



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 09:24 PM GMT

PDB ID : 4V4R
Title : Crystal structure of the whole ribosomal complex.
Authors : Petry, S.; Brodersen, D.E.; Murphy IV, F.V.; Dunham, C.M.; Selmer, M.;
Tarry, M.J.; Kelley, A.C.; Ramakrishnan, V.
Deposited on : 2005-09-30
Resolution : 5.90 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
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : 1.9-1692
EDS : rb-20026688
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Refmac : 5.8.0135
CCP4 : 6.5.0
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

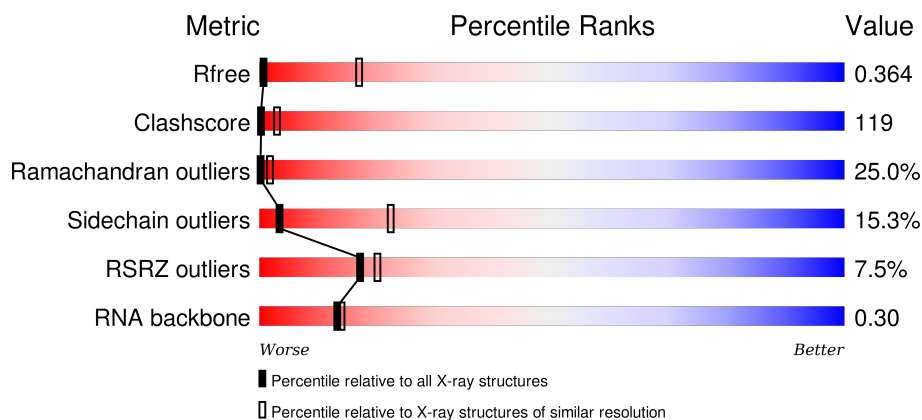
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 5.90 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}	91344	1000 (8.00-3.66)
Clashscore	102246	1048 (8.00-3.70)
Ramachandran outliers	100387	1021 (8.00-3.66)
Sidechain outliers	100360	1010 (8.00-3.64)
RSRZ outliers	91569	1015 (8.00-3.64)
RNA backbone	2183	1103 (8.70-2.80)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	1522	<div> <div>9%</div> <div>25% 42% 24% 9%</div> </div>
2	AV	76	<div> <div>7%</div> <div>17% 57% 22%</div> </div>
3	AW	76	<div> <div>18%</div> <div>30% 43% 18% 8%</div> </div>
4	AX	18	<div> <div>67%</div> <div>61% 33% 6%</div> </div>

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Mol	Chain	Length	Quality of chain
5	AB	256	
6	AC	239	
7	AD	209	
8	AE	162	
9	AF	101	
10	AG	156	
11	AH	138	
12	AI	128	
13	AJ	105	
14	AK	129	
15	AL	135	
16	AM	126	
17	AN	61	
18	AO	89	
19	AP	88	
20	AQ	105	
21	AR	88	
22	AS	93	
23	AT	106	
24	AU	27	
25	AY	354	
26	BB	123	
27	BA	2916	
28	BD	173	
29	BE	338	

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Mol	Chain	Length	Quality of chain
30	BF	246	
31	BG	176	
32	BH	177	
33	BI	149	
34	BN	145	
35	BO	122	
36	BP	164	
37	BQ	138	
38	BS	186	
39	BT	66	
40	BW	113	
41	BX	84	
42	BY	119	
43	BZ	253	
44	BR	118	
45	BU	118	
46	BV	100	
47	B2	70	
48	B3	60	
49	B0	91	
50	B4	73	
51	B5	60	
52	B6	82	
53	B7	47	
54	B8	64	

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Mol	Chain	Length	Quality of chain
55	B9	36	
56	BK	141	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	YYG	AW	37	X	-	X	-

2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 142780 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	1515	Total	C	N	O	P	0	0	0
			32551	14490	6022	10525	1514			

- Molecule 2 is a RNA chain called P-site tRNA (Phe).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AV	76	Total	C	N	O	P	0	0	0
			1622	725	293	529	75			

- Molecule 3 is a RNA chain called E-site tRNA (Phe).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AW	76	Total	C	N	O	P	0	0	0
			1638	736	294	533	75			

- Molecule 4 is a RNA chain called 5'-R(*AP*UP*GP*UP*UP*CP*UP*AP*GP*UP*AP*C
P*AP*AP*UP*AP*AP*U)-3'.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AX	17	Total	C	N	O	P	0	0	11
			136	56	19	44	17			

- Molecule 5 is a protein called 30S ribosomal protein S2.

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

- Molecule 6 is a protein called 30S ribosomal protein S3.

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

- Molecule 7 is a protein called 30S ribosomal protein S4.

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

- Molecule 8 is a protein called 30S ribosomal protein S5.

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

- Molecule 9 is a protein called 30S ribosomal protein S6.

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

- Molecule 10 is a protein called 30S ribosomal protein S7.

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

- Molecule 11 is a protein called 30S ribosomal protein S8.

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

- Molecule 12 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AI	127	Total	C	N	O		0	0	0
			1011	639	198	174				

- Molecule 13 is a protein called 30S ribosomal protein S10.

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

- Molecule 14 is a protein called 30S ribosomal protein S11.

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

- Molecule 15 is a protein called 30S ribosomal protein S12.

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

- Molecule 16 is a protein called 30S ribosomal protein S13.

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

- Molecule 17 is a protein called 30S ribosomal protein S14.

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

- Molecule 18 is a protein called 30S ribosomal protein S15.

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

- Molecule 19 is a protein called 30S ribosomal protein S16.

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

- Molecule 20 is a protein called 30S ribosomal protein S17.

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

- Molecule 21 is a protein called 30S ribosomal protein S18.

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

- Molecule 22 is a protein called 30S ribosomal protein S19.

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

- Molecule 23 is a protein called 30S ribosomal protein S20.

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

- Molecule 24 is a protein called 30S ribosomal protein Thx.

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

- Molecule 25 is a protein called Peptide chain release factor 1.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
25	AY	333	Total	C	0	0	333
			333	333			

- Molecule 26 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BB	123	Total	C	N	O	P	0	0	0
			2637	1175	488	852	122			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BB	-1	A	-	INSERTION	GB 48271

- Molecule 27 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BA	2814	Total	C	N	O	P	0	0	0
			60600	26974	11331	19482	2813			

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
BA	493	G	-	INSERTION	GB 48268

- Molecule 28 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BD	173	Total	C	N	O	S	0	0	0
			1308	820	246	236	6			

- Molecule 29 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BE	191	Total	C	N	O	S	0	0	0
			1507	940	290	273	4			

- Molecule 30 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BF	189	Total	C	N	O	S	0	0	0
			1430	872	255	302	1			

- Molecule 31 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BG	122	Total	C	N	O	S	0	0	0
			957	597	176	180	4			

- Molecule 32 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BH	164	Total	C	N	O	S	0	0	0
			1251	787	225	237	2			

- Molecule 33 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BI	148	Total	C	N	O	S	0	0	0
			1145	727	205	212	1			

- Molecule 34 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BN	117	Total	C	N	O	S	0	0	0
			917	570	164	180	3			

- Molecule 35 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BO	122	Total	C	N	O	S	0	0	0
			937	585	180	169	3			

- Molecule 36 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BP	84	Total	C	N	O	0	0	0
			639	391	109	139			

- Molecule 37 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BQ	138	Total	C	N	O	S	0	0	0
			1081	678	208	192	3			

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BS	113	Total	C	N	O	S	0	0	0
			866	536	165	164	1			

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BT	52	Total	C	N	O	S	0	0	0
			406	242	74	85	5			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
40	BW	108	Total	C	N	O	0	0	0
			860	542	169	149			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BX	76	Total	C	N	O	S	0	0	0
			602	366	102	131	3			

- Molecule 42 is a protein called 50S ribosomal protein 24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BY	110	Total	C	N	O	0	0	0
			879	531	166	182			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BZ	177	Total	C	N	O	S	0	0	0
			1360	859	238	257	6			

- Molecule 44 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BR	105	Total	C	N	O	0	0	0
			855	536	174	145			

- Molecule 45 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BU	117	Total	C	N	O	S	0	0	0
			978	608	210	159	1			

- Molecule 46 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BV	100	Total	C	N	O	S	0	0	0
			787	495	146	145	1			

- Molecule 47 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	B2	64	Total	C	N	O	S	0	0	0
			494	301	93	99	1			

- Molecule 48 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B3	60	Total	C	N	O	S	0	0	0
			477	303	91	82	1			

- Molecule 49 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B0	86	Total	C	N	O	S	0	0	0
			641	402	124	114	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B4	73	Total	C	N	O	S	0	0	0
			604	382	110	108	4			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B5	58	Total	C	N	O	S	0	0	0
			457	281	94	77	5			

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B6	53	Total	C	N	O	S	0	0	0
			431	274	80	76	1			

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	B7	46	Total	C	N	O	S	0	0	0
			383	230	91	60	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	B8	63	Total	C	N	O	S	0	0	0
			496	312	101	78	5			

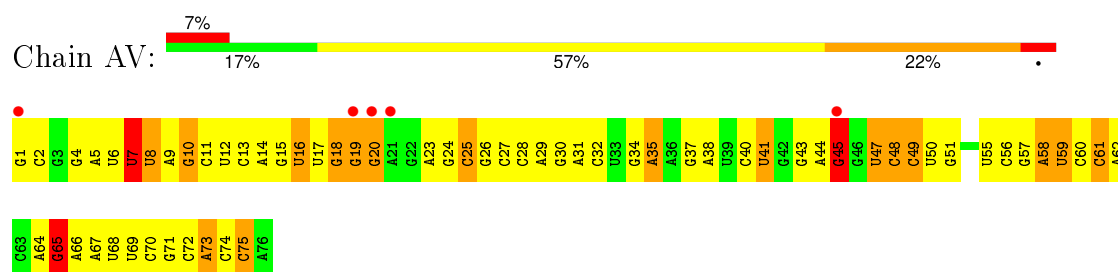
- Molecule 55 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	B9	35	Total	C	N	O	S	0	0	0
			285	172	64	45	4			

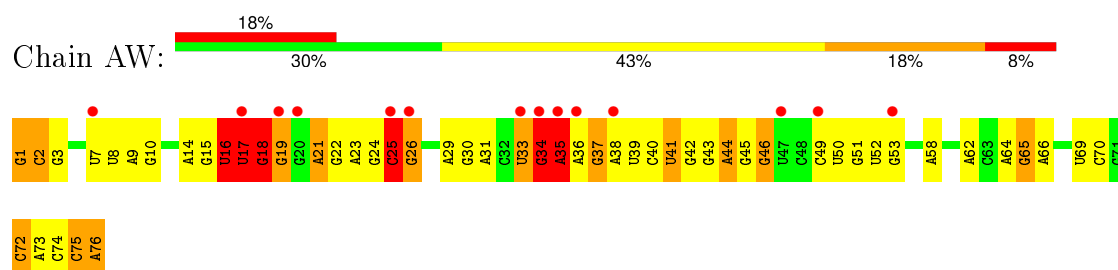
- Molecule 56 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	BK	133	Total	C	N	O	S	0	0	0
			999	642	169	182	6			

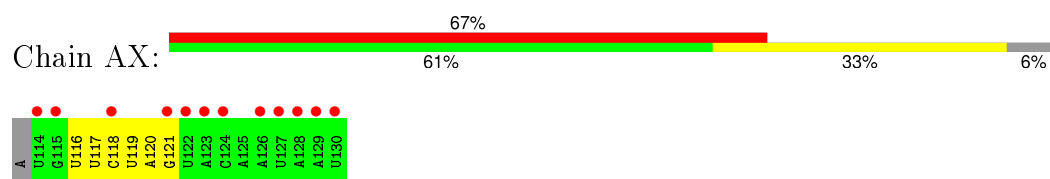
U1542	G1481	A1339	C1277	G1142	G1079	A1015	G947	G886	A814	U751	G685
C	G1401	A1340	U1278	G1143	A1080	A1016	C948	G887	A815	G752	U686
U	G1482	C1341	A1279	G1144	G1081	G1017	A949	G888	A816	A887	A687
	C1403	C1342	A1280	G1145	G1082	G1018	U950	A889	C817	G754	G688
	G1404	G1343	U1281	A1146	G1083	G1019	G951	A890	G818	G755	C689
	G1405	C1344	U1282	C1147	G1084	G1020	U952	U891	A819	G756	G690
	U1406	U1345	A1283	U1148	G1085	G1021	G953	A892	U820	U757	G691
	G1407	A1346	A1285	C1149	U1086	G1022	U956	C893	G821	G758	U692
	A1408	U1347	U1286	C1150	G1087	G1023	U957	G894	G822	G759	G693
	G1409	A1348	A1287	A1151	G1088	G1024	A958	C897	C826	G760	A694
	G1410	U1349	A1288	A1152	G1089	U1025	A959	G898	U827	G761	A695
	C1411	A1350	A1289	G1153	U1090	G1026	U960	C899	A828	G762	A696
	C1412	U1351	G1290	G1154	U1091	G1027	U961	A900	G829	G763	U697
	A1413	C1352	G1291	G1155	A1092	C1028	G962	A901	G830	G764	
	G1414	G1353	U1292	G1156	A1093	C1029	G963	A902	U831	G765	C701
	G1415	C1354	U1293	A1157	G1094	C1030	U964	G903	G832	A766	A702
	G1416	G1355	U1294	C1158	U1095	G30A	A965	G904	U833	A767	G703
	G1417	G1356	C1295	U1159	C1096	G30B	G966	U905	U834	A768	U705
	A1418	U1357	C1297	G1160	C1097	G30C	G967	G906	U835	A769	A706
	G1419	C1358	C1298	C1161	C1098	A30D	C968	A907	U836	G770	C707
	G1420	A1359	U1299	G1162	G1099	G1031	A969	A908	G771	G774	G708
	G1421	C1360	C1300	G1164	C1100	G1032	C970	A909	U839	G775	G709
	G1422	G1361	U1301	C1167	A1101	G1033	G971	C910	C840	G776	G713
	G1423	C361A	U1302	A1167	A1102	G1034	C972	C911	U841	A777	G714
	U1424	A1362	C1303	A1168	G1103	A1035	G973	C912	C846	A778	A715
	A1425	G1363	G1304	A1169	A1104	C1037	A974	A913	C849	G779	A716
	C1426	U1364	G1305	G1170	A1105	C1038	A975	A914	U850	A780	G717
	G1427	C1365	C1306	G1171	G1106	G1039	A976	A915	G851	A781	C718
	A1428	G1366	U1307	C1172	C1107	G1042	A977	A916	G852	A782	G719
	C1429	C1367	U1308	G1173	G1108	G1043	A978	G917	G853	G720	C721
	G1430	U1368	C1309	G1177	C1109	C1044	C979	A918	G854	G721	A722
	G1431	G1369	G1310	G1178	C1114	A1045	C980	A919	G855	G722	U723
	G1432	C1370	U1311	G1179	C1115	A1046	U981	C920	C856	G723	G724
	U1433	A1371	C1312	A1180	C1116	G1047	U982	C921	U857	G724	C725
	G1434	U1372	U1313	G1181	G1117	U1048	A983	A922	A859	G725	C726
	G1435	C1373	C1314	G1182	C1118	G1049	C984	A923	A860	G726	G727
	G1436	U1374	U1315	A1183	G1119	G1050	C985	C924	U863	G727	A728
	A1437	A1375	G1316	A1184	C1120	G1051	A986	G925	A864	G728	A729
	G1438	U1376	C1317	G1185	U1121	C1052	U987	C926	A865	G729	G730
	G1439	C1377	A1318	G1186	A1122	U1055	G988	G927	C866	G731	G732
	G1440	U1378	U1319	G1187	A1123	U1056	C989	G928	G795	G732	A733
	G1441	C1379	C1320	G1188	A1124	G1057	C990	C929	U870	G733	G734
	G1442	A1380	G1321	A1189	U1125	G1058	U991	C930	U871	G734	C735
	G1443	U1381	C1322	C1190	U1126	C1059	A992	C931	A872	G735	G736
	A1444	C1382	G1323	A1191	C1127	G1060	G993	C932	A873	G736	A737
	G1445	U1383	A1324	G1192	C1128	U1061	A994	C933	G874	U801	G738
	G1446	G1384	U1325	G1193	A1129	U1062	C995	C934	C875	A802	C739
	U1447	C1385	C1326	U1194	A1130	C1063	A996	A935	G876	G803	U740
	G1448	U1386	C1327	G1195	C1131	U1064	G1002	C936	G877	U804	G741
	A1449	C1387	U1328	U1196	C1132	U1065	G1003	A937	C878	C805	C742
	G1450	G1388	A1329	U1197	G1133	C1066	U1004	A938	G879	G806	C743
	A1451	C1389	U1330	G1198	G1134	A1067	A1005	C939	C880	A807	C744
	G1452	U1390	C1331	U1199	U1135	U1068	C1006	C940	C881	G745	
	A1453	A1391	A1332	U1200	U1136	C1069	A1007	G941	C882	C811	C748
	G1454	C1392	G1333	A1201	C1137	G1074	C1007	G942	C883	C812	C749
	G1455	U1393	A1334	C1202	G1138	C1075	G1013	G944	C884	U813	G750
	A1456	A1394	A1335	G1203	C1139	U1078	A1014	G945	G885		
	G1457	C1395	G1336	U1204	C1140						
	A1458	U1396	C1337	G1205	C1141						
	G1459	C1397	G1338		C1142						
	U1460	A1398	U1339		C1143						
	G1461	C1399	G1340		C1144						
	A1462	U1400	A1341		C1145						
	G1463	G1401	C1342		C1146						
	C1464	U1402	A1343		C1147						
	A1465	G1403	C1344		C1148						
	C1466	U1404	U1345		C1149						
	G1467	A1405	A1346		C1150						
	A1468	C1406	C1347		C1151						
	G1469	U1407	G1348		C1152						
	U1470	A1408	U1349		C1153						
	G1471	C1409	C1350		C1154						
	A1472	U1410	A1351		C1155						
	G1473	G1411	G1352		C1156						
	U1474	A1412	U1353		C1157						
	G1475	C1413	C1354		C1158						
	A1476	U1414	G1355		C1159						
	G1477	G1415	G1356		C1160						
	A1478	A1416	C1357		C1161						
	U1479	U1417	U1358		C1162						
	A1480	G1418	C1359		G1164						
	U1481	U1419	A1360		C1167						
	G1482	G1420	G1361		A1168						
	A1483	U1421	U1362		A1169						
	U1484	C1422	C1363		G1170						
	G1485	G1423	G1364		G1171						
	U1486	U1424	U1365		C1172						
	G1487	A1425	G1366		G1173						
	A1488	G1426	C1367		C1177						
	U1489	U1427	U1368		G1178						
	A1490	C1428	A1369		G1179						
	U1491	G1429	C1370		A1179						
	G1492	U1430	U1371		G1180						
	A1493	C1431	C1372		A1181						
	U1494	G1432	G1373		G1182						
	G1495	U1433	A1374		A1183						
	A1496	A1434	C1375		A1184						
	U1497	G1435	U1376		G1185						
	G1498	U1436	C1377		G1186						
	A1499	C1437	A1378		G1187						
	U1500	U1438	U1379		G1188						
	C1501	G1439	C1380		G1189						
	A1502	A1440	U1381		C1190						
	U1503	U1441	C1382		A1191						
	G1504	G1442	G1383		G1192						
	A1505	A1443	C1384		C1193						
	U1506	U1444	U1385		U1194						
	G1507	G1445	C1386		G1195						
	A1508	C1446	A1387		U1196						
	U1509	U1447	U1388		G1197						
	G1510	A1448	C1389		U1198						
	U1511	G1449	U1390		U1199						
	A1512	U1450	C1391		C1200						
	G1513	A1451	G1392		A1201						
	U1514	C1452	A1393		C1202						
	A1515	G1453	C1394		G1203						
	U1516	U1454	U1395		U1204						
	G1517	A1455	C1396		G1205						
	A1518	C1456	A1397		U1206						
	U1519	U1457	U1398		G1207						
	G1520	G1458	C1399		C1075						
	A1521	U1459	G1400		U1078						
	U1522	A1460	U1401		C1141						
	G1523	C1461	C1402								
	U1524	A1462	G1403								
	G1525	U1463	C1404								
	A1526	G1464	U1405								
	U1527	C1465	A1406								
	G1528	U1466	C1407								
	A1529	A1467	U1408								
	U1530	G1468	C1409								
	A1531	U1469	A1410								
	G1532	C1470	G1411								
	U1533	A1471	U1412								
	G1534	G1472	C1413								
	A1535	U1473	A1414								
	U1536	C1474	C1415								
	G1537	A1475	U1416								
	A1538	U1476	G1417								
	U1539	C1477	C1418								
	G1540	A1478	U1419								



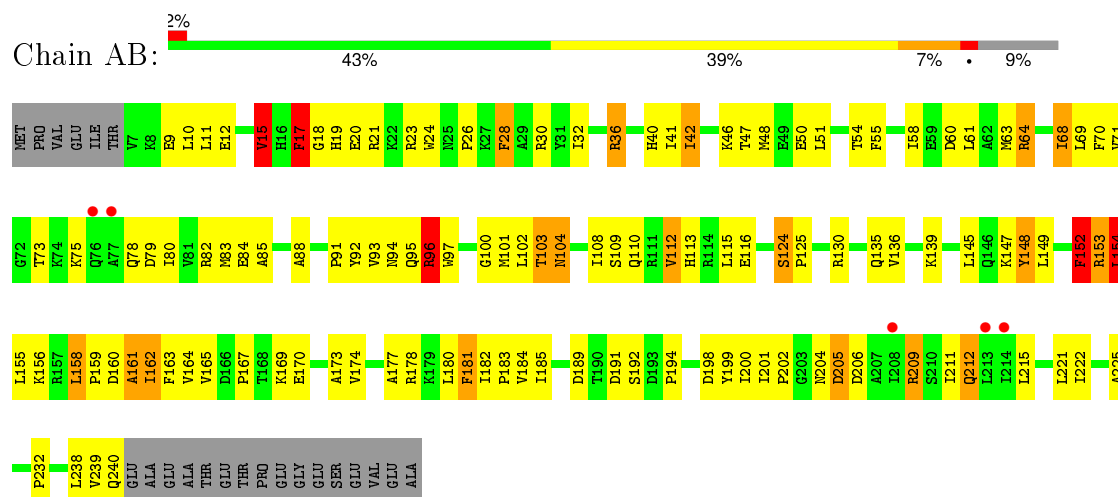
• Molecule 3: E-site tRNA (Phe)



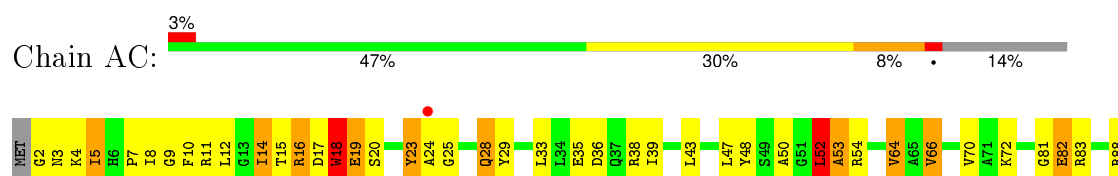
• Molecule 4: 5'-R(*AP*UP*GP*UP*UP*CP*UP*AP*GP*UP*AP*CP*AP*AP*UP*AP*AP*U)-3'

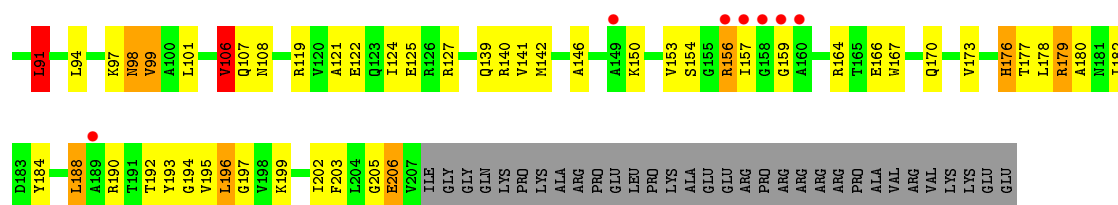


• Molecule 5: 30S ribosomal protein S2

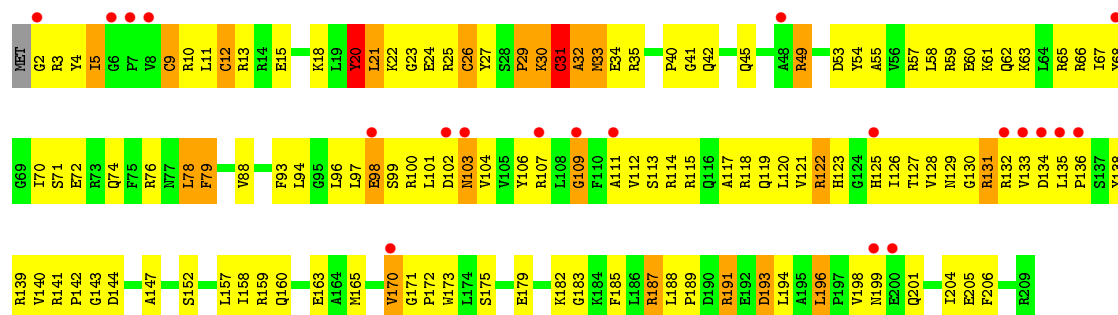


• Molecule 6: 30S ribosomal protein S3

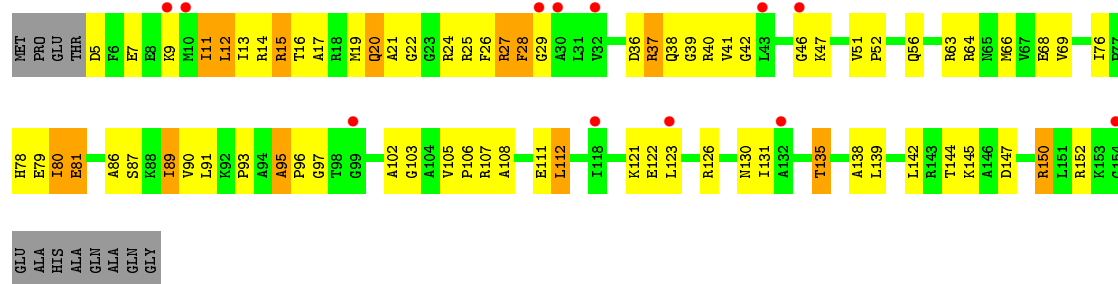




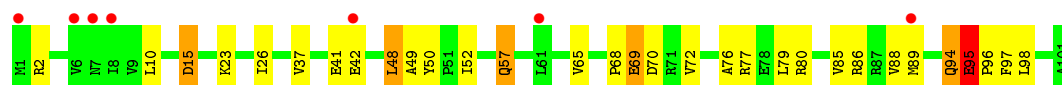
• Molecule 7: 30S ribosomal protein S4



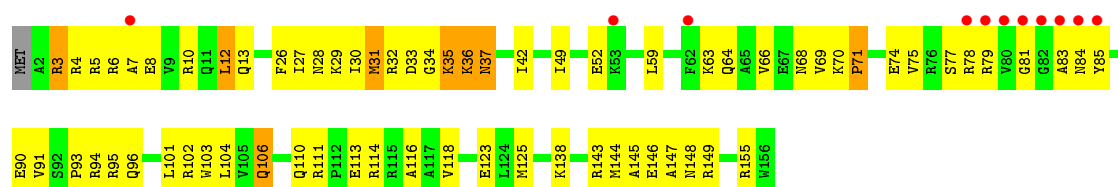
• Molecule 8: 30S ribosomal protein S5



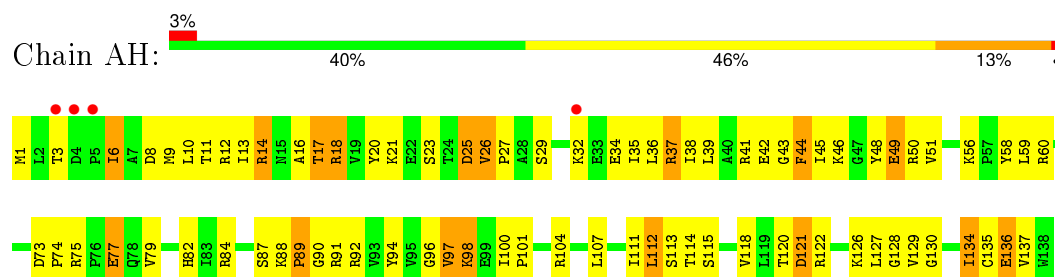
• Molecule 9: 30S ribosomal protein S6



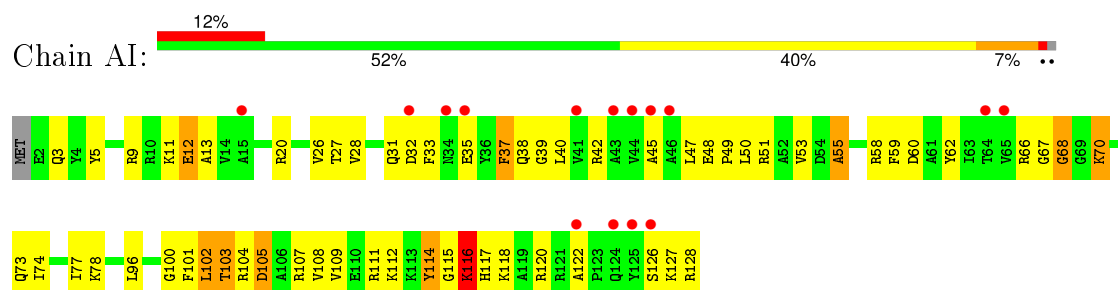
• Molecule 10: 30S ribosomal protein S7



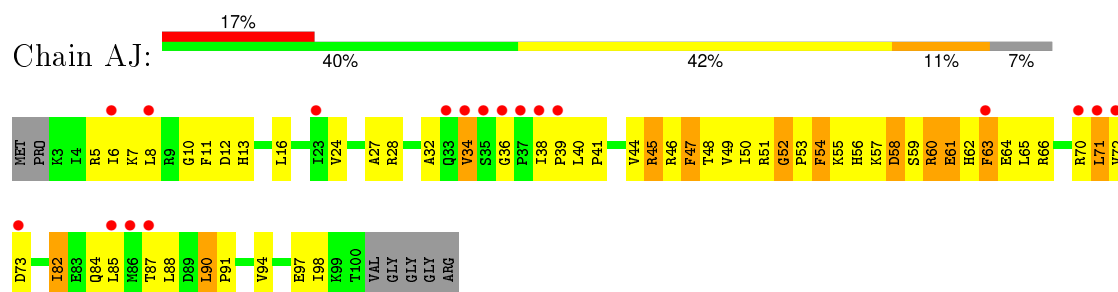
- Molecule 11: 30S ribosomal protein S8



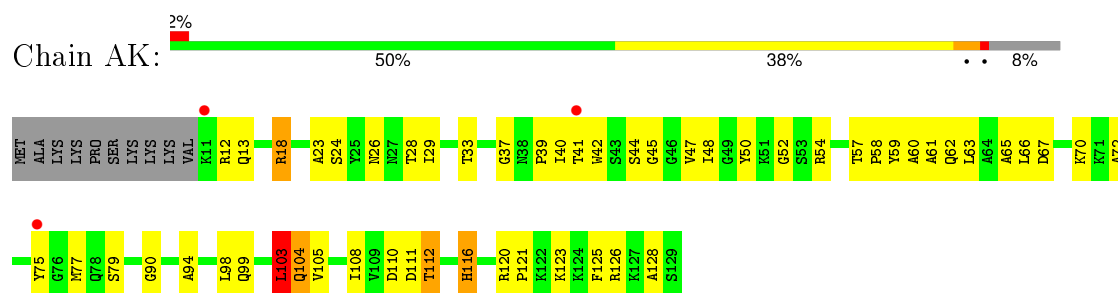
- Molecule 12: 30S ribosomal protein S9



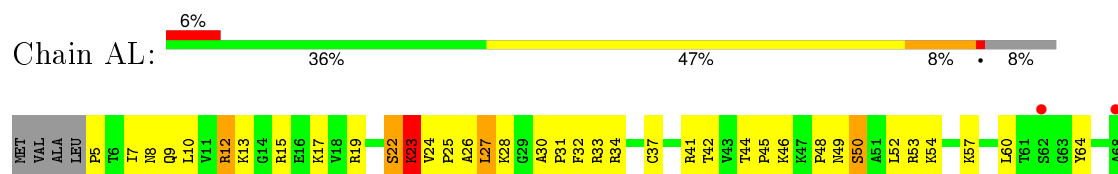
- Molecule 13: 30S ribosomal protein S10

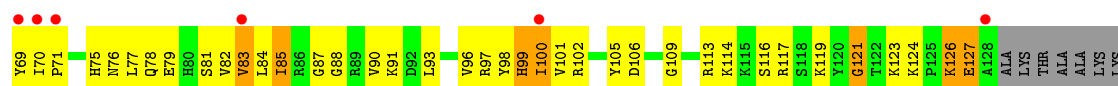


- Molecule 14: 30S ribosomal protein S11



- Molecule 15: 30S ribosomal protein S12





- Molecule 16: 30S ribosomal protein S13



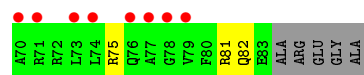
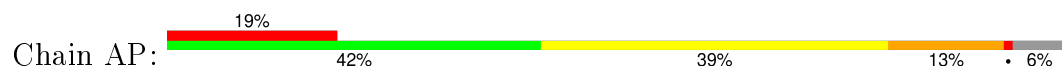
- Molecule 17: 30S ribosomal protein S14



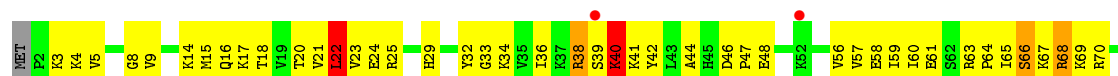
- Molecule 18: 30S ribosomal protein S15



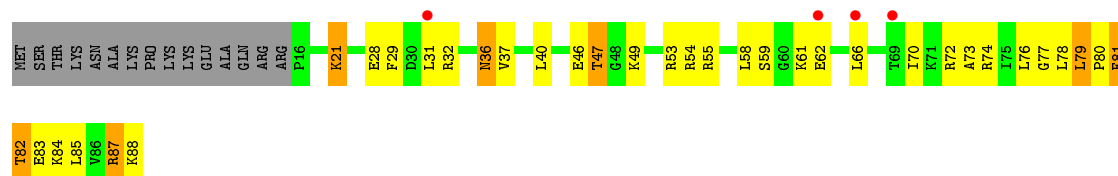
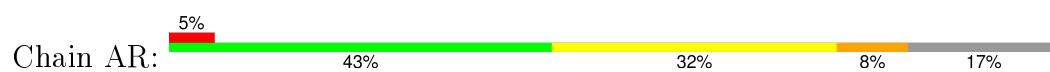
- Molecule 19: 30S ribosomal protein S16



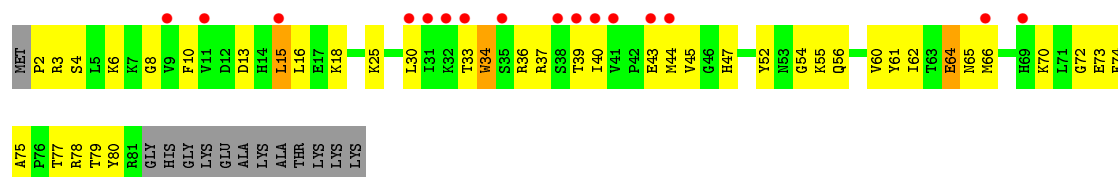
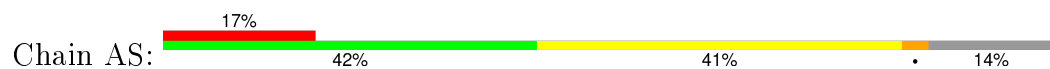
- Molecule 20: 30S ribosomal protein S17



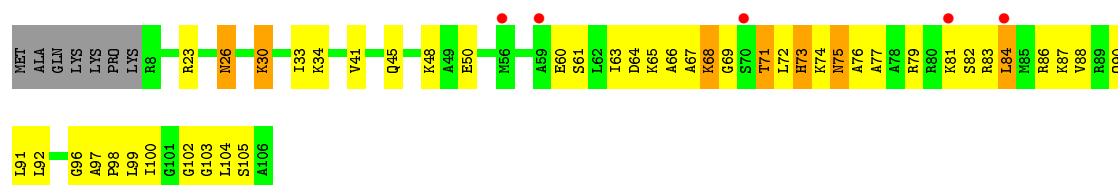
- Molecule 21: 30S ribosomal protein S18



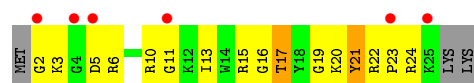
- Molecule 22: 30S ribosomal protein S19



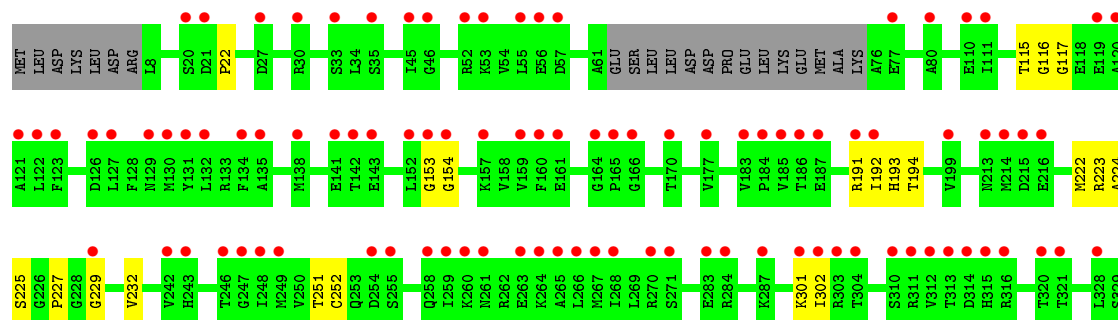
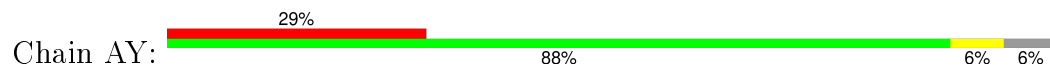
- Molecule 23: 30S ribosomal protein S20

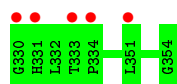


- Molecule 24: 30S ribosomal protein Thx



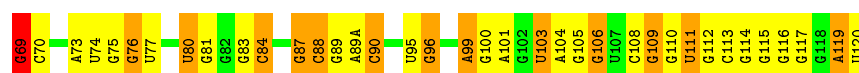
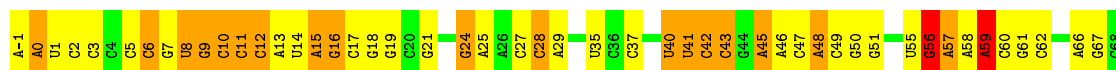
- Molecule 25: Peptide chain release factor 1





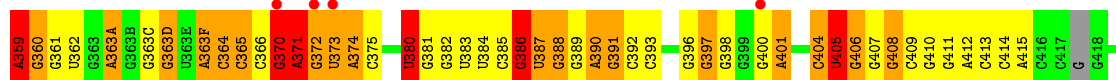
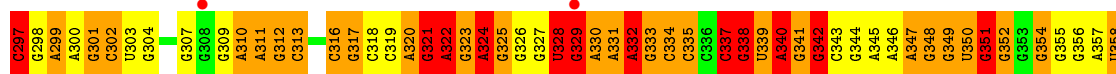
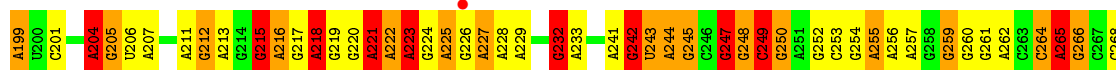
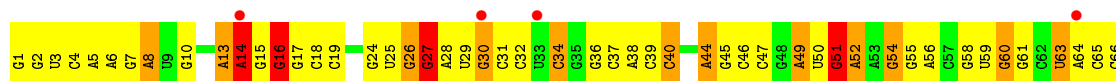
• Molecule 26: 5S ribosomal RNA

Chain BB: 30% 42% 25% .



