



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 12, 2026 – 02:21 AM UTC

PDB ID : 4V4A / pdb_00004v4a
Title : Crystal Structure of the Wild Type Ribosome from E. Coli 70S Ribosome.
Authors : Vila-Sanjurjo, A.; Ridgeway, W.K.; Seymaner, V.; Zhang, W.; Santoso, S.; Yu, K.; Cate, J.H.D.
Deposited on : 2003-06-13
Resolution : 9.50 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

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

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

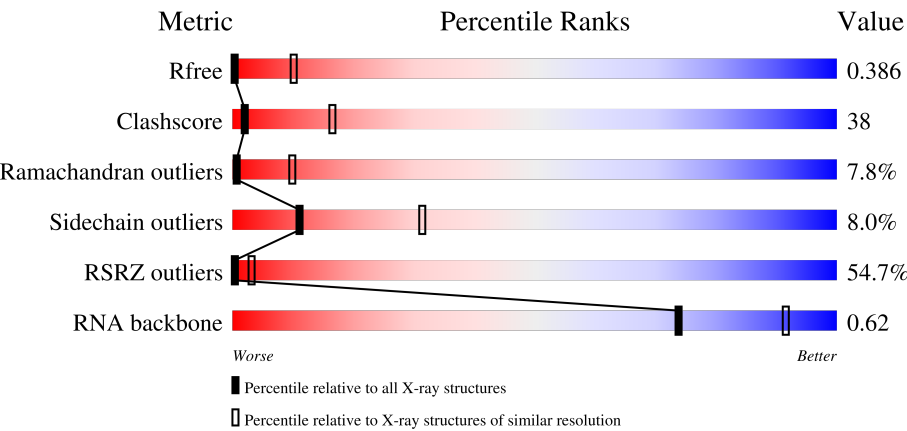
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 9.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R _{free}	180053	1168 (11.50-4.00)
Clashscore	190562	1001 (11.50-4.06)
Ramachandran outliers	187476	1055 (11.50-4.00)
Sidechain outliers	187428	1018 (11.50-4.00)
RSRZ outliers	180081	1162 (11.50-4.00)
RNA backbone	3983	1057 (11.50-3.10)

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 of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1537	25% 23% 57% 15% 5%
2	AB	234	29% 26% 56% 16% .
3	AC	206	53% 28% 51% 18% .
4	AD	208	53% 34% 56% 10%

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Mol	Chain	Length	Quality of chain
5	AE	150	
6	AF	101	
7	AG	155	
8	AH	138	
9	AI	127	
10	AJ	98	
11	AK	119	
12	AL	124	
13	AM	125	
14	AN	60	
15	AO	88	
16	AP	83	
17	AQ	104	
18	AR	73	
19	AS	80	
20	AT	99	
21	B0	2887	
22	B9	118	
23	BA	270	
24	BB	205	
25	BC	197	
26	BD	178	
27	BE	177	
28	BF	52	
29	BG	143	

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Mol	Chain	Length	Quality of chain
30	BH	143	92%
31	BI	132	96% 99%
32	BJ	141	79% 99%
33	BK	124	97% 100%
34	BL	114	97% 99%
35	BM	111	98% 100%
36	BN	125	94% 100%
37	BO	117	75% 100%
38	BP	100	64% 100%
39	BQ	130	92% 100%
40	BR	93	90% 100%
41	BS	113	99% 100%
42	BT	173	91% 100%
43	BU	86	92% 100%
44	BV	16	100%
45	BW	65	94% 100%
46	BX	55	89% 100%
47	BY	73	85% 100%
48	BZ	58	91% 100%
49	B1	53	98% 100%
50	B2	46	74% 100%
51	B3	63	51% 100%
52	B4	35	86% 100%
53	B5	217	90% 96%

2 Entry composition

There are 53 unique types of molecules in this entry. The entry contains 118711 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 16S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1533	Total	C	N	O	P	0	0	0
			32939	14664	6099	10643	1533			

- Molecule 2 is a protein called 30S ribosomal protein S2.

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

- Molecule 3 is a protein called 30S ribosomal protein S3.

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

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	208	Total	C	N	O	S	0	0	0
			1702	1066	339	290	7			

- Molecule 5 is a protein called 30S ribosomal protein S5.

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

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	101	Total	C	N	O	S	0	0	0
			842	531	155	153	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	155	Total	C	N	O	S	0	0	0
			1256	781	252	217	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	138	Total	C	N	O	S	0	0	0
			1115	705	215	192	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	S	0	0	0
			1010	639	198	173				

- Molecule 10 is a protein called 30S ribosomal protein S10.

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

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	119	Total	C	N	O	S	0	0	0
			884	549	168	164	3			

- Molecule 12 is a protein called 30S ribosomal protein S12.

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

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	125	Total	C	N	O	S	0	0	0
			996	617	207	170	2			

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	60	Total	C	N	O	S	0	0	0
			491	312	104	71	4			

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AO	88	Total	C	N	O	S	0	0	0
			733	459	147	125	2			

- Molecule 16 is a protein called 30S ribosomal protein S16.

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

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	104	Total	C	N	O	S	0	0	0
			856	547	161	146	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	AR	73	Total	C	N	O	0	0	0
			596	380	118	98			

- Molecule 19 is a protein called 30S ribosomal protein S19.

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

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	99	Total	C	N	O	S	0	0	0
			762	469	162	129	2			

- Molecule 21 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	B0	2825	Total	C	N	O	P	0	0	0
			60636	27047	11191	19573	2825			

- Molecule 22 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	B9	118	Total	C	N	O	P	0	0	0
			2519	1124	464	813	118			

- Molecule 23 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
23	BA	270	Total	C	0	0	270
			270	270			

- Molecule 24 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
24	BB	205	Total	C	0	0	205
			205	205			

- Molecule 25 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
25	BC	197	Total	C	0	0	197
			197	197			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
26	BD	178	Total	C	0	0	178
			178	178			

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
27	BE	177	Total	C	0	0	177
			177	177			

- Molecule 28 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	BF	52	Total C 52 52	0	0	52

- Molecule 29 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	BG	143	Total C 143 143	0	0	143

- Molecule 30 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	BH	143	Total C 143 143	0	0	143

- Molecule 31 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	BI	132	Total C 132 132	0	0	132

- Molecule 32 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
32	BJ	141	Total C 141 141	0	0	141

- Molecule 33 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
33	BK	124	Total C 124 124	0	0	124

- Molecule 34 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
34	BL	114	Total C 114 114	0	0	114

- Molecule 35 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
35	BM	111	Total	C	0	0	111
			111	111			

- Molecule 36 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
36	BN	125	Total	C	0	0	125
			125	125			

- Molecule 37 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
37	BO	117	Total	C	0	0	117
			117	117			

- Molecule 38 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
38	BP	100	Total	C	0	0	100
			100	100			

- Molecule 39 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
39	BQ	130	Total	C	0	0	130
			130	130			

- Molecule 40 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
40	BR	93	Total	C	0	0	93
			93	93			

- Molecule 41 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
41	BS	113	Total	C	0	0	113
			113	113			

- Molecule 42 is a protein called general stress protein Ctc.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
42	BT	173	Total C 173 173	0	0	173

- Molecule 43 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
43	BU	86	Total C 86 86	0	0	86

- Molecule 44 is a protein called 50S RIBOSOMAL PROTEIN L28.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
44	BV	16	Total C 16 16	0	0	16

- Molecule 45 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
45	BW	65	Total C 65 65	0	0	65

- Molecule 46 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
46	BX	55	Total C 55 55	0	0	55

- Molecule 47 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
47	BY	73	Total C 73 73	0	0	73

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
48	BZ	58	Total C 58 58	0	0	58

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
49	B1	53	Total C 53 53	0	0	53

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
50	B2	46	Total C 46 46	0	0	46

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
51	B3	63	Total C 63 63	0	0	63

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
52	B4	35	Total C 35 35	0	0	35

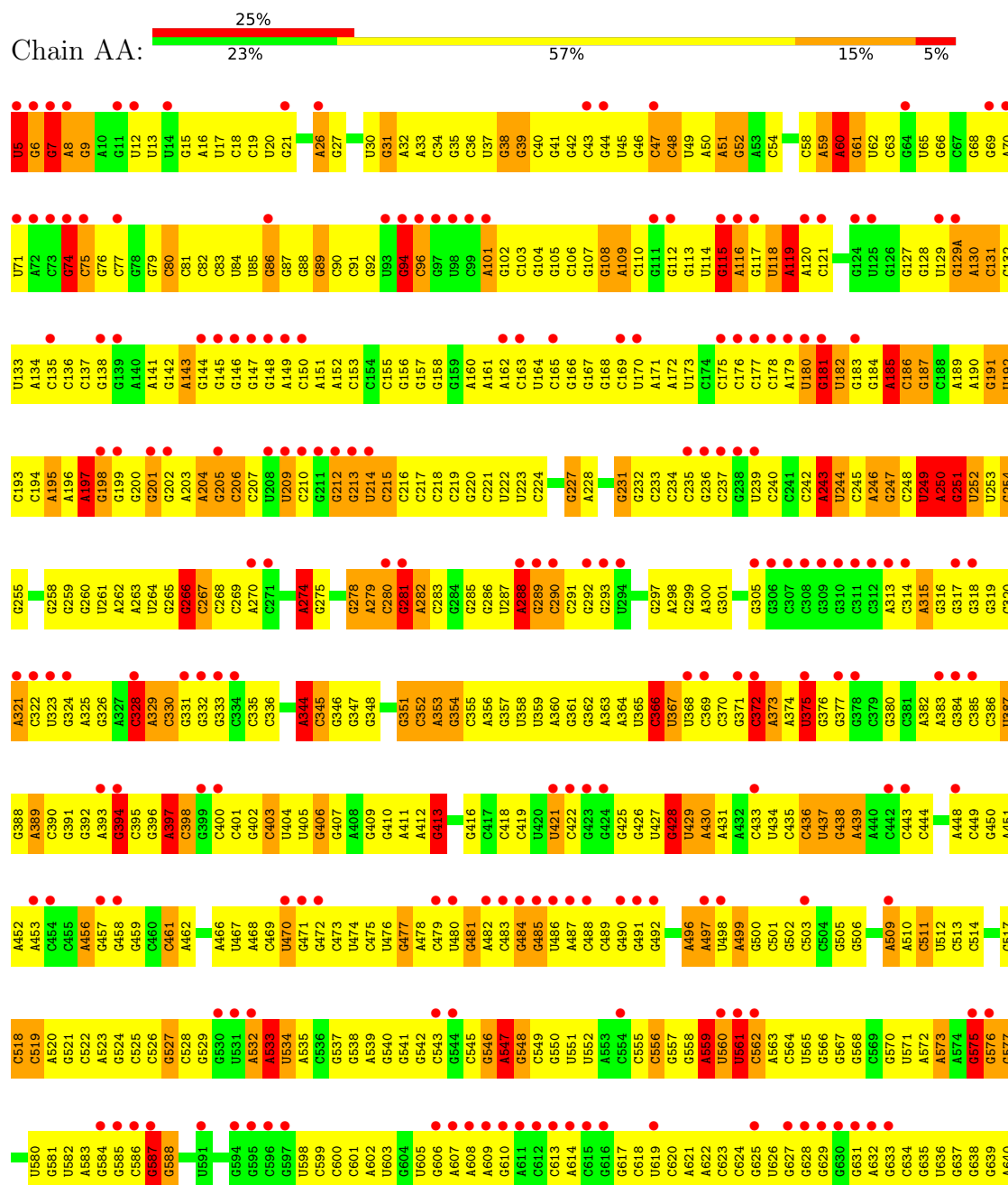
- Molecule 53 is a protein called 50S ribosomal protein L1P.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
53	B5	217	Total C 217 217	0	0	217

3 Residue-property plots

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

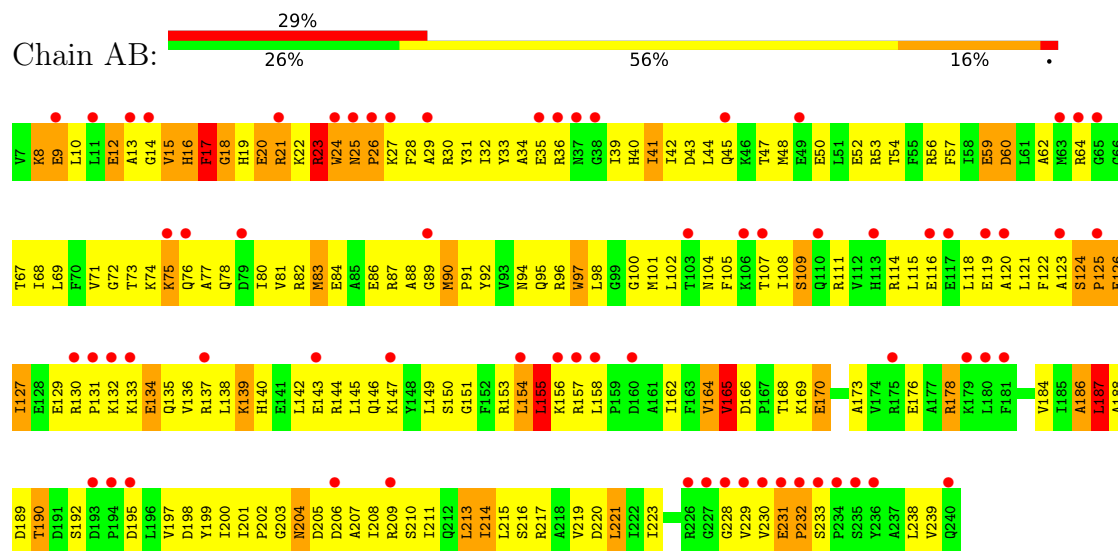
• Molecule 1: 16S RIBOSOMAL RNA



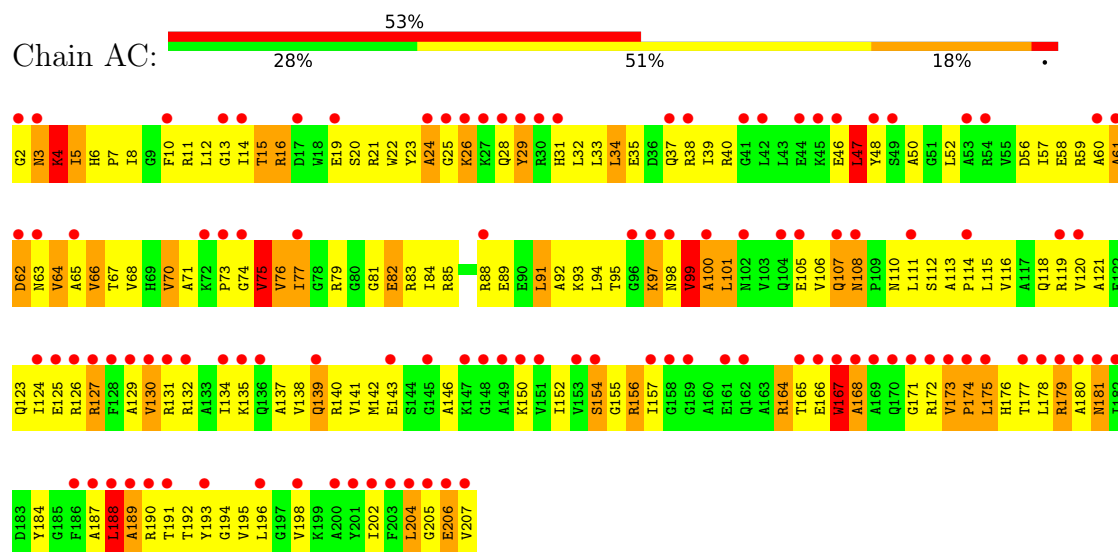
G1482	G1483	C1484	G1485	G1486	G1487	G1488	G1489	C1490	G1491	G1492	G1493	G1494	G1495	G1496	G1497	G1498	A1499	A1500	A1501	A1502	A1503	G1504	G1505	A1506	A1507	G1508	C1509	G1510	G1511	G1512	A1513	C1514	G1515	G1516	G1517	A1518	A1519	G1520	G1521	G1522	G1523	G1524	G1525	G1526	G1527	C1528	G1529	G1530	A1531	U1532	C1533	A1534	C	U	C	U1539	U1540	G1540	U1541
U1358	C1359	A1360	G1361	C361	C1362	A1363	U1364	G1365	A1366	C1367	G1368	G1369	G1370	G1371	A1372	G1373	A1374	A1375	U1376	A1377	U1380	U1381	C1382	C1383	C1384	G1385	U1388	C1389	U1390	G1391	C1392	G1393	A1394	C1395	A1396	C1397	A1398	C1399	G1400	G1401	A1402	C1403	C1404	G1405	U1406	C1407	A1408	C1409	G1410	C1411	C1412	U1413	U1414	C1477	C1478	C1479	G1480	U1481	
C1297	C1298	A1299	G1300	U1301	U1302	C1303	G1304	A1305	A1306	U1307	G1310	G1311	G1312	G1313	U1314	U1315	G1316	C1317	A1318	A1319	C1320	C1321	C1322	G1323	A1324	C1325	C1326	C1327	C1328	A1329	U1330	G1331	A1332	A1333	G1334	C1335	C1336	G1337	G1338	A1339	U1340	U1341	C1342	G1343	C1344	U1345	A1346	C1347	U1348	A1349	C1350	U1351	C1352	G1353	C1354	G1355	C1356	A1357	C1296
A1236	C1237	A1238	A1239	U1240	G1241	C1242	G1243	C1244	A1245	U1246	U1247	A1248	C1249	A1250	A1251	A1252	G1253	C1254	G1255	A1256	U1257	G1258	C1259	C1260	A1261	C1262	C1263	C1264	G1265	C1266	C1267	A1268	A1269	C1270	G1271	G1272	G1273	G1274	C1275	C1276	C1277	U1278	A1279	A1280	U1281	G1282	G1283	C1284	A1285	A1286	A1287	A1288	A1289	G1290	G1291	U1292	G1293	C1294	
G1173	G1174	G1175	A1176	G1177	G1178	A1179	A1180	G1181	G1182	A1183	G1184	G1185	A1188	C1189	G1190	A1191	C1192	G1193	U1194	C1195	U1196	G1197	G1198	U1199	C1200	A1201	C1202	G1203	A1204	U1205	G1206	G1207	U1211	U1212	A1213	C1214	G1215	G1216	C1217	C1218	U1219	G1220	G1221	G1222	C1223	G1224	A1225	C1226	A1227	C1228	A1229	C1230	G1231	U1232	G1233	C1234	U1235		
C1109	A1110	A1111	C1112	C1113	C1114	C1115	C1116	C1117	C1118	U1121	U1122	A1123	G1124	U1125	U1126	G1127	C1128	C1129	A1130	G1131	C1132	G1133	G1134	U1135	C1136	C1137	G1138	G1139	C1140	C1141	G1142	G1143	G1144	C1145	A1146	C1147	U1148	C1149	A1152	C1153	G1154	G1155	A1156	C1157	C1158	U1159	C1162	C1163	G1164	C1165	G1166	A1167	A1168	A1169	C1171	C1172			
A1046	G1047	G1048	U1049	G1050	C1051	U1052	G1053	C1054	U1055	U1056	G1057	C1058	C1059	C1060	G1061	U1062	G1063	U1064	U1065	A1066	C1067	G1068	G1069	U1070	C1071	G1072	U1073	G1074	G1077	U1078	G1079	A1080	G1081	G1082	U1083	U1086	G1087	U1090	U1091	A1092	A1093	G1094	U1095	C1096	C1097	C1098	G1099	C1100	A1101	A1102	C1103	U1104	G1105	G1106	C1107	G1108			
C985	C989	C990	U991	U992	G993	A994	C995	A996	U997	G998	C999	U1000	G1001	G1002	G1003	G2003	A1004	A1005	C1006	C1007	C1008	G1009	G1010	G1011	U1012	G1013	A1014	A1015	A1016	C1017	C1018	U1019	U1020	G1021	G1022	G1023	G1024	U1025	C1026	C1027	U1028	U1029	U1030	C1031	G1032	G1033	G1034	A1035	G1036	C1037	C1038	C1039	A1102	U1040	U1041	G1042	C1043	A983	C1045
A923	C924	G925	G926	G927	G928	G929	C930	C931	C932	C933	C934	A935	G939	C940	G941	G942	U943	G944	G945	A946	G947	C948	A949	U950	G951	C952	G953	G954	U955	U956	U957	A958	A959	U960	A961	C962	G963	A964	G965	G966	C967	A968	A969	C970	G971	C972	G973	A974	A975	G976	A977	A978	C979	U981	U982	A983	C984		
G852	G853	G854	G855	G858	A859	A860	G861	C862	C863	U864	A865	C866	G867	C868	G869	U870	U871	C872	A873	C874	G875	G876	C877	G878	C879	C882	C883	G884	G885	G890	C891	C892	C893	G894	G898	C899	A900	A901	G902	U905	A909	C910	U911	C912	A913	A914	A915	G916	A917	G917	C918	A919	U920	U921	G922				
C783	C784	U788	U789	A790	G791	A792	U793	A794	C795	U801	U804	C805	C806	A807	C808	G809	C810	C811	C812	U813	A814	A815	A816	C817	C818	A819	C883	U820	G821	C824	C825	C826	U827	A828	G829	C830	U831	C832	U833	C834	U835	C836	C837	C838	C841	U842	C843	A844	A845	C846	C847	C848	C849	U850	A780	U921	A782		
C717	G718	C719	U722	U723	U727	G730	C731	C732	C733	A734	C735	C736	A737	C738	G741	G742	U743	C744	C745	A746	C747	C748	C749	G750	U751	G752	A753	C754	G755	C756	U757	G758	A759	G760	G761	C762	G765	A766	A767	U768	G769	C770	U771	U772	G773	A774	G775	G776	A777	C778	C779	A780	A781	U782					
U641	A642	G643	G644	U645	U646	C647	A648	G649	G650	C651	U652	A653	G656	G657	G658	U659	G660	G661	G662	A663	C664	A665	G670	G671	U672	G673	G674	A675	A676	U677	C681	G682	G683	A684	G685	U686	A687	G688	C689	G690	G691	U692	A695	C701	A702	G703	U704	U705	A706	G713	G714	A715	A716						

U1542
C1543
U1544

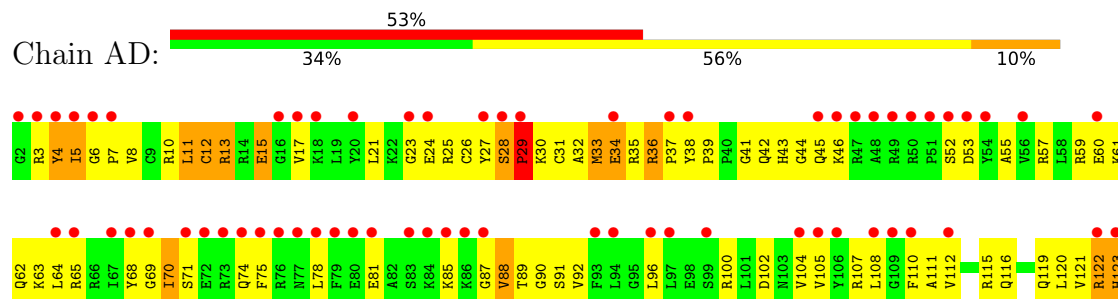
• Molecule 2: 30S ribosomal protein S2

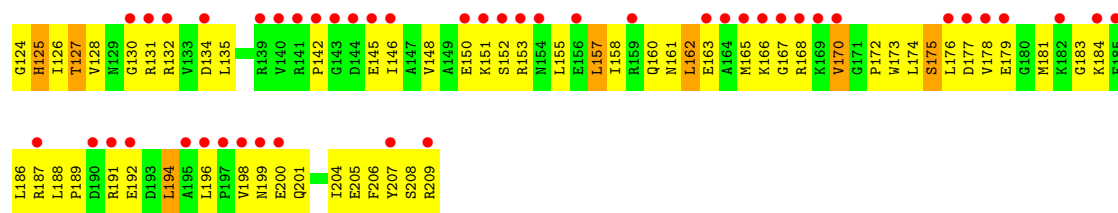


• Molecule 3: 30S ribosomal protein S3

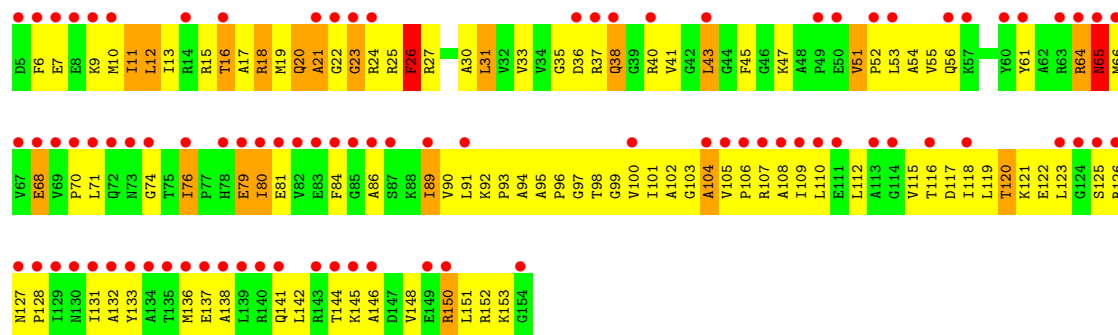


• Molecule 4: 30S ribosomal protein S4

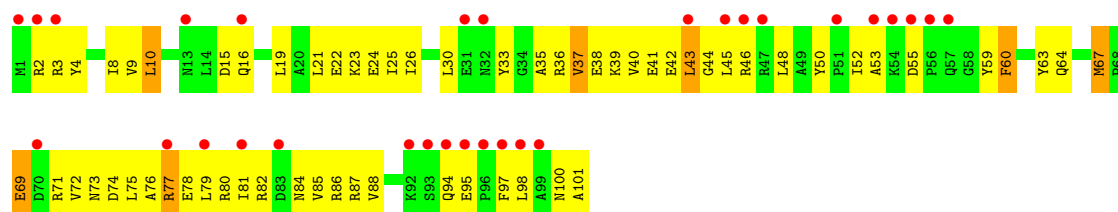




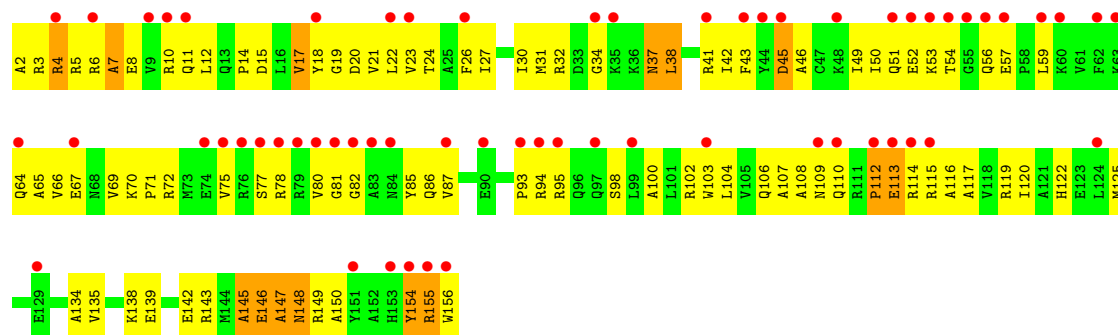
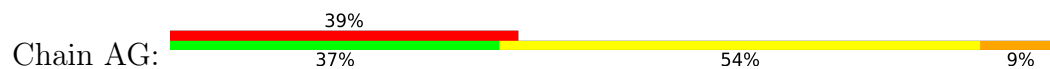
• Molecule 5: 30S ribosomal protein S5



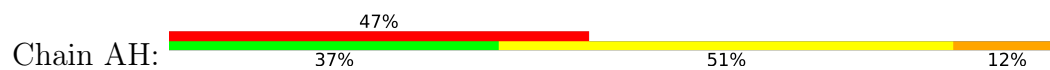
• Molecule 6: 30S ribosomal protein S6

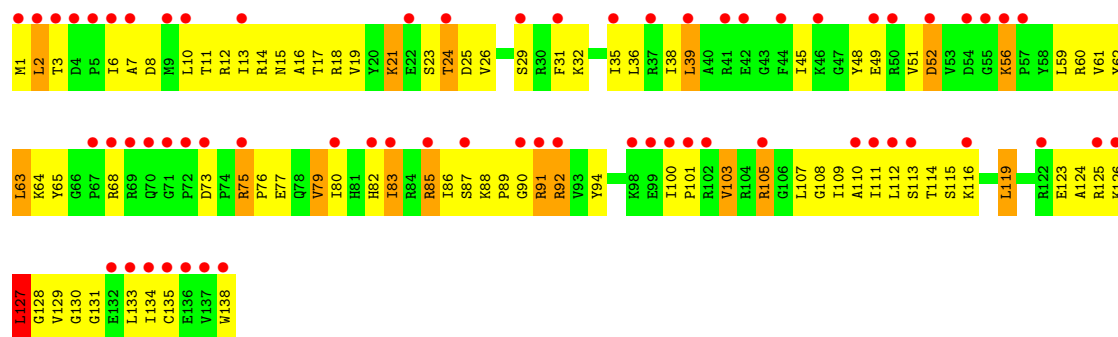


• Molecule 7: 30S ribosomal protein S7

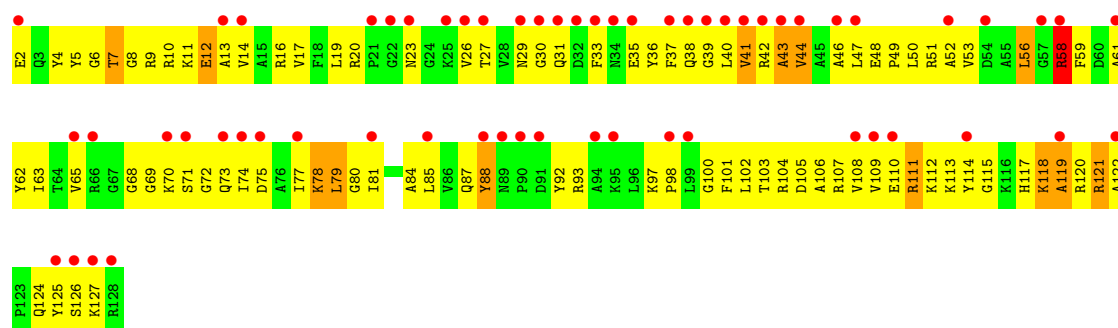


• Molecule 8: 30S ribosomal protein S8

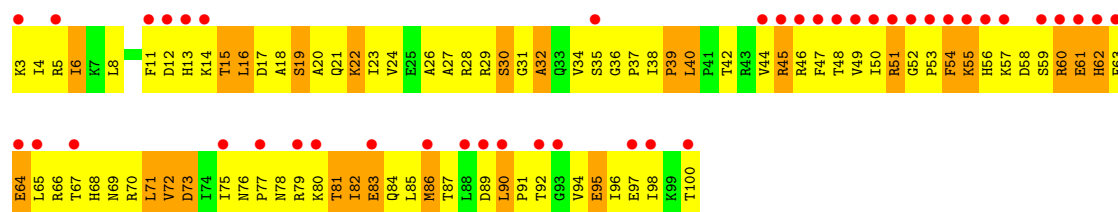
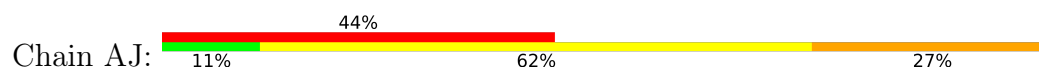




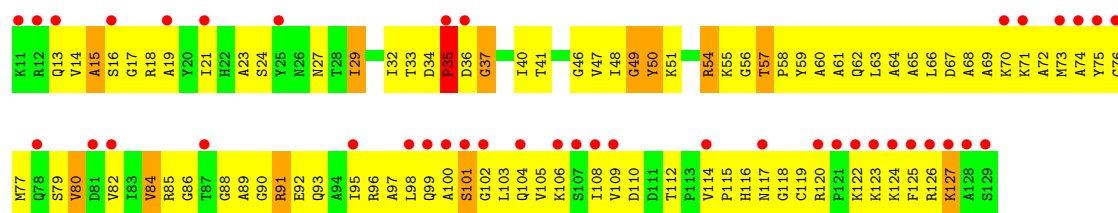
• Molecule 9: 30S ribosomal protein S9



• Molecule 10: 30S ribosomal protein S10

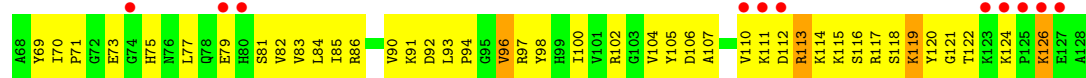
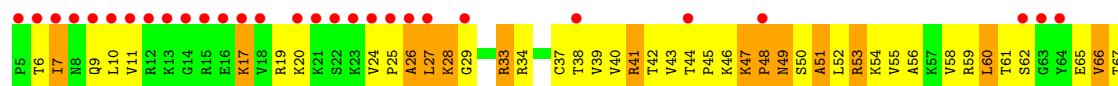


• Molecule 11: 30S ribosomal protein S11

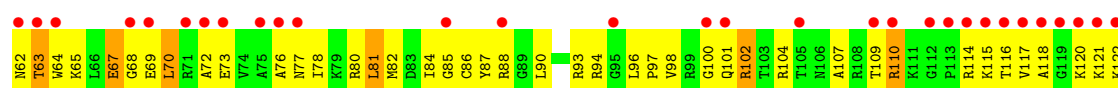
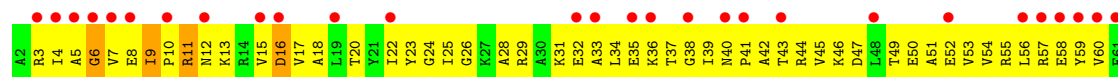


• Molecule 12: 30S ribosomal protein S12

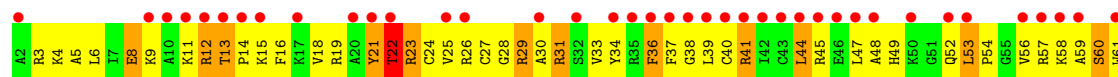




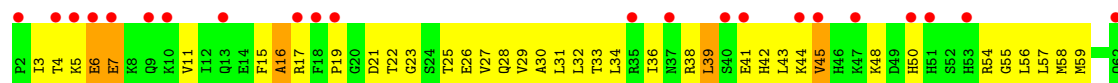
• Molecule 13: 30S ribosomal protein S13



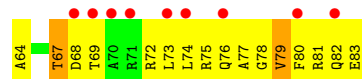
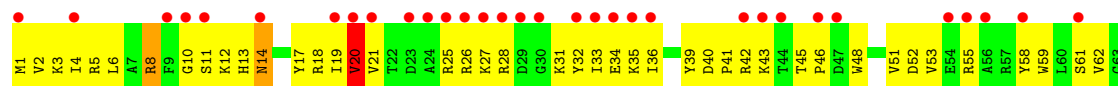
• Molecule 14: 30S ribosomal protein S14



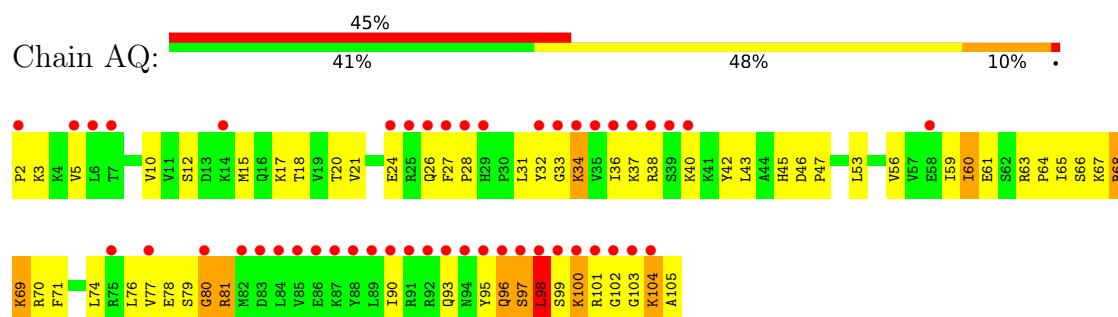
• Molecule 15: 30S ribosomal protein S15



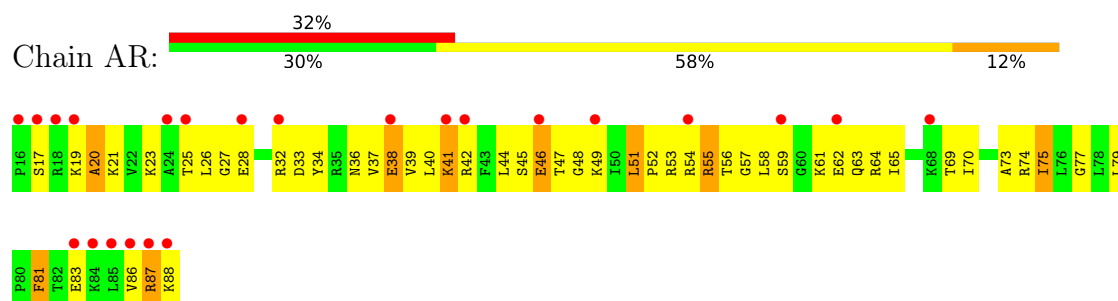
• Molecule 16: 30S ribosomal protein S16



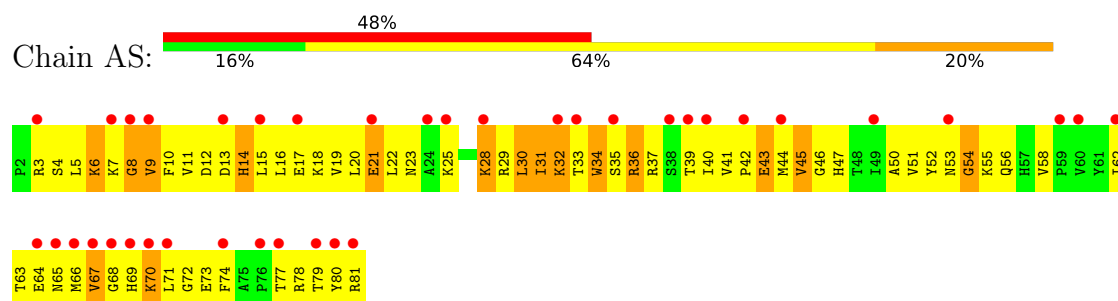
- Molecule 17: 30S ribosomal protein S17



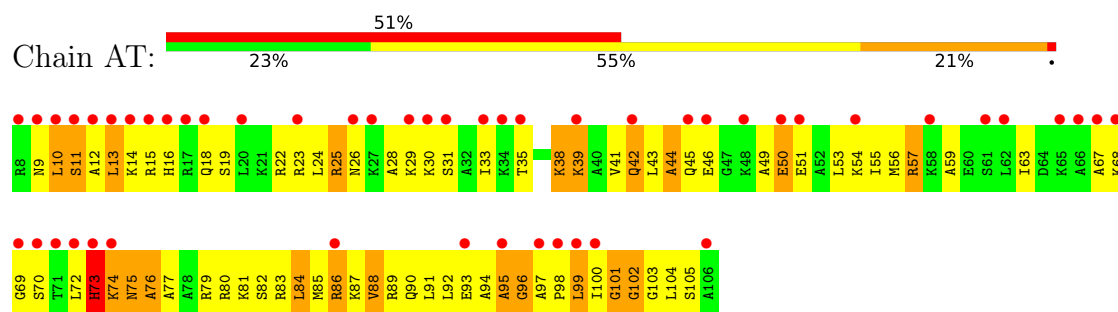
- Molecule 18: 30S ribosomal protein S18



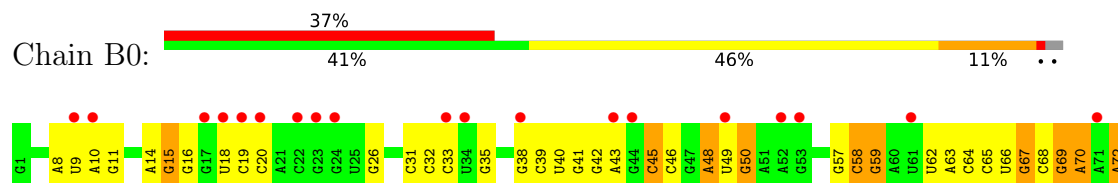
- Molecule 19: 30S ribosomal protein S19

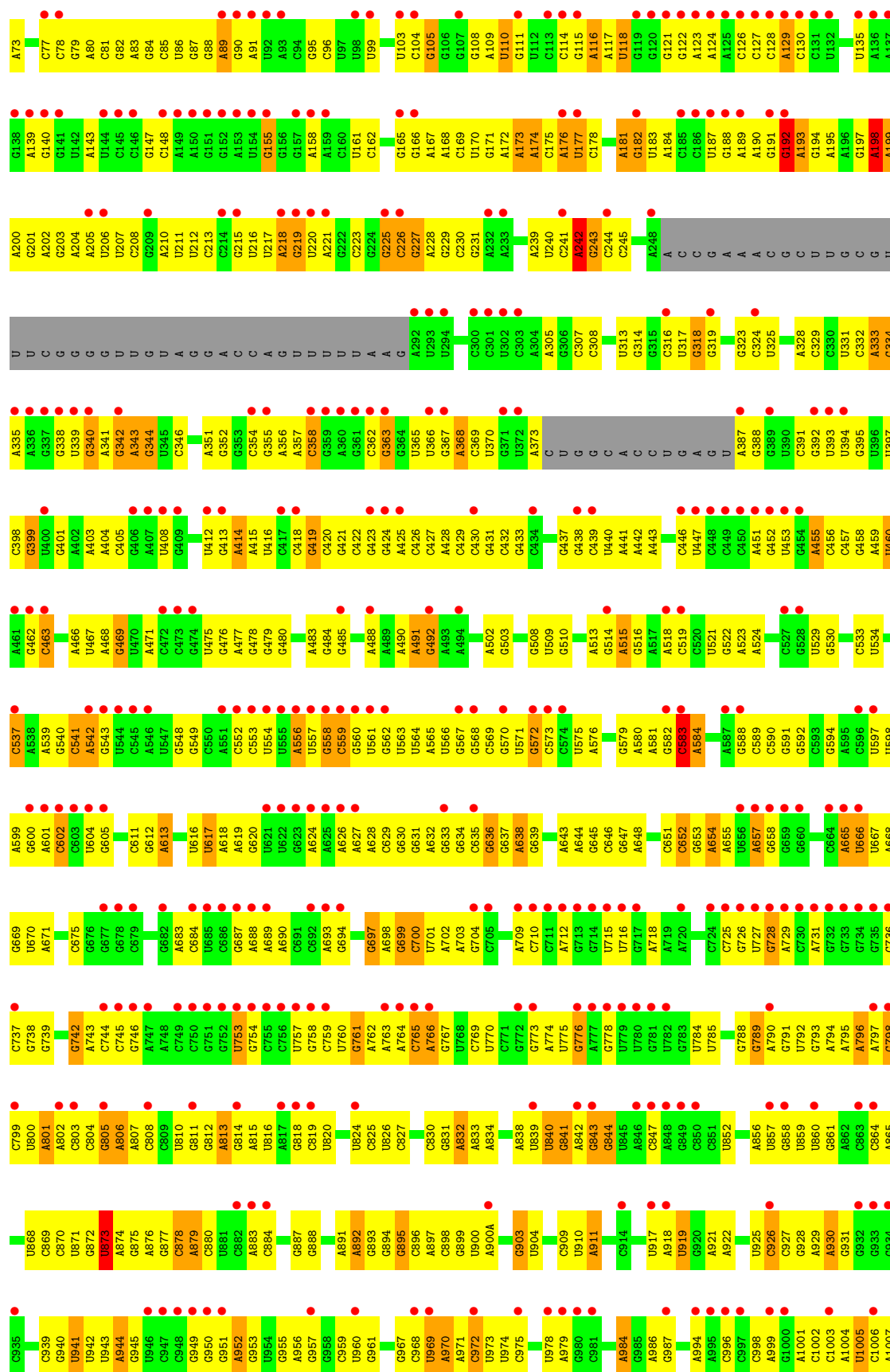


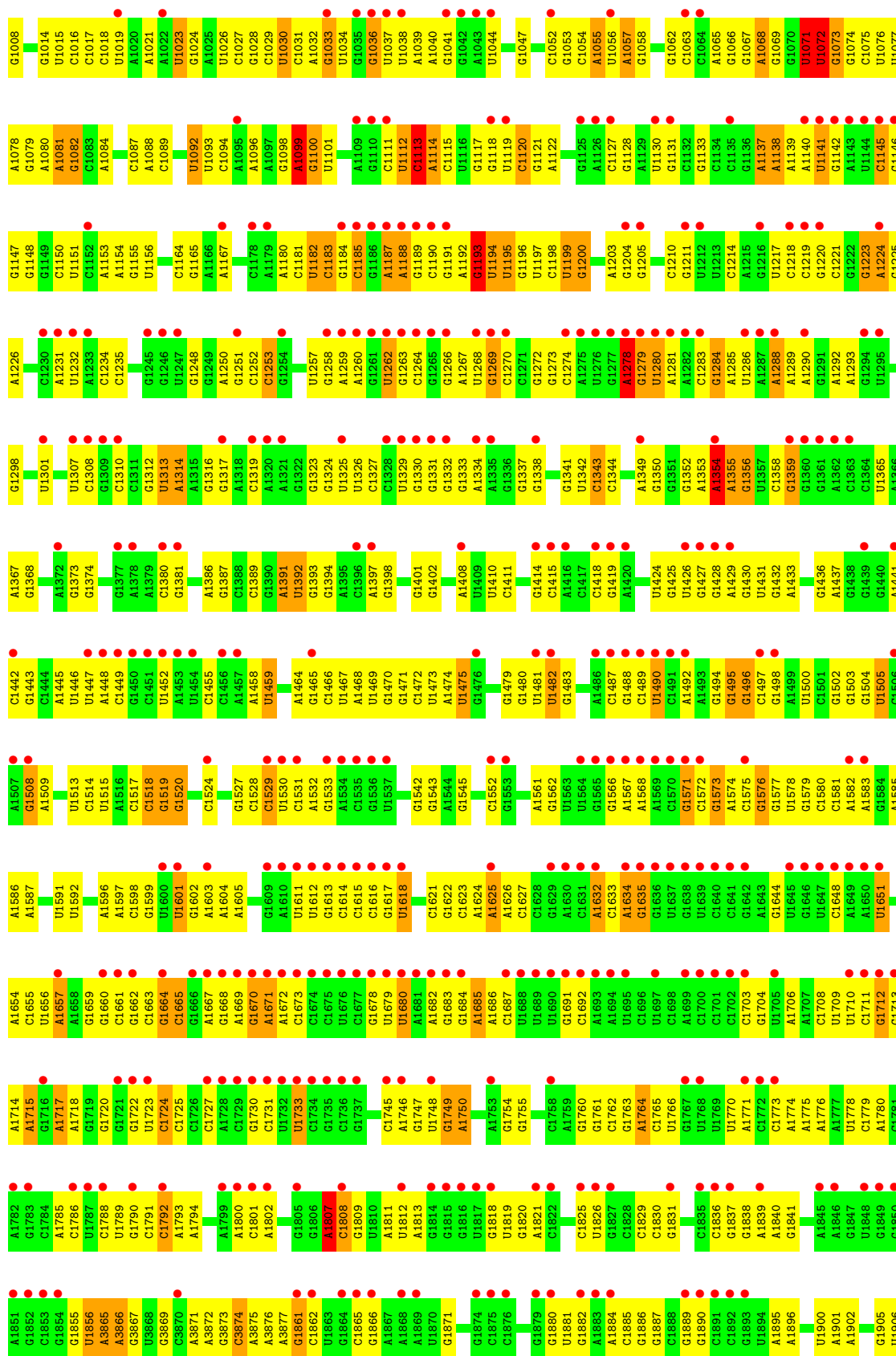
- Molecule 20: 30S ribosomal protein S20



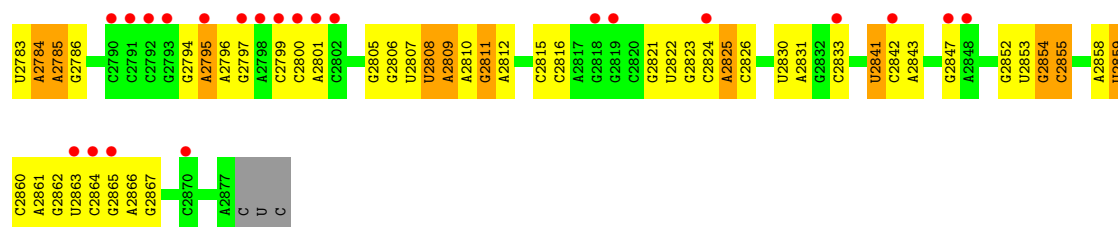
- Molecule 21: 23S RIBOSOMAL RNA



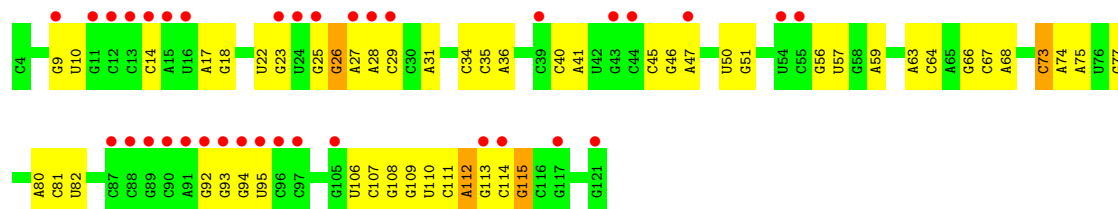




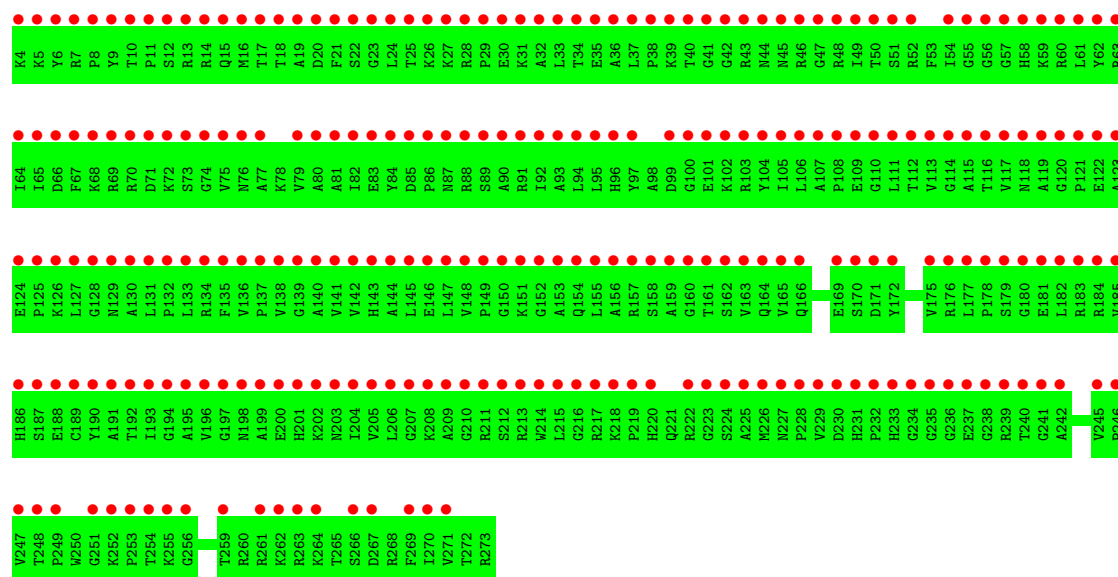
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	G2643	C2573	A2510	U2441	G2375	G2308	C2240	G3197	A3119	G2035	G1975	U1909
		C2574	A2512		G2376	G2309	U2241	A2181	G3121	G2036	U1976	
		U2575	A2513		G2377	U2311	C2242	A2182		A2037	U1977	G1912
		G2576	G2514	C2444	G2378	A2312		C2183	A3126	G2038		G1913
		A2577	G2515	C2445	G2379	G2313		C2184	G3127	G2039	U1978	U1914
		G2578	U2516	C2446	U2380	G2314		C2185	A2040	A2041	A1980	A1915
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		C2595	U2532	G2465	G2399	G2330		C2196	C3147	U2058	A1996	G1931
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		U2566	G2566	G2503	G2433	G2368			U3188	C3111	G2029	G1969
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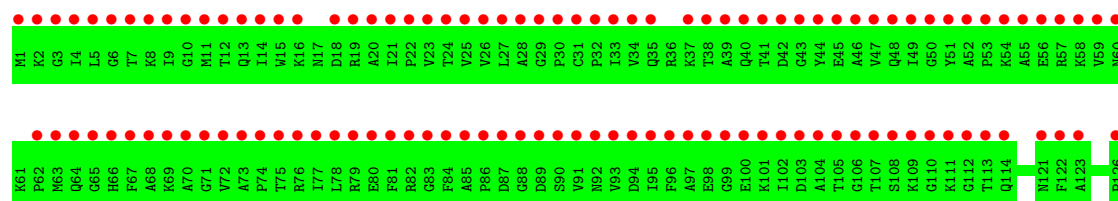
• Molecule 22: 5S RIBOSOMAL RNA

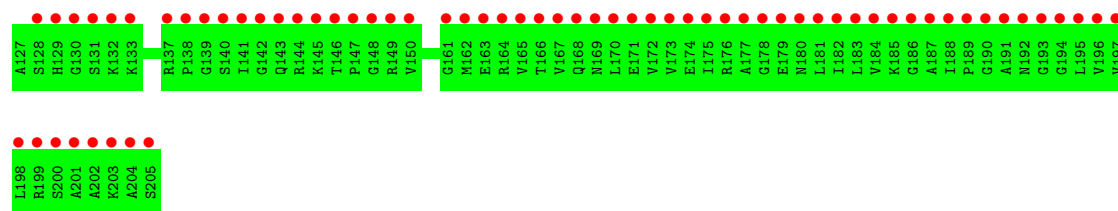


• Molecule 23: 50S ribosomal protein L2

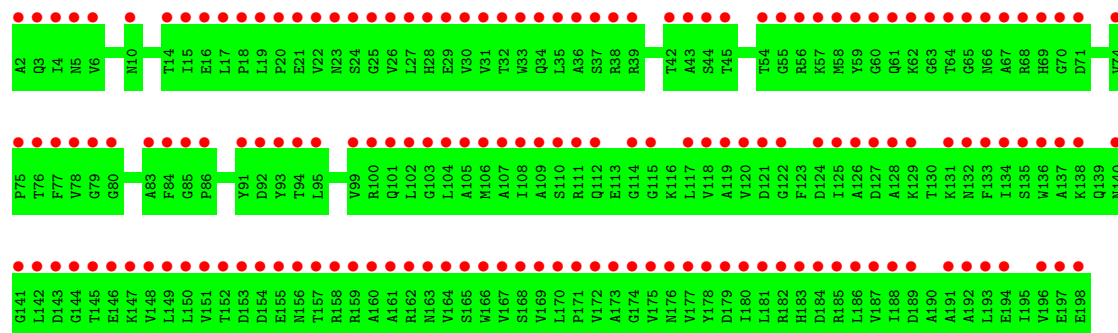
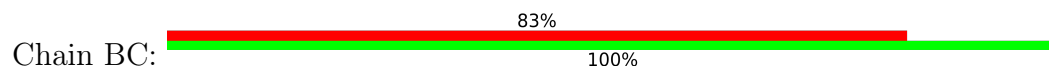


• Molecule 24: 50S ribosomal protein L3

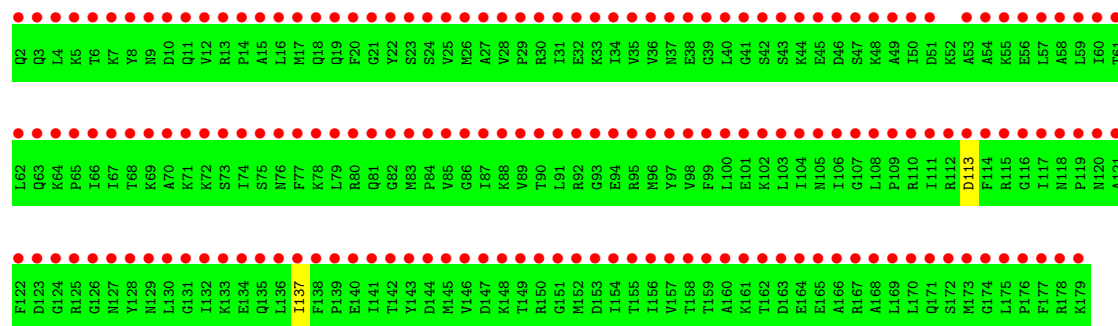




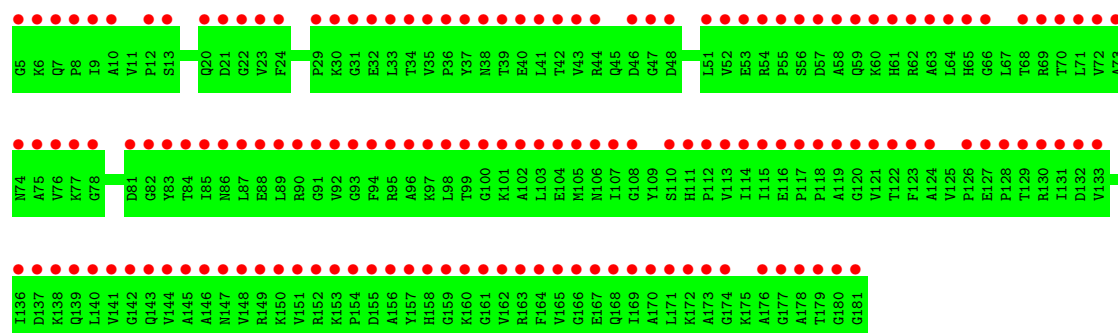
● Molecule 25: 50S ribosomal protein L4



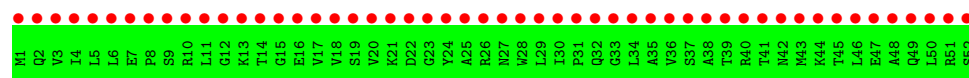
● Molecule 26: 50S ribosomal protein L5



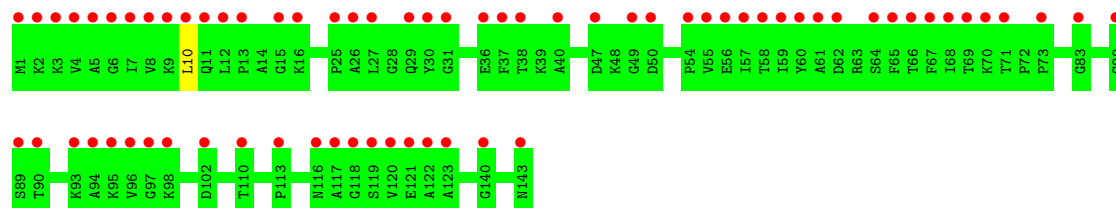
● Molecule 27: 50S ribosomal protein L6



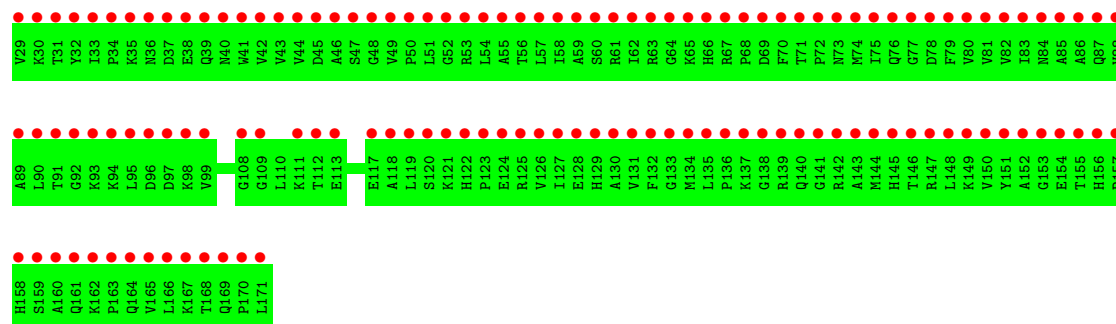
- Molecule 28: 50S ribosomal protein L9



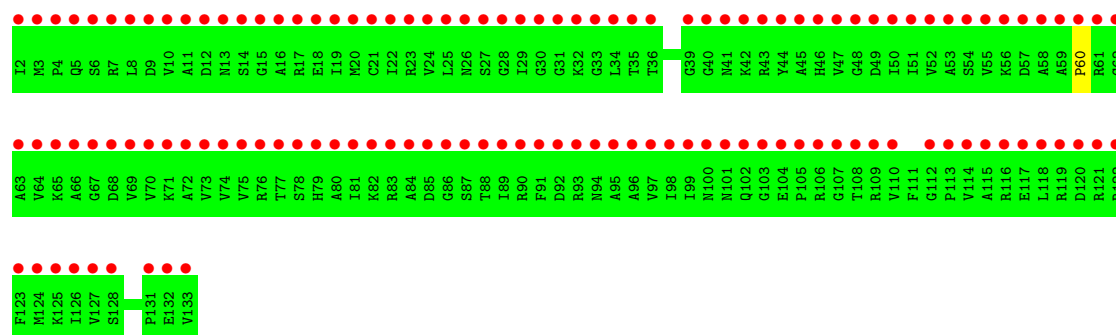
- Molecule 29: 50S ribosomal protein L11



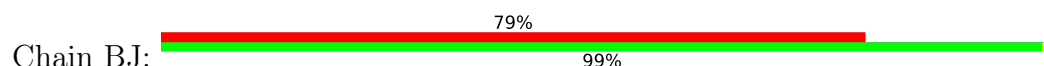
- Molecule 30: 50S ribosomal protein L13

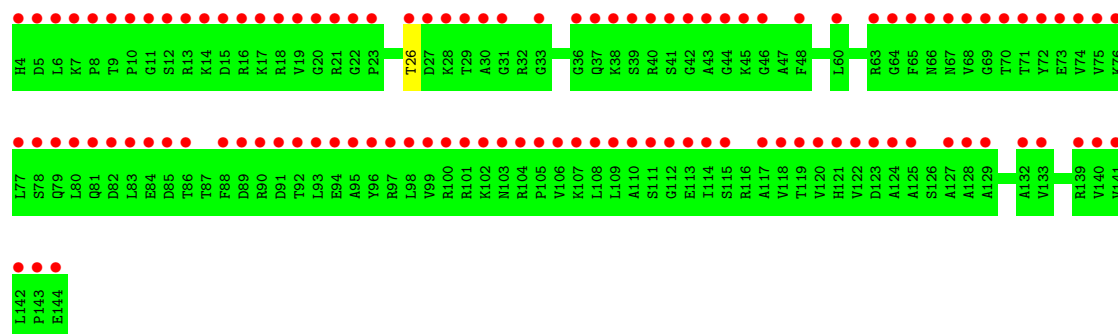


- Molecule 31: 50S ribosomal protein L14

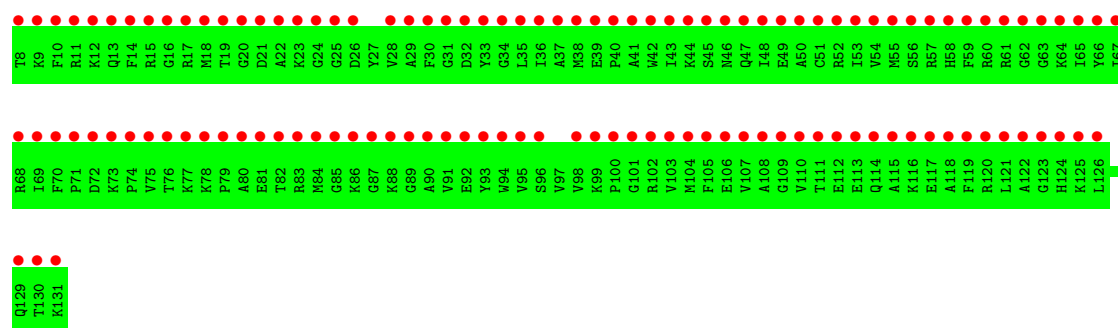


- Molecule 32: 50S ribosomal protein L15

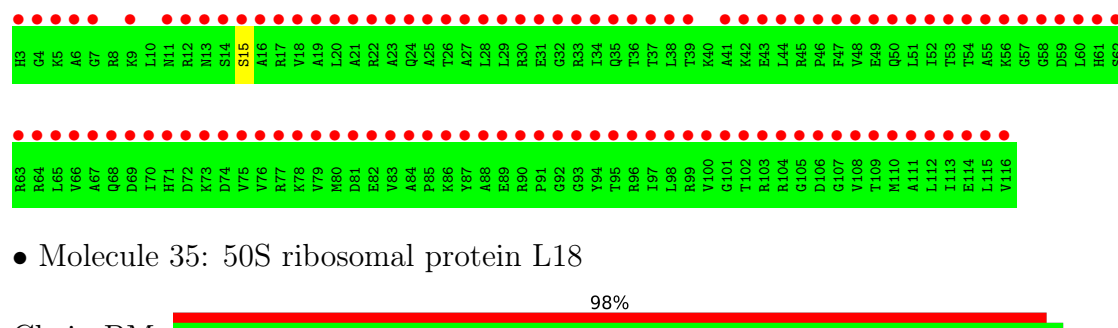




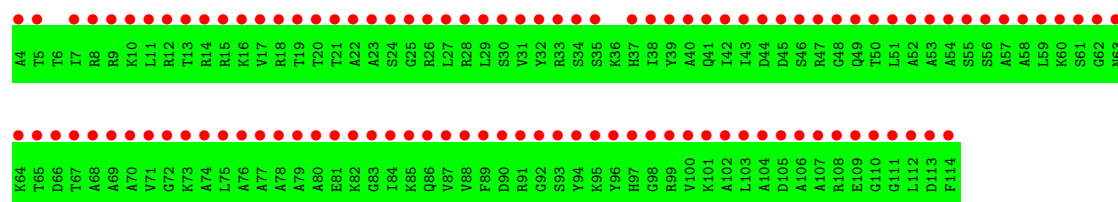
- Molecule 33: 50S ribosomal protein L16



- Molecule 34: 50S ribosomal protein L17

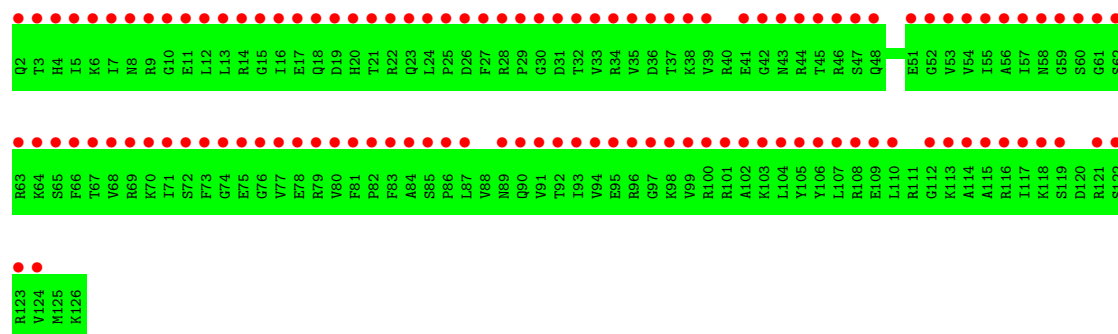


- Molecule 35: 50S ribosomal protein L18

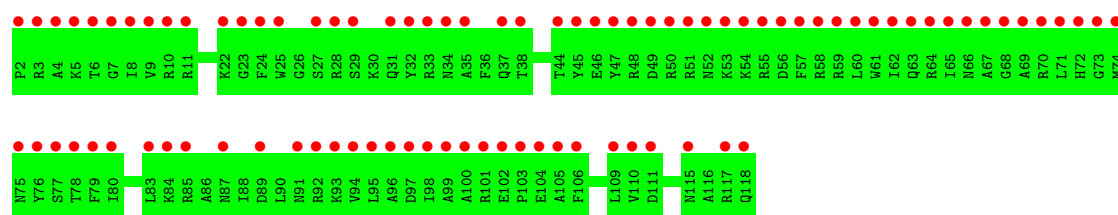
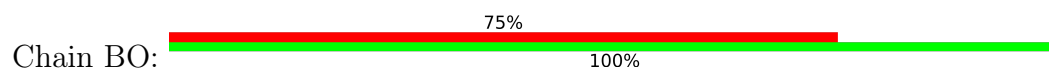


- Molecule 36: 50S ribosomal protein L19

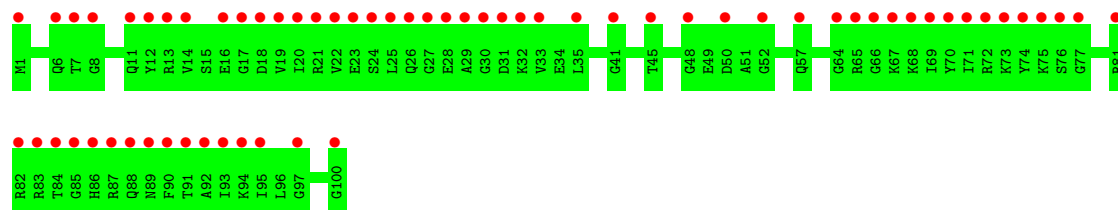




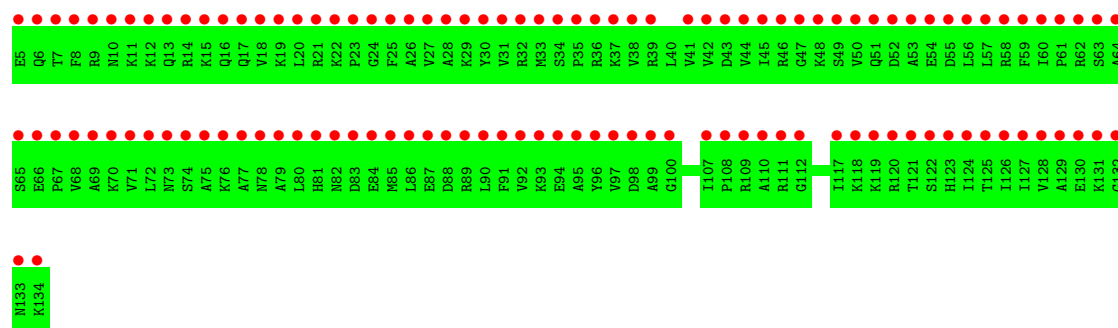
● Molecule 37: 50S ribosomal protein L20



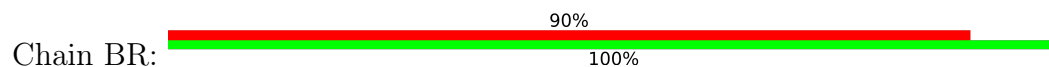
● Molecule 38: 50S ribosomal protein L21

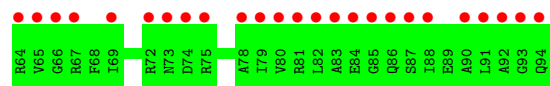
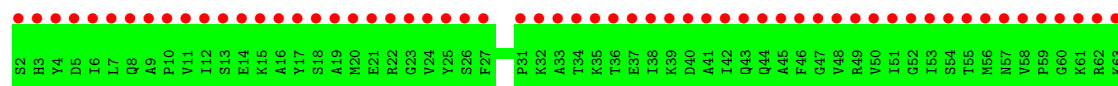


● Molecule 39: 50S ribosomal protein L22

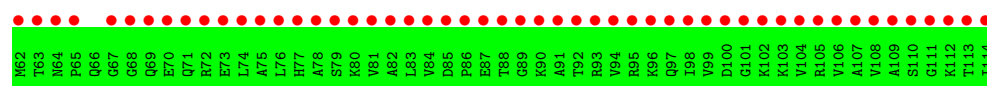
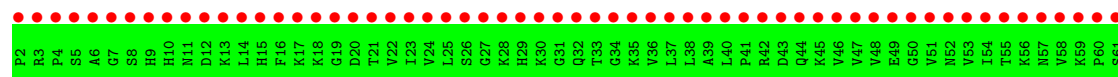


● Molecule 40: 50S ribosomal protein L23

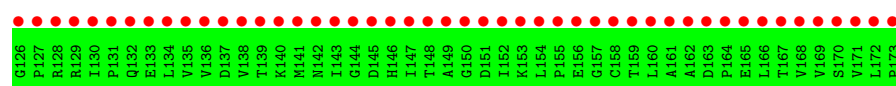
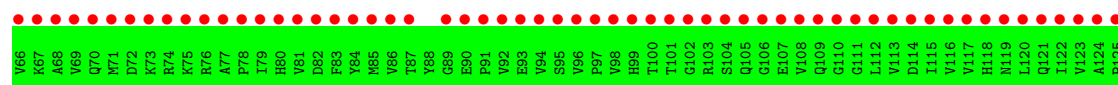
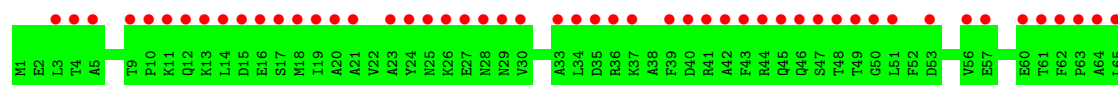




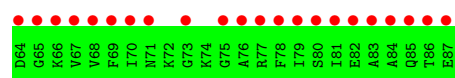
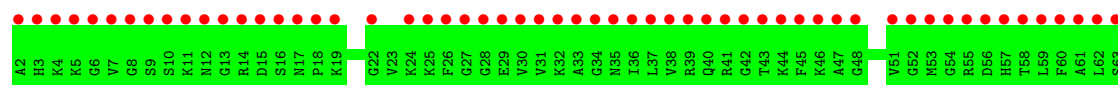
● Molecule 41: 50S ribosomal protein L24



● Molecule 42: general stress protein Ctc



● Molecule 43: 50S ribosomal protein L27

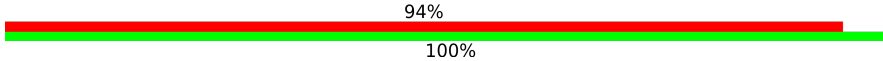


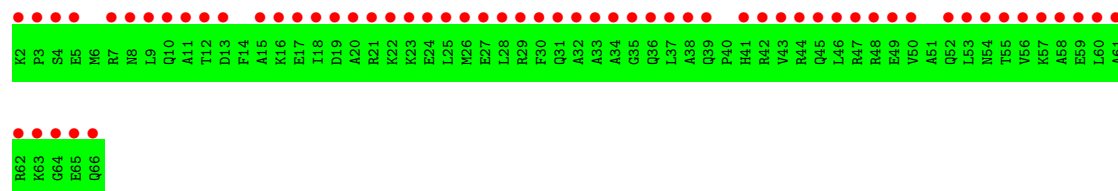
● Molecule 44: 50S RIBOSOMAL PROTEIN L28



There are no outlier residues recorded for this chain.

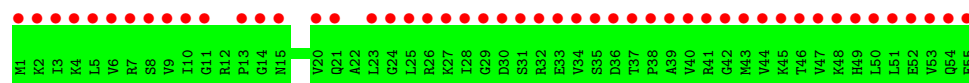
● Molecule 45: 50S ribosomal protein L29

Chain BW: 

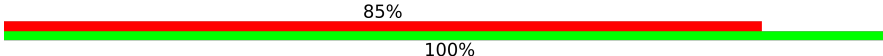


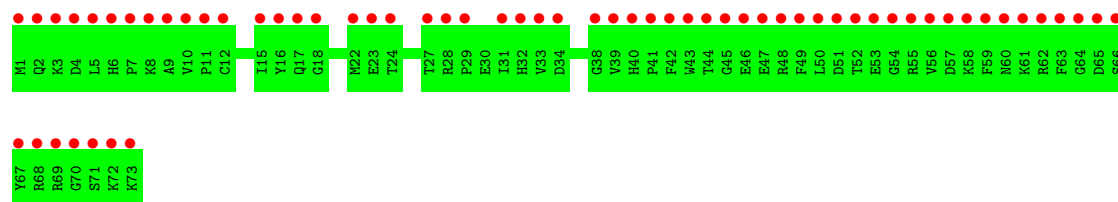
- Molecule 46: 50S ribosomal protein L30

Chain BX: 



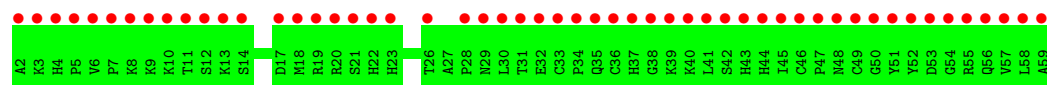
- Molecule 47: 50S ribosomal protein L31

Chain BY: 

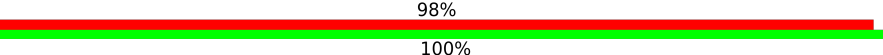


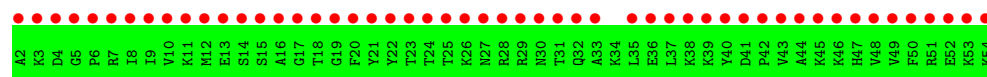
- Molecule 48: 50S ribosomal protein L32

Chain BZ: 



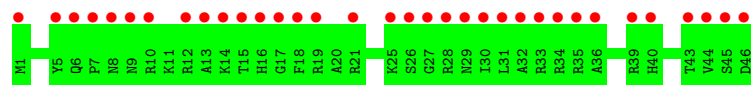
- Molecule 49: 50S ribosomal protein L33

Chain B1: 

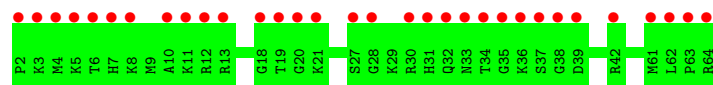


- Molecule 50: 50S ribosomal protein L34

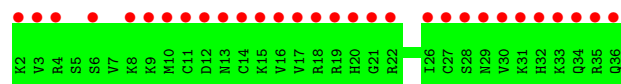
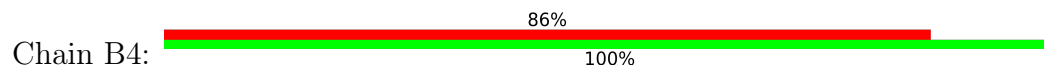
Chain B2: 



- Molecule 51: 50S ribosomal protein L35



• Molecule 52: 50S ribosomal protein L36



• Molecule 53: 50S ribosomal protein L1P



4 Data and refinement statistics

Property	Value	Source
Space group	I 4 2 2	Depositor
Cell constants a, b, c, α , β , γ	683.89Å 683.89Å 386.72Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	70.00 – 9.50 70.00 – 9.50	Depositor EDS
% Data completeness (in resolution range)	92.1 (70.00-9.50) 86.8 (70.00-9.50)	Depositor EDS
R_{merge}	0.14	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	9.49 (at 9.99Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.389 , 0.407 0.370 , 0.386	Depositor DCC
R_{free} test set	1282 reflections (4.78%)	wwPDB-VP
Wilson B-factor (Å ²)	437.2	Xtriage
Anisotropy	0.460	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.00 , 0.0	EDS
L-test for twinning ²	$\langle L \rangle = 0.46$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.85	EDS
Total number of atoms	118711	wwPDB-VP
Average B, all atoms (Å ²)	680.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 12.90% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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	AA	1.35	73/36823 (0.2%)	1.17	295/57351 (0.5%)
2	AB	0.45	0/1935	1.07	13/2609 (0.5%)
3	AC	0.44	0/1636	1.01	9/2205 (0.4%)
4	AD	0.44	0/1732	0.95	7/2318 (0.3%)
5	AE	0.63	0/1162	1.19	10/1564 (0.6%)
6	AF	0.41	0/855	0.95	3/1154 (0.3%)
7	AG	0.42	0/1275	1.00	7/1709 (0.4%)
8	AH	0.58	0/1135	1.13	8/1527 (0.5%)
9	AI	0.41	0/1028	0.95	5/1378 (0.4%)
10	AJ	0.43	0/807	1.08	6/1085 (0.6%)
11	AK	0.51	0/899	1.07	4/1213 (0.3%)
12	AL	0.52	0/985	1.08	4/1317 (0.3%)
13	AM	0.45	0/1006	0.99	2/1344 (0.1%)
14	AN	0.44	0/500	1.21	7/664 (1.1%)
15	AO	0.47	0/744	0.95	3/992 (0.3%)
16	AP	0.51	0/716	1.17	8/963 (0.8%)
17	AQ	0.54	0/869	1.07	1/1159 (0.1%)
18	AR	0.43	0/602	0.96	4/799 (0.5%)
19	AS	0.43	0/661	1.09	6/890 (0.7%)
20	AT	0.51	0/764	1.12	7/1006 (0.7%)
21	B0	0.44	15/67885 (0.0%)	0.65	63/105852 (0.1%)
22	B9	0.57	1/2815 (0.0%)	0.67	3/4384 (0.1%)
All	All	0.82	89/126834 (0.1%)	0.89	475/193483 (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	AA	2	40
21	B0	0	5
All	All	2	45

All (89) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	59	A	O3'-P	-96.68	0.16	1.61
1	AA	1398	A	O3'-P	-69.11	0.57	1.61
1	AA	214	U	O3'-P	-58.74	0.73	1.61
1	AA	394	G	O3'-P	-57.14	0.75	1.61
1	AA	1505	G	O3'-P	-56.83	0.76	1.61
1	AA	1190	G	O3'-P	-52.40	0.82	1.61
1	AA	249	U	O3'-P	-46.18	0.91	1.61
1	AA	227	G	O3'-P	-41.52	0.98	1.61
1	AA	1331	G	O3'-P	38.85	2.19	1.61
1	AA	933	G	O3'-P	-38.69	1.03	1.61
1	AA	1155	G	O3'-P	35.52	2.14	1.61
21	B0	3107	G	O3'-P	35.38	2.14	1.61
1	AA	375	U	O3'-P	-35.10	1.08	1.61
1	AA	1034	G	O3'-P	34.78	2.13	1.61
1	AA	212	G	O3'-P	34.39	2.12	1.61
21	B0	3098	U	O3'-P	34.10	2.12	1.61
1	AA	118	U	O3'-P	33.39	2.11	1.61
1	AA	94	G	O3'-P	-32.75	1.12	1.61
21	B0	3106	U	O3'-P	-32.39	1.12	1.61
1	AA	765	G	O3'-P	32.04	2.09	1.61
21	B0	1856	U	O3'-P	30.05	2.06	1.61
1	AA	651	C	O3'-P	-29.64	1.16	1.61
1	AA	717	C	O3'-P	29.48	2.05	1.61
1	AA	1211	U	O3'-P	28.19	2.03	1.61
21	B0	3183	A	O3'-P	27.46	2.02	1.61
1	AA	288	A	O3'-P	-27.40	1.20	1.61
22	B9	73	C	O3'-P	27.19	2.02	1.61
1	AA	143	A	O3'-P	27.07	2.01	1.61
1	AA	74	G	O3'-P	-26.95	1.20	1.61
1	AA	274	A	O3'-P	-25.16	1.23	1.61
21	B0	3149	G	O3'-P	25.11	1.98	1.61
1	AA	89	G	O3'-P	25.09	1.98	1.61
1	AA	1110	A	O3'-P	-25.04	1.23	1.61
1	AA	351	G	O3'-P	24.42	1.97	1.61
1	AA	1409	C	O3'-P	-24.39	1.24	1.61
1	AA	576	G	O3'-P	-24.04	1.25	1.61
21	B0	3102	G	O3'-P	-23.07	1.26	1.61
1	AA	108	G	O3'-P	22.50	1.95	1.61
1	AA	1305	G	O3'-P	22.18	1.94	1.61
1	AA	914	A	O3'-P	22.04	1.94	1.61
1	AA	239	U	O3'-P	-21.19	1.29	1.61
1	AA	1238	A	O3'-P	20.18	1.91	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	206	C	O3'-P	20.05	1.91	1.61
1	AA	1337	G	O3'-P	19.74	1.90	1.61
1	AA	461	C	O3'-P	-19.73	1.31	1.61
21	B0	3188	U	O3'-P	19.66	1.90	1.61
1	AA	436	C	O3'-P	-19.48	1.31	1.61
1	AA	827	U	O3'-P	19.34	1.90	1.61
1	AA	561	U	O3'-P	-19.22	1.32	1.61
1	AA	38	G	O3'-P	18.91	1.89	1.61
1	AA	587	G	O3'-P	18.77	1.89	1.61
1	AA	1345	U	O3'-P	18.64	1.89	1.61
1	AA	733	A	O3'-P	18.19	1.88	1.61
1	AA	1455	G	O3'-P	-17.71	1.34	1.61
1	AA	1457	A	O3'-P	-17.69	1.34	1.61
1	AA	1335	C	O3'-P	-17.44	1.34	1.61
21	B0	3141	G	O3'-P	17.32	1.87	1.61
1	AA	1393	U	O3'-P	-17.19	1.35	1.61
21	B0	3101	G	O3'-P	16.77	1.86	1.61
1	AA	499	A	O3'-P	-16.38	1.36	1.61
1	AA	396	G	O3'-P	15.91	1.85	1.61
1	AA	115	G	O3'-P	15.76	1.84	1.61
21	B0	3190	G	O3'-P	14.64	1.83	1.61
1	AA	278	G	O3'-P	-14.60	1.39	1.61
1	AA	983	A	O3'-P	-14.04	1.40	1.61
1	AA	135	C	O3'-P	-14.00	1.40	1.61
1	AA	1383	C	O3'-P	-13.79	1.40	1.61
21	B0	3874	C	O3'-P	13.60	1.81	1.61
1	AA	869	G	O3'-P	12.82	1.80	1.61
21	B0	3186	C	O3'-P	-12.51	1.42	1.61
1	AA	1445	U	O3'-P	-12.34	1.42	1.61
1	AA	944	G	O3'-P	11.60	1.78	1.61
1	AA	470	U	O3'-P	-11.56	1.43	1.61
1	AA	315	A	O3'-P	11.42	1.78	1.61
1	AA	1224	G	O3'-P	-10.72	1.45	1.61
1	AA	387	U	O3'-P	-10.68	1.45	1.61
1	AA	1490	C	O3'-P	-10.16	1.46	1.61
1	AA	905	U	O3'-P	10.00	1.76	1.61
1	AA	884	U	O3'-P	-9.95	1.46	1.61
1	AA	960	U	O3'-P	9.56	1.75	1.61
1	AA	684	A	O3'-P	-9.16	1.47	1.61
1	AA	1033	G	O3'-P	8.56	1.74	1.61
21	B0	3866	A	O3'-P	8.52	1.74	1.61
1	AA	403	C	O3'-P	-7.16	1.50	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	109	A	O3'-P	6.69	1.71	1.61
1	AA	79	G	O3'-P	-6.42	1.51	1.61
1	AA	26	A	O3'-P	-6.27	1.51	1.61
1	AA	1183	A	O3'-P	-5.55	1.52	1.61
21	B0	1113	C	P-OP2	5.22	1.59	1.49

All (475) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	B0	1856	U	O3'-P-O5'	-61.52	11.72	104.00
1	AA	59	A	P-O3'-C3'	-46.98	49.73	120.20
1	AA	351	G	O3'-P-O5'	42.09	167.14	104.00
1	AA	274	A	O3'-P-O5'	-36.25	49.62	104.00
1	AA	1409	C	O3'-P-O5'	-34.78	51.83	104.00
1	AA	436	C	O3'-P-O5'	-34.25	52.62	104.00
21	B0	3098	U	P-O3'-C3'	33.83	170.95	120.20
1	AA	1490	C	P-O3'-C3'	32.02	168.23	120.20
1	AA	651	C	P-O3'-C3'	-31.71	72.64	120.20
1	AA	249	U	O3'-P-O5'	31.01	150.51	104.00
21	B0	3190	G	P-O3'-C3'	30.22	165.53	120.20
1	AA	933	G	P-O3'-C3'	-28.73	77.10	120.20
1	AA	1238	A	P-O3'-C3'	-28.37	77.65	120.20
1	AA	651	C	O3'-P-O5'	28.32	146.47	104.00
1	AA	1383	C	P-O3'-C3'	-28.31	77.73	120.20
1	AA	436	C	P-O3'-C3'	-27.79	78.51	120.20
1	AA	1383	C	O3'-P-O5'	27.54	145.31	104.00
1	AA	587	G	O3'-P-O5'	26.16	143.24	104.00
1	AA	74	G	P-O3'-C3'	25.96	159.14	120.20
21	B0	3106	U	O3'-P-O5'	-25.93	65.10	104.00
1	AA	1238	A	O3'-P-O5'	25.64	142.47	104.00
1	AA	185	A	OP2-P-O3'	-23.73	36.82	108.00
1	AA	403	C	P-O3'-C3'	-23.48	84.98	120.20
1	AA	59	A	OP2-P-O3'	-23.27	38.20	108.00
22	B9	73	C	O3'-P-O5'	23.23	138.85	104.00
1	AA	1335	C	O3'-P-O5'	23.09	138.64	104.00
1	AA	143	A	P-O3'-C3'	-22.70	86.15	120.20
21	B0	3101	G	O3'-P-O5'	-22.64	70.03	104.00
1	AA	547	A	P-O3'-C3'	-22.18	86.94	120.20
1	AA	1224	G	O3'-P-O5'	22.02	137.03	104.00
1	AA	1183	A	P-O3'-C3'	-21.96	87.25	120.20
1	AA	143	A	O3'-P-O5'	-21.88	71.18	104.00
1	AA	214	U	O3'-P-O5'	-21.39	71.92	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	B0	3107	G	O3'-P-O5'	-21.30	72.06	104.00
21	B0	3107	G	P-O3'-C3'	21.28	152.12	120.20
1	AA	288	A	O3'-P-O5'	-20.66	73.02	104.00
1	AA	1182	G	O3'-P-O5'	-20.59	73.11	104.00
1	AA	1393	U	OP1-P-O3'	-20.51	46.47	108.00
1	AA	547	A	O3'-P-O5'	20.48	134.72	104.00
21	B0	3149	G	O3'-P-O5'	20.30	134.44	104.00
1	AA	185	A	O3'-P-O5'	19.91	133.86	104.00
1	AA	1190	G	O3'-P-O5'	19.79	133.69	104.00
1	AA	109	A	O3'-P-O5'	-19.50	74.75	104.00
1	AA	351	G	P-O3'-C3'	19.35	149.23	120.20
21	B0	3190	G	OP2-P-O3'	-19.33	50.01	108.00
1	AA	1110	A	O3'-P-O5'	-19.09	75.37	104.00
1	AA	1505	G	O3'-P-O5'	-19.07	75.39	104.00
1	AA	754	C	O3'-P-O5'	18.88	132.32	104.00
1	AA	1505	G	P-O3'-C3'	18.83	148.45	120.20
1	AA	1155	G	P-O3'-C3'	-18.73	92.11	120.20
1	AA	115	G	P-O3'-C3'	-18.69	92.17	120.20
1	AA	26	A	O3'-P-O5'	-18.34	76.49	104.00
1	AA	893	C	O3'-P-O5'	-17.80	77.30	104.00
1	AA	1211	U	O3'-P-O5'	17.59	130.39	104.00
21	B0	3098	U	OP1-P-O3'	17.59	160.77	108.00
1	AA	1190	G	P-O3'-C3'	-17.19	94.42	120.20
21	B0	3874	C	P-O3'-C3'	-17.17	94.44	120.20
1	AA	1335	C	P-O3'-C3'	16.97	145.65	120.20
1	AA	1490	C	OP1-P-O3'	16.96	158.87	108.00
1	AA	1457	A	O3'-P-O5'	16.91	129.36	104.00
1	AA	733	A	P-O3'-C3'	16.86	145.49	120.20
1	AA	717	C	O3'-P-O5'	-16.84	78.74	104.00
1	AA	1455	G	P-O3'-C3'	16.77	145.35	120.20
1	AA	94	G	P-O3'-C3'	16.64	145.17	120.20
1	AA	109	A	P-O3'-C3'	16.56	145.04	120.20
1	AA	436	C	OP2-P-O3'	16.54	157.62	108.00
1	AA	651	C	OP1-P-O3'	-16.23	59.31	108.00
21	B0	1071	U	OP1-P-O3'	-16.18	59.45	108.00
21	B0	3098	U	O3'-P-O5'	-15.97	80.05	104.00
1	AA	202	G	P-O3'-C3'	-15.94	96.29	120.20
1	AA	1211	U	P-O3'-C3'	-15.72	96.62	120.20
1	AA	315	A	O3'-P-O5'	-15.71	80.44	104.00
21	B0	3106	U	P-O3'-C3'	15.67	143.70	120.20
1	AA	933	G	OP1-P-O3'	-15.54	61.39	108.00
1	AA	1393	U	P-O3'-C3'	-15.52	96.93	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	246	A	O3'-P-O5'	-15.45	80.83	104.00
1	AA	351	G	OP1-P-O3'	-15.39	61.83	108.00
1	AA	1490	C	OP2-P-O3'	-15.35	61.95	108.00
1	AA	1393	U	O3'-P-O5'	15.31	126.96	104.00
1	AA	375	U	P-O3'-C3'	15.11	142.87	120.20
1	AA	135	C	O3'-P-O5'	15.03	126.55	104.00
1	AA	933	G	O3'-P-O5'	14.97	126.45	104.00
1	AA	89	G	O3'-P-O5'	14.97	126.45	104.00
1	AA	587	G	OP1-P-O3'	-14.88	63.36	108.00
1	AA	905	U	P-O3'-C3'	14.84	142.46	120.20
1	AA	1345	U	O3'-P-O5'	14.84	126.26	104.00
22	B9	73	C	P-O3'-C3'	-14.77	98.04	120.20
1	AA	278	G	O3'-P-O5'	-14.72	81.92	104.00
1	AA	1498	U	C2'-C3'-O3'	14.60	131.40	109.50
1	AA	1383	C	OP1-P-O3'	-14.57	64.28	108.00
1	AA	461	C	P-O3'-C3'	14.44	141.86	120.20
1	AA	246	A	P-O3'-C3'	-14.43	98.56	120.20
21	B0	3190	G	OP1-P-O3'	14.28	150.84	108.00
1	AA	278	G	P-O3'-C3'	-14.19	98.91	120.20
1	AA	249	U	OP2-P-O3'	-14.09	65.73	108.00
1	AA	1305	G	O3'-P-O5'	-13.87	83.20	104.00
1	AA	243	A	C2'-C3'-O3'	13.86	130.29	109.50
1	AA	754	C	P-O3'-C3'	-13.86	99.42	120.20
1	AA	212	G	OP2-P-O3'	-13.48	67.57	108.00
1	AA	559	A	C2'-C3'-O3'	13.45	129.68	109.50
1	AA	181	G	C2'-C3'-O3'	13.39	129.58	109.50
1	AA	1238	A	OP1-P-O3'	-13.27	68.20	108.00
1	AA	1183	A	OP1-P-O3'	13.25	147.76	108.00
1	AA	1455	G	O3'-P-O5'	-13.22	84.18	104.00
1	AA	202	G	O3'-P-O5'	-13.21	84.19	104.00
1	AA	1033	G	P-O3'-C3'	13.18	139.97	120.20
1	AA	59	A	OP1-P-O3'	13.06	147.19	108.00
1	AA	905	U	O3'-P-O5'	-12.96	84.56	104.00
21	B0	3874	C	O3'-P-O5'	12.89	123.34	104.00
3	AC	167	TRP	N-CA-C	12.71	119.21	108.78
21	B0	3866	A	O3'-P-O5'	-12.61	85.08	104.00
1	AA	576	G	P-O3'-C3'	-12.48	101.48	120.20
1	AA	115	G	OP1-P-O3'	-12.44	70.69	108.00
1	AA	274	A	P-O3'-C3'	-12.38	101.63	120.20
21	B0	3098	U	OP2-P-O3'	-12.37	70.88	108.00
1	AA	214	U	P-O3'-C3'	12.14	138.41	120.20
1	AA	1182	G	OP2-P-O3'	11.98	143.94	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1034	G	P-O3'-C3'	-11.92	102.33	120.20
21	B0	3101	G	OP2-P-O3'	11.91	143.74	108.00
21	B0	3866	A	P-O3'-C3'	11.91	138.07	120.20
12	AL	26	ALA	N-CA-C	-11.91	99.51	113.21
1	AA	135	C	P-O3'-C3'	-11.85	102.43	120.20
1	AA	547	A	OP2-P-O3'	-11.80	72.59	108.00
1	AA	499	A	O3'-P-O5'	-11.79	86.32	104.00
1	AA	1528	U	C2'-C3'-O3'	11.79	127.18	109.50
1	AA	1183	A	OP2-P-O3'	-11.77	72.70	108.00
1	AA	79	G	O3'-P-O5'	11.73	121.59	104.00
21	B0	3183	A	O3'-P-O5'	11.58	121.37	104.00
1	AA	366	C	C2'-C3'-O3'	11.51	126.76	109.50
21	B0	3107	G	OP1-P-O3'	11.48	142.45	108.00
1	AA	74	G	OP2-P-O3'	-11.45	73.64	108.00
1	AA	1331	G	P-O3'-C3'	11.40	137.30	120.20
1	AA	403	C	OP1-P-O3'	-11.35	73.95	108.00
1	AA	684	A	P-O3'-C3'	11.33	137.19	120.20
1	AA	687	A	C2'-C3'-O3'	11.31	126.46	109.50
1	AA	575	G	C2'-C3'-O3'	11.26	126.39	109.50
1	AA	1211	U	OP2-P-O3'	-11.22	74.35	108.00
1	AA	556	C	P-O3'-C3'	11.17	136.96	120.20
1	AA	266	G	C2'-C3'-O3'	11.16	126.24	109.50
1	AA	60	A	C2'-C3'-O3'	11.10	126.16	109.50
21	B0	1856	U	P-O3'-C3'	-11.09	103.57	120.20
1	AA	561	U	O3'-P-O5'	11.08	120.62	104.00
1	AA	79	G	P-O3'-C3'	-10.96	103.75	120.20
1	AA	717	C	P-O3'-C3'	-10.85	103.93	120.20
1	AA	1190	G	OP1-P-O3'	-10.72	75.85	108.00
1	AA	983	A	P-O3'-C3'	10.71	136.27	120.20
21	B0	1071	U	OP2-P-O3'	-10.69	75.94	108.00
1	AA	1528	U	C4'-C3'-O3'	10.60	125.30	109.40
1	AA	792	A	C2'-C3'-O3'	10.58	125.37	109.50
1	AA	1224	G	OP2-P-O3'	-10.56	76.31	108.00
1	AA	26	A	OP2-P-O3'	10.50	139.49	108.00
1	AA	556	C	OP2-P-O3'	-10.49	76.53	108.00
1	AA	351	G	OP2-P-O3'	-10.47	76.60	108.00
1	AA	288	A	OP1-P-O3'	10.38	139.15	108.00
1	AA	705	U	O3'-P-O5'	-10.29	88.56	104.00
21	B0	1112	U	C4'-C3'-O3'	-10.25	97.62	113.00
1	AA	89	G	P-O3'-C3'	-10.12	105.02	120.20
1	AA	288	A	P-O3'-C3'	10.07	135.30	120.20
20	AT	13	LEU	N-CA-C	-10.06	100.15	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	227	G	P-O3'-C3'	-9.96	105.26	120.20
5	AE	23	GLY	N-CA-C	9.90	124.61	110.46
21	B0	3135	A	O3'-P-O5'	-9.88	89.19	104.00
11	AK	37	GLY	N-CA-C	9.87	125.34	113.79
1	AA	315	A	OP2-P-O3'	9.84	137.51	108.00
1	AA	1067	A	C2'-C3'-O3'	9.82	124.23	109.50
1	AA	1398	A	O3'-P-O5'	9.75	118.63	104.00
1	AA	115	G	C2'-C3'-O3'	9.72	124.08	109.50
14	AN	31	ARG	N-CA-C	9.67	124.13	111.75
1	AA	372	C	C2'-C3'-O3'	9.57	123.86	109.50
1	AA	827	U	P-O3'-C3'	9.57	134.56	120.20
1	AA	7	G	C2'-C3'-O3'	9.56	123.84	109.50
1	AA	1490	C	O3'-P-O5'	-9.53	89.71	104.00
1	AA	546	G	O3'-P-O5'	9.47	118.21	104.00
1	AA	181	G	C4'-C3'-O3'	9.34	123.41	109.40
1	AA	212	G	OP1-P-O3'	9.30	135.89	108.00
1	AA	960	U	OP1-P-O3'	9.23	135.70	108.00
1	AA	375	U	O3'-P-O5'	-9.20	90.21	104.00
1	AA	1224	G	P-O3'-C3'	-9.18	106.43	120.20
1	AA	1155	G	OP1-P-O3'	-9.17	80.49	108.00
1	AA	1398	A	P-O3'-C3'	9.16	133.95	120.20
1	AA	396	G	P-O3'-C3'	9.16	133.94	120.20
1	AA	94	G	OP2-P-O3'	-9.15	80.55	108.00
1	AA	436	C	OP1-P-O3'	-9.11	80.68	108.00
1	AA	387	U	O3'-P-O5'	-9.07	90.40	104.00
15	AO	45	VAL	N-CA-C	-9.06	96.42	109.29
1	AA	428	G	C2'-C3'-O3'	9.04	123.06	109.50
14	AN	8	GLU	N-CA-C	-9.02	101.81	113.17
21	B0	3101	G	P-O3'-C3'	-9.02	106.68	120.20
1	AA	884	U	O3'-P-O5'	-8.90	90.65	104.00
1	AA	74	G	OP1-P-O3'	8.88	134.66	108.00
1	AA	108	G	P-O3'-C3'	-8.77	107.04	120.20
1	AA	1033	G	OP2-P-O3'	-8.76	81.72	108.00
1	AA	1299	A	N9-C1'-C2'	8.73	125.10	112.00
1	AA	387	U	OP1-P-O3'	8.73	134.18	108.00
1	AA	1380	U	C2'-C3'-O3'	8.71	122.56	109.50
21	B0	1112	U	C2'-C3'-O3'	-8.69	100.66	113.70
1	AA	315	A	P-O3'-C3'	8.69	133.23	120.20
2	AB	13	ALA	N-CA-C	-8.68	102.59	113.01
21	B0	3102	G	P-O3'-C3'	-8.66	107.20	120.20
1	AA	983	A	OP2-P-O3'	-8.62	82.13	108.00
21	B0	3186	C	P-O3'-C3'	8.62	133.13	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	484	G	C2'-C3'-O3'	8.45	122.17	109.50
21	B0	3149	G	OP2-P-O3'	-8.41	82.78	108.00
1	AA	1305	G	P-O3'-C3'	-8.31	107.73	120.20
21	B0	1072	U	O5'-P-OP1	-8.27	83.20	108.00
1	AA	403	C	OP2-P-O3'	8.26	132.79	108.00
1	AA	1110	A	OP2-P-O3'	8.26	132.78	108.00
21	B0	3866	A	OP1-P-O3'	8.25	132.75	108.00
7	AG	154	TYR	N-CA-C	-8.24	101.38	112.26
1	AA	1033	G	O3'-P-O5'	8.20	116.30	104.00
21	B0	903	G	O3'-P-O5'	-8.17	91.75	104.00
1	AA	461	C	OP2-P-O3'	-8.14	83.58	108.00
1	AA	960	U	C2'-C3'-O3'	8.14	121.71	109.50
1	AA	375	U	OP1-P-O3'	8.13	132.41	108.00
1	AA	394	G	P-O3'-C3'	8.07	132.31	120.20
11	AK	116	HIS	N-CA-C	-8.05	101.30	112.25
1	AA	944	G	O3'-P-O5'	-8.02	91.97	104.00
1	AA	115	G	OP2-P-O3'	8.00	132.01	108.00
2	AB	59	GLU	N-CA-C	-8.00	102.51	111.07
16	AP	27	LYS	N-CA-C	-7.97	99.98	110.43
5	AE	21	ALA	N-CA-C	-7.90	100.39	110.19
21	B0	3186	C	O3'-P-O5'	7.83	115.75	104.00
2	AB	190	THR	N-CA-C	7.81	121.75	111.75
1	AA	1224	G	C2'-C3'-O3'	7.78	121.17	109.50
1	AA	960	U	P-O3'-C3'	7.72	131.78	120.20
21	B0	3149	G	P-O3'-C3'	-7.72	108.62	120.20
1	AA	559	A	C4'-C3'-O3'	7.70	120.94	109.40
1	AA	1409	C	OP2-P-O3'	7.69	131.08	108.00
1	AA	733	A	OP2-P-O3'	-7.68	84.95	108.00
1	AA	202	G	OP2-P-O3'	7.66	130.97	108.00
7	AG	145	ALA	N-CA-C	-7.64	99.80	110.35
7	AG	147	ALA	N-CA-C	-7.55	103.45	114.39
2	AB	154	LEU	N-CA-C	7.52	119.12	111.07
1	AA	913	A	C2'-C3'-O3'	7.50	120.74	109.50
1	AA	587	G	P-O3'-C3'	7.49	131.43	120.20
21	B0	1807	A	C2'-C3'-O3'	7.46	120.69	109.50
19	AS	14	HIS	N-CA-C	-7.43	102.34	111.40
2	AB	187	LEU	N-CA-C	-7.42	96.46	108.41
1	AA	1301	U	C2'-C3'-O3'	7.39	120.59	109.50
14	AN	21	TYR	N-CA-C	7.39	120.34	107.49
21	B0	1113	C	C5'-C4'-C3'	-7.37	104.94	116.00
1	AA	79	G	OP1-P-O3'	-7.36	85.92	108.00
5	AE	64	ARG	N-CA-C	-7.35	97.70	109.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	B0	3117	A	N9-C1'-C2'	7.33	122.99	112.00
1	AA	274	A	OP2-P-O3'	7.31	129.92	108.00
21	B0	3106	U	OP1-P-O3'	7.29	129.87	108.00
1	AA	576	G	OP1-P-O3'	-7.27	86.18	108.00
6	AF	77	ARG	N-CA-C	-7.24	103.32	111.07
1	AA	143	A	OP1-P-O3'	7.21	129.64	108.00
1	AA	250	A	C2'-C3'-O3'	7.21	120.31	109.50
1	AA	1201	A	C2'-C3'-O3'	7.19	120.28	109.50
1	AA	1503	A	C2'-C3'-O3'	7.19	120.28	109.50
1	AA	246	A	OP2-P-O3'	7.17	129.53	108.00
21	B0	1071	U	O3'-P-O5'	7.17	114.75	104.00
1	AA	748	C	C2'-C3'-O3'	7.14	120.22	109.50
1	AA	1364	U	C2'-C3'-O3'	7.13	120.19	109.50
5	AE	20	GLN	N-CA-C	-7.12	98.53	109.14
1	AA	394	G	O3'-P-O5'	-7.11	93.33	104.00
18	AR	81	PHE	N-CA-C	-7.10	104.75	113.41
1	AA	733	A	O3'-P-O5'	7.09	114.64	104.00
1	AA	5	U	C2'-C3'-O3'	7.08	120.12	109.50
1	AA	1505	G	C2'-C3'-O3'	7.08	124.32	113.70
1	AA	26	A	P-O3'-C3'	-7.06	109.62	120.20
1	AA	546	G	P-O3'-C3'	7.05	130.78	120.20
1	AA	944	G	P-O3'-C3'	7.02	130.73	120.20
1	AA	1457	A	OP2-P-O3'	-7.00	87.00	108.00
8	AH	79	VAL	N-CA-C	-6.90	102.62	112.35
1	AA	1034	G	O3'-P-O5'	6.88	114.32	104.00
1	AA	869	G	P-O3'-C3'	6.88	130.51	120.20
1	AA	328	C	C2'-C3'-O3'	6.88	119.81	109.50
1	AA	1505	G	OP1-P-O3'	6.86	128.58	108.00
1	AA	1335	C	C4'-C3'-O3'	-6.86	102.72	113.00
19	AS	70	LYS	N-CA-C	6.83	119.76	108.49
1	AA	905	U	OP1-P-O3'	6.80	128.41	108.00
1	AA	278	G	OP2-P-O3'	6.80	128.39	108.00
1	AA	561	U	P-O3'-C3'	6.80	130.40	120.20
1	AA	1331	G	C2'-C3'-O3'	6.79	119.69	109.50
12	AL	119	LYS	N-CA-C	-6.79	99.24	110.17
1	AA	115	G	O3'-P-O5'	6.77	114.16	104.00
1	AA	983	A	OP1-P-O3'	6.71	128.14	108.00
5	AE	7	GLU	N-CA-C	-6.71	101.49	110.55
1	AA	509	A	C2'-C3'-O3'	6.70	123.75	113.70
1	AA	1110	A	P-O3'-C3'	-6.70	110.16	120.20
11	AK	91	ARG	N-CA-C	-6.69	105.25	113.41
1	AA	94	G	OP1-P-O3'	6.68	128.03	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	576	G	O3'-P-O5'	6.67	114.01	104.00
1	AA	197	A	N9-C1'-C2'	6.67	124.00	114.00
4	AD	33	MET	N-CA-C	-6.66	105.26	113.19
7	AG	148	ASN	N-CA-C	-6.66	103.24	112.30
1	AA	965	A	C2'-C3'-O3'	6.61	119.41	109.50
5	AE	76	ILE	CA-C-N	6.61	126.55	119.28
5	AE	76	ILE	C-N-CA	6.61	126.55	119.28
20	AT	44	ALA	N-CA-C	-6.60	104.08	111.28
1	AA	1065	U	C2'-C3'-O3'	6.59	119.39	109.50
7	AG	87	VAL	N-CA-C	6.58	114.29	108.63
1	AA	243	A	C4'-C3'-O3'	6.58	119.27	109.40
22	B9	73	C	OP1-P-O3'	-6.56	88.33	108.00
2	AB	105	PHE	N-CA-C	6.55	119.26	111.33
1	AA	556	C	O3'-P-O5'	6.53	113.79	104.00
3	AC	167	TRP	CB-CA-C	-6.51	107.70	117.07
1	AA	1335	C	OP1-P-O3'	-6.49	88.52	108.00
1	AA	1155	G	OP2-P-O3'	6.47	127.40	108.00
21	B0	192	G	C2'-C3'-O3'	6.46	119.19	109.50
1	AA	1085	U	C2'-C3'-O3'	6.46	119.19	109.50
5	AE	26	PHE	N-CA-C	6.46	120.08	110.52
1	AA	684	A	OP1-P-O3'	6.46	127.37	108.00
6	AF	67	MET	N-CA-C	6.45	113.81	108.07
3	AC	173	VAL	CA-C-N	6.43	127.88	119.84
3	AC	173	VAL	C-N-CA	6.43	127.88	119.84
21	B0	2426	G	C2'-C3'-O3'	6.42	119.14	109.50
1	AA	1281	U	C2'-C3'-O3'	6.41	119.11	109.50
16	AP	67	THR	N-CA-C	-6.38	102.07	110.43
19	AS	54	GLY	N-CA-C	-6.37	98.09	113.18
1	AA	914	A	OP2-P-O3'	6.36	127.08	108.00
8	AH	87	SER	N-CA-C	-6.32	100.93	110.28
21	B0	1354	A	C2'-C3'-O3'	6.31	118.97	109.50
2	AB	90	MET	N-CA-C	6.28	117.81	109.83
12	AL	61	THR	N-CA-C	-6.25	105.62	113.18
21	B0	2245	A	C2'-C3'-O3'	6.25	118.87	109.50
21	B0	242	A	C2'-C3'-O3'	6.24	118.86	109.50
1	AA	1124	G	N9-C1'-C2'	6.23	121.34	112.00
21	B0	3117	A	C4'-C3'-O3'	-6.22	103.67	113.00
1	AA	960	U	OP2-P-O3'	-6.20	89.39	108.00
4	AD	41	GLY	N-CA-C	6.19	120.48	112.68
1	AA	1345	U	P-O3'-C3'	6.19	129.49	120.20
1	AA	227	G	O3'-P-O5'	6.19	113.29	104.00
12	AL	66	VAL	N-CA-C	6.18	117.82	108.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AC	93	LYS	N-CA-C	-6.17	105.81	113.15
1	AA	119	A	C2'-C3'-O3'	6.14	118.71	109.50
17	AQ	100	LYS	N-CA-C	-6.14	105.49	114.39
1	AA	60	A	C4'-C3'-O3'	6.13	118.59	109.40
3	AC	25	GLY	N-CA-C	6.11	119.71	110.18
1	AA	1034	G	OP1-P-O3'	-6.10	89.69	108.00
21	B0	3186	C	OP2-P-O3'	-6.10	89.71	108.00
1	AA	63	C	C5'-C4'-C3'	-6.08	106.87	116.00
1	AA	115	G	N9-C1'-C2'	6.06	123.09	114.00
1	AA	533	A	C2'-C3'-O3'	6.05	118.58	109.50
1	AA	561	U	OP1-P-O3'	-6.03	89.90	108.00
1	AA	1337	G	O3'-P-O5'	-6.02	94.97	104.00
1	AA	1183	A	O3'-P-O5'	-6.02	94.97	104.00
1	AA	1129	C	C2'-C3'-O3'	6.01	118.51	109.50
20	AT	76	ALA	N-CA-C	-6.00	104.75	111.28
13	AM	11	ARG	N-CA-C	5.99	118.29	109.24
1	AA	461	C	O3'-P-O5'	5.98	112.97	104.00
18	AR	46	GLU	N-CA-C	-5.96	105.14	113.37
1	AA	914	A	O3'-P-O5'	-5.95	95.07	104.00
19	AS	36	ARG	N-CA-C	-5.95	106.00	113.20
10	AJ	51	ARG	N-CA-C	5.95	117.45	110.97
1	AA	556	C	OP1-P-O3'	5.92	125.75	108.00
10	AJ	81	THR	N-CA-C	-5.91	104.74	111.07
20	AT	88	VAL	N-CA-C	5.91	116.09	110.53
1	AA	1504	G	C2'-C3'-O3'	5.90	118.35	109.50
8	AH	75	ARG	CA-C-N	5.87	125.83	119.78
8	AH	75	ARG	C-N-CA	5.87	125.83	119.78
4	AD	12	CYS	N-CA-C	-5.86	104.08	111.11
1	AA	413	G	C4'-C3'-O3'	-5.86	104.21	113.00
16	AP	77	ALA	N-CA-C	-5.85	106.77	112.97
13	AM	107	ALA	N-CA-C	-5.84	105.03	113.21
16	AP	25	ARG	N-CA-C	5.82	120.23	113.18
6	AF	60	PHE	N-CA-C	5.80	118.93	109.59
1	AA	869	G	O3'-P-O5'	5.79	112.69	104.00
1	AA	1337	G	OP1-P-O3'	5.79	125.36	108.00
1	AA	701	C	C2'-C3'-O3'	5.78	118.17	109.50
15	AO	44	LYS	N-CA-C	-5.75	105.16	111.82
1	AA	135	C	OP1-P-O3'	-5.72	90.85	108.00
1	AA	993	G	N9-C1'-C2'	5.71	120.56	112.00
1	AA	281	G	C2'-C3'-O3'	5.71	118.06	109.50
21	B0	173	A	C2'-C3'-O3'	5.70	118.05	109.50
1	AA	944	G	OP1-P-O3'	5.69	125.06	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	413	G	N9-C1'-C2'	5.67	120.51	112.00
1	AA	1502	A	N9-C1'-C2'	5.67	122.50	114.00
1	AA	1182	G	C2'-C3'-O3'	5.67	118.00	109.50
4	AD	13	ARG	N-CA-C	5.66	117.13	111.07
4	AD	11	LEU	N-CA-C	-5.66	104.73	111.69
10	AJ	62	HIS	N-CA-C	5.66	119.04	109.76
21	B0	583	C	C2'-C3'-O3'	5.66	117.98	109.50
1	AA	960	U	O3'-P-O5'	-5.64	95.55	104.00
2	AB	45	GLN	N-CA-C	-5.63	105.23	111.71
1	AA	389	A	C5'-C4'-C3'	5.63	124.44	116.00
1	AA	1345	U	OP1-P-O3'	-5.62	91.15	108.00
1	AA	1285	A	C2'-C3'-O3'	5.61	117.91	109.50
20	AT	69	GLY	N-CA-C	-5.61	104.00	112.41
8	AH	56	LYS	CA-C-N	5.60	125.88	119.83
8	AH	56	LYS	C-N-CA	5.60	125.88	119.83
19	AS	34	TRP	N-CA-C	-5.59	106.23	113.16
21	B0	198	A	C2'-C3'-O3'	5.58	117.88	109.50
9	AI	63	ILE	N-CA-C	5.54	116.25	108.17
2	AB	186	ALA	N-CA-C	5.50	117.47	108.55
1	AA	266	G	C5'-C4'-C3'	-5.50	106.95	115.20
2	AB	23	ARG	N-CA-C	-5.49	99.10	110.80
1	AA	684	A	OP2-P-O3'	-5.48	91.56	108.00
1	AA	812	C	C2'-C3'-O3'	5.47	117.71	109.50
14	AN	38	GLY	N-CA-C	-5.46	108.10	115.36
7	AG	115	ARG	N-CA-C	5.45	117.62	108.96
1	AA	1200	C	C2'-C3'-O3'	-5.44	105.54	113.70
1	AA	1393	U	OP2-P-O3'	5.44	124.32	108.00
3	AC	167	TRP	CA-C-O	5.43	121.09	117.94
16	AP	20	VAL	N-CA-C	5.43	117.91	108.95
14	AN	53	LEU	CA-C-N	5.42	126.62	119.84
14	AN	53	LEU	C-N-CA	5.42	126.62	119.84
3	AC	99	VAL	N-CA-C	5.42	117.70	108.86
4	AD	28	SER	CA-C-N	5.42	126.61	119.84
4	AD	28	SER	C-N-CA	5.42	126.61	119.84
5	AE	51	VAL	CB-CA-C	-5.42	108.56	113.70
1	AA	239	U	OP1-P-O3'	-5.41	91.76	108.00
15	AO	5	LYS	N-CA-C	-5.40	105.39	111.28
1	AA	546	G	OP2-P-O3'	-5.40	91.80	108.00
20	AT	38	LYS	N-CA-C	-5.40	105.09	110.97
21	B0	3183	A	P-O3'-C3'	-5.38	112.13	120.20
1	AA	687	A	C4'-C3'-O3'	5.38	117.46	109.40
9	AI	118	LYS	N-CA-C	5.38	116.75	110.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	B0	1278	A	C2'-C3'-O3'	5.35	117.52	109.50
5	AE	11	ILE	N-CA-C	5.33	115.47	110.30
1	AA	1299	A	C4'-C3'-O3'	-5.33	105.01	113.00
2	AB	109	SER	N-CA-C	-5.32	105.15	111.69
1	AA	214	U	OP1-P-O3'	5.32	123.95	108.00
1	AA	1050	G	C5'-C4'-C3'	5.31	123.97	116.00
21	B0	1113	C	C3'-C2'-O2'	5.31	118.67	110.70
1	AA	1139	G	N9-C1'-C2'	5.31	119.96	112.00
1	AA	499	A	OP2-P-O3'	5.30	123.90	108.00
21	B0	1072	U	O5'-P-OP2	-5.29	92.12	108.00
1	AA	975	A	C2'-C3'-O3'	5.29	117.44	109.50
14	AN	22	THR	N-CA-C	5.28	122.04	110.80
1	AA	733	A	C1'-C2'-O2'	-5.27	103.89	111.80
3	AC	4	LYS	N-CA-C	5.27	122.03	110.80
1	AA	1346	A	C2'-C3'-O3'	5.27	117.40	109.50
10	AJ	18	ALA	N-CA-C	-5.25	104.46	111.24
11	AK	88	GLY	N-CA-C	5.24	118.41	110.75
21	B0	3146	A	C2'-C3'-O3'	5.24	117.36	109.50
1	AA	197	A	C2'-C3'-O3'	5.24	117.35	109.50
1	AA	344	A	C2'-C3'-O3'	5.23	117.35	109.50
1	AA	563	A	C4'-C3'-O3'	-5.23	105.16	113.00
20	AT	75	ASN	N-CA-C	-5.22	106.86	113.18
1	AA	661	G	C5'-C4'-C3'	-5.22	108.17	116.00
1	AA	1279	A	N9-C1'-C2'	5.21	119.81	112.00
1	AA	387	U	OP2-P-O3'	-5.21	92.38	108.00
1	AA	1101	A	C2'-C3'-O3'	5.20	117.30	109.50
9	AI	61	ALA	N-CA-C	5.20	117.84	108.48
1	AA	992	U	C2'-C3'-O3'	5.18	117.27	109.50
21	B0	1193	G	C2'-C3'-O3'	5.18	121.47	113.70
21	B0	3181	C	C4'-C3'-O3'	-5.17	105.24	113.00
1	AA	914	A	P-O3'-C3'	-5.17	112.45	120.20
10	AJ	22	LYS	N-CA-C	-5.16	105.55	111.07
18	AR	51	LEU	CA-C-N	5.16	125.14	120.03
18	AR	51	LEU	C-N-CA	5.16	125.14	120.03
1	AA	1305	G	N9-C1'-C2'	5.15	119.73	112.00
16	AP	14	ASN	CA-C-N	5.15	125.06	119.76
16	AP	14	ASN	C-N-CA	5.15	125.06	119.76
1	AA	869	G	OP2-P-O3'	-5.15	92.56	108.00
16	AP	79	VAL	N-CA-C	-5.13	105.52	113.16
21	B0	1113	C	P-O5'-C5'	-5.13	113.21	120.90
1	AA	38	G	O3'-P-O5'	5.12	111.69	104.00
2	AB	134	GLU	N-CA-C	-5.12	106.72	113.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	AI	59	PHE	CB-CA-C	-5.12	108.00	114.40
1	AA	1195	C	C4'-C3'-O3'	-5.12	105.33	113.00
1	AA	1305	G	C4'-C3'-O3'	-5.09	105.37	113.00
21	B0	3874	C	OP1-P-O3'	-5.08	92.75	108.00
8	AH	135	CYS	N-CA-C	5.08	114.95	108.24
1	AA	394	G	OP1-P-O3'	5.08	123.24	108.00
8	AH	103	VAL	N-CA-C	5.06	116.20	109.37
1	AA	239	U	OP2-P-O3'	5.06	123.18	108.00
19	AS	21	GLU	N-CA-C	-5.05	105.91	111.71
1	AA	397	A	P-O3'-C3'	5.04	127.76	120.20
2	AB	233	SER	N-CA-C	5.04	116.17	109.93
10	AJ	55	LYS	N-CA-C	5.03	118.58	109.32
1	AA	754	C	OP2-P-O3'	-5.02	92.93	108.00
9	AI	87	GLN	N-CA-C	-5.02	105.81	111.28
1	AA	1305	G	OP2-P-O3'	5.01	123.04	108.00
21	B0	3110	G	O4'-C1'-C2'	5.01	110.81	105.80
21	B0	3155	G	O3'-P-O5'	5.01	111.52	104.00
1	AA	1451	A	C2'-C3'-O3'	5.01	117.01	109.50
1	AA	397	A	OP2-P-O3'	-5.00	92.98	108.00
21	B0	1072	U	N1-C1'-C2'	5.00	119.51	112.00
1	AA	38	G	OP1-P-O3'	-5.00	93.00	108.00
7	AG	45	ASP	N-CA-C	-5.00	105.28	111.33

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	181	G	C3'
1	AA	1528	U	C3'

All (45) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AA	1048	G	Sidechain
1	AA	1073	U	Sidechain
1	AA	1079	G	Sidechain
1	AA	1085	U	Sidechain
1	AA	1092	A	Sidechain
1	AA	1139	G	Sidechain
1	AA	12	U	Sidechain
1	AA	1281	U	Sidechain
1	AA	1289	A	Sidechain
1	AA	1293	G	Sidechain

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Mol	Chain	Res	Type	Group
1	AA	1299	A	Sidechain
1	AA	1301	U	Sidechain
1	AA	1305	G	Sidechain
1	AA	1340	A	Sidechain
1	AA	1360	A	Sidechain
1	AA	1506	U	Sidechain
1	AA	1525	G	Sidechain
1	AA	187	G	Sidechain
1	AA	191	G	Sidechain
1	AA	197	A	Sidechain
1	AA	231	G	Sidechain
1	AA	249	U	Sidechain
1	AA	250	A	Sidechain
1	AA	251	G	Sidechain
1	AA	254	G	Sidechain
1	AA	266	G	Sidechain
1	AA	274	A	Sidechain
1	AA	290	C	Sidechain
1	AA	297	G	Sidechain
1	AA	305	G	Sidechain
1	AA	380	G	Sidechain
1	AA	413	G	Sidechain
1	AA	481	G	Sidechain
1	AA	573	A	Sidechain
1	AA	575	G	Sidechain
1	AA	603	U	Sidechain
1	AA	727	G	Sidechain
1	AA	879	C	Sidechain
1	AA	898	G	Sidechain
1	AA	982	U	Sidechain
21	B0	1071	U	Sidechain
21	B0	1099	A	Sidechain
21	B0	3117	A	Sidechain
21	B0	3168	G	Sidechain
21	B0	873	U	Sidechain

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32939	0	16652	3456	1
2	AB	1900	0	1951	227	0
3	AC	1612	0	1675	298	0
4	AD	1702	0	1767	228	2
5	AE	1146	0	1207	260	0
6	AF	842	0	855	77	2
7	AG	1256	0	1296	143	2
8	AH	1115	0	1177	128	0
9	AI	1010	0	1043	188	0
10	AJ	794	0	839	209	2
11	AK	884	0	904	87	0
12	AL	970	0	1056	154	0
13	AM	996	0	1068	185	0
14	AN	491	0	529	156	0
15	AO	733	0	770	63	0
16	AP	700	0	720	81	0
17	AQ	856	0	925	244	0
18	AR	596	0	668	77	0
19	AS	647	0	673	159	0
20	AT	762	0	853	291	0
21	B0	60636	0	30557	1715	1
22	B9	2519	0	1287	43	0
23	BA	270	0	0	0	0
24	BB	205	0	0	0	0
25	BC	197	0	0	0	0
26	BD	178	0	0	4	0
27	BE	177	0	0	0	0
28	BF	52	0	0	0	0
29	BG	143	0	0	1	0
30	BH	143	0	0	0	0
31	BI	132	0	0	2	0
32	BJ	141	0	0	1	0
33	BK	124	0	0	0	0
34	BL	114	0	0	1	0
35	BM	111	0	0	0	0
36	BN	125	0	0	0	0
37	BO	117	0	0	0	0
38	BP	100	0	0	0	0
39	BQ	130	0	0	0	0
40	BR	93	0	0	0	0
41	BS	113	0	0	0	0
42	BT	173	0	0	0	0
43	BU	86	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BV	16	0	0	0	0
45	BW	65	0	0	0	0
46	BX	55	0	0	0	0
47	BY	73	0	0	0	0
48	BZ	58	0	0	0	0
49	B1	53	0	0	0	0
50	B2	46	0	0	0	0
51	B3	63	0	0	0	0
52	B4	35	0	0	0	0
53	B5	217	0	0	22	0
All	All	118711	0	68472	7084	5

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 38.

