



Full wwPDB X-ray Structure Validation Report

Mar 31, 2014 – 05:36 PM BST

PDB ID : 2I2P
Title : Crystal Structure of Ribosome with messenger RNA and the Anticodon stem-loop of P-site tRNA. This file contains the 30s subunit of one 70s ribosome. The entire crystal structure contains two 70s ribosomes and is described in remark 400.
Authors : Berk, V.; Zhang, W.; Pai, R.D.; Cate, J.H.D.
Deposited on : 2006-08-16
Resolution : 3.22 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>

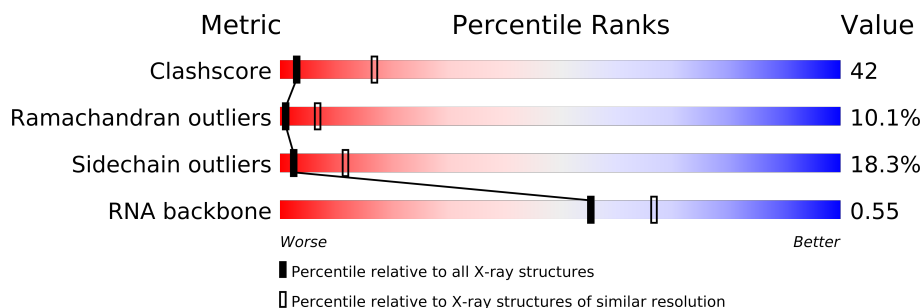
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.15 2013
Xtriage (Phenix) : dev-1323
EDS : **NOT EXECUTED**
Percentile statistics : 21963
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : stable23004

1 Overall quality at a glance

The reported resolution of this entry is 3.22 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1072 (3.28-3.16)
Ramachandran outliers	78287	1052 (3.28-3.16)
Sidechain outliers	78261	1051 (3.28-3.16)
RNA backbone	1838	1004 (3.74-2.70)

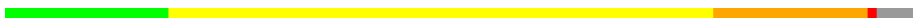
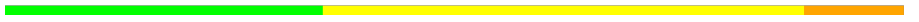
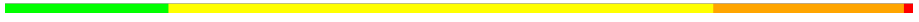

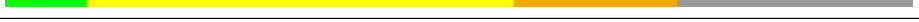



The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. The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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1542	
2	W	17	
3	X	6	
4	B	240	
5	C	232	
6	D	205	
7	E	166	
8	F	135	
9	G	178	
10	H	129	
11	I	129	
12	J	103	
13	K	128	
14	L	123	
15	M	117	

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Mol	Chain	Length	Quality of chain
16	N	100	
17	O	88	
18	P	82	
19	Q	83	
20	R	74	
21	S	91	
22	T	86	
23	U	70	

2 Entry composition

There are 25 unique types of molecules in this entry. The entry contains 52224 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 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 2 is a RNA chain called PHE TRNA (UNMODIFIED BASES).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	W	17	Total	C	N	O	P	0	0	0
			360	161	64	118	17			

- Molecule 3 is a RNA chain called MRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	X	6	Total	C	N	O	P	0	0	0
			125	56	18	45	6			

- Molecule 4 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	B	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- Molecule 5 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	C	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

- Molecule 6 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	D	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 7 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	E	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 8 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	F	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 9 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	G	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			

- Molecule 10 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	H	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 11 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	I	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 12 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	J	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 13 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	K	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 14 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	L	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 15 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	M	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			

- Molecule 16 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	N	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

- Molecule 17 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	O	88	Total	C	N	O	S	0	0	0
			716	440	146	129	1			

- Molecule 18 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	P	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

- Molecule 19 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	Q	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			

- Molecule 20 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
20	R	55	Total	C	N	O	0	0	0
			455	288	86	81			

- Molecule 21 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	S	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			

- Molecule 22 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	T	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 23 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	U	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 24 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
24	X	2	Total	Mg	0	0
			2	2		
24	A	60	Total	Mg	0	0
			60	60		

- Molecule 25 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
25	A	295	Total	O	0	0
			295	295		
25	E	1	Total	O	0	0
			1	1		
25	K	2	Total	O	0	0
			2	2		
25	N	1	Total	O	0	0
			1	1		
25	X	9	Total	O	0	0
			9	9		

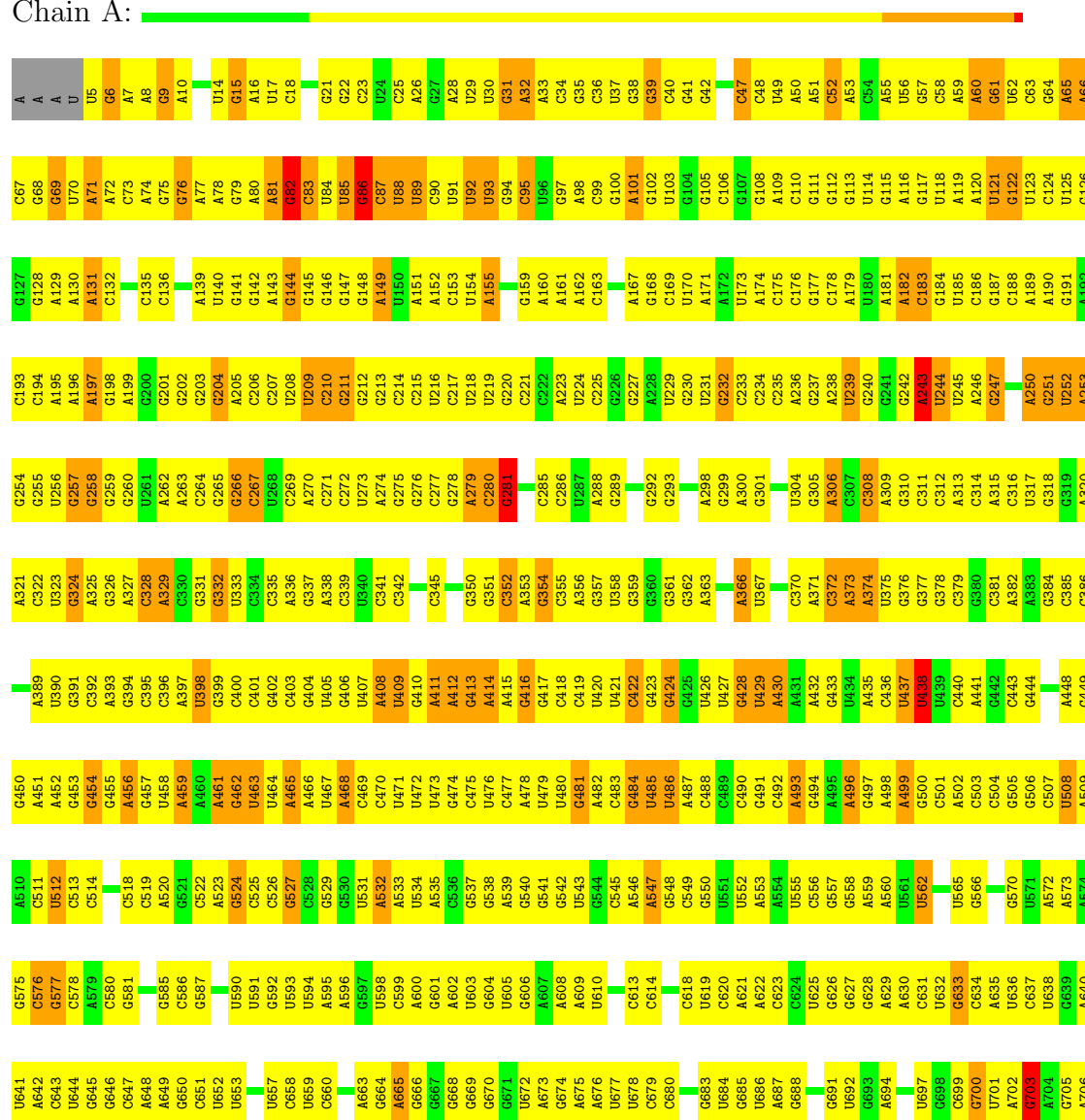
3 Residue-property plots

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

Note EDS was not executed.

• Molecule 1: 16S ribosomal RNA

Chain A:



G1487	G1488	G1489	G1490	A1493	A1494	U1495	U1496	G1497	U1498	A1499	A1500	A1503	G1504	G1505	U1506	A1507	A1508	U1509	G1510	G1511	U1512	A1513	G1514	G1515	G1516	U1517	U1518	A1519	G1520	C1521	U1522	G1523	G1524	G1525	G1526	U1527	U1528	G1529	G1530	C1533	A1534	C	C	U	C	C	U	A																
G1416	G1417	A1418	G1419	G1422	G1423	G1426	G1427	G1428	G1432	A1433	A1434	U1435	U1436	A1437	G1438	G1439	U1440	A1441	A1446	A1447	C1448	G1449	U1450	U1451	U1452	U1453	U1454	U1455	U1456	U1457	U1458	U1459	U1460	U1461	U1462	U1463	U1464	U1465	U1466	A1467	A1468	U1471	U1472	U1473	U1474	U1477	U1478	C1479	A1480	U1481	G1482	G1486												
U1345	A1346	G1347	U1348	A1349	A1350	U1351	C1352	G1353	U1354	G1355	G1356	U1357	U1358	C1359	A1360	G1361	A1362	A1363	U1364	C1367	A1368	C1369	G1370	G1371	U1372	G1373	A1374	A1375	U1376	A1377	U1380	U1381	C1382	C1383	G1386	G1387	C1388	C1389	U1390	U1391	G1392	A1398	C1399	C1400	G1401	C1402	C1403	C1409	A1410	C1411	C1412	A1413	U1414	G1415										
A1285	U1286	A1287	A1288	A1289	G1290	U1291	G1292	G1293	G1294	U1295	G1296	G1297	U1298	A1299	G1300	U1301	C1302	G1303	G1304	G1305	A1306	U1307	U1308	G1309	G1310	A1311	U1312	G1313	C1314	U1315	G1316	C1317	A1318	A1319	C1320	U1321	C1322	G1323	A1324	G1325	U1326	C1327	C1328	A1329	U1330	A1331	A1332	A1333	G1334	U1335	C1336	G1337	G1338	A1339	C1340	G1341	G1342	U1343	U1344					
U1224	A1225	C1226	A1227	C1228	A1229	C1230	G1231	U1232	G1233	C1234	U1235	A1236	C1237	A1238	C1239	U1240	G1241	G1242	C1243	G1244	C1245	A1246	U1247	A1248	C1249	A1250	A1251	A1252	G1253	A1254	U1255	A1256	G1257	A1258	C1259	G1260	A1261	C1262	C1263	U1264	C1265	G1268	A1269	G1270	A1271	G1272	C1273	A1274	G1275	G1276	G1277	G1278	G1279	A1280	C1281	C1282	U1283	C1284						
C1161	C1162	A1163	G1164	U1165	G1166	C1167	U1168	A1169	A1170	A1171	C1172	U1173	G1174	G1175	A1176	G1177	G1178	C1179	A1180	G1181	U1182	U1183	G1184	A1188	U1189	G1190	A1191	A1192	G1193	U1194	C1195	A1196	A1197	G1198	U1199	C1200	A1201	U1202	C1203	A1204	U1205	G1206	C1207	A1208	G1209	C1210	U1211	U1212	A1213	C1214	G1215	A1216	G1217	C1218	A1219	G1222	C1223							
A1101	A1102	C1103	G1104	A1105	G1106	C1107	G1108	C1109	A1110	A1111	C1112	C1113	C1114	U1115	U1116	A1117	U1118	C1119	C1120	U1121	G1182	U1123	G1124	U1125	U1126	U1127	C1128	G1064	A1191	U1065	A1130	G1131	C1132	G1133	U1134	U1135	U1136	C1137	G1138	U1075	G1139	U1076	A1140	A1141	C1142	G1143	U1144	A1145	A1146	C1147	U1148	C1149	A1150	A1151	A1152	G1153	C1154	U1155	A1156	A1157	C1158	U1159	G1160	
C1037	C1038	G1039	U1040	G1041	A1042	G1043	A1044	C1045	A1046	U986	G987	G988	U989	C990	C991	U992	G993	A994	C995	A996	G997	C998	A999	A1000	G1001	C1002	G1003	A1004	U1005	G1006	U1007	U1008	U1070	C1071	U1010	C1011	C1012	A1013	U950	G951	C952	G953	U954	C955	U956	U957	A958	A959	U960	C961	G966	C967	A968	U969	C970	A901	G1031	C971	C972	G973	A974	U905	A906	C912
A913	A914	A915	U916	G917	U918	A919	U920	A945	U921	G922	A923	C924	G925	A926	G927	U928	A929	C930	C931	C932	G933	A934	A935	G936	A937	A938	G939	C940	G941	G942	G945	A946	G947	C948	A949	G977	U950	G951	C980	C981	C982	U884	G885	A886	U890	C891	A892	C893	G894	C897	A988	U909	A1092	C1026	C1027	U1028	A909	C970	G1031	C1032	G1033	A1034	A1035	A1036
U837	G838	C839	C840	C841	U842	U843	U844	A845	G846	G847	C848	G849	C853	U854	U855	C856	C857	G858	C859	G860	C861	A864	A865	C866	G869	A872	A873	G874	U875	C876	A877	U878	C879	U884	C880	C881	C882	U884	G885	A886	U890	C891	A892	C893	G894	C897	A988	U909	A1092	C1026	C1027	U1028	A909	C970	G1031	C1032	G1033	A1034	A1035	A1036				
U772	G775	G776	A777	G778	C779	A780	G781	A782	A784	A787	U788	G791	A792	U793	A794	C795	G796	C797	U798	A802	G803	U804	C805	C737	C738	C739	U807	C808	G809	C810	C811	G812	U813	A814	A815	C817	U820	G821	U822	C823	A825	C826	U827	U828	G829	G830	A831	G832	G833	U834	U835	G836												
U707	C708	U709	G710	G711	A712	G713	G714	A715	A716	U717	A718	G721	U722	G723	G724	G725	C726	G727	G730	G731	C732	G733	G734	C735	C736	C737	C738	C739	U740	G741	G742	A743	C744	G745	A746	A747	G748	U751	G752	A753	C754	G755	A759	G760	G761	U762	U763	C764	G765	A766	A767	A768	G769	C770	G771									

• Molecule 2: PHE TRNA (UNMODIFIED BASES)

Chain W: 

U27	C28	G29	A37	A38	C39	C40	C41	C42	A43
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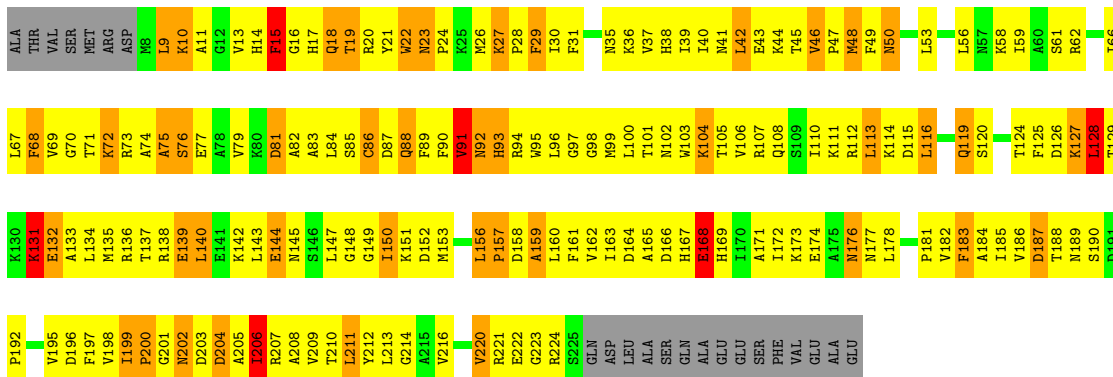
• Molecule 3: MRNA

Chain X: 



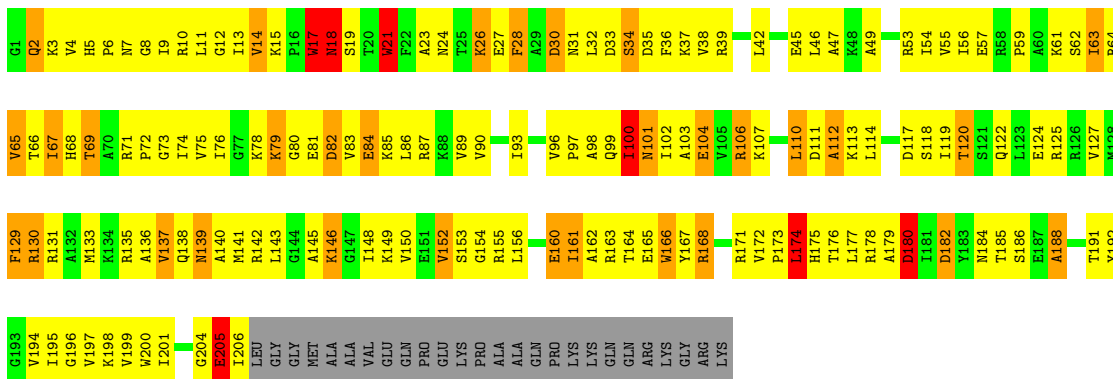
- Molecule 4: 30S ribosomal protein S2

Chain B:



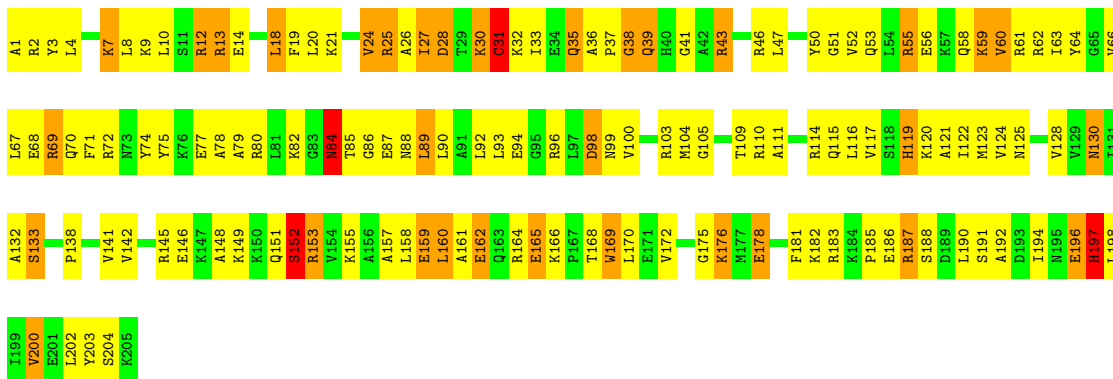
- Molecule 5: 30S ribosomal protein S3

Chain C:



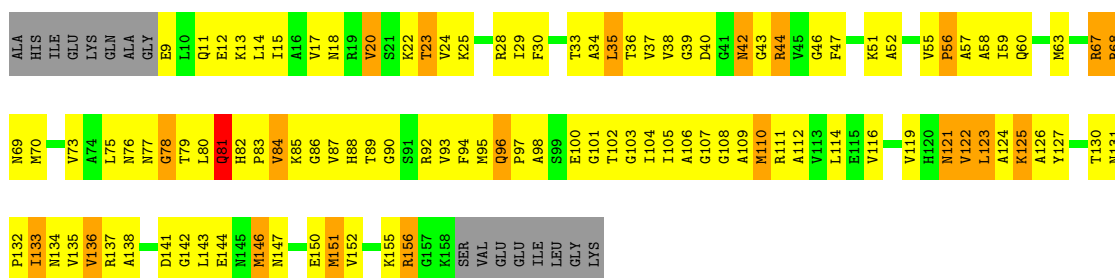
- Molecule 6: 30S ribosomal protein S4

Chain D:



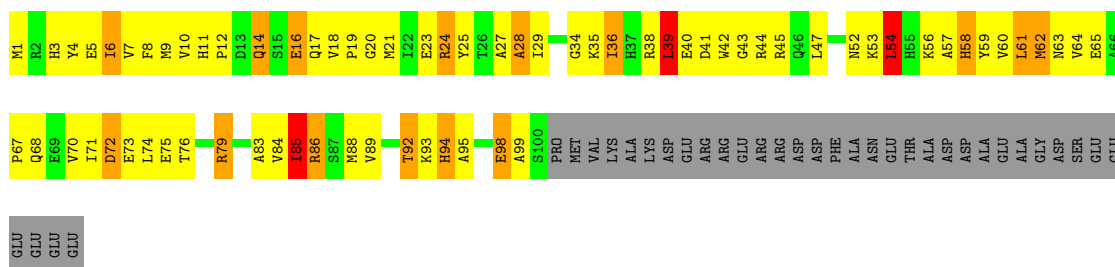
- Molecule 7: 30S ribosomal protein S5

Chain E:



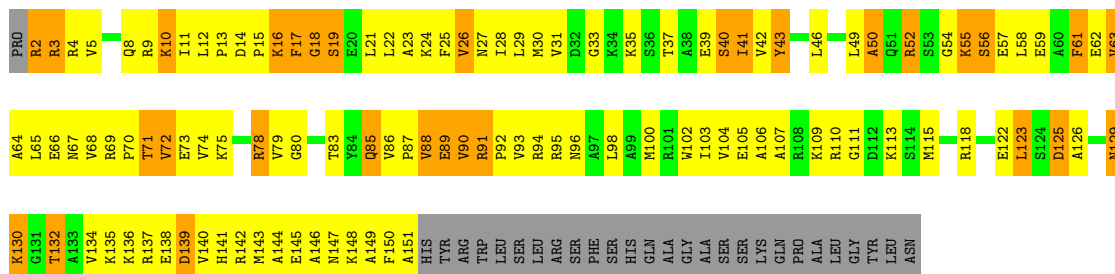
- Molecule 8: 30S ribosomal protein S6

Chain F:



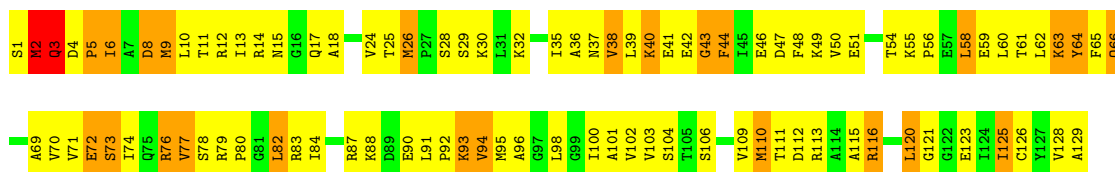
- Molecule 9: 30S ribosomal protein S7

Chain G:



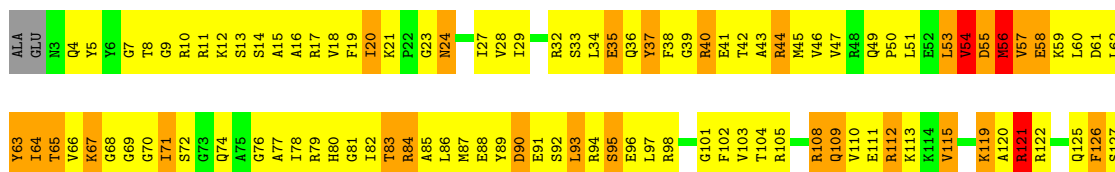
- Molecule 10: 30S ribosomal protein S8

Chain H:



- Molecule 11: 30S ribosomal protein S9

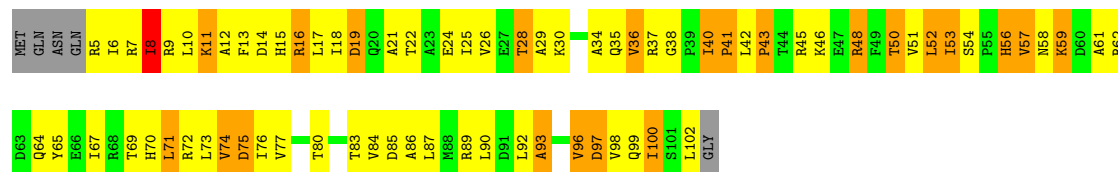
Chain I:



K128
R129

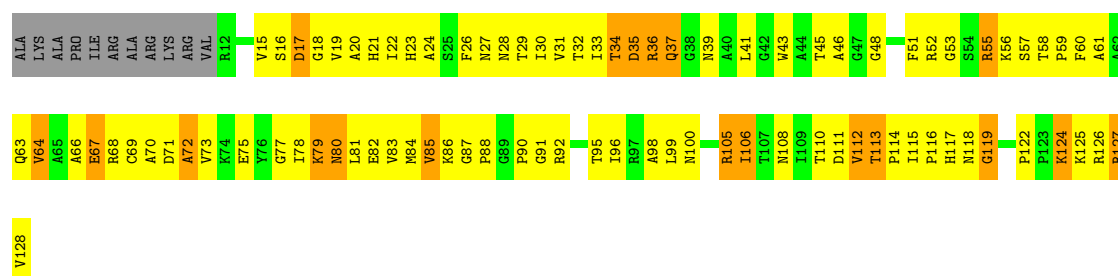
- Molecule 12: 30S ribosomal protein S10

Chain J:



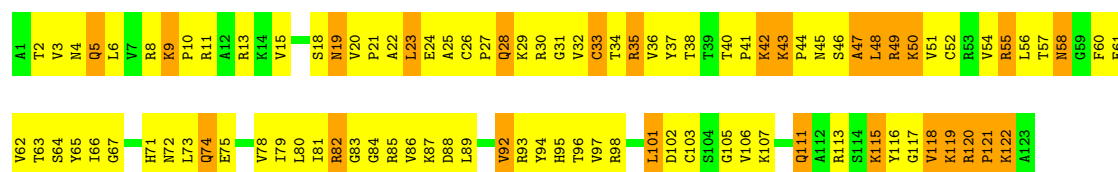
- Molecule 13: 30S ribosomal protein S11

Chain K:



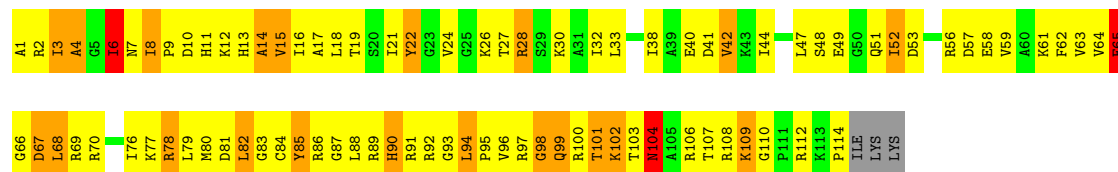
- Molecule 14: 30S ribosomal protein S12

Chain L:



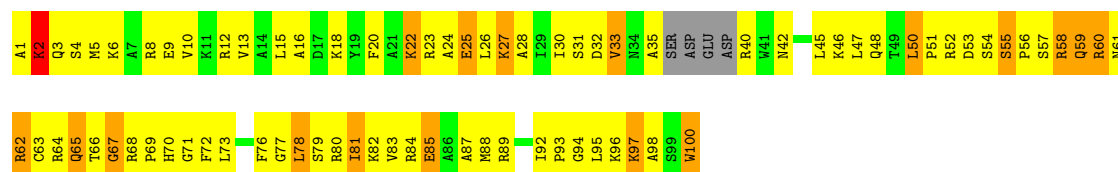
- Molecule 15: 30S ribosomal protein S13

Chain M:



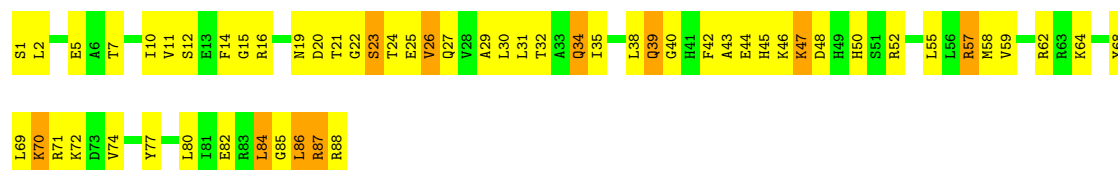
- Molecule 16: 30S ribosomal protein S14

Chain N:



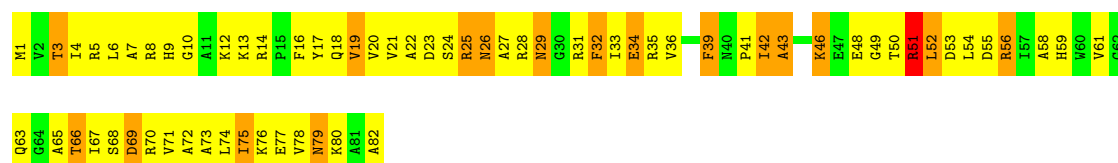
- Molecule 17: 30S ribosomal protein S15

Chain O: 



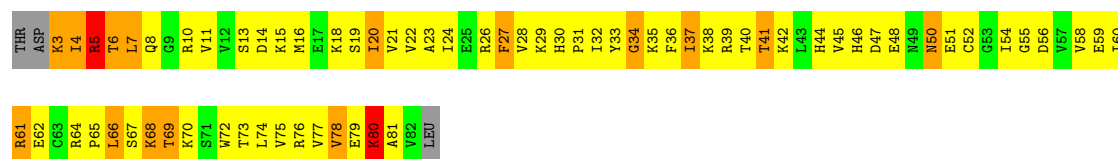
- Molecule 18: 30S ribosomal protein S16

Chain P: 



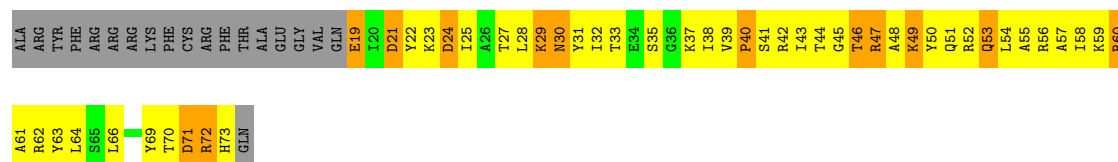
- Molecule 19: 30S ribosomal protein S17

Chain Q: 



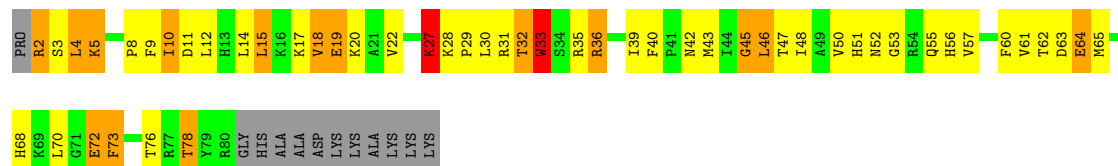
- Molecule 20: 30S ribosomal protein S18

Chain R: 



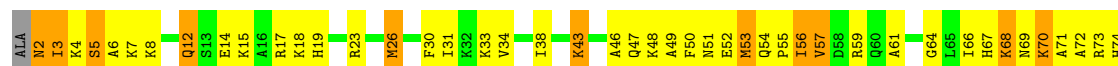
- Molecule 21: 30S ribosomal protein S19

Chain S: 



- Molecule 22: 30S ribosomal protein S20

Chain T: 





● Molecule 23: 30S ribosomal protein S21

Chain U:



4 Data and refinement statistics

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

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.78Å 395.22Å 744.38Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 3.22	Depositor
% Data completeness (in resolution range)	(Not available) (70.00-3.22)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	2.11 (at 3.19Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.287 , 0.320	Depositor
Wilson B-factor (Å ²)	80.0	Xtriage
Anisotropy	0.720	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	1 of 753156 reflections (0.000%)	Xtriage
Total number of atoms	52224	wwPDB-VP
Average B, all atoms (Å ²)	105.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.47% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.25	0/36762	0.74	11/57350 (0.0%)
2	W	0.32	0/401	0.75	0/622
3	X	0.48	0/138	0.88	0/212
4	B	0.25	0/1735	0.44	0/2338
5	C	0.23	0/1651	0.44	0/2225
6	D	0.23	0/1665	0.44	0/2227
7	E	0.23	0/1118	0.45	0/1504
8	F	0.24	0/835	0.44	0/1128
9	G	0.23	0/1187	0.43	0/1591
10	H	0.23	0/989	0.47	0/1326
11	I	0.24	0/1034	0.45	0/1375
12	J	0.22	0/796	0.47	0/1077
13	K	0.24	0/893	0.46	0/1205
14	L	0.22	0/969	0.46	0/1300
15	M	0.21	0/892	0.46	0/1193
16	N	0.24	0/785	0.43	0/1043
17	O	0.23	0/724	0.44	0/966
18	P	0.25	0/659	0.45	0/884
19	Q	0.23	0/657	0.46	0/881
20	R	0.23	0/462	0.45	0/621
21	S	0.25	0/652	0.43	0/877
22	T	0.23	0/671	0.42	0/888
23	U	0.26	0/430	0.45	0/570
All	All	0.25	0/56105	0.66	11/83403 (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
1	A	0	16

There are no bond length outliers.

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1499	A	C5'-C4'-O4'	-7.73	99.83	109.10
1	A	438	U	N1-C1'-C2'	-7.04	104.25	112.00
1	A	243	A	C2'-C3'-O3'	6.78	124.55	113.70
1	A	86	G	N9-C1'-C2'	6.76	122.79	114.00
1	A	1454	G	C5'-C4'-C3'	-6.71	105.27	116.00
1	A	765	G	N9-C1'-C2'	-6.66	104.67	112.00
1	A	232	G	C5'-C4'-C3'	-5.46	107.27	116.00
1	A	814	A	C5'-C4'-C3'	5.42	124.67	116.00
1	A	281	G	N9-C1'-C2'	-5.32	106.14	112.00
1	A	83	C	O4'-C1'-N1	5.28	112.42	108.20
1	A	1043	G	N9-C1'-C2'	5.11	120.65	114.00

There are no chirality outliers.

All (16) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1043	G	Sidechain
1	A	1048	G	Sidechain
1	A	1057	G	Sidechain
1	A	1133	G	Sidechain
1	A	1244	G	Sidechain
1	A	1319	A	Sidechain
1	A	1441	A	Sidechain
1	A	187	G	Sidechain
1	A	281	G	Sidechain
1	A	324	G	Sidechain
1	A	437	U	Sidechain
1	A	438	U	Sidechain
1	A	454	G	Sidechain
1	A	496	A	Sidechain
1	A	703	G	Sidechain
1	A	82	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	32831	0	16521	1472	0
2	W	360	0	185	9	0
3	X	125	0	63	6	0
4	B	1704	0	1732	269	0
5	C	1624	0	1699	212	0
6	D	1643	0	1710	195	0
7	E	1105	0	1148	159	0
8	F	817	0	808	88	0
9	G	1174	0	1230	146	0
10	H	979	0	1034	120	0
11	I	1022	0	1070	188	0
12	J	786	0	828	125	0
13	K	877	0	887	117	0
14	L	955	0	1019	139	0
15	M	883	0	944	127	0
16	N	774	0	827	128	0
17	O	716	0	742	60	0
18	P	649	0	666	101	0
19	Q	648	0	691	97	0
20	R	455	0	478	76	0
21	S	637	0	665	83	0
22	T	665	0	714	57	0
23	U	425	0	449	77	0
24	A	60	0	0	0	0
24	X	2	0	0	0	0
25	A	295	0	0	5	0
25	E	1	0	0	0	0
25	K	2	0	0	0	0
25	N	1	0	0	0	0
25	X	9	0	0	1	0
All	All	52224	0	36110	3706	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 42.