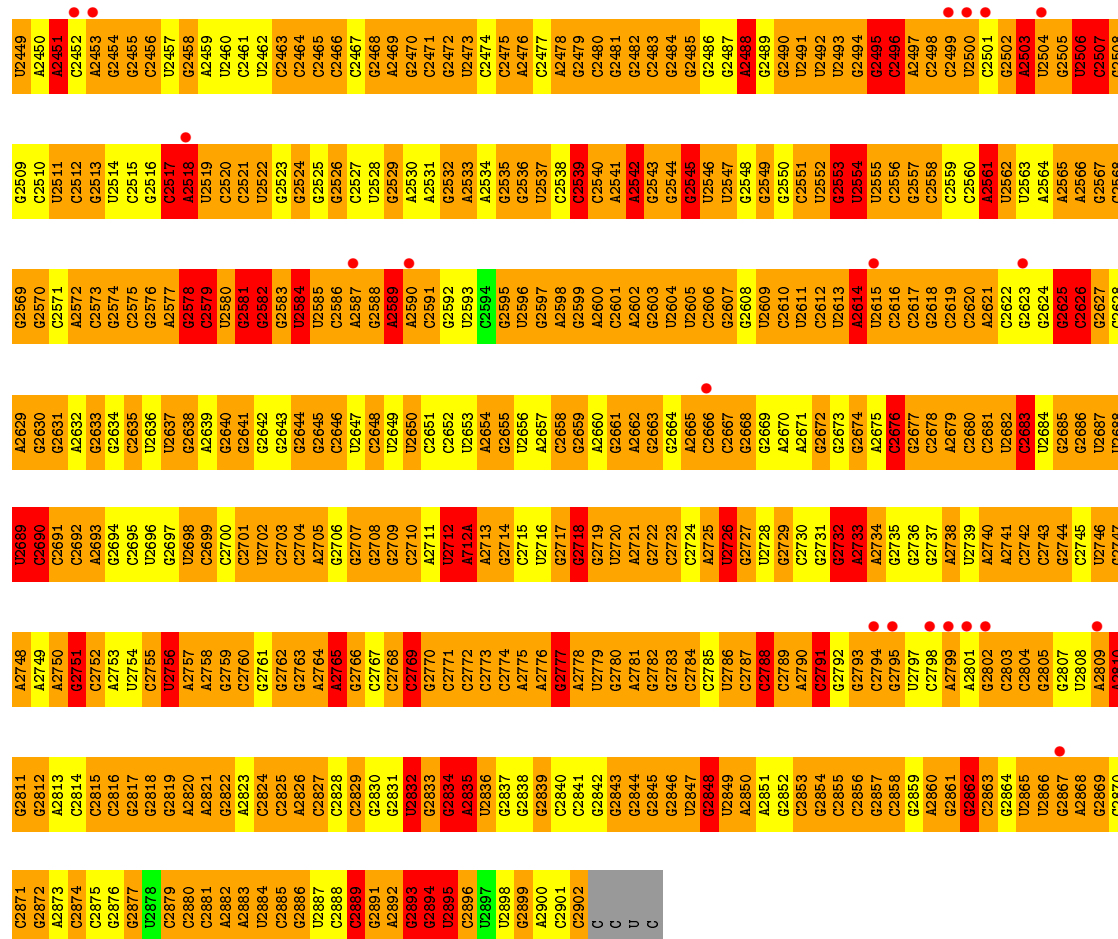
• Molecule 27: 23S ribosomal RNA

Chain BA: 6% 11% 34% 38% 13% .

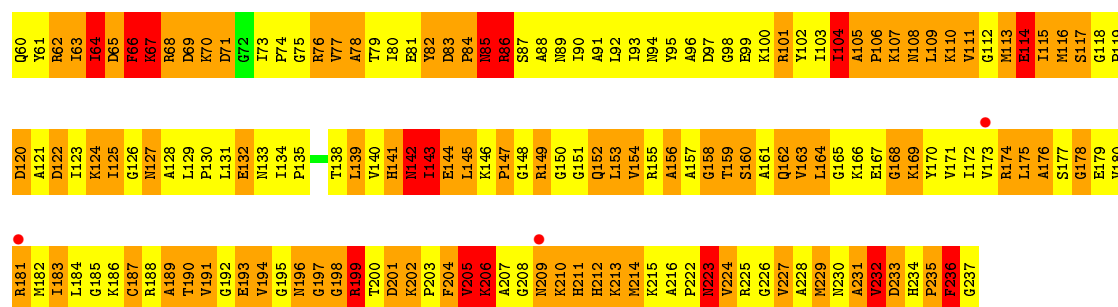




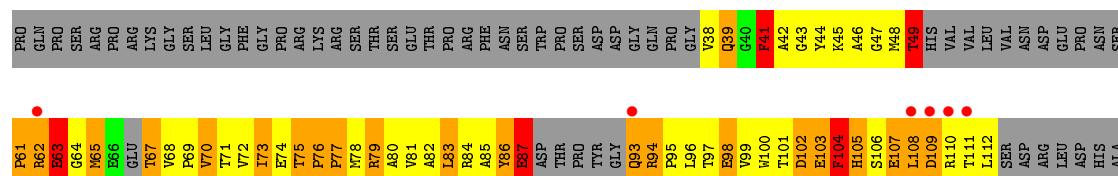


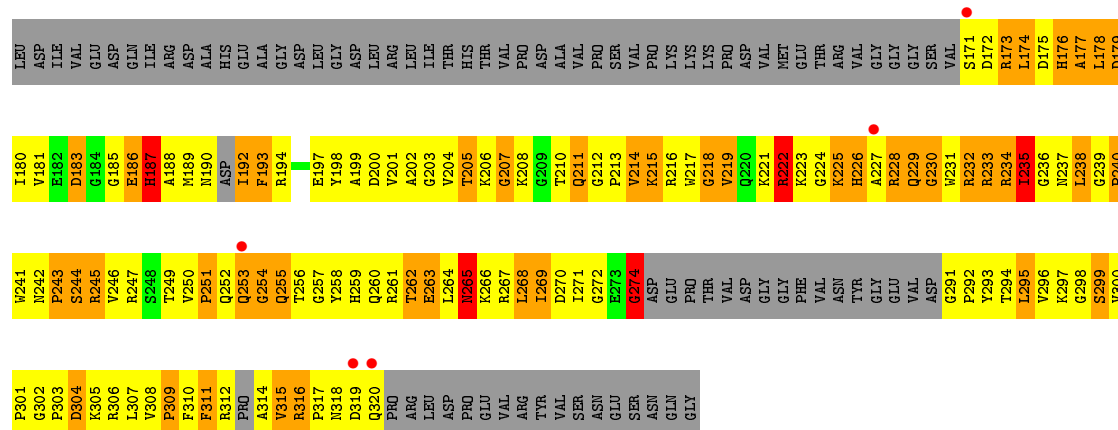


• Molecule 28: 50S ribosomal protein L2

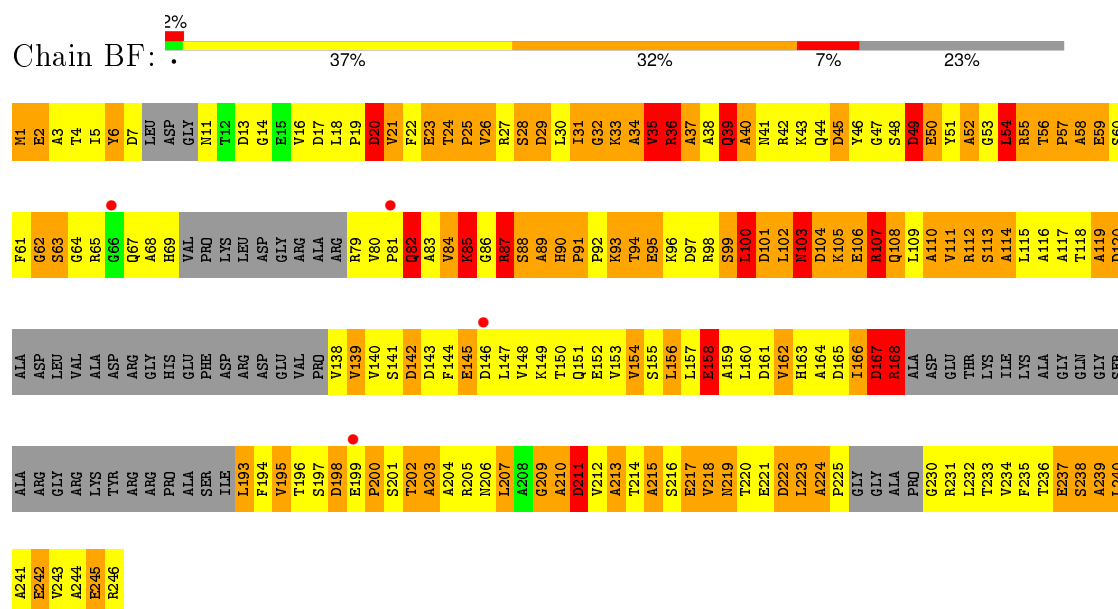


• Molecule 29: 50S ribosomal protein L3

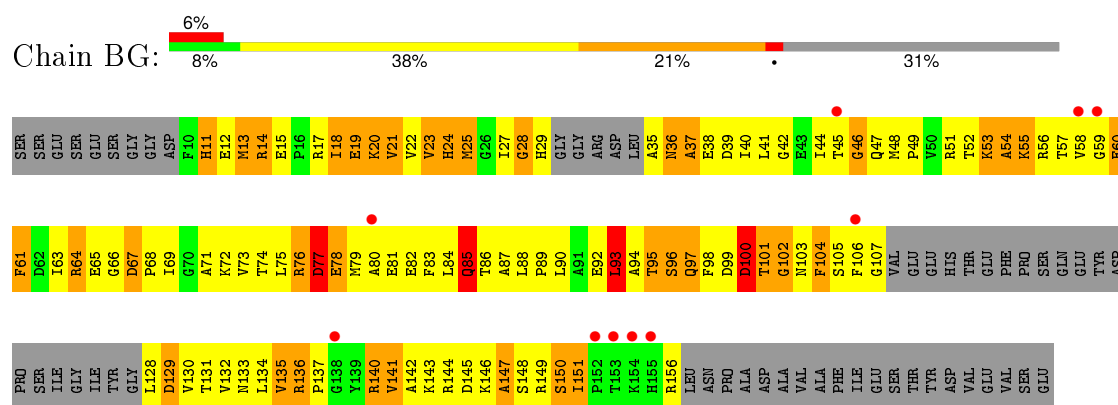




• Molecule 30: 50S ribosomal protein L4

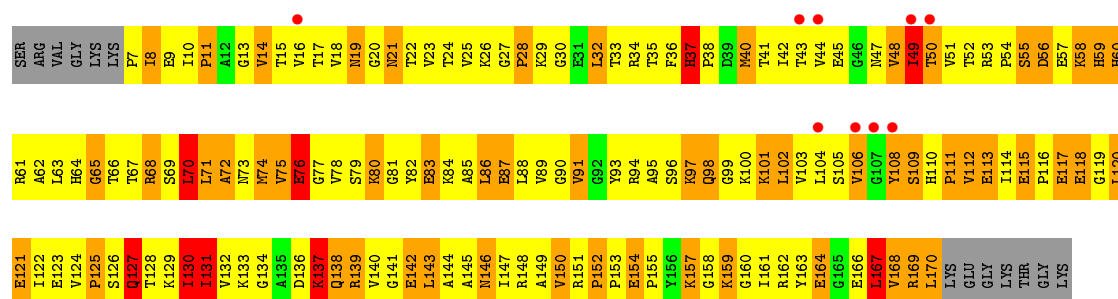


• Molecule 31: 50S ribosomal protein L5

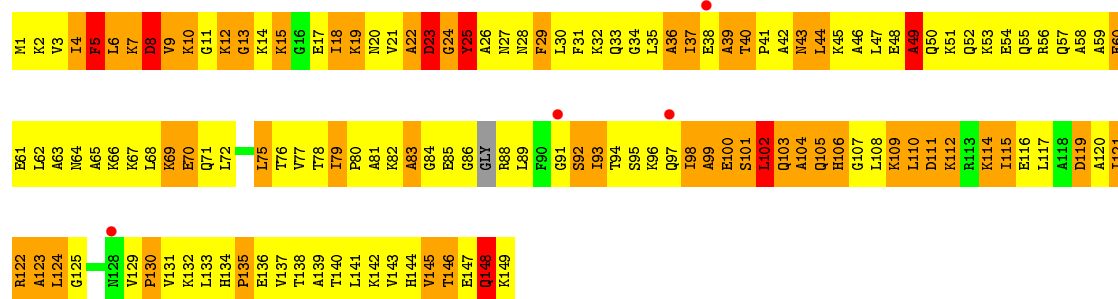


• Molecule 32: 50S ribosomal protein L6

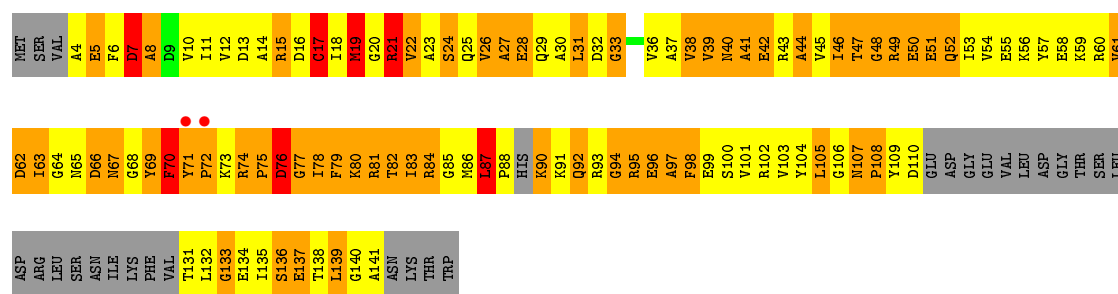




• Molecule 33: 50S ribosomal protein L9



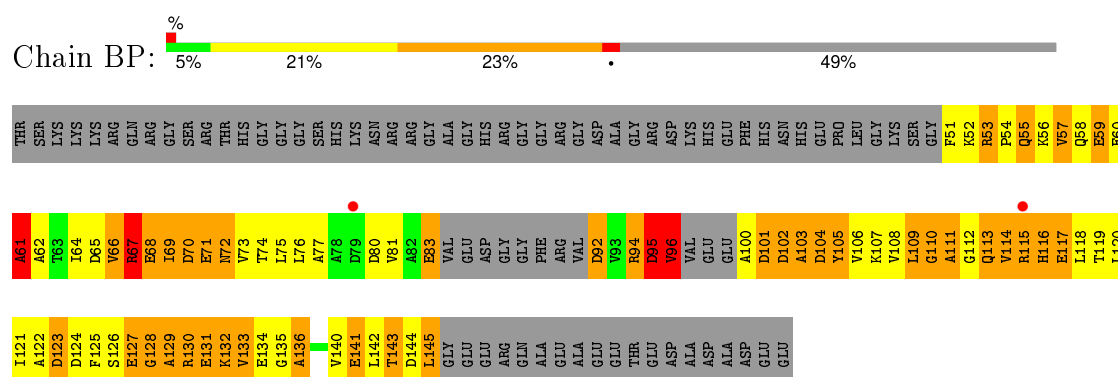
• Molecule 34: 50S ribosomal protein L13



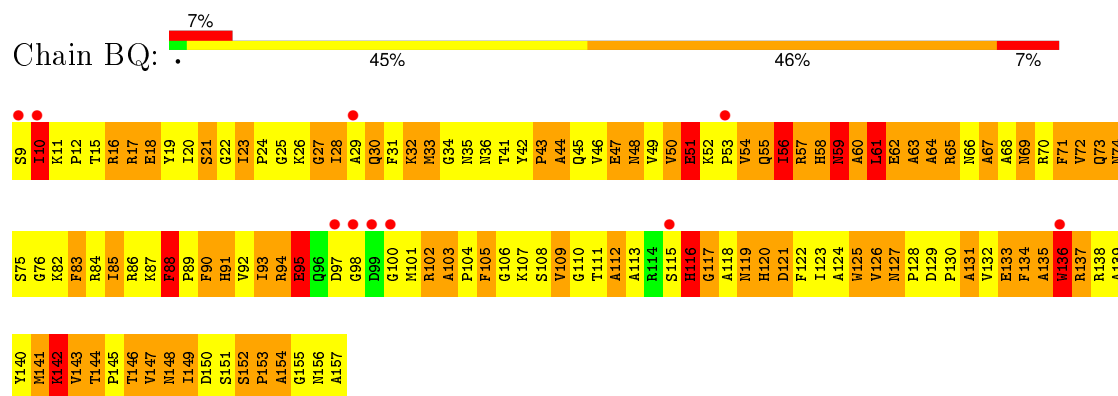
• Molecule 35: 50S ribosomal protein L14



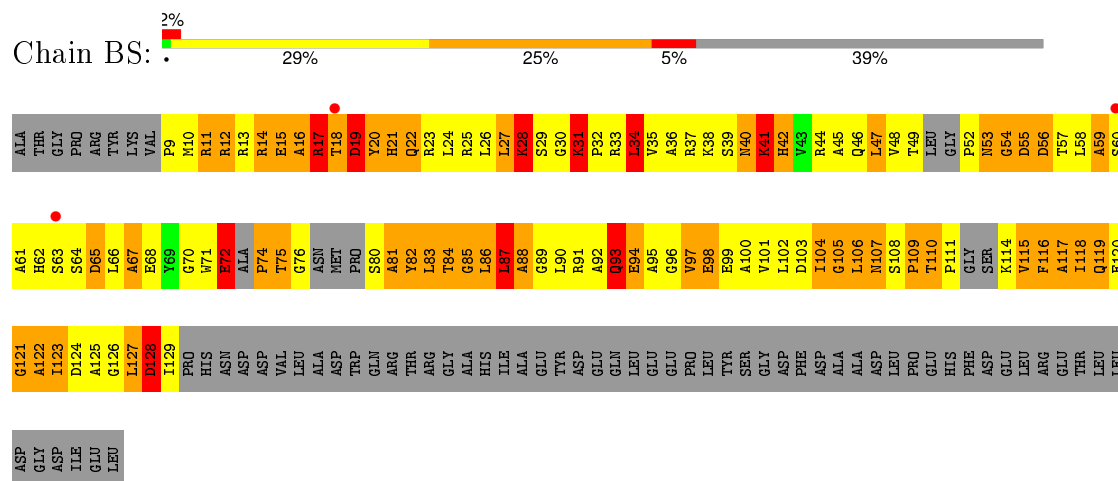
• Molecule 36: 50S ribosomal protein L15



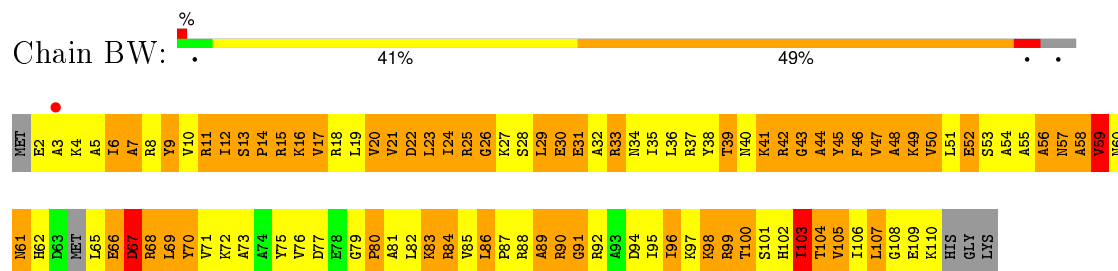
• Molecule 37: 50S ribosomal protein L16



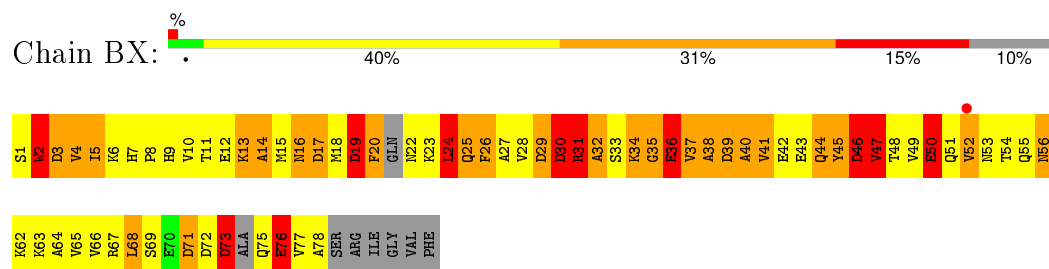
• Molecule 38: 50S ribosomal protein L18



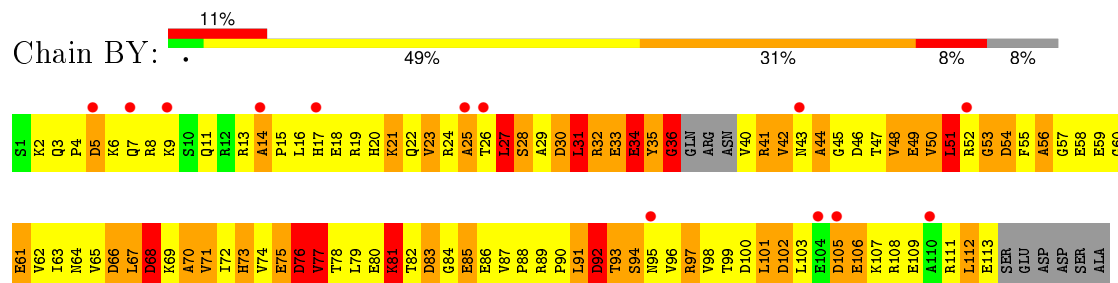
- Molecule 40: 50S ribosomal protein L22



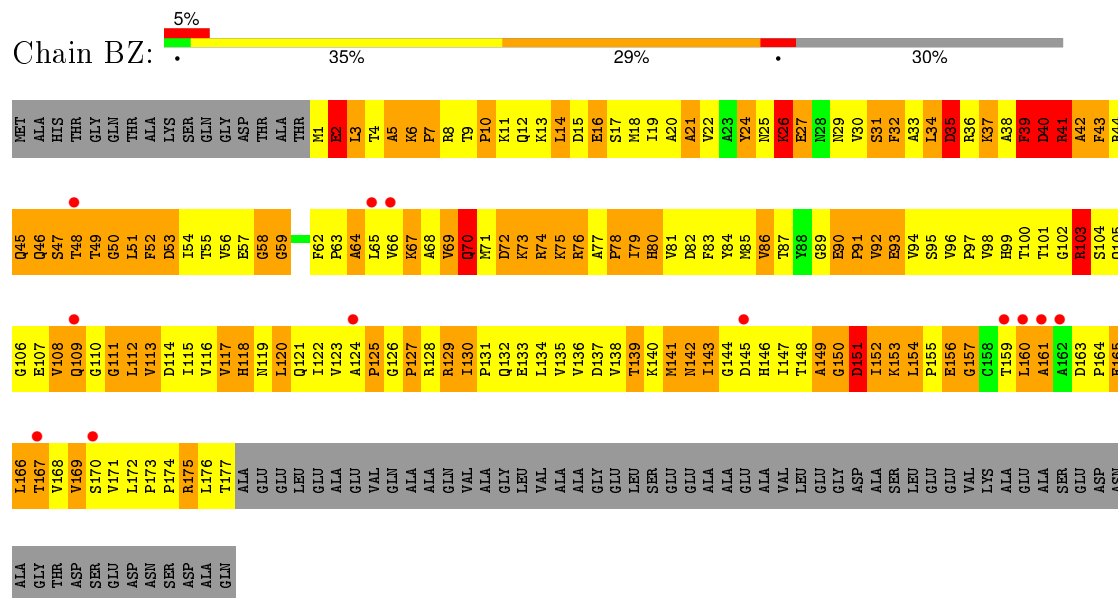
- Molecule 41: 50S ribosomal protein L23



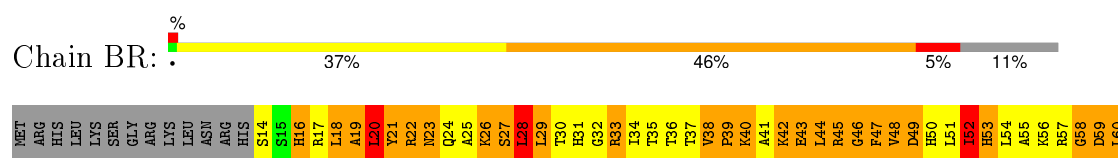
- Molecule 42: 50S ribosomal protein 24



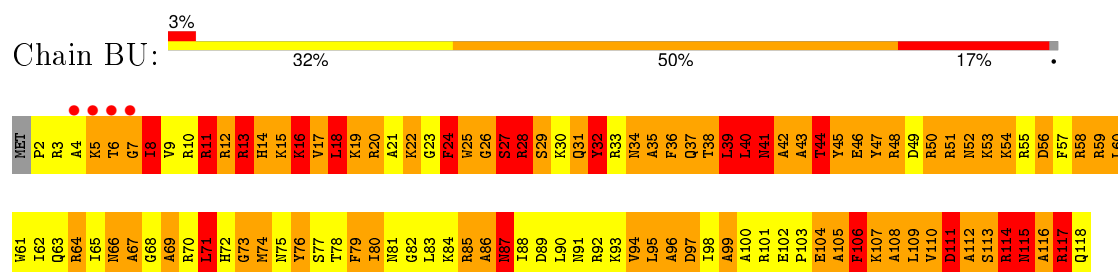
- Molecule 43: 50S ribosomal protein CTC



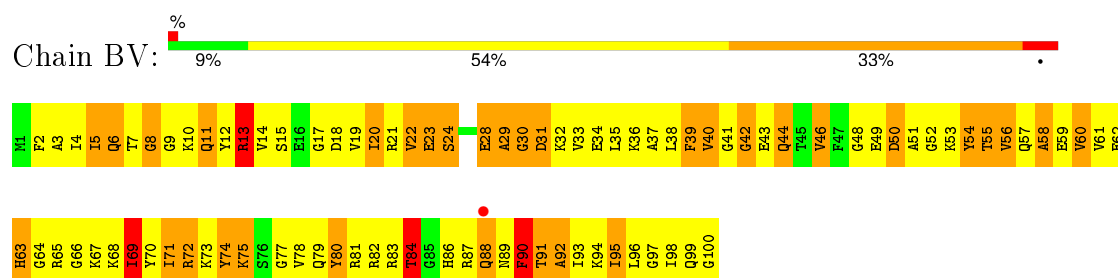
- Molecule 44: 50S ribosomal protein L17



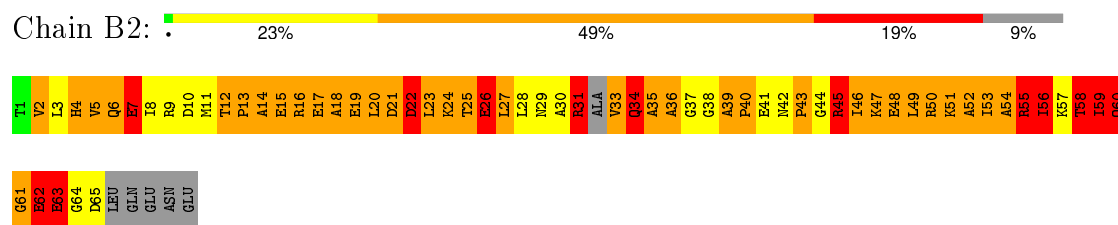
- Molecule 45: 50S ribosomal protein L20



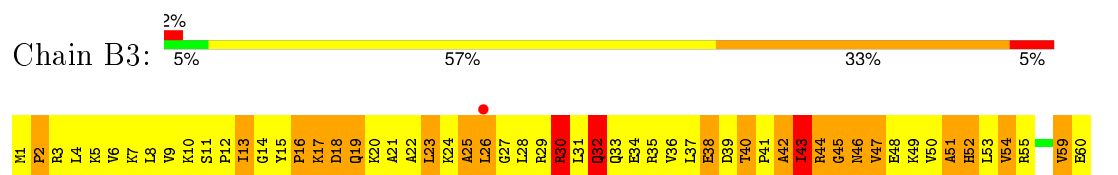
- Molecule 46: 50S ribosomal protein L21



- Molecule 47: 50S ribosomal protein L29

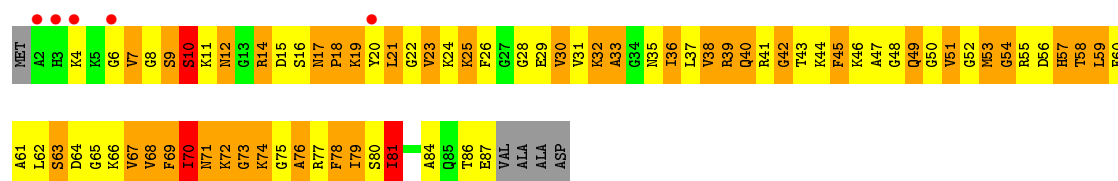


- Molecule 48: 50S ribosomal protein L30

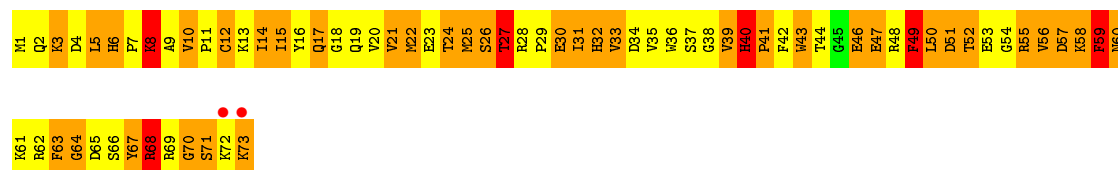


- Molecule 49: 50S ribosomal protein L27





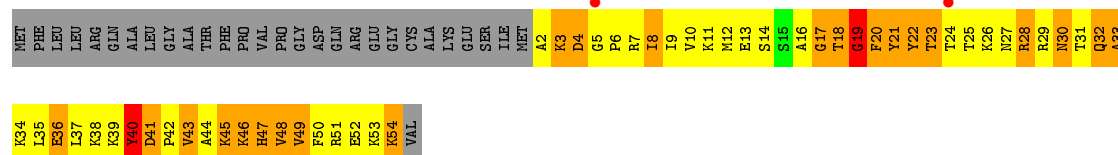
• Molecule 50: 50S ribosomal protein L31



• Molecule 51: 50S ribosomal protein L32



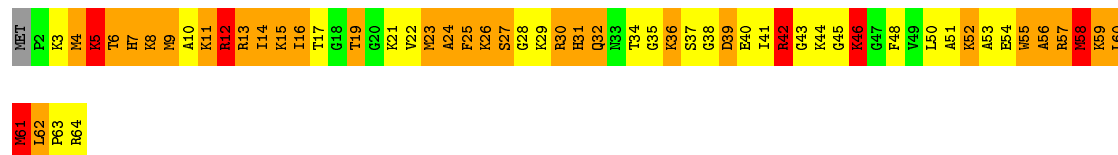
• Molecule 52: 50S ribosomal protein L33



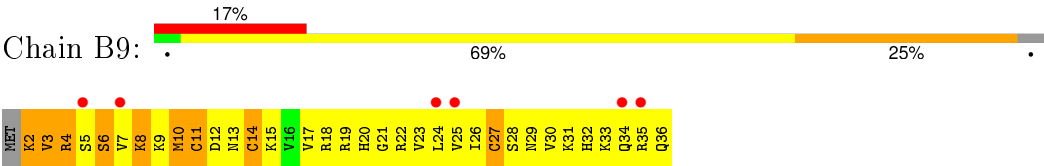
• Molecule 53: 50S ribosomal protein L34



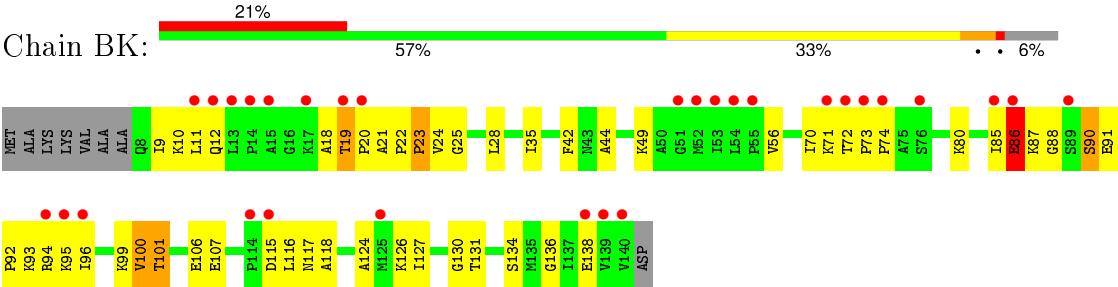
• Molecule 54: 50S ribosomal protein L35



• Molecule 55: 50S ribosomal protein L36



● Molecule 56: 50S ribosomal protein L11



4 Data and refinement statistics

Property	Value	Source
Space group	P 43 21 2	Depositor
Cell constants a, b, c, α , β , γ	518.99Å 518.99Å 365.14Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	40.00 – 5.90 49.92 – 5.54	Depositor EDS
% Data completeness (in resolution range)	97.4 (40.00-5.90) 94.5 (49.92-5.54)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.13	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.41 (at 5.39Å)	Xtriage
Refinement program	CNS	Depositor
R, R_{free}	0.351 , 0.371 0.344 , 0.364	Depositor DCC
R_{free} test set	6319 reflections (5.25%)	DCC
Wilson B-factor (Å ²)	223.1	Xtriage
Anisotropy	0.185	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.11 , 78.1	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 148368 reflections	Xtriage
F_o, F_c correlation	0.87	EDS
Total number of atoms	142780	wwPDB-VP
Average B, all atoms (Å ²)	236.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.88% 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, 0.375 respectively for untwinned datasets, and 0.333, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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	1.25	68/36411 (0.2%)	1.47	415/56769 (0.7%)
2	AV	2.34	3/1813 (0.2%)	1.16	11/2823 (0.4%)
3	AW	1.82	17/1739 (1.0%)	1.97	36/2698 (1.3%)
4	AX	0.18	0/139	0.66	0/213
5	AB	0.63	1/1935 (0.1%)	0.66	4/2609 (0.2%)
6	AC	0.60	2/1636 (0.1%)	1.10	6/2205 (0.3%)
7	AD	0.65	4/1733 (0.2%)	0.97	9/2318 (0.4%)
8	AE	0.46	0/1161	0.61	1/1561 (0.1%)
9	AF	0.35	0/856	0.54	0/1154
10	AG	0.60	1/1276 (0.1%)	0.59	2/1709 (0.1%)
11	AH	0.41	0/1136	0.66	0/1527
12	AI	0.34	0/1029	0.54	0/1378
13	AJ	0.35	0/807	0.56	0/1085
14	AK	0.87	1/900 (0.1%)	0.56	0/1213
15	AL	0.49	1/986 (0.1%)	0.70	1/1320 (0.1%)
16	AM	1.15	2/1008 (0.2%)	1.16	3/1347 (0.2%)
17	AN	0.49	1/501 (0.2%)	0.64	1/664 (0.2%)
18	AO	0.32	0/745	0.54	0/992
19	AP	0.40	0/716	0.59	1/963 (0.1%)
20	AQ	1.15	2/870 (0.2%)	1.38	5/1159 (0.4%)
21	AR	0.40	0/603	0.70	0/799
22	AS	0.34	0/661	0.53	0/890
23	AT	0.32	0/764	0.57	1/1006 (0.1%)
24	AU	0.33	0/212	0.48	0/277
26	BB	1.11	5/2950 (0.2%)	1.43	23/4602 (0.5%)
27	BA	1.21	152/67844 (0.2%)	1.45	897/105838 (0.8%)
28	BD	0.37	0/1328	0.61	0/1783
29	BE	0.64	3/1540 (0.2%)	1.07	7/2078 (0.3%)
30	BF	0.69	3/1444 (0.2%)	0.82	1/1954 (0.1%)
31	BG	0.25	0/971	0.46	0/1304
32	BH	0.58	1/1272 (0.1%)	0.48	0/1721
33	BI	0.39	1/1156 (0.1%)	0.64	3/1544 (0.2%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
34	BN	0.35	0/927	0.55	0/1245
35	BO	0.32	0/946	0.57	0/1269
36	BP	1.55	3/643 (0.5%)	1.32	5/870 (0.6%)
37	BQ	0.32	0/1106	0.53	0/1490
38	BS	0.79	2/877 (0.2%)	0.87	5/1179 (0.4%)
39	BT	0.39	0/412	0.70	0/554
40	BW	0.37	0/869	0.59	0/1166
41	BX	0.49	1/608 (0.2%)	1.04	3/820 (0.4%)
42	BY	0.25	0/887	0.83	3/1195 (0.3%)
43	BZ	0.32	1/1385 (0.1%)	0.55	3/1883 (0.2%)
44	BR	0.31	0/867	0.49	0/1162
45	BU	0.70	1/994 (0.1%)	0.65	3/1323 (0.2%)
46	BV	0.75	1/796 (0.1%)	0.89	3/1058 (0.3%)
47	B2	0.37	0/497	1.00	2/668 (0.3%)
48	B3	0.31	0/482	0.50	0/646
49	B0	0.29	0/649	1.15	3/860 (0.3%)
50	B4	0.77	2/620 (0.3%)	0.57	0/831
51	B5	0.36	0/469	0.79	3/629 (0.5%)
52	B6	0.32	0/438	0.55	1/583 (0.2%)
53	B7	0.38	0/387	0.64	0/509
54	B8	0.73	2/503 (0.4%)	1.23	5/657 (0.8%)
55	B9	0.33	0/286	0.59	0/375
56	BK	0.30	0/1010	0.60	3/1349 (0.2%)
All	All	1.11	281/154800 (0.2%)	1.32	1469/231824 (0.6%)

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
3	AW	1	5
5	AB	0	1
6	AC	0	2
7	AD	0	1
15	AL	0	1
16	AM	0	1
20	AQ	0	2
28	BD	0	1
29	BE	0	3
30	BF	0	3
32	BH	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
33	BI	0	1
36	BP	0	1
38	BS	0	1
41	BX	0	1
42	BY	0	1
47	B2	0	1
54	B8	0	1
56	BK	0	1
All	All	1	29

All (281) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	BA	2199	A	O3'-P	-71.12	0.75	1.61
2	AV	45	G	O3'-P	-70.03	0.77	1.61
2	AV	65	G	O3'-P	-62.91	0.85	1.61
27	BA	2196	C	O3'-P	-59.20	0.90	1.61
1	AA	1211	U	O3'-P	-53.33	0.97	1.61
1	AA	60	A	O3'-P	49.05	2.20	1.61
27	BA	1924	C	O3'-P	-45.91	1.06	1.61
27	BA	2454	G	O3'-P	-45.21	1.06	1.61
1	AA	983	A	O3'-P	44.90	2.15	1.61
27	BA	2889	C	O3'-P	-43.58	1.08	1.61
27	BA	1030	G	O3'-P	43.53	2.13	1.61
1	AA	115	G	O3'-P	42.42	2.12	1.61
1	AA	196	A	O3'-P	41.70	2.11	1.61
27	BA	1055	G	O3'-P	-40.87	1.12	1.61
27	BA	2894	G	O3'-P	39.84	2.08	1.61
27	BA	1546	C	O3'-P	-39.47	1.13	1.61
1	AA	733	A	O3'-P	39.11	2.08	1.61
1	AA	405	U	O3'-P	38.53	2.07	1.61
27	BA	1103	A	O3'-P	-38.09	1.15	1.61
27	BA	2712	U	O3'-P	-37.44	1.16	1.61
27	BA	1163	G	O3'-P	-37.44	1.16	1.61
27	BA	1404	C	O3'-P	36.23	2.04	1.61
27	BA	1050	A	O3'-P	36.19	2.04	1.61
1	AA	587	G	O3'-P	36.16	2.04	1.61
1	AA	937	A	O3'-P	36.09	2.04	1.61
1	AA	1182	G	O3'-P	-36.05	1.17	1.61
27	BA	1142	U	O3'-P	35.89	2.04	1.61
27	BA	110	G	O3'-P	-35.10	1.19	1.61
3	AW	21	A	O3'-P	-34.93	1.19	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	BA	2788	C	O3'-P	34.27	2.02	1.61
27	BA	864	G	O3'-P	34.24	2.02	1.61
27	BA	1905	C	O3'-P	-33.80	1.20	1.61
1	AA	576	G	O3'-P	33.62	2.01	1.61
16	AM	94	ARG	C-N	33.29	1.93	1.33
1	AA	239	U	O3'-P	-31.76	1.23	1.61
1	AA	703	G	O3'-P	31.74	1.99	1.61
1	AA	1361	G	O3'-P	31.70	1.99	1.61
2	AV	7	U	O3'-P	31.14	1.98	1.61
20	AQ	22	LEU	C-N	-30.20	0.64	1.34
26	BB	11	C	O3'-P	-29.92	1.25	1.61
27	BA	837	C	O3'-P	29.54	1.96	1.61
27	BA	1029	A	O3'-P	-29.09	1.26	1.61
1	AA	1255	G	O3'-P	-28.89	1.26	1.61
27	BA	460	A	O3'-P	-28.64	1.26	1.61
1	AA	869	G	O3'-P	-28.33	1.27	1.61
26	BB	59	A	O3'-P	-28.01	1.27	1.61
27	BA	1444	G	O3'-P	28.00	1.94	1.61
36	BP	96	VAL	C-N	-27.55	0.70	1.34
1	AA	351	G	O3'-P	-27.27	1.28	1.61
27	BA	911	A	O3'-P	-27.26	1.28	1.61
1	AA	288	A	O3'-P	-26.68	1.29	1.61
27	BA	655	A	O3'-P	26.56	1.93	1.61
27	BA	2344	U	O3'-P	-26.00	1.29	1.61
27	BA	686	G	O3'-P	25.91	1.92	1.61
27	BA	624	C	O3'-P	-25.88	1.30	1.61
27	BA	1626	G	O3'-P	-25.83	1.30	1.61
27	BA	2381	C	O3'-P	-25.68	1.30	1.61
1	AA	1030	C	O3'-P	25.66	1.92	1.61
1	AA	1101	A	O3'-P	25.45	1.91	1.61
27	BA	532	A	O3'-P	-25.45	1.30	1.61
1	AA	286	G	O3'-P	24.31	1.90	1.61
27	BA	2732	G	O3'-P	24.19	1.90	1.61
1	AA	1504	G	O3'-P	-24.05	1.32	1.61
14	AK	112	THR	C-N	-23.71	0.89	1.34
1	AA	820	U	O3'-P	23.62	1.89	1.61
27	BA	1302	A	O3'-P	23.43	1.89	1.61
27	BA	670	A	O3'-P	-23.36	1.33	1.61
1	AA	119	A	O3'-P	23.00	1.88	1.61
27	BA	468	G	O3'-P	-22.87	1.33	1.61
27	BA	1772	G	O3'-P	-22.38	1.34	1.61
1	AA	960	U	O3'-P	-22.35	1.34	1.61