All (7084) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1278:U:H5''	1:AA:1279:A:P	1.31	1.68
1:AA:1458:G:C8	1:AA:1459:C:H2'	1.27	1.63
1:AA:191:G:C6	1:AA:192:U:C2	1.90	1.60
1:AA:1475:G:H5''	21:B0:1706:A:C4'	1.13	1.60
1:AA:1475:G:C5'	21:B0:1706:A:H4'	1.32	1.59
21:B0:1861:G:H5'	53:B5:199:ASN:CA	1.09	1.56
1:AA:1256:A:H5'	1:AA:1258:G:C1'	1.26	1.56
1:AA:130:A:C2	1:AA:264:U:N1	1.72	1.55
1:AA:922:G:C2	1:AA:1396:A:C6	1.93	1.55
21:B0:3109:U:C5'	21:B0:3150:C:H5'	1.13	1.55
4:AD:89:THR:N	5:AE:97:GLY:HA3	1.21	1.54
1:AA:130:A:N1	1:AA:264:U:C2	1.76	1.53
1:AA:1261:A:C4'	1:AA:1283:G:H4'	1.37	1.52
1:AA:1475:G:C5'	21:B0:1706:A:C4'	1.83	1.52
17:AQ:104:LYS:CE	21:B0:729:A:H62	1.23	1.52
1:AA:130:A:C2	1:AA:264:U:C2	1.92	1.51
21:B0:3197:U:H3	21:B0:2204:A:N6	1.09	1.51
1:AA:94:G:O3'	1:AA:96:C:P	1.12	1.50
1:AA:6:G:C4	5:AE:119:LEU:HD11	1.42	1.50
1:AA:130:A:C4	1:AA:264:U:O4'	1.66	1.47
1:AA:1394:A:C6	1:AA:1501:C:H4'	1.48	1.47
1:AA:112:G:H21	1:AA:354:G:C5'	1.23	1.47
1:AA:319:G:N3	1:AA:1434:A:N3	1.62	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:375:U:O3'	1:AA:376:G:P	1.08	1.46
1:AA:702:A:N1	21:B0:1838:G:C2'	1.78	1.46
1:AA:112:G:N2	1:AA:354:G:H5'	1.21	1.45
1:AA:922:G:N2	1:AA:1396:A:C5	1.84	1.45
1:AA:189:A:N6	20:AT:89:ARG:HH21	1.05	1.44
1:AA:191:G:N1	1:AA:192:U:C2	1.85	1.43
1:AA:189:A:C6	20:AT:89:ARG:NH2	1.86	1.42
1:AA:323:U:H5''	20:AT:23:ARG:N	1.34	1.42
1:AA:130:A:C4	1:AA:264:U:C1'	2.02	1.42
4:AD:57:ARG:NH2	5:AE:107:ARG:HD3	1.15	1.41
1:AA:1394:A:C5	1:AA:1501:C:H4'	1.53	1.41
17:AQ:104:LYS:HE3	21:B0:729:A:N6	1.12	1.40
1:AA:187:G:C2	20:AT:105:SER:HB2	1.56	1.40
1:AA:293:G:H4'	1:AA:609:A:C2	1.53	1.39
21:B0:1861:G:C5'	53:B5:199:ASN:CA	1.96	1.39
1:AA:51:A:N1	1:AA:314:C:H1'	1.32	1.39
1:AA:293:G:H4'	1:AA:609:A:N1	1.38	1.39
21:B0:3876:A:H1'	53:B5:45:ASP:CA	1.52	1.39
1:AA:262:A:O2'	20:AT:75:ASN:ND2	1.56	1.39
21:B0:1856:U:O5'	21:B0:3865:A:C8	1.76	1.39
17:AQ:104:LYS:N	21:B0:726:G:H21	1.20	1.38
1:AA:235:C:H5'	17:AQ:70:ARG:CG	1.52	1.38
1:AA:189:A:N6	20:AT:104:LEU:HB3	1.37	1.37
21:B0:3110:G:P	21:B0:3149:G:H4'	1.63	1.37
1:AA:187:G:O4'	20:AT:85:MET:CE	1.72	1.37
1:AA:1484:C:H4'	21:B0:1943:A:C1'	1.55	1.36
1:AA:1505:G:C3'	1:AA:1506:U:P	2.14	1.36
1:AA:319:G:N2	1:AA:1434:A:H1'	1.37	1.36
1:AA:261:U:C5	20:AT:79:ARG:CZ	2.07	1.36
1:AA:760:G:O6	17:AQ:105:ALA:HB2	1.20	1.35
1:AA:191:G:C6	1:AA:192:U:N3	1.94	1.35
21:B0:1856:U:C4	21:B0:3865:A:C2	1.89	1.34
4:AD:88:VAL:HG22	5:AE:96:PRO:CB	1.57	1.34
1:AA:319:G:O2'	1:AA:1434:A:N1	1.58	1.34
21:B0:1098:G:H22	21:B0:1113:C:N4	1.25	1.33
21:B0:891:A:C1'	21:B0:892:A:C8	2.07	1.33
1:AA:113:G:N3	1:AA:353:A:O2'	1.58	1.33
21:B0:3110:G:OP1	21:B0:3148:G:H2'	1.21	1.33
1:AA:436:C:H2'	1:AA:437:U:O4'	1.16	1.32
1:AA:436:C:C4	1:AA:437:U:C4	2.17	1.32
1:AA:538:G:P	12:AL:115:LYS:HG3	1.68	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:186:C:O4'	20:AT:81:LYS:HE2	1.21	1.32
1:AA:190:A:C2	20:AT:101:GLY:CA	2.13	1.31
1:AA:1261:A:C4'	1:AA:1283:G:C4'	2.05	1.31
1:AA:1190:G:OP1	3:AC:4:LYS:CA	1.77	1.31
1:AA:216:C:C4'	1:AA:468:A:N3	1.79	1.31
1:AA:191:G:C5	1:AA:192:U:C6	2.17	1.30
1:AA:702:A:N1	21:B0:1838:G:H2'	0.98	1.30
1:AA:1256:A:N6	1:AA:1278:U:O2	1.62	1.30
1:AA:6:G:O6	5:AE:94:ALA:HA	1.24	1.30
1:AA:402:G:H4'	1:AA:620:C:N3	1.43	1.30
21:B0:3197:U:H1'	21:B0:2181:A:N7	1.46	1.30
1:AA:403:C:O2'	1:AA:404:U:H5'	1.15	1.30
1:AA:1405:G:O4'	1:AA:1519:A:H4'	1.25	1.30
1:AA:1182:G:H5'	1:AA:1184:G:C5'	1.62	1.30
21:B0:3197:U:N3	21:B0:2204:A:N6	1.79	1.30
1:AA:19:C:O2	1:AA:916:G:N2	1.62	1.29
1:AA:1394:A:C6	1:AA:1501:C:C4'	2.13	1.29
1:AA:1405:G:H1'	1:AA:1519:A:O4'	1.25	1.29
4:AD:89:THR:CB	5:AE:97:GLY:O	1.79	1.29
21:B0:891:A:O2'	21:B0:892:A:C5'	1.80	1.29
1:AA:1014:A:N3	1:AA:1219:U:O2'	1.65	1.29
1:AA:1256:A:C5'	1:AA:1258:G:C1'	2.10	1.29
1:AA:406:G:C4	1:AA:496:A:C6	2.21	1.29
1:AA:132:C:H5'	1:AA:262:A:C1'	1.62	1.29
1:AA:1255:G:H1'	1:AA:1259:C:C1'	1.63	1.28
1:AA:1297:C:OP1	13:AM:44:ARG:NH2	1.64	1.28
21:B0:1856:U:H3'	21:B0:3865:A:C8	1.67	1.28
1:AA:51:A:C2	1:AA:314:C:O2'	1.84	1.28
1:AA:130:A:C5	1:AA:264:U:H1'	1.68	1.28
1:AA:191:G:C2	1:AA:192:U:H1'	1.68	1.28
1:AA:187:G:O4'	20:AT:85:MET:HE1	1.15	1.28
1:AA:406:G:C5	1:AA:496:A:C5	2.22	1.28
1:AA:189:A:N6	20:AT:104:LEU:CB	1.97	1.27
1:AA:190:A:N7	20:AT:105:SER:HA	1.46	1.27
1:AA:489:C:OP1	4:AD:132:ARG:NH2	1.66	1.27
1:AA:702:A:C2	21:B0:1838:G:C2'	2.11	1.27
1:AA:191:G:O6	1:AA:192:U:N3	1.63	1.27
1:AA:1044:A:H2'	1:AA:1045:C:O2'	1.16	1.26
21:B0:3108:G:H2'	21:B0:3109:U:C5	1.67	1.26
1:AA:760:G:N1	17:AQ:104:LYS:O	1.69	1.26
1:AA:436:C:C2	1:AA:437:U:C6	2.24	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:130:A:C2	1:AA:264:U:C6	2.22	1.25
1:AA:132:C:C4'	1:AA:262:A:H1'	1.63	1.25
1:AA:760:G:O6	17:AQ:105:ALA:CB	1.85	1.25
1:AA:112:G:C2	1:AA:354:G:H5'	1.70	1.25
1:AA:293:G:C4'	1:AA:609:A:N1	1.99	1.25
1:AA:1277:C:O2'	1:AA:1279:A:C8	1.88	1.25
1:AA:319:G:N2	1:AA:1434:A:C1'	1.99	1.25
1:AA:1278:U:C5'	1:AA:1279:A:P	2.22	1.25
3:AC:59:ARG:O	10:AJ:92:THR:O	1.52	1.25
5:AE:79:GLU:OE1	8:AH:105:ARG:HD3	1.31	1.25
1:AA:1255:G:C1'	1:AA:1259:C:H1'	1.66	1.25
21:B0:891:A:H1'	21:B0:892:A:C8	1.51	1.25
21:B0:1098:G:N2	21:B0:1113:C:H42	1.33	1.25
1:AA:187:G:N3	20:AT:105:SER:HB2	1.50	1.24
1:AA:319:G:H21	1:AA:1434:A:C1'	1.46	1.24
1:AA:702:A:C6	21:B0:1838:G:H2'	1.70	1.24
1:AA:1416:G:H3'	1:AA:1417:G:P	1.76	1.24
13:AM:93:ARG:CG	21:B0:900(A):A:OP1	1.84	1.24
1:AA:476:U:H3'	1:AA:477:G:P	1.73	1.24
1:AA:476:U:C2	1:AA:477:G:O4'	1.91	1.24
1:AA:1261:A:O4'	1:AA:1283:G:C4'	1.86	1.24
1:AA:1484:C:O2'	21:B0:1943:A:H4'	1.23	1.24
1:AA:261:U:C4	20:AT:79:ARG:HD3	1.69	1.24
1:AA:141:A:C2	1:AA:195:A:H2	1.56	1.24
1:AA:1256:A:H5'	1:AA:1258:G:N9	1.52	1.24
1:AA:132:C:C5'	1:AA:262:A:H1'	1.68	1.24
13:AM:82:MET:CG	13:AM:93:ARG:HE	1.49	1.24
21:B0:1856:U:O4	21:B0:3865:A:C2	1.86	1.24
1:AA:319:G:H2'	1:AA:1434:A:C2	1.73	1.23
1:AA:323:U:O3'	20:AT:22:ARG:HB3	1.36	1.23
1:AA:476:U:C4	1:AA:477:G:C8	2.26	1.23
1:AA:820:U:O2	1:AA:873:A:C8	1.89	1.23
1:AA:922:G:C2	1:AA:1396:A:N1	2.06	1.23
1:AA:1224:G:O2'	1:AA:1225:A:OP1	1.53	1.23
1:AA:1261:A:O2'	1:AA:1283:G:H5''	1.33	1.23
1:AA:217:C:O2'	1:AA:470:U:H5'	1.38	1.23
1:AA:1416:G:C2'	1:AA:1417:G:H5'	1.68	1.23
4:AD:89:THR:N	5:AE:97:GLY:CA	2.01	1.23
21:B0:892:A:H1'	21:B0:911:A:C2	1.72	1.23
1:AA:1064:G:H1'	1:AA:1190:G:N2	1.52	1.23
1:AA:132:C:C4'	1:AA:262:A:C1'	2.17	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:232:G:N3	1:AA:263:A:C2	2.06	1.23
4:AD:89:THR:HB	5:AE:97:GLY:O	1.06	1.23
1:AA:115:G:O2'	1:AA:116:A:OP2	1.57	1.23
1:AA:261:U:C4	20:AT:79:ARG:CD	2.22	1.23
1:AA:351:G:O3'	1:AA:352:C:P	1.97	1.23
1:AA:1457:A:C8	1:AA:1459:C:C2	2.27	1.23
1:AA:815:A:O2'	1:AA:1527:C:O4'	1.56	1.22
10:AJ:45:ARG:NH1	14:AN:36:PHE:CD2	2.03	1.22
1:AA:216:C:H1'	1:AA:468:A:O2'	1.09	1.22
1:AA:1014:A:C2	1:AA:1219:U:O2'	1.78	1.22
1:AA:261:U:C5	20:AT:79:ARG:NE	2.06	1.22
1:AA:1459:C:OP1	20:AT:31:SER:OG	1.55	1.22
1:AA:89:G:O3'	1:AA:90:C:P	1.98	1.22
1:AA:247:G:OP2	17:AQ:100:LYS:HE2	1.38	1.22
1:AA:130:A:C8	17:AQ:63:ARG:HG3	1.75	1.21
1:AA:1458:G:C8	1:AA:1459:C:C2'	2.22	1.21
21:B0:3110:G:OP2	21:B0:3149:G:H4'	1.04	1.21
21:B0:3149:G:O3'	21:B0:3150:C:P	1.98	1.21
1:AA:1405:G:H1'	1:AA:1519:A:C4'	1.70	1.21
1:AA:190:A:C2	20:AT:101:GLY:HA3	1.73	1.21
1:AA:1277:C:H1'	1:AA:1279:A:C8	1.74	1.20
1:AA:44:G:OP2	16:AP:12:LYS:HB2	1.07	1.20
1:AA:191:G:N3	1:AA:192:U:H1'	1.56	1.20
1:AA:1459:C:H5''	20:AT:28:ALA:CB	1.72	1.20
4:AD:89:THR:H	5:AE:97:GLY:CA	1.51	1.20
4:AD:57:ARG:NH2	5:AE:107:ARG:CD	2.05	1.20
1:AA:6:G:C4	5:AE:119:LEU:CD1	2.25	1.19
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.22	1.19
21:B0:3110:G:P	21:B0:3149:G:C4'	2.29	1.19
1:AA:1256:A:H4'	1:AA:1258:G:C8	1.76	1.19
1:AA:130:A:O4'	1:AA:264:U:C4'	1.90	1.19
1:AA:935:A:H1'	1:AA:1384:C:N3	1.56	1.19
1:AA:132:C:C5'	1:AA:262:A:C1'	2.21	1.19
1:AA:261:U:O4	20:AT:79:ARG:CD	1.91	1.19
1:AA:20:U:O2	1:AA:915:A:N6	1.75	1.18
1:AA:143:A:O3'	1:AA:144:G:P	2.01	1.18
1:AA:923:A:O4'	1:AA:1398:A:C2	1.94	1.18
1:AA:1256:A:C5'	1:AA:1258:G:H1'	1.67	1.18
17:AQ:104:LYS:HE2	21:B0:727:U:O2	1.39	1.18
22:B9:73:C:O3'	22:B9:74:A:P	2.01	1.18
1:AA:1342:C:O3'	9:AI:125:TYR:OH	1.60	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1497:G:N2	1:AA:1519:A:N3	1.89	1.18
17:AQ:104:LYS:N	21:B0:726:G:N2	1.88	1.18
1:AA:1261:A:H4'	1:AA:1283:G:C3'	1.73	1.18
1:AA:130:A:O4'	1:AA:264:U:H4'	1.42	1.18
1:AA:1261:A:H4'	1:AA:1283:G:C4'	1.67	1.18
21:B0:3183:A:O3'	21:B0:3184:C:P	2.02	1.18
1:AA:570:G:O2'	1:AA:819:A:H2'	1.44	1.18
1:AA:760:G:C6	17:AQ:105:ALA:HB2	1.78	1.18
1:AA:922:G:N2	1:AA:1396:A:C6	2.05	1.17
1:AA:112:G:N2	1:AA:354:G:C5'	1.90	1.17
12:AL:19:ARG:C	12:AL:20:LYS:N	2.01	1.17
1:AA:815:A:C2	1:AA:1528:U:O4'	1.97	1.17
1:AA:1211:U:O3'	1:AA:1212:U:P	2.03	1.17
1:AA:1231:G:OP1	9:AI:127:LYS:NZ	1.78	1.17
1:AA:1347:G:C5	9:AI:107:ARG:NH1	2.10	1.17
1:AA:1475:G:C4'	21:B0:1706:A:H4'	1.74	1.17
21:B0:1098:G:N2	21:B0:1113:C:N4	1.89	1.17
1:AA:69:G:H5'	1:AA:152:A:C2	1.78	1.17
1:AA:261:U:O4	20:AT:79:ARG:HD2	1.41	1.17
1:AA:232:G:N3	1:AA:263:A:H2	1.37	1.17
1:AA:323:U:O3'	20:AT:22:ARG:CB	1.92	1.17
1:AA:103:C:O2'	1:AA:171:A:N1	1.73	1.16
1:AA:319:G:C2	1:AA:1434:A:N3	2.12	1.16
1:AA:835:U:H5''	18:AR:64:ARG:NH2	1.58	1.16
1:AA:131:C:O2	1:AA:262:A:H2	1.25	1.16
1:AA:436:C:C2'	1:AA:437:U:O4'	1.94	1.16
1:AA:1495:U:O2'	21:B0:1902:A:N3	1.78	1.16
3:AC:29:TYR:CE1	10:AJ:65:LEU:HD11	1.79	1.16
10:AJ:62:HIS:CB	14:AN:59:ALA:HB3	1.76	1.16
21:B0:910:U:O2'	21:B0:911:A:H5'	1.42	1.16
1:AA:19:C:N3	1:AA:916:G:N1	1.94	1.15
1:AA:187:G:C4'	20:AT:85:MET:HE2	1.75	1.15
1:AA:191:G:N1	1:AA:192:U:O2	1.78	1.15
1:AA:191:G:N3	1:AA:192:U:C1'	2.08	1.15
1:AA:367:U:C2	1:AA:369:C:C5	2.34	1.15
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.26	1.15
21:B0:1856:U:H3	21:B0:3877:A:N6	1.44	1.15
1:AA:1329:A:H5''	13:AM:26:GLY:H	1.09	1.15
1:AA:1405:G:C1'	1:AA:1519:A:C4'	2.25	1.15
1:AA:1505:G:O3'	1:AA:1506:U:P	0.75	1.15
1:AA:141:A:C4'	1:AA:182:U:H1'	1.75	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:235:C:C5'	17:AQ:70:ARG:HG2	1.75	1.15
1:AA:1459:C:C5'	20:AT:28:ALA:HB1	1.76	1.15
1:AA:274:A:N3	1:AA:275:G:H1'	1.61	1.15
1:AA:717:C:O3'	1:AA:718:G:P	2.05	1.15
1:AA:1459:C:H5''	20:AT:28:ALA:CA	1.77	1.15
1:AA:375:U:HO3'	1:AA:376:G:P	1.15	1.14
1:AA:406:G:C6	1:AA:496:A:N7	2.15	1.14
1:AA:1256:A:N3	1:AA:1258:G:C6	2.15	1.14
1:AA:1298:C:C5	7:AG:114:ARG:HD3	1.82	1.14
21:B0:3876:A:C1'	53:B5:45:ASP:CA	2.25	1.14
1:AA:7:G:H5'	1:AA:298:A:H5'	1.25	1.14
1:AA:44:G:OP2	16:AP:12:LYS:CB	1.95	1.14
1:AA:960:U:H1'	1:AA:1222:G:O2'	1.44	1.14
1:AA:1458:G:H8	1:AA:1459:C:C2'	1.57	1.14
13:AM:88:ARG:HD2	19:AS:3:ARG:HH21	1.03	1.14
1:AA:452:A:OP1	16:AP:43:LYS:NZ	1.77	1.14
1:AA:922:G:N1	1:AA:1396:A:N6	1.96	1.14
1:AA:1277:C:O2'	1:AA:1279:A:N9	1.79	1.14
1:AA:1405:G:C1'	1:AA:1519:A:H4'	1.78	1.14
1:AA:293:G:P	1:AA:609:A:H61	1.71	1.13
1:AA:237:C:OP1	17:AQ:40:LYS:CD	1.95	1.13
1:AA:320:C:O4'	1:AA:1434:A:C2	2.00	1.13
1:AA:1347:G:C4	9:AI:107:ARG:NH1	2.16	1.13
1:AA:142:G:H21	1:AA:196:A:H1'	1.06	1.13
1:AA:319:G:C2'	1:AA:1434:A:C2	2.31	1.13
1:AA:1261:A:H4'	1:AA:1283:G:O3'	1.45	1.13
21:B0:1861:G:OP2	53:B5:38:GLY:CA	1.97	1.13
1:AA:293:G:O5'	1:AA:609:A:N6	1.81	1.13
1:AA:319:G:N3	1:AA:1434:A:C2	2.17	1.13
1:AA:323:U:C5'	20:AT:23:ARG:N	2.12	1.13
1:AA:436:C:C4	1:AA:437:U:C5	2.37	1.13
1:AA:1234:C:H5'	1:AA:1365:G:OP1	1.49	1.13
17:AQ:104:LYS:CE	21:B0:727:U:O2	1.97	1.13
21:B0:1861:G:OP1	53:B5:37:LYS:CA	1.96	1.13
1:AA:130:A:O4'	1:AA:264:U:C5'	1.97	1.12
1:AA:421:U:C6	3:AC:127:ARG:NH2	1.99	1.13
4:AD:88:VAL:HA	5:AE:96:PRO:C	1.74	1.13
13:AM:93:ARG:HG2	21:B0:900(A):A:OP1	0.96	1.13
21:B0:891:A:O2'	21:B0:892:A:H5'	0.96	1.12
21:B0:891:A:C2'	21:B0:892:A:C8	2.30	1.13
13:AM:86:CYS:HG	13:AM:87:TYR:N	1.45	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1067:G:H5'	21:B0:1068:A:H5'	1.26	1.12
1:AA:323:U:OP1	20:AT:23:ARG:HA	1.49	1.12
1:AA:1261:A:O4'	1:AA:1283:G:H4'	0.95	1.12
21:B0:1066:G:N2	21:B0:1115:C:N3	1.96	1.12
1:AA:130:A:N9	1:AA:264:U:O4'	1.82	1.12
1:AA:922:G:N2	1:AA:1396:A:C4	2.16	1.12
1:AA:1398:A:H61	5:AE:21:ALA:HA	0.97	1.12
17:AQ:104:LYS:CG	21:B0:727:U:H1'	1.79	1.12
1:AA:191:G:O6	1:AA:192:U:C4	2.02	1.12
1:AA:406:G:C8	1:AA:496:A:C2	2.37	1.12
1:AA:571:U:H5''	1:AA:819:A:C2	1.85	1.12
1:AA:599:C:H4'	8:AH:130:GLY:C	1.75	1.12
1:AA:1298:C:N4	7:AG:114:ARG:HB3	1.65	1.12
1:AA:1483:A:C3'	1:AA:1484:C:OP2	1.97	1.12
1:AA:189:A:C5	20:AT:89:ARG:NH2	2.16	1.11
1:AA:922:G:N3	1:AA:1396:A:N1	1.98	1.11
21:B0:3128:G:O2'	21:B0:3174:C:H5'	1.47	1.11
1:AA:375:U:C3'	1:AA:376:G:P	2.36	1.11
1:AA:761:G:H5''	17:AQ:102:GLY:HA3	1.33	1.11
21:B0:1098:G:N2	21:B0:1113:C:N3	1.97	1.11
1:AA:216:C:O2'	1:AA:468:A:H2'	1.48	1.11
4:AD:88:VAL:HG22	5:AE:96:PRO:HB3	1.20	1.11
21:B0:3109:U:H5'	21:B0:3150:C:H5'	1.15	1.11
1:AA:143:A:C3'	1:AA:144:G:P	2.38	1.11
1:AA:1261:A:O2'	1:AA:1283:G:C5'	1.99	1.11
1:AA:1419:G:H4'	21:B0:1932:G:O2'	1.50	1.11
1:AA:1256:A:N3	1:AA:1258:G:N1	1.97	1.10
1:AA:142:G:H1'	1:AA:195:A:N1	1.66	1.10
1:AA:223:U:H5'	20:AT:68:LYS:HZ1	1.02	1.10
1:AA:1329:A:H5'	13:AM:29:ARG:HG3	1.15	1.10
1:AA:186:C:O4'	20:AT:81:LYS:CE	1.98	1.10
1:AA:1113:C:H1'	3:AC:178:LEU:HD21	1.33	1.10
1:AA:1318:A:H4'	19:AS:10:PHE:CE1	1.85	1.10
1:AA:1500:A:OP1	1:AA:1508:G:OP1	1.67	1.10
1:AA:1503:A:OP1	1:AA:1531:A:O2'	1.69	1.10
5:AE:152:ARG:NH2	8:AH:107:LEU:O	1.82	1.10
1:AA:132:C:H4'	1:AA:262:A:O4'	1.50	1.10
1:AA:390:C:O3'	16:AP:28:ARG:NH2	1.83	1.10
1:AA:1416:G:C3'	1:AA:1417:G:H5'	1.81	1.10
1:AA:323:U:P	20:AT:23:ARG:HA	1.92	1.10
1:AA:502:G:H1'	1:AA:550:G:H5'	1.32	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:765:G:O3'	1:AA:766:A:P	2.09	1.10
1:AA:1318:A:H4'	19:AS:10:PHE:CD1	1.86	1.10
1:AA:1475:G:OP1	21:B0:1706:A:H1'	1.49	1.10
1:AA:1484:C:C4'	21:B0:1943:A:H1'	1.82	1.10
21:B0:3110:G:OP2	21:B0:3149:G:C4'	1.98	1.10
1:AA:1092:A:H5''	7:AG:4:ARG:NH2	1.67	1.09
10:AJ:51:ARG:HB2	10:AJ:59:SER:HB3	1.34	1.09
1:AA:191:G:C5	1:AA:192:U:N1	2.20	1.09
1:AA:216:C:H4'	1:AA:468:A:C4	1.87	1.09
1:AA:1014:A:P	19:AS:14:HIS:HB3	1.91	1.09
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.03	1.09
21:B0:940:G:H3'	21:B0:941:U:H5''	1.19	1.09
1:AA:130:A:N1	1:AA:264:U:O2	1.82	1.09
1:AA:355:C:C1'	1:AA:388:G:O2'	2.00	1.09
1:AA:1112:C:N3	3:AC:178:LEU:N	1.99	1.09
1:AA:1416:G:H2'	1:AA:1417:G:H5'	1.25	1.09
1:AA:1483:A:C5	1:AA:1484:C:C5	2.41	1.09
1:AA:118:U:O3'	1:AA:119:A:P	2.11	1.09
1:AA:130:A:N3	1:AA:264:U:N1	2.00	1.09
1:AA:130:A:N3	1:AA:264:U:C1'	2.16	1.09
21:B0:1856:U:O4	21:B0:3865:A:N1	1.79	1.09
1:AA:835:U:OP1	18:AR:64:ARG:NH2	1.85	1.08
9:AI:8:GLY:HA2	9:AI:79:LEU:HD12	1.32	1.08
21:B0:1856:U:O5'	21:B0:3865:A:N7	1.85	1.08
1:AA:1346:A:H2'	7:AG:10:ARG:HH22	1.09	1.08
1:AA:191:G:C4	1:AA:192:U:C1'	2.36	1.08
1:AA:928:G:O3'	1:AA:1533:C:N4	1.85	1.08
1:AA:1256:A:O4'	1:AA:1258:G:C5	2.05	1.08
21:B0:1098:G:N2	21:B0:1113:C:C4	2.21	1.08
1:AA:322:C:O2'	20:AT:23:ARG:HB2	1.53	1.08
1:AA:323:U:C5'	20:AT:23:ARG:CA	2.32	1.08
1:AA:1398:A:H61	5:AE:21:ALA:CA	1.67	1.08
4:AD:150:GLU:HG3	4:AD:153:ARG:HH21	1.19	1.08
5:AE:79:GLU:CD	8:AH:105:ARG:HD3	1.76	1.08
1:AA:261:U:OP2	20:AT:79:ARG:NH2	1.86	1.08
1:AA:6:G:N9	5:AE:119:LEU:CD1	2.17	1.07
1:AA:130:A:C1'	1:AA:264:U:H5'	1.83	1.07
21:B0:225:G:H3'	21:B0:226:C:H5'	1.30	1.07
1:AA:44:G:P	16:AP:12:LYS:HB2	1.93	1.07
1:AA:94:G:C3'	1:AA:96:C:P	2.41	1.07
17:AQ:103:GLY:C	21:B0:726:G:H21	1.60	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:132:C:O4'	1:AA:262:A:H1'	1.53	1.07
1:AA:212:G:O3'	1:AA:213:G:P	2.12	1.07
1:AA:403:C:O2'	1:AA:404:U:C5'	2.02	1.07
1:AA:1256:A:C5'	1:AA:1258:G:N9	2.17	1.07
4:AD:36:ARG:H	4:AD:37:PRO:HD3	1.19	1.07
21:B0:1856:U:O2'	21:B0:3865:A:H5'	1.28	1.07
21:B0:3098:U:O3'	21:B0:3099:U:P	2.12	1.07
1:AA:142:G:H4'	1:AA:195:A:N6	1.68	1.07
1:AA:142:G:C1'	1:AA:195:A:N1	2.18	1.07
1:AA:1211:U:H5'	1:AA:1212:U:P	1.94	1.07
1:AA:1367:C:OP1	9:AI:115:GLY:N	1.86	1.07
17:AQ:104:LYS:HG2	21:B0:726:G:C2	1.89	1.07
1:AA:131:C:O2	1:AA:262:A:C2	2.07	1.06
17:AQ:101:ARG:NH1	21:B0:731:A:H2	1.52	1.06
1:AA:51:A:N1	1:AA:314:C:C1'	2.18	1.06
1:AA:223:U:H5'	20:AT:68:LYS:NZ	1.70	1.06
1:AA:1034:G:O3'	1:AA:1035:A:P	2.13	1.06
1:AA:1181:G:H4'	1:AA:1184:G:O4'	1.55	1.06
1:AA:1475:G:H4'	21:B0:1706:A:C5'	1.86	1.06
1:AA:1495:U:O2'	21:B0:1902:A:C2	2.06	1.06
1:AA:394:G:H2'	1:AA:395:C:H6	1.21	1.06
17:AQ:104:LYS:HG3	21:B0:727:U:C2	1.90	1.06
21:B0:1856:U:H5''	21:B0:3865:A:OP1	1.53	1.06
1:AA:130:A:N3	1:AA:264:U:C6	2.23	1.06
1:AA:130:A:N3	1:AA:264:U:O4'	1.87	1.06
1:AA:133:U:H5'	20:AT:74:LYS:NZ	1.71	1.06
1:AA:1016:A:C5'	14:AN:15:LYS:HE3	1.83	1.06
1:AA:1155:G:O3'	1:AA:1156:G:P	2.14	1.06
1:AA:132:C:H5'	1:AA:262:A:C2'	1.86	1.06
1:AA:189:A:N6	20:AT:89:ARG:NH2	1.87	1.06
1:AA:755:G:H1'	8:AH:1:MET:CE	1.85	1.05
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.10	1.05
1:AA:1459:C:OP1	20:AT:28:ALA:O	1.74	1.05
1:AA:323:U:H5''	20:AT:23:ARG:CA	1.85	1.05
1:AA:421:U:C2	3:AC:127:ARG:NH2	2.11	1.05
1:AA:502:G:H4'	1:AA:550:G:H4'	1.35	1.05
1:AA:1459:C:C5'	20:AT:28:ALA:CB	2.34	1.05
21:B0:1856:U:O2'	21:B0:3865:A:C5'	2.04	1.05
1:AA:216:C:C1'	1:AA:468:A:O2'	2.05	1.05
1:AA:322:C:H4'	20:AT:23:ARG:CD	1.86	1.05
1:AA:994:A:O2'	14:AN:8:GLU:HA	1.55	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:82:MET:HG2	13:AM:93:ARG:HE	1.19	1.05
21:B0:3107:G:O3'	21:B0:3108:G:P	2.14	1.05
1:AA:1255:G:H21	1:AA:1276:G:N2	1.54	1.05
1:AA:1489:G:H2'	1:AA:1490:C:H5''	1.37	1.05
1:AA:8:A:H1'	5:AE:103:GLY:HA2	1.35	1.05
1:AA:94:G:HO3'	1:AA:96:C:P	1.19	1.05
1:AA:142:G:C4'	1:AA:195:A:H61	1.68	1.05
1:AA:189:A:H8	20:AT:105:SER:OG	0.91	1.05
1:AA:322:C:H4'	20:AT:23:ARG:HD2	1.33	1.05
1:AA:559:A:OP2	5:AE:126:ARG:NH2	1.90	1.05
1:AA:571:U:H5'	1:AA:819:A:C4	1.91	1.05
21:B0:910:U:H2'	21:B0:911:A:P	1.95	1.05
1:AA:189:A:C6	20:AT:104:LEU:HB3	1.92	1.04
1:AA:355:C:H1'	1:AA:388:G:O2'	1.55	1.04
1:AA:1255:G:N2	1:AA:1276:G:N2	2.04	1.04
1:AA:15:G:C1'	5:AE:19:MET:HE2	1.86	1.04
1:AA:189:A:C8	20:AT:105:SER:OG	1.69	1.04
1:AA:323:U:H5'	20:AT:23:ARG:HB2	1.33	1.04
1:AA:1261:A:C2'	1:AA:1283:G:H5''	1.87	1.04
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.23	1.04
1:AA:1394:A:C6	1:AA:1501:C:C5'	2.39	1.04
8:AH:91:ARG:CZ	17:AQ:32:TYR:O	2.04	1.04
10:AJ:62:HIS:HB2	14:AN:59:ALA:HB3	1.37	1.04
1:AA:131:C:H4'	1:AA:263:A:C4'	1.87	1.04
1:AA:142:G:C4'	1:AA:195:A:N6	2.21	1.04
1:AA:292:G:H1'	1:AA:608:A:N6	1.71	1.04
1:AA:300:A:H1'	1:AA:565:U:O2	1.57	1.04
1:AA:1474:G:C4'	21:B0:1718:A:H2	1.69	1.04
21:B0:3197:U:C1'	21:B0:2181:A:N7	2.20	1.04
1:AA:189:A:H61	20:AT:104:LEU:CB	1.59	1.04
1:AA:421:U:N1	3:AC:127:ARG:NH2	2.04	1.04
1:AA:1061:G:O4'	10:AJ:56:HIS:CE1	2.11	1.04
1:AA:1296:C:O4'	1:AA:1302:U:C4	2.10	1.04
1:AA:1483:A:O3'	1:AA:1484:C:OP2	1.73	1.04
21:B0:891:A:O2'	21:B0:892:A:H8	1.40	1.04
1:AA:236:G:H5''	17:AQ:42:TYR:HE2	1.16	1.04
1:AA:237:C:OP1	17:AQ:40:LYS:HD2	1.57	1.03
1:AA:262:A:O3'	20:AT:75:ASN:HB2	1.56	1.03
1:AA:400:C:O2'	1:AA:622:A:O2'	1.73	1.03
1:AA:1256:A:O4'	1:AA:1258:G:C4	2.11	1.03
1:AA:1409:C:H2'	1:AA:1410:G:C8	1.93	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:82:MET:HG3	13:AM:93:ARG:HE	1.22	1.03
1:AA:141:A:H4'	1:AA:182:U:C1'	1.87	1.03
1:AA:216:C:H4'	1:AA:468:A:N3	1.22	1.03
21:B0:3108:G:H2'	21:B0:3109:U:H5	0.89	1.03
1:AA:187:G:N2	20:AT:105:SER:HB2	1.71	1.03
1:AA:243:A:H4'	1:AA:244:U:H5'	1.36	1.03
1:AA:1014:A:C2	19:AS:34:TRP:CD1	2.46	1.03
20:AT:39:LYS:HD2	20:AT:55:ILE:HD13	1.41	1.03
1:AA:559:A:P	5:AE:126:ARG:HH22	1.81	1.03
21:B0:1096:A:O2'	21:B0:1115:C:H1'	1.56	1.03
1:AA:994:A:H1'	14:AN:8:GLU:HB3	1.41	1.03
17:AQ:104:LYS:HG3	21:B0:727:U:C1'	1.89	1.03
1:AA:223:U:C5'	20:AT:68:LYS:NZ	2.22	1.02
1:AA:261:U:H5	20:AT:79:ARG:NE	1.46	1.02
1:AA:406:G:C6	1:AA:496:A:C5	2.47	1.02
1:AA:735:C:O2'	18:AR:75:ILE:CD1	2.06	1.02
1:AA:760:G:C2	17:AQ:103:GLY:O	2.12	1.02
1:AA:501:C:H1'	1:AA:549:C:H1'	1.37	1.02
1:AA:586:C:O3'	8:AH:89:PRO:HB2	1.58	1.02
1:AA:1483:A:C2'	1:AA:1484:C:P	2.48	1.02
21:B0:3107:G:HO3'	21:B0:3108:G:P	1.81	1.02
1:AA:502:G:C1'	1:AA:550:G:H5'	1.87	1.02
1:AA:1475:G:H5''	21:B0:1706:A:O4'	1.58	1.02
21:B0:892:A:C1'	21:B0:911:A:C2	2.41	1.02
1:AA:132:C:H5'	1:AA:262:A:O2'	1.59	1.02
1:AA:1319:A:H5''	19:AS:5:LEU:HD21	1.41	1.02
1:AA:1346:A:C4	7:AG:10:ARG:NH2	2.27	1.02
1:AA:1459:C:H5'	20:AT:28:ALA:HB1	1.37	1.02
10:AJ:65:LEU:HD13	14:AN:36:PHE:CZ	1.94	1.02
21:B0:1572:C:H2'	21:B0:1573:G:H5''	1.39	1.02
1:AA:9:G:OP1	5:AE:122:GLU:HB2	1.59	1.02
1:AA:322:C:C4'	20:AT:23:ARG:HD2	1.88	1.02
1:AA:397:A:N7	1:AA:547:A:O2'	1.89	1.02
1:AA:1190:G:OP1	3:AC:4:LYS:HA	0.85	1.02
1:AA:8:A:H1'	5:AE:103:GLY:CA	1.89	1.01
1:AA:141:A:C2	1:AA:195:A:C2	2.48	1.01
1:AA:702:A:C2	21:B0:1838:G:H2'	1.84	1.01
1:AA:1459:C:H5''	20:AT:28:ALA:HA	1.37	1.01
1:AA:1475:G:C5'	21:B0:1706:A:O4'	2.08	1.01
1:AA:116:A:N1	1:AA:313:A:O2'	1.92	1.01
1:AA:406:G:C5	1:AA:496:A:C6	2.45	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:957:U:H4'	19:AS:79:THR:HB	1.41	1.01
1:AA:1109:C:OP2	3:AC:176:HIS:CD2	2.13	1.01
17:AQ:104:LYS:CD	21:B0:727:U:O2	2.08	1.01
1:AA:15:G:H1'	5:AE:19:MET:HE2	1.43	1.01
1:AA:1331:G:O3'	1:AA:1332:A:P	2.19	1.01
1:AA:1367:C:H5''	9:AI:114:TYR:HB2	1.41	1.01
2:AB:178:ARG:HH11	2:AB:178:ARG:HG3	1.21	1.01
10:AJ:51:ARG:HG2	14:AN:45:ARG:NH1	1.76	1.01
19:AS:28:LYS:HG2	19:AS:29:ARG:H	1.26	1.01
1:AA:59:A:C6	1:AA:331:G:N3	2.28	1.01
1:AA:143:A:H3'	1:AA:144:G:P	2.00	1.01
1:AA:217:C:O2'	1:AA:470:U:C5'	2.09	1.01
1:AA:376:G:O3'	16:AP:5:ARG:HD2	1.60	1.01
1:AA:394:G:H2'	1:AA:395:C:C6	1.95	1.01
4:AD:88:VAL:CG2	5:AE:96:PRO:HB2	1.91	1.01
17:AQ:104:LYS:HG3	21:B0:727:U:N1	1.75	1.01
1:AA:5:U:C4	5:AE:95:ALA:CB	2.44	1.00
1:AA:186:C:C1'	20:AT:81:LYS:HE2	1.91	1.00
1:AA:1256:A:C4'	1:AA:1258:G:C8	2.43	1.00
1:AA:1474:G:O4'	21:B0:1718:A:H2	1.41	1.00
4:AD:88:VAL:CG2	5:AE:96:PRO:CB	2.37	1.00
1:AA:1086:U:H3	1:AA:1099:G:H22	1.08	1.00
1:AA:1182:G:H5'	1:AA:1184:G:H5'	1.03	1.00
21:B0:2668:U:H4'	21:B0:2669:C:H5'	1.40	1.00
1:AA:1255:G:H2'	1:AA:1258:G:H21	1.21	1.00
1:AA:1256:A:C4'	1:AA:1258:G:N9	2.24	1.00
21:B0:1252:C:H2'	21:B0:1253:C:H5''	1.43	1.00
21:B0:3110:G:OP1	21:B0:3149:G:O4'	1.79	1.00
22:B9:107:C:H3'	22:B9:108:G:P	2.01	1.00
1:AA:706:A:H1'	11:AK:29:ILE:HD11	1.39	1.00
1:AA:1044:A:C2'	1:AA:1045:C:O2'	2.09	1.00
1:AA:1234:C:C5'	1:AA:1365:G:OP1	2.10	1.00
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.05	1.00
1:AA:51:A:H2	1:AA:314:C:O2'	1.26	1.00
1:AA:1190:G:P	3:AC:4:LYS:HA	2.01	1.00
12:AL:60:LEU:HD11	12:AL:85:ILE:HD12	1.40	1.00
1:AA:130:A:OP1	17:AQ:63:ARG:NE	1.93	1.00
1:AA:325:A:OP2	20:AT:70:SER:CB	2.08	1.00
1:AA:586:C:H5''	8:AH:90:GLY:N	1.75	1.00
21:B0:1856:U:C6	21:B0:3865:A:C8	2.34	1.00
1:AA:142:G:N2	1:AA:196:A:H1'	1.77	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:436:C:N4	1:AA:437:U:O4	1.94	1.00
1:AA:714:G:H4'	1:AA:776:G:H4'	1.44	1.00
1:AA:319:G:C2'	1:AA:1434:A:N1	2.24	0.99
1:AA:367:U:C2	1:AA:369:C:C4	2.50	0.99
1:AA:929:G:P	1:AA:1533:C:H41	1.84	0.99
1:AA:1316:G:H4'	14:AN:18:VAL:HG11	1.40	0.99
1:AA:279:A:OP2	17:AQ:95:TYR:HE2	1.43	0.99
1:AA:189:A:O5'	20:AT:105:SER:OG	1.79	0.99
1:AA:191:G:C4	1:AA:192:U:N1	2.29	0.99
1:AA:755:G:H1'	8:AH:1:MET:HE3	1.00	0.99
1:AA:1087:G:OP1	1:AA:1389:C:H4'	1.61	0.99
1:AA:1394:A:C2	1:AA:1501:C:O4'	2.15	0.99
1:AA:205:G:N2	1:AA:207:C:C5	2.30	0.99
1:AA:1329:A:H5'	13:AM:29:ARG:CG	1.92	0.99
22:B9:107:C:O3'	22:B9:108:G:P	2.21	0.99
1:AA:292:G:C1'	1:AA:608:A:N6	2.26	0.99
1:AA:995:C:O2	14:AN:4:LYS:HD3	1.62	0.99
1:AA:1457:A:N9	1:AA:1459:C:C2	2.30	0.99
4:AD:88:VAL:HG22	5:AE:96:PRO:HB2	1.42	0.99
1:AA:6:G:N9	5:AE:119:LEU:HD11	1.72	0.99
1:AA:130:A:C6	1:AA:264:U:O2	2.16	0.99
1:AA:314:C:O2	1:AA:353:A:C2	2.16	0.99
1:AA:1298:C:P	7:AG:114:ARG:NH2	2.36	0.99
3:AC:59:ARG:O	10:AJ:92:THR:HG22	1.59	0.99
21:B0:891:A:HO2'	21:B0:892:A:C5'	1.62	0.99
1:AA:1398:A:N6	5:AE:21:ALA:HA	1.77	0.98
1:AA:545:C:O2'	1:AA:549:C:OP1	1.81	0.98
10:AJ:49:VAL:HG11	14:AN:41:ARG:O	1.62	0.98
13:AM:86:CYS:O	13:AM:90:LEU:HG	1.62	0.98
11:AK:54:ARG:HB3	11:AK:54:ARG:HH11	1.26	0.98
21:B0:1856:U:C3'	21:B0:3865:A:C8	2.45	0.98
1:AA:236:G:H5''	17:AQ:42:TYR:CE2	1.98	0.98
1:AA:133:U:H5'	20:AT:74:LYS:HZ2	1.25	0.98
1:AA:626:U:OP1	16:AP:35:LYS:NZ	1.96	0.98
1:AA:1261:A:C5'	1:AA:1283:G:O3'	2.11	0.98
1:AA:130:A:C1'	1:AA:264:U:C4'	2.42	0.98
1:AA:189:A:C6	20:AT:104:LEU:C	2.41	0.98
1:AA:992:U:H2'	1:AA:1043:C:C5	1.98	0.98
1:AA:587:G:O2'	1:AA:588:G:OP2	1.81	0.98
1:AA:762:C:H4'	21:B0:729:A:H61	1.28	0.98
1:AA:1116:C:H2'	1:AA:1117:G:H5''	1.46	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1329:A:OP1	13:AM:28:ALA:N	1.76	0.98
8:AH:113:SER:HB2	8:AH:134:ILE:HD11	1.43	0.98
22:B9:114:C:H2'	22:B9:115:G:H5''	1.45	0.98
1:AA:974:A:OP1	14:AN:31:ARG:HG2	1.64	0.98
1:AA:237:C:OP1	17:AQ:40:LYS:HD3	1.59	0.97
1:AA:262:A:C5'	20:AT:74:LYS:HB2	1.94	0.97
1:AA:1505:G:H4'	1:AA:1506:U:C5'	1.94	0.97
13:AM:80:ARG:NH2	19:AS:65:ASN:O	1.97	0.97
21:B0:1199:U:H3'	21:B0:1200:G:H5''	1.44	0.97
21:B0:1856:U:O5'	21:B0:3865:A:H8	1.40	0.97
1:AA:113:G:H1'	1:AA:353:A:O2'	1.65	0.97
1:AA:571:U:H4'	1:AA:819:A:C6	1.98	0.97
1:AA:1503:A:O5'	1:AA:1531:A:H1'	1.64	0.97
1:AA:113:G:C4	1:AA:353:A:O2'	2.15	0.97
1:AA:191:G:C6	1:AA:192:U:C4	2.50	0.97
1:AA:927:G:O2'	1:AA:1532:U:H4'	1.63	0.97
1:AA:994:A:C4	14:AN:5:ALA:O	2.18	0.97
1:AA:1092:A:C5'	7:AG:4:ARG:NH2	2.26	0.97
1:AA:223:U:H5''	20:AT:68:LYS:HZ2	1.25	0.97
21:B0:1861:G:H4'	53:B5:198:THR:CA	1.94	0.97
21:B0:2548:G:H2'	21:B0:2549:G:H5''	1.45	0.97
1:AA:143:A:O3'	1:AA:144:G:H8	1.45	0.97
1:AA:261:U:H5	20:AT:79:ARG:CZ	1.62	0.97
1:AA:1087:G:OP1	1:AA:1389:C:C4'	2.11	0.97
13:AM:88:ARG:HD2	19:AS:3:ARG:NH2	1.78	0.97
1:AA:1484:C:O2'	21:B0:1943:A:C4'	2.11	0.97
13:AM:86:CYS:C	13:AM:87:TYR:N	2.23	0.97
1:AA:319:G:H2'	1:AA:1434:A:H2	1.18	0.97
1:AA:323:U:H4'	20:AT:22:ARG:HB2	1.47	0.97
1:AA:351:G:O3'	1:AA:352:C:OP1	1.83	0.96
21:B0:1119:U:H3'	21:B0:1120:C:O5'	1.65	0.96
1:AA:69:G:H5'	1:AA:152:A:H2	1.21	0.96
1:AA:293:G:C4'	1:AA:609:A:C2	2.40	0.96
11:AK:110:ASP:OD2	18:AR:88:LYS:NZ	1.96	0.96
1:AA:37:U:O2'	1:AA:500:G:H4'	1.66	0.96
1:AA:116:A:N6	1:AA:313:A:N3	2.12	0.96
1:AA:1394:A:N6	1:AA:1501:C:C5'	2.28	0.96
21:B0:3877:A:O5'	21:B0:3877:A:H8	1.47	0.96
1:AA:190:A:H2	20:AT:101:GLY:HA2	1.28	0.96
1:AA:651:C:N4	1:AA:652:U:O4	1.98	0.96
1:AA:1459:C:P	20:AT:28:ALA:O	2.23	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:104:G:H5'	1:AA:172:A:N1	1.79	0.96
1:AA:191:G:N7	1:AA:192:U:C5	2.33	0.96
1:AA:362:G:H4'	12:AL:28:LYS:NZ	1.79	0.96
1:AA:837:G:O3'	1:AA:838:C:P	2.23	0.96
4:AD:57:ARG:HH21	5:AE:107:ARG:HD3	1.20	0.96
1:AA:191:G:N7	1:AA:192:U:C6	2.34	0.96
1:AA:837:G:HO3'	1:AA:838:C:H6	1.09	0.96
1:AA:926:G:C6	1:AA:1505:G:C6	2.54	0.95
1:AA:1261:A:C4'	1:AA:1283:G:O3'	2.13	0.95
1:AA:131:C:O2'	1:AA:262:A:C2'	2.14	0.95
1:AA:143:A:H5'	1:AA:196:A:N6	1.80	0.95
1:AA:977:A:C2	1:AA:1224:G:C6	2.54	0.95
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.65	0.95
21:B0:891:A:O3'	21:B0:892:A:OP2	1.83	0.95
1:AA:7:G:H5'	1:AA:298:A:C5'	1.96	0.95
1:AA:112:G:N3	1:AA:354:G:H4'	1.81	0.95
1:AA:133:U:C5'	20:AT:74:LYS:NZ	2.28	0.95
1:AA:406:G:N3	1:AA:496:A:N6	2.14	0.95
1:AA:1255:G:N3	1:AA:1259:C:O2	1.99	0.95
1:AA:1394:A:C5	1:AA:1501:C:C4'	2.41	0.95
21:B0:1747:G:H4'	21:B0:1749:G:H1'	1.47	0.95
21:B0:3128:G:O3'	21:B0:3174:C:H4'	1.66	0.95
1:AA:992:U:H2'	1:AA:1043:C:H5	1.32	0.95
1:AA:1110:A:H2'	1:AA:1111:A:O4'	1.64	0.95
3:AC:52:LEU:H	3:AC:52:LEU:HD23	1.26	0.95
1:AA:191:G:C2	1:AA:192:U:C1'	2.45	0.95
21:B0:1856:U:P	21:B0:3865:A:N7	2.39	0.95
1:AA:191:G:C5	1:AA:192:U:C5	2.55	0.95
21:B0:1066:G:N1	21:B0:1115:C:N4	2.15	0.95
1:AA:651:C:N3	1:AA:652:U:C4	2.35	0.95
1:AA:1489:G:C2'	1:AA:1490:C:H5''	1.96	0.95
10:AJ:62:HIS:HB3	14:AN:59:ALA:HB3	1.46	0.95
1:AA:933:G:C6	1:AA:935:A:C8	2.55	0.95
1:AA:1342:C:O3'	9:AI:125:TYR:CZ	2.20	0.95
3:AC:14:ILE:HG22	3:AC:15:THR:H	1.32	0.95
1:AA:189:A:N6	20:AT:104:LEU:CA	2.30	0.95
1:AA:191:G:C6	1:AA:192:U:N1	2.34	0.95
1:AA:323:U:H5'	20:AT:23:ARG:CB	1.95	0.95
1:AA:762:C:H4'	21:B0:729:A:N1	1.81	0.95
1:AA:116:A:H61	1:AA:313:A:H1'	1.32	0.95
1:AA:436:C:C5	1:AA:437:U:C5	2.54	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:3109:U:C5'	21:B0:3150:C:C5'	2.09	0.95
1:AA:619:U:C2	4:AD:135:LEU:HG	2.02	0.94
1:AA:702:A:C6	21:B0:1839:A:O4'	2.08	0.94
1:AA:1277:C:C1'	1:AA:1279:A:C8	2.50	0.94
1:AA:143:A:O4'	1:AA:196:A:C5	2.21	0.94
1:AA:319:G:N2	1:AA:1434:A:C2'	2.29	0.94
1:AA:1368:G:OP2	9:AI:113:LYS:C	2.10	0.94
21:B0:3110:G:OP1	21:B0:3148:G:C2'	2.15	0.94
1:AA:292:G:C2'	1:AA:608:A:N6	2.29	0.94
1:AA:376:G:C2	1:AA:389:A:C2	2.54	0.94
1:AA:762:C:C4'	21:B0:729:A:H61	1.79	0.94
1:AA:1255:G:N2	1:AA:1276:G:H21	1.64	0.94
10:AJ:31:GLY:HA2	10:AJ:78:ASN:HD22	1.32	0.94
21:B0:367:G:H2'	21:B0:368:A:H5''	1.48	0.94
1:AA:187:G:N3	20:AT:105:SER:CB	2.29	0.94
1:AA:315:A:O4'	1:AA:353:A:N1	2.01	0.94
1:AA:394:G:C6	1:AA:395:C:C4	2.54	0.94
1:AA:436:C:N4	1:AA:437:U:C4	2.34	0.94
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.26	0.94
1:AA:761:G:C5'	17:AQ:102:GLY:HA3	1.97	0.94
1:AA:1416:G:O5'	1:AA:1417:G:P	2.25	0.94
1:AA:112:G:N2	1:AA:354:G:OP2	2.00	0.94
1:AA:187:G:H4'	20:AT:85:MET:HE2	1.47	0.94
1:AA:190:A:H2	20:AT:101:GLY:CA	1.58	0.94
1:AA:1374:A:O3'	1:AA:1375:A:P	2.26	0.94
11:AK:54:ARG:O	11:AK:57:THR:HG22	1.66	0.94
1:AA:619:U:C4	4:AD:135:LEU:HD21	2.02	0.94
1:AA:216:C:H1'	1:AA:468:A:C2'	1.98	0.94
1:AA:1296:C:H4'	1:AA:1302:U:C5	2.03	0.94
1:AA:1483:A:H2'	1:AA:1484:C:P	2.06	0.94
21:B0:929:A:H3'	21:B0:930:A:H5''	1.47	0.94
21:B0:3108:G:C2'	21:B0:3109:U:H5	1.80	0.94
1:AA:5:U:C4	5:AE:95:ALA:HB2	2.03	0.94
1:AA:59:A:C4	1:AA:331:G:C2	2.55	0.94
1:AA:406:G:C4	1:AA:496:A:N6	2.35	0.94
1:AA:651:C:N4	1:AA:752:G:O2'	2.01	0.94
1:AA:1269:A:C2	1:AA:1313:U:C1'	2.50	0.94
1:AA:664:G:H22	1:AA:741:G:H1	1.16	0.94
6:AF:94:GLN:HE21	18:AR:32:ARG:HD3	1.32	0.94
17:AQ:97:SER:HB2	17:AQ:102:GLY:C	1.93	0.94
21:B0:2607:C:H3'	21:B0:2608:A:H5'	1.49	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:59:A:N1	1:AA:331:G:C4	2.35	0.93
1:AA:319:G:H5'	1:AA:1468:A:C4'	1.98	0.93
1:AA:1298:C:OP2	7:AG:114:ARG:NH2	2.01	0.93
17:AQ:104:LYS:CE	21:B0:729:A:N6	1.99	0.93
1:AA:39:G:C5	1:AA:498:U:O4	2.20	0.93
1:AA:762:C:H4'	21:B0:729:A:N6	1.82	0.93
1:AA:935:A:O4'	1:AA:1384:C:O2	1.87	0.93
1:AA:586:C:O3'	8:AH:89:PRO:CB	2.15	0.93
1:AA:815:A:H2	1:AA:1528:U:O4'	1.33	0.93
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.49	0.93
1:AA:141:A:H2	1:AA:195:A:C2	1.83	0.93
1:AA:1392:G:H4'	1:AA:1531:A:C5'	1.98	0.93
21:B0:892:A:C1'	21:B0:911:A:H2	1.81	0.93
1:AA:1406:U:O4'	1:AA:1518:A:H4'	1.66	0.93
1:AA:1505:G:O3'	1:AA:1506:U:OP2	1.85	0.93
21:B0:910:U:C2'	21:B0:911:A:P	2.56	0.93
1:AA:141:A:H4'	1:AA:182:U:H1'	1.45	0.93
1:AA:1248:A:O2'	9:AI:70:LYS:NZ	2.01	0.93
21:B0:892:A:H1'	21:B0:911:A:H2	1.15	0.93
1:AA:244:U:O4	1:AA:893:C:N3	2.02	0.93
8:AH:91:ARG:HG2	12:AL:7:ILE:HG21	1.51	0.93
1:AA:737:A:H1'	6:AF:73:ASN:OD1	1.69	0.93
1:AA:112:G:N3	1:AA:354:G:C4'	2.31	0.93
1:AA:559:A:P	5:AE:126:ARG:NH2	2.42	0.93
1:AA:651:C:C4	1:AA:652:U:C4	2.56	0.93
1:AA:1416:G:H3'	1:AA:1417:G:C5'	1.97	0.93
22:B9:107:C:C3'	22:B9:108:G:P	2.57	0.93
1:AA:6:G:O6	5:AE:94:ALA:CA	2.15	0.93
1:AA:436:C:N3	1:AA:437:U:C4	2.37	0.93
1:AA:571:U:H5''	1:AA:819:A:N1	1.83	0.93
1:AA:994:A:O2'	14:AN:11:LYS:HE3	1.69	0.93
13:AM:40:ASN:HD22	13:AM:41:PRO:CD	1.82	0.93
1:AA:323:U:H5''	20:AT:22:ARG:C	1.94	0.92
1:AA:922:G:N1	1:AA:1396:A:C6	2.31	0.92
3:AC:195:VAL:O	3:AC:196:LEU:HD23	1.68	0.92
1:AA:130:A:H1'	1:AA:264:U:H5'	1.48	0.92
1:AA:735:C:O2'	18:AR:75:ILE:HD12	1.69	0.92
3:AC:131:ARG:HG2	3:AC:135:LYS:HE3	1.50	0.92
1:AA:958:A:N9	19:AS:55:LYS:HD2	1.85	0.92
1:AA:1296:C:C4'	1:AA:1302:U:C4	2.52	0.92
21:B0:104:C:H2'	21:B0:105:G:H5''	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1066:G:N2	21:B0:1115:C:C2	2.36	0.92
1:AA:191:G:C2	1:AA:192:U:C2	2.56	0.92
1:AA:333:G:O4'	20:AT:16:HIS:CD2	2.21	0.92
1:AA:1416:G:C6	1:AA:1417:G:H1'	2.03	0.92
9:AI:115:GLY:HA2	10:AJ:58:ASP:OD1	1.69	0.92
17:AQ:104:LYS:CD	21:B0:727:U:H1'	1.99	0.92
1:AA:1305:G:O2'	1:AA:1306:A:H8	1.51	0.92
2:AB:124:SER:HB2	2:AB:125:PRO:HD2	1.49	0.92
21:B0:226:C:HO2'	21:B0:227:G:H8	0.97	0.92
21:B0:1656:U:H2'	21:B0:1657:A:H5''	1.52	0.92
1:AA:130:A:C6	1:AA:264:U:H1'	2.05	0.92
1:AA:651:C:C4	1:AA:652:U:C5	2.58	0.92
21:B0:1856:U:OP2	21:B0:3865:A:N7	2.02	0.92
1:AA:476:U:C3'	1:AA:477:G:P	2.56	0.92
1:AA:1296:C:C4'	1:AA:1302:U:O4	2.18	0.92
3:AC:91:LEU:HD21	3:AC:99:VAL:HG13	1.48	0.92
21:B0:3109:U:H5'	21:B0:3150:C:C5'	1.86	0.92
17:AQ:104:LYS:CG	21:B0:727:U:C1'	2.47	0.92
1:AA:319:G:N2	1:AA:1434:A:N3	2.18	0.92
1:AA:815:A:H2	1:AA:1528:U:C4'	1.82	0.92
1:AA:1292:U:P	7:AG:41:ARG:HH22	1.91	0.92
19:AS:31:ILE:HG22	19:AS:32:LYS:H	1.34	0.92
21:B0:1066:G:H1	21:B0:1115:C:N4	1.66	0.92
1:AA:130:A:C1'	1:AA:264:U:C5'	2.47	0.91
1:AA:518:C:O2'	12:AL:50:SER:HB3	1.70	0.91
1:AA:1064:G:H1'	1:AA:1190:G:H21	1.14	0.91
1:AA:835:U:C5'	18:AR:64:ARG:NH2	2.34	0.91
2:AB:59:GLU:HG2	2:AB:221:LEU:HD11	1.51	0.91
5:AE:79:GLU:OE1	8:AH:105:ARG:CD	2.17	0.91
21:B0:1182:U:H2'	21:B0:1183:C:H5''	1.49	0.91
1:AA:94:G:C5	1:AA:96:C:C5	2.59	0.91
1:AA:1392:G:H4'	1:AA:1531:A:H5''	1.50	0.91
1:AA:1429:C:O2'	21:B0:1720:G:O2'	1.87	0.91
1:AA:189:A:H62	20:AT:89:ARG:HH21	1.12	0.91
1:AA:324:G:P	20:AT:22:ARG:HB3	2.10	0.91
21:B0:1062:G:O3'	21:B0:1063:C:P	2.28	0.91
21:B0:892:A:H5'	21:B0:892:A:H8	1.35	0.91
1:AA:31:G:O6	1:AA:48:C:O4'	1.88	0.91
1:AA:292:G:C2'	1:AA:608:A:H62	1.82	0.91
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.05	0.91
5:AE:81:GLU:HG2	5:AE:90:VAL:HG22	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:261:U:C5	20:AT:79:ARG:CD	2.51	0.91
1:AA:1405:G:O4'	1:AA:1519:A:C4'	2.17	0.91
1:AA:1409:C:H2'	1:AA:1410:G:H8	1.30	0.91
3:AC:23:TYR:HA	10:AJ:11:PHE:CD1	2.06	0.91
13:AM:82:MET:CG	13:AM:93:ARG:NE	2.34	0.91
16:AP:58:TYR:O	16:AP:61:SER:HB3	1.68	0.91
1:AA:115:G:O2'	1:AA:116:A:P	2.28	0.91
1:AA:132:C:H5'	1:AA:262:A:H1'	1.33	0.91
1:AA:187:G:C4'	20:AT:85:MET:CE	2.41	0.91
1:AA:190:A:C2	20:AT:101:GLY:HA2	2.03	0.91
1:AA:755:G:C1'	8:AH:1:MET:HE3	1.96	0.91
1:AA:848:G:O3'	1:AA:849:C:C5'	2.18	0.91
1:AA:1277:C:H1'	1:AA:1279:A:H8	1.10	0.91
21:B0:1066:G:C2	21:B0:1115:C:N3	2.39	0.91
21:B0:3877:A:O3'	21:B0:1861:G:H3'	1.69	0.91
21:B0:3197:U:H3	21:B0:2204:A:H61	0.97	0.91
1:AA:1474:G:C4'	21:B0:1718:A:C2	2.54	0.90
1:AA:1484:C:H4'	21:B0:1943:A:H1'	0.92	0.90
1:AA:6:G:N3	5:AE:119:LEU:HD11	1.86	0.90
1:AA:293:G:C5'	1:AA:609:A:N1	2.33	0.90
1:AA:564:C:O4'	17:AQ:32:TYR:CD2	2.25	0.90
1:AA:1497:G:O2'	1:AA:1498:U:H5'	1.71	0.90
1:AA:1406:U:C4'	1:AA:1518:A:H4'	2.02	0.90
1:AA:1502:A:H2	1:AA:1505:G:H1	1.20	0.90
12:AL:25:PRO:C	12:AL:27:LEU:H	1.79	0.90
1:AA:190:A:N1	20:AT:104:LEU:HB2	1.84	0.90
9:AI:70:LYS:O	9:AI:74:ILE:HG13	1.72	0.90
21:B0:891:A:HO2'	21:B0:892:A:H8	0.91	0.90
1:AA:43:C:OP1	16:AP:13:HIS:HD2	1.55	0.90
1:AA:131:C:O3'	1:AA:262:A:O2'	1.88	0.90
1:AA:1346:A:H2'	7:AG:10:ARG:NH2	1.86	0.90
10:AJ:8:LEU:HD21	10:AJ:96:ILE:HG12	1.54	0.90
21:B0:128:C:H2'	21:B0:129:A:H5''	1.51	0.90
1:AA:113:G:N3	1:AA:353:A:C2'	2.34	0.90
1:AA:191:G:C4	1:AA:192:U:O4'	2.18	0.90
1:AA:262:A:H5'	20:AT:74:LYS:HB2	1.53	0.90
1:AA:994:A:C2'	14:AN:11:LYS:HE3	2.01	0.90
1:AA:191:G:C4	1:AA:192:U:C6	2.59	0.90
1:AA:922:G:N3	1:AA:1396:A:C2	2.39	0.90
1:AA:1182:G:C5'	1:AA:1184:G:H5'	1.98	0.90
1:AA:1256:A:H5'	1:AA:1258:G:H1'	0.90	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.29	0.90
1:AA:7:G:C5'	1:AA:298:A:H5'	2.02	0.90
1:AA:322:C:O3'	20:AT:23:ARG:HG3	1.70	0.90
1:AA:1070:U:OP1	5:AE:25:ARG:NH1	2.05	0.90
1:AA:1372:U:OP1	9:AI:71:SER:HB3	1.72	0.90
4:AD:88:VAL:C	5:AE:97:GLY:HA3	1.97	0.90
1:AA:190:A:N1	20:AT:101:GLY:O	2.05	0.90
1:AA:1447:A:O3'	1:AA:1448:C:P	2.29	0.90
1:AA:9:G:OP1	5:AE:122:GLU:CB	2.19	0.89
1:AA:367:U:O2	1:AA:369:C:C5	2.25	0.89
1:AA:406:G:O6	1:AA:496:A:C8	2.25	0.89
1:AA:1155:G:C3'	1:AA:1156:G:P	2.61	0.89
1:AA:1329:A:OP2	13:AM:28:ALA:N	1.93	0.89
12:AL:41:ARG:HG2	12:AL:42:THR:N	1.83	0.89
1:AA:231:G:N2	1:AA:262:A:C2	2.41	0.89
1:AA:319:G:H5'	1:AA:1468:A:H4'	1.54	0.89
1:AA:762:C:H4'	21:B0:729:A:C6	2.08	0.89
1:AA:1483:A:C2'	1:AA:1484:C:OP2	2.19	0.89
1:AA:113:G:C1'	1:AA:353:A:O2'	2.19	0.89
1:AA:130:A:C2	1:AA:264:U:C1'	2.51	0.89
1:AA:1190:G:H3'	3:AC:3:ASN:HB2	1.51	0.89
1:AA:1329:A:C5'	13:AM:26:GLY:H	1.84	0.89
8:AH:91:ARG:NH1	17:AQ:32:TYR:O	2.04	0.89
1:AA:318:G:O2'	1:AA:1468:A:C4'	2.18	0.89
1:AA:571:U:C5'	1:AA:819:A:C5	2.56	0.89
1:AA:935:A:C1'	1:AA:1384:C:N3	2.35	0.89
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.55	0.89
10:AJ:45:ARG:NH1	14:AN:36:PHE:CE2	2.40	0.89
10:AJ:61:GLU:OE2	14:AN:49:HIS:HE1	1.55	0.89
21:B0:3111:C:H4'	21:B0:3112:G:OP1	1.73	0.89
1:AA:1224:G:O2'	1:AA:1225:A:P	2.31	0.89
1:AA:1297:C:O3'	1:AA:1298:C:P	2.31	0.89
1:AA:1416:G:H3'	1:AA:1417:G:H5'	1.50	0.89
1:AA:405:U:O3'	1:AA:406:G:P	2.30	0.89
1:AA:570:G:O3'	1:AA:819:A:O2'	1.91	0.89
1:AA:1015:A:H1'	1:AA:1219:U:C5'	2.02	0.89
1:AA:1060:C:OP1	14:AN:45:ARG:NH2	2.04	0.89
1:AA:130:A:C1'	1:AA:264:U:O4'	2.21	0.89
1:AA:355:C:O4'	1:AA:388:G:O2'	1.88	0.89
1:AA:826:C:H1'	8:AH:15:ASN:HD22	1.36	0.89
1:AA:113:G:O4'	1:AA:354:G:H5''	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:394:G:C4	1:AA:395:C:C5	2.61	0.89
1:AA:142:G:O4'	1:AA:195:A:N1	2.06	0.88
1:AA:235:C:C5'	17:AQ:70:ARG:CG	2.42	0.88
1:AA:246:A:O3'	1:AA:247:G:C4'	2.19	0.88
1:AA:261:U:C6	20:AT:79:ARG:CZ	2.56	0.88
1:AA:1060:C:O2'	10:AJ:56:HIS:CD2	2.25	0.88
1:AA:1367:C:H5''	9:AI:114:TYR:CB	2.02	0.88
1:AA:1483:A:O2'	1:AA:1484:C:P	2.31	0.88
1:AA:293:G:O5'	1:AA:609:A:C6	2.25	0.88
1:AA:375:U:O3'	1:AA:376:G:OP2	1.89	0.88
1:AA:8:A:N6	4:AD:205:GLU:O	2.06	0.88
1:AA:141:A:H2	1:AA:195:A:H2	0.94	0.88
1:AA:184:G:H4'	1:AA:224:C:O2'	1.73	0.88
1:AA:1371:G:OP1	9:AI:11:LYS:O	1.92	0.88
1:AA:651:C:N3	1:AA:652:U:C5	2.41	0.88
1:AA:1211:U:C3'	1:AA:1212:U:P	2.61	0.88
1:AA:1255:G:O2'	1:AA:1259:C:N1	2.07	0.88
1:AA:1298:C:C6	7:AG:114:ARG:NH1	2.42	0.88
21:B0:3110:G:OP1	21:B0:3149:G:C4'	2.22	0.88
1:AA:142:G:H1'	1:AA:195:A:C2	2.09	0.88
1:AA:320:C:H5'	1:AA:1434:A:N1	1.88	0.88
1:AA:403:C:HO2'	1:AA:404:U:H5'	1.07	0.88
6:AF:10:LEU:HD12	6:AF:59:TYR:HB3	1.55	0.88
21:B0:3874:C:N4	21:B0:3875:A:C5	2.41	0.88
1:AA:436:C:O2'	1:AA:437:U:H5'	1.72	0.88
1:AA:539:A:OP2	12:AL:115:LYS:HE2	1.74	0.88
1:AA:581:G:O2'	17:AQ:105:ALA:O	1.89	0.88
1:AA:976:G:OP2	1:AA:1358:U:O2'	1.91	0.88
1:AA:538:G:P	12:AL:115:LYS:CG	2.60	0.88
1:AA:995:C:C2	14:AN:4:LYS:HB3	2.08	0.88
1:AA:1419:G:H4'	21:B0:1932:G:HO2'	1.36	0.88
1:AA:406:G:N7	1:AA:496:A:C4	2.41	0.88
1:AA:923:A:O2'	1:AA:1398:A:H2'	1.73	0.88
1:AA:184:G:C4'	1:AA:224:C:O2'	2.22	0.88
2:AB:116:GLU:HG2	2:AB:153:ARG:HH12	1.39	0.88
4:AD:36:ARG:N	4:AD:37:PRO:HD3	1.88	0.88
17:AQ:104:LYS:HD2	21:B0:727:U:H1'	1.56	0.88
1:AA:6:G:C6	5:AE:94:ALA:HA	2.08	0.88
1:AA:132:C:OP1	20:AT:75:ASN:OD1	1.91	0.88
1:AA:142:G:C1'	1:AA:195:A:C6	2.57	0.88
1:AA:538:G:OP2	12:AL:115:LYS:HG3	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1067:A:O3'	1:AA:1068:G:P	2.32	0.88
21:B0:1096:A:HO2'	21:B0:1115:C:H1'	1.37	0.88
1:AA:187:G:O4'	20:AT:85:MET:HE2	1.68	0.87
1:AA:394:G:C6	1:AA:395:C:N4	2.42	0.87
1:AA:760:G:C6	17:AQ:104:LYS:O	2.27	0.87
1:AA:1131:G:H1	1:AA:1143:G:H21	1.22	0.87
21:B0:665:A:H3'	21:B0:666:U:H5''	1.54	0.87
1:AA:1261:A:C1'	1:AA:1283:G:C5'	2.52	0.87
3:AC:59:ARG:O	10:AJ:92:THR:CG2	2.22	0.87
21:B0:2633:A:H4'	21:B0:2634:G:H4'	1.54	0.87
1:AA:68:G:H21	1:AA:152:A:H1'	1.38	0.87
1:AA:142:G:H1'	1:AA:195:A:C6	2.09	0.87
1:AA:1255:G:H21	1:AA:1276:G:H22	1.21	0.87
1:AA:1369:C:OP2	9:AI:112:LYS:N	2.07	0.87
1:AA:1457:A:C8	1:AA:1459:C:N3	2.41	0.87
1:AA:6:G:N2	5:AE:98:THR:HG23	1.89	0.87
1:AA:51:A:N6	1:AA:314:C:O2	2.07	0.87
1:AA:141:A:C4'	1:AA:182:U:C1'	2.48	0.87
1:AA:196:A:O2'	1:AA:221:C:O2	1.92	0.87
1:AA:325:A:OP2	20:AT:70:SER:HB3	1.74	0.87
1:AA:923:A:C2	1:AA:1395:C:N3	2.42	0.87
1:AA:1292:U:P	7:AG:41:ARG:NH2	2.47	0.87
21:B0:3128:G:O2'	21:B0:3174:C:C5'	2.21	0.87
22:B9:73:C:C3'	22:B9:74:A:P	2.63	0.87
1:AA:130:A:C4	1:AA:264:U:H1'	1.86	0.87
1:AA:190:A:N7	20:AT:105:SER:CA	2.37	0.87
1:AA:776:G:O3'	1:AA:777:A:P	2.33	0.87
1:AA:1261:A:H5'	1:AA:1283:G:O2'	1.74	0.87
1:AA:1458:G:C8	1:AA:1459:C:C2	2.61	0.87
4:AD:57:ARG:HH21	5:AE:107:ARG:CD	1.76	0.87
1:AA:94:G:C6	1:AA:96:C:C4	2.63	0.87
1:AA:235:C:H5'	17:AQ:70:ARG:CD	2.04	0.87
1:AA:436:C:C2	1:AA:437:U:N1	2.42	0.87
1:AA:1108:G:H4'	1:AA:1191:A:O4'	1.75	0.87
1:AA:1316:G:H4'	14:AN:18:VAL:CG1	2.05	0.87
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.10	0.87
1:AA:1392:G:C4'	1:AA:1531:A:H5''	2.04	0.87
1:AA:1475:G:H5'	21:B0:1706:A:C4'	2.00	0.87
2:AB:91:PRO:HG2	2:AB:155:LEU:HD23	1.54	0.87
13:AM:82:MET:HG2	13:AM:93:ARG:NE	1.89	0.87
1:AA:131:C:O2'	1:AA:262:A:H2'	1.74	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:402:G:H4'	1:AA:620:C:C4	2.09	0.87
1:AA:1261:A:C4'	1:AA:1283:G:C5'	2.52	0.87
1:AA:1475:G:C5'	21:B0:1706:A:C5'	2.52	0.87
13:AM:3:ARG:HG2	13:AM:9:ILE:HG23	1.56	0.87
1:AA:187:G:C1'	20:AT:85:MET:HE1	2.04	0.86
1:AA:293:G:O5'	1:AA:609:A:N1	2.08	0.86
1:AA:502:G:C4'	1:AA:550:G:H4'	2.03	0.86
1:AA:1343:G:P	9:AI:125:TYR:OH	2.31	0.86
1:AA:1458:G:C8	1:AA:1459:C:O2	2.28	0.86
1:AA:564:C:O4'	17:AQ:32:TYR:HD2	1.58	0.86
1:AA:1255:G:H2'	1:AA:1258:G:N2	1.90	0.86
4:AD:88:VAL:HA	5:AE:96:PRO:O	1.73	0.86
21:B0:918:A:H2'	21:B0:919:U:H5''	1.57	0.86
1:AA:1113:C:C1'	3:AC:178:LEU:HD21	2.05	0.86
4:AD:89:THR:HB	5:AE:97:GLY:C	1.98	0.86
10:AJ:22:LYS:HE2	10:AJ:90:LEU:HD12	1.57	0.86
12:AL:41:ARG:CG	12:AL:42:THR:H	1.88	0.86
21:B0:88:G:H3'	21:B0:89:A:H5''	1.57	0.86
1:AA:129:U:OP1	17:AQ:3:LYS:NZ	2.08	0.86
1:AA:261:U:C5	20:AT:79:ARG:NH1	2.43	0.86
1:AA:292:G:O2'	1:AA:608:A:N6	2.07	0.86
1:AA:719:C:O2'	18:AR:49:LYS:HG2	1.74	0.86
1:AA:1014:A:OP2	19:AS:14:HIS:HB3	1.73	0.86
21:B0:1856:U:H3'	21:B0:3865:A:H8	1.37	0.86
1:AA:132:C:H4'	1:AA:262:A:C1'	1.96	0.86
1:AA:190:A:C2	20:AT:101:GLY:C	2.54	0.86
1:AA:1061:G:C1'	10:AJ:56:HIS:CE1	2.59	0.86
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.57	0.86
1:AA:250:A:H4'	1:AA:251:G:O5'	1.76	0.86
1:AA:1014:A:H2	1:AA:1219:U:O2'	1.47	0.86
1:AA:1256:A:H5'	1:AA:1258:G:C4	2.09	0.86
1:AA:1416:G:H2'	1:AA:1417:G:C5'	2.06	0.86
19:AS:41:VAL:HG22	19:AS:44:MET:HE3	1.56	0.86
21:B0:1072:U:H4'	21:B0:1081:A:O2'	1.75	0.86
1:AA:571:U:H5'	1:AA:819:A:C5	2.10	0.86
6:AF:30:LEU:HD23	6:AF:75:LEU:HD21	1.57	0.86
13:AM:93:ARG:HG2	21:B0:900(A):A:P	2.16	0.86
21:B0:1119:U:C3'	21:B0:1120:C:O5'	2.22	0.86
1:AA:835:U:H5''	18:AR:64:ARG:HH22	1.39	0.86
1:AA:1064:G:H22	1:AA:1190:G:C2'	1.88	0.86
1:AA:1318:A:C4'	19:AS:10:PHE:CE1	2.59	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1155:G:H3'	1:AA:1156:G:P	2.15	0.86
2:AB:102:LEU:HD21	2:AB:162:ILE:HD11	1.57	0.86
3:AC:110:ASN:HD21	3:AC:140:ARG:HB3	1.40	0.86
1:AA:130:A:N7	17:AQ:63:ARG:HG3	1.91	0.86
1:AA:1067:A:O2'	1:AA:1093:A:O3'	1.92	0.86
1:AA:1256:A:C5'	1:AA:1258:G:C4	2.59	0.86
1:AA:1474:G:O4'	21:B0:1718:A:C2	2.28	0.86
5:AE:115:VAL:HG11	5:AE:118:ILE:HG13	1.57	0.86
1:AA:323:U:C5'	20:AT:23:ARG:HA	2.05	0.85
1:AA:826:C:H1'	8:AH:15:ASN:ND2	1.91	0.85
1:AA:1064:G:H4'	1:AA:1065:U:H5'	1.58	0.85
1:AA:571:U:C5'	1:AA:819:A:C4	2.59	0.85
1:AA:640:A:N3	8:AH:115:SER:HB2	1.91	0.85
1:AA:1092:A:H5''	7:AG:4:ARG:CZ	2.05	0.85
1:AA:1328:C:C5'	13:AM:28:ALA:HB1	2.03	0.85
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.43	0.85
21:B0:3187:U:O3'	21:B0:3188:U:P	2.35	0.85
1:AA:104:G:H5'	1:AA:172:A:C2	2.10	0.85
1:AA:588:G:C5	1:AA:753:A:C5	2.64	0.85
3:AC:52:LEU:HD21	3:AC:118:GLN:HE22	1.40	0.85
1:AA:9:G:C8	5:AE:126:ARG:NH1	2.44	0.85
1:AA:131:C:H4'	1:AA:263:A:H4'	1.59	0.85
1:AA:262:A:H5'	20:AT:74:LYS:CB	2.05	0.85
3:AC:64:VAL:HB	3:AC:99:VAL:HB	1.59	0.85
3:AC:70:VAL:HG21	3:AC:76:VAL:HG21	1.58	0.85
21:B0:542:A:H2'	21:B0:543:G:H5'	1.59	0.85
21:B0:1312:G:H5''	21:B0:1313:U:H5'	1.59	0.85
1:AA:59:A:C5	1:AA:331:G:C2	2.64	0.85
1:AA:1092:A:H5''	7:AG:4:ARG:HH22	1.42	0.85
21:B0:3098:U:H2'	21:B0:3099:U:C6	2.10	0.85
1:AA:190:A:N1	20:AT:104:LEU:CB	2.34	0.85
1:AA:261:U:C6	20:AT:79:ARG:NH1	2.45	0.85
1:AA:375:U:O3'	1:AA:376:G:O5'	1.93	0.85
1:AA:702:A:H5'	21:B0:1840:A:H5'	1.58	0.85
1:AA:183:G:N2	1:AA:223:U:O2'	2.10	0.85
4:AD:150:GLU:HG3	4:AD:153:ARG:NH2	1.90	0.85
7:AG:149:ARG:NH1	11:AK:59:TYR:CE1	2.45	0.85
21:B0:1098:G:H1	21:B0:1113:C:N4	1.75	0.85
1:AA:186:C:H4'	20:AT:81:LYS:HB2	1.58	0.84
1:AA:588:G:C4	1:AA:753:A:C6	2.65	0.84
1:AA:1318:A:C5'	19:AS:10:PHE:CD1	2.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1419:G:H1'	21:B0:1932:G:H4'	1.58	0.84
3:AC:190:ARG:HB3	3:AC:190:ARG:NH1	1.91	0.84
1:AA:187:G:C2	20:AT:105:SER:CB	2.53	0.84
1:AA:804:U:O3'	1:AA:805:C:P	2.35	0.84
17:AQ:101:ARG:NH1	21:B0:731:A:C2	2.36	0.84
1:AA:130:A:C6	1:AA:264:U:C2	2.64	0.84
1:AA:235:C:H5'	17:AQ:70:ARG:HG2	0.84	0.84
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.59	0.84
1:AA:1505:G:HO3'	1:AA:1506:U:P	0.97	0.84
21:B0:3098:U:HO3'	21:B0:3099:U:P	1.99	0.84
1:AA:191:G:C2	1:AA:192:U:O2	2.30	0.84
1:AA:216:C:O2'	1:AA:469:C:O4'	1.93	0.84
1:AA:247:G:OP2	17:AQ:100:LYS:CE	2.24	0.84
1:AA:1115:C:H1'	14:AN:61:TRP:O	1.77	0.84
17:AQ:96:GLN:HG3	21:B0:725:C:O2'	1.76	0.84
21:B0:910:U:C2'	21:B0:911:A:H5'	2.07	0.84
21:B0:1953:A:H1'	21:B0:1955:G:H1'	1.58	0.84
1:AA:274:A:N3	1:AA:275:G:C1'	2.39	0.84
1:AA:994:A:O2'	14:AN:8:GLU:CA	2.25	0.84
4:AD:104:VAL:HG11	4:AD:146:ILE:HD12	1.58	0.84
1:AA:923:A:C1'	1:AA:1398:A:C2	2.61	0.84
1:AA:1256:A:C4'	1:AA:1258:G:C4	2.60	0.84
17:AQ:104:LYS:N	21:B0:726:G:C2	2.42	0.84
1:AA:190:A:C2	20:AT:101:GLY:O	2.30	0.84
1:AA:1457:A:C4	1:AA:1459:C:O2	2.30	0.84
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.12	0.84
21:B0:1856:U:H3	21:B0:3877:A:H61	1.02	0.84
1:AA:848:G:C2'	1:AA:849:C:O4'	2.26	0.84
3:AC:190:ARG:HB3	3:AC:190:ARG:HH11	1.43	0.84
10:AJ:65:LEU:HD13	14:AN:36:PHE:CE1	2.11	0.84
21:B0:3128:G:H4'	21:B0:3174:C:O4'	1.78	0.84
1:AA:130:A:O4'	1:AA:264:U:H5'	1.72	0.84
1:AA:133:U:H5''	20:AT:74:LYS:HZ3	1.43	0.84
1:AA:1298:C:H5	7:AG:114:ARG:HD3	1.42	0.84
3:AC:172:ARG:HH12	3:AC:174:PRO:HG3	1.43	0.84
9:AI:8:GLY:HA2	9:AI:79:LEU:CD1	2.07	0.84
13:AM:84:ILE:HG21	19:AS:66:MET:HE2	1.60	0.84
21:B0:891:A:C2'	21:B0:892:A:H8	1.81	0.84
21:B0:2548:G:C2'	21:B0:2549:G:H5''	2.08	0.84
1:AA:923:A:H2	1:AA:1395:C:N3	1.75	0.83
1:AA:1182:G:H5'	1:AA:1184:G:H5''	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:616:U:H2'	21:B0:617:U:H5''	1.59	0.83
21:B0:847:C:H41	21:B0:955:G:H21	1.25	0.83
21:B0:3103:A:H61	21:B0:3186:C:H42	1.24	0.83
21:B0:2198:U:H3'	21:B0:2199:C:H5''	1.59	0.83
1:AA:640:A:N3	8:AH:115:SER:CB	2.41	0.83
1:AA:1044:A:H2'	1:AA:1045:C:C2'	2.03	0.83
4:AD:61:LYS:HD2	4:AD:207:TYR:OH	1.78	0.83
21:B0:910:U:C3'	21:B0:911:A:P	2.65	0.83
21:B0:1071:U:H3	21:B0:1099:A:H2	1.21	0.83
1:AA:19:C:O2	1:AA:916:G:C2	2.30	0.83
1:AA:262:A:H5'	20:AT:74:LYS:HG3	1.60	0.83
1:AA:935:A:C4'	1:AA:1384:C:O2	2.26	0.83
21:B0:109:A:H3'	21:B0:110:U:H5''	1.60	0.83
1:AA:394:G:C5	1:AA:395:C:C5	2.67	0.83
1:AA:922:G:C2	1:AA:1396:A:N6	2.41	0.83
1:AA:582:U:C1'	17:AQ:105:ALA:HA	2.07	0.83
1:AA:1475:G:OP1	21:B0:1706:A:C1'	2.26	0.83
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.08	0.83
4:AD:88:VAL:CG2	5:AE:96:PRO:HB3	2.03	0.83
13:AM:7:VAL:HG13	26:BD:113:ASP:CA	2.08	0.83
13:AM:50:GLU:O	13:AM:54:VAL:HG23	1.77	0.83
19:AS:55:LYS:HG2	19:AS:56:GLN:HE21	1.42	0.83
1:AA:246:A:O3'	1:AA:247:G:H4'	1.76	0.83
1:AA:1277:C:C2'	1:AA:1279:A:C8	2.62	0.83
1:AA:104:G:C4'	1:AA:172:A:C2	2.61	0.83
1:AA:436:C:C2	1:AA:437:U:C5	2.65	0.83
1:AA:1261:A:HO2'	1:AA:1283:G:H5''	1.44	0.83
4:AD:25:ARG:C	4:AD:27:TYR:H	1.85	0.83
5:AE:79:GLU:CD	8:AH:105:ARG:CD	2.51	0.83
21:B0:3877:A:O3'	21:B0:1861:G:C3'	2.25	0.83
1:AA:1044:A:H2'	1:AA:1045:C:HO2'	1.41	0.83
1:AA:1328:C:H5''	13:AM:28:ALA:HB1	1.59	0.83
1:AA:1475:G:H4'	21:B0:1706:A:H5''	1.60	0.83
5:AE:148:VAL:HG21	8:AH:107:LEU:HD13	1.60	0.83
1:AA:15:G:H4'	5:AE:24:ARG:CZ	2.09	0.83
1:AA:1250:A:H4'	9:AI:68:GLY:N	1.94	0.83
4:AD:150:GLU:H	4:AD:150:GLU:CD	1.86	0.83
6:AF:36:ARG:HH12	6:AF:38:GLU:HG2	1.43	0.83
1:AA:935:A:C1'	1:AA:1384:C:C2	2.62	0.82
1:AA:958:A:C8	19:AS:55:LYS:HD2	2.14	0.82
1:AA:1112:C:O2	3:AC:178:LEU:C	2.21	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1256:A:N6	1:AA:1278:U:C2	2.46	0.82
10:AJ:19:SER:HB2	10:AJ:91:PRO:HG3	1.60	0.82
21:B0:1181:C:H2'	21:B0:1182:U:H5''	1.60	0.82
1:AA:244:U:C5	1:AA:894:G:C2	2.67	0.82
1:AA:436:C:N3	1:AA:437:U:C5	2.45	0.82
1:AA:1237:C:O3'	1:AA:1238:A:P	2.38	0.82
3:AC:23:TYR:CE1	10:AJ:67:THR:HG23	2.15	0.82
21:B0:1098:G:N1	21:B0:1113:C:N4	2.27	0.82
1:AA:1182:G:C5'	1:AA:1184:G:C5'	2.53	0.82
3:AC:91:LEU:HD23	3:AC:92:ALA:N	1.94	0.82
1:AA:130:A:OP2	17:AQ:63:ARG:NH2	2.12	0.82
1:AA:274:A:H1'	1:AA:275:G:O4'	1.77	0.82
1:AA:1394:A:C6	1:AA:1501:C:H5'	2.14	0.82
5:AE:105:VAL:HB	5:AE:106:PRO:HD3	1.60	0.82
13:AM:78:ILE:HA	13:AM:81:LEU:HD21	1.62	0.82
21:B0:910:U:O2'	21:B0:911:A:C5'	2.24	0.82
1:AA:262:A:C2'	20:AT:75:ASN:ND2	2.41	0.82
10:AJ:45:ARG:CZ	14:AN:36:PHE:CD2	2.62	0.82
10:AJ:63:PHE:CZ	14:AN:48:ALA:HB3	2.13	0.82
14:AN:14:PRO:C	14:AN:16:PHE:H	1.86	0.82
21:B0:653:G:H2'	21:B0:654:A:H4'	1.62	0.82
1:AA:217:C:O3'	1:AA:470:U:O4'	1.98	0.82
21:B0:166:G:H21	21:B0:184:A:H62	1.27	0.82
1:AA:473:C:OP1	16:AP:75:ARG:NH1	2.13	0.82
1:AA:1269:A:C2	1:AA:1313:U:H1'	2.12	0.82
1:AA:1409:C:H2'	1:AA:1410:G:O4'	1.79	0.82
1:AA:116:A:H61	1:AA:313:A:C1'	1.92	0.82
1:AA:132:C:H5'	20:AT:75:ASN:ND2	1.94	0.82
1:AA:234:C:O3'	17:AQ:70:ARG:NE	2.12	0.82
1:AA:394:G:C5	1:AA:395:C:C4	2.68	0.82
1:AA:436:C:H2'	1:AA:437:U:C6	2.14	0.82
1:AA:571:U:C5'	1:AA:819:A:C6	2.62	0.82
1:AA:1405:G:O2'	1:AA:1519:A:H5'	1.80	0.82
20:AT:43:LEU:HD13	20:AT:51:GLU:HG3	1.62	0.82
21:B0:1964:A:H3'	21:B0:1965:U:H5'	1.60	0.82
1:AA:189:A:H61	20:AT:104:LEU:CG	1.92	0.82
1:AA:1475:G:C4'	21:B0:1706:A:C5'	2.58	0.82
6:AF:95:GLU:H	6:AF:95:GLU:CD	1.86	0.82
18:AR:55:ARG:HB3	18:AR:55:ARG:NH1	1.95	0.82
21:B0:3118:U:O4	21:B0:3149:G:C8	2.33	0.82
1:AA:132:C:C4'	1:AA:262:A:O4'	2.21	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:436:C:N1	1:AA:437:U:C6	2.47	0.82
1:AA:571:U:H5''	1:AA:819:A:C6	2.15	0.82
1:AA:1064:G:H22	1:AA:1190:G:H2'	1.42	0.82
1:AA:8:A:O4'	5:AE:103:GLY:N	2.12	0.81
1:AA:112:G:N2	1:AA:354:G:P	2.53	0.81
1:AA:825:G:H21	8:AH:11:THR:HG21	1.45	0.81
1:AA:1483:A:C5	1:AA:1484:C:C4	2.68	0.81
21:B0:831:G:H21	21:B0:1203:A:H62	1.25	0.81
1:AA:130:A:C2	1:AA:264:U:N3	2.47	0.81
1:AA:760:G:C2	17:AQ:104:LYS:O	2.33	0.81
1:AA:131:C:H1'	1:AA:263:A:H1'	1.62	0.81
1:AA:518:C:HO2'	12:AL:50:SER:HB3	1.43	0.81
1:AA:523:A:C2	12:AL:91:LYS:HB3	2.14	0.81
15:AO:78:TYR:CZ	15:AO:82:ILE:HD11	2.15	0.81
19:AS:29:ARG:O	19:AS:30:LEU:HB2	1.80	0.81
21:B0:789:G:H21	21:B0:806:A:H62	1.25	0.81
21:B0:3197:U:C4	21:B0:2204:A:N6	2.49	0.81
1:AA:1064:G:N2	1:AA:1190:G:C2'	2.43	0.81
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.15	0.81
7:AG:75:VAL:CG1	7:AG:86:GLN:HB3	2.10	0.81
1:AA:176:C:OP1	20:AT:29:LYS:NZ	2.11	0.81
1:AA:184:G:H5'	1:AA:224:C:O2'	1.81	0.81
1:AA:223:U:C5'	20:AT:68:LYS:HZ2	1.87	0.81
1:AA:706:A:C1'	11:AK:29:ILE:HD11	2.11	0.81
1:AA:761:G:H4'	17:AQ:102:GLY:C	2.06	0.81
1:AA:835:U:H5''	18:AR:64:ARG:CZ	2.11	0.81
1:AA:1224:G:C2'	1:AA:1225:A:OP1	2.26	0.81
1:AA:1318:A:C4'	19:AS:10:PHE:CD1	2.64	0.81
21:B0:1034:U:H1'	21:B0:1133:G:H5''	1.61	0.81
1:AA:189:A:H61	20:AT:104:LEU:HB3	1.04	0.81
1:AA:218:C:OP1	1:AA:470:U:H4'	1.81	0.81
1:AA:1269:A:N3	1:AA:1313:U:H1'	1.96	0.81
2:AB:132:LYS:HA	2:AB:135:GLN:HB3	1.63	0.81
21:B0:1119:U:C4	21:B0:1120:C:C5	2.69	0.81
1:AA:133:U:C5'	20:AT:74:LYS:HZ3	1.93	0.81
1:AA:1416:G:C4	1:AA:1417:G:O4'	2.34	0.81
1:AA:1416:G:C5	1:AA:1417:G:O4'	2.33	0.81
4:AD:150:GLU:HA	4:AD:153:ARG:HE	1.44	0.81
1:AA:406:G:N9	1:AA:496:A:N1	2.29	0.81
1:AA:600:C:C5'	8:AH:129:VAL:HA	2.11	0.81
1:AA:1261:A:C2'	1:AA:1283:G:C5'	2.58	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1305:G:N2	1:AA:1331:G:O2'	2.13	0.81
2:AB:101:MET:HA	2:AB:108:ILE:HD12	1.63	0.81
7:AG:75:VAL:HG11	7:AG:86:GLN:HB3	1.63	0.81
21:B0:1807:A:H4'	21:B0:1808:C:H5'	1.61	0.81
1:AA:9:G:H5'	5:AE:122:GLU:OE2	1.79	0.81
1:AA:1109:C:P	3:AC:176:HIS:CD2	2.74	0.81
13:AM:82:MET:HG3	13:AM:93:ARG:NE	1.96	0.81
1:AA:702:A:N1	21:B0:1839:A:O4'	2.14	0.81
1:AA:1061:G:O4'	10:AJ:56:HIS:ND1	2.14	0.81
3:AC:23:TYR:CD1	10:AJ:11:PHE:CD2	2.69	0.81
21:B0:2227:C:H2'	21:B0:2228:U:H5'	1.63	0.81
2:AB:27:LYS:HD3	2:AB:195:ASP:OD2	1.81	0.80
5:AE:118:ILE:HG22	5:AE:119:LEU:N	1.95	0.80
21:B0:878:C:H42	21:B0:921:A:H62	1.28	0.80
22:B9:73:C:HO3'	22:B9:74:A:P	2.03	0.80
1:AA:5:U:O4	5:AE:95:ALA:CB	2.29	0.80
1:AA:406:G:C6	1:AA:496:A:C8	2.69	0.80
1:AA:1368:G:OP2	9:AI:114:TYR:N	2.14	0.80
1:AA:1394:A:N6	1:AA:1501:C:H5''	1.95	0.80
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.44	0.80
1:AA:1483:A:C4	1:AA:1484:C:C6	2.69	0.80
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.82	0.80
1:AA:1416:G:C6	1:AA:1417:G:C1'	2.64	0.80
3:AC:8:ILE:HG23	3:AC:16:ARG:HG2	1.60	0.80
10:AJ:8:LEU:CD2	10:AJ:96:ILE:HG12	2.11	0.80
13:AM:22:ILE:HD12	13:AM:25:ILE:HD12	1.61	0.80
21:B0:3118:U:O4	21:B0:3149:G:H8	1.64	0.80
1:AA:848:G:O2'	1:AA:849:C:O4'	1.99	0.80
1:AA:926:G:C6	1:AA:1505:G:C5	2.69	0.80
1:AA:1255:G:C2'	1:AA:1258:G:H21	1.93	0.80
1:AA:929:G:P	1:AA:1533:C:N4	2.54	0.80
3:AC:191:THR:HG22	3:AC:193:TYR:H	1.44	0.80
21:B0:1098:G:C2	21:B0:1113:C:N4	2.41	0.80
1:AA:130:A:H1'	1:AA:263:A:O2'	1.81	0.80
1:AA:1416:G:C3'	1:AA:1417:G:P	2.64	0.80
6:AF:30:LEU:HB3	6:AF:35:ALA:HB3	1.62	0.80
21:B0:225:G:H3'	21:B0:226:C:C5'	2.09	0.80
21:B0:1072:U:H3	29:BG:10:LEU:CA	1.95	0.80
1:AA:995:C:C2	14:AN:4:LYS:HD3	2.17	0.80
12:AL:28:LYS:HD2	12:AL:33:ARG:HH22	1.47	0.80
17:AQ:95:TYR:C	17:AQ:97:SER:H	1.89	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1119:U:O3'	21:B0:1120:C:O5'	2.00	0.80
1:AA:8:A:O4'	5:AE:102:ALA:C	2.24	0.80
1:AA:59:A:C2	1:AA:331:G:C4	2.68	0.80
1:AA:319:G:O2'	1:AA:1434:A:C6	2.35	0.80
1:AA:367:U:O2	1:AA:369:C:C6	2.35	0.80
1:AA:974:A:P	14:AN:31:ARG:HG2	2.21	0.80
1:AA:994:A:C4	14:AN:5:ALA:C	2.51	0.80
1:AA:1298:C:C5	7:AG:114:ARG:CD	2.63	0.80
1:AA:1490:C:H2'	1:AA:1491:G:C8	2.17	0.80
12:AL:67:THR:HG22	12:AL:96:VAL:HG13	1.63	0.80
1:AA:19:C:C2	1:AA:916:G:N1	2.43	0.80
1:AA:547:A:H4'	1:AA:548:G:O5'	1.53	0.80
1:AA:820:U:O2	1:AA:873:A:H8	1.14	0.80
1:AA:994:A:O3'	14:AN:11:LYS:HE2	1.82	0.80
3:AC:23:TYR:HA	10:AJ:11:PHE:CE1	2.17	0.80
1:AA:1484:C:H4'	21:B0:1943:A:C2'	2.10	0.79
13:AM:88:ARG:CD	19:AS:3:ARG:HH21	1.89	0.79
1:AA:237:C:P	17:AQ:40:LYS:CD	2.69	0.79
1:AA:570:G:HO2'	1:AA:819:A:H2'	1.44	0.79
1:AA:619:U:H2'	4:AD:135:LEU:CD1	2.11	0.79
1:AA:933:G:OP2	7:AG:3:ARG:HD2	1.82	0.79
1:AA:1116:C:C2'	1:AA:1117:G:H5''	2.12	0.79
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.14	0.79
1:AA:1305:G:O2'	1:AA:1306:A:C8	2.30	0.79
1:AA:761:G:O4'	17:AQ:103:GLY:O	2.00	0.79
1:AA:1483:A:C4	1:AA:1484:C:C5	2.69	0.79
1:AA:1490:C:H5'	1:AA:1490:C:H6	1.47	0.79
21:B0:1119:U:O4	21:B0:1120:C:C4	2.36	0.79
1:AA:1261:A:H4'	1:AA:1283:G:C5'	2.11	0.79
1:AA:1314:C:H5	19:AS:6:LYS:HG3	1.44	0.79
3:AC:107:GLN:H	3:AC:107:GLN:CD	1.88	0.79
1:AA:212:G:HO3'	1:AA:213:G:P	2.01	0.79
1:AA:1211:U:C5'	1:AA:1212:U:P	2.71	0.79
1:AA:1248:A:O2'	9:AI:70:LYS:CE	2.30	0.79
1:AA:1261:A:C1'	1:AA:1283:G:H4'	2.12	0.79
10:AJ:62:HIS:HB3	14:AN:59:ALA:CB	2.11	0.79
21:B0:3874:C:C4	21:B0:3875:A:C5	2.70	0.79
1:AA:191:G:C8	1:AA:192:U:C6	2.71	0.79
8:AH:90:GLY:O	8:AH:91:ARG:HB2	1.82	0.79
10:AJ:45:ARG:HH22	14:AN:36:PHE:HD2	1.30	0.79
21:B0:1572:C:C2'	21:B0:1573:G:H5''	2.11	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:184:G:C5'	1:AA:224:C:O2'	2.30	0.79
1:AA:205:G:N2	1:AA:207:C:H5	1.80	0.79
1:AA:673:G:H2'	1:AA:674:G:C8	2.17	0.79
21:B0:1856:U:O2	21:B0:3877:A:N1	2.15	0.79
1:AA:113:G:O2'	1:AA:353:A:H4'	1.82	0.79
1:AA:244:U:C4	1:AA:894:G:C2	2.71	0.79
1:AA:278:G:H21	1:AA:279:A:H62	1.30	0.79
1:AA:1394:A:N1	1:AA:1501:C:H5'	1.98	0.79
3:AC:15:THR:O	3:AC:16:ARG:HB2	1.81	0.79
1:AA:108:G:C5	20:AT:15:ARG:HG3	2.17	0.79
1:AA:315:A:H4'	1:AA:353:A:N6	1.98	0.79
1:AA:397:A:C8	1:AA:547:A:O3'	2.36	0.79
1:AA:406:G:C8	1:AA:496:A:N1	2.51	0.79
1:AA:1475:G:H4'	21:B0:1706:A:H4'	1.65	0.79
21:B0:1856:U:C2	21:B0:3877:A:N1	2.51	0.79
21:B0:1856:U:N3	21:B0:3877:A:N6	2.14	0.79
1:AA:262:A:H5'	20:AT:74:LYS:CG	2.13	0.79
1:AA:323:U:H4'	20:AT:19:SER:O	1.82	0.79
1:AA:935:A:O4'	1:AA:1384:C:C2	2.36	0.79
1:AA:1346:A:C2'	7:AG:10:ARG:HH22	1.91	0.79
12:AL:126:LYS:H	12:AL:126:LYS:HD2	1.48	0.79
1:AA:104:G:C4'	1:AA:172:A:H2	1.95	0.78
1:AA:212:G:O2'	1:AA:213:G:H5'	1.82	0.78
1:AA:1475:G:H5'	21:B0:1706:A:O4'	1.83	0.78
5:AE:43:LEU:HD11	5:AE:132:ALA:HB1	1.64	0.78
21:B0:1861:G:C4'	53:B5:199:ASN:CA	2.61	0.78
1:AA:185:A:O2'	1:AA:186:C:P	2.41	0.78
1:AA:1459:C:P	20:AT:31:SER:OG	2.41	0.78
1:AA:1474:G:H5'	21:B0:1718:A:N3	1.99	0.78
2:AB:77:ALA:HB2	2:AB:211:ILE:CD1	2.10	0.78
20:AT:54:LYS:HG3	20:AT:100:ILE:HD13	1.65	0.78
1:AA:184:G:C1'	1:AA:224:C:H4'	2.13	0.78
1:AA:1296:C:O4'	1:AA:1302:U:O4	2.01	0.78
1:AA:1314:C:C5	19:AS:6:LYS:HE2	2.17	0.78
21:B0:471:A:H62	21:B0:480:G:H21	1.31	0.78
20:AT:54:LYS:HG3	20:AT:100:ILE:CD1	2.13	0.78
1:AA:406:G:C5	1:AA:496:A:C4	2.71	0.78
1:AA:837:G:H2'	1:AA:838:C:C6	2.19	0.78
1:AA:1232:U:OP1	9:AI:125:TYR:C	2.27	0.78
1:AA:1416:G:C3'	1:AA:1417:G:C5'	2.54	0.78
11:AK:54:ARG:HB3	11:AK:54:ARG:NH1	1.97	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:70:ILE:HD13	12:AL:77:LEU:HD12	1.63	0.78
16:AP:21:VAL:HG21	16:AP:59:TRP:CD1	2.19	0.78
19:AS:31:ILE:HG22	19:AS:32:LYS:N	1.99	0.78
21:B0:891:A:C2'	21:B0:892:A:N7	2.36	0.78
21:B0:895:G:H5'	21:B0:895:G:H8	1.48	0.78
1:AA:187:G:N2	20:AT:105:SER:CB	2.46	0.78
1:AA:243:A:C4'	1:AA:244:U:H5'	2.14	0.78
1:AA:1016:A:O2'	1:AA:1218:C:H4'	1.84	0.78
1:AA:1211:U:H5'	1:AA:1212:U:O5'	1.84	0.78
1:AA:1256:A:C2	1:AA:1258:G:N1	2.47	0.78
2:AB:84:GLU:OE1	2:AB:216:SER:HA	1.83	0.78
12:AL:120:TYR:O	12:AL:122:THR:HG23	1.83	0.78
1:AA:279:A:H3'	17:AQ:95:TYR:CZ	2.19	0.78
1:AA:1394:A:N1	1:AA:1501:C:C4'	2.46	0.78
1:AA:1458:G:N7	1:AA:1459:C:C2	2.52	0.78
2:AB:8:LYS:O	2:AB:9:GLU:HB2	1.81	0.78
13:AM:80:ARG:CZ	19:AS:65:ASN:O	2.32	0.78
21:B0:403:A:H4'	21:B0:425:A:H5'	1.63	0.78
21:B0:1252:C:C2'	21:B0:1253:C:H5''	2.13	0.78
1:AA:89:G:C3'	1:AA:90:C:P	2.72	0.78
1:AA:130:A:H2	1:AA:264:U:C6	1.98	0.78
1:AA:367:U:N3	1:AA:369:C:N4	2.31	0.78
1:AA:714:G:H4'	1:AA:776:G:C4'	2.13	0.78
1:AA:1232:U:OP1	9:AI:126:SER:N	2.17	0.78
1:AA:1366:C:H2'	1:AA:1367:C:H6	1.48	0.78
5:AE:64:ARG:O	5:AE:65:ASN:HB3	1.84	0.78
21:B0:225:G:C3'	21:B0:226:C:H5'	2.13	0.78
21:B0:1679:U:H3'	21:B0:1680:U:H5''	1.66	0.78
1:AA:476:U:O2	1:AA:477:G:O4'	1.99	0.78
1:AA:1256:A:H4'	1:AA:1258:G:N9	1.95	0.78
4:AD:88:VAL:HA	5:AE:97:GLY:N	1.98	0.78
15:AO:16:ALA:HB1	15:AO:21:ASP:HB3	1.65	0.78
1:AA:651:C:C2	1:AA:652:U:C5	2.72	0.77
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.66	0.77
21:B0:1067:G:H5'	21:B0:1068:A:C5'	2.11	0.77
1:AA:128:G:H4'	17:AQ:3:LYS:HG2	1.65	0.77
1:AA:189:A:C5	20:AT:104:LEU:C	2.59	0.77
1:AA:216:C:O2'	1:AA:468:A:C2'	2.32	0.77
1:AA:323:U:O2'	20:AT:22:ARG:HD2	1.84	0.77
1:AA:436:C:C6	1:AA:437:U:C5	2.72	0.77
1:AA:1112:C:C2	3:AC:178:LEU:N	2.51	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1117:G:O2'	9:AI:106:ALA:HB2	1.85	0.77
17:AQ:104:LYS:CG	21:B0:727:U:C2	2.66	0.77
1:AA:132:C:OP1	20:AT:75:ASN:CG	2.28	0.77
1:AA:583:A:H5'	17:AQ:90:ILE:HG21	1.66	0.77
1:AA:1147:C:H4'	9:AI:5:TYR:HE1	1.46	0.77
1:AA:1181:G:O2'	1:AA:1184:G:H5'	1.83	0.77
1:AA:190:A:C5	20:AT:105:SER:HA	2.19	0.77
1:AA:216:C:O2'	1:AA:468:A:N3	2.17	0.77
1:AA:130:A:P	17:AQ:63:ARG:HH21	2.07	0.77
1:AA:293:G:H4'	1:AA:609:A:H2	1.42	0.77
6:AF:100:ASN:HD22	18:AR:23:LYS:HG2	1.49	0.77
1:AA:760:G:O6	17:AQ:105:ALA:HB1	1.84	0.77
1:AA:1092:A:C5'	7:AG:4:ARG:CZ	2.61	0.77
1:AA:1226:C:H4'	1:AA:1227:A:OP1	1.84	0.77
1:AA:1255:G:O2'	1:AA:1259:C:C2	2.34	0.77
2:AB:197:VAL:HB	2:AB:200:ILE:HG12	1.66	0.77
1:AA:848:G:O3'	1:AA:849:C:H5'	1.85	0.77
7:AG:66:VAL:HG12	7:AG:70:LYS:HE3	1.65	0.77
21:B0:1067:G:C5'	21:B0:1068:A:H5'	2.10	0.77
21:B0:3109:U:H5'	21:B0:3150:C:C4'	2.15	0.77
21:B0:3185:U:H6	21:B0:3185:U:H5'	1.49	0.77
21:B0:2491:C:H2'	21:B0:2492:G:H5''	1.67	0.77
1:AA:7:G:H21	5:AE:121:LYS:HG2	1.50	0.77
1:AA:46:G:O3'	1:AA:47:C:P	2.42	0.77
1:AA:314:C:O2	1:AA:353:A:H2	1.66	0.77
1:AA:935:A:H1'	1:AA:1384:C:C4	2.20	0.77
1:AA:994:A:HO2'	14:AN:8:GLU:HA	1.49	0.77
1:AA:577:G:H1'	1:AA:816:A:C2	2.19	0.77
1:AA:922:G:C2	1:AA:1396:A:C2	2.73	0.77
2:AB:57:PHE:O	2:AB:60:ASP:HB3	1.84	0.77
10:AJ:61:GLU:OE2	14:AN:49:HIS:CE1	2.37	0.77
12:AL:75:HIS:CD2	12:AL:77:LEU:H	1.97	0.77
1:AA:236:G:C5'	17:AQ:42:TYR:HE2	1.94	0.77
1:AA:323:U:H5'	20:AT:23:ARG:CA	2.08	0.77
16:AP:74:LEU:O	16:AP:79:VAL:HG23	1.85	0.77
21:B0:940:G:H3'	21:B0:941:U:C5'	2.07	0.77
21:B0:3128:G:H4'	21:B0:3174:C:C1'	2.14	0.77
1:AA:142:G:O4'	1:AA:195:A:C6	2.37	0.76
1:AA:1409:C:C2'	1:AA:1410:G:H8	1.99	0.76
4:AD:205:GLU:OE1	5:AE:100:VAL:HB	1.85	0.76
21:B0:1856:U:C5'	21:B0:3865:A:OP1	2.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:2808:U:H3'	21:B0:2809:A:H5'	1.67	0.76
7:AG:95:ARG:HH11	7:AG:95:ARG:HG3	1.50	0.76
1:AA:1277:C:O2	1:AA:1279:A:N7	2.19	0.76
1:AA:1458:G:N9	1:AA:1459:C:H2'	1.95	0.76
12:AL:75:HIS:HD2	12:AL:77:LEU:N	1.82	0.76
17:AQ:104:LYS:HG3	21:B0:727:U:H1'	1.55	0.76
1:AA:19:C:N3	1:AA:916:G:C6	2.54	0.76
1:AA:189:A:N6	20:AT:104:LEU:C	2.43	0.76
1:AA:367:U:O2	1:AA:369:C:C4	2.38	0.76
1:AA:1016:A:H5'	14:AN:15:LYS:HE3	1.66	0.76
17:AQ:104:LYS:HZ3	21:B0:726:G:H1	1.32	0.76
1:AA:6:G:N2	5:AE:98:THR:CG2	2.47	0.76
1:AA:293:G:P	1:AA:609:A:N6	2.54	0.76
1:AA:935:A:H1'	1:AA:1384:C:C2	2.21	0.76
1:AA:1014:A:C2	19:AS:34:TRP:CG	2.72	0.76
1:AA:1329:A:H5''	13:AM:26:GLY:N	1.94	0.76
18:AR:55:ARG:HB3	18:AR:55:ARG:HH11	1.50	0.76
21:B0:894:G:H2'	21:B0:895:G:H5''	1.65	0.76
1:AA:132:C:C5'	20:AT:75:ASN:ND2	2.48	0.76
1:AA:217:C:C2'	1:AA:470:U:H5'	2.15	0.76
1:AA:994:A:O2'	14:AN:8:GLU:CB	2.33	0.76
1:AA:1108:G:H5'	1:AA:1191:A:H4'	1.67	0.76
1:AA:1250:A:H4'	9:AI:68:GLY:CA	2.14	0.76
2:AB:36:ARG:HD2	2:AB:41:ILE:HD12	1.68	0.76
4:AD:162:LEU:HD13	4:AD:181:MET:HG2	1.67	0.76
12:AL:126:LYS:H	12:AL:126:LYS:CD	1.96	0.76
1:AA:37:U:O2	1:AA:547:A:C2	2.39	0.76
1:AA:132:C:C5'	1:AA:262:A:O4'	2.31	0.76
1:AA:262:A:OP2	20:AT:76:ALA:HB2	1.85	0.76
1:AA:1459:C:C5'	20:AT:28:ALA:CA	2.62	0.76
1:AA:323:U:O3'	20:AT:22:ARG:HB2	1.83	0.76
1:AA:977:A:H2	1:AA:1224:G:C6	2.00	0.76
1:AA:1113:C:C1'	3:AC:178:LEU:CD2	2.62	0.76
1:AA:1182:G:O2'	1:AA:1183:A:OP2	2.04	0.76
17:AQ:104:LYS:CB	21:B0:727:U:H1'	2.16	0.76
20:AT:14:LYS:O	20:AT:18:GLN:HG3	1.86	0.76
21:B0:1528:C:H2'	21:B0:1529:C:H5''	1.67	0.76
1:AA:588:G:C8	1:AA:753:A:C2	2.74	0.76
6:AF:86:ARG:O	6:AF:87:ARG:HG2	1.85	0.76
1:AA:403:C:C2'	1:AA:404:U:H5'	2.14	0.76
1:AA:808:C:OP1	15:AO:48:LYS:HE3	1.86	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1114:C:O2	14:AN:60:SER:OG	2.04	0.76
1:AA:1428:A:H4'	21:B0:1703:C:O2'	1.85	0.76
3:AC:110:ASN:O	3:AC:111:LEU:HD23	1.85	0.76
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.49	0.76
17:AQ:97:SER:OG	17:AQ:103:GLY:HA2	1.85	0.76
19:AS:40:ILE:HD13	19:AS:62:ILE:HD13	1.68	0.76
21:B0:357:A:H2'	21:B0:358:C:H5'	1.66	0.76
22:B9:107:C:H2'	22:B9:108:G:H5'	1.68	0.76
1:AA:760:G:N1	17:AQ:104:LYS:C	2.43	0.75
1:AA:958:A:C4	19:AS:55:LYS:HD2	2.21	0.75
21:B0:68:C:H1'	21:B0:72:A:H1'	1.68	0.75
21:B0:1113:C:O3'	21:B0:1114:A:OP2	2.04	0.75
1:AA:16:A:H4'	5:AE:17:ALA:H	1.51	0.75
1:AA:322:C:O3'	20:AT:23:ARG:CG	2.33	0.75
1:AA:587:G:OP1	8:AH:89:PRO:HB3	1.86	0.75
2:AB:139:LYS:O	2:AB:143:GLU:HG2	1.86	0.75
21:B0:910:U:O3'	21:B0:911:A:P	2.45	0.75
21:B0:1919:A:H5''	21:B0:1920:A:O5'	1.86	0.75
1:AA:279:A:OP2	17:AQ:95:TYR:CE2	2.35	0.75
1:AA:328:C:O2	1:AA:328:C:H2'	1.85	0.75
1:AA:1025:U:H2'	1:AA:1026:G:C8	2.21	0.75
1:AA:1061:G:H1'	10:AJ:56:HIS:HE1	1.50	0.75
1:AA:1069:C:O2'	1:AA:1192:C:H1'	1.86	0.75
1:AA:1261:A:H1'	1:AA:1283:G:H5'	1.67	0.75
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.22	0.75
2:AB:16:HIS:NE2	2:AB:214:ILE:HG12	2.02	0.75
21:B0:3874:C:N4	21:B0:3875:A:C6	2.54	0.75
21:B0:3126:A:O4'	21:B0:3127:G:H5'	1.84	0.75
1:AA:142:G:O4'	1:AA:195:A:N6	2.19	0.75
1:AA:234:C:O2'	17:AQ:64:PRO:HG3	1.87	0.75
1:AA:501:C:H1'	1:AA:549:C:C1'	2.15	0.75
1:AA:1261:A:C4'	1:AA:1283:G:H5''	2.15	0.75
21:B0:3874:C:C4	21:B0:3875:A:N7	2.54	0.75
21:B0:2075:U:O2'	21:B0:3093:C:N1	2.18	0.75
21:B0:2806:G:H1'	21:B0:2858:A:H2'	1.68	0.75
1:AA:323:U:C4'	20:AT:22:ARG:HB2	2.15	0.75
1:AA:436:C:H2'	1:AA:437:U:H6	1.49	0.75
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.00	0.75
1:AA:1298:C:P	7:AG:114:ARG:HH22	2.09	0.75
9:AI:118:LYS:O	9:AI:119:ALA:HB3	1.85	0.75
12:AL:59:ARG:HD3	12:AL:65:GLU:HG3	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1199:U:H3'	21:B0:1200:G:C5'	2.17	0.75
1:AA:960:U:C1'	1:AA:1222:G:O2'	2.29	0.75
1:AA:1492:A:H2'	1:AA:1493:A:O4'	1.87	0.75
3:AC:19:GLU:HB3	3:AC:40:ARG:HH21	1.50	0.75
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.02	0.75
13:AM:49:THR:HG22	13:AM:51:ALA:N	2.02	0.75
21:B0:892:A:N3	21:B0:911:A:C4	2.54	0.75
1:AA:6:G:C8	5:AE:119:LEU:HD12	2.21	0.75
1:AA:31:G:C8	1:AA:48:C:C4	2.75	0.75
1:AA:132:C:O4'	1:AA:262:A:C1'	2.29	0.75
1:AA:992:U:H4'	1:AA:993:G:O5'	1.86	0.75
10:AJ:45:ARG:NH2	14:AN:36:PHE:HD2	1.85	0.75
1:AA:6:G:C8	5:AE:119:LEU:CD1	2.69	0.75
1:AA:51:A:C6	1:AA:314:C:H1'	2.21	0.75
1:AA:835:U:P	18:AR:64:ARG:HH21	2.10	0.75
1:AA:995:C:O2	14:AN:4:LYS:CD	2.34	0.75
1:AA:1367:C:H5'	10:AJ:60:ARG:NH1	2.02	0.75
10:AJ:82:ILE:O	10:AJ:86:MET:HB2	1.87	0.75
1:AA:250:A:N6	1:AA:275:G:C6	2.55	0.75
1:AA:1296:C:C4'	1:AA:1302:U:C5	2.69	0.75
1:AA:1297:C:HO3'	1:AA:1298:C:P	2.07	0.75
22:B9:114:C:C2'	22:B9:115:G:H5''	2.17	0.75
1:AA:59:A:H61	1:AA:331:G:H1'	1.52	0.74
1:AA:223:U:H5''	20:AT:68:LYS:NZ	1.94	0.74
2:AB:72:GLY:HA3	2:AB:81:VAL:HG21	1.69	0.74
8:AH:91:ARG:HA	17:AQ:34:LYS:HB2	1.68	0.74
13:AM:4:ILE:HG22	13:AM:5:ALA:N	2.00	0.74
21:B0:1856:U:O4	21:B0:3877:A:N6	2.20	0.74
1:AA:761:G:HO2'	17:AQ:104:LYS:HZ2	1.32	0.74
1:AA:994:A:O3'	14:AN:11:LYS:CE	2.35	0.74
1:AA:1255:G:C1'	1:AA:1259:C:C1'	2.42	0.74
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.51	0.74
21:B0:3197:U:O2	21:B0:2181:A:N6	2.20	0.74
1:AA:816:A:OP1	1:AA:1526:G:O2'	2.05	0.74
1:AA:1015:A:H1'	1:AA:1219:U:H5''	1.67	0.74
1:AA:1182:G:O2'	1:AA:1183:A:P	2.44	0.74
1:AA:1296:C:H4'	1:AA:1302:U:C4	2.18	0.74
1:AA:15:G:H1'	5:AE:19:MET:CE	2.15	0.74
1:AA:731:G:OP1	1:AA:766:A:H1'	1.88	0.74
1:AA:848:G:H2'	1:AA:849:C:C1'	2.18	0.74
1:AA:959:A:N1	1:AA:1221:G:O2'	2.19	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1029:C:H2'	21:B0:1030:U:H5''	1.68	0.74
21:B0:1915:A:H62	21:B0:1951:G:H21	1.35	0.74
1:AA:112:G:C2	1:AA:354:G:C5'	2.55	0.74
1:AA:922:G:C6	1:AA:1396:A:N6	2.54	0.74
1:AA:1092:A:H4'	7:AG:4:ARG:NH2	2.02	0.74
1:AA:1113:C:H1'	3:AC:178:LEU:CD2	2.14	0.74
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.69	0.74
1:AA:6:G:H2'	5:AE:119:LEU:CD1	2.18	0.74
1:AA:186:C:C4'	20:AT:81:LYS:HE2	2.18	0.74
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.36	0.74
3:AC:58:GLU:HB3	10:AJ:92:THR:HG21	1.67	0.74
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.67	0.74
12:AL:27:LEU:O	12:AL:29:GLY:N	2.21	0.74
13:AM:3:ARG:HA	13:AM:8:GLU:O	1.86	0.74
21:B0:221:A:H62	21:B0:231:G:H21	1.34	0.74
1:AA:436:C:H2'	1:AA:437:U:C4'	2.13	0.74
1:AA:1277:C:O2'	1:AA:1279:A:C1'	2.35	0.74
17:AQ:95:TYR:O	17:AQ:97:SER:N	2.20	0.74
21:B0:3118:U:C2	21:B0:3149:G:H5'	1.82	0.74
1:AA:141:A:H1'	1:AA:182:U:N3	1.50	0.74
1:AA:403:C:C2'	1:AA:404:U:C5'	2.65	0.74
4:AD:64:LEU:HD12	4:AD:75:PHE:HZ	1.53	0.74
4:AD:89:THR:H	5:AE:97:GLY:HA3	0.65	0.74
19:AS:16:LEU:O	19:AS:19:VAL:HG12	1.87	0.74
21:B0:67:G:N2	21:B0:72:A:H2'	2.02	0.74
21:B0:1119:U:O4	21:B0:1120:C:N4	2.20	0.74
1:AA:719:C:O2'	18:AR:49:LYS:CG	2.34	0.74
1:AA:1126:U:H1'	1:AA:1280:A:C6	2.23	0.74
1:AA:1346:A:C2	7:AG:10:ARG:CZ	2.71	0.74
1:AA:476:U:N3	1:AA:477:G:C8	2.56	0.74
1:AA:571:U:C4'	1:AA:819:A:C6	2.71	0.74
1:AA:677:U:O2	1:AA:777:A:O2'	2.05	0.74
1:AA:958:A:C8	19:AS:55:LYS:CD	2.71	0.74
2:AB:95:GLN:O	2:AB:96:ARG:HD2	1.88	0.74
10:AJ:47:PHE:CE2	14:AN:37:PHE:CE1	2.76	0.74
19:AS:17:GLU:O	19:AS:21:GLU:HG3	1.87	0.74
1:AA:377:G:OP1	16:AP:3:LYS:HD2	1.88	0.73
1:AA:792:A:H4'	1:AA:793:U:H5''	1.68	0.73
1:AA:815:A:H2	1:AA:1528:U:C5'	2.01	0.73
1:AA:848:G:O3'	1:AA:849:C:O5'	2.05	0.73
1:AA:1014:A:N1	19:AS:34:TRP:CD1	2.56	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1314:C:C5	19:AS:6:LYS:CD	2.71	0.73
21:B0:2636:A:H62	21:B0:2643:G:H21	1.36	0.73
1:AA:619:U:C2	4:AD:135:LEU:CG	2.71	0.73
1:AA:815:A:N1	1:AA:1528:U:O4'	2.20	0.73
1:AA:1147:C:H4'	9:AI:5:TYR:CE1	2.21	0.73
1:AA:1419:G:C1'	21:B0:1932:G:H4'	2.18	0.73
2:AB:23:ARG:HH11	2:AB:24:TRP:N	1.86	0.73
7:AG:23:VAL:HG12	7:AG:27:ILE:HD11	1.70	0.73
12:AL:27:LEU:HG	12:AL:28:LYS:H	1.53	0.73
21:B0:109:A:C3'	21:B0:110:U:H5''	2.18	0.73
1:AA:717:C:C3'	1:AA:718:G:P	2.75	0.73
1:AA:1232:U:P	9:AI:126:SER:HB3	2.28	0.73
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.88	0.73
1:AA:1367:C:H5'	10:AJ:60:ARG:HH12	1.53	0.73
6:AF:69:GLU:HA	6:AF:72:VAL:HG23	1.70	0.73
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.23	0.73
18:AR:26:LEU:HD12	18:AR:27:GLY:H	1.53	0.73
21:B0:3865:A:OP1	21:B0:2389:G:H1'	1.88	0.73
1:AA:218:C:P	1:AA:470:U:H4'	2.28	0.73
21:B0:1077:U:O2'	21:B0:1079:G:N7	2.21	0.73
1:AA:131:C:C4'	1:AA:263:A:O4'	2.36	0.73
2:AB:23:ARG:NH1	2:AB:24:TRP:N	2.35	0.73
8:AH:108:GLY:HA3	8:AH:138:TRP:HB3	1.70	0.73
9:AI:4:TYR:CE2	9:AI:88:TYR:HA	2.24	0.73
10:AJ:96:ILE:HG22	10:AJ:97:GLU:H	1.52	0.73
21:B0:2522:G:H21	21:B0:2625:U:H5''	1.53	0.73
1:AA:367:U:N3	1:AA:369:C:C4	2.55	0.73
1:AA:375:U:C2	1:AA:376:G:C8	2.76	0.73
1:AA:436:C:O2'	1:AA:437:U:C5'	2.34	0.73
1:AA:588:G:N2	1:AA:653:A:C2	2.55	0.73
5:AE:43:LEU:HB2	5:AE:136:MET:HE2	1.71	0.73
1:AA:161:A:H2'	1:AA:162:A:C8	2.23	0.73
1:AA:1251:A:H4'	9:AI:12:GLU:OE2	1.88	0.73
13:AM:86:CYS:SG	13:AM:87:TYR:N	2.60	0.73
15:AO:33:THR:HG23	15:AO:63:ARG:NH1	2.03	0.73
21:B0:1119:U:H3'	21:B0:1120:C:P	2.28	0.73
1:AA:108:G:O6	20:AT:15:ARG:HD2	1.89	0.73
1:AA:141:A:H4'	1:AA:182:U:O4'	1.87	0.73
1:AA:319:G:H22	1:AA:1434:A:C2'	2.00	0.73
1:AA:992:U:O4	1:AA:1044:A:OP2	2.07	0.73
1:AA:1347:G:C5	9:AI:107:ARG:CZ	2.71	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1068:G:N3	1:AA:1191:A:C2	2.57	0.73
1:AA:1278:U:H5''	1:AA:1279:A:O5'	1.88	0.73
12:AL:48:PRO:HG2	12:AL:49:ASN:H	1.52	0.73
1:AA:9:G:OP1	5:AE:122:GLU:CG	2.37	0.73
1:AA:104:G:O4'	1:AA:172:A:H2	1.72	0.73
1:AA:216:C:C5'	1:AA:466:A:N1	2.52	0.73
1:AA:434:U:H2'	1:AA:435:C:C6	2.24	0.73
1:AA:586:C:H5''	8:AH:90:GLY:CA	2.19	0.73
18:AR:45:SER:C	18:AR:47:THR:H	1.97	0.73
21:B0:1856:U:C4	21:B0:3865:A:N3	2.34	0.73
1:AA:1115:C:C1'	14:AN:61:TRP:HA	2.19	0.72
4:AD:3:ARG:HH22	4:AD:74:GLN:CD	1.97	0.72
8:AH:1:MET:HG2	8:AH:2:LEU:N	2.05	0.72
13:AM:3:ARG:HH22	26:BD:137:ILE:CA	2.02	0.72
21:B0:1856:U:C4	21:B0:3877:A:N6	2.51	0.72
1:AA:131:C:H1'	1:AA:263:A:C1'	2.17	0.72
1:AA:189:A:N6	20:AT:104:LEU:HD22	2.03	0.72
1:AA:248:C:O4'	1:AA:282:A:H2	1.72	0.72
1:AA:501:C:H2'	1:AA:502:G:H8	1.53	0.72
1:AA:502:G:H4'	1:AA:550:G:C4'	2.16	0.72
1:AA:825:G:N2	8:AH:11:THR:HG21	2.03	0.72
1:AA:1064:G:H4'	1:AA:1065:U:C5'	2.18	0.72
1:AA:1190:G:O2'	1:AA:1191:A:OP2	1.74	0.72
1:AA:1317:C:OP1	14:AN:16:PHE:HB3	1.90	0.72
4:AD:57:ARG:CZ	5:AE:107:ARG:HD3	2.16	0.72
1:AA:200:G:H2'	1:AA:201:G:C8	2.25	0.72
1:AA:401:C:O4'	1:AA:622:A:H1'	1.88	0.72
21:B0:552:C:H2'	21:B0:553:C:H4'	1.72	0.72
1:AA:249:U:C2'	1:AA:250:A:P	2.65	0.72
1:AA:397:A:C8	1:AA:547:A:O2'	2.33	0.72
1:AA:1015:A:N3	1:AA:1219:U:O4'	2.22	0.72
1:AA:1113:C:N1	3:AC:178:LEU:HD23	2.03	0.72
1:AA:1410:G:C2	1:AA:1491:G:N1	2.57	0.72
1:AA:1458:G:OP2	1:AA:1459:C:C6	2.36	0.72
6:AF:26:ILE:HG21	6:AF:63:TYR:HE2	1.54	0.72
9:AI:44:VAL:HG13	9:AI:51:ARG:HH22	1.52	0.72
21:B0:367:G:C2'	21:B0:368:A:H5''	2.19	0.72
21:B0:951:G:H2'	21:B0:952:A:H5''	1.70	0.72
21:B0:1856:U:C5'	21:B0:3865:A:C8	2.71	0.72
1:AA:131:C:H4'	1:AA:263:A:O4'	1.89	0.72
1:AA:1064:G:H1'	1:AA:1190:G:H22	1.49	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1108:G:H5''	3:AC:176:HIS:CE1	2.24	0.72
1:AA:1347:G:C8	9:AI:107:ARG:NH1	2.57	0.72
1:AA:39:G:C8	1:AA:498:U:C4	2.78	0.72
1:AA:227:G:O2'	1:AA:228:A:H5'	1.88	0.72
1:AA:406:G:N9	1:AA:496:A:C6	2.57	0.72
1:AA:600:C:H5'	8:AH:129:VAL:HA	1.72	0.72
1:AA:1061:G:H1'	10:AJ:56:HIS:CE1	2.24	0.72
1:AA:1277:C:O2'	1:AA:1279:A:O4'	2.07	0.72
1:AA:1329:A:C5'	13:AM:29:ARG:HG3	2.07	0.72
1:AA:1484:C:C4'	21:B0:1943:A:C1'	2.52	0.72
3:AC:23:TYR:CD1	10:AJ:11:PHE:CE2	2.78	0.72
4:AD:30:LYS:C	4:AD:32:ALA:H	1.97	0.72
21:B0:2236:U:H2'	21:B0:2237:C:H5''	1.72	0.72
1:AA:319:G:H1'	1:AA:1433:A:N1	2.05	0.72
1:AA:866:C:C4'	1:AA:919:A:H5'	2.20	0.72
1:AA:1488:G:H2'	1:AA:1489:G:C8	2.24	0.72
1:AA:1499:A:H1'	1:AA:1520:G:C5'	2.19	0.72
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.69	0.72
1:AA:132:C:O3'	20:AT:74:LYS:HD2	1.90	0.72
1:AA:1392:G:H4'	1:AA:1531:A:H5'	1.72	0.72
1:AA:1418:A:H2	21:B0:1931:G:O2'	1.72	0.72
10:AJ:51:ARG:HA	14:AN:45:ARG:HD2	1.69	0.72
21:B0:762:A:H5'	21:B0:1284:G:H1'	1.71	0.72
21:B0:892:A:C4	21:B0:911:A:C2	2.77	0.72
1:AA:5:U:N3	5:AE:95:ALA:HB3	2.04	0.72
1:AA:131:C:C1'	1:AA:263:A:H1'	2.19	0.72
1:AA:254:G:OP1	17:AQ:67:LYS:O	2.08	0.72
1:AA:582:U:H1'	17:AQ:105:ALA:HA	1.70	0.72
2:AB:116:GLU:HG2	2:AB:153:ARG:NH1	2.04	0.72
17:AQ:59:ILE:HG23	17:AQ:71:PHE:HB3	1.70	0.72
21:B0:1856:U:C5'	21:B0:3865:A:H8	2.02	0.72
1:AA:353:A:H8	1:AA:353:A:H5'	1.53	0.72
1:AA:1065:U:H4'	1:AA:1066:C:O5'	1.89	0.72
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.24	0.72
9:AI:65:VAL:HG21	9:AI:73:GLN:HB3	1.72	0.72
20:AT:10:LEU:O	20:AT:12:ALA:N	2.22	0.72
21:B0:9:U:H3	21:B0:2608:A:H62	1.37	0.72
21:B0:1856:U:C6	21:B0:3865:A:N9	2.31	0.72
21:B0:2426:G:H5'	21:B0:2480:C:H41	1.55	0.72
1:AA:116:A:N6	1:AA:313:A:H1'	2.04	0.71
1:AA:261:U:C5	20:AT:79:ARG:HD3	2.21	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:324:G:O5'	20:AT:22:ARG:HD3	1.90	0.71
1:AA:1281:U:H5'	1:AA:1282:C:C5	2.25	0.71
21:B0:1119:U:C4	21:B0:1120:C:C4	2.78	0.71
21:B0:1141:U:N3	21:B0:2008:C:H5''	2.04	0.71
21:B0:1908:C:H2'	21:B0:1909:U:H4'	1.71	0.71
21:B0:1966:C:H4'	21:B0:2585:C:H4'	1.71	0.71
1:AA:102:G:O2'	1:AA:151:A:O2'	2.08	0.71
1:AA:104:G:C5'	1:AA:172:A:C2	2.73	0.71
1:AA:143:A:O3'	1:AA:144:G:C8	2.28	0.71
1:AA:748:C:H1'	1:AA:749:C:H5	1.53	0.71
1:AA:760:G:N3	17:AQ:103:GLY:O	2.22	0.71
1:AA:761:G:C5'	17:AQ:102:GLY:CA	2.68	0.71
1:AA:933:G:C5	1:AA:935:A:N7	2.58	0.71
1:AA:1351:U:H2'	1:AA:1352:C:H6	1.55	0.71
3:AC:13:GLY:HA3	14:AN:57:ARG:HH21	1.54	0.71
11:AK:84:VAL:HG11	11:AK:95:ILE:HD11	1.70	0.71
18:AR:33:ASP:OD2	18:AR:36:ASN:HB2	1.90	0.71
21:B0:688:A:H62	21:B0:816:U:H3	1.38	0.71
21:B0:2503:G:C3'	21:B0:2504:G:H5''	2.21	0.71
1:AA:113:G:C1'	1:AA:354:G:H5''	2.21	0.71
1:AA:933:G:N1	1:AA:935:A:C8	2.58	0.71
8:AH:1:MET:HG2	8:AH:2:LEU:H	1.54	0.71
9:AI:97:LYS:HG2	9:AI:102:LEU:HD12	1.72	0.71
17:AQ:45:HIS:HB2	17:AQ:65:ILE:HD13	1.71	0.71
17:AQ:104:LYS:HD2	21:B0:727:U:O2	1.89	0.71
21:B0:3126:A:H4'	21:B0:3127:G:P	2.30	0.71
21:B0:2503:G:H3'	21:B0:2504:G:H5''	1.72	0.71
1:AA:818:G:N2	1:AA:873:A:OP1	2.23	0.71
1:AA:977:A:H2'	1:AA:978:A:H5''	1.72	0.71
1:AA:1459:C:OP1	20:AT:28:ALA:C	2.33	0.71
21:B0:202:A:H2'	21:B0:203:G:O4'	1.89	0.71
1:AA:132:C:O3'	20:AT:74:LYS:CD	2.37	0.71
1:AA:260:G:N7	20:AT:83:ARG:NH2	2.37	0.71
1:AA:866:C:H4'	1:AA:919:A:H5'	1.72	0.71
1:AA:977:A:C8	1:AA:1223:C:C4	2.79	0.71
21:B0:1487:C:H2'	21:B0:1488:G:H8	1.56	0.71
1:AA:130:A:C2	1:AA:264:U:C5	2.77	0.71
1:AA:1182:G:HO2'	1:AA:1183:A:P	2.13	0.71
1:AA:1411:C:H2'	1:AA:1412:C:C6	2.26	0.71
21:B0:3149:G:C3'	21:B0:3150:C:P	2.78	0.71
1:AA:59:A:C2	1:AA:331:G:C5	2.79	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:582:U:O4'	17:AQ:105:ALA:C	2.33	0.71
1:AA:1261:A:C4'	1:AA:1283:G:C3'	2.47	0.71
1:AA:1489:G:C3'	1:AA:1490:C:H5''	2.21	0.71
1:AA:1503:A:C4	1:AA:1531:A:H2	2.08	0.71
3:AC:59:ARG:N	10:AJ:92:THR:CG2	2.54	0.71
5:AE:102:ALA:HB1	5:AE:120:THR:HG21	1.72	0.71
9:AI:111:ARG:HD3	9:AI:112:LYS:N	2.06	0.71
10:AJ:35:SER:HB2	10:AJ:72:VAL:O	1.90	0.71
1:AA:130:A:H2	1:AA:264:U:C5	2.07	0.71
1:AA:537:G:OP1	12:AL:113:ARG:NH2	2.23	0.71
1:AA:922:G:H5'	5:AE:20:GLN:NE2	2.05	0.71
1:AA:1060:C:O2'	10:AJ:56:HIS:CG	2.42	0.71
1:AA:1405:G:H1'	1:AA:1519:A:C1'	2.21	0.71
1:AA:1405:G:O2'	1:AA:1518:A:O3'	2.09	0.71
2:AB:25:ASN:HD22	2:AB:25:ASN:C	1.97	0.71
3:AC:195:VAL:C	3:AC:196:LEU:HD23	2.15	0.71
21:B0:57:G:H2'	21:B0:58:C:H5''	1.73	0.71
21:B0:3126:A:C4'	21:B0:3127:G:H5'	2.21	0.71
21:B0:2274:C:H2'	21:B0:2275:U:H5'	1.73	0.71
1:AA:6:G:C2'	5:AE:119:LEU:HD13	2.20	0.71
1:AA:571:U:H4'	1:AA:819:A:N6	2.05	0.71
1:AA:933:G:OP2	7:AG:3:ARG:HB2	1.91	0.71
1:AA:1491:G:H2'	1:AA:1492:A:C8	2.26	0.71
1:AA:288:A:O2'	1:AA:289:G:O3'	2.05	0.71
1:AA:352:C:H4'	1:AA:354:G:OP1	1.91	0.71
1:AA:1261:A:C1'	1:AA:1283:G:H5'	2.20	0.71
13:AM:40:ASN:HB3	13:AM:43:THR:HG23	1.72	0.71
19:AS:70:LYS:O	19:AS:72:GLY:N	2.24	0.71
21:B0:1182:U:C2'	21:B0:1183:C:H5''	2.20	0.71
21:B0:1746:A:H2'	21:B0:1747:G:H5'	1.72	0.71
21:B0:3098:U:C5	21:B0:3099:U:O4	2.44	0.71
1:AA:227:G:C6	1:AA:228:A:C5	2.79	0.70
1:AA:392:G:H2'	1:AA:393:A:H8	1.55	0.70
1:AA:818:G:C3'	1:AA:819:A:H5''	2.21	0.70
1:AA:1014:A:C6	19:AS:34:TRP:CE2	2.79	0.70
1:AA:1406:U:O2	1:AA:1517:G:N2	2.24	0.70
1:AA:1413:A:H2	1:AA:1487:G:H22	1.39	0.70
1:AA:1484:C:HO2'	21:B0:1943:A:H4'	1.56	0.70
3:AC:59:ARG:H	10:AJ:92:THR:HG22	1.56	0.70
18:AR:39:VAL:O	18:AR:42:ARG:HB2	1.90	0.70
1:AA:44:G:OP1	16:AP:12:LYS:N	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:108:G:C6	20:AT:15:ARG:HG3	2.26	0.70
1:AA:235:C:H4'	17:AQ:70:ARG:HB2	1.72	0.70
1:AA:436:C:C2'	1:AA:437:U:H6	2.03	0.70
1:AA:1371:G:OP1	9:AI:11:LYS:HG2	1.91	0.70
1:AA:1409:C:C2	1:AA:1410:G:C8	2.79	0.70
13:AM:40:ASN:HD22	13:AM:41:PRO:HD2	1.55	0.70
21:B0:891:A:O2'	21:B0:892:A:C8	2.30	0.70
21:B0:3197:U:C2'	21:B0:2181:A:N7	2.51	0.70
1:AA:8:A:C1'	5:AE:103:GLY:N	2.53	0.70
1:AA:107:G:C2'	1:AA:108:G:H5'	2.21	0.70
1:AA:142:G:H21	1:AA:196:A:C1'	1.95	0.70
1:AA:288:A:H2'	1:AA:289:G:H4'	1.74	0.70
1:AA:761:G:H1'	17:AQ:104:LYS:O	1.91	0.70
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.90	0.70
1:AA:1320:C:N3	19:AS:36:ARG:HG3	2.05	0.70
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.26	0.70
3:AC:52:LEU:H	3:AC:52:LEU:CD2	2.00	0.70
10:AJ:65:LEU:HD13	14:AN:36:PHE:HZ	1.55	0.70
21:B0:1002:C:H5'	21:B0:1200:G:OP2	1.90	0.70
21:B0:1073:G:H1'	21:B0:1099:A:C2	2.27	0.70
21:B0:3874:C:C5	21:B0:3875:A:N7	2.59	0.70
21:B0:2680:U:H3'	21:B0:2681:A:H5'	1.72	0.70
1:AA:344:A:H4'	1:AA:345:C:OP2	1.91	0.70
1:AA:586:C:H5''	8:AH:90:GLY:H	1.54	0.70
1:AA:599:C:H5'	8:AH:131:GLY:HA2	1.73	0.70
1:AA:322:C:O2'	20:AT:23:ARG:CB	2.35	0.70
1:AA:438:G:H4'	1:AA:439:A:OP1	1.91	0.70
1:AA:919:A:O3'	1:AA:920:U:P	2.50	0.70
1:AA:1015:A:N3	1:AA:1219:U:C4'	2.54	0.70
1:AA:1168:A:H2'	1:AA:1169:A:C8	2.26	0.70
1:AA:1394:A:N6	1:AA:1501:C:H5'	2.06	0.70
3:AC:52:LEU:HD21	3:AC:118:GLN:NE2	2.07	0.70
6:AF:10:LEU:HD11	6:AF:59:TYR:HD2	1.55	0.70
10:AJ:78:ASN:O	10:AJ:80:LYS:N	2.24	0.70
19:AS:15:LEU:HD12	19:AS:16:LEU:N	2.06	0.70
1:AA:190:A:C6	20:AT:101:GLY:O	2.44	0.70
1:AA:292:G:C1'	1:AA:608:A:H61	2.00	0.70
1:AA:476:U:C5	1:AA:477:G:C8	2.80	0.70
1:AA:520:A:O2'	12:AL:73:GLU:OE2	2.07	0.70
1:AA:686:U:HO2'	1:AA:687:A:H8	1.38	0.70
1:AA:1250:A:C4'	9:AI:68:GLY:O	2.39	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:28:SER:O	4:AD:30:LYS:N	2.25	0.70
21:B0:874:A:H62	21:B0:928:G:H21	1.39	0.70
21:B0:3867:G:N3	53:B5:44:GLY:CA	2.55	0.70
1:AA:59:A:C5	1:AA:331:G:N2	2.60	0.70
1:AA:402:G:C1'	1:AA:620:C:H42	2.05	0.70
1:AA:588:G:N7	1:AA:753:A:C4	2.60	0.70
1:AA:974:A:OP2	14:AN:29:ARG:NH2	2.25	0.70
3:AC:6:HIS:CD2	3:AC:8:ILE:HB	2.27	0.70
10:AJ:45:ARG:NH2	14:AN:36:PHE:CD2	2.60	0.70
15:AO:17:ARG:NH1	15:AO:77:ARG:NH1	2.40	0.70
17:AQ:24:GLU:OE2	17:AQ:37:LYS:HD3	1.92	0.70
21:B0:104:C:C2'	21:B0:105:G:H5''	2.22	0.70
1:AA:323:U:OP1	20:AT:23:ARG:CA	2.35	0.70
1:AA:521:G:OP1	12:AL:73:GLU:O	2.10	0.70
4:AD:150:GLU:CG	4:AD:153:ARG:HH21	2.02	0.70
10:AJ:39:PRO:O	10:AJ:40:LEU:HB2	1.89	0.70
10:AJ:65:LEU:O	10:AJ:65:LEU:HD23	1.91	0.70
21:B0:892:A:C8	21:B0:892:A:H5'	2.24	0.70
21:B0:3146:A:H4'	21:B0:3147:C:OP2	1.92	0.70
1:AA:197:A:H4'	1:AA:198:G:O5'	1.90	0.70
1:AA:587:G:O2'	1:AA:588:G:P	2.49	0.70
1:AA:954:G:H5''	13:AM:120:LYS:HD3	1.73	0.70
2:AB:178:ARG:HG3	2:AB:178:ARG:NH1	1.92	0.70
9:AI:97:LYS:CG	9:AI:102:LEU:HD12	2.22	0.70
15:AO:39:LEU:HD13	15:AO:56:LEU:HB2	1.74	0.70
1:AA:19:C:N4	1:AA:916:G:O6	2.24	0.70
1:AA:128:G:O3'	17:AQ:3:LYS:NZ	2.23	0.70
1:AA:292:G:N3	1:AA:608:A:N1	2.40	0.70
1:AA:436:C:H2'	1:AA:437:U:C1'	2.21	0.70
1:AA:1034:G:C3'	1:AA:1035:A:P	2.80	0.70
1:AA:1372:U:OP2	9:AI:11:LYS:HD3	1.92	0.70
21:B0:3101:G:H2'	21:B0:3102:G:O4'	1.90	0.70
1:AA:476:U:C2	1:AA:477:G:C1'	2.75	0.69
1:AA:587:G:OP1	8:AH:92:ARG:NH1	2.23	0.69
3:AC:29:TYR:CE1	10:AJ:65:LEU:CD1	2.68	0.69
10:AJ:30:SER:O	10:AJ:78:ASN:HB2	1.92	0.69
10:AJ:46:ARG:HH11	10:AJ:64:GLU:CB	2.05	0.69
1:AA:477:G:H2'	1:AA:478:A:H8	1.56	0.69
1:AA:837:G:O3'	1:AA:838:C:O5'	2.09	0.69
1:AA:1141:C:H2'	1:AA:1142:G:H8	1.58	0.69
12:AL:126:LYS:HD2	12:AL:126:LYS:N	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:6:GLY:O	13:AM:7:VAL:HG22	1.92	0.69
17:AQ:96:GLN:CG	21:B0:725:C:O2'	2.40	0.69
19:AS:5:LEU:O	19:AS:6:LYS:HB2	1.92	0.69
20:AT:45:GLN:HA	20:AT:91:LEU:HD22	1.74	0.69
21:B0:814:G:H3'	21:B0:815:A:H5'	1.73	0.69
21:B0:1856:U:H3'	21:B0:3865:A:C2'	2.12	0.69
21:B0:1912:G:H4'	21:B0:1913:G:H8	1.56	0.69
1:AA:190:A:C5	20:AT:105:SER:CA	2.75	0.69
1:AA:262:A:C3'	20:AT:75:ASN:ND2	2.55	0.69
1:AA:586:C:C5'	8:AH:90:GLY:CA	2.69	0.69
1:AA:1314:C:C6	19:AS:6:LYS:HD3	2.26	0.69
3:AC:7:PRO:HG2	3:AC:184:TYR:HB2	1.73	0.69
13:AM:81:LEU:H	13:AM:81:LEU:HD23	1.56	0.69
16:AP:20:VAL:HG11	16:AP:32:TYR:HB3	1.74	0.69
21:B0:3874:C:C4	21:B0:3875:A:C8	2.80	0.69
21:B0:2607:C:H3'	21:B0:2608:A:C5'	2.23	0.69
1:AA:112:G:N3	1:AA:354:G:H5'	2.07	0.69
1:AA:141:A:O4'	1:AA:182:U:H1'	1.90	0.69
1:AA:375:U:H2'	1:AA:376:G:H8	1.57	0.69
1:AA:476:U:O3'	1:AA:477:G:OP1	2.10	0.69
1:AA:496:A:H4'	1:AA:497:A:OP1	1.91	0.69
1:AA:619:U:H2'	4:AD:135:LEU:HD12	1.72	0.69
1:AA:714:G:H5'	1:AA:776:G:H5''	1.74	0.69
1:AA:1416:G:C5	1:AA:1417:G:C1'	2.75	0.69
4:AD:70:ILE:HD11	4:AD:100:ARG:CZ	2.21	0.69
10:AJ:30:SER:HB2	10:AJ:80:LYS:HB3	1.74	0.69
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HD22	1.57	0.69
13:AM:84:ILE:CG2	19:AS:66:MET:HE2	2.22	0.69
1:AA:248:C:O2'	1:AA:283:C:H4'	1.92	0.69
1:AA:318:G:O2'	1:AA:1468:A:H4'	1.93	0.69
1:AA:714:G:H4'	1:AA:776:G:C5'	2.22	0.69
1:AA:1137:C:H4'	1:AA:1138:G:N2	2.06	0.69
1:AA:1504:G:OP1	1:AA:1507:A:H4'	1.92	0.69
3:AC:38:ARG:HH11	3:AC:38:ARG:HG3	1.58	0.69
13:AM:81:LEU:O	13:AM:86:CYS:HB3	1.92	0.69
17:AQ:104:LYS:CB	21:B0:727:U:C1'	2.71	0.69
21:B0:1679:U:C3'	21:B0:1680:U:H5''	2.22	0.69
21:B0:1774:A:H1'	21:B0:2586:G:H21	1.58	0.69
1:AA:59:A:C4	1:AA:331:G:N2	2.61	0.69
1:AA:216:C:H5'	1:AA:466:A:N1	2.08	0.69
1:AA:760:G:N2	17:AQ:103:GLY:C	2.50	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:837:G:C2'	1:AA:838:C:C6	2.75	0.69
3:AC:23:TYR:HE1	10:AJ:67:THR:HG23	1.55	0.69
17:AQ:66:SER:O	17:AQ:70:ARG:NH1	2.26	0.69
21:B0:226:C:O2'	21:B0:227:G:H8	1.73	0.69
21:B0:892:A:N3	21:B0:911:A:N3	2.41	0.69
21:B0:1791:C:O2'	21:B0:1793:A:H5'	1.93	0.69
1:AA:376:G:OP1	16:AP:6:LEU:HD13	1.92	0.69
1:AA:406:G:N2	1:AA:437:U:O2	2.25	0.69
1:AA:939:G:H2'	1:AA:940:C:C6	2.28	0.69
1:AA:1015:A:C2	1:AA:1219:U:O4'	2.45	0.69
1:AA:1064:G:C1'	1:AA:1190:G:N2	2.45	0.69
3:AC:23:TYR:HD1	10:AJ:11:PHE:CD2	2.09	0.69
4:AD:151:LYS:N	4:AD:151:LYS:HD2	2.08	0.69
21:B0:1004:A:H2'	21:B0:1005:U:H5''	1.74	0.69
21:B0:2495:G:H2'	21:B0:2496:C:C6	2.27	0.69
1:AA:36:C:O2	1:AA:501:C:C5'	2.40	0.69
1:AA:51:A:C6	1:AA:314:C:O2	2.44	0.69
1:AA:186:C:H4'	20:AT:81:LYS:CB	2.22	0.69
1:AA:355:C:H4'	1:AA:389:A:P	2.33	0.69
1:AA:375:U:H2'	1:AA:376:G:C8	2.26	0.69
1:AA:1087:G:P	1:AA:1389:C:H4'	2.32	0.69
1:AA:1255:G:O3'	1:AA:1258:G:N3	2.26	0.69
3:AC:59:ARG:N	10:AJ:92:THR:HG22	2.08	0.69
3:AC:130:VAL:HG21	3:AC:157:ILE:HG23	1.75	0.69
3:AC:180:ALA:O	3:AC:181:ASN:HB3	1.92	0.69
4:AD:64:LEU:HD12	4:AD:75:PHE:CZ	2.28	0.69
4:AD:89:THR:OG1	5:AE:97:GLY:O	2.10	0.69
10:AJ:42:THR:HG23	10:AJ:67:THR:O	1.93	0.69
12:AL:55:VAL:HG12	12:AL:56:ALA:H	1.57	0.69
13:AM:11:ARG:HG2	13:AM:12:ASN:N	2.07	0.69
19:AS:41:VAL:HG23	19:AS:43:GLU:HG2	1.75	0.69
19:AS:43:GLU:CD	19:AS:43:GLU:H	2.00	0.69
21:B0:1428:G:H5''	21:B0:1429:A:H5'	1.73	0.69
21:B0:1749:G:O6	21:B0:2674:C:H4'	1.92	0.69
21:B0:1807:A:H4'	21:B0:1808:C:C5'	2.22	0.69
21:B0:2380:U:H2'	21:B0:2381:A:H5'	1.75	0.69
21:B0:2617:G:H22	21:B0:2755:A:H2'	1.57	0.69
1:AA:587:G:H4'	8:AH:3:THR:O	1.93	0.69
10:AJ:49:VAL:HG21	14:AN:44:LEU:HG	1.75	0.69
12:AL:47:LYS:CB	12:AL:48:PRO:CD	2.71	0.69
13:AM:87:TYR:N	19:AS:73:GLU:O	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:588:G:H4'	21:B0:2001:G:H4'	1.73	0.69
21:B0:1223:G:H21	21:B0:1225:G:H21	1.40	0.69
21:B0:2245:A:H5'	21:B0:2246:A:C8	2.27	0.69
1:AA:44:G:P	16:AP:12:LYS:H	2.16	0.69
1:AA:232:G:C2	1:AA:263:A:C2	2.81	0.69
1:AA:501:C:C1'	1:AA:549:C:H1'	2.20	0.69
1:AA:1250:A:H4'	9:AI:68:GLY:H	1.57	0.69
4:AD:64:LEU:HD23	4:AD:198:VAL:HG21	1.75	0.69
1:AA:105:G:H2'	1:AA:106:C:C6	2.29	0.68
1:AA:583:A:H5'	17:AQ:90:ILE:CG2	2.22	0.68
2:AB:22:LYS:HD2	2:AB:35:GLU:OE1	1.93	0.68
4:AD:88:VAL:HG23	5:AE:96:PRO:HB2	1.72	0.68
4:AD:199:ASN:ND2	4:AD:201:GLN:HB2	2.08	0.68
6:AF:100:ASN:ND2	18:AR:23:LYS:HG2	2.08	0.68
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.68
1:AA:702:A:N6	21:B0:1838:G:N3	2.40	0.68
1:AA:928:G:O2'	1:AA:1533:C:H5	1.75	0.68
1:AA:1314:C:H5	19:AS:6:LYS:CG	2.05	0.68
3:AC:52:LEU:CD2	3:AC:118:GLN:HE22	2.05	0.68
4:AD:157:LEU:CD2	4:AD:161:ASN:HD21	2.05	0.68
21:B0:3101:G:H1	21:B0:3188:U:H3	1.41	0.68
1:AA:119:A:C5	1:AA:240:C:C4	2.81	0.68
1:AA:324:G:P	20:AT:22:ARG:HD3	2.33	0.68
1:AA:376:G:N3	1:AA:389:A:C2	2.61	0.68
1:AA:599:C:H4'	8:AH:130:GLY:O	1.94	0.68
1:AA:651:C:C2	1:AA:652:U:C6	2.82	0.68
5:AE:51:VAL:O	5:AE:55:VAL:HG23	1.93	0.68
12:AL:47:LYS:HB2	12:AL:48:PRO:CD	2.23	0.68
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	1.93	0.68
21:B0:1953:A:H1'	21:B0:1955:G:C1'	2.23	0.68
21:B0:2624:G:H4'	21:B0:2712:G:H2'	1.75	0.68
1:AA:17:U:H2'	1:AA:18:C:C6	2.28	0.68
1:AA:129:U:P	17:AQ:3:LYS:NZ	2.66	0.68
1:AA:247:G:P	17:AQ:100:LYS:HE2	2.33	0.68
1:AA:328:C:H4'	1:AA:329:A:O5'	1.94	0.68
1:AA:926:G:C5	1:AA:1505:G:C6	2.81	0.68
1:AA:992:U:C5	1:AA:1043:C:OP2	2.47	0.68
1:AA:1115:C:H1'	14:AN:61:TRP:CA	2.23	0.68
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.92	0.68
3:AC:59:ARG:C	10:AJ:92:THR:CG2	2.66	0.68
10:AJ:63:PHE:CZ	14:AN:48:ALA:CB	2.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:939:C:H2'	21:B0:940:G:C8	2.28	0.68
21:B0:2058:U:H4'	21:B0:2575:U:H3	1.58	0.68
21:B0:2440:C:H1'	21:B0:2471:U:H3	1.56	0.68
21:B0:2691:C:H3'	21:B0:2692:A:H5''	1.74	0.68
1:AA:134:A:H1'	1:AA:325:A:C5	2.28	0.68
1:AA:191:G:N3	1:AA:192:U:O4'	2.25	0.68
1:AA:394:G:O2'	1:AA:395:C:H5'	1.93	0.68
1:AA:406:G:C2	1:AA:496:A:N6	2.61	0.68
1:AA:815:A:C2	1:AA:1528:U:H5'	2.29	0.68
1:AA:948:C:OP1	13:AM:109:THR:HG22	1.94	0.68
1:AA:1409:C:O2'	1:AA:1410:G:H5'	1.92	0.68
1:AA:1503:A:C4	1:AA:1531:A:C2	2.81	0.68
14:AN:22:THR:HB	14:AN:33:VAL:HG21	1.73	0.68
21:B0:181:A:H4'	21:B0:182:G:H4'	1.76	0.68
21:B0:2075:U:O2'	21:B0:3093:C:C6	2.41	0.68
21:B0:2377:U:H2'	21:B0:2378:G:C8	2.28	0.68
1:AA:113:G:O4'	1:AA:354:G:C5'	2.42	0.68
1:AA:323:U:C4'	20:AT:19:SER:O	2.41	0.68
1:AA:954:G:C5'	13:AM:120:LYS:HD3	2.23	0.68
1:AA:1060:C:H5''	10:AJ:51:ARG:HB3	1.75	0.68
1:AA:1346:A:C4	7:AG:10:ARG:CZ	2.77	0.68
17:AQ:104:LYS:CA	21:B0:726:G:N2	2.56	0.68
21:B0:940:G:C3'	21:B0:941:U:H5''	2.11	0.68
21:B0:3118:U:C2	21:B0:3149:G:C5'	2.50	0.68
1:AA:394:G:C2	1:AA:395:C:C2	2.81	0.68
1:AA:848:G:H2'	1:AA:849:C:N1	2.08	0.68
1:AA:1314:C:C5	19:AS:6:LYS:CE	2.77	0.68
1:AA:1475:G:H5''	21:B0:1706:A:H4'	0.76	0.68
13:AM:80:ARG:NE	19:AS:65:ASN:O	2.27	0.68
19:AS:62:ILE:HD12	19:AS:66:MET:HG3	1.75	0.68
1:AA:761:G:HO2'	21:B0:726:G:H22	1.42	0.68
1:AA:994:A:N3	14:AN:5:ALA:C	2.42	0.68
1:AA:1298:C:H41	7:AG:114:ARG:HB3	1.54	0.68
6:AF:75:LEU:O	6:AF:79:LEU:HG	1.94	0.68
9:AI:93:ARG:HD3	9:AI:97:LYS:HE3	1.75	0.68
10:AJ:51:ARG:HG2	14:AN:45:ARG:CZ	2.22	0.68
21:B0:2381:A:H4'	21:B0:2382:C:C5	2.29	0.68
1:AA:43:C:OP1	16:AP:13:HIS:CD2	2.44	0.68
1:AA:46:G:H2'	1:AA:366:C:C5	2.28	0.68
1:AA:212:G:O2'	1:AA:213:G:C5'	2.41	0.68
1:AA:292:G:H1'	1:AA:608:A:H62	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:571:U:C5'	1:AA:819:A:C2	2.71	0.68
1:AA:915:A:H2'	1:AA:916:G:H5'	1.76	0.68
1:AA:1261:A:C3'	1:AA:1283:G:H5''	2.23	0.68
21:B0:26:G:H21	21:B0:524:A:H62	1.41	0.68
1:AA:1342:C:H4'	9:AI:125:TYR:CE1	2.29	0.68
2:AB:187:LEU:HD12	2:AB:205:ASP:HA	1.74	0.68
1:AA:9:G:P	5:AE:122:GLU:HB2	2.33	0.67
1:AA:132:C:OP1	20:AT:75:ASN:ND2	2.27	0.67
1:AA:355:C:O2'	1:AA:388:G:H1'	1.93	0.67
1:AA:583:A:C5'	17:AQ:90:ILE:HG21	2.23	0.67
1:AA:1417:G:H21	1:AA:1484:C:N4	1.90	0.67
2:AB:18:GLY:HA2	2:AB:42:ILE:H	1.59	0.67
3:AC:190:ARG:HH11	3:AC:190:ARG:CB	2.07	0.67
13:AM:81:LEU:H	13:AM:81:LEU:CD2	2.08	0.67
21:B0:1033:G:H22	21:B0:1150:C:H2'	1.58	0.67
21:B0:3875:A:C4'	53:B5:43:LYS:CA	2.72	0.67
21:B0:1955:G:H2'	21:B0:1956:G:H5'	1.76	0.67
1:AA:59:A:N6	1:AA:331:G:H1'	2.07	0.67
1:AA:476:U:C4	1:AA:477:G:N7	2.60	0.67
1:AA:1410:G:C2	1:AA:1491:G:C2	2.82	0.67
3:AC:26:LYS:H	3:AC:26:LYS:HD3	1.58	0.67
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.59	0.67
1:AA:108:G:C6	20:AT:15:ARG:CD	2.76	0.67
1:AA:187:G:H5'	20:AT:85:MET:SD	2.35	0.67
9:AI:93:ARG:NH1	9:AI:97:LYS:HZ1	1.92	0.67
10:AJ:45:ARG:CZ	14:AN:36:PHE:CE2	2.78	0.67
21:B0:1021:A:H1'	21:B0:1164:C:H1'	1.76	0.67
21:B0:2261:G:H4'	21:B0:2262:C:OP2	1.94	0.67
1:AA:131:C:C1'	1:AA:263:A:C1'	2.72	0.67
1:AA:189:A:N6	20:AT:104:LEU:CD2	2.57	0.67
1:AA:701:C:H5'	1:AA:703:G:O4'	1.94	0.67
1:AA:1483:A:C6	1:AA:1484:C:C4	2.82	0.67
6:AF:36:ARG:NH1	6:AF:38:GLU:HG2	2.08	0.67
13:AM:93:ARG:CB	21:B0:900(A):A:OP1	2.43	0.67
19:AS:33:THR:HG22	19:AS:35:SER:H	1.60	0.67
21:B0:998:C:H2'	21:B0:999:A:O4'	1.94	0.67
21:B0:1181:C:C2'	21:B0:1182:U:H5''	2.23	0.67
21:B0:2381:A:H4'	21:B0:2382:C:H5	1.60	0.67
1:AA:1330:U:H5''	13:AM:23:TYR:O	1.95	0.67
1:AA:1495:U:O2'	21:B0:1902:A:H2	1.74	0.67
21:B0:1112:U:C2'	21:B0:1113:C:H5''	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1016:A:H2'	1:AA:1017:G:O4'	1.93	0.67
1:AA:1455:G:H2'	1:AA:1456:A:O4'	1.95	0.67
18:AR:26:LEU:HD21	18:AR:39:VAL:CG2	2.25	0.67
21:B0:539:A:H62	21:B0:2024:U:H3	1.40	0.67
21:B0:2324:G:H4'	21:B0:2326:C:H5''	1.76	0.67
1:AA:761:G:H1'	17:AQ:104:LYS:HA	1.77	0.67
1:AA:1225:A:C4'	19:AS:78:ARG:HH11	2.07	0.67
1:AA:1502:A:H2	1:AA:1505:G:N1	1.90	0.67
3:AC:82:GLU:O	3:AC:85:ARG:HB3	1.94	0.67
17:AQ:104:LYS:HG2	21:B0:726:G:N1	2.10	0.67
1:AA:815:A:O2'	1:AA:1527:C:C4'	2.43	0.67
1:AA:933:G:C5	1:AA:935:A:C8	2.83	0.67
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.29	0.67
7:AG:149:ARG:NH1	11:AK:59:TYR:CZ	2.62	0.67
13:AM:7:VAL:CG1	26:BD:113:ASP:CA	2.73	0.67
21:B0:2508:G:H5''	21:B0:2509:A:H5''	1.76	0.67
1:AA:315:A:H2	1:AA:354:G:OP2	1.77	0.67
1:AA:362:G:H4'	12:AL:28:LYS:HZ2	1.57	0.67
1:AA:893:C:H2'	1:AA:894:G:C8	2.30	0.67
1:AA:929:G:OP1	1:AA:1533:C:N4	2.28	0.67
1:AA:976:G:OP1	14:AN:31:ARG:O	2.12	0.67
1:AA:1064:G:C4'	1:AA:1065:U:H5'	2.23	0.67
1:AA:1261:A:H5''	1:AA:1283:G:O3'	1.93	0.67
1:AA:1347:G:N7	9:AI:107:ARG:NH1	2.43	0.67
2:AB:124:SER:HB2	2:AB:125:PRO:CD	2.21	0.67
11:AK:14:VAL:HG21	11:AK:40:ILE:HD11	1.77	0.67
13:AM:34:LEU:HD13	13:AM:41:PRO:HA	1.77	0.67
14:AN:14:PRO:HB2	14:AN:16:PHE:O	1.95	0.67
21:B0:3877:A:O5'	21:B0:3877:A:C8	2.39	0.67
21:B0:1926:U:O2'	21:B0:1928:G:H5'	1.95	0.67
1:AA:68:G:H2'	1:AA:69:G:P	2.35	0.67
1:AA:104:G:H4'	1:AA:172:A:C2	2.28	0.67
1:AA:263:A:P	20:AT:75:ASN:HB2	2.34	0.67
1:AA:650:G:O2'	1:AA:651:C:H5'	1.94	0.67
1:AA:1483:A:H2'	1:AA:1484:C:OP2	1.90	0.67
7:AG:85:TYR:HD1	7:AG:154:TYR:HE1	1.43	0.67
21:B0:33:C:H42	21:B0:466:A:H61	1.41	0.67
21:B0:665:A:H3'	21:B0:666:U:C5'	2.24	0.67
1:AA:371:G:O2'	1:AA:372:C:H5'	1.94	0.66
1:AA:815:A:C2	1:AA:1528:U:C4'	2.69	0.66
1:AA:921:U:H5'	1:AA:1082:G:H5'	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1092:A:C4'	7:AG:4:ARG:NH2	2.58	0.66
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.29	0.66
1:AA:1368:G:O2'	1:AA:1369:C:H5'	1.95	0.66
1:AA:1483:A:C5	1:AA:1484:C:C6	2.81	0.66
13:AM:40:ASN:HD22	13:AM:41:PRO:N	1.91	0.66
15:AO:55:GLY:O	15:AO:59:MET:HG3	1.94	0.66
21:B0:1473:U:H4'	21:B0:1474:A:C8	2.29	0.66
21:B0:3876:A:N9	53:B5:45:ASP:CA	2.57	0.66
1:AA:662:G:H2'	1:AA:663:A:C8	2.30	0.66
1:AA:835:U:P	18:AR:64:ARG:NH2	2.66	0.66
1:AA:1296:C:H5'	1:AA:1302:U:O4	1.95	0.66
1:AA:1406:U:C1'	1:AA:1518:A:H4'	2.25	0.66
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.59	0.66
3:AC:179:ARG:HD3	3:AC:206:GLU:HG2	1.76	0.66
4:AD:36:ARG:H	4:AD:37:PRO:CD	2.02	0.66
5:AE:12:LEU:HD13	5:AE:31:LEU:HB2	1.77	0.66
17:AQ:76:LEU:HD23	17:AQ:76:LEU:C	2.20	0.66
18:AR:45:SER:OG	18:AR:49:LYS:HB2	1.94	0.66
21:B0:1223:G:H4'	21:B0:1224:A:O5'	1.96	0.66
21:B0:1312:G:H5'	21:B0:1314:A:H1'	1.77	0.66
1:AA:37:U:OP1	12:AL:124:LYS:CB	2.43	0.66
1:AA:436:C:C4	1:AA:437:U:O4	2.40	0.66
1:AA:1057:G:O2'	1:AA:1058:G:H5'	1.96	0.66
1:AA:1065:U:O4	1:AA:1189:C:C2	2.49	0.66
1:AA:1416:G:P	1:AA:1417:G:OP2	2.53	0.66
4:AD:187:ARG:HH21	4:AD:188:LEU:HD12	1.60	0.66
9:AI:10:ARG:HG2	9:AI:75:ASP:HB2	1.77	0.66
9:AI:26:VAL:HB	9:AI:33:PHE:HB2	1.76	0.66
10:AJ:96:ILE:HG22	10:AJ:97:GLU:N	2.10	0.66
17:AQ:104:LYS:HB3	21:B0:727:U:C1'	2.26	0.66
21:B0:1380:C:H2'	21:B0:1381:G:H5'	1.76	0.66
1:AA:8:A:C1'	5:AE:103:GLY:CA	2.69	0.66
1:AA:51:A:H2'	1:AA:116:A:O4'	1.94	0.66
1:AA:143:A:O4'	1:AA:196:A:C6	2.48	0.66
1:AA:315:A:H4'	1:AA:353:A:H61	1.59	0.66
1:AA:587:G:P	8:AH:89:PRO:HB3	2.35	0.66
1:AA:748:C:H1'	1:AA:749:C:C5	2.30	0.66
1:AA:760:G:H1	17:AQ:104:LYS:C	2.02	0.66
1:AA:1270:C:O2'	1:AA:1314:C:H5'	1.95	0.66
4:AD:57:ARG:HH21	5:AE:107:ARG:NE	1.93	0.66
8:AH:6:ILE:HD11	8:AH:31:PHE:CD2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:27:LEU:C	12:AL:29:GLY:H	2.04	0.66
13:AM:33:ALA:HA	13:AM:59:TYR:HE2	1.60	0.66
17:AQ:97:SER:OG	17:AQ:103:GLY:CA	2.44	0.66
21:B0:3128:G:O2'	21:B0:3174:C:C4'	2.44	0.66
1:AA:108:G:C6	20:AT:15:ARG:NE	2.64	0.66
1:AA:524:G:H2'	1:AA:525:C:C6	2.31	0.66
6:AF:67:MET:HE2	6:AF:72:VAL:HG22	1.77	0.66
21:B0:1066:G:N1	21:B0:1115:C:C4	2.64	0.66
21:B0:1141:U:H3	21:B0:2008:C:H5''	1.61	0.66
21:B0:1529:C:H2'	21:B0:1530:U:O4'	1.94	0.66
21:B0:3111:C:N3	21:B0:3148:G:OP2	2.26	0.66
1:AA:476:U:N3	1:AA:477:G:N9	2.43	0.66
1:AA:714:G:H5'	1:AA:776:G:C5'	2.24	0.66
1:AA:1406:U:H4'	1:AA:1518:A:H4'	1.76	0.66
3:AC:188:LEU:O	3:AC:189:ALA:HB2	1.96	0.66
15:AO:33:THR:HG23	15:AO:63:ARG:HH12	1.60	0.66
21:B0:910:U:H2'	21:B0:911:A:O5'	1.94	0.66
21:B0:1119:U:C3'	21:B0:1120:C:P	2.84	0.66
1:AA:141:A:C5'	1:AA:182:U:H1'	2.25	0.66
1:AA:394:G:C4	1:AA:395:C:C6	2.84	0.66
1:AA:1231:G:H5''	9:AI:126:SER:OG	1.95	0.66
3:AC:107:GLN:H	3:AC:107:GLN:NE2	1.94	0.66
3:AC:172:ARG:NH1	3:AC:172:ARG:HB3	2.11	0.66
10:AJ:90:LEU:H	10:AJ:91:PRO:HD2	1.61	0.66
1:AA:37:U:OP1	12:AL:124:LYS:HB3	1.96	0.66
1:AA:66:G:H5''	1:AA:199:G:O2'	1.96	0.66
1:AA:131:C:C4'	1:AA:263:A:C4'	2.70	0.66
1:AA:143:A:O3'	1:AA:144:G:O5'	2.13	0.66
1:AA:218:C:P	1:AA:470:U:C4'	2.83	0.66
1:AA:993:G:C6	1:AA:1046:A:C6	2.83	0.66
1:AA:1080:A:OP1	5:AE:47:LYS:HG2	1.96	0.66
1:AA:1111:A:N1	3:AC:177:THR:HA	2.09	0.66
1:AA:1255:G:C2'	1:AA:1258:G:N2	2.56	0.66
1:AA:1425:U:H2'	1:AA:1426:C:C6	2.31	0.66
4:AD:32:ALA:C	4:AD:34:GLU:H	2.04	0.66
12:AL:33:ARG:HD3	12:AL:62:SER:HB3	1.77	0.66
20:AT:85:MET:HE3	20:AT:103:GLY:O	1.96	0.66
21:B0:910:U:H2'	21:B0:911:A:C5'	2.26	0.66
21:B0:1978:U:H3'	21:B0:1979:C:H5''	1.77	0.66
1:AA:6:G:H2'	5:AE:119:LEU:HD13	1.78	0.66
1:AA:560:U:N3	5:AE:123:LEU:HD13	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:582:U:OP1	15:AO:68:ARG:NH2	2.25	0.66
1:AA:1107:C:OP1	3:AC:173:VAL:N	2.25	0.66
1:AA:1503:A:N3	1:AA:1531:A:H2	1.93	0.66
4:AD:151:LYS:HD2	4:AD:151:LYS:H	1.60	0.66
5:AE:150:ARG:HH11	5:AE:150:ARG:HG3	1.60	0.66
10:AJ:38:ILE:CG1	10:AJ:71:LEU:HB3	2.26	0.66
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.11	0.66
21:B0:439:C:H2'	21:B0:440:U:O4'	1.95	0.66
21:B0:515:A:H2'	21:B0:516:G:H5'	1.77	0.66
21:B0:1112:U:H2'	21:B0:1113:C:H5''	1.75	0.66
1:AA:26:A:C2'	1:AA:27:G:H5'	2.26	0.66
1:AA:94:G:C4	1:AA:96:C:C5	2.84	0.66
1:AA:130:A:H2	1:AA:264:U:C4	2.15	0.66
1:AA:161:A:H2	1:AA:348:G:H1'	1.60	0.66
1:AA:362:G:H4'	12:AL:28:LYS:HZ1	1.59	0.66
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.29	0.66
1:AA:1319:A:C5'	19:AS:5:LEU:HD21	2.23	0.66
4:AD:88:VAL:HA	5:AE:97:GLY:CA	2.25	0.66
4:AD:187:ARG:NH2	4:AD:188:LEU:HD12	2.10	0.66
10:AJ:47:PHE:CD2	14:AN:37:PHE:HE1	2.14	0.66
20:AT:87:LYS:O	20:AT:91:LEU:HD12	1.96	0.66
21:B0:897:A:N6	21:B0:898:C:N4	2.43	0.66
21:B0:1191:G:H2'	21:B0:1192:A:H8	1.61	0.66
1:AA:112:G:N2	1:AA:354:G:O5'	2.17	0.65
1:AA:216:C:C1'	1:AA:468:A:C2'	2.70	0.65
1:AA:436:C:O2	1:AA:437:U:C1'	2.44	0.65
1:AA:1296:C:H4'	1:AA:1302:U:H5	1.57	0.65
2:AB:15:VAL:CG2	2:AB:209:ARG:HG3	2.26	0.65
3:AC:172:ARG:HB3	3:AC:172:ARG:HH11	1.61	0.65
5:AE:80:ILE:HD11	5:AE:91:LEU:HD12	1.76	0.65
10:AJ:60:ARG:O	10:AJ:61:GLU:HB3	1.96	0.65
21:B0:128:C:C2'	21:B0:129:A:H5''	2.23	0.65
21:B0:3197:U:O2'	21:B0:2181:A:C8	2.25	0.65
1:AA:173:U:H5'	1:AA:197:A:O4'	1.96	0.65
1:AA:877:C:H5''	8:AH:88:LYS:HD3	1.78	0.65
1:AA:926:G:C8	1:AA:1505:G:C2	2.83	0.65
1:AA:1190:G:H3'	3:AC:3:ASN:CB	2.24	0.65
13:AM:3:ARG:NH2	26:BD:137:ILE:CA	2.58	0.65
21:B0:1471:G:H1	21:B0:2682:C:H42	1.44	0.65
1:AA:244:U:C4	1:AA:893:C:N3	2.64	0.65
1:AA:474:U:H2'	1:AA:475:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:927:G:O2'	1:AA:1532:U:C4'	2.41	0.65
1:AA:935:A:C6	7:AG:3:ARG:NH2	2.64	0.65
1:AA:1319:A:H5''	19:AS:5:LEU:CD2	2.21	0.65
1:AA:1329:A:C5'	13:AM:26:GLY:N	2.58	0.65
1:AA:1402:C:H2'	1:AA:1403:C:O4'	1.97	0.65
1:AA:1475:G:H2'	1:AA:1476:G:H8	1.62	0.65
5:AE:40:ARG:HG2	5:AE:68:GLU:OE2	1.96	0.65
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.61	0.65
12:AL:86:ARG:HH11	12:AL:86:ARG:HG3	1.61	0.65
13:AM:65:LYS:HG3	13:AM:69:GLU:OE2	1.96	0.65
1:AA:1113:C:N1	3:AC:178:LEU:CD2	2.59	0.65
1:AA:1329:A:H4'	13:AM:29:ARG:HD2	1.76	0.65
1:AA:1442:G:H2'	1:AA:1442:G:N3	2.11	0.65
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.78	0.65
2:AB:215:LEU:O	2:AB:219:VAL:HG23	1.97	0.65
3:AC:64:VAL:HB	3:AC:99:VAL:CB	2.27	0.65
3:AC:83:ARG:C	3:AC:85:ARG:H	2.04	0.65
17:AQ:104:LYS:HB3	21:B0:727:U:H1'	1.79	0.65
21:B0:2794:G:H3'	21:B0:2796:A:H62	1.61	0.65
1:AA:436:C:N3	1:AA:437:U:N3	2.44	0.65
1:AA:458:G:H2'	1:AA:459:G:H8	1.62	0.65
1:AA:825:G:H21	8:AH:11:THR:CG2	2.10	0.65
13:AM:33:ALA:HA	13:AM:59:TYR:CE2	2.32	0.65
19:AS:17:GLU:HA	19:AS:20:LEU:HD11	1.78	0.65
19:AS:28:LYS:HG2	19:AS:29:ARG:N	2.06	0.65
21:B0:542:A:C2'	21:B0:543:G:H5'	2.26	0.65
21:B0:1918:G:H4'	21:B0:1920:A:N3	2.10	0.65
21:B0:2236:U:C3'	21:B0:2237:C:H5''	2.26	0.65
1:AA:212:G:O3'	1:AA:213:G:OP2	2.08	0.65
1:AA:619:U:C2	4:AD:135:LEU:CD1	2.80	0.65
1:AA:918:A:H2'	1:AA:919:A:C8	2.32	0.65
1:AA:933:G:O6	1:AA:935:A:C4	2.49	0.65
1:AA:992:U:O2'	1:AA:1043:C:N4	2.29	0.65
3:AC:155:GLY:O	3:AC:156:ARG:HB2	1.96	0.65
5:AE:15:ARG:HD2	5:AE:15:ARG:O	1.96	0.65
21:B0:651:C:H2'	21:B0:652:C:H5''	1.78	0.65
21:B0:1098:G:H3'	21:B0:1099:A:H5''	1.79	0.65
21:B0:1472:C:C2'	21:B0:1473:U:H5'	2.27	0.65
21:B0:2822:U:H2'	21:B0:2823:G:O4'	1.97	0.65
1:AA:234:C:O2'	17:AQ:70:ARG:HG3	1.97	0.65
1:AA:353:A:H5'	1:AA:353:A:C8	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:677:U:H3	1:AA:713:G:H22	1.45	0.65
1:AA:923:A:O4'	1:AA:1398:A:H2	1.70	0.65
1:AA:977:A:N1	1:AA:1224:G:C5	2.64	0.65
1:AA:1014:A:C4	19:AS:34:TRP:HB2	2.31	0.65
1:AA:1483:A:N7	1:AA:1484:C:C5	2.65	0.65
1:AA:1497:G:H1'	1:AA:1518:A:C2	2.32	0.65
6:AF:100:ASN:HD22	18:AR:23:LYS:CG	2.10	0.65
10:AJ:49:VAL:O	10:AJ:60:ARG:HA	1.95	0.65
18:AR:47:THR:HG23	18:AR:83:GLU:H	1.61	0.65
21:B0:2047:C:H42	21:B0:2425:G:H1	1.43	0.65
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.31	0.65
1:AA:1522:U:O2'	1:AA:1523:G:H5'	1.96	0.65
2:AB:18:GLY:HA3	2:AB:41:ILE:HA	1.79	0.65
11:AK:14:VAL:O	11:AK:15:ALA:HB3	1.95	0.65
1:AA:319:G:H2'	1:AA:1434:A:N1	1.98	0.65
1:AA:1296:C:C5'	1:AA:1302:U:O4	2.45	0.65
1:AA:1298:C:H2'	7:AG:114:ARG:NH1	2.05	0.65
1:AA:1499:A:H1'	1:AA:1520:G:H5'	1.79	0.65
4:AD:131:ARG:H	4:AD:131:ARG:HD2	1.62	0.65
1:AA:6:G:C1'	5:AE:119:LEU:CD1	2.75	0.65
1:AA:59:A:C5	1:AA:331:G:N3	2.61	0.65
1:AA:287:U:O2'	1:AA:288:A:H5'	1.97	0.65
1:AA:377:G:P	16:AP:5:ARG:HD2	2.37	0.65
1:AA:1347:G:N9	9:AI:107:ARG:NH1	2.45	0.65
2:AB:68:ILE:HB	2:AB:90:MET:HE3	1.79	0.65
6:AF:21:LEU:O	6:AF:24:GLU:HB3	1.97	0.65
7:AG:50:ILE:O	7:AG:54:THR:HB	1.96	0.65
12:AL:55:VAL:HG12	12:AL:56:ALA:N	2.12	0.65
12:AL:110:VAL:O	12:AL:122:THR:HG21	1.97	0.65
21:B0:727:U:H2'	21:B0:728:G:H5''	1.78	0.65
21:B0:892:A:N9	21:B0:911:A:C2	2.65	0.65
21:B0:927:C:H2'	21:B0:928:G:O4'	1.97	0.65
21:B0:1656:U:C2'	21:B0:1657:A:H5''	2.25	0.65
1:AA:7:G:N2	5:AE:121:LYS:HG2	2.11	0.64
1:AA:130:A:C4'	1:AA:264:U:C5'	2.75	0.64
1:AA:281:G:O2'	1:AA:282:A:OP2	2.12	0.64
1:AA:403:C:HO2'	1:AA:404:U:C5'	1.96	0.64
1:AA:443:C:H2'	1:AA:444:C:H6	1.61	0.64
1:AA:959:A:H1'	1:AA:985:C:H1'	1.78	0.64
1:AA:1110:A:N6	1:AA:1111:A:C6	2.64	0.64
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:29:TYR:OH	14:AN:54:PRO:HG2	1.97	0.64
5:AE:65:ASN:O	5:AE:65:ASN:CG	2.40	0.64
11:AK:66:LEU:HB3	11:AK:70:LYS:HE3	1.78	0.64
17:AQ:101:ARG:HA	17:AQ:101:ARG:HE	1.62	0.64
21:B0:1472:C:H2'	21:B0:1473:U:H5'	1.79	0.64
21:B0:1811:A:O2'	21:B0:1812:U:H5''	1.97	0.64
1:AA:436:C:N3	1:AA:437:U:C6	2.62	0.64
1:AA:476:U:O4	1:AA:477:G:N7	2.30	0.64
1:AA:1153:C:H2'	1:AA:1154:G:H8	1.62	0.64
1:AA:1318:A:H5'	19:AS:10:PHE:CD1	2.32	0.64
1:AA:1474:G:H4'	21:B0:1718:A:C2	2.32	0.64
1:AA:1483:A:C6	1:AA:1484:C:C2	2.85	0.64
2:AB:71:VAL:O	2:AB:165:VAL:HG23	1.96	0.64
7:AG:37:ASN:ND2	9:AI:41:VAL:HG23	2.12	0.64
21:B0:897:A:C6	21:B0:898:C:C4	2.85	0.64
21:B0:1432:G:H21	21:B0:1596:A:H62	1.45	0.64
1:AA:31:G:C6	1:AA:48:C:O4'	2.50	0.64
1:AA:131:C:O2'	1:AA:262:A:O2'	2.16	0.64
1:AA:243:A:H4'	1:AA:244:U:C5'	2.22	0.64
1:AA:588:G:C8	1:AA:753:A:C4	2.84	0.64
1:AA:818:G:H3'	1:AA:819:A:C5'	2.27	0.64
1:AA:1249:C:H1'	9:AI:70:LYS:HG3	1.79	0.64
3:AC:59:ARG:C	10:AJ:92:THR:HG22	2.21	0.64
11:AK:40:ILE:HG22	11:AK:41:THR:HG23	1.80	0.64
19:AS:44:MET:O	19:AS:47:HIS:HB2	1.97	0.64
1:AA:51:A:N1	1:AA:314:C:O2'	2.23	0.64
1:AA:588:G:C4	1:AA:753:A:C5	2.83	0.64
1:AA:1368:G:P	9:AI:112:LYS:O	2.56	0.64
7:AG:42:ILE:HG22	7:AG:120:ILE:HD12	1.80	0.64
15:AO:29:VAL:HG12	15:AO:85:LEU:CD1	2.26	0.64
19:AS:40:ILE:HB	19:AS:67:VAL:O	1.98	0.64
21:B0:2422:C:H2'	21:B0:2423:G:H8	1.62	0.64
1:AA:59:A:C6	1:AA:331:G:C4	2.85	0.64
1:AA:112:G:N3	1:AA:354:G:C5'	2.59	0.64
1:AA:588:G:C6	1:AA:753:A:N7	2.66	0.64
1:AA:735:C:O2'	18:AR:75:ILE:HD11	1.96	0.64
1:AA:1190:G:O2'	1:AA:1191:A:O5'	2.12	0.64
1:AA:1475:G:H4'	21:B0:1706:A:C4'	2.16	0.64
3:AC:177:THR:CG2	3:AC:180:ALA:HB2	2.28	0.64
5:AE:115:VAL:CG1	5:AE:118:ILE:HG13	2.25	0.64
15:AO:17:ARG:CZ	15:AO:77:ARG:HH11	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1436:G:H1'	21:B0:1508:G:H21	1.60	0.64
21:B0:2075:U:O2'	21:B0:3093:C:C1'	2.45	0.64
1:AA:31:G:H1	1:AA:48:C:H5''	1.62	0.64
1:AA:36:C:O2'	1:AA:501:C:OP1	2.13	0.64
1:AA:103:C:O2'	1:AA:171:A:C6	2.50	0.64
1:AA:130:A:P	17:AQ:63:ARG:HE	2.18	0.64
1:AA:393:A:O2'	1:AA:394:G:H5'	1.98	0.64
1:AA:760:G:C2	17:AQ:103:GLY:C	2.75	0.64
1:AA:1141:C:H2'	1:AA:1142:G:C8	2.33	0.64
3:AC:112:SER:HB2	3:AC:115:LEU:HD12	1.79	0.64
9:AI:49:PRO:O	9:AI:52:ALA:HB3	1.97	0.64
13:AM:36:LYS:HD2	13:AM:59:TYR:CZ	2.32	0.64
21:B0:1861:G:P	53:B5:37:LYS:CA	2.86	0.64
1:AA:6:G:C5	5:AE:119:LEU:CD1	2.79	0.64
1:AA:13:U:O2	1:AA:914:A:H3'	1.96	0.64
1:AA:15:G:H4'	5:AE:24:ARG:NH2	2.13	0.64
1:AA:141:A:N3	1:AA:195:A:C2	2.66	0.64
1:AA:262:A:C5'	20:AT:74:LYS:CB	2.66	0.64
1:AA:375:U:OP1	16:AP:69:THR:OG1	2.03	0.64
1:AA:1014:A:C2	1:AA:1219:U:C2'	2.78	0.64
10:AJ:45:ARG:NH1	14:AN:36:PHE:HD2	1.87	0.64
11:AK:18:ARG:HB2	11:AK:33:THR:HG23	1.78	0.64
19:AS:64:GLU:O	19:AS:67:VAL:HG23	1.97	0.64
20:AT:50:GLU:HG2	20:AT:100:ILE:HG13	1.79	0.64
21:B0:1474:A:H2'	21:B0:1475:U:H5'	1.79	0.64
1:AA:499:A:H4'	1:AA:500:G:H5'	1.79	0.64
1:AA:835:U:C5'	18:AR:64:ARG:HH22	2.03	0.64
1:AA:837:G:O3'	1:AA:838:C:C6	2.49	0.64
1:AA:994:A:N3	14:AN:5:ALA:O	2.31	0.64
1:AA:1256:A:N3	1:AA:1258:G:O6	2.30	0.64
1:AA:1409:C:C2'	1:AA:1410:G:C8	2.75	0.64
5:AE:115:VAL:HG11	5:AE:118:ILE:CG1	2.28	0.64
16:AP:45:THR:HB	16:AP:46:PRO:HD2	1.80	0.64
21:B0:1047:G:H1	21:B0:1130:U:H3	1.46	0.64
1:AA:204:A:H5''	1:AA:205:G:OP1	1.97	0.64
1:AA:926:G:C2	1:AA:1505:G:C8	2.86	0.64
1:AA:976:G:N2	1:AA:2361:C:H2'	2.13	0.64
1:AA:1040:U:H2'	1:AA:1041:A:C8	2.33	0.64
1:AA:1475:G:H4'	21:B0:1706:A:H5'	1.80	0.64
3:AC:155:GLY:O	3:AC:196:LEU:HD22	1.98	0.64
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:37:ASN:HD21	9:AI:41:VAL:HG23	1.62	0.64
21:B0:894:G:C2'	21:B0:895:G:H5''	2.27	0.64
21:B0:910:U:C2'	21:B0:911:A:C5'	2.76	0.64
21:B0:3110:G:H5''	21:B0:3148:G:H1'	1.80	0.64
21:B0:2245:A:H5'	21:B0:2246:A:N7	2.12	0.64
21:B0:2690:A:OP2	21:B0:2694:G:H5'	1.98	0.64
1:AA:5:U:O4	5:AE:95:ALA:HB1	1.99	0.64
1:AA:191:G:C2	1:AA:192:U:N1	2.66	0.64
1:AA:234:C:O2'	17:AQ:70:ARG:CG	2.45	0.64
1:AA:262:A:O3'	20:AT:75:ASN:CB	2.41	0.64
1:AA:403:C:N3	1:AA:404:U:C5	2.66	0.64
1:AA:1086:U:H5''	1:AA:1389:C:OP1	1.96	0.64
1:AA:1109:C:OP2	3:AC:176:HIS:CG	2.51	0.64
4:AD:70:ILE:HD11	4:AD:100:ARG:NE	2.13	0.64
14:AN:27:CYS:SG	14:AN:29:ARG:HB2	2.38	0.64
21:B0:65:C:H2'	21:B0:66:U:O4'	1.97	0.64
1:AA:9:G:N7	5:AE:126:ARG:NH1	2.45	0.63
1:AA:367:U:O3'	1:AA:368:U:P	2.56	0.63
1:AA:392:G:H2'	1:AA:393:A:C8	2.32	0.63
1:AA:436:C:O2'	1:AA:437:U:O4'	2.16	0.63