All (3706) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:11:ARG:HH21	11:I:76:GLY:HA3	1.17	1.09
15:M:106:ARG:HE	15:M:112:ARG:HB3	1.20	1.02
8:F:3:HIS:HB2	8:F:92:THR:HA	1.39	1.02
15:M:92:ARG:HD3	15:M:94:LEU:HD11	1.43	1.01
11:I:33:SER:H	11:I:36:GLN:HE21	1.08	1.00
5:C:71:ARG:HH22	5:C:73:GLY:HA3	1.24	1.00
4:B:19:THR:HA	4:B:37:VAL:HA	1.41	1.00
19:Q:59:GLU:HG3	19:Q:76:ARG:HE	1.27	0.99
21:S:61:VAL:HG13	21:S:65:MET:HB2	1.41	0.99
20:R:72:ARG:H	20:R:72:ARG:HH11	1.04	0.99
1:A:842:U:H3'	1:A:843:U:H4'	1.39	0.99
21:S:30:LEU:HB2	21:S:48:ILE:HG22	1.44	0.99
11:I:113:LYS:HA	11:I:120:ALA:HB2	1.41	0.98
4:B:40:ILE:HD13	4:B:200:PRO:HB2	1.47	0.97
4:B:163:ILE:HG23	4:B:164:ASP:H	1.29	0.96
10:H:54:THR:HG23	10:H:55:LYS:HG2	1.48	0.96
9:G:64:ALA:HB1	9:G:126:ALA:HB3	1.44	0.96
5:C:67:ILE:HB	5:C:102:ILE:HG22	1.49	0.95
4:B:90:PHE:H	4:B:149:GLY:HA3	1.29	0.94
21:S:62:THR:H	21:S:65:MET:HE3	1.33	0.94
7:E:46:GLY:HA3	7:E:70:MET:HG2	1.49	0.94
8:F:42:TRP:HB2	8:F:59:TYR:HB2	1.49	0.94
15:M:44:ILE:HA	15:M:47:LEU:HD13	1.50	0.94
13:K:110:THR:HG22	23:U:4:LYS:HA	1.48	0.94
19:Q:58:VAL:HG12	19:Q:77:VAL:HA	1.50	0.93
18:P:51:ARG:HD3	18:P:52:LEU:H	1.31	0.93
13:K:22:ILE:HG21	13:K:95:THR:HG21	1.46	0.93
5:C:63:ILE:HG12	5:C:98:ALA:HB1	1.51	0.92
4:B:46:VAL:HG13	4:B:47:PRO:HD3	1.52	0.92
9:G:66:GLU:HA	9:G:69:ARG:HE	1.34	0.91
5:C:120:THR:HB	5:C:188:ALA:HB2	1.53	0.91
1:A:1081:A:H5'	7:E:22:LYS:HD3	1.51	0.91
5:C:155:ARG:H	5:C:162:ALA:HA	1.36	0.91
15:M:64:VAL:HA	15:M:68:LEU:HD12	1.50	0.91
1:A:522:C:H41	14:L:49:ARG:NH2	1.68	0.91
1:A:1367:C:H5''	11:I:115:VAL:HG23	1.53	0.90
1:A:1056:U:H5'	5:C:162:ALA:HB2	1.53	0.90
18:P:26:ASN:HD21	18:P:31:ARG:HD2	1.36	0.90
5:C:149:LYS:HG3	5:C:200:TRP:HB2	1.55	0.89
16:N:12:ARG:HA	16:N:15:LEU:HD21	1.55	0.89
21:S:18:VAL:HG13	21:S:19:GLU:H	1.35	0.89
7:E:84:VAL:HG13	7:E:95:MET:HB2	1.51	0.89
7:E:106:ALA:HB1	7:E:110:MET:HG2	1.54	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:522:C:H41	14:L:49:ARG:HH22	1.16	0.88
11:I:18:VAL:HA	11:I:64:ILE:HG23	1.54	0.88
13:K:124:LYS:HA	23:U:34:ARG:HB3	1.56	0.88
1:A:1328:C:H5''	15:M:27:THR:HG21	1.56	0.88
7:E:96:GLN:HG2	7:E:97:PRO:HD2	1.54	0.87
1:A:699:C:H2'	1:A:700:G:H5''	1.55	0.87
19:Q:4:ILE:HD12	19:Q:6:THR:H	1.39	0.87
14:L:85:ARG:HB3	14:L:93:ARG:HD3	1.55	0.87
1:A:1217:C:H3'	16:N:8:ARG:HH21	1.39	0.86
13:K:52:ARG:HA	13:K:56:LYS:HB3	1.56	0.86
12:J:36:VAL:HG13	12:J:76:ILE:HA	1.56	0.86
16:N:12:ARG:HG3	16:N:60:ARG:HH22	1.41	0.86
1:A:1294:G:H2'	1:A:1295:U:O4'	1.75	0.86
11:I:64:ILE:HG22	11:I:65:THR:H	1.38	0.86
7:E:121:ASN:HD22	7:E:121:ASN:H	1.21	0.86
1:A:429:U:H5'	6:D:8:LEU:HD22	1.57	0.86
21:S:17:LYS:HA	21:S:20:LYS:HE3	1.57	0.85
8:F:12:PRO:HG3	8:F:54:LEU:HD11	1.58	0.85
5:C:154:GLY:HA2	5:C:163:ARG:H	1.42	0.85
10:H:13:ILE:HG22	10:H:62:LEU:HD11	1.59	0.85
10:H:10:LEU:HD22	10:H:74:ILE:HD11	1.58	0.85
5:C:32:LEU:HD11	16:N:92:ILE:HG12	1.58	0.85
4:B:202:ASN:ND2	4:B:204:ASP:H	1.75	0.85
13:K:22:ILE:HD13	13:K:85:VAL:HG13	1.56	0.85
4:B:13:VAL:HB	4:B:211:LEU:HD11	1.59	0.85
16:N:92:ILE:HG21	16:N:95:LEU:HD22	1.58	0.85
1:A:981:U:H5'	16:N:60:ARG:HE	1.42	0.85
1:A:842:U:C3'	1:A:843:U:H4'	2.07	0.84
21:S:50:VAL:HG22	21:S:70:LEU:HD23	1.59	0.84
1:A:716:A:H1'	13:K:119:GLY:HA2	1.59	0.84
6:D:84:ASN:HD21	6:D:87:GLU:H	1.22	0.84
1:A:1346:A:H61	1:A:1374:A:H3'	1.42	0.84
1:A:464:U:H2'	1:A:465:A:H3'	1.59	0.84
15:M:2:ARG:HG3	15:M:8:ILE:HG13	1.60	0.83
5:C:156:LEU:H	5:C:156:LEU:HD12	1.42	0.83
1:A:1071:C:H2'	1:A:1072:G:H8	1.43	0.83
1:A:619:U:H3	6:D:130:ASN:ND2	1.74	0.83
6:D:61:ARG:HH12	6:D:68:GLU:HA	1.44	0.83
9:G:26:VAL:HA	9:G:42:VAL:HG21	1.60	0.83
5:C:7:ASN:HD21	16:N:89:ARG:HA	1.41	0.83
8:F:8:PHE:HB2	8:F:84:VAL:HG21	1.61	0.83
1:A:1322:C:H2'	1:A:1322:C:O2	1.79	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:82:ARG:HB2	14:L:97:VAL:HG22	1.60	0.83
13:K:86:LYS:HB2	13:K:112:VAL:HG23	1.59	0.82
4:B:73:ARG:HG3	4:B:94:ARG:HH22	1.44	0.82
1:A:1236:A:H4'	1:A:1304:G:H4'	1.60	0.82
22:T:66:ILE:HG13	22:T:70:LYS:HD3	1.59	0.82
23:U:8:ASN:ND2	23:U:9:GLU:H	1.78	0.82
11:I:16:ALA:HA	11:I:66:VAL:HA	1.61	0.82
13:K:86:LYS:HG3	13:K:113:THR:HA	1.58	0.82
14:L:27:PRO:HG2	14:L:28:GLN:HE21	1.43	0.82
1:A:1144:G:N2	1:A:1146:A:H62	1.77	0.82
5:C:4:VAL:HG22	5:C:5:HIS:H	1.42	0.82
1:A:1226:C:H41	15:M:102:LYS:HE3	1.43	0.82
17:O:70:LYS:HA	17:O:74:VAL:HG22	1.61	0.82
9:G:148:LYS:HE2	13:K:60:PHE:HB3	1.62	0.82
23:U:31:VAL:HG12	23:U:32:ARG:H	1.42	0.82
23:U:20:ARG:HH12	23:U:21:SER:HB3	1.45	0.82
1:A:1313:U:OP2	21:S:5:LYS:HA	1.80	0.81
14:L:35:ARG:NH2	14:L:75:GLU:HB3	1.95	0.81
22:T:5:SER:HA	22:T:7:LYS:HE2	1.60	0.81
16:N:20:PHE:HA	16:N:24:ALA:HB2	1.62	0.81
6:D:125:ASN:HA	6:D:141:VAL:HB	1.61	0.81
1:A:1323:G:H2'	1:A:1324:A:C8	2.15	0.81
6:D:94:GLU:HG2	6:D:185:PRO:HG3	1.62	0.81
23:U:13:VAL:HG13	23:U:14:ALA:H	1.45	0.81
5:C:71:ARG:HH12	5:C:73:GLY:H	1.28	0.81
6:D:52:VAL:HG23	6:D:53:GLN:H	1.43	0.81
1:A:1226:C:N4	15:M:102:LYS:HB3	1.96	0.81
7:E:105:ILE:HD12	7:E:123:LEU:HB3	1.63	0.81
8:F:64:VAL:HG12	8:F:65:GLU:H	1.45	0.80
5:C:163:ARG:HG2	5:C:164:THR:H	1.47	0.80
4:B:58:LYS:H	4:B:58:LYS:HD2	1.45	0.80
1:A:1238:A:H5'	1:A:1336:C:N4	1.96	0.80
6:D:24:VAL:HB	6:D:25:ARG:HD2	1.62	0.79
7:E:14:LEU:HA	7:E:36:THR:HG22	1.62	0.79
4:B:19:THR:HG23	4:B:20:ARG:H	1.47	0.79
6:D:55:ARG:NE	6:D:55:ARG:HA	1.95	0.79
1:A:824:G:H4'	10:H:2:MET:SD	2.22	0.79
1:A:1178:G:H3'	11:I:98:ARG:HH22	1.47	0.79
1:A:239:U:OP1	1:A:239:U:H4'	1.81	0.79
12:J:10:LEU:HD13	12:J:72:ARG:HB2	1.65	0.79
15:M:3:ILE:HD12	15:M:9:PRO:HD2	1.65	0.79
18:P:18:GLN:HE21	18:P:35:ARG:HD2	1.47	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:43:LYS:H	14:L:44:PRO:HD2	1.47	0.79
5:C:100:ILE:HD13	5:C:101:ASN:H	1.47	0.79
5:C:83:VAL:HB	5:C:87:ARG:HH21	1.48	0.79
19:Q:80:LYS:HD2	19:Q:81:ALA:H	1.46	0.79
20:R:72:ARG:H	20:R:72:ARG:NH1	1.81	0.79
1:A:967:C:H4'	11:I:129:ARG:HG2	1.65	0.79
1:A:1436:U:H2'	1:A:1437:A:H8	1.48	0.78
6:D:192:ALA:HB1	6:D:194:ILE:HG12	1.65	0.78
4:B:38:HIS:HB2	4:B:188:THR:HG21	1.64	0.78
1:A:426:U:H5''	6:D:36:ALA:HB1	1.65	0.78
6:D:146:GLU:HA	6:D:149:LYS:HG3	1.65	0.78
5:C:176:THR:HB	5:C:179:ALA:HB2	1.63	0.78
1:A:1391:U:H2'	1:A:1392:G:C8	2.19	0.78
5:C:63:ILE:HG13	5:C:65:VAL:HG23	1.66	0.78
14:L:35:ARG:HA	14:L:35:ARG:HE	1.49	0.78
1:A:1348:U:H4'	11:I:121:ARG:HD3	1.63	0.77
10:H:113:ARG:HA	10:H:116:ARG:HH12	1.49	0.77
7:E:136:VAL:HG13	7:E:137:ARG:H	1.47	0.77
14:L:113:ARG:HB3	14:L:118:VAL:HG23	1.64	0.77
6:D:69:ARG:NE	6:D:69:ARG:HA	1.99	0.77
13:K:80:ASN:HB3	13:K:105:ARG:HE	1.47	0.77
15:M:64:VAL:HG12	15:M:65:GLU:H	1.50	0.77
17:O:45:HIS:HA	17:O:47:LYS:NZ	2.00	0.77
5:C:86:LEU:HD23	5:C:89:VAL:HG21	1.66	0.77
1:A:814:A:H5'	1:A:1511:G:H4'	1.65	0.77
20:R:72:ARG:HH11	20:R:72:ARG:N	1.83	0.77
1:A:1054:C:O2'	1:A:1055:A:H5''	1.85	0.77
23:U:3:ILE:HG12	23:U:19:LYS:HG2	1.67	0.77
11:I:66:VAL:HG11	11:I:74:GLN:HB3	1.66	0.77
11:I:20:ILE:HD11	11:I:85:ALA:HB1	1.66	0.77
16:N:64:ARG:HB2	16:N:78:LEU:HD23	1.67	0.77
6:D:43:ARG:HH11	6:D:43:ARG:HB2	1.50	0.77
12:J:11:LYS:HE2	12:J:97:ASP:HB3	1.66	0.77
14:L:33:CYS:H	14:L:54:VAL:HG13	1.48	0.77
1:A:56:U:H2'	1:A:57:G:H8	1.49	0.77
15:M:33:LEU:HD13	15:M:40:GLU:HA	1.65	0.77
11:I:27:ILE:HA	11:I:63:TYR:HA	1.67	0.76
1:A:507:C:H3'	1:A:508:U:H5''	1.67	0.76
4:B:69:VAL:HB	4:B:162:VAL:HG23	1.68	0.76
7:E:82:HIS:NE2	7:E:146:MET:HA	2.00	0.76
1:A:426:U:H4'	6:D:39:GLN:HA	1.65	0.76
22:T:8:LYS:HE3	22:T:12:GLN:HE22	1.51	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:486:U:H2'	1:A:487:A:H8	1.50	0.76
6:D:160:LEU:HD13	6:D:160:LEU:H	1.51	0.76
22:T:70:LYS:HG3	22:T:71:ALA:N	2.00	0.76
11:I:64:ILE:HD13	11:I:78:ILE:HG21	1.66	0.76
6:D:99:ASN:HB3	6:D:103:ARG:HH21	1.50	0.76
6:D:138:PRO:HA	6:D:181:PHE:HB3	1.65	0.76
17:O:69:LEU:HB3	17:O:77:TYR:HB2	1.67	0.76
13:K:16:SER:HA	13:K:78:ILE:HA	1.67	0.76
23:U:36:PHE:CB	23:U:40:PRO:HD3	2.16	0.76
1:A:1142:G:H2'	1:A:1143:G:O4'	1.85	0.76
13:K:80:ASN:HA	13:K:105:ARG:HB2	1.68	0.76
8:F:3:HIS:HB2	8:F:92:THR:CA	2.13	0.76
19:Q:45:VAL:HG11	19:Q:60:ILE:HD12	1.67	0.75
4:B:20:ARG:HE	4:B:36:LYS:HG3	1.51	0.75
1:A:840:C:H2'	1:A:842:U:H5''	1.68	0.75
1:A:199:A:H61	1:A:218:U:H3	1.33	0.75
9:G:115:MET:SD	9:G:118:ARG:HD3	2.27	0.75
14:L:86:VAL:HG11	14:L:89:LEU:HD23	1.67	0.75
1:A:1086:U:H3	1:A:1099:G:H22	1.32	0.75
12:J:52:LEU:HD12	12:J:52:LEU:H	1.50	0.75
1:A:458:U:H2'	1:A:459:A:H8	1.51	0.75
22:T:3:ILE:HD12	22:T:3:ILE:H	1.52	0.75
9:G:67:ASN:HA	9:G:137:ARG:HH12	1.52	0.75
9:G:66:GLU:HA	9:G:69:ARG:NE	2.01	0.75
11:I:40:ARG:H	11:I:44:ARG:HH21	1.34	0.75
19:Q:14:ASP:HA	19:Q:20:ILE:HG22	1.69	0.75
21:S:17:LYS:HE2	21:S:30:LEU:HD12	1.68	0.75
6:D:181:PHE:HZ	6:D:185:PRO:HD3	1.52	0.75
5:C:149:LYS:HG2	5:C:172:VAL:HG21	1.69	0.74
9:G:46:LEU:HD12	9:G:57:GLU:HB3	1.67	0.74
18:P:58:ALA:HA	18:P:61:VAL:HG22	1.68	0.74
1:A:1376:U:H2'	1:A:1377:A:C8	2.22	0.74
1:A:1150:A:H1'	1:A:1280:A:N6	2.01	0.74
14:L:23:LEU:HD13	14:L:25:ALA:H	1.52	0.74
11:I:90:ASP:HB3	11:I:93:LEU:HD22	1.68	0.74
1:A:1170:A:H2'	1:A:1171:A:O4'	1.87	0.74
1:A:473:U:H2'	1:A:474:G:C8	2.22	0.74
8:F:92:THR:HG23	8:F:93:LYS:H	1.52	0.74
21:S:32:THR:HG22	21:S:33:TRP:H	1.52	0.74
21:S:18:VAL:HG21	21:S:43:MET:HG2	1.67	0.74
7:E:14:LEU:HD22	7:E:15:ILE:H	1.50	0.74
4:B:186:VAL:HB	4:B:190:SER:HB3	1.69	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1118:U:H1'	1:A:1179:A:C4	2.23	0.74
1:A:974:A:H4'	1:A:975:A:H5'	1.70	0.74
7:E:56:PRO:O	7:E:59:ILE:HG22	1.88	0.74
4:B:66:ILE:HG13	4:B:88:GLN:HG2	1.70	0.74
1:A:405:U:O4	6:D:1:ALA:HB2	1.87	0.74
1:A:1005:A:H61	1:A:1024:G:H1'	1.53	0.74
15:M:83:GLY:HA2	15:M:88:LEU:HD21	1.68	0.73
7:E:98:ALA:HB2	7:E:123:LEU:HG	1.68	0.73
12:J:42:LEU:HB3	12:J:43:PRO:HD2	1.70	0.73
4:B:163:ILE:HG23	4:B:164:ASP:N	2.03	0.73
22:T:61:ALA:HA	22:T:66:ILE:O	1.88	0.73
12:J:50:THR:HB	12:J:64:GLN:HG2	1.69	0.73
4:B:61:SER:HA	4:B:224:ARG:HB3	1.70	0.73
1:A:1226:C:H41	15:M:102:LYS:CE	2.02	0.73
8:F:7:VAL:HG21	20:R:64:LEU:HD21	1.70	0.73
12:J:9:ARG:O	12:J:98:VAL:HA	1.88	0.73
6:D:162:GLU:HA	6:D:166:LYS:NZ	2.03	0.73
5:C:71:ARG:NH1	5:C:73:GLY:H	1.86	0.73
21:S:62:THR:HG22	21:S:63:ASP:H	1.53	0.73
9:G:62:GLU:O	9:G:66:GLU:HG3	1.89	0.73
1:A:562:U:H1'	14:L:11:ARG:HB3	1.70	0.73
19:Q:59:GLU:HG3	19:Q:76:ARG:NE	2.02	0.73
20:R:27:THR:HA	20:R:30:ASN:HD21	1.53	0.73
1:A:1347:G:N2	1:A:1373:G:H2'	2.04	0.73
1:A:80:A:C2	1:A:81:A:H1'	2.24	0.73
7:E:83:PRO:HD2	10:H:95:MET:HG2	1.71	0.73
4:B:166:ASP:O	4:B:169:HIS:HB2	1.89	0.73
11:I:126:PHE:O	11:I:129:ARG:HB2	1.89	0.73
5:C:39:ARG:HG2	5:C:54:ILE:HD13	1.70	0.73
1:A:337:G:H2'	1:A:338:A:C8	2.23	0.72
1:A:1291:U:H2'	1:A:1292:G:C8	2.24	0.72
4:B:90:PHE:N	4:B:149:GLY:HA3	2.04	0.72
18:P:18:GLN:NE2	18:P:35:ARG:HD2	2.03	0.72
1:A:56:U:H2'	1:A:57:G:C8	2.24	0.72
1:A:1167:A:H2'	1:A:1169:A:C8	2.24	0.72
1:A:1358:U:H2'	1:A:1359:C:O4'	1.88	0.72
1:A:1101:A:H61	4:B:101:THR:HG21	1.53	0.72
11:I:14:SER:OG	11:I:69:GLY:HA3	1.89	0.72
15:M:106:ARG:NE	15:M:112:ARG:HB3	1.99	0.72
1:A:652:U:H4'	10:H:55:LYS:HE2	1.71	0.72
8:F:76:THR:HA	8:F:79:ARG:NH1	2.04	0.72
1:A:458:U:H2'	1:A:459:A:C8	2.24	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:7:LEU:O	19:Q:59:GLU:HA	1.89	0.72
20:R:59:LYS:HA	20:R:62:ARG:HD2	1.71	0.72
1:A:462:G:H2'	1:A:463:U:H6	1.54	0.72
5:C:79:LYS:HA	5:C:79:LYS:HE3	1.70	0.72
16:N:12:ARG:HD2	16:N:58:ARG:HH11	1.54	0.72
12:J:42:LEU:HB2	12:J:71:LEU:HD13	1.72	0.72
5:C:205:GLU:HG2	5:C:206:ILE:HG22	1.71	0.72
1:A:781:A:H2'	1:A:782:A:H5'	1.69	0.72
1:A:1238:A:H5'	1:A:1336:C:H41	1.54	0.71
5:C:13:ILE:HG22	5:C:14:VAL:HG13	1.72	0.71
1:A:664:G:OP1	20:R:52:ARG:HD3	1.89	0.71
18:P:48:GLU:HG2	18:P:49:GLY:H	1.55	0.71
23:U:38:GLU:C	23:U:40:PRO:HD2	2.10	0.71
20:R:51:GLN:NE2	20:R:54:LEU:HD23	2.05	0.71
10:H:92:PRO:HA	10:H:93:LYS:NZ	2.06	0.71
9:G:78:ARG:HA	9:G:83:THR:HA	1.72	0.71
11:I:98:ARG:HG3	11:I:103:VAL:HG22	1.72	0.71
11:I:83:THR:HG21	11:I:102:PHE:HB3	1.72	0.71
20:R:51:GLN:HE22	20:R:54:LEU:HD23	1.55	0.71
14:L:86:VAL:HG12	14:L:87:LYS:H	1.53	0.71
7:E:37:VAL:HG12	7:E:47:PHE:HB2	1.73	0.71
10:H:88:LYS:HA	10:H:91:LEU:HG	1.73	0.71
1:A:673:A:H2'	1:A:674:G:C8	2.26	0.71
11:I:12:LYS:H	11:I:105:ARG:HH12	1.39	0.71
4:B:71:THR:HG23	4:B:94:ARG:HA	1.71	0.71
23:U:48:LYS:HA	23:U:51:ALA:HB3	1.73	0.71
21:S:29:PRO:HA	21:S:47:THR:O	1.91	0.71
10:H:11:THR:HG22	10:H:15:ASN:HD21	1.54	0.71
19:Q:10:ARG:HH22	19:Q:54:ILE:HA	1.55	0.70
9:G:74:VAL:HG12	9:G:87:PRO:HA	1.72	0.70
13:K:18:GLY:O	13:K:81:LEU:HB2	1.91	0.70
8:F:4:TYR:O	8:F:63:ASN:HA	1.90	0.70
1:A:408:A:OP1	6:D:111:ALA:HB3	1.91	0.70
1:A:229:U:H2'	1:A:230:G:C8	2.26	0.70
13:K:124:LYS:CA	23:U:34:ARG:HB3	2.22	0.70
1:A:1179:A:H4'	11:I:104:THR:HA	1.72	0.70
1:A:674:G:H2'	1:A:675:A:H8	1.57	0.70
1:A:182:A:H1'	1:A:183:C:C4	2.26	0.70
14:L:64:SER:OG	14:L:96:THR:HG23	1.92	0.70
11:I:79:ARG:HB3	11:I:79:ARG:NH1	2.06	0.70
20:R:32:ILE:HG22	20:R:58:ILE:HD13	1.73	0.70
6:D:124:VAL:HG22	6:D:142:VAL:HG13	1.71	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:649:A:H2'	1:A:650:G:O4'	1.92	0.70
18:P:20:VAL:HG21	18:P:32:PHE:HD2	1.56	0.70
1:A:1319:A:H2'	1:A:1323:G:N7	2.06	0.70
6:D:18:LEU:O	6:D:20:LEU:HG	1.91	0.70
1:A:243:A:H4'	1:A:244:U:H5'	1.71	0.70
23:U:36:PHE:HB3	23:U:40:PRO:HD3	1.74	0.70
6:D:8:LEU:HD23	6:D:31:CYS:HA	1.73	0.70
1:A:1071:C:H2'	1:A:1072:G:C8	2.26	0.70
10:H:116:ARG:HB2	10:H:116:ARG:NH1	2.06	0.70
4:B:107:ARG:HA	4:B:110:ILE:HD12	1.74	0.70
1:A:154:U:H2'	1:A:155:A:C8	2.26	0.70
8:F:1:MET:HA	8:F:67:PRO:HA	1.74	0.70
7:E:52:ALA:HB3	7:E:58:ALA:HB2	1.72	0.70
12:J:22:THR:HA	12:J:25:ILE:HD12	1.73	0.70
11:I:33:SER:H	11:I:36:GLN:NE2	1.88	0.70
12:J:65:TYR:HA	16:N:98:ALA:H	1.56	0.70
9:G:87:PRO:HG2	9:G:151:ALA:HB3	1.74	0.70
13:K:80:ASN:N	13:K:80:ASN:HD22	1.89	0.70
1:A:451:A:H4'	1:A:452:A:O4'	1.92	0.70
15:M:95:PRO:HB2	15:M:99:GLN:NE2	2.06	0.69
1:A:1346:A:N1	1:A:1374:A:H5"	2.07	0.69
1:A:1333:A:H2'	1:A:1334:G:O4'	1.92	0.69
1:A:723:U:C2	23:U:48:LYS:HD3	2.27	0.69
13:K:51:PHE:CE1	13:K:61:ALA:HB1	2.26	0.69
5:C:71:ARG:NH2	5:C:73:GLY:HA3	2.05	0.69
4:B:161:PHE:CD2	4:B:183:PHE:HB2	2.27	0.69
1:A:628:G:H2'	1:A:629:A:H8	1.57	0.69
1:A:184:G:H4'	1:A:224:U:O3'	1.92	0.69
8:F:9:MET:HB3	8:F:57:ALA:HB1	1.75	0.69
1:A:1250:A:H4'	11:I:69:GLY:H	1.57	0.69
23:U:8:ASN:HD22	23:U:9:GLU:H	1.39	0.69
7:E:132:PRO:HA	7:E:135:VAL:HG22	1.74	0.69
11:I:86:LEU:HD23	11:I:93:LEU:HD11	1.74	0.69
22:T:53:MET:HA	22:T:56:ILE:HD12	1.75	0.69
14:L:42:LYS:HB2	14:L:88:ASP:HA	1.74	0.69
13:K:86:LYS:HD2	13:K:114:PRO:HD3	1.75	0.69
5:C:35:ASP:HB3	5:C:39:ARG:HH12	1.57	0.69
1:A:437:U:H5"	6:D:151:GLN:NE2	2.07	0.69
1:A:1348:U:H4'	11:I:121:ARG:HH11	1.57	0.69
1:A:973:G:H3'	1:A:974:A:H5"	1.74	0.69
1:A:1412:C:H2'	1:A:1413:A:C8	2.27	0.69
5:C:83:VAL:O	5:C:87:ARG:HG3	1.92	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:76:ASN:CG	7:E:77:ASN:H	1.94	0.69
1:A:1285:A:H4'	1:A:1286:U:O2	1.93	0.69
6:D:90:LEU:HD23	6:D:93:LEU:HD12	1.75	0.69
1:A:89:U:H2'	1:A:90:C:C6	2.27	0.69
15:M:88:LEU:O	15:M:91:ARG:HG2	1.93	0.69
21:S:36:ARG:HH11	21:S:36:ARG:HB3	1.58	0.69
19:Q:75:VAL:HG23	19:Q:76:ARG:HG2	1.74	0.69
1:A:376:G:H4'	18:P:5:ARG:HD2	1.74	0.69
12:J:36:VAL:HA	12:J:77:VAL:H	1.57	0.69
11:I:39:GLY:HA2	11:I:44:ARG:HE	1.58	0.69
1:A:449:G:H2'	1:A:450:G:C8	2.28	0.69
1:A:1137:C:H1'	1:A:1138:G:C2	2.27	0.69
4:B:205:ALA:O	4:B:209:VAL:HG13	1.93	0.69
9:G:91:ARG:HB3	9:G:92:PRO:HD2	1.72	0.69
1:A:1151:A:H5'	12:J:42:LEU:O	1.93	0.69
1:A:1005:A:N6	1:A:1024:G:H1'	2.07	0.69
18:P:39:PHE:CZ	18:P:41:PRO:HG3	2.28	0.69
1:A:1226:C:H4'	1:A:1227:A:OP1	1.92	0.69
4:B:15:PHE:O	4:B:39:ILE:HD12	1.93	0.69
5:C:35:ASP:HB3	5:C:39:ARG:NH1	2.07	0.69
4:B:98:GLY:HA2	4:B:101:THR:HG23	1.75	0.69
1:A:9:G:H5'	7:E:107:GLY:HA3	1.74	0.68
21:S:45:GLY:HA2	21:S:60:PHE:HB3	1.74	0.68
18:P:28:ARG:HG3	18:P:29:ASN:H	1.57	0.68
11:I:12:LYS:H	11:I:105:ARG:NH1	1.90	0.68
19:Q:11:VAL:HA	19:Q:22:VAL:HG22	1.75	0.68
8:F:38:ARG:HH12	20:R:23:LYS:NZ	1.90	0.68
1:A:264:C:H4'	19:Q:64:ARG:HD2	1.75	0.68
10:H:76:ARG:HD3	10:H:77:VAL:N	2.08	0.68
7:E:84:VAL:CG1	7:E:95:MET:HB2	2.22	0.68
4:B:58:LYS:HB3	4:B:62:ARG:CZ	2.23	0.68
18:P:1:MET:HB3	18:P:24:SER:HB3	1.75	0.68
13:K:19:VAL:HB	13:K:34:THR:HG22	1.74	0.68
7:E:68:ARG:HD2	7:E:69:ASN:H	1.57	0.68
16:N:15:LEU:HD12	16:N:16:ALA:N	2.07	0.68
1:A:1347:G:H22	1:A:1373:G:H2'	1.59	0.68
13:K:19:VAL:HG12	13:K:20:ALA:H	1.57	0.68
1:A:1356:G:H2'	1:A:1357:A:C8	2.29	0.68
5:C:5:HIS:NE2	5:C:7:ASN:HB3	2.08	0.68
1:A:1237:C:H3'	1:A:1336:C:H41	1.58	0.68
1:A:1166:G:H2'	1:A:1168:U:OP2	1.93	0.68
4:B:66:ILE:HB	4:B:88:GLN:HB3	1.74	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:429:U:H1'	1:A:430:A:H5''	1.76	0.68
1:A:437:U:H5''	6:D:151:GLN:CD	2.13	0.68
1:A:754:C:H4'	17:O:71:ARG:HH22	1.59	0.68
1:A:1250:A:H4'	11:I:69:GLY:N	2.09	0.68
1:A:1074:G:H5'	4:B:104:LYS:NZ	2.07	0.68
1:A:1148:U:H2'	1:A:1149:C:O4'	1.93	0.68
1:A:1160:G:H2'	1:A:1161:C:H6	1.57	0.68
1:A:1477:U:H2'	1:A:1478:U:C6	2.29	0.68
1:A:1065:U:H5''	1:A:1190:G:N2	2.09	0.68
14:L:20:VAL:HG12	14:L:23:LEU:HB2	1.73	0.68
5:C:13:ILE:O	5:C:14:VAL:HG22	1.93	0.68
9:G:115:MET:HA	9:G:118:ARG:HB2	1.76	0.68
17:O:15:GLY:HA2	17:O:26:VAL:HG22	1.75	0.68
1:A:1227:A:H8	1:A:1227:A:H5'	1.59	0.67
5:C:185:THR:HG23	5:C:197:VAL:O	1.94	0.67
1:A:1143:G:H2'	1:A:1144:G:C8	2.29	0.67
1:A:428:G:OP2	6:D:9:LYS:HD2	1.94	0.67
15:M:52:ILE:HG13	15:M:56:ARG:HH21	1.58	0.67
1:A:723:U:C4	23:U:48:LYS:HB2	2.29	0.67
12:J:48:ARG:HD3	12:J:48:ARG:H	1.59	0.67
1:A:98:A:H2'	1:A:99:C:C6	2.28	0.67
1:A:216:U:H2'	1:A:217:C:C6	2.29	0.67
1:A:1001:C:H2'	1:A:1002:G:C8	2.28	0.67
1:A:205:A:H2'	1:A:206:C:C6	2.29	0.67
11:I:20:ILE:HD12	11:I:20:ILE:H	1.58	0.67
1:A:1056:U:OP1	5:C:161:ILE:HA	1.94	0.67
12:J:29:ALA:HB1	12:J:83:THR:HB	1.75	0.67
8:F:38:ARG:HB3	8:F:63:ASN:HB2	1.75	0.67
6:D:56:GLU:HA	6:D:59:LYS:HE3	1.76	0.67
4:B:112:ARG:O	4:B:116:LEU:HB2	1.95	0.67
13:K:82:GLU:HB2	13:K:108:ASN:O	1.93	0.67
19:Q:24:ILE:HB	19:Q:41:THR:HB	1.77	0.67
4:B:79:VAL:HG23	4:B:213:LEU:HD21	1.76	0.67
4:B:58:LYS:HB3	4:B:62:ARG:NH2	2.10	0.67
5:C:90:VAL:HA	5:C:93:ILE:HG22	1.74	0.67
1:A:87:C:H2'	1:A:88:U:H4'	1.76	0.67
14:L:30:ARG:HG2	14:L:31:GLY:H	1.59	0.67
1:A:946:A:H2'	1:A:947:G:C8	2.29	0.67
14:L:29:LYS:H	14:L:81:ILE:HG22	1.59	0.67
11:I:126:PHE:HB2	11:I:129:ARG:HG3	1.75	0.67
1:A:672:U:H2'	1:A:673:A:H8	1.59	0.67
1:A:1254:A:H5'	1:A:1356:G:H4'	1.77	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:308:C:H2'	1:A:309:A:H8	1.59	0.67
1:A:812:G:H2'	1:A:812:G:N3	2.08	0.67
12:J:65:TYR:HD2	16:N:97:LYS:HA	1.59	0.67
9:G:78:ARG:HD2	9:G:79:VAL:N	2.10	0.67
1:A:959:A:N3	1:A:985:C:H1'	2.10	0.67
1:A:736:C:H2'	1:A:737:C:C6	2.30	0.67
4:B:166:ASP:CG	4:B:190:SER:HA	2.15	0.67
1:A:1342:C:H5''	11:I:129:ARG:HH21	1.60	0.67
10:H:11:THR:HG23	10:H:14:ARG:HH12	1.59	0.67
14:L:38:THR:HG22	14:L:48:LEU:HB2	1.75	0.67
1:A:859:G:H2'	1:A:860:A:C8	2.29	0.67
14:L:3:VAL:HG23	14:L:4:ASN:H	1.59	0.67
1:A:1370:G:O2'	1:A:1371:G:H5'	1.95	0.67
18:P:26:ASN:ND2	18:P:31:ARG:HB3	2.10	0.67
12:J:40:ILE:HG13	12:J:41:PRO:HD2	1.77	0.67
8:F:45:ARG:O	8:F:56:LYS:HG3	1.94	0.67
5:C:5:HIS:ND1	16:N:88:MET:HB3	2.10	0.67
1:A:505:G:H5'	1:A:534:U:H2'	1.77	0.67
1:A:664:G:H5''	20:R:52:ARG:NH1	2.08	0.67
7:E:13:LYS:HZ1	7:E:112:ALA:HA	1.60	0.67
18:P:10:GLY:HA3	18:P:16:PHE:H	1.60	0.67
12:J:84:VAL:HG23	12:J:85:ASP:H	1.59	0.67
1:A:1300:G:H1'	1:A:1301:U:C5	2.29	0.66
1:A:1273:C:H2'	1:A:1274:A:O4'	1.95	0.66
1:A:278:G:H21	1:A:279:A:H62	1.42	0.66
1:A:105:G:H2'	1:A:106:C:C6	2.29	0.66
7:E:152:VAL:HA	7:E:155:LYS:NZ	2.10	0.66
9:G:16:LYS:HA	9:G:16:LYS:NZ	2.11	0.66
14:L:49:ARG:HB3	14:L:65:TYR:HE1	1.61	0.66
1:A:1118:U:H2'	1:A:1118:U:O2	1.93	0.66
7:E:37:VAL:HA	7:E:47:PHE:HA	1.76	0.66
1:A:1412:C:H2'	1:A:1413:A:H8	1.60	0.66
1:A:1057:G:H5''	5:C:153:SER:HB3	1.77	0.66
1:A:1241:G:H2'	1:A:1242:G:H8	1.60	0.66
1:A:309:A:H2'	1:A:310:G:H8	1.59	0.66
12:J:57:VAL:HG22	12:J:58:ASN:H	1.59	0.66
18:P:42:ILE:HG22	18:P:43:ALA:N	2.11	0.66
8:F:38:ARG:HH12	20:R:23:LYS:HZ2	1.42	0.66
6:D:55:ARG:HA	6:D:55:ARG:CZ	2.25	0.66
14:L:33:CYS:N	14:L:54:VAL:HG13	2.10	0.66
17:O:52:ARG:O	17:O:55:LEU:HB3	1.95	0.66
13:K:20:ALA:HB2	13:K:33:ILE:HG23	1.76	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:T:19:HIS:O	22:T:23:ARG:HG2	1.96	0.66
11:I:11:ARG:HA	11:I:105:ARG:CZ	2.26	0.66
16:N:59:GLN:HE21	16:N:59:GLN:H	1.44	0.66
10:H:94:VAL:CG2	10:H:101:ALA:HB2	2.26	0.66
1:A:87:C:N3	1:A:88:U:H1'	2.09	0.66
18:P:10:GLY:HA3	18:P:16:PHE:N	2.10	0.66
1:A:1191:A:OP1	5:C:2:GLN:HB3	1.95	0.66
4:B:19:THR:OG1	4:B:36:LYS:HB3	1.96	0.66
4:B:69:VAL:HA	4:B:91:VAL:HG23	1.78	0.66
7:E:22:LYS:O	7:E:28:ARG:HG3	1.94	0.66
5:C:27:GLU:CD	5:C:27:GLU:H	1.99	0.66
7:E:68:ARG:HD2	7:E:69:ASN:N	2.09	0.66
14:L:41:PRO:HD3	14:L:47:ALA:O	1.95	0.66
1:A:555:U:H2'	1:A:556:C:C6	2.31	0.66
17:O:32:THR:OG1	17:O:86:LEU:HD11	1.96	0.66
1:A:423:G:H2'	1:A:424:G:C4'	2.26	0.66
1:A:443:C:H2'	1:A:444:G:H8	1.61	0.66
1:A:605:U:H2'	1:A:606:G:H8	1.61	0.66
7:E:89:THR:HG22	7:E:90:GLY:H	1.60	0.66
1:A:476:U:H2'	1:A:477:C:C6	2.31	0.66
1:A:731:G:H5'	1:A:766:A:H4'	1.77	0.66
19:Q:10:ARG:NH1	19:Q:55:GLY:H	1.93	0.66
1:A:1103:C:H5''	4:B:96:LEU:HD21	1.78	0.66
11:I:60:LEU:HD11	11:I:89:TYR:CD2	2.32	0.66
15:M:41:ASP:O	15:M:42:VAL:HG22	1.95	0.66
1:A:1309:G:H2'	1:A:1310:G:C8	2.31	0.66
8:F:3:HIS:CB	8:F:92:THR:HA	2.21	0.65
9:G:61:PHE:HA	9:G:123:LEU:HD11	1.78	0.65
1:A:1063:C:H3'	1:A:1064:G:H2'	1.77	0.65
12:J:17:LEU:HD23	12:J:96:VAL:HG22	1.77	0.65
1:A:672:U:H2'	1:A:673:A:C8	2.32	0.65
18:P:75:ILE:O	18:P:80:LYS:HB2	1.96	0.65
1:A:1238:A:N7	1:A:1303:C:H1'	2.11	0.65
1:A:36:C:O3'	14:L:119:LYS:HA	1.95	0.65
9:G:129:ASN:O	9:G:130:LYS:HB2	1.96	0.65
1:A:736:C:H2'	1:A:737:C:H6	1.60	0.65
1:A:269:C:H2'	1:A:270:A:H8	1.61	0.65
7:E:80:LEU:HD13	7:E:84:VAL:HG11	1.79	0.65
1:A:1305:G:H22	1:A:1331:G:H2'	1.61	0.65
1:A:1132:C:H2'	1:A:1133:G:C8	2.30	0.65
7:E:82:HIS:HB2	7:E:83:PRO:HD2	1.79	0.65
14:L:23:LEU:HD13	14:L:24:GLU:N	2.12	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:205:A:H2'	1:A:206:C:H6	1.62	0.65
4:B:23:ASN:HD22	4:B:24:PRO:HD2	1.60	0.65
7:E:80:LEU:HG	7:E:122:VAL:HG11	1.79	0.65
8:F:11:HIS:ND1	8:F:12:PRO:HD2	2.12	0.65
14:L:23:LEU:CD1	14:L:25:ALA:H	2.08	0.65
14:L:74:GLN:NE2	14:L:75:GLU:H	1.95	0.65
1:A:1237:C:OP1	1:A:1238:A:H1'	1.96	0.65
1:A:860:A:H2'	1:A:861:G:O4'	1.97	0.65
11:I:58:GLU:CD	11:I:58:GLU:H	1.99	0.65
1:A:1327:C:H2'	1:A:1328:C:C6	2.31	0.65
1:A:426:U:H5''	6:D:36:ALA:CB	2.26	0.65
13:K:80:ASN:H	13:K:80:ASN:HD22	1.40	0.65
19:Q:13:SER:HB2	19:Q:21:VAL:HB	1.78	0.65
14:L:62:VAL:HG22	14:L:63:THR:H	1.62	0.65
14:L:38:THR:HG21	14:L:48:LEU:HD12	1.79	0.65
1:A:270:A:H2'	1:A:271:C:C6	2.31	0.65
1:A:707:U:H2'	1:A:708:C:C6	2.32	0.65
4:B:40:ILE:CD1	4:B:201:GLY:H	2.09	0.65
5:C:72:PRO:HD2	5:C:104:GLU:OE1	1.97	0.65
1:A:1004:A:H2'	1:A:1005:A:C8	2.32	0.65
5:C:150:VAL:HG22	5:C:199:VAL:HG12	1.78	0.65
21:S:32:THR:HG21	21:S:70:LEU:HD22	1.79	0.65
4:B:73:ARG:HA	4:B:76:SER:OG	1.96	0.65
10:H:77:VAL:HB	10:H:125:ILE:O	1.97	0.65
10:H:17:GLN:NE2	10:H:69:ALA:HB1	2.12	0.64
20:R:39:VAL:HB	20:R:43:ILE:HD13	1.79	0.64
10:H:77:VAL:HG12	10:H:84:ILE:HD13	1.77	0.64
1:A:1176:A:H2'	1:A:1177:G:O4'	1.97	0.64
23:U:20:ARG:HB3	23:U:20:ARG:HH11	1.61	0.64
1:A:129:A:H1'	1:A:130:A:C8	2.32	0.64
1:A:1112:C:C4	5:C:177:LEU:HD12	2.32	0.64
19:Q:45:VAL:HG13	19:Q:60:ILE:HG23	1.80	0.64
11:I:60:LEU:HD21	11:I:89:TYR:CD1	2.32	0.64
1:A:436:C:O2'	1:A:437:U:H5'	1.98	0.64
1:A:644:U:H5'	10:H:83:ARG:HH12	1.61	0.64
2:W:27:U:H2'	2:W:28:C:C6	2.32	0.64
1:A:1480:A:H2'	1:A:1481:U:C6	2.33	0.64
1:A:513:C:H2'	1:A:514:C:C6	2.32	0.64
1:A:1194:U:H2'	1:A:1195:C:C6	2.32	0.64
13:K:37:GLN:HE21	13:K:37:GLN:HA	1.62	0.64
19:Q:18:LYS:HA	19:Q:47:ASP:O	1.97	0.64
12:J:8:ILE:HA	12:J:99:GLN:O	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:84:ASN:ND2	6:D:87:GLU:H	1.95	0.64
1:A:1305:G:H21	1:A:1332:A:H8	1.44	0.64
7:E:131:ASN:HB3	7:E:134:ASN:HD22	1.62	0.64
1:A:33:A:H2'	1:A:34:C:C6	2.32	0.64
19:Q:26:ARG:HD3	19:Q:39:ARG:NH1	2.12	0.64
7:E:40:ASP:OD2	7:E:42:ASN:HB3	1.98	0.64
22:T:14:GLU:OE1	22:T:18:LYS:HE2	1.97	0.64
3:X:3:G:H5'	3:X:5:U:H5'	1.78	0.64
1:A:632:U:H3'	1:A:633:G:H5'	1.80	0.64
1:A:194:C:O2'	1:A:195:A:H5'	1.98	0.64
1:A:764:C:H2'	1:A:765:G:H5'	1.78	0.64
5:C:87:ARG:HG2	5:C:100:ILE:HG21	1.80	0.64
18:P:54:LEU:HD21	18:P:80:LYS:HA	1.78	0.64
1:A:1225:A:OP1	15:M:100:ARG:HA	1.97	0.64
15:M:82:LEU:H	15:M:82:LEU:HD12	1.62	0.64
15:M:92:ARG:HB3	15:M:94:LEU:HG	1.78	0.64
4:B:87:ASP:O	4:B:88:GLN:HG3	1.97	0.64
13:K:22:ILE:HD11	13:K:83:VAL:CG1	2.28	0.64
1:A:1279:G:H5''	12:J:9:ARG:NH1	2.12	0.64
8:F:45:ARG:C	8:F:56:LYS:HG3	2.18	0.64
14:L:82:ARG:HB3	14:L:95:HIS:O	1.98	0.64
14:L:27:PRO:CG	14:L:28:GLN:HE21	2.10	0.64
1:A:1436:U:H2'	1:A:1437:A:C8	2.29	0.64
10:H:116:ARG:H	10:H:116:ARG:HH11	1.45	0.64
1:A:1513:A:H2'	1:A:1514:G:C8	2.33	0.64
1:A:1321:U:H3'	1:A:1322:C:O2	1.98	0.64
15:M:89:ARG:HB2	15:M:96:VAL:HG13	1.79	0.64
8:F:6:ILE:HG23	8:F:62:MET:HB3	1.79	0.64
7:E:82:HIS:HB3	10:H:98:LEU:HD13	1.80	0.64
6:D:84:ASN:OD1	7:E:101:GLY:HA2	1.98	0.64
23:U:20:ARG:HG2	23:U:24:LYS:HG3	1.80	0.64
1:A:17:U:H2'	1:A:18:C:C6	2.33	0.64
1:A:629:A:H2'	1:A:630:A:O4'	1.97	0.64
17:O:11:VAL:HG23	17:O:26:VAL:HG11	1.79	0.64
1:A:834:U:H2'	1:A:835:U:C6	2.33	0.64
1:A:211:G:N3	1:A:211:G:H3'	2.12	0.64
19:Q:47:ASP:OD2	19:Q:50:ASN:HA	1.97	0.64
5:C:76:ILE:HG22	5:C:80:GLY:H	1.62	0.64
1:A:1282:C:H2'	1:A:1283:U:C6	2.33	0.64
1:A:1291:U:H2'	1:A:1292:G:H8	1.62	0.64
1:A:677:U:H2'	1:A:678:U:H6	1.63	0.64
5:C:172:VAL:HG11	5:C:200:TRP:HB3	1.79	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1524:C:OP1	13:K:124:LYS:HD2	1.97	0.63
5:C:14:VAL:HG23	5:C:15:LYS:HG2	1.79	0.63
1:A:1000:A:H2'	1:A:1001:C:C6	2.34	0.63
4:B:135:MET:O	4:B:138:ARG:HG2	1.98	0.63
5:C:76:ILE:HA	5:C:83:VAL:HG23	1.79	0.63
9:G:85:GLN:HA	9:G:85:GLN:HE21	1.64	0.63
1:A:995:C:H2'	1:A:996:A:H5''	1.78	0.63
4:B:156:LEU:HB2	4:B:157:PRO:HD2	1.80	0.63
6:D:100:VAL:O	6:D:103:ARG:HG2	1.98	0.63
14:L:36:VAL:HG12	14:L:52:CYS:HB2	1.81	0.63
1:A:1125:U:H5''	12:J:37:ARG:HD2	1.80	0.63
12:J:7:ARG:NH1	12:J:102:LEU:HG	2.14	0.63
17:O:45:HIS:HA	17:O:47:LYS:HZ1	1.62	0.63
1:A:1513:A:H2'	1:A:1514:G:H8	1.63	0.63
1:A:9:G:H4'	7:E:107:GLY:HA3	1.81	0.63
19:Q:67:SER:HB2	19:Q:70:LYS:HB3	1.81	0.63
11:I:110:VAL:HG12	11:I:111:GLU:H	1.62	0.63
11:I:23:GLY:O	11:I:61:ASP:HB2	1.99	0.63
13:K:127:ARG:HB2	13:K:127:ARG:HH11	1.63	0.63
1:A:1349:A:P	11:I:119:LYS:HZ3	2.22	0.63
1:A:486:U:H2'	1:A:487:A:C8	2.33	0.63
1:A:1239:A:H4'	1:A:1240:U:H5'	1.80	0.63
1:A:1307:U:H2'	1:A:1308:U:C6	2.34	0.63
14:L:2:THR:HB	14:L:5:GLN:HB2	1.81	0.63
9:G:71:THR:HG23	9:G:72:VAL:HG22	1.81	0.63
4:B:182:VAL:O	4:B:197:PHE:HB2	1.99	0.63
12:J:52:LEU:HD13	16:N:80:ARG:HH11	1.63	0.63
1:A:512:U:H2'	1:A:513:C:C6	2.34	0.63
1:A:501:C:H2'	1:A:502:A:H8	1.63	0.63
13:K:63:GLN:HG3	13:K:64:VAL:N	2.14	0.63
1:A:1010:U:H2'	1:A:1011:C:C6	2.34	0.63
1:A:975:A:O2'	1:A:1358:U:H1'	1.99	0.62
16:N:68:ARG:HH11	16:N:70:HIS:HB2	1.64	0.62
23:U:34:ARG:NH1	23:U:39:LYS:HE3	2.14	0.62
6:D:89:LEU:O	6:D:93:LEU:HG	1.98	0.62
11:I:94:ARG:HA	11:I:97:LEU:HD23	1.80	0.62
5:C:10:ARG:HH11	5:C:10:ARG:HG3	1.64	0.62
5:C:14:VAL:HG11	5:C:178:ARG:HA	1.81	0.62
16:N:82:LYS:HD3	16:N:85:GLU:OE2	1.99	0.62
11:I:79:ARG:HH21	11:I:102:PHE:HA	1.64	0.62
12:J:22:THR:O	12:J:26:VAL:HG23	1.99	0.62
9:G:59:GLU:O	9:G:63:VAL:HG23	2.00	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1526:G:P	23:U:38:GLU:HB3	2.39	0.62
1:A:502:A:H4'	1:A:550:G:H4'	1.80	0.62
19:Q:23:ALA:HB1	19:Q:40:THR:HG23	1.80	0.62
4:B:185:ILE:HA	4:B:199:ILE:O	1.98	0.62
22:T:66:ILE:HG23	22:T:70:LYS:CG	2.30	0.62
1:A:764:C:C2'	1:A:765:G:H5'	2.30	0.62
1:A:1465:A:H2'	1:A:1466:C:C6	2.34	0.62
21:S:39:ILE:HG12	21:S:68:HIS:O	1.99	0.62
7:E:105:ILE:HB	7:E:123:LEU:HA	1.82	0.62
12:J:8:ILE:HG12	12:J:74:VAL:HB	1.82	0.62
14:L:74:GLN:HE21	14:L:75:GLU:H	1.48	0.62
11:I:10:ARG:HA	11:I:15:ALA:HA	1.80	0.62
1:A:91:U:H2'	1:A:92:U:C6	2.34	0.62
4:B:53:LEU:HA	4:B:56:LEU:HD23	1.80	0.62
1:A:1323:G:H2'	1:A:1324:A:H8	1.63	0.62
5:C:178:ARG:HE	5:C:205:GLU:HB2	1.65	0.62
1:A:98:A:H2'	1:A:99:C:H6	1.64	0.62
19:Q:26:ARG:HD3	19:Q:39:ARG:HH12	1.64	0.62
5:C:122:GLN:HB3	5:C:127:VAL:HG21	1.82	0.62
5:C:24:ASN:H	5:C:27:GLU:HG2	1.64	0.62
15:M:49:GLU:O	15:M:52:ILE:HG22	1.99	0.62
1:A:628:G:H2'	1:A:629:A:C8	2.33	0.62
1:A:960:U:O2'	1:A:1223:C:H4'	1.99	0.62
7:E:13:LYS:HD2	7:E:112:ALA:HB1	1.81	0.62
16:N:62:ARG:HA	16:N:68:ARG:O	1.99	0.62
17:O:72:LYS:HA	17:O:72:LYS:HE2	1.82	0.62
20:R:47:ARG:HB2	20:R:50:TYR:CD1	2.35	0.62
4:B:216:VAL:O	4:B:220:VAL:HG23	2.00	0.62
4:B:83:ALA:HB1	4:B:89:PHE:O	2.00	0.62
1:A:523:A:H61	14:L:49:ARG:HH12	1.48	0.62
7:E:80:LEU:HB3	7:E:146:MET:HE3	1.82	0.62
22:T:8:LYS:HE3	22:T:12:GLN:NE2	2.14	0.62
5:C:53:ARG:O	5:C:68:HIS:HB2	1.99	0.62
1:A:972:C:H4'	12:J:59:LYS:HG2	1.81	0.62
1:A:269:C:H2'	1:A:270:A:C8	2.35	0.62
1:A:502:A:H2'	1:A:503:C:H6	1.65	0.62
6:D:170:LEU:HA	6:D:182:LYS:H	1.63	0.62
1:A:1249:C:H4'	11:I:37:TYR:OH	1.98	0.62
19:Q:62:GLU:HB3	19:Q:72:TRP:CE2	2.35	0.62
5:C:63:ILE:HG12	5:C:98:ALA:CB	2.28	0.62
1:A:619:U:H3	6:D:130:ASN:HD21	1.46	0.62
7:E:14:LEU:HD23	7:E:59:ILE:HD11	1.82	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:80:PRO:HA	10:H:83:ARG:HE	1.64	0.62
1:A:1000:A:H2'	1:A:1001:C:H6	1.65	0.62
5:C:171:ARG:HH21	5:C:173:PRO:HG3	1.63	0.62
19:Q:60:ILE:HG22	19:Q:72:TRP:HE3	1.65	0.62
4:B:84:LEU:HB2	4:B:90:PHE:CD2	2.34	0.62
23:U:39:LYS:N	23:U:40:PRO:HD2	2.15	0.62
12:J:11:LYS:HA	12:J:70:HIS:O	2.00	0.62
10:H:17:GLN:HG3	10:H:62:LEU:HD23	1.81	0.62
1:A:173:U:H5'	1:A:197:A:O4'	2.00	0.62
15:M:82:LEU:HD13	15:M:84:CYS:SG	2.40	0.61
18:P:51:ARG:HH22	18:P:54:LEU:HD13	1.65	0.61
1:A:202:G:H2'	1:A:203:G:C8	2.34	0.61
9:G:130:LYS:H	9:G:134:VAL:HG11	1.65	0.61
11:I:43:ALA:O	11:I:46:VAL:HG13	2.00	0.61
11:I:56:MET:SD	11:I:57:VAL:HG23	2.40	0.61
1:A:1032:G:H2'	1:A:1033:G:O4'	2.00	0.61
13:K:22:ILE:HD12	13:K:84:MET:O	2.00	0.61
1:A:1129:C:H1'	1:A:1130:A:N7	2.15	0.61
1:A:1062:U:H2'	1:A:1063:C:C6	2.35	0.61
1:A:502:A:H2'	1:A:503:C:C6	2.35	0.61
8:F:6:ILE:HD12	8:F:7:VAL:N	2.15	0.61
1:A:415:A:H2'	1:A:416:G:H5'	1.82	0.61
1:A:922:G:H2'	1:A:923:A:C8	2.34	0.61
6:D:25:ARG:HH11	6:D:30:LYS:HE3	1.66	0.61
5:C:76:ILE:HA	5:C:83:VAL:CG2	2.30	0.61
1:A:699:C:C2'	1:A:700:G:H5''	2.30	0.61
13:K:57:SER:O	13:K:90:PRO:HG2	2.00	0.61
1:A:1149:C:H2'	1:A:1150:A:C8	2.35	0.61
1:A:1276:G:H2'	1:A:1277:C:C6	2.36	0.61
8:F:44:ARG:HG3	8:F:56:LYS:HG2	1.82	0.61
1:A:1305:G:N2	1:A:1331:G:H2'	2.15	0.61
20:R:27:THR:HA	20:R:30:ASN:ND2	2.15	0.61
1:A:335:C:H2'	1:A:336:A:H8	1.65	0.61
3:X:3:G:H1'	3:X:5:U:C2	2.35	0.61
14:L:5:GLN:HA	14:L:8:ARG:HH11	1.64	0.61
20:R:47:ARG:HB2	20:R:50:TYR:HD1	1.66	0.61
9:G:29:LEU:HD12	9:G:104:VAL:HG13	1.82	0.61
7:E:87:VAL:HG12	7:E:92:ARG:HA	1.83	0.61
19:Q:56:ASP:HA	19:Q:80:LYS:HA	1.81	0.61
12:J:5:ARG:O	12:J:102:LEU:HD12	2.01	0.61
12:J:93:ALA:HB1	12:J:96:VAL:HG23	1.81	0.61
16:N:65:GLN:HB3	16:N:82:LYS:HG3	1.82	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:67:ASN:HA	9:G:137:ARG:NH1	2.15	0.61
1:A:707:U:H2'	1:A:708:C:H6	1.64	0.61
4:B:56:LEU:HA	4:B:59:ILE:HD12	1.82	0.61
1:A:1451:U:H5''	1:A:1452:C:OP2	2.00	0.61
13:K:87:GLY:O	13:K:92:ARG:HD3	1.99	0.61
6:D:77:GLU:OE1	6:D:80:ARG:HD3	2.01	0.61
1:A:1432:G:H1'	1:A:1468:A:N6	2.15	0.61
1:A:1297:G:H21	9:G:113:LYS:HG2	1.65	0.61
1:A:1289:A:N6	11:I:71:ILE:HD13	2.15	0.61
1:A:950:U:H2'	1:A:951:G:H8	1.66	0.61
4:B:76:SER:O	4:B:79:VAL:HG12	2.01	0.61
6:D:3:TYR:CE1	6:D:10:LEU:HD12	2.35	0.61
20:R:27:THR:CA	20:R:30:ASN:HD21	2.12	0.61
1:A:402:G:H2'	1:A:403:C:C6	2.35	0.61
1:A:932:C:H5'	9:G:3:ARG:HD2	1.81	0.61
11:I:7:GLY:HA3	11:I:18:VAL:HB	1.83	0.61
8:F:44:ARG:HG2	8:F:56:LYS:HE2	1.83	0.61
14:L:3:VAL:HG23	14:L:4:ASN:N	2.16	0.61
18:P:42:ILE:O	18:P:43:ALA:HB2	2.01	0.61
16:N:35:ALA:N	16:N:40:ARG:HG3	2.16	0.61
10:H:49:LYS:HG3	10:H:50:VAL:H	1.66	0.61
11:I:29:ILE:HA	11:I:64:ILE:O	2.00	0.61
19:Q:4:ILE:CG1	19:Q:5:ARG:H	2.14	0.61
8:F:40:GLU:H	8:F:61:LEU:HB2	1.66	0.61
6:D:1:ALA:HB1	6:D:4:LEU:HD11	1.83	0.61
1:A:507:C:C3'	1:A:508:U:H5''	2.31	0.61
1:A:487:A:H2'	1:A:488:C:O4'	2.00	0.61
1:A:451:A:C6	1:A:480:U:H2'	2.36	0.61
5:C:171:ARG:NH2	5:C:173:PRO:HG3	2.16	0.61
20:R:21:ASP:OD1	20:R:24:ASP:HB2	2.00	0.61
1:A:1458:G:H2'	1:A:1459:G:H8	1.64	0.61
1:A:1371:G:H2'	1:A:1372:U:O4'	2.01	0.60
4:B:67:LEU:HG	4:B:157:PRO:HB3	1.83	0.60
18:P:7:ALA:HB1	18:P:29:ASN:HB3	1.83	0.60
1:A:640:A:O2'	1:A:641:U:H5'	1.99	0.60
1:A:370:C:H2'	1:A:371:A:H8	1.65	0.60
9:G:4:ARG:NH2	9:G:5:VAL:HG22	2.16	0.60
4:B:40:ILE:HD13	4:B:201:GLY:H	1.66	0.60
6:D:52:VAL:HG23	6:D:53:GLN:N	2.16	0.60
11:I:21:LYS:H	11:I:61:ASP:HB3	1.65	0.60
1:A:878:A:O4'	10:H:3:GLN:HG2	2.02	0.60
1:A:151:A:H2'	1:A:152:A:O4'	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:105:GLY:HA3	6:D:158:LEU:HD23	1.82	0.60
1:A:1226:C:N4	15:M:102:LYS:HE3	2.16	0.60
21:S:61:VAL:CG1	21:S:65:MET:HB2	2.24	0.60
15:M:22:TYR:HB2	15:M:65:GLU:HG2	1.82	0.60
21:S:18:VAL:O	21:S:22:VAL:HG23	2.01	0.60
6:D:109:THR:HG22	6:D:111:ALA:H	1.67	0.60
14:L:33:CYS:SG	14:L:54:VAL:HG22	2.41	0.60
1:A:668:G:O3'	17:O:47:LYS:HE3	2.01	0.60
6:D:53:GLN:HB3	6:D:202:LEU:HB2	1.84	0.60
6:D:70:GLN:HE22	6:D:96:ARG:HH22	1.49	0.60
7:E:14:LEU:HA	7:E:36:THR:CG2	2.31	0.60
13:K:35:ASP:CG	13:K:36:ARG:H	2.03	0.60
13:K:35:ASP:CG	13:K:36:ARG:N	2.55	0.60
1:A:512:U:H2'	1:A:513:C:H6	1.66	0.60
1:A:764:C:H3'	1:A:765:G:H21	1.67	0.60
9:G:139:ASP:HA	9:G:142:ARG:HD2	1.83	0.60
19:Q:10:ARG:NH2	19:Q:11:VAL:HB	2.15	0.60
8:F:1:MET:HG2	8:F:67:PRO:HD3	1.84	0.60
5:C:63:ILE:H	5:C:98:ALA:CB	2.15	0.60
7:E:73:VAL:HG21	7:E:143:LEU:HD13	1.84	0.60
13:K:126:ARG:HG3	23:U:33:ARG:HD2	1.83	0.60
6:D:2:ARG:H	6:D:4:LEU:HD21	1.66	0.60
14:L:33:CYS:HB3	14:L:75:GLU:O	2.02	0.60
8:F:86:ARG:HH11	20:R:63:TYR:HB3	1.66	0.60
10:H:78:SER:HA	10:H:84:ILE:HD12	1.82	0.60
23:U:23:GLU:HG3	23:U:27:VAL:HG11	1.83	0.60
15:M:78:ARG:O	15:M:82:LEU:HD11	2.00	0.60
10:H:94:VAL:HG21	10:H:100:ILE:C	2.21	0.60
12:J:10:LEU:HG	12:J:98:VAL:HG12	1.84	0.60
11:I:40:ARG:N	11:I:44:ARG:HH21	2.00	0.60
4:B:101:THR:HG23	4:B:102:ASN:H	1.67	0.60
8:F:18:VAL:N	8:F:19:PRO:HD2	2.17	0.60
1:A:1251:A:H2'	1:A:1252:A:C8	2.37	0.60
1:A:272:C:H2'	1:A:273:U:C6	2.36	0.60
4:B:182:VAL:HG12	4:B:195:VAL:HG13	1.84	0.60
1:A:1053:G:H4'	1:A:1054:C:H5'	1.84	0.60
5:C:148:ILE:HG12	5:C:149:LYS:N	2.17	0.60
1:A:865:A:H5'	1:A:1078:U:O4	2.01	0.60
15:M:58:GLU:HA	15:M:61:LYS:HE3	1.84	0.60
1:A:1260:G:H4'	1:A:1283:U:O2'	2.01	0.60
6:D:50:TYR:HA	6:D:53:GLN:OE1	2.01	0.60
1:A:202:G:H21	1:A:465:A:N6	2.00	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:U:20:ARG:HG2	23:U:24:LYS:CG	2.32	0.60
1:A:1179:A:H5''	11:I:103:VAL:HG23	1.84	0.60
4:B:124:THR:O	4:B:127:LYS:HG2	2.02	0.60
1:A:402:G:H2'	1:A:403:C:H6	1.66	0.60
1:A:370:C:H2'	1:A:371:A:C8	2.37	0.60
6:D:61:ARG:HH12	6:D:68:GLU:CA	2.14	0.60
14:L:56:LEU:HD11	14:L:81:ILE:HD12	1.84	0.60
23:U:17:ARG:HG2	23:U:20:ARG:NH1	2.17	0.60
11:I:79:ARG:HB3	11:I:79:ARG:HH11	1.67	0.60
1:A:677:U:H3	1:A:713:G:H22	1.50	0.60
1:A:147:G:H2'	1:A:148:G:C8	2.35	0.60
1:A:1381:U:O2'	1:A:1382:C:H5'	2.00	0.60
1:A:1318:A:H4'	21:S:9:PHE:CD2	2.37	0.59
1:A:6:G:N2	7:E:102:THR:HG21	2.16	0.59
1:A:545:C:H5'	6:D:68:GLU:HG2	1.83	0.59
1:A:16:A:O2'	1:A:17:U:H5'	2.02	0.59
1:A:236:A:H2'	1:A:237:G:H8	1.67	0.59
1:A:454:G:H2'	1:A:455:G:H8	1.66	0.59
14:L:48:LEU:HD23	14:L:48:LEU:H	1.65	0.59
1:A:213:G:H2'	1:A:214:C:H5'	1.84	0.59
21:S:35:ARG:HD2	21:S:51:HIS:O	2.03	0.59
8:F:68:GLN:O	8:F:71:ILE:HG13	2.02	0.59
7:E:23:THR:HG23	7:E:28:ARG:HB2	1.84	0.59
12:J:41:PRO:O	12:J:42:LEU:HB2	2.01	0.59
6:D:94:GLU:HG3	6:D:103:ARG:NH1	2.17	0.59
1:A:154:U:H2'	1:A:155:A:H8	1.64	0.59
1:A:105:G:H2'	1:A:106:C:H6	1.67	0.59
1:A:842:U:H2'	1:A:843:U:O3'	2.02	0.59
4:B:68:PHE:CZ	4:B:216:VAL:HG11	2.37	0.59
13:K:126:ARG:HB2	23:U:33:ARG:NH1	2.17	0.59
1:A:545:C:H5'	6:D:68:GLU:CB	2.32	0.59
14:L:80:LEU:HB2	14:L:101:LEU:HD22	1.84	0.59
1:A:974:A:C4'	1:A:975:A:H5'	2.32	0.59
1:A:1004:A:H2'	1:A:1005:A:H8	1.66	0.59
1:A:605:U:H2'	1:A:606:G:C8	2.38	0.59
1:A:970:C:H42	11:I:128:LYS:HD3	1.67	0.59
1:A:175:C:H2'	1:A:176:C:C6	2.38	0.59
1:A:1096:C:H2'	1:A:1097:C:C6	2.37	0.59
1:A:1499:A:O2'	1:A:1500:A:H5'	2.03	0.59
8:F:64:VAL:HG12	8:F:65:GLU:N	2.15	0.59
5:C:154:GLY:HA3	5:C:162:ALA:HB1	1.84	0.59
13:K:126:ARG:NE	13:K:126:ARG:HA	2.16	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:33:CYS:HA	14:L:54:VAL:HA	1.85	0.59
13:K:111:ASP:HB3	23:U:3:ILE:HD12	1.82	0.59
5:C:35:ASP:O	5:C:39:ARG:HG3	2.02	0.59
20:R:51:GLN:HE21	20:R:51:GLN:HA	1.67	0.59
1:A:1015:G:H2'	1:A:1016:A:C8	2.37	0.59
15:M:28:ARG:NH2	15:M:62:PHE:HB2	2.18	0.59
7:E:156:ARG:HD3	10:H:43:GLY:O	2.02	0.59
1:A:1289:A:H3'	1:A:1290:G:H8	1.68	0.59
14:L:83:GLY:HA2	14:L:94:TYR:HD1	1.66	0.59
11:I:60:LEU:HD13	11:I:86:LEU:HD11	1.83	0.59
1:A:1352:C:H2'	1:A:1353:G:C8	2.37	0.59
6:D:63:ILE:HG23	6:D:64:TYR:CD1	2.37	0.59
7:E:152:VAL:HA	7:E:155:LYS:HZ3	1.67	0.59
7:E:89:THR:HG22	7:E:90:GLY:N	2.15	0.59
1:A:1018:G:H2'	1:A:1019:A:C8	2.37	0.59
11:I:65:THR:HG22	11:I:67:LYS:HE2	1.85	0.59
19:Q:6:THR:HB	19:Q:59:GLU:HB3	1.84	0.59
7:E:151:MET:O	7:E:155:LYS:HD3	2.02	0.59
11:I:57:VAL:HB	11:I:58:GLU:OE2	2.03	0.59
22:T:47:GLN:HE21	22:T:82:ILE:HD11	1.67	0.59
1:A:1091:U:H2'	1:A:1093:A:OP2	2.03	0.59
1:A:41:G:H2'	1:A:42:G:H8	1.67	0.59
1:A:1224:U:O2'	1:A:1322:C:H5'	2.02	0.59
1:A:255:G:H2'	1:A:256:U:C6	2.37	0.59
1:A:1295:U:H2'	1:A:1296:C:C6	2.38	0.59
15:M:56:ARG:HA	15:M:59:VAL:HG12	1.83	0.59
14:L:20:VAL:HG13	14:L:94:TYR:CE1	2.38	0.59
11:I:49:GLN:N	11:I:50:PRO:HD2	2.18	0.59
1:A:462:G:H2'	1:A:463:U:C6	2.37	0.59
4:B:20:ARG:NE	4:B:36:LYS:HG3	2.15	0.59
7:E:114:LEU:HD22	7:E:119:VAL:HG21	1.84	0.59
7:E:78:GLY:O	7:E:119:VAL:HA	2.02	0.59
11:I:83:THR:HG23	11:I:84:ARG:H	1.67	0.59
1:A:363:A:OP2	14:L:57:THR:HG21	2.02	0.59
8:F:43:GLY:O	8:F:58:HIS:HA	2.03	0.59
14:L:98:ARG:HB2	14:L:116:TYR:HA	1.83	0.59
9:G:132:THR:O	9:G:135:LYS:HB3	2.03	0.59
1:A:1038:C:H2'	1:A:1039:G:C8	2.38	0.59
4:B:73:ARG:HG3	4:B:94:ARG:NH2	2.18	0.59
15:M:11:HIS:H	15:M:44:ILE:CG1	2.16	0.59
12:J:41:PRO:HG2	12:J:42:LEU:H	1.68	0.59
1:A:1171:A:H2'	1:A:1172:C:C6	2.37	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:28:SER:HB3	10:H:56:PRO:HB2	1.84	0.59
15:M:95:PRO:N	15:M:108:ARG:HG2	2.18	0.59
11:I:110:VAL:HG12	11:I:111:GLU:N	2.18	0.59
4:B:84:LEU:HD22	4:B:90:PHE:HE2	1.68	0.59
18:P:72:ALA:O	18:P:76:LYS:HE2	2.03	0.59
5:C:156:LEU:HD13	5:C:163:ARG:HB3	1.85	0.59
7:E:121:ASN:HD22	7:E:121:ASN:N	1.91	0.59
1:A:203:G:H1'	1:A:465:A:N1	2.18	0.59
11:I:90:ASP:O	11:I:93:LEU:HD23	2.03	0.59
1:A:546:A:OP1	6:D:69:ARG:HB2	2.03	0.59
11:I:81:GLY:O	11:I:84:ARG:HG3	2.03	0.59
1:A:474:G:H2'	1:A:475:C:O4'	2.03	0.59
1:A:1134:G:C2	1:A:1135:U:H1'	2.37	0.59
1:A:587:G:H4'	10:H:3:GLN:O	2.02	0.59
1:A:520:A:OP2	14:L:47:ALA:HB1	2.02	0.59
4:B:138:ARG:HH12	4:B:142:LYS:NZ	2.01	0.59
1:A:384:G:H2'	1:A:385:C:C6	2.37	0.59
10:H:35:ILE:O	10:H:39:LEU:HG	2.03	0.59
1:A:461:A:H2'	1:A:461:A:N3	2.17	0.59
1:A:1323:G:H4'	1:A:1362:A:C5	2.38	0.58
4:B:31:PHE:CE1	4:B:43:GLU:HB2	2.38	0.58
4:B:99:MET:HG3	4:B:100:LEU:HD13	1.85	0.58
21:S:40:PHE:HB3	21:S:42:ASN:OD1	2.02	0.58
1:A:780:A:O2'	1:A:781:A:H5''	2.02	0.58
1:A:1169:A:H2'	1:A:1170:A:C8	2.38	0.58
18:P:69:ASP:CG	18:P:70:ARG:H	2.05	0.58
1:A:644:U:C5'	10:H:83:ARG:HH12	2.15	0.58
1:A:1096:C:H2'	1:A:1097:C:H6	1.67	0.58
1:A:1498:U:H1'	1:A:1499:A:N7	2.18	0.58
1:A:1038:C:H2'	1:A:1039:G:H8	1.68	0.58
1:A:1317:C:H42	16:N:52:ARG:NH2	1.99	0.58
5:C:154:GLY:CA	5:C:163:ARG:H	2.16	0.58
13:K:124:LYS:HA	23:U:34:ARG:CB	2.31	0.58
1:A:1147:C:H2'	1:A:1148:U:C6	2.39	0.58
9:G:147:ASN:HD22	9:G:150:PHE:HE1	1.49	0.58
23:U:31:VAL:HG12	23:U:32:ARG:N	2.17	0.58
23:U:15:LEU:C	23:U:17:ARG:H	2.06	0.58
11:I:93:LEU:HA	11:I:96:GLU:OE1	2.03	0.58
