



# Full wwPDB X-ray Structure Validation Report ⓘ

Mar 31, 2014 – 06:13 PM BST

PDB ID : 2HGI  
Title : Crystal structure of the 70S *Thermus thermophilus* ribosome showing how the 16S 3'-end mimicks mRNA E and P codons. This entry 2HGI contains 30S ribosomal subunit. The 50S ribosomal subunit can be found in PDB entry 2HGJ.  
Authors : Jenner, L.; Yusupova, G.; Rees, B.; Moras, D.; Yusupov, M.  
Deposited on : 2006-06-27  
Resolution : 5.00 Å(reported)

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

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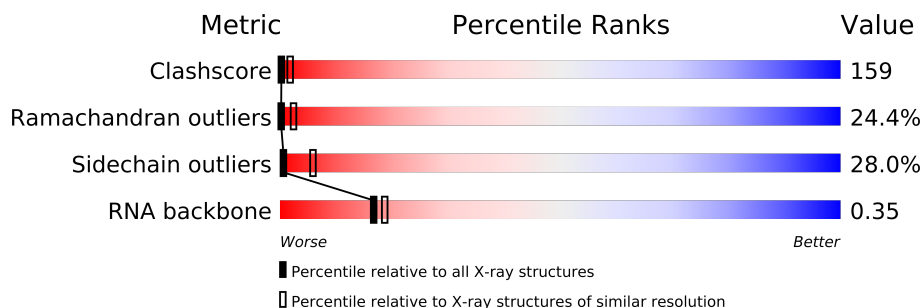
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.15 2013  
Xtriage (Phenix) : 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 5.00 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	79885	1327 (6.50-3.50)
Ramachandran outliers	78287	1242 (6.50-3.50)
Sidechain outliers	78261	1221 (6.50-3.50)
RNA backbone	1838	1037 (7.00-2.80)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	A	1522	
2	C	77	
3	D	76	
4	E	256	
5	F	239	
6	G	209	
7	H	162	
8	I	101	
9	J	156	
10	K	138	
11	L	128	
12	M	105	
13	N	129	
14	O	132	
15	P	126	

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Mol	Chain	Length	Quality of chain
16	Q	61	<div><div></div></div>
17	R	89	<div><div></div></div>
18	S	88	<div><div></div></div>
19	T	105	<div><div></div></div>
20	U	88	<div><div></div></div>
21	V	93	<div><div></div></div>
22	W	106	<div><div></div></div>
23	X	27	<div><div></div></div>

## 2 Entry composition

There are 23 unique types of molecules in this entry. The entry contains 55032 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 rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1515	Total	C	N	O	P	0	0	0
			32554	14490	6022	10527	1515			

- Molecule 2 is a RNA chain called tRNA fMET (unmodified bases).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	76	Total	C	N	O	P	0	0	0
			1624	723	295	530	76			

- Molecule 3 is a RNA chain called tRNA PHE (unmodified bases).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	76	Total	C	N	O	P	0	0	0
			1623	723	290	534	76			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	E	234	Total	C	N	O	S	0	0	0
			1900	1213	341	341	5			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	F	206	Total	C	N	O	S	0	0	0
			1612	1016	314	281	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	G	208	Total	C	N	O	S	0	0	0
			1703	1066	339	291	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	H	150	Total	C	N	O	S	0	0	0
			1146	724	217	201	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	I	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	J	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	K	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	L	127	Total	C	N	O	S	0	0	0
			1010	639	197	174				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	M	98	Total	C	N	O	S	0	0	0
			794	499	156	138	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	N	119	Total	C	N	O	S	0	0	0
			885	549	168	165	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	O	124	Total	C	N	O	S	0	0	0
			970	611	195	163	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	P	125	Total	C	N	O	S	0	0	0
			997	617	207	171	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	Q	60	Total	C	N	O	S	0	0	0
			492	312	104	72	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	R	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	S	83	Total	C	N	O	S	0	0	0
			700	443	139	117	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	T	104	Total	C	N	O	S	0	0	0
			857	547	161	147	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	U	73	Total	C	N	O		0	0	0
			597	380	118	99				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	V	80	Total	C	N	O	S	0	0	0
			647	414	119	112	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	W	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	X	24	Total	C	N	O	0	0	0
			208	128	50	30			

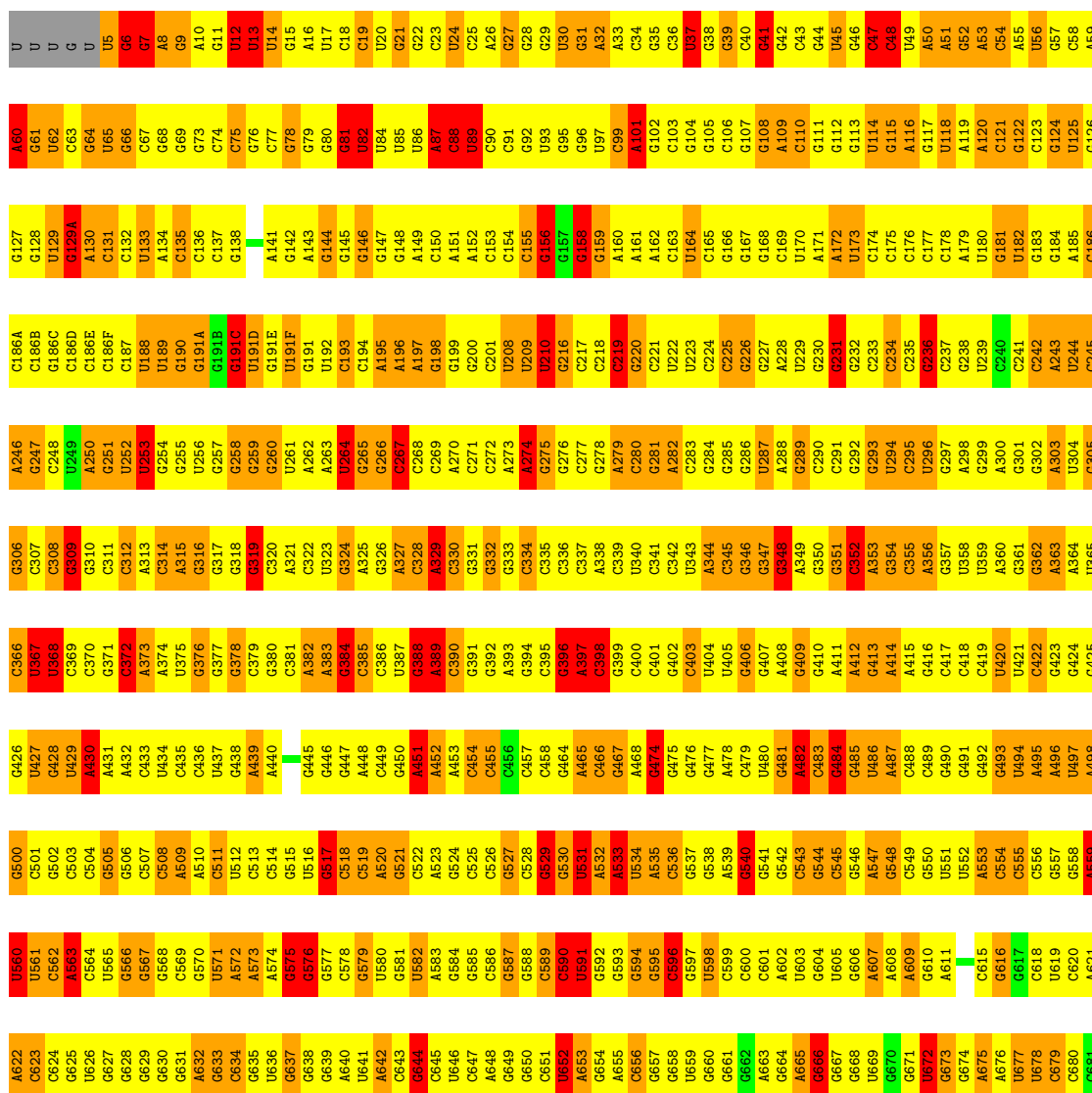
### 3 Residue-property plots

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 rRNA

Chain A: 



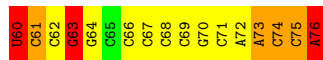


G1529	G1469	C1404	U1345	A1285	A1225	G1164	G1104	A1044	C989	G929	G869	A802	G742	G682
G1530	G1470	G1405	A1346	A1286	C1226	C1165	A1105	C1045	C990	C930	U870	G803	U743	G683
A1531	G1471	A1406	G1347	A1287	A1227	G1166	G1106	A1046	U991	C931	U871	U904	C744	A684
U1532	A1472	U1407	U1348	A1288	C1228	A1167	C1107	A1047	U992	C932	A872		C745	G685
C1533	A1473	A1408	A1349	A1289	A1229	A1169	G1108	G1048	G993	G933	A873	A807	U746	U686
A1534	A1474	C1409	A1350	G1290	C1230	A1170	C1109	U1049	A994	C934	G874	C808	A747	A687
C1535	G1475	G1410	U1351	G1291	G1231	G1171	A1110	G1050	C995	A935	C875	G803	C748	G688
U1536	G1476	C1411	C1352	U1292	U1232	C1172	A1111	C1051	A996	C936	C876	C810	C749	C689
C1537	G1477	A1412	G1353	G1293	G1233	C1173	C1112	U1052	U997	A937	C877	C811	G750	G690
C1538	C1478	A1413	G1354	G1294	C1234	G1174	C1113	G1053	G998	A938	G878	C812	U751	G691
C1539	C1479	U1414	G1355	G1295	U1235	G1175	C1114	C1054	C998A	G939	C879	U813	G752	U692
U1540	G1480	G1415	G1356	C1296	A1236	A1176	C1115	A1055	U999	C940	C880	A814	C753	G693
U1541	U1481	G1416	A1357	C1297	G1237	G1177	G1116	U1056	A1000	C941	G881	A815	C754	A694
U1542	G1482	G1417	U1358	C1298	A1238	G1178	C1117	G1057	G1001	G942	C882	A816	G755	A695
C	A1483	A1418	C1359	A1299	U1240	A1179	C1118	G1058	G1002	U943	C883	C817	C756	A696
U	C1484	G1419	A1360	G1300	G1241	A1180	C1119	C1059	U1003	G944	U884	G818	U757	U697
	U1485	C1420	G1361	U1301	G1241	G1181	G1120	C1060	A1004	A945	G885	A819	G758	G698
	G1486	G1421	C1362	U1302	C1242	G1182	U1121	G1061	A1005	A946	G886	U820	A759	G699
	G1487	G1422	C1363	C1303	C1243	A1183	U1122	U1062	G1006	G947	G887	G821	G760	G700
	G1488	G1423	A1363	G1304	C1244	C1184	A1123	C1063	C1007	C948	G888	C822	G761	G701
	G1489	C1424	A1364	G1305	C1245	G1185	G1124	G1064	C1008	C949	A889	G823	C762	A702
	U1490	U1425	G1365	A1306	U1246	G1186	U1125	U1065	G1009	U950	G890	G824	G763	G703
	G1491	C1426	C1366	U1307	G1247	G1187	U1126	C1066	G1010	G951	U891	G825	C764	A704
	A1492	U1427	G1367	U1308	A1248	A1188	G1127	A1067	G1011	U952	A892	G826	G765	U705
	A1493	A1428	G1368	G1309	G1249	C1189	C1128	G1068	U1012	G953	C893	U827	A766	A706
	G1494	C1429	C1369	G1310	A1250	G1190	C1129	C1069	G1013	G954	C894	A828	A767	G707
	U1495	C1430	G1370	G1311	A1251	A1191	A1130	U1070	A1014	U955	G895	G829	A768	C708
	C1496	G1431	G1371	G1312	A1252	C1192	G1131	C1071	A1015	U956	C896	G830	G769	G709
	G1497	G1432	C1372	U1313	G1253	G1193	G1132	G1072	A1016	U957	C897	G831	C770	G710
	U1498	A1433	G1373	C1314	C1254	U1194	C1133	G1073	G1017	A958	G898	C832	G771	G711
	A1499	G1434	A1374	U1315	G1255	C1195	G1134	G1074	C1018	A959	C899	U833	U772	A712
	A1500	G1435	A1375	G1316	A1256	U1196	U1135	C1075	C1019	U960	A900	C834	C773	G713
	C1501	U1436	U1376	C1317	U1257	G1197	U1136	G1076	U1020	U961	A901	U835	G774	G714
	A1502	C1437	A1377	A1318	G1258	G1198	C1137	G1077	G1021	C962	G902	G836	G775	A715
	C1503	G1438	C1378	A1319	C1259	U1199	G1138	U1078	G1022	A964	C904	G837	G776	A716
	G1504	C1439	G1379	C1320	A1261	C1200	G1139	G1079	G1023	G966	U905	G838	A777	G717
	U1505	A1440	U1380	G1321	C1262	A1201	C1140	A1080	G1024	A965	C906	U841	G778	C718
	U1506	G1441	U1381	C1322	C1263	G1202	C1141	G1081	U1025	G966	G907	C842	C779	C719
	A1507	G1442	C1382	G1323	C1264	A1204	G1142	G1082	G1026	C967	A907	U843	A780	C720
	G1508	G1443	C1383	A1324	G1265	U1205	G1143	U1083	C1027	A968	A908	C848	A781	G721
	C1509	A1446	C1384	C1325	G1266	G1206	G1144	G1084	C1028	A969	C909	C849	A782	A722
	U1510	G1447	G1385	C1326	G1267	G1207	C1145	U1085	C1028A	C970	C910	U850	C783	U723
	G1511	C1448	G1386	C1327	C1267	G1208	A1146	U1086	G1028B	G971	U911	G851	C784	G724
	U1512	U1449	G1387	C1328	A1268	C1209	C1147	G1087	G1029	C972	C912	G852	G785	G725
	A1513	U1450	C1388	A1329	A1269	C1210	U1148	G1088	C1030	G973	A913	G853	G786	C726
	C1514	A1451	C1389	U1330	G1270	C1211	C1149	U1089	G1031	A974	A914	G854	A787	C727
	U1515	C1452	U1390	G1331	G1271	U1211	U1150	U1090	A1032	A975	A915	G855	U788	A728
	G1516	G1453	U1391	A1332	G1272	U1212	A1151	U1091	G1032A	G976	G916	C856	U789	A729
	U1517	G1454	G1392	A1333	G1273	A1213	A1152	A1092	G1032B	A977	G917	C857	A790	G730
	A1518	G1455	U1393	G1334	G1274	C1214	C1153	A1093	G1033	A978	A918	G858	G791	G731
	U1519	C1456	A1394	C1335	A1275	G1215	G1154	G1094	G1034	C979	A919	A859	A792	C732
	G1520	A1460	C1395	C1336	G1276	G1216	G1155	U1095	A1035	U980	U920	A960	U793	A733
	U1521	G1461	A1396	G1337	C1277	C1217	G1156	C1096	G1036	U981	U921	G861	A794	G734
	U1522	G1462	C1397	G1338	U1278	C1218	A1157	C1097	G1037	U982	G922	C862	C795	C735
	G1523	C1463	A1398	A1339	C1279	U1219	C1158	C1098	G1038	A983	A923	U863	C796	C736
	U1524	G1464	C1399	A1340	A1280	G1220	U1159	G1099	C1039	C984	C924	A864	C797	A737
	G1525	C1465	C1400	U1341	U1281	G1221	G1160	C1100	U1040	C985	G925	A865	C798	C738
	U1526	G1466	G1401	C1342	C1282	G1222	C1161	A1101	A1041	A986	G926	C866	G799	C739
	C1527	G1467	C1402	G1343	G1283	C1223	C1162	A1102	G1042	G987	G927	G867	G800	U740
	U1528	A1468	C1403	C1344	C1284	G1224	C1163	C1103	C1043	G988	G928	C868	U801	G741

• Molecule 2: tRNA fMET (unmodified bases)

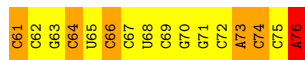
Chain C:





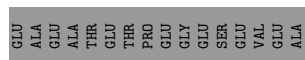
• Molecule 3: tRNA PHE (unmodified bases)

Chain D:



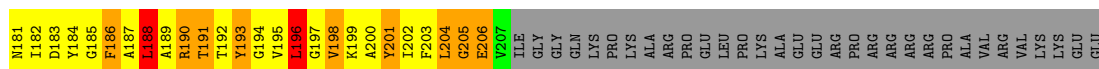
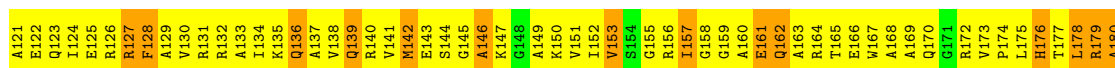
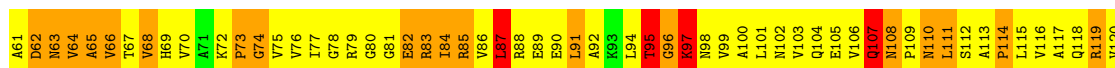
• Molecule 4: 30S ribosomal protein S2

Chain E:



• Molecule 5: 30S ribosomal protein S3

Chain F:



• Molecule 6: 30S ribosomal protein S4

Chain G:



V61	V62	L63	K64	V65	G66	P67	R68	R69	Q70	G71	P72	D73	P74	R75	P76	E77	Q78	V79	L80	H81	H82	L83	R84	R85	L86	S87	K88	P89	G90	R91	R92	V93	N94	V95	G96	V97	K98	E99	I100	P101	R102	V103	R104	R105	G106	L107	G108	I109	A110	I111	L112	S113	T114	S115	K116	G117	V118	L119	T120
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D121	R122	E123	A124	R125	K126	L127	G128	V129	G130	G131	E132	L133	I134	C135	E136	V137	W138
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• Molecule 11: 30S ribosomal protein S9

Chain L:

MET	E2	Q3	Y4	G5	Y6	T7	G8	R9	R10	K11	E12	A13	V14	A15	R16	V17	F18	L19	R20	P21	G22	N23	G24	K25	V26	T27	V28	N29	G30	D31	D32	P33	N34	E35	Y36	F37	Q38	G39	L40	V41	R42	A43	V44	A45	A46	L47	E48	P49	L50	R51	A52	V53	D54	A55	L56	G57	H58	F59	D60
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A61	Y62	T63	T64	V65	R66	G67	G68	G69	K70	S71	G72	D73	I74	D75	A76	I77	K78	L79	G80	L81	A82	R83	Q84	L85	V86	Q87	R88	N89	P90	D91	Y92	R93	A94	K95	L96	K97	P98	L99	G100	F101	L102	T103	G104	D105	A106	R107	V108	V109	E110	R111	K112	K113	Y114	G115	K116	R117	K118	A119	R120
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R121	A122	P123	Q124	Y125	S126	K127	R128
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• Molecule 12: 30S ribosomal protein S10

Chain M:

MET	PRO	K3	I4	R5	I6	K7	L8	R9	G10	F11	D12	H13	K14	T15	L16	D17	A18	S19	A20	Q21	K22	I23	Q24	E25	A26	A27	L28	R29	S30	G31	A32	Q33	V34	S35	G36	P37	I38	P39	L40	P41	T42	R43	V44	R45	R46	F47	T48	V49	I50	R51	G52	P53	F54	K55	H56	K57	D58	S59	R60
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B61	H62	F63	E64	L65	R66	T67	H68	G69	R70	L71	V72	D73	I74	T75	N76	P77	N78	R79	K80	T81	K82	E83	Q84	L85	N86	T87	L88	D89	L90	P91	T92	G93	V94	E95	L96	E97	I98	K99	T100	VAL	GLY	GLY	ARG
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------	-----	-----	-----	-----

• Molecule 13: 30S ribosomal protein S11

Chain N:

MET	ALA	LYS	LYS	PRO	SER	LYS	LYS	LYS	VAL	K11	R12	Q13	V14	A15	S16	G17	R18	A19	Y20	I21	H22	A23	S24	Y25	N26	N27	T28	I29	V30	T31	I32	T33	D34	P35	D36	G37	N38	P39	L40	T41	W42	S43	S44	G45	G46	V47	I48	G49	Y50	K51	G52	S53	R54	K55	G56	T57	P58	Y59	A60
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A61	Q62	L63	A64	A65	L66	D67	A68	A69	K70	K71	A72	M73	A74	Y75	K76	Q77	S78	V80	D81	V82	I83	V84	R85	G86	T87	G88	A89	R90	R91	E92	Q93	A94	I95	R96	A97	L98	Q99	A100	S101	G102	L103	Q104	V105	K106	S107	I108	V109	D110	D111	T112	P113	V114	P115	H116	N117	G118	C119	R120
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P121	K122	K123	K124	L125	R126	K127	A128	S129
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• Molecule 14: 30S ribosomal protein S12

Chain O:

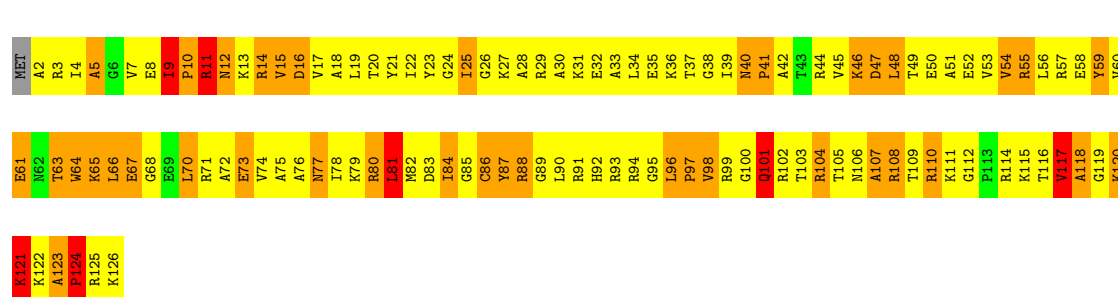
MET	P5	T6	I7	N8	Q9	L10	V11	R12	L15	E16	K17	V18	R19	K20	K21	S22	K23	V24	P25	A26	G27	L27	G28	G29	A30	P31	F32	R33	R34	G35	V36	G37	V38	V39	V40	R41	T42	V43	T44	P45	K46	A47	R48	M49	S50	A51	L52	B53	K54	V55	A56	K57	K58	L59	L60	T61	S62	K63	G64
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B65	V66	T67	A68	V69	I70	P71	G72	E73	G74	H75	N76	L77	Q78	E79	H80	S81	V82	R83	L84	L85	R86	G87	G88	R89	V90	K91	D92	L93	V96	R97	Y98	H99	I100	V101	R102	G103	V104	Y105	D106	A107	A108	G109	V110	K111	D112	R113	K114	K115	S116	R117	S118	K119	Y120	G121	T122	K123	K124	P125
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K126	E127	A128	ALA	THR	ALA	LYS	LYS
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- Molecule 15: 30S ribosomal protein S13

Chain P:



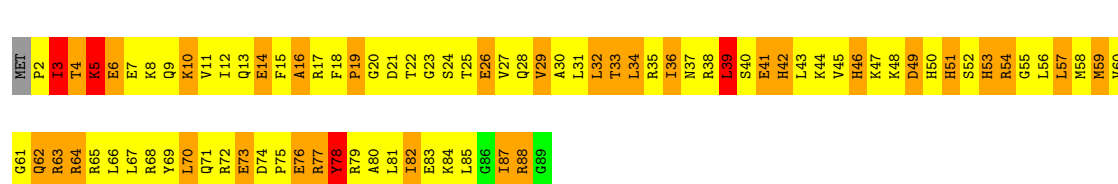
- Molecule 16: 30S ribosomal protein S14

Chain Q:



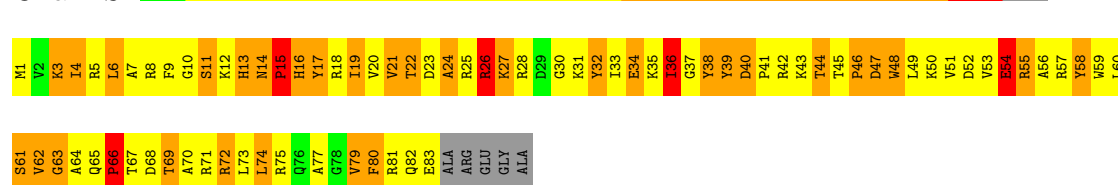
- Molecule 17: 30S ribosomal protein S15

Chain R:



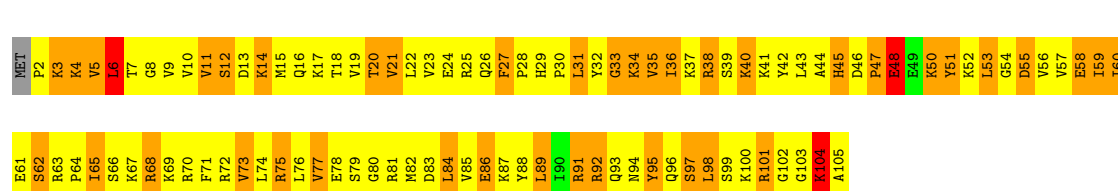
- Molecule 18: 30S ribosomal protein S16

Chain S:



- Molecule 19: 30S ribosomal protein S17

Chain T:



- Molecule 20: 30S ribosomal protein S18

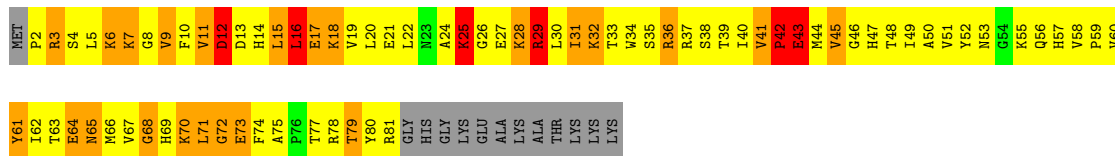
Chain U:





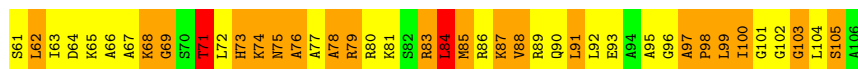
- Molecule 21: 30S ribosomal protein S19

Chain V:



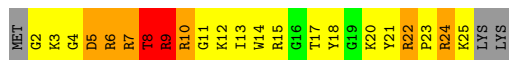
- Molecule 22: 30S ribosomal protein S20

Chain W:



- Molecule 23: 30S ribosomal protein Thx

Chain X:



## 4 Data and refinement statistics

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

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	509.52Å 509.52Å 804.94Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	300.00 – 5.00	Depositor
% Data completeness (in resolution range)	93.9 (300.00-5.00)	Depositor
$R_{merge}$	0.08	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	3.09 (at 4.88Å)	Xtriage
Refinement program	CNS	Depositor
R, $R_{free}$	0.263 , 0.323	Depositor
Wilson B-factor (Å <sup>2</sup> )	99.7	Xtriage
Anisotropy	0.066	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.55$ , $\langle L^2 \rangle = 0.39$	Xtriage
Outliers	1 of 252174 reflections (0.000%)	Xtriage
Total number of atoms	55032	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	169.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.30% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z  > 5$	RMSZ	# $ Z  > 5$
1	A	0.94	48/36438 (0.1%)	1.12	150/56869 (0.3%)
2	C	1.00	1/1814 (0.1%)	0.92	3/2825 (0.1%)
3	D	0.80	1/1813 (0.1%)	0.94	3/2823 (0.1%)
4	E	0.65	0/1935	1.02	3/2609 (0.1%)
5	F	0.55	0/1636	0.98	4/2205 (0.2%)
6	G	0.68	1/1733 (0.1%)	1.07	5/2318 (0.2%)
7	H	0.68	0/1162	1.06	2/1564 (0.1%)
8	I	0.68	0/856	1.01	3/1154 (0.3%)
9	J	0.60	0/1276	0.90	0/1709
10	K	0.68	0/1136	1.10	5/1527 (0.3%)
11	L	0.54	0/1029	0.87	0/1379
12	M	0.49	0/807	0.88	0/1085
13	N	0.73	0/900	1.06	3/1213 (0.2%)
14	O	0.67	0/986	1.12	6/1320 (0.5%)
15	P	0.53	0/1008	0.90	2/1347 (0.1%)
16	Q	0.57	0/501	1.01	1/664 (0.2%)
17	R	0.71	0/745	1.00	1/992 (0.1%)
18	S	0.72	0/716	1.05	3/963 (0.3%)
19	T	0.73	0/870	1.07	2/1159 (0.2%)
20	U	0.64	0/603	1.02	3/799 (0.4%)
21	V	0.55	0/661	0.94	0/890
22	W	0.77	0/765	1.03	1/1007 (0.1%)
23	X	0.48	0/212	0.85	1/277 (0.4%)
All	All	0.85	51/59602 (0.1%)	1.07	201/88698 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	217
2	C	0	13

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Mol	Chain	#Chirality outliers	#Planarity outliers
3	D	0	7
5	F	0	1
10	K	0	1
13	N	0	1
All	All	0	240

All (51) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	173	U	O3'-P	19.93	1.85	1.61
1	A	397	A	C6-N6	17.27	1.47	1.33
1	A	37	U	N1-C2	15.22	1.52	1.38
1	A	37	U	C4-O4	-14.43	1.12	1.23
1	A	37	U	N3-C4	-12.52	1.27	1.38
1	A	397	A	N3-C4	-10.40	1.28	1.34
1	A	961	U	C4-O4	-10.29	1.15	1.23
1	A	397	A	C5-C6	10.19	1.50	1.41
1	A	397	A	C6-N1	8.92	1.41	1.35
1	A	1064	G	C5-C6	-8.74	1.33	1.42
1	A	1064	G	C2-N3	8.66	1.39	1.32
1	A	697	U	N1-C2	8.10	1.45	1.38
3	D	1	G	OP3-P	-7.61	1.52	1.61
1	A	1192	C	N1-C2	7.38	1.47	1.40
1	A	974	A	C6-N1	7.28	1.40	1.35
1	A	974	A	C2-N3	7.21	1.40	1.33
2	C	1	C	OP3-P	-7.08	1.52	1.61
1	A	37	U	C2-O2	-7.03	1.16	1.22
1	A	114	U	N3-C4	-6.95	1.32	1.38
1	A	37	U	N1-C6	6.79	1.44	1.38
1	A	697	U	C2-N3	6.69	1.42	1.37
1	A	1064	G	N1-C2	6.60	1.43	1.37
1	A	677	U	N3-C4	6.51	1.44	1.38
1	A	1064	G	C5-C4	-6.28	1.33	1.38
1	A	961	U	N1-C6	-6.11	1.32	1.38
1	A	961	U	N3-C4	-6.05	1.33	1.38
1	A	974	A	N9-C4	6.02	1.41	1.37
1	A	697	U	N3-C4	5.99	1.43	1.38
1	A	961	U	N1-C2	5.98	1.44	1.38
1	A	397	A	N9-C8	-5.74	1.33	1.37
1	A	813	U	C2-N3	5.74	1.41	1.37
1	A	397	A	N7-C5	-5.73	1.35	1.39
1	A	1429	C	N1-C2	-5.71	1.34	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	540	G	N9-C4	-5.56	1.33	1.38
6	G	12	CYS	CA-CB	5.56	1.66	1.53
1	A	114	U	C2-N3	-5.55	1.33	1.37
1	A	309	G	N9-C4	-5.50	1.33	1.38
1	A	13	U	N1-C2	5.45	1.43	1.38
1	A	1419	G	C5-C6	-5.39	1.36	1.42
1	A	41	G	N9-C4	-5.37	1.33	1.38
1	A	354	G	N9-C4	5.37	1.42	1.38
1	A	13	U	N3-C4	5.36	1.43	1.38
1	A	677	U	C2-N3	5.27	1.41	1.37
1	A	37	U	C5-C6	5.26	1.38	1.34
1	A	1494	G	C6-O6	5.25	1.28	1.24
1	A	579	G	O3'-P	5.19	1.67	1.61
1	A	236	G	C5-C6	-5.11	1.37	1.42
1	A	1064	G	C6-O6	-5.10	1.19	1.24
1	A	825	G	N9-C4	-5.08	1.33	1.38
1	A	1103	C	N1-C2	-5.04	1.35	1.40
1	A	877	C	N1-C2	-5.00	1.35	1.40

All (201) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1064	G	N1-C2-N2	-70.70	52.57	116.20
1	A	1064	G	N3-C2-N2	58.69	160.98	119.90
1	A	1064	G	N1-C2-N3	-25.80	108.42	123.90
1	A	37	U	N3-C4-O4	-19.88	105.48	119.40
1	A	1064	G	C2-N3-C4	15.33	119.56	111.90
1	A	961	U	N3-C4-O4	-15.03	108.88	119.40
1	A	173	U	P-O3'-C3'	13.25	135.60	119.70
1	A	37	U	C5-C6-N1	-12.22	116.59	122.70
1	A	1064	G	C6-N1-C2	10.88	131.63	125.10
1	A	974	A	N9-C1'-C2'	9.81	126.75	114.00
1	A	793	U	N1-C1'-C2'	9.64	126.53	114.00
1	A	576	G	N9-C1'-C2'	9.62	126.50	114.00
1	A	173	U	O3'-P-O5'	-9.59	85.78	104.00
1	A	397	A	O4'-C1'-N9	-9.40	100.68	108.20
1	A	173	U	OP2-P-O3'	9.02	125.05	105.20
1	A	88	C	O4'-C1'-N1	9.01	115.41	108.20
1	A	590	C	N1-C1'-C2'	-8.76	102.36	112.00
1	A	1341	U	N1-C1'-C2'	-8.59	102.55	112.00
10	K	133	LEU	CA-CB-CG	-8.44	95.89	115.30
1	A	372	C	N1-C1'-C2'	8.35	124.86	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1133	G	N9-C1'-C2'	-8.29	102.88	112.00
1	A	961	U	C5-C4-O4	-8.04	121.07	125.90
1	A	1298	C	N1-C1'-C2'	8.02	124.42	114.00
14	O	29	GLY	N-CA-C	-7.89	93.38	113.10
1	A	457	C	N1-C1'-C2'	-7.87	103.34	112.00
1	A	974	A	C5-C6-N6	-7.74	117.51	123.70
1	A	451	A	N9-C1'-C2'	7.72	124.04	114.00
1	A	347	G	N9-C1'-C2'	-7.67	103.56	112.00
1	A	37	U	N1-C2-O2	-7.62	117.46	122.80
1	A	1380	U	N1-C1'-C2'	7.58	123.85	114.00
1	A	1185	G	N9-C1'-C2'	-7.57	103.68	112.00
3	D	76	A	N9-C1'-C2'	7.49	123.73	114.00
3	D	56	C	N1-C1'-C2'	7.47	123.71	114.00
1	A	397	A	N9-C1'-C2'	7.46	123.70	114.00
1	A	37	U	C5-C4-O4	-7.45	121.43	125.90
1	A	974	A	C6-N1-C2	-7.41	114.15	118.60
1	A	1166	G	N9-C1'-C2'	-7.41	103.85	112.00
1	A	1279	A	N9-C1'-C2'	7.41	123.63	114.00
1	A	1084	G	N9-C1'-C2'	7.37	123.58	114.00
15	P	81	LEU	CA-CB-CG	7.33	132.15	115.30
1	A	37	U	C4-C5-C6	7.32	124.09	119.70
13	N	126	ARG	N-CA-C	-7.30	91.28	111.00
1	A	961	U	O4'-C1'-N1	7.25	114.00	108.20
1	A	1528	U	N1-C1'-C2'	7.18	123.33	114.00
1	A	7	G	N9-C1'-C2'	7.10	123.22	114.00
1	A	13	U	N1-C1'-C2'	6.96	123.05	114.00
1	A	818	G	N9-C1'-C2'	6.95	123.03	114.00
1	A	815	A	N9-C1'-C2'	6.92	123.00	114.00
1	A	961	U	N1-C1'-C2'	6.90	122.97	114.00
6	G	28	SER	C-N-CD	-6.88	105.46	120.60
18	S	19	ILE	N-CA-C	-6.85	92.52	111.00
1	A	1504	G	C2'-C3'-O3'	6.81	124.60	113.70
1	A	156	G	N9-C1'-C2'	-6.81	104.51	112.00
1	A	563	A	N9-C1'-C2'	6.81	122.85	114.00
1	A	792	A	N9-C1'-C2'	6.74	122.76	114.00
1	A	82	U	N3-C4-O4	-6.69	114.72	119.40
1	A	1200	C	N1-C1'-C2'	6.67	122.68	114.00
1	A	13	U	O4'-C1'-N1	-6.63	102.90	108.20
18	S	63	GLY	N-CA-C	6.60	129.60	113.10
1	A	974	A	N1-C6-N6	6.58	122.55	118.60
16	Q	40	CYS	N-CA-C	-6.56	93.29	111.00
1	A	962	C	N1-C1'-C2'	-6.55	104.79	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1481	U	N1-C1'-C2'	6.53	122.49	114.00
10	K	10	LEU	CA-CB-CG	6.50	130.24	115.30
1	A	397	A	C4-N9-C1'	6.47	137.95	126.30
7	H	97	GLY	N-CA-C	-6.45	96.97	113.10
6	G	5	ILE	N-CA-C	-6.45	93.59	111.00
1	A	1049	U	C2'-C3'-O3'	6.39	123.92	113.70
1	A	1347	G	N9-C1'-C2'	6.39	122.30	114.00
1	A	974	A	C4-N9-C1'	6.32	137.68	126.30
1	A	397	A	C8-N9-C1'	-6.32	116.33	127.70
1	A	1310	G	N9-C1'-C2'	-6.32	105.05	112.00
14	O	59	ARG	N-CA-C	-6.31	93.96	111.00
1	A	37	U	N3-C4-C5	6.29	118.37	114.60
1	A	181	G	N9-C1'-C2'	6.29	122.17	114.00
1	A	13	U	C2-N1-C1'	6.25	125.20	117.70
14	O	120	TYR	N-CA-C	-6.25	94.12	111.00
8	I	36	ARG	N-CA-C	-6.24	94.16	111.00
1	A	226	G	N9-C1'-C2'	-6.23	105.15	112.00
1	A	1230	C	N1-C1'-C2'	-6.23	105.15	112.00
1	A	531	U	N1-C1'-C2'	6.23	122.10	114.00
1	A	1402	C	N1-C1'-C2'	-6.22	105.16	112.00
22	W	62	LEU	CA-CB-CG	-6.20	101.03	115.30
1	A	81	G	N9-C1'-C2'	6.20	122.06	114.00
1	A	810	C	N1-C1'-C2'	-6.16	105.22	112.00
1	A	974	A	C8-N9-C1'	-6.10	116.72	127.70
1	A	388	G	N9-C1'-C2'	6.08	121.90	114.00
10	K	80	ILE	N-CA-C	-6.07	94.62	111.00
1	A	1322	C	N1-C1'-C2'	6.06	121.88	114.00
1	A	13	U	C5'-C4'-O4'	6.05	116.36	109.10
1	A	60	A	N9-C1'-C2'	6.05	121.86	114.00
5	F	48	TYR	N-CA-C	-6.04	94.68	111.00
1	A	1135	U	N1-C1'-C2'	6.04	121.85	114.00
1	A	560	U	C2'-C3'-O3'	6.04	123.36	113.70
1	A	644	G	N9-C1'-C2'	-6.03	105.37	112.00
1	A	723	U	N1-C1'-C2'	6.02	121.83	114.00
1	A	1336	C	O4'-C1'-N1	6.01	113.01	108.20
1	A	135	C	N1-C1'-C2'	-5.97	105.43	112.00
1	A	1418	A	C5'-C4'-C3'	-5.96	106.46	116.00
1	A	793	U	C1'-O4'-C4'	-5.96	105.13	109.90
1	A	144	G	N9-C1'-C2'	-5.95	105.45	112.00
6	G	19	LEU	N-CA-C	-5.92	95.01	111.00
1	A	876	G	N9-C1'-C2'	-5.91	105.50	112.00
1	A	961	U	C2-N1-C1'	5.90	124.78	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	529	G	N9-C1'-C2'	-5.90	105.51	112.00
1	A	172	A	P-O3'-C3'	5.89	126.77	119.70
1	A	727	G	N9-C1'-C2'	-5.89	105.53	112.00
5	F	107	GLN	N-CA-C	5.87	126.85	111.00
1	A	656	C	N1-C1'-C2'	-5.85	105.56	112.00
1	A	1502	A	N9-C1'-C2'	5.84	121.60	114.00
1	A	1124	G	N9-C1'-C2'	5.77	121.51	114.00
1	A	813	U	N1-C1'-C2'	5.76	121.49	114.00
20	U	44	LEU	CA-CB-CG	5.76	128.55	115.30
1	A	48	C	O4'-C1'-N1	5.75	112.80	108.20
19	T	73	VAL	CB-CA-C	-5.71	100.56	111.40
1	A	88	C	C1'-O4'-C4'	-5.70	105.34	109.90
1	A	983	A	O4'-C1'-N9	-5.70	103.64	108.20
1	A	769	G	C5'-C4'-O4'	-5.70	102.26	109.10
1	A	37	U	C6-N1-C2	-5.69	117.58	121.00
1	A	810	C	O4'-C1'-N1	5.69	112.75	108.20
14	O	73	GLU	N-CA-C	5.68	126.34	111.00
1	A	1408	A	N9-C1'-C2'	-5.67	105.77	112.00
1	A	576	G	O4'-C1'-N9	5.66	112.73	108.20
2	C	76	A	C4'-C3'-O3'	5.66	124.32	113.00
20	U	75	ILE	CB-CA-C	-5.66	100.28	111.60
1	A	960	U	N1-C1'-C2'	5.66	121.36	114.00
5	F	188	LEU	CA-CB-CG	5.66	128.31	115.30
1	A	258	G	O4'-C1'-N9	5.65	112.72	108.20
15	P	117	VAL	N-CA-C	5.65	126.24	111.00
1	A	769	G	N9-C1'-C2'	5.63	121.32	114.00
1	A	397	A	C5'-C4'-O4'	5.60	115.82	109.10
1	A	37	U	O4'-C1'-N1	5.60	112.68	108.20
1	A	389	A	C5'-C4'-C3'	5.59	124.94	116.00
1	A	231	G	O4'-C1'-N9	5.58	112.66	108.20
1	A	319	G	N9-C1'-C2'	-5.57	105.88	112.00
2	C	14	A	N9-C1'-C2'	-5.57	105.88	112.00
1	A	372	C	C1'-O4'-C4'	-5.56	105.45	109.90
1	A	398	C	N1-C1'-C2'	-5.56	105.89	112.00
1	A	533	A	N9-C1'-C2'	5.55	121.21	114.00
1	A	559	A	N9-C1'-C2'	5.54	121.21	114.00
17	R	39	LEU	CA-CB-CG	5.54	128.05	115.30
18	S	16	HIS	N-CA-C	-5.54	96.05	111.00
1	A	652	U	N1-C1'-C2'	5.53	121.19	114.00
1	A	1175	G	N9-C1'-C2'	-5.53	105.92	112.00
6	G	158	ILE	N-CA-C	-5.53	96.07	111.00
1	A	878	G	C5'-C4'-C3'	-5.51	107.18	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	728	A	N9-C1'-C2'	-5.51	105.94	112.00
1	A	158	G	N9-C1'-C2'	-5.50	105.95	112.00
1	A	1498	U	OP2-P-O3'	5.50	117.30	105.20
20	U	80	PRO	N-CA-C	5.49	126.36	112.10
1	A	1054	C	N1-C1'-C2'	-5.48	105.97	112.00
1	A	376	G	N9-C1'-C2'	-5.47	105.98	112.00
1	A	560	U	N1-C1'-C2'	5.44	121.08	114.00
14	O	83	VAL	N-CA-C	-5.43	96.34	111.00
1	A	707	C	N1-C1'-C2'	-5.38	106.08	112.00
1	A	1392	G	N9-C1'-C2'	5.38	120.99	114.00
1	A	12	U	O4'-C1'-N1	5.38	112.50	108.20
1	A	1293	G	N9-C1'-C2'	-5.37	106.09	112.00
19	T	104	LYS	N-CA-C	5.37	125.50	111.00
1	A	1077	G	N9-C1'-C2'	-5.37	106.10	112.00
1	A	1139	G	N9-C1'-C2'	5.33	120.92	114.00
1	A	779	C	C5'-C4'-C3'	-5.32	107.49	116.00
6	G	9	CYS	CA-CB-SG	5.32	123.57	114.00
1	A	47	C	N1-C1'-C2'	5.30	120.90	114.00
1	A	1192	C	C2-N1-C1'	5.30	124.64	118.80
8	I	48	LEU	CA-CB-CG	-5.30	103.10	115.30
1	A	219	C	N1-C1'-C2'	-5.30	106.17	112.00
10	K	2	LEU	CA-CB-CG	5.29	127.47	115.30
1	A	396	G	N9-C1'-C2'	5.29	120.87	114.00
10	K	39	LEU	CA-CB-CG	-5.28	103.16	115.30
23	X	5	ASP	N-CA-C	-5.28	96.76	111.00
3	D	64	C	N1-C1'-C2'	-5.27	106.21	112.00
8	I	19	LEU	CA-CB-CG	5.27	127.42	115.30
1	A	596	C	C5'-C4'-O4'	5.24	115.39	109.10
1	A	37	U	N3-C2-O2	5.23	125.86	122.20
1	A	1193	G	N9-C1'-C2'	-5.21	106.27	112.00
1	A	334	C	N1-C1'-C2'	-5.21	106.27	112.00
1	A	517	G	N9-C1'-C2'	5.19	120.75	114.00
4	E	118	LEU	CA-CB-CG	5.16	127.16	115.30
1	A	1502	A	C1'-O4'-C4'	-5.15	105.78	109.90
7	H	83	GLU	N-CA-C	-5.12	97.17	111.00
13	N	47	VAL	N-CA-C	-5.12	97.18	111.00
13	N	90	GLY	N-CA-C	-5.12	100.31	113.10
14	O	25	PRO	N-CA-C	-5.10	98.85	112.10
1	A	1029	G	N9-C1'-C2'	-5.09	106.40	112.00
1	A	1311	G	N9-C1'-C2'	-5.09	106.40	112.00
4	E	142	LEU	CA-CB-CG	-5.09	103.59	115.30
1	A	1481	U	O4'-C1'-N1	5.07	112.26	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1225	A	N9-C1'-C2'	5.05	120.56	114.00
1	A	993	G	N9-C1'-C2'	5.03	120.54	114.00
1	A	1144	G	N9-C1'-C2'	-5.03	106.47	112.00
5	F	68	VAL	N-CA-C	-5.03	97.43	111.00
1	A	1205	U	O4'-C1'-N1	5.03	112.22	108.20
4	E	169	LYS	N-CA-C	-5.03	97.43	111.00
1	A	363	A	N9-C1'-C2'	-5.02	106.47	112.00
1	A	825	G	C4-N9-C1'	-5.02	119.97	126.50
1	A	860	A	N9-C1'-C2'	-5.02	106.48	112.00
1	A	191(C)	G	N9-C1'-C2'	-5.02	106.48	112.00
1	A	637	G	N9-C1'-C2'	-5.01	106.49	112.00
1	A	790	A	N9-C1'-C2'	-5.01	106.49	112.00
2	C	19	G	N9-C1'-C2'	5.00	120.50	114.00

There are no chirality outliers.

All (240) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1003	G	Sidechain
1	A	1006	C	Sidechain
1	A	1007	C	Sidechain
1	A	101	A	Sidechain
1	A	1012	U	Sidechain
1	A	1025	U	Sidechain
1	A	1027	C	Sidechain
1	A	1028(A)	C	Sidechain
1	A	1036	G	Sidechain
1	A	1037	C	Sidechain
1	A	1038	C	Sidechain
1	A	1039	C	Sidechain
1	A	1052	U	Sidechain
1	A	1053	G	Sidechain
1	A	1055	A	Sidechain
1	A	1057	G	Sidechain
1	A	1065	U	Sidechain
1	A	1075	C	Sidechain
1	A	108	G	Sidechain
1	A	1084	G	Sidechain
1	A	1086	U	Sidechain
1	A	1097	C	Sidechain
1	A	1100	C	Sidechain
1	A	1115	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1124	G	Sidechain
1	A	1128	C	Sidechain
1	A	1133	G	Sidechain
1	A	1135	U	Sidechain
1	A	1143	G	Sidechain
1	A	1150	U	Sidechain
1	A	1159	U	Sidechain
1	A	1172	C	Sidechain
1	A	118	U	Sidechain
1	A	1185	G	Sidechain
1	A	1192	C	Sidechain
1	A	1195	C	Sidechain
1	A	12	U	Sidechain
1	A	1203	C	Sidechain
1	A	1235	U	Sidechain
1	A	1246	C	Sidechain
1	A	1247	U	Sidechain
1	A	125	U	Sidechain
1	A	1254	C	Sidechain
1	A	1263	C	Sidechain
1	A	1264	C	Sidechain
1	A	1266	G	Sidechain
1	A	1271	G	Sidechain
1	A	1285	A	Sidechain
1	A	129	U	Sidechain
1	A	129(A)	G	Sidechain
1	A	1301	U	Sidechain
1	A	1302	U	Sidechain
1	A	1312	G	Sidechain
1	A	1314	C	Sidechain
1	A	1318	A	Sidechain
1	A	1320	C	Sidechain
1	A	1328	C	Sidechain
1	A	1330	U	Sidechain
1	A	1331	G	Sidechain
1	A	1342	C	Sidechain
1	A	1344	C	Sidechain
1	A	1347	G	Sidechain
1	A	1348	U	Sidechain
1	A	1354	C	Sidechain
1	A	1372	U	Sidechain
1	A	1377	A	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1380	U	Sidechain
1	A	1405	G	Sidechain
1	A	1407	C	Sidechain
1	A	1408	A	Sidechain
1	A	1418	A	Sidechain
1	A	1427	U	Sidechain
1	A	1442	G	Sidechain
1	A	146	G	Sidechain
1	A	1481	U	Sidechain
1	A	1507	A	Sidechain
1	A	1509	C	Sidechain
1	A	1521	G	Sidechain
1	A	1540	U	Sidechain
1	A	155	C	Sidechain
1	A	158	G	Sidechain
1	A	159	G	Sidechain
1	A	164	U	Sidechain
1	A	186	C	Sidechain
1	A	191(C)	G	Sidechain
1	A	191(D)	U	Sidechain
1	A	191(F)	U	Sidechain
1	A	201	C	Sidechain
1	A	21	G	Sidechain
1	A	210	U	Sidechain
1	A	219	C	Sidechain
1	A	220	G	Sidechain
1	A	225	C	Sidechain
1	A	231	G	Sidechain
1	A	234	C	Sidechain
1	A	24	U	Sidechain
1	A	242	C	Sidechain
1	A	253	U	Sidechain
1	A	264	U	Sidechain
1	A	267	C	Sidechain
1	A	27	G	Sidechain
1	A	274	A	Sidechain
1	A	287	U	Sidechain
1	A	294	U	Sidechain
1	A	295	C	Sidechain
1	A	296	U	Sidechain
1	A	303	A	Sidechain
1	A	312	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	314	C	Sidechain
1	A	319	G	Sidechain
1	A	329	A	Sidechain
1	A	348	G	Sidechain
1	A	352	C	Sidechain
1	A	362	G	Sidechain
1	A	367	U	Sidechain
1	A	368	U	Sidechain
1	A	37	U	Sidechain
1	A	378	G	Sidechain
1	A	384	G	Sidechain
1	A	385	C	Sidechain
1	A	388	G	Sidechain
1	A	396	G	Sidechain
1	A	397	A	Sidechain
1	A	398	C	Sidechain
1	A	403	C	Sidechain
1	A	406	G	Sidechain
1	A	409	G	Sidechain
1	A	41	G	Sidechain
1	A	420	U	Sidechain
1	A	430	A	Sidechain
1	A	45	U	Sidechain
1	A	47	C	Sidechain
1	A	474	G	Sidechain
1	A	482	A	Sidechain
1	A	484	G	Sidechain
1	A	493	G	Sidechain
1	A	529	G	Sidechain
1	A	53	A	Sidechain
1	A	530	G	Sidechain
1	A	531	U	Sidechain
1	A	533	A	Sidechain
1	A	54	C	Sidechain
1	A	543	C	Sidechain
1	A	544	G	Sidechain
1	A	559	A	Sidechain
1	A	56	U	Sidechain
1	A	560	U	Sidechain
1	A	563	A	Sidechain
1	A	575	G	Sidechain
1	A	576	G	Sidechain

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Mol	Chain	Res	Type	Group
1	A	582	U	Sidechain
1	A	587	G	Sidechain
1	A	590	C	Sidechain
1	A	591	U	Sidechain
1	A	594	G	Sidechain
1	A	596	C	Sidechain
1	A	6	G	Sidechain
1	A	616	G	Sidechain
1	A	632	A	Sidechain
1	A	633	G	Sidechain
1	A	634	C	Sidechain
1	A	639	G	Sidechain
1	A	644	G	Sidechain
1	A	666	G	Sidechain
1	A	672	U	Sidechain
1	A	675	A	Sidechain
1	A	678	U	Sidechain
1	A	689	C	Sidechain
1	A	690	G	Sidechain
1	A	7	G	Sidechain
1	A	703	G	Sidechain
1	A	705	U	Sidechain
1	A	707	C	Sidechain
1	A	717	C	Sidechain
1	A	741	G	Sidechain
1	A	749	C	Sidechain
1	A	75	C	Sidechain
1	A	760	G	Sidechain
1	A	774	G	Sidechain
1	A	779	C	Sidechain
1	A	783	C	Sidechain
1	A	792	A	Sidechain
1	A	803	G	Sidechain
1	A	81	G	Sidechain
1	A	810	C	Sidechain
1	A	813	U	Sidechain
1	A	815	A	Sidechain
1	A	818	G	Sidechain
1	A	819	A	Sidechain
1	A	82	U	Sidechain
1	A	820	U	Sidechain
1	A	841	U	Sidechain

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Mol	Chain	Res	Type	Group
1	A	852	G	Sidechain
1	A	853	G	Sidechain
1	A	855	G	Sidechain
1	A	861	G	Sidechain
1	A	862	C	Sidechain
1	A	863	U	Sidechain
1	A	87	A	Sidechain
1	A	873	A	Sidechain
1	A	89	U	Sidechain
1	A	895	G	Sidechain
1	A	897	C	Sidechain
1	A	898	G	Sidechain
1	A	901	A	Sidechain
1	A	914	A	Sidechain
1	A	918	A	Sidechain
1	A	946	A	Sidechain
1	A	947	G	Sidechain
1	A	955	U	Sidechain
1	A	961	U	Sidechain
1	A	974	A	Sidechain
1	A	976	G	Sidechain
1	A	982	U	Sidechain
1	A	983	A	Sidechain
1	A	989	C	Sidechain
1	A	998(A)	C	Sidechain
2	C	19	G	Sidechain
2	C	20	U	Sidechain
2	C	24	U	Sidechain
2	C	25	C	Sidechain
2	C	26	G	Sidechain
2	C	33	U	Sidechain
2	C	35	A	Sidechain
2	C	42	G	Sidechain
2	C	44	A	Sidechain
2	C	46	G	Sidechain
2	C	47	U	Sidechain
2	C	60	U	Sidechain
2	C	63	G	Sidechain
3	D	17	U	Sidechain
3	D	25	C	Sidechain
3	D	39	U	Sidechain
3	D	4	G	Sidechain

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Mol	Chain	Res	Type	Group
3	D	40	C	Sidechain
3	D	51	C	Sidechain
3	D	8	U	Sidechain
5	F	48	TYR	Sidechain
10	K	58	TYR	Sidechain
13	N	75	TYR	Sidechain

## 5.2 Close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	32554	0	16429	6436	0
2	C	1624	0	826	326	0
3	D	1623	0	821	338	0
4	E	1900	0	1951	934	0
5	F	1612	0	1677	695	0
6	G	1703	0	1763	800	0
7	H	1146	0	1207	493	0
8	I	843	0	857	370	0
9	J	1257	0	1296	561	0
10	K	1116	0	1177	644	0
11	L	1010	0	1037	460	0
12	M	794	0	840	363	0
13	N	885	0	904	407	0
14	O	970	0	1057	440	0
15	P	997	0	1072	482	0
16	Q	492	0	529	255	0
17	R	734	0	771	297	0
18	S	700	0	720	308	0
19	T	857	0	930	415	0
20	U	597	0	668	331	0
21	V	647	0	673	300	0
22	W	763	0	861	356	0
23	X	208	0	221	83	0
All	All	55032	0	38287	14770	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 159.

All (14770) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:5:VAL:HG13	19:T:59:ILE:O	1.26	1.35
1:A:559:A:H4'	1:A:560:U:C5'	1.57	1.34
1:A:197:A:N6	1:A:221:C:H5'	1.42	1.30
6:G:31:CYS:SG	6:G:33:MET:SD	2.29	1.29
6:G:59:ARG:HA	6:G:59:ARG:CZ	1.64	1.26
1:A:313:A:H2'	1:A:314:C:C6	1.72	1.24
1:A:946:A:H2'	1:A:947:G:C8	1.71	1.23
1:A:197:A:N6	1:A:221:C:C5'	2.04	1.21
13:N:25:TYR:HA	13:N:89:ALA:HB2	1.23	1.21
6:G:20:TYR:HA	6:G:26:CYS:O	1.37	1.20
14:O:56:ALA:HB3	14:O:68:ALA:O	1.37	1.20
4:E:56:ARG:NH1	4:E:56:ARG:HB3	1.56	1.20
1:A:372:C:H42	1:A:389:A:N6	1.40	1.19
1:A:392:G:H5'	18:S:12:LYS:NZ	1.58	1.18
4:E:176:GLU:O	4:E:180:LEU:HG	1.39	1.18
9:J:132:GLY:O	9:J:136:LYS:HB2	1.43	1.18
1:A:372:C:N4	1:A:389:A:H62	1.42	1.18
9:J:38:LEU:HD12	9:J:41:ARG:HD3	1.21	1.18
6:G:59:ARG:HA	6:G:59:ARG:NH1	1.59	1.17
1:A:279:A:H1'	1:A:281:G:N3	1.58	1.17
1:A:1394:A:N7	1:A:1501:C:H1'	1.57	1.16
9:J:45:ASP:HA	9:J:48:LYS:HD2	1.22	1.16
1:A:665:A:H2'	1:A:725:G:N2	1.59	1.16
1:A:946:A:H2'	1:A:947:G:H8	1.02	1.16
2:C:34:C:C2'	2:C:35:A:H5''	1.72	1.16
8:I:23:LYS:HA	8:I:26:ILE:HD12	1.27	1.16
2:C:15:G:N2	2:C:48:C:H42	1.43	1.15
4:E:111:ARG:HA	4:E:111:ARG:HH11	1.01	1.15
10:K:14:ARG:HB3	10:K:14:ARG:HH11	1.02	1.15
1:A:173:U:C5'	1:A:197:A:H1'	1.75	1.15
2:C:15:G:H22	2:C:48:C:N4	1.42	1.15
14:O:41:ARG:HB3	14:O:41:ARG:HH11	1.10	1.15
21:V:41:VAL:HB	21:V:42:PRO:HD2	1.17	1.15
19:T:4:LYS:HD2	19:T:5:VAL:H	1.12	1.15
20:U:55:ARG:NH1	20:U:55:ARG:HB3	1.62	1.15
21:V:62:ILE:HD11	21:V:67:VAL:HA	1.20	1.14
1:A:926:G:H2'	1:A:1505:G:N2	1.63	1.14
4:E:82:ARG:HD2	4:E:92:TYR:OH	1.45	1.14
1:A:1536:C:H2'	1:A:1537:U:C5	1.81	1.14

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:174:VAL:O	4:E:178:ARG:HB2	1.44	1.14
13:N:41:THR:HB	13:N:71:LYS:HE3	1.29	1.13
8:I:30:LEU:HA	8:I:75:LEU:HD11	1.16	1.13
1:A:474:G:H5'	18:S:81:ARG:HE	0.98	1.13
8:I:14:LEU:HD12	8:I:19:LEU:HD12	1.21	1.13
9:J:46:ALA:HA	9:J:49:ILE:HD12	1.14	1.13
1:A:263:A:C2'	1:A:264:U:H5''	1.77	1.13
5:F:150:LYS:HB2	5:F:173:VAL:HG21	1.27	1.13
1:A:1189:C:H5''	5:F:5:ILE:HG12	1.31	1.13
12:M:49:VAL:HG13	16:Q:41:ARG:HD2	1.30	1.12
1:A:571:U:C3'	1:A:572:A:H5''	1.79	1.12
20:U:55:ARG:HH11	20:U:55:ARG:HB3	1.03	1.12
20:U:67:ALA:HA	20:U:70:ILE:HD12	1.25	1.12
9:J:64:GLN:HB3	9:J:128:ALA:HB1	1.29	1.12
10:K:63:LEU:H	10:K:63:LEU:HD13	1.11	1.12
1:A:559:A:C4'	1:A:560:U:H5'	1.78	1.12
1:A:1404:C:H1'	1:A:1499:A:C2	1.85	1.12
17:R:62:GLN:NE2	17:R:66:LEU:HD21	1.65	1.12
18:S:75:ARG:HA	18:S:80:PHE:HB2	1.23	1.12
10:K:18:ARG:HD2	10:K:18:ARG:H	1.11	1.12
8:I:48:LEU:HB3	20:U:78:LEU:HD23	1.29	1.12
4:E:155:LEU:HB2	4:E:159:PRO:HG3	1.26	1.11
8:I:77:ARG:HA	8:I:80:ARG:HD2	1.16	1.11
21:V:36:ARG:HE	21:V:51:VAL:HG12	1.11	1.11
1:A:1064:G:H1'	1:A:1066:C:C4	1.84	1.11
5:F:182:ILE:HG23	5:F:203:PHE:HA	1.32	1.11
1:A:1236:A:H4'	1:A:1304:G:H4'	1.19	1.11
6:G:30:LYS:HG2	6:G:35:ARG:HD2	1.27	1.11
10:K:14:ARG:HB3	10:K:14:ARG:NH1	1.66	1.11
1:A:1118:C:OP1	11:L:104:ARG:HG3	1.49	1.11
4:E:101:MET:CA	4:E:108:ILE:HG13	1.81	1.11
6:G:55:ALA:O	6:G:59:ARG:HG2	1.49	1.11
9:J:35:LYS:HG2	9:J:37:ASN:HD21	1.13	1.11
1:A:47:C:H4'	1:A:48:C:H5''	1.17	1.10
1:A:192:U:H1'	22:W:103:GLY:HA2	1.34	1.10
1:A:197:A:N6	1:A:221:C:C4'	2.14	1.10
22:W:43:LEU:HD12	22:W:55:ILE:HD11	1.19	1.10
1:A:50:A:H5''	1:A:51:A:H5'	1.27	1.10
9:J:78:ARG:O	9:J:84:ASN:HA	1.50	1.10
17:R:75:PRO:O	17:R:78:TYR:HB3	1.49	1.10
1:A:186(A):C:H1'	22:W:104:LEU:HD22	1.31	1.10
1:A:1305:G:H2'	1:A:1331:G:H22	1.13	1.10

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:185:ILE:HG22	4:E:199:TYR:HB2	1.22	1.10
10:K:39:LEU:HB3	10:K:45:ILE:HG21	1.30	1.10
14:O:59:ARG:HA	14:O:64:TYR:O	1.51	1.10
2:C:37:A:H2'	2:C:38:A:H8	1.11	1.09
9:J:10:ARG:HB3	9:J:10:ARG:HH11	1.01	1.09
10:K:38:ILE:HG13	10:K:118:VAL:HG11	1.10	1.09
11:L:19:LEU:HD21	11:L:59:PHE:HB3	1.12	1.09
14:O:88:GLY:H	14:O:98:TYR:HA	1.08	1.09
4:E:115:LEU:HD13	4:E:145:LEU:HB3	1.15	1.09
4:E:88:ALA:HB2	4:E:219:VAL:HG22	1.26	1.09
4:E:222:ILE:HD13	4:E:226:ARG:HH21	1.06	1.09
1:A:599:C:H4'	10:K:130:GLY:HA3	1.12	1.09
1:A:926:G:H2'	1:A:1505:G:H21	0.97	1.09
6:G:147:ALA:HB2	6:G:182:LYS:HA	1.34	1.09
3:D:56:C:H3'	3:D:57:G:C8	1.87	1.09
2:C:34:C:H2'	2:C:35:A:H5''	1.18	1.09
1:A:1047:G:H5''	16:Q:4:LYS:HD3	1.13	1.09
4:E:161:ALA:HA	4:E:183:PRO:HB2	1.34	1.09
5:F:20:SER:HB2	5:F:40:ARG:HH22	1.15	1.09
1:A:628:G:H2'	1:A:629:G:H8	1.18	1.09
12:M:6:ILE:HD11	12:M:72:VAL:HB	1.29	1.09
13:N:23:ALA:CB	13:N:88:GLY:HA2	1.83	1.09
1:A:263:A:H2'	1:A:264:U:H5''	1.09	1.09
5:F:14:ILE:HG21	5:F:179:ARG:HA	1.18	1.09
14:O:84:LEU:HB3	14:O:104:VAL:HG11	1.30	1.09
14:O:93:LEU:HD12	14:O:96:VAL:HG21	1.32	1.09
1:A:1277:C:H4'	1:A:1282:C:H1'	1.35	1.08
1:A:1417:G:H2'	1:A:1482:G:N2	1.66	1.08
4:E:21:ARG:N	4:E:21:ARG:HD2	1.67	1.08
6:G:12:CYS:HA	6:G:19:LEU:HB2	1.17	1.08
19:T:10:VAL:HG21	19:T:55:ASP:HB2	1.31	1.08
18:S:57:ARG:HA	18:S:60:LEU:HD12	1.33	1.08
4:E:101:MET:HA	4:E:108:ILE:HG13	1.08	1.08
6:G:19:LEU:H	6:G:33:MET:HE1	1.15	1.08
6:G:57:ARG:HH22	7:H:107:ARG:HD3	1.14	1.08
3:D:3:C:H2'	3:D:4:G:H8	1.14	1.08
5:F:126:ARG:HB3	5:F:128:PHE:HE1	1.00	1.08
1:A:80:G:H2'	1:A:81:G:O4'	1.54	1.08
5:F:116:VAL:O	5:F:119:ARG:HB3	1.54	1.08
11:L:17:VAL:HA	11:L:63:ILE:HG23	1.30	1.08
6:G:20:TYR:CA	6:G:33:MET:SD	2.41	1.08
12:M:45:ARG:HH11	12:M:45:ARG:HB3	0.99	1.08

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:224:GLN:HG2	4:E:229:VAL:HG22	1.25	1.08
10:K:22:GLU:HA	10:K:63:LEU:HD21	1.33	1.08
12:M:24:VAL:HA	12:M:34:VAL:HG21	1.36	1.08
15:P:59:TYR:CE2	15:P:60:VAL:HG23	1.87	1.08
1:A:570:G:H5'	1:A:820:U:H1'	1.34	1.07
21:V:30:LEU:HD11	21:V:50:ALA:HB2	1.27	1.07
7:H:102:ALA:HB1	7:H:120:THR:HG22	1.35	1.07
7:H:11:ILE:HG22	7:H:12:LEU:H	0.93	1.07
9:J:111:ARG:HD2	9:J:123:GLU:HB2	1.33	1.07
11:L:70:LYS:H	11:L:70:LYS:HD2	1.12	1.07
19:T:5:VAL:HG22	19:T:60:ILE:HA	1.09	1.07
6:G:168:ARG:HD2	6:G:168:ARG:H	1.12	1.07
4:E:21:ARG:H	4:E:21:ARG:CD	1.66	1.07
7:H:94:ALA:HB2	7:H:119:LEU:HD21	1.14	1.07
19:T:59:ILE:HD11	19:T:71:PHE:HB3	1.36	1.07
21:V:36:ARG:HE	21:V:51:VAL:CG1	1.67	1.07
7:H:9:LYS:HB2	7:H:33:VAL:HB	1.34	1.07
9:J:115:ARG:HB2	9:J:118:VAL:HG23	1.34	1.07
11:L:50:LEU:HD11	11:L:56:LEU:HA	1.35	1.07
14:O:85:ILE:HD11	14:O:98:TYR:HB3	1.31	1.07
1:A:1202:G:H1'	16:Q:29:ARG:HD2	1.24	1.07
4:E:7:VAL:HG23	4:E:8:LYS:H	1.09	1.07
10:K:82:HIS:O	10:K:137:VAL:HA	1.54	1.07
22:W:26:ASN:HD22	22:W:27:LYS:N	1.52	1.07
1:A:761:G:H5'	19:T:102:GLY:HA3	1.34	1.07
17:R:71:GLN:HG3	17:R:75:PRO:HB3	1.37	1.07
3:D:8:U:H3	3:D:14:A:N6	1.53	1.07
6:G:148:VAL:HB	6:G:181:MET:HE3	1.37	1.07
11:L:10:ARG:HA	11:L:104:ARG:NE	1.70	1.07
22:W:50:GLU:H	22:W:99:LEU:HD12	1.14	1.07
1:A:888:G:N2	1:A:909:A:H62	1.53	1.07
11:L:19:LEU:HD23	11:L:60:ASP:O	1.55	1.07
5:F:30:ARG:HB3	16:Q:36:PHE:O	1.55	1.06
6:G:141:ARG:HD3	6:G:142:PRO:HD2	1.11	1.06
6:G:20:TYR:HB2	6:G:27:TYR:HA	1.32	1.06
10:K:26:VAL:HG22	10:K:27:PRO:HD2	1.36	1.06
9:J:29:LYS:HD2	9:J:101:LEU:HD22	1.37	1.06
10:K:6:ILE:HG23	10:K:7:ALA:H	1.19	1.06
14:O:86:ARG:HH12	14:O:119:LYS:HD3	1.11	1.06
3:D:37:A:H2'	3:D:38:A:H8	1.19	1.06
22:W:11:SER:HA	22:W:13:LEU:HD11	1.32	1.06
1:A:619:U:H3	6:G:135:LEU:HD21	1.19	1.06