1:AA:958:A:C2	19:AS:55:LYS:HB2	2.33	0.63
1:AA:1044:A:C8	1:AA:1045:C:H1'	2.32	0.63
1:AA:1394:A:N1	1:AA:1501:C:O4'	2.31	0.63
7:AG:71:PRO:HD3	7:AG:103:TRP:CZ3	2.33	0.63
21:B0:1075:C:H2'	21:B0:1076:U:O4'	1.99	0.63
21:B0:1838:G:H2'	21:B0:1839:A:H5'	1.75	0.63
21:B0:2510:A:H61	21:B0:2641:A:H61	1.46	0.63
1:AA:322:C:O3'	20:AT:23:ARG:CB	2.46	0.63
1:AA:587:G:HO2'	1:AA:588:G:P	2.22	0.63
1:AA:933:G:C6	1:AA:935:A:N9	2.65	0.63
1:AA:1131:G:H1	1:AA:1143:G:N2	1.95	0.63
1:AA:1503:A:OP1	1:AA:1531:A:C2'	2.46	0.63
2:AB:95:GLN:OE1	2:AB:95:GLN:HA	1.97	0.63
14:AN:22:THR:CB	14:AN:33:VAL:HG21	2.27	0.63
21:B0:1341:G:H22	21:B0:1664:G:H1	1.46	0.63
21:B0:1458:A:H3'	21:B0:1459:U:C5'	2.28	0.63
21:B0:3184:C:O2'	21:B0:3185:U:H5''	1.98	0.63
1:AA:108:G:O6	20:AT:15:ARG:CD	2.47	0.63
1:AA:173:U:C5'	1:AA:197:A:O4'	2.46	0.63
1:AA:1115:C:O4'	14:AN:61:TRP:HA	1.99	0.63
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:64:VAL:CB	3:AC:99:VAL:HB	2.27	0.63
21:B0:1715:A:H1'	21:B0:1717:A:O4'	1.99	0.63
21:B0:2491:C:C2'	21:B0:2492:G:H5''	2.29	0.63
1:AA:635:G:O2'	17:AQ:2:PRO:HG2	1.98	0.63
1:AA:1291:G:O3'	7:AG:41:ARG:NH2	2.31	0.63
1:AA:1499:A:H1'	1:AA:1520:G:H5''	1.80	0.63
3:AC:3:ASN:C	3:AC:4:LYS:HG2	2.23	0.63
9:AI:111:ARG:HD3	9:AI:112:LYS:C	2.24	0.63
11:AK:18:ARG:HB2	11:AK:33:THR:CG2	2.28	0.63
16:AP:8:ARG:HB2	16:AP:28:ARG:NH1	2.14	0.63
17:AQ:104:LYS:HE3	21:B0:729:A:H62	0.53	0.63
1:AA:74:G:H2'	1:AA:75:C:C6	2.34	0.63
1:AA:168:G:O2'	1:AA:169:C:H5'	1.98	0.63
1:AA:187:G:C1'	20:AT:85:MET:CE	2.71	0.63
1:AA:434:U:H2'	1:AA:435:C:H6	1.63	0.63
1:AA:636:U:H5'	17:AQ:2:PRO:HG2	1.79	0.63
1:AA:922:G:H2'	1:AA:923:A:C8	2.33	0.63
1:AA:976:G:P	1:AA:1358:U:HO2'	2.18	0.63
1:AA:1249:C:H4'	9:AI:36:TYR:OH	1.98	0.63
4:AD:148:VAL:HG11	4:AD:158:ILE:HG21	1.81	0.63
12:AL:27:LEU:C	12:AL:29:GLY:N	2.54	0.63
16:AP:18:ARG:HD3	16:AP:35:LYS:HE3	1.79	0.63
17:AQ:104:LYS:CG	21:B0:726:G:C2	2.75	0.63
21:B0:3149:G:C2'	21:B0:3150:C:P	2.87	0.63
1:AA:190:A:N3	20:AT:101:GLY:HA3	2.12	0.63
1:AA:253:U:OP1	17:AQ:67:LYS:NZ	2.31	0.63
1:AA:926:G:N1	1:AA:1505:G:C5	2.66	0.63
1:AA:1250:A:H5'	9:AI:68:GLY:O	1.98	0.63
1:AA:1314:C:C5	19:AS:6:LYS:HD3	2.33	0.63
1:AA:1346:A:N3	7:AG:10:ARG:CZ	2.62	0.63
2:AB:82:ARG:O	2:AB:86:GLU:HG3	1.98	0.63
5:AE:79:GLU:HG3	5:AE:93:PRO:HD2	1.79	0.63
8:AH:91:ARG:HD3	17:AQ:34:LYS:HB3	1.81	0.63
17:AQ:69:LYS:C	17:AQ:70:ARG:HD2	2.24	0.63
21:B0:1856:U:N3	21:B0:3877:A:C6	2.56	0.63
1:AA:130:A:H1'	1:AA:264:U:C5'	2.19	0.63
1:AA:191:G:C6	1:AA:192:U:C6	2.77	0.63
1:AA:320:C:C5'	1:AA:1434:A:N1	2.61	0.63
1:AA:402:G:C4'	1:AA:620:C:H42	2.11	0.63
1:AA:619:U:N1	4:AD:135:LEU:HD11	2.13	0.63
1:AA:926:G:C5	1:AA:1505:G:N1	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:926:G:C8	1:AA:1505:G:N2	2.66	0.63
1:AA:959:A:C4'	1:AA:985:C:H4'	2.28	0.63
5:AE:120:THR:CG2	5:AE:121:LYS:N	2.61	0.63
10:AJ:30:SER:OG	10:AJ:81:THR:HA	1.99	0.63
19:AS:52:TYR:HA	19:AS:56:GLN:O	1.99	0.63
21:B0:3183:A:C3'	21:B0:3184:C:P	2.87	0.63
21:B0:2198:U:C3'	21:B0:2199:C:H5''	2.27	0.63
1:AA:274:A:C2	1:AA:275:G:H1'	2.32	0.63
1:AA:571:U:H4'	1:AA:819:A:C5	2.33	0.63
1:AA:761:G:H1'	17:AQ:104:LYS:C	2.24	0.63
1:AA:1367:C:C5'	10:AJ:60:ARG:NH1	2.61	0.63
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.06	0.63
4:AD:25:ARG:C	4:AD:27:TYR:N	2.55	0.63
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.33	0.63
9:AI:118:LYS:O	9:AI:119:ALA:CB	2.45	0.63
1:AA:141:A:N3	1:AA:195:A:H2	1.96	0.63
1:AA:216:C:C2'	1:AA:468:A:N3	2.42	0.63
1:AA:261:U:P	20:AT:79:ARG:HH22	2.21	0.63
1:AA:323:U:O3'	20:AT:22:ARG:HD3	1.99	0.63
1:AA:402:G:C4'	1:AA:620:C:N3	2.39	0.63
1:AA:619:U:N3	4:AD:135:LEU:HG	2.13	0.63
1:AA:1292:U:OP2	7:AG:41:ARG:NH2	2.31	0.63
1:AA:1505:G:C3'	1:AA:1506:U:O5'	2.39	0.63
2:AB:186:ALA:HB3	2:AB:197:VAL:HG11	1.81	0.63
3:AC:177:THR:HG23	3:AC:180:ALA:HB2	1.81	0.63
4:AD:152:SER:HB3	4:AD:155:LEU:HD12	1.80	0.63
7:AG:155:ARG:O	7:AG:156:TRP:HB3	1.98	0.63
21:B0:514:G:H2'	21:B0:514:G:N3	2.12	0.63
21:B0:1464:A:H4'	21:B0:1545:G:H4'	1.81	0.63
21:B0:1711:C:H4'	21:B0:1712:G:C2	2.34	0.63
21:B0:1856:U:H6	21:B0:3865:A:C8	1.71	0.63
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.32	0.62
1:AA:926:G:C5	1:AA:1505:G:C2	2.87	0.62
3:AC:120:VAL:O	3:AC:124:ILE:HG13	1.99	0.62
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.13	0.62
19:AS:39:THR:HA	19:AS:70:LYS:HG2	1.81	0.62
1:AA:586:C:H5'	8:AH:90:GLY:HA3	1.80	0.62
1:AA:1020:U:H2'	1:AA:1021:G:H8	1.63	0.62
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.29	0.62
3:AC:13:GLY:HA3	14:AN:57:ARG:NH2	2.14	0.62
5:AE:116:THR:HG23	5:AE:117:ASP:OD2	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:150:ARG:HG3	5:AE:150:ARG:NH1	2.13	0.62
7:AG:23:VAL:O	7:AG:27:ILE:HG13	2.00	0.62
1:AA:375:U:N3	1:AA:376:G:C5	2.67	0.62
1:AA:815:A:C4	1:AA:1527:C:H1'	2.34	0.62
2:AB:73:THR:HB	2:AB:170:GLU:OE2	1.99	0.62
2:AB:142:LEU:HD22	2:AB:146:GLN:NE2	2.14	0.62
13:AM:84:ILE:C	13:AM:86:CYS:H	2.08	0.62
17:AQ:21:VAL:HG21	17:AQ:59:ILE:HD11	1.82	0.62
17:AQ:104:LYS:CG	21:B0:727:U:O2	2.47	0.62
20:AT:56:MET:HE3	20:AT:88:VAL:HG11	1.81	0.62
1:AA:218:C:OP1	1:AA:470:U:C4'	2.47	0.62
1:AA:325:A:OP2	20:AT:70:SER:OG	2.16	0.62
1:AA:1329:A:O3'	13:AM:26:GLY:N	2.09	0.62
7:AG:114:ARG:HG2	7:AG:114:ARG:HH11	1.64	0.62
12:AL:33:ARG:CD	12:AL:62:SER:HB3	2.29	0.62
1:AA:244:U:N3	1:AA:894:G:C4	2.67	0.62
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.64	0.62
1:AA:1190:G:H4'	1:AA:1191:A:C5'	2.27	0.62
1:AA:1298:C:C4	7:AG:114:ARG:HD3	2.35	0.62
21:B0:892:A:N3	21:B0:911:A:C2	2.67	0.62
21:B0:1429:A:H62	21:B0:1601:U:H5''	1.65	0.62
21:B0:2236:U:C2'	21:B0:2237:C:H5''	2.29	0.62
21:B0:2607:C:H1'	21:B0:2761:A:H2'	1.79	0.62
21:B0:2756:A:H4'	21:B0:2758:A:OP1	1.98	0.62
1:AA:129:U:P	17:AQ:3:LYS:HZ2	2.23	0.62
1:AA:436:C:O2	1:AA:437:U:N1	2.32	0.62
1:AA:586:C:C5'	8:AH:90:GLY:N	2.60	0.62
1:AA:600:C:H5''	8:AH:129:VAL:HA	1.81	0.62
1:AA:714:G:C5'	1:AA:776:G:H5'	2.30	0.62
1:AA:866:C:H4'	1:AA:919:A:C5'	2.30	0.62
1:AA:994:A:H1'	14:AN:8:GLU:CB	2.24	0.62
1:AA:1229:A:OP2	13:AM:114:ARG:HD3	1.99	0.62
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.16	0.62
2:AB:132:LYS:HG2	2:AB:135:GLN:OE1	1.99	0.62
4:AD:88:VAL:CA	5:AE:97:GLY:HA3	2.28	0.62
9:AI:19:LEU:O	9:AI:20:ARG:HG3	1.99	0.62
17:AQ:95:TYR:C	17:AQ:97:SER:N	2.58	0.62
19:AS:31:ILE:CG2	19:AS:32:LYS:H	2.10	0.62
1:AA:31:G:N2	1:AA:47:C:H4'	2.14	0.62
1:AA:319:G:C4	1:AA:1434:A:C2	2.88	0.62
1:AA:336:C:O4'	1:AA:1433:A:H1'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:837:G:O2'	1:AA:838:C:O4'	2.12	0.62
3:AC:23:TYR:CE1	10:AJ:11:PHE:CE2	2.88	0.62
12:AL:43:VAL:HG12	12:AL:44:THR:N	2.14	0.62
14:AN:53:LEU:HB3	14:AN:56:VAL:HG21	1.81	0.62
17:AQ:76:LEU:HD23	17:AQ:77:VAL:N	2.15	0.62
21:B0:1196:G:H2'	21:B0:1197:U:O4'	2.00	0.62
1:AA:6:G:C2'	5:AE:119:LEU:CD1	2.77	0.62
1:AA:501:C:H2'	1:AA:502:G:C8	2.34	0.62
1:AA:1342:C:H4'	9:AI:125:TYR:CZ	2.34	0.62
1:AA:1349:A:OP1	9:AI:120:ARG:HB2	2.00	0.62
4:AD:148:VAL:CG1	4:AD:158:ILE:HD13	2.30	0.62
7:AG:139:GLU:O	7:AG:143:ARG:HG3	2.00	0.62
13:AM:84:ILE:O	13:AM:86:CYS:N	2.32	0.62
1:AA:37:U:HO2'	1:AA:500:G:H4'	1.62	0.62
1:AA:1109:C:P	3:AC:176:HIS:NE2	2.72	0.62
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.35	0.62
2:AB:23:ARG:NH1	2:AB:23:ARG:C	2.58	0.62
2:AB:74:LYS:NZ	2:AB:206:ASP:HA	2.13	0.62
4:AD:61:LYS:NZ	4:AD:62:GLN:HE21	1.98	0.62
6:AF:94:GLN:NE2	18:AR:32:ARG:HD3	2.09	0.62
20:AT:54:LYS:HE3	20:AT:100:ILE:HD11	1.82	0.62
21:B0:1528:C:C2'	21:B0:1529:C:H5''	2.30	0.62
21:B0:2571:G:H2'	21:B0:2572:U:C6	2.34	0.62
1:AA:1211:U:O3'	1:AA:1212:U:OP2	2.17	0.62
1:AA:1297:C:P	13:AM:44:ARG:NH2	2.71	0.62
1:AA:1320:C:H41	19:AS:37:ARG:HD3	1.65	0.62
1:AA:1440:C:H2'	1:AA:1441:G:H5'	1.82	0.62
2:AB:74:LYS:HZ1	2:AB:206:ASP:HA	1.64	0.62
2:AB:115:LEU:HG	2:AB:153:ARG:NH2	2.14	0.62
4:AD:191:ARG:HD2	4:AD:191:ARG:O	2.00	0.62
5:AE:80:ILE:CD1	5:AE:91:LEU:HB2	2.30	0.62
5:AE:120:THR:HG23	5:AE:121:LYS:N	2.15	0.62
8:AH:91:ARG:NH2	17:AQ:32:TYR:O	2.31	0.62
11:AK:74:ALA:C	11:AK:76:GLY:H	2.06	0.62
20:AT:43:LEU:HD12	20:AT:55:ILE:HD12	1.81	0.62
21:B0:1580:C:H2'	21:B0:1581:C:C6	2.35	0.62
21:B0:2668:U:H4'	21:B0:2669:C:C5'	2.25	0.62
1:AA:51:A:N1	1:AA:314:C:C2'	2.63	0.61
1:AA:355:C:H4'	1:AA:389:A:OP2	1.99	0.61
1:AA:502:G:C4'	1:AA:550:G:C4'	2.77	0.61
1:AA:735:C:H1'	18:AR:75:ILE:HD11	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:922:G:N2	1:AA:1396:A:C2	2.68	0.61
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.35	0.61
1:AA:1409:C:C2'	1:AA:1410:G:O4'	2.47	0.61
1:AA:1416:G:H3'	1:AA:1417:G:O5'	2.00	0.61
1:AA:1474:G:H5'	21:B0:1718:A:C2	2.34	0.61
2:AB:69:LEU:HD12	2:AB:155:LEU:HD11	1.81	0.61
2:AB:122:PHE:HE2	2:AB:139:LYS:HG2	1.65	0.61
4:AD:23:GLY:HA3	4:AD:112:VAL:CG1	2.30	0.61
5:AE:102:ALA:CB	5:AE:120:THR:HG21	2.28	0.61
8:AH:91:ARG:CG	12:AL:7:ILE:HG21	2.28	0.61
9:AI:4:TYR:CZ	9:AI:88:TYR:HD1	2.17	0.61
10:AJ:63:PHE:HE1	14:AN:45:ARG:HA	1.63	0.61
21:B0:788:G:H5'	21:B0:790:A:H1'	1.81	0.61
21:B0:1250:A:O2'	21:B0:1251:G:H4'	2.00	0.61
1:AA:9:G:C5'	5:AE:122:GLU:CD	2.73	0.61
1:AA:119:A:C6	1:AA:240:C:C2	2.88	0.61
1:AA:193:C:H2'	1:AA:194:C:C6	2.35	0.61
1:AA:234:C:H4'	17:AQ:64:PRO:HG2	1.82	0.61
1:AA:386:C:O2'	1:AA:387:U:H5'	2.00	0.61
1:AA:778:G:O2'	11:AK:120:ARG:O	2.17	0.61
1:AA:969:A:H61	13:AM:126:LYS:HB2	1.65	0.61
1:AA:1182:G:C5'	1:AA:1184:G:H5''	2.26	0.61
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.00	0.61
2:AB:20:GLU:HG2	2:AB:189:ASP:OD2	1.99	0.61
15:AO:29:VAL:HG12	15:AO:85:LEU:HD11	1.82	0.61
21:B0:973:U:H2'	21:B0:974:U:C6	2.35	0.61
21:B0:1147:G:H2'	21:B0:1148:G:C8	2.35	0.61
21:B0:1856:U:C4'	21:B0:3865:A:C8	2.83	0.61
21:B0:2522:G:N2	21:B0:2625:U:H5''	2.15	0.61
1:AA:448:A:H2'	1:AA:449:C:H6	1.64	0.61
1:AA:502:G:OP1	12:AL:118:SER:HB2	1.99	0.61
1:AA:837:G:C3'	1:AA:838:C:C6	2.83	0.61
1:AA:1115:C:H1'	14:AN:61:TRP:C	2.25	0.61
1:AA:1425:U:H2'	1:AA:1426:C:H6	1.65	0.61
1:AA:1487:G:O2'	1:AA:1488:G:H5'	1.99	0.61
2:AB:184:VAL:N	2:AB:198:ASP:OD2	2.32	0.61
3:AC:50:ALA:O	3:AC:70:VAL:HG12	1.99	0.61
9:AI:114:TYR:CZ	10:AJ:60:ARG:HB2	2.36	0.61
21:B0:1066:G:C6	21:B0:1115:C:N4	2.62	0.61
21:B0:1920:A:H3'	21:B0:1920:A:OP2	2.01	0.61
1:AA:161:A:H2	1:AA:348:G:C1'	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:651:C:N4	1:AA:652:U:C4	2.66	0.61
1:AA:653:A:OP1	8:AH:56:LYS:NZ	2.33	0.61
1:AA:812:C:O2'	1:AA:813:U:OP2	2.17	0.61
1:AA:1225:A:H1'	19:AS:78:ARG:HD3	1.82	0.61
1:AA:1347:G:O2'	1:AA:1348:U:P	2.57	0.61
1:AA:1490:C:H6	1:AA:1490:C:C5'	2.13	0.61
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.00	0.61
21:B0:116:A:N3	21:B0:155:G:H1'	2.15	0.61
21:B0:1518:C:H2'	21:B0:1519:G:C8	2.35	0.61
21:B0:2727:G:H1	21:B0:2735:C:H5''	1.64	0.61
1:AA:112:G:H21	1:AA:354:G:P	2.22	0.61
1:AA:235:C:C5'	17:AQ:70:ARG:CD	2.76	0.61
1:AA:390:C:H2'	1:AA:391:G:H8	1.66	0.61
1:AA:538:G:H5''	12:AL:114:LYS:HB2	1.81	0.61
1:AA:588:G:H1'	1:AA:753:A:N1	2.16	0.61
1:AA:954:G:H21	1:AA:1227:A:H62	1.49	0.61
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.14	0.61
1:AA:1457:A:C5	1:AA:1459:C:O2	2.53	0.61
2:AB:115:LEU:O	2:AB:119:GLU:HG3	2.00	0.61
21:B0:2548:G:H2'	21:B0:2549:G:C5'	2.27	0.61
1:AA:651:C:C4	1:AA:652:U:O4	2.51	0.61
1:AA:1405:G:C4'	1:AA:1519:A:H4'	2.29	0.61
1:AA:1483:A:H3'	1:AA:1484:C:OP2	1.98	0.61
3:AC:129:ALA:HB3	3:AC:132:ARG:HD2	1.82	0.61
10:AJ:46:ARG:HH11	10:AJ:64:GLU:HB3	1.65	0.61
11:AK:48:ILE:HG22	11:AK:49:GLY:N	2.16	0.61
21:B0:1093:U:O4	21:B0:1094:C:C4	2.54	0.61
1:AA:179:A:O3'	1:AA:180:U:P	2.59	0.61
1:AA:476:U:HO3'	1:AA:477:G:P	2.23	0.61
1:AA:933:G:C6	1:AA:935:A:C4	2.88	0.61
2:AB:143:GLU:O	2:AB:147:LYS:HG3	2.00	0.61
12:AL:40:VAL:O	12:AL:40:VAL:HG12	1.99	0.61
13:AM:10:PRO:O	13:AM:45:VAL:HG11	2.01	0.61
20:AT:50:GLU:HG3	20:AT:99:LEU:HD12	1.82	0.61
21:B0:1094:C:O2'	21:B0:1096:A:H2	1.83	0.61
1:AA:6:G:C1'	5:AE:119:LEU:HD13	2.31	0.61
1:AA:186:C:O4'	20:AT:81:LYS:NZ	2.33	0.61
1:AA:263:A:OP2	20:AT:79:ARG:NH1	2.32	0.61
1:AA:292:G:C2	1:AA:608:A:N1	2.68	0.61
1:AA:1484:C:H2'	1:AA:1485:U:H6	1.65	0.61
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:47:LEU:HD23	3:AC:68:VAL:HG11	1.83	0.61
4:AD:61:LYS:NZ	4:AD:62:GLN:NE2	2.48	0.61
21:B0:2223:U:H2'	21:B0:2224:U:O4'	2.01	0.61
1:AA:244:U:O4	1:AA:893:C:C4	2.54	0.61
1:AA:333:G:O4'	20:AT:16:HIS:NE2	2.34	0.61
1:AA:551:U:H2'	1:AA:552:U:H6	1.64	0.61
1:AA:586:C:O3'	8:AH:89:PRO:HB3	2.00	0.61
1:AA:933:G:C6	1:AA:935:A:C5	2.89	0.61
1:AA:1329:A:C3'	13:AM:26:GLY:N	2.63	0.61
4:AD:25:ARG:O	4:AD:27:TYR:N	2.33	0.61
21:B0:362:C:H2'	21:B0:363:G:H4'	1.82	0.61
21:B0:3874:C:H2'	21:B0:3875:A:C5'	2.30	0.61
21:B0:3108:G:C2'	21:B0:3109:U:C5	2.63	0.61
21:B0:3184:C:C2'	21:B0:3185:U:H5''	2.31	0.61
1:AA:300:A:H1'	1:AA:565:U:C2	2.35	0.61
1:AA:953:G:H1'	13:AM:125:ARG:CB	2.31	0.61
1:AA:1250:A:C5'	9:AI:68:GLY:O	2.49	0.61
1:AA:1298:C:P	7:AG:114:ARG:HH21	2.20	0.61
7:AG:78:ARG:HB2	7:AG:156:TRP:HZ3	1.65	0.61
12:AL:28:LYS:HD2	12:AL:33:ARG:HH12	1.65	0.61
13:AM:54:VAL:O	13:AM:58:GLU:HG2	2.01	0.61
21:B0:181:A:H5''	21:B0:182:G:OP1	2.00	0.61
21:B0:1500:U:H3	21:B0:1520:G:H22	1.48	0.61
1:AA:292:G:C1'	1:AA:608:A:H62	2.03	0.60
1:AA:436:C:N3	1:AA:437:U:C2	2.69	0.60
1:AA:476:U:N3	1:AA:477:G:C1'	2.64	0.60
1:AA:923:A:H1'	1:AA:1398:A:N3	2.16	0.60
2:AB:12:GLU:C	2:AB:14:GLY:H	2.07	0.60
9:AI:44:VAL:HG12	9:AI:51:ARG:HH12	1.66	0.60
11:AK:19:ALA:HB2	11:AK:80:VAL:HG11	1.82	0.60
17:AQ:104:LYS:O	17:AQ:105:ALA:HB2	2.01	0.60
21:B0:161:U:H4'	21:B0:194:G:H21	1.66	0.60
21:B0:892:A:C2	21:B0:911:A:C4	2.89	0.60
1:AA:59:A:C8	1:AA:331:G:N2	2.69	0.60
1:AA:351:G:O3'	1:AA:352:C:OP2	2.18	0.60
1:AA:1112:C:O2	3:AC:178:LEU:O	2.19	0.60
1:AA:1459:C:C5'	20:AT:28:ALA:HA	2.23	0.60
3:AC:20:SER:HB3	3:AC:22:TRP:HE1	1.67	0.60
3:AC:191:THR:HG22	3:AC:192:THR:N	2.15	0.60
3:AC:191:THR:CG2	3:AC:192:THR:N	2.64	0.60
4:AD:157:LEU:HD22	4:AD:161:ASN:ND2	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:49:VAL:CG1	14:AN:41:ARG:O	2.46	0.60
21:B0:1427:G:H2'	21:B0:1428:G:H5'	1.82	0.60
21:B0:3876:A:O2'	53:B5:39:ILE:CA	2.49	0.60
1:AA:8:A:C1'	5:AE:103:GLY:HA2	2.23	0.60
1:AA:235:C:H4'	17:AQ:70:ARG:CB	2.31	0.60
1:AA:922:G:H4'	5:AE:20:GLN:HA	1.83	0.60
1:AA:1475:G:H2'	1:AA:1476:G:C8	2.36	0.60
3:AC:60:ALA:O	3:AC:61:ALA:HB2	2.00	0.60
12:AL:46:LYS:HG2	12:AL:47:LYS:N	2.16	0.60
13:AM:40:ASN:ND2	13:AM:41:PRO:HD2	2.16	0.60
17:AQ:101:ARG:HA	17:AQ:101:ARG:NE	2.16	0.60
21:B0:317:U:C3'	21:B0:318:G:H5''	2.31	0.60
21:B0:1139:A:H1'	21:B0:2496:C:H5'	1.83	0.60
1:AA:189:A:H61	20:AT:104:LEU:CD2	2.13	0.60
1:AA:278:G:N2	1:AA:279:A:H62	1.99	0.60
1:AA:319:G:H21	1:AA:1434:A:C2'	2.01	0.60
1:AA:848:G:H2'	1:AA:849:C:C6	2.36	0.60
1:AA:848:G:HO3'	1:AA:849:C:C5'	2.03	0.60
1:AA:1115:C:H1'	14:AN:61:TRP:HA	1.84	0.60
1:AA:1239:A:O2'	1:AA:1298:C:N4	2.34	0.60
1:AA:1318:A:C5'	19:AS:10:PHE:HD1	2.12	0.60
4:AD:88:VAL:C	5:AE:97:GLY:CA	2.67	0.60
10:AJ:30:SER:HB3	10:AJ:84:GLN:HE21	1.67	0.60
10:AJ:71:LEU:O	10:AJ:72:VAL:HB	2.00	0.60
11:AK:84:VAL:CG1	11:AK:95:ILE:HD11	2.31	0.60
13:AM:82:MET:HG3	13:AM:93:ARG:CG	2.32	0.60
16:AP:67:THR:HG22	16:AP:68:ASP:N	2.15	0.60
17:AQ:93:GLN:O	21:B0:726:G:O4'	2.20	0.60
21:B0:414:A:H2'	21:B0:415:A:O4'	2.01	0.60
21:B0:540:G:H2'	21:B0:541:C:H4'	1.82	0.60
21:B0:1352:G:H2'	21:B0:1353:A:H8	1.66	0.60
21:B0:1576:G:H8	21:B0:1576:G:OP2	1.85	0.60
1:AA:107:G:H2'	1:AA:108:G:H5'	1.83	0.60
1:AA:184:G:H5'	1:AA:224:C:HO2'	1.66	0.60
1:AA:244:U:C5	1:AA:894:G:N2	2.69	0.60
1:AA:1003:G:H2'	1:AA:2003:G:C8	2.36	0.60
1:AA:1053:G:C4'	1:AA:1054:C:H5'	2.31	0.60
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.16	0.60
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.02	0.60
1:AA:1250:A:H4'	9:AI:68:GLY:O	2.01	0.60
1:AA:1277:C:C1'	1:AA:1279:A:H8	1.95	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1298:C:C2'	7:AG:114:ARG:HH12	2.06	0.60
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.36	0.60
1:AA:1470:G:O2'	1:AA:1471:G:H5'	2.02	0.60
1:AA:1497:G:HO2'	1:AA:1498:U:H5'	1.64	0.60
2:AB:80:ILE:HD11	2:AB:208:ILE:HG23	1.81	0.60
5:AE:76:ILE:HD13	5:AE:142:LEU:HD11	1.84	0.60
21:B0:941:U:H2'	21:B0:942:U:O4'	2.02	0.60
21:B0:1763:G:H2'	21:B0:1764:A:H4'	1.83	0.60
21:B0:1856:U:C3'	21:B0:3865:A:C2'	2.79	0.60
1:AA:119:A:C4	1:AA:240:C:C4	2.90	0.60
1:AA:760:G:H1	17:AQ:105:ALA:CA	2.13	0.60
1:AA:1117:G:H5'	1:AA:1117:G:H8	1.66	0.60
1:AA:1329:A:C5'	13:AM:29:ARG:CG	2.75	0.60
3:AC:26:LYS:HD3	3:AC:26:LYS:N	2.17	0.60
4:AD:162:LEU:HD13	4:AD:181:MET:HE2	1.82	0.60
5:AE:80:ILE:HD11	5:AE:91:LEU:HB2	1.83	0.60
10:AJ:51:ARG:O	14:AN:45:ARG:CD	2.49	0.60
21:B0:742:G:H2'	21:B0:1766:U:H1'	1.83	0.60
1:AA:237:C:P	17:AQ:40:LYS:HD3	2.37	0.60
1:AA:425:G:O2'	1:AA:426:G:H5'	2.01	0.60
1:AA:599:C:H4'	8:AH:131:GLY:N	2.14	0.60
1:AA:1368:G:O5'	9:AI:112:LYS:O	2.20	0.60
1:AA:1372:U:H5''	9:AI:71:SER:CB	2.31	0.60
2:AB:88:ALA:C	2:AB:90:MET:H	2.09	0.60
14:AN:11:LYS:O	14:AN:13:THR:N	2.35	0.60
16:AP:52:ASP:OD2	16:AP:55:ARG:HG3	2.00	0.60
21:B0:2783:U:H2'	21:B0:2785:A:N7	2.16	0.60
1:AA:250:A:N6	1:AA:275:G:O6	2.34	0.60
1:AA:619:U:C2	4:AD:135:LEU:HD11	2.36	0.60
1:AA:619:U:O2	4:AD:135:LEU:HG	2.01	0.60
1:AA:861:G:P	8:AH:75:ARG:HH22	2.25	0.60
1:AA:926:G:C4	1:AA:1505:G:C4	2.89	0.60
1:AA:977:A:C2	1:AA:1224:G:C5	2.90	0.60
1:AA:1014:A:C2	1:AA:1219:U:H1'	2.37	0.60
2:AB:114:ARG:NH1	2:AB:118:LEU:HD21	2.15	0.60
3:AC:79:ARG:HE	3:AC:82:GLU:HG2	1.67	0.60
4:AD:23:GLY:HA3	4:AD:112:VAL:HG12	1.83	0.60
7:AG:42:ILE:HG23	7:AG:117:ALA:HA	1.84	0.60
7:AG:78:ARG:HB2	7:AG:156:TRP:CZ3	2.36	0.60
13:AM:125:ARG:HD2	13:AM:125:ARG:C	2.27	0.60
14:AN:8:GLU:O	14:AN:11:LYS:HB2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:83:A:H4'	21:B0:84:G:O4'	2.01	0.60
21:B0:1073:G:H1'	21:B0:1099:A:N1	2.17	0.60
21:B0:1127:C:H2'	21:B0:1128:G:H8	1.66	0.60
21:B0:1337:G:H1'	21:B0:1632:A:N6	2.17	0.60
1:AA:458:G:H2'	1:AA:459:G:C8	2.37	0.60
1:AA:564:C:O4'	17:AQ:32:TYR:CE2	2.54	0.60
1:AA:991:U:O2'	1:AA:992:U:H5'	2.02	0.60
1:AA:1016:A:H5''	14:AN:15:LYS:HE3	1.78	0.60
1:AA:1091:U:O2	1:AA:1093:A:C8	2.54	0.60
1:AA:1110:A:C5	1:AA:1111:A:C5	2.89	0.60
1:AA:1238:A:C2	1:AA:1241:G:H1'	2.37	0.60
1:AA:1503:A:P	1:AA:1531:A:C1'	2.89	0.60
5:AE:24:ARG:HG2	5:AE:24:ARG:HH11	1.66	0.60
11:AK:69:ALA:O	11:AK:73:MET:HG2	2.02	0.60
15:AO:11:VAL:HG21	15:AO:34:LEU:HD12	1.83	0.60
19:AS:13:ASP:HA	19:AS:16:LEU:HB3	1.84	0.60
21:B0:317:U:H2'	21:B0:318:G:H5''	1.82	0.60
21:B0:1194:U:H2'	21:B0:1195:U:C6	2.37	0.60
21:B0:1685:A:H1'	21:B0:1686:A:C5	2.36	0.60
21:B0:1686:A:H2'	21:B0:1686:A:N3	2.17	0.60
21:B0:1921:A:H2'	21:B0:1922:U:H5''	1.83	0.60
21:B0:3110:G:P	21:B0:3149:G:O4'	2.54	0.60
1:AA:36:C:O2	1:AA:501:C:H5''	2.01	0.60
5:AE:151:LEU:HD11	8:AH:77:GLU:OE2	2.02	0.60
10:AJ:51:ARG:CG	14:AN:45:ARG:NH1	2.60	0.60
10:AJ:60:ARG:N	10:AJ:60:ARG:HD2	2.17	0.60
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.00	0.60
22:B9:67:C:H2'	22:B9:68:A:H5'	1.84	0.60
1:AA:233:C:O2'	1:AA:264:U:N3	2.31	0.59
1:AA:262:A:H4'	20:AT:75:ASN:ND2	2.17	0.59
1:AA:560:U:H4'	1:AA:561:U:H5''	1.83	0.59
1:AA:588:G:C1'	1:AA:753:A:N1	2.64	0.59
1:AA:714:G:C5'	1:AA:776:G:C5'	2.80	0.59
1:AA:1261:A:O2'	1:AA:1283:G:H5'	1.97	0.59
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.37	0.59
2:AB:98:LEU:O	2:AB:101:MET:HG3	2.01	0.59
3:AC:6:HIS:NE2	3:AC:8:ILE:HD12	2.17	0.59
3:AC:33:LEU:HD11	14:AN:53:LEU:CD2	2.32	0.59
7:AG:38:LEU:HD12	7:AG:38:LEU:O	2.01	0.59
21:B0:1066:G:H21	21:B0:1096:A:H8	1.50	0.59
1:AA:184:G:H4'	1:AA:224:C:O3'	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:322:C:O2'	20:AT:23:ARG:CD	2.50	0.59
1:AA:436:C:C2'	1:AA:437:U:C6	2.82	0.59
1:AA:474:U:H2'	1:AA:475:C:H6	1.65	0.59
1:AA:762:C:C4'	21:B0:729:A:N1	2.63	0.59
1:AA:922:G:C4	1:AA:1396:A:N1	2.68	0.59
1:AA:974:A:P	14:AN:29:ARG:HH22	2.24	0.59
1:AA:996:A:H2'	1:AA:997:U:C6	2.37	0.59
2:AB:33:TYR:O	2:AB:34:ALA:HB2	2.02	0.59
2:AB:140:HIS:O	2:AB:143:GLU:HB2	2.01	0.59
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.02	0.59
13:AM:82:MET:SD	21:B0:900(A):A:OP1	2.61	0.59
16:AP:81:ARG:HG3	16:AP:83:GLU:HG2	1.84	0.59
21:B0:366:U:H2'	21:B0:367:G:H8	1.67	0.59
21:B0:766:A:H2'	21:B0:767:G:C8	2.37	0.59
21:B0:1912:G:N3	21:B0:1913:G:OP1	2.13	0.59
21:B0:2691:C:H3'	21:B0:2692:A:C5'	2.32	0.59
1:AA:376:G:C2	1:AA:389:A:N1	2.71	0.59
1:AA:502:G:O4'	1:AA:550:G:H5'	2.02	0.59
1:AA:714:G:C4'	1:AA:776:G:H4'	2.28	0.59
1:AA:731:G:H5'	1:AA:766:A:H4'	1.83	0.59
1:AA:761:G:H1'	17:AQ:104:LYS:CA	2.32	0.59
1:AA:992:U:C2'	1:AA:1043:C:H41	2.15	0.59
1:AA:1225:A:O4'	19:AS:78:ARG:NH1	2.34	0.59
1:AA:1318:A:H5'	19:AS:10:PHE:CE1	2.37	0.59
4:AD:33:MET:O	4:AD:37:PRO:HG3	2.02	0.59
7:AG:51:GLN:OE1	7:AG:51:GLN:HA	2.02	0.59
7:AG:95:ARG:HG3	7:AG:95:ARG:NH1	2.17	0.59
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.84	0.59
21:B0:81:C:H2'	21:B0:82:G:O4'	2.02	0.59
21:B0:2185:U:H2'	21:B0:2186:G:C8	2.37	0.59
1:AA:109:A:H2'	1:AA:326:G:N2	2.17	0.59
1:AA:588:G:N9	1:AA:753:A:C6	2.70	0.59
1:AA:1067:A:H2'	1:AA:1093:A:H4'	1.83	0.59
1:AA:1233:G:OP2	9:AI:124:GLN:HG2	2.01	0.59
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.17	0.59
1:AA:1496:C:O2'	1:AA:1517:G:O6	2.18	0.59
3:AC:6:HIS:HD2	3:AC:8:ILE:HB	1.66	0.59
10:AJ:46:ARG:NH1	10:AJ:64:GLU:HG2	2.18	0.59
13:AM:93:ARG:CG	21:B0:900(A):A:P	2.86	0.59
21:B0:198:A:H5''	21:B0:199:A:H5'	1.82	0.59
21:B0:895:G:H5'	21:B0:895:G:C8	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:3866:A:H61	53:B5:43:LYS:CA	2.15	0.59
1:AA:9:G:H5'	5:AE:122:GLU:CD	2.26	0.59
1:AA:262:A:O3'	20:AT:75:ASN:ND2	2.36	0.59
1:AA:538:G:OP1	12:AL:115:LYS:HG3	2.00	0.59
1:AA:761:G:O2'	21:B0:726:G:N2	2.36	0.59
1:AA:1106:G:OP1	3:AC:172:ARG:HG2	2.02	0.59
4:AD:162:LEU:CD1	4:AD:181:MET:HE2	2.31	0.59
21:B0:860:U:C2'	21:B0:861:G:H5'	2.32	0.59
21:B0:918:A:C2'	21:B0:919:U:H5''	2.30	0.59
21:B0:1057:A:H3'	21:B0:1058:G:C5'	2.32	0.59
21:B0:1147:G:H2'	21:B0:1148:G:H8	1.67	0.59
21:B0:1455:C:O2'	21:B0:1644:G:H5''	2.03	0.59
21:B0:2217:G:H4'	21:B0:2219:U:H5	1.68	0.59
1:AA:189:A:C6	20:AT:89:ARG:HH21	1.54	0.59
1:AA:227:G:N1	1:AA:228:A:C4	2.71	0.59
1:AA:262:A:C4'	20:AT:75:ASN:ND2	2.66	0.59
1:AA:406:G:N7	1:AA:496:A:C5	2.64	0.59
1:AA:968:A:C6	1:AA:1062:U:O2'	2.55	0.59
1:AA:1500:A:O3'	1:AA:1508:G:H4'	2.03	0.59
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.38	0.59
9:AI:115:GLY:CA	10:AJ:58:ASP:OD1	2.46	0.59
10:AJ:15:THR:HG23	10:AJ:94:VAL:HG22	1.85	0.59
10:AJ:63:PHE:CE2	14:AN:48:ALA:HB1	2.38	0.59
21:B0:241:C:O2'	21:B0:242:A:H5''	2.03	0.59
21:B0:2018:G:H3'	21:B0:2019:C:C5'	2.32	0.59
1:AA:435:C:H2'	1:AA:436:C:H6	1.67	0.59
1:AA:1255:G:O2'	1:AA:1258:G:C2	2.56	0.59
1:AA:1318:A:C5'	19:AS:10:PHE:CE1	2.86	0.59
1:AA:1381:U:O2'	1:AA:1382:C:H5'	2.02	0.59
3:AC:10:PHE:CZ	3:AC:178:LEU:HD13	2.38	0.59
5:AE:122:GLU:O	5:AE:123:LEU:HD23	2.03	0.59
9:AI:93:ARG:NH1	9:AI:97:LYS:NZ	2.51	0.59
17:AQ:104:LYS:HE2	21:B0:729:A:H62	1.52	0.59
21:B0:3128:G:H4'	21:B0:3174:C:C4'	2.33	0.59
1:AA:39:G:O2'	1:AA:40:C:H5'	2.03	0.59
1:AA:1343:G:P	9:AI:125:TYR:HH	2.25	0.59
1:AA:1346:A:N3	7:AG:10:ARG:NH2	2.50	0.59
1:AA:1404:C:O2	1:AA:1519:A:O2'	2.19	0.59
3:AC:47:LEU:CD1	3:AC:47:LEU:H	2.15	0.59
4:AD:151:LYS:H	4:AD:151:LYS:CD	2.16	0.59
6:AF:10:LEU:CD1	6:AF:59:TYR:HB3	2.29	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:79:LEU:HD23	9:AI:101:PHE:O	2.02	0.59
14:AN:12:ARG:O	14:AN:14:PRO:N	2.36	0.59
20:AT:57:ARG:HH21	20:AT:100:ILE:CG2	2.16	0.59
21:B0:3098:U:C5	21:B0:3099:U:C4	2.90	0.59
1:AA:119:A:C2	1:AA:240:C:C6	2.90	0.59
1:AA:184:G:O2'	1:AA:224:C:H5''	2.03	0.59
1:AA:231:G:H22	1:AA:262:A:H2	1.49	0.59
1:AA:518:C:H5''	1:AA:519:C:C6	2.38	0.59
1:AA:677:U:H1'	11:AK:119:CYS:SG	2.43	0.59
2:AB:34:ALA:O	2:AB:41:ILE:N	2.31	0.59
4:AD:204:ILE:HG21	5:AE:99:GLY:HA3	1.85	0.59
21:B0:67:G:H21	21:B0:72:A:H2'	1.67	0.59
21:B0:830:C:O2'	21:B0:852:U:H5''	2.03	0.59
21:B0:1621:C:H4'	21:B0:1626:A:H61	1.68	0.59
21:B0:3126:A:C2	21:B0:3127:G:H1'	2.38	0.59
21:B0:2181:A:H2'	21:B0:2182:A:H5'	1.85	0.59
21:B0:2368:G:H5''	21:B0:2369:U:O4'	2.02	0.59
22:B9:25:G:H2'	22:B9:26:G:H5'	1.84	0.59
22:B9:67:C:C2'	22:B9:68:A:H5'	2.32	0.59
1:AA:46:G:O2'	1:AA:365:U:H1'	2.02	0.59
1:AA:190:A:C8	20:AT:105:SER:HA	2.34	0.59
1:AA:262:A:H5''	20:AT:74:LYS:HB2	1.80	0.59
1:AA:505:G:H2'	1:AA:506:G:C8	2.37	0.59
1:AA:686:U:O2'	1:AA:687:A:H8	1.84	0.59
1:AA:935:A:H4'	1:AA:1384:C:O2	2.02	0.59
1:AA:959:A:H3'	1:AA:960:U:H5''	1.82	0.59
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.38	0.59
1:AA:1395:C:H5'	1:AA:1401:G:H21	1.67	0.59
1:AA:1505:G:C4'	1:AA:1506:U:C5'	2.77	0.59
3:AC:64:VAL:HB	3:AC:99:VAL:CG2	2.33	0.59
4:AD:157:LEU:HD22	4:AD:161:ASN:HD21	1.66	0.59
7:AG:72:ARG:HG2	7:AG:142:GLU:OE1	2.02	0.59
21:B0:576:A:H2	21:B0:580:A:H62	1.51	0.59
1:AA:617:G:H4'	16:AP:45:THR:HG22	1.84	0.58
1:AA:757:U:H2'	1:AA:758:G:O4'	2.03	0.58
1:AA:1113:C:C6	3:AC:178:LEU:HD23	2.38	0.58
1:AA:1261:A:H4'	1:AA:1283:G:H5''	1.83	0.58
5:AE:118:ILE:CG2	5:AE:119:LEU:N	2.65	0.58
10:AJ:81:THR:C	10:AJ:83:GLU:H	2.10	0.58
21:B0:191:G:O2'	21:B0:192:G:H5'	2.03	0.58
21:B0:1029:C:C2'	21:B0:1030:U:H5''	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:2547:C:H2'	21:B0:2548:G:C8	2.38	0.58
21:B0:2727:G:O2'	21:B0:2728:A:H5''	2.03	0.58
1:AA:102:G:HO2'	1:AA:151:A:HO2'	1.47	0.58
1:AA:513:C:O2'	1:AA:514:C:H5'	2.03	0.58
1:AA:736:C:H2'	1:AA:737:A:C8	2.38	0.58
1:AA:922:G:H5'	5:AE:20:GLN:HE22	1.66	0.58
1:AA:1087:G:OP1	1:AA:1389:C:O4'	2.21	0.58
1:AA:1130:A:H3'	1:AA:1130:A:OP2	2.02	0.58
7:AG:122:HIS:HA	7:AG:125:MET:HE3	1.85	0.58
13:AM:81:LEU:HD23	13:AM:81:LEU:N	2.17	0.58
14:AN:9:LYS:C	14:AN:9:LYS:HD3	2.28	0.58
19:AS:5:LEU:O	19:AS:6:LYS:CB	2.51	0.58
21:B0:181:A:H4'	21:B0:182:G:C5'	2.33	0.58
21:B0:800:U:H3'	21:B0:804:C:N4	2.17	0.58
21:B0:877:G:H21	21:B0:926:C:H41	1.50	0.58
21:B0:1856:U:HO2'	21:B0:3865:A:H5'	1.62	0.58
1:AA:397:A:N7	1:AA:547:A:C2'	2.65	0.58
1:AA:436:C:O2'	1:AA:437:U:C4'	2.51	0.58
3:AC:33:LEU:HD23	3:AC:33:LEU:C	2.29	0.58
3:AC:91:LEU:CD2	3:AC:99:VAL:HG13	2.27	0.58
10:AJ:51:ARG:O	14:AN:45:ARG:NE	2.36	0.58
10:AJ:86:MET:HA	10:AJ:86:MET:HE3	1.84	0.58
21:B0:45:C:H5''	21:B0:192:G:N7	2.19	0.58
21:B0:1088:A:H2'	21:B0:1089:C:O4'	2.03	0.58
21:B0:1181:C:C3'	21:B0:1182:U:H5''	2.32	0.58
21:B0:3110:G:H5''	21:B0:3148:G:C1'	2.34	0.58
1:AA:113:G:N3	1:AA:353:A:H1'	2.19	0.58
1:AA:205:G:H21	1:AA:207:C:H5	1.44	0.58
1:AA:1394:A:N1	1:AA:1501:C:C5'	2.59	0.58
1:AA:1475:G:C5'	21:B0:1706:A:H5'	2.31	0.58
3:AC:14:ILE:O	3:AC:16:ARG:N	2.35	0.58
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.03	0.58
16:AP:4:ILE:HG13	16:AP:64:ALA:HB1	1.83	0.58
21:B0:805:G:H5''	21:B0:806:A:O5'	2.03	0.58
21:B0:2547:C:H2'	21:B0:2548:G:H8	1.67	0.58
21:B0:2668:U:C4'	21:B0:2669:C:H5'	2.25	0.58
1:AA:9:G:OP1	5:AE:122:GLU:HG3	2.03	0.58
1:AA:69:G:C5'	1:AA:152:A:C2	2.72	0.58
1:AA:189:A:H8	20:AT:105:SER:HG	0.59	0.58
1:AA:254:G:OP1	17:AQ:66:SER:OG	2.14	0.58
1:AA:322:C:H4'	20:AT:23:ARG:NE	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:367:U:O3'	1:AA:368:U:H5'	2.02	0.58
1:AA:619:U:N3	4:AD:135:LEU:HD21	2.18	0.58
1:AA:761:G:H4'	17:AQ:102:GLY:O	2.03	0.58
1:AA:1054:C:OP1	1:AA:1197:G:OP1	2.21	0.58
1:AA:1061:G:C4'	10:AJ:56:HIS:ND1	2.66	0.58
1:AA:1211:U:C4'	1:AA:1212:U:P	2.91	0.58
1:AA:1475:G:C4'	21:B0:1706:A:H5'	2.32	0.58
2:AB:133:LYS:O	2:AB:137:ARG:HG3	2.04	0.58
2:AB:156:LYS:O	2:AB:156:LYS:HD3	2.03	0.58
10:AJ:45:ARG:O	10:AJ:64:GLU:HA	2.03	0.58
12:AL:92:ASP:O	12:AL:94:PRO:HD3	2.04	0.58
14:AN:24:CYS:HB3	14:AN:28:GLY:H	1.67	0.58
19:AS:25:LYS:H	19:AS:25:LYS:HD2	1.68	0.58
21:B0:175:C:H1'	21:B0:2413:A:H61	1.69	0.58
21:B0:2045:A:H4'	21:B0:2421:C:OP2	2.03	0.58
21:B0:2236:U:H3'	21:B0:2237:C:H5''	1.85	0.58
21:B0:2422:C:H2'	21:B0:2423:G:C8	2.37	0.58
1:AA:15:G:C4'	5:AE:24:ARG:NH1	2.66	0.58
1:AA:189:A:C6	20:AT:104:LEU:O	2.57	0.58
1:AA:2003:G:C2	1:AA:1004:A:H1'	2.39	0.58
1:AA:1014:A:H2	1:AA:1219:U:C2'	2.13	0.58
2:AB:134:GLU:C	2:AB:136:VAL:H	2.12	0.58
9:AI:5:TYR:O	9:AI:84:ALA:HA	2.03	0.58
17:AQ:103:GLY:C	21:B0:726:G:N2	2.46	0.58
18:AR:47:THR:HG22	18:AR:48:GLY:N	2.18	0.58
20:AT:10:LEU:HD12	20:AT:12:ALA:HB3	1.85	0.58
21:B0:3877:A:H4'	53:B5:199:ASN:CA	2.33	0.58
1:AA:15:G:H4'	5:AE:24:ARG:NH1	2.19	0.58
1:AA:130:A:C4'	1:AA:264:U:H5'	2.33	0.58
1:AA:216:C:O4'	1:AA:468:A:H1'	2.03	0.58
1:AA:391:G:O3'	16:AP:8:ARG:NH2	2.36	0.58
1:AA:723:U:O2	1:AA:723:U:H2'	2.04	0.58
1:AA:1255:G:H4'	1:AA:1258:G:O2'	2.03	0.58
1:AA:1503:A:P	1:AA:1531:A:H1'	2.44	0.58
2:AB:16:HIS:NE2	2:AB:214:ILE:CG1	2.66	0.58
2:AB:74:LYS:HZ1	2:AB:206:ASP:CA	2.17	0.58
2:AB:101:MET:CA	2:AB:108:ILE:HD12	2.33	0.58
9:AI:11:LYS:O	9:AI:11:LYS:HG2	2.03	0.58
10:AJ:24:VAL:HG12	10:AJ:28:ARG:HE	1.68	0.58
12:AL:55:VAL:CG1	12:AL:67:THR:HG23	2.33	0.58
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.29	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:87:ILE:O	15:AO:88:ARG:HB2	2.04	0.58
21:B0:3183:A:HO3'	21:B0:3184:C:P	2.22	0.58
21:B0:2329:C:H2'	21:B0:2330:G:H5'	1.84	0.58
1:AA:5:U:O4	5:AE:95:ALA:HB2	2.00	0.58
1:AA:7:G:C6	1:AA:298:A:C2	2.91	0.58
1:AA:791:G:C5'	21:B0:1905:G:OP1	2.52	0.58
1:AA:926:G:C2	1:AA:1505:G:C4	2.92	0.58
1:AA:1504:G:H3'	1:AA:1504:G:OP2	2.04	0.58
2:AB:120:ALA:O	2:AB:124:SER:HB3	2.02	0.58
4:AD:89:THR:N	5:AE:97:GLY:HA2	2.12	0.58
5:AE:118:ILE:HG22	5:AE:119:LEU:H	1.67	0.58
13:AM:120:LYS:HE2	13:AM:123:ALA:HB2	1.86	0.58
16:AP:51:VAL:O	16:AP:51:VAL:HG12	2.02	0.58
19:AS:7:LYS:O	19:AS:7:LYS:HG3	2.03	0.58
20:AT:53:LEU:O	20:AT:57:ARG:HD2	2.04	0.58
1:AA:189:A:N1	20:AT:104:LEU:HB3	2.19	0.58
1:AA:812:C:O2'	1:AA:813:U:P	2.62	0.58
1:AA:923:A:H1'	1:AA:1398:A:C2	2.38	0.58
1:AA:961:U:OP1	1:AA:1223:C:H4'	2.04	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.39	0.58
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.39	0.58
1:AA:1441:G:H4'	1:AA:1442:G:N7	2.19	0.58
2:AB:130:ARG:HD2	2:AB:131:PRO:HD2	1.85	0.58
9:AI:46:ALA:HB1	9:AI:77:ILE:HG22	1.85	0.58
11:AK:40:ILE:HG23	11:AK:75:TYR:CD2	2.39	0.58
21:B0:653:G:H4'	21:B0:2328:G:H4'	1.86	0.58
21:B0:876:A:H2'	21:B0:877:G:C8	2.39	0.58
21:B0:2434:G:H2'	21:B0:2435:C:C6	2.39	0.58
21:B0:2491:C:C3'	21:B0:2492:G:H5''	2.34	0.58
21:B0:2858:A:H3'	21:B0:2859:U:H5'	1.85	0.58
22:B9:14:C:H4'	22:B9:17:A:N6	2.19	0.58
1:AA:38:G:H4'	1:AA:547:A:N6	2.19	0.58
1:AA:113:G:N2	1:AA:353:A:H1'	2.19	0.58
1:AA:476:U:O4	1:AA:477:G:C5	2.57	0.58
1:AA:959:A:H4'	1:AA:985:C:H4'	1.86	0.58
1:AA:1114:C:O2'	14:AN:60:SER:O	2.14	0.58
1:AA:1329:A:OP1	13:AM:26:GLY:O	2.21	0.58
1:AA:1505:G:C4'	1:AA:1506:U:O5'	2.52	0.58
4:AD:89:THR:CB	5:AE:97:GLY:C	2.67	0.58
10:AJ:3:LYS:N	10:AJ:77:PRO:HD3	2.18	0.58
13:AM:13:LYS:O	13:AM:45:VAL:HG23	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:17:ARG:NH1	15:AO:77:ARG:HH11	2.01	0.58
21:B0:891:A:H2'	21:B0:892:A:C8	2.35	0.58
21:B0:891:A:H2'	21:B0:892:A:N7	2.17	0.58
21:B0:2035:G:H2'	21:B0:2036:G:H8	1.69	0.58
21:B0:3098:U:C4	21:B0:3099:U:O4	2.57	0.58
1:AA:227:G:C6	1:AA:228:A:C4	2.92	0.57
1:AA:300:A:C2	1:AA:566:G:O6	2.57	0.57
1:AA:355:C:C4'	1:AA:389:A:P	2.92	0.57
1:AA:538:G:OP1	12:AL:115:LYS:CG	2.50	0.57
1:AA:1014:A:N1	19:AS:34:TRP:NE1	2.52	0.57
1:AA:1181:G:O2'	1:AA:1184:G:C5'	2.52	0.57
13:AM:15:VAL:HG23	13:AM:43:THR:O	2.04	0.57
14:AN:29:ARG:HG2	14:AN:29:ARG:HH11	1.69	0.57
18:AR:86:VAL:O	18:AR:87:ARG:HB2	2.03	0.57
21:B0:118:U:H1'	21:B0:143:A:C8	2.39	0.57
21:B0:331:U:H2'	21:B0:332:C:H5''	1.85	0.57
21:B0:2854:G:H4'	21:B0:2855:C:H5	1.69	0.57
1:AA:8:A:C1'	5:AE:102:ALA:C	2.77	0.57
1:AA:8:A:C6	4:AD:209:ARG:HB2	2.39	0.57
1:AA:502:G:OP1	12:AL:118:SER:CB	2.52	0.57
1:AA:512:U:H1'	4:AD:42:GLN:OE1	2.03	0.57
1:AA:577:G:H1'	1:AA:816:A:N3	2.19	0.57
1:AA:815:A:H2	1:AA:1528:U:H5'	1.67	0.57
1:AA:1223:C:OP1	1:AA:1224:G:H3'	2.04	0.57
10:AJ:62:HIS:CE1	14:AN:61:TRP:HH2	2.22	0.57
21:B0:1195:U:H2'	21:B0:1196:G:C8	2.38	0.57
21:B0:3866:A:N1	53:B5:44:GLY:CA	2.67	0.57
21:B0:3184:C:H2'	21:B0:3185:U:C5'	2.35	0.57
1:AA:60:A:H4'	1:AA:61:G:O5'	2.04	0.57
1:AA:108:G:C6	20:AT:15:ARG:CG	2.87	0.57
1:AA:190:A:N1	20:AT:101:GLY:C	2.58	0.57
1:AA:346:G:C2'	1:AA:347:G:H5'	2.35	0.57
1:AA:390:C:H2'	1:AA:391:G:C8	2.38	0.57
1:AA:538:G:O5'	12:AL:115:LYS:HG3	2.04	0.57
1:AA:818:G:C3'	1:AA:819:A:C5'	2.83	0.57
1:AA:860:A:H2'	1:AA:861:G:O4'	2.03	0.57
1:AA:1342:C:H5''	9:AI:125:TYR:CE1	2.40	0.57
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.19	0.57
2:AB:10:LEU:HD23	2:AB:48:MET:HG3	1.86	0.57
2:AB:76:GLN:HG3	2:AB:206:ASP:OD1	2.03	0.57
3:AC:121:ALA:O	3:AC:125:GLU:HG3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:7:PRO:HG2	4:AD:10:ARG:HD2	1.87	0.57
18:AR:25:THR:O	18:AR:26:LEU:HB2	2.04	0.57
21:B0:218:A:O2'	21:B0:219:G:H4'	2.05	0.57
21:B0:1188:A:H2'	21:B0:1189:G:O4'	2.02	0.57
21:B0:1912:G:H4'	21:B0:1913:G:C8	2.38	0.57
1:AA:8:A:C5	4:AD:209:ARG:HA	2.39	0.57
1:AA:59:A:N1	1:AA:331:G:N3	2.46	0.57
1:AA:192:U:O2'	1:AA:193:C:H5'	2.05	0.57
1:AA:244:U:N3	1:AA:893:C:C2	2.70	0.57
1:AA:1152:A:H5'	10:AJ:70:ARG:HH22	1.68	0.57
1:AA:1237:C:H4'	1:AA:1334:G:N2	2.19	0.57
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.18	0.57
2:AB:115:LEU:HG	2:AB:153:ARG:HH21	1.69	0.57
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.19	0.57
3:AC:191:THR:HG21	3:AC:193:TYR:CZ	2.39	0.57
9:AI:23:ASN:C	9:AI:23:ASN:HD22	2.12	0.57
10:AJ:82:ILE:O	10:AJ:82:ILE:HG22	2.03	0.57
12:AL:85:ILE:HG23	12:AL:98:TYR:HB3	1.86	0.57
14:AN:36:PHE:CD1	14:AN:36:PHE:O	2.58	0.57
21:B0:521:U:H4'	21:B0:1248:G:O2'	2.04	0.57
21:B0:1916:G:H2'	21:B0:1917:C:C6	2.40	0.57
21:B0:2641:A:H2'	21:B0:2642:G:O4'	2.05	0.57
1:AA:39:G:C6	1:AA:404:U:C4	2.92	0.57
1:AA:130:A:N9	1:AA:264:U:C4'	2.63	0.57
1:AA:185:A:H2'	1:AA:186:C:C6	2.40	0.57
1:AA:205:G:N2	1:AA:207:C:C4	2.71	0.57
1:AA:586:C:H5'	8:AH:90:GLY:CA	2.33	0.57
1:AA:815:A:O2'	1:AA:1527:C:C1'	2.51	0.57
1:AA:1014:A:H2'	1:AA:1015:A:C8	2.39	0.57
1:AA:1297:C:P	13:AM:44:ARG:HH22	2.27	0.57
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.04	0.57
3:AC:33:LEU:HD23	3:AC:33:LEU:O	2.04	0.57
9:AI:7:THR:HG21	9:AI:9:ARG:NH1	2.19	0.57
9:AI:9:ARG:HA	9:AI:13:ALA:O	2.05	0.57
14:AN:24:CYS:HB3	14:AN:28:GLY:N	2.20	0.57
21:B0:879:A:C2'	21:B0:880:C:H5'	2.35	0.57
21:B0:1001:A:H62	21:B0:1200:G:H1'	1.69	0.57
21:B0:1119:U:H2'	21:B0:1120:C:O4'	2.03	0.57
21:B0:1187:A:H2'	21:B0:1188:A:H8	1.69	0.57
1:AA:94:G:C5	1:AA:96:C:C4	2.91	0.57
1:AA:173:U:C6	1:AA:197:A:C2	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:651:C:C4	1:AA:752:G:O2'	2.57	0.57
3:AC:10:PHE:CE2	3:AC:178:LEU:HD13	2.38	0.57
12:AL:28:LYS:HD2	12:AL:33:ARG:NH2	2.17	0.57
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD1	2.39	0.57
19:AS:40:ILE:HG21	19:AS:62:ILE:CD1	2.33	0.57
21:B0:176:A:H5''	21:B0:177:U:H5	1.69	0.57
21:B0:1458:A:H3'	21:B0:1459:U:H5'	1.86	0.57
21:B0:1861:G:C4'	53:B5:198:THR:CA	2.76	0.57
21:B0:1947:G:OP1	21:B0:1947:G:H3'	2.05	0.57
21:B0:2726:U:H2'	21:B0:2727:G:O4'	2.05	0.57
1:AA:130:A:C2	1:AA:264:U:C4	2.92	0.57
1:AA:261:U:O4	20:AT:79:ARG:HD3	1.75	0.57
1:AA:411:A:N9	1:AA:413:G:H1'	2.19	0.57
1:AA:780:A:O2'	1:AA:781:A:H5''	2.05	0.57
1:AA:1321:C:H42	19:AS:37:ARG:CZ	2.17	0.57
13:AM:82:MET:HE2	21:B0:900(A):A:OP1	2.05	0.57
21:B0:1517:C:H2'	21:B0:1518:C:C6	2.40	0.57
1:AA:6:G:N1	5:AE:94:ALA:HB1	2.19	0.57
1:AA:450:G:H5''	16:AP:43:LYS:HZ2	1.70	0.57
1:AA:505:G:H2'	1:AA:506:G:H8	1.69	0.57
1:AA:642:A:N3	8:AH:113:SER:OG	2.37	0.57
1:AA:755:G:O2'	8:AH:1:MET:HB2	2.03	0.57
1:AA:1115:C:C1'	14:AN:61:TRP:CA	2.83	0.57
1:AA:1369:C:OP2	9:AI:111:ARG:HA	2.04	0.57
2:AB:209:ARG:HE	2:AB:239:VAL:HG11	1.68	0.57
3:AC:29:TYR:CZ	14:AN:54:PRO:HG2	2.40	0.57
3:AC:59:ARG:C	10:AJ:92:THR:HG23	2.30	0.57
6:AF:2:ARG:CD	6:AF:69:GLU:HG2	2.35	0.57
9:AI:17:VAL:HG21	9:AI:80:GLY:HA3	1.86	0.57
21:B0:59:G:N2	21:B0:73:A:H61	2.03	0.57
21:B0:369:C:H2'	21:B0:370:U:O4'	2.05	0.57
21:B0:804:C:O2'	21:B0:806:A:H4'	2.05	0.57
21:B0:1119:U:O3'	21:B0:1120:C:P	2.63	0.57
21:B0:1791:C:H1'	21:B0:1793:A:O4'	2.05	0.57
21:B0:1807:A:H5'	21:B0:1809:G:O4'	2.05	0.57
1:AA:234:C:H4'	17:AQ:64:PRO:CG	2.35	0.57
1:AA:367:U:O3'	1:AA:368:U:C5'	2.52	0.57
1:AA:651:C:N4	1:AA:752:G:HO2'	2.03	0.57
1:AA:818:G:C2'	1:AA:819:A:H5''	2.34	0.57
1:AA:1067:A:HO2'	1:AA:1093:A:C3'	2.14	0.57
1:AA:1230:C:H1'	13:AM:126:LYS:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1270:C:O2'	1:AA:1314:C:C5'	2.53	0.57
1:AA:1409:C:C4	1:AA:1410:G:N7	2.72	0.57
1:AA:1483:A:N6	1:AA:1484:C:N3	2.53	0.57
6:AF:3:ARG:HH21	6:AF:64:GLN:NE2	2.02	0.57
6:AF:97:PHE:HB2	18:AR:32:ARG:CZ	2.34	0.57
8:AH:29:SER:OG	8:AH:32:LYS:HB2	2.04	0.57
9:AI:5:TYR:CD2	9:AI:6:GLY:N	2.71	0.57
14:AN:3:ARG:O	14:AN:4:LYS:C	2.48	0.57
21:B0:1358:C:H2'	21:B0:1359:G:C5'	2.34	0.57
1:AA:499:A:H1'	1:AA:500:G:O4'	2.04	0.57
1:AA:588:G:C8	1:AA:753:A:N3	2.72	0.57
1:AA:854:G:C8	1:AA:871:U:O4	2.58	0.57
1:AA:1129:C:OP1	9:AI:62:TYR:CE2	2.58	0.57
1:AA:1458:G:N7	1:AA:1459:C:O2	2.38	0.57
1:AA:1475:G:H5'	21:B0:1706:A:H5'	1.86	0.57
2:AB:15:VAL:HG11	2:AB:209:ARG:C	2.30	0.57
4:AD:205:GLU:HG2	5:AE:100:VAL:O	2.05	0.57
7:AG:15:ASP:OD1	7:AG:17:VAL:N	2.37	0.57
8:AH:17:THR:HG22	8:AH:63:LEU:HG	1.86	0.57
14:AN:3:ARG:NH1	14:AN:6:LEU:HD11	2.20	0.57
19:AS:10:PHE:C	19:AS:10:PHE:CD2	2.83	0.57
19:AS:10:PHE:CD2	19:AS:11:VAL:N	2.73	0.57
20:AT:67:ALA:HA	20:AT:73:HIS:H	1.70	0.57
1:AA:31:G:H1	1:AA:48:C:C5'	2.17	0.56
1:AA:186:C:C1'	20:AT:81:LYS:CE	2.71	0.56
1:AA:528:C:H41	12:AL:49:ASN:CG	2.13	0.56
1:AA:926:G:C4	1:AA:1505:G:C2	2.93	0.56
1:AA:1125:U:H3	10:AJ:5:ARG:HH21	1.53	0.56
1:AA:1228:C:OP1	13:AM:115:LYS:HG3	2.03	0.56
3:AC:7:PRO:CG	3:AC:184:TYR:HB2	2.35	0.56
3:AC:188:LEU:HD13	3:AC:195:VAL:HG13	1.86	0.56
4:AD:35:ARG:O	4:AD:36:ARG:HB2	2.04	0.56
6:AF:80:ARG:NH1	6:AF:88:VAL:HB	2.19	0.56
8:AH:60:ARG:HH11	8:AH:60:ARG:HG3	1.70	0.56
9:AI:39:GLY:O	9:AI:40:LEU:HD23	2.05	0.56
12:AL:26:ALA:O	12:AL:27:LEU:O	2.22	0.56
21:B0:317:U:H3'	21:B0:318:G:H5''	1.86	0.56
21:B0:1289:A:H62	21:B0:1662:G:H1	1.53	0.56
21:B0:2268:G:H22	21:B0:2323:U:H4'	1.68	0.56
1:AA:132:C:P	20:AT:75:ASN:ND2	2.79	0.56
1:AA:382:A:H2'	1:AA:383:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:657:G:H4'	15:AO:28:GLN:HG2	1.86	0.56
1:AA:665:A:N3	1:AA:732:C:H2'	2.20	0.56
1:AA:927:G:H1'	1:AA:1532:U:H5'	1.88	0.56
1:AA:960:U:O2'	1:AA:1223:C:H4'	2.05	0.56
1:AA:1255:G:H1'	1:AA:1259:C:H1'	0.75	0.56
2:AB:10:LEU:C	2:AB:12:GLU:H	2.12	0.56
3:AC:33:LEU:HD11	14:AN:53:LEU:HD22	1.87	0.56
3:AC:83:ARG:C	3:AC:85:ARG:N	2.63	0.56
8:AH:19:VAL:HG23	8:AH:21:LYS:HD3	1.86	0.56
13:AM:13:LYS:HD3	13:AM:17:VAL:HG11	1.86	0.56
13:AM:117:VAL:HG12	13:AM:118:ALA:H	1.71	0.56
21:B0:1971:C:H2'	21:B0:1972:G:C8	2.40	0.56
21:B0:1976:U:H2'	21:B0:1977:C:H5'	1.87	0.56
1:AA:114:U:H1'	1:AA:353:A:H1'	1.87	0.56
1:AA:143:A:O4'	1:AA:196:A:C4	2.57	0.56
1:AA:323:U:C5'	20:AT:23:ARG:H	2.12	0.56
1:AA:355:C:H5'	1:AA:389:A:OP1	2.05	0.56
1:AA:1016:A:O2'	1:AA:1218:C:C4'	2.54	0.56
1:AA:1104:G:OP1	2:AB:111:ARG:HD2	2.05	0.56
1:AA:1108:G:H5''	3:AC:176:HIS:ND1	2.20	0.56
1:AA:1195:C:H3'	1:AA:1196:U:C5'	2.35	0.56
1:AA:1392:G:C4'	1:AA:1531:A:C5'	2.72	0.56
1:AA:1414:U:O2'	1:AA:1415:G:H5'	2.04	0.56
2:AB:12:GLU:C	2:AB:14:GLY:N	2.59	0.56
2:AB:126:GLU:HG2	2:AB:129:GLU:OE1	2.05	0.56
4:AD:24:GLU:H	4:AD:112:VAL:CG1	2.19	0.56
4:AD:43:HIS:CE1	4:AD:46:LYS:HZ2	2.23	0.56
4:AD:88:VAL:CA	5:AE:97:GLY:CA	2.83	0.56
4:AD:107:ARG:HH21	4:AD:194:LEU:HD12	1.71	0.56
5:AE:12:LEU:C	5:AE:12:LEU:HD22	2.30	0.56
6:AF:25:ILE:HD12	6:AF:82:ARG:HD2	1.88	0.56
8:AH:105:ARG:HH11	8:AH:105:ARG:HG3	1.71	0.56
13:AM:80:ARG:HH21	19:AS:66:MET:HA	1.71	0.56
15:AO:3:ILE:HG22	15:AO:7:GLU:HB3	1.86	0.56
21:B0:874:A:N6	21:B0:928:G:H21	2.03	0.56
21:B0:879:A:O2'	21:B0:880:C:H5'	2.05	0.56
21:B0:984:A:H2'	21:B0:1200:G:H22	1.71	0.56
21:B0:1923:U:H4'	21:B0:1948:C:H41	1.71	0.56
21:B0:2058:U:H4'	21:B0:2575:U:N3	2.20	0.56
21:B0:2270:U:H2'	21:B0:2271:C:C6	2.40	0.56
21:B0:2402:U:H5'	21:B0:2404:A:C5	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:59:A:P	1:AA:60:A:H5''	2.46	0.56
1:AA:653:A:OP1	8:AH:56:LYS:CE	2.53	0.56
1:AA:911:U:OP2	12:AL:97:ARG:NH2	2.37	0.56
1:AA:1015:A:H2'	1:AA:1016:A:C8	2.40	0.56
1:AA:1040:U:H2'	1:AA:1041:A:H8	1.70	0.56
1:AA:1374:A:C3'	1:AA:1375:A:P	2.93	0.56
1:AA:1474:G:C5'	21:B0:1718:A:C2	2.88	0.56
12:AL:47:LYS:HB2	12:AL:48:PRO:HD2	1.88	0.56
13:AM:17:VAL:O	13:AM:20:THR:HB	2.05	0.56
16:AP:17:TYR:HE1	16:AP:41:PRO:HG2	1.69	0.56
21:B0:33:C:N4	21:B0:466:A:H61	2.03	0.56
21:B0:3116:G:H4'	21:B0:3117:A:OP1	2.04	0.56
21:B0:3197:U:H1'	21:B0:2181:A:C5	2.37	0.56
1:AA:143:A:C1'	1:AA:196:A:C4	2.89	0.56
1:AA:315:A:O4'	1:AA:353:A:C6	2.59	0.56
1:AA:355:C:C5'	1:AA:389:A:OP2	2.54	0.56
1:AA:1319:A:H5'	1:AA:1320:C:OP1	2.06	0.56
1:AA:1339:A:H2'	1:AA:1340:A:O4'	2.06	0.56
3:AC:32:LEU:HD23	3:AC:32:LEU:O	2.05	0.56
11:AK:126:ARG:O	11:AK:127:LYS:C	2.48	0.56
13:AM:8:GLU:OE1	13:AM:22:ILE:HG12	2.05	0.56
17:AQ:67:LYS:O	17:AQ:68:ARG:HB3	2.05	0.56
21:B0:368:A:H2'	21:B0:369:C:O4'	2.06	0.56
21:B0:1092:U:H2'	21:B0:1093:U:C6	2.41	0.56
21:B0:1093:U:C4	21:B0:1094:C:C4	2.94	0.56
21:B0:2466:G:H2'	21:B0:2467:A:C8	2.40	0.56
1:AA:39:G:N7	1:AA:498:U:O4	2.38	0.56
1:AA:187:G:H21	20:AT:105:SER:CB	2.17	0.56
1:AA:191:G:C6	1:AA:192:U:C5	2.86	0.56
1:AA:448:A:H2'	1:AA:449:C:C6	2.40	0.56
1:AA:1405:G:H4'	1:AA:1519:A:H5'	1.88	0.56
1:AA:1417:G:N2	1:AA:1484:C:N4	2.52	0.56
4:AD:6:GLY:O	4:AD:8:VAL:HG23	2.06	0.56
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.05	0.56
19:AS:63:THR:HG22	19:AS:64:GLU:H	1.71	0.56
21:B0:584:A:H4'	21:B0:2479:U:H5'	1.87	0.56
21:B0:689:A:H2'	21:B0:690:A:H5'	1.87	0.56
1:AA:39:G:N1	1:AA:404:U:C4	2.74	0.56
1:AA:179:A:N6	1:AA:196:A:OP2	2.38	0.56
1:AA:189:A:H62	20:AT:104:LEU:CA	2.19	0.56
1:AA:293:G:H5'	1:AA:610:G:N3	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:915:A:C2'	1:AA:916:G:H5'	2.35	0.56
1:AA:933:G:C6	1:AA:935:A:N7	2.74	0.56
1:AA:1086:U:H3	1:AA:1099:G:N2	1.91	0.56
1:AA:1351:U:H2'	1:AA:1352:C:C6	2.40	0.56
1:AA:1367:C:OP2	9:AI:112:LYS:NZ	2.37	0.56
1:AA:1394:A:N3	1:AA:1501:C:H1'	2.20	0.56
1:AA:1483:A:N7	1:AA:1484:C:C4	2.74	0.56
3:AC:91:LEU:HD11	3:AC:99:VAL:HG13	1.86	0.56
5:AE:80:ILE:HD12	5:AE:80:ILE:O	2.05	0.56
13:AM:31:LYS:O	13:AM:35:GLU:HB2	2.05	0.56
18:AR:46:GLU:H	18:AR:46:GLU:CD	2.13	0.56
21:B0:795:A:H4'	21:B0:796:A:N7	2.20	0.56
21:B0:813:A:O2'	21:B0:815:A:H5'	2.05	0.56
21:B0:1057:A:H3'	21:B0:1058:G:H5'	1.87	0.56
21:B0:1669:A:H2'	21:B0:1670:G:H4'	1.87	0.56
21:B0:1825:C:O2'	21:B0:1826:U:H5'	2.06	0.56
21:B0:2503:G:H2'	21:B0:2504:G:H5''	1.88	0.56
1:AA:108:G:N7	20:AT:15:ARG:HG3	2.20	0.56
1:AA:292:G:N3	1:AA:608:A:C6	2.74	0.56
1:AA:546:G:H4'	1:AA:548:G:O3'	2.06	0.56
1:AA:977:A:C8	1:AA:1223:C:N3	2.74	0.56
1:AA:1092:A:H4'	7:AG:4:ARG:HH21	1.69	0.56
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.38	0.56
1:AA:1267:C:O2	1:AA:1327:C:H4'	2.06	0.56
3:AC:84:ILE:O	3:AC:88:ARG:HB2	2.05	0.56
3:AC:108:ASN:C	3:AC:110:ASN:H	2.12	0.56
8:AH:103:VAL:HG21	8:AH:110:ALA:HB2	1.87	0.56
9:AI:97:LYS:O	9:AI:100:GLY:N	2.36	0.56
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.35	0.56
17:AQ:5:VAL:HG22	17:AQ:60:ILE:HG12	1.87	0.56
17:AQ:104:LYS:HE2	21:B0:727:U:C2	2.34	0.56
21:B0:1567:A:H2'	21:B0:1568:A:O4'	2.06	0.56
21:B0:3110:G:O2'	21:B0:3120:G:H5'	2.06	0.56
1:AA:113:G:N9	1:AA:353:A:O2'	2.37	0.56
1:AA:130:A:N7	17:AQ:63:ARG:CG	2.66	0.56
1:AA:322:C:O2'	20:AT:23:ARG:HD2	2.04	0.56
1:AA:411:A:C4	1:AA:413:G:H1'	2.41	0.56
1:AA:551:U:H2'	1:AA:552:U:C6	2.41	0.56
1:AA:1004:A:H5''	1:AA:1025:U:C5	2.39	0.56
1:AA:1202:G:O2'	1:AA:1203:C:H5'	2.06	0.56
1:AA:1368:G:OP2	9:AI:114:TYR:CA	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1483:A:O3'	1:AA:1484:C:P	2.62	0.56
2:AB:98:LEU:HG	2:AB:101:MET:HE3	1.87	0.56
8:AH:126:LYS:C	8:AH:128:GLY:H	2.14	0.56
15:AO:41:GLU:HA	15:AO:41:GLU:OE2	2.05	0.56
17:AQ:103:GLY:O	17:AQ:104:LYS:O	2.24	0.56
18:AR:53:ARG:HD3	18:AR:63:GLN:CB	2.36	0.56
20:AT:35:THR:O	20:AT:39:LYS:HB2	2.05	0.56
21:B0:1093:U:O4	21:B0:1094:C:N4	2.39	0.56
21:B0:1191:G:H2'	21:B0:1192:A:C8	2.41	0.56
21:B0:2402:U:H5'	21:B0:2404:A:N7	2.21	0.56
1:AA:89:G:C2'	1:AA:90:C:P	2.94	0.56
1:AA:335:C:C2	1:AA:1434:A:H1'	2.41	0.56
1:AA:837:G:H2'	1:AA:838:C:N1	2.19	0.56
1:AA:965:A:C2	13:AM:124:PRO:HB2	2.40	0.56
1:AA:1042:G:O2'	1:AA:1043:C:H5'	2.06	0.56
1:AA:1346:A:N9	7:AG:10:ARG:NH2	2.54	0.56
1:AA:1506:U:P	1:AA:1541:U:OP1	2.64	0.56
5:AE:79:GLU:OE2	8:AH:105:ARG:HD3	2.04	0.56
10:AJ:12:ASP:HB3	10:AJ:15:THR:HB	1.88	0.56
12:AL:50:SER:O	12:AL:51:ALA:HB2	2.05	0.56
13:AM:40:ASN:ND2	13:AM:42:ALA:H	2.04	0.56
17:AQ:104:LYS:HB3	21:B0:727:U:O4'	2.06	0.56
19:AS:40:ILE:HG21	19:AS:62:ILE:HD11	1.88	0.56
21:B0:533:C:H2'	21:B0:534:U:O4'	2.06	0.56
21:B0:1426:U:H2'	21:B0:1427:G:O4'	2.05	0.56
1:AA:812:C:HO2'	1:AA:813:U:P	2.27	0.55
1:AA:923:A:C4'	1:AA:1398:A:C2	2.88	0.55
1:AA:926:G:C4	1:AA:1505:G:N3	2.74	0.55
1:AA:977:A:H1'	1:AA:1223:C:H42	1.69	0.55
1:AA:1298:C:C6	7:AG:114:ARG:CZ	2.89	0.55
1:AA:1346:A:H4'	1:AA:1347:G:O5'	2.06	0.55
1:AA:1347:G:C5	9:AI:107:ARG:NH2	2.74	0.55
2:AB:223:ILE:HG21	2:AB:230:VAL:CG2	2.35	0.55
13:AM:49:THR:HB	13:AM:52:GLU:HG3	1.86	0.55
21:B0:68:C:H2'	21:B0:69:G:C8	2.40	0.55
21:B0:2299:A:N3	21:B0:2299:A:H2'	2.21	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.07	0.55
1:AA:402:G:H4'	1:AA:620:C:N4	2.20	0.55
1:AA:848:G:H2'	1:AA:849:C:O4'	2.04	0.55
1:AA:946:A:H2'	1:AA:947:G:C8	2.40	0.55
1:AA:978:A:C6	1:AA:1318:A:C6	2.93	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1006:C:H2'	1:AA:1007:C:H6	1.72	0.55
1:AA:1014:A:C6	19:AS:34:TRP:CD2	2.93	0.55
1:AA:1110:A:C6	1:AA:1111:A:C6	2.93	0.55
1:AA:1347:G:HO2'	1:AA:1348:U:P	2.28	0.55
1:AA:1504:G:P	1:AA:1507:A:H4'	2.45	0.55
2:AB:21:ARG:HG3	2:AB:23:ARG:HD2	1.88	0.55
3:AC:3:ASN:ND2	3:AC:4:LYS:HE2	2.21	0.55
6:AF:46:ARG:HB2	6:AF:60:PHE:HE1	1.71	0.55
12:AL:25:PRO:C	12:AL:27:LEU:N	2.52	0.55
13:AM:29:ARG:HB3	13:AM:64:TRP:CH2	2.42	0.55
16:AP:81:ARG:CG	16:AP:83:GLU:HG2	2.36	0.55
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.36	0.55
20:AT:86:ARG:O	20:AT:90:GLN:HG3	2.05	0.55
21:B0:952:A:O2'	21:B0:1204:G:H4'	2.06	0.55
21:B0:2549:G:H2'	21:B0:2550:C:O4'	2.06	0.55
1:AA:26:A:N6	1:AA:558:G:H1'	2.21	0.55
1:AA:397:A:H8	1:AA:547:A:O3'	1.87	0.55
1:AA:976:G:H22	1:AA:1362:C:H5''	1.71	0.55
1:AA:1406:U:O4'	1:AA:1518:A:C4'	2.47	0.55
1:AA:1406:U:H1'	1:AA:1518:A:O4'	2.06	0.55
21:B0:1856:U:P	21:B0:3865:A:C8	2.91	0.55
21:B0:3874:C:C5	21:B0:3875:A:C8	2.94	0.55
21:B0:1971:C:H2'	21:B0:1972:G:H8	1.70	0.55
21:B0:2755:A:O2'	21:B0:2756:A:H5'	2.06	0.55
21:B0:2759:U:H4'	21:B0:2760:G:OP2	2.05	0.55
1:AA:26:A:H2'	1:AA:27:G:H5'	1.88	0.55
1:AA:133:U:OP1	20:AT:74:LYS:HD3	2.06	0.55
1:AA:523:A:H2	12:AL:91:LYS:HB3	1.71	0.55
1:AA:843:C:H2'	1:AA:844:A:O4'	2.07	0.55
1:AA:1112:C:O2	3:AC:178:LEU:N	2.38	0.55
2:AB:17:PHE:C	2:AB:17:PHE:CD1	2.85	0.55
2:AB:17:PHE:C	2:AB:17:PHE:HD1	2.14	0.55
2:AB:17:PHE:HD1	2:AB:18:GLY:N	2.04	0.55
3:AC:46:GLU:O	3:AC:48:TYR:N	2.33	0.55
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.72	0.55
4:AD:176:LEU:HA	4:AD:183:GLY:HA2	1.87	0.55
7:AG:116:ALA:HA	7:AG:119:ARG:NH2	2.21	0.55
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.06	0.55
21:B0:26:G:N2	21:B0:524:A:H62	2.03	0.55
1:AA:212:G:O2'	1:AA:213:G:P	2.65	0.55
1:AA:489:C:P	4:AD:132:ARG:NH2	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:808:C:OP1	15:AO:48:LYS:CE	2.53	0.55
1:AA:995:C:N3	14:AN:4:LYS:HD3	2.22	0.55
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.41	0.55
1:AA:1394:A:N6	1:AA:1501:C:H4'	2.13	0.55
1:AA:1496:C:H1'	1:AA:1517:G:N1	2.22	0.55
1:AA:1500:A:H5''	1:AA:1508:G:H5''	1.87	0.55
4:AD:177:ASP:OD1	4:AD:179:GLU:HB2	2.07	0.55
8:AH:123:GLU:O	8:AH:127:LEU:HD23	2.05	0.55
13:AM:65:LYS:HE3	13:AM:69:GLU:OE2	2.07	0.55
20:AT:82:SER:O	20:AT:86:ARG:HB2	2.07	0.55
21:B0:597:U:H3	21:B0:683:A:H2'	1.71	0.55
21:B0:611:C:H2'	21:B0:612:G:O4'	2.07	0.55
21:B0:1316:G:H2'	21:B0:1317:G:C8	2.41	0.55
1:AA:477:G:H2'	1:AA:478:A:C8	2.40	0.55
1:AA:490:G:H2'	1:AA:491:G:H8	1.72	0.55
1:AA:571:U:C4'	1:AA:819:A:C5	2.89	0.55
1:AA:1251:A:H4'	9:AI:12:GLU:CD	2.31	0.55
1:AA:1257:U:H4'	1:AA:1258:G:O5'	2.06	0.55
1:AA:1376:U:OP1	7:AG:98:SER:OG	2.13	0.55
4:AD:24:GLU:HG2	4:AD:25:ARG:N	2.21	0.55
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HD3	1.88	0.55
10:AJ:31:GLY:HA2	10:AJ:78:ASN:ND2	2.12	0.55
17:AQ:68:ARG:N	17:AQ:70:ARG:NH1	2.55	0.55
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.06	0.55
21:B0:784:U:H2'	21:B0:785:U:C6	2.41	0.55
21:B0:2261:G:H5''	21:B0:2262:C:O5'	2.06	0.55
21:B0:2727:G:C2'	21:B0:2728:A:H5''	2.36	0.55
1:AA:6:G:C6	5:AE:94:ALA:CA	2.85	0.55
1:AA:193:C:H2'	1:AA:194:C:H6	1.72	0.55
1:AA:314:C:C2	1:AA:353:A:H2	2.24	0.55
1:AA:954:G:H2'	1:AA:955:U:C6	2.42	0.55
1:AA:1014:A:N3	19:AS:34:TRP:CB	2.69	0.55
1:AA:1092:A:H5'	7:AG:4:ARG:CZ	2.36	0.55
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.07	0.55
1:AA:1346:A:C2	7:AG:10:ARG:NH1	2.75	0.55
5:AE:15:ARG:O	5:AE:27:ARG:O	2.25	0.55
13:AM:93:ARG:HB3	21:B0:900(A):A:OP2	2.07	0.55
17:AQ:102:GLY:O	21:B0:726:G:N2	2.40	0.55
21:B0:223:C:H4'	21:B0:398:C:H1'	1.88	0.55
21:B0:582:G:H2'	21:B0:583:C:H3'	1.88	0.55
21:B0:805:G:H4'	21:B0:806:A:OP2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:892:A:H2'	21:B0:893:G:O4'	2.07	0.55
21:B0:951:G:C2'	21:B0:952:A:H5''	2.35	0.55
21:B0:1528:C:C3'	21:B0:1529:C:H5''	2.36	0.55
21:B0:2222:U:H2'	21:B0:2223:U:C6	2.41	0.55
1:AA:735:C:C1'	18:AR:75:ILE:HD11	2.37	0.55
1:AA:1539:C:P	7:AG:82:GLY:HA2	2.46	0.55
2:AB:33:TYR:HB2	2:AB:43:ASP:HB2	1.89	0.55
5:AE:104:ALA:O	5:AE:105:VAL:C	2.49	0.55
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.87	0.55
12:AL:43:VAL:HG12	12:AL:44:THR:H	1.71	0.55
15:AO:70:LEU:HD11	15:AO:77:ARG:HB2	1.89	0.55
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	1.89	0.55
21:B0:64:C:H2'	21:B0:65:C:C6	2.42	0.55
1:AA:8:A:H1'	5:AE:103:GLY:N	2.21	0.55
1:AA:46:G:O6	1:AA:394:G:O6	2.24	0.55
1:AA:237:C:P	17:AQ:40:LYS:HD2	2.40	0.55
1:AA:406:G:C8	1:AA:496:A:C6	2.95	0.55
1:AA:438:G:C4'	1:AA:439:A:OP1	2.53	0.55
1:AA:1112:C:N3	3:AC:178:LEU:CB	2.69	0.55
1:AA:1251:A:H5'	9:AI:12:GLU:OE1	2.07	0.55
1:AA:1314:C:H5	19:AS:6:LYS:CD	2.20	0.55
1:AA:1416:G:N7	1:AA:1417:G:C8	2.75	0.55
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.07	0.55
2:AB:47:THR:HA	2:AB:202:PRO:HG2	1.87	0.55
2:AB:67:THR:HG22	2:AB:68:ILE:N	2.21	0.55
5:AE:21:ALA:O	5:AE:23:GLY:N	2.40	0.55
6:AF:76:ALA:O	6:AF:80:ARG:HG3	2.06	0.55
21:B0:103:U:H2'	21:B0:104:C:C6	2.41	0.55
21:B0:121:G:O2'	21:B0:1389:C:H4'	2.05	0.55
21:B0:728:G:H2'	21:B0:729:A:O4'	2.06	0.55
21:B0:1975:G:H4'	21:B0:1976:U:H5	1.72	0.55
21:B0:2544:A:H2'	21:B0:2545:A:H4'	1.88	0.55
22:B9:45:C:H3'	22:B9:46:G:H5'	1.89	0.55
1:AA:54:C:H2'	1:AA:352:C:H41	1.71	0.55
1:AA:429:U:H2'	4:AD:25:ARG:NH1	2.22	0.55
1:AA:606:G:O3'	1:AA:607:A:H5'	2.06	0.55
1:AA:761:G:O2'	17:AQ:104:LYS:HA	2.06	0.55
1:AA:939:G:H2'	1:AA:940:C:H6	1.71	0.55
1:AA:1026:G:O3'	1:AA:1027:C:P	2.65	0.55
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.41	0.55
1:AA:1255:G:O2'	1:AA:1259:C:C1'	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1383:C:N3	1:AA:1384:C:C5	2.75	0.55
16:AP:26:ARG:HD2	16:AP:31:LYS:O	2.06	0.55
17:AQ:79:SER:O	17:AQ:80:GLY:O	2.25	0.55
21:B0:942:U:C2'	21:B0:943:U:H5'	2.37	0.55
21:B0:1994:U:H2'	21:B0:1995:G:O4'	2.07	0.55
21:B0:3126:A:H4'	21:B0:3127:G:H5'	1.89	0.55
21:B0:2503:G:C2'	21:B0:2504:G:H5''	2.37	0.55
1:AA:59:A:O5'	1:AA:60:A:H5''	2.06	0.54
1:AA:113:G:N3	1:AA:353:A:C1'	2.70	0.54
1:AA:184:G:H1'	1:AA:224:C:H4'	1.86	0.54
1:AA:537:G:H5''	12:AL:113:ARG:NH2	2.22	0.54
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.07	0.54
1:AA:1483:A:C8	1:AA:1484:C:C5	2.95	0.54
3:AC:174:PRO:HB2	3:AC:177:THR:HG22	1.89	0.54
9:AI:7:THR:HG22	9:AI:8:GLY:N	2.22	0.54
15:AO:87:ILE:O	15:AO:88:ARG:CB	2.54	0.54
17:AQ:96:GLN:OE1	21:B0:726:G:C8	2.60	0.54
21:B0:1514:C:H2'	21:B0:1515:U:O4'	2.07	0.54
21:B0:3098:U:C4	21:B0:3099:U:C4	2.96	0.54
21:B0:3109:U:H5''	21:B0:3150:C:H5'	1.61	0.54
1:AA:235:C:C5'	17:AQ:70:ARG:HD3	2.37	0.54
1:AA:333:G:C1'	20:AT:16:HIS:NE2	2.70	0.54
1:AA:425:G:H4'	4:AD:45:GLN:HE22	1.73	0.54
1:AA:429:U:H2'	4:AD:25:ARG:HH12	1.73	0.54
1:AA:583:A:C5'	17:AQ:90:ILE:CG2	2.84	0.54
1:AA:689:C:OP1	11:AK:55:LYS:HD3	2.05	0.54
1:AA:1014:A:N3	19:AS:34:TRP:HB2	2.22	0.54
1:AA:1394:A:C4	1:AA:1501:C:C4'	2.91	0.54
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.85	0.54
4:AD:57:ARG:HB3	4:AD:206:PHE:HB2	1.88	0.54
9:AI:47:LEU:C	9:AI:49:PRO:HD2	2.32	0.54
15:AO:27:VAL:O	15:AO:31:LEU:HD13	2.07	0.54
16:AP:21:VAL:O	16:AP:33:ILE:HB	2.07	0.54
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	1.88	0.54
21:B0:788:G:C5'	21:B0:790:A:H1'	2.37	0.54
21:B0:798:G:O2'	21:B0:1770:U:H4'	2.07	0.54
21:B0:1976:U:C2'	21:B0:1977:C:H5'	2.38	0.54
21:B0:3110:G:H4'	21:B0:3111:C:OP2	2.07	0.54
1:AA:69:G:O2'	1:AA:70:A:H5'	2.08	0.54
1:AA:319:G:H5'	1:AA:1468:A:C5'	2.37	0.54
1:AA:620:C:H2'	1:AA:621:A:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:761:G:H5'	17:AQ:102:GLY:CA	2.37	0.54
1:AA:1126:U:H1'	1:AA:1280:A:N6	2.22	0.54
3:AC:116:VAL:O	3:AC:120:VAL:HG23	2.07	0.54
4:AD:88:VAL:HA	5:AE:97:GLY:HA3	1.85	0.54
4:AD:199:ASN:HD21	4:AD:201:GLN:HB2	1.71	0.54
10:AJ:4:ILE:HA	10:AJ:100:THR:HA	1.88	0.54
13:AM:5:ALA:O	13:AM:6:GLY:C	2.51	0.54
15:AO:32:LEU:O	15:AO:36:ILE:HG13	2.06	0.54
18:AR:45:SER:C	18:AR:47:THR:N	2.64	0.54
21:B0:1187:A:H2'	21:B0:1188:A:C8	2.43	0.54
21:B0:1358:C:H2'	21:B0:1359:G:H5''	1.89	0.54
21:B0:3128:G:C3'	21:B0:3174:C:H4'	2.38	0.54
1:AA:403:C:C4	1:AA:404:U:C5	2.95	0.54
1:AA:406:G:C8	1:AA:496:A:N3	2.75	0.54
1:AA:406:G:N7	1:AA:496:A:N3	2.55	0.54
1:AA:532:A:H2'	1:AA:533:A:H5''	1.89	0.54
1:AA:598:U:H4'	8:AH:94:TYR:CG	2.43	0.54
1:AA:818:G:H3'	1:AA:819:A:H5''	1.87	0.54
1:AA:1181:G:O3'	1:AA:1184:G:H5'	2.07	0.54
1:AA:1457:A:C8	1:AA:1459:C:O2	2.60	0.54
2:AB:15:VAL:HG22	2:AB:209:ARG:HG3	1.88	0.54
4:AD:30:LYS:C	4:AD:32:ALA:N	2.58	0.54
7:AG:18:TYR:CE2	7:AG:59:LEU:HB2	2.42	0.54
8:AH:36:LEU:HD12	8:AH:59:LEU:HD13	1.88	0.54
10:AJ:51:ARG:HB2	10:AJ:59:SER:CB	2.23	0.54
10:AJ:65:LEU:CD1	14:AN:36:PHE:CZ	2.81	0.54
17:AQ:26:GLN:HE21	17:AQ:37:LYS:HE2	1.71	0.54
17:AQ:101:ARG:HD3	21:B0:731:A:N1	2.23	0.54
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.08	0.54
21:B0:873:U:H1'	21:B0:2246:A:OP1	2.07	0.54
21:B0:1356:G:H1'	21:B0:1613:G:C2	2.43	0.54
21:B0:1496:G:H1	21:B0:1527:G:H1	1.55	0.54
1:AA:35:G:H2'	1:AA:36:C:C6	2.43	0.54
1:AA:68:G:O2'	1:AA:152:A:C2	2.56	0.54
1:AA:281:G:O2'	1:AA:282:A:P	2.66	0.54
1:AA:407:G:O2'	4:AD:116:GLN:HG3	2.08	0.54
1:AA:489:C:P	4:AD:132:ARG:HH22	2.31	0.54
1:AA:570:G:H4'	1:AA:819:A:O2'	2.07	0.54
1:AA:1402:C:O2	1:AA:1500:A:N1	2.41	0.54
2:AB:187:LEU:HD23	2:AB:214:ILE:HG21	1.90	0.54
3:AC:14:ILE:HG22	3:AC:15:THR:N	2.12	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:116:ALA:HA	7:AG:119:ARG:CZ	2.37	0.54
8:AH:56:LYS:N	8:AH:56:LYS:HD2	2.23	0.54
10:AJ:63:PHE:CE1	14:AN:45:ARG:HA	2.41	0.54
21:B0:918:A:H2'	21:B0:919:U:C5'	2.35	0.54
21:B0:1319:C:H41	21:B0:1622:G:H2'	1.73	0.54
21:B0:2437:G:H2'	21:B0:2469:G:C2	2.42	0.54
21:B0:2516:U:H2'	21:B0:2517:C:C6	2.42	0.54
1:AA:113:G:C1'	1:AA:354:G:C5'	2.85	0.54
1:AA:132:C:C5'	1:AA:262:A:O2'	2.45	0.54
1:AA:390:C:H4'	16:AP:28:ARG:NH2	2.22	0.54
1:AA:958:A:C4	19:AS:55:LYS:HB2	2.43	0.54
1:AA:1066:C:O2'	1:AA:1067:A:H5'	2.07	0.54
1:AA:1371:G:P	9:AI:11:LYS:HG2	2.48	0.54
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.90	0.54
1:AA:1405:G:O2'	1:AA:1519:A:C5'	2.53	0.54
2:AB:17:PHE:CD1	2:AB:18:GLY:N	2.75	0.54
3:AC:37:GLN:NE2	14:AN:52:GLN:OE1	2.40	0.54
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.07	0.54
13:AM:60:VAL:O	13:AM:63:THR:HG22	2.07	0.54
21:B0:357:A:C2'	21:B0:358:C:H5'	2.38	0.54
21:B0:635:C:H3'	21:B0:636:G:H5''	1.90	0.54
21:B0:2677:U:H2'	21:B0:2678:C:C6	2.43	0.54
1:AA:292:G:H2'	1:AA:609:A:N1	2.22	0.54
1:AA:639:G:O2'	1:AA:640:A:H5'	2.08	0.54
1:AA:818:G:O2'	1:AA:819:A:H5''	2.08	0.54
1:AA:933:G:C2	1:AA:935:A:C8	2.95	0.54
1:AA:1003:G:C2	1:AA:2003:G:C6	2.96	0.54
1:AA:1081:G:C8	5:AE:27:ARG:NH1	2.75	0.54
1:AA:1128:C:H2'	1:AA:1129:C:H5''	1.90	0.54
1:AA:1268:A:H2'	1:AA:1269:A:C8	2.41	0.54
2:AB:124:SER:CB	2:AB:125:PRO:HD2	2.31	0.54
3:AC:91:LEU:HD21	3:AC:99:VAL:CG1	2.30	0.54
3:AC:130:VAL:O	3:AC:134:ILE:HG13	2.07	0.54
5:AE:79:GLU:CD	8:AH:105:ARG:NE	2.65	0.54
7:AG:113:GLU:HG2	7:AG:119:ARG:HG2	1.90	0.54
10:AJ:51:ARG:H	10:AJ:59:SER:HB2	1.72	0.54
11:AK:13:GLN:HA	11:AK:75:TYR:O	2.08	0.54
21:B0:317:U:C2'	21:B0:318:G:H5''	2.38	0.54
21:B0:857:U:H2'	21:B0:858:G:H5'	1.89	0.54
21:B0:1615:C:H2'	21:B0:1616:C:C6	2.42	0.54
21:B0:1713:G:H2'	21:B0:1714:A:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:2510:A:H61	21:B0:2641:A:N6	2.06	0.54
1:AA:101:A:O2'	1:AA:102:G:H5'	2.07	0.54
1:AA:391:G:P	16:AP:28:ARG:HH22	2.31	0.54
1:AA:403:C:C4	1:AA:404:U:H5	2.25	0.54
1:AA:619:U:N3	4:AD:135:LEU:CD2	2.71	0.54
1:AA:702:A:N6	21:B0:1838:G:C2	2.76	0.54
1:AA:1038:C:H2'	1:AA:1039:C:C6	2.43	0.54
1:AA:1068:G:N2	1:AA:1191:A:N3	2.55	0.54
1:AA:1225:A:C4'	19:AS:78:ARG:NH1	2.70	0.54
1:AA:1368:G:P	9:AI:114:TYR:N	2.80	0.54
4:AD:148:VAL:HG11	4:AD:158:ILE:HD13	1.88	0.54
5:AE:101:ILE:O	5:AE:120:THR:HB	2.08	0.54
16:AP:43:LYS:HB3	16:AP:48:TRP:CD1	2.43	0.54
21:B0:2227:C:C2'	21:B0:2228:U:H5'	2.35	0.54
21:B0:2446:C:H2'	21:B0:2447:G:C8	2.43	0.54
1:AA:33:A:H2'	1:AA:34:C:H6	1.72	0.54
1:AA:115:G:HO2'	1:AA:116:A:P	2.20	0.54
1:AA:394:G:O6	1:AA:395:C:N4	2.40	0.54
1:AA:401:C:C4'	1:AA:622:A:H1'	2.37	0.54
1:AA:419:C:H5''	1:AA:513:C:O4'	2.08	0.54
1:AA:750:G:H1'	15:AO:22:THR:OG1	2.08	0.54
1:AA:1053:G:H4'	1:AA:1054:C:H5'	1.88	0.54
1:AA:1257:U:O2'	1:AA:1258:G:OP2	2.21	0.54
2:AB:23:ARG:HD3	2:AB:23:ARG:N	2.22	0.54
2:AB:75:LYS:O	2:AB:75:LYS:HD3	2.08	0.54
5:AE:76:ILE:O	5:AE:93:PRO:HB3	2.07	0.54
6:AF:4:TYR:OH	6:AF:69:GLU:HB3	2.07	0.54
9:AI:23:ASN:C	9:AI:23:ASN:ND2	2.66	0.54
9:AI:85:LEU:O	9:AI:92:TYR:HD1	1.91	0.54
10:AJ:47:PHE:CD2	14:AN:37:PHE:CE1	2.94	0.54
12:AL:53:ARG:HG2	12:AL:69:TYR:HE1	1.73	0.54
16:AP:11:SER:OG	16:AP:14:ASN:HB3	2.08	0.54
20:AT:72:LEU:HD21	20:AT:80:ARG:CZ	2.38	0.54
21:B0:201:G:H2'	21:B0:202:A:C8	2.42	0.54
21:B0:319:G:H21	21:B0:340:G:H21	1.55	0.54
21:B0:1856:U:H3'	21:B0:3865:A:H2'	1.87	0.54
21:B0:1856:U:H3'	21:B0:3865:A:N9	1.78	0.54
21:B0:2379:G:H2'	21:B0:2380:U:O4'	2.07	0.54
1:AA:131:C:H4'	1:AA:263:A:C5'	2.37	0.54
1:AA:187:G:H21	20:AT:105:SER:HA	1.72	0.54
1:AA:244:U:N3	1:AA:893:C:O2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:743:U:H2'	1:AA:744:C:C6	2.43	0.54
1:AA:922:G:H1	1:AA:1396:A:N6	2.00	0.54
1:AA:1016:A:C1'	1:AA:1218:C:H4'	2.37	0.54
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.73	0.54
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.42	0.54
1:AA:1383:C:C4	1:AA:1384:C:C5	2.96	0.54
1:AA:1475:G:H5'	21:B0:1706:A:C5'	2.31	0.54
1:AA:1494:G:O2'	1:AA:1495:U:H5'	2.08	0.54
1:AA:1496:C:H1'	1:AA:1517:G:H1	1.72	0.54
6:AF:69:GLU:HA	6:AF:72:VAL:CG2	2.36	0.54
10:AJ:3:LYS:N	10:AJ:75:ILE:HA	2.22	0.54
10:AJ:4:ILE:HG12	10:AJ:100:THR:HB	1.90	0.54
12:AL:82:VAL:N	12:AL:106:ASP:OD1	2.34	0.54
13:AM:53:VAL:O	13:AM:57:ARG:HB2	2.08	0.54
18:AR:86:VAL:O	18:AR:87:ARG:CB	2.55	0.54
19:AS:51:VAL:HG12	19:AS:52:TYR:N	2.23	0.54
1:AA:43:C:H5''	16:AP:12:LYS:HB3	1.90	0.53
1:AA:86:G:H4'	1:AA:87:G:OP2	2.07	0.53
1:AA:323:U:C3'	20:AT:22:ARG:HB2	2.38	0.53
1:AA:582:U:O4'	17:AQ:105:ALA:HA	2.08	0.53
1:AA:702:A:C6	21:B0:1838:G:C2'	2.63	0.53
1:AA:961:U:OP1	1:AA:1223:C:C4'	2.56	0.53
1:AA:1458:G:C5	1:AA:1459:C:O2	2.61	0.53
3:AC:138:VAL:HG21	3:AC:168:ALA:HB1	1.89	0.53
3:AC:181:ASN:HD21	3:AC:204:LEU:HD12	1.72	0.53
13:AM:37:THR:O	13:AM:37:THR:HG22	2.07	0.53
21:B0:800:U:H3'	21:B0:804:C:H41	1.73	0.53
21:B0:968:C:H2'	21:B0:970:A:OP1	2.08	0.53
21:B0:1137:A:H5''	21:B0:1138:A:H5''	1.90	0.53
21:B0:1316:G:H2'	21:B0:1317:G:H8	1.72	0.53
21:B0:3877:A:OP1	21:B0:1861:G:OP2	2.21	0.53
21:B0:2241:U:H1'	21:B0:2307:A:H1'	1.90	0.53
21:B0:2246:A:H2'	21:B0:2246:A:N3	2.23	0.53
1:AA:94:G:C4	1:AA:96:C:C6	2.97	0.53
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.08	0.53
1:AA:1329:A:C4'	13:AM:29:ARG:HD2	2.38	0.53
3:AC:38:ARG:HB3	3:AC:94:LEU:HD21	1.88	0.53
3:AC:112:SER:CB	3:AC:115:LEU:HD12	2.36	0.53
3:AC:150:LYS:CE	3:AC:152:ILE:HD11	2.38	0.53
5:AE:31:LEU:HD22	5:AE:43:LEU:CD2	2.39	0.53
9:AI:81:ILE:O	9:AI:85:LEU:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:27:PHE:CE1	17:AQ:36:ILE:HD11	2.42	0.53
21:B0:45:C:H5''	21:B0:192:G:C8	2.43	0.53
21:B0:3196:G:O2'	21:B0:3197:U:P	2.66	0.53
21:B0:2316:G:H2'	21:B0:2317:G:H8	1.74	0.53
1:AA:80:C:H2'	1:AA:81:C:C6	2.43	0.53
1:AA:281:G:HO2'	1:AA:282:A:P	2.31	0.53
1:AA:299:G:H2'	1:AA:300:A:C8	2.44	0.53
1:AA:501:C:O4'	1:AA:548:G:N2	2.41	0.53
1:AA:619:U:N3	4:AD:135:LEU:CG	2.71	0.53
1:AA:702:A:N6	21:B0:1839:A:O4'	2.40	0.53
1:AA:717:C:H3'	1:AA:718:G:P	2.48	0.53
2:AB:33:TYR:HB3	2:AB:41:ILE:O	2.08	0.53
4:AD:32:ALA:C	4:AD:34:GLU:N	2.60	0.53
7:AG:138:LYS:HE2	7:AG:142:GLU:OE1	2.08	0.53
12:AL:46:LYS:CG	12:AL:47:LYS:N	2.71	0.53
12:AL:53:ARG:NH1	12:AL:92:ASP:OD2	2.42	0.53
13:AM:8:GLU:OE1	13:AM:22:ILE:HA	2.08	0.53
21:B0:239:A:H4'	21:B0:620:G:H5'	1.89	0.53
21:B0:658:G:H4'	21:B0:2331:A:H5'	1.90	0.53
21:B0:1217:U:H2'	21:B0:1218:C:C6	2.43	0.53
21:B0:1807:A:O2'	21:B0:1808:C:O5'	2.24	0.53
21:B0:2392:G:H2'	21:B0:2393:G:C8	2.44	0.53
21:B0:2483:U:H2'	21:B0:2484:G:H5'	1.91	0.53
21:B0:2623:A:H2'	21:B0:2624:G:O4'	2.09	0.53
1:AA:33:A:H2'	1:AA:34:C:C6	2.44	0.53
1:AA:300:A:H2'	1:AA:301:G:O4'	2.08	0.53
1:AA:322:C:C2'	20:AT:23:ARG:HD2	2.37	0.53
1:AA:527:G:O2'	1:AA:535:A:N1	2.32	0.53
1:AA:960:U:O2'	1:AA:1223:C:H5''	2.07	0.53
1:AA:960:U:H5'	1:AA:960:U:O2	2.08	0.53
1:AA:1068:G:OP2	1:AA:1068:G:H8	1.91	0.53
1:AA:1269:A:N1	1:AA:1313:U:C4'	2.72	0.53
1:AA:1503:A:C5'	1:AA:1531:A:H1'	2.38	0.53
5:AE:80:ILE:HD13	5:AE:138:ALA:HB1	1.90	0.53
7:AG:69:VAL:HG21	7:AG:104:LEU:HD21	1.90	0.53
10:AJ:27:ALA:C	10:AJ:29:ARG:H	2.15	0.53
15:AO:36:ILE:HA	15:AO:59:MET:HE3	1.91	0.53
21:B0:412:U:H2'	21:B0:413:G:O4'	2.08	0.53
21:B0:757:U:O2'	21:B0:758:G:H5'	2.09	0.53
21:B0:1141:U:H5'	21:B0:2549:G:N2	2.23	0.53
21:B0:3098:U:C2'	21:B0:3099:U:C6	2.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:3184:C:H2'	21:B0:3185:U:H5'	1.89	0.53
1:AA:21:G:H1'	1:AA:914:A:N6	2.22	0.53
1:AA:315:A:H5''	1:AA:317:G:OP2	2.08	0.53
1:AA:933:G:OP2	7:AG:3:ARG:CB	2.55	0.53
1:AA:992:U:O2'	1:AA:993:G:OP2	2.26	0.53
1:AA:1110:A:C2'	1:AA:1111:A:H5'	2.38	0.53
1:AA:1238:A:C2	1:AA:1241:G:O2'	2.62	0.53
1:AA:1240:U:C4	7:AG:32:ARG:NH2	2.77	0.53
6:AF:75:LEU:HD13	6:AF:75:LEU:C	2.34	0.53
8:AH:8:ASP:O	8:AH:12:ARG:HG3	2.08	0.53
12:AL:28:LYS:O	12:AL:29:GLY:C	2.50	0.53
21:B0:459:A:H1'	21:B0:466:A:N7	2.23	0.53
21:B0:1298:G:N2	21:B0:1341:G:H5''	2.23	0.53
21:B0:1861:G:P	53:B5:38:GLY:CA	2.96	0.53
21:B0:3102:G:H2'	21:B0:3103:A:H8	1.74	0.53
21:B0:2494:C:H2'	21:B0:2495:G:C8	2.44	0.53
1:AA:376:G:N1	1:AA:389:A:N1	2.57	0.53
1:AA:762:C:C5'	21:B0:729:A:H61	2.20	0.53
1:AA:953:G:H2'	1:AA:954:G:O4'	2.09	0.53
1:AA:1081:G:OP2	5:AE:27:ARG:HD2	2.07	0.53
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.09	0.53
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.90	0.53
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.08	0.53
8:AH:25:ASP:OD1	8:AH:60:ARG:HD3	2.09	0.53
8:AH:119:LEU:HD12	8:AH:124:ALA:HA	1.90	0.53
10:AJ:65:LEU:CD1	14:AN:36:PHE:CE1	2.89	0.53
11:AK:14:VAL:O	11:AK:15:ALA:CB	2.57	0.53
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.21	0.53
21:B0:394:U:H2'	21:B0:395:G:H8	1.74	0.53
21:B0:891:A:HO2'	21:B0:892:A:H5'	0.71	0.53
21:B0:1479:G:N2	21:B0:1543:G:H21	2.06	0.53
21:B0:3867:G:N2	53:B5:43:LYS:CA	2.72	0.53
21:B0:2445:C:H2'	21:B0:2446:C:O4'	2.08	0.53
1:AA:6:G:H22	5:AE:98:THR:CG2	2.18	0.53
1:AA:8:A:N6	4:AD:209:ARG:HB2	2.24	0.53
1:AA:315:A:C4'	1:AA:353:A:N6	2.70	0.53
1:AA:375:U:O2'	1:AA:376:G:H5'	2.08	0.53
1:AA:386:C:C2'	1:AA:387:U:H5'	2.39	0.53
1:AA:1110:A:C6	1:AA:1111:A:C5	2.97	0.53
1:AA:1111:A:N1	3:AC:177:THR:CB	2.72	0.53
1:AA:1296:C:C1'	1:AA:1302:U:C4	2.92	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1347:G:C2'	1:AA:1348:U:OP2	2.56	0.53
1:AA:1418:A:C2	21:B0:1931:G:O2'	2.60	0.53
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.09	0.53
2:AB:32:ILE:HD13	2:AB:40:HIS:CD2	2.44	0.53
2:AB:124:SER:O	2:AB:127:ILE:HG13	2.08	0.53
5:AE:18:ARG:HG2	5:AE:19:MET:N	2.24	0.53
7:AG:6:ARG:O	7:AG:7:ALA:C	2.52	0.53
12:AL:55:VAL:HG11	12:AL:67:THR:CG2	2.39	0.53
12:AL:55:VAL:HG11	12:AL:67:THR:HG23	1.91	0.53
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.08	0.53
17:AQ:104:LYS:CB	21:B0:727:U:O4'	2.56	0.53
18:AR:36:ASN:CG	18:AR:39:VAL:HG12	2.34	0.53
19:AS:42:PRO:O	19:AS:45:VAL:HG23	2.09	0.53
21:B0:616:U:C2'	21:B0:617:U:H5''	2.35	0.53
21:B0:917:U:H2'	21:B0:918:A:O4'	2.09	0.53
21:B0:1288:A:O2'	21:B0:1289:A:H5'	2.08	0.53
21:B0:1746:A:C2'	21:B0:1747:G:H5'	2.36	0.53
21:B0:2322:U:O2'	21:B0:2323:U:H5'	2.09	0.53
1:AA:791:G:H2'	1:AA:792:A:H5'	1.91	0.53
1:AA:1112:C:O2	3:AC:179:ARG:HB3	2.09	0.53
1:AA:1330:U:C5'	13:AM:23:TYR:O	2.57	0.53
2:AB:142:LEU:HD22	2:AB:146:GLN:HE22	1.73	0.53
3:AC:130:VAL:HG12	3:AC:134:ILE:HD11	1.91	0.53
7:AG:69:VAL:HG12	7:AG:100:ALA:HA	1.90	0.53
20:AT:38:LYS:O	20:AT:39:LYS:C	2.51	0.53
21:B0:216:U:H5''	21:B0:601:A:N6	2.23	0.53
21:B0:513:A:H4'	21:B0:515:A:H5'	1.90	0.53
21:B0:1791:C:H2'	21:B0:1792:C:H5''	1.91	0.53
21:B0:2470:U:O2'	21:B0:2471:U:H5'	2.08	0.53
1:AA:20:U:C2	1:AA:915:A:N6	2.68	0.53
1:AA:59:A:H2'	1:AA:331:G:H1	1.73	0.53
1:AA:101:A:H2'	1:AA:102:G:H8	1.74	0.53
1:AA:109:A:H5'	1:AA:110:C:C5	2.44	0.53
1:AA:252:U:H2'	1:AA:253:U:C6	2.44	0.53
1:AA:1108:G:H4'	1:AA:1191:A:C4'	2.39	0.53
1:AA:1110:A:O2'	1:AA:1111:A:H5'	2.08	0.53
1:AA:1278:U:OP1	1:AA:1279:A:H5'	2.09	0.53
2:AB:18:GLY:CA	2:AB:42:ILE:H	2.20	0.53
2:AB:73:THR:HG23	2:AB:95:GLN:O	2.09	0.53
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.23	0.53
7:AG:71:PRO:HD3	7:AG:103:TRP:HZ3	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:80:ILE:O	8:AH:80:ILE:HG22	2.08	0.53
9:AI:48:GLU:OE1	9:AI:51:ARG:HD2	2.09	0.53
13:AM:102:ARG:NH1	13:AM:102:ARG:HB2	2.24	0.53
13:AM:117:VAL:HG12	13:AM:118:ALA:N	2.24	0.53
14:AN:14:PRO:C	14:AN:16:PHE:N	2.56	0.53
21:B0:366:U:H2'	21:B0:367:G:C8	2.43	0.53
21:B0:605:G:H4'	21:B0:949:G:O2'	2.08	0.53
21:B0:1286:U:H5''	21:B0:1663:C:H42	1.73	0.53
21:B0:1730:G:H2'	21:B0:1731:C:C6	2.43	0.53
21:B0:1789:U:C2'	21:B0:1790:G:H5'	2.39	0.53
21:B0:2057:U:H1'	21:B0:2577:A:H1'	1.90	0.53
1:AA:128:G:H4'	17:AQ:3:LYS:CG	2.38	0.53
1:AA:184:G:O4'	1:AA:224:C:H4'	2.08	0.53
1:AA:976:G:H22	1:AA:2361:C:H2'	1.72	0.53
1:AA:979:C:H2'	1:AA:980:C:H5'	1.91	0.53
1:AA:1329:A:H5'	13:AM:29:ARG:CD	2.39	0.53
1:AA:1416:G:P	1:AA:1417:G:P	3.07	0.53
5:AE:20:GLN:C	5:AE:21:ALA:O	2.51	0.53
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.91	0.53
21:B0:192:G:C4'	21:B0:193:A:H4'	2.38	0.53
21:B0:665:A:OP2	21:B0:666:U:H5'	2.09	0.53
21:B0:1474:A:H3'	21:B0:1474:A:N3	2.23	0.53
21:B0:2010:G:H2'	21:B0:2011:U:O4'	2.09	0.53
21:B0:2025:A:H2'	21:B0:2026:C:H5''	1.91	0.53
22:B9:81:C:H2'	22:B9:82:U:O4'	2.09	0.53
1:AA:191:G:H21	20:AT:103:GLY:HA2	1.73	0.52
1:AA:623:C:O2'	1:AA:624:C:H5'	2.09	0.52
1:AA:1397:C:H4'	1:AA:1398:A:OP2	2.08	0.52
1:AA:1416:G:OP2	1:AA:1417:G:OP2	2.26	0.52
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.44	0.52
3:AC:32:LEU:HD21	3:AC:59:ARG:HD2	1.91	0.52
4:AD:6:GLY:O	4:AD:7:PRO:C	2.50	0.52
6:AF:3:ARG:NH2	6:AF:64:GLN:NE2	2.57	0.52
11:AK:17:GLY:O	11:AK:80:VAL:HA	2.09	0.52
11:AK:77:MET:HE3	11:AK:80:VAL:HG22	1.91	0.52
12:AL:42:THR:HG21	12:AL:52:LEU:HB3	1.92	0.52
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.91	0.52
21:B0:468:A:H2'	21:B0:469:G:H4'	1.90	0.52
21:B0:669:G:H2'	21:B0:670:U:C6	2.44	0.52
21:B0:1289:A:O2'	21:B0:1290:A:H5'	2.09	0.52
21:B0:3877:A:C3'	21:B0:1861:G:H3'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:373:A:O2'	1:AA:374:A:H5'	2.09	0.52
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.91	0.52
1:AA:826:C:O2'	8:AH:15:ASN:CB	2.57	0.52
1:AA:923:A:C1'	1:AA:1398:A:N3	2.70	0.52
1:AA:1111:A:H61	3:AC:176:HIS:C	2.17	0.52
1:AA:1250:A:H4'	9:AI:68:GLY:C	2.35	0.52
1:AA:1394:A:N3	1:AA:1501:C:C1'	2.73	0.52
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.44	0.52
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.69	0.52
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.10	0.52
2:AB:166:ASP:OD2	2:AB:169:LYS:HB2	2.09	0.52
3:AC:77:ILE:HG22	3:AC:81:GLY:HA2	1.90	0.52
3:AC:139:GLN:O	3:AC:143:GLU:N	2.37	0.52
9:AI:17:VAL:HG11	9:AI:81:ILE:HA	1.90	0.52
10:AJ:44:VAL:HG22	10:AJ:66:ARG:HB3	1.91	0.52
13:AM:88:ARG:HG3	13:AM:98:VAL:CG1	2.40	0.52
14:AN:12:ARG:O	14:AN:13:THR:C	2.52	0.52
17:AQ:45:HIS:HB2	17:AQ:65:ILE:CD1	2.37	0.52
21:B0:579:G:H2'	21:B0:2013:A:N6	2.24	0.52
21:B0:2860:C:H2'	21:B0:2861:A:O4'	2.09	0.52
1:AA:104:G:C5'	1:AA:172:A:N1	2.64	0.52
1:AA:142:G:H4'	1:AA:195:A:H61	1.35	0.52
1:AA:370:C:O2'	1:AA:371:G:H5'	2.09	0.52
1:AA:760:G:N1	17:AQ:105:ALA:HB2	2.20	0.52
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.09	0.52
2:AB:213:LEU:C	2:AB:213:LEU:CD2	2.82	0.52
3:AC:20:SER:HB3	3:AC:22:TRP:NE1	2.24	0.52
13:AM:11:ARG:CG	13:AM:12:ASN:N	2.72	0.52
19:AS:13:ASP:O	19:AS:17:GLU:HG2	2.10	0.52
21:B0:490:A:O2'	21:B0:491:A:H5'	2.09	0.52
21:B0:891:A:O2'	21:B0:892:A:P	2.68	0.52
21:B0:910:U:H2'	21:B0:911:A:H5'	1.83	0.52
21:B0:1278:A:H4'	21:B0:1279:G:O5'	2.08	0.52
21:B0:2329:C:C2'	21:B0:2330:G:H5'	2.39	0.52
1:AA:108:G:N1	20:AT:15:ARG:NE	2.57	0.52
1:AA:118:U:HO3'	1:AA:119:A:P	2.29	0.52
1:AA:131:C:O2'	1:AA:262:A:N3	2.42	0.52
1:AA:148:G:H2'	1:AA:149:A:H8	1.74	0.52
1:AA:175:C:H4'	20:AT:25:ARG:HD2	1.91	0.52
1:AA:227:G:C4	1:AA:228:A:C8	2.98	0.52
1:AA:357:G:O2'	1:AA:358:U:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:588:G:C5	1:AA:753:A:N7	2.78	0.52
1:AA:621:A:H2'	1:AA:622:A:C8	2.44	0.52
1:AA:714:G:C4'	1:AA:776:G:C5'	2.86	0.52
1:AA:977:A:C2'	1:AA:978:A:H5''	2.38	0.52
1:AA:983:A:H2	1:AA:984:C:C5	2.28	0.52
3:AC:23:TYR:CD2	3:AC:24:ALA:N	2.78	0.52
11:AK:27:ASN:HA	11:AK:56:GLY:HA2	1.92	0.52
13:AM:78:ILE:HA	13:AM:81:LEU:CD2	2.38	0.52
20:AT:50:GLU:O	20:AT:100:ILE:HD12	2.09	0.52
20:AT:76:ALA:O	20:AT:80:ARG:HG2	2.09	0.52
21:B0:839:U:H2'	21:B0:841:G:O4'	2.09	0.52
21:B0:841:G:H3'	21:B0:841:G:N3	2.24	0.52
21:B0:2240:C:H2'	21:B0:2241:U:H5'	1.90	0.52
21:B0:2418:A:H4'	21:B0:2420:C:OP2	2.10	0.52
1:AA:130:A:H1'	1:AA:264:U:O4'	2.09	0.52
1:AA:324:G:OP1	20:AT:22:ARG:HB3	2.09	0.52
1:AA:1003:G:N2	1:AA:1039:C:C2	2.77	0.52
1:AA:1006:C:H2'	1:AA:1007:C:C6	2.44	0.52
1:AA:1016:A:H1'	1:AA:1218:C:H4'	1.91	0.52
1:AA:1038:C:H2'	1:AA:1039:C:H6	1.75	0.52
1:AA:1121:U:H2'	1:AA:1122:U:H6	1.73	0.52
1:AA:1315:U:H5	19:AS:6:LYS:NZ	2.08	0.52
2:AB:215:LEU:O	2:AB:216:SER:C	2.52	0.52
5:AE:74:GLY:HA3	5:AE:116:THR:HG22	1.92	0.52
5:AE:115:VAL:HG12	5:AE:116:THR:N	2.24	0.52
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	1.92	0.52
9:AI:127:LYS:N	9:AI:127:LYS:HD2	2.25	0.52
13:AM:49:THR:CG2	13:AM:51:ALA:H	2.13	0.52
16:AP:19:ILE:HG22	16:AP:36:ILE:HG13	1.90	0.52
21:B0:509:U:H3	21:B0:513:A:H62	1.58	0.52
21:B0:860:U:H2'	21:B0:861:G:H5'	1.90	0.52
21:B0:942:U:O2'	21:B0:943:U:H5'	2.09	0.52
22:B9:50:U:H2'	22:B9:51:G:C8	2.44	0.52
1:AA:246:A:N6	1:AA:281:G:H1'	2.24	0.52
1:AA:300:A:H2	1:AA:566:G:O6	1.93	0.52
1:AA:588:G:C6	1:AA:753:A:C8	2.98	0.52
1:AA:860:A:H4'	8:AH:75:ARG:NH1	2.25	0.52
1:AA:935:A:C4'	1:AA:1384:C:C2	2.91	0.52
1:AA:1064:G:OP2	1:AA:1385:G:O2'	2.27	0.52
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.75	0.52
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	2.97	0.52
13:AM:73:GLU:O	13:AM:76:ALA:HB3	2.09	0.52
20:AT:93:GLU:HA	20:AT:93:GLU:OE2	2.09	0.52
21:B0:176:A:H1'	21:B0:2221:G:H21	1.75	0.52
21:B0:2533:U:H2'	21:B0:2534:U:C6	2.45	0.52
21:B0:2698:G:H2'	21:B0:2699:G:C8	2.45	0.52
1:AA:163:C:O2'	1:AA:164:U:H5'	2.10	0.52
1:AA:1086:U:O3'	1:AA:1389:C:C5'	2.57	0.52
1:AA:1129:C:O2'	1:AA:1130:A:OP2	2.24	0.52
1:AA:1409:C:C2'	1:AA:1410:G:C5'	2.87	0.52
1:AA:1424:C:O2'	1:AA:1425:U:H5'	2.09	0.52
1:AA:1483:A:C6	1:AA:1484:C:N3	2.77	0.52
2:AB:23:ARG:O	2:AB:24:TRP:O	2.27	0.52
3:AC:22:TRP:CZ2	14:AN:54:PRO:HG3	2.44	0.52
6:AF:10:LEU:HD11	6:AF:59:TYR:CD2	2.41	0.52
6:AF:43:LEU:CD2	6:AF:43:LEU:H	2.23	0.52
19:AS:53:ASN:HB2	19:AS:56:GLN:H	1.73	0.52
1:AA:133:U:C5'	20:AT:74:LYS:HZ2	2.03	0.52
1:AA:320:C:C4'	1:AA:1434:A:N1	2.73	0.52
1:AA:322:C:C3'	20:AT:23:ARG:HD2	2.39	0.52
1:AA:355:C:H5'	1:AA:389:A:P	2.50	0.52
1:AA:791:G:H2'	1:AA:792:A:C5'	2.40	0.52
1:AA:794:A:H2'	1:AA:795:C:C6	2.45	0.52
1:AA:1234:C:H1'	1:AA:1364:U:O2	2.10	0.52
1:AA:1255:G:O2'	1:AA:1259:C:C6	2.62	0.52
1:AA:1256:A:C5'	1:AA:1258:G:O4'	2.55	0.52
1:AA:1348:U:OP1	9:AI:110:GLU:HB3	2.10	0.52
2:AB:26:PRO:O	2:AB:29:ALA:HB2	2.10	0.52
3:AC:94:LEU:HD22	3:AC:95:THR:HG23	1.92	0.52
6:AF:53:ALA:C	6:AF:55:ASP:H	2.18	0.52
6:AF:67:MET:CE	6:AF:72:VAL:HA	2.40	0.52
14:AN:33:VAL:HA	14:AN:40:CYS:HA	1.91	0.52
18:AR:19:LYS:O	18:AR:20:ALA:HB2	2.10	0.52
21:B0:929:A:H3'	21:B0:930:A:C5'	2.30	0.52
21:B0:1018:C:H2'	21:B0:1019:U:C5	2.44	0.52
21:B0:3866:A:N7	21:B0:3875:A:H2	2.07	0.52
21:B0:2401:A:H2'	21:B0:2403:C:C5	2.45	0.52
22:B9:107:C:C2'	22:B9:108:G:H5'	2.39	0.52
1:AA:189:A:H61	20:AT:104:LEU:HD22	1.71	0.52
1:AA:475:C:H2'	1:AA:476:U:C6	2.44	0.52
1:AA:828:A:H2'	1:AA:829:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1027:C:O3'	1:AA:1028:C:P	2.68	0.52
1:AA:1152:A:H2'	1:AA:1153:C:C6	2.45	0.52
1:AA:1191:A:H2'	1:AA:1192:C:C6	2.45	0.52
1:AA:1238:A:H2	1:AA:1241:G:H1'	1.75	0.52
1:AA:1458:G:H8	1:AA:1458:G:O5'	1.91	0.52
1:AA:1483:A:C6	1:AA:1484:C:C5	2.97	0.52
3:AC:154:SER:O	3:AC:165:THR:HA	2.09	0.52
7:AG:42:ILE:CG2	7:AG:120:ILE:HD12	2.39	0.52
8:AH:24:THR:HG23	8:AH:61:VAL:HB	1.92	0.52
8:AH:49:GLU:HG2	8:AH:62:TYR:HE2	1.75	0.52
13:AM:77:ASN:O	13:AM:80:ARG:HB3	2.10	0.52
21:B0:476:G:H2'	21:B0:477:A:C8	2.45	0.52
21:B0:1325:U:H4'	21:B0:1326:U:C5	2.45	0.52
21:B0:1686:A:H2'	21:B0:1687:C:H5'	1.92	0.52
1:AA:6:G:C5	5:AE:119:LEU:HD12	2.44	0.52
1:AA:26:A:C3'	1:AA:27:G:C5'	2.86	0.52
1:AA:131:C:C4'	1:AA:263:A:H4'	2.34	0.52
1:AA:143:A:H4'	1:AA:144:G:C8	2.45	0.52
1:AA:203:A:O2'	1:AA:206:C:H4'	2.10	0.52
1:AA:244:U:O2	1:AA:894:G:H1'	2.10	0.52
1:AA:476:U:O4	1:AA:477:G:C8	2.55	0.52
1:AA:808:C:OP2	15:AO:48:LYS:HE2	2.10	0.52
1:AA:853:G:O2'	1:AA:854:G:H5'	2.10	0.52
1:AA:926:G:N2	1:AA:1505:G:C8	2.78	0.52
1:AA:2003:G:N1	1:AA:1004:A:H1'	2.25	0.52
1:AA:1256:A:C1'	1:AA:1258:G:C5	2.92	0.52
1:AA:1423:G:O2'	1:AA:1424:C:H5'	2.09	0.52
1:AA:1457:A:C4	1:AA:1459:C:C2	2.89	0.52
3:AC:70:VAL:O	3:AC:106:VAL:HG23	2.09	0.52
4:AD:208:SER:OG	5:AE:101:ILE:HG12	2.10	0.52
5:AE:40:ARG:HG2	5:AE:40:ARG:HH11	1.75	0.52
10:AJ:22:LYS:CE	10:AJ:90:LEU:HD12	2.33	0.52
10:AJ:38:ILE:HG13	10:AJ:71:LEU:HB3	1.90	0.52
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.10	0.52
16:AP:42:ARG:O	16:AP:43:LYS:C	2.51	0.52
21:B0:81:C:H4'	21:B0:307:C:H5'	1.92	0.52
21:B0:758:G:H2'	21:B0:759:C:H5'	1.92	0.52
21:B0:959:C:H5''	21:B0:972:C:O2'	2.10	0.52
21:B0:986:A:H2'	21:B0:987:G:H5'	1.92	0.52
21:B0:1029:C:C3'	21:B0:1030:U:H5''	2.40	0.52
21:B0:1140:A:H61	21:B0:2470:U:H6	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1856:U:C3'	21:B0:3865:A:H8	2.03	0.52
21:B0:2245:A:H4'	21:B0:2246:A:O5'	2.10	0.52
22:B9:73:C:H3'	22:B9:74:A:P	2.48	0.52
1:AA:80:C:H2'	1:AA:81:C:H6	1.75	0.51
1:AA:130:A:C5	1:AA:264:U:C1'	2.43	0.51
1:AA:131:C:C1'	1:AA:263:A:O4'	2.58	0.51
1:AA:148:G:H2'	1:AA:149:A:C8	2.45	0.51
1:AA:320:C:O4'	1:AA:1434:A:N1	2.40	0.51
1:AA:844:A:H2'	1:AA:845:A:C8	2.45	0.51
1:AA:1085:U:O3'	1:AA:1086:U:C6	2.64	0.51
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.45	0.51
1:AA:1253:G:O2'	1:AA:1356:G:H5'	2.09	0.51
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.45	0.51
3:AC:79:ARG:HG2	3:AC:82:GLU:HG2	1.92	0.51
4:AD:65:ARG:HB2	4:AD:75:PHE:CE1	2.45	0.51
4:AD:205:GLU:HB3	5:AE:107:ARG:NH2	2.25	0.51
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.39	0.51
5:AE:127:ASN:O	5:AE:128:PRO:C	2.53	0.51
8:AH:14:ARG:O	8:AH:18:ARG:HD3	2.10	0.51
14:AN:57:ARG:HG2	14:AN:58:LYS:H	1.75	0.51
21:B0:77:C:H2'	21:B0:78:C:C6	2.45	0.51
21:B0:441:A:H2'	21:B0:442:A:O4'	2.10	0.51
21:B0:451:A:H2'	21:B0:452:G:C8	2.45	0.51
21:B0:840:U:H4'	21:B0:841:G:C2	2.45	0.51
21:B0:1038:U:O2	21:B0:2466:G:H4'	2.10	0.51
21:B0:1431:U:H2'	21:B0:1432:G:O4'	2.09	0.51
1:AA:116:A:N1	1:AA:314:C:O4'	2.43	0.51
1:AA:766:A:H2	1:AA:1525:G:HO2'	1.52	0.51
1:AA:999:C:H2'	1:AA:1000:U:C6	2.46	0.51
1:AA:1313:U:O4	19:AS:4:SER:OG	2.27	0.51
3:AC:47:LEU:CD1	3:AC:47:LEU:N	2.74	0.51
3:AC:84:ILE:O	3:AC:84:ILE:HG12	2.10	0.51
3:AC:177:THR:HG23	3:AC:177:THR:O	2.10	0.51
5:AE:13:ILE:HG22	5:AE:30:ALA:CB	2.40	0.51
10:AJ:22:LYS:NZ	10:AJ:91:PRO:HD3	2.25	0.51
12:AL:115:LYS:O	12:AL:117:ARG:N	2.37	0.51
21:B0:230:C:H2'	21:B0:231:G:O4'	2.10	0.51
21:B0:513:A:C4'	21:B0:515:A:H5'	2.40	0.51
21:B0:652:C:H42	21:B0:657:A:H61	1.56	0.51
21:B0:864:C:H2'	21:B0:865:A:C8	2.46	0.51
21:B0:925:U:H4'	21:B0:926:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1029:C:OP1	21:B0:1047:G:H4'	2.10	0.51
21:B0:1031:C:H1'	21:B0:1151:U:O2	2.09	0.51
21:B0:1119:U:O4	21:B0:1120:C:C5	2.62	0.51
21:B0:2038:C:H5'	21:B0:2039:G:H5'	1.91	0.51
21:B0:3128:G:HO2'	21:B0:3174:C:H5'	1.68	0.51
1:AA:8:A:N7	4:AD:208:SER:CB	2.74	0.51
1:AA:119:A:C2	1:AA:240:C:C5	2.98	0.51
1:AA:293:G:O3'	1:AA:610:G:H1'	2.10	0.51
1:AA:402:G:C4'	1:AA:620:C:N4	2.72	0.51
1:AA:473:C:O2'	1:AA:474:U:H5'	2.09	0.51
1:AA:501:C:O2	1:AA:549:C:H4'	2.09	0.51
2:AB:33:TYR:HB3	2:AB:41:ILE:HG22	1.93	0.51
2:AB:53:ARG:NH1	2:AB:53:ARG:HG2	2.26	0.51
17:AQ:45:HIS:CB	17:AQ:65:ILE:HD13	2.39	0.51
21:B0:215:G:H4'	21:B0:617:U:O2'	2.09	0.51
21:B0:341:A:H1'	21:B0:1223:G:O6	2.10	0.51
21:B0:1220:G:H2'	21:B0:1221:C:C6	2.45	0.51
21:B0:1807:A:H5'	21:B0:1809:G:C1'	2.40	0.51
21:B0:2217:G:H4'	21:B0:2219:U:C5	2.46	0.51
21:B0:2841:U:O2	21:B0:2843:A:H1'	2.11	0.51
1:AA:68:G:N2	1:AA:152:A:H1'	2.16	0.51
1:AA:191:G:O3'	1:AA:192:U:OP1	2.26	0.51
1:AA:249:U:O2'	1:AA:250:A:P	2.68	0.51
1:AA:375:U:C4	1:AA:376:G:N7	2.79	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.64	0.51
1:AA:1426:C:H2'	1:AA:1427:U:C6	2.44	0.51
2:AB:186:ALA:HB3	2:AB:197:VAL:CG1	2.41	0.51
4:AD:87:GLY:O	4:AD:88:VAL:C	2.53	0.51
7:AG:102:ARG:O	7:AG:106:GLN:HG3	2.10	0.51
14:AN:22:THR:OG1	14:AN:33:VAL:HG21	2.10	0.51
21:B0:1712:G:H2'	21:B0:1713:G:H5'	1.91	0.51
21:B0:1818:G:H2'	21:B0:1819:U:C6	2.45	0.51
21:B0:3098:U:C6	21:B0:3099:U:C5	2.97	0.51
21:B0:2205:C:H2'	21:B0:2206:C:C6	2.46	0.51
1:AA:234:C:O2'	17:AQ:70:ARG:HG2	2.10	0.51
1:AA:319:G:C1'	1:AA:1434:A:C2	2.93	0.51
1:AA:375:U:C3'	1:AA:376:G:OP2	2.52	0.51
1:AA:397:A:N7	1:AA:547:A:H1'	2.25	0.51
1:AA:538:G:OP2	12:AL:115:LYS:CG	2.53	0.51
1:AA:580:U:H2'	1:AA:581:G:O4'	2.11	0.51
1:AA:958:A:C6	19:AS:55:LYS:HB2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:979:C:O2	14:AN:19:ARG:NE	2.44	0.51
1:AA:1191:A:OP1	3:AC:3:ASN:ND2	2.43	0.51
1:AA:1238:A:H2	1:AA:1241:G:HO2'	1.51	0.51
1:AA:1367:C:O3'	9:AI:114:TYR:HB3	2.11	0.51
1:AA:1406:U:C1'	1:AA:1518:A:C4'	2.88	0.51
3:AC:167:TRP:O	3:AC:168:ALA:HB3	2.10	0.51
4:AD:8:VAL:HG13	4:AD:21:LEU:HD13	1.92	0.51
10:AJ:23:ILE:HD12	10:AJ:23:ILE:N	2.26	0.51
21:B0:192:G:H4'	21:B0:193:A:H4'	1.91	0.51
21:B0:1597:A:H2'	21:B0:1598:C:C6	2.46	0.51
21:B0:1625:A:H2'	21:B0:1625:A:N3	2.25	0.51
21:B0:1955:G:C2'	21:B0:1956:G:H5'	2.38	0.51
21:B0:2320:G:H2'	21:B0:2321:C:O4'	2.09	0.51
1:AA:262:A:H4'	20:AT:75:ASN:H	1.75	0.51
1:AA:472:G:O2'	1:AA:473:C:H5'	2.10	0.51
1:AA:650:G:C2'	1:AA:651:C:H5'	2.40	0.51
1:AA:1021:G:C2'	1:AA:1022:G:H5'	2.40	0.51
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.46	0.51
1:AA:1167:A:H2'	1:AA:1168:A:C8	2.45	0.51
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.11	0.51
1:AA:1182:G:H4'	1:AA:1183:A:O5'	2.10	0.51
1:AA:1241:G:H2'	1:AA:1242:C:H6	1.75	0.51
1:AA:1422:G:H5''	31:BI:60:PRO:CA	2.41	0.51
2:AB:19:HIS:NE2	2:AB:206:ASP:HB3	2.26	0.51
17:AQ:15:MET:HE1	17:AQ:43:LEU:HD22	1.92	0.51
17:AQ:96:GLN:O	17:AQ:96:GLN:CD	2.54	0.51
21:B0:484:G:O2'	21:B0:485:G:H5'	2.11	0.51
21:B0:630:G:H2'	21:B0:631:G:H5'	1.92	0.51
21:B0:1087:C:H2'	21:B0:1088:A:O4'	2.11	0.51
21:B0:1210:C:H2'	21:B0:1211:G:O4'	2.09	0.51
21:B0:1251:G:H2'	21:B0:1252:C:C6	2.46	0.51
21:B0:1373:G:H1	21:B0:2192:U:H3	1.58	0.51
21:B0:2245:A:O2'	21:B0:2246:A:OP2	2.24	0.51
1:AA:8:A:N6	4:AD:209:ARG:H	2.08	0.51
1:AA:640:A:C2	8:AH:115:SER:HB3	2.45	0.51
1:AA:757:U:O2'	1:AA:879:C:H1'	2.11	0.51
1:AA:846:C:O2'	1:AA:847:C:H5'	2.10	0.51
1:AA:848:G:O3'	1:AA:849:C:O4'	2.29	0.51
1:AA:1231:G:H5''	9:AI:126:SER:CB	2.41	0.51
4:AD:158:ILE:HG22	4:AD:181:MET:HE2	1.92	0.51
9:AI:27:THR:HG23	9:AI:30:GLY:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:44:VAL:CG1	9:AI:51:ARG:HH12	2.23	0.51
10:AJ:20:ALA:O	10:AJ:24:VAL:HG23	2.11	0.51
10:AJ:27:ALA:HB1	10:AJ:81:THR:HG23	1.92	0.51
13:AM:82:MET:CE	21:B0:900(A):A:OP1	2.58	0.51
21:B0:66:U:H2'	21:B0:67:G:C8	2.46	0.51
21:B0:604:U:H2'	21:B0:605:G:C8	2.46	0.51
21:B0:2404:A:H5''	21:B0:2405:A:H3'	1.93	0.51
1:AA:37:U:O2	1:AA:547:A:H2	1.89	0.51
1:AA:39:G:C2	1:AA:404:U:C2	2.99	0.51
1:AA:246:A:N3	1:AA:247:G:H1'	2.25	0.51
1:AA:292:G:HO2'	1:AA:608:A:H62	1.52	0.51
1:AA:406:G:N7	1:AA:496:A:C2	2.76	0.51
1:AA:1021:G:C2	1:AA:1022:G:H1'	2.46	0.51
1:AA:1256:A:H5''	1:AA:1258:G:C1'	2.31	0.51
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.11	0.51
2:AB:206:ASP:O	2:AB:207:ALA:HB3	2.11	0.51
3:AC:97:LYS:O	3:AC:98:ASN:HB3	2.10	0.51
3:AC:139:GLN:HA	3:AC:139:GLN:NE2	2.25	0.51
9:AI:10:ARG:HG2	9:AI:75:ASP:CB	2.41	0.51
9:AI:31:GLN:HB3	9:AI:35:GLU:HB3	1.91	0.51
10:AJ:48:THR:O	14:AN:34:TYR:OH	2.28	0.51
10:AJ:69:ASN:O	10:AJ:70:ARG:HD3	2.10	0.51
11:AK:62:GLN:HG3	11:AK:97:ALA:HB2	1.92	0.51
20:AT:43:LEU:CD1	20:AT:55:ILE:HD12	2.40	0.51
21:B0:333:A:H1'	21:B0:351:A:C4	2.45	0.51
21:B0:795:A:H4'	21:B0:796:A:C8	2.46	0.51
21:B0:832:A:H2'	21:B0:833:A:O4'	2.11	0.51
21:B0:841:G:H4'	21:B0:844:G:N1	2.26	0.51
21:B0:1492:A:H2	21:B0:1531:C:H41	1.59	0.51
21:B0:1712:G:C2'	21:B0:1713:G:H5'	2.40	0.51
21:B0:2038:C:H5'	21:B0:2039:G:C5'	2.41	0.51
1:AA:292:G:HO2'	1:AA:608:A:N6	2.08	0.51
1:AA:394:G:O2'	1:AA:395:C:C5'	2.58	0.51
1:AA:652:U:O4	1:AA:752:G:O2'	2.28	0.51
1:AA:1059:C:O2'	1:AA:1060:C:H5'	2.11	0.51
2:AB:126:GLU:O	2:AB:129:GLU:HB2	2.11	0.51
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.11	0.51
3:AC:188:LEU:CD1	3:AC:195:VAL:HG13	2.41	0.51
6:AF:69:GLU:OE1	6:AF:69:GLU:N	2.44	0.51
9:AI:46:ALA:HA	9:AI:78:LYS:HB2	1.93	0.51
9:AI:93:ARG:HH11	9:AI:97:LYS:HZ1	1.55	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:125:TYR:N	9:AI:125:TYR:CD2	2.78	0.51
14:AN:28:GLY:O	14:AN:30:ALA:N	2.43	0.51
17:AQ:97:SER:O	17:AQ:98:LEU:C	2.54	0.51
21:B0:18:U:H2'	21:B0:19:C:C6	2.46	0.51
21:B0:80:A:H2'	21:B0:81:C:O4'	2.11	0.51
21:B0:579:G:H2'	21:B0:2013:A:H62	1.75	0.51
21:B0:804:C:O2	21:B0:807:A:H5'	2.11	0.51
21:B0:1181:C:H2'	21:B0:1182:U:C5'	2.38	0.51
21:B0:1532:A:H2'	21:B0:1533:G:C8	2.46	0.51
21:B0:1611:U:H2'	21:B0:1612:U:O4'	2.11	0.51
22:B9:111:C:H5''	22:B9:112:A:H5''	1.93	0.51
1:AA:31:G:N1	1:AA:48:C:C5'	2.74	0.51
1:AA:333:G:C4'	20:AT:16:HIS:CD2	2.94	0.51
1:AA:376:G:N2	1:AA:389:A:C4	2.79	0.51
1:AA:436:C:N1	1:AA:437:U:C5	2.76	0.51
1:AA:470:U:H2'	1:AA:471:G:H8	1.76	0.51
1:AA:605:U:O2'	1:AA:606:G:H5'	2.10	0.51
1:AA:884:U:H4'	1:AA:885:G:H5''	1.92	0.51
1:AA:958:A:C8	19:AS:55:LYS:HD3	2.46	0.51
1:AA:1090:U:O4'	1:AA:1169:A:H2	1.93	0.51
1:AA:1094:G:H5''	1:AA:1095:U:H5	1.75	0.51
1:AA:1112:C:N3	3:AC:178:LEU:HB3	2.26	0.51
4:AD:170:VAL:CG1	4:AD:174:LEU:HB2	2.39	0.51
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.10	0.51
21:B0:394:U:H2'	21:B0:395:G:C8	2.45	0.51
21:B0:460:U:H3	21:B0:592:G:H1'	1.75	0.51
21:B0:942:U:H2'	21:B0:943:U:O4'	2.11	0.51
21:B0:2011:U:H2'	21:B0:2012:A:C8	2.46	0.51
21:B0:2565:C:O2'	21:B0:2566:A:H5'	2.11	0.51
21:B0:2795:A:H2'	21:B0:2795:A:N3	2.24	0.51
1:AA:248:C:O4'	1:AA:282:A:C2	2.59	0.50
1:AA:367:U:H1'	1:AA:369:C:C6	2.46	0.50
1:AA:762:C:H5'	17:AQ:104:LYS:NZ	2.26	0.50
1:AA:875:C:O2'	8:AH:14:ARG:HD2	2.11	0.50
1:AA:1126:U:O4'	1:AA:1280:A:C5	2.64	0.50
1:AA:1250:A:C4'	9:AI:68:GLY:H	2.24	0.50
1:AA:1394:A:C4	1:AA:1501:C:C1'	2.93	0.50
1:AA:1483:A:C2	1:AA:1484:C:C6	2.99	0.50
1:AA:1484:C:C5'	21:B0:1943:A:H1'	2.39	0.50
2:AB:121:LEU:O	2:AB:127:ILE:HG12	2.11	0.50
3:AC:134:ILE:HG21	3:AC:167:TRP:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:24:GLU:O	4:AD:25:ARG:HB3	2.10	0.50
11:AK:32:ILE:CG2	11:AK:77:MET:HE2	2.41	0.50
12:AL:45:PRO:HD3	12:AL:51:ALA:O	2.11	0.50
15:AO:3:ILE:CG2	15:AO:7:GLU:HB3	2.41	0.50
20:AT:41:VAL:O	20:AT:45:GLN:HB2	2.10	0.50
21:B0:635:C:C3'	21:B0:636:G:H5''	2.41	0.50
21:B0:1040:A:H2'	21:B0:1041:G:H5'	1.93	0.50
21:B0:1495:G:H2'	21:B0:1496:G:C8	2.47	0.50
21:B0:1586:A:H2'	21:B0:1587:A:C8	2.46	0.50
21:B0:1779:C:H2'	21:B0:1780:A:O4'	2.10	0.50
21:B0:3874:C:H2'	21:B0:3875:A:H5'	1.91	0.50
21:B0:2058:U:H5'	21:B0:2576:G:H1'	1.93	0.50
21:B0:2213:G:H2'	21:B0:2214:G:C8	2.46	0.50
21:B0:2321:C:O2'	21:B0:2353:G:H5''	2.11	0.50
21:B0:2769:C:O2'	21:B0:2770:A:H5'	2.11	0.50
1:AA:7:G:N3	5:AE:121:LYS:HG2	2.27	0.50
1:AA:227:G:C6	1:AA:228:A:C6	2.99	0.50
1:AA:244:U:C4	1:AA:894:G:N3	2.79	0.50
1:AA:319:G:C2	1:AA:1434:A:H1'	2.33	0.50
1:AA:659:U:O2'	1:AA:660:G:H5'	2.11	0.50
1:AA:1347:G:C8	9:AI:107:ARG:HB3	2.47	0.50
2:AB:23:ARG:HH11	2:AB:23:ARG:C	2.16	0.50
2:AB:69:LEU:C	2:AB:69:LEU:HD23	2.36	0.50
2:AB:96:ARG:O	2:AB:98:LEU:HD23	2.11	0.50
3:AC:38:ARG:HG3	3:AC:38:ARG:NH1	2.26	0.50
3:AC:137:ALA:HA	3:AC:140:ARG:NH1	2.26	0.50
4:AD:126:ILE:CG2	4:AD:127:THR:N	2.75	0.50
8:AH:38:ILE:HD12	8:AH:38:ILE:N	2.27	0.50
9:AI:50:LEU:C	9:AI:52:ALA:N	2.69	0.50
10:AJ:3:LYS:HA	10:AJ:75:ILE:HA	1.94	0.50
18:AR:87:ARG:HG2	18:AR:87:ARG:HH11	1.76	0.50
21:B0:897:A:C6	21:B0:898:C:N4	2.79	0.50
21:B0:1661:C:O2'	21:B0:1662:G:H5'	2.11	0.50
21:B0:2272:A:H2'	21:B0:2273:C:C6	2.46	0.50
1:AA:31:G:N1	1:AA:48:C:H5''	2.26	0.50
1:AA:227:G:C5	1:AA:228:A:C5	2.99	0.50
1:AA:367:U:OP1	1:AA:394:G:N2	2.44	0.50
1:AA:403:C:C2	1:AA:404:U:C6	2.98	0.50
1:AA:760:G:H1	17:AQ:105:ALA:HA	1.76	0.50
1:AA:1262:C:H42	1:AA:1273:G:H1	1.59	0.50
3:AC:139:GLN:CA	3:AC:139:GLN:HE21	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:171:GLY:O	3:AC:173:VAL:HG23	2.11	0.50
4:AD:29:PRO:C	4:AD:30:LYS:HG3	2.35	0.50
4:AD:61:LYS:HZ1	4:AD:62:GLN:NE2	2.09	0.50
10:AJ:39:PRO:O	10:AJ:40:LEU:CB	2.57	0.50
12:AL:46:LYS:O	12:AL:47:LYS:C	2.54	0.50
21:B0:95:G:H2'	21:B0:96:C:C6	2.46	0.50
21:B0:429:C:H2'	21:B0:430:C:O4'	2.11	0.50
21:B0:689:A:H61	21:B0:815:A:H61	1.59	0.50
21:B0:798:G:H2'	21:B0:799:C:H5'	1.93	0.50
21:B0:2235:G:H2'	21:B0:2236:U:C6	2.46	0.50
1:AA:131:C:O4'	1:AA:263:A:C1'	2.59	0.50
1:AA:375:U:H2'	1:AA:376:G:O4'	2.12	0.50
1:AA:394:G:N1	1:AA:395:C:N3	2.60	0.50
1:AA:476:U:O3'	1:AA:477:G:P	2.67	0.50
1:AA:824:C:H2'	1:AA:825:G:H8	1.76	0.50
1:AA:958:A:C6	19:AS:55:LYS:CB	2.94	0.50
1:AA:994:A:O2'	14:AN:8:GLU:HB2	2.08	0.50
1:AA:1113:C:C2	3:AC:178:LEU:CD2	2.94	0.50
1:AA:1307:U:H5'	13:AM:109:THR:HG21	1.94	0.50
1:AA:1447:A:N7	1:AA:1456:A:H2	2.09	0.50
1:AA:1458:G:OP1	20:AT:28:ALA:HA	2.10	0.50
2:AB:221:LEU:HD13	2:AB:221:LEU:O	2.11	0.50
5:AE:15:ARG:O	5:AE:16:THR:O	2.28	0.50
5:AE:79:GLU:CD	8:AH:105:ARG:HE	2.19	0.50
6:AF:26:ILE:HG21	6:AF:63:TYR:CE2	2.40	0.50
7:AG:18:TYR:HD2	7:AG:59:LEU:HD22	1.76	0.50
11:AK:51:LYS:O	11:AK:55:LYS:HE3	2.11	0.50
21:B0:775:U:O2	21:B0:1445:A:H5''	2.11	0.50
22:B9:113:G:H2'	22:B9:114:C:C6	2.47	0.50
1:AA:130:A:P	17:AQ:63:ARG:NH2	2.81	0.50
1:AA:215:C:O2'	1:AA:216:C:H5'	2.12	0.50
1:AA:227:G:N2	1:AA:228:A:H1'	2.27	0.50
1:AA:244:U:C4	1:AA:894:G:C4	2.99	0.50
1:AA:397:A:N6	1:AA:547:A:C2	2.79	0.50
1:AA:976:G:OP2	1:AA:1358:U:H1'	2.12	0.50
1:AA:1048:G:H1'	1:AA:1215:G:H4'	1.92	0.50
1:AA:1092:A:H5''	7:AG:4:ARG:NH1	2.25	0.50
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.47	0.50
1:AA:1306:A:H2'	1:AA:1307:U:O4'	2.12	0.50
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.47	0.50
1:AA:1370:G:H3'	9:AI:109:VAL:HG21	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:88:ALA:O	2:AB:90:MET:N	2.45	0.50
2:AB:132:LYS:O	2:AB:136:VAL:HG23	2.11	0.50
3:AC:61:ALA:O	3:AC:63:ASN:N	2.44	0.50
4:AD:8:VAL:HG11	4:AD:21:LEU:HB3	1.94	0.50
4:AD:61:LYS:HZ2	4:AD:62:GLN:HE21	1.59	0.50
5:AE:121:LYS:HE3	5:AE:123:LEU:HD21	1.93	0.50
9:AI:120:ARG:O	9:AI:121:ARG:C	2.55	0.50
13:AM:40:ASN:ND2	13:AM:41:PRO:CD	2.63	0.50
21:B0:127:C:H2'	21:B0:128:C:C6	2.47	0.50
21:B0:868:U:H2'	21:B0:869:C:C6	2.46	0.50
21:B0:1272:G:H2'	21:B0:1273:G:C8	2.46	0.50
21:B0:1727:C:H4'	21:B0:2833:C:O2	2.12	0.50
21:B0:1865:C:H2'	21:B0:1866:G:O4'	2.12	0.50
22:B9:107:C:O3'	22:B9:108:G:OP1	2.29	0.50
1:AA:7:G:H5'	1:AA:298:A:C4'	2.41	0.50
1:AA:205:G:N2	1:AA:207:C:N4	2.60	0.50
1:AA:279:A:H5''	1:AA:280:C:H3'	1.94	0.50
1:AA:538:G:OP1	12:AL:115:LYS:CB	2.59	0.50
1:AA:1021:G:H2'	1:AA:1022:G:O4'	2.11	0.50
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.46	0.50
1:AA:1194:U:O2'	1:AA:1195:C:H5'	2.12	0.50
3:AC:92:ALA:C	3:AC:94:LEU:H	2.17	0.50
5:AE:89:ILE:HD13	5:AE:90:VAL:H	1.75	0.50
11:AK:65:ALA:HB3	11:AK:97:ALA:HB3	1.93	0.50
12:AL:28:LYS:CD	12:AL:33:ARG:HH12	2.24	0.50
13:AM:102:ARG:HB2	13:AM:102:ARG:HH11	1.75	0.50
21:B0:68:C:H2'	21:B0:69:G:H8	1.76	0.50
21:B0:168:A:H2'	21:B0:169:C:C6	2.47	0.50
21:B0:612:G:O3'	21:B0:613:A:H4'	2.11	0.50
21:B0:791:G:H2'	21:B0:792:U:C6	2.47	0.50
21:B0:897:A:O3'	21:B0:898:C:P	2.70	0.50
21:B0:1111:C:C4	21:B0:1112:U:C5	3.00	0.50
21:B0:1886:G:H2'	21:B0:1887:G:C8	2.46	0.50
1:AA:222:U:H2'	1:AA:223:U:C6	2.47	0.50
1:AA:227:G:C2'	1:AA:228:A:C5'	2.89	0.50
1:AA:848:G:C2'	1:AA:849:C:C1'	2.86	0.50
1:AA:971:G:N1	1:AA:1363:A:OP2	2.42	0.50
1:AA:1025:U:OP1	1:AA:1025:U:H4'	2.11	0.50
1:AA:1035:A:H2'	1:AA:1036:G:H8	1.77	0.50
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.77	0.50
1:AA:1097:C:O2'	1:AA:1168:A:H1'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1409:C:N1	1:AA:1410:G:C8	2.80	0.50
1:AA:1440:C:C2'	1:AA:1441:G:H5'	2.41	0.50
1:AA:1503:A:P	1:AA:1531:A:O4'	2.69	0.50
2:AB:102:LEU:CD2	2:AB:162:ILE:HD11	2.37	0.50
2:AB:213:LEU:C	2:AB:213:LEU:HD23	2.37	0.50
3:AC:58:GLU:O	3:AC:59:ARG:HG2	2.11	0.50
9:AI:17:VAL:CG2	9:AI:80:GLY:HA3	2.41	0.50
9:AI:112:LYS:C	9:AI:112:LYS:HD3	2.36	0.50
11:AK:48:ILE:HD13	11:AK:63:LEU:HB3	1.93	0.50
17:AQ:104:LYS:HG2	21:B0:726:G:N3	2.24	0.50
19:AS:45:VAL:HG12	19:AS:46:GLY:N	2.26	0.50
21:B0:177:U:H2'	21:B0:178:C:C6	2.46	0.50
21:B0:1326:U:O2	21:B0:1326:U:H2'	2.10	0.50
1:AA:7:G:C2	1:AA:298:A:C6	2.99	0.50
1:AA:131:C:O4'	1:AA:263:A:O4'	2.29	0.50
1:AA:185:A:H2'	1:AA:186:C:C5	2.47	0.50
1:AA:346:G:H2'	1:AA:347:G:H5'	1.94	0.50
1:AA:491:G:H2'	1:AA:492:G:H8	1.77	0.50
1:AA:546:G:H5'	1:AA:549:C:OP1	2.11	0.50
1:AA:1223:C:OP1	1:AA:1225:A:H8	1.95	0.50
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.12	0.50
1:AA:1539:C:OP1	7:AG:82:GLY:HA2	2.12	0.50
10:AJ:50:ILE:HB	14:AN:41:ARG:CD	2.42	0.50
12:AL:46:LYS:HG2	12:AL:47:LYS:HG3	1.93	0.50
21:B0:847:C:N4	21:B0:955:G:H21	2.03	0.50
21:B0:891:A:C2	21:B0:893:G:C5	3.00	0.50
21:B0:899:G:O2'	21:B0:900:U:H5'	2.12	0.50
21:B0:1052:C:H2'	21:B0:1053:G:C8	2.46	0.50
21:B0:1571:G:H2'	21:B0:1572:C:C6	2.46	0.50
21:B0:2383:C:H2'	21:B0:2384:G:O4'	2.11	0.50
1:AA:129:U:P	17:AQ:3:LYS:HZ1	2.32	0.50
1:AA:523:A:N6	12:AL:90:VAL:CG1	2.75	0.50
1:AA:625:G:H2'	1:AA:626:U:C6	2.47	0.50
1:AA:815:A:H1'	1:AA:1527:C:O2'	2.10	0.50
1:AA:1283:G:O2'	1:AA:1284:C:H5'	2.11	0.50
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.74	0.50
4:AD:78:LEU:HD22	4:AD:96:LEU:HB3	1.94	0.50
5:AE:21:ALA:C	5:AE:23:GLY:H	2.19	0.50
7:AG:85:TYR:HD1	7:AG:154:TYR:CE1	2.27	0.50
9:AI:9:ARG:HG2	9:AI:14:VAL:HG22	1.92	0.50
11:AK:79:SER:OG	11:AK:106:LYS:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:29:ARG:O	14:AN:33:VAL:HG13	2.11	0.50
17:AQ:78:GLU:HG3	17:AQ:78:GLU:O	2.12	0.50
21:B0:165:G:H2'	21:B0:166:G:O4'	2.12	0.50
21:B0:192:G:H4'	21:B0:193:A:O5'	2.12	0.50
21:B0:212:U:H2'	21:B0:213:C:C6	2.47	0.50
21:B0:638:A:O2'	21:B0:639:G:H5'	2.12	0.50
21:B0:1747:G:H1'	21:B0:1749:G:N3	2.26	0.50
21:B0:3877:A:C4'	21:B0:1861:G:O4'	2.55	0.50
21:B0:2301:A:H2'	21:B0:2302:G:O4'	2.11	0.50
21:B0:2357:A:H2'	21:B0:2358:C:O4'	2.12	0.50
21:B0:2426:G:O6	21:B0:2479:U:H2'	2.11	0.50
1:AA:218:C:H2'	1:AA:219:C:H6	1.76	0.49
1:AA:255:G:O6	1:AA:266:G:O6	2.29	0.49
1:AA:323:U:O3'	20:AT:22:ARG:CD	2.60	0.49
1:AA:393:A:C2	1:AA:394:G:C8	3.00	0.49
1:AA:478:A:O2'	1:AA:479:C:H5'	2.11	0.49
2:AB:168:THR:OG1	2:AB:192:SER:HB3	2.12	0.49
4:AD:81:GLU:O	4:AD:85:LYS:HG3	2.11	0.49
6:AF:19:LEU:HD23	6:AF:19:LEU:C	2.36	0.49
9:AI:19:LEU:C	9:AI:20:ARG:HG3	2.37	0.49
14:AN:21:TYR:HE2	14:AN:23:ARG:NE	2.09	0.49
15:AO:4:THR:HB	15:AO:6:GLU:HG2	1.93	0.49
16:AP:51:VAL:O	16:AP:51:VAL:CG1	2.60	0.49
21:B0:521:U:H2'	21:B0:522:G:H5'	1.93	0.49
21:B0:618:A:H2'	21:B0:619:A:O4'	2.11	0.49
21:B0:775:U:H4'	21:B0:776:G:C8	2.46	0.49
21:B0:1323:G:H2'	21:B0:1324:G:H4'	1.94	0.49
21:B0:1386:A:H2'	21:B0:1387:G:O4'	2.12	0.49
21:B0:1391:A:H2'	21:B0:1392:U:C6	2.47	0.49
21:B0:2310:G:H2'	21:B0:2311:U:O4'	2.12	0.49
21:B0:2324:G:C4'	21:B0:2326:C:H5''	2.42	0.49
21:B0:2658:A:H2'	21:B0:2659:C:C6	2.47	0.49
1:AA:116:A:C2	1:AA:314:C:O4'	2.65	0.49
1:AA:184:G:H2'	1:AA:185:A:H8	1.77	0.49
1:AA:220:G:O2'	1:AA:221:C:H5'	2.12	0.49
1:AA:325:A:H2'	1:AA:326:G:O4'	2.12	0.49
1:AA:436:C:C2	1:AA:437:U:C2	3.00	0.49
1:AA:443:C:H2'	1:AA:444:C:C6	2.43	0.49
1:AA:951:G:H1'	1:AA:970:C:O2'	2.12	0.49
1:AA:1111:A:N1	3:AC:177:THR:CA	2.73	0.49
1:AA:1322:C:H5''	13:AM:100:GLY:HA3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1329:A:H3'	13:AM:26:GLY:HA3	1.94	0.49
3:AC:47:LEU:N	3:AC:47:LEU:HD12	2.26	0.49
4:AD:31:CYS:C	4:AD:33:MET:H	2.21	0.49
5:AE:144:THR:C	5:AE:146:ALA:N	2.67	0.49
7:AG:108:ALA:O	7:AG:119:ARG:HB3	2.12	0.49
9:AI:36:TYR:HD2	9:AI:37:PHE:CE2	2.30	0.49
11:AK:23:ALA:CB	11:AK:91:ARG:HB2	2.42	0.49
11:AK:82:VAL:HG23	11:AK:105:VAL:HG13	1.93	0.49
21:B0:597:U:H2'	21:B0:598:U:C6	2.47	0.49
21:B0:693:A:H2'	21:B0:694:G:C8	2.46	0.49
21:B0:971:A:H2	21:B0:2475:C:H1'	1.77	0.49
21:B0:1286:U:H5''	21:B0:1663:C:N4	2.27	0.49
21:B0:1683:G:C2'	21:B0:1684:G:H5'	2.43	0.49
21:B0:1949:A:H1'	21:B0:2572:U:C4'	2.42	0.49
21:B0:2313:G:H2'	21:B0:2314:A:H5'	1.94	0.49
21:B0:2435:C:H2'	21:B0:2436:U:C6	2.47	0.49
21:B0:2459:C:H2'	21:B0:2460:G:H5'	1.94	0.49
21:B0:2858:A:H3'	21:B0:2859:U:C5'	2.42	0.49
1:AA:130:A:H1'	1:AA:263:A:HO2'	1.77	0.49
1:AA:143:A:H5'	1:AA:196:A:C6	2.45	0.49
1:AA:218:C:H2'	1:AA:219:C:C6	2.47	0.49
1:AA:619:U:H2'	4:AD:135:LEU:HD11	1.90	0.49
1:AA:737:A:H1'	6:AF:73:ASN:CG	2.35	0.49
1:AA:1015:A:H1'	1:AA:1219:U:H5'	1.89	0.49
1:AA:1172:C:O2'	1:AA:1173:G:H5'	2.11	0.49
1:AA:1296:C:H4'	1:AA:1302:U:O4	2.03	0.49
17:AQ:26:GLN:O	17:AQ:27:PHE:HB3	2.12	0.49
21:B0:189:A:H2'	21:B0:190:A:C8	2.47	0.49
21:B0:568:G:H5''	21:B0:1019:U:H5'	1.93	0.49
21:B0:652:C:H42	21:B0:657:A:N6	2.10	0.49
21:B0:1180:A:H2'	21:B0:1181:C:C6	2.47	0.49
21:B0:1223:G:O2'	21:B0:1224:A:OP2	2.26	0.49
21:B0:2536:G:H2'	21:B0:2537:C:C6	2.47	0.49
1:AA:39:G:C4	1:AA:498:U:O4	2.62	0.49
1:AA:134:A:H1'	1:AA:325:A:C4	2.47	0.49
1:AA:149:A:O2'	1:AA:150:C:H5'	2.11	0.49
1:AA:160:A:H61	1:AA:347:G:H21	1.60	0.49
1:AA:173:U:O4'	1:AA:197:A:C4	2.66	0.49
1:AA:722:A:H4'	1:AA:723:U:C5	2.48	0.49
1:AA:959:A:H4'	1:AA:985:C:C4'	2.42	0.49
1:AA:968:A:C8	1:AA:1062:U:H4'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1102:A:H2'	1:AA:1103:C:H6	1.77	0.49
3:AC:112:SER:O	3:AC:116:VAL:HG23	2.11	0.49
6:AF:9:VAL:HG22	6:AF:60:PHE:CE2	2.47	0.49
10:AJ:16:LEU:HD23	10:AJ:94:VAL:HG22	1.95	0.49
10:AJ:38:ILE:HG13	10:AJ:71:LEU:CB	2.42	0.49
13:AM:84:ILE:CD1	19:AS:66:MET:HB3	2.42	0.49
15:AO:36:ILE:HA	15:AO:59:MET:CE	2.42	0.49
17:AQ:104:LYS:HA	21:B0:726:G:N2	2.28	0.49
21:B0:601:A:H3'	21:B0:602:C:C5'	2.42	0.49
21:B0:960:U:H2'	21:B0:961:G:C8	2.48	0.49
21:B0:1268:U:H5''	21:B0:1269:G:H5''	1.95	0.49
21:B0:1715:A:H1'	21:B0:1717:A:C1'	2.42	0.49
21:B0:1923:U:H4'	21:B0:1948:C:N4	2.27	0.49
21:B0:1993:G:H2'	21:B0:1994:U:C6	2.47	0.49
21:B0:3110:G:OP2	21:B0:3149:G:C5'	2.56	0.49
21:B0:2312:A:H4'	21:B0:2313:G:N7	2.26	0.49
21:B0:2321:C:H2'	21:B0:2322:U:O4'	2.12	0.49
21:B0:2805:G:O2'	21:B0:2806:G:H5'	2.12	0.49
1:AA:18:C:O2	1:AA:917:G:N1	2.41	0.49
1:AA:149:A:H2'	1:AA:150:C:C6	2.47	0.49
1:AA:245:C:O2	1:AA:283:C:N3	2.46	0.49
1:AA:430:A:C2'	1:AA:431:A:H5'	2.42	0.49
1:AA:746:A:O2'	1:AA:747:C:H5'	2.11	0.49
1:AA:958:A:C5	19:AS:55:LYS:HB2	2.47	0.49
1:AA:1085:U:O3'	1:AA:1086:U:H6	1.95	0.49
1:AA:1136:U:H5''	1:AA:1137:C:OP2	2.12	0.49
1:AA:1183:A:O2'	1:AA:1184:G:OP2	2.28	0.49
1:AA:1238:A:N7	1:AA:1303:C:H1'	2.28	0.49
1:AA:1369:C:P	9:AI:111:ARG:HG2	2.52	0.49
1:AA:1413:A:O2'	1:AA:1414:U:H5'	2.12	0.49
1:AA:1505:G:H4'	1:AA:1506:U:O5'	2.13	0.49
2:AB:53:ARG:HG2	2:AB:53:ARG:HH11	1.76	0.49
2:AB:230:VAL:HG13	2:AB:231:GLU:OE2	2.13	0.49
4:AD:7:PRO:HB2	4:AD:10:ARG:HD2	1.93	0.49
4:AD:36:ARG:N	4:AD:37:PRO:CD	2.66	0.49
7:AG:69:VAL:HG12	7:AG:69:VAL:O	2.11	0.49
14:AN:15:LYS:HB3	14:AN:16:PHE:CD1	2.47	0.49
21:B0:628:A:H2'	21:B0:629:C:C6	2.48	0.49
21:B0:703:A:H2'	21:B0:704:G:H8	1.77	0.49
21:B0:1007:A:H2'	21:B0:1008:G:C8	2.47	0.49
21:B0:1199:U:H2'	21:B0:1200:G:C8	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1218:C:H2'	21:B0:1219:C:C6	2.47	0.49
21:B0:2249:U:H2'	21:B0:2250:G:O4'	2.13	0.49
21:B0:2397:A:H2'	21:B0:2398:U:O4'	2.12	0.49
21:B0:2492:G:H2'	21:B0:2493:U:O4'	2.12	0.49
21:B0:2717:G:H2'	21:B0:2718:A:C8	2.48	0.49
1:AA:31:G:H2'	1:AA:48:C:N4	2.28	0.49
1:AA:36:C:O2	1:AA:501:C:H4'	2.12	0.49
1:AA:136:C:H2'	1:AA:137:C:H6	1.77	0.49
1:AA:323:U:H5''	20:AT:23:ARG:HA	1.73	0.49
1:AA:375:U:N3	1:AA:376:G:N7	2.59	0.49
1:AA:559:A:OP1	5:AE:126:ARG:CZ	2.61	0.49
1:AA:564:C:C2	17:AQ:31:LEU:HD11	2.47	0.49
1:AA:577:G:O4'	1:AA:816:A:C5	2.66	0.49
1:AA:834:C:H2'	1:AA:835:U:C6	2.48	0.49
1:AA:933:G:N1	1:AA:935:A:N9	2.61	0.49
1:AA:1051:C:O2'	1:AA:1052:U:H5'	2.13	0.49
1:AA:1230:C:O2'	1:AA:1231:G:H5'	2.13	0.49
1:AA:1365:G:O2'	1:AA:1366:C:H5'	2.12	0.49
2:AB:44:LEU:HA	2:AB:47:THR:OG1	2.12	0.49
5:AE:84:PHE:CE2	5:AE:133:TYR:HD1	2.31	0.49
6:AF:100:ASN:O	18:AR:28:GLU:HG3	2.13	0.49
17:AQ:45:HIS:NE2	17:AQ:47:PRO:HG3	2.27	0.49
17:AQ:104:LYS:N	21:B0:726:G:N3	2.37	0.49
20:AT:101:GLY:O	20:AT:102:GLY:O	2.30	0.49
21:B0:117:A:H4'	21:B0:118:U:C6	2.47	0.49
21:B0:1164:C:H2'	21:B0:1165:G:O4'	2.12	0.49
21:B0:1532:A:H2'	21:B0:1533:G:H8	1.77	0.49
21:B0:1949:A:O2'	21:B0:2572:U:H5'	2.12	0.49
21:B0:1998:A:H2'	21:B0:1999:U:H5'	1.94	0.49
21:B0:2274:C:C2'	21:B0:2275:U:H5'	2.40	0.49
1:AA:185:A:O2'	1:AA:186:C:O5'	2.24	0.49
1:AA:489:C:H2'	1:AA:490:G:H8	1.77	0.49
1:AA:582:U:O4'	17:AQ:105:ALA:CA	2.61	0.49
1:AA:847:C:O2'	1:AA:848:G:H5'	2.12	0.49
1:AA:960:U:O2'	1:AA:1223:C:H5'	2.12	0.49
1:AA:1458:G:C1'	1:AA:1459:C:H2'	2.41	0.49
2:AB:12:GLU:HG2	2:AB:213:LEU:HD11	1.95	0.49
2:AB:30:ARG:HG3	2:AB:31:TYR:CD2	2.48	0.49
3:AC:116:VAL:O	3:AC:119:ARG:HB3	2.13	0.49
3:AC:179:ARG:HD2	3:AC:179:ARG:C	2.37	0.49
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:61:TYR:O	5:AE:64:ARG:O	2.29	0.49
5:AE:92:LYS:HB3	5:AE:119:LEU:HB2	1.94	0.49
6:AF:48:LEU:HD13	6:AF:52:ILE:HG13	1.95	0.49
11:AK:60:ALA:O	11:AK:61:ALA:C	2.56	0.49
11:AK:85:ARG:HH11	11:AK:85:ARG:HG3	1.77	0.49
15:AO:25:THR:HG21	15:AO:70:LEU:HD23	1.94	0.49
15:AO:39:LEU:HD12	15:AO:59:MET:HE2	1.93	0.49
17:AQ:10:VAL:O	17:AQ:53:LEU:HD12	2.12	0.49
21:B0:427:C:H2'	21:B0:428:A:C8	2.47	0.49
21:B0:483:A:H2'	21:B0:484:G:H5'	1.93	0.49
21:B0:599:A:H2'	21:B0:600:G:C8	2.48	0.49
21:B0:879:A:H2'	21:B0:880:C:H5'	1.94	0.49
21:B0:1829:C:H2'	21:B0:1830:C:H5'	1.95	0.49
21:B0:2260:C:H4'	21:B0:2368:G:H21	1.77	0.49
21:B0:2821:G:H2'	21:B0:2822:U:C6	2.48	0.49
21:B0:2852:G:H2'	21:B0:2853:U:O4'	2.12	0.49
1:AA:5:U:C4	5:AE:95:ALA:HB3	2.34	0.49
1:AA:51:A:C8	1:AA:114:U:O2'	2.64	0.49
1:AA:61:G:H2'	1:AA:62:U:O4'	2.13	0.49
1:AA:559:A:OP1	5:AE:126:ARG:NH2	2.45	0.49
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.45	0.49
1:AA:1112:C:C2	3:AC:178:LEU:HB3	2.46	0.49
1:AA:1121:U:H2'	1:AA:1122:U:C6	2.48	0.49
1:AA:1277:C:HO2'	1:AA:1279:A:N9	1.48	0.49
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.48	0.49
2:AB:144:ARG:O	2:AB:147:LYS:N	2.42	0.49
11:AK:124:LYS:HD2	11:AK:125:PHE:CE1	2.48	0.49
12:AL:34:ARG:O	12:AL:34:ARG:HG3	2.13	0.49
15:AO:30:ALA:HA	15:AO:85:LEU:HD21	1.94	0.49
19:AS:5:LEU:HD11	19:AS:70:LYS:NZ	2.28	0.49
21:B0:807:A:H2'	21:B0:808:C:C6	2.48	0.49
21:B0:1223:G:H1'	21:B0:1225:G:C4	2.48	0.49
21:B0:1982:C:H2'	21:B0:1983:G:H8	1.78	0.49
1:AA:235:C:H5''	17:AQ:70:ARG:HD3	1.95	0.49
1:AA:253:U:P	17:AQ:67:LYS:HZ3	2.36	0.49
1:AA:367:U:H3	1:AA:369:C:N4	2.11	0.49
1:AA:394:G:N1	1:AA:395:C:C4	2.80	0.49
1:AA:521:G:O2'	1:AA:522:C:H5'	2.12	0.49
1:AA:555:C:H2'	1:AA:556:C:C6	2.48	0.49
1:AA:556:C:O2'	1:AA:557:G:H5'	2.13	0.49
1:AA:942:G:O2'	1:AA:943:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1328:C:C5'	13:AM:28:ALA:CB	2.85	0.49
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.12	0.49
1:AA:1504:G:OP1	1:AA:1507:A:C4'	2.59	0.49
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.13	0.49
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.12	0.49
4:AD:38:TYR:CE1	4:AD:45:GLN:HG3	2.48	0.49
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.13	0.49
11:AK:58:PRO:HB2	11:AK:93:GLN:HG3	1.95	0.49
16:AP:20:VAL:CG1	16:AP:32:TYR:HB3	2.40	0.49
17:AQ:27:PHE:HB2	17:AQ:28:PRO:HD2	1.94	0.49
17:AQ:68:ARG:O	17:AQ:69:LYS:HB2	2.13	0.49
19:AS:81:ARG:HG2	19:AS:81:ARG:O	2.11	0.49
20:AT:89:ARG:HE	20:AT:104:LEU:HD22	1.78	0.49
21:B0:114:C:O2'	21:B0:124:A:H1'	2.12	0.49
21:B0:653:G:N2	21:B0:655:A:H1'	2.27	0.49
21:B0:1489:C:H3'	21:B0:1490:U:H5'	1.95	0.49
21:B0:1856:U:C5'	21:B0:3865:A:P	2.96	0.49
21:B0:1895:A:H2'	21:B0:1896:A:O4'	2.13	0.49
21:B0:1970:G:H2'	21:B0:1971:C:C6	2.48	0.49
21:B0:3110:G:P	21:B0:3149:G:C5'	3.00	0.49
1:AA:15:G:O4'	5:AE:19:MET:HE2	2.12	0.49
1:AA:59:A:C2	1:AA:331:G:C2	3.01	0.49
1:AA:403:C:H4'	4:AD:122:ARG:CZ	2.42	0.49
1:AA:560:U:O2'	1:AA:561:U:OP2	2.27	0.49
1:AA:659:U:H2'	1:AA:660:G:O4'	2.13	0.49
1:AA:926:G:C2	1:AA:1505:G:N9	2.80	0.49
1:AA:1342:C:C5'	9:AI:125:TYR:CE1	2.96	0.49
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.48	0.49
2:AB:144:ARG:HG3	2:AB:145:LEU:H	1.77	0.49
2:AB:188:ALA:O	2:AB:202:PRO:HA	2.13	0.49
3:AC:138:VAL:O	3:AC:142:MET:HB2	2.13	0.49
4:AD:3:ARG:NH2	4:AD:74:GLN:OE1	2.43	0.49
4:AD:105:VAL:HG13	4:AD:110:PHE:HB2	1.95	0.49
8:AH:113:SER:HB2	8:AH:134:ILE:CD1	2.29	0.49
12:AL:45:PRO:HB2	12:AL:49:ASN:O	2.13	0.49
12:AL:53:ARG:HB3	12:AL:93:LEU:HD11	1.95	0.49
17:AQ:56:VAL:HG12	17:AQ:77:VAL:HB	1.95	0.49
20:AT:29:LYS:O	20:AT:33:ILE:HG13	2.13	0.49
21:B0:216:U:H2'	21:B0:217:U:O4'	2.12	0.49
21:B0:930:A:H4'	21:B0:930:A:OP1	2.11	0.49
21:B0:1380:C:C2'	21:B0:1381:G:H5'	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1617:G:H2'	21:B0:1618:U:H5'	1.95	0.49
21:B0:2380:U:C2'	21:B0:2381:A:H5'	2.42	0.49
21:B0:2392:G:H2'	21:B0:2393:G:H8	1.77	0.49
1:AA:65:U:O4'	1:AA:200:G:H4'	2.12	0.48
1:AA:227:G:H2'	1:AA:228:A:C5'	2.43	0.48
1:AA:323:U:P	20:AT:23:ARG:CA	2.84	0.48
1:AA:586:C:O2'	1:AA:587:G:H5'	2.13	0.48
1:AA:624:C:O2'	1:AA:625:G:H5'	2.13	0.48
1:AA:893:C:H2'	1:AA:894:G:O4'	2.12	0.48
1:AA:977:A:N1	1:AA:1224:G:C4	2.81	0.48
1:AA:1030:U:H5'	1:AA:1031:C:C5	2.48	0.48
1:AA:1261:A:H5'	1:AA:1283:G:O3'	2.07	0.48
1:AA:1310:G:O2'	1:AA:1311:G:H5'	2.12	0.48
1:AA:1329:A:H4'	13:AM:24:GLY:O	2.13	0.48
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.43	0.48
1:AA:1396:A:H4'	1:AA:1397:C:H5''	1.93	0.48
2:AB:204:ASN:ND2	2:AB:206:ASP:H	2.11	0.48
4:AD:57:ARG:NH2	4:AD:205:GLU:OE2	2.46	0.48
4:AD:174:LEU:O	4:AD:175:SER:HB3	2.13	0.48
9:AI:117:HIS:HB2	9:AI:121:ARG:HD2	1.94	0.48
10:AJ:71:LEU:O	10:AJ:72:VAL:CB	2.60	0.48
16:AP:1:MET:HE3	16:AP:3:LYS:HG2	1.94	0.48
21:B0:338:G:H1	21:B0:346:C:H42	1.60	0.48
21:B0:3869:G:H2'	21:B0:3871:A:OP2	2.13	0.48
21:B0:2809:A:C2'	21:B0:2810:A:H5'	2.43	0.48
1:AA:141:A:H5'	1:AA:182:U:H1'	1.95	0.48
1:AA:212:G:O2'	1:AA:213:G:O5'	2.30	0.48
1:AA:265:G:O2'	1:AA:266:G:H5'	2.13	0.48
1:AA:291:C:O3'	1:AA:292:G:P	2.71	0.48
1:AA:315:A:C2	1:AA:354:G:OP2	2.62	0.48
1:AA:619:U:C6	4:AD:135:LEU:HD11	2.47	0.48
1:AA:784:C:H4'	21:B0:1829:C:OP1	2.13	0.48
1:AA:1346:A:H1'	1:AA:1348:U:C5	2.47	0.48
1:AA:1418:A:H2'	1:AA:1419:G:O4'	2.12	0.48
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.45	0.48
2:AB:134:GLU:C	2:AB:136:VAL:N	2.71	0.48
4:AD:7:PRO:CG	4:AD:10:ARG:HD2	2.42	0.48
6:AF:43:LEU:HD22	6:AF:43:LEU:N	2.27	0.48
8:AH:60:ARG:HG3	8:AH:60:ARG:NH1	2.28	0.48
13:AM:80:ARG:C	13:AM:82:MET:H	2.20	0.48
13:AM:88:ARG:CD	19:AS:3:ARG:NH2	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:52:ASP:OD2	16:AP:55:ARG:HB2	2.13	0.48
18:AR:34:TYR:HA	18:AR:69:THR:HG23	1.93	0.48
18:AR:39:VAL:HG13	18:AR:40:LEU:N	2.28	0.48
21:B0:58:C:H1'	21:B0:72:A:C8	2.48	0.48
21:B0:737:C:H2'	21:B0:738:G:O4'	2.14	0.48
21:B0:1949:A:H1'	21:B0:2572:U:H4'	1.95	0.48
21:B0:1964:A:H5''	21:B0:1965:U:OP2	2.13	0.48
21:B0:3184:C:C2'	21:B0:3185:U:C5'	2.91	0.48
22:B9:112:A:H2'	22:B9:113:G:C8	2.49	0.48
1:AA:161:A:H2	1:AA:348:G:HO2'	1.55	0.48
1:AA:269:C:H2'	1:AA:270:A:C8	2.48	0.48
1:AA:402:G:C2'	1:AA:620:C:H42	2.26	0.48
1:AA:702:A:O4'	21:B0:1840:A:OP1	2.29	0.48
1:AA:1279:A:O2'	1:AA:1282:C:N4	2.46	0.48
1:AA:1451:A:O2'	1:AA:1452:C:OP1	2.26	0.48
1:AA:1497:G:H2'	1:AA:1498:U:C5'	2.42	0.48
5:AE:51:VAL:O	5:AE:54:ALA:HB3	2.13	0.48
6:AF:38:GLU:O	6:AF:39:LYS:HB3	2.12	0.48
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB2	1.94	0.48
11:AK:74:ALA:C	11:AK:76:GLY:N	2.69	0.48
12:AL:83:VAL:HG21	12:AL:100:ILE:HD13	1.95	0.48
12:AL:119:LYS:O	12:AL:120:TYR:CB	2.61	0.48
13:AM:78:ILE:O	13:AM:82:MET:HB2	2.12	0.48
17:AQ:12:SER:HB3	17:AQ:20:THR:HB	1.95	0.48
21:B0:126:C:H2'	21:B0:127:C:C6	2.48	0.48
21:B0:742:G:H2'	21:B0:742:G:N3	2.29	0.48
21:B0:1190:C:H2'	21:B0:1191:G:C8	2.48	0.48
21:B0:1312:G:C5'	21:B0:1313:U:H5'	2.39	0.48