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
5	AB	112	VAL	C-N	22.32	1.85	1.34
27	BA	280	C	O3'-P	22.09	1.87	1.61
1	AA	1046	A	O3'-P	21.94	1.87	1.61
27	BA	148	C	O3'-P	21.29	1.86	1.61
27	BA	1275	A	O3'-P	21.22	1.86	1.61
27	BA	2506	U	O3'-P	21.17	1.86	1.61
27	BA	809	G	O3'-P	-21.16	1.35	1.61
27	BA	2022	U	O3'-P	-21.12	1.35	1.61
1	AA	569	C	O3'-P	-20.91	1.36	1.61
27	BA	940	G	O3'-P	20.68	1.85	1.61
36	BP	61	ALA	C-N	20.41	1.80	1.34
27	BA	2674	G	O3'-P	20.19	1.85	1.61
27	BA	1751	C	O3'-P	20.11	1.85	1.61
27	BA	1639	U	O3'-P	-19.99	1.37	1.61
46	BV	91	THR	C-N	19.88	1.79	1.34
1	AA	1337	G	O3'-P	-19.63	1.37	1.61
27	BA	264	C	O3'-P	-19.56	1.37	1.61
1	AA	1003	G	O3'-P	19.56	1.84	1.61
27	BA	270	A	O3'-P	-19.51	1.37	1.61
3	AW	46	G	C8-N7	19.41	1.42	1.30
30	BF	168	ARG	C-N	-19.26	0.89	1.34
1	AA	546	G	O3'-P	19.25	1.84	1.61
27	BA	1124	C	O3'-P	19.19	1.84	1.61
1	AA	1298	C	O3'-P	18.95	1.83	1.61
27	BA	1630	G	O3'-P	-18.87	1.38	1.61
27	BA	2421	G	O3'-P	-18.80	1.38	1.61
27	BA	734	A	O3'-P	18.80	1.83	1.61
3	AW	25	C	O3'-P	18.76	1.83	1.61
27	BA	183	C	O3'-P	-18.75	1.38	1.61
45	BU	50	ARG	C-N	-18.67	0.91	1.34
1	AA	858	G	O3'-P	-18.61	1.38	1.61
27	BA	1763	G	O3'-P	-18.61	1.38	1.61
3	AW	16	U	C5-C6	18.60	1.50	1.34
27	BA	1667	G	O3'-P	-18.51	1.39	1.61
27	BA	1978	A	O3'-P	-18.49	1.39	1.61
27	BA	2009	G	O3'-P	18.38	1.83	1.61
32	BH	80	LYS	C-N	-18.28	1.00	1.33
27	BA	359	A	O3'-P	18.14	1.82	1.61
27	BA	1525	G	O3'-P	-18.03	1.39	1.61
10	AG	12	LEU	C-N	17.98	1.75	1.34
36	BP	83	GLU	C-N	17.98	1.75	1.34
29	BE	87	GLU	C-N	17.97	1.75	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	AA	25	C	O3'-P	17.91	1.82	1.61
3	AW	58	A	C6-N6	17.88	1.48	1.33
1	AA	884	U	O3'-P	-17.87	1.39	1.61
27	BA	1294	U	O3'-P	-17.79	1.39	1.61
1	AA	765	G	O3'-P	-17.59	1.40	1.61
27	BA	1247	A	O3'-P	17.54	1.82	1.61
27	BA	509	C	O3'-P	-17.32	1.40	1.61
27	BA	1019	U	O3'-P	17.32	1.81	1.61
27	BA	1449	A	O3'-P	-17.30	1.40	1.61
1	AA	558	G	O3'-P	17.06	1.81	1.61
3	AW	17	U	C5-C6	17.05	1.49	1.34
1	AA	337	C	O3'-P	16.98	1.81	1.61
26	BB	0	A	O3'-P	16.97	1.81	1.61
38	BS	72	GLU	C-N	16.92	1.66	1.34
3	AW	44	A	O3'-P	-16.87	1.41	1.61
27	BA	474	G	O3'-P	16.84	1.81	1.61
3	AW	72	C	O3'-P	-16.78	1.41	1.61
3	AW	33	U	O3'-P	-16.63	1.41	1.61
27	BA	427	U	O3'-P	-16.42	1.41	1.61
27	BA	130	C	O3'-P	-16.37	1.41	1.61
27	BA	2518	A	O3'-P	-16.19	1.41	1.61
1	AA	143	A	O3'-P	16.02	1.80	1.61
1	AA	827	U	O3'-P	15.82	1.80	1.61
26	BB	-1	A	O3'-P	-15.81	1.42	1.61
27	BA	297	C	O3'-P	-15.78	1.42	1.61
27	BA	2287	A	O3'-P	15.75	1.80	1.61
27	BA	1197	G	O3'-P	-15.73	1.42	1.61
27	BA	223	A	O3'-P	15.72	1.80	1.61
27	BA	2370	G	O3'-P	-15.66	1.42	1.61
1	AA	1107	C	O3'-P	15.65	1.79	1.61
6	AC	106	VAL	C-N	-15.44	0.98	1.34
27	BA	103	A	O3'-P	15.43	1.79	1.61
1	AA	38	G	O3'-P	-15.15	1.43	1.61
27	BA	2243	U	O3'-P	15.14	1.79	1.61
7	AD	98	GLU	C-N	-14.61	1.00	1.34
38	BS	128	ASP	C-N	14.40	1.67	1.34
1	AA	974	A	O3'-P	14.32	1.78	1.61
27	BA	1791	A	O3'-P	-14.24	1.44	1.61
27	BA	271(C)	U	O3'-P	-14.14	1.44	1.61
27	BA	775	G	O3'-P	14.03	1.77	1.61
27	BA	2336	A	O3'-P	-13.89	1.44	1.61
3	AW	58	A	C6-N1	13.86	1.45	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	BA	1349	A	O3'-P	13.49	1.77	1.61
27	BA	56	A	O3'-P	-13.42	1.45	1.61
50	B4	40	HIS	C-N	13.39	1.59	1.34
1	AA	1377	A	O3'-P	-13.31	1.45	1.61
27	BA	2062	A	O3'-P	-13.14	1.45	1.61
1	AA	1117	G	O3'-P	12.89	1.76	1.61
27	BA	316	C	O3'-P	-12.69	1.46	1.61
27	BA	445	C	O3'-P	12.66	1.76	1.61
27	BA	2281	C	O3'-P	-12.51	1.46	1.61
27	BA	8	A	O3'-P	12.48	1.76	1.61
27	BA	176	G	O3'-P	-12.42	1.46	1.61
27	BA	1646	C	O3'-P	-12.34	1.46	1.61
27	BA	2769	C	O3'-P	-12.24	1.46	1.61
54	B8	46	LYS	C-N	12.15	1.54	1.33
27	BA	1419	A	O3'-P	12.01	1.75	1.61
1	AA	108	G	O3'-P	11.98	1.75	1.61
27	BA	560	C	O3'-P	-11.76	1.47	1.61
27	BA	1961	C	O3'-P	-11.56	1.47	1.61
1	AA	311	C	O3'-P	11.52	1.75	1.61
27	BA	1208	C	O3'-P	11.52	1.75	1.61
1	AA	315	A	O3'-P	11.50	1.75	1.61
27	BA	117	G	O3'-P	11.50	1.75	1.61
6	AC	18	TRP	C-N	-11.48	1.07	1.34
1	AA	1189	C	O3'-P	11.29	1.74	1.61
27	BA	1620	G	O3'-P	11.21	1.74	1.61
3	AW	16	U	N1-C6	11.04	1.47	1.38
27	BA	584	C	O3'-P	-10.98	1.48	1.61
27	BA	1361	G	O3'-P	-10.95	1.48	1.61
30	BF	28	SER	C-N	10.91	1.59	1.34
3	AW	17	U	N1-C6	10.88	1.47	1.38
27	BA	1890	A	O3'-P	10.82	1.74	1.61
1	AA	394	G	O3'-P	10.82	1.74	1.61
1	AA	754	C	O3'-P	10.81	1.74	1.61
50	B4	8	LYS	C-N	10.67	1.58	1.34
27	BA	1706	U	O3'-P	10.61	1.73	1.61
3	AW	46	G	N9-C8	10.59	1.45	1.37
27	BA	1466	G	O3'-P	10.52	1.73	1.61
16	AM	66	LEU	C-N	10.45	1.58	1.34
27	BA	2718	G	O3'-P	-10.35	1.48	1.61
27	BA	1851	U	O3'-P	10.34	1.73	1.61
27	BA	636	G	O3'-P	10.14	1.73	1.61
7	AD	187	ARG	C-N	10.13	1.57	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	BA	2057	A	O3'-P	10.12	1.73	1.61
27	BA	817	C	O3'-P	10.11	1.73	1.61
1	AA	365	U	O3'-P	-10.09	1.49	1.61
3	AW	17	U	C4-C5	10.06	1.52	1.43
27	BA	1143	A	O3'-P	9.90	1.73	1.61
27	BA	1512	G	O3'-P	9.86	1.73	1.61
1	AA	1067	A	O3'-P	-9.83	1.49	1.61
27	BA	2433	A	O3'-P	9.74	1.72	1.61
27	BA	1988	C	O3'-P	9.67	1.72	1.61
27	BA	1428	C	O3'-P	9.65	1.72	1.61
1	AA	1278	U	O3'-P	-9.50	1.49	1.61
20	AQ	81	ARG	C-N	9.35	1.55	1.34
27	BA	1255	U	O3'-P	-9.33	1.50	1.61
26	BB	24	G	O3'-P	-9.28	1.50	1.61
29	BE	49	THR	C-N	-9.25	1.16	1.34
27	BA	405	U	O3'-P	-9.02	1.50	1.61
41	BX	73	ASP	C-N	8.93	1.54	1.34
27	BA	2625	G	O3'-P	-8.87	1.50	1.61
27	BA	2040	C	O3'-P	-8.84	1.50	1.61
27	BA	271	G	O3'-P	8.79	1.71	1.61
1	AA	1396	A	O3'-P	-8.78	1.50	1.61
27	BA	44	A	O3'-P	-8.69	1.50	1.61
27	BA	712(A)	A	O3'-P	8.59	1.71	1.61
33	BI	49	ALA	C-N	-8.58	1.14	1.34
27	BA	2690	C	O3'-P	-8.45	1.51	1.61
27	BA	52	A	O3'-P	8.36	1.71	1.61
3	AW	16	U	C4-C5	8.30	1.51	1.43
27	BA	1970	A	O3'-P	8.20	1.71	1.61
3	AW	35	A	O3'-P	8.07	1.70	1.61
1	AA	243	A	C3'-O3'	8.06	1.53	1.42
1	AA	913	A	O3'-P	-8.03	1.51	1.61
27	BA	81	G	O3'-P	7.88	1.70	1.61
27	BA	601	C	O3'-P	7.80	1.70	1.61
27	BA	2582	G	O3'-P	7.79	1.70	1.61
27	BA	101	G	N9-C4	7.78	1.44	1.38
27	BA	1681	G	O3'-P	7.70	1.70	1.61
27	BA	2322	A	O3'-P	7.67	1.70	1.61
43	BZ	92	VAL	C-N	-7.54	1.16	1.34
27	BA	2394	C	O3'-P	7.54	1.70	1.61
27	BA	699	A	O3'-P	7.45	1.70	1.61
27	BA	1189	A	O3'-P	7.22	1.69	1.61
7	AD	31	CYS	CB-SG	6.84	1.93	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	BA	776	G	C3'-O3'	6.83	1.51	1.42
1	AA	1085	U	O3'-P	-6.81	1.52	1.61
1	AA	497	A	O3'-P	6.78	1.69	1.61
27	BA	1189	A	C3'-O3'	6.76	1.51	1.42
54	B8	24	ALA	C-N	6.72	1.49	1.34
27	BA	2076	U	O3'-P	-6.62	1.53	1.61
15	AL	23	LYS	C-N	-6.62	1.18	1.34
3	AW	58	A	C5-C6	6.60	1.47	1.41
29	BE	274	GLY	C-N	6.59	1.45	1.33
27	BA	1828	G	O3'-P	6.49	1.69	1.61
1	AA	776	G	O3'-P	6.43	1.68	1.61
27	BA	2835	A	O3'-P	-6.19	1.53	1.61
1	AA	879	C	O3'-P	6.17	1.68	1.61
27	BA	2644	G	O3'-P	-6.16	1.53	1.61
27	BA	101	G	C3'-O3'	6.13	1.50	1.42
27	BA	1597	A	O3'-P	6.06	1.68	1.61
30	BF	103	ASN	C-N	-5.99	1.20	1.34
27	BA	801	G	C3'-O3'	5.98	1.50	1.42
1	AA	804	U	O3'-P	-5.96	1.53	1.61
27	BA	1834	U	O3'-P	5.96	1.68	1.61
27	BA	1917	U	C3'-O3'	5.76	1.50	1.42
27	BA	1237	A	O3'-P	5.70	1.68	1.61
27	BA	1991	U	O3'-P	5.68	1.68	1.61
27	BA	340	A	O3'-P	-5.52	1.54	1.61
27	BA	739	G	N9-C4	5.49	1.42	1.38
27	BA	817	C	C1'-N1	5.47	1.56	1.48
27	BA	212	G	O3'-P	5.46	1.67	1.61
27	BA	944	G	C3'-O3'	5.40	1.49	1.42
1	AA	789	U	C1'-N1	5.39	1.56	1.48
27	BA	613	U	C1'-N1	5.38	1.56	1.48
7	AD	26	CYS	CB-SG	5.38	1.91	1.82
27	BA	990	A	O3'-P	-5.31	1.54	1.61
1	AA	115	G	C3'-O3'	5.31	1.49	1.42
1	AA	366	C	C3'-O3'	5.30	1.49	1.42
27	BA	974(A)	C	C1'-N1	5.21	1.56	1.48
1	AA	703	G	C3'-O3'	5.16	1.49	1.42
1	AA	1101	A	C3'-O3'	5.08	1.49	1.42
27	BA	2447	G	O3'-P	5.02	1.67	1.61
1	AA	687	A	O3'-P	-5.00	1.55	1.61
1	AA	904	C	C1'-N1	5.00	1.56	1.48
17	AN	27	CYS	CB-SG	5.00	1.90	1.82
27	BA	1914	C	C1'-N1	5.00	1.56	1.48