1:A:1480:A:H2'	1:A:1481:U:H6	1.66	0.58
1:A:204:G:H2'	1:A:205:A:H8	1.69	0.58
1:A:1250:A:H5'	11:I:68:GLY:HA2	1.85	0.58
4:B:89:PHE:HE2	4:B:153:MET:H	1.50	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1342:C:H2'	1:A:1343:G:C8	2.39	0.58
17:O:43:ALA:O	17:O:46:LYS:HE2	2.03	0.58
1:A:626:G:H2'	1:A:627:G:C8	2.38	0.58
6:D:169:TRP:NE1	6:D:170:LEU:HD23	2.18	0.58
1:A:1103:C:H4'	4:B:96:LEU:HD11	1.85	0.58
1:A:1291:U:H4'	11:I:41:GLU:HG3	1.84	0.58
14:L:58:ASN:ND2	14:L:58:ASN:H	2.02	0.58
19:Q:46:HIS:HB2	19:Q:70:LYS:HD2	1.85	0.58
21:S:17:LYS:HZ1	21:S:31:ARG:N	2.01	0.58
4:B:81:ASP:HA	4:B:85:SER:OG	2.03	0.58
1:A:565:U:H3'	1:A:566:G:H2'	1.86	0.58
1:A:423:G:H2'	1:A:424:G:O4'	2.03	0.58
1:A:275:G:H5'	19:Q:15:LYS:HB3	1.85	0.58
1:A:843:U:H5'	1:A:844:G:OP2	2.03	0.58
21:S:55:GLN:NE2	21:S:56:HIS:H	2.01	0.58
4:B:174:GLU:H	4:B:174:GLU:CD	2.07	0.58
4:B:71:THR:HA	4:B:92:ASN:O	2.02	0.58
1:A:797:C:O2'	1:A:798:U:H5'	2.03	0.58
5:C:205:GLU:HG2	5:C:206:ILE:N	2.19	0.58
13:K:108:ASN:HA	23:U:5:VAL:O	2.04	0.58
20:R:50:TYR:HA	20:R:53:GLN:HE21	1.67	0.58
1:A:22:G:H2'	1:A:23:C:C6	2.38	0.58
1:A:493:A:H3'	1:A:494:G:C8	2.39	0.58
5:C:34:SER:O	5:C:38:VAL:HG22	2.03	0.58
4:B:116:LEU:HD23	4:B:119:GLN:HG2	1.84	0.58
7:E:152:VAL:HG13	7:E:155:LYS:HZ3	1.68	0.58
1:A:299:G:H2'	1:A:300:A:C8	2.39	0.58
21:S:4:LEU:CB	21:S:8:PRO:HA	2.34	0.58
1:A:841:C:H3'	1:A:843:U:OP2	2.03	0.58
4:B:112:ARG:HG3	4:B:116:LEU:HD12	1.84	0.58
8:F:9:MET:O	8:F:85:ILE:HG13	2.02	0.58
1:A:312:C:H2'	1:A:313:A:C8	2.38	0.58
1:A:312:C:H2'	1:A:313:A:H8	1.68	0.58
1:A:632:U:H6	1:A:633:G:H5'	1.68	0.58
8:F:24:ARG:H	8:F:24:ARG:NH1	2.02	0.58
19:Q:62:GLU:HB3	19:Q:72:TRP:CZ2	2.39	0.58
4:B:69:VAL:O	4:B:163:ILE:HG22	2.04	0.58
6:D:32:LYS:HB3	6:D:35:GLN:CG	2.33	0.58
6:D:58:GLN:HG3	6:D:62:ARG:HG2	1.86	0.58
6:D:169:TRP:HB2	6:D:183:ARG:O	2.04	0.58
16:N:35:ALA:HB2	16:N:40:ARG:HB2	1.85	0.58
5:C:130:ARG:HE	5:C:131:ARG:H	1.52	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:K:67:GLU:HB3	13:K:98:ALA:HB1	1.85	0.58
1:A:1007:U:H2'	1:A:1008:U:C6	2.39	0.58
1:A:838:G:H2'	1:A:839:C:O4'	2.03	0.58
1:A:1144:G:H21	1:A:1146:A:H62	1.51	0.58
1:A:430:A:OP1	6:D:8:LEU:HB2	2.04	0.58
12:J:24:GLU:HG3	12:J:25:ILE:N	2.18	0.58
14:L:78:VAL:O	14:L:102:ASP:HB2	2.03	0.58
1:A:812:G:HO2'	1:A:813:U:H6	1.51	0.58
1:A:129:A:H1'	1:A:130:A:N7	2.19	0.58
1:A:257:G:H2'	1:A:258:G:H5''	1.86	0.58
1:A:190:A:H2'	1:A:191:G:O4'	2.04	0.58
1:A:1488:G:O2'	1:A:1489:G:H5'	2.04	0.58
13:K:28:ASN:OD1	13:K:46:ALA:HB3	2.03	0.58
23:U:34:ARG:CZ	23:U:39:LYS:HE3	2.34	0.57
8:F:54:LEU:HD12	8:F:56:LYS:H	1.69	0.57
22:T:61:ALA:HB2	22:T:66:ILE:HG22	1.85	0.57
18:P:39:PHE:HA	18:P:50:THR:HG23	1.86	0.57
10:H:125:ILE:HG22	10:H:126:CYS:N	2.18	0.57
14:L:36:VAL:HG12	14:L:52:CYS:CB	2.33	0.57
1:A:740:U:O3'	17:O:38:LEU:HD21	2.04	0.57
5:C:155:ARG:N	5:C:162:ALA:HA	2.14	0.57
12:J:12:ALA:HB2	12:J:96:VAL:HG13	1.84	0.57
1:A:437:U:H2'	1:A:438:U:O4'	2.04	0.57
1:A:443:C:H2'	1:A:444:G:C8	2.39	0.57
1:A:575:G:H4'	1:A:576:C:H5''	1.85	0.57
1:A:60:A:H4'	1:A:61:G:O5'	2.04	0.57
23:U:43:GLU:HA	23:U:46:ARG:HB3	1.85	0.57
7:E:82:HIS:HB2	10:H:95:MET:HG2	1.86	0.57
5:C:10:ARG:O	5:C:15:LYS:HB2	2.03	0.57
17:O:7:THR:HB	17:O:30:LEU:HD11	1.85	0.57
1:A:41:G:H2'	1:A:42:G:C8	2.39	0.57
14:L:50:LYS:N	14:L:50:LYS:HD2	2.19	0.57
4:B:90:PHE:O	4:B:91:VAL:HG13	2.05	0.57
18:P:51:ARG:HD3	18:P:53:ASP:H	1.68	0.57
1:A:920:U:H2'	1:A:921:U:C6	2.39	0.57
1:A:1237:C:H4'	1:A:1334:G:N2	2.19	0.57
6:D:138:PRO:HB3	6:D:181:PHE:HD2	1.68	0.57
1:A:242:G:H2'	1:A:243:A:H5''	1.84	0.57
1:A:1017:U:H2'	1:A:1018:G:C8	2.40	0.57
1:A:22:G:H2'	1:A:23:C:H6	1.69	0.57
10:H:25:THR:HG23	10:H:58:LEU:O	2.04	0.57
9:G:147:ASN:ND2	13:K:55:ARG:HH22	2.03	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:110:ARG:HB2	9:G:118:ARG:HG2	1.86	0.57
20:R:52:ARG:HH11	20:R:52:ARG:HG2	1.70	0.57
1:A:1073:U:H2'	1:A:1074:G:H8	1.69	0.57
1:A:985:C:H2'	1:A:986:U:C6	2.40	0.57
4:B:20:ARG:CZ	4:B:36:LYS:HA	2.35	0.57
19:Q:19:SER:HB3	19:Q:70:LYS:HZ2	1.69	0.57
4:B:163:ILE:CG2	4:B:164:ASP:H	2.11	0.57
5:C:67:ILE:HG22	5:C:69:THR:HG22	1.87	0.57
1:A:409:U:H2'	1:A:410:G:C8	2.40	0.57
23:U:20:ARG:NH1	23:U:21:SER:HB3	2.18	0.57
1:A:1446:A:H2'	1:A:1447:A:H5''	1.86	0.57
4:B:100:LEU:O	4:B:103:TRP:HB2	2.05	0.57
21:S:40:PHE:HB2	21:S:43:MET:SD	2.45	0.57
1:A:404:G:H2'	1:A:405:U:H6	1.69	0.57
1:A:470:C:H2'	1:A:471:U:O4'	2.04	0.57
1:A:1117:A:H2'	1:A:1118:U:C6	2.39	0.57
1:A:235:C:H2'	1:A:236:A:C8	2.40	0.57
1:A:33:A:H2'	1:A:34:C:H6	1.68	0.57
1:A:501:C:H2'	1:A:502:A:C8	2.39	0.57
1:A:1463:U:H2'	1:A:1464:U:C6	2.39	0.57
22:T:38:ILE:HD11	22:T:82:ILE:HG22	1.87	0.57
1:A:323:U:H2'	1:A:324:G:O4'	2.04	0.57
8:F:10:VAL:HG13	8:F:83:ALA:O	2.05	0.57
17:O:87:ARG:HH11	17:O:87:ARG:HA	1.69	0.57
1:A:160:A:H2'	1:A:161:A:O4'	2.04	0.57
19:Q:4:ILE:HG13	19:Q:5:ARG:H	1.70	0.57
19:Q:60:ILE:HG22	19:Q:72:TRP:HB3	1.87	0.57
6:D:87:GLU:OE1	6:D:90:LEU:HD12	2.04	0.57
17:O:42:PHE:O	17:O:46:LYS:HG2	2.05	0.57
11:I:40:ARG:H	11:I:44:ARG:NH2	2.03	0.57
9:G:91:ARG:HD3	9:G:91:ARG:H	1.68	0.57
14:L:41:PRO:HG3	14:L:46:SER:CA	2.35	0.57
1:A:1029:U:H2'	1:A:1031:C:C2	2.40	0.57
5:C:130:ARG:NH2	5:C:131:ARG:HB2	2.20	0.57
7:E:33:THR:HG22	7:E:51:LYS:HB3	1.86	0.57
1:A:1386:G:H2'	1:A:1387:G:H8	1.69	0.57
1:A:1202:U:H2'	1:A:1203:C:O4'	2.05	0.57
10:H:44:PHE:HD1	10:H:71:VAL:HG22	1.70	0.57
1:A:783:C:O2'	1:A:784:A:H5'	2.05	0.57
7:E:76:ASN:ND2	7:E:77:ASN:H	2.02	0.57
14:L:54:VAL:HG21	14:L:79:ILE:HD11	1.87	0.57
14:L:79:ILE:HD13	14:L:96:THR:HG22	1.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:58:LYS:O	4:B:62:ARG:HB2	2.04	0.57
1:A:238:A:H2'	1:A:239:U:H5''	1.86	0.57
22:T:54:GLN:N	22:T:55:PRO:HD2	2.19	0.57
19:Q:68:LYS:O	19:Q:69:THR:CB	2.53	0.57
4:B:23:ASN:HD22	4:B:24:PRO:CD	2.18	0.57
10:H:50:VAL:HG22	10:H:51:GLU:N	2.20	0.57
19:Q:35:LYS:O	19:Q:37:ILE:HG13	2.04	0.57
1:A:683:G:O2'	1:A:684:U:H5'	2.05	0.57
11:I:29:ILE:HG22	11:I:64:ILE:HB	1.86	0.57
18:P:6:LEU:HG	18:P:17:TYR:HB3	1.86	0.57
13:K:126:ARG:CG	23:U:33:ARG:HD2	2.34	0.57
7:E:34:ALA:HB1	7:E:59:ILE:HD12	1.87	0.57
1:A:1118:U:H5'	11:I:10:ARG:HH21	1.70	0.57
1:A:335:C:H2'	1:A:336:A:C8	2.39	0.57
14:L:98:ARG:HB2	14:L:116:TYR:C	2.25	0.57
5:C:106:ARG:HG2	5:C:107:LYS:HG3	1.86	0.57
16:N:31:SER:HA	16:N:45:LEU:HD21	1.87	0.57
1:A:1053:G:N7	1:A:1199:U:H3'	2.20	0.56
1:A:1284:C:H3'	1:A:1285:A:H5''	1.86	0.56
9:G:150:PHE:HZ	13:K:55:ARG:HH21	1.53	0.56
17:O:69:LEU:HD12	17:O:77:TYR:N	2.20	0.56
22:T:43:LYS:O	22:T:46:ALA:HB3	2.05	0.56
1:A:1277:C:H1'	1:A:1282:C:C2	2.40	0.56
14:L:6:LEU:HD21	14:L:11:ARG:HE	1.70	0.56
1:A:10:A:OP2	7:E:130:THR:HB	2.05	0.56
1:A:314:C:O2'	1:A:315:A:H5'	2.05	0.56
14:L:51:VAL:HG12	14:L:52:CYS:H	1.70	0.56
1:A:1508:A:H2'	1:A:1509:C:C6	2.40	0.56
9:G:14:ASP:HB2	9:G:19:SER:OG	2.05	0.56
7:E:38:VAL:HG21	7:E:67:ARG:HG3	1.87	0.56
1:A:817:C:H1'	1:A:819:A:H5'	1.86	0.56
15:M:3:ILE:HD12	15:M:9:PRO:CD	2.33	0.56
7:E:14:LEU:HD22	7:E:15:ILE:N	2.19	0.56
11:I:90:ASP:HB3	11:I:93:LEU:CD2	2.35	0.56
1:A:1171:A:H2'	1:A:1172:C:H6	1.70	0.56
2:W:28:C:H2'	2:W:29:G:H8	1.70	0.56
11:I:11:ARG:HG3	11:I:77:ALA:HA	1.87	0.56
16:N:60:ARG:HH11	16:N:60:ARG:H	1.54	0.56
5:C:120:THR:HG21	5:C:186:SER:HB3	1.88	0.56
1:A:1280:A:P	12:J:9:ARG:HH12	2.28	0.56
1:A:202:G:H2'	1:A:203:G:H8	1.71	0.56
23:U:17:ARG:HA	23:U:20:ARG:CB	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:H:79:ARG:HB2	10:H:80:PRO:HD2	1.86	0.56
1:A:1245:C:H2'	1:A:1246:A:C8	2.40	0.56
15:M:48:SER:H	15:M:51:GLN:CG	2.19	0.56
1:A:1371:G:OP1	11:I:13:SER:HB3	2.05	0.56
5:C:71:ARG:HH12	5:C:73:GLY:N	2.00	0.56
18:P:58:ALA:HA	18:P:61:VAL:CG2	2.36	0.56
10:H:100:ILE:HG13	10:H:128:VAL:HB	1.88	0.56
1:A:202:G:H1'	1:A:468:A:H8	1.71	0.56
8:F:86:ARG:NH1	20:R:63:TYR:HB3	2.21	0.56
1:A:878:A:H5''	10:H:80:PRO:HG2	1.87	0.56
1:A:1479:C:H2'	1:A:1480:A:H8	1.70	0.56
1:A:97:G:H2'	1:A:98:A:O4'	2.05	0.56
1:A:603:U:H2'	1:A:604:G:C8	2.41	0.56
1:A:197:A:N3	1:A:198:G:H1'	2.20	0.56
9:G:39:GLU:O	9:G:43:TYR:HB2	2.04	0.56
21:S:27:LYS:C	21:S:28:LYS:HE2	2.26	0.56
5:C:100:ILE:CD1	5:C:101:ASN:H	2.18	0.56
11:I:115:VAL:HG21	12:J:62:ARG:HD2	1.88	0.56
7:E:81:GLN:HE22	7:E:82:HIS:CE1	2.23	0.56
7:E:94:PHE:O	7:E:124:ALA:HB1	2.06	0.56
4:B:13:VAL:CB	4:B:211:LEU:HD11	2.33	0.56
4:B:110:ILE:HA	4:B:147:LEU:HD13	1.86	0.56
7:E:37:VAL:HG12	7:E:47:PHE:CB	2.34	0.56
5:C:2:GLN:N	5:C:2:GLN:HE21	2.04	0.56
1:A:1307:U:H2'	1:A:1308:U:H6	1.70	0.56
17:O:1:SER:HA	17:O:34:GLN:NE2	2.20	0.56
1:A:1225:A:P	15:M:102:LYS:HZ3	2.29	0.56
14:L:18:SER:C	14:L:20:VAL:H	2.08	0.56
22:T:70:LYS:O	22:T:74:HIS:HB2	2.06	0.56
9:G:110:ARG:HD3	9:G:122:GLU:OE2	2.05	0.56
1:A:272:C:H2'	1:A:273:U:H6	1.70	0.56
1:A:577:G:O2'	1:A:578:C:H5'	2.06	0.56
21:S:4:LEU:HD13	21:S:9:PHE:H	1.69	0.56
4:B:186:VAL:HB	4:B:190:SER:CB	2.35	0.56
4:B:46:VAL:HA	4:B:49:PHE:HD2	1.71	0.56
1:A:201:G:H21	1:A:469:C:H1'	1.71	0.56
13:K:79:LYS:CG	13:K:80:ASN:H	2.19	0.56
1:A:1134:G:H2'	1:A:1135:U:O4'	2.06	0.56
1:A:135:C:H2'	1:A:136:C:H5'	1.88	0.56
17:O:84:LEU:HD12	17:O:84:LEU:H	1.69	0.56
1:A:922:G:H2'	1:A:923:A:H8	1.71	0.56
13:K:31:VAL:HG21	13:K:66:ALA:CB	2.35	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1162:C:H2'	1:A:1163:A:H8	1.71	0.56
1:A:539:A:H2'	1:A:540:G:H8	1.70	0.56
7:E:141:ASP:O	7:E:144:GLU:HB3	2.05	0.56
16:N:63:CYS:HB3	16:N:66:THR:OG1	2.05	0.56
11:I:11:ARG:CG	11:I:77:ALA:HA	2.36	0.56
11:I:71:ILE:H	11:I:71:ILE:HD12	1.70	0.56
8:F:27:ALA:C	8:F:29:ILE:H	2.09	0.56
6:D:12:ARG:C	6:D:14:GLU:H	2.10	0.56
14:L:64:SER:HG	14:L:96:THR:HG23	1.69	0.56
6:D:96:ARG:O	6:D:100:VAL:HG23	2.06	0.56
7:E:15:ILE:HG21	7:E:35:LEU:HD13	1.88	0.56
6:D:43:ARG:HB2	6:D:43:ARG:NH1	2.19	0.56
4:B:104:LYS:O	4:B:107:ARG:HG2	2.05	0.56
14:L:58:ASN:N	14:L:58:ASN:HD22	2.04	0.56
1:A:161:A:H2'	1:A:162:A:C8	2.40	0.56
1:A:1115:U:H2'	1:A:1116:U:C6	2.41	0.56
9:G:12:LEU:HD22	9:G:12:LEU:H	1.70	0.56
19:Q:29:LYS:HE3	19:Q:36:PHE:CZ	2.41	0.56
12:J:10:LEU:HD22	12:J:72:ARG:HB2	1.87	0.56
15:M:52:ILE:HG23	15:M:53:ASP:N	2.21	0.56
9:G:137:ARG:HD2	9:G:138:GLU:N	2.21	0.56
11:I:83:THR:CG2	11:I:102:PHE:HB3	2.36	0.56
1:A:755:G:OP2	17:O:64:LYS:HD3	2.06	0.56
1:A:806:C:H2'	1:A:807:A:H8	1.71	0.56
16:N:12:ARG:HG3	16:N:60:ARG:NH2	2.17	0.55
11:I:33:SER:N	11:I:36:GLN:HE21	1.91	0.55
6:D:55:ARG:HH21	6:D:58:GLN:HB2	1.71	0.55
1:A:966:G:H2'	1:A:967:C:C6	2.41	0.55
1:A:1437:A:H2'	1:A:1438:G:H8	1.71	0.55
3:X:3:G:C5'	3:X:5:U:H5'	2.36	0.55
1:A:93:U:H2'	1:A:94:G:H5''	1.87	0.55
15:M:70:ARG:HH11	15:M:70:ARG:HG2	1.71	0.55
11:I:5:TYR:HB2	11:I:20:ILE:HB	1.87	0.55
15:M:90:HIS:HA	15:M:108:ARG:NH2	2.20	0.55
16:N:59:GLN:NE2	16:N:59:GLN:H	2.03	0.55
7:E:132:PRO:HA	7:E:135:VAL:CG2	2.36	0.55
5:C:19:SER:HB3	5:C:21:TRP:HE1	1.71	0.55
1:A:737:C:H5'	8:F:89:VAL:O	2.07	0.55
12:J:84:VAL:HG23	12:J:85:ASP:N	2.22	0.55
1:A:1031:C:H4'	1:A:1032:G:C4	2.42	0.55
1:A:1354:U:H2'	1:A:1355:G:C8	2.41	0.55
1:A:659:U:H2'	1:A:660:C:C6	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:9:ILE:O	5:C:9:ILE:HG23	2.04	0.55
11:I:66:VAL:HG22	11:I:67:LYS:N	2.20	0.55
21:S:55:GLN:CD	21:S:56:HIS:H	2.08	0.55
12:J:52:LEU:HD22	16:N:80:ARG:NH1	2.21	0.55
21:S:18:VAL:HG13	21:S:19:GLU:N	2.14	0.55
23:U:33:ARG:NH2	23:U:34:ARG:HG2	2.22	0.55
1:A:1284:C:H3'	1:A:1285:A:C5'	2.37	0.55
4:B:208:ALA:HA	4:B:211:LEU:HG	1.88	0.55
5:C:10:ARG:HB3	5:C:15:LYS:HG3	1.88	0.55
18:P:42:ILE:HB	18:P:46:LYS:NZ	2.20	0.55
1:A:501:C:H1'	1:A:549:C:H1'	1.89	0.55
9:G:94:ARG:CZ	9:G:98:LEU:HD21	2.36	0.55
1:A:1060:U:H4'	12:J:54:SER:HB2	1.88	0.55
5:C:166:TRP:CE3	5:C:166:TRP:HA	2.40	0.55
1:A:426:U:H2'	1:A:427:U:C6	2.41	0.55
1:A:332:G:H2'	1:A:333:U:H6	1.72	0.55
1:A:26:A:H61	1:A:558:G:H1'	1.71	0.55
1:A:600:A:H5'	10:H:120:LEU:HA	1.89	0.55
1:A:922:G:H4'	7:E:24:VAL:HA	1.88	0.55
16:N:32:ASP:O	16:N:40:ARG:HD3	2.06	0.55
21:S:4:LEU:HB3	21:S:8:PRO:HA	1.89	0.55
19:Q:19:SER:HB3	19:Q:70:LYS:NZ	2.21	0.55
18:P:28:ARG:HG3	18:P:29:ASN:N	2.22	0.55
12:J:29:ALA:HA	12:J:86:ALA:HB3	1.88	0.55
4:B:133:ALA:O	4:B:137:THR:HG23	2.06	0.55
1:A:1450:U:H2'	1:A:1452:C:C5	2.42	0.55
9:G:14:ASP:HB3	9:G:18:GLY:N	2.22	0.55
1:A:1354:U:H2'	1:A:1355:G:H8	1.72	0.55
23:U:17:ARG:HG2	23:U:20:ARG:HH11	1.71	0.55
1:A:9:G:C5'	7:E:107:GLY:HA3	2.36	0.55
1:A:586:C:O2'	1:A:878:A:H4'	2.06	0.55
15:M:89:ARG:HB3	15:M:96:VAL:HG22	1.87	0.55
21:S:62:THR:H	21:S:65:MET:CE	2.14	0.55
1:A:470:C:H2'	1:A:471:U:C6	2.41	0.55
9:G:147:ASN:HB3	9:G:150:PHE:CD1	2.42	0.55
9:G:74:VAL:HG12	9:G:87:PRO:CA	2.34	0.55
13:K:16:SER:H	13:K:78:ILE:HD13	1.72	0.55
9:G:46:LEU:HB3	9:G:57:GLU:HB3	1.88	0.55
1:A:1001:C:H2'	1:A:1002:G:H8	1.71	0.55
23:U:42:THR:OG1	23:U:43:GLU:N	2.38	0.55
1:A:1496:C:H2'	1:A:1497:G:O4'	2.05	0.55
1:A:186:C:H5'	22:T:72:ALA:HB1	1.89	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:Q:10:ARG:HH12	19:Q:54:ILE:HG13	1.72	0.55
12:J:6:ILE:O	12:J:76:ILE:HG13	2.07	0.55
12:J:17:LEU:HB3	12:J:96:VAL:HG22	1.89	0.55
6:D:111:ALA:HA	6:D:114:ARG:HD3	1.88	0.55
22:T:61:ALA:HB2	22:T:71:ALA:HB2	1.89	0.55
1:A:1165:U:H2'	1:A:1166:G:O4'	2.07	0.55
1:A:182:A:O2'	1:A:183:C:H3'	2.07	0.55
1:A:279:A:H5''	1:A:280:C:H3'	1.87	0.55
16:N:30:ILE:O	16:N:30:ILE:HG22	2.07	0.55
9:G:25:PHE:HD2	9:G:42:VAL:HG13	1.70	0.55
17:O:44:GLU:HG2	17:O:45:HIS:CD2	2.42	0.55
18:P:33:ILE:HG22	18:P:34:GLU:HG3	1.89	0.55
1:A:1134:G:N3	1:A:1135:U:H1'	2.22	0.55
1:A:270:A:H2'	1:A:271:C:H6	1.71	0.55
17:O:2:LEU:HG	17:O:34:GLN:HG2	1.87	0.55
16:N:23:ARG:HA	16:N:26:LEU:HB2	1.87	0.55
1:A:820:U:H4'	1:A:821:G:OP2	2.07	0.55
10:H:48:PHE:HA	10:H:59:GLU:O	2.06	0.55
4:B:70:GLY:HA2	4:B:163:ILE:CG2	2.37	0.55
5:C:65:VAL:HG12	5:C:66:THR:N	2.22	0.55
1:A:490:C:H2'	1:A:491:G:H8	1.72	0.55
14:L:32:VAL:H	14:L:54:VAL:CG1	2.20	0.55
1:A:1306:A:H61	1:A:1331:G:H1'	1.72	0.55
1:A:1080:A:H5''	7:E:20:VAL:HG11	1.89	0.55
1:A:120:A:H2'	1:A:121:U:H5''	1.89	0.55
9:G:49:LEU:HD11	9:G:123:LEU:HB3	1.89	0.55
1:A:1432:G:H1'	1:A:1468:A:H61	1.72	0.55
1:A:373:A:H3'	1:A:373:A:OP2	2.07	0.55
4:B:128:LEU:HB3	4:B:132:GLU:HB3	1.88	0.55
1:A:67:C:H2'	1:A:68:G:C8	2.42	0.55
1:A:1402:C:H2'	1:A:1403:C:O4'	2.06	0.55
1:A:978:A:H4'	1:A:1322:C:C6	2.42	0.54
4:B:44:LYS:O	4:B:47:PRO:HD2	2.08	0.54
1:A:6:G:N3	1:A:6:G:H3'	2.22	0.54
7:E:96:GLN:HB3	7:E:123:LEU:HD12	1.89	0.54
1:A:492:C:H2'	1:A:493:A:N3	2.22	0.54
1:A:1117:A:H2'	1:A:1118:U:H6	1.71	0.54
1:A:236:A:H2'	1:A:237:G:C8	2.42	0.54
14:L:113:ARG:NH2	14:L:120:ARG:HA	2.22	0.54
10:H:15:ASN:O	10:H:18:ALA:HB3	2.06	0.54
1:A:82:G:H1'	1:A:89:U:O4'	2.06	0.54
10:H:4:ASP:OD2	10:H:80:PRO:HD3	2.07	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1356:G:H2'	1:A:1357:A:H8	1.70	0.54
1:A:208:U:H2'	1:A:210:C:C5	2.42	0.54
16:N:73:LEU:N	16:N:73:LEU:HD12	2.23	0.54
1:A:373:A:O4'	1:A:481:G:H1'	2.06	0.54
1:A:257:G:C2'	1:A:258:G:H5''	2.36	0.54
1:A:1247:U:H2'	1:A:1248:A:H8	1.71	0.54
1:A:250:A:H1'	1:A:252:U:C5	2.42	0.54
4:B:159:ALA:HB1	4:B:183:PHE:HE1	1.72	0.54
1:A:468:A:H3'	1:A:469:C:H6	1.71	0.54
14:L:83:GLY:HA2	14:L:94:TYR:CD1	2.42	0.54
1:A:663:A:H5'	1:A:836:G:OP1	2.07	0.54
17:O:14:PHE:CD2	17:O:29:ALA:HB2	2.42	0.54
1:A:204:G:H2'	1:A:205:A:C8	2.42	0.54
1:A:555:U:H2'	1:A:556:C:H6	1.71	0.54
1:A:635:A:H2'	1:A:636:U:C6	2.43	0.54
1:A:635:A:H2'	1:A:636:U:H6	1.71	0.54
13:K:31:VAL:HG21	13:K:66:ALA:HB2	1.89	0.54
13:K:23:HIS:O	13:K:29:THR:HA	2.07	0.54
1:A:992:U:H2'	1:A:1043:G:N7	2.22	0.54
16:N:12:ARG:O	16:N:15:LEU:HD11	2.07	0.54
4:B:114:LYS:C	4:B:116:LEU:H	2.10	0.54
10:H:11:THR:HG22	10:H:15:ASN:ND2	2.22	0.54
1:A:88:U:O2'	1:A:89:U:C5	2.60	0.54
1:A:996:A:H2'	1:A:997:U:C6	2.42	0.54
1:A:189:A:H2'	1:A:190:A:C8	2.41	0.54
14:L:86:VAL:HG12	14:L:87:LYS:N	2.21	0.54
21:S:11:ASP:O	21:S:14:LEU:HG	2.07	0.54
1:A:542:G:OP1	6:D:9:LYS:HE3	2.07	0.54
7:E:56:PRO:HA	7:E:59:ILE:HG22	1.90	0.54
1:A:942:G:N2	11:I:125:GLN:HE22	2.04	0.54
7:E:68:ARG:NH1	7:E:69:ASN:HD21	2.06	0.54
14:L:31:GLY:O	14:L:78:VAL:HG13	2.07	0.54
12:J:56:HIS:O	12:J:57:VAL:HG12	2.07	0.54
11:I:56:MET:N	11:I:56:MET:SD	2.80	0.54
1:A:175:C:H2'	1:A:176:C:H6	1.73	0.54
8:F:14:GLN:NE2	8:F:17:GLN:HE21	2.05	0.54
10:H:46:GLU:HB2	10:H:61:THR:HB	1.88	0.54
15:M:76:ILE:HG23	15:M:90:HIS:CD2	2.42	0.54
16:N:12:ARG:HE	16:N:53:ASP:CG	2.10	0.54
1:A:1314:C:OP2	21:S:5:LYS:HG2	2.08	0.54
4:B:17:HIS:O	4:B:37:VAL:HG23	2.07	0.54
18:P:71:VAL:HA	18:P:74:LEU:HG	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:63:ILE:H	5:C:98:ALA:HB2	1.71	0.54
23:U:39:LYS:N	23:U:40:PRO:CD	2.71	0.54
1:A:1125:U:H5''	12:J:37:ARG:HH11	1.72	0.54
1:A:493:A:H3'	1:A:494:G:H8	1.72	0.54
5:C:23:ALA:C	5:C:24:ASN:HD22	2.11	0.54
16:N:76:PHE:CE2	16:N:92:ILE:HD13	2.42	0.54
4:B:202:ASN:HD21	4:B:204:ASP:HB2	1.73	0.54
23:U:31:VAL:O	23:U:32:ARG:HB3	2.08	0.54
6:D:94:GLU:HG3	6:D:103:ARG:HH12	1.72	0.54
1:A:125:U:H2'	1:A:126:G:C8	2.43	0.54
1:A:266:G:O2'	1:A:267:C:H3'	2.08	0.54
14:L:106:VAL:HG13	14:L:116:TYR:HB3	1.90	0.54
1:A:1162:C:H2'	1:A:1163:A:C8	2.43	0.54
1:A:806:C:H2'	1:A:807:A:C8	2.43	0.54
1:A:1044:A:C5	1:A:1045:C:H1'	2.43	0.54
11:I:78:ILE:HG22	11:I:82:ILE:HG13	1.90	0.54
1:A:1320:C:H2'	1:A:1321:U:O4'	2.08	0.54
16:N:53:ASP:O	16:N:58:ARG:HD3	2.07	0.54
4:B:158:ASP:O	4:B:181:PRO:HD2	2.08	0.54
18:P:4:ILE:HD13	18:P:67:ILE:HB	1.90	0.54
23:U:36:PHE:HB2	23:U:40:PRO:HD3	1.87	0.54
14:L:73:LEU:HD21	14:L:103:CYS:HB2	1.88	0.54
5:C:205:GLU:HG2	5:C:206:ILE:H	1.73	0.54
5:C:86:LEU:HA	5:C:89:VAL:HG23	1.89	0.54
1:A:663:A:O2'	1:A:664:G:H5'	2.08	0.54
18:P:33:ILE:HG22	18:P:34:GLU:CG	2.38	0.54
1:A:603:U:H2'	1:A:604:G:H8	1.73	0.54
1:A:1309:G:H2'	1:A:1310:G:H8	1.69	0.54
1:A:211:G:N3	1:A:211:G:H5''	2.22	0.54
5:C:129:PHE:O	5:C:133:MET:HE3	2.07	0.54
5:C:166:TRP:HA	5:C:166:TRP:HE3	1.73	0.54
1:A:1247:U:H2'	1:A:1248:A:C8	2.41	0.54
1:A:529:G:O6	14:L:45:ASN:HA	2.08	0.54
1:A:523:A:N6	14:L:49:ARG:HH12	2.05	0.54
12:J:11:LYS:HG2	12:J:97:ASP:HB3	1.88	0.54
1:A:202:G:HO2'	1:A:468:A:H8	1.55	0.54
7:E:132:PRO:O	7:E:136:VAL:HG12	2.08	0.54
1:A:1342:C:H2'	1:A:1343:G:H8	1.73	0.54
17:O:45:HIS:O	17:O:47:LYS:HG3	2.07	0.54
1:A:218:U:H2'	1:A:219:U:C6	2.43	0.54
9:G:107:ALA:O	9:G:118:ARG:HB3	2.08	0.54
1:A:1203:C:OP1	16:N:1:ALA:HB3	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1060:U:H1'	12:J:54:SER:OG	2.08	0.54
4:B:220:VAL:HG12	4:B:221:ARG:H	1.73	0.54
4:B:84:LEU:HD12	4:B:88:GLN:O	2.08	0.54
7:E:75:LEU:HD23	7:E:76:ASN:N	2.23	0.54
5:C:11:LEU:HD13	5:C:17:TRP:NE1	2.23	0.54
15:M:53:ASP:HA	15:M:56:ARG:CZ	2.37	0.54
1:A:1332:A:H2'	1:A:1333:A:C8	2.43	0.54
11:I:24:ASN:O	11:I:61:ASP:HA	2.07	0.54
1:A:37:U:OP1	14:L:120:ARG:HB2	2.07	0.54
1:A:474:G:H2'	1:A:475:C:C6	2.42	0.54
1:A:1160:G:H5''	4:B:131:LYS:HD2	1.88	0.54
1:A:280:C:H41	19:Q:38:LYS:HE2	1.73	0.54
1:A:559:A:H4'	1:A:560:A:H3'	1.90	0.54
1:A:125:U:H2'	1:A:126:G:H8	1.72	0.54
1:A:993:G:H2'	1:A:995:C:H41	1.73	0.54
7:E:92:ARG:HB2	7:E:127:TYR:HB2	1.90	0.54
10:H:12:ARG:HB3	10:H:24:VAL:HG21	1.89	0.54
1:A:613:C:H2'	1:A:614:C:C6	2.42	0.54
19:Q:61:ARG:HG2	19:Q:75:VAL:HG12	1.90	0.54
4:B:83:ALA:CB	4:B:90:PHE:HB3	2.38	0.54
18:P:68:SER:OG	18:P:71:VAL:HG12	2.08	0.54
1:A:1130:A:N6	1:A:1143:G:N2	2.56	0.54
1:A:265:G:H4'	19:Q:66:LEU:O	2.08	0.54
1:A:1029:U:H2'	1:A:1031:C:N3	2.23	0.54
17:O:87:ARG:NH1	17:O:87:ARG:HB2	2.23	0.54
1:A:1508:A:H2'	1:A:1509:C:H6	1.71	0.54
12:J:67:ILE:HA	16:N:94:GLY:O	2.07	0.54
4:B:111:LYS:O	4:B:111:LYS:HD3	2.08	0.54
21:S:2:ARG:HG3	21:S:3:SER:H	1.73	0.54
4:B:166:ASP:HB2	4:B:190:SER:HA	1.89	0.54
8:F:4:TYR:CE2	8:F:71:ILE:HG21	2.43	0.54
12:J:43:PRO:O	12:J:71:LEU:HD11	2.08	0.54
6:D:117:VAL:HA	6:D:122:ILE:HB	1.90	0.54
1:A:626:G:H2'	1:A:627:G:H8	1.72	0.54
1:A:70:U:H4'	1:A:71:A:OP1	2.07	0.54
7:E:13:LYS:NZ	7:E:112:ALA:HA	2.22	0.54
1:A:1107:C:C4	1:A:1108:G:N7	2.76	0.54
9:G:93:VAL:HG23	9:G:94:ARG:H	1.72	0.54
1:A:1270:G:H2'	1:A:1271:A:C8	2.42	0.54
5:C:152:VAL:HG23	5:C:165:GLU:H	1.72	0.54
1:A:478:A:H2'	1:A:479:U:O4'	2.08	0.54
4:B:45:THR:HA	4:B:48:MET:SD	2.48	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:952:U:H2'	1:A:953:G:H8	1.73	0.53
15:M:79:LEU:HD22	15:M:86:ARG:HH21	1.73	0.53
1:A:1526:G:OP2	23:U:38:GLU:HB3	2.07	0.53
23:U:33:ARG:HH21	23:U:34:ARG:HG2	1.72	0.53
6:D:32:LYS:HE2	6:D:35:GLN:HG3	1.89	0.53
23:U:20:ARG:HB3	23:U:20:ARG:NH1	2.23	0.53
11:I:39:GLY:HA2	11:I:44:ARG:NE	2.23	0.53
1:A:153:C:H2'	1:A:154:U:H6	1.74	0.53
20:R:57:ALA:O	20:R:60:ARG:HG3	2.07	0.53
1:A:26:A:N6	1:A:558:G:H1'	2.23	0.53
1:A:500:G:H1'	1:A:547:A:N1	2.23	0.53
13:K:22:ILE:HD11	13:K:83:VAL:HG12	1.89	0.53
1:A:697:U:O2	1:A:798:U:H1'	2.08	0.53
14:L:23:LEU:C	14:L:23:LEU:HD22	2.29	0.53
11:I:87:MET:HB3	11:I:91:GLU:HG2	1.89	0.53
4:B:119:GLN:HA	4:B:124:THR:OG1	2.08	0.53
9:G:91:ARG:O	9:G:95:ARG:HB2	2.07	0.53
1:A:1262:C:H2'	1:A:1263:C:C6	2.43	0.53
4:B:53:LEU:HD13	4:B:56:LEU:HD23	1.90	0.53
22:T:4:LYS:HD2	22:T:6:ALA:H	1.72	0.53
1:A:1317:C:N4	16:N:52:ARG:HH22	2.06	0.53
1:A:950:U:H2'	1:A:951:G:C8	2.42	0.53
15:M:86:ARG:HB2	21:S:72:GLU:OE2	2.09	0.53
1:A:842:U:H2'	1:A:844:G:P	2.49	0.53
25:A:1765:HOH:O	11:I:110:VAL:HG13	2.08	0.53
13:K:56:LYS:O	13:K:58:THR:HG23	2.08	0.53
9:G:24:LYS:HA	9:G:27:ASN:ND2	2.24	0.53
11:I:94:ARG:C	11:I:96:GLU:H	2.12	0.53
1:A:121:U:H3'	1:A:121:U:OP1	2.08	0.53
5:C:30:ASP:HA	16:N:64:ARG:HH12	1.74	0.53
1:A:84:U:C2	1:A:87:C:H1'	2.43	0.53
16:N:68:ARG:NH1	16:N:70:HIS:HB2	2.23	0.53
1:A:1040:U:H2'	1:A:1041:G:H8	1.73	0.53
1:A:994:A:N1	1:A:1047:G:H4'	2.24	0.53
1:A:1206:G:H2'	1:A:1207:G:O4'	2.09	0.53
15:M:90:HIS:HA	15:M:108:ARG:HH22	1.72	0.53
5:C:69:THR:O	5:C:104:GLU:HA	2.09	0.53
20:R:23:LYS:C	20:R:25:ILE:H	2.11	0.53
1:A:469:C:H2'	1:A:470:C:O4'	2.08	0.53
1:A:1330:U:H2'	1:A:1331:G:O4'	2.08	0.53
14:L:113:ARG:CB	14:L:118:VAL:HG23	2.37	0.53
1:A:1013:G:H2'	1:A:1015:G:OP2	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:C:129:PHE:O	5:C:133:MET:HG2	2.08	0.53
10:H:32:LYS:HB3	10:H:58:LEU:HD12	1.89	0.53
1:A:1234:C:O2'	1:A:1235:U:H5'	2.09	0.53
1:A:139:A:H2'	1:A:140:U:C6	2.44	0.53
9:G:73:GLU:O	9:G:88:VAL:N	2.41	0.53
18:P:5:ARG:HH22	18:P:26:ASN:HB2	1.72	0.53
6:D:14:GLU:OE2	6:D:58:GLN:HB3	2.08	0.53
1:A:468:A:H3'	1:A:469:C:C6	2.43	0.53
14:L:32:VAL:H	14:L:54:VAL:HG13	1.74	0.53
1:A:1157:A:C2	1:A:1180:A:H2'	2.44	0.53
1:A:669:G:O2'	1:A:670:G:H5'	2.09	0.53
1:A:769:G:O2'	1:A:770:C:H5'	2.08	0.53
1:A:143:A:H2	1:A:220:G:H22	1.56	0.53
22:T:30:PHE:HB3	22:T:53:MET:HB3	1.90	0.53
1:A:708:C:H2'	1:A:709:U:C6	2.43	0.53
1:A:833:G:H2'	1:A:834:U:C6	2.43	0.53
16:N:9:GLU:OE2	16:N:60:ARG:HG2	2.08	0.53
5:C:38:VAL:HG23	5:C:39:ARG:H	1.72	0.53
1:A:170:U:O2'	1:A:171:A:H5'	2.09	0.53
1:A:1214:C:H4'	1:A:1215:G:OP1	2.06	0.53
1:A:341:C:O2'	1:A:342:C:H5'	2.08	0.53
5:C:100:ILE:O	5:C:101:ASN:HB3	2.07	0.53
6:D:12:ARG:HB3	6:D:37:PRO:CB	2.39	0.53
5:C:4:VAL:HG22	5:C:5:HIS:N	2.20	0.53
13:K:112:VAL:O	13:K:113:THR:C	2.46	0.53
18:P:48:GLU:HG2	18:P:49:GLY:N	2.24	0.53
5:C:150:VAL:HA	5:C:198:LYS:O	2.09	0.53
1:A:1011:C:H2'	1:A:1012:A:C8	2.44	0.53
1:A:1015:G:H2'	1:A:1016:A:H8	1.74	0.53
1:A:1458:G:H2'	1:A:1459:G:C8	2.43	0.53
1:A:701:U:O5'	1:A:703:G:H5'	2.08	0.53
1:A:618:C:H3'	1:A:620:C:OP2	2.07	0.53
1:A:954:G:H2'	1:A:955:U:H6	1.74	0.53
1:A:1380:U:O4	9:G:2:ARG:HA	2.08	0.53
1:A:1289:A:H61	11:I:71:ILE:HD13	1.72	0.53
1:A:1323:G:H4'	1:A:1362:A:C4	2.43	0.53
4:B:84:LEU:HA	4:B:88:GLN:O	2.09	0.53
1:A:651:C:O2'	1:A:652:U:H5'	2.08	0.53
6:D:196:GLU:C	6:D:198:LEU:H	2.12	0.53
6:D:36:ALA:HA	6:D:41:GLY:HA3	1.91	0.53
22:T:48:LYS:O	22:T:52:GLU:HG3	2.08	0.53
17:O:10:ILE:HD11	17:O:29:ALA:HB1	1.90	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:320:A:H2'	1:A:321:A:C8	2.44	0.53
1:A:981:U:H4'	16:N:60:ARG:HD2	1.91	0.53
16:N:12:ARG:HD2	16:N:58:ARG:NH1	2.23	0.53
12:J:8:ILE:O	12:J:10:LEU:HD12	2.08	0.53
1:A:1296:C:H5'	15:M:13:HIS:CE1	2.43	0.53
9:G:26:VAL:CA	9:G:42:VAL:HG21	2.37	0.53
1:A:235:C:H2'	1:A:236:A:H8	1.74	0.53
10:H:116:ARG:HB2	10:H:116:ARG:HH11	1.73	0.53
11:I:19:PHE:HB2	11:I:63:TYR:O	2.09	0.53
9:G:61:PHE:HA	9:G:123:LEU:CD1	2.38	0.53
20:R:52:ARG:NH1	20:R:52:ARG:HG2	2.23	0.53
18:P:22:ALA:HA	18:P:33:ILE:CD1	2.39	0.53
1:A:627:G:H2'	1:A:628:G:C8	2.43	0.53
1:A:123:U:H5''	1:A:311:C:O2'	2.09	0.53
16:N:33:VAL:HA	16:N:40:ARG:NE	2.22	0.53
1:A:1153:G:H2'	1:A:1154:G:O4'	2.08	0.53
10:H:5:PRO:HG2	10:H:6:ILE:H	1.72	0.53
15:M:84:CYS:HB2	21:S:72:GLU:OE1	2.09	0.53
14:L:54:VAL:HG11	14:L:79:ILE:HD11	1.90	0.53
11:I:35:GLU:HA	11:I:39:GLY:HA3	1.91	0.53
1:A:1069:C:O2'	1:A:1192:C:H1'	2.09	0.53
4:B:134:LEU:HA	4:B:137:THR:OG1	2.09	0.53
9:G:4:ARG:CZ	9:G:5:VAL:HG22	2.39	0.53
9:G:4:ARG:CZ	9:G:5:VAL:H	2.22	0.53
1:A:642:A:H2'	1:A:643:C:C6	2.44	0.53
1:A:858:G:O6	1:A:869:G:H3'	2.09	0.53
16:N:9:GLU:CD	16:N:60:ARG:HG2	2.30	0.52
15:M:11:HIS:H	15:M:44:ILE:HG12	1.73	0.52
18:P:51:ARG:HH11	18:P:53:ASP:H	1.56	0.52
1:A:404:G:H2'	1:A:405:U:C6	2.43	0.52
1:A:1178:G:H5'	11:I:94:ARG:HH12	1.74	0.52
11:I:34:LEU:HD11	11:I:47:VAL:HG11	1.90	0.52
11:I:79:ARG:NH2	11:I:102:PHE:HA	2.23	0.52
10:H:11:THR:HA	10:H:14:ARG:NH2	2.24	0.52
1:A:224:U:H2'	1:A:225:C:H6	1.75	0.52
1:A:210:C:H4'	1:A:211:G:N1	2.23	0.52
10:H:51:GLU:O	10:H:56:PRO:HA	2.08	0.52
7:E:67:ARG:HB2	7:E:67:ARG:HH11	1.74	0.52
1:A:539:A:H2'	1:A:540:G:C8	2.44	0.52
13:K:45:THR:HG23	13:K:48:GLY:H	1.74	0.52
1:A:952:U:H2'	1:A:953:G:C8	2.44	0.52
19:Q:23:ALA:HB1	19:Q:40:THR:CG2	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:120:ALA:O	11:I:121:ARG:HD2	2.09	0.52
1:A:542:G:O2'	1:A:543:U:H5'	2.10	0.52
6:D:12:ARG:HH11	6:D:12:ARG:HG2	1.73	0.52
9:G:30:MET:SD	9:G:35:LYS:HB2	2.49	0.52
1:A:1160:G:H2'	1:A:1161:C:C6	2.40	0.52
1:A:70:U:H1'	1:A:71:A:N7	2.24	0.52
11:I:56:MET:HA	11:I:59:LYS:HB3	1.92	0.52
6:D:123:MET:CE	6:D:145:ARG:HA	2.39	0.52
4:B:81:ASP:HA	4:B:85:SER:CB	2.39	0.52
5:C:72:PRO:O	5:C:76:ILE:HG12	2.10	0.52
7:E:81:GLN:CD	7:E:82:HIS:H	2.12	0.52
12:J:6:ILE:HB	12:J:76:ILE:HD11	1.91	0.52
1:A:412:A:H4'	1:A:413:G:OP1	2.08	0.52
5:C:24:ASN:N	5:C:24:ASN:HD22	2.07	0.52
13:K:88:PRO:HD3	23:U:28:LEU:HD13	1.90	0.52
1:A:1179:A:O3'	11:I:104:THR:HG22	2.10	0.52
13:K:80:ASN:ND2	13:K:80:ASN:H	2.05	0.52
11:I:79:ARG:HG2	11:I:102:PHE:CE2	2.44	0.52
1:A:1073:U:H2'	1:A:1074:G:C8	2.45	0.52
4:B:113:LEU:HB2	4:B:143:LEU:HB3	1.92	0.52
18:P:20:VAL:HG21	18:P:32:PHE:CD2	2.42	0.52
1:A:154:U:O2'	1:A:155:A:H5'	2.10	0.52
12:J:57:VAL:HG13	12:J:58:ASN:N	2.24	0.52
14:L:106:VAL:HG22	14:L:116:TYR:HB2	1.91	0.52
7:E:38:VAL:HG12	7:E:39:GLY:N	2.25	0.52
9:G:73:GLU:HG2	9:G:90:VAL:HG13	1.91	0.52
10:H:72:GLU:O	10:H:73:SER:HB2	2.08	0.52
4:B:71:THR:HB	4:B:168:GLU:OE1	2.09	0.52
18:P:51:ARG:CD	18:P:52:LEU:H	2.14	0.52
7:E:110:MET:SD	7:E:110:MET:N	2.83	0.52
15:M:3:ILE:HG12	15:M:52:ILE:HD11	1.91	0.52
1:A:1350:A:H2'	1:A:1351:U:C6	2.45	0.52
1:A:57:G:H2'	1:A:58:C:C6	2.45	0.52
9:G:78:ARG:N	9:G:83:THR:HG23	2.24	0.52
9:G:21:LEU:HD23	9:G:21:LEU:H	1.74	0.52
1:A:1453:G:H3'	1:A:1453:G:N3	2.23	0.52
1:A:1227:A:C8	1:A:1227:A:H5'	2.42	0.52
16:N:55:SER:OG	16:N:58:ARG:HB3	2.10	0.52
1:A:252:U:H2'	1:A:253:A:C8	2.43	0.52
18:P:72:ALA:HA	18:P:75:ILE:HD11	1.90	0.52
1:A:220:G:O2'	1:A:221:C:H5'	2.10	0.52
9:G:78:ARG:HD2	9:G:78:ARG:C	2.30	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:223:A:H2'	1:A:224:U:C6	2.44	0.52
1:A:1137:C:H1'	1:A:1138:G:N1	2.24	0.52
1:A:73:C:H2'	1:A:74:A:O4'	2.10	0.52
1:A:708:C:H2'	1:A:709:U:H6	1.73	0.52
1:A:1105:A:H2'	1:A:1106:G:H8	1.74	0.52
14:L:67:GLY:O	14:L:98:ARG:HD2	2.08	0.52
14:L:58:ASN:H	14:L:58:ASN:HD22	1.55	0.52
1:A:1218:C:H2'	1:A:1219:A:H8	1.73	0.52
1:A:355:C:O2'	1:A:356:A:H5'	2.09	0.52
11:I:18:VAL:CA	11:I:64:ILE:HG23	2.34	0.52
18:P:6:LEU:HD13	18:P:19:VAL:HG13	1.92	0.52
1:A:1128:C:H4'	1:A:1148:U:H3	1.74	0.52
1:A:1253:G:H5'	12:J:46:LYS:O	2.09	0.52
6:D:125:ASN:OD1	6:D:141:VAL:HG23	2.09	0.52
1:A:9:G:H2'	1:A:10:A:H8	1.73	0.52
1:A:658:C:H2'	1:A:659:U:H6	1.75	0.52
1:A:1060:U:C4'	12:J:54:SER:HB2	2.40	0.52
1:A:1218:C:H2'	1:A:1219:A:C8	2.44	0.52
12:J:13:PHE:HD1	16:N:93:PRO:HB2	1.74	0.52
6:D:116:LEU:HD21	6:D:153:ARG:CD	2.40	0.52
18:P:51:ARG:NH2	18:P:54:LEU:HD13	2.25	0.52
1:A:1056:U:H5'	5:C:162:ALA:CB	2.31	0.52
7:E:75:LEU:HD11	7:E:119:VAL:N	2.24	0.52
10:H:101:ALA:O	10:H:103:VAL:HG23	2.09	0.52
7:E:106:ALA:HB1	7:E:110:MET:CG	2.35	0.52
1:A:1151:A:H1'	1:A:1152:A:C8	2.45	0.52
5:C:28:PHE:CZ	16:N:92:ILE:HG23	2.45	0.52
22:T:57:VAL:HG12	22:T:71:ALA:HB1	1.92	0.52
5:C:38:VAL:HG12	5:C:90:VAL:HG12	1.92	0.52
1:A:309:A:H2'	1:A:310:G:C8	2.44	0.52
1:A:280:C:N4	19:Q:38:LYS:HE2	2.24	0.52
14:L:41:PRO:HG3	14:L:46:SER:O	2.10	0.52
1:A:208:U:H2'	1:A:210:C:C6	2.44	0.52
14:L:8:ARG:HG3	14:L:9:LYS:H	1.75	0.52
5:C:122:GLN:O	5:C:127:VAL:HG13	2.10	0.52
16:N:25:GLU:HA	16:N:28:ALA:HB3	1.91	0.52
14:L:10:PRO:HB3	19:Q:33:TYR:OH	2.09	0.52
9:G:17:PHE:CE2	9:G:58:LEU:HB2	2.45	0.52
1:A:62:U:H2'	1:A:63:C:C6	2.44	0.52
19:Q:22:VAL:O	19:Q:42:LYS:HA	2.10	0.52
4:B:95:TRP:CZ2	4:B:171:ALA:HA	2.45	0.52
6:D:111:ALA:O	6:D:114:ARG:HG2	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:121:PRO:HG2	14:L:122:LYS:H	1.75	0.52
13:K:77:GLY:O	13:K:78:ILE:HD13	2.10	0.52
1:A:1167:A:H2'	1:A:1169:A:H8	1.75	0.52
12:J:22:THR:O	12:J:25:ILE:HB	2.09	0.52
1:A:923:A:H2'	1:A:924:C:C6	2.44	0.52
1:A:1297:G:N2	9:G:113:LYS:HB3	2.24	0.52
1:A:384:G:H2'	1:A:385:C:H6	1.74	0.52
19:Q:27:PHE:CD1	19:Q:36:PHE:HB3	2.45	0.52
1:A:1051:C:H2'	1:A:1052:U:C6	2.45	0.52
6:D:200:VAL:O	6:D:204:SER:HB3	2.10	0.52
4:B:166:ASP:CB	4:B:190:SER:HA	2.40	0.52
4:B:68:PHE:O	4:B:90:PHE:HA	2.10	0.52
1:A:1326:U:O2'	1:A:1327:C:H5'	2.10	0.52
1:A:1350:A:OP1	11:I:122:ARG:HD2	2.09	0.52
11:I:126:PHE:CB	11:I:129:ARG:HG3	2.40	0.52
5:C:15:LYS:HE2	5:C:180:ASP:HB2	1.91	0.52
5:C:21:TRP:CH2	5:C:31:ASN:HB3	2.45	0.52
5:C:39:ARG:CZ	5:C:56:ILE:HD12	2.40	0.52
1:A:1074:G:H2'	1:A:1075:U:H6	1.75	0.52
10:H:82:LEU:O	10:H:82:LEU:HD13	2.10	0.52
1:A:737:C:H2'	1:A:738:C:H6	1.74	0.52
1:A:1264:U:H2'	1:A:1265:C:C6	2.44	0.52
8:F:18:VAL:HG21	8:F:58:HIS:ND1	2.24	0.52
1:A:686:U:O4	1:A:703:G:H1'	2.10	0.52
5:C:106:ARG:HD3	5:C:106:ARG:H	1.74	0.52
1:A:1163:A:H2'	1:A:1164:G:C8	2.45	0.52
7:E:103:GLY:O	7:E:105:ILE:HG13	2.10	0.52
1:A:1260:G:OP1	1:A:1284:C:H4'	2.10	0.52
6:D:89:LEU:HG	6:D:90:LEU:N	2.23	0.52
1:A:1118:U:C5'	11:I:10:ARG:HH21	2.23	0.52
11:I:44:ARG:O	11:I:47:VAL:HG13	2.10	0.52
1:A:627:G:H2'	1:A:628:G:H8	1.75	0.52
17:O:62:ARG:NH1	17:O:86:LEU:HD21	2.25	0.52
1:A:599:C:H4'	10:H:121:GLY:HA3	1.91	0.52
1:A:513:C:H2'	1:A:514:C:H6	1.74	0.52
4:B:139:GLU:O	4:B:142:LYS:HG3	2.10	0.52
1:A:685:G:O2'	1:A:686:U:H5'	2.09	0.52
1:A:1414:U:H2'	1:A:1415:G:H8	1.75	0.52
1:A:325:A:H2'	1:A:326:G:C8	2.45	0.52
1:A:113:G:O2'	1:A:354:G:H5'	2.10	0.52
11:I:5:TYR:HB3	11:I:20:ILE:HD13	1.92	0.51
15:M:79:LEU:CD2	15:M:86:ARG:HH21	2.23	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:68:HIS:HD2	21:S:72:GLU:HG3	1.75	0.51
5:C:75:VAL:O	5:C:82:ASP:HB3	2.10	0.51
5:C:59:PRO:HD2	5:C:62:SER:O	2.10	0.51
4:B:9:LEU:HD21	4:B:11:ALA:HB2	1.91	0.51
1:A:234:C:H2'	1:A:235:C:H6	1.75	0.51
1:A:942:G:H21	11:I:125:GLN:HE22	1.58	0.51
4:B:38:HIS:O	4:B:39:ILE:HD13	2.10	0.51
1:A:331:G:OP1	1:A:332:G:H5'	2.10	0.51
1:A:308:C:H2'	1:A:309:A:C8	2.41	0.51
1:A:1175:G:O2'	1:A:1176:A:H5'	2.10	0.51
1:A:763:G:H2'	1:A:764:C:H6	1.75	0.51
1:A:1446:A:C2'	1:A:1447:A:H5''	2.40	0.51
5:C:78:LYS:NZ	5:C:81:GLU:HG2	2.25	0.51
1:A:580:C:H2'	1:A:581:G:O4'	2.09	0.51
1:A:1316:G:N2	1:A:1318:A:H3'	2.25	0.51
21:S:4:LEU:HD22	21:S:9:PHE:N	2.25	0.51
4:B:184:ALA:O	4:B:199:ILE:HG13	2.10	0.51
4:B:27:LYS:H	4:B:28:PRO:CD	2.23	0.51
8:F:6:ILE:HA	8:F:88:MET:O	2.10	0.51
18:P:4:ILE:O	18:P:71:VAL:HG11	2.10	0.51
1:A:408:A:H3'	1:A:409:U:H6	1.75	0.51
6:D:12:ARG:NH1	6:D:12:ARG:HG2	2.25	0.51
1:A:715:A:O2'	1:A:716:A:H5'	2.09	0.51
6:D:75:TYR:CE1	6:D:203:TYR:HB3	2.45	0.51
1:A:1240:U:OP1	9:G:115:MET:N	2.43	0.51
1:A:184:G:O4'	1:A:224:U:H4'	2.10	0.51
1:A:1137:C:O2	1:A:1137:C:O4'	2.28	0.51
1:A:1458:G:OP1	22:T:26:MET:HA	2.10	0.51
1:A:1095:U:H2'	1:A:1096:C:C6	2.44	0.51
1:A:21:G:H2'	1:A:22:G:C8	2.45	0.51
1:A:646:G:H2'	1:A:647:C:H6	1.76	0.51
11:I:88:GLU:H	11:I:88:GLU:CD	2.13	0.51
1:A:920:U:H2'	1:A:921:U:H6	1.75	0.51
12:J:11:LYS:HE2	12:J:97:ASP:CB	2.38	0.51
1:A:1188:A:H2'	1:A:1189:U:O4'	2.11	0.51
22:T:61:ALA:CB	22:T:66:ILE:HG22	2.40	0.51
1:A:484:G:H4'	1:A:485:U:H5'	1.91	0.51
9:G:111:GLY:HA2	9:G:118:ARG:HH21	1.75	0.51
1:A:1026:G:H2'	1:A:1027:C:H6	1.76	0.51
1:A:87:C:H2'	1:A:88:U:C4'	2.40	0.51
1:A:634:C:H2'	1:A:635:A:C8	2.46	0.51
11:I:54:VAL:HB	11:I:59:LYS:NZ	2.24	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:677:U:O2'	1:A:678:U:H5'	2.10	0.51
15:M:58:GLU:HA	15:M:61:LYS:HG3	1.91	0.51
1:A:947:G:H2'	1:A:948:C:C6	2.45	0.51
1:A:948:C:O2'	1:A:949:A:H5'	2.10	0.51
16:N:16:ALA:HA	16:N:20:PHE:HD2	1.76	0.51
19:Q:6:THR:HA	19:Q:60:ILE:O	2.10	0.51
4:B:31:PHE:HB2	4:B:41:ASN:HA	1.93	0.51
5:C:83:VAL:HB	5:C:87:ARG:NH2	2.22	0.51
7:E:85:LYS:HE3	7:E:94:PHE:HB2	1.92	0.51
10:H:92:PRO:HA	10:H:93:LYS:HZ3	1.73	0.51
23:U:48:LYS:HA	23:U:51:ALA:CB	2.39	0.51
6:D:169:TRP:O	6:D:182:LYS:HB3	2.10	0.51
6:D:115:GLN:HG3	6:D:119:HIS:CE1	2.46	0.51
10:H:73:SER:HB3	10:H:129:ALA:HB3	1.91	0.51
1:A:1369:C:H2'	1:A:1370:G:C8	2.45	0.51
1:A:1103:C:O2	4:B:105:THR:HG21	2.11	0.51
1:A:1128:C:H4'	1:A:1148:U:N3	2.26	0.51
6:D:27:ILE:N	6:D:27:ILE:HD12	2.26	0.51
6:D:28:ASP:O	6:D:30:LYS:HD3	2.11	0.51
1:A:1306:A:N6	1:A:1331:G:O2'	2.43	0.51
23:U:17:ARG:HA	23:U:20:ARG:HB2	1.92	0.51
5:C:13:ILE:HG22	5:C:14:VAL:N	2.25	0.51
1:A:1106:G:H2'	1:A:1107:C:H6	1.74	0.51
1:A:1270:G:H2'	1:A:1271:A:H8	1.76	0.51
8:F:36:ILE:N	8:F:36:ILE:HD12	2.26	0.51
12:J:7:ARG:C	12:J:8:ILE:HD13	2.30	0.51
1:A:1179:A:H2'	1:A:1180:A:O4'	2.10	0.51
11:I:23:GLY:H	11:I:60:LEU:HA	1.74	0.51
1:A:1343:G:H2'	1:A:1344:C:C6	2.45	0.51
1:A:1349:A:H2'	1:A:1350:A:O4'	2.10	0.51
4:B:107:ARG:HG3	4:B:108:GLN:N	2.25	0.51
10:H:76:ARG:HD3	10:H:77:VAL:H	1.76	0.51
14:L:9:LYS:O	14:L:9:LYS:HD3	2.11	0.51
1:A:372:C:H1'	1:A:373:A:OP2	2.11	0.51
5:C:119:ILE:HD13	5:C:137:VAL:CG2	2.39	0.51
1:A:118:U:O4	1:A:288:A:H2'	2.10	0.51
1:A:594:U:H2'	1:A:595:A:O4'	2.09	0.51
10:H:112:ASP:O	10:H:115:ALA:HB3	2.11	0.51
1:A:131:A:H2'	1:A:132:C:C6	2.46	0.51
1:A:797:C:OP2	13:K:125:LYS:HD3	2.11	0.51
12:J:10:LEU:HG	12:J:98:VAL:CG1	2.41	0.51
1:A:619:U:N3	6:D:130:ASN:ND2	2.54	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1300:G:H1'	1:A:1301:U:H5	1.73	0.51
1:A:954:G:H2'	1:A:955:U:C6	2.46	0.51
5:C:110:LEU:HD12	5:C:143:LEU:HD22	1.92	0.51
11:I:64:ILE:HG22	11:I:65:THR:N	2.19	0.51
11:I:32:ARG:HB3	11:I:36:GLN:O	2.10	0.51
4:B:67:LEU:HD21	4:B:157:PRO:HA	1.93	0.51
4:B:67:LEU:HB2	4:B:160:LEU:HA	1.93	0.51
18:P:6:LEU:CG	18:P:17:TYR:HB3	2.40	0.51
7:E:79:THR:OG1	7:E:80:LEU:N	2.44	0.51
7:E:95:MET:HA	7:E:124:ALA:HB2	1.91	0.51
6:D:47:LEU:HB2	6:D:51:GLY:HA3	1.92	0.51
1:A:1070:U:H2'	1:A:1071:C:C6	2.46	0.51
7:E:56:PRO:HG2	7:E:57:ALA:H	1.76	0.51
1:A:506:G:H2'	1:A:507:C:C6	2.46	0.51
5:C:37:LYS:HB3	5:C:93:ILE:HD11	1.91	0.51
1:A:890:G:O2'	1:A:906:A:N6	2.44	0.51
18:P:42:ILE:HG22	18:P:43:ALA:H	1.74	0.51
1:A:641:U:H4'	10:H:106:SER:O	2.10	0.51
1:A:159:G:N1	1:A:163:C:N4	2.59	0.51
1:A:990:C:O2'	1:A:991:U:H5'	2.10	0.51
1:A:1289:A:H2	1:A:1372:U:H1'	1.74	0.51
15:M:78:ARG:HH21	15:M:82:LEU:HG	1.76	0.51
4:B:183:PHE:CD1	4:B:183:PHE:N	2.78	0.51
5:C:156:LEU:H	5:C:156:LEU:CD1	2.20	0.51
8:F:54:LEU:HD12	8:F:56:LYS:O	2.11	0.51
1:A:16:A:N1	1:A:919:A:H2	2.08	0.51
1:A:119:A:H4'	1:A:120:A:O4'	2.11	0.51
1:A:1240:U:C2	9:G:31:VAL:HG12	2.46	0.51
11:I:50:PRO:HB3	11:I:102:PHE:CE2	2.46	0.51
1:A:451:A:H5''	18:P:70:ARG:HH22	1.75	0.51
1:A:375:U:OP1	18:P:70:ARG:HD3	2.11	0.51
18:P:39:PHE:CE2	18:P:41:PRO:HG3	2.46	0.51
1:A:632:U:H3'	1:A:633:G:C5'	2.41	0.51
1:A:193:C:H2'	1:A:194:C:C6	2.46	0.51
1:A:390:U:H2'	1:A:391:G:C8	2.45	0.51
1:A:980:C:H4'	16:N:58:ARG:HH12	1.76	0.51
21:S:28:LYS:HB3	21:S:29:PRO:HD2	1.93	0.51
4:B:58:LYS:HB3	4:B:62:ARG:NH1	2.26	0.51
1:A:972:C:H1'	12:J:57:VAL:HG23	1.93	0.51
1:A:1029:U:H2'	1:A:1031:C:O2	2.11	0.51
1:A:956:U:O2'	1:A:957:U:H5'	2.11	0.51
1:A:1035:A:H2'	1:A:1036:A:C8	2.46	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:65:A:H4'	1:A:66:A:C5'	2.40	0.51
1:A:1320:C:N3	21:S:35:ARG:NH1	2.59	0.50
4:B:35:ASN:C	4:B:37:VAL:H	2.14	0.50
19:Q:10:ARG:CZ	19:Q:55:GLY:N	2.74	0.50
19:Q:58:VAL:HG12	19:Q:77:VAL:CA	2.34	0.50
4:B:27:LYS:HA	4:B:30:ILE:HD11	1.92	0.50
10:H:54:THR:OG1	10:H:55:LYS:HE3	2.11	0.50
18:P:51:ARG:HH11	18:P:53:ASP:N	2.09	0.50
1:A:376:G:H2'	1:A:377:G:H8	1.75	0.50
1:A:494:G:O2'	1:A:496:A:H1'	2.10	0.50
6:D:32:LYS:HE2	6:D:35:GLN:CG	2.40	0.50
8:F:47:LEU:HG	8:F:56:LYS:CA	2.41	0.50
14:L:20:VAL:CG1	14:L:23:LEU:HB2	2.41	0.50
9:G:87:PRO:HD2	9:G:150:PHE:HB2	1.93	0.50
1:A:1342:C:H1'	11:I:125:GLN:NE2	2.25	0.50
17:O:20:ASP:O	17:O:26:VAL:HG11	2.11	0.50
1:A:69:G:N2	1:A:71:A:N6	2.59	0.50
9:G:15:PRO:HG2	9:G:43:TYR:CZ	2.46	0.50
16:N:30:ILE:HD12	16:N:30:ILE:H	1.75	0.50
4:B:42:LEU:HA	4:B:45:THR:HB	1.91	0.50
1:A:1533:C:C3'	1:A:1534:A:H5''	2.41	0.50
1:A:1143:G:H2'	1:A:1144:G:H8	1.71	0.50
9:G:8:GLN:HG2	9:G:9:ARG:N	2.26	0.50
1:A:1182:G:H4'	1:A:1183:U:H5'	1.94	0.50
1:A:1101:A:H4'	1:A:1102:A:O5'	2.12	0.50
1:A:230:G:O2'	1:A:231:U:H5'	2.11	0.50
9:G:4:ARG:HG3	9:G:5:VAL:N	2.27	0.50
9:G:4:ARG:NH1	9:G:5:VAL:HG22	2.26	0.50
1:A:1018:G:H2'	1:A:1019:A:H8	1.76	0.50
1:A:168:G:O2'	1:A:169:C:H5'	2.11	0.50
14:L:105:GLY:HA3	14:L:117:GLY:O	2.11	0.50
11:I:12:LYS:HA	11:I:109:GLN:NE2	2.27	0.50
11:I:78:ILE:O	11:I:82:ILE:HG13	2.12	0.50
9:G:63:VAL:HA	9:G:66:GLU:OE1	2.12	0.50
7:E:143:LEU:HA	7:E:146:MET:HG3	1.93	0.50
1:A:1150:A:H1'	1:A:1280:A:C6	2.46	0.50
1:A:1065:U:H5''	1:A:1190:G:H22	1.76	0.50
1:A:1438:G:O2'	1:A:1439:G:H5'	2.12	0.50
6:D:159:GLU:HG3	6:D:160:LEU:HD13	1.94	0.50
12:J:28:THR:OG1	12:J:87:LEU:HD23	2.10	0.50
1:A:451:A:H5''	18:P:70:ARG:NH2	2.26	0.50
1:A:1478:U:H2'	1:A:1479:C:C6	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:215:C:H2'	1:A:216:U:C6	2.46	0.50
1:A:737:C:H2'	1:A:738:C:C6	2.47	0.50
1:A:1009:U:O2'	1:A:1010:U:H5'	2.11	0.50
8:F:53:LYS:HA	8:F:53:LYS:HE2	1.93	0.50
1:A:114:U:O2'	1:A:115:G:H5'	2.12	0.50
15:M:82:LEU:HB2	15:M:84:CYS:SG	2.51	0.50
19:Q:45:VAL:HG22	19:Q:60:ILE:HG21	1.93	0.50
5:C:102:ILE:HD12	5:C:103:ALA:N	2.26	0.50
7:E:102:THR:O	7:E:121:ASN:HB2	2.11	0.50
7:E:14:LEU:HD13	7:E:15:ILE:N	2.26	0.50
1:A:224:U:H2'	1:A:225:C:C6	2.46	0.50
10:H:82:LEU:HD13	10:H:84:ILE:HD11	1.92	0.50
13:K:15:VAL:HG13	13:K:36:ARG:CZ	2.40	0.50
13:K:69:CYS:O	13:K:73:VAL:HG23	2.12	0.50
5:C:2:GLN:N	5:C:2:GLN:NE2	2.59	0.50
1:A:1062:U:H2'	1:A:1063:C:C5	2.47	0.50
4:B:22:TRP:HA	4:B:189:ASN:HB3	1.92	0.50
10:H:9:MET:HA	10:H:26:MET:HE2	1.94	0.50
10:H:58:LEU:HD22	10:H:60:LEU:CD1	2.41	0.50
1:A:706:A:O2'	13:K:32:THR:HG21	2.11	0.50
1:A:957:U:H4'	21:S:78:THR:HB	1.93	0.50
1:A:1426:G:H2'	1:A:1427:C:C6	2.46	0.50
1:A:802:A:H2'	1:A:803:G:O4'	2.11	0.50
1:A:31:G:N7	1:A:306:A:H1'	2.26	0.50
4:B:92:ASN:ND2	4:B:93:HIS:H	2.09	0.50
9:G:149:ALA:HB1	13:K:58:THR:HG21	1.94	0.50
1:A:1335:U:H4'	1:A:1336:C:C5	2.46	0.50
9:G:147:ASN:HB3	9:G:150:PHE:CE1	2.46	0.50
11:I:126:PHE:HB2	11:I:129:ARG:CG	2.41	0.50
6:D:72:ARG:HA	6:D:203:TYR:HE1	1.76	0.50
6:D:162:GLU:HA	6:D:166:LYS:HZ3	1.73	0.50
20:R:40:PRO:N	20:R:43:ILE:HD11	2.26	0.50
4:B:22:TRP:C	4:B:189:ASN:HA	2.32	0.50
6:D:120:LYS:HB3	6:D:145:ARG:NH1	2.26	0.50
1:A:1456:A:H2'	1:A:1457:G:C8	2.46	0.50
19:Q:11:VAL:HG13	19:Q:20:ILE:HB	1.92	0.50
4:B:221:ARG:HD2	4:B:222:GLU:N	2.27	0.50
7:E:46:GLY:HA3	7:E:70:MET:CG	2.30	0.50
9:G:145:GLU:C	9:G:147:ASN:H	2.14	0.50
1:A:17:U:H2'	1:A:18:C:H6	1.76	0.50
10:H:113:ARG:CA	10:H:116:ARG:HH12	2.20	0.50
13:K:105:ARG:O	13:K:106:ILE:HB	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1004:A:H1'	1:A:1026:G:C6	2.47	0.50
1:A:476:U:H2'	1:A:477:C:H6	1.74	0.50
1:A:52:C:H2'	1:A:53:A:C8	2.46	0.50
20:R:33:THR:HG23	20:R:35:SER:H	1.77	0.50
21:S:70:LEU:HD12	21:S:70:LEU:H	1.76	0.50