21:B0:1356:G:H5'	21:B0:1614:C:OP2	2.12	0.48
21:B0:2754:C:H2'	21:B0:2755:A:O4'	2.14	0.48
1:AA:35:G:O2'	12:AL:118:SER:O	2.21	0.48
1:AA:113:G:C2	1:AA:353:A:H1'	2.47	0.48
1:AA:209:U:H5'	1:AA:210:C:C5	2.48	0.48
1:AA:232:G:O2'	1:AA:263:A:N1	2.41	0.48
1:AA:390:C:C3'	16:AP:28:ARG:NH2	2.76	0.48
1:AA:528:C:H5'	1:AA:535:A:C6	2.49	0.48
1:AA:954:G:H2'	1:AA:955:U:H6	1.78	0.48
1:AA:959:A:H2'	1:AA:960:U:O4'	2.12	0.48
1:AA:1286:A:H2'	1:AA:1287:A:H4'	1.96	0.48
1:AA:1347:G:HO2'	1:AA:1373:G:H1	1.61	0.48
1:AA:1485:U:H5'	21:B0:1943:A:O3'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:111:ARG:HB3	2:AB:149:LEU:HD11	1.95	0.48
3:AC:3:ASN:HD22	3:AC:4:LYS:HG2	1.78	0.48
3:AC:180:ALA:O	3:AC:181:ASN:CB	2.61	0.48
4:AD:119:GLN:HG2	4:AD:123:HIS:CD2	2.48	0.48
5:AE:31:LEU:HD22	5:AE:43:LEU:HD21	1.94	0.48
6:AF:46:ARG:HB2	6:AF:60:PHE:CE1	2.48	0.48
7:AG:138:LYS:HD3	7:AG:138:LYS:C	2.39	0.48
10:AJ:6:ILE:HG23	10:AJ:98:ILE:HG12	1.94	0.48
10:AJ:45:ARG:CZ	14:AN:36:PHE:HD2	2.12	0.48
12:AL:53:ARG:HG2	12:AL:93:LEU:HD11	1.95	0.48
12:AL:83:VAL:HG22	12:AL:84:LEU:N	2.28	0.48
21:B0:422:C:H2'	21:B0:423:G:H8	1.78	0.48
21:B0:1099:A:H3'	21:B0:1100:G:H5'	1.94	0.48
21:B0:1343:C:H2'	21:B0:1344:C:C6	2.48	0.48
21:B0:1930:C:H2'	21:B0:1931:G:H8	1.78	0.48
21:B0:3102:G:H2'	21:B0:3103:A:C8	2.48	0.48
1:AA:216:C:O2'	1:AA:468:A:C4	2.66	0.48
1:AA:421:U:H5'	1:AA:422:C:C5	2.49	0.48
1:AA:456:A:C2	1:AA:477:G:H1'	2.48	0.48
1:AA:588:G:N9	1:AA:753:A:N1	2.61	0.48
1:AA:647:C:H2'	1:AA:648:A:H8	1.78	0.48
1:AA:1342:C:O2'	1:AA:1343:G:H5'	2.13	0.48
1:AA:1366:C:C2	1:AA:1367:C:C5	3.00	0.48
1:AA:1459:C:H5''	20:AT:28:ALA:HB2	1.84	0.48
3:AC:23:TYR:O	3:AC:24:ALA:HB2	2.14	0.48
4:AD:151:LYS:N	4:AD:151:LYS:CD	2.75	0.48
6:AF:43:LEU:H	6:AF:43:LEU:HD22	1.76	0.48
8:AH:65:TYR:HA	8:AH:79:VAL:HG23	1.95	0.48
9:AI:111:ARG:HG3	9:AI:111:ARG:NH1	2.28	0.48
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.77	0.48
15:AO:34:LEU:HD23	15:AO:34:LEU:O	2.12	0.48
19:AS:32:LYS:HG3	19:AS:32:LYS:O	2.13	0.48
21:B0:31:C:H2'	21:B0:32:C:O4'	2.14	0.48
21:B0:703:A:H2'	21:B0:704:G:C8	2.49	0.48
21:B0:929:A:H2'	21:B0:930:A:H4'	1.95	0.48
21:B0:1301:U:H2'	21:B0:1664:G:H21	1.79	0.48
21:B0:2437:G:N2	21:B0:2469:G:H2'	2.28	0.48
21:B0:2504:G:H2'	21:B0:2505:G:C8	2.49	0.48
21:B0:2642:G:H2'	21:B0:2643:G:O4'	2.13	0.48
21:B0:2808:U:H3'	21:B0:2809:A:C5'	2.40	0.48
1:AA:94:G:H2'	1:AA:96:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:130:A:C6	1:AA:264:U:C1'	2.84	0.48
1:AA:279:A:P	17:AQ:95:TYR:HE2	2.35	0.48
1:AA:322:C:C2'	20:AT:23:ARG:HB2	2.42	0.48
1:AA:571:U:C5'	1:AA:819:A:N3	2.75	0.48
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.13	0.48
1:AA:1108:G:OP1	3:AC:175:LEU:HB2	2.14	0.48
1:AA:1165:C:O2'	1:AA:1166:G:H5'	2.12	0.48
1:AA:1271:G:H5'	1:AA:1314:C:H5''	1.96	0.48
1:AA:1505:G:C3'	1:AA:1506:U:OP2	2.51	0.48
1:AA:1505:G:C8	1:AA:1505:G:H3'	2.48	0.48
2:AB:115:LEU:O	2:AB:115:LEU:HD12	2.13	0.48
3:AC:130:VAL:CG2	3:AC:157:ILE:HG23	2.41	0.48
3:AC:178:LEU:O	3:AC:179:ARG:CB	2.60	0.48
5:AE:13:ILE:HG13	5:AE:13:ILE:O	2.12	0.48
7:AG:38:LEU:O	7:AG:42:ILE:HG13	2.12	0.48
7:AG:64:GLN:O	7:AG:67:GLU:HB3	2.14	0.48
10:AJ:62:HIS:ND1	14:AN:61:TRP:CH2	2.82	0.48
11:AK:86:GLY:H	11:AK:112:THR:HG23	1.79	0.48
16:AP:20:VAL:CG1	16:AP:21:VAL:N	2.76	0.48
20:AT:67:ALA:O	20:AT:73:HIS:ND1	2.47	0.48
21:B0:340:G:H1'	21:B0:488:A:C4	2.49	0.48
21:B0:477:A:H2'	21:B0:478:G:H5'	1.95	0.48
21:B0:490:A:C5	21:B0:492:G:H1'	2.48	0.48
21:B0:634:G:H2'	21:B0:635:C:C6	2.49	0.48
21:B0:891:A:N1	21:B0:893:G:C5	2.81	0.48
21:B0:2017:U:O2'	21:B0:2018:G:H5'	2.13	0.48
1:AA:6:G:H22	5:AE:98:THR:HG23	1.74	0.48
1:AA:41:G:H2'	1:AA:42:G:C8	2.49	0.48
1:AA:407:G:H5''	4:AD:115:ARG:HB3	1.96	0.48
1:AA:792:A:H4'	1:AA:793:U:C5'	2.39	0.48
1:AA:983:A:C2	1:AA:984:C:C5	3.01	0.48
1:AA:1312:G:N7	19:AS:4:SER:HB3	2.29	0.48
1:AA:1501:C:OP1	1:AA:1508:G:H4'	2.13	0.48
1:AA:1533:C:O2'	1:AA:1534:A:H5'	2.14	0.48
4:AD:88:VAL:CA	5:AE:96:PRO:O	2.54	0.48
7:AG:149:ARG:CZ	11:AK:59:TYR:CZ	2.97	0.48
17:AQ:97:SER:HB2	17:AQ:103:GLY:N	2.26	0.48
17:AQ:104:LYS:NZ	21:B0:729:A:N6	2.61	0.48
21:B0:1023:U:H1'	21:B0:1154:A:N7	2.28	0.48
21:B0:1231:A:H2'	21:B0:1232:U:O4'	2.13	0.48
21:B0:1418:C:H2'	21:B0:1419:G:H8	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:2308:A:H2'	21:B0:2309:G:C8	2.48	0.48
1:AA:6:G:H2'	5:AE:119:LEU:CD2	2.44	0.48
1:AA:15:G:O4'	5:AE:24:ARG:NH1	2.44	0.48
1:AA:38:G:C4'	1:AA:547:A:N6	2.77	0.48
1:AA:173:U:H5''	1:AA:197:A:O4'	2.13	0.48
1:AA:406:G:N2	1:AA:437:U:C2	2.82	0.48
1:AA:538:G:O2'	1:AA:539:A:H5'	2.13	0.48
1:AA:588:G:C5	1:AA:753:A:C4	3.02	0.48
1:AA:825:G:H2'	1:AA:826:C:H6	1.78	0.48
1:AA:995:C:O2	14:AN:4:LYS:CG	2.62	0.48
1:AA:1110:A:C2'	1:AA:1111:A:C5'	2.92	0.48
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.78	0.48
3:AC:173:VAL:N	3:AC:174:PRO:CD	2.76	0.48
10:AJ:65:LEU:O	10:AJ:65:LEU:CD2	2.59	0.48
16:AP:52:ASP:CG	16:AP:52:ASP:O	2.57	0.48
18:AR:36:ASN:HD22	18:AR:38:GLU:HG2	1.79	0.48
21:B0:324:C:H2'	21:B0:325:U:O4'	2.14	0.48
21:B0:446:C:H2'	21:B0:447:U:C6	2.49	0.48
21:B0:951:G:C3'	21:B0:952:A:H5''	2.43	0.48
21:B0:1130:U:H2'	21:B0:1131:G:C8	2.48	0.48
21:B0:3176:A:H2'	21:B0:3177:C:C6	2.48	0.48
21:B0:2319:G:H2'	21:B0:2320:G:C8	2.49	0.48
1:AA:26:A:C3'	1:AA:27:G:H5'	2.43	0.48
1:AA:335:C:C2'	1:AA:1434:A:H5'	2.38	0.48
1:AA:376:G:P	16:AP:6:LEU:HB2	2.54	0.48
1:AA:714:G:H5'	1:AA:776:G:H5'	1.93	0.48
1:AA:761:G:C5'	17:AQ:102:GLY:C	2.87	0.48
1:AA:761:G:C1'	17:AQ:103:GLY:O	2.62	0.48
1:AA:926:G:H2'	1:AA:1505:G:N3	2.28	0.48
1:AA:1014:A:C5	19:AS:34:TRP:CD2	3.01	0.48
2:AB:18:GLY:CA	2:AB:41:ILE:HA	2.44	0.48
2:AB:59:GLU:O	2:AB:60:ASP:C	2.57	0.48
4:AD:111:ALA:HB1	4:AD:116:GLN:HB3	1.96	0.48
5:AE:71:LEU:HD21	5:AE:115:VAL:HG22	1.96	0.48
13:AM:97:PRO:HB2	13:AM:101:GLN:OE1	2.14	0.48
20:AT:39:LYS:HD2	20:AT:55:ILE:CD1	2.27	0.48
21:B0:974:U:H1'	21:B0:2229:G:N2	2.28	0.48
21:B0:1427:G:C2'	21:B0:1428:G:H5'	2.42	0.48
21:B0:2759:U:H5''	21:B0:2760:G:O5'	2.14	0.48
1:AA:8:A:O4'	5:AE:102:ALA:CA	2.62	0.48
1:AA:292:G:H2'	1:AA:609:A:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:376:G:N1	1:AA:389:A:C6	2.82	0.48
1:AA:586:C:C3'	8:AH:89:PRO:HB2	2.43	0.48
1:AA:768:A:H2'	1:AA:769:G:O4'	2.14	0.48
2:AB:25:ASN:O	2:AB:27:LYS:N	2.47	0.48
2:AB:108:ILE:O	2:AB:108:ILE:HG22	2.13	0.48
5:AE:36:ASP:O	5:AE:37:ARG:HB2	2.13	0.48
21:B0:387:A:H2'	21:B0:388:G:O4'	2.14	0.48
21:B0:1028:G:H2'	21:B0:1029:C:C6	2.49	0.48
21:B0:2321:C:C2'	21:B0:2322:U:H5'	2.44	0.48
1:AA:7:G:C2	5:AE:121:LYS:HG2	2.49	0.47
1:AA:39:G:C5	1:AA:498:U:C4	3.02	0.47
1:AA:155:C:H2'	1:AA:156:G:H8	1.79	0.47
1:AA:232:G:C2	1:AA:263:A:H2	2.18	0.47
1:AA:323:U:OP1	20:AT:26:ASN:HB2	2.13	0.47
1:AA:355:C:C5'	1:AA:389:A:P	3.02	0.47
1:AA:1277:C:O2'	1:AA:1279:A:C4	2.52	0.47
2:AB:17:PHE:HA	2:AB:44:LEU:HD21	1.95	0.47
2:AB:53:ARG:NH1	2:AB:199:TYR:CD2	2.82	0.47
3:AC:35:GLU:O	3:AC:38:ARG:N	2.47	0.47
4:AD:127:THR:CG2	4:AD:128:VAL:N	2.75	0.47
6:AF:67:MET:HE2	6:AF:72:VAL:HA	1.96	0.47
10:AJ:27:ALA:HB2	10:AJ:85:LEU:HD21	1.96	0.47
10:AJ:39:PRO:HA	10:AJ:70:ARG:HH11	1.78	0.47
12:AL:86:ARG:HG3	12:AL:86:ARG:NH1	2.28	0.47
20:AT:11:SER:C	20:AT:13:LEU:H	2.23	0.47
21:B0:457:C:H2'	21:B0:458:G:O4'	2.13	0.47
21:B0:1825:C:C2'	21:B0:1826:U:H5'	2.44	0.47
1:AA:113:G:O2'	1:AA:353:A:C4'	2.58	0.47
1:AA:119:A:N6	1:AA:240:C:C2	2.81	0.47
1:AA:186:C:H1'	20:AT:81:LYS:HE2	1.88	0.47
1:AA:204:A:H4'	1:AA:205:G:O5'	2.15	0.47
1:AA:526:C:OP2	12:AL:91:LYS:HE2	2.13	0.47
1:AA:538:G:OP1	12:AL:115:LYS:N	2.47	0.47
1:AA:657:G:O2'	1:AA:658:G:H5'	2.13	0.47
1:AA:1014:A:C2	1:AA:1219:U:C1'	2.97	0.47
1:AA:1149:C:O2'	1:AA:1280:A:N1	2.47	0.47
1:AA:1398:A:N6	5:AE:21:ALA:CA	2.52	0.47
2:AB:90:MET:HA	2:AB:91:PRO:HD3	1.70	0.47
5:AE:107:ARG:HG2	5:AE:108:ALA:N	2.29	0.47
7:AG:112:PRO:O	7:AG:113:GLU:C	2.57	0.47
10:AJ:22:LYS:HZ3	10:AJ:91:PRO:HD3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:26:ALA:C	12:AL:27:LEU:O	2.57	0.47
18:AR:47:THR:HA	18:AR:83:GLU:HB2	1.96	0.47
18:AR:53:ARG:HD3	18:AR:63:GLN:HB3	1.95	0.47
20:AT:42:GLN:O	20:AT:42:GLN:NE2	2.47	0.47
21:B0:88:G:H3'	21:B0:89:A:C5'	2.37	0.47
21:B0:611:C:O2'	21:B0:612:G:H5'	2.14	0.47
21:B0:952:A:H2'	21:B0:953:G:O4'	2.14	0.47
21:B0:1002:C:H2'	21:B0:1003:C:C6	2.49	0.47
21:B0:1071:U:N3	21:B0:1099:A:H2	2.02	0.47
21:B0:1182:U:C3'	21:B0:1183:C:H5''	2.45	0.47
21:B0:1260:A:N6	21:B0:1262:U:H1'	2.29	0.47
21:B0:1572:C:C3'	21:B0:1573:G:H5''	2.43	0.47
21:B0:2407:G:H4'	21:B0:2408:G:C8	2.49	0.47
21:B0:2794:G:H2'	21:B0:2796:A:N7	2.29	0.47
1:AA:41:G:H2'	1:AA:42:G:H8	1.79	0.47
1:AA:180:U:H2'	1:AA:181:G:H5'	1.96	0.47
1:AA:253:U:P	17:AQ:67:LYS:NZ	2.87	0.47
1:AA:394:G:C5	1:AA:395:C:N4	2.79	0.47
1:AA:780:A:C2	1:AA:801:U:C5	3.02	0.47
1:AA:834:C:H2'	1:AA:835:U:H6	1.79	0.47
1:AA:1113:C:C1'	3:AC:178:LEU:HD23	2.42	0.47
1:AA:1221:G:O2'	1:AA:1222:G:H5'	2.15	0.47
1:AA:1233:G:OP1	9:AI:124:GLN:N	2.43	0.47
1:AA:1409:C:N3	1:AA:1410:G:C5	2.83	0.47
3:AC:23:TYR:OH	10:AJ:67:THR:HG21	2.14	0.47
3:AC:59:ARG:O	10:AJ:92:THR:C	2.45	0.47
4:AD:111:ALA:HB2	4:AD:120:LEU:HD12	1.96	0.47
5:AE:92:LYS:O	5:AE:118:ILE:HG23	2.15	0.47
5:AE:148:VAL:O	5:AE:152:ARG:HG3	2.14	0.47
7:AG:21:VAL:HG23	7:AG:22:LEU:N	2.29	0.47
8:AH:6:ILE:HD12	8:AH:35:ILE:HD12	1.97	0.47
11:AK:33:THR:OG1	11:AK:37:GLY:C	2.58	0.47
11:AK:48:ILE:HD11	11:AK:64:ALA:HA	1.95	0.47
16:AP:6:LEU:HB3	16:AP:17:TYR:CD2	2.49	0.47
17:AQ:17:LYS:HA	17:AQ:46:ASP:O	2.14	0.47
18:AR:28:GLU:OE1	18:AR:28:GLU:N	2.46	0.47
21:B0:646:C:H2'	21:B0:647:G:O4'	2.14	0.47
21:B0:831:G:N2	21:B0:1203:A:H62	2.01	0.47
21:B0:1313:U:C4	21:B0:1651:U:H5'	2.49	0.47
21:B0:1930:C:H2'	21:B0:1931:G:C8	2.49	0.47
21:B0:1938:U:C2'	21:B0:1939:U:H5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:178:C:O2'	1:AA:179:A:H5'	2.13	0.47
1:AA:236:G:O3'	17:AQ:42:TYR:OH	2.31	0.47
1:AA:848:G:O3'	1:AA:849:C:P	2.72	0.47
1:AA:926:G:N7	1:AA:1505:G:N1	2.63	0.47
1:AA:1127:G:N2	1:AA:1147:C:N4	2.62	0.47
1:AA:1237:C:HO3'	1:AA:1238:A:P	2.35	0.47
1:AA:1261:A:C5'	1:AA:1283:G:C3'	2.85	0.47
1:AA:1262:C:H2'	1:AA:1263:C:H6	1.79	0.47
3:AC:46:GLU:C	3:AC:48:TYR:H	2.22	0.47
3:AC:79:ARG:C	3:AC:81:GLY:H	2.21	0.47
3:AC:173:VAL:O	3:AC:173:VAL:HG12	2.14	0.47
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.37	0.47
7:AG:54:THR:HG22	7:AG:56:GLN:H	1.80	0.47
10:AJ:47:PHE:CZ	14:AN:37:PHE:CE1	3.02	0.47
12:AL:27:LEU:HG	12:AL:28:LYS:N	2.25	0.47
12:AL:48:PRO:HG2	12:AL:49:ASN:N	2.25	0.47
14:AN:21:TYR:HE2	14:AN:23:ARG:HE	1.63	0.47
21:B0:109:A:C2'	21:B0:110:U:H5''	2.44	0.47
21:B0:393:U:H2'	21:B0:394:U:C6	2.49	0.47
21:B0:598:U:H2'	21:B0:599:A:C8	2.49	0.47
21:B0:636:G:H2'	21:B0:637:G:H5'	1.95	0.47
21:B0:1279:G:HO2'	21:B0:1280:U:H6	1.62	0.47
21:B0:1598:C:H2'	21:B0:1599:G:O4'	2.14	0.47
21:B0:2307:A:H2'	21:B0:2308:A:C8	2.49	0.47
21:B0:2437:G:C2	21:B0:2469:G:H2'	2.50	0.47
1:AA:113:G:C2'	1:AA:353:A:O2'	2.63	0.47
1:AA:160:A:N6	1:AA:347:G:H21	2.13	0.47
1:AA:264:U:O2'	17:AQ:63:ARG:HD3	2.13	0.47
1:AA:315:A:C2	1:AA:353:A:H2'	2.50	0.47
1:AA:435:C:O2'	1:AA:436:C:H5'	2.15	0.47
1:AA:959:A:H1'	1:AA:985:C:C1'	2.44	0.47
1:AA:1488:G:H2'	1:AA:1489:G:H8	1.78	0.47
1:AA:1501:C:P	1:AA:1508:G:C5'	3.02	0.47
1:AA:1503:A:OP1	1:AA:1531:A:C1'	2.62	0.47
3:AC:19:GLU:HB3	3:AC:40:ARG:NH2	2.25	0.47
4:AD:196:LEU:C	4:AD:198:VAL:H	2.22	0.47
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.44	0.47
10:AJ:49:VAL:CG1	14:AN:41:ARG:HB2	2.34	0.47
11:AK:80:VAL:HG21	11:AK:103:LEU:HD13	1.97	0.47
19:AS:39:THR:HG22	19:AS:40:ILE:N	2.29	0.47
21:B0:242:A:O2'	21:B0:243:G:P	2.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1365:U:H5'	21:B0:1587:A:H1'	1.96	0.47
21:B0:1489:C:H3'	21:B0:1490:U:C5'	2.45	0.47
21:B0:1494:G:H2'	21:B0:1495:G:C8	2.50	0.47
21:B0:2062:U:H4'	21:B0:2412:A:H2	1.78	0.47
21:B0:3171:A:H4'	21:B0:3172:U:OP1	2.13	0.47
21:B0:3181:C:H2'	21:B0:3182:U:C6	2.50	0.47
21:B0:2220:A:H2'	21:B0:2221:G:C8	2.48	0.47
21:B0:2455:A:O2'	21:B0:2456:U:H5'	2.15	0.47
21:B0:2799:C:H2'	21:B0:2800:C:O4'	2.14	0.47
1:AA:113:G:H1'	1:AA:354:G:H5''	1.97	0.47
1:AA:131:C:O2'	1:AA:263:A:O4'	2.32	0.47
1:AA:513:C:H2'	1:AA:514:C:C6	2.49	0.47
1:AA:518:C:H5''	1:AA:519:C:H6	1.78	0.47
1:AA:613:C:O2'	1:AA:614:A:H5'	2.14	0.47
1:AA:913:A:O2'	1:AA:914:A:P	2.72	0.47
1:AA:994:A:N9	14:AN:5:ALA:O	2.48	0.47
1:AA:994:A:C1'	14:AN:8:GLU:HB3	2.29	0.47
1:AA:1004:A:N6	1:AA:1035:A:H62	2.13	0.47
1:AA:1065:U:O4	1:AA:1189:C:N3	2.47	0.47
1:AA:1192:C:P	3:AC:4:LYS:NZ	2.88	0.47
1:AA:1405:G:C4'	1:AA:1519:A:H5'	2.44	0.47
2:AB:15:VAL:HG12	2:AB:210:SER:HB2	1.97	0.47
2:AB:187:LEU:CD2	2:AB:214:ILE:HG13	2.43	0.47
6:AF:2:ARG:NE	6:AF:69:GLU:HG2	2.29	0.47
7:AG:23:VAL:HG12	7:AG:27:ILE:CD1	2.41	0.47
7:AG:75:VAL:CG1	7:AG:86:GLN:HE21	2.27	0.47
8:AH:75:ARG:HA	8:AH:76:PRO:HD3	1.71	0.47
8:AH:114:THR:C	8:AH:116:LYS:H	2.22	0.47
9:AI:65:VAL:O	9:AI:65:VAL:HG13	2.13	0.47
18:AR:46:GLU:CD	18:AR:46:GLU:N	2.72	0.47
18:AR:47:THR:HG22	18:AR:48:GLY:H	1.79	0.47
21:B0:404:A:H2'	21:B0:405:C:C6	2.50	0.47
21:B0:1286:U:H2'	21:B0:2692:A:H2	1.80	0.47
21:B0:1497:C:O2'	21:B0:1498:G:H5'	2.14	0.47
21:B0:1591:U:H2'	21:B0:1592:U:O4'	2.14	0.47
21:B0:1654:A:H2'	21:B0:1655:C:C6	2.49	0.47
21:B0:1918:G:H4'	21:B0:1920:A:C2	2.50	0.47
21:B0:1922:U:H1'	21:B0:2570:C:O2'	2.15	0.47
1:AA:66:G:C5'	1:AA:199:G:O2'	2.63	0.47
1:AA:235:C:C5'	17:AQ:70:ARG:CB	2.92	0.47
1:AA:321:A:O2'	1:AA:322:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:406:G:N1	1:AA:496:A:N7	2.61	0.47
1:AA:577:G:C1'	1:AA:816:A:C2	2.95	0.47
1:AA:625:G:H2'	1:AA:626:U:H6	1.79	0.47
1:AA:743:U:H2'	1:AA:744:C:H6	1.79	0.47
1:AA:791:G:H5''	21:B0:1905:G:OP1	2.14	0.47
1:AA:911:U:P	12:AL:97:ARG:HH21	2.38	0.47
1:AA:952:U:O2'	1:AA:953:G:H5'	2.14	0.47
1:AA:968:A:N9	1:AA:1062:U:H4'	2.29	0.47
1:AA:1118:C:H1'	1:AA:1179:A:C8	2.50	0.47
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.50	0.47
1:AA:1231:G:O3'	9:AI:126:SER:OG	2.32	0.47
1:AA:1256:A:O3'	1:AA:1257:U:H5'	2.15	0.47
1:AA:1318:A:H5''	19:AS:10:PHE:CD1	2.48	0.47
1:AA:1405:G:N3	1:AA:1519:A:H1'	2.29	0.47
1:AA:1495:U:HO2'	21:B0:1902:A:H2	1.38	0.47
1:AA:1515:C:H2'	1:AA:1516:G:C8	2.50	0.47
2:AB:50:GLU:HB3	2:AB:200:ILE:O	2.15	0.47
2:AB:75:LYS:HE3	2:AB:78:GLN:OE1	2.14	0.47
3:AC:100:ALA:O	3:AC:101:LEU:HB2	2.14	0.47
3:AC:139:GLN:NE2	3:AC:139:GLN:CA	2.78	0.47
6:AF:4:TYR:CZ	6:AF:72:VAL:HG21	2.49	0.47
7:AG:65:ALA:O	7:AG:66:VAL:C	2.58	0.47
10:AJ:63:PHE:CE2	14:AN:48:ALA:CB	2.96	0.47
11:AK:50:TYR:HD1	11:AK:60:ALA:HB2	1.79	0.47
11:AK:59:TYR:O	11:AK:62:GLN:HB3	2.15	0.47
12:AL:42:THR:CG2	12:AL:52:LEU:HB3	2.44	0.47
13:AM:39:ILE:CD1	13:AM:56:LEU:HG	2.45	0.47
13:AM:80:ARG:NH2	19:AS:69:HIS:HE2	2.11	0.47
13:AM:94:ARG:HH22	19:AS:81:ARG:NH1	2.12	0.47
15:AO:17:ARG:HG3	15:AO:17:ARG:NH1	2.23	0.47
20:AT:59:ALA:O	20:AT:63:ILE:HG13	2.14	0.47
21:B0:9:U:H2'	21:B0:10:A:C8	2.49	0.47
21:B0:367:G:C3'	21:B0:368:A:H5''	2.44	0.47
21:B0:619:A:H2'	21:B0:620:G:C8	2.49	0.47
21:B0:930:A:H3'	21:B0:931:G:H8	1.79	0.47
21:B0:1074:G:O2'	21:B0:1075:C:H5'	2.15	0.47
21:B0:1088:A:C2	21:B0:1099:A:C8	3.03	0.47
21:B0:1101:U:O4	21:B0:1113:C:N4	2.48	0.47
21:B0:1189:G:O2'	21:B0:1190:C:H5'	2.14	0.47
21:B0:1829:C:C2'	21:B0:1830:C:H5'	2.44	0.47
21:B0:1886:G:H2'	21:B0:1887:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:2008:C:H2'	21:B0:2009:U:C6	2.49	0.47
21:B0:3171:A:O2'	21:B0:3172:U:H6	1.98	0.47
21:B0:3185:U:H5'	21:B0:3185:U:C6	2.40	0.47
21:B0:2376:G:H2'	21:B0:2377:U:C6	2.50	0.47
22:B9:22:U:H2'	22:B9:23:G:H8	1.79	0.47
22:B9:80:A:H2'	22:B9:81:C:O4'	2.15	0.47
1:AA:51:A:H4'	1:AA:52:G:C5'	2.45	0.47
1:AA:59:A:C2	1:AA:331:G:C6	3.03	0.47
1:AA:130:A:H5'	17:AQ:63:ARG:CZ	2.45	0.47
1:AA:209:U:H5'	1:AA:210:C:H5	1.80	0.47
1:AA:323:U:H1'	20:AT:19:SER:HB2	1.95	0.47
1:AA:1014:A:N3	19:AS:34:TRP:CG	2.82	0.47
1:AA:1178:G:OP2	9:AI:97:LYS:NZ	2.48	0.47
1:AA:1497:G:C2'	1:AA:1498:U:C5'	2.87	0.47
3:AC:79:ARG:HG2	3:AC:82:GLU:CG	2.45	0.47
4:AD:145:GLU:HG2	4:AD:184:LYS:HE2	1.96	0.47
5:AE:102:ALA:HB2	5:AE:120:THR:HB	1.97	0.47
6:AF:50:TYR:CE1	18:AR:77:GLY:HA2	2.49	0.47
10:AJ:8:LEU:HD12	10:AJ:20:ALA:HB2	1.97	0.47
15:AO:41:GLU:O	15:AO:42:HIS:C	2.57	0.47
21:B0:38:G:H2'	21:B0:39:C:C6	2.49	0.47
21:B0:537:C:C6	21:B0:2759:U:H2'	2.50	0.47
21:B0:859:U:H4'	21:B0:860:U:C5	2.49	0.47
21:B0:1838:G:C2'	21:B0:1839:A:H5'	2.37	0.47
21:B0:2238:G:H2'	21:B0:2239:C:C6	2.49	0.47
1:AA:88:G:O2'	1:AA:89:G:H5'	2.14	0.47
1:AA:227:G:C2	1:AA:228:A:C4	3.03	0.47
1:AA:528:C:H41	12:AL:49:ASN:ND2	2.13	0.47
1:AA:719:C:O2'	18:AR:49:LYS:HD3	2.15	0.47
1:AA:947:G:H2'	1:AA:948:C:O4'	2.15	0.47
1:AA:1057:G:C2'	1:AA:1058:G:H5'	2.45	0.47
1:AA:1300:G:O2'	1:AA:1301:U:P	2.73	0.47
3:AC:21:ARG:NH2	3:AC:56:ASP:OD2	2.48	0.47
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.96	0.47
8:AH:23:SER:OG	8:AH:60:ARG:HD2	2.15	0.47
9:AI:33:PHE:CE2	9:AI:47:LEU:HD11	2.50	0.47
10:AJ:22:LYS:HE2	10:AJ:90:LEU:HB2	1.97	0.47
12:AL:28:LYS:HD2	12:AL:33:ARG:NH1	2.29	0.47
14:AN:14:PRO:O	14:AN:16:PHE:N	2.44	0.47
15:AO:77:ARG:O	15:AO:80:ALA:HB3	2.15	0.47
20:AT:94:ALA:O	20:AT:95:ALA:CB	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:558:G:H5''	21:B0:559:C:C5	2.50	0.47
21:B0:810:U:H2'	21:B0:811:G:C8	2.49	0.47
21:B0:1789:U:H2'	21:B0:1790:G:H5'	1.95	0.47
21:B0:1974:U:H2'	21:B0:1975:G:H5''	1.95	0.47
1:AA:232:G:N2	1:AA:263:A:C2	2.82	0.47
1:AA:246:A:H4'	1:AA:247:G:H4'	1.96	0.47
1:AA:571:U:P	1:AA:819:A:HO2'	2.29	0.47
1:AA:606:G:O3'	1:AA:607:A:P	2.73	0.47
1:AA:633:G:H2'	1:AA:634:C:C6	2.50	0.47
1:AA:717:C:O3'	1:AA:718:G:O5'	2.33	0.47
1:AA:975:A:H4'	1:AA:976:G:H5'	1.97	0.47
1:AA:1111:A:N6	3:AC:176:HIS:HB3	2.30	0.47
1:AA:1261:A:H5'	1:AA:1284:C:H5'	1.96	0.47
2:AB:142:LEU:HB3	2:AB:146:GLN:HE22	1.80	0.47
4:AD:63:LYS:O	4:AD:64:LEU:C	2.58	0.47
6:AF:30:LEU:HB3	6:AF:35:ALA:CB	2.41	0.47
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.77	0.47
11:AK:100:ALA:O	11:AK:101:SER:C	2.57	0.47
13:AM:80:ARG:C	13:AM:82:MET:N	2.73	0.47
15:AO:66:LEU:O	15:AO:69:TYR:HB3	2.15	0.47
20:AT:50:GLU:HG3	20:AT:99:LEU:CD1	2.45	0.47
21:B0:85:C:O2'	21:B0:86:U:H5'	2.15	0.47
21:B0:342:G:O2'	21:B0:343:A:OP1	2.27	0.47
21:B0:462:G:H2'	21:B0:463:C:H5'	1.97	0.47
21:B0:564:U:H2'	21:B0:565:A:C8	2.50	0.47
21:B0:2199:C:H2'	21:B0:2200:G:C8	2.50	0.47
21:B0:2429:A:O2'	21:B0:2430:A:H5'	2.16	0.47
1:AA:119:A:C4	1:AA:240:C:C5	3.03	0.46
1:AA:235:C:C4'	17:AQ:70:ARG:HG2	2.43	0.46
1:AA:355:C:H4'	1:AA:388:G:O3'	2.15	0.46
1:AA:457:G:O2'	1:AA:458:G:H5'	2.16	0.46
1:AA:564:C:N3	17:AQ:31:LEU:HD11	2.30	0.46
1:AA:719:C:H1'	18:AR:49:LYS:HG2	1.97	0.46
1:AA:926:G:N3	1:AA:1505:G:C4	2.83	0.46
1:AA:927:G:H4'	1:AA:1503:A:N7	2.30	0.46
1:AA:1256:A:O4'	1:AA:1258:G:N7	2.48	0.46
1:AA:1321:C:N4	19:AS:37:ARG:NH1	2.61	0.46
1:AA:1474:G:O2'	1:AA:1475:G:H5'	2.15	0.46
3:AC:174:PRO:O	3:AC:177:THR:HG22	2.15	0.46
10:AJ:51:ARG:O	14:AN:45:ARG:HD3	2.15	0.46
17:AQ:96:GLN:HG3	21:B0:725:C:HO2'	1.75	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:351:A:H2'	21:B0:352:G:O4'	2.15	0.46
21:B0:1072:U:H4'	21:B0:1081:A:HO2'	1.80	0.46
21:B0:1155:G:H2'	21:B0:1156:U:O4'	2.16	0.46
21:B0:1184:G:H2'	21:B0:1185:C:H5'	1.97	0.46
21:B0:1223:G:H5'	21:B0:1225:G:OP1	2.15	0.46
21:B0:3098:U:H3'	21:B0:3099:U:C5	2.49	0.46
21:B0:3129:C:H5'	21:B0:3174:C:H5''	1.97	0.46
21:B0:2432:A:H4'	21:B0:2551:A:O2'	2.15	0.46
22:B9:34:C:H2'	22:B9:35:C:C6	2.50	0.46
1:AA:517:G:H5'	1:AA:519:C:C2	2.50	0.46
1:AA:675:A:C2	11:AK:118:GLY:HA3	2.51	0.46
1:AA:761:G:C4'	17:AQ:102:GLY:C	2.82	0.46
1:AA:1001:A:H2'	1:AA:1002:G:H8	1.79	0.46
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.50	0.46
1:AA:1305:G:HO2'	1:AA:1306:A:H8	0.68	0.46
2:AB:228:GLY:O	2:AB:229:VAL:C	2.58	0.46
3:AC:28:GLN:O	3:AC:31:HIS:N	2.46	0.46
3:AC:59:ARG:N	10:AJ:92:THR:HG21	2.30	0.46
5:AE:118:ILE:CG2	5:AE:119:LEU:H	2.28	0.46
6:AF:44:GLY:HA2	6:AF:59:TYR:CE1	2.51	0.46
7:AG:77:SER:O	7:AG:156:TRP:CZ3	2.69	0.46
7:AG:77:SER:O	7:AG:156:TRP:HZ3	1.98	0.46
9:AI:44:VAL:HG13	9:AI:51:ARG:NH2	2.24	0.46
17:AQ:80:GLY:O	17:AQ:81:ARG:HB3	2.15	0.46
18:AR:59:SER:OG	18:AR:62:GLU:HG3	2.15	0.46
21:B0:566:U:H2'	21:B0:567:G:C8	2.50	0.46
21:B0:1313:U:O4	21:B0:1651:U:H5'	2.15	0.46
21:B0:1445:A:H2'	21:B0:1446:U:O4'	2.14	0.46
21:B0:3181:C:O3'	21:B0:3182:U:P	2.73	0.46
21:B0:2560:G:H3'	21:B0:2560:G:N3	2.31	0.46
1:AA:91:C:O2'	1:AA:92:G:H5'	2.15	0.46
1:AA:130:A:N1	1:AA:264:U:N3	2.48	0.46
1:AA:132:C:O2'	1:AA:133:U:H5'	2.15	0.46
1:AA:161:A:C2	1:AA:348:G:O2'	2.66	0.46
1:AA:375:U:O4	1:AA:376:G:O6	2.33	0.46
1:AA:951:G:O2'	1:AA:952:U:H5'	2.15	0.46
1:AA:1320:C:O2	19:AS:72:GLY:HA3	2.14	0.46
1:AA:1372:U:H5''	9:AI:71:SER:HB2	1.98	0.46
1:AA:1445:U:O2'	1:AA:1446:A:H5'	2.15	0.46
1:AA:1503:A:O4'	1:AA:1531:A:N3	2.48	0.46
2:AB:125:PRO:C	2:AB:127:ILE:H	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:167:TRP:O	3:AC:168:ALA:CB	2.63	0.46
4:AD:24:GLU:CG	4:AD:25:ARG:N	2.77	0.46
7:AG:20:ASP:OD1	7:AG:22:LEU:HB3	2.16	0.46
7:AG:46:ALA:O	7:AG:50:ILE:HG13	2.15	0.46
7:AG:135:VAL:O	7:AG:139:GLU:HG3	2.15	0.46
8:AH:92:ARG:HG2	8:AH:94:TYR:OH	2.16	0.46
10:AJ:30:SER:CB	10:AJ:80:LYS:HB3	2.44	0.46
12:AL:71:PRO:O	12:AL:102:ARG:HD2	2.16	0.46
21:B0:397:U:H2'	21:B0:398:C:C6	2.51	0.46
21:B0:1280:U:O2'	21:B0:1281:A:H5'	2.15	0.46
21:B0:1333:G:N2	21:B0:1344:C:H41	2.13	0.46
21:B0:1840:A:H2'	21:B0:1841:G:H5'	1.98	0.46
21:B0:3131:A:H5''	21:B0:3133:G:O4'	2.16	0.46
21:B0:3149:G:O3'	21:B0:3150:C:OP2	2.33	0.46
21:B0:2277:A:H2'	21:B0:2278:A:O4'	2.16	0.46
21:B0:2498:U:H5''	21:B0:2499:C:OP1	2.15	0.46
21:B0:2512:A:H2'	21:B0:2513:A:O4'	2.15	0.46
22:B9:22:U:H2'	22:B9:23:G:C8	2.50	0.46
1:AA:15:G:N3	5:AE:19:MET:HG2	2.30	0.46
1:AA:58:C:O2'	1:AA:59:A:H5'	2.16	0.46
1:AA:59:A:N3	1:AA:331:G:C2	2.82	0.46
1:AA:112:G:H2'	1:AA:354:G:H4'	1.96	0.46
1:AA:127:G:N2	17:AQ:61:GLU:OE1	2.30	0.46
1:AA:151:A:H2'	1:AA:152:A:O4'	2.15	0.46
1:AA:227:G:C2	1:AA:228:A:H1'	2.51	0.46
1:AA:1195:C:H2'	1:AA:1197:G:H5'	1.96	0.46
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.45	0.46
1:AA:1298:C:N4	7:AG:114:ARG:CB	2.56	0.46
1:AA:1368:G:OP2	9:AI:114:TYR:HA	2.15	0.46
1:AA:1475:G:H5''	21:B0:1706:A:C1'	2.42	0.46
1:AA:1481:U:H2'	1:AA:1482:G:O4'	2.15	0.46
2:AB:10:LEU:C	2:AB:12:GLU:N	2.72	0.46
2:AB:78:GLN:O	2:AB:94:ASN:OD1	2.33	0.46
3:AC:110:ASN:ND2	3:AC:140:ARG:HB3	2.21	0.46
5:AE:68:GLU:O	5:AE:70:PRO:HD3	2.15	0.46
7:AG:107:ALA:O	7:AG:110:GLN:HB2	2.16	0.46
9:AI:104:ARG:O	9:AI:105:ASP:C	2.59	0.46
11:AK:72:ALA:HB1	11:AK:77:MET:HG3	1.97	0.46
12:AL:82:VAL:O	12:AL:106:ASP:HB2	2.15	0.46
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.30	0.46
18:AR:36:ASN:ND2	18:AR:38:GLU:HG2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:10:PHE:HE2	19:AS:12:ASP:OD1	1.97	0.46
21:B0:323:G:H2'	21:B0:324:C:C6	2.50	0.46
21:B0:584:A:H4'	21:B0:2479:U:C5'	2.45	0.46
21:B0:1947:G:P	21:B0:1947:G:H8	2.38	0.46
21:B0:2061:C:H1'	21:B0:2413:A:H1'	1.97	0.46
21:B0:2669:C:H41	34:BL:15:SER:CA	2.28	0.46
21:B0:2784:A:H4'	21:B0:2786:G:OP2	2.15	0.46
1:AA:232:G:H1'	1:AA:263:A:N1	2.31	0.46
1:AA:375:U:H3'	1:AA:376:G:OP2	2.15	0.46
1:AA:397:A:N7	1:AA:547:A:O3'	2.49	0.46
1:AA:719:C:O2'	18:AR:49:LYS:CD	2.63	0.46
1:AA:1015:A:H1'	1:AA:1219:U:H4'	1.97	0.46
1:AA:1112:C:N3	3:AC:178:LEU:CA	2.78	0.46
2:AB:15:VAL:CG1	2:AB:209:ARG:HG3	2.46	0.46
2:AB:19:HIS:HD2	2:AB:189:ASP:OD2	1.99	0.46
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.69	0.46
4:AD:3:ARG:NE	4:AD:71:SER:HB3	2.31	0.46
7:AG:15:ASP:O	7:AG:19:GLY:HA2	2.16	0.46
8:AH:126:LYS:C	8:AH:128:GLY:N	2.73	0.46
9:AI:48:GLU:OE1	9:AI:48:GLU:HA	2.16	0.46
13:AM:94:ARG:HH22	19:AS:81:ARG:HH11	1.64	0.46
15:AO:34:LEU:HD23	15:AO:34:LEU:C	2.40	0.46
19:AS:18:LYS:O	19:AS:18:LYS:HG2	2.16	0.46
21:B0:203:G:O2'	21:B0:204:A:H5'	2.15	0.46
21:B0:508:G:H22	21:B0:516:G:H22	1.63	0.46
21:B0:645:G:H2'	21:B0:646:C:C6	2.51	0.46
21:B0:670:U:H2'	21:B0:671:A:C8	2.50	0.46
21:B0:887:G:O2'	21:B0:888:G:H5'	2.15	0.46
21:B0:891:A:O2'	21:B0:892:A:OP2	2.33	0.46
21:B0:2075:U:C2'	21:B0:3093:C:C6	2.98	0.46
21:B0:2321:C:H2'	21:B0:2322:U:H5'	1.97	0.46
1:AA:19:C:N3	1:AA:916:G:O6	2.48	0.46
1:AA:51:A:H4'	1:AA:52:G:O5'	2.15	0.46
1:AA:69:G:O2'	1:AA:153:C:H5'	2.15	0.46
1:AA:184:G:O2'	1:AA:224:C:H4'	2.15	0.46
1:AA:690:G:H2'	1:AA:691:G:O4'	2.15	0.46
1:AA:993:G:N1	1:AA:1046:A:C5	2.84	0.46
1:AA:1039:C:O2'	1:AA:1040:U:H5'	2.16	0.46
1:AA:1300:G:O2'	1:AA:1301:U:H6	1.98	0.46
2:AB:62:ALA:C	2:AB:64:ARG:H	2.23	0.46
10:AJ:48:THR:OG1	10:AJ:62:HIS:CD2	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:84:VAL:HG23	11:AK:109:VAL:O	2.16	0.46
12:AL:54:LYS:N	12:AL:54:LYS:HD2	2.30	0.46
13:AM:36:LYS:C	13:AM:38:GLY:H	2.24	0.46
13:AM:51:ALA:O	13:AM:55:ARG:HG3	2.16	0.46
18:AR:48:GLY:O	18:AR:74:ARG:NH2	2.41	0.46
21:B0:84:G:H2'	21:B0:85:C:C6	2.50	0.46
21:B0:753:U:H2'	21:B0:754:G:H5'	1.97	0.46
21:B0:831:G:H5'	21:B0:852:U:OP1	2.15	0.46
21:B0:1036:G:H1'	21:B0:1145:C:C4'	2.45	0.46
21:B0:1226:A:N1	21:B0:1250:A:H1'	2.30	0.46
21:B0:1358:C:H2'	21:B0:1359:G:H5'	1.97	0.46
21:B0:1414:G:H2'	21:B0:1415:C:C6	2.50	0.46
21:B0:1856:U:O2	21:B0:3877:A:C2	2.68	0.46
21:B0:2825:A:H2'	21:B0:2826:C:C6	2.51	0.46
22:B9:59:A:N3	22:B9:59:A:H2'	2.31	0.46
1:AA:227:G:C2'	1:AA:228:A:H5'	2.46	0.46
1:AA:322:C:H4'	20:AT:23:ARG:CG	2.42	0.46
1:AA:411:A:C6	1:AA:429:U:C4	3.04	0.46
1:AA:542:G:H2'	1:AA:543:C:H6	1.81	0.46
1:AA:1056:U:O2'	1:AA:1057:G:H5'	2.14	0.46
1:AA:1086:U:O3'	1:AA:1389:C:H4'	2.16	0.46
1:AA:1097:C:H4'	1:AA:1168:A:O2'	2.15	0.46
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.62	0.46
1:AA:1237:C:H2'	1:AA:1336:C:C5	2.51	0.46
1:AA:1314:C:C4	19:AS:6:LYS:HE2	2.50	0.46
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.59	0.46
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.16	0.46
4:AD:163:GLU:C	4:AD:165:MET:N	2.72	0.46
6:AF:101:ALA:HB2	18:AR:28:GLU:HB3	1.97	0.46
12:AL:38:THR:HG22	12:AL:39:VAL:HG23	1.97	0.46
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.97	0.46
15:AO:83:GLU:OE1	15:AO:83:GLU:C	2.58	0.46
16:AP:43:LYS:HG2	16:AP:48:TRP:CE2	2.50	0.46
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.97	0.46
21:B0:181:A:H4'	21:B0:182:G:C4'	2.44	0.46
21:B0:575:U:H2'	21:B0:576:A:C8	2.51	0.46
21:B0:1269:G:H2'	21:B0:1270:C:C6	2.50	0.46
21:B0:2021:G:H2'	21:B0:2022:C:C6	2.51	0.46
1:AA:8:A:N7	4:AD:208:SER:HB2	2.30	0.46
1:AA:214:U:H5'	1:AA:215:C:OP2	2.15	0.46
1:AA:560:U:O5'	1:AA:560:U:H6	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:909:A:H2'	1:AA:910:C:O4'	2.16	0.46
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.16	0.46
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.51	0.46
1:AA:1416:G:H3'	1:AA:1417:G:OP1	2.13	0.46
1:AA:1497:G:N2	1:AA:1519:A:C2	2.76	0.46
3:AC:60:ALA:O	3:AC:61:ALA:CB	2.63	0.46
4:AD:130:GLY:O	4:AD:131:ARG:C	2.58	0.46
4:AD:173:TRP:CD2	4:AD:189:PRO:HB3	2.51	0.46
5:AE:18:ARG:HG2	5:AE:19:MET:H	1.81	0.46
9:AI:121:ARG:HG2	9:AI:121:ARG:HH11	1.81	0.46
10:AJ:94:VAL:HG12	10:AJ:95:GLU:H	1.76	0.46
11:AK:34:ASP:O	11:AK:36:ASP:N	2.48	0.46
13:AM:59:TYR:O	13:AM:63:THR:HB	2.15	0.46
19:AS:67:VAL:O	19:AS:69:HIS:N	2.49	0.46
21:B0:313:U:H2'	21:B0:314:G:C8	2.51	0.46
21:B0:317:U:H3'	21:B0:318:G:C5'	2.46	0.46
21:B0:1921:A:C3'	21:B0:1922:U:H5''	2.46	0.46
1:AA:191:G:C5	1:AA:192:U:C4	2.92	0.46
1:AA:234:C:C4'	17:AQ:64:PRO:HG2	2.44	0.46
1:AA:262:A:H4'	20:AT:75:ASN:CG	2.41	0.46
1:AA:421:U:H5'	1:AA:422:C:H5	1.80	0.46
1:AA:523:A:C2	12:AL:91:LYS:CB	2.95	0.46
1:AA:714:G:N3	1:AA:777:A:H1'	2.31	0.46
1:AA:926:G:O6	1:AA:1505:G:C6	2.68	0.46
1:AA:998:G:O2'	1:AA:999:C:H5'	2.15	0.46
1:AA:1245:A:H2'	1:AA:1246:C:C6	2.50	0.46
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.50	0.46
2:AB:95:GLN:C	2:AB:96:ARG:HD2	2.40	0.46
4:AD:104:VAL:HG11	4:AD:146:ILE:CD1	2.37	0.46
5:AE:35:GLY:HA3	5:AE:112:LEU:HB3	1.97	0.46
11:AK:48:ILE:O	11:AK:49:GLY:C	2.59	0.46
13:AM:39:ILE:HD12	13:AM:56:LEU:HG	1.98	0.46
14:AN:53:LEU:HB3	14:AN:56:VAL:CG2	2.45	0.46
21:B0:42:G:H2'	21:B0:43:A:O4'	2.16	0.46
21:B0:471:A:H62	21:B0:480:G:N2	2.07	0.46
21:B0:502:A:H2'	21:B0:503:G:O4'	2.15	0.46
21:B0:644:A:H2'	21:B0:645:G:H5'	1.98	0.46
21:B0:1193:G:H2'	21:B0:1194:U:C6	2.50	0.46
21:B0:2800:C:H2'	21:B0:2801:A:O4'	2.15	0.46
21:B0:2809:A:C6	21:B0:2854:G:H2'	2.50	0.46
1:AA:244:U:C2	1:AA:894:G:H1'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:336:C:H5'	1:AA:1433:A:O2'	2.15	0.46
1:AA:645:C:O2'	1:AA:646:U:H5'	2.16	0.46
1:AA:820:U:O3'	1:AA:821:G:P	2.74	0.46
1:AA:934:C:C4	1:AA:1345:U:C5	3.04	0.46
1:AA:1111:A:C6	3:AC:177:THR:HA	2.51	0.46
1:AA:1153:C:H2'	1:AA:1154:G:C8	2.46	0.46
1:AA:1171:G:H2'	1:AA:1172:C:C6	2.51	0.46
1:AA:1206:G:H4'	3:AC:192:THR:O	2.16	0.46
1:AA:1225:A:H5'	1:AA:1226:C:OP2	2.16	0.46
1:AA:1315:U:H5	19:AS:6:LYS:HZ1	1.63	0.46
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.16	0.46
1:AA:1342:C:C4'	9:AI:125:TYR:CZ	2.99	0.46
1:AA:1371:G:P	9:AI:11:LYS:HE2	2.55	0.46
1:AA:1532:U:O5'	1:AA:1532:U:H6	2.00	0.46
4:AD:152:SER:HA	4:AD:155:LEU:HG	1.97	0.46
5:AE:144:THR:O	5:AE:145:LYS:C	2.59	0.46
6:AF:2:ARG:HD2	6:AF:69:GLU:HG2	1.96	0.46
8:AH:91:ARG:HG3	12:AL:7:ILE:HG13	1.98	0.46
9:AI:114:TYR:CG	10:AJ:60:ARG:HG2	2.51	0.46
10:AJ:60:ARG:O	10:AJ:61:GLU:CB	2.61	0.46
11:AK:93:GLN:HE21	11:AK:96:ARG:NH2	2.13	0.46
12:AL:77:LEU:HD21	12:AL:107:ALA:HB2	1.97	0.46
18:AR:41:LYS:O	18:AR:41:LYS:HG2	2.13	0.46
19:AS:15:LEU:O	19:AS:19:VAL:N	2.48	0.46
20:AT:63:ILE:HG23	20:AT:72:LEU:CD1	2.46	0.46
21:B0:556:A:H2'	21:B0:557:U:H5'	1.98	0.46
21:B0:590:C:H2'	21:B0:591:G:C8	2.51	0.46
21:B0:599:A:H2'	21:B0:600:G:H8	1.80	0.46
21:B0:1312:G:H5''	21:B0:1313:U:C5'	2.39	0.46
21:B0:1352:G:H2'	21:B0:1353:A:C8	2.49	0.46
21:B0:1586:A:H2'	21:B0:1587:A:H8	1.81	0.46
21:B0:1750:A:H1'	21:B0:2690:A:C2	2.51	0.46
21:B0:3110:G:OP1	21:B0:3149:G:C5'	2.64	0.46
21:B0:2448:A:H2'	21:B0:2449:G:O4'	2.16	0.46
22:B9:74:A:H2'	22:B9:75:A:C8	2.51	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.81	0.45
1:AA:131:C:O4'	1:AA:263:A:H1'	2.16	0.45
1:AA:390:C:H6	1:AA:390:C:O5'	1.99	0.45
1:AA:401:C:H4'	1:AA:622:A:O4'	2.17	0.45
1:AA:760:G:C6	17:AQ:105:ALA:CB	2.66	0.45
1:AA:1106:G:OP1	3:AC:172:ARG:CG	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1459:C:OP1	20:AT:28:ALA:HA	2.16	0.45
1:AA:1501:C:P	1:AA:1508:G:H4'	2.56	0.45
3:AC:64:VAL:CG2	3:AC:99:VAL:HB	2.45	0.45
8:AH:45:ILE:HG13	8:AH:45:ILE:O	2.16	0.45
10:AJ:51:ARG:HG2	14:AN:45:ARG:HH12	1.73	0.45
12:AL:37:CYS:O	12:AL:79:GLU:O	2.34	0.45
13:AM:5:ALA:O	13:AM:8:GLU:N	2.45	0.45
13:AM:49:THR:O	13:AM:53:VAL:HG23	2.16	0.45
20:AT:42:GLN:O	20:AT:45:GLN:HB3	2.16	0.45
21:B0:162:C:H4'	21:B0:195:A:O2'	2.16	0.45
21:B0:403:A:H4'	21:B0:425:A:C5'	2.39	0.45
21:B0:689:A:H3'	21:B0:689:A:N3	2.31	0.45
21:B0:839:U:OP1	21:B0:2407:G:H3'	2.16	0.45
21:B0:1203:A:H2'	21:B0:1204:G:H5'	1.98	0.45
21:B0:1223:G:H1'	21:B0:1225:G:N3	2.31	0.45
21:B0:1683:G:H2'	21:B0:1684:G:O4'	2.16	0.45
21:B0:1684:G:H2'	21:B0:1974:U:O4	2.16	0.45
21:B0:3093:C:O2'	21:B0:3094:A:H5'	2.15	0.45
21:B0:2429:A:H5''	21:B0:2476:A:C6	2.51	0.45
21:B0:2437:G:H2'	21:B0:2469:G:N2	2.31	0.45
21:B0:2640:G:H2'	21:B0:2641:A:O4'	2.16	0.45
1:AA:51:A:N6	1:AA:313:A:C2	2.84	0.45
1:AA:59:A:H5''	1:AA:60:A:C5'	2.47	0.45
1:AA:217:C:O2'	1:AA:470:U:P	2.71	0.45
1:AA:1115:C:O4'	14:AN:61:TRP:CB	2.64	0.45
1:AA:1196:U:H4'	1:AA:1197:G:OP2	2.15	0.45
1:AA:1394:A:C2	1:AA:1501:C:C4'	2.93	0.45
1:AA:1503:A:O2'	1:AA:1504:G:OP1	2.29	0.45
2:AB:42:ILE:HD12	2:AB:203:GLY:HA2	1.97	0.45
2:AB:129:GLU:O	2:AB:130:ARG:HB2	2.15	0.45
3:AC:131:ARG:O	3:AC:135:LYS:HG3	2.16	0.45
3:AC:154:SER:OG	3:AC:155:GLY:N	2.48	0.45
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.97	0.45
4:AD:187:ARG:HA	4:AD:187:ARG:HD2	1.81	0.45
5:AE:121:LYS:HE3	5:AE:123:LEU:CD2	2.46	0.45
8:AH:91:ARG:HD3	17:AQ:34:LYS:CB	2.45	0.45
9:AI:111:ARG:HG3	9:AI:111:ARG:HH11	1.80	0.45
19:AS:20:LEU:O	19:AS:23:ASN:HB2	2.15	0.45
21:B0:508:G:H2'	21:B0:509:U:C6	2.50	0.45
21:B0:523:A:H2	21:B0:591:G:H4'	1.81	0.45
21:B0:629:C:H2'	21:B0:630:G:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:715:U:H2'	21:B0:716:U:C6	2.51	0.45
21:B0:831:G:C2'	21:B0:832:A:H5''	2.46	0.45
21:B0:1199:U:H2'	21:B0:1200:G:H8	1.80	0.45
21:B0:2009:U:H2'	21:B0:2010:G:C8	2.51	0.45
21:B0:2610:G:C4'	21:B0:2866:A:H4'	2.47	0.45
1:AA:5:U:O2'	1:AA:6:G:P	2.73	0.45
1:AA:15:G:N9	5:AE:19:MET:HE2	2.29	0.45
1:AA:59:A:C5'	1:AA:60:A:C5'	2.94	0.45
1:AA:82:C:H2'	1:AA:83:C:O4'	2.17	0.45
1:AA:143:A:H1'	1:AA:196:A:C4	2.52	0.45
1:AA:184:G:H4'	1:AA:224:C:C3'	2.46	0.45
1:AA:242:C:H2'	1:AA:243:A:H5'	1.98	0.45
1:AA:244:U:O4	1:AA:894:G:C6	2.70	0.45
1:AA:293:G:C4'	1:AA:609:A:H2	2.11	0.45
1:AA:319:G:O2'	1:AA:320:C:H5'	2.16	0.45
1:AA:546:G:O2'	1:AA:548:G:H4'	2.17	0.45
1:AA:619:U:C2'	4:AD:135:LEU:HD12	2.45	0.45
1:AA:826:C:H2'	1:AA:827:U:H6	1.82	0.45
1:AA:926:G:C5	1:AA:1505:G:C5	3.04	0.45
1:AA:926:G:C2	1:AA:1505:G:C5	3.04	0.45
1:AA:958:A:N1	19:AS:54:GLY:C	2.75	0.45
1:AA:1515:C:H2'	1:AA:1516:G:H8	1.81	0.45
2:AB:52:GLU:O	2:AB:56:ARG:HB2	2.17	0.45
3:AC:11:ARG:NH1	3:AC:177:THR:O	2.50	0.45
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.84	0.45
3:AC:108:ASN:OD1	3:AC:110:ASN:HB2	2.16	0.45
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.17	0.45
4:AD:204:ILE:CG2	5:AE:99:GLY:HA3	2.46	0.45
5:AE:115:VAL:HG11	5:AE:118:ILE:CD1	2.46	0.45
10:AJ:6:ILE:O	10:AJ:71:LEU:O	2.35	0.45
10:AJ:65:LEU:CD1	14:AN:36:PHE:HZ	2.26	0.45
11:AK:16:SER:O	11:AK:35:PRO:HD3	2.16	0.45
12:AL:59:ARG:NH1	12:AL:65:GLU:HG2	2.31	0.45
14:AN:26:ARG:NH1	14:AN:47:LEU:HD21	2.32	0.45
16:AP:82:GLN:O	16:AP:83:GLU:C	2.59	0.45
17:AQ:66:SER:OG	17:AQ:69:LYS:HB3	2.15	0.45
19:AS:22:LEU:CD1	19:AS:31:ILE:HD11	2.46	0.45
21:B0:129:A:H2'	21:B0:130:C:C6	2.51	0.45
21:B0:560:G:H2'	21:B0:561:U:C6	2.52	0.45
21:B0:666:U:H2'	21:B0:668:A:OP1	2.16	0.45
21:B0:930:A:H3'	21:B0:931:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1578:U:H2'	21:B0:1579:G:C8	2.51	0.45
21:B0:3872:A:H2'	21:B0:3873:G:O4'	2.17	0.45
21:B0:3874:C:C2'	21:B0:3875:A:H5'	2.46	0.45
21:B0:2451:G:H2'	21:B0:2508:G:N2	2.32	0.45
1:AA:143:A:H1'	1:AA:196:A:N9	2.31	0.45
1:AA:335:C:C2	1:AA:1434:A:C1'	2.99	0.45
1:AA:847:C:H2'	1:AA:848:G:H8	1.81	0.45
1:AA:926:G:N7	1:AA:1505:G:C2	2.84	0.45
1:AA:958:A:C2	19:AS:54:GLY:O	2.70	0.45
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.15	0.45
1:AA:1065:U:C4	1:AA:1189:C:N3	2.84	0.45
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.81	0.45
1:AA:1367:C:C5'	10:AJ:60:ARG:HH12	2.20	0.45
1:AA:1394:A:C4	1:AA:1501:C:H1'	2.52	0.45
1:AA:1409:C:C2	1:AA:1410:G:N7	2.84	0.45
1:AA:1485:U:OP1	21:B0:1944:C:OP1	2.26	0.45
1:AA:1515:C:O2'	1:AA:1516:G:H5'	2.16	0.45
2:AB:23:ARG:CZ	2:AB:23:ARG:HB2	2.47	0.45
7:AG:12:LEU:N	7:AG:12:LEU:HD12	2.32	0.45
9:AI:117:HIS:C	9:AI:118:LYS:HG3	2.42	0.45
10:AJ:51:ARG:HG3	10:AJ:60:ARG:O	2.17	0.45
12:AL:46:LYS:CG	12:AL:47:LYS:H	2.29	0.45
13:AM:93:ARG:HA	21:B0:900(A):A:H5'	1.97	0.45
14:AN:12:ARG:O	14:AN:14:PRO:HD3	2.16	0.45
14:AN:39:LEU:CD1	14:AN:47:LEU:HD12	2.46	0.45
18:AR:51:LEU:HA	18:AR:52:PRO:HD3	1.80	0.45
20:AT:100:ILE:C	20:AT:102:GLY:N	2.74	0.45
21:B0:515:A:C2'	21:B0:516:G:H5'	2.43	0.45
21:B0:701:U:H2'	21:B0:702:A:O4'	2.15	0.45
21:B0:1349:A:H2'	21:B0:1350:G:C8	2.51	0.45
21:B0:3873:G:O2'	21:B0:3874:C:H5'	2.16	0.45
21:B0:1861:G:O2'	21:B0:1862:C:H5'	2.17	0.45
21:B0:3171:A:O2'	21:B0:3172:U:C6	2.70	0.45
21:B0:2421:C:O2'	21:B0:2422:C:H5'	2.16	0.45
1:AA:6:G:H1	5:AE:94:ALA:HB1	1.79	0.45
1:AA:7:G:H5'	1:AA:298:A:O4'	2.16	0.45
1:AA:9:G:H5''	5:AE:122:GLU:OE1	2.16	0.45
1:AA:108:G:O6	20:AT:15:ARG:CG	2.64	0.45
1:AA:191:G:N9	1:AA:192:U:C6	2.84	0.45
1:AA:227:G:O6	1:AA:228:A:C6	2.69	0.45
1:AA:260:G:O2'	1:AA:261:U:H5'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:375:U:C2	1:AA:376:G:N7	2.84	0.45
1:AA:470:U:H2'	1:AA:471:G:C8	2.51	0.45
1:AA:586:C:C5'	8:AH:90:GLY:HA3	2.40	0.45
1:AA:624:C:H2'	1:AA:625:G:H8	1.81	0.45
1:AA:640:A:C2	8:AH:115:SER:CB	2.99	0.45
1:AA:781:A:H2'	1:AA:782:A:H5'	1.98	0.45
1:AA:1014:A:C4	19:AS:34:TRP:CG	3.04	0.45
1:AA:1014:A:N6	19:AS:34:TRP:CZ2	2.84	0.45
1:AA:1051:C:H2'	1:AA:1052:U:H6	1.80	0.45
1:AA:1114:C:H1'	14:AN:60:SER:HG	1.82	0.45
1:AA:1319:A:H5'	19:AS:70:LYS:NZ	2.30	0.45
1:AA:1409:C:C4	1:AA:1410:G:C5	3.04	0.45
3:AC:99:VAL:CG2	3:AC:100:ALA:N	2.80	0.45
3:AC:131:ARG:HA	3:AC:134:ILE:HD12	1.96	0.45
3:AC:164:ARG:HB3	3:AC:164:ARG:HH11	1.80	0.45
5:AE:15:ARG:CD	5:AE:26:PHE:CD2	2.99	0.45
6:AF:30:LEU:CB	6:AF:35:ALA:HB3	2.41	0.45
7:AG:18:TYR:CD2	7:AG:59:LEU:HB2	2.52	0.45
10:AJ:54:PHE:O	10:AJ:55:LYS:HG2	2.17	0.45
10:AJ:96:ILE:CG2	10:AJ:97:GLU:N	2.79	0.45
15:AO:87:ILE:CG2	15:AO:88:ARG:N	2.79	0.45
18:AR:45:SER:HG	18:AR:49:LYS:HB2	1.78	0.45
19:AS:15:LEU:HD12	19:AS:16:LEU:H	1.77	0.45
19:AS:63:THR:HG22	19:AS:64:GLU:N	2.32	0.45
21:B0:211:U:C2'	21:B0:212:U:H5'	2.46	0.45
21:B0:307:C:H2'	21:B0:308:C:C6	2.51	0.45
21:B0:452:G:H2'	21:B0:453:U:O4'	2.16	0.45
21:B0:688:A:O2'	21:B0:2422:C:H4'	2.17	0.45
21:B0:1566:G:H4'	21:B0:1733:U:O4	2.16	0.45
21:B0:1678:G:H2'	21:B0:1679:U:C6	2.51	0.45
21:B0:2348:A:H2'	21:B0:2349:G:C8	2.52	0.45
21:B0:2708:U:H2'	21:B0:2709:C:C6	2.51	0.45
1:AA:114:U:C1'	1:AA:353:A:H1'	2.46	0.45
1:AA:161:A:C2	1:AA:348:G:H1'	2.47	0.45
1:AA:513:C:H2'	1:AA:514:C:H6	1.80	0.45
1:AA:627:G:O2'	1:AA:628:G:H5'	2.17	0.45
1:AA:735:C:O2'	1:AA:736:C:H5'	2.17	0.45
1:AA:828:A:H5''	1:AA:859:A:C2	2.51	0.45
1:AA:958:A:C5	19:AS:55:LYS:CB	2.99	0.45
1:AA:1030:U:H5'	1:AA:1031:C:H5	1.80	0.45
1:AA:1314:C:C5	19:AS:6:LYS:HG3	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:8:LYS:O	2:AB:9:GLU:CB	2.60	0.45
3:AC:108:ASN:C	3:AC:110:ASN:N	2.73	0.45
3:AC:126:ARG:C	3:AC:127:ARG:HG3	2.42	0.45
4:AD:8:VAL:HG21	4:AD:115:ARG:CZ	2.46	0.45
7:AG:75:VAL:HG12	7:AG:86:GLN:HE21	1.81	0.45
9:AI:40:LEU:O	9:AI:42:ARG:N	2.50	0.45
10:AJ:30:SER:CB	10:AJ:84:GLN:HE21	2.29	0.45
13:AM:62:ASN:O	13:AM:63:THR:HB	2.16	0.45
17:AQ:97:SER:CB	17:AQ:102:GLY:C	2.78	0.45
21:B0:419:G:O2'	21:B0:420:C:H5'	2.17	0.45
21:B0:604:U:H2'	21:B0:605:G:H8	1.82	0.45
21:B0:687:G:O2'	21:B0:688:A:H5'	2.17	0.45
21:B0:700:C:O2'	21:B0:801:A:H5'	2.17	0.45
21:B0:978:U:H2'	21:B0:979:A:C8	2.51	0.45
21:B0:1016:C:H2'	21:B0:1017:C:C6	2.52	0.45
21:B0:1278:A:O2'	21:B0:1279:G:P	2.75	0.45
1:AA:76:G:O2'	1:AA:77:C:H5'	2.17	0.45
1:AA:217:C:O2'	1:AA:470:U:O5'	2.34	0.45
1:AA:419:C:OP1	1:AA:513:C:H1'	2.16	0.45
1:AA:439:A:C4	1:AA:497:A:C2	3.04	0.45
1:AA:644:G:O2'	1:AA:645:C:H5'	2.17	0.45
1:AA:792:A:H1'	1:AA:794:A:N7	2.32	0.45
1:AA:1202:G:C2'	1:AA:1203:C:H5'	2.46	0.45
1:AA:1230:C:O2'	13:AM:126:LYS:HA	2.16	0.45
1:AA:1301:U:O2'	1:AA:1302:U:OP1	2.30	0.45
1:AA:1346:A:C6	7:AG:10:ARG:NE	2.84	0.45
1:AA:1376:U:OP2	7:AG:94:ARG:NH2	2.49	0.45
1:AA:1461:G:O2'	1:AA:1462:G:H5'	2.16	0.45
1:AA:1497:G:H1'	1:AA:1518:A:H2	1.76	0.45
2:AB:83:MET:HG3	2:AB:238:LEU:CD1	2.46	0.45
5:AE:80:ILE:CD1	5:AE:91:LEU:HD12	2.46	0.45
6:AF:33:TYR:HB2	6:AF:75:LEU:HD23	1.98	0.45
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.28	0.45
7:AG:154:TYR:O	7:AG:156:TRP:N	2.49	0.45
9:AI:121:ARG:C	9:AI:121:ARG:HD3	2.42	0.45
10:AJ:24:VAL:CG1	10:AJ:28:ARG:HE	2.29	0.45
10:AJ:46:ARG:NH1	10:AJ:64:GLU:CG	2.80	0.45
11:AK:40:ILE:HG23	11:AK:75:TYR:CE2	2.51	0.45
13:AM:37:THR:HG23	13:AM:55:ARG:CB	2.46	0.45
15:AO:71:GLN:O	15:AO:72:ARG:C	2.59	0.45
16:AP:39:TYR:CZ	16:AP:41:PRO:HA	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:68:ARG:H	17:AQ:70:ARG:NH1	2.15	0.45
21:B0:15:G:O2'	21:B0:16:G:H5'	2.17	0.45
21:B0:316:C:H2'	21:B0:317:U:C6	2.52	0.45
21:B0:611:C:C2'	21:B0:612:G:H5'	2.47	0.45
21:B0:1373:G:H2'	21:B0:1374:G:H5'	1.99	0.45
21:B0:1685:A:H1'	21:B0:1686:A:N7	2.32	0.45
21:B0:1745:C:H2'	21:B0:1746:A:O4'	2.16	0.45
21:B0:1921:A:C2'	21:B0:1922:U:H5''	2.46	0.45
21:B0:3118:U:O2	21:B0:3149:G:H5'	2.09	0.45
1:AA:19:C:H2'	1:AA:20:U:H6	1.80	0.45
1:AA:39:G:C4	1:AA:498:U:C4	3.05	0.45
1:AA:323:U:C1'	20:AT:19:SER:HB2	2.47	0.45
1:AA:533:A:O2'	1:AA:534:U:P	2.75	0.45
1:AA:882:C:O2'	1:AA:883:C:H5'	2.16	0.45
1:AA:975:A:O5'	1:AA:976:G:H5'	2.17	0.45
1:AA:993:G:C2	1:AA:1046:A:C4	3.05	0.45
1:AA:1019:C:O2'	1:AA:1020:U:H5'	2.17	0.45
1:AA:1483:A:C6	1:AA:1484:C:C6	3.04	0.45
2:AB:92:TYR:CE1	2:AB:151:GLY:HA3	2.52	0.45
2:AB:137:ARG:O	2:AB:140:HIS:HB2	2.16	0.45
2:AB:178:ARG:NH1	2:AB:178:ARG:CG	2.67	0.45
5:AE:102:ALA:HB2	5:AE:120:THR:CB	2.46	0.45
9:AI:36:TYR:CD2	9:AI:37:PHE:CE2	3.04	0.45
11:AK:115:PRO:C	11:AK:117:ASN:H	2.25	0.45
12:AL:110:VAL:O	12:AL:122:THR:CG2	2.62	0.45
13:AM:123:ALA:O	13:AM:124:PRO:C	2.60	0.45
17:AQ:76:LEU:C	17:AQ:76:LEU:CD2	2.90	0.45
18:AR:74:ARG:HB3	18:AR:81:PHE:CE1	2.51	0.45
21:B0:109:A:H3'	21:B0:110:U:C5'	2.41	0.45
21:B0:221:A:H62	21:B0:231:G:N2	2.10	0.45
21:B0:852:U:H3	21:B0:950:G:H1	1.64	0.45
21:B0:926:C:C2'	21:B0:927:C:H5'	2.47	0.45
21:B0:959:C:H2'	21:B0:960:U:C6	2.52	0.45
21:B0:1089:C:H1'	21:B0:1099:A:H8	1.82	0.45
21:B0:1502:G:O2'	21:B0:1503:G:H5'	2.16	0.45
21:B0:2428:U:O2'	21:B0:2429:A:H5'	2.17	0.45
21:B0:2661:G:O2'	21:B0:2662:C:H5'	2.17	0.45
22:B9:66:G:H2'	22:B9:67:C:C6	2.52	0.45
1:AA:15:G:H1'	5:AE:19:MET:SD	2.56	0.45
1:AA:131:C:O2'	1:AA:262:A:C1'	2.64	0.45
1:AA:160:A:H61	1:AA:347:G:N2	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:187:G:H21	20:AT:105:SER:CA	2.29	0.45
1:AA:187:G:H21	20:AT:105:SER:HB2	1.65	0.45
1:AA:258:G:H2'	1:AA:259:G:H8	1.82	0.45
1:AA:485:G:C2'	1:AA:486:U:OP2	2.65	0.45
1:AA:502:G:H1'	1:AA:550:G:C5'	2.23	0.45
1:AA:807:A:H2'	1:AA:808:C:C6	2.52	0.45
1:AA:920:U:H2'	1:AA:921:U:C6	2.52	0.45
1:AA:975:A:H4'	1:AA:976:G:OP2	2.16	0.45
1:AA:1060:C:P	14:AN:45:ARG:HH21	2.40	0.45
1:AA:1206:G:C6	1:AA:1207:G:C5	3.04	0.45
1:AA:1238:A:H2	1:AA:1241:G:O2'	1.99	0.45
1:AA:1251:A:C5'	9:AI:12:GLU:CD	2.90	0.45
1:AA:1372:U:OP2	9:AI:11:LYS:CD	2.64	0.45
1:AA:1503:A:O2'	1:AA:1504:G:P	2.75	0.45
1:AA:1506:U:OP2	1:AA:1541:U:OP2	2.35	0.45
3:AC:129:ALA:HB3	3:AC:132:ARG:CD	2.45	0.45
5:AE:15:ARG:NE	5:AE:26:PHE:CD2	2.84	0.45
7:AG:143:ARG:O	7:AG:145:ALA:O	2.34	0.45
7:AG:155:ARG:O	7:AG:156:TRP:CB	2.63	0.45
10:AJ:53:PRO:O	10:AJ:54:PHE:O	2.34	0.45
10:AJ:85:LEU:O	10:AJ:87:THR:N	2.50	0.45
12:AL:85:ILE:HG23	12:AL:98:TYR:CB	2.46	0.45
13:AM:110:ARG:HG2	13:AM:110:ARG:HH11	1.82	0.45
16:AP:72:ARG:O	16:AP:72:ARG:HG2	2.16	0.45
18:AR:70:ILE:O	18:AR:74:ARG:HG3	2.17	0.45
19:AS:45:VAL:C	19:AS:47:HIS:H	2.25	0.45
21:B0:8:A:H2'	21:B0:9:U:C6	2.52	0.45
21:B0:475:U:H2'	21:B0:476:G:O4'	2.17	0.45
21:B0:709:A:H2'	21:B0:710:C:C6	2.52	0.45
21:B0:874:A:H62	21:B0:928:G:N2	2.12	0.45
21:B0:925:U:H4'	21:B0:926:C:C5	2.52	0.45
21:B0:1199:U:C3'	21:B0:1200:G:H5''	2.32	0.45
21:B0:1793:A:H2'	21:B0:1794:A:C8	2.52	0.45
21:B0:2026:C:H2'	21:B0:2027:C:C6	2.52	0.45
21:B0:3111:C:C2	21:B0:3148:G:P	2.96	0.45
21:B0:3129:C:H5'	21:B0:3174:C:C5'	2.47	0.45
21:B0:2181:A:C2'	21:B0:2182:A:H5'	2.47	0.45
21:B0:2454:C:H42	21:B0:2508:G:H22	1.64	0.45
21:B0:2539:C:H2'	21:B0:2540:A:C8	2.52	0.45
21:B0:2703:C:H2'	21:B0:2704:U:C6	2.51	0.45
21:B0:2830:U:H2'	21:B0:2831:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B9:40:C:H2'	22:B9:41:A:O4'	2.16	0.45
22:B9:94:G:O2'	22:B9:95:U:H5'	2.16	0.45
1:AA:115:G:H4'	1:AA:116:A:O5'	2.17	0.45
1:AA:321:A:H2'	1:AA:322:C:C6	2.52	0.45
1:AA:323:U:O2'	20:AT:22:ARG:CD	2.58	0.45
1:AA:372:C:O2	1:AA:387:U:O4	2.34	0.45
1:AA:686:U:O4	1:AA:703:G:H1'	2.17	0.45
1:AA:920:U:O2'	1:AA:1081:G:O2'	2.22	0.45
1:AA:976:G:C8	1:AA:2361:C:N4	2.85	0.45
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.31	0.45
1:AA:1064:G:N2	1:AA:1190:G:O2'	2.49	0.45
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.51	0.45
1:AA:1234:C:H5''	1:AA:1365:G:OP1	2.10	0.45
1:AA:1484:C:H2'	1:AA:1485:U:C6	2.50	0.45
2:AB:22:LYS:O	2:AB:23:ARG:HG3	2.16	0.45
2:AB:36:ARG:HD2	2:AB:41:ILE:CD1	2.44	0.45
2:AB:71:VAL:HB	2:AB:164:VAL:HG23	1.99	0.45
3:AC:59:ARG:CA	10:AJ:92:THR:CG2	2.95	0.45
4:AD:142:PRO:HG2	4:AD:187:ARG:NH1	2.32	0.45
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.17	0.45
10:AJ:4:ILE:HG12	10:AJ:100:THR:CB	2.46	0.45
10:AJ:29:ARG:C	10:AJ:84:GLN:HE22	2.24	0.45
13:AM:120:LYS:HE2	13:AM:123:ALA:CB	2.47	0.45
14:AN:25:VAL:O	14:AN:25:VAL:HG13	2.16	0.45
16:AP:20:VAL:HG13	16:AP:21:VAL:N	2.32	0.45
17:AQ:81:ARG:HG3	17:AQ:81:ARG:O	2.17	0.45
21:B0:116:A:C2	21:B0:155:G:H1'	2.51	0.45
21:B0:241:C:C2'	21:B0:242:A:H5''	2.46	0.45
21:B0:626:A:O2'	21:B0:627:A:H5'	2.17	0.45
21:B0:838:A:H2'	21:B0:839:U:C6	2.52	0.45
21:B0:843:G:O2'	21:B0:844:G:OP1	2.31	0.45
21:B0:871:U:H1'	21:B0:2248:A:H5''	1.99	0.45
21:B0:1504:G:O2'	21:B0:1505:U:H5'	2.17	0.45
21:B0:2555:G:H3'	21:B0:2555:G:N3	2.32	0.45
22:B9:36:A:H1'	22:B9:51:G:N2	2.32	0.45
1:AA:37:U:OP1	12:AL:124:LYS:HB2	2.16	0.44
1:AA:233:C:O2'	1:AA:264:U:C2	2.70	0.44
1:AA:436:C:O2	1:AA:437:U:H1'	2.17	0.44
1:AA:826:C:O2'	8:AH:15:ASN:HB2	2.16	0.44
1:AA:848:G:HO3'	1:AA:849:C:P	2.38	0.44
1:AA:968:A:C5	1:AA:1062:U:O2'	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1060:C:C5	3:AC:2:GLY:HA3	2.52	0.44
1:AA:1231:G:C5'	9:AI:126:SER:OG	2.64	0.44
1:AA:1251:A:N1	1:AA:1354:C:O2'	2.46	0.44
1:AA:1289:A:H2'	1:AA:1290:G:H5'	2.00	0.44
1:AA:1329:A:C5'	13:AM:29:ARG:HD2	2.46	0.44
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.80	0.44
1:AA:1409:C:O2'	1:AA:1410:G:C5'	2.62	0.44
2:AB:32:ILE:HG21	2:AB:40:HIS:HD2	1.81	0.44
4:AD:24:GLU:CG	4:AD:25:ARG:H	2.31	0.44
4:AD:39:PRO:HG2	4:AD:44:GLY:HA2	1.97	0.44
4:AD:162:LEU:HD13	4:AD:181:MET:CG	2.42	0.44
9:AI:10:ARG:O	9:AI:11:LYS:C	2.60	0.44
11:AK:51:LYS:O	11:AK:55:LYS:CE	2.65	0.44
13:AM:80:ARG:NH2	19:AS:69:HIS:NE2	2.65	0.44
16:AP:6:LEU:HB3	16:AP:17:TYR:HD2	1.81	0.44
20:AT:24:LEU:HD12	20:AT:24:LEU:O	2.17	0.44
20:AT:72:LEU:O	20:AT:73:HIS:O	2.35	0.44
21:B0:40:U:H2'	21:B0:41:G:C8	2.52	0.44
21:B0:857:U:C2'	21:B0:858:G:H5'	2.48	0.44
21:B0:926:C:H2'	21:B0:927:C:H5'	1.99	0.44
21:B0:1055:A:C2	21:B0:1121:G:H2'	2.52	0.44
21:B0:1098:G:H22	21:B0:1113:C:N3	1.52	0.44
21:B0:1273:G:H2'	21:B0:1274:C:C6	2.52	0.44
21:B0:1367:A:H2'	21:B0:1368:G:O4'	2.17	0.44
21:B0:2474:G:O2'	21:B0:2475:C:H5'	2.17	0.44
21:B0:2560:G:H4'	21:B0:2561:G:N7	2.32	0.44
1:AA:113:G:H1'	1:AA:354:G:C5'	2.47	0.44
1:AA:356:A:HO2'	1:AA:368:U:HO2'	1.62	0.44
1:AA:1115:C:C1'	14:AN:61:TRP:HB2	2.47	0.44
1:AA:1301:U:O2'	1:AA:1302:U:P	2.74	0.44
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.50	0.44
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.16	0.44
3:AC:123:GLN:HE22	3:AC:140:ARG:NH2	2.16	0.44
4:AD:162:LEU:HD13	4:AD:181:MET:CE	2.46	0.44
5:AE:45:PHE:CD2	5:AE:47:LYS:HE3	2.52	0.44
13:AM:9:ILE:N	13:AM:9:ILE:HD12	2.31	0.44
13:AM:34:LEU:HD13	13:AM:41:PRO:CA	2.45	0.44
17:AQ:18:THR:HG23	17:AQ:69:LYS:CE	2.47	0.44
21:B0:431:G:H2'	21:B0:432:C:C6	2.53	0.44
21:B0:438:G:H2'	21:B0:439:C:C6	2.51	0.44
21:B0:455:A:H4'	21:B0:1214:C:O2'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:562:G:H2'	21:B0:563:U:O4'	2.17	0.44
21:B0:1436:G:H1'	21:B0:1508:G:N2	2.31	0.44
21:B0:2591:C:O2'	21:B0:2592:U:H5'	2.17	0.44
21:B0:2854:G:H3'	21:B0:2854:G:N3	2.33	0.44
1:AA:8:A:O4'	5:AE:102:ALA:HA	2.17	0.44
1:AA:19:C:C4	1:AA:916:G:O6	2.70	0.44
1:AA:45:U:H2'	1:AA:46:G:C8	2.53	0.44
1:AA:129(A):G:O2'	1:AA:130:A:OP2	2.28	0.44
1:AA:185:A:H2'	1:AA:186:C:H6	1.82	0.44
1:AA:389:A:H2'	1:AA:390:C:C5'	2.48	0.44
1:AA:397:A:H3'	1:AA:397:A:N3	2.32	0.44
1:AA:502:G:C1'	1:AA:550:G:C5'	2.78	0.44
1:AA:559:A:OP1	5:AE:126:ARG:NH1	2.50	0.44
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.52	0.44
1:AA:1250:A:H5''	9:AI:68:GLY:N	2.32	0.44
1:AA:1275:A:H2	1:AA:1282:C:O2'	2.00	0.44
1:AA:1394:A:N3	1:AA:1501:C:O4'	2.47	0.44
1:AA:1409:C:O2'	1:AA:1410:G:O4'	2.32	0.44
2:AB:8:LYS:HB2	2:AB:9:GLU:H	1.58	0.44
2:AB:107:THR:C	2:AB:109:SER:H	2.25	0.44
2:AB:223:ILE:HG21	2:AB:230:VAL:HG23	1.99	0.44
8:AH:116:LYS:NZ	8:AH:127:LEU:HD12	2.31	0.44
9:AI:85:LEU:O	9:AI:92:TYR:CD1	2.69	0.44
10:AJ:3:LYS:CA	10:AJ:75:ILE:HA	2.48	0.44
10:AJ:75:ILE:HG22	10:AJ:76:ASN:N	2.32	0.44
13:AM:84:ILE:C	13:AM:86:CYS:N	2.70	0.44
16:AP:75:ARG:O	16:AP:78:GLY:N	2.49	0.44
21:B0:457:C:O2'	21:B0:458:G:H5'	2.16	0.44
21:B0:763:A:H2'	21:B0:764:A:H5''	2.00	0.44
21:B0:788:G:H5'	21:B0:790:A:N3	2.32	0.44
21:B0:1408:A:H1'	21:B0:1410:U:C5	2.52	0.44
21:B0:1436:G:H2'	21:B0:1437:A:C8	2.51	0.44
21:B0:1667:A:H2'	21:B0:1668:G:H8	1.83	0.44
21:B0:1708:C:H2'	21:B0:1709:U:O4'	2.18	0.44
21:B0:1785:A:H2'	21:B0:1786:C:C6	2.52	0.44
21:B0:3877:A:H4'	21:B0:1861:G:C5'	2.42	0.44
21:B0:1938:U:O2'	21:B0:1939:U:OP1	2.28	0.44
21:B0:1956:G:H2'	21:B0:1957:C:O4'	2.17	0.44
1:AA:6:G:C6	5:AE:94:ALA:CB	3.00	0.44
1:AA:59:A:OP1	1:AA:60:A:H5''	2.17	0.44
1:AA:113:G:H5'	1:AA:354:G:O3'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:247:G:N2	1:AA:282:A:N3	2.46	0.44
1:AA:393:A:C2'	1:AA:394:G:H5'	2.47	0.44
1:AA:583:A:H2'	1:AA:584:G:O4'	2.17	0.44
1:AA:600:C:O2'	1:AA:601:C:H5'	2.17	0.44
1:AA:753:A:C2	8:AH:1:MET:HE2	2.52	0.44
1:AA:950:U:H2'	1:AA:951:G:C8	2.52	0.44
1:AA:962:C:H2'	1:AA:963:G:O4'	2.18	0.44
1:AA:970:C:C2	1:AA:1231:G:H1'	2.52	0.44
1:AA:1152:A:H5'	10:AJ:70:ARG:NH2	2.32	0.44
1:AA:1409:C:C5	1:AA:1410:G:N7	2.85	0.44
1:AA:1457:A:C8	1:AA:1459:C:C4	3.06	0.44
4:AD:8:VAL:HG11	4:AD:21:LEU:CB	2.47	0.44
5:AE:13:ILE:HG22	5:AE:30:ALA:HB2	1.99	0.44
6:AF:40:VAL:CG2	6:AF:41:GLU:N	2.80	0.44
10:AJ:30:SER:HB3	10:AJ:84:GLN:NE2	2.31	0.44
12:AL:117:ARG:HD2	12:AL:122:THR:OG1	2.17	0.44
19:AS:72:GLY:C	19:AS:74:PHE:H	2.25	0.44
21:B0:121:G:H2'	21:B0:122:G:O4'	2.18	0.44
21:B0:1023:U:H1'	21:B0:1154:A:C8	2.52	0.44
21:B0:1331:G:H2'	21:B0:1332:G:C8	2.52	0.44
21:B0:1452:U:H5''	21:B0:1533:G:H5'	2.00	0.44
21:B0:1659:G:H2'	21:B0:1660:G:C8	2.52	0.44
21:B0:1679:U:C2'	21:B0:1680:U:H5''	2.47	0.44
21:B0:2204:A:O2'	21:B0:2205:C:OP2	2.35	0.44
21:B0:2204:A:O2'	21:B0:2205:C:P	2.76	0.44
21:B0:2211:U:H2'	21:B0:2212:U:C6	2.52	0.44
21:B0:2312:A:H1'	21:B0:2314:A:C4	2.52	0.44
1:AA:132:C:H5''	20:AT:75:ASN:ND2	2.32	0.44
1:AA:394:G:N3	1:AA:395:C:C6	2.86	0.44
1:AA:926:G:N1	1:AA:1505:G:N7	2.64	0.44
1:AA:1353:G:H2'	1:AA:1354:C:H6	1.82	0.44
1:AA:1372:U:O2'	1:AA:1373:G:H5'	2.18	0.44
1:AA:1501:C:OP1	1:AA:1508:G:C4'	2.66	0.44
1:AA:1501:C:OP2	1:AA:1504:G:H2'	2.17	0.44
1:AA:1506:U:OP2	1:AA:1541:U:P	2.75	0.44
3:AC:6:HIS:CD2	3:AC:8:ILE:H	2.36	0.44
3:AC:123:GLN:HE22	3:AC:140:ARG:HH22	1.65	0.44
7:AG:38:LEU:HD11	7:AG:42:ILE:HD11	1.99	0.44
10:AJ:8:LEU:CD1	10:AJ:20:ALA:HB2	2.48	0.44
11:AK:95:ILE:HD13	11:AK:108:ILE:HG21	1.99	0.44
16:AP:51:VAL:O	16:AP:52:ASP:C	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:55:ARG:O	16:AP:58:TYR:HB3	2.17	0.44
20:AT:10:LEU:C	20:AT:12:ALA:N	2.76	0.44
21:B0:172:A:H4'	21:B0:228:A:H4'	2.00	0.44
21:B0:1226:A:C6	21:B0:1250:A:H1'	2.53	0.44
21:B0:1836:C:H2'	21:B0:1837:G:C8	2.53	0.44
22:B9:92:G:H2'	22:B9:93:G:H5'	1.99	0.44
1:AA:9:G:H8	5:AE:126:ARG:NH1	2.10	0.44
1:AA:113:G:N2	1:AA:353:A:C1'	2.80	0.44
1:AA:116:A:H2'	1:AA:117:G:O4'	2.18	0.44
1:AA:133:U:P	20:AT:74:LYS:HD3	2.57	0.44
1:AA:176:C:H2'	1:AA:177:C:H6	1.83	0.44
1:AA:253:U:H2'	1:AA:254:G:C8	2.53	0.44
1:AA:254:G:O2'	1:AA:255:G:H5'	2.17	0.44
1:AA:384:G:H2'	1:AA:385:C:C6	2.53	0.44
1:AA:540:G:H2'	1:AA:541:G:O4'	2.18	0.44
1:AA:564:C:C6	17:AQ:32:TYR:HE2	2.36	0.44
1:AA:1005:A:H2'	1:AA:1006:C:O4'	2.17	0.44
1:AA:1190:G:OP1	3:AC:4:LYS:CB	2.59	0.44
1:AA:1377:A:N3	7:AG:2:ALA:HB2	2.32	0.44
2:AB:92:TYR:CD1	2:AB:151:GLY:HA3	2.53	0.44
3:AC:99:VAL:HG22	3:AC:100:ALA:O	2.18	0.44
4:AD:90:GLY:H	5:AE:97:GLY:HA2	1.82	0.44
4:AD:178:VAL:O	4:AD:178:VAL:HG12	2.18	0.44
4:AD:200:GLU:OE1	4:AD:200:GLU:N	2.46	0.44
13:AM:7:VAL:O	13:AM:7:VAL:HG23	2.18	0.44
14:AN:12:ARG:O	14:AN:14:PRO:CD	2.65	0.44
18:AR:26:LEU:HD21	18:AR:39:VAL:HG23	2.00	0.44
20:AT:30:LYS:O	20:AT:33:ILE:HB	2.18	0.44
21:B0:354:C:H2'	21:B0:355:G:O4'	2.17	0.44
21:B0:460:U:N3	21:B0:592:G:H1'	2.33	0.44
21:B0:1373:G:H22	21:B0:2192:U:H3	1.65	0.44
21:B0:1927:U:H3'	21:B0:1928:G:H5'	2.00	0.44
21:B0:1999:U:H5''	21:B0:2041:A:OP1	2.18	0.44
21:B0:2316:G:H2'	21:B0:2317:G:C8	2.50	0.44
1:AA:59:A:N9	1:AA:331:G:N2	2.65	0.44
1:AA:112:G:HO2'	1:AA:113:G:H5'	1.82	0.44
1:AA:217:C:P	1:AA:468:A:C2	3.11	0.44
1:AA:288:A:C2'	1:AA:289:G:H4'	2.47	0.44
1:AA:702:A:H1'	21:B0:1839:A:OP1	2.17	0.44
1:AA:865:A:H2'	1:AA:866:C:C6	2.53	0.44
1:AA:913:A:O2'	1:AA:914:A:OP2	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:977:A:H2'	1:AA:978:A:C5'	2.46	0.44
1:AA:1004:A:H5''	1:AA:1025:U:C4	2.53	0.44
1:AA:1059:C:O2'	10:AJ:52:GLY:HA2	2.18	0.44
1:AA:1314:C:H2'	1:AA:1315:U:C6	2.53	0.44
1:AA:1410:G:N2	1:AA:1491:G:C2	2.85	0.44
2:AB:25:ASN:HD22	2:AB:27:LYS:H	1.65	0.44
7:AG:149:ARG:NH1	11:AK:59:TYR:CD1	2.84	0.44
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	1.99	0.44
8:AH:73:ASP:OD2	8:AH:75:ARG:HB2	2.18	0.44
8:AH:86:ILE:HD12	8:AH:133:LEU:HD22	2.00	0.44
11:AK:23:ALA:HB2	11:AK:91:ARG:HB2	2.00	0.44
13:AM:84:ILE:HG13	13:AM:86:CYS:HB2	2.00	0.44
14:AN:9:LYS:HG3	14:AN:21:TYR:O	2.17	0.44
14:AN:23:ARG:HD3	14:AN:30:ALA:HB2	2.00	0.44
16:AP:80:PHE:O	16:AP:81:ARG:C	2.60	0.44
18:AR:37:VAL:O	18:AR:41:LYS:HB3	2.18	0.44
20:AT:42:GLN:HA	20:AT:45:GLN:HB2	1.99	0.44
21:B0:117:A:O3'	21:B0:118:U:H3'	2.17	0.44
21:B0:242:A:O2'	21:B0:243:G:O4'	2.34	0.44
21:B0:415:A:O2'	21:B0:416:U:H5'	2.17	0.44
21:B0:432:C:H2'	21:B0:433:G:H8	1.83	0.44
21:B0:892:A:H1'	21:B0:911:A:N3	2.26	0.44
21:B0:956:A:H2'	21:B0:956:A:N3	2.32	0.44
21:B0:1118:G:O2'	21:B0:1119:U:H5'	2.17	0.44
21:B0:1279:G:C2'	21:B0:1280:U:OP2	2.66	0.44
21:B0:1292:A:H2'	21:B0:1293:A:C8	2.53	0.44
21:B0:1459:U:H2'	21:B0:1475:U:O2'	2.16	0.44
21:B0:1604:A:H2'	21:B0:1605:A:O4'	2.18	0.44
21:B0:1724:C:H2'	21:B0:1725:C:C6	2.53	0.44
21:B0:3872:A:H2'	21:B0:3873:G:H5'	2.00	0.44
21:B0:1882:G:H21	21:B0:1885:C:N4	2.16	0.44
21:B0:2057:U:H2'	21:B0:2058:U:C6	2.52	0.44
21:B0:2242:C:H42	21:B0:2257:A:N6	2.16	0.44
1:AA:21:G:H1'	1:AA:914:A:H61	1.82	0.44
1:AA:50:A:N6	1:AA:361:G:H4'	2.33	0.44
1:AA:70:A:C2'	1:AA:71:U:H5'	2.48	0.44
1:AA:132:C:O4'	1:AA:262:A:C4	2.71	0.44
1:AA:189:A:H62	20:AT:104:LEU:HA	1.83	0.44
1:AA:243:A:N6	1:AA:281:G:O2'	2.51	0.44
1:AA:267:C:H2'	1:AA:268:C:C6	2.53	0.44
1:AA:652:U:H2'	1:AA:752:G:N1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:702:A:N1	21:B0:1838:G:C3'	2.30	0.44
1:AA:761:G:C1'	17:AQ:104:LYS:O	2.65	0.44
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.82	0.44
1:AA:1501:C:P	1:AA:1508:G:H5'	2.58	0.44
1:AA:1503:A:O5'	1:AA:1531:A:C1'	2.50	0.44
2:AB:54:THR:O	2:AB:57:PHE:HB3	2.18	0.44
2:AB:187:LEU:HD21	2:AB:214:ILE:HG13	2.00	0.44
3:AC:29:TYR:CZ	10:AJ:65:LEU:CD1	3.01	0.44
3:AC:204:LEU:O	3:AC:205:GLY:C	2.59	0.44
4:AD:25:ARG:HH21	4:AD:30:LYS:HD3	1.82	0.44
4:AD:204:ILE:HG21	5:AE:98:THR:O	2.17	0.44
5:AE:64:ARG:O	5:AE:65:ASN:CB	2.60	0.44
10:AJ:27:ALA:CB	10:AJ:81:THR:HG23	2.47	0.44
10:AJ:49:VAL:HG13	14:AN:41:ARG:CB	2.35	0.44
10:AJ:81:THR:C	10:AJ:83:GLU:N	2.76	0.44
11:AK:50:TYR:N	11:AK:50:TYR:CD2	2.84	0.44
12:AL:7:ILE:O	12:AL:11:VAL:HG23	2.18	0.44
15:AO:39:LEU:HD12	15:AO:59:MET:CE	2.48	0.44
17:AQ:104:LYS:O	17:AQ:105:ALA:CB	2.65	0.44
20:AT:100:ILE:O	20:AT:102:GLY:N	2.50	0.44
21:B0:114:C:H4'	21:B0:124:A:O2'	2.17	0.44
21:B0:539:A:N6	21:B0:2024:U:H3	2.11	0.44
21:B0:548:G:H2'	21:B0:549:G:C8	2.53	0.44
21:B0:736:G:H2'	21:B0:737:C:O4'	2.17	0.44
21:B0:875:G:H2'	21:B0:876:A:O4'	2.18	0.44
21:B0:1288:A:H2'	21:B0:1289:A:O4'	2.17	0.44
21:B0:1326:U:H1'	21:B0:1626:A:N3	2.33	0.44
21:B0:1703:C:H2'	21:B0:1704:G:O4'	2.17	0.44
21:B0:1915:A:H62	21:B0:1951:G:N2	2.09	0.44
21:B0:3116:G:O3'	21:B0:3117:A:O4'	2.36	0.44
21:B0:2193:C:H2'	21:B0:2194:A:O4'	2.18	0.44
21:B0:2439:U:H2'	21:B0:2440:C:H5'	1.99	0.44
1:AA:59:A:C5'	1:AA:60:A:H5''	2.48	0.44
1:AA:197:A:H1'	1:AA:198:G:O4'	2.17	0.44
1:AA:351:G:O2'	1:AA:352:C:OP1	2.25	0.44
1:AA:383:A:H2'	1:AA:384:G:H5'	1.99	0.44
1:AA:974:A:P	14:AN:29:ARG:NH2	2.89	0.44
1:AA:1053:G:O2'	1:AA:1199:U:H5	2.01	0.44
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.33	0.44
1:AA:1190:G:H4'	1:AA:1191:A:H5'	1.98	0.44
1:AA:1250:A:C4'	9:AI:68:GLY:N	2.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:P	19:AS:70:LYS:HZ2	2.41	0.44
1:AA:1422:G:OP1	31:BI:60:PRO:CA	2.66	0.44
1:AA:1503:A:N9	1:AA:1531:A:N3	2.66	0.44
2:AB:10:LEU:CD2	2:AB:48:MET:HE2	2.48	0.44
2:AB:17:PHE:H	2:AB:44:LEU:HD21	1.83	0.44
3:AC:113:ALA:N	3:AC:114:PRO:CD	2.80	0.44
5:AE:105:VAL:HB	5:AE:106:PRO:CD	2.40	0.44
14:AN:29:ARG:HB3	14:AN:40:CYS:HB3	1.99	0.44
16:AP:20:VAL:HG13	16:AP:32:TYR:HB2	2.00	0.44
19:AS:10:PHE:C	19:AS:10:PHE:HD2	2.26	0.44
20:AT:50:GLU:HG2	20:AT:100:ILE:CG1	2.47	0.44
20:AT:96:GLY:O	20:AT:97:ALA:CB	2.66	0.44
21:B0:181:A:C4'	21:B0:182:G:H4'	2.44	0.44
21:B0:192:G:O2'	21:B0:193:A:OP2	2.33	0.44
21:B0:529:U:H2'	21:B0:530:G:C8	2.53	0.44
21:B0:839:U:H5'	21:B0:2407:G:H2'	2.00	0.44
21:B0:1033:G:N2	21:B0:1150:C:H2'	2.30	0.44
21:B0:1113:C:O3'	21:B0:1114:A:P	2.75	0.44
21:B0:1188:A:H62	21:B0:1189:G:H21	1.66	0.44
21:B0:1313:U:H4'	21:B0:1314:A:O5'	2.18	0.44
21:B0:2022:C:H2'	21:B0:2023:C:C6	2.53	0.44
21:B0:2343:C:H2'	21:B0:2344:G:O4'	2.18	0.44
1:AA:6:G:H2'	5:AE:119:LEU:HD11	1.99	0.43
1:AA:94:G:C6	1:AA:96:C:N4	2.84	0.43
1:AA:137:C:O2'	1:AA:138:G:H5'	2.17	0.43
1:AA:227:G:C2	1:AA:228:A:C1'	3.01	0.43
1:AA:335:C:O2	1:AA:1433:A:N3	2.51	0.43
1:AA:500:G:O2'	1:AA:548:G:N2	2.51	0.43
1:AA:1190:G:C3'	3:AC:3:ASN:HB2	2.37	0.43
1:AA:1231:G:C4'	9:AI:126:SER:OG	2.66	0.43
1:AA:1299:A:C8	1:AA:1301:U:H1'	2.53	0.43
2:AB:107:THR:C	2:AB:109:SER:N	2.75	0.43
2:AB:146:GLN:O	2:AB:150:SER:HB3	2.18	0.43
4:AD:3:ARG:HA	4:AD:3:ARG:HD3	1.78	0.43
5:AE:36:ASP:OD2	5:AE:40:ARG:HD3	2.18	0.43
6:AF:15:ASP:O	6:AF:16:GLN:C	2.61	0.43
7:AG:24:THR:HA	7:AG:27:ILE:HD12	2.00	0.43
7:AG:38:LEU:HD12	7:AG:42:ILE:HG13	2.00	0.43
9:AI:97:LYS:HG3	9:AI:102:LEU:HD12	1.96	0.43
21:B0:10:A:O2'	21:B0:11:G:H5'	2.18	0.43
21:B0:35:G:C1'	21:B0:466:A:H1'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:197:G:N2	21:B0:440:U:H2'	2.33	0.43
21:B0:198:A:H4'	21:B0:199:A:OP2	2.17	0.43
21:B0:207:U:H2'	21:B0:208:C:C6	2.52	0.43
21:B0:758:G:O2'	21:B0:761:G:H1'	2.18	0.43
21:B0:891:A:N1	21:B0:893:G:C6	2.86	0.43
21:B0:1259:A:H2'	21:B0:1260:A:C8	2.53	0.43
21:B0:1664:G:O5'	21:B0:1665:C:OP1	2.36	0.43
21:B0:2033:C:H2'	21:B0:2034:A:O4'	2.17	0.43
21:B0:2065:A:H2'	21:B0:2066:G:O4'	2.18	0.43
21:B0:3128:G:H4'	21:B0:3174:C:H1'	1.97	0.43
21:B0:2265:A:H5''	21:B0:2266:A:O4'	2.18	0.43
1:AA:114:U:O4'	1:AA:353:A:O4'	2.35	0.43
1:AA:184:G:C4'	1:AA:224:C:H4'	2.48	0.43
1:AA:262:A:H4'	20:AT:74:LYS:HB3	2.00	0.43
1:AA:430:A:H2'	1:AA:431:A:H5'	1.99	0.43
1:AA:433:C:O2'	1:AA:434:U:H5'	2.18	0.43
1:AA:858:G:O2'	1:AA:859:A:H5'	2.18	0.43
1:AA:961:U:C2'	1:AA:962:C:H5'	2.48	0.43
1:AA:1128:C:H4'	9:AI:16:ARG:NH1	2.33	0.43
1:AA:1229:A:H2'	1:AA:1230:C:H6	1.84	0.43
1:AA:1255:G:H22	1:AA:1276:G:H21	1.56	0.43
1:AA:1279:A:O2'	1:AA:1281:U:OP2	2.33	0.43
1:AA:1300:G:O2'	1:AA:1301:U:C6	2.70	0.43
1:AA:1398:A:C6	5:AE:21:ALA:HA	2.49	0.43
2:AB:100:GLY:O	2:AB:104:ASN:N	2.44	0.43
3:AC:11:ARG:O	3:AC:14:ILE:O	2.36	0.43
3:AC:12:LEU:HA	3:AC:12:LEU:HD23	1.76	0.43
3:AC:47:LEU:H	3:AC:47:LEU:HD13	1.83	0.43
3:AC:95:THR:C	3:AC:97:LYS:N	2.73	0.43
3:AC:134:ILE:HG22	3:AC:168:ALA:CB	2.48	0.43
3:AC:188:LEU:HD13	3:AC:189:ALA:H	1.83	0.43
6:AF:75:LEU:O	6:AF:75:LEU:HD13	2.18	0.43
7:AG:145:ALA:C	7:AG:147:ALA:H	2.25	0.43
8:AH:16:ALA:O	8:AH:21:LYS:HG2	2.18	0.43
11:AK:69:ALA:O	11:AK:70:LYS:C	2.60	0.43
13:AM:22:ILE:HD12	13:AM:25:ILE:CD1	2.41	0.43
13:AM:110:ARG:HH11	13:AM:110:ARG:CG	2.31	0.43
15:AO:82:ILE:O	15:AO:83:GLU:C	2.61	0.43
21:B0:109:A:H2'	21:B0:110:U:H5''	2.00	0.43
21:B0:167:A:H62	21:B0:183:U:H3	1.66	0.43
21:B0:243:G:H2'	21:B0:244:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:583:C:N3	21:B0:2016:A:H4'	2.32	0.43
21:B0:860:U:H2'	21:B0:860:U:O2	2.17	0.43
21:B0:925:U:H5''	21:B0:926:C:OP1	2.18	0.43
21:B0:944:A:H2'	21:B0:945:G:O4'	2.17	0.43
21:B0:1014:G:O2'	21:B0:1015:U:H5'	2.17	0.43
21:B0:1054:C:H2'	21:B0:1055:A:H5'	2.00	0.43
21:B0:1065:A:O2'	21:B0:1066:G:H5'	2.19	0.43
21:B0:1258:G:H2'	21:B0:1259:A:C8	2.52	0.43
21:B0:1283:C:OP1	21:B0:1284:G:H5'	2.17	0.43
21:B0:1358:C:C2'	21:B0:1359:G:H5''	2.48	0.43
21:B0:1429:A:H1'	21:B0:1603:A:C6	2.53	0.43
21:B0:1819:U:H5''	21:B0:1954:A:O3'	2.18	0.43
21:B0:3871:A:H2'	21:B0:3872:A:C8	2.54	0.43
21:B0:1871:G:H2'	21:B0:1871:G:N3	2.33	0.43
21:B0:2069:U:H2'	21:B0:2070:G:C8	2.53	0.43
21:B0:2469:G:H4'	21:B0:2470:U:C6	2.54	0.43
21:B0:2498:U:H3'	21:B0:2498:U:OP1	2.17	0.43
21:B0:2680:U:H3'	21:B0:2681:A:C5'	2.43	0.43
21:B0:2867:G:H3'	21:B0:2867:G:N3	2.32	0.43
1:AA:205:G:N2	1:AA:207:C:H41	2.15	0.43
1:AA:235:C:C4'	17:AQ:70:ARG:CB	2.96	0.43
1:AA:236:G:C5'	17:AQ:42:TYR:CE2	2.80	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.18	0.43
1:AA:451:A:N6	1:AA:480:U:H2'	2.33	0.43
1:AA:538:G:OP1	12:AL:115:LYS:HB2	2.18	0.43
1:AA:640:A:C2'	1:AA:641:U:H5'	2.48	0.43
1:AA:1261:A:C1'	1:AA:1283:G:C4'	2.75	0.43
1:AA:1458:G:C4	1:AA:1459:C:O2	2.72	0.43
3:AC:28:GLN:O	3:AC:29:TYR:C	2.62	0.43
3:AC:191:THR:HG21	3:AC:193:TYR:CE1	2.53	0.43
5:AE:31:LEU:HD23	5:AE:31:LEU:HA	1.74	0.43
6:AF:22:GLU:OE2	6:AF:84:ASN:HB2	2.18	0.43
8:AH:103:VAL:HG21	8:AH:109:ILE:O	2.18	0.43
11:AK:77:MET:CE	11:AK:80:VAL:HG22	2.48	0.43
15:AO:54:ARG:O	15:AO:58:MET:HG3	2.17	0.43
18:AR:25:THR:O	18:AR:25:THR:HG22	2.17	0.43
20:AT:10:LEU:C	20:AT:12:ALA:H	2.26	0.43
21:B0:712:A:H61	21:B0:746:G:H1'	1.83	0.43
21:B0:792:U:H2'	21:B0:793:G:O4'	2.19	0.43
21:B0:1482:U:H2'	21:B0:1483:G:C8	2.53	0.43
21:B0:1881:U:H2'	21:B0:1882:G:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1923:U:H1'	21:B0:1947:G:H4'	1.99	0.43
21:B0:2011:U:H2'	21:B0:2012:A:H8	1.83	0.43
1:AA:16:A:O2'	1:AA:17:U:H5'	2.18	0.43
1:AA:501:C:H5'	1:AA:548:G:H22	1.83	0.43
1:AA:529:G:O6	12:AL:49:ASN:ND2	2.51	0.43
1:AA:560:U:N3	5:AE:123:LEU:CD1	2.81	0.43
1:AA:675:A:O2'	11:AK:114:VAL:O	2.36	0.43
1:AA:738:C:O4'	6:AF:73:ASN:ND2	2.51	0.43
1:AA:1128:C:C4'	9:AI:16:ARG:NH1	2.81	0.43
1:AA:1394:A:N9	1:AA:1501:C:O2'	2.51	0.43
2:AB:17:PHE:CA	2:AB:44:LEU:HD21	2.49	0.43
2:AB:119:GLU:OE1	2:AB:153:ARG:NH2	2.51	0.43
3:AC:8:ILE:O	3:AC:11:ARG:N	2.47	0.43
3:AC:14:ILE:O	3:AC:15:THR:C	2.61	0.43
4:AD:55:ALA:O	4:AD:59:ARG:HG2	2.19	0.43
4:AD:104:VAL:O	4:AD:105:VAL:C	2.59	0.43
5:AE:24:ARG:HG2	5:AE:24:ARG:NH1	2.32	0.43
8:AH:114:THR:C	8:AH:116:LYS:N	2.75	0.43
10:AJ:46:ARG:HH11	10:AJ:64:GLU:CG	2.31	0.43
10:AJ:68:HIS:N	10:AJ:68:HIS:CD2	2.85	0.43
11:AK:32:ILE:HG21	11:AK:77:MET:HE2	2.01	0.43
11:AK:100:ALA:O	11:AK:102:GLY:N	2.51	0.43
12:AL:111:LYS:O	12:AL:112:ASP:HB2	2.18	0.43
13:AM:23:TYR:CE2	13:AM:70:LEU:HD13	2.53	0.43
13:AM:93:ARG:CB	21:B0:900(A):A:P	3.07	0.43
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	2.00	0.43
18:AR:58:LEU:HD22	18:AR:62:GLU:HB3	1.99	0.43
20:AT:63:ILE:HD13	20:AT:80:ARG:CB	2.48	0.43
21:B0:437:G:O2'	21:B0:438:G:H5'	2.19	0.43
21:B0:826:U:H2'	21:B0:827:C:C6	2.53	0.43
21:B0:1196:G:C2'	21:B0:1197:U:H5'	2.48	0.43
21:B0:1257:U:H2'	21:B0:1258:G:C8	2.53	0.43
21:B0:1722:G:H2'	21:B0:1723:U:C6	2.54	0.43
1:AA:227:G:H2'	1:AA:228:A:O4'	2.19	0.43
1:AA:319:G:H5'	1:AA:1468:A:H5'	2.01	0.43
1:AA:1181:G:O2'	1:AA:1182:G:H5'	2.19	0.43
1:AA:1347:G:O6	9:AI:107:ARG:NH2	2.42	0.43
1:AA:1353:G:H2'	1:AA:1354:C:C6	2.54	0.43
1:AA:1405:G:C1'	1:AA:1519:A:O4'	2.21	0.43
2:AB:83:MET:HG3	2:AB:238:LEU:HD11	2.00	0.43
3:AC:191:THR:HB	3:AC:194:GLY:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:10:ARG:HH11	4:AD:10:ARG:HG3	1.83	0.43
4:AD:24:GLU:HG2	4:AD:25:ARG:H	1.82	0.43
4:AD:89:THR:O	4:AD:90:GLY:C	2.61	0.43
5:AE:21:ALA:C	5:AE:23:GLY:N	2.77	0.43
5:AE:40:ARG:NH1	5:AE:68:GLU:OE1	2.51	0.43
9:AI:103:THR:HG22	9:AI:104:ARG:N	2.31	0.43
13:AM:84:ILE:HD12	19:AS:66:MET:HB3	2.01	0.43
15:AO:87:ILE:HG22	15:AO:88:ARG:N	2.34	0.43
16:AP:20:VAL:CG1	16:AP:32:TYR:CB	2.95	0.43
21:B0:48:A:H4'	21:B0:50:G:O4'	2.18	0.43
21:B0:815:A:P	21:B0:815:A:H8	2.42	0.43
21:B0:1310:C:OP1	21:B0:2689:C:H4'	2.18	0.43
21:B0:1482:U:H2'	21:B0:1483:G:H8	1.83	0.43
21:B0:2035:G:H2'	21:B0:2036:G:C8	2.52	0.43
21:B0:2259:G:H2'	21:B0:2260:C:C6	2.53	0.43
21:B0:2378:G:H2'	21:B0:2379:G:H8	1.83	0.43
21:B0:2404:A:O2'	21:B0:2405:A:OP2	2.29	0.43
21:B0:2559:U:C2'	21:B0:2560:G:H5'	2.49	0.43
21:B0:2636:A:H62	21:B0:2643:G:N2	2.09	0.43
1:AA:216:C:H5''	1:AA:466:A:N1	2.30	0.43
1:AA:375:U:C4	1:AA:376:G:C5	3.06	0.43
1:AA:489:C:H2'	1:AA:490:G:C8	2.54	0.43
1:AA:782:A:H2'	1:AA:783:C:O4'	2.19	0.43
1:AA:921:U:H4'	1:AA:1082:G:OP1	2.18	0.43
1:AA:1060:C:O2'	1:AA:1061:G:H5'	2.18	0.43
1:AA:1367:C:H5''	9:AI:114:TYR:HB3	1.97	0.43
2:AB:14:GLY:C	2:AB:15:VAL:HG23	2.44	0.43
2:AB:28:PHE:CD2	2:AB:190:THR:HA	2.54	0.43
2:AB:43:ASP:C	2:AB:43:ASP:OD1	2.61	0.43
2:AB:124:SER:CB	2:AB:125:PRO:CD	2.90	0.43
4:AD:8:VAL:CG1	4:AD:21:LEU:HD13	2.48	0.43
4:AD:120:LEU:HD23	4:AD:125:HIS:CD2	2.54	0.43
5:AE:6:PHE:CZ	5:AE:66:MET:HE2	2.53	0.43
7:AG:78:ARG:HG2	7:AG:80:VAL:HG23	1.99	0.43
11:AK:54:ARG:H	11:AK:54:ARG:HG2	1.47	0.43
11:AK:98:LEU:HD23	11:AK:98:LEU:HA	1.82	0.43
17:AQ:97:SER:O	17:AQ:98:LEU:HD12	2.19	0.43
19:AS:8:GLY:O	19:AS:9:VAL:C	2.62	0.43
21:B0:45:C:H2'	21:B0:46:C:C6	2.53	0.43
21:B0:69:G:O2'	21:B0:70:A:H4'	2.17	0.43
21:B0:491:A:H2'	21:B0:491:A:N3	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:931:G:N2	21:B0:2247:A:H5''	2.34	0.43
21:B0:969:U:O2'	21:B0:970:A:H5''	2.18	0.43
21:B0:1119:U:P	21:B0:1120:C:OP2	2.76	0.43
21:B0:1391:A:H2'	21:B0:1392:U:C5	2.54	0.43
21:B0:1424:U:H2'	21:B0:1425:G:C8	2.53	0.43
21:B0:1938:U:H3'	21:B0:2530:C:O2'	2.19	0.43
21:B0:2241:U:H4'	21:B0:2307:A:C2	2.54	0.43
21:B0:2436:U:H2'	21:B0:2437:G:O4'	2.18	0.43
21:B0:2586:G:H2'	21:B0:2587:G:O4'	2.19	0.43
1:AA:7:G:H21	5:AE:121:LYS:CG	2.27	0.43
1:AA:15:G:C1'	5:AE:24:ARG:NH1	2.82	0.43
1:AA:157:G:O2'	1:AA:158:G:H5'	2.19	0.43
1:AA:160:A:H2'	1:AA:161:A:O4'	2.18	0.43
1:AA:564:C:H5'	12:AL:10:LEU:HD13	2.01	0.43
1:AA:836:G:OP1	18:AR:61:LYS:HD2	2.19	0.43
1:AA:961:U:OP1	1:AA:1223:C:C1'	2.67	0.43
1:AA:1010:G:O2'	1:AA:1011:G:H5'	2.18	0.43
1:AA:1125:U:H5''	1:AA:1126:U:H5	1.83	0.43
1:AA:1131:G:H2'	1:AA:1132:C:H6	1.82	0.43
1:AA:1157:A:O4'	1:AA:1158:C:C2	2.72	0.43
1:AA:1230:C:H1'	13:AM:125:ARG:O	2.19	0.43
1:AA:1231:G:O3'	9:AI:126:SER:CB	2.67	0.43
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.19	0.43
1:AA:1474:G:H4'	21:B0:1717:A:N6	2.33	0.43
1:AA:1517:G:N2	21:B0:1902:A:HO2'	2.16	0.43
1:AA:1533:C:O2	1:AA:1533:C:H2'	2.17	0.43
2:AB:41:ILE:O	2:AB:41:ILE:HG22	2.19	0.43
5:AE:80:ILE:HD12	5:AE:80:ILE:H	1.84	0.43
7:AG:148:ASN:C	7:AG:150:ALA:H	2.26	0.43
15:AO:78:TYR:CE2	15:AO:82:ILE:HD11	2.53	0.43
20:AT:63:ILE:HD13	20:AT:80:ARG:HB3	2.01	0.43
21:B0:211:U:O2'	21:B0:212:U:H5'	2.19	0.43
21:B0:217:U:H5'	21:B0:633:G:O2'	2.18	0.43
21:B0:540:G:N7	21:B0:2018:G:H4'	2.33	0.43
21:B0:941:U:H2'	21:B0:942:U:C6	2.54	0.43
21:B0:1329:U:H2'	21:B0:1330:G:C8	2.54	0.43
21:B0:1401:G:H2'	21:B0:1402:G:H8	1.83	0.43
21:B0:1856:U:H5''	21:B0:3865:A:P	2.52	0.43
21:B0:3876:A:C4	53:B5:45:ASP:CA	3.02	0.43
21:B0:2055:G:H2'	21:B0:2056:C:C6	2.54	0.43
22:B9:35:C:H2'	22:B9:36:A:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:59:A:H2'	1:AA:331:G:N1	2.33	0.43
1:AA:315:A:C4'	1:AA:353:A:H61	2.25	0.43
1:AA:456:A:C6	1:AA:477:G:N3	2.86	0.43
1:AA:1051:C:H2'	1:AA:1052:U:C6	2.53	0.43
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.52	0.43
1:AA:1485:U:P	21:B0:1943:A:O3'	2.77	0.43
2:AB:16:HIS:CE1	2:AB:210:SER:HG	2.37	0.43
2:AB:73:THR:O	2:AB:74:LYS:C	2.61	0.43
3:AC:70:VAL:O	3:AC:106:VAL:N	2.51	0.43
3:AC:112:SER:HB2	3:AC:115:LEU:HB2	2.01	0.43
3:AC:139:GLN:O	3:AC:140:ARG:C	2.62	0.43
9:AI:78:LYS:HD3	9:AI:101:PHE:CD2	2.54	0.43
12:AL:115:LYS:C	12:AL:117:ARG:H	2.25	0.43
14:AN:12:ARG:C	14:AN:14:PRO:HD3	2.44	0.43
17:AQ:104:LYS:CB	21:B0:726:G:N3	2.82	0.43
19:AS:3:ARG:O	19:AS:4:SER:HB3	2.18	0.43
20:AT:86:ARG:O	20:AT:87:LYS:C	2.62	0.43
21:B0:70:A:OP2	21:B0:111:G:H4'	2.19	0.43
21:B0:798:G:C2'	21:B0:799:C:H5'	2.48	0.43
21:B0:892:A:C4	21:B0:911:A:N1	2.87	0.43
21:B0:1429:A:O2'	21:B0:1430:G:H4'	2.19	0.43
21:B0:1634:A:O2'	21:B0:1635:G:OP1	2.29	0.43
21:B0:2426:G:C5'	21:B0:2480:C:H41	2.28	0.43
21:B0:2468:G:H2'	21:B0:2469:G:O4'	2.19	0.43
21:B0:2728:A:H2'	21:B0:2729:A:O4'	2.18	0.43
1:AA:173:U:O4'	1:AA:197:A:C5	2.71	0.43
1:AA:370:C:C2'	1:AA:371:G:H5'	2.48	0.43
1:AA:618:C:N3	1:AA:622:A:N6	2.67	0.43
1:AA:813:U:HO2'	1:AA:1511:G:HO2'	1.64	0.43
1:AA:818:G:H3'	1:AA:819:A:H5'	2.01	0.43
1:AA:932:C:H5''	7:AG:3:ARG:HD3	2.01	0.43
1:AA:958:A:C6	19:AS:55:LYS:HB3	2.53	0.43
1:AA:1262:C:H2'	1:AA:1263:C:C6	2.54	0.43
1:AA:1329:A:O3'	13:AM:25:ILE:CA	2.49	0.43
1:AA:1458:G:N9	1:AA:1459:C:O2	2.52	0.43
4:AD:127:THR:HG23	4:AD:128:VAL:N	2.34	0.43
5:AE:115:VAL:CG1	5:AE:116:THR:N	2.82	0.43
15:AO:29:VAL:HG11	15:AO:67:LEU:HD21	2.00	0.43
17:AQ:45:HIS:CD2	17:AQ:47:PRO:HG3	2.54	0.43
17:AQ:104:LYS:HB3	17:AQ:105:ALA:H	1.48	0.43
19:AS:12:ASP:HB2	19:AS:35:SER:OG	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:57:ARG:HE	20:AT:100:ILE:HG21	1.84	0.43
21:B0:873:U:O2	21:B0:2246:A:H5''	2.18	0.43
21:B0:1393:G:O2'	21:B0:1394:G:H5'	2.19	0.43
21:B0:1561:A:H2'	21:B0:1562:G:O4'	2.19	0.43
21:B0:2424:G:H2'	21:B0:2425:G:O4'	2.19	0.43
1:AA:409:G:H2'	1:AA:410:G:O4'	2.18	0.43
1:AA:409:G:OP1	4:AD:24:GLU:O	2.36	0.43
1:AA:628:G:H2'	1:AA:629:G:H8	1.84	0.43
1:AA:1137:C:H4'	1:AA:1138:G:N1	2.33	0.43
1:AA:1342:C:C4'	9:AI:125:TYR:CE1	3.00	0.43
1:AA:1438:G:H2'	1:AA:1439:C:C6	2.54	0.43
2:AB:74:LYS:HD2	2:AB:166:ASP:HB2	2.00	0.43
2:AB:88:ALA:C	2:AB:90:MET:N	2.71	0.43
4:AD:15:GLU:C	4:AD:17:VAL:N	2.76	0.43
4:AD:198:VAL:HG12	4:AD:199:ASN:N	2.34	0.43
4:AD:205:GLU:HB3	5:AE:107:ARG:HH21	1.83	0.43
9:AI:50:LEU:C	9:AI:52:ALA:H	2.26	0.43
11:AK:21:ILE:HD12	11:AK:95:ILE:HG12	2.00	0.43
11:AK:93:GLN:NE2	11:AK:96:ARG:NH2	2.67	0.43
21:B0:114:C:H2'	21:B0:115:G:O4'	2.19	0.43
21:B0:170:U:H2'	21:B0:171:G:H8	1.84	0.43
21:B0:572:G:H2'	21:B0:573:C:C6	2.54	0.43
21:B0:635:C:H2'	21:B0:636:G:H5''	2.00	0.43
21:B0:738:G:H2'	21:B0:739:G:O4'	2.18	0.43
21:B0:765:C:O2'	21:B0:766:A:O4'	2.36	0.43
21:B0:1039:A:H2'	21:B0:1040:A:C8	2.54	0.43
21:B0:1411:C:O5'	21:B0:1411:C:H6	2.02	0.43
21:B0:1466:C:H2'	21:B0:1467:U:O4'	2.19	0.43
21:B0:2204:A:H1'	21:B0:2205:C:C5	2.53	0.43
21:B0:2475:C:C2'	21:B0:2476:A:H5'	2.49	0.43
21:B0:2572:U:H2'	21:B0:2573:C:C6	2.54	0.43
22:B9:108:G:O2'	22:B9:109:G:H5'	2.19	0.43
1:AA:15:G:N3	5:AE:19:MET:CG	2.82	0.42
1:AA:730:G:C5	1:AA:731:G:H1'	2.54	0.42
1:AA:778:G:O2'	1:AA:779:C:H5'	2.19	0.42
1:AA:991:U:O2	1:AA:993:G:H8	2.02	0.42
1:AA:1126:U:H2'	1:AA:1127:G:O4'	2.19	0.42
1:AA:1135:U:O5'	1:AA:1135:U:H6	2.01	0.42
1:AA:1263:C:H2'	1:AA:1264:C:H6	1.83	0.42
1:AA:1268:A:H1'	1:AA:1326:C:O2'	2.19	0.42
1:AA:1346:A:C2'	7:AG:10:ARG:NH2	2.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	2.00	0.42
2:AB:137:ARG:HA	2:AB:140:HIS:HD2	1.84	0.42
3:AC:82:GLU:CD	3:AC:82:GLU:C	2.87	0.42
4:AD:60:GLU:OE1	4:AD:60:GLU:HA	2.19	0.42
7:AG:38:LEU:HD12	7:AG:38:LEU:C	2.44	0.42
9:AI:69:GLY:O	9:AI:73:GLN:HG3	2.18	0.42
9:AI:106:ALA:O	9:AI:108:VAL:HG23	2.19	0.42
10:AJ:96:ILE:CG2	10:AJ:97:GLU:H	2.25	0.42
12:AL:41:ARG:HB3	12:AL:41:ARG:HH11	1.84	0.42
14:AN:23:ARG:C	14:AN:33:VAL:HG11	2.43	0.42
17:AQ:60:ILE:HD13	17:AQ:61:GLU:N	2.34	0.42
20:AT:42:GLN:O	20:AT:46:GLU:HG3	2.19	0.42
21:B0:689:A:C2'	21:B0:690:A:H5'	2.48	0.42
21:B0:744:C:H2'	21:B0:745:C:C6	2.54	0.42
21:B0:842:A:H5'	21:B0:844:G:C5	2.54	0.42
21:B0:1307:U:H2'	21:B0:1308:C:O4'	2.19	0.42
21:B0:1429:A:N6	21:B0:1602:G:H5'	2.34	0.42
21:B0:2455:A:C2'	21:B0:2456:U:H5'	2.49	0.42
21:B0:2625:U:H2'	21:B0:2626:U:O4'	2.18	0.42
1:AA:42:G:H21	1:AA:622:A:H2	1.66	0.42
1:AA:418:C:H2'	1:AA:419:C:C6	2.54	0.42
1:AA:714:G:H4'	1:AA:776:G:H5'	2.01	0.42
1:AA:854:G:H3'	1:AA:871:U:O4	2.19	0.42
1:AA:974:A:OP1	1:AA:974:A:H8	2.03	0.42
1:AA:1158:C:N3	1:AA:1181:G:N2	2.61	0.42
1:AA:1393:U:C2	1:AA:1395:C:N4	2.87	0.42
1:AA:1483:A:N3	1:AA:1484:C:C6	2.87	0.42
4:AD:157:LEU:CD2	4:AD:161:ASN:ND2	2.74	0.42
6:AF:100:ASN:ND2	18:AR:23:LYS:O	2.52	0.42
11:AK:85:ARG:HG3	11:AK:85:ARG:NH1	2.34	0.42
12:AL:27:LEU:O	12:AL:28:LYS:C	2.63	0.42
12:AL:41:ARG:CB	12:AL:41:ARG:NH1	2.82	0.42
12:AL:55:VAL:CG1	12:AL:67:THR:CG2	2.97	0.42
15:AO:15:PHE:O	15:AO:16:ALA:C	2.61	0.42
17:AQ:59:ILE:CG2	17:AQ:71:PHE:CD1	3.02	0.42
17:AQ:104:LYS:NZ	21:B0:726:G:H1	2.09	0.42
18:AR:26:LEU:CD1	18:AR:27:GLY:H	2.29	0.42
19:AS:40:ILE:HG23	19:AS:44:MET:SD	2.59	0.42
21:B0:220:U:H2'	21:B0:221:A:O4'	2.19	0.42
21:B0:796:A:C2	21:B0:798:G:H1'	2.54	0.42
21:B0:1292:A:H2'	21:B0:1293:A:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1626:A:H5''	21:B0:1627:C:OP2	2.19	0.42
21:B0:1788:C:H2'	21:B0:1789:U:C6	2.54	0.42
21:B0:1975:G:H4'	21:B0:1976:U:C5	2.53	0.42
21:B0:1982:C:H2'	21:B0:1983:G:C8	2.52	0.42
21:B0:3185:U:H2'	21:B0:3186:C:O4'	2.19	0.42
21:B0:2204:A:H4'	21:B0:2205:C:O4'	2.19	0.42
21:B0:2404:A:OP1	21:B0:2406:C:H5'	2.18	0.42
21:B0:2426:G:O2'	21:B0:2427:A:OP2	2.32	0.42
21:B0:2504:G:H2'	21:B0:2505:G:H8	1.83	0.42
21:B0:2639:A:H2'	21:B0:2640:G:O4'	2.20	0.42
1:AA:762:C:C4'	21:B0:729:A:N6	2.54	0.42
1:AA:942:G:H2'	1:AA:943:U:H6	1.85	0.42
1:AA:977:A:C8	1:AA:1223:C:N4	2.87	0.42
1:AA:1016:A:C5'	14:AN:15:LYS:CE	2.75	0.42
1:AA:1195:C:H3'	1:AA:1196:U:H5''	2.01	0.42
1:AA:1221:G:O3'	19:AS:77:THR:HG21	2.20	0.42
1:AA:1228:C:H4'	13:AM:116:THR:HA	2.02	0.42
1:AA:1489:G:H2'	1:AA:1490:C:C5'	2.27	0.42
3:AC:50:ALA:O	3:AC:70:VAL:CG1	2.67	0.42
5:AE:16:THR:HG23	5:AE:27:ARG:O	2.19	0.42
7:AG:31:MET:SD	7:AG:34:GLY:HA2	2.59	0.42
9:AI:56:LEU:O	9:AI:58:ARG:N	2.49	0.42
9:AI:111:ARG:HD3	9:AI:111:ARG:C	2.44	0.42
10:AJ:15:THR:HG23	10:AJ:94:VAL:CG2	2.49	0.42
10:AJ:17:ASP:O	10:AJ:21:GLN:HB2	2.19	0.42
10:AJ:56:HIS:O	10:AJ:58:ASP:N	2.52	0.42
12:AL:60:LEU:CD2	12:AL:66:VAL:HG22	2.49	0.42
13:AM:33:ALA:HB2	13:AM:64:TRP:CH2	2.54	0.42
15:AO:27:VAL:O	15:AO:28:GLN:C	2.61	0.42
16:AP:40:ASP:HB3	16:AP:48:TRP:HB2	2.00	0.42
21:B0:338:G:O2'	21:B0:339:U:H5'	2.19	0.42
21:B0:569:C:H2'	21:B0:570:G:C8	2.53	0.42
21:B0:872:G:H2'	21:B0:928:G:N1	2.35	0.42
21:B0:1080:A:H4'	21:B0:1081:A:C8	2.54	0.42
21:B0:1764:A:H2'	21:B0:1765:C:O4'	2.19	0.42
21:B0:1811:A:H1'	21:B0:1813:A:C5	2.53	0.42
21:B0:1981:A:H4'	21:B0:2704:U:O2'	2.19	0.42
1:AA:376:G:OP2	16:AP:67:THR:HG21	2.19	0.42
1:AA:418:C:H2'	1:AA:419:C:H6	1.84	0.42
1:AA:487:A:H2'	1:AA:488:C:O4'	2.19	0.42
1:AA:808:C:P	15:AO:48:LYS:CE	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1015:A:H1'	1:AA:1219:U:C4'	2.48	0.42
1:AA:1217:C:O2'	1:AA:1218:C:H5'	2.19	0.42
1:AA:1244:C:O2'	1:AA:1245:A:H5'	2.19	0.42
1:AA:1371:G:OP2	9:AI:11:LYS:CE	2.68	0.42
1:AA:1397:C:O2'	1:AA:1398:A:P	2.77	0.42
2:AB:33:TYR:O	2:AB:34:ALA:CB	2.67	0.42
3:AC:116:VAL:HG11	3:AC:141:VAL:HG21	2.01	0.42
4:AD:8:VAL:CG1	4:AD:21:LEU:CD1	2.97	0.42
5:AE:131:ILE:HD13	5:AE:131:ILE:HA	1.93	0.42
6:AF:40:VAL:HG22	6:AF:41:GLU:N	2.34	0.42
7:AG:15:ASP:OD2	7:AG:23:VAL:HG11	2.19	0.42
8:AH:68:ARG:HG2	8:AH:68:ARG:HH11	1.84	0.42
12:AL:43:VAL:CG1	12:AL:44:THR:N	2.81	0.42
16:AP:4:ILE:HG23	16:AP:36:ILE:HD11	2.01	0.42
19:AS:17:GLU:HA	19:AS:20:LEU:CD1	2.49	0.42
19:AS:41:VAL:HB	19:AS:43:GLU:OE2	2.19	0.42
21:B0:477:A:H2'	21:B0:478:G:O4'	2.20	0.42
21:B0:697:G:O2'	21:B0:698:A:H5'	2.20	0.42
21:B0:883:A:H2'	21:B0:884:C:O4'	2.19	0.42
21:B0:1017:C:H2'	21:B0:1018:C:O4'	2.19	0.42
21:B0:1223:G:H4'	21:B0:1224:A:C5'	2.49	0.42
21:B0:2492:G:H2'	21:B0:2493:U:C6	2.54	0.42
21:B0:2561:G:N3	21:B0:2561:G:H2'	2.35	0.42
21:B0:2771:C:H5	21:B0:2867:G:H22	1.66	0.42
1:AA:44:G:OP2	16:AP:12:LYS:CG	2.63	0.42
1:AA:246:A:O3'	1:AA:247:G:O4'	2.36	0.42
1:AA:264:U:O2'	17:AQ:63:ARG:CD	2.68	0.42
1:AA:359:U:O2'	1:AA:360:A:H5'	2.18	0.42
1:AA:448:A:C4	1:AA:487:A:C2	3.07	0.42
1:AA:452:A:O2'	1:AA:453:A:O4'	2.34	0.42
1:AA:583:A:H5''	17:AQ:90:ILE:HG21	2.01	0.42
1:AA:617:G:H4'	16:AP:45:THR:CG2	2.47	0.42
1:AA:631:G:O3'	1:AA:632:A:P	2.77	0.42
1:AA:1015:A:C2	1:AA:1218:C:O2'	2.73	0.42
1:AA:1086:U:O3'	1:AA:1389:C:H5''	2.20	0.42
1:AA:1106:G:OP1	3:AC:172:ARG:CD	2.68	0.42
1:AA:1126:U:H2'	1:AA:1127:G:H8	1.85	0.42
1:AA:1231:G:O3'	9:AI:126:SER:HB3	2.19	0.42
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.54	0.42
1:AA:1266:G:N2	1:AA:1269:A:OP2	2.49	0.42
1:AA:1407:C:H2'	1:AA:1408:A:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1441:G:H4'	1:AA:1442:G:C8	2.54	0.42
1:AA:1446:A:C4	1:AA:1456:A:N1	2.87	0.42
1:AA:1505:G:H3'	1:AA:1505:G:H8	1.85	0.42
2:AB:14:GLY:C	2:AB:15:VAL:CG2	2.92	0.42
3:AC:59:ARG:O	10:AJ:92:THR:HG23	2.13	0.42
4:AD:25:ARG:HA	4:AD:28:SER:OG	2.19	0.42
5:AE:80:ILE:HD12	5:AE:91:LEU:HB2	2.00	0.42
11:AK:104:GLN:OE1	11:AK:106:LYS:HE2	2.19	0.42
12:AL:70:ILE:CD1	12:AL:77:LEU:HD12	2.42	0.42
21:B0:19:C:H2'	21:B0:20:C:C6	2.54	0.42
21:B0:669:G:H2'	21:B0:670:U:O4'	2.20	0.42
21:B0:1313:U:O2'	21:B0:1314:A:P	2.78	0.42
21:B0:1480:G:C2'	21:B0:1481:U:H5'	2.49	0.42
21:B0:1775:A:H4'	21:B0:1776:A:C8	2.54	0.42
21:B0:1957:C:O2'	21:B0:1958:G:H5'	2.20	0.42
21:B0:2437:G:H4'	21:B0:2438:A:N7	2.35	0.42
21:B0:2523:G:O2'	21:B0:2524:G:H5'	2.20	0.42
21:B0:2559:U:H2'	21:B0:2560:G:H5'	2.01	0.42
21:B0:2564:U:H5''	21:B0:2565:C:H5'	2.01	0.42
22:B9:73:C:H3'	22:B9:74:A:OP2	2.20	0.42
1:AA:333:G:O4'	20:AT:16:HIS:HD2	1.90	0.42
1:AA:833:U:H2'	1:AA:834:C:C6	2.55	0.42
1:AA:928:G:HO2'	1:AA:1533:C:H5	1.66	0.42
1:AA:992:U:H2'	1:AA:1043:C:C4	2.48	0.42
1:AA:1227:A:H5'	19:AS:80:TYR:OH	2.19	0.42
1:AA:1377:A:H2'	7:AG:2:ALA:HB3	2.02	0.42
1:AA:1392:G:C5'	1:AA:1531:A:H5''	2.50	0.42
1:AA:1416:G:C3'	1:AA:1417:G:OP1	2.68	0.42
7:AG:108:ALA:O	7:AG:119:ARG:HD2	2.18	0.42
8:AH:51:VAL:CG1	8:AH:52:ASP:N	2.82	0.42
10:AJ:62:HIS:ND1	14:AN:61:TRP:CZ3	2.85	0.42
10:AJ:72:VAL:O	10:AJ:73:ASP:HB2	2.18	0.42
17:AQ:95:TYR:N	17:AQ:95:TYR:CD1	2.88	0.42
17:AQ:96:GLN:CD	21:B0:725:C:O2'	2.62	0.42
19:AS:20:LEU:HD12	19:AS:21:GLU:N	2.34	0.42
21:B0:833:A:H2'	21:B0:834:A:C8	2.55	0.42
21:B0:1672:A:H2'	21:B0:1673:C:O4'	2.20	0.42
21:B0:1679:U:H2'	21:B0:1680:U:H5''	2.02	0.42
21:B0:1855:G:H4'	21:B0:2390:A:H4'	2.00	0.42
22:B9:50:U:H2'	22:B9:51:G:H8	1.83	0.42
1:AA:107:G:O2'	1:AA:108:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:117:G:N2	1:AA:313:A:H4'	2.34	0.42
1:AA:218:C:P	1:AA:470:U:O4'	2.78	0.42
1:AA:461:C:O2'	1:AA:462:A:H5'	2.19	0.42
1:AA:584:G:H2'	1:AA:585:G:C8	2.54	0.42
1:AA:762:C:H5'	17:AQ:104:LYS:HZ1	1.85	0.42
1:AA:960:U:O2'	1:AA:1223:C:C4'	2.68	0.42
1:AA:960:U:O2	1:AA:960:U:H2'	2.19	0.42
1:AA:965:A:O2'	1:AA:966:G:C5'	2.67	0.42
1:AA:993:G:C2	1:AA:1046:A:C2	3.08	0.42
1:AA:1129:C:O2'	1:AA:1130:A:P	2.78	0.42
1:AA:1152:A:H5''	10:AJ:13:HIS:HD2	1.85	0.42
1:AA:1376:U:OP1	7:AG:98:SER:CB	2.68	0.42
1:AA:1399:C:C2	1:AA:1502:A:N6	2.86	0.42
2:AB:142:LEU:O	2:AB:143:GLU:C	2.63	0.42
3:AC:193:TYR:HE1	3:AC:196:LEU:HD11	1.83	0.42
4:AD:24:GLU:H	4:AD:112:VAL:HG11	1.85	0.42
12:AL:60:LEU:HD21	12:AL:66:VAL:CG2	2.50	0.42
13:AM:6:GLY:O	13:AM:7:VAL:CG2	2.65	0.42
21:B0:69:G:O2'	21:B0:70:A:P	2.78	0.42
21:B0:589:C:H2'	21:B0:590:C:C6	2.55	0.42
21:B0:738:G:C2'	21:B0:739:G:H5'	2.50	0.42
21:B0:841:G:N1	21:B0:2226:A:H4'	2.35	0.42
21:B0:903:G:C6	21:B0:904:U:C4	3.08	0.42
21:B0:1181:C:H3'	21:B0:1182:U:H5''	2.01	0.42
21:B0:1961:A:H2'	21:B0:1962:C:O4'	2.19	0.42
21:B0:2031:A:H2'	21:B0:2032:G:C8	2.54	0.42
21:B0:3148:G:H2'	21:B0:3149:G:H5'	1.91	0.42
21:B0:2864:C:H2'	21:B0:2865:G:O4'	2.20	0.42
1:AA:39:G:N7	1:AA:498:U:C4	2.87	0.42
1:AA:44:G:P	16:AP:12:LYS:CB	2.85	0.42
1:AA:51:A:N6	1:AA:313:A:H2	2.17	0.42
1:AA:109:A:OP2	1:AA:110:C:H5	2.02	0.42
1:AA:851:G:H2'	1:AA:852:G:H8	1.84	0.42
1:AA:913:A:O2'	1:AA:914:A:O4'	2.26	0.42
1:AA:1064:G:C1'	1:AA:1190:G:H22	2.26	0.42
1:AA:1237:C:H4'	1:AA:1334:G:H21	1.85	0.42
1:AA:1261:A:H5'	1:AA:1283:G:C3'	2.50	0.42
1:AA:1394:A:H61	1:AA:1501:C:C5'	2.26	0.42
1:AA:1394:A:O2'	1:AA:1501:C:O2	2.37	0.42
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.66	0.42
3:AC:57:ILE:O	3:AC:57:ILE:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:70:VAL:HG12	3:AC:71:ALA:H	1.84	0.42
3:AC:77:ILE:CG2	3:AC:81:GLY:HA2	2.50	0.42
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.20	0.42
17:AQ:40:LYS:HD3	17:AQ:42:TYR:OH	2.20	0.42
21:B0:509:U:H2'	21:B0:510:G:H5'	2.00	0.42
21:B0:583:C:H4'	21:B0:584:A:OP2	2.20	0.42
21:B0:2467:A:H2'	21:B0:2468:G:C8	2.55	0.42
21:B0:2633:A:H4'	21:B0:2634:G:C4'	2.39	0.42
22:B9:9:G:H2'	22:B9:10:U:O4'	2.20	0.42
1:AA:8:A:C5	4:AD:209:ARG:CA	3.03	0.42
1:AA:70:A:O2'	1:AA:71:U:H5'	2.19	0.42
1:AA:132:C:O4'	1:AA:262:A:N9	2.53	0.42
1:AA:169:C:O2'	1:AA:170:U:H5'	2.19	0.42
1:AA:692:U:O2	1:AA:695:A:C8	2.73	0.42
1:AA:815:A:C2	1:AA:1528:U:C5'	2.85	0.42
1:AA:825:G:O2'	1:AA:826:C:H5'	2.20	0.42
1:AA:1014:A:OP2	19:AS:14:HIS:CB	2.58	0.42
1:AA:1014:A:C4	19:AS:34:TRP:CB	3.03	0.42
1:AA:1106:G:OP1	3:AC:172:ARG:HD3	2.19	0.42
1:AA:1202:G:O4'	14:AN:29:ARG:HD3	2.19	0.42
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.85	0.42
1:AA:1285:A:O2'	1:AA:1286:A:OP2	2.36	0.42
1:AA:1409:C:N4	1:AA:1410:G:O6	2.53	0.42
4:AD:70:ILE:HD11	4:AD:100:ARG:CD	2.49	0.42
4:AD:148:VAL:HG13	4:AD:158:ILE:HD13	2.01	0.42
8:AH:39:LEU:HD13	8:AH:39:LEU:HA	1.86	0.42
12:AL:55:VAL:CG1	12:AL:56:ALA:N	2.83	0.42
19:AS:51:VAL:HG12	19:AS:52:TYR:H	1.85	0.42
21:B0:332:C:H2'	21:B0:333:A:H5'	2.02	0.42
21:B0:391:C:H2'	21:B0:392:G:C8	2.54	0.42
21:B0:571:U:H2'	21:B0:581:A:H1'	2.02	0.42
21:B0:594:G:H21	21:B0:1267:A:H62	1.68	0.42
21:B0:814:G:H3'	21:B0:815:A:C5'	2.46	0.42
21:B0:877:G:N2	21:B0:926:C:H41	2.17	0.42
21:B0:1667:A:H2'	21:B0:1668:G:C8	2.55	0.42
21:B0:1938:U:O2'	21:B0:1939:U:H5'	2.20	0.42
21:B0:2393:G:H2'	21:B0:2394:G:H8	1.85	0.42
21:B0:2815:C:H2'	21:B0:2816:C:C6	2.55	0.42
1:AA:119:A:C8	1:AA:240:C:N4	2.88	0.42
1:AA:319:G:O2'	1:AA:1434:A:C2	2.40	0.42
1:AA:413:G:N2	1:AA:428:G:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:522:C:O2'	1:AA:523:A:H5'	2.19	0.42
1:AA:560:U:H4'	1:AA:561:U:C5'	2.50	0.42
1:AA:606:G:H3'	1:AA:607:A:H5'	2.02	0.42
1:AA:636:U:H2'	1:AA:637:G:C8	2.54	0.42
1:AA:640:A:O2'	1:AA:641:U:H5'	2.20	0.42
1:AA:767:A:H2'	1:AA:768:A:O4'	2.20	0.42
1:AA:825:G:H2'	1:AA:826:C:C6	2.53	0.42
1:AA:1068:G:H5'	1:AA:1388:C:OP1	2.20	0.42
1:AA:1095:U:H2'	1:AA:1096:C:H6	1.83	0.42
1:AA:1277:C:O3'	1:AA:1279:A:H5'	2.20	0.42
1:AA:1517:G:N2	21:B0:1902:A:O2'	2.53	0.42
2:AB:22:LYS:C	2:AB:23:ARG:HG3	2.45	0.42
2:AB:23:ARG:C	2:AB:24:TRP:HD1	2.28	0.42
3:AC:79:ARG:NE	3:AC:82:GLU:HG2	2.34	0.42
3:AC:206:GLU:O	3:AC:207:VAL:C	2.63	0.42
5:AE:43:LEU:N	5:AE:136:MET:HE2	2.35	0.42
5:AE:93:PRO:HG2	8:AH:105:ARG:NH2	2.35	0.42
5:AE:120:THR:HG23	5:AE:121:LYS:H	1.84	0.42
6:AF:45:LEU:O	6:AF:46:ARG:HG2	2.20	0.42
6:AF:77:ARG:O	6:AF:81:ILE:HG13	2.19	0.42
9:AI:120:ARG:O	9:AI:122:ALA:N	2.53	0.42
11:AK:57:THR:OG1	11:AK:58:PRO:HD2	2.20	0.42
11:AK:99:GLN:HG2	11:AK:105:VAL:HG21	2.02	0.42
12:AL:58:VAL:N	12:AL:66:VAL:O	2.47	0.42
13:AM:32:GLU:O	13:AM:35:GLU:N	2.53	0.42
15:AO:48:LYS:O	15:AO:50:HIS:N	2.50	0.42
16:AP:76:GLN:C	16:AP:78:GLY:H	2.28	0.42
17:AQ:95:TYR:HA	17:AQ:98:LEU:HD11	2.02	0.42
18:AR:17:SER:HB2	18:AR:54:ARG:HH21	1.85	0.42
21:B0:334:G:N3	21:B0:344:G:H1'	2.35	0.42
21:B0:869:C:O2'	21:B0:870:C:H5'	2.19	0.42
21:B0:1040:A:C2'	21:B0:1041:G:H5'	2.49	0.42
21:B0:1671:A:H2'	21:B0:1672:A:H8	1.85	0.42
21:B0:1747:G:H1'	21:B0:1749:G:C2	2.55	0.42
21:B0:1900:U:H3'	21:B0:1901:A:H8	1.85	0.42
21:B0:1912:G:N3	21:B0:1912:G:H3'	2.35	0.42
21:B0:3098:U:O3'	21:B0:3099:U:OP2	2.15	0.42
21:B0:3126:A:H4'	21:B0:3127:G:OP1	2.19	0.42
21:B0:3184:C:H2'	21:B0:3185:U:H5''	1.98	0.42
22:B9:25:G:C2'	22:B9:26:G:H5'	2.50	0.42
22:B9:106:U:O2'	22:B9:107:C:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:145:G:O2'	1:AA:146:G:H5'	2.20	0.41
1:AA:189:A:N6	20:AT:104:LEU:HA	2.28	0.41
1:AA:625:G:O2'	1:AA:626:U:H5'	2.20	0.41
1:AA:927:G:O2'	1:AA:1532:U:C5'	2.67	0.41
1:AA:976:G:C5	1:AA:2361:C:C4	3.08	0.41
1:AA:1192:C:P	3:AC:4:LYS:HZ3	2.43	0.41
2:AB:60:ASP:O	2:AB:64:ARG:HB2	2.20	0.41
2:AB:187:LEU:HA	2:AB:201:ILE:HB	2.01	0.41
3:AC:74:GLY:O	3:AC:75:VAL:C	2.62	0.41
3:AC:187:ALA:O	3:AC:198:VAL:N	2.51	0.41
5:AE:86:ALA:C	5:AE:125:SER:HB3	2.45	0.41
6:AF:42:GLU:C	6:AF:44:GLY:N	2.78	0.41
7:AG:45:ASP:O	7:AG:49:ILE:HG13	2.20	0.41
7:AG:69:VAL:O	7:AG:69:VAL:CG1	2.68	0.41
9:AI:110:GLU:OE2	9:AI:113:LYS:NZ	2.53	0.41
10:AJ:32:ALA:HB2	10:AJ:75:ILE:O	2.19	0.41
13:AM:82:MET:HE2	13:AM:93:ARG:HG2	2.02	0.41
16:AP:4:ILE:CG1	16:AP:64:ALA:HB1	2.49	0.41
20:AT:44:ALA:HB2	20:AT:88:VAL:HG13	2.02	0.41
20:AT:54:LYS:HA	20:AT:57:ARG:HD3	2.02	0.41
21:B0:425:A:H2'	21:B0:426:C:O4'	2.20	0.41
21:B0:1112:U:H2'	21:B0:1112:U:O2	2.20	0.41
21:B0:1188:A:H62	21:B0:1189:G:N2	2.17	0.41
21:B0:1762:C:H2'	21:B0:1763:G:C8	2.55	0.41
21:B0:3110:G:C4'	21:B0:3111:C:OP2	2.67	0.41
21:B0:2195:C:H2'	21:B0:2196:U:O4'	2.20	0.41
21:B0:2809:A:H2'	21:B0:2810:A:H5'	2.01	0.41
1:AA:162:A:H2'	1:AA:163:C:O4'	2.20	0.41
1:AA:288:A:HO2'	1:AA:290:C:P	2.36	0.41
1:AA:628:G:O2'	1:AA:629:G:H5'	2.20	0.41
1:AA:866:C:H2'	1:AA:867:G:O4'	2.20	0.41
1:AA:935:A:H4'	1:AA:1384:C:H1'	2.02	0.41
1:AA:1182:G:O2'	1:AA:1183:A:C5'	2.69	0.41
1:AA:1234:C:H4'	1:AA:1364:U:C1'	2.50	0.41
1:AA:1440:C:H2'	1:AA:1441:G:C5'	2.48	0.41
2:AB:64:ARG:HB2	2:AB:64:ARG:HE	1.70	0.41
3:AC:64:VAL:HG12	3:AC:65:ALA:H	1.84	0.41
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	2.01	0.41
3:AC:191:THR:HG22	3:AC:193:TYR:N	2.23	0.41
5:AE:79:GLU:OE2	8:AH:105:ARG:CD	2.64	0.41
7:AG:145:ALA:C	7:AG:147:ALA:N	2.78	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:97:LYS:HB2	9:AI:98:PRO:HD3	2.01	0.41
15:AO:74:ASP:CG	15:AO:77:ARG:HG3	2.46	0.41
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.20	0.41
21:B0:167:A:H2'	21:B0:168:A:C8	2.55	0.41
21:B0:860:U:O2'	21:B0:861:G:H5'	2.20	0.41
21:B0:1196:G:H2'	21:B0:1197:U:H5'	2.00	0.41
21:B0:1448:A:H2'	21:B0:1449:C:C6	2.55	0.41
21:B0:3875:A:H4'	53:B5:43:LYS:CA	2.51	0.41
21:B0:2242:C:N4	21:B0:2257:A:H61	2.18	0.41
21:B0:2604:G:H2'	21:B0:2605:C:C6	2.55	0.41
21:B0:2694:G:H2'	21:B0:2695:C:C6	2.55	0.41
21:B0:2721:A:H62	21:B0:2743:G:H21	1.68	0.41
1:AA:19:C:O2'	1:AA:20:U:H5'	2.20	0.41
1:AA:406:G:O6	1:AA:496:A:N7	2.31	0.41
1:AA:439:A:N6	1:AA:497:A:H1'	2.35	0.41
1:AA:942:G:C2	1:AA:943:U:C6	3.07	0.41
1:AA:1087:G:P	1:AA:1389:C:C4'	3.01	0.41
1:AA:1262:C:N4	1:AA:1273:G:H1	2.18	0.41
1:AA:1311:G:H2'	1:AA:1312:G:O4'	2.20	0.41
1:AA:1402:C:H2'	1:AA:1403:C:H6	1.85	0.41
1:AA:1431:C:H2'	1:AA:1432:G:O4'	2.21	0.41
3:AC:107:GLN:CD	3:AC:107:GLN:N	2.64	0.41
4:AD:205:GLU:O	4:AD:208:SER:HB2	2.20	0.41
7:AG:93:PRO:HG2	7:AG:94:ARG:H	1.85	0.41
10:AJ:3:LYS:HG3	10:AJ:75:ILE:HG23	2.02	0.41
10:AJ:55:LYS:O	10:AJ:56:HIS:HB2	2.19	0.41
13:AM:16:ASP:O	13:AM:17:VAL:C	2.63	0.41
13:AM:67:GLU:HB3	13:AM:68:GLY:H	1.58	0.41
15:AO:70:LEU:HD12	15:AO:78:TYR:HB2	2.01	0.41
16:AP:39:TYR:CD2	16:AP:73:LEU:HD11	2.54	0.41
17:AQ:95:TYR:N	17:AQ:95:TYR:HD1	2.18	0.41
21:B0:328:A:O2'	21:B0:329:C:H5'	2.20	0.41
21:B0:1082:G:H1'	21:B0:1100:G:H2'	2.03	0.41
21:B0:1447:U:H1'	21:B0:1577:G:H22	1.86	0.41
21:B0:1528:C:H3'	21:B0:1529:C:H5''	2.02	0.41
21:B0:1683:G:H2'	21:B0:1684:G:H5'	2.02	0.41
21:B0:2459:C:C2'	21:B0:2460:G:H5'	2.51	0.41
21:B0:2676:G:H2'	21:B0:2677:U:C6	2.56	0.41
1:AA:47:C:C6	1:AA:365:U:H2'	2.56	0.41
1:AA:246:A:H1'	1:AA:247:G:H1'	2.02	0.41
1:AA:300:A:C1'	1:AA:565:U:O2	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:382:A:C2	1:AA:383:A:C4	3.08	0.41
1:AA:397:A:H5'	1:AA:398:C:P	2.60	0.41
1:AA:532:A:H2'	1:AA:533:A:C5'	2.48	0.41
1:AA:550:G:O2'	1:AA:551:U:H5'	2.20	0.41
1:AA:647:C:H2'	1:AA:648:A:C8	2.54	0.41
1:AA:953:G:H1'	13:AM:125:ARG:HB3	1.99	0.41
1:AA:1138:G:N1	1:AA:1140:C:C2	2.89	0.41
1:AA:1240:U:H5	7:AG:109:ASN:OD1	2.04	0.41
1:AA:1269:A:C6	1:AA:1313:U:H4'	2.56	0.41
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.21	0.41
1:AA:1372:U:OP2	9:AI:11:LYS:CE	2.68	0.41
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.21	0.41
1:AA:1531:A:O5'	1:AA:1531:A:H8	2.03	0.41
2:AB:127:ILE:C	2:AB:129:GLU:H	2.28	0.41
2:AB:145:LEU:HD23	2:AB:145:LEU:HA	1.84	0.41
2:AB:217:ARG:C	2:AB:219:VAL:N	2.78	0.41
3:AC:89:GLU:C	3:AC:91:LEU:N	2.76	0.41
6:AF:48:LEU:HD13	6:AF:52:ILE:CG1	2.50	0.41
7:AG:23:VAL:HG13	7:AG:43:PHE:CE2	2.55	0.41
8:AH:111:ILE:O	8:AH:134:ILE:HB	2.20	0.41
9:AI:110:GLU:HG2	9:AI:113:LYS:NZ	2.35	0.41
13:AM:82:MET:HG3	13:AM:93:ARG:HG3	2.02	0.41
13:AM:96:LEU:HB3	13:AM:97:PRO:HD2	2.01	0.41
15:AO:26:GLU:HG3	15:AO:81:LEU:HG	2.02	0.41
21:B0:31:C:H5''	21:B0:1252:C:OP1	2.20	0.41
21:B0:601:A:H3'	21:B0:602:C:H5'	2.03	0.41
21:B0:773:G:H2'	21:B0:774:A:O4'	2.21	0.41
21:B0:895:G:H2'	21:B0:896:C:O4'	2.20	0.41
21:B0:1679:U:H3'	21:B0:1680:U:C5'	2.45	0.41
21:B0:1880:G:H2'	21:B0:1881:U:C6	2.55	0.41
21:B0:2448:A:C2'	21:B0:2449:G:H5'	2.50	0.41
1:AA:8:A:C6	4:AD:209:ARG:CA	3.03	0.41
1:AA:38:G:O4'	1:AA:547:A:C6	2.73	0.41
1:AA:262:A:C4'	20:AT:74:LYS:CB	2.98	0.41
1:AA:355:C:C4'	1:AA:389:A:OP2	2.68	0.41
1:AA:602:A:C2	1:AA:637:G:C2	3.08	0.41
1:AA:760:G:C2	17:AQ:104:LYS:C	2.94	0.41
1:AA:841:C:N3	1:AA:845:A:N6	2.67	0.41
1:AA:867:G:O2'	1:AA:868:C:H5'	2.20	0.41
1:AA:1057:G:H2'	1:AA:1058:G:O4'	2.20	0.41
1:AA:1112:C:C2	3:AC:178:LEU:CA	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1190:G:OP1	3:AC:5:ILE:N	2.52	0.41
1:AA:1320:C:H41	19:AS:37:ARG:CD	2.32	0.41
3:AC:61:ALA:O	3:AC:62:ASP:C	2.63	0.41
3:AC:134:ILE:HD13	3:AC:166:GLU:HB3	2.01	0.41
4:AD:62:GLN:HE22	4:AD:65:ARG:NH1	2.18	0.41
5:AE:9:LYS:HG3	5:AE:112:LEU:HD11	2.03	0.41
6:AF:19:LEU:HD21	6:AF:23:LYS:HD2	2.01	0.41
7:AG:95:ARG:NH1	7:AG:95:ARG:CG	2.80	0.41
13:AM:46:LYS:HB2	13:AM:46:LYS:HE3	1.86	0.41
13:AM:84:ILE:HD12	19:AS:74:PHE:HE2	1.86	0.41
16:AP:19:ILE:HG22	16:AP:36:ILE:CG1	2.51	0.41
21:B0:59:G:O6	21:B0:62:U:H2'	2.19	0.41
21:B0:567:G:H2'	21:B0:568:G:C8	2.56	0.41
21:B0:1055:A:H2	21:B0:1121:G:H2'	1.83	0.41
21:B0:1073:G:H2'	21:B0:1073:G:N3	2.35	0.41
21:B0:1204:G:H2'	21:B0:1205:G:C8	2.55	0.41
21:B0:1579:G:H2'	21:B0:1580:C:C6	2.56	0.41
21:B0:3865:A:C4	21:B0:3875:A:N1	2.89	0.41
21:B0:2440:C:H1'	21:B0:2471:U:N3	2.32	0.41
21:B0:2710:C:O2'	21:B0:2711:G:H5'	2.20	0.41
21:B0:2756:A:H1'	21:B0:2758:A:N7	2.36	0.41
21:B0:2796:A:H2'	21:B0:2797:G:O4'	2.20	0.41
1:AA:134:A:C1'	1:AA:325:A:C4	3.03	0.41
1:AA:143:A:H2	1:AA:220:G:H22	1.66	0.41
1:AA:191:G:N2	1:AA:192:U:H1'	2.23	0.41
1:AA:285:G:O2'	1:AA:286:G:H5'	2.21	0.41
1:AA:502:G:H2'	1:AA:503:C:C6	2.56	0.41
1:AA:502:G:H2'	1:AA:503:C:H6	1.84	0.41
1:AA:939:G:C6	1:AA:940:C:N4	2.89	0.41
1:AA:951:G:C6	1:AA:1231:G:C6	3.08	0.41
1:AA:977:A:H1'	1:AA:1223:C:N4	2.35	0.41
1:AA:1213:A:N1	1:AA:1215:G:H1'	2.35	0.41
1:AA:1227:A:OP1	19:AS:80:TYR:CZ	2.74	0.41
1:AA:1394:A:C2	1:AA:1501:C:C1'	3.02	0.41
2:AB:215:LEU:HD23	2:AB:215:LEU:HA	1.90	0.41
3:AC:73:PRO:HD3	3:AC:105:GLU:HG3	2.03	0.41
3:AC:172:ARG:HH12	3:AC:174:PRO:CG	2.22	0.41
8:AH:126:LYS:O	8:AH:128:GLY:N	2.54	0.41
9:AI:42:ARG:O	9:AI:43:ALA:C	2.63	0.41
10:AJ:3:LYS:CG	10:AJ:75:ILE:HG23	2.50	0.41
10:AJ:53:PRO:O	10:AJ:54:PHE:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:86:GLY:H	11:AK:112:THR:CG2	2.32	0.41
14:AN:3:ARG:NH1	14:AN:6:LEU:CD1	2.84	0.41
20:AT:53:LEU:HD13	20:AT:101:GLY:N	2.35	0.41
21:B0:365:U:H2'	21:B0:366:U:C6	2.56	0.41
21:B0:643:A:H2'	21:B0:644:A:C8	2.56	0.41
21:B0:870:C:H2'	21:B0:871:U:C6	2.56	0.41
21:B0:909:C:H2'	21:B0:910:U:H6	1.85	0.41
21:B0:974:U:H2'	21:B0:975:C:C6	2.55	0.41
21:B0:1007:A:H2'	21:B0:1008:G:H8	1.84	0.41
21:B0:1889:G:H2'	21:B0:1890:G:C8	2.55	0.41
21:B0:1962:C:H2'	21:B0:1963:G:H8	1.84	0.41
1:AA:13:U:O2	1:AA:914:A:C8	2.74	0.41
1:AA:176:C:H2'	1:AA:177:C:C6	2.56	0.41
1:AA:367:U:O2	1:AA:369:C:C2	2.73	0.41
1:AA:511:C:O3'	4:AD:43:HIS:CE1	2.74	0.41
1:AA:651:C:C5	1:AA:652:U:C5	3.07	0.41
1:AA:653:A:OP1	8:AH:56:LYS:HE3	2.20	0.41
1:AA:1110:A:N6	1:AA:1111:A:N1	2.69	0.41
1:AA:1111:A:C2	3:AC:177:THR:OG1	2.71	0.41
1:AA:1225:A:H4'	19:AS:78:ARG:HH11	1.85	0.41
1:AA:1426:C:H2'	1:AA:1427:U:H6	1.84	0.41
2:AB:14:GLY:O	2:AB:15:VAL:CG2	2.69	0.41
4:AD:167:GLY:O	4:AD:168:ARG:C	2.63	0.41
8:AH:6:ILE:O	8:AH:10:LEU:HG	2.20	0.41
8:AH:48:TYR:CD1	8:AH:48:TYR:C	2.98	0.41
8:AH:91:ARG:HA	17:AQ:34:LYS:CB	2.46	0.41
12:AL:117:ARG:O	12:AL:118:SER:C	2.64	0.41
14:AN:39:LEU:HD11	14:AN:47:LEU:HD12	2.02	0.41
16:AP:43:LYS:HA	16:AP:48:TRP:CB	2.51	0.41
20:AT:23:ARG:NH1	20:AT:23:ARG:HG2	2.36	0.41
20:AT:43:LEU:HD13	20:AT:51:GLU:CG	2.43	0.41
21:B0:128:C:C3'	21:B0:129:A:H5''	2.50	0.41
21:B0:178:C:H4'	21:B0:399:G:C2	2.56	0.41
21:B0:1018:C:H2'	21:B0:1019:U:H5	1.86	0.41
21:B0:1332:G:H2'	21:B0:1333:G:O4'	2.21	0.41
21:B0:1354:A:O2'	21:B0:1355:A:OP1	2.29	0.41
21:B0:1915:A:H2'	21:B0:1916:G:O4'	2.21	0.41
21:B0:1948:C:H2'	21:B0:1949:A:N7	2.36	0.41
21:B0:3197:U:O2	21:B0:2181:A:C6	2.73	0.41
1:AA:187:G:H2'	20:AT:105:SER:HB3	2.02	0.41
1:AA:323:U:C5'	20:AT:19:SER:O	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:948:C:O2'	1:AA:949:A:H5'	2.21	0.41
1:AA:2003:G:H2'	1:AA:1004:A:H4'	2.02	0.41
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.86	0.41
1:AA:1152:A:H2'	1:AA:1153:C:H6	1.83	0.41
1:AA:1305:G:C2'	1:AA:1306:A:H8	2.32	0.41
1:AA:1398:A:H61	5:AE:21:ALA:C	2.22	0.41
1:AA:1416:G:N1	1:AA:1417:G:H1'	2.33	0.41
2:AB:219:VAL:O	2:AB:220:ASP:C	2.61	0.41
5:AE:36:ASP:OD1	5:AE:38:GLN:N	2.39	0.41
7:AG:41:ARG:O	7:AG:42:ILE:C	2.64	0.41
12:AL:28:LYS:CG	12:AL:33:ARG:HH12	2.34	0.41
12:AL:33:ARG:HD2	12:AL:62:SER:HB3	2.01	0.41
13:AM:84:ILE:HG21	19:AS:65:ASN:ND2	2.35	0.41
13:AM:86:CYS:O	13:AM:90:LEU:CG	2.49	0.41
15:AO:43:LEU:C	15:AO:45:VAL:O	2.64	0.41
17:AQ:63:ARG:O	17:AQ:64:PRO:C	2.63	0.41
21:B0:139:A:H2'	21:B0:140:G:C8	2.56	0.41
21:B0:675:C:H5''	32:BJ:26:THR:CA	2.51	0.41
21:B0:753:U:C2'	21:B0:754:G:H5'	2.51	0.41
21:B0:1566:G:H2'	21:B0:1567:A:C8	2.56	0.41
21:B0:2395:C:H2'	21:B0:2396:C:C5'	2.51	0.41
1:AA:16:A:C2'	1:AA:17:U:H5'	2.51	0.41
1:AA:119:A:C5	1:AA:240:C:N3	2.89	0.41
1:AA:184:G:C2'	1:AA:224:C:H4'	2.51	0.41
1:AA:367:U:C4	1:AA:369:C:N4	2.89	0.41
1:AA:371:G:C2'	1:AA:372:C:H5'	2.51	0.41
1:AA:562:C:O2'	12:AL:17:LYS:HE3	2.20	0.41
1:AA:577:G:H1'	1:AA:816:A:C4	2.56	0.41
1:AA:588:G:N1	1:AA:652:U:N3	2.69	0.41
1:AA:621:A:H2'	1:AA:622:A:H8	1.85	0.41
1:AA:992:U:H2'	1:AA:1043:C:H41	1.85	0.41
1:AA:1048:G:C1'	1:AA:1215:G:H4'	2.50	0.41
1:AA:1061:G:C2'	1:AA:1062:U:H5'	2.50	0.41
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.50	0.41
1:AA:1126:U:P	1:AA:1126:U:H6	2.43	0.41
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.56	0.41
1:AA:1350:A:C6	1:AA:1351:U:N3	2.89	0.41
1:AA:1367:C:H5''	10:AJ:60:ARG:NH1	2.35	0.41
1:AA:1392:G:H2'	1:AA:1393:U:H6	1.86	0.41
1:AA:1394:A:C4	1:AA:1501:C:O4'	2.74	0.41
2:AB:15:VAL:HG11	2:AB:210:SER:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:22:LYS:HD2	2:AB:35:GLU:CD	2.45	0.41
2:AB:130:ARG:HB3	2:AB:134:GLU:OE1	2.20	0.41
2:AB:156:LYS:HD3	2:AB:156:LYS:C	2.45	0.41
2:AB:165:VAL:O	2:AB:187:LEU:O	2.38	0.41
3:AC:33:LEU:C	3:AC:33:LEU:CD2	2.94	0.41
3:AC:65:ALA:O	3:AC:66:VAL:HB	2.21	0.41
3:AC:79:ARG:CG	3:AC:82:GLU:HG2	2.51	0.41
4:AD:7:PRO:CB	4:AD:10:ARG:HD2	2.51	0.41
4:AD:68:TYR:O	4:AD:69:GLY:C	2.63	0.41
5:AE:40:ARG:NH1	5:AE:68:GLU:OE2	2.49	0.41
6:AF:33:TYR:HA	6:AF:71:ARG:NH2	2.36	0.41
8:AH:82:HIS:O	8:AH:83:ILE:HB	2.21	0.41
10:AJ:63:PHE:CE1	14:AN:48:ALA:HB3	2.53	0.41
11:AK:46:GLY:O	11:AK:47:VAL:C	2.62	0.41
11:AK:127:LYS:HA	11:AK:127:LYS:HD3	1.78	0.41
12:AL:27:LEU:HB3	12:AL:62:SER:HB2	2.03	0.41
12:AL:46:LYS:NZ	12:AL:47:LYS:HE3	2.36	0.41
12:AL:48:PRO:CG	12:AL:49:ASN:H	2.25	0.41
12:AL:104:VAL:HG12	12:AL:105:TYR:CD1	2.56	0.41
13:AM:37:THR:HG23	13:AM:55:ARG:HB2	2.03	0.41
13:AM:115:LYS:HZ2	13:AM:115:LYS:HB3	1.85	0.41
14:AN:53:LEU:HA	14:AN:54:PRO:HD2	1.77	0.41
15:AO:38:ARG:O	15:AO:41:GLU:HB3	2.20	0.41
15:AO:74:ASP:OD1	15:AO:76:GLU:HB3	2.21	0.41
19:AS:25:LYS:HD2	19:AS:25:LYS:N	2.34	0.41
20:AT:92:LEU:O	20:AT:96:GLY:HA3	2.21	0.41
21:B0:147:G:C2	21:B0:148:C:H1'	2.56	0.41
21:B0:187:U:H2'	21:B0:188:G:C8	2.56	0.41
21:B0:239:A:H2'	21:B0:240:U:O4'	2.20	0.41
21:B0:477:A:C2'	21:B0:478:G:H5'	2.51	0.41
21:B0:478:G:O2'	21:B0:479:G:H5'	2.20	0.41
21:B0:514:G:N3	21:B0:514:G:C2'	2.82	0.41
21:B0:644:A:C2'	21:B0:645:G:H5'	2.50	0.41
21:B0:658:G:H4'	21:B0:2331:A:C5'	2.50	0.41
21:B0:776:G:H3'	21:B0:776:G:N3	2.36	0.41
21:B0:810:U:H2'	21:B0:811:G:H8	1.85	0.41
21:B0:811:G:O2'	21:B0:812:G:H5'	2.21	0.41
21:B0:831:G:H21	21:B0:1203:A:N6	2.04	0.41
21:B0:967:G:H1'	21:B0:970:A:H62	1.86	0.41
21:B0:1004:A:C2'	21:B0:1005:U:H5''	2.46	0.41
21:B0:1196:G:H2'	21:B0:1197:U:C5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1542:G:H21	21:B0:1561:A:H62	1.69	0.41
21:B0:1760:G:H2'	21:B0:1761:G:C8	2.56	0.41
21:B0:2018:G:H3'	21:B0:2019:C:H5'	2.03	0.41
21:B0:2028:C:O2'	21:B0:2029:G:H5'	2.21	0.41
21:B0:3110:G:P	21:B0:3148:G:H2'	2.45	0.41
21:B0:3119:A:O2'	21:B0:3121:G:OP2	2.35	0.41
21:B0:3177:C:O2'	21:B0:3178:C:H5'	2.19	0.41
21:B0:2212:U:H2'	21:B0:2213:G:C8	2.55	0.41
21:B0:2239:C:O2'	21:B0:2240:C:H5'	2.21	0.41
21:B0:2491:C:H2'	21:B0:2492:G:C5'	2.45	0.41
21:B0:2526:U:H2'	21:B0:2527:G:C8	2.55	0.41
21:B0:2562:G:H2'	21:B0:2563:U:O4'	2.20	0.41
21:B0:2620:G:H2'	21:B0:2621:G:H8	1.86	0.41
21:B0:2811:G:H2'	21:B0:2812:A:C8	2.55	0.41
1:AA:359:U:H2'	1:AA:360:A:C8	2.56	0.41
1:AA:397:A:H5'	1:AA:398:C:OP1	2.21	0.41
1:AA:402:G:O2'	1:AA:620:C:N4	2.54	0.41
1:AA:824:C:H2'	1:AA:825:G:C8	2.56	0.41
1:AA:836:G:C6	1:AA:851:G:C6	3.09	0.41
1:AA:848:G:C3'	1:AA:849:C:O4'	2.68	0.41
1:AA:930:C:O2'	1:AA:931:C:H5'	2.20	0.41
1:AA:1128:C:H5'	9:AI:16:ARG:CZ	2.51	0.41
1:AA:1257:U:H4'	1:AA:1258:G:C5'	2.50	0.41
1:AA:1263:C:H2'	1:AA:1264:C:C6	2.56	0.41
1:AA:1320:C:OP1	19:AS:70:LYS:NZ	2.45	0.41
1:AA:1368:G:H3'	9:AI:112:LYS:HB3	2.03	0.41
2:AB:134:GLU:O	2:AB:138:LEU:HG	2.21	0.41
2:AB:157:ARG:O	2:AB:158:LEU:C	2.64	0.41
3:AC:7:PRO:HG2	3:AC:184:TYR:CB	2.45	0.41
3:AC:150:LYS:HE2	3:AC:152:ILE:CD1	2.44	0.41
4:AD:88:VAL:HG13	5:AE:97:GLY:N	2.36	0.41
4:AD:91:SER:O	4:AD:92:VAL:C	2.64	0.41
4:AD:108:LEU:HA	4:AD:108:LEU:HD23	1.86	0.41
10:AJ:50:ILE:HB	14:AN:41:ARG:HD3	2.03	0.41
10:AJ:75:ILE:O	10:AJ:76:ASN:HB2	2.21	0.41
11:AK:67:ASP:OD2	11:AK:71:LYS:HE3	2.21	0.41
11:AK:95:ILE:O	11:AK:95:ILE:HG22	2.20	0.41
11:AK:122:LYS:O	11:AK:123:LYS:C	2.64	0.41
12:AL:7:ILE:HD13	12:AL:7:ILE:HA	1.93	0.41
15:AO:26:GLU:HA	15:AO:81:LEU:HD11	2.03	0.41
17:AQ:97:SER:O	17:AQ:99:SER:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:39:VAL:CG1	18:AR:40:LEU:N	2.84	0.41
21:B0:108:G:H2'	21:B0:109:A:C8	2.56	0.41
21:B0:769:C:H2'	21:B0:770:U:O4'	2.21	0.41
21:B0:819:C:H2'	21:B0:820:U:C6	2.56	0.41
21:B0:856:A:H2'	21:B0:857:U:O4'	2.21	0.41
21:B0:878:C:N4	21:B0:921:A:H62	2.07	0.41
21:B0:1119:U:O5'	21:B0:1120:C:P	2.79	0.41
21:B0:1194:U:O2'	21:B0:1195:U:P	2.79	0.41
21:B0:1682:A:H2'	21:B0:1683:G:C8	2.56	0.41
21:B0:2447:G:H2'	21:B0:2448:A:H5'	2.02	0.41
1:AA:165:C:H2'	1:AA:166:G:H8	1.86	0.40
1:AA:292:G:C2'	1:AA:608:A:H61	2.23	0.40
1:AA:519:C:H2'	1:AA:520:A:C8	2.56	0.40
1:AA:766:A:C2	1:AA:1525:G:H1'	2.56	0.40
1:AA:815:A:N6	1:AA:1508:G:H21	2.19	0.40
1:AA:844:A:H2'	1:AA:845:A:H8	1.86	0.40
1:AA:864:A:H2'	1:AA:865:A:C8	2.56	0.40
1:AA:983:A:H2	1:AA:984:C:C6	2.40	0.40
1:AA:1286:A:H2'	1:AA:1287:A:O5'	2.21	0.40
1:AA:1342:C:O3'	9:AI:125:TYR:CE2	2.70	0.40
1:AA:1457:A:C4	1:AA:1459:C:H1'	2.53	0.40
2:AB:53:ARG:NH1	2:AB:199:TYR:HD2	2.19	0.40
2:AB:208:ILE:O	2:AB:209:ARG:C	2.64	0.40
3:AC:77:ILE:O	3:AC:83:ARG:HB3	2.21	0.40
3:AC:191:THR:HG21	3:AC:193:TYR:CE2	2.56	0.40
4:AD:194:LEU:N	4:AD:194:LEU:HD22	2.36	0.40
5:AE:110:LEU:HD13	5:AE:118:ILE:HD12	2.04	0.40
6:AF:74:ASP:O	6:AF:75:LEU:C	2.64	0.40
6:AF:79:LEU:O	6:AF:85:VAL:HG11	2.22	0.40
7:AG:72:ARG:HH12	7:AG:138:LYS:NZ	2.19	0.40
8:AH:100:ILE:HA	8:AH:101:PRO:HD2	1.95	0.40
8:AH:125:ARG:HE	8:AH:125:ARG:HB2	1.68	0.40
9:AI:78:LYS:HE2	9:AI:78:LYS:HB3	1.87	0.40
10:AJ:23:ILE:N	10:AJ:23:ILE:CD1	2.85	0.40
10:AJ:59:SER:O	10:AJ:60:ARG:HB2	2.20	0.40
12:AL:53:ARG:CB	12:AL:93:LEU:HD11	2.50	0.40
18:AR:44:LEU:HD22	18:AR:48:GLY:O	2.21	0.40
21:B0:820:U:H5'	21:B0:2424:G:H4'	2.04	0.40
21:B0:930:A:H5'	21:B0:931:G:C8	2.57	0.40
21:B0:1223:G:N2	21:B0:1225:G:H21	2.13	0.40
21:B0:1234:C:H2'	21:B0:1235:C:C6	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:1686:A:C2'	21:B0:1687:C:H5'	2.52	0.40
21:B0:2023:C:H2'	21:B0:2024:U:C6	2.56	0.40
21:B0:2027:C:H2'	21:B0:2028:C:C6	2.55	0.40
21:B0:2240:C:H2'	21:B0:2241:U:C5'	2.50	0.40
21:B0:2522:G:O2'	21:B0:2523:G:H5'	2.21	0.40
21:B0:2524:G:H2'	21:B0:2525:U:O4'	2.21	0.40
1:AA:155:C:H2'	1:AA:156:G:C8	2.57	0.40
1:AA:234:C:H5''	17:AQ:70:ARG:HH21	1.87	0.40
1:AA:538:G:H3'	12:AL:115:LYS:HE2	2.03	0.40
1:AA:637:G:O2'	1:AA:638:G:H5'	2.21	0.40
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.37	0.40
1:AA:975:A:C2	1:AA:1357:A:H1'	2.56	0.40
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.50	0.40
1:AA:1053:G:C3'	1:AA:1054:C:C5'	2.99	0.40
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.21	0.40
1:AA:1124:G:C8	1:AA:1145:C:C5	3.09	0.40
1:AA:1237:C:C4'	1:AA:1334:G:H21	2.34	0.40
1:AA:1380:U:O2'	1:AA:1381:U:OP2	2.36	0.40
1:AA:1406:U:H1'	1:AA:1518:A:C4'	2.51	0.40
1:AA:1415:G:O2'	1:AA:1416:G:H5'	2.22	0.40
2:AB:14:GLY:O	2:AB:15:VAL:HG22	2.21	0.40
2:AB:47:THR:HG23	2:AB:202:PRO:O	2.22	0.40
2:AB:125:PRO:HG2	2:AB:126:GLU:H	1.86	0.40
3:AC:67:THR:O	3:AC:67:THR:HG22	2.21	0.40
4:AD:23:GLY:HA3	4:AD:112:VAL:HG13	2.02	0.40
4:AD:52:SER:O	4:AD:53:ASP:C	2.64	0.40
4:AD:124:GLY:C	4:AD:126:ILE:H	2.29	0.40
4:AD:163:GLU:O	4:AD:166:LYS:HG3	2.22	0.40
5:AE:24:ARG:O	5:AE:25:ARG:HG2	2.20	0.40
13:AM:69:GLU:O	13:AM:72:ALA:HB3	2.21	0.40
15:AO:81:LEU:HD22	15:AO:85:LEU:HD12	2.03	0.40
16:AP:6:LEU:HD12	16:AP:6:LEU:N	2.36	0.40
20:AT:53:LEU:C	20:AT:57:ARG:HD2	2.46	0.40
21:B0:174:A:H2'	21:B0:175:C:O4'	2.21	0.40
21:B0:420:C:H2'	21:B0:421:G:C8	2.57	0.40
21:B0:552:C:C2'	21:B0:553:C:H4'	2.46	0.40
21:B0:699:G:H3'	21:B0:699:G:N3	2.35	0.40
21:B0:1474:A:C2'	21:B0:1475:U:H5'	2.47	0.40
21:B0:1770:U:H2'	21:B0:1774:A:H62	1.86	0.40
21:B0:1861:G:O4'	53:B5:199:ASN:CA	2.70	0.40
21:B0:2048:C:H2'	21:B0:2049:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:B0:3111:C:C4	21:B0:3148:G:P	2.85	0.40
21:B0:3172:U:O2'	21:B0:3173:A:H5'	2.21	0.40
21:B0:2236:U:H2'	21:B0:2237:C:C5'	2.47	0.40
22:B9:56:G:H2'	22:B9:57:U:O4'	2.22	0.40
22:B9:63:A:H2'	22:B9:64:C:C6	2.55	0.40
1:AA:43:C:H2'	1:AA:44:G:O4'	2.21	0.40
1:AA:482:A:H2'	1:AA:483:C:O4'	2.21	0.40
1:AA:599:C:O2'	1:AA:600:C:H5'	2.22	0.40
1:AA:965:A:O2'	1:AA:966:G:P	2.80	0.40
1:AA:976:G:C6	1:AA:2361:C:C5	3.09	0.40
1:AA:1021:G:H2'	1:AA:1022:G:H5'	2.04	0.40
1:AA:1390:U:H2'	1:AA:1391:U:H6	1.85	0.40
1:AA:1394:A:H61	1:AA:1501:C:H5'	1.81	0.40
1:AA:1405:G:H4'	1:AA:1519:A:C5'	2.50	0.40
2:AB:24:TRP:CG	2:AB:25:ASN:N	2.89	0.40
3:AC:64:VAL:H	3:AC:64:VAL:HG23	1.60	0.40
6:AF:48:LEU:HD13	6:AF:52:ILE:CD1	2.51	0.40
7:AG:104:LEU:HD23	7:AG:134:ALA:HB1	2.04	0.40
13:AM:63:THR:HG23	13:AM:64:TRP:CD2	2.56	0.40
15:AO:17:ARG:NH1	15:AO:17:ARG:CG	2.85	0.40
16:AP:17:TYR:N	16:AP:17:TYR:CD1	2.89	0.40
16:AP:67:THR:CG2	16:AP:68:ASP:N	2.81	0.40
21:B0:521:U:C2'	21:B0:522:G:H5'	2.51	0.40
21:B0:1337:G:H1'	21:B0:1632:A:C6	2.56	0.40
21:B0:1354:A:C2	21:B0:1411:C:H4'	2.56	0.40
21:B0:1906:U:H2'	21:B0:1907:C:C6	2.56	0.40
21:B0:2048:C:H2'	21:B0:2049:C:H6	1.87	0.40
21:B0:3128:G:H5''	21:B0:3174:C:O2'	2.22	0.40
21:B0:2370:G:H2'	21:B0:2371:A:H2	1.87	0.40
21:B0:2437:G:H2'	21:B0:2469:G:N1	2.37	0.40
21:B0:2532:G:H1'	21:B0:2561:G:N3	2.36	0.40
1:AA:8:A:C6	4:AD:209:ARG:CB	3.04	0.40
1:AA:147:G:O2'	1:AA:148:G:H5'	2.21	0.40
1:AA:182:U:OP2	1:AA:183:G:C8	2.74	0.40
1:AA:330:C:H6	1:AA:330:C:H5''	1.87	0.40
1:AA:373:A:H2'	1:AA:374:A:H8	1.85	0.40
1:AA:450:G:C4'	16:AP:42:ARG:HG2	2.51	0.40
1:AA:567:G:H2'	1:AA:568:G:O4'	2.21	0.40
1:AA:715:A:H2'	1:AA:716:A:C8	2.57	0.40
1:AA:913:A:H1'	1:AA:914:A:O4'	2.21	0.40
1:AA:961:U:O2'	1:AA:962:C:H5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1110:A:C3'	1:AA:1111:A:C5'	2.95	0.40
1:AA:1126:U:C1'	1:AA:1280:A:C6	2.99	0.40
1:AA:1408:A:O2'	1:AA:1409:C:H5'	2.21	0.40
2:AB:9:GLU:O	2:AB:48:MET:SD	2.80	0.40
2:AB:134:GLU:HG2	2:AB:137:ARG:HH21	1.86	0.40
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.21	0.40
4:AD:100:ARG:HB3	4:AD:102:ASP:OD1	2.22	0.40
10:AJ:12:ASP:OD1	10:AJ:14:LYS:N	2.50	0.40
15:AO:34:LEU:C	15:AO:34:LEU:CD2	2.94	0.40
18:AR:21:LYS:HG3	18:AR:57:GLY:CA	2.51	0.40
21:B0:35:G:H1'	21:B0:466:A:H1'	2.04	0.40
21:B0:79:G:H1'	21:B0:356:A:C2	2.57	0.40
21:B0:211:U:H2'	21:B0:212:U:O4'	2.22	0.40
21:B0:340:G:O4'	21:B0:488:A:H1'	2.22	0.40
21:B0:718:A:N6	21:B0:739:G:H4'	2.37	0.40
21:B0:738:G:H2'	21:B0:739:G:H5'	2.02	0.40
21:B0:878:C:O2'	21:B0:879:A:P	2.80	0.40
21:B0:1026:U:H2'	21:B0:1027:C:C6	2.56	0.40
21:B0:1686:A:O2'	21:B0:2528:G:H5'	2.22	0.40
21:B0:2372:A:H2'	21:B0:2373:C:C6	2.56	0.40
21:B0:2519:C:H2'	21:B0:2520:A:O4'	2.21	0.40
22:B9:110:U:O2'	22:B9:111:C:H5'	2.21	0.40
1:AA:94:G:O6	1:AA:96:C:N4	2.55	0.40
1:AA:112:G:N3	1:AA:354:G:O4'	2.55	0.40
1:AA:600:C:H4'	8:AH:129:VAL:HG12	2.04	0.40
1:AA:671:G:H2'	1:AA:672:U:O4'	2.21	0.40
1:AA:748:C:H6	1:AA:748:C:OP2	2.05	0.40
1:AA:883:C:O2'	1:AA:884:U:H5'	2.21	0.40
1:AA:952:U:H2'	1:AA:953:G:H8	1.85	0.40
1:AA:1001:A:H2'	1:AA:1002:G:C8	2.56	0.40
1:AA:1110:A:H8	1:AA:1110:A:O5'	2.04	0.40
1:AA:1300:G:C2'	1:AA:1301:U:OP2	2.70	0.40
3:AC:134:ILE:CD1	3:AC:166:GLU:HB3	2.52	0.40
4:AD:11:LEU:O	4:AD:12:CYS:C	2.65	0.40
5:AE:118:ILE:HG22	5:AE:119:LEU:O	2.21	0.40
5:AE:119:LEU:HD23	5:AE:119:LEU:HA	1.84	0.40
6:AF:48:LEU:HD13	6:AF:52:ILE:HD12	2.03	0.40
6:AF:78:GLU:HA	6:AF:81:ILE:CD1	2.51	0.40
6:AF:98:LEU:HD23	6:AF:98:LEU:HA	1.94	0.40
8:AH:18:ARG:N	8:AH:18:ARG:HD2	2.36	0.40
11:AK:86:GLY:N	11:AK:112:THR:HG23	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:83:VAL:HG22	12:AL:84:LEU:H	1.86	0.40
19:AS:28:LYS:CG	19:AS:29:ARG:H	2.09	0.40
21:B0:57:G:C2'	21:B0:58:C:H5''	2.47	0.40
21:B0:70:A:H4'	21:B0:72:A:OP1	2.22	0.40
21:B0:1197:U:H2'	21:B0:1198:C:O4'	2.21	0.40
21:B0:1452:U:H5'	21:B0:1532:A:O2'	2.21	0.40
21:B0:3196:G:O3'	21:B0:3197:U:P	2.80	0.40
21:B0:2809:A:N6	21:B0:2854:G:H2'	2.36	0.40
21:B0:2862:G:O2'	21:B0:2863:U:H5'	2.22	0.40

