.65	0.62
25:U:86:PHE:HB3	25:U:90:LYS:O	1.98	0.62
2:B:1174:U:H4'	2:B:1176:U:H1'	1.80	0.62
2:B:1373:A:H2'	2:B:1374:G:O4'	2.00	0.62
2:B:1013:C:H2'	2:B:1014:A:C8	2.33	0.62
2:B:863:A:H2'	2:B:864:G:C8	2.34	0.62
2:B:81:G:H2'	2:B:82:U:O4'	1.99	0.62
2:B:1847:A:H4'	2:B:1848:A:C8	2.35	0.62
2:B:441:U:H2'	2:B:442:G:H8	1.65	0.62
2:B:836:G:H2'	2:B:837:C:C6	2.34	0.62
14:V:28:ALA:HA	14:V:88:HIS:ND1	2.15	0.62
23:Q:97:ILE:HD11	23:Q:108:LEU:HD11	1.80	0.62
29:T:32:LEU:N	29:T:83:ALA:HB3	2.14	0.62
2:B:1913:A:H4'	2:B:1914:C:C5'	2.30	0.62
17:M:42:THR:OG1	17:M:45:GLN:HG3	2.00	0.62
27:G:61:TRP:HA	27:G:61:TRP:HE3	1.64	0.62
6:K:58:LEU:HD23	6:K:58:LEU:N	2.15	0.62
1:A:10:G:H2'	1:A:11:C:O4'	1.99	0.62
24:S:20:VAL:O	24:S:23:LEU:HB2	1.99	0.62
22:O:94:ARG:HD2	22:O:97:PHE:O	1.98	0.62
2:B:2615:U:C2	10:O:3:GLN:HA	2.34	0.62
26:F:33:ILE:HD13	26:F:98:PHE:CD2	2.34	0.62
32:6:33:ALA:CB	32:6:63:PRO:HA	2.29	0.62
2:B:851:C:O4'	9:Y:46:MET:HG2	2.00	0.62
30:Z:35:SER:HB3	30:Z:50:ARG:HG3	1.80	0.62
2:B:1175:A:C3'	2:B:1176:U:H5'	2.29	0.62
2:B:1654:A:H2'	2:B:1655:A:H8	1.65	0.62
10:O:21:LEU:HD12	24:S:19:LEU:O	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2376:A:H2'	2:B:2377:A:O4'	2.00	0.62
2:B:64:A:H2'	2:B:65:U:C6	2.35	0.62
2:B:257:C:H2'	2:B:258:G:O4'	2.00	0.62
16:L:56:PRO:HD2	16:L:59:ARG:HG3	1.82	0.62
2:B:1745:A:H2'	2:B:1746:A:O4'	2.00	0.62
2:B:394:C:O2'	2:B:395:U:H5'	2.00	0.62
14:V:15:GLY:O	14:V:19:ARG:HG3	1.99	0.62
26:F:60:SER:HB2	26:F:62:GLN:OE1	2.00	0.62
2:B:921:C:H2'	2:B:922:C:H6	1.65	0.62
2:B:2352:A:C6	31:W:30:VAL:HG11	2.35	0.62
15:2:33:ARG:HB2	15:2:33:ARG:HH21	1.65	0.62
23:Q:30:VAL:HG12	23:Q:33:VAL:HG22	1.82	0.62
25:U:65:GLN:HB2	25:U:68:ASN:ND2	2.15	0.62
2:B:1258:U:H4'	8:E:79:ARG:HD2	1.82	0.62
2:B:364:C:H2'	2:B:365:U:C6	2.35	0.62
2:B:347:A:H2'	2:B:348:A:H8	1.64	0.62
2:B:624:C:O2'	2:B:657:U:H5''	2.00	0.62
32:6:52:LEU:HD23	32:6:53:ASN:N	2.15	0.62
27:G:15:ASP:HB2	27:G:26:LYS:HB3	1.81	0.62
2:B:2645:G:H3'	2:B:2646:C:C5'	2.30	0.62
2:B:171:U:H2'	2:B:172:A:H8	1.65	0.62
2:B:1571:A:H2'	2:B:1572:A:C8	2.35	0.62
2:B:324:A:H2'	2:B:325:G:O4'	2.00	0.62
32:6:19:GLU:HA	32:6:22:GLU:CD	2.20	0.62
2:B:1562:U:H2'	2:B:1563:U:C6	2.34	0.62
26:F:103:ILE:HD11	26:F:174:PHE:HA	1.82	0.61
23:Q:63:ARG:HH21	23:Q:64:ILE:CD1	2.12	0.61
27:G:120:ILE:HD11	27:G:132:LEU:HB2	1.82	0.61
8:E:134:LEU:O	8:E:138:LEU:HG	2.00	0.61
2:B:2841:C:H2'	2:B:2842:G:C8	2.34	0.61
2:B:2835:A:H61	2:B:2878:U:H2'	1.64	0.61
2:B:1790:C:H2'	2:B:1791:A:C8	2.35	0.61
31:W:74:LYS:HA	31:W:74:LYS:HE2	1.82	0.61
5:D:29:VAL:O	5:D:185:ASN:HB3	1.99	0.61
19:H:135:HIS:H	19:H:138:VAL:HB	1.64	0.61
24:S:66:ILE:H	24:S:66:ILE:CD1	2.10	0.61
24:S:72:THR:CG2	24:S:108:SER:HB3	2.30	0.61
29:T:55:VAL:HG13	29:T:85:VAL:HG12	1.81	0.61
23:Q:63:ARG:HH21	23:Q:64:ILE:HD13	1.66	0.61
29:T:18:GLU:C	29:T:20:ALA:H	2.04	0.61
17:M:127:LYS:HD2	17:M:127:LYS:H	1.64	0.61
2:B:1169:A:H2'	2:B:1170:C:H6	1.64	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1381:G:C2'	2:B:1382:G:H5'	2.30	0.61
1:A:39:A:O2'	1:A:40:U:H5'	2.00	0.61
26:F:87:LYS:HG3	26:F:88:VAL:H	1.66	0.61
25:U:10:VAL:O	25:U:21:ARG:HA	2.01	0.61
29:T:39:THR:CG2	29:T:42:GLU:H	2.13	0.61
4:C:75:ALA:HB2	4:C:95:TYR:HA	1.81	0.61
2:B:2800:A:H2'	2:B:2801:G:C1'	2.30	0.61
8:E:148:ILE:HD13	8:E:187:VAL:CG2	2.29	0.61
3:I:126:ARG:HH11	3:I:126:ARG:HB3	1.65	0.61
2:B:1551:A:C3'	2:B:1552:A:H5''	2.30	0.61
2:B:2144:G:O2'	2:B:2145:C:H5'	2.00	0.61
2:B:1447:C:H2'	2:B:1448:G:C8	2.33	0.61
6:K:60:ALA:HA	6:K:87:LEU:HD23	1.82	0.61
2:B:1505:A:H2'	2:B:1506:U:C6	2.35	0.61
2:B:1716:U:H2'	2:B:1717:A:H8	1.66	0.61
23:Q:54:ARG:HB3	23:Q:58:GLN:NE2	2.12	0.61
5:D:106:LYS:O	5:D:107:VAL:HB	2.00	0.61
8:E:126:VAL:HG22	8:E:133:LEU:HD12	1.82	0.61
2:B:582:A:H2'	2:B:583:G:H8	1.65	0.61
24:S:17:VAL:HG13	24:S:43:ALA:HB1	1.82	0.61
2:B:1164:C:H2'	2:B:1165:A:H8	1.64	0.61
4:C:221:GLY:C	4:C:223:ALA:H	2.04	0.61
2:B:2137:U:O2'	2:B:2138:G:H5'	2.00	0.61
4:C:16:VAL:N	4:C:203:VAL:HG12	2.15	0.61
32:6:52:LEU:O	32:6:55:ILE:HG22	2.00	0.61
5:D:28:GLU:HG3	5:D:185:ASN:O	2.00	0.61
12:1:26:LYS:HD3	12:1:52:LYS:HB3	1.83	0.61
2:B:323:C:H2'	8:E:163:ASN:OD1	2.01	0.61
2:B:126:A:H5'	15:2:19:ARG:CG	2.29	0.61
19:H:115:VAL:HG22	19:H:117:LEU:H	1.64	0.61
2:B:543:G:H21	2:B:545:U:H5'	1.66	0.61
23:Q:30:VAL:HG22	23:Q:31:TYR:H	1.64	0.61
2:B:2472:G:H2'	2:B:2475:C:H42	1.65	0.61
2:B:79:C:HO2'	2:B:346:A:C1'	2.13	0.61
2:B:592:A:H2'	2:B:593:U:C6	2.35	0.61
2:B:1164:C:H2'	2:B:1165:A:C8	2.36	0.61
23:Q:83:LYS:NZ	23:Q:83:LYS:HA	2.16	0.61
32:6:70:SER:HB3	32:6:76:LEU:HD12	1.81	0.61
2:B:1222:U:P	28:R:90:ARG:HH22	2.23	0.61
2:B:1149:G:H2'	2:B:1150:C:C6	2.36	0.61
2:B:1636:U:H2'	2:B:1637:A:H8	1.65	0.61
5:D:68:PHE:C	5:D:73:VAL:HB	2.19	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:32:VAL:HG22	3:I:60:VAL:HG21	1.83	0.61
20:J:128:ASN:C	20:J:129:GLU:HG3	2.21	0.61
2:B:1175:A:H2'	2:B:1175:A:N3	2.13	0.61
6:K:115:ILE:HG23	6:K:116:ILE:N	2.16	0.61
2:B:873:C:H2'	2:B:874:G:C8	2.36	0.61
2:B:417:C:H2'	2:B:418:C:C6	2.36	0.61
2:B:1400:U:H2'	2:B:1401:G:C8	2.35	0.61
32:6:156:ARG:O	32:6:159:ALA:HB3	2.00	0.61
19:H:24:GLY:O	19:H:28:ASN:HB2	2.01	0.61
2:B:2229:U:H2'	2:B:2230:G:H8	1.66	0.61
8:E:46:GLN:HB2	8:E:87:ALA:O	1.99	0.61
2:B:2149:U:H2'	2:B:2150:C:C6	2.36	0.61
2:B:2810:A:H2'	2:B:2811:G:O4'	1.99	0.61
2:B:654:A:C2'	2:B:655:A:H5''	2.31	0.61
2:B:1240:U:O2'	2:B:1241:A:H5''	2.01	0.61
23:Q:65:ASN:HB2	23:Q:75:TYR:HB2	1.81	0.61
31:W:23:LYS:NZ	31:W:24:ARG:HG3	2.16	0.61
8:E:102:ARG:HD3	8:E:201:ALA:H	1.66	0.61
2:B:1405:U:H2'	2:B:1406:U:C6	2.36	0.61
10:0:38:LEU:HD13	10:0:41:HIS:NE2	2.16	0.61
2:B:144:A:H2'	2:B:145:C:C6	2.35	0.61
32:6:7:TYR:CZ	32:6:160:GLU:HG2	2.36	0.61
2:B:570:G:H2'	2:B:2030:A:N7	2.16	0.61
6:K:71:ARG:HB3	6:K:72:PRO:CD	2.26	0.61
21:N:37:THR:HB	21:N:40:LYS:HG3	1.82	0.61
28:R:31:GLU:H	28:R:63:VAL:CG2	2.12	0.61
2:B:627:A:H62	16:L:112:LEU:HD23	1.65	0.61
2:B:1812:U:H2'	2:B:1813:G:C8	2.36	0.61
17:M:58:LYS:N	17:M:58:LYS:HD2	2.16	0.61
2:B:1947:C:H2'	2:B:1948:G:H8	1.66	0.61
5:D:154:LYS:H	5:D:154:LYS:HD3	1.65	0.61
25:U:24:VAL:HA	25:U:35:VAL:HA	1.83	0.61
32:6:30:THR:C	32:6:32:ARG:N	2.54	0.61
24:S:18:ARG:HB3	24:S:76:VAL:CG2	2.31	0.61
2:B:878:A:H5'	2:B:900:A:H61	1.65	0.61
27:G:15:ASP:HB3	27:G:26:LYS:N	2.13	0.61
2:B:139:U:C2	29:T:1:MET:HB3	2.36	0.61
28:R:49:ILE:HD13	28:R:51:VAL:O	2.01	0.61
30:Z:70:GLU:O	30:Z:72:ARG:N	2.33	0.61
29:T:25:GLU:OE1	29:T:30:ILE:HA	2.01	0.61
2:B:2728:U:H2'	2:B:2729:G:C8	2.36	0.61
2:B:2415:G:C4'	16:L:66:PHE:HB2	2.31	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1387:A:H2'	2:B:1388:G:C8	2.36	0.61
2:B:184:C:H2'	2:B:185:G:H8	1.66	0.61
1:A:5:U:H2'	1:A:6:G:H8	1.66	0.61
2:B:1125:G:C5'	11:4:37:GLN:HE21	2.14	0.60
29:T:68:LYS:O	29:T:69:ARG:HB2	1.98	0.60
6:K:41:ILE:HG13	6:K:42:THR:H	1.65	0.60
13:3:49:VAL:CG2	13:3:54:LEU:HD13	2.31	0.60
2:B:1657:U:H4'	5:D:138:LEU:HB3	1.83	0.60
5:D:113:SER:CB	5:D:168:GLU:H	2.13	0.60
2:B:506:G:H1'	2:B:507:A:C8	2.36	0.60
2:B:1381:G:H2'	2:B:1382:G:H5'	1.83	0.60
2:B:1599:U:H2'	2:B:1600:C:C6	2.34	0.60
5:D:79:LEU:HD22	5:D:79:LEU:N	2.16	0.60
20:J:72:LYS:HG3	20:J:89:PHE:HB2	1.83	0.60
2:B:828:U:H4'	2:B:831:G:N1	2.16	0.60
2:B:1100:C:H2'	2:B:1101:U:H6	1.65	0.60
14:V:1:MET:CE	14:V:2:PHE:H	2.13	0.60
20:J:64:VAL:HG22	20:J:68:LYS:HD2	1.82	0.60
2:B:1442:U:H2'	2:B:1443:U:C6	2.35	0.60
21:N:72:ASP:O	21:N:75:ILE:HG13	2.01	0.60
2:B:2814:A:H2'	2:B:2815:C:H6	1.66	0.60
17:M:37:GLY:HA3	17:M:127:LYS:HZ2	1.63	0.60
32:6:134:ARG:HH22	32:6:135:GLU:HG2	1.66	0.60
5:D:124:ARG:HA	5:D:165:MET:CE	2.31	0.60
25:U:60:LYS:HE2	25:U:60:LYS:HA	1.83	0.60
6:K:7:MET:SD	6:K:20:MET:HB2	2.40	0.60
2:B:477:A:H2'	2:B:478:A:C8	2.36	0.60
6:K:72:PRO:O	6:K:74:GLY:N	2.34	0.60
31:W:23:LYS:O	31:W:66:VAL:HB	2.00	0.60
6:K:118:LEU:O	6:K:120:PRO:HD2	2.00	0.60
1:A:42:C:C5	26:F:65:LEU:HD22	2.36	0.60
18:X:24:GLU:O	18:X:28:LEU:HG	2.01	0.60
14:V:44:HIS:CE1	14:V:85:LYS:HB2	2.36	0.60
23:Q:108:LEU:HA	28:R:48:LYS:HD3	1.82	0.60
2:B:30:G:H4'	2:B:1215:G:H5'	1.84	0.60
6:K:99:ILE:HG12	6:K:115:ILE:HG13	1.82	0.60
4:C:77:VAL:HG23	4:C:112:GLY:N	2.16	0.60
2:B:968:C:H2'	2:B:969:G:C8	2.36	0.60
2:B:1866:A:H2'	2:B:1867:G:O4'	2.01	0.60
32:6:73:GLN:HG3	32:6:74:ASN:H	1.67	0.60
2:B:1889:A:H2'	2:B:1890:A:C8	2.35	0.60
2:B:2819:G:H2'	2:B:2821:A:N7	2.15	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1433:A:H2'	2:B:1434:A:O4'	2.01	0.60
4:C:245:THR:O	4:C:247:TRP:N	2.35	0.60
32:6:35:PRO:HB2	32:6:58:VAL:O	2.01	0.60
2:B:2386:A:C2	31:W:38:ARG:HB3	2.35	0.60
5:D:31:ALA:HA	5:D:97:SER:HA	1.83	0.60
23:Q:91:ARG:CZ	28:R:11:GLN:H	2.15	0.60
15:2:22:MET:SD	15:2:28:ARG:HG2	2.42	0.60
6:K:99:ILE:H	6:K:118:LEU:HD23	1.65	0.60
5:D:133:THR:HG23	5:D:134:HIS:N	2.16	0.60
2:B:2788:C:H2'	2:B:2789:C:C6	2.36	0.60
2:B:443:A:H1'	2:B:1201:U:O4'	2.02	0.60
2:B:2253:G:H22	32:6:151:GLU:CD	2.03	0.60
32:6:45:TYR:CZ	32:6:75:ALA:HB2	2.36	0.60
31:W:51:GLY:HA3	31:W:59:PHE:HB2	1.84	0.60
28:R:58:VAL:HG22	28:R:59:ILE:H	1.67	0.60
2:B:558:U:O3'	20:J:111:LYS:HE2	2.01	0.60
27:G:84:LYS:HG3	27:G:132:LEU:N	2.16	0.60
8:E:149:ILE:HG23	8:E:188:MET:HA	1.83	0.60
6:K:70:ARG:HB3	6:K:76:VAL:HG22	1.84	0.60
2:B:2283:C:H5''	2:B:2389:G:O2'	2.02	0.60
9:Y:12:ALA:HA	9:Y:15:ARG:HD3	1.82	0.60
15:2:3:ARG:HA	15:2:3:ARG:NE	2.15	0.60
2:B:878:A:H1'	2:B:899:A:N6	2.17	0.60
1:A:75:G:H1'	14:V:29:ILE:HG12	1.83	0.60
24:S:33:LEU:HG	24:S:51:LEU:HD23	1.83	0.60
28:R:2:TYR:CB	28:R:42:ALA:HB2	2.32	0.60
27:G:10:VAL:O	27:G:10:VAL:HG12	2.00	0.60
2:B:1853:A:N1	2:B:2087:G:H1'	2.16	0.60
2:B:1395:A:H4'	2:B:1397:U:C5	2.37	0.60
2:B:1098:A:H3'	3:I:3:LYS:CB	2.30	0.60
31:W:39:GLN:HG3	31:W:42:THR:HB	1.82	0.60
2:B:141:G:O6	29:T:2:ILE:HD12	2.01	0.60
12:1:8:ILE:CD1	12:1:51:ALA:HA	2.31	0.60
18:X:3:ALA:O	18:X:6:LEU:HB2	2.02	0.60
2:B:2292:U:H2'	2:B:2293:G:C8	2.37	0.60
4:C:16:VAL:H	4:C:203:VAL:HG12	1.67	0.60
25:U:41:VAL:HG22	25:U:60:LYS:O	2.02	0.60
4:C:123:ILE:HD13	4:C:135:PRO:HG2	1.83	0.60
2:B:1098:A:P	3:I:3:LYS:HG2	2.41	0.60
26:F:110:ILE:CG2	26:F:113:PHE:HB3	2.31	0.60
2:B:2514:U:H2'	2:B:2515:C:C6	2.37	0.60
20:J:19:ASP:HA	20:J:57:LEU:HB3	1.82	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:J:59:ALA:C	20:J:61:LYS:H	2.05	0.60
2:B:1324:G:H1'	2:B:1616:A:C6	2.37	0.60
17:M:17:ASN:HD21	17:M:95:LEU:HG	1.65	0.60
10:O:43:THR:HG23	10:O:47:TYR:O	2.01	0.60
2:B:1139:G:O2'	2:B:1140:C:H5'	2.02	0.60
2:B:967:U:H2'	2:B:968:C:C6	2.37	0.60
2:B:1505:A:H2'	2:B:1506:U:H6	1.67	0.60
32:6:154:THR:O	32:6:157:ALA:HB3	2.02	0.60
2:B:2332:C:H1'	2:B:2336:A:N7	2.16	0.60
2:B:1219:U:H2'	2:B:1220:G:C8	2.36	0.60
24:S:72:THR:HG21	24:S:108:SER:HB3	1.84	0.60
19:H:113:SER:H	19:H:132:PHE:HE1	1.48	0.60
2:B:37:C:O2'	8:E:45:ALA:HA	2.02	0.60
17:M:50:ARG:O	17:M:53:MET:HB3	2.01	0.60
22:O:68:LYS:H	22:O:102:ARG:HD2	1.67	0.60
16:L:56:PRO:O	16:L:59:ARG:HB2	2.01	0.60
2:B:144:A:H2'	2:B:145:C:H6	1.67	0.60
2:B:854:C:O2'	2:B:855:G:H5'	2.01	0.59
23:Q:57:ARG:HH22	23:Q:92:LYS:HE2	1.67	0.59
9:Y:6:ILE:N	9:Y:6:ILE:HD13	2.17	0.59
2:B:2875:C:H2'	2:B:2876:G:C8	2.36	0.59
2:B:1788:C:O2'	2:B:1789:A:H5'	2.02	0.59
2:B:2400:G:O2'	2:B:2401:U:H5'	2.02	0.59
2:B:526:A:N6	2:B:2626:C:H4'	2.17	0.59
28:R:4:VAL:HG23	28:R:39:LEU:H	1.66	0.59
29:T:40:LYS:HG2	29:T:60:THR:HG23	1.84	0.59
11:4:19:ARG:C	11:4:21:GLY:H	2.06	0.59
3:I:112:LYS:O	3:I:116:MET:HG3	2.02	0.59
23:Q:4:LYS:NZ	23:Q:7:VAL:HG22	2.16	0.59
23:Q:9:ALA:C	23:Q:11:ALA:H	2.05	0.59
7:P:89:GLY:HA2	7:P:111:GLU:C	2.23	0.59
11:4:25:VAL:O	11:4:26:ILE:HD13	2.02	0.59
3:I:125:THR:O	3:I:129:GLU:HG3	2.02	0.59
2:B:496:G:H1'	24:S:61:ASN:ND2	2.17	0.59
2:B:285:G:H2'	2:B:286:U:O4'	2.03	0.59
5:D:25:THR:HG21	5:D:193:VAL:CG2	2.32	0.59
9:Y:37:ARG:HA	9:Y:37:ARG:HE	1.68	0.59
2:B:2292:U:H2'	2:B:2293:G:H8	1.67	0.59
2:B:1842:G:H2'	2:B:1843:C:C6	2.37	0.59
13:3:24:LYS:NZ	13:3:28:LEU:HB3	2.17	0.59
2:B:664:G:H2'	2:B:665:U:H6	1.67	0.59
32:6:18:LEU:O	32:6:21:LEU:HB3	2.01	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:18:GLN:HE21	19:H:39:ALA:HB1	1.67	0.59
29:T:81:LYS:HG3	29:T:82:LYS:H	1.67	0.59
9:Y:6:ILE:H	9:Y:6:ILE:HD13	1.66	0.59
32:6:134:ARG:NH2	32:6:135:GLU:HG2	2.16	0.59
2:B:2340:A:H2'	2:B:2341:G:C8	2.37	0.59
4:C:64:VAL:O	4:C:65:ASP:HB3	2.02	0.59
32:6:126:ARG:O	32:6:130:ARG:HG3	2.02	0.59
15:2:3:ARG:HA	15:2:3:ARG:CZ	2.32	0.59
10:0:12:ARG:HD2	10:0:16:ARG:NH1	2.17	0.59
25:U:42:LYS:HG3	25:U:57:ILE:HG21	1.82	0.59
2:B:564:C:H1'	23:Q:36:GLN:OE1	2.01	0.59
26:F:169:LEU:HB3	26:F:174:PHE:CD1	2.38	0.59
2:B:2328:A:H2'	2:B:2329:U:C6	2.37	0.59
14:V:29:ILE:HG13	14:V:88:HIS:HE1	1.65	0.59
7:P:50:ARG:HB2	7:P:56:SER:CB	2.30	0.59
4:C:70:LYS:NZ	4:C:99:GLU:HB3	2.18	0.59
2:B:1018:U:O2'	2:B:1019:U:H5'	2.03	0.59
2:B:1082:U:O4	2:B:1086:A:C2	2.56	0.59
19:H:118:PRO:O	19:H:119:ASN:HB3	2.02	0.59
2:B:1726:C:H2'	2:B:1727:C:C6	2.37	0.59
2:B:1758:U:O4	2:B:2695:U:H4'	2.02	0.59
26:F:92:GLY:HA2	26:F:95:MET:HE3	1.83	0.59
2:B:141:G:C6	29:T:2:ILE:HG21	2.38	0.59
20:J:43:GLU:O	20:J:45:THR:N	2.34	0.59
2:B:559:G:H21	23:Q:51:GLN:HE22	1.49	0.59
2:B:2179:C:C2'	2:B:2179:C:O2	2.51	0.59
7:P:88:ARG:HB2	7:P:112:ARG:NH1	2.18	0.59
2:B:370:G:O2'	2:B:423:A:H3'	2.03	0.59
8:E:30:GLN:HG2	8:E:30:GLN:O	2.02	0.59
2:B:664:G:H2'	2:B:665:U:C6	2.37	0.59
2:B:401:A:H2'	2:B:402:A:C8	2.37	0.59
2:B:1718:G:H2'	2:B:1719:G:H8	1.67	0.59
2:B:1652:A:OP1	21:N:8:ARG:HD3	2.03	0.59
16:L:95:LEU:HB2	16:L:101:ILE:HG13	1.83	0.59
24:S:7:HIS:HB3	24:S:103:ILE:HB	1.85	0.59
31:W:47:GLY:HA3	31:W:80:SER:HB3	1.84	0.59
8:E:134:LEU:HD21	8:E:161:ALA:HB2	1.83	0.59
27:G:38:ASP:CG	27:G:39:ALA:H	2.06	0.59
2:B:189:G:H2'	2:B:205:G:N2	2.16	0.59
2:B:6:A:H2'	2:B:7:G:H8	1.68	0.59
2:B:863:A:H2'	2:B:864:G:H8	1.67	0.59
2:B:1339:G:N2	2:B:1603:A:H1'	2.17	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:639:U:H2'	2:B:640:C:C6	2.37	0.59
2:B:1099:G:C8	3:I:3:LYS:HB2	2.37	0.59
14:V:80:HIS:HB3	14:V:83:LYS:O	2.03	0.59
27:G:6:ALA:HB3	27:G:68:ARG:HG3	1.85	0.59
9:Y:16:LEU:CD2	9:Y:16:LEU:H	2.12	0.59
19:H:119:ASN:OD1	19:H:121:VAL:HG13	2.03	0.59
2:B:581:C:H2'	2:B:582:A:H8	1.67	0.59
2:B:1043:C:H2'	2:B:1044:C:O4'	2.02	0.59
2:B:1387:A:C4'	2:B:1469:A:H1'	2.33	0.59
2:B:928:A:O2'	9:Y:37:ARG:HD3	2.03	0.59
2:B:904:G:H2'	2:B:905:A:C8	2.37	0.59
2:B:636:G:H3'	16:L:128:THR:HG21	1.83	0.59
25:U:98:ASN:OD1	25:U:100:GLU:HB2	2.02	0.59
7:P:31:VAL:O	7:P:32:VAL:HB	2.02	0.59
29:T:50:LEU:H	29:T:50:LEU:HD22	1.68	0.59
2:B:30:G:H2'	2:B:31:C:H6	1.67	0.59
23:Q:26:ALA:HB1	23:Q:30:VAL:HB	1.84	0.59
9:Y:8:GLN:HG2	9:Y:31:ILE:HA	1.84	0.59
2:B:1015:U:H2'	2:B:1016:G:C8	2.38	0.59
4:C:66:PHE:HB2	4:C:150:GLY:O	2.02	0.59
2:B:950:G:H2'	2:B:951:C:C6	2.38	0.59
22:O:15:ARG:HH21	22:O:95:SER:CB	2.15	0.59
23:Q:109:VAL:HG12	23:Q:113:LYS:HE3	1.83	0.59
2:B:2512:C:H2'	2:B:2513:A:O4'	2.02	0.59
2:B:575:A:O2'	2:B:576:U:H5'	2.02	0.59
25:U:85:ARG:NE	25:U:85:ARG:HA	2.16	0.59
26:F:7:TYR:HA	26:F:11:VAL:CG2	2.32	0.59
2:B:321:U:H1'	8:E:162:ARG:NH1	2.18	0.59
2:B:2019:A:H2	2:B:2035:G:H22	1.48	0.59
2:B:1654:A:H2'	2:B:1655:A:C8	2.38	0.59
2:B:1656:C:H2'	2:B:1657:U:H6	1.67	0.59
2:B:1826:G:H2'	2:B:1827:U:C6	2.37	0.59
2:B:2016:U:H1'	10:O:2:VAL:HG11	1.85	0.59
7:P:31:VAL:HG12	7:P:38:ARG:O	2.02	0.59
4:C:173:LEU:H	4:C:173:LEU:HD13	1.67	0.59
2:B:315:G:H2'	2:B:316:C:C6	2.38	0.59
16:L:93:ASN:O	16:L:95:LEU:N	2.36	0.59
26:F:102:LEU:HD13	26:F:102:LEU:C	2.23	0.59
20:J:30:THR:HG23	20:J:31:GLU:H	1.68	0.59
20:J:64:VAL:O	20:J:68:LYS:HD2	2.03	0.59
2:B:1871:A:H2'	2:B:1872:A:C8	2.38	0.59
2:B:2070:A:H2'	2:B:2071:A:C8	2.37	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1716:U:H2'	2:B:1717:A:C8	2.38	0.59
2:B:599:A:O2'	2:B:600:G:H5'	2.03	0.59
2:B:587:C:N3	16:L:33:ARG:NH2	2.50	0.59
29:T:2:ILE:HD13	29:T:2:ILE:N	2.18	0.58
20:J:38:GLY:O	20:J:43:GLU:HB2	2.03	0.58
20:J:44:TYR:O	20:J:45:THR:HB	2.03	0.58
2:B:2228:G:H2'	2:B:2229:U:C6	2.37	0.58
17:M:19:GLY:N	17:M:38:ARG:HH22	2.01	0.58
2:B:2144:G:C2	2:B:2146:C:H5'	2.38	0.58
2:B:783:A:H8	2:B:784:G:H4'	1.67	0.58
27:G:10:VAL:HG21	27:G:47:ASN:O	2.03	0.58
2:B:419:U:H2'	2:B:420:C:C6	2.38	0.58
8:E:175:ILE:HD11	8:E:180:LEU:HD11	1.85	0.58
21:N:12:ARG:HG3	21:N:13:ASN:H	1.67	0.58
7:P:24:THR:O	7:P:25:VAL:HG22	2.03	0.58
2:B:1491:G:H5'	4:C:97:ASP:OD1	2.03	0.58
5:D:141:ARG:HG3	5:D:141:ARG:O	2.03	0.58
10:O:8:THR:HG23	10:O:11:LYS:H	1.67	0.58
2:B:2027:G:O2'	2:B:2028:U:H5'	2.03	0.58
26:F:64:PRO:HA	26:F:88:VAL:CG2	2.33	0.58
2:B:2572:A:OP2	5:D:151:THR:HB	2.03	0.58
2:B:848:C:H2'	2:B:849:A:C8	2.37	0.58
2:B:2353:G:N3	31:W:30:VAL:HG13	2.18	0.58
2:B:135:U:H2'	2:B:136:G:H8	1.65	0.58
4:C:94:LEU:HD13	4:C:100:ARG:HD2	1.85	0.58
28:R:63:VAL:HA	28:R:95:ASP:O	2.03	0.58
2:B:2881:U:H2'	2:B:2882:A:O4'	2.02	0.58
23:Q:10:ARG:CZ	23:Q:10:ARG:HB2	2.31	0.58
2:B:1317:G:H2'	2:B:1318:U:O4'	2.03	0.58
2:B:2187:U:H2'	2:B:2188:U:C5	2.39	0.58
2:B:2772:C:H2'	2:B:2773:C:H6	1.68	0.58
26:F:134:GLN:NE2	26:F:136:ILE:HD13	2.18	0.58
32:6:33:ALA:HA	32:6:103:ILE:CD1	2.23	0.58
25:U:21:ARG:HD3	25:U:72:PHE:CG	2.38	0.58
6:K:19:VAL:HB	6:K:41:ILE:HD11	1.85	0.58
25:U:65:GLN:HB2	25:U:68:ASN:HD22	1.68	0.58
8:E:109:LEU:HD13	8:E:180:LEU:HD13	1.85	0.58
2:B:5:A:H2'	2:B:6:A:H8	1.69	0.58
2:B:2028:U:H2'	2:B:2029:G:C8	2.38	0.58
5:D:33:ARG:NE	5:D:74:GLU:HB3	2.17	0.58
2:B:987:C:H2'	2:B:988:A:O4'	2.04	0.58
2:B:632:A:H2'	2:B:633:A:C8	2.38	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:5:ALA:HB3	24:S:54:ALA:HB2	1.83	0.58
32:6:110:ARG:O	32:6:114:LEU:HD13	2.04	0.58
3:I:2:LYS:NZ	3:I:2:LYS:HB3	2.19	0.58
2:B:857:G:O2'	2:B:858:G:H5'	2.03	0.58
2:B:161:A:C3'	2:B:162:U:H5''	2.29	0.58
2:B:2899:A:H2'	2:B:2900:A:C8	2.37	0.58
2:B:2834:G:H1'	2:B:2883:A:H61	1.68	0.58
32:6:44:GLU:HG2	32:6:49:HIS:CE1	2.38	0.58
2:B:2602:A:H3'	2:B:2602:A:OP1	2.03	0.58
2:B:2872:A:O2'	2:B:2873:A:H5''	2.03	0.58
2:B:693:A:H2'	2:B:694:U:C6	2.38	0.58
32:6:115:VAL:HG13	32:6:180:GLU:HG2	1.84	0.58
2:B:1001:A:H2'	2:B:1002:G:O4'	2.04	0.58
19:H:27:ARG:H	19:H:31:VAL:CG2	2.16	0.58
27:G:120:ILE:HG13	27:G:140:ILE:HG22	1.85	0.58
2:B:1085:A:H1'	2:B:1105:U:H1'	1.86	0.58
2:B:1438:U:H2'	2:B:1439:A:O4'	2.04	0.58
3:I:108:ILE:HG22	3:I:128:ILE:HD13	1.85	0.58
2:B:2153:C:H2'	2:B:2154:A:H8	1.67	0.58
2:B:2732:G:H5'	2:B:2733:A:O4'	2.02	0.58
11:4:15:LYS:O	11:4:16:ILE:CB	2.50	0.58
2:B:1594:U:H2'	2:B:1595:C:C6	2.39	0.58
23:Q:79:ILE:O	23:Q:79:ILE:HD13	2.03	0.58
32:6:60:ALA:HA	32:6:66:LEU:HD12	1.85	0.58
2:B:704:G:H2'	2:B:726:G:N2	2.12	0.58
2:B:1082:U:C2	2:B:1086:A:C6	2.91	0.58
19:H:124:THR:HG23	19:H:128:HIS:CE1	2.39	0.58
19:H:96:THR:HG23	19:H:97:ARG:N	2.18	0.58
6:K:116:ILE:HD12	6:K:117:SER:N	2.18	0.58
23:Q:79:ILE:HA	23:Q:82:LEU:HD12	1.84	0.58
26:F:71:LYS:O	26:F:72:SER:HB3	2.02	0.58
2:B:2860:A:O5'	2:B:2860:A:H8	1.87	0.58
2:B:2283:C:H2'	2:B:2284:A:H5'	1.85	0.58
2:B:145:C:H2'	2:B:146:A:H8	1.68	0.58
32:6:73:GLN:HG3	32:6:74:ASN:N	2.18	0.58
2:B:1219:U:H2'	2:B:1220:G:H8	1.69	0.58
2:B:383:C:H5''	2:B:385:C:OP2	2.03	0.58
27:G:9:VAL:HG12	27:G:11:PRO:HD3	1.85	0.58
19:H:31:VAL:O	19:H:33:GLN:N	2.36	0.58
31:W:28:GLU:HG3	31:W:29:SER:H	1.69	0.58
30:Z:71:LEU:O	30:Z:74:ARG:HG2	2.03	0.58
19:H:77:THR:HA	19:H:143:ILE:O	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:G:37:ASN:HD21	27:G:40:VAL:CB	2.16	0.58
2:B:958:U:N3	17:M:16:ARG:HB3	2.17	0.58
27:G:46:ASP:CG	27:G:47:ASN:H	2.07	0.58
22:O:47:VAL:HG12	22:O:48:LEU:N	2.18	0.58
2:B:594:U:H2'	2:B:595:C:H6	1.68	0.58
4:C:104:LEU:HD12	4:C:104:LEU:H	1.68	0.58
21:N:12:ARG:HG2	21:N:16:HIS:ND1	2.19	0.58
13:3:41:ARG:HG3	13:3:44:ARG:HH22	1.68	0.58
2:B:1295:C:H2'	2:B:1296:G:C8	2.38	0.58
32:6:143:LEU:O	32:6:147:LEU:HG	2.04	0.58
2:B:2699:C:H2'	2:B:2700:A:H8	1.69	0.58
2:B:2843:G:O2'	2:B:2844:G:H5'	2.04	0.58
26:F:109:ARG:HB3	26:F:135:ILE:CD1	2.30	0.58
32:6:32:ARG:HB2	32:6:103:ILE:CG2	2.33	0.58
31:W:23:LYS:HD2	31:W:24:ARG:N	2.18	0.58
31:W:59:PHE:CD2	31:W:61:LYS:HD2	2.39	0.58
2:B:705:A:N6	2:B:726:G:H1'	2.19	0.58
25:U:11:ILE:HD13	25:U:11:ILE:O	2.04	0.58
23:Q:96:ASP:C	23:Q:98:ALA:H	2.07	0.58
32:6:25:LEU:CD2	32:6:118:VAL:HG13	2.33	0.58
2:B:1386:C:H2'	2:B:1387:A:C8	2.39	0.58
2:B:864:G:O2'	2:B:865:C:H5'	2.04	0.58
11:4:13:ASN:O	11:4:27:CYS:HA	2.04	0.58
30:Z:11:ARG:HB3	30:Z:12:PRO:HD2	1.86	0.58
2:B:2825:G:H2'	2:B:2826:A:H5'	1.86	0.58
2:B:374:A:N6	2:B:400:G:H1'	2.17	0.58
23:Q:60:TRP:O	23:Q:64:ILE:HG12	2.03	0.58
12:1:6:GLU:HB2	12:1:52:LYS:NZ	2.19	0.58
3:I:71:LYS:HB3	3:I:115:ASP:OD2	2.04	0.58
2:B:1508:A:H3'	2:B:1509:A:C4	2.38	0.58
2:B:2700:A:H2'	2:B:2701:U:H6	1.69	0.58
2:B:2605:U:H2'	2:B:2606:C:C6	2.39	0.58
2:B:1390:U:O2'	2:B:1391:U:H5'	2.04	0.58
27:G:58:ALA:C	27:G:60:GLY:H	2.07	0.58
2:B:1365:A:OP2	30:Z:3:ARG:HB2	2.03	0.58
2:B:1099:G:O5'	3:I:4:VAL:HG12	2.04	0.58
5:D:108:ASP:OD2	5:D:173:GLN:HA	2.04	0.58
2:B:547:A:N1	2:B:548:G:H1'	2.19	0.58
28:R:69:GLY:O	28:R:90:ARG:HG2	2.03	0.58
31:W:13:ARG:HG3	31:W:14:ASP:H	1.69	0.58
2:B:2633:G:H2'	2:B:2634:A:O4'	2.03	0.58
2:B:245:G:H2'	2:B:246:C:H6	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1485:U:H2'	2:B:1486:U:C6	2.39	0.58
26:F:101:ARG:NH2	26:F:138:PRO:HB2	2.18	0.57
26:F:104:THR:C	26:F:108:PRO:HG2	2.24	0.57
32:6:90:LEU:HB3	32:6:101:ILE:HG21	1.85	0.57
2:B:921:C:H2'	2:B:922:C:C6	2.39	0.57
23:Q:86:SER:CB	28:R:51:VAL:HA	2.34	0.57
29:T:57:VAL:HG12	29:T:86:THR:OG1	2.04	0.57
4:C:75:ALA:HB1	4:C:93:VAL:HG22	1.86	0.57
5:D:107:VAL:H	5:D:205:PRO:HA	1.69	0.57
2:B:2579:C:H1'	5:D:130:GLN:NE2	2.18	0.57
2:B:1915:U:H2'	2:B:1916:A:C8	2.39	0.57
2:B:716:A:H2'	2:B:717:C:H5''	1.86	0.57
2:B:494:G:OP1	24:S:8:ARG:HD3	2.04	0.57
2:B:2693:G:H2'	2:B:2694:G:H8	1.67	0.57
2:B:2190:G:H2'	2:B:2191:A:O4'	2.04	0.57
2:B:2257:U:O2'	2:B:2258:C:H5'	2.04	0.57
2:B:1939:U:O2	2:B:1967:C:H4'	2.03	0.57
2:B:1893:C:H2'	2:B:1894:C:O4'	2.04	0.57
20:J:88:THR:HG22	20:J:91:GLU:HG3	1.86	0.57
2:B:2007:U:O2'	2:B:2008:C:H5'	2.04	0.57
2:B:2868:A:H2'	2:B:2869:G:C8	2.39	0.57
16:L:131:ALA:HA	16:L:134:ALA:HB3	1.85	0.57
32:6:38:LEU:HD11	32:6:66:LEU:HD23	1.85	0.57
8:E:5:LEU:HG	8:E:12:LEU:HD22	1.86	0.57
2:B:877:A:H2'	2:B:900:A:N6	2.20	0.57
14:V:1:MET:HE3	14:V:2:PHE:H	1.68	0.57
14:V:63:ILE:O	14:V:70:ILE:HD12	2.03	0.57
26:F:163:GLU:HA	26:F:166:ARG:HH11	1.68	0.57
4:C:159:THR:O	4:C:194:VAL:HG12	2.04	0.57
3:I:121:ILE:CD1	3:I:121:ILE:H	2.14	0.57
2:B:1230:A:H2'	2:B:1231:U:H6	1.67	0.57
2:B:2722:G:H2'	2:B:2723:C:H6	1.67	0.57
2:B:277:G:H4'	2:B:278:A:N7	2.19	0.57
2:B:172:A:H2'	2:B:173:A:H8	1.67	0.57
16:L:23:ILE:HD12	28:R:84:ARG:NE	2.19	0.57
2:B:1720:U:O2'	2:B:1721:G:H5'	2.04	0.57
2:B:2491:U:H5''	2:B:2570:G:H5''	1.87	0.57
16:L:119:PRO:HA	16:L:138:ALA:O	2.04	0.57
20:J:45:THR:N	20:J:46:PRO:HD3	2.19	0.57
4:C:94:LEU:HA	4:C:100:ARG:HA	1.86	0.57
3:I:45:THR:CA	3:I:48:ILE:HG22	2.33	0.57
2:B:2885:G:H2'	2:B:2886:A:O4'	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:364:C:H2'	2:B:365:U:H6	1.69	0.57
4:C:244:VAL:HB	4:C:249:VAL:H	1.69	0.57
3:I:37:PHE:CZ	3:I:58:ILE:HD11	2.39	0.57
2:B:1354:A:H2'	2:B:1355:G:O4'	2.03	0.57
2:B:1098:A:C3'	3:I:4:VAL:N	2.67	0.57
2:B:1098:A:O5'	3:I:3:LYS:HG2	2.04	0.57
25:U:11:ILE:CG2	25:U:70:ALA:HB3	2.33	0.57
7:P:77:SER:OG	7:P:79:VAL:HG22	2.04	0.57
2:B:106:C:H2'	2:B:107:G:C8	2.37	0.57
2:B:2590:A:H2'	2:B:2591:C:C6	2.39	0.57
2:B:1593:A:H2'	2:B:1594:U:H6	1.70	0.57
2:B:2680:U:OP2	5:D:114:LYS:HD3	2.04	0.57
28:R:19:THR:HB	28:R:96:VAL:O	2.05	0.57
5:D:141:ARG:O	5:D:142:VAL:HG13	2.03	0.57
25:U:8:ASP:O	25:U:23:LYS:HA	2.05	0.57
8:E:37:ALA:C	8:E:39:ALA:H	2.07	0.57
2:B:982:C:O2	2:B:982:C:H5'	2.03	0.57
3:I:1:ALA:C	3:I:2:LYS:HD2	2.25	0.57
27:G:24:THR:HG22	27:G:34:ARG:HB3	1.87	0.57
25:U:9:GLU:HG3	25:U:21:ARG:HD2	1.86	0.57
8:E:194:LYS:O	8:E:197:GLU:HB3	2.03	0.57
30:Z:35:SER:CA	30:Z:50:ARG:HA	2.32	0.57
19:H:119:ASN:HD21	19:H:121:VAL:CG1	2.18	0.57
29:T:15:HIS:O	29:T:16:VAL:C	2.42	0.57
2:B:1278:C:O3'	21:N:34:ILE:HG23	2.05	0.57
2:B:2704:C:H2'	2:B:2705:A:O4'	2.05	0.57
4:C:119:VAL:HG13	4:C:133:ASN:HD21	1.69	0.57
20:J:63:ALA:HA	20:J:69:ARG:HH12	1.70	0.57
2:B:1623:G:O2'	2:B:1624:U:H5'	2.04	0.57
2:B:2369:A:O2'	2:B:2370:G:H5'	2.04	0.57
31:W:23:LYS:C	31:W:66:VAL:HB	2.25	0.57
24:S:36:LEU:CD2	24:S:36:LEU:H	2.15	0.57
2:B:1060:U:H5	3:I:131:THR:HG22	1.69	0.57
2:B:1028:A:N6	2:B:1125:G:H2'	2.20	0.57
2:B:1276:A:O2'	2:B:1277:G:H5'	2.04	0.57
2:B:1657:U:O2'	5:D:138:LEU:HD12	2.04	0.57
2:B:2081:U:OP1	30:Z:19:SER:HB3	2.05	0.57
2:B:27:G:H1'	2:B:513:A:H61	1.69	0.57
2:B:1470:A:H3'	2:B:1471:G:H8	1.69	0.57
2:B:2212:A:H1'	2:B:2213:U:H3	1.69	0.57
2:B:1923:U:H2'	2:B:1924:C:H6	1.69	0.57
2:B:124:G:O2'	2:B:125:A:H5''	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:Q:65:ASN:O	23:Q:69:ARG:HB2	2.04	0.57
2:B:1946:U:H5'	32:6:123:GLU:OE1	2.04	0.57
2:B:1843:C:H4'	4:C:253:GLY:HA3	1.85	0.57
32:6:36:ALA:HA	32:6:39:LEU:HD23	1.87	0.57
2:B:647:G:H2'	2:B:648:G:C8	2.39	0.57
19:H:135:HIS:CG	19:H:136:SER:H	2.22	0.57
24:S:29:VAL:HA	24:S:32:ALA:HB3	1.85	0.57
2:B:2502:G:H5'	2:B:2503:A:C5'	2.32	0.57
8:E:29:HIS:HA	8:E:32:VAL:HG22	1.87	0.57
2:B:2041:U:H2'	2:B:2042:A:C8	2.40	0.57
2:B:2720:U:H5''	7:P:52:ARG:HH22	1.65	0.57
21:N:33:ILE:HD12	21:N:33:ILE:O	2.04	0.57
17:M:68:PHE:CG	17:M:69:PRO:HD2	2.40	0.57
14:V:53:LYS:NZ	14:V:54:ALA:HB3	2.18	0.57
2:B:2849:U:N3	2:B:2867:G:C8	2.73	0.57
21:N:97:ILE:HD12	21:N:98:LEU:H	1.68	0.57
2:B:1590:A:H2'	2:B:1591:A:H8	1.69	0.57
2:B:170:U:H2'	2:B:171:U:H6	1.69	0.57
2:B:1870:C:H3'	2:B:1871:A:C8	2.38	0.57
2:B:657:U:H2'	2:B:658:U:C6	2.39	0.57
25:U:35:VAL:HB	25:U:38:ILE:HB	1.85	0.57
2:B:251:A:H2'	2:B:252:G:O4'	2.05	0.57
26:F:134:GLN:C	26:F:136:ILE:H	2.06	0.57
14:V:29:ILE:HD13	14:V:31:TYR:HE2	1.70	0.57
23:Q:91:ARG:HB2	28:R:11:GLN:OE1	2.05	0.57
3:I:123:ALA:HA	3:I:126:ARG:HH12	1.68	0.57
2:B:2897:U:H2'	2:B:2898:U:C6	2.40	0.57
2:B:2884:U:H2'	2:B:2885:G:C8	2.40	0.57
18:X:52:ARG:O	18:X:55:THR:HB	2.05	0.57
2:B:1727:C:H2'	2:B:1728:C:H6	1.67	0.57
15:2:31:LEU:HD22	15:2:42:LEU:HD12	1.86	0.57
5:D:46:ARG:NH1	5:D:85:ALA:HA	2.18	0.57
2:B:265:A:O2'	2:B:266:G:H4'	2.05	0.57
2:B:1739:A:H2'	2:B:1740:G:O4'	2.04	0.57
32:6:67:VAL:HG12	32:6:100:TYR:HE1	1.70	0.57
29:T:57:VAL:HG13	29:T:58:VAL:N	2.20	0.57
2:B:996:A:H4'	23:Q:91:ARG:CD	2.35	0.57
8:E:141:MET:O	8:E:143:LEU:HG	2.05	0.57
2:B:616:A:H3'	2:B:617:G:C8	2.35	0.57
2:B:582:A:H2'	2:B:583:G:C8	2.39	0.57
2:B:1274:A:N3	2:B:1297:C:H1'	2.19	0.57
2:B:1568:G:H4'	4:C:58:LYS:HB3	1.85	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:5:U:H2'	1:A:6:G:C8	2.39	0.57
2:B:1486:U:H2'	2:B:1487:U:H6	1.69	0.57
2:B:1061:U:O4'	2:B:1070:A:H1'	2.04	0.57
3:I:99:LYS:H	3:I:99:LYS:HD3	1.69	0.57
2:B:813:U:H2'	2:B:814:C:C6	2.39	0.57
26:F:155:ILE:H	26:F:155:ILE:HD12	1.70	0.57
2:B:2329:U:H2'	2:B:2330:G:C8	2.40	0.57
29:T:43:ILE:O	29:T:47:VAL:HG23	2.05	0.57
29:T:57:VAL:HG22	29:T:58:VAL:N	2.16	0.57
25:U:84:PHE:HD2	25:U:91:LYS:HG2	1.70	0.57
29:T:14:PRO:HA	29:T:32:LEU:CB	2.35	0.57
6:K:47:ILE:HG23	6:K:48:PRO:CD	2.35	0.57
3:I:78:LEU:HA	3:I:81:LYS:HE2	1.87	0.57
13:3:22:LYS:HB2	13:3:48:MET:SD	2.44	0.57
2:B:654:A:H2'	2:B:655:A:H5''	1.86	0.57
2:B:550:C:H2'	2:B:551:G:H8	1.70	0.57
2:B:782:A:N7	4:C:219:VAL:HG21	2.20	0.57
24:S:42:LYS:O	24:S:45:VAL:HG22	2.04	0.57
2:B:730:A:O2'	2:B:731:C:H5'	2.05	0.57
2:B:1149:G:H2'	2:B:1150:C:H6	1.68	0.57
2:B:1636:U:H2'	2:B:1637:A:C8	2.40	0.57
2:B:1487:U:H2'	2:B:1488:C:H6	1.70	0.57
2:B:1291:C:O2'	2:B:1292:G:H5'	2.04	0.57
2:B:1210:G:H5'	2:B:1212:G:O4'	2.05	0.57
2:B:871:U:H2'	2:B:872:U:H6	1.70	0.57
17:M:35:ALA:CB	17:M:100:LYS:H	2.18	0.57
25:U:66:VAL:O	25:U:69:VAL:HG22	2.05	0.56
2:B:591:U:H1'	13:3:1:PRO:N	2.20	0.56
6:K:70:ARG:HB3	6:K:76:VAL:HG13	1.87	0.56
2:B:2900:A:O2'	2:B:2901:C:H5'	2.05	0.56
1:A:35:C:C2'	1:A:36:C:H5'	2.35	0.56
1:A:12:C:H4'	1:A:13:G:OP1	2.05	0.56
2:B:636:G:O5'	16:L:128:THR:HG22	2.05	0.56
32:6:14:MET:SD	32:6:164:ILE:HG22	2.45	0.56
2:B:1564:C:H2'	2:B:1565:C:C6	2.40	0.56
2:B:1487:U:H2'	2:B:1488:C:C6	2.39	0.56
17:M:131:VAL:HG12	17:M:132:THR:H	1.69	0.56
2:B:670:A:H5''	16:L:42:SER:HB2	1.88	0.56
2:B:2598:A:OP1	4:C:233:GLY:HA2	2.03	0.56
2:B:2385:C:H2'	2:B:2386:A:C8	2.39	0.56
27:G:17:LYS:HB3	27:G:24:THR:H	1.69	0.56
30:Z:69:ALA:HA	30:Z:72:ARG:HH12	1.71	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:U:80:ASP:HB2	25:U:96:LYS:N	2.19	0.56
20:J:59:ALA:O	20:J:62:VAL:HG12	2.04	0.56
2:B:2529:G:H5''	27:G:174:LYS:HB2	1.87	0.56
2:B:414:C:H2'	2:B:415:A:C8	2.40	0.56
2:B:2784:U:O2'	2:B:2785:C:H5'	2.05	0.56
2:B:441:U:H2'	2:B:442:G:C8	2.39	0.56
2:B:1843:C:H5''	4:C:250:GLN:HE21	1.71	0.56
2:B:2391:G:H1'	2:B:2424:C:N4	2.20	0.56
2:B:234:U:H2'	2:B:235:U:H6	1.71	0.56
2:B:611:C:H2'	2:B:612:G:O4'	2.04	0.56
2:B:992:C:H4'	28:R:74:ILE:HD13	1.87	0.56
25:U:2:ALA:HB3	25:U:5:ARG:NH2	2.20	0.56
27:G:66:THR:O	27:G:70:LEU:HB2	2.06	0.56
2:B:2685:G:O2'	2:B:2686:G:H5'	2.04	0.56
2:B:1098:A:C4	3:I:3:LYS:O	2.59	0.56
22:O:70:ALA:O	22:O:74:VAL:HG23	2.04	0.56
2:B:2352:A:N1	31:W:30:VAL:HG11	2.21	0.56
2:B:850:U:H2'	2:B:851:C:C6	2.40	0.56
18:X:39:GLN:O	18:X:42:LEU:HB2	2.05	0.56
14:V:70:ILE:HD13	14:V:71:LYS:N	2.16	0.56
2:B:557:C:H2'	2:B:558:U:C6	2.40	0.56
5:D:12:THR:HG22	5:D:13:ARG:H	1.70	0.56
7:P:4:ILE:HG22	7:P:5:LYS:N	2.12	0.56
2:B:1161:C:H1'	28:R:9:GLY:HA3	1.86	0.56
6:K:43:ILE:CG2	6:K:46:ALA:HB2	2.35	0.56
29:T:27:SER:O	29:T:28:ASN:HB3	2.06	0.56
2:B:1442:U:H2'	2:B:1443:U:H6	1.68	0.56
22:O:82:ALA:O	22:O:87:ILE:HB	2.05	0.56
2:B:91:A:H1'	2:B:92:U:C6	2.41	0.56
2:B:873:C:H2'	2:B:874:G:H8	1.68	0.56
2:B:76:C:O2'	2:B:77:G:H5'	2.05	0.56
2:B:2784:U:H2'	2:B:2785:C:C6	2.41	0.56
2:B:2785:C:H2'	2:B:2786:U:H6	1.70	0.56
2:B:680:C:H2'	2:B:681:G:C8	2.39	0.56
2:B:2066:C:O2'	2:B:2067:G:H5'	2.05	0.56
16:L:57:LEU:C	16:L:59:ARG:H	2.07	0.56
2:B:184:C:H2'	2:B:185:G:C8	2.40	0.56
2:B:1316:U:O2'	2:B:1317:G:H5'	2.04	0.56
2:B:374:A:H61	2:B:400:G:H1'	1.71	0.56
2:B:1061:U:H4'	2:B:1070:A:O3'	2.05	0.56
2:B:2318:G:C6	2:B:2319:G:N1	2.73	0.56
2:B:776:G:H4'	2:B:777:G:O5'	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2520:C:O2'	2:B:2521:C:H5'	2.06	0.56
2:B:666:A:H4'	16:L:48:ARG:HD3	1.87	0.56
2:B:538:A:H2'	2:B:539:G:O4'	2.04	0.56
9:Y:4:ILE:CD1	9:Y:58:GLU:HG3	2.35	0.56
2:B:823:C:H2'	2:B:824:U:C6	2.40	0.56
19:H:40:THR:O	19:H:42:LYS:N	2.38	0.56
31:W:41:GLY:HA2	31:W:44:PHE:CD2	2.40	0.56
2:B:2757:A:N3	2:B:2757:A:H2'	2.19	0.56
2:B:1131:G:N2	2:B:2024:G:H21	2.03	0.56
14:V:30:ILE:HA	14:V:91:PHE:O	2.05	0.56
5:D:12:THR:HG22	5:D:13:ARG:N	2.20	0.56
26:F:12:VAL:O	26:F:16:MET:HG2	2.04	0.56
2:B:2547:A:H2'	2:B:2548:U:C6	2.41	0.56
19:H:57:LYS:HG3	19:H:58:LEU:HD23	1.86	0.56
2:B:1439:A:C6	2:B:1552:A:N7	2.74	0.56
2:B:1553:A:O2'	2:B:1554:U:H2'	2.06	0.56
21:N:58:ASP:O	21:N:59:SER:HB3	2.04	0.56
20:J:23:LYS:HZ2	20:J:142:ILE:HG12	1.70	0.56
17:M:37:GLY:HA3	17:M:127:LYS:HZ3	1.71	0.56
2:B:285:G:H2'	2:B:286:U:C6	2.41	0.56
8:E:61:ARG:NH1	8:E:64:GLY:HA3	2.20	0.56
4:C:18:VAL:O	4:C:18:VAL:HG13	2.04	0.56
2:B:639:U:H2'	2:B:640:C:H6	1.71	0.56
2:B:1486:U:H2'	2:B:1487:U:C6	2.39	0.56
2:B:1939:U:H6	2:B:1939:U:H5'	1.71	0.56
2:B:813:U:H2'	2:B:814:C:H6	1.69	0.56
2:B:1210:G:H5'	2:B:1212:G:H5'	1.86	0.56
2:B:115:C:O2'	2:B:116:C:H5'	2.06	0.56
2:B:2436:G:O2'	2:B:2437:G:H5'	2.05	0.56
5:D:4:LEU:HD21	5:D:100:LEU:HB3	1.87	0.56
5:D:122:VAL:H	5:D:127:PHE:HB2	1.70	0.56
2:B:1429:G:H2'	2:B:1430:G:H8	1.71	0.56
14:V:80:HIS:HD2	14:V:82:TYR:H	1.54	0.56
19:H:65:ALA:CB	19:H:138:VAL:HG21	2.29	0.56
27:G:30:GLY:CA	27:G:78:VAL:HA	2.34	0.56
23:Q:93:ILE:O	23:Q:96:ASP:HB3	2.06	0.56
2:B:283:G:H3'	2:B:284:U:H5''	1.87	0.56
20:J:81:ILE:HG23	20:J:82:GLY:N	2.15	0.56
21:N:54:LEU:HD11	21:N:62:ASN:HB3	1.87	0.56
2:B:2144:G:H2'	2:B:2145:C:O3'	2.05	0.56
2:B:178:G:O2'	2:B:179:C:H5'	2.06	0.56
32:6:135:GLU:O	32:6:139:LYS:HG3	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2876:G:H5''	7:P:2:ASN:HB2	1.87	0.56
9:Y:15:ARG:O	9:Y:20:LYS:HE3	2.05	0.56
2:B:2189:U:H2'	2:B:2190:G:H5'	1.86	0.56
2:B:521:U:H2'	2:B:522:A:C8	2.41	0.56
2:B:1932:A:H2'	2:B:1933:G:O4'	2.06	0.56
2:B:1792:G:O2'	2:B:1793:C:H5'	2.06	0.56
2:B:2742:G:O2'	2:B:2743:U:H5'	2.05	0.56
2:B:2794:C:H2'	2:B:2795:C:C6	2.41	0.56
2:B:479:A:O2'	2:B:481:G:H5'	2.05	0.56
2:B:1745:A:H2'	2:B:1746:A:C8	2.41	0.56
2:B:1010:A:N3	2:B:1153:C:H1'	2.21	0.56
24:S:18:ARG:HB3	24:S:76:VAL:HG22	1.88	0.56
2:B:922:C:H1'	31:W:22:VAL:HG21	1.85	0.56
19:H:5:LEU:HD12	19:H:17:ASP:HB2	1.88	0.56
7:P:77:SER:O	7:P:80:VAL:HG12	2.06	0.56
2:B:1585:C:H2'	2:B:1586:A:O4'	2.05	0.56
28:R:19:THR:HG22	28:R:97:LYS:HA	1.88	0.56
2:B:2785:C:H2'	2:B:2786:U:C6	2.40	0.56
2:B:154:U:H2'	2:B:155:A:C8	2.40	0.56
2:B:2389:G:H5''	2:B:2390:U:H5'	1.87	0.56
2:B:347:A:H2'	2:B:348:A:C8	2.40	0.56
13:3:41:ARG:HG3	13:3:44:ARG:NH2	2.21	0.56
2:B:822:G:O2'	2:B:823:C:H5'	2.05	0.56
2:B:2358:A:H61	16:L:54:GLN:HE22	1.53	0.56
2:B:1098:A:H3'	3:I:3:LYS:C	2.26	0.56
26:F:105:ILE:C	26:F:108:PRO:HD2	2.26	0.56
26:F:34:THR:O	26:F:89:THR:HA	2.06	0.56
2:B:2269:G:H4'	31:W:19:ARG:NH1	2.20	0.56
2:B:141:G:H2'	2:B:142:A:O4'	2.06	0.56
5:D:9:VAL:O	7:P:4:ILE:HD11	2.06	0.56
2:B:1028:A:H2'	2:B:1029:A:C8	2.41	0.56
21:N:78:LYS:HG3	21:N:83:LEU:HG	1.88	0.56
23:Q:26:ALA:O	23:Q:30:VAL:HG12	2.05	0.56
2:B:2210:U:N3	2:B:2212:A:N7	2.54	0.56
5:D:38:LYS:HD3	5:D:45:TYR:OH	2.06	0.56
4:C:14:HIS:O	4:C:16:VAL:HG23	2.04	0.56
2:B:2026:U:H2'	2:B:2027:G:H8	1.70	0.56
17:M:21:ALA:CB	17:M:100:LYS:HG2	2.36	0.56
2:B:2001:C:H4'	2:B:2689:U:O2'	2.06	0.56
2:B:2393:U:H5''	16:L:62:PRO:HG3	1.87	0.56
26:F:107:VAL:O	26:F:110:ILE:HG22	2.05	0.56
25:U:72:PHE:HA	25:U:78:LYS:O	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:T:5:GLU:HA	29:T:8:LEU:HD12	1.88	0.56
28:R:5:PHE:O	28:R:11:GLN:HA	2.06	0.56
2:B:2730:C:H2'	2:B:2731:G:H8	1.71	0.56
8:E:108:ILE:O	8:E:108:ILE:HD13	2.06	0.56
8:E:58:LYS:HE2	8:E:60:TRP:CD1	2.41	0.56
2:B:654:A:O2'	2:B:655:A:H5''	2.06	0.56
23:Q:35:PHE:C	23:Q:37:ALA:H	2.07	0.56
22:O:58:ILE:O	22:O:62:LEU:HD23	2.06	0.56
4:C:149:LYS:HG2	4:C:152:GLN:NE2	2.22	0.56
16:L:89:VAL:HA	16:L:121:THR:O	2.06	0.56
2:B:966:G:HO2'	2:B:2267:A:H2	1.54	0.56
31:W:39:GLN:HG3	31:W:42:THR:CB	2.36	0.56
26:F:163:GLU:HA	26:F:166:ARG:CD	2.30	0.56
5:D:69:ALA:N	5:D:73:VAL:HB	2.21	0.56
2:B:38:A:N3	8:E:43:THR:HB	2.20	0.56
20:J:55:ILE:O	20:J:55:ILE:HG13	2.05	0.56
2:B:2078:C:H2'	2:B:2079:U:H6	1.70	0.56
2:B:2652:C:O2'	2:B:2653:U:H5'	2.06	0.56
2:B:1873:G:O2'	2:B:1874:C:H5'	2.05	0.56
2:B:2291:U:H2'	2:B:2292:U:C6	2.41	0.56
25:U:35:VAL:HB	25:U:38:ILE:CG2	2.36	0.56
2:B:1559:U:H3'	2:B:1560:G:H5'	1.88	0.56
2:B:2386:A:N3	31:W:38:ARG:HD2	2.21	0.55
2:B:2386:A:H2'	2:B:2387:U:C6	2.41	0.55
31:W:35:ILE:HG12	31:W:35:ILE:O	2.06	0.55
14:V:24:ASN:HB3	14:V:44:HIS:HB3	1.88	0.55
14:V:63:ILE:HD12	14:V:63:ILE:N	2.21	0.55
20:J:44:TYR:C	20:J:44:TYR:CD2	2.79	0.55
27:G:84:LYS:HG3	27:G:131:VAL:CA	2.36	0.55
7:P:4:ILE:HA	7:P:7:LEU:HD13	1.88	0.55
3:I:49:GLU:CB	3:I:52:LEU:HD12	2.36	0.55
3:I:54:ILE:HD13	3:I:55:PRO:N	2.21	0.55
2:B:1580:A:H2'	2:B:1581:G:O4'	2.05	0.55
2:B:1590:A:H2'	2:B:1591:A:C8	2.41	0.55
18:X:51:ALA:O	18:X:55:THR:N	2.36	0.55
2:B:674:G:H4'	8:E:69:ARG:HB3	1.88	0.55
1:A:91:C:H2'	1:A:92:C:H6	1.71	0.55
7:P:103:THR:HG22	7:P:104:GLY:H	1.71	0.55
2:B:1327:A:H2'	2:B:1328:A:O4'	2.06	0.55
2:B:2182:U:H2'	2:B:2183:A:C8	2.41	0.55
2:B:425:G:O2'	2:B:426:C:H5'	2.07	0.55
1:A:22:U:H2'	1:A:23:G:C8	2.40	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2286:G:H4'	2:B:2287:A:O4'	2.06	0.55
2:B:2498:C:O2'	2:B:2499:C:H5'	2.05	0.55
30:Z:40:VAL:O	30:Z:42:SER:N	2.39	0.55
5:D:148:GLN:O	5:D:149:ASN:HB2	2.05	0.55
2:B:2363:G:O2'	2:B:2364:C:H5'	2.06	0.55
14:V:31:TYR:CB	14:V:37:PRO:HG3	2.36	0.55
27:G:17:LYS:HZ2	27:G:18:ILE:N	2.03	0.55
22:O:25:ARG:O	22:O:39:VAL:HA	2.06	0.55
22:O:49:VAL:HG11	22:O:82:ALA:CA	2.36	0.55
2:B:1534:U:H2'	2:B:1536:C:C5	2.40	0.55
23:Q:26:ALA:HB1	23:Q:30:VAL:CG1	2.36	0.55
27:G:53:PRO:HG3	27:G:61:TRP:CD2	2.40	0.55
2:B:2680:U:H5'	5:D:194:PRO:HA	1.88	0.55
28:R:62:GLU:O	28:R:96:VAL:HA	2.05	0.55
2:B:1722:A:H2'	2:B:1723:G:C8	2.40	0.55
2:B:1649:G:O2'	2:B:1650:A:H5'	2.06	0.55
5:D:16:THR:HB	5:D:18:ASP:OD1	2.07	0.55
19:H:27:ARG:H	19:H:31:VAL:HG23	1.70	0.55
26:F:104:THR:C	26:F:105:ILE:HG13	2.27	0.55
24:S:73:LYS:HE3	24:S:74:ILE:N	2.09	0.55
4:C:93:VAL:HG13	4:C:94:LEU:N	2.22	0.55
30:Z:31:PRO:HB2	30:Z:33:LEU:HD11	1.88	0.55
21:N:87:PHE:C	21:N:89:SER:H	2.10	0.55
18:X:1:MET:HB3	18:X:5:GLU:OE1	2.05	0.55
2:B:2675:A:N1	2:B:2732:G:O6	2.39	0.55
2:B:637:A:H5''	16:L:112:LEU:HD22	1.89	0.55
2:B:2893:A:H5''	2:B:2894:G:H5'	1.88	0.55
2:B:2339:C:H2'	2:B:2340:A:C8	2.41	0.55
2:B:145:C:H2'	2:B:146:A:C8	2.40	0.55
2:B:1522:A:OP1	2:B:1522:A:H8	1.90	0.55
4:C:185:ALA:C	4:C:187:CYS:H	2.10	0.55
26:F:87:LYS:C	26:F:88:VAL:HG23	2.26	0.55
32:6:33:ALA:HB2	32:6:63:PRO:HA	1.87	0.55
27:G:24:THR:C	27:G:25:ILE:HD12	2.26	0.55
25:U:21:ARG:HD3	25:U:72:PHE:CD2	2.40	0.55
23:Q:91:ARG:HG2	23:Q:93:ILE:HG22	1.87	0.55
29:T:30:ILE:HG12	29:T:31:VAL:N	2.20	0.55
14:V:53:LYS:HZ3	14:V:54:ALA:HB3	1.71	0.55
5:D:33:ARG:HE	5:D:74:GLU:HB3	1.71	0.55
5:D:121:THR:HB	5:D:127:PHE:CD1	2.41	0.55
2:B:1760:C:H2'	2:B:1761:C:O4'	2.05	0.55
27:G:96:ALA:HB3	27:G:103:ASN:HB3	1.89	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1032:A:H1'	11:4:23:ILE:HD13	1.88	0.55
17:M:61:GLY:HA2	17:M:107:GLY:HA3	1.89	0.55
16:L:81:ASP:HA	16:L:84:LYS:HE3	1.89	0.55
32:6:33:ALA:HB2	32:6:63:PRO:O	2.06	0.55
2:B:917:A:H5''	2:B:2268:A:N6	2.22	0.55
31:W:39:GLN:CG	31:W:40:ARG:N	2.69	0.55
2:B:1203:U:H4'	16:L:3:LEU:HD12	1.87	0.55
6:K:87:LEU:HB2	6:K:93:GLN:O	2.06	0.55
6:K:120:PRO:HA	7:P:65:ASN:ND2	2.22	0.55
2:B:718:A:H2'	2:B:719:C:H5'	1.88	0.55
2:B:1656:C:H2'	2:B:1657:U:C6	2.41	0.55
2:B:2341:G:H2'	2:B:2342:C:H6	1.72	0.55
20:J:124:VAL:O	20:J:125:TYR:HB2	2.06	0.55
23:Q:65:ASN:CB	23:Q:75:TYR:HB2	2.37	0.55
2:B:1429:G:O2'	2:B:1430:G:H5'	2.06	0.55
17:M:34:LYS:HB3	17:M:129:THR:HG22	1.87	0.55
2:B:354:A:H2'	2:B:355:U:C6	2.42	0.55
26:F:34:THR:HA	26:F:89:THR:HA	1.88	0.55
31:W:37:VAL:HG13	31:W:55:ASP:O	2.06	0.55
2:B:2365:G:O2'	31:W:59:PHE:HE1	1.89	0.55
19:H:7:ASP:CG	19:H:8:LYS:H	2.08	0.55
2:B:1138:G:H21	20:J:108:MET:CE	2.18	0.55
2:B:2098:U:H2'	2:B:2099:U:H1'	1.89	0.55
2:B:934:U:H2'	2:B:935:C:H6	1.69	0.55
16:L:59:ARG:C	16:L:61:LEU:H	2.09	0.55
2:B:1400:U:H2'	2:B:1401:G:H8	1.70	0.55
2:B:2666:C:O2	2:B:2666:C:O4'	2.22	0.55
8:E:49:ARG:O	8:E:74:LYS:HD3	2.07	0.55
9:Y:29:ARG:H	9:Y:33:HIS:CD2	2.24	0.55
2:B:807:U:H2'	2:B:808:G:H8	1.71	0.55
2:B:857:G:C2'	2:B:858:G:H5'	2.36	0.55
31:W:59:PHE:O	31:W:60:ALA:HB3	2.06	0.55
2:B:705:A:N6	2:B:726:G:O2'	2.40	0.55
24:S:50:VAL:HA	24:S:53:SER:HB2	1.87	0.55
2:B:2511:U:H2'	2:B:2512:C:C6	2.42	0.55
29:T:69:ARG:HB3	29:T:74:ILE:HD12	1.89	0.55
2:B:340:A:H2'	2:B:341:C:O4'	2.06	0.55
22:O:25:ARG:HG3	22:O:27:VAL:HG23	1.88	0.55
2:B:1454:C:H5'	21:N:63:ARG:NE	2.22	0.55
2:B:719:C:O2'	2:B:720:U:H5'	2.06	0.55
10:0:38:LEU:HD22	10:0:41:HIS:NE2	2.22	0.55
2:B:506:G:H5''	2:B:509:C:O2'	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:J:72:LYS:CG	20:J:89:PHE:HB2	2.37	0.55
25:U:34:ILE:HG12	25:U:63:ALA:HB2	1.89	0.55
21:N:65:LEU:O	21:N:68:ALA:HB3	2.06	0.55
2:B:2758:A:O2'	2:B:2759:G:H5'	2.07	0.55
26:F:65:LEU:H	26:F:88:VAL:HG22	1.72	0.55
2:B:852:U:H2'	2:B:853:C:H6	1.71	0.55
2:B:2365:G:H4'	31:W:59:PHE:HD1	1.70	0.55
24:S:58:ALA:HB1	24:S:69:LEU:HD21	1.88	0.55
23:Q:91:ARG:HD3	28:R:11:GLN:OE1	2.07	0.55
27:G:83:THR:HA	27:G:84:LYS:HZ3	1.71	0.55
20:J:29:ALA:O	20:J:32:LEU:HB2	2.07	0.55
27:G:153:PRO:HA	27:G:159:LYS:O	2.07	0.55
27:G:94:ARG:HE	27:G:94:ARG:C	2.10	0.55
2:B:1535:A:O2'	2:B:1536:C:H5'	2.07	0.55
2:B:709:U:H2'	2:B:710:U:H6	1.70	0.55
2:B:150:U:H2'	2:B:151:C:H6	1.68	0.55
2:B:176:A:H3'	2:B:177:G:N2	2.20	0.55
2:B:2776:A:H4'	2:B:2777:G:C5'	2.36	0.55
2:B:256:A:O2'	2:B:257:C:H5'	2.07	0.55
25:U:35:VAL:HB	25:U:38:ILE:CB	2.37	0.55
25:U:40:LEU:H	25:U:40:LEU:HD12	1.71	0.55
2:B:2025:C:H2'	2:B:2026:U:C6	2.41	0.55
2:B:1676:A:H2'	2:B:1677:A:O4'	2.06	0.55
2:B:2135:A:H2'	2:B:2135:A:N3	2.21	0.55
17:M:105:MET:HB2	17:M:117:PHE:CZ	2.42	0.55
32:6:55:ILE:CG2	32:6:56:ALA:N	2.69	0.55
28:R:40:MET:O	28:R:41:ILE:HD13	2.06	0.55
4:C:78:GLU:OE1	4:C:94:LEU:HD22	2.07	0.55
19:H:49:ALA:HB3	19:H:50:ARG:CZ	2.37	0.55
2:B:460:A:P	15:2:41:ARG:HH12	2.29	0.55
2:B:2814:A:H2'	2:B:2815:C:C6	2.42	0.55
9:Y:7:THR:HG23	9:Y:34:THR:OG1	2.07	0.55
2:B:2458:G:HO2'	2:B:2490:G:H1	1.54	0.55
2:B:2098:U:H2'	2:B:2099:U:O4'	2.07	0.55
25:U:40:LEU:HA	25:U:60:LYS:O	2.06	0.55
13:3:24:LYS:HZ3	13:3:28:LEU:HB3	1.70	0.55
2:B:950:G:H2'	2:B:951:C:H6	1.71	0.55
9:Y:4:ILE:HD13	9:Y:58:GLU:HG3	1.89	0.55
21:N:92:GLY:HA2	21:N:94:TYR:CZ	2.42	0.55
2:B:1109:C:H6	2:B:1109:C:O5'	1.90	0.55
2:B:1396:U:O4'	2:B:1396:U:O2	2.22	0.55
3:I:5:GLN:O	3:I:6:ALA:HB3	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:Q:104:ALA:HA	28:R:46:GLU:CD	2.27	0.55
27:G:97:VAL:CG2	27:G:124:CYS:HB2	2.36	0.55
2:B:2230:G:H2'	2:B:2231:U:C6	2.41	0.55
30:Z:6:GLN:HE22	30:Z:50:ARG:H	1.55	0.55
15:2:27:GLY:O	15:2:30:VAL:HB	2.06	0.55
19:H:94:ILE:HG22	19:H:122:LEU:HB2	1.88	0.55
18:X:8:GLU:O	18:X:12:GLU:HB2	2.07	0.55
6:K:109:SER:HB2	6:K:111:LYS:HE2	1.89	0.55
1:A:103:U:O2'	1:A:104:A:H5'	2.07	0.55
16:L:74:THR:HA	16:L:107:PHE:O	2.06	0.55
20:J:18:VAL:CG1	20:J:54:ILE:HD11	2.37	0.55
20:J:98:GLU:H	20:J:98:GLU:CD	2.10	0.55
2:B:1349:C:H2'	2:B:1350:C:H6	1.72	0.55
2:B:2282:G:H5''	2:B:2283:C:O4'	2.06	0.55
2:B:1958:C:O2'	2:B:1959:G:H5'	2.07	0.55
26:F:131:VAL:HG22	26:F:151:LEU:O	2.07	0.55
2:B:2246:G:H2'	2:B:2247:A:C8	2.42	0.55
2:B:351:C:H2'	2:B:352:A:C8	2.41	0.55
4:C:132:ARG:HD3	4:C:166:ARG:NH1	2.21	0.54
26:F:134:GLN:O	26:F:136:ILE:N	2.40	0.54
2:B:899:A:OP1	2:B:899:A:H4'	2.05	0.54
21:N:37:THR:OG1	21:N:40:LYS:HE2	2.07	0.54
27:G:94:ARG:CB	27:G:127:GLN:HG2	2.35	0.54
19:H:69:ALA:O	19:H:73:ASN:HB2	2.07	0.54
2:B:37:C:O2'	2:B:38:A:H5'	2.06	0.54
2:B:2579:C:O2'	5:D:136:ASN:HA	2.06	0.54
1:A:64:G:O2'	1:A:65:U:H5'	2.07	0.54
20:J:136:GLN:N	20:J:137:PRO:HD3	2.22	0.54
2:B:1407:G:H2'	2:B:1408:G:H8	1.71	0.54
2:B:2882:A:H3'	2:B:2883:A:H5''	1.88	0.54
32:6:134:ARG:HB3	32:6:134:ARG:NH1	2.21	0.54
2:B:573:U:O2'	2:B:574:A:H3'	2.07	0.54
4:C:202:ARG:NH1	4:C:213:ARG:HE	2.05	0.54
5:D:36:GLN:OE1	5:D:38:LYS:HE3	2.08	0.54
2:B:587:C:O2'	16:L:19:LEU:HD13	2.08	0.54
16:L:134:ALA:O	16:L:137:ALA:HB3	2.06	0.54
2:B:870:U:O2'	2:B:871:U:H5'	2.06	0.54
31:W:46:ALA:HB2	31:W:78:PHE:HD1	1.70	0.54
12:1:14:ALA:HB3	12:1:16:THR:HG22	1.89	0.54
2:B:1667:G:OP1	6:K:6:THR:HA	2.07	0.54
2:B:1693:U:H1'	4:C:13:ARG:HH21	1.72	0.54
16:L:75:ALA:HB2	16:L:105:ILE:HG21	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:110:ILE:HG21	26:F:113:PHE:HB3	1.89	0.54
14:V:28:ALA:HB2	14:V:89:ILE:HD12	1.88	0.54
27:G:25:ILE:HG22	27:G:78:VAL:HG11	1.90	0.54
24:S:28:LYS:HD2	24:S:29:VAL:H	1.73	0.54
2:B:2514:U:H2'	2:B:2515:C:H6	1.72	0.54
8:E:138:LEU:HB3	8:E:143:LEU:O	2.08	0.54
25:U:73:ASN:HD21	25:U:76:THR:H	1.54	0.54
2:B:321:U:H1'	8:E:162:ARG:HH11	1.70	0.54
5:D:117:GLY:HA2	5:D:164:GLN:NE2	2.21	0.54
2:B:2886:A:H62	10:0:39:ARG:CZ	2.20	0.54
2:B:2881:U:O3'	21:N:96:ARG:HD3	2.07	0.54
12:1:7:LYS:HD3	12:1:23:THR:HG22	1.90	0.54
2:B:634:C:H2'	2:B:635:C:H6	1.72	0.54
21:N:11:ASN:O	21:N:12:ARG:HB2	2.07	0.54
25:U:35:VAL:HB	25:U:38:ILE:HG21	1.89	0.54
2:B:2868:A:H2'	2:B:2869:G:H8	1.72	0.54
2:B:1292:G:H2'	2:B:1293:C:C6	2.42	0.54
5:D:175:LEU:HD21	5:D:191:GLY:O	2.07	0.54
2:B:99:U:H5	25:U:6:ARG:HH22	1.53	0.54
1:A:29:A:H3'	1:A:30:C:H6	1.72	0.54
23:Q:68:ALA:HB1	23:Q:73:ILE:HG23	1.88	0.54
5:D:169:ARG:O	5:D:170:VAL:HG22	2.07	0.54
2:B:1098:A:C3'	3:I:3:LYS:HA	2.26	0.54
2:B:2572:A:OP2	5:D:152:PRO:HD3	2.08	0.54
2:B:2271:G:H2'	2:B:2272:U:O4'	2.06	0.54
8:E:27:LEU:O	8:E:31:VAL:HG23	2.08	0.54
2:B:460:A:H2'	2:B:461:C:O4'	2.07	0.54
29:T:13:ALA:O	29:T:32:LEU:HB2	2.07	0.54
2:B:547:A:C6	2:B:548:G:H1'	2.42	0.54
2:B:1848:A:H2'	2:B:1849:G:C8	2.41	0.54
2:B:1000:A:H2'	2:B:1001:A:C8	2.42	0.54
26:F:120:SER:HG	26:F:127:TYR:HD2	1.54	0.54
22:O:6:ALA:O	22:O:10:ARG:HG3	2.07	0.54
2:B:1987:A:H2'	2:B:1988:G:C8	2.42	0.54
20:J:84:ILE:HG23	20:J:84:ILE:O	2.07	0.54
2:B:909:A:H2'	2:B:912:C:H5	1.70	0.54
2:B:2365:G:H4'	31:W:59:PHE:CE1	2.42	0.54
28:R:49:ILE:O	28:R:49:ILE:HD12	2.08	0.54
2:B:2841:C:H2'	2:B:2842:G:H8	1.71	0.54
25:U:81:ARG:HH21	25:U:81:ARG:N	2.04	0.54
27:G:5:LYS:HE3	27:G:61:TRP:CZ2	2.42	0.54
25:U:54:PRO:HG2	25:U:55:GLY:H	1.72	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1517:G:O2'	2:B:1518:C:H5'	2.07	0.54
23:Q:34:ALA:O	23:Q:37:ALA:HB3	2.07	0.54
23:Q:24:TYR:CG	23:Q:25:GLY:N	2.75	0.54
2:B:1678:A:H2'	2:B:1679:A:O4'	2.07	0.54
3:I:63:ASP:O	3:I:64:ARG:HB2	2.06	0.54
2:B:2662:A:H2'	2:B:2663:G:O4'	2.08	0.54
4:C:264:LYS:HG3	4:C:265:PHE:CD2	2.43	0.54
16:L:92:LEU:CD2	16:L:124:GLY:HA3	2.38	0.54
32:6:80:GLU:CD	32:6:92:PRO:HB2	2.26	0.54
2:B:877:A:C2'	2:B:900:A:H61	2.18	0.54
14:V:2:PHE:O	14:V:4:ILE:HG13	2.07	0.54
2:B:2746:U:O3'	27:G:137:LYS:HD3	2.08	0.54
2:B:320:A:H4'	2:B:322:A:N7	2.23	0.54
3:I:17:ALA:O	3:I:18:ASN:CB	2.55	0.54
22:O:5:SER:HA	22:O:8:ILE:CD1	2.35	0.54
2:B:2153:C:H2'	2:B:2154:A:C8	2.42	0.54
3:I:85:ILE:CD1	3:I:137:LEU:HD21	2.37	0.54
16:L:57:LEU:HA	16:L:60:ARG:NE	2.23	0.54
32:6:122:ALA:O	32:6:126:ARG:HG3	2.08	0.54
20:J:72:LYS:CB	20:J:89:PHE:H	2.21	0.54
2:B:806:C:O2'	2:B:807:U:H5'	2.06	0.54
2:B:807:U:H2'	2:B:808:G:C8	2.43	0.54
2:B:1878:G:H2'	2:B:1879:C:C6	2.43	0.54
4:C:121:ALA:HB3	4:C:129:LEU:HD11	1.90	0.54
2:B:855:G:O2'	31:W:23:LYS:HD3	2.06	0.54
9:Y:18:LYS:O	9:Y:22:THR:HG23	2.08	0.54
14:V:63:ILE:H	14:V:70:ILE:HD11	1.71	0.54
27:G:7:PRO:O	27:G:8:VAL:CB	2.56	0.54
20:J:4:PHE:HB3	20:J:44:TYR:CE1	2.42	0.54
20:J:4:PHE:CG	20:J:5:THR:N	2.75	0.54
19:H:88:GLY:O	19:H:90:LEU:HD12	2.08	0.54
8:E:47:LYS:HA	8:E:51:GLU:HG3	1.90	0.54
17:M:40:ARG:HB2	17:M:93:VAL:CG2	2.38	0.54
2:B:1351:C:O2'	2:B:1571:A:H1'	2.07	0.54
2:B:335:C:O2'	2:B:336:C:H5'	2.07	0.54
2:B:2846:G:H2'	2:B:2847:U:C6	2.42	0.54
2:B:1376:C:H3'	36:B:3094:HOH:O	2.07	0.54
31:W:23:LYS:HZ2	31:W:24:ARG:HG3	1.72	0.54
31:W:37:VAL:HG13	31:W:55:ASP:C	2.27	0.54
28:R:39:LEU:HA	28:R:53:PHE:HA	1.89	0.54
23:Q:86:SER:HB3	28:R:52:PRO:HD3	1.89	0.54
28:R:58:VAL:HG22	28:R:59:ILE:N	2.23	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:90:ILE:CD1	4:C:102:TYR:HB3	2.37	0.54
26:F:1:ALA:O	26:F:4:HIS:HB3	2.07	0.54
2:B:102:U:H2'	18:X:2:LYS:CE	2.36	0.54
2:B:1443:U:H2'	2:B:1444:G:H8	1.73	0.54
22:O:71:ALA:O	22:O:106:LEU:HB3	2.07	0.54
2:B:1179:G:O2'	2:B:1180:U:H5'	2.08	0.54
14:V:9:ARG:HA	14:V:41:GLU:OE2	2.08	0.54
12:1:7:LYS:HA	12:1:23:THR:HG22	1.89	0.54
2:B:1222:U:O2'	2:B:1223:G:H5'	2.07	0.54
25:U:13:LEU:H	25:U:13:LEU:HD12	1.72	0.54
2:B:208:C:H2'	2:B:209:C:H6	1.73	0.54
2:B:1419:A:H2'	2:B:1421:G:N7	2.23	0.54
2:B:26:G:H1'	2:B:514:A:N6	2.21	0.54
2:B:2822:G:H2'	2:B:2823:A:H5''	1.89	0.54
2:B:585:G:H2'	2:B:1251:C:H42	1.72	0.54
2:B:974:G:OP2	28:R:78:ARG:HD3	2.07	0.54
22:O:69:ASP:O	22:O:72:ALA:HB3	2.08	0.54
27:G:15:ASP:CB	27:G:26:LYS:HB3	2.38	0.54
28:R:4:VAL:CG2	28:R:39:LEU:HG	2.37	0.54
28:R:39:LEU:HB3	28:R:53:PHE:HA	1.90	0.54
27:G:123:GLU:HG2	27:G:124:CYS:H	1.71	0.54
8:E:149:ILE:HG23	8:E:188:MET:CA	2.38	0.54
19:H:124:THR:HG23	19:H:128:HIS:HE1	1.72	0.54
20:J:57:LEU:CG	20:J:128:ASN:H	2.17	0.54
2:B:2142:A:H2'	2:B:2143:C:C1'	2.38	0.54
2:B:2149:U:H2'	2:B:2150:C:H6	1.73	0.54
2:B:2849:U:H4'	2:B:2850:A:C5'	2.38	0.54
2:B:1727:C:H2'	2:B:1728:C:O4'	2.08	0.54
22:O:89:ASP:HA	22:O:116:GLN:HB3	1.90	0.54
2:B:2700:A:H2'	2:B:2701:U:C6	2.42	0.54
1:A:32:U:H2'	1:A:33:G:O4'	2.07	0.54
4:C:177:SER:O	4:C:270:ARG:HG3	2.08	0.54
2:B:1479:G:O2'	2:B:1480:C:H5'	2.08	0.54
4:C:145:MET:SD	4:C:153:LEU:HD21	2.48	0.54
32:6:90:LEU:HB3	32:6:101:ILE:CG2	2.38	0.54
2:B:2364:C:O2'	2:B:2365:G:H5'	2.08	0.54
14:V:63:ILE:HB	14:V:70:ILE:HD11	1.90	0.54
23:Q:89:ILE:HB	28:R:11:GLN:NE2	2.21	0.54
23:Q:91:ARG:HH12	28:R:10:LYS:HB3	1.73	0.54
2:B:283:G:H2'	2:B:284:U:O4'	2.07	0.54
8:E:143:LEU:HB3	8:E:146:VAL:HG21	1.89	0.54
29:T:74:ILE:HG13	29:T:75:GLY:H	1.73	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:297:G:OP1	25:U:91:LYS:HD3	2.07	0.54
27:G:153:PRO:CG	27:G:162:ARG:HB3	2.38	0.54
2:B:1054:A:H2'	2:B:1055:G:O4'	2.08	0.54
2:B:320:A:C2	8:E:163:ASN:HB3	2.43	0.54
2:B:2306:C:C3'	2:B:2307:G:H5'	2.38	0.54
22:O:30:ARG:HG3	22:O:30:ARG:HH11	1.71	0.54
4:C:2:VAL:HG23	4:C:3:VAL:N	2.23	0.54
2:B:2680:U:OP2	5:D:114:LYS:HB3	2.08	0.54
26:F:78:ILE:C	26:F:79:ARG:HG3	2.27	0.54
6:K:2:ILE:HD12	6:K:2:ILE:N	2.23	0.54
2:B:1508:A:H2'	2:B:1509:A:C2	2.43	0.54
32:6:123:GLU:HA	32:6:126:ARG:NH1	2.22	0.54
2:B:633:A:O5'	2:B:633:A:H8	1.90	0.54
2:B:2539:C:O2'	2:B:2540:C:H5'	2.08	0.54
2:B:2100:G:H2'	2:B:2101:A:O4'	2.08	0.54
29:T:45:ALA:HA	29:T:48:GLN:CG	2.38	0.54
2:B:1100:C:OP2	3:I:2:LYS:HB3	2.07	0.54
2:B:850:U:H5''	9:Y:18:LYS:HD3	1.90	0.54
23:Q:91:ARG:HH22	28:R:10:LYS:HB3	1.73	0.54
29:T:67:VAL:HG23	29:T:75:GLY:O	2.08	0.54
2:B:1203:U:H3'	2:B:1204:A:H5''	1.89	0.54
19:H:94:ILE:O	19:H:122:LEU:HD23	2.07	0.54
29:T:14:PRO:HA	29:T:32:LEU:HB3	1.90	0.54
2:B:590:A:H2'	2:B:591:U:H6	1.71	0.54
22:O:68:LYS:H	22:O:102:ARG:CD	2.21	0.54
2:B:2820:A:OP1	21:N:4:ARG:HA	2.08	0.54
2:B:956:G:N2	2:B:959:A:H3'	2.23	0.54
2:B:1579:A:H2'	2:B:1580:A:C8	2.42	0.54
2:B:418:C:H2'	2:B:419:U:C6	2.42	0.54
2:B:1842:G:H2'	2:B:1843:C:H6	1.73	0.54
2:B:1842:G:H1'	4:C:242:HIS:NE2	2.23	0.54
31:W:77:LYS:O	31:W:78:PHE:HB2	2.07	0.54
2:B:3:U:H2'	2:B:4:U:C6	2.42	0.54
2:B:217:A:H2'	2:B:218:A:O4'	2.08	0.54
2:B:2093:G:H5'	19:H:22:LYS:HD2	1.90	0.54
31:W:50:VAL:O	31:W:59:PHE:HB3	2.08	0.53
2:B:136:G:H2'	2:B:137:U:C6	2.43	0.53
20:J:3:THR:HB	20:J:44:TYR:OH	2.08	0.53
23:Q:57:ARG:HH12	23:Q:61:ILE:HD11	1.70	0.53
2:B:2746:U:H5''	27:G:137:LYS:HG2	1.89	0.53
20:J:30:THR:HG23	20:J:31:GLU:N	2.23	0.53
5:D:68:PHE:HB3	5:D:73:VAL:CG2	2.33	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:24:GLY:HA2	3:I:34:ILE:HD12	1.90	0.53
25:U:73:ASN:C	25:U:75:ALA:H	2.11	0.53
12:1:36:LYS:HG2	12:1:47:ILE:HG13	1.90	0.53
3:I:45:THR:HA	3:I:48:ILE:CG2	2.38	0.53
1:A:48:U:H2'	1:A:49:C:C6	2.43	0.53
2:B:1258:U:C4'	8:E:79:ARG:HD2	2.37	0.53
9:Y:2:LYS:HD3	9:Y:2:LYS:H	1.73	0.53
22:O:100:HIS:C	22:O:104:GLN:HB2	2.29	0.53
1:A:94:A:H2'	1:A:95:U:O4'	2.08	0.53
2:B:1526:C:H2'	2:B:1527:G:O4'	2.09	0.53
2:B:2560:A:H2'	2:B:2561:U:C6	2.43	0.53
32:6:64:ARG:N	32:6:64:ARG:HD2	2.24	0.53
23:Q:91:ARG:HB2	23:Q:94:LEU:HD23	1.89	0.53
23:Q:52:ARG:C	23:Q:54:ARG:H	2.10	0.53
2:B:973:A:H1'	2:B:1188:U:C5	2.43	0.53
3:I:32:VAL:HG22	3:I:60:VAL:CG2	2.38	0.53
26:F:3:LEU:HD21	26:F:172:PHE:HB3	1.90	0.53
2:B:2528:U:O2'	2:B:2529:G:H3'	2.08	0.53
27:G:37:ASN:ND2	27:G:38:ASP:H	2.05	0.53
7:P:59:THR:OG1	7:P:72:VAL:HG12	2.08	0.53
2:B:2282:G:OP1	2:B:2283:C:H1'	2.07	0.53
2:B:691:C:O2'	2:B:692:C:H5'	2.08	0.53
2:B:1722:A:H2'	2:B:1723:G:H8	1.70	0.53
5:D:102:ALA:HA	5:D:180:VAL:HG21	1.89	0.53
1:A:87:U:H2'	1:A:88:C:O5'	2.09	0.53
2:B:1899:A:O2'	2:B:1900:A:H5''	2.07	0.53
2:B:2330:G:H1'	31:W:38:ARG:HB2	1.90	0.53
19:H:68:ARG:O	19:H:72:ILE:HG13	2.08	0.53
27:G:108:PHE:HD1	27:G:108:PHE:H	1.56	0.53
2:B:2259:U:H2'	2:B:2260:C:H6	1.73	0.53
2:B:2438:U:O2'	2:B:2439:A:H5''	2.08	0.53
23:Q:80:ASN:O	23:Q:83:LYS:HB3	2.08	0.53
2:B:1712:U:H2'	2:B:1713:A:N7	2.23	0.53
2:B:222:A:N6	2:B:232:G:H1'	2.24	0.53
2:B:1423:G:H2'	2:B:1424:G:H8	1.72	0.53
6:K:105:ARG:HB3	6:K:122:VAL:HG12	1.91	0.53
2:B:2553:G:H2'	2:B:2554:U:C4'	2.38	0.53
30:Z:27:ARG:HD2	30:Z:29:PHE:CE1	2.43	0.53
27:G:36:LEU:HD22	27:G:36:LEU:N	2.21	0.53
25:U:9:GLU:O	25:U:72:PHE:N	2.42	0.53
24:S:36:LEU:HD22	24:S:36:LEU:N	2.19	0.53
27:G:132:LEU:N	27:G:132:LEU:HD23	2.24	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:L:6:LEU:CD2	16:L:6:LEU:H	2.18	0.53
27:G:155:PRO:HA	27:G:170:THR:HA	1.90	0.53
2:B:322:A:C2'	8:E:163:ASN:HD21	2.20	0.53
2:B:179:C:H2'	2:B:180:G:O4'	2.07	0.53
2:B:228:C:O2	2:B:418:C:H4'	2.09	0.53
2:B:417:C:H2'	2:B:418:C:H6	1.72	0.53
2:B:2212:A:H1'	2:B:2213:U:N3	2.24	0.53
2:B:1166:G:H2'	2:B:1167:C:H6	1.71	0.53
32:6:150:SER:O	32:6:154:THR:HG22	2.08	0.53
2:B:2772:C:H2'	2:B:2773:C:C6	2.43	0.53
2:B:981:A:H2'	2:B:982:C:H5''	1.90	0.53
3:I:92:PRO:O	3:I:93:ASN:HB2	2.09	0.53
2:B:2195:U:O2'	2:B:2196:C:H5'	2.09	0.53
5:D:37:VAL:CG2	5:D:91:THR:HA	2.37	0.53
2:B:138:U:H2'	2:B:140:C:N1	2.24	0.53
21:N:106:ASP:OD1	21:N:108:ALA:HB3	2.09	0.53
30:Z:71:LEU:HD12	30:Z:78:TYR:CD2	2.43	0.53
2:B:321:U:OP2	8:E:130:LYS:HA	2.07	0.53
6:K:118:LEU:C	6:K:120:PRO:HD2	2.29	0.53
22:O:35:ILE:HG13	22:O:71:ALA:CB	2.36	0.53
2:B:2458:G:N3	2:B:2458:G:H2'	2.24	0.53
13:3:30:HIS:HD2	13:3:31:ILE:H	1.57	0.53
15:2:2:LYS:HD2	15:2:6:GLN:NE2	2.23	0.53
2:B:2804:U:H2'	2:B:2805:C:H6	1.71	0.53
5:D:25:THR:HG21	5:D:193:VAL:HG22	1.89	0.53
2:B:18:U:H2'	2:B:19:A:C8	2.43	0.53
2:B:20:C:O2'	2:B:21:A:H5'	2.07	0.53
2:B:1847:A:H4'	2:B:1848:A:H8	1.72	0.53
2:B:2293:G:H2'	2:B:2294:G:H8	1.72	0.53
2:B:1295:C:H2'	2:B:1296:G:H8	1.72	0.53
2:B:2023:C:O2'	2:B:2024:G:H5'	2.08	0.53
2:B:1930:G:H2'	2:B:1968:G:C6	2.43	0.53
24:S:13:SER:OG	24:S:14:ALA:N	2.41	0.53
2:B:1577:C:H2'	2:B:1578:U:O4'	2.09	0.53
32:6:35:PRO:HA	32:6:66:LEU:HD21	1.91	0.53
2:B:2327:A:H2'	2:B:2328:A:C8	2.44	0.53
27:G:23:ILE:HG21	27:G:71:LEU:HD11	1.90	0.53
2:B:1007:C:O3'	20:J:110:PRO:HB3	2.09	0.53
20:J:23:LYS:NZ	20:J:142:ILE:HG12	2.23	0.53
25:U:64:ILE:HG13	25:U:65:GLN:H	1.72	0.53
16:L:136:GLU:HA	16:L:140:GLY:H	1.74	0.53
2:B:277:G:N3	2:B:277:G:H2'	2.24	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:G:16:VAL:HG11	27:G:44:HIS:CE1	2.44	0.53
2:B:1571:A:H2'	2:B:1572:A:H8	1.73	0.53
21:N:13:ASN:C	21:N:15:SER:H	2.10	0.53
4:C:245:THR:C	4:C:247:TRP:H	2.12	0.53
2:B:1220:G:H2'	2:B:1221:C:H6	1.73	0.53
1:A:91:C:H2'	1:A:92:C:C6	2.43	0.53
18:X:20:ASN:HD22	18:X:20:ASN:N	2.06	0.53
23:Q:50:ARG:HD2	23:Q:50:ARG:N	2.24	0.53
2:B:2412:A:H2'	2:B:2413:G:O4'	2.08	0.53
2:B:1495:A:O2'	2:B:1496:A:H5'	2.09	0.53
2:B:1145:C:O2'	2:B:1146:C:H5'	2.09	0.53
23:Q:15:LYS:HD2	23:Q:16:ILE:HD12	1.90	0.53
32:6:15:GLN:HA	32:6:168:PHE:HE2	1.74	0.53
24:S:6:LYS:HB3	24:S:104:THR:HG23	1.90	0.53
14:V:14:LYS:HE2	14:V:18:ARG:HH21	1.74	0.53
23:Q:51:GLN:HA	23:Q:54:ARG:HD2	1.91	0.53
25:U:95:PHE:CE1	25:U:102:ILE:HB	2.33	0.53
4:C:12:ARG:HA	4:C:15:VAL:HG23	1.90	0.53
8:E:176:ASP:OD1	8:E:178:VAL:HG12	2.08	0.53
32:6:154:THR:HG23	32:6:155:LYS:N	2.23	0.53
16:L:19:LEU:O	16:L:21:ARG:HG2	2.07	0.53
2:B:2391:G:H1'	2:B:2424:C:H41	1.74	0.53
2:B:1878:G:H2'	2:B:1879:C:H6	1.73	0.53
6:K:3:GLN:HG2	6:K:4:GLU:N	2.24	0.53
2:B:755:U:H2'	2:B:756:A:H8	1.74	0.53
8:E:124:PHE:HD1	8:E:125:SER:N	2.07	0.53
16:L:99:ASN:O	16:L:100:ILE:HB	2.09	0.53
30:Z:41:GLU:O	30:Z:44:LYS:HD2	2.09	0.53
32:6:55:ILE:HG23	32:6:56:ALA:N	2.24	0.53
2:B:965:C:O2'	2:B:966:G:H5'	2.09	0.53
5:D:15:PHE:HD1	5:D:15:PHE:H	1.56	0.53
2:B:2109:U:H2'	2:B:2180:U:N3	2.22	0.53
2:B:547:A:H2'	2:B:547:A:N3	2.24	0.53
2:B:2150:C:H2'	2:B:2151:U:C6	2.44	0.53
2:B:634:C:H2'	2:B:635:C:C6	2.44	0.53
2:B:6:A:H2'	2:B:7:G:C8	2.44	0.53
2:B:1774:C:H2'	2:B:1774:C:O2	2.09	0.53
2:B:2189:U:C2'	2:B:2190:G:H5'	2.39	0.53
2:B:1647:U:P	2:B:1647:U:H3'	2.49	0.53
2:B:771:G:O2'	2:B:772:C:H5'	2.08	0.53
2:B:660:C:H2'	2:B:661:A:H8	1.74	0.53
32:6:167:GLU:O	32:6:170:ALA:HB3	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2267:A:N6	2:B:2272:U:C4	2.76	0.53
14:V:77:VAL:HG11	17:M:136:MET:O	2.09	0.53
19:H:9:VAL:HG12	19:H:12:LEU:HG	1.90	0.53
3:I:76:ALA:HA	3:I:135:MET:SD	2.48	0.53
28:R:6:GLN:HE21	28:R:7:SER:C	2.11	0.53
3:I:52:LEU:HD22	3:I:81:LYS:HD3	1.91	0.53
2:B:2530:A:H5'	27:G:174:LYS:HD2	1.90	0.53
2:B:2590:A:H2'	2:B:2591:C:H6	1.73	0.53
2:B:1351:C:H2'	2:B:1352:U:O4'	2.09	0.53
2:B:1381:G:H1'	2:B:1571:A:N1	2.24	0.53
2:B:466:A:N3	2:B:683:U:H1'	2.24	0.53
2:B:393:C:O2'	2:B:394:C:H5'	2.08	0.53
16:L:19:LEU:HD23	16:L:31:GLY:HA3	1.90	0.53
7:P:19:PHE:CE2	7:P:25:VAL:HG11	2.44	0.53
29:T:7:LEU:HA	29:T:9:LYS:HE3	1.89	0.53
2:B:1099:G:C8	3:I:3:LYS:CB	2.92	0.53
16:L:82:LEU:O	16:L:85:VAL:HG12	2.09	0.53
26:F:90:LEU:C	26:F:91:ARG:HD3	2.28	0.53
32:6:84:ARG:CZ	32:6:84:ARG:HB2	2.39	0.53
14:V:4:ILE:CD1	14:V:61:LEU:HB3	2.39	0.53
27:G:33:THR:HA	27:G:34:ARG:NH1	2.24	0.53
2:B:361:G:O2'	2:B:362:A:H5'	2.09	0.53
10:0:47:TYR:CZ	10:0:52:LYS:HG3	2.44	0.53
5:D:125:TRP:CG	5:D:160:LYS:HB3	2.44	0.53
2:B:679:C:H2'	2:B:680:C:H6	1.74	0.53
22:O:111:ARG:HB2	22:O:117:PHE:CZ	2.44	0.53
2:B:6:A:O2'	2:B:7:G:H5'	2.09	0.53
2:B:252:G:O2'	2:B:253:C:H5'	2.09	0.53
26:F:121:PHE:HB3	26:F:127:TYR:CE1	2.44	0.53
1:A:54:G:H21	26:F:25:MET:HE3	1.74	0.53
2:B:483:A:H2'	2:B:484:C:O4'	2.09	0.53
27:G:59:ASP:O	27:G:63:GLN:HB2	2.09	0.53
2:B:2266:A:C4	2:B:2272:U:H5	2.26	0.52
14:V:79:ARG:NH1	17:M:134:THR:HG21	2.24	0.52
27:G:17:LYS:O	27:G:23:ILE:HG23	2.10	0.52
27:G:34:ARG:HH11	27:G:34:ARG:N	1.96	0.52
27:G:25:ILE:HD13	27:G:74:MET:HE2	1.90	0.52
24:S:28:LYS:HD3	24:S:69:LEU:O	2.09	0.52
28:R:49:ILE:HG21	28:R:54:VAL:CA	2.39	0.52
23:Q:90:ASP:O	23:Q:94:LEU:HB2	2.08	0.52
8:E:18:THR:HG22	8:E:106:LYS:HZ1	1.74	0.52
2:B:1204:A:H1'	2:B:1206:G:N7	2.24	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:7:TYR:OH	26:F:29:ARG:HG3	2.09	0.52
2:B:2461:A:H2'	2:B:2462:C:H6	1.73	0.52
2:B:1475:G:H4'	2:B:1476:U:O5'	2.08	0.52
2:B:2064:C:H2'	2:B:2065:C:H6	1.74	0.52
2:B:2284:A:OP2	12:1:5:ARG:HG3	2.09	0.52
2:B:1401:G:H2'	2:B:1402:U:C6	2.44	0.52
2:B:2698:U:H2'	2:B:2699:C:C6	2.44	0.52
8:E:155:GLU:O	8:E:159:LEU:HB2	2.08	0.52
2:B:899:A:H2'	2:B:900:A:O4'	2.09	0.52
1:A:74:U:H2'	1:A:75:G:C8	2.44	0.52
24:S:55:ILE:O	24:S:58:ALA:HB3	2.09	0.52
20:J:24:THR:O	20:J:25:LEU:HB3	2.09	0.52
21:N:62:ASN:O	21:N:66:ALA:HB2	2.08	0.52
1:A:106:G:H2'	1:A:107:G:C8	2.43	0.52
2:B:2472:G:C2'	2:B:2475:C:H42	2.22	0.52
4:C:15:VAL:HG22	4:C:205:GLY:HA3	1.91	0.52
22:O:7:ARG:HA	22:O:10:ARG:NE	2.23	0.52
2:B:231:A:H3'	2:B:232:G:H8	1.75	0.52
2:B:1930:G:H22	2:B:1969:A:P	2.32	0.52
2:B:1930:G:H2'	2:B:1968:G:O6	2.08	0.52
2:B:1779:U:C5	2:B:1784:A:N7	2.78	0.52
2:B:93:G:H2'	2:B:94:A:O4'	2.09	0.52
2:B:431:U:O2'	2:B:432:A:H5'	2.09	0.52
2:B:2667:C:H2'	2:B:2668:G:O4'	2.09	0.52
2:B:2852:G:O2'	2:B:2853:C:H5'	2.10	0.52
2:B:1464:G:H2'	2:B:1465:G:H8	1.72	0.52
2:B:2309:A:H61	26:F:75:GLY:HA3	1.75	0.52
3:I:1:ALA:CB	3:I:2:LYS:HD2	2.39	0.52
32:6:80:GLU:HB2	32:6:99:LEU:CD1	2.40	0.52
2:B:2368:C:H2'	2:B:2369:A:H8	1.73	0.52
2:B:856:G:C1'	31:W:23:LYS:HB3	2.36	0.52
2:B:876:C:H2'	2:B:877:A:O4'	2.09	0.52
29:T:40:LYS:HE2	29:T:58:VAL:O	2.09	0.52
29:T:47:VAL:HG13	29:T:51:PHE:CD1	2.44	0.52
7:P:75:THR:CG2	7:P:76:HIS:H	2.17	0.52
4:C:28:PRO:HB3	4:C:81:GLU:OE1	2.09	0.52
2:B:2250:G:H8	2:B:2250:G:O5'	1.93	0.52
8:E:200:LEU:O	8:E:201:ALA:HB3	2.09	0.52
30:Z:33:LEU:HA	30:Z:51:VAL:O	2.10	0.52
8:E:31:VAL:HG21	8:E:104:ALA:HB2	1.91	0.52
3:I:126:ARG:HB3	3:I:126:ARG:NH1	2.24	0.52
19:H:119:ASN:HD21	19:H:121:VAL:HG13	1.74	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:N:83:LEU:HA	21:N:86:ARG:CG	2.36	0.52
17:M:41:LEU:HD13	17:M:46:ILE:HG22	1.91	0.52
22:O:106:LEU:CA	22:O:109:ALA:HB3	2.39	0.52
2:B:1033:U:C5	11:4:15:LYS:HE3	2.45	0.52
2:B:2679:A:H2'	2:B:2680:U:C6	2.45	0.52
2:B:338:G:N2	2:B:339:U:H1'	2.23	0.52
1:A:32:U:H1'	1:A:52:A:N7	2.23	0.52
2:B:738:G:H1'	2:B:759:G:N2	2.24	0.52
2:B:101:A:O4'	2:B:101:A:OP1	2.26	0.52
2:B:1513:U:O2'	2:B:1514:G:H5'	2.09	0.52
17:M:65:ILE:HG23	17:M:103:TYR:CE2	2.45	0.52
26:F:137:PHE:O	26:F:139:GLU:N	2.43	0.52
14:V:44:HIS:NE2	14:V:85:LYS:HB2	2.25	0.52
28:R:40:MET:HG3	28:R:48:LYS:HA	1.92	0.52
18:X:29:ARG:HH21	18:X:29:ARG:CB	2.22	0.52
2:B:995:C:O4'	23:Q:56:PHE:HD1	1.93	0.52
20:J:36:LEU:O	20:J:51:GLY:HA3	2.10	0.52
7:P:4:ILE:C	7:P:6:GLN:N	2.61	0.52
6:K:73:ASP:O	7:P:74:GLN:HG3	2.09	0.52
30:Z:32:ASN:C	30:Z:33:LEU:HD12	2.30	0.52
15:2:16:HIS:HB3	15:2:21:ARG:NH1	2.24	0.52
2:B:1548:A:H2'	2:B:1549:A:H8	1.70	0.52
22:O:83:LEU:HD12	22:O:87:ILE:O	2.09	0.52
2:B:2880:C:C1'	21:N:91:ALA:HB3	2.39	0.52
2:B:1228:G:O2'	2:B:1229:C:H5'	2.10	0.52
16:L:135:ILE:HG23	16:L:136:GLU:N	2.24	0.52
2:B:2594:C:O2'	2:B:2595:G:H5'	2.10	0.52
2:B:289:G:H2'	2:B:290:U:H6	1.71	0.52
2:B:2360:G:P	13:3:50:SER:HB3	2.49	0.52
2:B:1843:C:O2'	2:B:1844:C:H5'	2.10	0.52
9:Y:28:LEU:HA	9:Y:33:HIS:HD2	1.74	0.52
3:I:102:ARG:HG3	3:I:141:ASP:HB2	1.92	0.52
2:B:1640:A:H5'	2:B:1640:A:H8	1.74	0.52
32:6:102:ASN:O	32:6:104:PRO:HD3	2.09	0.52
2:B:1100:C:H2'	2:B:1101:U:C6	2.45	0.52
26:F:102:LEU:HD13	26:F:102:LEU:O	2.10	0.52
18:X:39:GLN:HB2	18:X:42:LEU:HD22	1.90	0.52
27:G:3:VAL:O	27:G:68:ARG:HG3	2.10	0.52
5:D:186:LEU:HD21	7:P:3:ILE:HD11	1.91	0.52
2:B:1031:G:N3	11:4:38:GLY:O	2.43	0.52
21:N:62:ASN:HD22	21:N:62:ASN:N	2.07	0.52
3:I:100:ILE:O	3:I:139:VAL:HA	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1947:C:H2'	2:B:1948:G:C8	2.44	0.52
17:M:31:PHE:HD1	17:M:105:MET:HB3	1.75	0.52
5:D:101:PHE:O	5:D:102:ALA:HB2	2.10	0.52
2:B:1941:C:O2	32:6:133:ARG:NH2	2.42	0.52
2:B:2487:G:H2'	2:B:2488:G:C8	2.44	0.52
2:B:925:A:O2'	2:B:926:G:H5'	2.09	0.52
32:6:80:GLU:HB2	32:6:99:LEU:HD13	1.92	0.52
2:B:899:A:H2'	2:B:900:A:C8	2.44	0.52
14:V:28:ALA:CB	14:V:89:ILE:HD12	2.40	0.52
5:D:10:GLY:HA3	5:D:26:VAL:N	2.18	0.52
2:B:1411:U:H2'	2:B:1412:U:C6	2.44	0.52
2:B:1549:A:H2'	2:B:1550:C:C6	2.45	0.52
2:B:493:G:H2'	2:B:494:G:O4'	2.09	0.52
2:B:1592:C:H2'	2:B:1593:A:H8	1.74	0.52
2:B:1473:G:O2'	2:B:1474:U:H5'	2.10	0.52
2:B:2377:A:H2'	2:B:2378:A:H8	1.73	0.52
2:B:1958:C:H2'	2:B:1959:G:H8	1.74	0.52
2:B:1987:A:H2'	2:B:1988:G:H8	1.75	0.52
18:X:56:LEU:O	18:X:57:LEU:HB2	2.09	0.52
22:O:70:ALA:C	22:O:72:ALA:H	2.13	0.52
19:H:44:ILE:O	19:H:48:GLU:HB2	2.10	0.52
27:G:34:ARG:HD3	27:G:34:ARG:N	2.24	0.52
5:D:90:PHE:HD2	5:D:94:GLN:HG3	1.75	0.52
20:J:45:THR:HG23	20:J:45:THR:O	2.09	0.52
20:J:6:ALA:HB3	20:J:45:THR:CG2	2.40	0.52
29:T:25:GLU:HA	29:T:28:ASN:O	2.10	0.52
8:E:48:THR:HG23	8:E:88:ARG:HH12	1.74	0.52
21:N:81:ASN:O	21:N:85:PRO:HD2	2.09	0.52
6:K:47:ILE:CG1	6:K:48:PRO:HD2	2.37	0.52
17:M:41:LEU:O	17:M:94:ALA:N	2.42	0.52
2:B:2812:G:H2'	2:B:2813:A:C8	2.45	0.52
6:K:64:ARG:HB2	6:K:83:ALA:HB3	1.92	0.52
2:B:2867:G:C2'	2:B:2867:G:N3	2.73	0.52
21:N:97:ILE:HD12	21:N:98:LEU:N	2.24	0.52
2:B:659:G:H4'	8:E:95:LYS:HB3	1.92	0.52
2:B:1339:G:H21	2:B:1603:A:H1'	1.75	0.52
3:I:99:LYS:HD3	3:I:99:LYS:N	2.25	0.52
2:B:2758:A:H2'	2:B:2759:G:O4'	2.09	0.52
2:B:2246:G:H2'	2:B:2247:A:H8	1.74	0.52
2:B:944:C:H2'	36:B:3147:HOH:O	2.09	0.52
2:B:2013:A:N3	24:S:88:ARG:NH1	2.58	0.52
2:B:1965:C:H5''	2:B:1966:A:H2'	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:X:45:GLN:O	18:X:47:ARG:N	2.42	0.52
2:B:2649:C:H2'	2:B:2650:U:H6	1.74	0.52
2:B:1735:A:H2'	2:B:1736:U:C6	2.45	0.52
4:C:20:ASN:ND2	4:C:23:LEU:HD13	2.25	0.52
6:K:71:ARG:HA	6:K:71:ARG:HE	1.75	0.52
27:G:17:LYS:HZ2	27:G:17:LYS:CA	2.22	0.52
23:Q:94:LEU:CD1	28:R:13:ARG:HB2	2.40	0.52
2:B:1060:U:O2	2:B:1088:A:C8	2.63	0.52
8:E:188:MET:HG2	8:E:193:VAL:CG2	2.36	0.52
8:E:18:THR:HG22	8:E:106:LYS:CE	2.40	0.52
19:H:131:SER:HB2	19:H:141:LYS:CA	2.40	0.52
2:B:2141:G:H2'	2:B:2142:A:C8	2.45	0.52
11:4:7:VAL:HG23	11:4:35:GLN:CB	2.38	0.52
6:K:39:ILE:HD13	6:K:39:ILE:H	1.75	0.52
2:B:454:A:H3'	2:B:455:C:H5'	1.92	0.52
23:Q:77:LYS:O	23:Q:80:ASN:HB3	2.09	0.52
2:B:1509:A:H5'	2:B:1510:G:H5'	1.91	0.52
2:B:1829:A:H2'	2:B:1830:C:H5'	1.92	0.52
32:6:76:LEU:HD11	32:6:97:ASP:C	2.30	0.52
2:B:1719:G:O2'	2:B:1720:U:H5'	2.10	0.52
29:T:64:LYS:H	29:T:64:LYS:HD2	1.75	0.52
17:M:33:LEU:HD22	17:M:128:THR:HB	1.92	0.52
2:B:936:A:H2'	2:B:937:C:C6	2.45	0.52
2:B:603:A:H4'	2:B:604:G:O5'	2.10	0.52
2:B:1984:G:O2'	2:B:1985:C:H5'	2.09	0.52
8:E:40:ARG:NH2	8:E:92:HIS:NE2	2.57	0.52
1:A:40:U:H1'	1:A:43:C:C5	2.44	0.52
14:V:31:TYR:HA	14:V:93:ARG:NH2	2.25	0.52
2:B:138:U:H6	2:B:138:U:O5'	1.92	0.52
23:Q:51:GLN:O	23:Q:54:ARG:HB2	2.10	0.52
25:U:85:ARG:NH1	25:U:86:PHE:H	2.07	0.52
27:G:162:ARG:NH2	27:G:168:VAL:HG21	2.24	0.52
2:B:1080:A:H4'	3:I:126:ARG:HD2	1.91	0.52
11:4:17:VAL:HG11	11:4:19:ARG:HE	1.75	0.52
2:B:2740:A:H2'	2:B:2741:A:C8	2.44	0.52
20:J:58:ASN:HD22	20:J:61:LYS:HD2	1.74	0.52
4:C:18:VAL:CG1	4:C:202:ARG:HD2	2.40	0.52
2:B:1874:C:H2'	2:B:1875:G:O4'	2.10	0.52
26:F:78:ILE:HA	26:F:82:TYR:CD1	2.45	0.52
2:B:1484:U:H2'	2:B:1485:U:C6	2.45	0.52
9:Y:23:LEU:HD13	9:Y:28:LEU:HB2	1.92	0.52
4:C:6:LYS:O	4:C:8:THR:HG23	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:G:144:ALA:HB1	27:G:163:TYR:HE1	1.75	0.52
2:B:1335:C:H2'	2:B:1336:A:H8	1.74	0.52
2:B:1256:G:H21	8:E:77:ILE:CG2	2.23	0.52
2:B:445:C:O2'	2:B:446:G:H5'	2.09	0.52
27:G:54:ARG:HD3	27:G:54:ARG:C	2.31	0.52
2:B:1197:G:H2'	2:B:1198:U:H6	1.75	0.52
32:6:78:ALA:HA	32:6:81:LYS:HD2	1.91	0.52
31:W:49:ASN:HA	31:W:61:LYS:H	1.75	0.52
14:V:4:ILE:O	14:V:63:ILE:HG23	2.10	0.52
14:V:80:HIS:CD2	14:V:83:LYS:H	2.28	0.52
20:J:6:ALA:CB	20:J:45:THR:HG21	2.39	0.52
9:Y:16:LEU:O	9:Y:19:HIS:HB2	2.10	0.52
4:C:18:VAL:HG11	4:C:202:ARG:HD2	1.92	0.52
2:B:2635:A:C5'	5:D:79:LEU:HB2	2.40	0.52
17:M:35:ALA:HB3	17:M:99:GLY:H	1.73	0.52
24:S:41:LYS:HB3	24:S:41:LYS:NZ	2.25	0.52
8:E:129:PRO:HD3	8:E:156:ASN:OD1	2.10	0.52
26:F:107:VAL:N	26:F:108:PRO:CD	2.73	0.51
26:F:124:ARG:HB3	26:F:126:ASN:OD1	2.10	0.51
32:6:65:THR:CA	32:6:103:ILE:HD12	2.40	0.51
31:W:18:LYS:O	31:W:34:SER:HA	2.10	0.51
14:V:63:ILE:HD12	14:V:63:ILE:H	1.76	0.51
28:R:4:VAL:HG21	28:R:40:MET:HB2	1.92	0.51
23:Q:108:LEU:HD23	28:R:48:LYS:HD3	1.91	0.51
2:B:1083:U:H2'	2:B:1085:A:OP2	2.10	0.51
2:B:1441:G:H4'	2:B:1628:G:OP1	2.10	0.51
2:B:1454:C:C1'	21:N:60:VAL:HG13	2.40	0.51
2:B:2529:G:O3'	27:G:174:LYS:HE2	2.09	0.51
2:B:2460:U:H2'	2:B:2461:A:H8	1.75	0.51
13:3:30:HIS:HD2	13:3:31:ILE:N	2.08	0.51
26:F:71:LYS:HE2	26:F:73:VAL:HB	1.92	0.51
32:6:70:SER:HB3	32:6:76:LEU:CD1	2.39	0.51
32:6:70:SER:HB3	32:6:76:LEU:CG	2.40	0.51
4:C:173:LEU:HD13	4:C:173:LEU:N	2.25	0.51
2:B:809:G:H2'	2:B:810:U:C6	2.45	0.51
2:B:2823:A:O2'	2:B:2824:C:H5'	2.11	0.51
2:B:584:C:OP1	23:Q:5:ARG:HB3	2.10	0.51
2:B:2852:G:H2'	2:B:2853:C:C6	2.45	0.51
21:N:71:ARG:HH21	21:N:71:ARG:HG2	1.75	0.51
4:C:255:LYS:C	4:C:257:ARG:H	2.14	0.51
2:B:820:A:H2'	2:B:821:A:O4'	2.10	0.51
26:F:65:LEU:O	26:F:86:CYS:HA	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:K:37:ASP:O	6:K:62:VAL:HG23	2.09	0.51
2:B:850:U:O2'	9:Y:22:THR:HA	2.10	0.51
27:G:71:LEU:HD13	27:G:74:MET:SD	2.50	0.51
2:B:1794:A:H2'	2:B:1795:C:H6	1.75	0.51
7:P:23:ASP:HA	7:P:88:ARG:HA	1.92	0.51
17:M:17:ASN:ND2	17:M:95:LEU:HG	2.25	0.51
2:B:970:U:H1'	2:B:985:C:P	2.50	0.51
2:B:144:A:O2'	2:B:145:C:H5'	2.11	0.51
2:B:1889:A:H2'	2:B:1890:A:H8	1.75	0.51
2:B:264:C:O2'	2:B:265:A:H5''	2.09	0.51
18:X:23:ARG:O	18:X:27:ASN:HB2	2.10	0.51
2:B:898:C:O2	2:B:898:C:H2'	2.10	0.51
23:Q:104:ALA:O	23:Q:106:THR:N	2.40	0.51
27:G:84:LYS:H	27:G:85:LYS:HD2	1.75	0.51
7:P:74:GLN:O	7:P:76:HIS:N	2.44	0.51
12:1:6:GLU:HB2	12:1:52:LYS:HZ3	1.75	0.51
2:B:1141:U:H4'	2:B:1142:A:C1'	2.41	0.51
23:Q:7:VAL:HG23	23:Q:8:ILE:N	2.26	0.51
17:M:126:ILE:H	17:M:126:ILE:HD12	1.75	0.51
6:K:75:SER:HA	7:P:72:VAL:O	2.11	0.51
9:Y:8:GLN:HB3	9:Y:31:ILE:C	2.31	0.51
13:3:60:CYS:C	13:3:62:PRO:HD3	2.31	0.51
2:B:2457:U:O2'	2:B:2458:G:H5'	2.11	0.51
8:E:58:LYS:O	8:E:60:TRP:N	2.44	0.51
4:C:239:PHE:HD1	4:C:241:LYS:H	1.58	0.51
2:B:154:U:H2'	2:B:155:A:H8	1.75	0.51
5:D:38:LYS:HE2	5:D:43:ASP:OD2	2.10	0.51
4:C:86:ARG:CZ	4:C:86:ARG:HB3	2.40	0.51
2:B:2291:U:O2'	2:B:2374:C:H1'	2.09	0.51
32:6:7:TYR:CE2	32:6:160:GLU:HG2	2.44	0.51
32:6:123:GLU:HA	32:6:126:ARG:HH11	1.74	0.51
2:B:1718:G:H2'	2:B:1719:G:C8	2.46	0.51
2:B:693:A:H2'	2:B:694:U:H6	1.74	0.51
2:B:871:U:H2'	2:B:872:U:C6	2.44	0.51
24:S:97:LEU:N	24:S:97:LEU:HD22	2.25	0.51
7:P:61:ARG:NH1	7:P:100:ARG:HA	2.25	0.51
32:6:12:SER:O	32:6:16:LYS:HD2	2.10	0.51
4:C:171:VAL:HG23	4:C:185:ALA:HB2	1.92	0.51
28:R:54:VAL:HG13	28:R:56:GLY:O	2.11	0.51
2:B:558:U:O2'	2:B:559:G:H5'	2.11	0.51
8:E:29:HIS:C	8:E:31:VAL:H	2.14	0.51
29:T:31:VAL:HA	29:T:84:TYR:H	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2529:G:H4'	27:G:174:LYS:HE2	1.92	0.51
10:O:38:LEU:HB3	10:O:41:HIS:CD2	2.46	0.51
27:G:10:VAL:HG13	27:G:14:VAL:HG21	1.92	0.51
2:B:1862:G:O2'	2:B:1863:G:H5'	2.10	0.51
2:B:2349:G:OP2	13:3:41:ARG:HD3	2.10	0.51
2:B:814:C:O2'	2:B:815:C:H5'	2.09	0.51
25:U:6:ARG:HG2	25:U:6:ARG:HH21	1.76	0.51