4:B:210:THR:HA	4:B:213:LEU:HB3	1.94	0.50
1:A:1277:C:H1'	1:A:1282:C:O2	2.11	0.50
6:D:31:CYS:O	6:D:32:LYS:HB2	2.12	0.50
9:G:30:MET:CE	9:G:33:GLY:HA2	2.42	0.50
1:A:553:A:O4'	14:L:27:PRO:HA	2.10	0.50
1:A:1241:G:H2'	1:A:1242:G:C8	2.44	0.50
9:G:122:GLU:HA	9:G:125:ASP:HB2	1.92	0.50
1:A:762:U:H2'	1:A:763:G:H8	1.76	0.50
5:C:171:ARG:HH21	5:C:173:PRO:CG	2.25	0.50
1:A:373:A:H1'	1:A:481:G:N3	2.27	0.50
1:A:300:A:H2'	1:A:301:G:O4'	2.12	0.50
1:A:1049:U:H1'	1:A:1201:A:C5	2.46	0.50
6:D:116:LEU:HD21	6:D:153:ARG:HD2	1.94	0.50
6:D:66:VAL:HG12	6:D:67:LEU:N	2.27	0.50
15:M:112:ARG:HG2	15:M:114:PRO:HD3	1.94	0.50
15:M:97:ARG:H	15:M:99:GLN:HE22	1.60	0.50
1:A:250:A:N3	1:A:250:A:H2'	2.26	0.50
6:D:8:LEU:HD11	6:D:21:LYS:HD2	1.93	0.50
4:B:10:LYS:HE2	4:B:10:LYS:HA	1.93	0.50
1:A:1178:G:N2	1:A:1180:A:H3'	2.26	0.50
13:K:80:ASN:N	13:K:105:ARG:HD3	2.26	0.50
1:A:975:A:OP2	1:A:975:A:H4'	2.12	0.50
1:A:1074:G:H2'	1:A:1075:U:C6	2.46	0.50
20:R:60:ARG:HH11	20:R:60:ARG:HG2	1.77	0.50
20:R:45:GLY:C	20:R:47:ARG:H	2.14	0.50
10:H:37:ASN:C	10:H:39:LEU:H	2.14	0.50
22:T:67:HIS:HB3	22:T:68:LYS:HE2	1.93	0.50
1:A:389:A:H2'	1:A:389:A:N3	2.26	0.50
1:A:1251:A:H2'	1:A:1252:A:H8	1.77	0.50
4:B:67:LEU:HD11	4:B:153:MET:HE3	1.92	0.50
18:P:74:LEU:HD23	18:P:77:GLU:OE2	2.12	0.50
1:A:37:U:H2'	1:A:38:G:H8	1.77	0.50
6:D:157:ALA:O	6:D:160:LEU:HD22	2.12	0.50
9:G:61:PHE:CE1	9:G:123:LEU:HD21	2.46	0.50
5:C:38:VAL:O	5:C:42:LEU:HD23	2.12	0.50
10:H:79:ARG:HG2	10:H:82:LEU:HD12	1.93	0.50
18:P:1:MET:HB3	18:P:24:SER:CB	2.39	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:279:A:OP1	1:A:281:G:H5'	2.12	0.50
11:I:51:LEU:HD13	11:I:56:MET:HG2	1.93	0.50
14:L:98:ARG:HB2	14:L:116:TYR:CA	2.40	0.50
5:C:129:PHE:HB2	5:C:133:MET:HE1	1.94	0.50
16:N:23:ARG:HG3	16:N:26:LEU:HD23	1.93	0.50
1:A:390:U:H2'	1:A:391:G:H8	1.77	0.50
11:I:29:ILE:HD11	11:I:37:TYR:HD2	1.77	0.49
1:A:1314:C:H2'	1:A:1315:U:C6	2.47	0.49
4:B:164:ASP:OD1	4:B:167:HIS:HB3	2.12	0.49
4:B:76:SER:C	4:B:92:ASN:HB2	2.32	0.49
9:G:56:SER:HB2	9:G:59:GLU:OE1	2.11	0.49
10:H:94:VAL:HG23	10:H:101:ALA:HB2	1.94	0.49
12:J:40:ILE:CG2	12:J:42:LEU:HG	2.41	0.49
5:C:26:LYS:HD3	5:C:27:GLU:OE1	2.12	0.49
1:A:202:G:H1'	1:A:468:A:C8	2.46	0.49
14:L:27:PRO:HB2	14:L:28:GLN:NE2	2.27	0.49
7:E:15:ILE:CG2	7:E:35:LEU:HD13	2.42	0.49
11:I:10:ARG:HG3	11:I:10:ARG:O	2.12	0.49
8:F:18:VAL:HG11	8:F:58:HIS:ND1	2.26	0.49
9:G:22:LEU:O	9:G:22:LEU:HD22	2.12	0.49
1:A:185:U:H2'	1:A:186:C:H6	1.75	0.49
1:A:31:G:N2	1:A:47:C:H4'	2.27	0.49
1:A:262:A:H2'	1:A:263:A:C8	2.47	0.49
16:N:12:ARG:HA	16:N:15:LEU:CD2	2.36	0.49
4:B:181:PRO:HB3	4:B:197:PHE:CE2	2.47	0.49
1:A:1053:G:O6	1:A:1199:U:H2'	2.11	0.49
5:C:161:ILE:HD13	5:C:161:ILE:N	2.27	0.49
1:A:1375:A:H2'	1:A:1376:U:O4'	2.12	0.49
7:E:131:ASN:CB	7:E:134:ASN:HD22	2.24	0.49
14:L:5:GLN:HA	14:L:8:ARG:NH1	2.27	0.49
1:A:580:C:H2'	1:A:581:G:C8	2.47	0.49
1:A:1036:A:H2'	1:A:1037:C:O4'	2.12	0.49
1:A:775:G:H2'	1:A:776:G:C8	2.47	0.49
10:H:110:MET:HE3	10:H:111:THR:O	2.12	0.49
1:A:1320:C:C5	21:S:36:ARG:HA	2.46	0.49
5:C:185:THR:HG22	5:C:186:SER:N	2.26	0.49
12:J:61:ALA:O	12:J:62:ARG:HB2	2.12	0.49
10:H:94:VAL:HG21	10:H:100:ILE:O	2.13	0.49
13:K:53:GLY:O	13:K:56:LYS:HG2	2.11	0.49
12:J:37:ARG:HB2	12:J:74:VAL:O	2.12	0.49
6:D:25:ARG:NH1	6:D:30:LYS:HE3	2.27	0.49
23:U:16:ARG:HE	23:U:16:ARG:HA	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:43:ILE:HD12	20:R:44:THR:N	2.26	0.49
1:A:558:G:H2'	1:A:559:A:C2	2.48	0.49
2:W:28:C:H2'	2:W:29:G:C8	2.48	0.49
1:A:1464:U:H2'	1:A:1465:A:C8	2.48	0.49
1:A:924:C:H2'	1:A:925:G:C8	2.47	0.49
1:A:1446:A:C3'	1:A:1447:A:H5''	2.42	0.49
17:O:85:GLY:O	17:O:88:ARG:HD3	2.12	0.49
9:G:94:ARG:NH2	9:G:98:LEU:HD21	2.27	0.49
18:P:56:ARG:O	18:P:59:HIS:HB3	2.12	0.49
13:K:70:ALA:C	13:K:72:ALA:H	2.16	0.49
6:D:176:LYS:HD2	6:D:178:GLU:HB3	1.93	0.49
1:A:1225:A:H2'	1:A:1225:A:N3	2.27	0.49
1:A:1315:U:H2'	1:A:1316:G:O4'	2.13	0.49
1:A:252:U:H2'	1:A:253:A:H8	1.76	0.49
6:D:12:ARG:HD2	6:D:31:CYS:O	2.12	0.49
5:C:24:ASN:HB2	5:C:27:GLU:OE2	2.12	0.49
11:I:87:MET:SD	11:I:94:ARG:HB2	2.53	0.49
19:Q:68:LYS:O	19:Q:69:THR:HB	2.13	0.49
1:A:1107:C:OP1	5:C:173:PRO:HD3	2.13	0.49
1:A:1368:A:O2'	1:A:1369:C:H5'	2.11	0.49
15:M:103:THR:HG22	15:M:104:ASN:OD1	2.13	0.49
1:A:255:G:H2'	1:A:256:U:H6	1.77	0.49
4:B:221:ARG:CZ	4:B:222:GLU:HB2	2.42	0.49
18:P:51:ARG:O	18:P:52:LEU:HB2	2.12	0.49
7:E:104:ILE:CD1	7:E:122:VAL:HG23	2.41	0.49
7:E:76:ASN:CG	7:E:77:ASN:N	2.64	0.49
6:D:59:LYS:C	6:D:61:ARG:H	2.15	0.49
22:T:31:ILE:HG21	22:T:74:HIS:CE1	2.47	0.49
4:B:61:SER:HA	4:B:224:ARG:CB	2.41	0.49
4:B:116:LEU:HB3	4:B:140:LEU:HD21	1.95	0.49
1:A:602:A:O2'	1:A:603:U:H5'	2.12	0.49
1:A:185:U:H2'	1:A:186:C:C6	2.48	0.49
4:B:17:HIS:CG	4:B:18:GLN:H	2.30	0.49
4:B:18:GLN:O	4:B:37:VAL:HB	2.13	0.49
4:B:81:ASP:HA	4:B:85:SER:HB2	1.94	0.49
15:M:10:ASP:HB3	15:M:44:ILE:HG12	1.93	0.49
12:J:8:ILE:CG1	12:J:74:VAL:HB	2.41	0.49
1:A:545:C:H5'	6:D:68:GLU:CG	2.43	0.49
4:B:202:ASN:HD22	4:B:203:ASP:N	2.10	0.49
9:G:26:VAL:HG12	9:G:42:VAL:HG11	1.95	0.49
1:A:1391:U:H2'	1:A:1392:G:H8	1.74	0.49
1:A:153:C:H2'	1:A:154:U:C6	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:50:ASN:HA	4:B:53:LEU:HD23	1.94	0.49
1:A:373:A:H2'	1:A:374:A:C8	2.48	0.49
1:A:159:G:H1	1:A:163:C:N4	2.10	0.49
6:D:104:MET:HB3	6:D:172:VAL:HG21	1.95	0.49
1:A:440:C:H2'	1:A:441:A:C8	2.47	0.49
1:A:358:U:H2'	1:A:359:G:C8	2.48	0.49
4:B:26:MET:HE1	4:B:192:PRO:HD3	1.93	0.49
16:N:12:ARG:HD3	16:N:53:ASP:O	2.12	0.49
16:N:56:PRO:C	16:N:59:GLN:HE22	2.16	0.49
8:F:1:MET:HB3	8:F:65:GLU:O	2.13	0.49
7:E:121:ASN:O	7:E:122:VAL:HG13	2.13	0.49
1:A:1279:G:N2	12:J:45:ARG:HE	2.11	0.49
1:A:490:C:H2'	1:A:491:G:C8	2.47	0.49
5:C:5:HIS:CD2	5:C:7:ASN:HB3	2.48	0.49
16:N:84:ARG:O	16:N:88:MET:HG2	2.13	0.49
23:U:24:LYS:C	23:U:26:GLY:H	2.16	0.49
9:G:46:LEU:O	9:G:57:GLU:HG3	2.13	0.49
1:A:88:U:O2	1:A:88:U:O2'	2.31	0.49
1:A:1133:G:O2'	1:A:1134:G:H5'	2.12	0.49
17:O:10:ILE:HG21	17:O:30:LEU:HD12	1.95	0.49
1:A:122:G:O2'	1:A:123:U:H5'	2.12	0.49
1:A:190:A:O5'	1:A:190:A:H8	1.95	0.49
1:A:608:A:H2'	1:A:609:A:O4'	2.11	0.49
1:A:526:C:H2'	1:A:527:G:H4'	1.95	0.49
1:A:1417:G:N2	1:A:1482:G:H2'	2.28	0.49
1:A:1312:G:O2'	1:A:1313:U:H5'	2.13	0.49
1:A:1188:A:H4'	16:N:97:LYS:HE2	1.94	0.49
1:A:1236:A:H2'	1:A:1237:C:C6	2.47	0.49
6:D:94:GLU:HG3	6:D:103:ARG:NH2	2.28	0.49
1:A:1157:A:H2	1:A:1180:A:H2'	1.78	0.49
1:A:1511:G:H2'	1:A:1512:U:O4'	2.13	0.49
9:G:61:PHE:CD1	9:G:123:LEU:HD11	2.48	0.49
9:G:46:LEU:HB3	9:G:57:GLU:CB	2.42	0.49
14:L:6:LEU:HD21	14:L:11:ARG:NE	2.27	0.49
4:B:143:LEU:O	4:B:147:LEU:HG	2.12	0.49
6:D:18:LEU:O	6:D:63:ILE:HG13	2.12	0.49
1:A:1133:G:H2'	1:A:1134:G:O4'	2.13	0.49
13:K:34:THR:OG1	13:K:39:ASN:N	2.46	0.49
1:A:210:C:H4'	1:A:211:G:C2	2.47	0.49
1:A:924:C:H2'	1:A:925:G:H8	1.78	0.49
1:A:621:A:H2'	1:A:622:A:C8	2.47	0.49
1:A:298:A:H2'	1:A:299:G:C8	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1426:G:H2'	1:A:1427:C:H6	1.77	0.49
1:A:304:U:H2'	1:A:305:G:C8	2.48	0.49
16:N:6:LYS:O	16:N:10:VAL:HG23	2.13	0.49
19:Q:14:ASP:C	19:Q:16:MET:H	2.16	0.49
19:Q:80:LYS:HD2	19:Q:81:ALA:N	2.21	0.49
1:A:1055:A:C2	1:A:1056:U:H1'	2.48	0.49
1:A:1141:C:H2'	1:A:1142:G:O4'	2.13	0.49
9:G:145:GLU:C	9:G:147:ASN:N	2.66	0.49
18:P:20:VAL:HG23	18:P:34:GLU:C	2.33	0.49
12:J:25:ILE:HG23	12:J:87:LEU:HD21	1.94	0.49
1:A:636:U:H2'	1:A:637:C:C6	2.47	0.49
4:B:42:LEU:HA	4:B:45:THR:CB	2.42	0.49
1:A:1317:C:OP1	16:N:56:PRO:HD2	2.12	0.49
1:A:1322:C:C2'	1:A:1322:C:O2	2.51	0.49
1:A:1348:U:OP1	11:I:111:GLU:HB2	2.13	0.49
1:A:429:U:H3'	6:D:8:LEU:HD13	1.94	0.49
9:G:23:ALA:O	9:G:26:VAL:HG22	2.13	0.49
1:A:1237:C:C4'	1:A:1334:G:N2	2.76	0.49
1:A:1339:A:H2'	1:A:1340:A:O4'	2.13	0.49
14:L:43:LYS:H	14:L:44:PRO:CD	2.23	0.49
20:R:32:ILE:CG2	20:R:58:ILE:HD13	2.40	0.49
4:B:120:SER:HA	4:B:125:PHE:CG	2.48	0.49
12:J:30:LYS:HB3	12:J:34:ALA:HB3	1.95	0.49
1:A:1262:C:N4	1:A:1273:C:H42	2.11	0.49
7:E:9:GLU:HG3	7:E:40:ASP:HB2	1.95	0.49
9:G:100:MET:O	9:G:104:VAL:HG23	2.13	0.49
10:H:58:LEU:HD22	10:H:60:LEU:HD12	1.95	0.49
7:E:125:LYS:NZ	7:E:125:LYS:HB2	2.27	0.49
23:U:50:SER:C	23:U:52:VAL:H	2.16	0.49
1:A:1250:A:H2'	1:A:1251:A:C8	2.48	0.48
11:I:29:ILE:HG13	11:I:29:ILE:O	2.13	0.48
16:N:51:PRO:HA	16:N:54:SER:OG	2.13	0.48
1:A:981:U:C5'	16:N:60:ARG:HE	2.21	0.48
4:B:17:HIS:CG	4:B:18:GLN:N	2.81	0.48
1:A:844:G:N7	1:A:846:G:N3	2.60	0.48
5:C:46:LEU:HD21	5:C:67:ILE:HD13	1.93	0.48
4:B:46:VAL:CG1	4:B:47:PRO:HD3	2.36	0.48
21:S:10:ILE:HD12	21:S:11:ASP:N	2.28	0.48
1:A:1127:G:O2'	1:A:1128:C:H5'	2.13	0.48
5:C:13:ILE:HG22	5:C:14:VAL:CG1	2.42	0.48
13:K:79:LYS:HG3	13:K:80:ASN:H	1.78	0.48
1:A:832:G:O2'	1:A:833:G:H5'	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:20:GLY:O	8:F:23:GLU:HB2	2.13	0.48
22:T:43:LYS:HG3	22:T:86:ALA:CB	2.42	0.48
1:A:52:C:H2'	1:A:53:A:H8	1.78	0.48
1:A:524:G:H2'	1:A:525:C:C6	2.48	0.48
6:D:74:TYR:CE1	6:D:92:LEU:HB3	2.48	0.48
1:A:1268:G:H2'	1:A:1269:A:C8	2.47	0.48
8:F:28:ALA:O	8:F:70:VAL:HG11	2.12	0.48
1:A:1321:U:H5''	1:A:1322:C:OP2	2.13	0.48
16:N:59:GLN:HA	16:N:60:ARG:NH1	2.29	0.48
4:B:20:ARG:NH2	4:B:36:LYS:HA	2.28	0.48
20:R:35:SER:HA	20:R:71:ASP:OD1	2.13	0.48
4:B:160:LEU:HD11	4:B:182:VAL:HG22	1.95	0.48
5:C:46:LEU:O	5:C:49:ALA:HB3	2.13	0.48
1:A:1053:G:C4'	1:A:1054:C:H5'	2.42	0.48
1:A:522:C:N4	14:L:49:ARG:HH22	1.98	0.48
1:A:1128:C:O2'	1:A:1129:C:H5'	2.12	0.48
6:D:47:LEU:HD12	6:D:51:GLY:C	2.34	0.48
12:J:53:ILE:HG23	16:N:84:ARG:CD	2.43	0.48
1:A:1338:G:H2'	1:A:1339:A:C8	2.48	0.48
11:I:95:SER:C	11:I:96:GLU:HG3	2.33	0.48
13:K:35:ASP:HA	13:K:41:LEU:HD11	1.94	0.48
1:A:1409:C:O2'	1:A:1410:A:H5'	2.13	0.48
1:A:591:U:OP1	10:H:30:LYS:HE2	2.13	0.48
1:A:398:U:H2'	1:A:399:G:C8	2.48	0.48
4:B:173:LYS:O	4:B:173:LYS:HD3	2.13	0.48
1:A:1317:C:N4	16:N:52:ARG:NH2	2.61	0.48
1:A:1226:C:C4	15:M:102:LYS:HB3	2.47	0.48
16:N:50:LEU:H	16:N:51:PRO:HD2	1.78	0.48
18:P:74:LEU:O	18:P:78:VAL:HG12	2.13	0.48
1:A:15:G:O2'	7:E:28:ARG:NE	2.47	0.48
6:D:84:ASN:O	6:D:88:ASN:HB2	2.14	0.48
12:J:53:ILE:HG23	16:N:84:ARG:NE	2.28	0.48
7:E:17:VAL:O	7:E:17:VAL:HG13	2.13	0.48
1:A:238:A:H3'	1:A:239:U:H5''	1.94	0.48
1:A:1344:C:H5'	11:I:122:ARG:HA	1.95	0.48
1:A:1242:G:H2'	1:A:1243:C:C6	2.48	0.48
8:F:86:ARG:HD3	20:R:63:TYR:O	2.13	0.48
12:J:83:THR:O	12:J:86:ALA:HB3	2.13	0.48
1:A:984:C:H2'	1:A:985:C:H6	1.79	0.48
1:A:373:A:H2'	1:A:374:A:H8	1.78	0.48
1:A:1230:C:H2'	1:A:1231:G:H8	1.78	0.48
18:P:3:THR:HB	18:P:66:THR:OG1	2.12	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:394:G:H2'	1:A:395:C:H6	1.79	0.48
19:Q:4:ILE:CD1	19:Q:6:THR:H	2.17	0.48
7:E:105:ILE:HD12	7:E:123:LEU:HD23	1.95	0.48
1:A:864:A:H2'	1:A:865:A:C8	2.48	0.48
1:A:505:G:H2'	1:A:506:G:C8	2.48	0.48
1:A:474:G:H2'	1:A:475:C:H6	1.78	0.48
1:A:455:G:H2'	1:A:456:A:C8	2.47	0.48
1:A:724:G:O2'	1:A:725:G:H5'	2.14	0.48
1:A:1382:C:H2'	1:A:1383:C:C6	2.48	0.48
15:M:48:SER:H	15:M:51:GLN:HG3	1.77	0.48
1:A:1210:C:C2'	1:A:1211:U:H5'	2.44	0.48
1:A:1422:G:O2'	1:A:1423:G:H5'	2.14	0.48
4:B:72:LYS:HE2	4:B:72:LYS:HA	1.95	0.48
4:B:18:GLN:HA	4:B:18:GLN:NE2	2.29	0.48
18:P:51:ARG:NH1	18:P:53:ASP:H	2.11	0.48
18:P:78:VAL:O	18:P:80:LYS:N	2.47	0.48
21:S:18:VAL:HG22	21:S:19:GLU:N	2.27	0.48
6:D:61:ARG:NH1	6:D:68:GLU:HA	2.22	0.48
20:R:56:ARG:HA	20:R:59:LYS:HZ2	1.79	0.48
4:B:113:LEU:CA	4:B:143:LEU:HD13	2.44	0.48
4:B:114:LYS:HE2	4:B:151:LYS:CG	2.43	0.48
1:A:675:A:OP1	20:R:73:HIS:HB3	2.13	0.48
1:A:600:A:C5'	10:H:120:LEU:HA	2.43	0.48
1:A:775:G:H2'	1:A:776:G:H8	1.78	0.48
1:A:1434:A:H2'	1:A:1435:G:O4'	2.14	0.48
18:P:79:ASN:HB3	18:P:82:ALA:HB3	1.95	0.48
10:H:63:LYS:NZ	10:H:63:LYS:HB2	2.28	0.48
10:H:104:SER:HA	10:H:109:VAL:HA	1.96	0.48
19:Q:8:GLN:HG3	19:Q:59:GLU:OE1	2.14	0.48
8:F:61:LEU:HD11	20:R:23:LYS:HE2	1.96	0.48
4:B:9:LEU:HD13	4:B:9:LEU:H	1.78	0.48
1:A:1346:A:H2'	9:G:9:ARG:HH22	1.78	0.48
1:A:202:G:H21	1:A:465:A:H61	1.60	0.48
6:D:117:VAL:HG22	6:D:122:ILE:HG13	1.93	0.48
5:C:8:GLY:HA3	16:N:88:MET:SD	2.54	0.48
1:A:1079:G:H2'	1:A:1080:A:C8	2.49	0.48
7:E:55:VAL:N	7:E:56:PRO:HD2	2.27	0.48
11:I:119:LYS:NZ	11:I:119:LYS:HB3	2.28	0.48
1:A:745:G:H2'	1:A:746:A:H8	1.78	0.48
10:H:79:ARG:O	10:H:83:ARG:HD3	2.14	0.48
9:G:16:LYS:HA	9:G:16:LYS:HZ3	1.78	0.48
1:A:419:C:H2'	1:A:420:U:H6	1.77	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:71:THR:O	9:G:72:VAL:HG13	2.13	0.48
1:A:1464:U:H2'	1:A:1465:A:H8	1.78	0.48
10:H:24:VAL:HG22	10:H:25:THR:N	2.28	0.48
10:H:25:THR:HG22	10:H:26:MET:N	2.28	0.48
17:O:34:GLN:HB3	17:O:58:MET:HE1	1.96	0.48
15:M:70:ARG:NH1	15:M:70:ARG:HG2	2.28	0.48
1:A:957:U:H4'	21:S:78:THR:CB	2.44	0.48
1:A:366:A:O2'	1:A:394:G:N2	2.46	0.48
10:H:87:ARG:HD2	10:H:90:GLU:OE2	2.13	0.48
15:M:79:LEU:O	15:M:87:GLY:HA2	2.13	0.48
11:I:32:ARG:HA	11:I:36:GLN:NE2	2.29	0.48
5:C:62:SER:HB3	5:C:97:PRO:O	2.12	0.48
7:E:22:LYS:HB3	7:E:29:ILE:HD11	1.96	0.48
7:E:100:GLU:HA	7:E:121:ASN:OD1	2.13	0.48
1:A:409:U:H5''	6:D:24:VAL:HG11	1.95	0.48
1:A:493:A:H5'	1:A:494:G:OP2	2.14	0.48
15:M:56:ARG:O	15:M:59:VAL:HG12	2.14	0.48
9:G:86:VAL:HG13	9:G:151:ALA:HB2	1.96	0.48
5:C:12:GLY:O	5:C:13:ILE:HD13	2.13	0.48
4:B:113:LEU:HD23	4:B:114:LYS:HG2	1.96	0.48
20:R:31:TYR:O	20:R:39:VAL:HG22	2.13	0.48
9:G:93:VAL:HG23	9:G:94:ARG:N	2.29	0.48
1:A:1014:A:C2	1:A:1219:A:H1'	2.49	0.48
1:A:1533:C:H2'	1:A:1534:A:H5''	1.96	0.48
1:A:847:G:H2'	1:A:848:C:H6	1.79	0.48
1:A:317:U:H2'	1:A:318:G:H8	1.78	0.48
1:A:1320:C:H41	21:S:36:ARG:HB3	1.79	0.48
4:B:83:ALA:HB1	4:B:90:PHE:HB3	1.95	0.48
4:B:46:VAL:HA	4:B:49:PHE:CD2	2.47	0.48
5:C:186:SER:H	5:C:197:VAL:HG12	1.79	0.48
1:A:1056:U:C5'	5:C:162:ALA:HB2	2.33	0.48
5:C:141:MET:HA	5:C:145:ALA:HB3	1.96	0.48
21:S:10:ILE:HD13	21:S:40:PHE:CE1	2.48	0.48
4:B:208:ALA:CB	4:B:211:LEU:HD12	2.44	0.48
20:R:29:LYS:O	20:R:32:ILE:HG12	2.13	0.48
7:E:40:ASP:OD1	7:E:44:ARG:HB2	2.13	0.48
1:A:95:C:H2'	1:A:95:C:O2	2.13	0.48
1:A:532:A:H62	1:A:1207:G:H5'	1.79	0.48
7:E:125:LYS:HD3	7:E:126:ALA:O	2.14	0.48
1:A:592:G:H2'	1:A:593:U:C6	2.48	0.48
1:A:1522:U:O2'	1:A:1523:G:H5'	2.14	0.48
20:R:33:THR:HG22	20:R:37:LYS:O	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:M:22:TYR:C	15:M:69:ARG:HH22	2.17	0.48
1:A:407:U:P	6:D:114:ARG:HH22	2.37	0.48
6:D:2:ARG:HH11	6:D:114:ARG:HD2	1.79	0.48
15:M:3:ILE:HG13	15:M:8:ILE:HG23	1.96	0.48
23:U:13:VAL:HG13	23:U:14:ALA:N	2.22	0.48
13:K:80:ASN:HB3	13:K:105:ARG:NE	2.22	0.48
20:R:70:THR:HG23	20:R:73:HIS:H	1.79	0.48
1:A:183:C:O2	1:A:183:C:O4'	2.30	0.48
1:A:177:G:H5'	22:T:59:ARG:NH2	2.29	0.48
16:N:72:PHE:C	16:N:73:LEU:HD12	2.34	0.48
6:D:168:THR:C	6:D:170:LEU:H	2.16	0.48
1:A:1108:G:H5''	5:C:175:HIS:CD2	2.49	0.48
14:L:98:ARG:HB2	14:L:116:TYR:O	2.13	0.48
1:A:1035:A:H2'	1:A:1036:A:H8	1.78	0.48
6:D:164:ARG:HG3	6:D:164:ARG:HH11	1.79	0.48
1:A:947:G:H5''	15:M:106:ARG:O	2.14	0.48
21:S:4:LEU:HD13	21:S:8:PRO:HA	1.96	0.48
21:S:4:LEU:CD1	21:S:9:PHE:H	2.26	0.48
4:B:66:ILE:C	4:B:67:LEU:HD22	2.34	0.48
4:B:73:ARG:C	4:B:75:ALA:H	2.18	0.48
5:C:120:THR:CB	5:C:188:ALA:HB2	2.35	0.48
5:C:186:SER:N	5:C:197:VAL:HG12	2.29	0.48
13:K:56:LYS:O	13:K:57:SER:HB3	2.14	0.48
13:K:24:ALA:HB3	13:K:87:GLY:O	2.14	0.48
1:A:747:A:H5'	1:A:748:G:OP2	2.14	0.48
10:H:3:GLN:HE21	10:H:3:GLN:HA	1.79	0.48
1:A:881:G:H2'	1:A:882:C:O4'	2.14	0.48
1:A:883:C:O2'	1:A:884:U:H5'	2.14	0.48
10:H:49:LYS:HG3	10:H:50:VAL:N	2.28	0.48
9:G:4:ARG:HH22	9:G:5:VAL:HG22	1.79	0.48
16:N:27:LYS:HA	16:N:30:ILE:HD13	1.96	0.48
8:F:98:GLU:O	8:F:99:ALA:HB3	2.14	0.48
1:A:1121:U:H2'	1:A:1122:U:C6	2.49	0.48
11:I:29:ILE:HG22	11:I:64:ILE:C	2.33	0.47
1:A:844:G:C8	1:A:846:G:H1'	2.49	0.47
4:B:81:ASP:O	4:B:85:SER:HB2	2.14	0.47
4:B:69:VAL:HG13	4:B:91:VAL:HG23	1.95	0.47
4:B:76:SER:O	4:B:92:ASN:HB2	2.13	0.47
1:A:1128:C:C4'	1:A:1148:U:H3	2.26	0.47
1:A:1276:G:H2'	1:A:1277:C:H6	1.76	0.47
6:D:53:GLN:HA	6:D:198:LEU:HB3	1.95	0.47
1:A:1342:C:H5''	11:I:129:ARG:NH2	2.26	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:462:G:H3'	1:A:463:U:H5''	1.96	0.47
18:P:33:ILE:HD12	18:P:33:ILE:N	2.28	0.47
1:A:1258:G:N3	1:A:1278:G:N2	2.62	0.47
1:A:738:C:H2'	1:A:739:C:H6	1.78	0.47
2:W:27:U:H2'	2:W:28:C:H6	1.75	0.47
14:L:51:VAL:HG12	14:L:52:CYS:N	2.28	0.47
1:A:882:C:H5	14:L:5:GLN:HE22	1.61	0.47
1:A:402:G:H5'	1:A:621:A:H1'	1.96	0.47
14:L:71:HIS:HA	14:L:98:ARG:HH22	1.78	0.47
1:A:285:C:H2'	1:A:286:C:C6	2.49	0.47
14:L:107:LYS:N	14:L:107:LYS:HD2	2.29	0.47
11:I:38:PHE:HE1	11:I:74:GLN:HB2	1.79	0.47
19:Q:10:ARG:CZ	19:Q:55:GLY:H	2.27	0.47
19:Q:44:HIS:O	19:Q:70:LYS:HG3	2.15	0.47
21:S:31:ARG:HG2	21:S:56:HIS:CD2	2.49	0.47
4:B:186:VAL:HG23	4:B:186:VAL:O	2.14	0.47
4:B:81:ASP:C	4:B:83:ALA:H	2.17	0.47
5:C:49:ALA:HA	5:C:74:ILE:HG21	1.96	0.47
8:F:29:ILE:HD13	8:F:64:VAL:HG13	1.95	0.47
4:B:11:ALA:HA	4:B:14:HIS:CE1	2.49	0.47
5:C:5:HIS:CD2	5:C:7:ASN:H	2.31	0.47
14:L:80:LEU:O	14:L:97:VAL:HG23	2.14	0.47
7:E:35:LEU:HG	7:E:133:ILE:HG22	1.94	0.47
17:O:45:HIS:HA	17:O:47:LYS:HZ3	1.79	0.47
1:A:89:U:H2'	1:A:90:C:H6	1.77	0.47
10:H:77:VAL:CG1	10:H:84:ILE:HD13	2.43	0.47
1:A:812:G:O2'	1:A:813:U:H6	1.96	0.47
5:C:143:LEU:N	5:C:143:LEU:HD12	2.29	0.47
1:A:591:U:H2'	1:A:592:G:H8	1.79	0.47
15:M:84:CYS:HA	21:S:73:PHE:HA	1.96	0.47
21:S:62:THR:HB	21:S:64:GLU:OE1	2.15	0.47
4:B:92:ASN:ND2	4:B:93:HIS:N	2.62	0.47
1:A:410:G:H2'	1:A:429:U:C5	2.50	0.47
6:D:14:GLU:OE2	6:D:59:LYS:HG3	2.14	0.47
8:F:12:PRO:HG3	8:F:54:LEU:CD1	2.39	0.47
8:F:44:ARG:CG	8:F:56:LYS:HG2	2.44	0.47
1:A:1189:U:H2'	1:A:1190:G:H5'	1.95	0.47
1:A:744:C:H2'	1:A:745:G:C8	2.50	0.47
8:F:75:GLU:O	8:F:79:ARG:HG3	2.14	0.47
1:A:1191:A:P	5:C:2:GLN:HB3	2.54	0.47
1:A:1107:C:OP1	5:C:171:ARG:HB2	2.14	0.47
1:A:1006:G:O2'	1:A:1007:U:H5'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:659:U:H2'	1:A:660:C:H6	1.80	0.47
16:N:27:LYS:HZ3	16:N:28:ALA:HA	1.79	0.47
1:A:1225:A:N3	1:A:1225:A:C2'	2.78	0.47
16:N:15:LEU:HD13	16:N:54:SER:HA	1.96	0.47
16:N:16:ALA:HA	16:N:20:PHE:CD2	2.49	0.47
7:E:108:GLY:O	7:E:111:ARG:HB3	2.14	0.47
1:A:1375:A:H2'	1:A:1376:U:C6	2.48	0.47
7:E:14:LEU:HD22	7:E:35:LEU:O	2.14	0.47
11:I:21:LYS:N	11:I:61:ASP:HB3	2.27	0.47
13:K:80:ASN:N	13:K:80:ASN:ND2	2.59	0.47
1:A:285:C:H2'	1:A:286:C:H6	1.79	0.47
15:M:26:LYS:O	15:M:30:LYS:HG2	2.14	0.47
1:A:810:C:O2'	1:A:811:C:H5'	2.15	0.47
1:A:841:C:H2'	1:A:843:U:O2	2.15	0.47
5:C:55:VAL:O	5:C:65:VAL:HA	2.15	0.47
13:K:124:LYS:CA	23:U:33:ARG:HH21	2.27	0.47
1:A:1130:A:H62	1:A:1143:G:H22	1.61	0.47
12:J:38:GLY:O	12:J:74:VAL:HA	2.14	0.47
4:B:202:ASN:ND2	4:B:204:ASP:N	2.55	0.47
6:D:117:VAL:O	6:D:130:ASN:HA	2.14	0.47
5:C:5:HIS:CE1	5:C:7:ASN:HD22	2.33	0.47
10:H:1:SER:C	10:H:3:GLN:H	2.17	0.47
1:A:677:U:H2'	1:A:678:U:C6	2.46	0.47
1:A:1382:C:H2'	1:A:1383:C:H6	1.78	0.47
1:A:68:G:O4'	1:A:171:A:H1'	2.14	0.47
5:C:165:GLU:OE1	5:C:165:GLU:HA	2.14	0.47
1:A:112:G:H21	1:A:354:G:C4'	2.28	0.47
2:W:37:A:H2'	2:W:38:A:O4'	2.14	0.47
1:A:915:A:H2'	1:A:916:U:H5'	1.96	0.47
5:C:113:LYS:HB2	5:C:184:ASN:OD1	2.15	0.47
11:I:70:GLY:O	11:I:74:GLN:HG3	2.14	0.47
1:A:1328:C:H2'	1:A:1329:A:H8	1.79	0.47
1:A:1129:C:H5'	11:I:17:ARG:HH12	1.80	0.47
1:A:491:G:O2'	1:A:492:C:H5'	2.14	0.47
1:A:541:G:H2'	1:A:542:G:H8	1.79	0.47
10:H:10:LEU:O	10:H:13:ILE:HG13	2.14	0.47
1:A:1374:A:O2'	1:A:1375:A:H5'	2.15	0.47
5:C:205:GLU:CG	5:C:206:ILE:H	2.27	0.47
17:O:40:GLY:O	17:O:43:ALA:HB3	2.14	0.47
11:I:80:HIS:CE1	11:I:84:ARG:HH12	2.32	0.47
1:A:745:G:H2'	1:A:746:A:C8	2.50	0.47
4:B:98:GLY:HA2	4:B:101:THR:CG2	2.41	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:F:9:MET:HB3	8:F:57:ALA:CB	2.41	0.47
1:A:1139:G:H4'	1:A:1140:C:OP1	2.13	0.47
10:H:38:VAL:O	10:H:42:GLU:HB2	2.13	0.47
1:A:1234:C:H1'	1:A:1364:U:C6	2.49	0.47
1:A:869:G:H4'	1:A:872:A:C8	2.50	0.47
6:D:119:HIS:C	6:D:121:ALA:H	2.18	0.47
1:A:646:G:H2'	1:A:647:C:C6	2.49	0.47
5:C:110:LEU:CD2	5:C:140:ALA:HB1	2.45	0.47
1:A:399:G:H2'	1:A:400:C:C6	2.49	0.47
9:G:105:GLU:O	9:G:109:LYS:HG3	2.15	0.47
1:A:930:C:O2'	1:A:931:C:H5'	2.15	0.47
1:A:1318:A:H4'	21:S:9:PHE:CG	2.49	0.47
15:M:95:PRO:CA	15:M:108:ARG:HG2	2.45	0.47
4:B:17:HIS:C	4:B:37:VAL:HG23	2.35	0.47
1:A:718:A:C2	20:R:37:LYS:HE2	2.50	0.47
1:A:1348:U:H4'	11:I:121:ARG:NH1	2.28	0.47
8:F:7:VAL:CG2	20:R:64:LEU:HD21	2.42	0.47
18:P:36:VAL:HG23	18:P:53:ASP:HB2	1.96	0.47
21:S:10:ILE:HD12	21:S:11:ASP:H	1.79	0.47
1:A:1125:U:H3'	12:J:37:ARG:NH1	2.30	0.47
12:J:11:LYS:NZ	12:J:99:GLN:H	2.12	0.47
1:A:413:G:H22	1:A:429:U:P	2.38	0.47
6:D:59:LYS:C	6:D:61:ARG:N	2.67	0.47
6:D:90:LEU:HA	6:D:93:LEU:HD12	1.97	0.47
12:J:65:TYR:OH	16:N:84:ARG:HG3	2.15	0.47
9:G:145:GLU:HA	9:G:148:LYS:HB3	1.97	0.47
1:A:865:A:H2'	1:A:866:C:C6	2.50	0.47
1:A:1181:G:C2	1:A:1182:G:N2	2.83	0.47
16:N:81:ILE:O	16:N:85:GLU:HB3	2.14	0.47
4:B:114:LYS:HE2	4:B:151:LYS:HG3	1.97	0.47
1:A:674:G:H2'	1:A:675:A:C8	2.45	0.47
22:T:50:PHE:O	22:T:53:MET:SD	2.72	0.47
1:A:84:U:H4'	1:A:85:U:OP1	2.15	0.47
13:K:19:VAL:HG23	13:K:35:ASP:O	2.15	0.47
1:A:123:U:OP1	1:A:312:C:H5'	2.15	0.47
1:A:972:C:O2'	12:J:57:VAL:HA	2.14	0.47
1:A:1113:C:C6	5:C:177:LEU:HD13	2.49	0.47
1:A:128:G:H2'	1:A:129:A:C8	2.50	0.47
3:X:5:U:H5''	25:X:369:HOH:O	2.14	0.47
1:A:208:U:C2'	1:A:209:U:H5''	2.43	0.47
1:A:712:A:O2'	1:A:713:G:H5'	2.15	0.47
1:A:1012:A:O2'	1:A:1013:G:H5'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:932:C:H5'	9:G:3:ARG:CD	2.45	0.47
9:G:4:ARG:NE	9:G:4:ARG:HA	2.30	0.47
1:A:1489:G:H2'	1:A:1490:U:C6	2.49	0.47
20:R:38:ILE:HD13	20:R:55:ALA:HA	1.95	0.47
1:A:537:G:H2'	1:A:538:G:C8	2.50	0.47
4:B:177:ASN:OD1	4:B:178:LEU:HD22	2.15	0.47
1:A:899:C:H2'	1:A:900:A:O4'	2.14	0.47
6:D:98:ASP:OD1	6:D:132:ALA:HB1	2.14	0.47
11:I:7:GLY:CA	11:I:85:ALA:HB2	2.44	0.47
15:M:89:ARG:HH11	15:M:94:LEU:HD12	1.80	0.47
21:S:28:LYS:HE2	21:S:28:LYS:N	2.30	0.47
1:A:376:G:H5''	18:P:5:ARG:HB2	1.97	0.47
1:A:1130:A:H62	1:A:1143:G:N2	2.12	0.47
1:A:1338:G:H21	2:W:41:C:H1'	1.79	0.47
6:D:94:GLU:HG3	6:D:103:ARG:CZ	2.45	0.47
6:D:99:ASN:CB	6:D:103:ARG:HH21	2.23	0.47
1:A:1084:G:H5'	1:A:1102:A:OP2	2.15	0.47
1:A:423:G:H2'	1:A:424:G:H4'	1.97	0.47
1:A:1388:C:H2'	1:A:1389:C:C6	2.50	0.47
15:M:109:LYS:HD3	15:M:110:GLY:O	2.14	0.47
1:A:978:A:H4'	1:A:1322:C:H6	1.78	0.47
1:A:1226:C:H41	15:M:102:LYS:NZ	2.13	0.47
15:M:98:GLY:O	15:M:99:GLN:HG3	2.15	0.47
4:B:164:ASP:HB3	4:B:168:GLU:CG	2.44	0.47
4:B:198:VAL:O	4:B:199:ILE:HG23	2.15	0.47
7:E:81:GLN:HE22	7:E:82:HIS:CD2	2.33	0.47
10:H:17:GLN:HG3	10:H:62:LEU:CD2	2.45	0.47
14:L:22:ALA:HB1	14:L:56:LEU:CD2	2.45	0.47
11:I:42:THR:C	11:I:44:ARG:H	2.17	0.47
1:A:600:A:H2'	1:A:601:G:C8	2.50	0.47
1:A:601:G:H2'	1:A:602:A:H8	1.80	0.47
4:B:50:ASN:O	4:B:53:LEU:HB2	2.14	0.47
16:N:33:VAL:HA	16:N:40:ARG:CZ	2.45	0.47
1:A:257:G:C3'	1:A:258:G:H5''	2.45	0.47
1:A:1388:C:H2'	1:A:1389:C:H6	1.78	0.47
22:T:80:ALA:O	22:T:84:LYS:HG3	2.15	0.47
11:I:112:ARG:HG3	11:I:112:ARG:O	2.14	0.47
1:A:949:A:O2'	1:A:950:U:H5'	2.15	0.47
15:M:78:ARG:HH22	15:M:81:ASP:HB2	1.80	0.47
21:S:36:ARG:CB	21:S:36:ARG:HH11	2.26	0.47
12:J:6:ILE:HB	12:J:76:ILE:CG1	2.45	0.47
6:D:32:LYS:HB3	6:D:35:GLN:HG2	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:332:G:P	22:T:2:ASN:HB3	2.54	0.47
1:A:1172:C:O2'	1:A:1173:U:H5'	2.15	0.47
1:A:451:A:N6	1:A:480:U:H2'	2.30	0.47
22:T:55:PRO:HG2	22:T:56:ILE:H	1.79	0.47
13:K:20:ALA:HA	13:K:33:ILE:HA	1.97	0.47
17:O:84:LEU:HD13	17:O:86:LEU:HD12	1.97	0.47
16:N:62:ARG:HB3	16:N:67:GLY:C	2.35	0.47
1:A:1090:U:H2'	1:A:1091:U:C6	2.50	0.47
10:H:64:TYR:N	10:H:64:TYR:CD1	2.83	0.47
1:A:28:A:H2'	1:A:29:U:O4'	2.14	0.47
1:A:950:U:O4	15:M:103:THR:HG21	2.15	0.46
19:Q:45:VAL:HG12	19:Q:46:HIS:H	1.80	0.46
19:Q:45:VAL:HG12	19:Q:46:HIS:N	2.29	0.46
18:P:4:ILE:HG13	18:P:21:VAL:HG22	1.97	0.46
18:P:67:ILE:HD11	18:P:71:VAL:HG22	1.97	0.46
15:M:22:TYR:HB3	15:M:69:ARG:NH2	2.30	0.46
9:G:23:ALA:O	9:G:26:VAL:HG13	2.15	0.46
14:L:24:GLU:C	14:L:26:CYS:H	2.19	0.46
4:B:206:ILE:O	4:B:209:VAL:HG22	2.15	0.46
12:J:57:VAL:O	12:J:58:ASN:HB2	2.14	0.46
1:A:126:G:OP1	1:A:605:U:O2'	2.28	0.46
22:T:43:LYS:HE3	22:T:86:ALA:HA	1.97	0.46
1:A:67:C:O2	1:A:171:A:H2	1.98	0.46
5:C:78:LYS:HB2	5:C:81:GLU:HB2	1.97	0.46
11:I:7:GLY:HA3	11:I:85:ALA:HB2	1.96	0.46
19:Q:23:ALA:HB2	19:Q:42:LYS:HG2	1.98	0.46
21:S:62:THR:HB	21:S:64:GLU:CD	2.36	0.46
13:K:117:HIS:O	13:K:118:ASN:HB2	2.15	0.46
4:B:70:GLY:HA2	4:B:163:ILE:HG21	1.96	0.46
18:P:74:LEU:HA	18:P:77:GLU:OE2	2.16	0.46
12:J:52:LEU:HA	12:J:62:ARG:HA	1.97	0.46
14:L:35:ARG:CA	14:L:35:ARG:HE	2.24	0.46
22:T:7:LYS:HG2	22:T:8:LYS:H	1.81	0.46
5:C:176:THR:HG22	5:C:178:ARG:HG2	1.96	0.46
1:A:35:G:H2'	1:A:36:C:C6	2.51	0.46
1:A:1172:C:H2'	1:A:1173:U:C6	2.50	0.46
4:B:101:THR:HG23	4:B:102:ASN:N	2.30	0.46
1:A:628:G:O2'	1:A:629:A:H5'	2.15	0.46
20:R:60:ARG:HA	20:R:63:TYR:HD1	1.81	0.46
1:A:1135:U:H3'	1:A:1137:C:N4	2.30	0.46
1:A:1138:G:H5'	1:A:1139:G:OP2	2.15	0.46
1:A:1254:A:H2'	1:A:1255:G:C8	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:833:G:H2'	1:A:834:U:H6	1.78	0.46
1:A:197:A:H4'	1:A:198:G:O5'	2.15	0.46
1:A:499:A:H4'	1:A:500:G:OP1	2.15	0.46
1:A:643:C:H1'	10:H:123:GLU:OE2	2.15	0.46
16:N:2:LYS:HD2	16:N:5:MET:HG2	1.97	0.46
1:A:29:U:O2'	1:A:30:U:H5'	2.15	0.46
1:A:328:C:H1'	1:A:329:A:OP2	2.14	0.46
1:A:946:A:H2'	1:A:947:G:H8	1.77	0.46
1:A:1225:A:H5''	15:M:102:LYS:NZ	2.30	0.46
15:M:84:CYS:HA	21:S:72:GLU:O	2.15	0.46
18:P:36:VAL:HG13	18:P:36:VAL:O	2.15	0.46
5:C:117:ASP:HA	5:C:120:THR:OG1	2.15	0.46
7:E:95:MET:HA	7:E:124:ALA:CB	2.45	0.46
7:E:80:LEU:HD13	7:E:84:VAL:CG1	2.43	0.46
6:D:1:ALA:O	6:D:2:ARG:HG3	2.14	0.46
1:A:1180:A:H5''	1:A:1181:G:OP2	2.15	0.46
1:A:32:A:H2'	1:A:33:A:C8	2.51	0.46
1:A:1003:G:N2	1:A:1005:A:H5'	2.31	0.46
5:C:19:SER:HA	5:C:56:ILE:O	2.15	0.46
1:A:87:C:C2	1:A:88:U:H1'	2.50	0.46
1:A:1255:G:O2'	1:A:1258:G:H1'	2.15	0.46
1:A:763:G:H2'	1:A:764:C:C6	2.50	0.46
1:A:993:G:C2'	1:A:995:C:H41	2.27	0.46
1:A:1106:G:H2'	1:A:1107:C:C6	2.51	0.46
1:A:1244:G:O2'	1:A:1245:C:H5'	2.16	0.46
1:A:592:G:H2'	1:A:593:U:H6	1.81	0.46
15:M:15:VAL:O	15:M:19:THR:HG23	2.15	0.46
11:I:78:ILE:HG22	11:I:82:ILE:CG1	2.45	0.46
19:Q:60:ILE:CG2	19:Q:72:TRP:HB3	2.45	0.46
1:A:1348:U:C4'	11:I:121:ARG:HH11	2.24	0.46
1:A:6:G:O2'	1:A:7:A:H8	1.99	0.46
12:J:36:VAL:CA	12:J:77:VAL:HG23	2.45	0.46
1:A:545:C:H5'	6:D:68:GLU:HB2	1.96	0.46
4:B:9:LEU:CD1	4:B:9:LEU:H	2.29	0.46
20:R:58:ILE:O	20:R:62:ARG:HG3	2.15	0.46
1:A:1258:G:H2'	1:A:1259:C:C6	2.50	0.46
1:A:1051:C:H2'	1:A:1052:U:H6	1.81	0.46
1:A:1360:A:C8	16:N:57:SER:HB3	2.51	0.46
4:B:159:ALA:HB1	4:B:183:PHE:CE1	2.49	0.46
4:B:40:ILE:HD12	4:B:201:GLY:O	2.15	0.46
5:C:80:GLY:O	5:C:84:GLU:HB2	2.15	0.46
8:F:36:ILE:HG22	8:F:38:ARG:O	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:J:8:ILE:HG12	12:J:75:ASP:H	1.79	0.46
6:D:10:LEU:HD23	6:D:10:LEU:C	2.36	0.46
15:M:3:ILE:HG13	15:M:8:ILE:CG2	2.45	0.46
9:G:26:VAL:O	9:G:30:MET:HB2	2.15	0.46
14:L:21:PRO:C	14:L:23:LEU:H	2.19	0.46
9:G:74:VAL:HB	9:G:85:GLN:O	2.16	0.46
1:A:1479:C:H2'	1:A:1480:A:C8	2.49	0.46
12:J:48:ARG:HB3	16:N:100:TRP:HH2	1.80	0.46
1:A:420:U:H1'	1:A:424:G:N2	2.31	0.46
1:A:995:C:C2'	1:A:996:A:H5''	2.46	0.46
1:A:882:C:O2'	1:A:883:C:H5'	2.15	0.46
16:N:61:ASN:O	16:N:62:ARG:HB2	2.15	0.46
16:N:61:ASN:HB3	16:N:72:PHE:CD2	2.51	0.46
8:F:24:ARG:HB2	8:F:24:ARG:NH1	2.30	0.46
10:H:44:PHE:CD1	10:H:71:VAL:HG22	2.49	0.46
5:C:61:LYS:HA	5:C:61:LYS:HE2	1.97	0.46
4:B:17:HIS:HB3	4:B:187:ASP:OD2	2.15	0.46
19:Q:59:GLU:HB2	19:Q:75:VAL:HG22	1.98	0.46
1:A:1058:G:O2'	1:A:1059:C:H5'	2.16	0.46
21:S:14:LEU:HD12	21:S:15:LEU:N	2.31	0.46
7:E:85:LYS:HG3	7:E:93:VAL:O	2.15	0.46
9:G:149:ALA:HB1	13:K:58:THR:OG1	2.15	0.46
12:J:46:LYS:HB2	12:J:46:LYS:NZ	2.30	0.46
6:D:89:LEU:HD11	6:D:93:LEU:HD11	1.97	0.46
6:D:190:LEU:O	6:D:192:ALA:N	2.49	0.46
22:T:56:ILE:O	22:T:59:ARG:HB3	2.16	0.46
10:H:102:VAL:HB	10:H:125:ILE:HB	1.96	0.46
1:A:1489:G:H2'	1:A:1490:U:H6	1.80	0.46
1:A:391:G:H4'	18:P:8:ARG:NH1	2.30	0.46
6:D:176:LYS:HD3	6:D:176:LYS:O	2.15	0.46
1:A:853:C:O2'	1:A:854:U:H5'	2.16	0.46
1:A:585:G:N3	1:A:879:C:H4'	2.31	0.46
19:Q:7:LEU:HD11	19:Q:72:TRP:CZ3	2.50	0.46
1:A:841:C:H2'	1:A:843:U:H1'	1.98	0.46
21:S:30:LEU:N	21:S:30:LEU:HD22	2.30	0.46
5:C:102:ILE:HD12	5:C:102:ILE:C	2.36	0.46
8:F:40:GLU:O	8:F:42:TRP:HD1	1.99	0.46
18:P:6:LEU:HD11	18:P:17:TYR:HB3	1.98	0.46
21:S:14:LEU:O	21:S:18:VAL:HG12	2.16	0.46
7:E:143:LEU:HD23	7:E:146:MET:SD	2.56	0.46
1:A:408:A:H3'	1:A:409:U:C6	2.51	0.46
6:D:14:GLU:CD	6:D:59:LYS:HG3	2.36	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1376:U:H2'	1:A:1377:A:H8	1.76	0.46
15:M:49:GLU:OE1	15:M:53:ASP:HB3	2.15	0.46
1:A:18:C:P	7:E:131:ASN:HD21	2.38	0.46
1:A:942:G:H21	11:I:125:GLN:NE2	2.14	0.46
1:A:457:G:H2'	1:A:458:U:C6	2.51	0.46
22:T:49:ALA:HA	22:T:52:GLU:OE1	2.16	0.46
17:O:11:VAL:HG13	17:O:12:SER:N	2.29	0.46
17:O:24:THR:HA	17:O:27:GLN:HB2	1.96	0.46
13:K:23:HIS:HB3	13:K:30:ILE:HG13	1.96	0.46
1:A:1234:C:O4'	1:A:1364:U:H1'	2.16	0.46
1:A:857:C:H2'	1:A:858:G:O4'	2.15	0.46
1:A:1461:G:H2'	1:A:1462:C:C6	2.51	0.46
1:A:1231:G:H2'	1:A:1232:U:C6	2.50	0.46
1:A:1122:U:H2'	1:A:1123:U:C6	2.50	0.46
1:A:610:U:O2	1:A:610:U:O4'	2.34	0.46
16:N:20:PHE:CZ	16:N:55:SER:HA	2.50	0.46
4:B:19:THR:HG23	4:B:20:ARG:N	2.24	0.46
19:Q:10:ARG:NE	19:Q:56:ASP:O	2.44	0.46
11:I:111:GLU:OE1	11:I:111:GLU:HA	2.16	0.46
8:F:6:ILE:HD11	8:F:8:PHE:HD2	1.79	0.46
18:P:4:ILE:HD12	18:P:4:ILE:H	1.81	0.46
1:A:1217:C:H3'	16:N:8:ARG:NH2	2.21	0.46
6:D:58:GLN:HG3	6:D:62:ARG:CG	2.45	0.46
5:C:24:ASN:ND2	5:C:24:ASN:N	2.64	0.46
1:A:239:U:H6	1:A:239:U:C5'	2.29	0.46
11:I:127:SER:C	11:I:129:ARG:H	2.19	0.46
1:A:762:U:H2'	1:A:763:G:C8	2.51	0.46
1:A:678:U:H2'	1:A:679:C:C6	2.51	0.46
16:N:72:PHE:CZ	16:N:77:GLY:HA2	2.51	0.46
1:A:1108:G:H5"	5:C:175:HIS:HD2	1.81	0.46
14:L:106:VAL:HG22	14:L:116:TYR:CB	2.46	0.46
10:H:12:ARG:CD	10:H:26:MET:HB3	2.46	0.46
17:O:87:ARG:C	17:O:88:ARG:HG2	2.35	0.46
1:A:1163:A:H2'	1:A:1164:G:H8	1.80	0.46
1:A:570:G:H1'	1:A:820:U:C4	2.51	0.46
1:A:989:U:O2'	1:A:990:C:H5'	2.16	0.46
7:E:98:ALA:HB3	7:E:122:VAL:HA	1.97	0.46
7:E:82:HIS:HE1	7:E:147:ASN:H	1.64	0.46
10:H:10:LEU:CD2	10:H:74:ILE:HD11	2.39	0.46
6:D:84:ASN:ND2	6:D:87:GLU:HB3	2.30	0.46
11:I:97:LEU:N	11:I:97:LEU:HD22	2.30	0.46
1:A:57:G:H2'	1:A:58:C:H6	1.81	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:484:G:H4'	1:A:485:U:C5'	2.45	0.46
4:B:119:GLN:O	4:B:125:PHE:HB3	2.15	0.46
1:A:401:C:O2'	1:A:402:G:H5'	2.16	0.46
1:A:621:A:H2'	1:A:622:A:H8	1.79	0.46
10:H:36:ALA:HA	10:H:39:LEU:HD12	1.97	0.46
10:H:29:SER:OG	10:H:32:LYS:HG3	2.16	0.46
9:G:37:THR:HA	9:G:40:SER:OG	2.16	0.46
1:A:1317:C:H42	16:N:52:ARG:HH22	1.63	0.46
15:M:94:LEU:C	15:M:108:ARG:HG2	2.36	0.46
21:S:36:ARG:HB3	21:S:36:ARG:NH1	2.28	0.46
20:R:71:ASP:HB2	20:R:72:ARG:NH1	2.31	0.46
4:B:210:THR:HG23	4:B:213:LEU:HD23	1.96	0.46
4:B:71:THR:CG2	4:B:95:TRP:H	2.29	0.46
7:E:121:ASN:ND2	7:E:121:ASN:N	2.62	0.46
13:K:124:LYS:HA	23:U:33:ARG:HH21	1.81	0.46
9:G:26:VAL:HG22	9:G:27:ASN:OD1	2.16	0.46
14:L:20:VAL:O	14:L:23:LEU:HB3	2.16	0.46
7:E:56:PRO:O	7:E:60:GLN:HG2	2.16	0.46
20:R:58:ILE:HG22	20:R:62:ARG:NE	2.31	0.46
20:R:39:VAL:HB	20:R:43:ILE:CD1	2.46	0.46
12:J:30:LYS:HB3	12:J:34:ALA:CB	2.46	0.46
17:O:10:ILE:HG23	17:O:11:VAL:N	2.30	0.46
12:J:85:ASP:O	12:J:89:ARG:HB3	2.15	0.46
8:F:24:ARG:HB2	8:F:24:ARG:CZ	2.46	0.46
5:C:106:ARG:NH1	5:C:107:LYS:HE2	2.30	0.46
16:N:25:GLU:HA	16:N:28:ALA:CB	2.46	0.46
1:A:1229:A:H2'	1:A:1230:C:C6	2.50	0.46
1:A:361:G:O2'	1:A:362:G:H5'	2.15	0.46
1:A:1225:A:H5''	15:M:102:LYS:HZ2	1.80	0.45
23:U:40:PRO:HG2	23:U:41:THR:H	1.81	0.45
1:A:1150:A:N6	1:A:1151:A:N6	2.64	0.45
1:A:1277:C:O2'	1:A:1279:G:H8	1.99	0.45
5:C:179:ALA:HA	5:C:205:GLU:HA	1.97	0.45
1:A:58:C:O2'	1:A:59:A:H5'	2.16	0.45
1:A:487:A:H3'	1:A:488:C:H6	1.80	0.45
13:K:15:VAL:C	13:K:17:ASP:H	2.18	0.45
1:A:1222:G:O2'	1:A:1223:C:H5'	2.16	0.45
1:A:503:C:H2'	1:A:504:C:C6	2.51	0.45
1:A:706:A:H4'	13:K:30:ILE:HD11	1.98	0.45
1:A:642:A:H2'	1:A:643:C:H6	1.81	0.45
5:C:112:ALA:HB2	5:C:182:ASP:HB3	1.97	0.45
1:A:1520:C:O2'	1:A:1521:C:H5'	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1319:A:OP1	21:S:4:LEU:HD11	2.15	0.45
4:B:165:ALA:HB2	4:B:184:ALA:HB1	1.98	0.45
4:B:186:VAL:H	4:B:200:PRO:HA	1.81	0.45
8:F:4:TYR:CZ	8:F:71:ILE:HG12	2.51	0.45
1:A:1374:A:H2'	1:A:1375:A:H8	1.81	0.45
23:U:25:ALA:HA	23:U:28:LEU:HD12	1.98	0.45
6:D:19:PHE:HD2	6:D:110:ARG:HH12	1.62	0.45
1:A:238:A:C3'	1:A:239:U:H5''	2.46	0.45
1:A:967:C:H2'	1:A:968:A:C2	2.51	0.45
1:A:1263:C:H2'	1:A:1264:U:H6	1.82	0.45
1:A:560:A:H5'	1:A:566:G:N2	2.31	0.45
1:A:987:G:H2'	1:A:988:G:H8	1.82	0.45
1:A:622:A:H3'	1:A:623:C:H6	1.80	0.45
8:F:34:GLY:O	8:F:35:LYS:HG3	2.17	0.45
4:B:17:HIS:O	4:B:18:GLN:HB2	2.16	0.45
4:B:96:LEU:HD13	4:B:97:GLY:N	2.31	0.45
20:R:64:LEU:HB3	20:R:66:LEU:HG	1.97	0.45
1:A:1182:G:C4'	1:A:1183:U:H5'	2.47	0.45
1:A:746:A:C6	1:A:747:A:N6	2.84	0.45
5:C:37:LYS:HB3	5:C:93:ILE:CD1	2.46	0.45
7:E:52:ALA:CB	7:E:58:ALA:HB2	2.42	0.45
8:F:85:ILE:HB	8:F:86:ARG:H	1.42	0.45
19:Q:64:ARG:HG2	19:Q:65:PRO:HD2	1.98	0.45
1:A:812:G:C2'	1:A:812:G:N3	2.79	0.45
1:A:373:A:O2'	1:A:374:A:H5'	2.16	0.45
1:A:22:G:H4'	1:A:885:G:C8	2.52	0.45
10:H:32:LYS:HB3	10:H:58:LEU:CD1	2.45	0.45
1:A:876:C:H2'	1:A:877:G:C8	2.51	0.45
15:M:84:CYS:O	15:M:88:LEU:HG	2.16	0.45
1:A:718:A:H2	20:R:37:LYS:HE2	1.82	0.45
4:B:67:LEU:HD11	4:B:153:MET:CE	2.47	0.45
4:B:87:ASP:C	4:B:88:GLN:HG3	2.36	0.45
5:C:195:ILE:HG22	5:C:196:GLY:N	2.32	0.45
1:A:1125:U:C5'	12:J:37:ARG:HD2	2.46	0.45
5:C:23:ALA:HB1	5:C:28:PHE:N	2.31	0.45
1:A:552:U:H2'	1:A:553:A:H8	1.81	0.45
5:C:10:ARG:NH1	5:C:10:ARG:HG3	2.29	0.45
6:D:75:TYR:CD1	6:D:203:TYR:HD1	2.34	0.45
11:I:27:ILE:N	11:I:27:ILE:HD12	2.30	0.45
1:A:336:A:O2'	1:A:337:G:H5'	2.16	0.45
1:A:244:U:O4	1:A:906:A:H1'	2.16	0.45
13:K:82:GLU:OE2	13:K:108:ASN:HB3	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:960:U:O2	1:A:960:U:H5''	2.17	0.45
15:M:41:ASP:CG	15:M:42:VAL:HG13	2.36	0.45
1:A:1201:A:H1'	1:A:1202:U:OP2	2.17	0.45
22:T:43:LYS:HG3	22:T:86:ALA:HA	1.97	0.45
9:G:12:LEU:HD22	9:G:12:LEU:N	2.32	0.45
1:A:1494:G:H2'	1:A:1495:U:C6	2.51	0.45
18:P:3:THR:HB	18:P:66:THR:N	2.32	0.45
1:A:904:U:H2'	1:A:905:U:C6	2.51	0.45
16:N:46:LYS:C	16:N:48:GLN:H	2.18	0.45
15:M:100:ARG:HD2	15:M:103:THR:HB	1.98	0.45
15:M:85:TYR:CZ	15:M:89:ARG:HG3	2.51	0.45
16:N:15:LEU:HD12	16:N:16:ALA:H	1.78	0.45
19:Q:24:ILE:O	19:Q:40:THR:HA	2.16	0.45
19:Q:20:ILE:CD1	19:Q:45:VAL:HB	2.46	0.45
19:Q:3:LYS:O	19:Q:5:ARG:N	2.50	0.45
18:P:51:ARG:HH11	18:P:53:ASP:HA	1.81	0.45
18:P:51:ARG:NH1	18:P:53:ASP:N	2.63	0.45
1:A:619:U:H3	6:D:130:ASN:HD22	1.60	0.45
9:G:87:PRO:HD2	9:G:151:ALA:H	1.82	0.45
1:A:1078:U:H2'	1:A:1079:G:O4'	2.16	0.45
7:E:135:VAL:O	7:E:138:ALA:HB3	2.16	0.45
4:B:119:GLN:C	4:B:125:PHE:HB3	2.36	0.45
1:A:174:A:O2'	1:A:175:C:H5'	2.17	0.45
14:L:58:ASN:ND2	14:L:58:ASN:N	2.61	0.45
17:O:27:GLN:O	17:O:31:LEU:HD23	2.17	0.45
1:A:1213:A:H2'	1:A:1215:G:C8	2.51	0.45
1:A:350:G:H2'	1:A:351:G:C8	2.51	0.45
1:A:1399:C:H4'	1:A:1400:C:O5'	2.16	0.45
23:U:6:ARG:O	23:U:7:GLU:C	2.55	0.45
19:Q:50:ASN:HD22	19:Q:50:ASN:C	2.20	0.45
4:B:162:VAL:HG22	4:B:163:ILE:N	2.31	0.45
1:A:921:U:H4'	7:E:22:LYS:HD2	1.98	0.45
1:A:1125:U:O2'	1:A:1126:U:H2'	2.16	0.45
12:J:96:VAL:HG12	12:J:97:ASP:H	1.82	0.45
17:O:23:SER:O	17:O:26:VAL:HG23	2.16	0.45
1:A:422:C:H1'	1:A:423:G:N2	2.31	0.45
4:B:134:LEU:O	4:B:138:ARG:HB3	2.16	0.45
1:A:1033:G:H2'	1:A:1034:G:O4'	2.16	0.45
5:C:78:LYS:HD2	5:C:81:GLU:HG2	1.99	0.45
1:A:167:A:H2'	1:A:168:G:H8	1.82	0.45
9:G:68:VAL:HG11	9:G:103:ILE:CG1	2.46	0.45
11:I:71:ILE:HG22	11:I:72:SER:N	2.30	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:84:VAL:HG23	7:E:142:GLY:HA3	1.98	0.45
1:A:1129:C:C1'	1:A:1146:A:H61	2.30	0.45
6:D:59:LYS:O	6:D:61:ARG:N	2.50	0.45
1:A:1188:A:H4'	16:N:97:LYS:NZ	2.31	0.45
22:T:66:ILE:HG23	22:T:70:LYS:HD3	1.99	0.45
1:A:824:G:O2'	1:A:825:A:H5'	2.17	0.45
11:I:21:LYS:HB2	11:I:61:ASP:CB	2.47	0.45
11:I:60:LEU:HD11	11:I:89:TYR:CE2	2.51	0.45
1:A:237:G:O2'	1:A:238:A:H5'	2.17	0.45
6:D:152:SER:HA	6:D:155:LYS:HD3	1.97	0.45
1:A:448:A:H2'	1:A:449:G:O4'	2.17	0.45
1:A:1300:G:C2'	1:A:1301:U:OP2	2.65	0.45
7:E:152:VAL:HA	7:E:155:LYS:HD3	1.98	0.45
14:L:41:PRO:HG3	14:L:46:SER:C	2.36	0.45
15:M:41:ASP:OD2	15:M:42:VAL:HG13	2.17	0.45
20:R:24:ASP:O	20:R:28:LEU:HB2	2.17	0.45
1:A:482:A:H2'	1:A:483:C:H5'	1.99	0.45
10:H:29:SER:O	10:H:32:LYS:HB2	2.16	0.45
20:R:49:LYS:C	20:R:49:LYS:HD3	2.36	0.45
19:Q:6:THR:C	19:Q:7:LEU:HG	2.37	0.45
4:B:165:ALA:HB2	4:B:184:ALA:CB	2.47	0.45
4:B:197:PHE:O	4:B:199:ILE:HG12	2.16	0.45
4:B:86:CYS:O	4:B:87:ASP:HB3	2.17	0.45
6:D:24:VAL:HG23	6:D:25:ARG:H	1.80	0.45
1:A:234:C:H2'	1:A:235:C:C6	2.52	0.45
10:H:113:ARG:HA	10:H:116:ARG:NH1	2.25	0.45
1:A:199:A:N1	1:A:218:U:O2	2.50	0.45
1:A:738:C:H2'	1:A:739:C:C6	2.51	0.45
9:G:136:LYS:O	9:G:140:VAL:HG23	2.17	0.45
16:N:63:CYS:HB2	16:N:79:SER:OG	2.16	0.45
4:B:178:LEU:HD22	4:B:178:LEU:H	1.82	0.45
1:A:926:G:H3'	1:A:1505:G:H21	1.82	0.45
1:A:254:G:O2'	1:A:255:G:H5'	2.16	0.45
19:Q:24:ILE:HD12	19:Q:24:ILE:N	2.31	0.45
19:Q:59:GLU:HB2	19:Q:75:VAL:CG2	2.47	0.45
20:R:33:THR:HG23	20:R:35:SER:N	2.32	0.45
21:S:50:VAL:O	21:S:56:HIS:HA	2.17	0.45
14:L:89:LEU:HB3	14:L:92:VAL:HG21	1.98	0.45
1:A:378:G:H2'	1:A:379:C:C6	2.52	0.45
5:C:11:LEU:HD11	16:N:87:ALA:O	2.17	0.45
1:A:1065:U:H1'	1:A:1066:C:OP2	2.17	0.45
12:J:65:TYR:HA	16:N:98:ALA:N	2.28	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1306:A:N6	1:A:1331:G:H1'	2.32	0.45
6:D:70:GLN:NE2	6:D:96:ARG:HH22	2.12	0.45
6:D:96:ARG:HH22	6:D:133:SER:HB3	1.82	0.45
1:A:219:U:H2'	1:A:220:G:O4'	2.16	0.45
4:B:110:ILE:HA	4:B:147:LEU:CD1	2.47	0.45
4:B:114:LYS:O	4:B:116:LEU:N	2.50	0.45
4:B:113:LEU:CB	4:B:143:LEU:HD13	2.47	0.45
10:H:14:ARG:CZ	10:H:14:ARG:HB3	2.47	0.45
22:T:30:PHE:O	22:T:33:LYS:HB2	2.16	0.45
17:O:11:VAL:HG23	17:O:26:VAL:CG1	2.46	0.45
1:A:1264:U:H2'	1:A:1265:C:H6	1.82	0.45
1:A:212:G:H2'	1:A:213:G:H8	1.81	0.45
1:A:188:C:H2'	1:A:189:A:O4'	2.17	0.45
7:E:63:MET:O	7:E:67:ARG:HD3	2.17	0.45
8:F:25:TYR:CD2	8:F:74:LEU:HD11	2.52	0.45
1:A:113:G:H1'	1:A:354:G:H5'	1.99	0.45
1:A:590:U:O2'	1:A:591:U:H5'	2.17	0.45
1:A:793:U:O2	1:A:1516:G:H4'	2.17	0.45
8:F:41:ASP:OD1	8:F:60:VAL:HG22	2.16	0.45
17:O:80:LEU:HD23	17:O:80:LEU:C	2.37	0.45
1:A:787:A:O2'	1:A:788:U:H5'	2.17	0.45
7:E:96:GLN:HB3	7:E:123:LEU:CD1	2.46	0.45
12:J:73:LEU:O	12:J:74:VAL:HB	2.17	0.45
6:D:79:ALA:HA	6:D:85:THR:HG23	1.99	0.45
1:A:1166:G:H1'	1:A:1170:A:H61	1.82	0.45
1:A:723:U:C5	23:U:48:LYS:HB2	2.52	0.45
9:G:92:PRO:O	9:G:96:ASN:ND2	2.49	0.45
1:A:9:G:C4'	7:E:107:GLY:HA3	2.46	0.45
14:L:30:ARG:CG	14:L:31:GLY:H	2.28	0.45
18:P:42:ILE:HB	18:P:46:LYS:HZ1	1.81	0.45
1:A:604:G:H2'	1:A:605:U:O4'	2.17	0.45
1:A:128:G:H2'	1:A:129:A:H8	1.82	0.45
1:A:414:A:H2'	1:A:415:A:O4'	2.16	0.45
16:N:71:GLY:O	16:N:79:SER:HA	2.16	0.45
1:A:131:A:H2'	1:A:132:C:H6	1.82	0.45
1:A:1155:A:H2'	1:A:1156:G:O4'	2.16	0.45
16:N:15:LEU:HB2	16:N:54:SER:HB3	1.98	0.44
4:B:84:LEU:HD13	4:B:149:GLY:HA2	1.99	0.44
4:B:70:GLY:HA2	4:B:163:ILE:HG22	1.99	0.44
4:B:99:MET:HA	4:B:106:VAL:HG21	1.99	0.44
9:G:55:LYS:O	9:G:56:SER:C	2.55	0.44
13:K:124:LYS:HE3	23:U:34:ARG:HD3	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:411:A:C4	1:A:413:G:H1'	2.53	0.44
11:I:45:MET:C	11:I:47:VAL:H	2.20	0.44
1:A:1135:U:H3'	1:A:1137:C:H42	1.82	0.44
1:A:279:A:C5'	1:A:280:C:H3'	2.47	0.44
1:A:834:U:H2'	1:A:835:U:H6	1.80	0.44
1:A:211:G:N3	1:A:211:G:C3'	2.79	0.44
1:A:1090:U:H2'	1:A:1091:U:H6	1.82	0.44
10:H:8:ASP:O	10:H:12:ARG:HG3	2.17	0.44
22:T:43:LYS:HG3	22:T:86:ALA:HB2	1.98	0.44
17:O:35:ILE:HD13	17:O:59:VAL:HG22	1.99	0.44
1:A:928:G:O2'	1:A:929:G:H5'	2.16	0.44
11:I:11:ARG:O	11:I:14:SER:HB2	2.16	0.44
11:I:62:LEU:O	11:I:64:ILE:HG13	2.17	0.44
21:S:4:LEU:HD21	21:S:9:PHE:HB3	2.00	0.44
4:B:166:ASP:OD1	4:B:190:SER:HA	2.17	0.44
12:J:52:LEU:HB2	16:N:80:ARG:HD2	1.98	0.44