All (5) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:172:PRO:O	6:AF:15:ASP:CB[3_555]	1.83	0.37
1:AA:416:G:OP1	21:B0:3140:G:O2'[3_555]	1.99	0.21
7:AG:51:GLN:NE2	10:AJ:87:THR:OG1[4_555]	2.08	0.12
4:AD:186:LEU:CD1	6:AF:15:ASP:OD2[3_555]	2.14	0.06
7:AG:57:GLU:OE2	10:AJ:89:ASP:OD1[4_555]	2.14	0.06

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	232/234 (99%)	174 (75%)	34 (15%)	24 (10%)	0	6
3	AC	204/206 (99%)	135 (66%)	40 (20%)	29 (14%)	0	3
4	AD	206/208 (99%)	166 (81%)	31 (15%)	9 (4%)	2	17
5	AE	148/150 (99%)	130 (88%)	13 (9%)	5 (3%)	3	21
6	AF	99/101 (98%)	79 (80%)	19 (19%)	1 (1%)	12	49
7	AG	153/155 (99%)	127 (83%)	16 (10%)	10 (6%)	1	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
8	AH	136/138 (99%)	125 (92%)	7 (5%)	4 (3%)	3	23
9	AI	125/127 (98%)	88 (70%)	27 (22%)	10 (8%)	1	9
10	AJ	96/98 (98%)	59 (62%)	20 (21%)	17 (18%)	0	2
11	AK	117/119 (98%)	88 (75%)	20 (17%)	9 (8%)	1	10
12	AL	120/124 (97%)	96 (80%)	15 (12%)	9 (8%)	1	10
13	AM	121/125 (97%)	87 (72%)	26 (22%)	8 (7%)	1	12
14	AN	58/60 (97%)	40 (69%)	11 (19%)	7 (12%)	0	4
15	AO	86/88 (98%)	70 (81%)	11 (13%)	5 (6%)	1	14
16	AP	81/83 (98%)	65 (80%)	15 (18%)	1 (1%)	10	44
17	AQ	102/104 (98%)	84 (82%)	10 (10%)	8 (8%)	1	10
18	AR	71/73 (97%)	62 (87%)	7 (10%)	2 (3%)	4	24
19	AS	78/80 (98%)	48 (62%)	19 (24%)	11 (14%)	0	3
20	AT	97/99 (98%)	65 (67%)	20 (21%)	12 (12%)	0	4
All	All	2330/2372 (98%)	1788 (77%)	361 (16%)	181 (8%)	1	10