2:B:26:G:H1'	2:B:514:A:H61	1.76	0.51
1:A:33:G:O2'	1:A:34:A:H5'	2.11	0.51
2:B:2487:G:H2'	2:B:2488:G:H8	1.75	0.51
2:B:2617:U:O2'	2:B:2618:G:H5'	2.11	0.51
13:3:39:ARG:O	13:3:43:LEU:HG	2.10	0.51
3:I:2:LYS:O	3:I:3:LYS:HG3	2.09	0.51
14:V:80:HIS:CD2	14:V:83:LYS:HB2	2.45	0.51
19:H:5:LEU:HD22	19:H:9:VAL:HG21	1.93	0.51
29:T:39:THR:HG22	29:T:42:GLU:CG	2.39	0.51
20:J:44:TYR:C	20:J:44:TYR:HD2	2.13	0.51
27:G:85:LYS:HB2	27:G:164:ALA:HB3	1.91	0.51
28:R:83:TYR:HE2	28:R:85:LYS:HE3	1.75	0.51
29:T:59:ASN:O	29:T:84:TYR:HB2	2.10	0.51
22:O:14:ALA:O	22:O:18:LEU:HB2	2.09	0.51
3:I:18:ASN:HB2	3:I:38:CYS:SG	2.51	0.51
6:K:102:PRO:HD3	7:P:65:ASN:HB2	1.93	0.51
20:J:99:ARG:HA	20:J:102:GLU:HB2	1.93	0.51
2:B:18:U:H2'	2:B:19:A:H8	1.76	0.51
22:O:47:VAL:O	22:O:48:LEU:HD23	2.09	0.51
23:Q:20:ALA:HA	23:Q:23:TYR:CE1	2.45	0.51
2:B:2289:G:O2'	2:B:2290:G:H5'	2.11	0.51
20:J:87:ALA:HA	20:J:91:GLU:OE1	2.10	0.51
2:B:661:A:H1'	16:L:12:SER:O	2.10	0.51
2:B:1041:G:H2'	2:B:1042:G:H8	1.75	0.51
2:B:736:C:H2'	2:B:737:C:C6	2.46	0.51
19:H:3:VAL:HA	19:H:39:ALA:HB2	1.92	0.51
14:V:30:ILE:O	14:V:37:PRO:HA	2.10	0.51
20:J:44:TYR:CE2	23:Q:59:LEU:HD11	2.45	0.51
27:G:122:ALA:HA	27:G:132:LEU:HA	1.93	0.51
5:D:178:VAL:HB	5:D:188:LEU:CB	2.35	0.51
12:1:24:LYS:NZ	12:1:33:LEU:HB2	2.25	0.51
2:B:962:G:H2'	2:B:963:U:H6	1.75	0.51
25:U:80:ASP:OD1	25:U:95:PHE:HB3	2.09	0.51
19:H:90:LEU:HB2	19:H:123:ARG:HA	1.93	0.51
2:B:2344:U:H4'	2:B:2345:G:OP1	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:M:127:LYS:H	17:M:127:LYS:CD	2.18	0.51
2:B:2462:C:H2'	2:B:2463:C:C6	2.44	0.51
2:B:2835:A:N6	2:B:2878:U:H2'	2.25	0.51
2:B:1015:U:H2'	2:B:1016:G:H8	1.76	0.51
2:B:1355:G:O2'	2:B:1356:G:H5'	2.10	0.51
18:X:7:ARG:HA	18:X:7:ARG:NE	2.25	0.51
2:B:1690:A:H2'	2:B:1691:C:O4'	2.10	0.51
2:B:2828:G:O2'	2:B:2829:A:H5'	2.10	0.51
4:C:140:VAL:HG12	4:C:141:HIS:N	2.25	0.51
28:R:24:LYS:HA	28:R:94:THR:CG2	2.40	0.51
26:F:3:LEU:HD11	26:F:172:PHE:CD1	2.45	0.51
2:B:1287:A:N7	21:N:105:GLY:HA3	2.26	0.51
2:B:2732:G:C3'	2:B:2733:A:H5'	2.39	0.51
6:K:88:ASN:ND2	6:K:89:ASN:N	2.59	0.51
2:B:2472:G:H2'	2:B:2529:G:N2	2.26	0.51
4:C:116:GLN:HG2	4:C:117:SER:N	2.24	0.51
2:B:151:C:H2'	2:B:152:A:H8	1.76	0.51
2:B:988:A:P	9:Y:11:SER:HB3	2.50	0.51
17:M:21:ALA:HB1	17:M:100:LYS:HG2	1.93	0.51
5:D:179:ARG:CB	5:D:179:ARG:HH11	2.24	0.51
3:I:10:LEU:HD12	3:I:10:LEU:O	2.10	0.51
2:B:225:C:O2'	2:B:226:A:H5'	2.10	0.51
6:K:14:SER:HB2	6:K:51:LYS:H	1.76	0.51
1:A:59:A:H2'	1:A:60:C:O4'	2.11	0.51
2:B:2037:A:H2'	2:B:2038:G:H8	1.75	0.51
2:B:2052:A:O4'	5:D:147:GLY:HA3	2.10	0.51
18:X:34:SER:HB2	18:X:36:GLN:OE1	2.11	0.51
27:G:23:ILE:HD11	27:G:42:VAL:HG11	1.91	0.51
24:S:29:VAL:HG23	24:S:70:LYS:HA	1.91	0.51
23:Q:107:ALA:HB1	28:R:48:LYS:HE2	1.93	0.51
2:B:994:C:H3'	23:Q:53:LYS:NZ	2.26	0.51
4:C:75:ALA:CB	4:C:95:TYR:HA	2.41	0.51
30:Z:5:CYS:SG	30:Z:8:THR:HG23	2.51	0.51
30:Z:68:LEU:HD22	30:Z:78:TYR:CD1	2.45	0.51
2:B:720:U:H2'	2:B:721:A:C8	2.45	0.51
2:B:2354:C:H4'	31:W:31:LEU:CD2	2.40	0.51
2:B:418:C:H2'	2:B:419:U:H6	1.76	0.51
2:B:2359:C:O2'	2:B:2360:G:H5'	2.10	0.51
2:B:2455:G:H2'	2:B:2456:C:H6	1.74	0.51
2:B:2187:U:H2'	2:B:2188:U:C6	2.44	0.51
1:A:116:G:H4'	22:O:54:VAL:HG22	1.92	0.51
22:O:7:ARG:HA	22:O:10:ARG:CD	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1495:A:H2'	2:B:1496:A:C8	2.45	0.51
2:B:2403:C:O2'	2:B:2404:U:H5'	2.10	0.51
5:D:60:VAL:HA	5:D:64:GLU:OE2	2.11	0.51
2:B:237:C:O2'	2:B:238:C:H5'	2.11	0.51
30:Z:39:TRP:HA	30:Z:46:PHE:CD2	2.45	0.51
30:Z:39:TRP:HE1	30:Z:41:GLU:HG2	1.76	0.51
5:D:11:MET:HA	5:D:24:VAL:O	2.11	0.51
3:I:79:LEU:HD11	3:I:131:THR:OG1	2.11	0.51
26:F:11:VAL:HG21	26:F:172:PHE:HE1	1.74	0.51
15:2:19:ARG:O	15:2:22:MET:HB2	2.11	0.51
19:H:121:VAL:HA	19:H:123:ARG:HD3	1.93	0.51
19:H:87:GLU:N	19:H:87:GLU:CD	2.64	0.51
2:B:718:A:H5'	2:B:719:C:C5	2.45	0.51
2:B:175:G:O2'	2:B:176:A:H5'	2.11	0.51
2:B:2138:G:H2'	2:B:2139:U:C6	2.46	0.51
2:B:1432:G:H2'	2:B:1433:A:C8	2.45	0.51
2:B:1220:G:H2'	2:B:1221:C:C6	2.45	0.51
2:B:753:A:H2'	2:B:754:U:C6	2.45	0.51
4:C:34:GLU:O	4:C:34:GLU:HG3	2.11	0.51
2:B:2708:G:O2'	2:B:2709:G:H5'	2.11	0.51
2:B:1785:A:O2'	2:B:1786:A:H2'	2.11	0.51
2:B:2088:A:H2'	2:B:2089:C:C6	2.45	0.51
2:B:437:U:H2'	2:B:438:G:C8	2.45	0.51
4:C:171:VAL:HG23	4:C:185:ALA:CB	2.41	0.51
5:D:90:PHE:CD2	5:D:94:GLN:HG3	2.46	0.51
29:T:29:THR:HA	29:T:86:THR:HA	1.92	0.51
29:T:50:LEU:C	29:T:52:GLU:H	2.14	0.51
27:G:155:PRO:CA	27:G:170:THR:HA	2.41	0.51
7:P:20:ARG:HH21	7:P:20:ARG:HG2	1.76	0.51
13:3:20:GLY:HA3	13:3:48:MET:HE1	1.92	0.51
2:B:2305:U:H2'	2:B:2306:C:O4'	2.11	0.51
2:B:1044:C:O3'	2:B:1047:G:H5'	2.11	0.51
2:B:834:G:O2'	2:B:835:C:H5'	2.11	0.51
2:B:927:A:H2'	2:B:928:A:C8	2.46	0.51
26:F:78:ILE:HA	26:F:82:TYR:CG	2.46	0.51
16:L:57:LEU:HD13	16:L:60:ARG:NH1	2.26	0.51
7:P:103:THR:HG22	7:P:104:GLY:N	2.26	0.51
17:M:117:PHE:HA	17:M:120:ALA:HB3	1.93	0.51
1:A:95:U:H2'	1:A:96:G:C8	2.46	0.51
2:B:1425:G:H2'	2:B:1426:G:C8	2.46	0.51
5:D:7:LYS:HE2	5:D:198:GLY:HA2	1.92	0.51
2:B:1248:G:OP1	8:E:44:ARG:NH1	2.44	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1357:C:O2'	2:B:1358:G:H5'	2.11	0.51
2:B:2314:A:H2'	2:B:2315:G:H8	1.75	0.51
31:W:24:ARG:HA	31:W:66:VAL:N	2.26	0.50
27:G:18:ILE:HA	27:G:22:VAL:O	2.11	0.50
29:T:55:VAL:CA	29:T:87:LEU:HA	2.39	0.50
29:T:81:LYS:HG3	29:T:82:LYS:N	2.25	0.50
8:E:191:ASP:O	8:E:194:LYS:HB3	2.11	0.50
11:4:17:VAL:HG12	11:4:18:LYS:N	2.20	0.50
23:Q:4:LYS:HZ3	23:Q:7:VAL:HG22	1.74	0.50
2:B:152:A:H2'	2:B:153:U:H6	1.73	0.50
2:B:414:C:H2'	2:B:415:A:H8	1.76	0.50
2:B:2085:U:O2'	2:B:2086:U:H5'	2.12	0.50
16:L:42:SER:C	16:L:44:GLY:H	2.14	0.50
13:3:4:LYS:O	16:L:48:ARG:NH2	2.41	0.50
2:B:755:U:H2'	2:B:756:A:C8	2.47	0.50
32:6:12:SER:OG	32:6:13:HIS:N	2.44	0.50
2:B:2671:G:H2'	2:B:2672:U:C6	2.46	0.50
4:C:132:ARG:HA	4:C:166:ARG:NH1	2.27	0.50
2:B:2328:A:H2'	2:B:2329:U:H6	1.77	0.50
2:B:2367:G:O2'	2:B:2368:C:H5'	2.11	0.50
23:Q:57:ARG:NH2	23:Q:92:LYS:HE2	2.26	0.50
2:B:359:G:H2'	2:B:360:U:C5'	2.39	0.50
2:B:1188:U:O2'	2:B:1189:A:H5'	2.11	0.50
8:E:196:VAL:O	8:E:200:LEU:HD23	2.10	0.50
2:B:1021:A:H61	2:B:1142:A:H61	1.59	0.50
3:I:27:LEU:N	3:I:27:LEU:HD23	2.20	0.50
19:H:115:VAL:HB	19:H:132:PHE:HD1	1.76	0.50
21:N:72:ASP:HB3	21:N:75:ILE:CG1	2.41	0.50
2:B:2580:U:H5'	5:D:136:ASN:H	1.75	0.50
31:W:9:THR:OG1	31:W:10:ARG:N	2.43	0.50
21:N:49:GLU:OE2	21:N:95:THR:HG22	2.11	0.50
2:B:1534:U:O5'	2:B:1534:U:H6	1.94	0.50
2:B:1405:U:H2'	2:B:1406:U:H6	1.75	0.50
9:Y:56:VAL:HG12	9:Y:57:GLU:N	2.25	0.50
2:B:1418:G:H1'	2:B:1580:A:H61	1.76	0.50
4:C:209:ALA:HA	4:C:212:TRP:NE1	2.26	0.50
2:B:2074:U:O2'	2:B:2075:U:H5'	2.11	0.50
2:B:1924:C:O2'	2:B:1925:C:H5'	2.11	0.50
2:B:679:C:H2'	2:B:680:C:C6	2.46	0.50
4:C:180:MET:HB3	4:C:267:VAL:HG23	1.93	0.50
2:B:1946:U:O2'	2:B:1947:C:H5'	2.11	0.50
2:B:1938:A:O2'	2:B:1939:U:H5''	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2598:A:H5''	4:C:233:GLY:HA2	1.93	0.50
2:B:337:C:H2'	2:B:338:G:O4'	2.12	0.50
2:B:1577:C:H2'	2:B:1578:U:C6	2.46	0.50
20:J:41:LYS:O	23:Q:66:ALA:HB1	2.11	0.50
2:B:1883:U:H2'	2:B:1884:G:C1'	2.41	0.50
8:E:115:GLN:O	8:E:117:ARG:HG3	2.11	0.50
2:B:2298:A:N1	2:B:2321:U:C5	2.79	0.50
7:P:36:LYS:C	7:P:37:LYS:HD3	2.32	0.50
2:B:24:G:H1'	24:S:77:ASP:HB3	1.92	0.50
14:V:20:LEU:HB3	14:V:25:LYS:O	2.11	0.50
4:C:129:LEU:HB3	4:C:134:ILE:HG22	1.92	0.50
19:H:4:ILE:HA	19:H:18:GLN:HA	1.92	0.50
2:B:2351:G:H2'	2:B:2365:G:H22	1.76	0.50
31:W:66:VAL:HA	31:W:81:ILE:HG22	1.93	0.50
5:D:34:VAL:HA	5:D:50:VAL:HG12	1.92	0.50
7:P:29:VAL:HG12	7:P:80:VAL:HA	1.93	0.50
8:E:193:VAL:O	8:E:197:GLU:HB2	2.11	0.50
17:M:19:GLY:C	17:M:20:LEU:HD22	2.32	0.50
3:I:23:VAL:HG12	3:I:27:LEU:HD21	1.93	0.50
2:B:528:A:N1	2:B:2042:A:H2'	2.26	0.50
1:A:48:U:H2'	1:A:49:C:H6	1.77	0.50
12:1:9:LYS:HD3	12:1:9:LYS:N	2.24	0.50
2:B:531:C:H5''	2:B:532:A:C5	2.46	0.50
5:D:125:TRP:CD2	5:D:160:LYS:HB3	2.47	0.50
1:A:13:G:H2'	1:A:14:U:H5''	1.92	0.50
2:B:1848:A:H2'	2:B:1849:G:H8	1.76	0.50
2:B:1720:U:C2'	2:B:1721:G:H5'	2.41	0.50
2:B:2026:U:H2'	2:B:2027:G:C8	2.46	0.50
31:W:46:ALA:HB2	31:W:78:PHE:CD1	2.47	0.50
1:A:52:A:C2'	1:A:53:A:H5'	2.41	0.50
2:B:1778:U:H2'	2:B:1784:A:H62	1.77	0.50
4:C:20:ASN:HD22	4:C:23:LEU:HD13	1.76	0.50
2:B:309:A:H4'	25:U:15:GLY:HA3	1.93	0.50
2:B:622:G:OP1	16:L:103:ILE:HD13	2.12	0.50
26:F:102:LEU:HA	26:F:106:ALA:HB3	1.93	0.50
2:B:2385:C:H2'	2:B:2386:A:H8	1.77	0.50
31:W:35:ILE:HG13	31:W:57:THR:OG1	2.11	0.50
14:V:76:ASP:C	17:M:136:MET:HE3	2.31	0.50
14:V:79:ARG:HA	14:V:86:LEU:HA	1.91	0.50
12:1:8:ILE:HG13	12:1:51:ALA:HA	1.93	0.50
21:N:101:GLY:O	21:N:102:PHE:HB2	2.11	0.50
2:B:2041:U:H2'	2:B:2042:A:H8	1.76	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1443:U:H2'	2:B:1444:G:C8	2.47	0.50
2:B:1445:G:H2'	2:B:1446:C:C6	2.47	0.50
21:N:2:ARG:HA	21:N:5:LYS:HD3	1.93	0.50
3:I:129:GLU:HB3	3:I:133:ARG:HH12	1.76	0.50
10:O:39:ARG:O	10:O:40:HIS:HB2	2.11	0.50
26:F:78:ILE:N	26:F:78:ILE:HD12	2.26	0.50
4:C:64:VAL:HG11	4:C:66:PHE:CE2	2.47	0.50
2:B:1830:C:H2'	2:B:1831:G:H8	1.75	0.50
2:B:811:U:OP2	16:L:20:GLY:HA2	2.12	0.50
2:B:2699:C:H2'	2:B:2700:A:C8	2.46	0.50
1:A:88:C:H2'	1:A:89:U:C6	2.46	0.50
2:B:687:C:H2'	2:B:688:U:O4'	2.11	0.50
2:B:1257:C:H5'	8:E:78:TRP:CZ3	2.46	0.50
27:G:140:ILE:HD12	27:G:141:GLY:N	2.27	0.50
5:D:10:GLY:HA2	7:P:4:ILE:HD11	1.94	0.50
4:C:93:VAL:HG21	4:C:115:ILE:HD11	1.92	0.50
5:D:107:VAL:HA	5:D:204:LYS:O	2.12	0.50
4:C:90:ILE:HD13	4:C:103:ILE:O	2.11	0.50
2:B:962:G:H2'	2:B:963:U:C6	2.46	0.50
8:E:29:HIS:O	8:E:32:VAL:HG22	2.11	0.50
27:G:108:PHE:HE1	27:G:151:ARG:HD3	1.75	0.50
2:B:2720:U:H5''	7:P:52:ARG:HH21	1.73	0.50
19:H:131:SER:OG	19:H:132:PHE:N	2.45	0.50
22:O:16:ARG:HD3	22:O:19:GLN:NE2	2.27	0.50
2:B:30:G:OP1	23:Q:4:LYS:HG2	2.12	0.50
2:B:2106:U:H2'	2:B:2107:G:H8	1.76	0.50
2:B:1047:G:H1'	2:B:1111:A:N6	2.26	0.50
22:O:15:ARG:HH21	22:O:95:SER:HB3	1.75	0.50
22:O:52:SER:OG	22:O:54:VAL:HG12	2.10	0.50
22:O:6:ALA:HB3	22:O:10:ARG:HH11	1.76	0.50
2:B:1495:A:H2'	2:B:1496:A:H8	1.77	0.50
2:B:765:C:O2'	2:B:766:U:H5'	2.11	0.50
28:R:32:THR:HA	28:R:61:ALA:O	2.11	0.50
2:B:817:C:H2'	2:B:818:G:O4'	2.11	0.50
2:B:2497:A:H5''	36:B:3512:HOH:O	2.10	0.50
2:B:41:C:H2'	2:B:42:A:O4'	2.10	0.50
4:C:166:ARG:HB3	4:C:171:VAL:HG22	1.92	0.50
2:B:622:G:H2'	2:B:623:C:H6	1.77	0.50
26:F:107:VAL:HB	26:F:108:PRO:HD3	1.93	0.50
31:W:37:VAL:CG1	31:W:38:ARG:H	2.21	0.50
2:B:159:G:O2'	2:B:160:A:H5''	2.12	0.50
8:E:126:VAL:CG2	8:E:133:LEU:HB2	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:M:40:ARG:HB3	17:M:95:LEU:HD12	1.93	0.50
5:D:39:ASP:HB3	5:D:42:ASN:HB3	1.93	0.50
13:3:50:SER:C	13:3:52:GLY:H	2.14	0.50
2:B:1777:U:O2'	2:B:1778:U:H5'	2.11	0.50
2:B:1883:U:H2'	2:B:1884:G:H1'	1.93	0.50
2:B:2408:U:O2'	2:B:2409:G:H5'	2.12	0.50
32:6:80:GLU:HG3	32:6:92:PRO:HG2	1.92	0.50
31:W:51:GLY:HA3	31:W:59:PHE:HB3	1.93	0.50
2:B:141:G:O6	29:T:2:ILE:HG21	2.10	0.50
7:P:4:ILE:O	7:P:6:GLN:N	2.44	0.50
12:1:49:LYS:HG3	12:1:50:GLU:N	2.22	0.50
2:B:576:U:H2'	2:B:577:G:C8	2.46	0.50
2:B:1551:A:H5''	2:B:1552:A:OP2	2.12	0.50
21:N:72:ASP:C	21:N:74:GLU:H	2.14	0.50
3:I:17:ALA:C	3:I:19:PRO:HD3	2.31	0.50
2:B:1915:U:H2'	2:B:1916:A:H8	1.74	0.50
2:B:1330:C:O2'	2:B:1331:G:H5'	2.12	0.50
2:B:2840:C:O2'	2:B:2841:C:H5'	2.12	0.50
2:B:2840:C:H2'	2:B:2841:C:H6	1.75	0.50
2:B:2543:G:H2'	2:B:2544:G:C8	2.47	0.50
22:O:105:ALA:C	22:O:107:ALA:H	2.14	0.50
2:B:2729:G:H2'	2:B:2730:C:C6	2.47	0.50
5:D:114:LYS:HD2	5:D:116:LYS:HZ1	1.76	0.50
2:B:1827:U:O2'	2:B:1828:G:H5'	2.11	0.50
1:A:16:G:O2'	1:A:17:C:H5'	2.11	0.50
2:B:679:C:O2'	2:B:680:C:H5'	2.11	0.50
2:B:522:A:H2'	2:B:523:C:C6	2.47	0.50
2:B:2361:G:OP1	13:3:25:HIS:HA	2.12	0.50
16:L:142:ILE:HD12	16:L:142:ILE:N	2.27	0.50
8:E:23:PHE:HA	8:E:107:SER:OG	2.11	0.50
2:B:408:G:O2'	2:B:409:G:H5'	2.12	0.50
26:F:99:PHE:HA	26:F:102:LEU:HD12	1.93	0.50
25:U:11:ILE:HD13	25:U:20:LYS:H	1.75	0.50
29:T:40:LYS:HA	29:T:43:ILE:HD12	1.93	0.50
29:T:38:ALA:HB3	29:T:81:LYS:NZ	2.27	0.50
27:G:84:LYS:HG3	27:G:131:VAL:HB	1.94	0.50
20:J:81:ILE:HG12	20:J:82:GLY:N	2.27	0.50
20:J:26:GLY:O	20:J:30:THR:HG22	2.12	0.50
27:G:106:LEU:O	27:G:108:PHE:HD1	1.95	0.50
19:H:131:SER:HA	19:H:140:ALA:O	2.12	0.50
29:T:32:LEU:O	29:T:83:ALA:HB2	2.12	0.50
3:I:19:PRO:HB2	3:I:22:PRO:HD2	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:K:47:ILE:HG23	6:K:48:PRO:HD2	1.94	0.50
3:I:54:ILE:C	3:I:54:ILE:HD13	2.31	0.50
3:I:85:ILE:HD12	3:I:87:SER:O	2.12	0.50
2:B:1372:U:H1'	2:B:2214:C:C4	2.47	0.50
5:D:40:LEU:HA	5:D:45:TYR:H	1.76	0.50
21:N:9:GLN:O	21:N:11:ASN:N	2.45	0.50
2:B:348:A:H2'	2:B:349:U:O4'	2.11	0.50
2:B:521:U:H2'	2:B:522:A:H8	1.75	0.50
29:T:44:LYS:O	29:T:48:GLN:HG2	2.12	0.50
16:L:40:SER:OG	16:L:41:ARG:HG3	2.11	0.50
1:A:20:G:H2'	1:A:21:G:H8	1.77	0.50
18:X:17:GLU:HB3	18:X:53:VAL:HG11	1.94	0.50
2:B:377:G:O2'	2:B:378:C:H5'	2.12	0.50
4:C:145:MET:HB2	4:C:152:GLN:NE2	2.27	0.50
18:X:42:LEU:O	18:X:46:VAL:HG23	2.12	0.50
2:B:704:G:C2'	2:B:726:G:H22	2.15	0.50
27:G:30:GLY:HA3	27:G:78:VAL:HG12	1.92	0.50
25:U:21:ARG:HG3	25:U:21:ARG:HH11	1.77	0.50
23:Q:85:ALA:O	23:Q:86:SER:C	2.50	0.50
12:1:29:LYS:N	12:1:30:PRO:HD3	2.26	0.50
2:B:296:U:H2'	2:B:297:G:H8	1.77	0.50
27:G:88:LEU:HD11	27:G:94:ARG:N	2.27	0.50
2:B:1439:A:N7	2:B:1440:U:C2	2.80	0.50
2:B:1441:G:O2'	2:B:1442:U:H5'	2.12	0.50
3:I:21:PRO:CB	3:I:22:PRO:HD3	2.38	0.50
3:I:11:GLN:HA	3:I:55:PRO:HA	1.93	0.50
4:C:41:GLY:CA	4:C:53:ILE:HG21	2.40	0.50
16:L:79:LEU:HB2	16:L:113:ALA:HB3	1.92	0.50
2:B:2260:C:O2'	2:B:2261:C:H5'	2.12	0.50
2:B:945:A:H3'	2:B:946:C:H5"	1.93	0.50
2:B:1854:A:H2	2:B:2087:G:N3	2.10	0.50
2:B:1936:A:H2	2:B:1943:U:O4	1.95	0.50
22:O:6:ALA:CB	22:O:10:ARG:HH11	2.25	0.50
1:A:54:G:H21	26:F:25:MET:CE	2.25	0.50
2:B:2309:A:H2'	2:B:2310:C:C6	2.47	0.50
8:E:129:PRO:HG3	8:E:156:ASN:HA	1.93	0.50
15:2:4:THR:O	15:2:5:PHE:HB2	2.12	0.50
2:B:991:C:H5"	2:B:1185:G:H2'	1.94	0.50
32:6:65:THR:N	32:6:103:ILE:HD12	2.26	0.49
8:E:5:LEU:CD1	8:E:10:SER:HB2	2.30	0.49
31:W:18:LYS:HG3	31:W:19:ARG:CZ	2.42	0.49
14:V:29:ILE:HD13	14:V:31:TYR:CE2	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:5:LEU:O	19:H:6:LEU:HB2	2.12	0.49
20:J:25:LEU:HD13	20:J:26:GLY:N	2.27	0.49
21:N:102:PHE:HD1	21:N:102:PHE:N	2.10	0.49
30:Z:32:ASN:O	30:Z:33:LEU:O	2.29	0.49
2:B:1141:U:OP2	20:J:65:THR:HG21	2.12	0.49
19:H:117:LEU:HD13	19:H:130:VAL:HG13	1.94	0.49
29:T:23:ALA:C	29:T:25:GLU:H	2.15	0.49
2:B:1275:A:N3	2:B:1275:A:H2'	2.27	0.49
21:N:83:LEU:HA	21:N:86:ARG:CB	2.41	0.49
2:B:1793:C:H2'	2:B:1794:A:H8	1.77	0.49
20:J:56:VAL:HG12	20:J:57:LEU:N	2.27	0.49
2:B:2471:A:O2'	2:B:2472:G:O5'	2.30	0.49
1:A:50:A:OP1	22:O:68:LYS:HB2	2.12	0.49
2:B:1562:U:H2'	2:B:1563:U:H6	1.74	0.49
2:B:606:U:OP2	8:E:99:LYS:HD2	2.11	0.49
32:6:58:VAL:HG12	32:6:66:LEU:HG	1.94	0.49
31:W:32:ALA:C	31:W:34:SER:H	2.15	0.49
2:B:878:A:H5'	2:B:900:A:N1	2.27	0.49
11:4:2:LYS:CD	11:4:4:ARG:HE	2.15	0.49
7:P:91:VAL:O	7:P:92:ARG:HB3	2.12	0.49
19:H:113:SER:N	19:H:132:PHE:HE1	2.09	0.49
3:I:17:ALA:O	3:I:18:ASN:HB3	2.12	0.49
3:I:78:LEU:HD13	3:I:108:ILE:HG23	1.95	0.49
31:W:10:ARG:O	31:W:11:ASN:HB2	2.11	0.49
2:B:2590:A:O2'	2:B:2591:C:H5'	2.13	0.49
2:B:1033:U:H5	11:4:15:LYS:HE3	1.76	0.49
2:B:118:A:N3	2:B:178:G:H1'	2.28	0.49
27:G:16:VAL:HG11	27:G:44:HIS:NE2	2.27	0.49
2:B:1165:A:H2'	2:B:1166:G:H8	1.77	0.49
2:B:2281:A:O2'	2:B:2282:G:H5'	2.12	0.49
2:B:146:A:H2'	2:B:147:C:C6	2.47	0.49
2:B:981:A:H2'	2:B:982:C:C5'	2.42	0.49
29:T:7:LEU:C	29:T:9:LYS:H	2.16	0.49
2:B:1640:A:O2'	2:B:1641:A:H5'	2.13	0.49
19:H:75:LEU:N	19:H:75:LEU:HD23	2.27	0.49
27:G:139:VAL:O	27:G:142:GLN:HB3	2.12	0.49
2:B:2710:C:H2'	2:B:2711:A:H8	1.77	0.49
2:B:1994:C:O2'	2:B:1995:U:H5'	2.13	0.49
16:L:123:ARG:HA	16:L:143:GLU:CB	2.40	0.49
31:W:39:GLN:CG	31:W:42:THR:HB	2.42	0.49
29:T:40:LYS:O	29:T:43:ILE:HB	2.13	0.49
4:C:128:THR:HA	4:C:190:THR:CA	2.40	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1244:A:O2'	2:B:1245:G:H5'	2.12	0.49
2:B:616:A:H4'	8:E:101:TYR:CE2	2.48	0.49
8:E:47:LYS:HA	8:E:88:ARG:HH11	1.76	0.49
2:B:1442:U:O2'	2:B:1443:U:H5'	2.12	0.49
5:D:118:PHE:HE2	21:N:1:MET:HB3	1.78	0.49
2:B:958:U:O4	17:M:16:ARG:HA	2.13	0.49
30:Z:17:ASN:O	30:Z:18:ARG:C	2.51	0.49
8:E:109:LEU:O	8:E:112:LEU:HB2	2.12	0.49
2:B:912:C:H2'	2:B:913:U:C6	2.47	0.49
2:B:584:C:P	23:Q:5:ARG:HD3	2.52	0.49
1:A:32:U:H4'	1:A:52:A:H62	1.76	0.49
5:D:101:PHE:O	5:D:180:VAL:HG11	2.11	0.49
32:6:15:GLN:HA	32:6:168:PHE:CE2	2.47	0.49
2:B:485:C:O2'	2:B:486:C:H5'	2.12	0.49
2:B:1463:C:H2'	2:B:1464:G:C8	2.47	0.49
2:B:1196:C:H2'	2:B:1197:G:C8	2.46	0.49
2:B:2037:A:H2'	2:B:2038:G:C8	2.48	0.49
16:L:41:ARG:HG2	16:L:41:ARG:HH21	1.78	0.49
2:B:2791:G:H2'	2:B:2792:A:O4'	2.12	0.49
13:3:9:ALA:C	13:3:11:LYS:H	2.15	0.49
13:3:32:LEU:HA	13:3:35:LYS:HD2	1.94	0.49
21:N:24:MET:O	21:N:27:SER:HB3	2.12	0.49
2:B:2588:G:H2'	2:B:2589:A:O4'	2.12	0.49
22:O:29:HIS:HB3	22:O:36:TYR:HB2	1.95	0.49
4:C:144:GLU:HB3	4:C:187:CYS:HB3	1.94	0.49
2:B:2466:C:OP1	11:4:4:ARG:HD2	2.12	0.49
4:C:189:ALA:C	4:C:190:THR:HG23	2.32	0.49
30:Z:7:VAL:HG11	30:Z:51:VAL:HG13	1.93	0.49
2:B:1021:A:H61	2:B:1142:A:N6	2.10	0.49
27:G:104:LEU:HD22	27:G:106:LEU:HD22	1.94	0.49
19:H:113:SER:N	19:H:132:PHE:CE1	2.81	0.49
29:T:32:LEU:HG	29:T:83:ALA:HB2	1.93	0.49
2:B:2148:G:O3'	2:B:2149:U:H6	1.95	0.49
8:E:150:THR:OG1	8:E:151:GLY:N	2.45	0.49
2:B:513:A:H8	2:B:513:A:O5'	1.95	0.49
2:B:2677:G:H2'	2:B:2678:C:C6	2.48	0.49
2:B:1518:C:H2'	2:B:1519:G:H8	1.78	0.49
20:J:98:GLU:HB3	20:J:124:VAL:HG21	1.93	0.49
16:L:77:ILE:HB	16:L:109:LYS:O	2.13	0.49
2:B:1789:A:P	4:C:220:ARG:HD3	2.52	0.49
23:Q:77:LYS:HE2	23:Q:116:LEU:HD13	1.93	0.49
26:F:127:TYR:HB2	26:F:155:ILE:HD13	1.94	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2134:A:H5'	2:B:2135:A:OP2	2.13	0.49
2:B:207:A:H2'	2:B:208:C:O4'	2.12	0.49
2:B:1526:C:O2'	2:B:1527:G:H5'	2.11	0.49
31:W:49:ASN:C	31:W:50:VAL:HG22	2.32	0.49
7:P:3:ILE:HG23	7:P:4:ILE:N	2.27	0.49
29:T:68:LYS:N	29:T:68:LYS:HD3	2.27	0.49
25:U:87:GLU:OE2	25:U:88:ASP:HB2	2.12	0.49
27:G:93:TYR:O	27:G:94:ARG:HG3	2.13	0.49
2:B:96:C:H4'	18:X:41:HIS:CG	2.46	0.49
19:H:125:THR:HA	19:H:146:VAL:CB	2.42	0.49
29:T:21:SER:HB3	29:T:31:VAL:CG2	2.43	0.49
2:B:1275:A:H2'	2:B:1276:A:O4'	2.12	0.49
6:K:119:ALA:HB3	6:K:120:PRO:HD3	1.94	0.49
2:B:2898:U:H2'	2:B:2899:A:H8	1.77	0.49
4:C:43:ASN:HD22	4:C:44:ASN:H	1.61	0.49
2:B:1592:C:H2'	2:B:1593:A:C8	2.46	0.49
2:B:1680:U:H2'	2:B:1681:G:O4'	2.12	0.49
2:B:2015:A:C2	10:O:2:VAL:HG22	2.47	0.49
2:B:477:A:H2'	2:B:478:A:H8	1.78	0.49
2:B:2626:C:H2'	2:B:2627:G:C8	2.48	0.49
2:B:2491:U:H5''	2:B:2570:G:C5'	2.41	0.49
2:B:2505:G:O2'	2:B:2506:U:H5'	2.12	0.49
2:B:707:G:O2'	2:B:708:G:H5'	2.12	0.49
2:B:2718:G:H4'	7:P:95:LYS:HB2	1.94	0.49
27:G:25:ILE:CG2	27:G:78:VAL:HG21	2.43	0.49
23:Q:91:ARG:HH12	28:R:10:LYS:CB	2.24	0.49
28:R:20:VAL:HG12	28:R:21:ARG:N	2.28	0.49
17:M:19:GLY:CA	17:M:97:GLN:HB2	2.39	0.49
27:G:94:ARG:NH2	27:G:104:LEU:HA	2.27	0.49
19:H:131:SER:HB2	19:H:141:LYS:HG3	1.95	0.49
2:B:1822:C:O2'	2:B:1823:G:H5'	2.12	0.49
2:B:1824:G:O2'	2:B:1825:U:H5'	2.12	0.49
2:B:1824:G:OP1	4:C:51:ARG:HD3	2.12	0.49
2:B:2896:C:H2'	2:B:2897:U:C6	2.47	0.49
5:D:53:GLY:C	5:D:76:GLY:HA2	2.32	0.49
26:F:69:ALA:HB3	26:F:80:GLN:O	2.13	0.49
4:C:221:GLY:O	4:C:223:ALA:N	2.45	0.49
2:B:659:G:N2	8:E:30:GLN:NE2	2.60	0.49
23:Q:65:ASN:HD21	23:Q:69:ARG:HH11	1.59	0.49
1:A:115:A:O2'	1:A:116:G:H5'	2.12	0.49
2:B:1942:C:C4'	32:6:133:ARG:HH12	2.24	0.49
2:B:49:A:H5''	2:B:51:G:O4'	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:L:95:LEU:HB2	16:L:101:ILE:CG1	2.42	0.49
32:6:67:VAL:HG23	32:6:67:VAL:O	2.12	0.49
32:6:29:ARG:NH2	32:6:87:ASP:O	2.46	0.49
6:K:35:VAL:HG12	6:K:69:VAL:CG2	2.42	0.49
2:B:138:U:H2'	2:B:140:C:C1'	2.42	0.49
23:Q:86:SER:HB3	28:R:51:VAL:HA	1.94	0.49
23:Q:57:ARG:HG2	23:Q:57:ARG:HH11	1.77	0.49
2:B:994:C:O2	28:R:10:LYS:HE3	2.13	0.49
27:G:123:GLU:HG2	27:G:124:CYS:N	2.28	0.49
26:F:4:HIS:O	26:F:7:TYR:HB3	2.12	0.49
17:M:69:PRO:HG2	17:M:70:ASP:H	1.77	0.49
6:K:39:ILE:HD13	6:K:60:ALA:O	2.13	0.49
1:A:102:G:O2'	1:A:103:U:H5'	2.13	0.49
2:B:729:G:C5	4:C:206:LYS:HB2	2.47	0.49
16:L:65:GLY:O	16:L:66:PHE:HB3	2.13	0.49
16:L:30:THR:O	16:L:32:GLY:N	2.46	0.49
2:B:1488:C:O2'	2:B:1489:C:H5'	2.12	0.49
2:B:1256:G:H21	8:E:77:ILE:HG22	1.76	0.49
12:1:44:GLN:OE1	12:1:44:GLN:HA	2.12	0.49
2:B:305:C:O2'	2:B:306:U:H5'	2.13	0.49
13:3:56:LEU:O	13:3:59:ALA:HB3	2.13	0.49
4:C:153:LEU:HD13	4:C:175:LEU:CD2	2.43	0.49
16:L:92:LEU:H	16:L:92:LEU:HD23	1.77	0.49
8:E:172:ALA:O	8:E:199:MET:HE3	2.13	0.49
6:K:19:VAL:CB	6:K:41:ILE:HD11	2.43	0.49
6:K:39:ILE:N	6:K:39:ILE:HD13	2.27	0.49
2:B:960:A:H61	17:M:82:MET:CE	2.25	0.49
10:0:42:ILE:HG22	10:0:43:THR:O	2.12	0.49
2:B:2339:C:H2'	2:B:2340:A:H8	1.76	0.49
2:B:533:G:H2'	2:B:534:U:C6	2.48	0.49
2:B:1683:U:H2'	2:B:1684:G:C8	2.48	0.49
1:A:113:C:H2'	1:A:114:C:C6	2.47	0.49
26:F:79:ARG:O	26:F:82:TYR:HB2	2.13	0.49
2:B:2439:A:C8	2:B:2586:U:H4'	2.48	0.49
2:B:1829:A:HO2'	4:C:14:HIS:CD2	2.31	0.49
13:3:44:ARG:N	13:3:45:PRO:HD2	2.28	0.49
2:B:600:G:H2'	2:B:601:C:C6	2.48	0.49
2:B:2825:G:H5''	2:B:2825:G:N3	2.27	0.49
2:B:667:U:H2'	2:B:668:A:O4'	2.13	0.49
31:W:77:LYS:HZ3	31:W:77:LYS:HB2	1.78	0.49
21:N:65:LEU:HD11	21:N:69:ARG:CZ	2.43	0.49
5:D:174:SER:O	5:D:175:LEU:HB2	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:52:A:H2'	1:A:53:A:H5'	1.94	0.49
2:B:2361:G:O2'	2:B:2362:C:H5'	2.13	0.49
2:B:1785:A:H2'	2:B:1787:A:N7	2.27	0.49
2:B:697:G:H2'	2:B:698:C:C6	2.47	0.49
2:B:796:C:H2'	2:B:797:G:H8	1.78	0.49
2:B:2830:C:H1'	2:B:2836:U:O4'	2.13	0.49
26:F:92:GLY:O	26:F:95:MET:HB3	2.12	0.49
2:B:878:A:H5'	2:B:900:A:N6	2.26	0.49
18:X:29:ARG:NH1	29:T:12:ARG:HG2	2.28	0.49
23:Q:96:ASP:C	23:Q:98:ALA:N	2.66	0.49
2:B:1161:C:C1'	28:R:9:GLY:HA3	2.43	0.49
16:L:116:VAL:HG22	16:L:117:THR:N	2.28	0.49
30:Z:30:LEU:H	30:Z:30:LEU:CD2	2.19	0.49
21:N:47:VAL:O	21:N:51:LEU:HD13	2.13	0.49
21:N:56:LYS:HD2	21:N:88:ALA:HA	1.94	0.49
2:B:2107:G:H2'	2:B:2108:A:C8	2.48	0.49
8:E:61:ARG:O	8:E:62:GLN:C	2.50	0.49
12:1:3:GLY:C	12:1:5:ARG:H	2.14	0.49
2:B:2025:C:H2'	2:B:2026:U:H6	1.78	0.49
9:Y:13:ILE:HG22	9:Y:14:GLY:N	2.28	0.49
2:B:351:C:H2'	2:B:352:A:H8	1.78	0.49
1:A:87:U:C2'	1:A:88:C:O5'	2.61	0.49
17:M:55:ARG:NH2	17:M:55:ARG:HG3	2.27	0.49
2:B:433:C:H2'	2:B:434:U:C6	2.48	0.49
2:B:622:G:H2'	2:B:623:C:C6	2.48	0.49
32:6:93:SER:N	32:6:100:TYR:O	2.45	0.49
14:V:4:ILE:HD11	14:V:61:LEU:HB3	1.95	0.49
28:R:40:MET:CG	28:R:48:LYS:HA	2.43	0.49
7:P:3:ILE:HD13	7:P:3:ILE:C	2.33	0.49
20:J:28:LEU:HD23	20:J:29:ALA:N	2.28	0.49
30:Z:49:LEU:HD13	30:Z:51:VAL:CG2	2.43	0.49
18:X:1:MET:HG2	18:X:4:LYS:HZ3	1.77	0.49
10:0:41:HIS:HB2	21:N:99:LYS:O	2.13	0.49
2:B:782:A:C2	4:C:224:MET:HB3	2.48	0.49
20:J:114:LEU:O	20:J:117:ALA:HB3	2.13	0.49
2:B:7:G:H2'	2:B:8:C:C6	2.48	0.49
2:B:2015:A:H2'	2:B:2016:U:O4'	2.13	0.49
25:U:24:VAL:HG22	25:U:35:VAL:HG22	1.95	0.49
32:6:151:GLU:HA	32:6:154:THR:HG22	1.95	0.49
2:B:565:C:O2'	2:B:566:U:H5'	2.13	0.49
2:B:1485:U:H2'	2:B:1486:U:H6	1.77	0.49
17:M:32:GLY:HA3	17:M:103:TYR:O	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:S:96:ILE:HG23	24:S:96:ILE:O	2.12	0.49
4:C:4:LYS:HE2	4:C:5:CYS:H	1.77	0.49
2:B:84:A:H4'	2:B:85:G:O5'	2.13	0.49
2:B:1845:G:O2'	2:B:1846:G:H5'	2.12	0.49
2:B:191:A:H2'	2:B:192:C:C6	2.48	0.49
32:6:59:THR:O	32:6:61:PRO:HD3	2.12	0.48
2:B:2352:A:H2'	2:B:2353:G:O4'	2.13	0.48
1:A:75:G:H2'	1:A:76:G:C8	2.48	0.48
23:Q:105:PHE:O	23:Q:109:VAL:HG23	2.13	0.48
23:Q:108:LEU:CA	28:R:48:LYS:HD3	2.43	0.48
23:Q:86:SER:HB2	28:R:51:VAL:HA	1.93	0.48
29:T:11:LEU:CD2	29:T:46:ALA:HB1	2.43	0.48
21:N:102:PHE:N	21:N:102:PHE:CD1	2.80	0.48
2:B:299:A:N6	2:B:322:A:O2'	2.44	0.48
2:B:451:U:OP1	8:E:47:LYS:HD2	2.14	0.48
8:E:88:ARG:O	8:E:90:GLN:HG3	2.13	0.48
2:B:1439:A:N7	2:B:1440:U:N1	2.61	0.48
22:O:110:ALA:O	22:O:115:LEU:HB2	2.13	0.48
3:I:57:VAL:HG23	3:I:71:LYS:NZ	2.27	0.48
2:B:545:U:C5	2:B:546:U:H1'	2.48	0.48
6:K:107:LEU:C	6:K:109:SER:H	2.17	0.48
25:U:27:VAL:CG2	25:U:33:VAL:HG12	2.40	0.48
2:B:2471:A:O2'	2:B:2472:G:C8	2.54	0.48
9:Y:5:LYS:O	9:Y:57:GLU:HB2	2.12	0.48
2:B:1812:U:H4'	4:C:44:ASN:OD1	2.12	0.48
4:C:15:VAL:HG13	4:C:204:LEU:O	2.13	0.48
2:B:2213:U:O2	2:B:2213:U:C2'	2.59	0.48
17:M:49:ALA:HA	17:M:123:LYS:HG3	1.95	0.48
28:R:14:VAL:HG22	28:R:15:SER:H	1.76	0.48
2:B:1854:A:N6	2:B:1888:G:H1'	2.27	0.48
2:B:2869:G:H2'	2:B:2870:C:C6	2.47	0.48
17:M:35:ALA:HB3	17:M:99:GLY:N	2.26	0.48
1:A:23:G:H2'	1:A:24:G:C8	2.48	0.48
17:M:31:PHE:HB3	17:M:130:PHE:CZ	2.47	0.48
2:B:909:A:H2'	2:B:912:C:C5	2.48	0.48
1:A:88:C:H2'	1:A:89:U:C5	2.48	0.48
2:B:307:G:N2	2:B:309:A:H3'	2.28	0.48
2:B:2323:G:O2'	2:B:2324:U:H5'	2.13	0.48
2:B:2047:C:H2'	2:B:2048:G:H8	1.77	0.48
2:B:271:G:HO2'	2:B:272:A:H8	1.61	0.48
2:B:2276:G:OP2	17:M:85:GLY:N	2.46	0.48
2:B:1099:G:N7	3:I:3:LYS:CD	2.76	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:33:ILE:HB	26:F:90:LEU:HB2	1.95	0.48
6:K:35:VAL:HG12	6:K:69:VAL:HG22	1.95	0.48
19:H:47:PHE:O	19:H:51:ARG:N	2.45	0.48
5:D:97:SER:HB3	5:D:99:GLU:HG3	1.94	0.48
24:S:31:GLN:C	24:S:33:LEU:H	2.15	0.48
26:F:163:GLU:CA	26:F:166:ARG:HD2	2.35	0.48
2:B:2229:U:H2'	2:B:2230:G:C8	2.45	0.48
25:U:48:VAL:H	25:U:53:GLN:HB2	1.78	0.48
2:B:2457:U:C2'	2:B:2458:G:H5'	2.43	0.48
2:B:608:A:H2'	2:B:609:A:H8	1.76	0.48
2:B:2886:A:H62	10:0:39:ARG:CD	2.26	0.48
2:B:2557:G:H2'	2:B:2558:C:H6	1.74	0.48
28:R:74:ILE:HB	28:R:87:GLN:O	2.12	0.48
32:6:16:LYS:O	32:6:20:VAL:HG23	2.13	0.48
17:M:55:ARG:HH21	17:M:55:ARG:HG3	1.77	0.48
2:B:1050:A:H2'	2:B:1051:G:H8	1.79	0.48
26:F:102:LEU:C	26:F:104:THR:H	2.16	0.48
2:B:917:A:H5''	2:B:2268:A:H61	1.78	0.48
2:B:138:U:H2'	2:B:140:C:O4'	2.13	0.48
23:Q:60:TRP:HB3	23:Q:92:LYS:O	2.13	0.48
23:Q:63:ARG:HH12	23:Q:96:ASP:HA	1.77	0.48
28:R:7:SER:HB2	28:R:22:LEU:HD22	1.93	0.48
2:B:2091:C:H1'	30:Z:34:HIS:CD2	2.48	0.48
2:B:2720:U:H2'	2:B:2721:A:C8	2.48	0.48
21:N:59:SER:C	21:N:61:ALA:H	2.17	0.48
2:B:2814:A:C4'	10:0:25:THR:HG21	2.41	0.48
6:K:63:VAL:HG21	6:K:85:VAL:HG23	1.94	0.48
5:D:62:LYS:HB2	5:D:63:PRO:HD3	1.95	0.48
2:B:62:U:H3'	2:B:63:A:H8	1.77	0.48
2:B:1515:A:H4'	2:B:1556:C:O2'	2.12	0.48
2:B:1346:G:O2'	2:B:1347:A:H5'	2.13	0.48
2:B:636:G:H3'	16:L:128:THR:CG2	2.44	0.48
25:U:38:ILE:HG23	25:U:39:ASN:N	2.27	0.48
4:C:243:PRO:O	4:C:250:GLN:HA	2.12	0.48
2:B:839:U:H2'	2:B:840:C:C6	2.48	0.48
16:L:30:THR:O	16:L:31:GLY:C	2.51	0.48
32:6:36:ALA:CA	32:6:39:LEU:HD23	2.43	0.48
23:Q:35:PHE:O	23:Q:39:ILE:HG12	2.13	0.48
2:B:2309:A:N6	26:F:75:GLY:HA3	2.29	0.48
2:B:1335:C:H2'	2:B:1336:A:C8	2.49	0.48
8:E:73:ILE:O	8:E:73:ILE:HG12	2.12	0.48
14:V:5:ASN:HA	14:V:64:VAL:O	2.12	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:G:29:ASN:HD21	27:G:81:GLY:HA2	1.77	0.48
26:F:2:LYS:HD2	26:F:100:GLU:HG2	1.95	0.48
26:F:34:THR:O	26:F:35:LEU:HB2	2.13	0.48
26:F:32:LYS:H	26:F:95:MET:HE1	1.77	0.48
32:6:41:LEU:HD23	32:6:83:ILE:HD13	1.94	0.48
2:B:2352:A:H8	2:B:2352:A:O5'	1.96	0.48
14:V:28:ALA:HA	14:V:88:HIS:CE1	2.48	0.48
19:H:7:ASP:CA	19:H:15:LEU:HD22	2.33	0.48
24:S:29:VAL:CA	24:S:32:ALA:HB3	2.43	0.48
2:B:357:C:H2'	2:B:358:U:C5	2.48	0.48
26:F:11:VAL:O	26:F:12:VAL:HB	2.12	0.48
2:B:1180:U:H2'	2:B:1181:U:C6	2.47	0.48
6:K:97:THR:C	6:K:98:ARG:HE	2.15	0.48
2:B:1372:U:O2'	2:B:1373:A:H5'	2.12	0.48
32:6:18:LEU:HD21	32:6:171:LYS:HB3	1.95	0.48
2:B:2020:A:O2'	2:B:2021:C:H5'	2.13	0.48
2:B:2700:A:O2'	2:B:2701:U:H5'	2.13	0.48
26:F:121:PHE:HB3	26:F:127:TYR:CZ	2.47	0.48
2:B:2092:U:H4'	2:B:2093:G:O5'	2.14	0.48
26:F:34:THR:OG1	26:F:154:THR:HB	2.14	0.48
31:W:30:VAL:HG21	31:W:59:PHE:CE1	2.48	0.48
14:V:65:VAL:C	14:V:67:GLY:H	2.17	0.48
14:V:70:ILE:CD1	14:V:71:LYS:H	2.22	0.48
28:R:2:TYR:HB2	28:R:42:ALA:CB	2.37	0.48
25:U:94:PHE:HB3	25:U:101:THR:HA	1.96	0.48
25:U:86:PHE:HE1	25:U:88:ASP:HB3	1.78	0.48
17:M:18:ARG:HA	17:M:18:ARG:HD2	1.66	0.48
2:B:1439:A:N7	2:B:1440:U:C6	2.82	0.48
21:N:79:LEU:O	21:N:80:PHE:HB2	2.14	0.48
3:I:72:THR:CG2	3:I:112:LYS:HD2	2.43	0.48
25:U:14:THR:O	25:U:18:LYS:HG2	2.12	0.48
8:E:58:LYS:HB2	8:E:60:TRP:CD1	2.48	0.48
2:B:729:G:H2'	2:B:1775:U:H1'	1.94	0.48
2:B:1252:G:N2	23:Q:32:ARG:HB3	2.28	0.48
2:B:1576:U:O2'	2:B:1577:C:H5'	2.13	0.48
8:E:75:SER:O	8:E:78:TRP:N	2.47	0.48
2:B:787:C:H5''	2:B:788:A:H5'	1.96	0.48
2:B:1904:G:O2'	2:B:1905:C:H5'	2.13	0.48
3:I:2:LYS:C	3:I:3:LYS:HD2	2.33	0.48
26:F:169:LEU:O	26:F:174:PHE:HB2	2.14	0.48
2:B:2330:G:O2'	2:B:2331:G:H5'	2.14	0.48
31:W:48:ALA:O	31:W:61:LYS:HB2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:V:63:ILE:HB	14:V:70:ILE:CD1	2.44	0.48
14:V:80:HIS:CD2	14:V:81:PRO:HD2	2.49	0.48
27:G:75:VAL:O	27:G:78:VAL:HG22	2.14	0.48
2:B:318:C:O2'	2:B:319:G:H5'	2.14	0.48
19:H:125:THR:HA	19:H:146:VAL:CG1	2.44	0.48
2:B:1793:C:H2'	2:B:1794:A:C8	2.47	0.48
2:B:1460:U:H5''	2:B:1461:C:O4'	2.13	0.48
2:B:2886:A:N6	10:0:39:ARG:CZ	2.76	0.48
2:B:419:U:H2'	2:B:420:C:H6	1.77	0.48
5:D:114:LYS:HE3	5:D:116:LYS:HG2	1.96	0.48
32:6:114:LEU:HB3	32:6:183:ILE:HG21	1.95	0.48
2:B:514:A:N6	2:B:515:A:N6	2.61	0.48
2:B:2649:C:H2'	2:B:2650:U:C6	2.49	0.48
18:X:23:ARG:HA	18:X:27:ASN:H	1.78	0.48
2:B:736:C:H2'	2:B:737:C:H6	1.79	0.48
2:B:991:C:H6	2:B:991:C:H5'	1.77	0.48
15:2:10:LEU:HD22	15:2:14:ARG:NE	2.28	0.48
2:B:1973:G:O2'	2:B:1974:C:H5'	2.13	0.48
2:B:1099:G:H5''	3:I:2:LYS:HB2	1.96	0.48
26:F:113:PHE:HZ	26:F:175:PRO:HB2	1.77	0.48
31:W:65:LYS:O	31:W:81:ILE:HA	2.14	0.48
24:S:24:ILE:CG2	24:S:71:VAL:HG11	2.34	0.48
26:F:41:GLU:CB	26:F:48:LEU:HD11	2.40	0.48
19:H:49:ALA:O	19:H:53:GLU:HB2	2.13	0.48
2:B:1455:G:H5'	21:N:60:VAL:HG21	1.95	0.48
2:B:1794:A:H2'	2:B:1795:C:C6	2.48	0.48
2:B:2143:C:C4	2:B:2144:G:H1'	2.48	0.48
27:G:115:GLN:N	27:G:115:GLN:CD	2.65	0.48
26:F:115:GLY:CA	26:F:177:ARG:HH11	2.26	0.48
5:D:125:TRP:CE3	5:D:160:LYS:HD3	2.49	0.48
2:B:2290:G:H2'	2:B:2291:U:C6	2.49	0.48
21:N:69:ARG:HD3	21:N:69:ARG:H	1.79	0.48
26:F:131:VAL:HG23	26:F:133:GLU:H	1.79	0.48
4:C:264:LYS:HG3	4:C:265:PHE:HD2	1.79	0.48
1:A:53:A:C2'	1:A:54:G:H5'	2.43	0.48
27:G:163:TYR:O	27:G:165:ASP:N	2.47	0.48
27:G:54:ARG:O	27:G:57:TYR:HD1	1.97	0.48
2:B:191:A:O2'	2:B:192:C:H5'	2.14	0.48
15:2:34:ARG:NH1	15:2:34:ARG:HG2	2.28	0.48
5:D:30:GLU:HB2	5:D:52:THR:CG2	2.44	0.48
2:B:930:G:H1'	9:Y:24:LEU:HD11	1.96	0.48
2:B:712:G:H2'	2:B:713:G:O4'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:5:GLN:HB2	3:I:30:GLN:OE1	2.14	0.48
26:F:135:ILE:C	26:F:136:ILE:HG12	2.34	0.48
26:F:111:ARG:HH11	26:F:135:ILE:CG2	2.27	0.48
2:B:2265:U:H3'	2:B:2266:A:H5''	1.95	0.48
31:W:37:VAL:C	31:W:38:ARG:HG2	2.34	0.48
24:S:33:LEU:HA	24:S:36:LEU:HD23	1.96	0.48
21:N:106:ASP:C	21:N:108:ALA:H	2.16	0.48
3:I:27:LEU:HB2	3:I:32:VAL:HG21	1.95	0.48
21:N:63:ARG:HD2	21:N:80:PHE:CD2	2.48	0.48
2:B:1173:U:O5'	2:B:1173:U:H6	1.97	0.48
2:B:285:G:H2'	2:B:286:U:H6	1.78	0.48
20:J:74:TYR:HE2	20:J:103:ILE:HD11	1.78	0.48
2:B:550:C:H2'	2:B:551:G:C8	2.49	0.48
2:B:785:G:H2'	2:B:786:C:C6	2.49	0.48
2:B:2243:U:O2'	2:B:2244:U:H5'	2.14	0.48
2:B:465:G:N2	2:B:684:G:H1'	2.29	0.48
2:B:1563:U:H2'	2:B:1564:C:C6	2.48	0.48
2:B:1432:G:O2'	2:B:1433:A:H5'	2.13	0.48
2:B:2188:U:H2'	2:B:2189:U:O4'	2.14	0.48
9:Y:9:THR:HB	9:Y:53:MET:O	2.14	0.48
1:A:28:C:H2'	1:A:29:A:O4'	2.14	0.48
20:J:77:HIS:CD2	20:J:84:ILE:H	2.32	0.48
3:I:102:ARG:HG3	3:I:141:ASP:CB	2.43	0.48
18:X:23:ARG:O	18:X:27:ASN:N	2.47	0.48
15:2:34:ARG:HH11	15:2:34:ARG:HG2	1.78	0.48
2:B:1783:A:H5'	2:B:2608:G:H4'	1.95	0.48
2:B:1858:A:H2'	2:B:1859:U:O4'	2.13	0.48
1:A:37:C:H2'	1:A:38:C:O4'	2.14	0.48
2:B:649:G:H2'	2:B:650:C:C6	2.49	0.48
2:B:560:C:H2'	2:B:561:G:O4'	2.14	0.48
2:B:1799:G:N2	2:B:1818:U:O2'	2.47	0.48
2:B:2331:G:C4'	31:W:39:GLN:HA	2.43	0.48
2:B:877:A:N6	2:B:898:C:N3	2.62	0.48
8:E:103:GLY:O	8:E:106:LYS:HB2	2.14	0.48
8:E:188:MET:HG3	8:E:192:ALA:HB3	1.95	0.48
2:B:1104:C:H2'	2:B:1105:U:H6	1.75	0.48
21:N:32:GLU:HB3	21:N:115:LEU:HG	1.95	0.48
21:N:72:ASP:HB3	21:N:75:ILE:HG13	1.95	0.48
2:B:2543:G:H8	2:B:2543:G:H5'	1.79	0.48
3:I:100:ILE:O	3:I:139:VAL:HG13	2.14	0.48
6:K:60:ALA:HA	6:K:87:LEU:CD2	2.42	0.48
2:B:1404:C:O2'	2:B:1405:U:H5'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2259:U:H2'	2:B:2260:C:C6	2.49	0.48
22:O:24:THR:O	22:O:90:VAL:HB	2.13	0.48
2:B:151:C:O2'	2:B:152:A:H5'	2.14	0.48
2:B:1258:U:H2'	2:B:1259:G:C8	2.48	0.48
2:B:121:G:H2'	2:B:122:G:C8	2.48	0.48
26:F:69:ALA:HB2	26:F:82:TYR:HB3	1.94	0.48
2:B:8:C:O2'	2:B:9:G:H5'	2.14	0.48
24:S:20:VAL:HG23	24:S:23:LEU:HD12	1.96	0.48
2:B:986:C:O2'	2:B:987:C:H5'	2.14	0.48
15:2:31:LEU:HD22	15:2:42:LEU:CD1	2.43	0.48
2:B:2301:C:O2'	2:B:2302:U:H5'	2.14	0.48
5:D:18:ASP:O	7:P:30:TRP:HZ3	1.96	0.48
26:F:151:LEU:HD12	26:F:152:ASP:N	2.29	0.48
2:B:98:G:H22	25:U:6:ARG:NH1	2.12	0.48
2:B:2855:C:O2'	2:B:2856:A:H5'	2.13	0.48
16:L:89:VAL:HG23	16:L:123:ARG:HB2	1.95	0.48
26:F:102:LEU:HB2	26:F:106:ALA:HB3	1.95	0.48
6:K:34:GLY:O	6:K:36:GLY:N	2.47	0.48
19:H:10:ALA:O	19:H:12:LEU:N	2.44	0.48
29:T:53:VAL:HG12	29:T:54:GLU:N	2.28	0.48
5:D:15:PHE:CD1	5:D:15:PHE:N	2.81	0.48
5:D:9:VAL:HG22	5:D:9:VAL:O	2.14	0.48
7:P:75:THR:O	7:P:80:VAL:HG11	2.13	0.48
7:P:6:GLN:HE22	7:P:7:LEU:HG	1.79	0.48
8:E:137:LYS:O	8:E:141:MET:HG3	2.13	0.48
22:O:53:THR:O	22:O:59:ALA:HB2	2.14	0.48
2:B:37:C:H4'	2:B:451:U:OP1	2.13	0.48
2:B:544:C:H2'	2:B:545:U:C4	2.49	0.48
2:B:546:U:H5'	2:B:547:A:OP1	2.14	0.48
2:B:2150:C:H2'	2:B:2151:U:H6	1.77	0.48
27:G:38:ASP:CG	27:G:39:ALA:N	2.67	0.48
2:B:1730:C:O2'	2:B:1731:G:N2	2.46	0.48
2:B:79:C:HO2'	2:B:346:A:H8	1.56	0.48
2:B:2803:G:H2'	2:B:2804:U:C6	2.48	0.48
1:A:113:C:H2'	1:A:114:C:H6	1.78	0.48
2:B:1201:U:H2'	2:B:1202:G:H8	1.79	0.48
22:O:52:SER:O	22:O:58:ILE:HD12	2.14	0.48
21:N:90:ARG:HB3	21:N:94:TYR:HE1	1.79	0.48
2:B:2047:C:H2'	2:B:2048:G:C8	2.49	0.48
12:1:37:LYS:O	12:1:45:HIS:HA	2.14	0.48
2:B:1319:C:O2'	2:B:1320:C:H5'	2.13	0.48
2:B:1664:A:H1'	2:B:2726:A:C2	2.49	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1456:G:O2'	2:B:1457:U:H5'	2.14	0.48
14:V:21:ARG:HE	14:V:87:GLN:HB3	1.78	0.48
26:F:102:LEU:O	26:F:103:ILE:HG22	2.13	0.47
26:F:168:LEU:O	26:F:170:ALA:N	2.45	0.47
32:6:78:ALA:HA	32:6:81:LYS:HB2	1.96	0.47
2:B:725:G:H2'	2:B:726:G:O4'	2.14	0.47
24:S:59:GLU:OE2	24:S:66:ILE:HG23	2.15	0.47
7:P:5:LYS:H	7:P:8:GLU:HG3	1.79	0.47
30:Z:5:CYS:HB3	30:Z:10:LYS:H	1.77	0.47
2:B:296:U:H2'	2:B:297:G:C8	2.49	0.47
25:U:92:VAL:HG11	25:U:101:THR:HG23	1.95	0.47
26:F:15:LEU:HD12	26:F:27:VAL:HB	1.94	0.47
11:4:19:ARG:C	11:4:21:GLY:N	2.67	0.47
8:E:47:LYS:CA	8:E:51:GLU:HG3	2.44	0.47
2:B:2144:G:C3'	2:B:2145:C:H5'	2.44	0.47
18:X:5:GLU:O	18:X:8:GLU:HB2	2.15	0.47
22:O:35:ILE:CG1	22:O:102:ARG:HE	2.27	0.47
2:B:2898:U:H2'	2:B:2899:A:C8	2.49	0.47
2:B:710:U:H2'	2:B:711:G:H8	1.78	0.47
24:S:99:ARG:HG2	24:S:99:ARG:H	1.45	0.47
2:B:1349:C:H2'	2:B:1350:C:C6	2.49	0.47
12:1:39:ASP:OD1	12:1:42:VAL:HG23	2.14	0.47
2:B:1877:A:H2'	2:B:1878:G:C8	2.49	0.47
2:B:270:A:OP1	2:B:271:G:H5'	2.13	0.47
12:1:10:LEU:HB2	12:1:20:TYR:HB2	1.95	0.47
2:B:767:U:O2'	2:B:768:G:H5'	2.14	0.47
2:B:303:G:H2'	2:B:304:U:C6	2.49	0.47
2:B:1669:A:O3'	2:B:2549:G:H5'	2.13	0.47
2:B:1263:U:O2'	10:0:7:PRO:HD2	2.14	0.47
16:L:89:VAL:O	16:L:89:VAL:HG13	2.14	0.47
19:H:135:HIS:HB3	19:H:138:VAL:HG23	1.96	0.47
29:T:61:LEU:O	29:T:81:LYS:HA	2.13	0.47
2:B:1187:G:H5'	28:R:83:TYR:CZ	2.48	0.47
20:J:25:LEU:O	20:J:27:ARG:N	2.43	0.47
2:B:181:A:H1'	2:B:435:C:H5'	1.97	0.47
6:K:88:ASN:HD22	6:K:89:ASN:N	2.11	0.47
22:O:106:LEU:HA	22:O:109:ALA:HB3	1.94	0.47
22:O:30:ARG:NH1	22:O:102:ARG:HB2	2.28	0.47
16:L:135:ILE:HG12	16:L:140:GLY:CA	2.40	0.47
2:B:2722:G:O2'	2:B:2723:C:H5'	2.14	0.47
10:0:41:HIS:HB3	21:N:99:LYS:HB2	1.96	0.47
2:B:1708:C:O2'	2:B:1709:U:H5'	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1516:G:O2'	2:B:1517:G:H5'	2.14	0.47
5:D:49:GLN:HE21	5:D:79:LEU:HD12	1.79	0.47
32:6:151:GLU:O	32:6:154:THR:HG22	2.14	0.47
2:B:2248:C:H2'	2:B:2249:U:O4'	2.14	0.47
22:O:6:ALA:O	22:O:9:ARG:HG3	2.14	0.47
2:B:584:C:OP2	23:Q:5:ARG:HD3	2.14	0.47
2:B:2710:C:H2'	2:B:2711:A:C8	2.49	0.47
7:P:110:LYS:HD2	7:P:110:LYS:N	2.29	0.47
29:T:6:ARG:HB3	29:T:6:ARG:NH1	2.28	0.47
22:O:2:ASP:OD2	22:O:4:LYS:HB3	2.13	0.47
2:B:2889:C:H2'	2:B:2890:G:C8	2.49	0.47
4:C:35:LYS:O	4:C:36:ASN:HB2	2.14	0.47
16:L:81:ASP:HA	16:L:84:LYS:CE	2.45	0.47
8:E:11:ALA:O	8:E:12:LEU:HD22	2.14	0.47
2:B:920:A:H2'	2:B:921:C:O4'	2.14	0.47
31:W:18:LYS:HA	31:W:36:ILE:HG12	1.94	0.47
14:V:48:MET:SD	14:V:85:LYS:HA	2.54	0.47
14:V:31:TYR:O	14:V:92:VAL:HG13	2.15	0.47
28:R:53:PHE:CD1	28:R:53:PHE:N	2.81	0.47
23:Q:56:PHE:HA	23:Q:59:LEU:HB3	1.95	0.47
12:1:51:ALA:O	12:1:52:LYS:C	2.53	0.47
22:O:83:LEU:HD13	22:O:115:LEU:HD22	1.95	0.47
21:N:28:LEU:HD23	21:N:113:ILE:HG23	1.95	0.47
2:B:2787:C:C1'	5:D:63:PRO:HG3	2.42	0.47
10:O:48:TYR:CG	10:O:49:ARG:N	2.82	0.47
2:B:1416:G:O2'	2:B:1417:C:H6	1.95	0.47
6:K:54:LYS:N	6:K:54:LYS:HD2	2.27	0.47
26:F:55:ASP:OD2	26:F:149:ARG:HG3	2.14	0.47
2:B:1841:U:H2'	2:B:1842:G:H8	1.79	0.47
2:B:1218:G:H2'	2:B:1219:U:O4'	2.14	0.47
2:B:2303:G:H4'	26:F:121:PHE:O	2.14	0.47
1:A:95:U:H2'	1:A:96:G:H8	1.79	0.47
2:B:2314:A:H2'	2:B:2315:G:C8	2.48	0.47
9:Y:21:ALA:O	9:Y:24:LEU:HB3	2.14	0.47
25:U:43:LYS:HD3	25:U:44:HIS:N	2.29	0.47
2:B:2600:A:O2'	2:B:2601:C:H5'	2.14	0.47
2:B:516:C:O2'	2:B:517:C:H5'	2.14	0.47
26:F:108:PRO:O	26:F:110:ILE:HG23	2.15	0.47
31:W:30:VAL:HG13	31:W:30:VAL:O	2.14	0.47
31:W:50:VAL:HB	31:W:51:GLY:H	1.52	0.47
28:R:49:ILE:HG21	28:R:53:PHE:C	2.34	0.47
8:E:192:ALA:O	8:E:196:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1055:G:HO2'	2:B:1085:A:H2	1.62	0.47
21:N:75:ILE:HD12	21:N:76:VAL:N	2.29	0.47
18:X:15:ASN:O	18:X:19:LEU:HD13	2.14	0.47
2:B:2148:G:H3'	2:B:2148:G:OP2	2.14	0.47
2:B:1655:A:H2'	2:B:1656:C:O4'	2.14	0.47
2:B:773:U:H4'	4:C:45:ASN:O	2.14	0.47
2:B:958:U:H3	17:M:16:ARG:CB	2.27	0.47
2:B:1872:A:H8	2:B:1872:A:O5'	1.96	0.47
2:B:1841:U:H2'	2:B:1842:G:C8	2.50	0.47
4:C:244:VAL:HB	4:C:249:VAL:N	2.29	0.47
13:3:7:ARG:HG3	13:3:7:ARG:NH1	2.29	0.47
2:B:2845:U:O2'	2:B:2846:G:H5'	2.13	0.47
2:B:770:G:O2'	2:B:771:G:H5'	2.13	0.47
2:B:2618:G:H2'	2:B:2619:C:H6	1.79	0.47
2:B:688:U:O2'	2:B:689:A:H5'	2.14	0.47
2:B:2724:U:H2'	2:B:2725:A:C8	2.50	0.47
2:B:1897:G:O2'	2:B:1898:U:H5'	2.14	0.47
2:B:2567:G:H2'	2:B:2568:U:C6	2.49	0.47
26:F:106:ALA:N	26:F:108:PRO:HD2	2.30	0.47
29:T:50:LEU:O	29:T:52:GLU:N	2.42	0.47
28:R:60:LYS:N	28:R:100:GLY:HA3	2.22	0.47
5:D:10:GLY:O	5:D:11:MET:HB2	2.14	0.47
2:B:2515:C:H2'	2:B:2516:A:H8	1.80	0.47
5:D:106:LYS:N	5:D:106:LYS:HD3	2.29	0.47
2:B:2801:G:H3'	2:B:2802:G:H8	1.80	0.47
26:F:45:ASP:O	26:F:46:LYS:HB2	2.15	0.47
2:B:2719:G:O2'	2:B:2720:U:H5'	2.14	0.47
19:H:141:LYS:HD2	19:H:141:LYS:N	2.30	0.47
3:I:129:GLU:HB3	3:I:133:ARG:NH1	2.30	0.47
2:B:1181:U:O2'	2:B:1182:G:H5'	2.15	0.47
9:Y:5:LYS:HG2	9:Y:36:GLU:HB2	1.96	0.47
2:B:2425:A:H5''	2:B:2426:A:H3'	1.96	0.47
2:B:17:G:H2'	2:B:18:U:H6	1.79	0.47
2:B:1014:A:O2'	2:B:1015:U:H5'	2.13	0.47
2:B:1773:A:H2'	2:B:1774:C:O4'	2.14	0.47
2:B:1773:A:N7	2:B:1829:A:H1'	2.30	0.47
2:B:2569:G:O2'	2:B:2570:G:H5'	2.15	0.47
2:B:1737:G:H5'	2:B:1738:G:OP2	2.14	0.47
2:B:3:U:H2'	2:B:4:U:H6	1.80	0.47
1:A:93:C:O2'	1:A:94:A:H5'	2.15	0.47
18:X:59:GLU:N	18:X:59:GLU:OE2	2.47	0.47
2:B:1704:C:O2'	2:B:1705:A:H5'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:G:25:ILE:O	27:G:32:LEU:HA	2.14	0.47
18:X:29:ARG:HH12	29:T:12:ARG:HG2	1.79	0.47
12:1:11:VAL:HG23	12:1:50:GLU:HB3	1.95	0.47
2:B:819:A:N6	2:B:1189:A:H1'	2.30	0.47
4:C:141:HIS:CG	4:C:142:ASN:H	2.30	0.47
4:C:158:GLY:H	4:C:194:VAL:HG13	1.80	0.47
4:C:89:ASN:O	4:C:105:ALA:HB3	2.15	0.47
3:I:18:ASN:N	3:I:19:PRO:CD	2.77	0.47
2:B:1796:U:O2'	2:B:1797:G:H5'	2.15	0.47
17:M:108:VAL:HG21	17:M:112:LEU:HD12	1.97	0.47
2:B:1654:A:O2'	5:D:118:PHE:CB	2.60	0.47
25:U:48:VAL:HG22	25:U:48:VAL:O	2.13	0.47
2:B:2462:C:H2'	2:B:2463:C:H6	1.78	0.47
2:B:2886:A:N7	10:0:39:ARG:NH2	2.62	0.47
2:B:2680:U:P	5:D:114:LYS:HB3	2.54	0.47
2:B:948:C:H2'	2:B:949:G:C8	2.50	0.47
2:B:1475:G:H1'	2:B:1476:U:C5	2.47	0.47
19:H:70:GLU:H	19:H:70:GLU:HG3	1.57	0.47
2:B:1223:G:OP2	28:R:90:ARG:NH1	2.47	0.47
16:L:68:SER:HB2	16:L:71:ALA:H	1.79	0.47
2:B:2008:C:H2'	2:B:2009:A:H8	1.79	0.47
3:I:37:PHE:HB2	3:I:66:PHE:CE2	2.49	0.47
2:B:870:U:C2'	2:B:871:U:H5'	2.45	0.47
17:M:66:ARG:CZ	17:M:101:VAL:HG11	2.44	0.47
2:B:1345:C:H5'	2:B:1396:U:H5	1.80	0.47
5:D:169:ARG:O	5:D:170:VAL:O	2.31	0.47
30:Z:27:ARG:HD3	30:Z:28:ARG:H	1.80	0.47
2:B:2193:G:H2'	2:B:2194:U:C6	2.49	0.47
2:B:2235:G:H2'	2:B:2236:U:C6	2.50	0.47
32:6:63:PRO:HD2	32:6:64:ARG:NH1	2.30	0.47
32:6:38:LEU:HB3	32:6:41:LEU:HD22	1.96	0.47
8:E:122:GLU:N	8:E:122:GLU:OE1	2.46	0.47
31:W:43:LYS:HB2	31:W:58:LEU:HD21	1.96	0.47
31:W:37:VAL:O	31:W:38:ARG:HG2	2.14	0.47
29:T:50:LEU:HD22	29:T:50:LEU:N	2.29	0.47
2:B:360:U:H2'	2:B:361:G:N9	2.29	0.47
8:E:196:VAL:HA	8:E:199:MET:HB3	1.96	0.47
30:Z:7:VAL:HG21	30:Z:59:ILE:CD1	2.42	0.47
8:E:171:ASP:CG	8:E:172:ALA:H	2.18	0.47
7:P:52:ARG:HB2	7:P:55:HIS:O	2.14	0.47
29:T:21:SER:HB3	29:T:31:VAL:HG22	1.96	0.47
19:H:89:LYS:N	19:H:89:LYS:HD2	2.30	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:3:18:LYS:HD2	13:3:19:GLY:N	2.30	0.47
21:N:93:GLY:C	21:N:95:THR:H	2.18	0.47
2:B:1533:C:H2'	2:B:1534:U:C6	2.49	0.47
25:U:14:THR:O	25:U:18:LYS:HA	2.14	0.47
9:Y:8:GLN:CG	9:Y:31:ILE:HA	2.44	0.47
2:B:2805:C:H2'	2:B:2806:C:H6	1.79	0.47
2:B:1868:C:H2'	2:B:1869:G:O4'	2.14	0.47
24:S:17:VAL:C	24:S:19:LEU:N	2.66	0.47
9:Y:37:ARG:HG3	9:Y:38:GLU:OE2	2.14	0.47
2:B:1826:G:P	4:C:221:GLY:H	2.38	0.47
2:B:2240:U:O2'	2:B:2241:A:H5'	2.14	0.47
2:B:2065:C:H2'	2:B:2066:C:H6	1.80	0.47
4:C:64:VAL:HG21	4:C:86:ARG:CZ	2.45	0.47
21:N:12:ARG:HG2	21:N:16:HIS:CG	2.50	0.47
2:B:1150:C:H2'	2:B:1151:A:H8	1.79	0.47
2:B:1844:C:OP1	4:C:254:LYS:HA	2.15	0.47
2:B:526:A:N6	2:B:2626:C:C4'	2.77	0.47
2:B:566:U:H2'	2:B:567:U:O4'	2.15	0.47
2:B:1316:U:H2'	2:B:1317:G:H8	1.79	0.47
2:B:1429:G:H2'	2:B:1430:G:C8	2.50	0.47
2:B:2774:C:OP1	5:D:169:ARG:HG3	2.15	0.47
2:B:2540:C:H2'	2:B:2541:A:C8	2.50	0.47
2:B:2708:G:H2'	2:B:2709:G:H8	1.79	0.47
26:F:2:LYS:HG2	26:F:2:LYS:H	1.52	0.47
32:6:113:ASP:HA	32:6:116:ARG:HD2	1.95	0.47
2:B:1052:C:H2'	2:B:1053:C:C6	2.50	0.47
17:M:26:VAL:CG2	17:M:133:LYS:HA	2.44	0.47
2:B:2716:C:O2'	2:B:2717:C:H5'	2.15	0.47
3:I:89:SER:HA	3:I:97:VAL:HG11	1.97	0.47
2:B:1279:G:H2'	2:B:1280:G:O4'	2.13	0.47
10:0:54:ILE:H	21:N:118:ARG:HH12	1.62	0.47
2:B:1098:A:H2'	3:I:3:LYS:C	2.36	0.47
2:B:1100:C:C5	3:I:1:ALA:O	2.68	0.47
31:W:35:ILE:O	31:W:37:VAL:N	2.48	0.47
14:V:30:ILE:HG12	14:V:91:PHE:HB2	1.97	0.47
19:H:135:HIS:CD2	19:H:136:SER:H	2.32	0.47
29:T:51:PHE:HB3	29:T:53:VAL:HG23	1.96	0.47
2:B:283:G:H3'	2:B:284:U:C5'	2.45	0.47
3:I:23:VAL:HG12	3:I:24:GLY:N	2.30	0.47
8:E:48:THR:C	8:E:50:ALA:H	2.16	0.47
3:I:78:LEU:HD23	3:I:81:LYS:HE2	1.96	0.47
11:4:35:GLN:HB2	11:4:35:GLN:HE21	1.54	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:3:22:LYS:CA	13:3:48:MET:HA	2.42	0.47
2:B:1535:A:H5'	2:B:1536:C:C5	2.44	0.47
11:4:22:VAL:HB	11:4:24:ARG:NE	2.28	0.47
2:B:2811:G:OP1	5:D:62:LYS:HD2	2.15	0.47
2:B:1726:C:O5'	2:B:1726:C:H6	1.97	0.47
2:B:812:C:H4'	23:Q:12:ARG:HH22	1.79	0.47
23:Q:73:ILE:HG13	23:Q:74:SER:N	2.30	0.47
2:B:305:C:H2'	2:B:306:U:C6	2.50	0.47
2:B:2060:A:H3'	8:E:63:LYS:HZ1	1.80	0.47
2:B:861:A:H2'	2:B:862:G:O4'	2.15	0.47
26:F:40:GLY:HA2	26:F:84:ILE:HG23	1.96	0.47
30:Z:20:HIS:O	30:Z:21:ALA:HB3	2.15	0.47
32:6:174:GLN:O	32:6:178:LYS:HG3	2.14	0.47
28:R:91:GLN:HG3	28:R:92:TRP:H	1.80	0.47
16:L:91:ASP:HA	16:L:123:ARG:HB3	1.97	0.47
8:E:1:MET:HB2	8:E:16:GLU:CA	2.45	0.47
2:B:2266:A:H4'	2:B:2267:A:C8	2.49	0.47
5:D:204:LYS:HB2	5:D:205:PRO:HD2	1.96	0.47
27:G:104:LEU:HD22	27:G:106:LEU:CD2	2.45	0.47
8:E:130:LYS:HB2	8:E:133:LEU:HG	1.96	0.47
21:N:59:SER:O	21:N:61:ALA:N	2.38	0.47
7:P:20:ARG:HD3	7:P:112:ARG:NH2	2.30	0.47
11:4:7:VAL:HG13	11:4:8:LYS:N	2.25	0.47
2:B:2529:G:H4'	27:G:174:LYS:CG	2.45	0.47
16:L:79:LEU:CG	16:L:113:ALA:H	2.28	0.47
9:Y:7:THR:HG22	9:Y:8:GLN:N	2.30	0.47
10:0:38:LEU:HB3	10:0:41:HIS:NE2	2.30	0.47
2:B:151:C:H2'	2:B:152:A:C8	2.50	0.47
5:D:114:LYS:HD2	5:D:116:LYS:HE3	1.96	0.47
2:B:635:C:H2'	2:B:636:G:C8	2.50	0.47
4:C:57:HIS:CG	4:C:58:LYS:N	2.82	0.47
23:Q:18:LYS:C	23:Q:20:ALA:N	2.68	0.47
2:B:836:G:H2'	2:B:837:C:H6	1.78	0.47
2:B:1936:A:OP1	2:B:1937:A:H5'	2.15	0.47
17:M:31:PHE:CE2	17:M:110:GLU:HA	2.50	0.47
23:Q:24:TYR:CD1	23:Q:25:GLY:N	2.82	0.47
14:V:46:LYS:N	14:V:46:LYS:HD2	2.30	0.47
2:B:2053:G:O2'	2:B:2054:A:H5'	2.14	0.47
21:N:82:GLU:C	21:N:84:GLY:H	2.18	0.47
19:H:27:ARG:O	19:H:28:ASN:ND2	2.47	0.47
26:F:138:PRO:HA	26:F:142:TYR:CE2	2.50	0.47
2:B:2052:A:O3'	5:D:149:ASN:HA	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2052:A:OP1	5:D:145:SER:HA	2.15	0.47
5:D:151:THR:N	5:D:152:PRO:CD	2.78	0.47
25:U:9:GLU:OE2	25:U:21:ARG:HD2	2.14	0.47
24:S:2:GLU:O	24:S:3:THR:O	2.33	0.47
23:Q:63:ARG:NH1	23:Q:96:ASP:HA	2.30	0.47
4:C:90:ILE:HD12	4:C:102:TYR:HB3	1.98	0.47
4:C:141:HIS:NE2	4:C:194:VAL:HA	2.29	0.47
25:U:86:PHE:HB2	25:U:92:VAL:HB	1.97	0.47
25:U:86:PHE:CE1	25:U:88:ASP:HB3	2.49	0.47
18:X:41:HIS:O	18:X:44:LYS:HB3	2.15	0.47
19:H:127:GLU:HB2	19:H:143:ILE:HG21	1.97	0.47
19:H:140:ALA:O	19:H:142:VAL:HG23	2.15	0.47
2:B:2896:C:H2'	2:B:2897:U:H6	1.80	0.47
2:B:956:G:H1'	17:M:82:MET:HE1	1.97	0.47
20:J:13:ARG:HB3	20:J:53:TYR:HD2	1.80	0.47
2:B:702:U:H2'	2:B:703:U:H6	1.79	0.47
2:B:947:A:HO2'	2:B:984:A:H2	1.58	0.47
1:A:13:G:O2'	1:A:15:A:H5'	2.14	0.47
2:B:1864:U:O2'	2:B:1865:U:H5'	2.14	0.47
11:4:12:ARG:HG3	11:4:13:ASN:ND2	2.30	0.47
13:3:7:ARG:HG3	13:3:7:ARG:HH11	1.80	0.47
16:L:119:PRO:HB3	16:L:139:GLY:O	2.15	0.47
1:A:28:C:H5'	1:A:29:A:OP2	2.15	0.47
2:B:2663:G:H2'	2:B:2664:G:H8	1.80	0.47
2:B:1464:G:H2'	2:B:1465:G:C8	2.50	0.47
2:B:796:C:H2'	2:B:797:G:C8	2.50	0.47
2:B:1802:A:H2'	2:B:1803:A:C8	2.50	0.47
16:L:85:VAL:HG22	16:L:94:THR:HG21	1.97	0.46
30:Z:40:VAL:CG2	30:Z:43:GLU:HB3	2.44	0.46
30:Z:39:TRP:CE2	30:Z:41:GLU:HA	2.50	0.46
2:B:2365:G:O2'	31:W:59:PHE:CE1	2.66	0.46
2:B:705:A:H2'	2:B:706:A:H8	1.80	0.46
23:Q:105:PHE:HA	23:Q:108:LEU:CD1	2.40	0.46
23:Q:109:VAL:O	23:Q:113:LYS:HG3	2.15	0.46
23:Q:108:LEU:HD23	28:R:48:LYS:CD	2.45	0.46
20:J:80:HIS:O	20:J:81:ILE:C	2.53	0.46
19:H:115:VAL:HG22	19:H:117:LEU:N	2.28	0.46
2:B:1553:A:H2'	2:B:1555:G:N7	2.31	0.46
2:B:2103:C:H3'	2:B:2104:C:O2	2.14	0.46
2:B:718:A:H3'	2:B:719:C:C6	2.44	0.46
2:B:1566:A:H5'	4:C:213:ARG:NH1	2.30	0.46
2:B:1309:G:H4'	15:2:7:PRO:CB	2.44	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2243:U:H2'	2:B:2244:U:H6	1.80	0.46
5:D:114:LYS:HD2	5:D:116:LYS:CE	2.44	0.46
1:A:111:U:H2'	1:A:112:G:H8	1.74	0.46
28:R:14:VAL:CG2	28:R:15:SER:N	2.78	0.46
2:B:65:U:H2'	2:B:66:C:H6	1.79	0.46
20:J:72:LYS:HB2	20:J:89:PHE:H	1.79	0.46
2:B:1434:A:H62	2:B:1558:C:H42	1.61	0.46
2:B:1190:G:O5'	16:L:32:GLY:HA2	2.15	0.46
2:B:633:A:OP1	16:L:71:ALA:HB2	2.15	0.46
2:B:244:A:H2'	2:B:245:G:O4'	2.15	0.46
2:B:235:U:H2'	2:B:236:C:C6	2.50	0.46
2:B:992:C:H2'	2:B:993:G:H8	1.81	0.46
26:F:131:VAL:C	26:F:133:GLU:H	2.19	0.46
26:F:132:ARG:O	26:F:133:GLU:HB2	2.15	0.46
2:B:584:C:H2'	2:B:585:G:C8	2.49	0.46
28:R:61:ALA:HB2	28:R:98:ILE:HA	1.96	0.46
2:B:1859:U:H2'	2:B:1860:G:C8	2.50	0.46
31:W:67:LYS:O	31:W:68:PHE:HB2	2.14	0.46
2:B:1098:A:H3'	3:I:3:LYS:HB3	1.96	0.46
24:S:4:ILE:HG22	24:S:106:VAL:HG13	1.97	0.46
2:B:851:C:O2'	2:B:852:U:H5'	2.15	0.46
14:V:80:HIS:HD2	14:V:83:LYS:H	1.63	0.46
2:B:558:U:P	20:J:113:PRO:HG2	2.55	0.46
27:G:79:THR:CG2	27:G:80:GLU:HG2	2.37	0.46
2:B:2228:G:H2'	2:B:2229:U:H6	1.79	0.46
17:M:38:ARG:HB3	17:M:98:PRO:HD3	1.97	0.46
2:B:1085:A:C1'	2:B:1105:U:H1'	2.44	0.46
2:B:1438:U:O2'	2:B:1439:A:H5'	2.15	0.46
17:M:69:PRO:HA	17:M:94:ALA:HB2	1.97	0.46
2:B:1174:U:H4'	2:B:1176:U:C1'	2.44	0.46
2:B:2880:C:O4'	21:N:91:ALA:HB3	2.14	0.46
3:I:96:LYS:HD3	3:I:138:VAL:HG21	1.97	0.46
2:B:1229:C:H2'	2:B:1230:A:C8	2.51	0.46
2:B:2730:C:H2'	2:B:2731:G:C8	2.49	0.46
2:B:494:G:O2'	2:B:495:G:H5'	2.15	0.46
26:F:77:LYS:HD2	26:F:79:ARG:HE	1.80	0.46
2:B:1523:U:H5''	2:B:1524:G:H8	1.76	0.46
2:B:2294:G:P	22:O:94:ARG:HH11	2.38	0.46
32:6:70:SER:HB3	32:6:76:LEU:HG	1.98	0.46
2:B:668:A:H2'	2:B:670:A:H62	1.80	0.46
22:O:58:ILE:HG22	22:O:62:LEU:CD2	2.45	0.46
2:B:2648:G:H2'	2:B:2649:C:C6	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:2:10:LEU:HD21	15:2:14:ARG:HH11	1.78	0.46
4:C:35:LYS:HD2	4:C:37:SER:OG	2.16	0.46
2:B:939:G:O2'	2:B:940:G:H5'	2.15	0.46
2:B:1102:C:O2'	2:B:1103:A:H5'	2.16	0.46
4:C:157:ALA:HB1	4:C:196:ASN:HB3	1.96	0.46
2:B:2221:G:O2'	2:B:2222:C:H5'	2.15	0.46
4:C:143:VAL:HG12	4:C:144:GLU:N	2.31	0.46
16:L:125:LEU:HB2	16:L:143:GLU:OE2	2.16	0.46
26:F:101:ARG:O	26:F:105:ILE:HB	2.14	0.46
26:F:102:LEU:HA	26:F:106:ALA:CB	2.45	0.46
26:F:134:GLN:OE1	26:F:136:ILE:HA	2.14	0.46
19:H:3:VAL:HA	19:H:39:ALA:N	2.31	0.46
14:V:32:GLY:O	14:V:93:ARG:HD2	2.15	0.46
27:G:22:VAL:HG22	27:G:36:LEU:HD12	1.97	0.46
23:Q:55:GLN:O	23:Q:59:LEU:HB2	2.15	0.46
2:B:2468:A:H2'	2:B:2476:A:C6	2.51	0.46
4:C:140:VAL:CG2	4:C:163:ILE:HG12	2.45	0.46
4:C:83:ASP:HB2	4:C:90:ILE:HB	1.97	0.46
2:B:962:G:H21	2:B:2250:G:N2	2.02	0.46
2:B:2768:U:H2'	2:B:2769:U:O4'	2.14	0.46
21:N:63:ARG:HA	21:N:80:PHE:CE2	2.50	0.46
2:B:2149:U:O2'	2:B:2150:C:H5'	2.15	0.46
13:3:36:ALA:O	13:3:40:LYS:HG3	2.15	0.46
2:B:1229:C:H2'	2:B:1230:A:H8	1.79	0.46
2:B:572:A:H5''	2:B:573:U:OP2	2.15	0.46
2:B:1117:C:C2'	2:B:1118:C:H5'	2.46	0.46
2:B:1300:G:H4'	2:B:1301:A:O5'	2.16	0.46
23:Q:10:ARG:HB2	23:Q:10:ARG:NH1	2.29	0.46
2:B:2376:A:H1'	22:O:111:ARG:HH12	1.81	0.46
2:B:2635:A:H5'	5:D:79:LEU:HB2	1.97	0.46
2:B:2021:C:OP1	10:0:8:THR:HG21	2.15	0.46
2:B:979:A:H2'	2:B:982:C:N4	2.30	0.46
17:M:31:PHE:CD1	17:M:105:MET:HB3	2.50	0.46
2:B:2553:G:H2'	2:B:2554:U:O4'	2.15	0.46
2:B:2553:G:H2'	2:B:2554:U:H4'	1.97	0.46
2:B:1463:C:H2'	2:B:1464:G:H8	1.81	0.46
2:B:1465:G:H2'	2:B:1466:U:O4'	2.15	0.46
2:B:937:C:H2'	2:B:938:G:H8	1.80	0.46
12:1:10:LEU:HD23	12:1:35:LEU:HD21	1.98	0.46
2:B:510:C:H2'	2:B:511:U:O4'	2.15	0.46
2:B:2737:G:H2'	2:B:2738:A:C8	2.50	0.46
19:H:5:LEU:HD11	19:H:12:LEU:O	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:Q:108:LEU:CD2	28:R:48:LYS:HB2	2.45	0.46
29:T:55:VAL:HG22	29:T:87:LEU:CD2	2.45	0.46
3:I:79:LEU:HD12	3:I:135:MET:SD	2.54	0.46
4:C:28:PRO:O	4:C:30:ALA:N	2.48	0.46
26:F:11:VAL:HG13	26:F:171:ALA:HB1	1.96	0.46
2:B:31:C:O2'	2:B:32:C:H5'	2.16	0.46
7:P:112:ARG:HB2	7:P:112:ARG:NH1	2.27	0.46
17:M:40:ARG:HB2	17:M:93:VAL:HG21	1.98	0.46
2:B:873:C:H4'	17:M:64:TRP:NE1	2.26	0.46
2:B:2420:C:OP1	13:3:33:THR:HB	2.15	0.46
2:B:1685:C:H2'	2:B:1686:C:H6	1.81	0.46
18:X:10:SER:N	18:X:60:LYS:HE2	2.27	0.46
26:F:148:VAL:O	26:F:149:ARG:HG2	2.15	0.46
2:B:2784:U:H4'	5:D:42:ASN:O	2.15	0.46
2:B:1742:U:H2'	2:B:1743:G:H8	1.80	0.46
2:B:870:U:H5''	17:M:6:ARG:O	2.16	0.46
29:T:45:ALA:HA	29:T:48:GLN:HB2	1.97	0.46
2:B:1050:A:H2'	2:B:1051:G:O4'	2.15	0.46
32:6:113:ASP:HA	32:6:116:ARG:HG2	1.98	0.46
3:I:69:VAL:HG23	3:I:69:VAL:O	2.14	0.46
19:H:78:VAL:HG12	19:H:79:THR:N	2.31	0.46
2:B:794:A:H2'	2:B:795:C:C6	2.50	0.46
2:B:1099:G:O4'	3:I:3:LYS:O	2.33	0.46
25:U:78:LYS:HE3	25:U:79:ALA:N	2.30	0.46
5:D:94:GLN:HG2	5:D:94:GLN:O	2.15	0.46
24:S:51:LEU:C	24:S:53:SER:H	2.19	0.46
28:R:39:LEU:HB2	28:R:49:ILE:HD11	1.97	0.46
29:T:60:THR:HB	29:T:81:LYS:HD2	1.98	0.46
23:Q:91:ARG:CB	23:Q:94:LEU:HD23	2.44	0.46
12:1:32:LYS:NZ	12:1:52:LYS:HA	2.31	0.46
8:E:134:LEU:CD2	8:E:161:ALA:HB2	2.45	0.46
29:T:69:ARG:NE	29:T:70:HIS:H	2.13	0.46
12:1:46:VAL:HG22	12:1:47:ILE:H	1.80	0.46
8:E:88:ARG:HB3	8:E:89:PRO:HD2	1.98	0.46
6:K:47:ILE:HG23	6:K:48:PRO:N	2.31	0.46
2:B:1914:C:H2'	2:B:1915:U:H5'	1.98	0.46
2:B:742:A:O2'	2:B:743:A:H5'	2.15	0.46
2:B:960:A:C4'	2:B:2457:U:H4'	2.46	0.46
4:C:204:LEU:CD2	4:C:209:ALA:HB1	2.45	0.46
2:B:833:A:H2'	2:B:834:G:H8	1.78	0.46
24:S:15:GLN:O	24:S:19:LEU:HB2	2.15	0.46
2:B:121:G:H2'	2:B:122:G:H8	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:17:C:O2'	1:A:18:G:H5'	2.16	0.46
16:L:17:LYS:HD2	16:L:19:LEU:HD11	1.98	0.46
32:6:183:ILE:C	32:6:185:GLY:H	2.19	0.46
2:B:979:A:H3'	2:B:980:A:C5'	2.45	0.46
2:B:2560:A:H2'	2:B:2561:U:H6	1.79	0.46
21:N:24:MET:CE	21:N:44:LEU:HB2	2.45	0.46
2:B:2603:G:O2'	2:B:2604:U:H5'	2.15	0.46
2:B:794:A:H2'	2:B:795:C:H6	1.80	0.46
22:O:56:LYS:HG2	22:O:60:GLU:OE1	2.15	0.46
2:B:2861:U:H2'	2:B:2862:G:H8	1.79	0.46
2:B:965:C:C2'	2:B:966:G:H5'	2.46	0.46
29:T:10:VAL:HG21	29:T:42:GLU:HG3	1.98	0.46
19:H:68:ARG:HG3	19:H:68:ARG:NH1	2.29	0.46
20:J:110:PRO:O	20:J:115:GLY:HA3	2.15	0.46
4:C:106:PRO:O	4:C:109:LEU:HB3	2.15	0.46
4:C:79:ARG:HD2	4:C:81:GLU:CG	2.45	0.46
8:E:106:LYS:CE	8:E:200:LEU:HB3	2.46	0.46
30:Z:63:GLY:O	30:Z:67:VAL:HG23	2.15	0.46
17:M:97:GLN:OE1	17:M:97:GLN:N	2.48	0.46
27:G:148:ARG:HB2	27:G:161:VAL:O	2.16	0.46
27:G:152:ARG:HD2	27:G:152:ARG:HA	1.68	0.46
19:H:53:GLU:OE1	19:H:54:LEU:HD23	2.15	0.46
2:B:1804:C:P	4:C:256:THR:HB	2.56	0.46
2:B:2152:G:H2'	2:B:2153:C:O4'	2.15	0.46
2:B:2674:G:H2'	2:B:2675:A:C8	2.51	0.46
2:B:1403:A:O2'	2:B:1404:C:H5'	2.15	0.46
5:D:117:GLY:O	5:D:118:PHE:C	2.54	0.46
20:J:13:ARG:HB3	20:J:53:TYR:CD2	2.51	0.46
5:D:111:GLY:H	5:D:194:PRO:HG2	1.81	0.46
4:C:245:THR:HG23	4:C:249:VAL:O	2.16	0.46
2:B:839:U:H1'	2:B:1191:G:H1'	1.97	0.46
2:B:647:G:H2'	2:B:648:G:H8	1.81	0.46
2:B:2300:C:H2'	2:B:2301:C:H6	1.80	0.46
17:M:35:ALA:HB2	17:M:100:LYS:H	1.79	0.46
2:B:523:C:H4'	2:B:540:C:O2	2.16	0.46
2:B:671:C:O2'	2:B:672:C:H5'	2.16	0.46
2:B:755:U:O2'	2:B:756:A:H5'	2.16	0.46
32:6:163:LYS:HE3	32:6:167:GLU:OE1	2.15	0.46
24:S:41:LYS:O	24:S:44:ALA:HB3	2.16	0.46
2:B:2076:U:O2	2:B:2076:U:O4'	2.32	0.46
2:B:2223:G:C2'	2:B:2224:G:H5'	2.46	0.46
2:B:998:C:H3'	36:B:3089:HOH:O	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2397:G:H2'	2:B:2398:U:H6	1.81	0.46
2:B:1092:C:H2'	2:B:1093:G:H5'	1.98	0.46
2:B:2204:G:O2'	2:B:2205:A:H5'	2.15	0.46
32:6:41:LEU:CD2	32:6:83:ILE:HD13	2.45	0.46
5:D:90:PHE:N	5:D:94:GLN:OE1	2.49	0.46
19:H:80:ILE:HD11	19:H:147:VAL:N	2.14	0.46
29:T:29:THR:CB	29:T:86:THR:HA	2.46	0.46
8:E:118:LEU:HD21	8:E:188:MET:CE	2.46	0.46
19:H:129:GLU:HA	19:H:143:ILE:HA	1.97	0.46
19:H:144:VAL:HG23	19:H:144:VAL:O	2.16	0.46
2:B:1795:C:O2'	2:B:1796:U:H5'	2.15	0.46
20:J:21:THR:O	20:J:62:VAL:HA	2.15	0.46
9:Y:7:THR:HA	9:Y:34:THR:HA	1.97	0.46
2:B:2897:U:H2'	2:B:2898:U:H6	1.80	0.46
5:D:113:SER:HB3	5:D:167:ASN:HA	1.97	0.46
2:B:571:U:O2'	2:B:573:U:O5'	2.34	0.46
27:G:10:VAL:CG1	27:G:14:VAL:HG21	2.46	0.46
2:B:457:A:N1	2:B:470:A:H5''	2.31	0.46
26:F:79:ARG:O	26:F:80:GLN:C	2.54	0.46
2:B:465:G:H2'	2:B:466:A:C8	2.51	0.46
2:B:642:U:H2'	2:B:644:A:OP2	2.15	0.46
2:B:264:C:C2'	2:B:265:A:H5''	2.46	0.46
29:T:45:ALA:O	29:T:48:GLN:HB2	2.16	0.46
2:B:1900:A:N1	2:B:1970:A:C6	2.84	0.46
30:Z:45:ARG:O	30:Z:46:PHE:HB2	2.15	0.46
2:B:920:A:H2'	2:B:921:C:C6	2.50	0.46
31:W:49:ASN:O	31:W:50:VAL:HG13	2.16	0.46
2:B:876:C:H3'	2:B:877:A:C8	2.50	0.46
23:Q:86:SER:HB2	28:R:51:VAL:HG12	1.97	0.46
29:T:11:LEU:HD22	29:T:11:LEU:N	2.26	0.46
2:B:2104:C:HO2'	2:B:2105:U:H5	1.64	0.46
2:B:2543:G:H2'	2:B:2544:G:O4'	2.16	0.46
3:I:100:ILE:HG23	3:I:104:GLN:OE1	2.16	0.46
6:K:64:ARG:HD2	6:K:102:PRO:O	2.16	0.46
2:B:2073:C:C5'	4:C:227:VAL:HG12	2.42	0.46
2:B:21:A:H2'	2:B:22:C:C6	2.50	0.46
26:F:74:ALA:CB	26:F:78:ILE:HD13	2.45	0.46
2:B:2636:C:O5'	5:D:81:GLU:HB2	2.16	0.46
2:B:2293:G:H2'	2:B:2294:G:C8	2.49	0.46
16:L:60:ARG:C	16:L:61:LEU:HD12	2.36	0.46
2:B:570:G:N7	2:B:2030:A:N6	2.63	0.46
32:6:180:GLU:O	32:6:184:LEU:HG	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:246:C:H2'	2:B:247:G:H5'	1.98	0.46
17:M:66:ARG:HB2	17:M:101:VAL:HG13	1.97	0.46
2:B:231:A:H3'	2:B:232:G:C8	2.51	0.46
2:B:438:G:O2'	2:B:439:A:H5'	2.16	0.46
21:N:24:MET:HG2	21:N:44:LEU:HD13	1.97	0.46
31:W:26:GLY:O	31:W:27:GLY:C	2.54	0.46
7:P:45:VAL:O	7:P:47:ILE:HG23	2.16	0.46
10:O:30:ASP:HB3	10:O:33:SER:O	2.16	0.46
1:A:40:U:O2'	1:A:41:G:H5'	2.16	0.46
19:H:48:GLU:HA	19:H:51:ARG:CZ	2.46	0.46
18:X:28:LEU:HB3	18:X:43:LEU:HD21	1.98	0.46
2:B:435:C:H2'	2:B:436:C:H5'	1.98	0.46
2:B:96:C:H4'	18:X:41:HIS:HD1	1.78	0.46
2:B:1552:A:H2'	2:B:1553:A:C5'	2.44	0.46
21:N:63:ARG:O	21:N:66:ALA:HB3	2.16	0.46
21:N:72:ASP:C	21:N:74:GLU:N	2.69	0.46
2:B:544:C:H2'	2:B:545:U:C6	2.50	0.46
6:K:115:ILE:HG23	6:K:116:ILE:H	1.81	0.46
6:K:12:ASP:HB3	6:K:85:VAL:HG13	1.98	0.46
2:B:580:U:O2'	2:B:581:C:H5'	2.15	0.46
20:J:96:ARG:N	20:J:97:PRO:HD3	2.31	0.46
5:D:70:LYS:HD3	5:D:70:LYS:C	2.35	0.46
2:B:1789:A:H2'	2:B:1790:C:O4'	2.16	0.46
2:B:1316:U:H2'	2:B:1317:G:C8	2.50	0.46
2:B:1210:G:C5'	2:B:1212:G:H5'	2.46	0.46
5:D:4:LEU:HD22	5:D:4:LEU:N	2.31	0.46
22:O:58:ILE:H	22:O:58:ILE:HG13	1.61	0.46
4:C:181:ARG:NH2	4:C:265:PHE:HB3	2.31	0.46
17:M:33:LEU:HD22	17:M:128:THR:CB	2.46	0.46
27:G:54:ARG:O	27:G:55:ASP:C	2.54	0.46
20:J:40:HIS:CE1	20:J:41:LYS:HG3	2.51	0.46
2:B:302:C:H2'	2:B:303:G:H8	1.81	0.46
5:D:56:LYS:HD3	5:D:58:ASN:HB3	1.97	0.46
2:B:699:A:H4'	2:B:1634:A:N7	2.31	0.46
2:B:2207:C:H2'	2:B:2208:C:C6	2.51	0.46
27:G:112:VAL:HG12	27:G:113:ASP:N	2.29	0.46
30:Z:43:GLU:C	30:Z:45:ARG:H	2.19	0.46
26:F:62:GLN:NE2	26:F:90:LEU:HD13	2.30	0.46
32:6:67:VAL:HG12	32:6:100:TYR:CD1	2.51	0.46
2:B:2571:U:H4'	5:D:151:THR:HG21	1.97	0.46
14:V:24:ASN:O	14:V:26:PHE:N	2.49	0.46
14:V:65:VAL:O	14:V:66:ASP:HB3	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:Q:86:SER:CB	28:R:51:VAL:HG12	2.46	0.46
19:H:119:ASN:ND2	19:H:121:VAL:HG13	2.31	0.46
20:J:58:ASN:CA	20:J:127:GLY:HA2	2.39	0.46
2:B:1179:G:C2'	2:B:1180:U:H5'	2.46	0.46
2:B:1387:A:H4'	2:B:1469:A:H1'	1.98	0.46
2:B:2137:U:C2'	2:B:2138:G:H5'	2.46	0.46
13:3:23:HIS:ND1	13:3:24:LYS:N	2.64	0.46
7:P:25:VAL:HA	7:P:85:VAL:C	2.36	0.46
2:B:246:C:N4	13:3:7:ARG:HG2	2.31	0.46
2:B:2247:A:H2'	2:B:2248:C:C6	2.51	0.46
18:X:20:ASN:ND2	18:X:20:ASN:N	2.64	0.46
2:B:738:G:H2'	2:B:739:A:C8	2.51	0.46
19:H:109:GLU:OE2	19:H:111:ALA:HB2	2.16	0.46
2:B:1806:C:C2'	2:B:1807:G:H5'	2.46	0.46
2:B:1733:G:H2'	2:B:1734:G:C8	2.51	0.46
2:B:838:C:C2	2:B:941:A:C6	3.04	0.46
26:F:116:LEU:HD21	26:F:174:PHE:HE2	1.81	0.45
26:F:99:PHE:HA	26:F:102:LEU:CD1	2.45	0.45
2:B:518:G:H4'	24:S:18:ARG:CZ	2.47	0.45
24:S:107:VAL:HG22	24:S:108:SER:N	2.31	0.45
23:Q:87:VAL:CB	28:R:52:PRO:HG3	2.40	0.45
1:A:83:G:H4'	9:Y:52:PHE:CD2	2.51	0.45
2:B:1161:C:H2'	2:B:1162:G:H8	1.81	0.45
8:E:18:THR:HG22	8:E:106:LYS:HE2	1.96	0.45
8:E:106:LYS:HE2	8:E:200:LEU:HB3	1.97	0.45
2:B:2691:C:O2'	2:B:2692:G:H5'	2.16	0.45
11:4:25:VAL:HG11	11:4:35:GLN:NE2	2.31	0.45
2:B:2461:A:H1'	2:B:2492:U:C2	2.51	0.45
2:B:655:A:H4'	2:B:656:G:OP1	2.16	0.45
13:3:33:THR:HG23	13:3:34:LYS:N	2.30	0.45
2:B:78:U:H2'	2:B:79:C:H6	1.76	0.45
5:D:54:ALA:N	5:D:76:GLY:HA2	2.30	0.45
2:B:2215:C:O2'	2:B:2216:G:H5'	2.16	0.45
2:B:946:C:H2'	2:B:947:A:H8	1.81	0.45
2:B:402:A:H2'	2:B:403:U:O4'	2.16	0.45
2:B:522:A:H2'	2:B:523:C:H6	1.80	0.45
5:D:122:VAL:HG12	5:D:122:VAL:O	2.16	0.45
21:N:67:PHE:O	21:N:68:ALA:C	2.55	0.45
22:O:56:LYS:O	22:O:60:GLU:HG2	2.16	0.45
2:B:2223:G:H2'	2:B:2224:G:H5'	1.99	0.45
3:I:70:THR:HG23	3:I:70:THR:O	2.15	0.45
28:R:55:ASP:N	28:R:55:ASP:OD2	2.50	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1765:U:H2'	2:B:1766:G:H8	1.82	0.45
2:B:1956:U:H2'	2:B:1957:C:H5'	1.97	0.45
27:G:154:GLU:O	27:G:156:TYR:N	2.42	0.45
2:B:1695:G:H2'	2:B:1696:G:O4'	2.15	0.45
32:6:65:THR:C	32:6:103:ILE:HD12	2.37	0.45
32:6:58:VAL:HG22	32:6:68:VAL:HG22	1.97	0.45
2:B:519:U:O2'	2:B:520:G:H5'	2.17	0.45
2:B:2364:C:C2'	2:B:2365:G:H5'	2.46	0.45
31:W:43:LYS:O	31:W:58:LEU:HD11	2.16	0.45
2:B:899:A:H2'	2:B:900:A:H8	1.81	0.45
29:T:39:THR:HG22	29:T:42:GLU:H	1.81	0.45
7:P:4:ILE:HA	7:P:7:LEU:CD1	2.46	0.45
4:C:141:HIS:HB3	4:C:190:THR:OG1	2.16	0.45
29:T:69:ARG:NE	29:T:69:ARG:HA	2.31	0.45
17:M:20:LEU:N	17:M:20:LEU:HD13	2.32	0.45
2:B:182:A:O2'	2:B:183:C:H5'	2.16	0.45
6:K:110:GLU:HA	6:K:113:MET:CG	2.46	0.45
4:C:211:ARG:C	4:C:213:ARG:H	2.19	0.45
2:B:16:C:O2'	2:B:17:G:H5'	2.16	0.45
2:B:677:A:O2'	2:B:2071:A:H5'	2.16	0.45
2:B:826:U:H2'	2:B:828:U:O4'	2.15	0.45
2:B:811:U:H2'	16:L:21:ARG:HA	1.99	0.45
2:B:1998:A:OP2	5:D:141:ARG:NH2	2.48	0.45
2:B:1937:A:N7	2:B:1939:U:H2'	2.32	0.45
2:B:1290:C:O2'	2:B:1291:C:H5'	2.17	0.45
19:H:40:THR:OG1	19:H:43:ASN:ND2	2.49	0.45
31:W:44:PHE:O	31:W:78:PHE:HA	2.17	0.45
31:W:75:ASN:O	31:W:76:ARG:HB2	2.16	0.45
2:B:1520:U:H2'	2:B:1521:G:O4'	2.17	0.45
2:B:866:A:H61	2:B:913:U:C1'	2.29	0.45
2:B:2663:G:H2'	2:B:2664:G:C8	2.51	0.45
28:R:78:ARG:HH21	28:R:78:ARG:HG3	1.81	0.45
2:B:1197:G:O2'	2:B:1198:U:H5'	2.16	0.45
1:A:78:A:H2'	1:A:79:G:O4'	2.16	0.45
2:B:1099:G:C5'	3:I:4:VAL:HG12	2.47	0.45
4:C:183:VAL:HG22	4:C:184:GLU:H	1.80	0.45
26:F:174:PHE:HB3	26:F:176:PHE:CD1	2.51	0.45
32:6:84:ARG:C	32:6:86:SER:N	2.68	0.45
20:J:44:TYR:CD2	23:Q:59:LEU:HD11	2.52	0.45
23:Q:60:TRP:CZ2	23:Q:93:ILE:HB	2.52	0.45
19:H:68:ARG:HG3	19:H:68:ARG:HH11	1.80	0.45
7:P:13:LYS:HD2	7:P:76:HIS:HA	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:Z:63:GLY:HA3	30:Z:66:THR:OG1	2.17	0.45
5:D:69:ALA:HA	5:D:73:VAL:HB	1.98	0.45
8:E:130:LYS:C	8:E:132:LYS:N	2.69	0.45
15:2:28:ARG:C	15:2:30:VAL:H	2.18	0.45
17:M:71:LYS:HD3	17:M:95:LEU:HD13	1.97	0.45
1:A:106:G:H2'	1:A:107:G:O4'	2.15	0.45
6:K:88:ASN:HD22	6:K:89:ASN:H	1.65	0.45
2:B:1993:U:H4'	5:D:133:THR:HG22	1.97	0.45
17:M:108:VAL:HG22	17:M:109:PRO:HD2	1.99	0.45
26:F:177:ARG:NE	26:F:177:ARG:HA	2.31	0.45
4:C:209:ALA:HA	4:C:212:TRP:CE2	2.52	0.45
2:B:1136:G:H2'	2:B:1137:G:H8	1.81	0.45
26:F:141:ASP:HB3	26:F:144:LYS:HB2	1.98	0.45
2:B:728:G:O2'	2:B:730:A:H8	1.99	0.45
2:B:245:G:H2'	2:B:246:C:C6	2.49	0.45
23:Q:35:PHE:C	23:Q:37:ALA:N	2.70	0.45
5:D:16:THR:HG22	5:D:17:GLU:H	1.81	0.45
29:T:9:LYS:O	29:T:9:LYS:HG2	2.16	0.45
2:B:1464:G:O2'	2:B:1465:G:H5'	2.16	0.45
2:B:1641:A:H2'	2:B:1642:G:O4'	2.17	0.45
2:B:2362:C:OP2	13:3:43:LEU:HD21	2.16	0.45
8:E:75:SER:O	8:E:78:TRP:HB2	2.16	0.45
20:J:95:ARG:HD3	20:J:95:ARG:O	2.17	0.45
4:C:67:LYS:O	4:C:188:ARG:HD3	2.16	0.45
2:B:2611:C:O2'	2:B:2612:C:H5'	2.16	0.45
2:B:2356:U:H5''	31:W:16:GLU:HG3	1.97	0.45
2:B:129:C:H2'	2:B:130:C:C6	2.52	0.45
31:W:40:ARG:HE	31:W:45:HIS:HE1	1.64	0.45
24:S:28:LYS:O	24:S:71:VAL:HG12	2.17	0.45
29:T:8:LEU:HD22	29:T:46:ALA:HA	1.98	0.45
23:Q:94:LEU:HD21	28:R:11:GLN:HB2	1.97	0.45
2:B:1023:U:H2'	2:B:1024:G:C5'	2.46	0.45
25:U:73:ASN:HB3	25:U:95:PHE:CE2	2.52	0.45
2:B:1547:C:H2'	2:B:1548:A:C8	2.52	0.45
21:N:2:ARG:HG2	21:N:5:LYS:CB	2.42	0.45
19:H:86:ASP:HB3	19:H:87:GLU:OE2	2.16	0.45
23:Q:26:ALA:HB1	23:Q:30:VAL:CB	2.46	0.45
2:B:2081:U:C5'	30:Z:25:THR:HG21	2.46	0.45
2:B:1418:G:H1'	2:B:1580:A:N6	2.31	0.45
2:B:729:G:H2'	2:B:729:G:N3	2.30	0.45
2:B:1047:G:H1'	2:B:1110:G:H22	1.80	0.45
27:G:10:VAL:H	27:G:48:THR:HG22	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1865:U:HO2'	2:B:1866:A:H8	1.63	0.45
2:B:1341:G:N2	2:B:1398:C:H4'	2.31	0.45
2:B:1050:A:H2'	2:B:1051:G:C8	2.51	0.45
3:I:59:THR:O	3:I:59:THR:HG23	2.17	0.45
2:B:2432:A:O2'	2:B:2433:A:H5'	2.16	0.45
2:B:1270:C:H5''	2:B:1271:G:H5'	1.98	0.45
16:L:81:ASP:O	16:L:82:LEU:HB2	2.17	0.45
26:F:98:PHE:O	26:F:102:LEU:HD12	2.17	0.45
26:F:101:ARG:HH12	26:F:138:PRO:HB2	1.82	0.45
2:B:518:G:H4'	24:S:18:ARG:NH2	2.31	0.45
23:Q:108:LEU:HD23	28:R:48:LYS:HB2	1.98	0.45
12:1:8:ILE:HD12	12:1:51:ALA:HA	1.98	0.45
3:I:75:ALA:O	3:I:79:LEU:HG	2.16	0.45
27:G:93:TYR:C	27:G:94:ARG:HG3	2.37	0.45
19:H:117:LEU:HD12	19:H:118:PRO:CD	2.40	0.45
6:K:111:LYS:HD3	6:K:111:LYS:N	2.32	0.45
16:L:115:GLU:OE1	16:L:115:GLU:N	2.49	0.45
6:K:75:SER:HB2	7:P:73:PHE:HA	1.99	0.45
4:C:15:VAL:HG22	4:C:204:LEU:O	2.16	0.45
2:B:2678:C:H2'	2:B:2679:A:C8	2.51	0.45
2:B:506:G:H4'	2:B:509:C:O2	2.17	0.45
2:B:2758:A:C2	2:B:2759:G:H1'	2.51	0.45
5:D:191:GLY:O	5:D:192:ALA:HB3	2.17	0.45
2:B:225:C:H2'	2:B:226:A:O4'	2.15	0.45
15:2:9:VAL:HG13	15:2:10:LEU:N	2.31	0.45
16:L:96:LYS:HE2	16:L:103:ILE:HA	1.99	0.45
26:F:165:GLY:O	26:F:169:LEU:HD12	2.17	0.45
2:B:851:C:H2'	2:B:852:U:H6	1.81	0.45
25:U:11:ILE:O	25:U:12:VAL:HB	2.17	0.45
19:H:7:ASP:CG	19:H:8:LYS:N	2.70	0.45
23:Q:111:LYS:HE3	28:R:48:LYS:HZ1	1.82	0.45
29:T:85:VAL:C	29:T:86:THR:HG23	2.37	0.45
2:B:160:A:H2'	2:B:161:A:C8	2.51	0.45
8:E:113:VAL:HG22	8:E:118:LEU:HD12	1.99	0.45
8:E:149:ILE:HD11	8:E:172:ALA:HA	1.99	0.45
27:G:95:ALA:HA	27:G:104:LEU:HD23	1.98	0.45
21:N:31:HIS:O	21:N:33:ILE:HG13	2.17	0.45
21:N:29:VAL:HG13	21:N:83:LEU:HD21	1.98	0.45
23:Q:7:VAL:O	23:Q:11:ALA:HB2	2.17	0.45
20:J:128:ASN:O	20:J:129:GLU:HG3	2.17	0.45
2:B:2106:U:H2'	2:B:2107:G:C8	2.51	0.45
6:K:38:ILE:HD11	6:K:112:PHE:HZ	1.82	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:720:U:H2'	2:B:721:A:H8	1.80	0.45
9:Y:47:ILE:HG23	9:Y:54:VAL:HG21	1.99	0.45
25:U:81:ARG:H	25:U:81:ARG:NH2	2.09	0.45
2:B:675:A:H4'	8:E:62:GLN:HE22	1.81	0.45
2:B:1582:C:H2'	2:B:1583:A:O4'	2.17	0.45
2:B:1045:C:P	2:B:1047:G:H5'	2.57	0.45
2:B:1258:U:H2'	2:B:1259:G:H8	1.80	0.45
2:B:2209:G:H2'	2:B:2210:U:C5	2.51	0.45
1:A:114:C:H1'	22:O:47:VAL:HG21	1.98	0.45
23:Q:23:TYR:CD2	23:Q:23:TYR:N	2.82	0.45
2:B:349:U:O2'	2:B:350:G:H5'	2.17	0.45
25:U:35:VAL:O	25:U:38:ILE:HG22	2.17	0.45
2:B:1353:A:H2'	2:B:1354:A:C8	2.51	0.45
2:B:979:A:H2'	2:B:982:C:H42	1.82	0.45
2:B:1210:G:H1'	2:B:1212:G:C2	2.52	0.45
2:B:1210:G:H5'	2:B:1212:G:C5'	2.45	0.45
2:B:2135:A:H61	2:B:2156:G:C2'	2.30	0.45
2:B:937:C:H2'	2:B:938:G:C8	2.52	0.45
2:B:2549:G:O2'	2:B:2550:G:H5'	2.17	0.45
2:B:2356:U:C5'	31:W:16:GLU:HG3	2.47	0.45
26:F:14:LYS:O	26:F:18:GLU:HB2	2.16	0.45
2:B:1048:A:H2'	2:B:1049:C:C6	2.51	0.45
6:K:18:ARG:O	6:K:45:GLU:HB2	2.17	0.45
2:B:428:A:O2'	2:B:429:A:H5'	2.15	0.45
26:F:31:GLU:O	26:F:32:LYS:O	2.34	0.45
27:G:8:VAL:HG22	27:G:51:PHE:HE2	1.82	0.45
29:T:49:LYS:HB2	29:T:50:LEU:HD22	1.99	0.45
2:B:361:G:HO2'	2:B:362:A:C4'	2.30	0.45
2:B:2513:A:H2'	2:B:2514:U:C6	2.52	0.45
2:B:2515:C:O2'	2:B:2516:A:H5'	2.17	0.45
12:1:26:LYS:HB3	12:1:52:LYS:HZ2	1.81	0.45
8:E:48:THR:HG22	8:E:86:ALA:HB3	1.98	0.45
8:E:51:GLU:O	8:E:52:VAL:C	2.53	0.45
2:B:1439:A:N3	2:B:1553:A:C6	2.85	0.45
22:O:14:ALA:C	22:O:16:ARG:H	2.20	0.45
3:I:138:VAL:HG12	3:I:139:VAL:N	2.31	0.45
16:L:79:LEU:CG	16:L:112:LEU:HA	2.43	0.45
9:Y:57:GLU:HA	9:Y:57:GLU:OE1	2.16	0.45
2:B:626:A:OP1	2:B:654:A:N6	2.49	0.45
15:2:13:ASN:O	15:2:17:GLY:HA3	2.17	0.45
2:B:394:C:C2'	2:B:395:U:H5'	2.46	0.45
4:C:245:THR:HG23	4:C:249:VAL:HB	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:263:G:H2'	2:B:264:C:O4'	2.16	0.45
2:B:814:C:H2'	2:B:815:C:H6	1.82	0.45
2:B:540:C:O2'	2:B:541:A:H5'	2.16	0.45
3:I:90:GLY:C	3:I:92:PRO:HD3	2.37	0.45
2:B:1144:A:O2'	2:B:1145:C:H5'	2.16	0.45
27:G:54:ARG:HD2	27:G:57:TYR:CE1	2.51	0.45
2:B:2888:C:H2'	2:B:2889:C:H6	1.82	0.45
29:T:36:LYS:HD3	29:T:36:LYS:O	2.17	0.45
4:C:216:ARG:HE	4:C:217:PRO:HD2	1.82	0.45
32:6:65:THR:HG23	32:6:101:ILE:O	2.17	0.45
6:K:35:VAL:CG2	6:K:36:GLY:H	2.06	0.45
31:W:59:PHE:HE2	31:W:61:LYS:HA	1.81	0.45
23:Q:106:THR:O	23:Q:109:VAL:HB	2.16	0.45
20:J:44:TYR:O	20:J:45:THR:CB	2.65	0.45
4:C:159:THR:N	4:C:194:VAL:CG1	2.80	0.45
30:Z:69:ALA:HA	30:Z:72:ARG:NH1	2.32	0.45
2:B:1439:A:C5	2:B:1552:A:N6	2.84	0.45
2:B:1797:G:C6	2:B:1823:G:C6	3.05	0.45
3:I:45:THR:O	3:I:48:ILE:HG22	2.16	0.45
2:B:1176:U:H6	2:B:1176:U:O5'	2.00	0.45
25:U:64:ILE:HG13	25:U:65:GLN:N	2.32	0.45
2:B:2789:C:H2'	2:B:2893:A:N7	2.32	0.45
8:E:60:TRP:HB3	8:E:61:ARG:H	1.33	0.45
13:3:30:HIS:CD2	13:3:31:ILE:N	2.85	0.45
2:B:1811:G:O2'	2:B:1812:U:H5'	2.16	0.45
4:C:43:ASN:HD22	4:C:44:ASN:N	2.15	0.45
5:D:55:LYS:C	5:D:57:ALA:H	2.20	0.45
16:L:127:VAL:HG22	16:L:128:THR:N	2.31	0.45
2:B:325:G:O2'	2:B:326:G:H5'	2.15	0.45
2:B:1150:C:O2'	2:B:1151:A:H5'	2.16	0.45
2:B:1434:A:H4'	2:B:1434:A:OP1	2.17	0.45
22:O:93:ASP:C	22:O:95:SER:H	2.21	0.45
9:Y:11:SER:OG	9:Y:13:ILE:HG13	2.16	0.45
27:G:58:ALA:C	27:G:60:GLY:N	2.70	0.45
17:M:35:ALA:HB3	17:M:100:LYS:H	1.82	0.45
2:B:1649:G:HO2'	2:B:1650:A:H5'	1.80	0.45
2:B:1640:A:H2'	2:B:1641:A:C8	2.51	0.45
2:B:309:A:H1'	2:B:329:G:N3	2.31	0.45
2:B:1048:A:P	2:B:1048:A:H8	2.40	0.45
2:B:112:U:H2'	2:B:113:U:H5'	1.99	0.45
2:B:131:A:H2'	2:B:132:G:H8	1.81	0.45
24:S:74:ILE:HD12	24:S:104:THR:O	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:4:ILE:CD1	19:H:44:ILE:HG22	2.47	0.45