7:E:104:ILE:HD11	7:E:114:LEU:HD12	1.99	0.44
4:B:58:LYS:N	4:B:58:LYS:HD2	2.22	0.44
11:I:98:ARG:NE	11:I:103:VAL:HG21	2.32	0.44
1:A:1352:C:H2'	1:A:1353:G:H8	1.81	0.44
1:A:1263:C:O2'	1:A:1264:U:H5'	2.17	0.44
1:A:637:C:H2'	1:A:638:U:C6	2.52	0.44
4:B:22:TRP:CZ3	4:B:24:PRO:HA	2.52	0.44
14:L:62:VAL:HG22	14:L:63:THR:N	2.30	0.44
1:A:922:G:N3	1:A:1398:A:H2	2.14	0.44
14:L:13:ARG:HH11	14:L:13:ARG:HG2	1.82	0.44
1:A:250:A:N3	1:A:250:A:C2'	2.80	0.44
20:R:35:SER:HA	20:R:71:ASP:OD2	2.18	0.44
4:B:167:HIS:C	4:B:169:HIS:H	2.20	0.44
4:B:66:ILE:CG1	4:B:88:GLN:HG2	2.44	0.44
21:S:40:PHE:HB2	21:S:43:MET:HG3	1.99	0.44
7:E:109:ALA:HB3	7:E:135:VAL:HG23	1.99	0.44
6:D:69:ARG:HH21	6:D:72:ARG:HB2	1.82	0.44
6:D:7:LYS:HG3	6:D:20:LEU:HD13	1.99	0.44
1:A:1097:C:O2'	1:A:1098:C:H5'	2.17	0.44
1:A:1203:C:O2'	1:A:1204:A:H5'	2.18	0.44
1:A:821:G:H2'	1:A:822:U:C6	2.52	0.44
1:A:1226:C:P	15:M:89:ARG:HH12	2.41	0.44
4:B:27:LYS:HB3	4:B:28:PRO:HD3	2.00	0.44
1:A:651:C:H2'	1:A:652:U:C6	2.52	0.44
12:J:36:VAL:HA	12:J:77:VAL:HG23	1.99	0.44
1:A:427:U:H5'	6:D:38:GLY:O	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:D:89:LEU:CD1	6:D:93:LEU:HD11	2.48	0.44
9:G:49:LEU:HA	9:G:52:ARG:HB2	1.99	0.44
5:C:53:ARG:HG2	5:C:54:ILE:N	2.32	0.44
1:A:556:C:O2'	1:A:557:G:H5'	2.17	0.44
1:A:373:A:C1'	1:A:481:G:H1'	2.47	0.44
10:H:65:PHE:CD2	10:H:66:GLN:HG2	2.52	0.44
15:M:63:VAL:HG13	15:M:67:ASP:HB2	2.00	0.44
9:G:10:LYS:CD	9:G:10:LYS:H	2.29	0.44
17:O:39:GLN:HB3	17:O:39:GLN:HE21	1.55	0.44
15:M:85:TYR:CE2	15:M:89:ARG:HG3	2.53	0.44
4:B:16:GLY:O	4:B:17:HIS:HB2	2.16	0.44
4:B:214:GLY:C	4:B:216:VAL:H	2.21	0.44
14:L:49:ARG:HG2	14:L:49:ARG:NH1	2.33	0.44
18:P:6:LEU:CD1	18:P:17:TYR:HB3	2.47	0.44
1:A:1280:A:O4'	12:J:43:PRO:HG3	2.17	0.44
12:J:71:LEU:HD12	12:J:71:LEU:N	2.31	0.44
6:D:3:TYR:CZ	6:D:10:LEU:HD12	2.53	0.44
8:F:47:LEU:HG	8:F:56:LYS:HA	2.00	0.44
4:B:14:HIS:HB3	4:B:208:ALA:HB2	1.99	0.44
1:A:1070:U:H2'	1:A:1071:C:H6	1.83	0.44
22:T:66:ILE:HG23	22:T:70:LYS:HG3	1.99	0.44
4:B:113:LEU:HD12	4:B:144:GLU:HA	1.98	0.44
1:A:230:G:H2'	1:A:231:U:O4'	2.16	0.44
12:J:26:VAL:HG12	12:J:30:LYS:HE3	1.98	0.44
1:A:1069:C:O4'	1:A:1191:A:H2	2.01	0.44
9:G:72:VAL:HA	9:G:89:GLU:HA	1.99	0.44
1:A:401:C:H2'	1:A:402:G:H8	1.81	0.44
16:N:33:VAL:HG22	16:N:40:ARG:NH2	2.32	0.44
1:A:246:A:N3	1:A:247:G:H1'	2.33	0.44
1:A:710:G:O2'	1:A:711:G:H5'	2.18	0.44
1:A:657:U:O2	17:O:21:THR:O	2.35	0.44
1:A:1371:G:O3'	11:I:70:GLY:HA3	2.18	0.44
1:A:950:U:H5	15:M:100:ARG:HE	1.66	0.44
1:A:254:G:H2'	1:A:255:G:H8	1.82	0.44
5:C:141:MET:HE2	5:C:148:ILE:HG22	2.00	0.44
12:J:37:ARG:N	12:J:77:VAL:HG23	2.32	0.44
9:G:30:MET:HE1	9:G:33:GLY:HA2	1.98	0.44
14:L:19:ASN:OD1	14:L:20:VAL:HG23	2.17	0.44
13:K:113:THR:HG21	23:U:28:LEU:HD11	1.99	0.44
13:K:59:PRO:HG2	13:K:60:PHE:H	1.83	0.44
23:U:13:VAL:HG22	23:U:14:ALA:N	2.33	0.44
5:C:33:ASP:O	5:C:36:PHE:HB3	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:42:ARG:NH1	20:R:43:ILE:HG23	2.32	0.44
1:A:723:U:N3	23:U:48:LYS:HD3	2.33	0.44
1:A:85:U:O2	1:A:85:U:O4'	2.35	0.44
1:A:735:C:H2'	1:A:736:C:H6	1.83	0.44
1:A:636:U:H2'	1:A:637:C:H6	1.83	0.44
8:F:16:GLU:O	8:F:19:PRO:HD2	2.17	0.44
1:A:1233:G:H21	1:A:1364:U:H6	1.64	0.44
1:A:1197:A:P	1:A:1197:A:H3'	2.58	0.44
1:A:687:A:H4'	1:A:688:G:O5'	2.18	0.44
5:C:168:ARG:HE	5:C:168:ARG:HB3	1.71	0.44
11:I:66:VAL:HG11	11:I:74:GLN:HE21	1.83	0.44
1:A:1320:C:O2'	1:A:1321:U:H5'	2.16	0.44
1:A:947:G:H2'	1:A:948:C:H6	1.83	0.44
15:M:86:ARG:HA	15:M:96:VAL:CG1	2.47	0.44
15:M:92:ARG:HD3	15:M:94:LEU:CD1	2.29	0.44
19:Q:54:ILE:C	19:Q:56:ASP:H	2.20	0.44
1:A:718:A:C1'	13:K:117:HIS:HA	2.48	0.44
4:B:220:VAL:HG12	4:B:221:ARG:N	2.33	0.44
4:B:82:ALA:HA	4:B:86:CYS:SG	2.58	0.44
18:P:75:ILE:HG22	18:P:80:LYS:HD2	2.00	0.44
5:C:64:ARG:O	5:C:65:VAL:HB	2.18	0.44
5:C:153:SER:O	5:C:156:LEU:HD11	2.17	0.44
1:A:796:C:O2'	1:A:797:C:H5'	2.17	0.44
1:A:1129:C:C5'	11:I:17:ARG:HH12	2.31	0.44
6:D:12:ARG:HB3	6:D:37:PRO:HB3	2.00	0.44
15:M:1:ALA:HA	15:M:56:ARG:NH1	2.33	0.44
1:A:1336:C:H1'	1:A:1337:G:C6	2.53	0.44
5:C:10:ARG:HB3	5:C:15:LYS:CG	2.48	0.44
11:I:83:THR:CB	11:I:102:PHE:HB3	2.48	0.44
5:C:33:ASP:O	5:C:37:LYS:HG2	2.18	0.44
22:T:47:GLN:HE21	22:T:82:ILE:CD1	2.29	0.44
5:C:133:MET:HA	5:C:137:VAL:CG2	2.48	0.44
1:A:1042:A:H2'	1:A:1043:G:O4'	2.18	0.44
1:A:140:U:H2'	1:A:141:G:H8	1.81	0.44
8:F:70:VAL:O	8:F:73:GLU:HB3	2.18	0.44
10:H:63:LYS:HG3	10:H:64:TYR:H	1.82	0.44
23:U:6:ARG:O	23:U:7:GLU:O	2.36	0.44
1:A:1323:G:O2'	1:A:1362:A:O4'	2.36	0.44
1:A:1320:C:H5'	21:S:2:ARG:HG2	2.00	0.44
21:S:62:THR:HG22	21:S:63:ASP:N	2.29	0.44
18:P:51:ARG:HH11	18:P:53:ASP:CA	2.30	0.44
21:S:43:MET:O	21:S:46:LEU:HB2	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:497:G:H2'	1:A:498:A:C8	2.53	0.44
1:A:959:A:N6	1:A:1222:G:H5'	2.33	0.44
13:K:64:VAL:O	13:K:68:ARG:HB2	2.17	0.44
1:A:25:C:C5'	1:A:524:G:H1'	2.47	0.44
15:M:21:ILE:HB	15:M:24:VAL:CG2	2.48	0.44
1:A:1486:G:H2'	1:A:1487:G:O4'	2.18	0.44
1:A:742:G:H5''	17:O:57:ARG:NH1	2.33	0.44
6:D:186:GLU:O	6:D:187:ARG:C	2.56	0.44
15:M:78:ARG:NH2	15:M:81:ASP:HB2	2.32	0.44
19:Q:60:ILE:HG22	19:Q:72:TRP:CE3	2.50	0.44
19:Q:80:LYS:CD	19:Q:81:ALA:H	2.23	0.44
1:A:842:U:O2'	1:A:846:G:N1	2.50	0.44
4:B:31:PHE:HB2	4:B:40:ILE:O	2.18	0.44
4:B:77:GLU:C	4:B:79:VAL:H	2.21	0.44
12:J:51:VAL:O	12:J:62:ARG:HA	2.17	0.44
13:K:27:ASN:O	13:K:56:LYS:HE2	2.18	0.44
1:A:404:G:O2'	1:A:405:U:H5'	2.16	0.44
6:D:3:TYR:HB2	6:D:62:ARG:NH2	2.33	0.44
1:A:202:G:N2	1:A:465:A:H61	2.15	0.44
6:D:7:LYS:HD3	6:D:20:LEU:HB3	2.00	0.44
1:A:451:A:H4'	1:A:452:A:C1'	2.48	0.44
22:T:56:ILE:HA	22:T:59:ARG:HB3	2.00	0.44
17:O:15:GLY:HA3	17:O:20:ASP:OD2	2.17	0.44
12:J:48:ARG:HB3	16:N:100:TRP:CH2	2.53	0.44
1:A:276:G:O2'	1:A:277:C:H5'	2.17	0.44
16:N:72:PHE:CE2	16:N:77:GLY:HA2	2.53	0.44
1:A:94:G:H4'	1:A:95:C:OP1	2.17	0.44
15:M:32:ILE:HD11	15:M:58:GLU:HB2	2.00	0.44
1:A:31:G:H22	1:A:47:C:H4'	1.83	0.44
1:A:327:A:H1'	1:A:329:A:O4'	2.17	0.44
5:C:111:ASP:HB3	5:C:114:LEU:HB2	2.00	0.44
3:X:1:A:H1'	3:X:6:U:O2'	2.18	0.44
19:Q:73:THR:HG22	19:Q:74:LEU:N	2.32	0.44
15:M:91:ARG:C	15:M:93:GLY:H	2.22	0.43
19:Q:18:LYS:HB3	19:Q:46:HIS:CE1	2.53	0.43
5:C:185:THR:HG22	5:C:186:SER:H	1.83	0.43
5:C:156:LEU:CD1	5:C:163:ARG:HB3	2.48	0.43
13:K:52:ARG:HB2	13:K:56:LYS:HD2	1.99	0.43
12:J:18:ILE:HG23	12:J:72:ARG:HG3	1.99	0.43
16:N:87:ALA:HB2	16:N:95:LEU:HD23	2.00	0.43
9:G:61:PHE:CZ	9:G:65:LEU:HD13	2.53	0.43
1:A:79:G:H2'	1:A:80:A:C8	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1074:G:H5'	4:B:104:LYS:HZ2	1.82	0.43
4:B:22:TRP:O	4:B:23:ASN:HB2	2.18	0.43
19:Q:13:SER:CB	19:Q:21:VAL:HB	2.48	0.43
9:G:139:ASP:HA	9:G:142:ARG:CD	2.49	0.43
10:H:37:ASN:ND2	10:H:41:GLU:HB2	2.33	0.43
23:U:42:THR:O	23:U:46:ARG:N	2.51	0.43
8:F:21:MET:HG2	8:F:25:TYR:OH	2.18	0.43
1:A:1213:A:C6	1:A:1215:G:H1'	2.53	0.43
1:A:440:C:H2'	1:A:441:A:H8	1.83	0.43
1:A:891:U:O2'	1:A:892:A:H5'	2.18	0.43
1:A:1363:A:H2'	1:A:1363:A:N3	2.33	0.43
16:N:15:LEU:HD13	16:N:54:SER:CB	2.48	0.43
4:B:89:PHE:CE2	4:B:153:MET:HB2	2.53	0.43
5:C:57:GLU:OE1	5:C:64:ARG:HG2	2.18	0.43
5:C:62:SER:HB2	5:C:98:ALA:HA	2.00	0.43
1:A:1253:G:N1	1:A:1285:A:N6	2.66	0.43
5:C:24:ASN:H	5:C:27:GLU:CG	2.27	0.43
15:M:8:ILE:H	15:M:8:ILE:HD12	1.83	0.43
1:A:1237:C:H3'	1:A:1336:C:N4	2.30	0.43
6:D:99:ASN:CG	6:D:110:ARG:HH21	2.21	0.43
9:G:137:ARG:C	9:G:137:ARG:HD2	2.39	0.43
1:A:453:G:H2'	1:A:454:G:O4'	2.18	0.43
1:A:1135:U:H2'	1:A:1138:G:O6	2.18	0.43
1:A:586:C:HO2'	1:A:878:A:H4'	1.82	0.43
1:A:162:A:H2'	1:A:163:C:O4'	2.18	0.43
1:A:1021:A:H2'	1:A:1022:A:C8	2.53	0.43
11:I:71:ILE:N	11:I:71:ILE:HD12	2.33	0.43
1:A:1317:C:H2'	1:A:1318:A:O4'	2.19	0.43
15:M:97:ARG:H	15:M:99:GLN:NE2	2.17	0.43
15:M:11:HIS:H	15:M:44:ILE:HG13	1.84	0.43
21:S:10:ILE:HG21	21:S:40:PHE:HZ	1.83	0.43
21:S:19:GLU:HA	21:S:22:VAL:CG2	2.48	0.43
12:J:36:VAL:HA	12:J:77:VAL:N	2.31	0.43
1:A:497:G:H2'	1:A:498:A:H8	1.83	0.43
4:B:13:VAL:O	4:B:208:ALA:HB2	2.18	0.43
1:A:1375:A:H2'	1:A:1376:U:H6	1.84	0.43
6:D:122:ILE:O	6:D:128:VAL:HG23	2.18	0.43
1:A:18:C:H4'	1:A:1078:U:O2	2.18	0.43
20:R:52:ARG:O	20:R:56:ARG:HG3	2.18	0.43
1:A:337:G:H2'	1:A:338:A:H8	1.78	0.43
13:K:35:ASP:CG	13:K:39:ASN:HB2	2.38	0.43
13:K:35:ASP:OD1	13:K:39:ASN:N	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:E:68:ARG:NH1	7:E:69:ASN:ND2	2.65	0.43
1:A:599:C:O2'	1:A:600:A:H5'	2.19	0.43
1:A:665:A:H2'	1:A:725:G:N2	2.32	0.43
13:K:37:GLN:CA	13:K:37:GLN:HE21	2.26	0.43
1:A:146:G:H2'	1:A:147:G:C8	2.54	0.43
9:G:106:ALA:HB2	9:G:132:THR:HB	1.98	0.43
22:T:4:LYS:NZ	22:T:6:ALA:HB2	2.33	0.43
1:A:1210:C:H4'	1:A:1214:C:N4	2.33	0.43
1:A:357:G:C2'	1:A:358:U:H5'	2.48	0.43
6:D:186:GLU:OE1	6:D:188:SER:HB3	2.18	0.43
1:A:116:A:H2'	1:A:117:G:O4'	2.18	0.43
14:L:115:LYS:N	14:L:115:LYS:HD2	2.34	0.43
11:I:82:ILE:HA	11:I:85:ALA:HB3	2.01	0.43
4:B:160:LEU:O	4:B:160:LEU:HD12	2.17	0.43
4:B:88:GLN:OE1	4:B:220:VAL:HG11	2.18	0.43
5:C:76:ILE:CG2	5:C:80:GLY:H	2.29	0.43
12:J:15:HIS:CE1	12:J:19:ASP:HB2	2.54	0.43
12:J:5:ARG:HG2	12:J:77:VAL:O	2.17	0.43
4:B:13:VAL:HG13	4:B:207:ARG:HG2	2.01	0.43
4:B:9:LEU:HD22	4:B:9:LEU:C	2.39	0.43
1:A:1157:A:H4'	1:A:1158:C:O5'	2.19	0.43
1:A:968:A:H4'	1:A:969:A:OP2	2.18	0.43
1:A:37:U:H2'	1:A:38:G:C8	2.53	0.43
17:O:42:PHE:C	17:O:44:GLU:H	2.22	0.43
16:N:65:GLN:HB2	16:N:78:LEU:HD22	1.99	0.43
12:J:86:ALA:O	12:J:90:LEU:HD12	2.17	0.43
7:E:89:THR:CG2	7:E:90:GLY:H	2.23	0.43
1:A:730:G:O2'	1:A:766:A:H5'	2.18	0.43
5:C:173:PRO:C	5:C:175:HIS:H	2.20	0.43
1:A:1040:U:H2'	1:A:1041:G:C8	2.52	0.43
19:Q:29:LYS:HE3	19:Q:36:PHE:CE1	2.53	0.43
1:A:1207:G:O2'	1:A:1208:C:H5'	2.19	0.43
2:W:39:C:H2'	2:W:40:C:H6	1.82	0.43
21:S:12:LEU:C	21:S:12:LEU:HD23	2.38	0.43
16:N:52:ARG:C	16:N:54:SER:H	2.21	0.43
1:A:253:A:H2'	1:A:254:G:C8	2.54	0.43
21:S:29:PRO:HB3	21:S:47:THR:HG22	2.01	0.43
4:B:69:VAL:HG13	4:B:91:VAL:CG2	2.48	0.43
1:A:768:A:H5'	1:A:1524:C:H1'	2.01	0.43
6:D:94:GLU:CA	6:D:103:ARG:HH22	2.31	0.43
1:A:484:G:H5'	1:A:486:U:H5'	1.99	0.43
9:G:49:LEU:HB2	9:G:57:GLU:OE2	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:R:44:THR:HG22	20:R:46:THR:N	2.34	0.43
1:A:754:C:H4'	17:O:71:ARG:NH2	2.31	0.43
1:A:266:G:N2	1:A:270:A:N6	2.67	0.43
1:A:207:C:O2'	1:A:208:U:H5'	2.18	0.43
17:O:68:TYR:O	17:O:72:LYS:HB2	2.19	0.43
8:F:18:VAL:HG11	8:F:58:HIS:CE1	2.54	0.43
17:O:87:ARG:HH11	17:O:87:ARG:CA	2.31	0.43
1:A:1495:U:O2'	1:A:1496:C:H5'	2.18	0.43
1:A:1454:G:H2'	1:A:1455:G:H8	1.84	0.43
21:S:4:LEU:HD13	21:S:8:PRO:CA	2.48	0.43
1:A:255:G:O3'	19:Q:18:LYS:HD2	2.19	0.43
1:A:429:U:C1'	1:A:430:A:H5''	2.47	0.43
6:D:58:GLN:O	6:D:62:ARG:N	2.51	0.43
9:G:24:LYS:O	9:G:28:ILE:N	2.47	0.43
14:L:55:ARG:HA	14:L:61:GLU:HA	1.99	0.43
1:A:238:A:C2'	1:A:239:U:H5''	2.49	0.43
1:A:37:U:P	14:L:119:LYS:HB2	2.59	0.43
5:C:45:GLU:OE1	5:C:86:LEU:HD21	2.19	0.43
15:M:33:LEU:HD22	15:M:38:ILE:HB	2.00	0.43
18:P:7:ALA:HB1	18:P:29:ASN:CB	2.47	0.43
1:A:997:U:H2'	1:A:998:C:O4'	2.18	0.43
14:L:8:ARG:HG3	14:L:9:LYS:N	2.33	0.43
14:L:9:LYS:HB2	14:L:9:LYS:HE3	1.86	0.43
14:L:71:HIS:HA	14:L:98:ARG:NH2	2.34	0.43
8:F:17:GLN:O	8:F:21:MET:HB2	2.18	0.43
1:A:856:C:O2'	1:A:857:C:H5'	2.19	0.43
1:A:395:C:O2'	1:A:396:C:H5'	2.19	0.43
5:C:146:LYS:HG3	5:C:204:GLY:H	1.83	0.43
11:I:32:ARG:NE	11:I:36:GLN:HG2	2.34	0.43
18:P:4:ILE:HD11	18:P:65:ALA:HB1	1.99	0.43
1:A:1057:G:OP1	5:C:154:GLY:N	2.51	0.43
14:L:89:LEU:HD22	14:L:89:LEU:N	2.34	0.43
1:A:716:A:N3	13:K:119:GLY:HA2	2.33	0.43
23:U:15:LEU:C	23:U:17:ARG:N	2.72	0.43
1:A:1351:U:O2'	1:A:1352:C:H5'	2.19	0.43
6:D:69:ARG:HH21	6:D:72:ARG:HD2	1.84	0.43
1:A:669:G:H5'	17:O:47:LYS:NZ	2.33	0.43
1:A:734:G:O2'	20:R:59:LYS:HD2	2.18	0.43
10:H:93:LYS:HE2	10:H:93:LYS:N	2.34	0.43
1:A:1138:G:H2'	1:A:1140:C:C6	2.53	0.43
16:N:62:ARG:HH11	16:N:69:PRO:HD3	1.84	0.43
7:E:156:ARG:HB2	10:H:43:GLY:O	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:42:LEU:HA	4:B:45:THR:OG1	2.18	0.43
1:A:139:A:H2'	1:A:140:U:H6	1.83	0.43
1:A:590:U:H2'	1:A:591:U:H6	1.83	0.43
1:A:847:G:H2'	1:A:848:C:C6	2.53	0.43
1:A:227:G:H21	18:P:63:GLN:HB3	1.84	0.43
18:P:12:LYS:O	18:P:13:LYS:HB2	2.18	0.43
11:I:5:TYR:CB	11:I:20:ILE:HD13	2.48	0.43
4:B:67:LEU:N	4:B:67:LEU:HD22	2.34	0.43
5:C:148:ILE:HA	5:C:200:TRP:O	2.19	0.43
6:D:61:ARG:HH22	6:D:68:GLU:N	2.17	0.43
6:D:94:GLU:HA	6:D:103:ARG:HH22	1.84	0.43
15:M:14:ALA:HB3	15:M:40:GLU:C	2.39	0.43
9:G:61:PHE:CE2	9:G:65:LEU:HD13	2.54	0.43
20:R:29:LYS:HB2	20:R:29:LYS:HE2	1.85	0.43
1:A:644:U:O2'	1:A:645:G:H5'	2.19	0.43
13:K:35:ASP:CA	13:K:41:LEU:HD11	2.49	0.43
1:A:1299:A:C8	1:A:1301:U:H1'	2.54	0.43
10:H:36:ALA:HA	10:H:39:LEU:CD1	2.49	0.43
9:G:70:PRO:HG3	9:G:102:TRP:CH2	2.54	0.43
1:A:532:A:N6	1:A:1207:G:H5'	2.33	0.43
1:A:803:G:H2'	1:A:804:U:C6	2.54	0.43
5:C:61:LYS:O	5:C:96:VAL:HB	2.18	0.43
18:P:12:LYS:C	18:P:14:ARG:H	2.21	0.43
15:M:12:LYS:HB3	15:M:17:ALA:HB2	2.00	0.43
19:Q:7:LEU:HD22	19:Q:24:ILE:HG12	1.99	0.43
4:B:100:LEU:HB2	4:B:174:GLU:HG3	2.01	0.43
8:F:71:ILE:HG13	8:F:72:ASP:N	2.33	0.43
8:F:38:ARG:NH1	20:R:23:LYS:NZ	2.64	0.43
14:L:49:ARG:HG2	14:L:49:ARG:HH11	1.83	0.43
12:J:36:VAL:HG13	12:J:76:ILE:CA	2.38	0.43
15:M:53:ASP:HA	15:M:56:ARG:NH2	2.34	0.43
15:M:14:ALA:HB3	15:M:40:GLU:O	2.19	0.43
6:D:162:GLU:HA	6:D:166:LYS:HZ1	1.83	0.43
20:R:29:LYS:HA	20:R:32:ILE:HG12	2.01	0.43
20:R:56:ARG:HA	20:R:59:LYS:NZ	2.34	0.43
1:A:229:U:H2'	1:A:230:G:H8	1.79	0.43
1:A:972:C:O3'	12:J:59:LYS:HG2	2.18	0.43
1:A:632:U:C3'	1:A:633:G:H5'	2.49	0.43
1:A:679:C:H2'	1:A:680:C:C6	2.54	0.43
10:H:40:LYS:HZ3	10:H:41:GLU:N	2.17	0.43
1:A:144:G:OP2	1:A:144:G:H3'	2.18	0.43
1:A:751:U:H2'	1:A:752:G:O4'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:759:A:H2'	1:A:760:G:O4'	2.19	0.43
19:Q:10:ARG:O	19:Q:22:VAL:HG13	2.17	0.43
7:E:108:GLY:N	7:E:110:MET:SD	2.92	0.43
1:A:542:G:H2'	1:A:543:U:H6	1.83	0.43
6:D:155:LYS:C	6:D:157:ALA:H	2.21	0.43
4:B:114:LYS:C	4:B:116:LEU:N	2.71	0.43
1:A:731:G:O2'	1:A:732:C:H5'	2.19	0.43
23:U:52:VAL:HG13	23:U:53:LYS:N	2.34	0.43
1:A:77:A:H2'	1:A:78:A:C8	2.54	0.43
1:A:251:G:H4'	1:A:252:U:H5'	1.99	0.42
19:Q:18:LYS:HD3	19:Q:48:GLU:CD	2.39	0.42
12:J:52:LEU:HD13	16:N:80:ARG:HD2	2.00	0.42
7:E:79:THR:O	7:E:119:VAL:HG12	2.18	0.42
12:J:7:ARG:HA	12:J:75:ASP:HA	2.01	0.42
1:A:509:A:N3	1:A:543:U:O2'	2.47	0.42
5:C:26:LYS:HD3	5:C:27:GLU:CD	2.39	0.42
15:M:2:ARG:C	15:M:4:ALA:H	2.23	0.42
1:A:1237:C:H2'	1:A:1336:C:C5	2.54	0.42
6:D:181:PHE:CZ	6:D:185:PRO:HD3	2.42	0.42
1:A:1118:U:H1'	1:A:1179:A:N3	2.34	0.42
1:A:1512:U:H2'	1:A:1513:A:H8	1.83	0.42
1:A:59:A:H3'	1:A:331:G:H22	1.84	0.42
4:B:110:ILE:HD13	4:B:150:ILE:HD11	1.99	0.42
20:R:46:THR:HG21	20:R:51:GLN:NE2	2.34	0.42
7:E:150:GLU:O	7:E:151:MET:HB3	2.19	0.42
1:A:598:U:H2'	1:A:599:C:C6	2.53	0.42
7:E:88:HIS:CE1	7:E:89:THR:HG1	2.36	0.42
7:E:156:ARG:HB2	10:H:43:GLY:C	2.39	0.42
1:A:807:A:H2'	1:A:808:C:C6	2.54	0.42
6:D:123:MET:HE1	6:D:145:ARG:HA	2.00	0.42
1:A:625:U:OP1	18:P:9:HIS:O	2.37	0.42
1:A:981:U:H2'	1:A:982:U:C5	2.54	0.42
1:A:253:A:H2'	1:A:254:G:H8	1.84	0.42
7:E:146:MET:HE2	7:E:146:MET:HB3	1.83	0.42
12:J:10:LEU:CD1	12:J:72:ARG:HB2	2.42	0.42
12:J:8:ILE:N	12:J:8:ILE:HD13	2.34	0.42
15:M:56:ARG:HA	15:M:59:VAL:CG1	2.46	0.42
1:A:1335:U:O3'	1:A:1336:C:H6	2.03	0.42
7:E:131:ASN:O	7:E:135:VAL:HG13	2.18	0.42
11:I:98:ARG:HG3	11:I:104:THR:HG23	2.01	0.42
16:N:65:GLN:HG2	16:N:82:LYS:CE	2.49	0.42
1:A:332:G:H2'	1:A:333:U:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:P:10:GLY:CA	18:P:16:PHE:H	2.30	0.42
1:A:1010:U:H2'	1:A:1011:C:H6	1.82	0.42
20:R:50:TYR:O	20:R:53:GLN:HG3	2.19	0.42
1:A:684:U:H2'	1:A:685:G:O4'	2.19	0.42
7:E:86:GLY:HA3	7:E:141:ASP:HB3	2.00	0.42
1:A:1364:U:O2	1:A:1364:U:O4'	2.36	0.42
1:A:144:G:H2'	1:A:145:G:O4'	2.19	0.42
20:R:22:TYR:HB2	20:R:61:ALA:HB2	2.02	0.42
12:J:14:ASP:OD2	12:J:16:ARG:HD3	2.19	0.42
15:M:84:CYS:HB2	21:S:72:GLU:CD	2.39	0.42
8:F:62:MET:HG3	8:F:64:VAL:CG2	2.48	0.42
15:M:44:ILE:O	15:M:47:LEU:HB2	2.19	0.42
12:J:15:HIS:HD2	12:J:18:ILE:HB	1.84	0.42
1:A:1236:A:C4'	1:A:1304:G:H4'	2.41	0.42
22:T:31:ILE:HD13	22:T:74:HIS:NE2	2.34	0.42
20:R:29:LYS:HD3	20:R:30:ASN:N	2.34	0.42
5:C:38:VAL:CG1	5:C:90:VAL:HG12	2.48	0.42
2:W:27:U:H2'	2:W:28:C:O4'	2.18	0.42
1:A:880:C:O2'	1:A:881:G:H5'	2.18	0.42
1:A:1458:G:H5'	22:T:26:MET:HB2	2.00	0.42
8:F:19:PRO:HG2	8:F:20:GLY:H	1.83	0.42
22:T:82:ILE:O	22:T:85:LEU:HD23	2.20	0.42
1:A:954:G:H2'	1:A:955:U:O4'	2.18	0.42
1:A:1427:C:O2'	1:A:1428:A:H5'	2.20	0.42
1:A:794:A:O2'	1:A:795:C:H5'	2.20	0.42
9:G:50:ALA:O	9:G:54:GLY:N	2.52	0.42
1:A:109:A:H5'	1:A:110:C:H5	1.84	0.42
1:A:110:C:H2'	1:A:111:G:C8	2.54	0.42
12:J:92:LEU:N	12:J:92:LEU:HD22	2.34	0.42
1:A:1110:A:H2'	1:A:1110:A:N3	2.34	0.42
17:O:48:ASP:C	17:O:50:HIS:H	2.22	0.42
16:N:9:GLU:O	16:N:13:VAL:HG23	2.18	0.42
21:S:27:LYS:HB2	21:S:28:LYS:H	1.62	0.42
1:A:376:G:H5'	18:P:6:LEU:O	2.19	0.42
1:A:1280:A:C8	12:J:43:PRO:HD3	2.54	0.42
14:L:29:LYS:O	14:L:80:LEU:HD12	2.19	0.42
2:W:41:C:O2'	2:W:42:G:H5'	2.19	0.42
11:I:56:MET:HB2	11:I:57:VAL:H	1.54	0.42
1:A:371:A:O2'	1:A:372:C:H5'	2.20	0.42
15:M:58:GLU:HA	15:M:61:LYS:CD	2.49	0.42
16:N:30:ILE:HD12	16:N:30:ILE:N	2.33	0.42
1:A:39:G:H2'	1:A:40:C:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:939:G:H2'	1:A:940:C:C6	2.54	0.42
4:B:95:TRP:CZ3	4:B:97:GLY:HA2	2.54	0.42
1:A:1342:C:O2'	1:A:1343:G:H5'	2.20	0.42
1:A:1075:U:H2'	1:A:1076:U:C6	2.55	0.42
4:B:107:ARG:CA	4:B:110:ILE:HD12	2.47	0.42
1:A:648:A:O2'	1:A:649:A:H5'	2.20	0.42
22:T:49:ALA:O	22:T:53:MET:HG3	2.20	0.42
1:A:713:G:H2'	1:A:714:G:C8	2.54	0.42
1:A:92:U:H2'	1:A:93:U:C5	2.54	0.42
1:A:622:A:H2'	1:A:623:C:O4'	2.18	0.42
1:A:371:A:H1'	1:A:482:A:H1'	2.00	0.42
1:A:148:G:H2'	1:A:149:A:H5''	2.01	0.42
10:H:46:GLU:O	10:H:47:ASP:HB3	2.20	0.42
1:A:994:A:C8	1:A:1216:A:H4'	2.54	0.42
6:D:13:ARG:O	6:D:13:ARG:HG3	2.20	0.42
1:A:692:U:C2	1:A:694:A:H5''	2.55	0.42
11:I:12:LYS:HA	11:I:109:GLN:HE22	1.84	0.42
11:I:66:VAL:CG2	11:I:67:LYS:N	2.82	0.42
11:I:9:GLY:HA2	11:I:77:ALA:O	2.19	0.42
19:Q:58:VAL:HG23	19:Q:60:ILE:HD11	2.02	0.42
21:S:27:LYS:HE3	21:S:30:LEU:HD21	2.01	0.42
4:B:185:ILE:HG22	4:B:200:PRO:O	2.19	0.42
4:B:31:PHE:CB	4:B:41:ASN:HA	2.49	0.42
4:B:95:TRP:NE1	4:B:99:MET:SD	2.92	0.42
8:F:7:VAL:HG13	8:F:7:VAL:O	2.19	0.42
18:P:67:ILE:HG13	18:P:71:VAL:CG1	2.49	0.42
7:E:114:LEU:HB3	7:E:119:VAL:HG23	2.01	0.42
7:E:105:ILE:CD1	7:E:123:LEU:HB3	2.43	0.42
1:A:1526:G:O2'	1:A:1527:U:H5'	2.19	0.42
1:A:541:G:H2'	1:A:542:G:C8	2.54	0.42
4:B:9:LEU:CD2	4:B:11:ALA:HB2	2.49	0.42
6:D:87:GLU:C	6:D:89:LEU:N	2.73	0.42
7:E:136:VAL:HG13	7:E:137:ARG:N	2.23	0.42
1:A:34:C:H2'	1:A:35:G:C8	2.55	0.42
11:I:40:ARG:HA	11:I:44:ARG:HH21	1.84	0.42
4:B:102:ASN:HA	4:B:104:LYS:HZ3	1.84	0.42
4:B:116:LEU:HD21	4:B:136:ARG:HE	1.85	0.42
13:K:69:CYS:O	13:K:73:VAL:N	2.53	0.42
1:A:363:A:OP2	14:L:30:ARG:NH1	2.52	0.42
1:A:419:C:O2'	1:A:420:U:H5'	2.19	0.42
5:C:122:GLN:O	5:C:125:ARG:HB3	2.20	0.42
20:R:19:GLU:OE1	20:R:53:GLN:HB2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:805:C:O2'	1:A:806:C:H5'	2.20	0.42
1:A:62:U:OP1	1:A:386:C:H5'	2.19	0.42
1:A:167:A:H2'	1:A:168:G:C8	2.55	0.42
1:A:317:U:H2'	1:A:318:G:C8	2.54	0.42
1:A:830:G:H2'	1:A:831:A:H8	1.84	0.42
17:O:5:GLU:H	17:O:5:GLU:HG3	1.68	0.42
11:I:108:ARG:HG2	11:I:108:ARG:H	1.65	0.42
1:A:951:G:O2'	1:A:952:U:H5'	2.20	0.42
16:N:9:GLU:OE1	16:N:60:ARG:HG2	2.19	0.42
13:K:21:HIS:HA	13:K:84:MET:O	2.19	0.42
1:A:377:G:H2'	1:A:378:G:H8	1.84	0.42
14:L:21:PRO:HG2	14:L:22:ALA:H	1.85	0.42
7:E:17:VAL:HG21	7:E:55:VAL:HG13	2.02	0.42
14:L:43:LYS:N	14:L:44:PRO:HD2	2.24	0.42
5:C:10:ARG:HB3	5:C:15:LYS:HB2	2.01	0.42
13:K:80:ASN:CA	13:K:105:ARG:HD3	2.50	0.42
1:A:668:G:O2'	1:A:669:G:H5'	2.20	0.42
1:A:452:A:H2'	1:A:453:G:O4'	2.20	0.42
22:T:51:ASN:C	22:T:53:MET:H	2.22	0.42
10:H:80:PRO:CA	10:H:83:ARG:HE	2.32	0.42
1:A:519:C:H5'	14:L:47:ALA:HA	2.00	0.42
1:A:988:G:H21	1:A:1016:A:H1'	1.85	0.42
15:M:28:ARG:NH2	15:M:62:PHE:CB	2.82	0.42
5:C:129:PHE:CG	5:C:130:ARG:N	2.88	0.42
1:A:103:U:H1'	1:A:171:A:N1	2.34	0.42
1:A:357:G:O2'	1:A:358:U:H5'	2.20	0.42
1:A:432:A:H2'	1:A:433:G:O4'	2.19	0.42
7:E:11:GLN:HB3	7:E:116:VAL:HB	2.01	0.42
1:A:977:A:H2'	1:A:978:A:H5''	2.01	0.42
16:N:50:LEU:HD23	16:N:51:PRO:N	2.35	0.42
8:F:67:PRO:O	8:F:71:ILE:HG23	2.20	0.42
5:C:163:ARG:HG2	5:C:164:THR:N	2.25	0.42
1:A:796:C:OP1	13:K:127:ARG:HB2	2.19	0.42
1:A:1147:C:O2	11:I:17:ARG:NH1	2.52	0.42
6:D:197:HIS:O	6:D:198:LEU:HD23	2.20	0.42
6:D:12:ARG:HB3	6:D:37:PRO:HG3	2.01	0.42
6:D:56:GLU:HB2	6:D:198:LEU:HD12	2.02	0.42
9:G:41:ILE:HG22	9:G:42:VAL:N	2.34	0.42
7:E:133:ILE:HD12	7:E:134:ASN:CG	2.40	0.42
6:D:78:ALA:O	6:D:85:THR:HG23	2.19	0.42
1:A:668:G:HO2'	1:A:669:G:H5'	1.84	0.42
6:D:157:ALA:O	6:D:160:LEU:HD13	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:49:LEU:HD23	9:G:52:ARG:HD3	2.02	0.42
18:P:69:ASP:CG	18:P:70:ARG:N	2.72	0.42
1:A:173:U:H5''	1:A:197:A:H5'	2.02	0.42
1:A:1028:C:H2'	1:A:1029:U:C6	2.55	0.42
1:A:274:A:H4'	1:A:275:G:O5'	2.19	0.42
15:M:63:VAL:CG1	15:M:67:ASP:HB2	2.50	0.42
19:Q:30:HIS:HB3	19:Q:34:GLY:H	1.85	0.42
1:A:533:A:HO2'	1:A:535:A:P	2.42	0.42
1:A:1471:U:O2'	1:A:1472:U:H5'	2.20	0.42
1:A:1473:G:O2'	1:A:1474:U:H5'	2.20	0.42
16:N:16:ALA:C	16:N:18:LYS:H	2.23	0.42
18:P:61:VAL:HA	18:P:65:ALA:HB3	2.01	0.42
23:U:33:ARG:O	23:U:34:ARG:C	2.58	0.42
5:C:11:LEU:HB3	5:C:17:TRP:CE2	2.54	0.42
1:A:1375:A:O2'	1:A:1376:U:H5'	2.20	0.42
22:T:66:ILE:HG23	22:T:70:LYS:CD	2.50	0.42
6:D:138:PRO:HB3	6:D:181:PHE:CD2	2.53	0.42
23:U:14:ALA:C	23:U:16:ARG:H	2.22	0.42
11:I:40:ARG:CA	11:I:44:ARG:HH21	2.32	0.42
1:A:1171:A:O2'	1:A:1172:C:H5'	2.20	0.42
9:G:78:ARG:HG2	9:G:83:THR:OG1	2.20	0.42
20:R:60:ARG:NH1	20:R:60:ARG:HG2	2.34	0.42
1:A:1138:G:H2'	1:A:1140:C:H6	1.84	0.42
4:B:206:ILE:O	4:B:206:ILE:HD13	2.20	0.42
17:O:14:PHE:O	17:O:25:GLU:HB3	2.20	0.42
1:A:735:C:H2'	1:A:736:C:C6	2.54	0.42
1:A:606:G:H21	1:A:631:C:H2'	1.85	0.42
1:A:922:G:O2'	1:A:923:A:H5'	2.20	0.42
1:A:418:C:H1'	1:A:540:G:O2'	2.20	0.42
16:N:22:LYS:O	16:N:25:GLU:HG3	2.19	0.42
4:B:178:LEU:HD22	4:B:178:LEU:N	2.35	0.42
5:C:112:ALA:N	5:C:201:ILE:HD12	2.35	0.42
1:A:771:G:O2'	1:A:772:U:H5'	2.20	0.42
7:E:121:ASN:ND2	7:E:121:ASN:H	2.02	0.42
9:G:149:ALA:HB1	13:K:58:THR:CG2	2.49	0.42
6:D:52:VAL:HG23	6:D:53:GLN:HG3	2.01	0.42
5:C:5:HIS:HA	5:C:6:PRO:HD2	1.95	0.42
14:L:95:HIS:ND1	14:L:96:THR:N	2.68	0.42
1:A:1118:U:C2'	1:A:1118:U:O2	2.62	0.42
16:N:64:ARG:HB2	16:N:78:LEU:CD2	2.45	0.42
1:A:1240:U:P	9:G:115:MET:H	2.43	0.42
1:A:599:C:H4'	10:H:121:GLY:CA	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:504:C:H6	1:A:504:C:O5'	2.03	0.42
6:D:169:TRP:C	6:D:182:LYS:HB3	2.40	0.42
1:A:1108:G:OP1	5:C:174:LEU:HD12	2.19	0.42
1:A:885:G:N3	1:A:914:A:C2	2.87	0.42
1:A:1456:A:H2'	1:A:1457:G:O4'	2.19	0.42
1:A:246:A:H4'	1:A:247:G:H4'	2.02	0.42
1:A:829:G:O2'	1:A:830:G:H5'	2.20	0.42
19:Q:30:HIS:HB3	19:Q:34:GLY:N	2.34	0.42
1:A:893:C:H2'	1:A:894:G:C8	2.54	0.42
1:A:912:C:O2'	1:A:913:A:H5'	2.20	0.42
21:S:57:VAL:O	21:S:57:VAL:HG23	2.20	0.42
11:I:8:THR:OG1	11:I:9:GLY:N	2.54	0.41
15:M:86:ARG:HA	15:M:96:VAL:HG11	2.02	0.41
8:F:3:HIS:C	8:F:92:THR:HA	2.40	0.41
19:Q:40:THR:HG22	19:Q:41:THR:N	2.34	0.41
4:B:83:ALA:HA	4:B:88:GLN:HE21	1.85	0.41
5:C:75:VAL:O	5:C:83:VAL:HG22	2.20	0.41
18:P:67:ILE:HG13	18:P:71:VAL:HG13	2.02	0.41
1:A:1130:A:H1'	1:A:1146:A:C2	2.54	0.41
1:A:1237:C:C4'	1:A:1334:G:H21	2.33	0.41
6:D:125:ASN:N	6:D:141:VAL:O	2.47	0.41
6:D:94:GLU:HG3	6:D:103:ARG:HH22	1.85	0.41
6:D:99:ASN:ND2	6:D:110:ARG:HH21	2.18	0.41
1:A:1078:U:O2'	1:A:1079:G:H5'	2.20	0.41
1:A:918:A:H2'	1:A:919:A:C8	2.55	0.41
1:A:233:C:O2'	1:A:234:C:H5'	2.19	0.41
1:A:782:A:H4'	1:A:1514:G:O2'	2.20	0.41
23:U:18:PHE:HB3	23:U:19:LYS:H	1.60	0.41
1:A:505:G:H2'	1:A:506:G:H8	1.85	0.41
1:A:1239:A:H1'	1:A:1241:G:C5	2.55	0.41
1:A:665:A:N3	1:A:732:C:H2'	2.34	0.41
1:A:266:G:H21	1:A:270:A:N6	2.18	0.41
1:A:181:A:N6	1:A:194:C:H2'	2.34	0.41
1:A:372:C:C1'	1:A:373:A:OP2	2.68	0.41
17:O:31:LEU:O	17:O:35:ILE:HG13	2.20	0.41
14:L:105:GLY:HA3	14:L:117:GLY:HA3	2.01	0.41
1:A:394:G:H2'	1:A:395:C:C6	2.55	0.41
1:A:926:G:H2'	1:A:1505:G:N3	2.35	0.41
4:B:172:ILE:HG22	4:B:176:ASN:HD21	1.84	0.41
1:A:49:U:O2'	1:A:50:A:H2'	2.19	0.41
11:I:55:ASP:OD2	11:I:55:ASP:N	2.52	0.41
1:A:947:G:O3'	15:M:107:THR:OG1	2.37	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:S:51:HIS:CD2	21:S:53:GLY:H	2.38	0.41
1:A:841:C:H2'	1:A:843:U:C2	2.54	0.41
4:B:163:ILE:O	4:B:185:ILE:HG13	2.20	0.41
4:B:184:ALA:N	4:B:199:ILE:HD11	2.35	0.41
4:B:74:ALA:O	4:B:75:ALA:HB2	2.19	0.41
18:P:4:ILE:CD1	18:P:65:ALA:HB1	2.50	0.41
1:A:1053:G:C3'	1:A:1054:C:H5'	2.49	0.41
14:L:89:LEU:HB3	14:L:92:VAL:CG2	2.51	0.41
23:U:34:ARG:HH11	23:U:34:ARG:HG3	1.85	0.41
1:A:542:G:H2'	1:A:543:U:C6	2.55	0.41
11:I:21:LYS:HB2	11:I:61:ASP:HB3	2.01	0.41
9:G:129:ASN:O	9:G:130:LYS:CB	2.64	0.41
9:G:67:ASN:HB3	9:G:137:ARG:NH2	2.34	0.41
1:A:1165:U:H2'	1:A:1166:G:C8	2.55	0.41
1:A:79:G:H2'	1:A:80:A:O4'	2.20	0.41
1:A:1101:A:N3	1:A:1102:A:H1'	2.35	0.41
4:B:120:SER:HA	4:B:125:PHE:CD2	2.54	0.41
8:F:76:THR:HA	8:F:79:ARG:HH11	1.83	0.41
9:G:78:ARG:NH1	9:G:80:GLY:N	2.69	0.41
1:A:177:G:O4'	1:A:177:G:N3	2.53	0.41
1:A:310:G:O2'	1:A:311:C:H5'	2.20	0.41
5:C:171:ARG:HH21	5:C:173:PRO:CB	2.33	0.41
1:A:1092:A:H2'	1:A:1093:A:C8	2.54	0.41
5:C:135:ARG:C	5:C:137:VAL:H	2.23	0.41
7:E:12:GLU:HG2	7:E:38:VAL:HG22	2.01	0.41
1:A:872:A:C4	1:A:874:G:N7	2.88	0.41
10:H:63:LYS:HB3	10:H:70:VAL:HG21	2.02	0.41
1:A:1515:G:O2'	1:A:1516:G:H5'	2.20	0.41
1:A:1313:U:H2'	1:A:1314:C:O4'	2.20	0.41
1:A:1324:A:O4'	1:A:1362:A:H4'	2.21	0.41
19:Q:47:ASP:N	19:Q:47:ASP:OD1	2.52	0.41
5:C:148:ILE:CG1	5:C:149:LYS:N	2.83	0.41
9:G:11:ILE:HD12	9:G:35:LYS:NZ	2.34	0.41
1:A:1158:C:O2	1:A:1158:C:H3'	2.21	0.41
9:G:46:LEU:HD22	9:G:46:LEU:N	2.35	0.41
4:B:42:LEU:HG	4:B:42:LEU:H	1.53	0.41
1:A:547:A:H4'	1:A:548:G:O5'	2.21	0.41
1:A:1520:C:H2'	1:A:1521:C:C6	2.56	0.41
1:A:292:G:OP2	1:A:293:G:N7	2.54	0.41
18:P:25:ARG:HD3	18:P:25:ARG:H	1.85	0.41
1:A:1249:C:O2'	11:I:38:PHE:HZ	2.03	0.41
1:A:1250:A:C4'	11:I:69:GLY:H	2.31	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:I:11:ARG:HG2	11:I:77:ALA:HA	2.02	0.41
19:Q:4:ILE:CG1	19:Q:5:ARG:N	2.81	0.41
13:K:95:THR:HG23	13:K:96:ILE:N	2.34	0.41
1:A:523:A:C2	14:L:87:LYS:HB3	2.54	0.41
13:K:122:PRO:O	23:U:34:ARG:HA	2.21	0.41
12:J:71:LEU:HD12	12:J:71:LEU:H	1.85	0.41
12:J:99:GLN:O	12:J:100:ILE:HG23	2.20	0.41
6:D:26:ALA:O	6:D:27:ILE:HB	2.20	0.41
6:D:47:LEU:HD12	6:D:52:VAL:N	2.36	0.41
1:A:1337:G:H5''	1:A:1338:G:OP1	2.20	0.41
9:G:148:LYS:C	9:G:150:PHE:H	2.24	0.41
16:N:65:GLN:HG2	16:N:82:LYS:HD2	2.02	0.41
11:I:47:VAL:O	11:I:50:PRO:HD2	2.20	0.41
1:A:182:A:HO2'	1:A:183:C:H3'	1.84	0.41
1:A:678:U:H4'	1:A:778:G:OP1	2.20	0.41
1:A:93:U:H3'	1:A:93:U:OP2	2.20	0.41
1:A:1039:G:H2'	1:A:1040:U:C6	2.56	0.41
6:D:116:LEU:HD21	6:D:153:ARG:HD3	2.02	0.41
1:A:389:A:H2'	1:A:390:U:H5'	2.03	0.41
4:B:29:PHE:CD1	4:B:29:PHE:N	2.89	0.41
15:M:21:ILE:HB	15:M:24:VAL:HG22	2.02	0.41
19:Q:19:SER:O	19:Q:20:ILE:HG23	2.21	0.41
19:Q:76:ARG:CZ	19:Q:78:VAL:HG22	2.50	0.41
4:B:30:ILE:C	4:B:41:ASN:HB2	2.41	0.41
4:B:92:ASN:O	4:B:93:HIS:O	2.39	0.41
18:P:75:ILE:HG21	18:P:80:LYS:NZ	2.36	0.41
1:A:1279:G:H5''	12:J:9:ARG:CZ	2.50	0.41
1:A:496:A:H2'	1:A:497:G:N7	2.35	0.41
6:D:109:THR:HG22	6:D:111:ALA:N	2.35	0.41
12:J:65:TYR:C	16:N:98:ALA:HB2	2.40	0.41
1:A:237:G:H2'	1:A:238:A:H8	1.86	0.41
13:K:92:ARG:HH21	13:K:111:ASP:CG	2.24	0.41
11:I:79:ARG:O	11:I:83:THR:HG22	2.20	0.41
11:I:80:HIS:CE1	11:I:84:ARG:NH1	2.88	0.41
20:R:60:ARG:HA	20:R:63:TYR:CD1	2.56	0.41
1:A:1135:U:H3'	1:A:1137:C:N3	2.36	0.41
1:A:985:C:H2'	1:A:986:U:C5	2.56	0.41
1:A:277:C:O2'	1:A:278:G:H5'	2.20	0.41
1:A:194:C:H3'	25:A:1849:HOH:O	2.19	0.41
1:A:102:G:N3	1:A:151:A:H2	2.17	0.41
1:A:1499:A:H3'	1:A:1499:A:OP2	2.20	0.41
16:N:63:CYS:CB	16:N:66:THR:HG1	2.33	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1229:A:H2'	1:A:1230:C:H6	1.84	0.41
1:A:1197:A:OP1	1:A:1198:G:OP2	2.38	0.41
21:S:15:LEU:HA	21:S:18:VAL:HG12	2.01	0.41
7:E:95:MET:CE	7:E:114:LEU:HD11	2.50	0.41
10:H:96:ALA:O	10:H:98:LEU:HD12	2.20	0.41
7:E:106:ALA:HB3	7:E:111:ARG:HA	2.03	0.41
13:K:125:LYS:O	23:U:33:ARG:CZ	2.68	0.41
1:A:1305:G:O2'	1:A:1306:A:H8	2.03	0.41
1:A:1182:G:C3'	1:A:1183:U:H5'	2.51	0.41
10:H:11:THR:HA	10:H:14:ARG:HH22	1.84	0.41
12:J:21:ALA:O	12:J:25:ILE:HG13	2.21	0.41
1:A:987:G:O2'	1:A:988:G:H5'	2.20	0.41
1:A:1463:U:H2'	1:A:1464:U:H6	1.86	0.41
6:D:105:GLY:HA2	6:D:161:ALA:HB2	2.03	0.41
9:G:22:LEU:HD13	9:G:22:LEU:C	2.41	0.41
13:K:30:ILE:HG22	13:K:45:THR:HA	2.02	0.41
6:D:119:HIS:O	6:D:120:LYS:HB2	2.21	0.41
12:J:13:PHE:HE2	12:J:69:THR:HG1	1.69	0.41
1:A:132:C:H5''	22:T:68:LYS:HG2	2.03	0.41
1:A:114:U:H4'	25:A:1754:HOH:O	2.19	0.41
1:A:692:U:H2'	1:A:694:A:OP2	2.20	0.41
1:A:1287:A:H2'	1:A:1288:A:C8	2.56	0.41
1:A:1250:A:H4'	11:I:69:GLY:O	2.21	0.41
1:A:981:U:H3'	1:A:982:U:H2'	2.02	0.41
1:A:718:A:C8	13:K:117:HIS:HB3	2.55	0.41
1:A:1055:A:H4'	5:C:160:GLU:OE1	2.21	0.41
9:G:23:ALA:HA	9:G:26:VAL:HG13	2.03	0.41
16:N:89:ARG:NH1	16:N:89:ARG:HB3	2.35	0.41
14:L:79:ILE:HG22	14:L:103:CYS:HB2	2.02	0.41
17:O:44:GLU:O	17:O:45:HIS:HB2	2.20	0.41
1:A:9:G:H2'	1:A:10:A:C8	2.55	0.41
10:H:82:LEU:HD22	10:H:82:LEU:O	2.20	0.41
13:K:33:ILE:HD11	13:K:69:CYS:SG	2.61	0.41
1:A:267:C:OP2	19:Q:68:LYS:HD2	2.20	0.41
1:A:1032:G:H2'	1:A:1033:G:C4'	2.51	0.41
16:N:2:LYS:O	16:N:6:LYS:HG3	2.20	0.41
1:A:900:A:O2'	1:A:901:A:H5'	2.21	0.41
1:A:705:G:H22	13:K:43:TRP:HB2	1.85	0.41
1:A:142:G:O2'	1:A:196:A:N1	2.41	0.41
1:A:352:C:H6	1:A:352:C:OP1	2.04	0.41
19:Q:75:VAL:CG2	19:Q:76:ARG:HG2	2.47	0.41
4:B:159:ALA:CB	4:B:181:PRO:HB2	2.51	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:B:96:LEU:HD13	4:B:97:GLY:O	2.20	0.41
5:C:153:SER:HB2	5:C:196:GLY:H	1.86	0.41
14:L:49:ARG:NH2	14:L:88:ASP:OD1	2.53	0.41
16:N:92:ILE:HG22	16:N:95:LEU:HB2	2.03	0.41
23:U:31:VAL:CG1	23:U:32:ARG:H	2.15	0.41
6:D:94:GLU:O	6:D:103:ARG:NH2	2.52	0.41
5:C:45:GLU:C	5:C:47:ALA:H	2.22	0.41
1:A:79:G:H2'	1:A:80:A:C1'	2.50	0.41
4:B:119:GLN:HA	4:B:119:GLN:OE1	2.21	0.41
22:T:56:ILE:CA	22:T:59:ARG:HB3	2.51	0.41
1:A:74:A:H1'	1:A:97:G:N2	2.36	0.41
7:E:151:MET:HG2	7:E:155:LYS:HD2	2.01	0.41
1:A:1039:G:H2'	1:A:1040:U:H6	1.86	0.41
17:O:34:GLN:OE1	17:O:34:GLN:HA	2.20	0.41
1:A:1460:C:H2'	1:A:1461:G:O4'	2.20	0.41
1:A:1533:C:C2'	1:A:1534:A:H5''	2.51	0.41
1:A:1048:G:H5''	16:N:2:LYS:HG3	2.03	0.41
9:G:144:ALA:C	9:G:146:ALA:H	2.23	0.41
1:A:726:C:O2'	1:A:727:G:H5'	2.21	0.41
1:A:938:A:H5''	9:G:75:LYS:HZ1	1.86	0.41
15:M:108:ARG:HH11	15:M:108:ARG:HG3	1.86	0.41
21:S:35:ARG:CZ	21:S:76:THR:HG21	2.51	0.41
19:Q:18:LYS:O	19:Q:46:HIS:ND1	2.54	0.41
4:B:27:LYS:H	4:B:28:PRO:HD2	1.85	0.41
8:F:38:ARG:HG3	8:F:39:LEU:N	2.35	0.41
8:F:42:TRP:CB	8:F:59:TYR:HB2	2.35	0.41
18:P:52:LEU:HD13	18:P:52:LEU:O	2.21	0.41
5:C:65:VAL:CG1	5:C:66:THR:N	2.84	0.41
15:M:69:ARG:HG2	15:M:69:ARG:HH11	1.86	0.41
1:A:796:C:O3'	13:K:126:ARG:NH2	2.47	0.41
12:J:36:VAL:HG22	12:J:76:ILE:HB	2.03	0.41
1:A:1128:C:H2'	1:A:1129:C:C6	2.56	0.41
1:A:1283:U:C2'	1:A:1284:C:H5'	2.51	0.41
1:A:405:U:O2	1:A:498:A:H2'	2.21	0.41
4:B:202:ASN:ND2	4:B:202:ASN:C	2.74	0.41
1:A:471:U:O2'	1:A:472:U:H5'	2.21	0.41
9:G:24:LYS:HA	9:G:27:ASN:HD22	1.84	0.41
5:C:7:ASN:ND2	16:N:89:ARG:HA	2.20	0.41
9:G:85:GLN:HA	9:G:85:GLN:NE2	2.32	0.41
23:U:20:ARG:HG3	23:U:24:LYS:HE3	2.03	0.41
23:U:20:ARG:NH1	23:U:21:SER:N	2.69	0.41
1:A:1343:G:OP1	11:I:126:PHE:HE1	2.04	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:O:46:LYS:O	17:O:52:ARG:NH2	2.54	0.41
1:A:769:G:H4'	1:A:1513:A:H4'	2.03	0.41
9:G:125:ASP:HB3	9:G:130:LYS:O	2.21	0.41
9:G:67:ASN:HB3	9:G:137:ARG:HH22	1.85	0.41
1:A:1023:U:H2'	1:A:1024:G:H8	1.86	0.41
4:B:102:ASN:HA	4:B:104:LYS:NZ	2.36	0.41
1:A:1075:U:H2'	1:A:1076:U:H6	1.86	0.41
1:A:135:C:O2	18:P:1:MET:HB2	2.19	0.41
13:K:39:ASN:O	13:K:41:LEU:HG	2.21	0.41
1:A:636:U:O2'	1:A:637:C:H5'	2.20	0.41
11:I:51:LEU:HB3	11:I:56:MET:HG3	2.02	0.41
3:X:3:G:H4'	3:X:5:U:H5'	2.03	0.41
1:A:1498:U:H4'	1:A:1519:A:C2	2.55	0.41
7:E:156:ARG:NH1	10:H:42:GLU:O	2.54	0.41
9:G:19:SER:O	9:G:22:LEU:HB3	2.20	0.41
12:J:67:ILE:HG12	16:N:94:GLY:O	2.21	0.41
1:A:994:A:N7	1:A:1216:A:H4'	2.36	0.41
1:A:31:G:C5	1:A:306:A:H1'	2.56	0.41
1:A:1231:G:H2'	1:A:1232:U:H6	1.86	0.41
1:A:691:G:O2'	1:A:692:U:H5'	2.21	0.41
1:A:937:A:C5	1:A:938:A:N7	2.89	0.41
6:D:60:VAL:HG22	6:D:60:VAL:O	2.21	0.41
14:L:111:GLN:HE21	14:L:111:GLN:HB2	1.54	0.41
1:A:1289:A:N6	1:A:1371:G:HO2'	2.18	0.41
11:I:11:ARG:HG3	11:I:77:ALA:CA	2.50	0.41
4:B:31:PHE:N	4:B:41:ASN:HB2	2.35	0.41
10:H:94:VAL:O	10:H:95:MET:C	2.59	0.41
6:D:27:ILE:HG22	6:D:28:ASP:N	2.36	0.41
6:D:55:ARG:HH21	6:D:58:GLN:CB	2.32	0.41
15:M:2:ARG:HG2	15:M:6:ILE:HA	2.03	0.41
5:C:15:LYS:HE2	5:C:180:ASP:CB	2.51	0.41
10:H:113:ARG:O	10:H:116:ARG:NH1	2.53	0.41
14:L:120:ARG:HG2	14:L:121:PRO:HD2	2.02	0.41
6:D:75:TYR:O	6:D:78:ALA:HB3	2.21	0.41
1:A:975:A:N6	12:J:50:THR:O	2.54	0.41
1:A:73:C:O2'	1:A:74:A:H5'	2.21	0.41
1:A:1302:C:H5'	15:M:16:ILE:HG23	2.02	0.41
1:A:416:G:H2'	1:A:417:G:O4'	2.20	0.41
8:F:18:VAL:N	8:F:19:PRO:CD	2.84	0.41
9:G:98:LEU:HB3	9:G:102:TRP:CZ2	2.56	0.41
4:B:26:MET:CE	4:B:192:PRO:HD3	2.50	0.41
1:A:676:A:H1'	13:K:116:PRO:HB3	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:100:G:H2'	1:A:101:A:O4'	2.21	0.41
1:A:1323:G:H4'	1:A:1362:A:C6	2.56	0.40
1:A:1226:C:H5''	15:M:101:THR:HG21	2.03	0.40
15:M:10:ASP:HB3	15:M:44:ILE:CD1	2.51	0.40
18:P:71:VAL:HG13	18:P:72:ALA:N	2.36	0.40
18:P:75:ILE:HG21	18:P:80:LYS:HZ2	1.85	0.40
21:S:10:ILE:HD12	21:S:14:LEU:HD21	2.02	0.40
1:A:5:U:H1'	1:A:6:G:C2	2.56	0.40
7:E:82:HIS:CE1	7:E:146:MET:HA	2.56	0.40
14:L:23:LEU:HD13	14:L:25:ALA:N	2.30	0.40
13:K:86:LYS:HZ3	13:K:86:LYS:CB	2.34	0.40
11:I:44:ARG:C	11:I:46:VAL:H	2.24	0.40
20:R:29:LYS:HD3	20:R:29:LYS:C	2.41	0.40
6:D:170:LEU:HA	6:D:182:LYS:CB	2.50	0.40
1:A:213:G:C2'	1:A:214:C:H5'	2.48	0.40
1:A:1498:U:H4'	1:A:1519:A:H2	1.87	0.40
16:N:23:ARG:HG3	16:N:26:LEU:CD2	2.51	0.40
22:T:4:LYS:O	22:T:6:ALA:N	2.54	0.40
8:F:52:ASN:O	8:F:53:LYS:HB2	2.21	0.40
1:A:322:C:H4'	22:T:17:ARG:HG3	2.03	0.40
1:A:178:C:O2'	1:A:179:A:H5'	2.21	0.40
1:A:1226:C:H5''	15:M:101:THR:HB	2.04	0.40
16:N:58:ARG:HH11	16:N:58:ARG:HG3	1.85	0.40
11:I:28:VAL:HA	11:I:33:SER:HA	2.03	0.40
4:B:66:ILE:O	4:B:89:PHE:HD1	2.04	0.40
8:F:6:ILE:HG23	8:F:62:MET:CB	2.48	0.40
13:K:96:ILE:H	13:K:96:ILE:HG13	1.70	0.40
1:A:1057:G:H2'	1:A:1058:G:O4'	2.21	0.40
18:P:26:ASN:HD21	18:P:31:ARG:HB3	1.82	0.40
13:K:56:LYS:O	13:K:58:THR:N	2.49	0.40
15:M:3:ILE:HA	15:M:52:ILE:HD11	2.04	0.40
11:I:89:TYR:O	11:I:90:ASP:HB2	2.20	0.40
1:A:121:U:N3	1:A:235:C:OP2	2.54	0.40
5:C:18:ASN:OD1	5:C:39:ARG:NH2	2.54	0.40
20:R:51:GLN:HA	20:R:51:GLN:NE2	2.33	0.40
10:H:11:THR:CG2	10:H:14:ARG:HH12	2.29	0.40
1:A:264:C:H2'	1:A:265:G:O4'	2.21	0.40
1:A:644:U:C2	1:A:645:G:C8	3.09	0.40
1:A:1263:C:H2'	1:A:1264:U:C6	2.56	0.40
14:L:40:THR:HB	14:L:41:PRO:HD2	2.03	0.40
1:A:637:C:H2'	1:A:638:U:H6	1.87	0.40
1:A:401:C:H2'	1:A:402:G:C8	2.54	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:G:139:ASP:O	9:G:142:ARG:HB2	2.21	0.40
5:C:129:PHE:CD1	5:C:129:PHE:N	2.88	0.40
1:A:232:G:H1'	1:A:262:A:N1	2.36	0.40
1:A:398:U:H2'	1:A:399:G:H8	1.86	0.40
15:M:15:VAL:O	15:M:18:LEU:N	2.54	0.40
18:P:23:ASP:OD1	18:P:25:ARG:N	2.54	0.40
13:K:115:ILE:O	13:K:115:ILE:HG13	2.21	0.40
1:A:75:G:H2'	1:A:76:G:C1'	2.51	0.40
1:A:1251:A:H1'	1:A:1369:C:O2'	2.21	0.40
15:M:100:ARG:HH11	15:M:100:ARG:HB2	1.85	0.40
19:Q:3:LYS:O	19:Q:4:ILE:HG13	2.21	0.40
7:E:80:LEU:HD22	7:E:146:MET:CE	2.51	0.40
6:D:36:ALA:N	6:D:37:PRO:HD3	2.37	0.40
6:D:96:ARG:NH2	6:D:133:SER:HB3	2.36	0.40
7:E:56:PRO:HA	7:E:59:ILE:CG2	2.52	0.40
1:A:534:U:H6	1:A:534:U:O5'	2.05	0.40
1:A:1168:U:H4'	1:A:1169:A:OP2	2.20	0.40
1:A:338:A:H2'	1:A:339:C:O4'	2.21	0.40
1:A:1101:A:N6	4:B:101:THR:HG21	2.28	0.40
18:P:70:ARG:O	18:P:73:ALA:HB3	2.21	0.40
18:P:39:PHE:O	18:P:41:PRO:HD3	2.21	0.40
7:E:68:ARG:HH11	7:E:69:ASN:ND2	2.20	0.40
1:A:313:A:O2'	1:A:314:C:H5'	2.21	0.40
1:A:557:G:N1	1:A:558:G:C2	2.90	0.40
1:A:124:C:O2'	1:A:125:U:H5'	2.22	0.40
9:G:136:LYS:HA	9:G:139:ASP:HB2	2.02	0.40
15:M:58:GLU:HA	15:M:61:LYS:CE	2.51	0.40
1:A:1017:U:O2'	1:A:1018:G:H5'	2.22	0.40
1:A:186:C:O4'	22:T:75:LYS:HE3	2.22	0.40
1:A:116:A:H8	1:A:116:A:O5'	2.03	0.40
4:B:172:ILE:HG22	4:B:176:ASN:ND2	2.37	0.40
1:A:1212:U:H5''	1:A:1212:U:C6	2.56	0.40
1:A:1131:G:P	11:I:4:GLN:HE22	2.44	0.40
11:I:11:ARG:HA	11:I:105:ARG:NH2	2.36	0.40
16:N:52:ARG:C	16:N:54:SER:N	2.75	0.40
11:I:33:SER:OG	11:I:36:GLN:HB2	2.21	0.40
20:R:35:SER:HA	20:R:71:ASP:CG	2.41	0.40
4:B:83:ALA:HA	4:B:88:GLN:NE2	2.36	0.40
7:E:80:LEU:HG	7:E:122:VAL:CG1	2.50	0.40
1:A:1527:U:H2'	1:A:1528:U:C6	2.57	0.40
13:K:126:ARG:CB	23:U:33:ARG:HD2	2.52	0.40
13:K:126:ARG:HB2	23:U:33:ARG:HD2	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1328:C:H2'	1:A:1329:A:C8	2.57	0.40
12:J:10:LEU:HD13	12:J:72:ARG:CB	2.43	0.40
1:A:428:G:O4'	1:A:430:A:C8	2.75	0.40
14:L:32:VAL:HB	14:L:55:ARG:HB3	2.04	0.40
22:T:31:ILE:HG21	22:T:74:HIS:HE1	1.85	0.40
7:E:14:LEU:HD13	7:E:14:LEU:C	2.41	0.40
1:A:1352:C:H2'	1:A:1353:G:O4'	2.21	0.40
20:R:27:THR:HG22	20:R:27:THR:O	2.21	0.40
1:A:85:U:H1'	1:A:86:G:O4'	2.21	0.40
10:H:77:VAL:HG12	10:H:78:SER:N	2.36	0.40
12:J:80:THR:HB	12:J:83:THR:OG1	2.22	0.40
1:A:1300:G:O2'	1:A:1301:U:P	2.79	0.40
1:A:1069:C:HO2'	1:A:1192:C:H1'	1.87	0.40
1:A:766:A:H2'	1:A:767:A:O4'	2.21	0.40
4:B:21:TYR:O	4:B:22:TRP:C	2.60	0.40
1:A:1113:C:O2'	1:A:1114:C:H5'	2.22	0.40
1:A:996:A:O2'	1:A:997:U:H5'	2.22	0.40
1:A:503:C:H2'	1:A:504:C:H6	1.87	0.40
1:A:1092:A:C6	1:A:1093:A:C6	3.10	0.40
1:A:524:G:H5'	25:A:1834:HOH:O	2.20	0.40
1:A:1224:U:H4'	1:A:1225:A:OP2	2.21	0.40
1:A:949:A:N7	15:M:104:ASN:ND2	2.69	0.40
11:I:33:SER:H	11:I:36:GLN:HB3	1.87	0.40
8:F:64:VAL:CG1	8:F:65:GLU:H	2.26	0.40
13:K:95:THR:O	13:K:99:LEU:HD23	2.22	0.40
1:A:1055:A:N3	5:C:155:ARG:NH1	2.70	0.40
11:I:115:VAL:CG2	12:J:62:ARG:HD2	2.51	0.40
7:E:79:THR:HG23	7:E:80:LEU:N	2.37	0.40
13:K:124:LYS:HA	23:U:34:ARG:HG2	2.04	0.40
4:B:10:LYS:O	4:B:14:HIS:HE1	2.05	0.40
14:L:34:THR:O	14:L:35:ARG:HB2	2.21	0.40
7:E:132:PRO:C	7:E:134:ASN:H	2.25	0.40
1:A:1085:U:H3'	1:A:1086:U:C5	2.56	0.40
11:I:49:GLN:N	11:I:50:PRO:CD	2.83	0.40
1:A:745:G:H1'	1:A:836:G:O2'	2.21	0.40
20:R:42:ARG:HH11	20:R:43:ILE:HG23	1.87	0.40
1:A:812:G:H4'	1:A:812:G:OP1	2.21	0.40
1:A:1299:A:N7	1:A:1302:C:H5	2.18	0.40
18:P:42:ILE:O	18:P:43:ALA:CB	2.65	0.40
1:A:126:G:H4'	1:A:634:C:H1'	2.04	0.40
1:A:679:C:H2'	1:A:680:C:H6	1.85	0.40
1:A:1307:U:H2'	1:A:1308:U:O4'	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:L:66:ILE:HG21	14:L:71:HIS:CD2	2.57	0.40
1:A:826:C:O5'	10:H:12:ARG:NH2	2.54	0.40
17:O:31:LEU:HD12	17:O:58:MET:HB2	2.03	0.40
4:B:26:MET:HG3	4:B:29:PHE:CZ	2.57	0.40
25:A:1663:HOH:O	16:N:2:LYS:HA	2.20	0.40
1:A:791:G:C6	1:A:792:A:N7	2.90	0.40
1:A:259:G:O2'	1:A:260:G:H5'	2.22	0.40
5:C:139:ASN:O	5:C:142:ARG:HB3	2.22	0.40
1:A:392:C:C2	1:A:393:A:C8	3.09	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	
4	B	216/240 (90%)	133 (62%)	59 (27%)	24 (11%)	1	5
5	C	204/232 (88%)	134 (66%)	50 (24%)	20 (10%)	1	7
6	D	203/205 (99%)	123 (61%)	56 (28%)	24 (12%)	1	4
7	E	148/166 (89%)	101 (68%)	38 (26%)	9 (6%)	2	19
8	F	98/135 (73%)	63 (64%)	24 (24%)	11 (11%)	1	4
9	G	148/178 (83%)	107 (72%)	31 (21%)	10 (7%)	2	15
10	H	127/129 (98%)	83 (65%)	31 (24%)	13 (10%)	1	6
11	I	125/129 (97%)	78 (62%)	33 (26%)	14 (11%)	1	4
12	J	96/103 (93%)	55 (57%)	27 (28%)	14 (15%)	0	2
13	K	115/128 (90%)	75 (65%)	30 (26%)	10 (9%)	1	9
14	L	121/123 (98%)	80 (66%)	30 (25%)	11 (9%)	1	8
15	M	112/117 (96%)	75 (67%)	22 (20%)	15 (13%)	0	2
16	N	92/100 (92%)	61 (66%)	25 (27%)	6 (6%)	2	17
17	O	86/88 (98%)	69 (80%)	14 (16%)	3 (4%)	6	37