All (181) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	8	LYS
2	AB	9	GLU
2	AB	15	VAL
2	AB	16	HIS
2	AB	17	PHE
2	AB	21	ARG
2	AB	24	TRP
3	AC	4	LYS
3	AC	15	THR
3	AC	16	ARG
3	AC	26	LYS
3	AC	47	LEU
3	AC	61	ALA
3	AC	62	ASP
3	AC	97	LYS
3	AC	101	LEU
3	AC	146	ALA
3	AC	154	SER
3	AC	179	ARG

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Mol	Chain	Res	Type
3	AC	189	ALA
4	AD	29	PRO
4	AD	36	ARG
5	AE	16	THR
5	AE	153	LYS
7	AG	7	ALA
7	AG	155	ARG
8	AH	24	THR
8	AH	83	ILE
8	AH	91	ARG
9	AI	88	TYR
10	AJ	32	ALA
10	AJ	39	PRO
10	AJ	54	PHE
10	AJ	57	LYS
10	AJ	79	ARG
10	AJ	86	MET
11	AK	57	THR
11	AK	127	LYS
12	AL	27	LEU
12	AL	28	LYS
12	AL	47	LYS
13	AM	63	THR
13	AM	67	GLU
13	AM	121	LYS
13	AM	122	LYS
13	AM	124	PRO
14	AN	22	THR
14	AN	29	ARG
15	AO	88	ARG
17	AQ	69	LYS
17	AQ	80	GLY
17	AQ	81	ARG
17	AQ	96	GLN
17	AQ	98	LEU
17	AQ	104	LYS
18	AR	87	ARG
19	AS	6	LYS
19	AS	71	LEU
20	AT	11	SER
20	AT	73	HIS
2	AB	18	GLY

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Mol	Chain	Res	Type
2	AB	20	GLU
2	AB	97	TRP
2	AB	123	ALA
2	AB	232	PRO
3	AC	29	TYR
3	AC	156	ARG
3	AC	168	ALA
3	AC	181	ASN
3	AC	206	GLU
4	AD	4	TYR
4	AD	26	CYS
4	AD	88	VAL
4	AD	125	HIS
5	AE	22	GLY
5	AE	104	ALA
6	AF	37	VAL
7	AG	52	GLU
9	AI	41	VAL
9	AI	58	ARG
10	AJ	30	SER
10	AJ	34	VAL
10	AJ	40	LEU
10	AJ	72	VAL
11	AK	15	ALA
11	AK	49	GLY
11	AK	50	TYR
11	AK	89	ALA
12	AL	41	ARG
12	AL	48	PRO
12	AL	51	ALA
12	AL	116	SER
12	AL	121	GLY
13	AM	6	GLY
13	AM	85	GLY
16	AP	10	GLY
18	AR	20	ALA
19	AS	9	VAL
19	AS	45	VAL
19	AS	67	VAL
19	AS	68	GLY
20	AT	9	ASN
20	AT	49	ALA

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Mol	Chain	Res	Type
20	AT	95	ALA
20	AT	99	LEU
20	AT	102	GLY
2	AB	26	PRO
2	AB	60	ASP
2	AB	83	MET
2	AB	89	GLY
2	AB	204	ASN
4	AD	175	SER
5	AE	65	ASN
7	AG	5	ARG
8	AH	127	LEU
9	AI	56	LEU
10	AJ	19	SER
10	AJ	60	ARG
10	AJ	61	GLU
10	AJ	90	LEU
11	AK	35	PRO
11	AK	101	SER
12	AL	49	ASN
14	AN	13	THR
14	AN	23	ARG
17	AQ	97	SER
19	AS	28	LYS
19	AS	30	LEU
19	AS	32	LYS
20	AT	74	LYS
2	AB	126	GLU
2	AB	165	VAL
3	AC	39	ILE
3	AC	100	ALA
3	AC	188	LEU
7	AG	4	ARG
7	AG	81	GLY
7	AG	112	PRO
9	AI	7	THR
9	AI	12	GLU
9	AI	119	ALA
13	AM	123	ALA
14	AN	12	ARG
14	AN	60	SER
15	AO	16	ALA

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Mol	Chain	Res	Type
17	AQ	33	GLY
20	AT	50	GLU
2	AB	155	LEU
3	AC	24	ALA
3	AC	66	VAL
3	AC	127	ARG
4	AD	123	HIS
7	AG	53	LYS
9	AI	121	ARG
14	AN	36	PHE
15	AO	84	LYS
19	AS	31	ILE
2	AB	127	ILE
2	AB	214	ILE
3	AC	108	ASN
3	AC	174	PRO
4	AD	5	ILE
9	AI	43	ALA
10	AJ	26	ALA
2	AB	124	SER
3	AC	76	VAL
7	AG	14	PRO
10	AJ	82	ILE
20	AT	98	PRO
2	AB	125	PRO
3	AC	77	ILE
7	AG	17	VAL
10	AJ	36	GLY
15	AO	82	ILE
19	AS	8	GLY
20	AT	101	GLY
9	AI	44	VAL
15	AO	19	PRO
20	AT	96	GLY
3	AC	75	VAL
11	AK	90	GLY

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	202/202 (100%)	184 (91%)	18 (9%)	9	28
3	AC	160/160 (100%)	142 (89%)	18 (11%)	5	19
4	AD	180/180 (100%)	169 (94%)	11 (6%)	17	38
5	AE	115/115 (100%)	98 (85%)	17 (15%)	3	13
6	AF	90/90 (100%)	86 (96%)	4 (4%)	25	47
7	AG	126/126 (100%)	120 (95%)	6 (5%)	23	44
8	AH	119/119 (100%)	107 (90%)	12 (10%)	7	23
9	AI	98/98 (100%)	90 (92%)	8 (8%)	10	31
10	AJ	88/88 (100%)	79 (90%)	9 (10%)	7	23
11	AK	90/90 (100%)	83 (92%)	7 (8%)	11	32
12	AL	104/104 (100%)	95 (91%)	9 (9%)	9	29
13	AM	100/100 (100%)	93 (93%)	7 (7%)	14	35
14	AN	49/49 (100%)	47 (96%)	2 (4%)	27	49
15	AO	79/79 (100%)	72 (91%)	7 (9%)	9	28
16	AP	72/72 (100%)	67 (93%)	5 (7%)	14	36
17	AQ	96/96 (100%)	90 (94%)	6 (6%)	16	37
18	AR	64/64 (100%)	60 (94%)	4 (6%)	16	37
19	AS	71/71 (100%)	70 (99%)	1 (1%)	59	72
20	AT	76/76 (100%)	68 (90%)	8 (10%)	6	21
All	All	1979/1979 (100%)	1820 (92%)	159 (8%)	11	31

All (159) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	12	GLU
2	AB	17	PHE
2	AB	23	ARG
2	AB	25	ASN
2	AB	41	ILE
2	AB	75	LYS
2	AB	87	ARG
2	AB	139	LYS
2	AB	155	LEU
2	AB	164	VAL

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Mol	Chain	Res	Type
2	AB	165	VAL
2	AB	170	GLU
2	AB	178	ARG
2	AB	187	LEU
2	AB	213	LEU
2	AB	221	LEU
2	AB	231	GLU
2	AB	232	PRO
3	AC	3	ASN
3	AC	5	ILE
3	AC	34	LEU
3	AC	47	LEU
3	AC	64	VAL
3	AC	70	VAL
3	AC	75	VAL
3	AC	82	GLU
3	AC	91	LEU
3	AC	99	VAL
3	AC	107	GLN
3	AC	130	VAL
3	AC	139	GLN
3	AC	164	ARG
3	AC	167	TRP
3	AC	175	LEU
3	AC	188	LEU
3	AC	204	LEU
4	AD	15	GLU
4	AD	29	PRO
4	AD	34	GLU
4	AD	70	ILE
4	AD	122	ARG
4	AD	127	THR
4	AD	157	LEU
4	AD	162	LEU
4	AD	170	VAL
4	AD	192	GLU
4	AD	194	LEU
5	AE	10	MET
5	AE	12	LEU
5	AE	18	ARG
5	AE	26	PHE
5	AE	31	LEU

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Mol	Chain	Res	Type
5	AE	38	GLN
5	AE	41	VAL
5	AE	43	LEU
5	AE	53	LEU
5	AE	56	GLN
5	AE	65	ASN
5	AE	68	GLU
5	AE	79	GLU
5	AE	80	ILE
5	AE	89	ILE
5	AE	120	THR
5	AE	150	ARG
6	AF	10	LEU
6	AF	37	VAL
6	AF	43	LEU
6	AF	69	GLU
7	AG	8	GLU
7	AG	11	GLN
7	AG	37	ASN
7	AG	38	LEU
7	AG	113	GLU
7	AG	146	GLU
8	AH	2	LEU
8	AH	21	LYS
8	AH	26	VAL
8	AH	39	LEU
8	AH	52	ASP
8	AH	63	LEU
8	AH	85	ARG
8	AH	92	ARG
8	AH	105	ARG
8	AH	112	LEU
8	AH	119	LEU
8	AH	127	LEU
9	AI	2	GLU
9	AI	29	ASN
9	AI	38	GLN
9	AI	53	VAL
9	AI	58	ARG
9	AI	78	LYS
9	AI	79	LEU
9	AI	111	ARG

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Mol	Chain	Res	Type
10	AJ	6	ILE
10	AJ	15	THR
10	AJ	16	LEU
10	AJ	45	ARG
10	AJ	64	GLU
10	AJ	71	LEU
10	AJ	73	ASP
10	AJ	83	GLU
10	AJ	95	GLU
11	AK	24	SER
11	AK	29	ILE
11	AK	35	PRO
11	AK	54	ARG
11	AK	80	VAL
11	AK	84	VAL
11	AK	92	GLU
12	AL	7	ILE
12	AL	17	LYS
12	AL	33	ARG
12	AL	53	ARG
12	AL	60	LEU
12	AL	81	SER
12	AL	96	VAL
12	AL	113	ARG
12	AL	126	LYS
13	AM	9	ILE
13	AM	16	ASP
13	AM	70	LEU
13	AM	81	LEU
13	AM	102	ARG
13	AM	110	ARG
13	AM	124	PRO
14	AN	41	ARG
14	AN	44	LEU
15	AO	6	GLU
15	AO	7	GLU
15	AO	39	LEU
15	AO	57	LEU
15	AO	70	LEU
15	AO	81	LEU
15	AO	83	GLU
16	AP	2	VAL

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Mol	Chain	Res	Type
16	AP	8	ARG
16	AP	20	VAL
16	AP	53	VAL
16	AP	62	VAL
17	AQ	34	LYS
17	AQ	38	ARG
17	AQ	60	ILE
17	AQ	68	ARG
17	AQ	74	LEU
17	AQ	98	LEU
18	AR	38	GLU
18	AR	41	LYS
18	AR	55	ARG
18	AR	75	ILE
19	AS	43	GLU
20	AT	10	LEU
20	AT	25	ARG
20	AT	39	LYS
20	AT	42	GLN
20	AT	57	ARG
20	AT	73	HIS
20	AT	84	LEU
20	AT	86	ARG