2:B:850:U:O3'	9:Y:22:THR:HG22	2.17	0.45
14:V:51:GLN:NE2	14:V:79:ARG:HH22	2.14	0.45
27:G:43:LYS:O	27:G:50:THR:N	2.49	0.45
29:T:55:VAL:HG22	29:T:87:LEU:HD23	1.99	0.45
2:B:2515:C:P	20:J:81:ILE:HD11	2.57	0.45
4:C:94:LEU:HA	4:C:100:ARG:HB3	1.98	0.45
30:Z:33:LEU:O	30:Z:34:HIS:CG	2.70	0.45
30:Z:63:GLY:O	30:Z:66:THR:N	2.50	0.45
2:B:320:A:OP1	8:E:130:LYS:HE3	2.17	0.45
20:J:59:ALA:C	20:J:61:LYS:N	2.70	0.45
2:B:2019:A:H4'	23:Q:33:VAL:HG11	1.98	0.45
29:T:18:GLU:O	29:T:20:ALA:N	2.48	0.45
22:O:30:ARG:HG3	22:O:30:ARG:NH1	2.32	0.45
2:B:1731:G:O2'	2:B:1732:C:H5''	2.17	0.45
2:B:928:A:H2'	2:B:929:U:C6	2.51	0.45
28:R:72:VAL:CG2	28:R:89:HIS:HB3	2.46	0.45
16:L:57:LEU:HA	16:L:60:ARG:HE	1.82	0.45
6:K:5:GLN:HA	6:K:20:MET:SD	2.57	0.45
2:B:1201:U:H2'	2:B:1202:G:C8	2.52	0.45
5:D:16:THR:HG22	5:D:17:GLU:N	2.32	0.45
2:B:1468:U:H2'	2:B:1522:A:H61	1.81	0.45
2:B:2846:G:OP1	7:P:51:ASN:HB2	2.17	0.45
2:B:208:C:H2'	2:B:209:C:C6	2.51	0.45
2:B:1257:C:H5'	8:E:78:TRP:CH2	2.51	0.45
28:R:91:GLN:HG3	28:R:92:TRP:N	2.32	0.45
2:B:2428:G:H5''	2:B:2429:G:OP1	2.17	0.45
2:B:2702:G:H2'	2:B:2703:C:H6	1.81	0.45
2:B:1281:G:O2'	2:B:1282:U:H5'	2.17	0.45
2:B:468:G:H5''	8:E:55:SER:HB2	1.98	0.45
2:B:1098:A:O5'	3:I:3:LYS:CG	2.64	0.45
14:V:80:HIS:CG	14:V:83:LYS:HB2	2.52	0.45
20:J:45:THR:H	20:J:46:PRO:CD	2.25	0.45
2:B:282:A:H2'	2:B:283:G:O4'	2.17	0.45
2:B:972:A:C3'	2:B:973:A:H5''	2.36	0.45
16:L:3:LEU:O	16:L:5:THR:HG23	2.17	0.45
3:I:57:VAL:HG23	3:I:71:LYS:HZ1	1.82	0.45
6:K:112:PHE:O	6:K:113:MET:C	2.55	0.45
9:Y:56:VAL:HG12	9:Y:57:GLU:H	1.81	0.45
2:B:1111:A:H3'	2:B:1111:A:OP2	2.17	0.45
2:B:173:A:H2'	2:B:174:U:H6	1.82	0.45
2:B:416:U:H2'	2:B:417:C:C6	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:Y:37:ARG:HG2	9:Y:43:ILE:HD11	1.97	0.45
26:F:147:ARG:CZ	26:F:147:ARG:HB3	2.46	0.45
2:B:931:U:C4	2:B:1167:C:H1'	2.52	0.45
2:B:1568:G:H4'	4:C:58:LYS:CB	2.47	0.45
2:B:2693:G:H2'	2:B:2694:G:C8	2.50	0.45
21:N:8:ARG:HB3	21:N:43:GLU:OE2	2.17	0.45
2:B:841:G:O2'	2:B:842:U:H5'	2.16	0.45
2:B:244:A:H1'	2:B:255:A:N6	2.32	0.45
25:U:23:LYS:HD2	25:U:23:LYS:N	2.32	0.45
2:B:1210:G:N3	2:B:1212:G:N2	2.65	0.45
21:N:90:ARG:HB3	21:N:94:TYR:CE1	2.52	0.45
2:B:1877:A:H2'	2:B:1878:G:O4'	2.17	0.45
20:J:40:HIS:ND1	20:J:41:LYS:HG3	2.32	0.45
2:B:2836:U:H2'	2:B:2837:A:C8	2.52	0.45
2:B:713:G:O2'	2:B:714:U:H5'	2.18	0.45
5:D:56:LYS:CD	5:D:58:ASN:HB3	2.47	0.45
2:B:274:C:H6	2:B:274:C:O5'	2.00	0.45
2:B:596:U:H2'	2:B:597:G:H8	1.82	0.45
2:B:220:G:H1	2:B:427:U:H2'	1.81	0.45
19:H:99:ILE:O	19:H:103:VAL:HG12	2.16	0.45
2:B:1322:A:C2'	2:B:1323:C:H5'	2.47	0.45
4:C:149:LYS:HD3	4:C:152:GLN:HE22	1.82	0.44
32:6:65:THR:HG22	32:6:66:LEU:N	2.31	0.44
6:K:71:ARG:O	6:K:72:PRO:C	2.55	0.44
24:S:25:ARG:HE	24:S:74:ILE:HG23	1.82	0.44
2:B:2330:G:H21	31:W:38:ARG:HA	1.80	0.44
2:B:850:U:H2'	2:B:851:C:H6	1.82	0.44
31:W:59:PHE:O	31:W:60:ALA:CB	2.65	0.44
14:V:14:LYS:CE	14:V:18:ARG:HH21	2.31	0.44
23:Q:59:LEU:O	23:Q:62:ALA:HB3	2.17	0.44
2:B:2798:U:H4'	2:B:2800:A:N1	2.32	0.44
4:C:80:LEU:HD22	4:C:109:LEU:HD12	1.98	0.44
2:B:2232:C:O2'	2:B:2233:U:H5'	2.17	0.44
17:M:38:ARG:CA	17:M:98:PRO:HD3	2.47	0.44
2:B:1083:U:H1'	2:B:1086:A:H61	1.81	0.44
21:N:45:ARG:O	21:N:49:GLU:HG3	2.17	0.44
2:B:2545:G:O2'	2:B:2546:U:H5'	2.17	0.44
6:K:85:VAL:HG21	6:K:115:ILE:HD11	2.00	0.44
2:B:2899:A:H2'	2:B:2900:A:H8	1.82	0.44
2:B:593:U:H2'	2:B:594:U:H6	1.80	0.44
23:Q:83:LYS:HZ2	23:Q:83:LYS:HA	1.82	0.44
2:B:1713:A:H4'	2:B:1714:U:OP2	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1507:C:H2'	2:B:1508:A:H4'	1.99	0.44
2:B:1599:U:H2'	2:B:1600:C:H6	1.78	0.44
32:6:45:TYR:CE2	32:6:75:ALA:HB2	2.52	0.44
2:B:951:C:O2'	2:B:952:G:H5'	2.17	0.44
2:B:1190:G:O2'	2:B:1191:G:H5'	2.17	0.44
2:B:1722:A:N6	2:B:1738:G:H1'	2.32	0.44
2:B:485:C:HO2'	24:S:60:HIS:HE2	1.65	0.44
27:G:112:VAL:HG13	27:G:150:TYR:CE2	2.52	0.44
28:R:26:ASP:O	28:R:27:ILE:HD13	2.17	0.44
8:E:4:VAL:C	8:E:6:LYS:H	2.20	0.44
18:X:49:ASP:O	18:X:50:VAL:C	2.54	0.44
4:C:146:LYS:HG2	4:C:147:PRO:HD2	1.99	0.44
2:B:1099:G:O2'	2:B:1100:C:H5'	2.18	0.44
16:L:92:LEU:HD22	16:L:124:GLY:HA3	1.97	0.44
30:Z:39:TRP:HA	30:Z:46:PHE:HD2	1.82	0.44
8:E:1:MET:HB2	8:E:16:GLU:HA	1.99	0.44
24:S:36:LEU:HB3	24:S:48:LYS:HB2	1.99	0.44
23:Q:109:VAL:CG1	23:Q:113:LYS:HE3	2.47	0.44
27:G:118:ALA:C	27:G:120:ILE:H	2.19	0.44
27:G:83:THR:C	27:G:84:LYS:HD3	2.37	0.44
9:Y:16:LEU:HD22	9:Y:16:LEU:N	2.16	0.44
2:B:280:U:H2'	2:B:281:C:C5	2.52	0.44
2:B:819:A:OP2	2:B:1187:G:N2	2.47	0.44
4:C:90:ILE:HD11	4:C:102:TYR:HB3	1.99	0.44
26:F:45:ASP:O	26:F:47:LYS:HD3	2.17	0.44
6:K:25:LEU:HD12	6:K:39:ILE:HA	1.99	0.44
32:6:31:GLY:HA2	32:6:106:LEU:HD22	2.00	0.44
2:B:1241:A:H2'	2:B:1242:U:C5'	2.44	0.44
5:D:116:LYS:HD3	5:D:116:LYS:HA	1.87	0.44
8:E:109:LEU:HD12	8:E:112:LEU:HD12	1.98	0.44
2:B:2360:G:OP1	13:3:50:SER:HB3	2.17	0.44
2:B:2065:C:H2'	2:B:2066:C:C6	2.52	0.44
12:1:4:ILE:HB	12:1:27:ARG:HG3	1.98	0.44
25:U:41:VAL:N	25:U:60:LYS:O	2.50	0.44
2:B:1863:G:H2'	2:B:1864:U:O4'	2.17	0.44
2:B:1252:G:H1	23:Q:36:GLN:CD	2.21	0.44
2:B:2188:U:H3'	2:B:2189:U:H6	1.83	0.44
2:B:1484:U:H2'	2:B:1485:U:H6	1.82	0.44
2:B:2286:G:H5'	2:B:2286:G:C8	2.52	0.44
2:B:98:G:H22	25:U:6:ARG:HH12	1.64	0.44
2:B:753:A:H2'	2:B:754:U:H6	1.81	0.44
2:B:2852:G:H2'	2:B:2853:C:H6	1.80	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1039:A:H2'	2:B:1040:A:H8	1.81	0.44
17:M:26:VAL:HG22	17:M:133:LYS:HA	1.99	0.44
2:B:2808:G:O2'	2:B:2809:A:H8	2.01	0.44
2:B:1159:U:O2'	2:B:1160:G:H5'	2.17	0.44
2:B:1661:G:O2'	2:B:1662:U:H5'	2.17	0.44
2:B:1820:U:H4'	2:B:1821:A:OP2	2.18	0.44
16:L:103:ILE:H	16:L:103:ILE:CD1	2.26	0.44
19:H:3:VAL:HB	19:H:37:VAL:O	2.16	0.44
31:W:23:LYS:O	31:W:24:ARG:C	2.56	0.44
4:C:70:LYS:HD2	4:C:101:ARG:NH2	2.32	0.44
25:U:73:ASN:HB3	25:U:95:PHE:CD2	2.52	0.44
2:B:1277:G:H2'	2:B:1278:C:O4'	2.17	0.44
2:B:2144:G:N2	2:B:2146:C:O4'	2.49	0.44
6:K:113:MET:HE1	6:K:116:ILE:HD11	1.97	0.44
2:B:2472:G:H3'	2:B:2475:C:N4	2.32	0.44
27:G:37:ASN:ND2	27:G:40:VAL:HB	2.26	0.44
5:D:117:GLY:O	5:D:164:GLN:HA	2.18	0.44
5:D:118:PHE:O	5:D:119:ALA:HB3	2.17	0.44
2:B:2834:G:O6	2:B:2879:A:H2'	2.18	0.44
2:B:550:C:OP1	20:J:2:LYS:HE3	2.17	0.44
2:B:1870:C:OP2	2:B:1870:C:H4'	2.16	0.44
2:B:1510:G:O2'	2:B:1511:G:H5'	2.18	0.44
27:G:60:GLY:O	27:G:62:ALA:N	2.50	0.44
2:B:2183:A:H2'	2:B:2184:A:C8	2.52	0.44
2:B:2519:U:C6	2:B:2542:A:N6	2.86	0.44
2:B:2032:G:N2	5:D:150:GLN:HB3	2.32	0.44
4:C:199:HIS:C	4:C:201:LEU:H	2.20	0.44
4:C:120:ASP:CG	4:C:121:ALA:H	2.21	0.44
26:F:31:GLU:O	26:F:31:GLU:HG3	2.17	0.44
14:V:44:HIS:O	14:V:45:ASP:C	2.55	0.44
4:C:92:LEU:HD12	4:C:101:ARG:O	2.17	0.44
4:C:76:VAL:O	4:C:93:VAL:O	2.36	0.44
11:4:3:VAL:HG23	11:4:4:ARG:H	1.83	0.44
2:B:973:A:OP1	2:B:973:A:H8	2.01	0.44
8:E:146:VAL:HA	8:E:185:LYS:O	2.17	0.44
26:F:27:VAL:O	26:F:29:ARG:HD2	2.16	0.44
2:B:322:A:C2	2:B:340:A:C6	3.04	0.44
2:B:1445:G:H2'	2:B:1446:C:H6	1.83	0.44
21:N:61:ALA:C	21:N:63:ARG:N	2.70	0.44
20:J:57:LEU:HD11	20:J:129:GLU:H	1.83	0.44
11:4:11:CYS:HB3	11:4:33:HIS:CE1	2.52	0.44
7:P:26:GLU:HG3	7:P:43:GLU:HG2	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:K:99:ILE:HB	6:K:118:LEU:HD22	1.99	0.44
4:C:204:LEU:HB3	4:C:209:ALA:CB	2.47	0.44
2:B:2805:C:H2'	2:B:2806:C:C6	2.52	0.44
2:B:2636:C:O2'	2:B:2637:U:H5'	2.18	0.44
5:D:83:ARG:HG3	5:D:83:ARG:HH21	1.82	0.44
2:B:2455:G:O2'	2:B:2456:C:H5'	2.17	0.44
2:B:392:U:O2'	2:B:393:C:H5'	2.18	0.44
2:B:1000:A:H2'	2:B:1001:A:H8	1.83	0.44
5:D:4:LEU:HD21	5:D:100:LEU:CB	2.47	0.44
2:B:1423:G:H2'	2:B:1424:G:C8	2.53	0.44
2:B:2194:U:H2'	2:B:2195:U:H6	1.82	0.44
2:B:484:C:H2'	2:B:485:C:H6	1.82	0.44
2:B:2407:A:H2'	2:B:2408:U:C6	2.51	0.44
2:B:696:G:O2'	2:B:697:G:H5'	2.17	0.44
17:M:26:VAL:HB	17:M:104:GLU:OE2	2.17	0.44
2:B:1633:G:O2'	2:B:1634:A:H5''	2.18	0.44
18:X:21:LEU:HD21	18:X:50:VAL:HG11	1.98	0.44
2:B:291:G:H2'	2:B:292:U:H6	1.81	0.44
2:B:1310:G:H1'	2:B:1611:C:H5'	1.99	0.44
23:Q:40:LYS:HA	23:Q:43:GLN:OE1	2.17	0.44
20:J:75:TYR:CD1	20:J:86:GLN:HB3	2.53	0.44
2:B:332:A:O2'	2:B:334:C:OP2	2.35	0.44
2:B:275:C:H2'	2:B:276:U:O4'	2.16	0.44
16:L:75:ALA:HB3	16:L:108:ALA:HB2	1.98	0.44
26:F:118:ALA:HA	26:F:176:PHE:CE2	2.53	0.44
1:A:42:C:O2'	26:F:91:ARG:NH1	2.50	0.44
2:B:2383:G:H2'	2:B:2384:U:C6	2.52	0.44
14:V:42:LEU:N	14:V:42:LEU:HD23	2.25	0.44
23:Q:91:ARG:HE	23:Q:94:LEU:CD2	2.31	0.44
27:G:84:LYS:HG3	27:G:131:VAL:CB	2.48	0.44
2:B:283:G:H5''	2:B:284:U:OP2	2.18	0.44
2:B:283:G:H2'	2:B:284:U:C1'	2.48	0.44
4:C:69:ASN:O	4:C:70:LYS:C	2.56	0.44
5:D:107:VAL:CG1	5:D:108:ASP:N	2.80	0.44
2:B:1914:C:C2'	2:B:1915:U:H5'	2.48	0.44
2:B:89:A:O2'	2:B:90:U:H5'	2.16	0.44
2:B:1173:U:H2'	2:B:1174:U:O4'	2.17	0.44
2:B:1654:A:H61	2:B:2049:G:P	2.41	0.44
2:B:1657:U:C2'	2:B:1658:C:H5'	2.47	0.44
2:B:2884:U:O2	10:O:49:ARG:HG2	2.18	0.44
2:B:1869:G:H2'	2:B:1871:A:N7	2.32	0.44
2:B:19:A:OP1	23:Q:22:GLY:N	2.50	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:221:GLY:C	4:C:223:ALA:N	2.70	0.44
17:M:60:GLN:HG2	17:M:60:GLN:H	1.50	0.44
2:B:2359:C:H2'	2:B:2360:G:C8	2.53	0.44
10:0:5:ASN:O	10:0:7:PRO:HD3	2.16	0.44
29:T:6:ARG:CZ	29:T:6:ARG:HB3	2.46	0.44
2:B:2518:A:H2'	2:B:2518:A:N3	2.32	0.44
2:B:524:G:O2'	2:B:525:U:H5'	2.17	0.44
3:I:2:LYS:N	3:I:2:LYS:HD2	2.32	0.44
16:L:123:ARG:HD2	16:L:124:GLY:N	2.32	0.44
16:L:143:GLU:CG	16:L:144:GLU:H	1.99	0.44
19:H:27:ARG:CZ	30:Z:60:ASP:HA	2.46	0.44
5:D:148:GLN:HG3	5:D:152:PRO:CB	2.44	0.44
27:G:34:ARG:H	27:G:34:ARG:CD	2.31	0.44
27:G:34:ARG:HG2	27:G:34:ARG:NH1	2.32	0.44
25:U:10:VAL:HA	25:U:70:ALA:O	2.17	0.44
21:N:108:ALA:O	21:N:110:MET:HE3	2.16	0.44
29:T:74:ILE:HG13	29:T:75:GLY:N	2.32	0.44
27:G:94:ARG:NH2	27:G:105:SER:N	2.66	0.44
12:1:36:LYS:HG2	12:1:47:ILE:HA	1.99	0.44
2:B:1444:G:H2'	2:B:1445:G:H8	1.83	0.44
21:N:34:ILE:HG22	21:N:35:LYS:N	2.32	0.44
21:N:55:ALA:HB1	21:N:80:PHE:H	1.82	0.44
20:J:20:ALA:HA	20:J:23:LYS:HG3	1.99	0.44
17:M:69:PRO:C	17:M:71:LYS:H	2.21	0.44
2:B:544:C:O2'	2:B:545:U:O5'	2.36	0.44
25:U:53:GLN:N	25:U:54:PRO:CD	2.80	0.44
2:B:2893:A:H4'	2:B:2894:G:H5'	2.00	0.44
4:C:212:TRP:CD1	4:C:212:TRP:C	2.90	0.44
2:B:2678:C:H2'	2:B:2679:A:H8	1.82	0.44
2:B:2636:C:H2'	2:B:2637:U:C6	2.52	0.44
1:A:6:G:H2'	1:A:7:G:C8	2.52	0.44
2:B:2300:C:H2'	2:B:2301:C:C6	2.53	0.44
2:B:2100:G:H2'	2:B:2101:A:C8	2.53	0.44
2:B:1858:A:C2	2:B:1859:U:H1'	2.53	0.44
10:0:33:SER:OG	10:0:35:GLU:HG2	2.17	0.44
24:S:95:ARG:NE	24:S:95:ARG:HA	2.33	0.44
4:C:61:TYR:HA	4:C:85:ASN:OD1	2.18	0.44
2:B:1528:A:H2'	2:B:1529:G:O4'	2.17	0.44
23:Q:17:LEU:HG	23:Q:17:LEU:O	2.18	0.44
2:B:1098:A:C8	3:I:3:LYS:CB	3.00	0.44
26:F:137:PHE:CD2	26:F:137:PHE:N	2.82	0.44
2:B:858:G:N2	2:B:2269:G:OP2	2.50	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:W:29:SER:O	31:W:30:VAL:HB	2.18	0.44
14:V:63:ILE:HG22	14:V:65:VAL:HG13	2.00	0.44
27:G:6:ALA:HB3	27:G:68:ARG:CD	2.48	0.44
24:S:59:GLU:OE1	24:S:59:GLU:HA	2.17	0.44
5:D:24:VAL:HG23	5:D:189:VAL:O	2.17	0.44
7:P:49:ILE:HG12	7:P:50:ARG:N	2.33	0.44
4:C:106:PRO:HB3	4:C:141:HIS:CE1	2.52	0.44
2:B:1023:U:H2'	2:B:1024:G:H5'	1.99	0.44
2:B:1054:A:H2'	2:B:1055:G:C8	2.53	0.44
22:O:18:LEU:HD11	22:O:91:SER:HB3	1.99	0.44
3:I:21:PRO:HB2	3:I:22:PRO:CD	2.43	0.44
7:P:62:LYS:O	7:P:63:ILE:HB	2.17	0.44
20:J:55:ILE:HG22	20:J:123:LYS:HB2	2.00	0.44
6:K:61:VAL:HG13	6:K:87:LEU:CD2	2.47	0.44
17:M:37:GLY:O	17:M:126:ILE:HG21	2.18	0.44
4:C:202:ARG:HH11	4:C:213:ARG:HH21	1.66	0.44
2:B:526:A:H62	2:B:2626:C:H4'	1.82	0.44
2:B:2623:G:H4'	2:B:2825:G:C8	2.52	0.44
26:F:127:TYR:CB	26:F:155:ILE:HD13	2.48	0.44
2:B:612:G:H2'	2:B:614:A:H5''	1.99	0.44
5:D:122:VAL:N	5:D:127:PHE:HB2	2.33	0.44
2:B:39:G:O2'	2:B:40:U:H5'	2.18	0.44
2:B:1904:G:N3	2:B:1928:A:H2	2.16	0.44
2:B:1093:G:O2'	2:B:1094:U:H5'	2.18	0.44
2:B:1452:G:C4	2:B:2702:G:C6	3.06	0.44
3:I:53:PRO:CG	3:I:77:VAL:HG11	2.47	0.44
8:E:136:GLN:HE22	8:E:139:LYS:HD3	1.81	0.44
26:F:64:PRO:HB3	26:F:88:VAL:HG21	1.99	0.44
32:6:79:ILE:HG22	32:6:80:GLU:N	2.32	0.44
2:B:518:G:H2'	2:B:519:U:C6	2.53	0.44
31:W:49:ASN:CB	31:W:81:ILE:HG12	2.43	0.44
2:B:878:A:N3	2:B:899:A:N7	2.66	0.44
19:H:135:HIS:HB3	19:H:138:VAL:CG2	2.48	0.44
27:G:34:ARG:HG2	27:G:34:ARG:HH11	1.82	0.44
2:B:139:U:O2'	29:T:1:MET:HA	2.18	0.44
28:R:39:LEU:CB	28:R:53:PHE:HA	2.48	0.44
2:B:994:C:H3'	23:Q:53:LYS:HZ2	1.82	0.44
23:Q:59:LEU:HD13	23:Q:59:LEU:C	2.37	0.44
4:C:76:VAL:HG12	4:C:114:GLN:CG	2.36	0.44
2:B:1823:G:O2'	2:B:1824:G:H5'	2.18	0.44
17:M:93:VAL:HG22	17:M:94:ALA:H	1.82	0.44
2:B:2839:G:O2'	2:B:2840:C:H5'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:372:G:HO2'	2:B:373:U:P	2.40	0.44
6:K:99:ILE:HD13	6:K:118:LEU:CD2	2.47	0.44
23:Q:27:ARG:HG3	23:Q:27:ARG:HH11	1.83	0.44
22:O:106:LEU:HG	22:O:107:ALA:N	2.33	0.44
22:O:109:ALA:O	22:O:113:ALA:N	2.49	0.44
25:U:48:VAL:HG13	25:U:48:VAL:O	2.18	0.44
2:B:2081:U:H4'	30:Z:25:THR:HG21	1.99	0.44
4:C:12:ARG:HA	4:C:15:VAL:CG2	2.48	0.44
2:B:453:A:N3	2:B:457:A:O2'	2.51	0.44
26:F:74:ALA:HB1	26:F:76:PHE:CD2	2.53	0.44
2:B:155:A:H2'	2:B:156:A:H8	1.79	0.44
2:B:1830:C:H2'	2:B:1831:G:C8	2.52	0.44
2:B:1831:G:O2'	2:B:1832:C:H5'	2.18	0.44
32:6:155:LYS:HA	32:6:158:GLU:OE2	2.18	0.44
2:B:1395:A:H4'	2:B:1397:U:H5	1.80	0.44
2:B:564:C:O2'	2:B:565:C:H5'	2.18	0.44
2:B:246:C:C2'	2:B:247:G:H5'	2.48	0.44
32:6:39:LEU:HG	32:6:40:HIS:H	1.81	0.44
12:1:16:THR:HG21	12:1:39:ASP:OD2	2.18	0.44
18:X:27:ASN:HA	18:X:27:ASN:HD22	1.61	0.44
2:B:438:G:H2'	2:B:439:A:H8	1.82	0.44
31:W:16:GLU:N	31:W:16:GLU:CD	2.71	0.44
19:H:32:PRO:O	19:H:33:GLN:HB2	2.18	0.44
31:W:23:LYS:HD2	31:W:24:ARG:H	1.82	0.44
18:X:39:GLN:CB	18:X:42:LEU:HD22	2.47	0.44
14:V:75:GLN:HB2	14:V:90:ASP:O	2.17	0.44
27:G:30:GLY:H	27:G:78:VAL:HA	1.83	0.44
19:H:80:ILE:O	19:H:80:ILE:HD12	2.18	0.44
23:Q:87:VAL:HG12	23:Q:88:GLU:N	2.33	0.44
19:H:104:THR:HA	19:H:108:VAL:O	2.18	0.44
2:B:361:G:H2'	2:B:362:A:H8	1.82	0.44
4:C:99:GLU:HG2	4:C:100:ARG:N	2.33	0.44
2:B:2109:U:C4	2:B:2181:U:C5	3.06	0.44
8:E:134:LEU:HD23	8:E:161:ALA:N	2.32	0.44
2:B:1411:U:H2'	2:B:1412:U:H6	1.82	0.44
2:B:1082:U:H2'	2:B:1083:U:O4'	2.18	0.44
2:B:1095:A:N6	3:I:29:GLN:HE22	2.16	0.44
2:B:31:C:C2'	2:B:32:C:H5'	2.47	0.44
17:M:46:ILE:CG1	17:M:47:GLU:N	2.81	0.44
6:K:104:THR:OG1	6:K:107:LEU:HD11	2.17	0.44
2:B:2458:G:H1'	2:B:2460:U:O4	2.18	0.44
2:B:1729:U:C5'	2:B:1730:C:H4'	2.48	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2884:U:H4'	10:0:49:ARG:NH2	2.33	0.44
20:J:120:ARG:HB3	20:J:120:ARG:HE	1.50	0.44
2:B:948:C:H2'	2:B:949:G:H8	1.83	0.44
2:B:635:C:H2'	2:B:636:G:H8	1.83	0.44
2:B:1829:A:N6	2:B:1977:A:N6	2.66	0.44
5:D:3:GLY:O	5:D:4:LEU:HD13	2.17	0.44
2:B:753:A:O2'	2:B:754:U:H5'	2.17	0.44
2:B:1639:C:C2'	2:B:1640:A:H5''	2.48	0.44
2:B:1942:C:H4'	32:6:133:ARG:HH12	1.83	0.44
2:B:1248:G:O2'	23:Q:2:ARG:HA	2.18	0.44
19:H:110:VAL:O	19:H:110:VAL:HG22	2.17	0.44
2:B:2751:G:N3	2:B:2751:G:H2'	2.32	0.44
2:B:1237:A:HO2'	2:B:1238:G:C4'	2.30	0.44
2:B:2095:A:H3'	2:B:2096:C:H6	1.82	0.44
2:B:1064:C:H2'	2:B:1065:U:O4'	2.18	0.44
30:Z:53:ALA:C	30:Z:55:GLY:H	2.20	0.44
2:B:1098:A:H2'	3:I:4:VAL:C	2.37	0.43
2:B:1818:U:C4	4:C:152:GLN:HB3	2.53	0.43
16:L:105:ILE:HG22	16:L:106:GLU:N	2.33	0.43
16:L:93:ASN:ND2	16:L:94:THR:N	2.65	0.43
22:O:75:GLY:O	22:O:78:VAL:HG23	2.18	0.43
31:W:37:VAL:HG22	31:W:55:ASP:O	2.18	0.43
23:Q:63:ARG:CZ	23:Q:96:ASP:HA	2.47	0.43
5:D:187:LEU:HD12	5:D:188:LEU:N	2.33	0.43
9:Y:16:LEU:HD23	9:Y:19:HIS:CD2	2.53	0.43
16:L:3:LEU:HA	16:L:6:LEU:HD21	2.00	0.43
2:B:2145:C:O2	2:B:2145:C:O4'	2.35	0.43
17:M:40:ARG:HB2	17:M:93:VAL:HG22	1.99	0.43
17:M:42:THR:HA	17:M:93:VAL:HA	1.99	0.43
3:I:41:PHE:CE2	3:I:45:THR:HG21	2.53	0.43
2:B:780:G:H21	2:B:783:A:H62	1.64	0.43
2:B:784:G:H5''	4:C:225:ASN:OD1	2.18	0.43
5:D:158:GLY:O	5:D:160:LYS:N	2.51	0.43
2:B:1509:A:H4'	2:B:1510:G:O4'	2.18	0.43
2:B:1400:U:O5'	2:B:1400:U:H6	2.01	0.43
2:B:690:G:H2'	2:B:691:C:O4'	2.17	0.43
2:B:823:C:H2'	2:B:824:U:H6	1.83	0.43
2:B:1778:U:H2'	2:B:1784:A:N6	2.31	0.43
2:B:2309:A:H2'	2:B:2310:C:H6	1.83	0.43
4:C:21:PRO:C	4:C:23:LEU:H	2.22	0.43
1:A:20:G:H2'	1:A:21:G:C8	2.52	0.43
2:B:2235:G:H2'	2:B:2236:U:H6	1.81	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1052:C:H2'	2:B:1053:C:H6	1.83	0.43
22:O:56:LYS:O	22:O:57:ALA:C	2.55	0.43
27:G:154:GLU:CG	27:G:156:TYR:HB2	2.47	0.43
2:B:131:A:H2'	2:B:132:G:C8	2.53	0.43
2:B:467:G:O2'	2:B:468:G:H5'	2.18	0.43
12:1:31:GLU:CD	12:1:31:GLU:H	2.21	0.43
7:P:64:SER:O	7:P:66:GLY:N	2.45	0.43
2:B:1106:G:H2'	2:B:1107:G:C8	2.53	0.43
4:C:132:ARG:HA	4:C:166:ARG:HH11	1.83	0.43
8:E:1:MET:HB3	8:E:14:VAL:HG23	2.00	0.43
27:G:15:ASP:CB	27:G:26:LYS:H	2.19	0.43
24:S:28:LYS:HD2	24:S:30:SER:H	1.83	0.43
7:P:50:ARG:HB3	7:P:57:ALA:N	2.32	0.43
12:1:32:LYS:HZ2	12:1:52:LYS:HA	1.83	0.43
2:B:1025:G:OP1	2:B:1025:G:H8	2.01	0.43
2:B:405:U:H4'	2:B:405:U:OP2	2.18	0.43
19:H:87:GLU:CD	19:H:87:GLU:H	2.21	0.43
20:J:58:ASN:O	20:J:60:ASP:N	2.44	0.43
2:B:2010:G:O2'	2:B:2011:U:H5'	2.19	0.43
2:B:1508:A:H3'	2:B:1509:A:C5	2.53	0.43
4:C:14:HIS:O	4:C:203:VAL:HG11	2.18	0.43
2:B:840:C:H2'	2:B:841:G:H8	1.82	0.43
32:6:143:LEU:HG	32:6:147:LEU:HD11	1.99	0.43
16:L:42:SER:C	16:L:44:GLY:N	2.72	0.43
2:B:539:G:H2'	2:B:540:C:C6	2.53	0.43
2:B:584:C:H2'	2:B:585:G:H8	1.83	0.43
2:B:308:G:H2'	2:B:309:A:O4'	2.19	0.43
12:1:35:LEU:N	12:1:35:LEU:HD23	2.33	0.43
2:B:2888:C:H2'	2:B:2889:C:C6	2.53	0.43
2:B:781:A:OP1	4:C:216:ARG:NH2	2.51	0.43
2:B:2509:G:N2	2:B:2510:C:H1'	2.33	0.43
2:B:1098:A:C3'	3:I:3:LYS:C	2.87	0.43
1:A:43:C:H4'	26:F:91:ARG:NE	2.33	0.43
26:F:134:GLN:C	26:F:136:ILE:N	2.71	0.43
2:B:919:U:H6	2:B:919:U:O5'	2.01	0.43
5:D:32:ASN:HB3	5:D:50:VAL:HG21	2.00	0.43
29:T:57:VAL:CG2	29:T:58:VAL:H	2.17	0.43
2:B:996:A:H4'	23:Q:91:ARG:NE	2.33	0.43
20:J:3:THR:HG21	23:Q:60:TRP:NE1	2.15	0.43
23:Q:63:ARG:HH12	23:Q:96:ASP:CA	2.31	0.43
28:R:59:ILE:HA	28:R:101:ILE:H	1.83	0.43
7:P:29:VAL:HB	7:P:79:VAL:O	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:1:26:LYS:HB2	12:1:52:LYS:HD2	1.99	0.43
2:B:1124:G:O2'	11:4:37:GLN:HG2	2.18	0.43
17:M:19:GLY:N	17:M:38:ARG:NH1	2.65	0.43
16:L:4:ASN:O	16:L:6:LEU:N	2.50	0.43
27:G:168:VAL:HG12	27:G:170:THR:HG23	2.00	0.43
2:B:2691:C:H2'	2:B:2692:G:H8	1.83	0.43
26:F:11:VAL:HG12	26:F:12:VAL:N	2.20	0.43
2:B:341:C:O2'	2:B:342:A:H5'	2.17	0.43
3:I:72:THR:OG1	3:I:73:PRO:HD2	2.18	0.43
20:J:19:ASP:OD2	20:J:58:ASN:HB2	2.18	0.43
2:B:544:C:H4'	2:B:545:U:OP1	2.18	0.43
1:A:66:A:N6	1:A:107:G:H2'	2.28	0.43
2:B:589:U:H2'	2:B:590:A:C8	2.54	0.43
23:Q:30:VAL:CG1	23:Q:31:TYR:N	2.78	0.43
20:J:96:ARG:CZ	20:J:99:ARG:HD2	2.48	0.43
1:A:15:A:O2'	1:A:16:G:H5'	2.19	0.43
17:M:57:VAL:O	17:M:59:ARG:N	2.46	0.43
26:F:141:ASP:CB	26:F:144:LYS:HB2	2.48	0.43
2:B:1790:C:H2'	2:B:1791:A:N7	2.32	0.43
10:0:2:VAL:HG12	10:0:3:GLN:H	1.83	0.43
2:B:1506:U:H2'	2:B:1507:C:C6	2.53	0.43
2:B:1843:C:H2'	2:B:1844:C:H6	1.83	0.43
2:B:2694:G:O2'	2:B:2695:U:H5'	2.18	0.43
2:B:812:C:O2'	2:B:813:U:H5'	2.18	0.43
17:M:23:GLY:O	17:M:101:VAL:HG12	2.17	0.43
31:W:44:PHE:HE2	31:W:76:ARG:CZ	2.30	0.43
31:W:77:LYS:HD3	31:W:77:LYS:HA	1.85	0.43
2:B:671:C:H2'	2:B:672:C:C6	2.53	0.43
2:B:1108:U:H2'	2:B:1109:C:H5'	2.00	0.43
2:B:222:A:H61	2:B:232:G:H1'	1.83	0.43
2:B:309:A:N3	2:B:329:G:O2'	2.46	0.43
2:B:1092:C:C2'	2:B:1093:G:H5'	2.48	0.43
10:0:30:ASP:OD2	10:0:31:LYS:N	2.50	0.43
2:B:1099:G:N7	3:I:3:LYS:HD3	2.33	0.43
2:B:622:G:O2'	2:B:623:C:H5'	2.18	0.43
2:B:847:U:H2'	2:B:848:C:C6	2.53	0.43
2:B:920:A:H2'	2:B:921:C:H6	1.83	0.43
19:H:135:HIS:CG	19:H:136:SER:N	2.86	0.43
23:Q:52:ARG:C	23:Q:54:ARG:N	2.72	0.43
30:Z:68:LEU:HD13	30:Z:78:TYR:CE1	2.53	0.43
25:U:73:ASN:ND2	25:U:76:THR:H	2.15	0.43
21:N:52:ILE:O	21:N:55:ALA:HB3	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:54:ILE:HG23	3:I:54:ILE:O	2.18	0.43
23:Q:9:ALA:O	23:Q:11:ALA:N	2.52	0.43
28:R:63:VAL:HG23	28:R:63:VAL:O	2.18	0.43
6:K:64:ARG:HG2	6:K:79:PHE:CD2	2.53	0.43
2:B:2834:G:H2'	2:B:2879:A:H61	1.84	0.43
2:B:1591:A:H2'	2:B:1592:C:O4'	2.18	0.43
5:D:55:LYS:H	5:D:76:GLY:H	1.67	0.43
2:B:471:A:OP1	8:E:79:ARG:NH1	2.51	0.43
2:B:1374:G:H2'	2:B:1375:U:C6	2.54	0.43
1:A:4:C:H2'	1:A:5:U:C6	2.54	0.43
20:J:72:LYS:HB3	20:J:89:PHE:H	1.84	0.43
2:B:664:G:O2'	2:B:665:U:H5'	2.19	0.43
11:4:13:ASN:OD1	11:4:29:ALA:HB2	2.18	0.43
16:L:131:ALA:HA	16:L:134:ALA:CB	2.48	0.43
17:M:105:MET:HB2	17:M:117:PHE:CE2	2.53	0.43
2:B:2648:G:H2'	2:B:2649:C:H6	1.82	0.43
2:B:1845:G:C6	2:B:1896:G:C6	3.07	0.43
2:B:596:U:H2'	2:B:597:G:C8	2.54	0.43
2:B:1213:A:N1	2:B:1237:A:H1'	2.34	0.43
2:B:2643:G:H2'	2:B:2644:G:O4'	2.18	0.43
2:B:1099:G:OP2	3:I:2:LYS:O	2.36	0.43
2:B:1818:U:HO2'	2:B:1819:A:P	2.42	0.43
2:B:2265:U:H3'	2:B:2266:A:C5'	2.49	0.43
31:W:37:VAL:HB	31:W:38:ARG:HD3	2.00	0.43
14:V:35:GLU:HG3	14:V:93:ARG:CZ	2.48	0.43
19:H:5:LEU:HD12	19:H:17:ASP:CB	2.47	0.43
24:S:66:ILE:O	24:S:69:LEU:HB2	2.19	0.43
2:B:819:A:H5'	2:B:973:A:N1	2.34	0.43
4:C:89:ASN:HD22	4:C:89:ASN:HA	1.52	0.43
30:Z:71:LEU:HD11	30:Z:78:TYR:HB3	1.99	0.43
2:B:1445:G:O2'	2:B:1446:C:H5'	2.19	0.43
4:C:52:HIS:O	4:C:53:ILE:HB	2.19	0.43
1:A:65:U:C2'	1:A:66:A:H5'	2.49	0.43
20:J:55:ILE:CG2	20:J:123:LYS:HB2	2.49	0.43
2:B:287:G:H2'	2:B:287:G:N3	2.33	0.43
2:B:28:A:O2'	2:B:29:U:H5'	2.17	0.43
2:B:1387:A:H5'	2:B:1469:A:H1'	2.00	0.43
2:B:1259:G:H2'	2:B:1260:A:C8	2.53	0.43
2:B:1259:G:H2'	2:B:1260:A:H8	1.83	0.43
26:F:74:ALA:HB3	26:F:78:ILE:HD13	2.01	0.43
2:B:1556:C:H2'	2:B:1557:C:C6	2.54	0.43
5:D:35:THR:O	5:D:36:GLN:HB3	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1789:A:OP2	4:C:220:ARG:HD3	2.18	0.43
2:B:2395:C:H2'	2:B:2396:G:O4'	2.19	0.43
12:1:3:GLY:O	12:1:5:ARG:N	2.52	0.43
2:B:1854:A:H2'	2:B:1855:U:H5'	2.00	0.43
2:B:2015:A:N3	10:0:2:VAL:HG22	2.33	0.43
2:B:840:C:H2'	2:B:841:G:C8	2.53	0.43
8:E:72:SER:C	8:E:74:LYS:H	2.22	0.43
2:B:2774:C:P	5:D:169:ARG:HG3	2.58	0.43
2:B:444:C:O2'	2:B:445:C:H5'	2.18	0.43
2:B:39:G:H2'	2:B:40:U:C6	2.54	0.43
2:B:1905:C:O2'	2:B:1929:G:H1'	2.18	0.43
7:P:45:VAL:H	7:P:60:VAL:HB	1.83	0.43
2:B:699:A:H2'	2:B:700:G:O4'	2.18	0.43
19:H:110:VAL:HG13	19:H:110:VAL:O	2.18	0.43
2:B:1767:G:O2'	2:B:1768:C:H5'	2.19	0.43
23:Q:81:GLY:HA3	23:Q:112:ALA:HB1	2.01	0.43
26:F:68:LYS:HG3	26:F:81:GLY:O	2.18	0.43
26:F:59:ILE:HG12	26:F:137:PHE:CE2	2.53	0.43
2:B:2262:U:H1'	2:B:2328:A:H1'	2.01	0.43
9:Y:46:MET:HE2	9:Y:46:MET:HB3	1.79	0.43
25:U:20:LYS:HB2	25:U:20:LYS:NZ	2.33	0.43
23:Q:104:ALA:O	23:Q:105:PHE:HB3	2.17	0.43
20:J:38:GLY:CA	20:J:51:GLY:HA2	2.49	0.43
23:Q:56:PHE:O	23:Q:59:LEU:HB3	2.19	0.43
27:G:100:ASN:O	27:G:116:LEU:HD13	2.19	0.43
8:E:161:ALA:HB1	8:E:167:VAL:HG22	2.00	0.43
26:F:125:GLY:HA2	26:F:162:ASP:CA	2.40	0.43
19:H:131:SER:HB2	19:H:141:LYS:CG	2.49	0.43
19:H:96:THR:CG2	19:H:97:ARG:H	2.18	0.43
2:B:1241:A:O4'	2:B:1241:A:N3	2.50	0.43
2:B:832:U:H2'	2:B:833:A:C8	2.53	0.43
2:B:2734:A:H2'	2:B:2735:G:C5'	2.46	0.43
6:K:24:VAL:CG1	6:K:33:ALA:HB2	2.47	0.43
25:U:82:VAL:CG1	25:U:93:ARG:HB3	2.46	0.43
26:F:37:MET:HG2	26:F:52:ALA:HB1	2.00	0.43
2:B:1563:U:O2'	2:B:1564:C:H5'	2.19	0.43
1:A:4:C:H2'	1:A:5:U:H6	1.84	0.43
2:B:638:G:H2'	2:B:639:U:C6	2.53	0.43
2:B:630:G:H4'	2:B:640:C:O2'	2.18	0.43
27:G:9:VAL:O	27:G:11:PRO:HD3	2.18	0.43
2:B:1292:G:H2'	2:B:1293:C:H6	1.81	0.43
2:B:672:C:H2'	2:B:673:C:C6	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:T:48:GLN:HA	29:T:48:GLN:NE2	2.33	0.43
18:X:22:LEU:HG	18:X:23:ARG:HG2	2.01	0.43
2:B:2298:A:C2	2:B:2321:U:C5	3.06	0.43
4:C:4:LYS:HB3	4:C:5:CYS:H	1.56	0.43
2:B:233:A:H61	2:B:428:A:H61	1.65	0.43
22:O:73:ALA:O	22:O:77:ALA:N	2.52	0.43
2:B:2199:A:H5'	2:B:2200:C:OP2	2.17	0.43
2:B:620:G:O6	8:E:98:LYS:HE2	2.18	0.43
4:C:169:ALA:O	4:C:185:ALA:HB3	2.18	0.43
26:F:174:PHE:HA	26:F:175:PRO:HD2	1.87	0.43
26:F:33:ILE:HG22	26:F:34:THR:N	2.33	0.43
32:6:38:LEU:O	32:6:41:LEU:HB2	2.18	0.43
19:H:2:GLN:O	19:H:3:VAL:O	2.37	0.43
8:E:3:LEU:O	8:E:12:LEU:HB2	2.19	0.43
14:V:29:ILE:HG13	14:V:88:HIS:CE1	2.51	0.43
5:D:15:PHE:CD2	7:P:77:SER:HA	2.53	0.43
4:C:90:ILE:HG23	4:C:91:ALA:N	2.32	0.43
26:F:41:GLU:O	26:F:43:ILE:N	2.52	0.43
26:F:45:ASP:C	26:F:47:LYS:H	2.22	0.43
27:G:167:VAL:O	27:G:168:VAL:HB	2.19	0.43
24:S:10:ALA:C	24:S:12:SER:H	2.21	0.43
2:B:126:A:O2'	2:B:127:A:H5'	2.18	0.43
21:N:77:ALA:O	21:N:81:ASN:HB2	2.18	0.43
2:B:1794:A:O2'	2:B:1795:C:H5'	2.18	0.43
23:Q:9:ALA:C	23:Q:11:ALA:N	2.70	0.43
2:B:372:G:N7	30:Z:57:ARG:HB3	2.33	0.43
2:B:1460:U:H3'	2:B:1461:C:H5'	2.01	0.43
11:4:22:VAL:O	11:4:24:ARG:N	2.52	0.43
21:N:96:ARG:HG2	21:N:98:LEU:HD22	2.01	0.43
2:B:1387:A:C5'	2:B:1469:A:H1'	2.48	0.43
21:N:12:ARG:HG3	21:N:13:ASN:N	2.30	0.43
10:0:2:VAL:HG12	10:0:3:GLN:N	2.33	0.43
16:L:60:ARG:O	16:L:61:LEU:HD12	2.19	0.43
2:B:263:G:H2'	2:B:264:C:C6	2.53	0.43
2:B:670:A:H3'	16:L:43:GLY:H	1.83	0.43
2:B:235:U:H2'	2:B:236:C:H6	1.83	0.43
2:B:2315:G:H2'	2:B:2316:G:H8	1.84	0.43
27:G:77:GLY:HA3	27:G:135:ALA:O	2.19	0.43
4:C:196:ASN:O	4:C:197:ALA:HB3	2.18	0.43
2:B:1076:C:O2'	2:B:1077:A:H5'	2.19	0.43
16:L:124:GLY:CA	16:L:143:GLU:HG3	2.49	0.43
32:6:62:ASP:OD1	32:6:65:THR:HB	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:W:79:ILE:HG22	31:W:80:SER:N	2.33	0.43
19:H:12:LEU:HD21	19:H:25:TYR:HE2	1.83	0.43
20:J:3:THR:CB	20:J:44:TYR:OH	2.67	0.43
2:B:2516:A:O2'	2:B:2517:C:H5'	2.18	0.43
2:B:1161:C:H2'	2:B:1162:G:C8	2.54	0.43
28:R:25:LEU:H	28:R:94:THR:HG21	1.83	0.43
8:E:146:VAL:CG1	8:E:187:VAL:HG23	2.48	0.43
27:G:168:VAL:HG12	27:G:170:THR:CG2	2.48	0.43
2:B:1287:A:O2'	2:B:1288:G:H5'	2.18	0.43
2:B:2547:A:H5''	6:K:29:HIS:NE2	2.34	0.43
19:H:122:LEU:C	19:H:124:THR:H	2.21	0.43
6:K:87:LEU:HD12	6:K:92:GLU:HA	2.00	0.43
2:B:1534:U:O2'	2:B:1535:A:H2'	2.19	0.43
2:B:627:A:N6	16:L:112:LEU:HD23	2.32	0.43
2:B:2787:C:H2'	2:B:2788:C:C6	2.53	0.43
2:B:1260:A:O2'	2:B:1261:C:H5'	2.19	0.43
2:B:2676:C:O2'	2:B:2677:G:H5'	2.18	0.43
8:E:176:ASP:O	8:E:180:LEU:HG	2.18	0.43
2:B:682:G:O2'	2:B:683:U:H5'	2.19	0.43
26:F:131:VAL:O	26:F:132:ARG:HB2	2.17	0.43
2:B:40:U:O2'	2:B:41:C:H5'	2.19	0.43
22:O:36:TYR:CD2	22:O:36:TYR:N	2.87	0.43
2:B:2809:A:N6	2:B:2891:U:H4'	2.34	0.43
2:B:1063:G:O2'	2:B:1064:C:H5'	2.18	0.43
28:R:86:GLN:HE21	28:R:86:GLN:HB2	1.55	0.43
2:B:1671:U:N3	2:B:1674:G:OP2	2.48	0.43
16:L:92:LEU:HD23	16:L:124:GLY:HA3	2.00	0.43
2:B:2269:G:H4'	31:W:19:ARG:HH12	1.83	0.43
14:V:72:VAL:HG12	14:V:93:ARG:CA	2.46	0.43
24:S:2:GLU:O	24:S:107:VAL:O	2.37	0.43
8:E:118:LEU:HD23	8:E:186:VAL:HG13	2.00	0.43
17:M:18:ARG:C	17:M:38:ARG:HH22	2.22	0.43
27:G:145:ALA:O	27:G:148:ARG:HD2	2.18	0.43
1:A:9:G:OP1	22:O:25:ARG:NH1	2.52	0.43
21:N:55:ALA:HA	21:N:80:PHE:CE1	2.54	0.43
3:I:12:VAL:HG13	3:I:41:PHE:CE2	2.54	0.43
11:4:25:VAL:HB	11:4:35:GLN:HE21	1.84	0.43
13:3:20:GLY:HA3	13:3:48:MET:CE	2.49	0.43
27:G:10:VAL:HG13	27:G:14:VAL:CG2	2.49	0.43
2:B:2734:A:C2'	2:B:2735:G:H5'	2.45	0.43
2:B:2332:C:C1'	2:B:2336:A:N7	2.82	0.43
2:B:809:G:H2'	2:B:810:U:H6	1.82	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1693:U:H4'	2:B:1694:C:OP2	2.18	0.43
1:A:52:A:OP1	1:A:52:A:H4'	2.18	0.43
2:B:739:A:H5''	2:B:1784:A:C2	2.54	0.43
12:1:35:LEU:N	12:1:35:LEU:CD2	2.82	0.43
2:B:132:G:H2'	2:B:133:U:C6	2.53	0.43
2:B:202:U:H2'	2:B:203:A:O4'	2.19	0.43
2:B:760:G:C2'	2:B:761:A:H5'	2.49	0.43
22:O:28:VAL:HG21	22:O:103:VAL:HG13	2.00	0.43
2:B:1908:C:O2'	2:B:1909:C:H5'	2.19	0.43
2:B:1545:A:H2'	2:B:1546:G:O4'	2.19	0.43
2:B:2864:G:H2'	2:B:2865:U:C6	2.54	0.43
26:F:135:ILE:O	26:F:135:ILE:HD12	2.19	0.43
31:W:50:VAL:HG23	31:W:61:LYS:CD	2.35	0.43
31:W:61:LYS:HB3	31:W:62:ALA:H	1.46	0.43
27:G:30:GLY:N	27:G:78:VAL:HA	2.34	0.43
23:Q:63:ARG:H	23:Q:63:ARG:HG3	1.57	0.43
8:E:148:ILE:HA	8:E:187:VAL:CB	2.43	0.43
2:B:2231:U:H2'	2:B:2232:C:O4'	2.18	0.43
8:E:111:GLU:HG2	8:E:114:ARG:HH21	1.84	0.43
17:M:38:ARG:HA	17:M:98:PRO:HD3	2.01	0.43
25:U:73:ASN:OD1	25:U:75:ALA:HB3	2.17	0.43
6:K:43:ILE:HD12	6:K:56:ASP:HB2	2.01	0.43
12:1:36:LYS:HA	12:1:46:VAL:O	2.19	0.43
2:B:90:U:H2'	2:B:91:A:C2	2.54	0.43
2:B:1171:G:H2'	2:B:1172:C:C6	2.53	0.43
13:3:22:LYS:HA	13:3:47:ALA:O	2.19	0.43
2:B:2793:C:H2'	2:B:2794:C:C6	2.54	0.43
2:B:958:U:H5''	2:B:959:A:O5'	2.18	0.43
2:B:63:A:OP2	2:B:63:A:H8	2.02	0.43
2:B:2556:C:H2'	2:B:2557:G:O4'	2.18	0.43
32:6:123:GLU:O	32:6:127:VAL:HG23	2.19	0.43
25:U:40:LEU:N	25:U:40:LEU:HD12	2.32	0.43
2:B:1613:G:O4'	15:2:3:ARG:HG3	2.18	0.43
2:B:672:C:O2'	2:B:673:C:H5'	2.18	0.43
1:A:24:G:O2'	1:A:25:U:H5''	2.19	0.43
2:B:1467:U:O2'	2:B:1468:U:H5'	2.19	0.43
2:B:2559:C:O2'	2:B:2560:A:H5'	2.19	0.43
2:B:660:C:H2'	2:B:661:A:C8	2.54	0.43
2:B:2206:C:O2'	2:B:2207:C:H5'	2.19	0.43
2:B:1544:A:H2'	2:B:1545:A:C8	2.54	0.43
17:M:25:ASP:OD2	17:M:25:ASP:N	2.52	0.43
7:P:83:ILE:O	7:P:83:ILE:HD13	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2760:C:H2'	2:B:2760:C:O2	2.19	0.43
2:B:745:G:O2'	2:B:748:G:H1'	2.19	0.43
30:Z:39:TRP:NE1	30:Z:41:GLU:HG2	2.34	0.42
32:6:38:LEU:CD1	32:6:66:LEU:HD23	2.47	0.42
2:B:2572:A:P	5:D:152:PRO:HD3	2.59	0.42
2:B:851:C:H2'	2:B:852:U:C6	2.54	0.42
27:G:43:LYS:N	27:G:50:THR:O	2.47	0.42
25:U:11:ILE:HA	25:U:20:LYS:O	2.19	0.42
27:G:97:VAL:HA	27:G:102:ILE:HA	2.01	0.42
5:D:8:LYS:O	5:D:9:VAL:HB	2.19	0.42
4:C:140:VAL:O	4:C:141:HIS:HB2	2.19	0.42
5:D:177:VAL:O	5:D:177:VAL:HG23	2.19	0.42
16:L:3:LEU:O	16:L:5:THR:N	2.51	0.42
2:B:2151:U:O2'	2:B:2152:G:H5'	2.19	0.42
3:I:129:GLU:CB	3:I:133:ARG:HH12	2.32	0.42
2:B:1168:G:C6	2:B:1182:G:C6	3.07	0.42
21:N:96:ARG:HG2	21:N:98:LEU:CD2	2.49	0.42
4:C:202:ARG:CB	4:C:202:ARG:HH21	2.31	0.42
4:C:202:ARG:HH21	4:C:202:ARG:HB2	1.83	0.42
5:D:67:HIS:O	5:D:70:LYS:HB3	2.19	0.42
2:B:1347:A:H2'	2:B:1348:C:O4'	2.18	0.42
2:B:2479:U:OP1	2:B:2537:U:H1'	2.18	0.42
2:B:2359:C:O3'	13:3:50:SER:CB	2.64	0.42
4:C:245:THR:C	4:C:247:TRP:N	2.71	0.42
2:B:1486:U:O2'	2:B:1487:U:H5'	2.19	0.42
2:B:265:A:O2'	2:B:266:G:C4'	2.67	0.42
2:B:2756:U:C1'	2:B:2757:A:H5"	2.48	0.42
26:F:133:GLU:HA	26:F:150:GLY:HA2	2.01	0.42
7:P:97:TYR:O	7:P:100:ARG:HD3	2.20	0.42
2:B:1754:A:OP1	7:P:93:LYS:HD3	2.19	0.42
2:B:699:A:H4'	2:B:1634:A:C5	2.54	0.42
8:E:33:VAL:O	8:E:36:ALA:HB3	2.19	0.42
2:B:2752:C:H2'	2:B:2753:A:O4'	2.19	0.42
2:B:1392:A:C5	2:B:1393:A:C6	3.07	0.42
4:C:131:MET:HE2	4:C:187:CYS:O	2.18	0.42
16:L:96:LYS:HE3	16:L:102:GLY:O	2.19	0.42
2:B:2269:G:O3'	31:W:18:LYS:HG2	2.19	0.42
14:V:77:VAL:CG2	14:V:89:ILE:HG23	2.43	0.42
27:G:6:ALA:HB3	27:G:68:ARG:CG	2.49	0.42
25:U:10:VAL:O	25:U:21:ARG:HG2	2.18	0.42
2:B:358:U:H2'	2:B:359:G:O4'	2.19	0.42
2:B:2109:U:O2'	2:B:2110:G:H5'	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:E:146:VAL:HG12	8:E:147:LEU:N	2.34	0.42
25:U:85:ARG:HH11	25:U:86:PHE:H	1.65	0.42
18:X:2:LYS:HB2	18:X:3:ALA:H	1.62	0.42
19:H:128:HIS:C	19:H:143:ILE:HG23	2.39	0.42
19:H:125:THR:CA	19:H:146:VAL:HB	2.48	0.42
20:J:127:GLY:O	20:J:128:ASN:HB2	2.19	0.42
11:4:11:CYS:HB3	11:4:33:HIS:HE1	1.84	0.42
2:B:2840:C:H2'	2:B:2841:C:C6	2.53	0.42
6:K:115:ILE:CG2	6:K:116:ILE:N	2.81	0.42
20:J:35:ARG:HG3	20:J:52:ASP:OD1	2.19	0.42
27:G:10:VAL:N	27:G:48:THR:HG22	2.35	0.42
5:D:25:THR:HG21	5:D:193:VAL:HG21	1.99	0.42
5:D:193:VAL:O	5:D:194:PRO:O	2.37	0.42
2:B:1902:C:H4'	4:C:241:LYS:O	2.19	0.42
2:B:2215:C:H2'	2:B:2216:G:H8	1.84	0.42
2:B:506:G:H1'	2:B:507:A:H8	1.82	0.42
26:F:79:ARG:H	26:F:82:TYR:HB2	1.84	0.42
25:U:41:VAL:O	25:U:59:GLU:HG3	2.18	0.42
2:B:1341:G:H3'	2:B:1397:U:O2	2.19	0.42
21:N:41:ALA:C	21:N:43:GLU:N	2.72	0.42
2:B:315:G:H2'	2:B:316:C:H6	1.84	0.42
2:B:692:C:H2'	2:B:693:A:H8	1.84	0.42
2:B:2756:U:H4'	2:B:2757:A:O5'	2.18	0.42
9:Y:23:LEU:CD1	9:Y:28:LEU:HB2	2.49	0.42
12:1:39:ASP:O	12:1:43:ARG:N	2.51	0.42
2:B:26:G:H1'	2:B:515:A:H61	1.84	0.42
21:N:25:ALA:HB1	21:N:48:VAL:CG1	2.49	0.42
24:S:84:ARG:HB3	24:S:96:ILE:HG23	2.01	0.42
23:Q:14:LYS:HA	23:Q:17:LEU:HB3	2.01	0.42
8:E:7:ASP:N	8:E:7:ASP:OD2	2.52	0.42
23:Q:70:GLN:HA	23:Q:70:GLN:NE2	2.34	0.42
2:B:1833:C:H2'	2:B:1834:U:H6	1.83	0.42
22:O:51:ALA:CB	22:O:78:VAL:HG22	2.45	0.42
31:W:49:ASN:OD1	31:W:80:SER:HA	2.19	0.42
23:Q:91:ARG:HH12	28:R:10:LYS:CA	2.32	0.42
20:J:110:PRO:HB2	20:J:111:LYS:HE3	2.01	0.42
7:P:50:ARG:HB3	7:P:57:ALA:O	2.19	0.42
1:A:83:G:H4'	9:Y:52:PHE:CE2	2.54	0.42
2:B:279:A:N6	2:B:361:G:O2'	2.52	0.42
27:G:166:GLU:HG2	27:G:167:VAL:N	2.34	0.42
27:G:94:ARG:NE	27:G:94:ARG:C	2.72	0.42
2:B:2040:G:H2'	2:B:2041:U:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:E:88:ARG:HA	8:E:88:ARG:HD3	1.93	0.42
2:B:1199:U:H5'	23:Q:4:LYS:HD3	2.02	0.42
6:K:79:PHE:HZ	6:K:104:THR:HG23	1.84	0.42
2:B:580:U:O3'	23:Q:30:VAL:CG2	2.67	0.42
2:B:2472:G:C3'	2:B:2475:C:H42	2.32	0.42
2:B:1461:C:H2'	2:B:1462:C:H6	1.83	0.42
2:B:2012:G:OP1	24:S:98:LYS:HG2	2.18	0.42
2:B:1682:G:H2'	2:B:1683:U:C6	2.54	0.42
5:D:111:GLY:H	5:D:194:PRO:CG	2.32	0.42
2:B:1351:C:H2'	2:B:1352:U:C1'	2.49	0.42
2:B:66:C:O2'	2:B:67:U:H5'	2.19	0.42
2:B:1887:C:C2'	2:B:1888:G:H5'	2.48	0.42
2:B:1714:U:H3'	2:B:1715:G:C5'	2.49	0.42
2:B:1983:G:H4'	2:B:2606:C:H4'	1.99	0.42
2:B:2521:C:H2'	2:B:2522:U:C6	2.54	0.42
2:B:336:C:O2'	2:B:337:C:H5'	2.19	0.42
1:A:51:G:H2'	1:A:52:A:O5'	2.20	0.42
20:J:40:HIS:HE1	20:J:41:LYS:HE3	1.84	0.42
2:B:2836:U:H2'	2:B:2837:A:H8	1.85	0.42
2:B:433:C:O2'	2:B:434:U:H5'	2.19	0.42
2:B:2234:G:O2'	2:B:2235:G:H5'	2.19	0.42
2:B:55:G:H2'	2:B:56:A:H8	1.84	0.42
2:B:2434:A:H2'	2:B:2434:A:H8	1.70	0.42
21:N:70:THR:O	21:N:70:THR:OG1	2.35	0.42
2:B:1665:A:O2'	2:B:1666:G:H5'	2.20	0.42
2:B:11:C:H2'	2:B:12:U:H5'	2.01	0.42
17:M:116:ALA:C	17:M:118:LYS:N	2.72	0.42
2:B:1098:A:O2'	3:I:4:VAL:C	2.58	0.42
2:B:621:A:H2'	2:B:622:G:O4'	2.19	0.42
16:L:102:GLY:O	16:L:105:ILE:HG12	2.19	0.42
19:H:24:GLY:C	19:H:26:ALA:N	2.72	0.42
26:F:111:ARG:HD2	26:F:111:ARG:N	2.34	0.42
27:G:72:ASN:O	27:G:75:VAL:HB	2.18	0.42
1:A:98:G:O6	14:V:14:LYS:N	2.41	0.42
2:B:996:A:O2'	23:Q:91:ARG:HD2	2.19	0.42
12:1:50:GLU:O	12:1:51:ALA:HB2	2.19	0.42
5:D:107:VAL:N	5:D:206:ALA:H	2.17	0.42
26:F:47:LYS:HA	26:F:50:ASP:OD1	2.19	0.42
2:B:1082:U:C2	2:B:1086:A:N1	2.87	0.42
19:H:127:GLU:HB2	19:H:143:ILE:CG2	2.49	0.42
19:H:124:THR:O	19:H:146:VAL:HG11	2.19	0.42
10:0:43:THR:HG23	10:0:47:TYR:C	2.39	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:L:57:LEU:O	16:L:61:LEU:HD13	2.19	0.42
4:C:242:HIS:O	4:C:244:VAL:HG13	2.20	0.42
3:I:99:LYS:HB2	3:I:140:GLU:OE1	2.19	0.42
2:B:2093:G:O2'	2:B:2094:A:H5'	2.19	0.42
2:B:1422:G:O2'	2:B:1423:G:H5'	2.19	0.42
2:B:484:C:H2'	2:B:485:C:C6	2.54	0.42
2:B:1336:A:H3'	2:B:1337:G:H8	1.83	0.42
2:B:2861:U:H2'	2:B:2862:G:C8	2.54	0.42
2:B:52:A:H2'	2:B:53:A:C8	2.54	0.42
2:B:2211:A:OP2	2:B:2211:A:H4'	2.19	0.42
2:B:1361:G:H2'	2:B:1362:C:C6	2.55	0.42
2:B:391:A:H1'	2:B:411:G:O4'	2.20	0.42
1:A:42:C:C6	26:F:65:LEU:HD22	2.54	0.42
32:6:64:ARG:C	32:6:103:ILE:HB	2.39	0.42
2:B:918:A:C2'	2:B:919:U:H5'	2.44	0.42
27:G:28:LYS:O	27:G:30:GLY:N	2.53	0.42
27:G:43:LYS:O	27:G:49:LEU:HA	2.20	0.42
4:C:76:VAL:O	4:C:78:GLU:N	2.52	0.42
5:D:107:VAL:HG13	5:D:203:VAL:HG23	2.01	0.42
26:F:163:GLU:O	26:F:166:ARG:HB2	2.19	0.42
28:R:21:ARG:C	28:R:22:LEU:HD23	2.40	0.42
25:U:86:PHE:CG	25:U:87:GLU:N	2.87	0.42
19:H:113:SER:HB2	19:H:132:PHE:CZ	2.53	0.42
21:N:28:LEU:O	21:N:32:GLU:HA	2.19	0.42
3:I:54:ILE:HD11	3:I:71:LYS:N	2.34	0.42
2:B:2143:C:H3'	2:B:2144:G:H8	1.84	0.42
2:B:547:A:C2	2:B:548:G:H1'	2.54	0.42
2:B:1597:A:C5'	2:B:1598:A:H5'	2.43	0.42
20:J:103:ILE:HG13	20:J:104:ALA:N	2.35	0.42
2:B:2081:U:H2'	2:B:2082:A:C8	2.54	0.42
20:J:12:LYS:HG2	20:J:12:LYS:H	1.66	0.42
2:B:79:C:O2'	2:B:346:A:C1'	2.66	0.42
27:G:44:HIS:O	27:G:46:ASP:N	2.52	0.42
2:B:2212:A:O3'	2:B:2213:U:C4	2.73	0.42
2:B:481:G:C2	2:B:507:A:C4	3.08	0.42
2:B:234:U:H2'	2:B:235:U:O4'	2.19	0.42
6:K:121:GLU:O	6:K:122:VAL:C	2.57	0.42
15:2:9:VAL:CG1	15:2:10:LEU:N	2.81	0.42
2:B:300:A:H2'	2:B:334:C:H1'	2.02	0.42
32:6:125:GLY:O	32:6:129:ILE:HG13	2.19	0.42
7:P:86:LYS:HB3	7:P:87:ARG:H	1.58	0.42
2:B:1099:G:H3'	3:I:2:LYS:HA	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:135:HIS:N	19:H:138:VAL:HB	2.30	0.42
5:D:31:ALA:HA	5:D:96:ILE:O	2.19	0.42
24:S:2:GLU:O	24:S:3:THR:C	2.58	0.42
28:R:39:LEU:CA	28:R:53:PHE:HA	2.49	0.42
29:T:50:LEU:O	29:T:51:PHE:HB2	2.20	0.42
11:4:2:LYS:HD3	11:4:4:ARG:NE	2.18	0.42
8:E:171:ASP:CG	8:E:172:ALA:N	2.73	0.42
27:G:106:LEU:N	27:G:106:LEU:HD23	2.35	0.42
19:H:143:ILE:HG22	19:H:144:VAL:N	2.35	0.42
8:E:46:GLN:HB3	8:E:86:ALA:CA	2.50	0.42
2:B:2840:C:OP1	21:N:50:PRO:HA	2.20	0.42
2:B:2544:G:H2'	2:B:2545:G:H8	1.84	0.42
6:K:38:ILE:HD13	6:K:61:VAL:HG12	2.01	0.42
1:A:49:C:O2'	1:A:50:A:H5'	2.19	0.42
16:L:80:SER:HA	16:L:115:GLU:HB2	2.02	0.42
2:B:2443:C:O2'	2:B:2444:G:H5'	2.20	0.42
2:B:2652:C:C2'	2:B:2653:U:H5'	2.49	0.42
5:D:125:TRP:CD1	5:D:160:LYS:HB3	2.54	0.42
4:C:231:HIS:HA	4:C:241:LYS:HE3	2.02	0.42
17:M:123:LYS:O	17:M:124:LEU:C	2.58	0.42
2:B:2097:A:H2'	2:B:2098:U:C6	2.54	0.42
26:F:141:ASP:O	26:F:143:ASP:N	2.53	0.42
21:N:41:ALA:C	21:N:43:GLU:H	2.23	0.42
2:B:1131:G:H1'	2:B:1133:A:H62	1.85	0.42
30:Z:14:THR:HA	30:Z:28:ARG:HA	2.02	0.42
7:P:61:ARG:HB3	7:P:61:ARG:HH21	1.85	0.42
2:B:2601:C:C2	2:B:2603:G:N7	2.88	0.42
2:B:233:A:N6	2:B:428:A:H61	2.17	0.42
2:B:1062:G:H2'	2:B:1063:G:H8	1.85	0.42
2:B:2473:U:O2	2:B:2473:U:H2'	2.19	0.42
2:B:1880:U:H2'	2:B:1881:C:C6	2.55	0.42
31:W:69:GLU:HB3	31:W:70:VAL:H	1.65	0.42
2:B:1183:U:O2'	2:B:1184:U:H5'	2.19	0.42
16:L:101:ILE:HG22	16:L:105:ILE:HG13	2.02	0.42
19:H:27:ARG:HG2	19:H:27:ARG:HH21	1.83	0.42
32:6:29:ARG:O	32:6:30:THR:O	2.37	0.42
24:S:4:ILE:HG22	24:S:106:VAL:HA	2.01	0.42
1:A:76:G:H21	14:V:78:GLN:HE22	1.67	0.42
27:G:8:VAL:CG1	27:G:49:LEU:HB2	2.35	0.42
28:R:37:GLU:O	28:R:39:LEU:HD23	2.20	0.42
4:C:76:VAL:O	4:C:76:VAL:HG23	2.20	0.42
2:B:2800:A:H2'	2:B:2801:G:H1'	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:119:ASN:ND2	19:H:121:VAL:HG22	2.35	0.42
2:B:1441:G:H2'	2:B:1442:U:C6	2.54	0.42
17:M:43:ALA:C	17:M:45:GLN:N	2.73	0.42
8:E:145:ASP:OD1	8:E:183:PHE:HA	2.19	0.42
2:B:2812:G:H2'	2:B:2813:A:O4'	2.20	0.42
27:G:37:ASN:HD22	27:G:38:ASP:H	1.68	0.42
2:B:2794:C:H2'	2:B:2795:C:H6	1.83	0.42
26:F:66:ILE:HD11	26:F:83:PRO:HB3	2.01	0.42
20:J:73:VAL:O	20:J:74:TYR:HB2	2.19	0.42
4:C:211:ARG:HD2	4:C:215:VAL:O	2.20	0.42
2:B:2285:C:OP2	12:1:5:ARG:HD3	2.19	0.42
2:B:1434:A:N6	2:B:1558:C:H42	2.18	0.42
2:B:2188:U:H3'	2:B:2189:U:C6	2.55	0.42
22:O:7:ARG:HA	22:O:10:ARG:CZ	2.49	0.42
21:N:24:MET:CG	21:N:44:LEU:HD22	2.50	0.42
27:G:29:ASN:ND2	27:G:77:GLY:O	2.52	0.42
6:K:53:LYS:HD3	6:K:53:LYS:H	1.83	0.42
13:3:14:LYS:O	13:3:21:PHE:O	2.36	0.42
8:E:2:GLU:OE1	8:E:13:THR:N	2.53	0.42
2:B:1605:C:H1'	2:B:1610:A:C8	2.55	0.42
6:K:68:GLY:HA3	6:K:78:ARG:HB3	2.01	0.42
26:F:111:ARG:O	26:F:112:ASP:HB2	2.20	0.42
2:B:917:A:H2'	2:B:918:A:O4'	2.19	0.42
31:W:47:GLY:HA3	31:W:80:SER:CB	2.49	0.42
14:V:26:PHE:CE1	14:V:89:ILE:HD11	2.55	0.42
5:D:96:ILE:HD12	5:D:96:ILE:N	2.34	0.42
19:H:25:TYR:CD2	19:H:30:LEU:HD11	2.54	0.42
2:B:141:G:C3'	2:B:141:G:N3	2.80	0.42
29:T:58:VAL:O	29:T:58:VAL:HG13	2.20	0.42
12:1:8:ILE:CG1	12:1:51:ALA:HA	2.49	0.42
4:C:80:LEU:HD21	4:C:109:LEU:HB2	2.02	0.42
4:C:80:LEU:HD23	4:C:91:ALA:HB2	2.00	0.42
8:E:187:VAL:HG12	8:E:188:MET:N	2.35	0.42
30:Z:6:GLN:NE2	30:Z:50:ARG:H	2.18	0.42
30:Z:72:ARG:HB3	30:Z:78:TYR:HE2	1.84	0.42
3:I:126:ARG:CB	3:I:126:ARG:NH1	2.83	0.42
8:E:47:LYS:HB3	8:E:51:GLU:CB	2.42	0.42
1:A:8:C:H2'	1:A:9:G:O4'	2.20	0.42
3:I:72:THR:HG23	3:I:112:LYS:HD2	2.01	0.42
2:B:2813:A:O2'	2:B:2814:A:H5'	2.19	0.42
6:K:99:ILE:N	6:K:118:LEU:HD23	2.34	0.42
17:M:127:LYS:HD2	17:M:127:LYS:N	2.31	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:43:ASN:ND2	4:C:44:ASN:N	2.67	0.42
2:B:458:G:O2'	2:B:459:U:P	2.78	0.42
26:F:161:SER:HG	26:F:164:GLU:HG3	1.81	0.42
2:B:1139:G:O2'	2:B:1143:A:N1	2.47	0.42
5:D:109:VAL:HG11	5:D:193:VAL:HG11	2.02	0.42
2:B:2876:G:H2'	2:B:2877:G:O4'	2.20	0.42
2:B:2877:G:O2'	2:B:2878:U:H5'	2.20	0.42
2:B:2783:U:H2'	2:B:2784:U:C6	2.54	0.42
2:B:564:C:OP2	28:R:79:ARG:NH2	2.52	0.42
2:B:2186:G:H2'	2:B:2187:U:O4'	2.19	0.42
2:B:2755:C:O2'	2:B:2756:U:H2'	2.20	0.42
2:B:2031:A:C6	2:B:2498:C:H1'	2.53	0.42
25:U:62:ALA:O	25:U:63:ALA:HB3	2.19	0.42
18:X:27:ASN:HA	18:X:30:MET:HG2	2.00	0.42
2:B:2671:G:H2'	2:B:2672:U:H6	1.84	0.42
4:C:198:GLU:O	4:C:201:LEU:HB2	2.19	0.42
2:B:932:U:O2	2:B:932:U:O4'	2.38	0.42
2:B:1620:G:H4'	15:2:1:MET:HG2	2.02	0.42
2:B:312:G:H5'	2:B:331:C:O2'	2.20	0.42
2:B:2655:G:O2'	2:B:2656:U:P	2.77	0.42
2:B:1265:A:H5'	36:B:3475:HOH:O	2.19	0.42
2:B:1098:A:C2'	3:I:4:VAL:C	2.88	0.42
16:L:120:VAL:HG12	16:L:121:THR:N	2.35	0.42
22:O:67:ASN:HB3	22:O:70:ALA:HB2	2.00	0.42
22:O:74:VAL:O	22:O:78:VAL:HG22	2.20	0.42
2:B:2329:U:H2'	2:B:2330:G:H8	1.82	0.42
14:V:83:LYS:O	14:V:85:LYS:N	2.53	0.42
14:V:76:ASP:O	14:V:89:ILE:HG22	2.20	0.42
5:D:32:ASN:HB3	5:D:50:VAL:CG2	2.50	0.42
5:D:90:PHE:O	5:D:91:THR:C	2.58	0.42
2:B:2466:C:N4	2:B:2467:C:N4	2.68	0.42
5:D:108:ASP:N	5:D:204:LYS:O	2.53	0.42
5:D:108:ASP:OD2	5:D:206:ALA:HA	2.20	0.42
8:E:118:LEU:HD21	8:E:188:MET:HE2	2.01	0.42
30:Z:35:SER:HA	30:Z:49:LEU:O	2.19	0.42
30:Z:56:MET:HA	30:Z:59:ILE:HG12	2.02	0.42
27:G:94:ARG:HB2	27:G:127:GLN:O	2.20	0.42
2:B:1444:G:H2'	2:B:1445:G:C8	2.54	0.42
21:N:74:GLU:O	21:N:77:ALA:HB3	2.20	0.42
3:I:49:GLU:HB3	3:I:52:LEU:HD12	2.01	0.42
2:B:1324:G:C6	2:B:1331:G:C6	3.07	0.42
6:K:61:VAL:HG23	6:K:61:VAL:O	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2593:U:H2'	2:B:2594:C:C6	2.55	0.42
25:U:49:PRO:O	25:U:50:ALA:HB2	2.20	0.42
11:4:16:ILE:HA	11:4:24:ARG:O	2.20	0.42
2:B:1297:C:H2'	2:B:1298:C:H6	1.85	0.42
32:6:7:TYR:CE1	32:6:160:GLU:HG2	2.54	0.42
2:B:808:G:OP2	16:L:36:LYS:HE2	2.20	0.42
1:A:30:C:H2'	1:A:31:C:H5'	2.01	0.42
1:A:79:G:O2'	1:A:80:U:H5'	2.20	0.42
14:V:49:ASN:O	14:V:52:ALA:HB3	2.19	0.42
5:D:14:ILE:HG23	5:D:14:ILE:O	2.20	0.42
2:B:1099:G:P	3:I:4:VAL:N	2.83	0.42
14:V:72:VAL:CG2	14:V:91:PHE:HB3	2.45	0.42
7:P:1:SER:H2	7:P:4:ILE:HG13	1.85	0.42
3:I:131:THR:O	3:I:135:MET:HG3	2.19	0.42
4:C:90:ILE:HA	4:C:90:ILE:HD13	1.89	0.42
29:T:69:ARG:HE	29:T:70:HIS:H	1.67	0.42
25:U:73:ASN:HD22	25:U:73:ASN:N	2.17	0.42
2:B:1286:A:H1'	2:B:1288:G:OP2	2.20	0.42
21:N:62:ASN:O	21:N:80:PHE:HZ	2.03	0.42
3:I:73:PRO:CG	3:I:78:LEU:HD21	2.47	0.42
2:B:1199:U:C5'	23:Q:4:LYS:HD3	2.50	0.42
2:B:2143:C:H2'	2:B:2144:G:O4'	2.20	0.42
2:B:2815:C:H2'	2:B:2816:G:H8	1.84	0.42
2:B:1181:U:H2'	2:B:1182:G:C8	2.47	0.42
2:B:2049:G:O2'	2:B:2050:C:H5'	2.19	0.42
2:B:2727:A:O3'	6:K:70:ARG:NH2	2.49	0.42
14:V:53:LYS:HA	14:V:53:LYS:HE2	2.01	0.42
2:B:170:U:O2'	2:B:171:U:H5'	2.19	0.42
2:B:416:U:O2'	2:B:417:C:H5'	2.19	0.42
2:B:593:U:H2'	2:B:594:U:C5	2.54	0.42
1:A:16:G:C5	1:A:69:G:C2	3.08	0.42
2:B:69:C:H2'	2:B:70:G:C8	2.55	0.42
2:B:1565:C:H5''	4:C:17:LYS:NZ	2.35	0.42
2:B:1948:G:O2'	2:B:1949:G:H5'	2.20	0.42
2:B:2336:A:O2'	2:B:2337:G:P	2.78	0.42
32:6:183:ILE:C	32:6:185:GLY:N	2.73	0.42
2:B:1468:U:H2'	2:B:1522:A:N6	2.35	0.42
2:B:2823:A:C2'	2:B:2824:C:H5'	2.50	0.42
2:B:1146:C:H2'	2:B:1147:A:C8	2.55	0.42
4:C:23:LEU:HD12	4:C:23:LEU:HA	1.86	0.42
20:J:40:HIS:ND1	20:J:41:LYS:N	2.68	0.42
12:1:38:PHE:HB2	12:1:45:HIS:CE1	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1956:U:C2'	2:B:1957:C:H5'	2.49	0.42
7:P:101:GLU:N	7:P:101:GLU:OE2	2.52	0.42
24:S:68:ASP:N	24:S:68:ASP:OD1	2.51	0.42
2:B:1068:G:C6	2:B:1069:A:N6	2.88	0.42
11:4:1:MET:HG3	11:4:34:LYS:HG2	2.02	0.42
16:L:81:ASP:CG	16:L:100:ILE:HD11	2.41	0.41
24:S:4:ILE:CG2	24:S:106:VAL:HG13	2.50	0.41
28:R:49:ILE:HD13	28:R:53:PHE:N	2.35	0.41
5:D:13:ARG:HG3	5:D:15:PHE:CE1	2.54	0.41
2:B:2467:C:O2'	2:B:2468:A:H5'	2.20	0.41
30:Z:38:PHE:CE2	30:Z:51:VAL:HG21	2.34	0.41
30:Z:59:ILE:HG22	30:Z:64:ILE:HG13	2.02	0.41
26:F:29:ARG:H	26:F:29:ARG:CD	2.33	0.41
2:B:2592:G:H2'	2:B:2593:U:O4'	2.19	0.41
2:B:2848:G:H22	2:B:2867:G:N2	2.16	0.41
10:0:38:LEU:HD13	10:0:41:HIS:CE1	2.54	0.41
27:G:46:ASP:N	27:G:46:ASP:OD2	2.53	0.41
2:B:470:A:H2'	2:B:471:A:C8	2.55	0.41
8:E:170:ARG:HH12	8:E:176:ASP:CB	2.33	0.41
2:B:827:U:H5'	2:B:828:U:O5'	2.21	0.41
2:B:1397:U:H5''	2:B:1398:C:H5	1.85	0.41
2:B:810:U:O4	16:L:30:THR:HG22	2.20	0.41
19:H:42:LYS:O	19:H:45:GLU:HB2	2.20	0.41
2:B:2758:A:C2'	2:B:2759:G:H5'	2.50	0.41
4:C:6:LYS:O	4:C:8:THR:N	2.48	0.41
2:B:307:G:N1	2:B:310:A:OP2	2.51	0.41
2:B:1539:U:O2	2:B:1539:U:H2'	2.21	0.41
2:B:1769:U:O2'	2:B:1770:G:H5'	2.20	0.41
2:B:80:G:HO2'	2:B:294:A:H2	1.60	0.41
20:J:70:THR:HG22	20:J:90:GLU:OE2	2.19	0.41
32:6:61:PRO:HD3	32:6:67:VAL:HG22	2.02	0.41
24:S:25:ARG:HH21	24:S:74:ILE:HG23	1.85	0.41
8:E:3:LEU:HD23	8:E:14:VAL:CG2	2.50	0.41
2:B:2262:U:H2'	2:B:2263:C:H6	1.86	0.41
31:W:39:GLN:NE2	31:W:43:LYS:HG2	2.35	0.41
18:X:36:GLN:HB2	18:X:37:LEU:H	1.65	0.41
14:V:70:ILE:CG1	14:V:71:LYS:N	2.84	0.41
5:D:21:SER:HB2	6:K:73:ASP:HA	2.02	0.41
7:P:3:ILE:CD1	7:P:7:LEU:HD11	2.49	0.41
2:B:2798:U:H1'	2:B:2800:A:C6	2.53	0.41
25:U:90:LYS:HB3	25:U:90:LYS:HE2	1.90	0.41
26:F:26:GLN:O	26:F:27:VAL:C	2.58	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:F:3:LEU:HD13	26:F:3:LEU:O	2.20	0.41
22:O:39:VAL:HB	22:O:49:VAL:HG22	2.02	0.41
3:I:108:ILE:CG2	3:I:128:ILE:HD13	2.50	0.41
3:I:52:LEU:HD13	3:I:81:LYS:NZ	2.35	0.41
2:B:1822:C:H2'	2:B:1823:G:H8	1.84	0.41
2:B:2143:C:H3'	2:B:2144:G:C8	2.54	0.41
29:T:18:GLU:C	29:T:20:ALA:N	2.71	0.41
2:B:2727:A:O2'	6:K:70:ARG:NH2	2.53	0.41
8:E:108:ILE:HG12	16:L:2:ARG:NH2	2.35	0.41
2:B:1813:G:H4'	4:C:42:ARG:O	2.20	0.41
4:C:208:GLY:O	4:C:209:ALA:C	2.58	0.41
16:L:55:MET:HG3	16:L:59:ARG:CB	2.50	0.41
2:B:262:A:H2'	2:B:263:G:O4'	2.19	0.41
2:B:2302:U:O2'	2:B:2303:G:H5'	2.19	0.41
17:M:66:ARG:CB	17:M:101:VAL:HG13	2.50	0.41
2:B:1131:G:N2	2:B:2024:G:N2	2.67	0.41
2:B:2334:U:H5'	22:O:12:THR:HB	2.03	0.41
6:K:3:GLN:CG	6:K:4:GLU:N	2.83	0.41
2:B:685:A:H1'	2:B:688:U:O4	2.20	0.41
2:B:199:A:O2'	2:B:200:U:H5'	2.20	0.41
19:H:83:LYS:HG2	19:H:149:GLU:CG	2.51	0.41
15:2:11:LYS:O	15:2:12:ARG:C	2.59	0.41
2:B:195:A:H1'	2:B:250:G:N2	2.35	0.41
2:B:2583:G:O2'	2:B:2584:U:H5'	2.20	0.41
19:H:41:LYS:HA	19:H:44:ILE:CD1	2.49	0.41
31:W:58:LEU:HD22	31:W:58:LEU:N	2.35	0.41
2:B:900:A:O2'	2:B:901:C:H5'	2.21	0.41
23:Q:94:LEU:CD2	28:R:11:GLN:HB2	2.50	0.41
5:D:12:THR:O	5:D:24:VAL:HG12	2.19	0.41
28:R:7:SER:OG	28:R:8:GLY:N	2.53	0.41
20:J:25:LEU:HA	20:J:28:LEU:HD22	2.01	0.41
27:G:93:TYR:CD1	27:G:106:LEU:HB2	2.55	0.41
7:P:52:ARG:HG2	7:P:52:ARG:NH1	2.31	0.41
8:E:160:ALA:C	8:E:162:ARG:H	2.24	0.41
11:4:9:LYS:O	11:4:10:LEU:HD23	2.21	0.41
13:3:22:LYS:HA	13:3:48:MET:CA	2.47	0.41
3:I:105:LEU:HD11	3:I:139:VAL:CG2	2.44	0.41
2:B:2526:G:H2'	2:B:2527:C:H6	1.86	0.41
2:B:495:G:H21	24:S:61:ASN:ND2	2.16	0.41
8:E:150:THR:HG21	8:E:153:LEU:CA	2.43	0.41
2:B:2883:A:OP1	10:0:48:TYR:HE1	2.03	0.41
10:0:51:ARG:O	10:0:52:LYS:HB2	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1137:G:O2'	2:B:1138:G:H5'	2.20	0.41
2:B:2677:G:H2'	2:B:2678:C:H6	1.85	0.41
26:F:141:ASP:O	26:F:144:LYS:N	2.54	0.41
4:C:180:MET:HB2	4:C:268:ARG:CB	2.50	0.41
23:Q:20:ALA:O	23:Q:21:LYS:C	2.58	0.41
2:B:2026:U:C2	2:B:2027:G:C8	3.09	0.41
2:B:2772:C:H4'	5:D:171:THR:HG22	2.01	0.41
2:B:2606:C:O2'	2:B:2607:G:H5'	2.20	0.41
2:B:2008:C:H2'	2:B:2009:A:C8	2.55	0.41
2:B:1353:A:C8	2:B:1378:A:N6	2.88	0.41
2:B:2598:A:OP1	4:C:233:GLY:CA	2.67	0.41
2:B:1559:U:H3'	2:B:1560:G:C5'	2.49	0.41
2:B:936:A:H2'	2:B:937:C:H6	1.83	0.41
2:B:1928:A:H2'	2:B:1929:G:O4'	2.20	0.41
7:P:110:LYS:HD2	7:P:110:LYS:H	1.86	0.41
2:B:2702:G:H2'	2:B:2703:C:C6	2.55	0.41
2:B:2642:G:O2'	2:B:2643:G:H5'	2.20	0.41
2:B:1036:G:C5	2:B:1120:G:C6	3.09	0.41
2:B:1687:G:O2'	2:B:1688:U:H5'	2.20	0.41
2:B:2624:G:H1'	10:0:18:HIS:CE1	2.55	0.41
16:L:101:ILE:HG22	16:L:102:GLY:N	2.34	0.41
16:L:118:THR:O	16:L:120:VAL:HG23	2.19	0.41
26:F:134:GLN:HE21	26:F:134:GLN:HB3	1.54	0.41
5:D:32:ASN:N	5:D:96:ILE:O	2.52	0.41
24:S:71:VAL:O	24:S:71:VAL:HG13	2.21	0.41
2:B:1029:A:H2'	2:B:1030:C:O4'	2.20	0.41
8:E:46:GLN:HB3	8:E:86:ALA:HA	2.02	0.41
2:B:1059:G:H4'	3:I:116:MET:HE2	2.02	0.41
2:B:2144:G:C2'	2:B:2145:C:H5'	2.51	0.41
17:M:46:ILE:HG13	17:M:47:GLU:N	2.35	0.41
2:B:543:G:H2'	2:B:544:C:H4'	2.02	0.41
2:B:2880:C:H1'	21:N:93:GLY:H	1.85	0.41
2:B:2645:G:H4'	2:B:2732:G:H2'	2.03	0.41
9:Y:7:THR:O	9:Y:54:VAL:HA	2.21	0.41
4:C:43:ASN:N	4:C:47:ARG:O	2.53	0.41
2:B:2654:A:N1	2:B:2665:A:H5''	2.36	0.41
2:B:532:A:N3	2:B:532:A:C2'	2.82	0.41
2:B:833:A:H1'	16:L:52:GLY:N	2.35	0.41
2:B:2217:G:H2'	2:B:2218:G:H8	1.84	0.41
2:B:76:C:HO2'	18:X:55:THR:CB	2.33	0.41
1:A:15:A:N3	1:A:15:A:O4'	2.53	0.41
2:B:82:U:H2'	2:B:83:A:C8	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:1250:G:OP2	16:L:21:ARG:NH2	2.53	0.41
32:6:147:LEU:N	32:6:147:LEU:HD23	2.34	0.41
2:B:2300:C:O2'	2:B:2301:C:H5'	2.19	0.41
2:B:1289:C:O2'	2:B:1290:C:H5'	2.20	0.41
17:M:66:ARG:HB2	17:M:101:VAL:O	2.20	0.41
2:B:2689:U:H4'	2:B:2690:U:OP2	2.20	0.41
2:B:2182:U:H2'	2:B:2183:A:H8	1.84	0.41
21:N:24:MET:HE2	21:N:44:LEU:HB2	2.02	0.41
12:1:37:LYS:HB2	12:1:48:TYR:CD2	2.56	0.41
32:6:174:GLN:HB3	32:6:174:GLN:HE21	1.58	0.41
20:J:75:TYR:HD1	20:J:86:GLN:HB3	1.85	0.41
2:B:553:G:H2'	2:B:554:U:O4'	2.20	0.41
1:A:109:A:H2'	1:A:110:C:O4'	2.20	0.41
30:Z:40:VAL:HG21	30:Z:43:GLU:HB3	2.01	0.41
6:K:72:PRO:C	6:K:74:GLY:N	2.73	0.41
2:B:2262:U:O2'	2:B:2263:C:H5'	2.21	0.41
27:G:42:VAL:HA	27:G:50:THR:O	2.20	0.41
19:H:9:VAL:CG1	19:H:12:LEU:HG	2.50	0.41
2:B:137:U:H6	2:B:137:U:P	2.43	0.41
24:S:71:VAL:O	24:S:71:VAL:HG22	2.19	0.41
5:D:8:LYS:HB2	5:D:201:LEU:HD21	2.02	0.41
4:C:75:ALA:CB	4:C:93:VAL:HG22	2.50	0.41
4:C:91:ALA:HB3	4:C:105:ALA:HB2	1.99	0.41
7:P:91:VAL:CG2	7:P:96:LEU:HD21	2.51	0.41
2:B:2230:G:H4'	30:Z:31:PRO:O	2.19	0.41
29:T:21:SER:O	29:T:25:GLU:HB2	2.20	0.41
11:4:10:LEU:HD12	11:4:33:HIS:CA	2.48	0.41
6:K:87:LEU:O	6:K:88:ASN:C	2.59	0.41
7:P:27:VAL:HG21	7:P:73:PHE:CE2	2.56	0.41
8:E:154:ASP:OD2	8:E:157:LEU:HB3	2.20	0.41
5:D:124:ARG:HG3	5:D:125:TRP:CD1	2.55	0.41
16:L:77:ILE:O	16:L:110:VAL:O	2.37	0.41
10:0:9:ARG:O	10:0:12:ARG:HB3	2.20	0.41
13:3:7:ARG:O	13:3:8:GLY:C	2.58	0.41
2:B:1353:A:O2'	2:B:1354:A:H5'	2.21	0.41
25:U:23:LYS:HD2	25:U:23:LYS:H	1.86	0.41
2:B:2686:G:H2'	2:B:2687:U:C6	2.56	0.41
2:B:1376:C:O2'	2:B:1377:G:H5'	2.21	0.41
2:B:1689:A:O2'	2:B:1690:A:H5'	2.20	0.41
28:R:61:ALA:CB	28:R:98:ILE:HA	2.51	0.41
14:V:5:ASN:N	14:V:5:ASN:OD1	2.54	0.41
2:B:1903:G:H2'	2:B:1904:G:H8	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2397:G:H2'	2:B:2398:U:C6	2.56	0.41
2:B:1092:C:H2'	2:B:1093:G:C5'	2.51	0.41
7:P:47:ILE:HG13	7:P:48:ALA:N	2.35	0.41
2:B:1120:G:O2'	2:B:1121:C:H5'	2.21	0.41
2:B:1940:U:H5''	2:B:1940:U:O2	2.21	0.41
36:B:3509:HOH:O	20:J:39:LYS:HE3	2.21	0.41
2:B:406:G:O2'	2:B:407:G:H5'	2.21	0.41
2:B:1097:U:C2	2:B:1098:A:H1'	2.56	0.41
3:I:4:VAL:O	3:I:5:GLN:O	2.39	0.41
32:6:38:LEU:O	32:6:52:LEU:HB3	2.21	0.41
14:V:42:LEU:HD11	14:V:89:ILE:HD11	2.03	0.41
27:G:34:ARG:N	27:G:34:ARG:CD	2.83	0.41
24:S:66:ILE:HG12	24:S:67:ASP:N	2.35	0.41
27:G:97:VAL:HG21	27:G:124:CYS:HB2	2.01	0.41
7:P:4:ILE:CG2	7:P:5:LYS:H	2.17	0.41
28:R:23:GLU:O	28:R:24:LYS:C	2.58	0.41
27:G:108:PHE:C	27:G:110:HIS:H	2.24	0.41
2:B:2580:U:C5'	5:D:136:ASN:H	2.33	0.41
17:M:47:GLU:CD	17:M:50:ARG:HH11	2.24	0.41
2:B:545:U:C4	2:B:548:G:OP1	2.74	0.41
7:P:27:VAL:O	7:P:42:PHE:N	2.53	0.41
2:B:2259:U:H1'	2:B:2427:C:C2	2.55	0.41
2:B:741:U:H2'	2:B:742:A:C8	2.55	0.41
10:0:41:HIS:N	10:0:41:HIS:CD2	2.87	0.41
2:B:27:G:O2'	2:B:28:A:H8	2.01	0.41
2:B:2636:C:H2'	2:B:2637:U:H6	1.85	0.41
22:O:88:LYS:HG2	22:O:89:ASP:N	2.36	0.41
2:B:1348:C:C3'	2:B:1349:C:H5'	2.51	0.41
2:B:1274:A:C2	2:B:1302:A:H2	2.38	0.41
4:C:66:PHE:CD1	4:C:66:PHE:N	2.88	0.41
2:B:2373:G:H2'	2:B:2374:C:C6	2.55	0.41
2:B:1341:G:H2'	2:B:1397:U:O2'	2.21	0.41
2:B:1197:G:H2'	2:B:1198:U:C6	2.55	0.41
2:B:2022:U:O2'	2:B:2617:U:H5'	2.20	0.41
2:B:2617:U:H2'	2:B:2618:G:O4'	2.20	0.41
2:B:2582:G:O2'	2:B:2583:G:H5'	2.20	0.41
18:X:25:GLN:HE21	18:X:25:GLN:HB3	1.60	0.41
20:J:9:GLU:CD	20:J:9:GLU:N	2.74	0.41
2:B:1885:A:H3'	2:B:1886:U:C6	2.56	0.41
2:B:1573:G:H2'	2:B:1574:C:H5'	2.01	0.41
2:B:2296:U:H4'	2:B:2297:A:OP1	2.20	0.41
2:B:1541:C:H2'	2:B:1542:U:C6	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:V:76:ASP:H	14:V:90:ASP:HB2	1.86	0.41
29:T:10:VAL:O	29:T:12:ARG:N	2.54	0.41
5:D:13:ARG:HH12	7:P:74:GLN:NE2	2.19	0.41
4:C:141:HIS:HB3	4:C:190:THR:HG1	1.84	0.41
1:A:2:G:O2'	1:A:3:C:H5'	2.20	0.41
7:P:91:VAL:HG21	7:P:96:LEU:HD21	2.03	0.41
30:Z:68:LEU:HD22	30:Z:78:TYR:CE1	2.55	0.41
16:L:116:VAL:HG13	16:L:117:THR:N	2.22	0.41
2:B:182:A:H2'	2:B:183:C:H6	1.85	0.41
15:2:28:ARG:C	15:2:30:VAL:N	2.74	0.41
21:N:34:ILE:HB	21:N:113:ILE:CG2	2.48	0.41
21:N:2:ARG:O	21:N:2:ARG:NE	2.42	0.41
18:X:5:GLU:OE2	18:X:5:GLU:HA	2.21	0.41
5:D:117:GLY:O	5:D:119:ALA:N	2.53	0.41
16:L:79:LEU:HB2	16:L:113:ALA:H	1.86	0.41
4:C:42:ARG:HG3	4:C:46:GLY:O	2.21	0.41
2:B:1417:C:O2'	2:B:1418:G:H5'	2.21	0.41
2:B:480:A:H3'	2:B:481:G:H5''	2.03	0.41
2:B:1350:C:H2'	2:B:1350:C:O2	2.20	0.41
2:B:2394:C:H2'	2:B:2395:C:C6	2.55	0.41
4:C:66:PHE:CD2	4:C:104:LEU:HD11	2.56	0.41
2:B:657:U:H2'	2:B:658:U:H6	1.83	0.41
2:B:1652:A:P	21:N:8:ARG:HD3	2.61	0.41
7:P:31:VAL:HG13	7:P:32:VAL:N	2.35	0.41
2:B:1315:C:H2'	2:B:1316:U:C6	2.56	0.41
3:I:140:GLU:H	3:I:140:GLU:CD	2.23	0.41
2:B:1430:G:H2'	2:B:1431:A:C8	2.55	0.41
9:Y:23:LEU:HD21	9:Y:53:MET:HE1	2.02	0.41
3:I:63:ASP:OD1	3:I:63:ASP:O	2.39	0.41
2:B:584:C:O2'	2:B:585:G:H5'	2.20	0.41
2:B:1526:C:C2'	2:B:1527:G:H5'	2.51	0.41
2:B:485:C:H2'	2:B:486:C:H6	1.86	0.41
2:B:649:G:H2'	2:B:650:C:H6	1.86	0.41
2:B:2599:G:O2'	2:B:2600:A:H5'	2.20	0.41
5:D:14:ILE:HG23	5:D:22:ILE:HB	2.02	0.41
5:D:14:ILE:HG13	7:P:11:GLN:HE22	1.85	0.41
15:2:12:ARG:HG2	15:2:44:VAL:HG11	2.03	0.41
28:R:70:GLU:CD	28:R:70:GLU:N	2.74	0.41
2:B:1207:C:O2'	2:B:1208:C:H5'	2.21	0.41
26:F:137:PHE:HB2	26:F:138:PRO:CD	2.46	0.41
26:F:35:LEU:HD13	26:F:56:LEU:CD1	2.45	0.41
2:B:920:A:O2'	2:B:921:C:H5'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:W:57:THR:O	31:W:59:PHE:N	2.54	0.41
19:H:9:VAL:HB	19:H:13:GLY:CA	2.50	0.41
23:Q:91:ARG:HH12	28:R:10:LYS:HA	1.85	0.41
27:G:116:LEU:HD23	27:G:120:ILE:HD13	2.02	0.41
1:A:83:G:OP1	9:Y:16:LEU:HD21	2.21	0.41
4:C:69:ASN:HB3	4:C:70:LYS:H	1.58	0.41
2:B:973:A:H1'	2:B:1188:U:C6	2.56	0.41
4:C:63:ILE:HD13	4:C:63:ILE:HA	1.89	0.41
15:2:21:ARG:HD2	15:2:43:THR:CG2	2.42	0.41
29:T:27:SER:O	29:T:28:ASN:CB	2.69	0.41
2:B:2795:C:O5'	2:B:2795:C:H6	2.04	0.41
26:F:38:GLY:HA2	26:F:85:GLY:HA3	2.03	0.41
11:4:22:VAL:O	11:4:24:ARG:HG3	2.20	0.41
2:B:2883:A:OP1	10:0:48:TYR:CE1	2.74	0.41
8:E:176:ASP:OD1	8:E:176:ASP:C	2.59	0.41
2:B:2071:A:H2'	2:B:2072:C:H6	1.83	0.41
2:B:569:U:H2'	2:B:570:G:O4'	2.21	0.41
2:B:1945:G:H2'	2:B:1946:U:C6	2.56	0.41
32:6:154:THR:HG23	32:6:155:LYS:H	1.83	0.41
1:A:116:G:H4'	22:O:54:VAL:HG13	2.02	0.41
2:B:673:C:C2'	2:B:674:G:H5'	2.51	0.41
2:B:1970:A:H1'	2:B:1972:G:C8	2.56	0.41
24:S:13:SER:CB	24:S:16:LYS:HE3	2.51	0.41
2:B:1575:C:O2'	2:B:1576:U:H5'	2.21	0.41
2:B:1040:A:O2'	2:B:1041:G:H5'	2.21	0.41
21:N:25:ALA:HA	21:N:44:LEU:HD11	2.03	0.41
32:6:174:GLN:HG2	32:6:178:LYS:HE2	2.03	0.41
22:O:55:GLU:O	22:O:56:LYS:C	2.58	0.41
21:N:22:ARG:HG3	21:N:70:THR:HA	2.02	0.41
2:B:527:C:O2	2:B:527:C:O4'	2.36	0.41
2:B:2320:U:O2'	2:B:2322:A:N7	2.48	0.41
2:B:2083:G:H2'	2:B:2084:C:H6	1.85	0.41
2:B:799:G:C6	2:B:800:A:C6	3.09	0.41
2:B:955:U:H5'	17:M:86:LYS:HE2	2.02	0.41
16:L:91:ASP:HB2	16:L:94:THR:OG1	2.21	0.41
19:H:32:PRO:HA	30:Z:39:TRP:CD1	2.56	0.41
32:6:64:ARG:HA	32:6:103:ILE:HB	2.02	0.41
32:6:77:LYS:O	32:6:81:LYS:HG3	2.21	0.41
2:B:2368:C:H2'	2:B:2369:A:C8	2.55	0.41
14:V:1:MET:HB3	14:V:59:GLU:OE1	2.21	0.41
27:G:26:LYS:HA	27:G:32:LEU:H	1.86	0.41
24:S:108:SER:OG	24:S:109:ASP:N	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:C:156:SER:HB3	4:C:159:THR:HG21	2.03	0.41
30:Z:59:ILE:HG23	30:Z:67:VAL:HG21	2.02	0.41
8:E:147:LEU:O	8:E:168:ASP:O	2.38	0.41
30:Z:64:ILE:H	30:Z:64:ILE:CD1	2.27	0.41
5:D:69:ALA:CA	5:D:73:VAL:HB	2.51	0.41
17:M:19:GLY:H	17:M:38:ARG:NH1	2.05	0.41
27:G:148:ARG:HB2	27:G:152:ARG:HH21	1.85	0.41
2:B:182:A:H2'	2:B:183:C:C6	2.56	0.41
2:B:1082:U:C4	2:B:1086:A:N1	2.85	0.41
29:T:14:PRO:HA	29:T:32:LEU:HB2	2.02	0.41
2:B:1549:A:H2'	2:B:1550:C:H6	1.83	0.41
11:4:33:HIS:O	11:4:35:GLN:N	2.54	0.41
21:N:107:ASN:ND2	24:S:40:ASN:ND2	2.64	0.41
28:R:31:GLU:O	28:R:63:VAL:HG22	2.21	0.41
6:K:108:ARG:O	6:K:113:MET:HE3	2.21	0.41
22:O:105:ALA:HA	22:O:108:ASP:OD2	2.21	0.41
5:D:118:PHE:CE2	21:N:1:MET:HB3	2.56	0.41
2:B:960:A:H4'	2:B:2457:U:H4'	2.02	0.41
2:B:512:G:OP2	2:B:1235:G:H5'	2.20	0.41
2:B:686:U:H1'	15:2:6:GLN:O	2.21	0.41
2:B:2338:C:O2'	2:B:2339:C:H5'	2.21	0.41
1:A:12:C:N3	31:W:73:PRO:HG3	2.35	0.41
1:A:13:G:C5	1:A:70:C:H4'	2.56	0.41
2:B:1348:C:H2'	2:B:1349:C:H5'	2.03	0.41
2:B:2064:C:H1'	2:B:2450:A:C5	2.56	0.41
12:1:3:GLY:C	12:1:5:ARG:N	2.73	0.41
4:C:64:VAL:HG11	4:C:66:PHE:CZ	2.56	0.41
6:K:58:LEU:HD23	6:K:58:LEU:H	1.83	0.41
32:6:22:GLU:HG3	32:6:22:GLU:H	1.54	0.41
13:3:28:LEU:HD21	13:3:44:ARG:HA	2.03	0.41
16:L:18:ARG:C	16:L:19:LEU:HD12	2.41	0.41
26:F:121:PHE:HD1	26:F:127:TYR:OH	2.03	0.41
17:M:100:LYS:HD3	17:M:101:VAL:H	1.86	0.41
2:B:776:G:H4'	2:B:777:G:C5'	2.50	0.41
2:B:2756:U:H1'	2:B:2757:A:H5''	2.02	0.41
8:E:69:ARG:O	8:E:70:SER:OG	2.35	0.41
2:B:1900:A:N1	2:B:1970:A:C5	2.89	0.41
2:B:2853:C:H2'	2:B:2854:G:H8	1.86	0.41
2:B:1357:C:H2'	2:B:1358:G:C8	2.56	0.41
2:B:816:C:O2'	2:B:817:C:H5'	2.21	0.41
22:O:36:TYR:N	22:O:36:TYR:HD2	2.19	0.41
2:B:2830:C:O4'	2:B:2836:U:H5'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:I:53:PRO:HG2	3:I:77:VAL:HG11	2.01	0.41
3:I:68:PHE:N	3:I:68:PHE:CD1	2.89	0.41
17:M:54:THR:O	17:M:56:ALA:N	2.53	0.41
16:L:111:ILE:HD13	16:L:111:ILE:N	2.35	0.41
20:J:101:ILE:O	20:J:105:VAL:HG22	2.20	0.41
2:B:86:G:O2'	2:B:104:A:H4'	2.20	0.41
3:I:14:ALA:HB3	3:I:51:GLY:H	1.86	0.41
4:C:259:ASN:C	4:C:261:ARG:H	2.24	0.41
2:B:1369:G:O2'	2:B:1370:C:H5'	2.21	0.41
2:B:1370:C:H2'	2:B:1371:G:C8	2.55	0.41
2:B:910:A:H2'	2:B:911:A:C8	2.56	0.41
3:I:5:GLN:O	3:I:6:ALA:CB	2.69	0.41
2:B:1819:A:OP1	4:C:154:ALA:HA	2.21	0.41
8:E:5:LEU:HD22	8:E:122:GLU:HG3	2.02	0.41
2:B:853:C:H2'	2:B:854:C:H6	1.86	0.41
2:B:856:G:H2'	2:B:857:G:C8	2.56	0.41
24:S:3:THR:HG21	24:S:58:ALA:HA	2.02	0.41
29:T:47:VAL:HG12	29:T:47:VAL:O	2.21	0.41
20:J:36:LEU:HD12	20:J:121:LYS:HB2	2.03	0.41
4:C:76:VAL:HA	4:C:113:ASP:O	2.21	0.41
12:1:26:LYS:HD2	12:1:30:PRO:HA	2.02	0.41
12:1:28:THR:C	12:1:30:PRO:HD3	2.42	0.41
7:P:96:LEU:O	7:P:99:LEU:HB2	2.21	0.41
2:B:2230:G:H2'	2:B:2231:U:H6	1.85	0.41
8:E:130:LYS:O	8:E:132:LYS:N	2.53	0.41
19:H:90:LEU:HD22	19:H:122:LEU:O	2.20	0.41
19:H:128:HIS:O	19:H:144:VAL:HG22	2.21	0.41
29:T:25:GLU:C	29:T:27:SER:N	2.74	0.41
29:T:31:VAL:C	29:T:32:LEU:HD23	2.42	0.41
21:N:61:ALA:C	21:N:63:ARG:H	2.22	0.41
2:B:2743:U:H2'	2:B:2744:G:H5''	2.03	0.41
2:B:2108:A:C8	2:B:2108:A:OP2	2.74	0.41
2:B:2544:G:H1'	2:B:2646:C:H5'	2.02	0.41
3:I:129:GLU:O	3:I:133:ARG:HG3	2.21	0.41
26:F:49:LEU:C	26:F:49:LEU:HD13	2.41	0.41
2:B:675:A:OP1	8:E:60:TRP:CZ2	2.74	0.41
10:0:38:LEU:HD23	10:0:39:ARG:N	2.36	0.41
2:B:2882:A:C3'	2:B:2883:A:H5''	2.52	0.41
2:B:572:A:C2	2:B:2033:A:C2	3.09	0.41
24:S:99:ARG:HB3	24:S:99:ARG:HE	1.55	0.41
16:L:59:ARG:O	16:L:61:LEU:N	2.54	0.41
2:B:1434:A:H62	2:B:1558:C:N4	2.18	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:P:19:PHE:HE2	7:P:25:VAL:HG11	1.85	0.41
2:B:775:G:H4'	2:B:776:G:H5'	2.02	0.41
2:B:1419:A:H2'	2:B:1421:G:C8	2.56	0.41
2:B:1248:G:OP1	23:Q:1:ALA:HB3	2.21	0.41
2:B:1765:U:H2'	2:B:1766:G:C8	2.56	0.41
2:B:620:G:N3	2:B:620:G:H5'	2.35	0.41
2:B:1940:U:O4'	2:B:1940:U:O2	2.38	0.41
7:P:114:ASN:HD22	7:P:114:ASN:HA	1.53	0.41
2:B:1856:U:C2'	2:B:1857:G:H5'	2.51	0.41
2:B:2659:G:O2'	2:B:2661:G:N7	2.45	0.41
5:D:159:LYS:HZ3	5:D:159:LYS:HA	1.86	0.41
5:D:159:LYS:O	5:D:161:MET:HG2	2.20	0.41
26:F:168:LEU:O	26:F:169:LEU:HB2	2.20	0.40
26:F:33:ILE:HG21	26:F:98:PHE:CE2	2.55	0.40
32:6:87:ASP:OD2	32:6:88:LEU:HD12	2.21	0.40
2:B:2352:A:C2'	2:B:2353:G:H5'	2.51	0.40
2:B:877:A:C2	2:B:901:C:N4	2.89	0.40
25:U:12:VAL:HG22	25:U:69:VAL:CG1	2.42	0.40
29:T:39:THR:O	29:T:40:LYS:HB2	2.21	0.40
29:T:40:LYS:HG2	29:T:60:THR:CG2	2.51	0.40
2:B:2798:U:H1'	2:B:2800:A:H61	1.77	0.40
4:C:30:ALA:O	4:C:32:LEU:N	2.48	0.40
2:B:319:G:H2'	2:B:320:A:O4'	2.21	0.40
8:E:126:VAL:HG21	8:E:133:LEU:HB2	2.03	0.40
29:T:59:ASN:O	29:T:83:ALA:O	2.39	0.40
21:N:52:ILE:HD13	21:N:87:PHE:CE2	2.56	0.40
5:D:136:ASN:HD21	5:D:140:HIS:N	2.19	0.40
2:B:1215:G:H2'	2:B:1216:G:H8	1.86	0.40
2:B:545:U:C6	2:B:546:U:H1'	2.56	0.40
2:B:717:C:C3'	2:B:718:A:H5''	2.48	0.40
2:B:2595:G:H1	4:C:238:ASN:ND2	2.19	0.40
6:K:54:LYS:H	6:K:54:LYS:CD	2.31	0.40
5:D:116:LYS:HB2	5:D:165:MET:HB3	2.03	0.40
2:B:1372:U:H4'	2:B:2213:U:O2	2.21	0.40
2:B:1373:A:H4'	2:B:2212:A:N3	2.36	0.40
2:B:15:G:O2'	2:B:16:C:H5'	2.21	0.40
16:L:70:LYS:HE3	16:L:107:PHE:HE2	1.86	0.40
2:B:2597:G:C6	2:B:2598:A:N6	2.89	0.40
24:S:14:ALA:C	24:S:16:LYS:H	2.25	0.40
3:I:10:LEU:C	3:I:10:LEU:HD12	2.40	0.40
2:B:48:G:O3'	2:B:51:G:H5'	2.21	0.40
2:B:1754:A:N1	2:B:2716:C:O2'	2.55	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:H:112:LYS:HG3	19:H:112:LYS:O	2.21	0.40
4:C:108:GLY:C	4:C:110:LYS:H	2.24	0.40
2:B:1249:U:O4'	23:Q:3:VAL:HG21	2.21	0.40
2:B:555:G:HO2'	2:B:556:A:H8	1.67	0.40
1:A:67:G:O2'	1:A:68:C:H5'	2.21	0.40
4:C:130:PRO:O	4:C:132:ARG:N	2.54	0.40
14:V:1:MET:O	14:V:62:THR:HG23	2.21	0.40
25:U:20:LYS:HB2	25:U:20:LYS:HZ3	1.85	0.40
29:T:43:ILE:O	29:T:46:ALA:HB3	2.22	0.40
5:D:104:VAL:HG11	5:D:205:PRO:HB3	2.03	0.40
27:G:88:LEU:CB	27:G:161:VAL:HG22	2.50	0.40
27:G:88:LEU:C	27:G:88:LEU:HD12	2.42	0.40
2:B:1055:G:C2'	2:B:1056:G:H5'	2.52	0.40
2:B:1057:A:C8	2:B:1086:A:C8	3.09	0.40
2:B:460:A:H4'	29:T:72:GLN:CB	2.42	0.40
19:H:94:ILE:HG22	19:H:122:LEU:HB3	2.00	0.40
2:B:1916:A:H2'	2:B:1917:U:C6	2.57	0.40
2:B:2142:A:H2'	2:B:2143:C:H1'	2.03	0.40
6:K:79:PHE:O	6:K:81:GLY:N	2.51	0.40
5:D:133:THR:HG23	5:D:134:HIS:CD2	2.56	0.40
2:B:2527:C:O2'	2:B:2528:U:H5'	2.22	0.40
2:B:107:G:C2	2:B:108:G:C8	3.10	0.40
26:F:66:ILE:HA	26:F:85:GLY:O	2.21	0.40
2:B:454:A:H3'	2:B:455:C:C5'	2.50	0.40
5:D:62:LYS:N	5:D:63:PRO:CD	2.85	0.40
10:O:41:HIS:O	10:O:42:ILE:O	2.39	0.40
2:B:2834:G:H2'	2:B:2879:A:N6	2.36	0.40
20:J:102:GLU:O	20:J:106:LYS:HB2	2.21	0.40
24:S:17:VAL:O	24:S:19:LEU:N	2.54	0.40
6:K:2:ILE:HG13	6:K:33:ALA:O	2.21	0.40
17:M:57:VAL:O	17:M:60:GLN:HG2	2.21	0.40
2:B:2283:C:H2'	2:B:2284:A:C5'	2.51	0.40
7:P:31:VAL:O	7:P:32:VAL:CB	2.69	0.40
27:G:9:VAL:C	27:G:11:PRO:HD3	2.41	0.40
2:B:1892:C:O2'	2:B:1893:C:H5'	2.21	0.40
2:B:2301:C:H2'	2:B:2302:U:H6	1.86	0.40
25:U:5:ARG:HH21	25:U:5:ARG:HG2	1.85	0.40
2:B:1521:G:O5'	2:B:1522:A:H2'	2.21	0.40
2:B:1251:C:OP2	23:Q:5:ARG:NE	2.55	0.40
32:6:13:HIS:HB3	32:6:132:ILE:HD13	2.04	0.40
2:B:954:G:H5'	2:B:955:U:OP2	2.21	0.40
3:I:56:VAL:CG2	3:I:68:PHE:HB2	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:196:A:H2'	2:B:196:A:N3	2.36	0.40
19:H:95:GLY:H	19:H:98:ASP:HB2	1.86	0.40
7:P:33:GLU:HB3	7:P:34:GLY:H	1.56	0.40
26:F:33:ILE:HG22	26:F:90:LEU:HD23	2.03	0.40
22:O:67:ASN:O	22:O:69:ASP:N	2.55	0.40
19:H:10:ALA:C	19:H:12:LEU:H	2.23	0.40
23:Q:60:TRP:CE2	23:Q:93:ILE:HB	2.56	0.40
7:P:49:ILE:HG12	7:P:50:ARG:H	1.87	0.40
1:A:83:G:O2'	1:A:84:G:H5'	2.21	0.40
20:J:28:LEU:HD23	20:J:29:ALA:H	1.86	0.40
8:E:29:HIS:C	8:E:31:VAL:N	2.74	0.40
2:B:2691:C:C4	2:B:2719:G:N2	2.89	0.40
2:B:1403:A:H2'	2:B:1404:C:H6	1.85	0.40
2:B:2471:A:O2'	2:B:2472:G:P	2.79	0.40
2:B:2078:C:O2'	2:B:2079:U:H5'	2.21	0.40
10:O:28:SER:HB2	10:O:39:ARG:HG2	2.03	0.40
2:B:572:A:H3'	2:B:573:U:O4'	2.22	0.40
15:2:6:GLN:HA	15:2:7:PRO:HD2	1.89	0.40
2:B:76:C:O2'	18:X:55:THR:HG21	2.20	0.40
16:L:127:VAL:HG22	16:L:128:THR:O	2.21	0.40
16:L:21:ARG:HD3	16:L:21:ARG:HA	1.99	0.40
2:B:2028:U:H2'	2:B:2029:G:O4'	2.21	0.40
2:B:98:G:H2'	2:B:99:U:H5'	2.03	0.40
24:S:14:ALA:C	24:S:16:LYS:N	2.74	0.40
18:X:56:LEU:O	18:X:57:LEU:CB	2.68	0.40
2:B:1334:G:O2'	2:B:1335:C:H5'	2.22	0.40
2:B:2036:C:H2'	2:B:2037:A:C8	2.57	0.40
12:1:20:TYR:CD2	12:1:37:LYS:HD3	2.56	0.40
19:H:111:ALA:O	19:H:112:LYS:C	2.60	0.40
1:A:80:U:H2'	1:A:81:G:C8	2.57	0.40
2:B:2032:G:N7	2:B:2454:G:H1'	2.37	0.40
2:B:1064:C:O2'	2:B:1065:U:H5'	2.20	0.40
2:B:1856:U:H2'	2:B:1857:G:H5'	2.02	0.40
23:Q:45:ALA:O	23:Q:49:ARG:N	2.50	0.40
31:W:54:ARG:C	31:W:56:HIS:H	2.25	0.40
4:C:29:PHE:C	4:C:31:PRO:HD2	2.42	0.40
2:B:1099:G:H4'	3:I:4:VAL:CG1	2.52	0.40
4:C:151:GLY:C	4:C:152:GLN:HG3	2.40	0.40
22:O:51:ALA:CB	22:O:78:VAL:HG13	2.52	0.40
31:W:24:ARG:HA	31:W:66:VAL:H	1.86	0.40
14:V:31:TYR:O	14:V:92:VAL:HA	2.21	0.40
23:Q:97:ILE:HG13	23:Q:105:PHE:HB2	2.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:R:46:GLU:HG3	28:R:46:GLU:O	2.22	0.40
27:G:84:LYS:HG3	27:G:131:VAL:C	2.41	0.40
2:B:2227:A:H2'	2:B:2228:G:O4'	2.21	0.40
2:B:577:G:OP1	2:B:2502:G:H2'	2.22	0.40
22:O:16:ARG:HA	22:O:16:ARG:HD3	1.94	0.40
21:N:51:LEU:O	21:N:55:ALA:N	2.54	0.40
20:J:21:THR:C	20:J:23:LYS:N	2.75	0.40
2:B:2345:G:H5'	2:B:2347:C:O4'	2.22	0.40
3:I:16:MET:N	3:I:42:ASN:OD1	2.54	0.40
2:B:372:G:O2'	2:B:373:U:P	2.78	0.40
2:B:2562:U:H4'	6:K:25:LEU:HD23	2.02	0.40
6:K:38:ILE:HD11	6:K:112:PHE:CZ	2.56	0.40
1:A:102:G:H2'	1:A:103:U:H6	1.86	0.40
8:E:108:ILE:HG12	16:L:2:ARG:HH22	1.86	0.40
25:U:51:LEU:N	25:U:53:GLN:NE2	2.69	0.40
16:L:78:ARG:HB3	16:L:78:ARG:NH2	2.37	0.40
2:B:458:G:HO2'	2:B:459:U:P	2.44	0.40
20:J:12:LYS:O	20:J:13:ARG:HB2	2.22	0.40
16:L:50:PHE:O	16:L:52:GLY:N	2.54	0.40
26:F:51:ASN:O	26:F:55:ASP:HB2	2.21	0.40
1:A:13:G:C2'	1:A:14:U:H5''	2.50	0.40
2:B:568:U:O2'	2:B:570:G:N7	2.43	0.40
1:A:6:G:H2'	1:A:7:G:H8	1.86	0.40
5:D:49:GLN:NE2	5:D:79:LEU:HD12	2.36	0.40
7:P:25:VAL:HA	7:P:85:VAL:CA	2.51	0.40
8:E:37:ALA:C	8:E:39:ALA:N	2.71	0.40
22:O:9:ARG:HA	22:O:12:THR:OG1	2.21	0.40
2:B:123:G:H4'	2:B:1376:C:O5'	2.20	0.40
2:B:26:G:H1'	2:B:515:A:N6	2.36	0.40
2:B:1424:G:O2'	2:B:1425:G:H5'	2.22	0.40
24:S:88:ARG:N	24:S:92:ARG:O	2.49	0.40
20:J:41:LYS:HB3	20:J:42:ALA:H	1.64	0.40
12:I:34:GLU:HA	12:I:48:TYR:O	2.22	0.40
2:B:2206:C:H2'	2:B:2207:C:H6	1.87	0.40
2:B:291:G:H2'	2:B:292:U:C6	2.56	0.40
2:B:1816:C:H3'	4:C:61:TYR:CE2	2.57	0.40
5:D:161:MET:HG3	5:D:161:MET:O	2.22	0.40
2:B:1332:G:H5'	2:B:1332:G:N3	2.36	0.40
3:I:91:LYS:N	3:I:91:LYS:HD2	2.36	0.40
16:L:47:ARG:HH21	16:L:47:ARG:CB	2.35	0.40
16:L:69:ARG:HD3	16:L:69:ARG:O	2.22	0.40
2:B:2657:A:C2'	2:B:2658:C:H5'	2.52	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:U:28:LEU:C	25:U:30:SER:N	2.75	0.40
32:6:86:SER:C	32:6:88:LEU:N	2.75	0.40
24:S:25:ARG:NH2	24:S:74:ILE:HG23	2.37	0.40
2:B:2263:C:H4'	2:B:2329:U:H4'	2.03	0.40
2:B:845:A:N1	2:B:847:U:H1'	2.36	0.40
31:W:48:ALA:HB3	31:W:81:ILE:O	2.21	0.40
18:X:35:GLY:O	18:X:37:LEU:N	2.54	0.40
14:V:70:ILE:CD1	14:V:71:LYS:N	2.82	0.40
19:H:14:SER:HB3	19:H:17:ASP:CB	2.45	0.40
28:R:49:ILE:HG21	28:R:54:VAL:HA	2.04	0.40
28:R:49:ILE:HG21	28:R:54:VAL:N	2.37	0.40
20:J:43:GLU:O	20:J:44:TYR:C	2.59	0.40
23:Q:89:ILE:C	23:Q:91:ARG:H	2.25	0.40
23:Q:89:ILE:O	23:Q:90:ASP:HB2	2.22	0.40
27:G:137:LYS:O	27:G:140:ILE:HG13	2.21	0.40
2:B:162:U:H2'	2:B:162:U:O2	2.21	0.40
30:Z:65:ASP:O	30:Z:69:ALA:HB2	2.21	0.40
30:Z:65:ASP:O	30:Z:69:ALA:N	2.54	0.40
2:B:96:C:H2'	2:B:97:C:H6	1.87	0.40
2:B:2143:C:N3	2:B:2144:G:H1'	2.36	0.40
17:M:69:PRO:HB2	17:M:92:TRP:HB3	2.03	0.40
17:M:93:VAL:HG22	17:M:94:ALA:N	2.37	0.40
11:4:8:LYS:HG3	11:4:9:LYS:HD3	2.04	0.40
6:K:109:SER:C	6:K:111:LYS:H	2.24	0.40
6:K:88:ASN:HB3	6:K:92:GLU:O	2.22	0.40
17:M:126:ILE:N	17:M:126:ILE:HD12	2.37	0.40
2:B:415:A:H2'	2:B:416:U:C6	2.56	0.40
2:B:2679:A:H2'	2:B:2680:U:H6	1.85	0.40
2:B:2485:G:H4'	17:M:123:LYS:O	2.22	0.40
2:B:1473:G:C6	2:B:1519:G:C6	3.10	0.40
2:B:392:U:H2'	2:B:393:C:H6	1.85	0.40
2:B:1948:G:C6	2:B:1959:G:C6	3.10	0.40
5:D:154:LYS:HG2	5:D:155:VAL:N	2.36	0.40
4:C:119:VAL:HA	4:C:133:ASN:ND2	2.36	0.40
2:B:265:A:H2'	2:B:266:G:O4'	2.21	0.40
2:B:1292:G:O2'	2:B:1293:C:H5'	2.21	0.40
2:B:754:U:H2'	2:B:755:U:C6	2.57	0.40
3:I:102:ARG:O	3:I:106:GLN:HG3	2.22	0.40
2:B:1689:A:H2'	2:B:1690:A:H8	1.86	0.40
2:B:2356:U:H4'	31:W:16:GLU:OE1	2.21	0.40
2:B:111:A:O2'	2:B:112:U:H5'	2.21	0.40
2:B:202:U:H2'	2:B:203:A:C8	2.57	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:B:2410:G:H2'	2:B:2411:A:O4'	2.21	0.40
2:B:651:G:O2'	2:B:652:U:H5'	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone ⓘ