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
18	P	80/82 (98%)	46 (58%)	26 (32%)	8 (10%)	1	7
19	Q	78/83 (94%)	51 (65%)	16 (20%)	11 (14%)	0	2
20	R	53/74 (72%)	39 (74%)	9 (17%)	5 (9%)	1	8
21	S	77/91 (85%)	53 (69%)	19 (25%)	5 (6%)	2	17
22	T	83/86 (96%)	63 (76%)	11 (13%)	9 (11%)	1	5
23	U	49/70 (70%)	21 (43%)	17 (35%)	11 (22%)	0	0
All	All	2311/2559 (90%)	1510 (65%)	568 (25%)	233 (10%)	1	7

All (233) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	B	19	THR
4	B	22	TRP
4	B	75	ALA
4	B	76	SER
4	B	91	VAL
4	B	93	HIS
4	B	119	GLN
4	B	220	VAL
5	C	65	VAL
5	C	112	ALA
5	C	205	GLU
6	D	27	ILE
6	D	148	ALA
6	D	187	ARG
6	D	191	SER
10	H	66	GLN
10	H	73	SER
11	I	37	TYR
12	J	35	GLN
12	J	57	VAL
13	K	35	ASP
13	K	105	ARG
13	K	124	LYS
14	L	42	LYS
15	M	6	ILE
15	M	7	ASN
15	M	42	VAL
15	M	65	GLU
18	P	43	ALA