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:140:ASP:HA	9:J:143:ARG:CZ	1.85	1.06
4:E:136:VAL:HA	4:E:139:LYS:HZ2	1.13	1.06
1:A:1005:A:H3'	1:A:1006:C:H6	1.20	1.06
1:A:389:A:H2'	1:A:390:C:H5'	1.38	1.06
1:A:902:G:O2'	1:A:903:G:H5'	1.55	1.06
13:N:23:ALA:HB3	13:N:88:GLY:HA2	1.35	1.06
20:U:66:LEU:HD12	20:U:67:ALA:N	1.69	1.06
1:A:939:G:H5''	9:J:102:ARG:HH12	1.14	1.06
21:V:5:LEU:CD1	21:V:9:VAL:HG13	1.86	1.06
1:A:1423:G:H2'	1:A:1424:C:H6	1.20	1.06
4:E:155:LEU:CB	4:E:159:PRO:HG3	1.86	1.06
10:K:9:MET:HG2	10:K:13:ILE:HD11	1.10	1.06
3:D:22:G:H2'	3:D:23:A:C8	1.89	1.06
3:D:63:G:H2'	3:D:64:C:C6	1.89	1.06
6:G:156:GLU:O	6:G:159:ARG:HB3	1.53	1.05
8:I:26:ILE:HG22	8:I:30:LEU:HD11	1.33	1.05
11:L:10:ARG:HA	11:L:104:ARG:HE	0.93	1.05
17:R:62:GLN:HA	17:R:65:ARG:NH2	1.71	1.05
1:A:1417:G:H2'	1:A:1482:G:H22	1.14	1.05
1:A:332:G:O2'	1:A:333:G:H5'	1.56	1.05
10:K:109:ILE:O	10:K:136:GLU:HB2	1.56	1.05
4:E:84:GLU:HG2	4:E:234:PRO:HD2	1.35	1.05
8:I:97:PHE:HD2	20:U:31:LEU:HD13	1.17	1.05
13:N:61:ALA:HB1	13:N:94:ALA:HB2	1.06	1.05
1:A:737:A:H3'	8:I:92:LYS:HZ1	1.19	1.05
13:N:111:ASP:OD2	13:N:113:PRO:HD3	1.54	1.05
1:A:582:U:H5'	17:R:64:ARG:NH2	1.71	1.05
21:V:40:ILE:HB	21:V:67:VAL:O	1.54	1.05
10:K:64:LYS:HG2	10:K:79:VAL:HG21	1.26	1.05
14:O:27:LEU:HD23	14:O:33:ARG:HH11	1.17	1.05
6:G:30:LYS:HE2	6:G:35:ARG:HH11	1.19	1.05
1:A:1152:A:H5''	12:M:13:HIS:NE2	1.71	1.05
1:A:1443:G:C4'	1:A:1446:A:H5'	1.85	1.05
13:N:57:THR:HG23	13:N:60:ALA:H	1.21	1.05
1:A:1261:A:H61	1:A:1274:G:H1'	1.18	1.05
6:G:94:LEU:HA	6:G:97:LEU:HD12	1.10	1.05
1:A:173:U:H1'	1:A:197:A:C2	1.92	1.05
13:N:102:GLY:HA2	13:N:105:VAL:HG23	1.34	1.05
1:A:652:U:O4	1:A:752:G:H2'	1.56	1.05
1:A:1192:C:H3'	1:A:1192:C:H6	1.16	1.04
6:G:173:TRP:CE2	6:G:189:PRO:HB3	1.93	1.04
8:I:3:ARG:HA	8:I:67:MET:HE1	1.37	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:41:ARG:HB3	14:O:41:ARG:NH1	1.70	1.04
1:A:1443:G:H4'	1:A:1446:A:C5'	1.86	1.04
1:A:777:A:H2'	1:A:778:G:H8	1.19	1.04
4:E:77:ALA:HB2	4:E:211:ILE:HD13	1.35	1.04
4:E:82:ARG:HB2	4:E:94:ASN:ND2	1.73	1.04
17:R:16:ALA:HB1	17:R:21:ASP:HB3	1.36	1.04
13:N:95:ILE:HA	13:N:98:LEU:HG	1.36	1.04
21:V:5:LEU:HD12	21:V:9:VAL:CG1	1.87	1.04
1:A:1011:G:H2'	1:A:1012:U:H5'	1.37	1.04
1:A:43:C:H5''	18:S:12:LYS:HB3	1.36	1.04
1:A:1179:A:H4'	11:L:103:THR:OG1	1.57	1.04
19:T:62:SER:HB3	19:T:72:ARG:HE	1.15	1.04
3:D:63:G:H2'	3:D:64:C:H6	1.20	1.04
1:A:553:A:H2'	1:A:554:C:C6	1.91	1.04
7:H:87:SER:HB3	7:H:131:ILE:HG12	1.38	1.04
19:T:57:VAL:HA	19:T:77:VAL:HG23	1.31	1.04
5:F:3:ASN:CG	5:F:4:LYS:H	1.61	1.04
5:F:59:ARG:HE	5:F:64:VAL:HA	1.16	1.04
7:H:11:ILE:CG2	7:H:12:LEU:H	1.69	1.04
17:R:62:GLN:HE21	17:R:66:LEU:HD21	1.12	1.04
1:A:1180:A:H2'	1:A:1181:G:H5'	1.37	1.04
1:A:817:C:O2'	1:A:818:G:H5'	1.55	1.04
5:F:126:ARG:HB3	5:F:128:PHE:CE1	1.92	1.04
13:N:58:PRO:O	13:N:61:ALA:HB3	1.57	1.04
1:A:1403:C:H1'	1:A:1500:A:N1	1.72	1.04
5:F:30:ARG:NH1	5:F:31:HIS:HB2	1.71	1.04
5:F:38:ARG:HB3	5:F:38:ARG:HH11	1.22	1.03
1:A:1251:A:H2'	1:A:1252:A:C8	1.93	1.03
1:A:21:G:H2'	1:A:22:G:H8	1.23	1.03
14:O:37:CYS:HA	14:O:58:VAL:HG22	1.41	1.03
1:A:123:C:O2'	1:A:290:C:H1'	1.58	1.03
6:G:83:SER:HA	6:G:89:THR:OG1	1.58	1.03
11:L:96:LEU:O	11:L:100:GLY:HA2	1.58	1.03
1:A:1180:A:OP1	11:L:102:LEU:HB2	1.57	1.03
13:N:104:GLN:HE22	13:N:106:LYS:HB2	1.22	1.03
7:H:114:GLY:O	7:H:115:VAL:HG13	1.59	1.03
7:H:43:LEU:HB3	7:H:136:MET:HE2	1.40	1.03
1:A:1226:C:H5''	15:P:103:THR:O	1.59	1.03
1:A:1245:A:H2'	1:A:1246:C:C6	1.93	1.03
5:F:87:LEU:HD12	5:F:101:LEU:HD11	1.35	1.03
1:A:474:G:H5'	18:S:81:ARG:NE	1.73	1.03
1:A:778:G:H2'	1:A:779:C:H6	1.23	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:5:LYS:O	17:R:8:LYS:HB3	1.58	1.02
18:S:56:ALA:O	18:S:60:LEU:HG	1.58	1.02
1:A:1208:C:H2'	1:A:1209:C:C6	1.94	1.02
1:A:1428:A:H2'	1:A:1429:C:C6	1.94	1.02
7:H:82:VAL:HG12	7:H:89:ILE:HG22	1.36	1.02
12:M:10:GLY:HA3	12:M:16:LEU:HD21	1.42	1.02
1:A:91:C:H2'	1:A:92:G:H8	1.19	1.02
13:N:86:GLY:HA2	13:N:112:THR:HG23	1.40	1.02
13:N:88:GLY:HA3	13:N:91:ARG:HB2	1.38	1.02
17:R:54:ARG:HA	17:R:57:LEU:HD22	1.34	1.02
20:U:18:ARG:HH21	20:U:21:LYS:HB2	1.22	1.02
1:A:68:G:H5'	1:A:171:A:H1'	1.41	1.02
10:K:29:SER:N	10:K:32:LYS:HZ3	1.58	1.02
11:L:112:LYS:HE2	11:L:117:HIS:HA	1.42	1.02
1:A:1208:C:H2'	1:A:1209:C:H6	1.19	1.02
4:E:59:GLU:HB3	4:E:221:LEU:HD21	1.41	1.02
9:J:76:ARG:HD3	9:J:156:TRP:HE1	1.20	1.02
1:A:1349:A:OP2	11:L:118:LYS:HD2	1.57	1.02
4:E:91:PRO:HB3	4:E:152:PHE:HD1	1.23	1.02
1:A:371:G:C2'	1:A:372:C:H5'	1.89	1.02
1:A:186(D):C:H2'	1:A:186(E):C:H6	1.24	1.01
6:G:22:LYS:HB3	6:G:26:CYS:HB3	1.37	1.01
11:L:9:ARG:HD2	11:L:14:VAL:HG22	1.39	1.01
21:V:45:VAL:HG22	21:V:67:VAL:HG21	1.39	1.01
12:M:24:VAL:HG21	12:M:37:PRO:HD3	1.42	1.01
7:H:51:VAL:HB	7:H:52:PRO:HD3	1.42	1.01
1:A:1129:C:H5'	1:A:1130:A:OP1	1.61	1.01
1:A:901:A:C2	1:A:902:G:H1'	1.95	1.01
11:L:85:LEU:HD23	11:L:96:LEU:HD13	1.43	1.01
12:M:50:ILE:HB	16:Q:41:ARG:HE	1.22	1.01
14:O:45:PRO:HG3	14:O:50:SER:HA	1.42	1.01
1:A:1504:G:OP1	1:A:1507:A:H4'	1.60	1.01
1:A:761:G:C5'	19:T:102:GLY:HA3	1.90	1.01
2:C:74:C:H2'	2:C:75:C:H5''	1.38	1.01
5:F:11:ARG:HD2	5:F:16:ARG:HH21	1.26	1.01
10:K:47:GLY:O	10:K:61:VAL:HG13	1.60	1.01
13:N:48:ILE:HG23	13:N:63:LEU:HD13	1.41	1.01
14:O:35:GLY:O	14:O:82:VAL:HA	1.60	1.01
1:A:390:C:H2'	1:A:391:G:H8	1.26	1.01
14:O:5:PRO:O	14:O:6:THR:HG23	1.58	1.01
15:P:57:ARG:O	15:P:61:GLU:HB2	1.61	1.01
16:Q:45:ARG:HH11	16:Q:45:ARG:HB2	1.23	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:18:C:H1'	1:A:1079:G:H21	1.21	1.01
1:A:942:G:N2	11:L:124:GLN:HE22	1.58	1.01
6:G:199:ASN:CG	6:G:200:GLU:H	1.62	1.01
6:G:18:LYS:HG2	6:G:33:MET:HB3	1.43	1.01
3:D:58:A:H2'	3:D:61:C:H41	1.21	1.01
8:I:4:TYR:CE1	8:I:72:VAL:HG11	1.96	1.00
1:A:828:A:N1	1:A:859:A:O4'	1.94	1.00
6:G:170:VAL:CG2	6:G:176:LEU:HB3	1.90	1.00
22:W:75:ASN:H	22:W:75:ASN:ND2	1.54	1.00
1:A:194:C:H2'	1:A:195:A:H5''	1.39	1.00
1:A:61:G:H2'	1:A:62:U:O4'	1.61	1.00
1:A:1314:C:H3'	21:V:6:LYS:HD3	1.43	1.00
1:A:571:U:H3'	1:A:572:A:C5'	1.90	1.00
1:A:594:G:N2	1:A:596:C:H41	1.58	1.00
4:E:97:TRP:HZ3	4:E:172:ILE:HB	1.22	1.00
15:P:55:ARG:HH21	15:P:56:LEU:HD21	1.23	1.00
6:G:58:LEU:HD13	6:G:59:ARG:HH11	1.26	1.00
1:A:1205:U:H4'	5:F:195:VAL:HG13	1.41	1.00
10:K:1:MET:HG2	10:K:2:LEU:H	1.27	1.00
4:E:102:LEU:HD12	4:E:102:LEU:H	1.24	1.00
4:E:111:ARG:HA	4:E:111:ARG:NH1	1.77	1.00
4:E:150:SER:HA	4:E:153:ARG:HB2	1.44	1.00
9:J:76:ARG:HD3	9:J:156:TRP:NE1	1.74	1.00
17:R:74:ASP:OD1	17:R:76:GLU:HB3	1.60	1.00
18:S:56:ALA:HB1	18:S:74:LEU:HD11	1.42	1.00
4:E:80:ILE:HD12	4:E:208:ILE:HG12	1.39	1.00
17:R:34:LEU:HG	17:R:35:ARG:H	1.25	1.00
1:A:748:C:H3'	1:A:748:C:C6	1.97	1.00
4:E:91:PRO:HB3	4:E:152:PHE:CD1	1.97	0.99
21:V:5:LEU:HB2	21:V:9:VAL:HG22	1.44	0.99
1:A:1192:C:H3'	1:A:1192:C:C6	1.96	0.99
1:A:38:G:H22	1:A:397:A:H5'	1.22	0.99
2:C:14:A:H61	2:C:21:A:H2	1.05	0.99
5:F:38:ARG:HB3	5:F:38:ARG:NH1	1.76	0.99
20:U:56:THR:O	20:U:58:LEU:HG	1.60	0.99
4:E:103:THR:O	4:E:104:ASN:HB3	1.58	0.99
7:H:147:ASP:HA	7:H:150:ARG:HB2	1.43	0.99
1:A:1323:G:H2'	1:A:1324:A:H8	1.25	0.99
6:G:20:TYR:HA	6:G:33:MET:SD	2.02	0.99
6:G:60:GLU:OE2	6:G:199:ASN:HB3	1.61	0.99
22:W:72:LEU:HD13	22:W:77:ALA:HA	1.44	0.99
1:A:1295:G:N2	1:A:1302:U:H3	1.60	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1313:U:H5	21:V:4:SER:HB2	1.27	0.99
7:H:11:ILE:HG22	7:H:12:LEU:N	1.77	0.99
21:V:5:LEU:HD12	21:V:9:VAL:HG13	1.03	0.99
1:A:307:C:N4	1:A:308:C:H41	1.61	0.99
1:A:1278:U:H4'	1:A:1279:A:O4'	1.62	0.99
4:E:97:TRP:HH2	4:E:176:GLU:HG3	1.28	0.99
6:G:112:VAL:HG23	6:G:161:ASN:HD21	1.24	0.99
10:K:34:GLU:O	10:K:37:ARG:HB3	1.63	0.99
21:V:11:VAL:HG12	21:V:15:LEU:HD11	1.45	0.99
1:A:730:G:C5	1:A:731:G:H1'	1.97	0.99
1:A:735:C:O2'	1:A:736:C:H5'	1.61	0.99
9:J:126:ASP:HB3	9:J:131:LYS:O	1.60	0.99
10:K:18:ARG:N	10:K:18:ARG:HH11	1.59	0.99
14:O:28:LYS:HD2	14:O:33:ARG:HH22	1.27	0.99
1:A:953:G:O2'	15:P:125:ARG:HA	1.62	0.99
1:A:1311:G:N7	21:V:2:PRO:HA	1.76	0.98
1:A:313:A:H2'	1:A:314:C:H6	1.17	0.98
4:E:184:VAL:O	4:E:198:ASP:HB2	1.62	0.98
17:R:6:GLU:HG2	17:R:7:GLU:H	1.27	0.98
6:G:47:ARG:NH1	6:G:47:ARG:HB2	1.77	0.98
5:F:35:GLU:HA	5:F:38:ARG:CG	1.93	0.98
13:N:69:ALA:HB1	13:N:103:LEU:HD12	1.45	0.98
15:P:48:LEU:HD21	15:P:52:GLU:HB2	1.39	0.98
3:D:19:G:C2	3:D:57:G:H1'	1.97	0.98
3:D:3:C:H2'	3:D:4:G:C8	1.99	0.98
4:E:101:MET:HA	4:E:108:ILE:CG1	1.92	0.98
4:E:56:ARG:HH11	4:E:56:ARG:HB3	1.10	0.98
9:J:103:TRP:CH2	9:J:138:LYS:HA	1.98	0.98
10:K:33:GLU:HA	10:K:36:LEU:HD21	1.44	0.98
1:A:1103:C:O2'	4:E:111:ARG:HD2	1.62	0.98
8:I:19:LEU:HD23	8:I:23:LYS:NZ	1.79	0.98
11:L:16:ARG:HG2	11:L:18:PHE:HE1	1.26	0.98
13:N:61:ALA:HB1	13:N:94:ALA:CB	1.92	0.98
1:A:1408:A:C2	1:A:1494:G:N3	2.32	0.98
1:A:628:G:H2'	1:A:629:G:C8	1.97	0.98
4:E:14:GLY:HA3	4:E:209:ARG:NH2	1.79	0.98
7:H:102:ALA:CB	7:H:120:THR:HG22	1.93	0.98
8:I:23:LYS:O	8:I:26:ILE:HB	1.63	0.98
1:A:112:G:H5'	1:A:389:A:H4'	1.43	0.98
4:E:136:VAL:CA	4:E:139:LYS:HZ2	1.75	0.98
14:O:41:ARG:HH22	14:O:57:LYS:NZ	1.60	0.98
1:A:1295:G:H21	1:A:1302:U:H3	1.10	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1408:A:H2	1:A:1494:G:H1'	1.26	0.98
8:I:17:SER:O	8:I:20:ALA:HB3	1.61	0.98
7:H:51:VAL:O	7:H:55:VAL:HG23	1.63	0.98
1:A:974:A:H1'	16:Q:31:ARG:HH21	1.28	0.98
4:E:97:TRP:CZ3	4:E:172:ILE:HB	1.97	0.98
1:A:15:G:H4'	7:H:24:ARG:HH22	1.28	0.98
9:J:70:LYS:O	9:J:138:LYS:HE3	1.62	0.98
10:K:18:ARG:HH11	10:K:18:ARG:CA	1.77	0.98
1:A:1271:G:OP1	1:A:1314:C:H5''	1.63	0.98
1:A:1443:G:H4'	1:A:1446:A:H5'	0.98	0.98
14:O:39:VAL:HB	14:O:57:LYS:HD2	1.45	0.98
21:V:36:ARG:O	21:V:71:LEU:HB2	1.64	0.98
1:A:597:G:N2	10:K:94:TYR:HE2	1.62	0.97
1:A:800:G:H8	1:A:800:G:O5'	1.46	0.97
6:G:94:LEU:HA	6:G:97:LEU:CD1	1.94	0.97
9:J:138:LYS:HE2	9:J:142:GLU:OE1	1.64	0.97
8:I:62:TRP:CB	20:U:35:ARG:HH12	1.76	0.97
3:D:58:A:H2'	3:D:61:C:N4	1.79	0.97
1:A:1147:C:O2	1:A:1147:C:H2'	1.63	0.97
9:J:115:ARG:HB2	9:J:118:VAL:CG2	1.93	0.97
4:E:54:THR:O	4:E:58:ILE:HG13	1.64	0.97
4:E:91:PRO:HG3	4:E:154:LEU:HB3	1.45	0.97
7:H:100:VAL:HG11	7:H:107:ARG:HG3	1.40	0.97
12:M:15:THR:HG23	12:M:16:LEU:HD22	1.43	0.97
19:T:59:ILE:HD12	19:T:72:ARG:O	1.62	0.97
1:A:1363:A:H1'	1:A:1365:G:N7	1.80	0.97
10:K:10:LEU:O	10:K:13:ILE:HB	1.61	0.97
1:A:101:A:H2'	1:A:102:G:H8	1.29	0.97
5:F:122:GLU:HA	5:F:125:GLU:HG3	1.46	0.97
5:F:47:LEU:HD11	5:F:83:ARG:HH21	1.24	0.97
1:A:1530:G:C2	1:A:1531:A:H1'	2.00	0.97
1:A:475:G:H2'	1:A:476:G:H8	1.28	0.97
1:A:763:G:H2'	1:A:764:C:H6	1.28	0.97
5:F:122:GLU:O	5:F:125:GLU:HB2	1.65	0.97
5:F:34:LEU:HD23	5:F:35:GLU:N	1.79	0.97
10:K:18:ARG:HA	10:K:18:ARG:NH1	1.80	0.97
10:K:39:LEU:HB3	10:K:45:ILE:CG2	1.93	0.97
13:N:80:VAL:O	13:N:106:LYS:HB3	1.62	0.97
1:A:961:U:O2'	1:A:962:C:H5'	1.65	0.97
4:E:67:THR:HB	4:E:90:MET:SD	2.04	0.97
4:E:80:ILE:HG23	4:E:212:GLN:HE21	1.30	0.97
9:J:79:ARG:NH1	9:J:84:ASN:HB3	1.80	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:37:THR:HB	15:P:59:TYR:CD2	2.00	0.97
22:W:62:LEU:HA	22:W:65:LYS:HG2	1.46	0.97
3:D:51:C:H2'	3:D:52:G:C8	2.00	0.97
1:A:1423:G:H2'	1:A:1424:C:C6	1.99	0.97
5:F:14:ILE:HG22	5:F:15:THR:HG23	1.45	0.97
1:A:942:G:H21	11:L:124:GLN:NE2	1.62	0.97
1:A:1349:A:H2'	1:A:1350:A:H8	1.27	0.97
1:A:38:G:H22	1:A:397:A:C5'	1.78	0.97
4:E:102:LEU:H	4:E:102:LEU:CD1	1.78	0.97
9:J:105:VAL:O	9:J:108:ALA:HB3	1.65	0.97
4:E:187:LEU:HD23	4:E:201:ILE:HG22	1.47	0.96
14:O:37:CYS:CA	14:O:58:VAL:HG22	1.94	0.96
17:R:29:VAL:HG11	17:R:81:LEU:HD21	1.46	0.96
22:W:56:MET:O	22:W:59:ALA:HB3	1.64	0.96
1:A:1005:A:H5''	1:A:1006:C:C5	1.98	0.96
1:A:129(A):G:H2'	1:A:189:U:C6	1.99	0.96
1:A:21:G:H2'	1:A:22:G:C8	2.00	0.96
1:A:66:G:H5'	1:A:173:U:O4	1.65	0.96
1:A:1533:C:HO2'	1:A:1534:A:H8	0.99	0.96
7:H:12:LEU:HB3	7:H:31:LEU:HB3	1.45	0.96
1:A:380:G:N2	1:A:382:A:H3'	1.78	0.96
1:A:399:G:H2'	1:A:400:C:C6	2.01	0.96
1:A:818:G:H3'	1:A:819:A:H5''	1.44	0.96
7:H:72:GLN:HG3	7:H:77:PRO:HD3	1.43	0.96
1:A:1265:G:H2'	1:A:1266:G:H5'	1.47	0.96
1:A:1396:A:O4'	1:A:1398:A:H1'	1.64	0.96
1:A:232:G:H2'	1:A:233:C:H6	1.26	0.96
20:U:66:LEU:O	20:U:70:ILE:HG13	1.66	0.96
1:A:1097:C:H2'	1:A:1098:C:H6	1.31	0.96
4:E:146:GLN:NE2	4:E:150:SER:HB2	1.79	0.96
9:J:75:VAL:HG23	9:J:145:ALA:HB1	1.48	0.96
11:L:9:ARG:O	11:L:104:ARG:HG2	1.65	0.96
12:M:45:ARG:NH1	12:M:45:ARG:HB3	1.80	0.96
1:A:962:C:H1'	1:A:1201:A:N1	1.80	0.96
1:A:1297:C:H4'	1:A:1298:C:O5'	1.63	0.96
1:A:50:A:C5'	1:A:51:A:H5'	1.95	0.96
1:A:665:A:H2'	1:A:725:G:H21	1.21	0.96
4:E:91:PRO:HG3	4:E:155:LEU:H	1.30	0.96
4:E:169:LYS:NZ	4:E:170:GLU:HA	1.80	0.96
6:G:141:ARG:CD	6:G:142:PRO:HD2	1.96	0.96
11:L:3:GLN:HA	11:L:20:ARG:HG2	1.48	0.96
15:P:80:ARG:HH12	15:P:81:LEU:HB3	1.27	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:85:MET:HB3	22:W:104:LEU:HD21	1.48	0.96
1:A:1185:G:N2	1:A:1186:G:H1'	1.81	0.96
1:A:1004:A:H5''	1:A:1025:U:C4	2.01	0.96
2:C:28:C:H2'	2:C:29:G:H8	1.29	0.95
2:C:37:A:H2'	2:C:38:A:C8	2.00	0.95
9:J:38:LEU:HA	9:J:41:ARG:HG3	1.43	0.95
1:A:173:U:C4'	1:A:197:A:H1'	1.95	0.95
7:H:16:THR:HG23	7:H:28:PHE:HA	1.46	0.95
7:H:79:GLU:HB3	7:H:92:LYS:HA	1.47	0.95
11:L:74:ILE:HA	11:L:77:ILE:HD12	1.44	0.95
1:A:124:G:H2'	1:A:125:U:O4'	1.65	0.95
1:A:1269:A:H5'	1:A:1326:C:H4'	1.49	0.95
1:A:370:C:H2'	1:A:371:G:H8	1.29	0.95
1:A:52:G:O2'	1:A:53:A:H5'	1.66	0.95
1:A:573:A:H2'	1:A:574:A:C8	2.00	0.95
1:A:922:G:H4'	7:H:20:GLN:HA	1.49	0.95
4:E:222:ILE:HD13	4:E:226:ARG:NH2	1.82	0.95
16:Q:27:CYS:H	16:Q:43:CYS:HB3	1.32	0.95
3:D:23:A:H2'	3:D:24:G:H8	1.30	0.95
1:A:1305:G:OP1	23:X:2:GLY:HA3	1.67	0.95
4:E:185:ILE:CG2	4:E:199:TYR:HB2	1.97	0.95
5:F:47:LEU:O	5:F:52:LEU:HD22	1.65	0.95
8:I:23:LYS:HA	8:I:26:ILE:CD1	1.95	0.95
1:A:691:G:H22	13:N:51:LYS:NZ	1.64	0.95
19:T:59:ILE:HD12	19:T:60:ILE:H	1.31	0.95
1:A:705:U:C5	1:A:706:A:N7	2.34	0.95
1:A:944:G:H3'	1:A:945:G:H5''	1.48	0.95
1:A:1128:C:O2	1:A:1130:A:N6	1.99	0.95
1:A:1180:A:C2'	1:A:1181:G:H5'	1.96	0.95
1:A:228:A:H2'	1:A:229:U:H5'	1.45	0.95
1:A:914:A:H2'	1:A:915:A:C8	2.01	0.95
7:H:43:LEU:HD23	7:H:44:GLY:N	1.81	0.95
9:J:135:VAL:O	9:J:138:LYS:HB3	1.65	0.95
11:L:16:ARG:HG2	11:L:18:PHE:CE1	2.01	0.95
21:V:62:ILE:CD1	21:V:67:VAL:HA	1.96	0.95
1:A:1225:A:H5'	21:V:78:ARG:NH1	1.82	0.95
1:A:748:C:H3'	1:A:748:C:H6	1.31	0.95
1:A:1339:A:H2'	1:A:1340:A:H5'	1.49	0.95
1:A:501:C:H1'	1:A:549:C:H1'	1.49	0.95
17:R:53:HIS:O	17:R:57:LEU:HD13	1.66	0.95
8:I:89:MET:HG2	20:U:76:LEU:HD21	1.46	0.95
5:F:157:ILE:HG13	5:F:164:ARG:HG2	1.46	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:12:CYS:CA	6:G:19:LEU:HB2	1.95	0.95
10:K:129:VAL:HG22	10:K:130:GLY:H	1.31	0.95
20:U:26:LEU:HB2	20:U:42:ARG:HH12	1.31	0.95
1:A:328:C:H4'	1:A:329:A:O5'	1.65	0.95
8:I:77:ARG:HA	8:I:80:ARG:CD	1.97	0.95
14:O:34:ARG:HB2	14:O:105:TYR:OH	1.66	0.95
14:O:41:ARG:HH22	14:O:57:LYS:HZ2	1.02	0.95
5:F:12:LEU:HD13	16:Q:57:ARG:HG3	1.49	0.95
20:U:22:VAL:HG22	20:U:55:ARG:HH12	1.32	0.95
8:I:49:ALA:CB	20:U:80:PRO:HD3	1.96	0.95
23:X:3:LYS:HD2	23:X:14:TRP:HB2	1.46	0.95
1:A:1081:G:OP2	7:H:27:ARG:HD2	1.66	0.94
1:A:250:A:H2	1:A:274:A:N1	1.65	0.94
1:A:410:G:H1'	1:A:432:A:H61	1.29	0.94
4:E:21:ARG:H	4:E:21:ARG:HD2	0.82	0.94
1:A:1107:C:H2'	1:A:1108:G:H5'	1.49	0.94
5:F:147:LYS:HB2	5:F:203:PHE:HB3	1.46	0.94
7:H:79:GLU:HG3	7:H:93:PRO:HD2	1.46	0.94
13:N:80:VAL:H	13:N:104:GLN:NE2	1.65	0.94
14:O:44:THR:HB	14:O:45:PRO:HD2	1.49	0.94
22:W:51:GLU:HA	22:W:54:LYS:CD	1.96	0.94
3:D:37:A:H2'	3:D:38:A:C8	2.02	0.94
15:P:104:ARG:HG2	15:P:105:THR:HG23	1.47	0.94
1:A:1206:G:H4'	5:F:192:THR:O	1.67	0.94
1:A:994:A:N7	1:A:1216:G:H4'	1.83	0.94
1:A:244:U:O2'	1:A:245:C:OP2	1.85	0.94
1:A:429:U:H4'	1:A:430:A:O5'	1.67	0.94
1:A:625:G:OP1	18:S:9:PHE:HB3	1.68	0.94
4:E:82:ARG:HA	4:E:92:TYR:CE1	2.02	0.94
13:N:81:ASP:OD1	13:N:106:LYS:HD2	1.68	0.94
8:I:98:LEU:HD21	20:U:28:GLU:HA	1.46	0.94
1:A:1514:C:H2'	1:A:1515:C:H6	1.32	0.94
15:P:55:ARG:NH2	15:P:56:LEU:HD21	1.81	0.94
20:U:79:LEU:O	20:U:79:LEU:HD13	1.65	0.94
1:A:327:A:H4'	1:A:328:C:OP1	1.64	0.94
1:A:392:G:H5'	18:S:12:LYS:HZ3	1.13	0.94
4:E:25:ASN:C	4:E:25:ASN:HD22	1.70	0.94
10:K:4:ASP:HB2	10:K:6:ILE:HG22	1.49	0.94
14:O:23:LYS:O	14:O:24:VAL:HG23	1.68	0.94
1:A:678:U:H2'	1:A:679:C:C6	2.03	0.94
6:G:50:ARG:NH1	6:G:52:SER:HA	1.81	0.94
15:P:91:ARG:HB3	15:P:98:VAL:HG22	1.47	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:24:CYS:HB2	16:Q:40:CYS:N	1.81	0.94
18:S:43:LYS:HG3	18:S:48:TRP:CZ3	2.03	0.94
21:V:63:THR:O	21:V:66:MET:HG2	1.67	0.94
1:A:769:G:O2'	1:A:770:C:H5'	1.67	0.94
4:E:55:PHE:HA	4:E:58:ILE:HD12	1.50	0.94
19:T:5:VAL:HG22	19:T:60:ILE:CA	1.98	0.94
22:W:23:ARG:O	22:W:26:ASN:ND2	2.01	0.94
6:G:26:CYS:O	6:G:31:CYS:SG	2.26	0.94
10:K:18:ARG:HA	10:K:18:ARG:HH11	1.30	0.94
18:S:20:VAL:HG22	18:S:35:LYS:HA	1.48	0.94
1:A:1119:C:H2'	1:A:1120:G:C8	2.02	0.94
1:A:218:C:H5'	1:A:466:C:N4	1.82	0.94
1:A:979:C:H5''	1:A:1222:G:O6	1.66	0.94
1:A:15:G:H2'	1:A:16:A:C8	2.02	0.94
2:C:34:C:C3'	2:C:35:A:H5''	1.97	0.94
7:H:52:PRO:O	7:H:55:VAL:HB	1.68	0.94
18:S:44:THR:HG23	18:S:45:THR:H	1.30	0.94
1:A:1506:U:H5''	1:A:1507:A:OP2	1.69	0.93
12:M:32:ALA:HA	12:M:76:ASN:HD22	1.32	0.93
14:O:100:ILE:H	14:O:100:ILE:HD13	1.32	0.93
1:A:979:C:N4	16:Q:18:VAL:HB	1.83	0.93
1:A:125:U:H2'	1:A:126:G:C8	2.02	0.93
1:A:1047:G:C5'	16:Q:4:LYS:HD3	1.99	0.93
18:S:5:ARG:HH12	18:S:24:ALA:HA	1.34	0.93
22:W:14:LYS:N	22:W:17:ARG:HH21	1.66	0.93
22:W:75:ASN:O	22:W:78:ALA:HB3	1.67	0.93
3:D:69:C:H2'	3:D:70:G:H8	1.30	0.93
1:A:1454:G:H2'	1:A:1455:G:H8	1.34	0.93
3:D:73:A:H2'	3:D:74:C:H5''	1.50	0.93
1:A:1376:U:H3	1:A:1377:A:H62	1.08	0.93
1:A:166:G:O2'	1:A:167:G:H5'	1.68	0.93
1:A:922:G:H2'	1:A:923:A:C8	2.03	0.93
10:K:19:VAL:HG23	10:K:21:LYS:HG2	1.49	0.93
11:L:29:ASN:OD1	11:L:64:THR:HA	1.69	0.93
13:N:54:ARG:HG3	13:N:54:ARG:HH11	1.31	0.93
1:A:966:G:N2	2:C:34:C:H5'	1.84	0.93
4:E:115:LEU:O	4:E:118:LEU:HB3	1.67	0.93
8:I:76:ALA:HB1	8:I:80:ARG:NH2	1.81	0.93
9:J:104:LEU:CD2	9:J:134:ALA:HB1	1.98	0.93
11:L:118:LYS:HB2	11:L:121:ARG:HB2	1.49	0.93
12:M:79:ARG:HH11	12:M:79:ARG:HA	1.32	0.93
17:R:31:LEU:HA	17:R:34:LEU:HD23	1.49	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:49:ALA:HB3	22:W:99:LEU:HG	1.51	0.93
2:C:40:C:H2'	2:C:41:C:H5'	1.50	0.93
9:J:84:ASN:C	9:J:85:TYR:HD2	1.71	0.93
1:A:1320:C:H1'	21:V:73:GLU:HG2	1.48	0.93
1:A:192:U:C1'	22:W:103:GLY:HA2	1.97	0.93
3:D:23:A:H2'	3:D:24:G:C8	2.04	0.93
1:A:84:U:H2'	1:A:85:U:O4'	1.68	0.93
4:E:88:ALA:HB2	4:E:219:VAL:CG2	1.99	0.93
6:G:119:GLN:HG3	6:G:123:HIS:CD2	2.03	0.93
9:J:72:ARG:HH11	9:J:72:ARG:HB3	1.33	0.93
10:K:114:THR:HG23	10:K:119:LEU:HD23	1.47	0.93
10:K:14:ARG:O	10:K:17:THR:HB	1.69	0.93
22:W:13:LEU:H	22:W:13:LEU:HD12	1.33	0.93
1:A:191(C):G:H2'	1:A:191(D):U:C6	2.03	0.93
1:A:1124:G:H21	1:A:1126:U:H3	1.09	0.93
1:A:621:A:H2'	1:A:622:A:H8	1.34	0.93
1:A:966:G:H21	2:C:34:C:H5'	1.32	0.93
1:A:979:C:H2'	1:A:980:C:H5'	1.49	0.93
5:F:156:ARG:HB2	5:F:196:LEU:HD13	1.51	0.93
1:A:667:G:N2	1:A:740:U:H1'	1.82	0.93
4:E:196:LEU:HD12	4:E:197:VAL:N	1.84	0.93
4:E:47:THR:O	4:E:51:LEU:HG	1.69	0.93
13:N:102:GLY:HA2	13:N:105:VAL:CG2	1.99	0.93
3:D:15:G:N1	3:D:48:C:N4	2.17	0.93
1:A:1202:G:C1'	16:Q:29:ARG:HD2	1.99	0.93
1:A:275:G:O3'	19:T:14:LYS:HD3	1.68	0.93
1:A:734:G:H2'	1:A:735:C:C6	2.03	0.93
6:G:150:GLU:HA	6:G:153:ARG:CZ	1.99	0.93
6:G:20:TYR:HA	6:G:26:CYS:SG	2.08	0.93
8:I:30:LEU:HA	8:I:75:LEU:CD1	1.99	0.93
20:U:74:ARG:HG2	20:U:81:PHE:HB3	1.50	0.93
4:E:166:ASP:O	4:E:169:LYS:HB3	1.69	0.92
10:K:97:VAL:HG22	10:K:98:LYS:H	1.33	0.92
1:A:390:C:H2'	1:A:391:G:C8	2.03	0.92
1:A:579:G:C2'	1:A:580:U:H5'	1.99	0.92
9:J:69:VAL:HG21	9:J:104:LEU:HD21	1.51	0.92
10:K:112:LEU:HA	10:K:134:ILE:HG13	1.49	0.92
15:P:91:ARG:HH22	15:P:103:THR:HG21	1.34	0.92
17:R:7:GLU:O	17:R:10:LYS:HG3	1.68	0.92
1:A:1321:C:N3	21:V:37:ARG:NH1	2.16	0.92
1:A:559:A:H4'	1:A:560:U:H5'	0.93	0.92
1:A:959:A:H3'	1:A:960:U:H5''	1.51	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:60:U:H4'	2:C:61:C:OP2	1.68	0.92
4:E:55:PHE:HE2	4:E:218:ALA:HA	1.32	0.92
6:G:61:LYS:HG3	6:G:207:TYR:HE1	1.33	0.92
9:J:155:ARG:HA	9:J:155:ARG:NE	1.85	0.92
13:N:21:ILE:HG22	13:N:30:VAL:HG22	1.52	0.92
15:P:24:GLY:HA3	15:P:66:LEU:HB2	1.49	0.92
15:P:23:TYR:HB3	15:P:67:GLU:HA	1.50	0.92
15:P:97:PRO:HB2	15:P:101:GLN:HB2	1.48	0.92
18:S:3:LYS:HE2	18:S:24:ALA:HB2	1.51	0.92
1:A:571:U:H3'	1:A:572:A:H5''	0.95	0.92
4:E:42:ILE:HG12	4:E:43:ASP:H	1.33	0.92
4:E:55:PHE:HA	4:E:58:ILE:CD1	1.98	0.92
5:F:30:ARG:HH12	5:F:31:HIS:HB2	1.31	0.92
6:G:132:ARG:HH11	6:G:132:ARG:HG2	1.32	0.92
6:G:18:LYS:HA	6:G:33:MET:HE2	1.48	0.92
9:J:36:LYS:HZ2	9:J:36:LYS:HB2	1.34	0.92
12:M:24:VAL:HG22	12:M:72:VAL:HG13	1.52	0.92
13:N:73:MET:SD	13:N:103:LEU:HD13	2.09	0.92
22:W:33:ILE:HD13	22:W:63:ILE:HA	1.52	0.92
1:A:383:A:H2'	1:A:384:G:H5'	1.47	0.92
1:A:27:G:N2	1:A:557:G:H1'	1.84	0.92
12:M:8:LEU:HD22	12:M:94:VAL:HG12	1.47	0.92
13:N:32:ILE:HG22	13:N:40:ILE:HD11	1.49	0.92
16:Q:22:THR:HG21	16:Q:33:VAL:O	1.70	0.92
6:G:170:VAL:HG23	6:G:176:LEU:HB3	1.51	0.92
19:T:91:ARG:HA	19:T:94:ASN:ND2	1.85	0.92
4:E:15:VAL:HG23	4:E:16:HIS:ND1	1.85	0.92
4:E:222:ILE:CD1	4:E:226:ARG:HH21	1.82	0.92
8:I:76:ALA:HA	8:I:79:LEU:HD11	1.51	0.92
12:M:24:VAL:HG22	12:M:34:VAL:HG11	1.50	0.92
12:M:3:LYS:HE3	12:M:77:PRO:HD3	1.52	0.92
15:P:23:TYR:HD2	15:P:70:LEU:HD13	1.34	0.92
20:U:70:ILE:O	20:U:74:ARG:HD2	1.70	0.92
1:A:1329:A:OP1	15:P:29:ARG:HG2	1.70	0.92
1:A:1425:U:H2'	1:A:1426:C:H6	1.35	0.92
1:A:399:G:H2'	1:A:400:C:H6	1.29	0.92
1:A:652:U:H1'	1:A:653:A:H2	1.35	0.92
6:G:20:TYR:N	6:G:33:MET:SD	2.43	0.92
9:J:49:ILE:HD13	9:J:121:ALA:HB2	1.52	0.92
17:R:39:LEU:HD23	17:R:40:SER:N	1.84	0.92
21:V:13:ASP:HA	21:V:16:LEU:HD22	1.49	0.92
1:A:1320:C:H1'	21:V:73:GLU:CG	2.00	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1408:A:C2	1:A:1494:G:H1'	2.05	0.92
2:C:17:C:H5'	2:C:18:G:H5''	1.52	0.92
2:C:40:C:H2'	2:C:41:C:C5'	1.99	0.92
6:G:61:LYS:HG3	6:G:207:TYR:CE1	2.04	0.92
13:N:101:SER:O	13:N:103:LEU:HG	1.70	0.92
13:N:44:SER:O	13:N:48:ILE:HG12	1.70	0.92
17:R:16:ALA:HA	17:R:21:ASP:OD1	1.69	0.92
18:S:20:VAL:HG13	18:S:34:GLU:O	1.69	0.92
20:U:43:PHE:HA	20:U:51:LEU:HD22	1.49	0.92
1:A:371:G:O2'	1:A:372:C:H5'	1.69	0.92
1:A:872:A:O2'	1:A:873:A:H3'	1.69	0.92
6:G:57:ARG:HB3	6:G:206:PHE:HB2	1.51	0.92
13:N:110:ASP:HB3	20:U:85:LEU:HB3	1.50	0.92
17:R:34:LEU:HG	17:R:35:ARG:N	1.81	0.92
21:V:19:VAL:HG21	21:V:43:GLU:OE2	1.70	0.92
1:A:1117:G:H5'	1:A:1118:C:OP2	1.70	0.91
6:G:12:CYS:HA	6:G:19:LEU:CB	2.00	0.91
9:J:37:ASN:CG	9:J:38:LEU:H	1.71	0.91
9:J:70:LYS:HA	9:J:100:ALA:HB2	1.49	0.91
9:J:75:VAL:HA	9:J:89:MET:HE1	1.50	0.91
1:A:1313:U:C5	21:V:4:SER:HB2	2.04	0.91
1:A:405:U:H3'	1:A:406:G:H5'	1.52	0.91
10:K:81:HIS:HB3	10:K:138:TRP:O	1.69	0.91
10:K:9:MET:HG2	10:K:13:ILE:CD1	1.99	0.91
12:M:12:ASP:HB3	12:M:15:THR:HG22	1.52	0.91
15:P:34:LEU:HD23	15:P:39:ILE:HG13	1.51	0.91
1:A:1015:A:H2'	1:A:1016:A:C8	2.05	0.91
1:A:482:A:H2	1:A:483:C:O4'	1.54	0.91
1:A:859:A:H2'	1:A:860:A:O4'	1.70	0.91
1:A:978:A:N6	1:A:1361:G:H22	1.68	0.91
7:H:37:ARG:HA	7:H:112:LEU:O	1.71	0.91
10:K:22:GLU:CA	10:K:63:LEU:HD11	1.99	0.91
1:A:538:G:H5''	14:O:114:LYS:HD3	1.53	0.91
15:P:48:LEU:CD2	15:P:52:GLU:HB2	2.00	0.91
15:P:48:LEU:HD13	15:P:53:VAL:HG22	1.49	0.91
22:W:49:ALA:CB	22:W:99:LEU:HG	2.00	0.91
1:A:50:A:N6	1:A:361:G:H4'	1.85	0.91
1:A:961:U:H5'	1:A:984:C:H1'	1.51	0.91
5:F:20:SER:HB2	5:F:40:ARG:NH2	1.85	0.91
1:A:737:A:H3'	8:I:92:LYS:NZ	1.84	0.91
15:P:81:LEU:HD23	15:P:89:GLY:HA2	1.51	0.91
19:T:62:SER:HB3	19:T:72:ARG:NE	1.85	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:85:MET:CB	22:W:104:LEU:HD21	2.00	0.91
1:A:1419:G:HO2'	1:A:1420:C:H6	1.17	0.91
1:A:265:G:O2'	1:A:266:G:H5'	1.70	0.91
1:A:562:C:O2	14:O:15:ARG:HB3	1.70	0.91
1:A:186:C:O2'	22:W:85:MET:SD	2.29	0.91
1:A:1163:C:C2'	1:A:1164:G:H5'	2.01	0.91
1:A:1200:C:H3'	1:A:1201:A:H5'	1.52	0.91
1:A:1400:C:H4'	1:A:1401:G:OP2	1.70	0.91
1:A:1394:A:N7	1:A:1501:C:C1'	2.33	0.91
1:A:777:A:H2'	1:A:778:G:C8	2.05	0.91
1:A:878:G:H2'	1:A:879:C:C6	2.06	0.91
4:E:208:ILE:HG21	4:E:239:VAL:HG11	1.52	0.91
5:F:83:ARG:O	5:F:87:LEU:HG	1.70	0.91
6:G:187:ARG:HG3	6:G:188:LEU:N	1.84	0.91
8:I:52:ILE:HG22	8:I:53:ALA:H	1.35	0.91
14:O:60:LEU:H	14:O:60:LEU:HD13	1.35	0.91
18:S:6:LEU:HD23	18:S:17:TYR:HD2	1.36	0.91
1:A:173:U:H5'	1:A:197:A:H1'	1.52	0.91
8:I:45:LEU:HG	8:I:59:TYR:CD1	2.05	0.91
9:J:113:GLU:HG3	9:J:118:VAL:HB	1.50	0.91
12:M:30:SER:HB2	12:M:81:THR:N	1.84	0.91
1:A:182:U:H2'	1:A:183:G:H5'	1.52	0.91
4:E:115:LEU:HA	4:E:118:LEU:HD12	1.53	0.91
6:G:20:TYR:HB2	6:G:27:TYR:CA	2.01	0.91
12:M:23:ILE:HG13	12:M:85:LEU:HB3	1.50	0.91
14:O:32:PHE:HB2	14:O:84:LEU:HD11	1.52	0.91
1:A:1210:C:H4'	1:A:1214:C:N3	1.85	0.91
1:A:129(A):G:H2'	1:A:189:U:C5	2.05	0.91
1:A:1305:G:N2	1:A:1331:G:H2'	1.84	0.91
1:A:227:G:H2'	1:A:228:A:C8	2.05	0.91
1:A:530:G:N3	1:A:530:G:H3'	1.85	0.91
4:E:82:ARG:HB2	4:E:94:ASN:HD21	1.31	0.91
8:I:59:TYR:CE2	8:I:61:LEU:HD21	2.06	0.91
11:L:10:ARG:CA	11:L:104:ARG:HE	1.83	0.91
15:P:4:ILE:O	15:P:8:GLU:HB2	1.71	0.91
17:R:36:ILE:HG13	17:R:59:MET:HE1	1.53	0.90
17:R:71:GLN:O	17:R:75:PRO:HD3	1.70	0.90
1:A:47:C:C4'	1:A:48:C:H5''	1.99	0.90
1:A:761:G:H5'	19:T:103:GLY:H	1.33	0.90
1:A:8:A:H5'	7:H:120:THR:O	1.70	0.90
5:F:91:LEU:HD21	5:F:98:ASN:HA	1.50	0.90
6:G:126:ILE:O	6:G:132:ARG:HB2	1.70	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:68:PRO:HB2	8:I:71:ARG:HG3	1.50	0.90
14:O:87:GLY:HA2	14:O:98:TYR:HB3	1.53	0.90
1:A:1363:A:H4'	1:A:1364:U:O5'	1.68	0.90
1:A:1477:C:H2'	1:A:1478:C:H6	1.36	0.90
1:A:517:G:H22	1:A:533:A:P	1.94	0.90
6:G:104:VAL:HA	6:G:107:ARG:HB2	1.51	0.90
6:G:31:CYS:O	6:G:31:CYS:SG	2.28	0.90
6:G:98:GLU:HA	6:G:103:ASN:ND2	1.86	0.90
7:H:18:ARG:HH21	7:H:25:ARG:HG3	1.36	0.90
10:K:92:ARG:HB3	10:K:94:TYR:HE1	1.36	0.90
10:K:95:VAL:HB	10:K:99:GLU:OE1	1.70	0.90
12:M:79:ARG:HH11	12:M:79:ARG:CA	1.84	0.90
19:T:5:VAL:CG1	19:T:59:ILE:O	2.18	0.90
1:A:1225:A:H4'	21:V:78:ARG:HD3	1.52	0.90
22:W:26:ASN:HD22	22:W:27:LYS:H	0.93	0.90
1:A:1053:G:H5'	1:A:1054:C:H5'	1.52	0.90
1:A:272:C:H2'	1:A:273:A:H8	1.35	0.90
1:A:713:G:H2'	1:A:714:G:C8	2.05	0.90
1:A:652:U:H2'	1:A:752:G:H22	1.36	0.90
1:A:9:G:OP2	7:H:121:LYS:HD2	1.71	0.90
4:E:162:ILE:HD13	4:E:183:PRO:O	1.71	0.90
4:E:69:LEU:HB3	4:E:162:ILE:HG22	1.54	0.90
5:F:91:LEU:CD2	5:F:98:ASN:HA	2.02	0.90
12:M:6:ILE:HG22	12:M:98:ILE:HG13	1.52	0.90
15:P:23:TYR:O	15:P:66:LEU:HD12	1.72	0.90
20:U:86:VAL:O	20:U:87:ARG:HB2	1.69	0.90
3:D:18:G:H2'	3:D:19:G:C4'	2.02	0.90
1:A:232:G:H2'	1:A:233:C:C6	2.07	0.90
1:A:533:A:C5	1:A:536:C:N4	2.40	0.90
1:A:65:U:H4'	1:A:66:G:H5"	1.52	0.90
10:K:60:ARG:HG3	10:K:61:VAL:N	1.85	0.90
10:K:64:LYS:HD3	10:K:79:VAL:HG11	1.50	0.90
11:L:19:LEU:CD2	11:L:59:PHE:HB3	2.01	0.90
1:A:279:A:N1	19:T:98:LEU:HG	1.87	0.90
1:A:763:G:H2'	1:A:764:C:C6	2.07	0.90
4:E:170:GLU:HB3	4:E:174:VAL:HG23	1.53	0.90
5:F:67:THR:HA	5:F:102:ASN:O	1.72	0.90
5:F:83:ARG:HG3	5:F:87:LEU:HD11	1.52	0.90
8:I:52:ILE:HG22	8:I:53:ALA:N	1.87	0.90
1:A:1250:A:H4'	11:L:67:GLY:C	1.92	0.90
12:M:8:LEU:HD13	12:M:94:VAL:HG11	1.53	0.90
20:U:26:LEU:HB2	20:U:42:ARG:NH1	1.85	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:164:U:HO2'	1:A:165:C:H6	0.93	0.90
1:A:1375:A:H2'	1:A:1376:U:C6	2.05	0.90
9:J:10:ARG:HB3	9:J:10:ARG:NH1	1.86	0.90
14:O:100:ILE:N	14:O:100:ILE:HD13	1.86	0.90
15:P:4:ILE:HG23	15:P:57:ARG:HG3	1.53	0.90
16:Q:27:CYS:SG	16:Q:43:CYS:N	2.43	0.90
1:A:1188:A:H5'	12:M:61:GLU:OE2	1.71	0.90
1:A:817:C:O2'	1:A:818:G:OP2	1.90	0.90
17:R:65:ARG:O	17:R:68:ARG:HB3	1.70	0.90
1:A:937:A:H1'	1:A:1379:G:N2	1.87	0.90
1:A:597:G:N2	10:K:94:TYR:CE2	2.39	0.90
8:I:12:PRO:HG2	8:I:13:ASN:ND2	1.87	0.90
1:A:173:U:O4'	1:A:197:A:N3	2.05	0.90
1:A:621:A:H2'	1:A:622:A:C8	2.07	0.90
1:A:939:G:H5''	9:J:102:ARG:NH1	1.87	0.90
1:A:973:G:H3'	1:A:974:A:H5''	1.55	0.90
4:E:15:VAL:HG21	4:E:209:ARG:HB3	1.54	0.90
1:A:8:A:H1'	7:H:102:ALA:O	1.71	0.90
8:I:52:ILE:HD13	8:I:87:ARG:CZ	2.02	0.90
9:J:45:ASP:O	9:J:48:LYS:HB2	1.72	0.90
11:L:37:PHE:HD1	11:L:43:ALA:HA	1.36	0.90
1:A:562:C:O2'	14:O:15:ARG:HD3	1.70	0.90
15:P:25:ILE:HA	15:P:29:ARG:HG3	1.54	0.90
1:A:47:C:H4'	1:A:48:C:C5'	2.02	0.89
1:A:607:A:C2	1:A:608:A:H1'	2.06	0.89
5:F:131:ARG:NH1	7:H:51:VAL:HG23	1.86	0.89
9:J:61:VAL:HG12	9:J:124:LEU:HD22	1.54	0.89
1:A:789:U:C6	1:A:790:A:H5''	2.06	0.89
9:J:72:ARG:HH22	9:J:138:LYS:NZ	1.70	0.89
10:K:22:GLU:HA	10:K:63:LEU:CD2	2.02	0.89
12:M:45:ARG:HH11	12:M:45:ARG:CB	1.85	0.89
20:U:36:ASN:O	20:U:40:LEU:HG	1.72	0.89
8:I:89:MET:HE3	20:U:75:ILE:HD13	1.54	0.89
1:A:265:G:H2'	1:A:267:C:H5	1.36	0.89
1:A:778:G:H2'	1:A:779:C:C6	2.07	0.89
4:E:42:ILE:HD11	4:E:202:PRO:HB2	1.52	0.89
21:V:40:ILE:O	21:V:68:GLY:HA2	1.71	0.89
4:E:54:THR:HG21	4:E:201:ILE:HD11	1.54	0.89
10:K:100:ILE:H	10:K:100:ILE:HD12	1.35	0.89
14:O:88:GLY:N	14:O:98:TYR:HA	1.88	0.89
21:V:22:LEU:HG	21:V:25:LYS:HE2	1.52	0.89
3:D:69:C:H2'	3:D:70:G:C8	2.06	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1016:A:H2'	1:A:1017:G:O4'	1.72	0.89
14:O:86:ARG:NH1	14:O:119:LYS:HD3	1.86	0.89
1:A:1307:U:H6	1:A:1307:U:O5'	1.54	0.89
1:A:12:U:H2'	1:A:13:U:H5	1.35	0.89
1:A:922:G:H2'	1:A:923:A:H8	1.38	0.89
7:H:86:ALA:O	7:H:125:SER:HB3	1.72	0.89
17:R:31:LEU:O	17:R:35:ARG:HG3	1.72	0.89
14:O:102:ARG:NE	14:O:109:GLY:HA2	1.87	0.89
1:A:1049:U:H1'	1:A:1201:A:H8	1.35	0.89
1:A:949:A:H4'	1:A:1364:U:O4	1.72	0.89
1:A:383:A:H2'	1:A:384:G:C5'	2.02	0.89
1:A:915:A:H2'	1:A:916:G:H5'	1.53	0.89
1:A:528:C:N4	14:O:49:ASN:ND2	2.21	0.89
22:W:75:ASN:H	22:W:75:ASN:HD22	1.12	0.89
1:A:1178:G:H21	1:A:1180:A:H3'	1.38	0.89
1:A:1224:G:N2	1:A:1362(A):C:N3	2.20	0.89
1:A:197:A:H61	1:A:221:C:H5'	0.97	0.89
1:A:863:U:O2	1:A:863:U:H2'	1.71	0.89
4:E:35:GLU:O	4:E:36:ARG:CZ	2.20	0.89
7:H:144:THR:HG22	7:H:146:ALA:H	1.36	0.89
14:O:16:GLU:O	14:O:17:LYS:HB3	1.72	0.89
1:A:17:U:H2'	1:A:18:C:H6	1.37	0.89
2:C:72:A:H2'	2:C:73:A:C8	2.07	0.89
9:J:45:ASP:HA	9:J:48:LYS:CD	2.02	0.89
20:U:72:ARG:HA	20:U:75:ILE:CD1	2.02	0.89
1:A:1287:A:H2'	1:A:1288:A:C8	2.08	0.89
1:A:594:G:N2	1:A:596:C:N4	2.21	0.89
4:E:213:LEU:HD22	4:E:214:ILE:HD13	1.55	0.89
7:H:94:ALA:HB3	7:H:117:ASP:O	1.73	0.89
10:K:38:ILE:CG1	10:K:118:VAL:HG11	2.00	0.89
4:E:134:GLU:O	4:E:138:LEU:HG	1.72	0.89
1:A:174:C:H2'	1:A:175:C:H6	1.37	0.88
1:A:716:A:O2'	1:A:717:C:H5'	1.74	0.88
6:G:112:VAL:HG23	6:G:161:ASN:ND2	1.87	0.88
6:G:57:ARG:HA	6:G:202:LEU:HD22	1.53	0.88
10:K:33:GLU:O	10:K:36:LEU:HG	1.71	0.88
12:M:60:ARG:HH11	12:M:60:ARG:N	1.71	0.88
21:V:18:LYS:HA	21:V:18:LYS:HE3	1.55	0.88
1:A:1074:G:H2'	1:A:1075:C:O4'	1.73	0.88
1:A:373:A:H1'	1:A:481:G:H1'	1.54	0.88
5:F:11:ARG:NH1	5:F:11:ARG:HB3	1.88	0.88
5:F:179:ARG:HD2	5:F:206:GLU:HG2	1.54	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:117:ALA:O	6:G:120:LEU:HG	1.72	0.88
1:A:1344:C:H4'	11:L:120:ARG:HB3	1.53	0.88
13:N:42:TRP:HE3	13:N:43:SER:HA	1.38	0.88
17:R:54:ARG:HE	17:R:58:MET:HE2	1.36	0.88
1:A:1005:A:H3'	1:A:1006:C:C6	2.09	0.88
1:A:1229:A:H2'	1:A:1230:C:H6	1.36	0.88
1:A:558:G:O5'	1:A:559:A:H3'	1.71	0.88
1:A:679:C:H2'	1:A:680:C:H6	1.35	0.88
1:A:966:G:H2'	1:A:967:C:C6	2.08	0.88
10:K:83:ILE:HA	10:K:137:VAL:HG22	1.56	0.88
10:K:86:ILE:HG21	10:K:133:LEU:HB2	1.53	0.88
11:L:113:LYS:NZ	11:L:119:ALA:HA	1.88	0.88
1:A:1308:U:H3'	15:P:99:ARG:NH2	1.88	0.88
1:A:1263:C:H2'	1:A:1264:C:C6	2.07	0.88
2:C:34:C:H2'	2:C:35:A:C5'	2.01	0.88
1:A:843:U:H3	4:E:37:ASN:ND2	1.71	0.88
5:F:14:ILE:HG21	5:F:179:ARG:CA	2.02	0.88
8:I:36:ARG:HH11	8:I:36:ARG:HB3	1.36	0.88
17:R:33:THR:HG23	17:R:87:ILE:HD11	1.52	0.88
20:U:25:THR:HG22	20:U:42:ARG:NH2	1.89	0.88
1:A:91:C:H2'	1:A:92:G:C8	2.07	0.88
9:J:99:LEU:O	9:J:103:TRP:HB2	1.73	0.88
21:V:41:VAL:HB	21:V:42:PRO:CD	2.01	0.88
3:D:55:U:H2'	3:D:57:G:N7	1.89	0.88
1:A:416:G:H2'	1:A:417:C:C6	2.07	0.88
4:E:70:PHE:CD2	4:E:163:PHE:HB3	2.08	0.88
5:F:19:GLU:HG3	5:F:54:ARG:HE	1.38	0.88
8:I:33:TYR:CD1	8:I:75:LEU:HG	2.07	0.88
1:A:218:C:H5'	1:A:466:C:H42	1.38	0.88
1:A:674:G:H2'	1:A:675:A:H8	1.35	0.88
1:A:907:A:H2'	1:A:908:A:C8	2.08	0.88
7:H:77:PRO:HG2	7:H:78:HIS:CD2	2.09	0.88
21:V:32:LYS:HA	21:V:50:ALA:HB3	1.56	0.88
22:W:13:LEU:HD12	22:W:13:LEU:N	1.89	0.88
1:A:1263:C:H2'	1:A:1264:C:H6	1.39	0.88
4:E:58:ILE:O	4:E:61:LEU:HB3	1.74	0.88
6:G:13:ARG:HG2	6:G:32:ALA:HB2	1.56	0.88
8:I:30:LEU:HB3	8:I:35:ALA:HB2	1.55	0.88
10:K:37:ARG:HD2	10:K:38:ILE:HD13	1.55	0.88
1:A:761:G:H5'	19:T:103:GLY:N	1.89	0.88
21:V:64:GLU:O	21:V:67:VAL:HG23	1.73	0.88
22:W:43:LEU:HD13	22:W:51:GLU:HB2	1.54	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1256:A:O2'	1:A:1257:U:H1'	1.71	0.88
1:A:246:A:O2'	1:A:247:G:O4'	1.90	0.88
1:A:88:C:O2'	1:A:89:U:C6	2.27	0.88
4:E:97:TRP:HZ2	4:E:102:LEU:HD13	1.38	0.88
6:G:30:LYS:HG2	6:G:35:ARG:CD	2.04	0.88
8:I:36:ARG:NH1	8:I:36:ARG:HB3	1.87	0.88
13:N:61:ALA:CB	13:N:94:ALA:HB2	1.98	0.88
1:A:253:U:H2'	1:A:254:G:H8	1.37	0.88
1:A:684:A:H1'	13:N:39:PRO:HD2	1.57	0.88
5:F:11:ARG:HH22	5:F:179:ARG:H	0.91	0.88
9:J:22:LEU:HD23	9:J:63:LYS:HZ2	1.38	0.88
10:K:95:VAL:HG22	10:K:133:LEU:HD21	1.54	0.88
19:T:10:VAL:CG2	19:T:55:ASP:HB2	2.04	0.88
19:T:60:ILE:HD13	19:T:62:SER:OG	1.74	0.88
20:U:33:ASP:CG	20:U:34:TYR:H	1.75	0.88
4:E:175:ARG:HD3	4:E:179:LYS:NZ	1.89	0.87
5:F:85:ARG:HH21	5:F:89:GLU:HB2	1.39	0.87
6:G:24:GLU:OE1	6:G:25:ARG:HB2	1.73	0.87
14:O:27:LEU:HD23	14:O:33:ARG:HD3	1.56	0.87
14:O:54:LYS:N	14:O:54:LYS:HD2	1.89	0.87
20:U:74:ARG:N	20:U:79:LEU:HD21	1.89	0.87
22:W:62:LEU:HA	22:W:65:LYS:CG	2.04	0.87
22:W:83:ARG:O	22:W:86:ARG:HG2	1.72	0.87
1:A:198:G:O2'	1:A:199:G:H5'	1.73	0.87
5:F:160:ALA:O	5:F:162:GLN:N	2.07	0.87
5:F:19:GLU:HG3	5:F:54:ARG:NE	1.90	0.87
10:K:67:PRO:HD2	10:K:77:GLU:H	1.39	0.87
15:P:24:GLY:HA3	15:P:66:LEU:CB	2.04	0.87
20:U:58:LEU:HB3	20:U:62:GLU:HB3	1.56	0.87
22:W:83:ARG:HA	22:W:86:ARG:HD3	1.56	0.87
1:A:1062:U:H2'	1:A:1063:C:C6	2.09	0.87
4:E:222:ILE:HD12	4:E:223:ILE:N	1.90	0.87
1:A:1206:G:H5'	5:F:194:GLY:HA2	1.56	0.87
10:K:29:SER:O	10:K:33:GLU:HB2	1.73	0.87
19:T:59:ILE:CD1	19:T:71:PHE:HB3	2.04	0.87
3:D:47:U:H2'	3:D:48:C:H5''	1.55	0.87
1:A:1005:A:H5''	1:A:1006:C:H5	1.34	0.87
1:A:1305:G:H2'	1:A:1331:G:N2	1.88	0.87
1:A:51:A:C6	1:A:353:A:C2	2.62	0.87
8:I:22:GLU:O	8:I:26:ILE:HG13	1.74	0.87
11:L:49:PRO:HD3	11:L:78:LYS:NZ	1.88	0.87
17:R:53:HIS:O	17:R:56:LEU:HB3	1.74	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:66:PRO:HD2	18:S:71:ARG:NH2	1.88	0.87
19:T:89:LEU:O	19:T:92:ARG:HB3	1.75	0.87
5:F:60:ALA:HB2	12:M:92:THR:OG1	1.74	0.87
1:A:977:A:H4'	1:A:982:U:O4	1.75	0.87
6:G:26:CYS:O	6:G:33:MET:SD	2.33	0.87
1:A:1481:U:H2'	1:A:1482:G:C8	2.09	0.87
1:A:687:A:H61	1:A:703:G:H1'	1.39	0.87
4:E:92:TYR:H	4:E:152:PHE:HA	1.39	0.87
5:F:188:LEU:HD11	5:F:190:ARG:HG3	1.56	0.87
7:H:78:HIS:HB2	10:K:104:ARG:HD3	1.54	0.87
1:A:405:U:H5''	1:A:406:G:O4'	1.74	0.87
1:A:610:G:O2'	1:A:611:A:H5'	1.74	0.87
1:A:68:G:C5'	1:A:171:A:H1'	2.04	0.87
1:A:792:A:H2'	1:A:794:A:H62	1.38	0.87
6:G:65:ARG:HE	6:G:72:GLU:N	1.72	0.87
9:J:69:VAL:CG2	9:J:104:LEU:HD21	2.04	0.87
12:M:32:ALA:O	12:M:33:GLN:HB2	1.73	0.87
12:M:7:LYS:O	12:M:97:GLU:HB2	1.74	0.87
13:N:95:ILE:HA	13:N:98:LEU:CG	2.02	0.87
4:E:75:LYS:O	4:E:75:LYS:HE3	1.75	0.87
7:H:91:LEU:C	7:H:91:LEU:HD23	1.95	0.87
10:K:11:THR:HA	10:K:14:ARG:CZ	2.05	0.87
10:K:14:ARG:CB	10:K:14:ARG:HH11	1.87	0.87
23:X:6:ARG:HB3	23:X:15:ARG:HH21	1.40	0.87
1:A:475:G:H2'	1:A:476:G:C8	2.08	0.87
10:K:4:ASP:OD2	10:K:7:ALA:HB3	1.73	0.87
13:N:79:SER:HA	13:N:104:GLN:HG3	1.54	0.87
19:T:4:LYS:HD2	19:T:5:VAL:N	1.89	0.87
1:A:1194:U:H4'	7:H:22:GLY:O	1.73	0.86
1:A:913:A:O2'	1:A:914:A:O4'	1.93	0.86
12:M:7:LYS:HG3	12:M:71:LEU:HD11	1.55	0.86
17:R:35:ARG:HH12	17:R:59:MET:HG3	1.40	0.86
8:I:97:PHE:CD2	20:U:31:LEU:HD13	2.07	0.86
21:V:11:VAL:HG22	21:V:39:THR:HB	1.57	0.86
1:A:112:G:O2'	1:A:113:G:H5'	1.75	0.86
1:A:301:G:H21	1:A:302:G:H1'	1.36	0.86
1:A:624:C:H4'	18:S:10:GLY:O	1.76	0.86
1:A:872:A:O2'	1:A:873:A:OP1	1.91	0.86
6:G:173:TRP:NE1	6:G:189:PRO:HB3	1.90	0.86
1:A:939:G:C5'	9:J:102:ARG:HH12	1.88	0.86
10:K:77:GLU:O	10:K:78:GLN:HB2	1.74	0.86
14:O:33:ARG:O	14:O:84:LEU:HG	1.75	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1230:C:H1'	15:P:126:LYS:HG3	1.57	0.86
1:A:1262:C:H2'	1:A:1263:C:C6	2.10	0.86
1:A:7:G:H1'	1:A:298:A:C8	2.10	0.86
1:A:29:G:H5'	1:A:296:U:OP1	1.74	0.86
1:A:482:A:H2'	1:A:482:A:N3	1.91	0.86
1:A:834:C:O2'	1:A:835:U:H5'	1.75	0.86
4:E:178:ARG:HA	4:E:184:VAL:HG21	1.56	0.86
4:E:83:MET:HB2	4:E:234:PRO:HG3	1.57	0.86
4:E:64:ARG:HG2	4:E:66:GLY:H	1.38	0.86
5:F:11:ARG:NH2	5:F:179:ARG:H	1.74	0.86
6:G:94:LEU:CA	6:G:97:LEU:HD12	2.02	0.86
9:J:73:MET:HA	9:J:90:GLU:O	1.75	0.86
9:J:90:GLU:O	9:J:91:VAL:HG23	1.74	0.86
1:A:552:U:H4'	14:O:86:ARG:O	1.74	0.86
1:A:1138:G:H3'	1:A:1138:G:N3	1.89	0.86
1:A:1494:G:N3	1:A:1495:U:H5	1.73	0.86
5:F:138:VAL:HG13	5:F:149:ALA:HB3	1.57	0.86
9:J:29:LYS:HZ3	9:J:102:ARG:HB2	1.40	0.86
9:J:50:ILE:HD13	9:J:58:PRO:HA	1.56	0.86
10:K:45:ILE:HD11	10:K:48:TYR:HB3	1.54	0.86
14:O:27:LEU:CD2	14:O:33:ARG:HH11	1.88	0.86
20:U:45:SER:HB3	20:U:51:LEU:HD11	1.56	0.86
1:A:1327:C:OP1	23:X:20:LYS:HE2	1.75	0.86
3:D:50:G:H2'	3:D:51:C:C6	2.10	0.86
1:A:1323:G:H2'	1:A:1324:A:C8	2.10	0.86
4:E:15:VAL:CG2	4:E:209:ARG:HD2	2.05	0.86
5:F:83:ARG:O	5:F:85:ARG:N	2.07	0.86
14:O:101:VAL:HG23	14:O:104:VAL:HG21	1.58	0.86
16:Q:39:LEU:HD13	16:Q:44:LEU:HA	1.56	0.86
3:D:75:C:H3'	3:D:76:A:O3'	1.76	0.86
1:A:907:A:H2'	1:A:908:A:H8	1.39	0.86
2:C:74:C:C2'	2:C:75:C:H5''	2.03	0.86
6:G:125:HIS:HA	6:G:149:ALA:HB3	1.58	0.86
6:G:162:LEU:HD13	6:G:181:MET:HG2	1.55	0.86
12:M:42:THR:HG23	12:M:68:HIS:HA	1.57	0.86
14:O:25:PRO:C	14:O:27:LEU:H	1.79	0.86
1:A:173:U:C4'	1:A:197:A:N3	2.38	0.86
1:A:787:A:H2'	1:A:788:U:H5'	1.58	0.86
2:C:50:U:H2'	2:C:51:C:C6	2.11	0.86
4:E:150:SER:CA	4:E:153:ARG:HB2	2.06	0.86
5:F:14:ILE:CG2	5:F:179:ARG:HA	2.04	0.86
10:K:55:GLY:O	10:K:57:PRO:HD3	1.75	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:98:PRO:C	11:L:100:GLY:H	1.77	0.86
17:R:62:GLN:HA	17:R:65:ARG:HH22	1.32	0.86
4:E:7:VAL:HG23	4:E:8:LYS:N	1.90	0.86
1:A:1107:C:P	5:F:172:ARG:HG2	2.16	0.86
1:A:282:A:N3	1:A:282:A:H2'	1.91	0.86
1:A:291:C:H3'	1:A:305:G:H22	1.41	0.86
4:E:50:GLU:HG3	4:E:200:ILE:O	1.75	0.86
6:G:127:THR:O	6:G:146:ILE:HA	1.74	0.86
6:G:152:SER:O	6:G:158:ILE:HG13	1.75	0.86
10:K:38:ILE:HG13	10:K:118:VAL:CG1	2.02	0.86
1:A:42:G:H2'	1:A:43:C:C6	2.10	0.86
1:A:942:G:H21	11:L:124:GLN:HE22	1.15	0.86
4:E:163:PHE:HA	4:E:185:ILE:O	1.76	0.86
5:F:6:HIS:NE2	5:F:8:ILE:HG22	1.91	0.86
6:G:204:ILE:HD12	6:G:204:ILE:H	1.41	0.86
6:G:4:TYR:HE2	6:G:8:VAL:HG22	1.41	0.86
10:K:22:GLU:N	10:K:63:LEU:HD11	1.89	0.86
3:D:8:U:N3	3:D:14:A:N6	2.21	0.86
1:A:674:G:H1	1:A:716:A:H61	1.24	0.86
5:F:59:ARG:NE	5:F:64:VAL:HA	1.89	0.86
14:O:84:LEU:CB	14:O:104:VAL:HG11	2.06	0.86
21:V:50:ALA:HB1	21:V:57:HIS:HB3	1.57	0.86
5:F:157:ILE:HG21	5:F:164:ARG:HE	1.38	0.86
1:A:1109:C:H2'	1:A:1110:A:H8	1.39	0.85
4:E:136:VAL:HA	4:E:139:LYS:NZ	1.91	0.85
4:E:71:VAL:HG13	4:E:93:VAL:O	1.76	0.85
6:G:11:LEU:O	6:G:19:LEU:HD12	1.75	0.85
6:G:198:VAL:HG23	6:G:199:ASN:H	1.39	0.85
15:P:77:ASN:O	15:P:80:ARG:HG3	1.75	0.85
1:A:1513:A:H2'	1:A:1514:C:C6	2.11	0.85
1:A:495:A:H1'	1:A:496:A:C8	2.11	0.85
1:A:687:A:N6	1:A:703:G:H1'	1.91	0.85
4:E:169:LYS:HZ2	4:E:170:GLU:HA	1.41	0.85
4:E:208:ILE:HA	4:E:211:ILE:HB	1.57	0.85
5:F:20:SER:CB	5:F:40:ARG:HH22	1.89	0.85
8:I:98:LEU:HD22	8:I:101:ALA:HB2	1.56	0.85
10:K:53:VAL:O	10:K:56:LYS:HB2	1.75	0.85
12:M:50:ILE:HB	16:Q:41:ARG:NE	1.89	0.85
14:O:36:VAL:O	14:O:58:VAL:HG13	1.76	0.85
19:T:82:MET:O	19:T:85:VAL:HB	1.76	0.85
1:A:1006:C:O2	1:A:1006:C:H2'	1.74	0.85
1:A:975:A:N7	1:A:1365:G:N2	2.24	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:563:A:H2'	14:O:15:ARG:HH12	1.39	0.85
4:E:31:TYR:CE2	4:E:200:ILE:HG21	2.10	0.85
6:G:26:CYS:HA	6:G:31:CYS:HB3	1.59	0.85
16:Q:9:LYS:HD3	16:Q:10:ALA:N	1.90	0.85
17:R:28:GLN:O	17:R:32:LEU:HD23	1.76	0.85
1:A:778:G:O2'	1:A:779:C:H5'	1.76	0.85
9:J:22:LEU:HD23	9:J:63:LYS:NZ	1.89	0.85
10:K:44:PHE:HE2	10:K:109:ILE:HD13	1.41	0.85
21:V:36:ARG:NE	21:V:51:VAL:HG12	1.90	0.85
1:A:1376:U:O4	9:J:10:ARG:HD2	1.76	0.85
1:A:184:G:C4'	1:A:224:C:H4'	2.06	0.85
1:A:888:G:H21	1:A:909:A:N6	1.73	0.85
10:K:29:SER:CA	10:K:32:LYS:HZ3	1.89	0.85
19:T:104:LYS:HD3	19:T:105:ALA:N	1.90	0.85
20:U:53:ARG:HG2	20:U:63:GLN:NE2	1.92	0.85
21:V:40:ILE:HD11	21:V:71:LEU:HA	1.58	0.85
1:A:1068:G:N7	1:A:1094:G:C8	2.44	0.85
1:A:68:G:H5'	1:A:171:A:C1'	2.06	0.85
1:A:266:G:H2'	19:T:67:LYS:NZ	1.91	0.85
1:A:677:U:H2'	1:A:678:U:C6	2.12	0.85
1:A:754:C:H5'	1:A:755:G:C8	2.12	0.85
1:A:959:A:H2'	1:A:960:U:H4'	1.57	0.85
6:G:56:VAL:O	6:G:59:ARG:HB2	1.76	0.85
8:I:77:ARG:O	8:I:81:ILE:HG13	1.74	0.85
9:J:10:ARG:HH11	9:J:10:ARG:CB	1.87	0.85
10:K:63:LEU:N	10:K:63:LEU:HD13	1.92	0.85
12:M:84:GLN:HA	12:M:88:LEU:HD12	1.55	0.85
13:N:84:VAL:HG21	20:U:88:LYS:CD	2.06	0.85
23:X:4:GLY:C	23:X:6:ARG:H	1.77	0.85
1:A:129(A):G:H4'	1:A:130:A:O5'	1.76	0.85
1:A:194:C:C2'	1:A:195:A:H5''	2.07	0.85
1:A:888:G:H21	1:A:909:A:H62	0.89	0.85
4:E:114:ARG:O	4:E:118:LEU:HB2	1.77	0.85
4:E:178:ARG:NE	4:E:196:LEU:HD13	1.92	0.85
5:F:36:ASP:O	5:F:39:ILE:HB	1.74	0.85
6:G:60:GLU:HA	6:G:63:LYS:CD	2.07	0.85
9:J:11:GLN:NE2	9:J:12:LEU:HD12	1.91	0.85
13:N:25:TYR:OH	13:N:87:THR:HB	1.77	0.85
15:P:37:THR:OG1	15:P:56:LEU:HA	1.76	0.85
20:U:63:GLN:OE1	20:U:66:LEU:HD21	1.76	0.85
1:A:1261:A:N6	1:A:1274:G:H1'	1.90	0.85
1:A:306:G:H2'	1:A:307:C:C6	2.12	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:817:C:N4	1:A:1529:G:O6	2.10	0.85
1:A:1191:A:C5'	5:F:4:LYS:HZ2	1.89	0.85
10:K:122:ARG:HD3	10:K:123:GLU:H	1.40	0.85
13:N:27:ASN:HB2	13:N:55:LYS:CB	2.07	0.85
20:U:49:LYS:HZ2	20:U:49:LYS:H	1.20	0.85
1:A:1391:U:H2'	1:A:1392:G:C8	2.11	0.85
1:A:858:G:H1	1:A:869:G:H3'	1.40	0.85
5:F:40:ARG:HG2	5:F:55:VAL:HG11	1.59	0.85
1:A:1229:A:H2'	1:A:1230:C:C6	2.12	0.85
1:A:1241:G:H2'	1:A:1242:C:H6	1.42	0.85
1:A:12:U:H2'	1:A:13:U:C5	2.11	0.85
1:A:663:A:H5'	1:A:836:G:OP1	1.77	0.85
2:C:4:G:H2'	2:C:5:G:H8	1.42	0.85
4:E:171:ALA:O	4:E:174:VAL:HB	1.76	0.85
5:F:11:ARG:HH22	5:F:179:ARG:N	1.73	0.85
9:J:140:ASP:HA	9:J:143:ARG:NH1	1.92	0.85
17:R:36:ILE:HG13	17:R:59:MET:CE	2.07	0.85
21:V:11:VAL:CG1	21:V:15:LEU:HD11	2.06	0.85
22:W:63:ILE:CD1	22:W:80:ARG:HB3	2.07	0.85
22:W:64:ASP:O	22:W:67:ALA:HB3	1.76	0.85
1:A:1528:U:O2'	1:A:1529:G:H3'	1.77	0.84
1:A:389:A:H2'	1:A:390:C:C5'	2.06	0.84
1:A:797:C:O2'	1:A:798:G:H5'	1.75	0.84
11:L:79:LEU:HD13	11:L:101:PHE:HB3	1.58	0.84
1:A:1347:G:H2'	11:L:107:ARG:O	1.78	0.84
12:M:4:ILE:HG12	12:M:100:THR:HB	1.57	0.84
14:O:68:ALA:HB1	14:O:99:HIS:HA	1.57	0.84
1:A:1034:G:H2'	1:A:1035:A:C8	2.12	0.84
1:A:105:G:H2'	1:A:106:C:C6	2.12	0.84
1:A:1267:C:H2'	1:A:1267:C:O2	1.73	0.84
1:A:1532:U:O2'	1:A:1533:C:O4'	1.95	0.84
1:A:351:G:H4'	1:A:352:C:OP1	1.75	0.84
1:A:370:C:H2'	1:A:371:G:C8	2.12	0.84
1:A:1191:A:H5''	5:F:4:LYS:HZ2	1.38	0.84
6:G:158:ILE:HG22	6:G:162:LEU:HD11	1.58	0.84
8:I:100:ASN:ND2	20:U:23:LYS:O	2.10	0.84
9:J:46:ALA:HA	9:J:49:ILE:CD1	2.05	0.84
13:N:25:TYR:HA	13:N:89:ALA:CB	2.06	0.84
13:N:42:TRP:HZ3	13:N:47:VAL:HG21	1.42	0.84
13:N:57:THR:HG23	13:N:60:ALA:N	1.92	0.84
13:N:79:SER:HA	13:N:104:GLN:CG	2.07	0.84
12:M:49:VAL:HG13	16:Q:41:ARG:CD	2.07	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:36:ARG:HH21	21:V:75:ALA:HB3	1.41	0.84
1:A:1349:A:H2'	1:A:1350:A:C8	2.12	0.84
5:F:35:GLU:O	5:F:38:ARG:HG2	1.76	0.84
6:G:50:ARG:HD3	6:G:51:PRO:N	1.92	0.84
7:H:121:LYS:HZ2	7:H:122:GLU:H	1.22	0.84
9:J:87:VAL:HB	9:J:156:TRP:CZ3	2.11	0.84
10:K:10:LEU:CD1	10:K:85:ARG:HB2	2.07	0.84
10:K:4:ASP:HB2	10:K:6:ILE:CG2	2.06	0.84
15:P:19:LEU:HD12	15:P:20:THR:N	1.91	0.84
18:S:22:THR:HA	18:S:33:ILE:HG13	1.58	0.84
23:X:14:TRP:HZ3	23:X:15:ARG:CZ	1.90	0.84
1:A:1149:C:O5'	1:A:1149:C:H6	1.61	0.84
1:A:1404:C:H1'	1:A:1499:A:H2	1.36	0.84
1:A:558:G:H5''	1:A:559:A:H5''	1.58	0.84
4:E:56:ARG:CB	4:E:56:ARG:HH11	1.89	0.84
6:G:29:PRO:O	6:G:30:LYS:HG3	1.78	0.84
19:T:4:LYS:O	19:T:5:VAL:HG23	1.78	0.84
5:F:157:ILE:HD12	5:F:164:ARG:CZ	2.08	0.84
1:A:1241:G:H2'	1:A:1242:C:C6	2.13	0.84
1:A:1418:A:N1	1:A:1483:A:C6	2.45	0.84
1:A:191:G:O2'	22:W:102:GLY:HA2	1.76	0.84
1:A:376:G:OP1	18:S:6:LEU:HD13	1.78	0.84
4:E:25:ASN:HD21	4:E:27:LYS:CG	1.90	0.84
6:G:122:ARG:HA	6:G:134:ASP:HB2	1.60	0.84
7:H:73:ASN:HD22	7:H:73:ASN:C	1.79	0.84
8:I:30:LEU:CA	8:I:75:LEU:HD11	2.03	0.84
10:K:46:LYS:CE	10:K:64:LYS:HA	2.06	0.84
12:M:82:ILE:O	12:M:86:MET:HB2	1.77	0.84
22:W:26:ASN:ND2	22:W:27:LYS:H	1.74	0.84
1:A:1256:A:H61	1:A:1278:U:H2'	1.43	0.84
1:A:599:C:H4'	10:K:130:GLY:CA	2.02	0.84
4:E:139:LYS:HG3	4:E:140:HIS:N	1.91	0.84
4:E:70:PHE:O	4:E:92:TYR:HB2	1.78	0.84
6:G:20:TYR:CA	6:G:26:CYS:O	2.22	0.84
8:I:45:LEU:HG	8:I:59:TYR:HD1	1.38	0.84
12:M:47:PHE:HZ	12:M:65:LEU:HB3	1.43	0.84
16:Q:22:THR:HB	16:Q:33:VAL:HG21	1.56	0.84
19:T:67:LYS:HA	19:T:70:ARG:NH2	1.93	0.84
1:A:1095:U:OP2	1:A:1108:G:N1	2.11	0.84
1:A:1192:C:N4	1:A:1193:G:C5	2.46	0.84
6:G:158:ILE:O	6:G:162:LEU:HG	1.78	0.84
10:K:9:MET:HA	10:K:26:VAL:HG21	1.59	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:25:GLU:HA	12:M:28:ARG:HD2	1.58	0.84
15:P:22:ILE:HB	15:P:25:ILE:HG13	1.60	0.84
1:A:1064:G:N3	1:A:1066:C:N3	2.26	0.84
4:E:152:PHE:O	4:E:154:LEU:N	2.11	0.84
10:K:103:VAL:HB	10:K:108:GLY:HA3	1.58	0.84
14:O:85:ILE:HD11	14:O:87:GLY:HA2	1.57	0.84
16:Q:26:ARG:HH11	16:Q:47:LEU:HG	1.42	0.84
1:A:1266:G:H2'	1:A:1268:A:OP2	1.77	0.84
1:A:1336:C:H4'	1:A:1337:G:C2	2.12	0.84
1:A:595:G:C8	1:A:641:U:C4	2.66	0.84
4:E:88:ALA:CB	4:E:219:VAL:HG22	2.08	0.84
5:F:84:ILE:CG1	5:F:101:LEU:HD22	2.08	0.84
6:G:105:VAL:HG21	6:G:121:VAL:CG2	2.07	0.84
1:A:1240:U:OP2	9:J:116:ALA:N	2.10	0.84
10:K:18:ARG:HD2	10:K:18:ARG:N	1.88	0.84
18:S:60:LEU:HA	18:S:64:ALA:HB3	1.60	0.84
22:W:64:ASP:O	22:W:67:ALA:N	2.11	0.84
3:D:15:G:H1	3:D:48:C:H41	1.21	0.84
1:A:1003:G:C6	1:A:1004:A:H1'	2.13	0.84
1:A:1095:U:H5'	1:A:1109:C:O2	1.78	0.84
1:A:1128:C:H1'	1:A:1146:A:H61	1.43	0.84
6:G:113:SER:HB3	6:G:116:GLN:HG3	1.60	0.84
6:G:30:LYS:CG	6:G:35:ARG:HD2	2.06	0.84
10:K:40:ALA:HB2	10:K:45:ILE:HG12	1.59	0.84
15:P:121:LYS:HA	15:P:121:LYS:HE3	1.60	0.84
19:T:31:LEU:O	19:T:32:TYR:HD2	1.60	0.84
22:W:50:GLU:H	22:W:99:LEU:CD1	1.90	0.84
1:A:1097:C:H2'	1:A:1098:C:C6	2.12	0.84
1:A:1315:U:O2'	1:A:1360:A:N3	2.10	0.83
4:E:146:GLN:HE21	4:E:150:SER:HB2	1.37	0.83
4:E:200:ILE:O	4:E:202:PRO:HD3	1.78	0.83
6:G:153:ARG:HA	6:G:158:ILE:HG21	1.60	0.83
7:H:121:LYS:NZ	7:H:122:GLU:H	1.76	0.83
12:M:43:ARG:O	12:M:66:ARG:HB2	1.77	0.83
14:O:53:ARG:HB3	14:O:69:TYR:HE1	1.42	0.83
1:A:1202:G:C4	16:Q:42:ILE:HD13	2.14	0.83
1:A:186(D):C:H2'	1:A:186(E):C:C6	2.11	0.83
1:A:112:G:C5'	1:A:389:A:H4'	2.08	0.83
1:A:761:G:H5'	19:T:102:GLY:CA	2.08	0.83
6:G:56:VAL:HG12	6:G:202:LEU:HD21	1.58	0.83
8:I:33:TYR:HE2	8:I:74:ASP:HB2	1.43	0.83
10:K:7:ALA:HA	10:K:10:LEU:CD1	2.07	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:52:GLU:HA	15:P:55:ARG:CD	2.07	0.83
1:A:1028:C:H2'	1:A:1028(A):C:C6	2.13	0.83
1:A:1109:C:H2'	1:A:1110:A:C8	2.13	0.83
1:A:1277:C:H4'	1:A:1282:C:C1'	2.09	0.83
1:A:509:A:H2'	1:A:510:A:C8	2.13	0.83
1:A:560:U:O2'	1:A:561:U:OP2	1.96	0.83
4:E:169:LYS:HD3	4:E:170:GLU:N	1.92	0.83
4:E:77:ALA:HA	4:E:208:ILE:HD11	1.60	0.83
5:F:36:ASP:HA	5:F:39:ILE:HD12	1.60	0.83
6:G:114:ARG:O	6:G:117:ALA:HB3	1.78	0.83
9:J:42:ILE:HG22	9:J:120:ILE:HD11	1.60	0.83
9:J:76:ARG:HB2	9:J:156:TRP:CZ2	2.13	0.83
11:L:111:ARG:O	11:L:119:ALA:HB2	1.78	0.83
11:L:37:PHE:CE1	11:L:74:ILE:HG23	2.13	0.83
1:A:586:C:OP1	19:T:34:LYS:HE3	1.76	0.83
5:F:157:ILE:CG1	5:F:164:ARG:HG2	2.07	0.83
1:A:1288:A:H2'	1:A:1289:A:H8	1.41	0.83
1:A:791:G:H2'	1:A:792:A:C8	2.12	0.83
1:A:570:G:H1	1:A:866:C:N4	1.75	0.83
1:A:942:G:N2	11:L:124:GLN:NE2	2.22	0.83
4:E:77:ALA:CB	4:E:211:ILE:HD13	2.08	0.83
10:K:126:LYS:NZ	10:K:127:LEU:HB2	1.94	0.83
13:N:26:ASN:O	13:N:27:ASN:HB3	1.78	0.83
13:N:42:TRP:HE3	13:N:43:SER:CA	1.90	0.83
14:O:86:ARG:HH12	14:O:119:LYS:CD	1.91	0.83
1:A:1226:C:C6	15:P:104:ARG:HA	2.14	0.83
1:A:197:A:H62	1:A:221:C:C4'	1.88	0.83
1:A:372:C:N4	1:A:389:A:N6	2.11	0.83
1:A:515:G:H2'	1:A:516:U:O4'	1.77	0.83
4:E:23:ARG:HH11	4:E:23:ARG:C	1.80	0.83
6:G:187:ARG:HG3	6:G:188:LEU:H	1.39	0.83
6:G:83:SER:N	6:G:89:THR:HG23	1.93	0.83
11:L:47:LEU:O	11:L:47:LEU:HD13	1.78	0.83
19:T:3:LYS:HD3	19:T:61:GLU:O	1.79	0.83
1:A:1253:G:N1	1:A:1285:A:N6	2.26	0.83
1:A:607:A:O2'	1:A:608:A:H5'	1.79	0.83
1:A:944:G:C3'	1:A:945:G:H5''	2.08	0.83
1:A:961:U:C2'	1:A:962:C:H5'	2.09	0.83
10:K:33:GLU:HG2	10:K:59:LEU:HD11	1.60	0.83
15:P:67:GLU:CG	15:P:68:GLY:H	1.89	0.83
7:H:78:HIS:ND1	10:K:107:LEU:HD11	1.94	0.83
9:J:32:ARG:O	9:J:33:ASP:HB2	1.78	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:25:ASP:HB2	10:K:58:TYR:CE2	2.13	0.83
12:M:79:ARG:HH12	12:M:82:ILE:HD12	1.41	0.83
13:N:73:MET:HE2	13:N:103:LEU:HD22	1.59	0.83
16:Q:26:ARG:HB3	16:Q:43:CYS:CB	2.08	0.83
1:A:1425:U:H2'	1:A:1426:C:C6	2.13	0.83
4:E:102:LEU:HD12	4:E:102:LEU:N	1.92	0.83
4:E:15:VAL:HG22	4:E:209:ARG:HD2	1.61	0.83
8:I:79:LEU:O	8:I:85:VAL:HG21	1.78	0.83
10:K:6:ILE:HG13	10:K:85:ARG:CZ	2.09	0.83
14:O:32:PHE:HB3	14:O:84:LEU:HD21	1.58	0.83
20:U:58:LEU:HB3	20:U:62:GLU:CB	2.07	0.83
22:W:51:GLU:HA	22:W:54:LYS:HD2	1.58	0.83
1:A:1043:C:H2'	1:A:1044:A:O4'	1.79	0.83
1:A:1124:G:H2'	1:A:1126:U:O4	1.77	0.83
1:A:1308:U:P	15:P:99:ARG:HG3	2.19	0.83
2:C:38:A:O2'	2:C:39:C:H5'	1.79	0.83
9:J:115:ARG:CB	9:J:118:VAL:HG23	2.09	0.83
10:K:61:VAL:HG12	10:K:62:TYR:N	1.94	0.83
23:X:24:ARG:O	23:X:25:LYS:HB2	1.79	0.83
1:A:1035:A:H2'	1:A:1036:G:H5'	1.60	0.83
5:F:157:ILE:HG21	5:F:164:ARG:NE	1.94	0.83
11:L:25:LYS:O	11:L:61:ALA:HB3	1.78	0.83
1:A:640:A:C2'	1:A:641:U:H5'	2.09	0.83
4:E:194:PRO:O	4:E:196:LEU:N	2.12	0.83
6:G:11:LEU:HA	6:G:14:ARG:HB3	1.58	0.83
8:I:76:ALA:O	8:I:80:ARG:HG3	1.79	0.83
12:M:15:THR:OG1	12:M:94:VAL:HG23	1.78	0.83
13:N:59:TYR:O	13:N:62:GLN:NE2	2.12	0.83
15:P:26:GLY:O	15:P:29:ARG:HB2	1.79	0.83
4:E:7:VAL:CG2	4:E:8:LYS:H	1.91	0.83
1:A:306:G:H3'	1:A:307:C:H5	1.42	0.82
1:A:551:U:H2'	1:A:552:U:C6	2.14	0.82
1:A:911:U:H2'	1:A:912:C:H6	1.44	0.82
6:G:59:ARG:HH12	6:G:62:GLN:HB2	1.44	0.82
9:J:74:GLU:HB3	9:J:91:VAL:CG2	2.09	0.82
15:P:24:GLY:O	15:P:29:ARG:HD2	1.79	0.82
23:X:12:LYS:HA	23:X:15:ARG:HB2	1.60	0.82
1:A:1316:G:H4'	16:Q:17:LYS:HD2	1.58	0.82
1:A:1399:C:N4	1:A:1502:A:N7	2.26	0.82
4:E:17:PHE:HD1	4:E:18:GLY:N	1.76	0.82
5:F:84:ILE:HA	5:F:101:LEU:CD1	2.09	0.82
5:F:108:ASN:HD22	5:F:111:LEU:HD13	1.44	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:191:THR:HB	5:F:193:TYR:CE2	2.13	0.82
5:F:41:GLY:O	5:F:45:LYS:HB2	1.78	0.82
6:G:145:GLU:O	6:G:146:ILE:HG23	1.78	0.82
9:J:111:ARG:HB2	9:J:119:ARG:HG3	1.61	0.82
1:A:1342:C:H1'	11:L:124:GLN:OE1	1.80	0.82
12:M:79:ARG:NH2	12:M:82:ILE:HG21	1.94	0.82
1:A:1160:G:N3	1:A:1160:G:H2'	1.95	0.82
1:A:1479:C:O2'	1:A:1480:G:H5'	1.80	0.82
1:A:1494:G:C2	1:A:1495:U:H5	1.97	0.82
1:A:745:C:H5''	1:A:851:G:H1'	1.60	0.82
1:A:961:U:H6	1:A:983:A:C2	1.97	0.82
1:A:974:A:P	16:Q:31:ARG:HG2	2.19	0.82
13:N:88:GLY:CA	13:N:91:ARG:HB2	2.09	0.82
16:Q:44:LEU:HD23	16:Q:45:ARG:H	1.43	0.82
18:S:39:TYR:HD1	18:S:40:ASP:N	1.76	0.82
19:T:97:SER:O	19:T:98:LEU:HD22	1.80	0.82
6:G:168:ARG:HD2	6:G:168:ARG:N	1.94	0.82
1:A:1269:A:H2'	1:A:1270:C:C4'	2.08	0.82
1:A:519:C:H2'	1:A:520:A:C5'	2.09	0.82
5:F:11:ARG:HB2	5:F:15:THR:O	1.78	0.82
6:G:78:LEU:HD11	6:G:96:LEU:HB3	1.61	0.82
7:H:52:PRO:HD2	7:H:53:LEU:HD23	1.60	0.82
1:A:642:A:N7	10:K:115:SER:HA	1.95	0.82
10:K:32:LYS:HG2	10:K:33:GLU:N	1.92	0.82
1:A:1163:C:H2'	1:A:1164:G:H5'	1.60	0.82
1:A:1206:G:H2'	1:A:1207:G:O4'	1.79	0.82
1:A:1302:U:C3'	1:A:1303:C:H5'	2.09	0.82
1:A:192:U:H4'	22:W:57:ARG:HH12	1.41	0.82
1:A:253:U:H2'	1:A:254:G:C8	2.15	0.82
6:G:58:LEU:CD1	6:G:59:ARG:HH11	1.91	0.82
7:H:147:ASP:CA	7:H:150:ARG:HB2	2.10	0.82
10:K:22:GLU:O	10:K:62:TYR:HA	1.79	0.82
11:L:115:GLY:O	11:L:117:HIS:N	2.11	0.82
15:P:108:ARG:HH11	15:P:108:ARG:HA	1.43	0.82
17:R:70:LEU:HG	17:R:78:TYR:CD1	2.14	0.82
1:A:280:C:H1'	19:T:38:ARG:HD3	1.59	0.82
22:W:45:GLN:N	22:W:91:LEU:HD12	1.94	0.82
1:A:345:C:H4'	1:A:346:G:O5'	1.77	0.82
1:A:679:C:H2'	1:A:680:C:C6	2.14	0.82
1:A:724:G:N2	1:A:725:G:H1'	1.95	0.82
1:A:781:A:H2'	1:A:782:A:H5'	1.61	0.82
1:A:962:C:O2'	1:A:1200:C:C5	2.33	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:113:HIS:O	4:E:117:GLU:HG3	1.80	0.82
5:F:47:LEU:CD1	5:F:83:ARG:HH21	1.92	0.82
5:F:57:ILE:HG12	5:F:66:VAL:HG22	1.61	0.82
6:G:196:LEU:N	6:G:196:LEU:HD23	1.94	0.82
9:J:50:ILE:HD12	9:J:58:PRO:HB3	1.59	0.82
11:L:66:ARG:HG2	11:L:67:GLY:H	1.44	0.82
1:A:454:C:H5''	1:A:455:C:OP2	1.78	0.82
4:E:19:HIS:NE2	4:E:206:ASP:HB2	1.93	0.82
6:G:30:LYS:HE2	6:G:35:ARG:NH1	1.95	0.82
10:K:100:ILE:HB	10:K:125:ARG:NH2	1.94	0.82
10:K:72:PRO:O	10:K:73:ASP:HB3	1.79	0.82
13:N:53:SER:O	13:N:55:LYS:N	2.12	0.82
15:P:23:TYR:CD2	15:P:70:LEU:HD13	2.13	0.82
1:A:377:G:OP1	18:S:5:ARG:NH1	2.12	0.82
19:T:65:ILE:HG23	19:T:69:LYS:O	1.80	0.82
1:A:1367:C:OP1	11:L:115:GLY:N	2.13	0.82
1:A:19:C:O2	1:A:572:A:H2	1.60	0.82
1:A:950:U:H5''	15:P:102:ARG:HH22	1.44	0.82
4:E:178:ARG:HE	4:E:196:LEU:HB2	1.44	0.82
5:F:150:LYS:NZ	5:F:152:ILE:HD13	1.95	0.82
9:J:104:LEU:HD22	9:J:134:ALA:HB1	1.61	0.82
9:J:23:VAL:HG13	9:J:43:PHE:CZ	2.14	0.82
10:K:109:ILE:HG23	10:K:137:VAL:O	1.77	0.82
13:N:73:MET:CE	13:N:103:LEU:HD22	2.09	0.82
15:P:92:HIS:CE1	15:P:110:ARG:NH2	2.48	0.82
21:V:62:ILE:HG13	21:V:66:MET:HG3	1.60	0.82
1:A:173:U:C1'	1:A:197:A:C2	2.63	0.82
1:A:745:C:H5'	1:A:851:G:N3	1.94	0.82
5:F:183:ASP:O	5:F:201:TYR:HA	1.80	0.82
7:H:56:GLN:H	7:H:56:GLN:HE21	1.27	0.82
7:H:79:GLU:H	7:H:79:GLU:CD	1.83	0.82
9:J:141:VAL:O	9:J:144:MET:HB2	1.79	0.82
11:L:37:PHE:CD1	11:L:43:ALA:HA	2.13	0.82
13:N:16:SER:O	13:N:35:PRO:HG3	1.80	0.82
22:W:62:LEU:CA	22:W:65:LYS:HG2	2.08	0.82
1:A:955:U:H1'	1:A:1227:A:H61	1.44	0.82
1:A:1318:A:H4'	21:V:10:PHE:HD2	1.43	0.82
8:I:37:VAL:HA	8:I:65:VAL:HG11	1.62	0.82
12:M:32:ALA:HB2	12:M:75:ILE:O	1.79	0.82
17:R:35:ARG:O	17:R:39:LEU:HD22	1.78	0.82
1:A:1418:A:C2	1:A:1483:A:N1	2.48	0.81
1:A:20:U:H2'	1:A:21:G:O4'	1.79	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:130:A:C6	1:A:264:U:H1'	2.13	0.81
4:E:44:LEU:O	4:E:48:MET:SD	2.38	0.81
6:G:20:TYR:CA	6:G:26:CYS:SG	2.68	0.81
7:H:78:HIS:CB	10:K:104:ARG:HD3	2.10	0.81
9:J:38:LEU:CA	9:J:41:ARG:HG3	2.09	0.81
12:M:30:SER:HB2	12:M:81:THR:CA	2.09	0.81
19:T:15:MET:CB	19:T:18:THR:HB	2.09	0.81
3:D:8:U:H3	3:D:14:A:H62	1.24	0.81
1:A:1049:U:H1'	1:A:1201:A:C8	2.13	0.81
1:A:1289:A:N6	1:A:1371:G:O2'	2.12	0.81
1:A:944:G:H3'	1:A:945:G:C5'	2.10	0.81
4:E:102:LEU:HB2	4:E:176:GLU:OE1	1.80	0.81
4:E:25:ASN:HD21	4:E:27:LYS:HG2	1.45	0.81
8:I:30:LEU:CB	8:I:35:ALA:HB2	2.09	0.81
8:I:31:GLU:HA	8:I:35:ALA:HB3	1.61	0.81
9:J:91:VAL:O	9:J:91:VAL:HG12	1.80	0.81
1:A:1226:C:C4	15:P:104:ARG:HG3	2.15	0.81
20:U:74:ARG:HA	20:U:79:LEU:HD11	1.61	0.81
3:D:18:G:H2'	3:D:19:G:H4'	1.62	0.81
1:A:340:U:H2'	1:A:341:C:H6	1.44	0.81
1:A:886:G:O2'	1:A:887:G:H5'	1.78	0.81
1:A:911:U:H2'	1:A:912:C:C6	2.14	0.81
6:G:18:LYS:HB3	6:G:20:TYR:CD1	2.15	0.81
1:A:540:G:H21	6:G:42:GLN:CD	1.83	0.81
6:G:63:LYS:HG2	6:G:64:LEU:N	1.96	0.81
17:R:60:VAL:O	17:R:63:ARG:HG3	1.79	0.81
19:T:45:HIS:O	19:T:73:VAL:HG23	1.80	0.81
22:W:50:GLU:N	22:W:99:LEU:HD12	1.95	0.81
1:A:1156:G:H1'	1:A:1179:A:H61	1.43	0.81
1:A:1242:C:O2'	1:A:1303:C:H5''	1.79	0.81
1:A:279:A:H1'	1:A:281:G:C2	2.15	0.81
9:J:75:VAL:HG22	9:J:88:PRO:HB3	1.62	0.81
14:O:85:ILE:HD12	14:O:99:HIS:O	1.80	0.81
23:X:7:ARG:HG3	23:X:8:THR:H	1.46	0.81
1:A:1302:U:C2'	1:A:1303:C:H5'	2.10	0.81
1:A:1376:U:O2	1:A:1377:A:N7	2.14	0.81
1:A:197:A:N6	1:A:221:C:H4'	1.94	0.81
1:A:498:A:H4'	1:A:500:G:OP1	1.79	0.81
1:A:50:A:H5''	1:A:51:A:C5'	2.09	0.81
4:E:71:VAL:O	4:E:164:VAL:HG23	1.79	0.81
13:N:33:THR:HA	13:N:39:PRO:HA	1.62	0.81
15:P:20:THR:HA	15:P:25:ILE:HB	1.61	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:81:ARG:HG2	18:S:83:GLU:HG2	1.61	0.81
1:A:1354:C:H2'	1:A:1355:G:C8	2.15	0.81
1:A:199:G:H2'	1:A:200:G:H8	1.44	0.81
1:A:134:A:H1'	1:A:325:A:C6	2.16	0.81
1:A:581:G:H4'	17:R:64:ARG:HH12	1.44	0.81
1:A:576:G:N7	1:A:881:G:C1'	2.44	0.81
4:E:222:ILE:O	4:E:226:ARG:HB3	1.79	0.81
6:G:57:ARG:NH2	7:H:107:ARG:HD3	1.93	0.81
7:H:77:PRO:HG2	7:H:78:HIS:HD2	1.42	0.81
13:N:42:TRP:CZ3	13:N:47:VAL:HG21	2.15	0.81
13:N:95:ILE:HG23	13:N:98:LEU:HD12	1.60	0.81
18:S:32:TYR:CD1	18:S:32:TYR:N	2.48	0.81
3:D:19:G:N2	3:D:57:G:H1'	1.95	0.81
1:A:1021:G:H2'	1:A:1022:G:O4'	1.81	0.81
1:A:243:A:O2'	1:A:244:U:OP2	1.97	0.81
1:A:915:A:C2'	1:A:916:G:H5'	2.11	0.81
1:A:955:U:H1'	1:A:1227:A:N6	1.96	0.81
5:F:11:ARG:HB3	5:F:11:ARG:HH11	1.46	0.81
11:L:78:LYS:HA	11:L:81:ILE:HD12	1.61	0.81
12:M:60:ARG:NH1	12:M:60:ARG:HB2	1.95	0.81
17:R:33:THR:CG2	17:R:87:ILE:HD11	2.11	0.81
1:A:275:G:H5'	19:T:14:LYS:NZ	1.94	0.81
20:U:58:LEU:HB3	20:U:62:GLU:CG	2.10	0.81
20:U:62:GLU:O	20:U:66:LEU:HG	1.80	0.81
3:D:22:G:H2'	3:D:23:A:H8	1.46	0.81
4:E:118:LEU:HD21	4:E:142:LEU:HB2	1.62	0.81
4:E:9:GLU:HB2	4:E:217:ARG:NH2	1.96	0.81
9:J:70:LYS:HB3	9:J:96:GLN:HG2	1.59	0.81
1:A:642:A:O2'	10:K:31:PHE:HE1	1.64	0.81
1:A:1197:G:H2'	1:A:1198:G:H5'	1.63	0.81
1:A:1236:A:H4'	1:A:1304:G:C4'	2.08	0.81
6:G:60:GLU:HA	6:G:63:LYS:HD3	1.62	0.81
7:H:74:GLY:C	7:H:115:VAL:HG12	2.01	0.81
11:L:47:LEU:HD13	11:L:50:LEU:HB3	1.62	0.81
13:N:42:TRP:CE3	13:N:43:SER:HA	2.16	0.81
15:P:14:ARG:CG	15:P:17:VAL:HG23	2.11	0.81
15:P:74:VAL:O	15:P:78:ILE:HG13	1.81	0.81
1:A:392:G:H5'	18:S:12:LYS:CE	2.10	0.81
1:A:191:G:N2	22:W:103:GLY:O	2.13	0.81
4:E:230:VAL:HG12	4:E:231:GLU:H	1.46	0.81
1:A:129(A):G:N2	1:A:191(A):G:C5	2.49	0.81
1:A:573:A:N3	1:A:883:C:O2'	2.14	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:186:PHE:HA	5:F:198:VAL:O	1.80	0.81
9:J:75:VAL:HG22	9:J:88:PRO:CB	2.11	0.81
11:L:116:LYS:HB3	11:L:122:ALA:HA	1.61	0.81
1:A:237:C:H5'	19:T:25:ARG:CZ	2.10	0.81
19:T:18:THR:HG23	19:T:69:LYS:NZ	1.95	0.81
21:V:22:LEU:CG	21:V:25:LYS:HE2	2.11	0.81
1:A:962:C:HO2'	1:A:1200:C:H5	1.26	0.81
1:A:126:G:C6	1:A:236:G:O6	2.34	0.81
1:A:1514:C:H2'	1:A:1515:C:C6	2.16	0.81
1:A:539:A:OP2	14:O:115:LYS:HE2	1.81	0.81
4:E:115:LEU:HD12	4:E:118:LEU:HD13	1.63	0.81
4:E:141:GLU:OE2	4:E:145:LEU:HD23	1.81	0.81
4:E:220:ASP:O	4:E:224:GLN:HG3	1.81	0.81
5:F:47:LEU:HD22	5:F:47:LEU:N	1.95	0.81
10:K:122:ARG:O	10:K:125:ARG:HB3	1.81	0.81
10:K:21:LYS:C	10:K:63:LEU:HD11	2.00	0.81
11:L:19:LEU:HD22	11:L:59:PHE:HD2	1.46	0.81
16:Q:60:SER:O	16:Q:61:TRP:HB3	1.81	0.81
20:U:54:ARG:O	20:U:55:ARG:HG2	1.80	0.81
23:X:11:GLY:O	23:X:15:ARG:HG2	1.81	0.81
1:A:754:C:H4'	17:R:72:ARG:NH2	1.96	0.80
1:A:761:G:C5'	19:T:103:GLY:H	1.93	0.80
1:A:982:U:H1'	1:A:983:A:H62	1.45	0.80
4:E:113:HIS:HA	4:E:116:GLU:OE1	1.81	0.80
4:E:188:ALA:HB1	4:E:192:SER:OG	1.80	0.80
4:E:25:ASN:ND2	4:E:25:ASN:C	2.33	0.80
7:H:56:GLN:NE2	7:H:56:GLN:H	1.79	0.80
8:I:14:LEU:HD11	8:I:19:LEU:N	1.96	0.80
11:L:112:LYS:CE	11:L:117:HIS:HA	2.10	0.80
13:N:78:GLN:O	13:N:104:GLN:HB3	1.81	0.80
1:A:1305:G:H21	1:A:1331:G:H2'	1.47	0.80
1:A:319:G:O2'	1:A:320:C:H5'	1.79	0.80
1:A:362:G:H3'	14:O:34:ARG:NH2	1.95	0.80
1:A:745:C:H2'	1:A:746:A:H8	1.44	0.80
1:A:859:A:O2'	1:A:860:A:H5'	1.81	0.80
1:A:949:A:C1'	1:A:1364:U:H3	1.93	0.80
6:G:107:ARG:HD2	6:G:174:LEU:HD11	1.61	0.80
7:H:83:GLU:HG2	7:H:88:LYS:HE2	1.62	0.80
13:N:22:HIS:O	13:N:28:THR:HG23	1.81	0.80
18:S:46:PRO:HG2	18:S:47:ASP:H	1.45	0.80
1:A:236:G:H3'	1:A:237:C:H6	1.46	0.80
1:A:484:G:H5'	1:A:486:U:H1'	1.63	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:545:C:O2'	1:A:546:G:H5'	1.82	0.80
1:A:674:G:H2'	1:A:675:A:C8	2.16	0.80
1:A:676:A:H2'	1:A:677:U:C6	2.16	0.80
1:A:766:A:N7	1:A:814:A:C6	2.50	0.80
4:E:137:ARG:O	4:E:141:GLU:HB2	1.81	0.80
4:E:168:THR:HG23	4:E:193:ASP:OD1	1.81	0.80
6:G:25:ARG:C	6:G:27:TYR:H	1.85	0.80
10:K:6:ILE:HG23	10:K:7:ALA:N	1.96	0.80
20:U:63:GLN:HA	20:U:66:LEU:HD21	1.64	0.80
22:W:36:LEU:HD21	22:W:55:ILE:HG22	1.62	0.80
1:A:309:G:O2'	1:A:310:G:H5'	1.82	0.80
4:E:106:LYS:O	4:E:109:SER:HB2	1.80	0.80
7:H:12:LEU:HD21	7:H:14:ARG:HB3	1.62	0.80
7:H:15:ARG:HA	7:H:28:PHE:HB3	1.63	0.80
19:T:3:LYS:O	19:T:4:LYS:O	2.00	0.80
19:T:6:LEU:HD22	19:T:23:VAL:HG21	1.63	0.80
21:V:15:LEU:HD21	21:V:38:SER:HB3	1.64	0.80
1:A:752:G:C8	1:A:752:G:OP2	2.34	0.80
1:A:962:C:O2'	1:A:1200:C:H5	1.64	0.80
1:A:991:U:HO2'	1:A:993:G:H8	1.29	0.80
6:G:144:ASP:O	6:G:184:LYS:HA	1.82	0.80
6:G:58:LEU:O	6:G:58:LEU:HD22	1.82	0.80
10:K:21:LYS:HE2	10:K:21:LYS:HA	1.63	0.80
15:P:14:ARG:HA	15:P:44:ARG:HA	1.63	0.80
15:P:91:ARG:HB3	15:P:98:VAL:HG13	1.63	0.80
21:V:36:ARG:HA	21:V:71:LEU:CD1	2.10	0.80
1:A:1035:A:C2'	1:A:1036:G:H5'	2.11	0.80
1:A:1124:G:H1	1:A:1147:C:N4	1.80	0.80
1:A:1346:A:H4'	1:A:1347:G:O5'	1.82	0.80
1:A:791:G:H22	1:A:1498:U:P	2.04	0.80
1:A:782:A:C6	1:A:801:U:C2	2.69	0.80
4:E:15:VAL:HG23	4:E:16:HIS:CE1	2.16	0.80
5:F:91:LEU:HD11	5:F:99:VAL:N	1.97	0.80
7:H:78:HIS:CG	10:K:107:LEU:HD11	2.16	0.80
13:N:84:VAL:CG2	13:N:110:ASP:HA	2.12	0.80
15:P:32:GLU:HB2	15:P:64:TRP:HH2	1.47	0.80
16:Q:22:THR:HB	16:Q:33:VAL:CG2	2.11	0.80
3:D:50:G:H2'	3:D:51:C:H6	1.46	0.80
1:A:1004:A:H3'	1:A:1025:U:N3	1.95	0.80
1:A:18:C:H1'	1:A:1079:G:N2	1.96	0.80
1:A:1151:A:H1'	12:M:39:PRO:HB2	1.62	0.80
1:A:1157:A:C8	1:A:1181:G:N2	2.48	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1338:G:H2'	1:A:1339:A:C8	2.16	0.80
5:F:122:GLU:HA	5:F:125:GLU:CG	2.11	0.80
8:I:89:MET:HE3	20:U:75:ILE:HG21	1.64	0.80
9:J:38:LEU:HA	9:J:41:ARG:CG	2.11	0.80
9:J:46:ALA:CA	9:J:49:ILE:HD12	2.06	0.80
10:K:1:MET:HG2	10:K:2:LEU:N	1.96	0.80
11:L:5:TYR:OH	11:L:16:ARG:HG3	1.82	0.80
11:L:63:ILE:N	11:L:63:ILE:HD12	1.97	0.80
1:A:953:G:N7	15:P:104:ARG:NH2	2.30	0.80
15:P:51:ALA:O	15:P:54:VAL:HB	1.81	0.80
20:U:36:ASN:HA	20:U:38:GLU:OE2	1.81	0.80
23:X:6:ARG:HB3	23:X:15:ARG:NH2	1.97	0.80
1:A:272:C:H2'	1:A:273:A:C8	2.17	0.80
1:A:301:G:N2	1:A:302:G:C4	2.50	0.80
1:A:764:C:H2'	1:A:765:G:C8	2.16	0.80
1:A:821:G:H2'	1:A:822:C:C6	2.17	0.80
5:F:3:ASN:CG	5:F:4:LYS:N	2.31	0.80
6:G:106:TYR:HA	6:G:111:ALA:HB3	1.64	0.80
10:K:53:VAL:HG23	10:K:58:TYR:HB2	1.63	0.80
15:P:88:ARG:HG2	15:P:98:VAL:HG12	1.61	0.80
18:S:67:THR:HB	18:S:70:ALA:HB2	1.64	0.80
1:A:468:A:O3'	18:S:81:ARG:HA	1.82	0.80
21:V:62:ILE:HD11	21:V:67:VAL:CA	2.09	0.80
1:A:1181:G:N7	1:A:1182:G:N3	2.29	0.80
1:A:1198:G:H2'	1:A:1199:U:O4'	1.81	0.80
1:A:1250:A:OP1	11:L:66:ARG:HD2	1.82	0.80
1:A:714:G:H1'	1:A:777:A:N7	1.96	0.80
1:A:979:C:H2'	1:A:980:C:C5'	2.11	0.80
4:E:215:LEU:O	4:E:218:ALA:HB3	1.81	0.80
3:D:41:G:O4'	9:J:144:MET:SD	2.40	0.80
1:A:932:C:H3'	9:J:3:ARG:HG3	1.63	0.80
10:K:122:ARG:CD	10:K:123:GLU:H	1.95	0.80
10:K:29:SER:O	10:K:32:LYS:NZ	2.15	0.80
10:K:88:LYS:NZ	10:K:88:LYS:HB2	1.97	0.80
12:M:6:ILE:CD1	12:M:72:VAL:HB	2.11	0.80
14:O:41:ARG:HG2	14:O:42:THR:N	1.96	0.80
21:V:22:LEU:O	21:V:22:LEU:HD23	1.82	0.80
1:A:994:A:N1	1:A:1047:G:H4'	1.97	0.80
1:A:752:G:OP2	1:A:752:G:H8	1.64	0.80
1:A:983:A:C2	1:A:984:C:C6	2.70	0.80
1:A:989:C:C2'	1:A:990:C:H5'	2.12	0.80
4:E:23:ARG:HD3	4:E:24:TRP:H	1.46	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:60:ASP:O	4:E:63:MET:HB3	1.82	0.80
7:H:141:GLN:HG3	7:H:143:ARG:HH21	1.45	0.80
7:H:61:TYR:HA	7:H:64:ARG:HG2	1.63	0.80
8:I:35:ALA:O	8:I:36:ARG:HB2	1.81	0.80
8:I:73:ASN:O	8:I:76:ALA:HB3	1.82	0.80
13:N:42:TRP:H	13:N:71:LYS:HE2	1.45	0.80
14:O:35:GLY:O	14:O:82:VAL:HG13	1.82	0.80
19:T:51:TYR:CZ	19:T:73:VAL:HG11	2.17	0.80
1:A:1181:G:O3'	1:A:1184:G:H5'	1.82	0.79
1:A:1239:A:H4'	1:A:1240:U:H5''	1.63	0.79
1:A:7:G:H21	7:H:121:LYS:HG3	1.46	0.79
2:C:69:C:H2'	2:C:70:G:H8	1.46	0.79
2:C:73:A:O2'	2:C:74:C:OP2	2.00	0.79
11:L:2:GLU:HA	11:L:21:PRO:HD2	1.65	0.79
14:O:41:ARG:CB	14:O:41:ARG:NH1	2.45	0.79
18:S:26:ARG:HH21	18:S:31:LYS:HE3	1.47	0.79
19:T:10:VAL:HG23	19:T:55:ASP:O	1.81	0.79
1:A:1144:G:N2	1:A:1146:A:H62	1.78	0.79
1:A:1055:A:N6	1:A:1206:G:C8	2.50	0.79
1:A:393:A:OP2	18:S:12:LYS:HE3	1.82	0.79
1:A:577:G:H21	1:A:578:C:H1'	1.47	0.79
1:A:620:C:O2'	1:A:621:A:H5'	1.82	0.79
1:A:664:G:P	20:U:64:ARG:HH21	2.05	0.79
1:A:692:U:H1'	1:A:694:A:N7	1.96	0.79
1:A:864:A:H2	1:A:917:G:N3	1.79	0.79
1:A:971:G:H5''	1:A:972:C:H5''	1.64	0.79
4:E:178:ARG:CD	4:E:196:LEU:HD13	2.11	0.79
5:F:59:ARG:CZ	5:F:59:ARG:HB2	2.11	0.79
8:I:13:ASN:N	8:I:13:ASN:HD22	1.79	0.79
10:K:126:LYS:HZ1	10:K:127:LEU:HB2	1.46	0.79
13:N:84:VAL:HG11	20:U:88:LYS:HD3	1.63	0.79
14:O:82:VAL:O	14:O:106:ASP:HB2	1.81	0.79
16:Q:26:ARG:HB3	16:Q:43:CYS:HB3	1.63	0.79
3:D:19:G:N3	3:D:57:G:H1'	1.95	0.79
1:A:161:A:H2'	1:A:162:A:O4'	1.82	0.79
1:A:1137:C:H4'	1:A:1138:G:N2	1.98	0.79
1:A:297:G:N2	1:A:299:G:H3'	1.98	0.79
4:E:101:MET:HB2	4:E:102:LEU:HD12	1.62	0.79
4:E:82:ARG:HA	4:E:92:TYR:HE1	1.47	0.79
8:I:99:ALA:HB2	20:U:31:LEU:HD11	1.64	0.79
1:A:1348:U:H4'	11:L:120:ARG:NH1	1.97	0.79
19:T:62:SER:OG	19:T:72:ARG:HG2	1.82	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1224:G:H1	1:A:1362(A):C:H42	1.29	0.79
1:A:66:G:H4'	1:A:173:U:C5	2.17	0.79
1:A:229:U:H2'	1:A:230:G:H8	1.47	0.79
1:A:695:A:H2'	1:A:696:A:O4'	1.83	0.79
2:C:22:G:H2'	2:C:23:C:H6	1.48	0.79
6:G:199:ASN:CG	6:G:200:GLU:N	2.35	0.79
10:K:44:PHE:HD1	10:K:79:VAL:HG12	1.47	0.79
14:O:60:LEU:N	14:O:60:LEU:HD13	1.95	0.79
15:P:15:VAL:HG11	15:P:39:ILE:CD1	2.12	0.79
1:A:748:C:C6	1:A:748:C:C3'	2.63	0.79
1:A:121:C:H4'	1:A:122:G:OP1	1.81	0.79
1:A:1321:C:O5'	1:A:1321:C:C6	2.36	0.79
1:A:1477:C:H2'	1:A:1478:C:C6	2.16	0.79
1:A:320:C:O2'	1:A:321:A:H5'	1.83	0.79
1:A:828:A:H2'	1:A:829:G:O4'	1.82	0.79
1:A:872:A:O2'	1:A:873:A:H5''	1.83	0.79
4:E:115:LEU:HD23	4:E:149:LEU:HD13	1.65	0.79
7:H:79:GLU:HB3	7:H:91:LEU:O	1.83	0.79
12:M:30:SER:CB	12:M:81:THR:HA	2.11	0.79
14:O:84:LEU:O	14:O:100:ILE:HG22	1.81	0.79
20:U:18:ARG:NH2	20:U:21:LYS:HB2	1.96	0.79
1:A:1225:A:H5'	21:V:78:ARG:HH11	1.44	0.79
1:A:279:A:H5'	1:A:280:C:H3'	1.65	0.79
1:A:49:U:O4	1:A:362:G:N2	2.16	0.79
1:A:874:G:H2'	1:A:875:C:H5'	1.64	0.79
6:G:57:ARG:HA	6:G:202:LEU:CD2	2.13	0.79
6:G:62:GLN:HA	6:G:62:GLN:HE21	1.46	0.79
9:J:38:LEU:CD1	9:J:41:ARG:HD3	2.08	0.79
14:O:100:ILE:CD1	14:O:100:ILE:H	1.91	0.79
17:R:34:LEU:CG	17:R:35:ARG:N	2.46	0.79
18:S:6:LEU:CD2	18:S:17:TYR:HD2	1.95	0.79
1:A:1118:C:H1'	1:A:1179:A:C8	2.17	0.79
1:A:1339:A:C2'	1:A:1340:A:H5'	2.12	0.79
1:A:32:A:H2'	1:A:33:A:C8	2.18	0.79
1:A:567:G:N2	1:A:568:G:H1'	1.98	0.79
1:A:745:C:H2'	1:A:746:A:C8	2.18	0.79
4:E:80:ILE:HG21	4:E:211:ILE:CG2	2.12	0.79
1:A:409:G:H5''	6:G:24:GLU:OE1	1.82	0.79
9:J:2:ALA:HB2	9:J:7:ALA:HB2	1.65	0.79
10:K:10:LEU:HD13	10:K:85:ARG:HB2	1.64	0.79
13:N:110:ASP:HB2	20:U:88:LYS:HB2	1.65	0.79
8:I:48:LEU:CB	20:U:78:LEU:HD23	2.09	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:75:ASN:HD22	22:W:75:ASN:N	1.74	0.79
1:A:1321:C:C5	1:A:1322:C:H2'	2.18	0.79
1:A:790:A:N6	1:A:791:G:C2	2.50	0.79
4:E:24:TRP:CH2	4:E:26:PRO:HA	2.17	0.79
4:E:61:LEU:HA	4:E:64:ARG:NH1	1.97	0.79
13:N:65:ALA:HB1	13:N:98:LEU:HD23	1.64	0.79
15:P:91:ARG:CB	15:P:98:VAL:HG13	2.13	0.79
17:R:63:ARG:HH12	17:R:87:ILE:CD1	1.96	0.79
20:U:44:LEU:HD12	20:U:45:SER:O	1.82	0.79
13:N:110:ASP:CB	20:U:88:LYS:HD2	2.12	0.79
22:W:11:SER:HA	22:W:13:LEU:CD1	2.13	0.79
22:W:72:LEU:HD13	22:W:77:ALA:CA	2.13	0.79
1:A:108:G:OP2	1:A:108:G:N2	2.15	0.79
1:A:1494:G:C2	1:A:1495:U:C5	2.71	0.79
4:E:70:PHE:HD2	4:E:163:PHE:HB3	1.47	0.79
7:H:76:ILE:HG23	7:H:77:PRO:HD2	1.65	0.79
8:I:76:ALA:CB	8:I:80:ARG:NH2	2.45	0.79
9:J:145:ALA:O	9:J:146:GLU:HB3	1.81	0.79
1:A:642:A:N3	10:K:113:SER:OG	2.16	0.79
10:K:7:ALA:HA	10:K:10:LEU:HD12	1.64	0.79
17:R:16:ALA:CB	17:R:21:ASP:HB3	2.12	0.79
19:T:59:ILE:HD12	19:T:60:ILE:N	1.98	0.79
22:W:51:GLU:HA	22:W:54:LYS:CE	2.13	0.79
1:A:1172:C:H2'	1:A:1173:G:H8	1.48	0.79
1:A:579:G:H2'	1:A:580:U:H5'	1.64	0.79
1:A:678:U:H2'	1:A:679:C:H6	1.47	0.79
1:A:842:C:H5'	1:A:848:C:C2	2.17	0.79
1:A:82:U:H2'	1:A:85:U:H5	1.47	0.79
1:A:854:G:H3'	1:A:871:U:O4	1.83	0.79
4:E:16:HIS:CE1	4:E:213:LEU:HD13	2.17	0.79
6:G:18:LYS:O	6:G:21:LEU:HD12	1.83	0.79
7:H:91:LEU:HD11	7:H:118:ILE:HG21	1.64	0.79
12:M:44:VAL:HG22	12:M:66:ARG:HE	1.46	0.79
21:V:40:ILE:HG12	21:V:71:LEU:CD2	2.13	0.79
1:A:346:G:H2'	1:A:347:G:O4'	1.83	0.79
1:A:1126:U:H2'	1:A:1127:G:H8	1.48	0.78
1:A:1135:U:H2'	1:A:1137:C:C6	2.17	0.78
1:A:1319:A:H4'	21:V:70:LYS:NZ	1.98	0.78
1:A:452:A:H2'	1:A:453:A:H8	1.48	0.78
1:A:483:C:OP2	1:A:484:G:H3'	1.82	0.78
2:C:50:U:H2'	2:C:51:C:H6	1.47	0.78
3:D:41:G:H8	3:D:41:G:H5'	1.45	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:182:ILE:HG23	4:E:183:PRO:HD2	1.63	0.78
5:F:111:LEU:O	5:F:202:ILE:HD12	1.82	0.78
5:F:76:VAL:O	5:F:83:ARG:HG2	1.83	0.78
6:G:94:LEU:O	6:G:97:LEU:HB2	1.83	0.78
7:H:79:GLU:HG3	7:H:93:PRO:CD	2.12	0.78
10:K:10:LEU:O	10:K:14:ARG:NH1	2.16	0.78
10:K:112:LEU:HD21	10:K:114:THR:HG23	1.65	0.78
14:O:113:ARG:C	14:O:114:LYS:HG3	2.03	0.78
15:P:11:ARG:O	15:P:45:VAL:HB	1.82	0.78
15:P:78:ILE:HA	15:P:81:LEU:CD1	2.14	0.78
1:A:741:G:OP1	17:R:39:LEU:HD12	1.83	0.78
18:S:26:ARG:NH2	18:S:31:LYS:HE3	1.97	0.78
19:T:92:ARG:O	19:T:95:TYR:HB2	1.82	0.78
1:A:579:G:O2'	1:A:580:U:H5'	1.83	0.78
1:A:862:C:H1'	1:A:874:G:H5''	1.66	0.78
7:H:147:ASP:O	7:H:150:ARG:HB2	1.83	0.78
7:H:53:LEU:H	7:H:53:LEU:CD2	1.96	0.78
7:H:81:GLU:HA	7:H:89:ILE:O	1.82	0.78
9:J:106:GLN:HA	9:J:109:ASN:HD22	1.47	0.78
9:J:5:ARG:HB3	9:J:5:ARG:NH1	1.98	0.78
9:J:5:ARG:HD2	9:J:7:ALA:H	1.48	0.78
10:K:92:ARG:H	10:K:92:ARG:HD2	1.48	0.78
15:P:11:ARG:CG	15:P:12:ASN:H	1.93	0.78
15:P:3:ARG:HG3	15:P:7:VAL:HA	1.66	0.78
18:S:39:TYR:HB2	18:S:49:LEU:HD13	1.63	0.78
18:S:75:ARG:HG3	18:S:80:PHE:HB3	1.65	0.78
19:T:15:MET:HB3	19:T:18:THR:HB	1.64	0.78
19:T:5:VAL:HG12	19:T:6:LEU:N	1.97	0.78
20:U:36:ASN:OD1	20:U:39:VAL:HB	1.83	0.78
22:W:36:LEU:O	22:W:36:LEU:HD23	1.83	0.78
1:A:1137:C:H4'	1:A:1138:G:C2	2.19	0.78
1:A:229:U:H2'	1:A:230:G:C8	2.18	0.78
4:E:14:GLY:HA3	4:E:209:ARG:CZ	2.13	0.78
4:E:61:LEU:HA	4:E:64:ARG:CD	2.13	0.78
6:G:105:VAL:HG21	6:G:121:VAL:HG22	1.64	0.78
6:G:60:GLU:HB2	6:G:202:LEU:HD13	1.64	0.78
1:A:1398:A:H61	7:H:21:ALA:HA	1.48	0.78
16:Q:26:ARG:HB2	16:Q:39:LEU:HD22	1.65	0.78
18:S:6:LEU:HA	18:S:18:ARG:O	1.83	0.78
1:A:1335:C:H5''	1:A:1336:C:H5'	1.65	0.78
1:A:388:G:O2'	1:A:389:A:OP2	1.99	0.78
1:A:592:G:O2'	1:A:593:G:H5'	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:982:U:H1'	1:A:983:A:N6	1.98	0.78
4:E:150:SER:HA	4:E:153:ARG:CB	2.12	0.78
4:E:212:GLN:O	4:E:216:SER:HB2	1.82	0.78
7:H:78:HIS:HB3	10:K:107:LEU:HD21	1.63	0.78
15:P:52:GLU:O	15:P:56:LEU:HG	1.84	0.78
15:P:78:ILE:HA	15:P:81:LEU:HD13	1.65	0.78
17:R:5:LYS:NZ	17:R:5:LYS:HB3	1.99	0.78
21:V:11:VAL:O	21:V:16:LEU:HD11	1.82	0.78
21:V:5:LEU:CB	21:V:9:VAL:HG22	2.14	0.78
1:A:160:A:H1'	1:A:344:A:N7	1.97	0.78
1:A:11:G:H2'	1:A:12:U:O4'	1.82	0.78
1:A:261:U:H2'	1:A:263:A:OP2	1.83	0.78
1:A:640:A:H2'	1:A:641:U:H5'	1.65	0.78
1:A:654:G:C2	1:A:753:A:H1'	2.19	0.78
1:A:789:U:C2	1:A:791:G:OP2	2.36	0.78
4:E:115:LEU:HB2	4:E:145:LEU:HG	1.65	0.78
6:G:110:PHE:O	6:G:161:ASN:ND2	2.16	0.78
10:K:83:ILE:CA	10:K:137:VAL:HG22	2.13	0.78
12:M:3:LYS:CE	12:M:77:PRO:HD3	2.14	0.78
13:N:27:ASN:HB2	13:N:55:LYS:HB2	1.65	0.78
14:O:56:ALA:CB	14:O:68:ALA:O	2.27	0.78
15:P:108:ARG:CA	15:P:108:ARG:HH11	1.96	0.78
15:P:20:THR:HA	15:P:25:ILE:CB	2.13	0.78
19:T:67:LYS:HA	19:T:70:ARG:NH1	1.98	0.78
19:T:75:ARG:HH12	19:T:77:VAL:HG13	1.48	0.78
1:A:1074:G:H5'	4:E:104:ASN:HB2	1.64	0.78
1:A:1269:A:H5'	1:A:1326:C:C4'	2.14	0.78
1:A:1378:C:O2	1:A:1378:C:H2'	1.82	0.78
7:H:121:LYS:NZ	7:H:122:GLU:N	2.32	0.78
10:K:25:ASP:OD2	10:K:60:ARG:HB2	1.83	0.78
12:M:49:VAL:O	12:M:60:ARG:HA	1.83	0.78
13:N:88:GLY:HA3	13:N:91:ARG:CB	2.13	0.78
15:P:19:LEU:HD11	15:P:30:ALA:HB2	1.65	0.78
19:T:91:ARG:HA	19:T:94:ASN:HD21	1.48	0.78
3:D:54:U:O2	3:D:58:A:N6	2.17	0.78
1:A:1178:G:N2	1:A:1180:A:H3'	1.99	0.78
1:A:708:C:O2'	1:A:709:G:H5'	1.83	0.78
4:E:80:ILE:CG2	4:E:212:GLN:HE21	1.97	0.78
4:E:80:ILE:HD12	4:E:208:ILE:CG1	2.12	0.78
6:G:90:GLY:HA3	6:G:200:GLU:OE2	1.84	0.78
14:O:85:ILE:HD11	14:O:98:TYR:CB	2.12	0.78
21:V:15:LEU:HG	21:V:16:LEU:HD13	1.66	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1129:C:N4	1:A:1139:G:C6	2.52	0.78
1:A:1181:G:H2'	1:A:1182:G:O4'	1.84	0.78
1:A:1192:C:C5	1:A:1193:G:C8	2.72	0.78
1:A:1298:C:C5	9:J:114:ARG:HB3	2.19	0.78
1:A:267:C:N4	1:A:268:C:N4	2.31	0.78
1:A:280:C:H1'	19:T:38:ARG:CD	2.12	0.78
1:A:765:G:H21	1:A:816:A:H2	1.32	0.78
7:H:115:VAL:HG11	7:H:118:ILE:HD11	1.65	0.78
7:H:144:THR:HB	7:H:146:ALA:HB3	1.66	0.78
8:I:42:GLU:HB2	8:I:61:LEU:HD22	1.65	0.78
10:K:92:ARG:N	10:K:92:ARG:HD2	1.96	0.78
11:L:48:GLU:N	11:L:49:PRO:HD2	1.99	0.78
1:A:689:C:P	13:N:46:GLY:HA3	2.23	0.78
18:S:35:LYS:HD2	18:S:36:ILE:N	1.98	0.78
19:T:88:TYR:N	19:T:91:ARG:HH21	1.82	0.78
3:D:62:C:H2'	3:D:63:G:H8	1.49	0.78
1:A:1115:C:H2'	1:A:1116:C:C6	2.17	0.78
1:A:113:G:H2'	1:A:114:U:C6	2.19	0.78
1:A:279:A:C5'	1:A:280:C:H3'	2.14	0.78
1:A:384:G:H2'	1:A:385:C:C6	2.18	0.78
1:A:576:G:N7	1:A:881:G:H1'	1.99	0.78
1:A:9:G:H5''	7:H:126:ARG:HD3	1.64	0.78
9:J:107:ALA:O	9:J:110:GLN:HB2	1.84	0.78
10:K:112:LEU:O	10:K:112:LEU:HD23	1.84	0.78
10:K:13:ILE:HG22	10:K:14:ARG:N	1.97	0.78
10:K:10:LEU:HD21	10:K:85:ARG:HD3	1.66	0.78
14:O:58:VAL:O	14:O:65:GLU:HA	1.84	0.78
1:A:1308:U:H3'	15:P:99:ARG:CZ	2.14	0.78
18:S:49:LEU:HD11	18:S:51:VAL:HG22	1.64	0.78
7:H:45:PHE:HD2	7:H:45:PHE:H	1.31	0.78
1:A:1239:A:H62	1:A:1299:A:H61	1.30	0.78
1:A:1296:C:H1'	1:A:1302:U:O4	1.83	0.78
1:A:1345:U:H5'	1:A:1346:A:OP1	1.84	0.78
1:A:1507:A:H2'	1:A:1508:G:O4'	1.83	0.78
1:A:266:G:H8	19:T:67:LYS:HZ3	1.31	0.78
1:A:815:A:H2	1:A:1527:C:O2	1.67	0.78
1:A:99:C:H2'	1:A:101:A:C8	2.18	0.78
5:F:38:ARG:HB2	5:F:94:LEU:HD11	1.65	0.78
6:G:125:HIS:O	6:G:126:ILE:HG12	1.83	0.78
6:G:129:ASN:OD1	6:G:144:ASP:HB3	1.84	0.78
10:K:112:LEU:HD21	10:K:114:THR:CG2	2.13	0.78
13:N:95:ILE:O	13:N:98:LEU:HB2	1.83	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:26:ARG:HB2	16:Q:39:LEU:CD2	2.14	0.78
22:W:13:LEU:HD13	22:W:17:ARG:NH2	1.99	0.78
1:A:1064:G:OP1	1:A:1386:G:H4'	1.84	0.77
1:A:1371:G:H5'	11:L:68:GLY:CA	2.14	0.77
1:A:329:A:H4'	1:A:330:C:OP1	1.83	0.77
1:A:519:C:H2'	1:A:520:A:H5'	1.66	0.77
1:A:8:A:H4'	1:A:9:G:OP1	1.84	0.77
1:A:940:C:OP1	9:J:102:ARG:HD3	1.82	0.77
1:A:955:U:C2	1:A:956:U:C5	2.73	0.77
6:G:145:GLU:HA	6:G:183:GLY:O	1.84	0.77
6:G:18:LYS:HA	6:G:33:MET:CE	2.14	0.77
10:K:86:ILE:HD13	10:K:135:CYS:HA	1.66	0.77
10:K:86:ILE:HG22	10:K:87:SER:N	1.99	0.77
14:O:34:ARG:O	14:O:60:LEU:HB2	1.83	0.77
15:P:11:ARG:HG3	15:P:12:ASN:H	1.47	0.77
15:P:48:LEU:HD22	15:P:53:VAL:HG23	1.66	0.77
21:V:46:GLY:HA2	21:V:62:ILE:O	1.84	0.77
22:W:73:HIS:H	22:W:76:ALA:HB3	1.49	0.77
1:A:1210:C:H4'	1:A:1214:C:H42	1.48	0.77
1:A:1317:C:H2'	1:A:1318:A:O4'	1.84	0.77
1:A:928:G:N2	1:A:1390:U:H1'	1.99	0.77
1:A:1399:C:C4	1:A:1502:A:N7	2.52	0.77
1:A:324:G:OP1	22:W:22:ARG:HB3	1.83	0.77
1:A:600:C:OP1	10:K:97:VAL:N	2.15	0.77
4:E:217:ARG:HA	4:E:220:ASP:OD2	1.85	0.77
5:F:30:ARG:HG2	5:F:30:ARG:HH11	1.49	0.77
6:G:159:ARG:O	6:G:163:GLU:CB	2.32	0.77
7:H:87:SER:CB	7:H:131:ILE:HG12	2.14	0.77
8:I:14:LEU:HD13	8:I:18:GLN:HB3	1.66	0.77
10:K:40:ALA:N	10:K:45:ILE:HG23	1.99	0.77
10:K:46:LYS:NZ	10:K:64:LYS:HA	2.00	0.77
11:L:47:LEU:HD12	11:L:51:ARG:CZ	2.15	0.77
14:O:18:VAL:O	14:O:19:ARG:HG3	1.84	0.77
1:A:1058:G:H2'	1:A:1059:C:O4'	1.85	0.77
1:A:1128:C:O2	1:A:1146:A:N6	2.17	0.77
1:A:22:G:H4'	1:A:885:G:C8	2.19	0.77
1:A:297:G:H21	1:A:299:G:H3'	1.49	0.77
1:A:715:A:H2'	1:A:716:A:O4'	1.84	0.77
1:A:775:G:N3	1:A:776:G:N7	2.32	0.77
1:A:975:A:O2'	1:A:976:G:OP2	2.02	0.77
4:E:111:ARG:CA	4:E:111:ARG:HH11	1.91	0.77
4:E:91:PRO:HG2	4:E:155:LEU:HB2	1.66	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:108:ALA:O	7:H:112:LEU:HB2	1.84	0.77
7:H:118:ILE:C	7:H:119:LEU:HD23	2.05	0.77
8:I:52:ILE:CG2	8:I:53:ALA:H	1.97	0.77
8:I:78:GLU:O	8:I:81:ILE:HD12	1.82	0.77
9:J:69:VAL:HG21	9:J:104:LEU:CD2	2.14	0.77
10:K:6:ILE:HG13	10:K:85:ARG:NH2	1.99	0.77
11:L:101:PHE:O	11:L:102:LEU:HD23	1.84	0.77
11:L:116:LYS:N	11:L:116:LYS:HD3	2.00	0.77
11:L:6:GLY:HA2	11:L:83:ARG:HB3	1.66	0.77
13:N:42:TRP:HZ3	13:N:47:VAL:CG2	1.96	0.77
14:O:90:VAL:O	14:O:92:ASP:N	2.16	0.77
20:U:53:ARG:HG2	20:U:63:GLN:HE21	1.48	0.77
21:V:13:ASP:CA	21:V:16:LEU:HD22	2.14	0.77
3:D:56:C:H2'	3:D:57:G:O4'	1.85	0.77
1:A:1305:G:H5''	23:X:4:GLY:C	2.03	0.77
1:A:1536:C:H2'	1:A:1537:U:C6	2.19	0.77
1:A:21:G:N2	1:A:916:G:C5	2.51	0.77
1:A:233:C:O2'	1:A:234:C:H5'	1.84	0.77
1:A:491:G:OP1	6:G:151:LYS:HE2	1.85	0.77
1:A:862:C:C2	1:A:863:U:H5	2.02	0.77
2:C:60:U:H6	2:C:60:U:OP2	1.67	0.77
1:A:1103:C:HO2'	4:E:111:ARG:HD2	1.46	0.77
11:L:97:LYS:HB3	11:L:98:PRO:HD3	1.66	0.77
11:L:9:ARG:HD2	11:L:14:VAL:CG2	2.15	0.77
13:N:57:THR:CG2	13:N:60:ALA:H	1.96	0.77
13:N:15:ALA:HB1	13:N:78:GLN:HE22	1.47	0.77
18:S:73:LEU:O	18:S:73:LEU:HD13	1.84	0.77
1:A:307:C:C6	1:A:307:C:O5'	2.38	0.77
1:A:476:G:N2	1:A:477:G:H1'	1.99	0.77
4:E:182:ILE:CG2	4:E:183:PRO:HD2	2.14	0.77
4:E:46:LYS:HA	4:E:49:GLU:OE1	1.84	0.77
8:I:26:ILE:O	8:I:30:LEU:HD12	1.83	0.77
8:I:41:GLU:HB3	8:I:62:TRP:HE3	1.49	0.77
8:I:65:VAL:HG23	8:I:66:GLU:O	1.84	0.77
10:K:119:LEU:HB3	10:K:123:GLU:OE2	1.84	0.77
13:N:79:SER:CA	13:N:104:GLN:HE21	1.96	0.77
17:R:36:ILE:HG13	17:R:59:MET:SD	2.24	0.77
22:W:90:GLN:HA	22:W:93:GLU:OE1	1.84	0.77
7:H:30:ALA:O	7:H:45:PHE:HA	1.85	0.77
1:A:1160:G:O6	1:A:1181:G:N1	2.16	0.77
1:A:1505:G:H4'	1:A:1506:U:O5'	1.85	0.77
1:A:174:C:C2	1:A:175:C:C5	2.72	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:91:PRO:HG3	4:E:154:LEU:CB	2.14	0.77
4:E:213:LEU:HD22	4:E:214:ILE:CD1	2.14	0.77
4:E:79:ASP:O	4:E:83:MET:HG2	1.85	0.77
12:M:79:ARG:HH22	12:M:82:ILE:HG21	1.50	0.77
1:A:563:A:H2'	14:O:15:ARG:NH1	1.98	0.77
14:O:83:VAL:HG22	14:O:84:LEU:H	1.48	0.77
15:P:10:PRO:O	15:P:45:VAL:HG21	1.85	0.77
15:P:91:ARG:NH1	15:P:96:LEU:HD12	2.00	0.77
20:U:67:ALA:HA	20:U:70:ILE:CD1	2.12	0.77
22:W:63:ILE:HD11	22:W:80:ARG:HB3	1.67	0.77
1:A:197:A:C6	1:A:221:C:H4'	2.20	0.77
1:A:43:C:H5''	18:S:12:LYS:CB	2.13	0.77
1:A:693:G:O2'	1:A:694:A:H5'	1.84	0.77
4:E:180:LEU:O	4:E:181:PHE:HB2	1.83	0.77
4:E:61:LEU:HD23	4:E:62:ALA:N	2.00	0.77
5:F:70:VAL:O	5:F:105:GLU:HA	1.85	0.77
6:G:88:VAL:HG22	7:H:97:GLY:H	1.49	0.77
1:A:738:C:OP2	8:I:92:LYS:HE3	1.84	0.77
12:M:24:VAL:CA	12:M:34:VAL:HG21	2.12	0.77
12:M:30:SER:HB2	12:M:81:THR:HA	1.65	0.77
13:N:80:VAL:N	13:N:104:GLN:NE2	2.32	0.77
13:N:95:ILE:CA	13:N:98:LEU:HG	2.12	0.77
17:R:32:LEU:O	17:R:36:ILE:HB	1.85	0.77
17:R:54:ARG:HD3	17:R:55:GLY:N	1.99	0.77
22:W:21:LYS:HA	22:W:24:LEU:HD12	1.66	0.77
1:A:64:G:H4'	1:A:65:U:H5''	1.67	0.77
2:C:21:A:C6	2:C:46:G:N1	2.53	0.77
4:E:161:ALA:HA	4:E:183:PRO:CB	2.12	0.77
7:H:109:ILE:CG2	7:H:110:LEU:HD23	2.14	0.77
8:I:76:ALA:O	8:I:79:LEU:HG	1.84	0.77
1:A:1346:A:N1	9:J:10:ARG:HD3	2.00	0.77
15:P:10:PRO:HG2	15:P:18:ALA:HB1	1.67	0.77
20:U:86:VAL:O	20:U:87:ARG:CB	2.32	0.77
21:V:41:VAL:CB	21:V:42:PRO:HD2	2.09	0.77
22:W:36:LEU:HD21	22:W:55:ILE:CG2	2.14	0.77
1:A:342:C:H2'	1:A:343:U:H6	1.48	0.77
1:A:1371:G:H5''	11:L:68:GLY:HA3	1.66	0.77
1:A:1404:C:C1'	1:A:1499:A:C2	2.68	0.77
1:A:37:U:O2'	1:A:500:G:H4'	1.84	0.77
1:A:585:G:H4'	14:O:8:ASN:ND2	2.00	0.77
1:A:677:U:H2'	1:A:678:U:C5	2.18	0.77
6:G:53:ASP:O	6:G:56:VAL:HB	1.83	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:98:GLU:HA	6:G:103:ASN:HD21	1.50	0.77
9:J:28:ASN:O	9:J:31:MET:HB3	1.85	0.77
11:L:2:GLU:CA	11:L:21:PRO:HD2	2.15	0.77
13:N:14:VAL:O	13:N:16:SER:N	2.18	0.77
16:Q:40:CYS:HB2	16:Q:42:ILE:HG13	1.66	0.77
20:U:74:ARG:HG3	20:U:79:LEU:HD22	1.65	0.77
22:W:25:ARG:O	22:W:28:ALA:HB3	1.85	0.77
1:A:1336:C:H1'	1:A:1337:G:C6	2.20	0.77
1:A:154:C:O2'	1:A:155:C:H5'	1.85	0.77
1:A:21:G:C8	1:A:22:G:N7	2.53	0.77
1:A:20:U:H5'	1:A:572:A:N6	1.98	0.77
1:A:939:G:H2'	1:A:940:C:C6	2.19	0.77
2:C:9:G:N2	2:C:45:G:C8	2.53	0.77
4:E:14:GLY:O	4:E:15:VAL:HG13	1.85	0.77
4:E:23:ARG:HD3	4:E:24:TRP:N	2.00	0.77
4:E:69:LEU:HD22	4:E:91:PRO:C	2.06	0.77
11:L:47:LEU:HD21	11:L:50:LEU:HD13	1.65	0.77
11:L:73:GLN:O	11:L:77:ILE:HG13	1.85	0.77
3:D:55:U:H1'	3:D:58:A:N7	2.01	0.77
3:D:71:G:H2'	3:D:72:C:H6	1.48	0.77
1:A:1396:A:H4'	1:A:1397:C:H5''	1.65	0.76
1:A:32:A:N6	1:A:553:A:N6	2.32	0.76
1:A:383:A:C2'	1:A:384:G:H5'	2.15	0.76
1:A:607:A:H2'	1:A:608:A:O4'	1.85	0.76
1:A:727:G:C8	1:A:727:G:H3'	2.20	0.76
1:A:21:G:N2	1:A:915:A:N6	2.33	0.76
5:F:150:LYS:HA	5:F:169:ALA:CB	2.14	0.76
11:L:119:ALA:O	11:L:120:ARG:HG3	1.85	0.76
11:L:37:PHE:HE1	11:L:74:ILE:HG23	1.50	0.76
12:M:39:PRO:HA	12:M:70:ARG:HH11	1.50	0.76
13:N:110:ASP:HB2	20:U:88:LYS:HD2	1.65	0.76
19:T:59:ILE:HD11	19:T:71:PHE:CB	2.15	0.76
22:W:13:LEU:HD13	22:W:17:ARG:HH22	1.50	0.76
1:A:1025:U:H2'	1:A:1026:G:N7	2.00	0.76
1:A:1382:C:H2'	1:A:1383:C:H6	1.50	0.76
1:A:386:C:H2'	1:A:387:U:H5'	1.67	0.76
1:A:1256:A:H61	1:A:1278:U:C2'	1.98	0.76
1:A:1333:A:O2'	1:A:1334:G:H5'	1.84	0.76
1:A:698:G:H2'	1:A:699:C:H6	1.50	0.76
1:A:776:G:H5''	1:A:777:A:OP1	1.86	0.76
1:A:900:A:H2'	1:A:901:A:C8	2.20	0.76
4:E:71:VAL:HG22	4:E:93:VAL:N	2.00	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:59:ARG:CA	6:G:59:ARG:CZ	2.57	0.76
8:I:50:TYR:OH	20:U:77:GLY:HA2	1.85	0.76
14:O:27:LEU:O	14:O:28:LYS:C	2.22	0.76
15:P:67:GLU:HG3	15:P:68:GLY:H	1.48	0.76
3:D:52:G:H2'	3:D:53:G:O4'	1.85	0.76
1:A:1197:G:C2'	1:A:1198:G:H5'	2.14	0.76
1:A:1205:U:H2'	1:A:1206:G:H8	1.50	0.76
1:A:1464:G:H2'	1:A:1465:C:H5	1.50	0.76
4:E:185:ILE:HG22	4:E:199:TYR:CB	2.11	0.76
4:E:87:ARG:HD3	4:E:234:PRO:HD3	1.67	0.76
9:J:107:ALA:HB3	9:J:123:GLU:OE1	1.85	0.76
9:J:15:ASP:OD1	9:J:18:TYR:HB2	1.86	0.76
9:J:26:PHE:HE1	9:J:105:VAL:HG22	1.49	0.76
1:A:826:C:H5'	10:K:12:ARG:NH2	1.99	0.76
11:L:17:VAL:CA	11:L:63:ILE:HG23	2.11	0.76
12:M:8:LEU:HD22	12:M:94:VAL:CG1	2.15	0.76
15:P:25:ILE:HG23	15:P:29:ARG:HB3	1.67	0.76
1:A:17:U:H2'	1:A:18:C:C6	2.21	0.76
1:A:266:G:H21	1:A:269:C:N4	1.83	0.76
1:A:93:U:H2'	1:A:95:G:H8	1.49	0.76
1:A:953:G:H2'	1:A:954:G:H8	1.51	0.76
2:C:5:G:O2'	2:C:6:G:H5'	1.86	0.76
3:D:41:G:C8	3:D:41:G:H5'	2.20	0.76
4:E:115:LEU:HB2	4:E:145:LEU:CD1	2.16	0.76
4:E:68:ILE:HB	4:E:70:PHE:CZ	2.20	0.76
5:F:113:ALA:HB2	5:F:202:ILE:HG13	1.67	0.76
7:H:16:THR:O	7:H:26:PHE:HB2	1.85	0.76
9:J:42:ILE:HG22	9:J:120:ILE:CD1	2.14	0.76
9:J:11:GLN:HE22	9:J:12:LEU:HD12	1.50	0.76
15:P:14:ARG:HG2	15:P:17:VAL:CG2	2.15	0.76
15:P:98:VAL:HG23	15:P:110:ARG:HH21	1.50	0.76
1:A:1064:G:H1'	1:A:1066:C:N3	2.00	0.76
1:A:1182:G:OP1	1:A:1184:G:H4'	1.84	0.76
1:A:1364:U:O2'	1:A:1365:G:OP1	2.04	0.76
1:A:322:C:O2'	1:A:323:U:H5'	1.85	0.76
1:A:44:G:C6	1:A:399:G:C6	2.74	0.76
4:E:178:ARG:NH2	4:E:196:LEU:O	2.18	0.76
4:E:96:ARG:H	4:E:96:ARG:HD2	1.49	0.76
8:I:37:VAL:HA	8:I:65:VAL:CG1	2.15	0.76
15:P:11:ARG:HG3	15:P:12:ASN:N	2.01	0.76
15:P:96:LEU:O	15:P:98:VAL:HG23	1.86	0.76
17:R:26:GLU:N	17:R:26:GLU:CD	2.39	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:36:ILE:CD1	17:R:63:ARG:HD3	2.16	0.76
17:R:7:GLU:HA	17:R:10:LYS:HG2	1.67	0.76
19:T:67:LYS:HA	19:T:70:ARG:CZ	2.15	0.76
20:U:72:ARG:HA	20:U:75:ILE:HD12	1.68	0.76
21:V:40:ILE:HG12	21:V:71:LEU:HD23	1.68	0.76
4:E:131:PRO:HB2	4:E:134:GLU:HG2	1.67	0.76
1:A:1068:G:O2'	1:A:1069:C:H5'	1.86	0.76
1:A:1101:A:H4'	1:A:1102:A:O5'	1.85	0.76
1:A:22:G:H2'	1:A:23:C:C6	2.19	0.76
1:A:279:A:N3	1:A:281:G:N2	2.34	0.76
6:G:26:CYS:O	6:G:33:MET:HG3	1.84	0.76
9:J:66:VAL:HG12	9:J:70:LYS:HE2	1.67	0.76
1:A:1236:A:H5'	1:A:1305:G:OP1	1.85	0.76
1:A:1336:C:O2	1:A:1336:C:H2'	1.85	0.76
1:A:1464:G:H2'	1:A:1465:C:C5	2.19	0.76
1:A:279:A:H1'	1:A:281:G:C4	2.19	0.76
1:A:109:A:N7	1:A:326:G:N3	2.34	0.76
1:A:821:G:H2'	1:A:822:C:H6	1.50	0.76
1:A:887:G:H2'	1:A:888:G:H8	1.50	0.76
4:E:84:GLU:OE2	4:E:219:VAL:HG21	1.85	0.76
5:F:11:ARG:CD	5:F:16:ARG:HH21	1.97	0.76
5:F:35:GLU:HA	5:F:38:ARG:HG2	1.67	0.76
6:G:50:ARG:HH12	6:G:52:SER:HA	1.48	0.76
8:I:23:LYS:CA	8:I:26:ILE:HD12	2.14	0.76
9:J:29:LYS:NZ	9:J:102:ARG:HB2	2.00	0.76
9:J:69:VAL:HG11	9:J:104:LEU:HD21	1.68	0.76
10:K:86:ILE:HB	10:K:133:LEU:O	1.84	0.76
1:A:1177:G:P	11:L:93:ARG:HH21	2.09	0.76
12:M:6:ILE:HD11	12:M:72:VAL:CB	2.14	0.76
13:N:91:ARG:O	13:N:95:ILE:HG13	1.86	0.76
20:U:73:ALA:O	20:U:79:LEU:HD11	1.85	0.76
3:D:55:U:O3'	3:D:57:G:O6	2.02	0.76
1:A:110:C:H2'	1:A:111:G:O4'	1.86	0.76
1:A:1277:C:C4'	1:A:1282:C:H1'	2.15	0.76
1:A:1401:G:O2'	1:A:1402:C:H5'	1.86	0.76
1:A:891:U:H5	1:A:906:G:C2	2.04	0.76
5:F:91:LEU:HD23	5:F:91:LEU:C	2.06	0.76
7:H:76:ILE:HG21	7:H:142:LEU:HD13	1.67	0.76
10:K:126:LYS:HD2	10:K:126:LYS:C	2.05	0.76
13:N:82:VAL:HB	13:N:108:ILE:HG12	1.67	0.76
14:O:93:LEU:CD1	14:O:96:VAL:HG21	2.14	0.76
17:R:70:LEU:O	17:R:70:LEU:HD12	1.85	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:56:VAL:HB	19:T:78:GLU:HB3	1.67	0.76
1:A:192:U:C2	1:A:193:C:C5	2.73	0.76
1:A:34:C:O2'	1:A:35:G:H5'	1.85	0.76
1:A:582:U:H5'	17:R:64:ARG:HH21	1.49	0.76
1:A:675:A:H2'	1:A:676:A:C8	2.20	0.76
4:E:69:LEU:C	4:E:69:LEU:HD13	2.05	0.76
5:F:73:PRO:O	5:F:76:VAL:HB	1.85	0.76
7:H:87:SER:HB3	7:H:131:ILE:CG1	2.16	0.76
8:I:62:TRP:HB3	20:U:35:ARG:HH12	1.51	0.76
9:J:16:LEU:O	9:J:17:VAL:HG23	1.84	0.76
1:A:1135:U:H4'	1:A:1136:U:H5	1.51	0.76
1:A:1234:C:H5'	1:A:1364:U:O2'	1.85	0.76
1:A:186:C:O2'	1:A:186(A):C:H5'	1.86	0.76
1:A:507:C:OP2	1:A:508:C:H3'	1.86	0.76
1:A:65:U:H4'	1:A:66:G:C5'	2.15	0.76
1:A:683:G:H2'	1:A:684:A:C8	2.21	0.76
1:A:764:C:C3'	1:A:765:G:C8	2.69	0.76
1:A:800:G:C8	1:A:800:G:O5'	2.37	0.76
5:F:173:VAL:HG12	5:F:175:LEU:HD12	1.67	0.76
6:G:152:SER:O	6:G:154:ASN:N	2.18	0.76
6:G:160:GLN:O	6:G:163:GLU:HB3	1.85	0.76
13:N:15:ALA:O	13:N:79:SER:HB3	1.85	0.76
18:S:42:ARG:C	18:S:43:LYS:HD2	2.06	0.76
20:U:61:LYS:O	20:U:65:ILE:HG12	1.86	0.76
20:U:77:GLY:C	20:U:79:LEU:HD12	2.06	0.76
20:U:74:ARG:HG3	20:U:79:LEU:CD2	2.15	0.76
20:U:74:ARG:CA	20:U:79:LEU:HD21	2.16	0.76
22:W:91:LEU:HD23	22:W:91:LEU:H	1.52	0.76
3:D:61:C:O2'	3:D:62:C:H5'	1.86	0.76
1:A:1246:C:O2'	1:A:1247:U:H5'	1.86	0.75
1:A:1521:G:H2'	1:A:1522:U:C6	2.22	0.75
1:A:551:U:H5'	14:O:119:LYS:NZ	2.00	0.75
1:A:690:G:N3	1:A:690:G:H2'	2.00	0.75
1:A:674:G:H1	1:A:716:A:N6	1.84	0.75
1:A:781:A:C2'	1:A:782:A:H5'	2.15	0.75
6:G:125:HIS:HB3	6:G:152:SER:CB	2.16	0.75
1:A:15:G:H4'	7:H:24:ARG:NH2	2.00	0.75
15:P:88:ARG:HG2	15:P:98:VAL:CG1	2.15	0.75
3:D:64:C:C2	3:D:65:U:C5	2.74	0.75
3:D:6:G:H2'	3:D:7:G:H8	1.49	0.75
1:A:1226:C:O2'	1:A:1227:A:OP1	2.02	0.75
1:A:1413:A:O2'	1:A:1414:U:H5'	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:174:C:H2'	1:A:175:C:C6	2.19	0.75
1:A:576:G:C8	1:A:881:G:H1'	2.21	0.75
1:A:894:G:C4	1:A:895:G:C8	2.74	0.75
2:C:19:G:H3'	2:C:20:U:O4	1.86	0.75
4:E:91:PRO:CG	4:E:155:LEU:H	2.00	0.75
4:E:27:LYS:C	4:E:194:PRO:HG2	2.06	0.75
8:I:20:ALA:O	8:I:24:GLU:HG3	1.86	0.75
9:J:35:LYS:HG2	9:J:37:ASN:ND2	1.97	0.75
10:K:14:ARG:O	10:K:18:ARG:HD2	1.86	0.75
10:K:80:ILE:H	10:K:80:ILE:HD12	1.50	0.75
14:O:51:ALA:C	14:O:52:LEU:HD23	2.06	0.75
18:S:21:VAL:HG13	18:S:36:ILE:HD11	1.66	0.75
1:A:255:G:H1'	19:T:16:GLN:NE2	2.01	0.75
19:T:43:LEU:C	19:T:43:LEU:HD13	2.05	0.75
22:W:53:LEU:HB2	22:W:100:ILE:HG13	1.68	0.75
1:A:1148:U:H2'	1:A:1148:U:O2	1.86	0.75
1:A:1352:C:H2'	1:A:1353:G:C8	2.21	0.75
1:A:1347:G:H22	1:A:1373:G:H3'	1.52	0.75
1:A:64:G:H4'	1:A:65:U:C5'	2.15	0.75
1:A:967:C:O5'	1:A:967:C:H6	1.68	0.75
4:E:48:MET:HA	4:E:51:LEU:HD12	1.69	0.75
7:H:51:VAL:HB	7:H:52:PRO:CD	2.17	0.75
9:J:27:ILE:HG12	9:J:43:PHE:CD1	2.22	0.75
11:L:16:ARG:CG	11:L:18:PHE:HE1	1.98	0.75
16:Q:58:LYS:HD3	16:Q:59:ALA:H	1.49	0.75
17:R:78:TYR:CE2	17:R:82:ILE:HD11	2.21	0.75
18:S:19:ILE:HB	18:S:37:GLY:O	1.87	0.75
19:T:5:VAL:CG2	19:T:60:ILE:HA	2.04	0.75
20:U:74:ARG:HB3	20:U:81:PHE:HD2	1.51	0.75
22:W:49:ALA:HB3	22:W:99:LEU:CG	2.15	0.75
1:A:337:C:H2'	1:A:338:A:C8	2.22	0.75
1:A:259:G:H5''	22:W:83:ARG:HH22	1.51	0.75
1:A:874:G:C2'	1:A:875:C:H5'	2.16	0.75
4:E:23:ARG:HH11	4:E:24:TRP:N	1.83	0.75
6:G:173:TRP:HD1	6:G:185:PHE:HE2	1.34	0.75
7:H:109:ILE:HG22	7:H:110:LEU:N	2.01	0.75
8:I:14:LEU:HD13	8:I:15:ASP:H	1.51	0.75
9:J:94:ARG:NH1	9:J:94:ARG:HG3	1.99	0.75
10:K:82:HIS:O	10:K:137:VAL:CA	2.32	0.75
10:K:82:HIS:O	10:K:137:VAL:HG13	1.86	0.75
22:W:23:ARG:C	22:W:26:ASN:HD21	1.89	0.75
1:A:1329:A:H5'	15:P:29:ARG:HE	1.51	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1361:G:N7	1:A:1362:C:C5	2.54	0.75
1:A:937:A:H1'	1:A:1379:G:H22	1.50	0.75
1:A:355:C:H1'	1:A:388:G:H2'	1.68	0.75
1:A:356:A:O2'	1:A:357:G:H5'	1.86	0.75
1:A:937:A:H62	1:A:938:A:N6	1.85	0.75
1:A:948:C:O2'	1:A:949:A:H5'	1.86	0.75
5:F:50:ALA:HB1	5:F:72:LYS:HB2	1.69	0.75
6:G:31:CYS:O	6:G:33:MET:HG2	1.86	0.75
9:J:86:GLN:HB2	9:J:148:ASN:ND2	2.02	0.75
9:J:64:GLN:HB3	9:J:128:ALA:CB	2.14	0.75
10:K:89:PRO:HA	10:K:92:ARG:HE	1.51	0.75
1:A:1343:G:O2'	11:L:121:ARG:HA	1.86	0.75
13:N:102:GLY:CA	13:N:105:VAL:HG23	2.16	0.75
14:O:83:VAL:CG2	14:O:104:VAL:HB	2.17	0.75
14:O:76:ASN:C	14:O:77:LEU:HG	2.06	0.75
15:P:56:LEU:O	15:P:59:TYR:HB3	1.86	0.75
16:Q:40:CYS:N	16:Q:43:CYS:SG	2.55	0.75
20:U:47:THR:HB	20:U:49:LYS:HE3	1.68	0.75
1:A:1047:G:H5''	16:Q:4:LYS:CD	2.07	0.75
1:A:259:G:H2'	1:A:260:G:C8	2.21	0.75
1:A:96:G:H2'	1:A:97:U:C6	2.22	0.75
4:E:17:PHE:C	4:E:42:ILE:HG22	2.07	0.75
6:G:74:GLN:HA	6:G:77:ASN:HD22	1.51	0.75
9:J:29:LYS:HZ3	9:J:102:ARG:HE	1.33	0.75
9:J:94:ARG:HG3	9:J:94:ARG:HH11	1.51	0.75
13:N:92:GLU:OE2	13:N:96:ARG:HB2	1.85	0.75
14:O:55:VAL:O	14:O:70:ILE:HD11	1.86	0.75
15:P:36:LYS:HB3	15:P:59:TYR:OH	1.87	0.75
22:W:43:LEU:HD23	22:W:46:GLU:OE2	1.86	0.75
1:A:1144:G:H22	1:A:1146:A:H62	1.31	0.75
1:A:1196:U:C5'	1:A:1197:G:H5'	2.16	0.75
1:A:1269:A:C8	1:A:1270:C:H1'	2.22	0.75
1:A:66:G:C4'	1:A:173:U:C4	2.70	0.75
1:A:264:U:H2'	1:A:264:U:O2	1.87	0.75
1:A:408:A:H2'	1:A:409:G:C8	2.22	0.75
1:A:483:C:N4	1:A:484:G:C2	2.55	0.75
1:A:949:A:H1'	1:A:1364:U:H3	1.50	0.75
8:I:12:PRO:HG2	8:I:13:ASN:HD22	1.48	0.75
8:I:75:LEU:HD23	8:I:78:GLU:HB3	1.67	0.75
10:K:12:ARG:CD	10:K:26:VAL:HG23	2.15	0.75
17:R:54:ARG:HE	17:R:58:MET:CE	2.00	0.75
1:A:1192:C:C3'	1:A:1192:C:C6	2.60	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1292:U:H2'	1:A:1293:G:C8	2.22	0.75
1:A:1347:G:O2'	1:A:1348:U:OP2	2.04	0.75
1:A:1407:C:N3	1:A:1494:G:N2	2.35	0.75
1:A:410:G:H1'	1:A:432:A:N6	2.00	0.75
1:A:718:G:N7	1:A:719:C:N4	2.35	0.75
1:A:781:A:H2'	1:A:782:A:C5'	2.17	0.75
1:A:900:A:H2'	1:A:901:A:H8	1.52	0.75
4:E:16:HIS:CE1	4:E:210:SER:HA	2.22	0.75
7:H:39:GLY:O	7:H:69:VAL:HG23	1.86	0.75
7:H:96:PRO:O	7:H:98:THR:N	2.20	0.75
9:J:64:GLN:HG3	9:J:128:ALA:O	1.87	0.75
15:P:50:GLU:O	15:P:54:VAL:HG23	1.87	0.75
20:U:53:ARG:NH2	20:U:60:GLY:N	2.35	0.75
1:A:1004:A:H2'	1:A:1036:G:C6	2.21	0.75
1:A:1402:C:H2'	1:A:1403:C:H6	1.50	0.75
1:A:15:G:H2'	1:A:16:A:H8	1.48	0.75
1:A:173:U:H4'	1:A:197:A:N3	2.02	0.75
1:A:263:A:H2'	1:A:264:U:C5'	2.05	0.75
1:A:299:G:H2'	1:A:300:A:C8	2.22	0.75
1:A:301:G:N2	1:A:302:G:H1'	2.00	0.75
1:A:858:G:H22	1:A:869:G:C3'	2.00	0.75
1:A:923:A:H2'	1:A:924:C:C6	2.21	0.75
2:C:31:G:OP1	11:L:127:LYS:HE3	1.86	0.75
4:E:17:PHE:CD1	4:E:18:GLY:N	2.52	0.75
4:E:28:PHE:CE1	4:E:31:TYR:CB	2.70	0.75
5:F:88:ARG:NE	5:F:101:LEU:H	1.84	0.75
5:F:193:TYR:HD2	5:F:193:TYR:H	1.35	0.75
6:G:38:TYR:HB2	6:G:39:PRO:HD2	1.68	0.75
20:U:56:THR:HB	20:U:58:LEU:HD12	1.69	0.75
21:V:46:GLY:H	21:V:62:ILE:HG23	1.52	0.75
1:A:1026:G:N7	1:A:1027:C:C5	2.55	0.75
4:E:127:ILE:HG22	4:E:128:GLU:H	1.52	0.75
1:A:1405:G:O4'	1:A:1519:A:H4'	1.86	0.74
1:A:407:G:O4'	6:G:119:GLN:OE1	2.05	0.74
1:A:686:U:O2	13:N:42:TRP:HZ2	1.70	0.74
1:A:946:A:C2'	1:A:947:G:H8	1.91	0.74
6:G:59:ARG:NH1	6:G:59:ARG:CA	2.46	0.74
7:H:86:ALA:O	7:H:125:SER:CB	2.35	0.74
9:J:20:ASP:HB3	9:J:23:VAL:HG23	1.69	0.74
14:O:56:ALA:HB2	14:O:70:ILE:HG12	1.67	0.74
15:P:90:LEU:O	15:P:93:ARG:N	2.20	0.74
21:V:50:ALA:HA	21:V:58:VAL:O	1.86	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:X:21:TYR:O	23:X:22:ARG:HB2	1.85	0.74
14:O:72:GLY:HA3	14:O:102:ARG:HD2	1.68	0.74
1:A:274:A:O2'	1:A:275:G:C1'	2.35	0.74
1:A:278:G:O2'	1:A:282:A:H1'	1.87	0.74
1:A:517:G:H5'	1:A:519:C:C4	2.22	0.74
1:A:553:A:H2'	1:A:554:C:H6	1.48	0.74
1:A:20:U:C6	1:A:572:A:C2	2.75	0.74
1:A:76:G:H2'	1:A:77:C:C6	2.22	0.74
4:E:97:TRP:CZ2	4:E:102:LEU:HD13	2.20	0.74
4:E:178:ARG:HD3	4:E:196:LEU:HD13	1.67	0.74
9:J:43:PHE:O	9:J:46:ALA:HB3	1.86	0.74
10:K:85:ARG:HG2	10:K:85:ARG:HH11	1.52	0.74
11:L:118:LYS:HB2	11:L:121:ARG:CB	2.17	0.74
1:A:1205:U:H4'	5:F:195:VAL:CG1	2.16	0.74
1:A:300:A:H2'	1:A:301:G:H5'	1.68	0.74
1:A:373:A:H2'	1:A:374:A:H8	1.52	0.74
1:A:703:G:O5'	1:A:703:G:H8	1.70	0.74
2:C:44:A:N1	2:C:45:G:N3	2.34	0.74
5:F:130:VAL:O	5:F:134:ILE:HD13	1.87	0.74
6:G:190:ASP:O	6:G:194:LEU:HD23	1.85	0.74
1:A:1346:A:C2	9:J:10:ARG:HD3	2.21	0.74
10:K:112:LEU:HB2	10:K:133:LEU:HA	1.69	0.74
10:K:6:ILE:HD12	10:K:85:ARG:NH1	2.02	0.74
13:N:68:ALA:HA	13:N:71:LYS:HD3	1.69	0.74
14:O:32:PHE:CB	14:O:84:LEU:HD21	2.17	0.74
18:S:32:TYR:HE2	18:S:35:LYS:CB	2.00	0.74
20:U:74:ARG:HA	20:U:79:LEU:CD1	2.17	0.74
21:V:36:ARG:HA	21:V:71:LEU:HD13	1.68	0.74
22:W:49:ALA:O	22:W:53:LEU:HG	1.86	0.74
1:A:1415:G:O2'	1:A:1416:G:H5'	1.87	0.74
1:A:186(A):C:H1'	22:W:104:LEU:CD2	2.13	0.74
1:A:572:A:O5'	1:A:573:A:P	2.45	0.74
1:A:714:G:H1'	1:A:777:A:C8	2.22	0.74
1:A:968:A:H4'	1:A:969:A:OP2	1.87	0.74
4:E:149:LEU:O	4:E:149:LEU:HD23	1.87	0.74
8:I:33:TYR:HB2	8:I:75:LEU:HD12	1.69	0.74
8:I:53:ALA:HB2	8:I:86:ARG:HD2	1.70	0.74
9:J:137:LYS:O	9:J:140:ASP:HB2	1.87	0.74
10:K:40:ALA:O	10:K:43:GLY:N	2.19	0.74
11:L:79:LEU:CD1	11:L:101:PHE:HB3	2.15	0.74
13:N:41:THR:HB	13:N:71:LYS:CE	2.13	0.74
5:F:8:ILE:HG21	16:Q:50:LYS:O	1.87	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:190:G:H8	1:A:190:G:OP1	1.71	0.74
1:A:173:U:C5'	1:A:197:A:C1'	2.62	0.74
4:E:184:VAL:C	4:E:198:ASP:HB2	2.06	0.74
4:E:189:ASP:OD1	4:E:205:ASP:OD1	2.05	0.74
6:G:102:ASP:HB2	6:G:136:PRO:CA	2.18	0.74
13:N:54:ARG:HG3	13:N:54:ARG:NH1	2.01	0.74
13:N:48:ILE:HD11	13:N:64:ALA:HA	1.69	0.74
14:O:28:LYS:HD2	14:O:33:ARG:NH2	2.02	0.74
14:O:28:LYS:HG3	14:O:33:ARG:HH12	1.53	0.74
1:A:101:A:O2'	1:A:102:G:H5'	1.85	0.74
1:A:1200:C:H3'	1:A:1201:A:C5'	2.15	0.74
1:A:1403:C:C1'	1:A:1500:A:N1	2.50	0.74
1:A:306:G:H2'	1:A:307:C:H6	1.48	0.74
1:A:333:G:H4'	22:W:16:HIS:NE2	2.02	0.74
1:A:510:A:O2'	1:A:542:G:O2'	2.05	0.74
1:A:610:G:N2	1:A:611:A:H1'	2.03	0.74
1:A:828:A:N6	1:A:858:G:O2'	2.20	0.74
1:A:643:C:H5'	10:K:31:PHE:CE1	2.22	0.74
10:K:9:MET:O	10:K:10:LEU:C	2.26	0.74
15:P:64:TRP:O	15:P:65:LYS:HG3	1.85	0.74
1:A:1309:G:OP1	15:P:88:ARG:NH1	2.20	0.74
3:D:73:A:H2	3:D:74:C:O4'	1.71	0.74
1:A:1189:C:H5''	5:F:5:ILE:CG1	2.13	0.74
1:A:1306:A:N6	1:A:1331:G:H1'	2.03	0.74
1:A:1431:C:O2'	1:A:1432:G:H5'	1.88	0.74
1:A:1529:G:H4'	1:A:1530:G:OP2	1.88	0.74
1:A:250:A:H4'	1:A:251:G:O5'	1.87	0.74
1:A:728:A:H8	17:R:54:ARG:NH2	1.84	0.74
1:A:93:U:H2'	1:A:95:G:C8	2.22	0.74
2:C:6:G:H2'	2:C:7:G:H8	1.52	0.74
4:E:115:LEU:HD13	4:E:145:LEU:CB	2.08	0.74
7:H:56:GLN:N	7:H:56:GLN:HE21	1.85	0.74
9:J:111:ARG:NH1	9:J:111:ARG:HB3	2.02	0.74
20:U:43:PHE:C	20:U:51:LEU:HD13	2.07	0.74
21:V:18:LYS:CA	21:V:18:LYS:HE3	2.16	0.74
1:A:333:G:H4'	22:W:16:HIS:CD2	2.23	0.74
1:A:186(B):C:H4'	22:W:89:ARG:NH1	2.02	0.74
3:D:9:A:H5''	3:D:10:G:OP2	1.88	0.74
3:D:71:G:H2'	3:D:72:C:C6	2.23	0.74
1:A:747:C:H2'	1:A:748:C:C1'	2.17	0.74
1:A:1210:C:H2'	1:A:1211:U:C6	2.23	0.74
1:A:1252:A:C6	1:A:1253:G:N7	2.56	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1292:U:H2'	1:A:1293:G:H8	1.53	0.74
1:A:1501:C:H2'	1:A:1504:G:O6	1.86	0.74
1:A:34:C:H2'	1:A:35:G:H8	1.51	0.74
1:A:540:G:H21	6:G:42:GLN:NE2	1.85	0.74
5:F:147:LYS:HB2	5:F:203:PHE:CD2	2.22	0.74
5:F:82:GLU:OE1	5:F:83:ARG:N	2.18	0.74
6:G:126:ILE:HG22	6:G:126:ILE:O	1.87	0.74
6:G:78:LEU:HD11	6:G:96:LEU:CB	2.16	0.74
7:H:79:GLU:CG	7:H:93:PRO:HD2	2.17	0.74
8:I:6:VAL:HG12	8:I:63:TYR:O	1.88	0.74
9:J:132:GLY:O	9:J:136:LYS:CB	2.31	0.74
9:J:75:VAL:CG2	9:J:88:PRO:HB3	2.17	0.74
12:M:6:ILE:HG22	12:M:98:ILE:CG1	2.17	0.74
14:O:41:ARG:HH12	14:O:57:LYS:HE3	1.51	0.74
14:O:57:LYS:HG2	14:O:67:THR:HG22	1.68	0.74
15:P:84:ILE:HG13	15:P:85:GLY:H	1.53	0.74
18:S:73:LEU:HD13	18:S:73:LEU:C	2.07	0.74
1:A:748:C:O5'	1:A:748:C:C6	2.41	0.74
1:A:1129:C:O2	1:A:1131:G:O6	2.06	0.74
1:A:171:A:O2'	1:A:172:A:H5'	1.88	0.74
1:A:563:A:H1'	1:A:566:G:O2'	1.87	0.74
1:A:684:A:H4'	13:N:12:ARG:HH12	1.52	0.74
1:A:909:A:C2'	1:A:910:C:H5'	2.17	0.74
7:H:63:ARG:O	7:H:66:MET:HG2	1.88	0.74
9:J:69:VAL:CG1	9:J:104:LEU:HD21	2.16	0.74
1:A:691:G:O6	13:N:55:LYS:HE2	1.87	0.74
14:O:53:ARG:HB3	14:O:69:TYR:CE1	2.21	0.74
14:O:85:ILE:CD1	14:O:98:TYR:HB3	2.13	0.74
19:T:40:LYS:HB3	19:T:42:TYR:HE1	1.51	0.74
1:A:1004:A:H5''	1:A:1025:U:C5	2.23	0.74
1:A:1005:A:H1'	1:A:1036:G:N2	2.02	0.74
1:A:1214:C:O2'	1:A:1215:G:OP1	2.03	0.74
1:A:1259:C:O2	1:A:1283:G:H1'	1.87	0.74
1:A:321:A:H5'	1:A:1435:G:O2'	1.88	0.74
1:A:517:G:N2	1:A:533:A:OP2	2.21	0.74
1:A:818:G:C3'	1:A:819:A:H5''	2.18	0.74
4:E:234:PRO:O	4:E:238:LEU:HD22	1.88	0.74
5:F:123:GLN:HB3	5:F:128:PHE:CE2	2.23	0.74
5:F:52:LEU:HA	5:F:70:VAL:HG22	1.70	0.74
7:H:57:LYS:HG2	7:H:61:TYR:HE2	1.53	0.74
9:J:113:GLU:OE1	9:J:118:VAL:HG12	1.88	0.74
11:L:67:GLY:N	11:L:73:GLN:HE21	1.86	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:31:LEU:HA	17:R:34:LEU:CD2	2.16	0.74
19:T:57:VAL:HG23	19:T:58:GLU:N	2.01	0.74
19:T:67:LYS:HA	19:T:70:ARG:HH22	1.52	0.74
19:T:97:SER:O	19:T:98:LEU:HD13	1.87	0.74
21:V:52:TYR:OH	21:V:55:LYS:HA	1.88	0.74
22:W:39:LYS:O	22:W:42:GLN:HB2	1.88	0.74
1:A:1087:G:H2'	1:A:1088:G:C8	2.23	0.73
1:A:1113:C:O2'	1:A:1114:C:H5'	1.88	0.73
1:A:235:C:H2'	1:A:236:G:H8	1.52	0.73
1:A:594:G:C5	1:A:595:G:N3	2.55	0.73
1:A:730:G:N7	1:A:731:G:H1'	2.03	0.73
1:A:787:A:H2'	1:A:788:U:C5'	2.17	0.73
2:C:62:C:C2'	2:C:63:G:O5'	2.36	0.73
4:E:213:LEU:CD2	4:E:214:ILE:HD13	2.16	0.73
4:E:40:HIS:C	4:E:41:ILE:HD12	2.08	0.73
5:F:118:GLN:O	5:F:121:ALA:HB3	1.88	0.73
6:G:57:ARG:HH22	7:H:107:ARG:CD	1.98	0.73
9:J:87:VAL:HG21	9:J:154:TYR:HB2	1.70	0.73
11:L:49:PRO:HD3	11:L:78:LYS:HZ3	1.50	0.73
13:N:84:VAL:HG21	13:N:110:ASP:HA	1.69	0.73
14:O:117:ARG:HH22	14:O:124:LYS:CG	2.01	0.73
14:O:84:LEU:HB3	14:O:104:VAL:CG1	2.14	0.73
16:Q:27:CYS:H	16:Q:43:CYS:CB	2.01	0.73
22:W:13:LEU:H	22:W:13:LEU:CD1	1.91	0.73
1:A:1302:U:H2'	1:A:1303:C:H5'	1.67	0.73
1:A:1376:U:H3	1:A:1377:A:N6	1.84	0.73
1:A:1483:A:O2'	1:A:1484:C:H5'	1.87	0.73
1:A:1495:U:O2'	1:A:1496:C:H5'	1.88	0.73
1:A:728:A:C8	17:R:54:ARG:CZ	2.70	0.73
1:A:878:G:H2'	1:A:879:C:H6	1.50	0.73
7:H:35:GLY:HA3	7:H:41:VAL:CG1	2.18	0.73
18:S:67:THR:O	18:S:70:ALA:HB3	1.88	0.73
19:T:66:SER:HB3	19:T:69:LYS:HB3	1.70	0.73
19:T:59:ILE:CD1	19:T:72:ARG:O	2.36	0.73
1:A:112:G:H4'	1:A:389:A:H5''	1.70	0.73
1:A:1268:A:H2	1:A:1311:G:H21	1.33	0.73
1:A:1500:A:H2'	1:A:1501:C:C6	2.23	0.73
1:A:862:C:H1'	1:A:874:G:C5'	2.18	0.73
1:A:572:A:HO2'	1:A:916:G:HO2'	1.30	0.73
2:C:31:G:P	11:L:127:LYS:HE3	2.28	0.73
4:E:115:LEU:HB2	4:E:145:LEU:CG	2.18	0.73
4:E:222:ILE:O	4:E:226:ARG:CB	2.36	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:28:PHE:CE1	4:E:31:TYR:HB2	2.22	0.73
5:F:179:ARG:HD2	5:F:179:ARG:O	1.87	0.73
6:G:128:VAL:HG12	6:G:129:ASN:N	2.02	0.73
6:G:93:PHE:O	6:G:94:LEU:C	2.24	0.73
7:H:107:ARG:O	7:H:111:GLU:HG2	1.88	0.73
9:J:75:VAL:HG22	9:J:88:PRO:CA	2.18	0.73
11:L:45:ALA:HB3	11:L:74:ILE:CG2	2.19	0.73
15:P:13:LYS:HB3	15:P:17:VAL:HB	1.69	0.73
22:W:57:ARG:HE	22:W:100:ILE:HD12	1.51	0.73
1:A:1185:G:C2	1:A:1186:G:H1'	2.23	0.73
1:A:1329:A:C5'	15:P:29:ARG:NE	2.51	0.73
1:A:489:C:H2'	1:A:490:G:H8	1.54	0.73
1:A:656:C:C2'	1:A:657:G:H5'	2.18	0.73
1:A:697:U:O5'	1:A:697:U:H6	1.70	0.73
6:G:19:LEU:N	6:G:33:MET:HE1	1.97	0.73
8:I:14:LEU:CD1	8:I:15:ASP:H	2.02	0.73
9:J:155:ARG:O	9:J:156:TRP:HE3	1.72	0.73
10:K:45:ILE:CD1	10:K:48:TYR:HB3	2.17	0.73
12:M:48:THR:HG23	12:M:61:GLU:O	1.88	0.73
12:M:65:LEU:HD12	16:Q:56:VAL:HG22	1.70	0.73
15:P:2:ALA:HB3	15:P:4:ILE:HD11	1.70	0.73
19:T:29:HIS:CE1	19:T:31:LEU:H	2.06	0.73
19:T:36:ILE:HG12	19:T:36:ILE:O	1.88	0.73
21:V:31:ILE:O	21:V:33:THR:HG23	1.88	0.73
22:W:36:LEU:C	22:W:36:LEU:HD23	2.08	0.73
1:A:1016:A:O5'	1:A:1016:A:H8	1.72	0.73
1:A:127:G:HO2'	19:T:2:PRO:N	1.86	0.73
1:A:1433:A:O2'	1:A:1434:A:H5'	1.88	0.73
1:A:313:A:H2'	1:A:314:C:C5	2.24	0.73
1:A:321:A:C6	1:A:322:C:N4	2.56	0.73
1:A:559:A:H4'	1:A:560:U:O5'	1.88	0.73
1:A:673:G:H2'	1:A:674:G:C8	2.23	0.73
1:A:953:G:H2'	1:A:954:G:C8	2.24	0.73
3:D:37:A:C2'	3:D:38:A:H8	1.99	0.73
6:G:146:ILE:HD12	6:G:146:ILE:N	2.04	0.73
6:G:15:GLU:HB3	6:G:19:LEU:HD11	1.71	0.73
6:G:22:LYS:HB3	6:G:26:CYS:CB	2.16	0.73
8:I:64:GLN:O	8:I:65:VAL:HG12	1.87	0.73
8:I:34:GLY:HA3	8:I:68:PRO:HD2	1.69	0.73
9:J:69:VAL:HG11	9:J:104:LEU:CD2	2.19	0.73
11:L:37:PHE:HA	11:L:40:LEU:HD12	1.69	0.73
15:P:16:ASP:HA	15:P:19:LEU:HD21	1.71	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:81:PHE:HD1	20:U:81:PHE:O	1.70	0.73
3:D:9:A:N3	3:D:46:G:H1'	2.03	0.73
4:E:130:ARG:HD3	4:E:131:PRO:HD2	1.69	0.73
1:A:1287:A:H61	1:A:1371:G:C4'	2.01	0.73
1:A:1333:A:H2'	1:A:1334:G:O4'	1.88	0.73
1:A:1522:U:H2'	1:A:1523:G:H8	1.54	0.73
1:A:375:U:H2'	1:A:376:G:H8	1.54	0.73
1:A:41:G:H2'	1:A:42:G:H8	1.53	0.73
1:A:493:G:O2'	1:A:494:U:H5	1.71	0.73
2:C:18:G:N3	2:C:58:A:N3	2.35	0.73
5:F:14:ILE:HG13	5:F:178:LEU:HD12	1.70	0.73
6:G:127:THR:O	6:G:146:ILE:HG22	1.87	0.73
1:A:921:U:O2'	7:H:19:MET:O	2.05	0.73
9:J:12:LEU:O	9:J:14:PRO:HD3	1.88	0.73
12:M:24:VAL:HG13	12:M:34:VAL:HG11	1.71	0.73
1:A:562:C:O2'	14:O:15:ARG:CD	2.35	0.73
21:V:64:GLU:HG2	21:V:65:ASN:N	2.04	0.73
1:A:68:G:C4'	1:A:171:A:H1'	2.19	0.73
1:A:175:C:O2'	1:A:176:C:H5'	1.87	0.73
1:A:818:G:N2	1:A:820:U:N3	2.37	0.73
1:A:894:G:C5	1:A:895:G:N7	2.57	0.73
4:E:167:PRO:HG2	4:E:168:THR:H	1.53	0.73
4:E:184:VAL:HB	4:E:198:ASP:OD1	1.89	0.73
7:H:17:ALA:HA	7:H:26:PHE:HB3	1.69	0.73
8:I:14:LEU:HD22	8:I:18:GLN:OE1	1.88	0.73
9:J:65:ALA:HB2	9:J:124:LEU:HD23	1.71	0.73
9:J:64:GLN:C	9:J:128:ALA:HA	2.09	0.73
9:J:15:ASP:HB2	9:J:23:VAL:HG11	1.71	0.73
10:K:92:ARG:HB3	10:K:94:TYR:CE1	2.22	0.73
13:N:48:ILE:HG22	13:N:48:ILE:O	1.87	0.73
14:O:85:ILE:CD1	14:O:87:GLY:H	2.02	0.73
15:P:10:PRO:HB2	15:P:18:ALA:HA	1.68	0.73
12:M:49:VAL:CG2	16:Q:41:ARG:HB2	2.19	0.73
18:S:14:ASN:HA	18:S:42:ARG:CZ	2.19	0.73
19:T:45:HIS:NE2	19:T:47:PRO:HG3	2.02	0.73
1:A:1327:C:H5''	23:X:20:LYS:CE	2.17	0.73
1:A:1163:C:O2'	1:A:1164:G:H5'	1.89	0.73
1:A:1084:G:H2'	1:A:1085:U:C5	2.24	0.73
1:A:1187:G:H2'	1:A:1188:A:H8	1.54	0.73
1:A:595:G:C8	1:A:641:U:N3	2.56	0.73
1:A:687:A:H61	1:A:703:G:C1'	2.02	0.73
1:A:891:U:H5	1:A:906:G:N2	1.86	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:72:GLY:HA3	4:E:165:VAL:CG1	2.18	0.73
4:E:80:ILE:HG23	4:E:212:GLN:NE2	2.03	0.73
14:O:69:TYR:HE2	14:O:71:PRO:HA	1.54	0.73
22:W:44:ALA:HB3	22:W:91:LEU:HD12	1.70	0.73
23:X:12:LYS:HB3	23:X:22:ARG:HH11	1.52	0.73
1:A:300:A:C2'	1:A:301:G:H5'	2.19	0.73
1:A:80:G:H3'	1:A:81:G:H8	1.52	0.73
1:A:90:C:O2'	1:A:91:C:H5'	1.89	0.73
6:G:135:LEU:C	6:G:137:SER:H	1.91	0.73
7:H:91:LEU:HD23	7:H:91:LEU:O	1.89	0.73
9:J:5:ARG:HB3	9:J:5:ARG:CZ	2.17	0.73
13:N:32:ILE:O	13:N:40:ILE:HD13	1.88	0.73
1:A:1228:C:P	15:P:115:LYS:HB3	2.29	0.73
15:P:91:ARG:HB3	15:P:98:VAL:CG2	2.17	0.73
21:V:42:PRO:O	21:V:45:VAL:HG23	1.88	0.73
1:A:101:A:H2'	1:A:102:G:C8	2.18	0.73
1:A:1077:G:H1'	1:A:1081:G:N2	2.03	0.73
1:A:118:U:O4	1:A:288:A:H2'	1.88	0.73
1:A:1209:C:H2'	1:A:1210:C:H5'	1.71	0.73
1:A:1330:U:OP1	15:P:25:ILE:N	2.21	0.73
1:A:169:C:H2'	1:A:170:U:H6	1.52	0.73
1:A:582:U:H5''	17:R:68:ARG:HH12	1.54	0.73
4:E:118:LEU:CD2	4:E:142:LEU:HB2	2.18	0.73
6:G:151:LYS:O	6:G:154:ASN:ND2	2.18	0.73
6:G:26:CYS:O	6:G:33:MET:CG	2.36	0.73
6:G:59:ARG:HA	6:G:59:ARG:NE	1.95	0.73
9:J:155:ARG:CZ	9:J:155:ARG:HA	2.18	0.73
12:M:5:ARG:HB2	12:M:5:ARG:CZ	2.19	0.73
12:M:79:ARG:NH1	12:M:79:ARG:HA	2.03	0.73
13:N:27:ASN:HB2	13:N:55:LYS:HE3	1.71	0.73
14:O:76:ASN:HD21	14:O:107:ALA:HA	1.54	0.73
15:P:13:LYS:HB3	15:P:17:VAL:CG1	2.19	0.73
16:Q:26:ARG:HH11	16:Q:47:LEU:CG	2.02	0.73
5:F:33:LEU:HD11	16:Q:53:LEU:HA	1.70	0.73
22:W:64:ASP:O	22:W:67:ALA:CB	2.36	0.73
1:A:615:C:O2'	1:A:616:G:H5'	1.89	0.73
1:A:219:C:C6	1:A:219:C:H3'	2.24	0.73
1:A:18:C:C1'	1:A:1079:G:H21	1.98	0.72
1:A:1202:G:N2	1:A:1203:C:C1'	2.52	0.72
1:A:1230:C:O2'	1:A:1231:G:H5'	1.89	0.72
1:A:1256:A:H5''	5:F:27:LYS:NZ	2.04	0.72
1:A:1483:A:H2'	1:A:1484:C:O4'	1.89	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:709:G:O2'	1:A:710:G:H5'	1.88	0.72
5:F:153:VAL:HG23	5:F:166:GLU:HB3	1.71	0.72
10:K:26:VAL:C	10:K:58:TYR:CE1	2.63	0.72
11:L:28:VAL:HG11	11:L:36:TYR:CB	2.18	0.72
13:N:22:HIS:ND1	13:N:29:ILE:HG12	2.03	0.72
14:O:93:LEU:N	14:O:93:LEU:HD23	2.03	0.72
18:S:32:TYR:HE2	18:S:35:LYS:HB2	1.54	0.72
21:V:22:LEU:CD2	21:V:25:LYS:HE2	2.18	0.72
1:A:55:A:H2'	1:A:56:U:O4'	1.90	0.72
1:A:751:U:H2'	1:A:752:G:O4'	1.88	0.72
1:A:779:C:N3	1:A:780:A:C2	2.57	0.72
1:A:817:C:H1'	1:A:818:G:H5''	1.71	0.72
6:G:19:LEU:O	6:G:26:CYS:SG	2.47	0.72
8:I:52:ILE:HG21	8:I:87:ARG:NH1	2.04	0.72
9:J:26:PHE:CE1	9:J:105:VAL:HG22	2.24	0.72
10:K:111:ILE:N	10:K:111:ILE:HD12	2.02	0.72
11:L:4:TYR:HB3	11:L:87:GLN:CB	2.19	0.72
14:O:54:LYS:HB2	14:O:70:ILE:HB	1.69	0.72
1:A:1329:A:H5'	15:P:29:ARG:NE	2.04	0.72
1:A:264:U:H2'	19:T:64:PRO:HB2	1.72	0.72
20:U:21:LYS:NZ	20:U:23:LYS:HB3	2.03	0.72
20:U:22:VAL:HG22	20:U:55:ARG:NH1	2.04	0.72
1:A:1327:C:OP1	23:X:20:LYS:HB3	1.88	0.72
1:A:1067:A:H1'	1:A:1068:G:O4'	1.90	0.72
1:A:267:C:C4	1:A:268:C:N4	2.58	0.72
4:E:113:HIS:O	4:E:116:GLU:HG2	1.89	0.72
4:E:132:LYS:H	4:E:132:LYS:HE2	1.52	0.72
4:E:84:GLU:N	4:E:234:PRO:HG3	2.05	0.72
5:F:84:ILE:HG13	5:F:101:LEU:HD22	1.70	0.72
5:F:107:GLN:O	5:F:108:ASN:HB2	1.90	0.72
5:F:10:PHE:HD1	5:F:178:LEU:HD22	1.55	0.72
1:A:619:U:N3	6:G:135:LEU:HD21	2.00	0.72
6:G:11:LEU:C	6:G:19:LEU:HD12	2.09	0.72
10:K:86:ILE:CD1	10:K:135:CYS:HA	2.18	0.72
12:M:60:ARG:CZ	12:M:60:ARG:HB2	2.19	0.72
15:P:81:LEU:HD22	15:P:82:MET:N	2.04	0.72
16:Q:47:LEU:O	16:Q:50:LYS:HB2	1.89	0.72
18:S:4:ILE:N	18:S:4:ILE:HD13	2.04	0.72
19:T:9:VAL:HG13	19:T:11:VAL:HG22	1.70	0.72
22:W:44:ALA:HB2	22:W:52:ALA:HB1	1.72	0.72
1:A:1047:G:H2'	1:A:1048:G:H5'	1.72	0.72
1:A:1247:U:H2'	1:A:1248:A:H8	1.53	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:280:C:H5''	1:A:281:G:OP2	1.89	0.72
1:A:476:G:O2'	1:A:477:G:H5'	1.90	0.72
1:A:666:G:H5'	1:A:726:C:O2	1.89	0.72
2:C:44:A:C2	2:C:45:G:N3	2.57	0.72
3:D:40:C:C3'	3:D:41:G:H5''	2.18	0.72
4:E:168:THR:CG2	4:E:192:SER:HA	2.19	0.72
6:G:119:GLN:NE2	6:G:123:HIS:NE2	2.35	0.72
9:J:47:CYS:HA	9:J:50:ILE:HD12	1.72	0.72
10:K:48:TYR:CB	10:K:61:VAL:HG22	2.20	0.72
10:K:97:VAL:HG22	10:K:98:LYS:N	2.03	0.72
13:N:48:ILE:HD12	13:N:63:LEU:HD22	1.70	0.72
1:A:1226:C:C5	15:P:104:ARG:HA	2.23	0.72
15:P:14:ARG:HB3	15:P:44:ARG:HD2	1.70	0.72
17:R:36:ILE:HD11	17:R:60:VAL:HG22	1.71	0.72
17:R:57:LEU:N	17:R:57:LEU:CD1	2.52	0.72
19:T:7:THR:HG23	19:T:57:VAL:O	1.89	0.72
21:V:50:ALA:HB1	21:V:57:HIS:CB	2.20	0.72
1:A:113:G:H1'	1:A:354:G:H5''	1.70	0.72
1:A:1229:A:O5'	1:A:1229:A:H8	1.72	0.72
1:A:1299:A:N7	1:A:1301:U:H1'	2.05	0.72
1:A:31:G:C6	1:A:306:G:H1'	2.24	0.72
1:A:49:U:C2	1:A:364:A:N6	2.58	0.72
1:A:789:U:H6	1:A:790:A:H5''	1.54	0.72
1:A:969:A:O2'	12:M:55:LYS:NZ	2.23	0.72
5:F:49:SER:C	5:F:51:GLY:H	1.91	0.72
6:G:3:ARG:NH2	6:G:74:GLN:OE1	2.21	0.72
8:I:65:VAL:HG23	8:I:66:GLU:N	2.04	0.72
12:M:82:ILE:HG23	12:M:86:MET:CE	2.19	0.72
15:P:10:PRO:CG	15:P:18:ALA:HB1	2.18	0.72
15:P:91:ARG:HD3	15:P:96:LEU:CD1	2.19	0.72
16:Q:3:ARG:O	16:Q:3:ARG:HG3	1.87	0.72
16:Q:45:ARG:O	16:Q:48:ALA:HB3	1.90	0.72
1:A:1311:G:N7	21:V:2:PRO:CA	2.52	0.72
23:X:18:TYR:CD2	23:X:24:ARG:HA	2.24	0.72
1:A:1125:U:H4'	1:A:1126:U:H5	1.53	0.72
1:A:1401:G:H2'	1:A:1402:C:C5'	2.20	0.72
1:A:565:U:H3'	1:A:566:G:C8	2.24	0.72
1:A:585:G:O2'	1:A:586:C:H5'	1.89	0.72
1:A:596:C:H2'	1:A:596:C:O2	1.89	0.72
1:A:705:U:C4	1:A:706:A:N7	2.56	0.72
4:E:136:VAL:N	4:E:139:LYS:HZ2	1.86	0.72
4:E:139:LYS:HG3	4:E:140:HIS:H	1.49	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:28:PHE:CD1	4:E:31:TYR:HB2	2.25	0.72
4:E:82:ARG:CA	4:E:92:TYR:HE1	2.03	0.72
6:G:126:ILE:H	6:G:132:ARG:HD2	1.53	0.72
8:I:39:LYS:O	8:I:63:TYR:HA	1.90	0.72
9:J:79:ARG:CZ	9:J:84:ASN:HB3	2.19	0.72
13:N:86:GLY:CA	13:N:112:THR:HG23	2.18	0.72
14:O:5:PRO:O	14:O:6:THR:CG2	2.38	0.72
15:P:60:VAL:HG13	15:P:64:TRP:HB2	1.72	0.72
19:T:31:LEU:HD12	19:T:31:LEU:O	1.89	0.72
1:A:1148:U:O2'	1:A:1149:C:H5'	1.90	0.72
1:A:113:G:H2'	1:A:114:U:H6	1.53	0.72
1:A:1401:G:H2'	1:A:1402:C:O4'	1.89	0.72
1:A:335:C:H1'	1:A:1434:A:H1'	1.70	0.72
1:A:538:G:C5'	14:O:114:LYS:HD3	2.19	0.72
1:A:622:A:H2'	1:A:623:C:C5'	2.20	0.72
1:A:865:A:H5'	1:A:1078:U:O4	1.89	0.72
2:C:74:C:C3'	2:C:75:C:H5''	2.20	0.72
4:E:97:TRP:CH2	4:E:176:GLU:HG3	2.20	0.72
4:E:55:PHE:CE2	4:E:218:ALA:HA	2.20	0.72
4:E:217:ARG:O	4:E:220:ASP:HB2	1.88	0.72
5:F:88:ARG:CZ	5:F:101:LEU:H	2.02	0.72
5:F:28:GLN:CD	5:F:29:TYR:N	2.43	0.72
5:F:50:ALA:HA	5:F:72:LYS:HD2	1.72	0.72
6:G:20:TYR:O	6:G:22:LYS:N	2.22	0.72
1:A:922:G:H5''	7:H:20:GLN:HG2	1.72	0.72
7:H:78:HIS:CE1	7:H:142:LEU:HD23	2.25	0.72
8:I:80:ARG:HG2	8:I:80:ARG:HH11	1.52	0.72
10:K:26:VAL:CG2	10:K:27:PRO:HD2	2.16	0.72
13:N:34:ASP:HB2	13:N:35:PRO:CD	2.20	0.72
18:S:36:ILE:CG2	18:S:55:ARG:HB3	2.19	0.72
19:T:38:ARG:HG3	19:T:39:SER:H	1.54	0.72
20:U:66:LEU:HD12	20:U:67:ALA:CA	2.19	0.72
3:D:54:U:OP2	3:D:55:U:O4	2.08	0.72
1:A:1004:A:C8	1:A:1036:G:O6	2.43	0.72
1:A:137:C:H2'	1:A:138:G:H5'	1.72	0.72
1:A:197:A:H2'	1:A:198:G:OP2	1.90	0.72
1:A:49:U:C5	1:A:361:G:N2	2.57	0.72
1:A:652:U:C4	1:A:752:G:H2'	2.25	0.72
1:A:698:G:H2'	1:A:699:C:C6	2.25	0.72
1:A:82:U:H2'	1:A:85:U:C5	2.24	0.72
1:A:770:C:H1'	1:A:900:A:C2	2.25	0.72
4:E:118:LEU:HD22	4:E:142:LEU:HD12	1.69	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:175:ARG:HD3	4:E:179:LYS:HZ2	1.52	0.72
4:E:168:THR:OG1	4:E:192:SER:HA	1.89	0.72
6:G:100:ARG:O	6:G:104:VAL:HG23	1.90	0.72
6:G:104:VAL:CA	6:G:107:ARG:HB2	2.20	0.72
6:G:34:GLU:CD	6:G:35:ARG:H	1.92	0.72
7:H:102:ALA:HB1	7:H:120:THR:CG2	2.18	0.72
9:J:72:ARG:HH22	9:J:138:LYS:HZ1	1.36	0.72
9:J:20:ASP:HB3	9:J:23:VAL:CG2	2.20	0.72
10:K:46:LYS:HZ1	10:K:65:TYR:H	1.36	0.72
10:K:6:ILE:HD13	10:K:6:ILE:C	2.10	0.72
1:A:974:A:OP1	16:Q:31:ARG:HG2	1.89	0.72
1:A:1058:G:O2'	1:A:1059:C:H5'	1.90	0.72
1:A:1342:C:H1'	11:L:124:GLN:HB2	1.71	0.72
1:A:305:G:O2'	1:A:306:G:P	2.47	0.72
1:A:307:C:H42	1:A:308:C:H41	1.35	0.72
4:E:18:GLY:N	4:E:41:ILE:HG23	2.05	0.72
4:E:69:LEU:HD13	4:E:70:PHE:N	2.04	0.72
4:E:87:ARG:O	4:E:89:GLY:N	2.23	0.72
5:F:91:LEU:HD11	5:F:99:VAL:H	1.53	0.72
7:H:72:GLN:CG	7:H:77:PRO:HD3	2.16	0.72
7:H:78:HIS:HB3	10:K:104:ARG:HB3	1.70	0.72
9:J:99:LEU:HD23	9:J:102:ARG:HB3	1.70	0.72
10:K:25:ASP:HB2	10:K:58:TYR:CD2	2.25	0.72
10:K:65:TYR:HA	10:K:79:VAL:HG23	1.71	0.72
12:M:15:THR:HG23	12:M:16:LEU:CD2	2.20	0.72
14:O:44:THR:CB	14:O:45:PRO:HD2	2.13	0.72
14:O:35:GLY:O	14:O:82:VAL:CA	2.38	0.72
1:A:1319:A:OP2	21:V:5:LEU:HD13	1.90	0.72
1:A:1145:C:H1'	1:A:1146:A:C8	2.25	0.72
1:A:1195:C:H5''	1:A:1196:U:OP2	1.89	0.72
1:A:131:C:O2'	1:A:262:A:H1'	1.90	0.72
1:A:440:A:H8	1:A:440:A:O5'	1.71	0.72
1:A:484:G:C8	1:A:486:U:N3	2.58	0.72
1:A:872:A:HO2'	1:A:873:A:P	2.13	0.72
4:E:200:ILE:O	4:E:200:ILE:HG22	1.90	0.72
4:E:222:ILE:HD12	4:E:223:ILE:H	1.52	0.72
4:E:82:ARG:CB	4:E:94:ASN:HD21	2.02	0.72
6:G:64:LEU:HD13	6:G:65:ARG:N	2.05	0.72
10:K:104:ARG:HH11	10:K:104:ARG:HG2	1.55	0.72
1:A:755:G:N3	10:K:1:MET:HE1	2.05	0.72
10:K:29:SER:HB3	10:K:32:LYS:NZ	2.04	0.72
11:L:70:LYS:CD	11:L:70:LYS:H	1.95	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:93:ARG:NH1	11:L:97:LYS:HD3	2.05	0.72
13:N:79:SER:HA	13:N:104:GLN:HE21	1.54	0.72
17:R:75:PRO:C	17:R:78:TYR:HB3	2.09	0.72
20:U:47:THR:HA	20:U:83:GLU:O	1.90	0.72
21:V:11:VAL:HG12	21:V:15:LEU:CD1	2.18	0.72
22:W:83:ARG:HA	22:W:86:ARG:CD	2.18	0.72
1:A:1305:G:H5''	23:X:5:ASP:N	2.04	0.72
1:A:1449:C:H2'	1:A:1450:U:H5'	1.71	0.71
1:A:228:A:H2'	1:A:229:U:C5'	2.20	0.71
1:A:503:C:O2	1:A:510:A:H2	1.73	0.71
1:A:566:G:H4'	1:A:567:G:OP1	1.89	0.71
3:D:38:A:C2	3:D:39:U:C6	2.78	0.71
4:E:104:ASN:O	4:E:104:ASN:CG	2.27	0.71
6:G:26:CYS:HA	6:G:31:CYS:CB	2.19	0.71
10:K:65:TYR:C	10:K:67:PRO:HD3	2.10	0.71
12:M:47:PHE:CZ	12:M:65:LEU:HB3	2.25	0.71
13:N:85:ARG:HE	13:N:111:ASP:HB3	1.55	0.71
1:A:691:G:H22	13:N:51:LYS:HZ1	1.38	0.71
14:O:68:ALA:HA	14:O:98:TYR:O	1.90	0.71
15:P:20:THR:HA	15:P:25:ILE:CG2	2.20	0.71
18:S:54:GLU:CD	18:S:54:GLU:C	2.43	0.71
19:T:88:TYR:HA	19:T:91:ARG:NH2	2.05	0.71
13:N:110:ASP:HA	20:U:88:LYS:HD2	1.70	0.71
21:V:30:LEU:HA	21:V:48:THR:O	1.89	0.71
1:A:1037:C:H2'	1:A:1038:C:H6	1.53	0.71
1:A:1102:A:C6	1:A:1103:C:N4	2.58	0.71
1:A:1178:G:H2'	1:A:1180:A:OP2	1.89	0.71
1:A:964:A:OP1	1:A:1199:U:OP1	2.07	0.71
1:A:1314:C:C6	21:V:6:LYS:HG3	2.25	0.71
1:A:262:A:H5'	22:W:74:LYS:HG3	1.71	0.71
1:A:878:G:H5''	10:K:89:PRO:HG2	1.72	0.71
1:A:955:U:H2'	1:A:956:U:H6	1.54	0.71
2:C:48:C:H5'	2:C:49:G:O5'	1.90	0.71
4:E:170:GLU:O	4:E:172:ILE:HG13	1.90	0.71
4:E:68:ILE:HG13	4:E:90:MET:HG3	1.72	0.71
6:G:116:GLN:O	6:G:119:GLN:HB3	1.90	0.71
8:I:49:ALA:HB1	20:U:80:PRO:HD3	1.71	0.71
8:I:89:MET:CE	20:U:75:ILE:HG21	2.20	0.71
10:K:18:ARG:HH12	10:K:78:GLN:NE2	1.86	0.71
12:M:12:ASP:HB3	12:M:15:THR:CG2	2.19	0.71
12:M:3:LYS:N	12:M:3:LYS:HZ2	1.88	0.71
1:A:1151:A:OP1	12:M:41:PRO:HA	1.90	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:90:LEU:H	12:M:91:PRO:HD2	1.55	0.71
13:N:23:ALA:HB1	13:N:88:GLY:HA2	1.68	0.71
15:P:120:LYS:O	15:P:121:LYS:HB2	1.90	0.71
15:P:14:ARG:HG3	15:P:17:VAL:HG23	1.72	0.71
15:P:66:LEU:O	15:P:70:LEU:HB2	1.90	0.71
15:P:80:ARG:O	15:P:84:ILE:HG23	1.90	0.71
15:P:81:LEU:HA	15:P:84:ILE:HD11	1.71	0.71
16:Q:41:ARG:O	16:Q:45:ARG:HG2	1.90	0.71
18:S:43:LYS:HA	18:S:48:TRP:CE3	2.25	0.71
1:A:1058:G:O5'	1:A:1058:G:H8	1.73	0.71
1:A:1060:C:H2'	1:A:1061:G:H8	1.56	0.71
1:A:1243:C:P	23:X:10:ARG:HD2	2.29	0.71
1:A:440:A:N6	1:A:494:U:C5	2.57	0.71
1:A:530:G:N3	1:A:530:G:C3'	2.53	0.71
1:A:26:A:H61	1:A:558:G:C2'	2.02	0.71
1:A:741:G:O2'	1:A:742:G:H5'	1.90	0.71
2:C:8:U:O4'	2:C:48:C:O2'	2.08	0.71
5:F:5:ILE:CG2	12:M:51:ARG:HH22	2.03	0.71
6:G:147:ALA:CB	6:G:182:LYS:HA	2.17	0.71
7:H:9:LYS:HG2	7:H:112:LEU:HD23	1.73	0.71
8:I:89:MET:CE	20:U:75:ILE:HD13	2.20	0.71
12:M:34:VAL:HA	12:M:74:ILE:HG12	1.72	0.71
13:N:27:ASN:HB2	13:N:55:LYS:HB3	1.72	0.71
18:S:7:ALA:HB3	18:S:18:ARG:HB2	1.72	0.71
19:T:12:SER:O	19:T:20:THR:HG23	1.91	0.71
1:A:189:U:H2'	19:T:63:ARG:NH2	2.05	0.71
1:A:1312:G:N7	21:V:2:PRO:O	2.24	0.71
1:A:1408:A:H62	1:A:1409:C:N4	1.87	0.71
1:A:1512:U:H2'	1:A:1513:A:C8	2.24	0.71
1:A:486:U:O2	1:A:486:U:H2'	1.89	0.71
1:A:668:G:O2'	1:A:669:U:H5'	1.90	0.71
1:A:944:G:H21	1:A:1339:A:H62	1.37	0.71
4:E:12:GLU:O	4:E:14:GLY:N	2.23	0.71
4:E:176:GLU:O	4:E:180:LEU:CG	2.30	0.71
4:E:219:VAL:HG12	4:E:223:ILE:CD1	2.21	0.71
4:E:233:SER:HB3	4:E:234:PRO:HD2	1.70	0.71
12:M:79:ARG:HD3	12:M:79:ARG:C	2.11	0.71
13:N:27:ASN:OD1	13:N:28:THR:N	2.23	0.71
14:O:101:VAL:CG2	14:O:104:VAL:HG21	2.19	0.71
1:A:1187:G:C4	1:A:1188:A:N7	2.58	0.71
1:A:1210:C:H4'	1:A:1214:C:N4	2.05	0.71
1:A:277:C:H5''	19:T:68:ARG:NH2	2.05	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:453:A:H62	1:A:480:U:H3	1.36	0.71
1:A:517:G:O2'	1:A:530:G:H4'	1.91	0.71
1:A:876:G:O2'	10:K:11:THR:HG21	1.89	0.71
4:E:219:VAL:O	4:E:223:ILE:HG13	1.90	0.71
6:G:151:LYS:HD2	6:G:151:LYS:H	1.56	0.71
7:H:151:LEU:HD11	10:K:67:PRO:CG	2.20	0.71
8:I:53:ALA:CB	8:I:86:ARG:HD2	2.20	0.71
8:I:80:ARG:HG2	8:I:88:VAL:HG11	1.72	0.71
14:O:37:CYS:HA	14:O:57:LYS:O	1.91	0.71
1:A:950:U:H5''	15:P:102:ARG:NH2	2.03	0.71
19:T:7:THR:O	19:T:23:VAL:HG23	1.90	0.71
1:A:1507:A:O2'	1:A:1508:G:H5'	1.91	0.71
1:A:184:G:H5'	1:A:224:C:H4'	1.73	0.71
1:A:247:G:O2'	1:A:248:C:H5'	1.90	0.71
1:A:426:G:P	6:G:45:GLN:HE22	2.13	0.71
2:C:28:C:H2'	2:C:29:G:C8	2.20	0.71
4:E:72:GLY:HA3	4:E:165:VAL:HG13	1.71	0.71
4:E:165:VAL:HG23	4:E:166:ASP:H	1.54	0.71
4:E:61:LEU:CA	4:E:64:ARG:NH1	2.53	0.71
5:F:91:LEU:CD1	5:F:99:VAL:H	2.03	0.71
7:H:15:ARG:HH11	7:H:15:ARG:HG3	1.54	0.71
8:I:45:LEU:CG	8:I:59:TYR:HD1	2.03	0.71
8:I:67:MET:SD	8:I:67:MET:N	2.62	0.71
9:J:111:ARG:NH1	9:J:112:PRO:HD2	2.06	0.71
11:L:84:ALA:O	11:L:87:GLN:HB2	1.90	0.71
17:R:77:ARG:NH1	17:R:77:ARG:O	2.24	0.71
18:S:75:ARG:CA	18:S:80:PHE:HB2	2.13	0.71
19:T:8:GLY:HA3	19:T:22:LEU:O	1.91	0.71
1:A:340:U:H2'	1:A:341:C:C6	2.26	0.71
1:A:216:G:H2'	1:A:217:C:C6	2.26	0.71
1:A:1109:C:H2'	1:A:1110:A:O4'	1.91	0.71
1:A:1134:G:C6	1:A:1135:U:H1'	2.26	0.71
1:A:1320:C:H5	21:V:37:ARG:HD3	1.56	0.71
1:A:1419:G:O6	1:A:1482:G:C6	2.44	0.71
1:A:26:A:H61	1:A:558:G:H2'	1.55	0.71
1:A:519:C:C2'	1:A:520:A:H5'	2.21	0.71
1:A:765:G:O2'	1:A:766:A:H5'	1.89	0.71
1:A:983:A:C2	1:A:984:C:H6	2.05	0.71
14:O:25:PRO:O	14:O:27:LEU:N	2.19	0.71
14:O:37:CYS:HA	14:O:58:VAL:CG2	2.19	0.71
1:A:529:G:C6	14:O:49:ASN:ND2	2.58	0.71
16:Q:58:LYS:HD3	16:Q:59:ALA:N	2.04	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1205:U:H2'	1:A:1206:G:C8	2.25	0.71
1:A:1375:A:H2'	1:A:1376:U:H6	1.50	0.71
1:A:1534:A:H4'	1:A:1535:C:OP1	1.88	0.71
1:A:583:A:H2'	1:A:584:G:C8	2.25	0.71
1:A:722:A:H3'	1:A:722:A:N3	2.05	0.71
1:A:888:G:N2	1:A:909:A:N6	2.35	0.71
6:G:191:ARG:HD3	6:G:191:ARG:C	2.11	0.71
7:H:65:ASN:HD21	7:H:136:MET:CE	2.04	0.71
10:K:26:VAL:HG22	10:K:27:PRO:CD	2.18	0.71
1:A:1260:C:O5'	1:A:1284:C:H4'	1.91	0.71
1:A:224:C:H2'	1:A:225:C:C6	2.26	0.71
1:A:302:G:H2'	1:A:556:C:H5''	1.72	0.71
1:A:623:C:O2'	1:A:624:C:H5'	1.91	0.71
1:A:761:G:C4'	19:T:103:GLY:H	2.04	0.71
4:E:15:VAL:HG21	4:E:210:SER:N	2.06	0.71
7:H:94:ALA:HB2	7:H:119:LEU:CD2	2.07	0.71
9:J:37:ASN:OD1	9:J:38:LEU:N	2.18	0.71
11:L:6:GLY:HA3	11:L:80:GLY:O	1.91	0.71
13:N:30:VAL:O	13:N:42:TRP:HB2	1.91	0.71
13:N:92:GLU:O	13:N:94:ALA:N	2.24	0.71
14:O:17:LYS:O	14:O:18:VAL:O	2.09	0.71
15:P:91:ARG:HH22	15:P:103:THR:CG2	2.03	0.71
17:R:56:LEU:O	17:R:60:VAL:HG23	1.90	0.71
18:S:53:VAL:HG12	18:S:79:VAL:HG22	1.70	0.71
19:T:60:ILE:HG12	19:T:61:GLU:N	2.06	0.71
1:A:189:U:H2'	19:T:63:ARG:HH22	1.56	0.71
19:T:5:VAL:CG1	19:T:6:LEU:N	2.54	0.71
20:U:63:GLN:HA	20:U:66:LEU:HD11	1.73	0.71
20:U:66:LEU:CD1	20:U:67:ALA:N	2.51	0.71
1:A:1320:C:N4	21:V:36:ARG:NH1	2.38	0.71
1:A:1057:G:H5'	5:F:196:LEU:HA	1.71	0.71
1:A:1094:G:C3'	1:A:1108:G:H22	2.04	0.71
1:A:1278:U:H4'	1:A:1279:A:C1'	2.20	0.71
1:A:138:G:N2	1:A:226:G:H1'	2.06	0.71
1:A:226:G:O2'	1:A:227:G:H5'	1.91	0.71
1:A:448:A:H2'	1:A:449:C:C6	2.26	0.71
5:F:156:ARG:HD2	5:F:163:ALA:HB2	1.73	0.71
5:F:69:HIS:ND1	5:F:104:GLN:HB2	2.06	0.71
8:I:95:GLU:HA	20:U:32:ARG:HB3	1.71	0.71
1:A:823:G:H21	10:K:1:MET:H2	1.37	0.71
11:L:36:TYR:OH	11:L:70:LYS:NZ	2.24	0.71
13:N:40:ILE:HD13	13:N:40:ILE:N	2.05	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:81:LEU:O	15:P:86:CYS:SG	2.49	0.71
20:U:46:GLU:HB3	20:U:85:LEU:HD13	1.72	0.71
1:A:721:G:OP2	20:U:63:GLN:HG2	1.91	0.71
21:V:32:LYS:CA	21:V:50:ALA:HB3	2.21	0.71
3:D:21:A:N6	3:D:48:C:H6	1.89	0.71
1:A:1002:G:N3	1:A:1002:G:H2'	2.04	0.71
1:A:1470:G:O2'	1:A:1471:G:H5'	1.90	0.70
1:A:197:A:H61	1:A:221:C:C5'	1.78	0.70
1:A:20:U:H5'	1:A:572:A:H61	1.55	0.70
1:A:21:G:C2'	1:A:22:G:H8	2.02	0.70
1:A:945:G:H1'	1:A:1337:G:O2'	1.91	0.70
4:E:113:HIS:HA	4:E:116:GLU:CD	2.11	0.70
1:A:1191:A:OP1	5:F:4:LYS:HG2	1.90	0.70
11:L:27:THR:HB	11:L:62:TYR:HD1	1.55	0.70
12:M:44:VAL:HG11	12:M:46:ARG:HE	1.56	0.70
13:N:27:ASN:CB	13:N:55:LYS:HE3	2.20	0.70
13:N:99:GLN:HA	13:N:105:VAL:CG2	2.20	0.70
15:P:67:GLU:O	15:P:70:LEU:HB3	1.90	0.70
18:S:15:PRO:HB2	18:S:17:TYR:CE1	2.26	0.70
19:T:75:ARG:HG2	19:T:76:LEU:N	2.05	0.70
1:A:1258:G:H2'	1:A:1259:C:C6	2.26	0.70
1:A:1302:U:O2'	1:A:1303:C:OP1	2.09	0.70
1:A:1238:A:N7	1:A:1303:C:H1'	2.05	0.70
1:A:37:U:OP2	14:O:123:LYS:HD2	1.90	0.70
1:A:38:G:N2	1:A:397:A:H5'	2.01	0.70
1:A:87:A:N7	1:A:88:C:C4	2.59	0.70
4:E:47:THR:HG22	4:E:51:LEU:HD11	1.73	0.70
5:F:67:THR:HG22	5:F:69:HIS:CE1	2.26	0.70
5:F:72:LYS:O	5:F:76:VAL:HG21	1.91	0.70
6:G:191:ARG:HB3	6:G:192:GLU:OE1	1.91	0.70
8:I:62:TRP:CZ2	8:I:64:GLN:HB2	2.26	0.70
9:J:45:ASP:HB2	9:J:117:ALA:HB2	1.73	0.70
13:N:25:TYR:CE2	13:N:87:THR:HB	2.26	0.70
15:P:32:GLU:HB2	15:P:64:TRP:CH2	2.26	0.70
20:U:53:ARG:HH22	20:U:60:GLY:N	1.88	0.70
1:A:1003:G:N7	1:A:1004:A:N3	2.39	0.70
13:N:121:PRO:HG3	13:N:125:PHE:O	1.90	0.70
1:A:1158:C:N3	1:A:1160:G:C8	2.59	0.70
1:A:1288:A:N1	1:A:1371:G:H1'	2.04	0.70
1:A:1327:C:H5''	23:X:20:LYS:HD3	1.71	0.70
1:A:1418:A:H2'	1:A:1419:G:H5'	1.71	0.70
1:A:44:G:C2	1:A:45:U:H1'	2.26	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:594:G:N7	1:A:595:G:N3	2.38	0.70
1:A:687:A:O2'	1:A:688:G:P	2.49	0.70
1:A:754:C:H2'	1:A:755:G:OP1	1.91	0.70
1:A:781:A:N6	1:A:802:A:C4	2.59	0.70
1:A:799:G:N2	1:A:800:G:H1'	2.05	0.70
1:A:828:A:O2'	1:A:829:G:O5'	2.08	0.70
4:E:57:PHE:CD1	4:E:199:TYR:HE1	2.08	0.70
5:F:53:ALA:HB2	5:F:115:LEU:HD21	1.72	0.70
5:F:179:ARG:CD	5:F:206:GLU:HG2	2.21	0.70
10:K:122:ARG:HH11	10:K:123:GLU:HB3	1.55	0.70
12:M:9:ARG:C	12:M:94:VAL:HG13	2.12	0.70
14:O:43:VAL:HG12	14:O:44:THR:N	2.06	0.70
21:V:16:LEU:H	21:V:16:LEU:CD1	2.04	0.70
1:A:337:C:H2'	1:A:338:A:H8	1.55	0.70
1:A:1054:C:OP2	1:A:1197:G:P	2.49	0.70
1:A:1094:G:H2'	1:A:1108:G:H22	1.56	0.70
1:A:1196:U:O2'	1:A:1197:G:OP2	2.09	0.70
1:A:1320:C:O2'	21:V:73:GLU:HG2	1.92	0.70
1:A:1387:G:H2'	1:A:1388:C:H6	1.57	0.70
1:A:1498:U:O2'	1:A:1499:A:C5'	2.39	0.70
1:A:152:A:H8	1:A:152:A:O5'	1.75	0.70
1:A:225:C:O2'	1:A:226:G:H5'	1.91	0.70
1:A:997:U:OP2	1:A:997:U:H6	1.73	0.70
3:D:38:A:O2'	3:D:39:U:H5'	1.92	0.70
4:E:115:LEU:CD2	4:E:149:LEU:HD13	2.21	0.70
4:E:223:ILE:CG2	4:E:229:VAL:HA	2.22	0.70
7:H:80:ILE:HD12	7:H:80:ILE:N	2.05	0.70
8:I:12:PRO:HB3	8:I:58:GLY:HA2	1.72	0.70
10:K:46:LYS:HZ2	10:K:64:LYS:HA	1.56	0.70
11:L:113:LYS:O	11:L:115:GLY:N	2.25	0.70
11:L:55:ALA:HB1	11:L:58:HIS:HD2	1.55	0.70
11:L:23:ASN:H	11:L:59:PHE:C	1.95	0.70
11:L:45:ALA:HB3	11:L:74:ILE:HG21	1.73	0.70
12:M:8:LEU:HD13	12:M:94:VAL:CG1	2.21	0.70
15:P:29:ARG:NH1	15:P:66:LEU:HD22	2.06	0.70
1:A:1119:C:H2'	1:A:1120:G:H8	1.55	0.70
1:A:1269:A:H8	1:A:1270:C:C1'	2.05	0.70
1:A:1342:C:O2'	11:L:124:GLN:HB2	1.91	0.70
1:A:256:U:H2'	1:A:257:G:O4'	1.91	0.70
1:A:799:G:C2	1:A:800:G:H1'	2.26	0.70
1:A:887:G:H2'	1:A:888:G:C8	2.27	0.70
4:E:136:VAL:O	4:E:139:LYS:HG2	1.91	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:213:LEU:O	4:E:217:ARG:HG2	1.92	0.70
4:E:25:ASN:ND2	4:E:27:LYS:H	1.89	0.70
8:I:19:LEU:HD23	8:I:23:LYS:HZ1	1.55	0.70
9:J:49:ILE:O	9:J:53:LYS:HB2	1.92	0.70
11:L:106:ALA:O	11:L:107:ARG:HG3	1.91	0.70
11:L:70:LYS:HD2	11:L:70:LYS:N	1.96	0.70
12:M:79:ARG:HH12	12:M:82:ILE:CD1	2.04	0.70
22:W:41:ILE:O	22:W:45:GLN:HB2	1.90	0.70
1:A:1172:C:O2'	1:A:1173:G:H5'	1.92	0.70
1:A:1237:C:H4'	1:A:1334:G:N2	2.07	0.70
1:A:67:C:C1'	1:A:172:A:H1'	2.21	0.70
1:A:250:A:C2	1:A:274:A:N1	2.56	0.70
1:A:301:G:N2	1:A:302:G:N9	2.40	0.70
1:A:452:A:H2'	1:A:453:A:C8	2.27	0.70
5:F:84:ILE:HA	5:F:101:LEU:HD13	1.71	0.70
5:F:35:GLU:CA	5:F:38:ARG:HG2	2.22	0.70
7:H:103:GLY:O	7:H:106:PRO:HD2	1.91	0.70
9:J:40:ALA:O	9:J:43:PHE:HB3	1.92	0.70
9:J:83:ALA:HB3	9:J:85:TYR:HE2	1.55	0.70
11:L:113:LYS:HZ2	11:L:119:ALA:HA	1.52	0.70
11:L:40:LEU:C	11:L:42:ARG:N	2.44	0.70
18:S:19:ILE:HG13	18:S:38:TYR:HA	1.73	0.70
1:A:137:C:C2'	1:A:138:G:H5'	2.22	0.70
1:A:153:C:H2'	1:A:154:C:C6	2.27	0.70
1:A:296:U:N3	1:A:297:G:N7	2.40	0.70
5:F:138:VAL:HG12	5:F:170:GLN:NE2	2.06	0.70
7:H:136:MET:O	7:H:139:LEU:HB2	1.92	0.70
7:H:9:LYS:HE2	7:H:9:LYS:HA	1.74	0.70
9:J:45:ASP:HB2	9:J:117:ALA:CB	2.22	0.70
13:N:104:GLN:NE2	13:N:106:LYS:HB2	2.02	0.70
1:A:689:C:OP2	13:N:46:GLY:HA3	1.92	0.70
13:N:95:ILE:HA	13:N:98:LEU:CD1	2.21	0.70
15:P:81:LEU:HA	15:P:84:ILE:CD1	2.22	0.70
16:Q:9:LYS:NZ	16:Q:12:ARG:HH21	1.89	0.70
19:T:43:LEU:HD22	19:T:44:ALA:N	2.07	0.70
3:D:14:A:C2	3:D:15:G:N7	2.59	0.70
1:A:1087:G:H2'	1:A:1088:G:H8	1.56	0.70
1:A:1152:A:H5''	12:M:13:HIS:CE1	2.26	0.70
1:A:1365:G:H2'	1:A:1366:C:C6	2.26	0.70
1:A:192:U:H2'	1:A:193:C:C6	2.26	0.70
1:A:538:G:H5''	14:O:114:LYS:CD	2.22	0.70
1:A:783:C:O2'	1:A:784:C:H5'	1.92	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:112:SER:O	5:F:116:VAL:HG23	1.92	0.70
6:G:133:VAL:HG13	6:G:135:LEU:HG	1.73	0.70
6:G:19:LEU:HA	6:G:21:LEU:CD1	2.22	0.70
8:I:2:ARG:O	8:I:66:GLU:HA	1.91	0.70
8:I:68:PRO:HB2	8:I:71:ARG:CG	2.22	0.70
9:J:111:ARG:HH11	9:J:111:ARG:HB3	1.55	0.70
10:K:69:ARG:NH1	10:K:73:ASP:O	2.24	0.70
10:K:6:ILE:CG2	10:K:7:ALA:H	2.01	0.70
12:M:68:HIS:HB3	12:M:70:ARG:HH21	1.55	0.70
14:O:83:VAL:HG22	14:O:104:VAL:HB	1.73	0.70
14:O:119:LYS:O	14:O:120:TYR:HB2	1.91	0.70
14:O:37:CYS:N	14:O:58:VAL:HG22	2.06	0.70
1:A:950:U:H3'	15:P:102:ARG:HH22	1.57	0.70
18:S:21:VAL:HG22	18:S:36:ILE:HD11	1.73	0.70
19:T:51:TYR:HB3	19:T:55:ASP:OD2	1.91	0.70
6:G:168:ARG:CD	6:G:168:ARG:H	1.88	0.70
1:A:136:C:O4'	18:S:1:MET:SD	2.50	0.70
1:A:306:G:H3'	1:A:307:C:C5	2.26	0.70
1:A:518:C:H5'	1:A:530:G:O4'	1.92	0.70
5:F:181:ASN:O	5:F:204:LEU:HG	1.91	0.70
7:H:94:ALA:CB	7:H:119:LEU:HD21	2.07	0.70
8:I:48:LEU:HG	8:I:56:PRO:O	1.92	0.70
10:K:88:LYS:HZ2	10:K:88:LYS:HB2	1.56	0.70
14:O:27:LEU:HD23	14:O:33:ARG:NH1	2.01	0.70
15:P:26:GLY:H	15:P:29:ARG:HB2	1.56	0.70
3:D:60:U:H6	3:D:60:U:O5'	1.75	0.70
4:E:126:GLU:O	4:E:127:ILE:O	2.08	0.70
1:A:1356:G:H2'	1:A:1357:A:N7	2.06	0.70
1:A:267:C:N4	1:A:268:C:H41	1.88	0.70
1:A:362:G:N3	1:A:364:A:C8	2.60	0.70
1:A:448:A:O2'	1:A:449:C:H5'	1.92	0.70
1:A:55:A:C2'	1:A:56:U:H5'	2.21	0.70
1:A:600:C:H2'	1:A:601:C:H6	1.56	0.70
1:A:652:U:O4	1:A:752:G:C2'	2.39	0.70
1:A:656:C:O2'	1:A:657:G:H5'	1.92	0.70
1:A:657:G:N2	17:R:22:THR:OG1	2.24	0.70
1:A:659:U:O2'	1:A:660:G:H5'	1.91	0.70
1:A:652:U:H2'	1:A:752:G:N2	2.04	0.70
5:F:189:ALA:HB1	5:F:196:LEU:HG	1.74	0.70
6:G:64:LEU:O	6:G:64:LEU:HD22	1.92	0.70
9:J:70:LYS:HA	9:J:100:ALA:CB	2.20	0.70
9:J:37:ASN:CG	9:J:38:LEU:N	2.45	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:97:LYS:NZ	11:L:102:LEU:HD22	2.06	0.70
11:L:8:GLY:HA3	11:L:76:ALA:O	1.92	0.70
12:M:23:ILE:HG13	12:M:85:LEU:HD23	1.73	0.70
14:O:83:VAL:HG23	14:O:104:VAL:O	1.92	0.70
18:S:20:VAL:CG1	18:S:21:VAL:N	2.55	0.70
18:S:39:TYR:CD1	18:S:40:ASP:N	2.58	0.70
18:S:43:LYS:HA	18:S:48:TRP:HE3	1.57	0.70
18:S:75:ARG:HA	18:S:80:PHE:CB	2.13	0.70
19:T:13:ASP:O	19:T:15:MET:N	2.24	0.70
1:A:277:C:H5''	19:T:68:ARG:HH22	1.57	0.70
20:U:53:ARG:O	20:U:55:ARG:N	2.25	0.70
22:W:12:ALA:H	22:W:13:LEU:HD12	1.56	0.70
3:D:56:C:C4	3:D:57:G:N2	2.59	0.70
6:G:47:ARG:HB2	6:G:47:ARG:HH11	1.54	0.70
1:A:1161:C:C2	1:A:1162:C:C5	2.79	0.70
4:E:11:LEU:N	4:E:11:LEU:HD23	2.07	0.70
1:A:1118:C:OP1	11:L:104:ARG:CG	2.36	0.69
1:A:1144:G:N2	1:A:1146:A:N6	2.40	0.69
1:A:1204:A:H2	5:F:195:VAL:HG21	1.56	0.69
1:A:1210:C:H4'	1:A:1214:C:C4	2.26	0.69
1:A:153:C:H2'	1:A:154:C:H6	1.56	0.69
1:A:373:A:C1'	1:A:481:G:H1'	2.22	0.69
1:A:565:U:H3'	1:A:566:G:H8	1.57	0.69
1:A:730:G:O2'	1:A:766:A:H5'	1.92	0.69
1:A:872:A:O2'	1:A:873:A:P	2.50	0.69
4:E:187:LEU:HA	4:E:201:ILE:O	1.91	0.69
4:E:83:MET:HB2	4:E:234:PRO:CG	2.21	0.69
5:F:138:VAL:HG13	5:F:149:ALA:CB	2.22	0.69
5:F:35:GLU:C	5:F:38:ARG:HG2	2.13	0.69
3:D:33:U:H5''	9:J:79:ARG:NH2	2.06	0.69
11:L:112:LYS:HE2	11:L:117:HIS:CA	2.19	0.69
13:N:23:ALA:HB3	13:N:88:GLY:CA	2.18	0.69
14:O:44:THR:HB	14:O:45:PRO:CD	2.21	0.69
1:A:1230:C:O2'	15:P:126:LYS:HE2	1.92	0.69
17:R:62:GLN:HA	17:R:65:ARG:CZ	2.21	0.69
19:T:57:VAL:HA	19:T:77:VAL:CG2	2.17	0.69
3:D:54:U:H2'	3:D:55:U:H5'	1.73	0.69
1:A:1028:C:H2'	1:A:1028(A):C:H6	1.57	0.69
1:A:1023:G:O6	1:A:1024:G:N2	2.25	0.69
1:A:1283:G:O2'	1:A:1284:C:H5'	1.91	0.69
1:A:237:C:OP1	19:T:40:LYS:CE	2.40	0.69
1:A:692:U:N3	1:A:695:A:OP2	2.25	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:752:G:O4'	1:A:752:G:OP2	2.11	0.69
1:A:885:G:N3	1:A:914:A:C2	2.59	0.69
6:G:3:ARG:HE	6:G:71:SER:HB2	1.57	0.69
9:J:36:LYS:NZ	9:J:36:LYS:HB2	2.02	0.69
14:O:27:LEU:HD23	14:O:33:ARG:CD	2.23	0.69
15:P:14:ARG:HG2	15:P:17:VAL:HG23	1.73	0.69
19:T:62:SER:CB	19:T:72:ARG:HE	1.99	0.69
8:I:99:ALA:CB	20:U:31:LEU:HD11	2.22	0.69
21:V:31:ILE:HG22	21:V:33:THR:HG23	1.74	0.69
22:W:40:ALA:HA	22:W:55:ILE:HD12	1.73	0.69
1:A:619:U:O2	6:G:133:VAL:HG13	1.92	0.69
1:A:644:G:O2'	1:A:645:C:H5'	1.92	0.69
1:A:66:G:C5'	1:A:173:U:O4	2.40	0.69
1:A:940:C:H2'	1:A:941:G:H8	1.55	0.69
3:D:41:G:C2	3:D:42:C:C2	2.80	0.69
4:E:115:LEU:CD2	4:E:149:LEU:HB3	2.21	0.69
5:F:42:LEU:O	5:F:45:LYS:HB3	1.92	0.69
6:G:58:LEU:HD13	6:G:59:ARG:N	2.05	0.69
9:J:84:ASN:C	9:J:85:TYR:CD2	2.61	0.69
10:K:33:GLU:HG2	10:K:59:LEU:HD21	1.74	0.69
12:M:44:VAL:HG22	12:M:66:ARG:NE	2.07	0.69
13:N:124:LYS:O	13:N:127:LYS:HB2	1.93	0.69
14:O:37:CYS:O	14:O:79:GLU:O	2.10	0.69
14:O:85:ILE:HG23	14:O:85:ILE:O	1.91	0.69
14:O:88:GLY:HA3	14:O:99:HIS:CE1	2.26	0.69
15:P:20:THR:HG23	15:P:25:ILE:O	1.92	0.69
16:Q:24:CYS:SG	16:Q:27:CYS:N	2.65	0.69
17:R:10:LYS:O	17:R:13:GLN:HB2	1.92	0.69
18:S:32:TYR:HD1	18:S:32:TYR:H	1.39	0.69
8:I:62:TRP:HB2	20:U:35:ARG:HH12	1.56	0.69
13:N:110:ASP:CA	20:U:88:LYS:HD2	2.23	0.69
22:W:72:LEU:CD1	22:W:77:ALA:HA	2.22	0.69
1:A:1361:G:H3'	1:A:1361:G:H8	1.56	0.69
1:A:1454:G:H2'	1:A:1455:G:C8	2.23	0.69
1:A:1511:G:H2'	1:A:1512:U:O4'	1.92	0.69
1:A:1539:C:H2'	1:A:1540:U:C6	2.26	0.69
1:A:198:G:OP2	1:A:198:G:H8	1.74	0.69
1:A:19:C:O2	1:A:572:A:C2	2.45	0.69
1:A:224:C:H2'	1:A:225:C:H6	1.55	0.69
1:A:251:G:H5'	1:A:252:U:OP1	1.92	0.69
1:A:251:G:H4'	1:A:252:U:O5'	1.92	0.69
1:A:363:A:O2'	1:A:364:A:H5'	1.91	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:836:G:P	20:U:61:LYS:HZ1	2.15	0.69
1:A:989:C:H2'	1:A:990:C:H5'	1.73	0.69
4:E:42:ILE:HD11	4:E:202:PRO:CB	2.23	0.69
8:I:77:ARG:CA	8:I:80:ARG:HD2	2.09	0.69
10:K:37:ARG:HD2	10:K:38:ILE:N	2.07	0.69
1:A:1348:U:OP1	11:L:109:VAL:HA	1.92	0.69
14:O:43:VAL:CG1	14:O:44:THR:N	2.54	0.69
19:T:81:ARG:CG	19:T:84:LEU:HD21	2.22	0.69
21:V:58:VAL:HG23	21:V:60:VAL:HG23	1.75	0.69
23:X:6:ARG:NH1	23:X:15:ARG:CZ	2.56	0.69
1:A:1238:A:H62	1:A:1301:U:H3	1.39	0.69
1:A:1265:G:O6	1:A:1266:G:N3	2.24	0.69
1:A:1401:G:C2'	1:A:1402:C:H5'	2.23	0.69
1:A:389:A:C2	1:A:390:C:O4'	2.45	0.69
1:A:409:G:OP1	6:G:24:GLU:HB3	1.92	0.69
1:A:410:G:N3	1:A:432:A:N6	2.39	0.69
1:A:573:A:C2	1:A:574:A:C6	2.80	0.69
1:A:902:G:HO2'	1:A:903:G:H5'	1.55	0.69
1:A:736:C:H4'	8:I:89:MET:SD	2.32	0.69
8:I:98:LEU:CD2	20:U:28:GLU:HA	2.20	0.69
9:J:85:TYR:HD1	9:J:154:TYR:HE1	1.41	0.69
10:K:33:GLU:OE1	10:K:36:LEU:HD11	1.91	0.69
12:M:32:ALA:CA	12:M:76:ASN:HD22	2.05	0.69
18:S:21:VAL:HG23	18:S:34:GLU:O	1.91	0.69
1:A:760:G:N2	19:T:104:LYS:HB3	2.08	0.69
1:A:237:C:OP1	19:T:40:LYS:HE3	1.92	0.69
8:I:60:PHE:CZ	20:U:78:LEU:HD21	2.27	0.69
22:W:76:ALA:O	22:W:79:ARG:HG2	1.92	0.69
3:D:62:C:C2	3:D:63:G:N7	2.61	0.69
3:D:64:C:H2'	3:D:65:U:C6	2.28	0.69
1:A:1118:C:H1'	1:A:1179:A:N9	2.06	0.69
1:A:1229:A:OP1	15:P:116:THR:HG22	1.92	0.69
1:A:1244:C:H2'	1:A:1245:A:H8	1.55	0.69
1:A:1468:A:H2'	1:A:1469:G:C5'	2.22	0.69
1:A:32:A:OP1	1:A:398:C:H1'	1.92	0.69
1:A:407:G:H5''	6:G:115:ARG:HD2	1.73	0.69
1:A:87:A:O2'	1:A:88:C:H5'	1.92	0.69
4:E:211:ILE:HG22	4:E:212:GLN:N	2.06	0.69
4:E:80:ILE:HG12	4:E:212:GLN:HG2	1.74	0.69
5:F:35:GLU:HA	5:F:38:ARG:HG3	1.74	0.69
8:I:72:VAL:HG23	8:I:73:ASN:H	1.57	0.69
11:L:103:THR:CG2	11:L:104:ARG:N	2.55	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:45:ALA:O	11:L:78:LYS:HB2	1.92	0.69
12:M:10:GLY:CA	12:M:16:LEU:HD21	2.20	0.69
13:N:101:SER:O	13:N:103:LEU:N	2.25	0.69
18:S:14:ASN:HA	18:S:42:ARG:NH1	2.07	0.69
19:T:7:THR:CG2	19:T:8:GLY:N	2.56	0.69
3:D:50:G:C2	3:D:65:U:C2	2.80	0.69
1:A:435:C:H2'	1:A:436:C:O4'	1.91	0.69
1:A:129(A):G:O2'	1:A:130:A:OP2	2.07	0.69
1:A:1404:C:H1'	1:A:1499:A:N1	2.06	0.69
1:A:173:U:C1'	1:A:197:A:N3	2.56	0.69
1:A:41:G:H2'	1:A:42:G:C8	2.27	0.69
1:A:583:A:H2'	1:A:584:G:O4'	1.93	0.69
1:A:632:A:H2'	1:A:633:G:O4'	1.92	0.69
2:C:44:A:C2	2:C:45:G:H1'	2.28	0.69
2:C:4:G:H2'	2:C:5:G:C8	2.28	0.69
4:E:22:LYS:HA	4:E:40:HIS:CE1	2.26	0.69
5:F:99:VAL:HG23	5:F:100:ALA:N	2.07	0.69
8:I:82:ARG:O	8:I:85:VAL:HG23	1.92	0.69
10:K:100:ILE:HD13	10:K:125:ARG:HE	1.58	0.69
12:M:9:ARG:O	12:M:94:VAL:HG13	1.91	0.69
13:N:23:ALA:HA	13:N:28:THR:HG23	1.74	0.69
14:O:28:LYS:CG	14:O:33:ARG:HH12	2.06	0.69
14:O:52:LEU:N	14:O:52:LEU:HD23	2.08	0.69
15:P:100:GLY:O	15:P:101:GLN:O	2.10	0.69
15:P:46:LYS:HG3	15:P:47:ASP:OD1	1.92	0.69
17:R:71:GLN:HB2	17:R:78:TYR:CE1	2.28	0.69
3:D:48:C:N4	3:D:59:U:C2	2.60	0.69
3:D:68:U:O2'	3:D:69:C:H5'	1.92	0.69
1:A:129(A):G:N2	1:A:191(A):G:C4	2.61	0.69
1:A:1436:U:H2'	1:A:1437:C:O4'	1.93	0.69
1:A:708:C:H4'	13:N:37:GLY:HA3	1.75	0.69
1:A:828:A:H5''	1:A:859:A:N1	2.08	0.69
1:A:961:U:H5'	1:A:984:C:C1'	2.21	0.69
2:C:31:G:N2	2:C:40:C:C4	2.61	0.69
3:D:32:C:H1'	9:J:86:GLN:HE22	1.56	0.69
6:G:132:ARG:HG2	6:G:132:ARG:NH1	2.00	0.69
7:H:48:ALA:HB3	7:H:54:ALA:N	2.08	0.69
1:A:642:A:C5	10:K:115:SER:HA	2.28	0.69
4:E:181:PHE:CD1	10:K:71:GLY:HA3	2.27	0.69
11:L:101:PHE:C	11:L:102:LEU:HD23	2.12	0.69
12:M:7:LYS:HG3	12:M:71:LEU:CD1	2.22	0.69
13:N:62:GLN:CD	13:N:63:LEU:N	2.46	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1075:C:H4'	1:A:1101:A:N6	2.07	0.69
1:A:1178:G:O5'	1:A:1178:G:H8	1.76	0.69
1:A:1187:G:H2'	1:A:1188:A:C8	2.28	0.69
1:A:1392:G:H2'	1:A:1393:U:H6	1.58	0.69
1:A:1405:G:H2'	1:A:1406:U:H6	1.57	0.69
1:A:30:U:O2'	1:A:31:G:OP1	2.10	0.69
1:A:352:C:H4'	1:A:354:G:OP1	1.92	0.69
1:A:509:A:N3	1:A:543:C:O2'	2.19	0.69
1:A:519:C:N4	1:A:520:A:C2	2.61	0.69
1:A:20:U:H6	1:A:572:A:C2	2.11	0.69
4:E:116:GLU:HG2	4:E:117:GLU:H	1.58	0.69
4:E:144:ARG:O	4:E:147:LYS:HB3	1.91	0.69
5:F:120:VAL:O	5:F:124:ILE:HG13	1.93	0.69
11:L:16:ARG:HB3	11:L:64:THR:HG1	1.58	0.69
12:M:46:ARG:HD3	12:M:64:GLU:HB3	1.73	0.69
12:M:79:ARG:HH22	12:M:82:ILE:HD12	1.57	0.69
13:N:22:HIS:HB2	13:N:85:ARG:HB2	1.73	0.69
1:A:1459:C:OP1	22:W:27:LYS:NZ	2.25	0.69
3:D:53:G:N2	3:D:62:C:C2	2.61	0.69
3:D:11:C:O2'	3:D:12:U:H5'	1.93	0.69
1:A:1068:G:N7	1:A:1094:G:H8	1.90	0.69
1:A:1354:C:H2'	1:A:1355:G:H8	1.55	0.69
1:A:928:G:H22	1:A:1390:U:H1'	1.56	0.69
1:A:1529:G:H5''	1:A:1530:G:OP2	1.93	0.69
1:A:169:C:O2'	1:A:170:U:H5'	1.92	0.69
1:A:408:A:H2'	1:A:409:G:H8	1.56	0.69
1:A:689:C:C4	1:A:690:G:N7	2.60	0.69
1:A:754:C:H1'	17:R:69:TYR:CG	2.28	0.69
1:A:938:A:H2'	1:A:939:G:C5'	2.23	0.69
1:A:954:G:N2	1:A:1228:C:C4	2.61	0.69
1:A:96:G:H2'	1:A:97:U:H6	1.57	0.69
4:E:69:LEU:HB3	4:E:162:ILE:CG2	2.23	0.69
6:G:159:ARG:O	6:G:163:GLU:HB2	1.91	0.69
6:G:74:GLN:O	6:G:77:ASN:HB2	1.93	0.69
1:A:922:G:H5''	7:H:20:GLN:HE21	1.57	0.69
8:I:19:LEU:HB3	8:I:23:LYS:HD2	1.73	0.69
8:I:19:LEU:HD23	8:I:23:LYS:HZ2	1.52	0.69
8:I:21:LEU:HA	8:I:24:GLU:OE1	1.93	0.69
9:J:118:VAL:O	9:J:121:ALA:HB3	1.93	0.69
9:J:56:GLN:CD	9:J:56:GLN:H	1.95	0.69
9:J:74:GLU:HG2	9:J:75:VAL:H	1.58	0.69
14:O:104:VAL:HG12	14:O:105:TYR:CD1	2.28	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:28:LYS:CD	14:O:33:ARG:HH12	2.04	0.69
14:O:69:TYR:CE2	14:O:71:PRO:HA	2.28	0.69
14:O:93:LEU:HD12	14:O:96:VAL:CG2	2.17	0.69
1:A:1228:C:H4'	15:P:116:THR:HA	1.75	0.69
21:V:16:LEU:H	21:V:16:LEU:HD13	1.58	0.69
21:V:32:LYS:CB	21:V:50:ALA:HB3	2.23	0.69
4:E:130:ARG:CB	4:E:131:PRO:HD2	2.23	0.69
1:A:1314:C:H2'	1:A:1315:U:C5	2.28	0.69
1:A:1237:C:C4'	1:A:1334:G:N2	2.56	0.69
1:A:1419:G:O2'	1:A:1420:C:H6	1.74	0.69
1:A:14:U:H2'	1:A:16:A:OP2	1.92	0.69
1:A:173:U:H4'	1:A:197:A:H1'	1.74	0.69
1:A:36:C:H5''	14:O:122:THR:O	1.93	0.69
1:A:494:U:H2'	1:A:494:U:O2	1.92	0.69
1:A:909:A:H2'	1:A:910:C:H5'	1.74	0.69
1:A:955:U:H2'	1:A:956:U:C6	2.26	0.69
1:A:973:G:C3'	1:A:974:A:H5''	2.23	0.69
4:E:219:VAL:O	4:E:223:ILE:CG1	2.40	0.69
6:G:135:LEU:C	6:G:137:SER:N	2.47	0.69
6:G:31:CYS:O	6:G:33:MET:SD	2.51	0.69
7:H:92:LYS:HG3	7:H:93:PRO:HD2	1.75	0.69
10:K:12:ARG:HD2	10:K:26:VAL:HG23	1.72	0.69
12:M:24:VAL:CG2	12:M:72:VAL:HG13	2.22	0.69
17:R:41:GLU:HA	17:R:44:LYS:HE3	1.76	0.69
17:R:79:ARG:HA	17:R:82:ILE:HD12	1.75	0.69
3:D:62:C:H2'	3:D:63:G:C8	2.27	0.69
3:D:67:C:O2'	3:D:68:U:H5'	1.92	0.69
1:A:1399:C:H4'	1:A:1400:C:O5'	1.92	0.68
1:A:817:C:O2'	1:A:818:G:C5'	2.37	0.68
2:C:7:G:O2'	2:C:8:U:P	2.50	0.68
4:E:220:ASP:O	4:E:223:ILE:HB	1.93	0.68
6:G:15:GLU:OE2	6:G:59:ARG:NH2	2.26	0.68
6:G:64:LEU:CD1	6:G:75:PHE:CZ	2.76	0.68
6:G:64:LEU:HD11	6:G:75:PHE:CE1	2.27	0.68
8:I:6:VAL:HG22	8:I:8:ILE:CG1	2.22	0.68
9:J:113:GLU:CG	9:J:118:VAL:HB	2.23	0.68
9:J:38:LEU:O	9:J:41:ARG:HB2	1.93	0.68
15:P:2:ALA:N	15:P:9:ILE:HG23	2.08	0.68
19:T:27:PHE:O	19:T:36:ILE:CD1	2.41	0.68
19:T:6:LEU:N	19:T:6:LEU:HD12	2.08	0.68
22:W:89:ARG:O	22:W:93:GLU:HG3	1.93	0.68
3:D:59:U:C2	3:D:59:U:OP1	2.46	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:489:C:H2'	1:A:490:G:C8	2.28	0.68
1:A:498:A:O2'	1:A:500:G:C8	2.46	0.68
1:A:727:G:N2	1:A:731:G:C5	2.61	0.68
4:E:178:ARG:HE	4:E:196:LEU:HD13	1.57	0.68
4:E:212:GLN:NE2	4:E:212:GLN:HA	2.05	0.68
4:E:69:LEU:HD23	4:E:91:PRO:CB	2.23	0.68
6:G:128:VAL:HG21	6:G:133:VAL:HG23	1.74	0.68
6:G:34:GLU:CD	6:G:35:ARG:N	2.47	0.68
6:G:67:ILE:HD12	6:G:68:TYR:N	2.08	0.68
9:J:155:ARG:HD3	9:J:156:TRP:H	1.57	0.68
9:J:38:LEU:HD12	9:J:41:ARG:CD	2.14	0.68
10:K:117:GLY:O	10:K:119:LEU:HD22	1.94	0.68
13:N:25:TYR:CZ	13:N:87:THR:HB	2.28	0.68
13:N:34:ASP:HB2	13:N:35:PRO:HD3	1.76	0.68
14:O:33:ARG:HG2	14:O:60:LEU:HD23	1.75	0.68
20:U:70:ILE:HG22	20:U:74:ARG:NE	2.09	0.68
22:W:10:LEU:HD12	22:W:11:SER:H	1.59	0.68
22:W:75:ASN:ND2	22:W:75:ASN:N	2.29	0.68
1:A:1269:A:H2'	1:A:1270:C:H4'	1.75	0.68
1:A:1431:C:H2'	1:A:1432:G:O4'	1.93	0.68
1:A:186(B):C:O2'	1:A:186(C):G:H5'	1.93	0.68
1:A:192:U:H2'	1:A:193:C:H6	1.59	0.68
1:A:22:G:H3'	1:A:23:C:H6	1.57	0.68
1:A:266:G:O2'	1:A:268:C:OP2	2.11	0.68
1:A:412:A:H4'	1:A:412:A:OP2	1.92	0.68
2:C:60:U:OP2	2:C:60:U:C6	2.45	0.68
4:E:84:GLU:OE1	4:E:216:SER:HA	1.94	0.68
5:F:152:ILE:CG2	5:F:167:TRP:HE3	2.06	0.68
6:G:172:PRO:HG3	6:G:193:ASP:HB2	1.74	0.68
8:I:60:PHE:CE2	20:U:78:LEU:HD21	2.28	0.68
10:K:14:ARG:HD2	10:K:15:ASN:HD22	1.59	0.68
17:R:26:GLU:H	17:R:26:GLU:CD	1.96	0.68
17:R:79:ARG:HH11	17:R:79:ARG:HB3	1.58	0.68
1:A:1259:C:H6	1:A:1259:C:O5'	1.77	0.68
1:A:1402:C:H2'	1:A:1403:C:C6	2.27	0.68
1:A:170:U:O2'	1:A:171:A:H5'	1.92	0.68
1:A:275:G:H5'	19:T:14:LYS:HZ3	1.57	0.68
1:A:483:C:H3'	1:A:483:C:H6	1.59	0.68
1:A:891:U:C5	1:A:906:G:N2	2.61	0.68
1:A:949:A:H2'	1:A:950:U:C6	2.29	0.68
1:A:964:A:O2'	12:M:55:LYS:NZ	2.25	0.68
4:E:165:VAL:HG23	4:E:166:ASP:N	2.08	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:84:ILE:HA	5:F:101:LEU:HD11	1.74	0.68
6:G:158:ILE:HG22	6:G:162:LEU:CD1	2.22	0.68
6:G:204:ILE:HD12	6:G:204:ILE:N	2.08	0.68
1:A:1374:A:OP1	9:J:36:LYS:HE2	1.94	0.68
10:K:89:PRO:HA	10:K:92:ARG:HH21	1.57	0.68
16:Q:29:ARG:HB2	16:Q:40:CYS:HB3	1.76	0.68
1:A:1157:A:H2'	1:A:1157:A:N3	2.07	0.68
1:A:294:U:H2'	1:A:294:U:O2	1.93	0.68
1:A:51:A:C2	1:A:116:A:H1'	2.28	0.68
1:A:601:C:O2'	1:A:602:A:H5'	1.93	0.68
1:A:684:A:O2'	13:N:39:PRO:O	2.10	0.68
3:D:40:C:H5'	3:D:41:G:OP2	1.92	0.68
5:F:147:LYS:CB	5:F:203:PHE:HD2	2.07	0.68
6:G:194:LEU:HB3	6:G:196:LEU:HD11	1.74	0.68
7:H:60:TYR:HE1	7:H:64:ARG:CZ	2.06	0.68
9:J:122:HIS:O	9:J:125:MET:HG3	1.93	0.68
10:K:115:SER:C	10:K:116:LYS:HD2	2.14	0.68
12:M:23:ILE:HG23	12:M:85:LEU:CD2	2.23	0.68
12:M:9:ARG:HH11	12:M:9:ARG:CB	2.06	0.68
18:S:39:TYR:CD1	18:S:39:TYR:C	2.65	0.68
1:A:986:A:H4'	21:V:55:LYS:HG3	1.76	0.68
3:D:18:G:N2	3:D:57:G:H2'	2.09	0.68
1:A:1161:C:H2'	1:A:1162:C:H6	1.59	0.68
1:A:1124:G:N1	1:A:1147:C:N4	2.42	0.68
1:A:1271:G:O2'	1:A:1272:G:H5'	1.94	0.68
1:A:236:G:C3'	1:A:237:C:H6	2.07	0.68
1:A:520:A:N7	1:A:521:G:C8	2.62	0.68
1:A:578:C:N4	1:A:579:G:O6	2.25	0.68
1:A:764:C:H3'	1:A:765:G:C8	2.28	0.68
1:A:955:U:C2	1:A:956:U:H5	2.11	0.68
5:F:56:ASP:O	5:F:66:VAL:HA	1.93	0.68
6:G:133:VAL:CG1	6:G:135:LEU:HG	2.23	0.68
7:H:109:ILE:HG22	7:H:110:LEU:HD23	1.74	0.68
8:I:77:ARG:N	8:I:80:ARG:HE	1.92	0.68
9:J:72:ARG:HH22	9:J:138:LYS:HZ3	1.42	0.68
10:K:29:SER:CB	10:K:32:LYS:HZ3	2.07	0.68
13:N:71:LYS:O	13:N:74:ALA:N	2.27	0.68
15:P:19:LEU:HD12	15:P:20:THR:H	1.58	0.68
15:P:15:VAL:HG11	15:P:39:ILE:HD12	1.74	0.68
18:S:32:TYR:HD1	18:S:32:TYR:N	1.92	0.68
1:A:1451:A:H5''	1:A:1452:C:H5	1.58	0.68
1:A:1378:C:O2	1:A:1378:C:C2'	2.42	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1521:G:H2'	1:A:1522:U:H6	1.58	0.68
1:A:230:G:N2	1:A:231:G:H1'	2.09	0.68
1:A:244:U:HO2'	1:A:245:C:P	2.15	0.68
1:A:283:C:N3	1:A:284:G:C8	2.62	0.68
1:A:464:G:N2	1:A:474:G:O6	2.27	0.68
1:A:50:A:O2'	1:A:360:A:H2	1.77	0.68
1:A:522:C:N4	1:A:523:A:N6	2.42	0.68
1:A:577:G:N2	1:A:578:C:H1'	2.09	0.68
1:A:728:A:H8	17:R:54:ARG:CZ	2.07	0.68
1:A:885:G:N3	1:A:914:A:H2	1.92	0.68
4:E:28:PHE:HE1	4:E:31:TYR:HB3	1.58	0.68
4:E:35:GLU:HG2	4:E:39:ILE:C	2.14	0.68
6:G:172:PRO:HG3	6:G:193:ASP:CB	2.24	0.68
7:H:118:ILE:HG22	7:H:119:LEU:H	1.58	0.68
8:I:76:ALA:HB1	8:I:80:ARG:CZ	2.23	0.68
11:L:4:TYR:HB3	11:L:87:GLN:HB2	1.76	0.68
18:S:14:ASN:OD1	18:S:16:HIS:CE1	2.47	0.68
18:S:3:LYS:NZ	18:S:3:LYS:HB3	2.09	0.68
1:A:663:A:O3'	20:U:64:ARG:NH2	2.26	0.68
20:U:76:LEU:H	20:U:76:LEU:CD2	2.05	0.68
22:W:73:HIS:O	22:W:74:LYS:C	2.31	0.68
23:X:12:LYS:HB3	23:X:22:ARG:NH1	2.09	0.68
1:A:1153:C:H2'	1:A:1154:G:C8	2.28	0.68
1:A:1285:A:O2'	1:A:1286:A:OP2	2.11	0.68
1:A:1392:G:O2'	1:A:1393:U:H5'	1.94	0.68
1:A:273:A:C2	1:A:274:A:H1'	2.29	0.68
4:E:31:TYR:HE2	4:E:200:ILE:HG21	1.55	0.68
5:F:150:LYS:HA	5:F:169:ALA:HB1	1.75	0.68
1:A:509:A:H5'	6:G:54:TYR:HD2	1.57	0.68
7:H:105:VAL:HG12	7:H:106:PRO:HD3	1.75	0.68
7:H:50:GLU:HB2	7:H:53:LEU:CD2	2.24	0.68
7:H:50:GLU:HB2	7:H:53:LEU:HG	1.74	0.68
8:I:33:TYR:CG	8:I:75:LEU:HG	2.29	0.68
8:I:50:TYR:CZ	20:U:77:GLY:HA2	2.28	0.68
8:I:85:VAL:CG1	8:I:88:VAL:HG23	2.24	0.68
11:L:110:GLU:O	11:L:111:ARG:HB2	1.92	0.68
11:L:47:LEU:HD21	11:L:50:LEU:CD1	2.23	0.68
14:O:41:ARG:CG	14:O:42:THR:N	2.56	0.68
16:Q:22:THR:O	16:Q:23:ARG:HG2	1.93	0.68
19:T:33:GLY:O	19:T:34:LYS:O	2.11	0.68
19:T:67:LYS:HA	19:T:70:ARG:HH12	1.58	0.68
20:U:81:PHE:O	20:U:82:THR:HG22	1.94	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:54:U:OP2	3:D:55:U:C4	2.47	0.68
1:A:1321:C:H6	1:A:1321:C:O5'	1.74	0.68
1:A:11:G:N2	1:A:24:U:N1	2.42	0.68
1:A:111:G:N1	1:A:331:G:O6	2.18	0.68
1:A:50:A:O2'	1:A:52:G:N7	2.27	0.68
1:A:55:A:O2'	1:A:56:U:H5'	1.92	0.68
1:A:607:A:C2'	1:A:608:A:H5'	2.24	0.68
4:E:145:LEU:O	4:E:149:LEU:HB2	1.94	0.68
4:E:33:TYR:CD2	4:E:43:ASP:HA	2.29	0.68
4:E:77:ALA:O	4:E:80:ILE:N	2.26	0.68
5:F:132:ARG:O	5:F:135:LYS:HB2	1.94	0.68
5:F:190:ARG:HB3	5:F:190:ARG:NH1	2.09	0.68
9:J:54:THR:OG1	9:J:56:GLN:HG2	1.93	0.68
11:L:112:LYS:HG3	11:L:117:HIS:HA	1.76	0.68
11:L:50:LEU:C	11:L:50:LEU:HD23	2.14	0.68
1:A:468:A:P	18:S:75:ARG:HH22	2.16	0.68
1:A:191:G:H1'	22:W:105:SER:HA	1.76	0.68
3:D:15:G:H1	3:D:48:C:N4	1.83	0.68
1:A:1004:A:H8	1:A:1036:G:O6	1.76	0.68
1:A:113:G:C1'	1:A:354:G:H5''	2.24	0.68
1:A:1210:C:C4'	1:A:1214:C:H42	2.07	0.68
1:A:1372:U:H2'	1:A:1373:G:H8	1.58	0.68
1:A:321:A:H2'	1:A:322:C:C6	2.29	0.68
1:A:55:A:C2	1:A:56:U:H1'	2.29	0.68
1:A:707:C:O2'	1:A:708:C:H5'	1.94	0.68
1:A:843:U:H3	4:E:37:ASN:HD22	1.42	0.68
1:A:920:U:H2'	1:A:921:U:H6	1.58	0.68
4:E:158:LEU:N	4:E:158:LEU:HD23	2.09	0.68
8:I:60:PHE:CE2	20:U:78:LEU:HD11	2.29	0.68
8:I:52:ILE:HD13	8:I:87:ARG:NH2	2.08	0.68
9:J:129:GLU:OE1	9:J:131:LYS:HG2	1.93	0.68
10:K:84:ARG:HB3	10:K:84:ARG:HH11	1.57	0.68
14:O:25:PRO:C	14:O:27:LEU:N	2.48	0.68
15:P:14:ARG:HG2	15:P:44:ARG:NH1	2.08	0.68
1:A:667:G:H4'	17:R:51:HIS:ND1	2.09	0.68
20:U:55:ARG:HH11	20:U:55:ARG:CB	1.96	0.68
1:A:1285:A:O4'	1:A:1286:A:N7	2.27	0.67
1:A:586:C:OP1	19:T:34:LYS:CE	2.42	0.67
1:A:659:U:H2'	1:A:660:G:H8	1.57	0.67
4:E:163:PHE:CE2	4:E:186:ALA:HA	2.29	0.67
5:F:11:ARG:HD2	5:F:16:ARG:NH2	2.05	0.67
6:G:3:ARG:HH21	6:G:71:SER:HB3	1.58	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:59:GLY:C	7:H:63:ARG:HH21	1.98	0.67
8:I:96:PRO:O	8:I:97:PHE:HB2	1.94	0.67
9:J:85:TYR:HD2	9:J:85:TYR:N	1.92	0.67
10:K:135:CYS:SG	10:K:136:GLU:N	2.66	0.67
10:K:29:SER:N	10:K:32:LYS:NZ	2.39	0.67
11:L:50:LEU:HD21	11:L:55:ALA:C	2.15	0.67
11:L:114:TYR:HD1	12:M:60:ARG:HH22	1.42	0.67
13:N:63:LEU:O	13:N:63:LEU:HD23	1.93	0.67
16:Q:42:ILE:O	16:Q:43:CYS:C	2.31	0.67
19:T:4:LYS:O	19:T:5:VAL:CG2	2.42	0.67
3:D:75:C:H5'	3:D:76:A:O3'	1.93	0.67
1:A:386:C:C2'	1:A:387:U:H5'	2.24	0.67
1:A:1065:U:O2	1:A:1065:U:H2'	1.94	0.67
1:A:1531:A:H5'	1:A:1532:U:OP2	1.94	0.67
1:A:579:G:HO2'	1:A:580:U:H5'	1.57	0.67
2:C:19:G:H3'	2:C:20:U:C4	2.30	0.67
5:F:126:ARG:O	5:F:127:ARG:HB2	1.93	0.67
5:F:156:ARG:HB3	5:F:193:TYR:HD1	1.59	0.67
6:G:108:LEU:O	6:G:110:PHE:N	2.27	0.67
6:G:127:THR:C	6:G:146:ILE:HG22	2.13	0.67
14:O:82:VAL:O	14:O:83:VAL:HB	1.93	0.67
15:P:22:ILE:HB	15:P:25:ILE:CD1	2.23	0.67
15:P:22:ILE:HB	15:P:25:ILE:CG1	2.23	0.67
22:W:43:LEU:HD22	22:W:51:GLU:HG3	1.76	0.67
1:A:195:A:O5'	22:W:68:LYS:NZ	2.27	0.67
3:D:48:C:N3	3:D:59:U:H2'	2.08	0.67
6:G:47:ARG:HB2	6:G:47:ARG:CZ	2.24	0.67
1:A:1161:C:H2'	1:A:1162:C:C6	2.29	0.67
1:A:1256:A:N6	1:A:1278:U:H2'	2.10	0.67
1:A:1392:G:H2'	1:A:1393:U:C6	2.29	0.67
1:A:184:G:C5'	1:A:224:C:H4'	2.24	0.67
1:A:236:G:H2'	1:A:237:C:C6	2.29	0.67
1:A:301:G:N2	1:A:302:G:C1'	2.57	0.67
1:A:689:C:H4'	1:A:705:U:H1'	1.74	0.67
1:A:92:G:H2'	1:A:93:U:O4'	1.95	0.67
1:A:977:A:N6	1:A:1224:G:OP1	2.27	0.67
3:D:34:G:OP1	3:D:35:A:H5'	1.94	0.67
4:E:184:VAL:H	4:E:198:ASP:CG	1.98	0.67
6:G:119:GLN:HG3	6:G:123:HIS:HD2	1.55	0.67
6:G:150:GLU:HA	6:G:153:ARG:NE	2.09	0.67
6:G:55:ALA:O	6:G:59:ARG:CG	2.37	0.67
15:P:16:ASP:HA	15:P:19:LEU:CD2	2.24	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:66:LEU:HA	15:P:70:LEU:HD12	1.76	0.67
1:A:1305:G:O4'	1:A:1305:G:OP2	2.12	0.67
1:A:1507:A:C2'	1:A:1508:G:H5'	2.25	0.67
1:A:432:A:C8	1:A:433:C:C6	2.82	0.67
1:A:533:A:H2'	1:A:535:A:OP2	1.93	0.67
1:A:866:C:H5	1:A:867:G:H1'	1.58	0.67
1:A:890:G:H2'	1:A:891:U:OP2	1.93	0.67
4:E:35:GLU:HG2	4:E:39:ILE:O	1.95	0.67
6:G:146:ILE:HD12	6:G:146:ILE:H	1.59	0.67
7:H:147:ASP:HA	7:H:150:ARG:CB	2.23	0.67
10:K:102:ARG:HG2	10:K:102:ARG:HH11	1.58	0.67
10:K:103:VAL:HB	10:K:108:GLY:CA	2.24	0.67
10:K:109:ILE:HG12	10:K:137:VAL:H	1.59	0.67
10:K:33:GLU:CA	10:K:36:LEU:HD21	2.24	0.67
13:N:42:TRP:HE3	13:N:43:SER:N	1.92	0.67
20:U:33:ASP:CG	20:U:34:TYR:N	2.47	0.67
20:U:53:ARG:HD3	20:U:58:LEU:O	1.94	0.67
21:V:52:TYR:HA	21:V:56:GLN:O	1.95	0.67
22:W:12:ALA:N	22:W:13:LEU:HD12	2.09	0.67
3:D:21:A:N6	3:D:48:C:OP2	2.27	0.67
3:D:54:U:C2'	3:D:55:U:H5'	2.24	0.67
1:A:1084:G:C2	1:A:1085:U:O4	2.48	0.67
1:A:1476:G:C6	1:A:1477:C:N4	2.63	0.67
1:A:283:C:O2	1:A:283:C:H2'	1.94	0.67
1:A:296:U:C4	1:A:297:G:N7	2.63	0.67
1:A:508:C:H4'	1:A:509:A:O5'	1.93	0.67
1:A:518:C:O2'	1:A:519:C:OP2	2.09	0.67
1:A:665:A:H2'	1:A:725:G:H22	1.57	0.67
1:A:961:U:H6	1:A:983:A:C4	2.12	0.67
2:C:7:G:O2'	2:C:8:U:OP1	2.11	0.67
5:F:33:LEU:O	5:F:36:ASP:HB3	1.94	0.67
7:H:118:ILE:HG22	7:H:119:LEU:N	2.10	0.67
1:A:737:A:H5''	8:I:92:LYS:HG3	1.77	0.67
9:J:85:TYR:HD1	9:J:154:TYR:CE1	2.12	0.67
10:K:61:VAL:CG1	10:K:62:TYR:N	2.56	0.67
11:L:114:TYR:HD1	12:M:60:ARG:HH12	1.42	0.67
11:L:16:ARG:HB3	11:L:64:THR:OG1	1.93	0.67
11:L:3:GLN:CA	11:L:20:ARG:HG2	2.22	0.67
12:M:24:VAL:CG2	12:M:34:VAL:HG11	2.23	0.67
1:A:973:G:H1'	12:M:55:LYS:H	1.60	0.67
14:O:83:VAL:HA	14:O:105:TYR:HD1	1.59	0.67
14:O:93:LEU:O	14:O:96:VAL:HG23	1.94	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:60:ILE:HG12	19:T:61:GLU:O	1.94	0.67
19:T:61:GLU:HA	19:T:71:PHE:CE1	2.30	0.67
21:V:13:ASP:O	21:V:17:GLU:HG3	1.95	0.67
21:V:30:LEU:HD12	21:V:59:PRO:HB3	1.77	0.67
1:A:1105:A:H2'	1:A:1106:G:H8	1.60	0.67
1:A:1316:G:H5'	16:Q:17:LYS:NZ	2.09	0.67
1:A:1418:A:N1	1:A:1483:A:N1	2.43	0.67
1:A:66:G:O4'	1:A:173:U:C4	2.46	0.67
1:A:448:A:OP2	1:A:485:G:N2	2.28	0.67
1:A:373:A:C6	1:A:482:A:N6	2.62	0.67
1:A:683:G:H21	13:N:38:ASN:HA	1.60	0.67
1:A:703:G:O2'	1:A:704:A:OP2	2.11	0.67
1:A:893:C:O2'	1:A:894:G:H5'	1.95	0.67
1:A:909:A:O2'	1:A:910:C:H5'	1.94	0.67
4:E:16:HIS:O	4:E:204:ASN:HB2	1.95	0.67
4:E:42:ILE:HG12	4:E:43:ASP:N	2.07	0.67
4:E:54:THR:CG2	4:E:201:ILE:HD11	2.23	0.67
5:F:151:VAL:HG13	5:F:200:ALA:HB2	1.75	0.67
5:F:182:ILE:HA	5:F:204:LEU:HG	1.77	0.67
5:F:84:ILE:HA	5:F:87:LEU:HD12	1.76	0.67
6:G:158:ILE:CG2	6:G:162:LEU:HD11	2.23	0.67
6:G:191:ARG:NH2	6:G:194:LEU:O	2.27	0.67
7:H:89:ILE:HG12	7:H:131:ILE:HD12	1.77	0.67
9:J:133:GLY:O	9:J:137:LYS:HG3	1.95	0.67
9:J:5:ARG:O	9:J:7:ALA:N	2.26	0.67
11:L:91:ASP:O	11:L:91:ASP:CG	2.33	0.67
1:A:706:A:H4'	13:N:29:ILE:CD1	2.24	0.67
15:P:22:ILE:HD12	15:P:25:ILE:HD12	1.77	0.67
16:Q:44:LEU:HD23	16:Q:45:ARG:N	2.08	0.67
1:A:748:C:C3'	1:A:748:C:H6	2.04	0.67
1:A:1104:G:O2'	1:A:1105:A:H5'	1.94	0.67
1:A:1128:C:H1'	1:A:1146:A:N6	2.10	0.67
1:A:197:A:H62	1:A:221:C:C5'	2.00	0.67
1:A:132:C:H5'	1:A:262:A:H1'	1.76	0.67
1:A:404:U:H5'	6:G:122:ARG:HH11	1.60	0.67
1:A:373:A:N7	1:A:482:A:N7	2.42	0.67
1:A:633:G:H2'	1:A:634:C:H6	1.60	0.67
1:A:640:A:H2'	1:A:641:U:C5'	2.25	0.67
1:A:652:U:C6	1:A:752:G:C2	2.83	0.67
1:A:673:G:N2	1:A:674:G:C2	2.63	0.67
1:A:706:A:C4'	13:N:29:ILE:HD13	2.24	0.67
1:A:724:G:N2	1:A:725:G:C1'	2.58	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:27:LYS:HB3	4:E:194:PRO:HD2	1.77	0.67
5:F:183:ASP:N	5:F:204:LEU:HD21	2.08	0.67
8:I:30:LEU:C	8:I:35:ALA:HB2	2.15	0.67
8:I:75:LEU:HD22	8:I:79:LEU:HD23	1.75	0.67
12:M:7:LYS:O	12:M:97:GLU:CB	2.43	0.67
13:N:99:GLN:O	13:N:105:VAL:HG21	1.94	0.67
14:O:33:ARG:H	14:O:85:ILE:HG23	1.60	0.67
14:O:59:ARG:CA	14:O:64:TYR:O	2.35	0.67
11:L:111:ARG:HD2	16:Q:61:TRP:HE1	1.60	0.67
19:T:43:LEU:HD22	19:T:44:ALA:H	1.59	0.67
20:U:40:LEU:O	20:U:42:ARG:N	2.28	0.67
1:A:1350:A:OP2	11:L:118:LYS:HG3	1.94	0.67
1:A:1361:G:H3'	1:A:1361:G:C8	2.29	0.67
1:A:438:G:H22	1:A:495:A:P	2.17	0.67
1:A:701:C:H4'	1:A:702:A:OP2	1.94	0.67
1:A:654:G:H1'	1:A:753:A:C2	2.30	0.67
2:C:6:G:H2'	2:C:7:G:C8	2.30	0.67
4:E:145:LEU:O	4:E:149:LEU:CB	2.43	0.67
5:F:120:VAL:CG2	5:F:137:ALA:HB2	2.25	0.67
6:G:35:ARG:O	6:G:37:PRO:N	2.28	0.67
10:K:64:LYS:HG2	10:K:79:VAL:CG2	2.14	0.67
11:L:49:PRO:CD	11:L:78:LYS:HG2	2.25	0.67
12:M:49:VAL:HG12	16:Q:45:ARG:HD2	1.77	0.67
13:N:111:ASP:O	13:N:112:THR:C	2.31	0.67
15:P:15:VAL:HG11	15:P:39:ILE:HD11	1.76	0.67
5:F:29:TYR:CE2	16:Q:54:PRO:HG2	2.30	0.67
17:R:36:ILE:CD1	17:R:59:MET:SD	2.82	0.67
17:R:39:LEU:HD21	17:R:56:LEU:CD1	2.25	0.67
19:T:18:THR:HG23	19:T:69:LYS:CE	2.24	0.67
20:U:51:LEU:O	20:U:56:THR:HG23	1.95	0.67
21:V:15:LEU:HD12	21:V:44:MET:CE	2.25	0.67
1:A:106:C:O2	1:A:379:C:C5'	2.42	0.67
1:A:1203:C:H2'	1:A:1204:A:O4'	1.95	0.67
1:A:923:A:O4'	1:A:1398:A:C2	2.48	0.67
1:A:1532:U:H4'	1:A:1533:C:OP1	1.93	0.67
1:A:404:U:H2'	1:A:405:U:C6	2.29	0.67
1:A:454:C:H3'	1:A:455:C:H6	1.60	0.67
1:A:622:A:H2'	1:A:623:C:H5'	1.75	0.67
1:A:632:A:O2'	1:A:633:G:H5'	1.95	0.67
1:A:664:G:C8	1:A:664:G:H3'	2.29	0.67
1:A:735:C:O2'	1:A:736:C:C5'	2.40	0.67
2:C:3:C:O2'	2:C:4:G:H5'	1.95	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:19:HIS:O	4:E:20:GLU:O	2.12	0.67
5:F:150:LYS:HZ2	5:F:152:ILE:HD13	1.60	0.67
5:F:50:ALA:CA	5:F:72:LYS:HD2	2.24	0.67
6:G:159:ARG:O	6:G:163:GLU:HB3	1.95	0.67
6:G:59:ARG:O	6:G:63:LYS:HD2	1.94	0.67
7:H:72:GLN:O	7:H:73:ASN:HB3	1.95	0.67
7:H:84:PHE:CE1	7:H:133:TYR:HB3	2.30	0.67
8:I:6:VAL:HG22	8:I:8:ILE:HG13	1.75	0.67
10:K:97:VAL:HG22	10:K:98:LYS:HD3	1.77	0.67
12:M:25:GLU:O	12:M:28:ARG:HB2	1.93	0.67
12:M:79:ARG:NH1	12:M:82:ILE:HD12	2.08	0.67
13:N:84:VAL:HG13	13:N:109:VAL:O	1.95	0.67
14:O:88:GLY:HA3	14:O:99:HIS:NE2	2.09	0.67
1:A:189:U:N3	19:T:72:ARG:NH2	2.40	0.67
13:N:84:VAL:HG21	20:U:88:LYS:HD3	1.77	0.67
21:V:63:THR:HB	21:V:66:MET:CE	2.25	0.67
1:A:210:U:H4'	1:A:216:G:O4'	1.95	0.67
1:A:1154:G:H2'	1:A:1155:G:H8	1.60	0.67
1:A:1202:G:N2	1:A:1203:C:H1'	2.10	0.67
1:A:1316:G:C5'	16:Q:17:LYS:NZ	2.58	0.67
1:A:1237:C:O2	1:A:1335:C:H5'	1.94	0.67
1:A:1433:A:H2'	1:A:1434:A:O4'	1.95	0.67
1:A:1443:G:O3'	1:A:1446:A:H4'	1.95	0.67
1:A:265:G:H2'	1:A:267:C:C5	2.26	0.67
1:A:703:G:O5'	1:A:703:G:C8	2.47	0.67
1:A:735:C:O2'	20:U:75:ILE:HD11	1.93	0.67
1:A:938:A:H2'	1:A:939:G:H5'	1.76	0.67
1:A:989:C:O2'	1:A:990:C:H5'	1.95	0.67
2:C:76:A:H3'	2:C:76:A:OP1	1.93	0.67
5:F:147:LYS:HB2	5:F:203:PHE:CB	2.23	0.67
5:F:182:ILE:HG12	5:F:203:PHE:CD1	2.30	0.67
5:F:42:LEU:HD12	5:F:94:LEU:HD12	1.77	0.67
6:G:145:GLU:HB3	6:G:184:LYS:HG2	1.77	0.67
7:H:48:ALA:HB1	7:H:53:LEU:HB3	1.77	0.67
8:I:2:ARG:HG3	8:I:69:GLU:HG2	1.76	0.67
9:J:65:ALA:N	9:J:128:ALA:HA	2.10	0.67
10:K:95:VAL:CG1	10:K:133:LEU:HD11	2.25	0.67
13:N:57:THR:OG1	13:N:59:TYR:HB3	1.94	0.67
14:O:54:LYS:HB3	14:O:70:ILE:HD12	1.76	0.67
15:P:27:LYS:NZ	15:P:31:LYS:HZ3	1.93	0.67
16:Q:11:LYS:O	16:Q:13:THR:N	2.27	0.67
18:S:67:THR:HG22	18:S:68:ASP:N	2.10	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:31:LEU:O	19:T:32:TYR:CD2	2.48	0.67
21:V:4:SER:O	21:V:5:LEU:HD23	1.95	0.67
22:W:14:LYS:O	22:W:18:GLN:HG2	1.94	0.67
3:D:63:G:C4	3:D:64:C:C5	2.83	0.67
1:A:122:G:C2	1:A:123:C:C2	2.82	0.66
1:A:1375:A:C2	1:A:1376:U:C2	2.82	0.66
1:A:764:C:C2'	1:A:765:G:C8	2.78	0.66
4:E:212:GLN:HE22	4:E:215:LEU:HB3	1.59	0.66
5:F:12:LEU:HD23	5:F:13:GLY:N	2.10	0.66
6:G:148:VAL:O	6:G:153:ARG:HG2	1.95	0.66
6:G:187:ARG:HE	6:G:188:LEU:HG	1.58	0.66
7:H:129:ILE:HG22	7:H:130:ASN:N	2.09	0.66
7:H:52:PRO:O	7:H:55:VAL:CB	2.41	0.66
9:J:72:ARG:NH2	9:J:138:LYS:NZ	2.41	0.66
10:K:137:VAL:HG12	10:K:138:TRP:N	2.09	0.66
10:K:46:LYS:HE3	10:K:64:LYS:HG3	1.77	0.66
11:L:8:GLY:O	11:L:76:ALA:HB1	1.94	0.66
16:Q:45:ARG:NH1	16:Q:45:ARG:HB2	2.05	0.66
18:S:4:ILE:HD12	18:S:64:ALA:HB1	1.77	0.66
20:U:87:ARG:O	20:U:88:LYS:C	2.34	0.66
1:A:161:A:O2'	1:A:162:A:H5'	1.95	0.66
1:A:1242:C:H5''	23:X:10:ARG:NH1	2.10	0.66
1:A:1261:A:H61	1:A:1274:G:C1'	2.01	0.66
1:A:1316:G:O5'	1:A:1316:G:H8	1.77	0.66
1:A:50:A:C2	1:A:360:A:N3	2.64	0.66
1:A:598:U:H2'	1:A:599:C:H6	1.60	0.66
1:A:698:G:N2	1:A:699:C:C2	2.63	0.66
1:A:909:A:C2	1:A:910:C:H1'	2.30	0.66
1:A:947:G:O3'	15:P:109:THR:OG1	2.09	0.66
1:A:966:G:C2	2:C:34:C:H5'	2.29	0.66
1:A:961:U:C5	1:A:983:A:C5	2.84	0.66
3:D:34:G:N3	3:D:34:G:H2'	2.09	0.66
5:F:22:TRP:CZ3	5:F:32:LEU:HD12	2.30	0.66
5:F:58:GLU:O	5:F:59:ARG:NE	2.27	0.66
6:G:12:CYS:SG	6:G:19:LEU:O	2.53	0.66
6:G:61:LYS:N	6:G:203:VAL:HG22	2.10	0.66
6:G:4:TYR:CE2	6:G:8:VAL:HG22	2.28	0.66
17:R:35:ARG:NH1	17:R:59:MET:HG3	2.09	0.66
1:A:191(F):U:C2	22:W:105:SER:HB2	2.30	0.66
1:A:1147:C:O2	1:A:1147:C:C2'	2.39	0.66
1:A:1224:G:H1	1:A:1362(A):C:N4	1.94	0.66