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
3	I	139/141 (99%)	114 (82%)	20 (14%)	5 (4%)	5	54
4	C	269/272 (99%)	155 (58%)	65 (24%)	49 (18%)	0	5
5	D	207/209 (99%)	124 (60%)	51 (25%)	32 (16%)	0	8
6	K	119/123 (97%)	78 (66%)	24 (20%)	17 (14%)	0	10
7	P	112/114 (98%)	61 (54%)	34 (30%)	17 (15%)	0	8
8	E	199/201 (99%)	125 (63%)	51 (26%)	23 (12%)	1	15
9	Y	56/58 (97%)	39 (70%)	12 (21%)	5 (9%)	1	25
10	0	54/56 (96%)	39 (72%)	8 (15%)	7 (13%)	0	12
11	4	36/38 (95%)	16 (44%)	10 (28%)	10 (28%)	0	1
12	1	48/54 (89%)	36 (75%)	8 (17%)	4 (8%)	1	27
13	3	62/64 (97%)	34 (55%)	22 (36%)	6 (10%)	1	21
14	V	92/94 (98%)	62 (67%)	24 (26%)	6 (6%)	2	36
15	2	44/46 (96%)	30 (68%)	10 (23%)	4 (9%)	1	24
16	L	141/144 (98%)	89 (63%)	32 (23%)	20 (14%)	0	10
17	M	134/136 (98%)	83 (62%)	31 (23%)	20 (15%)	0	8
18	X	61/63 (97%)	36 (59%)	17 (28%)	8 (13%)	0	12
19	H	147/149 (99%)	91 (62%)	33 (22%)	23 (16%)	0	7
20	J	140/142 (99%)	85 (61%)	36 (26%)	19 (14%)	0	11
21	N	118/127 (93%)	77 (65%)	28 (24%)	13 (11%)	1	16
22	O	114/117 (97%)	75 (66%)	27 (24%)	12 (10%)	1	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
23	Q	115/117 (98%)	75 (65%)	29 (25%)	11 (10%)	1	21
24	S	108/110 (98%)	66 (61%)	31 (29%)	11 (10%)	1	19
25	U	100/103 (97%)	59 (59%)	22 (22%)	19 (19%)	0	4
26	F	176/178 (99%)	105 (60%)	42 (24%)	29 (16%)	0	7
27	G	174/176 (99%)	101 (58%)	41 (24%)	32 (18%)	0	5
28	R	101/103 (98%)	74 (73%)	18 (18%)	9 (9%)	1	25
29	T	91/100 (91%)	46 (50%)	27 (30%)	18 (20%)	0	4
30	Z	75/78 (96%)	50 (67%)	13 (17%)	12 (16%)	0	7
31	W	77/84 (92%)	28 (36%)	24 (31%)	25 (32%)	0	0
32	6	183/185 (99%)	152 (83%)	24 (13%)	7 (4%)	5	52
All	All	3492/3582 (98%)	2205 (63%)	814 (23%)	473 (14%)	0	11