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Mol	Chain	Res	Type
18	P	52	LEU
18	P	79	ASN
19	Q	4	ILE
20	R	40	PRO
21	S	33	TRP
23	U	7	GLU
23	U	18	PHE
23	U	23	GLU
4	B	27	LYS
4	B	115	ASP
4	B	131	LYS
4	B	150	ILE
4	B	159	ALA
4	B	200	PRO
5	C	14	VAL
6	D	24	VAL
6	D	46	ARG
6	D	152	SER
6	D	165	GLU
6	D	175	GLY
7	E	20	VAL
7	E	25	LYS
8	F	39	LEU
8	F	85	ILE
8	F	92	THR
8	F	95	ALA
8	F	98	GLU
9	G	18	GLY
9	G	130	LYS
10	H	5	PRO
10	H	82	LEU
11	I	54	VAL
11	I	56	MET
11	I	65	THR
11	I	71	ILE
11	I	90	ASP
12	J	19	ASP
12	J	41	PRO
12	J	74	VAL
12	J	75	ASP
12	J	93	ALA
13	K	72	ALA

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Mol	Chain	Res	Type
13	K	106	ILE
14	L	84	GLY
14	L	92	VAL
15	M	4	ALA
15	M	66	GLY
15	M	80	MET
15	M	104	ASN
16	N	2	LYS
16	N	33	VAL
17	O	86	LEU
18	P	42	ILE
19	Q	5	ARG
19	Q	34	GLY
19	Q	68	LYS
19	Q	69	THR
20	R	47	ARG
21	S	18	VAL
22	T	3	ILE
22	T	69	ASN
23	U	8	ASN
23	U	13	VAL
23	U	14	ALA
23	U	34	ARG
4	B	15	PHE
4	B	129	THR
4	B	187	ASP
5	C	17	TRP
5	C	18	ASN
5	C	21	TRP
5	C	101	ASN
5	C	136	ALA
5	C	167	TYR
6	D	28	ASP
6	D	38	GLY
6	D	39	GLN
6	D	84	ASN
6	D	86	GLY
7	E	43	GLY
7	E	78	GLY
7	E	146	MET
8	F	79	ARG
8	F	94	HIS