1:A:193:C:H2'	1:A:194:C:C6	2.30	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:317:G:O2'	1:A:318:G:H5'	1.94	0.66
1:A:384:G:H2'	1:A:385:C:H6	1.59	0.66
1:A:539:A:H2'	1:A:540:G:C8	2.30	0.66
1:A:625:G:H4'	18:S:16:HIS:CD2	2.31	0.66
1:A:913:A:O2'	1:A:914:A:O5'	2.13	0.66
1:A:961:U:C6	1:A:983:A:C6	2.83	0.66
2:C:10:G:O2'	2:C:11:A:H5'	1.96	0.66
4:E:170:GLU:CB	4:E:174:VAL:HG23	2.23	0.66
4:E:52:GLU:HG2	4:E:53:ARG:N	2.09	0.66
4:E:69:LEU:HD23	4:E:91:PRO:HB2	1.77	0.66
6:G:56:VAL:CG1	6:G:202:LEU:HD21	2.25	0.66
6:G:88:VAL:HG12	6:G:91:SER:H	1.59	0.66
9:J:123:GLU:OE1	9:J:134:ALA:HB2	1.95	0.66
9:J:75:VAL:CG2	9:J:145:ALA:HB1	2.24	0.66
9:J:66:VAL:O	9:J:70:LYS:HG3	1.95	0.66
10:K:61:VAL:HG12	10:K:62:TYR:H	1.60	0.66
19:T:31:LEU:HG	19:T:32:TYR:CD2	2.30	0.66
22:W:102:GLY:O	22:W:104:LEU:N	2.29	0.66
3:D:8:U:O4	3:D:14:A:N7	2.29	0.66
5:F:157:ILE:HD12	5:F:164:ARG:NE	2.10	0.66
1:A:1111:A:N1	5:F:177:THR:HB	2.09	0.66
1:A:1194:U:H2'	1:A:1195:C:O4'	1.96	0.66
1:A:1302:U:H2'	1:A:1303:C:C5'	2.25	0.66
1:A:197:A:H62	1:A:221:C:H5'	1.55	0.66
1:A:374:A:O4'	1:A:481:G:N2	2.29	0.66
1:A:775:G:H2'	1:A:776:G:C8	2.30	0.66
8:I:3:ARG:HG3	8:I:65:VAL:C	2.15	0.66
8:I:81:ILE:O	8:I:83:ASP:N	2.28	0.66
10:K:11:THR:O	10:K:13:ILE:N	2.28	0.66
10:K:10:LEU:HD11	10:K:85:ARG:HB2	1.78	0.66
1:A:1249:C:O2	11:L:70:LYS:HE2	1.94	0.66
14:O:54:LYS:HD2	14:O:54:LYS:H	1.58	0.66
15:P:52:GLU:HA	15:P:55:ARG:HD3	1.77	0.66
15:P:60:VAL:HG22	15:P:63:THR:HG21	1.75	0.66
1:A:376:G:O3'	18:S:5:ARG:HD2	1.96	0.66
18:S:6:LEU:HD23	18:S:17:TYR:CD2	2.25	0.66
1:A:332:G:OP2	22:W:10:LEU:HD23	1.95	0.66
22:W:48:LYS:HB3	22:W:51:GLU:CG	2.26	0.66
1:A:749:C:O2	1:A:749:C:H2'	1.94	0.66
1:A:16:A:N3	1:A:16:A:H2'	2.10	0.66
1:A:22:G:OP1	1:A:561:U:O2	2.13	0.66
1:A:484:G:C8	1:A:486:U:C2	2.83	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:51:A:O2'	1:A:52:G:P	2.53	0.66
1:A:559:A:C5'	1:A:560:U:H5'	2.25	0.66
1:A:572:A:O5'	1:A:573:A:OP2	2.13	0.66
4:E:174:VAL:O	4:E:178:ARG:CB	2.36	0.66
4:E:82:ARG:HB3	4:E:83:MET:HE2	1.76	0.66
5:F:139:GLN:HA	5:F:170:GLN:HE22	1.60	0.66
5:F:25:GLY:O	5:F:28:GLN:NE2	2.29	0.66
5:F:46:GLU:HB3	5:F:47:LEU:HD22	1.75	0.66
8:I:4:TYR:HA	8:I:93:SER:OG	1.96	0.66
9:J:76:ARG:HB2	9:J:156:TRP:CE2	2.29	0.66
10:K:38:ILE:HA	10:K:41:ARG:HB2	1.76	0.66
12:M:16:LEU:HD13	12:M:94:VAL:HG21	1.76	0.66
13:N:69:ALA:HB1	13:N:103:LEU:CD1	2.25	0.66
17:R:70:LEU:HG	17:R:78:TYR:CG	2.30	0.66
17:R:78:TYR:HE2	17:R:82:ILE:HD11	1.57	0.66
20:U:63:GLN:O	20:U:67:ALA:HB2	1.96	0.66
22:W:53:LEU:O	22:W:56:MET:CB	2.43	0.66
3:D:58:A:O2'	3:D:60:U:O4	2.13	0.66
1:A:1094:G:C2'	1:A:1108:G:H22	2.09	0.66
1:A:116:A:H8	1:A:116:A:O5'	1.78	0.66
1:A:1160:G:N7	1:A:1181:G:C2	2.64	0.66
1:A:15:G:N7	1:A:1396:A:C2	2.64	0.66
1:A:193:C:C2	1:A:194:C:C5	2.82	0.66
1:A:266:G:H2'	19:T:67:LYS:HZ3	1.59	0.66
1:A:609:A:C4	1:A:610:G:C8	2.84	0.66
4:E:118:LEU:HD22	4:E:142:LEU:CD1	2.25	0.66
4:E:31:TYR:CE2	4:E:200:ILE:CG2	2.79	0.66
5:F:124:ILE:HG12	5:F:130:VAL:HG22	1.76	0.66
5:F:156:ARG:CB	5:F:196:LEU:HD13	2.23	0.66
6:G:148:VAL:CG1	6:G:158:ILE:HD12	2.25	0.66
1:A:1298:C:C4	9:J:114:ARG:HB3	2.30	0.66
9:J:29:LYS:NZ	9:J:98:SER:O	2.28	0.66
10:K:14:ARG:O	10:K:18:ARG:CD	2.43	0.66
14:O:24:VAL:O	14:O:24:VAL:HG12	1.94	0.66
19:T:18:THR:HG22	19:T:43:LEU:HD21	1.76	0.66
22:W:85:MET:HB2	22:W:104:LEU:HD21	1.77	0.66
1:A:1026:G:N7	1:A:1027:C:C6	2.63	0.66
1:A:1502:A:C2	1:A:1504:G:C4	2.83	0.66
1:A:482:A:C2	1:A:483:C:O4'	2.44	0.66
1:A:689:C:C2	1:A:690:G:C8	2.83	0.66
1:A:691:G:H22	13:N:51:LYS:HZ3	1.39	0.66
4:E:175:ARG:O	4:E:176:GLU:C	2.34	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:26:CYS:SG	6:G:26:CYS:O	2.53	0.66
7:H:14:ARG:HG3	7:H:14:ARG:O	1.94	0.66
7:H:53:LEU:H	7:H:53:LEU:HD23	1.60	0.66
10:K:86:ILE:HD11	10:K:136:GLU:OE1	1.95	0.66
11:L:112:LYS:CG	11:L:117:HIS:HA	2.26	0.66
12:M:79:ARG:HH11	12:M:79:ARG:C	1.99	0.66
12:M:9:ARG:HB3	12:M:9:ARG:NH1	2.10	0.66
1:A:529:G:C6	14:O:49:ASN:CG	2.68	0.66
15:P:37:THR:CG2	15:P:56:LEU:HD22	2.25	0.66
15:P:82:MET:SD	15:P:93:ARG:HG3	2.36	0.66
20:U:31:LEU:N	20:U:31:LEU:HD12	2.11	0.66
21:V:18:LYS:HE2	21:V:22:LEU:HD12	1.77	0.66
3:D:18:G:H4'	3:D:60:U:H3	1.60	0.66
1:A:1056:U:O2'	5:F:195:VAL:O	2.13	0.66
1:A:1363:A:H5''	1:A:1364:U:OP1	1.95	0.66
1:A:279:A:P	19:T:95:TYR:HH	2.19	0.66
1:A:307:C:C4	1:A:308:C:H5	2.12	0.66
1:A:685:G:N2	1:A:686:U:O4	2.29	0.66
1:A:933:G:OP2	9:J:3:ARG:HG2	1.94	0.66
5:F:12:LEU:CD1	16:Q:57:ARG:HG3	2.23	0.66
6:G:92:VAL:O	6:G:96:LEU:HD12	1.96	0.66
9:J:105:VAL:HG12	9:J:109:ASN:HD21	1.61	0.66
9:J:6:ARG:N	9:J:6:ARG:NH1	2.43	0.66
10:K:29:SER:HB3	10:K:32:LYS:CE	2.25	0.66
11:L:27:THR:HG22	11:L:30:GLY:H	1.61	0.66
14:O:39:VAL:CB	14:O:57:LYS:HD2	2.23	0.66
15:P:14:ARG:H	15:P:44:ARG:CZ	2.08	0.66
18:S:58:TYR:CD1	18:S:58:TYR:C	2.69	0.66
22:W:63:ILE:HG22	22:W:64:ASP:N	2.11	0.66
1:A:164:U:O2'	1:A:165:C:H6	1.73	0.66
1:A:1302:U:C2'	1:A:1303:C:C5'	2.74	0.66
1:A:1520:G:H2'	1:A:1521:G:H8	1.59	0.66
1:A:277:C:P	19:T:68:ARG:HH12	2.19	0.66
1:A:247:G:N2	1:A:282:A:C2	2.59	0.66
1:A:382:A:C2'	1:A:383:A:O5'	2.44	0.66
1:A:684:A:H5''	13:N:12:ARG:HH22	1.60	0.66
1:A:777:A:C4	1:A:778:G:C8	2.84	0.66
1:A:791:G:N2	1:A:1497:G:O3'	2.29	0.66
1:A:939:G:H2'	1:A:940:C:H6	1.58	0.66
5:F:110:ASN:ND2	5:F:144:SER:OG	2.29	0.66
5:F:11:ARG:HG3	5:F:16:ARG:HE	1.60	0.66
6:G:138:TYR:HD2	6:G:139:ARG:N	1.94	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:155:LEU:HB2	6:G:158:ILE:HG12	1.78	0.66
8:I:47:ARG:HD3	8:I:57:GLN:CG	2.26	0.66
8:I:78:GLU:HA	8:I:81:ILE:HD11	1.76	0.66
9:J:69:VAL:CG2	9:J:135:VAL:HG22	2.26	0.66
10:K:118:VAL:C	10:K:119:LEU:HD13	2.17	0.66
10:K:114:THR:CG2	10:K:119:LEU:HD23	2.25	0.66
10:K:12:ARG:HD2	10:K:26:VAL:CG2	2.26	0.66
1:A:643:C:H5'	10:K:31:PHE:CZ	2.31	0.66
10:K:61:VAL:CG1	10:K:62:TYR:H	2.09	0.66
10:K:70:GLN:OE1	10:K:72:PRO:HD2	1.95	0.66
12:M:78:ASN:O	12:M:79:ARG:C	2.34	0.66
1:A:684:A:C4'	13:N:12:ARG:HH12	2.08	0.66
13:N:19:ALA:HB3	13:N:82:VAL:HG22	1.78	0.66
16:Q:34:TYR:CZ	16:Q:44:LEU:HD13	2.30	0.66
20:U:53:ARG:C	20:U:55:ARG:H	1.97	0.66
21:V:31:ILE:O	21:V:31:ILE:HG22	1.94	0.66
21:V:47:HIS:O	21:V:61:TYR:HA	1.96	0.66
3:D:48:C:N4	3:D:59:U:O2	2.28	0.66
1:A:1002:G:N2	1:A:1039:C:N3	2.44	0.66
15:P:40:ASN:OD1	15:P:42:ALA:HB3	1.95	0.66
1:A:1075:C:O2	1:A:1075:C:H2'	1.96	0.66
1:A:1306:A:H1'	1:A:1332:A:C6	2.31	0.66
1:A:1441:G:C2'	1:A:1460:A:H61	2.09	0.66
1:A:1499:A:H2'	1:A:1500:A:H5'	1.78	0.66
1:A:1536:C:H2'	1:A:1537:U:H5	1.59	0.66
1:A:310:G:H2'	1:A:311:C:C6	2.30	0.66
1:A:675:A:N3	13:N:116:HIS:HB2	2.11	0.66
1:A:961:U:C6	1:A:983:A:C2	2.83	0.66
4:E:224:GLN:HG2	4:E:229:VAL:CG2	2.15	0.66
4:E:41:ILE:N	4:E:41:ILE:HD12	2.10	0.66
4:E:81:VAL:HG12	4:E:92:TYR:HD1	1.59	0.66
4:E:91:PRO:HG3	4:E:155:LEU:N	2.08	0.66
5:F:44:GLU:HG2	5:F:52:LEU:HD11	1.77	0.66
6:G:81:GLU:HG3	6:G:85:LYS:HD3	1.77	0.66
7:H:35:GLY:HA3	7:H:41:VAL:HG13	1.76	0.66
7:H:80:ILE:CD1	7:H:91:LEU:HB3	2.26	0.66
10:K:40:ALA:HB2	10:K:45:ILE:CG1	2.23	0.66
10:K:6:ILE:CD1	10:K:6:ILE:C	2.65	0.66
12:M:60:ARG:HH11	12:M:60:ARG:H	1.43	0.66
19:T:96:GLN:O	19:T:98:LEU:N	2.29	0.66
20:U:54:ARG:C	20:U:55:ARG:HG2	2.16	0.66
22:W:44:ALA:HA	22:W:92:LEU:HD21	1.77	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:53:LEU:HA	22:W:56:MET:HB2	1.77	0.66
22:W:63:ILE:HD13	22:W:80:ARG:HB3	1.77	0.66
3:D:58:A:N3	3:D:61:C:C6	2.64	0.66
1:A:1131:G:H1	1:A:1144:G:H1'	1.62	0.65
1:A:1347:G:H3'	11:L:107:ARG:C	2.17	0.65
1:A:922:G:O2'	1:A:1398:A:N1	2.29	0.65
1:A:1414:U:H2'	1:A:1415:G:C8	2.31	0.65
1:A:1414:U:H2'	1:A:1415:G:H8	1.62	0.65
1:A:198:G:C2	1:A:199:G:C8	2.84	0.65
1:A:371:G:H2'	1:A:372:C:H5'	1.73	0.65
1:A:458:C:N4	1:A:464:G:C6	2.64	0.65
1:A:671:G:N3	1:A:671:G:H2'	2.10	0.65
1:A:957:U:H2'	1:A:959:A:OP2	1.96	0.65
4:E:155:LEU:HB3	4:E:159:PRO:HG3	1.77	0.65
4:E:83:MET:O	4:E:87:ARG:HG3	1.96	0.65
6:G:159:ARG:O	6:G:160:GLN:C	2.33	0.65
9:J:109:ASN:O	9:J:119:ARG:NH1	2.28	0.65
10:K:14:ARG:HH12	10:K:83:ILE:HD13	1.61	0.65
16:Q:23:ARG:HD3	16:Q:30:ALA:HB2	1.78	0.65
5:F:6:HIS:CD2	16:Q:49:HIS:HB3	2.31	0.65
17:R:81:LEU:HD23	17:R:85:LEU:HD13	1.76	0.65
21:V:38:SER:O	21:V:70:LYS:HA	1.95	0.65
22:W:36:LEU:CD2	22:W:55:ILE:HG22	2.24	0.65
1:A:1046:A:N3	1:A:1046:A:H2'	2.11	0.65
1:A:1084:G:H5''	1:A:1086:U:C4	2.31	0.65
1:A:1260:C:H4'	1:A:1284:C:H5'	1.78	0.65
1:A:1278:U:C4'	1:A:1279:A:O4'	2.40	0.65
1:A:410:G:C1'	1:A:432:A:H61	2.08	0.65
1:A:594:G:H2'	1:A:595:G:O4'	1.96	0.65
1:A:620:C:H2'	1:A:621:A:O4'	1.96	0.65
1:A:714:G:O2'	1:A:715:A:H5'	1.95	0.65
1:A:720:C:C5	1:A:721:G:H2'	2.30	0.65
1:A:880:C:O2'	1:A:881:G:H5'	1.96	0.65
2:C:60:U:H2'	2:C:60:U:O2	1.96	0.65
4:E:75:LYS:O	4:E:77:ALA:N	2.30	0.65
5:F:53:ALA:CB	5:F:115:LEU:HD21	2.27	0.65
6:G:8:VAL:O	6:G:11:LEU:N	2.28	0.65
6:G:15:GLU:CD	6:G:59:ARG:HH21	1.99	0.65
6:G:19:LEU:H	6:G:33:MET:CE	2.02	0.65
8:I:87:ARG:HH11	8:I:87:ARG:HG2	1.61	0.65
8:I:95:GLU:H	8:I:96:PRO:HD3	1.60	0.65
9:J:111:ARG:CZ	9:J:122:HIS:HB3	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:14:PRO:HG3	9:J:21:VAL:CG1	2.26	0.65
9:J:78:ARG:HG3	9:J:80:VAL:HG23	1.76	0.65
10:K:126:LYS:HD2	10:K:127:LEU:N	2.10	0.65
10:K:48:TYR:CA	10:K:61:VAL:HG22	2.26	0.65
11:L:40:LEU:C	11:L:42:ARG:H	1.97	0.65
15:P:13:LYS:HB3	15:P:17:VAL:CB	2.26	0.65
1:A:474:G:P	18:S:81:ARG:HA	2.37	0.65
21:V:45:VAL:CG2	21:V:67:VAL:HG21	2.21	0.65
1:A:1003:G:H21	1:A:1005:A:H5'	1.61	0.65
1:A:159:G:N1	1:A:163:C:N4	2.44	0.65
1:A:1268:A:C2	1:A:1311:G:N2	2.64	0.65
1:A:1360:A:N3	1:A:1360:A:H2'	2.10	0.65
1:A:266:G:H2'	19:T:67:LYS:HZ2	1.60	0.65
1:A:579:G:O5'	1:A:579:G:H8	1.79	0.65
1:A:947:G:N2	1:A:948:C:C2	2.65	0.65
2:C:10:G:C6	2:C:26:G:C2	2.85	0.65
2:C:62:C:H2'	2:C:63:G:O5'	1.95	0.65
4:E:115:LEU:CD1	4:E:145:LEU:HB3	2.09	0.65
4:E:70:PHE:CE2	4:E:163:PHE:HB3	2.32	0.65
4:E:31:TYR:HE2	4:E:200:ILE:CG2	2.10	0.65
5:F:108:ASN:HD22	5:F:111:LEU:CD1	2.09	0.65
6:G:205:GLU:CD	7:H:100:VAL:H	1.99	0.65
6:G:61:LYS:HE3	6:G:62:GLN:N	2.11	0.65
6:G:68:TYR:HE2	6:G:97:LEU:HB3	1.61	0.65
8:I:34:GLY:HA3	8:I:68:PRO:CD	2.26	0.65
10:K:98:LYS:O	10:K:98:LYS:HG2	1.94	0.65
12:M:27:ALA:CB	12:M:85:LEU:HD21	2.26	0.65
14:O:41:ARG:NH2	14:O:57:LYS:NZ	2.41	0.65
19:T:104:LYS:HD3	19:T:105:ALA:CB	2.27	0.65
19:T:5:VAL:HG13	19:T:59:ILE:C	2.14	0.65
20:U:34:TYR:CD1	20:U:35:ARG:HG3	2.32	0.65
20:U:69:THR:O	20:U:70:ILE:C	2.35	0.65
21:V:30:LEU:CD1	21:V:50:ALA:HB2	2.16	0.65
14:O:102:ARG:HE	14:O:109:GLY:HA2	1.60	0.65
1:A:342:C:O2'	1:A:343:U:H5'	1.95	0.65
1:A:1200:C:C5'	1:A:1202:G:OP1	2.44	0.65
1:A:1255:G:O2'	1:A:1258:G:H1'	1.97	0.65
1:A:1322:C:H5''	1:A:1323:G:OP1	1.96	0.65
1:A:520:A:N6	1:A:529:G:H21	1.94	0.65
1:A:982:U:H5''	1:A:983:A:OP1	1.95	0.65
2:C:67:C:O2'	2:C:68:C:H5'	1.97	0.65
4:E:221:LEU:HD13	4:E:221:LEU:C	2.16	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:68:ILE:HG22	4:E:161:ALA:O	1.96	0.65
6:G:20:TYR:CB	6:G:33:MET:SD	2.85	0.65
6:G:58:LEU:CD1	6:G:59:ARG:HD2	2.27	0.65
7:H:7:GLU:HB3	7:H:112:LEU:HD11	1.78	0.65
9:J:100:ALA:O	9:J:104:LEU:HG	1.96	0.65
9:J:139:GLU:HA	9:J:142:GLU:CD	2.17	0.65
9:J:88:PRO:HD2	9:J:152:ALA:HA	1.77	0.65
11:L:82:ALA:O	11:L:85:LEU:HB3	1.96	0.65
11:L:89:ASN:O	11:L:91:ASP:N	2.27	0.65
13:N:67:ASP:O	13:N:71:LYS:HG3	1.97	0.65
15:P:48:LEU:HD21	15:P:52:GLU:CB	2.22	0.65
15:P:4:ILE:HD12	15:P:4:ILE:H	1.60	0.65
17:R:21:ASP:OD2	17:R:24:SER:HB3	1.96	0.65
3:D:19:G:N2	3:D:56:C:O2	2.29	0.65
1:A:1253:G:N2	1:A:1254:C:C2	2.64	0.65
1:A:1323:G:C6	1:A:1324:A:N6	2.65	0.65
1:A:1495:U:O2	1:A:1495:U:H2'	1.96	0.65
1:A:1515:C:O2'	1:A:1516:G:H5'	1.96	0.65
1:A:173:U:H1'	1:A:197:A:H2	1.56	0.65
1:A:522:C:H41	1:A:523:A:N6	1.94	0.65
1:A:643:C:HO2'	10:K:132:GLU:CD	2.00	0.65
1:A:907:A:C2'	1:A:908:A:H8	2.10	0.65
4:E:115:LEU:HB2	4:E:145:LEU:HD12	1.77	0.65
9:J:61:VAL:HG12	9:J:124:LEU:CD2	2.26	0.65
10:K:104:ARG:O	10:K:106:GLY:N	2.29	0.65
1:A:642:A:HO2'	10:K:31:PHE:HE1	1.38	0.65
11:L:38:GLN:O	11:L:40:LEU:HG	1.97	0.65
11:L:50:LEU:CD1	11:L:56:LEU:HA	2.21	0.65
12:M:60:ARG:O	12:M:61:GLU:HB2	1.97	0.65
15:P:27:LYS:HD2	15:P:31:LYS:NZ	2.12	0.65
15:P:92:HIS:CG	15:P:98:VAL:HG21	2.31	0.65
1:A:1084:G:H5''	1:A:1086:U:C5	2.31	0.65
1:A:648:A:C2	1:A:649:G:C8	2.85	0.65
1:A:977:A:C4'	1:A:982:U:O4	2.44	0.65
2:C:5:G:C2'	2:C:6:G:O5'	2.44	0.65
4:E:108:ILE:O	4:E:112:VAL:HG23	1.96	0.65
4:E:9:GLU:HG3	4:E:217:ARG:HH21	1.61	0.65
6:G:145:GLU:HG2	6:G:184:LYS:HE2	1.78	0.65
6:G:76:ARG:O	6:G:79:PHE:HB3	1.96	0.65
9:J:111:ARG:HD2	9:J:123:GLU:CB	2.19	0.65
9:J:72:ARG:HA	9:J:96:GLN:NE2	2.11	0.65
10:K:22:GLU:HA	10:K:63:LEU:HD11	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:89:PRO:CA	10:K:92:ARG:HH21	2.09	0.65
11:L:32:ASP:O	11:L:35:GLU:HB3	1.97	0.65
3:D:21:A:N6	3:D:48:C:C6	2.65	0.65
1:A:1031:G:H2'	1:A:1032:A:O4'	1.96	0.65
1:A:1435:G:H2'	1:A:1436:U:C5	2.31	0.65
1:A:1492:A:H3'	1:A:1493:A:O4'	1.97	0.65
1:A:294:U:C2	1:A:295:C:C5	2.85	0.65
1:A:302:G:C2'	1:A:556:C:H5''	2.25	0.65
1:A:501:C:H2'	1:A:502:G:H8	1.60	0.65
1:A:562:C:O2	14:O:15:ARG:CB	2.44	0.65
1:A:829:G:O2'	1:A:830:G:H5'	1.97	0.65
4:E:164:VAL:HG22	4:E:165:VAL:N	2.12	0.65
5:F:179:ARG:NE	5:F:206:GLU:OE1	2.30	0.65
1:A:1204:A:C2	5:F:195:VAL:HG21	2.32	0.65
5:F:22:TRP:CH2	5:F:32:LEU:HB2	2.32	0.65
6:G:19:LEU:HA	6:G:21:LEU:HD12	1.78	0.65
6:G:20:TYR:CB	6:G:27:TYR:HA	2.20	0.65
6:G:78:LEU:HD21	6:G:96:LEU:CB	2.27	0.65
7:H:9:LYS:CB	7:H:33:VAL:HB	2.19	0.65
8:I:75:LEU:HD22	8:I:79:LEU:CD2	2.27	0.65
9:J:104:LEU:O	9:J:105:VAL:C	2.34	0.65
9:J:140:ASP:HA	9:J:143:ARG:NH2	2.12	0.65
11:L:97:LYS:O	11:L:100:GLY:HA3	1.96	0.65
11:L:9:ARG:CD	11:L:14:VAL:HG13	2.26	0.65
17:R:32:LEU:H	17:R:32:LEU:HD23	1.62	0.65
17:R:71:GLN:N	17:R:78:TYR:HD1	1.95	0.65
20:U:45:SER:CB	20:U:51:LEU:HD11	2.26	0.65
21:V:32:LYS:HB3	21:V:50:ALA:HB3	1.79	0.65
1:A:1039:C:H2'	1:A:1040:U:H6	1.62	0.65
1:A:1109:C:C2'	1:A:1110:A:H8	2.09	0.65
1:A:1268:A:H2	1:A:1311:G:N2	1.94	0.65
1:A:1336:C:H4'	1:A:1337:G:N3	2.11	0.65
1:A:169:C:H2'	1:A:170:U:C6	2.31	0.65
1:A:394:G:C5	1:A:395:C:C5	2.84	0.65
1:A:741:G:H2'	1:A:742:G:H8	1.62	0.65
1:A:790:A:H2'	1:A:791:G:O5'	1.96	0.65
2:C:10:G:C2	2:C:11:A:C8	2.85	0.65
2:C:11:A:H2'	2:C:12:G:C8	2.30	0.65
2:C:5:G:O2'	2:C:6:G:C5'	2.44	0.65
4:E:61:LEU:HA	4:E:64:ARG:HH11	1.60	0.65
5:F:28:GLN:NE2	5:F:29:TYR:N	2.45	0.65
6:G:101:LEU:HD12	6:G:105:VAL:HG23	1.79	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:20:TYR:O	6:G:26:CYS:SG	2.55	0.65
6:G:20:TYR:HB3	6:G:33:MET:SD	2.36	0.65
7:H:37:ARG:NH1	7:H:112:LEU:HA	2.12	0.65
7:H:95:ALA:HB3	7:H:96:PRO:HD3	1.78	0.65
8:I:7:ASN:ND2	8:I:62:TRP:HD1	1.95	0.65
9:J:48:LYS:O	9:J:52:GLU:HB2	1.97	0.65
11:L:103:THR:HG22	11:L:104:ARG:N	2.11	0.65
13:N:59:TYR:O	13:N:60:ALA:C	2.34	0.65
14:O:9:GLN:O	14:O:10:LEU:C	2.32	0.65
14:O:78:GLN:O	14:O:79:GLU:C	2.34	0.65
1:A:1226:C:N4	15:P:104:ARG:HG3	2.12	0.65
15:P:16:ASP:HA	15:P:19:LEU:CG	2.26	0.65
15:P:84:ILE:HD11	15:P:86:CYS:SG	2.35	0.65
15:P:91:ARG:HD2	15:P:98:VAL:HA	1.79	0.65
17:R:64:ARG:HA	17:R:67:LEU:CD1	2.27	0.65
1:A:986:A:H4'	21:V:55:LYS:HE3	1.79	0.65
1:A:1171:G:H2'	1:A:1172:C:C6	2.31	0.65
1:A:1126:U:H2'	1:A:1127:G:C8	2.32	0.65
1:A:1409:C:O2'	1:A:1410:G:H5'	1.97	0.65
1:A:182:U:C2'	1:A:183:G:H5'	2.25	0.65
1:A:22:G:O4'	1:A:885:G:H1'	1.97	0.65
1:A:318:G:O2'	1:A:319:G:H5'	1.97	0.65
1:A:416:G:H2'	1:A:417:C:H6	1.58	0.65
1:A:493:G:O2'	1:A:494:U:C5	2.49	0.65
1:A:591:U:C4	1:A:649:G:C6	2.84	0.65
1:A:650:G:O2'	1:A:651:C:H5'	1.96	0.65
1:A:668:G:H1'	17:R:46:HIS:HE2	1.61	0.65
4:E:12:GLU:C	4:E:14:GLY:H	1.97	0.65
6:G:101:LEU:HB3	6:G:138:TYR:O	1.96	0.65
6:G:170:VAL:HG21	6:G:176:LEU:HB3	1.76	0.65
9:J:139:GLU:O	9:J:142:GLU:HB2	1.96	0.65
10:K:129:VAL:HG22	10:K:130:GLY:N	2.10	0.65
10:K:48:TYR:HA	10:K:61:VAL:HG22	1.79	0.65
10:K:5:PRO:O	10:K:8:ASP:HB3	1.97	0.65
11:L:89:ASN:C	11:L:91:ASP:H	1.99	0.65
12:M:56:HIS:O	12:M:58:ASP:N	2.30	0.65
15:P:12:ASN:O	15:P:44:ARG:NE	2.22	0.65
15:P:60:VAL:HA	15:P:63:THR:CG2	2.27	0.65
1:A:1263:C:C2	1:A:1264:C:C5	2.85	0.65
1:A:1337:G:H5''	1:A:1338:G:OP1	1.97	0.65
1:A:1365:G:H2'	1:A:1366:C:H6	1.62	0.65
1:A:1374:A:C5	1:A:1375:A:N7	2.65	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:293:G:H2'	1:A:293:G:N3	2.12	0.65
1:A:496:A:H4'	1:A:497:U:OP1	1.96	0.65
1:A:570:G:C5'	1:A:820:U:H1'	2.21	0.65
1:A:872:A:O2'	1:A:873:A:C5'	2.45	0.65
4:E:16:HIS:NE2	4:E:213:LEU:HD13	2.12	0.65
4:E:25:ASN:OD1	4:E:192:SER:O	2.15	0.65
4:E:193:ASP:O	4:E:194:PRO:O	2.15	0.65
4:E:84:GLU:HG2	4:E:233:SER:HB3	1.79	0.65
9:J:108:ALA:HA	9:J:111:ARG:HG3	1.77	0.65
10:K:83:ILE:HB	10:K:137:VAL:HG22	1.79	0.65
11:L:97:LYS:HZ2	11:L:102:LEU:HD13	1.60	0.65
13:N:101:SER:O	13:N:103:LEU:CG	2.43	0.65
1:A:691:G:N2	13:N:51:LYS:NZ	2.43	0.65
15:P:36:LYS:HB3	15:P:59:TYR:CZ	2.31	0.65
16:Q:12:ARG:O	16:Q:13:THR:C	2.35	0.65
17:R:8:LYS:HE2	17:R:12:ILE:HD11	1.78	0.65
1:A:392:G:C5'	18:S:12:LYS:NZ	2.49	0.65
1:A:191(F):U:N3	22:W:105:SER:HB2	2.12	0.65
1:A:1006:C:O2	1:A:1006:C:C2'	2.45	0.65
4:E:127:ILE:O	4:E:129:GLU:N	2.29	0.65
1:A:1063:C:C4	1:A:1064:G:N7	2.65	0.64
1:A:1320:C:C5	21:V:37:ARG:NH1	2.66	0.64
1:A:1518:A:H8	1:A:1518:A:O5'	1.79	0.64
1:A:148:G:H1	1:A:174:C:H42	1.43	0.64
1:A:130:A:C5	1:A:264:U:H1'	2.31	0.64
1:A:297:G:N2	1:A:299:G:O5'	2.30	0.64
1:A:297:G:N2	1:A:300:A:OP2	2.30	0.64
1:A:522:C:OP1	14:O:120:TYR:HE2	1.80	0.64
1:A:658:G:O2'	1:A:659:U:H5'	1.97	0.64
1:A:697:U:H2'	1:A:698:G:C8	2.31	0.64
1:A:769:G:O2'	1:A:770:C:C5'	2.44	0.64
1:A:842:C:H5'	1:A:848:C:O2	1.95	0.64
1:A:923:A:OP1	7:H:21:ALA:HB2	1.97	0.64
1:A:961:U:H2'	1:A:962:C:C5'	2.26	0.64
1:A:983:A:N3	1:A:983:A:H3'	2.12	0.64
5:F:147:LYS:HB2	5:F:203:PHE:HD2	1.58	0.64
5:F:193:TYR:N	5:F:193:TYR:CD2	2.65	0.64
9:J:149:ARG:O	9:J:151:TYR:N	2.30	0.64
10:K:110:ALA:HA	10:K:136:GLU:HB2	1.79	0.64
10:K:47:GLY:O	10:K:61:VAL:CG1	2.42	0.64
10:K:95:VAL:HG13	10:K:133:LEU:HD11	1.79	0.64
11:L:112:LYS:CD	11:L:117:HIS:HA	2.27	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:24:VAL:HG13	14:O:98:TYR:HE2	1.62	0.64
18:S:21:VAL:HG22	18:S:36:ILE:CD1	2.26	0.64
20:U:66:LEU:HD12	20:U:67:ALA:H	1.56	0.64
20:U:81:PHE:CD1	20:U:81:PHE:O	2.50	0.64
22:W:21:LYS:HA	22:W:24:LEU:CD1	2.26	0.64
3:D:18:G:H1'	3:D:58:A:O4'	1.97	0.64
1:A:1452:C:H5'	1:A:1453:G:C2	2.31	0.64
1:A:1511:G:O2'	1:A:1512:U:H5'	1.97	0.64
1:A:23:C:H2'	1:A:23:C:O2	1.96	0.64
1:A:278:G:N2	1:A:279:A:H62	1.94	0.64
1:A:286:G:H2'	1:A:287:U:H6	1.61	0.64
1:A:795:C:H6	1:A:795:C:O5'	1.81	0.64
1:A:965:A:O2'	1:A:966:G:P	2.54	0.64
1:A:990:C:H2'	1:A:991:U:C6	2.32	0.64
2:C:19:G:C2	2:C:57:A:C2	2.85	0.64
6:G:98:GLU:O	6:G:100:ARG:N	2.31	0.64
6:G:147:ALA:HB1	6:G:181:MET:O	1.97	0.64
8:I:75:LEU:O	8:I:79:LEU:CD2	2.45	0.64
11:L:78:LYS:HA	11:L:81:ILE:CD1	2.27	0.64
5:F:40:ARG:NH2	16:Q:52:GLN:HG2	2.12	0.64
17:R:62:GLN:O	17:R:66:LEU:HD23	1.96	0.64
18:S:53:VAL:HG23	18:S:54:GLU:N	2.12	0.64
18:S:4:ILE:HG12	18:S:66:PRO:HB3	1.79	0.64
23:X:10:ARG:O	23:X:13:ILE:HG22	1.97	0.64
1:A:1069:C:H1'	1:A:1191:A:H2	1.61	0.64
1:A:1138:G:N3	1:A:1138:G:H5''	2.13	0.64
1:A:1226:C:H5''	15:P:103:THR:C	2.17	0.64
1:A:1323:G:C4	1:A:1324:A:N7	2.66	0.64
1:A:1437:C:H2'	1:A:1438:G:H8	1.62	0.64
1:A:1497:G:C4	1:A:1498:U:H5	2.16	0.64
1:A:968:A:O4'	1:A:968:A:OP1	2.15	0.64
2:C:44:A:H2	2:C:45:G:H1'	1.62	0.64
6:G:100:ARG:O	6:G:103:ASN:HB3	1.97	0.64
6:G:150:GLU:O	6:G:152:SER:N	2.30	0.64
6:G:57:ARG:HD2	6:G:202:LEU:HD23	1.79	0.64
6:G:64:LEU:C	6:G:64:LEU:HD22	2.17	0.64
7:H:13:ILE:HD12	7:H:13:ILE:N	2.13	0.64
7:H:68:GLU:O	7:H:70:PRO:HD3	1.96	0.64
9:J:47:CYS:HA	9:J:50:ILE:CD1	2.28	0.64
7:H:78:HIS:CB	10:K:107:LEU:HD21	2.27	0.64
10:K:88:LYS:O	10:K:90:GLY:N	2.25	0.64
1:A:754:C:H1'	17:R:69:TYR:CD2	2.32	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:6:GLU:HG2	17:R:7:GLU:N	2.09	0.64
18:S:27:LYS:O	18:S:28:ARG:C	2.33	0.64
18:S:49:LEU:HD11	18:S:51:VAL:CG2	2.26	0.64
18:S:74:LEU:O	18:S:77:ALA:HB3	1.98	0.64
20:U:25:THR:HG22	20:U:42:ARG:HH21	1.57	0.64
1:A:1117:G:OP1	11:L:104:ARG:NH1	2.31	0.64
1:A:1278:U:H3'	1:A:1278:U:H6	1.63	0.64
1:A:1402:C:C4	1:A:1403:C:C4	2.85	0.64
1:A:1526:G:H2'	1:A:1527:C:H6	1.62	0.64
1:A:20:U:O2'	1:A:21:G:H5'	1.97	0.64
1:A:586:C:O2'	1:A:587:G:H5'	1.98	0.64
1:A:735:C:O2'	20:U:75:ILE:CD1	2.46	0.64
1:A:739:C:C2'	1:A:740:U:H5'	2.28	0.64
1:A:776:G:N2	1:A:802:A:OP2	2.30	0.64
1:A:917:G:O2'	1:A:918:A:H5'	1.98	0.64
1:A:933:G:OP2	9:J:3:ARG:CG	2.45	0.64
1:A:95:G:N2	1:A:96:G:H1'	2.12	0.64
5:F:178:LEU:O	5:F:179:ARG:CB	2.45	0.64
5:F:182:ILE:HG23	5:F:203:PHE:CA	2.21	0.64
5:F:59:ARG:CZ	5:F:64:VAL:HG22	2.26	0.64
5:F:84:ILE:CA	5:F:101:LEU:HD13	2.28	0.64
5:F:77:ILE:HD13	5:F:84:ILE:HB	1.79	0.64
7:H:147:ASP:C	7:H:150:ARG:HB2	2.18	0.64
7:H:34:VAL:O	7:H:41:VAL:HA	1.97	0.64
8:I:6:VAL:O	8:I:6:VAL:HG13	1.97	0.64
9:J:103:TRP:CZ2	9:J:138:LYS:HA	2.31	0.64
10:K:4:ASP:O	10:K:5:PRO:C	2.34	0.64
10:K:64:LYS:CD	10:K:79:VAL:HG11	2.27	0.64
10:K:83:ILE:CB	10:K:137:VAL:HG22	2.27	0.64
14:O:54:LYS:N	14:O:54:LYS:CD	2.61	0.64
1:A:1329:A:H5''	15:P:29:ARG:CG	2.27	0.64
15:P:34:LEU:HD23	15:P:39:ILE:CG1	2.23	0.64
19:T:98:LEU:HD13	19:T:102:GLY:O	1.97	0.64
20:U:72:ARG:O	20:U:76:LEU:HD23	1.98	0.64
1:A:343:U:H2'	1:A:345:C:H5	1.62	0.64
1:A:1145:C:H1'	1:A:1146:A:N7	2.11	0.64
1:A:323:U:H5	1:A:324:G:C4	2.16	0.64
1:A:764:C:C4	1:A:765:G:O6	2.50	0.64
1:A:828:A:C2'	1:A:829:G:O5'	2.45	0.64
1:A:576:G:N7	1:A:881:G:O4'	2.30	0.64
2:C:17:C:H5'	2:C:18:G:C5'	2.26	0.64
2:C:25:C:H2'	2:C:26:G:C8	2.33	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:41:G:H2'	3:D:42:C:O4'	1.96	0.64
4:E:146:GLN:HE21	4:E:150:SER:CB	2.08	0.64
6:G:133:VAL:HG12	6:G:135:LEU:H	1.62	0.64
6:G:148:VAL:HB	6:G:181:MET:CE	2.23	0.64
8:I:14:LEU:CD1	8:I:18:GLN:HB3	2.28	0.64
8:I:3:ARG:HG3	8:I:65:VAL:O	1.97	0.64
1:A:938:A:H4'	9:J:95:ARG:HH12	1.61	0.64
13:N:99:GLN:O	13:N:102:GLY:N	2.31	0.64
15:P:15:VAL:HG21	15:P:39:ILE:HD12	1.80	0.64
17:R:5:LYS:HZ3	17:R:5:LYS:HB3	1.63	0.64
19:T:75:ARG:HH12	19:T:77:VAL:HA	1.63	0.64
22:W:66:ALA:O	22:W:67:ALA:C	2.36	0.64
1:A:13:U:H5'	1:A:14:U:OP2	1.96	0.64
1:A:222:U:O2'	1:A:223:U:H5'	1.98	0.64
1:A:412:A:O2'	1:A:413:G:H5''	1.98	0.64
1:A:792:A:N3	1:A:794:A:C6	2.66	0.64
1:A:89:U:C2	1:A:90:C:C5	2.85	0.64
2:C:36:U:C2	2:C:37:A:C8	2.85	0.64
2:C:61:C:H2'	2:C:62:C:H6	1.63	0.64
5:F:120:VAL:HG21	5:F:137:ALA:CB	2.27	0.64
5:F:40:ARG:HG2	5:F:55:VAL:CG1	2.27	0.64
6:G:155:LEU:H	6:G:158:ILE:HG13	1.61	0.64
7:H:11:ILE:CG2	7:H:31:LEU:HD22	2.28	0.64
8:I:16:GLN:HG3	8:I:17:SER:N	2.12	0.64
9:J:149:ARG:HG2	13:N:59:TYR:OH	1.98	0.64
9:J:68:ASN:O	9:J:135:VAL:HG13	1.97	0.64
10:K:6:ILE:HD11	10:K:85:ARG:HD3	1.80	0.64
2:C:31:G:H5'	11:L:127:LYS:O	1.97	0.64
12:M:52:GLY:H	12:M:59:SER:CB	2.10	0.64
12:M:79:ARG:HD3	12:M:80:LYS:N	2.12	0.64
1:A:692:U:O4	13:N:53:SER:N	2.31	0.64
9:J:150:ALA:HB2	13:N:59:TYR:CD2	2.32	0.64
14:O:69:TYR:O	14:O:71:PRO:HD3	1.98	0.64
15:P:23:TYR:CE2	15:P:70:LEU:HD22	2.32	0.64
15:P:48:LEU:HD22	15:P:53:VAL:CG2	2.26	0.64
15:P:99:ARG:HH11	15:P:99:ARG:HG3	1.62	0.64
19:T:43:LEU:CD1	19:T:69:LYS:HG3	2.28	0.64
20:U:22:VAL:HG11	20:U:42:ARG:O	1.97	0.64
22:W:84:LEU:O	22:W:88:VAL:HG23	1.98	0.64
1:A:1011:G:C2'	1:A:1012:U:H5'	2.21	0.64
1:A:1101:A:O2'	1:A:1102:A:OP2	2.15	0.64
1:A:1157:A:C1'	1:A:1181:G:H21	2.10	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1197:G:H3'	1:A:1197:G:OP1	1.96	0.64
1:A:1228:C:OP1	15:P:115:LYS:HB3	1.98	0.64
1:A:1251:A:O4'	1:A:1370:G:H4'	1.98	0.64
1:A:1320:C:H1'	21:V:73:GLU:HG3	1.78	0.64
1:A:1475:G:H2'	1:A:1476:G:H8	1.61	0.64
1:A:228:A:C2'	1:A:229:U:H5'	2.22	0.64
1:A:243:A:H61	1:A:282:A:H8	1.44	0.64
1:A:464:G:H2'	1:A:465:A:H5''	1.80	0.64
1:A:656:C:H2'	1:A:657:G:H5'	1.80	0.64
1:A:824:C:H2'	1:A:825:G:H8	1.62	0.64
1:A:834:C:N4	1:A:853:G:C6	2.65	0.64
2:C:19:G:H4'	2:C:20:U:OP2	1.96	0.64
2:C:73:A:HO2'	2:C:74:C:P	2.20	0.64
4:E:208:ILE:HA	4:E:211:ILE:HD12	1.80	0.64
4:E:56:ARG:HB3	4:E:56:ARG:CZ	2.27	0.64
5:F:134:ILE:HD12	5:F:134:ILE:N	2.13	0.64
5:F:14:ILE:HG22	5:F:15:THR:CG2	2.23	0.64
9:J:113:GLU:OE2	9:J:119:ARG:HG3	1.96	0.64
10:K:44:PHE:CE2	10:K:109:ILE:HD13	2.29	0.64
15:P:8:GLU:O	15:P:10:PRO:HD2	1.96	0.64
15:P:90:LEU:HA	15:P:93:ARG:HB2	1.79	0.64
16:Q:12:ARG:O	16:Q:14:PRO:N	2.29	0.64
17:R:7:GLU:HA	17:R:10:LYS:CG	2.28	0.64
21:V:10:PHE:CZ	21:V:12:ASP:HA	2.32	0.64
22:W:10:LEU:HD12	22:W:11:SER:N	2.13	0.64
3:D:48:C:H2'	3:D:48:C:O2	1.97	0.64
3:D:55:U:C2'	3:D:57:G:N7	2.60	0.64
13:N:128:ALA:O	13:N:129:SER:HB2	1.97	0.64
1:A:1115:C:H2'	1:A:1116:C:H6	1.59	0.64
1:A:122:G:N2	1:A:123:C:H1'	2.13	0.64
1:A:1256:A:O3'	1:A:1257:U:H4'	1.98	0.64
1:A:130:A:H2	1:A:263:A:N3	1.95	0.64
1:A:1313:U:H5	21:V:4:SER:CB	2.08	0.64
1:A:1397:C:O2'	1:A:1398:A:OP2	2.14	0.64
1:A:1500:A:OP2	1:A:1505:G:OP2	2.16	0.64
1:A:292:G:OP2	1:A:293:G:N7	2.31	0.64
1:A:112:G:H21	1:A:354:G:H5'	1.62	0.64
1:A:533:A:C6	1:A:536:C:C4	2.86	0.64
1:A:588:G:N7	1:A:753:A:H2'	2.13	0.64
1:A:676:A:H2'	1:A:677:U:H6	1.59	0.64
1:A:764:C:N4	1:A:765:G:O6	2.31	0.64
1:A:951:G:H1'	1:A:970:C:O2'	1.98	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:132:LYS:O	4:E:135:GLN:HB2	1.97	0.64
4:E:50:GLU:CG	4:E:200:ILE:O	2.46	0.64
4:E:84:GLU:CG	4:E:234:PRO:HD2	2.23	0.64
5:F:153:VAL:HG23	5:F:166:GLU:O	1.98	0.64
6:G:196:LEU:H	6:G:196:LEU:HD23	1.60	0.64
8:I:1:MET:HB3	8:I:67:MET:O	1.98	0.64
8:I:19:LEU:O	8:I:23:LYS:HB2	1.98	0.64
15:P:19:LEU:O	15:P:25:ILE:HD12	1.97	0.64
19:T:65:ILE:HG12	19:T:69:LYS:HD2	1.79	0.64
1:A:1327:C:H5''	23:X:20:LYS:CD	2.28	0.64
3:D:64:C:H2'	3:D:65:U:H6	1.61	0.64
1:A:1382:C:H2'	1:A:1383:C:C6	2.33	0.64
1:A:1209:C:C2'	1:A:1210:C:H5'	2.27	0.64
1:A:1213:A:H2'	1:A:1215:G:N7	2.12	0.64
1:A:1302:U:O2'	1:A:1303:C:P	2.56	0.64
1:A:945:G:C6	1:A:1337:G:C5	2.86	0.64
1:A:1372:U:H2'	1:A:1373:G:C8	2.32	0.64
1:A:1480:G:H2'	1:A:1481:U:C5'	2.28	0.64
1:A:264:U:C2'	1:A:264:U:O2	2.45	0.64
1:A:438:G:H5'	6:G:123:HIS:HD1	1.61	0.64
1:A:642:A:O2'	10:K:31:PHE:CE1	2.46	0.64
1:A:652:U:H1'	1:A:653:A:C2	2.27	0.64
1:A:756:C:O2'	1:A:823:G:H1'	1.98	0.64
1:A:824:C:H2'	1:A:825:G:C8	2.33	0.64
1:A:863:U:O2	1:A:865:A:OP2	2.16	0.64
6:G:30:LYS:N	6:G:34:GLU:HB3	2.13	0.64
8:I:14:LEU:HD22	8:I:18:GLN:CD	2.18	0.64
10:K:101:PRO:O	10:K:102:ARG:HB2	1.98	0.64
13:N:92:GLU:O	13:N:93:GLN:C	2.34	0.64
15:P:67:GLU:CG	15:P:68:GLY:N	2.61	0.64
16:Q:30:ALA:HA	16:Q:33:VAL:HG11	1.79	0.64
18:S:53:VAL:HG23	18:S:54:GLU:H	1.61	0.64
1:A:375:U:O3'	18:S:6:LEU:HD21	1.96	0.64
19:T:27:PHE:O	19:T:36:ILE:HD13	1.96	0.64
21:V:45:VAL:HG13	21:V:64:GLU:N	2.12	0.64
23:X:6:ARG:HH11	23:X:15:ARG:NH2	1.95	0.64
1:A:1005:A:H4'	1:A:1037:C:O2	1.97	0.64
1:A:1129:C:H4'	1:A:1130:A:O5'	1.98	0.64
1:A:1138:G:N3	1:A:1138:G:C3'	2.61	0.64
1:A:1200:C:H5''	1:A:1201:A:O3'	1.97	0.64
1:A:1048:G:O4'	1:A:1215:G:H4'	1.97	0.64
1:A:295:C:H2'	1:A:296:U:O4'	1.97	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:382:A:O2'	1:A:383:A:H5'	1.97	0.64
1:A:482:A:C2	1:A:483:C:N1	2.66	0.64
1:A:47:C:O2'	1:A:48:C:P	2.56	0.64
1:A:579:G:C4'	1:A:728:A:H1'	2.28	0.64
1:A:7:G:H21	7:H:121:LYS:CG	2.10	0.64
1:A:998:G:N2	1:A:998(A):C:H1'	2.13	0.64
4:E:95:GLN:HG3	4:E:148:TYR:HB3	1.80	0.64
4:E:80:ILE:HD13	4:E:211:ILE:HG22	1.80	0.64
5:F:28:GLN:NE2	5:F:29:TYR:H	1.95	0.64
5:F:38:ARG:HH11	5:F:38:ARG:CB	2.05	0.64
5:F:43:LEU:HD21	5:F:68:VAL:HG21	1.80	0.64
9:J:87:VAL:HB	9:J:156:TRP:CE3	2.33	0.64
1:A:878:G:C5'	10:K:89:PRO:HG2	2.28	0.64
13:N:88:GLY:C	13:N:90:GLY:H	2.01	0.64
15:P:54:VAL:HG13	15:P:58:GLU:OE1	1.98	0.64
16:Q:14:PRO:C	16:Q:16:PHE:N	2.49	0.64
1:A:979:C:H42	16:Q:18:VAL:HB	1.59	0.64
1:A:1216:G:H5''	16:Q:5:ALA:CB	2.28	0.64
17:R:42:HIS:CG	17:R:43:LEU:N	2.66	0.64
18:S:51:VAL:HG11	18:S:74:LEU:HD23	1.79	0.64
1:A:474:G:C5'	18:S:81:ARG:HE	1.92	0.64
19:T:59:ILE:CG1	19:T:60:ILE:N	2.61	0.64
19:T:88:TYR:CA	19:T:91:ARG:HH21	2.10	0.64
8:I:91:VAL:HG13	20:U:72:ARG:NH2	2.13	0.64
23:X:20:LYS:HE3	23:X:21:TYR:CE2	2.33	0.64
1:A:1003:G:C5	1:A:1004:A:H1'	2.33	0.64
1:A:1066:C:H2'	1:A:1067:A:C8	2.33	0.63
1:A:1267:C:C2'	1:A:1267:C:O2	2.46	0.63
1:A:107:G:H5'	1:A:379:C:OP1	1.98	0.63
1:A:495:A:H1'	1:A:496:A:N7	2.14	0.63
1:A:508:C:O2'	1:A:509:A:H8	1.80	0.63
1:A:64:G:N2	1:A:67:C:C4	2.66	0.63
4:E:170:GLU:HB3	4:E:174:VAL:CG2	2.25	0.63
9:J:71:PRO:HG2	9:J:96:GLN:HG3	1.79	0.63
10:K:14:ARG:HD2	10:K:15:ASN:ND2	2.13	0.63
10:K:43:GLY:O	10:K:44:PHE:HB2	1.97	0.63
11:L:110:GLU:HG2	11:L:111:ARG:N	2.12	0.63
1:A:970:C:H42	15:P:126:LYS:NZ	1.96	0.63
17:R:85:LEU:HD12	17:R:85:LEU:N	2.13	0.63
22:W:49:ALA:HB3	22:W:99:LEU:CD1	2.27	0.63
3:D:6:G:H2'	3:D:7:G:C8	2.33	0.63
1:A:208:U:H4'	1:A:209:U:OP1	1.96	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1321:C:C4	1:A:1322:C:H2'	2.33	0.63
1:A:1483:A:H3'	1:A:1484:C:H6	1.63	0.63
1:A:1539:C:H2'	1:A:1540:U:H6	1.62	0.63
1:A:511:C:O2'	1:A:512:U:O4'	2.17	0.63
1:A:520:A:H3'	1:A:521:G:H5''	1.80	0.63
1:A:552:U:O2'	1:A:553:A:H5'	1.98	0.63
1:A:570:G:N1	1:A:866:C:N4	2.46	0.63
1:A:595:G:H3'	1:A:641:U:O4	1.99	0.63
1:A:85:U:H2'	1:A:86:U:H5'	1.81	0.63
1:A:570:G:O6	1:A:865:A:N6	2.31	0.63
1:A:974:A:H8	1:A:974:A:OP1	1.81	0.63
3:D:34:G:C2	3:D:35:A:H5''	2.33	0.63
4:E:132:LYS:H	4:E:132:LYS:CE	2.10	0.63
4:E:67:THR:OG1	4:E:155:LEU:HG	1.99	0.63
4:E:28:PHE:HE1	4:E:31:TYR:CB	2.09	0.63
6:G:148:VAL:HB	6:G:153:ARG:HG2	1.80	0.63
6:G:20:TYR:C	6:G:26:CYS:SG	2.77	0.63
9:J:141:VAL:C	9:J:144:MET:HB2	2.17	0.63
10:K:85:ARG:HA	10:K:135:CYS:HB2	1.79	0.63
10:K:92:ARG:CB	10:K:94:TYR:HE1	2.09	0.63
11:L:85:LEU:CD2	11:L:96:LEU:HD13	2.25	0.63
14:O:122:THR:HG22	14:O:123:LYS:N	2.13	0.63
1:A:362:G:H4'	14:O:28:LYS:NZ	2.13	0.63
15:P:2:ALA:O	15:P:4:ILE:HD12	1.98	0.63
15:P:8:GLU:C	15:P:10:PRO:HD2	2.18	0.63
16:Q:9:LYS:HZ1	16:Q:12:ARG:HH21	1.46	0.63
18:S:30:GLY:O	18:S:31:LYS:C	2.36	0.63
20:U:63:GLN:O	20:U:67:ALA:CB	2.46	0.63
20:U:46:GLU:CB	20:U:85:LEU:HD13	2.29	0.63
1:A:1080:A:OP1	7:H:14:ARG:NH2	2.31	0.63
1:A:1260:C:H4'	1:A:1284:C:C5'	2.29	0.63
1:A:1419:G:O2'	1:A:1420:C:C5'	2.46	0.63
1:A:67:C:O4'	1:A:172:A:H1'	1.99	0.63
1:A:375:U:H2'	1:A:376:G:C8	2.32	0.63
1:A:405:U:C3'	1:A:406:G:H5'	2.27	0.63
1:A:449:C:N3	1:A:450:G:H1'	2.14	0.63
1:A:790:A:O5'	1:A:790:A:H8	1.80	0.63
4:E:118:LEU:HD13	4:E:142:LEU:HD12	1.80	0.63
1:A:843:U:N3	4:E:37:ASN:ND2	2.44	0.63
5:F:46:GLU:C	5:F:47:LEU:HD22	2.17	0.63
6:G:3:ARG:NE	6:G:71:SER:H	1.96	0.63
14:O:24:VAL:CG1	14:O:26:ALA:HB2	2.29	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:68:ALA:HB1	14:O:99:HIS:CA	2.25	0.63
15:P:15:VAL:HB	15:P:34:LEU:HD21	1.79	0.63
15:P:29:ARG:HH11	15:P:66:LEU:HD22	1.62	0.63
18:S:1:MET:HB3	18:S:3:LYS:HZ1	1.63	0.63
21:V:36:ARG:NH2	21:V:75:ALA:HB3	2.11	0.63
3:D:58:A:O2'	3:D:59:U:OP1	2.16	0.63
1:A:1122:U:O2'	1:A:1123:A:H5'	1.98	0.63
1:A:1124:G:N7	1:A:1145:C:H2'	2.14	0.63
1:A:1196:U:O5'	1:A:1197:G:H5'	1.98	0.63
1:A:1296:C:C1'	1:A:1302:U:O4	2.46	0.63
1:A:1234:C:H4'	1:A:1364:U:H1'	1.79	0.63
1:A:137:C:H2'	1:A:138:G:C5'	2.29	0.63
1:A:1411:C:H2'	1:A:1412:C:H6	1.63	0.63
1:A:1519:A:H2'	1:A:1520:G:H5'	1.80	0.63
1:A:960:U:O2'	1:A:961:U:OP1	2.15	0.63
4:E:97:TRP:NE1	4:E:101:MET:SD	2.71	0.63
4:E:68:ILE:HB	4:E:70:PHE:CE1	2.34	0.63
5:F:132:ARG:C	5:F:136:GLN:NE2	2.51	0.63
5:F:47:LEU:HD11	5:F:83:ARG:NH2	2.06	0.63
6:G:148:VAL:HG11	6:G:158:ILE:HD12	1.80	0.63
7:H:91:LEU:HD12	7:H:110:LEU:HD11	1.81	0.63
8:I:80:ARG:CG	8:I:88:VAL:HG11	2.27	0.63
9:J:75:VAL:HG13	9:J:87:VAL:O	1.97	0.63
9:J:83:ALA:HB3	9:J:85:TYR:CE2	2.32	0.63
10:K:119:LEU:HD22	10:K:119:LEU:N	2.13	0.63
11:L:117:HIS:O	11:L:119:ALA:N	2.30	0.63
11:L:48:GLU:OE1	11:L:48:GLU:HA	1.96	0.63
13:N:34:ASP:CB	13:N:35:PRO:CD	2.77	0.63
15:P:10:PRO:CB	15:P:18:ALA:HA	2.28	0.63
15:P:29:ARG:CZ	15:P:64:TRP:NE1	2.62	0.63
15:P:84:ILE:HG13	15:P:85:GLY:N	2.12	0.63
12:M:63:PHE:HZ	16:Q:45:ARG:HB2	1.64	0.63
19:T:3:LYS:HD3	19:T:62:SER:HA	1.81	0.63
21:V:5:LEU:CG	21:V:9:VAL:HG22	2.29	0.63
23:X:7:ARG:O	23:X:12:LYS:HD3	1.99	0.63
1:A:1036:G:C8	1:A:1037:C:C5	2.87	0.63
1:A:1064:G:N3	1:A:1066:C:N4	2.45	0.63
1:A:1300:G:HO2'	1:A:1301:U:P	2.22	0.63
1:A:1418:A:H2'	1:A:1419:G:C5'	2.27	0.63
1:A:1394:A:C8	1:A:1501:C:H1'	2.32	0.63
1:A:1500:A:H5''	1:A:1508:G:H5''	1.79	0.63
1:A:225:C:H2'	1:A:226:G:C5'	2.29	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:519:C:O2'	1:A:520:A:H5'	1.99	0.63
1:A:678:U:H2'	1:A:679:C:C5	2.33	0.63
1:A:754:C:C2'	1:A:755:G:OP1	2.45	0.63
1:A:80:G:C2'	1:A:81:G:O4'	2.39	0.63
1:A:9:G:OP2	7:H:121:LYS:HA	1.99	0.63
4:E:219:VAL:HG13	4:E:222:ILE:HD11	1.80	0.63
4:E:219:VAL:HG12	4:E:223:ILE:HD11	1.79	0.63
5:F:158:GLY:HA2	5:F:193:TYR:OH	1.99	0.63
5:F:17:ASP:HB3	5:F:18:TRP:HE3	1.63	0.63
5:F:35:GLU:HG2	5:F:36:ASP:N	2.12	0.63
6:G:121:VAL:HA	6:G:126:ILE:HD11	1.79	0.63
6:G:120:LEU:HB2	6:G:125:HIS:CD2	2.33	0.63
8:I:62:TRP:CB	20:U:35:ARG:NH1	2.56	0.63
10:K:68:ARG:HD3	10:K:69:ARG:N	2.13	0.63
1:A:1179:A:C4'	11:L:103:THR:OG1	2.42	0.63
17:R:33:THR:HG23	17:R:63:ARG:HH12	1.63	0.63
18:S:20:VAL:HG11	18:S:32:TYR:CB	2.28	0.63
19:T:59:ILE:CD1	19:T:60:ILE:N	2.61	0.63
19:T:74:LEU:O	19:T:74:LEU:HD13	1.98	0.63
21:V:11:VAL:O	21:V:16:LEU:CD1	2.46	0.63
22:W:63:ILE:HD13	22:W:80:ARG:CB	2.29	0.63
1:A:1305:G:H5'	23:X:4:GLY:HA3	1.81	0.63
1:A:1003:G:N2	1:A:1038:C:H1'	2.14	0.63
1:A:219:C:C6	1:A:219:C:C3'	2.82	0.63
19:T:101:ARG:HD2	19:T:101:ARG:N	2.14	0.63
1:A:1236:A:H2'	1:A:1237:C:C6	2.34	0.63
1:A:1296:C:C5	1:A:1297:C:N4	2.64	0.63
1:A:1446:A:O2'	1:A:1447:G:P	2.57	0.63
1:A:687:A:O2'	1:A:688:G:OP2	2.14	0.63
1:A:859:A:H2'	1:A:860:A:C5'	2.29	0.63
2:C:47:U:H2'	2:C:48:C:O5'	1.98	0.63
5:F:59:ARG:HE	5:F:64:VAL:CA	2.02	0.63
7:H:115:VAL:CG1	7:H:118:ILE:HD11	2.28	0.63
7:H:121:LYS:HZ2	7:H:122:GLU:N	1.93	0.63
8:I:3:ARG:CA	8:I:67:MET:HE1	2.24	0.63
12:M:46:ARG:HA	12:M:64:GLU:HB3	1.79	0.63
12:M:39:PRO:CA	12:M:70:ARG:HH11	2.11	0.63
13:N:79:SER:HA	13:N:104:GLN:NE2	2.12	0.63
13:N:85:ARG:NE	13:N:111:ASP:OD2	2.31	0.63
15:P:91:ARG:NH2	15:P:103:THR:HG21	2.09	0.63
15:P:24:GLY:C	15:P:66:LEU:HD13	2.19	0.63
15:P:91:ARG:HB3	15:P:98:VAL:CG1	2.29	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:18:THR:HG23	19:T:69:LYS:HE2	1.79	0.63
19:T:50:LYS:HG2	19:T:51:TYR:N	2.13	0.63
19:T:81:ARG:HG3	19:T:84:LEU:HD21	1.81	0.63
22:W:23:ARG:CA	22:W:26:ASN:HD21	2.11	0.63
22:W:51:GLU:O	22:W:55:ILE:HG13	1.99	0.63
1:A:262:A:H4'	22:W:75:ASN:HD21	1.63	0.63
1:A:186(B):C:H4'	22:W:89:ARG:HH12	1.60	0.63
6:G:165:MET:C	6:G:165:MET:SD	2.77	0.63
1:A:1191:A:H5''	5:F:4:LYS:NZ	2.10	0.63
1:A:190:G:H4'	1:A:191(A):G:OP2	1.98	0.63
1:A:232:G:C4	1:A:233:C:C5	2.87	0.63
1:A:370:C:O2'	1:A:371:G:H5'	1.98	0.63
1:A:44:G:C2	1:A:45:U:C1'	2.82	0.63
1:A:373:A:C5	1:A:482:A:N6	2.66	0.63
1:A:572:A:H4'	1:A:917:G:H5'	1.80	0.63
1:A:817:C:O2	1:A:817:C:C2'	2.45	0.63
1:A:872:A:C4	1:A:874:G:N7	2.67	0.63
1:A:88:C:H2'	1:A:89:U:C5	2.34	0.63
1:A:21:G:N2	1:A:915:A:H61	1.96	0.63
4:E:163:PHE:HE1	4:E:201:ILE:CD1	2.11	0.63
4:E:178:ARG:HA	4:E:184:VAL:CG2	2.27	0.63
4:E:168:THR:HG21	4:E:192:SER:HA	1.80	0.63
6:G:87:GLY:O	6:G:89:THR:N	2.30	0.63
10:K:40:ALA:CA	10:K:45:ILE:HG23	2.28	0.63
11:L:23:ASN:HA	11:L:57:GLY:O	1.99	0.63
12:M:44:VAL:HG11	12:M:46:ARG:NE	2.13	0.63
12:M:52:GLY:H	12:M:59:SER:HB3	1.63	0.63
17:R:31:LEU:O	17:R:34:LEU:HG	1.98	0.63
18:S:4:ILE:CG1	18:S:66:PRO:HB3	2.28	0.63
19:T:3:LYS:O	19:T:5:VAL:HG23	1.98	0.63
8:I:62:TRP:HB2	20:U:35:ARG:NH1	2.14	0.63
20:U:74:ARG:CA	20:U:79:LEU:HD11	2.27	0.63
1:A:1313:U:C5	21:V:4:SER:CB	2.82	0.63
1:A:986:A:C4'	21:V:55:LYS:HG3	2.29	0.63
21:V:77:THR:HG23	21:V:78:ARG:N	2.14	0.63
3:D:19:G:N1	3:D:56:C:N3	2.46	0.63
1:A:1034:G:H2'	1:A:1035:A:H8	1.62	0.63
5:F:157:ILE:CG2	5:F:164:ARG:HE	2.11	0.63
4:E:230:VAL:HG12	4:E:231:GLU:N	2.13	0.63
1:A:1107:C:C2'	1:A:1108:G:H5'	2.26	0.63
1:A:1251:A:C2'	1:A:1252:A:C8	2.78	0.63
1:A:1363:A:N3	1:A:1365:G:O6	2.31	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1404:C:H6	1:A:1404:C:OP2	1.81	0.63
1:A:1516:G:N2	1:A:1518:A:OP2	2.31	0.63
1:A:11:G:N2	1:A:24:U:C6	2.67	0.63
1:A:310:G:H2'	1:A:311:C:H6	1.64	0.63
1:A:479:C:O5'	1:A:479:C:H6	1.81	0.63
1:A:607:A:C5	1:A:608:A:C8	2.87	0.63
1:A:622:A:H2'	1:A:623:C:O5'	1.98	0.63
1:A:665:A:C2'	1:A:725:G:N2	2.50	0.63
1:A:768:A:H8	1:A:768:A:O5'	1.82	0.63
1:A:961:U:C2'	1:A:962:C:C5'	2.77	0.63
4:E:137:ARG:O	4:E:141:GLU:CB	2.47	0.63
4:E:160:ASP:HA	4:E:182:ILE:HG21	1.81	0.63
8:I:72:VAL:O	8:I:73:ASN:C	2.35	0.63
8:I:95:GLU:H	8:I:96:PRO:CD	2.10	0.63
9:J:26:PHE:CE2	9:J:30:ILE:HD11	2.34	0.63
7:H:79:GLU:OE1	10:K:105:ARG:HB2	1.98	0.63
12:M:16:LEU:HB3	12:M:70:ARG:HG2	1.79	0.63
13:N:111:ASP:OD2	13:N:113:PRO:CD	2.41	0.63
13:N:99:GLN:HB3	13:N:105:VAL:HG11	1.80	0.63
15:P:90:LEU:HA	15:P:93:ARG:CB	2.29	0.63
16:Q:45:ARG:CB	16:Q:45:ARG:HH11	2.08	0.63
18:S:53:VAL:HG12	18:S:79:VAL:CG2	2.28	0.63
19:T:51:TYR:N	19:T:51:TYR:CD1	2.67	0.63
20:U:50:ILE:HG22	20:U:50:ILE:O	1.99	0.63
1:A:1451:A:H5''	1:A:1452:C:C5	2.33	0.63
1:A:1018:C:O2'	1:A:1019:C:H5'	1.99	0.63
1:A:129(A):G:O2'	1:A:130:A:P	2.57	0.63
1:A:1310:G:C8	21:V:2:PRO:HD3	2.34	0.63
1:A:1314:C:H2'	1:A:1315:U:C6	2.33	0.63
1:A:1367:C:OP1	11:L:115:GLY:CA	2.47	0.63
1:A:1367:C:OP1	11:L:115:GLY:HA2	1.99	0.63
1:A:501:C:OP2	14:O:124:LYS:NZ	2.31	0.63
1:A:666:G:OP2	1:A:726:C:H1'	1.99	0.63
1:A:706:A:H4'	13:N:29:ILE:HD13	1.79	0.63
1:A:729:A:C2	1:A:730:G:H1'	2.34	0.63
1:A:775:G:H2'	1:A:776:G:N7	2.14	0.63
1:A:812:C:O2	1:A:813:U:H5	1.82	0.63
3:D:28:G:C6	3:D:43:A:C6	2.87	0.63
4:E:164:VAL:HG22	4:E:165:VAL:HG22	1.79	0.63
5:F:10:PHE:CD1	5:F:178:LEU:HD22	2.34	0.63
5:F:50:ALA:HB1	5:F:72:LYS:CB	2.28	0.63
6:G:67:ILE:HD12	6:G:67:ILE:C	2.19	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:51:GLN:OE1	9:J:58:PRO:HD2	1.99	0.63
9:J:69:VAL:HG11	9:J:104:LEU:CG	2.28	0.63
10:K:111:ILE:H	10:K:111:ILE:HD12	1.63	0.63
10:K:68:ARG:HD3	10:K:69:ARG:H	1.63	0.63
1:A:598:U:H4'	10:K:94:TYR:CD2	2.34	0.63
14:O:110:VAL:HB	14:O:113:ARG:HG3	1.81	0.63
14:O:77:LEU:HA	14:O:81:SER:CB	2.29	0.63
12:M:65:LEU:HD13	16:Q:36:PHE:CZ	2.34	0.63
16:Q:26:ARG:HB3	16:Q:43:CYS:HB2	1.80	0.63
18:S:21:VAL:HG21	18:S:34:GLU:HB3	1.81	0.63
18:S:39:TYR:CZ	18:S:41:PRO:HG3	2.34	0.63
19:T:48:GLU:OE2	19:T:50:LYS:HB2	1.98	0.63
19:T:60:ILE:HG22	19:T:74:LEU:HB2	1.80	0.63
22:W:72:LEU:HD22	22:W:76:ALA:HB1	1.81	0.63
3:D:17:U:O4	3:D:19:G:N7	2.31	0.63
1:A:1111:A:H2'	1:A:1112:C:C6	2.33	0.62
1:A:1358:U:OP2	1:A:1359:C:C5	2.52	0.62
1:A:137:C:O2'	1:A:138:G:H5'	1.99	0.62
1:A:1435:G:C2	1:A:1436:U:C4	2.87	0.62
1:A:1498:U:O2'	1:A:1499:A:H5'	1.98	0.62
1:A:467:G:H3'	1:A:467:G:OP2	1.99	0.62
1:A:488:C:H2'	1:A:489:C:H6	1.64	0.62
1:A:50:A:N6	1:A:361:G:C4'	2.61	0.62
1:A:5:U:C4	6:G:86:LYS:HD3	2.34	0.62
1:A:647:C:C2	1:A:648:A:C8	2.87	0.62
1:A:655:A:H2'	1:A:656:C:H6	1.63	0.62
1:A:720:C:H6	1:A:720:C:O5'	1.82	0.62
1:A:727:G:C8	1:A:727:G:C3'	2.82	0.62
1:A:76:G:H2'	1:A:77:C:H6	1.64	0.62
1:A:817:C:N4	1:A:819:A:N3	2.47	0.62
1:A:949:A:O2'	1:A:1364:U:N3	2.32	0.62
5:F:112:SER:OG	5:F:115:LEU:HG	1.99	0.62
7:H:116:THR:HG23	7:H:116:THR:O	1.99	0.62
8:I:31:GLU:CA	8:I:35:ALA:HB3	2.27	0.62
9:J:122:HIS:HA	9:J:125:MET:SD	2.38	0.62
9:J:72:ARG:HA	9:J:96:GLN:HE22	1.64	0.62
10:K:65:TYR:CE2	10:K:78:GLN:OE1	2.51	0.62
1:A:1343:G:H4'	11:L:122:ALA:O	1.98	0.62
11:L:29:ASN:HA	11:L:63:ILE:O	1.98	0.62
12:M:50:ILE:N	12:M:60:ARG:HG3	2.14	0.62
13:N:24:SER:OG	13:N:25:TYR:N	2.31	0.62
15:P:81:LEU:HD22	15:P:82:MET:H	1.64	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:54:PRO:O	16:Q:56:VAL:HG23	1.99	0.62
1:A:625:G:H4'	18:S:16:HIS:CG	2.34	0.62
18:S:35:LYS:HZ2	18:S:37:GLY:C	2.02	0.62
18:S:3:LYS:HZ2	18:S:3:LYS:HB3	1.62	0.62
22:W:14:LYS:N	22:W:17:ARG:NH2	2.44	0.62
23:X:12:LYS:HG3	23:X:17:THR:OG1	1.98	0.62
1:A:1189:C:HO2'	1:A:1190:G:H5'	1.64	0.62
1:A:1237:C:C4	1:A:1336:C:H6	2.17	0.62
1:A:1480:G:H2'	1:A:1481:U:H5'	1.80	0.62
1:A:21:G:C2	1:A:915:A:N6	2.68	0.62
1:A:262:A:C2	1:A:263:A:C6	2.87	0.62
1:A:363:A:C2'	1:A:364:A:H5'	2.29	0.62
1:A:379:C:H2'	1:A:380:G:H5'	1.79	0.62
1:A:448:A:H2'	1:A:449:C:H6	1.65	0.62
1:A:453:A:N6	1:A:480:U:H3	1.96	0.62
1:A:576:G:C8	1:A:881:G:O2'	2.48	0.62
1:A:66:G:C4'	1:A:173:U:C5	2.83	0.62
1:A:828:A:C8	1:A:829:G:C8	2.87	0.62
1:A:952:U:O2'	1:A:965:A:N6	2.32	0.62
1:A:989:C:H4'	1:A:1016:A:H2	1.64	0.62
2:C:48:C:N4	2:C:59:A:C6	2.66	0.62
5:F:121:ALA:HB2	5:F:187:ALA:CB	2.29	0.62
5:F:66:VAL:O	5:F:66:VAL:HG12	1.99	0.62
7:H:44:GLY:HA3	7:H:61:TYR:HB2	1.82	0.62
7:H:79:GLU:O	7:H:80:ILE:HG23	1.98	0.62
8:I:61:LEU:HB3	8:I:63:TYR:OH	1.99	0.62
9:J:50:ILE:CD1	9:J:58:PRO:HB3	2.29	0.62
11:L:98:PRO:C	11:L:100:GLY:N	2.47	0.62
14:O:33:ARG:O	14:O:84:LEU:CG	2.47	0.62
1:A:522:C:H41	14:O:53:ARG:HH22	1.47	0.62
1:A:1230:C:O2	15:P:126:LYS:HD3	1.99	0.62
15:P:77:ASN:HA	15:P:80:ARG:CG	2.30	0.62
19:T:18:THR:HG23	19:T:69:LYS:HZ3	1.63	0.62
19:T:82:MET:O	19:T:85:VAL:CB	2.47	0.62
23:X:6:ARG:HH11	23:X:15:ARG:CZ	2.12	0.62
1:A:1163:C:H2'	1:A:1164:G:C5'	2.27	0.62
1:A:1074:G:C2	1:A:1075:C:H1'	2.35	0.62
1:A:1215:G:C2	1:A:1216:G:C8	2.86	0.62
1:A:1287:A:C5	1:A:1288:A:N6	2.67	0.62
1:A:1389:C:H2'	1:A:1390:U:O4'	1.98	0.62
1:A:262:A:H2'	1:A:263:A:C8	2.35	0.62
1:A:669:U:O4'	17:R:46:HIS:HE1	1.82	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:736:C:H2'	1:A:737:A:C8	2.34	0.62
1:A:85:U:C2'	1:A:86:U:H5'	2.29	0.62
4:E:201:ILE:N	4:E:201:ILE:HD12	2.14	0.62
4:E:61:LEU:HA	4:E:64:ARG:HD2	1.81	0.62
5:F:84:ILE:O	5:F:101:LEU:HD13	2.00	0.62
6:G:105:VAL:HG21	6:G:121:VAL:HG21	1.80	0.62
11:L:87:GLN:O	11:L:90:PRO:HD3	1.99	0.62
14:O:36:VAL:HG22	14:O:79:GLU:O	1.99	0.62
2:C:29:G:H5'	15:P:118:ALA:O	1.99	0.62
18:S:19:ILE:HB	18:S:37:GLY:C	2.20	0.62
22:W:87:LYS:O	22:W:88:VAL:C	2.38	0.62
3:D:48:C:C4	3:D:59:U:H2'	2.35	0.62
1:A:342:C:H2'	1:A:343:U:C6	2.31	0.62
1:A:1015:A:H2'	1:A:1016:A:H8	1.60	0.62
1:A:1113:C:H2'	1:A:1114:C:H6	1.64	0.62
1:A:1404:C:C1'	1:A:1499:A:N1	2.62	0.62
1:A:145:G:N1	1:A:178:C:C4	2.66	0.62
1:A:300:A:H2'	1:A:301:G:C5'	2.29	0.62
1:A:35:G:N2	14:O:118:SER:OG	2.31	0.62
1:A:366:C:O2'	1:A:367:U:P	2.57	0.62
1:A:464:G:H2'	1:A:467:G:O6	2.00	0.62
1:A:655:A:H2'	1:A:656:C:C6	2.33	0.62
1:A:953:G:O2'	1:A:954:G:H5'	1.99	0.62
4:E:48:MET:HA	4:E:51:LEU:CD1	2.29	0.62
4:E:61:LEU:O	4:E:64:ARG:HD2	1.99	0.62
4:E:95:GLN:CG	4:E:148:TYR:HB3	2.29	0.62
5:F:120:VAL:HG21	5:F:137:ALA:HB2	1.81	0.62
5:F:6:HIS:CD2	5:F:8:ILE:HG22	2.33	0.62
8:I:24:GLU:HA	8:I:27:GLN:HG2	1.80	0.62
10:K:91:ARG:HH11	19:T:33:GLY:N	1.97	0.62
11:L:37:PHE:N	11:L:37:PHE:HD2	1.97	0.62
12:M:24:VAL:HG13	12:M:34:VAL:CG1	2.29	0.62
1:A:973:G:H1'	12:M:55:LYS:N	2.14	0.62
22:W:12:ALA:C	22:W:14:LYS:N	2.52	0.62
1:A:1004:A:H3'	1:A:1025:U:H3	1.63	0.62
1:A:1004:A:H4'	1:A:1005:A:OP1	1.99	0.62
1:A:344:A:O2'	1:A:345:C:P	2.56	0.62
1:A:1157:A:N9	1:A:1181:G:N2	2.35	0.62
1:A:1240:U:OP2	9:J:115:ARG:HA	1.98	0.62
1:A:1256:A:O3'	1:A:1257:U:C4'	2.47	0.62
1:A:130:A:H4'	1:A:190:G:C4	2.35	0.62
1:A:1413:A:N6	1:A:1488:G:C6	2.67	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:194:C:O3'	22:W:68:LYS:NZ	2.33	0.62
1:A:236:G:H3'	1:A:237:C:C6	2.30	0.62
1:A:322:C:C2'	1:A:323:U:H5'	2.28	0.62
1:A:49:U:O4	1:A:362:G:C2	2.52	0.62
1:A:854:G:C2	1:A:855:G:C8	2.87	0.62
1:A:892:A:H2'	1:A:893:C:C6	2.34	0.62
1:A:97:U:N3	1:A:99:C:N4	2.47	0.62
2:C:18:G:N1	2:C:57:A:C6	2.66	0.62
2:C:31:G:O3'	11:L:127:LYS:O	2.17	0.62
2:C:37:A:C4	2:C:38:A:N7	2.67	0.62
4:E:19:HIS:C	4:E:39:ILE:HD11	2.20	0.62
4:E:56:ARG:O	4:E:59:GLU:HG3	2.00	0.62
4:E:75:LYS:C	4:E:75:LYS:HE3	2.20	0.62
5:F:146:ALA:C	5:F:147:LYS:HD2	2.18	0.62
6:G:135:LEU:O	6:G:137:SER:N	2.32	0.62
7:H:78:HIS:ND1	10:K:104:ARG:HD3	2.14	0.62
9:J:130:GLY:O	9:J:131:LYS:HB3	1.99	0.62
9:J:74:GLU:OE2	9:J:75:VAL:O	2.17	0.62
10:K:45:ILE:O	10:K:45:ILE:HG12	1.99	0.62
10:K:6:ILE:CD1	10:K:85:ARG:CZ	2.77	0.62
11:L:38:GLN:O	11:L:40:LEU:N	2.32	0.62
12:M:64:GLU:HG3	16:Q:59:ALA:HB2	1.82	0.62
14:O:61:THR:O	14:O:62:SER:OG	2.17	0.62
17:R:18:PHE:O	17:R:20:GLY:N	2.33	0.62
17:R:63:ARG:O	17:R:67:LEU:HG	1.99	0.62
17:R:80:ALA:O	17:R:83:GLU:HB3	2.00	0.62
1:A:236:G:H5'	19:T:42:TYR:OH	2.00	0.62
1:A:130:A:C8	19:T:63:ARG:HG3	2.35	0.62
19:T:75:ARG:NH2	19:T:77:VAL:HG22	2.15	0.62
21:V:46:GLY:O	21:V:47:HIS:ND1	2.32	0.62
21:V:5:LEU:HB2	21:V:9:VAL:CG2	2.24	0.62
13:N:121:PRO:HB2	13:N:125:PHE:CD1	2.34	0.62
1:A:1299:A:N7	1:A:1301:U:C1'	2.62	0.62
1:A:1395:C:H2'	1:A:1396:A:H8	1.63	0.62
1:A:291:C:H3'	1:A:305:G:N2	2.15	0.62
1:A:40:C:C2	1:A:41:G:C8	2.88	0.62
1:A:794:A:C6	1:A:795:C:N4	2.68	0.62
1:A:834:C:H2'	1:A:835:U:O4'	1.99	0.62
1:A:889:A:H5'	1:A:891:U:O4'	1.99	0.62
1:A:965:A:C8	1:A:969:A:C4	2.88	0.62
4:E:118:LEU:HD11	4:E:141:GLU:OE1	2.00	0.62
4:E:212:GLN:HB3	4:E:235:SER:OG	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:80:ILE:HG21	4:E:211:ILE:HG22	1.82	0.62
4:E:81:VAL:HG12	4:E:92:TYR:CD1	2.34	0.62
4:E:82:ARG:O	4:E:86:GLU:HG3	1.99	0.62
6:G:206:PHE:HD2	6:G:207:TYR:CD1	2.17	0.62
9:J:113:GLU:HB2	9:J:118:VAL:HG11	1.80	0.62
10:K:101:PRO:O	10:K:102:ARG:CB	2.48	0.62
11:L:74:ILE:O	11:L:77:ILE:HB	1.99	0.62
12:M:61:GLU:HG2	16:Q:58:LYS:HZ3	1.63	0.62
15:P:60:VAL:HA	15:P:63:THR:HB	1.81	0.62
16:Q:26:ARG:NH1	16:Q:47:LEU:HG	2.13	0.62
1:A:1187:G:H1'	16:Q:61:TRP:OXT	1.99	0.62
3:D:2:C:H2'	3:D:3:C:C6	2.33	0.62
1:A:1002:G:OP2	1:A:1002:G:O4'	2.18	0.62
1:A:1003:G:N1	1:A:1038:C:C2	2.68	0.62
1:A:1011:G:H2'	1:A:1012:U:C5'	2.21	0.62
1:A:108:G:O6	22:W:15:ARG:HD2	2.00	0.62
1:A:1241:G:O2'	1:A:1242:C:H5'	1.99	0.62
1:A:1248:A:C2	1:A:1249:C:N3	2.68	0.62
1:A:1285:A:H4'	1:A:1286:A:O5'	2.00	0.62
1:A:1512:U:H2'	1:A:1513:A:H8	1.65	0.62
1:A:306:G:N2	1:A:307:C:H1'	2.13	0.62
1:A:682:G:C2	1:A:683:G:C8	2.87	0.62
1:A:738:C:N4	1:A:739:C:H41	1.98	0.62
1:A:753:A:H4'	1:A:754:C:O2	2.00	0.62
1:A:918:A:H2'	1:A:919:A:O4'	1.99	0.62
2:C:33:U:H2'	2:C:35:A:OP2	2.00	0.62
4:E:80:ILE:HD11	4:E:208:ILE:HG23	1.81	0.62
5:F:139:GLN:CA	5:F:170:GLN:HE22	2.12	0.62
5:F:24:ALA:HB1	5:F:28:GLN:OE1	1.99	0.62
1:A:411:A:OP2	6:G:25:ARG:NH2	2.32	0.62
8:I:15:ASP:O	8:I:19:LEU:HD12	1.98	0.62
8:I:40:VAL:HA	8:I:63:TYR:HD1	1.65	0.62
11:L:15:ALA:CB	11:L:77:ILE:N	2.62	0.62
12:M:27:ALA:HB2	12:M:85:LEU:HD21	1.82	0.62
15:P:91:ARG:NH1	15:P:96:LEU:HB2	2.15	0.62
1:A:976:G:OP1	16:Q:32:SER:HA	1.99	0.62
17:R:62:GLN:CA	17:R:65:ARG:HH22	2.10	0.62
17:R:79:ARG:NH1	17:R:79:ARG:CB	2.63	0.62
1:A:659:U:OP1	17:R:9:GLN:NE2	2.33	0.62
18:S:5:ARG:NH1	18:S:24:ALA:HA	2.09	0.62
18:S:36:ILE:HG21	18:S:55:ARG:HB3	1.80	0.62
19:T:46:ASP:OD2	19:T:48:GLU:OE1	2.17	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:49:ALA:HB1	22:W:99:LEU:HG	1.78	0.62
1:A:1261:A:N6	1:A:1274:G:C1'	2.62	0.62
1:A:186(A):C:N3	22:W:105:SER:OG	2.32	0.62
1:A:44:G:O6	1:A:399:G:C6	2.53	0.62
1:A:449:C:C2	1:A:450:G:H1'	2.35	0.62
1:A:52:G:H2'	1:A:53:A:O4'	1.99	0.62
1:A:564:C:H2'	1:A:565:U:O4'	2.00	0.62
1:A:688:G:C2'	1:A:689:C:H5'	2.30	0.62
1:A:87:A:H2'	1:A:88:C:O4'	2.00	0.62
1:A:958:A:O2'	1:A:959:A:H5'	1.99	0.62
2:C:19:G:C2	2:C:57:A:N3	2.68	0.62
4:E:16:HIS:O	4:E:204:ASN:N	2.30	0.62
5:F:118:GLN:O	5:F:122:GLU:HG3	2.00	0.62
6:G:144:ASP:H	6:G:185:PHE:HB3	1.65	0.62
7:H:73:ASN:ND2	7:H:73:ASN:C	2.52	0.62
10:K:64:LYS:CG	10:K:79:VAL:HG21	2.18	0.62
10:K:6:ILE:CG1	10:K:85:ARG:CZ	2.77	0.62
11:L:89:ASN:ND2	11:L:92:TYR:CE1	2.68	0.62
1:A:1177:G:OP2	11:L:93:ARG:NH2	2.32	0.62
13:N:99:GLN:HA	13:N:105:VAL:HG22	1.82	0.62
13:N:28:THR:HG22	13:N:29:ILE:N	2.13	0.62
15:P:96:LEU:N	15:P:96:LEU:HD23	2.13	0.62
1:A:979:C:O2	16:Q:19:ARG:NE	2.33	0.62
17:R:46:HIS:O	17:R:48:LYS:N	2.32	0.62
19:T:15:MET:HB2	19:T:18:THR:HB	1.81	0.62
1:A:1459:C:P	22:W:27:LYS:HZ3	2.22	0.62
1:A:160:A:H2'	1:A:161:A:O4'	2.00	0.62
1:A:1085:U:OP2	1:A:1086:U:O4	2.18	0.62
1:A:1085:U:O2'	1:A:1086:U:OP1	2.12	0.62
1:A:1158:C:C2'	1:A:1158:C:O2	2.48	0.62
1:A:1159:U:H5'	1:A:1160:G:OP1	1.99	0.62
1:A:1366:C:O2'	1:A:1367:C:H5'	2.00	0.62
1:A:308:C:C2	1:A:309:G:C8	2.88	0.62
1:A:432:A:N7	1:A:433:C:C6	2.68	0.62
1:A:675:A:N1	1:A:716:A:C2	2.68	0.62
1:A:866:C:C5	1:A:867:G:H1'	2.34	0.62
1:A:932:C:C3'	9:J:3:ARG:HG3	2.29	0.62
1:A:15:G:H1'	7:H:19:MET:HG2	1.82	0.62
7:H:71:LEU:HD23	7:H:71:LEU:C	2.20	0.62
1:A:738:C:OP2	8:I:92:LYS:CE	2.47	0.62
9:J:5:ARG:HD2	9:J:7:ALA:N	2.15	0.62
9:J:72:ARG:CB	9:J:72:ARG:HH11	2.10	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:6:ARG:O	9:J:7:ALA:C	2.36	0.62
10:K:122:ARG:O	10:K:125:ARG:N	2.32	0.62
1:A:826:C:H5'	10:K:12:ARG:CZ	2.30	0.62
14:O:84:LEU:HG	14:O:85:ILE:H	1.65	0.62
15:P:81:LEU:HD23	15:P:89:GLY:CA	2.26	0.62
17:R:76:GLU:HG3	17:R:77:ARG:N	2.15	0.62
18:S:23:ASP:O	18:S:25:ARG:N	2.31	0.62
21:V:36:ARG:HA	21:V:71:LEU:HD12	1.82	0.62
22:W:73:HIS:O	22:W:74:LYS:O	2.18	0.62
1:A:747:C:H2'	1:A:748:C:H1'	1.81	0.62
1:A:1452:C:H5'	1:A:1453:G:N3	2.14	0.62
1:A:1108:G:H4'	1:A:1191:A:H1'	1.81	0.62
1:A:1487:G:O2'	1:A:1488:G:H5'	2.00	0.62
1:A:926:G:C2'	1:A:1505:G:N2	2.52	0.62
1:A:406:G:C2	1:A:407:G:C5	2.88	0.62
1:A:515:G:N2	1:A:537:G:C4	2.68	0.62
1:A:518:C:O2'	14:O:50:SER:HB3	1.99	0.62
1:A:766:A:N7	1:A:814:A:N6	2.47	0.62
2:C:75:C:C3'	2:C:76:A:O3'	2.48	0.62
5:F:94:LEU:HD23	5:F:94:LEU:O	1.99	0.62
8:I:96:PRO:HD2	20:U:32:ARG:HH21	1.64	0.62
9:J:85:TYR:CD2	9:J:85:TYR:N	2.64	0.62
10:K:111:ILE:HG23	10:K:120:THR:HG22	1.82	0.62
10:K:21:LYS:O	10:K:22:GLU:C	2.39	0.62
10:K:9:MET:CA	10:K:26:VAL:HG21	2.29	0.62
10:K:51:VAL:CG2	10:K:60:ARG:HB3	2.29	0.62
10:K:24:THR:HG22	10:K:61:VAL:O	1.99	0.62
11:L:15:ALA:HA	11:L:65:VAL:HG23	1.82	0.62
11:L:23:ASN:C	11:L:23:ASN:HD22	2.03	0.62
11:L:69:GLY:O	11:L:73:GLN:HG3	2.00	0.62
21:V:22:LEU:HG	21:V:25:LYS:CE	2.29	0.62
21:V:80:TYR:CD1	21:V:81:ARG:N	2.68	0.62
5:F:157:ILE:HD12	5:F:164:ARG:CG	2.30	0.62
1:A:121:C:C4'	1:A:122:G:OP1	2.48	0.61
1:A:1253:G:H2'	1:A:1254:C:O4'	1.99	0.61
1:A:1359:C:O2'	1:A:1361:G:OP2	2.18	0.61
1:A:1529:G:C4'	1:A:1530:G:OP2	2.48	0.61
1:A:375:U:H4'	18:S:6:LEU:HD21	1.82	0.61
1:A:391:G:C6	1:A:392:G:C5	2.88	0.61
4:E:20:GLU:N	4:E:39:ILE:HD11	2.14	0.61
4:E:222:ILE:HB	4:E:226:ARG:NH2	2.14	0.61
4:E:33:TYR:HE2	4:E:44:LEU:HG	1.64	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:84:GLU:O	4:E:219:VAL:HG21	2.00	0.61
4:E:97:TRP:CZ3	4:E:173:ALA:N	2.67	0.61
5:F:156:ARG:HH12	5:F:161:GLU:HA	1.65	0.61
9:J:122:HIS:C	9:J:125:MET:HG3	2.20	0.61
10:K:30:ARG:O	10:K:33:GLU:HB3	2.00	0.61
1:A:684:A:H4'	13:N:12:ARG:NH1	2.15	0.61
13:N:58:PRO:HB2	13:N:93:GLN:HB2	1.82	0.61
14:O:101:VAL:O	14:O:104:VAL:HG23	2.00	0.61
15:P:3:ARG:CG	15:P:7:VAL:HA	2.29	0.61
1:A:979:C:H41	16:Q:18:VAL:HB	1.65	0.61
17:R:40:SER:O	17:R:43:LEU:HB2	1.99	0.61
18:S:6:LEU:HB2	18:S:17:TYR:HB3	1.80	0.61
1:A:1088:G:C2	1:A:1089:G:C8	2.88	0.61
1:A:1224:G:H2'	1:A:1225:A:OP1	2.00	0.61
1:A:1307:U:C6	1:A:1307:U:O5'	2.46	0.61
1:A:1387:G:H2'	1:A:1388:C:C6	2.34	0.61
1:A:1514:C:O2'	1:A:1515:C:H5'	2.00	0.61
1:A:195:A:C4	1:A:196:A:C2	2.88	0.61
1:A:320:C:O2'	1:A:321:A:C5'	2.46	0.61
1:A:432:A:H8	1:A:432:A:H3'	1.65	0.61
1:A:451:A:C8	1:A:481:G:N1	2.68	0.61
1:A:959:A:H3'	1:A:960:U:C5'	2.28	0.61
2:C:33:U:H6	2:C:33:U:O5'	1.82	0.61
4:E:19:HIS:CE1	4:E:204:ASN:HD21	2.18	0.61
4:E:18:GLY:CA	4:E:41:ILE:HA	2.30	0.61
5:F:5:ILE:HD13	5:F:10:PHE:CE2	2.35	0.61
5:F:113:ALA:HB3	5:F:114:PRO:HD3	1.80	0.61
6:G:120:LEU:HD12	6:G:121:VAL:N	2.15	0.61
6:G:3:ARG:HG3	6:G:3:ARG:HH11	1.65	0.61
7:H:11:ILE:HB	7:H:31:LEU:HD22	1.83	0.61
11:L:105:ASP:OD1	11:L:107:ARG:NH2	2.34	0.61
11:L:55:ALA:HB1	11:L:58:HIS:CD2	2.35	0.61
14:O:117:ARG:HH22	14:O:124:LYS:HG2	1.64	0.61
14:O:56:ALA:HB2	14:O:70:ILE:CG1	2.31	0.61
16:Q:9:LYS:HZ1	16:Q:12:ARG:NH2	1.97	0.61
19:T:4:LYS:C	19:T:5:VAL:HG23	2.20	0.61
19:T:68:ARG:H	19:T:70:ARG:CZ	2.13	0.61
3:D:17:U:H3'	3:D:18:G:C8	2.35	0.61
3:D:58:A:H2'	3:D:61:C:C4	2.35	0.61
1:A:1091:U:O2	1:A:1095:U:C5	2.53	0.61
1:A:1524:C:OP1	13:N:120:ARG:NH2	2.33	0.61
1:A:329:A:C6	1:A:332:G:C2	2.88	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:607:A:C4	1:A:608:A:C8	2.87	0.61
1:A:659:U:H2'	1:A:660:G:C8	2.34	0.61
1:A:667:G:H4'	17:R:51:HIS:CG	2.35	0.61
1:A:872:A:C5	1:A:874:G:C8	2.87	0.61
2:C:68:C:H2'	2:C:69:C:C6	2.34	0.61
4:E:95:GLN:HA	4:E:95:GLN:OE1	2.00	0.61
5:F:140:ARG:HA	5:F:143:GLU:HB2	1.82	0.61
5:F:30:ARG:HG2	5:F:30:ARG:NH1	2.14	0.61
6:G:104:VAL:HG21	6:G:140:VAL:HG21	1.82	0.61
9:J:62:PHE:HD1	9:J:124:LEU:HD11	1.64	0.61
9:J:90:GLU:O	9:J:91:VAL:CG2	2.47	0.61
11:L:23:ASN:ND2	11:L:57:GLY:O	2.32	0.61
13:N:63:LEU:C	13:N:63:LEU:HD23	2.21	0.61
13:N:67:ASP:N	13:N:70:LYS:HZ2	1.97	0.61
14:O:41:ARG:CG	14:O:42:THR:H	2.13	0.61
18:S:8:ARG:C	18:S:9:PHE:HD2	2.02	0.61
21:V:22:LEU:HD23	21:V:25:LYS:HE2	1.82	0.61
21:V:24:ALA:C	21:V:26:GLY:H	2.04	0.61
1:A:1022:G:N3	1:A:1022:G:H2'	2.15	0.61
1:A:1107:C:OP2	5:F:172:ARG:HG2	2.00	0.61
1:A:1239:A:H4'	1:A:1240:U:C5'	2.30	0.61
1:A:179:A:H3'	1:A:180:U:C6	2.35	0.61
1:A:220:G:O2'	1:A:221:C:H5'	2.00	0.61
1:A:331:G:OP1	1:A:332:G:H8	1.83	0.61
1:A:395:C:O2'	1:A:396:G:H5'	2.00	0.61
1:A:556:C:O2'	1:A:557:G:H5'	2.00	0.61
1:A:881:G:OP2	14:O:9:GLN:NE2	2.33	0.61
1:A:981:U:H6	1:A:981:U:O5'	1.82	0.61
3:D:38:A:C2'	3:D:39:U:H5'	2.30	0.61
4:E:33:TYR:CG	4:E:43:ASP:HB2	2.35	0.61
5:F:83:ARG:C	5:F:87:LEU:HG	2.20	0.61
5:F:38:ARG:C	5:F:94:LEU:HD11	2.21	0.61
6:G:122:ARG:HG2	6:G:134:ASP:O	2.01	0.61
6:G:20:TYR:HA	6:G:31:CYS:SG	2.40	0.61
1:A:1349:A:OP1	11:L:120:ARG:HB2	2.01	0.61
12:M:39:PRO:HA	12:M:70:ARG:NH1	2.14	0.61
12:M:94:VAL:HG12	12:M:95:GLU:H	1.64	0.61
14:O:60:LEU:CD1	14:O:60:LEU:N	2.64	0.61
15:P:91:ARG:HD3	15:P:96:LEU:HG	1.81	0.61
19:T:29:HIS:ND1	19:T:31:LEU:N	2.37	0.61
20:U:34:TYR:CD1	20:U:35:ARG:N	2.68	0.61
22:W:65:LYS:O	22:W:68:LYS:CG	2.48	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1278:U:OP1	1:A:1279:A:H4'	2.00	0.61
1:A:1407:C:H2'	1:A:1408:A:O4'	2.00	0.61
1:A:1476:G:H2'	1:A:1477:C:C6	2.35	0.61
1:A:1499:A:N7	1:A:1500:A:N7	2.49	0.61
1:A:232:G:C5	1:A:233:C:C5	2.88	0.61
1:A:238:G:N1	1:A:239:U:C2	2.68	0.61
1:A:106:C:O2	1:A:379:C:H5'	2.00	0.61
1:A:423:G:H2'	1:A:424:G:O4'	2.01	0.61
1:A:523:A:N6	14:O:53:ARG:HH22	1.99	0.61
1:A:766:A:H2'	1:A:767:A:C8	2.35	0.61
1:A:86:U:C2'	1:A:87:A:H5'	2.31	0.61
2:C:9:G:H4'	2:C:10:G:OP1	1.99	0.61
4:E:112:VAL:HG13	4:E:149:LEU:HD21	1.82	0.61
4:E:169:LYS:HZ3	4:E:170:GLU:HA	1.63	0.61
5:F:130:VAL:O	5:F:133:ALA:HB3	2.00	0.61
6:G:191:ARG:CD	6:G:191:ARG:C	2.68	0.61
1:A:8:A:C4'	7:H:102:ALA:HA	2.31	0.61
9:J:93:PRO:O	9:J:94:ARG:C	2.38	0.61
10:K:110:ALA:HA	10:K:136:GLU:CB	2.30	0.61
11:L:113:LYS:HZ1	11:L:119:ALA:CB	2.14	0.61
2:C:31:G:H4'	11:L:127:LYS:HB2	1.83	0.61
11:L:5:TYR:O	11:L:84:ALA:HA	2.01	0.61
12:M:32:ALA:HB2	12:M:75:ILE:C	2.21	0.61
13:N:80:VAL:O	13:N:106:LYS:CB	2.43	0.61
3:D:73:A:O2'	3:D:74:C:OP1	2.17	0.61
1:A:1124:G:N2	1:A:1126:U:H3	1.89	0.61
1:A:1245:A:H2'	1:A:1246:C:H6	1.63	0.61
1:A:1329:A:O2'	1:A:1330:U:H5'	1.99	0.61
1:A:1513:A:H2'	1:A:1514:C:H6	1.62	0.61
1:A:38:G:N3	1:A:397:A:N6	2.48	0.61
1:A:564:C:C5	1:A:565:U:C5	2.89	0.61
1:A:761:G:N3	19:T:105:ALA:O	2.33	0.61
1:A:817:C:H1'	1:A:818:G:C5'	2.31	0.61
4:E:22:LYS:O	4:E:24:TRP:CD1	2.53	0.61
4:E:27:LYS:O	4:E:194:PRO:HG2	2.00	0.61
4:E:71:VAL:CG1	4:E:93:VAL:HB	2.30	0.61
5:F:126:ARG:O	5:F:127:ARG:CB	2.47	0.61
5:F:85:ARG:O	5:F:89:GLU:HB3	2.01	0.61
7:H:102:ALA:HB2	7:H:120:THR:HG22	1.82	0.61
7:H:142:LEU:O	7:H:143:ARG:HD3	2.00	0.61
7:H:48:ALA:HB1	7:H:53:LEU:CB	2.30	0.61
10:K:63:LEU:HB2	10:K:65:TYR:CZ	2.36	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:109:VAL:O	11:L:109:VAL:HG12	2.01	0.61
11:L:19:LEU:HD21	11:L:59:PHE:CB	2.08	0.61
11:L:19:LEU:HD22	11:L:59:PHE:CD2	2.31	0.61
11:L:48:GLU:HB2	11:L:78:LYS:NZ	2.14	0.61
11:L:93:ARG:C	11:L:95:LYS:H	2.03	0.61
13:N:21:ILE:HD11	13:N:82:VAL:CG1	2.31	0.61
1:A:35:G:O2'	14:O:118:SER:O	2.14	0.61
3:D:26:A:H2'	3:D:26:A:N3	2.16	0.61
3:D:60:U:C6	3:D:60:U:H3'	2.35	0.61
1:A:1129:C:C4	1:A:1139:G:C6	2.88	0.61
1:A:129(A):G:HO2'	1:A:130:A:P	2.24	0.61
1:A:1318:A:H4'	21:V:10:PHE:CD2	2.31	0.61
1:A:1488:G:C2	1:A:1489:G:C8	2.88	0.61
1:A:355:C:C1'	1:A:388:G:H2'	2.31	0.61
1:A:491:G:O2'	1:A:492:G:H5'	2.01	0.61
1:A:872:A:C2'	1:A:873:A:H5''	2.31	0.61
1:A:900:A:H62	1:A:901:A:N6	1.97	0.61
1:A:936:C:O2'	1:A:937:A:H5'	2.00	0.61
1:A:977:A:N3	1:A:977:A:H2'	2.16	0.61
1:A:961:U:C6	1:A:983:A:C5	2.88	0.61
2:C:17:C:C4	2:C:19:G:H8	2.19	0.61
4:E:18:GLY:H	4:E:41:ILE:HG23	1.65	0.61
5:F:134:ILE:HD11	5:F:153:VAL:HG11	1.82	0.61
5:F:150:LYS:HA	5:F:169:ALA:HB2	1.82	0.61
5:F:83:ARG:C	5:F:85:ARG:H	2.02	0.61
6:G:98:GLU:OE2	6:G:103:ASN:OD1	2.18	0.61
6:G:26:CYS:CA	6:G:31:CYS:HB3	2.29	0.61
7:H:28:PHE:HE1	7:H:50:GLU:C	2.04	0.61
7:H:84:PHE:HB3	7:H:87:SER:O	1.99	0.61
8:I:76:ALA:HA	8:I:79:LEU:CD1	2.26	0.61
9:J:92:SER:HB2	9:J:93:PRO:HD2	1.83	0.61
10:K:88:LYS:C	10:K:90:GLY:H	2.04	0.61
1:A:538:G:C4'	14:O:114:LYS:HD3	2.30	0.61
15:P:88:ARG:O	15:P:91:ARG:HB2	2.00	0.61
17:R:62:GLN:HE21	17:R:66:LEU:CD2	2.01	0.61
19:T:75:ARG:NH1	19:T:77:VAL:HG13	2.14	0.61
21:V:10:PHE:CE2	21:V:12:ASP:HA	2.36	0.61
1:A:926:G:C2	1:A:1505:G:C2	2.88	0.61
1:A:283:C:C2	1:A:284:G:C8	2.88	0.61
1:A:522:C:C4	1:A:523:A:N7	2.68	0.61
1:A:540:G:C6	1:A:541:G:C5	2.89	0.61
1:A:20:U:H5'	1:A:572:A:C6	2.34	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:744:C:H2'	1:A:745:C:C6	2.35	0.61
1:A:754:C:H3'	1:A:754:C:O2	2.00	0.61
1:A:863:U:H2'	1:A:865:A:OP2	2.01	0.61
2:C:33:U:C2	2:C:35:A:OP2	2.54	0.61
2:C:60:U:C4'	2:C:61:C:OP2	2.46	0.61
4:E:196:LEU:HD12	4:E:197:VAL:CA	2.29	0.61
4:E:23:ARG:C	4:E:24:TRP:HD1	2.04	0.61
5:F:202:ILE:O	5:F:204:LEU:HD23	2.01	0.61
5:F:52:LEU:O	5:F:53:ALA:HB2	2.01	0.61
6:G:56:VAL:HG12	6:G:57:ARG:N	2.15	0.61
9:J:95:ARG:O	9:J:96:GLN:C	2.38	0.61
10:K:9:MET:HG3	10:K:26:VAL:HG21	1.82	0.61
10:K:98:LYS:N	10:K:98:LYS:HZ2	1.99	0.61
11:L:9:ARG:HD2	11:L:14:VAL:HG13	1.83	0.61
14:O:117:ARG:HH21	14:O:123:LYS:C	2.04	0.61
21:V:30:LEU:HD12	21:V:59:PRO:HA	1.83	0.61
1:A:1316:G:O6	21:V:6:LYS:HE2	2.01	0.61
1:A:1320:C:C5	21:V:72:GLY:HA3	2.35	0.61
22:W:15:ARG:O	22:W:18:GLN:HG3	2.01	0.61
3:D:17:U:H5'	3:D:18:G:O5'	2.00	0.61
1:A:1250:A:N3	1:A:1370:G:O2'	2.34	0.61
1:A:1338:G:C2	1:A:1339:A:C5	2.89	0.61
1:A:319:G:C5'	1:A:1468:A:H4'	2.30	0.61
1:A:382:A:H2'	1:A:383:A:O5'	2.00	0.61
1:A:515:G:O6	1:A:533:A:N7	2.34	0.61
1:A:547:A:H4'	1:A:548:G:O5'	1.99	0.61
1:A:557:G:H3'	1:A:558:G:C8	2.35	0.61
1:A:91:C:C2	1:A:92:G:C8	2.88	0.61
1:A:975:A:C8	1:A:1365:G:N2	2.69	0.61
1:A:978:A:N6	1:A:1361:G:N2	2.45	0.61
4:E:88:ALA:HB2	4:E:219:VAL:HG13	1.81	0.61
4:E:97:TRP:CZ2	4:E:102:LEU:HD22	2.35	0.61
5:F:142:MET:CB	5:F:149:ALA:HB2	2.31	0.61
5:F:156:ARG:H	5:F:163:ALA:HB1	1.65	0.61
5:F:53:ALA:HB3	5:F:69:HIS:O	2.00	0.61
6:G:200:GLU:O	6:G:201:GLN:C	2.38	0.61
6:G:31:CYS:O	6:G:33:MET:CG	2.49	0.61
6:G:42:GLN:HG2	6:G:43:HIS:CE1	2.36	0.61
7:H:144:THR:C	7:H:146:ALA:N	2.50	0.61
7:H:71:LEU:HD23	7:H:72:GLN:N	2.16	0.61
7:H:81:GLU:HG3	7:H:90:VAL:HG23	1.82	0.61
8:I:52:ILE:CG2	8:I:87:ARG:HH12	2.14	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:104:LEU:HD22	9:J:134:ALA:CB	2.31	0.61
10:K:72:PRO:O	10:K:73:ASP:CB	2.46	0.61
11:L:5:TYR:HD2	11:L:6:GLY:H	1.47	0.61
18:S:74:LEU:HD22	18:S:79:VAL:HB	1.82	0.61
19:T:22:LEU:HD12	19:T:23:VAL:H	1.66	0.61
14:O:11:VAL:HG22	19:T:32:TYR:HD1	1.65	0.61
19:T:29:HIS:ND1	19:T:32:TYR:N	2.47	0.61
21:V:4:SER:C	21:V:5:LEU:HD23	2.21	0.61
22:W:25:ARG:CZ	22:W:25:ARG:HB2	2.30	0.61
1:A:1003:G:C2	1:A:1004:A:O2'	2.54	0.61
1:A:1037:C:N4	1:A:1038:C:N4	2.49	0.61
1:A:1244:C:H2'	1:A:1245:A:C8	2.36	0.61
1:A:1261:A:C2	1:A:1262:C:C2	2.88	0.61
1:A:1360:A:N6	16:Q:18:VAL:HG12	2.15	0.61
1:A:819:A:N3	1:A:1529:G:O6	2.34	0.61
1:A:367:U:H4'	1:A:368:U:OP1	2.01	0.61
1:A:403:C:O2'	6:G:122:ARG:CZ	2.48	0.61
1:A:486:U:H2'	1:A:487:A:O5'	2.00	0.61
1:A:517:G:N2	1:A:532:A:O3'	2.29	0.61
1:A:592:G:C2'	1:A:593:G:H5'	2.30	0.61
1:A:864:A:O5'	1:A:864:A:H8	1.83	0.61
1:A:970:C:H5''	1:A:971:G:OP1	2.00	0.61
2:C:75:C:OP1	2:C:76:A:OP2	2.19	0.61
1:A:1191:A:OP1	5:F:4:LYS:CG	2.48	0.61
1:A:1190:G:OP1	5:F:4:LYS:HA	2.00	0.61
6:G:102:ASP:HB2	6:G:136:PRO:CB	2.31	0.61
6:G:94:LEU:HD11	6:G:200:GLU:OE1	2.01	0.61
6:G:85:LYS:O	6:G:86:LYS:O	2.18	0.61
7:H:151:LEU:HD11	10:K:67:PRO:HG3	1.82	0.61
7:H:11:ILE:HB	7:H:31:LEU:CD2	2.30	0.61
11:L:70:LYS:O	11:L:71:SER:C	2.39	0.61
12:M:79:ARG:HH22	12:M:82:ILE:CD1	2.13	0.61
13:N:50:TYR:O	13:N:55:LYS:HG2	2.01	0.61
16:Q:39:LEU:HD13	16:Q:44:LEU:CA	2.30	0.61
18:S:57:ARG:HA	18:S:60:LEU:CD1	2.21	0.61
19:T:43:LEU:HD12	19:T:69:LYS:CB	2.30	0.61
21:V:11:VAL:O	21:V:12:ASP:O	2.19	0.61
3:D:17:U:O4	3:D:19:G:C8	2.53	0.61
14:O:102:ARG:CZ	14:O:109:GLY:HA2	2.29	0.61
1:A:1029:G:H1'	1:A:1032:A:H62	1.65	0.61
1:A:1054:C:H2'	1:A:1055:A:H5''	1.83	0.60
1:A:1159:U:C5	1:A:1181:G:N7	2.68	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1184:G:H2'	1:A:1185:G:C8	2.37	0.60
1:A:1391:U:H2'	1:A:1392:G:N7	2.16	0.60
1:A:1492:A:C8	1:A:1493:A:N3	2.69	0.60
1:A:150:C:H6	1:A:150:C:O5'	1.84	0.60
1:A:449:C:H2'	1:A:450:G:O4'	2.00	0.60
1:A:528:C:N4	14:O:49:ASN:HD21	1.96	0.60
1:A:689:C:C5	1:A:690:G:N7	2.69	0.60
1:A:777:A:C2'	1:A:778:G:H8	2.04	0.60
1:A:789:U:H3'	1:A:789:U:H6	1.66	0.60
1:A:797:C:H2'	1:A:798:G:H8	1.66	0.60
1:A:858:G:N2	1:A:869:G:H2'	2.15	0.60
3:D:38:A:C6	3:D:39:U:C5	2.89	0.60
3:D:40:C:C2'	3:D:41:G:H5''	2.31	0.60
4:E:91:PRO:CG	4:E:154:LEU:HB3	2.26	0.60
6:G:150:GLU:O	6:G:153:ARG:HG3	2.00	0.60
8:I:3:ARG:C	8:I:4:TYR:HD2	2.04	0.60
10:K:47:GLY:O	10:K:61:VAL:HA	2.01	0.60
13:N:81:ASP:OD1	13:N:106:LYS:CD	2.46	0.60
13:N:110:ASP:HB2	20:U:88:LYS:CB	2.31	0.60
2:C:29:G:OP1	15:P:119:GLY:HA3	2.00	0.60
15:P:60:VAL:HG22	15:P:63:THR:CG2	2.31	0.60
1:A:1316:G:C4'	16:Q:17:LYS:HD2	2.28	0.60
12:M:49:VAL:HG22	16:Q:41:ARG:HB2	1.81	0.60
19:T:29:HIS:CG	19:T:30:PRO:HD2	2.36	0.60
10:K:91:ARG:HG2	19:T:34:LYS:HB2	1.82	0.60
13:N:84:VAL:HG21	20:U:88:LYS:HD2	1.83	0.60
1:A:1312:G:N7	21:V:3:ARG:O	2.34	0.60
1:A:1286:A:H5'	23:X:25:LYS:CG	2.31	0.60
18:S:44:THR:HG23	18:S:45:THR:N	2.11	0.60
4:E:130:ARG:HB3	4:E:131:PRO:HD2	1.82	0.60
1:A:1316:G:C5'	16:Q:17:LYS:HZ2	2.14	0.60
1:A:1342:C:H2'	1:A:1343:G:C8	2.37	0.60
1:A:236:G:N3	1:A:236:G:H2'	2.16	0.60
1:A:377:G:H2'	1:A:378:G:H8	1.66	0.60
1:A:646:U:C2	1:A:647:C:C5	2.89	0.60
1:A:697:U:H5'	1:A:786:G:O2'	2.01	0.60
1:A:727:G:H8	1:A:727:G:H3'	1.64	0.60
1:A:780:A:H2	1:A:803:G:C6	2.18	0.60
1:A:812:C:O2'	1:A:813:U:P	2.59	0.60
4:E:115:LEU:HA	4:E:118:LEU:CD1	2.28	0.60
4:E:70:PHE:O	4:E:92:TYR:CB	2.49	0.60
5:F:142:MET:HB3	5:F:149:ALA:HB2	1.83	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1057:G:H4'	5:F:197:GLY:H	1.66	0.60
6:G:104:VAL:HA	6:G:107:ARG:CB	2.27	0.60
7:H:69:VAL:O	7:H:71:LEU:N	2.34	0.60
8:I:33:TYR:CE2	8:I:74:ASP:HB2	2.32	0.60
9:J:143:ARG:O	9:J:145:ALA:O	2.19	0.60
10:K:29:SER:CA	10:K:32:LYS:NZ	2.64	0.60
10:K:60:ARG:HG3	10:K:61:VAL:H	1.61	0.60
13:N:78:GLN:O	13:N:103:LEU:O	2.19	0.60
14:O:54:LYS:CD	14:O:54:LYS:H	2.14	0.60
15:P:13:LYS:O	15:P:14:ARG:O	2.18	0.60
15:P:96:LEU:H	15:P:96:LEU:HD23	1.67	0.60
19:T:58:GLU:OE2	19:T:75:ARG:N	2.35	0.60
3:D:59:U:O2	3:D:59:U:H2'	2.00	0.60
1:A:1026:G:H2'	1:A:1027:C:H5'	1.83	0.60
1:A:1039:C:H2'	1:A:1040:U:C6	2.36	0.60
1:A:963:G:H5'	1:A:1200:C:N4	2.16	0.60
1:A:1284:C:C4	1:A:1285:A:C5	2.89	0.60
1:A:1314:C:OP2	21:V:6:LYS:HG2	2.01	0.60
1:A:237:C:OP1	19:T:40:LYS:NZ	2.33	0.60
1:A:411:A:C6	1:A:429:U:C4	2.89	0.60
1:A:643:C:O2'	10:K:132:GLU:CD	2.40	0.60
1:A:690:G:C2	1:A:691:G:O4'	2.54	0.60
1:A:817:C:O2'	1:A:817:C:O2	2.19	0.60
1:A:829:G:H4'	4:E:26:PRO:HG3	1.83	0.60
4:E:67:THR:CB	4:E:155:LEU:HD21	2.32	0.60
5:F:40:ARG:O	5:F:43:LEU:HB3	2.01	0.60
6:G:19:LEU:C	6:G:21:LEU:N	2.48	0.60
1:A:427:U:OP1	6:G:41:GLY:HA2	2.02	0.60
7:H:9:LYS:HG2	7:H:112:LEU:CD2	2.31	0.60
8:I:10:LEU:N	8:I:10:LEU:HD23	2.16	0.60
8:I:78:GLU:HA	8:I:81:ILE:CD1	2.30	0.60
9:J:78:ARG:O	9:J:84:ASN:CA	2.40	0.60
10:K:102:ARG:O	10:K:103:VAL:O	2.20	0.60
11:L:54:ASP:O	11:L:55:ALA:HB2	2.00	0.60
11:L:23:ASN:O	11:L:59:PHE:N	2.34	0.60
14:O:24:VAL:HG13	14:O:98:TYR:CE2	2.36	0.60
15:P:66:LEU:C	15:P:70:LEU:HB2	2.21	0.60
21:V:51:VAL:O	21:V:58:VAL:HG22	2.01	0.60
1:A:1023:G:H2'	1:A:1024:G:H5'	1.83	0.60
1:A:1129:C:H1'	1:A:1130:A:N7	2.17	0.60
1:A:815:A:C2	1:A:1527:C:O2	2.52	0.60
1:A:474:G:O2'	1:A:475:G:H5'	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:490:G:H2'	1:A:491:G:C8	2.36	0.60
1:A:609:A:H2'	1:A:610:G:O4'	2.01	0.60
1:A:721:G:H1'	1:A:722:A:C6	2.36	0.60
1:A:739:C:H2'	1:A:740:U:H5'	1.84	0.60
1:A:836:G:P	20:U:61:LYS:NZ	2.73	0.60
2:C:17:C:H6	2:C:19:G:OP2	1.84	0.60
2:C:74:C:H2'	2:C:75:C:C5'	2.23	0.60
4:E:102:LEU:CD2	4:E:176:GLU:HB2	2.31	0.60
4:E:239:VAL:O	4:E:240:GLN:HB2	2.00	0.60
8:I:33:TYR:HB2	8:I:75:LEU:CD1	2.31	0.60
9:J:146:GLU:O	9:J:147:ALA:C	2.39	0.60
9:J:96:GLN:O	9:J:100:ALA:HB2	2.02	0.60
10:K:26:VAL:HA	10:K:58:TYR:OH	2.00	0.60
11:L:113:LYS:NZ	11:L:119:ALA:CA	2.62	0.60
12:M:39:PRO:CA	12:M:70:ARG:NH1	2.65	0.60
5:F:12:LEU:HD22	16:Q:57:ARG:HD2	1.82	0.60
1:A:129(A):G:HO2'	19:T:63:ARG:HH21	1.48	0.60
19:T:92:ARG:O	19:T:95:TYR:CB	2.49	0.60
1:A:1305:G:C5'	23:X:4:GLY:C	2.70	0.60
1:A:1026:G:H1	1:A:1036:G:N2	1.99	0.60
1:A:1137:C:H5'	1:A:1138:G:N1	2.17	0.60
1:A:1160:G:N7	1:A:1181:G:N2	2.49	0.60
1:A:1265:G:C2'	1:A:1266:G:H5'	2.28	0.60
1:A:1330:U:C5	1:A:1331:G:N7	2.69	0.60
1:A:1351:U:C2	1:A:1352:C:C5	2.89	0.60
1:A:1516:G:N2	1:A:1518:A:P	2.74	0.60
1:A:267:C:P	19:T:67:LYS:HD3	2.41	0.60
1:A:31:G:N2	1:A:47:C:H5''	2.16	0.60
1:A:363:A:OP2	14:O:34:ARG:NE	2.33	0.60
1:A:503:C:OP2	14:O:116:SER:OG	2.02	0.60
1:A:56:U:H2'	1:A:57:G:C8	2.37	0.60
1:A:608:A:C2	1:A:609:A:C8	2.90	0.60
1:A:667:G:N2	1:A:740:U:C1'	2.60	0.60
1:A:934:C:N4	1:A:939:G:N1	2.49	0.60
1:A:962:C:C4	1:A:963:G:N7	2.68	0.60
4:E:184:VAL:O	4:E:198:ASP:CB	2.45	0.60
4:E:162:ILE:O	4:E:185:ILE:HG12	2.01	0.60
4:E:61:LEU:HA	4:E:64:ARG:CZ	2.31	0.60
4:E:69:LEU:HD22	4:E:91:PRO:O	2.01	0.60
5:F:67:THR:CG2	5:F:104:GLN:HG2	2.30	0.60
6:G:115:ARG:O	6:G:116:GLN:C	2.39	0.60
6:G:177:ASP:CG	6:G:182:LYS:HG3	2.22	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:43:HIS:HB3	6:G:46:LYS:HG3	1.82	0.60
6:G:74:GLN:CA	6:G:77:ASN:HD22	2.14	0.60
7:H:100:VAL:C	7:H:101:ILE:HD13	2.22	0.60
7:H:37:ARG:NH1	7:H:112:LEU:HD22	2.16	0.60
8:I:67:MET:SD	8:I:67:MET:O	2.59	0.60
10:K:104:ARG:NH1	10:K:104:ARG:HG2	2.16	0.60
10:K:9:MET:SD	10:K:32:LYS:HG3	2.40	0.60
10:K:30:ARG:O	10:K:33:GLU:CB	2.50	0.60
12:M:20:ALA:O	12:M:24:VAL:HG23	2.01	0.60
13:N:20:TYR:CE2	13:N:83:ILE:HG12	2.36	0.60
15:P:25:ILE:HA	15:P:29:ARG:CG	2.28	0.60
22:W:53:LEU:O	22:W:56:MET:HB3	2.01	0.60
3:D:9:A:C2	3:D:46:G:H1'	2.36	0.60
4:E:125:PRO:O	4:E:127:ILE:HG13	2.01	0.60
1:A:1094:G:H3'	1:A:1108:G:H22	1.65	0.60
1:A:1152:A:C2	1:A:1153:C:C2	2.89	0.60
1:A:122:G:OP1	1:A:122:G:C8	2.54	0.60
1:A:1298:C:H4'	1:A:1299:A:C2	2.36	0.60
1:A:258:G:C6	1:A:259:G:O6	2.55	0.60
1:A:270:A:O2'	1:A:271:C:H5'	2.00	0.60
1:A:453:A:C6	1:A:454:C:N4	2.70	0.60
1:A:764:C:C3'	1:A:765:G:H8	2.14	0.60
1:A:819:A:H4'	1:A:820:U:OP2	1.97	0.60
3:D:28:G:H2'	3:D:29:C:H6	1.66	0.60
4:E:114:ARG:HG3	4:E:115:LEU:N	2.15	0.60
5:F:112:SER:CB	5:F:115:LEU:HD12	2.32	0.60
5:F:193:TYR:HD2	5:F:193:TYR:N	1.98	0.60
6:G:121:VAL:HG11	6:G:136:PRO:HA	1.83	0.60
8:I:21:LEU:O	8:I:25:ILE:HG13	2.01	0.60
9:J:105:VAL:O	9:J:109:ASN:ND2	2.34	0.60
9:J:155:ARG:HD3	9:J:156:TRP:N	2.16	0.60
10:K:65:TYR:HE2	10:K:78:GLN:OE1	1.83	0.60
11:L:10:ARG:C	11:L:104:ARG:HH21	2.05	0.60
12:M:20:ALA:HB1	12:M:37:PRO:HB3	1.83	0.60
12:M:56:HIS:C	12:M:58:ASP:H	2.04	0.60
1:A:33:A:N3	14:O:32:PHE:HZ	2.00	0.60
14:O:33:ARG:O	14:O:85:ILE:HG22	2.02	0.60
14:O:54:LYS:CB	14:O:70:ILE:HB	2.32	0.60
17:R:39:LEU:HD23	17:R:40:SER:H	1.62	0.60
17:R:71:GLN:O	17:R:75:PRO:CD	2.46	0.60
20:U:76:LEU:CD2	20:U:76:LEU:N	2.64	0.60
20:U:80:PRO:O	20:U:81:PHE:C	2.38	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:W:57:ARG:HH22	22:W:102:GLY:HA3	1.67	0.60
3:D:18:G:H4'	3:D:60:U:N3	2.16	0.60
1:A:1037:C:H2'	1:A:1038:C:C6	2.35	0.60
1:A:104:G:C2	1:A:105:G:C8	2.89	0.60
1:A:1092:A:N6	1:A:1093:A:N1	2.49	0.60
1:A:1138:G:C6	1:A:1140:C:C6	2.89	0.60
1:A:1157:A:O4'	1:A:1158:C:C4	2.55	0.60
1:A:115:G:O2'	1:A:116:A:OP2	2.19	0.60
1:A:1213:A:C6	1:A:1215:G:C2	2.89	0.60
1:A:1301:U:C4	1:A:1303:C:C2	2.89	0.60
1:A:1347:G:OP2	11:L:107:ARG:HD2	2.02	0.60
1:A:183:G:N3	1:A:223:U:O2'	2.35	0.60
1:A:195:A:P	22:W:68:LYS:HZ1	2.24	0.60
1:A:284:G:O2'	1:A:285:G:H5'	2.01	0.60
1:A:112:G:C4'	1:A:389:A:H5''	2.32	0.60
1:A:38:G:H1'	1:A:397:A:N6	2.17	0.60
1:A:606:G:N2	1:A:631:G:N3	2.50	0.60
1:A:68:G:H2'	1:A:69:G:O4'	2.02	0.60
1:A:731:G:O2'	1:A:732:C:H5'	2.01	0.60
1:A:885:G:C2	1:A:886:G:N7	2.70	0.60
1:A:924:C:H2'	1:A:925:G:C8	2.37	0.60
1:A:1074:G:C5'	4:E:104:ASN:HB2	2.32	0.60
4:E:165:VAL:O	4:E:187:LEU:O	2.19	0.60
4:E:15:VAL:HG21	4:E:209:ARG:HD2	1.83	0.60
5:F:152:ILE:HG22	5:F:167:TRP:HA	1.84	0.60
5:F:39:ILE:O	5:F:43:LEU:HB2	2.01	0.60
5:F:38:ARG:HB2	5:F:94:LEU:CD1	2.32	0.60
6:G:79:PHE:HB2	6:G:93:PHE:CE1	2.36	0.60
6:G:78:LEU:HD21	6:G:96:LEU:HD22	1.84	0.60
8:I:26:ILE:C	8:I:30:LEU:HD12	2.22	0.60
9:J:88:PRO:HD2	9:J:152:ALA:CA	2.31	0.60
9:J:85:TYR:CD1	9:J:154:TYR:CE1	2.90	0.60
10:K:126:LYS:NZ	10:K:127:LEU:CB	2.64	0.60
11:L:16:ARG:HD3	11:L:64:THR:OG1	2.02	0.60
11:L:9:ARG:HG2	11:L:14:VAL:HA	1.83	0.60
13:N:29:ILE:HG22	13:N:44:SER:OG	2.02	0.60
13:N:32:ILE:O	13:N:40:ILE:CD1	2.49	0.60
13:N:51:LYS:HE2	13:N:52:GLY:H	1.66	0.60
13:N:78:GLN:OE1	13:N:79:SER:N	2.35	0.60
15:P:20:THR:HA	15:P:25:ILE:HG22	1.83	0.60
1:A:974:A:C1'	16:Q:31:ARG:HH21	2.08	0.60
19:T:22:LEU:HD12	19:T:40:LYS:O	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:46:ASP:OD1	19:T:50:LYS:N	2.35	0.60
1:A:1182:G:H4'	1:A:1183:A:O5'	2.01	0.60
1:A:1211:U:O2'	1:A:1213:A:N3	2.35	0.60
1:A:1298:C:N4	9:J:114:ARG:HB3	2.16	0.60
1:A:1321:C:H3'	1:A:1321:C:C6	2.37	0.60
1:A:13:U:H6	1:A:13:U:C5'	2.15	0.60
1:A:1472:U:O2'	1:A:1473:A:H5'	2.01	0.60
1:A:198:G:N2	1:A:199:G:C4	2.70	0.60
1:A:265:G:C8	1:A:267:C:C5	2.89	0.60
1:A:292:G:C5	1:A:293:G:H1'	2.36	0.60
1:A:652:U:O2	1:A:753:A:N7	2.34	0.60
1:A:790:A:N6	1:A:791:G:N1	2.49	0.60
1:A:926:G:N3	1:A:1505:G:C2	2.69	0.60
2:C:19:G:O3'	2:C:20:U:C5	2.55	0.60
2:C:44:A:O2'	2:C:45:G:H5'	2.02	0.60
4:E:91:PRO:CD	4:E:155:LEU:HD23	2.32	0.60
4:E:170:GLU:HG3	4:E:174:VAL:HG23	1.83	0.60
4:E:226:ARG:HG2	4:E:227:GLY:N	2.16	0.60
4:E:78:GLN:O	4:E:94:ASN:ND2	2.34	0.60
5:F:139:GLN:O	5:F:143:GLU:HG3	2.01	0.60
6:G:118:ARG:NH2	6:G:136:PRO:HB2	2.17	0.60
6:G:42:GLN:O	6:G:43:HIS:ND1	2.34	0.60
12:M:12:ASP:OD1	12:M:14:LYS:HB2	2.01	0.60
13:N:84:VAL:HG22	13:N:109:VAL:O	2.00	0.60
1:A:538:G:OP2	14:O:115:LYS:HB2	2.02	0.60
1:A:474:G:O5'	18:S:81:ARG:HG3	2.01	0.60
22:W:50:GLU:HG3	22:W:100:ILE:HG23	1.84	0.60
1:A:1185:G:C2	1:A:1186:G:C1'	2.85	0.60
1:A:1196:U:C5'	1:A:1197:G:C5'	2.79	0.60
1:A:1278:U:H5'	1:A:1279:A:C4'	2.31	0.60
1:A:1279:A:O2'	1:A:1282:C:C4	2.54	0.60
1:A:1251:A:H61	1:A:1285:A:H2	1.49	0.60
1:A:1389:C:C2'	1:A:1390:U:H5'	2.32	0.60
1:A:295:C:O2'	1:A:296:U:H5'	2.01	0.60
1:A:296:U:C2	1:A:297:G:C8	2.90	0.60
1:A:508:C:O2'	1:A:509:A:C8	2.54	0.60
1:A:60:A:H4'	1:A:61:G:O5'	2.01	0.60
1:A:692:U:O2	1:A:694:A:C8	2.55	0.60
1:A:707:C:C2'	1:A:708:C:H5'	2.32	0.60
1:A:861:G:H2'	1:A:862:C:H6	1.67	0.60
6:G:121:VAL:HA	6:G:126:ILE:CD1	2.32	0.60
6:G:177:ASP:OD2	6:G:179:GLU:HB2	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:29:GLY:HA2	7:H:46:GLY:O	2.01	0.60
9:J:149:ARG:O	9:J:152:ALA:N	2.32	0.60
11:L:69:GLY:C	11:L:73:GLN:OE1	2.40	0.60
12:M:89:ASP:O	12:M:90:LEU:HG	2.01	0.60
14:O:27:LEU:HD22	14:O:61:THR:O	2.01	0.60
14:O:93:LEU:HB2	14:O:96:VAL:HG21	1.82	0.60
17:R:36:ILE:HG22	17:R:37:ASN:N	2.16	0.60
18:S:51:VAL:O	18:S:52:ASP:C	2.39	0.60
20:U:63:GLN:CA	20:U:66:LEU:HD21	2.32	0.60
3:D:21:A:N1	3:D:46:G:N2	2.48	0.60
1:A:999:U:H2'	1:A:1000:A:O4'	2.02	0.60
1:A:1067:A:O2'	1:A:1068:G:C8	2.53	0.60
1:A:1067:A:O2'	1:A:1068:G:O5'	2.20	0.60
1:A:1202:G:N2	1:A:1203:C:O4'	2.34	0.60
1:A:1416:G:N2	1:A:1485:U:H1'	2.17	0.60
1:A:246:A:O2'	1:A:247:G:P	2.59	0.60
1:A:370:C:C2	1:A:371:G:C8	2.90	0.60
1:A:841:U:H5'	1:A:842:C:H5	1.65	0.60
1:A:902:G:C2'	1:A:903:G:H5'	2.31	0.60
1:A:907:A:OP1	1:A:907:A:H4'	2.02	0.60
4:E:16:HIS:HA	4:E:210:SER:OG	2.02	0.60
6:G:117:ALA:HA	6:G:120:LEU:CD2	2.32	0.60
6:G:31:CYS:O	6:G:33:MET:N	2.29	0.60
7:H:145:LYS:HA	7:H:148:VAL:HG23	1.84	0.60
9:J:126:ASP:HA	9:J:129:GLU:OE1	2.01	0.60
3:D:33:U:H5''	9:J:79:ARG:HH22	1.66	0.60
10:K:3:THR:HB	10:K:4:ASP:OD1	2.01	0.60
11:L:113:LYS:NZ	11:L:119:ALA:CB	2.64	0.60
1:A:1373:G:OP1	11:L:42:ARG:NH2	2.35	0.60
11:L:71:SER:O	11:L:74:ILE:HB	2.02	0.60
11:L:85:LEU:HD23	11:L:96:LEU:CD1	2.26	0.60
12:M:50:ILE:HA	12:M:60:ARG:HG3	1.84	0.60
1:A:529:G:H1	14:O:49:ASN:HB3	1.67	0.60
15:P:23:TYR:O	15:P:66:LEU:HB2	2.01	0.60
15:P:60:VAL:O	15:P:61:GLU:C	2.40	0.60
16:Q:24:CYS:HB2	16:Q:39:LEU:C	2.22	0.60
17:R:43:LEU:HD11	17:R:53:HIS:HA	1.82	0.60
17:R:77:ARG:O	17:R:80:ALA:HB3	2.01	0.60
18:S:72:ARG:HD3	18:S:73:LEU:N	2.17	0.60
19:T:59:ILE:CD1	19:T:72:ARG:N	2.65	0.60
19:T:75:ARG:HH12	19:T:77:VAL:CG1	2.13	0.60
20:U:49:LYS:NZ	20:U:49:LYS:H	1.97	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1032(B):G:H2'	1:A:1033:G:C8	2.36	0.60
1:A:1044:A:C6	1:A:1045:C:H1'	2.37	0.59
1:A:122:G:O2'	1:A:123:C:H5'	2.02	0.59
1:A:1288:A:C4	1:A:1289:A:N7	2.70	0.59
1:A:1298:C:N4	9:J:114:ARG:O	2.35	0.59
1:A:67:C:H1'	1:A:172:A:H1'	1.84	0.59
1:A:482:A:H2	1:A:483:C:C1'	2.13	0.59
1:A:608:A:C2	1:A:609:A:O4'	2.54	0.59
1:A:762:C:H2'	1:A:763:G:C8	2.37	0.59
1:A:992:U:O2'	1:A:993:G:OP2	2.17	0.59
1:A:995:C:O2	16:Q:4:LYS:HE2	2.02	0.59
2:C:40:C:C2'	2:C:41:C:C5'	2.76	0.59
4:E:84:GLU:HG3	4:E:212:GLN:OE1	2.01	0.59
5:F:26:LYS:O	5:F:28:GLN:N	2.35	0.59
6:G:127:THR:OG1	6:G:149:ALA:HA	2.02	0.59
6:G:152:SER:C	6:G:154:ASN:H	2.03	0.59
6:G:199:ASN:OD1	6:G:202:LEU:HB2	2.01	0.59
6:G:78:LEU:O	6:G:79:PHE:C	2.40	0.59
8:I:52:ILE:HG21	8:I:87:ARG:HH12	1.67	0.59
9:J:110:GLN:O	9:J:111:ARG:O	2.19	0.59
10:K:103:VAL:HG11	10:K:109:ILE:O	2.02	0.59
10:K:122:ARG:HD3	10:K:123:GLU:N	2.15	0.59
11:L:116:LYS:CB	11:L:122:ALA:HA	2.32	0.59
11:L:67:GLY:O	11:L:73:GLN:NE2	2.35	0.59
12:M:10:GLY:HA3	12:M:16:LEU:CD2	2.27	0.59
12:M:50:ILE:HG12	12:M:60:ARG:CD	2.32	0.59
12:M:30:SER:OG	12:M:81:THR:HA	2.02	0.59
14:O:100:ILE:C	14:O:101:VAL:HG22	2.22	0.59
14:O:27:LEU:HD22	14:O:62:SER:OG	2.00	0.59
15:P:104:ARG:HG2	15:P:105:THR:N	2.17	0.59
1:A:953:G:O2'	15:P:124:PRO:O	2.18	0.59
5:F:33:LEU:HD11	16:Q:54:PRO:HD2	1.84	0.59
17:R:70:LEU:C	17:R:70:LEU:HD12	2.23	0.59
18:S:34:GLU:HG3	18:S:59:TRP:HZ2	1.67	0.59
19:T:75:ARG:HH12	19:T:77:VAL:CA	2.15	0.59
20:U:50:ILE:CD1	20:U:70:ILE:HG21	2.32	0.59
22:W:66:ALA:HB3	22:W:72:LEU:HB2	1.82	0.59
3:D:5:A:C6	3:D:69:C:N4	2.70	0.59
1:A:1148:U:O2	1:A:1149:C:N1	2.35	0.59
1:A:1239:A:H1'	1:A:1241:G:C4	2.37	0.59
1:A:1276:G:H2'	1:A:1277:C:O4'	2.02	0.59
1:A:1342:C:H2'	1:A:1343:G:H8	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1323:G:H4'	1:A:1362(A):C:C4	2.36	0.59
1:A:177:C:N3	1:A:178:C:C5	2.70	0.59
1:A:266:G:H8	19:T:67:LYS:NZ	1.98	0.59
1:A:519:C:C4	1:A:520:A:N3	2.70	0.59
1:A:603:U:H2'	1:A:604:G:C8	2.37	0.59
1:A:646:U:H2'	1:A:647:C:C6	2.37	0.59
1:A:720:C:OP2	1:A:721:G:H3'	2.02	0.59
1:A:766:A:O2'	1:A:767:A:H5'	2.01	0.59
1:A:996:A:N1	1:A:997:U:C4	2.70	0.59
2:C:71:C:C2	2:C:72:A:C8	2.90	0.59
3:D:39:U:C2	3:D:40:C:C6	2.90	0.59
5:F:134:ILE:O	5:F:138:VAL:HG23	2.02	0.59
5:F:14:ILE:HG13	5:F:178:LEU:CD1	2.32	0.59
5:F:189:ALA:HB3	5:F:196:LEU:H	1.66	0.59
7:H:111:GLU:CG	7:H:112:LEU:N	2.65	0.59
9:J:22:LEU:O	9:J:25:ALA:HB3	2.02	0.59
10:K:44:PHE:CD1	10:K:79:VAL:HG12	2.35	0.59
11:L:48:GLU:HB2	11:L:78:LYS:HZ3	1.67	0.59
12:M:49:VAL:C	12:M:60:ARG:HG3	2.22	0.59
13:N:23:ALA:O	13:N:87:THR:O	2.19	0.59
14:O:84:LEU:N	14:O:104:VAL:HG11	2.17	0.59
14:O:41:ARG:HG2	14:O:42:THR:HG22	1.83	0.59
14:O:6:THR:OG1	14:O:9:GLN:HB2	2.01	0.59
14:O:77:LEU:HA	14:O:81:SER:OG	2.02	0.59
1:A:1326:C:H5''	23:X:12:LYS:HZ1	1.66	0.59
3:D:19:G:N1	3:D:56:C:C2	2.70	0.59
1:A:1451:A:C5'	1:A:1452:C:H5	2.13	0.59
1:A:1188:A:N3	1:A:1188:A:H2'	2.17	0.59
1:A:1275:A:C2'	1:A:1276:G:H5'	2.31	0.59
1:A:258:G:C4	1:A:259:G:N7	2.70	0.59
1:A:437:U:HO2'	6:G:123:HIS:CE1	2.19	0.59
1:A:652:U:C5	1:A:752:G:C4	2.90	0.59
1:A:65:U:H5''	1:A:66:G:OP1	2.02	0.59
1:A:735:C:H2'	1:A:736:C:H6	1.68	0.59
1:A:874:G:N2	1:A:875:C:C1'	2.65	0.59
2:C:19:G:N2	2:C:56:C:N3	2.49	0.59
2:C:76:A:H3'	2:C:76:A:C8	2.37	0.59
4:E:163:PHE:CE1	4:E:201:ILE:HD13	2.37	0.59
4:E:58:ILE:O	4:E:61:LEU:CB	2.48	0.59
5:F:58:GLU:O	5:F:64:VAL:HA	2.02	0.59
7:H:124:GLY:O	7:H:126:ARG:N	2.36	0.59
7:H:109:ILE:HD13	7:H:139:LEU:CD1	2.32	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:101:LEU:C	9:J:101:LEU:HD23	2.22	0.59
10:K:123:GLU:O	10:K:126:LYS:HE3	2.01	0.59
10:K:46:LYS:HB2	10:K:63:LEU:O	2.03	0.59
10:K:9:MET:HG3	10:K:26:VAL:HG11	1.83	0.59
15:P:34:LEU:HD22	15:P:41:PRO:HA	1.85	0.59
20:U:72:ARG:O	20:U:75:ILE:HB	2.03	0.59
3:D:17:U:H3'	3:D:18:G:H8	1.68	0.59
3:D:47:U:H2'	3:D:48:C:C5'	2.29	0.59
1:A:1000:A:N6	1:A:1001:G:O6	2.36	0.59
1:A:1159:U:C5	1:A:1182:G:N3	2.70	0.59
1:A:953:G:C6	1:A:1229:A:C6	2.89	0.59
1:A:939:G:H4'	1:A:1375:A:O2'	2.02	0.59
1:A:1481:U:H2'	1:A:1482:G:H8	1.65	0.59
1:A:103:C:H1'	1:A:151:A:C2	2.36	0.59
1:A:184:G:H4'	1:A:224:C:O3'	2.03	0.59
1:A:274:A:O2'	1:A:275:G:H1'	2.03	0.59
1:A:610:G:C2'	1:A:611:A:H5'	2.31	0.59
1:A:61:G:C6	1:A:107:G:C6	2.90	0.59
1:A:675:A:H2'	1:A:676:A:H8	1.66	0.59
1:A:819:A:H5''	1:A:820:U:OP2	2.01	0.59
1:A:880:C:H3'	14:O:9:GLN:NE2	2.16	0.59
1:A:948:C:O2'	1:A:949:A:C5'	2.50	0.59
3:D:40:C:C3'	3:D:41:G:C5'	2.80	0.59
4:E:42:ILE:CD1	4:E:202:PRO:HB2	2.30	0.59
4:E:84:GLU:OE1	4:E:219:VAL:HB	2.01	0.59
5:F:120:VAL:HG13	5:F:133:ALA:HB1	1.83	0.59
6:G:60:GLU:OE2	6:G:202:LEU:HD12	2.00	0.59
7:H:100:VAL:CG1	7:H:107:ARG:HG3	2.25	0.59
7:H:114:GLY:O	7:H:115:VAL:CG1	2.42	0.59
9:J:15:ASP:CB	9:J:23:VAL:HG11	2.31	0.59
10:K:9:MET:C	10:K:13:ILE:HD12	2.23	0.59
10:K:70:GLN:HB2	10:K:73:ASP:O	2.02	0.59
11:L:47:LEU:HD12	11:L:51:ARG:NH1	2.16	0.59
12:M:65:LEU:HB2	16:Q:56:VAL:HG13	1.85	0.59
21:V:39:THR:O	21:V:41:VAL:HG22	2.02	0.59
22:W:59:ALA:O	22:W:60:GLU:C	2.39	0.59
3:D:14:A:H2'	3:D:14:A:N3	2.17	0.59
1:A:1004:A:H3'	1:A:1025:U:C2	2.36	0.59
1:A:1123:A:H5''	12:M:36:GLY:HA3	1.84	0.59
1:A:1142:G:O2'	1:A:1143:G:H5'	2.03	0.59
1:A:1193:G:C6	1:A:1194:U:C4	2.91	0.59
1:A:1309:G:OP1	15:P:88:ARG:CZ	2.51	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1342:C:O2'	11:L:124:GLN:CB	2.50	0.59
1:A:1347:G:H4'	1:A:1348:U:O5'	2.02	0.59
1:A:186(A):C:O2'	22:W:89:ARG:NH2	2.35	0.59
1:A:22:G:C3'	1:A:23:C:H6	2.14	0.59
1:A:373:A:O2'	1:A:374:A:H5'	2.02	0.59
1:A:429:U:H5'	1:A:430:A:OP1	2.01	0.59
1:A:782:A:C8	1:A:783:C:C5	2.90	0.59
1:A:791:G:N2	1:A:1498:U:OP1	2.35	0.59
1:A:843:U:OP2	1:A:843:U:H4'	2.02	0.59
1:A:952:U:O2'	1:A:953:G:H5'	2.02	0.59
1:A:953:G:H1'	15:P:125:ARG:C	2.23	0.59
1:A:986:A:H2'	1:A:987:G:H8	1.67	0.59
2:C:20:U:H3'	2:C:20:U:O2	2.02	0.59
3:D:40:C:O2	3:D:40:C:H2'	2.02	0.59
4:E:118:LEU:HD11	4:E:141:GLU:OE2	2.02	0.59
4:E:18:GLY:HA3	4:E:41:ILE:HG13	1.83	0.59
5:F:189:ALA:HB3	5:F:196:LEU:N	2.17	0.59
6:G:128:VAL:CG1	6:G:129:ASN:N	2.65	0.59
6:G:15:GLU:CB	6:G:19:LEU:HD11	2.32	0.59
7:H:105:VAL:HG12	7:H:106:PRO:CD	2.32	0.59
8:I:81:ILE:HG22	8:I:82:ARG:N	2.16	0.59
9:J:65:ALA:HA	9:J:128:ALA:N	2.17	0.59
1:A:932:C:H5''	9:J:3:ARG:HB3	1.82	0.59
10:K:40:ALA:HB2	10:K:45:ILE:CD1	2.31	0.59
11:L:47:LEU:CD1	11:L:50:LEU:HB3	2.30	0.59
11:L:93:ARG:HD2	11:L:97:LYS:HB2	1.84	0.59
12:M:79:ARG:NH2	12:M:82:ILE:CG2	2.65	0.59
1:A:1073:U:H2'	1:A:1074:G:H8	1.68	0.59
1:A:122:G:H21	1:A:123:C:H1'	1.67	0.59
1:A:1449:C:H2'	1:A:1450:U:C5'	2.33	0.59
1:A:1468:A:H2'	1:A:1469:G:H5'	1.83	0.59
1:A:511:C:O2'	1:A:512:U:H6	1.86	0.59
1:A:579:G:H2'	1:A:580:U:C5'	2.31	0.59
1:A:766:A:C2	1:A:767:A:C4	2.90	0.59
1:A:795:C:H4'	1:A:1506:U:O2	2.02	0.59
1:A:819:A:C6	1:A:1529:G:N7	2.71	0.59
1:A:823:G:H21	10:K:1:MET:N	1.99	0.59
1:A:986:A:H1'	21:V:55:LYS:HA	1.83	0.59
4:E:115:LEU:HD22	4:E:145:LEU:C	2.23	0.59
4:E:80:ILE:CD1	4:E:212:GLN:HB2	2.32	0.59
5:F:42:LEU:HA	5:F:45:LYS:HD2	1.84	0.59
6:G:124:GLY:O	6:G:125:HIS:C	2.41	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:76:ALA:CB	8:I:80:ARG:HH21	2.15	0.59
10:K:117:GLY:O	10:K:119:LEU:CD2	2.51	0.59
10:K:11:THR:C	10:K:13:ILE:N	2.52	0.59
10:K:85:ARG:HG2	10:K:85:ARG:NH1	2.17	0.59
11:L:37:PHE:N	11:L:37:PHE:CD2	2.67	0.59
11:L:49:PRO:HD3	11:L:78:LYS:HZ2	1.68	0.59
12:M:18:ALA:HB3	12:M:91:PRO:HB3	1.84	0.59
12:M:72:VAL:O	12:M:73:ASP:HB2	2.02	0.59
13:N:42:TRP:CZ3	13:N:47:VAL:HG11	2.38	0.59
16:Q:16:PHE:HB3	16:Q:18:VAL:HG22	1.84	0.59
16:Q:27:CYS:SG	16:Q:42:ILE:HG13	2.43	0.59
17:R:57:LEU:O	17:R:58:MET:C	2.40	0.59
18:S:32:TYR:CE2	18:S:35:LYS:HB2	2.37	0.59
19:T:43:LEU:HD12	19:T:69:LYS:HB2	1.84	0.59
19:T:97:SER:C	19:T:98:LEU:HD22	2.23	0.59
22:W:16:HIS:O	22:W:17:ARG:C	2.40	0.59
22:W:35:THR:HA	22:W:38:LYS:HD2	1.84	0.59
1:A:1166:G:H2'	1:A:1169:A:OP2	2.03	0.59
1:A:1126:U:C2	1:A:1127:G:C8	2.90	0.59
1:A:1317:C:H6	1:A:1317:C:OP1	1.86	0.59
1:A:1320:C:C5	21:V:37:ARG:HD3	2.38	0.59
1:A:1404:C:C6	1:A:1404:C:OP2	2.55	0.59
1:A:1511:G:N7	1:A:1512:U:C5	2.71	0.59
1:A:195:A:C2	1:A:196:A:H2	2.21	0.59
1:A:296:U:H2'	1:A:297:G:H8	1.67	0.59
1:A:300:A:H8	1:A:300:A:O5'	1.86	0.59
1:A:302:G:H2'	1:A:556:C:C5'	2.31	0.59
1:A:439:A:OP2	1:A:493:G:N1	2.29	0.59
1:A:609:A:O2'	1:A:610:G:H5'	2.02	0.59
1:A:867:G:O2'	1:A:868:C:H5'	2.03	0.59
1:A:991:U:O2'	1:A:993:G:H8	1.85	0.59
2:C:47:U:C5	2:C:49:G:H4'	2.38	0.59
4:E:119:GLU:HB2	4:E:142:LEU:HD11	1.84	0.59
4:E:188:ALA:HB1	4:E:192:SER:CB	2.32	0.59
4:E:24:TRP:CG	4:E:25:ASN:N	2.63	0.59
4:E:97:TRP:HZ3	4:E:172:ILE:CB	2.05	0.59
5:F:132:ARG:HB3	5:F:136:GLN:NE2	2.17	0.59
5:F:57:ILE:CG1	5:F:66:VAL:HG22	2.32	0.59
6:G:78:LEU:O	6:G:81:GLU:N	2.36	0.59
7:H:15:ARG:NH1	7:H:15:ARG:HG3	2.16	0.59
7:H:59:GLY:CA	7:H:63:ARG:HH21	2.16	0.59
9:J:29:LYS:CD	9:J:101:LEU:HD22	2.21	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:19:VAL:HG23	10:K:21:LYS:CG	2.27	0.59
15:P:29:ARG:HD3	15:P:64:TRP:CZ2	2.37	0.59
17:R:57:LEU:HD13	17:R:57:LEU:H	1.66	0.59
17:R:70:LEU:HD21	17:R:78:TYR:HA	1.85	0.59
20:U:22:VAL:O	20:U:25:THR:OG1	2.19	0.59
20:U:26:LEU:HG	20:U:27:GLY:N	2.18	0.59
20:U:40:LEU:N	20:U:40:LEU:HD23	2.16	0.59
22:W:48:LYS:O	22:W:51:GLU:HG2	2.01	0.59
22:W:88:VAL:HG12	22:W:92:LEU:CD1	2.31	0.59
1:A:1228:C:H4'	15:P:116:THR:CA	2.33	0.59
1:A:166:G:O2'	1:A:167:G:C5'	2.48	0.59
1:A:20:U:H2'	1:A:20:U:O2	2.03	0.59
1:A:246:A:N1	1:A:279:A:N7	2.51	0.59
1:A:566:G:H4'	1:A:567:G:H5'	1.85	0.59
1:A:575:G:O2'	1:A:576:G:O5'	2.20	0.59
1:A:580:U:H2'	1:A:581:G:O4'	2.02	0.59
1:A:692:U:O2	1:A:694:A:H3'	2.02	0.59
1:A:834:C:N4	1:A:853:G:O6	2.36	0.59
1:A:965:A:H8	1:A:969:A:H1'	1.67	0.59
4:E:17:PHE:HA	4:E:42:ILE:CG2	2.33	0.59
5:F:151:VAL:HG12	5:F:152:ILE:N	2.18	0.59
5:F:25:GLY:C	5:F:28:GLN:HE21	2.06	0.59
6:G:102:ASP:HB2	6:G:136:PRO:HB3	1.85	0.59
6:G:128:VAL:HA	6:G:146:ILE:CG2	2.33	0.59
5:F:131:ARG:HH12	7:H:51:VAL:HG23	1.66	0.59
8:I:91:VAL:HG12	8:I:92:LYS:O	2.02	0.59
9:J:14:PRO:HB3	9:J:19:GLY:C	2.22	0.59
10:K:60:ARG:CG	10:K:61:VAL:N	2.63	0.59
10:K:8:ASP:O	10:K:11:THR:OG1	2.18	0.59
11:L:38:GLN:OE1	11:L:38:GLN:HA	2.02	0.59
1:A:523:A:N6	14:O:53:ARG:NH2	2.50	0.59
15:P:90:LEU:HD23	15:P:93:ARG:HD2	1.85	0.59
17:R:32:LEU:N	17:R:32:LEU:CD2	2.65	0.59
17:R:40:SER:O	17:R:41:GLU:C	2.40	0.59
20:U:64:ARG:HH11	20:U:64:ARG:HG3	1.68	0.59
1:A:1225:A:C5'	21:V:78:ARG:NH1	2.63	0.59
21:V:9:VAL:HG12	21:V:9:VAL:O	2.02	0.59
1:A:524:G:O2'	1:A:525:C:H5'	2.02	0.59
1:A:772:U:O2'	1:A:773:G:H5'	2.01	0.59
1:A:1018:C:H2'	1:A:1019:C:O4'	2.03	0.59
1:A:1148:U:O2	1:A:1149:C:C1'	2.51	0.59
1:A:1250:A:C5	1:A:1251:A:C5	2.91	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1352:C:H2'	1:A:1353:G:H8	1.66	0.59
1:A:1429:C:C2	1:A:1430:C:C5	2.91	0.59
1:A:1431:C:H2'	1:A:1432:G:C5'	2.33	0.59
1:A:1533:C:H5'	1:A:1534:A:OP1	2.03	0.59
1:A:355:C:C4	1:A:356:A:N7	2.71	0.59
1:A:519:C:N4	1:A:520:A:N3	2.50	0.59
1:A:610:G:N2	1:A:611:A:C1'	2.64	0.59
1:A:719:C:H3'	1:A:720:C:C6	2.36	0.59
1:A:765:G:N2	1:A:816:A:H2	2.00	0.59
1:A:855:G:O5'	1:A:871:U:O4	2.21	0.59
1:A:89:U:O2'	1:A:90:C:H5'	2.02	0.59
2:C:14:A:N6	2:C:15:G:C6	2.71	0.59
4:E:116:GLU:CG	4:E:117:GLU:N	2.66	0.59
4:E:167:PRO:O	4:E:169:LYS:N	2.35	0.59
4:E:212:GLN:O	4:E:213:LEU:C	2.41	0.59
4:E:212:GLN:O	4:E:216:SER:CB	2.50	0.59
4:E:28:PHE:CE1	4:E:31:TYR:HB3	2.37	0.59
5:F:11:ARG:O	5:F:12:LEU:C	2.41	0.59
1:A:427:U:P	6:G:41:GLY:HA2	2.43	0.59
6:G:96:LEU:HD23	6:G:139:ARG:NH2	2.16	0.59
7:H:74:GLY:O	7:H:115:VAL:HG12	2.02	0.59
10:K:95:VAL:HB	10:K:99:GLU:CD	2.23	0.59
12:M:23:ILE:HG13	12:M:85:LEU:CD2	2.32	0.59
14:O:85:ILE:HD11	14:O:87:GLY:CA	2.30	0.59
15:P:14:ARG:HG2	15:P:17:VAL:HG21	1.85	0.59
12:M:61:GLU:HG2	16:Q:58:LYS:NZ	2.17	0.59
19:T:28:PRO:HA	19:T:35:VAL:HA	1.83	0.59
20:U:52:PRO:HB2	20:U:54:ARG:HB3	1.85	0.59
21:V:64:GLU:HG2	21:V:65:ASN:H	1.67	0.59
22:W:26:ASN:ND2	22:W:27:LYS:N	2.37	0.59
23:X:14:TRP:HZ3	23:X:15:ARG:NE	2.00	0.59
1:A:1004:A:H2'	1:A:1036:G:O6	2.03	0.59
1:A:1040:U:H2'	1:A:1041:A:C8	2.37	0.59
1:A:1087:G:N2	1:A:1099:G:C4	2.71	0.59
1:A:1329:A:H5''	15:P:29:ARG:NE	2.18	0.59
1:A:1438:G:C5	1:A:1439:C:C5	2.91	0.59
1:A:190:G:C8	1:A:190:G:OP1	2.55	0.59
1:A:452:A:N6	1:A:480:U:C2	2.71	0.59
1:A:482:A:C2'	1:A:482:A:N3	2.65	0.59
1:A:517:G:H5'	1:A:519:C:N4	2.18	0.59
1:A:620:C:C2'	1:A:621:A:H5'	2.33	0.59
1:A:649:G:H2'	1:A:650:G:H8	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:862:C:O4'	1:A:874:G:H4'	2.03	0.59
1:A:909:A:H2'	1:A:910:C:C5'	2.32	0.59
1:A:915:A:H2'	1:A:916:G:C5'	2.31	0.59
4:E:178:ARG:HD2	4:E:184:VAL:HG11	1.84	0.59
4:E:35:GLU:OE2	4:E:36:ARG:O	2.21	0.59
5:F:49:SER:C	5:F:51:GLY:N	2.53	0.59
6:G:158:ILE:HG22	6:G:162:LEU:CG	2.33	0.59
10:K:118:VAL:O	10:K:119:LEU:HD13	2.02	0.59
10:K:100:ILE:HD13	10:K:125:ARG:NE	2.16	0.59
10:K:40:ALA:N	10:K:45:ILE:CG2	2.66	0.59
11:L:11:LYS:N	11:L:104:ARG:HH21	2.00	0.59
12:M:49:VAL:O	12:M:60:ARG:CA	2.51	0.59
16:Q:10:ALA:HA	16:Q:12:ARG:HE	1.67	0.59
16:Q:3:ARG:O	16:Q:3:ARG:CG	2.51	0.59
18:S:43:LYS:HG3	18:S:48:TRP:CE3	2.38	0.59
18:S:51:VAL:CG2	18:S:73:LEU:HD11	2.33	0.59
19:T:29:HIS:CG	19:T:32:TYR:HB2	2.38	0.59
21:V:30:LEU:CD1	21:V:59:PRO:HB3	2.33	0.59
1:A:194:C:H4'	22:W:68:LYS:HE2	1.85	0.59
3:D:19:G:C6	3:D:56:C:N3	2.71	0.59
1:A:1003:G:N1	1:A:1004:A:H1'	2.17	0.59
1:A:1029:G:H1'	1:A:1032:A:N6	2.18	0.59
21:V:28:LYS:O	21:V:29:ARG:HB2	2.02	0.59
1:A:1157:A:O4'	1:A:1158:C:N3	2.36	0.58
1:A:1198:G:O2'	12:M:54:PHE:HE2	1.86	0.58
1:A:1243:C:OP2	23:X:10:ARG:CZ	2.51	0.58
1:A:1287:A:C6	1:A:1288:A:N6	2.71	0.58
1:A:1351:U:H2'	1:A:1352:C:H6	1.68	0.58
1:A:1399:C:H42	1:A:1504:G:H1	1.51	0.58
1:A:781:A:H4'	1:A:1522:U:O2'	2.01	0.58
1:A:179:A:H3'	1:A:180:U:C5	2.38	0.58
1:A:198:G:H2'	1:A:199:G:O5'	2.02	0.58
1:A:450:G:O6	1:A:481:G:H2'	2.03	0.58
1:A:521:G:OP2	14:O:54:LYS:NZ	2.30	0.58
1:A:538:G:O3'	14:O:114:LYS:CE	2.51	0.58
1:A:27:G:H22	1:A:557:G:H1'	1.67	0.58
1:A:56:U:H2'	1:A:57:G:H8	1.68	0.58
1:A:691:G:N2	13:N:51:LYS:HZ1	1.99	0.58
1:A:673:G:C6	1:A:734:G:C6	2.91	0.58
2:C:18:G:C2	2:C:58:A:C4	2.90	0.58
4:E:48:MET:SD	4:E:48:MET:N	2.76	0.58
5:F:146:ALA:O	5:F:147:LYS:HD2	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:186:PHE:CA	5:F:198:VAL:O	2.49	0.58
5:F:18:TRP:HZ2	16:Q:55:GLY:O	1.85	0.58
5:F:189:ALA:CB	5:F:196:LEU:HG	2.31	0.58
6:G:200:GLU:HG3	6:G:201:GLN:N	2.18	0.58
6:G:203:VAL:O	6:G:206:PHE:HB3	2.03	0.58
6:G:60:GLU:HA	6:G:63:LYS:HD2	1.85	0.58
7:H:19:MET:SD	7:H:20:GLN:N	2.76	0.58
7:H:94:ALA:HB1	7:H:98:THR:HG21	1.85	0.58
8:I:75:LEU:O	8:I:75:LEU:HD23	2.03	0.58
8:I:95:GLU:C	20:U:32:ARG:HG3	2.23	0.58
12:M:5:ARG:O	12:M:98:ILE:HG23	2.03	0.58
13:N:84:VAL:HG22	13:N:110:ASP:HA	1.85	0.58
14:O:33:ARG:HB3	14:O:85:ILE:CG2	2.33	0.58
14:O:47:LYS:N	14:O:48:PRO:CD	2.65	0.58
12:M:50:ILE:H	16:Q:41:ARG:HD2	1.66	0.58
5:F:40:ARG:NH1	16:Q:52:GLN:HB3	2.18	0.58
17:R:33:THR:O	17:R:36:ILE:HG22	2.03	0.58
17:R:67:LEU:O	17:R:70:LEU:N	2.35	0.58
18:S:4:ILE:HG12	18:S:66:PRO:CB	2.33	0.58
18:S:6:LEU:HD13	18:S:6:LEU:H	1.66	0.58
19:T:58:GLU:OE1	19:T:74:LEU:HD12	2.03	0.58
19:T:75:ARG:CZ	19:T:77:VAL:HG22	2.33	0.58
8:I:96:PRO:HD2	20:U:32:ARG:HE	1.66	0.58
22:W:37:SER:O	22:W:40:ALA:HB3	2.03	0.58
1:A:1268:A:H4'	23:X:20:LYS:HB2	1.85	0.58
1:A:1377:A:O2'	1:A:1378:C:P	2.61	0.58
1:A:1483:A:H3'	1:A:1484:C:C6	2.38	0.58
1:A:1530:G:C6	1:A:1531:A:C4	2.91	0.58
1:A:1533:C:H4'	1:A:1534:A:OP1	2.03	0.58
1:A:1540:U:O2'	1:A:1541:U:H5'	2.03	0.58
1:A:16:A:H1'	7:H:17:ALA:HB3	1.85	0.58
1:A:198:G:C2'	1:A:199:G:O5'	2.52	0.58
1:A:22:G:H2'	1:A:23:C:O4'	2.03	0.58
1:A:478:A:H8	1:A:478:A:O5'	1.86	0.58
1:A:47:C:O2'	1:A:48:C:OP2	2.20	0.58
1:A:518:C:O2'	1:A:519:C:P	2.60	0.58
1:A:600:C:H2'	1:A:601:C:C6	2.36	0.58
1:A:857:C:H2'	1:A:858:G:O4'	2.03	0.58
2:C:44:A:C2	2:C:45:G:C1'	2.85	0.58
4:E:16:HIS:HA	4:E:204:ASN:HB3	1.85	0.58
4:E:80:ILE:HD11	4:E:212:GLN:HB2	1.84	0.58
6:G:54:TYR:O	6:G:55:ALA:C	2.41	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:81:GLU:CB	7:H:90:VAL:HG23	2.34	0.58
8:I:23:LYS:O	8:I:26:ILE:CB	2.45	0.58
9:J:2:ALA:HB1	9:J:5:ARG:HH12	1.66	0.58
10:K:113:SER:HA	10:K:117:GLY:O	2.03	0.58
10:K:120:THR:H	10:K:123:GLU:CD	2.07	0.58
12:M:27:ALA:HB1	12:M:81:THR:CG2	2.33	0.58
14:O:85:ILE:HG13	14:O:87:GLY:H	1.68	0.58
17:R:15:PHE:O	17:R:17:ARG:N	2.36	0.58
19:T:5:VAL:CG1	19:T:6:LEU:H	2.16	0.58
21:V:11:VAL:HG12	21:V:16:LEU:HD11	1.84	0.58
22:W:67:ALA:O	22:W:68:LYS:O	2.21	0.58
22:W:86:ARG:CG	22:W:87:LYS:N	2.66	0.58
3:D:60:U:C6	3:D:60:U:O5'	2.56	0.58
3:D:60:U:C2'	3:D:61:C:OP1	2.51	0.58
1:A:1065:U:O2'	1:A:1066:C:P	2.61	0.58
1:A:1109:C:OP1	5:F:176:HIS:CE1	2.56	0.58
1:A:1158:C:C4	1:A:1160:G:H1'	2.37	0.58
1:A:1191:A:N3	1:A:1191:A:H2'	2.17	0.58
1:A:130:A:H2	1:A:263:A:C2	2.21	0.58
1:A:1429:C:H2'	1:A:1430:C:C6	2.39	0.58
1:A:1466:C:H3'	1:A:1467:G:C8	2.38	0.58
1:A:597:G:C4	1:A:644:G:C2	2.91	0.58
1:A:724:G:H21	1:A:725:G:H1'	1.69	0.58
1:A:745:C:OP1	1:A:851:G:O2'	2.15	0.58
1:A:77:C:H2'	1:A:78:G:O4'	2.03	0.58
1:A:858:G:N1	1:A:869:G:H3'	2.15	0.58
1:A:895:G:H2'	1:A:896:C:C6	2.38	0.58
1:A:900:A:C5	1:A:901:A:N7	2.71	0.58
1:A:978:A:H3'	1:A:978:A:H8	1.68	0.58
4:E:15:VAL:HG21	4:E:209:ARG:CB	2.31	0.58
4:E:71:VAL:HG22	4:E:93:VAL:H	1.67	0.58
5:F:110:ASN:ND2	5:F:141:VAL:HA	2.19	0.58
6:G:36:ARG:HB3	6:G:38:TYR:CZ	2.38	0.58
9:J:72:ARG:HB3	9:J:72:ARG:NH1	2.11	0.58
10:K:85:ARG:HD2	10:K:135:CYS:HB2	1.85	0.58
10:K:36:LEU:O	10:K:39:LEU:CB	2.52	0.58
12:M:59:SER:O	12:M:60:ARG:O	2.21	0.58
18:S:19:ILE:HG13	18:S:38:TYR:CA	2.34	0.58
18:S:58:TYR:HD1	18:S:59:TRP:N	2.01	0.58
22:W:72:LEU:HD22	22:W:76:ALA:CB	2.33	0.58
3:D:26:A:H61	3:D:44:G:H22	1.49	0.58
1:A:1169:A:C6	1:A:1170:A:C2	2.91	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:12:U:H2'	3:D:13:C:C6	2.37	0.58
15:P:79:LYS:O	15:P:83:ASP:HB2	2.02	0.58
1:A:1196:U:H5'	1:A:1197:G:C5'	2.33	0.58
1:A:1201:A:H2'	1:A:1201:A:N3	2.18	0.58
1:A:1252:A:C5	1:A:1253:G:N7	2.71	0.58
1:A:155:C:C2	1:A:167:G:C2	2.92	0.58
1:A:298:A:C2	1:A:299:G:H1'	2.38	0.58
1:A:533:A:C6	1:A:536:C:N4	2.70	0.58
1:A:690:G:C6	1:A:691:G:N3	2.71	0.58
1:A:739:C:O2'	1:A:740:U:H5'	2.03	0.58
2:C:61:C:H2'	2:C:62:C:C6	2.38	0.58
2:C:62:C:O2'	2:C:63:G:H5'	2.03	0.58
4:E:135:GLN:O	4:E:139:LYS:HG2	2.03	0.58
4:E:16:HIS:NE2	4:E:210:SER:HA	2.18	0.58
5:F:152:ILE:CG2	5:F:167:TRP:CE3	2.86	0.58
5:F:23:TYR:CD2	5:F:24:ALA:N	2.65	0.58
1:A:8:A:N7	6:G:208:SER:O	2.37	0.58
6:G:67:ILE:CD1	6:G:67:ILE:C	2.72	0.58
8:I:10:LEU:H	8:I:10:LEU:HD23	1.67	0.58
9:J:106:GLN:HA	9:J:109:ASN:ND2	2.18	0.58
9:J:94:ARG:HH11	9:J:94:ARG:C	2.06	0.58
13:N:15:ALA:HA	13:N:77:MET:HA	1.85	0.58
13:N:85:ARG:HG3	13:N:85:ARG:HH11	1.68	0.58
14:O:103:GLY:N	14:O:107:ALA:O	2.35	0.58
15:P:19:LEU:HD11	15:P:30:ALA:CB	2.31	0.58
18:S:56:ALA:C	18:S:60:LEU:HG	2.24	0.58
19:T:61:GLU:HA	19:T:71:PHE:CD1	2.39	0.58
23:X:23:PRO:C	23:X:25:LYS:H	2.04	0.58
1:A:209:U:O2	1:A:209:U:H2'	2.02	0.58
1:A:1338:G:N2	2:C:41:C:H1'	2.19	0.58
1:A:1343:G:C2	1:A:1344:C:C2	2.92	0.58
1:A:1396:A:O2'	1:A:1397:C:OP2	2.21	0.58
1:A:1480:G:C2'	1:A:1481:U:H5'	2.33	0.58
1:A:246:A:O2'	1:A:247:G:O5'	2.21	0.58
1:A:510:A:O5'	1:A:510:A:H8	1.86	0.58
1:A:520:A:C8	1:A:521:G:O4'	2.56	0.58
1:A:854:G:N1	1:A:855:G:N7	2.51	0.58
1:A:865:A:C4	1:A:866:C:O2	2.57	0.58
1:A:575:G:N2	1:A:880:C:O2	2.36	0.58
1:A:939:G:N2	1:A:940:C:C2	2.72	0.58
1:A:954:G:H2'	1:A:955:U:O4'	2.04	0.58
2:C:25:C:H2'	2:C:26:G:H8	1.66	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:136:VAL:N	4:E:139:LYS:NZ	2.51	0.58
4:E:193:ASP:O	4:E:194:PRO:C	2.42	0.58
4:E:213:LEU:C	4:E:213:LEU:HD23	2.24	0.58
4:E:97:TRP:HE3	4:E:172:ILE:HD12	1.68	0.58
5:F:138:VAL:O	5:F:139:GLN:C	2.42	0.58
5:F:40:ARG:HG3	5:F:57:ILE:HD12	1.84	0.58
6:G:121:VAL:O	6:G:134:ASP:HA	2.03	0.58
7:H:43:LEU:HB3	7:H:136:MET:CE	2.25	0.58
9:J:121:ALA:O	9:J:125:MET:HG3	2.03	0.58
9:J:149:ARG:O	9:J:150:ALA:C	2.42	0.58
9:J:71:PRO:CG	9:J:96:GLN:HA	2.33	0.58
12:M:23:ILE:HG23	12:M:85:LEU:HD23	1.85	0.58
13:N:80:VAL:N	13:N:104:GLN:HE21	2.00	0.58
14:O:83:VAL:HG21	14:O:107:ALA:HB3	1.85	0.58
15:P:14:ARG:H	15:P:44:ARG:NE	2.01	0.58
15:P:22:ILE:HD12	15:P:25:ILE:CD1	2.33	0.58
17:R:71:GLN:N	17:R:78:TYR:CD1	2.71	0.58
18:S:21:VAL:CG2	18:S:34:GLU:HB3	2.33	0.58
19:T:22:LEU:HD12	19:T:23:VAL:N	2.18	0.58
19:T:44:ALA:HA	19:T:71:PHE:O	2.04	0.58
19:T:88:TYR:HA	19:T:91:ARG:HH21	1.68	0.58
21:V:11:VAL:HG13	21:V:39:THR:H	1.68	0.58
22:W:72:LEU:CD2	22:W:76:ALA:HB1	2.33	0.58
3:D:1:G:N1	3:D:73:A:C5	2.72	0.58
1:A:1072:G:C2	1:A:1104:G:C2	2.92	0.58
1:A:1336:C:O2'	1:A:1337:G:OP2	2.22	0.58
1:A:1405:G:H1'	1:A:1519:A:O4'	2.02	0.58
1:A:175:C:H2'	1:A:176:C:H6	1.67	0.58
1:A:275:G:C2	1:A:276:G:C8	2.91	0.58
1:A:375:U:C2	1:A:376:G:C8	2.91	0.58
1:A:394:G:C4	1:A:395:C:C5	2.92	0.58
1:A:465:A:N7	1:A:467:G:N1	2.52	0.58
1:A:483:C:H3'	1:A:483:C:C6	2.38	0.58
1:A:607:A:C2	1:A:608:A:C1'	2.84	0.58
1:A:760:G:H8	1:A:760:G:O5'	1.86	0.58
1:A:834:C:C4	1:A:853:G:C6	2.91	0.58
1:A:859:A:C2'	1:A:860:A:C5'	2.82	0.58
4:E:173:ALA:HA	4:E:176:GLU:HB2	1.84	0.58
4:E:45:GLN:O	4:E:48:MET:HB2	2.03	0.58
5:F:51:GLY:O	5:F:52:LEU:O	2.21	0.58
6:G:88:VAL:HG12	6:G:88:VAL:O	2.04	0.58
7:H:76:ILE:HG21	7:H:142:LEU:CB	2.34	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:4:TYR:CA	8:I:93:SER:OG	2.52	0.58
9:J:76:ARG:HD2	9:J:89:MET:HE2	1.86	0.58
9:J:94:ARG:CG	9:J:94:ARG:HH11	2.17	0.58
11:L:50:LEU:HD11	11:L:56:LEU:CA	2.21	0.58
11:L:6:GLY:CA	11:L:83:ARG:HB3	2.32	0.58
13:N:14:VAL:HG12	13:N:14:VAL:O	2.03	0.58
17:R:33:THR:HG23	17:R:87:ILE:CD1	2.28	0.58
18:S:14:ASN:OD1	18:S:16:HIS:HE1	1.87	0.58
19:T:96:GLN:O	19:T:97:SER:C	2.41	0.58
1:A:1032(A):G:O2'	1:A:1032(B):G:H5'	2.04	0.58
1:A:339:C:O2'	1:A:340:U:H5'	2.03	0.58
1:A:1012:U:C4	1:A:1013:G:C6	2.92	0.58
1:A:1065:U:C2'	1:A:1065:U:O2	2.50	0.58
1:A:1291:G:N2	1:A:1292:U:C2	2.71	0.58
1:A:1464:G:C2	1:A:1465:C:N4	2.72	0.58
1:A:228:A:O4'	18:S:62:VAL:HG21	2.03	0.58
1:A:247:G:H2'	1:A:248:C:O5'	2.03	0.58
1:A:38:G:N2	1:A:397:A:C5'	2.60	0.58
1:A:767:A:N6	1:A:813:U:C2	2.72	0.58
1:A:877:C:O2'	1:A:878:G:H5'	2.04	0.58
1:A:585:G:O2'	1:A:879:C:H5''	2.03	0.58
1:A:900:A:N6	1:A:901:A:N6	2.51	0.58
1:A:947:G:H2'	1:A:948:C:H6	1.68	0.58
1:A:960:U:N3	1:A:1225:A:C5	2.72	0.58
1:A:962:C:H1'	1:A:1201:A:C2	2.39	0.58
1:A:97:U:H2'	1:A:99:C:C5	2.38	0.58
4:E:142:LEU:C	4:E:142:LEU:HD23	2.24	0.58
5:F:83:ARG:CG	5:F:87:LEU:HD11	2.27	0.58
6:G:160:GLN:C	6:G:163:GLU:HB3	2.24	0.58
6:G:180:GLY:O	6:G:182:LYS:HG2	2.04	0.58
6:G:194:LEU:HB3	6:G:196:LEU:CD1	2.32	0.58
6:G:204:ILE:H	6:G:204:ILE:CD1	2.16	0.58
6:G:35:ARG:O	6:G:36:ARG:C	2.41	0.58
7:H:79:GLU:CB	7:H:91:LEU:O	2.51	0.58
10:K:109:ILE:HG12	10:K:137:VAL:O	2.03	0.58
10:K:35:ILE:HG22	10:K:36:LEU:N	2.19	0.58
10:K:32:LYS:O	10:K:35:ILE:N	2.36	0.58
10:K:38:ILE:CA	10:K:41:ARG:HB2	2.34	0.58
12:M:79:ARG:NH2	12:M:82:ILE:HD12	2.19	0.58
12:M:6:ILE:CG2	12:M:98:ILE:HG13	2.29	0.58
13:N:42:TRP:CZ3	13:N:47:VAL:CG2	2.80	0.58
14:O:46:LYS:HG2	14:O:47:LYS:HG2	1.84	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:50:SER:O	14:O:51:ALA:HB2	2.04	0.58
15:P:96:LEU:O	15:P:98:VAL:N	2.36	0.58
19:T:67:LYS:CA	19:T:70:ARG:HH22	2.16	0.58
20:U:50:ILE:HD11	20:U:70:ILE:HG21	1.86	0.58
6:G:47:ARG:NH2	6:G:48:ALA:O	2.36	0.58
1:A:1031:G:O2'	1:A:1032:A:H5'	2.02	0.58
1:A:1101:A:O2'	1:A:1102:A:P	2.62	0.58
1:A:1242:C:C4	1:A:1243:C:C5	2.91	0.58
1:A:1269:A:H8	1:A:1270:C:O4'	1.86	0.58
1:A:1317:C:OP1	16:Q:16:PHE:CD2	2.56	0.58
1:A:1285:A:N6	1:A:1355:G:H4'	2.17	0.58
1:A:1377:A:O5'	1:A:1377:A:H8	1.87	0.58
1:A:1464:G:N1	1:A:1465:C:N4	2.52	0.58
1:A:1516:G:N3	1:A:1518:A:OP2	2.37	0.58
1:A:262:A:N1	1:A:263:A:C6	2.71	0.58
1:A:286:G:C5	1:A:287:U:C5	2.92	0.58
1:A:323:U:H5	1:A:324:G:N3	2.02	0.58
1:A:389:A:C2	1:A:390:C:C4'	2.86	0.58
1:A:507:C:OP2	1:A:508:C:C3'	2.51	0.58
1:A:892:A:H2'	1:A:893:C:H6	1.69	0.58
1:A:953:G:N1	1:A:1229:A:C6	2.71	0.58
1:A:961:U:C6	1:A:983:A:C4	2.91	0.58
2:C:47:U:C2	2:C:50:U:OP1	2.56	0.58
2:C:9:G:H21	2:C:45:G:H2'	1.69	0.58
4:E:150:SER:O	4:E:151:GLY:C	2.41	0.58
4:E:177:ALA:O	4:E:179:LYS:N	2.36	0.58
4:E:82:ARG:CA	4:E:92:TYR:CE1	2.80	0.58
6:G:187:ARG:O	6:G:188:LEU:C	2.40	0.58
6:G:40:PRO:O	6:G:44:GLY:HA3	2.03	0.58
7:H:61:TYR:HA	7:H:64:ARG:CG	2.31	0.58
7:H:61:TYR:O	7:H:64:ARG:N	2.36	0.58
8:I:88:VAL:HG12	8:I:88:VAL:O	2.04	0.58
10:K:20:TYR:HA	10:K:65:TYR:OH	2.04	0.58
10:K:53:VAL:CG2	10:K:58:TYR:HB2	2.34	0.58
13:N:54:ARG:O	13:N:56:GLY:N	2.37	0.58
15:P:108:ARG:HH12	15:P:112:GLY:N	2.01	0.58
15:P:14:ARG:CA	15:P:44:ARG:HA	2.30	0.58
15:P:77:ASN:O	15:P:81:LEU:HD13	2.04	0.58
17:R:36:ILE:CG2	17:R:37:ASN:N	2.66	0.58
17:R:50:HIS:H	17:R:50:HIS:CD2	2.20	0.58
19:T:67:LYS:CA	19:T:70:ARG:NH2	2.66	0.58
20:U:46:GLU:HG2	20:U:85:LEU:HD13	1.84	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:40:ILE:HA	21:V:44:MET:SD	2.43	0.58
3:D:19:G:O2'	3:D:58:A:H5''	2.04	0.58
3:D:18:G:N2	3:D:57:G:C8	2.63	0.58
1:A:434:U:O2'	1:A:435:C:H5'	2.04	0.58
1:A:1016:A:C8	1:A:1016:A:O5'	2.54	0.58
1:A:1065:U:C5	1:A:1190:G:H1'	2.39	0.58
1:A:1196:U:H3'	1:A:1196:U:H6	1.68	0.58
1:A:120:A:H2'	1:A:122:G:N7	2.19	0.58
1:A:251:G:C2	1:A:266:G:O6	2.57	0.58
1:A:315:A:H2'	1:A:316:G:OP2	2.04	0.58
1:A:406:G:N2	1:A:407:G:C4	2.72	0.58
1:A:465:A:N6	1:A:467:G:N3	2.51	0.58
1:A:570:G:O5'	1:A:570:G:H8	1.87	0.58
1:A:668:G:H1'	17:R:46:HIS:NE2	2.19	0.58
1:A:684:A:H2'	1:A:685:G:C8	2.39	0.58
1:A:981:U:C6	1:A:981:U:H3'	2.39	0.58
1:A:997:U:OP2	1:A:997:U:C6	2.57	0.58
4:E:166:ASP:HB2	4:E:205:ASP:HB2	1.85	0.58
5:F:12:LEU:HD11	5:F:18:TRP:CH2	2.39	0.58
5:F:205:GLY:O	5:F:206:GLU:CB	2.51	0.58
6:G:117:ALA:HA	6:G:120:LEU:HD21	1.86	0.58
6:G:126:ILE:N	6:G:132:ARG:HD2	2.17	0.58
6:G:18:LYS:C	6:G:20:TYR:H	2.07	0.58
6:G:31:CYS:C	6:G:33:MET:H	2.05	0.58
7:H:7:GLU:CG	7:H:112:LEU:HD21	2.33	0.58
7:H:35:GLY:HA3	7:H:41:VAL:HG12	1.84	0.58
8:I:61:LEU:HB3	8:I:63:TYR:CZ	2.39	0.58
9:J:69:VAL:HG22	9:J:135:VAL:HG22	1.85	0.58
10:K:27:PRO:O	10:K:32:LYS:HE2	2.03	0.58
10:K:89:PRO:HB3	10:K:92:ARG:HH21	1.67	0.58
11:L:21:PRO:HG3	11:L:59:PHE:CZ	2.38	0.58
12:M:28:ARG:HG3	12:M:33:GLN:O	2.04	0.58
13:N:84:VAL:CG2	13:N:111:ASP:H	2.17	0.58
14:O:11:VAL:O	14:O:11:VAL:HG12	2.04	0.58
1:A:1230:C:O2	15:P:126:LYS:CG	2.51	0.58
12:M:46:ARG:HH11	16:Q:59:ALA:HB1	1.68	0.58
16:Q:9:LYS:HD3	16:Q:9:LYS:C	2.24	0.58
18:S:36:ILE:HG22	18:S:55:ARG:CB	2.34	0.58
19:T:58:GLU:CD	19:T:74:LEU:HB3	2.24	0.58
22:W:75:ASN:O	22:W:79:ARG:HG2	2.02	0.58
1:A:998(A):C:O2	1:A:1043:C:C2	2.56	0.58
1:A:1062:U:N3	1:A:1063:C:N4	2.52	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1085:U:O2	1:A:1094:G:O6	2.21	0.58
1:A:1202:G:C4	16:Q:42:ILE:CD1	2.85	0.58
1:A:1259:C:C2	1:A:1283:G:H1'	2.38	0.58
1:A:1286:A:H5''	23:X:25:LYS:HE3	1.85	0.58
1:A:1309:G:OP2	15:P:99:ARG:NH2	2.37	0.58
1:A:136:C:C1'	18:S:1:MET:SD	2.92	0.58
1:A:280:C:H4'	1:A:281:G:OP2	2.04	0.58
1:A:609:A:C2	1:A:610:G:H1'	2.38	0.58
1:A:618:C:H3'	1:A:620:C:OP2	2.04	0.58
1:A:889:A:H4'	1:A:890:G:H4'	1.85	0.58
3:D:28:G:H2'	3:D:29:C:C6	2.38	0.58
4:E:16:HIS:NE2	4:E:213:LEU:HB3	2.19	0.58
4:E:187:LEU:HD13	4:E:187:LEU:O	2.03	0.58
4:E:27:LYS:CB	4:E:194:PRO:HD2	2.34	0.58
5:F:84:ILE:CB	5:F:101:LEU:HD22	2.33	0.58
5:F:110:ASN:ND2	5:F:140:ARG:O	2.34	0.58
6:G:12:CYS:HB3	6:G:31:CYS:O	2.04	0.58
6:G:99:SER:O	6:G:140:VAL:HG23	2.03	0.58
6:G:153:ARG:HG2	6:G:181:MET:HE3	1.85	0.58
7:H:72:GLN:OE1	7:H:77:PRO:HB3	2.03	0.58
8:I:37:VAL:HG12	8:I:38:GLU:H	1.69	0.58
10:K:9:MET:O	10:K:13:ILE:HG13	2.04	0.58
12:M:76:ASN:C	12:M:78:ASN:H	2.06	0.58
1:A:551:U:H5'	14:O:119:LYS:HZ3	1.68	0.58
1:A:1229:A:P	15:P:116:THR:HG22	2.43	0.58
15:P:20:THR:HG23	15:P:26:GLY:HA2	1.85	0.58
15:P:58:GLU:O	15:P:61:GLU:HB3	2.04	0.58
15:P:90:LEU:O	15:P:93:ARG:HB3	2.04	0.58
16:Q:23:ARG:CD	16:Q:30:ALA:HB2	2.34	0.58
17:R:39:LEU:HD21	17:R:56:LEU:HD11	1.86	0.58
18:S:6:LEU:CD2	18:S:17:TYR:CD2	2.83	0.58
18:S:53:VAL:O	18:S:56:ALA:HB3	2.03	0.58
19:T:18:THR:CB	19:T:69:LYS:HZ1	2.17	0.58
19:T:24:GLU:N	19:T:24:GLU:OE1	2.36	0.58
22:W:56:MET:SD	22:W:84:LEU:HD12	2.44	0.58
3:D:19:G:N2	3:D:57:G:C1'	2.67	0.58
1:A:109:A:N7	1:A:326:G:C4	2.71	0.57
1:A:1143:G:H2'	1:A:1144:G:H8	1.67	0.57
1:A:1157:A:C6	1:A:1180:A:C5	2.91	0.57
1:A:1317:C:C6	1:A:1317:C:OP1	2.57	0.57
1:A:198:G:C2	1:A:199:G:N9	2.72	0.57
1:A:245:C:C2	1:A:284:G:C2	2.91	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:438:G:C5'	6:G:123:HIS:HD1	2.17	0.57
1:A:484:G:O2'	1:A:485:G:OP2	2.18	0.57
1:A:488:C:H2'	1:A:489:C:C6	2.39	0.57
1:A:509:A:H5'	6:G:54:TYR:CD2	2.37	0.57
1:A:591:U:OP1	10:K:30:ARG:NH2	2.37	0.57
1:A:735:C:H5'	20:U:71:LYS:HD3	1.86	0.57
1:A:954:G:C5	1:A:955:U:C4	2.92	0.57
4:E:54:THR:HG23	4:E:199:TYR:HB3	1.86	0.57
4:E:47:THR:HG23	4:E:202:PRO:HD2	1.86	0.57
4:E:70:PHE:HA	4:E:163:PHE:O	2.04	0.57
4:E:69:LEU:HD11	4:E:71:VAL:HG23	1.86	0.57
4:E:74:LYS:HD2	4:E:76:GLN:HB2	1.86	0.57
4:E:68:ILE:O	4:E:90:MET:HB3	2.04	0.57
5:F:112:SER:HB3	5:F:115:LEU:HD12	1.85	0.57
5:F:22:TRP:CZ2	5:F:33:LEU:HG	2.38	0.57
5:F:22:TRP:HZ3	5:F:32:LEU:HD12	1.69	0.57
5:F:84:ILE:HG13	5:F:101:LEU:HD13	1.86	0.57
6:G:102:ASP:HB2	6:G:136:PRO:HA	1.85	0.57
6:G:154:ASN:N	6:G:154:ASN:ND2	2.50	0.57
6:G:41:GLY:O	6:G:43:HIS:N	2.36	0.57
10:K:63:LEU:O	10:K:64:LYS:HB2	2.04	0.57
11:L:112:LYS:HG3	11:L:117:HIS:CA	2.34	0.57
12:M:46:ARG:HD3	12:M:64:GLU:CB	2.34	0.57
15:P:81:LEU:CD2	15:P:82:MET:N	2.66	0.57
1:A:728:A:C8	17:R:54:ARG:NH2	2.70	0.57
18:S:8:ARG:O	18:S:9:PHE:HD2	1.87	0.57
19:T:59:ILE:HG13	19:T:60:ILE:N	2.19	0.57
19:T:88:TYR:CA	19:T:91:ARG:NH2	2.67	0.57
21:V:11:VAL:O	21:V:12:ASP:C	2.41	0.57
22:W:53:LEU:N	22:W:53:LEU:HD23	2.18	0.57
22:W:55:ILE:O	22:W:56:MET:C	2.42	0.57
22:W:76:ALA:O	22:W:77:ALA:C	2.41	0.57
3:D:6:G:C6	3:D:68:U:N3	2.71	0.57
1:A:1109:C:O2'	1:A:1110:A:H5'	2.04	0.57
1:A:1201:A:C2'	1:A:1202:G:OP2	2.52	0.57
1:A:1350:A:OP2	11:L:118:LYS:CG	2.53	0.57
1:A:949:A:H1'	1:A:1364:U:N3	2.19	0.57
1:A:1536:C:C2'	1:A:1537:U:C5	2.73	0.57
1:A:15:G:C2'	1:A:16:A:H8	2.14	0.57
1:A:28:G:O2'	1:A:296:U:OP1	2.18	0.57
1:A:366:C:O2'	1:A:367:U:OP1	2.22	0.57
1:A:555:C:H5''	1:A:556:C:OP2	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:575:G:C6	1:A:821:G:N7	2.72	0.57
1:A:591:U:O2'	1:A:592:G:O4'	2.21	0.57
1:A:729:A:H2	1:A:765:G:H1'	1.69	0.57
1:A:890:G:C2'	1:A:891:U:OP2	2.51	0.57
1:A:935:A:H2'	1:A:936:C:H6	1.67	0.57
1:A:953:G:O2'	15:P:125:ARG:CA	2.44	0.57
1:A:976:G:OP1	16:Q:31:ARG:O	2.21	0.57
2:C:73:A:O2'	2:C:74:C:P	2.62	0.57
5:F:13:GLY:O	5:F:14:ILE:HG12	2.04	0.57
5:F:180:ALA:HB1	5:F:182:ILE:HD11	1.86	0.57
5:F:30:ARG:HH11	5:F:31:HIS:H	1.51	0.57
5:F:88:ARG:HB2	5:F:101:LEU:HB2	1.86	0.57
7:H:102:ALA:CB	7:H:120:THR:CG2	2.77	0.57
11:L:79:LEU:HD13	11:L:101:PHE:CD2	2.39	0.57
13:N:85:ARG:NE	13:N:113:PRO:HD3	2.20	0.57
14:O:18:VAL:O	14:O:19:ARG:CG	2.52	0.57
1:A:626:U:H5''	18:S:38:TYR:CD2	2.38	0.57
21:V:13:ASP:O	21:V:13:ASP:CG	2.43	0.57
1:A:1081:G:H2'	1:A:1082:G:C8	2.38	0.57
1:A:112:G:C2'	1:A:113:G:H5'	2.35	0.57
1:A:1206:G:H2'	1:A:1207:G:C8	2.39	0.57
1:A:1314:C:OP1	21:V:7:LYS:HE2	2.05	0.57
1:A:1327:C:O2'	1:A:1328:C:H5'	2.04	0.57
1:A:1353:G:C2	1:A:1370:G:C2	2.93	0.57
1:A:237:C:P	19:T:40:LYS:HE3	2.44	0.57
1:A:402:G:H4'	1:A:620:C:N3	2.19	0.57
1:A:404:U:H2'	1:A:405:U:H6	1.68	0.57
1:A:452:A:N6	1:A:480:U:N3	2.52	0.57
1:A:661:G:N2	1:A:745:C:C2	2.72	0.57
1:A:843:U:C2'	1:A:848:C:OP1	2.53	0.57
1:A:908:A:H2'	1:A:909:A:H8	1.70	0.57
1:A:945:G:C2	1:A:946:A:C8	2.92	0.57
1:A:961:U:H5	1:A:983:A:C5	2.22	0.57
2:C:18:G:C6	2:C:57:A:N6	2.72	0.57
2:C:76:A:P	2:C:76:A:HO3'	2.27	0.57
4:E:207:ALA:O	4:E:210:SER:HB3	2.04	0.57
4:E:22:LYS:HA	4:E:40:HIS:HE1	1.68	0.57
5:F:38:ARG:CG	5:F:94:LEU:HD21	2.35	0.57
6:G:121:VAL:HB	6:G:136:PRO:HG3	1.85	0.57
6:G:147:ALA:CB	6:G:181:MET:O	2.51	0.57
6:G:38:TYR:O	6:G:39:PRO:O	2.21	0.57
8:I:14:LEU:HD12	8:I:15:ASP:O	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:6:VAL:O	8:I:6:VAL:CG1	2.53	0.57
9:J:41:ARG:HG2	9:J:41:ARG:HH11	1.69	0.57
10:K:114:THR:HG21	10:K:129:VAL:HG13	1.84	0.57
10:K:6:ILE:CD1	10:K:85:ARG:HD3	2.34	0.57
10:K:9:MET:O	10:K:11:THR:N	2.36	0.57
11:L:20:ARG:O	11:L:21:PRO:C	2.38	0.57
12:M:27:ALA:HB2	12:M:85:LEU:CG	2.33	0.57
13:N:92:GLU:C	13:N:94:ALA:N	2.55	0.57
14:O:69:TYR:HB3	14:O:99:HIS:HB3	1.86	0.57
14:O:6:THR:OG1	14:O:9:GLN:HG3	2.04	0.57
14:O:84:LEU:HG	14:O:85:ILE:N	2.20	0.57
17:R:81:LEU:HD23	17:R:85:LEU:CD1	2.34	0.57
19:T:69:LYS:HG2	19:T:69:LYS:O	2.04	0.57
19:T:76:LEU:HD21	19:T:79:SER:N	2.19	0.57
19:T:81:ARG:HG2	19:T:84:LEU:HD21	1.87	0.57
20:U:78:LEU:O	20:U:79:LEU:HB3	2.04	0.57
22:W:13:LEU:C	22:W:17:ARG:HH21	2.05	0.57
22:W:57:ARG:O	22:W:58:LYS:C	2.43	0.57
14:O:127:GLU:OE2	14:O:127:GLU:O	2.21	0.57
1:A:996:A:N6	1:A:1046:A:H1'	2.19	0.57
1:A:1135:U:O2	1:A:1137:C:C2	2.57	0.57
1:A:1200:C:O4'	1:A:1200:C:OP1	2.23	0.57
1:A:1202:G:O2'	1:A:1203:C:H5'	2.04	0.57
1:A:123:C:O2'	1:A:290:C:C1'	2.44	0.57
1:A:1256:A:H5''	5:F:27:LYS:HZ3	1.67	0.57
1:A:1319:A:C2	1:A:1361:G:N2	2.72	0.57
1:A:1376:U:C2	1:A:1377:A:N7	2.73	0.57
1:A:1405:G:H1'	1:A:1519:A:C4'	2.33	0.57
1:A:67:C:H4'	1:A:172:A:O4'	2.04	0.57
1:A:17:U:O2'	1:A:18:C:H5'	2.04	0.57
1:A:28:G:O2'	1:A:296:U:H5''	2.05	0.57
1:A:113:G:H1'	1:A:354:G:C5'	2.34	0.57
1:A:373:A:C2	1:A:482:A:N6	2.72	0.57
1:A:465:A:C8	1:A:467:G:C6	2.93	0.57
1:A:501:C:H2'	1:A:502:G:C8	2.39	0.57
1:A:841:U:O2	1:A:841:U:H2'	2.04	0.57
1:A:745:C:C5'	1:A:851:G:N3	2.66	0.57
1:A:867:G:N2	1:A:868:C:C2	2.72	0.57
1:A:914:A:H2'	1:A:915:A:H8	1.61	0.57
4:E:102:LEU:HD22	4:E:176:GLU:CB	2.34	0.57
4:E:15:VAL:HG23	4:E:16:HIS:HD1	1.65	0.57
5:F:151:VAL:O	5:F:168:ALA:O	2.22	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:151:VAL:HG22	5:F:200:ALA:HB1	1.85	0.57
6:G:163:GLU:HG3	6:G:164:ALA:N	2.19	0.57
7:H:145:LYS:HA	7:H:148:VAL:CG2	2.34	0.57
7:H:52:PRO:O	7:H:55:VAL:N	2.37	0.57
8:I:36:ARG:O	8:I:65:VAL:HB	2.04	0.57
8:I:79:LEU:HD12	8:I:88:VAL:CG2	2.34	0.57
10:K:69:ARG:NH1	10:K:74:PRO:O	2.38	0.57
12:M:39:PRO:O	12:M:40:LEU:C	2.43	0.57
5:F:29:TYR:HE1	12:M:65:LEU:HD11	1.69	0.57
14:O:117:ARG:HH22	14:O:124:LYS:HG3	1.69	0.57
17:R:79:ARG:HB3	17:R:79:ARG:NH1	2.20	0.57
20:U:29:PHE:CE2	20:U:39:VAL:HG11	2.40	0.57
20:U:74:ARG:HB3	20:U:81:PHE:CD2	2.36	0.57
22:W:27:LYS:HD3	22:W:28:ALA:N	2.19	0.57
1:A:1121:U:H6	1:A:1121:U:O5'	1.87	0.57
1:A:164:U:H2'	1:A:165:C:C5	2.39	0.57
1:A:1054:C:OP1	1:A:1197:G:OP1	2.23	0.57
1:A:1242:C:C5'	23:X:10:ARG:NH1	2.67	0.57
1:A:1320:C:C4	21:V:72:GLY:HA3	2.39	0.57
1:A:934:C:C5	1:A:1344:C:C2	2.93	0.57
1:A:1346:A:O2'	1:A:1347:G:OP2	2.18	0.57
1:A:1417:G:N2	1:A:1482:G:H2'	2.19	0.57
1:A:148:G:N2	1:A:175:C:C4	2.73	0.57
1:A:193:C:O2'	22:W:61:SER:HA	2.04	0.57
1:A:225:C:C2'	1:A:226:G:H5'	2.34	0.57
1:A:32:A:H2'	1:A:33:A:H8	1.65	0.57
1:A:59:A:H4'	1:A:388:G:C5'	2.33	0.57
1:A:392:G:N2	1:A:393:A:H1'	2.19	0.57
1:A:646:U:O2'	1:A:647:C:H5'	2.05	0.57
1:A:675:A:H2'	1:A:676:A:O4'	2.05	0.57
1:A:738:C:C2	1:A:739:C:C5	2.93	0.57
1:A:85:U:H2'	1:A:86:U:C5'	2.34	0.57
1:A:22:G:O4'	1:A:885:G:C1'	2.53	0.57
1:A:952:U:H5'	1:A:972:C:H41	1.68	0.57
4:E:104:ASN:O	4:E:108:ILE:HG12	2.05	0.57
4:E:169:LYS:CD	4:E:170:GLU:N	2.66	0.57
4:E:97:TRP:CZ2	4:E:102:LEU:CD1	2.88	0.57
6:G:105:VAL:CG1	6:G:120:LEU:HD21	2.34	0.57
6:G:148:VAL:HG11	6:G:153:ARG:HA	1.85	0.57
7:H:115:VAL:HG21	7:H:118:ILE:HD12	1.85	0.57
7:H:78:HIS:CG	10:K:104:ARG:HD3	2.39	0.57
9:J:75:VAL:HG13	9:J:87:VAL:C	2.25	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:149:ARG:HG2	13:N:59:TYR:CZ	2.40	0.57
15:P:16:ASP:HA	15:P:19:LEU:HG	1.85	0.57
17:R:6:GLU:HG2	17:R:7:GLU:HG2	1.85	0.57
19:T:43:LEU:HD13	19:T:44:ALA:N	2.19	0.57
19:T:84:LEU:O	19:T:87:LYS:HB2	2.04	0.57
20:U:58:LEU:CB	20:U:62:GLU:HB3	2.32	0.57
22:W:43:LEU:O	22:W:46:GLU:HG3	2.05	0.57
22:W:57:ARG:O	22:W:59:ALA:N	2.37	0.57
22:W:45:GLN:H	22:W:91:LEU:HD12	1.68	0.57
1:A:1060:C:H2'	1:A:1061:G:C8	2.40	0.57
1:A:1180:A:OP1	11:L:102:LEU:HD12	2.04	0.57
1:A:1483:A:H8	1:A:1483:A:O5'	1.88	0.57
1:A:230:G:N1	1:A:231:G:C4	2.72	0.57
1:A:42:G:H2'	1:A:43:C:H6	1.66	0.57
1:A:770:C:C1'	1:A:900:A:H2	2.18	0.57
1:A:792:A:O2'	1:A:794:A:N7	2.23	0.57
1:A:979:C:N4	16:Q:18:VAL:CB	2.65	0.57
2:C:75:C:O5'	2:C:76:A:P	2.62	0.57
4:E:19:HIS:HD2	4:E:20:GLU:OE1	1.87	0.57
4:E:239:VAL:O	4:E:240:GLN:CB	2.52	0.57
5:F:121:ALA:HB2	5:F:187:ALA:HB1	1.85	0.57
5:F:172:ARG:HB3	5:F:172:ARG:CZ	2.35	0.57
6:G:201:GLN:O	6:G:205:GLU:HG3	2.05	0.57
7:H:37:ARG:HH12	7:H:111:GLU:HG3	1.68	0.57
7:H:58:ALA:HA	7:H:61:TYR:HD2	1.69	0.57
8:I:79:LEU:HD12	8:I:88:VAL:HG21	1.87	0.57
9:J:118:VAL:HG12	9:J:122:HIS:CE1	2.39	0.57
9:J:71:PRO:CD	9:J:96:GLN:HG3	2.35	0.57
10:K:20:TYR:CE2	10:K:75:ARG:HD2	2.40	0.57
2:C:33:U:OP2	11:L:128:ARG:O	2.22	0.57
13:N:101:SER:O	13:N:102:GLY:C	2.41	0.57
13:N:11:LYS:HB3	13:N:13:GLN:OE1	2.04	0.57
1:A:1186:G:H21	16:Q:61:TRP:C	2.06	0.57
18:S:55:ARG:HE	18:S:55:ARG:HA	1.68	0.57
20:U:75:ILE:O	20:U:76:LEU:C	2.42	0.57
23:X:20:LYS:HE3	23:X:21:TYR:CZ	2.39	0.57
3:D:73:A:C2	3:D:74:C:O4'	2.54	0.57
1:A:747:C:H2'	1:A:748:C:O4'	2.04	0.57
1:A:865:A:H5'	1:A:1078:U:C4	2.39	0.57
1:A:1129:C:C5'	1:A:1130:A:OP1	2.45	0.57
1:A:1182:G:H4'	1:A:1183:A:C5'	2.34	0.57
1:A:1320:C:H2'	1:A:1320:C:O2	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1321:C:C3'	1:A:1321:C:C6	2.88	0.57
1:A:1372:U:C5	1:A:1373:G:N7	2.72	0.57
1:A:1389:C:H2'	1:A:1390:U:C5'	2.35	0.57
1:A:1443:G:P	1:A:1446:A:OP1	2.63	0.57
1:A:1430:C:C2	1:A:1471:G:N2	2.72	0.57
1:A:1537:U:O5'	1:A:1537:U:H6	1.88	0.57
1:A:1539:C:C2	1:A:1540:U:C6	2.92	0.57
1:A:186(D):C:O2'	1:A:186(E):C:H5'	2.05	0.57
1:A:781:A:O2'	1:A:782:A:H5'	2.03	0.57
1:A:88:C:O2'	1:A:89:U:O5'	2.22	0.57
1:A:983:A:H2	1:A:984:C:H6	1.51	0.57
4:E:121:LEU:O	4:E:122:PHE:HD1	1.88	0.57
4:E:178:ARG:HH21	4:E:196:LEU:CA	2.18	0.57
4:E:52:GLU:O	4:E:53:ARG:C	2.41	0.57
5:F:101:LEU:HD23	5:F:103:VAL:HG23	1.85	0.57
5:F:59:ARG:NE	5:F:64:VAL:CA	2.66	0.57
5:F:50:ALA:HA	5:F:72:LYS:CD	2.35	0.57
6:G:50:ARG:C	6:G:50:ARG:HD3	2.25	0.57
6:G:64:LEU:HD11	6:G:75:PHE:CZ	2.40	0.57
7:H:72:GLN:HE21	7:H:144:THR:HG23	1.69	0.57
7:H:78:HIS:CD2	7:H:78:HIS:N	2.72	0.57
7:H:82:VAL:CG1	7:H:89:ILE:HG22	2.24	0.57
9:J:75:VAL:HG21	9:J:146:GLU:H	1.68	0.57
9:J:12:LEU:HD11	9:J:21:VAL:HB	1.87	0.57
1:A:756:C:O4'	10:K:1:MET:HE3	2.05	0.57
10:K:65:TYR:O	10:K:67:PRO:HD3	2.04	0.57
11:L:19:LEU:HD22	11:L:20:ARG:N	2.20	0.57
12:M:60:ARG:NH1	12:M:60:ARG:CB	2.67	0.57
12:M:65:LEU:HD13	16:Q:36:PHE:HZ	1.68	0.57
13:N:22:HIS:HB2	13:N:85:ARG:CB	2.34	0.57
15:P:13:LYS:HD3	15:P:17:VAL:HG12	1.87	0.57
18:S:36:ILE:HG22	18:S:55:ARG:HB3	1.86	0.57
1:A:1314:C:C5	21:V:6:LYS:HG3	2.40	0.57
3:D:6:G:O2'	3:D:7:G:O4'	2.23	0.57
1:A:1005:A:H5''	1:A:1006:C:C6	2.38	0.57
1:A:1066:C:C5	1:A:1067:A:N6	2.72	0.57
1:A:136:C:H1'	18:S:1:MET:HE1	1.86	0.57
1:A:1376:U:H2'	1:A:1377:A:C8	2.40	0.57
1:A:1394:A:O2'	1:A:1395:C:OP1	2.20	0.57
1:A:1419:G:C2'	1:A:1420:C:H6	2.18	0.57
1:A:319:G:H4'	1:A:1468:A:C4'	2.35	0.57
1:A:900:A:N7	1:A:901:A:N6	2.41	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:901:A:N3	1:A:902:G:H1'	2.18	0.57
1:A:915:A:O5'	1:A:915:A:H8	1.88	0.57
2:C:18:G:C4	2:C:58:A:C2	2.92	0.57
2:C:5:G:H2'	2:C:6:G:O5'	2.04	0.57
3:D:34:G:C2'	3:D:34:G:N3	2.67	0.57
4:E:141:GLU:OE1	4:E:142:LEU:N	2.36	0.57
4:E:163:PHE:CB	4:E:185:ILE:HG13	2.34	0.57
4:E:57:PHE:HD1	4:E:199:TYR:HE1	1.53	0.57
5:F:25:GLY:C	5:F:28:GLN:NE2	2.58	0.57
7:H:109:ILE:CG2	7:H:110:LEU:N	2.68	0.57
7:H:18:ARG:NH2	7:H:25:ARG:HG3	2.15	0.57
7:H:28:PHE:CZ	7:H:49:PRO:O	2.58	0.57
8:I:50:TYR:O	8:I:52:ILE:N	2.38	0.57
8:I:75:LEU:CD2	8:I:79:LEU:HD23	2.34	0.57
9:J:14:PRO:HG3	9:J:21:VAL:HG13	1.85	0.57
9:J:88:PRO:HG2	9:J:152:ALA:CB	2.35	0.57
10:K:14:ARG:NH1	10:K:83:ILE:HG21	2.20	0.57
14:O:113:ARG:O	14:O:114:LYS:HG3	2.04	0.57
15:P:59:TYR:CG	15:P:60:VAL:N	2.72	0.57
15:P:80:ARG:NH1	15:P:81:LEU:HB3	2.09	0.57
15:P:8:GLU:HG3	15:P:22:ILE:HD11	1.87	0.57
16:Q:27:CYS:N	16:Q:43:CYS:HB3	2.12	0.57
23:X:4:GLY:O	23:X:6:ARG:HG2	2.04	0.57
4:E:126:GLU:HA	4:E:129:GLU:OE1	2.05	0.57
1:A:1188:A:H3'	1:A:1189:C:H5	1.70	0.57
1:A:1189:C:OP2	1:A:1189:C:C6	2.58	0.57
1:A:1275:A:O2'	1:A:1276:G:H5'	2.05	0.57
1:A:186(E):C:O2'	1:A:186(F):C:H5'	2.04	0.57
1:A:307:C:N4	1:A:308:C:N4	2.45	0.57
1:A:355:C:N3	1:A:356:A:N7	2.53	0.57
1:A:511:C:HO2'	1:A:512:U:H6	1.53	0.57
1:A:518:C:HO2'	1:A:519:C:P	2.26	0.57
1:A:579:G:N1	1:A:763:G:C6	2.73	0.57
1:A:644:G:C2'	1:A:645:C:H5'	2.35	0.57
1:A:796:C:C2	1:A:797:C:C5	2.93	0.57
1:A:900:A:C8	1:A:901:A:N7	2.73	0.57
1:A:939:G:OP1	9:J:99:LEU:HD11	2.05	0.57
1:A:990:C:H2'	1:A:991:U:C1'	2.35	0.57
1:A:1230:C:H4'	2:C:31:G:OP1	2.04	0.57
4:E:178:ARG:HH21	4:E:196:LEU:HA	1.68	0.57
4:E:234:PRO:C	4:E:238:LEU:HD22	2.25	0.57
6:G:192:GLU:N	6:G:192:GLU:OE1	2.34	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:61:LYS:HA	6:G:203:VAL:HG13	1.87	0.57
7:H:19:MET:CE	7:H:20:GLN:N	2.67	0.57
9:J:27:ILE:HG12	9:J:43:PHE:CG	2.39	0.57
9:J:76:ARG:CD	9:J:89:MET:HE2	2.34	0.57
10:K:23:SER:O	10:K:61:VAL:O	2.22	0.57
10:K:32:LYS:O	10:K:33:GLU:C	2.43	0.57
11:L:28:VAL:O	11:L:30:GLY:N	2.38	0.57
11:L:55:ALA:CB	11:L:58:HIS:HD2	2.18	0.57
13:N:27:ASN:OD1	13:N:45:GLY:N	2.37	0.57
13:N:63:LEU:C	13:N:63:LEU:CD2	2.73	0.57
14:O:48:PRO:HG2	14:O:49:ASN:N	2.20	0.57
15:P:4:ILE:O	15:P:5:ALA:HB3	2.05	0.57
15:P:24:GLY:O	15:P:66:LEU:HD13	2.05	0.57
16:Q:23:ARG:HA	16:Q:33:VAL:HG11	1.86	0.57
17:R:71:GLN:HA	17:R:75:PRO:HA	1.87	0.57
18:S:67:THR:HB	18:S:70:ALA:CB	2.32	0.57
19:T:86:GLU:O	19:T:89:LEU:HB2	2.05	0.57
3:D:66:C:C2	3:D:67:C:C5	2.93	0.57
1:A:1053:G:H4'	1:A:1054:C:O3'	2.05	0.57
1:A:1184:G:C2	1:A:1185:G:C5	2.93	0.57
1:A:1185:G:O2'	1:A:1186:G:H5'	2.05	0.57
1:A:1206:G:C4	1:A:1207:G:C8	2.93	0.57
1:A:122:G:H2'	1:A:123:C:O4'	2.05	0.57
1:A:1239:A:N6	1:A:1299:A:H61	2.01	0.57
1:A:1299:A:N7	1:A:1301:U:N1	2.52	0.57
1:A:1428:A:H2'	1:A:1429:C:H6	1.59	0.57
1:A:270:A:H2'	1:A:271:C:H6	1.70	0.57
1:A:274:A:H5'	1:A:275:G:OP1	2.05	0.57
1:A:30:U:O2'	1:A:31:G:P	2.63	0.57
1:A:363:A:N1	1:A:364:A:N3	2.53	0.57
1:A:37:U:P	14:O:123:LYS:HD2	2.44	0.57
1:A:647:C:N3	1:A:648:A:N7	2.52	0.57
1:A:64:G:N2	1:A:67:C:N4	2.53	0.57
1:A:657:G:O2'	1:A:658:G:H5'	2.05	0.57
1:A:668:G:O2'	17:R:46:HIS:CE1	2.58	0.57
1:A:665:A:N7	1:A:733:A:C2	2.72	0.57
1:A:964:A:C5'	1:A:1199:U:OP1	2.52	0.57
1:A:967:C:H2'	1:A:968:A:N7	2.20	0.57
3:D:39:U:H2'	3:D:40:C:C6	2.40	0.57
4:E:25:ASN:HD22	4:E:26:PRO:N	2.02	0.57
4:E:85:ALA:HB3	4:E:92:TYR:CD1	2.40	0.57
5:F:172:ARG:HH12	5:F:174:PRO:HD3	1.69	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:42:LEU:HD12	5:F:94:LEU:CD1	2.34	0.57
6:G:148:VAL:HG21	6:G:162:LEU:HD21	1.87	0.57
6:G:78:LEU:HD21	6:G:96:LEU:HB2	1.85	0.57
9:J:138:LYS:CE	9:J:142:GLU:OE1	2.47	0.57
10:K:101:PRO:HG2	10:K:102:ARG:H	1.70	0.57
10:K:87:SER:HB2	10:K:93:VAL:H	1.70	0.57
11:L:79:LEU:HD13	11:L:101:PHE:HD2	1.70	0.57
15:P:13:LYS:HA	15:P:44:ARG:NH2	2.20	0.57
17:R:36:ILE:CG1	17:R:59:MET:SD	2.92	0.57
1:A:835:U:OP1	20:U:64:ARG:NH1	2.38	0.57
22:W:100:ILE:O	22:W:102:GLY:N	2.38	0.57
1:A:101:A:C4	1:A:102:G:C8	2.93	0.56
1:A:1057:G:C5	1:A:1204:A:C2	2.92	0.56
1:A:1191:A:P	5:F:4:LYS:HZ2	2.27	0.56
1:A:1223:C:O5'	1:A:1224:G:H5''	2.05	0.56
1:A:1351:U:H2'	1:A:1352:C:C6	2.40	0.56
1:A:1442:G:C6	1:A:1446:A:C6	2.93	0.56
1:A:1526:G:H2'	1:A:1527:C:C6	2.40	0.56
1:A:176:C:O2'	1:A:177:C:H5'	2.05	0.56
1:A:173:U:H5''	1:A:197:A:H1'	1.79	0.56
1:A:440:A:H61	1:A:494:U:H5	1.52	0.56
1:A:744:C:H2'	1:A:745:C:H6	1.70	0.56
1:A:769:G:N3	1:A:770:C:C6	2.73	0.56
2:C:10:G:N2	2:C:11:A:C4	2.72	0.56
2:C:17:C:N4	2:C:19:G:C8	2.73	0.56
4:E:132:LYS:HA	4:E:135:GLN:OE1	2.04	0.56
4:E:175:ARG:HG3	4:E:179:LYS:HE3	1.87	0.56
4:E:18:GLY:HA2	4:E:41:ILE:HA	1.86	0.56
4:E:193:ASP:OD2	4:E:196:LEU:HD11	2.05	0.56
4:E:91:PRO:N	4:E:154:LEU:HD13	2.20	0.56
5:F:111:LEU:N	5:F:111:LEU:CD1	2.68	0.56
5:F:18:TRP:CZ2	16:Q:55:GLY:O	2.57	0.56
5:F:22:TRP:CZ2	16:Q:54:PRO:HG3	2.40	0.56
5:F:89:GLU:O	5:F:90:GLU:C	2.43	0.56
6:G:30:LYS:CE	6:G:35:ARG:HH11	2.07	0.56
8:I:68:PRO:O	8:I:71:ARG:HG2	2.04	0.56
8:I:76:ALA:HB3	8:I:80:ARG:HH21	1.70	0.56
8:I:80:ARG:HG2	8:I:80:ARG:NH1	2.18	0.56
8:I:98:LEU:HD21	20:U:28:GLU:CA	2.29	0.56
10:K:14:ARG:CD	10:K:15:ASN:ND2	2.68	0.56
12:M:9:ARG:NH1	12:M:9:ARG:CB	2.68	0.56
14:O:121:GLY:O	14:O:122:THR:OG1	2.22	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:97:PRO:CB	15:P:101:GLN:HB2	2.28	0.56
5:F:29:TYR:HE2	16:Q:54:PRO:HG2	1.70	0.56
17:R:18:PHE:O	17:R:18:PHE:CD1	2.58	0.56
18:S:39:TYR:HB2	18:S:49:LEU:CD1	2.33	0.56
19:T:4:LYS:CD	19:T:5:VAL:H	2.02	0.56
20:U:43:PHE:O	20:U:51:LEU:HD13	2.05	0.56
20:U:58:LEU:HD22	20:U:62:GLU:HG2	1.87	0.56
20:U:76:LEU:N	20:U:76:LEU:HD22	2.20	0.56
21:V:12:ASP:O	21:V:15:LEU:HG	2.05	0.56
21:V:17:GLU:OE1	21:V:18:LYS:N	2.36	0.56
21:V:63:THR:HB	21:V:66:MET:SD	2.45	0.56
3:D:18:G:N3	3:D:58:A:O4'	2.38	0.56
3:D:21:A:H61	3:D:48:C:H6	1.53	0.56
4:E:130:ARG:HD3	4:E:131:PRO:CD	2.33	0.56
1:A:1106:G:H5''	5:F:172:ARG:HG3	1.86	0.56
1:A:1134:G:OP2	1:A:1135:U:H5	1.87	0.56
1:A:1227:A:H8	1:A:1228:C:O4'	1.88	0.56
1:A:1230:C:O2'	15:P:126:LYS:CE	2.53	0.56
1:A:1320:C:C5	21:V:37:ARG:CZ	2.88	0.56
1:A:1326:C:H2'	1:A:1327:C:H6	1.67	0.56
1:A:1251:A:O2'	1:A:1369:C:O2'	2.12	0.56
1:A:188:U:O2'	1:A:189:U:H5'	2.05	0.56
1:A:308:C:H2'	1:A:309:G:O5'	2.06	0.56
1:A:633:G:H2'	1:A:634:C:C6	2.40	0.56
1:A:702:A:HO2'	1:A:703:G:P	2.28	0.56
1:A:756:C:O4'	10:K:1:MET:CE	2.53	0.56
1:A:88:C:C2'	1:A:89:U:C6	2.88	0.56
1:A:961:U:O4	1:A:974:A:N1	2.38	0.56
2:C:14:A:C2	2:C:22:G:C4	2.93	0.56
2:C:30:G:H2'	2:C:31:G:O4'	2.04	0.56
4:E:115:LEU:HD21	4:E:146:GLN:HA	1.88	0.56
4:E:47:THR:OG1	4:E:202:PRO:HG2	2.05	0.56
4:E:79:ASP:O	4:E:82:ARG:HB3	2.05	0.56
4:E:97:TRP:O	4:E:99:GLY:N	2.38	0.56
5:F:116:VAL:C	5:F:119:ARG:HB3	2.25	0.56
6:G:101:LEU:HG	6:G:102:ASP:N	2.20	0.56
6:G:177:ASP:OD1	6:G:179:GLU:HB2	2.05	0.56
6:G:58:LEU:HD22	6:G:58:LEU:C	2.25	0.56
6:G:65:ARG:HE	6:G:72:GLU:CA	2.18	0.56
9:J:106:GLN:O	9:J:107:ALA:C	2.41	0.56
9:J:3:ARG:C	9:J:4:ARG:HG2	2.26	0.56
10:K:10:LEU:HD11	10:K:85:ARG:HD3	1.87	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:597:G:H22	10:K:94:TYR:HE2	1.50	0.56
11:L:66:ARG:C	11:L:73:GLN:HE21	2.09	0.56
11:L:71:SER:HA	11:L:74:ILE:HD12	1.87	0.56
12:M:27:ALA:HB2	12:M:85:LEU:HD11	1.86	0.56
13:N:60:ALA:O	13:N:63:LEU:N	2.38	0.56
14:O:54:LYS:O	14:O:70:ILE:HG13	2.05	0.56
15:P:37:THR:HG23	15:P:56:LEU:HD22	1.87	0.56
15:P:90:LEU:O	15:P:91:ARG:C	2.43	0.56
15:P:91:ARG:CZ	15:P:96:LEU:HD12	2.35	0.56
17:R:32:LEU:H	17:R:32:LEU:CD2	2.17	0.56
17:R:41:GLU:CD	17:R:41:GLU:C	2.64	0.56
17:R:70:LEU:HG	17:R:78:TYR:CB	2.36	0.56
19:T:18:THR:CG2	19:T:69:LYS:NZ	2.68	0.56
19:T:91:ARG:CA	19:T:94:ASN:ND2	2.66	0.56
20:U:21:LYS:HZ3	20:U:24:ALA:N	2.03	0.56
20:U:46:GLU:N	20:U:46:GLU:OE2	2.39	0.56
22:W:31:SER:OG	22:W:32:ALA:N	2.38	0.56
1:A:1082:G:C2'	1:A:1083:U:H5'	2.35	0.56
1:A:1200:C:O4'	1:A:1200:C:P	2.62	0.56
1:A:1314:C:H3'	21:V:6:LYS:CD	2.27	0.56
1:A:1330:U:H4'	15:P:23:TYR:CZ	2.40	0.56
1:A:1493:A:HO2'	1:A:1494:G:C5'	2.19	0.56
1:A:1539:C:C2	1:A:1540:U:C5	2.94	0.56
1:A:66:G:H4'	1:A:173:U:C4	2.39	0.56
1:A:301:G:C2	1:A:302:G:C4	2.94	0.56
1:A:356:A:H2'	1:A:357:G:O4'	2.05	0.56
1:A:498:A:O2'	1:A:500:G:O4'	2.23	0.56
1:A:640:A:O2'	10:K:116:LYS:NZ	2.39	0.56
1:A:642:A:C2	10:K:113:SER:O	2.58	0.56
1:A:737:A:O2'	8:I:72:VAL:HG21	2.06	0.56
1:A:862:C:C2	1:A:863:U:C5	2.90	0.56
2:C:24:U:O2'	2:C:25:C:H5'	2.05	0.56
2:C:44:A:N6	2:C:45:G:N2	2.54	0.56
4:E:61:LEU:HD23	4:E:62:ALA:H	1.69	0.56
5:F:191:THR:OG1	5:F:196:LEU:HD21	2.05	0.56
6:G:130:GLY:HA3	6:G:131:ARG:NH1	2.20	0.56
6:G:78:LEU:HD21	6:G:96:LEU:HD13	1.87	0.56
7:H:65:ASN:HD21	7:H:136:MET:HE3	1.70	0.56
7:H:79:GLU:CD	7:H:79:GLU:N	2.57	0.56
10:K:31:PHE:HZ	10:K:113:SER:HB2	1.71	0.56
11:L:97:LYS:HZ2	11:L:102:LEU:CD1	2.17	0.56
11:L:4:TYR:HB3	11:L:87:GLN:HB3	1.85	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:11:PHE:HE2	12:M:66:ARG:O	1.89	0.56
12:M:6:ILE:O	12:M:71:LEU:HD13	2.05	0.56
12:M:79:ARG:CZ	12:M:82:ILE:HB	2.35	0.56
14:O:65:GLU:O	14:O:66:VAL:HG13	2.04	0.56
1:A:750:G:H1'	17:R:23:GLY:N	2.20	0.56
1:A:1077:G:N2	1:A:1080:A:OP2	2.31	0.56
1:A:1296:C:H1'	1:A:1302:U:C4	2.40	0.56
1:A:1317:C:C2'	1:A:1318:A:H5'	2.35	0.56
1:A:1349:A:C2'	1:A:1350:A:H8	2.09	0.56
1:A:1399:C:C5	1:A:1502:A:N7	2.74	0.56
1:A:237:C:H2'	1:A:238:G:H8	1.71	0.56
1:A:487:A:OP2	1:A:488:C:H5	1.88	0.56
1:A:594:G:H22	1:A:596:C:N4	2.02	0.56
1:A:66:G:O2'	1:A:67:C:H5'	2.05	0.56
4:E:102:LEU:HB2	4:E:176:GLU:CD	2.24	0.56
5:F:108:ASN:HD21	5:F:110:ASN:HB2	1.70	0.56
7:H:109:ILE:HG21	7:H:135:THR:CG2	2.36	0.56
8:I:75:LEU:O	8:I:78:GLU:HB3	2.06	0.56
9:J:106:GLN:CA	9:J:109:ASN:HD22	2.17	0.56
10:K:37:ARG:CD	10:K:38:ILE:HD13	2.31	0.56
1:A:1348:U:H4'	11:L:120:ARG:HH11	1.69	0.56
11:L:93:ARG:O	11:L:95:LYS:N	2.27	0.56
12:M:57:LYS:HG2	12:M:57:LYS:O	2.04	0.56
5:F:29:TYR:HE1	12:M:65:LEU:CD1	2.19	0.56
13:N:87:THR:HG22	13:N:91:ARG:NH2	2.21	0.56
1:A:551:U:C4'	14:O:119:LYS:NZ	2.69	0.56
1:A:33:A:N3	14:O:32:PHE:CZ	2.73	0.56
15:P:20:THR:CA	15:P:25:ILE:HB	2.35	0.56
20:U:40:LEU:C	20:U:42:ARG:H	2.09	0.56
20:U:79:LEU:CD1	20:U:79:LEU:O	2.49	0.56
22:W:40:ALA:HA	22:W:55:ILE:CD1	2.36	0.56
3:D:1:G:N1	3:D:73:A:C6	2.74	0.56
3:D:2:C:H2'	3:D:3:C:H6	1.70	0.56
3:D:73:A:N3	3:D:74:C:C5'	2.68	0.56
1:A:1002:G:N2	1:A:1039:C:C4	2.73	0.56
1:A:216:G:H2'	1:A:217:C:C5	2.41	0.56
1:A:1384:C:H2'	1:A:1385:G:O4'	2.05	0.56
1:A:1066:C:H3'	1:A:1067:A:C8	2.40	0.56
1:A:12:U:C2	1:A:13:U:O4	2.57	0.56
1:A:1389:C:O2'	1:A:1390:U:H5'	2.05	0.56
1:A:1436:U:C2'	1:A:1437:C:H5'	2.36	0.56
1:A:1443:G:O5'	1:A:1446:A:OP1	2.21	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1493:A:O2'	1:A:1494:G:O5'	2.23	0.56
1:A:186:C:H4'	22:W:81:LYS:HB2	1.87	0.56
1:A:224:C:C2	1:A:225:C:C5	2.93	0.56
1:A:284:G:H2'	1:A:285:G:H8	1.70	0.56
1:A:392:G:C5'	18:S:12:LYS:HE2	2.35	0.56
1:A:707:C:H2'	1:A:708:C:C5'	2.36	0.56
1:A:762:C:C2	1:A:763:G:N7	2.73	0.56
1:A:822:C:H2'	1:A:823:G:H8	1.70	0.56
1:A:862:C:O2'	1:A:874:G:H5''	2.06	0.56
1:A:974:A:H5'	1:A:975:A:OP1	2.06	0.56
3:D:35:A:H2'	3:D:36:A:O4'	2.06	0.56
4:E:234:PRO:HB2	4:E:238:LEU:HD22	1.87	0.56
4:E:81:VAL:O	4:E:82:ARG:C	2.43	0.56
6:G:191:ARG:NH1	6:G:194:LEU:O	2.38	0.56
7:H:119:LEU:HD23	7:H:119:LEU:N	2.20	0.56
8:I:45:LEU:CD2	8:I:59:TYR:HD1	2.19	0.56
11:L:65:VAL:HG22	11:L:73:GLN:HB3	1.87	0.56
11:L:74:ILE:HA	11:L:77:ILE:CD1	2.27	0.56
12:M:51:ARG:HB2	12:M:59:SER:O	2.04	0.56
14:O:92:ASP:C	14:O:93:LEU:HD23	2.24	0.56
15:P:14:ARG:HE	15:P:44:ARG:HH11	1.54	0.56
16:Q:34:TYR:OH	16:Q:41:ARG:HA	2.05	0.56
21:V:63:THR:CG2	21:V:64:GLU:N	2.68	0.56
1:A:1136:U:H5''	1:A:1137:C:OP2	2.06	0.56
1:A:1184:G:N3	1:A:1185:G:N7	2.52	0.56
1:A:122:G:C2	1:A:123:C:N1	2.74	0.56
1:A:1236:A:C4'	1:A:1304:G:H4'	2.13	0.56
1:A:1537:U:H2'	1:A:1538:C:C6	2.40	0.56
1:A:294:U:O2	1:A:295:C:C5	2.59	0.56
1:A:425:G:C2	1:A:426:G:C8	2.94	0.56
1:A:49:U:N3	1:A:364:A:N7	2.53	0.56
1:A:501:C:O2'	1:A:549:C:O2	2.23	0.56
1:A:636:U:O2'	1:A:637:G:H5'	2.05	0.56
1:A:643:C:O2'	1:A:644:G:H5'	2.05	0.56
1:A:581:G:O6	1:A:758:G:C8	2.59	0.56
1:A:817:C:O2'	1:A:818:G:P	2.63	0.56
1:A:878:G:OP1	10:K:88:LYS:HG2	2.05	0.56
1:A:959:A:H8	1:A:959:A:O5'	1.88	0.56
1:A:979:C:C2	1:A:980:C:O4'	2.59	0.56
4:E:102:LEU:HD22	4:E:176:GLU:HB2	1.88	0.56
4:E:220:ASP:HA	4:E:223:ILE:HD12	1.87	0.56
6:G:188:LEU:C	6:G:189:PRO:O	2.41	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:26:PHE:N	7:H:26:PHE:CD1	2.71	0.56
8:I:47:ARG:HD3	8:I:57:GLN:HB3	1.87	0.56
9:J:49:ILE:HG21	9:J:121:ALA:HB1	1.87	0.56
9:J:79:ARG:NH1	9:J:84:ASN:CB	2.62	0.56
9:J:88:PRO:HG2	9:J:152:ALA:HB2	1.87	0.56
11:L:10:ARG:NH1	11:L:105:ASP:OD2	2.38	0.56
1:A:942:G:N2	11:L:124:GLN:OE1	2.39	0.56
11:L:5:TYR:CD2	11:L:6:GLY:N	2.73	0.56
11:L:96:LEU:O	11:L:100:GLY:CA	2.43	0.56
12:M:50:ILE:CA	12:M:60:ARG:HG3	2.35	0.56
13:N:110:ASP:HB2	20:U:88:LYS:CD	2.34	0.56
14:O:29:GLY:O	14:O:30:ALA:O	2.22	0.56
14:O:69:TYR:O	14:O:71:PRO:CD	2.54	0.56
15:P:11:ARG:C	15:P:13:LYS:H	2.08	0.56
17:R:29:VAL:HG21	17:R:81:LEU:HD11	1.87	0.56
1:A:736:C:OP1	20:U:72:ARG:CZ	2.53	0.56
3:D:47:U:H3	3:D:50:G:P	2.29	0.56
1:A:341:C:O2'	1:A:342:C:H5'	2.06	0.56
1:A:1353:G:C2	1:A:1370:G:N2	2.73	0.56
1:A:1408:A:H2	1:A:1494:G:C1'	2.11	0.56
1:A:69:G:N3	1:A:69:G:H2'	2.20	0.56
1:A:770:C:H1'	1:A:900:A:H2	1.69	0.56
1:A:953:G:H1'	15:P:126:LYS:N	2.20	0.56
1:A:968:A:H8	1:A:968:A:OP1	1.88	0.56
2:C:14:A:N6	2:C:21:A:H2	1.89	0.56
4:E:97:TRP:HZ2	4:E:102:LEU:CD1	2.14	0.56
5:F:67:THR:CG2	5:F:69:HIS:CE1	2.88	0.56
6:G:141:ARG:O	6:G:143:GLY:N	2.39	0.56
6:G:13:ARG:HH21	6:G:40:PRO:HA	1.70	0.56
6:G:52:SER:O	6:G:55:ALA:N	2.38	0.56
7:H:105:VAL:HG21	7:H:132:ALA:HB2	1.87	0.56
7:H:121:LYS:HZ1	7:H:122:GLU:N	2.02	0.56
7:H:53:LEU:O	7:H:57:LYS:HB2	2.06	0.56
8:I:60:PHE:O	8:I:61:LEU:HD23	2.05	0.56
8:I:64:GLN:C	8:I:65:VAL:CG1	2.74	0.56
8:I:98:LEU:HD22	8:I:101:ALA:CB	2.32	0.56
9:J:74:GLU:HB3	9:J:91:VAL:HG21	1.88	0.56
10:K:11:THR:O	10:K:12:ARG:C	2.43	0.56
10:K:114:THR:HA	10:K:130:GLY:O	2.05	0.56
10:K:21:LYS:HE2	10:K:21:LYS:CA	2.34	0.56
10:K:82:HIS:CE1	10:K:84:ARG:HB2	2.41	0.56
12:M:3:LYS:N	12:M:3:LYS:NZ	2.53	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:65:LEU:CD1	16:Q:36:PHE:HZ	2.19	0.56
13:N:75:TYR:O	13:N:77:MET:N	2.38	0.56
13:N:86:GLY:H	13:N:112:THR:HA	1.70	0.56
14:O:120:TYR:O	14:O:121:GLY:O	2.23	0.56
14:O:6:THR:O	14:O:10:LEU:HD12	2.06	0.56
1:A:552:U:C4'	14:O:86:ARG:O	2.50	0.56
15:P:49:THR:HG22	15:P:51:ALA:H	1.69	0.56
17:R:6:GLU:N	17:R:6:GLU:OE2	2.36	0.56
19:T:80:GLY:O	19:T:81:ARG:C	2.44	0.56
21:V:15:LEU:HD12	21:V:44:MET:HE1	1.86	0.56
22:W:37:SER:O	22:W:41:ILE:HG13	2.05	0.56
1:A:1198:G:C2'	1:A:1199:U:H5'	2.35	0.56
1:A:1049:U:H1'	1:A:1201:A:O4'	2.06	0.56
1:A:1317:C:O2'	1:A:1318:A:H5'	2.06	0.56
1:A:1361:G:H2'	1:A:1362:C:H5'	1.86	0.56
1:A:1436:U:O2'	1:A:1437:C:H5'	2.05	0.56
1:A:1528:U:H2'	1:A:1530:G:H5'	1.88	0.56
1:A:153:C:C2	1:A:154:C:C5	2.94	0.56
1:A:226:G:O2'	1:A:227:G:C5'	2.53	0.56
1:A:307:C:N3	1:A:308:C:H5	2.04	0.56
1:A:35:G:O2'	1:A:36:C:H5'	2.05	0.56
1:A:649:G:H2'	1:A:650:G:C8	2.39	0.56
1:A:722:A:H5'	1:A:723:U:O4	2.06	0.56
1:A:946:A:O2'	1:A:1333:A:H1'	2.05	0.56
1:A:959:A:H2'	1:A:960:U:C4'	2.33	0.56
2:C:20:U:O2	2:C:20:U:C2'	2.54	0.56
2:C:37:A:C5	2:C:38:A:N7	2.74	0.56
2:C:44:A:H2'	2:C:44:A:N3	2.21	0.56
4:E:115:LEU:HD12	4:E:115:LEU:O	2.06	0.56
4:E:145:LEU:HD12	4:E:149:LEU:HD13	1.88	0.56
4:E:17:PHE:CA	4:E:42:ILE:HG22	2.35	0.56
5:F:21:ARG:O	5:F:58:GLU:HA	2.06	0.56
5:F:35:GLU:O	5:F:39:ILE:HG13	2.05	0.56
5:F:59:ARG:NH1	5:F:59:ARG:HB2	2.20	0.56
6:G:24:GLU:O	6:G:27:TYR:HB3	2.06	0.56
8:I:69:GLU:O	8:I:72:VAL:HG22	2.06	0.56
10:K:27:PRO:O	10:K:32:LYS:CE	2.54	0.56
12:M:34:VAL:HG12	12:M:36:GLY:H	1.71	0.56
15:P:27:LYS:C	15:P:29:ARG:H	2.09	0.56
15:P:98:VAL:HG12	15:P:98:VAL:O	2.06	0.56
1:A:1358:U:H5''	16:Q:34:TYR:HA	1.88	0.56
18:S:21:VAL:HG13	18:S:36:ILE:CD1	2.33	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:74:ARG:NH1	20:U:81:PHE:HB3	2.20	0.56
21:V:11:VAL:CG1	21:V:38:SER:HB2	2.35	0.56
3:D:60:U:C6	3:D:60:U:C3'	2.89	0.56
3:D:20:U:O2	3:D:20:U:H2'	2.04	0.56
1:A:1159:U:O4	1:A:1182:G:N3	2.39	0.56
1:A:1277:C:H2'	1:A:1278:U:O4'	2.06	0.56
1:A:1343:G:H2'	1:A:1344:C:O4'	2.05	0.56
1:A:1368:G:OP2	11:L:112:LYS:O	2.23	0.56
1:A:1405:G:H21	1:A:1518:A:H1'	1.71	0.56
1:A:309:G:O2'	1:A:310:G:C5'	2.53	0.56
1:A:563:A:O2'	1:A:564:C:OP2	2.24	0.56
1:A:571:U:C3'	1:A:572:A:C5'	2.64	0.56
1:A:583:A:H2'	1:A:584:G:H8	1.70	0.56
1:A:585:G:HO2'	1:A:586:C:H5'	1.70	0.56
1:A:586:C:H2'	1:A:587:G:O4'	2.04	0.56
1:A:88:C:O2'	1:A:89:U:O4'	2.23	0.56
1:A:978:A:H3'	1:A:978:A:C8	2.41	0.56
1:A:981:U:H2'	1:A:982:U:C5	2.41	0.56
2:C:31:G:N2	2:C:40:C:N3	2.53	0.56
2:C:72:A:C2'	2:C:73:A:C8	2.85	0.56
4:E:160:ASP:O	4:E:161:ALA:HB2	2.06	0.56
5:F:196:LEU:HD23	5:F:196:LEU:N	2.21	0.56
6:G:159:ARG:O	6:G:161:ASN:N	2.38	0.56
7:H:50:GLU:HB2	7:H:53:LEU:CG	2.35	0.56
7:H:68:GLU:OE2	7:H:69:VAL:N	2.39	0.56
8:I:2:ARG:HD2	8:I:69:GLU:HB3	1.86	0.56
9:J:97:GLN:O	9:J:98:SER:C	2.44	0.56
11:L:28:VAL:HG11	11:L:36:TYR:HB2	1.86	0.56
12:M:46:ARG:HD3	12:M:64:GLU:HG2	1.86	0.56
1:A:551:U:O4'	14:O:119:LYS:HE2	2.06	0.56
14:O:34:ARG:HH21	14:O:61:THR:HG21	1.70	0.56
14:O:82:VAL:HG12	14:O:83:VAL:N	2.21	0.56
16:Q:24:CYS:HA	16:Q:39:LEU:HA	1.86	0.56
18:S:58:TYR:O	18:S:61:SER:CB	2.54	0.56
19:T:57:VAL:CG2	19:T:58:GLU:N	2.69	0.56
1:A:259:G:C5'	22:W:83:ARG:HH22	2.18	0.56
1:A:1242:C:C5'	23:X:10:ARG:HH12	2.19	0.56
1:A:1128:C:C1'	1:A:1146:A:H61	2.16	0.56
1:A:1144:G:N2	1:A:1146:A:N7	2.53	0.56
1:A:1206:G:C2	1:A:1207:G:C4	2.94	0.56
1:A:1265:G:C6	1:A:1271:G:C6	2.94	0.56
1:A:1292:U:OP2	1:A:1292:U:H6	1.89	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1251:A:C2	1:A:1354:C:H1'	2.40	0.56
1:A:167:G:O2'	1:A:168:G:H5'	2.05	0.56
1:A:308:C:C2'	1:A:309:G:O5'	2.53	0.56
1:A:485:G:HO2'	1:A:486:U:H6	1.54	0.56
1:A:539:A:H2'	1:A:540:G:H8	1.71	0.56
1:A:990:C:H2'	1:A:991:U:O4'	2.05	0.56
1:A:992:U:H4'	1:A:993:G:O5'	2.06	0.56
4:E:234:PRO:HB2	4:E:238:LEU:CD2	2.36	0.56
4:E:39:ILE:O	4:E:41:ILE:CD1	2.54	0.56
4:E:60:ASP:HB3	4:E:64:ARG:NH2	2.21	0.56
6:G:131:ARG:HD2	6:G:132:ARG:N	2.21	0.56
6:G:31:CYS:O	6:G:33:MET:HE3	2.06	0.56
6:G:58:LEU:HD13	6:G:59:ARG:HD2	1.86	0.56
9:J:77:SER:C	9:J:156:TRP:HH2	2.09	0.56
9:J:42:ILE:HD13	9:J:116:ALA:CB	2.35	0.56
10:K:33:GLU:CG	10:K:59:LEU:HD11	2.35	0.56
10:K:93:VAL:O	10:K:133:LEU:HG	2.06	0.56
10:K:95:VAL:CG2	10:K:133:LEU:HD21	2.31	0.56
14:O:43:VAL:CG1	14:O:44:THR:H	2.17	0.56
15:P:58:GLU:HA	15:P:61:GLU:HB2	1.88	0.56
15:P:78:ILE:HA	15:P:81:LEU:HD11	1.88	0.56
21:V:55:LYS:HG2	21:V:56:GLN:NE2	2.20	0.56
22:W:63:ILE:HG23	22:W:72:LEU:CD1	2.36	0.56
3:D:18:G:H21	3:D:58:A:H5'	1.71	0.56
2:C:1:C:O2	2:C:2:G:C8	2.59	0.56
2:C:53:G:O2'	2:C:54:U:H5'	2.06	0.56
1:A:1192:C:H5	1:A:1193:G:C8	2.21	0.56
1:A:1206:G:C6	1:A:1207:G:C5	2.94	0.56
1:A:1261:A:H3'	1:A:1262:C:C5	2.41	0.56
1:A:1273:G:H2'	1:A:1274:G:O4'	2.06	0.56
1:A:1289:A:O2'	1:A:1290:G:H5'	2.06	0.56
1:A:1305:G:C2'	1:A:1331:G:N2	2.66	0.56
1:A:1406:U:C2	1:A:1407:C:C5	2.93	0.56
1:A:1412:C:H2'	1:A:1413:A:C8	2.41	0.56
1:A:17:U:H5'	1:A:1080:A:O2'	2.06	0.56
1:A:300:A:H2'	1:A:301:G:O4'	2.05	0.56
1:A:325:A:H2'	1:A:326:G:O5'	2.06	0.56
1:A:357:G:O2'	1:A:358:U:H5'	2.05	0.56
1:A:687:A:C2	1:A:704:A:C6	2.94	0.56
1:A:739:C:H2'	1:A:740:U:C5'	2.36	0.56
1:A:761:G:H5'	19:T:102:GLY:C	2.26	0.56
1:A:714:G:O2'	1:A:777:A:N6	2.39	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:789:U:O2'	1:A:791:G:N7	2.28	0.56
1:A:244:U:C6	1:A:894:G:C2	2.94	0.56
1:A:922:G:N2	1:A:923:A:H1'	2.21	0.56
1:A:979:C:OP2	1:A:980:C:C5	2.59	0.56
2:C:16:C:H5'	2:C:60:U:O2'	2.05	0.56
4:E:184:VAL:O	4:E:198:ASP:N	2.39	0.56
4:E:67:THR:HB	4:E:155:LEU:HD21	1.88	0.56
4:E:80:ILE:HG21	4:E:211:ILE:HG21	1.88	0.56
5:F:116:VAL:HG11	5:F:141:VAL:HG21	1.89	0.56
5:F:29:TYR:C	5:F:29:TYR:CD2	2.77	0.56
5:F:35:GLU:HA	5:F:38:ARG:CD	2.35	0.56
5:F:63:ASN:O	5:F:64:VAL:HB	2.06	0.56
6:G:104:VAL:O	6:G:107:ARG:N	2.39	0.56
6:G:90:GLY:CA	6:G:200:GLU:OE2	2.53	0.56
6:G:24:GLU:CD	6:G:25:ARG:N	2.59	0.56
9:J:63:LYS:HE2	9:J:63:LYS:N	2.21	0.56
10:K:65:TYR:HD2	10:K:78:GLN:HA	1.71	0.56
11:L:19:LEU:CD2	11:L:59:PHE:HD2	2.16	0.56
11:L:5:TYR:HD2	11:L:6:GLY:N	2.03	0.56
1:A:363:A:OP2	14:O:34:ARG:HB3	2.05	0.56
16:Q:16:PHE:O	16:Q:17:LYS:C	2.44	0.56
17:R:39:LEU:O	17:R:42:HIS:HB3	2.06	0.56
21:V:15:LEU:HG	21:V:16:LEU:CD1	2.36	0.56
22:W:36:LEU:CD2	22:W:55:ILE:CG2	2.82	0.56
22:W:64:ASP:HA	22:W:67:ALA:HB2	1.87	0.56
1:A:1039:C:N4	1:A:1040:U:O4	2.39	0.56
1:A:1159:U:H5	1:A:1182:G:H1'	1.70	0.55
1:A:1319:A:N6	1:A:1323:G:N3	2.54	0.55
1:A:1336:C:C4'	1:A:1337:G:C2	2.87	0.55
1:A:1369:C:H2'	1:A:1370:G:O4'	2.05	0.55
1:A:1373:G:H4'	9:J:36:LYS:NZ	2.21	0.55
1:A:1524:C:H2'	1:A:1525:G:O4'	2.05	0.55
1:A:184:G:O4'	1:A:224:C:H4'	2.05	0.55
1:A:303:A:H2'	1:A:304:U:O4'	2.06	0.55
1:A:354:G:C2'	1:A:355:C:O5'	2.54	0.55
1:A:401:C:OP2	6:G:73:ARG:NH1	2.38	0.55
1:A:467:G:C2	1:A:468:A:C5	2.93	0.55
1:A:497:U:O2	1:A:497:U:H2'	2.05	0.55
1:A:51:A:O2'	1:A:52:G:OP2	2.22	0.55
1:A:7:G:H21	7:H:121:LYS:CB	2.19	0.55
1:A:820:U:O2'	1:A:821:G:OP2	2.22	0.55
1:A:19:C:O4'	1:A:864:A:H1'	2.05	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:900:A:C4	1:A:901:A:N7	2.74	0.55
4:E:102:LEU:CD2	4:E:176:GLU:CB	2.84	0.55
4:E:47:THR:HG23	4:E:202:PRO:HG2	1.88	0.55
4:E:44:LEU:HB2	4:E:45:GLN:OE1	2.06	0.55
6:G:177:ASP:OD1	6:G:182:LYS:HG3	2.06	0.55
6:G:68:TYR:O	6:G:70:ILE:HG12	2.06	0.55
7:H:82:VAL:CG1	7:H:134:ALA:HB1	2.37	0.55
7:H:147:ASP:O	7:H:150:ARG:CB	2.52	0.55
7:H:80:ILE:HD11	7:H:91:LEU:HB3	1.86	0.55
9:J:111:ARG:HB3	9:J:112:PRO:HD2	1.87	0.55
9:J:86:GLN:HG3	9:J:148:ASN:ND2	2.21	0.55
10:K:89:PRO:HA	10:K:92:ARG:NE	2.20	0.55
11:L:88:TYR:CD2	11:L:89:ASN:ND2	2.74	0.55
12:M:16:LEU:HD22	12:M:16:LEU:N	2.21	0.55
12:M:4:ILE:HD13	12:M:98:ILE:CG2	2.35	0.55
1:A:551:U:C5'	14:O:119:LYS:NZ	2.68	0.55
15:P:16:ASP:HB3	15:P:30:ALA:HB1	1.88	0.55
18:S:8:ARG:NH1	18:S:11:SER:N	2.54	0.55
22:W:12:ALA:H	22:W:13:LEU:CD1	2.19	0.55
1:A:186(A):C:O4'	22:W:85:MET:SD	2.65	0.55
22:W:44:ALA:HB3	22:W:91:LEU:CD1	2.35	0.55
3:D:69:C:O2'	3:D:70:G:H5'	2.06	0.55
1:A:1027:C:C4	1:A:1028:C:C5	2.94	0.55
4:E:124:SER:OG	4:E:126:GLU:CD	2.44	0.55
1:A:1128:C:C5	1:A:1139:G:C6	2.94	0.55
1:A:1151:A:N3	12:M:39:PRO:HG3	2.21	0.55
1:A:1316:G:C4	1:A:1318:A:OP2	2.59	0.55
1:A:1320:C:C6	21:V:72:GLY:HA3	2.41	0.55
1:A:1324:A:O4'	1:A:1362:C:H4'	2.05	0.55
1:A:1336:C:O2'	1:A:1337:G:C5	2.54	0.55
1:A:1361:G:C8	1:A:1361:G:C3'	2.89	0.55
1:A:1363:A:N3	1:A:1365:G:C6	2.74	0.55
1:A:1442:G:C6	1:A:1446:A:N6	2.73	0.55
1:A:1516:G:C2	1:A:1518:A:OP2	2.59	0.55
1:A:235:C:C2	1:A:236:G:N7	2.74	0.55
1:A:37:U:H2'	1:A:38:G:H5'	1.88	0.55
1:A:406:G:N2	1:A:437:U:O2	2.39	0.55
1:A:551:U:H5'	14:O:119:LYS:HZ1	1.68	0.55
2:C:27:U:H2'	2:C:28:C:C6	2.41	0.55
2:C:71:C:N3	2:C:72:A:C8	2.74	0.55
4:E:149:LEU:C	4:E:149:LEU:HD23	2.27	0.55
4:E:35:GLU:O	4:E:36:ARG:NE	2.39	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:56:ARG:C	4:E:56:ARG:HD2	2.27	0.55
6:G:143:GLY:HA2	6:G:185:PHE:HB3	1.88	0.55
6:G:8:VAL:C	6:G:10:ARG:N	2.58	0.55
8:I:24:GLU:O	8:I:27:GLN:HB2	2.06	0.55
8:I:52:ILE:CD1	8:I:87:ARG:NH2	2.69	0.55
8:I:1:MET:CE	8:I:68:PRO:HG3	2.36	0.55
9:J:124:LEU:O	9:J:124:LEU:HD23	2.07	0.55
9:J:139:GLU:HA	9:J:142:GLU:HB2	1.88	0.55
9:J:69:VAL:HG21	9:J:104:LEU:HD11	1.87	0.55
7:H:78:HIS:ND1	10:K:107:LEU:CD1	2.67	0.55
10:K:29:SER:CB	10:K:32:LYS:NZ	2.68	0.55
10:K:98:LYS:NZ	10:K:98:LYS:C	2.60	0.55
11:L:114:TYR:HB2	11:L:116:LYS:NZ	2.21	0.55
11:L:38:GLN:C	11:L:40:LEU:N	2.59	0.55
11:L:43:ALA:O	11:L:45:ALA:N	2.38	0.55
1:A:585:G:C4'	14:O:8:ASN:ND2	2.67	0.55
15:P:108:ARG:HH12	15:P:112:GLY:H	1.54	0.55
18:S:20:VAL:HG12	18:S:21:VAL:N	2.22	0.55
18:S:73:LEU:CD1	18:S:73:LEU:C	2.75	0.55
1:A:761:G:H1'	19:T:104:LYS:O	2.06	0.55
1:A:1025:U:H4'	1:A:1025:U:OP1	2.06	0.55
1:A:1171:G:HO2'	1:A:1172:C:H6	1.53	0.55
4:E:134:GLU:HB3	4:E:138:LEU:HD11	1.88	0.55
6:G:165:MET:HE3	6:G:167:GLY:H	1.70	0.55
1:A:1064:G:N3	1:A:1066:C:C4	2.74	0.55
1:A:962:C:O2'	1:A:1200:C:N4	2.40	0.55
1:A:132:C:C2	1:A:231:G:N2	2.74	0.55
1:A:279:A:H5''	1:A:280:C:H3'	1.87	0.55
1:A:280:C:C5'	1:A:281:G:OP2	2.54	0.55
1:A:378:G:H2'	1:A:379:C:C6	2.41	0.55
1:A:417:C:O2'	1:A:418:C:H5'	2.06	0.55
1:A:570:G:C6	1:A:571:U:O4	2.59	0.55
1:A:577:G:N2	1:A:578:C:C2	2.75	0.55
1:A:685:G:N2	1:A:686:U:C4	2.74	0.55
1:A:706:A:C2	1:A:707:C:C6	2.94	0.55
1:A:760:G:C2	19:T:104:LYS:O	2.60	0.55
1:A:775:G:C4	1:A:776:G:N7	2.74	0.55
1:A:80:G:H3'	1:A:81:G:C8	2.39	0.55
2:C:38:A:C2'	2:C:39:C:H5'	2.35	0.55
4:E:146:GLN:O	4:E:147:LYS:C	2.44	0.55
4:E:173:ALA:O	4:E:174:VAL:C	2.44	0.55
5:F:138:VAL:HG22	5:F:151:VAL:CG2	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:30:ARG:HH11	5:F:31:HIS:N	2.05	0.55
6:G:106:TYR:HD1	6:G:106:TYR:C	2.09	0.55
6:G:16:GLY:O	6:G:18:LYS:N	2.39	0.55
7:H:18:ARG:O	7:H:25:ARG:O	2.24	0.55
7:H:55:VAL:HG12	7:H:56:GLN:N	2.21	0.55
9:J:108:ALA:O	9:J:119:ARG:HD3	2.06	0.55
9:J:137:LYS:O	9:J:141:VAL:HG23	2.07	0.55
9:J:41:ARG:O	9:J:44:TYR:HB2	2.05	0.55
12:M:48:THR:OG1	12:M:62:HIS:HB3	2.06	0.55
12:M:98:ILE:HG22	12:M:99:LYS:N	2.21	0.55
14:O:39:VAL:HG12	14:O:41:ARG:H	1.71	0.55
1:A:1329:A:C5'	15:P:29:ARG:HE	2.16	0.55
15:P:48:LEU:HD23	15:P:49:THR:N	2.21	0.55
15:P:77:ASN:HA	15:P:80:ARG:HD3	1.87	0.55
15:P:77:ASN:O	15:P:80:ARG:NH1	2.33	0.55
17:R:8:LYS:HE2	17:R:12:ILE:CD1	2.36	0.55
18:S:8:ARG:NH1	18:S:11:SER:O	2.40	0.55
20:U:41:LYS:O	20:U:44:LEU:HD23	2.07	0.55
1:A:191:G:HO2'	22:W:102:GLY:HA2	1.70	0.55
22:W:13:LEU:CD1	22:W:17:ARG:NH2	2.69	0.55
22:W:51:GLU:HA	22:W:54:LYS:HE3	1.87	0.55
19:T:26:GLN:HG2	19:T:37:LYS:HB3	1.88	0.55
1:A:1072:G:C4	1:A:1104:G:N2	2.75	0.55
1:A:1148:U:O2	1:A:1149:C:O4'	2.25	0.55
1:A:1429:C:H2'	1:A:1430:C:C5	2.42	0.55
1:A:274:A:HO2'	1:A:275:G:C1'	2.18	0.55
1:A:62:U:O2'	1:A:379:C:H1'	2.05	0.55
1:A:802:A:H2'	1:A:803:G:O4'	2.06	0.55
1:A:922:G:O2'	1:A:923:A:H5'	2.06	0.55
1:A:938:A:C2'	1:A:939:G:H5'	2.37	0.55
1:A:981:U:H6	1:A:981:U:H3'	1.71	0.55
1:A:961:U:C5	1:A:983:A:C6	2.95	0.55
4:E:153:ARG:O	4:E:153:ARG:CZ	2.54	0.55
4:E:27:LYS:HA	4:E:27:LYS:HE2	1.88	0.55
4:E:39:ILE:HG23	4:E:41:ILE:HD11	1.88	0.55
1:A:1057:G:H4'	5:F:197:GLY:N	2.21	0.55
5:F:34:LEU:O	5:F:38:ARG:HD3	2.06	0.55
5:F:95:THR:HB	5:F:97:LYS:HE2	1.87	0.55
6:G:121:VAL:HG22	6:G:126:ILE:HD11	1.87	0.55
6:G:191:ARG:HD3	6:G:192:GLU:N	2.21	0.55
6:G:200:GLU:O	6:G:203:VAL:N	2.40	0.55
7:H:135:THR:O	7:H:136:MET:C	2.44	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:144:THR:HG22	7:H:145:LYS:N	2.21	0.55
7:H:76:ILE:CG2	7:H:77:PRO:HD2	2.36	0.55
8:I:31:GLU:N	8:I:35:ALA:HB3	2.21	0.55
9:J:22:LEU:HD13	9:J:97:GLN:NE2	2.21	0.55
10:K:114:THR:C	10:K:116:LYS:H	2.09	0.55
10:K:85:ARG:HD2	10:K:134:ILE:O	2.07	0.55
10:K:63:LEU:H	10:K:63:LEU:CD1	1.91	0.55
11:L:4:TYR:CE2	11:L:88:TYR:HA	2.41	0.55
11:L:54:ASP:O	11:L:55:ALA:CB	2.54	0.55
1:A:1280:A:C4	12:M:41:PRO:HG3	2.41	0.55
12:M:60:ARG:H	12:M:60:ARG:HD3	1.72	0.55
13:N:57:THR:C	13:N:59:TYR:N	2.59	0.55
14:O:78:GLN:O	14:O:80:HIS:N	2.40	0.55
15:P:48:LEU:HD11	15:P:56:LEU:HD12	1.87	0.55
16:Q:55:GLY:O	16:Q:56:VAL:C	2.45	0.55
17:R:67:LEU:O	17:R:70:LEU:HB3	2.05	0.55
18:S:39:TYR:CE1	18:S:41:PRO:HG3	2.40	0.55
18:S:4:ILE:HG22	18:S:21:VAL:HG13	1.88	0.55
18:S:57:ARG:CA	18:S:60:LEU:HD12	2.22	0.55
8:I:50:TYR:OH	20:U:77:GLY:CA	2.53	0.55
1:A:340:U:C2	1:A:341:C:C5	2.93	0.55
1:A:962:C:C1'	1:A:1201:A:N1	2.62	0.55
1:A:1257:U:C2'	1:A:1258:G:OP2	2.55	0.55
1:A:1454:G:C4	1:A:1455:G:C8	2.95	0.55
1:A:1461:G:O2'	1:A:1462:G:H5'	2.07	0.55
1:A:1522:U:O2'	1:A:1523:G:H5'	2.06	0.55
1:A:22:G:H2'	1:A:23:C:C1'	2.36	0.55
1:A:246:A:H1'	1:A:247:G:H1'	1.88	0.55
1:A:432:A:C8	1:A:432:A:H3'	2.42	0.55
1:A:578:C:H5''	1:A:578:C:H6	1.72	0.55
1:A:597:G:C5	1:A:644:G:C2	2.94	0.55
1:A:687:A:C8	1:A:701:C:N4	2.74	0.55
1:A:1229:A:O2'	2:C:30:G:OP1	2.19	0.55
3:D:34:G:N2	3:D:35:A:O4'	2.40	0.55
4:E:101:MET:HB2	4:E:102:LEU:CD1	2.36	0.55
4:E:175:ARG:HD3	4:E:179:LYS:HZ1	1.70	0.55
5:F:14:ILE:HD12	5:F:179:ARG:HB2	1.89	0.55
5:F:78:GLY:C	5:F:80:GLY:H	2.10	0.55
6:G:120:LEU:HG	6:G:121:VAL:H	1.71	0.55
6:G:57:ARG:HD2	6:G:202:LEU:CD2	2.36	0.55
6:G:58:LEU:HD21	6:G:62:GLN:HG3	1.89	0.55
7:H:7:GLU:O	7:H:34:VAL:HA	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:81:GLU:CD	7:H:81:GLU:N	2.59	0.55
10:K:26:VAL:HG13	10:K:27:PRO:N	2.20	0.55
1:A:1371:G:OP1	11:L:12:GLU:HG2	2.06	0.55
13:N:69:ALA:O	13:N:72:ALA:HB3	2.06	0.55
15:P:52:GLU:HA	15:P:55:ARG:CG	2.36	0.55
16:Q:24:CYS:CB	16:Q:40:CYS:N	2.61	0.55
18:S:6:LEU:O	18:S:6:LEU:HD22	2.05	0.55
19:T:10:VAL:HG11	19:T:52:LYS:C	2.27	0.55
22:W:42:GLN:CA	22:W:42:GLN:HE21	2.19	0.55
22:W:44:ALA:CA	22:W:92:LEU:HD21	2.36	0.55
3:D:18:G:C2	3:D:19:G:H1'	2.42	0.55
1:A:1172:C:H2'	1:A:1173:G:C8	2.37	0.55
1:A:1060:C:H4'	12:M:52:GLY:CA	2.36	0.55
1:A:1145:C:O2'	1:A:1146:A:H8	1.88	0.55
1:A:1237:C:C4'	1:A:1334:G:H21	2.19	0.55
1:A:1431:C:H42	1:A:1469:G:H1	1.53	0.55
1:A:1443:G:OP1	1:A:1446:A:OP1	2.24	0.55
1:A:1514:C:C2	1:A:1515:C:C5	2.94	0.55
1:A:280:C:C4'	1:A:281:G:OP2	2.55	0.55
1:A:332:G:O2'	1:A:333:G:C5'	2.43	0.55
1:A:417:C:H2'	1:A:418:C:H6	1.72	0.55
1:A:422:C:OP2	1:A:422:C:C6	2.60	0.55
1:A:428:G:C2	1:A:430:A:N6	2.74	0.55
1:A:483:C:C3'	1:A:483:C:C6	2.90	0.55
1:A:503:C:O2	1:A:510:A:C2	2.59	0.55
1:A:551:U:H4'	14:O:119:LYS:HZ3	1.72	0.55
1:A:559:A:O2'	1:A:560:U:P	2.64	0.55
1:A:563:A:C2	1:A:567:G:C5	2.94	0.55
1:A:579:G:O4'	1:A:728:A:H1'	2.05	0.55
1:A:716:A:C2'	1:A:717:C:H5'	2.36	0.55
1:A:801:U:OP2	1:A:801:U:H6	1.90	0.55
1:A:812:C:O2'	1:A:813:U:OP2	2.23	0.55
1:A:889:A:H4'	1:A:890:G:OP1	2.06	0.55
4:E:165:VAL:CG2	4:E:166:ASP:H	2.16	0.55
5:F:145:GLY:O	5:F:146:ALA:HB2	2.07	0.55
5:F:29:TYR:CE2	5:F:33:LEU:HD12	2.42	0.55
5:F:34:LEU:HD23	5:F:35:GLU:H	1.66	0.55
6:G:61:LYS:CB	6:G:203:VAL:HG13	2.37	0.55
6:G:88:VAL:O	6:G:89:THR:C	2.45	0.55
7:H:92:LYS:HB3	7:H:119:LEU:HD12	1.89	0.55
7:H:81:GLU:HB3	7:H:90:VAL:HG23	1.89	0.55
8:I:5:GLU:HA	8:I:64:GLN:HA	1.87	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:14:ARG:HD2	10:K:15:ASN:N	2.21	0.55
10:K:34:GLU:O	10:K:38:ILE:HG12	2.06	0.55
10:K:92:ARG:HH11	10:K:92:ARG:HG2	1.72	0.55
11:L:114:TYR:HA	12:M:60:ARG:HH22	1.71	0.55
14:O:117:ARG:NH2	14:O:124:LYS:HG2	2.21	0.55
14:O:27:LEU:HG	14:O:28:LYS:H	1.71	0.55
17:R:85:LEU:H	17:R:85:LEU:HD12	1.71	0.55
20:U:25:THR:HG22	20:U:42:ARG:CZ	2.36	0.55
21:V:13:ASP:OD2	21:V:17:GLU:HG2	2.06	0.55
21:V:50:ALA:CB	21:V:57:HIS:HB3	2.33	0.55
22:W:66:ALA:CB	22:W:72:LEU:HB2	2.37	0.55
22:W:41:ILE:O	22:W:91:LEU:CD1	2.55	0.55
3:D:58:A:C2	3:D:61:C:C6	2.94	0.55
1:A:1148:U:O2	1:A:1149:C:C6	2.59	0.55
1:A:1196:U:H5'	1:A:1197:G:H5'	1.88	0.55
1:A:1301:U:H3	1:A:1303:C:H1'	1.72	0.55
1:A:1323:G:H5''	1:A:1362(A):C:N3	2.20	0.55
1:A:533:A:N7	1:A:536:C:N4	2.54	0.55
1:A:556:C:H2'	1:A:557:G:O4'	2.07	0.55
1:A:73:G:H2'	1:A:74:C:C6	2.41	0.55
1:A:762:C:H2'	1:A:763:G:H8	1.71	0.55
1:A:842:C:H4'	1:A:848:C:C4	2.42	0.55
2:C:34:C:C3'	2:C:35:A:C5'	2.80	0.55
4:E:118:LEU:HD11	4:E:141:GLU:CD	2.27	0.55
4:E:76:GLN:O	4:E:77:ALA:CB	2.54	0.55
5:F:142:MET:HA	5:F:146:ALA:CB	2.37	0.55
6:G:106:TYR:C	6:G:106:TYR:CD1	2.79	0.55
6:G:128:VAL:O	6:G:130:GLY:O	2.24	0.55
6:G:70:ILE:HD12	6:G:100:ARG:NH2	2.22	0.55
9:J:111:ARG:HB2	9:J:119:ARG:CG	2.36	0.55
9:J:21:VAL:HG23	9:J:22:LEU:H	1.72	0.55
1:A:1374:A:H4'	9:J:28:ASN:OD1	2.07	0.55
10:K:116:LYS:HG2	10:K:129:VAL:HG21	1.89	0.55
10:K:9:MET:CG	10:K:26:VAL:HG11	2.37	0.55
1:A:1344:C:H5'	11:L:120:ARG:O	2.07	0.55
12:M:17:ASP:O	12:M:21:GLN:HB3	2.06	0.55
13:N:84:VAL:O	13:N:84:VAL:HG23	2.05	0.55
14:O:61:THR:O	14:O:62:SER:CB	2.55	0.55
15:P:38:GLY:O	15:P:39:ILE:HG23	2.06	0.55
16:Q:48:ALA:O	16:Q:51:GLY:N	2.39	0.55
17:R:9:GLN:O	17:R:12:ILE:N	2.40	0.55
18:S:6:LEU:CA	18:S:18:ARG:O	2.55	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:59:U:O2	3:D:59:U:C2'	2.55	0.55
3:D:65:U:C6	3:D:65:U:O5'	2.59	0.55
5:F:157:ILE:HG22	5:F:157:ILE:O	2.05	0.55
11:L:25:LYS:N	11:L:25:LYS:HD2	2.20	0.55
3:D:12:U:O2'	3:D:13:C:O5'	2.23	0.55
1:A:1047:G:C2'	1:A:1048:G:H5'	2.36	0.55
1:A:1065:U:OP2	1:A:1190:G:N2	2.39	0.55
1:A:994:A:C8	1:A:1216:G:H4'	2.41	0.55
1:A:1316:G:O6	21:V:6:LYS:CE	2.54	0.55
1:A:1326:C:O2'	1:A:1327:C:H5'	2.06	0.55
1:A:1234:C:C4'	1:A:1364:U:H1'	2.37	0.55
1:A:1522:U:H2'	1:A:1523:G:C8	2.37	0.55
1:A:198:G:O2'	1:A:199:G:C5'	2.52	0.55
1:A:225:C:H2'	1:A:226:G:O5'	2.07	0.55
1:A:257:G:O2'	1:A:258:G:H5'	2.06	0.55
1:A:299:G:C2	1:A:300:A:N1	2.75	0.55
1:A:321:A:C2	1:A:333:G:C2	2.95	0.55
1:A:538:G:O2'	1:A:539:A:H5'	2.07	0.55
1:A:594:G:N7	1:A:595:G:C2	2.75	0.55
1:A:600:C:H5'	10:K:129:VAL:HA	1.88	0.55
1:A:640:A:C5	1:A:641:U:C6	2.95	0.55
1:A:643:C:C2	1:A:644:G:C8	2.95	0.55
1:A:688:G:N3	1:A:704:A:C2	2.74	0.55
1:A:81:G:C6	1:A:82:U:O4	2.60	0.55
1:A:881:G:O2'	1:A:882:C:H5'	2.06	0.55
2:C:63:G:H2'	2:C:64:G:H8	1.72	0.55
5:F:136:GLN:O	5:F:139:GLN:HB2	2.07	0.55
5:F:182:ILE:HG22	5:F:202:ILE:O	2.06	0.55
5:F:29:TYR:HD2	5:F:29:TYR:C	2.11	0.55
5:F:40:ARG:HA	5:F:43:LEU:HD13	1.87	0.55
5:F:57:ILE:HG23	5:F:64:VAL:HG13	1.88	0.55
6:G:188:LEU:O	6:G:189:PRO:O	2.25	0.55
7:H:31:LEU:HD23	7:H:31:LEU:C	2.27	0.55
10:K:36:LEU:O	10:K:39:LEU:HB2	2.07	0.55
13:N:112:THR:O	13:N:112:THR:HG22	2.07	0.55
14:O:60:LEU:CD1	14:O:64:TYR:HB3	2.36	0.55
15:P:27:LYS:NZ	15:P:31:LYS:NZ	2.55	0.55
16:Q:4:LYS:O	16:Q:6:LEU:N	2.40	0.55
19:T:94:ASN:HB3	19:T:104:LYS:HB2	1.87	0.55
19:T:104:LYS:HD3	19:T:105:ALA:H	1.71	0.55
19:T:60:ILE:CD1	19:T:61:GLU:O	2.55	0.55
13:N:110:ASP:CB	20:U:85:LEU:HB3	2.30	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:30:LEU:HD12	21:V:59:PRO:CB	2.37	0.55
22:W:78:ALA:O	22:W:79:ARG:C	2.46	0.55
1:A:1035:A:H2'	1:A:1036:G:C5'	2.34	0.55
1:A:748:C:O2'	1:A:749:C:C6	2.58	0.55
1:A:1166:G:C2	1:A:1171:G:O6	2.60	0.55
1:A:525:C:N4	1:A:526:C:N4	2.54	0.55
1:A:1157:A:N1	1:A:1180:A:C4	2.75	0.55
1:A:1202:G:H1'	16:Q:42:ILE:HD11	1.87	0.55
1:A:1261:A:H3'	1:A:1262:C:C6	2.41	0.55
1:A:1316:G:H5'	16:Q:17:LYS:HZ3	1.70	0.55
1:A:1305:G:N3	1:A:1331:G:N2	2.55	0.55
1:A:145:G:C2'	1:A:146:G:H5'	2.36	0.55
1:A:22:G:C4	1:A:23:C:C5	2.94	0.55
1:A:236:G:C4	1:A:237:C:C5	2.95	0.55
1:A:646:U:H2'	1:A:647:C:H6	1.71	0.55
1:A:715:A:O2'	1:A:716:A:H5'	2.06	0.55
1:A:859:A:H2'	1:A:860:A:C4'	2.36	0.55
1:A:959:A:H1'	1:A:985:C:H1'	1.89	0.55
1:A:965:A:C8	1:A:969:A:N3	2.75	0.55
2:C:14:A:N7	2:C:15:G:N7	2.54	0.55
2:C:38:A:H2'	2:C:39:C:C5'	2.36	0.55
4:E:109:SER:O	4:E:110:GLN:C	2.43	0.55
4:E:150:SER:HA	4:E:153:ARG:CG	2.37	0.55
4:E:67:THR:HG21	4:E:155:LEU:HD11	1.89	0.55
4:E:163:PHE:HE1	4:E:201:ILE:HD13	1.70	0.55
5:F:42:LEU:HD23	5:F:45:LYS:HD2	1.89	0.55
6:G:144:ASP:C	6:G:184:LYS:HD3	2.27	0.55
7:H:9:LYS:CG	7:H:112:LEU:HD23	2.35	0.55
9:J:69:VAL:HG11	9:J:104:LEU:HG	1.87	0.55
9:J:139:GLU:HA	9:J:142:GLU:CG	2.37	0.55
9:J:87:VAL:CG2	9:J:154:TYR:HB2	2.36	0.55
10:K:104:ARG:NE	10:K:138:TRP:CZ3	2.74	0.55
1:A:589:C:OP1	10:K:5:PRO:HG2	2.06	0.55
10:K:63:LEU:HB2	10:K:65:TYR:CE1	2.42	0.55
11:L:9:ARG:CD	11:L:14:VAL:HG22	2.26	0.55
14:O:117:ARG:NH2	14:O:124:LYS:CG	2.70	0.55
15:P:11:ARG:O	15:P:13:LYS:N	2.40	0.55
15:P:3:ARG:HG3	15:P:7:VAL:CG1	2.36	0.55
16:Q:39:LEU:HB2	16:Q:44:LEU:HB2	1.89	0.55
20:U:34:TYR:HD1	20:U:35:ARG:HG3	1.72	0.55
3:D:50:G:N1	3:D:65:U:N3	2.55	0.55
1:A:1192:C:C3'	1:A:1192:C:H6	1.90	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1055:A:N6	1:A:1206:G:C5	2.75	0.55
1:A:1377:A:HO2'	1:A:1378:C:P	2.29	0.55
1:A:1500:A:OP1	1:A:1508:G:OP1	2.24	0.55
1:A:327:A:O3'	1:A:328:C:O4'	2.24	0.55
1:A:351:G:O5'	1:A:351:G:C8	2.60	0.55
1:A:482:A:N1	1:A:483:C:C2	2.75	0.55
1:A:507:C:P	1:A:508:C:H3'	2.46	0.55
1:A:611:A:H61	1:A:629:G:H1	1.54	0.55
2:C:24:U:H2'	2:C:25:C:H6	1.71	0.55
4:E:142:LEU:O	4:E:143:GLU:C	2.45	0.55
5:F:14:ILE:CG2	5:F:15:THR:HG23	2.29	0.55
5:F:182:ILE:CG2	5:F:202:ILE:O	2.55	0.55
6:G:150:GLU:HA	6:G:153:ARG:NH2	2.21	0.55
6:G:25:ARG:C	6:G:27:TYR:N	2.56	0.55
1:A:8:A:C5'	7:H:120:THR:O	2.52	0.55
7:H:141:GLN:C	7:H:142:LEU:HG	2.25	0.55
7:H:57:LYS:CG	7:H:61:TYR:HE2	2.20	0.55
8:I:49:ALA:CB	20:U:80:PRO:CD	2.78	0.55
8:I:33:TYR:CB	8:I:75:LEU:HD12	2.36	0.55
9:J:69:VAL:HG21	9:J:104:LEU:CD1	2.37	0.55
9:J:95:ARG:O	9:J:97:GLN:N	2.40	0.55
10:K:101:PRO:O	10:K:102:ARG:HG3	2.07	0.55
10:K:112:LEU:HD11	10:K:131:GLY:N	2.22	0.55
11:L:103:THR:CG2	11:L:104:ARG:H	2.20	0.55
11:L:40:LEU:O	11:L:42:ARG:N	2.40	0.55
12:M:50:ILE:N	16:Q:41:ARG:HD2	2.21	0.55
12:M:5:ARG:HD3	12:M:6:ILE:N	2.21	0.55
12:M:4:ILE:HG12	12:M:99:LYS:O	2.07	0.55
1:A:1227:A:O2'	15:P:115:LYS:HG2	2.07	0.55
15:P:8:GLU:C	15:P:10:PRO:CD	2.75	0.55
17:R:36:ILE:HG22	17:R:37:ASN:H	1.72	0.55
1:A:189:U:H3	19:T:63:ARG:CB	2.19	0.55
21:V:51:VAL:HB	21:V:58:VAL:CG2	2.37	0.55
22:W:36:LEU:CD2	22:W:36:LEU:C	2.75	0.55
1:A:1001:G:C4	1:A:1002:G:H1'	2.41	0.55
1:A:1382:C:O2'	1:A:1383:C:H5'	2.07	0.55
1:A:1227:A:OP2	15:P:111:LYS:HE2	2.06	0.54
1:A:1301:U:O2	1:A:1301:U:H2'	2.06	0.54
1:A:1430:C:O2'	1:A:1431:C:O5'	2.25	0.54
1:A:1468:A:H2'	1:A:1469:G:O5'	2.07	0.54
1:A:192:U:H4'	22:W:57:ARG:NH1	2.17	0.54
1:A:195:A:P	22:W:68:LYS:NZ	2.80	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:59:A:C2	1:A:331:G:C2	2.94	0.54
1:A:51:A:N6	1:A:353:A:C2	2.74	0.54
1:A:627:G:O2'	1:A:628:G:H5'	2.07	0.54
1:A:822:C:C2'	1:A:823:G:O5'	2.55	0.54
1:A:862:C:C1'	1:A:874:G:H5''	2.35	0.54
1:A:886:G:H2'	1:A:887:G:H8	1.71	0.54
1:A:888:G:H3'	1:A:889:A:H8	1.72	0.54
4:E:102:LEU:HD21	4:E:173:ALA:HB1	1.90	0.54
4:E:204:ASN:HD22	4:E:204:ASN:C	2.10	0.54
5:F:192:THR:HG22	5:F:192:THR:O	2.05	0.54
5:F:67:THR:HG23	5:F:104:GLN:HG2	1.89	0.54
5:F:91:LEU:HD23	5:F:92:ALA:N	2.22	0.54
6:G:179:GLU:O	6:G:181:MET:N	2.34	0.54
6:G:61:LYS:HE3	6:G:61:LYS:C	2.28	0.54
7:H:103:GLY:O	7:H:106:PRO:CD	2.54	0.54
1:A:9:G:P	7:H:122:GLU:OE1	2.65	0.54
8:I:27:GLN:HA	8:I:30:LEU:CD1	2.37	0.54
8:I:59:TYR:CD2	8:I:61:LEU:HD21	2.41	0.54
9:J:86:GLN:CB	9:J:148:ASN:ND2	2.70	0.54
11:L:48:GLU:N	11:L:49:PRO:CD	2.69	0.54
11:L:96:LEU:HG	11:L:101:PHE:CD1	2.42	0.54
12:M:28:ARG:HG2	12:M:28:ARG:HH11	1.71	0.54
12:M:27:ALA:HB1	12:M:81:THR:HG22	1.89	0.54
14:O:78:GLN:N	14:O:81:SER:OG	2.35	0.54
15:P:34:LEU:HD13	15:P:41:PRO:HB3	1.88	0.54
1:A:1216:G:H5''	16:Q:5:ALA:HB2	1.89	0.54
1:A:275:G:C5'	19:T:14:LYS:NZ	2.67	0.54
19:T:40:LYS:HB3	19:T:42:TYR:CE1	2.38	0.54
22:W:98:PRO:O	22:W:99:LEU:O	2.25	0.54
3:D:54:U:H3'	3:D:55:U:C6	2.41	0.54
3:D:1:G:N2	3:D:73:A:C4	2.75	0.54
1:A:1054:C:OP2	1:A:1197:G:OP2	2.25	0.54
1:A:1126:U:O2'	1:A:1127:G:H5'	2.07	0.54
1:A:1158:C:H2'	1:A:1158:C:O2	2.07	0.54
1:A:1403:C:O5'	1:A:1403:C:H6	1.89	0.54
1:A:186(D):C:C2	1:A:186(E):C:C5	2.95	0.54
1:A:198:G:N2	1:A:199:G:C1'	2.70	0.54
1:A:198:G:H21	1:A:199:G:H1'	1.71	0.54
1:A:246:A:C6	1:A:279:A:C5	2.95	0.54
1:A:403:C:H2'	1:A:404:U:C6	2.42	0.54
1:A:836:G:C6	1:A:851:G:C6	2.94	0.54
1:A:909:A:C2	1:A:910:C:C1'	2.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:75:LYS:NZ	4:E:78:GLN:NE2	2.56	0.54
5:F:18:TRP:O	5:F:21:ARG:HG3	2.06	0.54
5:F:5:ILE:N	5:F:5:ILE:HD12	2.22	0.54
6:G:75:PHE:CD1	6:G:93:PHE:HZ	2.25	0.54
13:N:22:HIS:HA	13:N:85:ARG:HB2	1.90	0.54
13:N:48:ILE:HD11	13:N:64:ALA:CA	2.35	0.54
13:N:88:GLY:HA3	13:N:91:ARG:CA	2.38	0.54
14:O:78:GLN:C	14:O:80:HIS:N	2.58	0.54
14:O:35:GLY:O	14:O:82:VAL:CG1	2.53	0.54
15:P:52:GLU:HA	15:P:55:ARG:NE	2.22	0.54
15:P:91:ARG:HH12	15:P:103:THR:HG22	1.72	0.54
15:P:92:HIS:CD2	15:P:98:VAL:HG21	2.41	0.54
1:A:1316:G:H5''	16:Q:17:LYS:NZ	2.23	0.54
16:Q:41:ARG:HA	16:Q:44:LEU:HD22	1.89	0.54
18:S:75:ARG:HG3	18:S:75:ARG:HH11	1.71	0.54
1:A:761:G:H5''	19:T:102:GLY:HA3	1.82	0.54
19:T:104:LYS:HD3	19:T:105:ALA:HB2	1.88	0.54
19:T:62:SER:HG	19:T:72:ARG:HG2	1.70	0.54
20:U:74:ARG:HA	20:U:79:LEU:HD21	1.89	0.54
21:V:15:LEU:HD12	21:V:44:MET:HE2	1.88	0.54
22:W:64:ASP:O	22:W:65:LYS:C	2.45	0.54
3:D:70:G:H2'	3:D:71:G:C8	2.42	0.54
14:O:126:LYS:N	14:O:126:LYS:HD2	2.21	0.54
1:A:1085:U:P	1:A:1086:U:O4	2.65	0.54
1:A:110:C:C2'	1:A:111:G:H5'	2.38	0.54
1:A:1137:C:H5'	1:A:1138:G:C6	2.42	0.54
1:A:1048:G:C1'	1:A:1215:G:H5''	2.38	0.54
1:A:1217:C:O2'	1:A:1218:C:H5'	2.08	0.54
1:A:1312:G:O2'	1:A:1313:U:H5'	2.08	0.54
1:A:1324:A:C6	1:A:1325:C:C4	2.95	0.54
1:A:1499:A:H3'	1:A:1499:A:C8	2.41	0.54
1:A:1520:G:O2'	1:A:1521:G:H5'	2.08	0.54
1:A:1532:U:C4'	1:A:1533:C:OP1	2.55	0.54
1:A:20:U:N3	1:A:21:G:C4	2.76	0.54
1:A:350:G:N2	1:A:351:G:C2	2.75	0.54
1:A:643:C:O2'	10:K:132:GLU:OE2	2.24	0.54
1:A:645:C:O2'	1:A:646:U:H5'	2.06	0.54
1:A:739:C:OP1	17:R:2:PRO:HG2	2.07	0.54
1:A:947:G:H2'	1:A:948:C:C6	2.41	0.54
1:A:953:G:H4'	15:P:124:PRO:O	2.07	0.54
1:A:975:A:N6	1:A:1366:C:O2	2.40	0.54
2:C:47:U:O4	2:C:49:G:O2'	2.25	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:150:SER:C	4:E:153:ARG:HB2	2.27	0.54
4:E:69:LEU:HB2	4:E:159:PRO:HB2	1.90	0.54
4:E:178:ARG:HE	4:E:196:LEU:CB	2.18	0.54
1:A:1256:A:H5''	5:F:27:LYS:HZ2	1.73	0.54
5:F:37:GLN:O	5:F:38:ARG:C	2.42	0.54
6:G:112:VAL:HG12	6:G:112:VAL:O	2.07	0.54
6:G:131:ARG:CD	6:G:132:ARG:H	2.20	0.54
6:G:43:HIS:HB3	6:G:46:LYS:CG	2.37	0.54
7:H:31:LEU:O	7:H:31:LEU:HD23	2.07	0.54
7:H:91:LEU:C	7:H:91:LEU:CD2	2.61	0.54
8:I:64:GLN:C	8:I:65:VAL:HG12	2.27	0.54
1:A:1298:C:C5	9:J:114:ARG:HD3	2.42	0.54
9:J:113:GLU:CB	9:J:118:VAL:HG11	2.38	0.54
9:J:146:GLU:O	9:J:149:ARG:N	2.41	0.54
9:J:54:THR:O	9:J:54:THR:HG23	2.07	0.54
10:K:122:ARG:NH1	10:K:123:GLU:HB3	2.22	0.54
11:L:10:ARG:HD3	11:L:104:ARG:O	2.07	0.54
13:N:42:TRP:O	13:N:71:LYS:HE2	2.07	0.54
14:O:44:THR:CB	14:O:45:PRO:CD	2.83	0.54
14:O:33:ARG:HG2	14:O:60:LEU:CD2	2.37	0.54
15:P:67:GLU:CD	15:P:68:GLY:H	2.10	0.54
15:P:91:ARG:HD3	15:P:96:LEU:CG	2.37	0.54
22:W:48:LYS:HB3	22:W:51:GLU:CD	2.27	0.54
1:A:1000:A:C2	1:A:1001:G:N7	2.75	0.54
5:F:157:ILE:HG21	5:F:164:ARG:CZ	2.36	0.54
1:A:1014:A:H2'	1:A:1015:A:C8	2.43	0.54
1:A:1128:C:C5	1:A:1139:G:O6	2.60	0.54
1:A:1321:C:C5	1:A:1322:C:C2'	2.89	0.54
1:A:1474:G:N1	1:A:1475:G:C5	2.76	0.54
1:A:791:G:N2	1:A:1498:U:P	2.79	0.54
1:A:193:C:H2'	1:A:194:C:H6	1.69	0.54
1:A:325:A:H2'	1:A:326:G:C5'	2.37	0.54
1:A:451:A:H1'	1:A:452:A:C4	2.43	0.54
1:A:529:G:N1	14:O:49:ASN:HB3	2.22	0.54
1:A:575:G:O2'	1:A:576:G:C5'	2.55	0.54
1:A:611:A:N6	1:A:629:G:H1	2.06	0.54
1:A:632:A:C4	1:A:633:G:C8	2.96	0.54
1:A:828:A:C5'	1:A:859:A:N1	2.70	0.54
1:A:858:G:H22	1:A:869:G:H3'	1.72	0.54
1:A:878:G:P	10:K:88:LYS:HG2	2.47	0.54