All (473) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	I	5	GLN
3	I	18	ASN
4	C	51	ARG
4	C	59	GLN
4	C	77	VAL
4	C	141	HIS
5	D	9	VAL
5	D	74	GLU
5	D	91	THR
5	D	102	ALA
5	D	106	LYS
5	D	107	VAL
5	D	159	LYS
5	D	169	ARG
5	D	170	VAL
5	D	182	ALA
5	D	194	PRO
5	D	196	ALA
6	K	17	ARG
6	K	18	ARG
6	K	31	ARG
6	K	35	VAL
6	K	72	PRO

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Mol	Chain	Res	Type
6	K	73	ASP
6	K	92	GLU
6	K	119	ALA
6	K	120	PRO
7	P	25	VAL
7	P	50	ARG
7	P	64	SER
7	P	75	THR
7	P	100	ARG
8	E	62	GLN
8	E	79	ARG
8	E	165	HIS
9	Y	2	LYS
10	0	23	ALA
10	0	42	ILE
11	4	16	ILE
12	1	51	ALA
14	V	25	LYS
15	2	5	PHE
16	L	31	GLY
16	L	54	GLN
16	L	89	VAL
16	L	100	ILE
16	L	111	ILE
16	L	116	VAL
17	M	56	ALA
17	M	59	ARG
17	M	78	LEU
18	X	2	LYS
19	H	3	VAL
19	H	6	LEU
19	H	10	ALA
19	H	14	SER
19	H	31	VAL
19	H	32	PRO
19	H	33	GLN
19	H	86	ASP
19	H	148	ALA
20	J	4	PHE
20	J	5	THR
20	J	44	TYR
20	J	45	THR