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (68) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	19	HIS
2	AB	25	ASN
2	AB	40	HIS
2	AB	94	ASN
2	AB	146	GLN
2	AB	204	ASN
2	AB	240	GLN
3	AC	3	ASN
3	AC	6	HIS
3	AC	31	HIS
3	AC	69	HIS
3	AC	104	GLN
3	AC	107	GLN
3	AC	110	ASN
3	AC	118	GLN

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Mol	Chain	Res	Type
3	AC	123	GLN
3	AC	139	GLN
3	AC	181	ASN
4	AD	45	GLN
4	AD	62	GLN
4	AD	123	HIS
4	AD	161	ASN
4	AD	199	ASN
5	AE	20	GLN
5	AE	38	GLN
5	AE	65	ASN
5	AE	73	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	57	GLN
6	AF	64	GLN
6	AF	94	GLN
6	AF	100	ASN
7	AG	37	ASN
7	AG	86	GLN
7	AG	96	GLN
7	AG	106	GLN
9	AI	23	ASN
9	AI	73	GLN
9	AI	87	GLN
9	AI	124	GLN
10	AJ	56	HIS
10	AJ	69	ASN
10	AJ	76	ASN
10	AJ	78	ASN
10	AJ	84	GLN
11	AK	22	HIS
11	AK	62	GLN
11	AK	93	GLN
11	AK	117	ASN
12	AL	49	ASN
12	AL	75	HIS
12	AL	80	HIS
13	AM	12	ASN
13	AM	40	ASN
13	AM	62	ASN

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Mol	Chain	Res	Type
14	AN	49	HIS
15	AO	13	GLN
15	AO	37	ASN
16	AP	82	GLN
17	AQ	16	GLN
17	AQ	26	GLN
18	AR	36	ASN
19	AS	14	HIS
19	AS	56	GLN
20	AT	18	GLN
20	AT	42	GLN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1522/1537 (99%)	236 (15%)	88 (5%)
21	B0	2815/2887 (97%)	440 (15%)	55 (1%)
22	B9	117/118 (99%)	10 (8%)	0
All	All	4454/4542 (98%)	686 (15%)	143 (3%)

All (686) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	8	A
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	49	U
1	AA	51	A
1	AA	52	G
1	AA	60	A
1	AA	61	G
1	AA	75	C
1	AA	80	C
1	AA	84	U
1	AA	85	U
1	AA	86	G

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Mol	Chain	Res	Type
1	AA	96	C
1	AA	101	A
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	129(A)	G
1	AA	130	A
1	AA	131	C
1	AA	180	U
1	AA	182	U
1	AA	186	C
1	AA	192	U
1	AA	195	A
1	AA	198	G
1	AA	201	G
1	AA	205	G
1	AA	209	U
1	AA	213	G
1	AA	215	C
1	AA	244	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	252	U
1	AA	266	G
1	AA	267	C
1	AA	280	C
1	AA	282	A
1	AA	289	G
1	AA	316	G
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	373	A

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Mol	Chain	Res	Type
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	437	U
1	AA	439	A
1	AA	456	A
1	AA	467	U
1	AA	477	G
1	AA	481	G
1	AA	484	G
1	AA	485	G
1	AA	497	A
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	519	C
1	AA	527	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	547	A
1	AA	548	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	588	G
1	AA	652	U
1	AA	653	A
1	AA	665	A

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Mol	Chain	Res	Type
1	AA	686	U
1	AA	687	A
1	AA	688	G
1	AA	702	A
1	AA	703	G
1	AA	718	G
1	AA	723	U
1	AA	731	G
1	AA	749	C
1	AA	755	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	793	U
1	AA	794	A
1	AA	813	U
1	AA	815	A
1	AA	817	C
1	AA	819	A
1	AA	821	G
1	AA	828	A
1	AA	838	C
1	AA	858	G
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	945	G
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	991	U
1	AA	992	U

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Mol	Chain	Res	Type
1	AA	993	G
1	AA	1004	A
1	AA	1005	A
1	AA	1023	G
1	AA	1026	G
1	AA	1030	U
1	AA	1034	G
1	AA	1050	G
1	AA	1053	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1085	U
1	AA	1086	U
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1117	G
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1145	C
1	AA	1146	A
1	AA	1152	A
1	AA	1157	A
1	AA	1159	U
1	AA	1183	A
1	AA	1184	G
1	AA	1191	A
1	AA	1196	U
1	AA	1197	G
1	AA	1201	A
1	AA	1202	G

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Mol	Chain	Res	Type
1	AA	1211	U
1	AA	1212	U
1	AA	1215	G
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1238	A
1	AA	1258	G
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1285	A
1	AA	1286	A
1	AA	1287	A
1	AA	1299	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1303	C
1	AA	1305	G
1	AA	1320	C
1	AA	1332	A
1	AA	1336	C
1	AA	1338	G
1	AA	1347	G
1	AA	1348	U
1	AA	1363	A
1	AA	1364	U
1	AA	1365	G
1	AA	1381	U
1	AA	1384	C
1	AA	1394	A
1	AA	1398	A
1	AA	1417	G
1	AA	1442	G
1	AA	1443	G
1	AA	1452	C
1	AA	1484	C
1	AA	1490	C
1	AA	1491	G
1	AA	1499	A

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Mol	Chain	Res	Type
1	AA	1502	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
21	B0	14	A
21	B0	15	G
21	B0	45	C
21	B0	48	A
21	B0	49	U
21	B0	50	G
21	B0	58	C
21	B0	59	G
21	B0	63	A
21	B0	67	G
21	B0	70	A
21	B0	72	A
21	B0	87	G
21	B0	89	A
21	B0	90	G
21	B0	91	A
21	B0	99	U
21	B0	105	G
21	B0	110	U
21	B0	116	A
21	B0	118	U
21	B0	123	A
21	B0	129	A
21	B0	135	U
21	B0	155	G
21	B0	158	A
21	B0	173	A
21	B0	174	A
21	B0	176	A
21	B0	177	U
21	B0	181	A
21	B0	182	G
21	B0	193	A
21	B0	199	A

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Mol	Chain	Res	Type
21	B0	200	A
21	B0	205	A
21	B0	206	U
21	B0	210	A
21	B0	218	A
21	B0	219	G
21	B0	225	G
21	B0	226	C
21	B0	227	G
21	B0	229	G
21	B0	242	A
21	B0	243	G
21	B0	245	C
21	B0	305	A
21	B0	318	G
21	B0	333	A
21	B0	334	G
21	B0	335	A
21	B0	340	G
21	B0	342	G
21	B0	343	A
21	B0	344	G
21	B0	358	C
21	B0	363	G
21	B0	368	A
21	B0	373	A
21	B0	399	G
21	B0	401	G
21	B0	408	U
21	B0	414	A
21	B0	418	C
21	B0	419	G
21	B0	424	G
21	B0	443	A
21	B0	455	A
21	B0	456	C
21	B0	460	U
21	B0	463	C
21	B0	467	U
21	B0	469	G
21	B0	491	A
21	B0	492	G

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Mol	Chain	Res	Type
21	B0	515	A
21	B0	518	A
21	B0	519	C
21	B0	537	C
21	B0	541	C
21	B0	542	A
21	B0	554	U
21	B0	556	A
21	B0	558	G
21	B0	559	C
21	B0	572	G
21	B0	584	A
21	B0	602	C
21	B0	613	A
21	B0	617	U
21	B0	624	A
21	B0	632	A
21	B0	636	G
21	B0	638	A
21	B0	648	A
21	B0	652	C
21	B0	654	A
21	B0	657	A
21	B0	665	A
21	B0	666	U
21	B0	667	U
21	B0	684	C
21	B0	697	G
21	B0	699	G
21	B0	700	C
21	B0	728	G
21	B0	742	G
21	B0	743	A
21	B0	753	U
21	B0	760	U
21	B0	761	G
21	B0	766	A
21	B0	776	G
21	B0	778	G
21	B0	789	G
21	B0	794	A
21	B0	796	A

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Mol	Chain	Res	Type
21	B0	797	A
21	B0	798	G
21	B0	801	A
21	B0	802	A
21	B0	803	C
21	B0	806	A
21	B0	813	A
21	B0	818	G
21	B0	825	C
21	B0	832	A
21	B0	840	U
21	B0	841	G
21	B0	844	G
21	B0	873	U
21	B0	879	A
21	B0	892	A
21	B0	895	G
21	B0	911	A
21	B0	919	U
21	B0	922	A
21	B0	926	C
21	B0	930	A
21	B0	941	U
21	B0	944	A
21	B0	952	A
21	B0	957	G
21	B0	969	U
21	B0	970	A
21	B0	972	C
21	B0	984	A
21	B0	994	A
21	B0	996	C
21	B0	1005	U
21	B0	1006	C
21	B0	1023	U
21	B0	1024	G
21	B0	1030	U
21	B0	1032	A
21	B0	1033	G
21	B0	1036	G
21	B0	1037	U
21	B0	1044	U

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Mol	Chain	Res	Type
21	B0	1055	A
21	B0	1056	U
21	B0	1057	A
21	B0	1068	A
21	B0	1069	G
21	B0	1071	U
21	B0	1072	U
21	B0	1073	G
21	B0	1078	A
21	B0	1081	A
21	B0	1082	G
21	B0	1084	A
21	B0	1092	U
21	B0	1099	A
21	B0	1100	G
21	B0	1113	C
21	B0	1114	A
21	B0	1117	G
21	B0	1120	C
21	B0	1122	A
21	B0	1137	A
21	B0	1138	A
21	B0	1142	G
21	B0	1145	C
21	B0	1146	G
21	B0	1153	A
21	B0	1167	A
21	B0	1182	U
21	B0	1183	C
21	B0	1185	C
21	B0	1188	A
21	B0	1194	U
21	B0	1195	U
21	B0	1199	U
21	B0	1200	G
21	B0	1224	A
21	B0	1253	C
21	B0	1262	U
21	B0	1264	C
21	B0	1266	G
21	B0	1269	G
21	B0	1278	A

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Mol	Chain	Res	Type
21	B0	1279	G
21	B0	1280	U
21	B0	1284	G
21	B0	1285	A
21	B0	1288	A
21	B0	1314	A
21	B0	1327	C
21	B0	1334	A
21	B0	1338	G
21	B0	1342	U
21	B0	1343	C
21	B0	1355	A
21	B0	1356	G
21	B0	1359	G
21	B0	1391	A
21	B0	1392	U
21	B0	1397	A
21	B0	1398	G
21	B0	1433	A
21	B0	1441	A
21	B0	1442	C
21	B0	1443	G
21	B0	1459	U
21	B0	1465	G
21	B0	1468	A
21	B0	1469	U
21	B0	1470	G
21	B0	1475	U
21	B0	1482	U
21	B0	1490	U
21	B0	1496	G
21	B0	1505	U
21	B0	1508	G
21	B0	1509	A
21	B0	1513	U
21	B0	1519	G
21	B0	1520	G
21	B0	1524	C
21	B0	1529	C
21	B0	1552	C
21	B0	1571	G
21	B0	1573	G

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Mol	Chain	Res	Type
21	B0	1574	A
21	B0	1576	G
21	B0	1582	A
21	B0	1583	A
21	B0	1585	A
21	B0	1601	U
21	B0	1618	U
21	B0	1623	C
21	B0	1624	A
21	B0	1625	A
21	B0	1632	A
21	B0	1633	C
21	B0	1634	A
21	B0	1635	G
21	B0	1648	C
21	B0	1651	U
21	B0	1657	A
21	B0	1664	G
21	B0	1665	C
21	B0	1670	G
21	B0	1671	A
21	B0	1680	U
21	B0	1685	A
21	B0	1691	G
21	B0	1692	C
21	B0	1710	U
21	B0	1712	G
21	B0	1715	A
21	B0	1717	A
21	B0	1724	C
21	B0	1733	U
21	B0	1748	U
21	B0	1749	G
21	B0	1750	A
21	B0	1754	G
21	B0	1755	G
21	B0	1764	A
21	B0	1771	A
21	B0	1773	C
21	B0	1778	U
21	B0	1792	C
21	B0	1800	A

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Mol	Chain	Res	Type
21	B0	1801	C
21	B0	1802	A
21	B0	1807	A
21	B0	1808	C
21	B0	1821	A
21	B0	1831	G
21	B0	3865	A
21	B0	1861	G
21	B0	1884	A
21	B0	1913	G
21	B0	1920	A
21	B0	1922	U
21	B0	1926	U
21	B0	1927	U
21	B0	1928	G
21	B0	1938	U
21	B0	1939	U
21	B0	1949	A
21	B0	1950	C
21	B0	1954	A
21	B0	1955	G
21	B0	1956	G
21	B0	1979	C
21	B0	1980	A
21	B0	2004	U
21	B0	2006	G
21	B0	2014	A
21	B0	2015	G
21	B0	2016	A
21	B0	2019	C
21	B0	2034	A
21	B0	2038	C
21	B0	2043	A
21	B0	2045	A
21	B0	2051	U
21	B0	2052	G
21	B0	2060	A
21	B0	3107	G
21	B0	3110	G
21	B0	3111	C
21	B0	3112	G
21	B0	3116	G

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Mol	Chain	Res	Type
21	B0	3117	A
21	B0	3118	U
21	B0	3119	A
21	B0	3127	G
21	B0	3146	A
21	B0	3147	C
21	B0	3150	C
21	B0	3172	U
21	B0	3173	A
21	B0	3185	U
21	B0	3191	A
21	B0	3197	U
21	B0	2191	A
21	B0	2195	C
21	B0	2199	C
21	B0	2205	C
21	B0	2218	G
21	B0	2229	G
21	B0	2237	C
21	B0	2241	U
21	B0	2245	A
21	B0	2246	A
21	B0	2247	A
21	B0	2255	G
21	B0	2262	C
21	B0	2268	G
21	B0	2285	U
21	B0	2286	G
21	B0	2287	G
21	B0	2288	A
21	B0	2298	U
21	B0	2299	A
21	B0	2300	G
21	B0	2301	A
21	B0	2313	G
21	B0	2315	A
21	B0	2316	G
21	B0	2326	C
21	B0	2362	G
21	B0	2364	C
21	B0	2378	G
21	B0	2382	C

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Mol	Chain	Res	Type
21	B0	2385	U
21	B0	2396	C
21	B0	2403	C
21	B0	2405	A
21	B0	2408	G
21	B0	2409	A
21	B0	2414	A
21	B0	2420	C
21	B0	2427	A
21	B0	2428	U
21	B0	2438	A
21	B0	2448	A
21	B0	2455	A
21	B0	2470	U
21	B0	2481	G
21	B0	2482	A
21	B0	2483	U
21	B0	2484	G
21	B0	2485	U
21	B0	2492	G
21	B0	2498	U
21	B0	2499	C
21	B0	2504	G
21	B0	2522	G
21	B0	2546	G
21	B0	2549	G
21	B0	2565	C
21	B0	2578	G
21	B0	2581	A
21	B0	2582	G
21	B0	2588	U
21	B0	2589	C
21	B0	2591	C
21	B0	2593	A
21	B0	2594	U
21	B0	2608	A
21	B0	2609	G
21	B0	2625	U
21	B0	2633	A
21	B0	2634	G
21	B0	2661	G
21	B0	2669	C

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Mol	Chain	Res	Type
21	B0	2670	C
21	B0	2681	A
21	B0	2691	C
21	B0	2692	A
21	B0	2712	G
21	B0	2728	A
21	B0	2730	A
21	B0	2732	C
21	B0	2737	A
21	B0	2745	A
21	B0	2756	A
21	B0	2760	G
21	B0	2761	A
21	B0	2771	C
21	B0	2784	A
21	B0	2785	A
21	B0	2795	A
21	B0	2807	U
21	B0	2808	U
21	B0	2809	A
21	B0	2811	G
21	B0	2825	A
21	B0	2841	U
21	B0	2842	C
21	B0	2847	G
21	B0	2854	G
21	B0	2855	C
21	B0	2859	U
22	B9	18	G
22	B9	26	G
22	B9	27	A
22	B9	28	A
22	B9	29	C
22	B9	31	A
22	B9	47	A
22	B9	77	G
22	B9	112	A
22	B9	115	G

All (143) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type
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Mol	Chain	Res	Type
1	AA	5	U
1	AA	7	G
1	AA	30	U
1	AA	48	C
1	AA	51	A
1	AA	60	A
1	AA	74	G
1	AA	94	G
1	AA	115	G
1	AA	119	A
1	AA	129(A)	G
1	AA	181	G
1	AA	185	A
1	AA	197	A
1	AA	204	A
1	AA	243	A
1	AA	249	U
1	AA	250	A
1	AA	251	G
1	AA	266	G
1	AA	279	A
1	AA	281	G
1	AA	288	A
1	AA	328	C
1	AA	329	A
1	AA	344	A
1	AA	353	A
1	AA	366	C
1	AA	372	C
1	AA	375	U
1	AA	394	G
1	AA	428	G
1	AA	429	U
1	AA	438	G
1	AA	484	G
1	AA	496	A
1	AA	509	A
1	AA	518	C
1	AA	533	A
1	AA	547	A
1	AA	559	A

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Mol	Chain	Res	Type
1	AA	560	U
1	AA	575	G
1	AA	587	G
1	AA	651	C
1	AA	687	A
1	AA	701	C
1	AA	748	C
1	AA	792	A
1	AA	812	C
1	AA	913	A
1	AA	960	U
1	AA	965	A
1	AA	975	A
1	AA	976	G
1	AA	992	U
1	AA	1049	U
1	AA	1065	U
1	AA	1085	U
1	AA	1101	A
1	AA	1129	C
1	AA	1145	C
1	AA	1182	G
1	AA	1190	G
1	AA	1196	U
1	AA	1201	A
1	AA	1214	C
1	AA	1224	G
1	AA	1226	C
1	AA	1257	U
1	AA	1281	U
1	AA	1285	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1319	A
1	AA	1346	A
1	AA	1347	G
1	AA	1364	U
1	AA	1380	U
1	AA	1393	U
1	AA	1397	C
1	AA	1398	A

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Mol	Chain	Res	Type
1	AA	1451	A
1	AA	1498	U
1	AA	1503	A
1	AA	1504	G
1	AA	1528	U
21	B0	69	G
21	B0	173	A
21	B0	181	A
21	B0	192	G
21	B0	198	A
21	B0	242	A
21	B0	342	G
21	B0	583	C
21	B0	765	C
21	B0	801	A
21	B0	805	G
21	B0	824	U
21	B0	843	G
21	B0	878	C
21	B0	1071	U
21	B0	1141	U
21	B0	1187	A
21	B0	1193	G
21	B0	1194	U
21	B0	1223	G
21	B0	1263	G
21	B0	1278	A
21	B0	1279	G
21	B0	1313	U
21	B0	1354	A
21	B0	1495	G
21	B0	1518	C
21	B0	1519	G
21	B0	1575	C
21	B0	1633	C
21	B0	1634	A
21	B0	1664	G
21	B0	1807	A
21	B0	1820	G
21	B0	1938	U
21	B0	2015	G
21	B0	3098	U

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Mol	Chain	Res	Type
21	B0	3107	G
21	B0	3110	G
21	B0	3111	C
21	B0	3116	G
21	B0	3118	U
21	B0	3146	A
21	B0	3149	G
21	B0	3171	A
21	B0	3172	U
21	B0	2204	A
21	B0	2245	A
21	B0	2261	G
21	B0	2377	U
21	B0	2404	A
21	B0	2426	G
21	B0	2668	U
21	B0	2759	U
21	B0	2824	C

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	AA	106
21	B0	31
22	B9	2
13	AM	1
12	AL	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	1443:G	O3'	1445:U	P	9.14
1	AA	1458:G	O3'	1459:C	P	8.01
1	B0	1888:C	O3'	1889:G	P	6.96
1	AA	1459:C	O3'	1460:A	P	6.03
1	B0	3180:U	O3'	3181:C	P	5.42
1	AA	993:G	O3'	994:A	P	5.01
1	AA	1434:A	O3'	1435:G	P	4.54
1	B0	3197:U	O3'	2181:A	P	4.41
1	B0	2075:U	O3'	3093:C	P	4.27
1	AA	170:U	O3'	171:A	P	4.12
1	AA	150:C	O3'	151:A	P	4.08
1	B0	3108:G	O3'	3109:U	P	3.98
1	B0	3161:C	O3'	3162:G	P	3.90
1	AA	1466:C	O3'	1467:G	P	3.88
1	AA	1044:A	O3'	1045:C	P	3.70
1	AA	497:A	O3'	498:U	P	3.58
1	AA	196:A	O3'	197:A	P	3.53
1	AA	1278:U	O3'	1279:A	P	3.49
1	AA	455:C	O3'	456:A	P	3.48
1	AA	672:U	O3'	673:G	P	3.32
1	AA	1117:G	O3'	1118:C	P	3.27
1	AA	68:G	O3'	69:G	P	3.10
1	AA	1256:A	O3'	1257:U	P	3.10
1	B0	1116:U	O3'	1117:G	P	3.10
1	AA	1416:G	O3'	1417:G	P	3.08
1	AA	337:C	O3'	338:A	P	3.07
1	B0	3126:A	O3'	3127:G	P	3.07
1	B0	1912:G	O3'	1913:G	P	3.03
1	AA	216:C	O3'	217:C	P	3.00
1	AA	200:G	O3'	201:G	P	2.93
1	AA	99:C	O3'	101:A	P	2.89
1	B0	891:A	O3'	892:A	P	2.88
1	AA	305:G	O3'	306:G	P	2.83
1	AA	814:A	O3'	815:A	P	2.82
1	B0	3196:G	O3'	3197:U	P	2.80

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	631:G	O3'	632:A	P	2.77
1	B0	1113:C	O3'	1114:A	P	2.75
1	AA	820:U	O3'	821:G	P	2.74
1	AA	606:G	O3'	607:A	P	2.73
1	B0	3181:C	O3'	3182:U	P	2.73
1	AA	848:G	O3'	849:C	P	2.72
1	AA	291:C	O3'	292:G	P	2.71
1	B0	897:A	O3'	898:C	P	2.70
1	AA	1027:C	O3'	1028:C	P	2.68
1	AA	476:U	O3'	477:G	P	2.67
1	AA	1026:G	O3'	1027:C	P	2.65
1	B0	1119:U	O3'	1120:C	P	2.63
1	AA	1483:A	O3'	1484:C	P	2.62
1	AA	179:A	O3'	180:U	P	2.59
1	B0	3877:A	O3'	1861:G	P	2.59
1	AA	367:U	O3'	368:U	P	2.56
1	AA	919:A	O3'	920:U	P	2.50
1	B0	910:U	O3'	911:A	P	2.45
1	AA	46:G	O3'	47:C	P	2.42
1	AA	1237:C	O3'	1238:A	P	2.38
1	AA	804:U	O3'	805:C	P	2.35
1	B0	3187:U	O3'	3188:U	P	2.35
1	AA	191:G	O3'	192:U	P	2.33
1	AA	776:G	O3'	777:A	P	2.33
1	AA	1067:A	O3'	1068:G	P	2.32
1	AA	1297:C	O3'	1298:C	P	2.31
1	AA	405:U	O3'	406:G	P	2.30
1	AA	1447:A	O3'	1448:C	P	2.29
1	B0	1062:G	O3'	1063:C	P	2.28
1	AA	1374:A	O3'	1375:A	P	2.26
1	AA	837:G	O3'	838:C	P	2.23
1	AM	86:CYS	C	87:TYR	N	2.23
1	B9	107:C	O3'	108:G	P	2.21
1	AA	1331:G	O3'	1332:A	P	2.19
1	AA	1155:G	O3'	1156:G	P	2.14
1	B0	3107:G	O3'	3108:G	P	2.14
1	AA	1034:G	O3'	1035:A	P	2.13
1	AA	212:G	O3'	213:G	P	2.12
1	B0	3098:U	O3'	3099:U	P	2.12
1	AA	118:U	O3'	119:A	P	2.11
1	AA	765:G	O3'	766:A	P	2.09
1	B0	1856:U	O3'	3865:A	P	2.06

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	717:C	O3'	718:G	P	2.05
1	AA	1211:U	O3'	1212:U	P	2.03
1	B0	3183:A	O3'	3184:C	P	2.02
1	AA	143:A	O3'	144:G	P	2.01
1	AL	19:ARG	C	20:LYS	N	2.01
1	B9	73:C	O3'	74:A	P	2.01
1	AA	89:G	O3'	90:C	P	1.98
1	B0	3149:G	O3'	3150:C	P	1.98
1	AA	351:G	O3'	352:C	P	1.97
1	AA	108:G	O3'	109:A	P	1.94
1	AA	914:A	O3'	915:A	P	1.94
1	AA	1305:G	O3'	1306:A	P	1.94
1	AA	206:C	O3'	207:C	P	1.91
1	AA	1238:A	O3'	1239:A	P	1.91
1	AA	827:U	O3'	828:A	P	1.90
1	AA	1337:G	O3'	1338:G	P	1.90
1	B0	3188:U	O3'	3189:U	P	1.90
1	AA	38:G	O3'	39:G	P	1.89
1	AA	587:G	O3'	588:G	P	1.89
1	AA	1345:U	O3'	1346:A	P	1.89
1	AA	733:A	O3'	734:G	P	1.88
1	B0	3141:G	O3'	3142:C	P	1.87
1	B0	3101:G	O3'	3102:G	P	1.86
1	AA	396:G	O3'	397:A	P	1.85
1	AA	115:G	O3'	116:A	P	1.84
1	B0	3190:G	O3'	3191:A	P	1.83
1	B0	3874:C	O3'	3875:A	P	1.81
1	AA	869:G	O3'	870:U	P	1.80
1	AA	315:A	O3'	316:G	P	1.78
1	AA	944:G	O3'	945:G	P	1.78
1	AA	905:U	O3'	906:G	P	1.76
1	AA	960:U	O3'	961:U	P	1.75
1	AA	135:C	O3'	136:C	P	1.40
1	AA	983:A	O3'	984:C	P	1.40
1	AA	278:G	O3'	279:A	P	1.39
1	AA	499:A	O3'	500:G	P	1.36
1	AA	1335:C	O3'	1336:C	P	1.35
1	AA	1393:U	O3'	1394:A	P	1.35
1	AA	1455:G	O3'	1456:A	P	1.34
1	AA	1457:A	O3'	1458:G	P	1.34
1	AA	561:U	O3'	562:C	P	1.32
1	AA	436:C	O3'	437:U	P	1.31

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	461:C	O3'	462:A	P	1.31
1	AA	239:U	O3'	240:C	P	1.29
1	B0	3102:G	O3'	3103:A	P	1.26
1	AA	576:G	O3'	577:G	P	1.25
1	AA	1409:C	O3'	1410:G	P	1.24
1	AA	274:A	O3'	275:G	P	1.23
1	AA	1110:A	O3'	1111:A	P	1.23
1	AA	74:G	O3'	75:C	P	1.20
1	AA	288:A	O3'	289:G	P	1.20
1	AA	651:C	O3'	652:U	P	1.16
1	AA	94:G	O3'	96:C	P	1.12
1	B0	3106:U	O3'	3107:G	P	1.12
1	AA	375:U	O3'	376:G	P	1.08
1	AA	933:G	O3'	934:C	P	1.03
1	AA	227:G	O3'	228:A	P	0.98
1	AA	249:U	O3'	250:A	P	0.91
1	AA	1190:G	O3'	1191:A	P	0.82
1	AA	394:G	O3'	395:C	P	0.75
1	AA	1505:G	O3'	1506:U	P	0.75
1	AA	214:U	O3'	215:C	P	0.73
1	AA	1398:A	O3'	1399:C	P	0.57
1	AA	59:A	O3'	60:A	P	0.16

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1533/1537 (99%)	1.43	391 (25%) 1 8	207, 548, 819, 940	0
2	AB	234/234 (100%)	1.50	67 (28%) 1 7	754, 754, 754, 754	0
3	AC	206/206 (100%)	2.81	110 (53%) 0 3	378, 378, 378, 378	0
4	AD	208/208 (100%)	2.96	111 (53%) 0 3	709, 709, 709, 709	0
5	AE	150/150 (100%)	3.30	89 (59%) 0 2	756, 756, 756, 756	0
6	AF	101/101 (100%)	1.44	30 (29%) 1 7	748, 748, 748, 748	0
7	AG	155/155 (100%)	1.93	61 (39%) 1 5	374, 374, 374, 374	0
8	AH	138/138 (100%)	2.82	65 (47%) 0 4	856, 856, 856, 856	0
9	AI	127/127 (100%)	2.24	59 (46%) 0 4	439, 439, 439, 439	0
10	AJ	98/98 (100%)	3.00	43 (43%) 0 4	430, 430, 430, 430	0
11	AK	119/119 (100%)	2.12	42 (35%) 1 6	652, 652, 652, 652	0
12	AL	124/124 (100%)	1.94	40 (32%) 1 6	423, 541, 541, 541	0
13	AM	125/125 (100%)	2.40	62 (49%) 0 3	378, 572, 572, 572	0
14	AN	60/60 (100%)	4.09	39 (65%) 0 2	378, 378, 378, 378	0
15	AO	88/88 (100%)	2.08	38 (43%) 0 4	740, 740, 740, 740	0
16	AP	83/83 (100%)	2.39	41 (49%) 0 3	781, 781, 781, 781	0
17	AQ	104/104 (100%)	1.91	47 (45%) 0 4	857, 857, 857, 857	0
18	AR	73/73 (100%)	1.50	23 (31%) 1 6	748, 748, 748, 748	0
19	AS	80/80 (100%)	2.38	38 (47%) 0 4	633, 633, 633, 633	0
20	AT	99/99 (100%)	2.37	50 (50%) 0 3	940, 940, 940, 940	0
21	B0	2825/2887 (97%)	2.03	1080 (38%) 1 5	462, 737, 737, 940	0
22	B9	118/118 (100%)	1.74	35 (29%) 1 7	772, 938, 938, 938	0
23	BA	270/270 (100%)	8.12	252 (93%) 0 1	737, 737, 737, 737	0
24	BB	205/205 (100%)	7.27	180 (87%) 0 1	737, 737, 737, 737	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
25	BC	197/197 (100%)	7.86	163 (82%)	0	1	737, 737, 737, 737	0
26	BD	178/178 (100%)	9.94	177 (99%)	0	1	938, 938, 938, 938	0
27	BE	177/177 (100%)	7.15	155 (87%)	0	1	737, 737, 737, 737	0
28	BF	52/52 (100%)	9.12	52 (100%)	0	1	737, 737, 737, 737	0
29	BG	143/143 (100%)	4.35	69 (48%)	0	3	907, 907, 907, 907	0
30	BH	143/143 (100%)	6.73	131 (91%)	0	1	737, 737, 737, 737	0
31	BI	132/132 (100%)	10.34	127 (96%)	0	1	737, 737, 737, 737	0
32	BJ	141/141 (100%)	6.64	112 (79%)	0	1	737, 737, 737, 737	0
33	BK	124/124 (100%)	7.95	120 (96%)	0	1	737, 737, 737, 737	0
34	BL	114/114 (100%)	9.53	111 (97%)	0	1	737, 737, 737, 737	0
35	BM	111/111 (100%)	11.03	109 (98%)	0	1	938, 938, 938, 938	0
36	BN	125/125 (100%)	7.04	117 (93%)	0	1	737, 737, 737, 737	0
37	BO	117/117 (100%)	4.31	88 (75%)	0	2	737, 737, 737, 737	0
38	BP	100/100 (100%)	4.54	64 (64%)	0	2	737, 737, 737, 737	0
39	BQ	130/130 (100%)	7.19	119 (91%)	0	1	737, 737, 737, 737	0
40	BR	93/93 (100%)	7.99	84 (90%)	0	1	737, 737, 737, 737	0
41	BS	113/113 (100%)	9.26	112 (99%)	0	1	737, 737, 737, 737	0
42	BT	173/173 (100%)	15.01	158 (91%)	0	1	737, 772, 772, 772	0
43	BU	86/86 (100%)	9.01	79 (91%)	0	1	737, 737, 737, 737	0
44	BV	0/16	-	-	-	-	-	-
45	BW	65/65 (100%)	7.82	61 (93%)	0	1	737, 737, 737, 737	0
46	BX	55/55 (100%)	6.25	49 (89%)	0	1	737, 737, 737, 737	0
47	BY	73/73 (100%)	7.54	62 (84%)	0	1	737, 737, 737, 737	0
48	BZ	58/58 (100%)	6.92	53 (91%)	0	1	737, 737, 737, 737	0
49	B1	53/53 (100%)	9.08	52 (98%)	0	1	737, 737, 737, 737	0
50	B2	46/46 (100%)	3.95	34 (73%)	0	2	737, 737, 737, 737	0
51	B3	63/63 (100%)	3.01	32 (50%)	0	3	737, 737, 737, 737	0
52	B4	35/35 (100%)	4.10	30 (85%)	0	1	737, 737, 737, 737	0
53	B5	213/217 (98%)	8.93	196 (92%)	0	1	940, 940, 940, 940	0
All	All	10433/10519 (99%)	4.05	5709 (54%)	0	3	207, 737, 938, 940	0

All (5709) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
42	BT	137	ASP	89.0
42	BT	136	VAL	85.9
42	BT	138	VAL	78.6
42	BT	103	ARG	64.3
42	BT	101	THR	59.0
42	BT	102	GLY	56.8
42	BT	100	THR	56.4
42	BT	131	PRO	54.9
42	BT	104	SER	53.9
29	BG	58	THR	49.1
42	BT	152	ILE	49.0
42	BT	105	GLN	48.3
42	BT	149	ALA	47.9
42	BT	114	ASP	46.7
42	BT	148	THR	45.0
25	BC	127	ASP	41.4
29	BG	57	ILE	41.3
24	BB	86	PRO	41.0
32	BJ	84	GLU	39.6
32	BJ	78	SER	39.1
34	BL	71	HIS	38.8
38	BP	27	GLY	38.5
23	BA	227	ASN	37.7
26	BD	46	ASP	37.6
32	BJ	85	ASP	37.2
42	BT	171	VAL	36.9
35	BM	81	GLU	36.2
36	BN	99	VAL	36.1
42	BT	96	VAL	36.1
34	BL	89	GLU	36.0
42	BT	169	VAL	36.0
25	BC	170	LEU	35.9
45	BW	64	GLY	35.5
34	BL	72	ASP	35.2
43	BU	87	GLU	35.2
31	BI	33	GLY	34.7
43	BU	86	THR	34.7
53	B5	143	ASP	34.4
42	BT	106	GLY	34.4
23	BA	228	PRO	34.3
42	BT	150	GLY	34.0
27	BE	119	ALA	33.4
53	B5	96	GLN	33.2

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Mol	Chain	Res	Type	RSRZ
42	BT	151	ASP	33.2
53	B5	124	LEU	32.5
38	BP	26	GLN	32.5
42	BT	170	SER	31.2
53	B5	10	GLU	31.2
30	BH	170	PRO	30.7
42	BT	121	GLN	30.7
42	BT	164	PRO	30.7
40	BR	94	GLN	30.7
42	BT	123	VAL	30.6
25	BC	126	ALA	30.6
39	BQ	5	GLU	30.2
25	BC	70	GLY	30.2
42	BT	168	VAL	30.0
25	BC	69	HIS	29.8
30	BH	171	LEU	29.7
34	BL	67	ALA	29.2
42	BT	173	PRO	29.1
53	B5	17	SER	29.0
23	BA	17	THR	28.9
39	BQ	7	THR	28.9
42	BT	139	THR	28.8
23	BA	24	LEU	28.6
45	BW	2	LYS	28.6
42	BT	98	VAL	28.5
35	BM	112	LEU	28.5
31	BI	84	ALA	28.5
25	BC	171	PRO	28.4
31	BI	34	LEU	28.2
23	BA	23	GLY	28.0
32	BJ	11	GLY	27.8
27	BE	118	PRO	27.4
31	BI	103	GLY	27.3
41	BS	100	ASP	27.2
31	BI	32	LYS	27.2
43	BU	6	GLY	27.2
53	B5	6	GLU	27.2
53	B5	146	GLU	27.2
23	BA	240	THR	27.0
24	BB	100	GLU	26.8
42	BT	134	LEU	26.7
35	BM	85	LYS	26.3

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Mol	Chain	Res	Type	RSRZ
28	BF	49	GLN	26.2
41	BS	99	VAL	26.2
33	BK	88	LYS	26.1
53	B5	13	LYS	26.1
53	B5	121	GLY	26.0
31	BI	28	GLY	25.9
53	B5	12	LEU	25.7
42	BT	116	VAL	25.5
35	BM	80	ALA	25.5
25	BC	176	ASN	25.1
31	BI	83	ARG	25.0
21	B0	625	A	25.0
23	BA	232	PRO	25.0
49	B1	24	THR	24.9
31	BI	102	GLN	24.9
42	BT	99	HIS	24.8
53	B5	125	GLY	24.8
35	BM	13	THR	24.8
27	BE	36	PRO	24.7
42	BT	115	ILE	24.6
34	BL	15	SER	24.6
42	BT	110	GLY	24.2
42	BT	118	HIS	24.2
42	BT	95	SER	23.9
53	B5	9	ILE	23.9
34	BL	74	ASP	23.9
23	BA	235	GLY	23.8
24	BB	85	ALA	23.8
42	BT	97	PRO	23.6
31	BI	85	ASP	23.5
21	B0	1648	C	23.4
28	BF	35	ALA	23.4
35	BM	79	ALA	23.2
43	BU	83	ALA	23.2
42	BT	155	PRO	23.2
43	BU	84	ALA	23.2
34	BL	70	ILE	23.0
42	BT	157	GLY	22.9
53	B5	145	SER	22.9
53	B5	7	SER	22.8
35	BM	113	ASP	22.8
25	BC	68	ARG	22.7

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Mol	Chain	Res	Type	RSRZ
32	BJ	105	PRO	22.7
34	BL	82	GLU	22.6
53	B5	120	ALA	22.6
50	B2	16	HIS	22.6
43	BU	82	GLU	22.5
34	BL	88	ALA	22.5
34	BL	85	PRO	22.5
51	B3	63	PRO	22.5
24	BB	173	VAL	22.5
42	BT	162	ALA	22.5
53	B5	123	ILE	22.4
40	BR	93	GLY	22.4
53	B5	14	LEU	22.3
29	BG	56	GLU	22.2
24	BB	24	THR	22.2
42	BT	119	ASN	22.1
25	BC	174	GLY	22.0
42	BT	107	GLU	22.0
34	BL	55	ALA	22.0
26	BD	66	ILE	21.9
34	BL	66	VAL	21.9
43	BU	85	GLN	21.7
35	BM	12	ARG	21.7
21	B0	624	A	21.7
25	BC	108	ILE	21.7
24	BB	87	ASP	21.6
53	B5	119	LEU	21.6
42	BT	122	ILE	21.6
39	BQ	133	ASN	21.6
53	B5	11	ALA	21.6
24	BB	200	SER	21.5
32	BJ	12	SER	21.5
35	BM	86	GLN	21.5
26	BD	68	THR	21.4
42	BT	154	LEU	21.4
14	AN	44	LEU	21.4
38	BP	25	LEU	21.3
35	BM	16	LYS	21.3
23	BA	238	GLY	21.2
46	BX	55	GLU	21.2
47	BY	57	ASP	21.2
42	BT	172	LEU	21.2

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Mol	Chain	Res	Type	RSRZ
23	BA	114	GLY	21.1
25	BC	141	GLY	21.1
36	BN	30	GLY	21.1
34	BL	65	LEU	21.1
33	BK	106	GLU	21.1
31	BI	20	MET	21.0
31	BI	87	SER	21.0
42	BT	130	ILE	21.0
31	BI	35	THR	21.0
45	BW	65	GLU	20.9
23	BA	233	HIS	20.9
10	AJ	61	GLU	20.8
34	BL	73	LYS	20.7
4	AD	48	ALA	20.7
26	BD	126	GLY	20.7
26	BD	51	ASP	20.6
43	BU	68	VAL	20.6
42	BT	163	ASP	20.6
35	BM	84	ILE	20.4
53	B5	127	ALA	20.4
26	BD	105	ASN	20.3
27	BE	116	GLU	20.3
42	BT	156	GLU	20.3
53	B5	142	ALA	20.2
25	BC	104	LEU	20.2
33	BK	31	GLY	20.1
25	BC	165	SER	20.1
36	BN	100	ARG	20.1
31	BI	19	ILE	20.1
4	AD	86	LYS	20.1
23	BA	231	HIS	20.1
27	BE	34	THR	20.1
42	BT	78	PRO	20.1
39	BQ	6	GLN	20.1
41	BS	87	GLU	20.0
34	BL	54	THR	20.0
38	BP	65	ARG	20.0
28	BF	50	LEU	20.0
31	BI	31	GLY	20.0
39	BQ	57	LEU	19.9
40	BR	24	VAL	19.9
34	BL	62	SER	19.9

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Mol	Chain	Res	Type	RSRZ
27	BE	37	TYR	19.9
24	BB	15	TRP	19.8
32	BJ	4	HIS	19.8
35	BM	83	GLY	19.8
25	BC	143	ASP	19.7
26	BD	78	LYS	19.7
41	BS	33	THR	19.7
34	BL	23	ALA	19.7
33	BK	111	THR	19.6
10	AJ	49	VAL	19.5
23	BA	236	GLY	19.5
42	BT	153	LYS	19.4
41	BS	113	THR	19.3
30	BH	38	GLU	19.3
27	BE	35	VAL	19.3
27	BE	160	LYS	19.3
33	BK	89	GLY	19.2
53	B5	91	GLN	19.1
24	BB	201	ALA	19.1
30	BH	62	ILE	19.1
11	AK	128	ALA	19.1
25	BC	61	GLN	19.1
34	BL	68	GLN	19.0
30	BH	40	ASN	19.0
26	BD	67	ILE	18.9
32	BJ	77	LEU	18.9
27	BE	117	PRO	18.9
42	BT	71	MET	18.9
34	BL	81	ASP	18.8
40	BR	19	ALA	18.8
25	BC	164	VAL	18.8
53	B5	8	LEU	18.7
23	BA	226	MET	18.7
27	BE	120	GLY	18.7
25	BC	172	VAL	18.7
53	B5	97	LYS	18.6
33	BK	85	GLY	18.6
53	B5	50	GLU	18.6
25	BC	169	VAL	18.6
41	BS	85	ASP	18.6
23	BA	237	GLU	18.5
27	BE	157	TYR	18.5

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Mol	Chain	Res	Type	RSRZ
32	BJ	96	TYR	18.5
47	BY	62	ARG	18.4
25	BC	105	ALA	18.4
35	BM	87	VAL	18.4
25	BC	175	VAL	18.3
33	BK	32	ASP	18.3
33	BK	64	LYS	18.3
21	B0	623	G	18.3
53	B5	5	LYS	18.3
31	BI	104	GLU	18.3
26	BD	158	THR	18.3
26	BD	165	GLU	18.3
25	BC	107	ALA	18.2
35	BM	77	ALA	18.2
21	B0	1647	U	18.2
49	B1	20	PHE	18.2
34	BL	76	VAL	18.2
27	BE	32	GLU	18.1
45	BW	35	GLY	18.1
27	BE	158	HIS	18.1
49	B1	30	ASN	18.1
35	BM	111	GLY	18.1
35	BM	25	GLY	18.1
39	BQ	132	GLY	17.9
45	BW	63	LYS	17.9
53	B5	93	LEU	17.9
27	BE	23	VAL	17.8
23	BA	239	ARG	17.8
26	BD	83	MET	17.8
53	B5	197	GLU	17.7
53	B5	49	ARG	17.7
43	BU	80	SER	17.7
25	BC	66	ASN	17.6
23	BA	234	GLY	17.6
23	BA	115	ALA	17.6
25	BC	24	SER	17.6
53	B5	191	GLU	17.5
42	BT	142	ASN	17.5
53	B5	94	GLN	17.5
42	BT	117	VAL	17.5
40	BR	81	ARG	17.5
40	BR	25	TYR	17.4

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Mol	Chain	Res	Type	RSRZ
32	BJ	76	LYS	17.3
31	BI	36	THR	17.3
23	BA	125	PRO	17.3
25	BC	67	ALA	17.2
51	B3	7	HIS	17.2
42	BT	113	VAL	17.2
31	BI	27	SER	17.2
53	B5	100	VAL	17.1
26	BD	28	VAL	17.1
25	BC	177	VAL	17.1
40	BR	73	ASN	17.0
24	BB	25	VAL	17.0
25	BC	180	ILE	16.9
24	BB	13	GLN	16.9
10	AJ	47	PHE	16.9
27	BE	161	GLY	16.9
42	BT	135	VAL	16.9
42	BT	77	ALA	16.8
42	BT	120	LEU	16.8
26	BD	30	ARG	16.8
40	BR	18	SER	16.8
31	BI	16	ALA	16.8
39	BQ	29	LYS	16.8
42	BT	147	ILE	16.8
23	BA	229	VAL	16.8
26	BD	47	SER	16.7
26	BD	59	LEU	16.7
31	BI	21	CYS	16.6
34	BL	86	LYS	16.6
35	BM	91	ARG	16.6
23	BA	116	THR	16.6
23	BA	246	PRO	16.6
33	BK	84	MET	16.6
45	BW	37	LEU	16.5
31	BI	18	GLU	16.5
36	BN	60	SER	16.5
36	BN	83	PHE	16.5
27	BE	114	ILE	16.4
27	BE	81	ASP	16.4
35	BM	110	GLY	16.4
42	BT	72	ASP	16.4
23	BA	34	THR	16.3

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Mol	Chain	Res	Type	RSRZ
25	BC	23	ASN	16.3
39	BQ	10	ASN	16.3
42	BT	70	GLN	16.3
26	BD	163	ASP	16.3
39	BQ	17	GLN	16.3
24	BB	11	MET	16.2
41	BS	71	GLN	16.2
43	BU	7	VAL	16.2
21	B0	127	C	16.2
40	BR	26	SER	16.1
53	B5	122	ARG	16.1
41	BS	88	THR	16.1
35	BM	48	GLY	16.1
41	BS	19	GLY	16.1
29	BG	7	ILE	16.1
40	BR	22	ARG	16.0
28	BF	36	VAL	16.0
24	BB	204	ALA	16.0
47	BY	61	LYS	16.0
32	BJ	102	LYS	16.0
21	B0	626	A	16.0
43	BU	64	ASP	16.0
23	BA	158	SER	15.9
27	BE	115	ILE	15.9
28	BF	7	GLU	15.9
39	BQ	123	HIS	15.9
34	BL	14	SER	15.9
45	BW	3	PRO	15.9
41	BS	86	PRO	15.8
35	BM	24	SER	15.8
26	BD	84	PRO	15.8
22	B9	43	G	15.8
31	BI	55	VAL	15.8
31	BI	15	GLY	15.8
53	B5	19	GLU	15.8
1	AA	210	C	15.8
53	B5	136	THR	15.7
41	BS	63	THR	15.7
42	BT	132	GLN	15.7
34	BL	75	VAL	15.7
24	BB	205	SER	15.6
29	BG	30	TYR	15.6

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Mol	Chain	Res	Type	RSRZ
29	BG	29	GLN	15.6
25	BC	173	ALA	15.6
26	BD	166	ALA	15.6
26	BD	80	ARG	15.6
23	BA	32	ALA	15.5
21	B0	1649	A	15.5
41	BS	98	ILE	15.5
1	AA	211	G	15.5
47	BY	58	LYS	15.4
53	B5	16	LEU	15.4
8	AH	102	ARG	15.4
26	BD	77	PHE	15.4
24	BB	16	LYS	15.3
26	BD	62	LEU	15.3
8	AH	72	PRO	15.3
26	BD	43	SER	15.3
26	BD	61	THR	15.3
29	BG	2	LYS	15.2
31	BI	115	ALA	15.2
32	BJ	144	GLU	15.2
26	BD	21	GLY	15.2
47	BY	46	GLU	15.2
29	BG	6	GLY	15.2
14	AN	37	PHE	15.2
27	BE	97	LYS	15.1
10	AJ	62	HIS	15.1
41	BS	89	GLY	15.1
24	BB	10	GLY	15.1
23	BA	241	GLY	15.1
36	BN	85	SER	15.1
1	AA	972	C	15.1
26	BD	9	ASN	15.0
33	BK	76	THR	15.0
35	BM	114	PHE	15.0
43	BU	40	GLN	15.0
33	BK	67	ILE	15.0
39	BQ	16	GLN	15.0
43	BU	65	GLY	15.0
24	BB	166	THR	14.9
26	BD	82	GLY	14.9
39	BQ	13	GLN	14.9
26	BD	32	GLU	14.9

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Mol	Chain	Res	Type	RSRZ
34	BL	59	ASP	14.9
26	BD	65	PRO	14.9
23	BA	22	SER	14.9
36	BN	37	THR	14.8
41	BS	84	VAL	14.8
53	B5	95	GLY	14.8
31	BI	117	GLU	14.8
43	BU	81	ILE	14.8
26	BD	109	PRO	14.7
38	BP	18	ASP	14.7
27	BE	86	ASN	14.7
25	BC	179	ASP	14.7
33	BK	79	PRO	14.7
48	BZ	5	PRO	14.7
48	BZ	6	VAL	14.7
29	BG	61	ALA	14.7
25	BC	151	VAL	14.6
24	BB	104	ALA	14.6
37	BO	95	LEU	14.6
31	BI	29	ILE	14.6
31	BI	67	GLY	14.6
31	BI	17	ARG	14.6
24	BB	23	VAL	14.6
23	BA	20	ASP	14.5
42	BT	165	GLU	14.5
53	B5	190	ILE	14.5
26	BD	54	ALA	14.5
21	B0	2298	U	14.5
35	BM	61	SER	14.5
41	BS	110	SER	14.5
40	BR	79	ILE	14.5
39	BQ	52	ASP	14.4
53	B5	188	ASN	14.4
25	BC	93	TYR	14.4
30	BH	167	LYS	14.4
30	BH	87	GLN	14.4
30	BH	69	ASP	14.4
40	BR	21	GLU	14.4
35	BM	19	THR	14.4
26	BD	45	GLU	14.4
23	BA	35	GLU	14.3
47	BY	43	TRP	14.3

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Mol	Chain	Res	Type	RSRZ
28	BF	16	GLU	14.3
49	B1	25	THR	14.3
49	B1	13	GLU	14.3
42	BT	16	GLU	14.3
36	BN	98	LYS	14.2
31	BI	54	SER	14.2
41	BS	23	ILE	14.2
41	BS	109	ALA	14.2
48	BZ	59	ALA	14.1
28	BF	52	SER	14.1
23	BA	25	THR	14.1
35	BM	15	ARG	14.1
35	BM	96	TYR	14.1
53	B5	2	LEU	14.1
23	BA	80	ALA	14.1
47	BY	63	PHE	14.1
5	AE	5	ASP	14.0
32	BJ	15	ASP	14.0
49	B1	4	ASP	14.0
25	BC	34	GLN	14.0
27	BE	147	ASN	14.0
33	BK	30	PHE	14.0
31	BI	116	ARG	14.0
23	BA	196	VAL	14.0
25	BC	103	GLY	14.0
31	BI	120	ASP	13.9
27	BE	148	VAL	13.9
34	BL	13	ASN	13.9
26	BD	17	MET	13.9
24	BB	101	LYS	13.9
35	BM	45	ASP	13.9
43	BU	69	PHE	13.8
42	BT	15	ASP	13.8
39	BQ	65	SER	13.8
40	BR	92	ALA	13.8
5	AE	38	GLN	13.8
29	BG	9	LYS	13.8
35	BM	20	THR	13.8
26	BD	157	VAL	13.8
25	BC	32	THR	13.8
33	BK	82	THR	13.8
35	BM	78	ALA	13.8

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Mol	Chain	Res	Type	RSRZ
39	BQ	8	PHE	13.7
53	B5	4	ASP	13.7
25	BC	166	TRP	13.7
26	BD	172	SER	13.7
25	BC	145	THR	13.7
36	BN	29	PRO	13.7
10	AJ	63	PHE	13.7
43	BU	45	PHE	13.7
31	BI	68	ASP	13.7
25	BC	156	ASN	13.6
38	BP	29	ALA	13.6
24	BB	99	GLY	13.6
41	BS	36	VAL	13.6
28	BF	15	GLY	13.6
29	BG	5	ALA	13.6
35	BM	51	LEU	13.6
4	AD	51	PRO	13.6
36	BN	31	ASP	13.6
24	BB	84	PHE	13.5
26	BD	110	ARG	13.5
31	BI	80	ALA	13.5
32	BJ	6	LEU	13.5
35	BM	17	VAL	13.5
41	BS	18	LYS	13.5
43	BU	66	LYS	13.5
29	BG	59	ILE	13.5
41	BS	34	GLY	13.5
31	BI	79	HIS	13.5
39	BQ	55	ASP	13.5
23	BA	197	GLY	13.5
23	BA	263	ARG	13.5
34	BL	63	ARG	13.5
53	B5	126	PRO	13.4
26	BD	31	ILE	13.4
41	BS	106	VAL	13.4
53	B5	90	LEU	13.4
26	BD	29	PRO	13.4
11	AK	129	SER	13.4
28	BF	5	LEU	13.4
45	BW	33	ALA	13.4
31	BI	75	VAL	13.4
40	BR	60	GLY	13.4

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Mol	Chain	Res	Type	RSRZ
40	BR	80	VAL	13.3
47	BY	45	GLY	13.3
41	BS	35	LYS	13.3
32	BJ	5	ASP	13.3
41	BS	107	ALA	13.3
36	BN	68	VAL	13.3
35	BM	40	ALA	13.3
40	BR	20	MET	13.3
40	BR	59	PRO	13.3
41	BS	21	THR	13.3
53	B5	158	LYS	13.2
24	BB	108	SER	13.2
43	BU	63	SER	13.2
43	BU	5	LYS	13.2
47	BY	51	ASP	13.2
24	BB	105	THR	13.2
23	BA	136	VAL	13.2
1	AA	973	G	13.2
49	B1	19	GLY	13.2
31	BI	108	THR	13.2
35	BM	68	ALA	13.2
36	BN	117	ILE	13.2
41	BS	114	ILE	13.2
32	BJ	100	ARG	13.1
35	BM	47	ARG	13.1
41	BS	50	GLY	13.1
26	BD	48	LYS	13.1
27	BE	126	PRO	13.1
31	BI	76	ARG	13.1
45	BW	36	GLN	13.1
23	BA	254	THR	13.1
43	BU	46	LYS	13.0
40	BR	23	GLY	13.0
46	BX	54	GLN	13.0
23	BA	93	ALA	13.0
53	B5	189	ALA	13.0
26	BD	137	ILE	12.9
33	BK	45	SER	12.9
21	B0	1801	C	12.9
26	BD	81	GLN	12.9
53	B5	156	LEU	12.9
53	B5	3	ALA	12.9

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Mol	Chain	Res	Type	RSRZ
23	BA	112	THR	12.9
5	AE	73	ASN	12.9
32	BJ	123	ASP	12.9
46	BX	30	ASP	12.9
47	BY	44	THR	12.8
25	BC	33	TRP	12.8
31	BI	14	SER	12.8
45	BW	8	ASN	12.8
24	BB	1	MET	12.8
43	BU	44	LYS	12.8
47	BY	48	ARG	12.7
35	BM	44	ASP	12.7
30	BH	61	ARG	12.7
21	B0	1568	A	12.7
41	BS	20	ASP	12.7
34	BL	77	ARG	12.7
26	BD	19	GLN	12.7
33	BK	90	ALA	12.7
31	BI	65	LYS	12.7
30	BH	66	HIS	12.7
23	BA	71	ASP	12.6
26	BD	16	LEU	12.6
53	B5	196	VAL	12.6
35	BM	109	GLU	12.6
34	BL	57	GLY	12.6
36	BN	53	VAL	12.6
31	BI	12	ASP	12.6
26	BD	95	ARG	12.6
49	B1	32	GLN	12.6
26	BD	136	LEU	12.6
42	BT	141	MET	12.6
24	BB	12	THR	12.6
29	BG	8	VAL	12.6
10	AJ	48	THR	12.6
31	BI	6	SER	12.6
26	BD	106	ILE	12.6
24	BB	198	LEU	12.6
53	B5	128	LEU	12.5
42	BT	133	GLU	12.5
25	BC	178	TYR	12.5
53	B5	92	LYS	12.5
42	BT	79	ILE	12.5

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Mol	Chain	Res	Type	RSRZ
23	BA	90	ALA	12.5
42	BT	129	ARG	12.5
28	BF	46	LEU	12.5
49	B1	23	THR	12.5
21	B0	2592	U	12.5
32	BJ	103	ASN	12.5
35	BM	90	ASP	12.5
23	BA	107	ALA	12.5
47	BY	17	GLN	12.5
36	BN	36	ASP	12.5
47	BY	65	ASP	12.5
23	BA	45	ASN	12.5
21	B0	752	G	12.5
30	BH	65	LYS	12.5
37	BO	65	ILE	12.4
4	AD	197	PRO	12.4
53	B5	157	VAL	12.4
39	BQ	49	SER	12.4
26	BD	20	PHE	12.4
45	BW	19	ASP	12.4
23	BA	127	LEU	12.4
23	BA	128	GLY	12.3
41	BS	49	GLU	12.3
47	BY	56	VAL	12.3
39	BQ	9	ARG	12.3
53	B5	187	LEU	12.3
27	BE	132	ASP	12.3
37	BO	4	ALA	12.3
41	BS	108	VAL	12.3
13	AM	122	LYS	12.3
22	B9	90	C	12.3
26	BD	33	LYS	12.3
49	B1	17	GLY	12.3
26	BD	13	ARG	12.3
26	BD	171	GLN	12.3
21	B0	1488	G	12.2
21	B0	1567	A	12.2
28	BF	37	SER	12.2
28	BF	17	VAL	12.2
35	BM	67	THR	12.2
35	BM	39	TYR	12.2
32	BJ	106	VAL	12.2

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Mol	Chain	Res	Type	RSRZ
36	BN	94	VAL	12.2
21	B0	128	C	12.2
25	BC	181	LEU	12.2
47	BY	70	GLY	12.2
22	B9	91	A	12.2
43	BU	61	ALA	12.2
27	BE	162	VAL	12.2
25	BC	101	GLN	12.1
35	BM	66	ASP	12.1
14	AN	41	ARG	12.1
42	BT	143	ILE	12.1
45	BW	61	ALA	12.1
23	BA	124	GLU	12.1
27	BE	38	ASN	12.1
47	BY	42	PHE	12.1
53	B5	176	PRO	12.1
4	AD	64	LEU	12.0
30	BH	64	GLY	12.0
2	AB	37	ASN	12.0
25	BC	22	VAL	12.0
27	BE	85	ILE	12.0
35	BM	23	ALA	12.0
23	BA	230	ASP	12.0
26	BD	127	ASN	12.0
38	BP	69	ILE	12.0
48	BZ	37	HIS	12.0
28	BF	8	PRO	12.0
41	BS	112	LYS	12.0
13	AM	62	ASN	12.0
29	BG	10	LEU	12.0
51	B3	62	LEU	12.0
39	BQ	18	VAL	11.9
39	BQ	54	GLU	11.9
34	BL	64	ARG	11.9
30	BH	37	ASP	11.9
48	BZ	29	ASN	11.9
24	BB	2	LYS	11.9
53	B5	116	SER	11.9
29	BG	4	VAL	11.8
30	BH	60	SER	11.8
31	BI	77	THR	11.8
48	BZ	7	PRO	11.8

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Mol	Chain	Res	Type	RSRZ
32	BJ	92	THR	11.8
25	BC	150	LEU	11.8
5	AE	135	THR	11.8
27	BE	93	GLY	11.8
27	BE	178	ALA	11.8
50	B2	17	GLY	11.8
23	BA	108	PRO	11.8
53	B5	159	THR	11.8
42	BT	94	VAL	11.8
45	BW	32	ALA	11.8
33	BK	77	LYS	11.8
50	B2	15	THR	11.8
23	BA	30	GLU	11.8
41	BS	24	VAL	11.8
48	BZ	32	GLU	11.8
42	BT	76	ARG	11.8
21	B0	1570	C	11.7
3	AC	153	VAL	11.7
26	BD	76	ASN	11.7
34	BL	16	ALA	11.7
23	BA	223	GLY	11.7
47	BY	67	TYR	11.7
53	B5	203	ILE	11.7
41	BS	94	VAL	11.7
23	BA	31	LYS	11.7
35	BM	62	GLY	11.7
41	BS	52	ASN	11.7
26	BD	97	TYR	11.7
53	B5	163	PRO	11.7
5	AE	137	GLU	11.7
23	BA	82	ILE	11.7
21	B0	2779	C	11.7
30	BH	32	TYR	11.6
26	BD	15	ALA	11.6
26	BD	34	ILE	11.6
53	B5	199	ASN	11.6
26	BD	14	PRO	11.6
23	BA	111	LEU	11.6
16	AP	25	ARG	11.6
19	AS	7	LYS	11.6
37	BO	6	THR	11.6
42	BT	47	SER	11.6

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Mol	Chain	Res	Type	RSRZ
37	BO	34	ASN	11.6
31	BI	81	ILE	11.6
36	BN	41	GLU	11.6
49	B1	18	THR	11.6
35	BM	74	ALA	11.6
26	BD	108	LEU	11.6
9	AI	126	SER	11.6
26	BD	173	MET	11.6
23	BA	192	THR	11.5
12	AL	14	GLY	11.5
33	BK	62	GLY	11.5
25	BC	28	HIS	11.5
27	BE	89	LEU	11.5
35	BM	58	ALA	11.5
31	BI	82	LYS	11.5
43	BU	38	VAL	11.5
23	BA	101	GLU	11.5
24	BB	164	ARG	11.5
33	BK	61	ARG	11.5
39	BQ	66	GLU	11.5
40	BR	64	ARG	11.5
47	BY	47	GLU	11.5
49	B1	2	ALA	11.5
12	AL	25	PRO	11.5
15	AO	89	GLY	11.5
24	BB	50	GLY	11.5
31	BI	10	VAL	11.5
31	BI	125	LYS	11.5
40	BR	17	TYR	11.5
31	BI	50	ILE	11.5
21	B0	1615	C	11.4
39	BQ	56	LEU	11.4
39	BQ	11	LYS	11.4
25	BC	158	ARG	11.4
39	BQ	53	ALA	11.4
33	BK	22	ALA	11.4
24	BB	18	ASP	11.4
42	BT	40	ASP	11.4
42	BT	159	THR	11.4
27	BE	112	PRO	11.4
47	BY	59	PHE	11.4
53	B5	195	LYS	11.4

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Mol	Chain	Res	Type	RSRZ
31	BI	78	SER	11.4
19	AS	71	LEU	11.3
35	BM	60	LYS	11.3
24	BB	20	ALA	11.3
26	BD	64	LYS	11.3
35	BM	82	LYS	11.3
33	BK	93	TYR	11.3
31	BI	114	VAL	11.3
53	B5	1	MET	11.3
53	B5	198	THR	11.3
47	BY	64	GLY	11.3
47	BY	71	SER	11.3
36	BN	43	ASN	11.3
47	BY	66	SER	11.2
42	BT	14	LEU	11.2
31	BI	53	ALA	11.2
49	B1	49	VAL	11.2
39	BQ	19	LYS	11.2
41	BS	90	LYS	11.2
41	BS	60	PRO	11.2
35	BM	100	VAL	11.2
4	AD	73	ARG	11.2
32	BJ	13	ARG	11.2
53	B5	129	GLY	11.2
14	AN	34	TYR	11.2
45	BW	66	GLN	11.2
26	BD	159	THR	11.2
48	BZ	31	THR	11.2
45	BW	31	GLN	11.2
28	BF	12	GLY	11.2
47	BY	52	THR	11.2
53	B5	135	PRO	11.2
42	BT	69	VAL	11.2
53	B5	118	ALA	11.2
24	BB	3	GLY	11.2
25	BC	144	GLY	11.2
21	B0	126	C	11.2
3	AC	17	ASP	11.1
21	B0	1489	C	11.1
40	BR	10	PRO	11.1
28	BF	33	GLY	11.1
47	BY	33	VAL	11.1

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Mol	Chain	Res	Type	RSRZ
45	BW	62	ARG	11.1
26	BD	22	TYR	11.1
29	BG	71	THR	11.1
28	BF	18	VAL	11.1
14	AN	10	ALA	11.1
30	BH	169	GLN	11.1
43	BU	30	VAL	11.1
26	BD	8	TYR	11.0
32	BJ	95	ALA	11.0
24	BB	182	ILE	11.0
23	BA	113	VAL	11.0
33	BK	83	ARG	11.0
39	BQ	14	ARG	11.0
36	BN	13	LEU	11.0
30	BH	34	PRO	11.0
23	BA	105	ILE	11.0
41	BS	70	GLU	11.0
27	BE	179	THR	11.0
27	BE	156	ALA	11.0
46	BX	53	VAL	11.0
32	BJ	16	ARG	11.0
43	BU	35	ASN	11.0
26	BD	12	VAL	11.0
19	AS	8	GLY	11.0
30	BH	63	ARG	11.0
26	BD	107	GLY	10.9
47	BY	60	ASN	10.9
23	BA	117	VAL	10.9
23	BA	18	THR	10.9
27	BE	107	ILE	10.9
40	BR	12	ILE	10.9
23	BA	129	ASN	10.9
23	BA	126	LYS	10.9
45	BW	45	GLN	10.9
23	BA	85	ASP	10.9
21	B0	601	A	10.9
25	BC	27	LEU	10.9
28	BF	22	ASP	10.9
34	BL	94	TYR	10.9
26	BD	174	GLY	10.9
43	BU	8	GLY	10.9
27	BE	87	LEU	10.9

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Mol	Chain	Res	Type	RSRZ
11	AK	125	PHE	10.9
34	BL	80	MET	10.9
32	BJ	8	PRO	10.9
35	BM	101	LYS	10.9
26	BD	5	LYS	10.9
27	BE	159	GLY	10.9
43	BU	9	SER	10.9
43	BU	62	LEU	10.9
41	BS	32	GLN	10.9
26	BD	87	ILE	10.8
12	AL	13	LYS	10.8
25	BC	146	GLU	10.8
35	BM	65	THR	10.8
26	BD	149	THR	10.8
35	BM	54	ALA	10.8
25	BC	106	MET	10.8
27	BE	113	VAL	10.8
45	BW	30	PHE	10.8
30	BH	31	THR	10.8
26	BD	156	ILE	10.8
26	BD	147	ASP	10.8
36	BN	101	ARG	10.8
42	BT	161	ALA	10.8
36	BN	61	GLY	10.8
34	BL	78	LYS	10.8
24	BB	51	TYR	10.7
41	BS	30	LYS	10.7
40	BR	62	ARG	10.7
26	BD	175	LEU	10.7
34	BL	26	THR	10.7
26	BD	104	ILE	10.7
35	BM	28	ARG	10.7
39	BQ	15	LYS	10.7
31	BI	86	GLY	10.7
27	BE	88	GLU	10.7
23	BA	86	PRO	10.7
49	B1	22	TYR	10.7
34	BL	116	VAL	10.7
34	BL	115	LEU	10.7
1	AA	1543	C	10.7
29	BG	90	THR	10.7
26	BD	135	GLN	10.7

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Mol	Chain	Res	Type	RSRZ
36	BN	93	ILE	10.6
27	BE	145	ALA	10.6
52	B4	3	VAL	10.6
31	BI	13	ASN	10.6
35	BM	92	GLY	10.6
43	BU	4	LYS	10.6
17	AQ	86	GLU	10.6
39	BQ	69	ALA	10.6
24	BB	103	ASP	10.6
24	BB	55	ALA	10.6
27	BE	133	VAL	10.6
27	BE	155	ASP	10.6
8	AH	135	CYS	10.6
43	BU	3	HIS	10.6
24	BB	167	VAL	10.6
53	B5	15	ALA	10.6
36	BN	92	THR	10.6
28	BF	9	SER	10.6
33	BK	33	TYR	10.6
24	BB	7	THR	10.6
33	BK	71	PRO	10.5
39	BQ	20	LEU	10.5
48	BZ	30	LEU	10.5
53	B5	34	LEU	10.5
32	BJ	91	ASP	10.5
33	BK	57	ARG	10.5
34	BL	19	ALA	10.5
39	BQ	28	ALA	10.5
26	BD	10	ASP	10.5
43	BU	39	ARG	10.5
32	BJ	7	LYS	10.5
35	BM	30	SER	10.5
27	BE	131	ILE	10.5
30	BH	41	TRP	10.5
26	BD	176	PRO	10.5
26	BD	148	LYS	10.5
43	BU	67	VAL	10.5
28	BF	39	THR	10.5
36	BN	95	GLU	10.5
53	B5	134	PHE	10.4
21	B0	713	G	10.4
25	BC	135	SER	10.4

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Mol	Chain	Res	Type	RSRZ
36	BN	35	VAL	10.4
27	BE	104	GLU	10.4
35	BM	42	ILE	10.4
42	BT	125	PRO	10.4
25	BC	109	ALA	10.4
8	AH	70	GLN	10.4
24	BB	199	ARG	10.4
30	BH	89	ALA	10.4
41	BS	92	THR	10.4
23	BA	270	ILE	10.4
26	BD	23	SER	10.4
27	BE	12	PRO	10.4
32	BJ	10	PRO	10.4
46	BX	31	SER	10.4
32	BJ	9	THR	10.4
4	AD	168	ARG	10.4
33	BK	65	ILE	10.4
37	BO	101	ARG	10.3
25	BC	163	ASN	10.3
43	BU	47	ALA	10.3
25	BC	167	VAL	10.3
26	BD	112	ARG	10.3
1	AA	1231	G	10.3
3	AC	44	GLU	10.3
26	BD	154	ILE	10.3
53	B5	180	ALA	10.3
9	AI	74	ILE	10.3
30	BH	50	PRO	10.3
28	BF	6	LEU	10.3
33	BK	109	GLY	10.3
30	BH	91	THR	10.3
23	BA	189	CYS	10.3
21	B0	1260	A	10.3
47	BY	73	LYS	10.3
24	BB	52	ALA	10.3
31	BI	89	ILE	10.3
21	B0	1378	A	10.3
28	BF	19	SER	10.3
49	B1	11	LYS	10.2
31	BI	11	ALA	10.2
26	BD	155	THR	10.2
31	BI	66	ALA	10.2

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Mol	Chain	Res	Type	RSRZ
32	BJ	81	GLN	10.2
30	BH	153	GLY	10.2
30	BH	166	LEU	10.2
35	BM	11	LEU	10.2
30	BH	81	VAL	10.2
23	BA	130	ALA	10.2
41	BS	95	ARG	10.2
40	BR	4	TYR	10.2
39	BQ	134	LYS	10.1
53	B5	202	ASN	10.1
29	BG	3	LYS	10.1
30	BH	67	ARG	10.1
24	BB	165	VAL	10.1
21	B0	2692	A	10.1
46	BX	29	GLY	10.1
31	BI	94	ASN	10.1
32	BJ	108	LEU	10.1
33	BK	92	GLU	10.1
29	BG	93	LYS	10.1
48	BZ	38	GLY	10.1
5	AE	136	MET	10.1
4	AD	77	ASN	10.1
27	BE	105	MET	10.1
31	BI	49	ASP	10.1
35	BM	41	GLN	10.1
23	BA	60	ARG	10.0
23	BA	146	GLU	10.0
30	BH	33	ILE	10.0
38	BP	31	ASP	10.0
33	BK	107	VAL	10.0
49	B1	48	VAL	10.0
23	BA	91	ARG	10.0
35	BM	95	LYS	10.0
36	BN	12	LEU	10.0
35	BM	99	ARG	10.0
26	BD	69	LYS	10.0
36	BN	81	PHE	10.0
40	BR	50	VAL	10.0
43	BU	57	HIS	10.0
48	BZ	44	HIS	10.0
23	BA	121	PRO	10.0
46	BX	3	ILE	10.0

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Mol	Chain	Res	Type	RSRZ
10	AJ	60	ARG	10.0
49	B1	12	MET	10.0
49	B1	15	SER	10.0
33	BK	49	GLU	10.0
23	BA	84	TYR	10.0
33	BK	51	CYS	10.0
4	AD	192	GLU	9.9
34	BL	114	GLU	9.9
32	BJ	112	GLY	9.9
36	BN	14	ARG	9.9
26	BD	116	GLY	9.9
25	BC	31	VAL	9.9
47	BY	40	HIS	9.9
30	BH	152	ALA	9.9
41	BS	77	HIS	9.9
23	BA	66	ASP	9.9
35	BM	29	LEU	9.9
26	BD	123	ASP	9.9
27	BE	48	ASP	9.9
21	B0	2780	A	9.8
26	BD	118	ASN	9.8
5	AE	56	GLN	9.8
35	BM	59	LEU	9.8
26	BD	6	THR	9.8
29	BG	66	THR	9.8
28	BF	4	ILE	9.8
23	BA	132	PRO	9.8
53	B5	183	ALA	9.8
24	BB	72	VAL	9.8
31	BI	97	VAL	9.8
24	BB	202	ALA	9.8
27	BE	57	ASP	9.8
35	BM	46	SER	9.8
33	BK	78	LYS	9.8
20	AT	11	SER	9.8
24	BB	26	VAL	9.8
48	BZ	46	CYS	9.8
25	BC	155	GLU	9.8
7	AG	62	PHE	9.7
32	BJ	122	VAL	9.7
40	BR	11	VAL	9.7
45	BW	54	ASN	9.7

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Mol	Chain	Res	Type	RSRZ
49	B1	6	PRO	9.7
21	B0	2664	G	9.7
53	B5	51	ILE	9.7
29	BG	31	GLY	9.7
43	BU	32	LYS	9.7
40	BR	82	LEU	9.7
30	BH	77	GLY	9.7
32	BJ	79	GLN	9.7
26	BD	120	ASN	9.7
24	BB	171	GLU	9.7
26	BD	111	ILE	9.7
30	BH	92	GLY	9.7
15	AO	44	LYS	9.7
2	AB	231	GLU	9.7
42	BT	112	LEU	9.7
4	AD	151	LYS	9.7
33	BK	11	ARG	9.7
31	BI	5	GLN	9.7
21	B0	555	U	9.7
41	BS	22	VAL	9.7
43	BU	31	VAL	9.7
23	BA	193	ILE	9.7
40	BR	16	ALA	9.6
3	AC	27	LYS	9.6
48	BZ	4	HIS	9.6
31	BI	7	ARG	9.6
37	BO	54	LYS	9.6
53	B5	162	GLN	9.6
33	BK	72	ASP	9.6
34	BL	83	VAL	9.6
32	BJ	86	THR	9.6
3	AC	130	VAL	9.6
26	BD	4	LEU	9.6
26	BD	55	LYS	9.6
53	B5	186	VAL	9.6
23	BA	61	LEU	9.6
46	BX	10	ILE	9.6
46	BX	41	ARG	9.6
26	BD	44	LYS	9.6
23	BA	181	GLU	9.6
24	BB	73	ALA	9.6
24	BB	53	PRO	9.6

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Mol	Chain	Res	Type	RSRZ
26	BD	11	GLN	9.5
53	B5	193	LYS	9.5
36	BN	52	GLY	9.5
24	BB	9	ILE	9.5
41	BS	104	VAL	9.5
23	BA	170	SER	9.5
24	BB	49	ILE	9.5
53	B5	215	VAL	9.5
26	BD	152	MET	9.5
6	AF	54	LYS	9.5
26	BD	103	LEU	9.5
21	B0	1360	G	9.5
36	BN	4	HIS	9.5
36	BN	102	ALA	9.5
11	AK	126	ARG	9.5
34	BL	104	ARG	9.5
26	BD	73	SER	9.5
30	BH	140	GLN	9.5
49	B1	47	HIS	9.5
12	AL	12	ARG	9.5
32	BJ	104	ARG	9.5
48	BZ	10	LYS	9.5
49	B1	3	LYS	9.5
36	BN	69	ARG	9.5
45	BW	22	LYS	9.5
46	BX	37	THR	9.4
23	BA	83	GLU	9.4
24	BB	31	CYS	9.4
23	BA	191	ALA	9.4
26	BD	18	GLN	9.4
26	BD	162	THR	9.4
32	BJ	101	ARG	9.4
4	AD	195	ALA	9.4
5	AE	8	GLU	9.4
17	AQ	87	LYS	9.4
41	BS	73	GLU	9.4
23	BA	143	HIS	9.4
39	BQ	122	SER	9.4
28	BF	14	THR	9.4
23	BA	188	GLU	9.4
3	AC	124	ILE	9.4
42	BT	17	SER	9.4

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Mol	Chain	Res	Type	RSRZ
37	BO	55	ARG	9.4
41	BS	91	ALA	9.4
35	BM	97	HIS	9.4
24	BB	74	PRO	9.4
37	BO	33	ARG	9.4
23	BA	92	ILE	9.4
47	BY	50	LEU	9.4
43	BU	60	PHE	9.3
2	AB	230	VAL	9.3
31	BI	70	VAL	9.3
8	AH	73	ASP	9.3
49	B1	14	SER	9.3
42	BT	158	CYS	9.3
26	BD	60	ILE	9.3
41	BS	25	LEU	9.3
23	BA	138	VAL	9.3
30	BH	29	VAL	9.3
23	BA	12	SER	9.3
35	BM	55	SER	9.3
23	BA	159	ALA	9.3
33	BK	75	VAL	9.3
39	BQ	50	VAL	9.3
21	B0	554	U	9.3
30	BH	54	LEU	9.3
37	BO	5	LYS	9.3
24	BB	172	VAL	9.3
26	BD	36	VAL	9.3
33	BK	70	PHE	9.3
33	BK	53	ILE	9.3
37	BO	109	LEU	9.3
38	BP	70	TYR	9.2
23	BA	106	LEU	9.2
53	B5	192	ASN	9.2
23	BA	81	ALA	9.2
30	BH	122	HIS	9.2
31	BI	124	MET	9.2
1	AA	1232	U	9.2
35	BM	63	ASN	9.2
37	BO	96	ALA	9.2
30	BH	151	TYR	9.2
11	AK	11	LYS	9.2
50	B2	14	LYS	9.2

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Mol	Chain	Res	Type	RSRZ
46	BX	44	VAL	9.2
26	BD	168	ALA	9.2
35	BM	76	ALA	9.2
5	AE	110	LEU	9.2
23	BA	190	TYR	9.2
23	BA	135	PHE	9.2
24	BB	130	GLY	9.2
28	BF	23	GLY	9.2
30	BH	86	ALA	9.2
38	BP	88	GLN	9.2
33	BK	91	VAL	9.1
26	BD	35	VAL	9.1
31	BI	24	VAL	9.1
31	BI	88	THR	9.1
34	BL	58	GLY	9.1
36	BN	84	ALA	9.1
36	BN	75	GLU	9.1
40	BR	61	LYS	9.1
5	AE	124	GLY	9.1
23	BA	131	LEU	9.1
26	BD	100	LEU	9.1
34	BL	22	ARG	9.1
38	BP	68	LYS	9.1
46	BX	4	LYS	9.1
36	BN	25	PRO	9.1
21	B0	1983	G	9.1
28	BF	2	GLN	9.1
40	BR	13	SER	9.1
32	BJ	45	LYS	9.1
23	BA	150	GLY	9.1
23	BA	36	ALA	9.1
14	AN	36	PHE	9.1
49	B1	21	TYR	9.1
40	BR	3	HIS	9.1
4	AD	47	ARG	9.1
5	AE	139	LEU	9.0
23	BA	79	VAL	9.0
49	B1	10	VAL	9.0
21	B0	731	A	9.0
35	BM	70	ALA	9.0
14	AN	13	THR	9.0
52	B4	33	LYS	9.0

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Mol	Chain	Res	Type	RSRZ
27	BE	82	GLY	9.0
39	BQ	131	LYS	9.0
26	BD	160	ALA	9.0
25	BC	142	LEU	9.0
30	BH	165	VAL	9.0
27	BE	149	ARG	9.0
30	BH	57	LEU	9.0
5	AE	85	GLY	9.0
7	AG	55	GLY	9.0
30	BH	164	GLN	9.0
16	AP	46	PRO	9.0
27	BE	72	VAL	9.0
31	BI	42	LYS	9.0
53	B5	216	LYS	9.0
36	BN	67	THR	9.0
21	B0	726	G	9.0
26	BD	125	ARG	9.0
8	AH	6	ILE	8.9
8	AH	22	GLU	8.9
26	BD	88	LYS	8.9
33	BK	114	GLN	8.9
49	B1	40	TYR	8.9
23	BA	109	GLU	8.9
31	BI	101	ASN	8.9
4	AD	131	ARG	8.9
53	B5	35	THR	8.9
38	BP	89	ASN	8.9
47	BY	41	PRO	8.9
41	BS	17	LYS	8.9
37	BO	56	ASP	8.9
48	BZ	50	GLY	8.9
49	B1	41	ASP	8.9
47	BY	55	ARG	8.9
24	BB	39	ALA	8.9
34	BL	95	THR	8.9
43	BU	59	LEU	8.9
40	BR	43	GLN	8.9
35	BM	88	VAL	8.9
43	BU	29	GLU	8.9
33	BK	8	THR	8.8
41	BS	28	LYS	8.8
21	B0	1188	A	8.8

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Mol	Chain	Res	Type	RSRZ
25	BC	29	GLU	8.8
21	B0	2706	U	8.8
25	BC	60	GLY	8.8
21	B0	2665	G	8.8
31	BI	90	ARG	8.8
21	B0	819	C	8.8
41	BS	61	SER	8.8
29	BG	60	TYR	8.8
30	BH	78	ASP	8.8
39	BQ	51	GLN	8.8
4	AD	199	ASN	8.8
32	BJ	36	GLY	8.8
1	AA	209	U	8.8
23	BA	11	PRO	8.8
30	BH	82	VAL	8.8
39	BQ	128	VAL	8.8
53	B5	52	VAL	8.8
24	BB	75	THR	8.8
33	BK	105	PHE	8.8
53	B5	165	VAL	8.8
35	BM	34	SER	8.8
31	BI	107	GLY	8.8
5	AE	140	ARG	8.8
23	BA	252	LYS	8.8
8	AH	137	VAL	8.8
24	BB	189	PRO	8.8
27	BE	151	VAL	8.8
26	BD	128	TYR	8.8
42	BT	126	GLY	8.8
48	BZ	33	CYS	8.8
36	BN	3	THR	8.7
32	BJ	67	ASN	8.7
33	BK	55	MET	8.7
49	B1	38	LYS	8.7
24	BB	22	PRO	8.7
33	BK	52	ARG	8.7
27	BE	181	GLY	8.7
36	BN	71	ILE	8.7
33	BK	103	VAL	8.7
21	B0	1984	A	8.7
33	BK	87	GLY	8.7
12	AL	18	VAL	8.7

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Mol	Chain	Res	Type	RSRZ
39	BQ	92	VAL	8.7
41	BS	29	HIS	8.7
30	BH	71	THR	8.7
53	B5	214	LYS	8.7
24	BB	60	ASN	8.7
25	BC	36	ALA	8.7
26	BD	164	GLU	8.7
23	BA	147	LEU	8.7
35	BM	75	LEU	8.7
28	BF	20	VAL	8.7
21	B0	149	A	8.7
33	BK	23	LYS	8.7
49	B1	42	PRO	8.6
23	BA	104	TYR	8.6
26	BD	58	ALA	8.6
27	BE	103	LEU	8.6
34	BL	53	THR	8.6
41	BS	83	LEU	8.6
35	BM	71	VAL	8.6
33	BK	68	ARG	8.6
42	BT	19	ILE	8.6
34	BL	87	TYR	8.6
23	BA	69	ARG	8.6
26	BD	138	PHE	8.6
40	BR	46	PHE	8.6
41	BS	105	ARG	8.6
53	B5	130	PRO	8.6
28	BF	3	VAL	8.6
46	BX	38	PRO	8.6
21	B0	1056	U	8.6
31	BI	56	LYS	8.6
46	BX	32	ARG	8.6
46	BX	51	LEU	8.6
30	BH	39	GLN	8.6
25	BC	44	SER	8.6
53	B5	114	GLN	8.6
32	BJ	68	VAL	8.6
32	BJ	75	VAL	8.6
35	BM	52	ALA	8.6
41	BS	101	GLY	8.6
31	BI	63	ALA	8.6
1	AA	73	C	8.6

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Mol	Chain	Res	Type	RSRZ
21	B0	2017	U	8.5
25	BC	198	GLU	8.5
23	BA	68	LYS	8.5
33	BK	63	GLY	8.5
53	B5	185	ALA	8.5
4	AD	50	ARG	8.5
41	BS	51	VAL	8.5
24	BB	48	GLN	8.5
34	BL	105	GLY	8.5
25	BC	45	THR	8.5
21	B0	732	G	8.5
24	BB	58	LYS	8.5
49	B1	45	LYS	8.5
23	BA	110	GLY	8.5
25	BC	102	LEU	8.5
53	B5	204	TYR	8.5
27	BE	99	THR	8.5
42	BT	109	GLN	8.5
24	BB	8	LYS	8.5
31	BI	73	VAL	8.5
21	B0	715	U	8.4
53	B5	164	GLN	8.4
28	BF	34	LEU	8.4
48	BZ	49	CYS	8.4
53	B5	48	LEU	8.4
21	B0	2778	U	8.4
36	BN	28	ARG	8.4
53	B5	98	ARG	8.4
36	BN	59	GLY	8.4
33	BK	94	TRP	8.4
23	BA	122	GLU	8.4
21	B0	1799	A	8.4
21	B0	714	G	8.4
26	BD	99	PHE	8.4
24	BB	30	PRO	8.4
48	BZ	47	PRO	8.4
26	BD	101	GLU	8.4
40	BR	84	GLU	8.4
51	B3	8	LYS	8.4
27	BE	47	GLY	8.4
36	BN	82	PRO	8.4
21	B0	1361	G	8.4

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Mol	Chain	Res	Type	RSRZ
21	B0	1716	G	8.4
24	BB	193	GLY	8.4
31	BI	47	VAL	8.3
24	BB	54	LYS	8.3
46	BX	45	LYS	8.3
51	B3	11	LYS	8.3
23	BA	70	ARG	8.3
25	BC	132	ASN	8.3
23	BA	152	GLY	8.3
40	BR	2	SER	8.3
3	AC	26	LYS	8.3
40	BR	39	LYS	8.3
3	AC	132	ARG	8.3
24	BB	106	GLY	8.3
21	B0	2191	A	8.3
40	BR	40	ASP	8.3
31	BI	41	ASN	8.3
48	BZ	51	TYR	8.3
35	BM	69	ALA	8.3
42	BT	124	ALA	8.3
21	B0	622	U	8.3
24	BB	132	LYS	8.3
26	BD	74	ILE	8.3
26	BD	42	SER	8.3
53	B5	141	THR	8.3
47	BY	53	GLU	8.3
39	BQ	31	VAL	8.3
21	B0	817	A	8.3
25	BC	25	GLY	8.3
4	AD	154	ASN	8.3
48	BZ	48	ASN	8.3
26	BD	79	LEU	8.3
21	B0	1536	G	8.3
24	BB	28	ALA	8.2
40	BR	45	ALA	8.2
33	BK	104	MET	8.2
5	AE	84	PHE	8.2
3	AC	175	LEU	8.2
8	AH	98	LYS	8.2
23	BA	225	ALA	8.2
24	BB	38	THR	8.2
38	BP	67	LYS	8.2

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Mol	Chain	Res	Type	RSRZ
23	BA	253	PRO	8.2
31	BI	113	PRO	8.2
32	BJ	143	PRO	8.2
53	B5	20	TYR	8.2
21	B0	712	A	8.2
30	BH	46	ALA	8.2
49	B1	16	ALA	8.2
53	B5	160	LYS	8.2
26	BD	90	THR	8.2
39	BQ	127	ILE	8.2
36	BN	62	SER	8.2
38	BP	91	THR	8.2
17	AQ	89	LEU	8.2
24	BB	183	LEU	8.2
36	BN	63	ARG	8.2
40	BR	14	GLU	8.2
23	BA	144	ALA	8.2
53	B5	104	ALA	8.2
21	B0	1650	A	8.2
21	B0	1981	A	8.2
26	BD	113	ASP	8.2
27	BE	177	GLY	8.2
37	BO	7	GLY	8.2
24	BB	64	GLN	8.2
21	B0	1569	A	8.2
26	BD	96	MET	8.2
40	BR	41	ALA	8.2
47	BY	68	ARG	8.2
20	AT	58	LYS	8.1
25	BC	187	VAL	8.1
3	AC	157	ILE	8.1
33	BK	118	ALA	8.1
47	BY	49	PHE	8.1
10	AJ	45	ARG	8.1
30	BH	84	ASN	8.1
34	BL	56	LYS	8.1
32	BJ	120	VAL	8.1
21	B0	124	A	8.1
48	BZ	45	ILE	8.1
53	B5	217	ARG	8.1
34	BL	69	ASP	8.1
47	BY	39	VAL	8.1

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Mol	Chain	Res	Type	RSRZ
49	B1	5	GLY	8.1
24	BB	71	GLY	8.1
29	BG	96	VAL	8.1
12	AL	112	ASP	8.1
23	BA	137	PRO	8.1
25	BC	182	ARG	8.1
31	BI	106	ARG	8.1
42	BT	68	ALA	8.1
33	BK	56	SER	8.0
23	BA	195	ALA	8.0
26	BD	134	GLU	8.0
24	BB	102	ILE	8.0
43	BU	2	ALA	8.0
21	B0	1980	A	8.0
26	BD	170	LEU	8.0
49	B1	31	THR	8.0
23	BA	29	PRO	8.0
47	BY	54	GLY	8.0
21	B0	2589	C	8.0
23	BA	8	PRO	8.0
23	BA	43	ARG	8.0
23	BA	157	ARG	8.0
21	B0	1982	C	8.0
22	B9	92	G	8.0
14	AN	39	LEU	8.0
37	BO	67	ALA	8.0
24	BB	77	ILE	8.0
36	BN	11	GLU	8.0
40	BR	44	GLN	8.0
48	BZ	8	LYS	8.0
21	B0	557	U	8.0
1	AA	74	G	8.0
11	AK	25	TYR	8.0
25	BC	100	ARG	8.0
24	BB	66	HIS	8.0
39	BQ	129	ALA	8.0
10	AJ	65	LEU	7.9
23	BA	96	HIS	7.9
35	BM	106	ALA	7.9
46	BX	43	MET	7.9
5	AE	133	TYR	7.9
23	BA	103	ARG	7.9

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Mol	Chain	Res	Type	RSRZ
26	BD	153	ASP	7.9
27	BE	21	ASP	7.9
41	BS	72	ARG	7.9
24	BB	56	GLU	7.9
3	AC	28	GLN	7.9
2	AB	227	GLY	7.9
25	BC	37	SER	7.9
23	BA	62	TYR	7.9
24	BB	63	MET	7.9
1	AA	129(A)	G	7.9
33	BK	110	VAL	7.9
42	BT	127	PRO	7.9
53	B5	53	PRO	7.9
38	BP	66	GLY	7.9
43	BU	56	ASP	7.9
47	BY	69	ARG	7.9
18	AR	16	PRO	7.9
25	BC	147	LYS	7.9
40	BR	51	ILE	7.9
41	BS	47	VAL	7.9
46	BX	42	GLY	7.9
13	AM	61	GLU	7.8
23	BA	153	ALA	7.8
33	BK	74	PRO	7.8
23	BA	269	PHE	7.8
31	BI	69	VAL	7.8
39	BQ	48	LYS	7.8
21	B0	583	C	7.8
31	BI	74	VAL	7.8
36	BN	73	PHE	7.8
53	B5	194	ALA	7.8
23	BA	42	GLY	7.8
25	BC	71	ASP	7.8
23	BA	183	ARG	7.8
25	BC	168	SER	7.8
36	BN	17	GLU	7.8
35	BM	94	TYR	7.8
31	BI	100	ASN	7.8
23	BA	72	LYS	7.8
25	BC	131	LYS	7.8
27	BE	7	GLN	7.8
39	BQ	12	LYS	7.8

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Mol	Chain	Res	Type	RSRZ
23	BA	67	PHE	7.8
21	B0	2781	G	7.8
23	BA	194	GLY	7.8
23	BA	44	ASN	7.8
33	BK	117	GLU	7.8
5	AE	86	ALA	7.7
23	BA	120	GLY	7.7
32	BJ	17	LYS	7.7
21	B0	2299	A	7.7
45	BW	60	LEU	7.7
1	AA	121	C	7.7
39	BQ	58	ARG	7.7
40	BR	83	ALA	7.7
45	BW	34	ALA	7.7
23	BA	182	LEU	7.7
1	AA	970	C	7.7
23	BA	9	TYR	7.7
27	BE	171	LEU	7.7
47	BY	72	LYS	7.7
41	BS	76	LEU	7.7
24	BB	29	GLY	7.7
53	B5	184	ILE	7.7
25	BC	26	VAL	7.7
33	BK	60	ARG	7.7
48	BZ	3	LYS	7.7
32	BJ	142	LEU	7.7
41	BS	15	HIS	7.7
53	B5	18	THR	7.7
31	BI	96	ALA	7.7
25	BC	30	VAL	7.7
37	BO	2	PRO	7.7
39	BQ	100	GLY	7.7
43	BU	78	PHE	7.7
7	AG	60	LYS	7.6
20	AT	30	LYS	7.6
49	B1	26	LYS	7.6
41	BS	27	GLY	7.6
31	BI	91	PHE	7.6
33	BK	46	ASN	7.6
25	BC	35	LEU	7.6
48	BZ	58	LEU	7.6
45	BW	38	ALA	7.6

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Mol	Chain	Res	Type	RSRZ
21	B0	730	C	7.6
46	BX	33	GLU	7.6
34	BL	32	GLY	7.6
13	AM	113	PRO	7.6
10	AJ	55	LYS	7.6
23	BA	151	LYS	7.6
49	B1	52	GLU	7.6
37	BO	23	GLY	7.6
48	BZ	53	ASP	7.6
3	AC	98	ASN	7.6
31	BI	26	ASN	7.6
35	BM	22	ALA	7.6
9	AI	33	PHE	7.6
23	BA	6	TYR	7.6
28	BF	21	LYS	7.6
30	BH	30	LYS	7.6
5	AE	53	LEU	7.6
39	BQ	88	ASP	7.6
25	BC	57	LYS	7.6
4	AD	150	GLU	7.6
29	BG	97	GLY	7.6
21	B0	818	G	7.6
42	BT	93	GLU	7.6
42	BT	160	LEU	7.6
9	AI	77	ILE	7.6
26	BD	7	LYS	7.5
39	BQ	63	SER	7.5
49	B1	35	LEU	7.5
34	BL	99	ARG	7.5
45	BW	27	GLU	7.5
27	BE	39	THR	7.5
29	BG	16	LYS	7.5
32	BJ	14	LYS	7.5
21	B0	2591	C	7.5
30	BH	51	LEU	7.5
5	AE	52	PRO	7.5
36	BN	9	ARG	7.5
38	BP	19	VAL	7.5
41	BS	75	ALA	7.5
27	BE	33	LEU	7.5
41	BS	37	LEU	7.5
36	BN	2	GLN	7.5

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Mol	Chain	Res	Type	RSRZ
7	AG	26	PHE	7.5
21	B0	2537	C	7.5
40	BR	42	ILE	7.5
29	BG	67	PHE	7.5
36	BN	26	ASP	7.5
25	BC	78	VAL	7.5
40	BR	15	LYS	7.5
11	AK	16	SER	7.5
53	B5	161	ASP	7.5
39	BQ	91	PHE	7.4
53	B5	36	PHE	7.4
3	AC	63	ASN	7.4
5	AE	65	ASN	7.4
3	AC	31	HIS	7.4
31	BI	46	HIS	7.4
34	BL	3	HIS	7.4
24	BB	188	ILE	7.4
1	AA	1540	U	7.4
53	B5	179	LEU	7.4
35	BM	89	PHE	7.4
9	AI	94	ALA	7.4
28	BF	10	ARG	7.4
9	AI	127	LYS	7.4
27	BE	172	LYS	7.4
31	BI	48	GLY	7.4
21	B0	1979	C	7.4
23	BA	95	LEU	7.4
42	BT	166	LEU	7.4
3	AC	170	GLN	7.4
23	BA	123	ALA	7.4
25	BC	137	ALA	7.4
37	BO	118	GLN	7.4
28	BF	27	ASN	7.4
23	BA	41	GLY	7.4
31	BI	25	LEU	7.4
41	BS	48	VAL	7.4
42	BT	10	PRO	7.4
39	BQ	62	ARG	7.4
43	BU	79	ILE	7.4
48	BZ	42	SER	7.4
39	BQ	21	ARG	7.4
27	BE	137	ASP	7.4

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Mol	Chain	Res	Type	RSRZ
36	BN	5	ILE	7.4
48	BZ	9	LYS	7.4
48	BZ	40	LYS	7.4
26	BD	89	VAL	7.4
41	BS	31	GLY	7.4
20	AT	10	LEU	7.4
48	BZ	56	GLN	7.4
45	BW	26	MET	7.4
48	BZ	43	HIS	7.4
21	B0	1044	U	7.4
4	AD	27	TYR	7.3
25	BC	184	ASP	7.3
21	B0	1792	C	7.3
22	B9	89	G	7.3
27	BE	130	ARG	7.3
45	BW	29	ARG	7.3
30	BH	80	VAL	7.3
21	B0	1614	C	7.3
52	B4	32	HIS	7.3
24	BB	57	ARG	7.3
40	BR	49	ARG	7.3
1	AA	205	G	7.3
17	AQ	90	ILE	7.3
21	B0	2207	G	7.3
52	B4	29	ASN	7.3
46	BX	5	LEU	7.3
21	B0	150	A	7.3
7	AG	81	GLY	7.3
41	BS	111	GLY	7.3
12	AL	5	PRO	7.3
21	B0	1772	C	7.3
35	BM	21	THR	7.3
35	BM	18	ARG	7.3
31	BI	72	ALA	7.3
1	AA	212	G	7.3
8	AH	55	GLY	7.3
24	BB	179	GLU	7.3
49	B1	39	LYS	7.3
23	BA	10	THR	7.3
26	BD	132	ILE	7.3
31	BI	51	ILE	7.3
19	AS	13	ASP	7.3

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Mol	Chain	Res	Type	RSRZ
27	BE	150	LYS	7.3
24	BB	80	GLU	7.3
26	BD	2	GLN	7.3
28	BF	25	ALA	7.3
43	BU	11	LYS	7.3
3	AC	190	ARG	7.3
21	B0	408	U	7.3
24	BB	76	ARG	7.3
32	BJ	18	ARG	7.3
49	B1	9	ILE	7.3
20	AT	54	LYS	7.2
5	AE	109	ILE	7.2
23	BA	7	ARG	7.2
33	BK	66	TYR	7.2
34	BL	52	ILE	7.2
4	AD	37	PRO	7.2
34	BL	84	ALA	7.2
48	BZ	57	VAL	7.2
21	B0	802	A	7.2
23	BA	102	LYS	7.2
42	BT	11	LYS	7.2
1	AA	1542	U	7.2
42	BT	111	GLY	7.2
37	BO	66	ASN	7.2
21	B0	518	A	7.2
24	BB	129	HIS	7.2
24	BB	88	GLY	7.2
43	BU	27	GLY	7.2
31	BI	22	ILE	7.2
41	BS	93	ARG	7.2
5	AE	125	SER	7.2
34	BL	79	VAL	7.2
25	BC	193	LEU	7.2
27	BE	100	GLY	7.2
31	BI	30	GLY	7.2
33	BK	69	ILE	7.2
42	BT	44	ARG	7.2
13	AM	116	THR	7.2
23	BA	50	THR	7.2
34	BL	39	THR	7.2
45	BW	57	LYS	7.2
4	AD	179	GLU	7.2

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Mol	Chain	Res	Type	RSRZ
53	B5	132	GLY	7.2
42	BT	9	THR	7.2
13	AM	15	VAL	7.2
24	BB	192	ASN	7.2
35	BM	108	ARG	7.2
42	BT	13	LYS	7.2
53	B5	200	LEU	7.2
53	B5	154	SER	7.2
48	BZ	54	GLY	7.1
31	BI	64	VAL	7.1
26	BD	75	SER	7.1
28	BF	32	GLN	7.1
23	BA	171	ASP	7.1
1	AA	72	A	7.1
36	BN	18	GLN	7.1
27	BE	127	GLU	7.1
12	AL	11	VAL	7.1
51	B3	10	ALA	7.1
35	BM	14	ARG	7.1
35	BM	35	SER	7.1
3	AC	147	LYS	7.1
4	AD	166	LYS	7.1
5	AE	83	GLU	7.1
25	BC	129	LYS	7.1
25	BC	194	GLU	7.1
23	BA	205	VAL	7.1
8	AH	83	ILE	7.1
30	BH	123	PRO	7.1
36	BN	66	PHE	7.1
24	BB	4	ILE	7.1
11	AK	124	LYS	7.1
5	AE	127	ASN	7.1
36	BN	8	ASN	7.1
21	B0	1616	C	7.1
26	BD	72	LYS	7.1
43	BU	37	LEU	7.1
47	BY	12	CYS	7.1
1	AA	117	G	7.1
26	BD	167	ARG	7.0
30	BH	83	ILE	7.1
32	BJ	124	ALA	7.1
9	AI	54	ASP	7.0

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Mol	Chain	Res	Type	RSRZ
6	AF	53	ALA	7.0
13	AM	72	ALA	7.0
30	BH	85	ALA	7.0
21	B0	302	U	7.0
27	BE	180	GLY	7.0
45	BW	12	THR	7.0
21	B0	409	G	7.0
29	BG	62	ASP	7.0
33	BK	58	HIS	7.0
40	BR	54	SER	7.0
41	BS	11	ASN	7.0
26	BD	50	ILE	7.0
21	B0	3104	C	7.0
3	AC	188	LEU	7.0
32	BJ	110	ALA	7.0
21	B0	2493	U	7.0
23	BA	73	SER	7.0
20	AT	9	ASN	7.0
27	BE	106	ASN	7.0
17	AQ	96	GLN	7.0
3	AC	166	GLU	7.0
39	BQ	94	GLU	7.0
49	B1	50	PHE	7.0
21	B0	2184	C	7.0
3	AC	207	VAL	7.0
7	AG	74	GLU	7.0
9	AI	47	LEU	6.9
23	BA	161	THR	6.9
4	AD	169	LYS	6.9
30	BH	35	LYS	6.9
27	BE	56	SER	6.9
41	BS	79	SER	6.9
40	BR	65	VAL	6.9
23	BA	262	LYS	6.9
23	BA	142	VAL	6.9
5	AE	50	GLU	6.9
2	AB	179	LYS	6.9
17	AQ	38	ARG	6.9
23	BA	13	ARG	6.9
1	AA	1443	G	6.9
29	BG	1	MET	6.9
42	BT	167	THR	6.9

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Mol	Chain	Res	Type	RSRZ
12	AL	21	LYS	6.9
26	BD	169	LEU	6.9
17	AQ	93	GLN	6.9
33	BK	95	VAL	6.9
48	BZ	11	THR	6.9
36	BN	15	GLY	6.8
18	AR	38	GLU	6.8
42	BT	82	ASP	6.8
41	BS	46	VAL	6.8
21	B0	1362	A	6.8
11	AK	123	LYS	6.8
23	BA	119	ALA	6.8
1	AA	5	U	6.8
24	BB	83	GLY	6.8
27	BE	144	VAL	6.8
53	B5	40	ASP	6.8
21	B0	559	C	6.8
46	BX	1	MET	6.8
5	AE	7	GLU	6.8
23	BA	19	ALA	6.8
43	BU	43	THR	6.8
25	BC	79	GLY	6.8
35	BM	72	GLY	6.8
24	BB	96	PHE	6.8
23	BA	175	VAL	6.8
36	BN	64	LYS	6.8
46	BX	2	LYS	6.8
42	BT	36	ARG	6.8
21	B0	1995	G	6.8
21	B0	2015	G	6.8
26	BD	119	PRO	6.8
41	BS	96	LYS	6.8
21	B0	1187	A	6.8
21	B0	2601	C	6.8
37	BO	64	ARG	6.8
24	BB	67	PHE	6.8
35	BM	27	LEU	6.8
24	BB	194	GLY	6.8
4	AD	164	ALA	6.7
7	AG	11	GLN	6.7
25	BC	43	ALA	6.7
27	BE	173	ALA	6.7

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Mol	Chain	Res	Type	RSRZ
41	BS	97	GLN	6.7
25	BC	148	VAL	6.7
21	B0	734	G	6.7
31	BI	98	ILE	6.7
46	BX	36	ASP	6.7
52	B4	2	LYS	6.7
21	B0	92	U	6.7
3	AC	102	ASN	6.7
12	AL	26	ALA	6.7
21	B0	1279	G	6.7
23	BA	145	LEU	6.7
24	BB	90	SER	6.7
26	BD	114	PHE	6.7
43	BU	42	GLY	6.7
21	B0	301	C	6.7
36	BN	118	LYS	6.7
32	BJ	94	GLU	6.7
23	BA	38	PRO	6.7
14	AN	59	ALA	6.7
21	B0	1734	C	6.7
31	BI	58	ALA	6.7
23	BA	26	LYS	6.7
27	BE	6	LYS	6.7
30	BH	49	VAL	6.7
23	BA	16	MET	6.7
49	B1	44	ALA	6.7
21	B0	2037	A	6.7
35	BM	38	ILE	6.7
42	BT	80	HIS	6.7
26	BD	115	ARG	6.7
30	BH	157	PRO	6.7
33	BK	102	ARG	6.7
36	BN	6	LYS	6.7
23	BA	148	VAL	6.7
30	BH	68	PRO	6.6
21	B0	2275	U	6.6
29	BG	55	VAL	6.6
21	B0	514	G	6.6
21	B0	2602	G	6.6
33	BK	122	ALA	6.6
21	B0	2305	C	6.6
42	BT	18	MET	6.6

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Mol	Chain	Res	Type	RSRZ
53	B5	181	GLU	6.6
31	BI	105	PRO	6.6
41	BS	78	ALA	6.6
21	B0	1699	A	6.6
4	AD	167	GLY	6.6
24	BB	203	LYS	6.6
30	BH	36	ASN	6.6
1	AA	1403	C	6.6
30	BH	141	GLY	6.6
30	BH	44	VAL	6.6
24	BB	33	ILE	6.6
53	B5	33	ILE	6.6
53	B5	39	ILE	6.6
30	BH	149	LYS	6.6
53	B5	101	LYS	6.6
23	BA	139	GLY	6.6
41	BS	12	ASP	6.6
27	BE	75	ALA	6.6
30	BH	160	ALA	6.6
23	BA	187	SER	6.6
5	AE	132	ALA	6.5
1	AA	1438	G	6.5
21	B0	1678	G	6.5
25	BC	21	GLU	6.5
21	B0	129	A	6.5
21	B0	2190	A	6.5
53	B5	201	ARG	6.5
39	BQ	34	SER	6.5
32	BJ	99	VAL	6.5
31	BI	45	ALA	6.5
41	BS	2	PRO	6.5
42	BT	12	GLN	6.5
53	B5	61	ALA	6.5
5	AE	145	LYS	6.5
21	B0	2016	A	6.5
43	BU	12	ASN	6.5
30	BH	158	HIS	6.5
36	BN	32	THR	6.5
48	BZ	52	TYR	6.5
36	BN	65	SER	6.5
25	BC	128	ALA	6.5
35	BM	73	LYS	6.5

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Mol	Chain	Res	Type	RSRZ
30	BH	88	VAL	6.5
11	AK	106	LYS	6.5
1	AA	64	G	6.5
33	BK	120	ARG	6.5
30	BH	156	HIS	6.5
3	AC	41	GLY	6.5
20	AT	12	ALA	6.5
35	BM	107	ALA	6.5
37	BO	63	GLN	6.5
21	B0	152	G	6.5
21	B0	711	C	6.5
21	B0	733	G	6.5
23	BA	118	ASN	6.5
53	B5	182	ASN	6.5
48	BZ	41	LEU	6.5
9	AI	95	LYS	6.5
35	BM	102	ALA	6.5
21	B0	3146	A	6.5
36	BN	96	ARG	6.5
39	BQ	25	PHE	6.5
21	B0	2536	G	6.5
13	AM	19	LEU	6.5
43	BU	48	GLY	6.5
49	B1	37	LEU	6.5
23	BA	156	ALA	6.5
25	BC	110	SER	6.5
21	B0	665	A	6.5
23	BA	209	ALA	6.4
41	BS	57	ASN	6.4
50	B2	13	ALA	6.4
23	BA	176	ARG	6.4
39	BQ	89	ARG	6.4
26	BD	177	PHE	6.4
27	BE	13	SER	6.4
21	B0	1152	C	6.4
21	B0	2558	C	6.4
27	BE	5	GLY	6.4
33	BK	48	ILE	6.4
21	B0	154	U	6.4
37	BO	58	ARG	6.4
42	BT	81	VAL	6.4
38	BP	30	GLY	6.4

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Mol	Chain	Res	Type	RSRZ
34	BL	31	GLU	6.4
24	BB	70	ALA	6.4
46	BX	46	THR	6.4
35	BM	49	GLN	6.4
12	AL	22	SER	6.4
36	BN	7	ILE	6.4
51	B3	35	GLY	6.4
3	AC	206	GLU	6.4
1	AA	293	G	6.4
3	AC	62	ASP	6.4
26	BD	121	ALA	6.4
21	B0	1566	G	6.4
40	BR	27	PHE	6.4
42	BT	28	ASN	6.4
18	AR	86	VAL	6.4
23	BA	218	LYS	6.4
24	BB	59	VAL	6.4
53	B5	32	ILE	6.4
21	B0	1640	C	6.4
21	B0	2038	C	6.4
25	BC	38	ARG	6.4
29	BG	70	LYS	6.4
42	BT	48	THR	6.4
21	B0	2029	G	6.4
21	B0	2014	A	6.4
51	B3	33	ASN	6.4
34	BL	90	ARG	6.4
35	BM	56	SER	6.4
30	BH	94	LYS	6.3
31	BI	71	LYS	6.3
39	BQ	22	LYS	6.3
50	B2	30	ILE	6.3
31	BI	43	ARG	6.3
40	BR	91	LEU	6.3
32	BJ	73	GLU	6.3
41	BS	8	SER	6.3
41	BS	4	PRO	6.3
21	B0	1487	C	6.3
26	BD	63	GLN	6.3
33	BK	59	PHE	6.3
38	BP	92	ALA	6.3
39	BQ	87	GLU	6.3

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Mol	Chain	Res	Type	RSRZ
42	BT	108	VAL	6.3
46	BX	6	VAL	6.3
26	BD	117	ILE	6.3
43	BU	70	ILE	6.3
24	BB	42	ASP	6.3
39	BQ	93	LYS	6.3
10	AJ	86	MET	6.3
34	BL	113	ILE	6.3
52	B4	27	CYS	6.3
24	BB	94	ASP	6.3
29	BG	94	ALA	6.3
1	AA	1498	U	6.3
28	BF	29	LEU	6.3
17	AQ	37	LYS	6.3
38	BP	90	PHE	6.3
33	BK	21	ASP	6.3
33	BK	29	ALA	6.3
30	BH	150	VAL	6.3
30	BH	144	MET	6.3
6	AF	51	PRO	6.3
26	BD	91	LEU	6.3
21	B0	3143	U	6.3
30	BH	143	ALA	6.3
10	AJ	50	ILE	6.3
36	BN	16	ILE	6.3
20	AT	50	GLU	6.3
37	BO	52	ASN	6.3
40	BR	36	THR	6.3
12	AL	126	LYS	6.2
21	B0	2312	A	6.3
3	AC	169	ALA	6.2
14	AN	42	ILE	6.2
21	B0	2370	G	6.2
25	BC	196	VAL	6.2
32	BJ	19	VAL	6.2
49	B1	8	ILE	6.2
33	BK	131	LYS	6.2
45	BW	59	GLU	6.2
33	BK	124	HIS	6.2
1	AA	1544	U	6.2
35	BM	43	ILE	6.2
23	BA	133	LEU	6.2

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Mol	Chain	Res	Type	RSRZ
24	BB	109	LYS	6.2
41	BS	41	PRO	6.2
53	B5	47	LYS	6.2
27	BE	90	ARG	6.2
40	BR	72	ARG	6.2
47	BY	32	HIS	6.2
35	BM	57	ALA	6.2
37	BO	80	ILE	6.2
46	BX	28	ILE	6.2
21	B0	449	C	6.2
36	BN	72	SER	6.2
21	B0	1849	G	6.2
48	BZ	39	LYS	6.2
25	BC	115	GLY	6.2
26	BD	124	GLY	6.2
31	BI	112	GLY	6.2
36	BN	10	GLY	6.2
39	BQ	130	GLU	6.2
5	AE	138	ALA	6.2
21	B0	1617	G	6.2
25	BC	138	LYS	6.2
20	AT	42	GLN	6.2
46	BX	7	ARG	6.2
26	BD	122	PHE	6.2
31	BI	52	VAL	6.2
26	BD	27	ALA	6.2
27	BE	111	HIS	6.2
24	BB	5	LEU	6.2
18	AR	18	ARG	6.2
20	AT	8	ARG	6.2
31	BI	121	ARG	6.2
24	BB	81	PHE	6.2
33	BK	119	PHE	6.2
37	BO	61	TRP	6.2
21	B0	139	A	6.2
26	BD	129	ASN	6.2
24	BB	19	ARG	6.2
21	B0	138	G	6.2
8	AH	111	ILE	6.2
26	BD	151	GLY	6.2
31	BI	99	ILE	6.2
39	BQ	98	ASP	6.2

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Mol	Chain	Res	Type	RSRZ
23	BA	39	LYS	6.2
22	B9	54	U	6.1
20	AT	51	GLU	6.1
2	AB	181	PHE	6.1
8	AH	39	LEU	6.1
20	AT	99	LEU	6.1
48	BZ	28	PRO	6.1
1	AA	1022	G	6.1
41	BS	69	GLN	6.1
31	BI	95	ALA	6.1
34	BL	6	ALA	6.1
12	AL	127	GLU	6.1
48	BZ	34	PRO	6.1
53	B5	37	LYS	6.1
35	BM	104	ALA	6.1
37	BO	99	ALA	6.1
8	AH	69	ARG	6.1
28	BF	26	ARG	6.1
6	AF	56	PRO	6.1
23	BA	160	GLY	6.1
33	BK	34	GLY	6.1
27	BE	58	ALA	6.1
34	BL	61	HIS	6.1
2	AB	228	GLY	6.1
13	AM	120	LYS	6.1
21	B0	1737	G	6.1
26	BD	150	ARG	6.1
16	AP	34	GLU	6.1
25	BC	99	VAL	6.1
30	BH	58	ILE	6.1
3	AC	61	ALA	6.1
6	AF	95	GLU	6.1
39	BQ	27	VAL	6.1
32	BJ	97	ARG	6.0
19	AS	40	ILE	6.0
21	B0	778	G	6.0
1	AA	723	U	6.0
24	BB	62	PRO	6.0
36	BN	19	ASP	6.0
30	BH	70	PHE	6.0
21	B0	1612	U	6.0
21	B0	1990	U	6.0

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Mol	Chain	Res	Type	RSRZ
28	BF	11	LEU	6.0
24	BB	95	ILE	6.0
27	BE	84	THR	6.0
39	BQ	124	ILE	6.0
2	AB	240	GLN	6.0
26	BD	98	VAL	6.0
3	AC	2	GLY	6.0
31	BI	62	GLY	6.0
13	AM	125	ARG	6.0
17	AQ	101	ARG	6.0
42	BT	39	PHE	6.0
25	BC	92	ASP	6.0
12	AL	111	LYS	6.0
26	BD	179	LYS	6.0
40	BR	55	THR	6.0
23	BA	210	GLY	6.0
31	BI	40	GLY	6.0
38	BP	24	SER	6.0
11	AK	74	ALA	6.0
14	AN	20	ALA	6.0
2	AB	229	VAL	6.0
23	BA	165	VAL	6.0
9	AI	91	ASP	6.0
25	BC	152	THR	6.0
21	B0	2026	C	6.0
33	BK	35	LEU	6.0
23	BA	149	PRO	6.0
26	BD	102	LYS	6.0
33	BK	9	LYS	6.0
49	B1	46	LYS	6.0
21	B0	2206	C	6.0
27	BE	62	ARG	6.0
45	BW	49	GLU	6.0
35	BM	64	LYS	6.0
41	BS	59	LYS	6.0
53	B5	46	LEU	5.9
30	BH	79	PHE	5.9
5	AE	128	PRO	5.9
39	BQ	67	PRO	5.9
32	BJ	121	HIS	5.9
21	B0	1043	A	5.9
30	BH	146	THR	5.9

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Mol	Chain	Res	Type	RSRZ
36	BN	79	ARG	5.9
13	AM	121	LYS	5.9
24	BB	197	VAL	5.9
32	BJ	74	VAL	5.9
37	BO	9	VAL	5.9
21	B0	729	A	5.9
30	BH	90	LEU	5.9
37	BO	51	ARG	5.9
35	BM	98	GLY	5.9
40	BR	52	GLY	5.9
23	BA	248	THR	5.9
36	BN	89	ASN	5.9
42	BT	29	ASN	5.9
41	BS	38	LEU	5.9
30	BH	120	SER	5.9
35	BM	93	SER	5.9
3	AC	172	ARG	5.9
7	AG	78	ARG	5.9
37	BO	70	ARG	5.9
3	AC	136	GLN	5.9
24	BB	168	GLN	5.9
37	BO	98	ILE	5.9
21	B0	153	A	5.9
21	B0	751	G	5.9
2	AB	63	MET	5.9
41	BS	65	PRO	5.9
4	AD	24	GLU	5.9
30	BH	154	GLU	5.9
41	BS	5	SER	5.9
36	BN	57	ILE	5.9
30	BH	48	GLY	5.9
46	BX	11	GLY	5.9
41	BS	82	ALA	5.9
20	AT	13	LEU	5.9
27	BE	71	LEU	5.9
36	BN	105	TYR	5.9
27	BE	61	HIS	5.9
18	AR	87	ARG	5.9
32	BJ	80	LEU	5.9
47	BY	11	PRO	5.8
21	B0	2864	C	5.8
24	BB	139	GLY	5.8

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Mol	Chain	Res	Type	RSRZ
32	BJ	20	GLY	5.8
32	BJ	44	GLY	5.8
39	BQ	68	VAL	5.8
14	AN	14	PRO	5.8
24	BB	32	PRO	5.8
33	BK	44	LYS	5.8
5	AE	68	GLU	5.8
31	BI	23	ARG	5.8
21	B0	303	C	5.8
21	B0	448	C	5.8
21	B0	1535	C	5.8
26	BD	86	GLY	5.8
37	BO	73	GLY	5.8
50	B2	29	ASN	5.8
43	BU	10	SER	5.8
46	BX	35	SER	5.8
50	B2	26	SER	5.8
53	B5	137	PRO	5.8
35	BM	26	ARG	5.8
21	B0	2590	U	5.8
38	BP	16	GLU	5.8
21	B0	3142	C	5.8
33	BK	15	ARG	5.8
4	AD	81	GLU	5.8
34	BL	38	LEU	5.8
41	BS	58	VAL	5.8
24	BB	6	GLY	5.8
21	B0	664	C	5.8
9	AI	37	PHE	5.8
21	B0	1817	U	5.8
26	BD	130	LEU	5.8
41	BS	81	VAL	5.8
47	BY	1	MET	5.8
21	B0	1185	C	5.8
21	B0	151	G	5.8
24	BB	147	PRO	5.8
25	BC	77	PHE	5.8
37	BO	3	ARG	5.8
33	BK	112	GLU	5.8
21	B0	1674	C	5.8
45	BW	23	LYS	5.8
52	B4	14	CYS	5.8