1:A:90:C:N3	1:A:91:C:C5	2.76	0.54
2:C:59:A:C5	2:C:60:U:C5	2.96	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:58:A:C8	2:C:61:C:C4	2.96	0.54
4:E:20:GLU:O	4:E:39:ILE:HG13	2.07	0.54
4:E:50:GLU:O	4:E:51:LEU:C	2.46	0.54
5:F:130:VAL:HA	5:F:133:ALA:HB3	1.88	0.54
5:F:49:SER:O	5:F:51:GLY:N	2.40	0.54
5:F:19:GLU:HB3	5:F:55:VAL:O	2.07	0.54
6:G:101:LEU:HD23	6:G:135:LEU:O	2.07	0.54
6:G:104:VAL:O	6:G:107:ARG:HB2	2.07	0.54
6:G:177:ASP:CG	6:G:179:GLU:HB2	2.27	0.54
7:H:41:VAL:CG1	7:H:112:LEU:HD12	2.37	0.54
8:I:7:ASN:ND2	8:I:62:TRP:CD1	2.75	0.54
9:J:108:ALA:O	9:J:110:GLN:N	2.41	0.54
10:K:28:ALA:CB	10:K:57:PRO:O	2.56	0.54
12:M:11:PHE:CE2	12:M:66:ARG:O	2.61	0.54
12:M:31:GLY:CA	12:M:81:THR:OG1	2.56	0.54
14:O:60:LEU:HD11	14:O:64:TYR:HB3	1.89	0.54
14:O:85:ILE:CG1	14:O:87:GLY:H	2.19	0.54
14:O:6:THR:OG1	14:O:9:GLN:CB	2.56	0.54
1:A:1228:C:OP2	15:P:111:LYS:NZ	2.34	0.54
1:A:1115:C:O4'	16:Q:61:TRP:HA	2.08	0.54
17:R:40:SER:O	17:R:43:LEU:N	2.41	0.54
17:R:79:ARG:HB2	17:R:79:ARG:CZ	2.38	0.54
19:T:56:VAL:C	19:T:57:VAL:HG12	2.28	0.54
19:T:58:GLU:OE1	19:T:74:LEU:HB3	2.07	0.54
21:V:78:ARG:O	21:V:79:THR:OG1	2.24	0.54
22:W:16:HIS:O	22:W:19:SER:HB3	2.07	0.54
22:W:23:ARG:HA	22:W:26:ASN:HD21	1.71	0.54
3:D:15:G:C6	3:D:48:C:N4	2.75	0.54
3:D:60:U:H2'	3:D:61:C:OP1	2.07	0.54
1:A:1004:A:H8	1:A:1036:G:C6	2.25	0.54
1:A:1095:U:H5''	1:A:1109:C:N3	2.23	0.54
1:A:1102:A:H2'	1:A:1103:C:C6	2.42	0.54
1:A:1132:C:C4	1:A:1133:G:N7	2.76	0.54
1:A:1151:A:OP1	12:M:41:PRO:CA	2.54	0.54
1:A:1229:A:O2'	1:A:1230:C:H5'	2.08	0.54
1:A:1240:U:O2'	1:A:1241:G:P	2.65	0.54
1:A:1399:C:N4	1:A:1502:A:C8	2.75	0.54
1:A:1515:C:O2	1:A:1516:G:C8	2.61	0.54
1:A:191:G:H21	22:W:103:GLY:C	2.10	0.54
1:A:199:G:H2'	1:A:200:G:C8	2.35	0.54
1:A:246:A:HO2'	1:A:247:G:C4'	2.13	0.54
1:A:270:A:C6	1:A:271:C:C4	2.96	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:333:G:O2'	1:A:334:C:H5'	2.08	0.54
1:A:428:G:H5'	1:A:430:A:O4'	2.06	0.54
1:A:520:A:OP2	14:O:51:ALA:HB1	2.08	0.54
1:A:795:C:H4'	1:A:1506:U:C2	2.42	0.54
1:A:942:G:N2	11:L:124:GLN:CD	2.60	0.54
2:C:40:C:H2'	2:C:41:C:H5''	1.88	0.54
2:C:40:C:O2	2:C:40:C:H2'	2.07	0.54
2:C:59:A:N3	2:C:59:A:H2'	2.21	0.54
2:C:59:A:C6	2:C:60:U:C5	2.96	0.54
4:E:15:VAL:HG22	4:E:209:ARG:CD	2.34	0.54
4:E:178:ARG:HD2	4:E:184:VAL:HG21	1.89	0.54
4:E:52:GLU:CG	4:E:53:ARG:N	2.69	0.54
5:F:12:LEU:HD11	16:Q:57:ARG:HB2	1.90	0.54
5:F:152:ILE:HG22	5:F:167:TRP:HE3	1.72	0.54
6:G:101:LEU:C	6:G:101:LEU:HD12	2.27	0.54
6:G:146:ILE:O	6:G:147:ALA:HB2	2.07	0.54
6:G:173:TRP:HD1	6:G:185:PHE:CE2	2.22	0.54
6:G:20:TYR:CB	6:G:26:CYS:O	2.55	0.54
6:G:43:HIS:HB3	6:G:46:LYS:HB2	1.90	0.54
7:H:79:GLU:CB	7:H:92:LYS:HA	2.30	0.54
9:J:15:ASP:HB2	9:J:23:VAL:CG1	2.37	0.54
9:J:95:ARG:C	9:J:97:GLN:N	2.60	0.54
10:K:11:THR:HA	10:K:14:ARG:NH1	2.22	0.54
1:A:755:G:H21	10:K:1:MET:CE	2.20	0.54
10:K:51:VAL:HG21	10:K:60:ARG:HB3	1.89	0.54
11:L:114:TYR:HD1	12:M:60:ARG:NH2	2.06	0.54
9:J:153:HIS:CE1	13:N:58:PRO:HD2	2.41	0.54
14:O:83:VAL:HG23	14:O:104:VAL:HB	1.90	0.54
14:O:56:ALA:CB	14:O:100:ILE:HD11	2.37	0.54
15:P:27:LYS:HD2	15:P:31:LYS:HZ3	1.70	0.54
12:M:49:VAL:CG1	16:Q:45:ARG:HD2	2.37	0.54
19:T:45:HIS:HB2	19:T:69:LYS:HD3	1.90	0.54
20:U:53:ARG:C	20:U:55:ARG:N	2.61	0.54
22:W:73:HIS:O	22:W:76:ALA:N	2.38	0.54
3:D:72:C:O2	3:D:72:C:H2'	2.06	0.54
1:A:1118:C:O4'	1:A:1179:A:H1'	2.07	0.54
1:A:123:C:OP1	1:A:312:C:H5'	2.06	0.54
1:A:1371:G:OP2	11:L:11:LYS:HE3	2.07	0.54
1:A:1403:C:C6	1:A:1403:C:O5'	2.61	0.54
1:A:1433:A:C2'	1:A:1434:A:H5'	2.38	0.54
1:A:1443:G:C5'	1:A:1446:A:H5'	2.37	0.54
1:A:148:G:C2	1:A:175:C:N3	2.76	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:198:G:N2	1:A:199:G:N9	2.56	0.54
1:A:232:G:C6	1:A:233:C:N4	2.75	0.54
1:A:128:G:H21	1:A:234:C:H1'	1.73	0.54
1:A:425:G:O3'	6:G:45:GLN:NE2	2.30	0.54
1:A:575:G:HO2'	1:A:576:G:P	2.31	0.54
1:A:664:G:C8	1:A:664:G:C3'	2.90	0.54
1:A:688:G:H2'	1:A:689:C:H5'	1.88	0.54
1:A:698:G:O2'	1:A:699:C:H5'	2.08	0.54
1:A:707:C:H4'	13:N:20:TYR:CG	2.42	0.54
1:A:578:C:O2'	1:A:729:A:O4'	2.25	0.54
1:A:727:G:N2	1:A:731:G:C4	2.75	0.54
1:A:80:G:C3'	1:A:81:G:H8	2.18	0.54
1:A:88:C:C2'	1:A:89:U:C5	2.91	0.54
1:A:935:A:C4	1:A:936:C:C5	2.96	0.54
2:C:62:C:O2'	2:C:63:G:C5'	2.55	0.54
5:F:73:PRO:HD3	5:F:105:GLU:OE2	2.08	0.54
1:A:1189:C:O2'	5:F:176:HIS:NE2	2.40	0.54
5:F:64:VAL:HB	5:F:99:VAL:HG11	1.90	0.54
6:G:69:GLY:C	6:G:70:ILE:HG12	2.27	0.54
9:J:107:ALA:CB	9:J:123:GLU:OE1	2.54	0.54
11:L:98:PRO:O	11:L:100:GLY:N	2.41	0.54
12:M:3:LYS:HG3	12:M:75:ILE:HA	1.88	0.54
13:N:66:LEU:O	13:N:69:ALA:HB3	2.08	0.54
15:P:16:ASP:O	15:P:19:LEU:HG	2.08	0.54
17:R:41:GLU:HA	17:R:44:LYS:CE	2.38	0.54
17:R:69:TYR:O	17:R:70:LEU:C	2.44	0.54
17:R:9:GLN:O	17:R:12:ILE:HB	2.08	0.54
1:A:468:A:H1'	18:S:82:GLN:NE2	2.22	0.54
20:U:63:GLN:HA	20:U:66:LEU:CD2	2.35	0.54
13:N:84:VAL:HG21	20:U:88:LYS:NZ	2.22	0.54
21:V:22:LEU:HA	21:V:25:LYS:NZ	2.22	0.54
22:W:50:GLU:HA	22:W:53:LEU:HD12	1.90	0.54
22:W:87:LYS:HA	22:W:90:GLN:HB2	1.90	0.54
3:D:56:C:P	3:D:57:G:O6	2.65	0.54
1:A:1010:G:N2	1:A:1020:U:H1'	2.22	0.54
14:O:125:PRO:C	14:O:127:GLU:H	2.11	0.54
12:M:96:ILE:O	12:M:96:ILE:HG13	2.07	0.54
1:A:1085:U:H5'	1:A:1094:G:N2	2.22	0.54
1:A:985:C:C2	1:A:1221:G:N2	2.76	0.54
1:A:1239:A:C2	1:A:1298:C:C5	2.95	0.54
1:A:1251:A:N6	1:A:1285:A:H2	2.04	0.54
1:A:1252:A:C4	1:A:1253:G:C8	2.96	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1316:G:N3	1:A:1318:A:N7	2.56	0.54
1:A:1419:G:H2'	1:A:1420:C:C6	2.43	0.54
1:A:1440:C:C2	1:A:1441:G:C8	2.96	0.54
1:A:226:G:N2	1:A:227:G:H1'	2.22	0.54
1:A:23:C:C2'	1:A:23:C:O2	2.55	0.54
1:A:412:A:O2'	1:A:413:G:C8	2.61	0.54
1:A:640:A:O2'	1:A:641:U:H5'	2.08	0.54
1:A:729:A:C2	1:A:730:G:C1'	2.91	0.54
1:A:784:C:H2'	1:A:785:G:O4'	2.08	0.54
1:A:803:G:O2'	1:A:804:U:H5'	2.07	0.54
1:A:828:A:C2	1:A:859:A:C1'	2.90	0.54
1:A:872:A:O2'	1:A:873:A:C3'	2.50	0.54
1:A:977:A:N6	1:A:1224:G:P	2.81	0.54
2:C:74:C:H6	2:C:75:C:H5''	1.73	0.54
4:E:57:PHE:CD1	4:E:199:TYR:CE1	2.92	0.54
5:F:201:TYR:CD1	5:F:201:TYR:N	2.76	0.54
6:G:3:ARG:HG3	6:G:3:ARG:NH1	2.22	0.54
6:G:83:SER:N	6:G:89:THR:CG2	2.68	0.54
6:G:78:LEU:HD22	6:G:93:PHE:CD2	2.43	0.54
9:J:134:ALA:O	9:J:136:LYS:N	2.41	0.54
9:J:136:LYS:O	9:J:140:ASP:OD1	2.26	0.54
9:J:29:LYS:HD3	9:J:102:ARG:HA	1.90	0.54
10:K:63:LEU:CB	10:K:65:TYR:OH	2.55	0.54
11:L:113:LYS:HD2	11:L:113:LYS:H	1.72	0.54
11:L:117:HIS:C	11:L:119:ALA:H	2.11	0.54
11:L:42:ARG:O	11:L:43:ALA:C	2.46	0.54
1:A:796:C:OP1	13:N:123:LYS:HD3	2.07	0.54
13:N:48:ILE:CG1	13:N:64:ALA:HB2	2.37	0.54
9:J:150:ALA:HA	13:N:59:TYR:CG	2.43	0.54
14:O:117:ARG:NH2	14:O:124:LYS:HA	2.23	0.54
15:P:60:VAL:HA	15:P:63:THR:CB	2.38	0.54
15:P:86:CYS:O	15:P:90:LEU:HD12	2.07	0.54
1:A:755:G:OP2	17:R:65:ARG:HG2	2.07	0.54
19:T:22:LEU:HD11	19:T:39:SER:OG	2.07	0.54
23:X:18:TYR:CG	23:X:24:ARG:HD3	2.43	0.54
23:X:4:GLY:C	23:X:6:ARG:N	2.50	0.54
3:D:44:G:C6	3:D:45:U:O2	2.60	0.54
3:D:47:U:N3	3:D:50:G:OP1	2.40	0.54
3:D:48:C:C2	3:D:59:U:O2'	2.47	0.54
1:A:1161:C:H6	1:A:1161:C:OP2	1.90	0.54
1:A:1103:C:O2'	4:E:111:ARG:CD	2.46	0.54
1:A:1193:G:C8	1:A:1193:G:H3'	2.43	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1396:A:C2'	1:A:1397:C:OP2	2.56	0.54
1:A:183:G:O6	1:A:194:C:N3	2.40	0.54
1:A:197:A:C2'	1:A:198:G:OP2	2.54	0.54
1:A:422:C:H6	1:A:422:C:OP2	1.89	0.54
1:A:897:C:C2	1:A:903:G:C2	2.95	0.54
1:A:945:G:C2	1:A:946:A:N7	2.75	0.54
2:C:59:A:C6	2:C:60:U:C4	2.96	0.54
2:C:66:C:H2'	2:C:67:C:C6	2.43	0.54
4:E:19:HIS:CE1	4:E:204:ASN:ND2	2.76	0.54
4:E:69:LEU:C	4:E:69:LEU:CD1	2.74	0.54
4:E:84:GLU:HG2	4:E:234:PRO:CD	2.23	0.54
7:H:9:LYS:HD2	7:H:111:GLU:OE1	2.08	0.54
7:H:122:GLU:HB2	7:H:126:ARG:HG3	1.89	0.54
1:A:826:C:H5'	10:K:12:ARG:HH21	1.73	0.54
1:A:823:G:N2	10:K:1:MET:H2	2.04	0.54
10:K:89:PRO:CB	10:K:92:ARG:HH21	2.19	0.54
10:K:98:LYS:C	10:K:100:ILE:HD12	2.29	0.54
11:L:32:ASP:HB3	11:L:35:GLU:HB2	1.89	0.54
13:N:82:VAL:O	13:N:108:ILE:HG23	2.07	0.54
14:O:33:ARG:HB3	14:O:85:ILE:HG21	1.89	0.54
17:R:59:MET:O	17:R:62:GLN:HB3	2.08	0.54
1:A:375:U:H4'	18:S:17:TYR:HE2	1.73	0.54
20:U:77:GLY:O	20:U:79:LEU:HD12	2.05	0.54
21:V:32:LYS:HA	21:V:50:ALA:CB	2.34	0.54
22:W:13:LEU:O	22:W:14:LYS:C	2.45	0.54
22:W:21:LYS:O	22:W:24:LEU:HB2	2.07	0.54
3:D:1:G:O2'	3:D:2:C:H5'	2.08	0.54
3:D:73:A:H2'	3:D:74:C:C5'	2.31	0.54
13:N:125:PHE:N	13:N:125:PHE:CD1	2.76	0.54
2:C:1:C:H2'	2:C:2:G:H8	1.73	0.54
1:A:1092:A:O4'	1:A:1183:A:N6	2.41	0.54
1:A:1152:A:N1	1:A:1153:C:C4	2.75	0.54
1:A:964:A:H5'	1:A:1199:U:OP1	2.08	0.54
1:A:1475:G:C2	1:A:1476:G:C8	2.95	0.54
1:A:1499:A:C2'	1:A:1500:A:H5'	2.37	0.54
1:A:275:G:O2'	1:A:276:G:H5'	2.08	0.54
1:A:374:A:C6	1:A:375:U:C4	2.96	0.54
1:A:375:U:H4'	18:S:17:TYR:CE2	2.43	0.54
1:A:394:G:H2'	1:A:395:C:H6	1.73	0.54
1:A:421:U:OP2	1:A:422:C:H5	1.91	0.54
1:A:581:G:H4'	17:R:64:ARG:NH1	2.21	0.54
1:A:668:G:O2'	1:A:669:U:C5'	2.56	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:760:G:H2'	19:T:103:GLY:CA	2.38	0.54
1:A:775:G:C2	1:A:776:G:N7	2.75	0.54
1:A:90:C:O2'	1:A:91:C:C5'	2.55	0.54
3:D:39:U:C2	3:D:40:C:C5	2.96	0.54
4:E:145:LEU:HD12	4:E:149:LEU:CD1	2.37	0.54
5:F:134:ILE:CD1	5:F:134:ILE:N	2.70	0.54
5:F:38:ARG:HG3	5:F:94:LEU:HD21	1.90	0.54
1:A:1191:A:H5''	5:F:4:LYS:HD3	1.90	0.54
5:F:63:ASN:O	5:F:64:VAL:CB	2.56	0.54
6:G:57:ARG:HG3	6:G:202:LEU:O	2.08	0.54
7:H:12:LEU:HD22	7:H:13:ILE:N	2.22	0.54
10:K:33:GLU:HG2	10:K:59:LEU:CD1	2.34	0.54
10:K:79:VAL:O	10:K:81:HIS:N	2.41	0.54
1:A:1342:C:C1'	11:L:124:GLN:HB2	2.38	0.54
11:L:50:LEU:O	11:L:50:LEU:HD23	2.07	0.54
13:N:79:SER:CA	13:N:104:GLN:HG3	2.31	0.54
14:O:27:LEU:CD2	14:O:61:THR:O	2.55	0.54
15:P:8:GLU:OE1	15:P:10:PRO:HD3	2.08	0.54
15:P:20:THR:CG2	15:P:26:GLY:HA2	2.37	0.54
15:P:15:VAL:CG1	15:P:39:ILE:HD12	2.36	0.54
15:P:54:VAL:CG1	15:P:58:GLU:OE1	2.56	0.54
15:P:66:LEU:CA	15:P:70:LEU:HD12	2.38	0.54
15:P:70:LEU:C	15:P:70:LEU:HD23	2.28	0.54
18:S:51:VAL:HG21	18:S:73:LEU:CD1	2.38	0.54
3:D:18:G:C2'	3:D:19:G:H4'	2.35	0.54
1:A:163:C:H2'	1:A:164:U:O4'	2.07	0.54
1:A:337:C:N4	1:A:338:A:H62	2.05	0.54
1:A:1145:C:HO2'	1:A:1146:A:H8	1.48	0.54
1:A:1254:C:OP1	12:M:45:ARG:CZ	2.56	0.54
1:A:1233:G:O2'	1:A:1365:G:OP1	2.22	0.54
1:A:1407:C:O5'	1:A:1407:C:H6	1.91	0.54
1:A:1495:U:H2'	1:A:1496:C:O5'	2.08	0.54
1:A:625:G:N2	1:A:626:U:C2	2.76	0.54
1:A:684:A:H2	1:A:706:A:N1	2.06	0.54
1:A:813:U:H5''	1:A:814:A:P	2.48	0.54
1:A:850:U:H2'	1:A:851:G:H8	1.73	0.54
1:A:935:A:C6	1:A:936:C:N4	2.76	0.54
2:C:75:C:O5'	2:C:76:A:OP2	2.25	0.54
1:A:1100:C:OP1	4:E:96:ARG:HG2	2.08	0.54
5:F:117:ALA:O	5:F:121:ALA:HB2	2.07	0.54
5:F:124:ILE:HG23	5:F:130:VAL:CG2	2.38	0.54
5:F:153:VAL:CG2	5:F:166:GLU:HB3	2.37	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:188:LEU:HD11	5:F:190:ARG:CG	2.34	0.54
1:A:1056:U:O2	5:F:195:VAL:CG2	2.56	0.54
5:F:57:ILE:HG12	5:F:66:VAL:CG2	2.35	0.54
6:G:80:GLU:O	6:G:83:SER:N	2.41	0.54
7:H:151:LEU:CD2	7:H:151:LEU:N	2.71	0.54
8:I:5:GLU:CB	8:I:62:TRP:HE1	2.21	0.54
8:I:76:ALA:C	8:I:80:ARG:NE	2.62	0.54
8:I:84:ASN:HA	8:I:86:ARG:HH21	1.72	0.54
9:J:11:GLN:NE2	9:J:12:LEU:O	2.40	0.54
9:J:30:ILE:O	9:J:31:MET:O	2.26	0.54
10:K:112:LEU:HD23	10:K:112:LEU:C	2.28	0.54
11:L:111:ARG:O	11:L:113:LYS:NZ	2.37	0.54
11:L:114:TYR:HD1	12:M:60:ARG:NH1	2.06	0.54
13:N:21:ILE:HD11	13:N:82:VAL:HG11	1.89	0.54
15:P:110:ARG:HG3	15:P:111:LYS:N	2.21	0.54
15:P:34:LEU:HD23	15:P:39:ILE:CD1	2.37	0.54
16:Q:51:GLY:C	16:Q:53:LEU:H	2.11	0.54
17:R:39:LEU:HD21	17:R:56:LEU:HD13	1.90	0.54
21:V:40:ILE:HG13	21:V:69:HIS:O	2.08	0.54
3:D:50:G:N2	3:D:65:U:N1	2.56	0.54
1:A:1021:G:C2	1:A:1022:G:H1'	2.43	0.54
1:A:216:G:N2	1:A:217:C:C2	2.76	0.54
1:A:524:G:H2'	1:A:525:C:O4'	2.08	0.54
1:A:1117:G:C2	1:A:1184:G:C2	2.97	0.53
1:A:1129:C:C1'	1:A:1130:A:N7	2.71	0.53
1:A:138:G:N2	1:A:226:G:C1'	2.71	0.53
1:A:290:C:O5'	1:A:290:C:H6	1.91	0.53
1:A:420:U:H1'	1:A:424:G:N2	2.23	0.53
1:A:601:C:C2	1:A:602:A:C8	2.96	0.53
1:A:601:C:H2'	1:A:602:A:H8	1.73	0.53
1:A:687:A:HO2'	1:A:688:G:P	2.27	0.53
1:A:688:G:H1'	1:A:704:A:N1	2.22	0.53
1:A:980:C:N3	1:A:981:U:O2	2.40	0.53
2:C:19:G:N3	2:C:57:A:N3	2.55	0.53
4:E:166:ASP:OD2	4:E:167:PRO:HD2	2.09	0.53
4:E:88:ALA:HB2	4:E:219:VAL:CG1	2.38	0.53
5:F:110:ASN:O	5:F:141:VAL:HG13	2.07	0.53
5:F:156:ARG:HB2	5:F:196:LEU:CD1	2.33	0.53
5:F:159:GLY:N	5:F:193:TYR:CE1	2.76	0.53
5:F:155:GLY:O	5:F:196:LEU:HB2	2.08	0.53
5:F:38:ARG:HB2	5:F:94:LEU:CG	2.38	0.53
6:G:148:VAL:O	6:G:153:ARG:HD3	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:61:LYS:HE3	6:G:62:GLN:HA	1.91	0.53
7:H:21:ALA:O	7:H:25:ARG:NH2	2.40	0.53
1:A:1346:A:C2	9:J:10:ARG:CD	2.90	0.53
9:J:87:VAL:HG13	9:J:152:ALA:HA	1.90	0.53
10:K:103:VAL:HB	10:K:108:GLY:C	2.27	0.53
10:K:82:HIS:O	10:K:137:VAL:CG1	2.56	0.53
10:K:46:LYS:CD	10:K:64:LYS:HA	2.38	0.53
15:P:24:GLY:O	15:P:29:ARG:NH1	2.41	0.53
18:S:60:LEU:O	18:S:61:SER:C	2.45	0.53
1:A:760:G:O2'	19:T:103:GLY:HA3	2.07	0.53
19:T:41:LYS:O	19:T:42:TYR:CD1	2.61	0.53
19:T:75:ARG:NH1	19:T:77:VAL:HA	2.23	0.53
1:A:191(F):U:H3	22:W:105:SER:HB2	1.72	0.53
22:W:13:LEU:O	22:W:16:HIS:CB	2.55	0.53
23:X:6:ARG:O	23:X:11:GLY:HA3	2.08	0.53
1:A:1028(B):C:C4	1:A:1032(B):G:C6	2.95	0.53
1:A:163:C:O2'	1:A:164:U:H5'	2.07	0.53
8:I:28:ARG:HG2	8:I:28:ARG:HH11	1.72	0.53
1:A:1018:C:C2'	1:A:1019:C:H5'	2.37	0.53
1:A:1066:C:H5	1:A:1067:A:N6	2.07	0.53
1:A:1203:C:H6	1:A:1203:C:O5'	1.92	0.53
1:A:1266:G:H21	1:A:1270:C:N4	2.06	0.53
1:A:1320:C:H42	21:V:36:ARG:NH1	2.05	0.53
1:A:136:C:H1'	18:S:1:MET:CE	2.38	0.53
1:A:1419:G:O2'	1:A:1420:C:O5'	2.27	0.53
1:A:1472:U:H6	1:A:1472:U:O5'	1.92	0.53
1:A:1405:G:O2'	1:A:1519:A:H5'	2.07	0.53
1:A:20:U:C2'	1:A:20:U:O2	2.56	0.53
1:A:38:G:N3	1:A:397:A:C6	2.76	0.53
1:A:476:G:O2'	1:A:477:G:C5'	2.55	0.53
1:A:652:U:C1'	1:A:653:A:H2	2.16	0.53
1:A:981:U:C2	1:A:982:U:C4	2.96	0.53
2:C:69:C:C2	2:C:70:G:C8	2.96	0.53
5:F:31:HIS:O	5:F:34:LEU:HB3	2.09	0.53
5:F:52:LEU:HA	5:F:70:VAL:HG13	1.89	0.53
5:F:91:LEU:C	5:F:91:LEU:CD2	2.75	0.53
6:G:102:ASP:O	6:G:105:VAL:HB	2.07	0.53
7:H:31:LEU:HD12	7:H:129:ILE:HG12	1.90	0.53
8:I:82:ARG:O	8:I:84:ASN:N	2.42	0.53
10:K:28:ALA:HB3	10:K:57:PRO:O	2.08	0.53
11:L:102:LEU:O	11:L:103:THR:CB	2.57	0.53
11:L:28:VAL:HG21	11:L:32:ASP:O	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:4:ILE:CG2	18:S:21:VAL:CG1	2.86	0.53
19:T:86:GLU:OE1	19:T:86:GLU:HA	2.00	0.53
19:T:8:GLY:O	19:T:56:VAL:HA	2.07	0.53
19:T:92:ARG:O	19:T:95:TYR:N	2.40	0.53
21:V:46:GLY:N	21:V:62:ILE:HG23	2.22	0.53
1:A:1320:C:C1'	21:V:73:GLU:HG2	2.30	0.53
22:W:50:GLU:HB2	22:W:99:LEU:HD12	1.89	0.53
3:D:56:C:C2'	3:D:57:G:O4'	2.56	0.53
3:D:61:C:O2'	3:D:62:C:C5'	2.56	0.53
1:A:1064:G:N2	1:A:1192:C:N3	2.55	0.53
1:A:1081:G:H2'	1:A:1082:G:H8	1.71	0.53
1:A:946:A:N6	1:A:1236:A:C6	2.77	0.53
1:A:1254:C:OP1	12:M:45:ARG:HD2	2.08	0.53
1:A:1299:A:N7	1:A:1301:U:C6	2.76	0.53
1:A:1411:C:C2	1:A:1412:C:C6	2.95	0.53
1:A:1419:G:C2'	1:A:1420:C:C6	2.92	0.53
1:A:1425:U:O2	1:A:1476:G:C2	2.61	0.53
1:A:1533:C:C4'	1:A:1534:A:OP1	2.56	0.53
1:A:20:U:N3	1:A:21:G:C5	2.76	0.53
1:A:22:G:C2'	1:A:23:C:C6	2.90	0.53
1:A:318:G:C2'	1:A:319:G:H5'	2.39	0.53
1:A:476:G:H21	1:A:477:G:H1'	1.72	0.53
1:A:603:U:H2'	1:A:604:G:H8	1.72	0.53
1:A:607:A:H2'	1:A:608:A:C5'	2.38	0.53
1:A:939:G:C2	1:A:940:C:C4	2.96	0.53
1:A:966:G:C2'	1:A:967:C:O5'	2.56	0.53
2:C:39:C:O2	2:C:40:C:C5	2.62	0.53
2:C:19:G:N3	2:C:57:A:C2	2.76	0.53
2:C:59:A:N6	2:C:60:U:C4	2.76	0.53
4:E:144:ARG:HD3	4:E:148:TYR:CZ	2.43	0.53
5:F:17:ASP:HB3	5:F:18:TRP:CE3	2.43	0.53
5:F:156:ARG:HB3	5:F:193:TYR:CD1	2.40	0.53
6:G:30:LYS:O	6:G:31:CYS:HB3	2.07	0.53
1:A:9:G:C8	7:H:126:ARG:NH1	2.76	0.53
7:H:19:MET:HE3	7:H:20:GLN:N	2.23	0.53
8:I:83:ASP:O	8:I:85:VAL:N	2.41	0.53
9:J:50:ILE:HD12	9:J:58:PRO:CB	2.36	0.53
9:J:75:VAL:CA	9:J:89:MET:HE1	2.32	0.53
10:K:88:LYS:NZ	10:K:88:LYS:CB	2.67	0.53
11:L:3:GLN:HG3	11:L:20:ARG:HD3	1.90	0.53
11:L:5:TYR:CZ	11:L:7:THR:OG1	2.61	0.53
11:L:4:TYR:CD1	11:L:88:TYR:HB2	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:50:ILE:HG12	12:M:60:ARG:HD2	1.89	0.53
13:N:99:GLN:O	13:N:105:VAL:CG2	2.56	0.53
13:N:15:ALA:CB	13:N:78:GLN:HE22	2.20	0.53
14:O:53:ARG:NH2	14:O:92:ASP:OD2	2.41	0.53
17:R:15:PHE:HB3	17:R:26:GLU:HB3	1.90	0.53
17:R:54:ARG:HD3	17:R:55:GLY:H	1.73	0.53
17:R:4:THR:CG2	17:R:6:GLU:OE1	2.56	0.53
21:V:53:ASN:HD21	21:V:58:VAL:HG13	1.73	0.53
1:A:1320:C:H5''	21:V:70:LYS:HD2	1.90	0.53
22:W:43:LEU:HD13	22:W:51:GLU:CB	2.34	0.53
3:D:5:A:N1	3:D:69:C:C4	2.76	0.53
1:A:1022:G:N1	1:A:1023:G:C5	2.76	0.53
1:A:142:G:H2'	1:A:143:A:C8	2.42	0.53
1:A:1156:G:O2'	1:A:1179:A:N6	2.40	0.53
1:A:1201:A:O2'	1:A:1202:G:OP2	2.25	0.53
1:A:1203:C:O2'	1:A:1204:A:H5'	2.07	0.53
1:A:1224:G:C2'	1:A:1225:A:OP1	2.56	0.53
1:A:1250:A:C6	1:A:1251:A:C6	2.96	0.53
1:A:1300:G:O2'	1:A:1301:U:O5'	2.25	0.53
1:A:1300:G:O2'	1:A:1301:U:P	2.65	0.53
1:A:1316:G:H5''	16:Q:17:LYS:HZ2	1.72	0.53
1:A:1224:G:N2	1:A:1362(A):C:C2	2.71	0.53
1:A:1437:C:O2'	1:A:1438:G:H5'	2.09	0.53
1:A:1518:A:N1	1:A:1519:A:C6	2.77	0.53
1:A:1536:C:N4	3:D:35:A:N6	2.55	0.53
1:A:250:A:O4'	1:A:252:U:C6	2.62	0.53
1:A:328:C:O2'	1:A:329:A:P	2.67	0.53
1:A:327:A:C2	1:A:329:A:C4	2.97	0.53
1:A:382:A:O2'	1:A:383:A:C5'	2.56	0.53
1:A:468:A:N7	1:A:474:G:N7	2.57	0.53
1:A:610:G:C2	1:A:611:A:C8	2.96	0.53
1:A:689:C:H2'	1:A:690:G:O4'	2.09	0.53
1:A:697:U:O5'	1:A:697:U:C6	2.59	0.53
1:A:701:C:O2'	1:A:702:A:P	2.66	0.53
1:A:686:U:H3	1:A:704:A:H62	1.57	0.53
1:A:786:G:N2	1:A:787:A:H1'	2.22	0.53
1:A:897:C:O2'	1:A:898:G:H5'	2.08	0.53
1:A:88:C:H2'	1:A:89:U:OP2	2.08	0.53
1:A:950:U:O4'	1:A:971:G:N2	2.41	0.53
5:F:108:ASN:HB3	5:F:111:LEU:HD22	1.90	0.53
5:F:57:ILE:HG23	5:F:64:VAL:CG1	2.38	0.53
6:G:126:ILE:O	6:G:128:VAL:N	2.42	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:132:GLY:O	9:J:133:GLY:C	2.47	0.53
9:J:69:VAL:HG23	9:J:135:VAL:HG22	1.91	0.53
10:K:35:ILE:CG2	10:K:36:LEU:N	2.71	0.53
11:A:1349:A:OP1	11:L:118:LYS:HB3	2.07	0.53
11:L:48:GLU:O	11:L:51:ARG:N	2.41	0.53
12:M:26:ALA:C	12:M:28:ARG:H	2.11	0.53
13:N:13:GLN:O	13:N:14:VAL:HG23	2.08	0.53
13:N:58:PRO:CA	13:N:90:GLY:HA3	2.38	0.53
14:O:30:ALA:HB1	14:O:31:PRO:HD2	1.91	0.53
16:Q:27:CYS:C	16:Q:40:CYS:SG	2.85	0.53
18:S:22:THR:HG22	18:S:32:TYR:CB	2.39	0.53
18:S:69:THR:HG22	18:S:72:ARG:NH1	2.23	0.53
19:T:25:ARG:NH2	19:T:40:LYS:HD2	2.23	0.53
1:A:189:U:H3	19:T:63:ARG:HB2	1.73	0.53
8:I:97:PHE:HE2	20:U:62:GLU:OE2	1.91	0.53
21:V:43:GLU:OE2	21:V:44:MET:HA	2.09	0.53
22:W:58:LYS:O	22:W:61:SER:OG	2.20	0.53
1:A:344:A:O2'	1:A:345:C:OP1	2.27	0.53
1:A:929:G:C6	1:A:930:C:C4	2.97	0.53
1:A:1065:U:C2'	1:A:1066:C:OP2	2.57	0.53
1:A:1148:U:C2'	1:A:1148:U:O2	2.56	0.53
1:A:1268:A:O2'	1:A:1269:A:O5'	2.21	0.53
1:A:134:A:C6	1:A:135:C:C4	2.96	0.53
1:A:1356:G:H2'	1:A:1357:A:C8	2.44	0.53
1:A:1387:G:C4	1:A:1388:C:C5	2.96	0.53
1:A:1431:C:C2'	1:A:1432:G:H5'	2.38	0.53
1:A:1468:A:C8	1:A:1469:G:C8	2.97	0.53
1:A:1480:G:O2'	1:A:1481:U:H5'	2.08	0.53
1:A:265:G:C2'	1:A:266:G:H5'	2.38	0.53
1:A:38:G:N2	1:A:397:A:C5	2.77	0.53
1:A:565:U:H2'	1:A:566:G:N7	2.24	0.53
1:A:619:U:H3	6:G:135:LEU:CD2	2.06	0.53
1:A:765:G:N2	1:A:816:A:C2	2.76	0.53
1:A:920:U:H2'	1:A:921:U:C6	2.43	0.53
1:A:965:A:H2'	1:A:965:A:N3	2.23	0.53
1:A:971:G:N2	1:A:1363:A:OP2	2.42	0.53
2:C:18:G:C2'	2:C:19:G:O5'	2.56	0.53
4:E:116:GLU:HG2	4:E:117:GLU:N	2.22	0.53
4:E:92:TYR:HE2	4:E:151:GLY:HA2	1.72	0.53
5:F:67:THR:HA	5:F:102:ASN:HB2	1.91	0.53
5:F:172:ARG:O	5:F:173:VAL:HG22	2.08	0.53
5:F:175:LEU:HD21	5:F:201:TYR:CD2	2.43	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:38:ARG:HB2	5:F:94:LEU:HD21	1.90	0.53
7:H:133:TYR:CD2	7:H:136:MET:HG3	2.42	0.53
8:I:10:LEU:O	8:I:11:ASN:O	2.27	0.53
9:J:12:LEU:HD22	9:J:24:THR:HB	1.90	0.53
10:K:27:PRO:O	10:K:32:LYS:HD2	2.09	0.53
10:K:46:LYS:NZ	10:K:65:TYR:H	2.05	0.53
1:A:877:C:O3'	10:K:88:LYS:HG2	2.08	0.53
11:L:97:LYS:HZ2	11:L:102:LEU:HD22	1.72	0.53
11:L:108:VAL:O	11:L:110:GLU:N	2.30	0.53
11:L:40:LEU:HB3	11:L:42:ARG:HB2	1.90	0.53
15:P:121:LYS:HE3	15:P:121:LYS:CA	2.36	0.53
15:P:29:ARG:HA	15:P:64:TRP:CH2	2.44	0.53
15:P:3:ARG:HG3	15:P:7:VAL:CA	2.38	0.53
18:S:36:ILE:HD13	18:S:59:TRP:CD1	2.44	0.53
20:U:58:LEU:HB3	20:U:62:GLU:HG2	1.91	0.53
21:V:45:VAL:HA	21:V:67:VAL:CG2	2.38	0.53
22:W:104:LEU:O	22:W:105:SER:O	2.27	0.53
22:W:12:ALA:C	22:W:14:LYS:H	2.12	0.53
1:A:1058:G:C2'	1:A:1059:C:H5'	2.38	0.53
1:A:1113:C:C2	1:A:1114:C:C6	2.97	0.53
1:A:1159:U:C5'	1:A:1160:G:OP1	2.57	0.53
1:A:1286:A:H5'	23:X:25:LYS:HG2	1.90	0.53
1:A:130:A:N7	19:T:64:PRO:HD2	2.24	0.53
1:A:1315:U:OP2	21:V:6:LYS:NZ	2.40	0.53
1:A:1323:G:H4'	1:A:1362(A):C:N3	2.23	0.53
1:A:971:G:C8	1:A:1365:G:H4'	2.44	0.53
1:A:1419:G:C6	1:A:1482:G:C2	2.96	0.53
1:A:1529:G:C5'	1:A:1530:G:OP2	2.55	0.53
1:A:173:U:H4'	1:A:197:A:C1'	2.39	0.53
1:A:254:G:H2'	1:A:255:G:H8	1.73	0.53
1:A:458:C:N4	1:A:464:G:N1	2.56	0.53
1:A:539:A:N7	14:O:115:LYS:NZ	2.54	0.53
1:A:647:C:H2'	1:A:648:A:H8	1.72	0.53
1:A:675:A:C2'	1:A:676:A:H8	2.21	0.53
1:A:691:G:N7	13:N:26:ASN:OD1	2.42	0.53
1:A:707:C:H2'	1:A:708:C:H5'	1.89	0.53
1:A:954:G:C8	1:A:955:U:C5	2.96	0.53
1:A:960:U:H2'	1:A:960:U:O2	2.08	0.53
2:C:9:G:H5''	2:C:10:G:OP2	2.09	0.53
4:E:70:PHE:CE2	4:E:163:PHE:CB	2.92	0.53
4:E:198:ASP:O	4:E:199:TYR:CD2	2.60	0.53
4:E:221:LEU:HD13	4:E:222:ILE:N	2.23	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:31:HIS:ND1	5:F:34:LEU:HD13	2.23	0.53
5:F:42:LEU:HD23	5:F:45:LYS:CD	2.39	0.53
6:G:157:LEU:C	6:G:159:ARG:N	2.59	0.53
6:G:157:LEU:O	6:G:158:ILE:C	2.46	0.53
8:I:14:LEU:CD1	8:I:19:LEU:N	2.70	0.53
9:J:85:TYR:HB3	9:J:151:TYR:CD2	2.43	0.53
7:H:78:HIS:CB	10:K:104:ARG:HB3	2.39	0.53
10:K:12:ARG:CG	10:K:26:VAL:HG23	2.38	0.53
10:K:69:ARG:HG3	10:K:69:ARG:HH11	1.74	0.53
12:M:24:VAL:CG1	12:M:34:VAL:HG11	2.37	0.53
13:N:101:SER:OG	13:N:103:LEU:HG	2.09	0.53
13:N:26:ASN:ND2	13:N:53:SER:HA	2.24	0.53
13:N:18:ARG:NE	13:N:34:ASP:O	2.39	0.53
15:P:12:ASN:O	15:P:12:ASN:OD1	2.26	0.53
15:P:80:ARG:O	15:P:84:ILE:HG12	2.09	0.53
17:R:41:GLU:CA	17:R:44:LYS:HE3	2.37	0.53
17:R:48:LYS:HA	17:R:50:HIS:CE1	2.43	0.53
17:R:81:LEU:CD2	17:R:85:LEU:HD13	2.38	0.53
1:A:1077:G:N2	1:A:1079:G:H3'	2.24	0.53
1:A:1117:G:C5'	1:A:1118:C:OP2	2.52	0.53
1:A:1272:G:H2'	1:A:1273:G:C8	2.44	0.53
1:A:1326:C:H5''	23:X:12:LYS:NZ	2.22	0.53
1:A:1360:A:H62	16:Q:18:VAL:HG12	1.74	0.53
1:A:1404:C:C1'	1:A:1499:A:H2	2.12	0.53
1:A:926:G:N2	1:A:1505:G:C4	2.77	0.53
1:A:178:C:C2	1:A:179:A:C8	2.97	0.53
1:A:310:G:OP2	18:S:27:LYS:HE2	2.09	0.53
1:A:315:A:N1	1:A:330:C:C6	2.77	0.53
1:A:357:G:OP1	1:A:367:U:H2'	2.08	0.53
1:A:429:U:H1'	1:A:430:A:H5''	1.91	0.53
1:A:467:G:H2'	1:A:468:A:H8	1.74	0.53
1:A:482:A:H2'	1:A:483:C:O5'	2.09	0.53
1:A:780:A:OP1	13:N:122:LYS:HA	2.08	0.53
1:A:843:U:H2'	1:A:848:C:OP1	2.09	0.53
1:A:922:G:C2	1:A:923:A:C4	2.96	0.53
1:A:966:G:N7	1:A:967:C:C4	2.76	0.53
4:E:170:GLU:CG	4:E:174:VAL:HG23	2.39	0.53
4:E:179:LYS:C	4:E:181:PHE:N	2.62	0.53
4:E:96:ARG:O	4:E:98:LEU:HD22	2.09	0.53
5:F:131:ARG:O	5:F:132:ARG:C	2.46	0.53
5:F:138:VAL:CG1	5:F:149:ALA:HB3	2.35	0.53
5:F:20:SER:HB2	5:F:40:ARG:HH12	1.73	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:65:ALA:O	5:F:66:VAL:HB	2.07	0.53
6:G:11:LEU:O	6:G:12:CYS:C	2.47	0.53
6:G:137:SER:OG	6:G:138:TYR:N	2.40	0.53
6:G:83:SER:HA	6:G:89:THR:HG1	1.67	0.53
7:H:79:GLU:C	7:H:80:ILE:HG13	2.29	0.53
9:J:143:ARG:HA	9:J:146:GLU:OE1	2.09	0.53
9:J:149:ARG:HB3	13:N:59:TYR:CE2	2.43	0.53
10:K:111:ILE:HG22	10:K:134:ILE:HD12	1.91	0.53
10:K:17:THR:HG22	10:K:18:ARG:NH1	2.23	0.53
1:A:1344:C:C4'	11:L:120:ARG:HB3	2.34	0.53
11:L:66:ARG:HG2	11:L:67:GLY:N	2.21	0.53
12:M:36:GLY:O	12:M:38:ILE:N	2.41	0.53
13:N:29:ILE:HA	13:N:44:SER:OG	2.08	0.53
13:N:62:GLN:OE1	13:N:63:LEU:CA	2.56	0.53
13:N:71:LYS:O	13:N:74:ALA:HB3	2.07	0.53
18:S:35:LYS:NZ	18:S:37:GLY:N	2.56	0.53
18:S:5:ARG:HH12	18:S:24:ALA:CA	2.15	0.53
19:T:7:THR:HG23	19:T:8:GLY:N	2.24	0.53
1:A:1243:C:OP2	23:X:10:ARG:NE	2.42	0.53
1:A:1277:C:O2'	1:A:1279:A:H8	1.92	0.53
1:A:1528:U:N3	1:A:1530:G:C8	2.76	0.53
1:A:186(D):C:O5'	1:A:186(D):C:H6	1.92	0.53
1:A:241:C:C2	1:A:242:C:C5	2.97	0.53
1:A:428:G:H4'	1:A:429:U:O5'	2.09	0.53
1:A:497:U:O2'	1:A:498:A:H5'	2.09	0.53
1:A:520:A:H62	1:A:529:G:H21	1.57	0.53
1:A:711:G:O2'	1:A:712:A:H5'	2.09	0.53
1:A:816:A:H2'	1:A:817:C:OP2	2.08	0.53
1:A:920:U:C4'	1:A:1080:A:H62	2.20	0.53
4:E:136:VAL:O	4:E:139:LYS:CG	2.56	0.53
4:E:150:SER:O	4:E:151:GLY:O	2.27	0.53
4:E:16:HIS:HE1	4:E:209:ARG:HH11	1.57	0.53
4:E:39:ILE:O	4:E:41:ILE:HD12	2.09	0.53
11:L:45:ALA:O	11:L:78:LYS:HG3	2.09	0.53
11:L:47:LEU:HD12	11:L:51:ARG:NH2	2.24	0.53
12:M:24:VAL:HG13	12:M:34:VAL:CB	2.38	0.53
12:M:32:ALA:HA	12:M:76:ASN:ND2	2.13	0.53
13:N:69:ALA:O	13:N:72:ALA:N	2.42	0.53
14:O:7:ILE:O	14:O:10:LEU:HB2	2.08	0.53
14:O:68:ALA:CA	14:O:98:TYR:O	2.57	0.53
14:O:93:LEU:HD12	14:O:96:VAL:HG11	1.91	0.53
15:P:108:ARG:CB	15:P:108:ARG:HH11	2.22	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:U:53:ARG:HH12	20:U:60:GLY:HA2	1.73	0.53
20:U:76:LEU:H	20:U:76:LEU:HD23	1.72	0.53
21:V:70:LYS:O	21:V:71:LEU:C	2.47	0.53
22:W:27:LYS:O	22:W:30:LYS:N	2.42	0.53
22:W:73:HIS:O	22:W:76:ALA:HB3	2.09	0.53
1:A:1197:G:OP1	1:A:1198:G:OP2	2.26	0.53
1:A:1346:A:C8	1:A:1348:U:C2	2.97	0.53
1:A:1377:A:N3	9:J:7:ALA:HB1	2.23	0.53
1:A:230:G:N2	1:A:231:G:N3	2.57	0.53
1:A:55:A:N6	1:A:357:G:O2'	2.42	0.53
1:A:485:G:O2'	1:A:486:U:C6	2.62	0.53
1:A:498:A:C4'	1:A:500:G:OP1	2.54	0.53
1:A:706:A:N3	1:A:707:C:C6	2.77	0.53
1:A:858:G:H22	1:A:869:G:C2'	2.22	0.53
1:A:872:A:C5	1:A:874:G:N7	2.77	0.53
1:A:890:G:O2'	1:A:891:U:C6	2.62	0.53
1:A:978:A:H8	1:A:980:C:H41	1.57	0.53
2:C:22:G:H2'	2:C:23:C:C6	2.38	0.53
2:C:18:G:C6	2:C:57:A:C6	2.97	0.53
6:G:60:GLU:HG2	6:G:203:VAL:HG23	1.91	0.53
7:H:11:ILE:O	7:H:13:ILE:HG13	2.08	0.53
7:H:109:ILE:HG21	7:H:135:THR:HG22	1.91	0.53
1:A:671:G:P	8:I:77:ARG:HH21	2.32	0.53
11:L:9:ARG:CG	11:L:14:VAL:HA	2.39	0.53
12:M:23:ILE:CG1	12:M:85:LEU:HD23	2.38	0.53
12:M:64:GLU:CG	16:Q:59:ALA:HB2	2.37	0.53
13:N:28:THR:CG2	13:N:29:ILE:N	2.72	0.53
14:O:101:VAL:O	14:O:104:VAL:CG2	2.56	0.53
15:P:15:VAL:CG2	15:P:39:ILE:HD12	2.39	0.53
15:P:58:GLU:HA	15:P:61:GLU:CB	2.39	0.53
15:P:4:ILE:CD1	15:P:8:GLU:O	2.56	0.53
16:Q:9:LYS:HZ3	16:Q:12:ARG:HE	1.57	0.53
20:U:34:TYR:HE1	20:U:35:ARG:NE	2.06	0.53
20:U:36:ASN:O	20:U:36:ASN:OD1	2.27	0.53
20:U:72:ARG:HA	20:U:75:ILE:CG1	2.38	0.53
22:W:64:ASP:O	22:W:67:ALA:CA	2.57	0.53
6:G:47:ARG:CB	6:G:47:ARG:HH11	2.19	0.53
1:A:1171:G:H2'	1:A:1172:C:H6	1.71	0.53
1:A:1151:A:H1'	12:M:39:PRO:CB	2.38	0.53
1:A:1226:C:O5'	15:P:103:THR:HB	2.09	0.53
1:A:1350:A:H2'	1:A:1351:U:H6	1.73	0.53
1:A:1350:A:H2'	1:A:1351:U:C6	2.44	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1450:U:H1'	1:A:1454:G:N2	2.23	0.53
1:A:1472:U:H2'	1:A:1473:A:H8	1.73	0.53
1:A:1536:C:N3	1:A:1537:U:O4	2.41	0.53
1:A:68:G:C4'	1:A:171:A:C1'	2.87	0.53
1:A:366:C:O2'	1:A:394:G:N2	2.42	0.53
1:A:373:A:C4	1:A:482:A:N6	2.73	0.53
1:A:486:U:O2	1:A:486:U:C2'	2.54	0.53
1:A:604:G:C6	1:A:635:G:C6	2.97	0.53
1:A:606:G:H2'	1:A:631:G:H22	1.75	0.53
1:A:852:G:C6	1:A:853:G:N7	2.77	0.53
1:A:862:C:N4	1:A:863:U:O4	2.42	0.53
1:A:967:C:OP2	1:A:968:A:H3'	2.09	0.53
2:C:43:A:C2	2:C:44:A:N7	2.77	0.53
2:C:61:C:C2	2:C:62:C:C5	2.96	0.53
4:E:139:LYS:CG	4:E:140:HIS:N	2.68	0.53
4:E:179:LYS:O	4:E:181:PHE:N	2.42	0.53
4:E:164:VAL:HG12	4:E:186:ALA:HB2	1.91	0.53
5:F:179:ARG:CZ	5:F:206:GLU:OE1	2.56	0.53
6:G:8:VAL:C	6:G:10:ARG:H	2.11	0.53
8:I:57:GLN:HE21	8:I:57:GLN:C	2.12	0.53
10:K:9:MET:O	10:K:13:ILE:CG1	2.57	0.53
10:K:14:ARG:HD2	10:K:15:ASN:H	1.74	0.53
13:N:123:LYS:O	13:N:124:LYS:C	2.47	0.53
13:N:62:GLN:O	13:N:65:ALA:HB3	2.10	0.53
14:O:41:ARG:CB	14:O:41:ARG:HH11	2.00	0.53
14:O:58:VAL:CG1	14:O:59:ARG:N	2.72	0.53
14:O:36:VAL:C	14:O:58:VAL:HG13	2.30	0.53
10:K:91:ARG:HG3	14:O:7:ILE:HG23	1.91	0.53
15:P:58:GLU:CA	15:P:61:GLU:HB2	2.38	0.53
19:T:60:ILE:CG1	19:T:61:GLU:O	2.57	0.53
22:W:62:LEU:HD23	22:W:65:LYS:HG3	1.90	0.53
22:W:77:ALA:O	22:W:80:ARG:HB2	2.09	0.53
1:A:1004:A:O2'	1:A:1005:A:O5'	2.25	0.53
1:A:1069:C:H1'	1:A:1191:A:C2	2.42	0.52
1:A:1206:G:C2'	1:A:1207:G:O4'	2.55	0.52
1:A:120:A:C4	1:A:122:G:C5	2.97	0.52
1:A:129:U:H6	1:A:129:U:O5'	1.92	0.52
1:A:1305:G:P	1:A:1305:G:O4'	2.66	0.52
1:A:134:A:C6	1:A:135:C:N3	2.77	0.52
1:A:198:G:N3	1:A:199:G:C8	2.77	0.52
1:A:276:G:P	19:T:14:LYS:HD3	2.49	0.52
1:A:246:A:N6	1:A:279:A:C4	2.77	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:451:A:O2'	1:A:452:A:OP2	2.23	0.52
1:A:540:G:C4	1:A:541:G:C8	2.97	0.52
1:A:619:U:O2	6:G:135:LEU:HD11	2.10	0.52
1:A:595:G:N7	1:A:641:U:N3	2.57	0.52
1:A:68:G:H5'	1:A:171:A:O2'	2.09	0.52
1:A:715:A:C4'	1:A:777:A:N6	2.71	0.52
1:A:799:G:C2	1:A:800:G:C1'	2.92	0.52
1:A:981:U:C6	1:A:981:U:O5'	2.62	0.52
1:A:982:U:H3	1:A:1223:C:H42	1.55	0.52
2:C:28:C:O2	2:C:29:G:C8	2.62	0.52
2:C:75:C:O3'	2:C:76:A:O3'	2.28	0.52
5:F:87:LEU:CD1	5:F:101:LEU:HD11	2.24	0.52
5:F:18:TRP:NE1	16:Q:55:GLY:N	2.56	0.52
6:G:134:ASP:O	6:G:136:PRO:HD3	2.10	0.52
6:G:148:VAL:HG21	6:G:162:LEU:CD2	2.39	0.52
6:G:19:LEU:HA	6:G:21:LEU:HD13	1.90	0.52
7:H:63:ARG:N	7:H:63:ARG:HD3	2.24	0.52
10:K:14:ARG:O	10:K:17:THR:CB	2.52	0.52
10:K:22:GLU:HA	10:K:63:LEU:CD1	2.38	0.52
13:N:22:HIS:ND1	13:N:29:ILE:CG1	2.72	0.52
9:J:150:ALA:HB1	13:N:57:THR:HG1	1.74	0.52
14:O:42:THR:CA	14:O:55:VAL:HG23	2.38	0.52
15:P:107:ALA:O	15:P:110:ARG:HB3	2.09	0.52
17:R:49:ASP:OD1	17:R:52:SER:HB2	2.09	0.52
18:S:4:ILE:HG12	18:S:66:PRO:CA	2.40	0.52
21:V:22:LEU:C	21:V:24:ALA:H	2.11	0.52
21:V:39:THR:O	21:V:40:ILE:C	2.46	0.52
22:W:50:GLU:HG3	22:W:100:ILE:HG12	1.90	0.52
22:W:58:LYS:O	22:W:62:LEU:HG	2.09	0.52
1:A:1081:G:OP2	7:H:27:ARG:CD	2.50	0.52
1:A:1087:G:C2	1:A:1099:G:C4	2.98	0.52
1:A:1327:C:H5''	23:X:20:LYS:NZ	2.24	0.52
1:A:1338:G:H21	2:C:41:C:H1'	1.75	0.52
1:A:1402:C:C2	1:A:1403:C:C6	2.96	0.52
1:A:1430:C:C2	1:A:1431:C:H5	2.27	0.52
1:A:1408:A:N1	1:A:1494:G:N3	2.57	0.52
1:A:20:U:C2	1:A:21:G:C4	2.98	0.52
1:A:225:C:H2'	1:A:226:G:H5'	1.91	0.52
1:A:313:A:C2'	1:A:314:C:H6	2.04	0.52
1:A:315:A:C2'	1:A:316:G:OP2	2.57	0.52
1:A:34:C:H2'	1:A:35:G:C8	2.39	0.52
1:A:44:G:N2	1:A:45:U:H1'	2.24	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:453:A:H1'	18:S:69:THR:HG23	1.91	0.52
1:A:540:G:H2'	1:A:541:G:H8	1.74	0.52
1:A:683:G:N2	13:N:38:ASN:HA	2.24	0.52
1:A:750:G:H4'	17:R:20:GLY:O	2.09	0.52
1:A:581:G:H1	1:A:758:G:H2'	1.74	0.52
1:A:908:A:H2'	1:A:909:A:C8	2.45	0.52
1:A:965:A:N7	1:A:969:A:N3	2.56	0.52
1:A:997:U:H2'	1:A:998:G:O4'	2.09	0.52
4:E:83:MET:HB2	4:E:234:PRO:CB	2.38	0.52
4:E:71:VAL:HG13	4:E:93:VAL:HB	1.90	0.52
5:F:138:VAL:HG12	5:F:170:GLN:HE21	1.75	0.52
1:A:1112:C:H1'	5:F:179:ARG:NH2	2.23	0.52
6:G:122:ARG:HA	6:G:134:ASP:O	2.10	0.52
6:G:3:ARG:CZ	6:G:71:SER:H	2.23	0.52
6:G:73:ARG:O	6:G:74:GLN:C	2.47	0.52
7:H:109:ILE:HD12	7:H:135:THR:HG22	1.91	0.52
7:H:109:ILE:HG22	7:H:110:LEU:CD2	2.39	0.52
7:H:91:LEU:HD23	7:H:92:LYS:N	2.24	0.52
8:I:30:LEU:C	8:I:35:ALA:CB	2.78	0.52
8:I:5:GLU:HB2	8:I:62:TRP:HE1	1.75	0.52
9:J:140:ASP:O	9:J:144:MET:HG2	2.09	0.52
9:J:17:VAL:HG12	9:J:17:VAL:O	2.08	0.52
9:J:51:GLN:O	9:J:55:GLY:HA2	2.09	0.52
9:J:63:LYS:O	9:J:66:VAL:HB	2.09	0.52
13:N:67:ASP:HA	13:N:70:LYS:HD2	1.90	0.52
13:N:17:GLY:O	13:N:80:VAL:HG22	2.09	0.52
15:P:36:LYS:HG2	15:P:59:TYR:CE1	2.44	0.52
15:P:81:LEU:O	15:P:84:ILE:HG12	2.09	0.52
16:Q:14:PRO:O	16:Q:15:LYS:C	2.48	0.52
16:Q:24:CYS:O	16:Q:24:CYS:SG	2.67	0.52
1:A:254:G:OP1	19:T:67:LYS:O	2.27	0.52
20:U:39:VAL:HA	20:U:42:ARG:HD2	1.91	0.52
8:I:49:ALA:HB3	20:U:80:PRO:HD3	1.89	0.52
21:V:41:VAL:O	21:V:44:MET:HB2	2.09	0.52
23:X:6:ARG:HB3	23:X:15:ARG:CZ	2.40	0.52
3:D:10:G:C6	3:D:26:A:C6	2.97	0.52
1:A:1161:C:C6	1:A:1161:C:OP2	2.62	0.52
1:A:1159:U:O2	1:A:1159:U:H2'	2.09	0.52
1:A:1156:G:C1'	1:A:1179:A:H61	2.17	0.52
1:A:1205:U:C2	1:A:1206:G:N7	2.78	0.52
1:A:122:G:N2	1:A:123:C:C2	2.77	0.52
1:A:1239:A:H8	1:A:1241:G:H1'	1.75	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1400:C:C6	1:A:1400:C:OP1	2.63	0.52
1:A:1430:C:C2'	1:A:1431:C:O5'	2.57	0.52
1:A:130:A:OP2	1:A:189:U:C4	2.62	0.52
1:A:133:U:O4	1:A:229:U:O4	2.27	0.52
1:A:255:G:P	19:T:66:SER:HB2	2.49	0.52
1:A:501:C:H1'	1:A:549:C:C1'	2.32	0.52
1:A:538:G:O2'	14:O:114:LYS:NZ	2.39	0.52
1:A:539:A:C8	14:O:115:LYS:NZ	2.69	0.52
1:A:586:C:OP1	19:T:34:LYS:NZ	2.43	0.52
1:A:632:A:H2'	1:A:633:G:H8	1.74	0.52
1:A:682:G:C6	1:A:683:G:N7	2.77	0.52
1:A:921:U:O2'	1:A:922:G:H5'	2.09	0.52
1:A:937:A:N7	1:A:938:A:N7	2.58	0.52
4:E:44:LEU:C	4:E:48:MET:SD	2.88	0.52
4:E:77:ALA:O	4:E:78:GLN:C	2.46	0.52
5:F:20:SER:HB2	5:F:40:ARG:CZ	2.37	0.52
6:G:128:VAL:HG21	6:G:133:VAL:CG2	2.38	0.52
6:G:191:ARG:CZ	6:G:194:LEU:O	2.57	0.52
6:G:60:GLU:CB	6:G:202:LEU:HB3	2.38	0.52
6:G:60:GLU:CG	6:G:203:VAL:HG23	2.39	0.52
6:G:205:GLU:OE1	7:H:100:VAL:HG23	2.10	0.52
7:H:86:ALA:HB3	7:H:130:ASN:ND2	2.24	0.52
7:H:90:VAL:CG1	7:H:90:VAL:O	2.57	0.52
9:J:54:THR:O	9:J:55:GLY:C	2.45	0.52
10:K:18:ARG:N	10:K:18:ARG:CD	2.69	0.52
11:L:63:ILE:N	11:L:63:ILE:CD1	2.66	0.52
11:L:96:LEU:HG	11:L:101:PHE:CE1	2.45	0.52
1:A:501:C:OP2	14:O:124:LYS:CE	2.57	0.52
15:P:10:PRO:CG	15:P:18:ALA:CB	2.87	0.52
17:R:21:ASP:OD2	17:R:24:SER:CB	2.57	0.52
17:R:2:PRO:O	17:R:3:ILE:C	2.47	0.52
18:S:35:LYS:NZ	18:S:37:GLY:C	2.62	0.52
20:U:21:LYS:HZ1	20:U:23:LYS:HB3	1.74	0.52
21:V:58:VAL:HG21	21:V:75:ALA:CB	2.39	0.52
21:V:40:ILE:CG1	21:V:71:LEU:HD23	2.38	0.52
22:W:43:LEU:CD1	22:W:51:GLU:HB2	2.33	0.52
22:W:79:ARG:O	22:W:80:ARG:C	2.47	0.52
1:A:1244:C:OP2	23:X:9:ARG:CD	2.57	0.52
3:D:1:G:C6	3:D:73:A:N6	2.78	0.52
1:A:748:C:O2'	1:A:749:C:H5'	2.08	0.52
1:A:1133:G:N1	1:A:1142:G:C6	2.77	0.52
1:A:1151:A:O2'	1:A:1152:A:OP1	2.23	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1212:U:O2'	1:A:1213:A:H8	1.93	0.52
1:A:1250:A:H2'	1:A:1251:A:C8	2.44	0.52
1:A:1319:A:H4'	21:V:70:LYS:HZ3	1.74	0.52
1:A:1333:A:H8	1:A:1333:A:O5'	1.92	0.52
1:A:246:A:C2	1:A:282:A:C5	2.98	0.52
1:A:362:G:N3	1:A:364:A:H8	2.06	0.52
1:A:644:G:C6	1:A:645:C:C2	2.98	0.52
1:A:690:G:N3	1:A:690:G:C2'	2.70	0.52
1:A:715:A:H4'	1:A:777:A:H61	1.74	0.52
1:A:575:G:C6	1:A:821:G:C8	2.98	0.52
1:A:856:C:O2'	1:A:857:C:H5'	2.09	0.52
4:E:55:PHE:CD2	4:E:58:ILE:HD12	2.44	0.52
4:E:87:ARG:C	4:E:89:GLY:N	2.62	0.52
6:G:55:ALA:C	6:G:59:ARG:HG2	2.25	0.52
8:I:12:PRO:HG2	8:I:13:ASN:H	1.74	0.52
8:I:8:ILE:HG23	8:I:88:VAL:HA	1.91	0.52
9:J:150:ALA:HB2	13:N:59:TYR:HD2	1.71	0.52
9:J:88:PRO:CG	9:J:152:ALA:HB2	2.40	0.52
10:K:126:LYS:CE	10:K:127:LEU:HB2	2.39	0.52
11:L:19:LEU:CD2	11:L:20:ARG:N	2.73	0.52
14:O:117:ARG:HH21	14:O:124:LYS:N	2.08	0.52
14:O:62:SER:O	14:O:63:GLY:C	2.46	0.52
15:P:73:GLU:C	15:P:73:GLU:CD	2.67	0.52
15:P:80:ARG:HG3	15:P:80:ARG:HH11	1.74	0.52
15:P:91:ARG:HH11	15:P:96:LEU:HB2	1.73	0.52
15:P:99:ARG:HG3	15:P:99:ARG:NH1	2.24	0.52
19:T:40:LYS:NZ	19:T:42:TYR:OH	2.41	0.52
21:V:36:ARG:NE	21:V:51:VAL:CG1	2.52	0.52
18:S:45:THR:HB	18:S:46:PRO:HD2	1.92	0.52
1:A:1274:G:H2'	1:A:1274:G:N3	2.24	0.52
1:A:1349:A:OP2	11:L:118:LYS:CD	2.44	0.52
1:A:1401:G:C2'	1:A:1402:C:C5'	2.83	0.52
1:A:1430:C:N3	1:A:1471:G:C2	2.77	0.52
1:A:1435:G:C2	1:A:1436:U:O4	2.61	0.52
1:A:1466:C:H5''	1:A:1467:G:OP2	2.10	0.52
1:A:1498:U:C2'	1:A:1498:U:O2	2.58	0.52
1:A:1502:A:C2	1:A:1504:G:N3	2.77	0.52
1:A:190:G:O2'	1:A:191(A):G:P	2.67	0.52
1:A:50:A:O2'	1:A:360:A:C2	2.62	0.52
1:A:44:G:O6	1:A:399:G:O6	2.28	0.52
1:A:478:A:H2'	1:A:479:C:C6	2.43	0.52
1:A:60:A:H62	1:A:110:C:H42	1.56	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:688:G:N3	1:A:704:A:H2	2.08	0.52
1:A:78:G:C6	1:A:79:G:N7	2.78	0.52
1:A:895:G:C2	1:A:896:C:C4	2.98	0.52
2:C:17:C:N4	2:C:19:G:H8	2.06	0.52
4:E:163:PHE:CE1	4:E:201:ILE:CD1	2.93	0.52
4:E:67:THR:HG21	4:E:155:LEU:HD21	1.91	0.52
5:F:172:ARG:NH1	5:F:174:PRO:HD3	2.23	0.52
1:A:1189:C:O2'	5:F:176:HIS:CD2	2.62	0.52
5:F:192:THR:CG2	5:F:192:THR:O	2.57	0.52
5:F:89:GLU:O	5:F:91:LEU:N	2.43	0.52
6:G:12:CYS:HB3	6:G:33:MET:CE	2.40	0.52
6:G:65:ARG:HG2	6:G:65:ARG:NH1	2.25	0.52
7:H:81:GLU:CG	7:H:90:VAL:HG23	2.40	0.52
11:L:16:ARG:CD	11:L:64:THR:OG1	2.57	0.52
13:N:99:GLN:O	13:N:102:GLY:HA2	2.09	0.52
15:P:49:THR:O	15:P:53:VAL:HG23	2.10	0.52
17:R:83:GLU:O	17:R:84:LYS:C	2.44	0.52
19:T:94:ASN:O	19:T:97:SER:OG	2.27	0.52
20:U:17:SER:HB2	20:U:54:ARG:CZ	2.40	0.52
22:W:76:ALA:C	22:W:78:ALA:N	2.60	0.52
22:W:34:LYS:HG2	22:W:80:ARG:HH12	1.74	0.52
1:A:1286:A:H5'	23:X:25:LYS:HG3	1.90	0.52
3:D:56:C:H2'	3:D:57:G:C1'	2.39	0.52
1:A:1382:C:H6	1:A:1382:C:O5'	1.91	0.52
1:A:1047:G:C2	1:A:1048:G:C8	2.97	0.52
1:A:1064:G:C1'	1:A:1066:C:N3	2.71	0.52
1:A:1184:G:C2	1:A:1185:G:N7	2.78	0.52
1:A:1325:C:C2	1:A:1326:C:C5	2.97	0.52
1:A:1338:G:N2	2:C:30:G:H21	2.07	0.52
1:A:1350:A:C6	1:A:1351:U:C4	2.98	0.52
1:A:1376:U:OP1	9:J:98:SER:HB3	2.09	0.52
1:A:137:C:H1'	18:S:62:VAL:HA	1.90	0.52
1:A:1390:U:C2	1:A:1391:U:C5	2.98	0.52
1:A:1391:U:C2'	1:A:1392:G:C8	2.88	0.52
1:A:1476:G:C2	1:A:1477:C:C4	2.97	0.52
1:A:1536:C:H42	3:D:35:A:N6	2.07	0.52
1:A:230:G:C2	1:A:231:G:C4	2.98	0.52
1:A:235:C:H2'	1:A:236:G:C8	2.40	0.52
1:A:523:A:H61	14:O:53:ARG:NH2	2.08	0.52
1:A:620:C:C2	6:G:135:LEU:HD13	2.44	0.52
1:A:883:C:H5'	1:A:884:U:OP2	2.09	0.52
1:A:889:A:H5''	1:A:890:G:OP1	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:927:G:OP2	1:A:1503:A:N7	2.42	0.52
1:A:940:C:H2'	1:A:941:G:C8	2.40	0.52
1:A:952:U:C5'	1:A:972:C:H41	2.22	0.52
1:A:961:U:H6	1:A:983:A:N3	2.07	0.52
2:C:17:C:C4	2:C:19:G:C8	2.97	0.52
2:C:36:U:O2	2:C:36:U:H2'	2.08	0.52
4:E:103:THR:O	4:E:104:ASN:CB	2.43	0.52
5:F:27:LYS:O	5:F:28:GLN:HB3	2.10	0.52
5:F:72:LYS:O	5:F:76:VAL:CG2	2.57	0.52
6:G:20:TYR:CD1	6:G:21:LEU:N	2.77	0.52
7:H:46:GLY:H	7:H:58:ALA:HB2	1.74	0.52
8:I:6:VAL:O	8:I:62:TRP:HA	2.10	0.52
9:J:15:ASP:OD1	9:J:18:TYR:N	2.42	0.52
9:J:43:PHE:HD2	9:J:44:TYR:CD2	2.28	0.52
10:K:116:LYS:HE3	10:K:116:LYS:HA	1.92	0.52
10:K:5:PRO:O	10:K:6:ILE:C	2.47	0.52
12:M:87:THR:O	12:M:87:THR:HG22	2.09	0.52
17:R:69:TYR:O	17:R:72:ARG:N	2.42	0.52
17:R:6:GLU:O	17:R:7:GLU:C	2.48	0.52
18:S:51:VAL:HG21	18:S:77:ALA:HB2	1.92	0.52
18:S:58:TYR:CD1	18:S:59:TRP:N	2.78	0.52
19:T:75:ARG:HH12	19:T:77:VAL:CB	2.22	0.52
19:T:83:ASP:O	19:T:86:GLU:HB2	2.09	0.52
20:U:54:ARG:HG3	20:U:55:ARG:HG2	1.92	0.52
20:U:55:ARG:NH1	20:U:55:ARG:CB	2.55	0.52
21:V:11:VAL:CG1	21:V:15:LEU:CD1	2.82	0.52
22:W:76:ALA:O	22:W:78:ALA:N	2.43	0.52
3:D:56:C:H3'	3:D:57:G:N9	2.25	0.52
3:D:49:G:H2'	3:D:49:G:N3	2.24	0.52
4:E:131:PRO:O	4:E:134:GLU:HB2	2.10	0.52
1:A:1017:G:O2'	1:A:1018:C:H5'	2.10	0.52
1:A:1128:C:O4'	1:A:1148:U:O4	2.28	0.52
1:A:1222:G:O2'	1:A:1223:C:O4'	2.22	0.52
1:A:1255:G:H21	1:A:1276:G:N2	2.08	0.52
1:A:1438:G:C6	1:A:1439:C:C4	2.97	0.52
1:A:1483:A:C2'	1:A:1484:C:O5'	2.58	0.52
1:A:266:G:H8	19:T:67:LYS:CE	2.23	0.52
1:A:359:U:O2'	1:A:360:A:H5'	2.10	0.52
1:A:377:G:H2'	1:A:378:G:C8	2.44	0.52
1:A:379:C:C2'	1:A:380:G:H5'	2.38	0.52
1:A:43:C:H2'	1:A:44:G:H8	1.74	0.52
1:A:702:A:O2'	1:A:703:G:P	2.67	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:582:U:C4	1:A:760:G:O6	2.63	0.52
1:A:787:A:C2'	1:A:788:U:H5'	2.37	0.52
1:A:900:A:H2'	1:A:901:A:O5'	2.09	0.52
1:A:978:A:C6	1:A:1361:G:N2	2.73	0.52
2:C:70:G:H2'	2:C:71:C:C6	2.45	0.52
2:C:71:C:C4	2:C:72:A:N7	2.77	0.52
4:E:107:THR:C	4:E:109:SER:N	2.60	0.52
5:F:120:VAL:CG1	5:F:133:ALA:HB1	2.39	0.52
6:G:121:VAL:HA	6:G:126:ILE:HG13	1.92	0.52
6:G:75:PHE:CE1	6:G:93:PHE:CZ	2.97	0.52
6:G:92:VAL:HG12	6:G:96:LEU:HD11	1.90	0.52
7:H:119:LEU:CD2	7:H:119:LEU:N	2.73	0.52
7:H:75:THR:HG21	7:H:94:ALA:O	2.10	0.52
10:K:33:GLU:O	10:K:36:LEU:CG	2.51	0.52
10:K:9:MET:HA	10:K:26:VAL:CG2	2.36	0.52
12:M:60:ARG:CA	12:M:60:ARG:HH11	2.23	0.52
12:M:75:ILE:HG22	12:M:76:ASN:N	2.24	0.52
1:A:692:U:O4	13:N:52:GLY:C	2.48	0.52
19:T:84:LEU:O	19:T:87:LYS:N	2.43	0.52
20:U:37:VAL:HG12	20:U:41:LYS:CE	2.40	0.52
20:U:31:LEU:HD22	20:U:65:ILE:CD1	2.40	0.52
20:U:66:LEU:CD1	20:U:67:ALA:H	2.18	0.52
22:W:31:SER:O	22:W:34:LYS:HB2	2.09	0.52
1:A:920:U:H4'	1:A:1080:A:H62	1.75	0.52
1:A:1159:U:C5	1:A:1182:G:H1'	2.45	0.52
1:A:1186:G:C2	1:A:1187:G:C8	2.98	0.52
1:A:1187:G:C6	1:A:1188:A:N6	2.78	0.52
1:A:1239:A:H1'	1:A:1241:G:C5	2.45	0.52
1:A:1278:U:C3'	1:A:1278:U:C6	2.92	0.52
1:A:1329:A:H5''	15:P:29:ARG:HG2	1.92	0.52
1:A:1342:C:O2'	11:L:124:GLN:HA	2.09	0.52
1:A:1343:G:H2'	1:A:1344:C:C6	2.45	0.52
1:A:145:G:H2'	1:A:146:G:H5'	1.92	0.52
1:A:1502:A:C6	1:A:1504:G:C2	2.96	0.52
1:A:332:G:C2'	1:A:333:G:H5'	2.39	0.52
1:A:421:U:C4	5:F:127:ARG:NH1	2.78	0.52
1:A:428:G:O4'	1:A:430:A:C8	2.63	0.52
1:A:503:C:N3	1:A:504:C:C5	2.78	0.52
1:A:558:G:O5'	1:A:559:A:C3'	2.51	0.52
1:A:947:G:N3	1:A:948:C:C6	2.78	0.52
1:A:970:C:H42	15:P:126:LYS:HZ2	1.56	0.52
2:C:19:G:N1	2:C:56:C:N4	2.56	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:196:LEU:HD12	4:E:197:VAL:HA	1.91	0.52
4:E:82:ARG:H	4:E:94:ASN:HD21	1.57	0.52
5:F:63:ASN:O	5:F:99:VAL:HG12	2.09	0.52
7:H:109:ILE:HD13	7:H:139:LEU:HD12	1.92	0.52
9:J:71:PRO:CG	9:J:96:GLN:HG3	2.39	0.52
10:K:10:LEU:HB3	10:K:83:ILE:HD11	1.91	0.52
10:K:112:LEU:CD2	10:K:114:THR:HG23	2.38	0.52
10:K:137:VAL:CG1	10:K:138:TRP:N	2.72	0.52
10:K:20:TYR:HE2	10:K:75:ARG:HD2	1.74	0.52
11:L:15:ALA:HB1	11:L:77:ILE:CA	2.40	0.52
11:L:89:ASN:C	11:L:91:ASP:N	2.63	0.52
12:M:79:ARG:NH1	12:M:79:ARG:O	2.42	0.52
12:M:9:ARG:HH1	12:M:9:ARG:HB2	1.73	0.52
14:O:41:ARG:NH2	14:O:57:LYS:HZ2	1.88	0.52
1:A:948:C:P	15:P:109:THR:H	2.32	0.52
15:P:67:GLU:OE2	15:P:68:GLY:N	2.43	0.52
16:Q:26:ARG:C	16:Q:28:GLY:H	2.13	0.52
1:A:1358:U:OP1	16:Q:34:TYR:HA	2.10	0.52
17:R:31:LEU:CA	17:R:34:LEU:HD23	2.32	0.52
18:S:20:VAL:HG13	18:S:21:VAL:H	1.75	0.52
1:A:277:C:OP1	19:T:41:LYS:CD	2.58	0.52
19:T:59:ILE:HD11	19:T:72:ARG:N	2.24	0.52
1:A:1038:C:O2	1:A:1039:C:C5	2.62	0.52
1:A:1129:C:OP2	1:A:1129:C:C6	2.63	0.52
1:A:1191:A:P	5:F:4:LYS:NZ	2.83	0.52
1:A:1216:G:C4	1:A:1217:C:C5	2.98	0.52
1:A:1225:A:H3'	1:A:1226:C:H6	1.75	0.52
1:A:1271:G:OP1	1:A:1314:C:C5'	2.49	0.52
1:A:1288:A:H2'	1:A:1289:A:C8	2.33	0.52
1:A:1326:C:C2	1:A:1327:C:C6	2.98	0.52
1:A:1373:G:H4'	9:J:34:GLY:O	2.10	0.52
1:A:1459:C:P	22:W:27:LYS:NZ	2.83	0.52
1:A:129(A):G:N2	1:A:191(A):G:C8	2.78	0.52
1:A:195:A:C5	1:A:196:A:C2	2.98	0.52
1:A:322:C:O2'	22:W:23:ARG:HB2	2.09	0.52
1:A:109:A:N7	1:A:326:G:C2	2.78	0.52
1:A:458:C:C2	1:A:475:G:C2	2.97	0.52
1:A:671:G:H3'	1:A:672:U:H6	1.73	0.52
1:A:734:G:OP1	1:A:734:G:C8	2.63	0.52
1:A:792:A:C4	1:A:794:A:N6	2.78	0.52
1:A:861:G:H2'	1:A:862:C:C6	2.44	0.52
1:A:934:C:H5	1:A:1344:C:C2	2.28	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:978:A:H3'	1:A:980:C:H41	1.75	0.52
4:E:178:ARG:HE	4:E:196:LEU:CD1	2.23	0.52
4:E:35:GLU:OE2	4:E:36:ARG:C	2.48	0.52
4:E:33:TYR:HB2	4:E:42:ILE:C	2.30	0.52
5:F:12:LEU:HD11	16:Q:57:ARG:CB	2.40	0.52
5:F:47:LEU:N	5:F:47:LEU:CD2	2.66	0.52
6:G:8:VAL:HG21	6:G:115:ARG:NH2	2.25	0.52
6:G:135:LEU:HB3	6:G:137:SER:OG	2.09	0.52
6:G:101:LEU:CD2	6:G:138:TYR:HB3	2.40	0.52
6:G:101:LEU:HD23	6:G:138:TYR:HB3	1.92	0.52
6:G:196:LEU:CD2	6:G:196:LEU:N	2.60	0.52
6:G:61:LYS:HA	6:G:203:VAL:CG1	2.40	0.52
1:A:544:G:OP1	6:G:66:ARG:NH2	2.43	0.52
7:H:107:ARG:HB2	7:H:107:ARG:CZ	2.40	0.52
7:H:70:PRO:O	7:H:76:ILE:HG12	2.10	0.52
8:I:47:ARG:HD3	8:I:57:GLN:HG3	1.90	0.52
10:K:83:ILE:HA	10:K:136:GLU:O	2.10	0.52
11:L:27:THR:HA	11:L:31:GLN:O	2.10	0.52
11:L:114:TYR:HA	12:M:60:ARG:NH2	2.24	0.52
16:Q:15:LYS:O	16:Q:16:PHE:HB2	2.10	0.52
1:A:227:G:O2'	18:S:62:VAL:HG11	2.10	0.52
19:T:70:ARG:C	19:T:71:PHE:HD1	2.13	0.52
19:T:76:LEU:HD23	19:T:77:VAL:N	2.24	0.52
20:U:39:VAL:O	20:U:40:LEU:C	2.45	0.52
21:V:30:LEU:HD12	21:V:59:PRO:CA	2.40	0.52
3:D:58:A:H2'	3:D:61:C:C5	2.45	0.52
1:A:1196:U:H4'	1:A:1197:G:O5'	2.08	0.52
1:A:1048:G:O4'	1:A:1215:G:H5''	2.10	0.52
1:A:1216:G:H2'	1:A:1217:C:H6	1.74	0.52
1:A:1413:A:O2'	1:A:1414:U:C5'	2.57	0.52
1:A:1422:G:O2'	1:A:1423:G:H5'	2.10	0.52
1:A:19:C:N3	1:A:20:U:C5	2.77	0.52
1:A:325:A:H2'	1:A:326:G:H5'	1.92	0.52
1:A:588:G:N3	1:A:588:G:H2'	2.25	0.52
1:A:591:U:O2'	1:A:592:G:H5'	2.10	0.52
1:A:605:U:H2'	1:A:606:G:C8	2.45	0.52
1:A:622:A:C2'	1:A:623:C:O5'	2.57	0.52
1:A:738:C:N4	1:A:739:C:N4	2.57	0.52
1:A:80:G:H2'	1:A:81:G:C8	2.45	0.52
1:A:943:U:O2'	1:A:944:G:H5'	2.09	0.52
1:A:969:A:C4'	1:A:969:A:OP1	2.57	0.52
1:A:988:G:C2	1:A:989:C:C2	2.98	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:163:PHE:CD2	4:E:164:VAL:N	2.77	0.52
4:E:164:VAL:O	4:E:165:VAL:O	2.27	0.52
4:E:72:GLY:HA3	4:E:165:VAL:HG11	1.91	0.52
5:F:136:GLN:O	5:F:137:ALA:C	2.49	0.52
5:F:88:ARG:HD3	5:F:99:VAL:O	2.10	0.52
6:G:120:LEU:HG	6:G:121:VAL:N	2.25	0.52
6:G:102:ASP:CB	6:G:136:PRO:O	2.57	0.52
6:G:200:GLU:HG3	6:G:201:GLN:HE21	1.74	0.52
6:G:15:GLU:CD	6:G:59:ARG:NH2	2.62	0.52
7:H:92:LYS:CG	7:H:93:PRO:HD2	2.39	0.52
8:I:4:TYR:HB3	8:I:91:VAL:O	2.10	0.52
8:I:77:ARG:N	8:I:80:ARG:NE	2.58	0.52
9:J:118:VAL:HG12	9:J:122:HIS:NE2	2.24	0.52
9:J:37:ASN:OD1	9:J:38:LEU:HB2	2.10	0.52
9:J:42:ILE:HG23	9:J:117:ALA:N	2.25	0.52
10:K:67:PRO:C	10:K:68:ARG:O	2.44	0.52
11:L:82:ALA:HB1	11:L:96:LEU:HD11	1.91	0.52
12:M:24:VAL:HG22	12:M:34:VAL:CG1	2.32	0.52
12:M:46:ARG:HA	12:M:64:GLU:CB	2.38	0.52
13:N:22:HIS:HB3	13:N:29:ILE:HD11	1.92	0.52
18:S:57:ARG:HG2	18:S:79:VAL:HG13	1.92	0.52
20:U:43:PHE:HB3	20:U:51:LEU:HB2	1.91	0.52
22:W:32:ALA:O	22:W:33:ILE:C	2.47	0.52
22:W:50:GLU:HA	22:W:53:LEU:CD1	2.39	0.52
23:X:7:ARG:HG3	23:X:8:THR:N	2.21	0.52
3:D:73:A:N3	3:D:73:A:H2'	2.25	0.52
1:A:1129:C:N4	1:A:1139:G:N1	2.58	0.51
1:A:1131:G:H3'	1:A:1131:G:H8	1.76	0.51
1:A:1193:G:H2'	1:A:1194:U:O5'	2.10	0.51
1:A:1277:C:C5	1:A:1278:U:O2	2.63	0.51
1:A:1237:C:N4	1:A:1336:C:C6	2.78	0.51
1:A:934:C:N4	1:A:1344:C:N3	2.58	0.51
1:A:1397:C:C2'	1:A:1398:A:OP2	2.58	0.51
1:A:1415:G:C2	1:A:1416:G:C8	2.98	0.51
1:A:1425:U:O2'	1:A:1426:C:H5'	2.09	0.51
1:A:1426:C:O2'	1:A:1427:U:H5'	2.10	0.51
1:A:1484:C:O2'	1:A:1485:U:H5'	2.11	0.51
1:A:440:A:C8	1:A:440:A:O5'	2.57	0.51
1:A:503:C:H2'	1:A:504:C:H6	1.75	0.51
1:A:565:U:P	1:A:566:G:H3'	2.51	0.51
1:A:707:C:H4'	13:N:20:TYR:CD2	2.46	0.51
1:A:981:U:C6	1:A:981:U:C3'	2.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:986:A:H2'	1:A:987:G:C8	2.44	0.51
2:C:35:A:C8	2:C:35:A:H5'	2.45	0.51
2:C:6:G:C2'	2:C:7:G:H8	2.21	0.51
4:E:107:THR:HA	4:E:110:GLN:OE1	2.11	0.51
5:F:187:ALA:HB3	5:F:198:VAL:HG22	1.92	0.51
5:F:25:GLY:H	5:F:28:GLN:NE2	2.07	0.51
5:F:88:ARG:O	5:F:91:LEU:HB3	2.10	0.51
6:G:161:ASN:C	6:G:163:GLU:N	2.63	0.51
6:G:71:SER:O	6:G:75:PHE:CB	2.58	0.51
9:J:2:ALA:HB1	9:J:5:ARG:NH1	2.24	0.51
10:K:40:ALA:O	10:K:42:GLU:N	2.43	0.51
10:K:73:ASP:C	10:K:73:ASP:OD2	2.48	0.51
10:K:94:TYR:CD1	10:K:94:TYR:N	2.78	0.51
11:L:27:THR:HG22	11:L:30:GLY:N	2.25	0.51
11:L:42:ARG:HB3	11:L:74:ILE:HD13	1.91	0.51
12:M:13:HIS:O	12:M:13:HIS:ND1	2.43	0.51
12:M:32:ALA:CB	12:M:76:ASN:HD22	2.23	0.51
13:N:110:ASP:HB3	20:U:85:LEU:CB	2.33	0.51
13:N:15:ALA:HB1	13:N:78:GLN:NE2	2.20	0.51
15:P:102:ARG:O	15:P:104:ARG:N	2.41	0.51
15:P:3:ARG:HG3	15:P:7:VAL:HG12	1.91	0.51
18:S:4:ILE:HG23	18:S:21:VAL:HG12	1.91	0.51
1:A:664:G:OP1	20:U:64:ARG:NH2	2.42	0.51
20:U:74:ARG:CB	20:U:81:PHE:HD2	2.22	0.51
21:V:52:TYR:OH	21:V:55:LYS:CA	2.57	0.51
22:W:86:ARG:HG2	22:W:87:LYS:H	1.75	0.51
1:A:1041:A:C6	1:A:1042:G:N7	2.78	0.51
1:A:1022:G:N2	1:A:1023:G:C4	2.78	0.51
1:A:143:A:H8	1:A:143:A:O5'	1.93	0.51
1:A:1064:G:O2'	1:A:1065:U:H1'	2.10	0.51
1:A:111:G:H5''	1:A:112:G:OP2	2.10	0.51
1:A:1126:U:OP1	1:A:1126:U:O4'	2.29	0.51
1:A:1200:C:O5'	1:A:1202:G:OP1	2.28	0.51
1:A:1226:C:O2'	1:A:1227:A:P	2.68	0.51
1:A:1401:G:N1	1:A:1504:G:N2	2.58	0.51
1:A:1418:A:C6	1:A:1483:A:C6	2.98	0.51
1:A:145:G:C2	1:A:178:C:C2	2.98	0.51
1:A:173:U:H5'	1:A:197:A:O2'	2.09	0.51
1:A:22:G:C4	1:A:23:C:C6	2.98	0.51
1:A:301:G:C2	1:A:302:G:N9	2.78	0.51
1:A:406:G:C2	1:A:407:G:N7	2.78	0.51
1:A:451:A:H1'	1:A:452:A:C5	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:451:A:C2	1:A:480:U:C5	2.99	0.51
1:A:723:U:OP2	1:A:724:G:H8	1.94	0.51
1:A:797:C:C2'	1:A:798:G:H5'	2.39	0.51
1:A:865:A:O2'	1:A:918:A:O2'	2.15	0.51
1:A:965:A:O2'	1:A:966:G:OP1	2.27	0.51
2:C:74:C:C3'	2:C:75:C:C5'	2.87	0.51
4:E:115:LEU:HD23	4:E:149:LEU:HD22	1.91	0.51
4:E:139:LYS:O	4:E:143:GLU:HB3	2.10	0.51
4:E:187:LEU:HD13	4:E:187:LEU:C	2.30	0.51
4:E:69:LEU:O	4:E:162:ILE:HB	2.11	0.51
6:G:122:ARG:CA	6:G:134:ASP:HB2	2.38	0.51
6:G:31:CYS:SG	6:G:33:MET:CG	2.99	0.51
6:G:39:PRO:HG2	6:G:44:GLY:O	2.10	0.51
6:G:61:LYS:HE3	6:G:62:GLN:CA	2.40	0.51
7:H:54:ALA:O	7:H:57:LYS:HB3	2.10	0.51
8:I:80:ARG:NH1	8:I:88:VAL:HG12	2.25	0.51
10:K:18:ARG:NH1	10:K:18:ARG:CA	2.51	0.51
11:L:118:LYS:CB	11:L:121:ARG:HB2	2.32	0.51
13:N:32:ILE:C	13:N:40:ILE:HD11	2.30	0.51
13:N:54:ARG:O	13:N:57:THR:HG22	2.10	0.51
13:N:58:PRO:HB2	13:N:93:GLN:HG3	1.92	0.51
15:P:22:ILE:O	15:P:25:ILE:HG13	2.10	0.51
18:S:43:LYS:HD2	18:S:43:LYS:N	2.25	0.51
1:A:275:G:C5'	19:T:14:LYS:HZ3	2.24	0.51
18:S:46:PRO:HG2	18:S:47:ASP:N	2.20	0.51
5:F:79:ARG:HG3	5:F:79:ARG:O	2.10	0.51
1:A:1145:C:O2'	1:A:1146:A:C8	2.57	0.51
1:A:1147:C:N3	1:A:1148:U:C4	2.78	0.51
1:A:1352:C:N3	1:A:1371:G:C6	2.78	0.51
1:A:1234:C:H5'	1:A:1365:G:OP1	2.10	0.51
1:A:1419:G:N1	1:A:1482:G:C4	2.79	0.51
1:A:819:A:N1	1:A:1529:G:N7	2.59	0.51
1:A:186:C:H1'	22:W:85:MET:SD	2.50	0.51
1:A:286:G:C4	1:A:287:U:C6	2.99	0.51
1:A:285:G:C6	1:A:286:G:N7	2.78	0.51
1:A:299:G:H2'	1:A:300:A:N7	2.25	0.51
1:A:331:G:OP1	1:A:332:G:H5'	2.10	0.51
1:A:405:U:O2	1:A:405:U:H2'	2.09	0.51
1:A:715:A:O5'	1:A:715:A:H8	1.93	0.51
1:A:719:C:H2'	1:A:720:C:O4'	2.11	0.51
1:A:73:G:N2	1:A:74:C:C2	2.78	0.51
1:A:744:C:O2'	1:A:851:G:N2	2.39	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:760:G:C5	1:A:761:G:C8	2.98	0.51
1:A:770:C:H2'	1:A:771:G:H8	1.75	0.51
1:A:777:A:N3	1:A:778:G:C8	2.79	0.51
1:A:81:G:O6	1:A:87:A:N6	2.43	0.51
1:A:87:A:N7	1:A:88:C:C5	2.78	0.51
1:A:888:G:H3'	1:A:889:A:C8	2.46	0.51
1:A:996:A:N3	1:A:996:A:H2'	2.25	0.51
2:C:43:A:N3	2:C:44:A:C8	2.78	0.51
2:C:75:C:P	2:C:76:A:OP2	2.68	0.51
2:C:9:G:N3	2:C:45:G:H2'	2.26	0.51
4:E:23:ARG:C	4:E:24:TRP:CD1	2.82	0.51
4:E:24:TRP:CZ3	4:E:26:PRO:HA	2.45	0.51
5:F:143:GLU:O	5:F:145:GLY:N	2.42	0.51
5:F:28:GLN:O	5:F:32:LEU:HG	2.10	0.51
6:G:7:PRO:HB2	6:G:10:ARG:HB2	1.92	0.51
6:G:26:CYS:CA	6:G:31:CYS:CB	2.88	0.51
7:H:107:ARG:HG2	7:H:111:GLU:OE2	2.11	0.51
8:I:15:ASP:O	8:I:19:LEU:CD1	2.58	0.51
8:I:94:GLN:HB2	20:U:32:ARG:NH2	2.25	0.51
9:J:12:LEU:H	9:J:12:LEU:HD12	1.75	0.51
10:K:26:VAL:O	10:K:58:TYR:CE1	2.64	0.51
10:K:69:ARG:HD2	10:K:70:GLN:HG2	1.91	0.51
10:K:6:ILE:HD12	10:K:85:ARG:CZ	2.40	0.51
11:L:96:LEU:CD1	11:L:101:PHE:HE1	2.24	0.51
11:L:114:TYR:HB3	12:M:58:ASP:OD1	2.09	0.51
13:N:20:TYR:HE1	13:N:33:THR:HG1	1.57	0.51
14:O:113:ARG:NH1	14:O:115:LYS:O	2.43	0.51
14:O:122:THR:HG22	14:O:123:LYS:H	1.74	0.51
16:Q:41:ARG:O	16:Q:44:LEU:HD23	2.11	0.51
17:R:76:GLU:C	17:R:78:TYR:N	2.62	0.51
18:S:4:ILE:CG2	18:S:21:VAL:HG13	2.41	0.51
18:S:26:ARG:HB3	18:S:30:GLY:HA3	1.92	0.51
15:P:87:TYR:HB2	21:V:73:GLU:O	2.10	0.51
1:A:193:C:O4'	22:W:60:GLU:HG2	2.09	0.51
22:W:56:MET:SD	22:W:84:LEU:CD1	2.98	0.51
1:A:342:C:O2'	1:A:343:U:C5'	2.57	0.51
1:A:525:C:C5	1:A:526:C:C5	2.98	0.51
1:A:1058:G:C8	1:A:1058:G:O5'	2.59	0.51
1:A:1106:G:OP1	5:F:172:ARG:HD2	2.10	0.51
1:A:1143:G:H2'	1:A:1144:G:C8	2.45	0.51
1:A:1317:C:N4	1:A:1318:A:C2	2.78	0.51
1:A:1446:A:HO2'	1:A:1447:G:P	2.32	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:193:C:O2'	1:A:194:C:H5'	2.10	0.51
1:A:197:A:O2'	1:A:198:G:O4'	2.26	0.51
1:A:198:G:C2'	1:A:199:G:H5'	2.41	0.51
1:A:184:G:H4'	1:A:224:C:H4'	1.91	0.51
1:A:355:C:C2	1:A:356:A:C8	2.99	0.51
1:A:38:G:C2	1:A:397:A:C6	2.99	0.51
1:A:44:G:H2'	1:A:45:U:C5'	2.40	0.51
1:A:454:C:H3'	1:A:455:C:C6	2.45	0.51
1:A:465:A:N7	1:A:467:G:C6	2.79	0.51
1:A:485:G:O2'	1:A:486:U:H6	1.93	0.51
1:A:529:G:H3'	1:A:529:G:C8	2.45	0.51
1:A:52:G:C2'	1:A:53:A:H5'	2.39	0.51
1:A:595:G:N7	1:A:641:U:C4	2.78	0.51
1:A:667:G:H4'	17:R:51:HIS:CE1	2.45	0.51
1:A:715:A:H5'	1:A:777:A:N6	2.26	0.51
1:A:782:A:N6	1:A:801:U:C6	2.79	0.51
1:A:817:C:C1'	1:A:818:G:H5''	2.41	0.51
1:A:828:A:C2	1:A:859:A:H1'	2.45	0.51
1:A:868:C:O5'	1:A:868:C:H6	1.94	0.51
1:A:939:G:H5''	9:J:102:ARG:CZ	2.41	0.51
1:A:962:C:H2'	1:A:963:G:O4'	2.11	0.51
1:A:972:C:P	12:M:57:LYS:HD2	2.50	0.51
1:A:983:A:N3	1:A:983:A:C2'	2.73	0.51
2:C:20:U:C3'	2:C:20:U:O2	2.58	0.51
2:C:6:G:C2	2:C:7:G:C5	2.99	0.51
2:C:74:C:H3'	2:C:75:C:H5''	1.90	0.51
6:G:14:ARG:HG3	6:G:15:GLU:N	2.25	0.51
9:J:94:ARG:O	9:J:97:GLN:HB3	2.10	0.51
10:K:112:LEU:HG	10:K:131:GLY:HA3	1.92	0.51
13:N:21:ILE:CD1	13:N:82:VAL:CG1	2.89	0.51
13:N:88:GLY:C	13:N:90:GLY:N	2.63	0.51
14:O:32:PHE:HB2	14:O:84:LEU:CD1	2.33	0.51
15:P:4:ILE:N	15:P:4:ILE:HD12	2.24	0.51
18:S:60:LEU:O	18:S:61:SER:O	2.28	0.51
19:T:24:GLU:HB3	19:T:38:ARG:O	2.10	0.51
19:T:7:THR:OG1	19:T:57:VAL:C	2.49	0.51
20:U:46:GLU:CG	20:U:85:LEU:HD13	2.40	0.51
1:A:1067:A:O2'	1:A:1068:G:P	2.68	0.51
1:A:1108:G:C6	1:A:1109:C:N4	2.79	0.51
1:A:1118:C:O4'	1:A:1179:A:C1'	2.58	0.51
1:A:1154:G:O2'	1:A:1155:G:C5'	2.59	0.51
1:A:1194:U:C5	1:A:1195:C:C5	2.99	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:953:G:C6	1:A:1229:A:N6	2.78	0.51
1:A:1401:G:H2'	1:A:1402:C:H5'	1.87	0.51
1:A:1505:G:C4'	1:A:1506:U:O5'	2.55	0.51
1:A:186(A):C:H2'	1:A:186(B):C:O4'	2.10	0.51
1:A:186(B):C:H2'	1:A:186(C):G:O5'	2.10	0.51
1:A:22:G:O2'	1:A:913:A:N1	2.44	0.51
1:A:245:C:C2	1:A:284:G:N1	2.78	0.51
1:A:595:G:O6	1:A:641:U:H3'	2.10	0.51
1:A:722:A:H2'	1:A:724:G:H8	1.75	0.51
1:A:738:C:N3	1:A:739:C:C5	2.79	0.51
4:E:53:ARG:O	4:E:56:ARG:NH1	2.44	0.51
5:F:156:ARG:NH1	5:F:161:GLU:HA	2.25	0.51
5:F:24:ALA:HB2	5:F:32:LEU:HD11	1.93	0.51
6:G:102:ASP:HA	6:G:105:VAL:CG2	2.40	0.51
6:G:195:ALA:O	6:G:196:LEU:C	2.48	0.51
9:J:104:LEU:CD2	9:J:134:ALA:CB	2.83	0.51
7:H:78:HIS:CB	10:K:107:LEU:HD11	2.39	0.51
11:L:15:ALA:HB1	11:L:77:ILE:HA	1.91	0.51
11:L:9:ARG:HD2	11:L:14:VAL:CB	2.41	0.51
12:M:25:GLU:C	12:M:28:ARG:HB2	2.30	0.51
12:M:55:LYS:O	12:M:56:HIS:CD2	2.64	0.51
13:N:54:ARG:O	13:N:55:LYS:C	2.49	0.51
15:P:27:LYS:CD	15:P:31:LYS:NZ	2.73	0.51
18:S:14:ASN:CB	18:S:42:ARG:HH22	2.23	0.51
18:S:57:ARG:O	18:S:58:TYR:C	2.47	0.51
19:T:45:HIS:ND1	19:T:46:ASP:N	2.58	0.51
21:V:31:ILE:O	21:V:33:THR:N	2.44	0.51
22:W:43:LEU:HD22	22:W:48:LYS:HB2	1.93	0.51
22:W:54:LYS:O	22:W:55:ILE:C	2.48	0.51
1:A:261:U:O4	22:W:79:ARG:NH2	2.43	0.51
3:D:18:G:H2'	3:D:19:G:O4'	2.10	0.51
1:A:1055:A:N6	1:A:1206:G:C4	2.78	0.51
1:A:1061:G:C5	1:A:1062:U:C5	2.98	0.51
1:A:1094:G:H3'	1:A:1108:G:N2	2.25	0.51
1:A:1142:G:H2'	1:A:1143:G:O4'	2.11	0.51
1:A:1319:A:OP1	21:V:70:LYS:NZ	2.41	0.51
1:A:1403:C:H1'	1:A:1500:A:C2	2.43	0.51
1:A:1511:G:C2'	1:A:1512:U:H5'	2.41	0.51
1:A:1516:G:N2	1:A:1519:A:OP2	2.43	0.51
1:A:186:C:C2'	22:W:85:MET:SD	2.98	0.51
1:A:250:A:O4'	1:A:252:U:C5	2.64	0.51
1:A:399:G:C4	1:A:400:C:C5	2.99	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:491:G:C2	1:A:492:G:C8	2.99	0.51
1:A:58:C:O2	1:A:388:G:C8	2.64	0.51
1:A:597:G:C5	1:A:644:G:N1	2.79	0.51
1:A:723:U:O5'	1:A:723:U:C6	2.64	0.51
1:A:778:G:C4	1:A:779:C:C5	2.99	0.51
1:A:789:U:H3'	1:A:789:U:C6	2.45	0.51
1:A:978:A:H8	1:A:980:C:N4	2.08	0.51
4:E:141:GLU:CD	4:E:142:LEU:N	2.64	0.51
4:E:75:LYS:CA	4:E:75:LYS:HE3	2.41	0.51
5:F:142:MET:HA	5:F:146:ALA:HB3	1.91	0.51
6:G:3:ARG:HE	6:G:71:SER:CB	2.20	0.51
8:I:27:GLN:CA	8:I:30:LEU:HD12	2.41	0.51
8:I:29:ALA:O	8:I:30:LEU:C	2.46	0.51
10:K:102:ARG:CZ	10:K:102:ARG:HB3	2.41	0.51
11:L:37:PHE:CZ	11:L:74:ILE:HG12	2.46	0.51
11:L:7:THR:H	11:L:83:ARG:HD2	1.76	0.51
12:M:46:ARG:HD2	16:Q:61:TRP:HZ3	1.75	0.51
12:M:55:LYS:O	12:M:56:HIS:CG	2.64	0.51
12:M:56:HIS:C	12:M:58:ASP:N	2.64	0.51
15:P:95:GLY:O	15:P:110:ARG:HD2	2.10	0.51
15:P:13:LYS:HD3	15:P:21:TYR:OH	2.11	0.51
16:Q:34:TYR:OH	16:Q:44:LEU:HD13	2.10	0.51
19:T:40:LYS:CB	19:T:40:LYS:NZ	2.74	0.51
19:T:19:VAL:O	19:T:43:LEU:HD22	2.10	0.51
20:U:47:THR:O	20:U:49:LYS:N	2.44	0.51
1:A:1084:G:N9	1:A:1085:U:H5	2.09	0.51
1:A:1308:U:O5'	15:P:99:ARG:NH1	2.43	0.51
1:A:1321:C:H3'	1:A:1321:C:H6	1.74	0.51
1:A:1430:C:C2	1:A:1431:C:C5	2.98	0.51
1:A:319:G:H4'	1:A:1468:A:H4'	1.92	0.51
1:A:263:A:P	1:A:263:A:H8	2.33	0.51
1:A:322:C:H2'	1:A:323:U:O4'	2.11	0.51
1:A:52:G:C4	1:A:53:A:C8	2.99	0.51
1:A:566:G:C4'	1:A:567:G:OP1	2.57	0.51
1:A:792:A:N3	1:A:794:A:N6	2.58	0.51
1:A:815:A:C8	1:A:819:A:H2	2.29	0.51
1:A:848:C:H2'	1:A:849:C:C6	2.46	0.51
1:A:956:U:H2'	1:A:957:U:C6	2.45	0.51
4:E:147:LYS:HG3	4:E:148:TYR:HD1	1.76	0.51
4:E:196:LEU:C	4:E:196:LEU:HD12	2.31	0.51
4:E:187:LEU:CD2	4:E:201:ILE:O	2.59	0.51
4:E:47:THR:CG2	4:E:51:LEU:HD21	2.41	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:404:U:OP1	6:G:118:ARG:NH1	2.44	0.51
6:G:130:GLY:O	6:G:131:ARG:C	2.49	0.51
6:G:173:TRP:CD1	6:G:189:PRO:HB3	2.46	0.51
6:G:69:GLY:O	6:G:70:ILE:HG12	2.11	0.51
6:G:78:LEU:HD13	6:G:93:PHE:HE2	1.76	0.51
7:H:12:LEU:CD2	7:H:14:ARG:HB3	2.36	0.51
7:H:44:GLY:O	7:H:58:ALA:HB1	2.10	0.51
10:K:138:TRP:CE3	10:K:138:TRP:OXT	2.64	0.51
4:E:181:PHE:HE1	10:K:72:PRO:HD2	1.76	0.51
10:K:89:PRO:HA	10:K:92:ARG:NH2	2.23	0.51
1:A:1372:U:OP1	11:L:71:SER:HB3	2.11	0.51
15:P:11:ARG:HA	15:P:11:ARG:HH11	1.75	0.51
15:P:25:ILE:HG12	15:P:66:LEU:HD13	1.91	0.51
12:M:11:PHE:CE1	16:Q:55:GLY:HA3	2.46	0.51
17:R:57:LEU:N	17:R:57:LEU:HD13	2.22	0.51
18:S:6:LEU:HD22	18:S:6:LEU:C	2.31	0.51
21:V:13:ASP:OD1	21:V:16:LEU:HB2	2.11	0.51
22:W:34:LYS:O	22:W:37:SER:N	2.43	0.51
1:A:1286:A:C5'	23:X:25:LYS:HG2	2.41	0.51
3:D:1:G:C6	3:D:73:A:C6	2.99	0.51
1:A:345:C:H5''	1:A:346:G:OP1	2.10	0.51
1:A:1007:C:O2'	1:A:1008:C:H5'	2.10	0.51
1:A:1113:C:H6	1:A:1113:C:O5'	1.93	0.51
1:A:1259:C:H1'	1:A:1283:G:N3	2.26	0.51
1:A:1263:C:O5'	1:A:1263:C:H6	1.93	0.51
1:A:1348:U:O2'	1:A:1349:A:H5'	2.11	0.51
1:A:1388:C:H2'	1:A:1389:C:H6	1.76	0.51
1:A:144:G:C4	1:A:179:A:C2	2.99	0.51
1:A:22:G:C2'	1:A:23:C:H6	2.24	0.51
1:A:352:C:O2	1:A:357:G:O6	2.28	0.51
1:A:541:G:H4'	6:G:42:GLN:HB2	1.92	0.51
1:A:58:C:O2	1:A:388:G:N7	2.43	0.51
1:A:946:A:C4	1:A:947:G:N7	2.79	0.51
2:C:41:C:C2	2:C:42:G:C8	2.99	0.51
4:E:114:ARG:C	4:E:114:ARG:HD3	2.30	0.51
4:E:139:LYS:O	4:E:143:GLU:CB	2.59	0.51
4:E:115:LEU:HD22	4:E:145:LEU:HD12	1.93	0.51
4:E:43:ASP:OD1	4:E:44:LEU:N	2.44	0.51
4:E:58:ILE:HG22	4:E:61:LEU:HD22	1.93	0.51
5:F:121:ALA:CB	5:F:187:ALA:HB1	2.40	0.51
5:F:28:GLN:HE22	5:F:29:TYR:HB2	1.74	0.51
6:G:200:GLU:O	6:G:204:ILE:HD12	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:80:GLU:HA	6:G:83:SER:OG	2.10	0.51
7:H:122:GLU:N	7:H:122:GLU:OE1	2.38	0.51
7:H:11:ILE:CB	7:H:31:LEU:HD22	2.41	0.51
9:J:106:GLN:O	9:J:109:ASN:N	2.43	0.51
1:A:1240:U:C2	9:J:32:ARG:NE	2.78	0.51
9:J:42:ILE:HD13	9:J:116:ALA:HB3	1.92	0.51
9:J:56:GLN:NE2	9:J:56:GLN:H	2.09	0.51
10:K:112:LEU:CB	10:K:133:LEU:HD23	2.41	0.51
1:A:1367:C:P	11:L:115:GLY:HA2	2.50	0.51
11:L:17:VAL:HG13	11:L:63:ILE:HG12	1.92	0.51
12:M:79:ARG:HH12	12:M:82:ILE:CG1	2.24	0.51
1:A:538:G:O3'	14:O:114:LYS:HD3	2.10	0.51
14:O:39:VAL:HB	14:O:57:LYS:CD	2.29	0.51
15:P:37:THR:CB	15:P:59:TYR:CD2	2.84	0.51
15:P:78:ILE:O	15:P:81:LEU:HD22	2.10	0.51
16:Q:24:CYS:O	16:Q:26:ARG:N	2.44	0.51
1:A:277:C:H5''	19:T:68:ARG:CZ	2.40	0.51
20:U:63:GLN:HA	20:U:66:LEU:CD1	2.41	0.51
1:A:1310:G:H3'	21:V:2:PRO:HD2	1.93	0.51
22:W:13:LEU:O	22:W:16:HIS:N	2.44	0.51
4:E:131:PRO:HB2	4:E:134:GLU:CG	2.38	0.51
1:A:337:C:N4	1:A:338:A:N6	2.58	0.51
1:A:1060:C:O2'	1:A:1061:G:H5'	2.11	0.51
1:A:1074:G:C4'	4:E:104:ASN:HB2	2.41	0.51
1:A:1085:U:O4'	1:A:1094:G:C2	2.63	0.51
1:A:1158:C:O2	1:A:1158:C:H3'	2.11	0.51
1:A:116:A:C2'	1:A:117:G:H5'	2.41	0.51
1:A:1239:A:H1'	1:A:1241:G:C8	2.46	0.51
1:A:1350:A:C2	1:A:1351:U:C2	2.99	0.51
1:A:1405:G:C1'	1:A:1519:A:C4'	2.88	0.51
1:A:892:A:HO2'	1:A:1415:G:HO2'	1.56	0.51
1:A:1431:C:N4	1:A:1470:G:C6	2.79	0.51
1:A:1475:G:N3	1:A:1476:G:C8	2.79	0.51
1:A:173:U:H5'	1:A:197:A:C1'	2.32	0.51
1:A:191:G:C4	22:W:105:SER:HB3	2.46	0.51
1:A:367:U:O4'	1:A:394:G:N2	2.44	0.51
1:A:451:A:N6	1:A:480:U:H2'	2.25	0.51
1:A:574:A:O5'	1:A:574:A:H8	1.93	0.51
1:A:607:A:C2'	1:A:608:A:C5'	2.89	0.51
1:A:640:A:N3	10:K:115:SER:OG	2.31	0.51
1:A:643:C:HO2'	1:A:644:G:H5'	1.76	0.51
1:A:665:A:C8	1:A:733:A:N3	2.79	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:842:C:H4'	1:A:848:C:N3	2.26	0.51
1:A:932:C:H5''	9:J:3:ARG:CB	2.40	0.51
1:A:979:C:H42	16:Q:18:VAL:CB	2.23	0.51
4:E:18:GLY:HA3	4:E:41:ILE:HA	1.93	0.51
5:F:123:GLN:HA	5:F:123:GLN:OE1	2.10	0.51
5:F:173:VAL:HG12	5:F:175:LEU:CD1	2.37	0.51
5:F:20:SER:HB2	5:F:40:ARG:NH1	2.26	0.51
1:A:407:G:O2'	6:G:116:GLN:HA	2.11	0.51
6:G:126:ILE:C	6:G:132:ARG:HB2	2.30	0.51
6:G:34:GLU:HA	6:G:34:GLU:OE1	2.11	0.51
6:G:60:GLU:HG2	6:G:202:LEU:HB3	1.93	0.51
6:G:98:GLU:CG	6:G:189:PRO:HG3	2.41	0.51
9:J:18:TYR:O	9:J:19:GLY:C	2.49	0.51
9:J:41:ARG:HG2	9:J:41:ARG:NH1	2.26	0.51
9:J:50:ILE:HG22	9:J:56:GLN:O	2.10	0.51
10:K:21:LYS:O	10:K:63:LEU:HD11	2.11	0.51
12:M:8:LEU:HD13	12:M:94:VAL:CB	2.41	0.51
1:A:684:A:O3'	13:N:12:ARG:NH1	2.44	0.51
14:O:86:ARG:O	14:O:87:GLY:O	2.29	0.51
15:P:81:LEU:HB2	15:P:86:CYS:SG	2.51	0.51
15:P:97:PRO:HG2	15:P:103:THR:CG2	2.41	0.51
1:A:579:G:O2'	17:R:58:MET:CE	2.59	0.51
17:R:59:MET:O	17:R:63:ARG:HG2	2.11	0.51
19:T:67:LYS:O	19:T:68:ARG:CB	2.59	0.51
21:V:18:LYS:HE2	21:V:22:LEU:CD1	2.41	0.51
22:W:68:LYS:O	22:W:69:GLY:O	2.28	0.51
1:A:1065:U:O2'	1:A:1066:C:OP2	2.30	0.51
1:A:1079:G:C4	1:A:1080:A:C2	2.98	0.51
1:A:1105:A:C2	1:A:1106:G:C8	2.99	0.51
1:A:1134:G:C6	1:A:1135:U:C1'	2.92	0.51
1:A:1180:A:O2'	1:A:1181:G:H5'	2.11	0.51
1:A:1299:A:C8	1:A:1301:U:H1'	2.45	0.51
1:A:1329:A:C2'	1:A:1330:U:H5'	2.41	0.51
1:A:1349:A:O2'	1:A:1350:A:H5'	2.11	0.51
1:A:1530:G:OP1	1:A:1530:G:H4'	2.11	0.51
1:A:333:G:C2	1:A:334:C:C4	2.99	0.51
1:A:394:G:C6	1:A:395:C:C4	2.99	0.51
1:A:447:G:N2	1:A:488:C:N4	2.59	0.51
1:A:563:A:N3	14:O:15:ARG:NH1	2.58	0.51
1:A:61:G:N7	1:A:62:U:C4	2.79	0.51
1:A:5:U:O2'	1:A:6:G:OP2	2.21	0.51
2:C:34:C:C4	2:C:35:A:N7	2.79	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:38:A:C2'	2:C:39:C:C5'	2.88	0.51
4:E:175:ARG:HA	4:E:178:ARG:HB3	1.91	0.51
4:E:16:HIS:O	4:E:204:ASN:CB	2.58	0.51
4:E:68:ILE:HD12	4:E:70:PHE:HZ	1.74	0.51
5:F:23:TYR:O	5:F:24:ALA:HB2	2.11	0.51
5:F:73:PRO:HG2	5:F:74:GLY:H	1.76	0.51
6:G:119:GLN:C	6:G:123:HIS:HD2	2.14	0.51
6:G:129:ASN:CG	6:G:144:ASP:HB3	2.30	0.51
9:J:93:PRO:O	9:J:95:ARG:N	2.45	0.51
10:K:100:ILE:HD13	10:K:125:ARG:HH21	1.74	0.51
2:C:31:G:H5'	11:L:127:LYS:HG3	1.93	0.51
11:L:85:LEU:HG	11:L:92:TYR:HD1	1.76	0.51
11:L:9:ARG:HD3	11:L:14:VAL:HG13	1.92	0.51
12:M:81:THR:O	12:M:85:LEU:HD12	2.10	0.51
1:A:685:G:H4'	13:N:40:ILE:O	2.11	0.51
13:N:58:PRO:HA	13:N:90:GLY:HA3	1.92	0.51
13:N:48:ILE:CD1	13:N:63:LEU:HD22	2.40	0.51
14:O:113:ARG:NH2	14:O:116:SER:O	2.44	0.51
15:P:34:LEU:CD2	15:P:39:ILE:HG13	2.34	0.51
17:R:25:THR:O	17:R:29:VAL:HG23	2.10	0.51
19:T:50:LYS:HG2	19:T:51:TYR:H	1.74	0.51
1:A:1318:A:C4'	21:V:10:PHE:HD2	2.19	0.51
3:D:52:G:N1	3:D:63:G:C6	2.78	0.51
3:D:59:U:OP2	3:D:59:U:O4'	2.28	0.51
1:A:1054:C:P	1:A:1197:G:P	3.09	0.50
1:A:1189:C:O5'	1:A:1189:C:H6	1.94	0.50
1:A:1247:U:H2'	1:A:1248:A:C8	2.40	0.50
1:A:1301:U:C4	1:A:1303:C:N1	2.78	0.50
1:A:1479:C:H2'	1:A:1480:G:O4'	2.10	0.50
1:A:1500:A:C6	1:A:1501:C:N4	2.79	0.50
1:A:166:G:HO2'	1:A:167:G:H5'	1.72	0.50
1:A:196:A:O2'	1:A:222:U:H5'	2.11	0.50
1:A:198:G:N2	1:A:199:G:H1'	2.26	0.50
1:A:356:A:C2'	1:A:357:G:H5'	2.40	0.50
1:A:52:G:C6	1:A:360:A:C2	2.99	0.50
1:A:404:U:H2'	1:A:405:U:C5	2.45	0.50
1:A:44:G:N3	1:A:45:U:O4'	2.44	0.50
1:A:50:A:C4'	1:A:51:A:H5'	2.41	0.50
1:A:541:G:O4'	6:G:42:GLN:NE2	2.44	0.50
1:A:719:C:H3'	1:A:720:C:C5	2.46	0.50
1:A:571:U:O4'	1:A:819:A:N7	2.44	0.50
1:A:848:C:C2	1:A:849:C:C6	2.99	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:864:A:N1	1:A:865:A:C2	2.79	0.50
1:A:888:G:OP2	1:A:889:A:H2'	2.11	0.50
1:A:908:A:N3	1:A:909:A:N7	2.59	0.50
2:C:26:G:H2'	2:C:26:G:N3	2.26	0.50
4:E:114:ARG:CG	4:E:115:LEU:N	2.74	0.50
4:E:163:PHE:HB2	4:E:185:ILE:HG13	1.92	0.50
4:E:88:ALA:CB	4:E:219:VAL:HG13	2.41	0.50
4:E:21:ARG:O	4:E:23:ARG:N	2.43	0.50
6:G:120:LEU:CG	6:G:121:VAL:N	2.74	0.50
6:G:127:THR:HA	6:G:131:ARG:O	2.11	0.50
6:G:144:ASP:CA	6:G:184:LYS:HD3	2.42	0.50
6:G:127:THR:O	6:G:146:ILE:CG2	2.57	0.50
6:G:195:ALA:C	6:G:196:LEU:HG	2.30	0.50
6:G:30:LYS:HA	6:G:34:GLU:HB3	1.92	0.50
7:H:34:VAL:O	7:H:41:VAL:HG12	2.11	0.50
8:I:2:ARG:O	8:I:67:MET:HE1	2.10	0.50
8:I:1:MET:SD	8:I:68:PRO:HD3	2.51	0.50
9:J:17:VAL:CG1	9:J:17:VAL:O	2.59	0.50
1:A:1060:C:H5''	12:M:51:ARG:HB3	1.93	0.50
13:N:85:ARG:CD	13:N:113:PRO:HD2	2.42	0.50
13:N:16:SER:HA	13:N:79:SER:HB3	1.93	0.50
13:N:63:LEU:O	13:N:66:LEU:HB2	2.11	0.50
14:O:113:ARG:HD2	14:O:114:LYS:H	1.75	0.50
14:O:37:CYS:SG	14:O:78:GLN:O	2.69	0.50
15:P:14:ARG:CG	15:P:44:ARG:NH1	2.75	0.50
19:T:2:PRO:O	19:T:4:LYS:N	2.44	0.50
20:U:34:TYR:CE1	20:U:35:ARG:HG3	2.46	0.50
20:U:59:SER:O	20:U:62:GLU:HB2	2.09	0.50
3:D:4:G:C6	3:D:5:A:N7	2.79	0.50
1:A:1017:G:O5'	1:A:1017:G:H8	1.95	0.50
1:A:1122:U:H2'	1:A:1123:A:O4'	2.11	0.50
1:A:1118:C:C2	1:A:1156:G:N2	2.80	0.50
1:A:1415:G:C2'	1:A:1416:G:H5'	2.40	0.50
1:A:1447:G:C6	1:A:1448:C:N4	2.80	0.50
1:A:1406:U:H1'	1:A:1518:A:O4'	2.11	0.50
1:A:176:C:H2'	1:A:177:C:H6	1.77	0.50
1:A:293:G:H4'	1:A:609:A:C2	2.46	0.50
1:A:545:C:C2	1:A:546:G:C8	2.99	0.50
1:A:729:A:C2	1:A:765:G:H1'	2.45	0.50
1:A:881:G:C5	1:A:882:C:C5	3.00	0.50
1:A:952:U:HO2'	1:A:953:G:H5'	1.74	0.50
5:F:191:THR:HB	5:F:193:TYR:CD2	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:125:HIS:HA	6:G:149:ALA:CB	2.36	0.50
6:G:52:SER:O	6:G:53:ASP:C	2.49	0.50
7:H:125:SER:OG	7:H:127:ASN:HB3	2.12	0.50
7:H:125:SER:O	7:H:127:ASN:N	2.38	0.50
8:I:12:PRO:HB2	8:I:57:GLN:NE2	2.26	0.50
8:I:64:GLN:HG2	8:I:65:VAL:N	2.25	0.50
9:J:54:THR:O	9:J:56:GLN:N	2.43	0.50
10:K:126:LYS:CD	10:K:127:LEU:N	2.74	0.50
10:K:111:ILE:O	10:K:134:ILE:HB	2.11	0.50
10:K:46:LYS:HE3	10:K:64:LYS:HA	1.92	0.50
11:L:11:LYS:N	11:L:104:ARG:NH2	2.59	0.50
12:M:6:ILE:HG12	12:M:73:ASP:H	1.76	0.50
12:M:8:LEU:HD23	12:M:95:GLU:O	2.11	0.50
13:N:23:ALA:CA	13:N:28:THR:HG23	2.41	0.50
13:N:54:ARG:C	13:N:56:GLY:N	2.64	0.50
14:O:69:TYR:O	14:O:100:ILE:CD1	2.59	0.50
14:O:34:ARG:HB2	14:O:105:TYR:HH	1.73	0.50
14:O:83:VAL:HG22	14:O:84:LEU:N	2.23	0.50
14:O:93:LEU:HB2	14:O:96:VAL:CG2	2.41	0.50
16:Q:12:ARG:C	16:Q:14:PRO:N	2.63	0.50
17:R:15:PHE:CD1	17:R:15:PHE:N	2.80	0.50
17:R:33:THR:HG23	17:R:63:ARG:NH1	2.26	0.50
17:R:34:LEU:CD1	17:R:35:ARG:N	2.74	0.50
18:S:21:VAL:CG2	18:S:34:GLU:O	2.57	0.50
19:T:97:SER:CB	19:T:104:LYS:H	2.24	0.50
19:T:60:ILE:HD11	19:T:61:GLU:O	2.10	0.50
1:A:189:U:C2	19:T:63:ARG:NH2	2.79	0.50
20:U:75:ILE:HB	20:U:76:LEU:CD2	2.40	0.50
21:V:5:LEU:HD12	21:V:9:VAL:CB	2.41	0.50
3:D:49:G:C2	3:D:66:C:C2	2.98	0.50
1:A:1169:A:P	1:A:1169:A:H8	2.35	0.50
1:A:1170:A:N7	1:A:1171:G:C4	2.80	0.50
1:A:338:A:C2	1:A:339:C:C2	2.98	0.50
1:A:1020:U:H2'	1:A:1021:G:H8	1.77	0.50
1:A:103:C:H1'	1:A:151:A:H2	1.74	0.50
1:A:1071:C:N4	1:A:1084:G:N2	2.58	0.50
1:A:1105:A:N3	1:A:1106:G:C8	2.78	0.50
1:A:1228:C:O3'	15:P:116:THR:HA	2.10	0.50
1:A:1315:U:O2	1:A:1361:G:H1'	2.11	0.50
1:A:1446:A:O2'	1:A:1447:G:OP1	2.27	0.50
1:A:1498:U:O2	1:A:1498:U:H2'	2.11	0.50
1:A:150:C:C6	1:A:150:C:O5'	2.65	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:266:G:H21	1:A:269:C:H41	1.57	0.50
1:A:402:G:C6	1:A:403:C:C5	3.00	0.50
1:A:453:A:N6	1:A:480:U:N3	2.59	0.50
1:A:518:C:H3'	1:A:530:G:H1'	1.93	0.50
1:A:52:G:H2'	1:A:53:A:H8	1.75	0.50
1:A:560:U:OP1	1:A:566:G:N2	2.43	0.50
1:A:598:U:C2	1:A:599:C:C5	2.99	0.50
1:A:658:G:C6	1:A:659:U:C4	2.99	0.50
1:A:720:C:H3'	1:A:720:C:C6	2.47	0.50
1:A:760:G:H22	19:T:104:LYS:HB3	1.75	0.50
1:A:865:A:C5	1:A:866:C:N3	2.79	0.50
1:A:945:G:N2	1:A:1337:G:C2	2.79	0.50
4:E:75:LYS:HZ2	4:E:78:GLN:NE2	2.09	0.50
5:F:113:ALA:O	5:F:114:PRO:C	2.49	0.50
5:F:116:VAL:HG21	5:F:141:VAL:CG2	2.42	0.50
5:F:30:ARG:N	5:F:30:ARG:HD3	2.27	0.50
5:F:46:GLU:O	5:F:47:LEU:HD13	2.12	0.50
6:G:104:VAL:O	6:G:105:VAL:C	2.49	0.50
6:G:121:VAL:HG11	6:G:136:PRO:CA	2.41	0.50
6:G:20:TYR:N	6:G:20:TYR:CD1	2.78	0.50
7:H:104:ALA:N	7:H:107:ARG:HH12	2.10	0.50
7:H:10:MET:HA	7:H:32:VAL:HG22	1.93	0.50
9:J:115:ARG:O	9:J:118:VAL:HB	2.12	0.50
9:J:72:ARG:HG3	9:J:73:MET:N	2.26	0.50
10:K:32:LYS:CG	10:K:33:GLU:N	2.67	0.50
10:K:9:MET:SD	10:K:26:VAL:HG11	2.51	0.50
12:M:28:ARG:HG2	12:M:33:GLN:HG3	1.94	0.50
13:N:17:GLY:C	13:N:80:VAL:HG22	2.31	0.50
13:N:26:ASN:O	13:N:27:ASN:CB	2.56	0.50
13:N:32:ILE:CG2	13:N:40:ILE:HD11	2.31	0.50
13:N:42:TRP:HZ3	13:N:47:VAL:CG1	2.24	0.50
13:N:85:ARG:HE	13:N:111:ASP:CB	2.24	0.50
15:P:16:ASP:CB	15:P:30:ALA:HB1	2.41	0.50
15:P:76:ALA:O	15:P:80:ARG:HG2	2.11	0.50
15:P:81:LEU:CD2	15:P:89:GLY:HA2	2.32	0.50
16:Q:23:ARG:NE	16:Q:30:ALA:HB2	2.27	0.50
17:R:12:ILE:HD11	17:R:31:LEU:HD11	1.92	0.50
18:S:26:ARG:NE	18:S:31:LYS:O	2.44	0.50
20:U:39:VAL:HG13	20:U:42:ARG:HD3	1.92	0.50
20:U:79:LEU:HD22	20:U:79:LEU:O	2.12	0.50
21:V:63:THR:O	21:V:64:GLU:C	2.50	0.50
3:D:72:C:H3'	3:D:73:A:H8	1.76	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1171:G:H2'	1:A:1172:C:C5	2.46	0.50
1:A:104:G:N3	1:A:105:G:C8	2.79	0.50
1:A:1216:G:OP1	16:Q:3:ARG:NH2	2.44	0.50
1:A:1222:G:C2	1:A:1223:C:N3	2.80	0.50
1:A:130:A:N6	19:T:64:PRO:HG2	2.26	0.50
1:A:1358:U:OP1	16:Q:35:ARG:HG3	2.12	0.50
1:A:1386:G:O2'	1:A:1387:G:O5'	2.29	0.50
1:A:1475:G:H2'	1:A:1476:G:C8	2.44	0.50
1:A:1488:G:O2'	1:A:1489:G:H5'	2.11	0.50
1:A:1527:C:O2'	1:A:1529:G:N2	2.39	0.50
1:A:271:C:C4	1:A:272:C:C5	3.00	0.50
1:A:293:G:C2	1:A:294:U:C6	3.00	0.50
1:A:307:C:O5'	1:A:307:C:H6	1.88	0.50
1:A:380:G:H21	1:A:382:A:H3'	1.73	0.50
1:A:410:G:N2	1:A:429:U:H3	2.10	0.50
1:A:511:C:O2'	1:A:512:U:P	2.68	0.50
1:A:605:U:H2'	1:A:606:G:H8	1.77	0.50
1:A:707:C:H2'	1:A:708:C:O5'	2.12	0.50
1:A:832:C:C4	1:A:833:U:C4	3.00	0.50
1:A:986:A:C4	1:A:987:G:C8	2.98	0.50
2:C:58:A:N7	2:C:61:C:C4	2.80	0.50
5:F:150:LYS:CB	5:F:173:VAL:HG21	2.19	0.50
5:F:84:ILE:HB	5:F:101:LEU:HD22	1.92	0.50
5:F:92:ALA:O	5:F:96:GLY:N	2.41	0.50
6:G:106:TYR:CD2	6:G:114:ARG:N	2.79	0.50
6:G:135:LEU:CB	6:G:137:SER:OG	2.60	0.50
6:G:62:GLN:O	6:G:66:ARG:HD2	2.10	0.50
7:H:43:LEU:HD23	7:H:44:GLY:H	1.73	0.50
7:H:84:PHE:CD2	7:H:84:PHE:O	2.64	0.50
8:I:100:ASN:ND2	20:U:26:LEU:O	2.45	0.50
1:A:737:A:O2'	8:I:72:VAL:CG2	2.60	0.50
9:J:121:ALA:O	9:J:122:HIS:C	2.50	0.50
9:J:74:GLU:CB	9:J:91:VAL:HG21	2.42	0.50
10:K:12:ARG:HG3	10:K:26:VAL:HG23	1.93	0.50
10:K:9:MET:CB	10:K:26:VAL:HG21	2.41	0.50
11:L:102:LEU:O	11:L:103:THR:HB	2.10	0.50
11:L:113:LYS:HD2	11:L:113:LYS:N	2.26	0.50
11:L:6:GLY:CA	11:L:80:GLY:O	2.58	0.50
13:N:50:TYR:HB3	13:N:55:LYS:HG2	1.93	0.50
1:A:362:G:H4'	14:O:28:LYS:HZ2	1.77	0.50
14:O:85:ILE:CD1	14:O:98:TYR:CB	2.82	0.50
15:P:24:GLY:HA3	15:P:66:LEU:HB3	1.92	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:52:GLN:C	16:Q:53:LEU:HD23	2.32	0.50
17:R:57:LEU:HD12	17:R:57:LEU:N	2.26	0.50
17:R:60:VAL:HA	17:R:63:ARG:HD3	1.94	0.50
18:S:15:PRO:HB2	18:S:17:TYR:HE1	1.76	0.50
18:S:3:LYS:C	18:S:4:ILE:HD13	2.31	0.50
19:T:21:VAL:HG23	19:T:42:TYR:O	2.12	0.50
20:U:40:LEU:C	20:U:42:ARG:N	2.64	0.50
20:U:62:GLU:O	20:U:66:LEU:CG	2.56	0.50
1:A:1097:C:O2'	1:A:1098:C:H5'	2.12	0.50
1:A:1452:C:H5'	1:A:1453:G:C4	2.47	0.50
1:A:1079:G:N3	1:A:1080:A:H2	2.09	0.50
1:A:1094:G:H2'	1:A:1108:G:N2	2.24	0.50
1:A:1160:G:N3	1:A:1160:G:C2'	2.70	0.50
1:A:1180:A:C2'	1:A:1181:G:C5'	2.81	0.50
1:A:1258:G:O2'	1:A:1259:C:H5'	2.11	0.50
1:A:128:G:N2	1:A:234:C:H1'	2.26	0.50
1:A:134:A:C5	1:A:135:C:C4	2.99	0.50
1:A:335:C:H4'	1:A:1434:A:H4'	1.93	0.50
1:A:1440:C:C2	1:A:1462:G:N2	2.80	0.50
1:A:1418:A:C2	1:A:1483:A:C2	2.98	0.50
1:A:1511:G:H2'	1:A:1512:U:C5'	2.40	0.50
1:A:251:G:C5'	1:A:252:U:OP1	2.59	0.50
1:A:32:A:H61	1:A:553:A:N6	2.08	0.50
1:A:568:G:C6	1:A:569:C:N4	2.78	0.50
1:A:57:G:C6	1:A:58:C:C4	3.00	0.50
1:A:623:C:C2	1:A:624:C:C6	2.99	0.50
1:A:624:C:O2	1:A:625:G:C8	2.65	0.50
1:A:721:G:H8	1:A:721:G:OP1	1.94	0.50
1:A:877:C:OP1	10:K:88:LYS:HE3	2.11	0.50
1:A:950:U:H3'	15:P:102:ARG:NH2	2.26	0.50
2:C:16:C:O3'	2:C:18:G:OP2	2.30	0.50
2:C:39:C:H2'	2:C:40:C:C5	2.47	0.50
4:E:115:LEU:HD23	4:E:149:LEU:CD1	2.39	0.50
4:E:218:ALA:O	4:E:221:LEU:N	2.44	0.50
4:E:23:ARG:NH1	4:E:24:TRP:O	2.44	0.50
4:E:36:ARG:HA	4:E:36:ARG:NE	2.26	0.50
5:F:7:PRO:HG3	5:F:184:TYR:CD1	2.46	0.50
5:F:87:LEU:HB2	5:F:101:LEU:CD1	2.42	0.50
6:G:39:PRO:HB2	6:G:40:PRO:CD	2.42	0.50
6:G:94:LEU:HD23	6:G:97:LEU:CD1	2.41	0.50
8:I:12:PRO:CB	8:I:57:GLN:NE2	2.74	0.50
8:I:4:TYR:OH	8:I:69:GLU:HA	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:106:GLN:N	9:J:106:GLN:HE21	2.09	0.50
9:J:86:GLN:CG	9:J:148:ASN:ND2	2.74	0.50
10:K:104:ARG:C	10:K:106:GLY:N	2.65	0.50
10:K:6:ILE:HD11	10:K:10:LEU:HD21	1.92	0.50
14:O:41:ARG:CB	14:O:41:ARG:CZ	2.90	0.50
15:P:27:LYS:CD	15:P:31:LYS:HZ3	2.24	0.50
15:P:9:ILE:HD12	15:P:9:ILE:H	1.76	0.50
16:Q:26:ARG:O	16:Q:28:GLY:N	2.45	0.50
5:F:12:LEU:CD2	16:Q:57:ARG:HD2	2.41	0.50
17:R:54:ARG:CA	17:R:57:LEU:HD22	2.25	0.50
1:A:755:G:OP1	17:R:66:LEU:HD13	2.12	0.50
17:R:75:PRO:HA	17:R:78:TYR:CB	2.42	0.50
18:S:42:ARG:C	18:S:43:LYS:CD	2.77	0.50
1:A:136:C:H4'	18:S:65:GLN:OE1	2.11	0.50
20:U:60:GLY:O	20:U:64:ARG:HG3	2.12	0.50
21:V:32:LYS:HB2	21:V:57:HIS:CE1	2.46	0.50
21:V:5:LEU:O	21:V:6:LYS:HB2	2.10	0.50
22:W:57:ARG:C	22:W:59:ALA:N	2.61	0.50
23:X:5:ASP:O	23:X:7:ARG:N	2.45	0.50
3:D:44:G:OP2	3:D:44:G:H8	1.95	0.50
3:D:22:G:N7	3:D:46:G:N2	2.59	0.50
1:A:1005:A:C6	1:A:1026:G:N2	2.80	0.50
1:A:1038:C:H2'	1:A:1039:C:C6	2.47	0.50
1:A:1169:A:C2	1:A:1170:A:C2	2.99	0.50
1:A:1490:C:H6	1:A:1490:C:OP2	1.95	0.50
1:A:1054:C:C2'	1:A:1055:A:H5''	2.41	0.50
1:A:1073:U:H2'	1:A:1074:G:C8	2.45	0.50
1:A:1262:C:H6	1:A:1262:C:O5'	1.94	0.50
1:A:1379:G:C5	1:A:1380:U:C5	3.00	0.50
1:A:145:G:H8	1:A:145:G:H5''	1.77	0.50
1:A:148:G:H1	1:A:174:C:N4	2.09	0.50
1:A:280:C:N3	19:T:39:SER:HB3	2.26	0.50
1:A:404:U:H5'	6:G:122:ARG:NH1	2.26	0.50
1:A:563:A:C5	1:A:567:G:H1'	2.46	0.50
1:A:729:A:N1	1:A:730:G:C4	2.80	0.50
1:A:89:U:H2'	1:A:90:C:O4'	2.11	0.50
1:A:8:A:H3'	1:A:8:A:P	2.50	0.50
1:A:75:C:C2	1:A:96:G:N2	2.80	0.50
2:C:18:G:C4	2:C:58:A:N3	2.80	0.50
2:C:4:G:C4	2:C:5:G:C8	2.99	0.50
5:F:12:LEU:HG	5:F:18:TRP:CZ3	2.47	0.50
5:F:156:ARG:O	5:F:193:TYR:HE1	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:173:VAL:O	5:F:175:LEU:N	2.43	0.50
6:G:119:GLN:O	6:G:123:HIS:HD2	1.95	0.50
6:G:62:GLN:CA	6:G:62:GLN:HE21	2.18	0.50
7:H:111:GLU:HG3	7:H:112:LEU:N	2.26	0.50
10:K:126:LYS:HZ2	10:K:127:LEU:HA	1.77	0.50
10:K:6:ILE:HD11	10:K:85:ARG:CD	2.41	0.50
12:M:40:LEU:HD12	12:M:71:LEU:HD21	1.94	0.50
12:M:5:ARG:NE	12:M:73:ASP:OD1	2.44	0.50
17:R:33:THR:HG22	17:R:37:ASN:HD21	1.76	0.50
17:R:33:THR:HG22	17:R:37:ASN:ND2	2.27	0.50
18:S:6:LEU:HD13	18:S:6:LEU:N	2.25	0.50
18:S:8:ARG:NH2	18:S:11:SER:O	2.45	0.50
19:T:56:VAL:C	19:T:57:VAL:CG1	2.79	0.50
19:T:70:ARG:O	19:T:71:PHE:HD1	1.95	0.50
1:A:986:A:H4'	21:V:55:LYS:CD	2.41	0.50
1:A:1314:C:C3'	21:V:6:LYS:HD3	2.29	0.50
3:D:19:G:H2'	3:D:57:G:O2'	2.12	0.50
1:A:1008:C:C2	1:A:1009:G:C8	2.99	0.50
1:A:1047:G:H2'	1:A:1048:G:C5'	2.41	0.50
1:A:1077:G:N3	1:A:1081:G:C2	2.79	0.50
1:A:1156:G:H1'	1:A:1179:A:N6	2.18	0.50
1:A:1192:C:N4	1:A:1193:G:N7	2.59	0.50
1:A:1263:C:H2'	1:A:1264:C:C5	2.43	0.50
1:A:1269:A:H2'	1:A:1270:C:O4'	2.12	0.50
1:A:1320:C:H42	21:V:36:ARG:HH12	1.60	0.50
1:A:1357:A:C6	1:A:1358:U:C4	2.99	0.50
1:A:1477:C:C2	1:A:1478:C:C5	2.99	0.50
1:A:1495:U:O2	1:A:1495:U:C2'	2.59	0.50
1:A:1526:G:C4	1:A:1527:C:C5	2.99	0.50
1:A:819:A:C2	1:A:1529:G:O6	2.64	0.50
1:A:198:G:H21	1:A:199:G:C1'	2.25	0.50
1:A:410:G:C2	1:A:429:U:N3	2.80	0.50
1:A:453:A:C6	1:A:454:C:C4	3.00	0.50
1:A:545:C:O2'	1:A:546:G:C5'	2.58	0.50
1:A:627:G:H2'	1:A:628:G:H8	1.76	0.50
1:A:68:G:C5'	1:A:171:A:C1'	2.80	0.50
1:A:709:G:HO2'	1:A:710:G:H5'	1.77	0.50
1:A:908:A:C2	1:A:909:A:N7	2.80	0.50
2:C:39:C:C2	2:C:40:C:C5	3.00	0.50
2:C:72:A:H2'	2:C:73:A:N7	2.25	0.50
4:E:105:PHE:CD1	4:E:108:ILE:HB	2.46	0.50
4:E:25:ASN:ND2	4:E:27:LYS:N	2.57	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:53:ARG:HA	4:E:56:ARG:HH12	1.77	0.50
5:F:159:GLY:H	5:F:193:TYR:HE1	1.60	0.50
6:G:172:PRO:HG3	6:G:193:ASP:HB3	1.94	0.50
6:G:193:ASP:C	6:G:194:LEU:HD22	2.31	0.50
1:A:540:G:N2	6:G:42:GLN:NE2	2.56	0.50
8:I:27:GLN:O	8:I:30:LEU:HD12	2.11	0.50
8:I:2:ARG:NE	8:I:69:GLU:HG2	2.27	0.50
1:A:738:C:H4'	8:I:70:ASP:HA	1.92	0.50
10:K:116:LYS:HG2	10:K:129:VAL:HG11	1.93	0.50
10:K:97:VAL:HG13	10:K:98:LYS:NZ	2.27	0.50
11:L:119:ALA:O	11:L:120:ARG:CG	2.58	0.50
13:N:25:TYR:HE2	13:N:87:THR:CB	2.25	0.50
14:O:32:PHE:HB3	14:O:85:ILE:O	2.12	0.50
16:Q:36:PHE:CE2	16:Q:37:PHE:HE2	2.30	0.50
18:S:26:ARG:HH21	18:S:31:LYS:CE	2.21	0.50
18:S:75:ARG:CG	18:S:80:PHE:HB3	2.38	0.50
8:I:97:PHE:O	20:U:30:ASP:HA	2.11	0.50
22:W:29:LYS:O	22:W:32:ALA:HB3	2.12	0.50
3:D:21:A:HO2'	3:D:22:G:C1'	2.25	0.50
1:A:1025:U:H2'	1:A:1026:G:C8	2.46	0.50
18:S:46:PRO:CG	18:S:47:ASP:H	2.20	0.50
1:A:1007:C:H2'	1:A:1008:C:C6	2.46	0.50
1:A:107:G:H2'	1:A:108:G:O4'	2.12	0.50
1:A:118:U:C4	1:A:288:A:H2'	2.46	0.50
1:A:1257:U:H2'	1:A:1258:G:OP2	2.12	0.50
1:A:945:G:C2	1:A:1337:G:C2	3.00	0.50
1:A:924:C:O2'	1:A:1399:C:C6	2.64	0.50
1:A:185:A:C6	1:A:186:C:C4	3.00	0.50
1:A:321:A:H2'	1:A:322:C:C5	2.47	0.50
1:A:32:A:H2'	1:A:33:A:O4'	2.12	0.50
1:A:406:G:N2	1:A:407:G:C5	2.80	0.50
1:A:432:A:C8	1:A:432:A:C3'	2.95	0.50
1:A:522:C:O4'	1:A:536:C:H4'	2.12	0.50
1:A:566:G:H4'	1:A:567:G:C5'	2.42	0.50
1:A:594:G:C4	1:A:595:G:H1'	2.46	0.50
1:A:766:A:H2'	1:A:767:A:H8	1.76	0.50
1:A:80:G:N2	1:A:90:C:O2	2.45	0.50
2:C:37:A:C4	2:C:38:A:C8	3.00	0.50
4:E:92:TYR:HE2	4:E:151:GLY:CA	2.25	0.50
5:F:69:HIS:ND1	5:F:104:GLN:CB	2.73	0.50
5:F:188:LEU:CD1	5:F:190:ARG:HG3	2.37	0.50
5:F:46:GLU:HB3	5:F:47:LEU:CD2	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:100:ARG:NH2	6:G:136:PRO:O	2.45	0.50
6:G:15:GLU:OE2	6:G:63:LYS:CA	2.59	0.50
6:G:31:CYS:C	6:G:33:MET:N	2.64	0.50
6:G:8:VAL:HG21	6:G:115:ARG:HH22	1.77	0.50
9:J:76:ARG:CB	9:J:156:TRP:CZ2	2.92	0.50
9:J:80:VAL:C	9:J:82:GLY:H	2.15	0.50
11:L:111:ARG:HG2	11:L:113:LYS:HE3	1.94	0.50
11:L:17:VAL:HG13	11:L:63:ILE:CG1	2.41	0.50
11:L:19:LEU:CD2	11:L:20:ARG:H	2.24	0.50
12:M:32:ALA:H	12:M:74:ILE:HG23	1.77	0.50
12:M:23:ILE:CG1	12:M:85:LEU:HB3	2.32	0.50
13:N:59:TYR:O	13:N:62:GLN:N	2.45	0.50
13:N:67:ASP:O	13:N:68:ALA:C	2.50	0.50
13:N:67:ASP:HA	13:N:70:LYS:CD	2.42	0.50
14:O:113:ARG:HB3	14:O:117:ARG:HD2	1.94	0.50
14:O:9:GLN:O	14:O:12:ARG:N	2.44	0.50
15:P:23:TYR:O	15:P:66:LEU:CD1	2.54	0.50
15:P:4:ILE:O	15:P:8:GLU:CB	2.51	0.50
16:Q:57:ARG:HG2	16:Q:58:LYS:O	2.11	0.50
1:A:994:A:N3	16:Q:5:ALA:HA	2.27	0.50
17:R:57:LEU:CD1	17:R:57:LEU:H	2.23	0.50
18:S:14:ASN:HA	18:S:42:ARG:NH2	2.27	0.50
1:A:266:G:H8	19:T:67:LYS:HE2	1.76	0.50
19:T:7:THR:HG23	19:T:8:GLY:H	1.77	0.50
1:A:736:C:OP1	20:U:72:ARG:NH2	2.45	0.50
3:D:51:C:C2'	3:D:52:G:C8	2.85	0.50
1:A:160:A:C6	1:A:346:G:O6	2.65	0.50
8:I:32:ASN:N	8:I:32:ASN:HD22	2.10	0.50
1:A:1133:G:C6	1:A:1134:G:N7	2.80	0.50
1:A:1154:G:N3	1:A:1155:G:C8	2.80	0.50
1:A:1441:G:H1'	1:A:1461:G:N2	2.27	0.50
1:A:1463:C:H2'	1:A:1464:G:O4'	2.12	0.50
1:A:1494:G:N3	1:A:1495:U:C5	2.64	0.50
1:A:184:G:H5'	1:A:224:C:O2'	2.12	0.50
1:A:246:A:N1	1:A:279:A:C5	2.80	0.50
1:A:403:C:O2'	6:G:122:ARG:NH1	2.45	0.50
1:A:511:C:O2'	1:A:512:U:O5'	2.30	0.50
1:A:568:G:N2	1:A:574:A:C2	2.76	0.50
1:A:575:G:H4'	1:A:576:G:H5'	1.94	0.50
1:A:652:U:O2'	1:A:653:A:C2	2.58	0.50
1:A:683:G:H2'	1:A:684:A:H8	1.74	0.50
1:A:693:G:H2'	1:A:694:A:O4'	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:698:G:N3	1:A:699:C:C6	2.80	0.50
1:A:780:A:C2	1:A:803:G:N1	2.80	0.50
1:A:945:G:N1	1:A:946:A:N7	2.59	0.50
1:A:975:A:H4'	1:A:976:G:O5'	2.11	0.50
4:E:60:ASP:O	4:E:64:ARG:NE	2.44	0.50
4:E:76:GLN:O	4:E:211:ILE:CD1	2.60	0.50
4:E:90:MET:C	4:E:154:LEU:HD13	2.32	0.50
5:F:19:GLU:CD	5:F:19:GLU:N	2.65	0.50
6:G:101:LEU:CD1	6:G:105:VAL:CG2	2.89	0.50
6:G:121:VAL:HA	6:G:126:ILE:CG1	2.42	0.50
6:G:64:LEU:HD12	6:G:75:PHE:CZ	2.47	0.50
6:G:82:ALA:C	6:G:89:THR:HG23	2.32	0.50
8:I:67:MET:SD	8:I:67:MET:C	2.90	0.50
9:J:62:PHE:CD1	9:J:124:LEU:HD11	2.47	0.50
11:L:96:LEU:CD1	11:L:101:PHE:CE1	2.95	0.50
11:L:113:LYS:HZ1	11:L:119:ALA:HB2	1.75	0.50
11:L:113:LYS:C	11:L:115:GLY:H	2.14	0.50
13:N:21:ILE:CD1	13:N:82:VAL:HG11	2.42	0.50
14:O:110:VAL:CG2	14:O:113:ARG:HG3	2.41	0.50
14:O:85:ILE:CD1	14:O:99:HIS:N	2.75	0.50
15:P:27:LYS:O	15:P:28:ALA:HB3	2.12	0.50
15:P:63:THR:CG2	15:P:64:TRP:N	2.74	0.50
15:P:97:PRO:HG2	15:P:103:THR:HG23	1.93	0.50
17:R:29:VAL:O	17:R:30:ALA:C	2.49	0.50
18:S:51:VAL:HG21	18:S:73:LEU:HD11	1.93	0.50
18:S:61:SER:OG	18:S:62:VAL:N	2.43	0.50
18:S:6:LEU:C	18:S:6:LEU:CD2	2.81	0.50
1:A:760:G:H2'	19:T:103:GLY:HA3	1.93	0.50
19:T:19:VAL:HG21	19:T:46:ASP:HB2	1.94	0.50
20:U:79:LEU:N	20:U:79:LEU:CD1	2.75	0.50
21:V:80:TYR:CE1	21:V:81:ARG:HB2	2.46	0.50
22:W:88:VAL:HG12	22:W:92:LEU:HD12	1.93	0.50
1:A:1005:A:C1'	1:A:1036:G:N2	2.73	0.50
1:A:1040:U:H2'	1:A:1041:A:H8	1.76	0.50
1:A:1091:U:O2	1:A:1095:U:C4	2.64	0.49
1:A:1127:G:O2'	1:A:1148:U:N3	2.43	0.49
1:A:1200:C:H5''	1:A:1202:G:P	2.52	0.49
1:A:1202:G:H2'	1:A:1203:C:O5'	2.12	0.49
1:A:1299:A:C5	1:A:1301:U:H1'	2.46	0.49
1:A:1320:C:H3'	1:A:1321:C:C5	2.47	0.49
1:A:1368:G:O2'	1:A:1369:C:H5'	2.11	0.49
1:A:1406:U:H2'	1:A:1406:U:O2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1464:G:C2	1:A:1465:C:C4	3.00	0.49
1:A:1483:A:H2'	1:A:1484:C:C5'	2.41	0.49
1:A:1530:G:H2'	1:A:1531:A:O5'	2.11	0.49
1:A:184:G:H5'	1:A:224:C:HO2'	1.77	0.49
1:A:270:A:H2'	1:A:271:C:C6	2.47	0.49
1:A:33:A:C6	1:A:34:C:N4	2.80	0.49
1:A:394:G:C5	1:A:395:C:C4	3.00	0.49
1:A:559:A:C4'	1:A:560:U:C5'	2.53	0.49
1:A:598:U:H2'	1:A:599:C:C6	2.44	0.49
1:A:611:A:N6	1:A:629:G:N1	2.56	0.49
1:A:766:A:C8	1:A:814:A:N6	2.80	0.49
1:A:959:A:C2'	1:A:960:U:H4'	2.35	0.49
1:A:983:A:N3	1:A:983:A:C3'	2.75	0.49
1:A:996:A:C6	1:A:997:U:C4	3.00	0.49
2:C:17:C:C6	2:C:19:G:OP2	2.64	0.49
4:E:133:LYS:HB3	4:E:137:ARG:NH1	2.27	0.49
4:E:19:HIS:CD2	4:E:20:GLU:OE1	2.63	0.49
4:E:234:PRO:HA	4:E:238:LEU:HD13	1.93	0.49
4:E:33:TYR:HB3	4:E:41:ILE:O	2.12	0.49
4:E:69:LEU:CD2	4:E:91:PRO:C	2.77	0.49
5:F:12:LEU:HD22	16:Q:57:ARG:CD	2.42	0.49
5:F:84:ILE:HG13	5:F:101:LEU:CD2	2.40	0.49
6:G:149:ALA:O	6:G:150:GLU:O	2.30	0.49
1:A:9:G:H5'	7:H:122:GLU:OE2	2.12	0.49
7:H:149:GLU:O	7:H:150:ARG:C	2.51	0.49
7:H:28:PHE:CZ	7:H:50:GLU:HA	2.47	0.49
10:K:100:ILE:HD13	10:K:125:ARG:NH2	2.26	0.49
10:K:31:PHE:O	10:K:32:LYS:C	2.51	0.49
12:M:30:SER:OG	12:M:81:THR:HG23	2.12	0.49
12:M:34:VAL:HG12	12:M:35:SER:N	2.26	0.49
12:M:75:ILE:CG2	12:M:76:ASN:N	2.75	0.49
13:N:83:ILE:N	13:N:83:ILE:HD12	2.26	0.49
13:N:91:ARG:CG	13:N:95:ILE:HD11	2.42	0.49
14:O:54:LYS:C	14:O:70:ILE:HD12	2.32	0.49
15:P:39:ILE:HG22	15:P:55:ARG:HH22	1.77	0.49
5:F:40:ARG:CZ	16:Q:52:GLN:HB3	2.41	0.49
5:F:33:LEU:HD21	16:Q:54:PRO:HD2	1.93	0.49
18:S:49:LEU:HD12	18:S:50:LYS:N	2.27	0.49
19:T:94:ASN:OD1	19:T:104:LYS:HG3	2.12	0.49
22:W:50:GLU:CB	22:W:99:LEU:HD12	2.41	0.49
22:W:86:ARG:CG	22:W:87:LYS:H	2.25	0.49
3:D:44:G:C8	3:D:44:G:OP2	2.64	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:127:ILE:C	4:E:129:GLU:H	2.15	0.49
1:A:1084:G:N3	1:A:1085:U:O4	2.45	0.49
1:A:960:U:C2	1:A:1225:A:N7	2.80	0.49
1:A:1246:C:C4	1:A:1247:U:C5	3.00	0.49
1:A:1341:U:H5'	2:C:32:C:OP1	2.12	0.49
1:A:1349:A:OP1	11:L:118:LYS:O	2.30	0.49
1:A:1406:U:C2	1:A:1407:C:C6	2.99	0.49
1:A:1409:C:C2	1:A:1410:G:C8	3.01	0.49
1:A:1519:A:C2'	1:A:1520:G:H5'	2.42	0.49
1:A:1521:G:O2'	1:A:1522:U:O5'	2.30	0.49
1:A:308:C:O2	1:A:309:G:C8	2.65	0.49
1:A:406:G:C2	1:A:437:U:O2	2.64	0.49
1:A:40:C:O2'	1:A:41:G:H5'	2.12	0.49
1:A:609:A:C5	1:A:610:G:C8	3.00	0.49
1:A:758:G:O5'	1:A:758:G:H8	1.95	0.49
1:A:848:C:H2'	1:A:849:C:H6	1.76	0.49
1:A:880:C:H3'	14:O:9:GLN:HE21	1.76	0.49
1:A:895:G:C4	1:A:896:C:C5	3.00	0.49
1:A:938:A:H2'	1:A:939:G:O5'	2.12	0.49
1:A:937:A:C8	1:A:938:A:N7	2.81	0.49
2:C:19:G:C4'	2:C:20:U:OP2	2.60	0.49
2:C:26:G:C6	2:C:27:U:C5	3.00	0.49
2:C:63:G:H2'	2:C:64:G:C8	2.47	0.49
4:E:152:PHE:CG	4:E:153:ARG:N	2.79	0.49
4:E:32:ILE:HD11	4:E:40:HIS:HD2	1.77	0.49
5:F:108:ASN:ND2	5:F:110:ASN:HB2	2.27	0.49
5:F:110:ASN:HB3	5:F:144:SER:OG	2.12	0.49
5:F:130:VAL:HG12	5:F:134:ILE:CD1	2.42	0.49
5:F:14:ILE:HG22	5:F:15:THR:N	2.27	0.49
6:G:159:ARG:HG3	6:G:160:GLN:N	2.27	0.49
6:G:185:PHE:CD2	6:G:186:LEU:N	2.80	0.49
6:G:190:ASP:O	6:G:191:ARG:C	2.50	0.49
6:G:200:GLU:CG	6:G:201:GLN:HE21	2.26	0.49
6:G:35:ARG:O	6:G:37:PRO:CD	2.60	0.49
9:J:13:GLN:O	9:J:14:PRO:O	2.30	0.49
11:L:97:LYS:NZ	11:L:102:LEU:HD13	2.28	0.49
11:L:50:LEU:HD21	11:L:55:ALA:O	2.10	0.49
15:P:10:PRO:HG2	15:P:18:ALA:CB	2.37	0.49
15:P:10:PRO:HG3	15:P:18:ALA:HB1	1.94	0.49
15:P:58:GLU:O	15:P:61:GLU:CB	2.60	0.49
15:P:8:GLU:HG3	15:P:22:ILE:CD1	2.42	0.49
16:Q:3:ARG:HE	16:Q:6:LEU:HG	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:60:SER:O	16:Q:61:TRP:CB	2.59	0.49
17:R:15:PHE:HE2	17:R:85:LEU:HD11	1.77	0.49
18:S:57:ARG:O	18:S:60:LEU:HB2	2.13	0.49
19:T:12:SER:OG	19:T:14:LYS:HD2	2.11	0.49
1:A:986:A:H4'	21:V:55:LYS:CG	2.41	0.49
21:V:37:ARG:O	21:V:70:LYS:HE2	2.12	0.49
22:W:33:ILE:HD11	22:W:62:LEU:O	2.12	0.49
22:W:53:LEU:CA	22:W:56:MET:HB2	2.41	0.49
23:X:17:THR:O	23:X:22:ARG:CZ	2.60	0.49
3:D:14:A:C8	3:D:22:G:N2	2.80	0.49
3:D:52:G:C2	3:D:53:G:H1'	2.47	0.49
18:S:44:THR:CG2	18:S:45:THR:H	2.09	0.49
1:A:1082:G:O2'	1:A:1083:U:H5'	2.12	0.49
1:A:1125:U:H2'	1:A:1281:U:O2	2.13	0.49
1:A:1184:G:C6	1:A:1185:G:O6	2.65	0.49
1:A:132:C:O2'	1:A:133:U:O5'	2.25	0.49
1:A:1392:G:O2'	1:A:1393:U:C5'	2.60	0.49
1:A:1530:G:N1	1:A:1531:A:H1'	2.27	0.49
1:A:198:G:C2'	1:A:199:G:C5'	2.90	0.49
1:A:131:C:C4	1:A:232:G:N2	2.80	0.49
1:A:259:G:H2'	1:A:260:G:H8	1.75	0.49
1:A:351:G:O5'	1:A:351:G:H8	1.96	0.49
1:A:413:G:H22	1:A:428:G:C2'	2.24	0.49
1:A:445:G:C6	1:A:490:G:C6	3.00	0.49
1:A:44:G:C6	1:A:399:G:N1	2.80	0.49
1:A:44:G:C6	1:A:45:U:C2	3.00	0.49
1:A:465:A:C6	1:A:467:G:N3	2.80	0.49
1:A:535:A:H4'	1:A:536:C:OP2	2.12	0.49
1:A:579:G:C5	1:A:580:U:C5	3.01	0.49
1:A:682:G:N1	1:A:683:G:C8	2.79	0.49
1:A:727:G:C5	1:A:729:A:OP2	2.65	0.49
1:A:667:G:P	1:A:732:C:O2'	2.71	0.49
1:A:734:G:H8	1:A:734:G:OP1	1.94	0.49
1:A:874:G:O2'	1:A:875:C:H5'	2.11	0.49
1:A:890:G:O2'	1:A:891:U:P	2.70	0.49
1:A:894:G:C6	1:A:895:G:N7	2.81	0.49
2:C:62:C:O2'	2:C:63:G:O5'	2.31	0.49
4:E:132:LYS:N	4:E:132:LYS:HE2	2.24	0.49
4:E:167:PRO:HG2	4:E:168:THR:N	2.22	0.49
4:E:82:ARG:CA	4:E:94:ASN:HD21	2.25	0.49
5:F:5:ILE:HG23	12:M:51:ARG:HH12	1.77	0.49
6:G:154:ASN:HD22	6:G:154:ASN:N	2.09	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:65:ARG:HE	6:G:71:SER:C	2.14	0.49
6:G:88:VAL:HG12	6:G:90:GLY:N	2.27	0.49
1:A:1194:U:C4'	7:H:22:GLY:O	2.55	0.49
7:H:60:TYR:CE1	7:H:64:ARG:CZ	2.92	0.49
7:H:89:ILE:HD13	7:H:90:VAL:N	2.27	0.49
8:I:87:ARG:NH1	8:I:87:ARG:HG2	2.25	0.49
9:J:74:GLU:CG	9:J:75:VAL:H	2.25	0.49
10:K:134:ILE:HG22	10:K:135:CYS:HB3	1.93	0.49
10:K:48:TYR:HB2	10:K:61:VAL:HG22	1.95	0.49
11:L:103:THR:HG23	11:L:104:ARG:H	1.77	0.49
11:L:37:PHE:HD1	11:L:43:ALA:CA	2.16	0.49
12:M:32:ALA:CB	12:M:75:ILE:O	2.56	0.49
13:N:110:ASP:HB2	20:U:88:LYS:CG	2.42	0.49
14:O:84:LEU:CG	14:O:85:ILE:N	2.73	0.49
14:O:6:THR:OG1	14:O:9:GLN:CG	2.61	0.49
15:P:96:LEU:O	15:P:110:ARG:NE	2.45	0.49
16:Q:44:LEU:CD2	16:Q:45:ARG:H	2.21	0.49
17:R:24:SER:O	17:R:27:VAL:N	2.45	0.49
17:R:41:GLU:O	17:R:44:LYS:HB2	2.11	0.49
17:R:54:ARG:HH21	17:R:58:MET:CE	2.26	0.49
17:R:71:GLN:HA	17:R:75:PRO:CA	2.43	0.49
18:S:4:ILE:HG12	18:S:66:PRO:HA	1.94	0.49
18:S:54:GLU:O	18:S:55:ARG:C	2.50	0.49
3:D:21:A:O2'	3:D:22:G:O4'	2.28	0.49
5:F:79:ARG:CG	5:F:79:ARG:O	2.60	0.49
1:A:1055:A:H2'	1:A:1055:A:N3	2.26	0.49
1:A:1324:A:C6	1:A:1325:C:C5	3.01	0.49
1:A:1501:C:OP1	1:A:1508:G:H4'	2.12	0.49
1:A:68:G:O4'	1:A:171:A:H1'	2.12	0.49
1:A:277:C:C5'	19:T:68:ARG:HH12	2.26	0.49
1:A:427:U:O5'	1:A:427:U:H6	1.94	0.49
1:A:414:A:OP2	1:A:428:G:N2	2.46	0.49
1:A:551:U:C4'	14:O:119:LYS:HZ3	2.26	0.49
1:A:936:C:C2'	1:A:937:A:H5'	2.42	0.49
1:A:937:A:N6	1:A:938:A:N6	2.57	0.49
1:A:991:U:O2'	1:A:993:G:H1'	2.12	0.49
2:C:5:G:O2'	2:C:6:G:O5'	2.30	0.49
3:D:34:G:N2	3:D:35:A:H5''	2.27	0.49
4:E:107:THR:O	4:E:108:ILE:C	2.51	0.49
4:E:144:ARG:HA	4:E:147:LYS:CB	2.43	0.49
4:E:192:SER:C	4:E:194:PRO:HD3	2.33	0.49
4:E:192:SER:O	4:E:194:PRO:HD3	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:61:LEU:HD11	4:E:68:ILE:HD13	1.94	0.49
5:F:84:ILE:CD1	5:F:101:LEU:HD22	2.42	0.49
5:F:15:THR:HG21	5:F:181:ASN:CG	2.31	0.49
5:F:190:ARG:CZ	5:F:190:ARG:HB3	2.41	0.49
5:F:8:ILE:HG23	5:F:9:GLY:N	2.27	0.49
1:A:407:G:O2'	6:G:116:GLN:HG2	2.11	0.49
6:G:57:ARG:HB3	6:G:206:PHE:CB	2.35	0.49
7:H:40:ARG:CA	7:H:68:GLU:OE1	2.60	0.49
8:I:11:ASN:OD1	8:I:14:LEU:N	2.45	0.49
9:J:26:PHE:CZ	9:J:30:ILE:CG1	2.95	0.49
9:J:51:GLN:OE1	9:J:58:PRO:CD	2.61	0.49
10:K:114:THR:HB	10:K:130:GLY:O	2.11	0.49
11:L:33:PHE:HE2	11:L:37:PHE:CE1	2.30	0.49
13:N:32:ILE:HD11	13:N:68:ALA:O	2.12	0.49
13:N:85:ARG:HD2	13:N:113:PRO:HD2	1.93	0.49
14:O:100:ILE:O	14:O:101:VAL:HG13	2.13	0.49
14:O:85:ILE:CD1	14:O:87:GLY:N	2.75	0.49
1:A:1228:C:C4'	15:P:116:THR:HA	2.42	0.49
1:A:255:G:O2'	19:T:16:GLN:NE2	2.44	0.49
19:T:38:ARG:HG3	19:T:39:SER:N	2.24	0.49
20:U:51:LEU:O	20:U:56:THR:CG2	2.60	0.49
20:U:62:GLU:C	20:U:66:LEU:CD2	2.81	0.49
20:U:70:ILE:HG22	20:U:74:ARG:HE	1.76	0.49
21:V:16:LEU:N	21:V:16:LEU:CD1	2.71	0.49
3:D:47:U:N3	3:D:50:G:P	2.85	0.49
3:D:7:G:C2	3:D:49:G:H1'	2.47	0.49
1:A:208:U:O2	1:A:208:U:H2'	2.11	0.49
2:C:52:G:C6	2:C:53:G:C5	3.00	0.49
1:A:1070:U:H2'	1:A:1070:U:O2	2.12	0.49
1:A:865:A:C5'	1:A:1078:U:O4	2.57	0.49
1:A:1250:A:H4'	11:L:68:GLY:N	2.27	0.49
1:A:124:G:C6	1:A:125:U:C2	3.00	0.49
1:A:1386:G:C2'	1:A:1387:G:O5'	2.60	0.49
1:A:1401:G:H2'	1:A:1402:C:C4'	2.43	0.49
1:A:1431:C:C2'	1:A:1432:G:C5'	2.91	0.49
1:A:1530:G:N1	1:A:1531:A:N3	2.60	0.49
1:A:241:C:N3	1:A:242:C:C5	2.81	0.49
1:A:258:G:O6	1:A:259:G:O6	2.30	0.49
1:A:306:G:C4	1:A:307:C:C5	3.01	0.49
1:A:328:C:HO2'	1:A:329:A:P	2.35	0.49
1:A:510:A:N3	1:A:543:C:H1'	2.28	0.49
1:A:593:G:C6	1:A:594:G:C5	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:673:G:C2'	1:A:674:G:C8	2.94	0.49
1:A:813:U:H5''	1:A:814:A:OP2	2.12	0.49
1:A:825:G:C4	1:A:876:G:N2	2.80	0.49
1:A:860:A:N6	1:A:861:G:C2	2.79	0.49
1:A:898:G:C6	1:A:902:G:O6	2.66	0.49
2:C:8:U:C1'	2:C:48:C:O2'	2.59	0.49
2:C:70:G:N2	2:C:71:C:C2	2.80	0.49
4:E:95:GLN:CB	4:E:148:TYR:HB3	2.43	0.49
4:E:23:ARG:O	4:E:24:TRP:CD1	2.66	0.49
6:G:98:GLU:HG2	6:G:189:PRO:HG3	1.94	0.49
6:G:83:SER:CA	6:G:89:THR:CG2	2.91	0.49
8:I:11:ASN:OD1	8:I:13:ASN:N	2.45	0.49
1:A:737:A:C3'	8:I:92:LYS:NZ	2.69	0.49
9:J:65:ALA:N	9:J:128:ALA:CA	2.76	0.49
10:K:109:ILE:O	10:K:109:ILE:HG12	2.11	0.49
10:K:92:ARG:CG	10:K:92:ARG:HH11	2.24	0.49
11:L:32:ASP:N	11:L:35:GLU:OE2	2.42	0.49
13:N:18:ARG:HB2	13:N:33:THR:OG1	2.13	0.49
14:O:71:PRO:HD2	14:O:100:ILE:HG12	1.94	0.49
14:O:48:PRO:HG2	14:O:49:ASN:H	1.77	0.49
14:O:82:VAL:O	14:O:83:VAL:CB	2.59	0.49
15:P:120:LYS:O	15:P:121:LYS:CB	2.58	0.49
1:A:1216:G:OP1	16:Q:3:ARG:CZ	2.60	0.49
20:U:74:ARG:HA	20:U:79:LEU:CD2	2.42	0.49
21:V:63:THR:HG22	21:V:64:GLU:N	2.26	0.49
22:W:60:GLU:O	22:W:63:ILE:HB	2.13	0.49
1:A:259:G:H3'	22:W:83:ARG:NH2	2.28	0.49
22:W:84:LEU:HD13	22:W:84:LEU:C	2.32	0.49
3:D:65:U:H6	3:D:65:U:O5'	1.96	0.49
3:D:5:A:N6	3:D:69:C:N4	2.60	0.49
5:F:157:ILE:CD1	5:F:164:ARG:CG	2.90	0.49
1:A:1131:G:C8	1:A:1131:G:H3'	2.47	0.49
1:A:1188:A:C8	1:A:1188:A:OP2	2.66	0.49
1:A:1474:G:C6	1:A:1475:G:N7	2.81	0.49
1:A:378:G:C4	1:A:379:C:C5	3.00	0.49
1:A:497:U:O2	1:A:498:A:C8	2.66	0.49
1:A:528:C:O4'	1:A:535:A:C6	2.66	0.49
1:A:564:C:C4	1:A:565:U:C4	3.00	0.49
1:A:60:A:H62	1:A:110:C:N4	2.10	0.49
1:A:731:G:OP1	1:A:766:A:H1'	2.12	0.49
1:A:734:G:H2'	1:A:735:C:C5	2.44	0.49
1:A:756:C:O2'	1:A:757:U:H5'	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:87:A:H62	1:A:88:C:N4	2.11	0.49
1:A:907:A:C2'	1:A:908:A:C8	2.88	0.49
1:A:954:G:C5	1:A:955:U:C5	3.01	0.49
1:A:975:A:H62	1:A:1366:C:H1'	1.77	0.49
4:E:117:GLU:O	4:E:120:ALA:HB3	2.12	0.49
4:E:12:GLU:C	4:E:14:GLY:N	2.64	0.49
4:E:71:VAL:CG2	4:E:93:VAL:HB	2.43	0.49
4:E:77:ALA:CB	4:E:211:ILE:HG21	2.43	0.49
5:F:34:LEU:CD2	5:F:35:GLU:N	2.65	0.49
5:F:78:GLY:CA	5:F:82:GLU:OE1	2.60	0.49
6:G:144:ASP:HA	6:G:184:LYS:CE	2.42	0.49
6:G:154:ASN:HD22	6:G:154:ASN:H	1.61	0.49
6:G:156:GLU:OE1	6:G:157:LEU:HD23	2.12	0.49
6:G:20:TYR:N	6:G:20:TYR:HD1	2.11	0.49
6:G:88:VAL:O	6:G:92:VAL:HG23	2.12	0.49
9:J:63:LYS:HE2	9:J:63:LYS:CA	2.43	0.49
10:K:25:ASP:CB	10:K:58:TYR:CD2	2.95	0.49
10:K:62:TYR:O	10:K:63:LEU:O	2.31	0.49
1:A:685:G:H4'	13:N:40:ILE:HA	1.95	0.49
15:P:13:LYS:HA	15:P:44:ARG:CZ	2.43	0.49
18:S:40:ASP:O	18:S:40:ASP:CG	2.51	0.49
18:S:62:VAL:O	18:S:64:ALA:N	2.45	0.49
19:T:43:LEU:HD11	19:T:69:LYS:HE2	1.93	0.49
20:U:31:LEU:HD12	20:U:31:LEU:H	1.77	0.49
20:U:43:PHE:HD2	20:U:56:THR:HG22	1.77	0.49
3:D:3:C:C2	3:D:4:G:N7	2.81	0.49
3:D:73:A:N3	3:D:74:C:H5'	2.28	0.49
1:A:1005:A:C3'	1:A:1006:C:H6	2.08	0.49
1:A:160:A:C1'	1:A:344:A:N7	2.72	0.49
1:A:1086:U:H5'	1:A:1086:U:H6	1.77	0.49
1:A:1216:G:H2'	1:A:1217:C:C6	2.47	0.49
1:A:1014:A:C2	1:A:1219:U:H1'	2.48	0.49
1:A:1242:C:P	23:X:10:ARG:HH12	2.35	0.49
1:A:1338:G:C6	1:A:1339:A:N6	2.80	0.49
1:A:937:A:N3	1:A:1379:G:N1	2.59	0.49
1:A:1388:C:C2	1:A:1389:C:C5	3.00	0.49
1:A:181:G:N2	1:A:183:G:C2	2.81	0.49
1:A:21:G:N7	1:A:22:G:N7	2.61	0.49
1:A:296:U:O2	1:A:302:G:C2	2.66	0.49
1:A:445:G:O2'	1:A:446:G:H5'	2.12	0.49
1:A:517:G:H5''	1:A:518:C:OP1	2.12	0.49
1:A:591:U:C6	1:A:591:U:OP2	2.65	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:687:A:O2'	1:A:688:G:O4'	2.31	0.49
1:A:718:G:C5	13:N:116:HIS:NE2	2.81	0.49
1:A:717:C:C2'	1:A:718:G:OP2	2.60	0.49
1:A:579:G:H5'	1:A:728:A:H1'	1.95	0.49
1:A:775:G:N3	1:A:776:G:C8	2.80	0.49
1:A:797:C:C2	1:A:798:G:C8	3.01	0.49
1:A:815:A:H1'	1:A:817:C:N4	2.27	0.49
1:A:819:A:C4'	1:A:820:U:OP2	2.59	0.49
1:A:858:G:N2	1:A:870:U:OP2	2.45	0.49
1:A:940:C:O2'	1:A:941:G:H5'	2.12	0.49
1:A:947:G:C2	1:A:948:C:C2	3.00	0.49
1:A:961:U:C6	1:A:983:A:N1	2.80	0.49
5:F:76:VAL:HG11	5:F:103:VAL:CG1	2.43	0.49
5:F:59:ARG:HG3	5:F:61:ALA:O	2.11	0.49
6:G:65:ARG:NE	6:G:72:GLU:N	2.53	0.49
8:I:61:LEU:HD13	8:I:63:TYR:OH	2.13	0.49
9:J:120:ILE:O	9:J:124:LEU:HB2	2.13	0.49
9:J:136:LYS:C	9:J:138:LYS:N	2.64	0.49
10:K:36:LEU:HG	10:K:37:ARG:N	2.28	0.49
10:K:63:LEU:N	10:K:63:LEU:HD22	2.28	0.49
11:L:97:LYS:HZ3	11:L:102:LEU:HD22	1.76	0.49
14:O:18:VAL:O	14:O:19:ARG:CB	2.60	0.49
15:P:16:ASP:CA	15:P:19:LEU:HG	2.42	0.49
15:P:15:VAL:HG12	15:P:19:LEU:HD23	1.93	0.49
17:R:48:LYS:HB3	17:R:50:HIS:NE2	2.28	0.49
18:S:20:VAL:HA	18:S:36:ILE:HG13	1.95	0.49
19:T:63:ARG:O	19:T:65:ILE:HG22	2.13	0.49
19:T:83:ASP:O	19:T:86:GLU:N	2.46	0.49
20:U:30:ASP:CG	20:U:32:ARG:H	2.16	0.49
20:U:67:ALA:O	20:U:70:ILE:N	2.46	0.49
22:W:81:LYS:O	22:W:84:LEU:N	2.46	0.49
3:D:44:G:O6	3:D:45:U:O2	2.31	0.49
3:D:63:G:C6	3:D:64:C:N4	2.81	0.49
3:D:2:C:N4	3:D:3:C:N4	2.60	0.49
3:D:68:U:H2'	3:D:69:C:H6	1.78	0.49
1:A:341:C:O2'	1:A:342:C:C5'	2.60	0.49
1:A:1068:G:C2'	1:A:1069:C:H5'	2.43	0.49
1:A:110:C:H2'	1:A:111:G:C5'	2.42	0.49
1:A:116:A:C8	1:A:116:A:O5'	2.63	0.49
1:A:1277:C:C2'	1:A:1279:A:H8	2.25	0.49
1:A:893:C:H5'	1:A:1415:G:HO2'	1.78	0.49
1:A:1406:U:H1'	1:A:1518:A:C4'	2.43	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1528:U:C2	1:A:1530:G:H8	2.31	0.49
1:A:22:G:C2'	1:A:23:C:O4'	2.60	0.49
1:A:254:G:O2'	1:A:255:G:H5'	2.13	0.49
1:A:318:G:C2	1:A:319:G:C8	3.01	0.49
1:A:372:C:H42	1:A:389:A:H62	0.63	0.49
1:A:389:A:N3	1:A:390:C:O4'	2.46	0.49
1:A:532:A:H8	5:F:161:GLU:OE1	1.96	0.49
1:A:573:A:C2	1:A:574:A:C5	3.00	0.49
1:A:657:G:C4'	17:R:28:GLN:OE1	2.61	0.49
1:A:841:U:H5'	1:A:842:C:C5	2.46	0.49
1:A:901:A:H2'	1:A:902:G:O5'	2.13	0.49
1:A:914:A:H2'	1:A:915:A:N7	2.26	0.49
1:A:957:U:H3	1:A:960:U:H5'	1.78	0.49
1:A:972:C:OP2	12:M:57:LYS:HD2	2.12	0.49
1:A:9:G:OP2	7:H:121:LYS:NZ	2.42	0.49
2:C:16:C:H5'	2:C:60:U:C2'	2.42	0.49
2:C:9:G:C2	2:C:46:G:C8	3.01	0.49
3:D:36:A:H2'	3:D:37:A:C8	2.48	0.49
4:E:144:ARG:HD3	4:E:148:TYR:OH	2.13	0.49
4:E:74:LYS:HE2	4:E:76:GLN:CG	2.43	0.49
4:E:80:ILE:HD12	4:E:208:ILE:CD1	2.42	0.49
4:E:82:ARG:HA	4:E:92:TYR:CZ	2.45	0.49
4:E:97:TRP:O	4:E:97:TRP:CG	2.66	0.49
5:F:76:VAL:HG11	5:F:103:VAL:HG11	1.94	0.49
5:F:122:GLU:O	5:F:125:GLU:CB	2.51	0.49
5:F:144:SER:O	5:F:144:SER:OG	2.25	0.49
5:F:54:ARG:HG2	5:F:55:VAL:N	2.28	0.49
6:G:18:LYS:O	6:G:21:LEU:CD1	2.57	0.49
6:G:20:TYR:HA	6:G:26:CYS:C	2.24	0.49
6:G:54:TYR:O	6:G:56:VAL:N	2.46	0.49
6:G:59:ARG:HH11	6:G:59:ARG:HA	1.65	0.49
6:G:72:GLU:O	6:G:75:PHE:HB3	2.12	0.49
6:G:82:ALA:HB3	6:G:89:THR:HG23	1.94	0.49
7:H:145:LYS:CA	7:H:148:VAL:HG23	2.43	0.49
7:H:146:ALA:O	7:H:149:GLU:HB2	2.12	0.49
9:J:106:GLN:O	9:J:108:ALA:N	2.46	0.49
9:J:42:ILE:HG21	9:J:116:ALA:CB	2.43	0.49
9:J:143:ARG:O	9:J:144:MET:C	2.51	0.49
9:J:78:ARG:HB2	9:J:156:TRP:CZ3	2.48	0.49
9:J:71:PRO:HD2	9:J:96:GLN:HA	1.93	0.49
9:J:97:GLN:HG2	9:J:98:SER:N	2.27	0.49
10:K:121:ASP:O	10:K:122:ARG:C	2.51	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:25:ASP:CG	10:K:60:ARG:HB2	2.33	0.49
10:K:63:LEU:HG	10:K:65:TYR:OH	2.12	0.49
11:L:104:ARG:O	11:L:105:ASP:CB	2.60	0.49
11:L:15:ALA:CA	11:L:65:VAL:HG23	2.42	0.49
11:L:29:ASN:CA	11:L:63:ILE:O	2.60	0.49
13:N:99:GLN:O	13:N:102:GLY:CA	2.61	0.49
15:P:78:ILE:CA	15:P:81:LEU:HD13	2.37	0.49
16:Q:26:ARG:NH1	16:Q:47:LEU:CG	2.75	0.49
1:A:994:A:C2	16:Q:5:ALA:HA	2.48	0.49
1:A:237:C:H5''	19:T:25:ARG:NH2	2.25	0.49
20:U:63:GLN:HA	20:U:63:GLN:OE1	2.10	0.49
20:U:67:ALA:O	20:U:70:ILE:HB	2.13	0.49
20:U:71:LYS:O	20:U:74:ARG:N	2.46	0.49
1:A:143:A:C8	1:A:143:A:O5'	2.65	0.49
1:A:1266:G:H21	1:A:1270:C:H42	1.61	0.49
1:A:1281:U:H6	1:A:1281:U:H3'	1.77	0.49
1:A:1419:G:O6	1:A:1482:G:N1	2.46	0.49
1:A:1511:G:C5	1:A:1512:U:C5	3.01	0.49
1:A:59:A:C5	1:A:354:G:C6	3.01	0.49
1:A:20:U:H5'	1:A:572:A:N1	2.28	0.49
1:A:575:G:OP1	1:A:576:G:H5''	2.13	0.49
1:A:584:G:C2	1:A:585:G:C8	3.01	0.49
1:A:647:C:C2	1:A:648:A:N7	2.80	0.49
1:A:790:A:C2'	1:A:791:G:O5'	2.60	0.49
1:A:829:G:C2'	1:A:830:G:H5'	2.42	0.49
1:A:897:C:C2'	1:A:898:G:O5'	2.61	0.49
1:A:950:U:O2	1:A:951:G:C8	2.66	0.49
2:C:43:A:H2'	2:C:44:A:H8	1.78	0.49
2:C:16:C:H5'	2:C:60:U:H2'	1.94	0.49
3:D:36:A:H3'	3:D:37:A:H8	1.77	0.49
5:F:116:VAL:HG11	5:F:141:VAL:CG2	2.43	0.49
5:F:123:GLN:O	5:F:128:PHE:CE1	2.66	0.49
5:F:142:MET:C	5:F:142:MET:SD	2.91	0.49
5:F:15:THR:CG2	5:F:181:ASN:CG	2.81	0.49
5:F:174:PRO:HD2	5:F:203:PHE:CE1	2.47	0.49
5:F:204:LEU:O	5:F:205:GLY:C	2.51	0.49
6:G:199:ASN:O	6:G:200:GLU:HB3	2.12	0.49
6:G:93:PHE:O	6:G:96:LEU:N	2.46	0.49
8:I:80:ARG:NH1	8:I:88:VAL:CG1	2.75	0.49
9:J:72:ARG:NH2	9:J:138:LYS:HZ3	2.04	0.49
9:J:75:VAL:CG2	9:J:146:GLU:H	2.26	0.49
10:K:104:ARG:HB3	10:K:107:LEU:HG	1.95	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:100:ILE:CB	10:K:125:ARG:NH2	2.72	0.49
10:K:98:LYS:HZ2	10:K:98:LYS:H	1.60	0.49
11:L:5:TYR:HD2	11:L:17:VAL:O	1.96	0.49
12:M:4:ILE:CG1	12:M:100:THR:HB	2.37	0.49
12:M:27:ALA:HB2	12:M:85:LEU:CD2	2.42	0.49
13:N:42:TRP:CE3	13:N:43:SER:N	2.76	0.49
13:N:99:GLN:HA	13:N:105:VAL:HG21	1.94	0.49
14:O:8:ASN:O	14:O:9:GLN:C	2.49	0.49
15:P:2:ALA:HB3	15:P:4:ILE:CD1	2.40	0.49
15:P:77:ASN:HA	15:P:80:ARG:CD	2.43	0.49
17:R:28:GLN:O	17:R:31:LEU:HB2	2.13	0.49
1:A:582:U:C5'	17:R:64:ARG:NH2	2.61	0.49
18:S:59:TRP:HA	18:S:59:TRP:CE3	2.47	0.49
19:T:67:LYS:CB	19:T:70:ARG:HH22	2.26	0.49
20:U:82:THR:O	20:U:83:GLU:CD	2.52	0.49
22:W:39:LYS:O	22:W:42:GLN:CB	2.60	0.49
22:W:42:GLN:CA	22:W:42:GLN:NE2	2.74	0.49
22:W:50:GLU:HB2	22:W:99:LEU:CD1	2.43	0.49
22:W:72:LEU:HD13	22:W:77:ALA:CB	2.43	0.49
22:W:91:LEU:HD23	22:W:91:LEU:N	2.26	0.49
3:D:52:G:N2	3:D:53:G:H1'	2.28	0.49
1:A:346:G:N2	1:A:347:G:C4	2.81	0.49
1:A:1022:G:C2	1:A:1023:G:C4	3.01	0.49
1:A:1068:G:C6	1:A:1108:G:N3	2.81	0.49
1:A:921:U:OP1	1:A:1082:G:H5''	2.12	0.49
1:A:1179:A:H2'	1:A:1180:A:C8	2.48	0.49
1:A:1239:A:H2'	1:A:1239:A:N3	2.27	0.49
1:A:1304:G:N1	1:A:1332:A:OP2	2.45	0.49
1:A:1326:C:C2	1:A:1327:C:C5	3.01	0.49
1:A:1338:G:N1	1:A:1339:A:C6	2.80	0.49
1:A:1533:C:C5'	1:A:1534:A:OP1	2.60	0.49
1:A:281:G:O2'	1:A:282:A:H8	1.96	0.49
1:A:321:A:N6	1:A:328:C:O2'	2.43	0.49
1:A:373:A:H1'	1:A:481:G:N3	2.27	0.49
1:A:379:C:H2'	1:A:380:G:C5'	2.43	0.49
1:A:664:G:H3'	1:A:664:G:H8	1.77	0.49
1:A:675:A:C2'	1:A:676:A:C8	2.92	0.49
1:A:696:A:O2'	1:A:697:U:H5'	2.12	0.49
1:A:701:C:HO2'	1:A:702:A:P	2.36	0.49
1:A:796:C:N3	1:A:797:C:C5	2.81	0.49
1:A:924:C:HO2'	1:A:1399:C:H6	1.59	0.49
2:C:70:G:H2'	2:C:71:C:H6	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:24:TRP:HA	4:E:190:THR:O	2.13	0.49
5:F:34:LEU:HD23	5:F:35:GLU:CA	2.41	0.49
6:G:18:LYS:C	6:G:19:LEU:HD23	2.33	0.49
6:G:93:PHE:O	6:G:95:GLY:N	2.45	0.49
7:H:94:ALA:HB3	7:H:117:ASP:C	2.34	0.49
8:I:50:TYR:CE2	20:U:77:GLY:HA2	2.48	0.49
8:I:39:LYS:CG	8:I:64:GLN:HE21	2.26	0.49
8:I:6:VAL:HG12	8:I:63:TYR:H	1.78	0.49
9:J:134:ALA:C	9:J:136:LYS:N	2.65	0.49
9:J:21:VAL:HG23	9:J:22:LEU:N	2.28	0.49
10:K:122:ARG:O	10:K:125:ARG:CB	2.57	0.49
10:K:36:LEU:HG	10:K:37:ARG:H	1.77	0.49
11:L:28:VAL:N	11:L:31:GLN:O	2.40	0.49
12:M:36:GLY:O	12:M:38:ILE:HG13	2.13	0.49
1:A:34:C:O4'	14:O:32:PHE:HE2	1.95	0.49
14:O:28:LYS:HG3	14:O:33:ARG:NH1	2.23	0.49
14:O:90:VAL:HG12	14:O:90:VAL:O	2.13	0.49
16:Q:42:ILE:C	16:Q:44:LEU:N	2.63	0.49
1:A:1186:G:N2	16:Q:61:TRP:O	2.35	0.49
17:R:42:HIS:C	17:R:42:HIS:ND1	2.66	0.49
17:R:49:ASP:O	17:R:49:ASP:OD1	2.30	0.49
17:R:64:ARG:HA	17:R:67:LEU:HD12	1.94	0.49
17:R:68:ARG:O	17:R:71:GLN:HB3	2.13	0.49
17:R:79:ARG:NH1	17:R:79:ARG:HB2	2.27	0.49
1:A:392:G:C5'	18:S:12:LYS:CE	2.85	0.49
18:S:19:ILE:HD12	18:S:38:TYR:N	2.27	0.49
19:T:65:ILE:O	19:T:66:SER:C	2.51	0.49
20:U:75:ILE:HB	20:U:76:LEU:HD23	1.94	0.49
3:D:67:C:C2'	3:D:68:U:H5'	2.42	0.49
1:A:1037:C:O2'	1:A:1038:C:H5'	2.11	0.49
1:A:1167:A:C6	1:A:1169:A:C6	3.01	0.49
5:F:157:ILE:HG21	5:F:164:ARG:NH2	2.27	0.49
6:G:165:MET:HE3	6:G:167:GLY:N	2.28	0.49
1:A:1055:A:N6	1:A:1206:G:N9	2.61	0.48
1:A:1102:A:C2	1:A:1103:C:C4	3.00	0.48
1:A:1147:C:H1'	11:L:16:ARG:HH21	1.78	0.48
1:A:1222:G:N2	1:A:1223:C:N3	2.61	0.48
1:A:1278:U:C6	1:A:1278:U:H3'	2.46	0.48
1:A:1374:A:C4	1:A:1375:A:C8	3.01	0.48
1:A:254:G:H2'	1:A:255:G:C8	2.48	0.48
1:A:283:C:O2	1:A:283:C:C2'	2.60	0.48
1:A:464:G:C2	1:A:474:G:O6	2.66	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:482:A:H2	1:A:483:C:N1	2.09	0.48
1:A:49:U:C5	1:A:361:G:C2	3.01	0.48
1:A:501:C:C1'	1:A:549:C:H1'	2.34	0.48
1:A:570:G:O3'	1:A:819:A:H2'	2.13	0.48
1:A:568:G:N3	1:A:574:A:H2	2.11	0.48
1:A:601:C:C2	1:A:638:G:N2	2.81	0.48
1:A:629:G:C2	1:A:630:G:C8	3.01	0.48
1:A:643:C:C2'	1:A:644:G:H5'	2.43	0.48
1:A:696:A:H2'	1:A:697:U:C5'	2.43	0.48
1:A:812:C:H4'	1:A:813:U:H6	1.78	0.48
1:A:859:A:C2'	1:A:860:A:O4'	2.54	0.48
1:A:813:U:OP1	1:A:904:C:H5'	2.13	0.48
1:A:962:C:C3'	1:A:1200:C:H41	2.26	0.48
1:A:991:U:O2'	1:A:993:G:C8	2.61	0.48
3:D:34:G:OP1	3:D:35:A:C5'	2.61	0.48
4:E:171:ALA:O	4:E:174:VAL:N	2.46	0.48
4:E:193:ASP:OD2	4:E:196:LEU:CG	2.61	0.48
4:E:47:THR:HB	4:E:48:MET:SD	2.53	0.48
4:E:55:PHE:HA	4:E:58:ILE:CG1	2.42	0.48
4:E:61:LEU:CD1	4:E:68:ILE:HD13	2.43	0.48
5:F:134:ILE:HG12	5:F:153:VAL:HG22	1.95	0.48
5:F:44:GLU:HA	5:F:52:LEU:CD1	2.43	0.48
6:G:101:LEU:HD12	6:G:105:VAL:CG2	2.42	0.48
6:G:105:VAL:CG2	6:G:121:VAL:HG22	2.39	0.48
6:G:173:TRP:CD1	6:G:185:PHE:HE2	2.22	0.48
6:G:18:LYS:HD3	6:G:20:TYR:CD2	2.47	0.48
6:G:83:SER:HA	6:G:89:THR:CB	2.42	0.48
7:H:127:ASN:O	7:H:128:PRO:C	2.51	0.48
1:A:737:A:C3'	8:I:92:LYS:HZ1	2.07	0.48
8:I:95:GLU:N	8:I:95:GLU:CD	2.67	0.48
8:I:98:LEU:HD23	8:I:99:ALA:O	2.13	0.48
9:J:123:GLU:O	9:J:125:MET:N	2.46	0.48
9:J:136:LYS:O	9:J:137:LYS:C	2.51	0.48
12:M:54:PHE:CZ	12:M:55:LYS:HG2	2.47	0.48
13:N:85:ARG:CD	13:N:113:PRO:CD	2.91	0.48
14:O:23:LYS:O	14:O:24:VAL:CG2	2.53	0.48
15:P:91:ARG:O	15:P:96:LEU:CD2	2.61	0.48
16:Q:14:PRO:O	16:Q:16:PHE:N	2.45	0.48
18:S:5:ARG:HH22	18:S:24:ALA:HA	1.79	0.48
1:A:375:U:O3'	18:S:6:LEU:CD2	2.61	0.48
20:U:74:ARG:HG3	20:U:79:LEU:HD21	1.94	0.48
13:N:110:ASP:CB	20:U:88:LYS:HB2	2.39	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:77:THR:HG23	21:V:78:ARG:H	1.78	0.48
22:W:26:ASN:HB2	22:W:71:THR:HG23	1.95	0.48
22:W:79:ARG:HG3	22:W:79:ARG:HH11	1.77	0.48
3:D:63:G:C2	3:D:64:C:C4	3.01	0.48
3:D:73:A:C2'	3:D:74:C:OP1	2.61	0.48
4:E:130:ARG:HA	4:E:130:ARG:NE	2.28	0.48
7:H:140:ARG:NH1	7:H:140:ARG:CB	2.76	0.48
5:F:75:VAL:HG12	5:F:75:VAL:O	2.12	0.48
1:A:1142:G:H2'	1:A:1143:G:H8	1.78	0.48
1:A:118:U:O4	1:A:289:G:O5'	2.31	0.48
1:A:1239:A:C8	1:A:1241:G:H1'	2.47	0.48
1:A:1252:A:C2	1:A:1253:G:C8	3.01	0.48
1:A:1330:U:C4	1:A:1331:G:N7	2.80	0.48
1:A:1407:C:C6	1:A:1407:C:O5'	2.66	0.48
1:A:1421:G:C2'	1:A:1422:G:H5'	2.43	0.48
1:A:1470:G:C6	1:A:1471:G:C5	3.02	0.48
1:A:138:G:C2	1:A:226:G:C4	3.01	0.48
1:A:250:A:H5'	1:A:252:U:O4'	2.12	0.48
1:A:33:A:OP2	1:A:398:C:H5'	2.13	0.48
1:A:39:G:O2'	1:A:40:C:H5'	2.12	0.48
1:A:519:C:C2'	1:A:520:A:C5'	2.81	0.48
1:A:567:G:H21	1:A:568:G:H1'	1.73	0.48
1:A:708:C:C4'	13:N:37:GLY:HA3	2.41	0.48
1:A:741:G:H2'	1:A:742:G:C8	2.45	0.48
1:A:754:C:H5'	1:A:755:G:H8	1.72	0.48
1:A:826:C:N3	1:A:827:U:C5	2.81	0.48
1:A:842:C:C5'	1:A:848:C:C2	2.93	0.48
1:A:968:A:H5''	1:A:969:A:C5'	2.43	0.48
4:E:187:LEU:HD22	4:E:201:ILE:O	2.13	0.48
4:E:87:ARG:O	4:E:88:ALA:C	2.51	0.48
5:F:12:LEU:CD2	5:F:13:GLY:N	2.76	0.48
6:G:108:LEU:CD1	6:G:183:GLY:HA3	2.44	0.48
6:G:120:LEU:C	6:G:120:LEU:HD12	2.33	0.48
6:G:38:TYR:CB	6:G:39:PRO:HD2	2.35	0.48
6:G:88:VAL:HB	6:G:91:SER:OG	2.14	0.48
7:H:77:PRO:O	7:H:78:HIS:C	2.51	0.48
8:I:41:GLU:HB3	8:I:62:TRP:CE3	2.39	0.48
9:J:23:VAL:HG12	9:J:24:THR:N	2.27	0.48
10:K:79:VAL:O	10:K:80:ILE:C	2.52	0.48
12:M:51:ARG:NH2	12:M:61:GLU:OE1	2.46	0.48
1:A:690:G:OP2	13:N:27:ASN:ND2	2.47	0.48
13:N:32:ILE:HD12	13:N:41:THR:OG1	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:85:ILE:HA	14:O:100:ILE:HA	1.95	0.48
15:P:108:ARG:NH1	15:P:112:GLY:H	2.11	0.48
15:P:60:VAL:HA	15:P:63:THR:HG22	1.95	0.48
17:R:42:HIS:HE1	17:R:46:HIS:CD2	2.31	0.48
17:R:66:LEU:N	17:R:66:LEU:HD22	2.28	0.48
18:S:3:LYS:HD2	18:S:5:ARG:NH1	2.28	0.48
19:T:5:VAL:O	19:T:6:LEU:HG	2.13	0.48
19:T:86:GLU:OE2	19:T:89:LEU:HD12	2.13	0.48
20:U:68:LYS:O	20:U:72:ARG:HG3	2.12	0.48
1:A:1025:U:C2'	1:A:1026:G:C8	2.96	0.48
1:A:105:G:H2'	1:A:106:C:C5	2.49	0.48
1:A:1090:U:O2'	1:A:1091:U:O4'	2.28	0.48
1:A:10:A:O2'	1:A:11:G:H5'	2.13	0.48
1:A:1125:U:H4'	1:A:1126:U:C5	2.41	0.48
1:A:1221:G:OP1	21:V:37:ARG:NH2	2.46	0.48
1:A:1276:G:O2'	1:A:1282:C:H4'	2.13	0.48
1:A:1286:A:H5''	23:X:25:LYS:CE	2.43	0.48
1:A:131:C:N4	1:A:232:G:N1	2.61	0.48
1:A:1251:A:H2	1:A:1354:C:H1'	1.78	0.48
1:A:923:A:O2'	1:A:1399:C:OP2	2.31	0.48
1:A:1410:G:C6	1:A:1411:C:N4	2.82	0.48
1:A:145:G:C6	1:A:178:C:C4	3.01	0.48
1:A:331:G:OP1	1:A:332:G:C8	2.65	0.48
1:A:415:A:H2'	1:A:416:G:O4'	2.13	0.48
1:A:48:C:OP1	1:A:115:G:OP1	2.31	0.48
1:A:440:A:C6	1:A:494:U:C5	3.02	0.48
1:A:560:U:C6	1:A:566:G:N3	2.82	0.48
1:A:560:U:C6	1:A:566:G:C2	3.01	0.48
1:A:59:A:O2'	1:A:388:G:H5''	2.13	0.48
1:A:625:G:C2	1:A:626:U:C2	3.01	0.48
1:A:709:G:H2'	1:A:710:G:O4'	2.13	0.48
1:A:812:C:O2	1:A:813:U:C5	2.65	0.48
1:A:914:A:C6	1:A:915:A:C6	3.01	0.48
3:D:30:G:H2'	3:D:31:A:C8	2.47	0.48
4:E:47:THR:HG22	4:E:51:LEU:HD21	1.94	0.48
4:E:67:THR:CG2	4:E:155:LEU:HD21	2.43	0.48
4:E:75:LYS:CE	4:E:75:LYS:HA	2.42	0.48
5:F:29:TYR:CE1	12:M:65:LEU:HD11	2.47	0.48
6:G:57:ARG:CB	6:G:206:PHE:HB2	2.33	0.48
6:G:61:LYS:CA	6:G:203:VAL:HG13	2.43	0.48
6:G:78:LEU:HD21	6:G:96:LEU:CG	2.43	0.48
7:H:115:VAL:HG11	7:H:118:ILE:CD1	2.40	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:4:TYR:N	8:I:4:TYR:CD2	2.81	0.48
8:I:76:ALA:O	8:I:80:ARG:CG	2.57	0.48
8:I:84:ASN:O	8:I:86:ARG:N	2.46	0.48
9:J:62:PHE:HA	9:J:124:LEU:HD21	1.94	0.48
9:J:5:ARG:C	9:J:7:ALA:H	2.16	0.48
10:K:8:ASP:C	10:K:8:ASP:OD2	2.51	0.48
11:L:82:ALA:HB2	11:L:101:PHE:CZ	2.48	0.48
11:L:85:LEU:HD11	11:L:92:TYR:HE1	1.79	0.48
1:A:969:A:C2'	12:M:55:LYS:HZ1	2.25	0.48
12:M:5:ARG:NH1	12:M:5:ARG:HB2	2.28	0.48
12:M:8:LEU:HD22	12:M:95:GLU:H	1.78	0.48
14:O:41:ARG:O	14:O:42:THR:HB	2.12	0.48
15:P:110:ARG:HB2	15:P:110:ARG:HH11	1.78	0.48
1:A:1308:U:C3'	15:P:99:ARG:NH2	2.70	0.48
17:R:76:GLU:CG	17:R:77:ARG:N	2.71	0.48
18:S:35:LYS:HE3	18:S:37:GLY:H	1.77	0.48
19:T:9:VAL:HG22	19:T:10:VAL:N	2.27	0.48
20:U:21:LYS:CE	20:U:23:LYS:HB3	2.43	0.48
21:V:11:VAL:HG13	21:V:38:SER:HB2	1.94	0.48
21:V:24:ALA:HB3	21:V:25:LYS:HZ3	1.77	0.48
1:A:191:G:C1'	22:W:105:SER:HA	2.41	0.48
22:W:64:ASP:OD2	22:W:81:LYS:HE3	2.13	0.48
3:D:19:G:C2	3:D:56:C:O2	2.66	0.48
1:A:1104:G:C4	1:A:1105:A:C8	3.01	0.48
1:A:1200:C:OP2	1:A:1200:C:H4'	2.12	0.48
1:A:1223:C:C5'	1:A:1224:G:H5''	2.43	0.48
1:A:1251:A:H2'	1:A:1252:A:N9	2.26	0.48
1:A:1419:G:H2'	1:A:1420:C:C5	2.48	0.48
1:A:197:A:C6	1:A:221:C:C4'	2.84	0.48
1:A:182:U:O4	1:A:223:U:H1'	2.13	0.48
1:A:270:A:C5	1:A:271:C:C5	3.01	0.48
1:A:315:A:C6	1:A:330:C:C6	3.02	0.48
1:A:357:G:OP1	1:A:367:U:H3'	2.13	0.48
1:A:46:G:C2	1:A:366:C:C2	3.01	0.48
1:A:376:G:OP1	18:S:6:LEU:CD1	2.57	0.48
1:A:38:G:H22	1:A:397:A:H5''	1.72	0.48
1:A:393:A:H5'	1:A:483:C:H4'	1.95	0.48
1:A:468:A:C8	1:A:474:G:N7	2.81	0.48
1:A:467:G:O2'	1:A:468:A:H5'	2.14	0.48
1:A:511:C:C2	1:A:512:U:C5	3.02	0.48
1:A:671:G:H2'	1:A:672:U:C1'	2.44	0.48
1:A:689:C:N3	1:A:690:G:C5	2.81	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:755:G:O2'	10:K:1:MET:HE1	2.12	0.48
1:A:826:C:C2	1:A:827:U:C5	3.01	0.48
1:A:962:C:H2'	1:A:963:G:C8	2.48	0.48
3:D:30:G:H21	9:J:144:MET:HE1	1.78	0.48
4:E:160:ASP:O	4:E:161:ALA:CB	2.61	0.48
4:E:32:ILE:CG2	4:E:32:ILE:O	2.61	0.48
5:F:105:GLU:O	5:F:105:GLU:HG2	2.13	0.48
5:F:20:SER:N	5:F:40:ARG:HH22	2.12	0.48
5:F:78:GLY:HA3	5:F:82:GLU:OE1	2.13	0.48
6:G:195:ALA:HB3	6:G:196:LEU:HD23	1.95	0.48
6:G:20:TYR:C	6:G:22:LYS:H	2.15	0.48
6:G:22:LYS:CB	6:G:26:CYS:CB	2.88	0.48
6:G:65:ARG:NE	6:G:72:GLU:CA	2.76	0.48
7:H:127:ASN:C	7:H:127:ASN:OD1	2.51	0.48
9:J:79:ARG:CZ	9:J:84:ASN:CB	2.91	0.48
10:K:10:LEU:CA	10:K:13:ILE:HD12	2.43	0.48
12:M:21:GLN:HG2	12:M:22:LYS:N	2.27	0.48
12:M:48:THR:O	12:M:49:VAL:HG23	2.12	0.48
14:O:117:ARG:NH2	14:O:124:LYS:CA	2.77	0.48
14:O:87:GLY:HA2	14:O:98:TYR:CB	2.35	0.48
15:P:8:GLU:CG	15:P:22:ILE:HG12	2.43	0.48
16:Q:31:ARG:O	16:Q:33:VAL:HG22	2.14	0.48
17:R:5:LYS:CB	17:R:5:LYS:NZ	2.73	0.48
17:R:81:LEU:O	17:R:82:ILE:C	2.51	0.48
18:S:68:ASP:O	18:S:71:ARG:HB3	2.12	0.48
1:A:279:A:P	19:T:95:TYR:OH	2.71	0.48
8:I:50:TYR:OH	20:U:74:ARG:O	2.25	0.48
21:V:15:LEU:HD11	21:V:38:SER:CB	2.44	0.48
21:V:16:LEU:O	21:V:17:GLU:C	2.52	0.48
22:W:51:GLU:HB3	22:W:54:LYS:NZ	2.28	0.48
22:W:62:LEU:HA	22:W:65:LYS:HG3	1.93	0.48
22:W:96:GLY:O	22:W:97:ALA:O	2.31	0.48
3:D:18:G:N3	3:D:19:G:H1'	2.29	0.48
19:T:100:LYS:C	19:T:101:ARG:HD2	2.34	0.48
1:A:1134:G:N3	1:A:1134:G:H2'	2.28	0.48
1:A:978:A:C2	1:A:1319:A:N3	2.82	0.48
1:A:145:G:C6	1:A:178:C:N4	2.82	0.48
1:A:237:C:O5'	19:T:25:ARG:NH2	2.46	0.48
1:A:522:C:H41	1:A:523:A:H62	1.61	0.48
1:A:542:G:N2	1:A:543:C:H1'	2.28	0.48
1:A:659:U:C2	1:A:660:G:C8	3.02	0.48
1:A:79:G:H2'	1:A:80:G:O4'	2.12	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:862:C:C1'	1:A:874:G:H4'	2.43	0.48
1:A:889:A:C4'	1:A:890:G:OP1	2.61	0.48
1:A:900:A:C2'	1:A:901:A:O5'	2.61	0.48
1:A:966:G:N3	2:C:34:C:H5'	2.28	0.48
2:C:58:A:O2'	2:C:59:A:P	2.71	0.48
4:E:161:ALA:CA	4:E:183:PRO:HB2	2.25	0.48
4:E:163:PHE:CD1	4:E:185:ILE:HG13	2.49	0.48
6:G:52:SER:O	6:G:54:TYR:N	2.46	0.48
7:H:107:ARG:NH1	7:H:107:ARG:HB2	2.28	0.48
7:H:109:ILE:HG23	7:H:110:LEU:HD23	1.92	0.48
7:H:151:LEU:N	7:H:151:LEU:HD22	2.28	0.48
8:I:47:ARG:HD3	8:I:57:GLN:CB	2.43	0.48
8:I:91:VAL:CG1	20:U:72:ARG:NH2	2.76	0.48
9:J:92:SER:CB	9:J:93:PRO:HD2	2.43	0.48
9:J:93:PRO:O	9:J:96:GLN:N	2.47	0.48
10:K:112:LEU:CD1	10:K:133:LEU:HD23	2.44	0.48
10:K:29:SER:C	10:K:32:LYS:NZ	2.66	0.48
11:L:37:PHE:CE1	11:L:74:ILE:CG2	2.91	0.48
11:L:49:PRO:CD	11:L:78:LYS:HZ3	2.25	0.48
13:N:42:TRP:HZ3	13:N:47:VAL:HG11	1.78	0.48
14:O:117:ARG:O	14:O:118:SER:C	2.51	0.48
15:P:48:LEU:HD22	15:P:49:THR:O	2.14	0.48
16:Q:13:THR:HG22	16:Q:13:THR:O	2.14	0.48
19:T:34:LYS:HD2	19:T:35:VAL:H	1.79	0.48
19:T:74:LEU:O	19:T:75:ARG:CB	2.61	0.48
22:W:20:LEU:O	22:W:21:LYS:C	2.51	0.48
22:W:42:GLN:O	22:W:43:LEU:C	2.50	0.48
5:F:60:ALA:HB2	12:M:92:THR:HG1	1.75	0.48
1:A:1071:C:N4	1:A:1084:G:H21	2.11	0.48
1:A:1189:C:OP2	1:A:1189:C:H6	1.97	0.48
1:A:137:C:C2'	1:A:138:G:C5'	2.90	0.48
1:A:1443:G:O2'	1:A:1446:A:H4'	2.13	0.48
1:A:141:A:H1'	1:A:182:U:C2	2.49	0.48
1:A:394:G:C6	1:A:395:C:N4	2.82	0.48
1:A:468:A:C5	1:A:474:G:C5	3.02	0.48
1:A:482:A:C2	1:A:483:C:C2	3.01	0.48
1:A:483:C:C6	1:A:483:C:OP2	2.66	0.48
1:A:483:C:N4	1:A:484:G:N1	2.62	0.48
1:A:52:G:C2'	1:A:53:A:C5'	2.91	0.48
1:A:57:G:H2'	1:A:58:C:H6	1.78	0.48
1:A:715:A:C4'	1:A:777:A:H61	2.26	0.48
1:A:856:C:C2'	1:A:857:C:H5'	2.42	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:892:A:C6	1:A:907:A:C8	3.02	0.48
1:A:99:C:O5'	1:A:99:C:H6	1.97	0.48
2:C:71:C:N3	2:C:72:A:N7	2.61	0.48
3:D:39:U:H2'	3:D:40:C:O4'	2.13	0.48
4:E:68:ILE:HD12	4:E:70:PHE:CZ	2.47	0.48
5:F:91:LEU:CD2	5:F:92:ALA:N	2.76	0.48
6:G:70:ILE:HD12	6:G:100:ARG:CZ	2.44	0.48
6:G:187:ARG:CG	6:G:188:LEU:N	2.65	0.48
6:G:191:ARG:O	6:G:193:ASP:N	2.47	0.48
6:G:30:LYS:HG2	6:G:35:ARG:CG	2.43	0.48
7:H:70:PRO:CB	7:H:143:ARG:HA	2.43	0.48
7:H:39:GLY:O	7:H:69:VAL:CG2	2.58	0.48
7:H:40:ARG:N	7:H:68:GLU:OE1	2.45	0.48
7:H:80:ILE:O	7:H:90:VAL:HA	2.14	0.48
9:J:47:CYS:O	9:J:50:ILE:HB	2.13	0.48
14:O:30:ALA:CB	14:O:33:ARG:NH2	2.76	0.48
1:A:528:C:H42	14:O:49:ASN:ND2	2.10	0.48
14:O:65:GLU:CD	14:O:65:GLU:N	2.66	0.48
15:P:4:ILE:HD13	15:P:8:GLU:O	2.13	0.48
1:A:1048:G:OP1	16:Q:3:ARG:HD2	2.13	0.48
17:R:27:VAL:O	17:R:31:LEU:HD13	2.14	0.48
17:R:66:LEU:O	17:R:67:LEU:C	2.49	0.48
21:V:45:VAL:HA	21:V:67:VAL:HG21	1.95	0.48
3:D:19:G:N1	3:D:56:C:O2	2.47	0.48
1:A:164:U:O2	1:A:165:C:C5	2.66	0.48
1:A:1225:A:OP2	15:P:102:ARG:O	2.32	0.48
1:A:131:C:N4	1:A:232:G:H1	2.12	0.48
1:A:1323:G:C2	1:A:1324:A:C5	3.02	0.48
1:A:1287:A:N6	1:A:1371:G:O4'	2.43	0.48
1:A:1484:C:H2'	1:A:1484:C:O2	2.13	0.48
1:A:1487:G:H2'	1:A:1488:G:O5'	2.13	0.48
1:A:1488:G:C6	1:A:1489:G:N7	2.82	0.48
1:A:186(C):G:H2'	1:A:186(D):C:C6	2.49	0.48
1:A:20:U:H5	1:A:916:G:N1	2.11	0.48
1:A:285:G:O2'	1:A:286:G:H5'	2.13	0.48
1:A:296:U:O2'	1:A:556:C:O2'	2.25	0.48
1:A:302:G:O2'	1:A:556:C:H5''	2.13	0.48
1:A:306:G:O5'	1:A:306:G:C8	2.67	0.48
1:A:32:A:P	1:A:398:C:HO2'	2.35	0.48
1:A:34:C:C2	1:A:35:G:C8	3.01	0.48
1:A:421:U:H5''	1:A:422:C:OP2	2.13	0.48
1:A:484:G:O4'	1:A:486:U:C6	2.66	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:505:G:C6	1:A:535:A:C2	3.01	0.48
1:A:552:U:H2'	1:A:553:A:H8	1.79	0.48
1:A:571:U:H4'	1:A:572:A:OP2	2.12	0.48
1:A:626:U:H2'	1:A:627:G:H8	1.79	0.48
1:A:690:G:H2'	1:A:691:G:O5'	2.13	0.48
1:A:735:C:O5'	1:A:735:C:H6	1.95	0.48
1:A:765:G:H2'	1:A:766:A:OP2	2.13	0.48
1:A:663:A:C5'	1:A:836:G:OP1	2.55	0.48
1:A:924:C:O2'	1:A:925:G:H5'	2.13	0.48
1:A:935:A:C5	1:A:936:C:C5	3.02	0.48
1:A:951:G:N3	1:A:970:C:O2'	2.39	0.48
1:A:951:G:C1'	1:A:970:C:O2'	2.60	0.48
1:A:978:A:N1	1:A:1318:A:C6	2.82	0.48
2:C:19:G:C3'	2:C:20:U:C4	2.96	0.48
3:D:35:A:O2'	3:D:36:A:P	2.72	0.48
4:E:33:TYR:CE2	4:E:44:LEU:HG	2.48	0.48
8:I:26:ILE:C	8:I:30:LEU:CD1	2.81	0.48
8:I:48:LEU:HB3	20:U:78:LEU:CD2	2.20	0.48
8:I:68:PRO:O	8:I:69:GLU:C	2.52	0.48
8:I:82:ARG:O	8:I:83:ASP:C	2.51	0.48
10:K:39:LEU:HD12	10:K:45:ILE:HG22	1.95	0.48
1:A:1232:U:OP1	11:L:125:TYR:O	2.32	0.48
11:L:28:VAL:HG11	11:L:36:TYR:CG	2.49	0.48
13:N:12:ARG:C	13:N:13:GLN:HG2	2.34	0.48
17:R:79:ARG:HH11	17:R:79:ARG:CB	2.23	0.48
18:S:14:ASN:OD1	18:S:14:ASN:C	2.52	0.48
18:S:3:LYS:CB	18:S:65:GLN:O	2.61	0.48
20:U:49:LYS:HZ2	20:U:49:LYS:N	2.00	0.48
20:U:74:ARG:NH1	20:U:81:PHE:CB	2.76	0.48
23:X:6:ARG:HB3	23:X:15:ARG:NE	2.29	0.48
3:D:73:A:C2	3:D:74:C:C6	3.02	0.48
1:A:1003:G:N2	1:A:1004:A:O2'	2.47	0.48
1:A:1079:G:N3	1:A:1080:A:C2	2.82	0.48
1:A:1129:C:H5'	1:A:1130:A:P	2.51	0.48
1:A:1134:G:C6	1:A:1141:C:C4	3.01	0.48
1:A:1176:A:N7	1:A:1177:G:C6	2.81	0.48
1:A:1330:U:C4	1:A:1331:G:C5	3.02	0.48
1:A:1392:G:H8	1:A:1392:G:O5'	1.97	0.48
1:A:185:A:O2'	1:A:186:C:H5'	2.13	0.48
1:A:191(F):U:H3	22:W:105:SER:CB	2.27	0.48
1:A:198:G:C2	1:A:199:G:C4	3.02	0.48
1:A:236:G:C2'	1:A:237:C:C6	2.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:307:C:C5'	1:A:307:C:H6	2.27	0.48
1:A:329:A:C2	1:A:332:G:C4	3.02	0.48
1:A:383:A:C2'	1:A:384:G:C5'	2.82	0.48
1:A:543:C:N3	1:A:544:G:N7	2.61	0.48
1:A:571:U:O2	1:A:571:U:H2'	2.12	0.48
1:A:785:G:N2	1:A:798:G:C4	2.82	0.48
1:A:967:C:H2'	1:A:968:A:C8	2.48	0.48
1:A:988:G:N2	1:A:989:C:H1'	2.29	0.48
2:C:38:A:C2'	2:C:39:C:O5'	2.61	0.48
3:D:28:G:O6	3:D:43:A:C6	2.67	0.48
4:E:146:GLN:O	4:E:148:TYR:N	2.47	0.48
4:E:15:VAL:HG11	4:E:209:ARG:HB3	1.94	0.48
4:E:208:ILE:O	4:E:209:ARG:C	2.50	0.48
5:F:101:LEU:HD23	5:F:101:LEU:O	2.13	0.48
5:F:140:ARG:HA	5:F:143:GLU:OE1	2.14	0.48
5:F:142:MET:HG3	5:F:143:GLU:N	2.29	0.48
6:G:117:ALA:O	6:G:121:VAL:HG23	2.13	0.48
6:G:118:ARG:HG3	6:G:118:ARG:HH21	1.78	0.48
6:G:148:VAL:HG11	6:G:158:ILE:CG2	2.43	0.48
7:H:11:ILE:CG2	7:H:12:LEU:N	2.45	0.48
9:J:52:GLU:HB3	9:J:53:LYS:H	1.51	0.48
9:J:50:ILE:CD1	9:J:58:PRO:HA	2.36	0.48
1:A:643:C:O2'	10:K:132:GLU:OE1	2.19	0.48
10:K:132:GLU:O	10:K:133:LEU:C	2.52	0.48
1:A:755:G:O2'	10:K:1:MET:CE	2.62	0.48
10:K:28:ALA:O	10:K:29:SER:HB2	2.14	0.48
10:K:64:LYS:C	10:K:65:TYR:CG	2.87	0.48
11:L:104:ARG:O	11:L:105:ASP:HB2	2.13	0.48
11:L:47:LEU:O	11:L:48:GLU:C	2.52	0.48
11:L:85:LEU:HD11	11:L:92:TYR:CE1	2.49	0.48
12:M:23:ILE:CB	12:M:85:LEU:HD23	2.44	0.48
12:M:60:ARG:HH11	12:M:60:ARG:CB	2.26	0.48
15:P:20:THR:O	15:P:20:THR:CG2	2.61	0.48
15:P:37:THR:HB	15:P:59:TYR:CE2	2.45	0.48
15:P:91:ARG:HH12	15:P:103:THR:CG2	2.26	0.48
19:T:31:LEU:O	19:T:31:LEU:CD1	2.60	0.48
19:T:6:LEU:O	19:T:58:GLU:HA	2.13	0.48
20:U:54:ARG:O	20:U:54:ARG:HG3	2.13	0.48
20:U:63:GLN:N	20:U:66:LEU:HD21	2.28	0.48
23:X:21:TYR:O	23:X:22:ARG:CB	2.59	0.48
3:D:4:G:C2	3:D:5:A:C8	3.01	0.48
3:D:6:G:O2'	3:D:7:G:O5'	2.27	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1003:G:H2'	1:A:1004:A:H4'	1.96	0.48
1:A:1003:G:N2	1:A:1005:A:H5'	2.28	0.48
4:E:124:SER:HB2	4:E:125:PRO:HD2	1.96	0.48
1:A:1134:G:H2'	1:A:1135:U:H5'	1.94	0.48
1:A:1188:A:C5	1:A:1189:C:N4	2.82	0.48
1:A:1242:C:O2'	1:A:1303:C:C5'	2.59	0.48
1:A:1289:A:H2'	1:A:1290:G:H8	1.79	0.48
1:A:128:G:C6	1:A:129:U:C4	3.02	0.48
1:A:976:G:N3	1:A:1363:A:N6	2.61	0.48
1:A:925:G:N1	1:A:1392:G:C6	2.82	0.48
1:A:1505:G:C8	1:A:1505:G:O5'	2.67	0.48
1:A:1521:G:O2'	1:A:1522:U:C5'	2.62	0.48
1:A:292:G:N7	1:A:293:G:H1'	2.29	0.48
1:A:404:U:OP1	6:G:118:ARG:CZ	2.62	0.48
1:A:425:G:N2	1:A:426:G:H1'	2.29	0.48
1:A:437:U:H2'	1:A:438:G:O4'	2.14	0.48
1:A:451:A:N7	1:A:481:G:C2	2.82	0.48
1:A:589:C:H2'	1:A:590:C:C6	2.48	0.48
1:A:650:G:C2'	1:A:651:C:H5'	2.44	0.48
1:A:787:A:H2'	1:A:788:U:O5'	2.14	0.48
1:A:814:A:O2'	1:A:815:A:H5'	2.14	0.48
1:A:939:G:C2	1:A:940:C:N3	2.82	0.48
2:C:47:U:C2'	2:C:48:C:O5'	2.58	0.48
4:E:164:VAL:CG2	4:E:165:VAL:N	2.77	0.48
5:F:50:ALA:O	5:F:72:LYS:HD2	2.13	0.48
5:F:52:LEU:HG	5:F:53:ALA:H	1.79	0.48
6:G:111:ALA:HB2	6:G:120:LEU:HD21	1.96	0.48
6:G:152:SER:O	6:G:158:ILE:CG1	2.53	0.48
6:G:107:ARG:CD	6:G:174:LEU:HD11	2.38	0.48
6:G:58:LEU:HD13	6:G:58:LEU:C	2.34	0.48
7:H:141:GLN:O	7:H:142:LEU:CB	2.62	0.48
9:J:49:ILE:HD13	9:J:121:ALA:CB	2.36	0.48
9:J:5:ARG:CB	9:J:5:ARG:NH1	2.75	0.48
10:K:112:LEU:CB	10:K:133:LEU:HA	2.41	0.48
11:L:113:LYS:N	11:L:113:LYS:CD	2.77	0.48
11:L:26:VAL:O	11:L:32:ASP:HA	2.14	0.48
12:M:38:ILE:O	12:M:71:LEU:HB2	2.14	0.48
14:O:36:VAL:HB	14:O:82:VAL:HG22	1.96	0.48
15:P:19:LEU:C	15:P:25:ILE:HG21	2.34	0.48
15:P:39:ILE:CG2	15:P:55:ARG:NH2	2.77	0.48
16:Q:21:TYR:CE2	16:Q:23:ARG:HG2	2.48	0.48
17:R:36:ILE:HD12	17:R:63:ARG:HD3	1.94	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:8:ARG:HH12	18:S:11:SER:N	2.12	0.48
18:S:15:PRO:HD2	18:S:42:ARG:NE	2.28	0.48
20:U:87:ARG:O	20:U:88:LYS:OXT	2.32	0.48
21:V:14:HIS:HD2	21:V:35:SER:HB2	1.79	0.48
21:V:40:ILE:O	21:V:41:VAL:HG13	2.14	0.48
23:X:18:TYR:HD2	23:X:23:PRO:O	1.97	0.48
5:F:60:ALA:HB2	12:M:92:THR:O	2.13	0.48
6:G:165:MET:HE3	6:G:166:LYS:HA	1.96	0.48
1:A:142:G:C2	1:A:143:A:C5	3.01	0.48
1:A:1015:A:C6	1:A:1016:A:C6	3.01	0.48
1:A:1049:U:O2'	1:A:1050:G:OP2	2.31	0.48
1:A:1157:A:C4	1:A:1181:G:N2	2.82	0.48
1:A:1182:G:C4'	1:A:1183:A:O5'	2.62	0.48
1:A:1184:G:N1	1:A:1185:G:O6	2.47	0.48
1:A:1287:A:C5	1:A:1288:A:C6	3.02	0.48
1:A:1321:C:N4	1:A:1322:C:H2'	2.28	0.48
1:A:1371:G:H2'	1:A:1372:U:C5'	2.44	0.48
1:A:1373:G:O3'	9:J:36:LYS:NZ	2.46	0.48
1:A:137:C:C2	1:A:227:G:N2	2.82	0.48
1:A:1433:A:N6	1:A:1434:A:C6	2.81	0.48
1:A:1498:U:O4	1:A:1540:U:C5'	2.62	0.48
1:A:1507:A:C2'	1:A:1508:G:C5'	2.90	0.48
1:A:1539:C:N3	1:A:1540:U:C4	2.82	0.48
1:A:186:C:HO2'	22:W:85:MET:CG	2.25	0.48
1:A:262:A:C2	1:A:263:A:C5	3.02	0.48
1:A:315:A:N3	1:A:315:A:H2'	2.29	0.48
1:A:352:C:H2'	1:A:352:C:O2	2.13	0.48
1:A:421:U:OP2	1:A:422:C:C5	2.67	0.48
1:A:432:A:N7	1:A:433:C:C5	2.81	0.48
1:A:580:U:H2'	1:A:581:G:C8	2.48	0.48
1:A:602:A:H2'	1:A:603:U:C6	2.48	0.48
1:A:611:A:N1	1:A:629:G:N2	2.61	0.48
1:A:664:G:OP1	20:U:64:ARG:NE	2.47	0.48
1:A:652:U:C2'	1:A:752:G:H22	2.18	0.48
1:A:848:C:H2'	1:A:849:C:O4'	2.14	0.48
1:A:863:U:O2	1:A:863:U:C2'	2.47	0.48
1:A:943:U:C2'	1:A:944:G:H5'	2.44	0.48
2:C:12:G:C2'	2:C:13:C:O5'	2.62	0.48
2:C:35:A:C2'	2:C:36:U:O5'	2.62	0.48
3:D:41:G:N1	3:D:42:C:C2	2.82	0.48
4:E:95:GLN:O	4:E:97:TRP:N	2.47	0.48
5:F:178:LEU:O	5:F:179:ARG:HB2	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:59:GLY:O	7:H:62:ALA:N	2.47	0.48
8:I:35:ALA:O	8:I:36:ARG:CB	2.58	0.48
9:J:20:ASP:O	9:J:23:VAL:HB	2.13	0.48
9:J:43:PHE:HD2	9:J:44:TYR:CE2	2.32	0.48
9:J:63:LYS:HE2	9:J:63:LYS:HA	1.96	0.48
10:K:112:LEU:HB2	10:K:133:LEU:HD23	1.95	0.48
10:K:36:LEU:HD12	10:K:48:TYR:CG	2.49	0.48
11:L:108:VAL:C	11:L:110:GLU:H	2.12	0.48
12:M:3:LYS:HG3	12:M:75:ILE:HG23	1.95	0.48
12:M:4:ILE:HD13	12:M:98:ILE:HG21	1.95	0.48
12:M:5:ARG:HA	12:M:73:ASP:OD1	2.14	0.48
13:N:99:GLN:CA	13:N:105:VAL:HG21	2.43	0.48
16:Q:40:CYS:HB2	16:Q:42:ILE:CG1	2.39	0.48
18:S:3:LYS:HA	18:S:4:ILE:HD13	1.95	0.48
19:T:25:ARG:HH21	19:T:40:LYS:CD	2.26	0.48
20:U:46:GLU:HG2	20:U:85:LEU:CD1	2.43	0.48
1:A:191:G:C5	22:W:105:SER:HB3	2.47	0.48
1:A:1053:G:O3'	1:A:1054:C:H4'	2.14	0.47
1:A:1055:A:N6	1:A:1206:G:N7	2.62	0.47
1:A:1180:A:OP1	11:L:102:LEU:CD1	2.61	0.47
1:A:1306:A:H1'	1:A:1332:A:N6	2.29	0.47
1:A:1480:G:C2	1:A:1481:U:H1'	2.48	0.47
1:A:17:U:H1'	1:A:1080:A:C2	2.49	0.47
1:A:47:C:C3'	1:A:48:C:H5''	2.37	0.47
1:A:20:U:O4'	1:A:572:A:C6	2.67	0.47
1:A:828:A:N1	1:A:859:A:C1'	2.77	0.47
1:A:16:A:N6	1:A:920:U:N3	2.61	0.47
1:A:95:G:H2'	1:A:96:G:O4'	2.13	0.47
1:A:962:C:C4	1:A:963:G:C5	3.01	0.47
2:C:60:U:C2'	2:C:60:U:O2	2.61	0.47
4:E:178:ARG:NE	4:E:196:LEU:HB2	2.22	0.47
4:E:84:GLU:CG	4:E:233:SER:HB3	2.43	0.47
5:F:23:TYR:CD1	12:M:11:PHE:HB2	2.49	0.47
5:F:76:VAL:O	5:F:83:ARG:CG	2.59	0.47
6:G:146:ILE:HD12	6:G:146:ILE:O	2.14	0.47
7:H:109:ILE:HD13	7:H:139:LEU:HD11	1.96	0.47
7:H:129:ILE:O	7:H:132:ALA:N	2.47	0.47
7:H:133:TYR:HD2	7:H:136:MET:HG3	1.79	0.47
7:H:20:GLN:O	7:H:23:GLY:O	2.32	0.47
7:H:82:VAL:HG13	7:H:82:VAL:O	2.14	0.47
10:K:100:ILE:HB	10:K:125:ARG:HH21	1.76	0.47
4:E:179:LYS:HG2	10:K:72:PRO:HB3	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:37:PHE:CA	11:L:40:LEU:HD12	2.40	0.47
13:N:64:ALA:O	13:N:65:ALA:C	2.51	0.47
13:N:85:ARG:CZ	13:N:111:ASP:OD2	2.62	0.47
14:O:104:VAL:O	14:O:106:ASP:N	2.47	0.47
14:O:35:GLY:C	14:O:82:VAL:HG13	2.34	0.47
14:O:53:ARG:CB	14:O:69:TYR:HE1	2.20	0.47
15:P:18:ALA:HB2	15:P:45:VAL:CG2	2.43	0.47
17:R:11:VAL:HA	17:R:14:GLU:OE2	2.14	0.47
17:R:53:HIS:NE2	17:R:57:LEU:HD21	2.29	0.47
18:S:8:ARG:HH12	18:S:11:SER:CA	2.26	0.47
18:S:54:GLU:CD	18:S:54:GLU:O	2.52	0.47
1:A:277:C:OP1	19:T:41:LYS:HD2	2.14	0.47
1:A:189:U:C4	19:T:72:ARG:NH2	2.80	0.47
20:U:30:ASP:OD1	20:U:32:ARG:HB2	2.14	0.47
20:U:59:SER:O	20:U:62:GLU:N	2.47	0.47
21:V:15:LEU:HD21	21:V:38:SER:CB	2.41	0.47
22:W:81:LYS:O	22:W:84:LEU:CB	2.62	0.47
22:W:87:LYS:O	22:W:90:GLN:N	2.47	0.47
3:D:9:A:N3	3:D:46:G:C1'	2.77	0.47
1:A:1171:G:C2'	1:A:1172:C:C6	2.97	0.47
13:N:114:VAL:HG22	13:N:115:PRO:N	2.30	0.47
1:A:1047:G:OP1	16:Q:4:LYS:CD	2.62	0.47
1:A:1067:A:O2'	1:A:1068:G:H8	1.96	0.47
1:A:1188:A:C4	1:A:1189:C:C5	3.02	0.47
1:A:1225:A:H4'	21:V:78:ARG:CD	2.34	0.47
1:A:1249:C:C1'	11:L:70:LYS:HZ3	2.27	0.47
1:A:1262:C:H2'	1:A:1263:C:C5	2.46	0.47
1:A:1267:C:N4	1:A:1268:A:C2	2.79	0.47
1:A:1269:A:C8	1:A:1270:C:C1'	2.85	0.47
1:A:1286:A:C8	1:A:1286:A:H3'	2.49	0.47
1:A:133:U:H5''	1:A:134:A:OP1	2.13	0.47
1:A:1372:U:C6	1:A:1373:G:N7	2.82	0.47
1:A:1396:A:O2'	1:A:1397:C:C5'	2.62	0.47
1:A:1443:G:O2'	1:A:1447:G:P	2.71	0.47
1:A:1447:G:N2	1:A:1460:A:H1'	2.29	0.47
1:A:1498:U:O2'	1:A:1499:A:O4'	2.32	0.47
1:A:198:G:N7	1:A:220:G:N2	2.62	0.47
1:A:22:G:H2'	1:A:23:C:H6	1.75	0.47
1:A:362:G:H4'	14:O:28:LYS:HZ1	1.79	0.47
1:A:61:G:N2	1:A:379:C:H5'	2.28	0.47
1:A:394:G:H2'	1:A:395:C:C6	2.50	0.47
1:A:465:A:N6	1:A:467:G:C2	2.82	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:482:A:C2	1:A:483:C:C6	3.02	0.47
1:A:562:C:C4	1:A:884:U:H5	2.32	0.47
1:A:814:A:N7	1:A:816:A:C5	2.82	0.47
1:A:864:A:H2	1:A:917:G:C2	2.31	0.47
1:A:926:G:C4	1:A:1505:G:N2	2.82	0.47
2:C:72:A:C2	2:C:73:A:C6	3.02	0.47
5:F:85:ARG:C	5:F:87:LEU:N	2.67	0.47
7:H:92:LYS:O	7:H:119:LEU:HG	2.14	0.47
7:H:76:ILE:HG21	7:H:142:LEU:CD1	2.40	0.47
10:K:63:LEU:CB	10:K:65:TYR:CZ	2.96	0.47
11:L:6:GLY:HA2	11:L:83:ARG:CB	2.40	0.47
12:M:33:GLN:O	12:M:34:VAL:CB	2.63	0.47
13:N:18:ARG:NH2	13:N:37:GLY:HA2	2.29	0.47
13:N:25:TYR:HE2	13:N:87:THR:HB	1.78	0.47
15:P:63:THR:HG22	15:P:64:TRP:N	2.29	0.47
15:P:92:HIS:CE1	15:P:110:ARG:HH22	2.30	0.47
16:Q:24:CYS:HB2	16:Q:40:CYS:CA	2.43	0.47
17:R:33:THR:O	17:R:36:ILE:N	2.47	0.47
17:R:62:GLN:O	17:R:66:LEU:CD2	2.60	0.47
17:R:63:ARG:HH12	17:R:87:ILE:HD11	1.74	0.47
18:S:40:ASP:HA	18:S:41:PRO:HD3	1.72	0.47
19:T:3:LYS:HB3	19:T:61:GLU:O	2.13	0.47
19:T:97:SER:O	19:T:98:LEU:CD2	2.57	0.47
1:A:735:C:C5'	20:U:71:LYS:HD3	2.44	0.47
1:A:1452:C:C4'	1:A:1453:G:N2	2.77	0.47
1:A:1111:A:O5'	1:A:1111:A:C8	2.67	0.47
1:A:1159:U:H5	1:A:1181:G:N7	2.08	0.47
1:A:1237:C:C4	1:A:1336:C:C6	2.99	0.47
1:A:1246:C:N3	1:A:1247:U:C5	2.82	0.47
1:A:1251:A:C2	1:A:1252:A:N1	2.81	0.47
1:A:1277:C:O2'	1:A:1279:A:C8	2.67	0.47
1:A:1286:A:H3'	1:A:1286:A:H8	1.78	0.47
1:A:1304:G:C2	1:A:1333:A:N6	2.83	0.47
1:A:1307:U:H2'	1:A:1308:U:O4'	2.14	0.47
1:A:945:G:C2	1:A:1337:G:N3	2.82	0.47
1:A:1399:C:O2	1:A:1401:G:C8	2.67	0.47
1:A:1438:G:C4	1:A:1439:C:C5	3.02	0.47
1:A:1459:C:OP1	22:W:27:LYS:CE	2.62	0.47
1:A:22:G:C2	1:A:23:C:C2	3.02	0.47
1:A:292:G:H3'	1:A:293:G:H8	1.79	0.47
1:A:364:A:C4	1:A:365:U:O4	2.67	0.47
1:A:413:G:C2'	1:A:414:A:OP2	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:486:U:C2'	1:A:487:A:O5'	2.63	0.47
1:A:564:C:O2'	10:K:91:ARG:NH2	2.47	0.47
1:A:55:A:H2'	1:A:56:U:H5'	1.96	0.47
1:A:66:G:O5'	1:A:66:G:H8	1.98	0.47
1:A:7:G:C8	1:A:298:A:H1'	2.49	0.47
1:A:833:U:C2	1:A:834:C:C5	3.02	0.47
1:A:976:G:C8	1:A:976:G:H3'	2.49	0.47
2:C:10:G:C5	2:C:26:G:N2	2.82	0.47
3:D:40:C:H2'	3:D:41:G:H5''	1.96	0.47
4:E:199:TYR:O	4:E:201:ILE:CD1	2.63	0.47
4:E:42:ILE:HD12	4:E:203:GLY:N	2.29	0.47
5:F:123:GLN:O	5:F:124:ILE:C	2.53	0.47
5:F:124:ILE:HD11	5:F:130:VAL:HG13	1.97	0.47
5:F:110:ASN:CG	5:F:144:SER:OG	2.52	0.47
7:H:145:LYS:O	7:H:148:VAL:HB	2.14	0.47
1:A:1080:A:P	7:H:14:ARG:NH2	2.87	0.47
9:J:20:ASP:OD1	9:J:23:VAL:HG23	2.14	0.47
9:J:79:ARG:HA	9:J:83:ALA:O	2.14	0.47
7:H:78:HIS:ND1	10:K:104:ARG:CD	2.77	0.47
1:A:969:A:C1'	12:M:55:LYS:HZ1	2.27	0.47
1:A:708:C:H4'	13:N:37:GLY:CA	2.43	0.47
13:N:43:SER:OG	13:N:44:SER:N	2.48	0.47
14:O:24:VAL:HG13	14:O:26:ALA:HB2	1.97	0.47
15:P:126:LYS:O	15:P:126:LYS:HD2	2.15	0.47
5:F:8:ILE:CG2	16:Q:50:LYS:O	2.61	0.47
18:S:3:LYS:HB2	18:S:65:GLN:O	2.14	0.47
18:S:58:TYR:O	18:S:61:SER:N	2.47	0.47
20:U:36:ASN:O	20:U:37:VAL:C	2.52	0.47
20:U:68:LYS:O	20:U:71:LYS:HB2	2.14	0.47
21:V:17:GLU:O	21:V:21:GLU:HG2	2.15	0.47
21:V:19:VAL:CG2	21:V:43:GLU:OE2	2.54	0.47
22:W:20:LEU:O	22:W:23:ARG:HB3	2.15	0.47
3:D:64:C:H2'	3:D:65:U:C5	2.49	0.47
3:D:71:G:C4	3:D:72:C:C5	3.02	0.47
1:A:1154:G:O2'	1:A:1155:G:H5'	2.15	0.47
1:A:116:A:H2'	1:A:117:G:H5'	1.96	0.47
1:A:1282:C:C2'	1:A:1282:C:O2	2.61	0.47
1:A:1284:C:C6	1:A:1285:A:C8	3.02	0.47
1:A:1395:C:H2'	1:A:1396:A:C8	2.48	0.47
1:A:1431:C:N4	1:A:1470:G:N1	2.61	0.47
1:A:1464:G:C6	1:A:1465:C:N4	2.82	0.47
1:A:148:G:C2	1:A:175:C:C4	3.01	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:148:G:O2'	1:A:149:A:H5'	2.15	0.47
1:A:925:G:O4'	1:A:1502:A:C8	2.66	0.47
1:A:149:A:N6	1:A:171:A:C5	2.77	0.47
1:A:383:A:H2'	1:A:384:G:C4'	2.43	0.47
1:A:424:G:C2	1:A:425:G:C8	3.02	0.47
1:A:453:A:N6	1:A:480:U:C2	2.82	0.47
1:A:549:C:H2'	1:A:550:G:O5'	2.14	0.47
1:A:595:G:H5'	1:A:596:C:OP1	2.13	0.47
1:A:622:A:C8	1:A:623:C:C5	3.03	0.47
1:A:822:C:H2'	1:A:823:G:O5'	2.14	0.47
1:A:891:U:C5	1:A:906:G:C2	2.95	0.47
1:A:92:G:H2'	1:A:93:U:C6	2.49	0.47
2:C:76:A:H3'	2:C:76:A:H8	1.76	0.47
4:E:216:SER:OG	4:E:233:SER:HB2	2.14	0.47
4:E:36:ARG:O	4:E:37:ASN:C	2.52	0.47
6:G:105:VAL:HG13	6:G:120:LEU:HD11	1.96	0.47
6:G:33:MET:N	6:G:33:MET:HE3	2.29	0.47
6:G:43:HIS:CB	6:G:46:LYS:HG3	2.44	0.47
9:J:94:ARG:NH1	9:J:98:SER:OG	2.47	0.47
10:K:83:ILE:HB	10:K:137:VAL:CG2	2.43	0.47
10:K:6:ILE:O	10:K:7:ALA:C	2.51	0.47
10:K:69:ARG:HH11	10:K:70:GLN:HB2	1.78	0.47
10:K:82:HIS:NE2	10:K:84:ARG:HB2	2.29	0.47
11:L:38:GLN:C	11:L:40:LEU:H	2.18	0.47
12:M:7:LYS:O	12:M:97:GLU:CG	2.63	0.47
13:N:65:ALA:CB	13:N:98:LEU:HD23	2.41	0.47
13:N:96:ARG:HA	13:N:99:GLN:OE1	2.14	0.47
16:Q:22:THR:HG22	16:Q:23:ARG:H	1.79	0.47
1:A:761:G:H4'	19:T:103:GLY:H	1.79	0.47
19:T:40:LYS:CB	19:T:40:LYS:HZ3	2.27	0.47
19:T:83:ASP:O	19:T:84:LEU:C	2.53	0.47
1:A:986:A:H4'	21:V:55:LYS:CE	2.43	0.47
22:W:20:LEU:O	22:W:24:LEU:HG	2.13	0.47
22:W:26:ASN:O	22:W:27:LYS:C	2.50	0.47
22:W:53:LEU:O	22:W:56:MET:HB2	2.13	0.47
22:W:88:VAL:O	22:W:92:LEU:HG	2.15	0.47
1:A:160:A:C2'	1:A:161:A:H5'	2.44	0.47
1:A:1044:A:H2'	1:A:1045:C:C5'	2.44	0.47
1:A:1095:U:H5'	1:A:1109:C:C2	2.46	0.47
1:A:1099:G:N7	1:A:1100:C:C4	2.83	0.47
1:A:1128:C:C6	1:A:1139:G:O6	2.67	0.47
1:A:1196:U:H3'	1:A:1196:U:C6	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1277:C:H2'	1:A:1279:A:H8	1.80	0.47
1:A:1390:U:C4	1:A:1391:U:O4	2.68	0.47
1:A:781:A:H4'	1:A:1522:U:HO2'	1.79	0.47
1:A:198:G:H2'	1:A:199:G:C5'	2.44	0.47
1:A:251:G:C2	1:A:266:G:C6	3.02	0.47
1:A:277:C:H5''	19:T:68:ARG:NH1	2.29	0.47
1:A:334:C:H2'	1:A:335:C:H6	1.79	0.47
1:A:363:A:N1	1:A:364:A:C4	2.83	0.47
1:A:537:G:O2'	1:A:538:G:H5'	2.14	0.47
1:A:597:G:C6	1:A:644:G:C6	3.02	0.47
1:A:788:U:C2	1:A:789:U:O2	2.67	0.47
1:A:836:G:C6	1:A:837:G:N7	2.83	0.47
1:A:960:U:C2'	1:A:960:U:O2	2.62	0.47
1:A:968:A:H5''	1:A:969:A:O5'	2.15	0.47
1:A:96:G:C5	1:A:97:U:C4	3.02	0.47
2:C:48:C:C4	2:C:59:A:C4	3.02	0.47
2:C:5:G:C2	2:C:6:G:C8	3.03	0.47
4:E:80:ILE:CG1	4:E:212:GLN:HG2	2.41	0.47
6:G:105:VAL:HG11	6:G:121:VAL:HG23	1.96	0.47
6:G:150:GLU:C	6:G:152:SER:H	2.16	0.47
6:G:15:GLU:OE2	6:G:63:LYS:HB3	2.15	0.47
8:I:75:LEU:O	8:I:79:LEU:HD23	2.14	0.47
8:I:96:PRO:N	20:U:32:ARG:HG3	2.29	0.47
9:J:50:ILE:HD13	9:J:58:PRO:CA	2.37	0.47
9:J:73:MET:CA	9:J:90:GLU:O	2.53	0.47
10:K:48:TYR:CD1	10:K:49:GLU:N	2.83	0.47
11:L:67:GLY:N	11:L:73:GLN:NE2	2.61	0.47
12:M:33:GLN:O	12:M:34:VAL:HB	2.14	0.47
13:N:47:VAL:C	13:N:49:GLY:H	2.18	0.47
13:N:17:GLY:HA3	13:N:77:MET:CE	2.45	0.47
14:O:83:VAL:CA	14:O:105:TYR:HD1	2.27	0.47
1:A:551:U:C5'	14:O:119:LYS:HZ1	2.28	0.47
1:A:760:G:C2'	19:T:103:GLY:HA3	2.45	0.47
19:T:45:HIS:CE1	19:T:47:PRO:N	2.82	0.47
19:T:81:ARG:O	19:T:84:LEU:CD1	2.62	0.47
20:U:69:THR:O	20:U:71:LYS:N	2.47	0.47
21:V:40:ILE:CB	21:V:67:VAL:O	2.45	0.47
3:D:64:C:N3	3:D:65:U:C5	2.81	0.47
1:A:1167:A:OP1	1:A:1167:A:C8	2.67	0.47
1:A:216:G:C2	1:A:217:C:C4	3.02	0.47
1:A:1045:C:H6	1:A:1045:C:O5'	1.98	0.47
1:A:1049:U:C2	1:A:1201:A:HI'	2.50	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1118:C:H1'	1:A:1179:A:C4	2.49	0.47
1:A:1213:A:C2	1:A:1215:G:C4	3.02	0.47
1:A:129(A):G:C8	1:A:129(A):G:H3'	2.50	0.47
1:A:1504:G:O2'	1:A:1505:G:OP2	2.22	0.47
1:A:186(B):C:H2'	1:A:186(C):G:C5'	2.44	0.47
1:A:129(A):G:C2'	1:A:189:U:C6	2.87	0.47
1:A:193:C:H2'	1:A:194:C:C5	2.50	0.47
1:A:19:C:C2	1:A:20:U:C5	3.02	0.47
1:A:246:A:H4'	1:A:247:G:H4'	1.96	0.47
1:A:263:A:C3'	1:A:264:U:H5''	2.43	0.47
1:A:37:U:OP2	14:O:123:LYS:NZ	2.41	0.47
1:A:46:G:C2	1:A:396:G:C6	3.02	0.47
1:A:507:C:H3'	1:A:508:C:C6	2.49	0.47
1:A:516:U:C5	1:A:517:G:O6	2.67	0.47
1:A:665:A:O2'	1:A:666:G:H5''	2.15	0.47
1:A:776:G:C5'	1:A:777:A:OP1	2.61	0.47
1:A:780:A:H2	1:A:803:G:N1	2.13	0.47
1:A:816:A:C2'	1:A:817:C:OP2	2.63	0.47
1:A:82:U:C6	1:A:85:U:OP2	2.67	0.47
1:A:946:A:N3	1:A:947:G:N7	2.62	0.47
1:A:961:U:O4	1:A:974:A:C6	2.67	0.47
1:A:978:A:C3'	1:A:978:A:C8	2.96	0.47
3:D:38:A:H2'	3:D:39:U:H5'	1.96	0.47
4:E:201:ILE:N	4:E:201:ILE:CD1	2.77	0.47
4:E:18:GLY:CA	4:E:41:ILE:HG23	2.43	0.47
4:E:60:ASP:CB	4:E:64:ARG:NH2	2.78	0.47
4:E:60:ASP:C	4:E:64:ARG:CZ	2.83	0.47
4:E:82:ARG:N	4:E:94:ASN:HD21	2.11	0.47
5:F:120:VAL:CG2	5:F:137:ALA:CB	2.89	0.47
5:F:64:VAL:HB	5:F:99:VAL:CG1	2.44	0.47
6:G:101:LEU:CB	6:G:138:TYR:O	2.62	0.47
6:G:197:PRO:O	6:G:198:VAL:HG13	2.15	0.47
6:G:3:ARG:NH2	6:G:74:GLN:CD	2.68	0.47
6:G:94:LEU:HD23	6:G:97:LEU:HD11	1.97	0.47
7:H:48:ALA:CB	7:H:54:ALA:N	2.74	0.47
7:H:59:GLY:HA3	7:H:63:ARG:HH21	1.77	0.47
7:H:76:ILE:HD13	7:H:142:LEU:HB2	1.96	0.47
8:I:78:GLU:O	8:I:81:ILE:CD1	2.60	0.47
8:I:79:LEU:O	8:I:80:ARG:C	2.53	0.47
10:K:51:VAL:HG23	10:K:60:ARG:HB3	1.95	0.47
10:K:83:ILE:HG13	10:K:135:CYS:SG	2.54	0.47
11:L:122:ALA:O	11:L:123:PRO:C	2.53	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:O:110:VAL:CB	14:O:113:ARG:HG3	2.44	0.47
14:O:26:ALA:C	14:O:27:LEU:O	2.49	0.47
15:P:66:LEU:O	15:P:70:LEU:CB	2.62	0.47
16:Q:52:GLN:O	16:Q:53:LEU:HD23	2.14	0.47
17:R:33:THR:O	17:R:36:ILE:CB	2.62	0.47
20:U:62:GLU:O	20:U:63:GLN:C	2.53	0.47
21:V:48:THR:HA	21:V:60:VAL:O	2.14	0.47
22:W:80:ARG:O	22:W:84:LEU:HB2	2.14	0.47
22:W:44:ALA:CB	22:W:91:LEU:HD12	2.41	0.47
22:W:89:ARG:O	22:W:92:LEU:N	2.46	0.47
1:A:1002:G:N3	1:A:1002:G:C2'	2.73	0.47
1:A:1028:C:C4	1:A:1028(A):C:C4	3.03	0.47
4:E:125:PRO:O	4:E:127:ILE:N	2.48	0.47
6:G:165:MET:SD	6:G:165:MET:O	2.73	0.47
1:A:1081:G:OP1	7:H:18:ARG:HB2	2.15	0.47
1:A:1129:C:OP2	1:A:1129:C:H6	1.98	0.47
1:A:1145:C:O2'	1:A:1146:A:O5'	2.33	0.47
1:A:1152:A:C2	1:A:1153:C:C6	3.02	0.47
1:A:1159:U:C4	1:A:1182:G:N3	2.82	0.47
1:A:1206:G:H5'	5:F:194:GLY:CA	2.38	0.47
1:A:128:G:C5	1:A:129:U:C5	3.02	0.47
1:A:1299:A:C8	1:A:1301:U:C1'	2.98	0.47
1:A:1321:C:N3	21:V:37:ARG:CZ	2.76	0.47
1:A:195:A:H1'	1:A:223:U:H5'	1.95	0.47
1:A:247:G:C2'	1:A:248:C:O5'	2.63	0.47
1:A:301:G:H21	1:A:302:G:C1'	2.12	0.47
1:A:327:A:C4'	1:A:328:C:OP1	2.51	0.47
1:A:467:G:N2	1:A:468:A:C4	2.82	0.47
1:A:474:G:OP2	18:S:75:ARG:NH1	2.47	0.47
1:A:545:C:OP2	6:G:62:GLN:OE1	2.33	0.47
1:A:560:U:O4'	1:A:566:G:N2	2.48	0.47
1:A:696:A:C2'	1:A:697:U:H5'	2.44	0.47
1:A:716:A:H1'	13:N:118:GLY:HA2	1.97	0.47
1:A:743:U:H2'	1:A:744:C:H6	1.79	0.47
1:A:582:U:H3	1:A:759:A:H62	1.62	0.47
1:A:82:U:C2'	1:A:85:U:H5	2.23	0.47
1:A:894:G:C6	1:A:895:G:C5	3.03	0.47
1:A:897:C:C2	1:A:903:G:N2	2.82	0.47
1:A:953:G:C5	1:A:954:G:C5	3.03	0.47
1:A:992:U:H6	1:A:992:U:O5'	1.98	0.47
1:A:996:A:C2	1:A:997:U:C6	3.03	0.47
2:C:32:C:H6	2:C:32:C:O5'	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:49:G:C2'	2:C:50:U:O5'	2.62	0.47
4:E:170:GLU:OE2	4:E:173:ALA:N	2.47	0.47
5:F:88:ARG:NH2	5:F:101:LEU:H	2.12	0.47
5:F:114:PRO:O	5:F:117:ALA:HB3	2.14	0.47
6:G:113:SER:HB3	6:G:116:GLN:CG	2.36	0.47
6:G:58:LEU:HA	6:G:206:PHE:CE1	2.49	0.47
7:H:57:LYS:HG2	7:H:61:TYR:CE2	2.42	0.47
7:H:65:ASN:ND2	7:H:65:ASN:O	2.48	0.47
9:J:15:ASP:CG	9:J:23:VAL:HG11	2.34	0.47
9:J:80:VAL:HG12	9:J:81:GLY:N	2.30	0.47
10:K:26:VAL:HG13	10:K:27:PRO:CD	2.45	0.47
10:K:32:LYS:HG2	10:K:33:GLU:H	1.73	0.47
10:K:40:ALA:HA	10:K:45:ILE:HG23	1.95	0.47
11:L:116:LYS:HB2	11:L:121:ARG:C	2.34	0.47
11:L:49:PRO:HD3	11:L:78:LYS:HG2	1.96	0.47
12:M:5:ARG:HG2	12:M:5:ARG:HH11	1.80	0.47
12:M:82:ILE:HG23	12:M:86:MET:SD	2.54	0.47
12:M:9:ARG:O	12:M:94:VAL:CG1	2.62	0.47
13:N:18:ARG:HD3	13:N:18:ARG:N	2.30	0.47
13:N:57:THR:OG1	13:N:59:TYR:CB	2.60	0.47
13:N:62:GLN:O	13:N:66:LEU:HG	2.15	0.47
13:N:76:GLY:O	13:N:77:MET:HG2	2.14	0.47
14:O:119:LYS:HE3	14:O:119:LYS:HB2	1.69	0.47
15:P:97:PRO:C	15:P:99:ARG:H	2.18	0.47
16:Q:23:ARG:HH11	16:Q:28:GLY:C	2.18	0.47
16:Q:53:LEU:HA	16:Q:54:PRO:HD2	1.65	0.47
18:S:52:ASP:OD2	18:S:54:GLU:N	2.47	0.47
18:S:75:ARG:NH1	18:S:75:ARG:HG3	2.29	0.47
1:A:760:G:N3	19:T:103:GLY:O	2.48	0.47
19:T:60:ILE:O	19:T:60:ILE:HD13	2.15	0.47
20:U:31:LEU:CD2	20:U:65:ILE:HG13	2.44	0.47
20:U:23:LYS:HD2	20:U:58:LEU:HD23	1.97	0.47
20:U:83:GLU:HA	20:U:83:GLU:OE1	2.14	0.47
21:V:47:HIS:H	21:V:62:ILE:HG22	1.80	0.47
22:W:40:ALA:O	22:W:41:ILE:C	2.52	0.47
1:A:1089:G:H2'	1:A:1090:U:H5'	1.95	0.47
1:A:1233:G:N2	1:A:1234:C:C2	2.83	0.47
1:A:1276:G:O2'	1:A:1277:C:H5'	2.15	0.47
1:A:1435:G:H2'	1:A:1436:U:C6	2.50	0.47
1:A:1440:C:H2'	1:A:1441:G:O4'	2.15	0.47
1:A:1446:A:O2'	1:A:1447:G:O5'	2.32	0.47
1:A:1401:G:C6	1:A:1504:G:N2	2.82	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1511:G:C8	1:A:1512:U:C5	3.02	0.47
1:A:1528:U:C1'	1:A:1529:G:H21	2.28	0.47
1:A:281:G:O2'	1:A:282:A:O4'	2.33	0.47
1:A:390:C:C2	1:A:391:G:N7	2.83	0.47
1:A:451:A:H2	1:A:480:U:C5	2.33	0.47
1:A:568:G:C4	1:A:569:C:C5	3.03	0.47
1:A:59:A:H4'	1:A:388:G:O5'	2.15	0.47
1:A:686:U:O4	1:A:703:G:O2'	2.25	0.47
1:A:68:G:C6	1:A:102:G:N1	2.83	0.47
1:A:760:G:H2'	19:T:103:GLY:O	2.15	0.47
1:A:812:C:O4'	1:A:813:U:C5	2.68	0.47
1:A:878:G:P	10:K:88:LYS:CD	3.03	0.47
1:A:87:A:C2'	1:A:88:C:H5'	2.44	0.47
1:A:907:A:N3	1:A:908:A:C8	2.83	0.47
1:A:910:C:O2'	1:A:911:U:H5'	2.15	0.47
1:A:995:C:H6	1:A:995:C:OP2	1.96	0.47
2:C:27:U:C2	2:C:28:C:C5	3.03	0.47
3:D:29:C:C2'	3:D:30:G:O5'	2.63	0.47
4:E:133:LYS:HA	4:E:133:LYS:HE2	1.96	0.47
4:E:145:LEU:O	4:E:149:LEU:HB3	2.13	0.47
4:E:167:PRO:CG	4:E:168:THR:H	2.23	0.47
4:E:92:TYR:CD2	4:E:92:TYR:C	2.88	0.47
6:G:102:ASP:HB3	6:G:136:PRO:O	2.15	0.47
6:G:146:ILE:CD1	6:G:146:ILE:O	2.63	0.47
6:G:34:GLU:OE1	6:G:35:ARG:N	2.37	0.47
6:G:78:LEU:HD13	6:G:93:PHE:CE2	2.50	0.47
1:A:9:G:C5'	7:H:126:ARG:HD3	2.42	0.47
7:H:69:VAL:HG22	7:H:139:LEU:HD22	1.96	0.47
7:H:78:HIS:HB3	10:K:107:LEU:CD2	2.42	0.47
7:H:91:LEU:HG	7:H:92:LYS:N	2.29	0.47
8:I:12:PRO:CG	8:I:13:ASN:H	2.27	0.47
8:I:22:GLU:O	8:I:25:ILE:HB	2.15	0.47
9:J:102:ARG:HE	9:J:102:ARG:HB2	1.30	0.47
9:J:14:PRO:HB3	9:J:20:ASP:N	2.29	0.47
9:J:26:PHE:CZ	9:J:30:ILE:HG12	2.50	0.47
9:J:31:MET:SD	9:J:36:LYS:NZ	2.88	0.47
10:K:10:LEU:HD11	10:K:85:ARG:CG	2.45	0.47
10:K:122:ARG:HD2	10:K:123:GLU:H	1.78	0.47
11:L:28:VAL:C	11:L:30:GLY:N	2.66	0.47
11:L:2:GLU:O	11:L:3:GLN:HB2	2.14	0.47
11:L:15:ALA:HB2	11:L:76:ALA:HB3	1.95	0.47
11:L:15:ALA:HB3	11:L:77:ILE:N	2.28	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:70:ARG:HA	12:M:70:ARG:HD3	1.48	0.47
14:O:48:PRO:CG	14:O:49:ASN:H	2.26	0.47
14:O:90:VAL:HB	14:O:93:LEU:HG	1.96	0.47
1:A:1228:C:O3'	15:P:116:THR:HG22	2.14	0.47
17:R:57:LEU:O	17:R:60:VAL:N	2.48	0.47
22:W:57:ARG:O	22:W:60:GLU:N	2.48	0.47
3:D:73:A:N3	3:D:74:C:H5''	2.28	0.47
1:A:1002:G:C6	1:A:1003:G:O6	2.68	0.47
1:A:1170:A:H3'	1:A:1170:A:H8	1.77	0.47
1:A:1170:A:H3'	1:A:1170:A:C8	2.49	0.47
4:E:231:GLU:HB2	4:E:232:PRO:HD2	1.95	0.47
7:H:8:GLU:O	7:H:8:GLU:OE2	2.32	0.47
15:P:94:ARG:HD3	15:P:94:ARG:HA	1.52	0.47
1:A:1226:C:H4'	1:A:1227:A:OP1	2.14	0.47
1:A:1338:G:C2	1:A:1339:A:C4	3.03	0.47
1:A:1526:G:O2'	1:A:1527:C:H5'	2.15	0.47
1:A:166:G:C2'	1:A:167:G:O5'	2.63	0.47
1:A:276:G:H2'	1:A:277:C:H5'	1.96	0.47
1:A:37:U:O2	1:A:548:G:N2	2.48	0.47
1:A:389:A:N3	1:A:390:C:H5'	2.30	0.47
1:A:411:A:C4	1:A:413:G:H1'	2.50	0.47
1:A:437:U:HO2'	1:A:438:G:H5'	1.79	0.47
1:A:484:G:H8	1:A:486:U:C2	2.30	0.47
1:A:506:G:C5	1:A:507:C:C4	3.02	0.47
1:A:574:A:C3'	1:A:575:G:H5''	2.45	0.47
1:A:671:G:C2	1:A:672:U:C2	3.03	0.47
1:A:579:G:C5'	1:A:728:A:H1'	2.44	0.47
1:A:859:A:H2'	1:A:860:A:O5'	2.15	0.47
1:A:86:U:H2'	1:A:87:A:H5'	1.96	0.47
2:C:14:A:H2'	2:C:15:G:C8	2.50	0.47
2:C:29:G:O2'	2:C:30:G:H5'	2.13	0.47
3:D:32:C:C5	3:D:33:U:C5	3.03	0.47
4:E:100:GLY:O	4:E:103:THR:O	2.32	0.47
4:E:167:PRO:HD2	4:E:188:ALA:HA	1.96	0.47
4:E:187:LEU:HD22	4:E:188:ALA:N	2.30	0.47
4:E:25:ASN:HD21	4:E:27:LYS:H	1.62	0.47
5:F:117:ALA:O	5:F:118:GLN:C	2.53	0.47
5:F:142:MET:HB3	5:F:170:GLN:NE2	2.30	0.47
5:F:8:ILE:HG13	5:F:16:ARG:HG2	1.96	0.47
1:A:1205:U:C4'	5:F:195:VAL:HG13	2.28	0.47
5:F:39:ILE:HD12	5:F:57:ILE:HG21	1.96	0.47
1:A:407:G:H4'	6:G:115:ARG:HB3	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:4:TYR:N	8:I:4:TYR:HD2	2.12	0.47
1:A:939:G:H5'	9:J:102:ARG:HH22	1.80	0.47
9:J:148:ASN:HB3	9:J:151:TYR:HD1	1.80	0.47
9:J:90:GLU:O	9:J:91:VAL:CB	2.62	0.47
11:L:69:GLY:O	11:L:70:LYS:C	2.53	0.47
11:L:9:ARG:HD2	11:L:14:VAL:CG1	2.45	0.47
5:F:23:TYR:CD1	12:M:11:PHE:N	2.83	0.47
12:M:81:THR:HG22	12:M:85:LEU:HD11	1.97	0.47
14:O:110:VAL:O	14:O:113:ARG:HB2	2.14	0.47
17:R:43:LEU:HD12	17:R:56:LEU:HD23	1.96	0.47
1:A:468:A:O4'	18:S:82:GLN:CD	2.53	0.47
19:T:22:LEU:CD1	19:T:39:SER:OG	2.62	0.47
19:T:40:LYS:NZ	19:T:42:TYR:CE1	2.73	0.47
19:T:76:LEU:HD23	19:T:78:GLU:N	2.29	0.47
22:W:38:LYS:HA	22:W:41:ILE:HD12	1.97	0.47
6:G:165:MET:HE3	6:G:166:LYS:CA	2.45	0.47
7:H:36:ASP:OD1	7:H:38:GLN:HB2	2.14	0.47
1:A:1044:A:H2'	1:A:1045:C:H5'	1.96	0.47
1:A:1048:G:C4'	1:A:1215:G:H4'	2.45	0.47
1:A:1129:C:C4	1:A:1139:G:O6	2.67	0.47
1:A:1132:C:H2'	1:A:1133:G:O4'	2.14	0.47
1:A:1124:G:C6	1:A:1147:C:N4	2.82	0.47
1:A:1251:A:H2'	1:A:1252:A:N7	2.27	0.47
1:A:1259:C:O2'	1:A:1283:G:N2	2.48	0.47
1:A:1403:C:C1'	1:A:1500:A:C2	2.98	0.47
1:A:247:G:C6	1:A:248:C:C5	3.03	0.47
1:A:254:G:H4'	19:T:18:THR:HG21	1.96	0.47
1:A:262:A:C6	1:A:263:A:N6	2.83	0.47
1:A:275:G:H5'	19:T:14:LYS:HG2	1.97	0.47
1:A:246:A:O4'	1:A:282:A:N6	2.48	0.47
1:A:298:A:H3'	1:A:299:G:C8	2.50	0.47
1:A:33:A:C2	14:O:32:PHE:HZ	2.32	0.47
1:A:458:C:H6	1:A:458:C:O5'	1.97	0.47
1:A:477:G:C2	1:A:478:A:C4	3.02	0.47
1:A:57:G:H2'	1:A:58:C:C6	2.50	0.47
1:A:591:U:OP2	1:A:591:U:H6	1.98	0.47
1:A:675:A:C3'	1:A:676:A:H8	2.27	0.47
1:A:798:G:C6	1:A:799:G:C8	3.03	0.47
1:A:88:C:O2'	1:A:89:U:C5'	2.63	0.47
2:C:33:U:O5'	2:C:33:U:C6	2.65	0.47
2:C:39:C:H2'	2:C:40:C:C6	2.50	0.47
4:E:212:GLN:OE1	4:E:216:SER:HB2	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:33:TYR:CB	4:E:42:ILE:O	2.63	0.47
5:F:134:ILE:CD1	5:F:134:ILE:H	2.28	0.47
5:F:116:VAL:HG21	5:F:141:VAL:HG21	1.97	0.47
1:A:1056:U:H5'	5:F:163:ALA:HB3	1.96	0.47
1:A:495:A:N6	6:G:123:HIS:HE1	2.13	0.47
6:G:27:TYR:CD2	6:G:27:TYR:C	2.89	0.47
7:H:105:VAL:HG12	7:H:106:PRO:N	2.29	0.47
7:H:115:VAL:O	7:H:116:THR:HB	2.15	0.47
1:A:7:G:N2	7:H:121:LYS:CB	2.78	0.47
7:H:82:VAL:HG13	7:H:134:ALA:HB1	1.97	0.47
8:I:76:ALA:C	8:I:79:LEU:HG	2.36	0.47
9:J:101:LEU:HD23	9:J:105:VAL:HG23	1.96	0.47
9:J:49:ILE:HG21	9:J:121:ALA:CB	2.45	0.47
9:J:121:ALA:O	9:J:125:MET:CG	2.61	0.47
10:K:109:ILE:CG1	10:K:109:ILE:O	2.61	0.47
10:K:39:LEU:O	10:K:43:GLY:O	2.32	0.47
10:K:65:TYR:CD1	10:K:65:TYR:N	2.83	0.47
11:L:16:ARG:CD	11:L:18:PHE:HE1	2.27	0.47
12:M:39:PRO:O	12:M:40:LEU:O	2.33	0.47
12:M:49:VAL:HG21	16:Q:41:ARG:HB2	1.95	0.47
14:O:76:ASN:O	14:O:77:LEU:HG	2.14	0.47
16:Q:15:LYS:O	16:Q:16:PHE:CB	2.62	0.47
17:R:42:HIS:O	17:R:43:LEU:C	2.53	0.47
18:S:67:THR:CG2	18:S:68:ASP:N	2.78	0.47
18:S:51:VAL:HG22	18:S:73:LEU:HD11	1.96	0.47
19:T:4:LYS:CD	19:T:5:VAL:N	2.70	0.47
19:T:97:SER:O	19:T:98:LEU:CD1	2.62	0.47
20:U:72:ARG:HA	20:U:75:ILE:HG13	1.96	0.47
22:W:17:ARG:O	22:W:20:LEU:HB2	2.14	0.47
1:A:1305:G:H5'	23:X:4:GLY:CA	2.43	0.47
3:D:63:G:H2'	3:D:64:C:C5	2.45	0.47
1:A:1003:G:C2	1:A:1004:A:H1'	2.49	0.47
1:A:1022:G:N2	1:A:1023:G:N3	2.63	0.47
4:E:125:PRO:O	4:E:126:GLU:C	2.53	0.47
1:A:109:A:C2	1:A:327:A:N1	2.83	0.47
1:A:963:G:H5'	1:A:1200:C:C4	2.50	0.47
1:A:1316:G:O6	21:V:6:LYS:NZ	2.48	0.47
1:A:1396:A:C4'	1:A:1397:C:H5''	2.39	0.47
1:A:1464:G:N3	1:A:1465:C:C5	2.83	0.47
1:A:1472:U:C6	1:A:1472:U:H3'	2.50	0.47
1:A:1521:G:O2'	1:A:1522:U:H5'	2.15	0.47
1:A:241:C:H2'	1:A:242:C:O5'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:307:C:C4	1:A:308:C:C5	2.99	0.47
1:A:329:A:N6	1:A:332:G:N2	2.63	0.47
1:A:350:G:N1	1:A:351:G:N1	2.62	0.47
1:A:556:C:C2'	1:A:557:G:H5'	2.45	0.47
1:A:559:A:O2'	1:A:560:U:OP2	2.30	0.47
1:A:299:G:N2	1:A:566:G:C6	2.83	0.47
1:A:568:G:C2	1:A:569:C:C5	3.03	0.47
1:A:624:C:H2'	1:A:625:G:H8	1.80	0.47
1:A:629:G:N3	1:A:630:G:C8	2.83	0.47
1:A:654:G:C2	1:A:753:A:C1'	2.94	0.47
1:A:789:U:C6	1:A:789:U:C3'	2.98	0.47
1:A:874:G:N2	1:A:875:C:C2	2.83	0.47
1:A:900:A:C5	1:A:901:A:N6	2.79	0.47
1:A:907:A:C4	1:A:908:A:N7	2.83	0.47
1:A:864:A:C2	1:A:917:G:N2	2.83	0.47
1:A:956:U:O2	1:A:960:U:O4	2.33	0.47
1:A:984:C:N4	1:A:1222:G:N2	2.63	0.47
2:C:13:C:H2'	2:C:14:A:O5'	2.14	0.47
2:C:48:C:N4	2:C:59:A:C5	2.83	0.47
4:E:84:GLU:HB3	4:E:215:LEU:CD1	2.45	0.47
5:F:17:ASP:O	5:F:18:TRP:C	2.53	0.47
6:G:127:THR:C	6:G:128:VAL:O	2.46	0.47
7:H:118:ILE:CG2	7:H:119:LEU:N	2.78	0.47
7:H:125:SER:C	7:H:127:ASN:H	2.18	0.47
7:H:144:THR:O	7:H:147:ASP:N	2.48	0.47
8:I:89:MET:HE3	20:U:75:ILE:CD1	2.36	0.47
8:I:89:MET:HG2	20:U:76:LEU:CD2	2.32	0.47
9:J:42:ILE:CG2	9:J:120:ILE:HD11	2.36	0.47
1:A:1373:G:OP1	11:L:42:ARG:CZ	2.63	0.47
13:N:85:ARG:HH21	13:N:111:ASP:CG	2.18	0.47
13:N:88:GLY:N	13:N:91:ARG:HB2	2.29	0.47
15:P:34:LEU:CD2	15:P:41:PRO:HA	2.45	0.47
15:P:90:LEU:O	15:P:93:ARG:CB	2.62	0.47
1:A:1202:G:N3	16:Q:42:ILE:CD1	2.77	0.47
1:A:667:G:O2'	17:R:49:ASP:HA	2.14	0.47
18:S:54:GLU:HA	18:S:54:GLU:OE1	2.15	0.47
19:T:87:LYS:O	19:T:91:ARG:HB3	2.15	0.47
20:U:27:GLY:O	20:U:28:GLU:C	2.54	0.47
22:W:43:LEU:HD12	22:W:55:ILE:CD1	2.13	0.47
3:D:18:G:H21	3:D:58:A:C5'	2.27	0.47
1:A:164:U:O2'	1:A:165:C:C6	2.58	0.47
4:E:134:GLU:OE1	4:E:134:GLU:HA	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:123:ALA:O	4:E:124:SER:O	2.33	0.47
1:A:1030:C:H2'	1:A:1031:G:C8	2.49	0.47
15:P:71:ARG:O	15:P:72:ALA:C	2.52	0.47
1:A:102:G:H2'	1:A:103:C:O4'	2.15	0.46
1:A:1043:C:C4	1:A:1044:A:C8	3.03	0.46
1:A:1043:C:O2'	1:A:1044:A:H5'	2.15	0.46
1:A:1068:G:N7	1:A:1094:G:N7	2.62	0.46
1:A:1075:C:C2'	1:A:1075:C:O2	2.60	0.46
1:A:115:G:H1'	1:A:116:A:N7	2.30	0.46
1:A:1284:C:C2	1:A:1285:A:N7	2.83	0.46
1:A:1301:U:N3	1:A:1303:C:H1'	2.29	0.46
1:A:1319:A:OP1	21:V:70:LYS:CE	2.64	0.46
1:A:1323:G:N3	1:A:1324:A:N7	2.63	0.46
1:A:1424:C:H2'	1:A:1425:U:O5'	2.15	0.46
1:A:1455:G:OP1	22:W:32:ALA:HA	2.15	0.46
1:A:1506:U:C5'	1:A:1507:A:OP2	2.54	0.46
1:A:194:C:O2'	1:A:195:A:H4'	2.14	0.46
1:A:220:G:C6	1:A:221:C:C5	3.04	0.46
1:A:233:C:C2'	1:A:234:C:H5'	2.44	0.46
1:A:253:U:H5'	1:A:276:G:H1'	1.97	0.46
1:A:130:A:C2	1:A:264:U:O4'	2.67	0.46
1:A:275:G:C4	1:A:276:G:C8	3.03	0.46
1:A:278:G:C6	19:T:95:TYR:HD2	2.31	0.46
1:A:33:A:C6	1:A:34:C:C4	3.03	0.46
1:A:557:G:C6	1:A:558:G:N1	2.83	0.46
1:A:578:C:H2'	1:A:728:A:N3	2.29	0.46
1:A:675:A:H3'	1:A:676:A:H8	1.80	0.46
1:A:909:A:O5'	1:A:909:A:C8	2.68	0.46
1:A:90:C:C2	1:A:91:C:C5	3.04	0.46
1:A:921:U:C2	1:A:922:G:C8	3.04	0.46
1:A:977:A:C6	1:A:1224:G:OP1	2.68	0.46
1:A:983:A:H2	1:A:984:C:C6	2.24	0.46
3:D:37:A:O2'	3:D:38:A:H5'	2.15	0.46
4:E:97:TRP:CZ2	4:E:176:GLU:OE1	2.67	0.46
4:E:28:PHE:HB3	4:E:32:ILE:HD13	1.96	0.46
4:E:61:LEU:CA	4:E:64:ARG:HH11	2.24	0.46
5:F:178:LEU:O	5:F:179:ARG:HB3	2.15	0.46
6:G:108:LEU:HD11	6:G:183:GLY:HA3	1.96	0.46
6:G:120:LEU:CD1	6:G:121:VAL:N	2.77	0.46
6:G:158:ILE:CG2	6:G:162:LEU:HD21	2.45	0.46
6:G:82:ALA:HB1	6:G:89:THR:O	2.15	0.46
6:G:94:LEU:CD1	6:G:200:GLU:OE1	2.63	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:60:PHE:N	8:I:60:PHE:CD1	2.83	0.46
9:J:61:VAL:O	9:J:128:ALA:HB2	2.15	0.46
9:J:20:ASP:CB	9:J:23:VAL:HG23	2.43	0.46
9:J:83:ALA:CB	9:J:85:TYR:HE2	2.28	0.46
7:H:80:ILE:CG2	10:K:104:ARG:NH2	2.78	0.46
12:M:45:ARG:HG2	12:M:65:LEU:O	2.14	0.46
12:M:78:ASN:O	12:M:80:LYS:N	2.48	0.46
13:N:27:ASN:H	13:N:56:GLY:CA	2.28	0.46
14:O:90:VAL:HG12	14:O:93:LEU:HD21	1.96	0.46
15:P:52:GLU:HA	15:P:55:ARG:HG3	1.96	0.46
15:P:80:ARG:NH1	15:P:81:LEU:N	2.63	0.46
16:Q:48:ALA:CA	16:Q:53:LEU:HD12	2.45	0.46
17:R:34:LEU:HD12	17:R:35:ARG:N	2.30	0.46
17:R:67:LEU:O	17:R:68:ARG:C	2.52	0.46
19:T:16:GLN:O	19:T:17:LYS:HB2	2.15	0.46
19:T:75:ARG:NH1	19:T:77:VAL:HG22	2.29	0.46
1:A:735:C:HO2'	20:U:75:ILE:HD13	1.79	0.46
21:V:45:VAL:HG13	21:V:64:GLU:HA	1.96	0.46
22:W:54:LYS:N	22:W:100:ILE:HD11	2.30	0.46
3:D:62:C:C2	3:D:63:G:C8	3.04	0.46
1:A:1005:A:OP2	1:A:1005:A:C8	2.68	0.46
1:A:1120:G:H2'	1:A:1121:U:O5'	2.14	0.46
1:A:1084:G:C4	1:A:1085:U:H5	2.33	0.46
1:A:10:A:C2	1:A:25:C:C2	3.03	0.46
1:A:1152:A:C2	1:A:1153:C:N1	2.83	0.46
1:A:1283:G:C2'	1:A:1284:C:H5'	2.45	0.46
1:A:146:G:C2'	1:A:147:G:H5'	2.45	0.46
1:A:328:C:O2'	1:A:329:A:OP2	2.33	0.46
1:A:388:G:C2'	1:A:389:A:OP2	2.63	0.46
1:A:411:A:C5	1:A:429:U:C4	3.02	0.46
1:A:445:G:H2'	1:A:446:G:O4'	2.15	0.46
1:A:478:A:C6	1:A:479:C:N4	2.84	0.46
1:A:495:A:C1'	1:A:496:A:C8	2.94	0.46
1:A:531:U:H5''	1:A:532:A:OP1	2.14	0.46
1:A:606:G:N2	1:A:631:G:C4	2.83	0.46
1:A:654:G:N2	1:A:753:A:H1'	2.30	0.46
1:A:862:C:H2'	1:A:863:U:C6	2.51	0.46
1:A:926:G:N1	1:A:1505:G:C6	2.83	0.46
4:E:156:LYS:HG2	4:E:156:LYS:O	2.15	0.46
4:E:168:THR:HG21	4:E:192:SER:CA	2.45	0.46
4:E:102:LEU:CB	4:E:176:GLU:HB3	2.44	0.46
4:E:65:GLY:O	4:E:66:GLY:C	2.53	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:44:GLU:HA	5:F:52:LEU:HD11	1.97	0.46
6:G:105:VAL:HG11	6:G:121:VAL:CG2	2.45	0.46
6:G:31:CYS:C	6:G:33:MET:HG2	2.36	0.46
6:G:52:SER:C	6:G:54:TYR:N	2.68	0.46
7:H:109:ILE:CG2	7:H:110:LEU:CD2	2.91	0.46
7:H:109:ILE:HG22	7:H:110:LEU:H	1.79	0.46
7:H:76:ILE:HG21	7:H:142:LEU:HB3	1.97	0.46
7:H:80:ILE:HD12	7:H:80:ILE:H	1.80	0.46
8:I:69:GLU:HB2	8:I:70:ASP:H	1.52	0.46
9:J:22:LEU:HD23	9:J:63:LYS:HZ3	1.78	0.46
9:J:70:LYS:HB3	9:J:96:GLN:CG	2.39	0.46
9:J:91:VAL:O	9:J:92:SER:O	2.33	0.46
9:J:99:LEU:O	9:J:100:ALA:C	2.52	0.46
11:L:112:LYS:HB2	11:L:117:HIS:O	2.15	0.46
11:L:2:GLU:C	11:L:21:PRO:HD2	2.34	0.46
12:M:54:PHE:O	12:M:55:LYS:C	2.54	0.46
12:M:63:PHE:N	12:M:63:PHE:CD1	2.82	0.46
13:N:92:GLU:O	13:N:95:ILE:N	2.48	0.46
15:P:92:HIS:N	15:P:98:VAL:HG21	2.31	0.46
21:V:44:MET:HA	21:V:47:HIS:HD2	1.80	0.46
22:W:49:ALA:O	22:W:52:ALA:HB3	2.16	0.46
3:D:24:G:C2	3:D:25:C:C6	3.03	0.46
5:F:157:ILE:CD1	5:F:164:ARG:HG2	2.44	0.46
14:O:109:GLY:O	14:O:111:LYS:HG3	2.14	0.46
6:G:165:MET:O	6:G:166:LYS:C	2.53	0.46
1:A:1066:C:C3'	1:A:1067:A:C8	2.99	0.46
1:A:1104:G:C2'	1:A:1105:A:H5'	2.45	0.46
1:A:1117:G:P	11:L:104:ARG:NH1	2.89	0.46
1:A:1124:G:C8	1:A:1145:C:H2'	2.50	0.46
1:A:1240:U:O2	9:J:32:ARG:HG2	2.16	0.46
1:A:1302:U:H3'	1:A:1303:C:H5'	1.92	0.46
1:A:1376:U:O2	1:A:1377:A:C5	2.68	0.46
1:A:1414:U:C2'	1:A:1415:G:H8	2.27	0.46
1:A:1416:G:H2'	1:A:1417:G:H8	1.79	0.46
1:A:1433:A:N1	1:A:1434:A:C2	2.84	0.46
1:A:1467:G:H5''	1:A:1467:G:H8	1.80	0.46
1:A:1484:C:C2'	1:A:1485:U:H5'	2.45	0.46
1:A:1510:U:C2	1:A:1526:G:N2	2.84	0.46
1:A:16:A:C2	1:A:17:U:O4'	2.68	0.46
1:A:196:A:O2'	1:A:222:U:C4'	2.64	0.46
1:A:321:A:H61	1:A:332:G:H1	1.63	0.46
1:A:572:A:OP1	1:A:573:A:OP1	2.33	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:761:G:N3	1:A:761:G:H2'	2.29	0.46
1:A:828:A:C2	1:A:859:A:O4'	2.66	0.46
1:A:862:C:N3	1:A:863:U:H5	2.13	0.46
1:A:889:A:C8	1:A:889:A:OP1	2.68	0.46
1:A:901:A:H2'	1:A:902:G:O4'	2.15	0.46
1:A:954:G:N7	1:A:955:U:C5	2.84	0.46
2:C:31:G:C5'	11:L:127:LYS:HG3	2.45	0.46
3:D:35:A:C2'	3:D:36:A:O5'	2.63	0.46
5:F:195:VAL:C	5:F:196:LEU:HD23	2.35	0.46
5:F:20:SER:CA	5:F:40:ARG:HH22	2.28	0.46
6:G:190:ASP:N	6:G:193:ASP:OD2	2.49	0.46
6:G:57:ARG:CD	6:G:202:LEU:HD23	2.44	0.46
6:G:29:PRO:O	6:G:30:LYS:CG	2.57	0.46
6:G:21:LEU:HD13	6:G:67:ILE:HG22	1.98	0.46
6:G:67:ILE:HD13	6:G:68:TYR:CD1	2.50	0.46
7:H:52:PRO:O	7:H:55:VAL:CA	2.63	0.46
8:I:13:ASN:N	8:I:13:ASN:ND2	2.51	0.46
8:I:31:GLU:N	8:I:35:ALA:CB	2.78	0.46
8:I:42:GLU:HB2	8:I:61:LEU:CD2	2.41	0.46
8:I:39:LYS:HG3	8:I:64:GLN:HE21	1.79	0.46
10:K:104:ARG:HD3	10:K:107:LEU:HD11	1.97	0.46
10:K:48:TYR:CD1	10:K:48:TYR:C	2.88	0.46
11:L:23:ASN:H	11:L:60:ASP:N	2.13	0.46
12:M:95:GLU:HG2	12:M:97:GLU:OE2	2.15	0.46
13:N:79:SER:C	13:N:104:GLN:HE21	2.18	0.46
5:F:22:TRP:CE2	16:Q:54:PRO:HG3	2.50	0.46
17:R:36:ILE:HD11	17:R:59:MET:SD	2.54	0.46
17:R:77:ARG:C	17:R:77:ARG:NH1	2.68	0.46
18:S:4:ILE:CD1	18:S:64:ALA:HB1	2.44	0.46
19:T:18:THR:HG23	19:T:43:LEU:HD11	1.96	0.46
1:A:237:C:C5'	19:T:25:ARG:NH2	2.78	0.46
20:U:51:LEU:HA	20:U:52:PRO:HD2	1.65	0.46
21:V:30:LEU:HD23	21:V:30:LEU:C	2.36	0.46
22:W:102:GLY:C	22:W:104:LEU:N	2.68	0.46
22:W:50:GLU:O	22:W:53:LEU:HG	2.14	0.46
22:W:66:ALA:HB1	22:W:71:THR:HB	1.98	0.46
23:X:14:TRP:CZ3	23:X:15:ARG:NE	2.81	0.46
3:D:54:U:H3'	3:D:55:U:H6	1.80	0.46
14:O:21:LYS:O	14:O:22:SER:O	2.32	0.46
1:A:1113:C:C6	1:A:1113:C:OP2	2.68	0.46
1:A:1115:C:N4	1:A:1116:C:N4	2.63	0.46
1:A:1148:U:H2'	1:A:1149:C:C6	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1150:U:H2'	1:A:1151:A:C8	2.50	0.46
1:A:1213:A:C4	1:A:1215:G:C5	3.04	0.46
1:A:1215:G:C2	1:A:1216:G:N7	2.84	0.46
1:A:1253:G:C2	1:A:1285:A:N6	2.83	0.46
1:A:1288:A:C2	1:A:1289:A:N7	2.84	0.46
1:A:1306:A:C6	1:A:1307:U:C2	3.03	0.46
1:A:130:A:C8	1:A:130:A:OP1	2.68	0.46
1:A:1329:A:C6	1:A:1330:U:C5	3.04	0.46
1:A:1331:G:C2'	1:A:1332:A:OP2	2.64	0.46
1:A:1415:G:H2'	1:A:1416:G:C5'	2.45	0.46
1:A:1499:A:OP1	1:A:1505:G:OP2	2.34	0.46
1:A:225:C:C2'	1:A:226:G:C5'	2.92	0.46
1:A:128:G:N2	1:A:234:C:N1	2.63	0.46
1:A:375:U:C4	1:A:376:G:N7	2.83	0.46
1:A:390:C:O2'	1:A:391:G:H5'	2.16	0.46
1:A:427:U:C2	1:A:428:G:N7	2.84	0.46
1:A:517:G:O2'	1:A:530:G:C5'	2.64	0.46
1:A:555:C:H2'	1:A:555:C:O2	2.15	0.46
1:A:582:U:O5'	1:A:582:U:H6	1.97	0.46
1:A:597:G:C2'	1:A:598:U:O5'	2.62	0.46
1:A:608:A:C4	1:A:609:A:C8	3.03	0.46
1:A:623:C:C2'	1:A:624:C:H5'	2.45	0.46
1:A:62:U:H2'	1:A:63:C:C6	2.51	0.46
1:A:631:G:H2'	1:A:632:A:N7	2.30	0.46