All (1469) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	712(A)	A	P-O3'-C3'	-48.47	61.54	119.70
1	AA	196	A	P-O3'-C3'	44.40	172.99	119.70
3	AW	25	C	O3'-P-O5'	-43.47	21.42	104.00
27	BA	2199	A	O3'-P-O5'	-43.09	22.13	104.00
26	BB	24	G	P-O3'-C3'	29.89	155.56	119.70
1	AA	1030	C	OP2-P-O3'	-27.93	43.76	105.20
29	BE	49	THR	O-C-N	-27.49	68.87	121.10
3	AW	33	U	P-O3'-C3'	27.31	152.47	119.70
3	AW	35	A	P-O3'-C3'	27.09	152.20	119.70
36	BP	83	GLU	O-C-N	-27.06	79.41	122.70
2	AV	25	C	P-O3'-C3'	-26.85	87.48	119.70
1	AA	1030	C	P-O3'-C3'	25.67	150.50	119.70
2	AV	65	G	P-O3'-C3'	25.39	150.17	119.70
20	AQ	22	LEU	CA-C-N	-25.06	62.07	117.20
30	BF	168	ARG	O-C-N	-24.62	83.31	122.70
6	AC	106	VAL	CA-C-N	-24.19	63.99	117.20
27	BA	1055	G	P-O3'-C3'	-23.88	91.05	119.70
1	AA	1211	U	P-O3'-C3'	23.74	148.18	119.70
1	AA	1004	A	P-O3'-C3'	23.17	147.50	119.70
3	AW	17	U	C5-C6-N1	-23.10	111.15	122.70
6	AC	18	TRP	O-C-N	-22.93	86.02	122.70
16	AM	94	ARG	O-C-N	22.84	162.03	123.20
1	AA	983	A	P-O3'-C3'	-22.40	92.83	119.70
1	AA	178	C	P-O3'-C3'	22.27	146.43	119.70
1	AA	1046	A	P-O3'-C3'	-22.25	93.00	119.70
49	B0	18	PRO	O-C-N	-22.14	87.27	122.70
1	AA	1030	C	OP1-P-O3'	21.12	151.67	105.20
27	BA	712(A)	A	O3'-P-O5'	-20.96	64.17	104.00
3	AW	16	U	C5-C6-N1	-20.88	112.26	122.70
16	AM	94	ARG	CA-C-N	-20.79	74.62	116.20
6	AC	106	VAL	C-N-CA	-20.51	70.42	121.70
27	BA	1103	A	P-O3'-C3'	-20.38	95.24	119.70
6	AC	106	VAL	O-C-N	20.35	155.26	122.70
16	AM	94	ARG	C-N-CA	-20.30	79.66	122.30
1	AA	196	A	OP2-P-O3'	-20.19	60.77	105.20
20	AQ	22	LEU	C-N-CA	-20.17	71.27	121.70
3	AW	25	C	P-O3'-C3'	20.11	143.83	119.70
27	BA	2090	G	P-O3'-C3'	19.88	143.56	119.70
1	AA	196	A	O3'-P-O5'	19.61	141.25	104.00
1	AA	436	C	O3'-P-O5'	-19.46	67.02	104.00
20	AQ	22	LEU	O-C-N	19.45	153.82	122.70
41	BX	73	ASP	O-C-N	-18.92	92.43	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	B2	31	ARG	O-C-N	-18.57	93.00	122.70
3	AW	21	A	P-O3'-C3'	18.49	141.89	119.70
1	AA	1085	U	P-O3'-C3'	18.24	141.59	119.70
27	BA	2889	C	OP2-P-O3'	-18.16	65.24	105.20
27	BA	1924	C	P-O3'-C3'	-18.09	98.00	119.70
46	BV	91	THR	CA-C-N	-17.96	77.68	117.20
54	B8	24	ALA	O-C-N	-17.82	94.19	122.70
1	AA	913	A	P-O3'-C3'	17.61	140.84	119.70
27	BA	1189	A	P-O3'-C3'	17.52	140.72	119.70
7	AD	98	GLU	O-C-N	17.28	150.35	122.70
27	BA	2894	G	P-O3'-C3'	-17.16	99.11	119.70
38	BS	72	GLU	O-C-N	-16.96	88.88	121.10
29	BE	49	THR	CA-C-N	16.88	164.37	117.10
27	BA	2447	G	P-O3'-C3'	16.87	139.94	119.70
36	BP	96	VAL	O-C-N	16.82	149.61	122.70
3	AW	72	C	OP2-P-O3'	16.79	142.13	105.20
42	BY	36	GLY	O-C-N	-16.76	95.89	122.70
26	BB	24	G	O3'-P-O5'	16.71	135.76	104.00
1	AA	1337	G	P-O3'-C3'	16.49	139.49	119.70
2	AV	45	G	O3'-P-O5'	16.41	135.19	104.00
27	BA	232	G	P-O3'-C3'	-16.31	100.13	119.70
49	B0	18	PRO	CA-C-N	16.23	152.90	117.20
27	BA	1140	C	C1'-O4'-C4'	-16.22	96.92	109.90
7	AD	187	ARG	O-C-N	16.05	148.39	122.70
27	BA	1103	A	O3'-P-O5'	15.85	134.12	104.00
1	AA	960	U	P-O3'-C3'	15.74	138.59	119.70
27	BA	101	G	N3-C4-C5	-15.61	120.79	128.60
27	BA	1055	G	OP2-P-O3'	15.60	139.51	105.20
29	BE	87	GLU	O-C-N	-15.59	97.76	122.70
1	AA	1182	G	OP2-P-O3'	15.53	139.36	105.20
1	AA	1182	G	P-O3'-C3'	-15.48	101.13	119.70
1	AA	497	A	OP2-P-O3'	-15.29	71.57	105.20
26	BB	59	A	O3'-P-O5'	-15.03	75.44	104.00
1	AA	558	G	OP1-P-O3'	-15.01	72.18	105.20
46	BV	91	THR	C-N-CA	-14.90	84.45	121.70
41	BX	73	ASP	C-N-CA	14.89	158.91	121.70
27	BA	1905	C	P-O3'-C3'	14.80	137.46	119.70
27	BA	2889	C	O3'-P-O5'	14.67	131.87	104.00
27	BA	176	G	P-O3'-C3'	14.65	137.29	119.70
42	BY	36	GLY	C-N-CA	14.61	158.23	121.70
2	AV	25	C	O3'-P-O5'	14.59	131.73	104.00
3	AW	35	A	OP1-P-O3'	14.52	137.15	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	2712	U	P-O3'-C3'	14.51	137.11	119.70
27	BA	101	G	C2-N3-C4	14.46	119.13	111.90
29	BE	49	THR	C-N-CD	-14.46	88.79	120.60
49	B0	18	PRO	C-N-CA	14.23	157.27	121.70
1	AA	869	G	P-O3'-C3'	14.06	136.57	119.70
26	BB	106	G	P-O3'-C3'	-14.04	102.85	119.70
3	AW	65	G	O3'-P-O5'	-14.03	77.35	104.00
1	AA	1107	C	P-O3'-C3'	-13.88	103.04	119.70
1	AA	1211	U	OP2-P-O3'	13.88	135.75	105.20
1	AA	436	C	P-O3'-C3'	-13.77	103.17	119.70
27	BA	340	A	P-O3'-C3'	-13.66	103.31	119.70
1	AA	1278	U	P-O3'-C3'	13.61	136.03	119.70
20	AQ	40	LYS	CA-C-N	-13.59	87.31	117.20
1	AA	405	U	O3'-P-O5'	-13.46	78.43	104.00
1	AA	243	A	P-O3'-C3'	13.43	135.81	119.70
27	BA	2287	A	P-O3'-C3'	-13.31	103.72	119.70
27	BA	1108	U	P-O3'-C3'	13.27	135.63	119.70
1	AA	286	G	P-O3'-C3'	13.23	135.58	119.70
3	AW	58	A	N1-C6-N6	13.16	126.50	118.60
27	BA	1055	G	OP1-P-O3'	-13.12	76.34	105.20
38	BS	31	LYS	O-C-N	-12.97	96.45	121.10
36	BP	96	VAL	CA-C-N	-12.85	88.93	117.20
7	AD	98	GLU	CA-C-N	-12.77	89.11	117.20
3	AW	33	U	OP1-P-O3'	12.75	133.25	105.20
27	BA	1630	G	P-O3'-C3'	12.70	134.94	119.70
2	AV	65	G	OP1-P-O3'	12.57	132.86	105.20
1	AA	288	A	O3'-P-O5'	-12.54	80.17	104.00
27	BA	776	G	P-O3'-C3'	12.50	134.70	119.70
1	AA	813	U	P-O3'-C3'	12.47	134.67	119.70
27	BA	931	G	C1'-O4'-C4'	-12.47	99.92	109.90
54	B8	24	ALA	CA-C-N	12.38	144.44	117.20
3	AW	65	G	OP2-P-O3'	12.37	132.42	105.20
2	AV	25	C	OP1-P-O3'	-12.37	78.00	105.20
27	BA	627	A	C1'-O4'-C4'	-12.23	100.12	109.90
1	AA	983	A	OP2-P-O3'	12.21	132.05	105.20
1	AA	38	G	OP1-P-O3'	12.17	131.97	105.20
27	BA	2496	C	P-O3'-C3'	-12.17	105.10	119.70
3	AW	58	A	C4-C5-C6	12.16	123.08	117.00
1	AA	108	G	O3'-P-O5'	12.06	126.92	104.00
27	BA	801	G	P-O3'-C3'	12.06	134.18	119.70
20	AQ	40	LYS	C-N-CA	-12.06	91.55	121.70
1	AA	703	G	P-O3'-C3'	12.03	134.13	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	AD	187	ARG	CA-C-N	-12.01	90.78	117.20
27	BA	316	C	P-O3'-C3'	-12.00	105.30	119.70
3	AW	17	U	C4-C5-C6	-11.97	112.52	119.70
27	BA	911	A	P-O3'-C3'	11.96	134.06	119.70
27	BA	1266	G	C1'-O4'-C4'	-11.96	100.33	109.90
1	AA	497	A	OP1-P-O3'	11.95	131.50	105.20
1	AA	1046	A	O3'-P-O5'	11.95	126.71	104.00
26	BB	59	A	P-O3'-C3'	11.94	134.03	119.70
27	BA	101	G	N9-C1'-C2'	11.87	129.43	114.00
1	AA	288	A	OP1-P-O3'	11.80	131.16	105.20
27	BA	1586	A	P-O3'-C3'	11.69	133.72	119.70
2	AV	45	G	P-O3'-C3'	11.68	133.72	119.70
27	BA	1545	A	OP2-P-O3'	11.68	130.89	105.20
27	BA	14	A	P-O3'-C3'	11.64	133.67	119.70
3	AW	21	A	OP1-P-O3'	11.60	130.72	105.20
27	BA	1828	G	P-O3'-C3'	11.57	133.59	119.70
1	AA	1337	G	OP2-P-O3'	-11.56	79.77	105.20
2	AV	65	G	OP2-P-O3'	-11.55	79.80	105.20
3	AW	65	G	P-O3'-C3'	-11.50	105.90	119.70
3	AW	46	G	N7-C8-N9	-11.49	107.35	113.10
27	BA	1673	U	C1'-O4'-C4'	-11.49	100.71	109.90
54	B8	24	ALA	C-N-CA	11.48	150.39	121.70
27	BA	809	G	O3'-P-O5'	-11.46	82.22	104.00
27	BA	101	G	C8-N9-C4	-11.46	101.82	106.40
27	BA	148	C	P-O3'-C3'	-11.43	105.99	119.70
27	BA	2199	A	OP2-P-O3'	11.40	130.29	105.20
27	BA	670	A	P-O3'-C3'	11.35	133.31	119.70
27	BA	1247	A	P-O3'-C3'	11.34	133.31	119.70
1	AA	1396	A	P-O3'-C3'	-11.32	106.11	119.70
38	BS	31	LYS	C-N-CD	-11.26	95.82	120.60
1	AA	178	C	OP2-P-O3'	-11.21	80.54	105.20
27	BA	2042	A	C1'-O4'-C4'	-11.19	100.95	109.90
3	AW	1	G	P-O3'-C3'	11.11	133.04	119.70
27	BA	1103	A	OP1-P-O3'	-11.09	80.81	105.20
1	AA	311	C	OP2-P-O3'	11.04	129.49	105.20
27	BA	460	A	P-O3'-C3'	-11.02	106.47	119.70
27	BA	2196	C	P-O3'-C3'	-10.98	106.52	119.70
27	BA	1004	C	P-O3'-C3'	-10.94	106.57	119.70
27	BA	301	G	C1'-O4'-C4'	-10.87	101.20	109.90
27	BA	2832	U	C3'-C2'-C1'	-10.86	92.82	101.50
27	BA	2433	A	P-O3'-C3'	-10.85	106.68	119.70
27	BA	2219	G	P-O3'-C3'	-10.82	106.71	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1345	U	P-O3'-C3'	10.81	132.67	119.70
27	BA	101	G	N3-C4-N9	10.81	132.49	126.00
1	AA	1182	G	OP1-P-O3'	-10.81	81.43	105.20
27	BA	1324	G	P-O3'-C3'	10.76	132.61	119.70
1	AA	983	A	OP1-P-O3'	-10.75	81.54	105.20
1	AA	575	G	P-O3'-C3'	10.75	132.60	119.70
27	BA	1992	G	P-O3'-C3'	10.71	132.55	119.70
3	AW	33	U	O3'-P-O5'	-10.58	83.90	104.00
27	BA	101	G	C4-N9-C1'	10.57	140.24	126.50
27	BA	101	G	C5-C6-N1	10.53	116.77	111.50
27	BA	944	G	P-O3'-C3'	10.48	132.28	119.70
1	AA	1046	A	OP1-P-O3'	-10.41	82.29	105.20
1	AA	1201	A	P-O3'-C3'	10.37	132.15	119.70
3	AW	58	A	C5-C6-N1	-10.37	112.52	117.70
1	AA	121	C	P-O3'-C3'	10.35	132.12	119.70
27	BA	1980	G	P-O3'-C3'	10.32	132.08	119.70
27	BA	2394	C	O3'-P-O5'	10.31	123.60	104.00
1	AA	818	G	O4'-C1'-N9	10.27	116.42	108.20
27	BA	2506	U	P-O3'-C3'	10.26	132.01	119.70
27	BA	340	A	O3'-P-O5'	10.25	123.47	104.00
27	BA	1029	A	P-O3'-C3'	-10.25	107.40	119.70
27	BA	1941	C	C3'-C2'-C1'	-10.21	93.33	101.50
1	AA	944	G	P-O3'-C3'	-10.16	107.50	119.70
7	AD	98	GLU	C-N-CA	-10.13	96.38	121.70
27	BA	2894	G	O3'-P-O5'	-10.12	84.78	104.00
33	BI	49	ALA	CA-C-N	-10.10	94.98	117.20
27	BA	945	A	O4'-C1'-N9	10.09	116.27	108.20
1	AA	178	C	OP1-P-O3'	10.08	127.38	105.20
1	AA	717	C	P-O3'-C3'	-10.07	107.62	119.70
33	BI	49	ALA	C-N-CA	-10.04	96.60	121.70
1	AA	509	A	P-O3'-C3'	10.03	131.74	119.70
3	AW	25	C	OP1-P-O3'	10.02	127.23	105.20
27	BA	1265	A	P-O3'-C3'	10.00	131.70	119.70
1	AA	1377	A	OP2-P-O3'	10.00	127.20	105.20
3	AW	16	U	C4-C5-C6	-9.96	113.72	119.70
1	AA	1064	G	C1'-O4'-C4'	-9.94	101.95	109.90
27	BA	1206	G	C4'-C3'-C2'	-9.93	92.67	102.60
27	BA	1248	G	P-O3'-C3'	9.92	131.60	119.70
7	AD	26	CYS	CA-CB-SG	9.92	131.85	114.00
27	BA	2042	A	O4'-C1'-N9	9.90	116.12	108.20
1	AA	944	G	OP2-P-O3'	9.88	126.94	105.20
26	BB	0	A	P-O3'-C3'	9.87	131.54	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1278	U	OP2-P-O3'	9.86	126.90	105.20
27	BA	242	G	C1'-O4'-C4'	-9.86	102.01	109.90
1	AA	793	U	C1'-O4'-C4'	-9.85	102.02	109.90
27	BA	1559	G	C3'-C2'-C1'	-9.84	93.63	101.50
27	BA	232	G	OP2-P-O3'	9.82	126.80	105.20
1	AA	328	C	P-O3'-C3'	9.81	131.47	119.70
27	BA	1924	C	OP1-P-O3'	-9.79	83.67	105.20
27	BA	386	G	C1'-O4'-C4'	-9.77	102.09	109.90
7	AD	187	ARG	C-N-CA	-9.72	97.39	121.70
1	AA	311	C	O3'-P-O5'	-9.69	85.59	104.00
1	AA	687	A	P-O3'-C3'	9.67	131.30	119.70
27	BA	148	C	O3'-P-O5'	-9.67	85.63	104.00
3	AW	35	A	OP2-P-O3'	-9.66	83.95	105.20
27	BA	30	G	P-O3'-C3'	9.63	131.26	119.70
3	AW	34	G	O3'-P-O5'	9.63	122.29	104.00
27	BA	940	G	P-O3'-C3'	9.58	131.20	119.70
27	BA	1140	C	O4'-C1'-N1	9.58	115.86	108.20
1	AA	1211	U	OP1-P-O3'	-9.53	84.23	105.20
3	AW	44	A	OP2-P-O3'	9.52	126.15	105.20
3	AW	72	C	O3'-P-O5'	-9.51	85.92	104.00
2	AV	7	U	OP1-P-O3'	9.49	126.08	105.20
27	BA	32	C	P-O3'-C3'	9.48	131.07	119.70
29	BE	274	GLY	CA-C-N	-9.48	97.25	116.20
1	AA	813	U	O3'-P-O5'	9.46	121.97	104.00
1	AA	974	A	O3'-P-O5'	9.43	121.92	104.00
1	AA	1337	G	O3'-P-O5'	9.40	121.86	104.00
1	AA	566	G	O3'-P-O5'	9.40	121.85	104.00
1	AA	266	G	P-O3'-C3'	9.38	130.96	119.70
1	AA	143	A	O3'-P-O5'	-9.36	86.22	104.00
27	BA	294	A	C3'-C2'-C1'	-9.35	94.02	101.50
1	AA	366	C	P-O3'-C3'	9.35	130.91	119.70
1	AA	372	C	P-O3'-C3'	9.34	130.91	119.70
1	AA	812	C	P-O3'-C3'	9.33	130.89	119.70
3	AW	34	G	OP2-P-O3'	-9.32	84.69	105.20
27	BA	139	G	P-O3'-C3'	9.29	130.85	119.70
27	BA	1646	C	OP1-P-O3'	9.27	125.59	105.20
27	BA	1819	A	P-O3'-C3'	9.26	130.81	119.70
1	AA	1505	G	P-O3'-C3'	9.25	130.80	119.70
1	AA	1396	A	O3'-P-O5'	-9.24	86.45	104.00
27	BA	2454	G	P-O3'-C3'	-9.23	108.62	119.70
1	AA	1065	U	P-O3'-C3'	9.19	130.72	119.70
7	AD	49	ARG	O-C-N	-9.10	108.15	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	973	A	C4'-C3'-C2'	-9.09	93.51	102.60
27	BA	282	A	C3'-C2'-C1'	-9.09	94.23	101.50
1	AA	1004	A	O3'-P-O5'	-9.08	86.74	104.00
27	BA	421	U	P-O3'-C3'	9.07	130.59	119.70
1	AA	817	C	P-O3'-C3'	9.07	130.59	119.70
26	BB	-1	A	O3'-P-O5'	9.07	121.23	104.00
27	BA	1542	G	C3'-C2'-C1'	-9.06	94.25	101.50
42	BY	36	GLY	CA-C-N	9.06	137.13	117.20
1	AA	914	A	C1'-O4'-C4'	-8.97	102.73	109.90
1	AA	914	A	O4'-C1'-N9	8.97	115.37	108.20
27	BA	2718	G	P-O3'-C3'	8.94	130.43	119.70
26	BB	56	G	P-O3'-C3'	8.93	130.42	119.70
27	BA	1634	A	P-O3'-C3'	8.92	130.40	119.70
1	AA	717	C	OP1-P-O3'	8.90	124.78	105.20
27	BA	800	A	P-O3'-C3'	8.89	130.37	119.70
27	BA	1545	A	P-O3'-C3'	-8.89	109.03	119.70
43	BZ	92	VAL	O-C-N	8.89	136.92	122.70
1	AA	869	G	O3'-P-O5'	8.84	120.80	104.00
27	BA	1070	A	C1'-O4'-C4'	-8.81	102.85	109.90
27	BA	654	A	C3'-C2'-C1'	-8.80	94.46	101.50
1	AA	1298	C	P-O3'-C3'	-8.78	109.16	119.70
27	BA	2090	G	OP2-P-O3'	-8.76	85.93	105.20
51	B5	30	LEU	O-C-N	-8.74	108.71	122.70
1	AA	1502	A	C1'-O4'-C4'	-8.73	102.92	109.90
1	AA	563	A	C1'-O4'-C4'	-8.72	102.92	109.90
27	BA	1183	G	O4'-C1'-N9	8.72	115.18	108.20
1	AA	1298	C	OP2-P-O3'	-8.70	86.06	105.20
27	BA	846	C	P-O3'-C3'	8.70	130.13	119.70
27	BA	1943	U	P-O3'-C3'	8.67	130.10	119.70
1	AA	1117	G	P-O3'-C3'	8.63	130.06	119.70
1	AA	518	C	P-O3'-C3'	8.63	130.05	119.70
27	BA	1955	U	O4'-C1'-N1	8.62	115.10	108.20
27	BA	135	G	C3'-C2'-C1'	-8.60	94.62	101.50
27	BA	712(A)	A	OP1-P-O3'	8.59	124.10	105.20
27	BA	691	C	C3'-C2'-C1'	-8.58	94.64	101.50
1	AA	197	A	P-O3'-C3'	8.58	130.00	119.70
36	BP	96	VAL	C-N-CA	-8.57	100.27	121.70
27	BA	284	U	C1'-O4'-C4'	-8.57	103.04	109.90
41	BX	73	ASP	CA-C-N	8.56	136.04	117.20
27	BA	296	C	O4'-C1'-N1	8.56	115.05	108.20
27	BA	817	C	P-O3'-C3'	8.55	129.97	119.70
27	BA	1742	C	C4'-C3'-C2'	-8.55	94.05	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1347	G	P-O3'-C3'	8.54	129.95	119.70
27	BA	972	G	C4'-C3'-C2'	-8.52	94.08	102.60
1	AA	558	G	OP2-P-O3'	8.51	123.91	105.20
27	BA	444	C	O4'-C1'-N1	8.50	115.00	108.20
27	BA	752	A	P-O3'-C3'	8.48	129.88	119.70
27	BA	265	A	P-O3'-C3'	8.48	129.87	119.70
27	BA	2196	C	OP2-P-O3'	8.46	123.81	105.20
1	AA	436	C	OP2-P-O3'	8.46	123.80	105.20
3	AW	18	G	C5'-C4'-O4'	-8.45	98.96	109.10
27	BA	458	G	P-O3'-C3'	8.42	129.80	119.70
27	BA	1022	G	P-O3'-C3'	8.41	129.80	119.70
27	BA	264	C	P-O3'-C3'	-8.39	109.64	119.70
27	BA	1925	C	C3'-C2'-C1'	-8.39	94.79	101.50
1	AA	1226	C	P-O3'-C3'	8.37	129.74	119.70
1	AA	288	A	P-O3'-C3'	8.36	129.73	119.70
1	AA	365	U	OP1-P-O3'	8.34	123.55	105.20
1	AA	47	C	P-O3'-C3'	8.31	129.67	119.70
27	BA	74	A	P-O3'-C3'	8.30	129.66	119.70
27	BA	2398	U	C3'-C2'-C1'	-8.29	94.86	101.50
5	AB	112	VAL	O-C-N	8.29	135.97	122.70
1	AA	877	C	C3'-C2'-C1'	-8.29	94.87	101.50
1	AA	889	A	P-O3'-C3'	8.29	129.64	119.70
27	BA	1545	A	C1'-O4'-C4'	-8.28	103.27	109.90
1	AA	560	U	P-O3'-C3'	8.28	129.63	119.70
27	BA	83	G	P-O3'-C3'	8.25	129.60	119.70
27	BA	2712	U	OP2-P-O3'	8.23	123.30	105.20
27	BA	973	A	O4'-C1'-N9	8.20	114.76	108.20
27	BA	1419	A	C1'-O4'-C4'	-8.20	103.34	109.90
27	BA	791	C	C1'-O4'-C4'	-8.18	103.35	109.90
1	AA	559	A	P-O3'-C3'	8.18	129.52	119.70
27	BA	960	A	P-O3'-C3'	8.18	129.51	119.70
27	BA	2690	C	O3'-P-O5'	-8.17	88.47	104.00
1	AA	1380	U	P-O3'-C3'	8.16	129.50	119.70
3	AW	72	C	OP1-P-O3'	-8.16	87.25	105.20
27	BA	714	U	C3'-C2'-C1'	-8.15	94.98	101.50
27	BA	1924	C	OP2-P-O3'	8.15	123.14	105.20
1	AA	119	A	P-O3'-C3'	8.15	129.48	119.70
27	BA	1520	U	C3'-C2'-C1'	-8.15	94.98	101.50
27	BA	2218	G	P-O3'-C3'	-8.12	109.96	119.70
27	BA	1742	C	O4'-C1'-N1	8.12	114.69	108.20
27	BA	1183	G	O4'-C4'-C3'	-8.11	95.89	104.00
27	BA	2219	G	N9-C1'-C2'	-8.11	103.08	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1257	U	P-O3'-C3'	8.07	129.38	119.70
27	BA	1954	G	P-O3'-C3'	8.06	129.38	119.70
1	AA	992	U	P-O3'-C3'	8.04	129.35	119.70
27	BA	1955	U	C1'-O4'-C4'	-8.04	103.47	109.90
1	AA	405	U	OP1-P-O3'	8.02	122.84	105.20
27	BA	2857	G	C3'-C2'-C1'	-8.01	95.10	101.50
27	BA	739	G	N3-C4-C5	-7.99	124.60	128.60
27	BA	223	A	P-O3'-C3'	-7.99	110.11	119.70
1	AA	1346	A	P-O3'-C3'	7.98	129.27	119.70
1	AA	484	G	P-O3'-C3'	7.98	129.27	119.70
27	BA	2825	C	C3'-C2'-C1'	-7.98	95.12	101.50
1	AA	558	G	O3'-P-O5'	7.97	119.15	104.00
27	BA	2045	C	C1'-O4'-C4'	-7.97	103.52	109.90
27	BA	1427	A	P-O3'-C3'	7.97	129.26	119.70
26	BB	11	C	OP2-P-O3'	7.96	122.72	105.20
1	AA	246	A	P-O3'-C3'	7.95	129.24	119.70
27	BA	148	C	OP2-P-O3'	7.95	122.68	105.20
27	BA	2287	A	OP2-P-O3'	7.93	122.64	105.20
27	BA	119	A	P-O3'-C3'	7.92	129.21	119.70
1	AA	499	A	P-O3'-C3'	7.90	129.18	119.70
1	AA	535	A	P-O3'-C3'	7.90	129.18	119.70
27	BA	2488	A	C3'-C2'-C1'	-7.89	95.19	101.50
1	AA	1004	A	OP1-P-O3'	7.89	122.56	105.20
27	BA	1525	G	P-O3'-C3'	-7.89	110.23	119.70
27	BA	1552	G	P-O3'-C3'	7.89	129.16	119.70
3	AW	58	A	C6-C5-N7	-7.88	126.78	132.30
3	AW	44	A	O3'-P-O5'	-7.88	89.04	104.00
27	BA	1669	A	C1'-O4'-C4'	-7.88	103.60	109.90
27	BA	1143	A	O4'-C1'-N9	7.88	114.50	108.20
1	AA	1281	U	P-O3'-C3'	7.87	129.14	119.70
26	BB	59	A	OP1-P-O3'	7.87	122.50	105.20
1	AA	429	U	C1'-O4'-C4'	-7.85	103.62	109.90
27	BA	30	G	O3'-P-O5'	-7.84	89.09	104.00
1	AA	274	A	P-O3'-C3'	7.84	129.11	119.70
27	BA	509	C	P-O3'-C3'	-7.84	110.29	119.70
27	BA	1463	C	O4'-C1'-N1	7.84	114.47	108.20
27	BA	832	G	O4'-C1'-N9	7.84	114.47	108.20
27	BA	329	G	P-O3'-C3'	7.83	129.09	119.70
27	BA	1545	A	O3'-P-O5'	-7.82	89.14	104.00
1	AA	60	A	OP1-P-O3'	7.81	122.39	105.20
15	AL	23	LYS	O-C-N	-7.80	110.23	122.70
27	BA	1275	A	P-O3'-C3'	7.80	129.06	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	974(A)	C	C6-N1-C2	-7.79	117.19	120.30
27	BA	331	A	P-O3'-C3'	7.76	129.01	119.70
27	BA	289	A	C1'-O4'-C4'	-7.76	103.69	109.90
27	BA	613	U	O4'-C1'-N1	7.76	114.41	108.20
27	BA	2021	C	N1-C2-O2	7.76	123.56	118.90
3	AW	72	C	P-O3'-C3'	-7.74	110.41	119.70
1	AA	251	G	P-O3'-C3'	7.74	128.99	119.70
27	BA	2433	A	OP2-P-O3'	7.74	122.22	105.20
1	AA	129(A)	G	P-O3'-C3'	7.74	128.98	119.70
27	BA	2810	A	P-O3'-C3'	-7.73	110.43	119.70
1	AA	727	G	C3'-C2'-C1'	-7.72	95.33	101.50
27	BA	961	C	P-O3'-C3'	7.71	128.96	119.70
27	BA	2381	C	P-O3'-C3'	7.71	128.96	119.70
27	BA	931	G	O4'-C1'-N9	7.71	114.37	108.20
27	BA	1100	C	P-O3'-C3'	7.70	128.94	119.70
27	BA	2893	G	C3'-C2'-C1'	-7.70	95.34	101.50
29	BE	274	GLY	O-C-N	-7.70	110.12	123.20
27	BA	2019	A	C3'-C2'-C1'	-7.69	95.34	101.50
1	AA	820	U	P-O3'-C3'	7.69	128.92	119.70
1	AA	965	A	P-O3'-C3'	7.69	128.92	119.70
27	BA	2584	U	C3'-C2'-C1'	-7.68	95.36	101.50
27	BA	120	U	C1'-O4'-C4'	-7.68	103.76	109.90
27	BA	679	C	C3'-C2'-C1'	-7.67	95.37	101.50
27	BA	2626	C	C3'-C2'-C1'	-7.66	95.37	101.50
26	BB	24	G	OP2-P-O3'	-7.64	88.39	105.20
1	AA	190(F)	G	P-O3'-C3'	7.63	128.86	119.70
36	BP	83	GLU	CA-C-N	7.63	133.98	117.20
27	BA	1820	U	P-O3'-C3'	7.63	128.85	119.70
27	BA	530	G	O4'-C1'-N9	7.61	114.29	108.20
27	BA	1255	U	O4'-C1'-N1	7.61	114.29	108.20
27	BA	1630	G	OP1-P-O3'	7.61	121.94	105.20
26	BB	80	U	O4'-C1'-N1	7.60	114.28	108.20
27	BA	1239	G	N9-C1'-C2'	7.59	123.87	114.00
1	AA	1298	C	O3'-P-O5'	7.59	118.41	104.00
1	AA	927	G	C3'-C2'-C1'	-7.58	95.44	101.50
1	AA	701	C	P-O3'-C3'	7.56	128.77	119.70
27	BA	574	C	P-O3'-C3'	7.55	128.76	119.70
1	AA	1049	U	P-O3'-C3'	7.55	128.76	119.70
1	AA	863	U	C1'-O4'-C4'	-7.55	103.86	109.90
43	BZ	92	VAL	CA-C-N	-7.55	100.60	117.20
54	B8	46	LYS	C-N-CA	-7.53	106.49	122.30
27	BA	2049	G	P-O3'-C3'	7.52	128.73	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1964	G	P-O3'-C3'	7.52	128.72	119.70
1	AA	281	G	P-O3'-C3'	7.51	128.72	119.70
10	AG	12	LEU	O-C-N	-7.51	110.68	122.70
27	BA	125	G	C1'-O4'-C4'	-7.50	103.90	109.90
27	BA	1664	A	C3'-C2'-C1'	-7.50	95.50	101.50
27	BA	1239	G	C8-N9-C4	-7.48	103.41	106.40
27	BA	297	C	O3'-P-O5'	7.48	118.21	104.00
26	BB	106	G	OP2-P-O3'	7.47	121.64	105.20
27	BA	2033	A	P-O3'-C3'	7.46	128.66	119.70
1	AA	327	A	P-O3'-C3'	7.45	128.63	119.70
27	BA	738	G	C3'-C2'-C1'	7.44	107.45	101.50
1	AA	765	G	O3'-P-O5'	-7.43	89.87	104.00
1	AA	819	A	O4'-C1'-N9	-7.43	102.25	108.20
27	BA	573	G	N9-C1'-C2'	7.41	123.63	114.00
27	BA	1404	C	P-O3'-C3'	7.41	128.59	119.70
27	BA	1772	G	C4'-C3'-C2'	-7.38	95.22	102.60
1	AA	1190	G	P-O3'-C3'	7.37	128.55	119.70
27	BA	196	A	P-O3'-C3'	7.37	128.54	119.70
27	BA	832	G	C1'-O4'-C4'	-7.37	104.01	109.90
27	BA	2448	A	C1'-O4'-C4'	-7.37	104.01	109.90
27	BA	624	C	P-O3'-C3'	7.36	128.53	119.70
27	BA	342	G	O4'-C1'-N9	7.36	114.09	108.20
6	AC	18	TRP	CA-C-N	7.35	133.38	117.20
27	BA	2503	A	C3'-C2'-C1'	-7.35	95.62	101.50
27	BA	1130	U	P-O3'-C3'	7.35	128.52	119.70
27	BA	101	G	N1-C6-O6	-7.34	115.50	119.90
27	BA	1800	C	O4'-C4'-C3'	-7.33	96.67	104.00
33	BI	49	ALA	O-C-N	7.33	134.43	122.70
1	AA	365	U	P-O3'-C3'	-7.32	110.92	119.70
27	BA	527	C	P-O3'-C3'	7.31	128.47	119.70
27	BA	559	G	P-O3'-C3'	7.31	128.47	119.70
27	BA	1466	G	P-O3'-C3'	-7.31	110.93	119.70
1	AA	569	C	P-O3'-C3'	-7.31	110.93	119.70
27	BA	103	A	P-O3'-C3'	7.31	128.47	119.70
27	BA	2589	A	C4'-C3'-C2'	-7.31	95.29	102.60
1	AA	1085	U	O3'-P-O5'	7.29	117.85	104.00
1	AA	993	G	P-O3'-C3'	7.28	128.44	119.70
1	AA	501	C	O4'-C1'-N1	7.27	114.02	108.20
1	AA	569	C	OP2-P-O3'	7.27	121.19	105.20
1	AA	1301	U	C1'-O4'-C4'	-7.27	104.09	109.90
27	BA	1249	U	O4'-C1'-N1	7.27	114.01	108.20
54	B8	46	LYS	CA-C-N	-7.26	101.67	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	101	G	N7-C8-N9	7.26	116.73	113.10
27	BA	809	G	P-O3'-C3'	7.26	128.41	119.70
27	BA	1938	A	P-O3'-C3'	7.25	128.40	119.70
1	AA	286	G	OP1-P-O3'	7.24	121.14	105.20
1	AA	879	C	P-O3'-C3'	-7.24	111.01	119.70
1	AA	497	A	P-O3'-C3'	-7.24	111.01	119.70
1	AA	869	G	OP1-P-O3'	-7.24	89.27	105.20
27	BA	2059	A	C1'-O4'-C4'	-7.24	104.11	109.90
27	BA	1706	U	P-O3'-C3'	7.24	128.38	119.70
27	BA	8	A	P-O3'-C3'	7.22	128.37	119.70
1	AA	51	A	P-O3'-C3'	7.22	128.36	119.70
27	BA	1237	A	C1'-O4'-C4'	-7.22	104.13	109.90
27	BA	1363	C	C3'-C2'-C1'	-7.21	95.73	101.50
1	AA	851	G	C4'-C3'-C2'	-7.20	95.40	102.60
27	BA	363(F)	A	C3'-C2'-C1'	-7.19	95.75	101.50
38	BS	31	LYS	CA-C-N	7.19	137.22	117.10
27	BA	2848	G	C3'-C2'-C1'	-7.18	95.75	101.50
27	BA	2080	G	C1'-O4'-C4'	-7.18	104.16	109.90
27	BA	340	A	OP1-P-O3'	-7.16	89.44	105.20
27	BA	1826	G	O4'-C1'-N9	7.16	113.93	108.20
1	AA	1145	C	P-O3'-C3'	7.16	128.29	119.70
27	BA	2055	C	P-O3'-C3'	7.14	128.27	119.70
1	AA	311	C	P-O3'-C3'	-7.14	111.13	119.70
27	BA	2035	G	N3-C4-N9	7.14	130.28	126.00
27	BA	804	A	C1'-O4'-C4'	-7.13	104.19	109.90
27	BA	1190	G	C5'-C4'-O4'	7.13	117.66	109.10
27	BA	2734	A	C3'-C2'-C1'	-7.13	95.79	101.50
27	BA	2769	C	OP2-P-O3'	7.13	120.89	105.20
1	AA	5	U	P-O3'-C3'	7.13	128.26	119.70
27	BA	1449	A	P-O3'-C3'	-7.13	111.14	119.70
1	AA	108	G	OP1-P-O3'	-7.12	89.54	105.20
1	AA	258	G	C1'-O4'-C4'	-7.12	104.21	109.90
27	BA	128	C	P-O3'-C3'	7.12	128.24	119.70
29	BE	49	THR	C-N-CA	7.12	151.89	122.00
27	BA	13	A	P-O3'-C3'	7.11	128.23	119.70
1	AA	429	U	P-O3'-C3'	7.10	128.22	119.70
27	BA	1183	G	C4'-C3'-C2'	-7.10	95.50	102.60
1	AA	1377	A	OP1-P-O3'	-7.09	89.60	105.20
27	BA	110	G	P-O3'-C3'	7.09	128.21	119.70
1	AA	143	A	OP2-P-O3'	7.09	120.80	105.20
27	BA	1181	C	P-O3'-C3'	7.09	128.21	119.70
27	BA	2589	A	C1'-O4'-C4'	-7.09	104.23	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1085	A	P-O3'-C3'	7.08	128.20	119.70
27	BA	2832	U	C1'-O4'-C4'	-7.08	104.24	109.90
1	AA	1278	U	O3'-P-O5'	-7.07	90.56	104.00
27	BA	2286	A	C3'-C2'-C1'	-7.07	95.84	101.50
27	BA	2506	U	OP2-P-O3'	-7.06	89.67	105.20
1	AA	351	G	P-O3'-C3'	7.05	128.16	119.70
1	AA	975	A	P-O3'-C3'	7.05	128.16	119.70
27	BA	71	A	P-O3'-C3'	7.04	128.15	119.70
27	BA	945	A	O4'-C4'-C3'	-7.03	96.97	104.00
27	BA	2295	C	P-O3'-C3'	7.02	128.12	119.70
1	AA	1522	U	O4'-C1'-N1	7.00	113.80	108.20
27	BA	2076	U	P-O3'-C3'	6.99	128.09	119.70
27	BA	1968	G	C3'-C2'-C1'	-6.99	95.91	101.50
1	AA	879	C	O3'-P-O5'	6.98	117.27	104.00
26	BB	119	A	C3'-C2'-C1'	-6.98	95.91	101.50
1	AA	428	G	P-O3'-C3'	6.98	128.08	119.70
27	BA	2545	G	P-O3'-C3'	-6.98	111.33	119.70
1	AA	1361	G	P-O3'-C3'	6.97	128.07	119.70
1	AA	202	U	P-O3'-C3'	6.97	128.06	119.70
27	BA	1266	G	P-O3'-C3'	6.97	128.06	119.70
27	BA	101	G	C8-N9-C1'	-6.97	117.94	127.00
27	BA	289	A	O4'-C1'-N9	6.96	113.77	108.20
27	BA	830	G	P-O3'-C3'	6.96	128.05	119.70
1	AA	1498	U	P-O3'-C3'	6.95	128.04	119.70
27	BA	1251	C	C1'-O4'-C4'	-6.95	104.34	109.90
27	BA	1673	U	O4'-C1'-N1	6.95	113.76	108.20
26	BB	106	G	OP1-P-O3'	-6.94	89.93	105.20
27	BA	1163	G	P-O3'-C3'	-6.94	111.37	119.70
1	AA	1532	U	O4'-C1'-N1	6.93	113.74	108.20
27	BA	1150	C	O3'-P-O5'	6.92	117.14	104.00
27	BA	204	A	P-O3'-C3'	6.91	128.00	119.70
27	BA	2042	A	C5'-C4'-O4'	6.91	117.40	109.10
1	AA	914	A	C4'-C3'-C2'	-6.91	95.69	102.60
26	BB	66	A	P-O3'-C3'	6.91	127.99	119.70
1	AA	1504	G	P-O3'-C3'	6.91	127.99	119.70
27	BA	971	C	O4'-C1'-N1	6.91	113.72	108.20
27	BA	1265	A	C1'-O4'-C4'	-6.90	104.38	109.90
27	BA	51	G	C3'-C2'-C1'	6.89	107.01	101.50
27	BA	223	A	C1'-O4'-C4'	-6.88	104.39	109.90
27	BA	1546	C	P-O3'-C3'	-6.88	111.44	119.70
1	AA	770	C	O4'-C1'-N1	6.88	113.70	108.20
1	AA	1224	G	C1'-O4'-C4'	-6.88	104.40	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	615	G	C3'-C2'-C1'	6.87	107.00	101.50
1	AA	701	C	C1'-O4'-C4'	-6.87	104.41	109.90
27	BA	2756	U	C1'-O4'-C4'	-6.87	104.41	109.90
1	AA	591	U	O4'-C1'-N1	6.86	113.69	108.20
1	AA	891	U	O4'-C1'-N1	6.86	113.69	108.20
27	BA	2834	G	C4'-C3'-C2'	-6.86	95.74	102.60
27	BA	1980	G	O4'-C1'-N9	-6.86	102.71	108.20
46	BV	91	THR	O-C-N	6.86	133.67	122.70
27	BA	264	C	O3'-P-O5'	-6.86	90.97	104.00
27	BA	2451	A	P-O3'-C3'	6.86	127.93	119.70
27	BA	2595	G	C3'-C2'-C1'	-6.85	96.02	101.50
27	BA	1210	A	P-O3'-C3'	6.85	127.92	119.70
27	BA	2240	C	C1'-O4'-C4'	-6.84	104.43	109.90
27	BA	223	A	OP1-P-O3'	6.84	120.25	105.20
27	BA	1914	C	O4'-C1'-C2'	-6.84	98.96	105.80
27	BA	2432	A	C1'-O4'-C4'	-6.84	104.43	109.90
27	BA	215	G	P-O3'-C3'	6.83	127.90	119.70
1	AA	818	G	C1'-O4'-C4'	-6.83	104.44	109.90
27	BA	945	A	C1'-O4'-C4'	-6.83	104.44	109.90
27	BA	1180	C	P-O3'-C3'	6.82	127.88	119.70
27	BA	1779	U	C3'-C2'-C1'	-6.82	96.05	101.50
1	AA	1528	U	P-O3'-C3'	6.81	127.87	119.70
27	BA	739	G	C3'-C2'-C1'	6.80	106.94	101.50
1	AA	877	C	C4'-C3'-C2'	-6.79	95.81	102.60
27	BA	176	G	OP1-P-O3'	6.79	120.14	105.20
27	BA	2258	C	C1'-O4'-C4'	-6.79	104.47	109.90
27	BA	2258	C	O4'-C1'-N1	6.79	113.63	108.20
27	BA	2448	A	O4'-C1'-N9	6.79	113.63	108.20
27	BA	1030	G	O3'-P-O5'	-6.78	91.11	104.00
27	BA	1475	G	C3'-C2'-C1'	-6.78	96.08	101.50
27	BA	787	U	O4'-C4'-C3'	-6.77	97.23	104.00
27	BA	1255	U	P-O3'-C3'	-6.77	111.58	119.70
1	AA	318	G	O4'-C1'-N9	6.76	113.61	108.20
27	BA	1742	C	O4'-C4'-C3'	-6.76	97.24	104.00
27	BA	1449	A	OP2-P-O3'	6.76	120.06	105.20
27	BA	232	G	OP1-P-O3'	-6.75	90.34	105.20
1	AA	1502	A	O4'-C1'-N9	6.74	113.59	108.20
27	BA	468	G	OP2-P-O3'	6.74	120.04	105.20
27	BA	587	C	P-O3'-C3'	6.74	127.79	119.70
27	BA	1800	C	C3'-C2'-C1'	-6.73	96.11	101.50
27	BA	1179	C	P-O3'-C3'	6.72	127.77	119.70
27	BA	886	C	P-O3'-C3'	6.72	127.76	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	90	U	P-O3'-C3'	6.71	127.76	119.70
27	BA	2047	U	P-O3'-C3'	6.71	127.75	119.70
27	BA	1905	C	OP2-P-O3'	-6.71	90.44	105.20
27	BA	2508	G	N9-C1'-C2'	-6.70	104.63	112.00
27	BA	740	U	C3'-C2'-C1'	6.70	106.86	101.50
27	BA	1996	C	C5-C6-N1	6.70	124.35	121.00
1	AA	9	G	O4'-C1'-N9	6.69	113.55	108.20
1	AA	974	A	P-O3'-C3'	6.69	127.73	119.70
27	BA	1349	A	O3'-P-O5'	6.68	116.69	104.00
27	BA	788	A	P-O3'-C3'	6.68	127.71	119.70
27	BA	1743	G	N9-C1'-C2'	6.67	122.68	114.00
1	AA	578	C	O4'-C1'-N1	6.66	113.53	108.20
27	BA	1341	U	P-O3'-C3'	6.66	127.69	119.70
27	BA	2451	A	C4'-C3'-C2'	-6.64	95.96	102.60
27	BA	2894	G	OP2-P-O3'	6.63	119.79	105.20
27	BA	761	A	P-O3'-C3'	6.63	127.66	119.70
27	BA	1742	C	C3'-C2'-C1'	-6.63	96.20	101.50
27	BA	2689	U	C1'-O4'-C4'	-6.61	104.61	109.90
27	BA	1423	G	C3'-C2'-C1'	-6.60	96.22	101.50
1	AA	38	G	O3'-P-O5'	-6.60	91.46	104.00
27	BA	152	G	C3'-C2'-C1'	-6.59	96.22	101.50
27	BA	2690	C	P-O3'-C3'	-6.59	111.79	119.70
27	BA	984	A	C4'-C3'-C2'	-6.59	96.01	102.60
27	BA	1618	A	P-O3'-C3'	6.59	127.60	119.70
1	AA	754	C	P-O3'-C3'	6.58	127.60	119.70
27	BA	1004	C	O3'-P-O5'	-6.58	91.49	104.00
1	AA	181	G	P-O3'-C3'	6.58	127.60	119.70
27	BA	1616	A	O4'-C1'-N9	-6.58	102.94	108.20
5	AB	148	TYR	C-N-CA	-6.57	105.26	121.70
27	BA	791	C	P-O3'-C3'	6.57	127.59	119.70
27	BA	1984	G	O4'-C1'-N9	6.57	113.46	108.20
1	AA	60	A	OP2-P-O3'	-6.56	90.76	105.20
27	BA	1834	U	P-O3'-C3'	6.56	127.58	119.70
27	BA	2561	A	C3'-C2'-C1'	-6.56	96.25	101.50
1	AA	356	A	C4'-C3'-C2'	-6.55	96.05	102.60
27	BA	1302	A	P-O3'-C3'	-6.55	111.84	119.70
27	BA	221	A	P-O3'-C3'	6.55	127.56	119.70
1	AA	286	G	O3'-P-O5'	-6.55	91.56	104.00
27	BA	714	U	O4'-C1'-N1	6.54	113.43	108.20
27	BA	973	A	C1'-O4'-C4'	-6.54	104.67	109.90
27	BA	2398	U	C4'-C3'-C2'	-6.53	96.07	102.60
27	BA	1914	C	C2-N1-C1'	6.53	125.98	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1084	G	P-O3'-C3'	6.52	127.53	119.70
27	BA	348	G	P-O3'-C3'	6.52	127.53	119.70
27	BA	2712	U	O3'-P-O5'	-6.51	91.62	104.00
27	BA	2021	C	N3-C2-O2	-6.51	117.34	121.90
43	BZ	92	VAL	C-N-CA	-6.51	105.42	121.70
27	BA	1583	A	C1'-O4'-C4'	-6.51	104.69	109.90
1	AA	405	U	P-O3'-C3'	-6.51	111.89	119.70
27	BA	120	U	P-O3'-C3'	6.51	127.51	119.70
27	BA	71	A	C1'-O4'-C4'	-6.50	104.70	109.90
1	AA	506	G	O4'-C1'-N9	6.50	113.40	108.20
1	AA	884	U	O4'-C1'-N1	6.49	113.39	108.20
27	BA	2644	G	C3'-C2'-C1'	-6.49	96.31	101.50
27	BA	2030	A	P-O3'-C3'	6.48	127.47	119.70
27	BA	2896	C	C3'-C2'-C1'	-6.47	96.32	101.50
1	AA	890	G	C1'-O4'-C4'	-6.47	104.72	109.90
27	BA	1187	G	P-O3'-C3'	6.47	127.46	119.70
27	BA	81	G	P-O3'-C3'	6.46	127.45	119.70
1	AA	1400	C	C3'-C2'-C1'	6.46	106.67	101.50
27	BA	1968	G	O4'-C4'-C3'	-6.46	97.54	104.00
27	BA	2035	G	N3-C4-C5	-6.45	125.37	128.60
1	AA	733	A	O3'-P-O5'	6.44	116.24	104.00
1	AA	873	A	P-O3'-C3'	6.44	127.43	119.70
27	BA	2506	U	OP1-P-O3'	6.44	119.37	105.20
27	BA	817	C	C6-N1-C2	-6.44	117.72	120.30
1	AA	28	G	C3'-C2'-C1'	-6.41	96.37	101.50
27	BA	456	C	O4'-C1'-N1	6.41	113.33	108.20
27	BA	147	U	O4'-C1'-N1	6.41	113.33	108.20
27	BA	1008	C	P-O3'-C3'	6.41	127.39	119.70
45	BU	50	ARG	O-C-N	6.41	132.95	122.70
27	BA	2238	G	C1'-O4'-C4'	-6.41	104.78	109.90
27	BA	1552	G	C3'-C2'-C1'	-6.40	96.38	101.50
1	AA	1398	A	C3'-C2'-C1'	-6.40	96.38	101.50
27	BA	1702	G	C3'-C2'-C1'	-6.40	96.38	101.50
1	AA	501	C	C3'-C2'-C1'	-6.39	96.39	101.50
27	BA	1522	G	C3'-C2'-C1'	-6.39	96.38	101.50
27	BA	713	G	C3'-C2'-C1'	-6.39	96.39	101.50
27	BA	2267	A	O4'-C1'-N9	6.39	113.31	108.20
27	BA	1183	G	C3'-C2'-C1'	-6.39	96.39	101.50
1	AA	859	A	O4'-C1'-N9	6.39	113.31	108.20
26	BB	90	C	O4'-C1'-N1	6.39	113.31	108.20
27	BA	141(A)	C	O4'-C1'-N1	6.39	113.31	108.20
27	BA	1732	A	C1'-O4'-C4'	-6.39	104.79	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1825	A	C1'-O4'-C4'	-6.38	104.79	109.90
27	BA	301	G	O4'-C1'-N9	6.38	113.30	108.20
27	BA	1544	C	O4'-C1'-N1	6.37	113.30	108.20
27	BA	1667	G	C3'-C2'-C1'	6.37	106.59	101.50
1	AA	1532	U	C3'-C2'-C1'	-6.37	96.41	101.50
1	AA	1452	C	C2-N1-C1'	6.36	125.80	118.80
27	BA	1527	G	C8-N9-C4	-6.36	103.86	106.40
27	BA	1239	G	C4-N9-C1'	6.36	134.76	126.50
27	BA	532	A	P-O3'-C3'	6.36	127.33	119.70
27	BA	1980	G	C2'-C3'-O3'	6.35	123.87	113.70
27	BA	1926	U	C3'-C2'-C1'	-6.35	96.42	101.50
27	BA	2345	G	C1'-O4'-C4'	-6.35	104.82	109.90
27	BA	2428	G	C4'-C3'-C2'	-6.34	96.26	102.60
27	BA	1439	A	O4'-C1'-N9	6.34	113.27	108.20
27	BA	1559	G	C4'-C3'-C2'	-6.33	96.27	102.60
27	BA	1747	G	O4'-C1'-N9	6.33	113.27	108.20
27	BA	1536	A	P-O3'-C3'	6.33	127.29	119.70
27	BA	627	A	C4'-C3'-C2'	-6.33	96.27	102.60
27	BA	2542	A	P-O3'-C3'	6.33	127.29	119.70
27	BA	1939	U	O4'-C1'-N1	6.32	113.26	108.20
27	BA	2019	A	P-O3'-C3'	6.32	127.29	119.70
27	BA	1239	G	N3-C4-C5	-6.31	125.44	128.60
1	AA	32	A	C1'-O4'-C4'	-6.31	104.86	109.90
1	AA	723	U	C2-N1-C1'	6.30	125.26	117.70
27	BA	1029	A	OP1-P-O3'	-6.30	91.34	105.20
27	BA	1941	C	C4'-C3'-C2'	-6.30	96.30	102.60
1	AA	1481	U	O4'-C1'-N1	6.30	113.24	108.20
27	BA	1088	A	C1'-O4'-C4'	-6.30	104.86	109.90
27	BA	2517	C	P-O3'-C3'	6.29	127.25	119.70
1	AA	315	A	OP1-P-O3'	6.29	119.04	105.20
27	BA	626	U	O4'-C4'-C3'	-6.29	97.71	104.00
27	BA	1266	G	C4'-C3'-C2'	-6.29	96.31	102.60
27	BA	328	U	C2-N1-C1'	6.28	125.24	117.70
1	AA	917	G	C4'-C3'-C2'	-6.28	96.32	102.60
1	AA	939	G	C1'-O4'-C4'	-6.28	104.88	109.90
27	BA	1542	G	C4'-C3'-C2'	-6.28	96.32	102.60
27	BA	2674	G	P-O3'-C3'	6.28	127.23	119.70
27	BA	1571	A	O4'-C1'-C2'	-6.28	99.52	105.80
1	AA	587	G	O3'-P-O5'	-6.28	92.08	104.00
27	BA	2856	C	C3'-C2'-C1'	-6.28	96.48	101.50
27	BA	460	A	O3'-P-O5'	6.27	115.91	104.00
27	BA	1239	G	N7-C8-N9	6.27	116.23	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1944	U	P-O3'-C3'	6.27	127.22	119.70
1	AA	1453	G	C1'-O4'-C4'	-6.27	104.89	109.90
27	BA	2021	C	C2-N1-C1'	6.27	125.69	118.80
27	BA	574	C	C1'-O4'-C4'	-6.26	104.89	109.90
27	BA	1210	A	C1'-O4'-C4'	-6.26	104.89	109.90
27	BA	1621	U	O4'-C1'-N1	6.26	113.21	108.20
27	BA	102	G	O4'-C4'-C3'	-6.26	97.74	104.00
1	AA	30	U	P-O3'-C3'	6.25	127.20	119.70
1	AA	543	C	O4'-C1'-N1	6.25	113.20	108.20
27	BA	2062	A	O4'-C1'-N9	6.25	113.20	108.20
1	AA	1285	A	P-O3'-C3'	6.25	127.20	119.70
27	BA	1444	G	OP1-P-O3'	6.25	118.94	105.20
27	BA	2267	A	P-O3'-C3'	-6.25	112.20	119.70
1	AA	27	G	P-O3'-C3'	6.24	127.19	119.70
27	BA	676	A	C1'-O4'-C4'	-6.24	104.91	109.90
1	AA	396	G	C1'-O4'-C4'	-6.24	104.91	109.90
1	AA	652	U	O4'-C1'-N1	6.24	113.19	108.20
27	BA	2788	C	C3'-C2'-C1'	-6.24	96.51	101.50
27	BA	1230	C	O4'-C1'-N1	6.23	113.18	108.20
1	AA	353	A	O4'-C1'-N9	6.22	113.18	108.20
27	BA	1970	A	O4'-C1'-N9	6.22	113.18	108.20
27	BA	1189	A	OP1-P-O3'	6.21	118.87	105.20
27	BA	597	U	O4'-C1'-N1	6.21	113.17	108.20
27	BA	1183	G	C5'-C4'-O4'	6.21	116.56	109.10
1	AA	1108	G	C4'-C3'-C2'	-6.21	96.39	102.60