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Mol	Chain	Res	Type
20	J	81	ILE
20	J	111	LYS
21	N	11	ASN
21	N	58	ASP
21	N	82	GLU
24	S	3	THR
24	S	14	ALA
24	S	40	ASN
25	U	6	ARG
25	U	18	LYS
25	U	50	ALA
26	F	32	LYS
26	F	80	GLN
26	F	112	ASP
26	F	135	ILE
26	F	138	PRO
26	F	148	VAL
26	F	149	ARG
27	G	11	PRO
27	G	83	THR
27	G	91	VAL
27	G	94	ARG
28	R	7	SER
29	T	16	VAL
29	T	38	ALA
29	T	39	THR
29	T	69	ARG
29	T	88	LYS
30	Z	33	LEU
30	Z	45	ARG
30	Z	46	PHE
30	Z	77	LYS
31	W	14	ASP
31	W	30	VAL
31	W	50	VAL
31	W	61	LYS
31	W	62	ALA
32	6	30	THR
32	6	41	LEU
32	6	84	ARG
4	C	4	LYS
4	C	17	LYS

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Mol	Chain	Res	Type
4	C	29	PHE
4	C	36	ASN
4	C	52	HIS
4	C	140	VAL
4	C	142	ASN
4	C	151	GLY
4	C	195	GLY
4	C	220	ARG
4	C	222	THR
4	C	232	GLY
5	D	93	GLY
5	D	122	VAL
5	D	145	SER
5	D	149	ASN
5	D	181	ASP
5	D	184	ARG
7	P	31	VAL
7	P	38	ARG
7	P	101	GLU
7	P	111	GLU
8	E	42	GLY
8	E	45	ALA
8	E	167	VAL
9	Y	4	ILE
9	Y	34	THR
10	0	51	ARG
10	0	52	LYS
11	4	4	ARG
11	4	7	VAL
11	4	8	LYS
11	4	23	ILE
11	4	34	LYS
11	4	37	GLN
12	1	4	ILE
13	3	31	ILE
13	3	50	SER
16	L	5	THR
16	L	51	GLU
16	L	52	GLY
16	L	60	ARG
17	M	13	HIS
17	M	69	PRO