1:A:722:A:H2'	1:A:724:G:C8	2.50	0.46
1:A:777:A:C2	1:A:778:G:C4	3.04	0.46
1:A:921:U:OP1	1:A:1082:G:C5'	2.62	0.46
1:A:933:G:OP2	9:J:3:ARG:HG3	2.16	0.46
1:A:977:A:O2'	1:A:1223:C:N4	2.46	0.46
2:C:76:A:C3'	2:C:76:A:C8	2.98	0.46
4:E:223:ILE:HG22	4:E:224:GLN:N	2.29	0.46
4:E:84:GLU:OE2	4:E:219:VAL:CG2	2.60	0.46
6:G:200:GLU:CG	6:G:201:GLN:N	2.78	0.46
7:H:75:THR:O	7:H:75:THR:HG23	2.15	0.46
9:J:15:ASP:OD2	9:J:16:LEU:N	2.48	0.46
9:J:35:LYS:CG	9:J:37:ASN:HD21	2.04	0.46
10:K:36:LEU:HA	10:K:39:LEU:HB2	1.97	0.46
10:K:86:ILE:HD13	10:K:135:CYS:CA	2.40	0.46
10:K:94:TYR:N	10:K:94:TYR:HD1	2.12	0.46
10:K:97:VAL:HG13	10:K:98:LYS:HZ2	1.80	0.46
11:L:56:LEU:O	11:L:56:LEU:HD23	2.16	0.46
11:L:93:ARG:C	11:L:95:LYS:N	2.68	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:M:30:SER:HB3	12:M:80:LYS:HG3	1.97	0.46
1:A:1253:G:OP1	12:M:44:VAL:HB	2.15	0.46
1:A:972:C:OP2	12:M:57:LYS:CD	2.64	0.46
12:M:6:ILE:HG22	12:M:98:ILE:HG23	1.96	0.46
12:M:39:PRO:CB	12:M:70:ARG:NH1	2.78	0.46
13:N:20:TYR:HB2	13:N:31:THR:HB	1.98	0.46
14:O:105:TYR:HB2	14:O:106:ASP:H	1.47	0.46
14:O:50:SER:O	14:O:51:ALA:CB	2.63	0.46
18:S:19:ILE:HD11	18:S:39:TYR:HB3	1.98	0.46
1:A:468:A:C1'	18:S:82:GLN:NE2	2.78	0.46
20:U:31:LEU:HD21	20:U:62:GLU:OE2	2.15	0.46
20:U:53:ARG:CG	20:U:63:GLN:NE2	2.72	0.46
20:U:63:GLN:O	20:U:66:LEU:CD1	2.64	0.46
20:U:69:THR:O	20:U:72:ARG:N	2.49	0.46
20:U:82:THR:O	20:U:83:GLU:OE1	2.34	0.46
21:V:11:VAL:CG1	21:V:16:LEU:HD11	2.46	0.46
21:V:19:VAL:HG21	21:V:43:GLU:CD	2.34	0.46
1:A:1022:G:C2'	1:A:1022:G:N3	2.78	0.46
1:A:219:C:H6	1:A:219:C:H3'	1.73	0.46
1:A:1384:C:H2'	1:A:1385:G:C5'	2.46	0.46
1:A:1490:C:OP2	1:A:1490:C:C6	2.68	0.46
1:A:1067:A:O5'	1:A:1067:A:H8	1.98	0.46
1:A:1101:A:O2'	1:A:1102:A:O4'	2.24	0.46
1:A:1244:C:C2	1:A:1245:A:N7	2.84	0.46
1:A:1366:C:C2'	1:A:1367:C:H5'	2.45	0.46
1:A:925:G:C6	1:A:1392:G:N1	2.84	0.46
1:A:166:G:H2'	1:A:167:G:O5'	2.15	0.46
1:A:17:U:H1'	1:A:1080:A:N3	2.31	0.46
1:A:191:G:O2'	22:W:102:GLY:CA	2.58	0.46
1:A:20:U:O4'	1:A:572:A:N1	2.48	0.46
1:A:322:C:OP1	1:A:1436:U:H4'	2.15	0.46
1:A:390:C:C2	1:A:391:G:C8	3.03	0.46
1:A:51:A:C2'	1:A:52:G:OP2	2.63	0.46
1:A:540:G:H2'	1:A:541:G:C8	2.50	0.46
1:A:549:C:C2'	1:A:550:G:O5'	2.63	0.46
1:A:622:A:C2'	1:A:623:C:H5'	2.45	0.46
1:A:658:G:C2	1:A:659:U:C2	3.04	0.46
1:A:720:C:H5	1:A:721:G:H2'	1.74	0.46
1:A:825:G:H2'	1:A:825:G:N3	2.31	0.46
1:A:834:C:C2'	1:A:835:U:H5'	2.44	0.46
1:A:876:G:O2'	10:K:11:THR:CG2	2.60	0.46
1:A:935:A:H2'	1:A:936:C:C6	2.47	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:11:A:H2'	2:C:12:G:H8	1.80	0.46
1:A:1338:G:H21	2:C:41:C:C1'	2.28	0.46
2:C:43:A:C2	2:C:44:A:C8	3.03	0.46
2:C:3:C:O2'	2:C:4:G:C5'	2.61	0.46
3:D:28:G:C6	3:D:43:A:N1	2.84	0.46
4:E:136:VAL:CA	4:E:139:LYS:NZ	2.58	0.46
4:E:50:GLU:O	4:E:53:ARG:N	2.48	0.46
5:F:132:ARG:HB3	5:F:136:GLN:HE22	1.80	0.46
5:F:44:GLU:CG	5:F:52:LEU:HD11	2.45	0.46
6:G:13:ARG:HH11	6:G:36:ARG:HB2	1.81	0.46
6:G:56:VAL:O	6:G:59:ARG:N	2.49	0.46
6:G:63:LYS:HG2	6:G:64:LEU:H	1.75	0.46
7:H:111:GLU:HG2	7:H:112:LEU:H	1.81	0.46
8:I:12:PRO:HG2	8:I:13:ASN:N	2.30	0.46
8:I:48:LEU:HD21	8:I:57:GLN:HA	1.98	0.46
9:J:88:PRO:CD	9:J:152:ALA:HA	2.44	0.46
10:K:116:LYS:HG3	10:K:127:LEU:HD11	1.98	0.46
12:M:27:ALA:HB2	12:M:85:LEU:CD1	2.45	0.46
16:Q:17:LYS:O	16:Q:19:ARG:N	2.48	0.46
18:S:14:ASN:CA	18:S:42:ARG:NH2	2.78	0.46
19:T:104:LYS:CD	19:T:105:ALA:N	2.72	0.46
19:T:51:TYR:CE1	19:T:73:VAL:HG11	2.49	0.46
20:U:63:GLN:HA	20:U:66:LEU:CG	2.46	0.46
21:V:36:ARG:HE	21:V:51:VAL:HG13	1.72	0.46
22:W:30:LYS:O	22:W:31:SER:C	2.54	0.46
22:W:51:GLU:HA	22:W:54:LYS:CG	2.43	0.46
22:W:54:LYS:O	22:W:57:ARG:HG3	2.16	0.46
23:X:6:ARG:HB3	23:X:15:ARG:HE	1.79	0.46
3:D:1:G:C2	3:D:73:A:C5	3.03	0.46
1:A:1049:U:C1'	1:A:1201:A:O4'	2.64	0.46
1:A:1157:A:N1	1:A:1180:A:C5	2.83	0.46
1:A:1230:C:O2	15:P:126:LYS:CD	2.62	0.46
1:A:1412:C:C2	1:A:1413:A:N7	2.84	0.46
1:A:1421:G:H2'	1:A:1422:G:H5'	1.98	0.46
1:A:1402:C:O2	1:A:1500:A:N1	2.48	0.46
1:A:1530:G:C6	1:A:1531:A:N3	2.83	0.46
1:A:186:C:O2'	1:A:186(A):C:C5'	2.59	0.46
1:A:19:C:H1'	1:A:864:A:N3	2.30	0.46
1:A:265:G:C2'	1:A:267:C:H5	2.19	0.46
1:A:46:G:H22	1:A:366:C:H1'	1.80	0.46
1:A:46:G:OP1	1:A:306:G:N2	2.48	0.46
1:A:563:A:H5''	1:A:565:U:O4	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:61:G:C6	1:A:62:U:N3	2.84	0.46
1:A:718:G:C4	13:N:116:HIS:NE2	2.83	0.46
1:A:893:C:C2	1:A:894:G:C8	3.03	0.46
1:A:920:U:O2'	1:A:921:U:H5'	2.14	0.46
1:A:942:G:C2	1:A:943:U:C6	3.04	0.46
1:A:961:U:HO2'	1:A:962:C:H5'	1.77	0.46
2:C:21:A:O4'	2:C:21:A:OP1	2.33	0.46
4:E:163:PHE:CZ	4:E:186:ALA:C	2.89	0.46
4:E:28:PHE:CD2	4:E:190:THR:HA	2.51	0.46
4:E:53:ARG:NH2	4:E:199:TYR:CD2	2.83	0.46
4:E:19:HIS:ND1	4:E:204:ASN:ND2	2.63	0.46
4:E:55:PHE:O	4:E:58:ILE:HB	2.16	0.46
1:A:1106:G:H5''	5:F:172:ARG:CG	2.45	0.46
1:A:1107:C:OP1	5:F:172:ARG:HG2	2.15	0.46
5:F:33:LEU:HD11	16:Q:53:LEU:CA	2.42	0.46
6:G:25:ARG:HD2	6:G:25:ARG:O	2.16	0.46
7:H:147:ASP:O	7:H:148:VAL:C	2.52	0.46
7:H:40:ARG:CB	7:H:68:GLU:OE1	2.64	0.46
1:A:1240:U:H1'	9:J:42:ILE:HD11	1.97	0.46
9:J:89:MET:HB3	9:J:156:TRP:CB	2.45	0.46
9:J:74:GLU:CB	9:J:91:VAL:CG2	2.89	0.46
10:K:23:SER:O	10:K:24:THR:HB	2.14	0.46
10:K:26:VAL:HG13	10:K:27:PRO:HD2	1.98	0.46
11:L:97:LYS:HZ2	11:L:102:LEU:CD2	2.28	0.46
11:L:12:GLU:CD	11:L:12:GLU:N	2.69	0.46
12:M:34:VAL:CG1	12:M:35:SER:N	2.79	0.46
13:N:54:ARG:HH11	13:N:54:ARG:CG	2.12	0.46
14:O:97:ARG:HG2	14:O:97:ARG:O	2.15	0.46
15:P:22:ILE:HG22	15:P:66:LEU:HD12	1.98	0.46
16:Q:47:LEU:CB	16:Q:53:LEU:HD11	2.46	0.46
17:R:71:GLN:HA	17:R:75:PRO:HB3	1.97	0.46
18:S:67:THR:HG22	18:S:68:ASP:H	1.77	0.46
19:T:67:LYS:HG3	19:T:67:LYS:O	2.15	0.46
1:A:1227:A:OP1	21:V:80:TYR:CE2	2.68	0.46
22:W:42:GLN:O	22:W:45:GLN:N	2.49	0.46
3:D:64:C:H2'	3:D:65:U:O5'	2.16	0.46
3:D:64:C:C2'	3:D:65:U:O5'	2.63	0.46
1:A:209:U:N1	1:A:209:U:OP2	2.48	0.46
1:A:1144:G:N3	1:A:1144:G:H2'	2.30	0.46
1:A:1292:U:O2'	1:A:1293:G:O4'	2.30	0.46
1:A:133:U:O3'	1:A:134:A:H8	1.98	0.46
1:A:1360:A:N1	1:A:1361:G:C2	2.84	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1461:G:H2'	1:A:1462:G:H8	1.78	0.46
1:A:148:G:N2	1:A:175:C:N3	2.64	0.46
1:A:1495:U:C2'	1:A:1496:C:O5'	2.64	0.46
1:A:1515:C:H2'	1:A:1516:G:H8	1.81	0.46
1:A:299:G:C5	1:A:300:A:N6	2.83	0.46
1:A:306:G:N3	1:A:307:C:C6	2.83	0.46
1:A:424:G:O2'	1:A:425:G:H5'	2.15	0.46
1:A:46:G:N2	1:A:366:C:H1'	2.30	0.46
1:A:447:G:N2	1:A:486:U:C5	2.84	0.46
1:A:560:U:P	1:A:566:G:H22	2.39	0.46
1:A:597:G:H2'	1:A:598:U:O5'	2.15	0.46
1:A:676:A:C4	1:A:677:U:C5	3.04	0.46
1:A:696:A:H2'	1:A:697:U:H5'	1.96	0.46
1:A:757:U:H1'	1:A:879:C:H1'	1.98	0.46
2:C:6:G:C2'	2:C:7:G:C8	2.97	0.46
3:D:29:C:H2'	3:D:30:G:O5'	2.15	0.46
4:E:109:SER:O	4:E:111:ARG:N	2.48	0.46
4:E:166:ASP:HA	4:E:187:LEU:O	2.15	0.46
4:E:199:TYR:O	4:E:201:ILE:HD13	2.16	0.46
4:E:219:VAL:O	4:E:222:ILE:CD1	2.64	0.46
4:E:97:TRP:HZ2	4:E:176:GLU:OE1	1.98	0.46
6:G:118:ARG:HG3	6:G:136:PRO:CB	2.45	0.46
6:G:112:VAL:CG2	6:G:161:ASN:ND2	2.69	0.46
6:G:43:HIS:C	6:G:45:GLN:H	2.18	0.46
6:G:65:ARG:HG2	6:G:65:ARG:HH11	1.79	0.46
6:G:88:VAL:HG22	7:H:97:GLY:N	2.23	0.46
7:H:109:ILE:CD1	7:H:139:LEU:HD12	2.45	0.46
1:A:922:G:C5'	7:H:20:GLN:HG2	2.43	0.46
8:I:79:LEU:O	8:I:81:ILE:N	2.49	0.46
9:J:102:ARG:O	9:J:103:TRP:C	2.54	0.46
10:K:98:LYS:HZ2	10:K:98:LYS:C	2.19	0.46
11:L:11:LYS:HG2	11:L:11:LYS:O	2.16	0.46
11:L:23:ASN:HD22	11:L:57:GLY:HA2	1.81	0.46
11:L:33:PHE:C	11:L:35:GLU:H	2.18	0.46
11:L:63:ILE:HD12	11:L:63:ILE:H	1.76	0.46
12:M:40:LEU:HA	12:M:41:PRO:HD2	1.71	0.46
13:N:71:LYS:O	13:N:74:ALA:CB	2.63	0.46
14:O:36:VAL:C	14:O:58:VAL:HG22	2.35	0.46
1:A:1328:C:OP1	15:P:28:ALA:HB2	2.15	0.46
15:P:73:GLU:O	15:P:74:VAL:C	2.53	0.46
16:Q:54:PRO:O	16:Q:56:VAL:N	2.46	0.46
17:R:79:ARG:O	17:R:82:ILE:HB	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:3:LYS:CE	18:S:24:ALA:HB2	2.35	0.46
8:I:89:MET:HB3	20:U:76:LEU:HD11	1.98	0.46
8:I:50:TYR:HE1	20:U:81:PHE:CE2	2.33	0.46
21:V:40:ILE:HG21	21:V:62:ILE:CD1	2.45	0.46
22:W:71:THR:O	22:W:72:LEU:C	2.54	0.46
3:D:44:G:H2'	3:D:45:U:H5'	1.97	0.46
3:D:48:C:C2'	3:D:48:C:O2	2.60	0.46
1:A:1171:G:C2'	1:A:1172:C:H6	2.29	0.46
3:D:75:C:H6	3:D:76:A:O3'	1.99	0.46
1:A:160:A:O2'	1:A:161:A:H5'	2.16	0.46
1:A:346:G:H2'	1:A:347:G:C4'	2.46	0.46
2:C:1:C:C2	2:C:2:G:C8	3.04	0.46
1:A:1091:U:O2	1:A:1093:A:C8	2.68	0.46
1:A:1069:C:N4	1:A:1094:G:C6	2.84	0.46
1:A:1087:G:C2	1:A:1099:G:C2	3.04	0.46
1:A:1117:G:N2	1:A:1184:G:C4	2.84	0.46
1:A:1154:G:C4	1:A:1155:G:C8	3.04	0.46
1:A:1198:G:O2'	1:A:1199:U:H5'	2.15	0.46
1:A:1212:U:O2'	1:A:1213:A:O5'	2.33	0.46
1:A:1231:G:H5''	11:L:126:SER:OG	2.16	0.46
1:A:1250:A:OP1	11:L:66:ARG:CD	2.60	0.46
1:A:1275:A:H2'	1:A:1276:G:H5'	1.98	0.46
1:A:1256:A:N6	1:A:1278:U:C2'	2.73	0.46
1:A:1465:C:O2	1:A:1466:C:O4'	2.32	0.46
1:A:1471:G:H2'	1:A:1472:U:C6	2.51	0.46
1:A:186:C:H2'	1:A:186(A):C:H6	1.81	0.46
1:A:465:A:N7	1:A:467:G:C2	2.84	0.46
1:A:507:C:H2'	1:A:508:C:H5	1.81	0.46
1:A:539:A:C6	1:A:540:G:C6	3.03	0.46
1:A:552:U:C2	1:A:553:A:C8	3.04	0.46
1:A:55:A:H2'	1:A:56:U:C5'	2.46	0.46
1:A:576:G:C8	1:A:881:G:C1'	2.90	0.46
1:A:701:C:C2	1:A:703:G:C2	3.04	0.46
1:A:771:G:C6	1:A:809:G:C6	3.04	0.46
1:A:779:C:C4	1:A:780:A:C2	3.04	0.46
1:A:880:C:OP1	14:O:12:ARG:NH2	2.36	0.46
1:A:901:A:C2'	1:A:902:G:O5'	2.64	0.46
1:A:926:G:C4	1:A:1505:G:C2	3.04	0.46
1:A:949:A:N3	1:A:971:G:O6	2.49	0.46
2:C:50:U:C2	2:C:51:C:C5	3.04	0.46
3:D:41:G:H1'	9:J:144:MET:HE2	1.98	0.46
4:E:116:GLU:CG	4:E:117:GLU:H	2.25	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:141:GLU:CD	4:E:141:GLU:C	2.73	0.46
4:E:146:GLN:NE2	4:E:150:SER:CB	2.65	0.46
4:E:14:GLY:HA3	4:E:209:ARG:HH22	1.73	0.46
4:E:154:LEU:HB3	4:E:155:LEU:H	1.63	0.46
4:E:171:ALA:O	4:E:172:ILE:C	2.53	0.46
4:E:163:PHE:CZ	4:E:186:ALA:HA	2.51	0.46
5:F:130:VAL:HA	5:F:133:ALA:CB	2.45	0.46
5:F:151:VAL:CG1	5:F:152:ILE:N	2.79	0.46
5:F:147:LYS:CB	5:F:203:PHE:HB3	2.32	0.46
6:G:179:GLU:C	6:G:181:MET:H	2.19	0.46
6:G:30:LYS:O	6:G:31:CYS:CB	2.64	0.46
7:H:125:SER:C	7:H:127:ASN:N	2.69	0.46
9:J:140:ASP:O	9:J:144:MET:CG	2.64	0.46
9:J:20:ASP:OD1	9:J:22:LEU:HB3	2.16	0.46
1:A:1240:U:O4	9:J:30:ILE:O	2.33	0.46
9:J:74:GLU:CG	9:J:75:VAL:N	2.78	0.46
4:E:181:PHE:HD1	10:K:71:GLY:HA3	1.75	0.46
10:K:92:ARG:CG	10:K:92:ARG:NH1	2.78	0.46
11:L:50:LEU:C	11:L:50:LEU:CD2	2.83	0.46
11:L:78:LYS:O	11:L:81:ILE:HB	2.16	0.46
13:N:18:ARG:HH11	13:N:18:ARG:HG2	1.80	0.46
14:O:6:THR:HG23	14:O:9:GLN:OE1	2.16	0.46
14:O:85:ILE:CG2	14:O:85:ILE:O	2.63	0.46
16:Q:24:CYS:O	16:Q:25:VAL:C	2.54	0.46
16:Q:26:ARG:CB	16:Q:43:CYS:HB2	2.43	0.46
17:R:49:ASP:O	17:R:49:ASP:CG	2.53	0.46
19:T:28:PRO:C	19:T:36:ILE:CD1	2.84	0.46
19:T:60:ILE:CD1	19:T:62:SER:OG	2.54	0.46
1:A:254:G:H5''	19:T:66:SER:OG	2.15	0.46
21:V:24:ALA:HB3	21:V:25:LYS:NZ	2.30	0.46
21:V:47:HIS:O	21:V:61:TYR:HD2	1.99	0.46
21:V:50:ALA:HB1	21:V:57:HIS:CA	2.46	0.46
22:W:97:ALA:O	22:W:99:LEU:HD23	2.16	0.46
3:D:6:G:O6	3:D:68:U:C4	2.68	0.46
1:A:1035:A:O2'	1:A:1036:G:H5'	2.16	0.46
1:A:1009:G:C6	1:A:1021:G:C6	3.03	0.46
1:A:103:C:C4	1:A:104:G:N7	2.83	0.46
1:A:1044:A:H2'	1:A:1045:C:O4'	2.16	0.46
1:A:1074:G:O4'	4:E:104:ASN:HB2	2.15	0.46
1:A:17:U:O4'	1:A:1080:A:H1'	2.16	0.46
1:A:109:A:N3	1:A:109:A:O4'	2.48	0.46
1:A:1150:U:O3'	12:M:41:PRO:HB3	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1206:G:C6	1:A:1207:G:C6	3.04	0.46
1:A:130:A:OP2	19:T:63:ARG:NH2	2.46	0.46
1:A:1429:C:HO2'	1:A:1430:C:C5'	2.28	0.46
1:A:1483:A:O2'	1:A:1484:C:C5'	2.62	0.46
1:A:1539:C:O2	1:A:1540:U:C6	2.69	0.46
1:A:16:A:C1'	7:H:17:ALA:HB3	2.46	0.46
1:A:186(B):C:N3	1:A:186(C):G:C8	2.84	0.46
1:A:117:G:O6	1:A:289:G:H1'	2.15	0.46
1:A:438:G:N2	1:A:495:A:O5'	2.49	0.46
1:A:519:C:H2'	1:A:520:A:O5'	2.15	0.46
1:A:55:A:C2	1:A:56:U:C1'	2.96	0.46
1:A:580:U:C5'	17:R:58:MET:HG2	2.46	0.46
1:A:664:G:H5''	20:U:64:ARG:HE	1.80	0.46
1:A:78:G:H8	1:A:78:G:OP2	1.98	0.46
1:A:792:A:C2'	1:A:794:A:H62	2.20	0.46
1:A:854:G:OP1	1:A:871:U:O2	2.33	0.46
1:A:854:G:C2	1:A:855:G:N7	2.84	0.46
1:A:89:U:H6	1:A:89:U:O5'	1.99	0.46
1:A:978:A:O2'	1:A:979:C:H5'	2.16	0.46
4:E:187:LEU:HD21	4:E:203:GLY:O	2.16	0.46
4:E:23:ARG:NH1	4:E:23:ARG:C	2.60	0.46
5:F:108:ASN:ND2	5:F:110:ASN:CB	2.79	0.46
5:F:84:ILE:HD12	5:F:101:LEU:HD22	1.98	0.46
5:F:91:LEU:O	5:F:92:ALA:C	2.54	0.46
6:G:106:TYR:HD1	6:G:106:TYR:O	1.99	0.46
6:G:61:LYS:HB2	6:G:203:VAL:HG13	1.97	0.46
7:H:89:ILE:CG1	7:H:131:ILE:HD12	2.45	0.46
8:I:2:ARG:NH2	17:R:2:PRO:HD2	2.30	0.46
8:I:53:ALA:O	8:I:55:ASP:CG	2.54	0.46
9:J:55:GLY:O	9:J:56:GLN:O	2.34	0.46
11:L:10:ARG:CB	11:L:104:ARG:HB3	2.46	0.46
11:L:12:GLU:N	11:L:12:GLU:OE2	2.49	0.46
14:O:40:VAL:HG11	14:O:77:LEU:HB2	1.96	0.46
15:P:14:ARG:NE	15:P:44:ARG:HH11	2.14	0.46
17:R:78:TYR:O	17:R:79:ARG:C	2.54	0.46
18:S:16:HIS:C	18:S:17:TYR:CD1	2.89	0.46
19:T:38:ARG:CG	19:T:39:SER:N	2.79	0.46
19:T:7:THR:OG1	19:T:58:GLU:CA	2.64	0.46
21:V:52:TYR:CD1	21:V:56:GLN:O	2.69	0.46
3:D:16:U:HO2'	3:D:17:U:P	2.39	0.46
1:A:1088:G:C6	1:A:1089:G:N7	2.84	0.46
1:A:1068:G:O6	1:A:1108:G:C2	2.69	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1129:C:O4'	1:A:1130:A:C8	2.69	0.46
1:A:1148:U:O2'	1:A:1149:C:C5'	2.61	0.46
1:A:1196:U:H5'	1:A:1197:G:H5''	1.98	0.46
1:A:1377:A:O2'	1:A:1378:C:OP2	2.32	0.46
1:A:927:G:OP2	1:A:1503:A:N6	2.49	0.46
1:A:259:G:H5''	22:W:83:ARG:NH2	2.27	0.46
1:A:277:C:OP2	19:T:41:LYS:NZ	2.40	0.46
1:A:284:G:H2'	1:A:285:G:C8	2.50	0.46
1:A:354:G:H2'	1:A:355:C:O5'	2.15	0.46
1:A:378:G:C2	1:A:379:C:C4	3.04	0.46
1:A:412:A:HO2'	1:A:413:G:H8	1.55	0.46
1:A:445:G:C2	1:A:446:G:C4	3.03	0.46
1:A:467:G:H2'	1:A:468:A:C8	2.50	0.46
1:A:492:G:C5	1:A:493:G:C8	3.04	0.46
1:A:503:C:C2	1:A:504:C:C5	3.03	0.46
1:A:542:G:H21	1:A:543:C:H1'	1.81	0.46
1:A:591:U:N3	1:A:649:G:C6	2.84	0.46
1:A:623:C:H2'	1:A:624:C:O4'	2.15	0.46
1:A:631:G:O5'	1:A:631:G:H8	1.99	0.46
1:A:644:G:H2'	1:A:645:C:H5'	1.97	0.46
1:A:656:C:HO2'	1:A:657:G:H5'	1.79	0.46
1:A:686:U:HO2'	1:A:687:A:P	2.37	0.46
1:A:686:U:O2'	1:A:687:A:P	2.73	0.46
1:A:707:C:C2'	1:A:708:C:C5'	2.94	0.46
1:A:725:G:H2'	1:A:726:C:C6	2.50	0.46
1:A:16:A:N6	1:A:920:U:H3	2.14	0.46
1:A:97:U:H2'	1:A:99:C:C6	2.51	0.46
1:A:978:A:C8	1:A:980:C:N4	2.84	0.46
2:C:10:G:N3	2:C:11:A:C8	2.84	0.46
2:C:15:G:N2	2:C:59:A:N1	2.64	0.46
2:C:14:A:C8	2:C:15:G:N7	2.84	0.46
3:D:40:C:H3'	3:D:41:G:C5'	2.46	0.46
4:E:133:LYS:O	4:E:136:VAL:HB	2.16	0.46
4:E:139:LYS:CG	4:E:140:HIS:H	2.25	0.46
4:E:69:LEU:CD1	4:E:71:VAL:HG23	2.46	0.46
4:E:97:TRP:CZ2	4:E:102:LEU:CD2	2.98	0.46
5:F:13:GLY:C	5:F:14:ILE:HG12	2.36	0.46
5:F:29:TYR:HD2	5:F:29:TYR:O	1.99	0.46
5:F:43:LEU:HD11	5:F:68:VAL:CG2	2.46	0.46
6:G:198:VAL:HG23	6:G:199:ASN:N	2.20	0.46
7:H:59:GLY:O	7:H:62:ALA:HB3	2.15	0.46
7:H:61:TYR:O	7:H:62:ALA:C	2.54	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:50:TYR:CD1	20:U:81:PHE:CZ	3.04	0.46
8:I:79:LEU:C	8:I:81:ILE:N	2.69	0.46
9:J:125:MET:O	9:J:127:ALA:N	2.49	0.46
9:J:134:ALA:O	9:J:135:VAL:C	2.54	0.46
10:K:25:ASP:N	10:K:25:ASP:OD1	2.48	0.46
11:L:17:VAL:HG13	11:L:63:ILE:CG2	2.46	0.46
12:M:57:LYS:O	12:M:58:ASP:OD2	2.34	0.46
13:N:42:TRP:N	13:N:71:LYS:HE2	2.23	0.46
14:O:27:LEU:HG	14:O:28:LYS:N	2.31	0.46
14:O:57:LYS:HG2	14:O:67:THR:CG2	2.40	0.46
14:O:62:SER:OG	14:O:64:TYR:HB2	2.16	0.46
14:O:84:LEU:O	14:O:101:VAL:CG2	2.64	0.46
15:P:52:GLU:HB3	15:P:55:ARG:CZ	2.45	0.46
15:P:67:GLU:CD	15:P:68:GLY:N	2.69	0.46
17:R:18:PHE:C	17:R:20:GLY:H	2.18	0.46
19:T:20:THR:OG1	19:T:20:THR:O	2.34	0.46
19:T:75:ARG:CG	19:T:76:LEU:N	2.75	0.46
22:W:40:ALA:C	22:W:42:GLN:N	2.67	0.46
23:X:8:THR:HA	23:X:21:TYR:CD1	2.51	0.46
1:A:1074:G:C5	1:A:1075:C:C6	3.04	0.45
1:A:1138:G:N1	1:A:1140:C:C5	2.84	0.45
1:A:1158:C:C3'	1:A:1158:C:O2	2.64	0.45
1:A:126:G:H4'	1:A:634:C:O2'	2.17	0.45
1:A:1320:C:C2'	1:A:1320:C:O2	2.61	0.45
1:A:1347:G:H22	1:A:1373:G:C3'	2.26	0.45
1:A:1415:G:C4	1:A:1416:G:C8	3.04	0.45
1:A:1465:C:N4	1:A:1466:C:C4	2.84	0.45
1:A:1479:C:O2'	1:A:1480:G:C5'	2.59	0.45
1:A:1483:A:H2'	1:A:1484:C:O5'	2.16	0.45
1:A:1487:G:C2	1:A:1488:G:C8	3.04	0.45
1:A:1487:G:C2'	1:A:1488:G:O5'	2.65	0.45
1:A:1507:A:H2'	1:A:1508:G:C5'	2.45	0.45
1:A:186(A):C:C2'	1:A:186(B):C:H5'	2.45	0.45
1:A:186(D):C:O2'	1:A:186(E):C:C5'	2.64	0.45
1:A:259:G:C2	1:A:260:G:C4	3.04	0.45
1:A:420:U:H2'	1:A:422:C:C5	2.51	0.45
1:A:51:A:N1	1:A:116:A:C4	2.84	0.45
1:A:73:G:C4	1:A:74:C:C5	3.04	0.45
1:A:767:A:C2'	1:A:768:A:H5'	2.47	0.45
1:A:817:C:C6	1:A:819:A:H4'	2.52	0.45
1:A:858:G:O5'	1:A:858:G:H8	1.99	0.45
1:A:922:G:H5''	7:H:20:GLN:NE2	2.27	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:13:C:O2	2:C:13:C:H2'	2.16	0.45
2:C:19:G:C4	2:C:57:A:C2	3.04	0.45
2:C:22:G:O2'	2:C:23:C:H5'	2.16	0.45
4:E:153:ARG:O	4:E:153:ARG:NE	2.49	0.45
4:E:72:GLY:CA	4:E:165:VAL:CG1	2.91	0.45
5:F:186:PHE:CD1	5:F:187:ALA:N	2.83	0.45
7:H:107:ARG:O	7:H:108:ALA:C	2.52	0.45
7:H:75:THR:HB	7:H:118:ILE:HG12	1.98	0.45
10:K:10:LEU:HA	10:K:83:ILE:HD11	1.98	0.45
13:N:80:VAL:HG13	13:N:81:ASP:N	2.31	0.45
14:O:79:GLU:HB2	14:O:80:HIS:ND1	2.30	0.45
15:P:24:GLY:O	15:P:29:ARG:CD	2.58	0.45
15:P:54:VAL:O	15:P:58:GLU:HG3	2.15	0.45
16:Q:9:LYS:HD3	16:Q:10:ALA:CA	2.46	0.45
17:R:64:ARG:O	17:R:67:LEU:HG	2.16	0.45
19:T:25:ARG:HH21	19:T:40:LYS:HD2	1.82	0.45
19:T:19:VAL:HG21	19:T:46:ASP:CB	2.46	0.45
20:U:53:ARG:HA	20:U:63:GLN:HE22	1.80	0.45
8:I:50:TYR:CE2	20:U:77:GLY:CA	2.99	0.45
21:V:45:VAL:HG13	21:V:64:GLU:CA	2.46	0.45
21:V:58:VAL:O	21:V:58:VAL:HG23	2.16	0.45
1:A:1319:A:C4'	21:V:70:LYS:NZ	2.76	0.45
22:W:14:LYS:O	22:W:15:ARG:C	2.53	0.45
22:W:40:ALA:HB2	22:W:55:ILE:CG2	2.46	0.45
22:W:42:GLN:HA	22:W:42:GLN:NE2	2.31	0.45
1:A:261:U:H5	22:W:79:ARG:NH1	2.15	0.45
3:D:17:U:C4	3:D:19:G:C8	3.04	0.45
3:D:18:G:H1'	3:D:58:A:C1'	2.47	0.45
3:D:6:G:HO2'	3:D:7:G:C5'	2.28	0.45
1:A:1026:G:N7	1:A:1027:C:H5	2.11	0.45
1:A:748:C:H1'	1:A:749:C:C5	2.51	0.45
1:A:343:U:H2'	1:A:345:C:C5	2.47	0.45
1:A:1013:G:H3'	1:A:1013:G:C8	2.51	0.45
1:A:1077:G:H1'	1:A:1081:G:H22	1.80	0.45
1:A:1086:U:H3'	1:A:1086:U:OP2	2.16	0.45
1:A:1072:G:C6	1:A:1104:G:N1	2.85	0.45
1:A:1265:G:O6	1:A:1266:G:C2	2.69	0.45
1:A:1272:G:H2'	1:A:1273:G:H8	1.80	0.45
1:A:126:G:N2	1:A:127:G:H1'	2.32	0.45
1:A:12:U:N3	1:A:13:U:O4	2.49	0.45
1:A:1371:G:H2'	1:A:1372:U:O5'	2.17	0.45
1:A:1373:G:H4'	9:J:36:LYS:HZ3	1.80	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:306:G:C2'	1:A:307:C:C6	2.93	0.45
1:A:433:C:O5'	1:A:433:C:H6	1.99	0.45
1:A:557:G:H2'	1:A:558:G:C1'	2.46	0.45
1:A:609:A:H2'	1:A:610:G:C5'	2.46	0.45
1:A:64:G:C2	1:A:67:C:N4	2.84	0.45
1:A:650:G:C2	1:A:651:C:C6	3.05	0.45
1:A:666:G:C4	1:A:741:G:C2	3.04	0.45
1:A:752:G:O4'	1:A:752:G:P	2.75	0.45
1:A:965:A:O2'	1:A:966:G:O5'	2.22	0.45
1:A:983:A:N1	1:A:984:C:C5	2.84	0.45
2:C:35:A:C2	2:C:36:U:C6	3.04	0.45
4:E:101:MET:CG	4:E:108:ILE:HG21	2.47	0.45
4:E:168:THR:CB	4:E:191:ASP:O	2.64	0.45
4:E:102:LEU:HD23	4:E:176:GLU:HB2	1.97	0.45
4:E:168:THR:CB	4:E:192:SER:HA	2.45	0.45
4:E:193:ASP:OD2	4:E:196:LEU:HG	2.17	0.45
4:E:59:GLU:HB3	4:E:221:LEU:CD2	2.29	0.45
5:F:119:ARG:CG	5:F:120:VAL:N	2.77	0.45
5:F:24:ALA:CB	5:F:28:GLN:OE1	2.64	0.45
7:H:133:TYR:HD2	7:H:133:TYR:HA	1.60	0.45
8:I:30:LEU:HB3	8:I:35:ALA:CB	2.36	0.45
9:J:42:ILE:HG22	9:J:120:ILE:HD12	1.96	0.45
9:J:44:TYR:O	9:J:45:ASP:C	2.54	0.45
10:K:16:ALA:O	10:K:17:THR:C	2.54	0.45
10:K:36:LEU:O	10:K:45:ILE:HD13	2.16	0.45
11:L:121:ARG:HA	11:L:121:ARG:HA	1.81	0.45
15:P:115:LYS:CB	15:P:115:LYS:CB	2.64	0.45
15:P:20:THR:O	15:P:20:THR:HG22	2.16	0.45
15:P:31:LYS:O	15:P:35:GLU:HB2	2.16	0.45
16:Q:38:GLY:O	16:Q:39:LEU:HD23	2.16	0.45
18:S:35:LYS:HD2	18:S:36:ILE:H	1.77	0.45
18:S:74:LEU:HA	18:S:74:LEU:HD23	1.58	0.45
18:S:75:ARG:HB2	18:S:80:PHE:CD1	2.52	0.45
20:U:79:LEU:N	20:U:79:LEU:HD12	2.32	0.45
21:V:25:LYS:HD2	21:V:25:LYS:N	2.31	0.45
22:W:38:LYS:O	22:W:39:LYS:C	2.54	0.45
22:W:61:SER:O	22:W:62:LEU:C	2.54	0.45
22:W:61:SER:O	22:W:65:LYS:HG2	2.16	0.45
23:X:14:TRP:CZ3	23:X:15:ARG:CZ	2.83	0.45
3:D:58:A:O2'	3:D:59:U:P	2.74	0.45
5:F:157:ILE:HD12	5:F:164:ARG:HG3	1.97	0.45
14:O:102:ARG:CZ	14:O:109:GLY:C	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:45:PHE:CD2	7:H:45:PHE:N	2.74	0.45
1:A:1013:G:H2'	1:A:1015:A:OP2	2.16	0.45
1:A:1055:A:O2'	1:A:1056:U:OP1	2.34	0.45
1:A:1053:G:N7	1:A:1200:C:OP2	2.49	0.45
1:A:1217:C:H2'	1:A:1218:C:O4'	2.16	0.45
1:A:1315:U:O2'	1:A:1360:A:C2'	2.64	0.45
1:A:1353:G:N1	1:A:1370:G:C2	2.84	0.45
1:A:1369:C:C2'	1:A:1370:G:O4'	2.65	0.45
1:A:1443:G:HO2'	1:A:1446:A:H4'	1.80	0.45
1:A:1417:G:C6	1:A:1482:G:C6	3.04	0.45
1:A:174:C:O2'	1:A:175:C:H5'	2.16	0.45
1:A:267:C:OP2	19:T:67:LYS:HD3	2.17	0.45
1:A:373:A:H2'	1:A:374:A:C8	2.42	0.45
1:A:37:U:C2'	1:A:38:G:H5'	2.46	0.45
1:A:59:A:O2'	1:A:388:G:C5'	2.65	0.45
1:A:37:U:C5	1:A:38:G:C8	3.05	0.45
1:A:447:G:H8	1:A:447:G:O5'	1.99	0.45
1:A:440:A:N6	1:A:494:U:C4	2.85	0.45
1:A:568:G:C2	1:A:569:C:C4	3.04	0.45
1:A:621:A:C4	1:A:622:A:N7	2.84	0.45
1:A:641:U:C2'	1:A:641:U:O2	2.62	0.45
1:A:691:G:N7	13:N:26:ASN:CG	2.70	0.45
1:A:813:U:C5'	1:A:814:A:OP2	2.65	0.45
1:A:874:G:N2	1:A:875:C:N1	2.64	0.45
1:A:908:A:C2	1:A:909:A:C5	3.04	0.45
1:A:95:G:C2	1:A:96:G:H1'	2.51	0.45
1:A:976:G:H8	1:A:976:G:H3'	1.82	0.45
2:C:48:C:OP2	2:C:48:C:O4'	2.34	0.45
3:D:34:G:N3	3:D:35:A:H5''	2.30	0.45
4:E:114:ARG:HA	4:E:117:GLU:OE2	2.15	0.45
4:E:219:VAL:O	4:E:222:ILE:HD12	2.17	0.45
4:E:77:ALA:HB1	4:E:211:ILE:HG21	1.98	0.45
5:F:142:MET:O	5:F:146:ALA:HB3	2.16	0.45
6:G:154:ASN:ND2	6:G:154:ASN:H	2.15	0.45
6:G:179:GLU:C	6:G:181:MET:N	2.70	0.45
6:G:58:LEU:HD13	6:G:59:ARG:NH1	2.10	0.45
7:H:150:ARG:HB3	7:H:151:LEU:CD2	2.46	0.45
7:H:53:LEU:O	7:H:54:ALA:C	2.54	0.45
7:H:84:PHE:HE2	7:H:130:ASN:ND2	2.14	0.45
8:I:18:GLN:O	8:I:19:LEU:C	2.55	0.45
9:J:106:GLN:C	9:J:108:ALA:N	2.65	0.45
10:K:114:THR:H	10:K:119:LEU:CD2	2.29	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1342:C:H4'	11:L:125:TYR:H	1.82	0.45
11:L:27:THR:HG21	11:L:62:TYR:CE1	2.51	0.45
11:L:28:VAL:O	11:L:29:ASN:C	2.54	0.45
12:M:3:LYS:CE	12:M:77:PRO:CD	2.92	0.45
12:M:79:ARG:CZ	12:M:82:ILE:HD12	2.46	0.45
13:N:39:PRO:O	13:N:40:ILE:HG23	2.17	0.45
15:P:26:GLY:H	15:P:29:ARG:CB	2.27	0.45
16:Q:36:PHE:C	16:Q:36:PHE:CD1	2.89	0.45
16:Q:39:LEU:CD1	16:Q:44:LEU:HA	2.36	0.45
17:R:6:GLU:CG	17:R:7:GLU:H	2.06	0.45
22:W:88:VAL:C	22:W:92:LEU:HD12	2.36	0.45
1:A:1026:G:O6	1:A:1036:G:C2	2.69	0.45
1:A:1120:G:C8	1:A:1120:G:O5'	2.69	0.45
1:A:1082:G:C6	1:A:1083:U:C5	3.04	0.45
1:A:1117:G:O5'	11:L:104:ARG:NH1	2.49	0.45
1:A:1140:C:N3	1:A:1141:C:C5	2.84	0.45
1:A:1146:A:C4	1:A:1147:C:H6	2.35	0.45
1:A:1202:G:C2'	1:A:1203:C:O5'	2.64	0.45
1:A:122:G:OP1	1:A:122:G:H8	1.99	0.45
1:A:1301:U:O2	1:A:1301:U:C2'	2.63	0.45
1:A:1221:G:OP1	1:A:1320:C:N4	2.49	0.45
1:A:1394:A:N6	1:A:1500:A:O2'	2.49	0.45
1:A:1498:U:H2'	1:A:1499:A:C8	2.52	0.45
1:A:184:G:H4'	1:A:224:C:C4'	2.46	0.45
1:A:477:G:N2	1:A:478:A:H1'	2.32	0.45
1:A:445:G:C6	1:A:490:G:N1	2.84	0.45
1:A:516:U:C5	1:A:517:G:C6	3.04	0.45
1:A:56:U:C5	1:A:352:C:N4	2.85	0.45
1:A:579:G:HO2'	17:R:58:MET:CE	2.29	0.45
1:A:659:U:O2'	1:A:660:G:C5'	2.63	0.45
1:A:743:U:H2'	1:A:744:C:C6	2.52	0.45
1:A:652:U:H2'	1:A:752:G:H1	1.82	0.45
1:A:754:C:O5'	17:R:72:ARG:NH1	2.50	0.45
1:A:931:C:H2'	1:A:932:C:C5	2.51	0.45
1:A:997:U:H2'	1:A:998:G:C8	2.51	0.45
4:E:133:LYS:O	4:E:137:ARG:HD2	2.17	0.45
4:E:170:GLU:HG3	4:E:174:VAL:H	1.81	0.45
4:E:16:HIS:CD2	4:E:210:SER:HA	2.51	0.45
4:E:72:GLY:CA	4:E:165:VAL:HG13	2.42	0.45
5:F:131:ARG:HH12	7:H:51:VAL:H	1.64	0.45
5:F:190:ARG:O	5:F:191:THR:C	2.55	0.45
6:G:124:GLY:C	6:G:132:ARG:HE	2.20	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:148:VAL:O	6:G:181:MET:CE	2.64	0.45
6:G:180:GLY:O	6:G:181:MET:O	2.35	0.45
1:A:8:A:H4'	7:H:102:ALA:HA	1.98	0.45
7:H:112:LEU:O	7:H:113:ALA:C	2.54	0.45
7:H:11:ILE:HG22	7:H:31:LEU:HD22	1.98	0.45
9:J:46:ALA:O	9:J:47:CYS:C	2.53	0.45
1:A:590:C:O3'	10:K:30:ARG:NH2	2.50	0.45
10:K:74:PRO:HG2	10:K:75:ARG:H	1.81	0.45
11:L:19:LEU:HD23	11:L:20:ARG:H	1.81	0.45
11:L:32:ASP:HB3	11:L:35:GLU:OE2	2.17	0.45
5:F:23:TYR:CG	12:M:11:PHE:HB2	2.52	0.45
12:M:11:PHE:HD2	12:M:11:PHE:HA	1.65	0.45
12:M:46:ARG:HD3	12:M:64:GLU:CG	2.46	0.45
12:M:40:LEU:HD12	12:M:71:LEU:CD2	2.47	0.45
13:N:85:ARG:CG	13:N:85:ARG:HH11	2.28	0.45
14:O:120:TYR:O	14:O:121:GLY:C	2.55	0.45
15:P:60:VAL:HG22	15:P:64:TRP:HE3	1.82	0.45
1:A:1014:A:O3'	21:V:14:HIS:CE1	2.70	0.45
21:V:70:LYS:O	21:V:73:GLU:HG3	2.17	0.45
1:A:1325:C:O3'	23:X:17:THR:HG21	2.17	0.45
3:D:19:G:N3	3:D:57:G:O2'	2.37	0.45
3:D:44:G:C5	3:D:45:U:C2	3.05	0.45
3:D:63:G:C6	3:D:64:C:C4	3.05	0.45
1:A:1100:C:O2	1:A:1102:A:H5'	2.16	0.45
1:A:1130:A:OP2	1:A:1131:G:OP2	2.34	0.45
1:A:1049:U:C1'	1:A:1201:A:H8	2.19	0.45
1:A:1238:A:C5	1:A:1303:C:H1'	2.50	0.45
1:A:124:G:C6	1:A:125:U:N3	2.84	0.45
1:A:1338:G:N2	1:A:1339:A:C4	2.84	0.45
1:A:1389:C:H2'	1:A:1390:U:C4'	2.47	0.45
1:A:1405:G:H1'	1:A:1519:A:H5'	1.98	0.45
1:A:1428:A:C4	1:A:1429:C:C5	3.04	0.45
1:A:1506:U:H3'	1:A:1507:A:H5'	1.99	0.45
1:A:1536:C:C2'	1:A:1537:U:C6	2.97	0.45
1:A:189:U:C2	19:T:72:ARG:NH2	2.78	0.45
1:A:356:A:O3'	1:A:367:U:H2'	2.16	0.45
1:A:718:G:N7	1:A:719:C:C4	2.85	0.45
1:A:812:C:C1'	1:A:813:U:H5	2.29	0.45
1:A:825:G:N3	1:A:825:G:C2'	2.80	0.45
1:A:828:A:H2'	1:A:829:G:O5'	2.16	0.45
1:A:865:A:H2'	1:A:866:C:O2	2.16	0.45
1:A:893:C:N3	1:A:894:G:N7	2.65	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:890:G:H22	1:A:906:G:H3'	1.81	0.45
4:E:44:LEU:HB2	4:E:45:GLN:H	1.57	0.45
4:E:69:LEU:HD22	4:E:92:TYR:N	2.31	0.45
4:E:76:GLN:O	4:E:211:ILE:HD13	2.17	0.45
5:F:35:GLU:CA	5:F:38:ARG:CG	2.76	0.45
5:F:86:VAL:HA	5:F:89:GLU:OE1	2.17	0.45
6:G:131:ARG:O	6:G:132:ARG:HB3	2.16	0.45
6:G:21:LEU:HD22	6:G:67:ILE:HG22	1.98	0.45
6:G:79:PHE:O	6:G:82:ALA:HB3	2.17	0.45
6:G:9:CYS:O	6:G:12:CYS:HB2	2.17	0.45
7:H:84:PHE:CD1	7:H:134:ALA:HA	2.52	0.45
7:H:20:GLN:O	7:H:21:ALA:C	2.54	0.45
8:I:49:ALA:HB1	20:U:80:PRO:CD	2.44	0.45
9:J:108:ALA:C	9:J:110:GLN:N	2.69	0.45
9:J:74:GLU:HG2	9:J:75:VAL:N	2.29	0.45
11:A:1131:G:OP1	11:L:20:ARG:NH1	2.49	0.45
11:L:27:THR:O	11:L:29:ASN:N	2.50	0.45
11:L:45:ALA:O	11:L:78:LYS:CB	2.63	0.45
11:L:47:LEU:O	11:L:50:LEU:HB3	2.16	0.45
13:N:32:ILE:C	13:N:40:ILE:CD1	2.85	0.45
14:O:33:ARG:CG	14:O:60:LEU:HD23	2.44	0.45
15:P:19:LEU:HD13	15:P:25:ILE:CG2	2.47	0.45
18:S:4:ILE:CG2	18:S:21:VAL:HG12	2.47	0.45
19:T:45:HIS:HE1	19:T:47:PRO:HA	1.82	0.45
1:A:266:G:C8	19:T:67:LYS:HE2	2.52	0.45
19:T:18:THR:CB	19:T:69:LYS:NZ	2.79	0.45
1:A:192:U:O4'	22:W:103:GLY:HA2	2.15	0.45
1:A:1163:C:C2'	1:A:1164:G:C5'	2.84	0.45
1:A:346:G:O4'	1:A:346:G:OP1	2.35	0.45
1:A:1107:C:H2'	1:A:1107:C:O2	2.17	0.45
1:A:1115:C:C4	1:A:1116:C:C4	3.05	0.45
1:A:1148:U:H5'	11:L:5:TYR:OH	2.17	0.45
1:A:1210:C:C5'	1:A:1214:C:H42	2.29	0.45
1:A:1443:G:O2'	1:A:1447:G:OP1	2.35	0.45
1:A:266:G:C2'	1:A:267:C:OP2	2.65	0.45
1:A:267:C:H2'	1:A:268:C:C6	2.52	0.45
1:A:290:C:H2'	1:A:291:C:H5'	1.98	0.45
1:A:294:U:O2	1:A:294:U:C2'	2.57	0.45
1:A:317:G:C2'	1:A:318:G:O5'	2.65	0.45
1:A:357:G:P	1:A:367:U:H2'	2.57	0.45
1:A:423:G:N2	1:A:424:G:C5	2.85	0.45
1:A:27:G:C2	1:A:557:G:N3	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:573:A:OP2	1:A:573:A:H3'	2.17	0.45
1:A:702:A:C2'	1:A:703:G:OP1	2.63	0.45
1:A:80:G:H2'	1:A:81:G:C1'	2.44	0.45
1:A:934:C:H5	1:A:1344:C:N1	2.14	0.45
1:A:99:C:C6	1:A:99:C:H3'	2.51	0.45
2:C:38:A:C4	2:C:39:C:C6	3.04	0.45
2:C:38:A:H2'	2:C:39:C:O5'	2.17	0.45
2:C:76:A:P	2:C:76:A:O3'	2.74	0.45
4:E:175:ARG:O	4:E:178:ARG:N	2.50	0.45
4:E:205:ASP:OD1	4:E:206:ASP:OD1	2.34	0.45
4:E:28:PHE:HE2	4:E:189:ASP:O	2.00	0.45
4:E:61:LEU:HB2	4:E:64:ARG:NH1	2.31	0.45
4:E:75:LYS:CE	4:E:75:LYS:CA	2.95	0.45
5:F:189:ALA:HB1	5:F:196:LEU:CG	2.45	0.45
5:F:94:LEU:O	5:F:95:THR:OG1	2.32	0.45
6:G:132:ARG:CG	6:G:132:ARG:NH1	2.71	0.45
6:G:177:ASP:O	6:G:177:ASP:OD1	2.35	0.45
6:G:153:ARG:CG	6:G:181:MET:HE3	2.47	0.45
6:G:62:GLN:O	6:G:66:ARG:CG	2.65	0.45
8:I:40:VAL:HG22	8:I:40:VAL:O	2.16	0.45
10:K:69:ARG:CZ	10:K:74:PRO:O	2.64	0.45
12:M:61:GLU:CG	16:Q:58:LYS:NZ	2.78	0.45
13:N:27:ASN:N	13:N:56:GLY:CA	2.80	0.45
13:N:85:ARG:HA	13:N:85:ARG:HD3	1.33	0.45
14:O:69:TYR:CE2	14:O:71:PRO:CA	2.99	0.45
14:O:85:ILE:HG13	14:O:87:GLY:N	2.32	0.45
14:O:85:ILE:CD1	14:O:99:HIS:H	2.29	0.45
1:A:1227:A:O2'	15:P:115:LYS:CG	2.65	0.45
16:Q:13:THR:O	16:Q:14:PRO:C	2.54	0.45
17:R:84:LYS:HB3	17:R:85:LEU:HD12	1.98	0.45
19:T:35:VAL:HG13	19:T:36:ILE:N	2.32	0.45
19:T:9:VAL:O	19:T:9:VAL:HG13	2.17	0.45
20:U:58:LEU:HD22	20:U:62:GLU:CG	2.47	0.45
22:W:16:HIS:O	22:W:19:SER:N	2.50	0.45
3:D:63:G:N2	3:D:64:C:C2	2.85	0.45
1:A:748:C:O2'	1:A:749:C:C5'	2.65	0.45
1:A:1166:G:C2	1:A:1169:A:P	3.10	0.45
1:A:191(C):G:C2'	1:A:191(D):U:C6	2.90	0.45
1:A:1189:C:P	1:A:1189:C:H6	2.40	0.45
1:A:962:C:O3'	1:A:1200:C:N4	2.48	0.45
1:A:1347:G:HO2'	1:A:1348:U:P	2.37	0.45
1:A:1440:C:OP2	1:A:1440:C:C6	2.70	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1470:G:H2'	1:A:1471:G:O5'	2.17	0.45
1:A:150:C:H2'	1:A:151:A:O4'	2.16	0.45
1:A:155:C:H2'	1:A:156:G:O4'	2.17	0.45
1:A:186(B):C:C2'	1:A:186(C):G:O5'	2.65	0.45
1:A:232:G:C8	1:A:233:C:H5	2.35	0.45
1:A:451:A:C8	1:A:481:G:C6	3.05	0.45
1:A:439:A:H5''	1:A:493:G:H22	1.82	0.45
1:A:522:C:N4	1:A:523:A:C6	2.84	0.45
1:A:64:G:H5'	1:A:66:G:OP1	2.17	0.45
1:A:687:A:H1'	1:A:688:G:O4'	2.17	0.45
4:E:170:GLU:HA	4:E:170:GLU:OE1	2.16	0.45
4:E:175:ARG:O	4:E:177:ALA:N	2.50	0.45
6:G:83:SER:HA	6:G:89:THR:CG2	2.47	0.45
6:G:92:VAL:HG12	6:G:96:LEU:CD1	2.47	0.45
7:H:95:ALA:O	7:H:96:PRO:O	2.35	0.45
9:J:17:VAL:HG21	9:J:44:TYR:CZ	2.51	0.45
9:J:22:LEU:HD13	9:J:97:GLN:HE21	1.82	0.45
10:K:116:LYS:O	10:K:119:LEU:HD11	2.17	0.45
10:K:120:THR:OG1	10:K:122:ARG:NH1	2.49	0.45
10:K:6:ILE:CD1	10:K:7:ALA:N	2.80	0.45
10:K:90:GLY:CA	14:O:7:ILE:HG13	2.47	0.45
11:L:46:ALA:HA	11:L:78:LYS:HB2	1.99	0.45
12:M:50:ILE:H	16:Q:41:ARG:CD	2.30	0.45
12:M:9:ARG:HD2	12:M:95:GLU:OE2	2.15	0.45
13:N:123:LYS:HA	13:N:126:ARG:HB2	1.99	0.45
13:N:22:HIS:O	13:N:28:THR:CG2	2.60	0.45
13:N:62:GLN:OE1	13:N:63:LEU:CB	2.65	0.45
13:N:62:GLN:OE1	13:N:63:LEU:HB2	2.16	0.45
13:N:69:ALA:O	13:N:70:LYS:C	2.55	0.45
1:A:539:A:OP1	14:O:114:LYS:HE2	2.16	0.45
14:O:47:LYS:N	14:O:48:PRO:HD3	2.31	0.45
14:O:84:LEU:O	14:O:100:ILE:HA	2.17	0.45
15:P:37:THR:OG1	15:P:56:LEU:HD23	2.17	0.45
1:A:1321:C:H4'	15:P:87:TYR:OH	2.16	0.45
16:Q:36:PHE:O	16:Q:36:PHE:HD1	1.99	0.45
18:S:4:ILE:HD11	18:S:64:ALA:C	2.37	0.45
19:T:7:THR:CG2	19:T:57:VAL:O	2.60	0.45
22:W:27:LYS:O	22:W:28:ALA:C	2.53	0.45
22:W:49:ALA:O	22:W:53:LEU:CG	2.60	0.45
22:W:53:LEU:O	22:W:57:ARG:HG3	2.16	0.45
22:W:84:LEU:CD1	22:W:88:VAL:CG2	2.94	0.45
3:D:56:C:O5'	3:D:57:G:N7	2.49	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1018:C:H2'	1:A:1019:C:C5'	2.46	0.45
1:A:68:G:H1	1:A:101:A:H2	1.63	0.45
1:A:1043:C:H2'	1:A:1044:A:C5'	2.47	0.45
1:A:1074:G:O2'	1:A:1075:C:H5'	2.17	0.45
1:A:1124:G:H1	1:A:1147:C:H42	1.64	0.45
1:A:1141:C:C2	1:A:1142:G:C8	3.05	0.45
1:A:1118:C:N3	1:A:1156:G:N2	2.64	0.45
1:A:1157:A:H5''	1:A:1158:C:OP1	2.17	0.45
1:A:115:G:C6	1:A:313:A:N1	2.85	0.45
1:A:1157:A:H1'	1:A:1181:G:N2	2.31	0.45
1:A:1286:A:C5'	23:X:25:LYS:CG	2.94	0.45
1:A:1313:U:O4	21:V:4:SER:OG	2.21	0.45
1:A:1345:U:C5'	1:A:1346:A:OP1	2.62	0.45
1:A:1365:G:C6	1:A:1366:C:C4	3.05	0.45
1:A:1515:C:O2'	1:A:1516:G:C5'	2.64	0.45
1:A:1523:G:C6	1:A:1524:C:N4	2.84	0.45
1:A:186(A):C:O2'	1:A:186(B):C:H5'	2.16	0.45
1:A:130:A:N1	1:A:264:U:H1'	2.32	0.45
1:A:300:A:H2'	1:A:301:G:C4'	2.46	0.45
1:A:321:A:H62	1:A:328:C:C2'	2.29	0.45
1:A:407:G:OP1	6:G:115:ARG:HD2	2.17	0.45
1:A:428:G:O2'	1:A:429:U:P	2.74	0.45
1:A:671:G:N3	1:A:671:G:C2'	2.77	0.45
1:A:761:G:N2	1:A:762:C:C2	2.84	0.45
1:A:815:A:C8	1:A:819:A:C2	3.05	0.45
1:A:86:U:OP2	1:A:87:A:N1	2.49	0.45
1:A:885:G:C2	1:A:913:A:C2	3.05	0.45
1:A:921:U:H2'	1:A:922:G:O4'	2.17	0.45
1:A:925:G:N1	1:A:1392:G:N1	2.65	0.45
1:A:963:G:H2'	1:A:964:A:C8	2.52	0.45
3:D:30:G:C6	3:D:31:A:N6	2.84	0.45
4:E:100:GLY:C	4:E:108:ILE:HD11	2.37	0.45
4:E:114:ARG:HG3	4:E:115:LEU:H	1.79	0.45
4:E:161:ALA:HA	4:E:183:PRO:CG	2.47	0.45
4:E:162:ILE:H	4:E:162:ILE:HD13	1.82	0.45
5:F:120:VAL:O	5:F:123:GLN:HB2	2.17	0.45
5:F:147:LYS:HB2	5:F:203:PHE:CG	2.52	0.45
5:F:11:ARG:O	5:F:14:ILE:N	2.49	0.45
6:G:113:SER:HB3	6:G:116:GLN:H	1.81	0.45
6:G:152:SER:O	6:G:155:LEU:HG	2.15	0.45
6:G:3:ARG:HH21	6:G:71:SER:CB	2.29	0.45
7:H:87:SER:HB3	7:H:131:ILE:CD1	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:33:VAL:HG12	7:H:34:VAL:N	2.31	0.45
8:I:11:ASN:OD1	8:I:11:ASN:C	2.55	0.45
8:I:33:TYR:CE2	8:I:75:LEU:N	2.85	0.45
9:J:89:MET:O	9:J:90:GLU:C	2.55	0.45
10:K:101:PRO:HG2	10:K:102:ARG:N	2.32	0.45
10:K:114:THR:C	10:K:116:LYS:N	2.70	0.45
10:K:129:VAL:CG2	10:K:130:GLY:H	2.14	0.45
10:K:23:SER:O	10:K:24:THR:CB	2.65	0.45
10:K:77:GLU:HB3	10:K:78:GLN:H	1.45	0.45
13:N:91:ARG:O	13:N:94:ALA:HB3	2.17	0.45
15:P:108:ARG:NH1	15:P:112:GLY:N	2.65	0.45
1:A:1114:C:O2'	16:Q:60:SER:HB2	2.16	0.45
19:T:59:ILE:CD1	19:T:72:ARG:C	2.85	0.45
20:U:45:SER:N	20:U:51:LEU:HD11	2.32	0.45
20:U:66:LEU:CG	20:U:67:ALA:H	2.30	0.45
20:U:66:LEU:CG	20:U:67:ALA:N	2.79	0.45
21:V:62:ILE:HG12	21:V:63:THR:N	2.31	0.45
22:W:78:ALA:O	22:W:81:LYS:N	2.49	0.45
15:P:40:ASN:C	15:P:42:ALA:H	2.20	0.45
8:I:32:ASN:ND2	8:I:32:ASN:N	2.64	0.45
1:A:1015:A:C5	1:A:1016:A:C6	3.04	0.45
1:A:1075:C:H4'	1:A:1101:A:H62	1.77	0.45
1:A:1159:U:O2	1:A:1159:U:C2'	2.65	0.45
1:A:1202:G:C1'	16:Q:29:ARG:CD	2.85	0.45
1:A:1277:C:O2'	1:A:1282:C:C2	2.70	0.45
1:A:1308:U:H2'	1:A:1309:G:H8	1.81	0.45
1:A:1521:G:C2'	1:A:1522:U:O5'	2.65	0.45
1:A:301:G:H2'	1:A:301:G:N3	2.30	0.45
1:A:295:C:N4	1:A:303:A:N1	2.64	0.45
1:A:513:C:N3	1:A:514:C:C5	2.84	0.45
1:A:559:A:H5'	1:A:560:U:H5'	1.99	0.45
1:A:589:C:H5'	10:K:29:SER:HB2	1.99	0.45
1:A:702:A:H2'	1:A:703:G:OP1	2.17	0.45
1:A:724:G:N3	1:A:724:G:H2'	2.32	0.45
1:A:781:A:H2'	1:A:782:A:O4'	2.17	0.45
1:A:785:G:C2	1:A:786:G:C8	3.05	0.45
1:A:818:G:O2'	1:A:819:A:OP1	2.29	0.45
1:A:880:C:H2'	1:A:881:G:O5'	2.17	0.45
1:A:1339:A:H2	2:C:31:G:HO2'	1.57	0.45
2:C:31:G:N1	2:C:40:C:N4	2.65	0.45
4:E:101:MET:HA	4:E:108:ILE:HG21	1.98	0.45
4:E:144:ARG:HA	4:E:147:LYS:HB2	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:179:LYS:C	4:E:181:PHE:H	2.21	0.45
4:E:75:LYS:HZ2	4:E:75:LYS:HA	1.82	0.45
4:E:79:ASP:HA	4:E:82:ARG:HB2	1.99	0.45
5:F:11:ARG:H	5:F:11:ARG:HG2	1.54	0.45
5:F:127:ARG:C	5:F:128:PHE:CD1	2.90	0.45
6:G:117:ALA:O	6:G:118:ARG:C	2.55	0.45
6:G:125:HIS:HB3	6:G:152:SER:HB2	1.95	0.45
6:G:128:VAL:HG12	6:G:129:ASN:H	1.79	0.45
1:A:425:G:H4'	6:G:45:GLN:OE1	2.16	0.45
6:G:95:GLY:O	6:G:98:GLU:N	2.50	0.45
7:H:91:LEU:CD1	7:H:110:LEU:HD11	2.46	0.45
7:H:78:HIS:CE1	7:H:142:LEU:HA	2.51	0.45
7:H:41:VAL:CG2	7:H:113:ALA:HA	2.46	0.45
7:H:75:THR:OG1	7:H:93:PRO:HA	2.17	0.45
7:H:80:ILE:HD12	7:H:91:LEU:O	2.17	0.45
9:J:125:MET:O	9:J:126:ASP:C	2.54	0.45
9:J:72:ARG:NH2	9:J:138:LYS:HZ1	2.07	0.45
9:J:15:ASP:HB2	9:J:23:VAL:CB	2.47	0.45
9:J:23:VAL:HG13	9:J:43:PHE:HZ	1.77	0.45
10:K:36:LEU:C	10:K:39:LEU:HB2	2.38	0.45
10:K:88:LYS:O	10:K:91:ARG:N	2.49	0.45
12:M:98:ILE:HD12	12:M:98:ILE:N	2.32	0.45
13:N:21:ILE:HG21	13:N:98:LEU:HD11	1.99	0.45
13:N:73:MET:O	13:N:74:ALA:C	2.55	0.45
14:O:115:LYS:O	14:O:116:SER:C	2.54	0.45
14:O:43:VAL:HG13	14:O:44:THR:H	1.82	0.45
14:O:93:LEU:N	14:O:93:LEU:CD2	2.72	0.45
1:A:1308:U:H5'	15:P:110:ARG:HH12	1.82	0.45
15:P:39:ILE:HG13	15:P:39:ILE:O	2.17	0.45
16:Q:41:ARG:O	16:Q:44:LEU:CD2	2.65	0.45
1:A:754:C:C1'	17:R:69:TYR:CG	2.98	0.45
19:T:9:VAL:HG13	19:T:11:VAL:CG2	2.45	0.45
21:V:38:SER:OG	21:V:71:LEU:CD1	2.65	0.45
22:W:40:ALA:HB2	22:W:55:ILE:HG21	1.99	0.45
3:D:58:A:O2'	3:D:60:U:C5	2.69	0.45
1:A:525:C:H3'	1:A:525:C:H6	1.81	0.45
1:A:1063:C:H3'	1:A:1064:G:H5''	1.98	0.45
1:A:1089:G:H2'	1:A:1089:G:N3	2.31	0.45
1:A:1141:C:H2'	1:A:1142:G:H8	1.81	0.45
1:A:120:A:C2	1:A:122:G:C4	3.05	0.45
1:A:1235:U:H5''	23:X:3:LYS:HB2	1.99	0.45
1:A:1241:G:C4	1:A:1242:C:C5	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1293:G:H2'	1:A:1294:G:C8	2.52	0.45
1:A:1320:C:C2	21:V:72:GLY:HA3	2.51	0.45
1:A:132:C:H5'	1:A:262:A:C1'	2.44	0.45
1:A:225:C:O2	1:A:226:G:O4'	2.35	0.45
1:A:11:G:H21	1:A:24:U:C1'	2.30	0.45
1:A:287:U:O2	1:A:288:A:C8	2.70	0.45
1:A:108:G:OP1	1:A:326:G:N2	2.49	0.45
1:A:50:A:C6	1:A:361:G:H4'	2.51	0.45
1:A:522:C:N4	1:A:523:A:H62	2.14	0.45
1:A:593:G:C2'	1:A:594:G:H5'	2.47	0.45
1:A:648:A:H2'	1:A:649:G:H5'	1.98	0.45
1:A:657:G:C6	1:A:658:G:N7	2.85	0.45
1:A:689:C:O3'	1:A:705:U:O2'	2.35	0.45
1:A:701:C:O2	1:A:703:G:N1	2.50	0.45
1:A:756:C:C1'	10:K:1:MET:HE3	2.47	0.45
1:A:781:A:N6	1:A:802:A:N9	2.65	0.45
1:A:21:G:N2	1:A:916:G:C6	2.82	0.45
1:A:91:C:C2	1:A:92:G:N7	2.85	0.45
1:A:933:G:O5'	1:A:933:G:H8	1.99	0.45
2:C:40:C:C2'	2:C:41:C:H5'	2.35	0.45
4:E:157:ARG:C	4:E:158:LEU:HD23	2.37	0.45
4:E:222:ILE:HB	4:E:226:ARG:HH21	1.81	0.45
4:E:25:ASN:HD21	4:E:27:LYS:CB	2.29	0.45
5:F:145:GLY:O	5:F:146:ALA:CB	2.64	0.45
6:G:180:GLY:O	6:G:181:MET:C	2.54	0.45
6:G:205:GLU:O	6:G:206:PHE:C	2.55	0.45
6:G:54:TYR:C	6:G:56:VAL:N	2.69	0.45
7:H:77:PRO:O	7:H:78:HIS:O	2.35	0.45
9:J:12:LEU:HB2	9:J:24:THR:HG21	1.99	0.45
9:J:9:VAL:HG21	9:J:94:ARG:HD3	1.99	0.45
10:K:22:GLU:C	10:K:63:LEU:HD11	2.37	0.45
10:K:74:PRO:O	10:K:75:ARG:C	2.55	0.45
10:K:10:LEU:HD11	10:K:85:ARG:CB	2.45	0.45
11:L:118:LYS:HD3	11:L:118:LYS:HA	1.50	0.45
11:L:75:ASP:O	11:L:78:LYS:HB3	2.17	0.45
12:M:5:ARG:CG	12:M:5:ARG:HH11	2.28	0.45
13:N:123:LYS:O	13:N:126:ARG:HB2	2.17	0.45
13:N:42:TRP:CZ3	13:N:47:VAL:CG1	2.98	0.45
13:N:84:VAL:HG23	13:N:111:ASP:H	1.81	0.45
14:O:110:VAL:HG23	14:O:122:THR:OG1	2.17	0.45
14:O:42:THR:HA	14:O:55:VAL:HG23	1.98	0.45
14:O:84:LEU:C	14:O:84:LEU:HD23	2.37	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:117:VAL:O	15:P:118:ALA:HB2	2.17	0.45
17:R:65:ARG:CZ	17:R:65:ARG:HB3	2.46	0.45
17:R:65:ARG:O	17:R:68:ARG:CB	2.55	0.45
17:R:79:ARG:CB	17:R:79:ARG:CZ	2.95	0.45
19:T:31:LEU:HD11	19:T:32:TYR:CE2	2.52	0.45
20:U:30:ASP:OD2	20:U:32:ARG:HB2	2.17	0.45
20:U:46:GLU:O	20:U:48:GLY:N	2.44	0.45
21:V:49:ILE:CD1	21:V:51:VAL:HG22	2.47	0.45
21:V:62:ILE:CG1	21:V:63:THR:N	2.80	0.45
21:V:70:LYS:O	21:V:72:GLY:N	2.50	0.45
21:V:78:ARG:H	21:V:78:ARG:HG2	1.55	0.45
1:A:191(F):U:O2	22:W:105:SER:HB2	2.17	0.45
22:W:93:GLU:C	22:W:95:ALA:H	2.19	0.45
1:A:1004:A:H5''	1:A:1025:U:N3	2.29	0.45
1:A:999:U:C4	1:A:1042:G:N1	2.85	0.45
1:A:142:G:H2'	1:A:143:A:H8	1.81	0.45
1:A:1108:G:C5	1:A:1109:C:C4	3.05	0.44
1:A:1260:C:H4'	1:A:1284:C:H5''	1.98	0.44
1:A:129(A):G:N2	1:A:191(A):G:N7	2.65	0.44
1:A:1410:G:H2'	1:A:1411:C:C6	2.51	0.44
1:A:1475:G:C2'	1:A:1476:G:O5'	2.65	0.44
1:A:1393:U:HO2'	1:A:1501:C:HO2'	1.65	0.44
1:A:242:C:C2	1:A:285:G:N2	2.85	0.44
1:A:378:G:N3	1:A:379:C:C5	2.85	0.44
1:A:468:A:C5	1:A:474:G:N7	2.84	0.44
1:A:483:C:OP2	1:A:484:G:C3'	2.59	0.44
1:A:494:U:H2'	1:A:495:A:O5'	2.17	0.44
1:A:581:G:C6	1:A:758:G:C8	3.05	0.44
1:A:602:A:C6	1:A:637:G:C6	3.04	0.44
1:A:698:G:C2	1:A:699:C:C2	3.05	0.44
1:A:68:G:C2	1:A:69:G:H1'	2.52	0.44
1:A:706:A:O2'	13:N:29:ILE:CD1	2.66	0.44
1:A:781:A:H61	1:A:802:A:H1'	1.82	0.44
1:A:835:U:H2'	1:A:836:G:H8	1.82	0.44
1:A:745:C:H4'	1:A:836:G:N2	2.32	0.44
1:A:854:G:C6	1:A:855:G:N7	2.85	0.44
1:A:85:U:C4	1:A:86:U:C5	3.05	0.44
1:A:885:G:C2	1:A:913:A:N1	2.85	0.44
1:A:950:U:O4'	1:A:971:G:C2	2.69	0.44
1:A:9:G:O5'	7:H:122:GLU:OE1	2.35	0.44
2:C:44:A:C6	2:C:45:G:C2	3.05	0.44
4:E:160:ASP:HA	4:E:182:ILE:CG2	2.46	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:208:ILE:HG21	4:E:239:VAL:CG1	2.36	0.44
4:E:29:ALA:O	4:E:32:ILE:HB	2.17	0.44
1:A:1112:C:H1'	5:F:179:ARG:HH22	1.81	0.44
5:F:52:LEU:O	5:F:53:ALA:CB	2.65	0.44
5:F:63:ASN:O	5:F:64:VAL:HG23	2.16	0.44
6:G:110:PHE:CE1	6:G:148:VAL:HG23	2.52	0.44
6:G:172:PRO:CG	6:G:193:ASP:HB2	2.46	0.44
1:A:923:A:C5'	7:H:21:ALA:HB2	2.47	0.44
7:H:16:THR:CG2	7:H:28:PHE:HA	2.34	0.44
1:A:1376:U:OP1	9:J:98:SER:CB	2.65	0.44
1:A:826:C:H4'	10:K:12:ARG:HB3	1.99	0.44
11:L:8:GLY:O	11:L:15:ALA:HB3	2.18	0.44
11:L:28:VAL:HG23	11:L:32:ASP:C	2.38	0.44
12:M:61:GLU:HG2	12:M:62:HIS:H	1.82	0.44
13:N:40:ILE:HG12	13:N:41:THR:N	2.33	0.44
14:O:27:LEU:CD2	14:O:33:ARG:HD3	2.38	0.44
14:O:78:GLN:H	14:O:81:SER:CB	2.30	0.44
15:P:11:ARG:C	15:P:13:LYS:N	2.71	0.44
16:Q:16:PHE:O	16:Q:18:VAL:N	2.50	0.44
16:Q:24:CYS:HB3	16:Q:28:GLY:O	2.17	0.44
18:S:16:HIS:C	18:S:17:TYR:HD1	2.20	0.44
20:U:45:SER:HB3	20:U:51:LEU:CD1	2.37	0.44
22:W:38:LYS:O	22:W:41:ILE:N	2.50	0.44
22:W:63:ILE:HD13	22:W:80:ARG:HB2	1.99	0.44
22:W:72:LEU:HD22	22:W:77:ALA:N	2.32	0.44
3:D:6:G:HO2'	3:D:7:G:C4'	2.30	0.44
1:A:1037:C:C4	1:A:1038:C:C5	3.05	0.44
6:G:47:ARG:NH1	6:G:47:ARG:CB	2.64	0.44
4:E:138:LEU:HG	4:E:138:LEU:H	1.34	0.44
1:A:434:U:H2'	1:A:435:C:H6	1.81	0.44
14:O:126:LYS:CD	14:O:126:LYS:H	2.30	0.44
15:P:122:LYS:O	15:P:123:ALA:HB2	2.17	0.44
1:A:1056:U:O2	1:A:1056:U:H2'	2.16	0.44
1:A:1153:C:N4	1:A:1154:G:O6	2.51	0.44
1:A:1302:U:HO2'	1:A:1303:C:P	2.33	0.44
1:A:1305:G:N2	1:A:1332:A:OP2	2.50	0.44
1:A:1386:G:O2'	1:A:1387:G:C5'	2.65	0.44
1:A:1499:A:H8	1:A:1499:A:O5'	2.00	0.44
1:A:1498:U:O2'	1:A:1499:A:O5'	2.35	0.44
1:A:1518:A:C2	1:A:1519:A:C2	3.05	0.44
1:A:194:C:C2'	1:A:195:A:C5'	2.88	0.44
1:A:20:U:C4	1:A:21:G:C2	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:38:G:C4	1:A:397:A:N6	2.86	0.44
1:A:411:A:C5	1:A:429:U:C5	3.06	0.44
1:A:47:C:C5	1:A:365:U:O2	2.70	0.44
1:A:509:A:O2'	1:A:510:A:O4'	2.26	0.44
1:A:553:A:C2	1:A:554:C:C2	3.05	0.44
1:A:587:G:H1'	1:A:755:G:N2	2.32	0.44
1:A:644:G:C5	1:A:645:C:C5	3.05	0.44
1:A:713:G:C2'	1:A:714:G:C8	2.90	0.44
1:A:725:G:H2'	1:A:726:C:H6	1.82	0.44
1:A:582:U:N3	1:A:760:G:N1	2.66	0.44
1:A:961:U:H6	1:A:983:A:C5	2.30	0.44
2:C:5:G:N1	2:C:6:G:C5	2.86	0.44
4:E:114:ARG:O	4:E:117:GLU:OE2	2.34	0.44
5:F:11:ARG:CZ	5:F:11:ARG:HB3	2.46	0.44
5:F:47:LEU:CD1	5:F:83:ARG:NH2	2.72	0.44
5:F:50:ALA:C	5:F:72:LYS:HD2	2.37	0.44
5:F:55:VAL:HG11	5:F:57:ILE:HD11	1.99	0.44
6:G:13:ARG:NH1	6:G:36:ARG:HB3	2.32	0.44
6:G:88:VAL:CG1	6:G:91:SER:H	2.28	0.44
7:H:105:VAL:O	7:H:106:PRO:C	2.55	0.44
7:H:109:ILE:HD12	7:H:135:THR:CG2	2.47	0.44
7:H:89:ILE:HG12	7:H:131:ILE:CD1	2.47	0.44
9:J:113:GLU:OE1	9:J:118:VAL:C	2.56	0.44
9:J:31:MET:CG	9:J:32:ARG:N	2.79	0.44
9:J:77:SER:C	9:J:156:TRP:CH2	2.89	0.44
10:K:126:LYS:HZ1	10:K:127:LEU:CB	2.23	0.44
12:M:12:ASP:O	12:M:16:LEU:HD23	2.18	0.44
13:N:53:SER:O	13:N:54:ARG:C	2.55	0.44
13:N:88:GLY:O	13:N:90:GLY:N	2.41	0.44
21:V:49:ILE:O	21:V:49:ILE:HG13	2.15	0.44
21:V:62:ILE:CG1	21:V:63:THR:H	2.30	0.44
22:W:89:ARG:HH21	22:W:104:LEU:HD13	1.81	0.44
22:W:90:GLN:O	22:W:93:GLU:HB2	2.17	0.44
3:D:68:U:C2	3:D:69:C:C5	3.05	0.44
1:A:1038:C:H2'	1:A:1039:C:C5	2.52	0.44
1:A:434:U:O5'	1:A:434:U:H6	2.00	0.44
1:A:431:A:N3	1:A:431:A:H2'	2.32	0.44
1:A:1046:A:C2	1:A:1047:G:O4'	2.70	0.44
1:A:1065:U:H5	1:A:1190:G:C4	2.36	0.44
1:A:17:U:C4'	1:A:1080:A:H1'	2.47	0.44
1:A:1085:U:O2	1:A:1094:G:C6	2.70	0.44
1:A:1238:A:N7	1:A:1301:U:O4	2.50	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1314:C:C6	21:V:6:LYS:CG	2.97	0.44
1:A:1341:U:H3'	1:A:1341:U:C6	2.53	0.44
1:A:1413:A:N6	1:A:1488:G:N1	2.64	0.44
1:A:1424:C:C2	1:A:1425:U:C6	3.06	0.44
1:A:1443:G:HO2'	1:A:1447:G:P	2.39	0.44
1:A:1447:G:C4	1:A:1448:C:C5	3.05	0.44
1:A:1480:G:C2'	1:A:1481:U:C5'	2.95	0.44
1:A:1407:C:C2	1:A:1494:G:N2	2.85	0.44
1:A:1515:C:C2'	1:A:1516:G:O5'	2.65	0.44
1:A:17:U:O2'	1:A:18:C:C5'	2.65	0.44
1:A:246:A:C2'	1:A:247:G:OP2	2.65	0.44
1:A:11:G:N2	1:A:24:U:C1'	2.80	0.44
1:A:408:A:H5'	6:G:116:GLN:HG2	1.99	0.44
1:A:503:C:O2'	1:A:510:A:N1	2.38	0.44
1:A:549:C:C4	1:A:550:G:N7	2.85	0.44
1:A:557:G:H2'	1:A:558:G:N9	2.32	0.44
1:A:570:G:O5'	1:A:570:G:C8	2.70	0.44
1:A:754:C:O2'	17:R:69:TYR:HB2	2.17	0.44
1:A:781:A:C2'	1:A:782:A:C5'	2.86	0.44
1:A:881:G:C6	1:A:882:C:C4	3.05	0.44
1:A:963:G:H2'	1:A:964:A:H8	1.83	0.44
2:C:24:U:C2	2:C:25:C:C6	3.05	0.44
3:D:32:C:C2'	3:D:33:U:H5'	2.47	0.44
4:E:132:LYS:O	4:E:136:VAL:HG23	2.18	0.44
4:E:97:TRP:CE3	4:E:172:ILE:HB	2.50	0.44
4:E:235:SER:O	4:E:238:LEU:HB3	2.17	0.44
4:E:69:LEU:CD2	4:E:91:PRO:HB2	2.45	0.44
5:F:84:ILE:HG13	5:F:101:LEU:CG	2.48	0.44
5:F:124:ILE:HG23	5:F:130:VAL:HG21	2.00	0.44
5:F:160:ALA:O	5:F:161:GLU:C	2.56	0.44
5:F:174:PRO:HD2	5:F:203:PHE:CZ	2.52	0.44
5:F:84:ILE:HG13	5:F:101:LEU:CB	2.48	0.44
6:G:125:HIS:HB3	6:G:152:SER:OG	2.16	0.44
6:G:108:LEU:HD23	6:G:170:VAL:HG11	1.97	0.44
6:G:78:LEU:HD21	6:G:96:LEU:CD2	2.47	0.44
8:I:12:PRO:CG	8:I:13:ASN:N	2.81	0.44
9:J:69:VAL:CG2	9:J:104:LEU:HD11	2.47	0.44
9:J:71:PRO:CG	9:J:91:VAL:HG11	2.48	0.44
11:L:19:LEU:CD2	11:L:59:PHE:CD2	2.97	0.44
11:L:26:VAL:O	11:L:31:GLN:O	2.35	0.44
11:L:96:LEU:HD12	11:L:101:PHE:HE1	1.83	0.44
1:A:718:G:H4'	13:N:117:ASN:HD21	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:47:VAL:O	13:N:49:GLY:N	2.42	0.44
13:N:79:SER:O	13:N:80:VAL:HG23	2.17	0.44
13:N:85:ARG:HD2	13:N:113:PRO:CD	2.47	0.44
15:P:91:ARG:HD3	15:P:96:LEU:HD11	1.97	0.44
17:R:76:GLU:HG3	17:R:77:ARG:H	1.79	0.44
1:A:468:A:H1'	18:S:82:GLN:HE21	1.83	0.44
19:T:58:GLU:OE1	19:T:75:ARG:HB3	2.17	0.44
21:V:18:LYS:C	21:V:18:LYS:HE3	2.36	0.44
21:V:44:MET:HB2	21:V:67:VAL:CG1	2.47	0.44
3:D:63:G:C2	3:D:64:C:N3	2.86	0.44
1:A:1039:C:C2	1:A:1040:U:C5	3.05	0.44
1:A:1191:A:H5''	5:F:4:LYS:CE	2.47	0.44
1:A:1230:C:C2'	1:A:1231:G:H5'	2.46	0.44
1:A:1240:U:C1'	9:J:42:ILE:HD11	2.47	0.44
1:A:1326:C:N3	1:A:1327:C:C5	2.84	0.44
1:A:945:G:C2	1:A:1337:G:C4	3.06	0.44
1:A:1368:G:N2	1:A:1369:C:H1'	2.33	0.44
1:A:1287:A:N6	1:A:1371:G:C4'	2.77	0.44
1:A:1371:G:O6	1:A:1372:U:C4	2.70	0.44
1:A:1388:C:O2'	1:A:1389:C:H5'	2.17	0.44
1:A:1472:U:C3'	1:A:1472:U:C6	3.00	0.44
1:A:1507:A:C2	1:A:1530:G:C1'	3.00	0.44
1:A:1507:A:N1	1:A:1530:G:C8	2.84	0.44
1:A:1530:G:O6	1:A:1531:A:C2	2.71	0.44
1:A:1541:U:C2	2:C:35:A:N1	2.85	0.44
1:A:192:U:C2'	1:A:193:C:O5'	2.66	0.44
1:A:253:U:OP2	19:T:67:LYS:HE3	2.18	0.44
1:A:39:G:H2'	1:A:40:C:O5'	2.17	0.44
1:A:533:A:HO2'	1:A:534:U:P	2.41	0.44
1:A:543:C:C2	1:A:544:G:N7	2.86	0.44
1:A:713:G:H2'	1:A:714:G:N7	2.31	0.44
1:A:73:G:C6	1:A:74:C:N4	2.85	0.44
1:A:754:C:O2	1:A:754:C:C3'	2.65	0.44
1:A:777:A:O2'	1:A:778:G:H5'	2.17	0.44
1:A:779:C:O2'	1:A:780:A:H5'	2.17	0.44
1:A:790:A:C6	1:A:791:G:C4	3.06	0.44
1:A:792:A:C2	1:A:794:A:C6	3.06	0.44
1:A:931:C:C2'	1:A:931:C:O2	2.65	0.44
1:A:962:C:N4	1:A:963:G:C6	2.86	0.44
2:C:61:C:C2'	2:C:62:C:O5'	2.66	0.44
3:D:32:C:H2'	3:D:33:U:H5'	2.00	0.44
4:E:110:GLN:O	4:E:113:HIS:HB3	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:154:LEU:O	4:E:156:LYS:N	2.50	0.44
4:E:9:GLU:CG	4:E:217:ARG:HH21	2.27	0.44
4:E:215:LEU:HD22	4:E:218:ALA:HB3	1.99	0.44
4:E:57:PHE:HD1	4:E:199:TYR:CE1	2.33	0.44
4:E:69:LEU:HB2	4:E:159:PRO:CB	2.47	0.44
5:F:156:ARG:HE	5:F:193:TYR:HD1	1.65	0.44
6:G:108:LEU:C	6:G:110:PHE:H	2.20	0.44
7:H:50:GLU:HB2	7:H:53:LEU:HD23	1.98	0.44
7:H:53:LEU:O	7:H:57:LYS:CB	2.65	0.44
8:I:45:LEU:HD23	8:I:58:GLY:C	2.37	0.44
8:I:91:VAL:HG21	20:U:72:ARG:NH1	2.33	0.44
9:J:100:ALA:HA	9:J:103:TRP:HE3	1.82	0.44
9:J:122:HIS:O	9:J:126:ASP:OD1	2.36	0.44
9:J:14:PRO:HG3	9:J:21:VAL:HG12	1.99	0.44
10:K:102:ARG:HH11	10:K:102:ARG:CG	2.25	0.44
1:A:825:G:O3'	10:K:12:ARG:NH2	2.50	0.44
11:L:53:VAL:O	11:L:54:ASP:CB	2.65	0.44
1:A:780:A:P	13:N:122:LYS:HA	2.57	0.44
14:O:103:GLY:CA	14:O:107:ALA:O	2.66	0.44
15:P:27:LYS:HZ3	15:P:31:LYS:NZ	2.15	0.44
15:P:91:ARG:CB	15:P:98:VAL:HG22	2.33	0.44
17:R:27:VAL:O	17:R:28:GLN:C	2.56	0.44
17:R:34:LEU:O	17:R:38:ARG:HG2	2.17	0.44
18:S:26:ARG:HG2	18:S:26:ARG:HH11	1.81	0.44
18:S:68:ASP:O	18:S:69:THR:C	2.55	0.44
20:U:33:ASP:O	20:U:69:THR:HG23	2.18	0.44
21:V:43:GLU:O	21:V:47:HIS:NE2	2.49	0.44
21:V:55:LYS:O	21:V:56:GLN:NE2	2.50	0.44
22:W:25:ARG:NH1	22:W:25:ARG:HB2	2.33	0.44
3:D:17:U:C5'	3:D:18:G:O5'	2.66	0.44
3:D:22:G:C2'	3:D:23:A:C8	2.80	0.44
3:D:58:A:C4	3:D:61:C:C5	3.05	0.44
4:E:7:VAL:CG2	4:E:8:LYS:N	2.62	0.44
1:A:1003:G:N2	1:A:1004:A:HO2'	2.15	0.44
15:P:40:ASN:O	15:P:42:ALA:N	2.47	0.44
13:N:128:ALA:O	13:N:129:SER:CB	2.63	0.44
1:A:1017:G:H2'	1:A:1018:C:O5'	2.17	0.44
1:A:69:G:C2	1:A:101:A:C2	3.05	0.44
1:A:1103:C:HO2'	4:E:111:ARG:CD	2.22	0.44
1:A:1117:G:O2'	11:L:106:ALA:HB2	2.17	0.44
1:A:1126:U:H5'	1:A:1281:U:O4'	2.17	0.44
1:A:1215:G:N2	1:A:1216:G:C8	2.85	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1256:A:H61	1:A:1278:U:C1'	2.30	0.44
1:A:1293:G:H2'	1:A:1294:G:H8	1.83	0.44
1:A:1361:G:C2'	1:A:1362:C:H5'	2.48	0.44
1:A:1372:U:C4	1:A:1373:G:C5	3.06	0.44
1:A:928:G:N1	1:A:1390:U:C2	2.86	0.44
1:A:1438:G:N2	1:A:1464:G:H1'	2.33	0.44
1:A:1483:A:C2'	1:A:1484:C:C5'	2.95	0.44
1:A:1499:A:C5	1:A:1500:A:N7	2.85	0.44
1:A:173:U:H5''	1:A:197:A:C1'	2.39	0.44
1:A:283:C:O2	1:A:284:G:O4'	2.35	0.44
1:A:293:G:N3	1:A:294:U:C6	2.85	0.44
1:A:398:C:H6	1:A:398:C:O5'	2.01	0.44
1:A:427:U:O5'	1:A:427:U:C6	2.71	0.44
1:A:509:A:O2'	1:A:510:A:H5'	2.17	0.44
1:A:505:G:OP2	1:A:534:U:H2'	2.18	0.44
1:A:712:A:O2'	1:A:713:G:C5'	2.66	0.44
1:A:790:A:N6	1:A:791:G:C6	2.85	0.44
1:A:843:U:O2'	1:A:848:C:P	2.75	0.44
1:A:849:C:H2'	1:A:850:U:H6	1.83	0.44
1:A:913:A:O2'	1:A:914:A:P	2.76	0.44
3:D:29:C:O2'	3:D:30:G:H5'	2.16	0.44
4:E:15:VAL:HB	4:E:16:HIS:H	1.56	0.44
4:E:54:THR:OG1	4:E:201:ILE:HD11	2.17	0.44
4:E:25:ASN:O	4:E:26:PRO:C	2.55	0.44
5:F:141:VAL:CG1	5:F:202:ILE:HD13	2.47	0.44
1:A:409:G:C5'	6:G:24:GLU:OE1	2.60	0.44
6:G:61:LYS:HZ1	6:G:65:ARG:HD3	1.83	0.44
6:G:71:SER:O	6:G:75:PHE:HB2	2.18	0.44
6:G:6:GLY:O	6:G:8:VAL:CG2	2.66	0.44
7:H:91:LEU:HA	7:H:119:LEU:O	2.17	0.44
7:H:79:GLU:HB3	7:H:92:LYS:CA	2.34	0.44
7:H:92:LYS:O	7:H:118:ILE:CG2	2.65	0.44
8:I:61:LEU:HB3	8:I:63:TYR:CE2	2.52	0.44
9:J:71:PRO:CD	9:J:96:GLN:HA	2.48	0.44
1:A:827:U:H4'	10:K:19:VAL:HG21	1.99	0.44
11:L:47:LEU:C	11:L:49:PRO:HD2	2.37	0.44
14:O:53:ARG:HG2	14:O:53:ARG:NH1	2.32	0.44
14:O:55:VAL:C	14:O:70:ILE:HD11	2.38	0.44
15:P:64:TRP:HB3	15:P:66:LEU:CD2	2.48	0.44
15:P:3:ARG:HG2	15:P:7:VAL:H	1.83	0.44
16:Q:48:ALA:HA	16:Q:53:LEU:HD12	1.99	0.44
17:R:76:GLU:O	17:R:77:ARG:C	2.56	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:20:VAL:CG1	18:S:32:TYR:HB2	2.48	0.44
19:T:97:SER:O	19:T:103:GLY:HA2	2.17	0.44
19:T:84:LEU:H	19:T:84:LEU:HG	1.44	0.44
1:A:735:C:HO2'	20:U:75:ILE:CD1	2.30	0.44
21:V:58:VAL:HG21	21:V:75:ALA:HB2	1.98	0.44
22:W:84:LEU:CD1	22:W:84:LEU:C	2.85	0.44
1:A:1003:G:C5	1:A:1004:A:N3	2.85	0.44
21:V:28:LYS:O	21:V:29:ARG:CB	2.66	0.44
1:A:1043:C:C2'	1:A:1044:A:H5'	2.48	0.44
1:A:1084:G:C4	1:A:1085:U:C5	3.06	0.44
1:A:1102:A:C2'	1:A:1103:C:O5'	2.66	0.44
1:A:1251:A:C2	1:A:1252:A:C6	3.05	0.44
1:A:1305:G:N2	1:A:1331:G:N3	2.66	0.44
1:A:1342:C:H4'	11:L:125:TYR:CD1	2.53	0.44
1:A:949:A:H1'	1:A:1364:U:C2	2.53	0.44
1:A:1389:C:H2'	1:A:1390:U:H5'	1.96	0.44
1:A:1413:A:C2	1:A:1414:U:N1	2.86	0.44
1:A:1433:A:H2'	1:A:1434:A:C5'	2.48	0.44
1:A:1492:A:C3'	1:A:1493:A:O4'	2.66	0.44
1:A:187:C:H2'	1:A:188:U:O4'	2.18	0.44
1:A:276:G:N2	1:A:277:C:C1'	2.80	0.44
1:A:352:C:O2	1:A:357:G:C6	2.71	0.44
1:A:428:G:H5'	1:A:430:A:C1'	2.48	0.44
1:A:529:G:O6	14:O:49:ASN:CG	2.56	0.44
1:A:536:C:O2'	1:A:537:G:H5'	2.17	0.44
1:A:597:G:C8	1:A:644:G:N2	2.85	0.44
1:A:621:A:C6	1:A:622:A:C6	3.05	0.44
1:A:644:G:H2'	1:A:645:C:C5'	2.48	0.44
1:A:644:G:N7	1:A:645:C:C5	2.86	0.44
1:A:817:C:C2'	1:A:818:G:C5'	2.96	0.44
1:A:819:A:C5'	1:A:820:U:OP2	2.66	0.44
1:A:854:G:P	1:A:871:U:O2	2.76	0.44
1:A:893:C:C2'	1:A:894:G:H5'	2.47	0.44
1:A:950:U:C6	15:P:102:ARG:NH2	2.86	0.44
1:A:963:G:N2	12:M:55:LYS:HD2	2.32	0.44
2:C:19:G:C4	2:C:57:A:H2	2.36	0.44
2:C:68:C:C2	2:C:69:C:C5	3.05	0.44
4:E:132:LYS:N	4:E:132:LYS:CE	2.78	0.44
4:E:60:ASP:CG	4:E:64:ARG:HH21	2.20	0.44
4:E:80:ILE:CD1	4:E:208:ILE:HG23	2.46	0.44
5:F:190:ARG:HB3	5:F:190:ARG:HH11	1.81	0.44
6:G:113:SER:O	6:G:114:ARG:C	2.51	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:104:ALA:HA	7:H:107:ARG:NH1	2.33	0.44
7:H:72:GLN:O	7:H:73:ASN:CB	2.63	0.44
7:H:80:ILE:HG23	10:K:104:ARG:NH2	2.32	0.44
8:I:19:LEU:O	8:I:23:LYS:CB	2.65	0.44
8:I:96:PRO:CD	20:U:32:ARG:HE	2.29	0.44
9:J:111:ARG:CZ	9:J:122:HIS:CB	2.95	0.44
9:J:2:ALA:HB3	9:J:5:ARG:O	2.17	0.44
9:J:86:GLN:HB2	9:J:148:ASN:CG	2.37	0.44
1:A:878:G:P	10:K:88:LYS:HD3	2.57	0.44
1:A:1371:G:P	11:L:12:GLU:HG2	2.58	0.44
11:L:33:PHE:CZ	11:L:46:ALA:HB3	2.53	0.44
11:L:36:TYR:CE2	11:L:70:LYS:HG3	2.52	0.44
11:L:15:ALA:HB3	11:L:76:ALA:C	2.37	0.44
12:M:95:GLU:OE1	12:M:95:GLU:O	2.35	0.44
14:O:25:PRO:HD2	14:O:98:TYR:OH	2.18	0.44
14:O:60:LEU:HD22	14:O:60:LEU:C	2.38	0.44
15:P:126:LYS:HB3	15:P:126:LYS:HE3	1.82	0.44
15:P:28:ALA:O	15:P:32:GLU:HG3	2.18	0.44
15:P:80:ARG:NH1	15:P:81:LEU:H	2.15	0.44
15:P:91:ARG:C	15:P:98:VAL:HG22	2.38	0.44
12:M:49:VAL:CG1	16:Q:41:ARG:HB2	2.47	0.44
1:A:1047:G:OP1	16:Q:4:LYS:HD2	2.18	0.44
17:R:62:GLN:O	17:R:63:ARG:C	2.56	0.44
18:S:22:THR:HG22	18:S:32:TYR:HB3	1.99	0.44
18:S:4:ILE:HG13	18:S:66:PRO:HB3	1.97	0.44
19:T:74:LEU:O	19:T:75:ARG:HB2	2.16	0.44
20:U:36:ASN:C	20:U:40:LEU:HG	2.34	0.44
20:U:53:ARG:HH22	20:U:60:GLY:CA	2.29	0.44
21:V:17:GLU:O	21:V:18:LYS:C	2.54	0.44
22:W:42:GLN:C	22:W:42:GLN:HE21	2.21	0.44
3:D:26:A:N6	3:D:44:G:H22	2.15	0.44
3:D:19:G:H21	3:D:57:G:C1'	2.30	0.44
3:D:63:G:C2	3:D:64:C:C2	3.06	0.44
1:A:435:C:C2'	1:A:436:C:H5'	2.47	0.44
7:H:5:ASP:HB3	7:H:6:PHE:H	1.42	0.44
1:A:1132:C:N3	1:A:1133:G:C5	2.86	0.44
1:A:1216:G:OP1	16:Q:3:ARG:NH1	2.51	0.44
1:A:1241:G:C6	1:A:1242:C:N4	2.86	0.44
1:A:1425:U:C2	1:A:1476:G:N1	2.86	0.44
1:A:147:G:C6	1:A:148:G:C5	3.05	0.44
1:A:238:G:C2	1:A:239:U:C2	3.06	0.44
1:A:50:A:C6	1:A:361:G:C4'	3.01	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:483:C:OP2	1:A:483:C:H6	2.01	0.44
1:A:527:G:O2'	1:A:535:A:N6	2.49	0.44
1:A:608:A:H2'	1:A:608:A:N3	2.33	0.44
1:A:658:G:O4'	17:R:22:THR:O	2.35	0.44
1:A:701:C:C4'	1:A:702:A:OP2	2.61	0.44
1:A:755:G:H21	10:K:1:MET:HE3	1.82	0.44
1:A:778:G:O2'	1:A:779:C:C5'	2.56	0.44
1:A:833:U:HO2'	1:A:834:C:C5'	2.31	0.44
1:A:828:A:C6	1:A:859:A:O4'	2.67	0.44
1:A:889:A:C2	1:A:891:U:N3	2.85	0.44
1:A:944:G:C3'	1:A:945:G:C5'	2.83	0.44
1:A:971:G:C5	1:A:1365:G:H5'	2.53	0.44
1:A:974:A:H1'	16:Q:31:ARG:NH2	2.12	0.44
2:C:44:A:N1	2:C:45:G:C2	2.86	0.44
4:E:54:THR:HG23	4:E:199:TYR:CB	2.47	0.44
4:E:71:VAL:O	4:E:164:VAL:CG2	2.60	0.44
4:E:82:ARG:CB	4:E:94:ASN:ND2	2.60	0.44
4:E:97:TRP:CD2	4:E:97:TRP:O	2.71	0.44
1:A:1108:G:OP2	5:F:174:PRO:HA	2.18	0.44
5:F:156:ARG:O	5:F:193:TYR:CE1	2.71	0.44
6:G:118:ARG:NH2	6:G:118:ARG:HG3	2.33	0.44
6:G:38:TYR:HB2	6:G:39:PRO:CD	2.44	0.44
6:G:88:VAL:O	6:G:90:GLY:N	2.51	0.44
6:G:82:ALA:CB	6:G:89:THR:HG23	2.47	0.44
7:H:144:THR:O	7:H:145:LYS:C	2.56	0.44
7:H:53:LEU:H	7:H:53:LEU:HD22	1.77	0.44
8:I:30:LEU:CB	8:I:35:ALA:CB	2.88	0.44
8:I:7:ASN:HA	8:I:7:ASN:HD22	1.50	0.44
8:I:80:ARG:HA	8:I:85:VAL:HG11	1.99	0.44
8:I:83:ASP:C	8:I:85:VAL:N	2.71	0.44
9:J:88:PRO:HD2	9:J:152:ALA:N	2.33	0.44
10:K:8:ASP:O	10:K:12:ARG:HG2	2.18	0.44
12:M:3:LYS:NZ	12:M:77:PRO:HD3	2.32	0.44
1:A:1254:C:OP1	12:M:45:ARG:NE	2.50	0.44
12:M:26:ALA:O	12:M:84:GLN:NE2	2.51	0.44
12:M:9:ARG:HG3	12:M:95:GLU:OE2	2.18	0.44
14:O:43:VAL:HG23	14:O:55:VAL:HG21	2.00	0.44
15:P:92:HIS:CA	15:P:98:VAL:HG21	2.48	0.44
17:R:5:LYS:HZ2	17:R:5:LYS:HB3	1.78	0.44
17:R:78:TYR:CD2	17:R:82:ILE:HD11	2.53	0.44
18:S:25:ARG:O	18:S:26:ARG:C	2.55	0.44
18:S:26:ARG:O	18:S:27:LYS:C	2.56	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:391:G:OP1	18:S:28:ARG:NH2	2.51	0.44
18:S:52:ASP:C	18:S:52:ASP:OD2	2.56	0.44
18:S:53:VAL:CG2	18:S:54:GLU:N	2.81	0.44
18:S:54:GLU:O	18:S:57:ARG:N	2.51	0.44
19:T:51:TYR:HB3	19:T:55:ASP:CG	2.38	0.44
20:U:41:LYS:CA	20:U:44:LEU:HD23	2.48	0.44
20:U:45:SER:OG	20:U:49:LYS:NZ	2.51	0.44
20:U:53:ARG:NH2	20:U:60:GLY:H	2.13	0.44
1:A:262:A:C5'	22:W:74:LYS:HG3	2.45	0.44
23:X:9:ARG:NH2	23:X:22:ARG:HG3	2.32	0.44
3:D:44:G:C2'	3:D:45:U:H5'	2.48	0.44
3:D:54:U:OP2	3:D:55:U:C5	2.71	0.44
1:A:1165:C:N4	1:A:1166:G:C5	2.85	0.44
1:A:1120:G:C2'	1:A:1121:U:O5'	2.66	0.44
3:D:75:C:C3'	3:D:76:A:O3'	2.58	0.44
13:N:114:VAL:CG2	13:N:115:PRO:HD2	2.47	0.44
1:A:1147:C:O2	1:A:1148:U:C6	2.71	0.44
1:A:1308:U:P	15:P:99:ARG:CG	2.98	0.44
1:A:1316:G:O5'	1:A:1316:G:C8	2.64	0.44
1:A:1422:G:N1	1:A:1423:G:C5	2.86	0.44
1:A:236:G:C3'	1:A:237:C:C6	2.95	0.44
1:A:291:C:H1'	1:A:310:G:N2	2.32	0.44
1:A:355:C:N4	1:A:356:A:H62	2.15	0.44
1:A:529:G:N1	14:O:49:ASN:ND2	2.65	0.44
1:A:569:C:O4'	1:A:574:A:N1	2.51	0.44
1:A:592:G:C4	1:A:593:G:C8	3.06	0.44
1:A:578:C:C2'	1:A:728:A:C2	3.01	0.44
1:A:751:U:C5	1:A:752:G:C5	3.06	0.44
1:A:830:G:C2	1:A:857:C:C2	3.06	0.44
1:A:962:C:O2'	1:A:1200:C:C4	2.71	0.44
2:C:47:U:C4	2:C:49:G:O3'	2.71	0.44
2:C:3:C:C2'	2:C:4:G:O5'	2.66	0.44
2:C:58:A:O2'	2:C:59:A:OP1	2.35	0.44
3:D:30:G:N1	3:D:31:A:C6	2.86	0.44
4:E:101:MET:N	4:E:108:ILE:HG13	2.28	0.44
4:E:171:ALA:O	4:E:174:VAL:CB	2.59	0.44
4:E:33:TYR:HB2	4:E:42:ILE:O	2.18	0.44
4:E:60:ASP:CG	4:E:64:ARG:NH2	2.71	0.44
5:F:184:TYR:OH	5:F:186:PHE:HB3	2.18	0.44
6:G:152:SER:C	6:G:154:ASN:N	2.66	0.44
6:G:43:HIS:CG	6:G:46:LYS:HG3	2.52	0.44
6:G:78:LEU:O	6:G:78:LEU:HD23	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:79:PHE:O	6:G:83:SER:OG	2.35	0.44
6:G:78:LEU:HB3	6:G:93:PHE:CE2	2.52	0.44
7:H:109:ILE:CD1	7:H:135:THR:HB	2.47	0.44
7:H:72:GLN:NE2	7:H:144:THR:HG23	2.31	0.44
5:F:135:LYS:NZ	7:H:52:PRO:CD	2.81	0.44
7:H:9:LYS:CD	7:H:108:ALA:HA	2.47	0.44
8:I:42:GLU:HG3	8:I:44:GLY:H	1.82	0.44
10:K:112:LEU:CD1	10:K:131:GLY:CA	2.95	0.44
10:K:9:MET:CG	10:K:26:VAL:HG21	2.45	0.44
10:K:46:LYS:HD2	10:K:64:LYS:HA	2.00	0.44
10:K:95:VAL:CB	10:K:99:GLU:OE1	2.53	0.44
11:L:15:ALA:CB	11:L:76:ALA:HB3	2.48	0.44
11:L:45:ALA:HB3	11:L:74:ILE:HG22	1.97	0.44
11:L:93:ARG:NH2	11:L:97:LYS:HE2	2.33	0.44
12:M:48:THR:HG22	12:M:49:VAL:N	2.33	0.44
13:N:25:TYR:CE2	13:N:87:THR:CB	2.96	0.44
14:O:37:CYS:CA	14:O:57:LYS:O	2.64	0.44
15:P:33:ALA:HB2	15:P:64:TRP:HZ3	1.83	0.44
17:R:70:LEU:HG	17:R:78:TYR:HB2	2.00	0.44
18:S:53:VAL:HA	18:S:79:VAL:CG2	2.47	0.44
20:U:64:ARG:NH1	20:U:64:ARG:HG3	2.32	0.44
21:V:25:LYS:H	21:V:25:LYS:HD2	1.83	0.44
22:W:26:ASN:N	22:W:26:ASN:ND2	2.66	0.44
1:A:1169:A:OP2	1:A:1169:A:H8	2.00	0.44
4:E:131:PRO:CB	4:E:134:GLU:HG2	2.44	0.44
1:A:342:C:C2	1:A:343:U:C5	3.06	0.44
1:A:105:G:C2'	1:A:106:C:C6	2.94	0.44
1:A:111:G:C5'	1:A:112:G:OP2	2.65	0.44
1:A:1183:A:H2'	1:A:1184:G:OP1	2.17	0.44
1:A:1227:A:C8	1:A:1228:C:C6	3.06	0.44
1:A:1234:C:H4'	1:A:1364:U:C1'	2.47	0.44
1:A:1238:A:N6	1:A:1303:C:O4'	2.51	0.44
1:A:1298:C:C6	9:J:114:ARG:NH1	2.86	0.44
1:A:1306:A:H61	1:A:1331:G:H1'	1.79	0.44
1:A:1339:A:C2	1:A:1340:A:H1'	2.53	0.44
1:A:1393:U:H4'	1:A:1501:C:O2'	2.18	0.44
1:A:1419:G:O2'	1:A:1420:C:H5'	2.18	0.44
1:A:1428:A:C2	1:A:1429:C:N3	2.86	0.44
1:A:1433:A:C2'	1:A:1434:A:C5'	2.96	0.44
1:A:1447:G:H8	1:A:1447:G:O5'	2.00	0.44
1:A:146:G:H2'	1:A:147:G:H5'	2.00	0.44
1:A:1476:G:C4	1:A:1477:C:C5	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1511:G:C2'	1:A:1512:U:C5'	2.96	0.44
1:A:1405:G:C1'	1:A:1519:A:H5'	2.47	0.44
1:A:275:G:H5'	19:T:14:LYS:CE	2.48	0.44
1:A:293:G:C8	1:A:293:G:OP2	2.71	0.44
1:A:302:G:C6	1:A:303:A:C5	3.05	0.44
1:A:568:G:N2	1:A:883:C:H1'	2.33	0.44
1:A:583:A:C2'	1:A:584:G:H8	2.31	0.44
1:A:609:A:C2'	1:A:610:G:H5'	2.48	0.44
1:A:695:A:C6	1:A:696:A:C5	3.06	0.44
1:A:868:C:O5'	1:A:868:C:C6	2.71	0.44
1:A:889:A:H4'	1:A:890:G:C4'	2.48	0.44
1:A:948:C:C2	1:A:949:A:C8	3.05	0.44
1:A:966:G:C8	1:A:967:C:C4	3.06	0.44
1:A:966:G:H2'	1:A:967:C:O5'	2.18	0.44
1:A:976:G:C6	1:A:1362:C:C4	3.06	0.44
2:C:12:G:H2'	2:C:13:C:O5'	2.18	0.44
2:C:18:G:C2	2:C:58:A:N3	2.85	0.44
2:C:7:G:HO2'	2:C:8:U:P	2.27	0.44
4:E:97:TRP:CD1	4:E:101:MET:SD	3.11	0.44
4:E:25:ASN:ND2	4:E:25:ASN:O	2.49	0.44
5:F:54:ARG:O	5:F:68:VAL:HG13	2.18	0.44
5:F:89:GLU:HG2	5:F:90:GLU:N	2.33	0.44
6:G:105:VAL:HG12	6:G:120:LEU:HD21	1.98	0.44
6:G:146:ILE:HD12	6:G:183:GLY:O	2.17	0.44
7:H:9:LYS:O	7:H:32:VAL:HG13	2.18	0.44
1:A:939:G:H5''	9:J:102:ARG:NH2	2.33	0.44
9:J:143:ARG:N	9:J:143:ARG:HD2	2.33	0.44
10:K:101:PRO:O	10:K:102:ARG:CG	2.66	0.44
10:K:107:LEU:H	10:K:107:LEU:HD23	1.83	0.44
10:K:45:ILE:O	10:K:45:ILE:CG1	2.65	0.44
11:L:27:THR:CB	11:L:62:TYR:HD1	2.28	0.44
12:M:50:ILE:HG23	12:M:59:SER:HB2	2.00	0.44
12:M:49:VAL:CG1	12:M:50:ILE:N	2.80	0.44
13:N:19:ALA:HB3	13:N:82:VAL:CG2	2.46	0.44
13:N:59:TYR:C	13:N:62:GLN:NE2	2.71	0.44
14:O:110:VAL:HB	14:O:113:ARG:CG	2.47	0.44
14:O:6:THR:HG1	14:O:9:GLN:HB2	1.83	0.44
15:P:2:ALA:C	15:P:4:ILE:HD12	2.38	0.44
5:F:12:LEU:CD1	16:Q:57:ARG:HA	2.47	0.44
18:S:39:TYR:CE1	18:S:41:PRO:N	2.86	0.44
18:S:74:LEU:HD22	18:S:79:VAL:CB	2.47	0.44
18:S:53:VAL:HA	18:S:79:VAL:HG21	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:53:VAL:CG1	18:S:79:VAL:HG22	2.45	0.44
21:V:25:LYS:H	21:V:25:LYS:CD	2.30	0.44
21:V:53:ASN:ND2	21:V:58:VAL:HG13	2.33	0.44
21:V:77:THR:CG2	21:V:78:ARG:N	2.79	0.44
22:W:87:LYS:HG3	22:W:91:LEU:CD2	2.48	0.44
1:A:1018:C:HO2'	1:A:1019:C:H5'	1.83	0.43
1:A:1193:G:C8	1:A:1193:G:C3'	3.00	0.43
1:A:1246:C:H2'	1:A:1247:U:O5'	2.18	0.43
1:A:1250:A:N6	1:A:1251:A:N1	2.66	0.43
1:A:130:A:H4'	1:A:190:G:N3	2.33	0.43
1:A:1329:A:H5'	15:P:29:ARG:CZ	2.48	0.43
1:A:1338:G:C6	1:A:1339:A:C6	3.06	0.43
1:A:1353:G:C2	1:A:1354:C:C5	3.06	0.43
1:A:1390:U:N3	1:A:1391:U:C4	2.86	0.43
1:A:1409:C:C2'	1:A:1410:G:H5'	2.48	0.43
1:A:128:G:N2	1:A:234:C:C1'	2.81	0.43
1:A:235:C:C2	1:A:236:G:C8	3.06	0.43
1:A:301:G:C2	1:A:302:G:C8	3.06	0.43
1:A:43:C:C2	1:A:44:G:C8	3.06	0.43
1:A:46:G:C6	1:A:396:G:O6	2.71	0.43
1:A:495:A:H61	6:G:123:HIS:CE1	2.36	0.43
1:A:522:C:H2'	1:A:523:A:O5'	2.17	0.43
1:A:67:C:H4'	1:A:172:A:C4'	2.48	0.43
1:A:760:G:H5''	1:A:761:G:OP2	2.18	0.43
1:A:579:G:C2	1:A:763:G:C2	3.06	0.43
1:A:782:A:N1	1:A:801:U:C2	2.86	0.43
1:A:812:C:C1'	1:A:813:U:C5	3.01	0.43
1:A:816:A:O2'	1:A:817:C:H5''	2.18	0.43
1:A:834:C:C4	1:A:853:G:N1	2.86	0.43
1:A:866:C:H3'	1:A:867:G:H8	1.83	0.43
1:A:576:G:N7	1:A:881:G:C4'	2.81	0.43
1:A:916:G:H2'	1:A:916:G:N3	2.33	0.43
1:A:986:A:O2'	21:V:55:LYS:HG3	2.18	0.43
2:C:44:A:C6	2:C:45:G:N2	2.86	0.43
2:C:55:U:N3	2:C:58:A:OP2	2.47	0.43
4:E:115:LEU:HD23	4:E:149:LEU:HB3	1.96	0.43
4:E:178:ARG:NE	4:E:196:LEU:CD1	2.74	0.43
4:E:24:TRP:O	4:E:191:ASP:HA	2.18	0.43
5:F:139:GLN:O	5:F:143:GLU:CG	2.64	0.43
5:F:134:ILE:HG12	5:F:153:VAL:CG2	2.47	0.43
5:F:156:ARG:NH1	5:F:161:GLU:O	2.50	0.43
5:F:40:ARG:CG	5:F:57:ILE:HD12	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:95:THR:O	5:F:97:LYS:HE2	2.17	0.43
6:G:104:VAL:HA	6:G:107:ARG:CG	2.48	0.43
6:G:110:PHE:CZ	6:G:147:ALA:CB	3.01	0.43
6:G:118:ARG:O	6:G:121:VAL:HB	2.18	0.43
9:J:108:ALA:O	9:J:111:ARG:N	2.51	0.43
9:J:108:ALA:O	9:J:109:ASN:C	2.56	0.43
10:K:18:ARG:N	10:K:18:ARG:NH1	2.44	0.43
10:K:69:ARG:HG3	10:K:69:ARG:NH1	2.32	0.43
10:K:83:ILE:HG23	10:K:83:ILE:O	2.18	0.43
10:K:88:LYS:C	10:K:90:GLY:N	2.71	0.43
11:L:38:GLN:O	11:L:39:GLY:C	2.57	0.43
13:N:40:ILE:N	13:N:40:ILE:CD1	2.72	0.43
13:N:44:SER:N	13:N:47:VAL:CG2	2.81	0.43
13:N:58:PRO:HB3	13:N:90:GLY:CA	2.47	0.43
14:O:84:LEU:HD23	14:O:101:VAL:CG2	2.48	0.43
1:A:625:G:C4'	18:S:16:HIS:CD2	3.00	0.43
19:T:34:LYS:HD2	19:T:35:VAL:N	2.32	0.43
21:V:30:LEU:HG	21:V:50:ALA:N	2.32	0.43
21:V:11:VAL:HG13	21:V:38:SER:HG	1.83	0.43
21:V:41:VAL:N	21:V:44:MET:SD	2.80	0.43
22:W:18:GLN:HG2	22:W:18:GLN:H	1.44	0.43
3:D:54:U:C3'	3:D:55:U:H5'	2.48	0.43
3:D:58:A:O2'	3:D:60:U:C4	2.67	0.43
3:D:4:G:O2'	3:D:5:A:H5'	2.18	0.43
1:A:1169:A:N1	1:A:1170:A:C2	2.86	0.43
4:E:126:GLU:O	4:E:127:ILE:C	2.56	0.43
5:F:62:ASP:OD1	5:F:62:ASP:O	2.36	0.43
1:A:1181:G:N7	1:A:1182:G:C2	2.85	0.43
1:A:1193:G:C6	1:A:1194:U:C5	3.06	0.43
1:A:1202:G:H2'	1:A:1202:G:N3	2.32	0.43
1:A:1255:G:H21	1:A:1276:G:H22	1.64	0.43
1:A:130:A:N3	1:A:264:U:O4'	2.51	0.43
1:A:131:C:O2	1:A:132:C:C6	2.71	0.43
1:A:1342:C:O2'	1:A:1343:G:H5'	2.18	0.43
1:A:133:U:O2'	1:A:134:A:C8	2.59	0.43
1:A:1386:G:O2'	1:A:1387:G:H5'	2.17	0.43
1:A:1465:C:H2'	1:A:1466:C:O4'	2.18	0.43
1:A:1486:G:C2	1:A:1487:G:C4	3.06	0.43
1:A:781:A:H5''	1:A:1523:G:O4'	2.18	0.43
1:A:186(B):C:C2'	1:A:186(C):G:H5'	2.47	0.43
1:A:266:G:N2	1:A:270:A:H62	2.15	0.43
1:A:323:U:C5	1:A:324:G:H1'	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:372:C:C4	1:A:389:A:N6	2.82	0.43
1:A:523:A:N1	14:O:92:ASP:HB3	2.33	0.43
1:A:595:G:C8	1:A:641:U:O4	2.70	0.43
1:A:640:A:C2'	1:A:641:U:C5'	2.88	0.43
1:A:648:A:H2'	1:A:649:G:C5'	2.49	0.43
1:A:715:A:C2'	1:A:716:A:O4'	2.59	0.43
1:A:734:G:H2'	1:A:735:C:H6	1.69	0.43
1:A:790:A:C5	1:A:791:G:C5	3.05	0.43
1:A:850:U:C2	1:A:851:G:N7	2.86	0.43
1:A:585:G:N3	1:A:879:C:H4'	2.33	0.43
1:A:88:C:C2'	1:A:89:U:OP2	2.66	0.43
4:E:61:LEU:HB2	4:E:64:ARG:HH11	1.82	0.43
6:G:110:PHE:HE1	6:G:148:VAL:HG23	1.83	0.43
6:G:176:LEU:O	6:G:176:LEU:HG	2.18	0.43
6:G:144:ASP:N	6:G:185:PHE:HB3	2.33	0.43
6:G:60:GLU:CG	6:G:202:LEU:HB3	2.48	0.43
7:H:37:ARG:HG2	7:H:37:ARG:HH11	1.82	0.43
8:I:96:PRO:HD2	20:U:32:ARG:NH2	2.30	0.43
10:K:123:GLU:CG	10:K:124:ALA:N	2.80	0.43
10:K:26:VAL:C	10:K:58:TYR:HE1	2.16	0.43
11:L:111:ARG:HD2	16:Q:61:TRP:NE1	2.31	0.43
1:A:1148:U:H6	11:L:16:ARG:CZ	2.30	0.43
12:M:81:THR:O	12:M:83:GLU:N	2.51	0.43
12:M:19:SER:N	12:M:91:PRO:HG3	2.33	0.43
13:N:21:ILE:HG12	13:N:82:VAL:HG13	2.00	0.43
13:N:22:HIS:C	13:N:22:HIS:CD2	2.91	0.43
13:N:24:SER:O	13:N:89:ALA:HB2	2.17	0.43
13:N:22:HIS:CB	13:N:85:ARG:HB2	2.44	0.43
15:P:29:ARG:HH12	15:P:66:LEU:HB3	1.82	0.43
17:R:81:LEU:HD23	17:R:81:LEU:C	2.37	0.43
18:S:26:ARG:CG	18:S:26:ARG:HH11	2.31	0.43
19:T:40:LYS:HB3	19:T:40:LYS:NZ	2.32	0.43
19:T:52:LYS:O	19:T:53:LEU:C	2.56	0.43
19:T:57:VAL:HB	19:T:76:LEU:HA	2.00	0.43
20:U:29:PHE:CE2	20:U:39:VAL:CG1	3.00	0.43
1:A:1219:U:O2'	21:V:34:TRP:HB3	2.18	0.43
21:V:57:HIS:O	21:V:59:PRO:HD3	2.19	0.43
22:W:18:GLN:O	22:W:22:ARG:HG3	2.18	0.43
3:D:9:A:N6	3:D:22:G:C8	2.86	0.43
3:D:72:C:C2'	3:D:72:C:O2	2.66	0.43
3:D:75:C:C5'	3:D:76:A:O3'	2.64	0.43
17:R:45:VAL:O	17:R:45:VAL:HG12	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1064:G:H5'	1:A:1065:U:OP1	2.18	0.43
1:A:1086:U:OP2	1:A:1087:G:OP2	2.36	0.43
1:A:110:C:H2'	1:A:111:G:H5'	1.99	0.43
1:A:1130:A:C6	1:A:1146:A:C6	3.07	0.43
1:A:955:U:C1'	1:A:1227:A:H61	2.22	0.43
1:A:1240:U:C6	9:J:32:ARG:NH2	2.87	0.43
1:A:1250:A:C5	1:A:1251:A:C6	3.07	0.43
1:A:1348:U:O2	1:A:1348:U:H2'	2.19	0.43
1:A:1357:A:C5	1:A:1358:U:C5	3.06	0.43
1:A:1363:A:H8	1:A:1363:A:OP1	2.01	0.43
1:A:1450:U:C1'	1:A:1454:G:N2	2.81	0.43
1:A:145:G:O6	1:A:178:C:N4	2.51	0.43
1:A:268:C:O2'	1:A:269:C:H5'	2.18	0.43
1:A:28:G:C6	1:A:29:G:N7	2.87	0.43
1:A:322:C:C2'	1:A:323:U:C5'	2.97	0.43
1:A:432:A:C8	1:A:433:C:C5	3.06	0.43
1:A:478:A:O5'	1:A:478:A:C8	2.69	0.43
1:A:520:A:N6	1:A:529:G:N2	2.62	0.43
1:A:577:G:N2	1:A:578:C:C1'	2.80	0.43
1:A:582:U:H5''	17:R:68:ARG:NH1	2.28	0.43
1:A:593:G:C5	1:A:594:G:C8	3.06	0.43
1:A:595:G:N7	1:A:641:U:C2	2.87	0.43
1:A:657:G:C4	1:A:658:G:C8	3.06	0.43
1:A:64:G:H4'	1:A:65:U:O5'	2.17	0.43
1:A:682:G:N1	1:A:683:G:N7	2.65	0.43
1:A:720:C:C3'	1:A:720:C:C6	3.01	0.43
1:A:756:C:H4'	1:A:823:G:O2'	2.18	0.43
2:C:14:A:H2'	2:C:15:G:H8	1.82	0.43
2:C:29:G:H2'	2:C:30:G:O5'	2.17	0.43
4:E:152:PHE:C	4:E:154:LEU:N	2.70	0.43
4:E:172:ILE:O	4:E:175:ARG:HB3	2.19	0.43
4:E:41:ILE:N	4:E:41:ILE:CD1	2.80	0.43
5:F:84:ILE:C	5:F:101:LEU:HD13	2.38	0.43
5:F:173:VAL:O	5:F:175:LEU:HD12	2.18	0.43
5:F:63:ASN:C	5:F:64:VAL:HG23	2.39	0.43
5:F:87:LEU:HB2	5:F:101:LEU:HD12	2.01	0.43
5:F:88:ARG:HH21	5:F:101:LEU:HB3	1.83	0.43
6:G:126:ILE:CG2	6:G:126:ILE:O	2.59	0.43
6:G:101:LEU:N	6:G:138:TYR:O	2.37	0.43
6:G:173:TRP:CG	6:G:189:PRO:HA	2.54	0.43
6:G:30:LYS:CA	6:G:34:GLU:HB3	2.49	0.43
7:H:129:ILE:O	7:H:130:ASN:C	2.57	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:53:LEU:N	7:H:53:LEU:CD2	2.72	0.43
8:I:53:ALA:HB2	8:I:86:ARG:CD	2.45	0.43
8:I:6:VAL:CG1	8:I:8:ILE:HD11	2.48	0.43
12:M:3:LYS:CE	12:M:3:LYS:N	2.81	0.43
12:M:3:LYS:CD	12:M:3:LYS:N	2.81	0.43
15:P:27:LYS:C	15:P:29:ARG:N	2.71	0.43
15:P:64:TRP:HB3	15:P:66:LEU:HD23	1.99	0.43
19:T:29:HIS:CE1	19:T:31:LEU:N	2.82	0.43
19:T:63:ARG:HG2	19:T:64:PRO:N	2.32	0.43
20:U:31:LEU:CD1	20:U:31:LEU:N	2.81	0.43
13:N:84:VAL:CG2	20:U:88:LYS:NZ	2.81	0.43
22:W:102:GLY:C	22:W:104:LEU:H	2.22	0.43
22:W:53:LEU:HB2	22:W:100:ILE:CG1	2.43	0.43
1:A:1170:A:C8	1:A:1170:A:C3'	3.01	0.43
5:F:157:ILE:HG21	5:F:164:ARG:HH21	1.83	0.43
4:E:131:PRO:O	4:E:134:GLU:N	2.51	0.43
1:A:160:A:N3	1:A:344:A:N7	2.66	0.43
19:T:26:GLN:HG2	19:T:37:LYS:CB	2.49	0.43
1:A:1182:G:H4'	1:A:1183:A:H5''	2.01	0.43
1:A:1244:C:C2	1:A:1245:A:C8	3.06	0.43
1:A:1269:A:C2	1:A:1312:G:N3	2.86	0.43
1:A:1273:G:C8	1:A:1274:G:C8	3.06	0.43
1:A:1278:U:H5'	1:A:1279:A:H5'	2.01	0.43
1:A:1315:U:O2'	1:A:1360:A:C4	2.63	0.43
1:A:1477:C:C2	1:A:1478:C:C6	3.06	0.43
1:A:1528:U:C2	1:A:1530:G:C8	3.07	0.43
1:A:19:C:N3	1:A:20:U:H5	2.16	0.43
1:A:20:U:O4'	1:A:572:A:C2	2.70	0.43
1:A:230:G:N2	1:A:231:G:C4	2.87	0.43
1:A:329:A:N6	1:A:332:G:C2	2.86	0.43
1:A:686:U:O2	13:N:42:TRP:CZ2	2.60	0.43
1:A:686:U:O2'	1:A:687:A:OP1	2.35	0.43
1:A:689:C:N3	1:A:690:G:N7	2.66	0.43
1:A:666:G:N2	1:A:741:G:H1'	2.33	0.43
1:A:750:G:N3	17:R:23:GLY:O	2.51	0.43
1:A:588:G:H1'	1:A:753:A:C2	2.53	0.43
1:A:764:C:H5''	1:A:765:G:OP2	2.18	0.43
1:A:918:A:C2	1:A:919:A:C4	3.06	0.43
1:A:954:G:H5''	15:P:120:LYS:HD2	2.00	0.43
1:A:956:U:O2'	1:A:957:U:O5'	2.35	0.43
1:A:978:A:H61	1:A:1360:A:H61	1.65	0.43
2:C:34:C:H3'	2:C:35:A:H5''	1.94	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:49:G:H2'	2:C:50:U:O5'	2.18	0.43
4:E:169:LYS:O	4:E:170:GLU:C	2.56	0.43
4:E:23:ARG:NH1	4:E:24:TRP:N	2.58	0.43
4:E:49:GLU:O	4:E:52:GLU:HB3	2.17	0.43
4:E:73:THR:O	4:E:74:LYS:C	2.56	0.43
5:F:52:LEU:HA	5:F:70:VAL:CG2	2.42	0.43
5:F:89:GLU:C	5:F:91:LEU:N	2.67	0.43
6:G:113:SER:CB	6:G:116:GLN:H	2.31	0.43
6:G:139:ARG:HG2	6:G:139:ARG:O	2.18	0.43
6:G:13:ARG:NH1	6:G:36:ARG:CB	2.82	0.43
6:G:78:LEU:HD23	6:G:78:LEU:C	2.39	0.43
7:H:127:ASN:O	7:H:127:ASN:OD1	2.36	0.43
7:H:65:ASN:CG	7:H:65:ASN:O	2.56	0.43
8:I:25:ILE:O	8:I:26:ILE:C	2.56	0.43
9:J:136:LYS:O	9:J:139:GLU:OE1	2.35	0.43
9:J:152:ALA:O	9:J:154:TYR:N	2.51	0.43
1:A:932:C:H5''	9:J:3:ARG:CG	2.48	0.43
9:J:75:VAL:HG22	9:J:88:PRO:HA	1.97	0.43
9:J:87:VAL:HG13	9:J:152:ALA:CA	2.48	0.43
11:L:15:ALA:HB1	11:L:77:ILE:CG1	2.49	0.43
11:L:80:GLY:O	11:L:83:ARG:N	2.51	0.43
11:L:80:GLY:O	11:L:83:ARG:HB3	2.18	0.43
11:L:5:TYR:O	11:L:87:GLN:HG3	2.18	0.43
12:M:24:VAL:HG13	12:M:34:VAL:HB	1.98	0.43
1:A:1060:C:H4'	12:M:52:GLY:N	2.33	0.43
1:A:362:G:O5'	14:O:34:ARG:NH2	2.51	0.43
17:R:54:ARG:HH21	17:R:58:MET:HE3	1.84	0.43
19:T:7:THR:OG1	19:T:57:VAL:O	2.36	0.43
19:T:59:ILE:CG1	19:T:71:PHE:HD2	2.31	0.43
3:D:24:G:C6	3:D:25:C:C5	3.06	0.43
3:D:72:C:O2	3:D:73:A:C8	2.71	0.43
1:A:1097:C:H5'	1:A:1170:A:H4'	2.00	0.43
4:E:127:ILE:HG22	4:E:128:GLU:N	2.24	0.43
1:A:773:G:O6	1:A:807:A:N6	2.51	0.43
14:O:126:LYS:H	14:O:126:LYS:HD2	1.83	0.43
1:A:1062:U:C2	1:A:1063:C:C4	3.07	0.43
1:A:1065:U:C5	1:A:1190:G:C1'	3.01	0.43
1:A:1069:C:O2'	1:A:1192:C:O2'	2.29	0.43
1:A:1111:A:H8	1:A:1111:A:O5'	2.01	0.43
1:A:1207:G:C2	1:A:1208:C:C5	3.06	0.43
1:A:1210:C:H5''	1:A:1214:C:H42	1.82	0.43
1:A:1281:U:C6	1:A:1281:U:C3'	3.02	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1253:G:H1	1:A:1285:A:N6	2.08	0.43
1:A:1301:U:O4	1:A:1303:C:C2	2.70	0.43
1:A:1389:C:C2'	1:A:1390:U:C5'	2.95	0.43
1:A:1486:G:C6	1:A:1487:G:C6	3.06	0.43
1:A:1520:G:C4	1:A:1521:G:C8	3.07	0.43
1:A:245:C:N3	1:A:284:G:N1	2.67	0.43
1:A:35:G:C6	1:A:36:C:C4	3.07	0.43
1:A:37:U:OP2	14:O:123:LYS:CD	2.63	0.43
1:A:420:U:H1'	1:A:424:G:C2	2.53	0.43
1:A:510:A:H1'	1:A:543:C:O4'	2.18	0.43
1:A:588:G:N7	1:A:753:A:C2'	2.82	0.43
1:A:74:C:N3	1:A:75:C:C5	2.86	0.43
1:A:869:G:O2'	1:A:872:A:N7	2.46	0.43
1:A:89:U:C2	1:A:90:C:C6	3.07	0.43
1:A:907:A:H2'	1:A:907:A:N3	2.34	0.43
1:A:90:C:C2	1:A:91:C:C6	3.07	0.43
1:A:20:U:C5	1:A:916:G:C2	3.06	0.43
1:A:962:C:N4	1:A:963:G:O6	2.51	0.43
1:A:994:A:N7	1:A:1216:G:C4'	2.69	0.43
2:C:41:C:H2'	2:C:42:G:O4'	2.18	0.43
2:C:57:A:H3'	2:C:58:A:H5''	2.00	0.43
2:C:74:C:H3'	2:C:75:C:C5'	2.47	0.43
3:D:37:A:H2'	3:D:38:A:O4'	2.18	0.43
4:E:16:HIS:O	4:E:17:PHE:O	2.37	0.43
5:F:114:PRO:HA	5:F:185:GLY:HA3	2.00	0.43
7:H:133:TYR:O	7:H:134:ALA:C	2.57	0.43
8:I:14:LEU:CD1	8:I:15:ASP:O	2.67	0.43
10:K:104:ARG:CD	10:K:107:LEU:HD11	2.48	0.43
10:K:112:LEU:CD1	10:K:133:LEU:CD2	2.97	0.43
11:L:50:LEU:O	11:L:51:ARG:C	2.56	0.43
12:M:34:VAL:HG22	12:M:74:ILE:HD11	1.99	0.43
12:M:45:ARG:HG2	12:M:66:ARG:HA	1.99	0.43
1:A:718:G:C4	13:N:116:HIS:CE1	3.06	0.43
13:N:63:LEU:HA	13:N:66:LEU:HG	2.01	0.43
14:O:113:ARG:O	14:O:114:LYS:CG	2.66	0.43
14:O:11:VAL:O	14:O:11:VAL:CG1	2.66	0.43
15:P:44:ARG:HB3	15:P:47:ASP:OD2	2.18	0.43
15:P:58:GLU:HG3	15:P:58:GLU:H	1.59	0.43
15:P:36:LYS:CG	15:P:59:TYR:CE1	3.01	0.43
15:P:9:ILE:N	15:P:10:PRO:CD	2.81	0.43
17:R:9:GLN:O	17:R:10:LYS:C	2.57	0.43
18:S:35:LYS:NZ	18:S:37:GLY:CA	2.81	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:3:LYS:C	19:T:4:LYS:O	2.57	0.43
1:A:189:U:O2	19:T:63:ARG:CZ	2.66	0.43
19:T:67:LYS:HB2	19:T:70:ARG:HH22	1.83	0.43
20:U:81:PHE:O	20:U:82:THR:CG2	2.64	0.43
21:V:2:PRO:O	21:V:3:ARG:O	2.36	0.43
22:W:21:LYS:HB3	22:W:25:ARG:HH22	1.83	0.43
22:W:66:ALA:HB1	22:W:72:LEU:H	1.84	0.43
22:W:85:MET:HA	22:W:88:VAL:HG23	2.00	0.43
3:D:5:A:C2'	3:D:6:G:O5'	2.66	0.43
1:A:1097:C:C2	1:A:1098:C:C5	3.06	0.43
1:A:1452:C:H4'	1:A:1453:G:N2	2.33	0.43
1:A:1126:U:H2'	1:A:1127:G:O4'	2.18	0.43
1:A:1157:A:H1'	1:A:1181:G:H21	1.83	0.43
1:A:1323:G:C5'	1:A:1362(A):C:N3	2.81	0.43
1:A:1251:A:H4'	1:A:1370:G:C5'	2.47	0.43
1:A:1251:A:H4'	1:A:1370:G:H5'	2.01	0.43
1:A:1396:A:O2'	1:A:1397:C:P	2.76	0.43
1:A:1423:G:C5	1:A:1424:C:C5	3.06	0.43
1:A:1504:G:O4'	1:A:1505:G:C6	2.71	0.43
1:A:1510:U:H2'	1:A:1511:G:C8	2.53	0.43
1:A:1520:G:O2'	1:A:1521:G:C5'	2.66	0.43
1:A:265:G:C4	1:A:267:C:C6	3.06	0.43
1:A:296:U:O2'	1:A:556:C:H1'	2.19	0.43
1:A:320:C:H2'	1:A:321:A:O4'	2.18	0.43
1:A:334:C:C2'	1:A:335:C:O5'	2.66	0.43
1:A:51:A:N1	1:A:353:A:N1	2.66	0.43
1:A:369:C:N3	1:A:393:A:C2	2.86	0.43
1:A:517:G:O2'	1:A:530:G:C4'	2.63	0.43
1:A:536:C:O5'	1:A:536:C:C6	2.71	0.43
1:A:566:G:H8	1:A:566:G:O5'	2.01	0.43
1:A:631:G:O2'	1:A:632:A:C8	2.59	0.43
1:A:657:G:C2'	1:A:658:G:H5'	2.49	0.43
1:A:671:G:P	8:I:77:ARG:NH2	2.92	0.43
1:A:687:A:O2'	1:A:688:G:O5'	2.36	0.43
1:A:719:C:O2	20:U:50:ILE:HG13	2.19	0.43
1:A:829:G:C1'	4:E:26:PRO:HG2	2.49	0.43
1:A:82:U:C2	1:A:85:U:OP2	2.71	0.43
1:A:901:A:N3	1:A:902:G:C1'	2.82	0.43
1:A:943:U:H2'	1:A:944:G:H8	1.84	0.43
1:A:959:A:C3'	1:A:960:U:H5''	2.37	0.43
1:A:97:U:C2	1:A:99:C:C5	3.07	0.43
2:C:20:U:O2	2:C:20:U:H2'	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:C:36:U:C2'	2:C:36:U:O2	2.66	0.43
2:C:44:A:C2'	2:C:45:G:H5'	2.48	0.43
4:E:9:GLU:CB	4:E:217:ARG:NH2	2.76	0.43
4:E:58:ILE:O	4:E:61:LEU:N	2.50	0.43
5:F:153:VAL:HG23	5:F:166:GLU:CB	2.44	0.43
5:F:67:THR:CG2	5:F:104:GLN:CG	2.96	0.43
5:F:83:ARG:HG3	5:F:87:LEU:HD21	2.01	0.43
6:G:149:ALA:O	6:G:150:GLU:C	2.56	0.43
6:G:185:PHE:HD2	6:G:186:LEU:H	1.66	0.43
6:G:205:GLU:OE2	7:H:100:VAL:HB	2.19	0.43
7:H:106:PRO:HB3	7:H:120:THR:HG21	1.99	0.43
7:H:148:VAL:O	7:H:149:GLU:C	2.56	0.43
7:H:84:PHE:HB2	7:H:134:ALA:HA	2.00	0.43
9:J:123:GLU:O	9:J:124:LEU:C	2.57	0.43
9:J:50:ILE:O	9:J:54:THR:HG23	2.19	0.43
9:J:80:VAL:O	9:J:82:GLY:N	2.47	0.43
1:A:876:G:H1'	10:K:11:THR:HG21	2.01	0.43
10:K:122:ARG:HD2	10:K:122:ARG:N	2.33	0.43
10:K:67:PRO:O	10:K:68:ARG:C	2.54	0.43
12:M:47:PHE:CE1	12:M:64:GLU:HA	2.54	0.43
12:M:27:ALA:CB	12:M:85:LEU:HD11	2.48	0.43
13:N:91:ARG:HG2	13:N:95:ILE:CD1	2.49	0.43
14:O:30:ALA:HB1	14:O:31:PRO:CD	2.49	0.43
14:O:33:ARG:HG3	14:O:61:THR:OG1	2.19	0.43
15:P:103:THR:O	15:P:104:ARG:O	2.37	0.43
1:A:970:C:N4	15:P:126:LYS:HZ2	2.15	0.43
15:P:55:ARG:HH21	15:P:56:LEU:CD2	2.12	0.43
16:Q:23:ARG:HD3	16:Q:30:ALA:CB	2.46	0.43
5:F:33:LEU:HD21	16:Q:52:GLN:O	2.18	0.43
17:R:71:GLN:HG3	17:R:75:PRO:CB	2.27	0.43
18:S:48:TRP:HD1	18:S:48:TRP:H	1.66	0.43
19:T:94:ASN:HB3	19:T:104:LYS:CB	2.49	0.43
19:T:62:SER:OG	19:T:72:ARG:CG	2.59	0.43
1:A:189:U:C2	19:T:63:ARG:CZ	3.02	0.43
20:U:87:ARG:HH11	20:U:87:ARG:HG2	1.83	0.43
21:V:58:VAL:HG23	21:V:60:VAL:CG2	2.46	0.43
21:V:15:LEU:HD22	21:V:71:LEU:HD11	2.01	0.43
22:W:48:LYS:N	22:W:48:LYS:HD2	2.34	0.43
22:W:55:ILE:O	22:W:57:ARG:N	2.52	0.43
22:W:67:ALA:O	22:W:68:LYS:C	2.56	0.43
3:D:48:C:C4	3:D:59:U:C2	3.07	0.43
1:A:1002:G:N1	1:A:1003:G:C6	2.86	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1164:G:N1	1:A:1165:C:C2	2.86	0.43
1:A:1169:A:C6	1:A:1170:A:N1	2.86	0.43
1:A:210:U:H4'	1:A:216:G:OP1	2.14	0.43
1:A:1067:A:C4'	1:A:1068:G:O5'	2.67	0.43
1:A:110:C:O2'	1:A:111:G:H5'	2.18	0.43
1:A:1200:C:H5''	1:A:1202:G:OP1	2.19	0.43
1:A:1209:C:H2'	1:A:1210:C:C5'	2.45	0.43
1:A:1300:G:C2'	1:A:1301:U:OP2	2.66	0.43
1:A:1305:G:C5'	23:X:4:GLY:CA	2.97	0.43
1:A:1321:C:N3	21:V:37:ARG:NH2	2.66	0.43
1:A:1419:G:O2'	1:A:1420:C:O4'	2.33	0.43
1:A:1437:C:H2'	1:A:1438:G:C8	2.48	0.43
1:A:1494:G:C2	1:A:1495:U:C4	3.07	0.43
1:A:194:C:O2'	22:W:68:LYS:NZ	2.40	0.43
1:A:130:A:C2	1:A:263:A:N3	2.82	0.43
1:A:285:G:C4	1:A:286:G:C8	3.05	0.43
1:A:31:G:O6	1:A:306:G:H1'	2.19	0.43
1:A:363:A:N3	1:A:363:A:H2'	2.33	0.43
1:A:410:G:N2	1:A:429:U:N3	2.65	0.43
1:A:506:G:C6	1:A:507:C:C4	3.06	0.43
1:A:529:G:C8	1:A:529:G:C3'	3.01	0.43
1:A:55:A:C2'	1:A:56:U:C5'	2.94	0.43
1:A:640:A:H2'	1:A:641:U:O4'	2.19	0.43
1:A:643:C:H2'	1:A:644:G:C5'	2.48	0.43
1:A:716:A:C2'	1:A:717:C:C5'	2.97	0.43
1:A:721:G:O2'	1:A:722:A:C2	2.70	0.43
1:A:767:A:O2'	1:A:768:A:H5'	2.18	0.43
1:A:873:A:H5'	1:A:874:G:OP2	2.18	0.43
1:A:988:G:H2'	1:A:989:C:O4'	2.18	0.43
2:C:19:G:O3'	2:C:20:U:C4	2.71	0.43
2:C:23:C:N3	2:C:24:U:C4	2.86	0.43
4:E:233:SER:HB3	4:E:234:PRO:CD	2.43	0.43
4:E:76:GLN:O	4:E:77:ALA:HB3	2.19	0.43
4:E:84:GLU:HB3	4:E:215:LEU:HD12	1.99	0.43
4:E:90:MET:SD	4:E:91:PRO:HD2	2.59	0.43
1:A:1057:G:C5'	5:F:196:LEU:HA	2.44	0.43
5:F:24:ALA:CB	5:F:32:LEU:HD11	2.47	0.43
5:F:94:LEU:HD23	5:F:95:THR:HG1	1.83	0.43
7:H:43:LEU:CD2	7:H:44:GLY:N	2.68	0.43
8:I:2:ARG:CG	8:I:69:GLU:HG2	2.45	0.43
9:J:140:ASP:CA	9:J:143:ARG:NH1	2.74	0.43
9:J:153:HIS:HE1	13:N:58:PRO:HD2	1.82	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:120:THR:N	10:K:123:GLU:OE1	2.41	0.43
1:A:590:C:OP1	10:K:29:SER:HA	2.18	0.43
10:K:27:PRO:O	10:K:32:LYS:CD	2.66	0.43
10:K:68:ARG:NE	10:K:74:PRO:HB3	2.34	0.43
11:L:49:PRO:CG	11:L:81:ILE:HB	2.49	0.43
1:A:1188:A:C5'	12:M:61:GLU:OE2	2.55	0.43
12:M:98:ILE:CG2	12:M:99:LYS:N	2.81	0.43
13:N:27:ASN:HA	13:N:55:LYS:O	2.17	0.43
14:O:15:ARG:O	14:O:17:LYS:N	2.51	0.43
15:P:16:ASP:C	15:P:19:LEU:HG	2.39	0.43
15:P:27:LYS:CE	15:P:31:LYS:HZ3	2.31	0.43
15:P:14:ARG:NE	15:P:44:ARG:NH1	2.67	0.43
18:S:8:ARG:CZ	18:S:11:SER:O	2.66	0.43
18:S:39:TYR:CB	18:S:49:LEU:HD13	2.43	0.43
1:A:376:G:OP1	18:S:5:ARG:HB2	2.19	0.43
19:T:3:LYS:O	19:T:4:LYS:C	2.55	0.43
19:T:62:SER:CB	19:T:72:ARG:NE	2.67	0.43
1:A:663:A:H4'	20:U:61:LYS:HZ1	1.84	0.43
21:V:18:LYS:HA	21:V:18:LYS:CE	2.33	0.43
1:A:1320:C:C6	21:V:37:ARG:NH1	2.86	0.43
22:W:40:ALA:O	22:W:42:GLN:N	2.52	0.43
22:W:61:SER:C	22:W:65:LYS:HG2	2.39	0.43
23:X:9:ARG:O	23:X:10:ARG:C	2.57	0.43
3:D:22:G:C2'	3:D:23:A:H8	2.24	0.43
3:D:1:G:H2'	3:D:2:C:H6	1.84	0.43
1:A:345:C:H5'	1:A:346:G:C4	2.54	0.43
1:A:1381:U:H2'	1:A:1382:C:H5'	2.01	0.43
8:I:28:ARG:HG2	8:I:28:ARG:NH1	2.32	0.43
1:A:1060:C:C2	1:A:1061:G:C8	3.07	0.43
1:A:1061:G:H2'	1:A:1062:U:O4'	2.19	0.43
1:A:1082:G:H2'	1:A:1083:U:H5'	2.01	0.43
1:A:1084:G:O3'	1:A:1086:U:O4	2.37	0.43
1:A:1134:G:O6	1:A:1141:C:N4	2.51	0.43
1:A:1246:C:O2'	1:A:1247:U:C5'	2.64	0.43
1:A:1247:U:N3	1:A:1291:G:C6	2.86	0.43
1:A:1286:A:C8	1:A:1286:A:C3'	3.02	0.43
1:A:1348:U:O2	1:A:1349:A:C8	2.71	0.43
1:A:184:G:C4'	1:A:224:C:C4'	2.87	0.43
1:A:272:C:C2	1:A:273:A:N7	2.87	0.43
1:A:242:C:N3	1:A:285:G:C2	2.87	0.43
1:A:370:C:N3	1:A:392:G:C2	2.87	0.43
1:A:684:A:H2'	1:A:685:G:O4'	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:795:C:C4'	1:A:1506:U:C2	3.01	0.43
2:C:26:G:C5	2:C:27:U:C5	3.07	0.43
2:C:72:A:N1	2:C:73:A:C6	2.86	0.43
4:E:104:ASN:OD1	4:E:107:THR:HB	2.19	0.43
4:E:114:ARG:C	4:E:114:ARG:CD	2.87	0.43
4:E:105:PHE:HZ	4:E:152:PHE:HZ	1.65	0.43
4:E:75:LYS:HA	4:E:75:LYS:HE3	2.01	0.43
5:F:127:ARG:C	5:F:128:PHE:HD1	2.22	0.43
5:F:36:ASP:O	5:F:39:ILE:CB	2.57	0.43
6:G:118:ARG:HG3	6:G:136:PRO:HG2	2.01	0.43
6:G:100:ARG:NH1	6:G:137:SER:HA	2.34	0.43
6:G:173:TRP:CD1	6:G:185:PHE:CE2	3.03	0.43
6:G:181:MET:HE2	6:G:181:MET:HB2	1.87	0.43
6:G:57:ARG:HG3	6:G:202:LEU:HD23	2.01	0.43
7:H:92:LYS:O	7:H:118:ILE:HG23	2.19	0.43
7:H:141:GLN:C	7:H:142:LEU:CG	2.87	0.43
7:H:48:ALA:CB	7:H:53:LEU:CB	2.96	0.43
7:H:76:ILE:CG2	7:H:142:LEU:HB3	2.48	0.43
7:H:82:VAL:O	7:H:88:LYS:HA	2.19	0.43
8:I:100:ASN:OD1	20:U:27:GLY:HA2	2.18	0.43
9:J:126:ASP:O	9:J:129:GLU:OE1	2.37	0.43
9:J:54:THR:C	9:J:56:GLN:HE21	2.22	0.43
10:K:102:ARG:NH1	10:K:102:ARG:CG	2.82	0.43
10:K:89:PRO:HB3	10:K:92:ARG:NH2	2.34	0.43
11:A:1367:C:OP1	11:L:113:LYS:O	2.36	0.43
11:L:5:TYR:CD2	11:L:17:VAL:O	2.71	0.43
11:L:33:PHE:C	11:L:35:GLU:N	2.71	0.43
12:M:28:ARG:HG2	12:M:28:ARG:NH1	2.33	0.43
13:N:30:VAL:O	13:N:42:TRP:CB	2.65	0.43
17:R:65:ARG:NH1	17:R:65:ARG:HB3	2.33	0.43
18:S:68:ASP:C	18:S:70:ALA:N	2.71	0.43
19:T:16:GLN:C	19:T:18:THR:H	2.22	0.43
19:T:57:VAL:HB	19:T:75:ARG:O	2.19	0.43
19:T:5:VAL:C	19:T:6:LEU:HG	2.39	0.43
22:W:60:GLU:HG3	22:W:81:LYS:HE2	1.99	0.43
3:D:44:G:P	3:D:44:G:H8	2.41	0.43
3:D:58:A:C2'	3:D:61:C:C5	3.02	0.43
3:D:53:G:C2	3:D:62:C:N3	2.87	0.43
1:A:1033:G:N1	1:A:1034:G:C5	2.87	0.43
1:A:1039:C:O2'	1:A:1040:U:H5'	2.19	0.43
1:A:999:U:C4	1:A:1042:G:C6	3.07	0.43
1:A:164:U:H2'	1:A:165:C:H5	1.81	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1043:C:H2'	1:A:1044:A:C4'	2.49	0.43
1:A:1083:U:C6	1:A:1084:G:N7	2.87	0.43
1:A:1124:G:OP1	12:M:35:SER:OG	2.32	0.43
1:A:1138:G:C6	1:A:1140:C:N1	2.86	0.43
1:A:1245:A:C2	1:A:1246:C:C2	3.07	0.43
1:A:1290:G:C6	1:A:1291:G:C8	3.07	0.43
1:A:1304:G:H1	1:A:1332:A:P	2.42	0.43
1:A:1234:C:C5'	1:A:1364:U:O2'	2.61	0.43
1:A:928:G:C2	1:A:1390:U:H1'	2.54	0.43
1:A:1442:G:H21	1:A:1446:A:H5''	1.82	0.43
1:A:1454:G:O2'	1:A:1455:G:H5'	2.19	0.43
1:A:150:C:H2'	1:A:151:A:O5'	2.19	0.43
1:A:168:G:C6	1:A:169:C:N4	2.87	0.43
1:A:16:A:H2	1:A:17:U:O4'	2.02	0.43
1:A:22:G:OP1	1:A:561:U:H1'	2.19	0.43
1:A:294:U:C2	1:A:295:C:H5	2.35	0.43
1:A:307:C:C6	1:A:307:C:C5'	3.02	0.43
1:A:44:G:C5	1:A:399:G:N1	2.87	0.43
1:A:451:A:C6	1:A:480:U:H2'	2.53	0.43
1:A:505:G:C5	1:A:506:G:N7	2.87	0.43
1:A:571:U:H4'	1:A:819:A:H62	1.84	0.43
1:A:740:U:O2'	1:A:741:G:H5'	2.18	0.43
1:A:957:U:O2	1:A:960:U:C6	2.72	0.43
1:A:983:A:N3	1:A:983:A:H2'	2.33	0.43
2:C:28:C:C2	2:C:29:G:C8	3.07	0.43
3:D:41:G:N2	3:D:42:C:O2	2.52	0.43
4:E:147:LYS:HG3	4:E:148:TYR:CD1	2.54	0.43
4:E:173:ALA:C	4:E:175:ARG:N	2.72	0.43
4:E:213:LEU:O	4:E:216:SER:HB3	2.18	0.43
4:E:22:LYS:O	4:E:24:TRP:HD1	1.99	0.43
4:E:56:ARG:HA	4:E:59:GLU:HG2	2.00	0.43
4:E:74:LYS:O	4:E:75:LYS:C	2.55	0.43
5:F:84:ILE:HG13	5:F:101:LEU:HB3	2.01	0.43
5:F:82:GLU:O	5:F:83:ARG:C	2.55	0.43
6:G:103:ASN:OD1	6:G:103:ASN:C	2.57	0.43
6:G:147:ALA:O	6:G:148:VAL:C	2.57	0.43
6:G:172:PRO:HG2	6:G:173:TRP:HE3	1.83	0.43
7:H:48:ALA:HB1	7:H:53:LEU:HB2	2.01	0.43
8:I:14:LEU:HD13	8:I:18:GLN:CB	2.41	0.43
8:I:95:GLU:N	8:I:96:PRO:CD	2.77	0.43
10:K:111:ILE:HD12	10:K:135:CYS:O	2.19	0.43
10:K:33:GLU:HG2	10:K:59:LEU:CD2	2.44	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:L:120:ARG:O	11:L:122:ALA:N	2.52	0.43
11:L:91:ASP:O	11:L:92:TYR:HD2	2.01	0.43
5:F:23:TYR:CE1	12:M:10:GLY:C	2.92	0.43
12:M:8:LEU:HD11	12:M:19:SER:CB	2.48	0.43
13:N:102:GLY:C	13:N:104:GLN:N	2.68	0.43
13:N:99:GLN:CB	13:N:105:VAL:HG11	2.48	0.43
13:N:39:PRO:C	13:N:40:ILE:HD13	2.39	0.43
13:N:48:ILE:HG13	13:N:64:ALA:HB2	2.01	0.43
15:P:4:ILE:O	15:P:5:ALA:CB	2.66	0.43
15:P:8:GLU:HG3	15:P:22:ILE:HG12	2.01	0.43
16:Q:48:ALA:O	16:Q:49:HIS:C	2.57	0.43
17:R:33:THR:O	17:R:36:ILE:HB	2.18	0.43
1:A:580:U:H4'	17:R:58:MET:HG2	2.00	0.43
17:R:71:GLN:CA	17:R:78:TYR:CD1	3.02	0.43
18:S:11:SER:OG	18:S:14:ASN:ND2	2.45	0.43
18:S:21:VAL:CG1	18:S:36:ILE:HD11	2.43	0.43
18:S:3:LYS:HE2	18:S:24:ALA:CB	2.35	0.43
19:T:32:TYR:O	19:T:33:GLY:C	2.57	0.43
22:W:18:GLN:O	22:W:19:SER:C	2.56	0.43
3:D:70:G:H2'	3:D:71:G:H8	1.81	0.43
1:A:1004:A:C8	1:A:1037:C:N4	2.87	0.43
1:A:1007:C:C2	1:A:1008:C:C5	3.07	0.43
1:A:1129:C:O4'	1:A:1130:A:N7	2.52	0.43
1:A:1135:U:H2'	1:A:1137:C:C5	2.53	0.43
1:A:1178:G:H2'	1:A:1179:A:H3'	2.01	0.43
1:A:1065:U:C5	1:A:1190:G:N3	2.87	0.43
1:A:1290:G:H2'	1:A:1291:G:H5'	2.01	0.43
1:A:1340:A:O3'	2:C:32:C:H5'	2.18	0.43
1:A:1391:U:H2'	1:A:1392:G:H8	1.73	0.43
1:A:1406:U:H2'	1:A:1407:C:H6	1.84	0.43
1:A:893:C:H5'	1:A:1415:G:O2'	2.19	0.43
1:A:1500:A:OP1	1:A:1505:G:OP1	2.37	0.43
1:A:296:U:C2	1:A:297:G:N7	2.86	0.43
1:A:380:G:N2	1:A:382:A:C3'	2.67	0.43
1:A:421:U:H6	1:A:421:U:P	2.41	0.43
1:A:447:G:H2'	1:A:448:A:OP2	2.18	0.43
1:A:559:A:HO2'	1:A:560:U:P	2.39	0.43
1:A:581:G:N1	1:A:758:G:H2'	2.33	0.43
1:A:401:C:O2'	1:A:621:A:N3	2.41	0.43
1:A:655:A:C6	1:A:656:C:C4	3.07	0.43
1:A:766:A:C2	1:A:767:A:N9	2.87	0.43
1:A:76:G:C6	1:A:95:G:C6	3.07	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:713:G:H21	1:A:777:A:C1'	2.31	0.43
1:A:860:A:N7	1:A:861:G:C5	2.87	0.43
1:A:85:U:O2'	1:A:86:U:H5'	2.19	0.43
1:A:886:G:C4	1:A:887:G:C8	3.07	0.43
1:A:980:C:C4	1:A:981:U:O2	2.72	0.43
4:E:120:ALA:O	4:E:122:PHE:HB2	2.18	0.43
4:E:219:VAL:C	4:E:223:ILE:HD12	2.39	0.43
4:E:223:ILE:HA	4:E:226:ARG:HE	1.83	0.43
4:E:57:PHE:CD2	4:E:57:PHE:C	2.92	0.43
4:E:69:LEU:CD2	4:E:92:TYR:N	2.82	0.43
5:F:111:LEU:HD13	5:F:111:LEU:N	2.34	0.43
5:F:42:LEU:CD1	5:F:94:LEU:HD12	2.48	0.43
6:G:106:TYR:HD2	6:G:114:ARG:CA	2.32	0.43
6:G:146:ILE:CD1	6:G:146:ILE:N	2.65	0.43
1:A:409:G:H5'	6:G:24:GLU:HB3	2.00	0.43
1:A:402:G:P	6:G:74:GLN:HE21	2.41	0.43
8:I:85:VAL:HG11	8:I:88:VAL:CG2	2.49	0.43
9:J:47:CYS:O	9:J:51:GLN:HG2	2.19	0.43
1:A:1376:U:H5''	9:J:94:ARG:HH22	1.84	0.43
10:K:111:ILE:CG2	10:K:118:VAL:HG13	2.48	0.43
10:K:133:LEU:HG	10:K:133:LEU:H	1.08	0.43
10:K:48:TYR:HB2	10:K:61:VAL:CG2	2.49	0.43
11:L:23:ASN:C	11:L:59:PHE:O	2.58	0.43
11:L:30:GLY:C	11:L:31:GLN:OE1	2.58	0.43
14:O:82:VAL:CG1	14:O:83:VAL:N	2.82	0.43
14:O:69:TYR:HB2	14:O:96:VAL:HG11	2.00	0.43
15:P:27:LYS:O	15:P:29:ARG:N	2.50	0.43
1:A:1202:G:N9	16:Q:42:ILE:HD13	2.33	0.43
17:R:54:ARG:O	17:R:57:LEU:HB2	2.19	0.43
17:R:71:GLN:CG	17:R:75:PRO:HB3	2.27	0.43
18:S:21:VAL:HG23	18:S:34:GLU:C	2.39	0.43
21:V:19:VAL:HG13	21:V:20:LEU:N	2.34	0.43
21:V:39:THR:C	21:V:40:ILE:O	2.57	0.43
22:W:44:ALA:HB1	22:W:92:LEU:HD11	2.00	0.43
1:A:163:C:C2	1:A:164:U:C6	3.07	0.43
1:A:102:G:H2'	1:A:103:C:H6	1.83	0.42
1:A:108:G:O6	22:W:15:ARG:CD	2.67	0.42
1:A:109:A:H4'	1:A:110:C:OP2	2.18	0.42
1:A:1147:C:N3	1:A:1148:U:C5	2.87	0.42
1:A:130:A:C2	1:A:264:U:C1'	3.01	0.42
1:A:1314:C:C2	1:A:1315:U:C4	3.07	0.42
1:A:1315:U:O2'	1:A:1360:A:C1'	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:924:C:O2'	1:A:1399:C:C5	2.71	0.42
1:A:1425:U:C2	1:A:1426:C:C5	3.06	0.42
1:A:1462:G:H2'	1:A:1463:C:H6	1.84	0.42
1:A:1483:A:C8	1:A:1483:A:O5'	2.71	0.42
1:A:1499:A:H62	1:A:1500:A:N6	2.16	0.42
1:A:1499:A:N6	1:A:1500:A:C6	2.87	0.42
1:A:15:G:C3'	1:A:16:A:H8	2.32	0.42
1:A:197:A:N6	1:A:220:G:O2'	2.51	0.42
1:A:293:G:C4	1:A:294:U:C5	3.06	0.42
1:A:325:A:C2'	1:A:326:G:O5'	2.66	0.42
1:A:373:A:N1	1:A:482:A:N6	2.66	0.42
1:A:37:U:H5	1:A:38:G:C8	2.37	0.42
1:A:42:G:C5	1:A:43:C:C4	3.07	0.42
1:A:451:A:N7	1:A:481:G:C6	2.87	0.42
1:A:551:U:H2'	1:A:552:U:C5	2.53	0.42
1:A:800:G:H2'	1:A:801:U:OP2	2.19	0.42
1:A:80:G:C2'	1:A:81:G:C8	3.02	0.42
1:A:812:C:H1'	1:A:813:U:C5	2.54	0.42
1:A:93:U:C2	1:A:95:G:N7	2.87	0.42
1:A:99:C:O2'	1:A:101:A:P	2.76	0.42
2:C:5:G:C6	2:C:6:G:N7	2.87	0.42
4:E:109:SER:O	4:E:112:VAL:N	2.52	0.42
4:E:118:LEU:CD1	4:E:141:GLU:OE2	2.67	0.42
5:F:8:ILE:HD12	5:F:16:ARG:HD2	2.01	0.42
5:F:29:TYR:HE2	5:F:33:LEU:HD12	1.83	0.42
6:G:128:VAL:CA	6:G:146:ILE:HG22	2.49	0.42
6:G:140:VAL:O	6:G:141:ARG:C	2.58	0.42
6:G:71:SER:O	6:G:75:PHE:HB3	2.19	0.42
7:H:110:LEU:O	7:H:115:VAL:HG22	2.19	0.42
7:H:41:VAL:HG12	7:H:112:LEU:HD12	2.00	0.42
9:J:139:GLU:CA	9:J:142:GLU:HB2	2.49	0.42
9:J:89:MET:HB3	9:J:156:TRP:HB2	2.01	0.42
9:J:54:THR:OG1	9:J:56:GLN:CG	2.63	0.42
9:J:69:VAL:HG22	9:J:135:VAL:CG2	2.49	0.42
9:J:71:PRO:HG2	9:J:96:GLN:HA	1.99	0.42
10:K:122:ARG:CD	10:K:123:GLU:N	2.73	0.42
10:K:4:ASP:OD1	10:K:89:PRO:HG3	2.19	0.42
13:N:122:LYS:O	13:N:123:LYS:C	2.57	0.42
1:A:551:U:C5'	14:O:119:LYS:HZ3	2.29	0.42
16:Q:29:ARG:HH11	16:Q:29:ARG:HB3	1.83	0.42
17:R:53:HIS:CD2	17:R:57:LEU:HD11	2.54	0.42
18:S:12:LYS:NZ	18:S:13:HIS:CE1	2.87	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:S:26:ARG:NH1	18:S:26:ARG:CG	2.81	0.42
20:U:55:ARG:CZ	20:U:55:ARG:HB3	2.41	0.42
20:U:74:ARG:CG	20:U:79:LEU:HD21	2.49	0.42
21:V:53:ASN:OD1	21:V:56:GLN:HB2	2.19	0.42
21:V:71:LEU:O	21:V:72:GLY:C	2.57	0.42
3:D:10:G:H2'	3:D:10:G:N3	2.34	0.42
18:S:46:PRO:CG	18:S:47:ASP:N	2.81	0.42
1:A:342:C:C4	1:A:348:G:N1	2.87	0.42
1:A:1102:A:C4	1:A:1103:C:C5	3.07	0.42
1:A:1109:C:C2'	1:A:1110:A:C8	2.90	0.42
1:A:1207:G:C2	1:A:1208:C:C6	3.08	0.42
1:A:1300:G:C2	1:A:1335:C:C2	3.07	0.42
1:A:1309:G:C2	1:A:1310:G:C8	3.07	0.42
1:A:1357:A:C4	1:A:1358:U:C5	3.07	0.42
1:A:1372:U:O4	1:A:1373:G:C6	2.72	0.42
1:A:191(F):U:O5'	1:A:191(F):U:H6	2.02	0.42
1:A:196:A:H3'	1:A:196:A:H8	1.82	0.42
1:A:284:G:H2'	1:A:285:G:O4'	2.19	0.42
1:A:290:C:C2'	1:A:291:C:H5'	2.49	0.42
1:A:372:C:O2'	1:A:373:A:OP2	2.29	0.42
1:A:402:G:C6	1:A:403:C:C4	3.07	0.42
1:A:451:A:N7	1:A:481:G:N1	2.67	0.42
1:A:518:C:C5	1:A:530:G:C5	3.07	0.42
1:A:547:A:H4'	1:A:548:G:C5'	2.49	0.42
1:A:557:G:N1	1:A:558:G:C2	2.88	0.42
1:A:717:C:O2'	1:A:718:G:OP2	2.35	0.42
1:A:826:C:O5'	1:A:826:C:H6	2.02	0.42
1:A:836:G:C6	1:A:837:G:C5	3.07	0.42
1:A:885:G:C2	1:A:886:G:C5	3.06	0.42
1:A:909:A:C2'	1:A:910:C:C5'	2.90	0.42
1:A:917:G:HO2'	1:A:918:A:H5'	1.84	0.42
1:A:975:A:H1'	1:A:1357:A:H2	1.85	0.42
1:A:96:G:C6	1:A:97:U:N3	2.87	0.42
1:A:991:U:C4	1:A:1212:U:O2	2.73	0.42
4:E:12:GLU:OE1	4:E:12:GLU:O	2.37	0.42
4:E:167:PRO:C	4:E:169:LYS:N	2.73	0.42
4:E:208:ILE:CA	4:E:211:ILE:HD12	2.49	0.42
4:E:22:LYS:HD2	4:E:40:HIS:CE1	2.54	0.42
5:F:142:MET:O	5:F:145:GLY:O	2.37	0.42
5:F:15:THR:CG2	5:F:181:ASN:OD1	2.67	0.42
5:F:28:GLN:CD	5:F:28:GLN:C	2.78	0.42
5:F:91:LEU:HD22	5:F:98:ASN:HA	1.94	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:128:VAL:CG1	6:G:129:ASN:H	2.31	0.42
1:A:541:G:O2'	6:G:42:GLN:HB3	2.19	0.42
7:H:149:GLU:O	7:H:152:ARG:N	2.52	0.42
7:H:20:GLN:O	7:H:21:ALA:O	2.37	0.42
8:I:77:ARG:HA	8:I:80:ARG:NE	2.33	0.42
10:K:11:THR:C	10:K:13:ILE:H	2.23	0.42
10:K:36:LEU:CA	10:K:39:LEU:HB2	2.49	0.42
10:K:48:TYR:HA	10:K:60:ARG:O	2.19	0.42
10:K:91:ARG:HG3	14:O:7:ILE:HD12	2.01	0.42
11:L:93:ARG:CZ	11:L:97:LYS:HG2	2.49	0.42
11:L:97:LYS:O	11:L:100:GLY:CA	2.67	0.42
12:M:53:PRO:O	12:M:54:PHE:HB3	2.18	0.42
12:M:5:ARG:HA	12:M:73:ASP:CG	2.39	0.42
14:O:68:ALA:HB1	14:O:98:TYR:C	2.39	0.42
15:P:90:LEU:HA	15:P:93:ARG:HB3	1.99	0.42
16:Q:14:PRO:C	16:Q:16:PHE:H	2.22	0.42
18:S:21:VAL:CG2	18:S:34:GLU:CB	2.97	0.42
18:S:58:TYR:O	18:S:59:TRP:C	2.57	0.42
18:S:70:ALA:O	18:S:73:LEU:HB3	2.20	0.42
19:T:54:GLY:O	19:T:55:ASP:C	2.57	0.42
8:I:48:LEU:CA	20:U:78:LEU:HD23	2.49	0.42
22:W:22:ARG:O	22:W:23:ARG:C	2.57	0.42
22:W:65:LYS:O	22:W:66:ALA:C	2.57	0.42
22:W:81:LYS:O	22:W:84:LEU:HB3	2.19	0.42
8:I:28:ARG:H	8:I:28:ARG:HD3	1.84	0.42
1:A:1066:C:C2'	1:A:1067:A:C8	3.02	0.42
1:A:1228:C:H4'	15:P:115:LYS:O	2.19	0.42
1:A:1350:A:H2'	1:A:1351:U:O4'	2.19	0.42
1:A:1365:G:C2	1:A:1366:C:C2	3.08	0.42
1:A:1411:C:N3	1:A:1412:C:C5	2.87	0.42
1:A:1438:G:H2'	1:A:1439:C:H6	1.84	0.42
1:A:1446:A:C2'	1:A:1447:G:O5'	2.67	0.42
1:A:1502:A:C6	1:A:1504:G:N2	2.87	0.42
1:A:172:A:N7	1:A:174:C:C4	2.87	0.42
1:A:187:C:H1'	1:A:191(A):G:N2	2.34	0.42
1:A:225:C:C2'	1:A:226:G:O5'	2.67	0.42
1:A:44:G:H2'	1:A:45:U:H5'	2.00	0.42
1:A:373:A:C8	1:A:482:A:N7	2.88	0.42
1:A:406:G:C8	1:A:495:A:C2	3.07	0.42
1:A:562:C:C6	1:A:884:U:C5	3.08	0.42
1:A:628:G:C2'	1:A:629:G:H8	2.08	0.42
1:A:641:U:O2	1:A:641:U:H2'	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:688:G:O2'	1:A:689:C:H5'	2.19	0.42
1:A:799:G:H3'	1:A:800:G:C8	2.54	0.42
1:A:853:G:H2'	1:A:854:G:H8	1.85	0.42
1:A:923:A:P	7:H:21:ALA:HB2	2.59	0.42
1:A:980:C:C4	1:A:981:U:C2	3.07	0.42
1:A:986:A:C5	1:A:987:G:N7	2.87	0.42
2:C:11:A:N1	2:C:25:C:N3	2.67	0.42
2:C:44:A:N3	2:C:45:G:O4'	2.52	0.42
5:F:34:LEU:C	5:F:38:ARG:HD3	2.40	0.42
6:G:102:ASP:HB2	6:G:136:PRO:O	2.19	0.42
6:G:159:ARG:HG2	6:G:159:ARG:HH11	1.84	0.42
6:G:201:GLN:O	6:G:202:LEU:C	2.58	0.42
7:H:105:VAL:HG11	7:H:132:ALA:HA	2.01	0.42
7:H:41:VAL:HG21	7:H:113:ALA:CB	2.49	0.42
7:H:15:ARG:HD2	7:H:16:THR:N	2.35	0.42
7:H:41:VAL:HG21	7:H:113:ALA:HB2	2.01	0.42
7:H:46:GLY:N	7:H:58:ALA:HB2	2.34	0.42
7:H:80:ILE:N	7:H:80:ILE:CD1	2.70	0.42
8:I:2:ARG:CD	8:I:69:GLU:HG2	2.49	0.42
8:I:91:VAL:CG2	20:U:72:ARG:HH12	2.33	0.42
9:J:136:LYS:HA	9:J:139:GLU:OE1	2.19	0.42
9:J:49:ILE:HG22	9:J:125:MET:HE1	2.02	0.42
9:J:50:ILE:O	9:J:54:THR:O	2.37	0.42
10:K:109:ILE:HG12	10:K:137:VAL:N	2.31	0.42
1:A:599:C:O3'	10:K:96:GLY:HA3	2.20	0.42
12:M:16:LEU:HD13	12:M:94:VAL:CG2	2.48	0.42
10:K:90:GLY:HA3	14:O:7:ILE:HG13	2.01	0.42
15:P:110:ARG:HB2	15:P:110:ARG:NH1	2.33	0.42
18:S:20:VAL:HG13	18:S:21:VAL:N	2.29	0.42
18:S:58:TYR:O	18:S:61:SER:HB3	2.19	0.42
18:S:66:PRO:HD2	18:S:71:ARG:HH22	1.79	0.42
19:T:50:LYS:CG	19:T:51:TYR:N	2.74	0.42
19:T:18:THR:HA	19:T:69:LYS:HZ3	1.85	0.42
20:U:79:LEU:HA	20:U:80:PRO:HD2	1.74	0.42
21:V:24:ALA:C	21:V:26:GLY:N	2.70	0.42
21:V:19:VAL:CG2	21:V:43:GLU:CD	2.87	0.42
21:V:63:THR:H	21:V:66:MET:CG	2.32	0.42
22:W:50:GLU:HB2	22:W:99:LEU:CB	2.49	0.42
1:A:748:C:O5'	1:A:748:C:H6	1.95	0.42
1:A:217:C:O5'	1:A:217:C:H6	2.01	0.42
14:O:126:LYS:HD3	14:O:128:ALA:H	1.84	0.42
1:A:1057:G:H2'	1:A:1058:G:C8	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1196:U:C3'	1:A:1196:U:C6	3.02	0.42
1:A:1205:U:O2'	5:F:194:GLY:CA	2.67	0.42
1:A:120:A:C6	1:A:122:G:C2	3.07	0.42
1:A:125:U:C2'	1:A:126:G:C8	2.90	0.42
1:A:1253:G:C6	1:A:1285:A:N6	2.87	0.42
1:A:1303:C:H2'	1:A:1303:C:O2	2.19	0.42
1:A:1365:G:C4	1:A:1366:C:C5	3.07	0.42
1:A:1353:G:N3	1:A:1370:G:N2	2.67	0.42
1:A:1431:C:N4	1:A:1469:G:H1	2.17	0.42
1:A:1516:G:N2	1:A:1518:A:H3'	2.35	0.42
1:A:262:A:H5'	22:W:74:LYS:CG	2.44	0.42
1:A:303:A:HO2'	1:A:555:C:HO2'	1.67	0.42
1:A:305:G:O2'	1:A:306:G:OP1	2.37	0.42
1:A:320:C:O2'	1:A:1435:G:O2'	2.31	0.42
1:A:397:A:H2'	1:A:398:C:OP2	2.20	0.42
1:A:411:A:N6	1:A:413:G:C2	2.87	0.42
1:A:512:U:H2'	1:A:513:C:C6	2.55	0.42
1:A:596:C:O2	1:A:597:G:C8	2.72	0.42
1:A:697:U:C4'	1:A:786:G:O2'	2.67	0.42
1:A:766:A:C2	1:A:767:A:H1'	2.55	0.42
1:A:87:A:N7	1:A:88:C:N3	2.67	0.42
1:A:959:A:C3'	1:A:960:U:C5'	2.97	0.42
1:A:983:A:C2	1:A:984:C:C5	3.07	0.42
2:C:35:A:H2'	2:C:36:U:O5'	2.19	0.42
2:C:4:G:C6	2:C:70:G:C6	3.07	0.42
4:E:193:ASP:OD2	4:E:196:LEU:CD1	2.66	0.42
5:F:185:GLY:O	5:F:199:LYS:HA	2.19	0.42
5:F:50:ALA:HB1	5:F:70:VAL:HG11	2.02	0.42
6:G:148:VAL:O	6:G:153:ARG:CG	2.66	0.42
6:G:43:HIS:C	6:G:45:GLN:N	2.73	0.42
6:G:62:GLN:C	6:G:66:ARG:HD2	2.40	0.42
7:H:144:THR:HB	7:H:146:ALA:CB	2.45	0.42
7:H:78:HIS:CG	10:K:107:LEU:CD1	2.97	0.42
8:I:96:PRO:HD2	20:U:32:ARG:NE	2.33	0.42
9:J:139:GLU:O	9:J:143:ARG:HD2	2.20	0.42
9:J:76:ARG:HB2	9:J:156:TRP:NE1	2.34	0.42
7:H:78:HIS:HB3	10:K:107:LEU:HD11	2.01	0.42
10:K:98:LYS:C	10:K:98:LYS:HZ3	2.23	0.42
11:L:45:ALA:O	11:L:78:LYS:CG	2.67	0.42
11:L:15:ALA:HB2	11:L:73:GLN:O	2.19	0.42
11:L:7:THR:C	11:L:80:GLY:HA2	2.39	0.42
12:M:33:GLN:O	12:M:34:VAL:HG23	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:N:66:LEU:O	13:N:70:LYS:HD2	2.19	0.42
14:O:58:VAL:HG12	14:O:59:ARG:N	2.34	0.42
15:P:125:ARG:O	15:P:126:LYS:HB2	2.18	0.42
16:Q:44:LEU:CG	16:Q:45:ARG:N	2.82	0.42
18:S:5:ARG:NH2	18:S:23:ASP:O	2.52	0.42
18:S:35:LYS:CD	18:S:36:ILE:N	2.77	0.42
20:U:58:LEU:CD2	20:U:62:GLU:HG2	2.49	0.42
3:D:56:C:O5'	3:D:57:G:C5	2.72	0.42
3:D:60:U:H5	3:D:60:U:OP2	2.03	0.42
1:A:1003:G:C4	1:A:1004:A:H1'	2.54	0.42
1:A:747:C:C2'	1:A:748:C:O4'	2.67	0.42
1:A:958:A:N6	1:A:1221:G:O2'	2.52	0.42
1:A:1242:C:N4	1:A:1243:C:N4	2.68	0.42
1:A:1291:G:C2	1:A:1292:U:C2	3.08	0.42
1:A:129(A):G:C8	1:A:129(A):G:C3'	3.03	0.42
1:A:1301:U:N3	1:A:1303:C:C1'	2.82	0.42
1:A:1434:A:N6	1:A:1467:G:H21	2.18	0.42
1:A:14:U:O2	1:A:17:U:H5	2.02	0.42
1:A:1509:C:H2'	1:A:1510:U:H6	1.83	0.42
1:A:186(E):C:C2'	1:A:186(F):C:H5'	2.50	0.42
1:A:317:G:H2'	1:A:318:G:O5'	2.19	0.42
1:A:429:U:O2	1:A:430:A:C8	2.73	0.42
1:A:513:C:C2	1:A:514:C:C6	3.08	0.42
1:A:418:C:O2'	1:A:540:G:H1'	2.20	0.42
1:A:582:U:O4	1:A:583:A:N6	2.53	0.42
1:A:58:C:C6	1:A:58:C:H5''	2.54	0.42
1:A:707:C:N3	1:A:708:C:C5	2.87	0.42
1:A:860:A:N7	1:A:861:G:C4	2.87	0.42
1:A:97:U:H3	1:A:99:C:N4	2.18	0.42
2:C:18:G:N1	2:C:57:A:N6	2.67	0.42
4:E:73:THR:CG2	4:E:93:VAL:HG12	2.49	0.42
4:E:92:TYR:CE2	4:E:151:GLY:O	2.73	0.42
5:F:108:ASN:HD21	5:F:110:ASN:CB	2.30	0.42
5:F:16:ARG:HG2	5:F:16:ARG:O	2.19	0.42
5:F:172:ARG:C	5:F:173:VAL:CG2	2.87	0.42
5:F:182:ILE:CA	5:F:204:LEU:HG	2.48	0.42
6:G:175:SER:OG	6:G:184:LYS:O	2.26	0.42
6:G:31:CYS:O	6:G:33:MET:CE	2.66	0.42
7:H:28:PHE:O	7:H:47:LYS:HA	2.19	0.42
8:I:86:ARG:HD3	8:I:86:ARG:HA	1.73	0.42
9:J:62:PHE:O	9:J:66:VAL:HG23	2.19	0.42
9:J:22:LEU:CD1	9:J:97:GLN:HE21	2.32	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:876:G:C1'	10:K:11:THR:HG21	2.49	0.42
10:K:9:MET:C	10:K:11:THR:N	2.70	0.42
10:K:49:GLU:CG	10:K:62:TYR:OH	2.67	0.42
10:K:65:TYR:HB2	10:K:66:GLY:H	1.64	0.42
11:L:101:PHE:CD1	11:L:101:PHE:N	2.87	0.42
11:L:70:LYS:N	11:L:73:GLN:OE1	2.53	0.42
11:L:48:GLU:CB	11:L:78:LYS:NZ	2.82	0.42
12:M:23:ILE:CA	12:M:85:LEU:HD23	2.49	0.42
12:M:31:GLY:N	12:M:81:THR:OG1	2.52	0.42
12:M:34:VAL:HG12	12:M:36:GLY:N	2.35	0.42
5:F:5:ILE:HG22	12:M:51:ARG:HH22	1.79	0.42
13:N:48:ILE:O	13:N:49:GLY:C	2.58	0.42
15:P:23:TYR:O	15:P:67:GLU:N	2.38	0.42
15:P:52:GLU:O	15:P:55:ARG:HG3	2.19	0.42
16:Q:9:LYS:NZ	16:Q:12:ARG:NH2	2.58	0.42
17:R:36:ILE:HD11	17:R:60:VAL:HA	2.01	0.42
17:R:48:LYS:CB	17:R:50:HIS:NE2	2.83	0.42
18:S:59:TRP:O	18:S:60:LEU:C	2.57	0.42
19:T:22:LEU:CD1	19:T:23:VAL:N	2.82	0.42
19:T:50:LYS:O	19:T:51:TYR:C	2.57	0.42
19:T:78:GLU:CG	19:T:81:ARG:HB2	2.49	0.42
20:U:37:VAL:HG12	20:U:41:LYS:HE3	2.02	0.42
22:W:51:GLU:CA	22:W:54:LYS:HE3	2.50	0.42
1:A:1166:G:N2	1:A:1169:A:O5'	2.52	0.42
8:I:90:VAL:HG13	8:I:90:VAL:O	2.18	0.42
1:A:1084:G:P	1:A:1086:U:C6	3.12	0.42
1:A:1192:C:N4	1:A:1193:G:C6	2.86	0.42
1:A:1215:G:N3	1:A:1215:G:H2'	2.34	0.42
1:A:1244:C:OP2	23:X:9:ARG:HD3	2.20	0.42
1:A:1286:A:N3	23:X:18:TYR:CZ	2.87	0.42
1:A:1245:A:C6	1:A:1293:G:N1	2.88	0.42
1:A:1306:A:H3'	1:A:1307:U:C5	2.54	0.42
1:A:1479:C:C2	1:A:1480:G:C8	3.07	0.42
1:A:250:A:N3	1:A:252:U:N3	2.68	0.42
1:A:427:U:C6	1:A:428:G:N7	2.87	0.42
1:A:657:G:H5'	17:R:28:GLN:OE1	2.20	0.42
1:A:856:C:C2	1:A:857:C:C6	3.08	0.42
1:A:87:A:C8	1:A:88:C:C6	3.07	0.42
1:A:914:A:C2'	1:A:915:A:C8	2.87	0.42
1:A:974:A:C4	16:Q:31:ARG:NH2	2.87	0.42
2:C:30:G:C2	2:C:41:C:C2	3.07	0.42
2:C:31:G:H3'	2:C:32:C:H5	1.83	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:155:LEU:C	4:E:157:ARG:H	2.22	0.42
4:E:177:ALA:O	4:E:180:LEU:N	2.53	0.42
5:F:25:GLY:N	5:F:28:GLN:NE2	2.67	0.42
5:F:38:ARG:CB	5:F:94:LEU:HD21	2.49	0.42
5:F:19:GLU:CG	5:F:54:ARG:HE	2.21	0.42
6:G:130:GLY:HA3	6:G:131:ARG:HH12	1.84	0.42
6:G:15:GLU:OE1	6:G:59:ARG:NH2	2.51	0.42
6:G:173:TRP:CD2	6:G:189:PRO:HB3	2.49	0.42
7:H:43:LEU:CB	7:H:136:MET:HE2	2.29	0.42
7:H:141:GLN:OE1	7:H:141:GLN:CA	2.68	0.42
8:I:36:ARG:NH1	8:I:66:GLU:OE2	2.52	0.42
9:J:25:ALA:O	9:J:28:ASN:HB2	2.20	0.42
9:J:75:VAL:HA	9:J:88:PRO:HA	2.02	0.42
10:K:126:LYS:HZ2	10:K:127:LEU:CA	2.32	0.42
11:L:15:ALA:HB3	11:L:76:ALA:CB	2.49	0.42
1:A:963:G:H21	12:M:55:LYS:HD2	1.85	0.42
15:P:108:ARG:CZ	15:P:111:LYS:HD2	2.49	0.42
18:S:58:TYR:O	18:S:61:SER:OG	2.33	0.42
1:A:255:G:OP2	19:T:66:SER:HB2	2.20	0.42
21:V:45:VAL:HA	21:V:67:VAL:HG22	2.02	0.42
21:V:50:ALA:HB1	21:V:57:HIS:C	2.39	0.42
3:D:6:G:C6	3:D:68:U:C4	3.08	0.42
8:I:46:ARG:HB3	8:I:46:ARG:HE	1.70	0.42
1:A:1124:G:OP1	12:M:35:SER:O	2.38	0.42
1:A:1188:A:C5	1:A:1189:C:C4	3.07	0.42
1:A:1373:G:C4'	9:J:34:GLY:O	2.67	0.42
1:A:1374:A:C6	1:A:1375:A:N7	2.88	0.42
1:A:1468:A:C2'	1:A:1469:G:H5'	2.47	0.42
1:A:155:C:O2'	1:A:156:G:H5'	2.19	0.42
1:A:11:G:H21	1:A:24:U:H1'	1.84	0.42
1:A:279:A:C1'	1:A:281:G:N3	2.53	0.42
1:A:287:U:H2'	1:A:287:U:O2	2.18	0.42
1:A:332:G:C4	1:A:333:G:C8	3.07	0.42
1:A:363:A:OP2	14:O:34:ARG:NH2	2.52	0.42
1:A:397:A:C2	1:A:548:G:O6	2.73	0.42
1:A:407:G:O2'	1:A:408:A:H5'	2.19	0.42
1:A:498:A:C8	1:A:547:A:N6	2.87	0.42
1:A:513:C:C2	1:A:514:C:C5	3.07	0.42
1:A:620:C:H2'	1:A:621:A:C5'	2.50	0.42
1:A:620:C:HO2'	1:A:621:A:H5'	1.81	0.42
1:A:696:A:H3'	1:A:697:U:C5	2.55	0.42
1:A:654:G:C1'	1:A:753:A:C2	3.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:872:A:H2'	1:A:873:A:H5''	2.00	0.42
1:A:873:A:C5'	1:A:874:G:OP2	2.68	0.42
1:A:949:A:HO2'	1:A:1364:U:H3	1.61	0.42
1:A:988:G:C4	1:A:989:C:C6	3.08	0.42
1:A:994:A:C2	1:A:995:C:C2	3.07	0.42
4:E:132:LYS:HZ2	4:E:132:LYS:HB3	1.84	0.42
4:E:15:VAL:HG21	4:E:210:SER:H	1.84	0.42
4:E:20:GLU:OE1	4:E:20:GLU:N	2.52	0.42
4:E:69:LEU:HD22	4:E:92:TYR:HA	2.02	0.42
5:F:10:PHE:O	5:F:178:LEU:CD1	2.67	0.42
5:F:68:VAL:HG12	5:F:69:HIS:N	2.34	0.42
1:A:404:U:P	6:G:118:ARG:HH11	2.43	0.42
6:G:119:GLN:O	6:G:123:HIS:CD2	2.73	0.42
6:G:131:ARG:HD2	6:G:132:ARG:H	1.82	0.42
6:G:139:ARG:O	6:G:141:ARG:N	2.53	0.42
6:G:148:VAL:HG11	6:G:158:ILE:HG23	2.01	0.42
6:G:3:ARG:NE	6:G:71:SER:N	2.67	0.42
6:G:61:LYS:HD2	6:G:207:TYR:OH	2.19	0.42
8:I:80:ARG:HG2	8:I:88:VAL:CG1	2.46	0.42
1:A:1346:A:C2	9:J:10:ARG:NE	2.88	0.42
1:A:1298:C:C6	9:J:114:ARG:HD3	2.55	0.42
9:J:49:ILE:CD1	9:J:121:ALA:HB2	2.34	0.42
9:J:138:LYS:O	9:J:140:ASP:N	2.51	0.42
10:K:45:ILE:HB	10:K:61:VAL:HG11	2.01	0.42
10:K:6:ILE:HD12	10:K:7:ALA:N	2.33	0.42
11:L:111:ARG:C	11:L:113:LYS:HE3	2.39	0.42
12:M:27:ALA:HB3	12:M:85:LEU:HD21	1.99	0.42
12:M:38:ILE:HA	12:M:39:PRO:HD2	1.71	0.42
13:N:61:ALA:O	13:N:62:GLN:C	2.58	0.42
14:O:56:ALA:HB2	14:O:100:ILE:HD11	2.02	0.42
14:O:122:THR:CG2	14:O:123:LYS:N	2.82	0.42
14:O:24:VAL:HG22	14:O:98:TYR:CE2	2.55	0.42
15:P:34:LEU:HD22	15:P:41:PRO:CA	2.47	0.42
17:R:34:LEU:HG	17:R:35:ARG:HG3	2.01	0.42
17:R:65:ARG:HB2	17:R:65:ARG:HH11	1.84	0.42
17:R:6:GLU:O	17:R:9:GLN:N	2.53	0.42
17:R:69:TYR:CE1	17:R:73:GLU:HG3	2.55	0.42
18:S:12:LYS:C	18:S:14:ASN:H	2.23	0.42
18:S:20:VAL:HG11	18:S:32:TYR:CG	2.54	0.42
18:S:60:LEU:HA	18:S:64:ALA:CB	2.42	0.42
19:T:5:VAL:HG12	19:T:6:LEU:H	1.78	0.42
21:V:39:THR:O	21:V:41:VAL:HG13	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:X:17:THR:O	23:X:22:ARG:NH1	2.52	0.42
1:A:749:C:O2	1:A:749:C:C2'	2.65	0.42
7:H:140:ARG:NH1	7:H:140:ARG:HB2	2.35	0.42
1:A:1077:G:C4	1:A:1081:G:N1	2.88	0.42
1:A:1324:A:C5	1:A:1325:C:C5	3.08	0.42
1:A:1376:U:H2'	1:A:1377:A:N7	2.35	0.42
1:A:1419:G:C4	1:A:1420:C:C5	3.07	0.42
1:A:1446:A:O4'	1:A:1446:A:N3	2.52	0.42
1:A:166:G:C2	1:A:167:G:C8	3.08	0.42
1:A:173:U:O4'	1:A:197:A:C4	2.71	0.42
1:A:193:C:N3	1:A:194:C:N4	2.67	0.42
1:A:22:G:C4'	1:A:885:G:O4'	2.68	0.42
1:A:254:G:C6	1:A:273:A:C6	3.08	0.42
1:A:266:G:N2	1:A:269:C:N4	2.59	0.42
1:A:374:A:C6	1:A:375:U:C5	3.07	0.42
1:A:381:C:H2'	1:A:382:A:C8	2.55	0.42
1:A:408:A:OP1	6:G:113:SER:CB	2.67	0.42
1:A:438:G:N2	1:A:495:A:H8	2.17	0.42
1:A:538:G:H4'	14:O:114:LYS:HD3	1.98	0.42
1:A:667:G:C2	1:A:740:U:C2	3.07	0.42
1:A:712:A:O2'	1:A:713:G:H5'	2.20	0.42
1:A:731:G:H2'	1:A:732:C:H6	1.84	0.42
1:A:666:G:C2	1:A:741:G:C4	3.08	0.42
1:A:757:U:H2'	1:A:758:G:O4'	2.20	0.42
1:A:774:G:C4	1:A:775:G:C8	3.08	0.42
1:A:966:G:O2'	1:A:967:C:O5'	2.37	0.42
1:A:986:A:H2'	1:A:987:G:O4'	2.20	0.42
2:C:23:C:C4	2:C:24:U:C4	3.07	0.42
2:C:23:C:C4	2:C:24:U:O4	2.73	0.42
2:C:27:U:H2'	2:C:28:C:C5	2.55	0.42
2:C:28:C:C2	2:C:29:G:N7	2.88	0.42
4:E:214:ILE:HA	4:E:217:ARG:HG2	2.01	0.42
4:E:73:THR:HG22	4:E:93:VAL:HG12	2.02	0.42
5:F:117:ALA:O	5:F:121:ALA:CB	2.68	0.42
5:F:205:GLY:O	5:F:206:GLU:HB3	2.19	0.42
5:F:20:SER:N	5:F:40:ARG:NH2	2.68	0.42
6:G:102:ASP:OD1	6:G:118:ARG:HB2	2.20	0.42
6:G:12:CYS:HB3	6:G:33:MET:SD	2.60	0.42
6:G:75:PHE:HE1	6:G:97:LEU:HD21	1.84	0.42
7:H:12:LEU:C	7:H:12:LEU:HD13	2.40	0.42
7:H:75:THR:O	7:H:76:ILE:C	2.57	0.42
8:I:41:GLU:O	8:I:42:GLU:HB3	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:I:50:TYR:CE1	20:U:81:PHE:CZ	3.08	0.42
8:I:60:PHE:C	8:I:61:LEU:HD23	2.39	0.42
1:A:939:G:O3'	9:J:102:ARG:NH1	2.53	0.42
10:K:112:LEU:HD11	10:K:114:THR:HG22	2.02	0.42
10:K:10:LEU:N	10:K:13:ILE:HD12	2.33	0.42
10:K:14:ARG:NH1	10:K:83:ILE:CG2	2.83	0.42
11:L:47:LEU:O	11:L:50:LEU:N	2.41	0.42
11:L:69:GLY:O	11:L:70:LYS:O	2.38	0.42
1:A:1280:A:N3	12:M:41:PRO:HG3	2.35	0.42
12:M:23:ILE:CG2	12:M:85:LEU:HD23	2.49	0.42
13:N:48:ILE:CG2	13:N:48:ILE:O	2.59	0.42
13:N:62:GLN:OE1	13:N:63:LEU:N	2.52	0.42
14:O:23:LYS:O	14:O:97:ARG:HD3	2.20	0.42
14:O:78:GLN:O	14:O:81:SER:N	2.53	0.42
15:P:97:PRO:N	15:P:110:ARG:HG2	2.34	0.42
15:P:19:LEU:HB2	15:P:25:ILE:HG21	2.01	0.42
16:Q:22:THR:CB	16:Q:33:VAL:CG2	2.93	0.42
5:F:12:LEU:HD11	16:Q:57:ARG:HA	2.02	0.42
17:R:15:PHE:O	17:R:16:ALA:C	2.57	0.42
17:R:33:THR:O	17:R:36:ILE:CG2	2.67	0.42
1:A:755:G:OP2	17:R:65:ARG:CG	2.67	0.42
20:U:31:LEU:HD23	20:U:65:ILE:HG13	2.01	0.42
3:D:9:A:C2	3:D:46:G:C1'	3.00	0.42
1:A:1020:U:H2'	1:A:1021:G:C8	2.55	0.42
1:A:1187:G:C5	1:A:1188:A:N7	2.87	0.42
1:A:1194:U:C4	1:A:1195:C:C4	3.08	0.42
1:A:962:C:C2'	1:A:1200:C:H41	2.32	0.42
1:A:1256:A:O2'	1:A:1257:U:C1'	2.57	0.42
1:A:1315:U:C5	1:A:1316:G:C6	3.07	0.42
1:A:1329:A:C5'	15:P:29:ARG:CZ	2.97	0.42
1:A:1353:G:C4	1:A:1370:G:N2	2.88	0.42
1:A:1412:C:H2'	1:A:1413:A:H8	1.85	0.42
1:A:1528:U:O2'	1:A:1529:G:O5'	2.34	0.42
1:A:1530:G:C2'	1:A:1531:A:O5'	2.67	0.42
1:A:67:C:O2	1:A:171:A:H2	2.03	0.42
1:A:229:U:H2'	1:A:230:G:O4'	2.20	0.42
1:A:243:A:H62	1:A:281:G:H2'	1.85	0.42
1:A:321:A:N1	1:A:332:G:N2	2.62	0.42
1:A:389:A:C2	1:A:390:C:H4'	2.54	0.42
1:A:42:G:C6	1:A:43:C:C4	3.07	0.42
1:A:573:A:C2	1:A:574:A:N1	2.88	0.42
1:A:643:C:H2'	1:A:644:G:H5'	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:664:G:C5'	20:U:64:ARG:HE	2.31	0.42
1:A:679:C:C2	1:A:680:C:C5	3.08	0.42
1:A:687:A:C4	1:A:704:A:N6	2.87	0.42
1:A:709:G:H2'	1:A:710:G:O5'	2.20	0.42
1:A:761:G:C2	1:A:762:C:C6	3.08	0.42
1:A:907:A:C3'	1:A:908:A:H8	2.33	0.42
2:C:10:G:C2	2:C:11:A:C5	3.08	0.42
4:E:119:GLU:HA	4:E:142:LEU:HD13	2.01	0.42
4:E:182:ILE:HG22	4:E:183:PRO:HD2	2.00	0.42
4:E:61:LEU:HA	4:E:64:ARG:NE	2.33	0.42
4:E:85:ALA:O	4:E:86:GLU:C	2.57	0.42
5:F:189:ALA:O	5:F:195:VAL:HA	2.20	0.42
5:F:46:GLU:CB	5:F:47:LEU:HD22	2.45	0.42
7:H:111:GLU:CG	7:H:112:LEU:H	2.32	0.42
7:H:79:GLU:HG2	7:H:92:LYS:HG3	2.02	0.42
9:J:17:VAL:HG12	9:J:18:TYR:HD1	1.85	0.42
9:J:42:ILE:O	9:J:43:PHE:C	2.59	0.42
9:J:59:LEU:O	9:J:63:LYS:HG2	2.20	0.42
10:K:111:ILE:CG2	10:K:134:ILE:HD12	2.49	0.42
10:K:22:GLU:O	10:K:62:TYR:CA	2.61	0.42
10:K:39:LEU:HD13	10:K:39:LEU:HA	1.62	0.42
12:M:48:THR:HA	12:M:61:GLU:O	2.19	0.42
12:M:49:VAL:O	12:M:60:ARG:CB	2.68	0.42
13:N:73:MET:CG	13:N:103:LEU:HD13	2.49	0.42
1:A:717:C:H4'	13:N:117:ASN:HB2	2.01	0.42
13:N:18:ARG:HG2	13:N:18:ARG:NH1	2.34	0.42
15:P:10:PRO:O	15:P:45:VAL:CG2	2.64	0.42
15:P:108:ARG:HH12	15:P:112:GLY:C	2.24	0.42
1:A:1308:U:OP2	15:P:99:ARG:HG3	2.19	0.42
16:Q:22:THR:HG22	16:Q:33:VAL:HB	2.00	0.42
18:S:74:LEU:HD22	18:S:79:VAL:CG2	2.49	0.42
21:V:15:LEU:O	21:V:16:LEU:C	2.57	0.42
21:V:3:ARG:O	21:V:4:SER:HB3	2.20	0.42
21:V:31:ILE:H	21:V:49:ILE:HA	1.83	0.42
22:W:44:ALA:N	22:W:52:ALA:HB2	2.35	0.42
23:X:10:ARG:HG2	23:X:10:ARG:H	1.50	0.42
3:D:50:G:N2	3:D:65:U:C2	2.87	0.42
1:A:1015:A:O5'	1:A:1015:A:H8	2.03	0.42
1:A:1056:U:O2	5:F:195:VAL:HG23	2.19	0.42
1:A:1134:G:C3'	1:A:1135:U:H5'	2.50	0.42
1:A:1197:G:C8	1:A:1197:G:O5'	2.73	0.42
1:A:1336:C:C2'	1:A:1337:G:OP2	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1339:A:H2'	1:A:1340:A:C5'	2.33	0.42
1:A:1363:A:C2	1:A:1365:G:O6	2.72	0.42
1:A:136:C:C1'	18:S:1:MET:CE	2.98	0.42
1:A:1347:G:N2	1:A:1373:G:N9	2.66	0.42
1:A:1465:C:H2'	1:A:1466:C:C5'	2.50	0.42
1:A:15:G:C5	1:A:1396:A:C2	3.08	0.42
1:A:141:A:H1'	1:A:182:U:O2	2.20	0.42
1:A:186(D):C:C2	1:A:186(E):C:C6	3.08	0.42
1:A:324:G:OP1	22:W:22:ARG:HD3	2.20	0.42
1:A:438:G:H5''	1:A:439:A:OP1	2.20	0.42
1:A:451:A:O2'	1:A:452:A:C8	2.73	0.42
1:A:476:G:N2	1:A:477:G:C1'	2.78	0.42
1:A:696:A:N3	1:A:697:U:O4'	2.52	0.42
1:A:870:U:H2'	1:A:870:U:O2	2.20	0.42
1:A:88:C:O2'	1:A:89:U:P	2.78	0.42
1:A:979:C:H2'	1:A:979:C:O2	2.18	0.42
2:C:11:A:C2	2:C:25:C:C2	3.08	0.42
2:C:38:A:O2'	2:C:39:C:C5'	2.61	0.42
2:C:46:G:H2'	2:C:46:G:N3	2.35	0.42
2:C:72:A:C6	2:C:73:A:N6	2.88	0.42
3:D:35:A:C8	3:D:36:A:C8	3.08	0.42
4:E:70:PHE:HE2	4:E:163:PHE:CB	2.33	0.42
4:E:163:PHE:CG	4:E:185:ILE:O	2.73	0.42
4:E:178:ARG:CZ	4:E:196:LEU:O	2.67	0.42
4:E:97:TRP:HH2	4:E:176:GLU:CG	2.14	0.42
5:F:128:PHE:N	5:F:128:PHE:CD1	2.87	0.42
5:F:206:GLU:CD	5:F:206:GLU:C	2.78	0.42
5:F:30:ARG:HG2	5:F:31:HIS:N	2.35	0.42
5:F:8:ILE:O	5:F:11:ARG:N	2.52	0.42
1:A:407:G:C1'	6:G:119:GLN:OE1	2.68	0.42
1:A:404:U:C5'	6:G:122:ARG:HH11	2.32	0.42
6:G:148:VAL:CB	6:G:153:ARG:HG2	2.49	0.42
6:G:85:LYS:HB2	6:G:85:LYS:NZ	2.35	0.42
1:A:8:A:O4'	7:H:102:ALA:HA	2.20	0.42
8:I:53:ALA:O	8:I:55:ASP:OD1	2.38	0.42
9:J:11:GLN:NE2	9:J:12:LEU:H	2.18	0.42
9:J:6:ARG:HA	9:J:6:ARG:HH11	1.85	0.42
9:J:85:TYR:HB3	9:J:151:TYR:CE2	2.54	0.42
10:K:22:GLU:CA	10:K:63:LEU:CD1	2.83	0.42
11:L:7:THR:CG2	11:L:9:ARG:NH1	2.82	0.42
12:M:15:THR:HG23	12:M:16:LEU:N	2.35	0.42
16:Q:44:LEU:HD23	16:Q:45:ARG:HB3	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:R:56:LEU:HB3	17:R:57:LEU:HD13	2.02	0.42
18:S:21:VAL:CG2	18:S:36:ILE:HD11	2.47	0.42
1:A:468:A:C1'	18:S:82:GLN:HG2	2.50	0.42
20:U:53:ARG:HA	20:U:63:GLN:NE2	2.34	0.42
21:V:36:ARG:C	21:V:38:SER:H	2.22	0.42
21:V:63:THR:O	21:V:64:GLU:O	2.38	0.42
1:A:1040:U:C2	1:A:1041:A:C8	3.08	0.42
1:A:748:C:H1'	1:A:749:C:H5	1.85	0.42
1:A:1169:A:OP2	1:A:1169:A:C8	2.73	0.42
1:A:160:A:H1'	1:A:344:A:C5	2.54	0.42
1:A:1084:G:OP1	1:A:1086:U:C6	2.73	0.41
1:A:1228:C:C3'	15:P:116:THR:HA	2.49	0.41
1:A:1264:C:N3	1:A:1272:G:C2	2.88	0.41
1:A:128:G:H5'	19:T:2:PRO:CA	2.50	0.41
1:A:1307:U:H2'	1:A:1308:U:H6	1.85	0.41
1:A:131:C:O2'	1:A:262:A:C1'	2.64	0.41
1:A:1480:G:C6	1:A:1481:U:C2	3.08	0.41
1:A:1500:A:H2'	1:A:1501:C:H6	1.79	0.41
1:A:1504:G:H3'	1:A:1504:G:H8	1.83	0.41
1:A:232:G:C5	1:A:233:C:C4	3.07	0.41
1:A:263:A:O5'	1:A:263:A:H8	2.03	0.41
1:A:303:A:C5	1:A:304:U:C6	3.08	0.41
1:A:52:G:H2'	1:A:53:A:C5'	2.50	0.41
1:A:608:A:C2	1:A:609:A:C1'	3.02	0.41
1:A:637:G:C6	1:A:638:G:C5	3.08	0.41
1:A:716:A:H2'	1:A:717:C:C5'	2.50	0.41
1:A:826:C:C4	1:A:827:U:C5	3.08	0.41
1:A:853:G:H2'	1:A:854:G:C8	2.55	0.41
1:A:964:A:H5''	1:A:965:A:OP2	2.20	0.41
4:E:177:ALA:O	4:E:178:ARG:C	2.58	0.41
4:E:47:THR:CG2	4:E:48:MET:HE3	2.51	0.41
5:F:147:LYS:CB	5:F:203:PHE:CD2	2.90	0.41
5:F:78:GLY:C	5:F:80:GLY:N	2.73	0.41
5:F:77:ILE:CD1	5:F:84:ILE:HB	2.48	0.41
6:G:36:ARG:HG2	6:G:38:TYR:OH	2.20	0.41
6:G:62:GLN:O	6:G:66:ARG:HG3	2.19	0.41
7:H:7:GLU:HB3	7:H:112:LEU:HD21	2.01	0.41
7:H:82:VAL:HG11	7:H:134:ALA:O	2.20	0.41
7:H:80:ILE:HA	7:H:81:GLU:OE2	2.20	0.41
8:I:76:ALA:HA	8:I:79:LEU:CG	2.50	0.41
9:J:5:ARG:NH1	9:J:5:ARG:O	2.41	0.41
9:J:91:VAL:CG1	9:J:91:VAL:O	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:114:THR:CB	10:K:130:GLY:O	2.68	0.41
10:K:114:THR:OG1	10:K:119:LEU:HD21	2.19	0.41
10:K:114:THR:HG22	10:K:130:GLY:C	2.40	0.41
10:K:86:ILE:O	10:K:88:LYS:N	2.53	0.41
10:K:87:SER:CB	10:K:92:ARG:HA	2.50	0.41
10:K:9:MET:C	10:K:13:ILE:CD1	2.88	0.41
11:L:126:SER:HB3	11:L:127:LYS:H	1.44	0.41
12:M:90:LEU:H	12:M:91:PRO:CD	2.29	0.41
13:N:28:THR:CG2	13:N:29:ILE:H	2.34	0.41
15:P:8:GLU:OE1	15:P:10:PRO:CD	2.67	0.41
15:P:20:THR:O	15:P:25:ILE:O	2.38	0.41
15:P:27:LYS:HZ2	15:P:31:LYS:HZ3	1.65	0.41
15:P:4:ILE:HD12	15:P:8:GLU:O	2.20	0.41
16:Q:24:CYS:HA	16:Q:39:LEU:CA	2.49	0.41
17:R:33:THR:O	17:R:34:LEU:C	2.57	0.41
17:R:48:LYS:HA	17:R:50:HIS:NE2	2.35	0.41
17:R:61:GLY:C	17:R:65:ARG:HH12	2.24	0.41
17:R:82:ILE:HG22	17:R:83:GLU:N	2.35	0.41
18:S:4:ILE:N	18:S:4:ILE:CD1	2.68	0.41
1:A:761:G:O4'	19:T:103:GLY:O	2.38	0.41
1:A:130:A:N7	19:T:63:ARG:HG3	2.35	0.41
22:W:23:ARG:O	22:W:24:LEU:C	2.58	0.41
1:A:1171:G:C4	1:A:1172:C:C5	3.08	0.41
1:A:191(C):G:C5	1:A:191(D):U:C4	3.08	0.41
1:A:191(D):U:H2'	1:A:191(E):G:H8	1.85	0.41
4:E:130:ARG:CD	4:E:131:PRO:HD2	2.45	0.41
1:A:343:U:C2'	1:A:344:A:O5'	2.68	0.41
1:A:1384:C:O2'	1:A:1385:G:H5'	2.20	0.41
1:A:1051:C:H2'	1:A:1052:U:C6	2.55	0.41
1:A:1308:U:H2'	1:A:1309:G:C8	2.55	0.41
1:A:1386:G:N1	1:A:1387:G:C5	2.89	0.41
1:A:1425:U:C2	1:A:1476:G:C2	3.08	0.41
1:A:1475:G:O2'	1:A:1476:G:H5'	2.20	0.41
1:A:1507:A:C2	1:A:1530:G:H1'	2.55	0.41
1:A:263:A:C2'	1:A:264:U:C5'	2.71	0.41
1:A:332:G:HO2'	1:A:333:G:H5'	1.73	0.41
1:A:350:G:N3	1:A:350:G:H2'	2.35	0.41
1:A:419:C:OP1	1:A:513:C:H1'	2.20	0.41
1:A:452:A:C4	1:A:453:A:N7	2.87	0.41
1:A:476:G:C2	1:A:477:G:C8	3.08	0.41
1:A:439:A:C2	1:A:496:A:C4	3.08	0.41
1:A:517:G:O2'	1:A:530:G:H5''	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:542:G:C2	1:A:543:C:C6	3.08	0.41
1:A:600:C:C2	1:A:601:C:C5	3.08	0.41
1:A:668:G:C2'	1:A:669:U:O5'	2.68	0.41
1:A:683:G:O2'	13:N:38:ASN:ND2	2.53	0.41
1:A:692:U:O2	1:A:694:A:O5'	2.38	0.41
1:A:706:A:O2'	1:A:707:C:H5'	2.20	0.41
1:A:718:G:C5	1:A:719:C:C4	3.08	0.41
1:A:723:U:OP2	1:A:724:G:C8	2.72	0.41
1:A:750:G:N3	17:R:23:GLY:HA3	2.35	0.41
1:A:767:A:H1'	1:A:1525:G:H1'	2.00	0.41
1:A:790:A:N7	1:A:791:G:C5	2.87	0.41
1:A:86:U:C3'	1:A:87:A:H5'	2.50	0.41
1:A:934:C:N4	1:A:939:G:C2	2.87	0.41
1:A:947:G:H4'	15:P:109:THR:OG1	2.20	0.41
1:A:950:U:O2'	1:A:951:G:H5'	2.20	0.41
1:A:967:C:O5'	1:A:967:C:C6	2.59	0.41
1:A:970:C:H4'	1:A:972:C:C5	2.55	0.41
2:C:29:G:C6	2:C:42:G:N1	2.88	0.41
4:E:35:GLU:C	4:E:35:GLU:CD	2.78	0.41
5:F:172:ARG:NH1	5:F:172:ARG:HB3	2.34	0.41
5:F:36:ASP:HA	5:F:39:ILE:CD1	2.41	0.41
1:A:404:U:P	6:G:118:ARG:NH1	2.93	0.41
6:G:43:HIS:O	6:G:46:LYS:N	2.42	0.41
7:H:15:ARG:HD2	7:H:27:ARG:O	2.20	0.41
1:A:1194:U:C5'	7:H:22:GLY:O	2.69	0.41
7:H:60:TYR:O	7:H:63:ARG:HB2	2.18	0.41
7:H:84:PHE:CB	7:H:134:ALA:HB2	2.50	0.41
9:J:64:GLN:HE21	9:J:68:ASN:HD21	1.66	0.41
10:K:13:ILE:O	10:K:14:ARG:C	2.58	0.41
10:K:18:ARG:O	10:K:20:TYR:CZ	2.73	0.41
10:K:24:THR:C	10:K:25:ASP:OD1	2.58	0.41
10:K:67:PRO:O	10:K:68:ARG:O	2.38	0.41
10:K:97:VAL:HG13	10:K:99:GLU:HG3	2.02	0.41
12:M:48:THR:CG2	12:M:60:ARG:HB3	2.50	0.41
12:M:83:GLU:OE1	12:M:87:THR:N	2.53	0.41
13:N:105:VAL:HG12	13:N:105:VAL:O	2.20	0.41
13:N:18:ARG:NH2	13:N:36:ASP:O	2.53	0.41
14:O:100:ILE:HB	14:O:101:VAL:H	1.54	0.41
1:A:1329:A:H4'	15:P:29:ARG:CZ	2.51	0.41
15:P:77:ASN:C	15:P:80:ARG:HG3	2.40	0.41
17:R:13:GLN:O	17:R:14:GLU:C	2.59	0.41
17:R:32:LEU:CB	17:R:63:ARG:HB3	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:29:HIS:CD2	19:T:32:TYR:HB2	2.55	0.41
19:T:41:LYS:C	19:T:42:TYR:HD1	2.24	0.41
20:U:63:GLN:OE1	20:U:63:GLN:CA	2.68	0.41
20:U:73:ALA:O	20:U:79:LEU:CD1	2.62	0.41
21:V:8:GLY:O	21:V:9:VAL:C	2.58	0.41
3:D:54:U:H2'	3:D:55:U:O4'	2.20	0.41
1:A:1167:A:OP1	1:A:1167:A:H8	2.02	0.41
1:A:1013:G:C3'	1:A:1013:G:C8	3.03	0.41
1:A:1087:G:C2	1:A:1099:G:N3	2.88	0.41
1:A:1131:G:C8	1:A:1131:G:C3'	3.03	0.41
1:A:1228:C:H4'	15:P:115:LYS:C	2.40	0.41
1:A:1228:C:O2	1:A:1228:C:H2'	2.19	0.41
1:A:1270:C:H2'	1:A:1271:G:O5'	2.19	0.41
1:A:1255:G:N2	1:A:1276:G:N2	2.68	0.41
1:A:1296:C:C4	1:A:1297:C:N4	2.88	0.41
1:A:132:C:N3	1:A:231:G:C2	2.88	0.41
1:A:1353:G:C2	1:A:1354:C:C4	3.07	0.41
1:A:129(A):G:C2'	1:A:189:U:C5	2.90	0.41
1:A:278:G:N2	1:A:279:A:N6	2.65	0.41
1:A:322:C:H2'	1:A:323:U:C5'	2.50	0.41
1:A:350:G:C2	1:A:351:G:N1	2.88	0.41
1:A:59:A:C1'	1:A:388:G:H5''	2.50	0.41
1:A:498:A:O2'	1:A:500:G:H8	1.99	0.41
1:A:564:C:C5	1:A:565:U:C4	3.08	0.41
1:A:581:G:H2'	1:A:582:U:OP2	2.20	0.41
1:A:626:U:H2'	1:A:627:G:C8	2.55	0.41
1:A:626:U:H5''	18:S:38:TYR:CE2	2.55	0.41
1:A:654:G:C4	1:A:753:A:C4	3.08	0.41
1:A:66:G:C4'	1:A:173:U:O4	2.65	0.41
1:A:690:G:N2	1:A:691:G:O4'	2.54	0.41
1:A:712:A:O2'	1:A:713:G:O4'	2.36	0.41
1:A:743:U:C2	1:A:744:C:C5	3.07	0.41
1:A:583:A:C4	1:A:759:A:N6	2.88	0.41
1:A:825:G:N2	1:A:826:C:C2	2.89	0.41
1:A:938:A:O2'	1:A:939:G:H5'	2.20	0.41
1:A:959:A:H1'	1:A:985:C:C1'	2.48	0.41
3:D:42:C:C2	3:D:43:A:C8	3.08	0.41
4:E:105:PHE:HD1	4:E:108:ILE:HB	1.85	0.41
4:E:142:LEU:HA	4:E:145:LEU:HB2	2.02	0.41
4:E:167:PRO:O	4:E:170:GLU:N	2.53	0.41
4:E:222:ILE:HG13	4:E:222:ILE:H	1.70	0.41
5:F:16:ARG:HH12	5:F:184:TYR:H	1.67	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:130:GLY:C	6:G:131:ARG:HH11	2.24	0.41
6:G:133:VAL:HG11	6:G:138:TYR:HD1	1.86	0.41
6:G:148:VAL:O	6:G:181:MET:HE1	2.19	0.41
6:G:56:VAL:O	6:G:59:ARG:CB	2.57	0.41
6:G:4:TYR:CZ	6:G:5:ILE:O	2.73	0.41
6:G:88:VAL:C	6:G:90:GLY:N	2.69	0.41
7:H:102:ALA:HB3	7:H:106:PRO:HB2	2.01	0.41
7:H:11:ILE:O	7:H:13:ILE:CD1	2.68	0.41
7:H:39:GLY:O	7:H:68:GLU:OE2	2.38	0.41
7:H:74:GLY:O	7:H:117:ASP:OD2	2.38	0.41
7:H:79:GLU:C	7:H:80:ILE:CG1	2.88	0.41
9:J:101:LEU:C	9:J:101:LEU:CD2	2.87	0.41
9:J:113:GLU:OE1	9:J:118:VAL:CG1	2.62	0.41
9:J:23:VAL:O	9:J:24:THR:C	2.59	0.41
9:J:23:VAL:O	9:J:26:PHE:N	2.53	0.41
10:K:39:LEU:C	10:K:45:ILE:HG23	2.38	0.41
10:K:98:LYS:HA	10:K:100:ILE:CD1	2.50	0.41
1:A:1291:G:H4'	11:L:38:GLN:O	2.20	0.41
12:M:8:LEU:CD2	12:M:95:GLU:C	2.89	0.41
14:O:33:ARG:HA	14:O:33:ARG:HE	1.85	0.41
15:P:91:ARG:HB3	15:P:98:VAL:CB	2.51	0.41
16:Q:25:VAL:HG12	16:Q:39:LEU:HD23	2.01	0.41
16:Q:45:ARG:HG3	16:Q:46:GLU:N	2.36	0.41
18:S:7:ALA:HB3	18:S:18:ARG:CB	2.47	0.41
1:A:760:G:N1	19:T:104:LYS:O	2.53	0.41
19:T:27:PHE:CD2	19:T:36:ILE:HD11	2.55	0.41
8:I:50:TYR:CE1	20:U:81:PHE:CE2	3.07	0.41
22:W:54:LYS:H	22:W:54:LYS:HG3	1.64	0.41
1:A:1002:G:C2	1:A:1003:G:N7	2.88	0.41
1:A:1037:C:C4	1:A:1038:C:C4	3.08	0.41
14:O:102:ARG:CZ	14:O:109:GLY:CA	2.96	0.41
1:A:1044:A:C5	1:A:1045:C:H1'	2.54	0.41
1:A:1114:C:H4'	16:Q:57:ARG:HH22	1.86	0.41
1:A:1196:U:H4'	1:A:1197:G:C5'	2.51	0.41
1:A:122:G:O5'	1:A:122:G:C8	2.74	0.41
1:A:1282:C:H2'	1:A:1282:C:O2	2.20	0.41
1:A:1346:A:N6	1:A:1375:A:OP2	2.37	0.41
1:A:1415:G:C6	1:A:1416:G:N7	2.89	0.41
1:A:1418:A:C2'	1:A:1419:G:H5'	2.46	0.41
1:A:1443:G:O5'	1:A:1446:A:P	2.78	0.41
1:A:168:G:N1	1:A:169:C:N4	2.68	0.41
1:A:242:C:C2	1:A:285:G:C2	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:352:C:C2'	1:A:352:C:O2	2.67	0.41
1:A:513:C:H6	1:A:513:C:O5'	2.03	0.41
1:A:563:A:C4	1:A:567:G:C8	3.09	0.41
1:A:563:A:H1'	1:A:566:G:HO2'	1.82	0.41
1:A:604:G:H2'	1:A:605:U:O4'	2.20	0.41
1:A:632:A:H2'	1:A:633:G:C8	2.53	0.41
1:A:757:U:H5'	1:A:878:G:H21	1.86	0.41
1:A:768:A:C5	1:A:769:G:N7	2.88	0.41
1:A:791:G:C6	1:A:792:A:N6	2.83	0.41
1:A:803:G:H2'	1:A:804:U:O5'	2.19	0.41
1:A:888:G:C2	1:A:909:A:N6	2.88	0.41
1:A:955:U:N3	1:A:956:U:C5	2.88	0.41
2:C:68:C:N3	2:C:69:C:C4	2.88	0.41
3:D:31:A:C5	3:D:32:C:C4	3.08	0.41
4:E:101:MET:HA	4:E:108:ILE:CB	2.47	0.41
4:E:148:TYR:CD1	4:E:148:TYR:N	2.89	0.41
4:E:169:LYS:NZ	4:E:170:GLU:OE1	2.53	0.41
4:E:222:ILE:O	4:E:226:ARG:HB2	2.14	0.41
5:F:91:LEU:HD11	5:F:99:VAL:HG13	2.03	0.41
6:G:10:ARG:HD3	6:G:10:ARG:C	2.40	0.41
6:G:43:HIS:HB3	6:G:46:LYS:CB	2.49	0.41
6:G:65:ARG:CD	6:G:72:GLU:HA	2.49	0.41
7:H:150:ARG:HA	7:H:150:ARG:HD3	1.73	0.41
7:H:27:ARG:C	7:H:28:PHE:CD2	2.93	0.41
8:I:47:ARG:HG3	8:I:47:ARG:NH1	2.35	0.41
8:I:86:ARG:O	8:I:87:ARG:NH1	2.52	0.41
9:J:73:MET:CE	9:J:146:GLU:HB2	2.50	0.41
9:J:74:GLU:HB3	9:J:91:VAL:HG22	1.96	0.41
10:K:10:LEU:HB3	10:K:83:ILE:CD1	2.51	0.41
10:K:126:LYS:HE3	10:K:127:LEU:HB2	2.03	0.41
10:K:6:ILE:CD1	10:K:85:ARG:NE	2.83	0.41
11:L:23:ASN:C	11:L:23:ASN:ND2	2.71	0.41
12:M:25:GLU:HA	12:M:28:ARG:HB2	2.02	0.41
12:M:35:SER:N	12:M:73:ASP:O	2.53	0.41
14:O:117:ARG:HA	14:O:119:LYS:O	2.20	0.41
14:O:11:VAL:HG13	19:T:29:HIS:HD2	1.85	0.41
14:O:18:VAL:HB	14:O:19:ARG:H	1.33	0.41
14:O:69:TYR:CD2	14:O:71:PRO:N	2.89	0.41
16:Q:22:THR:CG2	16:Q:33:VAL:O	2.55	0.41
1:A:1187:G:C1'	16:Q:61:TRP:OXT	2.67	0.41
18:S:73:LEU:HD22	18:S:73:LEU:HA	1.83	0.41
1:A:277:C:C5'	19:T:68:ARG:NH1	2.83	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:T:7:THR:CG2	19:T:56:VAL:HG12	2.50	0.41
19:T:87:LYS:HD3	19:T:87:LYS:HA	1.44	0.41
20:U:23:LYS:HD2	20:U:58:LEU:CD2	2.50	0.41
20:U:36:ASN:HB3	20:U:40:LEU:HD21	2.02	0.41
21:V:12:ASP:O	21:V:16:LEU:HD13	2.20	0.41
21:V:18:LYS:HG2	21:V:31:ILE:HG21	2.03	0.41
21:V:42:PRO:O	21:V:44:MET:N	2.54	0.41
21:V:69:HIS:HB2	21:V:74:PHE:CZ	2.55	0.41
22:W:104:LEU:HD23	22:W:104:LEU:HA	1.84	0.41
22:W:89:ARG:O	22:W:92:LEU:C	2.58	0.41
1:A:1451:A:H2'	1:A:1452:C:OP1	2.19	0.41
3:D:20:U:C2'	3:D:20:U:O2	2.68	0.41
1:A:1064:G:C4	1:A:1066:C:N4	2.88	0.41
1:A:1108:G:C5	1:A:1109:C:N4	2.88	0.41
1:A:1151:A:C5	1:A:1152:A:N7	2.88	0.41
1:A:1178:G:OP2	11:L:93:ARG:NH1	2.54	0.41
1:A:1187:G:N3	1:A:1188:A:C8	2.89	0.41
1:A:1195:C:O2	1:A:1195:C:H2'	2.20	0.41
1:A:1050:G:OP1	1:A:1215:G:OP1	2.38	0.41
1:A:1282:C:O2	1:A:1283:G:C8	2.73	0.41
1:A:1433:A:N6	1:A:1434:A:N1	2.68	0.41
1:A:1518:A:N1	1:A:1519:A:N1	2.68	0.41
1:A:194:C:O2'	1:A:195:A:C5'	2.69	0.41
1:A:20:U:C2'	1:A:21:G:H5'	2.50	0.41
1:A:256:U:O5'	1:A:256:U:H6	2.04	0.41
1:A:269:C:O2'	1:A:270:A:H5'	2.21	0.41
1:A:271:C:N3	1:A:272:C:C5	2.89	0.41
1:A:285:G:C2	1:A:286:G:C8	3.07	0.41
1:A:292:G:H3'	1:A:293:G:C8	2.55	0.41
1:A:35:G:N3	14:O:118:SER:OG	2.53	0.41
1:A:383:A:O2'	1:A:384:G:H5'	2.20	0.41
1:A:414:A:H2'	1:A:415:A:O4'	2.21	0.41
1:A:558:G:C5'	1:A:559:A:H5''	2.41	0.41
1:A:864:A:C6	1:A:865:A:C6	3.08	0.41
1:A:87:A:H2'	1:A:88:C:C5'	2.50	0.41
1:A:924:C:C2'	1:A:925:G:O5'	2.68	0.41
1:A:934:C:C5	1:A:1344:C:C4	3.08	0.41
2:C:6:G:C4	2:C:7:G:N7	2.88	0.41
3:D:28:G:C2	3:D:29:C:C4	3.08	0.41
3:D:34:G:H3'	3:D:35:A:C5'	2.50	0.41
4:E:223:ILE:O	4:E:226:ARG:HB3	2.19	0.41
4:E:33:TYR:CD2	4:E:43:ASP:CA	3.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:E:87:ARG:C	4:E:89:GLY:H	2.23	0.41
5:F:123:GLN:HA	5:F:128:PHE:CZ	2.55	0.41
5:F:59:ARG:NE	5:F:64:VAL:HG22	2.35	0.41
1:A:8:A:C1'	7:H:102:ALA:O	2.55	0.41
7:H:121:LYS:HZ1	7:H:122:GLU:C	2.22	0.41
7:H:65:ASN:ND2	7:H:136:MET:CE	2.79	0.41
7:H:26:PHE:C	7:H:27:ARG:CG	2.88	0.41
8:I:33:TYR:HE2	8:I:74:ASP:CB	2.24	0.41
8:I:95:GLU:OE1	8:I:95:GLU:C	2.58	0.41
9:J:115:ARG:HB2	9:J:118:VAL:HG21	1.91	0.41
9:J:138:LYS:O	9:J:139:GLU:C	2.56	0.41
10:K:26:VAL:CB	10:K:27:PRO:HD2	2.50	0.41
11:L:2:GLU:O	11:L:20:ARG:HB3	2.20	0.41
11:L:51:ARG:O	11:L:52:ALA:C	2.58	0.41
11:L:23:ASN:N	11:L:59:PHE:C	2.69	0.41
11:L:27:THR:HG21	11:L:62:TYR:HE1	1.85	0.41
11:L:17:VAL:HG21	11:L:77:ILE:O	2.21	0.41
11:L:93:ARG:HH22	11:L:97:LYS:HE2	1.85	0.41
12:M:39:PRO:O	12:M:70:ARG:NH1	2.53	0.41
13:N:21:ILE:HD13	13:N:98:LEU:HD11	2.03	0.41
14:O:27:LEU:O	14:O:29:GLY:N	2.52	0.41
15:P:14:ARG:HA	15:P:44:ARG:CA	2.43	0.41
15:P:44:ARG:HA	15:P:44:ARG:HD2	1.83	0.41
18:S:4:ILE:HG22	18:S:21:VAL:CG1	2.49	0.41
18:S:8:ARG:HD3	18:S:9:PHE:O	2.21	0.41
1:A:128:G:H5'	19:T:2:PRO:HA	2.03	0.41
20:U:21:LYS:HZ3	20:U:24:ALA:H	1.66	0.41
20:U:70:ILE:CG2	20:U:74:ARG:HE	2.33	0.41
21:V:64:GLU:CG	21:V:65:ASN:H	2.28	0.41
22:W:53:LEU:C	22:W:56:MET:HB2	2.41	0.41
1:A:1164:G:C2'	1:A:1165:C:H5'	2.50	0.41
1:A:1173:G:C6	1:A:1174:G:N7	2.88	0.41
1:A:161:A:N6	1:A:162:A:C6	2.88	0.41
1:A:102:G:C5	1:A:103:C:C5	3.09	0.41
1:A:1085:U:H5'	1:A:1094:G:H21	1.84	0.41
1:A:1132:C:C4	1:A:1133:G:C5	3.09	0.41
1:A:1243:C:OP2	23:X:10:ARG:CD	2.69	0.41
1:A:1329:A:P	15:P:28:ALA:HB3	2.61	0.41
1:A:1364:U:O2'	1:A:1365:G:P	2.79	0.41
1:A:1433:A:C2	1:A:1468:A:C2	3.08	0.41
1:A:186:C:H2'	1:A:186(A):C:C6	2.55	0.41
1:A:199:G:O2'	1:A:200:G:H5'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:275:G:H2'	1:A:276:G:O5'	2.21	0.41
1:A:306:G:C3'	1:A:307:C:C5	3.00	0.41
1:A:322:C:N3	1:A:323:U:C2	2.88	0.41
1:A:47:C:C5	1:A:365:U:C2	3.09	0.41
1:A:380:G:C6	1:A:384:G:O6	2.74	0.41
1:A:411:A:H8	1:A:411:A:H3'	1.85	0.41
1:A:666:G:N1	1:A:741:G:C4	2.89	0.41
1:A:769:G:C2	1:A:770:C:C6	3.09	0.41
1:A:813:U:H2'	1:A:814:A:C8	2.56	0.41
1:A:828:A:H4'	1:A:828:A:OP1	2.19	0.41
1:A:857:C:H2'	1:A:858:G:C5'	2.50	0.41
1:A:988:G:N1	1:A:989:C:C2	2.89	0.41
2:C:72:A:C2	2:C:73:A:C2	3.09	0.41
4:E:47:THR:CG2	4:E:202:PRO:HG2	2.50	0.41
4:E:35:GLU:C	4:E:36:ARG:HD2	2.40	0.41
4:E:83:MET:HG3	4:E:238:LEU:HD21	2.03	0.41
5:F:189:ALA:HB1	5:F:196:LEU:CD2	2.50	0.41
5:F:187:ALA:CB	5:F:198:VAL:HG22	2.50	0.41
5:F:73:PRO:HG2	5:F:74:GLY:N	2.35	0.41
6:G:101:LEU:CG	6:G:102:ASP:N	2.82	0.41
6:G:110:PHE:CZ	6:G:147:ALA:HA	2.55	0.41
6:G:206:PHE:CD2	6:G:207:TYR:CD1	3.03	0.41
6:G:33:MET:H	6:G:33:MET:HE3	1.85	0.41
7:H:103:GLY:C	7:H:106:PRO:HD2	2.40	0.41
8:I:8:ILE:CG2	8:I:88:VAL:CG2	2.99	0.41
9:J:74:GLU:HA	9:J:145:ALA:HB3	2.02	0.41
10:K:104:ARG:CB	10:K:107:LEU:HG	2.51	0.41
10:K:100:ILE:HD13	10:K:125:ARG:CZ	2.49	0.41
10:K:112:LEU:HD12	10:K:133:LEU:HD23	2.02	0.41
1:A:1349:A:P	11:L:118:LYS:HD2	2.57	0.41
15:P:22:ILE:O	15:P:23:TYR:C	2.57	0.41
1:A:974:A:N9	16:Q:31:ARG:NH2	2.69	0.41
16:Q:42:ILE:HG13	16:Q:43:CYS:H	1.85	0.41
17:R:65:ARG:CB	17:R:65:ARG:NH1	2.84	0.41
18:S:42:ARG:O	18:S:43:LYS:HB2	2.21	0.41
19:T:13:ASP:HA	19:T:19:VAL:HG12	2.02	0.41
3:D:56:C:C5	3:D:57:G:C2	3.08	0.41
1:A:1452:C:C4'	1:A:1453:G:C2	3.03	0.41
1:A:1069:C:N4	1:A:1094:G:O6	2.54	0.41
1:A:1128:C:H4'	1:A:1148:U:C5	2.56	0.41
1:A:1134:G:C2'	1:A:1135:U:H5'	2.51	0.41
1:A:1178:G:C4	1:A:1180:A:OP2	2.74	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:1159:U:H5	1:A:1182:G:N3	2.16	0.41
1:A:1224:G:O6	1:A:1322:C:C1'	2.69	0.41
1:A:1240:U:H2'	9:J:32:ARG:HE	1.85	0.41
1:A:1261:A:H2'	1:A:1261:A:N3	2.35	0.41
1:A:1357:A:C8	1:A:1357:A:O5'	2.73	0.41
1:A:1419:G:C6	1:A:1482:G:C4	3.09	0.41
1:A:1431:C:H2'	1:A:1432:G:C4'	2.51	0.41
1:A:1488:G:N3	1:A:1489:G:C8	2.89	0.41
1:A:1497:G:C5	1:A:1498:U:H5	2.38	0.41
1:A:16:A:N3	1:A:16:A:C2'	2.82	0.41
1:A:127:G:N2	1:A:235:C:C2	2.88	0.41
1:A:262:A:N3	1:A:262:A:H2'	2.36	0.41
1:A:305:G:HO2'	1:A:306:G:P	2.36	0.41
1:A:404:U:O5'	1:A:404:U:H6	2.04	0.41
1:A:425:G:O2'	1:A:426:G:H5'	2.20	0.41
1:A:449:C:H2'	1:A:450:G:C4'	2.51	0.41
1:A:465:A:C6	1:A:467:G:C4	3.09	0.41
1:A:476:G:C2	1:A:477:G:N9	2.89	0.41
1:A:605:U:C2	1:A:606:G:C8	3.09	0.41
1:A:61:G:C8	1:A:62:U:C5	3.08	0.41
1:A:643:C:N3	1:A:644:G:C8	2.89	0.41
1:A:658:G:C2	1:A:659:U:N1	2.89	0.41
1:A:706:A:O4'	13:N:29:ILE:HD13	2.20	0.41
1:A:711:G:H2'	1:A:712:A:O5'	2.21	0.41
1:A:790:A:N7	1:A:791:G:N7	2.69	0.41
1:A:875:C:C2'	1:A:876:G:O5'	2.69	0.41
1:A:904:C:O2'	1:A:905:U:H5'	2.21	0.41
2:C:10:G:N2	2:C:11:A:N9	2.69	0.41
2:C:28:C:O3'	15:P:118:ALA:O	2.38	0.41
2:C:19:G:H1	2:C:56:C:H42	1.64	0.41
2:C:76:A:C3'	2:C:76:A:OP1	2.63	0.41
4:E:140:HIS:HA	4:E:143:GLU:OE1	2.20	0.41
4:E:70:PHE:HE2	4:E:163:PHE:HB2	1.86	0.41
4:E:47:THR:HG23	4:E:202:PRO:CD	2.49	0.41
4:E:69:LEU:HD23	4:E:91:PRO:HB3	1.98	0.41
4:E:80:ILE:HG22	4:E:81:VAL:N	2.35	0.41
5:F:12:LEU:O	5:F:14:ILE:N	2.50	0.41
5:F:10:PHE:O	5:F:178:LEU:HD11	2.20	0.41
5:F:34:LEU:O	5:F:38:ARG:CD	2.67	0.41
5:F:87:LEU:N	5:F:87:LEU:HD23	2.35	0.41
1:A:405:U:O4	6:G:2:GLY:N	2.54	0.41
7:H:9:LYS:HD2	7:H:108:ALA:HA	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:H:143:ARG:O	7:H:144:THR:O	2.38	0.41
7:H:78:HIS:HE2	7:H:142:LEU:HB3	1.84	0.41
8:I:80:ARG:H	8:I:80:ARG:HG3	1.53	0.41
9:J:5:ARG:HH11	9:J:5:ARG:C	2.21	0.41
10:K:100:ILE:HG23	10:K:121:ASP:HA	2.02	0.41
10:K:38:ILE:C	10:K:41:ARG:HB2	2.41	0.41
10:K:47:GLY:O	10:K:61:VAL:CA	2.67	0.41
12:M:65:LEU:HD22	16:Q:36:PHE:CE2	2.56	0.41
13:N:62:GLN:CD	13:N:63:LEU:H	2.23	0.41
14:O:84:LEU:CA	14:O:104:VAL:HG11	2.51	0.41
1:A:538:G:O3'	14:O:114:LYS:CD	2.68	0.41
17:R:36:ILE:O	17:R:39:LEU:HD22	2.20	0.41
17:R:87:ILE:CG2	17:R:88:ARG:N	2.83	0.41
18:S:12:LYS:HD2	18:S:12:LYS:HA	1.87	0.41
18:S:3:LYS:HD2	18:S:5:ARG:HH11	1.85	0.41
19:T:66:SER:OG	19:T:67:LYS:N	2.52	0.41
20:U:73:ALA:C	20:U:79:LEU:HD11	2.40	0.41
13:N:84:VAL:CG1	20:U:88:LYS:HD3	2.42	0.41
3:D:60:U:OP2	3:D:60:U:C5	2.72	0.41
3:D:50:G:N1	3:D:65:U:C4	2.89	0.41
1:A:748:C:O2'	1:A:749:C:H6	2.02	0.41
1:A:1072:G:N3	1:A:1104:G:N2	2.69	0.41
1:A:1091:U:C6	1:A:1091:U:H3'	2.56	0.41
1:A:1157:A:H8	1:A:1158:C:H42	1.68	0.41
1:A:1184:G:C2	1:A:1185:G:C6	3.09	0.41
1:A:1210:C:O3'	1:A:1214:C:N4	2.53	0.41
1:A:1268:A:C2	1:A:1327:C:H1'	2.56	0.41
1:A:1286:A:H4'	23:X:25:LYS:HG2	2.02	0.41
1:A:1321:C:O4'	15:P:87:TYR:CE1	2.74	0.41
1:A:1342:C:O2'	11:L:124:GLN:CA	2.68	0.41
1:A:1388:C:N3	1:A:1389:C:C5	2.88	0.41
1:A:1415:G:C2	1:A:1416:G:N9	2.89	0.41
1:A:1496:C:H2'	1:A:1497:G:O4'	2.21	0.41
1:A:171:A:C2'	1:A:172:A:H5'	2.51	0.41
1:A:236:G:C2'	1:A:236:G:N3	2.83	0.41
1:A:438:G:H5'	6:G:123:HIS:ND1	2.32	0.41
1:A:51:A:C6	1:A:353:A:N1	2.88	0.41
1:A:582:U:H1'	19:T:105:ALA:CB	2.50	0.41
1:A:609:A:C2	1:A:610:G:C1'	3.04	0.41
1:A:60:A:C4'	1:A:61:G:O5'	2.68	0.41
1:A:631:G:O5'	1:A:631:G:C8	2.74	0.41
1:A:654:G:C5	1:A:655:A:C5	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:665:A:C2	1:A:732:C:C4	3.09	0.41
1:A:671:G:H2'	1:A:672:U:H1'	2.03	0.41
1:A:690:G:O6	1:A:691:G:C2	2.74	0.41
1:A:695:A:C2	1:A:696:A:H1'	2.56	0.41
1:A:657:G:C2	1:A:750:G:C4	3.09	0.41
1:A:827:U:N3	1:A:870:U:C5	2.88	0.41
1:A:857:C:O2'	1:A:858:G:H5'	2.19	0.41
1:A:890:G:O2'	1:A:891:U:O5'	2.39	0.41
1:A:946:A:C2	1:A:947:G:C5	3.09	0.41
1:A:947:G:H21	1:A:948:C:H1'	1.85	0.41
1:A:976:G:C3'	1:A:976:G:C8	3.04	0.41
2:C:31:G:C2	2:C:40:C:C4	3.08	0.41
2:C:44:A:H2'	2:C:45:G:O4'	2.21	0.41
2:C:75:C:C2'	2:C:76:A:O3'	2.68	0.41
4:E:133:LYS:CA	4:E:133:LYS:HE2	2.51	0.41
4:E:115:LEU:CD1	4:E:142:LEU:HG	2.50	0.41
4:E:167:PRO:CG	4:E:168:THR:N	2.82	0.41
4:E:162:ILE:CD1	4:E:183:PRO:O	2.57	0.41
4:E:207:ALA:O	4:E:210:SER:N	2.54	0.41
4:E:80:ILE:HD13	4:E:212:GLN:CB	2.51	0.41
4:E:219:VAL:O	4:E:223:ILE:CB	2.69	0.41
4:E:54:THR:O	4:E:58:ILE:CG1	2.53	0.41
5:F:110:ASN:HD21	5:F:140:ARG:C	2.21	0.41
5:F:19:GLU:HA	5:F:54:ARG:HH21	1.85	0.41
5:F:59:ARG:CG	5:F:59:ARG:HH11	2.34	0.41
5:F:8:ILE:O	5:F:9:GLY:C	2.57	0.41
6:G:200:GLU:O	6:G:204:ILE:CD1	2.68	0.41
7:H:82:VAL:HB	7:H:138:ALA:HB2	2.03	0.41
5:F:135:LYS:NZ	7:H:52:PRO:HG2	2.35	0.41
8:I:1:MET:SD	8:I:68:PRO:CD	3.09	0.41
9:J:65:ALA:HA	9:J:128:ALA:CA	2.50	0.41
9:J:96:GLN:O	9:J:100:ALA:CB	2.68	0.41
10:K:63:LEU:CG	10:K:65:TYR:OH	2.68	0.41
1:A:1342:C:H4'	11:L:125:TYR:HD1	1.85	0.41
12:M:49:VAL:HG13	16:Q:41:ARG:CG	2.51	0.41
1:A:1202:G:N7	12:M:53:PRO:HB2	2.35	0.41
13:N:41:THR:CB	13:N:71:LYS:HE3	2.22	0.41
15:P:102:ARG:HG2	15:P:105:THR:O	2.21	0.41
16:Q:24:CYS:CA	16:Q:39:LEU:HA	2.50	0.41
1:A:994:A:C4	16:Q:5:ALA:HA	2.56	0.41
19:T:75:ARG:NH1	19:T:76:LEU:O	2.54	0.41
19:T:7:THR:HG22	19:T:8:GLY:N	2.32	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:V:36:ARG:HB2	21:V:71:LEU:HB3	2.03	0.41
21:V:64:GLU:O	21:V:66:MET:N	2.54	0.41
22:W:71:THR:HB	22:W:72:LEU:H	1.44	0.41
1:A:1004:A:C4'	1:A:1005:A:OP1	2.68	0.41
4:E:124:SER:C	4:E:126:GLU:N	2.73	0.41
1:A:102:G:H1'	1:A:152:A:C1'	2.51	0.41
1:A:1159:U:C4'	1:A:1160:G:OP1	2.69	0.41
1:A:1273:G:H2'	1:A:1274:G:H8	1.86	0.41
1:A:1307:U:O2'	1:A:1308:U:H5'	2.20	0.41
1:A:1341:U:C3'	1:A:1341:U:C6	3.04	0.41
1:A:1347:G:H3'	11:L:107:ARG:O	2.20	0.41
1:A:1387:G:O2'	1:A:1388:C:H5'	2.21	0.41
1:A:1401:G:C8	1:A:1402:C:C6	3.09	0.41
1:A:1401:G:N7	1:A:1402:C:C6	2.88	0.41
1:A:1465:C:O2'	1:A:1466:C:H5'	2.21	0.41
1:A:222:U:H2'	1:A:223:U:O5'	2.21	0.41
1:A:232:G:C6	1:A:233:C:C4	3.09	0.41
1:A:282:A:C5	1:A:283:C:C5	3.09	0.41
1:A:391:G:N1	1:A:392:G:C4	2.89	0.41
1:A:410:G:N3	1:A:432:A:C6	2.88	0.41
1:A:448:A:O2'	1:A:449:C:C5'	2.64	0.41
1:A:465:A:H62	1:A:467:G:N2	2.19	0.41
1:A:479:C:H2'	1:A:480:U:C2	2.56	0.41
1:A:503:C:C2	1:A:504:C:C6	3.09	0.41
1:A:544:G:C5	1:A:545:C:C5	3.09	0.41
1:A:550:G:H2'	1:A:551:U:H6	1.86	0.41
1:A:579:G:N1	1:A:763:G:N1	2.68	0.41
1:A:657:G:C5	1:A:658:G:N7	2.89	0.41
1:A:674:G:OP1	8:I:87:ARG:NH2	2.54	0.41
1:A:735:C:O5'	1:A:735:C:C6	2.73	0.41
1:A:737:A:H2'	1:A:738:C:H6	1.86	0.41
1:A:789:U:C5	1:A:790:A:H5''	2.53	0.41
1:A:933:G:C6	1:A:935:A:C4	3.09	0.41
1:A:947:G:O2'	1:A:948:C:H5'	2.20	0.41
1:A:969:A:N6	1:A:970:C:C4	2.89	0.41
3:D:37:A:C4	3:D:38:A:C8	3.09	0.41
3:D:38:A:C5	3:D:39:U:C5	3.08	0.41
3:D:38:A:H2'	3:D:39:U:C5'	2.50	0.41
4:E:118:LEU:O	4:E:119:GLU:C	2.59	0.41
4:E:118:LEU:HD11	4:E:142:LEU:HA	2.03	0.41
4:E:216:SER:O	4:E:217:ARG:C	2.60	0.41
4:E:44:LEU:O	4:E:45:GLN:C	2.60	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:F:132:ARG:CB	5:F:136:GLN:NE2	2.82	0.41
5:F:26:LYS:O	5:F:28:GLN:NE2	2.54	0.41
5:F:39:ILE:CD1	5:F:57:ILE:HG21	2.51	0.41
5:F:86:VAL:O	5:F:90:GLU:HG2	2.21	0.41
5:F:64:VAL:O	5:F:99:VAL:HG11	2.21	0.41
6:G:15:GLU:OE2	6:G:63:LYS:HA	2.20	0.41
6:G:20:TYR:C	6:G:22:LYS:N	2.70	0.41
7:H:109:ILE:HG21	7:H:135:THR:HG21	2.03	0.41
8:I:8:ILE:HG23	8:I:88:VAL:HG22	2.03	0.41
8:I:8:ILE:CG2	8:I:88:VAL:HG22	2.51	0.41
9:J:139:GLU:HA	9:J:142:GLU:CB	2.50	0.41
10:K:31:PHE:CZ	10:K:113:SER:HB2	2.54	0.41
10:K:63:LEU:HB3	10:K:65:TYR:OH	2.20	0.41
11:L:49:PRO:HB3	11:L:82:ALA:HB2	2.03	0.41
11:L:7:THR:HG23	11:L:9:ARG:HH11	1.86	0.41
13:N:20:TYR:O	13:N:30:VAL:HA	2.20	0.41
13:N:84:VAL:HG21	20:U:88:LYS:HZ2	1.85	0.41
15:P:45:VAL:O	15:P:47:ASP:N	2.53	0.41
15:P:91:ARG:O	15:P:96:LEU:HD23	2.21	0.41
15:P:91:ARG:CD	15:P:96:LEU:HG	2.49	0.41
17:R:15:PHE:N	17:R:15:PHE:HD1	2.17	0.41
17:R:26:GLU:N	17:R:26:GLU:OE1	2.53	0.41
17:R:50:HIS:O	17:R:53:HIS:HB3	2.21	0.41
19:T:46:ASP:HB2	19:T:73:VAL:HG21	2.03	0.41
19:T:54:GLY:HA2	19:T:85:VAL:HG21	2.03	0.41
19:T:68:ARG:H	19:T:70:ARG:NH2	2.17	0.41
19:T:91:ARG:HB3	19:T:91:ARG:HE	1.54	0.41
21:V:13:ASP:CB	21:V:16:LEU:HD22	2.50	0.41
21:V:40:ILE:CG1	21:V:69:HIS:O	2.69	0.41
23:X:6:ARG:NH1	23:X:15:ARG:NH1	2.69	0.41
23:X:6:ARG:C	23:X:11:GLY:HA3	2.41	0.41
1:A:1326:C:OP2	23:X:6:ARG:NH2	2.53	0.41
1:A:101:A:O2'	1:A:102:G:C5'	2.62	0.41
1:A:1134:G:C6	1:A:1141:C:N4	2.88	0.41
1:A:1212:U:HO2'	1:A:1213:A:P	2.44	0.41
1:A:121:C:H1'	1:A:123:C:H41	1.85	0.41
1:A:1224:G:O6	1:A:1322:C:H1'	2.21	0.41
1:A:1363:A:H5'	1:A:1364:U:C6	2.56	0.41
1:A:1470:G:C2'	1:A:1471:G:O5'	2.68	0.41
1:A:184:G:N1	1:A:194:C:N4	2.69	0.41
1:A:199:G:O2'	1:A:200:G:C5'	2.69	0.41
1:A:262:A:N1	1:A:263:A:N1	2.69	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:308:C:HO2'	1:A:309:G:P	2.44	0.41
1:A:354:G:O2'	1:A:355:C:O5'	2.39	0.41
1:A:370:C:H2'	1:A:371:G:O4'	2.21	0.41
1:A:392:G:O2'	1:A:483:C:O4'	2.39	0.41
1:A:488:C:O2'	1:A:489:C:H5'	2.21	0.41
1:A:538:G:O3'	14:O:114:LYS:HE2	2.20	0.41
1:A:575:G:O2'	1:A:576:G:H5'	2.20	0.41
1:A:61:G:C5	1:A:62:U:C2	3.09	0.41
1:A:697:U:H3'	1:A:698:G:H8	1.86	0.41
1:A:73:G:C2	1:A:74:C:C2	3.09	0.41
1:A:741:G:C4	1:A:742:G:C8	3.09	0.41
1:A:753:A:H4'	1:A:754:C:H5''	2.03	0.41
1:A:756:C:O4'	10:K:1:MET:HE2	2.20	0.41
1:A:579:G:C6	1:A:763:G:N1	2.89	0.41
1:A:864:A:H2'	1:A:865:A:O4'	2.20	0.41
1:A:873:A:H4'	1:A:874:G:OP2	2.20	0.41
1:A:895:G:N3	1:A:896:C:C5	2.89	0.41
1:A:909:A:H2'	1:A:910:C:O4'	2.21	0.41
1:A:966:G:N3	2:C:34:C:C4'	2.84	0.41
1:A:978:A:N6	1:A:1360:A:H61	2.19	0.41
1:A:979:C:H2'	1:A:980:C:O5'	2.19	0.41
1:A:993:G:O2'	1:A:994:A:P	2.78	0.41
1:A:1104:G:H4'	4:E:111:ARG:NE	2.36	0.41
4:E:31:TYR:CZ	4:E:200:ILE:HG21	2.54	0.41
4:E:54:THR:CB	4:E:201:ILE:HD11	2.51	0.41
4:E:42:ILE:CD1	4:E:202:PRO:C	2.89	0.41
4:E:14:GLY:CA	4:E:209:ARG:NH2	2.66	0.41
4:E:208:ILE:CA	4:E:211:ILE:HB	2.39	0.41
4:E:26:PRO:O	4:E:28:PHE:N	2.54	0.41
5:F:124:ILE:CD1	5:F:130:VAL:HG13	2.50	0.41
5:F:174:PRO:HB2	5:F:177:THR:HG22	2.02	0.41
5:F:189:ALA:HB2	5:F:196:LEU:O	2.21	0.41
5:F:88:ARG:CZ	5:F:100:ALA:HA	2.50	0.41
6:G:126:ILE:H	6:G:149:ALA:HB2	1.86	0.41
6:G:64:LEU:HD12	6:G:75:PHE:HZ	1.83	0.41
1:A:9:G:OP2	7:H:122:GLU:OE1	2.39	0.41
7:H:139:LEU:O	7:H:141:GLN:O	2.38	0.41
8:I:30:LEU:CA	8:I:35:ALA:HB2	2.51	0.41
9:J:12:LEU:CD1	9:J:21:VAL:HB	2.51	0.41
9:J:78:ARG:HB2	9:J:156:TRP:CH2	2.56	0.41
10:K:120:THR:O	10:K:121:ASP:O	2.39	0.41
10:K:14:ARG:CB	10:K:14:ARG:NH1	2.58	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:K:63:LEU:HB2	10:K:64:LYS:H	1.44	0.41
10:K:6:ILE:HD13	10:K:10:LEU:HG	2.03	0.41
11:L:100:GLY:C	11:L:101:PHE:CD1	2.94	0.41
13:N:123:LYS:CA	13:N:126:ARG:HB2	2.51	0.41
13:N:23:ALA:CB	13:N:88:GLY:CA	2.74	0.41
13:N:31:THR:HA	13:N:42:TRP:HB3	2.02	0.41
14:O:54:LYS:O	14:O:70:ILE:CG1	2.68	0.41
15:P:82:MET:O	15:P:82:MET:SD	2.78	0.41
16:Q:22:THR:O	16:Q:23:ARG:CG	2.66	0.41
17:R:6:GLU:CG	17:R:7:GLU:N	2.78	0.41
17:R:79:ARG:O	17:R:80:ALA:C	2.58	0.41
1:A:626:U:O3'	18:S:38:TYR:CE2	2.73	0.41
18:S:51:VAL:O	18:S:53:VAL:N	2.54	0.41
19:T:11:VAL:C	19:T:20:THR:HG1	2.24	0.41
19:T:52:LYS:HB2	19:T:52:LYS:HE3	1.75	0.41
19:T:9:VAL:HG22	19:T:10:VAL:O	2.21	0.41
20:U:70:ILE:O	20:U:73:ALA:HB3	2.20	0.41
8:I:49:ALA:HB3	20:U:80:PRO:CD	2.49	0.41
23:X:9:ARG:HB3	23:X:10:ARG:H	1.74	0.41
3:D:64:C:C2	3:D:65:U:C6	3.09	0.41
3:D:62:C:N3	3:D:63:G:N7	2.68	0.41
1:A:164:U:H2'	1:A:165:C:C6	2.55	0.41
1:A:1451:A:H8	1:A:1451:A:OP1	2.03	0.41
1:A:158:G:H3'	1:A:158:G:C8	2.55	0.41
1:A:1091:U:C6	1:A:1093:A:OP2	2.73	0.41
1:A:1095:U:C2	1:A:1096:C:C6	3.09	0.41
1:A:1155:G:H2'	1:A:1156:G:C8	2.56	0.41
1:A:117:G:O6	1:A:289:G:C1'	2.69	0.41
1:A:1157:A:C2	1:A:1180:A:C4	3.09	0.41
1:A:1193:G:C5	1:A:1194:U:C5	3.09	0.41
1:A:1196:U:C4'	1:A:1197:G:C5'	2.99	0.41
1:A:1237:C:H5''	1:A:1238:A:C8	2.56	0.41
1:A:1253:G:H21	1:A:1254:C:H1'	1.86	0.41
1:A:1254:C:OP1	12:M:45:ARG:CD	2.69	0.41
1:A:1349:A:C2'	1:A:1350:A:C8	2.93	0.41
1:A:1488:G:H2'	1:A:1489:G:H8	1.86	0.41
1:A:1504:G:H3'	1:A:1504:G:C8	2.56	0.41
1:A:15:G:H1	1:A:920:U:H3	1.68	0.41
1:A:237:C:H2'	1:A:238:G:C8	2.53	0.41
1:A:236:G:C2'	1:A:237:C:H6	2.34	0.41
1:A:124:G:N2	1:A:238:G:H1'	2.36	0.41
1:A:298:A:H3'	1:A:299:G:H8	1.86	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:413:G:H2'	1:A:414:A:OP2	2.21	0.41
1:A:52:G:H2'	1:A:53:A:C8	2.54	0.41
1:A:595:G:H8	1:A:641:U:O4	2.04	0.41
1:A:605:U:C4	1:A:606:G:N7	2.89	0.41
1:A:721:G:H4'	1:A:722:A:O4'	2.21	0.41
1:A:664:G:O2'	1:A:725:G:O2'	2.18	0.41
1:A:764:C:O3'	1:A:765:G:H8	2.03	0.41
1:A:817:C:C1'	1:A:818:G:C5'	2.98	0.41
1:A:87:A:N7	1:A:88:C:C2	2.89	0.41
1:A:920:U:H5'	1:A:1080:A:N6	2.37	0.41
1:A:925:G:O2'	1:A:927:G:OP1	2.34	0.41
1:A:953:G:H5'	1:A:965:A:H61	1.86	0.41
1:A:981:U:C3'	1:A:981:U:H6	2.34	0.41
4:E:173:ALA:O	4:E:175:ARG:N	2.54	0.41
4:E:40:HIS:HB3	4:E:190:THR:HG21	2.02	0.41
4:E:20:GLU:HB2	4:E:190:THR:OG1	2.21	0.41
4:E:80:ILE:HG13	4:E:208:ILE:HD13	2.03	0.41
4:E:20:GLU:HA	4:E:21:ARG:NH1	2.36	0.41
4:E:56:ARG:O	4:E:57:PHE:C	2.55	0.41
4:E:67:THR:OG1	4:E:155:LEU:CG	2.66	0.41
5:F:142:MET:HG2	5:F:170:GLN:HG3	2.03	0.41
5:F:35:GLU:HA	5:F:38:ARG:HD3	2.01	0.41
5:F:42:LEU:HA	5:F:45:LYS:CD	2.48	0.41
6:G:149:ALA:O	6:G:153:ARG:HG3	2.21	0.41
6:G:145:GLU:CB	6:G:184:LYS:HG2	2.49	0.41
7:H:16:THR:O	7:H:26:PHE:CB	2.64	0.41
8:I:10:LEU:N	8:I:10:LEU:CD2	2.82	0.41
8:I:12:PRO:CD	8:I:13:ASN:H	2.34	0.41
8:I:19:LEU:HD23	8:I:23:LYS:CE	2.48	0.41
9:J:42:ILE:HG21	9:J:116:ALA:HB1	2.03	0.41
9:J:46:ALA:HB2	9:J:120:ILE:HD12	2.02	0.41
9:J:136:LYS:HE3	9:J:136:LYS:HB3	1.92	0.41
9:J:149:ARG:HB3	9:J:150:ALA:H	1.62	0.41
9:J:87:VAL:HG21	9:J:154:TYR:CB	2.46	0.41
10:K:10:LEU:HD11	10:K:85:ARG:CD	2.51	0.41
10:K:18:ARG:HH12	10:K:78:GLN:CD	2.22	0.41
10:K:33:GLU:CG	10:K:59:LEU:HD21	2.48	0.41
11:L:23:ASN:ND2	11:L:57:GLY:HA2	2.36	0.41
11:L:9:ARG:HG2	11:L:15:ALA:H	1.86	0.41
14:O:27:LEU:HG	14:O:28:LYS:HG3	2.03	0.41
14:O:76:ASN:OD1	14:O:76:ASN:N	2.54	0.41
15:P:59:TYR:CD2	15:P:60:VAL:HG23	2.49	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:P:90:LEU:HD23	15:P:93:ARG:CD	2.49	0.41
16:Q:46:GLU:O	16:Q:47:LEU:C	2.58	0.41
17:R:34:LEU:C	17:R:34:LEU:HD12	2.41	0.41
18:S:1:MET:CB	18:S:3:LYS:HZ1	2.30	0.41
19:T:40:LYS:HB2	19:T:40:LYS:HZ3	1.86	0.41
21:V:18:LYS:O	21:V:18:LYS:HE3	2.21	0.41
22:W:73:HIS:O	22:W:76:ALA:CB	2.69	0.41
22:W:73:HIS:C	22:W:74:LYS:O	2.58	0.41
22:W:84:LEU:HA	22:W:84:LEU:HD22	1.90	0.41
3:D:5:A:O2'	3:D:6:G:O5'	2.39	0.41
1:A:1451:A:H8	1:A:1451:A:P	2.44	0.41
1:A:101:A:H8	1:A:101:A:O5'	2.03	0.40
1:A:101:A:C2'	1:A:102:G:H8	2.16	0.40
1:A:1057:G:H2'	1:A:1058:G:H8	1.85	0.40
1:A:1145:C:C1'	1:A:1146:A:C8	3.01	0.40
1:A:951:G:C5	1:A:1231:G:C6	3.08	0.40
1:A:1260:C:O4'	1:A:1283:G:O2'	2.38	0.40
1:A:1321:C:C3'	1:A:1321:C:H6	2.31	0.40
1:A:1376:U:H6	1:A:1376:U:O5'	2.03	0.40
1:A:17:U:C2	1:A:18:C:C5	3.09	0.40
1:A:306:G:N2	1:A:307:C:C1'	2.83	0.40
1:A:411:A:C8	1:A:411:A:H3'	2.56	0.40
1:A:424:G:O5'	1:A:424:G:H8	2.04	0.40
1:A:52:G:O2'	1:A:53:A:C5'	2.53	0.40
1:A:562:C:O2	14:O:15:ARG:CA	2.69	0.40
1:A:577:G:N2	1:A:578:C:O2	2.54	0.40
1:A:621:A:C6	1:A:622:A:N6	2.88	0.40
1:A:742:G:C2	1:A:743:U:H1'	2.56	0.40
1:A:764:C:H3'	1:A:765:G:N7	2.36	0.40
1:A:815:A:H8	1:A:819:A:H2	1.69	0.40
1:A:835:U:C2	1:A:836:G:N7	2.89	0.40
2:C:75:C:H2'	2:C:76:A:O3'	2.21	0.40
4:E:236:TYR:O	4:E:239:VAL:O	2.39	0.40
4:E:22:LYS:HD2	4:E:40:HIS:HE1	1.86	0.40
5:F:114:PRO:O	5:F:115:LEU:C	2.59	0.40
5:F:82:GLU:O	5:F:85:ARG:HB3	2.22	0.40
6:G:123:HIS:HB3	6:G:125:HIS:CE1	2.55	0.40
6:G:78:LEU:CD2	6:G:78:LEU:C	2.89	0.40
7:H:104:ALA:HA	7:H:107:ARG:HH11	1.86	0.40
7:H:84:PHE:CD2	7:H:130:ASN:OD1	2.74	0.40
7:H:89:ILE:HD13	7:H:90:VAL:H	1.84	0.40
9:J:113:GLU:OE2	9:J:119:ARG:CG	2.68	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:72:ARG:HG3	9:J:73:MET:H	1.86	0.40
9:J:72:ARG:CA	9:J:96:GLN:NE2	2.81	0.40
10:K:15:ASN:O	10:K:18:ARG:HB2	2.21	0.40
12:M:95:GLU:O	12:M:97:GLU:HG2	2.21	0.40
13:N:82:VAL:HB	13:N:108:ILE:CG1	2.46	0.40
13:N:95:ILE:HA	13:N:98:LEU:HD12	2.02	0.40
14:O:60:LEU:CD2	14:O:61:THR:O	2.70	0.40
15:P:18:ALA:HB2	15:P:45:VAL:HG21	2.03	0.40
15:P:48:LEU:HD11	15:P:56:LEU:CD1	2.51	0.40
16:Q:40:CYS:O	16:Q:44:LEU:HB3	2.21	0.40
17:R:36:ILE:CA	17:R:39:LEU:HD22	2.52	0.40
17:R:7:GLU:O	17:R:8:LYS:C	2.60	0.40
19:T:11:VAL:O	19:T:12:SER:CB	2.68	0.40
19:T:16:GLN:O	19:T:17:LYS:CB	2.69	0.40
19:T:20:THR:H	19:T:20:THR:HG23	1.62	0.40
20:U:49:LYS:HZ3	20:U:49:LYS:HB2	1.86	0.40
20:U:49:LYS:NZ	20:U:49:LYS:HB2	2.35	0.40
20:U:61:LYS:HA	20:U:61:LYS:HD2	1.90	0.40
1:A:1311:G:OP2	21:V:2:PRO:N	2.54	0.40
22:W:34:LYS:O	22:W:35:THR:C	2.60	0.40
22:W:86:ARG:HG3	22:W:87:LYS:N	2.36	0.40
22:W:88:VAL:O	22:W:92:LEU:HD12	2.21	0.40
3:D:14:A:N3	3:D:14:A:C2'	2.84	0.40
3:D:50:G:N2	3:D:65:U:C1'	2.84	0.40
3:D:54:U:H2'	3:D:55:U:C5'	2.48	0.40
1:A:1041:A:C2	1:A:1042:G:C8	3.09	0.40
1:A:161:A:C6	1:A:162:A:C5	3.09	0.40
7:H:140:ARG:CZ	7:H:140:ARG:HB2	2.50	0.40
1:A:1087:G:N2	1:A:1099:G:N3	2.69	0.40
1:A:1185:G:C2'	1:A:1186:G:H5'	2.51	0.40
1:A:1202:G:O4'	16:Q:29:ARG:NE	2.54	0.40
1:A:1206:G:H2'	1:A:1207:G:H8	1.86	0.40
1:A:1226:C:O2	1:A:1226:C:H2'	2.22	0.40
1:A:122:G:C4	1:A:123:C:C6	3.10	0.40
1:A:1324:A:C2	1:A:1325:C:C6	3.08	0.40
1:A:1324:A:N1	1:A:1325:C:C4	2.88	0.40
1:A:1394:A:O2'	1:A:1395:C:P	2.78	0.40
1:A:1423:G:O2'	1:A:1424:C:H5'	2.22	0.40
1:A:1498:U:C2'	1:A:1499:A:C8	3.04	0.40
1:A:1394:A:N6	1:A:1501:C:O4'	2.39	0.40
1:A:1522:U:H6	1:A:1522:U:O5'	2.04	0.40
1:A:265:G:C2'	1:A:266:G:C5'	2.99	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:376:G:O2'	1:A:377:G:H5'	2.21	0.40
1:A:465:A:C5	1:A:467:G:C4	3.09	0.40
1:A:50:A:H5''	1:A:51:A:C3'	2.51	0.40
1:A:511:C:C2'	1:A:512:U:OP2	2.69	0.40
1:A:544:G:C4	1:A:545:C:C5	3.10	0.40
1:A:552:U:N3	1:A:553:A:N7	2.68	0.40
1:A:686:U:C2'	1:A:687:A:O5'	2.70	0.40
1:A:588:G:C5	1:A:753:A:H2'	2.56	0.40
1:A:777:A:C2'	1:A:778:G:O5'	2.69	0.40
1:A:817:C:C2'	1:A:818:G:H5'	2.45	0.40
1:A:915:A:C5	1:A:916:G:C8	3.09	0.40
1:A:864:A:C2	1:A:917:G:C2	3.09	0.40
1:A:948:C:C2'	1:A:949:A:O5'	2.69	0.40
1:A:960:U:N3	1:A:1225:A:N7	2.69	0.40
1:A:969:A:O4'	1:A:969:A:OP1	2.39	0.40
2:C:41:C:OP2	2:C:41:C:H3'	2.20	0.40
4:E:23:ARG:NH1	4:E:23:ARG:HB2	2.36	0.40
4:E:46:LYS:O	4:E:47:THR:C	2.59	0.40
4:E:55:PHE:O	4:E:58:ILE:CB	2.70	0.40
5:F:10:PHE:O	5:F:178:LEU:CD2	2.69	0.40
5:F:184:TYR:HD1	5:F:201:TYR:CE2	2.40	0.40
5:F:50:ALA:CB	5:F:70:VAL:HG11	2.52	0.40
6:G:150:GLU:C	6:G:152:SER:N	2.74	0.40
6:G:158:ILE:HG23	6:G:162:LEU:HD21	2.02	0.40
7:H:121:LYS:HB3	7:H:121:LYS:HE3	1.69	0.40
1:A:9:G:N7	7:H:126:ARG:NH1	2.69	0.40
7:H:52:PRO:O	7:H:56:GLN:NE2	2.55	0.40
8:I:12:PRO:CB	8:I:57:GLN:HE22	2.35	0.40
8:I:85:VAL:CG1	8:I:88:VAL:CG2	2.98	0.40
9:J:68:ASN:ND2	9:J:128:ALA:O	2.54	0.40
10:K:54:ASP:HB2	10:K:56:LYS:HD3	2.03	0.40
7:H:151:LEU:HB3	10:K:79:VAL:HG22	2.03	0.40
11:L:96:LEU:C	11:L:100:GLY:HA2	2.35	0.40
13:N:62:GLN:CG	13:N:63:LEU:N	2.83	0.40
14:O:113:ARG:C	14:O:114:LYS:CG	2.81	0.40
14:O:34:ARG:HB3	14:O:34:ARG:HE	1.68	0.40
14:O:83:VAL:HG13	14:O:84:LEU:N	2.36	0.40
18:S:35:LYS:HD2	18:S:35:LYS:C	2.40	0.40
18:S:4:ILE:CD1	18:S:65:GLN:O	2.68	0.40
19:T:86:GLU:O	19:T:87:LYS:C	2.59	0.40
22:W:87:LYS:CG	22:W:91:LEU:HD21	2.51	0.40
3:D:19:G:O6	3:D:56:C:N3	2.55	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:D:4:G:C4	3:D:5:A:C8	3.09	0.40
1:A:1452:C:O4'	1:A:1453:G:N2	2.55	0.40
1:A:1068:G:O6	1:A:1108:G:N3	2.55	0.40
1:A:1074:G:C2'	1:A:1075:C:H5'	2.51	0.40
1:A:1198:G:H2'	1:A:1199:U:C5'	2.51	0.40
1:A:1252:A:N3	1:A:1253:G:C8	2.90	0.40
1:A:1378:C:O2	1:A:1379:G:O4'	2.39	0.40
1:A:1394:A:H62	1:A:1501:C:C4'	2.32	0.40
1:A:1416:G:C4	1:A:1417:G:C8	3.09	0.40
1:A:1443:G:H4'	1:A:1446:A:C4'	2.48	0.40
1:A:1461:G:H2'	1:A:1462:G:C8	2.56	0.40
1:A:20:U:H2'	1:A:21:G:C5'	2.51	0.40
1:A:376:G:C2	1:A:377:G:C8	3.10	0.40
1:A:497:U:O2	1:A:498:A:H8	2.05	0.40
1:A:550:G:C4	1:A:551:U:C5	3.09	0.40
1:A:568:G:N2	1:A:574:A:H2	2.19	0.40
1:A:56:U:O2'	1:A:57:G:H5'	2.21	0.40
1:A:608:A:H2'	1:A:609:A:H5'	2.02	0.40
1:A:620:C:C2'	1:A:621:A:C5'	2.99	0.40
1:A:645:C:C2'	1:A:646:U:H5'	2.52	0.40
1:A:688:G:H2'	1:A:689:C:C5'	2.50	0.40
1:A:714:G:H2'	1:A:715:A:C8	2.57	0.40
1:A:737:A:OP1	8:I:91:VAL:HG13	2.21	0.40
1:A:244:U:O4	1:A:893:C:N3	2.54	0.40
1:A:934:C:N4	1:A:939:G:H1	2.19	0.40
1:A:951:G:N2	1:A:952:U:C2	2.90	0.40
1:A:996:A:C2	1:A:997:U:C2	3.10	0.40
2:C:37:A:C2'	2:C:38:A:C8	2.89	0.40
2:C:21:A:N6	2:C:46:G:N1	2.69	0.40
4:E:204:ASN:C	4:E:204:ASN:ND2	2.75	0.40
4:E:56:ARG:HA	4:E:59:GLU:CG	2.52	0.40
4:E:61:LEU:CB	4:E:64:ARG:NH1	2.84	0.40
4:E:97:TRP:CZ2	4:E:99:GLY:HA3	2.56	0.40
5:F:40:ARG:HG3	5:F:57:ILE:CD1	2.49	0.40
5:F:85:ARG:NH2	5:F:89:GLU:HB2	2.21	0.40
6:G:128:VAL:HG23	6:G:132:ARG:HA	2.04	0.40
6:G:24:GLU:CD	6:G:24:GLU:C	2.79	0.40
6:G:60:GLU:HG2	6:G:202:LEU:CB	2.50	0.40
6:G:66:ARG:O	6:G:68:TYR:N	2.54	0.40
7:H:141:GLN:HG3	7:H:143:ARG:NH2	2.25	0.40
9:J:129:GLU:CD	9:J:131:LYS:HG2	2.42	0.40
9:J:36:LYS:NZ	9:J:36:LYS:CB	2.78	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:J:94:ARG:CZ	9:J:98:SER:OG	2.69	0.40
10:K:103:VAL:HG11	10:K:109:ILE:C	2.42	0.40
10:K:112:LEU:HD12	10:K:131:GLY:C	2.41	0.40
10:K:19:VAL:C	10:K:20:TYR:CG	2.92	0.40
10:K:22:GLU:O	10:K:63:LEU:HD13	2.20	0.40
1:A:1347:G:OP1	11:L:107:ARG:HG2	2.20	0.40
13:N:85:ARG:CG	13:N:85:ARG:NH1	2.84	0.40
15:P:28:ALA:O	15:P:32:GLU:HB2	2.21	0.40
15:P:15:VAL:CB	15:P:34:LEU:HD21	2.50	0.40
15:P:70:LEU:CD2	15:P:70:LEU:C	2.90	0.40
15:P:7:VAL:O	15:P:9:ILE:CD1	2.69	0.40
16:Q:53:LEU:O	16:Q:56:VAL:HG23	2.21	0.40
18:S:4:ILE:HA	18:S:20:VAL:O	2.21	0.40
19:T:17:LYS:HE3	19:T:48:GLU:HA	2.03	0.40
19:T:61:GLU:HA	19:T:71:PHE:CZ	2.55	0.40
19:T:75:ARG:NH1	19:T:77:VAL:CA	2.82	0.40
20:U:33:ASP:O	20:U:34:TYR:CD2	2.74	0.40
20:U:54:ARG:O	20:U:54:ARG:CG	2.69	0.40
21:V:58:VAL:HA	21:V:59:PRO:HD2	1.98	0.40
22:W:104:LEU:C	22:W:105:SER:O	2.58	0.40
22:W:59:ALA:O	22:W:62:LEU:N	2.54	0.40
22:W:75:ASN:O	22:W:79:ARG:CD	2.69	0.40
3:D:63:G:N1	3:D:64:C:C4	2.90	0.40
1:A:1452:C:C5'	1:A:1453:G:C2	3.04	0.40
1:A:102:G:H2'	1:A:103:C:C6	2.56	0.40
1:A:998(A):C:C2	1:A:1043:C:N3	2.89	0.40
1:A:1113:C:OP2	1:A:1113:C:C5	2.74	0.40
1:A:1124:G:C2'	1:A:1126:U:O4	2.60	0.40
1:A:1246:C:C2'	1:A:1247:U:O5'	2.70	0.40
1:A:1257:U:O2'	1:A:1258:G:C8	2.74	0.40
1:A:133:U:H3	1:A:229:U:H3	1.67	0.40
1:A:141:A:C1'	1:A:182:U:H1'	2.51	0.40
1:A:1443:G:O3'	1:A:1446:A:C4'	2.65	0.40
1:A:1465:C:C2	1:A:1466:C:C6	3.09	0.40
1:A:1477:C:C4	1:A:1478:C:C5	3.09	0.40
1:A:1509:C:H2'	1:A:1510:U:C6	2.56	0.40
1:A:194:C:O2'	1:A:195:A:C4'	2.69	0.40
1:A:196:A:C8	1:A:196:A:H3'	2.56	0.40
1:A:126:G:N1	1:A:236:G:O6	2.54	0.40
1:A:292:G:C8	1:A:293:G:H1'	2.57	0.40
1:A:307:C:C6	1:A:307:C:C4'	3.04	0.40
1:A:408:A:H5'	6:G:116:GLN:CG	2.50	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:A:501:C:P	14:O:124:LYS:HD2	2.61	0.40
1:A:551:U:C2	1:A:552:U:C5	3.09	0.40
1:A:592:G:H2'	1:A:593:G:C5'	2.52	0.40
1:A:596:C:C2'	1:A:597:G:O5'	2.70	0.40
1:A:644:G:O6	1:A:645:C:N3	2.55	0.40
1:A:655:A:O5'	1:A:655:A:H8	2.05	0.40
1:A:69:G:H2'	1:A:73:G:C8	2.56	0.40
1:A:730:G:N7	1:A:731:G:C1'	2.81	0.40
1:A:754:C:O5'	17:R:72:ARG:CZ	2.69	0.40
1:A:779:C:N3	1:A:780:A:N3	2.69	0.40
1:A:819:A:OP1	1:A:820:U:H5	2.03	0.40
1:A:835:U:O3'	20:U:61:LYS:NZ	2.54	0.40
1:A:85:U:H2'	1:A:86:U:O4'	2.22	0.40
1:A:931:C:H2'	1:A:931:C:O2	2.20	0.40
1:A:938:A:C2'	1:A:939:G:C5'	2.95	0.40
1:A:953:G:C6	1:A:954:G:C5	3.10	0.40
2:C:67:C:H2'	2:C:68:C:H6	1.86	0.40
4:E:136:VAL:C	4:E:139:LYS:HG2	2.42	0.40
4:E:163:PHE:CZ	4:E:186:ALA:CA	3.04	0.40
4:E:15:VAL:C	4:E:16:HIS:HD1	2.25	0.40
4:E:208:ILE:HA	4:E:211:ILE:CB	2.39	0.40
6:G:29:PRO:HA	6:G:34:GLU:HG3	2.02	0.40
6:G:59:ARG:CA	6:G:59:ARG:NE	2.69	0.40
8:I:11:ASN:HA	8:I:86:ARG:NH1	2.36	0.40
8:I:16:GLN:O	8:I:18:GLN:N	2.55	0.40
8:I:70:ASP:OD1	8:I:71:ARG:HG2	2.21	0.40
8:I:76:ALA:O	8:I:79:LEU:CG	2.61	0.40
9:J:97:GLN:O	9:J:100:ALA:N	2.54	0.40
9:J:138:LYS:C	9:J:140:ASP:N	2.73	0.40
9:J:38:LEU:HD12	9:J:38:LEU:HA	1.91	0.40
9:J:65:ALA:CA	9:J:128:ALA:HA	2.51	0.40
9:J:99:LEU:HA	9:J:99:LEU:HD23	1.67	0.40
10:K:111:ILE:CD1	10:K:111:ILE:N	2.70	0.40
10:K:27:PRO:N	10:K:58:TYR:HE1	2.19	0.40
11:L:33:PHE:HB3	11:L:34:ASN:H	1.77	0.40
12:M:14:LYS:O	12:M:17:ASP:HB2	2.21	0.40
1:A:684:A:C3'	13:N:12:ARG:HH12	2.34	0.40
1:A:689:C:OP1	13:N:46:GLY:HA3	2.22	0.40
13:N:63:LEU:O	13:N:66:LEU:N	2.54	0.40
14:O:28:LYS:HD2	14:O:33:ARG:HH12	1.86	0.40
14:O:7:ILE:HB	14:O:8:ASN:H	1.64	0.40
15:P:75:ALA:O	15:P:76:ALA:C	2.59	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:Q:24:CYS:C	16:Q:26:ARG:N	2.72	0.40
5:F:40:ARG:CZ	16:Q:52:GLN:HG2	2.51	0.40
17:R:25:THR:HA	17:R:28:GLN:HG2	2.03	0.40
17:R:36:ILE:HA	17:R:39:LEU:CD2	2.51	0.40
19:T:104:LYS:CD	19:T:105:ALA:H	2.34	0.40
1:A:235:C:H4'	19:T:71:PHE:HE1	1.87	0.40
21:V:47:HIS:O	21:V:61:TYR:CD2	2.74	0.40
3:D:18:G:H3'	3:D:18:G:C8	2.56	0.40
1:A:161:A:C2'	1:A:162:A:H5'	2.51	0.40
1:A:1102:A:H2'	1:A:1103:C:H6	1.87	0.40
1:A:1213:A:C6	1:A:1215:G:N3	2.90	0.40
1:A:1242:C:N3	1:A:1243:C:C5	2.89	0.40
1:A:128:G:H5'	19:T:2:PRO:N	2.37	0.40
1:A:1303:C:C4	1:A:1304:G:C5	3.10	0.40
1:A:135:C:O2	18:S:1:MET:HG2	2.21	0.40
1:A:1378:C:N3	1:A:1379:G:H1'	2.37	0.40
1:A:1399:C:O2'	1:A:1400:C:OP2	2.35	0.40
1:A:1427:U:H2'	1:A:1428:A:H8	1.86	0.40
1:A:1428:A:C6	1:A:1429:C:N4	2.89	0.40
1:A:336:C:H1'	1:A:1468:A:C2	2.56	0.40
1:A:21:G:N2	1:A:916:G:C4	2.90	0.40
1:A:293:G:C2	1:A:294:U:C5	3.09	0.40
1:A:298:A:N6	1:A:299:G:C2	2.90	0.40
1:A:418:C:C4	1:A:419:C:C5	3.10	0.40
1:A:69:G:C2	1:A:73:G:C8	3.09	0.40
1:A:710:G:O2'	1:A:711:G:H5'	2.22	0.40
1:A:726:C:O2'	1:A:727:G:H5'	2.21	0.40
1:A:731:G:H2'	1:A:732:C:O4'	2.22	0.40
1:A:768:A:N7	1:A:769:G:N7	2.69	0.40
1:A:90:C:C4	1:A:91:C:C5	3.10	0.40
1:A:75:C:C2	1:A:96:G:C2	3.10	0.40
1:A:1338:G:H21	2:C:30:G:H21	1.69	0.40
2:C:35:A:H8	2:C:35:A:H5'	1.84	0.40
4:E:21:ARG:HA	4:E:39:ILE:HG13	2.03	0.40
4:E:69:LEU:O	4:E:162:ILE:HA	2.21	0.40
4:E:70:PHE:O	4:E:92:TYR:CA	2.69	0.40
4:E:70:PHE:O	4:E:92:TYR:HA	2.22	0.40
5:F:142:MET:HB3	5:F:149:ALA:CB	2.49	0.40
5:F:142:MET:HB2	5:F:149:ALA:N	2.37	0.40
5:F:33:LEU:HD11	16:Q:54:PRO:CD	2.51	0.40
5:F:6:HIS:HA	5:F:7:PRO:HD2	1.72	0.40
1:A:620:C:N1	6:G:135:LEU:HD13	2.36	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:G:32:ALA:HB3	6:G:33:MET:HE3	2.04	0.40
7:H:151:LEU:HD11	10:K:67:PRO:HG2	2.02	0.40
7:H:26:PHE:HB2	7:H:27:ARG:H	1.43	0.40
7:H:39:GLY:C	7:H:68:GLU:OE2	2.60	0.40
7:H:78:HIS:NE2	7:H:142:LEU:HB3	2.36	0.40
8:I:52:ILE:CG2	8:I:87:ARG:NH1	2.75	0.40
9:J:26:PHE:CD1	9:J:26:PHE:O	2.74	0.40
9:J:50:ILE:O	9:J:54:THR:C	2.59	0.40
9:J:65:ALA:N	9:J:128:ALA:CB	2.85	0.40
9:J:76:ARG:C	9:J:156:TRP:CZ2	2.95	0.40
10:K:103:VAL:HG21	10:K:109:ILE:CA	2.51	0.40
10:K:49:GLU:OE2	10:K:51:VAL:HG22	2.22	0.40
11:A:1347:G:N7	11:L:107:ARG:CZ	2.84	0.40
11:L:45:ALA:CB	11:L:74:ILE:HG22	2.51	0.40
13:N:27:ASN:H	13:N:56:GLY:HA2	1.85	0.40
13:N:44:SER:N	13:N:47:VAL:HG23	2.37	0.40
13:N:57:THR:O	13:N:58:PRO:C	2.57	0.40
13:N:79:SER:HA	13:N:104:GLN:CD	2.42	0.40
14:O:45:PRO:O	14:O:46:LYS:O	2.39	0.40
14:O:523:A:H62	14:O:53:ARG:HH22	1.67	0.40
14:O:68:ALA:HB1	14:O:99:HIS:N	2.36	0.40
14:O:32:PHE:HB2	14:O:84:LEU:HD21	2.02	0.40
15:P:23:TYR:HE2	15:P:70:LEU:CD2	2.34	0.40
16:Q:47:LEU:HB2	16:Q:53:LEU:HD11	2.03	0.40
17:R:64:ARG:HA	17:R:67:LEU:HG	2.03	0.40
19:T:7:THR:CB	19:T:57:VAL:O	2.70	0.40
19:T:70:ARG:O	19:T:71:PHE:CD1	2.74	0.40
22:W:50:GLU:O	22:W:54:LYS:HG3	2.22	0.40
3:D:72:C:H3'	3:D:73:A:C8	2.55	0.40
1:A:345:C:C4'	1:A:346:G:O5'	2.61	0.40
1:A:1007:C:O2'	1:A:1008:C:C5'	2.70	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	E	232/256 (91%)	119 (51%)	48 (21%)	65 (28%)	0	1
5	F	204/239 (85%)	117 (57%)	41 (20%)	46 (22%)	0	3
6	G	206/209 (99%)	99 (48%)	52 (25%)	55 (27%)	0	2
7	H	148/162 (91%)	89 (60%)	26 (18%)	33 (22%)	0	3
8	I	99/101 (98%)	62 (63%)	14 (14%)	23 (23%)	0	3
9	J	153/156 (98%)	65 (42%)	45 (29%)	43 (28%)	0	1
10	K	136/138 (99%)	71 (52%)	28 (21%)	37 (27%)	0	1
11	L	125/128 (98%)	57 (46%)	38 (30%)	30 (24%)	0	2
12	M	96/105 (91%)	53 (55%)	21 (22%)	22 (23%)	0	3
13	N	117/129 (91%)	63 (54%)	28 (24%)	26 (22%)	0	3
14	O	122/132 (92%)	60 (49%)	29 (24%)	33 (27%)	0	2
15	P	123/126 (98%)	64 (52%)	33 (27%)	26 (21%)	0	4
16	Q	58/61 (95%)	24 (41%)	16 (28%)	18 (31%)	0	1
17	R	86/89 (97%)	43 (50%)	26 (30%)	17 (20%)	0	4
18	S	81/88 (92%)	46 (57%)	22 (27%)	13 (16%)	0	8
19	T	102/105 (97%)	63 (62%)	20 (20%)	19 (19%)	0	5
20	U	71/88 (81%)	29 (41%)	23 (32%)	19 (27%)	0	2
21	V	78/93 (84%)	32 (41%)	24 (31%)	22 (28%)	0	1
22	W	97/106 (92%)	31 (32%)	43 (44%)	23 (24%)	0	3
23	X	22/27 (82%)	11 (50%)	5 (23%)	6 (27%)	0	1
All	All	2356/2538 (93%)	1198 (51%)	582 (25%)	576 (24%)	0	2