27	BA	1189	A	O3'-P-O5'	-6.21	92.21	104.00
27	BA	322	A	C4'-C3'-C2'	-6.20	96.40	102.60
27	BA	1248	G	N9-C1'-C2'	6.20	122.06	114.00
27	BA	1758	G	O4'-C1'-N9	6.20	113.16	108.20
27	BA	1917	U	P-O3'-C3'	6.20	127.14	119.70
1	AA	587	G	OP2-P-O3'	6.20	118.84	105.20
27	BA	2062	A	C1'-O4'-C4'	-6.20	104.94	109.90
27	BA	527	C	C3'-C2'-C1'	6.20	106.46	101.50
1	AA	915	A	C3'-C2'-C1'	-6.20	96.54	101.50
1	AA	1300	G	P-O3'-C3'	6.20	127.14	119.70
27	BA	1552	G	C4'-C3'-C2'	-6.20	96.41	102.60
1	AA	1397	C	N1-C2-O2	6.19	122.62	118.90
1	AA	573	A	P-O3'-C3'	6.19	127.13	119.70
1	AA	908	A	C3'-C2'-C1'	-6.19	96.55	101.50
27	BA	2394	C	P-O3'-C3'	-6.19	112.28	119.70
1	AA	290	C	C5-C6-N1	6.19	124.09	121.00
1	AA	1004	A	C1'-O4'-C4'	-6.17	104.96	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	532	A	C1'-O4'-C4'	-6.17	104.96	109.90
1	AA	250	A	P-O3'-C3'	6.17	127.10	119.70
27	BA	571	A	C1'-O4'-C4'	-6.16	104.97	109.90
27	BA	525	U	O4'-C1'-N1	6.16	113.13	108.20
27	BA	2091	U	C3'-C2'-C1'	-6.16	96.57	101.50
5	AB	112	VAL	CA-C-N	-6.16	103.66	117.20
27	BA	1585	C	C3'-C2'-C1'	6.16	106.42	101.50
27	BA	535	C	C3'-C2'-C1'	-6.15	96.58	101.50
1	AA	634	C	O4'-C1'-N1	6.15	113.12	108.20
27	BA	777	A	O4'-C1'-N9	6.15	113.12	108.20
1	AA	302	G	C8-N9-C4	-6.14	103.94	106.40
1	AA	871	U	P-O3'-C3'	6.14	127.07	119.70
1	AA	859	A	C1'-O4'-C4'	-6.14	104.99	109.90
27	BA	321	G	C3'-C2'-C1'	6.14	106.41	101.50
1	AA	92	C	O4'-C1'-N1	6.13	113.11	108.20
27	BA	456	C	C4'-C3'-C2'	-6.13	96.47	102.60
27	BA	2252	G	C3'-C2'-C1'	-6.13	96.59	101.50
1	AA	806	C	O4'-C1'-N1	6.13	113.10	108.20
1	AA	108	G	P-O3'-C3'	-6.13	112.35	119.70
1	AA	849	C	O4'-C1'-N1	6.13	113.10	108.20
27	BA	1253	A	N9-C1'-C2'	6.12	121.96	114.00
27	BA	1202	C	C2-N1-C1'	6.12	125.53	118.80
27	BA	1796	U	C1'-O4'-C4'	-6.12	105.01	109.90
27	BA	899	A	C3'-C2'-C1'	-6.11	96.61	101.50
27	BA	2057	A	P-O3'-C3'	-6.11	112.36	119.70
27	BA	2683	C	C4'-C3'-C2'	-6.11	96.49	102.60
27	BA	1313	U	O4'-C1'-N1	6.11	113.09	108.20
3	AW	21	A	O3'-P-O5'	-6.11	92.39	104.00
27	BA	2016	U	P-O3'-C3'	6.11	127.03	119.70
1	AA	372	C	C1'-O4'-C4'	-6.11	105.02	109.90
27	BA	1646	C	O3'-P-O5'	-6.11	92.40	104.00
1	AA	820	U	OP2-P-O3'	6.10	118.62	105.20
27	BA	2219	G	OP1-P-OP2	-6.10	110.46	119.60
27	BA	1124	C	P-O3'-C3'	6.09	127.01	119.70
1	AA	344	A	P-O3'-C3'	6.09	127.00	119.70
27	BA	363(D)	G	O4'-C1'-N9	6.09	113.07	108.20
27	BA	710	G	C3'-C2'-C1'	-6.09	96.63	101.50
27	BA	2692	C	C4'-C3'-C2'	-6.09	96.51	102.60
27	BA	359	A	OP2-P-O3'	-6.08	91.82	105.20
27	BA	2399	G	C3'-C2'-C1'	-6.08	96.64	101.50
27	BA	363(D)	G	C1'-O4'-C4'	-6.07	105.04	109.90
27	BA	974(A)	C	C3'-C2'-C1'	6.07	106.36	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	2886	G	C3'-C2'-C1'	-6.07	96.64	101.50
1	AA	569	C	O3'-P-O5'	-6.07	92.47	104.00
27	BA	687	C	C3'-C2'-C1'	6.07	106.36	101.50
27	BA	2381	C	OP1-P-O3'	6.06	118.53	105.20
27	BA	2090	G	OP1-P-O3'	6.06	118.52	105.20
1	AA	1413	A	C3'-C2'-C1'	-6.05	96.66	101.50
27	BA	793	A	P-O3'-C3'	6.05	126.97	119.70
27	BA	1247	A	O3'-P-O5'	-6.05	92.50	104.00
1	AA	748	C	P-O3'-C3'	6.05	126.96	119.70
27	BA	2267	A	C4'-C3'-C2'	-6.05	96.55	102.60
27	BA	503	A	C3'-C2'-C1'	6.05	106.34	101.50
27	BA	1241	A	C8-N9-C4	-6.05	103.38	105.80
1	AA	672	U	P-O3'-C3'	-6.05	112.44	119.70
1	AA	339	C	O4'-C1'-N1	6.04	113.03	108.20
27	BA	297	C	P-O3'-C3'	-6.04	112.45	119.70
1	AA	917	G	C3'-C2'-C1'	-6.04	96.67	101.50
27	BA	669	G	C3'-C2'-C1'	6.04	106.33	101.50
27	BA	1206	G	C1'-O4'-C4'	-6.03	105.08	109.90
27	BA	2224	G	OP1-P-OP2	-6.03	110.55	119.60
27	BA	2832	U	O4'-C1'-C2'	-6.02	99.78	105.80
27	BA	1912	A	C1'-O4'-C4'	-6.02	105.08	109.90
27	BA	1991	U	C3'-C2'-C1'	-6.02	96.69	101.50
27	BA	1604	C	O4'-C1'-N1	6.01	113.01	108.20
27	BA	1625	C	P-O3'-C3'	6.01	126.92	119.70
1	AA	870	U	C3'-C2'-C1'	6.01	106.31	101.50
27	BA	1131	G	P-O3'-C3'	6.01	126.91	119.70
27	BA	359	A	OP1-P-O3'	6.01	118.42	105.20
1	AA	603	U	C3'-C2'-C1'	-6.01	96.69	101.50
1	AA	727	G	O4'-C4'-C3'	-6.00	98.00	104.00
1	AA	904	C	O4'-C1'-N1	6.00	113.00	108.20
27	BA	945	A	C4'-C3'-C2'	-6.00	96.60	102.60
8	AE	12	LEU	CA-CB-CG	6.00	129.09	115.30
27	BA	270(L)	U	P-O3'-C3'	6.00	126.90	119.70
27	BA	1241	A	N7-C8-N9	5.99	116.80	113.80
27	BA	1664	A	C8-N9-C4	-5.99	103.41	105.80
27	BA	1029	A	OP2-P-O3'	5.99	118.37	105.20
27	BA	148	C	O4'-C1'-N1	5.98	112.99	108.20
1	AA	1297	C	P-O3'-C3'	5.98	126.87	119.70
1	AA	728	A	O4'-C1'-N9	5.97	112.98	108.20
27	BA	294	A	O4'-C4'-C3'	-5.97	98.03	104.00
27	BA	2496	C	OP1-P-O3'	-5.97	92.06	105.20
1	AA	1453	G	O4'-C1'-N9	5.96	112.97	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	296	C	C4'-C3'-C2'	-5.96	96.64	102.60
27	BA	1647	G	P-O3'-C3'	5.96	126.85	119.70
27	BA	1183	G	C1'-O4'-C4'	-5.96	105.13	109.90
27	BA	984	A	C1'-O4'-C4'	-5.96	105.14	109.90
27	BA	787	U	C4'-C3'-C2'	-5.95	96.65	102.60
1	AA	888	G	C5-C6-O6	-5.95	125.03	128.60
27	BA	686	G	OP2-P-O3'	5.95	118.29	105.20
27	BA	2584	U	N1-C1'-C2'	-5.95	105.46	112.00
27	BA	779	U	O4'-C1'-N1	5.94	112.95	108.20
27	BA	1437	C	P-O3'-C3'	5.94	126.83	119.70
27	BA	1207	C	C1'-O4'-C4'	-5.94	105.15	109.90
1	AA	65	U	C3'-C2'-C1'	5.93	106.25	101.50
1	AA	1452	C	N1-C2-O2	5.93	122.46	118.90
27	BA	102	G	O4'-C1'-N9	5.93	112.94	108.20
27	BA	1011	G	C1'-O4'-C4'	-5.93	105.16	109.90
3	AW	15	G	N9-C1'-C2'	-5.92	105.48	112.00
27	BA	351	G	C4'-C3'-C2'	-5.92	96.67	102.60
1	AA	1125	U	P-O3'-C3'	5.92	126.81	119.70
27	BA	1824	G	C4'-C3'-C2'	-5.92	96.68	102.60
27	BA	685	A	P-O3'-C3'	5.91	126.80	119.70
27	BA	787	U	C5'-C4'-O4'	5.91	116.20	109.10
1	AA	740	U	O4'-C1'-N1	5.91	112.93	108.20
27	BA	1206	G	O4'-C1'-N9	5.91	112.93	108.20
26	BB	69	G	P-O3'-C3'	-5.91	112.61	119.70
27	BA	586	A	N9-C1'-C2'	-5.90	105.51	112.00
27	BA	962	G	P-O3'-C3'	5.90	126.78	119.70
27	BA	775	G	C3'-C2'-C1'	5.90	106.22	101.50
27	BA	2245	U	C1'-O4'-C4'	-5.90	105.18	109.90
26	BB	69	G	OP2-P-O3'	5.90	118.18	105.20
1	AA	127	G	C3'-C2'-C1'	-5.89	96.78	101.50
1	AA	510	A	O4'-C1'-N9	5.89	112.92	108.20
27	BA	445	C	C1'-O4'-C4'	-5.89	105.19	109.90
27	BA	1102	C	C2-N1-C1'	5.89	125.28	118.80
1	AA	296	U	O4'-C1'-N1	5.89	112.91	108.20
27	BA	1914	C	C6-N1-C2	-5.89	117.94	120.30
27	BA	767	U	O4'-C1'-N1	5.88	112.91	108.20
1	AA	553	A	O4'-C1'-N9	5.88	112.91	108.20
27	BA	2035	G	C5-C6-N1	5.88	114.44	111.50
1	AA	1094	G	C1'-O4'-C4'	-5.88	105.20	109.90
27	BA	154	G	N3-C4-C5	-5.88	125.66	128.60
27	BA	1239	G	O4'-C1'-N9	5.87	112.90	108.20
1	AA	882	C	O4'-C1'-N1	5.87	112.89	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AV	45	G	OP1-P-O3'	-5.87	92.29	105.20
27	BA	1507	A	C1'-O4'-C4'	-5.87	105.20	109.90
27	BA	1247	A	OP1-P-O3'	5.87	118.11	105.20
1	AA	1255	G	OP2-P-O3'	5.87	118.11	105.20
27	BA	190	A	C1'-O4'-C4'	-5.87	105.21	109.90
27	BA	1342	A	P-O3'-C3'	5.86	126.73	119.70
27	BA	371	A	P-O3'-C3'	5.85	126.72	119.70
27	BA	120	U	O4'-C1'-N1	5.85	112.88	108.20
27	BA	1836	C	C3'-C2'-C1'	-5.84	96.82	101.50
27	BA	1498	C	C2-N1-C1'	5.84	125.22	118.80
27	BA	1489	U	P-O3'-C3'	5.84	126.70	119.70
27	BA	2009	G	OP2-P-O3'	5.83	118.03	105.20
1	AA	367	U	P-O3'-C3'	5.83	126.70	119.70
27	BA	1489	U	C1'-O4'-C4'	-5.83	105.24	109.90
27	BA	1476	C	C1'-O4'-C4'	-5.82	105.24	109.90
27	BA	1482	U	C3'-C2'-C1'	-5.82	96.84	101.50
27	BA	2381	C	OP2-P-O3'	-5.82	92.39	105.20
27	BA	2035	G	C2-N3-C4	5.82	114.81	111.90
27	BA	296	C	O4'-C4'-C3'	-5.81	98.19	104.00
27	BA	1667	G	N3-C4-C5	-5.81	125.69	128.60
27	BA	1808	U	C2-N1-C1'	5.80	124.66	117.70
27	BA	508	G	P-O3'-C3'	5.79	126.65	119.70
27	BA	2009	G	O3'-P-O5'	-5.79	92.99	104.00
27	BA	27	G	C8-N9-C4	-5.79	104.08	106.40
1	AA	607	A	C4'-C3'-C2'	-5.79	96.81	102.60
1	AA	18	C	O4'-C1'-N1	5.78	112.83	108.20
1	AA	1418	A	P-O3'-C3'	5.78	126.64	119.70
27	BA	1809	A	O4'-C1'-N9	5.78	112.83	108.20
27	BA	602	G	P-O3'-C3'	5.78	126.64	119.70
27	BA	371	A	O4'-C1'-N9	5.78	112.82	108.20
1	AA	115	G	OP2-P-O3'	5.78	117.91	105.20
27	BA	1626	G	P-O3'-C3'	5.78	126.63	119.70
27	BA	791	C	C3'-C2'-C1'	5.77	106.12	101.50
27	BA	1181	C	O4'-C1'-N1	5.77	112.82	108.20
27	BA	2895	U	C4'-C3'-C2'	-5.77	96.83	102.60
27	BA	1914	C	N1-C2-O2	5.77	122.36	118.90
1	AA	902	G	P-O3'-C3'	5.76	126.62	119.70
27	BA	264	C	OP2-P-O3'	5.76	117.87	105.20
27	BA	1930	G	P-O3'-C3'	5.76	126.61	119.70
1	AA	542	G	C4'-C3'-C2'	-5.75	96.85	102.60
27	BA	1378	A	P-O3'-C3'	5.75	126.61	119.70
27	BA	2045	C	C5'-C4'-O4'	5.75	116.00	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1193	G	C3'-C2'-C1'	-5.75	96.90	101.50
27	BA	459	U	O4'-C1'-N1	5.75	112.80	108.20
27	BA	2228	G	OP2-P-O3'	5.75	117.84	105.20
27	BA	332	A	P-O3'-C3'	5.74	126.59	119.70
27	BA	472	A	P-O3'-C3'	5.74	126.58	119.70
1	AA	524	G	P-O3'-C3'	5.74	126.58	119.70
1	AA	738	C	C3'-C2'-C1'	-5.73	96.91	101.50
27	BA	2076	U	C3'-C2'-C1'	-5.73	96.92	101.50
38	BS	31	LYS	C-N-CA	5.73	146.07	122.00
27	BA	380	U	C3'-C2'-C1'	-5.73	96.92	101.50
27	BA	1449	A	OP1-P-O3'	-5.73	92.60	105.20
27	BA	1266	G	O4'-C1'-N9	5.72	112.78	108.20
1	AA	413	G	C1'-O4'-C4'	-5.72	105.32	109.90
27	BA	512	G	C8-N9-C4	-5.72	104.11	106.40
26	BB	-1	A	O4'-C1'-N9	5.71	112.77	108.20
27	BA	792	G	C1'-O4'-C4'	-5.71	105.33	109.90
56	BK	86	GLU	CA-C-N	-5.71	104.64	117.20
1	AA	801	U	O4'-C1'-N1	5.71	112.77	108.20
27	BA	130	C	P-O3'-C3'	5.71	126.55	119.70
27	BA	1757	U	C3'-C2'-C1'	-5.71	96.93	101.50
27	BA	1086	A	OP1-P-O3'	5.70	117.74	105.20
27	BA	2545	G	OP2-P-O3'	-5.70	92.66	105.20
1	AA	732	C	O4'-C1'-N1	5.70	112.76	108.20
1	AA	858	G	O3'-P-O5'	-5.70	93.18	104.00
1	AA	1297	C	C3'-C2'-C1'	5.69	106.06	101.50
27	BA	2553	G	C4'-C3'-C2'	-5.69	96.91	102.60
1	AA	586	C	O4'-C1'-N1	5.69	112.75	108.20
27	BA	1132	A	C1'-O4'-C4'	-5.69	105.35	109.90
1	AA	976	G	C1'-O4'-C4'	-5.68	105.35	109.90
27	BA	503	A	P-O3'-C3'	5.68	126.52	119.70
27	BA	2539	C	C4'-C3'-C2'	-5.68	96.92	102.60
1	AA	776	G	OP1-P-O3'	5.68	117.69	105.20
27	BA	817	C	O4'-C1'-N1	5.67	112.74	108.20
27	BA	1669	A	P-O3'-C3'	5.67	126.50	119.70
27	BA	2579	C	C3'-C2'-C1'	-5.67	96.97	101.50
1	AA	1399	C	C1'-O4'-C4'	-5.67	105.37	109.90
27	BA	1251	C	N1-C2-O2	5.67	122.30	118.90
27	BA	2554	U	C4'-C3'-C2'	-5.67	96.93	102.60
27	BA	2825	C	P-O3'-C3'	-5.66	112.91	119.70
27	BA	52	A	O3'-P-O5'	-5.66	93.25	104.00
27	BA	133	C	O4'-C1'-N1	5.66	112.73	108.20
17	AN	27	CYS	CA-CB-SG	5.66	124.18	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	688	U	C1'-O4'-C4'	-5.65	105.38	109.90
27	BA	1653	G	C3'-C2'-C1'	5.65	106.02	101.50
1	AA	508	C	P-O3'-C3'	5.64	126.47	119.70
1	AA	1380	U	C1'-O4'-C4'	-5.64	105.39	109.90
27	BA	2824	C	C3'-C2'-C1'	-5.64	96.98	101.50
1	AA	522	C	C4'-C3'-C2'	-5.64	96.96	102.60
27	BA	498	G	C8-N9-C4	-5.64	104.14	106.40
27	BA	324	A	P-O3'-C3'	5.64	126.47	119.70
1	AA	1192	C	C3'-C2'-C1'	-5.64	96.99	101.50
1	AA	438	G	C3'-C2'-C1'	5.64	106.01	101.50
1	AA	359	U	O4'-C1'-N1	5.63	112.71	108.20
26	BB	0	A	O4'-C1'-N9	5.63	112.71	108.20
27	BA	1019	U	O3'-P-O5'	-5.63	93.30	104.00
1	AA	412	A	C1'-O4'-C4'	-5.63	105.40	109.90
1	AA	944	G	O3'-P-O5'	-5.63	93.31	104.00
1	AA	1301	U	O4'-C1'-N1	5.63	112.70	108.20
27	BA	218	A	C1'-O4'-C4'	-5.63	105.40	109.90
27	BA	1668	A	P-O3'-C3'	5.63	126.45	119.70
27	BA	1914	C	N1-C1'-C2'	5.62	121.31	114.00
27	BA	1437	C	C4'-C3'-C2'	-5.62	96.98	102.60
27	BA	646	A	C3'-C2'-C1'	5.62	106.00	101.50
1	AA	403	C	O4'-C1'-N1	5.62	112.69	108.20
27	BA	911	A	OP2-P-O3'	5.62	117.56	105.20
27	BA	1914	C	N3-C2-O2	-5.62	117.97	121.90
27	BA	2003	G	C1'-O4'-C4'	-5.61	105.41	109.90
1	AA	481	G	C3'-C2'-C1'	5.61	105.99	101.50
1	AA	571	U	C2-N1-C1'	5.61	124.43	117.70
27	BA	352	G	N7-C8-N9	5.61	115.90	113.10
27	BA	1664	A	N7-C8-N9	5.61	116.60	113.80
27	BA	2524	G	C4'-C3'-C2'	-5.61	97.00	102.60
27	BA	101	G	C6-N1-C2	-5.60	121.74	125.10
1	AA	1107	C	OP1-P-O3'	-5.59	92.89	105.20
1	AA	1400	C	P-O3'-C3'	5.59	126.41	119.70
27	BA	2317	C	C4'-C3'-C2'	-5.59	97.00	102.60
27	BA	2295	C	OP1-P-O3'	5.59	117.50	105.20
1	AA	1084	G	C3'-C2'-C1'	5.59	105.97	101.50
27	BA	1984	G	C4'-C3'-C2'	-5.59	97.01	102.60
1	AA	233	C	O4'-C1'-N1	5.59	112.67	108.20
1	AA	290	C	C3'-C2'-C1'	-5.59	97.03	101.50
27	BA	946	G	O4'-C1'-N9	5.59	112.67	108.20
1	AA	365	U	O3'-P-O5'	-5.58	93.39	104.00
1	AA	1397	C	C2-N1-C1'	5.58	124.94	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1451	A	C3'-C2'-C1'	-5.58	97.04	101.50
27	BA	516	C	C6-N1-C2	-5.58	118.07	120.30
27	BA	1070	A	O4'-C1'-N9	5.58	112.66	108.20
27	BA	1924	C	C6-N1-C2	-5.58	118.07	120.30
1	AA	616	G	C3'-C2'-C1'	-5.58	97.04	101.50
1	AA	1117	G	O3'-P-O5'	5.58	114.59	104.00
27	BA	352	G	C8-N9-C4	-5.58	104.17	106.40
27	BA	973	A	C5'-C4'-C3'	5.57	124.92	116.00
27	BA	1442	G	O4'-C1'-N9	5.57	112.66	108.20
1	AA	1064	G	O4'-C1'-N9	5.57	112.65	108.20
27	BA	1970	A	C1'-O4'-C4'	-5.57	105.45	109.90
27	BA	1796	U	O4'-C1'-N1	5.56	112.65	108.20
1	AA	893	C	O4'-C1'-N1	5.56	112.65	108.20
27	BA	316	C	OP2-P-O3'	5.56	117.43	105.20
1	AA	234	C	C3'-C2'-C1'	-5.55	97.06	101.50
1	AA	498	U	C3'-C2'-C1'	5.55	105.94	101.50
27	BA	1498	C	N1-C1'-C2'	5.55	121.22	114.00
27	BA	342	G	O4'-C4'-C3'	-5.55	98.45	104.00
27	BA	270(M)	U	C2-N1-C1'	5.55	124.36	117.70
45	BU	50	ARG	CA-C-N	-5.55	104.99	117.20
27	BA	1249	U	C3'-C2'-C1'	-5.55	97.06	101.50
27	BA	2855	C	C3'-C2'-C1'	-5.55	97.06	101.50
1	AA	709	G	O4'-C1'-N9	5.54	112.64	108.20
27	BA	2545	G	O3'-P-O5'	5.54	114.53	104.00
27	BA	625	G	C3'-C2'-C1'	-5.54	97.07	101.50
27	BA	1730	U	O4'-C1'-N1	5.54	112.63	108.20
27	BA	815	C	O4'-C1'-N1	5.54	112.63	108.20
1	AA	485	G	C1'-O4'-C4'	-5.54	105.47	109.90
27	BA	81	G	OP1-P-O3'	5.54	117.38	105.20
27	BA	530	G	C1'-O4'-C4'	-5.54	105.47	109.90
1	AA	342	C	O4'-C1'-N1	5.53	112.63	108.20
1	AA	827	U	O3'-P-O5'	5.53	114.52	104.00
2	AV	7	U	OP2-P-O3'	-5.53	93.03	105.20
23	AT	84	LEU	CA-CB-CG	5.53	128.02	115.30
27	BA	162	U	C3'-C2'-C1'	5.53	105.92	101.50
27	BA	1509	C	N1-C2-O2	5.53	122.22	118.90
27	BA	176	G	OP2-P-O3'	-5.52	93.05	105.20
1	AA	615	C	O4'-C1'-N1	5.52	112.62	108.20
1	AA	499	A	C1'-O4'-C4'	-5.52	105.48	109.90
1	AA	1256	A	C3'-C2'-C1'	5.51	105.91	101.50
27	BA	1528	A	C5'-C4'-O4'	5.51	115.71	109.10
27	BA	1976	U	C1'-O4'-C4'	-5.51	105.49	109.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1214	A	C1'-O4'-C4'	-5.51	105.49	109.90
27	BA	286	C	O4'-C1'-N1	5.50	112.60	108.20
1	AA	1510	U	C3'-C2'-C1'	-5.50	97.10	101.50
1	AA	1345	U	O3'-P-O5'	-5.50	93.55	104.00
1	AA	276	G	C3'-C2'-C1'	-5.50	97.10	101.50
1	AA	496	A	P-O3'-C3'	5.50	126.29	119.70
27	BA	30	G	C3'-C2'-C1'	5.50	105.90	101.50
27	BA	1924	C	C4'-C3'-C2'	-5.50	97.11	102.60
27	BA	462	C	O4'-C1'-N1	5.49	112.59	108.20
27	BA	1669	A	C4'-C3'-C2'	-5.49	97.11	102.60
1	AA	587	G	P-O3'-C3'	-5.49	113.11	119.70
27	BA	2287	A	OP1-P-O3'	-5.49	93.12	105.20
27	BA	2644	G	OP1-P-O3'	-5.49	93.12	105.20
27	BA	1211	U	P-O3'-C3'	5.49	126.28	119.70
27	BA	288	C	C3'-C2'-C1'	-5.49	97.11	101.50
1	AA	356	A	O4'-C1'-N9	5.48	112.59	108.20
27	BA	134	C	O4'-C1'-N1	5.48	112.59	108.20
26	BB	28	C	O4'-C1'-N1	5.48	112.59	108.20
1	AA	836	G	C4'-C3'-C2'	-5.48	97.12	102.60
27	BA	563	G	N3-C4-C5	-5.47	125.86	128.60
27	BA	1386	C	O4'-C1'-N1	5.47	112.58	108.20
27	BA	137	C	C3'-C2'-C1'	5.47	105.88	101.50
1	AA	656	C	C3'-C2'-C1'	-5.47	97.12	101.50
27	BA	16	G	C5'-C4'-O4'	5.47	115.66	109.10
27	BA	2726	U	C1'-O4'-C4'	-5.47	105.53	109.90
1	AA	652	U	C1'-O4'-C4'	-5.46	105.53	109.90
27	BA	973	A	O4'-C4'-C3'	-5.46	98.53	104.00
27	BA	1404	C	O3'-P-O5'	-5.46	93.62	104.00
27	BA	434	U	C3'-C2'-C1'	5.46	105.86	101.50
1	AA	231	G	C5'-C4'-O4'	5.46	115.65	109.10
27	BA	848	G	C3'-C2'-C1'	-5.46	97.14	101.50
27	BA	458	G	C3'-C2'-C1'	5.45	105.86	101.50
27	BA	1088	A	O4'-C1'-N9	5.45	112.56	108.20
27	BA	1056	G	C1'-O4'-C4'	-5.45	105.54	109.90
27	BA	2718	G	OP1-P-O3'	5.45	117.19	105.20
1	AA	242	C	O4'-C1'-N1	5.45	112.56	108.20
27	BA	564	C	C4'-C3'-C2'	-5.45	97.15	102.60
47	B2	31	ARG	C-N-CA	-5.45	108.07	121.70
1	AA	48	C	P-O3'-C3'	5.45	126.24	119.70
1	AA	28	G	C4'-C3'-C2'	-5.45	97.15	102.60
1	AA	969	A	O4'-C1'-N9	5.45	112.56	108.20
27	BA	1025	G	C4'-C3'-C2'	-5.45	97.15	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	2395	C	C3'-C2'-C1'	-5.45	97.14	101.50
1	AA	1107	C	O3'-P-O5'	5.44	114.34	104.00
27	BA	479	A	O4'-C1'-N9	5.44	112.55	108.20
27	BA	270	A	OP2-P-O3'	5.44	117.17	105.20
27	BA	1206	G	C3'-C2'-C1'	-5.44	97.15	101.50
1	AA	913	A	OP1-P-O3'	5.43	117.16	105.20
27	BA	1935	G	C3'-C2'-C1'	5.43	105.85	101.50
27	BA	1102	C	N1-C2-O2	5.43	122.16	118.90
27	BA	1978	A	P-O3'-C3'	-5.43	113.19	119.70
1	AA	542	G	O4'-C1'-N9	5.43	112.54	108.20
3	AW	46	G	C5-N7-C8	5.43	107.01	104.30
27	BA	47	C	O4'-C1'-N1	5.42	112.54	108.20
5	AB	148	TYR	CA-C-N	-5.42	105.27	117.20
27	BA	8	A	O3'-P-O5'	5.42	114.30	104.00
27	BA	1150	C	P-O3'-C3'	5.42	126.21	119.70
27	BA	1283	G	C3'-C2'-C1'	-5.42	97.16	101.50
1	AA	951	G	C4'-C3'-C2'	-5.42	97.19	102.60
27	BA	774	A	O4'-C1'-N9	5.42	112.53	108.20
27	BA	627	A	O4'-C1'-N9	5.41	112.53	108.20
27	BA	943	U	C4'-C3'-C2'	-5.41	97.19	102.60
27	BA	1286	A	C3'-C2'-C1'	5.41	105.83	101.50
27	BA	2810	A	O3'-P-O5'	5.41	114.28	104.00
1	AA	125	U	O4'-C1'-N1	5.41	112.53	108.20
1	AA	1255	G	OP1-P-O3'	-5.41	93.31	105.20
27	BA	845	G	C3'-C2'-C1'	5.41	105.83	101.50
1	AA	591	U	C3'-C2'-C1'	-5.40	97.18	101.50
27	BA	1767	C	O4'-C1'-N1	5.40	112.52	108.20
27	BA	2310	A	C4'-C3'-C2'	-5.40	97.20	102.60
27	BA	1888	G	O4'-C1'-N9	5.40	112.52	108.20
1	AA	1530	G	C1'-O4'-C4'	-5.40	105.58	109.90
27	BA	1968	G	C4'-C3'-C2'	-5.39	97.21	102.60
27	BA	1420	U	N1-C1'-C2'	5.39	121.01	114.00
27	BA	2267	A	O4'-C4'-C3'	-5.39	98.61	104.00
27	BA	1255	U	O3'-P-O5'	5.39	114.24	104.00
27	BA	32	C	OP1-P-O3'	5.39	117.05	105.20
27	BA	1247	A	C3'-C2'-C1'	5.39	105.81	101.50
27	BA	1313	U	C4'-C3'-C2'	-5.39	97.21	102.60
27	BA	626	U	O4'-C1'-N1	5.38	112.51	108.20
27	BA	1939	U	C3'-C2'-C1'	5.38	105.81	101.50
1	AA	1065	U	C2'-C3'-O3'	5.38	122.31	113.70
27	BA	2442	C	P-O3'-C3'	-5.38	113.24	119.70
51	B5	30	LEU	C-N-CA	5.38	135.15	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	387	U	C1'-O4'-C4'	-5.38	105.60	109.90
27	BA	997	G	C4'-C3'-C2'	-5.38	97.22	102.60
27	BA	1534	G	C4'-C3'-C2'	-5.38	97.22	102.60
27	BA	1835	G	N3-C4-C5	-5.38	125.91	128.60
1	AA	332	G	C3'-C2'-C1'	-5.37	97.20	101.50
1	AA	1532	U	O4'-C4'-C3'	-5.37	98.63	104.00
27	BA	1140	C	C5'-C4'-O4'	5.37	115.54	109.10
1	AA	595	G	C3'-C2'-C1'	5.37	105.79	101.50
27	BA	1520	U	C5-C6-N1	5.37	125.38	122.70
27	BA	1885	A	O4'-C1'-N9	5.37	112.49	108.20
27	BA	2052	G	O4'-C1'-N9	5.37	112.49	108.20
27	BA	498	G	C3'-C2'-C1'	-5.36	97.21	101.50
27	BA	932	G	C3'-C2'-C1'	5.36	105.79	101.50
1	AA	1212	U	P-O3'-C3'	5.36	126.13	119.70
1	AA	1345	U	OP2-P-O3'	5.36	117.00	105.20
27	BA	530	G	P-O3'-C3'	5.36	126.13	119.70
27	BA	1283	G	P-O3'-C3'	-5.36	113.27	119.70
27	BA	1423	G	O4'-C4'-C3'	-5.36	98.64	104.00
27	BA	2676	C	C3'-C2'-C1'	-5.35	97.22	101.50
27	BA	548	A	C3'-C2'-C1'	5.35	105.78	101.50
27	BA	2733	A	C4'-C3'-C2'	-5.35	97.25	102.60
1	AA	403	C	C3'-C2'-C1'	-5.35	97.22	101.50
27	BA	1302	A	O3'-P-O5'	5.35	114.17	104.00
27	BA	2865	U	C1'-O4'-C4'	-5.35	105.62	109.90
27	BA	1206	G	O4'-C4'-C3'	-5.34	98.66	104.00
27	BA	1567	A	C3'-C2'-C1'	5.34	105.78	101.50
27	BA	1600	C	O4'-C1'-N1	5.34	112.48	108.20
27	BA	2441	C	P-O3'-C3'	-5.34	113.29	119.70
27	BA	739	G	N3-C4-N9	5.34	129.21	126.00
27	BA	1190	G	O4'-C4'-C3'	-5.34	98.66	104.00
27	BA	27	G	N3-C4-C5	-5.34	125.93	128.60
1	AA	402	G	C3'-C2'-C1'	-5.34	97.23	101.50
27	BA	566	U	C3'-C2'-C1'	5.34	105.77	101.50
1	AA	792	A	O4'-C1'-N9	5.34	112.47	108.20
1	AA	1331	G	P-O3'-C3'	5.34	126.10	119.70
27	BA	1515	C	P-O3'-C3'	5.34	126.10	119.70
27	BA	1466	G	OP1-P-O3'	5.33	116.94	105.20
27	BA	271(B)	G	P-O3'-C3'	5.33	126.10	119.70
1	AA	679	C	O4'-C1'-N1	5.33	112.46	108.20
1	AA	332	G	C4'-C3'-C2'	-5.32	97.28	102.60
27	BA	456	C	C6-N1-C2	-5.32	118.17	120.30
27	BA	242	G	P-O3'-C3'	5.32	126.09	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	665	C	O4'-C1'-N1	5.32	112.46	108.20
27	BA	2036	C	O4'-C1'-N1	5.32	112.46	108.20
1	AA	680	C	O4'-C1'-N1	5.32	112.45	108.20
27	BA	1163	G	OP2-P-O3'	5.32	116.90	105.20
27	BA	488	G	C4'-C3'-C2'	-5.31	97.29	102.60
27	BA	1727	U	C1'-O4'-C4'	-5.31	105.65	109.90
27	BA	2090	G	O3'-P-O5'	5.31	114.08	104.00
27	BA	889	C	O4'-C1'-N1	5.30	112.44	108.20
27	BA	1626	G	C3'-C2'-C1'	5.30	105.74	101.50
27	BA	2751	G	C1'-O4'-C4'	-5.30	105.66	109.90
1	AA	576	G	C1'-O4'-C4'	-5.30	105.66	109.90
27	BA	2320	A	C3'-C2'-C1'	5.30	105.74	101.50
1	AA	1285	A	C1'-O4'-C4'	-5.30	105.66	109.90
27	BA	594	U	O4'-C1'-N1	5.30	112.44	108.20
27	BA	321	G	P-O3'-C3'	5.30	126.06	119.70
27	BA	218	A	C4'-C3'-C2'	-5.30	97.30	102.60
27	BA	1181	C	C1'-O4'-C4'	-5.29	105.67	109.90
27	BA	2264	C	C4'-C3'-C2'	-5.29	97.31	102.60
27	BA	335	C	O4'-C1'-N1	5.29	112.43	108.20
1	AA	792	A	C1'-O4'-C4'	-5.29	105.67	109.90
27	BA	479	A	C1'-O4'-C4'	-5.29	105.67	109.90
27	BA	2334	G	C1'-O4'-C4'	-5.29	105.67	109.90
1	AA	258	G	O4'-C1'-N9	5.28	112.43	108.20
27	BA	468	G	O3'-P-O5'	-5.28	93.96	104.00
27	BA	1772	G	C5'-C4'-O4'	5.28	115.44	109.10
1	AA	574	A	C8-N9-C4	-5.28	103.69	105.80
27	BA	1546	C	OP1-P-O3'	5.28	116.82	105.20
27	BA	2668	G	C3'-C2'-C1'	-5.28	97.28	101.50
1	AA	904	C	C3'-C2'-C1'	-5.28	97.28	101.50
27	BA	95	G	P-O3'-C3'	-5.28	113.37	119.70
27	BA	1312	U	C3'-C2'-C1'	5.28	105.72	101.50
27	BA	299	A	C8-N9-C4	-5.27	103.69	105.80
1	AA	883	C	O4'-C1'-N1	5.27	112.42	108.20
27	BA	1329	U	P-O3'-C3'	5.27	126.03	119.70
27	BA	987	G	O4'-C1'-N9	5.27	112.42	108.20
27	BA	1402	C	O4'-C1'-N1	5.27	112.42	108.20
27	BA	153	C	O4'-C1'-N1	5.27	112.41	108.20
27	BA	791	C	O4'-C1'-N1	5.26	112.41	108.20
1	AA	1452	C	N1-C1'-C2'	5.26	120.84	114.00
27	BA	612	G	P-O3'-C3'	5.26	126.01	119.70
56	BK	86	GLU	O-C-N	-5.26	114.28	122.70
27	BA	1800	C	C4'-C3'-C2'	-5.26	97.34	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	338	G	C3'-C2'-C1'	5.26	105.70	101.50
27	BA	1570	A	C3'-C2'-C1'	-5.26	97.30	101.50
27	BA	1970	A	P-O3'-C3'	5.26	126.01	119.70
27	BA	1108	U	O3'-P-O5'	5.25	113.98	104.00
27	BA	449(A)	G	C3'-C2'-C1'	5.25	105.70	101.50
27	BA	1996	C	C6-N1-C2	-5.25	118.20	120.30
27	BA	1586	A	OP1-P-O3'	5.25	116.75	105.20
27	BA	661	C	C4'-C3'-C2'	-5.25	97.35	102.60
27	BA	164	U	C3'-C2'-C1'	5.24	105.69	101.50
27	BA	1539	G	C1'-O4'-C4'	-5.24	105.71	109.90
27	BA	1153	C	C2-N1-C1'	5.24	124.56	118.80
56	BK	86	GLU	C-N-CA	-5.24	108.60	121.70
27	BA	1772	G	O4'-C1'-N9	5.24	112.39	108.20
27	BA	2765	A	C3'-C2'-C1'	5.24	105.69	101.50
27	BA	2885	C	C3'-C2'-C1'	-5.24	97.31	101.50
27	BA	270(Z)	U	P-O3'-C3'	5.24	125.98	119.70
27	BA	1800	C	C5'-C4'-O4'	5.24	115.39	109.10
27	BA	570	G	C8-N9-C4	-5.24	104.31	106.40
52	B6	19	GLY	N-CA-C	-5.24	100.01	113.10
27	BA	316	C	OP1-P-O3'	-5.23	93.69	105.20
27	BA	1054	A	C1'-O4'-C4'	-5.23	105.71	109.90
27	BA	2010	G	O4'-C1'-N9	5.23	112.39	108.20
1	AA	366	C	C3'-C2'-C1'	5.23	105.69	101.50
27	BA	1527	G	N7-C8-N9	5.23	115.72	113.10
27	BA	2267	A	C1'-O4'-C4'	-5.23	105.72	109.90
27	BA	2614	A	C3'-C2'-C1'	5.23	105.68	101.50
27	BA	2471	C	C4'-C3'-C2'	-5.23	97.37	102.60
1	AA	574	A	N7-C8-N9	5.23	116.41	113.80
27	BA	750	A	C3'-C2'-C1'	5.23	105.68	101.50
27	BA	935	C	C1'-O4'-C4'	-5.23	105.72	109.90
1	AA	1302	U	P-O3'-C3'	5.22	125.97	119.70
27	BA	1255	U	C5'-C4'-O4'	5.22	115.37	109.10
27	BA	2022	U	N1-C2-O2	5.22	126.45	122.80
10	AG	12	LEU	CA-C-N	5.22	128.68	117.20
27	BA	2508	G	N3-C4-C5	5.22	131.21	128.60
1	AA	511	C	C3'-C2'-C1'	5.22	105.67	101.50
1	AA	974	A	OP1-P-O3'	-5.22	93.72	105.20
27	BA	105	C	O4'-C1'-N1	5.22	112.37	108.20
26	BB	119	A	C4'-C3'-C2'	-5.21	97.39	102.60
27	BA	1554	A	P-O3'-C3'	5.21	125.96	119.70
27	BA	2777	G	C1'-O4'-C4'	-5.21	105.73	109.90
1	AA	137	C	O4'-C1'-N1	5.21	112.37	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1158	C	N1-C2-O2	5.21	122.03	118.90
27	BA	1586	A	C3'-C2'-C1'	5.21	105.67	101.50
1	AA	541	G	C8-N9-C4	-5.21	104.32	106.40
27	BA	1169	G	O4'-C1'-N9	5.21	112.37	108.20
27	BA	2726	U	O4'-C1'-N1	5.21	112.37	108.20
27	BA	14	A	OP1-P-O3'	5.20	116.65	105.20
27	BA	761	A	N7-C8-N9	5.20	116.40	113.80
27	BA	801	G	C2'-C3'-O3'	5.20	122.03	113.70
27	BA	1270	C	P-O3'-C3'	5.20	125.94	119.70
27	BA	1697	G	C3'-C2'-C1'	-5.20	97.34	101.50
27	BA	2022	U	O3'-P-O5'	-5.20	94.12	104.00
1	AA	74	C	O4'-C1'-N1	5.20	112.36	108.20
1	AA	147	G	C3'-C2'-C1'	-5.20	97.34	101.50
1	AA	702	A	C3'-C2'-C1'	5.20	105.66	101.50
1	AA	38	G	OP2-P-O3'	-5.20	93.77	105.20
27	BA	935	C	O4'-C1'-N1	5.19	112.36	108.20
7	AD	31	CYS	CA-CB-SG	5.19	123.34	114.00
27	BA	775	G	C8-N9-C4	-5.19	104.32	106.40
27	BA	135	G	C4'-C3'-C2'	-5.19	97.41	102.60
27	BA	196	A	N9-C1'-C2'	5.19	120.75	114.00
1	AA	204	U	C2-N1-C1'	5.19	123.93	117.70
27	BA	2084	C	P-O3'-C3'	-5.19	113.47	119.70
27	BA	141(A)	C	C6-N1-C2	-5.18	118.23	120.30
27	BA	148	C	C1'-O4'-C4'	-5.18	105.75	109.90
27	BA	616	A	C3'-C2'-C1'	5.18	105.65	101.50
27	BA	2086	U	O4'-C1'-N1	5.18	112.35	108.20
27	BA	1566	A	C1'-O4'-C4'	-5.18	105.75	109.90
27	BA	2234	G	C4'-C3'-C2'	-5.18	97.42	102.60
27	BA	1653	G	P-O3'-C3'	5.18	125.91	119.70
1	AA	918	A	O4'-C1'-N9	5.18	112.34	108.20
27	BA	71	A	O4'-C1'-N9	5.18	112.34	108.20
1	AA	1315	U	O4'-C1'-N1	5.17	112.34	108.20
27	BA	1835	G	C8-N9-C4	-5.17	104.33	106.40
27	BA	1212	G	P-O3'-C3'	5.17	125.91	119.70
1	AA	1362	C	O4'-C1'-N1	5.17	112.34	108.20
27	BA	2403	C	C4'-C3'-C2'	-5.17	97.43	102.60
1	AA	1365	G	N9-C1'-C2'	-5.17	106.32	112.00
27	BA	1961	C	OP2-P-O3'	5.17	116.57	105.20
1	AA	1201	A	C1'-O4'-C4'	-5.17	105.77	109.90
27	BA	1476	C	C5'-C4'-O4'	5.17	115.30	109.10
27	BA	80	G	C3'-C2'-C1'	-5.16	97.37	101.50
27	BA	974(A)	C	N1-C1'-C2'	5.16	120.71	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	764	A	N9-C1'-C2'	5.16	120.71	114.00
27	BA	688	U	O4'-C1'-N1	5.16	112.33	108.20
27	BA	766	C	O4'-C1'-N1	5.16	112.33	108.20
1	AA	1078	U	O4'-C1'-N1	5.16	112.33	108.20
27	BA	95	G	O4'-C4'-C3'	-5.15	98.85	104.00
1	AA	819	A	P-O3'-C3'	5.15	125.88	119.70
1	AA	859	A	C4'-C3'-C2'	-5.15	97.45	102.60
27	BA	242	G	O4'-C1'-N9	5.15	112.32	108.20
27	BA	2007	C	C3'-C2'-C1'	-5.15	97.38	101.50
1	AA	814	A	P-O3'-C3'	5.15	125.88	119.70
27	BA	177	G	P-O3'-C3'	5.15	125.88	119.70
27	BA	1829	A	O4'-C1'-N9	-5.15	104.08	108.20
27	BA	370	G	P-O3'-C3'	5.15	125.88	119.70
1	AA	345	C	P-O3'-C3'	5.15	125.88	119.70
1	AA	908	A	O4'-C1'-N9	5.15	112.32	108.20
27	BA	1297	C	O4'-C1'-N1	5.15	112.32	108.20
27	BA	1983	C	O4'-C1'-N1	5.15	112.32	108.20
27	BA	712	G	C3'-C2'-C1'	-5.15	97.38	101.50
27	BA	2209	C	C4'-C3'-C2'	-5.15	97.45	102.60
27	BA	585	G	O5'-C5'-C4'	-5.14	101.93	111.70
1	AA	21	G	C3'-C2'-C1'	-5.14	97.39	101.50
1	AA	135	C	O4'-C1'-N1	5.14	112.31	108.20
1	AA	827	U	O4'-C1'-N1	5.14	112.31	108.20
27	BA	1206	G	C5'-C4'-O4'	5.14	115.27	109.10
27	BA	2595	G	C4'-C3'-C2'	-5.14	97.46	102.60
27	BA	218	A	O4'-C1'-N9	5.14	112.31	108.20
1	AA	65	U	P-O3'-C3'	5.13	125.86	119.70
27	BA	151	C	O4'-C1'-N1	5.13	112.31	108.20
1	AA	421	U	C3'-C2'-C1'	5.13	105.61	101.50
1	AA	1378	C	N1-C2-O2	5.13	121.98	118.90
27	BA	244	A	C3'-C2'-C1'	-5.13	97.40	101.50
27	BA	602	G	C3'-C2'-C1'	5.13	105.60	101.50
27	BA	1979	C	C4'-C3'-C2'	-5.13	97.47	102.60
27	BA	1265	A	N9-C1'-C2'	5.12	120.66	114.00
27	BA	1351	C	O4'-C1'-N1	5.12	112.30	108.20
27	BA	1640	C	P-O3'-C3'	5.12	125.85	119.70
1	AA	10	A	C4'-C3'-C2'	-5.12	97.48	102.60
27	BA	529	A	P-O3'-C3'	5.12	125.84	119.70
27	BA	2439	A	C8-N9-C4	5.12	107.85	105.80
27	BA	1237	A	P-O3'-C3'	5.12	125.84	119.70
27	BA	2488	A	P-O3'-C3'	-5.12	113.56	119.70
27	BA	188	G	O4'-C1'-N9	5.12	112.29	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1890	A	OP2-P-O3'	-5.12	93.94	105.20
1	AA	1346	A	C1'-O4'-C4'	-5.12	105.81	109.90
27	BA	1520	U	O4'-C1'-N1	5.12	112.29	108.20
27	BA	2495	G	P-O3'-C3'	5.12	125.84	119.70
27	BA	337	C	O4'-C1'-N1	5.11	112.29	108.20
27	BA	740	U	O4'-C1'-N1	5.11	112.29	108.20
27	BA	1559	G	O4'-C1'-C2'	-5.11	100.69	105.80
27	BA	1621	U	C3'-C2'-C1'	-5.11	97.41	101.50
27	BA	2091	U	O4'-C1'-N1	5.11	112.29	108.20
27	BA	817	C	OP1-P-O3'	5.11	116.44	105.20
27	BA	1568	G	C3'-C2'-C1'	5.11	105.59	101.50
27	BA	1998	G	C3'-C2'-C1'	-5.11	97.42	101.50
1	AA	44	G	C3'-C2'-C1'	-5.11	97.42	101.50
27	BA	469	G	N3-C4-C5	-5.11	126.05	128.60
27	BA	560	C	P-O3'-C3'	-5.11	113.57	119.70
27	BA	1653	G	N9-C1'-C2'	5.11	120.64	114.00
27	BA	1779	U	P-O3'-C3'	-5.11	113.57	119.70
27	BA	801	G	O4'-C1'-N9	-5.10	104.12	108.20
1	AA	1304	G	C1'-O4'-C4'	-5.10	105.82	109.90
27	BA	2023	G	C8-N9-C4	-5.10	104.36	106.40
51	B5	30	LEU	CA-C-N	5.10	128.42	117.20
27	BA	1025	G	O4'-C4'-C3'	-5.10	98.90	104.00
27	BA	1302	A	OP1-P-O3'	-5.10	93.98	105.20
27	BA	1491	G	P-O3'-C3'	5.10	125.82	119.70
1	AA	849	C	C4'-C3'-C2'	-5.09	97.51	102.60
1	AA	509	A	C3'-C2'-C1'	-5.09	97.43	101.50
27	BA	912	C	O4'-C1'-N1	5.09	112.27	108.20
27	BA	195	A	O4'-C1'-N9	5.09	112.27	108.20
27	BA	2855	C	C4'-C3'-C2'	-5.09	97.51	102.60
27	BA	984	A	C5'-C4'-C3'	5.09	124.14	116.00
27	BA	1827	C	O4'-C1'-N1	5.09	112.27	108.20
27	BA	2848	G	C1'-O4'-C4'	-5.09	105.83	109.90
27	BA	101	G	P-O3'-C3'	5.08	125.80	119.70
27	BA	601	C	C3'-C2'-C1'	-5.08	97.44	101.50
27	BA	670	A	O4'-C1'-N9	5.08	112.27	108.20
27	BA	1939	U	C2-N1-C1'	5.08	123.80	117.70
27	BA	563	G	C5'-C4'-O4'	5.08	115.20	109.10
27	BA	1915	U	P-O3'-C3'	5.08	125.80	119.70
27	BA	1615	C	C1'-O4'-C4'	-5.08	105.84	109.90
1	AA	314	C	P-O3'-C3'	5.08	125.79	119.70
1	AA	434	U	O4'-C1'-N1	5.08	112.26	108.20
27	BA	249	C	N1-C1'-C2'	-5.08	106.42	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BA	1474	C	O4'-C1'-N1	5.08	112.26	108.20
1	AA	1498	U	C3'-C2'-C1'	5.07	105.56	101.50
27	BA	814	C	C1'-O4'-C4'	-5.07	105.84	109.90
27	BA	1030	G	OP1-P-O3'	5.07	116.36	105.20
1	AA	1158	C	C2-N1-C1'	5.07	124.38	118.80
27	BA	1409	C	O4'-C1'-N1	5.07	112.25	108.20
27	BA	79	G	C3'-C2'-C1'	-5.07	97.45	101.50
27	BA	1288	U	C3'-C2'-C1'	5.07	105.55	101.50
1	AA	918	A	C3'-C2'-C1'	5.07	105.55	101.50
27	BA	1306	C	O4'-C1'-N1	5.07	112.25	108.20
27	BA	2507	C	C4'-C3'-C2'	-5.07	97.53	102.60
1	AA	1485	U	O4'-C4'-C3'	-5.06	98.94	104.00
27	BA	1603	A	C3'-C2'-C1'	5.06	105.55	101.50
27	BA	825	C	P-O3'-C3'	5.06	125.77	119.70
27	BA	1356	G	O4'-C1'-N9	5.06	112.25	108.20
1	AA	1533	C	O4'-C1'-N1	5.06	112.25	108.20
27	BA	247	G	C3'-C2'-C1'	5.06	105.55	101.50
27	BA	2318	G	C3'-C2'-C1'	5.06	105.55	101.50
45	BU	50	ARG	C-N-CA	-5.06	109.05	121.70
1	AA	508	C	C3'-C2'-C1'	5.05	105.54	101.50
27	BA	1968	G	C5'-C4'-O4'	5.05	115.16	109.10
1	AA	615	C	C3'-C2'-C1'	-5.05	97.46	101.50
27	BA	865	C	N1-C2-O2	5.05	121.93	118.90
27	BA	957	A	P-O3'-C3'	5.05	125.76	119.70
27	BA	1266	G	C5'-C4'-C3'	5.05	124.08	116.00
27	BA	1555	G	C8-N9-C4	-5.05	104.38	106.40
1	AA	960	U	C2-N1-C1'	5.05	123.76	117.70
27	BA	82	G	C3'-C2'-C1'	5.05	105.54	101.50
27	BA	1805	U	O4'-C1'-N1	5.05	112.24	108.20
27	BA	1480	G	N7-C8-N9	5.05	115.62	113.10
27	BA	1941	C	N1-C2-O2	5.04	121.93	118.90
27	BA	2045	C	O4'-C1'-N1	5.04	112.24	108.20
1	AA	1339	A	C3'-C2'-C1'	-5.04	97.47	101.50
19	AP	6	LEU	CA-CB-CG	5.04	126.89	115.30
27	BA	1930	G	O4'-C1'-N9	5.04	112.23	108.20
27	BA	1917	U	O4'-C1'-N1	5.04	112.23	108.20
27	BA	2008	C	O4'-C1'-N1	5.04	112.23	108.20
1	AA	972	C	O4'-C1'-N1	5.04	112.23	108.20
27	BA	2227	A	P-O3'-C3'	-5.04	113.65	119.70
27	BA	2418	A	C3'-C2'-C1'	5.04	105.53	101.50
27	BA	2581	G	C3'-C2'-C1'	5.04	105.53	101.50
1	AA	412	A	O4'-C1'-N9	5.04	112.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1514	C	C5-C6-N1	5.04	123.52	121.00
27	BA	32	C	O4'-C1'-N1	5.03	112.23	108.20
1	AA	1020	U	O4'-C1'-N1	5.03	112.23	108.20
27	BA	1335	U	O4'-C1'-N1	5.03	112.22	108.20
1	AA	271	C	O4'-C1'-N1	5.03	112.22	108.20
27	BA	2439	A	N9-C1'-C2'	-5.03	106.47	112.00
27	BA	2791	C	C3'-C2'-C1'	5.03	105.52	101.50
27	BA	280	C	O3'-P-O5'	-5.03	94.45	104.00
1	AA	949	A	C1'-O4'-C4'	-5.03	105.88	109.90
27	BA	1227	A	C3'-C2'-C1'	-5.03	97.48	101.50
27	BA	2578	G	C4'-C3'-C2'	-5.03	97.58	102.60
27	BA	1970	A	OP2-P-O3'	5.02	116.25	105.20
1	AA	1540	U	O4'-C1'-N1	5.02	112.22	108.20
27	BA	1890	A	OP1-P-O3'	5.02	116.25	105.20
27	BA	1926	U	O4'-C1'-N1	5.02	112.22	108.20
27	BA	1657	C	C3'-C2'-C1'	-5.02	97.48	101.50
27	BA	2511	U	C4'-C3'-C2'	-5.02	97.58	102.60
27	BA	270(Q)	C	O4'-C1'-N1	5.02	112.22	108.20
27	BA	977	G	C4'-C3'-C2'	-5.02	97.58	102.60
27	BA	725	G	C3'-C2'-C1'	5.02	105.51	101.50
27	BA	1420	U	P-O3'-C3'	5.02	125.72	119.70
27	BA	1527	G	O4'-C1'-N9	5.02	112.21	108.20
1	AA	38	G	C4'-C3'-C2'	-5.02	97.58	102.60
1	AA	911	U	O4'-C1'-N1	5.01	112.21	108.20
6	AC	91	LEU	CA-CB-CG	5.01	126.83	115.30
27	BA	1966	A	C3'-C2'-C1'	5.01	105.51	101.50
27	BA	1988	C	O4'-C1'-N1	5.01	112.21	108.20
1	AA	302	G	N7-C8-N9	5.01	115.61	113.10
1	AA	662	G	C1'-O4'-C4'	-5.01	105.89	109.90
1	AA	1394	A	C3'-C2'-C1'	5.01	105.51	101.50
27	BA	2824	C	C4'-C3'-C2'	-5.01	97.59	102.60
1	AA	289	G	O4'-C1'-N9	5.01	112.21	108.20
1	AA	308	C	C4'-C3'-C2'	-5.01	97.59	102.60
1	AA	329	A	P-O3'-C3'	5.01	125.71	119.70
27	BA	1313	U	C1'-O4'-C4'	-5.01	105.89	109.90
27	BA	989	G	P-O3'-C3'	5.01	125.71	119.70
27	BA	2862	G	C3'-C2'-C1'	5.01	105.50	101.50
27	BA	201	C	O4'-C1'-N1	5.00	112.20	108.20
27	BA	324	A	C3'-C2'-C1'	5.00	105.50	101.50
27	BA	1050	A	O3'-P-O5'	-5.00	94.50	104.00
27	BA	2394	C	OP2-P-O3'	-5.00	94.19	105.20