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Mol	Chain	Res	Type
17	M	83	GLY
17	M	87	GLY
17	M	116	ALA
18	X	9	LYS
18	X	45	GLN
18	X	58	ASN
19	H	5	LEU
19	H	8	LYS
19	H	11	ASN
19	H	12	LEU
19	H	29	PHE
19	H	89	LYS
19	H	121	VAL
20	J	41	LYS
20	J	43	GLU
20	J	52	ASP
20	J	73	VAL
20	J	84	ILE
20	J	124	VAL
21	N	10	LEU
21	N	19	ALA
21	N	60	VAL
21	N	100	CYS
21	N	101	GLY
22	O	13	ARG
22	O	60	GLU
22	O	100	HIS
23	Q	76	SER
23	Q	86	SER
23	Q	87	VAL
23	Q	91	ARG
24	S	25	ARG
24	S	65	ASP
24	S	96	ILE
25	U	5	ARG
25	U	49	PRO
25	U	61	GLU
25	U	62	ALA
25	U	85	ARG
25	U	92	VAL
26	F	78	ILE
26	F	87	LYS

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Mol	Chain	Res	Type
26	F	92	GLY
26	F	103	ILE
26	F	142	TYR
27	G	8	VAL
27	G	61	TRP
27	G	84	LYS
27	G	85	LYS
27	G	102	ILE
27	G	117	PRO
27	G	125	PRO
27	G	164	ALA
28	R	43	ASN
28	R	70	GLU
28	R	101	ILE
29	T	19	LYS
30	Z	31	PRO
30	Z	35	SER
30	Z	41	GLU
30	Z	71	LEU
31	W	9	THR
31	W	32	ALA
31	W	34	SER
31	W	36	ILE
31	W	58	LEU
31	W	70	VAL
32	6	52	LEU
32	6	89	GLY
3	I	23	VAL
4	C	3	VAL
4	C	35	LYS
4	C	53	ILE
4	C	88	ALA
4	C	94	LEU
4	C	131	MET
4	C	135	PRO
4	C	145	MET
4	C	246	PRO
4	C	250	GLN
5	D	31	ALA
5	D	118	PHE
5	D	127	PHE
5	D	136	ASN

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Mol	Chain	Res	Type
5	D	164	GLN
6	K	6	THR
6	K	16	ALA
6	K	46	ALA
7	P	37	LYS
7	P	65	ASN
7	P	73	PHE
8	E	46	GLN
8	E	106	LYS
8	E	166	LYS
8	E	188	MET
10	0	48	TYR
10	0	54	ILE
11	4	9	LYS
11	4	18	LYS
12	1	36	LYS
13	3	10	ALA
13	3	22	LYS
13	3	29	ARG
14	V	71	LYS
14	V	75	GLN
15	2	45	SER
16	L	36	LYS
16	L	94	THR
17	M	43	ALA
17	M	72	PRO
17	M	134	THR
18	X	36	GLN
18	X	46	VAL
19	H	41	LYS
19	H	113	SER
21	N	68	ALA
21	N	88	ALA
22	O	22	GLY
22	O	51	ALA
22	O	68	LYS
22	O	99	TYR
23	Q	10	ARG
24	S	13	SER
24	S	80	PRO
25	U	42	LYS
26	F	9	ASP

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Mol	Chain	Res	Type
26	F	11	VAL
26	F	28	PRO
26	F	42	ALA
26	F	133	GLU
27	G	2	ARG
27	G	32	LEU
27	G	45	ALA
27	G	111	PRO
27	G	118	ALA
27	G	151	ARG
27	G	152	ARG
27	G	170	THR
28	R	24	LYS
28	R	65	ALA
29	T	11	LEU
29	T	28	ASN
29	T	35	ALA
30	Z	3	ARG
30	Z	34	HIS
30	Z	70	GLU
31	W	15	SER
31	W	27	GLY
31	W	28	GLU
31	W	59	PHE
31	W	60	ALA
31	W	77	LYS
32	6	112	LYS
3	I	14	ALA
4	C	5	CYS
4	C	34	GLU
4	C	37	SER
4	C	105	ALA
4	C	186	ASP
4	C	190	THR
4	C	196	ASN
4	C	200	MET
4	C	204	LEU
5	D	109	VAL
5	D	121	THR
6	K	14	SER
6	K	54	LYS
6	K	110	GLU

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Mol	Chain	Res	Type
7	P	30	TRP
7	P	86	LYS
8	E	27	LEU
8	E	52	VAL
8	E	61	ARG
8	E	68	ALA
8	E	69	ARG
8	E	70	SER
9	Y	9	THR
10	O	26	SER
14	V	6	ALA
14	V	45	ASP
16	L	4	ASN
16	L	19	LEU
16	L	81	ASP
16	L	99	ASN
16	L	117	THR
17	M	20	LEU
17	M	21	ALA
17	M	70	ASP
18	X	37	LEU
19	H	7	ASP
19	H	9	VAL
19	H	96	THR
20	J	13	ARG
22	O	57	ALA
22	O	98	GLN
23	Q	15	LYS
23	Q	88	GLU
24	S	18	ARG
24	S	30	SER
24	S	61	ASN
25	U	24	VAL
25	U	51	LEU
25	U	59	GLU
25	U	96	LYS
26	F	41	GLU
26	F	81	GLY
27	G	9	VAL
27	G	16	VAL
27	G	29	ASN
27	G	54	ARG

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Mol	Chain	Res	Type
27	G	97	VAL
27	G	109	SER
27	G	112	VAL
28	R	40	MET
29	T	8	LEU
29	T	29	THR
29	T	58	VAL
31	W	12	GLY
4	C	84	PRO
4	C	189	ALA
4	C	202	ARG
4	C	238	ASN
4	C	254	LYS
5	D	54	ALA
5	D	112	THR
5	D	131	ASP
6	K	93	GLN
7	P	4	ILE
8	E	73	ILE
8	E	83	VAL
8	E	96	VAL
8	E	131	THR
12	1	50	GLU
15	2	22	MET
16	L	58	TYR
16	L	66	PHE
17	M	26	VAL
17	M	82	MET
19	H	109	GLU
19	H	119	ASN
20	J	14	ASP
20	J	134	ALA
21	N	70	THR
21	N	89	SER
22	O	27	VAL
22	O	115	LEU
23	Q	78	PHE
25	U	12	VAL
25	U	16	LYS
25	U	41	VAL
26	F	43	ILE
26	F	93	GLU

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Mol	Chain	Res	Type
26	F	110	ILE
26	F	156	THR
27	G	59	ASP
28	R	52	PRO
28	R	98	ILE
29	T	66	LYS
29	T	86	THR
29	T	91	GLN
30	Z	18	ARG
31	W	23	LYS
31	W	29	SER
31	W	40	ARG
31	W	78	PHE
32	6	61	PRO
3	I	6	ALA
4	C	63	ILE
4	C	78	GLU
5	D	143	PRO
5	D	162	ALA
13	3	58	ILE
14	V	84	PRO
17	M	27	SER
17	M	73	ILE
17	M	106	ASP
20	J	60	ASP
21	N	59	SER
23	Q	18	LYS
23	Q	89	ILE
25	U	45	GLN
26	F	136	ILE
27	G	168	VAL
29	T	55	VAL
31	W	68	PHE
8	E	129	PRO
18	X	62	GLY
20	J	112	GLY
20	J	139	VAL
26	F	82	TYR
27	G	89	VAL
27	G	155	PRO
31	W	37	VAL
4	C	150	GLY

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Mol	Chain	Res	Type
5	D	24	VAL
6	K	101	GLY
7	P	63	ILE
11	4	17	VAL
20	J	64	VAL
22	O	8	ILE
25	U	82	VAL
26	F	88	VAL
26	F	105	ILE
29	T	10	VAL
4	C	18	VAL
4	C	64	VAL
4	C	106	PRO
4	C	123	ILE
7	P	46	VAL
8	E	59	PRO
8	E	187	VAL
26	F	145	VAL
27	G	18	ILE
29	T	65	GLY
4	C	31	PRO
5	D	92	VAL
15	2	44	VAL
16	L	28	GLY
17	M	23	GLY
26	F	123	GLY
31	W	33	GLY
4	C	203	VAL
9	Y	13	ILE
23	Q	30	VAL