All (576) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	E	13	ALA
4	E	15	VAL
4	E	17	PHE
4	E	20	GLU
4	E	42	ILE
4	E	44	LEU
4	E	76	GLN
4	E	77	ALA
4	E	87	ARG
4	E	88	ALA
4	E	96	ARG

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Mol	Chain	Res	Type
4	E	97	TRP
4	E	99	GLY
4	E	104	ASN
4	E	124	SER
4	E	127	ILE
4	E	128	GLU
4	E	130	ARG
4	E	131	PRO
4	E	153	ARG
4	E	154	LEU
4	E	161	ALA
4	E	165	VAL
4	E	172	ILE
4	E	178	ARG
4	E	181	PHE
4	E	191	ASP
4	E	194	PRO
4	E	195	ASP
4	E	211	ILE
4	E	232	PRO
5	F	4	LYS
5	F	12	LEU
5	F	14	ILE
5	F	24	ALA
5	F	27	LYS
5	F	28	GLN
5	F	49	SER
5	F	52	LEU
5	F	53	ALA
5	F	60	ALA
5	F	64	VAL
5	F	65	ALA
5	F	83	ARG
5	F	84	ILE
5	F	95	THR
5	F	97	LYS
5	F	119	ARG
5	F	127	ARG
5	F	129	ALA
5	F	146	ALA
5	F	157	ILE
5	F	161	GLU