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Mol	Chain	Res	Type	RSRZ
9	AI	98	PRO	5.8
36	BN	54	VAL	5.8
14	AN	50	LYS	5.7
26	BD	94	GLU	5.7
27	BE	102	ALA	5.7
21	B0	1038	U	5.7
8	AH	134	ILE	5.7
13	AM	126	LYS	5.7
21	B0	779	U	5.7
33	BK	17	ARG	5.7
40	BR	34	THR	5.7
41	BS	13	LYS	5.7
3	AC	25	GLY	5.7
36	BN	97	GLY	5.7
33	BK	108	ALA	5.7
45	BW	18	ILE	5.7
28	BF	1	MET	5.7
21	B0	1265	G	5.7
25	BC	112	GLN	5.7
49	B1	27	ASN	5.7
24	BB	68	ALA	5.7
21	B0	2792	C	5.7
35	BM	33	ARG	5.7
39	BQ	109	ARG	5.7
18	AR	88	LYS	5.7
4	AD	16	GLY	5.7
21	B0	1927	U	5.7
24	BB	181	LEU	5.7
30	BH	47	SER	5.7
31	BI	2	ILE	5.7
36	BN	22	ARG	5.7
53	B5	153	ARG	5.7
8	AH	10	LEU	5.7
42	BT	45	GLN	5.7
21	B0	745	C	5.7
33	BK	12	LYS	5.7
51	B3	36	LYS	5.7
32	BJ	93	LEU	5.7
41	BS	14	LEU	5.7
33	BK	101	GLY	5.7
34	BL	4	GLY	5.7
21	B0	2010	G	5.7

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Mol	Chain	Res	Type	RSRZ
23	BA	88	ARG	5.7
21	B0	131	C	5.7
33	BK	54	VAL	5.7
53	B5	213	VAL	5.7
41	BS	10	HIS	5.6
21	B0	1282	A	5.6
41	BS	7	GLY	5.6
49	B1	51	ARG	5.6
34	BL	100	VAL	5.6
21	B0	1262	U	5.6
1	AA	1500	A	5.6
6	AF	47	ARG	5.6
38	BP	45	THR	5.6
39	BQ	70	LYS	5.6
21	B0	49	U	5.6
2	AB	11	LEU	5.6
27	BE	65	HIS	5.6
8	AH	35	ILE	5.6
34	BL	34	ILE	5.6
23	BA	134	ARG	5.6
42	BT	20	ALA	5.6
25	BC	64	THR	5.6
30	BH	168	THR	5.6
21	B0	1189	G	5.6
13	AM	56	LEU	5.6
53	B5	172	GLU	5.6
9	AI	34	ASN	5.6
24	BB	169	ASN	5.6
36	BN	27	PHE	5.6
27	BE	108	GLY	5.6
53	B5	155	VAL	5.6
23	BA	15	GLN	5.6
53	B5	166	GLN	5.6
13	AM	58	GLU	5.6
38	BP	20	ILE	5.6
25	BC	111	ARG	5.6
40	BR	35	LYS	5.6
27	BE	165	VAL	5.6
1	AA	963	G	5.6
21	B0	1646	G	5.6
23	BA	46	ARG	5.6
40	BR	37	GLU	5.6

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Mol	Chain	Res	Type	RSRZ
42	BT	73	LYS	5.6
23	BA	247	VAL	5.6
39	BQ	99	ALA	5.6
1	AA	1054	C	5.6
24	BB	40	GLN	5.6
47	BY	2	GLN	5.6
42	BT	43	PHE	5.6
38	BP	28	GLU	5.6
10	AJ	59	SER	5.5
21	B0	1144	U	5.5
41	BS	39	ALA	5.5
21	B0	1552	C	5.5
33	BK	100	PRO	5.5
37	BO	117	ARG	5.5
21	B0	413	G	5.5
21	B0	1954	A	5.5
52	B4	11	CYS	5.5
37	BO	94	VAL	5.5
53	B5	115	GLU	5.5
25	BC	188	ILE	5.5
5	AE	106	PRO	5.5
36	BN	44	ARG	5.5
29	BG	110	THR	5.5
21	B0	1987	G	5.5
3	AC	13	GLY	5.5
3	AC	105	GLU	5.5
34	BL	27	ALA	5.5
36	BN	76	GLY	5.5
41	BS	68	GLY	5.5
43	BU	28	GLY	5.5
41	BS	9	HIS	5.5
53	B5	59	SER	5.5
42	BT	67	LYS	5.5
21	B0	123	A	5.5
24	BB	47	VAL	5.5
53	B5	54	LEU	5.5
27	BE	176	ALA	5.5
46	BX	49	HIS	5.5
6	AF	83	ASP	5.5
3	AC	173	VAL	5.5
20	AT	46	GLU	5.5
47	BY	6	HIS	5.5

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Mol	Chain	Res	Type	RSRZ
9	AI	81	ILE	5.5
25	BC	153	ASP	5.5
31	BI	109	ARG	5.5
34	BL	96	ARG	5.5
21	B0	765	C	5.5
21	B0	447	U	5.5
34	BL	29	LEU	5.5
30	BH	59	ALA	5.5
50	B2	32	ALA	5.5
1	AA	809	G	5.5
3	AC	177	THR	5.5
21	B0	1850	G	5.5
33	BK	86	LYS	5.5
53	B5	133	LYS	5.5
53	B5	175	LYS	5.5
27	BE	152	ARG	5.5
47	BY	4	ASP	5.5
9	AI	26	VAL	5.5
41	BS	74	LEU	5.5
17	AQ	97	SER	5.5
3	AC	205	GLY	5.5
20	AT	69	GLY	5.5
23	BA	64	ILE	5.5
1	AA	1453	G	5.5
3	AC	143	GLU	5.5
21	B0	418	C	5.4
22	B9	114	C	5.4
28	BF	43	MET	5.4
1	AA	996	A	5.4
23	BA	255	LYS	5.4
29	BG	65	PHE	5.4
13	AM	73	GLU	5.4
28	BF	47	GLU	5.4
21	B0	2691	C	5.4
47	BY	34	ASP	5.4
21	B0	1334	A	5.4
28	BF	38	ALA	5.4
33	BK	115	ALA	5.4
34	BL	24	GLN	5.4
34	BL	101	GLY	5.4
41	BS	26	SER	5.4
14	AN	12	ARG	5.4

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Mol	Chain	Res	Type	RSRZ
14	AN	53	LEU	5.4
21	B0	2009	U	5.4
41	BS	40	LEU	5.4
49	B1	43	VAL	5.4
31	BI	44	TYR	5.4
25	BC	154	ASP	5.4
49	B1	54	LYS	5.4
8	AH	13	ILE	5.4
37	BO	106	PHE	5.4
5	AE	64	ARG	5.4
24	BB	180	ASN	5.4
17	AQ	88	TYR	5.4
42	BT	37	LYS	5.4
35	BM	53	ALA	5.4
39	BQ	64	ALA	5.4
21	B0	61	U	5.4
21	B0	1451	C	5.4
21	B0	1641	C	5.4
21	B0	2018	G	5.4
33	BK	19	THR	5.4
37	BO	57	PHE	5.4
40	BR	88	ILE	5.4
2	AB	106	LYS	5.4
49	B1	36	GLU	5.4
21	B0	2209	G	5.4
31	BI	126	ILE	5.4
43	BU	58	THR	5.4
21	B0	2593	A	5.4
45	BW	58	ALA	5.4
34	BL	30	ARG	5.4
33	BK	26	ASP	5.4
23	BA	51	SER	5.4
24	BB	131	SER	5.4
27	BE	153	LYS	5.4
53	B5	149	ASN	5.4
3	AC	174	PRO	5.4
21	B0	1864	G	5.4
28	BF	31	PRO	5.4
53	B5	55	PRO	5.4
21	B0	2187	A	5.3
24	BB	82	ARG	5.3
17	AQ	24	GLU	5.3

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Mol	Chain	Res	Type	RSRZ
39	BQ	86	LEU	5.3
27	BE	96	ALA	5.3
2	AB	64	ARG	5.3
21	B0	2188	A	5.3
23	BA	40	THR	5.3
25	BC	94	THR	5.3
36	BN	39	VAL	5.3
2	AB	195	ASP	5.3
16	AP	58	TYR	5.3
21	B0	19	C	5.3
27	BE	40	GLU	5.3
30	BH	73	ASN	5.3
4	AD	84	LYS	5.3
34	BL	97	ILE	5.3
45	BW	28	LEU	5.3
29	BG	89	SER	5.3
26	BD	131	GLY	5.3
36	BN	86	PRO	5.3
21	B0	2401	A	5.3
24	BB	145	LYS	5.3
25	BC	186	LEU	5.3
39	BQ	72	LEU	5.3
40	BR	53	ILE	5.3
46	BX	50	LEU	5.3
1	AA	613	C	5.3
45	BW	4	SER	5.3
53	B5	89	GLU	5.3
53	B5	99	PRO	5.3
8	AH	3	THR	5.3
12	AL	6	THR	5.3
6	AF	97	PHE	5.3
31	BI	61	ARG	5.3
37	BO	92	ARG	5.3
21	B0	744	C	5.3
21	B0	2210	C	5.3
22	B9	14	C	5.3
21	B0	627	A	5.3
21	B0	165	G	5.3
27	BE	164	PHE	5.3
31	BI	123	PHE	5.3
25	BC	76	THR	5.3
1	AA	1437	C	5.3

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Mol	Chain	Res	Type	RSRZ
9	AI	46	ALA	5.3
13	AM	118	ALA	5.3
33	BK	24	GLY	5.3
39	BQ	110	ALA	5.3
33	BK	40	PRO	5.3
37	BO	97	ASP	5.3
30	BH	145	HIS	5.3
24	BB	121	ASN	5.3
21	B0	1565	G	5.2
21	B0	2378	G	5.2
24	BB	65	GLY	5.2
15	AO	19	PRO	5.2
21	B0	1233	A	5.2
24	BB	78	LEU	5.2
30	BH	53	ARG	5.2
13	AM	119	GLY	5.2
2	AB	157	ARG	5.2
17	AQ	91	ARG	5.2
39	BQ	73	ASN	5.2
13	AM	60	VAL	5.2
37	BO	100	ALA	5.2
21	B0	2208	U	5.2
29	BG	25	PRO	5.2
21	B0	1448	A	5.2
16	AP	23	ASP	5.2
40	BR	5	ASP	5.2
37	BO	84	LYS	5.2
21	B0	2007	G	5.2
32	BJ	109	LEU	5.2
36	BN	115	ALA	5.2
39	BQ	90	LEU	5.2
40	BR	47	GLY	5.2
1	AA	99	C	5.2
21	B0	2535	C	5.2
41	BS	16	PHE	5.2
24	BB	89	ASP	5.2
30	BH	159	SER	5.2
1	AA	368	U	5.2
21	B0	2492	G	5.2
26	BD	37	ASN	5.2
41	BS	67	GLY	5.2
48	BZ	36	CYS	5.2

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Mol	Chain	Res	Type	RSRZ
21	B0	756	C	5.2
51	B3	34	THR	5.2
26	BD	38	GLU	5.2
26	BD	178	ARG	5.2
27	BE	54	ARG	5.2
33	BK	73	LYS	5.2
7	AG	156	TRP	5.2
21	B0	780	U	5.2
24	BB	148	GLY	5.2
39	BQ	75	ALA	5.2
47	BY	18	GLY	5.2
13	AM	4	ILE	5.2
21	B0	710	C	5.2
34	BL	91	PRO	5.2
39	BQ	121	THR	5.2
4	AD	97	LEU	5.2
53	B5	38	GLY	5.2
33	BK	47	GLN	5.1
2	AB	75	LYS	5.1
21	B0	1126	A	5.1
23	BA	5	LYS	5.1
33	BK	130	THR	5.1
21	B0	1946	U	5.1
23	BA	200	GLU	5.1
39	BQ	95	ALA	5.1
23	BA	65	ILE	5.1
37	BO	8	ILE	5.1
46	BX	24	GLY	5.1
4	AD	29	PRO	5.1
13	AM	124	PRO	5.1
21	B0	2028	C	5.1
21	B0	2313	G	5.1
11	AK	98	LEU	5.1
27	BE	10	ALA	5.1
45	BW	15	ALA	5.1
21	B0	450	C	5.1
21	B0	527	C	5.1
21	B0	2025	A	5.1
24	BB	27	LEU	5.1
1	AA	1000	U	5.1
32	BJ	64	GLY	5.1
4	AD	68	TYR	5.1

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Mol	Chain	Res	Type	RSRZ
10	AJ	80	LYS	5.1
1	AA	997	U	5.1
24	BB	92	ASN	5.1
27	BE	74	ASN	5.1
37	BO	75	ASN	5.1
32	BJ	29	THR	5.1
25	BC	84	PHE	5.1
32	BJ	113	GLU	5.1
23	BA	74	GLY	5.1
14	AN	43	CYS	5.1
5	AE	37	ARG	5.1
1	AA	314	C	5.1
21	B0	1771	A	5.1
21	B0	2400	G	5.1
24	BB	163	GLU	5.1
3	AC	167	TRP	5.1
4	AD	76	ARG	5.1
21	B0	2791	C	5.1
36	BN	91	VAL	5.1
32	BJ	111	SER	5.1
1	AA	630	G	5.1
40	BR	38	ILE	5.1
3	AC	125	GLU	5.1
15	AO	83	GLU	5.1
39	BQ	24	GLY	5.1
45	BW	24	GLU	5.1
9	AI	41	VAL	5.1
21	B0	2600	A	5.1
36	BN	55	ILE	5.1
23	BA	264	LYS	5.0
35	BM	4	ALA	5.0
20	AT	71	THR	5.0
39	BQ	45	ILE	5.0
32	BJ	98	LEU	5.0
37	BO	68	GLY	5.0
17	AQ	92	ARG	5.0
27	BE	70	THR	5.0
50	B2	7	PRO	5.0
1	AA	899	C	5.0
20	AT	45	GLN	5.0
33	BK	14	PHE	5.0
12	AL	27	LEU	5.0

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Mol	Chain	Res	Type	RSRZ
26	BD	57	LEU	5.0
33	BK	80	ALA	5.0
30	BH	124	GLU	5.0
41	BS	53	VAL	5.0
39	BQ	33	MET	5.0
39	BQ	108	PRO	5.0
1	AA	962	C	5.0
21	B0	1736	C	5.0
21	B0	2333	A	5.0
21	B0	2355	A	5.0
53	B5	169	ILE	5.0
45	BW	25	LEU	5.0
34	BL	93	GLY	5.0
36	BN	116	ARG	5.0
30	BH	45	ASP	5.0
23	BA	87	ASN	5.0
45	BW	47	ARG	5.0
23	BA	162	SER	5.0
18	AR	84	LYS	5.0
34	BL	49	GLU	5.0
25	BC	133	PHE	5.0
34	BL	50	GLN	5.0
39	BQ	85	MET	5.0
19	AS	49	ILE	5.0
11	AK	35	PRO	5.0
1	AA	1402	C	5.0
21	B0	146	C	5.0
21	B0	2023	C	5.0
21	B0	2559	U	5.0
53	B5	57	GLN	5.0
25	BC	62	LYS	5.0
25	BC	15	ILE	4.9
28	BF	24	TYR	5.0
36	BN	104	LEU	4.9
7	AG	45	ASP	4.9
8	AH	82	HIS	4.9
21	B0	132	U	4.9
21	B0	725	C	4.9
21	B0	1224	A	4.9
21	B0	1261	G	4.9
21	B0	1735	G	4.9
42	BT	35	ASP	4.9

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Mol	Chain	Res	Type	RSRZ
26	BD	70	ALA	4.9
42	BT	25	ASN	4.9
27	BE	59	GLN	4.9
42	BT	46	GLN	4.9
25	BC	149	LEU	4.9
21	B0	1710	U	4.9
21	B0	1486	A	4.9
29	BG	47	ASP	4.9
27	BE	166	GLY	4.9
42	BT	66	VAL	4.9
39	BQ	76	LYS	4.9
43	BU	25	LYS	4.9
8	AH	67	PRO	4.9
1	AA	971	G	4.9
3	AC	150	LYS	4.9
4	AD	198	VAL	4.9
15	AO	47	LYS	4.9
26	BD	71	LYS	4.9
39	BQ	97	VAL	4.9
45	BW	56	VAL	4.9
4	AD	75	PHE	4.9
14	AN	40	CYS	4.9
31	BI	4	PRO	4.9
21	B0	1700	C	4.9
1	AA	629	G	4.9
1	AA	951	G	4.9
4	AD	140	VAL	4.9
23	BA	212	SER	4.9
40	BR	74	ASP	4.9
2	AB	65	GLY	4.9
24	BB	43	GLY	4.9
25	BC	125	ILE	4.9
30	BH	95	LEU	4.9
34	BL	28	LEU	4.9
17	AQ	94	ASN	4.9
15	AO	88	ARG	4.9
1	AA	1367	C	4.9
24	BB	196	VAL	4.9
21	B0	3101	G	4.9
13	AM	77	ASN	4.9
15	AO	13	GLN	4.9
5	AE	49	PRO	4.9

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Mol	Chain	Res	Type	RSRZ
25	BC	185	ARG	4.9
26	BD	139	PRO	4.9
21	B0	130	C	4.9
3	AC	60	ALA	4.9
25	BC	183	HIS	4.9
26	BD	39	GLY	4.9
34	BL	92	GLY	4.9
21	B0	716	U	4.9
21	B0	2847	G	4.9
42	BT	84	TYR	4.9
16	AP	26	ARG	4.9
36	BN	58	ASN	4.9
27	BE	8	PRO	4.9
21	B0	994	A	4.9
30	BH	121	LYS	4.9
21	B0	1677	C	4.9
21	B0	2334	C	4.9
15	AO	6	GLU	4.8
21	B0	1679	U	4.8
23	BA	186	HIS	4.8
27	BE	22	GLY	4.8
27	BE	66	GLY	4.8
4	AD	178	VAL	4.8
23	BA	185	VAL	4.8
47	BY	10	VAL	4.8
30	BH	55	ALA	4.8
21	B0	122	G	4.8
21	B0	582	G	4.8
10	AJ	79	ARG	4.8
17	AQ	83	ASP	4.8
24	BB	184	VAL	4.8
10	AJ	100	THR	4.8
25	BC	58	MET	4.8
5	AE	134	ALA	4.8
39	BQ	79	ALA	4.8
24	BB	190	GLY	4.8
39	BQ	32	ARG	4.8
42	BT	140	LYS	4.8
39	BQ	83	ASP	4.8
31	BI	3	MET	4.8
21	B0	561	U	4.8
21	B0	2669	C	4.8

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Mol	Chain	Res	Type	RSRZ
25	BC	119	ALA	4.8
40	BR	78	ALA	4.8
27	BE	53	GLU	4.8
24	BB	79	ARG	4.8
41	BS	56	LYS	4.8
41	BS	103	LYS	4.8
37	BO	60	LEU	4.8
42	BT	41	ARG	4.8
52	B4	35	ARG	4.8
21	B0	934	G	4.8
16	AP	29	ASP	4.8
45	BW	13	ASP	4.8
53	B5	144	ILE	4.8
21	B0	1270	C	4.8
34	BL	109	THR	4.8
10	AJ	3	LYS	4.8
10	AJ	83	GLU	4.8
51	B3	12	ARG	4.8
1	AA	148	G	4.8
21	B0	528	G	4.8
23	BA	219	PRO	4.8
21	B0	2581	A	4.8
29	BG	119	SER	4.8
8	AH	52	ASP	4.8
13	AM	76	ALA	4.8
23	BA	199	ALA	4.8
27	BE	24	PHE	4.8
1	AA	1008	C	4.8
23	BA	94	LEU	4.8
43	BU	71	ASN	4.8
27	BE	69	ARG	4.8
9	AI	110	GLU	4.8
33	BK	81	GLU	4.8
1	AA	94	G	4.8
7	AG	112	PRO	4.8
21	B0	1730	G	4.8
23	BA	154	GLN	4.8
11	AK	102	GLY	4.8
34	BL	106	ASP	4.8
38	BP	84	THR	4.8
4	AD	34	GLU	4.7
14	AN	56	VAL	4.8

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Mol	Chain	Res	Type	RSRZ
36	BN	109	GLU	4.7
1	AA	313	A	4.7
21	B0	1110	G	4.7
37	BO	37	GLN	4.7
1	AA	1501	C	4.7
24	BB	140	SER	4.7
26	BD	161	LYS	4.7
39	BQ	112	GLY	4.7
53	B5	152	LYS	4.7
52	B4	12	ASP	4.7
21	B0	2663	U	4.7
27	BE	129	THR	4.7
24	BB	174	GLU	4.7
39	BQ	78	ASN	4.7
42	BT	85	MET	4.7
23	BA	21	PHE	4.7
28	BF	13	LYS	4.7
42	BT	75	LYS	4.7
25	BC	117	LEU	4.7
30	BH	161	GLN	4.7
21	B0	2311	U	4.7
19	AS	44	MET	4.7
24	BB	98	GLU	4.7
21	B0	1453	A	4.7
23	BA	177	LEU	4.7
6	AF	94	GLN	4.7
11	AK	104	GLN	4.7
22	B9	44	C	4.7
53	B5	170	GLY	4.7
24	BB	149	ARG	4.7
21	B0	1490	U	4.7
24	BB	128	SER	4.7
11	AK	81	ASP	4.7
23	BA	49	ILE	4.7
39	BQ	96	TYR	4.7
18	AR	41	LYS	4.7
23	BA	33	LEU	4.7
37	BO	35	ALA	4.7
24	BB	178	GLY	4.7
48	BZ	55	ARG	4.7
49	B1	7	ARG	4.7
21	B0	1141	U	4.7

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Mol	Chain	Res	Type	RSRZ
8	AH	9	MET	4.7
8	AH	80	ILE	4.7
32	BJ	39	SER	4.7
7	AG	43	PHE	4.7
32	BJ	107	LYS	4.7
53	B5	58	PRO	4.7
27	BE	91	GLY	4.7
37	BO	59	ARG	4.7
40	BR	66	GLY	4.7
4	AD	17	VAL	4.7
31	BI	133	VAL	4.7
1	AA	633	G	4.7
21	B0	728	G	4.7
5	AE	91	LEU	4.7
35	BM	105	ASP	4.7
7	AG	93	PRO	4.7
24	BB	187	ALA	4.7
34	BL	46	PRO	4.7
50	B2	34	ARG	4.7
21	B0	2195	C	4.7
21	B0	1668	G	4.7
2	AB	236	TYR	4.7
12	AL	123	LYS	4.7
1	AA	1534	A	4.7
4	AD	141	ARG	4.7
23	BA	213	ARG	4.7
25	BC	159	ARG	4.7
41	BS	42	ARG	4.7
33	BK	28	VAL	4.6
21	B0	145	C	4.6
21	B0	996	C	4.6
2	AB	76	GLN	4.6
3	AC	45	LYS	4.6
7	AG	83	ALA	4.6
10	AJ	12	ASP	4.6
12	AL	24	VAL	4.6
21	B0	91	A	4.6
50	B2	27	GLY	4.6
46	BX	15	ASN	4.6
34	BL	98	LEU	4.6
21	B0	727	U	4.6
11	AK	107	SER	4.6

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Mol	Chain	Res	Type	RSRZ
13	AM	5	ALA	4.6
8	AH	54	ASP	4.6
16	AP	47	ASP	4.6
53	B5	88	GLU	4.6
21	B0	1731	C	4.6
27	BE	68	THR	4.6
36	BN	23	GLN	4.6
21	B0	1642	G	4.6
14	AN	45	ARG	4.6
18	AR	24	ALA	4.6
37	BO	48	ARG	4.6
21	B0	1681	A	4.6
32	BJ	42	GLY	4.6
33	BK	18	MET	4.6
1	AA	322	C	4.6
53	B5	147	TYR	4.6
21	B0	1571	G	4.6
37	BO	69	ALA	4.6
3	AC	135	LYS	4.6
16	AP	54	GLU	4.6
11	AK	120	ARG	4.6
24	BB	14	ILE	4.6
53	B5	167	VAL	4.6
3	AC	72	LYS	4.6
42	BT	63	PRO	4.6
53	B5	42	LYS	4.6
3	AC	10	PHE	4.6
23	BA	89	SER	4.6
52	B4	20	HIS	4.6
53	B5	80	SER	4.6
1	AA	280	C	4.6
30	BH	97	ASP	4.6
2	AB	175	ARG	4.6
5	AE	126	ARG	4.6
7	AG	154	TYR	4.6
27	BE	139	GLN	4.6
50	B2	19	ARG	4.6
27	BE	52	VAL	4.6
50	B2	8	ASN	4.6
1	AA	471	G	4.6
1	AA	1023	G	4.6
21	B0	159	A	4.6

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Mol	Chain	Res	Type	RSRZ
21	B0	1812	U	4.6
7	AG	18	TYR	4.5
42	BT	49	THR	4.5
45	BW	55	THR	4.5
29	BG	27	LEU	4.5
37	BO	22	LYS	4.5
41	BS	45	LYS	4.5
42	BT	83	PHE	4.5
21	B0	687	G	4.5
21	B0	1332	G	4.5
51	B3	31	HIS	4.5
13	AM	36	LYS	4.5
39	BQ	41	VAL	4.5
45	BW	50	VAL	4.5
24	BB	177	ALA	4.5
2	AB	232	PRO	4.5
33	BK	123	GLY	4.5
21	B0	772	G	4.5
19	AS	81	ARG	4.5
34	BL	33	ARG	4.5
3	AC	151	VAL	4.5
23	BA	141	VAL	4.5
29	BG	68	ILE	4.5
53	B5	56	LYS	4.5
30	BH	74	MET	4.5
19	AS	79	THR	4.5
39	BQ	125	THR	4.5
21	B0	2030	U	4.5
24	BB	186	GLY	4.5
21	B0	777	A	4.5
23	BA	198	ASN	4.5
7	AG	56	GLN	4.5
3	AC	74	GLY	4.5
9	AI	32	ASP	4.5
16	AP	30	GLY	4.5
21	B0	1733	U	4.5
30	BH	163	PRO	4.5
21	B0	1359	G	4.5
40	BR	48	VAL	4.5
2	AB	110	GLN	4.5
52	B4	21	GLY	4.5
4	AD	196	LEU	4.5

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Mol	Chain	Res	Type	RSRZ
31	BI	8	LEU	4.5
1	AA	150	C	4.5
21	B0	148	C	4.5
1	AA	1504	G	4.5
21	B0	140	G	4.5
26	BD	25	VAL	4.5
33	BK	36	ILE	4.5
17	AQ	102	GLY	4.5
40	BR	85	GLY	4.5
1	AA	1394	A	4.5
21	B0	1288	A	4.5
4	AD	191	ARG	4.5
8	AH	2	LEU	4.5
10	AJ	89	ASP	4.5
24	BB	69	LYS	4.5
45	BW	46	LEU	4.5
24	BB	91	VAL	4.5
21	B0	562	G	4.5
21	B0	220	U	4.5
23	BA	57	GLY	4.5
23	BA	179	SER	4.5
46	BX	48	LYS	4.4
53	B5	62	LYS	4.4
14	AN	22	THR	4.4
32	BJ	27	ASP	4.4
21	B0	2655	C	4.4
21	B0	1037	U	4.4
1	AA	394	G	4.4
7	AG	90	GLU	4.4
10	AJ	64	GLU	4.4
21	B0	121	G	4.4
21	B0	219	G	4.4
21	B0	735	G	4.4
24	BB	191	ALA	4.4
25	BC	2	ALA	4.4
25	BC	197	GLU	4.4
33	BK	39	GLU	4.4
37	BO	91	ASN	4.4
7	AG	82	GLY	4.4
23	BA	4	LYS	4.4
1	AA	116	A	4.4
1	AA	393	A	4.4

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Mol	Chain	Res	Type	RSRZ
1	AA	532	A	4.4
10	AJ	51	ARG	4.4
11	AK	121	PRO	4.4
30	BH	136	PRO	4.4
38	BP	94	LYS	4.4
21	B0	1259	A	4.4
48	BZ	12	SER	4.4
38	BP	71	ILE	4.4
1	AA	1465	C	4.4
21	B0	1268	U	4.4
21	B0	1452	U	4.4
23	BA	140	ALA	4.4
27	BE	73	ALA	4.4
1	AA	281	G	4.4
30	BH	117	GLU	4.4
38	BP	87	ARG	4.4
9	AI	14	VAL	4.4
24	BB	34	VAL	4.4
41	BS	62	MET	4.4
24	BB	122	PHE	4.4
21	B0	2580	C	4.4
25	BC	42	THR	4.4
51	B3	6	THR	4.4
10	AJ	13	HIS	4.4
23	BA	251	GLY	4.4
21	B0	1109	A	4.4
35	BM	31	VAL	4.4
53	B5	205	VAL	4.4
21	B0	439	C	4.4
23	BA	172	TYR	4.4
26	BD	144	ASP	4.4
30	BH	155	THR	4.4
27	BE	140	LEU	4.4
32	BJ	82	ASP	4.4
41	BS	55	THR	4.4
53	B5	82	LYS	4.4
4	AD	163	GLU	4.4
21	B0	2001	G	4.4
53	B5	177	GLU	4.4
21	B0	2666	U	4.4
3	AC	186	PHE	4.4
25	BC	3	GLN	4.4

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Mol	Chain	Res	Type	RSRZ
1	AA	1404	C	4.4
7	AG	59	LEU	4.4
46	BX	25	LEU	4.4
24	BB	146	THR	4.4
9	AI	2	GLU	4.4
33	BK	16	GLY	4.4
53	B5	63	ARG	4.4
1	AA	871	U	4.4
21	B0	560	G	4.4
33	BK	98	VAL	4.4
21	B0	556	A	4.4
1	AA	612	C	4.4
18	AR	85	LEU	4.4
3	AC	149	ALA	4.4
26	BD	24	SER	4.4
40	BR	87	SER	4.4
3	AC	201	TYR	4.4
16	AP	32	TYR	4.4
8	AH	122	ARG	4.4
23	BA	261	ARG	4.4
1	AA	294	U	4.4
7	AG	9	VAL	4.4
31	BI	57	ASP	4.4
21	B0	1848	U	4.4
38	BP	86	HIS	4.4
21	B0	1428	G	4.4
42	BT	62	PHE	4.4
53	B5	151	PHE	4.4
20	AT	97	ALA	4.3
3	AC	48	TYR	4.3
52	B4	19	ARG	4.3
1	AA	1541	U	4.3
15	AO	86	GLY	4.3
21	B0	2369	U	4.3
40	BR	7	LEU	4.3
1	AA	311	C	4.3
21	B0	972	C	4.3
8	AH	37	ARG	4.3
1	AA	955	U	4.3
15	AO	40	SER	4.3
21	B0	393	U	4.3
21	B0	1232	U	4.3

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Mol	Chain	Res	Type	RSRZ
33	BK	20	GLY	4.3
46	BX	34	VAL	4.3
24	BB	107	THR	4.3
36	BN	70	LYS	4.3
53	B5	60	LYS	4.3
38	BP	11	GLN	4.3
21	B0	104	C	4.3
22	B9	88	C	4.3
1	AA	180	U	4.3
12	AL	15	ARG	4.3
21	B0	1601	U	4.3
46	BX	26	ARG	4.3
32	BJ	46	GLY	4.3
39	BQ	47	GLY	4.3
17	AQ	28	PRO	4.3
26	BD	56	GLU	4.3
21	B0	1893	G	4.3
37	BO	31	GLN	4.3
26	BD	133	LYS	4.3
8	AH	4	ASP	4.3
25	BC	161	ALA	4.3
1	AA	75	C	4.3
38	BP	21	ARG	4.3
3	AC	96	GLY	4.3
16	AP	1	MET	4.3
8	AH	101	PRO	4.3
32	BJ	41	SER	4.3
21	B0	2042	A	4.3
42	BT	146	HIS	4.3
19	AS	21	GLU	4.3
46	BX	52	GLU	4.3
1	AA	98	U	4.3
34	BL	111	ALA	4.3
21	B0	1269	G	4.3
21	B0	2304	G	4.3
21	B0	2757	G	4.3
32	BJ	141	VAL	4.3
23	BA	216	GLY	4.3
29	BG	15	GLY	4.3
33	BK	125	LYS	4.3
42	BT	27	GLU	4.3
1	AA	454	C	4.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1193	G	4.3
21	B0	1419	G	4.3
37	BO	74	MET	4.3
21	B0	158	A	4.2
23	BA	249	PRO	4.2
34	BL	45	ARG	4.2
41	BS	3	ARG	4.2
45	BW	48	ARG	4.2
31	BI	127	VAL	4.2
13	AM	63	THR	4.2
21	B0	1449	C	4.2
21	B0	2027	C	4.2
24	BB	44	TYR	4.2
27	BE	123	PHE	4.2
21	B0	2603	G	4.2
25	BC	121	ASP	4.2
21	B0	1275	A	4.2
15	AO	72	ARG	4.2
27	BE	163	ARG	4.2
3	AC	24	ALA	4.2
16	AP	74	LEU	4.2
33	BK	121	LEU	4.2
1	AA	810	C	4.2
21	B0	750	C	4.2
21	B0	34	U	4.2
21	B0	917	U	4.2
1	AA	607	A	4.2
16	AP	4	ILE	4.2
34	BL	11	ASN	4.2
37	BO	62	ILE	4.2
53	B5	81	PRO	4.2
19	AS	67	VAL	4.2
24	BB	46	ALA	4.2
30	BH	42	VAL	4.2
33	BK	50	ALA	4.2
46	BX	9	VAL	4.2
7	AG	48	LYS	4.2
21	B0	558	G	4.2
29	BG	113	PRO	4.2
7	AG	84	ASN	4.2
15	AO	37	ASN	4.2
37	BO	115	ASN	4.2

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Mol	Chain	Res	Type	RSRZ
20	AT	16	HIS	4.2
4	AD	2	GLY	4.2
42	BT	128	ARG	4.2
3	AC	159	GLY	4.2
9	AI	30	GLY	4.2
21	B0	603	C	4.2
21	B0	1808	C	4.2
21	B0	2237	C	4.2
22	B9	29	C	4.2
53	B5	75	TYR	4.2
30	BH	76	GLN	4.2
50	B2	43	THR	4.2
1	AA	310	G	4.2
21	B0	1635	G	4.2
21	B0	22	C	4.2
21	B0	2008	C	4.2
25	BC	17	LEU	4.2
31	BI	118	LEU	4.2
38	BP	57	GLN	4.2
1	AA	614	A	4.2
25	BC	59	TYR	4.1
21	B0	1524	C	4.1
21	B0	1865	C	4.1
31	BI	132	GLU	4.1
5	AE	131	ILE	4.1
23	BA	59	LYS	4.1
34	BL	5	LYS	4.1
27	BE	55	PRO	4.1
35	BM	50	THR	4.1
21	B0	568	G	4.1
21	B0	2036	G	4.1
25	BC	63	GLY	4.1
38	BP	48	GLY	4.1
21	B0	692	C	4.1
32	BJ	28	LYS	4.1
49	B1	53	LYS	4.1
18	AR	17	SER	4.1
46	BX	8	SER	4.1
1	AA	453	A	4.1
23	BA	242	ALA	4.1
21	B0	949	G	4.1
4	AD	130	GLY	4.1

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Mol	Chain	Res	Type	RSRZ
17	AQ	36	ILE	4.1
25	BC	114	GLY	4.1
3	AC	127	ARG	4.1
10	AJ	46	ARG	4.1
23	BA	220	HIS	4.1
28	BF	30	ILE	4.1
15	AO	76	GLU	4.1
18	AR	46	GLU	4.1
34	BL	42	LYS	4.1
38	BP	32	LYS	4.1
45	BW	44	ARG	4.1
23	BA	245	VAL	4.1
36	BN	80	VAL	4.1
45	BW	43	VAL	4.1
19	AS	66	MET	4.1
21	B0	2185	U	4.1
1	AA	181	G	4.1
21	B0	2234	G	4.1
21	B0	2548	G	4.1
8	AH	91	ARG	4.1
30	BH	139	ARG	4.1
43	BU	41	ARG	4.1
26	BD	85	VAL	4.1
33	BK	10	PHE	4.1
2	AB	234	PRO	4.1
3	AC	49	SER	4.1
21	B0	1143	A	4.1
21	B0	1281	A	4.1
1	AA	289	G	4.1
14	AN	58	LYS	4.1
21	B0	1263	G	4.1
21	B0	1816	G	4.1
17	AQ	35	VAL	4.1
21	B0	2374	C	4.1
50	B2	40	HIS	4.1
1	AA	323	U	4.1
21	B0	400	U	4.1
23	BA	203	ASN	4.1
27	BE	29	PRO	4.1
11	AK	13	GLN	4.1
5	AE	22	GLY	4.1
5	AE	107	ARG	4.1

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Mol	Chain	Res	Type	RSRZ
34	BL	7	GLY	4.1
21	B0	300	C	4.1
21	B0	935	C	4.1
21	B0	1145	C	4.1
21	B0	1491	C	4.1
21	B0	1669	A	4.1
26	BD	40	LEU	4.1
42	BT	64	ALA	4.1
12	AL	7	ILE	4.1
39	BQ	126	ILE	4.1
52	B4	31	LYS	4.1
7	AG	80	VAL	4.1
10	AJ	44	VAL	4.1
21	B0	1246	G	4.1
21	B0	757	U	4.1
21	B0	542	A	4.0
36	BN	56	ALA	4.0
42	BT	34	LEU	4.0
11	AK	122	LYS	4.0
16	AP	33	ILE	4.0
45	BW	7	ARG	4.0
45	BW	21	ARG	4.0
3	AC	120	VAL	4.0
1	AA	21	G	4.0
1	AA	657	G	4.0
21	B0	1130	U	4.0
21	B0	2259	G	4.0
21	B0	2434	G	4.0
21	B0	2800	C	4.0
32	BJ	83	LEU	4.0
37	BO	49	ASP	4.0
21	B0	336	A	4.0
21	B0	979	A	4.0
23	BA	14	ARG	4.0
53	B5	150	ARG	4.0
5	AE	105	VAL	4.0
30	BH	138	GLY	4.0
37	BO	32	TYR	4.0
21	B0	2799	C	4.0
1	AA	976	G	4.0
21	B0	933	G	4.0
21	B0	2071	G	4.0

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Mol	Chain	Res	Type	RSRZ
22	B9	113	G	4.0
47	BY	5	LEU	4.0
7	AG	35	LYS	4.0
19	AS	69	HIS	4.0
3	AC	161	GLU	4.0
23	BA	202	LYS	4.0
25	BC	86	PRO	4.0
5	AE	141	GLN	4.0
36	BN	33	VAL	4.0
1	AA	177	C	4.0
1	AA	1112	C	4.0
15	AO	10	LYS	4.0
30	BH	130	ALA	4.0
38	BP	93	ILE	4.0
42	BT	23	ALA	4.0
1	AA	964	A	4.0
18	AR	54	ARG	4.0
40	BR	86	GLN	4.0
12	AL	64	TYR	4.0
21	B0	2239	C	4.0
1	AA	147	G	4.0
1	AA	1021	G	4.0
40	BR	9	ALA	4.0
1	AA	859	A	4.0
23	BA	178	PRO	4.0
52	B4	4	ARG	4.0
21	B0	1732	U	4.0
21	B0	2211	U	4.0
31	BI	110	VAL	4.0
39	BQ	71	VAL	4.0
39	BQ	80	LEU	4.0
21	B0	2491	C	4.0
41	BS	64	ASN	4.0
9	AI	71	SER	4.0
21	B0	485	G	4.0
5	AE	82	VAL	4.0
14	AN	46	GLU	4.0
23	BA	75	VAL	4.0
34	BL	102	THR	4.0
42	BT	61	THR	4.0
46	BX	40	VAL	4.0
31	BI	9	ASP	4.0

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Mol	Chain	Res	Type	RSRZ
53	B5	178	ASP	4.0
1	AA	1539	C	4.0
21	B0	362	C	4.0
21	B0	1661	C	4.0
21	B0	2752	C	4.0
15	AO	68	ARG	4.0
32	BJ	21	ARG	4.0
34	BL	41	ALA	4.0
39	BQ	77	ALA	4.0
21	B0	1212	U	4.0
21	B0	1672	A	4.0
30	BH	72	PRO	4.0
7	AG	99	LEU	3.9
36	BN	24	LEU	3.9
36	BN	51	GLU	3.9
37	BO	46	GLU	3.9
48	BZ	17	ASP	3.9
48	BZ	35	GLN	3.9
1	AA	1230	C	3.9
21	B0	1190	C	3.9
33	BK	37	ALA	3.9
40	BR	58	VAL	3.9
3	AC	165	THR	3.9
21	B0	23	G	3.9
21	B0	1211	G	3.9
6	AF	92	LYS	3.9
30	BH	93	LYS	3.9
25	BC	134	ILE	3.9
29	BG	11	GLN	3.9
1	AA	43	C	3.9
21	B0	2833	C	3.9
8	AH	105	ARG	3.9
13	AM	71	ARG	3.9
28	BF	40	ARG	3.9
21	B0	125	A	3.9
33	BK	96	SER	3.9
1	AA	1024	G	3.9
15	AO	5	LYS	3.9
52	B4	34	GLN	3.9
1	AA	832	C	3.9
5	AE	14	ARG	3.9
21	B0	177	U	3.9

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Mol	Chain	Res	Type	RSRZ
21	B0	1276	U	3.9
21	B0	1675	C	3.9
38	BP	13	ARG	3.9
3	AC	3	ASN	3.9
22	B9	15	A	3.9
46	BX	27	LYS	3.9
4	AD	156	GLU	3.9
21	B0	1000	G	3.9
27	BE	83	TYR	3.9
1	AA	882	C	3.9
17	AQ	26	GLN	3.9
11	AK	73	MET	3.9
4	AD	85	LYS	3.9
3	AC	193	TYR	3.9
13	AM	35	GLU	3.9
41	BS	54	ILE	3.9
42	BT	90	GLU	3.9
10	AJ	67	THR	3.9
14	AN	25	VAL	3.9
16	AP	21	VAL	3.9
21	B0	1575	C	3.9
30	BH	43	VAL	3.9
30	BH	148	LEU	3.9
41	BS	44	GLN	3.9
1	AA	860	A	3.9
27	BE	9	ILE	3.9
4	AD	28	SER	3.9
1	AA	44	G	3.9
1	AA	576	G	3.9
7	AG	67	GLU	3.9
45	BW	17	GLU	3.9
53	B5	69	SER	3.9
47	BY	24	THR	3.9
5	AE	108	ALA	3.9
8	AH	44	PHE	3.9
21	B0	20	C	3.9
14	AN	15	LYS	3.9
16	AP	43	LYS	3.9
21	B0	1280	U	3.9
4	AD	20	TYR	3.9
4	AD	49	ARG	3.9
1	AA	1464	G	3.8

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Mol	Chain	Res	Type	RSRZ
32	BJ	119	THR	3.8
11	AK	99	GLN	3.8
12	AL	9	GLN	3.8
53	B5	78	LYS	3.8
19	AS	59	PRO	3.8
21	B0	136	A	3.8
21	B0	1693	A	3.8
26	BD	41	GLY	3.8
39	BQ	60	ILE	3.8
26	BD	143	TYR	3.8
24	BB	93	VAL	3.8
16	AP	70	ALA	3.8
21	B0	166	G	3.8
21	B0	2547	C	3.8
21	B0	2819	G	3.8
8	AH	5	PRO	3.8
27	BE	128	PRO	3.8
37	BO	28	ARG	3.8
29	BG	120	VAL	3.8
1	AA	309	G	3.8
1	AA	491	G	3.8
1	AA	544	G	3.8
1	AA	1113	C	3.8
23	BA	266	SER	3.8
36	BN	21	THR	3.8
30	BH	133	GLY	3.8
46	BX	13	PRO	3.8
2	AB	21	ARG	3.8
50	B2	39	ARG	3.8
4	AD	56	VAL	3.8
17	AQ	5	VAL	3.8
27	BE	60	LYS	3.8
41	BS	102	LYS	3.8
43	BU	26	PHE	3.8
48	BZ	18	MET	3.8
3	AC	19	GLU	3.8
21	B0	3147	C	3.8
1	AA	6	G	3.8
12	AL	62	SER	3.8
16	AP	36	ILE	3.8
21	B0	1926	U	3.8
21	B0	2003	A	3.8

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Mol	Chain	Res	Type	RSRZ
34	BL	37	THR	3.8
24	BB	161	GLY	3.8
39	BQ	23	PRO	3.8
9	AI	42	ARG	3.8
20	AT	17	ARG	3.8
7	AG	23	VAL	3.8
19	AS	25	LYS	3.8
20	AT	39	LYS	3.8
23	BA	271	VAL	3.8
36	BN	38	LYS	3.8
36	BN	103	LYS	3.8
14	AN	2	ALA	3.8
41	BS	6	ALA	3.8
12	AL	79	GLU	3.8
21	B0	2238	G	3.8
21	B0	2464	G	3.8
1	AA	828	A	3.8
21	B0	137	A	3.8
10	AJ	92	THR	3.8
12	AL	63	GLY	3.8
39	BQ	46	ARG	3.8
16	AP	27	LYS	3.8
42	BT	30	VAL	3.8
52	B4	30	VAL	3.8
34	BL	25	ALA	3.8
21	B0	372	U	3.8
1	AA	995	C	3.8
15	AO	41	GLU	3.8
21	B0	186	C	3.8
34	BL	112	LEU	3.8
1	AA	926	G	3.8
1	AA	965	A	3.8
1	AA	1188	A	3.8
15	AO	17	ARG	3.8
21	B0	2002	A	3.8
21	B0	2622	G	3.8
25	BC	18	PRO	3.8
23	BA	27	LYS	3.8
30	BH	137	LYS	3.8
48	BZ	19	ARG	3.8
53	B5	86	THR	3.8
47	BY	16	TYR	3.8

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Mol	Chain	Res	Type	RSRZ
1	AA	1493	A	3.8
7	AG	115	ARG	3.8
23	BA	28	ARG	3.8
23	BA	208	LYS	3.7
24	BB	176	ARG	3.8
21	B0	736	G	3.7
21	B0	1131	G	3.7
21	B0	1294	G	3.7
21	B0	1683	G	3.7
21	B0	2202	G	3.7
21	B0	2332	G	3.7
30	BH	131	VAL	3.7
42	BT	87	THR	3.7
13	AM	33	ALA	3.7
21	B0	2668	U	3.7
43	BU	33	ALA	3.7
21	B0	2686	C	3.7
39	BQ	81	HIS	3.7
30	BH	142	ARG	3.7
41	BS	80	LYS	3.7
3	AC	198	VAL	3.7
4	AD	142	PRO	3.7
13	AM	68	GLY	3.7
23	BA	207	GLY	3.7
1	AA	97	G	3.7
1	AA	1480	G	3.7
12	AL	8	ASN	3.7
21	B0	604	U	3.7
34	BL	36	THR	3.7
39	BQ	26	ALA	3.7
1	AA	101	A	3.7
10	AJ	54	PHE	3.7
14	AN	38	GLY	3.7
21	B0	221	A	3.7
27	BE	92	VAL	3.7
25	BC	20	PRO	3.7
1	AA	827	U	3.7
16	AP	61	SER	3.7
21	B0	2186	G	3.7
4	AD	146	ILE	3.7
20	AT	48	LYS	3.7
37	BO	53	LYS	3.7

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Mol	Chain	Res	Type	RSRZ
23	BA	217	ARG	3.7
32	BJ	90	ARG	3.7
1	AA	1499	A	3.7
3	AC	171	GLY	3.7
21	B0	764	A	3.7
23	BA	47	GLY	3.7
47	BY	23	GLU	3.7
23	BA	214	TRP	3.7
5	AE	60	TYR	3.7
8	AH	112	LEU	3.7
21	B0	342	G	3.7
21	B0	1670	G	3.7
21	B0	1722	G	3.7
22	B9	93	G	3.7
43	BU	16	SER	3.7
1	AA	862	C	3.7
21	B0	1380	C	3.7
8	AH	90	GLY	3.7
39	BQ	84	GLU	3.7
21	B0	1787	U	3.7
2	AB	180	LEU	3.7
31	BI	92	ASP	3.7
27	BE	20	GLN	3.7
39	BQ	117	ILE	3.7
1	AA	139	G	3.7
21	B0	1186	G	3.7
25	BC	157	THR	3.7
1	AA	826	C	3.7
15	AO	45	VAL	3.7
21	B0	472	C	3.7
21	B0	737	C	3.7
21	B0	2667	C	3.7
30	BH	132	PHE	3.7
4	AD	7	PRO	3.7
21	B0	1397	A	3.7
39	BQ	61	PRO	3.7
20	AT	72	LEU	3.7
33	BK	13	GLN	3.7
20	AT	66	ALA	3.7
52	B4	8	LYS	3.7
3	AC	131	ARG	3.7
37	BO	24	PHE	3.7

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Mol	Chain	Res	Type	RSRZ
21	B0	2343	C	3.7
38	BP	41	GLY	3.7
46	BX	14	GLY	3.7
1	AA	179	A	3.7
1	AA	974	A	3.7
21	B0	1998	A	3.7
2	AB	143	GLU	3.7
3	AC	46	GLU	3.7
24	BB	21	ILE	3.7
52	B4	15	LYS	3.7
3	AC	129	ALA	3.7
21	B0	371	G	3.6
21	B0	1985	G	3.6
23	BA	211	ARG	3.6
21	B0	1680	U	3.6
38	BP	100	GLY	3.6
21	B0	232	A	3.6
24	BB	138	PRO	3.6
27	BE	154	PRO	3.6
40	BR	33	ALA	3.6
4	AD	190	ASP	3.6
38	BP	22	VAL	3.6
21	B0	605	G	3.6
13	AM	100	GLY	3.6
21	B0	2445	C	3.6
39	BQ	82	ASN	3.6
7	AG	153	HIS	3.6
21	B0	3132	A	3.6
42	BT	24	TYR	3.6
1	AA	956	U	3.6
1	AA	236	G	3.6
1	AA	999	C	3.6
21	B0	678	G	3.6
45	BW	5	GLU	3.6
16	AP	9	PHE	3.6
43	BU	77	ARG	3.6
53	B5	22	VAL	3.6
30	BH	96	ASP	3.6
1	AA	849	C	3.6
8	AH	46	LYS	3.6
21	B0	1692	C	3.6
21	B0	2754	C	3.6

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Mol	Chain	Res	Type	RSRZ
32	BJ	69	GLY	3.6
36	BN	42	GLY	3.6
35	BM	5	THR	3.6
2	AB	117	GLU	3.6
21	B0	1611	U	3.6
37	BO	79	PHE	3.6
28	BF	28	TRP	3.6
7	AG	110	GLN	3.6
24	BB	143	GLN	3.6
2	AB	156	LYS	3.6
2	AB	193	ASP	3.6
21	B0	950	G	3.6
29	BG	13	PRO	3.6
16	AP	55	ARG	3.6
20	AT	86	ARG	3.6
37	BO	76	TYR	3.6
38	BP	83	ARG	3.6
42	BT	42	ALA	3.6
47	BY	9	ALA	3.6
53	B5	103	LEU	3.6
27	BE	174	GLY	3.6
21	B0	1729	C	3.6
21	B0	2484	G	3.6
21	B0	2574	G	3.6
21	B0	2750	G	3.6
11	AK	114	VAL	3.6
21	B0	3189	U	3.6
40	BR	67	ARG	3.6
43	BU	51	VAL	3.6
49	B1	29	ARG	3.6
8	AH	136	GLU	3.6
21	B0	446	C	3.6
21	B0	2753	C	3.6
1	AA	149	A	3.5
1	AA	162	A	3.5
21	B0	1694	A	3.5
23	BA	267	ASP	3.5
32	BJ	65	PHE	3.5
4	AD	4	TYR	3.5
24	BB	162	MET	3.5
20	AT	26	ASN	3.5
29	BG	64	SER	3.5

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Mol	Chain	Res	Type	RSRZ
34	BL	43	GLU	3.5
42	BT	4	THR	3.5
5	AE	80	ILE	3.5
26	BD	141	ILE	3.5
2	AB	14	GLY	3.5
1	AA	96	C	3.5
1	AA	176	C	3.5
9	AI	58	ARG	3.5
16	AP	73	LEU	3.5
21	B0	1630	A	3.5
21	B0	1851	A	3.5
49	B1	28	ARG	3.5
27	BE	146	ALA	3.5
30	BH	134	MET	3.5
35	BM	37	HIS	3.5
53	B5	109	TRP	3.5
25	BC	85	GLY	3.5
21	B0	1631	C	3.5
21	B0	2459	C	3.5
9	AI	65	VAL	3.5
21	B0	3103	A	3.5
39	BQ	120	ARG	3.5
2	AB	116	GLU	3.5
25	BC	16	GLU	3.5
33	BK	113	GLU	3.5
38	BP	7	THR	3.5
21	B0	1651	U	3.5
33	BK	126	LEU	3.5
4	AD	3	ARG	3.5
21	B0	1701	C	3.5
34	BL	12	ARG	3.5
52	B4	18	ARG	3.5
21	B0	693	A	3.5
39	BQ	30	TYR	3.5
1	AA	1032	G	3.5
21	B0	1815	G	3.5
3	AC	148	GLY	3.5
25	BC	140	ASN	3.5
29	BG	12	LEU	3.5
37	BO	71	LEU	3.5
38	BP	85	GLY	3.5
21	B0	847	C	3.5

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Mol	Chain	Res	Type	RSRZ
23	BA	184	ARG	3.5
53	B5	87	ARG	3.5
1	AA	608	A	3.5
22	B9	28	A	3.5
9	AI	52	ALA	3.5
19	AS	28	LYS	3.5
21	B0	359	G	3.5
21	B0	570	G	3.5
38	BP	50	ASP	3.5
4	AD	108	LEU	3.5
2	AB	235	SER	3.5
9	AI	66	ARG	3.5
19	AS	74	PHE	3.5
1	AA	307	C	3.5
1	AA	497	A	3.5
21	B0	1610	A	3.5
53	B5	23	LYS	3.5
2	AB	154	LEU	3.5
21	B0	355	G	3.5
5	AE	23	GLY	3.5
25	BC	55	GLY	3.5
43	BU	15	ASP	3.5
4	AD	80	GLU	3.5
17	AQ	58	GLU	3.5
36	BN	77	VAL	3.5
37	BO	50	ARG	3.5
2	AB	27	LYS	3.5
38	BP	76	SER	3.5
48	BZ	21	SER	3.5
21	B0	686	C	3.5
21	B0	2260	C	3.5
23	BA	76	ASN	3.5
2	AB	29	ALA	3.5
2	AB	120	ALA	3.5
5	AE	43	LEU	3.4
14	AN	47	LEU	3.4
7	AG	41	ARG	3.4
21	B0	340	G	3.4
21	B0	600	G	3.4
21	B0	1666	G	3.4
7	AG	52	GLU	3.4
9	AI	25	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
13	AM	32	GLU	3.4
35	BM	10	LYS	3.4
17	AQ	39	SER	3.4
11	AK	100	ALA	3.4
21	B0	292	A	3.4
21	B0	1420	A	3.4
21	B0	1507	A	3.4
27	BE	170	ALA	3.4
4	AD	122	ARG	3.4
9	AI	44	VAL	3.4
24	BB	144	ARG	3.4
40	BR	75	ARG	3.4
1	AA	1435	G	3.4
15	AO	50	HIS	3.4
42	BT	50	GLY	3.4
21	B0	1970	G	3.4
21	B0	3116	G	3.4
22	B9	25	G	3.4
13	AM	16	ASP	3.4
3	AC	180	ALA	3.4
9	AI	90	PRO	3.4
21	B0	797	A	3.4
34	BL	35	GLN	3.4
20	AT	68	LYS	3.4
53	B5	30	VAL	3.4
1	AA	890	G	3.4
21	B0	773	G	3.4
1	AA	1439	C	3.4
1	AA	1492	A	3.4
9	AI	119	ALA	3.4
16	AP	24	ALA	3.4
5	AE	87	SER	3.4
7	AG	109	ASN	3.4
18	AR	19	LYS	3.4
15	AO	53	HIS	3.4
1	AA	771	G	3.4
21	B0	543	G	3.4
21	B0	2818	G	3.4
1	AA	561	U	3.4
8	AH	133	LEU	3.4
21	B0	968	C	3.4
2	AB	206	ASP	3.4

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Mol	Chain	Res	Type	RSRZ
9	AI	43	ALA	3.4
21	B0	2041	A	3.4
21	B0	2790	C	3.4
23	BA	37	LEU	3.4
50	B2	5	TYR	3.4
8	AH	126	LYS	3.4
30	BH	147	ARG	3.4
42	BT	144	GLY	3.4
45	BW	53	LEU	3.4
1	AA	1007	C	3.4
1	AA	1429	C	3.4
21	B0	182	G	3.4
21	B0	2310	G	3.4
53	B5	79	ALA	3.4
10	AJ	53	PRO	3.4
47	BY	7	PRO	3.4
3	AC	179	ARG	3.4
4	AD	209	ARG	3.4
37	BO	93	LYS	3.4
39	BQ	59	PHE	3.4
21	B0	1994	U	3.4
21	B0	335	A	3.4
21	B0	987	G	3.4
21	B0	995	A	3.4
21	B0	1728	A	3.4
5	AE	61	TYR	3.4
19	AS	80	TYR	3.4
29	BG	95	LYS	3.4
35	BM	32	TYR	3.4
7	AG	10	ARG	3.4
11	AK	36	ASP	3.4
27	BE	95	ARG	3.4
28	BF	45	THR	3.4
32	BJ	66	ASN	3.4
1	AA	165	C	3.3
21	B0	2450	A	3.3
6	AF	96	PRO	3.3
13	AM	115	LYS	3.3
14	AN	26	ARG	3.3
27	BE	94	PHE	3.3
50	B2	10	ARG	3.3
1	AA	863	U	3.3

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Mol	Chain	Res	Type	RSRZ
39	BQ	74	SER	3.3
7	AG	54	THR	3.3
21	B0	176	A	3.3
21	B0	602	C	3.3
21	B0	846	A	3.3
21	B0	2538	C	3.3
1	AA	490	G	3.3
21	B0	2687	G	3.3
2	AB	45	GLN	3.3
3	AC	139	GLN	3.3
15	AO	62	GLN	3.3
3	AC	178	LEU	3.3
21	B0	969	U	3.3
29	BG	69	THR	3.3
11	AK	127	LYS	3.3
12	AL	124	LYS	3.3
32	BJ	128	ALA	3.3
53	B5	21	ASN	3.3
1	AA	609	A	3.3
21	B0	1218	C	3.3
21	B0	1290	A	3.3
9	AI	109	VAL	3.3
38	BP	74	TYR	3.3
1	AA	201	G	3.3
1	AA	1198	G	3.3
21	B0	1662	G	3.3
4	AD	87	GLY	3.3
24	BB	185	LYS	3.3
20	AT	35	THR	3.3
32	BJ	132	ALA	3.3
1	AA	312	C	3.3
5	AE	63	ARG	3.3
8	AH	75	ARG	3.3
21	B0	71	A	3.3
21	B0	1925	C	3.3
25	BC	56	ARG	3.3
25	BC	136	TRP	3.3
8	AH	1	MET	3.3
5	AE	71	LEU	3.3
19	AS	68	GLY	3.3
21	B0	111	G	3.3
21	B0	1258	G	3.3

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Mol	Chain	Res	Type	RSRZ
21	B0	2560	G	3.3
21	B0	2578	G	3.3
45	BW	16	LYS	3.3
4	AD	93	PHE	3.3
13	AM	114	ARG	3.3
1	AA	1533	C	3.3
21	B0	233	A	3.3
21	B0	1671	A	3.3
36	BN	45	THR	3.3
21	B0	2435	C	3.3
29	BG	54	PRO	3.3
17	AQ	84	LEU	3.3
1	AA	821	G	3.3
2	AB	89	GLY	3.3
21	B0	157	G	3.3
31	BI	93	ARG	3.3
53	B5	83	VAL	3.3
1	AA	163	C	3.3
1	AA	308	C	3.3
21	B0	93	A	3.3
15	AO	2	PRO	3.3
21	B0	544	U	3.3
21	B0	724	C	3.3
21	B0	1682	A	3.3
21	B0	1991	C	3.3
21	B0	2705	A	3.3
23	BA	58	HIS	3.3
30	BH	129	HIS	3.3
36	BN	20	HIS	3.3
13	AM	6	GLY	3.3
24	BB	110	GLY	3.3
29	BG	118	GLY	3.3
21	B0	1861	G	3.3
20	AT	23	ARG	3.3
34	BL	103	ARG	3.3
21	B0	451	A	3.3
21	B0	1530	U	3.3
21	B0	3180	U	3.3
27	BE	110	SER	3.3
43	BU	18	PRO	3.3
5	AE	116	THR	3.3
51	B3	27	SER	3.3

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Mol	Chain	Res	Type	RSRZ
2	AB	9	GLU	3.2
3	AC	158	GLY	3.2
5	AE	149	GLU	3.2
11	AK	70	LYS	3.2
13	AM	112	GLY	3.2
42	BT	89	GLY	3.2
23	BA	166	GLN	3.2
21	B0	2221	G	3.2
4	AD	105	VAL	3.2
1	AA	1481	U	3.2
1	AA	543	C	3.2
1	AA	975	A	3.2
21	B0	766	A	3.2
21	B0	1127	C	3.2
33	BK	42	TRP	3.2
29	BG	121	GLU	3.2
42	BT	60	GLU	3.2
53	B5	71	GLU	3.2
1	AA	998	G	3.2
1	AA	1202	G	3.2
6	AF	43	LEU	3.2
8	AH	85	ARG	3.2
13	AM	117	VAL	3.2
15	AO	79	ARG	3.2
18	AR	32	ARG	3.2
19	AS	24	ALA	3.2
21	B0	980	G	3.2
21	B0	2021	G	3.2
36	BN	110	LEU	3.2
39	BQ	111	ARG	3.2
21	B0	2024	U	3.2
9	AI	21	PRO	3.2
14	AN	17	LYS	3.2
15	AO	74	ASP	3.2
18	AR	59	SER	3.2
27	BE	122	THR	3.2
32	BJ	115	SER	3.2
43	BU	73	GLY	3.2
9	AI	35	GLU	3.2
16	AP	80	PHE	3.2
27	BE	168	GLN	3.2
32	BJ	37	GLN	3.2

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Mol	Chain	Res	Type	RSRZ
1	AA	575	G	3.2
1	AA	631	G	3.2
33	BK	43	ILE	3.2
40	BR	31	PRO	3.2
53	B5	77	LYS	3.2
11	AK	76	GLY	3.2
24	BB	142	GLY	3.2
35	BM	103	LEU	3.2
16	AP	14	ASN	3.2
38	BP	23	GLU	3.2
3	AC	107	GLN	3.2
24	BB	97	ALA	3.2
45	BW	20	ALA	3.2
21	B0	2460	G	3.2
21	B0	1996	A	3.2
40	BR	32	LYS	3.2
1	AA	135	C	3.2
53	B5	68	PRO	3.2
7	AG	34	GLY	3.2
8	AH	71	GLY	3.2
23	BA	56	GLY	3.2
4	AD	134	ASP	3.2
24	BB	195	LEU	3.2
3	AC	104	GLN	3.2
1	AA	1470	G	3.2
21	B0	1852	G	3.2
21	B0	3105	G	3.2
21	B0	2248	A	3.2
8	AH	57	PRO	3.2
14	AN	21	TYR	3.2
21	B0	2735	C	3.2
25	BC	91	TYR	3.2
9	AI	40	LEU	3.2
27	BE	31	GLY	3.2
20	AT	73	HIS	3.2
26	BD	92	ARG	3.2
32	BJ	63	ARG	3.2
14	AN	11	LYS	3.2
36	BN	90	GLN	3.2
1	AA	1502	A	3.2
1	AA	485	G	3.2
21	B0	2751	C	3.2

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Mol	Chain	Res	Type	RSRZ
4	AD	185	PHE	3.2
5	AE	40	ARG	3.2
8	AH	68	ARG	3.2
14	AN	57	ARG	3.2
38	BP	72	ARG	3.2
39	BQ	36	ARG	3.2
4	AD	177	ASP	3.2
10	AJ	14	LYS	3.1
17	AQ	104	LYS	3.1
20	AT	95	ALA	3.2
24	BB	123	ALA	3.2
32	BJ	127	ALA	3.2
39	BQ	43	ASP	3.2
39	BQ	107	ILE	3.2
40	BR	90	ALA	3.2
27	BE	42	THR	3.1
32	BJ	26	THR	3.1
48	BZ	13	LYS	3.1
53	B5	171	THR	3.1
5	AE	130	ASN	3.1
21	B0	2381	A	3.1
50	B2	9	ASN	3.1
1	AA	615	C	3.1
27	BE	41	LEU	3.1
1	AA	1136	U	3.1
1	AA	1233	G	3.1
1	AA	1391	U	3.1
21	B0	1993	G	3.1
10	AJ	93	GLY	3.1
50	B2	12	ARG	3.1
41	BS	43	ASP	3.1
4	AD	83	SER	3.1
11	AK	101	SER	3.1
12	AL	44	THR	3.1
24	BB	41	THR	3.1
46	BX	21	GLN	3.1
21	B0	189	A	3.1
21	B0	1582	A	3.1
21	B0	77	C	3.1
21	B0	1826	U	3.1
7	AG	94	ARG	3.1
10	AJ	5	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
17	AQ	85	VAL	3.1
21	B0	120	G	3.1
21	B0	1889	G	3.1
21	B0	1975	G	3.1
21	B0	2407	G	3.1
23	BA	180	GLY	3.1
37	BO	25	TRP	3.1
40	BR	56	MET	3.1
52	B4	10	MET	3.1
36	BN	107	LEU	3.1
9	AI	73	GLN	3.1
21	B0	18	U	3.1
21	B0	2189	A	3.1
37	BO	38	THR	3.1
21	B0	2774	U	3.1
21	B0	244	C	3.1
21	B0	2072	C	3.1
22	B9	12	C	3.1
25	BC	75	PRO	3.1
16	AP	10	GLY	3.1
20	AT	15	ARG	3.1
1	AA	1505	G	3.1
21	B0	814	G	3.1
1	AA	421	U	3.1
5	AE	79	GLU	3.1
21	B0	1295	U	3.1
21	B0	1967	U	3.1
1	AA	1357	A	3.1
20	AT	31	SER	3.1
21	B0	1320	A	3.1
21	B0	1800	A	3.1
21	B0	1964	A	3.1
36	BN	122	SER	3.1
21	B0	1711	C	3.1
21	B0	2022	C	3.1
50	B2	44	VAL	3.1
15	AO	87	ILE	3.1
28	BF	42	ASN	3.1
1	AA	112	G	3.1
1	AA	384	G	3.1
1	AA	610	G	3.1
21	B0	1033	G	3.1

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Mol	Chain	Res	Type	RSRZ
21	B0	1036	G	3.1
21	B0	2465	G	3.1
22	B9	94	G	3.1
17	AQ	29	HIS	3.1
21	B0	1301	U	3.1
37	BO	102	GLU	3.1
1	AA	949	A	3.1
2	AB	226	ARG	3.1
4	AD	187	ARG	3.1
21	B0	2758	A	3.1
34	BL	48	VAL	3.1
37	BO	89	ASP	3.1
50	B2	28	ARG	3.1
1	AA	178	C	3.1
1	AA	596	C	3.1
1	AA	1509	C	3.1
21	B0	1442	C	3.1
21	B0	2215	C	3.1
21	B0	2263	C	3.1
51	B3	2	PRO	3.1
51	B3	38	GLY	3.1
1	AA	306	G	3.1
21	B0	103	U	3.1
21	B0	1307	U	3.1
21	B0	1639	U	3.1
21	B0	3188	U	3.1
21	B0	2599	U	3.1
15	AO	18	PHE	3.1
2	AB	36	ARG	3.1
11	AK	109	VAL	3.1
21	B0	2848	A	3.1
26	BD	146	VAL	3.1
30	BH	113	GLU	3.1
37	BO	10	ARG	3.1
27	BE	77	LYS	3.1
27	BE	143	GLN	3.1
51	B3	3	LYS	3.1
52	B4	9	LYS	3.1
21	B0	2033	C	3.1
18	AR	25	THR	3.1
23	BA	155	LEU	3.1
40	BR	57	ASN	3.1

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Mol	Chain	Res	Type	RSRZ
52	B4	13	ASN	3.1
21	B0	2039	G	3.1
21	B0	2793	G	3.1
3	AC	128	PHE	3.1
2	AB	49	GLU	3.1
3	AC	182	ILE	3.1
8	AH	42	GLU	3.1
1	AA	1395	C	3.0
4	AD	74	GLN	3.0
5	AE	72	GLN	3.0
10	AJ	52	GLY	3.0
21	B0	1274	C	3.0
21	B0	2605	C	3.0
33	BK	25	GLY	3.0
36	BN	112	GLY	3.0
27	BE	63	ALA	3.0
1	AA	7	G	3.0
1	AA	472	G	3.0
21	B0	188	G	3.0
21	B0	1146	G	3.0
21	B0	1712	G	3.0
42	BT	86	VAL	3.0
21	B0	407	A	3.0
21	B0	688	A	3.0
21	B0	900(A)	A	3.0
30	BH	128	GLU	3.0
1	AA	554	C	3.0
3	AC	42	LEU	3.0
12	AL	10	LEU	3.0
21	B0	803	C	3.0
30	BH	135	LEU	3.0
2	AB	123	ALA	3.0
19	AS	39	THR	3.0
21	B0	1690	U	3.0
42	BT	145	ASP	3.0
1	AA	399	G	3.0
3	AC	126	ARG	3.0
13	AM	110	ARG	3.0
21	B0	2032	G	3.0
21	B0	2760	G	3.0
39	BQ	38	VAL	3.0
53	B5	107	ASN	3.0

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Mol	Chain	Res	Type	RSRZ
8	AH	49	GLU	3.0
21	B0	1875	C	3.0
22	B9	87	C	3.0
24	BB	170	LEU	3.0
27	BE	51	LEU	3.0
42	BT	65	LEU	3.0
53	B5	73	LEU	3.0
53	B5	74	GLU	3.0
42	BT	53	ASP	3.0
25	BC	120	VAL	3.0
21	B0	1691	G	3.0
21	B0	1969	G	3.0
21	B0	2320	G	3.0
21	B0	2577	A	3.0
25	BC	19	LEU	3.0
27	BE	64	LEU	3.0
15	AO	7	GLU	3.0
21	B0	997	C	3.0
21	B0	2708	U	3.0
53	B5	72	GLN	3.0
29	BG	40	ALA	3.0
29	BG	117	ALA	3.0
4	AD	144	ASP	3.0
12	AL	110	VAL	3.0
48	BZ	20	ARG	3.0
51	B3	37	SER	3.0
1	AA	861	G	3.0
1	AA	1001	A	3.0
21	B0	119	G	3.0
21	B0	367	G	3.0
21	B0	1216	G	3.0
21	B0	2656	G	3.0
43	BU	22	GLY	3.0
4	AD	72	GLU	3.0
21	B0	33	C	3.0
21	B0	1135	C	3.0
53	B5	212	ALA	3.0
4	AD	104	VAL	3.0
15	AO	63	ARG	3.0
23	BA	63	ARG	3.0
53	B5	84	VAL	3.0
20	AT	33	ILE	3.0

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Mol	Chain	Res	Type	RSRZ
36	BN	119	SER	3.0
47	BY	31	ILE	3.0
23	BA	206	LEU	3.0
1	AA	8	A	3.0
1	AA	115	G	3.0
1	AA	170	U	3.0
1	AA	238	G	3.0
1	AA	952	U	3.0
21	B0	98	U	3.0
21	B0	1309	G	3.0
21	B0	2441	U	3.0
21	B0	2463	G	3.0
21	B0	2685	A	3.0
21	B0	2801	A	3.0
1	AA	488	C	3.0
3	AC	53	ALA	3.0
33	BK	129	GLN	3.0
42	BT	21	ALA	3.0
43	BU	76	ALA	3.0
7	AG	76	ARG	3.0
7	AG	95	ARG	3.0
23	BA	163	VAL	3.0
19	AS	15	LEU	3.0
45	BW	9	LEU	3.0
21	B0	1883	A	3.0
29	BG	49	GLY	3.0
21	B0	781	G	3.0
21	B0	882	C	3.0
39	BQ	37	LYS	3.0
40	BR	63	LYS	3.0
23	BA	169	GLU	3.0
14	AN	35	ARG	3.0
50	B2	1	MET	2.9
16	AP	44	THR	2.9
25	BC	54	THR	2.9
22	B9	47	A	2.9
47	BY	38	GLY	2.9
9	AI	70	LYS	2.9
17	AQ	2	PRO	2.9
1	AA	585	G	2.9
1	AA	681	C	2.9
1	AA	1424	C	2.9

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Mol	Chain	Res	Type	RSRZ
1	AA	1466	C	2.9
21	B0	452	G	2.9
21	B0	2218	G	2.9
29	BG	37	PHE	2.9
43	BU	19	LYS	2.9
45	BW	42	ARG	2.9
17	AQ	99	SER	2.9
21	B0	1625	A	2.9
29	BG	88	SER	2.9
37	BO	78	THR	2.9
43	BU	13	GLY	2.9
43	BU	52	GLY	2.9
31	BI	131	PRO	2.9
1	AA	1397	C	2.9
8	AH	7	ALA	2.9
21	B0	755	C	2.9
21	B0	1553	G	2.9
21	B0	1660	G	2.9
21	B0	1673	C	2.9
21	B0	3870	C	2.9
21	B0	2375	G	2.9
3	AC	196	LEU	2.9
3	AC	204	LEU	2.9
10	AJ	88	LEU	2.9
13	AM	12	ASN	2.9
52	B4	26	ILE	2.9
6	AF	57	GLN	2.9
21	B0	2059	U	2.9
21	B0	2192	U	2.9
1	AA	270	A	2.9
12	AL	20	LYS	2.9
20	AT	29	LYS	2.9
21	B0	2623	A	2.9
32	BJ	88	PHE	2.9
37	BO	47	TYR	2.9
4	AD	152	SER	2.9
19	AS	35	SER	2.9
21	B0	1773	C	2.9
27	BE	141	VAL	2.9
21	B0	1266	G	2.9
21	B0	1790	G	2.9
6	AF	13	ASN	2.9

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Mol	Chain	Res	Type	RSRZ
18	AR	28	GLU	2.9
21	B0	978	U	2.9
16	AP	76	GLN	2.9
24	BB	35	GLN	2.9
16	AP	35	LYS	2.9
21	B0	689	A	2.9
21	B0	1869	A	2.9
38	BP	17	GLY	2.9
37	BO	103	PRO	2.9
4	AD	52	SER	2.9
5	AE	144	THR	2.9
20	AT	100	ILE	2.9
21	B0	545	C	2.9
21	B0	1310	C	2.9
21	B0	1396	C	2.9
21	B0	2494	C	2.9
29	BG	122	ALA	2.9
15	AO	51	HIS	2.9
21	B0	99	U	2.9
21	B0	2557	G	2.9
21	B0	2564	U	2.9
21	B0	2588	U	2.9
14	AN	9	LYS	2.9
3	AC	145	GLY	2.9
3	AC	203	PHE	2.9
5	AE	6	PHE	2.9
4	AD	38	TYR	2.9
21	B0	1231	A	2.9
21	B0	1321	A	2.9
38	BP	77	GLY	2.9
23	BA	97	TYR	2.9
34	BL	20	LEU	2.9
13	AM	7	VAL	2.9
23	BA	222	ARG	2.9
50	B2	33	ARG	2.9
50	B2	35	ARG	2.9
21	B0	1363	C	2.9
21	B0	1456	C	2.9
21	B0	1497	C	2.9
26	BD	145	MET	2.9
47	BY	22	MET	2.9
21	B0	1600	U	2.9

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Mol	Chain	Res	Type	RSRZ
1	AA	423	G	2.9
1	AA	1432	G	2.9
21	B0	462	G	2.9
21	B0	2341	G	2.9
1	AA	1227	A	2.9
21	B0	1429	A	2.9
50	B2	31	LEU	2.9
4	AD	159	ARG	2.9
8	AH	125	ARG	2.9
38	BP	14	VAL	2.9
1	AA	125	U	2.9
6	AF	1	MET	2.9
21	B0	1119	U	2.9
25	BC	83	ALA	2.9
53	B5	76	ALA	2.9
1	AA	1463	C	2.9
21	B0	574	C	2.9
21	B0	914	C	2.9
21	B0	2740	C	2.9
24	BB	133	LYS	2.9
1	AA	292	G	2.9
1	AA	584	G	2.9
1	AA	1401	G	2.9
21	B0	758	G	2.9
21	B0	2865	G	2.9
36	BN	78	GLU	2.9
2	AB	25	ASN	2.9
24	BB	112	GLY	2.9
5	AE	118	ILE	2.8
21	B0	842	A	2.8
21	B0	1095	A	2.8
21	B0	1534	A	2.8
21	B0	597	U	2.8
21	B0	824	U	2.8
21	B0	1914	U	2.8
21	B0	2704	U	2.8
1	AA	808	C	2.8
21	B0	2573	C	2.8
21	B0	2598	C	2.8
21	B0	2683	C	2.8
19	AS	32	LYS	2.8
20	AT	27	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
7	AG	113	GLU	2.8
4	AD	45	GLN	2.8
10	AJ	90	LEU	2.8
21	B0	1205	G	2.8
21	B0	1613	G	2.8
16	AP	19	ILE	2.8
19	AS	62	ILE	2.8
19	AS	65	ASN	2.8
21	B0	1447	U	2.8
21	B0	1705	U	2.8
21	B0	1949	A	2.8
43	BU	53	MET	2.8
1	AA	372	C	2.8
1	AA	1267	C	2.8
17	AQ	34	LYS	2.8
21	B0	114	C	2.8
21	B0	552	C	2.8
21	B0	2373	C	2.8
6	AF	55	ASP	2.8
21	B0	24	G	2.8
4	AD	65	ARG	2.8
5	AE	154	GLY	2.8
45	BW	10	GLN	2.8
53	B5	85	ILE	2.8
21	B0	43	A	2.8
21	B0	1846	A	2.8
15	AO	75	PRO	2.8
1	AA	875	C	2.8
21	B0	1415	C	2.8
21	B0	2205	C	2.8
38	BP	73	LYS	2.8
51	B3	5	LYS	2.8
4	AD	110	PHE	2.8
10	AJ	56	HIS	2.8
17	AQ	6	LEU	2.8
17	AQ	98	LEU	2.8
1	AA	646	U	2.8
6	AF	3	ARG	2.8
20	AT	93	GLU	2.8
21	B0	1929	U	2.8
21	B0	694	G	2.8
21	B0	1465	G	2.8

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Mol	Chain	Res	Type	RSRZ
27	BE	78	GLY	2.8
47	BY	28	ARG	2.8
9	AI	125	TYR	2.8
11	AK	75	TYR	2.8
21	B0	999	A	2.8
36	BN	106	TYR	2.8
45	BW	11	ALA	2.8
50	B2	25	LYS	2.8
1	AA	1249	C	2.8
1	AA	1449	C	2.8
21	B0	1702	C	2.8
21	B0	2295	C	2.8
1	AA	498	U	2.8
2	AB	130	ARG	2.8
3	AC	14	ILE	2.8
3	AC	202	ILE	2.8
30	BH	56	THR	2.8
36	BN	34	ARG	2.8
39	BQ	42	VAL	2.8
1	AA	111	G	2.8
13	AM	59	TYR	2.8
21	B0	567	G	2.8
21	B0	1125	G	2.8
21	B0	1664	G	2.8
21	B0	2336	G	2.8
20	AT	67	ALA	2.8
1	AA	334	C	2.8
6	AF	32	ASN	2.8
21	B0	214	C	2.8
21	B0	553	C	2.8
21	B0	2662	C	2.8
21	B0	2802	C	2.8
3	AC	30	ARG	2.8
4	AD	67	ILE	2.8
7	AG	155	ARG	2.8
31	BI	119	ARG	2.8
53	B5	64	VAL	2.8
1	AA	288	A	2.8
21	B0	918	A	2.8
53	B5	70	SER	2.8
1	AA	606	G	2.8
1	AA	1266	G	2.8

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Mol	Chain	Res	Type	RSRZ
4	AD	207	TYR	2.8
21	B0	704	G	2.8
21	B0	1381	G	2.8
2	AB	158	LEU	2.8
1	AA	369	C	2.8
1	AA	479	C	2.8
21	B0	113	C	2.8
21	B0	1052	C	2.8
32	BJ	48	PHE	2.8
1	AA	1510	U	2.8
21	B0	2074	U	2.8
11	AK	12	ARG	2.8
24	BB	141	ILE	2.8
32	BJ	118	VAL	2.8
23	BA	256	GLY	2.8
21	B0	1868	A	2.8
24	BB	45	GLU	2.8
37	BO	105	ALA	2.8
1	AA	213	G	2.8
21	B0	209	G	2.8
21	B0	1450	G	2.8
21	B0	1533	G	2.8
1	AA	235	C	2.8
1	AA	1479	C	2.8
21	B0	1572	C	2.8
21	B0	1788	C	2.8
50	B2	18	PHE	2.8
1	AA	957	U	2.7
21	B0	144	U	2.7
27	BE	76	VAL	2.7
43	BU	36	ILE	2.7
6	AF	2	ARG	2.7
5	AE	10	MET	2.7
2	AB	133	LYS	2.7
48	BZ	26	THR	2.7
1	AA	317	G	2.7
1	AA	628	G	2.7
8	AH	31	PHE	2.7
21	B0	746	G	2.7
21	B0	1331	G	2.7
21	B0	1818	G	2.7
21	B0	1912	G	2.7

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Mol	Chain	Res	Type	RSRZ
21	B0	2466	G	2.7
21	B0	2604	G	2.7
21	B0	2707	G	2.7
1	AA	175	C	2.7
1	AA	924	C	2.7
21	B0	324	C	2.7
21	B0	2565	C	2.7
4	AD	153	ARG	2.7
18	AR	42	ARG	2.7
23	BA	48	ARG	2.7
38	BP	82	ARG	2.7
51	B3	4	MET	2.7
12	AL	23	LYS	2.7
17	AQ	80	GLY	2.7
34	BL	51	LEU	2.7
21	B0	2012	A	2.7
37	BO	45	TYR	2.7
46	BX	39	ALA	2.7
16	AP	82	GLN	2.7
19	AS	64	GLU	2.7
31	BI	60	PRO	2.7
21	B0	135	U	2.7
30	BH	112	THR	2.7
1	AA	775	G	2.7
1	AA	818	G	2.7
21	B0	1636	G	2.7
21	B0	1854	G	2.7
21	B0	3102	G	2.7
21	B0	2399	C	2.7
30	BH	127	ILE	2.7
35	BM	7	ILE	2.7
40	BR	6	ILE	2.7
3	AC	119	ARG	2.7
27	BE	44	ARG	2.7
4	AD	69	GLY	2.7
23	BA	55	GLY	2.7
3	AC	187	ALA	2.7
21	B0	360	A	2.7
21	B0	1988	A	2.7
9	AI	38	GLN	2.7
13	AM	69	GLU	2.7
8	AH	100	ILE	2.7

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Mol	Chain	Res	Type	RSRZ
1	AA	855	G	2.7
4	AD	132	ARG	2.7
20	AT	14	LYS	2.7
21	B0	805	G	2.7
21	B0	1822	C	2.7
21	B0	1882	G	2.7
23	BA	224	SER	2.7
53	B5	173	ASP	2.7
37	BO	83	LEU	2.7
38	BP	8	GLY	2.7
53	B5	25	ASN	2.7
1	AA	1436	U	2.7
4	AD	106	TYR	2.7
21	B0	1782	A	2.7
21	B0	2455	A	2.7
21	B0	2568	A	2.7
21	B0	2798	A	2.7
49	B1	33	ALA	2.7
10	AJ	75	ILE	2.7
12	AL	16	GLU	2.7
32	BJ	38	LYS	2.7
37	BO	11	ARG	2.7
51	B3	19	THR	2.7
1	AA	124	G	2.7
21	B0	338	G	2.7
21	B0	1866	G	2.7
21	B0	2797	G	2.7
22	B9	11	G	2.7
17	AQ	33	GLY	2.7
25	BC	80	GLY	2.7
1	AA	1380	U	2.7
21	B0	1537	U	2.7
21	B0	2004	U	2.7
1	AA	482	A	2.7
53	B5	168	PHE	2.7
12	AL	48	PRO	2.7
27	BE	136	ILE	2.7
3	AC	88	ARG	2.7
24	BB	150	VAL	2.7
30	BH	162	LYS	2.7
39	BQ	118	LYS	2.7
21	B0	185	C	2.7

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Mol	Chain	Res	Type	RSRZ
21	B0	241	C	2.7
21	B0	2518	C	2.7
1	AA	144	G	2.7
2	AB	233	SER	2.7
16	AP	11	SER	2.7
21	B0	337	G	2.7
21	B0	1439	G	2.7
21	B0	494	A	2.7
21	B0	2306	A	2.7
2	AB	137	ARG	2.7
5	AE	69	VAL	2.7
7	AG	63	LYS	2.7
24	BB	111	LYS	2.7
30	BH	98	LYS	2.7
6	AF	31	GLU	2.7
51	B3	32	GLN	2.7
52	B4	36	GLN	2.7
21	B0	78	C	2.7
21	B0	1230	C	2.7
21	B0	2233	C	2.7
21	B0	2254	C	2.7
1	AA	670	G	2.7
4	AD	23	GLY	2.7
21	B0	1042	G	2.7
21	B0	1427	G	2.7
21	B0	3159	G	2.7
21	B0	2196	U	2.7
21	B0	2582	G	2.7
21	B0	2651	U	2.7
25	BC	65	GLY	2.7
36	BN	74	GLY	2.7
3	AC	100	ALA	2.6
16	AP	68	ASP	2.6
1	AA	632	A	2.6
4	AD	184	LYS	2.6
5	AE	24	ARG	2.6
32	BJ	139	ARG	2.6
5	AE	123	LEU	2.6
8	AH	99	GLU	2.6
21	B0	1745	C	2.6
21	B0	2440	C	2.6
1	AA	324	G	2.6

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Mol	Chain	Res	Type	RSRZ
21	B0	319	G	2.6
21	B0	633	G	2.6
21	B0	1338	G	2.6
21	B0	1498	G	2.6
21	B0	3193	G	2.6
21	B0	2555	G	2.6
3	AC	134	ILE	2.6
1	AA	1286	A	2.6
17	AQ	100	LYS	2.6
21	B0	52	A	2.6
7	AG	114	ARG	2.6
1	AA	1317	C	2.6
21	B0	635	C	2.6
1	AA	480	U	2.6
21	B0	839	U	2.6
12	AL	17	LYS	2.6
20	AT	106	ALA	2.6
21	B0	192	G	2.6
21	B0	215	G	2.6
21	B0	1184	G	2.6
21	B0	1245	G	2.6
21	B0	1638	G	2.6
37	BO	29	SER	2.6
5	AE	100	VAL	2.6
8	AH	41	ARG	2.6
8	AH	50	ARG	2.6
21	B0	218	A	2.6
21	B0	2339	A	2.6
46	BX	20	VAL	2.6
1	AA	619	U	2.6
1	AA	850	U	2.6
1	AA	950	U	2.6
9	AI	29	ASN	2.6
13	AM	52	GLU	2.6
21	B0	430	C	2.6
21	B0	947	C	2.6
26	BD	140	GLU	2.6
27	BE	142	GLY	2.6
34	BL	107	GLY	2.6
32	BJ	129	ALA	2.6
36	BN	114	ALA	2.6
47	BY	8	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
21	B0	53	G	2.6
21	B0	2697	G	2.6
1	AA	722	A	2.6
4	AD	139	ARG	2.6
9	AI	114	TYR	2.6
21	B0	2372	A	2.6
39	BQ	35	PRO	2.6
48	BZ	22	HIS	2.6
21	B0	293	U	2.6
21	B0	2594	U	2.6
20	AT	18	GLN	2.6
26	BD	3	GLN	2.6
30	BH	118	ALA	2.6
42	BT	33	ALA	2.6
48	BZ	2	ALA	2.6
53	B5	67	VAL	2.6
17	AQ	82	MET	2.6
1	AA	86	G	2.6
1	AA	595	G	2.6
1	AA	1017	G	2.6
5	AE	16	THR	2.6
21	B0	790	A	2.6
1	AA	833	U	2.6
13	AM	64	TRP	2.6
21	B0	519	C	2.6
6	AF	16	GLN	2.6
20	AT	65	LYS	2.6
33	BK	116	LYS	2.6
38	BP	95	ILE	2.6
4	AD	176	LEU	2.6
42	BT	51	LEU	2.6
52	B4	16	VAL	2.6
52	B4	22	ARG	2.6
21	B0	551	A	2.6
21	B0	2684	A	2.6
1	AA	331	G	2.6
1	AA	375	U	2.6
10	AJ	77	PRO	2.6
21	B0	717	G	2.6
21	B0	1684	G	2.6
21	B0	1814	G	2.6
21	B0	2772	U	2.6

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Mol	Chain	Res	Type	RSRZ
37	BO	27	SER	2.6
42	BT	91	PRO	2.6
1	AA	433	C	2.6
21	B0	226	C	2.6
21	B0	2047	C	2.6
21	B0	3136	C	2.6
21	B0	2340	C	2.6
21	B0	2444	C	2.6
21	B0	2722	C	2.6
32	BJ	89	ASP	2.6
37	BO	111	ASP	2.6
5	AE	111	GLU	2.6
43	BU	75	GLY	2.6
51	B3	20	GLY	2.6
4	AD	170	VAL	2.6
15	AO	85	LEU	2.6
5	AE	146	ALA	2.6
36	BN	46	ARG	2.6
46	BX	47	VAL	2.6
1	AA	864	A	2.6
1	AA	1251	A	2.6
21	B0	1278	A	2.6
21	B0	1457	A	2.6
21	B0	1935	A	2.6
21	B0	3169	A	2.6
21	B0	2288	A	2.6
1	AA	1494	G	2.6
2	AB	131	PRO	2.6
3	AC	73	PRO	2.6
21	B0	2597	G	2.6
12	AL	80	HIS	2.5
17	AQ	14	LYS	2.5
36	BN	47	SER	2.5
21	B0	1111	C	2.5
21	B0	1836	C	2.5
21	B0	1853	C	2.5
21	B0	1962	C	2.5
9	AI	99	LEU	2.5
25	BC	124	ASP	2.5
32	BJ	114	ILE	2.5
9	AI	108	VAL	2.5
1	AA	129	U	2.5

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Mol	Chain	Res	Type	RSRZ
21	B0	2490	U	2.5
21	B0	2371	A	2.5
21	B0	2614	A	2.5
12	AL	125	PRO	2.5
19	AS	42	PRO	2.5
29	BG	73	PRO	2.5
1	AA	587	G	2.5
21	B0	392	G	2.5
21	B0	3190	G	2.5
21	B0	2739	G	2.5
14	AN	61	TRP	2.5
25	BC	14	THR	2.5
37	BO	77	SER	2.5
50	B2	45	SER	2.5
1	AA	47	C	2.5
1	AA	169	C	2.5
21	B0	1003	C	2.5
21	B0	1264	C	2.5
5	AE	81	GLU	2.5
16	AP	56	ALA	2.5
23	BA	99	ASP	2.5
23	BA	164	GLN	2.5
29	BG	123	ALA	2.5
38	BP	1	MET	2.5
51	B3	61	MET	2.5
21	B0	656	U	2.5
21	B0	1286	U	2.5
21	B0	2534	U	2.5
21	B0	248	A	2.5
21	B0	709	A	2.5
21	B0	1492	A	2.5
21	B0	2220	A	2.5
24	BB	37	LYS	2.5
27	BE	101	LYS	2.5
1	AA	11	G	2.5
1	AA	69	G	2.5
8	AH	138	TRP	2.5
21	B0	191	G	2.5
21	B0	361	G	2.5
21	B0	754	G	2.5
21	B0	1827	G	2.5
21	B0	1879	G	2.5

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Mol	Chain	Res	Type	RSRZ
21	B0	2567	G	2.5
27	BE	169	ILE	2.5
4	AD	6	GLY	2.5
21	B0	1006	C	2.5
30	BH	52	GLY	2.5
34	BL	108	VAL	2.5
39	BQ	39	ARG	2.5
48	BZ	23	HIS	2.5
14	AN	30	ALA	2.5
14	AN	52	GLN	2.5
15	AO	73	GLU	2.5
21	B0	2236	U	2.5
21	B0	2693	U	2.5
9	AI	88	TYR	2.5
25	BC	10	ASN	2.5
42	BT	26	LYS	2.5
6	AF	45	LEU	2.5
23	BA	215	LEU	2.5
27	BE	98	LEU	2.5
1	AA	385	C	2.5
5	AE	67	VAL	2.5
21	B0	948	C	2.5
21	B0	2232	G	2.5
4	AD	99	SER	2.5
5	AE	78	HIS	2.5
25	BC	122	GLY	2.5
21	B0	1247	U	2.5
11	AK	78	GLN	2.5
53	B5	31	GLU	2.5
4	AD	54	TYR	2.5
29	BG	143	ASN	2.5
36	BN	123	ARG	2.5
42	BT	56	VAL	2.5
1	AA	772	U	2.5
1	AA	1382	C	2.5
21	B0	115	G	2.5
21	B0	572	G	2.5
21	B0	1064	C	2.5
17	AQ	7	THR	2.5
21	B0	2285	U	2.5
19	AS	38	SER	2.5
1	AA	509	A	2.5

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Mol	Chain	Res	Type	RSRZ
7	AG	151	TYR	2.5
20	AT	62	LEU	2.5
21	B0	1335	A	2.5
13	AM	40	ASN	2.5
30	BH	125	ARG	2.5
22	B9	16	U	2.5
1	AA	989	C	2.5
21	B0	705	C	2.5
21	B0	1687	C	2.5
21	B0	2462	C	2.5
3	AC	65	ALA	2.5
21	B0	588	G	2.5
21	B0	849	G	2.5
21	B0	1035	G	2.5
29	BG	26	ALA	2.5
31	BI	59	ALA	2.5
21	B0	3131	A	2.5
6	AF	70	ASP	2.5
8	AH	92	ARG	2.5
16	AP	20	VAL	2.5
21	B0	1482	U	2.5
2	AB	38	GLY	2.5
9	AI	57	GLY	2.5
38	BP	64	GLY	2.5
38	BP	97	GLY	2.5
43	BU	34	GLY	2.5
1	AA	656	C	2.5
1	AA	1366	C	2.5
3	AC	189	ALA	2.5
21	B0	850	C	2.5
22	B9	39	C	2.5
28	BF	48	ALA	2.5
1	AA	424	G	2.5
1	AA	616	G	2.5
1	AA	1368	G	2.5
21	B0	658	G	2.5
21	B0	1783	G	2.5
21	B0	1992	G	2.5
21	B0	2035	G	2.5
21	B0	2293	G	2.5
38	BP	12	TYR	2.4
1	AA	969	A	2.4

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Mol	Chain	Res	Type	RSRZ
21	B0	1179	A	2.4
21	B0	2013	A	2.4
47	BY	15	ILE	2.4
1	AA	1341	U	2.4
5	AE	66	MET	2.4
21	B0	2011	U	2.4
22	B9	24	U	2.4
38	BP	81	ARG	2.4
1	AA	645	C	2.4
3	AC	181	ASN	2.4
4	AD	182	LYS	2.4
26	BD	49	ALA	2.4
21	B0	363	G	2.4
21	B0	438	G	2.4
21	B0	1831	G	2.4
21	B0	3100	G	2.4
37	BO	72	HIS	2.4
30	BH	75	ILE	2.4
7	AG	129	GLU	2.4
21	B0	1287	A	2.4
21	B0	1583	A	2.4
21	B0	1634	A	2.4
21	B0	2556	A	2.4
7	AG	75	VAL	2.4
13	AM	41	PRO	2.4
21	B0	685	U	2.4
21	B0	1019	U	2.4
21	B0	1481	U	2.4
42	BT	92	VAL	2.4
53	B5	131	ARG	2.4
8	AH	116	LYS	2.4
9	AI	39	GLY	2.4
53	B5	44	GLY	2.4
1	AA	400	C	2.4
3	AC	168	ALA	2.4
13	AM	123	ALA	2.4
21	B0	473	C	2.4
21	B0	1418	C	2.4
21	B0	1930	C	2.4
21	B0	3179	C	2.4
21	B0	2646	C	2.4
33	BK	41	ALA	2.4

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Mol	Chain	Res	Type	RSRZ
36	BN	87	LEU	2.4
42	BT	3	LEU	2.4
5	AE	76	ILE	2.4
21	B0	659	G	2.4
21	B0	682	G	2.4
13	AM	8	GLU	2.4
21	B0	294	U	2.4
21	B0	461	A	2.4
21	B0	1688	U	2.4
51	B3	64	ARG	2.4
2	AB	79	ASP	2.4
4	AD	109	GLY	2.4
5	AE	114	GLY	2.4
31	BI	39	GLY	2.4
1	AA	237	C	2.4
1	AA	1115	C	2.4
4	AD	94	LEU	2.4
11	AK	19	ALA	2.4
25	BC	95	LEU	2.4
34	BL	60	LEU	2.4
50	B2	46	ASP	2.4
21	B0	1727	C	2.4
11	AK	117	ASN	2.4
23	BA	54	ILE	2.4
1	AA	239	U	2.4
1	AA	611	A	2.4
1	AA	774	G	2.4
1	AA	1204	A	2.4
21	B0	753	U	2.4
21	B0	1629	G	2.4
21	B0	1713	G	2.4
5	AE	150	ARG	2.4
21	B0	2749	A	2.4
23	BA	259	THR	2.4
32	BJ	71	THR	2.4
51	B3	30	ARG	2.4
27	BE	138	LYS	2.4
12	AL	29	GLY	2.4
12	AL	74	GLY	2.4
5	AE	21	ALA	2.4
9	AI	122	ALA	2.4
21	B0	354	C	2.4

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Mol	Chain	Res	Type	RSRZ
21	B0	799	C	2.4
21	B0	1063	C	2.4
21	B0	1966	C	2.4
21	B0	2454	C	2.4
21	B0	2765	C	2.4
21	B0	1695	U	2.4
1	AA	627	G	2.4
1	AA	1340	A	2.4
15	AO	35	ARG	2.4
21	B0	957	G	2.4
21	B0	2393	G	2.4
21	B0	2699	G	2.4
32	BJ	40	ARG	2.4
42	BT	74	ARG	2.4
7	AG	53	LYS	2.4
11	AK	71	LYS	2.4
11	AK	87	THR	2.4
13	AM	10	PRO	2.4
15	AO	4	THR	2.4
5	AE	113	ALA	2.4
1	AA	586	C	2.4
10	AJ	98	ILE	2.4
13	AM	22	ILE	2.4
21	B0	1825	C	2.4
21	B0	1835	C	2.4
21	B0	3181	C	2.4
21	B0	2506	C	2.4
21	B0	2483	U	2.4
19	AS	60	VAL	2.4
21	B0	387	A	2.4
21	B0	1746	A	2.4
1	AA	377	G	2.4
1	AA	1469	G	2.4
3	AC	111	LEU	2.4
7	AG	22	LEU	2.4
22	B9	121	G	2.4
34	BL	44	LEU	2.4
51	B3	18	GLY	2.4
51	B3	28	GLY	2.4
13	AM	75	ALA	2.4
32	BJ	43	ALA	2.4
1	AA	1478	C	2.4

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Mol	Chain	Res	Type	RSRZ
21	B0	981	C	2.4
21	B0	2227	C	2.4
24	BB	175	ILE	2.4
7	AG	87	VAL	2.4
9	AI	75	ASP	2.4
16	AP	42	ARG	2.4
25	BC	74	VAL	2.4
28	BF	51	ARG	2.4
19	AS	70	LYS	2.4
6	AF	98	LEU	2.4
13	AM	109	THR	2.3
17	AQ	27	PHE	2.3
30	BH	109	GLY	2.3
26	BD	53	ALA	2.3
28	BF	41	THR	2.3
1	AA	271	C	2.3
4	AD	71	SER	2.3
7	AG	77	SER	2.3
21	B0	679	C	2.3
21	B0	884	C	2.3
21	B0	1703	C	2.3
21	B0	2000	U	2.3
21	B0	3150	C	2.3
21	B0	2870	C	2.3
16	AP	71	ARG	2.3
23	BA	52	ARG	2.3
27	BE	43	VAL	2.3
5	AE	36	ASP	2.3
7	AG	44	TYR	2.3
17	AQ	40	LYS	2.3
20	AT	74	LYS	2.3
1	AA	448	A	2.3
15	AO	67	LEU	2.3
1	AA	199	G	2.3
1	AA	830	G	2.3
2	AB	35	GLU	2.3
4	AD	200	GLU	2.3
13	AM	95	GLY	2.3
21	B0	38	G	2.3
21	B0	811	G	2.3
21	B0	2020	G	2.3
21	B0	2066	G	2.3

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Mol	Chain	Res	Type	RSRZ
8	AH	110	ALA	2.3
10	AJ	97	GLU	2.3
11	AK	108	ILE	2.3
18	AR	83	GLU	2.3
32	BJ	31	GLY	2.3
1	AA	12	U	2.3
8	AH	24	THR	2.3
21	B0	394	U	2.3
1	AA	1342	C	2.3
21	B0	749	C	2.3
21	B0	975	C	2.3
21	B0	1786	C	2.3
21	B0	2842	C	2.3
22	B9	13	C	2.3
22	B9	55	C	2.3
25	BC	118	VAL	2.3
27	BE	121	VAL	2.3
51	B3	21	LYS	2.3
53	B5	206	LYS	2.3
32	BJ	60	LEU	2.3
38	BP	35	LEU	2.3
21	B0	747	A	2.3
51	B3	39	ASP	2.3
1	AA	318	G	2.3
1	AA	457	G	2.3
1	AA	1013	G	2.3
21	B0	776	G	2.3
21	B0	798	G	2.3
21	B0	1277	G	2.3
21	B0	1637	U	2.3
21	B0	1645	U	2.3
21	B0	1767	G	2.3
21	B0	2385	U	2.3
53	B5	106	GLN	2.3
17	AQ	25	ARG	2.3
17	AQ	77	VAL	2.3
21	B0	863	C	2.3
21	B0	1891	C	2.3
26	BD	142	THR	2.3
26	BD	26	MET	2.3
21	B0	587	A	2.3
21	B0	1845	A	2.3

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Mol	Chain	Res	Type	RSRZ
21	B0	2402	U	2.3
26	BD	93	GLY	2.3
7	AG	97	GLN	2.3
9	AI	13	ALA	2.3
1	AA	138	G	2.3
1	AA	183	G	2.3
1	AA	371	G	2.3
21	B0	90	G	2.3
21	B0	1118	G	2.3
36	BN	124	VAL	2.3
1	AA	77	C	2.3
1	AA	562	C	2.3
1	AA	1153	C	2.3
3	AC	54	ARG	2.3
21	B0	316	C	2.3
21	B0	1506	C	2.3
21	B0	1876	C	2.3
37	BO	44	THR	2.3
47	BY	27	THR	2.3
20	AT	70	SER	2.3
52	B4	28	SER	2.3
21	B0	425	A	2.3
21	B0	1821	A	2.3
21	B0	2551	A	2.3
1	AA	560	U	2.3
21	B0	782	U	2.3
21	B0	860	U	2.3
21	B0	1325	U	2.3
21	B0	2575	U	2.3
5	AE	104	ALA	2.3
32	BJ	117	ALA	2.3
1	AA	146	G	2.3
1	AA	597	G	2.3
1	AA	649	G	2.3
1	AA	851	G	2.3
1	AA	1486	G	2.3
13	AM	88	ARG	2.3
29	BG	36	GLU	2.3
21	B0	858	G	2.3
21	B0	2283	G	2.3
1	AA	422	C	2.3
1	AA	1400	C	2.3

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Mol	Chain	Res	Type	RSRZ
21	B0	759	C	2.3
22	B9	97	C	2.3
6	AF	81	ILE	2.3
21	B0	453	U	2.3
21	B0	666	U	2.3
21	B0	883	A	2.3
21	B0	2045	A	2.3
21	B0	2391	A	2.3
21	B0	2579	A	2.3
17	AQ	103	GLY	2.3
32	BJ	23	PRO	2.3
32	BJ	30	ALA	2.3
34	BL	18	VAL	2.3
52	B4	17	VAL	2.3
24	BB	114	GLN	2.3
43	BU	14	ARG	2.3
51	B3	13	ARG	2.3
19	AS	17	GLU	2.3
1	AA	290	C	2.3
1	AA	378	G	2.3
1	AA	492	G	2.3
1	AA	1197	G	2.3
21	B0	17	G	2.3
21	B0	107	G	2.3
21	B0	951	G	2.3
21	B0	1142	G	2.3
21	B0	1204	G	2.3
21	B0	1328	C	2.3
21	B0	1330	G	2.3
21	B0	1414	G	2.3
21	B0	2554	C	2.3
21	B0	2824	C	2.3
1	AA	93	U	2.3
9	AI	27	THR	2.3
1	AA	1111	A	2.3
21	B0	9	U	2.3
21	B0	1618	U	2.3
24	BB	113	THR	2.3
10	AJ	35	SER	2.3
14	AN	32	SER	2.3
21	B0	2738	A	2.3
21	B0	2795	A	2.3

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Mol	Chain	Res	Type	RSRZ
20	AT	34	LYS	2.3
47	BY	3	LYS	2.3
7	AG	6	ARG	2.3
9	AI	128	ARG	2.3
25	BC	189	ASP	2.3
29	BG	50	ASP	2.3
31	BI	122	ARG	2.3
50	B2	21	ARG	2.3
4	AD	145	GLU	2.2
21	B0	358	C	2.2
21	B0	596	C	2.2
21	B0	926	C	2.2
21	B0	1308	C	2.2
1	AA	145	G	2.2
1	AA	530	G	2.2
1	AA	1053	G	2.2
21	B0	141	G	2.2
21	B0	454	G	2.2
1	AA	71	U	2.2
21	B0	339	U	2.2
21	B0	1454	U	2.2
29	BG	116	ASN	2.2
53	B5	110	PHE	2.2
21	B0	2034	A	2.2
3	AC	154	SER	2.2
8	AH	56	LYS	2.2
20	AT	61	SER	2.2
48	BZ	14	SER	2.2
9	AI	85	LEU	2.2
30	BH	126	VAL	2.2
13	AM	3	ARG	2.2
1	AA	328	C	2.2
21	B0	463	C	2.2
21	B0	1892	C	2.2
37	BO	104	GLU	2.2
45	BW	39	GLN	2.2
1	AA	1002	G	2.2
21	B0	44	G	2.2
21	B0	1986	G	2.2
21	B0	2527	G	2.2
22	B9	9	G	2.2
43	BU	17	ASN	2.2

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Mol	Chain	Res	Type	RSRZ
21	B0	2618	A	2.2
19	AS	77	THR	2.2
29	BG	38	THR	2.2
33	BK	99	LYS	2.2
38	BP	75	LYS	2.2
38	BP	33	VAL	2.2
38	BP	52	GLY	2.2
14	AN	48	ALA	2.2
42	BT	5	ALA	2.2
15	AO	9	GLN	2.2
21	B0	2249	U	2.2
21	B0	2709	C	2.2
27	BE	167	GLU	2.2
38	BP	6	GLN	2.2
1	AA	305	G	2.2
1	AA	760	G	2.2
1	AA	1385	G	2.2
21	B0	932	G	2.2
21	B0	2006	G	2.2
21	B0	2214	G	2.2
4	AD	78	LEU	2.2
2	AB	26	PRO	2.2
3	AC	114	PRO	2.2
5	AE	70	PRO	2.2
13	AM	85	GLY	2.2
30	BH	99	VAL	2.2
1	AA	960	U	2.2
21	B0	187	U	2.2
21	B0	1978	U	2.2
22	B9	95	U	2.2
21	B0	2595	C	2.2
34	BL	47	PHE	2.2
53	B5	108	GLU	2.2
7	AG	124	LEU	2.2
17	AQ	32	TYR	2.2
43	BU	24	LYS	2.2
1	AA	26	A	2.2
1	AA	671	G	2.2
1	AA	790	A	2.2
1	AA	1392	G	2.2
4	AD	143	GLY	2.2
23	BA	100	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
25	BC	5	ASN	2.2
25	BC	6	VAL	2.2
35	BM	8	ARG	2.2
1	AA	788	U	2.2
21	B0	857	U	2.2
21	B0	2863	U	2.2
31	BI	128	SER	2.2
1	AA	442	C	2.2
1	AA	643	C	2.2
4	AD	96	LEU	2.2
29	BG	102	ASP	2.2
21	B0	848	A	2.2
21	B0	1416	A	2.2
1	AA	458	G	2.2
2	AB	209	ARG	2.2
5	AE	74	GLY	2.2
13	AM	38	GLY	2.2
21	B0	225	G	2.2
21	B0	2282	G	2.2
21	B0	2576	G	2.2
25	BC	162	ARG	2.2
35	BM	9	ARG	2.2
3	AC	108	ASN	2.2
19	AS	76	PRO	2.2
34	BL	21	ALA	2.2
1	AA	214	U	2.2
19	AS	33	THR	2.2
21	B0	621	U	2.2
53	B5	207	THR	2.2
18	AR	49	LYS	2.2
18	AR	68	LYS	2.2
34	BL	9	LYS	2.2
46	BX	23	LEU	2.2
3	AC	37	GLN	2.2
13	AM	101	GLN	2.2
18	AR	62	GLU	2.2
1	AA	70	A	2.2
1	AA	120	A	2.2
1	AA	901	A	2.2
2	AB	24	TRP	2.2
3	AC	38	ARG	2.2
4	AD	165	MET	2.2

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Mol	Chain	Res	Type	RSRZ
21	B0	89	A	2.2
21	B0	488	A	2.2
21	B0	1441	A	2.2
21	B0	2031	A	2.2
21	B0	2065	A	2.2
37	BO	110	VAL	2.2
29	BG	83	GLY	2.2
1	AA	1009	G	2.2
1	AA	1154	G	2.2
1	AA	1471	G	2.2
20	AT	98	PRO	2.2
21	B0	1251	G	2.2
21	B0	2297	G	2.2
21	B0	2317	G	2.2
1	AA	672	U	2.2
3	AC	97	LYS	2.2
4	AD	5	ILE	2.2
27	BE	30	LYS	2.2
8	AH	29	SER	2.2
3	AC	29	TYR	2.2
9	AI	31	GLN	2.2
7	AG	79	ARG	2.2
13	AM	57	ARG	2.2
17	AQ	75	ARG	2.2
19	AS	3	ARG	2.2
21	B0	1349	A	2.2
21	B0	1667	A	2.2
21	B0	2345	A	2.2
3	AC	200	ALA	2.1
21	B0	412	U	2.1
21	B0	2335	U	2.1
25	BC	160	ALA	2.1
9	AI	23	ASN	2.1
11	AK	21	ILE	2.1
11	AK	95	ILE	2.1
30	BH	119	LEU	2.1
3	AC	191	THR	2.1
12	AL	38	THR	2.1
1	AA	744	C	2.1
1	AA	1431	C	2.1
21	B0	1178	C	2.1
21	B0	1219	C	2.1

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Mol	Chain	Res	Type	RSRZ
21	B0	1758	C	2.1
21	B0	1924	C	2.1
19	AS	9	VAL	2.1
32	BJ	133	VAL	2.1
21	B0	205	A	2.1
21	B0	1753	A	2.1
21	B0	2043	A	2.1
21	B0	2318	U	2.1
21	B0	2356	A	2.1
22	B9	27	A	2.1
42	BT	57	GLU	2.1
32	BJ	33	GLY	2.1
27	BE	46	ASP	2.1
53	B5	45	ASP	2.1
1	AA	769	G	2.1
1	AA	854	G	2.1
1	AA	876	G	2.1
21	B0	1609	G	2.1
22	B9	117	G	2.1
19	AS	53	ASN	2.1
37	BO	87	ASN	2.1
1	AA	1114	C	2.1
1	AA	1362	C	2.1
21	B0	1319	C	2.1
21	B0	2715	C	2.1
23	BA	201	HIS	2.1
39	BQ	44	VAL	2.1
25	BC	39	ARG	2.1
34	BL	17	ARG	2.1
52	B4	6	SER	2.1
1	AA	1167	A	2.1
7	AG	64	GLN	2.1
21	B0	1140	A	2.1
21	B0	1426	U	2.1
21	B0	3158	A	2.1
21	B0	2545	A	2.1
2	AB	13	ALA	2.1
10	AJ	57	LYS	2.1
24	BB	126	PRO	2.1
1	AA	484	G	2.1
1	AA	625	G	2.1
21	B0	1890	G	2.1

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Mol	Chain	Res	Type	RSRZ
21	B0	2258	G	2.1
21	B0	2688	G	2.1
13	AM	43	THR	2.1
21	B0	2517	C	2.1
21	B0	2519	C	2.1
53	B5	113	ASN	2.1
43	BU	55	ARG	2.1
1	AA	470	U	2.1
1	AA	486	U	2.1
21	B0	206	U	2.1
21	B0	1999	U	2.1
8	AH	87	SER	2.1
21	B0	1022	A	2.1
21	B0	1167	A	2.1
21	B0	1839	A	2.1
25	BC	192	ALA	2.1
30	BH	108	GLY	2.1
43	BU	54	GLY	2.1
53	B5	29	SER	2.1
2	AB	119	GLU	2.1
8	AH	132	GLU	2.1
2	AB	194	PRO	2.1
10	AJ	11	PHE	2.1
29	BG	98	LYS	2.1
21	B0	1254	G	2.1
21	B0	3141	G	2.1
21	B0	2514	G	2.1
21	B0	2546	G	2.1
11	AK	82	VAL	2.1
21	B0	1748	U	2.1
21	B0	1989	C	2.1
21	B0	2262	C	2.1
21	B0	2264	C	2.1
36	BN	108	ARG	2.1
5	AE	57	LYS	2.1
9	AI	22	GLY	2.1
21	B0	657	A	2.1
21	B0	1372	A	2.1
21	B0	1408	A	2.1
21	B0	1632	A	2.1
21	B0	2331	A	2.1
21	B0	2755	A	2.1

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Mol	Chain	Res	Type	RSRZ
25	BC	191	ALA	2.1
39	BQ	119	LYS	2.1
4	AD	60	GLU	2.1
1	AA	1273	G	2.1
4	AD	112	VAL	2.1
16	AP	28	ARG	2.1
21	B0	946	U	2.1
21	B0	960	U	2.1
21	B0	1041	G	2.1
21	B0	1377	G	2.1
21	B0	2322	U	2.1
51	B3	42	ARG	2.1
1	AA	503	C	2.1
21	B0	1531	C	2.1
45	BW	41	HIS	2.1
5	AE	9	LYS	2.1
36	BN	113	LYS	2.1
53	B5	211	LYS	2.1
1	AA	487	A	2.1
21	B0	1657	A	2.1
23	BA	77	ALA	2.1
7	AG	51	GLN	2.1
25	BC	4	ILE	2.1
40	BR	8	GLN	2.1
40	BR	69	ILE	2.1
45	BW	52	GLN	2.1
7	AG	103	TRP	2.1
1	AA	1196	U	2.1
5	AE	143	ARG	2.1
21	B0	1676	U	2.1
21	B0	1689	U	2.1
33	BK	38	MET	2.1
1	AA	202	G	2.1
1	AA	332	G	2.1
1	AA	594	G	2.1
1	AA	825	G	2.1
1	AA	1482	G	2.1
4	AD	53	ASP	2.1
21	B0	423	G	2.1
21	B0	474	G	2.1
21	B0	660	G	2.1
21	B0	1220	G	2.1

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Mol	Chain	Res	Type	RSRZ
21	B0	2528	G	2.1
1	AA	443	C	2.1
21	B0	434	C	2.1
21	B0	537	C	2.1
21	B0	1862	C	2.1
2	AB	147	LYS	2.1
32	BJ	72	TYR	2.1
1	AA	321	A	2.1
3	AC	77	ILE	2.1
4	AD	79	PHE	2.1
9	AI	61	ALA	2.1
21	B0	1603	A	2.1
23	BA	204	ILE	2.1
27	BE	124	ALA	2.1
32	BJ	125	ALA	2.1
3	AC	162	GLN	2.1
13	AM	105	THR	2.1
6	AF	93	SER	2.1
1	AA	531	U	2.1
34	BL	110	MET	2.0
1	AA	198	G	2.0
1	AA	333	G	2.0
1	AA	682	G	2.0
1	AA	1454	G	2.0
4	AD	18	LYS	2.0
13	AM	48	LEU	2.0
21	B0	155	G	2.0
21	B0	424	G	2.0
21	B0	677	G	2.0
21	B0	684	C	2.0
21	B0	1191	G	2.0
21	B0	1476	G	2.0
21	B0	1529	C	2.0
21	B0	1721	G	2.0
21	B0	1880	G	2.0
21	B0	3137	C	2.0
21	B0	2287	G	2.0
21	B0	2532	G	2.0
22	B9	23	G	2.0
30	BH	111	LYS	2.0
1	AA	383	A	2.0
1	AA	665	A	2.0

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Mol	Chain	Res	Type	RSRZ
2	AB	113	HIS	2.0
5	AE	129	ILE	2.0
21	B0	2357	A	2.0
29	BG	140	GLY	2.0
32	BJ	22	GLY	2.0
2	AB	107	THR	2.0
9	AI	89	ASN	2.0
32	BJ	70	THR	2.0
7	AG	57	GLU	2.0
1	AA	208	U	2.0
1	AA	1020	U	2.0
8	AH	113	SER	2.0
32	BJ	140	VAL	2.0
6	AF	46	ARG	2.0
15	AO	65	ARG	2.0
24	BB	137	ARG	2.0
36	BN	121	ARG	2.0
37	BO	85	ARG	2.0
21	B0	417	C	2.0
21	B0	808	C	2.0
21	B0	864	C	2.0
21	B0	1283	C	2.0
21	B0	3192	C	2.0
21	B0	2338	C	2.0
1	AA	1174	G	2.0
17	AQ	95	TYR	2.0
21	B0	492	G	2.0
21	B0	843	G	2.0
21	B0	1317	G	2.0
21	B0	1874	G	2.0
21	B0	2052	G	2.0
21	B0	3154	G	2.0
21	B0	2392	G	2.0
1	AA	1289	A	2.0
21	B0	546	A	2.0
21	B0	1354	A	2.0
21	B0	1921	A	2.0
50	B2	36	ALA	2.0
2	AB	125	PRO	2.0
16	AP	69	THR	2.0
21	B0	366	U	2.0
21	B0	1723	U	2.0

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Mol	Chain	Res	Type	RSRZ
36	BN	48	GLN	2.0
6	AF	77	ARG	2.0
2	AB	132	LYS	2.0
4	AD	46	LYS	2.0
6	AF	79	LEU	2.0
20	AT	20	LEU	2.0
28	BF	44	LYS	2.0
1	AA	483	C	2.0
1	AA	1399	C	2.0
5	AE	89	ILE	2.0
21	B0	573	C	2.0
21	B0	2585	C	2.0
22	B9	96	C	2.0
6	AF	99	ALA	2.0
2	AB	160	ASP	2.0
21	B0	10	A	2.0
21	B0	389	G	2.0
21	B0	406	G	2.0
21	B0	720	A	2.0
21	B0	763	A	2.0
21	B0	1508	G	2.0
21	B0	1802	A	2.0
21	B0	1805	G	2.0
21	B0	1837	G	2.0
21	B0	1884	A	2.0
21	B0	2505	G	2.0
22	B9	105	G	2.0
4	AD	123	HIS	2.0
1	AA	14	U	2.0
1	AA	591	U	2.0
21	B0	1329	U	2.0
21	B0	1564	U	2.0
21	B0	1697	U	2.0
21	B0	1768	U	2.0
47	BY	29	PRO	2.0
2	AB	103	THR	2.0
7	AG	4	ARG	2.0
50	B2	6	GLN	2.0

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

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.