5.3.2 Protein sidechains ⓘ

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	I	109/109 (100%)	103 (94%)	6 (6%)	30	78
4	C	216/217 (100%)	176 (82%)	40 (18%)	2	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
5	D	164/164 (100%)	134 (82%)	30 (18%)	2	18
6	K	102/104 (98%)	81 (79%)	21 (21%)	2	13
7	P	99/99 (100%)	80 (81%)	19 (19%)	2	16
8	E	165/165 (100%)	142 (86%)	23 (14%)	5	34
9	Y	48/48 (100%)	38 (79%)	10 (21%)	2	13
10	0	47/47 (100%)	38 (81%)	9 (19%)	2	16
11	4	34/34 (100%)	29 (85%)	5 (15%)	4	31
12	1	45/48 (94%)	41 (91%)	4 (9%)	14	58
13	3	51/51 (100%)	46 (90%)	5 (10%)	12	52
14	V	78/78 (100%)	64 (82%)	14 (18%)	2	19
15	2	38/38 (100%)	28 (74%)	10 (26%)	1	7
16	L	102/103 (99%)	91 (89%)	11 (11%)	9	48
17	M	109/109 (100%)	87 (80%)	22 (20%)	2	14
18	X	55/55 (100%)	46 (84%)	9 (16%)	3	25
19	H	114/114 (100%)	89 (78%)	25 (22%)	1	11
20	J	116/116 (100%)	100 (86%)	16 (14%)	5	34
21	N	100/103 (97%)	84 (84%)	16 (16%)	3	27
22	O	86/87 (99%)	72 (84%)	14 (16%)	3	26
23	Q	89/89 (100%)	79 (89%)	10 (11%)	9	45
24	S	93/93 (100%)	77 (83%)	16 (17%)	3	22
25	U	83/84 (99%)	65 (78%)	18 (22%)	1	11
26	F	149/149 (100%)	117 (78%)	32 (22%)	1	11
27	G	137/137 (100%)	112 (82%)	25 (18%)	2	18
28	R	84/84 (100%)	70 (83%)	14 (17%)	3	24
29	T	80/84 (95%)	64 (80%)	16 (20%)	2	14
30	Z	67/68 (98%)	56 (84%)	11 (16%)	3	25
31	W	59/62 (95%)	42 (71%)	17 (29%)	0	5
32	6	157/157 (100%)	134 (85%)	23 (15%)	5	31
All	All	2876/2896 (99%)	2385 (83%)	491 (17%)	3	22

All (491) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	I	2	LYS
3	I	54	ILE
3	I	91	LYS
3	I	99	LYS
3	I	121	ILE
3	I	140	GLU
4	C	4	LYS
4	C	5	CYS
4	C	12	ARG
4	C	23	LEU
4	C	37	SER
4	C	43	ASN
4	C	45	ASN
4	C	52	HIS
4	C	53	ILE
4	C	62	ARG
4	C	65	ASP
4	C	86	ARG
4	C	89	ASN
4	C	90	ILE
4	C	100	ARG
4	C	123	ILE
4	C	129	LEU
4	C	134	ILE
4	C	142	ASN
4	C	155	ARG
4	C	166	ARG
4	C	172	THR
4	C	173	LEU
4	C	176	ARG
4	C	180	MET
4	C	190	THR
4	C	191	LEU
4	C	202	ARG
4	C	212	TRP
4	C	213	ARG
4	C	224	MET
4	C	239	PHE
4	C	245	THR
4	C	249	VAL
4	C	251	THR
4	C	257	ARG
4	C	264	LYS

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Mol	Chain	Res	Type
4	C	267	VAL
4	C	268	ARG
4	C	269	ARG
5	D	17	GLU
5	D	35	THR
5	D	36	GLN
5	D	40	LEU
5	D	46	ARG
5	D	48	ILE
5	D	56	LYS
5	D	59	ARG
5	D	79	LEU
5	D	81	GLU
5	D	84	LEU
5	D	89	GLU
5	D	91	THR
5	D	99	GLU
5	D	124	ARG
5	D	131	ASP
5	D	137	SER
5	D	138	LEU
5	D	142	VAL
5	D	148	GLN
5	D	151	THR
5	D	154	LYS
5	D	159	LYS
5	D	165	MET
5	D	167	ASN
5	D	179	ARG
5	D	186	LEU
5	D	201	LEU
5	D	204	LYS
5	D	207	VAL
6	K	8	LEU
6	K	21	CYS
6	K	32	TYR
6	K	39	ILE
6	K	41	ILE
6	K	47	ILE
6	K	52	VAL
6	K	53	LYS
6	K	54	LYS

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Mol	Chain	Res	Type
6	K	58	LEU
6	K	64	ARG
6	K	72	PRO
6	K	79	PHE
6	K	86	LEU
6	K	87	LEU
6	K	98	ARG
6	K	104	THR
6	K	105	ARG
6	K	107	LEU
6	K	111	LYS
6	K	120	PRO
7	P	3	ILE
7	P	6	GLN
7	P	19	PHE
7	P	20	ARG
7	P	24	THR
7	P	25	VAL
7	P	28	LYS
7	P	33	GLU
7	P	37	LYS
7	P	38	ARG
7	P	43	GLU
7	P	61	ARG
7	P	83	ILE
7	P	99	LEU
7	P	100	ARG
7	P	101	GLU
7	P	111	GLU
7	P	112	ARG
7	P	114	ASN
8	E	2	GLU
8	E	12	LEU
8	E	22	ASP
8	E	24	ASN
8	E	40	ARG
8	E	48	THR
8	E	51	GLU
8	E	58	LYS
8	E	60	TRP
8	E	62	GLN
8	E	67	ARG

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Mol	Chain	Res	Type
8	E	75	SER
8	E	78	TRP
8	E	108	ILE
8	E	116	ASP
8	E	118	LEU
8	E	122	GLU
8	E	124	PHE
8	E	133	LEU
8	E	147	LEU
8	E	153	LEU
8	E	163	ASN
8	E	170	ARG
9	Y	2	LYS
9	Y	3	THR
9	Y	6	ILE
9	Y	15	ARG
9	Y	16	LEU
9	Y	19	HIS
9	Y	23	LEU
9	Y	30	ARG
9	Y	37	ARG
9	Y	57	GLU
10	0	3	GLN
10	0	26	SER
10	0	27	LEU
10	0	37	HIS
10	0	41	HIS
10	0	45	ASP
10	0	51	ARG
10	0	53	VAL
10	0	56	LYS
11	4	3	VAL
11	4	9	LYS
11	4	28	SER
11	4	35	GLN
11	4	37	GLN
12	1	8	ILE
12	1	9	LYS
12	1	35	LEU
12	1	44	GLN
13	3	7	ARG
13	3	14	LYS

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Mol	Chain	Res	Type
13	3	18	LYS
13	3	27	ASN
13	3	42	HIS
14	V	7	GLU
14	V	12	GLN
14	V	18	ARG
14	V	40	ILE
14	V	42	LEU
14	V	46	LYS
14	V	51	GLN
14	V	53	LYS
14	V	55	GLU
14	V	66	ASP
14	V	70	ILE
14	V	75	GLN
14	V	89	ILE
14	V	90	ASP
15	2	4	THR
15	2	10	LEU
15	2	19	ARG
15	2	22	MET
15	2	24	THR
15	2	33	ARG
15	2	39	ARG
15	2	41	ARG
15	2	42	LEU
15	2	43	THR
16	L	12	SER
16	L	40	SER
16	L	47	ARG
16	L	60	ARG
16	L	69	ARG
16	L	91	ASP
16	L	92	LEU
16	L	95	LEU
16	L	112	LEU
16	L	118	THR
16	L	123	ARG
17	M	1	MET
17	M	10	ARG
17	M	20	LEU
17	M	25	ASP

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Mol	Chain	Res	Type
17	M	38	ARG
17	M	47	GLU
17	M	58	LYS
17	M	59	ARG
17	M	63	ILE
17	M	65	ILE
17	M	70	ASP
17	M	90	GLU
17	M	91	TYR
17	M	95	LEU
17	M	100	LYS
17	M	104	GLU
17	M	105	MET
17	M	108	VAL
17	M	110	GLU
17	M	115	GLU
17	M	127	LYS
17	M	131	VAL
18	X	14	LEU
18	X	18	LEU
18	X	25	GLN
18	X	28	LEU
18	X	29	ARG
18	X	41	HIS
18	X	48	ARG
18	X	57	LEU
18	X	59	GLU
19	H	3	VAL
19	H	12	LEU
19	H	15	LEU
19	H	17	ASP
19	H	28	ASN
19	H	31	VAL
19	H	32	PRO
19	H	33	GLN
19	H	48	GLU
19	H	50	ARG
19	H	58	LEU
19	H	70	GLU
19	H	73	ASN
19	H	75	LEU
19	H	79	THR

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Mol	Chain	Res	Type
19	H	89	LYS
19	H	114	GLU
19	H	115	VAL
19	H	121	VAL
19	H	124	THR
19	H	129	GLU
19	H	133	GLN
19	H	137	GLU
19	H	139	PHE
19	H	145	ASN
20	J	2	LYS
20	J	5	THR
20	J	12	LYS
20	J	28	LEU
20	J	35	ARG
20	J	44	TYR
20	J	65	THR
20	J	71	ASP
20	J	76	HIS
20	J	93	ILE
20	J	95	ARG
20	J	111	LYS
20	J	120	ARG
20	J	124	VAL
20	J	129	GLU
20	J	138	GLN
21	N	1	MET
21	N	2	ARG
21	N	9	GLN
21	N	11	ASN
21	N	18	GLN
21	N	20	MET
21	N	35	LYS
21	N	46	ARG
21	N	59	SER
21	N	69	ARG
21	N	71	ARG
21	N	82	GLU
21	N	83	LEU
21	N	114	GLU
21	N	118	ARG
21	N	120	GLU

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Mol	Chain	Res	Type
22	O	3	LYS
22	O	9	ARG
22	O	17	LYS
22	O	31	THR
22	O	36	TYR
22	O	43	ASN
22	O	69	ASP
22	O	78	VAL
22	O	80	GLU
22	O	89	ASP
22	O	98	GLN
22	O	100	HIS
22	O	104	GLN
22	O	106	LEU
23	Q	5	ARG
23	Q	10	ARG
23	Q	13	HIS
23	Q	29	ARG
23	Q	63	ARG
23	Q	79	ILE
23	Q	83	LYS
23	Q	84	LYS
23	Q	90	ASP
23	Q	96	ASP
24	S	1	MET
24	S	6	LYS
24	S	18	ARG
24	S	22	ASP
24	S	33	LEU
24	S	39	THR
24	S	55	ILE
24	S	62	ASP
24	S	66	ILE
24	S	72	THR
24	S	73	LYS
24	S	84	ARG
24	S	86	MET
24	S	88	ARG
24	S	99	ARG
24	S	100	THR
25	U	7	ASP
25	U	11	ILE

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Mol	Chain	Res	Type
25	U	13	LEU
25	U	20	LYS
25	U	30	SER
25	U	34	ILE
25	U	49	PRO
25	U	51	LEU
25	U	52	ASN
25	U	53	GLN
25	U	60	LYS
25	U	64	ILE
25	U	65	GLN
25	U	73	ASN
25	U	78	LYS
25	U	80	ASP
25	U	81	ARG
25	U	85	ARG
26	F	2	LYS
26	F	13	LYS
26	F	15	LEU
26	F	18	GLU
26	F	29	ARG
26	F	32	LYS
26	F	50	ASP
26	F	55	ASP
26	F	56	LEU
26	F	59	ILE
26	F	76	PHE
26	F	82	TYR
26	F	86	CYS
26	F	91	ARG
26	F	96	TRP
26	F	97	GLU
26	F	101	ARG
26	F	102	LEU
26	F	103	ILE
26	F	109	ARG
26	F	111	ARG
26	F	121	PHE
26	F	126	ASN
26	F	129	MET
26	F	134	GLN
26	F	137	PHE

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Mol	Chain	Res	Type
26	F	138	PRO
26	F	147	ARG
26	F	149	ARG
26	F	174	PHE
26	F	177	ARG
26	F	178	LYS
27	G	1	SER
27	G	15	ASP
27	G	17	LYS
27	G	24	THR
27	G	31	GLU
27	G	34	ARG
27	G	36	LEU
27	G	54	ARG
27	G	55	ASP
27	G	61	TRP
27	G	68	ARG
27	G	70	LEU
27	G	71	LEU
27	G	84	LYS
27	G	85	LYS
27	G	86	LEU
27	G	94	ARG
27	G	106	LEU
27	G	120	ILE
27	G	132	LEU
27	G	138	GLN
27	G	148	ARG
27	G	154	GLU
27	G	162	ARG
27	G	166	GLU
28	R	4	VAL
28	R	22	LEU
28	R	39	LEU
28	R	40	MET
28	R	45	GLU
28	R	48	LYS
28	R	53	PHE
28	R	55	ASP
28	R	70	GLU
28	R	71	LYS
28	R	72	VAL

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Mol	Chain	Res	Type
28	R	79	ARG
28	R	82	HIS
28	R	86	GLN
29	T	2	ILE
29	T	3	ARG
29	T	4	GLU
29	T	7	LEU
29	T	9	LYS
29	T	11	LEU
29	T	12	ARG
29	T	24	MET
29	T	32	LEU
29	T	64	LYS
29	T	68	LYS
29	T	69	ARG
29	T	70	HIS
29	T	73	ARG
29	T	81	LYS
29	T	87	LEU
30	Z	25	THR
30	Z	27	ARG
30	Z	28	ARG
30	Z	33	LEU
30	Z	37	ARG
30	Z	41	GLU
30	Z	46	PHE
30	Z	49	LEU
30	Z	50	ARG
30	Z	66	THR
30	Z	78	TYR
31	W	13	ARG
31	W	14	ASP
31	W	16	GLU
31	W	18	LYS
31	W	19	ARG
31	W	23	LYS
31	W	24	ARG
31	W	25	PHE
31	W	38	ARG
31	W	39	GLN
31	W	40	ARG
31	W	44	PHE

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Mol	Chain	Res	Type
31	W	49	ASN
31	W	50	VAL
31	W	54	ARG
31	W	77	LYS
31	W	80	SER
32	6	1	MET
32	6	6	LEU
32	6	12	SER
32	6	16	LYS
32	6	17	SER
32	6	24	ASN
32	6	44	GLU
32	6	59	THR
32	6	64	ARG
32	6	84	ARG
32	6	85	ASP
32	6	93	SER
32	6	94	ASN
32	6	97	ASP
32	6	106	LEU
32	6	107	THR
32	6	108	GLU
32	6	114	LEU
32	6	137	LEU
32	6	146	GLU
32	6	147	LEU
32	6	156	ARG
32	6	174	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (104) such sidechains are listed below:

Mol	Chain	Res	Type
3	I	5	GLN
3	I	11	GLN
3	I	29	GLN
3	I	33	ASN
3	I	93	ASN
4	C	20	ASN
4	C	43	ASN
4	C	59	GLN
4	C	89	ASN
4	C	133	ASN

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Mol	Chain	Res	Type
4	C	152	GLN
4	C	162	GLN
5	D	32	ASN
5	D	36	GLN
5	D	49	GLN
5	D	126	ASN
5	D	130	GLN
5	D	136	ASN
5	D	173	GLN
6	K	5	GLN
6	K	13	ASN
6	K	88	ASN
6	K	89	ASN
7	P	6	GLN
7	P	40	GLN
7	P	114	ASN
8	E	9	GLN
8	E	24	ASN
8	E	30	GLN
8	E	62	GLN
8	E	136	GLN
8	E	195	GLN
9	Y	33	HIS
9	Y	48	ASN
10	0	3	GLN
10	0	18	HIS
11	4	35	GLN
11	4	37	GLN
13	3	30	HIS
13	3	42	HIS
14	V	44	HIS
14	V	51	GLN
14	V	80	HIS
15	2	13	ASN
16	L	4	ASN
16	L	54	GLN
16	L	93	ASN
16	L	104	GLN
17	M	17	ASN
17	M	60	GLN
18	X	15	ASN
18	X	20	ASN

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Mol	Chain	Res	Type
18	X	25	GLN
18	X	27	ASN
18	X	31	GLN
18	X	41	HIS
18	X	45	GLN
19	H	18	GLN
19	H	20	ASN
19	H	28	ASN
19	H	43	ASN
19	H	66	ASN
19	H	135	HIS
20	J	136	GLN
20	J	138	GLN
21	N	11	ASN
21	N	62	ASN
21	N	107	ASN
22	O	19	GLN
22	O	38	GLN
22	O	61	GLN
23	Q	19	GLN
23	Q	51	GLN
23	Q	58	GLN
23	Q	70	GLN
23	Q	80	ASN
24	S	40	ASN
24	S	57	ASN
24	S	61	ASN
25	U	65	GLN
25	U	68	ASN
25	U	73	ASN
26	F	51	ASN
26	F	134	GLN
27	G	29	ASN
27	G	37	ASN
27	G	127	GLN
28	R	6	GLN
28	R	86	GLN
29	T	48	GLN
29	T	91	GLN
29	T	92	ASN
30	Z	17	ASN
30	Z	20	HIS

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Mol	Chain	Res	Type
30	Z	23	ASN
30	Z	36	HIS
31	W	39	GLN
31	W	56	HIS
31	W	75	ASN
32	6	24	ASN
32	6	49	HIS
32	6	53	ASN
32	6	102	ASN
32	6	174	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	116/120 (96%)	16 (13%)	0
2	B	2837/2904 (97%)	435 (15%)	22 (0%)
All	All	2953/3024 (97%)	451 (15%)	22 (0%)

All (451) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	4	C
1	A	9	G
1	A	16	G
1	A	24	G
1	A	26	C
1	A	29	A
1	A	30	C
1	A	35	C
1	A	42	C
1	A	43	C
1	A	66	A
1	A	67	G
1	A	88	C
1	A	90	C
1	A	99	A
1	A	109	A
2	B	27	G
2	B	33	C
2	B	34	U
2	B	46	G

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Mol	Chain	Res	Type
2	B	51	G
2	B	63	A
2	B	64	A
2	B	71	A
2	B	74	A
2	B	75	G
2	B	79	C
2	B	99	U
2	B	100	U
2	B	101	A
2	B	102	U
2	B	103	A
2	B	114	U
2	B	119	A
2	B	120	U
2	B	125	A
2	B	126	A
2	B	139	U
2	B	140	C
2	B	141	G
2	B	142	A
2	B	143	C
2	B	160	A
2	B	162	U
2	B	163	C
2	B	181	A
2	B	196	A
2	B	199	A
2	B	215	G
2	B	216	A
2	B	221	A
2	B	222	A
2	B	225	C
2	B	230	G
2	B	233	A
2	B	248	G
2	B	250	G
2	B	255	A
2	B	265	A
2	B	266	G
2	B	271	G
2	B	277	G

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Mol	Chain	Res	Type
2	B	278	A
2	B	280	U
2	B	281	C
2	B	282	A
2	B	284	U
2	B	286	U
2	B	287	G
2	B	288	U
2	B	289	G
2	B	295	G
2	B	299	A
2	B	311	A
2	B	323	C
2	B	329	G
2	B	330	A
2	B	333	G
2	B	346	A
2	B	347	A
2	B	350	G
2	B	358	U
2	B	371	A
2	B	372	G
2	B	383	C
2	B	386	G
2	B	387	U
2	B	396	G
2	B	411	G
2	B	412	A
2	B	423	A
2	B	424	G
2	B	444	C
2	B	451	U
2	B	455	C
2	B	456	C
2	B	457	A
2	B	479	A
2	B	480	A
2	B	481	G
2	B	491	G
2	B	504	A
2	B	505	A
2	B	508	A

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Mol	Chain	Res	Type
2	B	512	G
2	B	527	C
2	B	531	C
2	B	532	A
2	B	533	G
2	B	544	C
2	B	545	U
2	B	546	U
2	B	547	A
2	B	548	G
2	B	549	G
2	B	550	C
2	B	561	G
2	B	563	A
2	B	573	U
2	B	574	A
2	B	575	A
2	B	603	A
2	B	613	A
2	B	614	A
2	B	615	U
2	B	616	A
2	B	627	A
2	B	637	A
2	B	645	C
2	B	646	U
2	B	653	U
2	B	654	A
2	B	656	G
2	B	671	C
2	B	686	U
2	B	717	C
2	B	718	A
2	B	719	C
2	B	730	A
2	B	747	U
2	B	764	A
2	B	775	G
2	B	782	A
2	B	784	G
2	B	785	G
2	B	805	G

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Mol	Chain	Res	Type
2	B	812	C
2	B	819	A
2	B	827	U
2	B	828	U
2	B	846	U
2	B	847	U
2	B	859	G
2	B	869	G
2	B	874	G
2	B	875	G
2	B	876	C
2	B	899	A
2	B	910	A
2	B	912	C
2	B	931	U
2	B	932	U
2	B	933	A
2	B	941	A
2	B	946	C
2	B	953	G
2	B	955	U
2	B	961	C
2	B	973	A
2	B	974	G
2	B	983	A
2	B	985	C
2	B	991	C
2	B	995	C
2	B	996	A
2	B	1012	U
2	B	1013	C
2	B	1022	G
2	B	1024	G
2	B	1025	G
2	B	1033	U
2	B	1046	A
2	B	1047	G
2	B	1048	A
2	B	1070	A
2	B	1088	A
2	B	1090	A
2	B	1098	A

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Mol	Chain	Res	Type
2	B	1111	A
2	B	1112	G
2	B	1116	G
2	B	1122	G
2	B	1126	A
2	B	1132	U
2	B	1133	A
2	B	1134	A
2	B	1135	C
2	B	1136	G
2	B	1141	U
2	B	1142	A
2	B	1143	A
2	B	1157	G
2	B	1174	U
2	B	1176	U
2	B	1195	G
2	B	1204	A
2	B	1205	A
2	B	1206	G
2	B	1211	C
2	B	1212	G
2	B	1237	A
2	B	1238	G
2	B	1241	A
2	B	1242	U
2	B	1247	A
2	B	1248	G
2	B	1250	G
2	B	1253	A
2	B	1256	G
2	B	1266	G
2	B	1271	G
2	B	1272	A
2	B	1273	U
2	B	1275	A
2	B	1276	A
2	B	1301	A
2	B	1302	A
2	B	1321	A
2	B	1325	U
2	B	1337	G

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Mol	Chain	Res	Type
2	B	1341	G
2	B	1345	C
2	B	1365	A
2	B	1368	G
2	B	1379	U
2	B	1383	A
2	B	1384	A
2	B	1396	U
2	B	1397	U
2	B	1416	G
2	B	1419	A
2	B	1420	A
2	B	1426	G
2	B	1427	A
2	B	1428	C
2	B	1434	A
2	B	1451	C
2	B	1453	A
2	B	1454	C
2	B	1459	G
2	B	1461	C
2	B	1470	A
2	B	1471	G
2	B	1476	U
2	B	1477	A
2	B	1478	G
2	B	1482	G
2	B	1490	A
2	B	1493	C
2	B	1497	U
2	B	1504	A
2	B	1507	C
2	B	1508	A
2	B	1509	A
2	B	1510	G
2	B	1524	G
2	B	1535	A
2	B	1540	G
2	B	1552	A
2	B	1558	C
2	B	1559	U
2	B	1567	G

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Mol	Chain	Res	Type
2	B	1569	A
2	B	1578	U
2	B	1583	A
2	B	1584	U
2	B	1585	C
2	B	1607	C
2	B	1608	A
2	B	1610	A
2	B	1613	G
2	B	1616	A
2	B	1634	A
2	B	1635	A
2	B	1640	A
2	B	1647	U
2	B	1648	U
2	B	1674	G
2	B	1700	A
2	B	1713	A
2	B	1715	G
2	B	1716	U
2	B	1727	C
2	B	1730	C
2	B	1731	G
2	B	1733	G
2	B	1738	G
2	B	1746	A
2	B	1764	C
2	B	1772	A
2	B	1773	A
2	B	1800	C
2	B	1816	C
2	B	1829	A
2	B	1870	C
2	B	1872	A
2	B	1876	A
2	B	1884	G
2	B	1906	G
2	B	1912	A
2	B	1913	A
2	B	1914	C
2	B	1927	A
2	B	1929	G

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Mol	Chain	Res	Type
2	B	1930	G
2	B	1937	A
2	B	1938	A
2	B	1939	U
2	B	1940	U
2	B	1944	U
2	B	1955	U
2	B	1963	U
2	B	1967	C
2	B	1970	A
2	B	1971	U
2	B	1972	G
2	B	1991	U
2	B	1993	U
2	B	1997	C
2	B	2020	A
2	B	2022	U
2	B	2023	C
2	B	2031	A
2	B	2033	A
2	B	2043	C
2	B	2055	C
2	B	2056	G
2	B	2060	A
2	B	2061	G
2	B	2062	A
2	B	2069	G
2	B	2096	C
2	B	2099	U
2	B	2102	G
2	B	2106	U
2	B	2107	G
2	B	2108	A
2	B	2109	U
2	B	2110	G
2	B	2135	A
2	B	2138	G
2	B	2144	G
2	B	2147	A
2	B	2148	G
2	B	2149	U
2	B	2156	G

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Mol	Chain	Res	Type
2	B	2157	G
2	B	2180	U
2	B	2190	G
2	B	2193	G
2	B	2198	A
2	B	2203	U
2	B	2204	G
2	B	2212	A
2	B	2225	A
2	B	2238	G
2	B	2239	G
2	B	2250	G
2	B	2266	A
2	B	2268	A
2	B	2283	C
2	B	2287	A
2	B	2288	A
2	B	2297	A
2	B	2305	U
2	B	2307	G
2	B	2308	G
2	B	2311	A
2	B	2320	U
2	B	2321	U
2	B	2322	A
2	B	2325	G
2	B	2335	A
2	B	2337	G
2	B	2347	C
2	B	2361	G
2	B	2379	G
2	B	2383	G
2	B	2385	C
2	B	2396	G
2	B	2402	U
2	B	2406	A
2	B	2423	U
2	B	2425	A
2	B	2426	A
2	B	2429	G
2	B	2430	A
2	B	2434	A

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Mol	Chain	Res	Type
2	B	2441	U
2	B	2448	A
2	B	2472	G
2	B	2476	A
2	B	2491	U
2	B	2502	G
2	B	2505	G
2	B	2506	U
2	B	2518	A
2	B	2535	G
2	B	2554	U
2	B	2566	A
2	B	2567	G
2	B	2573	C
2	B	2586	U
2	B	2609	U
2	B	2613	U
2	B	2629	U
2	B	2630	G
2	B	2634	A
2	B	2646	C
2	B	2654	A
2	B	2682	A
2	B	2689	U
2	B	2690	U
2	B	2714	G
2	B	2739	U
2	B	2744	G
2	B	2748	A
2	B	2757	A
2	B	2760	C
2	B	2778	A
2	B	2791	G
2	B	2796	U
2	B	2799	A
2	B	2800	A
2	B	2801	G
2	B	2802	G
2	B	2808	G
2	B	2820	A
2	B	2821	A
2	B	2823	A

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Mol	Chain	Res	Type
2	B	2832	U
2	B	2833	U
2	B	2834	G
2	B	2836	U
2	B	2850	A
2	B	2866	U
2	B	2867	G
2	B	2872	A
2	B	2873	A
2	B	2883	A
2	B	2903	U

All (22) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	63	A
2	B	125	A
2	B	139	U
2	B	162	U
2	B	508	A
2	B	544	C
2	B	670	A
2	B	1126	A
2	B	1205	A
2	B	1210	G
2	B	1301	A
2	B	1419	A
2	B	1911	U
2	B	1943	U
2	B	2148	G
2	B	2282	G
2	B	2336	A
2	B	2425	A
2	B	2756	U
2	B	2798	U
2	B	2832	U
2	B	2894	G

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 113 ligands modelled in this entry, 112 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. 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 $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
34	LLL	B	3016	-	33,33,33	3.21	14 (42%)	49,49,49	1.55	5 (10%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
34	LLL	B	3016	-	-	0/12/65/65	0/3/3/3

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B	3016	LLL	C22-C32	9.11	1.59	1.52
34	B	3016	LLL	C22-C12	7.55	1.58	1.52
34	B	3016	LLL	O53-C53	6.05	1.52	1.43
34	B	3016	LLL	C43-C33	4.98	1.63	1.54
34	B	3016	LLL	C42-C32	4.58	1.59	1.52
34	B	3016	LLL	O53-C13	4.42	1.51	1.41
34	B	3016	LLL	C53-C43	3.78	1.56	1.52
34	B	3016	LLL	C41-C51	3.47	1.60	1.51
34	B	3016	LLL	O51-C11	3.42	1.50	1.41
34	B	3016	LLL	C23-C33	2.82	1.60	1.52
34	B	3016	LLL	C52-C42	2.70	1.60	1.52
34	B	3016	LLL	C31-C21	2.64	1.59	1.52
34	B	3016	LLL	C52-C62	2.24	1.58	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
34	B	3016	LLL	O51-C51	2.01	1.48	1.44

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	B	3016	LLL	C93-N33-C33	6.38	117.48	113.85
34	B	3016	LLL	C53-O53-C13	4.47	117.59	111.22
34	B	3016	LLL	C83-C43-C33	2.62	116.51	112.15
34	B	3016	LLL	C11-O51-C51	2.56	115.78	113.19
34	B	3016	LLL	O43-C43-C83	-2.51	102.54	108.08

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	A	117/120 (97%)	0.28	8 (6%) 17 17	36, 88, 148, 180	0
2	B	2841/2904 (97%)	0.33	234 (8%) 12 13	5, 46, 154, 180	0
3	I	141/141 (100%)	-0.41	1 (0%) 84 73	63, 162, 180, 180	0
4	C	271/272 (99%)	0.28	16 (5%) 22 20	5, 38, 99, 145	0
5	D	209/209 (100%)	0.40	12 (5%) 23 21	5, 51, 131, 180	0
6	K	121/123 (98%)	1.36	32 (26%) 1 3	5, 42, 103, 180	0
7	P	114/114 (100%)	1.05	24 (21%) 1 3	5, 52, 119, 161	0
8	E	201/201 (100%)	0.00	4 (1%) 62 48	5, 66, 138, 180	0
9	Y	58/58 (100%)	0.35	3 (5%) 26 23	10, 66, 149, 158	0
10	0	56/56 (100%)	0.11	2 (3%) 41 33	9, 54, 119, 180	0
11	4	38/38 (100%)	0.81	6 (15%) 3 5	17, 62, 132, 171	0
12	1	50/54 (92%)	0.14	2 (4%) 36 30	24, 73, 125, 155	0
13	3	64/64 (100%)	1.47	18 (28%) 1 2	6, 49, 107, 180	0
14	V	94/94 (100%)	0.65	15 (15%) 3 5	27, 94, 160, 180	0
15	2	46/46 (100%)	0.41	0 100 100	7, 43, 103, 180	0
16	L	143/144 (99%)	0.63	21 (14%) 3 5	5, 61, 128, 162	0
17	M	136/136 (100%)	0.65	13 (9%) 8 11	5, 63, 134, 171	0
18	X	63/63 (100%)	-0.13	1 (1%) 68 54	38, 94, 166, 180	0
19	H	149/149 (100%)	-0.20	2 (1%) 74 59	5, 109, 171, 180	0
20	J	142/142 (100%)	0.34	13 (9%) 9 12	5, 65, 128, 180	0
21	N	120/127 (94%)	-0.11	3 (2%) 54 43	5, 44, 116, 141	0
22	O	116/117 (99%)	0.42	11 (9%) 8 11	5, 93, 156, 180	0
23	Q	117/117 (100%)	0.22	5 (4%) 34 28	5, 50, 131, 156	0
24	S	110/110 (100%)	-0.04	1 (0%) 81 68	5, 50, 120, 157	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	U	102/103 (99%)	0.16	7 (6%) 17 17	26, 93, 154, 180	0
26	F	178/178 (100%)	0.06	7 (3%) 37 31	22, 106, 175, 180	0
27	G	176/176 (100%)	0.17	13 (7%) 14 15	32, 104, 164, 180	0
28	R	103/103 (100%)	-0.23	0 100 100	5, 85, 144, 180	0
29	T	93/100 (93%)	0.42	5 (5%) 25 22	15, 79, 167, 180	0
30	Z	77/78 (98%)	-0.10	0 100 100	5, 56, 101, 131	0
31	W	79/84 (94%)	0.46	5 (6%) 19 19	5, 79, 143, 180	0
32	6	185/185 (100%)	0.09	2 (1%) 77 63	5, 104, 180, 180	0
All	All	6510/6606 (98%)	0.30	486 (7%) 14 15	5, 59, 160, 180	0

All (486) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	B	645	C	10.7
2	B	31	C	8.4
2	B	2799	A	8.3
27	G	172	GLU	8.3
9	Y	1	ALA	8.0
2	B	1459	G	8.0
22	O	3	LYS	7.3
2	B	2547	A	7.1
26	F	178	LYS	7.0
17	M	59	ARG	7.0
1	A	88	C	6.8
2	B	2566	A	6.6
27	G	171	LYS	6.5
2	B	1490	A	6.5
2	B	2213	U	6.4
2	B	1460	U	6.3
9	Y	2	LYS	6.2
2	B	1535	A	6.0
2	B	30	G	5.9
6	K	110	GLU	5.9
2	B	2189	U	5.9
17	M	60	GLN	5.8
6	K	108	ARG	5.7
2	B	2227	A	5.7
7	P	88	ARG	5.6
2	B	952	G	5.6

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Mol	Chain	Res	Type	RSRZ
2	B	1	G	5.6
6	K	111	LYS	5.6
2	B	32	C	5.5
27	G	173	ALA	5.5
1	A	89	U	5.3
7	P	36	LYS	5.3
2	B	2797	U	5.3
2	B	2360	G	5.2
5	D	120	GLY	5.1
2	B	1027	A	5.0
2	B	1046	A	5.0
2	B	434	U	5.0
2	B	350	G	5.0
2	B	1026	G	4.9
2	B	43	G	4.7
29	T	42	GLU	4.7
7	P	33	GLU	4.7
2	B	12	U	4.7
13	3	15	LYS	4.6
2	B	1148	U	4.6
2	B	2188	U	4.5
20	J	10	THR	4.5
7	P	35	SER	4.5
4	C	169	ALA	4.5
20	J	12	LYS	4.5
2	B	331	C	4.5
2	B	1870	C	4.4
6	K	39	ILE	4.4
7	P	37	LYS	4.4
26	F	177	ARG	4.4
2	B	2463	C	4.3
2	B	242	G	4.3
2	B	282	A	4.3
2	B	433	C	4.3
2	B	953	G	4.3
2	B	446	G	4.2
2	B	1382	G	4.2
2	B	245	G	4.2
2	B	57	C	4.2
2	B	244	A	4.1
2	B	196	A	4.1
16	L	65	GLY	4.1

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Mol	Chain	Res	Type	RSRZ
6	K	25	LEU	4.1
2	B	473	G	4.1
2	B	44	A	4.0
2	B	2220	U	4.0
17	M	58	LYS	4.0
17	M	38	ARG	4.0
7	P	34	GLY	4.0
2	B	805	G	4.0
2	B	1045	C	4.0
31	W	40	ARG	3.9
14	V	82	TYR	3.9
27	G	155	PRO	3.9
9	Y	58	GLU	3.9
13	3	16	THR	3.9
13	3	63	TYR	3.9
2	B	436	C	3.9
22	O	60	GLU	3.9
2	B	243	U	3.8
2	B	474	G	3.8
2	B	9	G	3.8
17	M	1	MET	3.8
2	B	285	G	3.8
25	U	49	PRO	3.8
5	D	104	VAL	3.8
20	J	11	VAL	3.8
7	P	38	ARG	3.8
2	B	145	C	3.8
2	B	2358	A	3.8
5	D	103	ASP	3.8
4	C	260	LYS	3.8
6	K	40	LYS	3.8
26	F	115	GLY	3.8
5	D	1	MET	3.7
2	B	472	A	3.7
22	O	63	LYS	3.7
6	K	38	ILE	3.7
14	V	67	GLY	3.7
2	B	2798	U	3.7
2	B	284	U	3.7
6	K	26	GLY	3.7
22	O	2	ASP	3.7
5	D	105	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
22	O	112	GLU	3.7
2	B	2422	C	3.7
2	B	351	C	3.6
14	V	10	LYS	3.6
2	B	42	A	3.6
2	B	1859	U	3.6
14	V	69	GLU	3.6
16	L	60	ARG	3.6
2	B	2357	G	3.6
2	B	2424	C	3.6
16	L	11	GLY	3.6
2	B	349	U	3.6
22	O	61	GLN	3.6
2	B	283	G	3.6
10	0	55	ALA	3.6
2	B	2226	C	3.5
2	B	1655	A	3.5
13	3	64	ALA	3.5
12	1	34	GLU	3.5
13	3	48	MET	3.5
7	P	102	ARG	3.5
7	P	19	PHE	3.4
2	B	455	C	3.4
2	B	1381	G	3.4
2	B	2190	G	3.4
4	C	5	CYS	3.4
14	V	68	LYS	3.4
22	O	62	LEU	3.4
16	L	38	GLN	3.4
26	F	94	ARG	3.4
2	B	29	U	3.3
7	P	114	ASN	3.3
14	V	83	LYS	3.3
26	F	2	LYS	3.3
2	B	5	A	3.3
2	B	146	A	3.3
2	B	2191	A	3.3
2	B	4	U	3.3
2	B	967	U	3.3
20	J	9	GLU	3.3
7	P	41	ALA	3.3
2	B	1175	A	3.3

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Mol	Chain	Res	Type	RSRZ
6	K	30	ARG	3.3
2	B	1458	U	3.3
20	J	50	THR	3.3
2	B	1858	A	3.3
2	B	2523	G	3.3
2	B	965	C	3.3
11	4	10	LEU	3.2
13	3	20	GLY	3.2
2	B	205	G	3.2
4	C	168	GLY	3.2
6	K	109	SER	3.2
2	B	458	G	3.2
27	G	156	TYR	3.2
13	3	14	LYS	3.2
4	C	1	ALA	3.1
7	P	48	ALA	3.1
2	B	1847	A	3.1
2	B	2272	U	3.1
4	C	4	LYS	3.1
13	3	13	PHE	3.1
6	K	37	ASP	3.1
2	B	435	C	3.1
2	B	2225	A	3.1
2	B	405	U	3.1
4	C	3	VAL	3.1
2	B	56	A	3.1
27	G	153	PRO	3.1
2	B	254	G	3.1
2	B	1684	G	3.1
2	B	948	C	3.1
8	E	51	GLU	3.1
16	L	64	PHE	3.1
6	K	27	GLY	3.1
13	3	19	GLY	3.1
2	B	968	C	3.1
2	B	2197	U	3.0
2	B	2359	C	3.0
2	B	2629	U	3.0
25	U	90	LYS	3.0
1	A	86	G	3.0
14	V	65	VAL	3.0
8	E	201	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
2	B	804	A	3.0
25	U	87	GLU	3.0
2	B	54	G	3.0
2	B	949	G	3.0
2	B	286	U	3.0
2	B	2356	U	3.0
2	B	195	A	3.0
16	L	10	GLU	3.0
2	B	2630	G	3.0
2	B	251	A	3.0
6	K	34	GLY	3.0
2	B	2790	U	3.0
4	C	34	GLU	3.0
2	B	2787	C	3.0
2	B	2473	U	2.9
13	3	18	LYS	2.9
2	B	2201	G	2.9
16	L	92	LEU	2.9
17	M	28	PHE	2.9
6	K	107	LEU	2.9
6	K	29	HIS	2.9
2	B	28	A	2.9
6	K	28	SER	2.9
16	L	55	MET	2.9
6	K	105	ARG	2.9
2	B	644	A	2.9
2	B	2757	A	2.9
2	B	1119	U	2.9
7	P	61	ARG	2.9
14	V	11	GLU	2.9
2	B	1030	C	2.9
1	A	98	G	2.9
2	B	1044	C	2.9
2	B	1617	C	2.9
2	B	2563	U	2.9
13	3	60	CYS	2.9
2	B	3	U	2.8
2	B	11	C	2.8
2	B	544	C	2.8
2	B	582	A	2.8
2	B	1536	C	2.8
2	B	2585	U	2.8

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Mol	Chain	Res	Type	RSRZ
26	F	93	GLU	2.8
5	D	119	ALA	2.8
16	L	69	ARG	2.8
27	G	110	HIS	2.8
7	P	40	GLN	2.8
23	Q	4	LYS	2.8
2	B	1745	A	2.8
27	G	168	VAL	2.8
2	B	447	A	2.8
2	B	1254	A	2.8
2	B	55	G	2.8
2	B	1746	A	2.8
2	B	2147	A	2.8
6	K	21	CYS	2.8
6	K	8	LEU	2.8
27	G	176	LYS	2.8
2	B	1241	A	2.7
1	A	99	A	2.7
27	G	170	THR	2.7
2	B	2093	G	2.7
29	T	93	LEU	2.7
7	P	18	SER	2.7
20	J	13	ARG	2.7
13	3	12	ARG	2.7
2	B	1237	A	2.7
32	6	95	LYS	2.7
23	Q	19	GLN	2.7
20	J	6	ALA	2.7
5	D	17	GLU	2.7
2	B	2393	U	2.6
4	C	170	TYR	2.6
2	B	969	G	2.6
2	B	437	U	2.6
2	B	2202	U	2.6
1	A	90	C	2.6
2	B	34	U	2.6
2	B	508	A	2.6
26	F	97	GLU	2.6
6	K	3	GLN	2.6
2	B	2193	G	2.6
2	B	2228	G	2.6
16	L	52	GLY	2.6

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Mol	Chain	Res	Type	RSRZ
31	W	43	LYS	2.6
2	B	959	A	2.6
7	P	87	ARG	2.6
16	L	51	GLU	2.6
2	B	2068	U	2.6
2	B	1147	A	2.6
2	B	1434	A	2.6
11	4	4	ARG	2.6
2	B	546	U	2.6
2	B	2092	U	2.6
2	B	947	A	2.6
2	B	1615	C	2.6
4	C	229	HIS	2.6
14	V	55	GLU	2.6
2	B	1356	G	2.6
6	K	112	PHE	2.6
14	V	41	GLU	2.6
10	0	56	LYS	2.5
2	B	643	A	2.5
2	B	504	A	2.5
2	B	529	A	2.5
2	B	574	A	2.5
11	4	21	GLY	2.5
2	B	2621	G	2.5
2	B	2895	G	2.5
4	C	167	ASP	2.5
2	B	250	G	2.5
23	Q	21	LYS	2.5
20	J	51	GLY	2.5
29	T	3	ARG	2.5
21	N	119	SER	2.5
14	V	9	ARG	2.5
2	B	10	A	2.5
11	4	9	LYS	2.5
22	O	56	LYS	2.5
16	L	45	GLY	2.5
4	C	231	HIS	2.5
2	B	1253	A	2.5
6	K	24	VAL	2.5
17	M	19	GLY	2.5
2	B	2524	G	2.5
27	G	169	ARG	2.4

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Mol	Chain	Res	Type	RSRZ
2	B	958	U	2.4
2	B	2464	G	2.4
13	3	24	LYS	2.4
2	B	2703	C	2.4
20	J	7	LYS	2.4
13	3	7	ARG	2.4
4	C	204	LEU	2.4
6	K	33	ALA	2.4
21	N	120	GLU	2.4
2	B	2423	U	2.4
2	B	2609	U	2.4
27	G	174	LYS	2.4
2	B	2894	G	2.4
2	B	102	U	2.4
2	B	2194	U	2.4
2	B	2530	A	2.4
16	L	58	TYR	2.4
2	B	2896	C	2.4
19	H	18	GLN	2.4
31	W	42	THR	2.4
6	K	35	VAL	2.4
7	P	21	PRO	2.4
2	B	471	A	2.4
2	B	41	C	2.4
2	B	2206	C	2.4
25	U	86	PHE	2.4
20	J	37	ARG	2.4
14	V	40	ILE	2.4
7	P	98	TYR	2.4
4	C	12	ARG	2.4
2	B	388	G	2.4
2	B	1530	G	2.4
2	B	2487	G	2.4
5	D	190	LYS	2.4
16	L	44	GLY	2.4
16	L	57	LEU	2.4
6	K	92	GLU	2.4
2	B	1995	U	2.4
13	3	49	VAL	2.4
18	X	23	ARG	2.4
2	B	182	A	2.4
2	B	2456	C	2.3

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Mol	Chain	Res	Type	RSRZ
29	T	71	GLY	2.3
2	B	2428	G	2.3
6	K	51	LYS	2.3
2	B	456	C	2.3
19	H	7	ASP	2.3
2	B	971	G	2.3
17	M	17	ASN	2.3
2	B	806	C	2.3
20	J	44	TYR	2.3
7	P	86	LYS	2.3
17	M	34	LYS	2.3
14	V	39	ALA	2.3
13	3	9	ALA	2.3
2	B	2200	C	2.3
16	L	63	LYS	2.3
23	Q	84	LYS	2.3
2	B	2874	C	2.3
2	B	328	U	2.3
2	B	1559	U	2.3
2	B	2273	A	2.3
7	P	101	GLU	2.3
16	L	47	ARG	2.3
3	I	86	LYS	2.3
1	A	100	G	2.3
2	B	1325	U	2.3
16	L	12	SER	2.3
2	B	1134	A	2.3
2	B	1728	C	2.3
5	D	83	ARG	2.3
7	P	23	ASP	2.3
2	B	2	G	2.3
2	B	1451	C	2.3
2	B	2800	A	2.2
32	6	152	ASP	2.2
5	D	128	ARG	2.2
2	B	2897	U	2.2
6	K	104	THR	2.2
16	L	118	THR	2.2
6	K	7	MET	2.2
2	B	825	A	2.2
2	B	981	A	2.2
2	B	2794	C	2.2

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Mol	Chain	Res	Type	RSRZ
4	C	2	VAL	2.2
13	3	23	HIS	2.2
25	U	25	LYS	2.2
2	B	2764	A	2.2
27	G	167	VAL	2.2
6	K	90	ASN	2.2
14	V	1	MET	2.2
1	A	87	U	2.2
7	P	105	LYS	2.2
11	4	20	ASP	2.2
2	B	2219	U	2.2
31	W	14	ASP	2.2
2	B	1043	C	2.2
20	J	1	MET	2.2
2	B	1339	G	2.2
2	B	181	A	2.2
2	B	1683	U	2.2
21	N	118	ARG	2.2
2	B	2667	C	2.2
7	P	26	GLU	2.2
2	B	512	G	2.2
2	B	549	G	2.2
2	B	2561	U	2.2
17	M	57	VAL	2.2
17	M	16	ARG	2.2
2	B	172	A	2.2
2	B	193	U	2.2
8	E	56	GLY	2.2
2	B	359	G	2.2
2	B	1271	G	2.2
2	B	1876	A	2.2
2	B	357	C	2.1
5	D	180	VAL	2.1
24	S	26	GLY	2.1
20	J	8	PRO	2.1
2	B	2392	A	2.1
25	U	28	LEU	2.1
7	P	47	ILE	2.1
17	M	20	LEU	2.1
11	4	5	ALA	2.1
2	B	1435	G	2.1
2	B	2196	C	2.1

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Mol	Chain	Res	Type	RSRZ
2	B	2486	C	2.1
14	V	64	VAL	2.1
31	W	45	HIS	2.1
16	L	67	THR	2.1
2	B	52	A	2.1
2	B	7	G	2.1
2	B	194	G	2.1
6	K	46	ALA	2.1
13	3	17	GLY	2.1
2	B	183	C	2.1
2	B	1352	U	2.1
2	B	794	A	2.1
29	T	38	ALA	2.1
2	B	2788	C	2.1
2	B	453	A	2.1
2	B	2531	A	2.1
22	O	59	ALA	2.1
2	B	2666	C	2.1
22	O	57	ALA	2.1
2	B	2207	C	2.1
2	B	2394	C	2.1
6	K	18	ARG	2.1
23	Q	102	LYS	2.0
2	B	2223	G	2.0
2	B	2013	A	2.0
12	1	49	LYS	2.0
8	E	53	THR	2.0
2	B	489	G	2.0
2	B	2481	G	2.0
2	B	1340	U	2.0
2	B	2474	U	2.0
5	D	166	GLY	2.0
22	O	21	LEU	2.0
2	B	2562	U	2.0
2	B	2728	U	2.0
25	U	50	ALA	2.0
17	M	29	GLY	2.0
6	K	56	ASP	2.0
16	L	54	GLN	2.0
4	C	132	ARG	2.0

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

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
33	MG	B	3010	1/1	0.64	23.32	64,64,64,64	0
33	MG	B	2939	1/1	2.40	11.54	75,75,75,75	0
34	LLL	B	3016	31/31	0.26	8.23	121,121,121,121	0
33	MG	B	2938	1/1	0.37	6.65	69,69,69,69	0
33	MG	B	2964	1/1	0.15	6.60	104,104,104,104	0
33	MG	B	2999	1/1	0.32	5.46	88,88,88,88	0
33	MG	B	2952	1/1	0.44	4.77	34,34,34,34	0
33	MG	B	2994	1/1	1.84	4.58	64,64,64,64	0
33	MG	B	2956	1/1	0.79	4.19	113,113,113,113	0
33	MG	B	2932	1/1	0.83	3.98	58,58,58,58	0
33	MG	B	3005	1/1	0.31	3.06	25,25,25,25	0
33	MG	B	2981	1/1	0.16	1.88	15,15,15,15	0
33	MG	B	2983	1/1	0.20	1.33	34,34,34,34	0
33	MG	B	2930	1/1	0.28	1.14	54,54,54,54	0
33	MG	B	2923	1/1	0.26	0.98	5,5,5,5	0
33	MG	B	2936	1/1	0.28	0.97	51,51,51,51	0
33	MG	B	3000	1/1	0.19	0.93	20,20,20,20	0
33	MG	B	2963	1/1	0.20	0.79	166,166,166,166	0
33	MG	B	2984	1/1	0.28	0.63	5,5,5,5	0
33	MG	B	2974	1/1	0.38	0.60	38,38,38,38	0
33	MG	B	3011	1/1	0.35	0.51	11,11,11,11	0
33	MG	B	2926	1/1	0.15	0.46	71,71,71,71	0
33	MG	B	3003	1/1	0.25	0.00	5,5,5,5	0
33	MG	B	2927	1/1	0.18	0.00	17,17,17,17	0
33	MG	B	2980	1/1	0.17	-0.06	104,104,104,104	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
33	MG	B	2933	1/1	0.26	-0.09	59,59,59,59	0
33	MG	B	2973	1/1	0.28	-0.17	14,14,14,14	0
33	MG	B	2965	1/1	0.18	-0.22	69,69,69,69	0
33	MG	B	2946	1/1	0.15	-0.26	23,23,23,23	0
33	MG	B	2961	1/1	0.14	-0.28	77,77,77,77	0
33	MG	B	2996	1/1	0.19	-0.37	56,56,56,56	0
33	MG	B	2948	1/1	0.25	-0.49	21,21,21,21	0
33	MG	B	2998	1/1	0.20	-0.52	55,55,55,55	0
33	MG	B	3004	1/1	0.16	-0.60	46,46,46,46	0
33	MG	B	2982	1/1	0.15	-0.64	32,32,32,32	0
33	MG	B	3015	1/1	0.17	-0.69	32,32,32,32	0
33	MG	B	2918	1/1	0.16	-0.77	43,43,43,43	0
33	MG	B	2960	1/1	0.21	-0.91	12,12,12,12	0
33	MG	B	2977	1/1	0.22	-0.92	67,67,67,67	0
33	MG	B	2979	1/1	0.15	-0.94	35,35,35,35	0
33	MG	B	2922	1/1	0.20	-0.94	22,22,22,22	0
33	MG	B	3007	1/1	0.21	-1.00	42,42,42,42	0
33	MG	B	3008	1/1	0.24	-1.00	71,71,71,71	0
33	MG	B	2976	1/1	0.26	-1.01	54,54,54,54	0
33	MG	B	2931	1/1	0.17	-1.03	28,28,28,28	0
33	MG	B	3014	1/1	0.13	-1.10	38,38,38,38	0
33	MG	B	2920	1/1	0.30	-1.12	25,25,25,25	0
33	MG	B	3006	1/1	0.18	-1.16	22,22,22,22	0
33	MG	B	2972	1/1	0.18	-1.25	22,22,22,22	0
33	MG	B	2907	1/1	0.16	-1.30	33,33,33,33	0
33	MG	B	2988	1/1	0.13	-1.31	16,16,16,16	0
33	MG	B	2928	1/1	0.12	-1.33	45,45,45,45	0
33	MG	B	2905	1/1	0.13	-1.33	6,6,6,6	0
33	MG	B	2910	1/1	0.14	-1.38	15,15,15,15	0
33	MG	B	2957	1/1	0.16	-1.39	80,80,80,80	0
33	MG	B	2969	1/1	0.21	-1.44	45,45,45,45	0
33	MG	B	2959	1/1	0.18	-1.47	41,41,41,41	0
33	MG	B	2985	1/1	0.25	-1.47	19,19,19,19	0
33	MG	B	2942	1/1	0.11	-1.47	37,37,37,37	0
35	ZN	4	624	1/1	0.06	-1.48	45,45,45,45	0
33	MG	B	2911	1/1	0.11	-1.53	13,13,13,13	0
33	MG	B	2908	1/1	0.13	-1.53	69,69,69,69	0
33	MG	B	2919	1/1	0.13	-1.60	24,24,24,24	0
33	MG	B	2945	1/1	0.20	-1.62	34,34,34,34	0
33	MG	B	2986	1/1	0.10	-1.77	57,57,57,57	0
33	MG	B	2950	1/1	0.09	-1.79	11,11,11,11	0
33	MG	B	2925	1/1	0.09	-1.81	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
33	MG	B	2914	1/1	0.17	-1.86	16,16,16,16	0
33	MG	B	2987	1/1	0.16	-1.87	83,83,83,83	0
33	MG	B	2967	1/1	0.13	-1.88	19,19,19,19	0
33	MG	B	2929	1/1	0.13	-2.03	42,42,42,42	0
33	MG	B	2913	1/1	0.09	-2.04	18,18,18,18	0
33	MG	B	2943	1/1	0.09	-2.12	69,69,69,69	0
33	MG	B	2997	1/1	0.12	-2.20	10,10,10,10	0
33	MG	B	2944	1/1	0.09	-2.25	18,18,18,18	0
33	MG	B	2968	1/1	0.12	-2.28	19,19,19,19	0
33	MG	B	2937	1/1	0.07	-2.30	43,43,43,43	0
33	MG	B	2955	1/1	0.04	-2.35	32,32,32,32	0
33	MG	B	3002	1/1	0.10	-2.36	28,28,28,28	0
33	MG	B	2916	1/1	0.15	-2.36	12,12,12,12	0
33	MG	B	2906	1/1	0.07	-2.42	6,6,6,6	0
33	MG	B	2975	1/1	0.21	-2.46	37,37,37,37	0
33	MG	B	2993	1/1	0.07	-2.52	61,61,61,61	0
33	MG	B	2954	1/1	0.07	-2.54	123,123,123,123	0
33	MG	B	2962	1/1	0.16	-2.58	162,162,162,162	0
33	MG	B	2917	1/1	0.16	-2.75	41,41,41,41	0
33	MG	B	2991	1/1	0.10	-2.80	75,75,75,75	0
33	MG	B	2978	1/1	0.15	-2.82	17,17,17,17	0
33	MG	B	2947	1/1	0.10	-2.90	32,32,32,32	0
33	MG	B	3001	1/1	0.11	-2.91	64,64,64,64	0
33	MG	B	2951	1/1	0.22	-2.97	19,19,19,19	0
33	MG	B	2934	1/1	0.14	-3.06	10,10,10,10	0
33	MG	B	2971	1/1	0.16	-3.12	16,16,16,16	0
33	MG	B	2989	1/1	0.08	-3.14	49,49,49,49	0
33	MG	B	2940	1/1	0.08	-3.23	20,20,20,20	0
33	MG	B	2992	1/1	0.09	-3.40	46,46,46,46	0
33	MG	B	2909	1/1	0.12	-3.50	45,45,45,45	0
33	MG	B	3013	1/1	0.07	-3.64	83,83,83,83	0
33	MG	B	2921	1/1	0.07	-3.81	5,5,5,5	0
33	MG	B	2941	1/1	0.07	-3.83	54,54,54,54	0
33	MG	B	3009	1/1	0.17	-3.89	30,30,30,30	0
33	MG	B	2924	1/1	0.10	-3.97	13,13,13,13	0
33	MG	B	2958	1/1	0.07	-4.03	29,29,29,29	0
33	MG	B	2953	1/1	0.07	-4.11	9,9,9,9	0
33	MG	B	2949	1/1	0.11	-4.14	68,68,68,68	0
33	MG	B	2995	1/1	0.08	-4.43	5,5,5,5	0
33	MG	B	2915	1/1	0.09	-5.06	33,33,33,33	0
33	MG	B	3012	1/1	0.09	-5.33	5,5,5,5	0
33	MG	B	2935	1/1	0.17	-5.53	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
33	MG	B	2966	1/1	0.07	-6.77	67,67,67,67	0
33	MG	B	2990	1/1	0.07	-9.09	52,52,52,52	0
33	MG	B	2912	1/1	0.08	-15.96	17,17,17,17	0
33	MG	B	2970	1/1	0.59	-	158,158,158,158	0

6.5 Other polymers ⓘ

There are no such residues in this entry.