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Mol	Chain	Res	Type
5	F	179	ARG
6	G	17	VAL
6	G	18	LYS
6	G	21	LEU
6	G	29	PRO
6	G	31	CYS
6	G	39	PRO
6	G	40	PRO
6	G	41	GLY
6	G	42	GLN
6	G	47	ARG
6	G	73	ARG
6	G	86	LYS
6	G	99	SER
6	G	109	GLY
6	G	117	ALA
6	G	125	HIS
6	G	127	THR
6	G	131	ARG
6	G	142	PRO
6	G	150	GLU
6	G	151	LYS
6	G	163	GLU
6	G	170	VAL
6	G	179	GLU
6	G	181	MET
6	G	192	GLU
6	G	195	ALA
6	G	198	VAL
6	G	199	ASN
7	H	21	ALA
7	H	55	VAL
7	H	77	PRO
7	H	116	THR
7	H	125	SER
7	H	128	PRO
7	H	144	THR
7	H	153	LYS
8	I	11	ASN
8	I	16	GLN
8	I	35	ALA
8	I	36	ARG

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Mol	Chain	Res	Type
8	I	53	ALA
8	I	81	ILE
8	I	82	ARG
8	I	83	ASP
8	I	84	ASN
8	I	95	GLU
8	I	97	PHE
9	J	6	ARG
9	J	14	PRO
9	J	17	VAL
9	J	31	MET
9	J	33	ASP
9	J	37	ASN
9	J	52	GLU
9	J	56	GLN
9	J	90	GLU
9	J	91	VAL
9	J	92	SER
9	J	94	ARG
9	J	111	ARG
9	J	113	GLU
9	J	121	ALA
9	J	134	ALA
9	J	142	GLU
9	J	149	ARG
9	J	150	ALA
10	K	6	ILE
10	K	13	ILE
10	K	23	SER
10	K	30	ARG
10	K	31	PHE
10	K	63	LEU
10	K	70	GLN
10	K	75	ARG
10	K	76	PRO
10	K	77	GLU
10	K	78	GLN
10	K	87	SER
10	K	103	VAL
10	K	105	ARG
10	K	121	ASP
10	K	129	VAL