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	AW	37	YYG	C15

All (29) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
5	AB	148	TYR	Mainchain
6	AC	106	VAL	Mainchain
6	AC	18	TRP	Mainchain
7	AD	49	ARG	Mainchain
15	AL	23	LYS	Mainchain
16	AM	66	LEU	Mainchain
20	AQ	22	LEU	Mainchain
20	AQ	40	LYS	Mainchain
3	AW	16	U	Sidechain
3	AW	17	U	Sidechain
3	AW	18	G	Sidechain
3	AW	19	G	Sidechain
3	AW	62	A	Sidechain
47	B2	31	ARG	Mainchain
54	B8	46	LYS	Mainchain
28	BD	213	LYS	Peptide
29	BE	274	GLY	Mainchain,Peptide
29	BE	49	THR	Mainchain
30	BF	103	ASN	Mainchain
30	BF	168	ARG	Mainchain,Peptide
32	BH	80	LYS	Mainchain
33	BI	49	ALA	Mainchain
56	BK	86	GLU	Mainchain
36	BP	96	VAL	Peptide
38	BS	31	LYS	Mainchain
41	BX	73	ASP	Mainchain
42	BY	36	GLY	Mainchain

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	32551	0	16464	1922	4

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	AV	1622	0	823	187	0
3	AW	1638	0	835	231	0
4	AX	136	0	63	35	0
5	AB	1900	0	1950	97	0
6	AC	1612	0	1675	104	0
7	AD	1703	0	1762	190	0
8	AE	1146	0	1206	57	0
9	AF	843	0	857	27	0
10	AG	1257	0	1294	138	0
11	AH	1116	0	1177	79	0
12	AI	1011	0	1041	80	0
13	AJ	794	0	840	118	0
14	AK	885	0	904	50	0
15	AL	970	0	1056	79	0
16	AM	997	0	1071	129	0
17	AN	492	0	529	111	0
18	AO	734	0	771	31	0
19	AP	700	0	720	68	0
20	AQ	857	0	929	96	0
21	AR	597	0	668	31	0
22	AS	647	0	672	146	0
23	AT	762	0	859	43	0
24	AU	208	0	221	22	0
25	AY	333	0	0	47	0
26	BB	2637	0	1338	198	0
27	BA	60600	0	30513	10823	139
28	BD	1308	0	1345	1087	0
29	BE	1507	0	1474	1127	3
30	BF	1430	0	1359	1069	0
31	BG	957	0	950	685	0
32	BH	1251	0	1289	743	0
33	BI	1145	0	1225	635	4
34	BN	917	0	896	775	1
35	BO	937	0	993	614	0
36	BP	639	0	605	490	0
37	BQ	1081	0	1048	916	0
38	BS	866	0	867	686	0
39	BT	406	0	360	166	0
40	BW	860	0	911	559	0
41	BX	602	0	558	457	0
42	BY	879	0	860	748	0
43	BZ	1360	0	1377	887	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	BR	855	0	904	580	0
45	BU	978	0	995	924	0
46	BV	787	0	783	652	0
47	B2	494	0	504	385	0
48	B3	477	0	528	446	0
49	B0	641	0	657	501	0
50	B4	604	0	587	493	0
51	B5	457	0	457	293	0
52	B6	431	0	454	288	0
53	B7	383	0	409	396	0
54	B8	496	0	541	358	0
55	B9	285	0	312	203	0
56	BK	999	0	1068	144	0
All	All	142780	0	94554	28108	146

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 119.

All (28108) 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)
51:B5:33:CYS:SG	51:B5:36:CYS:HB2	1.24	1.69
27:BA:2470:G:C2	27:BA:2471:C:C5	1.81	1.68
27:BA:994:C:C2	45:BU:53:LYS:HD3	1.16	1.68
53:B7:30:ILE:HA	53:B7:33:ARG:CD	1.21	1.67
27:BA:2580:U:C6	27:BA:2581:G:C8	1.82	1.66
27:BA:1078:U:P	56:BK:93:LYS:HG3	1.30	1.66
28:BD:73:ILE:HG21	28:BD:95:TYR:CD2	1.30	1.65
2:AV:35:A:H2	4:AX:118:C:C2	1.06	1.64
4:AX:120:A:C2	25:AY:193:HIS:CA	1.75	1.64
29:BE:71:THR:HG21	29:BE:299:SER:CB	1.26	1.64
32:BH:43:THR:HG23	32:BH:52:THR:CG2	1.23	1.63
44:BR:58:GLY:HA2	44:BR:80:PHE:CE2	1.26	1.63
33:BI:95:SER:HA	33:BI:98:ILE:CG1	1.25	1.63
52:B6:32:GLN:CB	52:B6:35:LEU:HD12	1.25	1.63
49:B0:37:LEU:HB3	49:B0:69:PHE:CD2	1.26	1.63
42:BY:103:LEU:HD21	42:BY:112:LEU:CD2	1.25	1.63
42:BY:73:HIS:CA	42:BY:91:LEU:HD11	1.26	1.63
37:BQ:85:ILE:HG22	37:BQ:122:PHE:CG	1.17	1.62
27:BA:2352:A:C2	49:B0:30:VAL:HG12	1.31	1.62
28:BD:92:LEU:HD11	28:BD:102:TYR:CE1	1.29	1.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:10:ILE:CG2	32:BH:14:VAL:HG11	1.27	1.62
46:BV:11:GLN:HE22	46:BV:22:VAL:CG2	1.06	1.62
27:BA:1799:G:C2	28:BD:153:LEU:HD21	1.17	1.61
27:BA:2810:A:C2'	27:BA:2811:G:H5'	1.19	1.61
43:BZ:39:PHE:HA	43:BZ:43:PHE:CE2	1.25	1.61
27:BA:2226:C:C2	27:BA:2227:A:H1'	1.19	1.61
3:AW:25:C:H3'	3:AW:26:G:C8	1.21	1.61
27:BA:2331:G:H4'	49:B0:70:ILE:CG1	1.28	1.60
27:BA:2470:G:N2	27:BA:2471:C:C2	1.68	1.60
28:BD:128:ALA:CB	28:BD:190:THR:HG22	1.15	1.60
27:BA:2785:C:C4'	29:BE:99:VAL:HA	1.17	1.60
36:BP:77:ALA:HA	36:BP:81:VAL:CB	1.23	1.60
42:BY:101:LEU:HD22	42:BY:103:LEU:CG	1.31	1.60
42:BY:45:GLY:HA2	42:BY:62:VAL:CG1	1.29	1.60
36:BP:65:ASP:CB	36:BP:109:LEU:HB3	1.25	1.59
29:BE:71:THR:CG2	29:BE:299:SER:HB2	1.12	1.59
30:BF:147:LEU:CD1	30:BF:156:LEU:HD11	1.17	1.59
27:BA:994:C:C2	45:BU:53:LYS:CD	1.78	1.59
2:AV:35:A:C2	4:AX:118:C:C2	1.88	1.59
55:B9:25:VAL:CB	55:B9:34:GLN:HB3	1.26	1.59
27:BA:535:C:H4'	45:BU:53:LYS:CE	1.26	1.59
27:BA:1665:A:C4'	35:BO:66:LYS:HZ3	1.05	1.59
27:BA:1151:G:C4'	45:BU:81:ASN:HD21	0.97	1.59
42:BY:71:VAL:CG2	42:BY:93:THR:HG23	1.23	1.59
54:B8:50:LEU:CD2	54:B8:51:ALA:H	1.03	1.59
27:BA:2740:A:H2'	27:BA:2741:A:C8	1.13	1.59
27:BA:2360:A:N7	27:BA:2361:A:C8	1.69	1.59
34:BN:13:ASP:HA	34:BN:38:VAL:CG1	1.23	1.59
30:BF:96:LYS:HB2	30:BF:98:ARG:CZ	1.11	1.59
44:BR:38:VAL:CG1	44:BR:39:PRO:HD3	1.30	1.59
44:BR:38:VAL:HG12	44:BR:39:PRO:CD	1.23	1.59
16:AM:91:ARG:HH12	16:AM:103:THR:CG2	1.10	1.59
48:B3:20:LYS:HA	48:B3:23:LEU:CD1	1.30	1.58
55:B9:7:VAL:CG1	55:B9:34:GLN:HG2	1.21	1.58
27:BA:2197:U:C6	27:BA:2224:G:C2	1.85	1.58
32:BH:129:LYS:C	32:BH:130:ILE:HD12	1.21	1.58
42:BY:103:LEU:CD2	42:BY:112:LEU:HD21	1.19	1.58
27:BA:1364:G:H3'	50:B4:3:LYS:CD	1.23	1.58
45:BU:59:ARG:HA	45:BU:62:ILE:CG1	1.15	1.58
34:BN:10:VAL:CG1	34:BN:36:VAL:HG22	1.15	1.58
28:BD:128:ALA:HB2	28:BD:190:THR:CB	1.10	1.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:57:A:H1'	31:BG:13:MET:CE	1.31	1.58
48:B3:23:LEU:CA	48:B3:28:LEU:HD12	1.31	1.58
27:BA:2768:C:N3	27:BA:2769:C:C5	1.71	1.58
27:BA:2331:G:C4'	49:B0:70:ILE:HG13	1.32	1.57
34:BN:65:ASN:HB2	34:BN:69:TYR:CD1	1.31	1.57
45:BU:59:ARG:CA	45:BU:62:ILE:HG12	1.22	1.57
27:BA:2432:A:H2	27:BA:2433:A:C6	1.18	1.57
28:BD:175:LEU:CD2	28:BD:180:VAL:HA	1.32	1.57
27:BA:2227:A:N1	27:BA:2228:G:C6	1.70	1.57
27:BA:2543:G:H2'	27:BA:2544:G:C8	1.40	1.57
27:BA:2832:U:C6	27:BA:2832:U:H5'	1.34	1.57
34:BN:15:ARG:CB	34:BN:43:ARG:HG2	1.20	1.57
45:BU:92:ARG:CA	45:BU:95:LEU:HD11	1.26	1.57
33:BI:68:LEU:CD2	33:BI:108:LEU:HD13	1.16	1.57
43:BZ:69:VAL:CG2	43:BZ:81:VAL:HG13	1.26	1.57
28:BD:213:LYS:CG	28:BD:215:LYS:HB2	1.27	1.57
27:BA:2826:A:C6	27:BA:2827:C:C6	1.90	1.57
27:BA:2093:G:C2	27:BA:2198:A:N6	1.67	1.57
51:B5:45:ILE:HG23	51:B5:52:TYR:CD1	1.36	1.57
52:B6:19:GLY:HA3	52:B6:42:PRO:CG	1.32	1.57
27:BA:6:A:C5'	34:BN:4:ALA:N	1.68	1.57
34:BN:13:ASP:CA	34:BN:38:VAL:CG1	1.78	1.57
34:BN:58:GLU:HA	34:BN:61:VAL:CG2	1.34	1.57
3:AW:25:C:C3'	3:AW:26:G:H8	1.17	1.57
48:B3:8:LEU:CD2	48:B3:31:LEU:HA	1.20	1.56
44:BR:20:LEU:CD1	44:BR:21:TYR:N	1.68	1.56
33:BI:7:LYS:HG3	33:BI:12:LYS:CG	1.25	1.56
50:B4:7:PRO:CD	50:B4:56:VAL:HG21	1.33	1.56
27:BA:2574:G:C4	27:BA:2575:C:C5	1.90	1.56
42:BY:78:THR:CG2	42:BY:88:PRO:HA	1.26	1.56
27:BA:2352:A:C2	49:B0:30:VAL:CG1	1.84	1.56
27:BA:973:A:H61	46:BV:81:ARG:CG	1.08	1.56
53:B7:17:GLY:HA2	53:B7:44:VAL:CG2	1.09	1.55
27:BA:2579:C:C6	27:BA:2579:C:H5''	1.41	1.55
28:BD:128:ALA:CB	28:BD:190:THR:CG2	1.80	1.55
35:BO:35:ILE:CG2	35:BO:63:VAL:HA	1.34	1.55
36:BP:77:ALA:CA	36:BP:81:VAL:HB	1.37	1.55
37:BQ:140:TYR:CD1	37:BQ:147:VAL:HG11	1.33	1.55
27:BA:2209:C:C2'	27:BA:2210:G:H3'	1.36	1.55
30:BF:47:GLY:HA2	30:BF:92:PRO:CG	1.35	1.55
44:BR:77:ARG:HH11	44:BR:77:ARG:CB	1.04	1.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2810:A:H2'	27:BA:2811:G:C5'	1.14	1.55
31:BG:19:GLU:HB3	31:BG:135:VAL:CG2	1.16	1.55
27:BA:2712:U:C2'	27:BA:712(A):A:H5''	1.13	1.55
45:BU:14:HIS:CE1	45:BU:36:PHE:HZ	1.25	1.55
30:BF:81:PRO:HA	30:BF:87:ARG:CG	1.36	1.54
27:BA:593:G:C1'	54:B8:3:LYS:HZ2	1.14	1.54
36:BP:94:ARG:HB2	36:BP:120:LEU:CD2	1.17	1.54
43:BZ:71:MET:CG	43:BZ:78:PRO:HD3	1.09	1.54
45:BU:92:ARG:HA	45:BU:95:LEU:CD1	1.08	1.54
42:BY:101:LEU:CG	42:BY:112:LEU:HD11	1.33	1.54
53:B7:30:ILE:CD1	53:B7:33:ARG:HH11	0.92	1.54
27:BA:2225:A:C4'	27:BA:2226:C:H5'	1.28	1.54
27:BA:2406:U:C4	36:BP:55:GLN:HB3	1.40	1.54
27:BA:1163:G:O3'	27:BA:1164:G:P	1.16	1.54
42:BY:45:GLY:CA	42:BY:62:VAL:HG11	1.36	1.54
55:B9:25:VAL:CB	55:B9:34:GLN:CB	1.82	1.54
27:BA:2556:C:H2'	27:BA:2557:G:C5'	1.34	1.54
27:BA:2785:C:H1'	29:BE:100:TRP:CD1	1.02	1.54
28:BD:103:ILE:CG1	28:BD:104:ILE:CD1	1.80	1.54
35:BO:99:PHE:CD2	39:BT:24:LYS:HE2	1.43	1.54
34:BN:27:ALA:CA	34:BN:30:ALA:CB	1.82	1.53
44:BR:44:LEU:CD1	44:BR:48:VAL:HG21	1.37	1.53
46:BV:19:VAL:CG1	46:BV:21:ARG:NH1	1.69	1.53
42:BY:101:LEU:HD22	42:BY:103:LEU:CD1	1.33	1.53
27:BA:849:A:C2	48:B3:21:ALA:HB1	1.39	1.53
55:B9:7:VAL:CG1	55:B9:34:GLN:CG	1.83	1.53
42:BY:55:PHE:CZ	42:BY:89:ARG:NH1	1.72	1.53
42:BY:73:HIS:C	42:BY:91:LEU:HD11	1.23	1.53
27:BA:2225:A:H4'	27:BA:2226:C:C5'	1.33	1.53
27:BA:2712:U:O3'	27:BA:712(A):A:P	1.16	1.53
45:BU:49:ASP:CA	45:BU:52:ASN:ND2	1.69	1.53
33:BI:95:SER:CB	33:BI:98:ILE:HD12	1.09	1.53
27:BA:1546:C:O3'	27:BA:1547:C:P	1.13	1.53
27:BA:2813:A:H2'	27:BA:2814:C:C6	1.41	1.53
42:BY:55:PHE:CZ	42:BY:89:ARG:CZ	1.88	1.52
35:BO:99:PHE:CE2	39:BT:24:LYS:CE	1.90	1.52
27:BA:16:G:H4'	51:B5:18:MET:SD	1.45	1.52
27:BA:2785:C:H4'	29:BE:99:VAL:CA	1.31	1.52
34:BN:52:GLN:HA	34:BN:55:GLU:CD	1.23	1.52
33:BI:95:SER:CB	33:BI:98:ILE:CD1	1.85	1.52
35:BO:35:ILE:HG23	35:BO:63:VAL:CA	1.37	1.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B3:23:LEU:HA	48:B3:28:LEU:CD1	1.37	1.52
27:BA:2254:C:C2'	27:BA:2255:G:H5'	1.38	1.52
46:BV:50:ASP:CB	46:BV:53:LYS:HG3	1.37	1.52
32:BH:86:LEU:CA	32:BH:148:ARG:NH2	1.68	1.52
45:BU:99:ALA:HB2	45:BU:106:PHE:CE2	1.43	1.52
34:BN:10:VAL:HG11	34:BN:36:VAL:CG2	1.05	1.52
27:BA:1826:G:P	28:BD:227:VAL:HG21	1.49	1.52
31:BG:19:GLU:CB	31:BG:135:VAL:CG2	1.81	1.52
27:BA:2580:U:C5	27:BA:2581:G:C8	1.98	1.52
28:BD:131:LEU:HD13	28:BD:171:VAL:CG2	1.40	1.52
27:BA:85:G:P	42:BY:65:VAL:HG11	1.49	1.52
27:BA:104:U:H3	42:BY:17:HIS:CE1	1.26	1.52
42:BY:63:ILE:CD1	42:BY:75:GLU:N	1.69	1.52
30:BF:81:PRO:CB	30:BF:87:ARG:HB3	1.37	1.51
35:BO:99:PHE:CE2	39:BT:24:LYS:HE2	0.98	1.51
41:BX:24:LEU:O	41:BX:26:PHE:CE1	1.63	1.51
27:BA:2066:C:C2	27:BA:2445:G:N2	1.77	1.51
31:BG:102:GLY:CA	31:BG:134:LEU:HD12	1.39	1.51
29:BE:205:THR:HG21	29:BE:259:HIS:CA	1.40	1.51
30:BF:47:GLY:CA	30:BF:92:PRO:HB2	1.29	1.51
28:BD:213:LYS:HG3	28:BD:215:LYS:CB	1.40	1.51
35:BO:25:LEU:CD2	35:BO:40:VAL:HG23	1.09	1.51
27:BA:2584:U:C6	27:BA:2585:U:C5	1.97	1.51
54:B8:26:LYS:CG	54:B8:45:GLY:H	1.24	1.51
41:BX:4:VAL:HG22	47:B2:24:LYS:NZ	1.23	1.51
27:BA:2403:C:N4	27:BA:2415:G:C6	1.79	1.50
27:BA:2865:U:C4	27:BA:2866:U:H5	1.29	1.50
27:BA:1031:G:C4'	55:B9:8:LYS:HZ3	1.23	1.50
35:BO:63:VAL:CG1	35:BO:102:VAL:HG13	1.33	1.50
35:BO:35:ILE:HD11	35:BO:65:THR:CG2	1.41	1.50
27:BA:2259:G:N2	27:BA:2282:G:C5	1.79	1.50
27:BA:2584:U:C6	27:BA:2585:U:C6	1.95	1.50
27:BA:2657:A:N7	27:BA:2658:C:C5	1.78	1.50
27:BA:2437:U:H5'	27:BA:2598:A:C2	1.47	1.50
28:BD:135:PRO:CG	28:BD:138:THR:HG21	1.39	1.50
48:B3:40:THR:CG2	48:B3:43:ILE:CD1	1.85	1.50
30:BF:22:PHE:CZ	30:BF:115:LEU:HB3	1.45	1.50
46:BV:94:LYS:C	46:BV:95:ILE:CD1	1.76	1.50
27:BA:2785:C:C1'	29:BE:100:TRP:CD1	1.94	1.50
30:BF:91:PRO:HB2	30:BF:92:PRO:CD	1.31	1.50
27:BA:1364:G:C2'	50:B4:3:LYS:HZ2	1.25	1.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:13:ARG:HH11	45:BU:13:ARG:CB	0.86	1.49
40:BW:20:VAL:CG1	40:BW:47:VAL:HG21	1.40	1.49
27:BA:2018:G:N2	45:BU:34:ASN:ND2	1.60	1.49
27:BA:2718:G:H2'	27:BA:2719:G:C8	1.43	1.49
30:BF:36:ARG:CA	30:BF:39:GLN:HE22	1.24	1.49
28:BD:146:LYS:CD	28:BD:147:PRO:HD2	1.39	1.49
45:BU:99:ALA:HB2	45:BU:106:PHE:CZ	1.46	1.49
27:BA:1263:U:H4'	51:B5:16:ARG:CZ	1.42	1.49
27:BA:2225:A:C5'	27:BA:2226:C:H5'	1.39	1.49
27:BA:2850:A:C2	44:BR:61:HIS:CE1	2.00	1.49
28:BD:73:ILE:CG2	28:BD:95:TYR:CD2	1.89	1.49
29:BE:39:GLN:NE2	29:BE:174:LEU:HD11	1.22	1.49
29:BE:74:GLU:HA	29:BE:293:TYR:CD2	1.46	1.49
31:BG:28:GLY:CA	31:BG:69:ILE:HD13	1.38	1.49
27:BA:2353:G:H1	27:BA:2364:C:N4	1.03	1.49
40:BW:32:ALA:CB	40:BW:35:ILE:HD12	1.39	1.49
27:BA:593:G:H1'	54:B8:3:LYS:NZ	1.19	1.49
27:BA:2826:A:C6	27:BA:2827:C:C5	2.01	1.49
34:BN:25:GLN:HA	34:BN:28:GLU:CG	1.41	1.49
27:BA:2197:U:C6	27:BA:2224:G:N2	1.69	1.49
27:BA:2316:C:H5'	31:BG:142:ALA:CB	1.35	1.48
34:BN:15:ARG:HB3	34:BN:43:ARG:CG	1.03	1.48
37:BQ:85:ILE:HG22	37:BQ:122:PHE:CB	1.39	1.48
1:AA:1224:G:N2	1:AA:1362:C:C2	1.69	1.48
27:BA:1782:C:C2	27:BA:2609:U:C6	1.99	1.48
37:BQ:49:VAL:CG2	37:BQ:121:ASP:H	1.26	1.48
27:BA:2581:G:N1	27:BA:2610:C:H6	1.08	1.48
29:BE:44:TYR:HA	29:BE:309:PRO:CD	1.39	1.48
30:BF:225:PRO:C	30:BF:231:ARG:HG3	1.12	1.48
30:BF:47:GLY:CA	30:BF:92:PRO:CG	1.88	1.48
34:BN:12:VAL:C	34:BN:38:VAL:HG13	1.30	1.48
42:BY:73:HIS:CA	42:BY:91:LEU:CD1	1.91	1.48
48:B3:31:LEU:CD2	48:B3:32:GLN:H	1.26	1.48
27:BA:2653:U:C2	27:BA:2654:A:N6	1.82	1.48
34:BN:27:ALA:CA	34:BN:30:ALA:HB3	1.38	1.48
45:BU:74:MET:CE	45:BU:78:THR:HG21	1.00	1.48
4:AX:121:G:N2	25:AY:191:ARG:CA	1.76	1.48
27:BA:2597:G:H2'	27:BA:2598:A:C8	1.47	1.47
40:BW:20:VAL:HG11	40:BW:47:VAL:CG2	1.41	1.47
54:B8:16:ILE:HG13	54:B8:22:VAL:CG2	1.43	1.47
48:B3:20:LYS:C	48:B3:23:LEU:HG	1.31	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:78:THR:HG22	42:BY:88:PRO:CA	1.44	1.47
51:B5:12:SER:HB3	51:B5:15:LYS:NZ	1.22	1.47
27:BA:2286:A:H5'	27:BA:2287:A:C4'	1.38	1.47
27:BA:2432:A:C2	27:BA:2433:A:C6	2.03	1.47
27:BA:2450:A:H5''	27:BA:2497:A:N6	1.24	1.47
29:BE:39:GLN:CD	29:BE:174:LEU:HD11	1.33	1.47
29:BE:210:THR:HA	29:BE:216:ARG:NH2	1.30	1.47
27:BA:2410:G:H2'	27:BA:2411:A:C8	1.47	1.47
45:BU:14:HIS:CE1	45:BU:36:PHE:CZ	2.00	1.47
1:AA:1313:U:H5	22:AS:4:SER:CB	1.00	1.47
54:B8:26:LYS:CD	54:B8:44:LYS:CA	1.89	1.47
36:BP:144:ASP:C	36:BP:145:LEU:HD12	1.27	1.47
29:BE:79:ARG:O	29:BE:187:HIS:CE1	1.67	1.47
29:BE:79:ARG:HH12	29:BE:104:PHE:C	1.02	1.47
27:BA:2579:C:H6	27:BA:2579:C:C5'	1.21	1.46
55:B9:25:VAL:HB	55:B9:34:GLN:CB	1.03	1.46
42:BY:71:VAL:HG22	42:BY:93:THR:CG2	1.41	1.46
53:B7:30:ILE:CA	53:B7:33:ARG:HD2	1.45	1.46
28:BD:175:LEU:CG	28:BD:179:GLU:C	1.81	1.46
46:BV:50:ASP:HB2	46:BV:53:LYS:CG	1.43	1.46
28:BD:74:PRO:CG	28:BD:96:ALA:HB2	1.42	1.46
37:BQ:89:PRO:O	37:BQ:90:PHE:CD1	1.66	1.46
33:BI:103:GLN:HE21	33:BI:110:LEU:N	1.11	1.46
47:B2:55:ARG:CA	47:B2:58:THR:OG1	1.63	1.46
27:BA:2740:A:C2'	27:BA:2741:A:H8	1.25	1.46
34:BN:45:VAL:O	34:BN:46:ILE:CG1	1.63	1.46
27:BA:2470:G:C2	27:BA:2471:C:C4	2.01	1.46
43:BZ:68:ALA:O	43:BZ:69:VAL:CG2	1.64	1.46
29:BE:205:THR:CG2	29:BE:259:HIS:CA	1.94	1.46
38:BS:23:ARG:NH2	38:BS:35:VAL:HG21	1.18	1.46
44:BR:38:VAL:CG1	44:BR:39:PRO:CD	1.84	1.46
27:BA:2258:C:C5	27:BA:2426:A:O4'	1.65	1.46
50:B4:46:GLU:O	50:B4:47:GLU:CG	1.65	1.45
29:BE:72:VAL:C	29:BE:73:ILE:HD13	1.19	1.45
27:BA:2638:G:N2	27:BA:2778:A:H62	1.08	1.45
50:B4:7:PRO:HD2	50:B4:56:VAL:CG2	1.44	1.45
30:BF:52:ALA:HA	30:BF:55:ARG:NE	1.27	1.45
27:BA:2531:A:H2'	27:BA:2532:G:C5'	1.46	1.45
28:BD:158:GLY:HA2	28:BD:194:VAL:CG1	1.46	1.45
40:BW:82:LEU:CD2	40:BW:98:LYS:O	1.64	1.45
54:B8:26:LYS:HG3	54:B8:45:GLY:N	1.27	1.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:80:ILE:CD1	28:BD:80:ILE:O	1.65	1.45
27:BA:2316:C:H4'	31:BG:151:ILE:CD1	1.00	1.45
27:BA:2698:U:O2	27:BA:2699:C:C6	1.69	1.45
36:BP:65:ASP:HB3	36:BP:109:LEU:CB	1.46	1.44
36:BP:94:ARG:HD3	36:BP:120:LEU:CD2	1.40	1.44
1:AA:1319:A:H4'	22:AS:70:LYS:NZ	1.26	1.44
27:BA:1080:C:C4'	56:BK:126:LYS:O	1.64	1.44
27:BA:2416:C:OP1	36:BP:51:PHE:CE2	1.69	1.44
27:BA:2652:C:C6	27:BA:2653:U:C5	2.05	1.44
31:BG:49:PRO:HB3	31:BG:72:LYS:C	1.36	1.44
27:BA:2570:G:H2'	27:BA:2571:C:C6	1.52	1.44
27:BA:2626:C:H2'	27:BA:2627:G:C5'	1.46	1.44
35:BO:1:MET:C	35:BO:2:ILE:HD12	1.15	1.44
42:BY:41:ARG:O	42:BY:112:LEU:CB	1.64	1.44
27:BA:2698:U:O2	27:BA:2699:C:C5	1.70	1.44
29:BE:71:THR:CG2	29:BE:299:SER:CB	1.84	1.44
34:BN:19:MET:CE	34:BN:19:MET:HA	1.44	1.44
53:B7:21:ARG:CZ	53:B7:43:THR:HG23	1.47	1.44
27:BA:2808:U:C2	27:BA:2892:A:N6	1.85	1.44
31:BG:19:GLU:CB	31:BG:135:VAL:HG21	1.39	1.44
33:BI:7:LYS:CD	33:BI:12:LYS:NZ	1.78	1.44
4:AX:121:G:C2	25:AY:191:ARG:CA	2.01	1.44
34:BN:95:ARG:N	34:BN:98:PHE:HE1	1.15	1.44
43:BZ:172:LEU:HD23	43:BZ:173:PRO:CD	1.46	1.44
30:BF:3:ALA:HB3	30:BF:16:VAL:C	1.37	1.44
34:BN:15:ARG:CD	34:BN:43:ARG:HD2	1.42	1.44
32:BH:166:GLU:C	32:BH:167:LEU:HD23	1.07	1.44
43:BZ:172:LEU:HD23	43:BZ:173:PRO:N	1.33	1.44
33:BI:68:LEU:HD21	33:BI:108:LEU:CD1	0.98	1.44
43:BZ:2:GLU:C	43:BZ:54:ILE:HG21	1.32	1.44
53:B7:17:GLY:CA	53:B7:44:VAL:CG2	1.95	1.43
27:BA:2316:C:C4'	31:BG:151:ILE:CD1	1.95	1.43
27:BA:2406:U:O4	36:BP:55:GLN:CB	1.66	1.43
27:BA:2638:G:H21	27:BA:2778:A:N6	0.95	1.43
27:BA:2808:U:C2	27:BA:2892:A:C6	2.06	1.43
27:BA:29:U:H4'	45:BU:11:ARG:NH1	1.26	1.43
27:BA:1568:G:C5'	28:BD:60:GLN:HE21	1.30	1.43
28:BD:73:ILE:CG2	28:BD:95:TYR:HD2	1.20	1.43
36:BP:94:ARG:CB	36:BP:120:LEU:CD2	1.94	1.43
27:BA:104:U:N3	42:BY:17:HIS:HE1	1.08	1.43
49:B0:65:GLY:C	49:B0:66:LYS:CD	1.86	1.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:92:ASP:CB	36:BP:118:LEU:HD13	1.48	1.43
37:BQ:16:ARG:HH11	37:BQ:16:ARG:CB	1.27	1.43
44:BR:44:LEU:HD13	44:BR:48:VAL:CG2	1.47	1.43
52:B6:28:ARG:NH1	52:B6:28:ARG:HB3	1.31	1.43
27:BA:2579:C:C2'	27:BA:2580:U:H5'	1.48	1.43
27:BA:2093:G:C4	27:BA:2198:A:N6	1.83	1.43
46:BV:91:THR:C	46:BV:92:ALA:CB	1.86	1.43
48:B3:40:THR:CG2	48:B3:43:ILE:HD13	0.95	1.43
27:BA:2090:G:C6	27:BA:2230:G:O6	1.70	1.43
27:BA:2556:C:C2'	27:BA:2557:G:H5'	0.98	1.43
27:BA:2306:C:N4	27:BA:2311:A:H2	1.12	1.43
45:BU:76:TYR:O	45:BU:80:ILE:CD1	1.65	1.43
27:BA:2336:A:O2'	27:BA:2337:G:C5'	1.64	1.43
27:BA:2625:G:H3'	27:BA:2626:C:C5	1.53	1.43
46:BV:11:GLN:NE2	46:BV:22:VAL:CG2	1.74	1.43
46:BV:61:VAL:CG1	46:BV:95:ILE:HG22	1.49	1.43
27:BA:1782:C:O2	27:BA:2609:U:C6	1.69	1.42
31:BG:28:GLY:HA2	31:BG:69:ILE:CD1	1.46	1.42
36:BP:94:ARG:CD	36:BP:120:LEU:HD23	1.46	1.42
45:BU:8:ILE:CA	45:BU:11:ARG:HD3	1.44	1.42
46:BV:60:VAL:O	46:BV:98:ILE:CB	1.67	1.42
28:BD:208:GLY:HA2	28:BD:210:LYS:NZ	1.27	1.42
27:BA:2320:A:N6	38:BS:9:PRO:HG3	1.26	1.42
27:BA:2228:G:C8	27:BA:2229:C:C6	2.08	1.42
32:BH:104:LEU:HB2	32:BH:151:ARG:NH1	1.25	1.42
36:BP:76:LEU:C	36:BP:81:VAL:HG21	1.32	1.42
37:BQ:87:LYS:O	37:BQ:88:PHE:CD2	1.72	1.42
41:BX:5:ILE:CG2	41:BX:6:LYS:H	1.17	1.42
27:BA:2813:A:C2'	27:BA:2814:C:H6	1.30	1.42
52:B6:12:MET:SD	52:B6:54:LYS:HB3	1.60	1.42
33:BI:7:LYS:CG	33:BI:12:LYS:HG2	1.48	1.42
30:BF:196:THR:HA	30:BF:236:THR:CG2	1.50	1.42
46:BV:74:TYR:CD1	46:BV:86:HIS:O	1.70	1.42
40:BW:19:LEU:CD2	51:B5:25:LEU:HG	1.47	1.42
29:BE:205:THR:CG2	29:BE:259:HIS:N	1.83	1.42
27:BA:2579:C:H2'	27:BA:2580:U:C5'	1.48	1.42
28:BD:77:VAL:CB	28:BD:113:MET:HA	1.31	1.42
27:BA:1665:A:C3'	35:BO:66:LYS:HZ3	1.31	1.42
49:B0:45:PHE:CD1	49:B0:78:PHE:HA	1.52	1.42
27:BA:2354:G:C2	49:B0:32:LYS:HE3	1.54	1.42
28:BD:149:ARG:CB	28:BD:152:GLN:HE22	1.32	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:211:GLN:C	29:BE:216:ARG:HD2	1.37	1.42
46:BV:39:PHE:O	46:BV:40:VAL:CG2	1.64	1.42
27:BA:1:G:H1	27:BA:2902:C:N4	0.92	1.42
27:BA:2698:U:C2	27:BA:2699:C:C5	2.06	1.41
31:BG:21:VAL:HG13	31:BG:132:VAL:CG2	1.48	1.41
52:B6:45:LYS:O	52:B6:46:LYS:CE	1.66	1.41
35:BO:63:VAL:HG13	35:BO:102:VAL:CG1	0.96	1.41
29:BE:74:GLU:HA	29:BE:293:TYR:CE2	1.53	1.41
52:B6:46:LYS:NZ	52:B6:46:LYS:HA	1.19	1.41
25:AY:225:SER:CA	27:BA:2553:G:O6	1.68	1.41
30:BF:223:LEU:HD12	30:BF:224:ALA:N	1.08	1.41
27:BA:2484:G:N2	27:BA:2485:G:C1'	1.83	1.41
46:BV:50:ASP:H	46:BV:53:LYS:CE	1.30	1.41
43:BZ:6:LYS:O	43:BZ:31:SER:CB	1.66	1.41
16:AM:92:HIS:CD2	16:AM:98:VAL:HG21	1.54	1.41
49:B0:43:THR:HG21	49:B0:75:GLY:CA	1.48	1.41
27:BA:2330:G:N2	27:BA:2331:G:H1'	1.34	1.41
27:BA:2515:C:N4	27:BA:2569:G:H1	1.10	1.41
45:BU:74:MET:CE	45:BU:78:THR:CG2	1.97	1.41
27:BA:2020:A:N7	51:B5:9:LYS:HE2	1.16	1.41
27:BA:2225:A:C5'	27:BA:2226:C:C5'	1.98	1.41
31:BG:98:PHE:HA	31:BG:104:PHE:CD2	1.53	1.41
32:BH:104:LEU:CB	32:BH:151:ARG:NH1	1.84	1.41
37:BQ:46:VAL:CB	37:BQ:124:ALA:O	1.65	1.41
31:BG:28:GLY:C	31:BG:69:ILE:CD1	1.88	1.41
34:BN:94:GLY:C	34:BN:98:PHE:HE1	1.19	1.41
54:B8:26:LYS:HD2	54:B8:44:LYS:CA	0.93	1.40
27:BA:2447:G:C5	27:BA:2500:U:C5	2.07	1.40
27:BA:2652:C:C5	27:BA:2653:U:C4	2.09	1.40
28:BD:77:VAL:HB	28:BD:113:MET:CA	1.47	1.40
37:BQ:142:LYS:CG	37:BQ:143:VAL:H	1.28	1.40
42:BY:55:PHE:CE2	42:BY:89:ARG:NH1	1.89	1.40
36:BP:83:GLU:C	36:BP:92:ASP:N	1.75	1.40
43:BZ:67:LYS:HA	43:BZ:67:LYS:NZ	1.29	1.40
27:BA:2573:C:C5'	27:BA:2573:C:H6	1.32	1.40
1:AA:1320:C:N4	22:AS:36:ARG:HG3	1.29	1.40
27:BA:2652:C:C5	27:BA:2653:U:C5	2.09	1.40
27:BA:598:G:N2	30:BF:33:LYS:NZ	1.65	1.40
49:B0:67:VAL:CG1	49:B0:74:LYS:HG2	1.51	1.40
53:B7:30:ILE:HA	53:B7:33:ARG:CG	1.48	1.40
53:B7:21:ARG:NH1	53:B7:43:THR:HG23	1.08	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2093:G:N3	27:BA:2198:A:C6	1.90	1.40
27:BA:2210:G:O6	28:BD:148:GLY:CA	1.69	1.40
27:BA:2312:U:H5'	31:BG:53:LYS:CA	1.52	1.40
43:BZ:116:VAL:HG23	43:BZ:169:VAL:CG2	1.50	1.40
10:AG:12:LEU:C	10:AG:13:GLN:N	1.75	1.40
27:BA:2832:U:C6	27:BA:2832:U:C5'	2.04	1.40
28:BD:131:LEU:HD11	28:BD:183:ILE:CG2	1.49	1.40
27:BA:1665:A:H4'	35:BO:66:LYS:NZ	1.32	1.40
37:BQ:140:TYR:HD1	37:BQ:147:VAL:CG1	1.29	1.40
49:B0:45:PHE:CE1	49:B0:78:PHE:CD2	2.08	1.40
34:BN:135:ILE:O	34:BN:139:LEU:CD1	1.69	1.40
27:BA:2446:G:C2	27:BA:2501:C:H5	1.39	1.40
36:BP:94:ARG:CG	36:BP:120:LEU:HD23	1.50	1.40
50:B4:6:HIS:ND1	50:B4:56:VAL:HG23	1.34	1.39
27:BA:2848:G:N2	27:BA:2849:U:H3	1.14	1.39
29:BE:45:LYS:HE3	29:BE:303:PRO:CG	1.52	1.39
37:BQ:45:GLN:NE2	37:BQ:153:PRO:HB2	1.38	1.39
54:B8:55:TRP:CZ3	54:B8:59:LYS:HE3	1.54	1.39
27:BA:2013:A:OP1	40:BW:96:ILE:CG2	1.68	1.39
28:BD:175:LEU:HG	28:BD:179:GLU:C	1.03	1.39
27:BA:2225:A:H5''	27:BA:2226:C:C5'	1.52	1.39
28:BD:92:LEU:HD11	28:BD:102:TYR:CD1	1.56	1.39
27:BA:29:U:C4'	45:BU:11:ARG:HH12	1.33	1.39
27:BA:535:C:C4'	45:BU:53:LYS:HE2	1.51	1.39
45:BU:92:ARG:C	45:BU:95:LEU:HG	1.42	1.39
43:BZ:172:LEU:CG	43:BZ:173:PRO:HD2	1.49	1.39
48:B3:31:LEU:CD2	48:B3:32:GLN:N	1.81	1.39
29:BE:87:GLU:C	29:BE:93:GLN:N	1.75	1.39
45:BU:59:ARG:C	45:BU:62:ILE:HG12	1.42	1.39
27:BA:2485:G:C2'	27:BA:2486:G:H5'	1.50	1.39
2:AV:35:A:C2	4:AX:118:C:N3	1.90	1.39
28:BD:103:ILE:HG12	28:BD:104:ILE:CD1	0.93	1.39
29:BE:79:ARG:NH1	29:BE:104:PHE:C	1.75	1.39
30:BF:47:GLY:HA2	30:BF:92:PRO:CB	0.91	1.39
34:BN:94:GLY:C	34:BN:98:PHE:CE1	1.96	1.39
52:B6:46:LYS:CA	52:B6:46:LYS:HZ3	1.34	1.39
27:BA:2287:A:C2	27:BA:2289:G:C1'	2.03	1.39
43:BZ:163:ASP:CG	43:BZ:164:PRO:HD2	1.40	1.39
42:BY:33:GLU:OE1	42:BY:34:GLU:CG	1.70	1.39
27:BA:2748:A:N7	27:BA:2749:A:C2	1.89	1.38
27:BA:2799:A:H3'	27:BA:2801:A:P	1.63	1.38