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Mol	Chain	Res	Type
10	H	6	ILE
11	I	57	VAL
11	I	101	GLY
11	I	128	LYS
12	J	36	VAL
12	J	43	PRO
13	K	113	THR
14	L	19	ASN
14	L	47	ALA
15	M	3	ILE
15	M	22	TYR
16	N	22	LYS
18	P	51	ARG
19	Q	6	THR
21	S	27	LYS
22	T	53	MET
22	T	68	LYS
23	U	16	ARG
23	U	37	TYR
4	B	211	LEU
4	B	223	GLY
5	C	67	ILE
5	C	99	GLN
5	C	104	GLU
5	C	174	LEU
5	C	180	ASP
6	D	13	ARG
6	D	31	CYS
7	E	81	GLN
9	G	50	ALA
9	G	71	THR
10	H	3	GLN
10	H	43	GLY
10	H	44	PHE
11	I	24	ASN
11	I	53	LEU
11	I	95	SER
12	J	56	HIS
12	J	96	VAL
13	K	26	PHE
13	K	71	ASP
13	K	91	GLY

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Mol	Chain	Res	Type
14	L	122	LYS
15	M	98	GLY
16	N	67	GLY
17	O	19	ASN
18	P	27	ALA
18	P	69	ASP
19	Q	80	LYS
20	R	24	ASP
20	R	48	ALA
23	U	9	GLU
4	B	128	LEU
4	B	206	ILE
5	C	152	VAL
5	C	188	ALA
6	D	59	LYS
6	D	153	ARG
6	D	169	TRP
6	D	197	HIS
8	F	54	LEU
8	F	61	LEU
9	G	19	SER
9	G	61	PHE
9	G	129	ASN
10	H	2	MET
11	I	121	ARG
12	J	53	ILE
12	J	100	ILE
14	L	43	LYS
14	L	120	ARG
14	L	121	PRO
15	M	15	VAL
15	M	85	TYR
16	N	62	ARG
20	R	46	THR
21	S	32	THR
22	T	5	SER
22	T	57	VAL
22	T	85	LEU
4	B	168	GLU
6	D	33	ILE
6	D	82	LYS
6	D	133	SER

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Mol	Chain	Res	Type
8	F	28	ALA
8	F	62	MET
14	L	15	VAL
14	L	101	LEU
15	M	14	ALA
17	O	22	GLY
18	P	39	PHE
19	Q	28	VAL
4	B	148	GLY
9	G	13	PRO
9	G	63	VAL
10	H	38	VAL
15	M	52	ILE
21	S	45	GLY
22	T	64	GLY
5	C	100	ILE
10	H	94	VAL
10	H	125	ILE
11	I	115	VAL
7	E	56	PRO
7	E	136	VAL
13	K	119	GLY
19	Q	31	PRO
19	Q	32	ILE
4	B	157	PRO
5	C	194	VAL
7	E	133	ILE
9	G	88	VAL
10	H	77	VAL
16	N	83	VAL
19	Q	78	VAL
23	U	31	VAL
5	C	137	VAL
6	D	60	VAL
12	J	8	ILE
22	T	56	ILE

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	
4	B	180/198 (91%)	140 (78%)	40 (22%)	1	6
5	C	170/189 (90%)	134 (79%)	36 (21%)	1	8
6	D	172/172 (100%)	146 (85%)	26 (15%)	4	19
7	E	113/125 (90%)	95 (84%)	18 (16%)	4	16
8	F	87/116 (75%)	74 (85%)	13 (15%)	4	20
9	G	123/146 (84%)	99 (80%)	24 (20%)	2	10
10	H	104/104 (100%)	89 (86%)	15 (14%)	5	22
11	I	105/106 (99%)	83 (79%)	22 (21%)	1	8
12	J	86/90 (96%)	75 (87%)	11 (13%)	6	29
13	K	90/98 (92%)	75 (83%)	15 (17%)	3	14
14	L	103/103 (100%)	83 (81%)	20 (19%)	2	10
15	M	92/95 (97%)	75 (82%)	17 (18%)	2	11
16	N	79/83 (95%)	60 (76%)	19 (24%)	1	4
17	O	76/76 (100%)	65 (86%)	11 (14%)	5	22
18	P	65/65 (100%)	52 (80%)	13 (20%)	2	9
19	Q	74/77 (96%)	60 (81%)	14 (19%)	2	11
20	R	48/64 (75%)	37 (77%)	11 (23%)	1	5
21	S	70/78 (90%)	55 (79%)	15 (21%)	1	7
22	T	65/65 (100%)	56 (86%)	9 (14%)	5	24
23	U	44/60 (73%)	37 (84%)	7 (16%)	4	16
All	All	1946/2110 (92%)	1590 (82%)	356 (18%)	2	12

All (356) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	B	9	LEU
4	B	10	LYS
4	B	15	PHE
4	B	18	GLN
4	B	23	ASN
4	B	29	PHE
4	B	42	LEU
4	B	46	VAL
4	B	48	MET
4	B	50	ASN
4	B	68	PHE

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Mol	Chain	Res	Type
4	B	72	LYS
4	B	81	ASP
4	B	86	CYS
4	B	88	GLN
4	B	91	VAL
4	B	92	ASN
4	B	104	LYS
4	B	113	LEU
4	B	116	LEU
4	B	126	ASP
4	B	127	LYS
4	B	128	LEU
4	B	131	LYS
4	B	132	GLU
4	B	139	GLU
4	B	140	LEU
4	B	144	GLU
4	B	145	ASN
4	B	152	ASP
4	B	156	LEU
4	B	168	GLU
4	B	176	ASN
4	B	183	PHE
4	B	196	ASP
4	B	199	ILE
4	B	202	ASN
4	B	204	ASP
4	B	206	ILE
4	B	212	TYR
5	C	2	GLN
5	C	3	LYS
5	C	17	TRP
5	C	18	ASN
5	C	21	TRP
5	C	26	LYS
5	C	28	PHE
5	C	30	ASP
5	C	34	SER
5	C	63	ILE
5	C	69	THR
5	C	79	LYS
5	C	82	ASP

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Mol	Chain	Res	Type
5	C	84	GLU
5	C	85	LYS
5	C	100	ILE
5	C	106	ARG
5	C	110	LEU
5	C	118	SER
5	C	120	THR
5	C	124	GLU
5	C	129	PHE
5	C	130	ARG
5	C	138	GLN
5	C	139	ASN
5	C	146	LYS
5	C	160	GLU
5	C	161	ILE
5	C	166	TRP
5	C	168	ARG
5	C	174	LEU
5	C	180	ASP
5	C	182	ASP
5	C	191	THR
5	C	192	TYR
5	C	205	GLU
6	D	7	LYS
6	D	12	ARG
6	D	18	LEU
6	D	25	ARG
6	D	30	LYS
6	D	31	CYS
6	D	35	GLN
6	D	43	ARG
6	D	55	ARG
6	D	69	ARG
6	D	71	PHE
6	D	84	ASN
6	D	89	LEU
6	D	98	ASP
6	D	119	HIS
6	D	130	ASN
6	D	152	SER
6	D	159	GLU
6	D	160	LEU

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Mol	Chain	Res	Type
6	D	162	GLU
6	D	165	GLU
6	D	176	LYS
6	D	178	GLU
6	D	196	GLU
6	D	197	HIS
6	D	200	VAL
7	E	18	ASN
7	E	23	THR
7	E	30	PHE
7	E	35	LEU
7	E	42	ASN
7	E	44	ARG
7	E	67	ARG
7	E	68	ARG
7	E	81	GLN
7	E	84	VAL
7	E	96	GLN
7	E	110	MET
7	E	121	ASN
7	E	122	VAL
7	E	123	LEU
7	E	125	LYS
7	E	151	MET
7	E	156	ARG
8	F	5	GLU
8	F	6	ILE
8	F	14	GLN
8	F	16	GLU
8	F	24	ARG
8	F	36	ILE
8	F	39	LEU
8	F	54	LEU
8	F	58	HIS
8	F	72	ASP
8	F	85	ILE
8	F	86	ARG
8	F	94	HIS
9	G	2	ARG
9	G	3	ARG
9	G	10	LYS
9	G	16	LYS

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Mol	Chain	Res	Type
9	G	17	PHE
9	G	26	VAL
9	G	40	SER
9	G	41	ILE
9	G	43	TYR
9	G	52	ARG
9	G	55	LYS
9	G	56	SER
9	G	72	VAL
9	G	78	ARG
9	G	85	GLN
9	G	89	GLU
9	G	90	VAL
9	G	91	ARG
9	G	123	LEU
9	G	125	ASP
9	G	132	THR
9	G	139	ASP
9	G	141	HIS
9	G	143	MET
10	H	2	MET
10	H	3	GLN
10	H	8	ASP
10	H	9	MET
10	H	26	MET
10	H	40	LYS
10	H	58	LEU
10	H	63	LYS
10	H	64	TYR
10	H	72	GLU
10	H	76	ARG
10	H	93	LYS
10	H	110	MET
10	H	116	ARG
10	H	120	LEU
11	I	20	ILE
11	I	35	GLU
11	I	40	ARG
11	I	44	ARG
11	I	53	LEU
11	I	54	VAL
11	I	55	ASP

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Mol	Chain	Res	Type
11	I	56	MET
11	I	58	GLU
11	I	63	TYR
11	I	64	ILE
11	I	67	LYS
11	I	83	THR
11	I	84	ARG
11	I	92	SER
11	I	93	LEU
11	I	108	ARG
11	I	109	GLN
11	I	112	ARG
11	I	119	LYS
11	I	121	ARG
11	I	126	PHE
12	J	8	ILE
12	J	11	LYS
12	J	16	ARG
12	J	28	THR
12	J	40	ILE
12	J	48	ARG
12	J	50	THR
12	J	52	LEU
12	J	59	LYS
12	J	71	LEU
12	J	97	ASP
13	K	17	ASP
13	K	34	THR
13	K	36	ARG
13	K	37	GLN
13	K	55	ARG
13	K	64	VAL
13	K	67	GLU
13	K	75	GLU
13	K	79	LYS
13	K	80	ASN
13	K	85	VAL
13	K	100	ASN
13	K	112	VAL
13	K	127	ARG
13	K	128	VAL
14	L	5	GLN

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Mol	Chain	Res	Type
14	L	9	LYS
14	L	23	LEU
14	L	28	GLN
14	L	33	CYS
14	L	35	ARG
14	L	37	TYR
14	L	48	LEU
14	L	49	ARG
14	L	50	LYS
14	L	55	ARG
14	L	58	ASN
14	L	60	PHE
14	L	72	ASN
14	L	74	GLN
14	L	82	ARG
14	L	111	GLN
14	L	115	LYS
14	L	118	VAL
14	L	119	LYS
15	M	6	ILE
15	M	8	ILE
15	M	28	ARG
15	M	57	ASP
15	M	65	GLU
15	M	67	ASP
15	M	68	LEU
15	M	77	LYS
15	M	78	ARG
15	M	82	LEU
15	M	90	HIS
15	M	94	LEU
15	M	99	GLN
15	M	101	THR
15	M	102	LYS
15	M	104	ASN
15	M	109	LYS
16	N	2	LYS
16	N	3	GLN
16	N	4	SER
16	N	25	GLU
16	N	27	LYS
16	N	42	ASN

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Mol	Chain	Res	Type
16	N	47	LEU
16	N	50	LEU
16	N	55	SER
16	N	58	ARG
16	N	59	GLN
16	N	60	ARG
16	N	65	GLN
16	N	78	LEU
16	N	81	ILE
16	N	85	GLU
16	N	96	LYS
16	N	97	LYS
16	N	100	TRP
17	O	16	ARG
17	O	23	SER
17	O	26	VAL
17	O	34	GLN
17	O	39	GLN
17	O	47	LYS
17	O	57	ARG
17	O	70	LYS
17	O	82	GLU
17	O	84	LEU
17	O	87	ARG
18	P	3	THR
18	P	19	VAL
18	P	25	ARG
18	P	26	ASN
18	P	29	ASN
18	P	32	PHE
18	P	34	GLU
18	P	46	LYS
18	P	51	ARG
18	P	55	ASP
18	P	56	ARG
18	P	66	THR
18	P	75	ILE
19	Q	3	LYS
19	Q	5	ARG
19	Q	7	LEU
19	Q	20	ILE
19	Q	27	PHE

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Mol	Chain	Res	Type
19	Q	37	ILE
19	Q	41	THR
19	Q	50	ASN
19	Q	51	GLU
19	Q	52	CYS
19	Q	61	ARG
19	Q	66	LEU
19	Q	79	GLU
19	Q	80	LYS
20	R	19	GLU
20	R	21	ASP
20	R	29	LYS
20	R	30	ASN
20	R	41	SER
20	R	49	LYS
20	R	53	GLN
20	R	60	ARG
20	R	69	TYR
20	R	71	ASP
20	R	72	ARG
21	S	2	ARG
21	S	4	LEU
21	S	5	LYS
21	S	10	ILE
21	S	15	LEU
21	S	19	GLU
21	S	27	LYS
21	S	33	TRP
21	S	36	ARG
21	S	46	LEU
21	S	52	ASN
21	S	64	GLU
21	S	72	GLU
21	S	73	PHE
21	S	78	THR
22	T	2	ASN
22	T	12	GLN
22	T	15	LYS
22	T	26	MET
22	T	34	VAL
22	T	43	LYS
22	T	70	LYS

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Mol	Chain	Res	Type
22	T	73	ARG
22	T	78	LEU
23	U	11	PHE
23	U	16	ARG
23	U	18	PHE
23	U	20	ARG
23	U	41	THR
23	U	42	THR
23	U	48	LYS

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (82) such sidechains are listed below:

Mol	Chain	Res	Type
4	B	23	ASN
4	B	35	ASN
4	B	41	ASN
4	B	88	GLN
4	B	93	HIS
4	B	145	ASN
4	B	167	HIS
4	B	176	ASN
4	B	202	ASN
5	C	2	GLN
5	C	7	ASN
5	C	24	ASN
5	C	40	GLN
5	C	68	HIS
5	C	122	GLN
5	C	138	GLN
5	C	139	ASN
6	D	70	GLN
6	D	84	ASN
6	D	88	ASN
6	D	130	ASN
6	D	135	GLN
6	D	139	ASN
6	D	197	HIS
7	E	69	ASN
7	E	76	ASN
7	E	96	GLN
7	E	121	ASN
7	E	131	ASN

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Mol	Chain	Res	Type
7	E	134	ASN
7	E	147	ASN
8	F	17	GLN
8	F	68	GLN
9	G	27	ASN
9	G	67	ASN
9	G	85	GLN
9	G	129	ASN
9	G	147	ASN
10	H	15	ASN
10	H	17	GLN
10	H	37	ASN
11	I	24	ASN
11	I	36	GLN
11	I	49	GLN
11	I	74	GLN
11	I	125	GLN
12	J	15	HIS
12	J	35	GLN
12	J	99	GLN
13	K	14	GLN
13	K	37	GLN
13	K	39	ASN
13	K	80	ASN
13	K	100	ASN
13	K	108	ASN
14	L	5	GLN
14	L	28	GLN
14	L	58	ASN
14	L	72	ASN
14	L	74	GLN
14	L	111	GLN
15	M	99	GLN
16	N	59	GLN
16	N	65	GLN
17	O	36	ASN
17	O	39	GLN
17	O	45	HIS
18	P	18	GLN
18	P	26	ASN
19	Q	50	ASN
20	R	51	GLN

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Mol	Chain	Res	Type
20	R	53	GLN
21	S	55	GLN
21	S	68	HIS
22	T	2	ASN
22	T	12	GLN
22	T	20	ASN
22	T	47	GLN
22	T	51	ASN
22	T	81	GLN
22	T	83	ASN
23	U	8	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1529/1542 (99%)	278 (18%)	20 (1%)
2	W	16/17 (94%)	0	0
3	X	5/6 (83%)	3 (60%)	0
All	All	1550/1565 (99%)	281 (18%)	20 (1%)

All (281) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	8	A
1	A	9	G
1	A	14	U
1	A	15	G
1	A	31	G
1	A	32	A
1	A	39	G
1	A	47	C
1	A	48	C
1	A	51	A
1	A	52	C
1	A	55	A
1	A	61	G
1	A	64	G
1	A	65	A
1	A	66	A
1	A	69	G

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Mol	Chain	Res	Type
1	A	71	A
1	A	72	A
1	A	76	G
1	A	82	G
1	A	83	C
1	A	85	U
1	A	86	G
1	A	87	C
1	A	88	U
1	A	89	U
1	A	92	U
1	A	93	U
1	A	95	C
1	A	101	A
1	A	108	G
1	A	121	U
1	A	122	G
1	A	131	A
1	A	144	G
1	A	149	A
1	A	155	A
1	A	182	A
1	A	183	C
1	A	197	A
1	A	204	G
1	A	209	U
1	A	210	C
1	A	211	G
1	A	239	U
1	A	240	G
1	A	243	A
1	A	244	U
1	A	245	U
1	A	247	G
1	A	250	A
1	A	251	G
1	A	252	U
1	A	253	A
1	A	257	G
1	A	258	G
1	A	266	G
1	A	267	C

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Mol	Chain	Res	Type
1	A	280	C
1	A	289	G
1	A	306	A
1	A	308	C
1	A	316	C
1	A	328	C
1	A	329	A
1	A	332	G
1	A	345	C
1	A	352	C
1	A	353	A
1	A	354	G
1	A	367	U
1	A	373	A
1	A	374	A
1	A	381	C
1	A	382	A
1	A	397	A
1	A	398	U
1	A	406	G
1	A	408	A
1	A	409	U
1	A	411	A
1	A	412	A
1	A	413	G
1	A	414	A
1	A	416	G
1	A	421	U
1	A	422	C
1	A	424	G
1	A	429	U
1	A	430	A
1	A	435	A
1	A	438	U
1	A	456	A
1	A	459	A
1	A	461	A
1	A	462	G
1	A	463	U
1	A	465	A
1	A	466	A
1	A	467	U

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Mol	Chain	Res	Type
1	A	468	A
1	A	481	G
1	A	484	G
1	A	485	U
1	A	486	U
1	A	493	A
1	A	499	A
1	A	508	U
1	A	511	C
1	A	512	U
1	A	518	C
1	A	524	G
1	A	527	G
1	A	531	U
1	A	532	A
1	A	547	A
1	A	562	U
1	A	572	A
1	A	573	A
1	A	576	C
1	A	577	G
1	A	596	A
1	A	633	G
1	A	653	U
1	A	665	A
1	A	666	G
1	A	700	G
1	A	702	A
1	A	703	G
1	A	721	G
1	A	724	G
1	A	731	G
1	A	747	A
1	A	748	G
1	A	752	G
1	A	755	G
1	A	777	A
1	A	781	A
1	A	782	A
1	A	793	U
1	A	794	A
1	A	812	G

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Mol	Chain	Res	Type
1	A	815	A
1	A	817	C
1	A	819	A
1	A	821	G
1	A	828	U
1	A	841	C
1	A	842	U
1	A	843	U
1	A	844	G
1	A	847	G
1	A	849	G
1	A	873	A
1	A	914	A
1	A	926	G
1	A	927	G
1	A	934	C
1	A	935	A
1	A	945	G
1	A	960	U
1	A	961	U
1	A	966	G
1	A	968	A
1	A	969	A
1	A	971	G
1	A	974	A
1	A	977	A
1	A	993	G
1	A	994	A
1	A	996	A
1	A	1004	A
1	A	1018	G
1	A	1020	G
1	A	1028	C
1	A	1031	C
1	A	1032	G
1	A	1034	G
1	A	1036	A
1	A	1050	G
1	A	1053	G
1	A	1054	C
1	A	1064	G
1	A	1065	U

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Mol	Chain	Res	Type
1	A	1066	C
1	A	1070	U
1	A	1085	U
1	A	1086	U
1	A	1094	G
1	A	1095	U
1	A	1101	A
1	A	1110	A
1	A	1113	C
1	A	1118	U
1	A	1119	C
1	A	1124	G
1	A	1125	U
1	A	1130	A
1	A	1133	G
1	A	1134	G
1	A	1135	U
1	A	1136	C
1	A	1137	C
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1145	A
1	A	1146	A
1	A	1159	U
1	A	1160	G
1	A	1167	A
1	A	1168	U
1	A	1181	G
1	A	1182	G
1	A	1183	U
1	A	1184	G
1	A	1196	A
1	A	1197	A
1	A	1202	U
1	A	1212	U
1	A	1213	A
1	A	1215	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1228	C

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Mol	Chain	Res	Type
1	A	1238	A
1	A	1240	U
1	A	1241	G
1	A	1249	C
1	A	1256	A
1	A	1258	G
1	A	1261	A
1	A	1270	G
1	A	1280	A
1	A	1281	C
1	A	1285	A
1	A	1286	U
1	A	1287	A
1	A	1297	G
1	A	1300	G
1	A	1301	U
1	A	1303	C
1	A	1305	G
1	A	1316	G
1	A	1317	C
1	A	1320	C
1	A	1322	C
1	A	1323	G
1	A	1331	G
1	A	1336	C
1	A	1346	A
1	A	1353	G
1	A	1363	A
1	A	1364	U
1	A	1380	U
1	A	1381	U
1	A	1398	A
1	A	1399	C
1	A	1419	G
1	A	1432	G
1	A	1446	A
1	A	1448	C
1	A	1451	U
1	A	1454	G
1	A	1493	A
1	A	1494	G
1	A	1497	G

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Mol	Chain	Res	Type
1	A	1499	A
1	A	1503	A
1	A	1506	U
1	A	1517	G
1	A	1520	C
1	A	1529	G
1	A	1530	G
1	A	1534	A
3	X	4	U
3	X	5	U
3	X	6	U

All (20) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	51	A
1	A	60	A
1	A	81	A
1	A	243	A
1	A	279	A
1	A	328	C
1	A	366	A
1	A	372	C
1	A	428	G
1	A	429	U
1	A	484	G
1	A	960	U
1	A	1049	U
1	A	1065	U
1	A	1201	A
1	A	1214	C
1	A	1226	C
1	A	1300	G
1	A	1302	C
1	A	1319	A

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry ⓘ

Of 62 ligands modelled in this entry, 62 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

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

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

6.3 Carbohydrates ⓘ

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

6.4 Ligands ⓘ

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

6.5 Other polymers ⓘ

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