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Mol	Chain	Res	Type
11	L	33	PHE
11	L	43	ALA
11	L	44	VAL
11	L	55	ALA
11	L	70	LYS
11	L	71	SER
11	L	94	ALA
11	L	103	THR
11	L	109	VAL
11	L	110	GLU
11	L	114	TYR
11	L	116	LYS
11	L	118	LYS
12	M	33	GLN
12	M	34	VAL
12	M	41	PRO
12	M	56	HIS
12	M	60	ARG
12	M	61	GLU
12	M	72	VAL
12	M	79	ARG
12	M	90	LEU
12	M	96	ILE
13	N	15	ALA
13	N	27	ASN
13	N	34	ASP
13	N	48	ILE
13	N	54	ARG
13	N	78	GLN
13	N	102	GLY
13	N	106	LYS
13	N	115	PRO
13	N	116	HIS
14	O	18	VAL
14	O	19	ARG
14	O	22	SER
14	O	28	LYS
14	O	30	ALA
14	O	41	ARG
14	O	46	LYS
14	O	48	PRO
14	O	51	ALA

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Mol	Chain	Res	Type
14	O	62	SER
14	O	73	GLU
14	O	83	VAL
14	O	87	GLY
14	O	91	LYS
14	O	100	ILE
14	O	116	SER
14	O	127	GLU
15	P	11	ARG
15	P	12	ASN
15	P	14	ARG
15	P	84	ILE
15	P	101	GLN
15	P	104	ARG
15	P	107	ALA
15	P	114	ARG
15	P	118	ALA
15	P	121	LYS
15	P	124	PRO
16	Q	12	ARG
16	Q	16	PHE
16	Q	18	VAL
16	Q	44	LEU
16	Q	54	PRO
17	R	3	ILE
17	R	6	GLU
17	R	19	PRO
17	R	47	LYS
17	R	49	ASP
18	S	11	SER
18	S	15	PRO
18	S	44	THR
18	S	61	SER
18	S	63	GLY
19	T	4	LYS
19	T	14	LYS
19	T	34	LYS
19	T	48	GLU
19	T	50	LYS
19	T	97	SER
19	T	104	LYS
20	U	21	LYS

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Mol	Chain	Res	Type
20	U	34	TYR
20	U	54	ARG
20	U	59	SER
20	U	75	ILE
20	U	87	ARG
21	V	3	ARG
21	V	9	VAL
21	V	12	ASP
21	V	16	LEU
21	V	28	LYS
21	V	29	ARG
21	V	32	LYS
21	V	42	PRO
21	V	64	GLU
21	V	65	ASN
21	V	70	LYS
21	V	71	LEU
22	W	68	LYS
22	W	69	GLY
22	W	74	LYS
22	W	97	ALA
22	W	99	LEU
22	W	103	GLY
22	W	105	SER
23	X	6	ARG
23	X	7	ARG
23	X	8	THR
23	X	9	ARG
23	X	22	ARG
4	E	22	LYS
4	E	27	LYS
4	E	37	ASN
4	E	109	SER
4	E	120	ALA
4	E	126	GLU
4	E	147	LYS
4	E	151	GLY
4	E	155	LEU
4	E	160	ASP
4	E	169	LYS
4	E	180	LEU
4	E	183	PRO

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Mol	Chain	Res	Type
4	E	200	ILE
4	E	226	ARG
4	E	236	TYR
5	F	16	ARG
5	F	18	TRP
5	F	26	LYS
5	F	63	ASN
5	F	74	GLY
5	F	196	LEU
5	F	206	GLU
6	G	30	LYS
6	G	85	LYS
6	G	88	VAL
6	G	126	ILE
6	G	138	TYR
6	G	140	VAL
6	G	153	ARG
6	G	159	ARG
6	G	160	GLN
6	G	166	LYS
6	G	168	ARG
6	G	189	PRO
6	G	191	ARG
6	G	200	GLU
7	H	12	LEU
7	H	64	ARG
7	H	75	THR
7	H	78	HIS
7	H	85	GLY
7	H	99	GLY
7	H	102	ALA
7	H	115	VAL
7	H	129	ILE
8	I	12	PRO
8	I	26	ILE
8	I	27	GLN
8	I	69	GLU
8	I	72	VAL
9	J	4	ARG
9	J	55	GLY
9	J	80	VAL
9	J	93	PRO

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Mol	Chain	Res	Type
9	J	112	PRO
9	J	130	GLY
9	J	138	LYS
9	J	153	HIS
10	K	22	GLU
10	K	24	THR
10	K	41	ARG
10	K	64	LYS
10	K	65	TYR
10	K	69	ARG
10	K	73	ASP
10	K	74	PRO
10	K	97	VAL
10	K	102	ARG
11	L	23	ASN
11	L	29	ASN
11	L	39	GLY
11	L	52	ALA
11	L	98	PRO
11	L	105	ASP
11	L	117	HIS
11	L	120	ARG
12	M	30	SER
12	M	36	GLY
12	M	55	LYS
12	M	78	ASN
12	M	80	LYS
12	M	82	ILE
13	N	14	VAL
13	N	55	LYS
13	N	76	GLY
13	N	93	GLN
14	O	6	THR
14	O	7	ILE
14	O	16	GLU
14	O	26	ALA
14	O	108	ALA
14	O	121	GLY
15	P	41	PRO
15	P	59	TYR
16	Q	5	ALA
16	Q	17	LYS

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Mol	Chain	Res	Type
16	Q	25	VAL
16	Q	27	CYS
16	Q	29	ARG
16	Q	31	ARG
16	Q	34	TYR
16	Q	55	GLY
17	R	5	LYS
17	R	16	ALA
17	R	29	VAL
17	R	46	HIS
17	R	76	GLU
17	R	88	ARG
18	S	24	ALA
18	S	26	ARG
19	T	3	LYS
19	T	33	GLY
19	T	75	ARG
19	T	98	LEU
20	U	41	LYS
20	U	48	GLY
20	U	52	PRO
20	U	82	THR
21	V	6	LYS
21	V	43	GLU
22	W	49	ALA
22	W	59	ALA
22	W	101	GLY
4	E	8	LYS
4	E	25	ASN
4	E	45	GLN
4	E	53	ARG
4	E	91	PRO
4	E	110	GLN
4	E	118	LEU
4	E	121	LEU
4	E	204	ASN
5	F	50	ALA
5	F	73	PRO
5	F	87	LEU
5	F	191	THR
6	G	36	ARG
6	G	56	VAL

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Mol	Chain	Res	Type
6	G	107	ARG
7	H	74	GLY
7	H	95	ALA
7	H	104	ALA
7	H	150	ARG
8	I	17	SER
8	I	37	VAL
8	I	51	PRO
9	J	8	GLU
9	J	71	PRO
9	J	72	ARG
9	J	109	ASN
9	J	131	LYS
9	J	135	VAL
10	K	21	LYS
10	K	133	LEU
10	K	134	ILE
11	L	47	LEU
11	L	54	ASP
11	L	121	ARG
12	M	37	PRO
12	M	57	LYS
12	M	58	ASP
13	N	37	GLY
13	N	39	PRO
13	N	128	ALA
14	O	42	THR
14	O	105	TYR
14	O	110	VAL
15	P	10	PRO
15	P	46	LYS
15	P	65	LYS
15	P	67	GLU
16	Q	9	LYS
18	S	13	HIS
18	S	54	GLU
18	S	66	PRO
19	T	53	LEU
19	T	89	LEU
20	U	28	GLU
20	U	70	ILE
21	V	73	GLU

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Mol	Chain	Res	Type
21	V	79	THR
22	W	16	HIS
22	W	20	LEU
22	W	34	LYS
22	W	71	THR
22	W	78	ALA
22	W	84	LEU
4	E	24	TRP
4	E	78	GLN
4	E	158	LEU
4	E	176	GLU
4	E	189	ASP
4	E	193	ASP
4	E	230	VAL
5	F	81	GLY
5	F	91	LEU
5	F	205	GLY
6	G	51	PRO
6	G	55	ALA
6	G	71	SER
7	H	11	ILE
7	H	26	PHE
7	H	96	PRO
7	H	117	ASP
8	I	20	ALA
8	I	34	GLY
8	I	73	ASN
8	I	85	VAL
9	J	97	GLN
10	K	37	ARG
10	K	44	PHE
10	K	89	PRO
11	L	95	LYS
11	L	100	GLY
11	L	123	PRO
12	M	53	PRO
13	N	26	ASN
13	N	53	SER
13	N	92	GLU
13	N	113	PRO
13	N	117	ASN
14	O	29	GLY

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Mol	Chain	Res	Type
14	O	31	PRO
14	O	76	ASN
14	O	106	ASP
15	P	5	ALA
15	P	106	ASN
15	P	123	ALA
16	Q	15	LYS
17	R	51	HIS
17	R	53	HIS
17	R	62	GLN
17	R	82	ILE
18	S	79	VAL
19	T	12	SER
20	U	79	LEU
20	U	80	PRO
20	U	81	PHE
21	V	27	GLU
22	W	76	ALA
22	W	98	PRO
5	F	22	TRP
5	F	66	VAL
5	F	180	ALA
6	G	4	TYR
6	G	67	ILE
6	G	119	GLN
6	G	173	TRP
7	H	27	ARG
7	H	109	ILE
7	H	135	THR
7	H	141	GLN
7	H	142	LEU
9	J	7	ALA
9	J	23	VAL
9	J	106	GLN
9	J	122	HIS
9	J	129	GLU
10	K	11	THR
10	K	12	ARG
10	K	27	PRO
12	M	40	LEU
12	M	73	ASP
13	N	42	TRP

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Mol	Chain	Res	Type
13	N	74	ALA
14	O	101	VAL
15	P	9	ILE
15	P	54	VAL
15	P	98	VAL
15	P	120	LYS
19	T	6	LEU
19	T	47	PRO
19	T	68	ARG
19	T	99	SER
20	U	51	LEU
21	V	25	LYS
21	V	45	VAL
21	V	68	GLY
22	W	24	LEU
22	W	32	ALA
4	E	182	ILE
5	F	43	LEU
5	F	96	GLY
7	H	51	VAL
9	J	96	GLN
9	J	105	VAL
14	O	47	LYS
15	P	97	PRO
17	R	78	TYR
17	R	87	ILE
20	U	37	VAL
20	U	62	GLU
22	W	88	VAL
23	X	24	ARG
7	H	97	GLY
10	K	79	VAL
11	L	22	GLY
18	S	36	ILE
18	S	46	PRO
19	T	5	VAL
20	U	57	GLY
7	H	70	PRO
11	L	28	VAL
11	L	57	GLY
15	P	15	VAL
16	Q	13	THR

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Mol	Chain	Res	Type
21	V	11	VAL
21	V	72	GLY
4	E	26	PRO
5	F	39	ILE
6	G	148	VAL
9	J	50	ILE
10	K	80	ILE
13	N	40	ILE
22	W	100	ILE
5	F	108	ASN
5	F	114	PRO
9	J	81	GLY
13	N	121	PRO
22	W	41	ILE
5	F	109	PRO
6	G	128	VAL
14	O	103	GLY
16	Q	14	PRO
16	Q	56	VAL

### 5.3.2 Protein sidechains ⓘ

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	E	202/220 (92%)	142 (70%)	60 (30%)	0	5
5	F	160/188 (85%)	122 (76%)	38 (24%)	1	9
6	G	180/181 (99%)	130 (72%)	50 (28%)	0	6
7	H	115/123 (94%)	70 (61%)	45 (39%)	0	1
8	I	90/90 (100%)	59 (66%)	31 (34%)	0	3
9	J	126/127 (99%)	97 (77%)	29 (23%)	1	10
10	K	119/119 (100%)	76 (64%)	43 (36%)	0	2
11	L	98/99 (99%)	74 (76%)	24 (24%)	1	9
12	M	88/92 (96%)	61 (69%)	27 (31%)	0	5
13	N	90/99 (91%)	70 (78%)	20 (22%)	1	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
14	O	104/109 (95%)	79 (76%)	25 (24%)	1	9
15	P	100/101 (99%)	73 (73%)	27 (27%)	1	6
16	Q	49/50 (98%)	36 (74%)	13 (26%)	1	7
17	R	79/80 (99%)	56 (71%)	23 (29%)	0	5
18	S	72/74 (97%)	45 (62%)	27 (38%)	0	1
19	T	96/97 (99%)	69 (72%)	27 (28%)	0	5
20	U	64/77 (83%)	50 (78%)	14 (22%)	1	11
21	V	71/80 (89%)	57 (80%)	14 (20%)	2	15
22	W	76/82 (93%)	57 (75%)	19 (25%)	1	8
23	X	19/22 (86%)	16 (84%)	3 (16%)	4	27
All	All	1998/2110 (95%)	1439 (72%)	559 (28%)	0	6

All (559) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
4	E	11	LEU
4	E	12	GLU
4	E	15	VAL
4	E	17	PHE
4	E	19	HIS
4	E	20	GLU
4	E	21	ARG
4	E	23	ARG
4	E	24	TRP
4	E	25	ASN
4	E	28	PHE
4	E	30	ARG
4	E	33	TYR
4	E	36	ARG
4	E	44	LEU
4	E	48	MET
4	E	52	GLU
4	E	56	ARG
4	E	57	PHE
4	E	59	GLU
4	E	61	LEU
4	E	64	ARG
4	E	68	ILE

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Mol	Chain	Res	Type
4	E	75	LYS
4	E	80	ILE
4	E	84	GLU
4	E	92	TYR
4	E	96	ARG
4	E	101	MET
4	E	102	LEU
4	E	104	ASN
4	E	105	PHE
4	E	111	ARG
4	E	114	ARG
4	E	118	LEU
4	E	122	PHE
4	E	132	LYS
4	E	145	LEU
4	E	148	TYR
4	E	152	PHE
4	E	153	ARG
4	E	154	LEU
4	E	158	LEU
4	E	162	ILE
4	E	169	LYS
4	E	172	ILE
4	E	181	PHE
4	E	187	LEU
4	E	190	THR
4	E	193	ASP
4	E	194	PRO
4	E	195	ASP
4	E	196	LEU
4	E	198	ASP
4	E	202	PRO
4	E	204	ASN
4	E	208	ILE
4	E	209	ARG
4	E	212	GLN
4	E	217	ARG
5	F	5	ILE
5	F	10	PHE
5	F	11	ARG
5	F	16	ARG
5	F	29	TYR

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Mol	Chain	Res	Type
5	F	30	ARG
5	F	34	LEU
5	F	35	GLU
5	F	38	ARG
5	F	52	LEU
5	F	59	ARG
5	F	62	ASP
5	F	82	GLU
5	F	85	ARG
5	F	87	LEU
5	F	95	THR
5	F	97	LYS
5	F	106	VAL
5	F	107	GLN
5	F	110	ASN
5	F	111	LEU
5	F	128	PHE
5	F	136	GLN
5	F	139	GLN
5	F	142	MET
5	F	153	VAL
5	F	162	GLN
5	F	165	THR
5	F	176	HIS
5	F	178	LEU
5	F	186	PHE
5	F	188	LEU
5	F	190	ARG
5	F	193	TYR
5	F	196	LEU
5	F	198	VAL
5	F	201	TYR
5	F	204	LEU
6	G	3	ARG
6	G	9	CYS
6	G	13	ARG
6	G	15	GLU
6	G	20	TYR
6	G	25	ARG
6	G	26	CYS
6	G	27	TYR
6	G	29	PRO

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Mol	Chain	Res	Type
6	G	31	CYS
6	G	33	MET
6	G	34	GLU
6	G	35	ARG
6	G	47	ARG
6	G	51	PRO
6	G	53	ASP
6	G	58	LEU
6	G	59	ARG
6	G	61	LYS
6	G	62	GLN
6	G	63	LYS
6	G	64	LEU
6	G	68	TYR
6	G	83	SER
6	G	101	LEU
6	G	104	VAL
6	G	106	TYR
6	G	114	ARG
6	G	126	ILE
6	G	131	ARG
6	G	138	TYR
6	G	141	ARG
6	G	142	PRO
6	G	146	ILE
6	G	154	ASN
6	G	162	LEU
6	G	165	MET
6	G	168	ARG
6	G	175	SER
6	G	176	LEU
6	G	177	ASP
6	G	181	MET
6	G	182	LYS
6	G	190	ASP
6	G	191	ARG
6	G	193	ASP
6	G	196	LEU
6	G	198	VAL
6	G	202	LEU
6	G	209	ARG
7	H	8	GLU

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Mol	Chain	Res	Type
7	H	10	MET
7	H	12	LEU
7	H	13	ILE
7	H	15	ARG
7	H	16	THR
7	H	19	MET
7	H	20	GLN
7	H	25	ARG
7	H	26	PHE
7	H	27	ARG
7	H	28	PHE
7	H	31	LEU
7	H	41	VAL
7	H	43	LEU
7	H	45	PHE
7	H	53	LEU
7	H	56	GLN
7	H	60	TYR
7	H	63	ARG
7	H	73	ASN
7	H	75	THR
7	H	78	HIS
7	H	79	GLU
7	H	80	ILE
7	H	81	GLU
7	H	89	ILE
7	H	90	VAL
7	H	101	ILE
7	H	106	PRO
7	H	109	ILE
7	H	112	LEU
7	H	117	ASP
7	H	119	LEU
7	H	120	THR
7	H	121	LYS
7	H	128	PRO
7	H	131	ILE
7	H	133	TYR
7	H	135	THR
7	H	141	GLN
7	H	142	LEU
7	H	143	ARG

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Mol	Chain	Res	Type
7	H	150	ARG
7	H	152	ARG
8	I	4	TYR
8	I	5	GLU
8	I	7	ASN
8	I	8	ILE
8	I	10	LEU
8	I	13	ASN
8	I	14	LEU
8	I	27	GLN
8	I	28	ARG
8	I	36	ARG
8	I	38	GLU
8	I	40	VAL
8	I	42	GLU
8	I	48	LEU
8	I	50	TYR
8	I	54	LYS
8	I	55	ASP
8	I	57	GLN
8	I	64	GLN
8	I	67	MET
8	I	69	GLU
8	I	73	ASN
8	I	74	ASP
8	I	79	LEU
8	I	80	ARG
8	I	83	ASP
8	I	86	ARG
8	I	88	VAL
8	I	94	GLN
8	I	95	GLU
8	I	98	LEU
9	J	5	ARG
9	J	6	ARG
9	J	10	ARG
9	J	12	LEU
9	J	14	PRO
9	J	16	LEU
9	J	18	TYR
9	J	28	ASN
9	J	33	ASP

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Mol	Chain	Res	Type
9	J	36	LYS
9	J	52	GLU
9	J	56	GLN
9	J	72	ARG
9	J	76	ARG
9	J	77	SER
9	J	85	TYR
9	J	89	MET
9	J	90	GLU
9	J	103	TRP
9	J	106	GLN
9	J	113	GLU
9	J	125	MET
9	J	129	GLU
9	J	136	LYS
9	J	139	GLU
9	J	143	ARG
9	J	146	GLU
9	J	149	ARG
9	J	155	ARG
10	K	3	THR
10	K	4	ASP
10	K	6	ILE
10	K	14	ARG
10	K	18	ARG
10	K	19	VAL
10	K	23	SER
10	K	24	THR
10	K	25	ASP
10	K	26	VAL
10	K	32	LYS
10	K	33	GLU
10	K	35	ILE
10	K	36	LEU
10	K	37	ARG
10	K	38	ILE
10	K	39	LEU
10	K	41	ARG
10	K	45	ILE
10	K	48	TYR
10	K	49	GLU
10	K	52	ASP

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Mol	Chain	Res	Type
10	K	57	PRO
10	K	58	TYR
10	K	62	TYR
10	K	63	LEU
10	K	65	TYR
10	K	76	PRO
10	K	84	ARG
10	K	92	ARG
10	K	98	LYS
10	K	103	VAL
10	K	104	ARG
10	K	107	LEU
10	K	109	ILE
10	K	111	ILE
10	K	112	LEU
10	K	119	LEU
10	K	122	ARG
10	K	123	GLU
10	K	126	LYS
10	K	135	CYS
10	K	136	GLU
11	L	12	GLU
11	L	17	VAL
11	L	19	LEU
11	L	21	PRO
11	L	23	ASN
11	L	31	GLN
11	L	32	ASP
11	L	33	PHE
11	L	37	PHE
11	L	44	VAL
11	L	48	GLU
11	L	60	ASP
11	L	63	ILE
11	L	75	ASP
11	L	78	LYS
11	L	79	LEU
11	L	91	ASP
11	L	102	LEU
11	L	105	ASP
11	L	110	GLU
11	L	113	LYS

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Mol	Chain	Res	Type
11	L	116	LYS
11	L	117	HIS
11	L	126	SER
12	M	3	LYS
12	M	4	ILE
12	M	5	ARG
12	M	8	LEU
12	M	9	ARG
12	M	11	PHE
12	M	14	LYS
12	M	21	GLN
12	M	23	ILE
12	M	33	GLN
12	M	45	ARG
12	M	47	PHE
12	M	58	ASP
12	M	60	ARG
12	M	62	HIS
12	M	63	PHE
12	M	64	GLU
12	M	65	LEU
12	M	70	ARG
12	M	73	ASP
12	M	78	ASN
12	M	79	ARG
12	M	81	THR
12	M	85	LEU
12	M	95	GLU
12	M	99	LYS
12	M	100	THR
13	N	12	ARG
13	N	13	GLN
13	N	22	HIS
13	N	24	SER
13	N	40	ILE
13	N	47	VAL
13	N	50	TYR
13	N	51	LYS
13	N	62	GLN
13	N	67	ASP
13	N	75	TYR
13	N	78	GLN

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Mol	Chain	Res	Type
13	N	80	VAL
13	N	81	ASP
13	N	87	THR
13	N	104	GLN
13	N	107	SER
13	N	116	HIS
13	N	125	PHE
13	N	126	ARG
14	O	12	ARG
14	O	18	VAL
14	O	32	PHE
14	O	33	ARG
14	O	38	THR
14	O	41	ARG
14	O	47	LYS
14	O	48	PRO
14	O	52	LEU
14	O	53	ARG
14	O	60	LEU
14	O	61	THR
14	O	64	TYR
14	O	65	GLU
14	O	66	VAL
14	O	75	HIS
14	O	76	ASN
14	O	92	ASP
14	O	93	LEU
14	O	100	ILE
14	O	101	VAL
14	O	102	ARG
14	O	110	VAL
14	O	113	ARG
14	O	126	LYS
15	P	9	ILE
15	P	11	ARG
15	P	16	ASP
15	P	25	ILE
15	P	40	ASN
15	P	47	ASP
15	P	48	LEU
15	P	55	ARG
15	P	61	GLU

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Mol	Chain	Res	Type
15	P	63	THR
15	P	64	TRP
15	P	66	LEU
15	P	70	LEU
15	P	73	GLU
15	P	77	ASN
15	P	80	ARG
15	P	81	LEU
15	P	86	CYS
15	P	87	TYR
15	P	88	ARG
15	P	96	LEU
15	P	101	GLN
15	P	108	ARG
15	P	110	ARG
15	P	117	VAL
15	P	121	LYS
15	P	124	PRO
16	Q	22	THR
16	Q	24	CYS
16	Q	25	VAL
16	Q	26	ARG
16	Q	29	ARG
16	Q	34	TYR
16	Q	36	PHE
16	Q	40	CYS
16	Q	43	CYS
16	Q	44	LEU
16	Q	45	ARG
16	Q	56	VAL
16	Q	61	TRP
17	R	3	ILE
17	R	4	THR
17	R	5	LYS
17	R	10	LYS
17	R	14	GLU
17	R	19	PRO
17	R	26	GLU
17	R	32	LEU
17	R	33	THR
17	R	34	LEU
17	R	36	ILE

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Mol	Chain	Res	Type
17	R	39	LEU
17	R	41	GLU
17	R	42	HIS
17	R	54	ARG
17	R	57	LEU
17	R	59	MET
17	R	63	ARG
17	R	64	ARG
17	R	70	LEU
17	R	73	GLU
17	R	77	ARG
17	R	78	TYR
18	S	3	LYS
18	S	4	ILE
18	S	6	LEU
18	S	14	ASN
18	S	15	PRO
18	S	17	TYR
18	S	21	VAL
18	S	22	THR
18	S	26	ARG
18	S	27	LYS
18	S	32	TYR
18	S	34	GLU
18	S	36	ILE
18	S	38	TYR
18	S	39	TYR
18	S	40	ASP
18	S	47	ASP
18	S	48	TRP
18	S	54	GLU
18	S	55	ARG
18	S	58	TYR
18	S	62	VAL
18	S	66	PRO
18	S	69	THR
18	S	72	ARG
18	S	74	LEU
18	S	80	PHE
19	T	6	LEU
19	T	11	VAL
19	T	20	THR

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Mol	Chain	Res	Type
19	T	21	VAL
19	T	27	PHE
19	T	31	LEU
19	T	35	VAL
19	T	36	ILE
19	T	38	ARG
19	T	40	LYS
19	T	45	HIS
19	T	48	GLU
19	T	51	TYR
19	T	55	ASP
19	T	58	GLU
19	T	59	ILE
19	T	60	ILE
19	T	62	SER
19	T	65	ILE
19	T	77	VAL
19	T	84	LEU
19	T	86	GLU
19	T	91	ARG
19	T	92	ARG
19	T	93	GLN
19	T	95	TYR
19	T	101	ARG
20	U	22	VAL
20	U	28	GLU
20	U	43	PHE
20	U	49	LYS
20	U	53	ARG
20	U	55	ARG
20	U	62	GLU
20	U	63	GLN
20	U	72	ARG
20	U	74	ARG
20	U	76	LEU
20	U	79	LEU
20	U	81	PHE
20	U	83	GLU
21	V	7	LYS
21	V	12	ASP
21	V	15	LEU
21	V	16	LEU

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Mol	Chain	Res	Type
21	V	17	GLU
21	V	18	LYS
21	V	25	LYS
21	V	29	ARG
21	V	31	ILE
21	V	36	ARG
21	V	41	VAL
21	V	42	PRO
21	V	43	GLU
21	V	61	TYR
22	W	13	LEU
22	W	18	GLN
22	W	19	SER
22	W	23	ARG
22	W	25	ARG
22	W	26	ASN
22	W	42	GLN
22	W	45	GLN
22	W	53	LEU
22	W	56	MET
22	W	71	THR
22	W	73	HIS
22	W	75	ASN
22	W	79	ARG
22	W	83	ARG
22	W	84	LEU
22	W	85	MET
22	W	87	LYS
22	W	91	LEU
23	X	8	THR
23	X	9	ARG
23	X	10	ARG

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (83) such sidechains are listed below:

Mol	Chain	Res	Type
4	E	25	ASN
4	E	37	ASN
4	E	40	HIS
4	E	78	GLN
4	E	94	ASN
4	E	146	GLN

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Mol	Chain	Res	Type
4	E	204	ASN
4	E	212	GLN
4	E	224	GLN
4	E	240	GLN
5	F	28	GLN
5	F	108	ASN
5	F	136	GLN
5	F	139	GLN
5	F	170	GLN
6	G	62	GLN
6	G	77	ASN
6	G	119	GLN
6	G	154	ASN
6	G	161	ASN
6	G	201	GLN
7	H	20	GLN
7	H	56	GLN
7	H	65	ASN
7	H	72	GLN
7	H	73	ASN
8	I	7	ASN
8	I	13	ASN
8	I	18	GLN
8	I	32	ASN
8	I	57	GLN
8	I	64	GLN
8	I	94	GLN
9	J	11	GLN
9	J	56	GLN
9	J	68	ASN
9	J	86	GLN
9	J	96	GLN
9	J	97	GLN
9	J	106	GLN
9	J	109	ASN
9	J	110	GLN
9	J	153	HIS
10	K	15	ASN
10	K	81	HIS
11	L	3	GLN
11	L	23	ASN
11	L	58	HIS

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Mol	Chain	Res	Type
11	L	73	GLN
11	L	87	GLN
11	L	89	ASN
11	L	117	HIS
11	L	124	GLN
12	M	56	HIS
12	M	68	HIS
12	M	76	ASN
12	M	78	ASN
13	N	26	ASN
13	N	38	ASN
13	N	78	GLN
13	N	104	GLN
13	N	117	ASN
14	O	9	GLN
14	O	49	ASN
14	O	99	HIS
15	P	12	ASN
15	P	92	HIS
17	R	9	GLN
17	R	13	GLN
17	R	37	ASN
17	R	42	HIS
17	R	46	HIS
17	R	62	GLN
18	S	16	HIS
18	S	82	GLN
19	T	16	GLN
19	T	93	GLN
21	V	14	HIS
21	V	23	ASN
21	V	56	GLN
22	W	26	ASN
22	W	42	GLN
22	W	75	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1515/1522 (99%)	430 (28%)	157 (10%)
2	C	75/77 (97%)	29 (38%)	6 (8%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
3	D	75/76 (98%)	27 (36%)	4 (5%)
All	All	1665/1675 (99%)	486 (29%)	167 (10%)

All (486) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	6	G
1	A	8	A
1	A	9	G
1	A	13	U
1	A	14	U
1	A	19	C
1	A	30	U
1	A	31	G
1	A	32	A
1	A	39	G
1	A	48	C
1	A	50	A
1	A	51	A
1	A	52	G
1	A	54	C
1	A	61	G
1	A	62	U
1	A	64	G
1	A	65	U
1	A	66	G
1	A	78	G
1	A	81	G
1	A	82	U
1	A	87	A
1	A	89	U
1	A	101	A
1	A	109	A
1	A	110	C
1	A	116	A
1	A	120	A
1	A	121	C
1	A	122	G
1	A	124	G
1	A	130	A
1	A	131	C
1	A	133	U

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Mol	Chain	Res	Type
1	A	182	U
1	A	188	U
1	A	189	U
1	A	191(A)	G
1	A	193	C
1	A	195	A
1	A	196	A
1	A	197	A
1	A	198	G
1	A	209	U
1	A	210	U
1	A	216	G
1	A	236	G
1	A	244	U
1	A	245	C
1	A	247	G
1	A	251	G
1	A	252	U
1	A	253	U
1	A	259	G
1	A	260	G
1	A	264	U
1	A	265	G
1	A	266	G
1	A	267	C
1	A	275	G
1	A	279	A
1	A	280	C
1	A	281	G
1	A	282	A
1	A	289	G
1	A	293	G
1	A	306	G
1	A	308	C
1	A	309	G
1	A	315	A
1	A	316	G
1	A	324	G
1	A	328	C
1	A	329	A
1	A	330	C
1	A	332	G

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Mol	Chain	Res	Type
1	A	345	C
1	A	346	G
1	A	348	G
1	A	349	A
1	A	352	C
1	A	353	A
1	A	355	C
1	A	356	A
1	A	367	U
1	A	368	U
1	A	372	C
1	A	373	A
1	A	382	A
1	A	383	A
1	A	384	G
1	A	388	G
1	A	389	A
1	A	390	C
1	A	397	A
1	A	398	C
1	A	412	A
1	A	413	G
1	A	414	A
1	A	422	C
1	A	427	U
1	A	428	G
1	A	429	U
1	A	430	A
1	A	439	A
1	A	451	A
1	A	452	A
1	A	454	C
1	A	455	C
1	A	465	A
1	A	466	C
1	A	467	G
1	A	474	G
1	A	481	G
1	A	482	A
1	A	483	C
1	A	484	G
1	A	485	G

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Mol	Chain	Res	Type
1	A	486	U
1	A	487	A
1	A	494	U
1	A	495	A
1	A	496	A
1	A	497	U
1	A	500	G
1	A	505	G
1	A	508	C
1	A	509	A
1	A	511	C
1	A	517	G
1	A	518	C
1	A	519	C
1	A	520	A
1	A	521	G
1	A	527	G
1	A	531	U
1	A	532	A
1	A	533	A
1	A	534	U
1	A	535	A
1	A	536	C
1	A	540	G
1	A	545	C
1	A	548	G
1	A	553	A
1	A	554	C
1	A	555	C
1	A	559	A
1	A	560	U
1	A	561	U
1	A	562	C
1	A	563	A
1	A	566	G
1	A	567	G
1	A	571	U
1	A	572	A
1	A	573	A
1	A	575	G
1	A	576	G
1	A	589	C

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Mol	Chain	Res	Type
1	A	590	C
1	A	591	U
1	A	595	G
1	A	596	C
1	A	598	U
1	A	607	A
1	A	609	A
1	A	623	C
1	A	642	A
1	A	653	A
1	A	665	A
1	A	666	G
1	A	672	U
1	A	673	G
1	A	679	C
1	A	687	A
1	A	688	G
1	A	691	G
1	A	693	G
1	A	702	A
1	A	703	G
1	A	704	A
1	A	718	G
1	A	719	C
1	A	721	G
1	A	722	A
1	A	723	U
1	A	724	G
1	A	731	G
1	A	752	G
1	A	753	A
1	A	754	C
1	A	755	G
1	A	760	G
1	A	763	G
1	A	764	C
1	A	766	A
1	A	776	G
1	A	777	A
1	A	781	A
1	A	782	A
1	A	785	G

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Mol	Chain	Res	Type
1	A	788	U
1	A	790	A
1	A	791	G
1	A	793	U
1	A	794	A
1	A	801	U
1	A	813	U
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	820	U
1	A	821	G
1	A	823	G
1	A	828	A
1	A	838	G
1	A	841	U
1	A	842	C
1	A	843	U
1	A	848	C
1	A	865	A
1	A	870	U
1	A	871	U
1	A	872	A
1	A	873	A
1	A	874	G
1	A	877	C
1	A	884	U
1	A	885	G
1	A	889	A
1	A	890	G
1	A	891	U
1	A	902	G
1	A	906	G
1	A	913	A
1	A	914	A
1	A	919	A
1	A	927	G
1	A	932	C
1	A	934	C
1	A	935	A

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Mol	Chain	Res	Type
1	A	945	G
1	A	946	A
1	A	950	U
1	A	956	U
1	A	958	A
1	A	960	U
1	A	961	U
1	A	965	A
1	A	966	G
1	A	967	C
1	A	968	A
1	A	969	A
1	A	971	G
1	A	974	A
1	A	975	A
1	A	976	G
1	A	977	A
1	A	980	C
1	A	982	U
1	A	983	A
1	A	991	U
1	A	993	G
1	A	994	A
1	A	995	C
1	A	997	U
1	A	1002	G
1	A	1003	G
1	A	1004	A
1	A	1005	A
1	A	1006	C
1	A	1023	G
1	A	1024	G
1	A	1026	G
1	A	1027	C
1	A	1029	G
1	A	1048	G
1	A	1050	G
1	A	1054	C
1	A	1056	U
1	A	1064	G
1	A	1065	U
1	A	1066	C

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Mol	Chain	Res	Type
1	A	1068	G
1	A	1080	A
1	A	1081	G
1	A	1085	U
1	A	1086	U
1	A	1094	G
1	A	1096	C
1	A	1099	G
1	A	1100	C
1	A	1101	A
1	A	1102	A
1	A	1103	C
1	A	1107	C
1	A	1123	A
1	A	1125	U
1	A	1126	U
1	A	1129	C
1	A	1130	A
1	A	1131	G
1	A	1135	U
1	A	1136	U
1	A	1138	G
1	A	1139	G
1	A	1140	C
1	A	1145	C
1	A	1146	A
1	A	1148	U
1	A	1151	A
1	A	1152	A
1	A	1158	C
1	A	1159	U
1	A	1160	G
1	A	1161	C
1	A	1177	G
1	A	1182	G
1	A	1183	A
1	A	1184	G
1	A	1185	G
1	A	1188	A
1	A	1189	C
1	A	1190	G
1	A	1191	A

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Mol	Chain	Res	Type
1	A	1196	U
1	A	1197	G
1	A	1200	C
1	A	1201	A
1	A	1202	G
1	A	1211	U
1	A	1212	U
1	A	1213	A
1	A	1215	G
1	A	1220	G
1	A	1225	A
1	A	1226	C
1	A	1227	A
1	A	1240	U
1	A	1241	G
1	A	1249	C
1	A	1256	A
1	A	1257	U
1	A	1258	G
1	A	1269	A
1	A	1270	C
1	A	1271	G
1	A	1278	U
1	A	1279	A
1	A	1280	A
1	A	1281	U
1	A	1282	C
1	A	1285	A
1	A	1286	A
1	A	1287	A
1	A	1289	A
1	A	1292	U
1	A	1296	C
1	A	1297	C
1	A	1298	C
1	A	1299	A
1	A	1301	U
1	A	1302	U
1	A	1303	C
1	A	1305	G
1	A	1317	C
1	A	1319	A

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Mol	Chain	Res	Type
1	A	1320	C
1	A	1321	C
1	A	1322	C
1	A	1323	G
1	A	1331	G
1	A	1333	A
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1348	U
1	A	1354	C
1	A	1362(A)	C
1	A	1363	A
1	A	1364	U
1	A	1365	G
1	A	1378	C
1	A	1379	G
1	A	1381	U
1	A	1395	C
1	A	1397	C
1	A	1398	A
1	A	1400	C
1	A	1401	G
1	A	1404	C
1	A	1419	G
1	A	1431	C
1	A	1435	G
1	A	1437	C
1	A	1440	C
1	A	1442	G
1	A	1443	G
1	A	1446	A
1	A	1447	G
1	A	1449	C
1	A	1450	U
1	A	1454	G
1	A	1467	G
1	A	1468	A
1	A	1469	G
1	A	1484	C
1	A	1490	C
1	A	1493	A

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Mol	Chain	Res	Type
1	A	1495	U
1	A	1498	U
1	A	1503	A
1	A	1504	G
1	A	1505	G
1	A	1506	U
1	A	1507	A
1	A	1517	G
1	A	1518	A
1	A	1520	G
1	A	1529	G
1	A	1530	G
1	A	1532	U
1	A	1533	C
1	A	1534	A
1	A	1535	C
2	C	8	U
2	C	9	G
2	C	10	G
2	C	15	G
2	C	17	C
2	C	18	G
2	C	20	U
2	C	21	A
2	C	22	G
2	C	28	C
2	C	32	C
2	C	35	A
2	C	36	U
2	C	39	C
2	C	41	C
2	C	43	A
2	C	46	G
2	C	47	U
2	C	48	C
2	C	49	G
2	C	50	U
2	C	58	A
2	C	59	A
2	C	60	U
2	C	61	C
2	C	63	G

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Mol	Chain	Res	Type
2	C	74	C
2	C	75	C
2	C	76	A
3	D	10	G
3	D	13	C
3	D	15	G
3	D	16	U
3	D	17	U
3	D	18	G
3	D	27	U
3	D	34	G
3	D	35	A
3	D	36	A
3	D	37	A
3	D	40	C
3	D	41	G
3	D	42	C
3	D	43	A
3	D	46	G
3	D	48	C
3	D	49	G
3	D	52	G
3	D	53	G
3	D	58	A
3	D	59	U
3	D	60	U
3	D	61	C
3	D	66	C
3	D	74	C
3	D	76	A

All (167) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	5	U
1	A	7	G
1	A	8	A
1	A	13	U
1	A	30	U
1	A	31	G
1	A	47	C
1	A	50	A

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Mol	Chain	Res	Type
1	A	51	A
1	A	60	A
1	A	64	G
1	A	88	C
1	A	99	C
1	A	109	A
1	A	115	G
1	A	119	A
1	A	121	C
1	A	129(A)	G
1	A	156	G
1	A	190	G
1	A	197	A
1	A	208	U
1	A	210	U
1	A	243	A
1	A	244	U
1	A	246	A
1	A	250	A
1	A	251	G
1	A	266	G
1	A	274	A
1	A	279	A
1	A	280	C
1	A	281	G
1	A	305	G
1	A	308	C
1	A	315	A
1	A	327	A
1	A	328	C
1	A	329	A
1	A	344	A
1	A	345	C
1	A	351	G
1	A	366	C
1	A	367	U
1	A	372	C
1	A	388	G
1	A	422	C
1	A	428	G
1	A	429	U
1	A	451	A

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Mol	Chain	Res	Type
1	A	484	G
1	A	495	A
1	A	496	A
1	A	498	A
1	A	508	C
1	A	517	G
1	A	518	C
1	A	531	U
1	A	533	A
1	A	535	A
1	A	547	A
1	A	559	A
1	A	560	U
1	A	563	A
1	A	566	G
1	A	571	U
1	A	575	G
1	A	576	G
1	A	622	A
1	A	652	U
1	A	653	A
1	A	686	U
1	A	687	A
1	A	701	C
1	A	702	A
1	A	703	G
1	A	717	C
1	A	721	G
1	A	723	U
1	A	752	G
1	A	753	A
1	A	754	C
1	A	792	A
1	A	793	U
1	A	812	C
1	A	815	A
1	A	816	A
1	A	817	C
1	A	818	G
1	A	819	A
1	A	843	U
1	A	870	U

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Mol	Chain	Res	Type
1	A	871	U
1	A	872	A
1	A	873	A
1	A	889	A
1	A	890	G
1	A	913	A
1	A	945	G
1	A	960	U
1	A	965	A
1	A	968	A
1	A	974	A
1	A	975	A
1	A	982	U
1	A	983	A
1	A	992	U
1	A	993	G
1	A	1004	A
1	A	1049	U
1	A	1055	A
1	A	1065	U
1	A	1067	A
1	A	1085	U
1	A	1100	C
1	A	1101	A
1	A	1129	C
1	A	1145	C
1	A	1151	A
1	A	1159	U
1	A	1182	G
1	A	1183	A
1	A	1196	U
1	A	1201	A
1	A	1212	U
1	A	1214	C
1	A	1224	G
1	A	1226	C
1	A	1240	U
1	A	1257	U
1	A	1279	A
1	A	1280	A
1	A	1285	A
1	A	1297	C

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Mol	Chain	Res	Type
1	A	1298	C
1	A	1300	G
1	A	1302	U
1	A	1322	C
1	A	1345	U
1	A	1346	A
1	A	1347	G
1	A	1363	A
1	A	1377	A
1	A	1380	U
1	A	1394	A
1	A	1396	A
1	A	1399	C
1	A	1400	C
1	A	1446	A
1	A	1502	A
1	A	1504	G
1	A	1505	G
1	A	1528	U
1	A	1529	G
1	A	1532	U
1	A	1533	C
1	A	1534	A
2	C	7	G
2	C	9	G
2	C	19	G
2	C	58	A
2	C	60	U
2	C	73	A
3	D	16	U
3	D	35	A
3	D	58	A
3	D	73	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 ⓘ

There are no ligands in this entry.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

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

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

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

### 6.3 Carbohydrates ⓘ

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

### 6.4 Ligands ⓘ

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

### 6.5 Other polymers ⓘ

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