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2845:G:O2'	27:BA:2846:G:C5'	1.69	1.38
37:BQ:54:VAL:O	37:BQ:56:ILE:CD1	1.71	1.38
38:BS:12:ARG:HD2	38:BS:20:TYR:CZ	1.58	1.38
32:BH:10:ILE:CG2	32:BH:14:VAL:CG1	1.98	1.38
4:AX:121:G:N1	25:AY:191:ARG:CA	1.86	1.38
33:BI:102:LEU:HD12	33:BI:103:GLN:N	1.07	1.38
32:BH:86:LEU:H	32:BH:131:ILE:CG2	1.35	1.38
40:BW:30:GLU:CA	40:BW:33:ARG:HD3	1.51	1.38
29:BE:76:PRO:HB2	29:BE:77:PRO:CD	1.49	1.38
30:BF:47:GLY:C	30:BF:92:PRO:CG	1.92	1.38
35:BO:63:VAL:CG1	35:BO:102:VAL:CG1	1.91	1.38
38:BS:12:ARG:NH1	38:BS:20:TYR:CE2	1.73	1.38
27:BA:1034:G:P	55:B9:18:ARG:HH21	1.46	1.38
27:BA:1364:G:H2'	50:B4:3:LYS:NZ	1.19	1.38
27:BA:2776:A:H1'	27:BA:2778:A:C8	1.58	1.38
31:BG:28:GLY:CA	31:BG:69:ILE:CD1	1.96	1.38
53:B7:21:ARG:O	53:B7:24:THR:CG2	1.72	1.38
27:BA:2893:G:O2'	27:BA:2894:G:C1'	1.69	1.38
30:BF:81:PRO:CA	30:BF:87:ARG:HG2	1.49	1.38
36:BP:112:GLY:C	36:BP:113:GLN:NE2	1.76	1.38
43:BZ:71:MET:HG2	43:BZ:78:PRO:CD	0.92	1.38
53:B7:30:ILE:O	53:B7:33:ARG:CB	1.71	1.38
52:B6:48:VAL:O	52:B6:50:PHE:CE1	1.76	1.38
36:BP:62:ALA:N	36:BP:107:LYS:CE	1.84	1.38
42:BY:18:GLU:C	42:BY:21:LYS:HZ2	1.26	1.38
27:BA:1546:C:C3'	27:BA:1547:C:P	2.11	1.38
40:BW:90:ARG:NH1	40:BW:90:ARG:HB2	1.14	1.38
54:B8:16:ILE:CG1	54:B8:22:VAL:HG22	1.51	1.38
27:BA:2583:G:C2'	27:BA:2584:U:O2	1.69	1.38
28:BD:103:ILE:CG1	28:BD:104:ILE:HD12	1.47	1.38
27:BA:2636:U:C4'	29:BE:84:ARG:HH22	1.36	1.38
36:BP:62:ALA:O	36:BP:107:LYS:CD	1.69	1.38
42:BY:101:LEU:HD11	42:BY:112:LEU:CG	1.53	1.38
28:BD:208:GLY:CA	28:BD:210:LYS:NZ	1.83	1.38
27:BA:2482:G:H2'	27:BA:2483:C:C5'	1.51	1.37
33:BI:103:GLN:NE2	33:BI:110:LEU:H	1.21	1.37
3:AW:25:C:C3'	3:AW:26:G:C8	1.91	1.37
54:B8:26:LYS:HD2	54:B8:44:LYS:N	1.37	1.37
54:B8:60:LEU:HD11	54:B8:64:ARG:CB	1.51	1.37
27:BA:2331:G:O2'	49:B0:70:ILE:CG2	1.69	1.37
27:BA:2712:U:C2'	27:BA:712(A):A:C5'	2.01	1.37

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:592:G:N3	54:B8:3:LYS:CE	1.86	1.37
28:BD:128:ALA:HB2	28:BD:190:THR:CA	1.53	1.37
30:BF:52:ALA:CB	30:BF:55:ARG:NH2	1.85	1.37
48:B3:8:LEU:CD2	48:B3:31:LEU:CA	2.01	1.37
29:BE:205:THR:HG21	29:BE:259:HIS:N	1.09	1.37
27:BA:94:G:N2	47:B2:42:ASN:HD22	1.22	1.37
55:B9:14:CYS:HA	55:B9:27:CYS:CB	1.52	1.37
43:BZ:163:ASP:CG	43:BZ:164:PRO:CD	1.92	1.37
27:BA:2768:C:C2'	27:BA:2769:C:H5'	1.54	1.37
27:BA:2808:U:O2	27:BA:2892:A:C6	1.77	1.37
32:BH:143:LEU:HD23	32:BH:144:ALA:N	1.33	1.37
27:BA:2580:U:C5	27:BA:2581:G:N7	1.92	1.37
27:BA:593:G:C1'	54:B8:3:LYS:NZ	1.73	1.37
49:B0:46:LYS:HG3	49:B0:58:THR:CG2	1.51	1.37
27:BA:973:A:N6	46:BV:81:ARG:HG3	1.12	1.37
27:BA:2378:A:N3	38:BS:26:LEU:HD23	1.36	1.37
46:BV:42:GLY:N	46:BV:54:TYR:CZ	1.93	1.37
1:AA:1313:U:C5	22:AS:4:SER:CB	1.74	1.37
27:BA:911:A:N1	37:BQ:16:ARG:HA	1.39	1.36
27:BA:2307:G:H1'	27:BA:2311:A:N6	1.40	1.36
27:BA:2616:C:C2'	27:BA:2617:C:H5'	1.56	1.36
1:AA:1030:C:H2'	1:AA:30(A):G:C8	1.57	1.36
27:BA:2470:G:N2	27:BA:2471:C:N3	1.65	1.36
27:BA:2567:G:N3	27:BA:2568:C:C5	1.92	1.36
27:BA:2316:C:C4'	31:BG:151:ILE:HD12	1.52	1.36
46:BV:62:GLU:O	46:BV:95:ILE:CG2	1.71	1.36
43:BZ:172:LEU:CD2	43:BZ:173:PRO:HD2	1.53	1.36
32:BH:120:LEU:C	32:BH:121:GLU:OE1	1.63	1.36
45:BU:61:TRP:O	45:BU:65:ILE:CG1	1.74	1.36
27:BA:2267:A:H5''	27:BA:2268:A:OP1	1.20	1.36
27:BA:535:C:C4'	45:BU:53:LYS:CE	2.01	1.36
50:B4:16:TYR:O	50:B4:17:GLN:CG	1.73	1.36
42:BY:28:SER:HB3	42:BY:99:THR:CB	1.52	1.36
49:B0:36:ILE:C	49:B0:68:VAL:HG13	1.45	1.36
27:BA:2464:C:N4	27:BA:2487:G:C6	1.94	1.36
29:BE:233:ARG:O	29:BE:234:ARG:CG	1.71	1.36
29:BE:45:LYS:HZ1	29:BE:303:PRO:N	0.90	1.36
30:BF:217:GLU:O	30:BF:218:VAL:CG2	1.73	1.36
32:BH:101:LYS:CE	32:BH:115:GLU:HB2	1.55	1.36
27:BA:1163:G:C3'	27:BA:1164:G:P	2.13	1.36
29:BE:211:GLN:O	29:BE:216:ARG:CD	1.72	1.36

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:27:ALA:HA	34:BN:30:ALA:CB	0.89	1.36
38:BS:46:GLN:O	38:BS:47:LEU:CD2	1.73	1.36
52:B6:21:TYR:CZ	52:B6:43:VAL:HG23	1.60	1.36
36:BP:117:GLU:OE2	36:BP:136:ALA:C	1.64	1.36
28:BD:143:ILE:O	28:BD:152:GLN:N	1.57	1.35
35:BO:25:LEU:CD2	35:BO:40:VAL:CG2	2.04	1.35
46:BV:42:GLY:HA3	46:BV:54:TYR:CE2	1.60	1.35
49:B0:65:GLY:O	49:B0:66:LYS:HD2	1.20	1.35
27:BA:2737:G:H1	27:BA:2767:C:N4	1.22	1.35
27:BA:2785:C:H2'	27:BA:2786:U:C6	1.60	1.35
27:BA:1818:U:C5'	28:BD:155:ARG:HG3	1.54	1.35
31:BG:49:PRO:CB	31:BG:72:LYS:O	1.71	1.35
27:BA:10:G:N2	27:BA:2629:A:C2	1.94	1.35
49:B0:37:LEU:N	49:B0:68:VAL:HG13	1.39	1.35
27:BA:2574:G:C5	27:BA:2575:C:C5	1.92	1.35
27:BA:2820:A:H5''	27:BA:2820:A:N3	1.38	1.35
28:BD:156:ALA:O	28:BD:196:ASN:ND2	1.58	1.35
27:BA:2785:C:C5'	29:BE:99:VAL:HG22	1.56	1.35
53:B7:34:ARG:NH1	53:B7:42:LEU:HA	1.34	1.35
27:BA:2195:C:C5	27:BA:2195:C:OP2	1.77	1.35
30:BF:59:GLU:O	30:BF:61:PHE:CD2	1.79	1.35
36:BP:66:VAL:HB	36:BP:67:ARG:CZ	1.16	1.35
46:BV:61:VAL:HG12	46:BV:95:ILE:CG2	1.52	1.35
34:BN:106:GLY:O	34:BN:107:ASN:ND2	1.58	1.35
29:BE:70:VAL:HG11	29:BE:296:VAL:N	1.41	1.35
30:BF:238:SER:O	30:BF:241:ALA:CB	1.72	1.35
30:BF:243:VAL:HA	30:BF:246:ARG:CD	1.54	1.35
32:BH:148:ARG:NH1	32:BH:163:TYR:HA	1.42	1.35
44:BR:20:LEU:CD1	44:BR:21:TYR:CD2	2.10	1.35
47:B2:52:ALA:O	47:B2:56:ILE:CG1	1.71	1.35
3:AW:1:G:N2	3:AW:2:C:H41	1.22	1.35
49:B0:46:LYS:CG	49:B0:58:THR:HG23	1.55	1.35
30:BF:245:GLU:N	30:BF:245:GLU:OE2	1.60	1.35
45:BU:98:ILE:O	45:BU:100:ALA:N	1.56	1.35
27:BA:1151:G:H4'	45:BU:81:ASN:ND2	1.06	1.35
27:BA:2306:C:N4	27:BA:2311:A:C2	1.88	1.35
30:BF:215:ALA:HB1	30:BF:238:SER:O	1.27	1.35
27:BA:2303:G:C3'	31:BG:99:ASP:OD2	1.74	1.35
39:BT:28:THR:O	39:BT:29:THR:HG23	1.17	1.35
16:AM:94:ARG:N	16:AM:95:GLY:N	1.72	1.35
27:BA:2564:A:H2'	27:BA:2565:A:C8	1.61	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:94:ARG:HB3	29:BE:95:PRO:CD	1.54	1.35
36:BP:61:ALA:C	36:BP:62:ALA:N	1.81	1.35
32:BH:97:LYS:O	32:BH:98:GLN:HG3	1.21	1.35
34:BN:13:ASP:N	34:BN:38:VAL:CG1	1.87	1.35
46:BV:40:VAL:HG12	46:BV:51:ALA:O	1.24	1.35
54:B8:8:LYS:O	54:B8:10:ALA:N	1.59	1.34
54:B8:16:ILE:CG2	54:B8:21:LYS:O	1.75	1.34
32:BH:15:THR:CG2	32:BH:26:LYS:HB2	1.55	1.34
34:BN:65:ASN:CB	34:BN:69:TYR:HD1	1.40	1.34
46:BV:91:THR:C	46:BV:92:ALA:N	1.79	1.34
48:B3:20:LYS:O	48:B3:23:LEU:CG	1.75	1.34
55:B9:7:VAL:HG12	55:B9:34:GLN:CD	1.47	1.34
28:BD:183:ILE:CG2	28:BD:184:LEU:H	1.34	1.34
42:BY:73:HIS:HA	42:BY:91:LEU:CD1	1.52	1.34
27:BA:2286:A:H5'	27:BA:2287:A:C5'	1.57	1.34
27:BA:2717:G:N3	27:BA:2718:G:C8	1.95	1.34
52:B6:32:GLN:HB3	52:B6:35:LEU:CD1	1.55	1.34
27:BA:2583:G:H2'	27:BA:2584:U:C2	1.61	1.34
34:BN:83:ILE:CG1	34:BN:84:ARG:H	1.17	1.34
37:BQ:67:ALA:O	37:BQ:71:PHE:CD1	1.78	1.34
1:AA:1211:U:O3'	1:AA:1212:U:P	0.97	1.34
27:BA:2406:U:N3	36:BP:55:GLN:HB3	1.38	1.34
29:BE:44:TYR:CE1	29:BE:308:VAL:HA	1.62	1.34
31:BG:21:VAL:CG1	31:BG:132:VAL:HG23	1.57	1.34
27:BA:2287:A:N6	27:BA:2344:U:C5	1.90	1.34
3:AW:76:A:N7	27:BA:2421:G:H2'	1.39	1.34
26:BB:57:A:C1'	31:BG:13:MET:CE	2.04	1.34
28:BD:175:LEU:HD21	28:BD:180:VAL:CA	1.55	1.34
30:BF:62:GLY:HA3	30:BF:65:ARG:NH2	1.38	1.34
45:BU:49:ASP:HA	45:BU:52:ASN:ND2	1.02	1.34
42:BY:43:ASN:ND2	42:BY:101:LEU:CD2	1.90	1.34
43:BZ:51:LEU:HD23	43:BZ:52:PHE:N	1.38	1.34
27:BA:1:G:N1	27:BA:2902:C:N4	1.71	1.34
28:BD:118:GLY:O	28:BD:129:LEU:HD11	1.20	1.34
37:BQ:67:ALA:CB	37:BQ:70:ARG:NH1	1.88	1.34
27:BA:2826:A:N6	27:BA:2827:C:C5	1.91	1.34
27:BA:2313:C:C5'	31:BG:72:LYS:HG3	1.58	1.34
32:BH:104:LEU:HB2	32:BH:151:ARG:CZ	1.56	1.34
34:BN:134:GLU:O	34:BN:138:THR:CG2	1.74	1.34
27:BA:2251:G:H5''	37:BQ:102:ARG:NH2	1.39	1.34
40:BW:76:VAL:HG23	40:BW:102:HIS:O	1.20	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:58:MET:SD	54:B8:61:MET:HG3	1.67	1.34
27:BA:2228:G:N7	27:BA:2229:C:C6	1.94	1.34
36:BP:52:LYS:HD3	36:BP:53:ARG:NH1	1.42	1.34
27:BA:2688:U:O2	27:BA:2719:G:C2	1.80	1.34
47:B2:7:GLU:CD	47:B2:8:ILE:HG13	1.47	1.34
27:BA:2768:C:C4	27:BA:2769:C:H5	1.45	1.33
28:BD:128:ALA:CB	28:BD:190:THR:CB	2.03	1.33
27:BA:2592:G:N7	27:BA:2593:U:C5	1.95	1.33
30:BF:81:PRO:HB3	30:BF:87:ARG:CB	1.56	1.33
32:BH:166:GLU:O	32:BH:167:LEU:CD2	1.76	1.33
2:AV:35:A:H2	4:AX:118:C:O2	1.04	1.33
42:BY:45:GLY:CA	42:BY:62:VAL:CG1	1.98	1.33
42:BY:73:HIS:HA	42:BY:91:LEU:CG	1.57	1.33
41:BX:4:VAL:CG2	47:B2:24:LYS:NZ	1.89	1.33
53:B7:30:ILE:HD13	53:B7:33:ARG:CD	1.58	1.33
27:BA:1665:A:O3'	35:BO:66:LYS:CE	1.75	1.33
27:BA:2353:G:N2	27:BA:2364:C:N3	1.70	1.33
32:BH:166:GLU:C	32:BH:167:LEU:CD2	1.94	1.33
27:BA:1675:C:N3	29:BE:225:LYS:HG2	1.40	1.33
27:BA:2556:C:C2'	27:BA:2557:G:C5'	1.94	1.33
38:BS:35:VAL:HA	38:BS:103:ASP:CB	1.42	1.33
42:BY:30:ASP:OD2	42:BY:31:LEU:HD21	1.19	1.33
17:AN:24:CYS:CB	17:AN:40:CYS:H	1.40	1.33
27:BA:2197:U:C5	27:BA:2224:G:C2	2.15	1.33
27:BA:2447:G:C4	27:BA:2500:U:H5	1.45	1.33
30:BF:48:SER:N	30:BF:92:PRO:CG	1.92	1.33
35:BO:35:ILE:HG23	35:BO:63:VAL:N	1.37	1.33
36:BP:114:VAL:O	36:BP:115:ARG:CG	1.75	1.33
45:BU:92:ARG:O	45:BU:95:LEU:CG	1.76	1.33
53:B7:34:ARG:CD	53:B7:42:LEU:CD2	2.06	1.33
27:BA:2259:G:C2	27:BA:2282:G:C6	2.15	1.33
27:BA:2446:G:C2	27:BA:2501:C:C5	2.16	1.33
30:BF:36:ARG:HA	30:BF:39:GLN:NE2	1.40	1.33
35:BO:77:ILE:HD11	35:BO:79:PHE:CE2	1.63	1.33
27:BA:2689:U:H5'	27:BA:2690:C:C5'	1.57	1.33
30:BF:5:ILE:HB	30:BF:14:GLY:O	1.23	1.33
43:BZ:126:GLY:O	43:BZ:129:ARG:HB2	1.18	1.33
3:AW:76:A:N3	27:BA:2422:A:N6	1.76	1.33
50:B4:21:VAL:CG1	50:B4:22:MET:H	1.38	1.33
27:BA:1031:G:H4'	55:B9:8:LYS:NZ	1.41	1.33
27:BA:2785:C:H2'	27:BA:2786:U:C5	1.64	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:958:A:C2	22:AS:55:LYS:HB2	1.62	1.33
27:BA:30:G:OP1	45:BU:8:ILE:CD1	1.74	1.33
28:BD:135:PRO:HG2	28:BD:138:THR:CG2	1.55	1.33
27:BA:1059:G:N2	56:BK:131:THR:HG23	1.02	1.33
27:BA:535:C:O2'	45:BU:53:LYS:CG	1.77	1.32
27:BA:1568:G:C4'	28:BD:60:GLN:HE21	1.40	1.32
30:BF:59:GLU:HB2	30:BF:61:PHE:CE2	1.65	1.32
36:BP:114:VAL:HG23	36:BP:132:LYS:CB	1.57	1.32
27:BA:1156:A:OP1	45:BU:55:ARG:CZ	1.77	1.32
27:BA:598:G:H21	30:BF:33:LYS:NZ	0.84	1.32
29:BE:180:ILE:CA	29:BE:183:ASP:OD2	1.74	1.32
30:BF:52:ALA:HB2	30:BF:55:ARG:NH2	1.00	1.32
35:BO:7:ARG:CD	35:BO:44:LYS:HE3	1.58	1.32
37:BQ:140:TYR:CD1	37:BQ:147:VAL:CG1	2.02	1.32
42:BY:101:LEU:O	42:BY:103:LEU:HG	1.24	1.32
27:BA:85:G:O5'	42:BY:65:VAL:CG1	1.75	1.32
43:BZ:37:LYS:O	43:BZ:41:ARG:NH1	1.59	1.32
29:BE:107:GLU:HB3	29:BE:110:ARG:NE	1.35	1.32
49:B0:61:ALA:O	49:B0:62:LEU:CD1	1.76	1.32
31:BG:28:GLY:C	31:BG:69:ILE:HD13	1.42	1.32
45:BU:27:SER:O	45:BU:29:SER:N	1.57	1.32
46:BV:5:ILE:O	46:BV:6:GLN:HG2	1.19	1.32
27:BA:2552:U:H5''	27:BA:2553:G:OP2	1.29	1.32
33:BI:95:SER:CA	33:BI:98:ILE:HG13	1.58	1.32
42:BY:43:ASN:HD21	42:BY:101:LEU:CD2	1.40	1.32
53:B7:21:ARG:HB3	53:B7:31:LEU:CD1	1.59	1.32
27:BA:2645:G:H4'	27:BA:2732:G:O2'	1.21	1.32
34:BN:95:ARG:N	34:BN:98:PHE:CE1	1.96	1.32
36:BP:67:ARG:NH1	36:BP:111:ALA:O	1.62	1.32
27:BA:1364:G:C2'	50:B4:3:LYS:NZ	1.83	1.32
42:BY:101:LEU:CD2	42:BY:103:LEU:CG	2.07	1.32
16:AM:91:ARG:NH1	16:AM:103:THR:CG2	1.85	1.32
27:BA:1367:A:O3'	53:B7:25:LYS:NZ	1.57	1.32
27:BA:459:U:OP1	53:B7:40:HIS:HA	1.23	1.32
27:BA:2250:G:C5'	37:BQ:102:ARG:HD3	1.59	1.32
27:BA:2617:C:H2'	27:BA:2618:G:C5'	1.58	1.32
27:BA:2865:U:C4	27:BA:2866:U:C5	2.18	1.32
45:BU:7:GLY:C	45:BU:8:ILE:HD12	1.50	1.32
55:B9:7:VAL:O	55:B9:8:LYS:CE	1.76	1.32
27:BA:2584:U:C6	27:BA:2584:U:H3'	1.65	1.32
28:BD:65:ASP:OD1	28:BD:66:PHE:N	1.59	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:973:A:N1	46:BV:81:ARG:HD2	1.02	1.32
34:BN:106:GLY:C	34:BN:107:ASN:ND2	1.82	1.32
1:AA:339:C:OP2	35:BO:97:ARG:NH2	1.63	1.32
48:B3:16:PRO:HB2	48:B3:19:GLN:CD	1.45	1.32
27:BA:2698:U:C2	27:BA:2699:C:H5	1.42	1.32
35:BO:66:LYS:NZ	35:BO:67:ARG:HD3	1.42	1.32
37:BQ:16:ARG:NH1	37:BQ:16:ARG:HB3	0.99	1.32
37:BQ:69:ASN:HD22	37:BQ:70:ARG:N	1.24	1.32
44:BR:78:LYS:O	44:BR:82:GLU:HB2	1.18	1.32
48:B3:19:GLN:O	48:B3:23:LEU:HD21	1.27	1.32
27:BA:1078:U:OP1	56:BK:93:LYS:CE	1.77	1.32
30:BF:223:LEU:CD1	30:BF:224:ALA:N	1.93	1.32
37:BQ:91:HIS:O	37:BQ:111:THR:HG23	1.16	1.32
46:BV:30:GLY:O	46:BV:33:VAL:HG23	1.22	1.32
33:BI:77:VAL:CG2	33:BI:141:LEU:HD11	1.60	1.32
27:BA:1826:G:OP2	28:BD:227:VAL:HG21	1.19	1.32
27:BA:2333:A:OP2	38:BS:13:ARG:NH1	1.60	1.31
27:BA:2842:G:C2'	27:BA:2843:G:H5'	1.58	1.31
32:BH:137:LYS:HD2	32:BH:138:GLN:N	1.42	1.31
37:BQ:85:ILE:CG2	37:BQ:122:PHE:CG	2.10	1.31
46:BV:62:GLU:C	46:BV:95:ILE:HG23	1.48	1.31
27:BA:2020:A:N7	51:B5:9:LYS:CE	1.92	1.31
29:BE:180:ILE:HG22	29:BE:186:GLU:O	1.14	1.31
3:AW:37:YYG:C21	10:AG:83:ALA:CB	2.08	1.31
27:BA:2397:G:C6	27:BA:2420:C:O2	1.81	1.31
27:BA:2470:G:N2	27:BA:2471:C:C4	1.90	1.31
27:BA:2584:U:C5	27:BA:2585:U:C6	2.17	1.31
27:BA:2678:C:C2	27:BA:2679:A:C8	2.18	1.31
27:BA:2709:G:C2'	27:BA:2710:C:H5'	1.57	1.31
36:BP:76:LEU:C	36:BP:81:VAL:CG2	1.96	1.31
45:BU:92:ARG:H	46:BV:10:LYS:NZ	1.25	1.31
27:BA:445:C:OP1	45:BU:2:PRO:N	1.60	1.31
28:BD:118:GLY:O	28:BD:129:LEU:CD1	1.78	1.31
30:BF:168:ARG:NH1	30:BF:209:GLY:O	1.62	1.31
30:BF:84:VAL:C	30:BF:85:LYS:HD2	1.51	1.31
40:BW:85:VAL:O	40:BW:86:LEU:HD23	1.20	1.31
51:B5:44:HIS:CA	51:B5:52:TYR:OH	1.78	1.31
27:BA:2197:U:H6	27:BA:2224:G:C2	1.30	1.31
27:BA:2574:G:H5''	27:BA:2575:C:OP2	1.19	1.31
27:BA:2717:G:C2	27:BA:2718:G:N7	1.98	1.31
30:BF:48:SER:N	30:BF:92:PRO:HG2	1.46	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:107:LYS:O	45:BU:110:VAL:HB	1.29	1.31
46:BV:65:ARG:O	46:BV:93:ILE:HG23	1.20	1.31
54:B8:5:LYS:O	54:B8:7:HIS:N	1.61	1.31
27:BA:142(A):A:H4'	34:BN:21:ARG:NH2	1.45	1.31
27:BA:2749:A:O4'	32:BH:62:ALA:CB	1.76	1.31
27:BA:2768:C:H2'	27:BA:2769:C:C5'	1.60	1.31
27:BA:1799:G:C2	28:BD:153:LEU:CD2	2.11	1.31
33:BI:95:SER:CA	33:BI:98:ILE:CG1	2.08	1.31
43:BZ:95:SER:OG	43:BZ:122:ILE:HG12	1.13	1.31
27:BA:963:U:H1'	27:BA:2250:G:N2	1.44	1.31
2:AV:75:C:N3	27:BA:2252:G:N2	1.79	1.31
30:BF:168:ARG:O	30:BF:168:ARG:HD2	1.20	1.31
27:BA:459:U:OP2	53:B7:40:HIS:CD2	1.82	1.31
54:B8:6:THR:O	54:B8:8:LYS:N	1.63	1.31
27:BA:1033:U:C6	27:BA:2750:A:H2	1.48	1.31
27:BA:684:G:OP1	53:B7:16:HIS:NE2	1.59	1.31
30:BF:163:HIS:O	30:BF:166:ILE:CB	1.77	1.31
30:BF:47:GLY:CA	30:BF:92:PRO:HG2	1.54	1.31
36:BP:66:VAL:CB	36:BP:67:ARG:CZ	2.01	1.31
46:BV:4:ILE:HD11	46:BV:13:ARG:CD	1.61	1.31
43:BZ:34:LEU:HD13	43:BZ:39:PHE:CZ	1.65	1.31
31:BG:81:GLU:O	31:BG:85:GLN:HG2	1.20	1.31
27:BA:2647:U:O2'	27:BA:2648:C:H5'	1.20	1.31
53:B7:30:ILE:HD11	53:B7:33:ARG:NH1	0.99	1.31
27:BA:2485:G:O2'	27:BA:2486:G:C5'	1.77	1.31
27:BA:2488:A:H2'	27:BA:2489:G:C5'	1.59	1.31
27:BA:2555:U:C2'	27:BA:2556:C:H5'	1.60	1.31
27:BA:2023:G:H4'	27:BA:2618:G:OP1	1.20	1.31
39:BT:4:ARG:O	39:BT:5:GLU:CG	1.77	1.31
33:BI:89:LEU:CD1	33:BI:93:ILE:HG22	1.59	1.31
26:BB:77:U:OP1	43:BZ:80:HIS:NE2	1.60	1.31
27:BA:2262:U:O2'	27:BA:2263:C:H5''	1.24	1.30
27:BA:2439:A:H1'	27:BA:2587:A:OP1	1.20	1.30
38:BS:34:LEU:CD2	38:BS:102:LEU:HA	1.59	1.30
46:BV:42:GLY:CA	46:BV:54:TYR:CZ	2.12	1.30
27:BA:1568:G:O5'	28:BD:60:GLN:CG	1.76	1.30
27:BA:2212:A:C2'	27:BA:2213:U:C5	2.13	1.30
29:BE:45:LYS:NZ	29:BE:303:PRO:O	1.61	1.30
27:BA:598:G:N2	30:BF:33:LYS:HZ3	1.21	1.30
45:BU:65:ILE:HG22	45:BU:76:TYR:CE2	1.65	1.30
40:BW:36:LEU:HD11	40:BW:47:VAL:CG1	1.59	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:3:ASP:OD2	47:B2:24:LYS:CD	1.79	1.30
28:BD:71:ASP:OD1	28:BD:118:GLY:HA2	1.19	1.30
35:BO:110:ASP:O	35:BO:111:PHE:CG	1.83	1.30
45:BU:94:VAL:C	45:BU:98:ILE:CD1	1.99	1.30
27:BA:2636:U:H4'	29:BE:84:ARG:NH2	1.43	1.30
27:BA:2574:G:O2'	29:BE:240:PRO:CB	1.78	1.30
27:BA:1665:A:C4'	35:BO:66:LYS:NZ	1.83	1.30
36:BP:70:ASP:O	36:BP:74:THR:HG23	1.24	1.30
27:BA:1368:G:OP1	53:B7:25:LYS:CE	1.78	1.30
27:BA:2249:U:H3	27:BA:2253:G:P	1.53	1.30
27:BA:2684:U:H1'	35:BO:70:ARG:NH2	1.03	1.30
27:BA:994:C:O2	45:BU:53:LYS:HD3	1.28	1.30
27:BA:2468:G:O6	27:BA:2481:G:C6	1.84	1.30
27:BA:2826:A:C5	27:BA:2827:C:C5	2.20	1.30
34:BN:38:VAL:O	34:BN:39:VAL:HG13	1.21	1.30
35:BO:1:MET:N	35:BO:32:TYR:HD2	1.26	1.30
44:BR:113:LEU:HD13	44:BR:114:VAL:N	1.45	1.30
1:AA:1317:C:O2'	22:AS:10:PHE:CZ	1.79	1.30
27:BA:1058:G:N2	56:BK:117:ASN:OD1	1.63	1.30
31:BG:59:GLY:O	31:BG:60:GLU:HG3	1.30	1.30
27:BA:1818:U:O5'	28:BD:155:ARG:CG	1.79	1.30
27:BA:2517:C:O2'	27:BA:2518:A:H5''	1.28	1.30
32:BH:121:GLU:OE2	32:BH:134:GLY:HA2	1.29	1.30
35:BO:77:ILE:CD1	35:BO:78:ARG:N	1.93	1.30
27:BA:2051:A:C8	27:BA:2614:A:N6	1.95	1.30
27:BA:2741:A:O2'	27:BA:2742:C:C5'	1.79	1.30
28:BD:149:ARG:HB2	28:BD:152:GLN:NE2	0.99	1.30
2:AV:56:C:O2'	31:BG:56:ARG:HD3	1.29	1.30
27:BA:2226:C:C2	27:BA:2227:A:C1'	2.13	1.30
27:BA:2506:U:OP2	27:BA:2576:G:N2	1.64	1.30
27:BA:2657:A:C8	27:BA:2658:C:C5	2.17	1.30
29:BE:171:SER:O	29:BE:175:ASP:HB2	1.13	1.30
30:BF:164:ALA:CA	30:BF:232:LEU:HD12	1.62	1.30
32:BH:42:ILE:O	32:BH:52:THR:HG21	1.21	1.30
35:BO:77:ILE:HD13	35:BO:78:ARG:N	0.98	1.30
27:BA:2251:G:C5'	37:BQ:102:ARG:NH2	1.94	1.30
38:BS:27:LEU:CB	38:BS:33:ARG:NH2	1.93	1.30
27:BA:2195:C:H5	27:BA:2195:C:OP2	1.07	1.30
27:BA:974:G:N7	46:BV:80:TYR:CE1	1.99	1.30
41:BX:24:LEU:C	41:BX:25:GLN:OE1	1.70	1.30
51:B5:33:CYS:SG	51:B5:36:CYS:CB	2.19	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2333:A:N9	27:BA:2335:A:C2	2.00	1.29
27:BA:973:A:N1	46:BV:81:ARG:CD	1.91	1.29
27:BA:2785:C:C1'	29:BE:100:TRP:HD1	1.34	1.29
27:BA:2578:G:N7	29:BE:237:ASN:ND2	1.78	1.29
27:BA:2397:G:N1	27:BA:2420:C:O2	1.62	1.29
27:BA:2689:U:C5	27:BA:2713:A:N6	1.99	1.29
27:BA:2792:G:N2	27:BA:2804:C:C2	1.99	1.29
37:BQ:49:VAL:HG22	37:BQ:121:ASP:N	1.44	1.29
38:BS:27:LEU:HB2	38:BS:33:ARG:NH2	0.98	1.29
30:BF:225:PRO:C	30:BF:231:ARG:CG	1.98	1.29
27:BA:494:G:H4'	40:BW:6:ILE:CG2	1.61	1.29
27:BA:997:G:OP1	45:BU:93:LYS:HE2	1.16	1.29
46:BV:34:GLU:O	46:BV:35:LEU:HD23	1.23	1.29
42:BY:28:SER:CB	42:BY:99:THR:OG1	1.80	1.29
43:BZ:69:VAL:CG1	43:BZ:81:VAL:HG22	1.63	1.29
27:BA:1791:A:OP1	28:BD:210:LYS:CD	1.79	1.29
27:BA:2:G:N2	27:BA:2902:C:O2	1.61	1.29
27:BA:2385:C:N3	27:BA:2386:C:C5	2.01	1.29
29:BE:180:ILE:HG21	29:BE:187:HIS:CA	1.62	1.29
37:BQ:58:HIS:O	37:BQ:61:LEU:HG	1.30	1.29
54:B8:4:MET:HA	54:B8:5:LYS:NZ	1.17	1.29
28:BD:143:ILE:O	28:BD:152:GLN:HB2	1.29	1.29
29:BE:222:ARG:HD3	29:BE:232:ARG:C	1.53	1.29
30:BF:205:ARG:HG2	30:BF:212:VAL:CG2	1.62	1.29
44:BR:20:LEU:HD13	44:BR:21:TYR:CA	1.60	1.29
3:AW:1:G:N2	3:AW:2:C:N4	1.77	1.29
27:BA:2470:G:N3	27:BA:2471:C:C6	2.00	1.29
27:BA:2799:A:O2'	27:BA:2802:G:C2	1.86	1.29
28:BD:75:GLY:CA	28:BD:115:ILE:O	1.80	1.29
28:BD:175:LEU:CD1	28:BD:180:VAL:N	1.93	1.29
27:BA:1568:G:H5"	28:BD:60:GLN:NE2	1.45	1.29
29:BE:45:LYS:NZ	29:BE:303:PRO:N	1.79	1.29
30:BF:103:ASN:HB2	30:BF:106:GLU:OE2	1.27	1.29
31:BG:27:ILE:O	31:BG:69:ILE:CG2	1.81	1.29
27:BA:2376:A:C2	38:BS:102:LEU:HD22	1.67	1.29
27:BA:994:C:OP2	45:BU:54:LYS:HE3	1.32	1.29
53:B7:34:ARG:CD	53:B7:42:LEU:HD23	1.61	1.29
27:BA:1568:G:OP2	28:BD:60:GLN:CB	1.64	1.29
27:BA:2691:C:O2'	27:BA:2692:C:H5'	1.22	1.29
29:BE:39:GLN:OE1	29:BE:174:LEU:HD21	1.19	1.29
34:BN:12:VAL:O	34:BN:38:VAL:HG13	1.16	1.29

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:85:VAL:CA	40:BW:95:ILE:HG12	1.62	1.29
27:BA:1338:G:O2'	41:BX:13:LYS:NZ	1.64	1.29
28:BD:139:LEU:O	28:BD:139:LEU:HD12	1.27	1.29
52:B6:48:VAL:O	52:B6:50:PHE:CD1	1.85	1.29
27:BA:2197:U:H6	27:BA:2224:G:N2	0.79	1.29
37:BQ:17:ARG:O	37:BQ:18:GLU:CG	1.79	1.29
43:BZ:147:ILE:O	43:BZ:168:VAL:HB	1.30	1.29
27:BA:2206:C:O2'	27:BA:2207:C:H5'	1.11	1.29
28:BD:198:GLY:O	28:BD:200:THR:N	1.61	1.29
29:BE:82:ALA:O	29:BE:83:LEU:HG	1.14	1.29
16:AM:91:ARG:NH1	16:AM:103:THR:HG21	1.38	1.29
1:AA:1288:A:N1	1:AA:1371:G:H1'	1.47	1.29
54:B8:16:ILE:HG23	54:B8:21:LYS:O	1.14	1.28
27:BA:2103:C:O2	27:BA:2187:G:N1	1.63	1.28
27:BA:2679:A:N3	29:BE:300:VAL:CG1	1.95	1.28
30:BF:147:LEU:CD1	30:BF:156:LEU:CD1	2.11	1.28
30:BF:201:SER:O	30:BF:204:ALA:HB3	1.29	1.28
27:BA:1078:U:OP1	56:BK:93:LYS:HE3	1.17	1.28
34:BN:45:VAL:O	34:BN:46:ILE:HG12	1.16	1.28
34:BN:95:ARG:O	34:BN:98:PHE:CD1	1.86	1.28
44:BR:72:ASP:O	44:BR:76:VAL:CG2	1.81	1.28
43:BZ:172:LEU:CD2	43:BZ:173:PRO:CD	2.05	1.28
27:BA:712(A):A:H5'	27:BA:2714:G:OP2	1.30	1.28
35:BO:99:PHE:O	35:BO:119:PRO:HG3	1.32	1.28
37:BQ:133:GLU:C	37:BQ:133:GLU:OE1	1.69	1.28
44:BR:44:LEU:O	44:BR:48:VAL:HG23	1.31	1.28
42:BY:101:LEU:HD21	42:BY:112:LEU:CD2	1.62	1.28
27:BA:1826:G:P	28:BD:227:VAL:CG2	2.20	1.28
5:AB:112:VAL:C	5:AB:113:HIS:N	1.85	1.28
49:B0:46:LYS:HE3	49:B0:58:THR:OG1	1.21	1.28
48:B3:1:MET:CE	48:B3:3:ARG:HD2	1.61	1.28
27:BA:2653:U:O2	27:BA:2654:A:N6	1.61	1.28
30:BF:52:ALA:CB	30:BF:55:ARG:CZ	2.08	1.28
27:BA:2498:C:O2'	27:BA:2499:C:H5''	1.34	1.28
28:BD:146:LYS:NZ	28:BD:184:LEU:HD11	1.46	1.28
30:BF:147:LEU:HD12	30:BF:156:LEU:CD1	1.62	1.28
27:BA:1205:U:O2	30:BF:232:LEU:HD11	1.25	1.28
49:B0:24:LYS:HG2	49:B0:56:ASP:OD2	1.21	1.28
48:B3:51:ALA:O	48:B3:53:LEU:N	1.66	1.28
27:BA:2644:G:O5'	27:BA:2644:G:H8	1.07	1.28
27:BA:1818:U:C5'	28:BD:155:ARG:CG	2.10	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:112:ARG:O	30:BF:114:ALA:N	1.66	1.28
31:BG:105:SER:OG	31:BG:131:THR:HG22	1.33	1.28
40:BW:19:LEU:HD22	51:B5:25:LEU:CG	1.61	1.28
27:BA:2494:G:C2	27:BA:2495:G:C8	2.22	1.28
30:BF:4:THR:O	30:BF:139:VAL:HG21	1.32	1.28
32:BH:40:MET:HG2	32:BH:64:HIS:CE1	1.68	1.28
37:BQ:58:HIS:HB3	37:BQ:111:THR:O	1.28	1.28
38:BS:53:ASN:O	38:BS:55:ASP:N	1.66	1.28
4:AX:120:A:N1	25:AY:193:HIS:CA	1.97	1.28
27:BA:144:C:H5'	41:BX:36:GLU:CD	1.50	1.28
50:B4:68:ARG:CD	50:B4:72:LYS:HG2	1.63	1.28
27:BA:2212:A:O2'	27:BA:2213:U:H5	1.07	1.28
27:BA:2684:U:C1'	35:BO:70:ARG:NH2	1.94	1.28
46:BV:42:GLY:HA3	46:BV:54:TYR:CZ	1.66	1.28
50:B4:30:GLU:C	50:B4:31:ILE:HD13	1.52	1.28
27:BA:2457:U:C2'	27:BA:2458:G:H5'	1.62	1.28
33:BI:29:PHE:O	33:BI:33:GLN:NE2	1.67	1.28
41:BX:24:LEU:C	41:BX:26:PHE:CE1	2.05	1.28
27:BA:2051:A:N7	27:BA:2614:A:N6	1.77	1.28
27:BA:2642:G:O2'	27:BA:2643:G:H5'	1.19	1.28
31:BG:22:VAL:O	31:BG:23:VAL:HG13	1.25	1.28
38:BS:31:LYS:HB3	38:BS:32:PRO:CD	1.62	1.28
46:BV:94:LYS:O	46:BV:95:ILE:HD12	1.21	1.28
48:B3:31:LEU:HD23	48:B3:32:GLN:N	0.96	1.28
27:BA:2491:U:O2'	27:BA:2492:U:C5'	1.81	1.28
27:BA:2587:A:O2'	27:BA:2588:G:H5'	1.30	1.28
28:BD:175:LEU:HD11	28:BD:180:VAL:N	1.49	1.28
29:BE:44:TYR:CD1	29:BE:308:VAL:HA	1.69	1.28
30:BF:84:VAL:O	30:BF:86:GLY:N	1.63	1.28
37:BQ:85:ILE:CG2	37:BQ:122:PHE:HB3	1.63	1.28
42:BY:49:GLU:CD	42:BY:97:ARG:NH1	1.86	1.28
47:B2:2:VAL:O	47:B2:4:HIS:ND1	1.63	1.28
27:BA:95:G:H5'	47:B2:41:GLU:OE1	1.20	1.28
27:BA:2197:U:H5	27:BA:2224:G:N3	1.31	1.27
27:BA:2297:C:H2'	27:BA:2298:A:C8	1.69	1.27
27:BA:2869:G:C5	27:BA:2870:C:C5	2.04	1.27
27:BA:451:C:O3'	30:BF:55:ARG:NH2	1.66	1.27
37:BQ:125:TRP:O	37:BQ:126:VAL:HG23	1.22	1.27
38:BS:99:GLU:OE1	38:BS:128:ASP:CB	1.80	1.27
43:BZ:92:VAL:O	43:BZ:94:VAL:N	1.66	1.27
27:BA:2784:C:OP1	29:BE:95:PRO:HG2	1.35	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2485:G:C5'	37:BQ:144:THR:HG22	1.63	1.27
3:AW:25:C:C5	3:AW:26:G:C5	2.22	1.27
1:AA:1221:G:H5'	22:AS:36:ARG:NH1	1.43	1.27
1:AA:1211:U:HO3'	1:AA:1212:U:P	0.79	1.27
54:B8:26:LYS:CD	54:B8:45:GLY:H	1.47	1.27
27:BA:2580:U:C6	27:BA:2581:G:H8	1.27	1.27
28:BD:175:LEU:CG	28:BD:179:GLU:O	1.76	1.27
30:BF:111:VAL:O	30:BF:114:ALA:HB3	1.21	1.27
27:BA:2470:G:C2	27:BA:2471:C:C6	2.22	1.27
27:BA:2821:A:C2	27:BA:2822:G:C5	2.21	1.27
32:BH:111:PRO:O	32:BH:112:VAL:CG2	1.82	1.27
30:BF:91:PRO:CB	30:BF:92:PRO:CD	2.02	1.27
27:BA:2312:U:C5'	31:BG:53:LYS:HA	1.64	1.27
36:BP:94:ARG:CD	36:BP:120:LEU:CD2	2.04	1.27
37:BQ:59:ASN:ND2	37:BQ:60:ALA:H	1.30	1.27
43:BZ:130:ILE:O	43:BZ:130:ILE:HD12	1.29	1.27
27:BA:126:A:C6	53:B7:18:PHE:CE2	2.22	1.27
27:BA:2581:G:N1	27:BA:2610:C:C6	1.95	1.27
27:BA:2615:U:O2'	27:BA:2616:C:H5'	1.34	1.27
27:BA:2862:G:O2'	27:BA:2863:C:H6	1.08	1.27
3:AW:25:C:N4	3:AW:26:G:N1	1.79	1.27
1:AA:953:G:O2'	16:AM:125:ARG:HA	1.22	1.27
48:B3:32:GLN:NE2	48:B3:32:GLN:O	1.62	1.27
27:BA:2333:A:C8	27:BA:2335:A:C2	2.22	1.27
44:BR:72:ASP:O	44:BR:76:VAL:HG23	1.09	1.27
45:BU:111:ASP:O	45:BU:113:SER:N	1.65	1.27
49:B0:65:GLY:C	49:B0:66:LYS:HD2	0.89	1.27
27:BA:2051:A:O2'	29:BE:238:LEU:HG	1.31	1.27
27:BA:2740:A:C2'	27:BA:2741:A:C8	2.06	1.27
27:BA:747:U:OP1	51:B5:2:ALA:HB3	1.33	1.27
26:BB:84:C:OP1	48:B3:10:LYS:NZ	1.65	1.27
28:BD:110:LYS:NZ	28:BD:110:LYS:HA	1.48	1.27
30:BF:151:GLN:OE1	30:BF:154:VAL:HG21	1.23	1.27
30:BF:91:PRO:CG	30:BF:92:PRO:HD2	1.65	1.27
1:AA:1219:U:O2'	22:AS:34:TRP:HB3	1.23	1.27
52:B6:38:LYS:O	52:B6:50:PHE:HB2	1.10	1.27
27:BA:2674:G:H2'	27:BA:2675:A:C8	1.67	1.27
27:BA:2739:U:H2'	27:BA:2740:A:C5'	1.63	1.27
35:BO:1:MET:C	35:BO:2:ILE:CD1	2.02	1.27
37:BQ:34:GLY:HA2	37:BQ:74:ASN:O	1.28	1.27
27:BA:2453:A:O2'	27:BA:2454:G:H5'	1.29	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2558:C:O2	27:BA:2559:C:C6	1.86	1.27
27:BA:2561:A:O2'	35:BO:40:VAL:CG1	1.82	1.27
27:BA:2712:U:H2'	27:BA:712(A):A:C5'	1.58	1.27
27:BA:969:U:H4'	48:B3:14:GLY:O	1.16	1.27
28:BD:71:ASP:OD1	28:BD:118:GLY:CA	1.83	1.27
27:BA:1078:U:P	56:BK:93:LYS:CG	2.22	1.27
2:AV:65:G:C3'	2:AV:66:A:P	2.20	1.27
27:BA:2400:G:O2'	52:B6:20:PHE:HE1	1.11	1.26
27:BA:2225:A:C4'	27:BA:2226:C:C5'	1.92	1.26
27:BA:2286:A:C5'	27:BA:2287:A:H5'	1.64	1.26
27:BA:2657:A:C8	27:BA:2658:C:H5	1.50	1.26
29:BE:229:GLN:O	29:BE:231:TRP:N	1.68	1.26
32:BH:123:GLU:O	32:BH:130:ILE:HG23	1.18	1.26
27:BA:557:U:C5'	34:BN:92:GLN:HE21	1.48	1.26
39:BT:4:ARG:O	39:BT:5:GLU:HG3	1.17	1.26
27:BA:2320:A:C2	27:BA:2333:A:C2	2.22	1.26
30:BF:231:ARG:O	30:BF:232:LEU:HD23	1.09	1.26
27:BA:2251:G:OP1	37:BQ:102:ARG:NE	1.65	1.26
37:BQ:143:VAL:O	37:BQ:144:THR:HG23	1.30	1.26
47:B2:30:ALA:C	47:B2:34:GLN:HG2	1.54	1.26
27:BA:1637:A:H4'	27:BA:2711:A:O2'	1.29	1.26
27:BA:2254:C:H2'	27:BA:2255:G:C5'	1.63	1.26
27:BA:932:G:C5'	48:B3:29:ARG:NH2	1.97	1.26
29:BE:44:TYR:CA	29:BE:309:PRO:HG3	1.65	1.26
45:BU:4:ALA:O	45:BU:6:THR:N	1.65	1.26
27:BA:989:G:OP1	48:B3:31:LEU:HD12	1.30	1.26
27:BA:2825:C:H6	27:BA:2825:C:O5'	1.14	1.26
31:BG:71:ALA:O	31:BG:72:LYS:HD3	1.33	1.26
31:BG:93:LEU:CD1	31:BG:94:ALA:H	1.45	1.26
36:BP:114:VAL:HG21	36:BP:133:VAL:N	1.45	1.26
40:BW:32:ALA:HA	40:BW:35:ILE:CD1	1.63	1.26
42:BY:30:ASP:OD2	42:BY:31:LEU:CD2	1.84	1.26
43:BZ:2:GLU:O	43:BZ:54:ILE:HG21	1.09	1.26
27:BA:1826:G:OP1	28:BD:227:VAL:CG2	1.82	1.26
1:AA:1319:A:C4'	22:AS:70:LYS:HZ3	1.45	1.26
3:AW:37:YYG:C10	10:AG:83:ALA:HB1	1.66	1.26
27:BA:2261:C:OP2	49:B0:14:ARG:CG	1.83	1.26
29:BE:74:GLU:CA	29:BE:293:TYR:CE2	2.18	1.26
30:BF:32:GLY:O	30:BF:35:VAL:HG23	1.19	1.26
27:BA:2309:A:H5''	27:BA:2310:A:C8	1.69	1.26
27:BA:2422:A:N3	27:BA:2424:C:C5	2.02	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:211:GLN:H	29:BE:216:ARG:CZ	1.46	1.26
29:BE:62:ARG:O	29:BE:63:GLU:CD	1.73	1.26
31:BG:11:HIS:CD2	31:BG:15:GLU:OE2	1.88	1.26
35:BO:88:ARG:O	35:BO:90:ASP:N	1.68	1.26
36:BP:144:ASP:O	36:BP:145:LEU:HD12	1.17	1.26
4:AX:121:G:H22	25:AY:191:ARG:CA	1.38	1.26
32:BH:111:PRO:O	32:BH:112:VAL:HG23	1.26	1.26
36:BP:75:LEU:O	36:BP:75:LEU:HD23	1.30	1.26
52:B6:37:LEU:O	52:B6:38:LYS:HG3	1.35	1.26
53:B7:43:THR:C	53:B7:46:ASP:OD2	1.72	1.26
27:BA:2810:A:C8	27:BA:2811:G:O4'	1.89	1.26
27:BA:2815:C:C2'	27:BA:2816:C:H5'	1.62	1.26
40:BW:19:LEU:HD13	51:B5:25:LEU:CD2	1.64	1.26
27:BA:1799:G:N2	28:BD:153:LEU:CD2	1.97	1.26
27:BA:531:C:O2	45:BU:28:ARG:NH2	1.69	1.26
30:BF:163:HIS:O	30:BF:166:ILE:HB	1.15	1.26
42:BY:78:THR:CA	42:BY:89:ARG:HG3	1.65	1.26
16:AM:91:ARG:CZ	16:AM:103:THR:HG21	1.64	1.26
32:BH:53:ARG:HB3	32:BH:56:ASP:OD1	1.25	1.26
53:B7:18:PHE:N	53:B7:44:VAL:HG21	1.48	1.26
27:BA:2766:G:H5''	27:BA:2767:C:OP2	1.18	1.26
31:BG:21:VAL:CG1	31:BG:132:VAL:CG2	2.12	1.26
46:BV:61:VAL:HA	46:BV:98:ILE:CG1	1.66	1.26
27:BA:2287:A:C2	27:BA:2289:G:H1'	1.64	1.26
27:BA:2378:A:O2'	38:BS:30:GLY:HA3	1.36	1.26
27:BA:2450:A:OP1	27:BA:2497:A:N7	1.68	1.26
28:BD:158:GLY:CA	28:BD:194:VAL:HG11	1.63	1.26
36:BP:77:ALA:N	36:BP:81:VAL:HG21	1.51	1.26
37:BQ:67:ALA:HB2	37:BQ:70:ARG:NH1	0.94	1.26
42:BY:86:GLU:O	42:BY:87:VAL:HG23	1.36	1.26
41:BX:38:ALA:O	41:BX:39:ASP:O	1.53	1.26
50:B4:49:PHE:CZ	50:B4:70:GLY:O	1.87	1.26
52:B6:22:TYR:O	52:B6:23:THR:HG23	1.21	1.26
27:BA:2865:U:C5	27:BA:2866:U:H5	1.53	1.25
28:BD:146:LYS:HD3	28:BD:147:PRO:CD	1.66	1.25
32:BH:93:TYR:CB	32:BH:106:VAL:HG22	1.66	1.25
33:BI:7:LYS:HD2	33:BI:12:LYS:NZ	0.93	1.25
34:BN:95:ARG:O	34:BN:98:PHE:HD1	0.93	1.25
49:B0:46:LYS:NZ	49:B0:60:PHE:O	1.69	1.25
52:B6:37:LEU:HD21	52:B6:51:ARG:CG	1.65	1.25
27:BA:1033:U:C6	27:BA:2750:A:C2	2.23	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2093:G:H1'	27:BA:2198:A:N1	1.48	1.25
27:BA:775:G:O2'	27:BA:791:C:N4	1.67	1.25
27:BA:994:C:N3	45:BU:53:LYS:HD3	1.51	1.25
44:BR:63:ARG:NH2	44:BR:77:ARG:HG2	1.47	1.25
38:BS:105:GLY:O	38:BS:106:LEU:HD23	1.37	1.25
51:B5:19:ARG:O	51:B5:21:SER:N	1.68	1.25
27:BA:2421:G:H5''	52:B6:4:ASP:OD1	1.12	1.25
27:BA:637:A:H8	36:BP:111:ALA:CB	1.48	1.25
30:BF:32:GLY:HA2	30:BF:35:VAL:CG2	1.67	1.25
27:BA:1665:A:C3'	35:BO:66:LYS:NZ	1.96	1.25
40:BW:32:ALA:HA	40:BW:35:ILE:CG1	1.65	1.25
52:B6:37:LEU:CD2	52:B6:51:ARG:HG2	1.65	1.25
52:B6:21:TYR:OH	52:B6:43:VAL:HG23	1.35	1.25
54:B8:26:LYS:CD	54:B8:44:LYS:HA	1.56	1.25
27:BA:1568:G:P	28:BD:60:GLN:HG2	1.76	1.25
28:BD:74:PRO:HG3	28:BD:96:ALA:CB	1.64	1.25
29:BE:45:LYS:CE	29:BE:303:PRO:HG2	1.67	1.25
31:BG:49:PRO:CB	31:BG:72:LYS:C	2.04	1.25
34:BN:65:ASN:CB	34:BN:69:TYR:CD1	2.16	1.25
43:BZ:13:LYS:O	43:BZ:36:ARG:NH2	1.69	1.25
27:BA:2259:G:N2	27:BA:2282:G:C4	2.04	1.25
27:BA:458:G:C5'	53:B7:39:ARG:HD2	1.66	1.25
28:BD:63:ILE:CG2	28:BD:64:ILE:H	1.33	1.25
29:BE:72:VAL:O	29:BE:73:ILE:HD13	1.24	1.25
33:BI:43:ASN:O	33:BI:46:ALA:N	1.68	1.25
37:BQ:94:ARG:CD	37:BQ:106:GLY:HA2	1.65	1.25
27:BA:2219:G:H2'	27:BA:2224:G:C5'	1.66	1.25
27:BA:2313:C:H5'	31:BG:72:LYS:CG	1.64	1.25
27:BA:2320:A:N6	38:BS:9:PRO:CG	2.00	1.25
31:BG:105:SER:CB	31:BG:131:THR:HG22	1.65	1.25
1:AA:1224:G:N2	1:AA:1362:C:O2	1.56	1.25
41:BX:51:GLN:O	41:BX:52:VAL:HG23	1.13	1.25
41:BX:75:GLN:HB2	41:BX:78:ALA:O	1.30	1.25
3:AW:76:A:C8	27:BA:2421:G:N3	1.87	1.25
27:BA:2543:G:C5	27:BA:2544:G:C6	2.24	1.25
27:BA:2776:A:H1'	27:BA:2778:A:N7	1.51	1.25
27:BA:1799:G:N2	28:BD:153:LEU:HD21	1.51	1.25
40:BW:82:LEU:O	40:BW:84:ARG:HD2	1.34	1.25
32:BH:170:LEU:O	32:BH:170:LEU:CD1	1.85	1.25
27:BA:2484:G:N2	27:BA:2485:G:O4'	1.69	1.25
36:BP:66:VAL:HG23	36:BP:109:LEU:O	1.24	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:109:PRO:O	38:BS:116:PHE:CE1	1.89	1.25
45:BU:88:ILE:HG21	46:BV:55:THR:OG1	1.30	1.25
49:B0:67:VAL:HG11	49:B0:74:LYS:CG	1.66	1.25
28:BD:107:LYS:N	28:BD:194:VAL:O	1.70	1.25
30:BF:205:ARG:CG	30:BF:212:VAL:HG21	1.64	1.25
30:BF:96:LYS:H	30:BF:98:ARG:NH2	1.35	1.25
33:BI:77:VAL:CG2	33:BI:141:LEU:CD1	2.14	1.25
26:BB:75:G:O2'	43:BZ:32:PHE:HD2	1.11	1.25
31:BG:88:LEU:O	31:BG:88:LEU:HD23	1.30	1.25
54:B8:26:LYS:CD	54:B8:45:GLY:N	1.99	1.25
27:BA:2826:A:C5	27:BA:2827:C:C6	2.23	1.25
27:BA:994:C:H5	46:BV:72:ARG:NH1	1.35	1.25
27:BA:2306:C:N4	31:BG:53:LYS:NZ	1.83	1.25
38:BS:40:ASN:HA	38:BS:114:LYS:NZ	1.51	1.25
54:B8:41:ILE:O	54:B8:43:GLY:N	1.69	1.25
27:BA:1364:G:OP1	50:B4:2:GLN:O	1.53	1.25
27:BA:2303:G:O3'	31:BG:99:ASP:CG	1.74	1.25
27:BA:2717:G:H5'	27:BA:2717:G:C8	1.70	1.25
27:BA:2809:A:O4'	27:BA:2811:G:N7	1.69	1.25
36:BP:62:ALA:HB3	36:BP:105:TYR:O	1.30	1.25
37:BQ:72:VAL:O	37:BQ:73:GLN:HG3	1.10	1.25
27:BA:85:G:O5'	42:BY:65:VAL:HG11	1.15	1.25
42:BY:48:VAL:CG1	42:BY:49:GLU:H	1.46	1.25
43:BZ:62:PHE:CD2	43:BZ:87:THR:HG22	1.70	1.25
47:B2:5:VAL:CG1	47:B2:6:GLN:H	1.42	1.25
27:BA:1059:G:C2	56:BK:131:THR:HG23	1.72	1.25
37:BQ:108:SER:O	37:BQ:109:VAL:HG13	1.36	1.25
49:B0:37:LEU:CB	49:B0:69:PHE:CD2	2.18	1.24
53:B7:21:ARG:CZ	53:B7:43:THR:CG2	2.14	1.24
55:B9:7:VAL:O	55:B9:8:LYS:HE3	1.09	1.24
29:BE:44:TYR:HA	29:BE:309:PRO:CG	1.65	1.24
29:BE:70:VAL:CG1	29:BE:71:THR:H	1.41	1.24
35:BO:110:ASP:O	35:BO:111:PHE:CD1	1.89	1.24
44:BR:87:TYR:CE1	44:BR:94:TYR:HB3	1.72	1.24
27:BA:125:G:H5''	53:B7:19:ARG:NH1	1.49	1.24
27:BA:2745:C:H1'	32:BH:142:GLU:CG	1.67	1.24
27:BA:2825:C:C6	27:BA:2825:C:O5'	1.91	1.24
28:BD:165:GLY:O	28:BD:172:ILE:CB	1.85	1.24
27:BA:2571:C:O2'	29:BE:243:PRO:HD3	1.09	1.24
34:BN:15:ARG:HB3	34:BN:43:ARG:CD	1.65	1.24
47:B2:52:ALA:O	47:B2:56:ILE:HG13	1.27	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1032:A:OP1	55:B9:8:LYS:CG	1.84	1.24
27:BA:2252:G:C2'	27:BA:2253:G:H5'	1.67	1.24
30:BF:24:THR:HB	30:BF:25:PRO:CD	1.61	1.24
32:BH:146:ASN:O	32:BH:150:VAL:HG23	1.36	1.24
44:BR:38:VAL:CB	44:BR:39:PRO:HD2	1.65	1.24
45:BU:99:ALA:HB2	45:BU:106:PHE:CD2	1.72	1.24
48:B3:7:LYS:O	48:B3:54:VAL:HG21	1.26	1.24
45:BU:43:ALA:O	45:BU:45:TYR:N	1.68	1.24
41:BX:9:HIS:CE1	41:BX:27:ALA:HA	1.70	1.24
49:B0:39:ARG:HG2	49:B0:69:PHE:CE1	1.71	1.24
27:BA:2219:G:O2'	27:BA:2224:G:C5'	1.86	1.24
31:BG:27:ILE:O	31:BG:69:ILE:HG23	1.29	1.24
32:BH:86:LEU:HD13	32:BH:87:GLU:N	1.51	1.24
37:BQ:17:ARG:O	37:BQ:18:GLU:HG3	1.32	1.24
44:BR:89:ASP:OD1	44:BR:90:ARG:N	1.69	1.24
45:BU:14:HIS:ND1	45:BU:36:PHE:HZ	1.34	1.24
27:BA:25:U:H4'	40:BW:79:GLY:CA	1.66	1.24
49:B0:61:ALA:HB2	49:B0:81:ILE:CD1	1.68	1.24
27:BA:1364:G:C3'	50:B4:3:LYS:CD	2.15	1.24
30:BF:93:LYS:O	30:BF:96:LYS:CG	1.83	1.24
33:BI:7:LYS:CG	33:BI:12:LYS:CG	2.11	1.24
37:BQ:54:VAL:O	37:BQ:56:ILE:HD13	1.11	1.24
44:BR:79:LEU:C	44:BR:79:LEU:CD2	2.01	1.24
45:BU:13:ARG:O	45:BU:16:LYS:HB2	1.09	1.24
46:BV:19:VAL:HG12	46:BV:21:ARG:CZ	1.68	1.24
42:BY:101:LEU:CG	42:BY:112:LEU:CD1	2.16	1.24
27:BA:1059:G:N2	56:BK:131:THR:CG2	1.98	1.24
32:BH:168:VAL:O	32:BH:169:ARG:CG	1.85	1.24
27:BA:18:C:H4'	45:BU:23:GLY:O	1.31	1.24
27:BA:2893:G:O2'	27:BA:2894:G:H1'	1.21	1.24
30:BF:52:ALA:HB2	30:BF:55:ARG:CZ	1.68	1.24
34:BN:61:VAL:HG12	34:BN:62:ASP:OD1	1.32	1.24
27:BA:2307:G:C1'	27:BA:2311:A:H61	1.49	1.24
27:BA:2384:G:C5'	27:BA:2386:C:OP1	1.85	1.24
27:BA:2470:G:N3	27:BA:2471:C:C5	2.04	1.24
27:BA:2517:C:O2'	27:BA:2518:A:C5'	1.84	1.24
27:BA:2296:U:C4	38:BS:16:ALA:HB2	1.71	1.24
33:BI:95:SER:CA	33:BI:98:ILE:CD1	2.13	1.24
42:BY:28:SER:HB3	42:BY:99:THR:OG1	1.07	1.24
43:BZ:39:PHE:HA	43:BZ:43:PHE:CD2	1.70	1.24
1:AA:975:A:C8	1:AA:1357:A:H2	1.54	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2364:C:H5''	49:B0:38:VAL:CG1	1.66	1.24
27:BA:2509:G:O2'	27:BA:2510:C:H5'	1.28	1.24
29:BE:301:PRO:O	29:BE:303:PRO:HD2	1.32	1.24
30:BF:25:PRO:O	30:BF:26:VAL:HG23	1.32	1.24
31:BG:21:VAL:HG13	31:BG:132:VAL:CB	1.65	1.24
35:BO:66:LYS:HZ2	35:BO:67:ARG:CD	1.50	1.24
27:BA:1156:A:OP1	45:BU:55:ARG:NH1	1.70	1.24
46:BV:33:VAL:HB	46:BV:63:HIS:CG	1.72	1.24
46:BV:59:GLU:O	46:BV:60:VAL:CG2	1.85	1.24
48:B3:19:GLN:O	48:B3:23:LEU:CD2	1.83	1.24
27:BA:2246:G:O2'	27:BA:2247:A:H5'	1.32	1.24
27:BA:2622:C:O2	27:BA:2623:G:C8	1.91	1.24
30:BF:238:SER:O	30:BF:241:ALA:HB3	1.09	1.24
30:BF:96:LYS:CA	30:BF:98:ARG:NH1	1.99	1.24
27:BA:637:A:C8	36:BP:111:ALA:CB	2.20	1.24
27:BA:1287:A:O4'	44:BR:104:ARG:HD2	1.08	1.24
34:BN:106:GLY:O	34:BN:107:ASN:CG	1.76	1.24
27:BA:2043:C:C5	27:BA:2777:G:H1'	1.73	1.23
27:BA:2215:G:H2'	27:BA:2216:G:C8	1.71	1.23
27:BA:2710:C:O2'	27:BA:2711:A:H5'	1.37	1.23
27:BA:2847:U:OP2	27:BA:2847:U:C6	1.90	1.23
35:BO:1:MET:O	35:BO:2:ILE:CD1	1.85	1.23
46:BV:35:LEU:O	46:BV:60:VAL:HG13	1.29	1.23
46:BV:61:VAL:CG2	46:BV:97:GLY:HA2	1.69	1.23
27:BA:2333:A:H1'	27:BA:2335:A:C4	1.71	1.23
27:BA:2717:G:C2	27:BA:2718:G:C5	2.27	1.23
29:BE:193:PHE:CE2	29:BE:199:ALA:HB2	1.72	1.23
32:BH:129:LYS:O	32:BH:130:ILE:HD12	1.12	1.23
33:BI:7:LYS:HG3	33:BI:12:LYS:CD	1.67	1.23
34:BN:60:ARG:O	34:BN:71:TYR:HB3	1.33	1.23
47:B2:51:LYS:O	47:B2:54:ALA:N	1.71	1.23
49:B0:23:VAL:CG1	49:B0:24:LYS:H	1.49	1.23
27:BA:2384:G:H5''	27:BA:2386:C:OP1	1.09	1.23
27:BA:825:C:H4'	27:BA:2428:G:N7	1.50	1.23
28:BD:78:ALA:O	28:BD:79:THR:HG23	1.31	1.23
32:BH:43:THR:CG2	32:BH:52:THR:CG2	2.14	1.23
38:BS:41:LYS:HD3	38:BS:41:LYS:C	1.57	1.23
27:BA:2044:C:N3	27:BA:2624:G:N2	1.86	1.23
27:BA:2681:C:O2'	27:BA:2682:U:O5'	1.56	1.23
30:BF:115:LEU:HG	30:BF:246:ARG:NH2	1.51	1.23
31:BG:24:HIS:O	31:BG:25:MET:HG2	1.11	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:88:PHE:HB2	37:BQ:90:PHE:CE1	1.72	1.23
45:BU:88:ILE:CG2	46:BV:55:THR:OG1	1.86	1.23
42:BY:101:LEU:HD13	42:BY:113:GLU:CB	1.68	1.23
43:BZ:5:ALA:O	43:BZ:33:ALA:HB2	1.38	1.23
27:BA:138:G:C5'	41:BX:43:GLU:HG3	1.68	1.23
27:BA:2555:U:H2'	27:BA:2556:C:C5'	1.68	1.23
27:BA:2589:A:C2'	27:BA:2590:A:H5''	1.69	1.23
30:BF:47:GLY:CA	30:BF:92:PRO:CB	1.82	1.23
33:BI:4:ILE:HB	33:BI:37:ILE:O	1.33	1.23
27:BA:1140:C:C5	34:BN:49:ARG:HG3	1.73	1.23
40:BW:85:VAL:HA	40:BW:95:ILE:CG1	1.68	1.23
52:B6:2:ALA:HB2	52:B6:11:LYS:NZ	1.53	1.23
27:BA:125:G:C5'	53:B7:19:ARG:HH11	1.51	1.23
27:BA:2309:A:OP2	27:BA:2309:A:C4'	1.81	1.23
27:BA:2320:A:H62	38:BS:9:PRO:CG	1.50	1.23
27:BA:2573:C:C6	27:BA:2573:C:H5'	1.71	1.23
27:BA:2769:C:C2'	27:BA:2770:G:O5'	1.83	1.23
31:BG:142:ALA:CB	31:BG:151:ILE:HD11	1.67	1.23
37:BQ:25:GLY:O	37:BQ:26:LYS:HG2	1.34	1.23
45:BU:103:PRO:O	45:BU:107:LYS:HG2	1.30	1.23
27:BA:1598:C:H5''	41:BX:34:LYS:CG	1.67	1.23
27:BA:2197:U:C5	27:BA:2224:G:N3	2.05	1.23
27:BA:2508:G:O2'	27:BA:2509:G:H5'	1.36	1.23
27:BA:2509:G:C2'	27:BA:2510:C:H5'	1.67	1.23
27:BA:2684:U:H1'	35:BO:70:ARG:CZ	1.68	1.23
27:BA:826:U:C5'	27:BA:2429:G:OP2	1.86	1.23
3:AW:72:C:O2'	3:AW:73:A:C5'	1.85	1.23
27:BA:2226:C:O2	27:BA:2227:A:H1'	1.33	1.23
27:BA:2316:C:C5'	31:BG:142:ALA:HB1	1.67	1.23
27:BA:1783:A:C2	27:BA:2587:A:H2	1.57	1.23
45:BU:38:THR:CA	45:BU:41:ASN:OD1	1.84	1.23
40:BW:80:PRO:O	40:BW:100:THR:OG1	1.56	1.23
28:BD:208:GLY:CA	28:BD:210:LYS:HZ3	1.41	1.23
41:BX:3:ASP:O	41:BX:4:VAL:HG13	1.32	1.23
49:B0:30:VAL:HG22	49:B0:63:SER:OG	1.36	1.23
50:B4:21:VAL:HG12	50:B4:22:MET:N	1.43	1.23
53:B7:41:GLN:O	53:B7:42:LEU:HG	1.34	1.23
54:B8:23:MET:CE	54:B8:23:MET:HA	1.63	1.23
54:B8:26:LYS:CG	54:B8:45:GLY:N	1.88	1.23
27:BA:2394:C:C5	27:BA:2395:C:N4	2.06	1.23
27:BA:2756:U:O2'	27:BA:2757:A:C5'	1.86	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:34:LEU:CG	38:BS:102:LEU:HA	1.69	1.23
46:BV:5:ILE:HG23	46:BV:39:PHE:CA	1.67	1.23
43:BZ:168:VAL:O	43:BZ:169:VAL:CG2	1.87	1.23
53:B7:17:GLY:CA	53:B7:44:VAL:HG21	1.63	1.23
29:BE:269:ILE:HG23	29:BE:297:LYS:NZ	1.53	1.23
44:BR:58:GLY:CA	44:BR:80:PHE:CE2	2.22	1.23
46:BV:71:ILE:O	46:BV:72:ARG:HG3	1.38	1.23
28:BD:226:GLY:O	28:BD:227:VAL:HG12	1.10	1.23
31:BG:44:ILE:O	31:BG:83:PHE:CZ	1.92	1.23
2:AV:65:G:O3'	2:AV:66:A:P	0.85	1.23
27:BA:1248:G:OP1	45:BU:2:PRO:CB	1.86	1.22
27:BA:2218:G:O2'	28:BD:146:LYS:HE3	1.35	1.22
30:BF:93:LYS:O	30:BF:96:LYS:HG3	1.08	1.22
32:BH:143:LEU:CD2	32:BH:144:ALA:H	1.52	1.22
46:BV:14:VAL:HG21	46:BV:19:VAL:CG2	1.68	1.22
54:B8:26:LYS:CD	54:B8:44:LYS:N	2.00	1.22
29:BE:44:TYR:CA	29:BE:309:PRO:CG	2.15	1.22
30:BF:243:VAL:CA	30:BF:246:ARG:HD2	1.67	1.22
32:BH:15:THR:HG21	32:BH:26:LYS:CB	1.68	1.22
34:BN:18:ILE:O	34:BN:22:VAL:HG23	1.36	1.22
37:BQ:65:ARG:CZ	37:BQ:122:PHE:CE2	2.22	1.22
38:BS:94:GLU:OE1	38:BS:94:GLU:C	1.76	1.22
27:BA:1161:C:O2'	46:BV:22:VAL:HG11	1.09	1.22
46:BV:30:GLY:C	46:BV:33:VAL:CG2	2.07	1.22
27:BA:85:G:OP2	42:BY:65:VAL:HB	1.37	1.22
27:BA:85:G:P	42:BY:65:VAL:CG1	2.25	1.22
43:BZ:69:VAL:CG2	43:BZ:81:VAL:CG1	2.18	1.22
27:BA:837:C:O3'	27:BA:838:C:P	1.96	1.22
3:AW:39:PSU:H4'	14:AK:54:ARG:NH2	1.54	1.22
43:BZ:96:VAL:CG1	43:BZ:97:PRO:HD2	1.69	1.22
27:BA:125:G:H3'	53:B7:19:ARG:NH1	1.54	1.22
27:BA:826:U:H5'	27:BA:2429:G:OP2	1.32	1.22
29:BE:205:THR:HG23	29:BE:259:HIS:C	1.60	1.22
53:B7:21:ARG:NH1	53:B7:43:THR:CG2	2.03	1.22
27:BA:2378:A:C4	38:BS:26:LEU:CD2	2.23	1.22
28:BD:183:ILE:O	28:BD:184:LEU:HD23	1.06	1.22
36:BP:92:ASP:HB3	36:BP:118:LEU:CD1	1.68	1.22
43:BZ:2:GLU:O	43:BZ:54:ILE:CG2	1.86	1.22
27:BA:126:A:N7	53:B7:18:PHE:CZ	2.06	1.22
27:BA:2209:C:H2'	27:BA:2210:G:C3'	1.68	1.22
27:BA:2262:U:OP2	49:B0:14:ARG:NE	1.72	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:529:A:H2	27:BA:2022:U:OP1	1.22	1.22
49:B0:43:THR:CG2	49:B0:75:GLY:HA3	1.68	1.22
50:B4:59:PHE:O	50:B4:61:LYS:N	1.72	1.22
27:BA:2228:G:N7	27:BA:2229:C:C5	2.05	1.22
26:BB:47:C:O3'	38:BS:107:ASN:ND2	1.68	1.22
29:BE:205:THR:HG23	29:BE:259:HIS:O	1.07	1.22
30:BF:52:ALA:CA	30:BF:55:ARG:NE	2.02	1.22
38:BS:81:ALA:O	38:BS:83:LEU:N	1.72	1.22
40:BW:11:ARG:O	40:BW:12:ILE:HG13	1.39	1.22
41:BX:28:VAL:O	41:BX:62:LYS:HB3	1.37	1.22
50:B4:68:ARG:CG	50:B4:72:LYS:HG2	1.69	1.22
27:BA:994:C:O2	45:BU:53:LYS:CD	1.83	1.22
45:BU:36:PHE:O	45:BU:39:LEU:HB2	1.38	1.22
46:BV:71:ILE:O	46:BV:72:ARG:CG	1.87	1.22
27:BA:850:C:C4'	48:B3:18:ASP:OD1	1.85	1.22
48:B3:40:THR:HG21	48:B3:43:ILE:CD1	1.58	1.22
27:BA:2056:G:N2	51:B5:4:HIS:O	1.69	1.22
38:BS:76:GLY:O	38:BS:82:TYR:HB2	1.34	1.22
45:BU:97:ASP:O	45:BU:101:ARG:HG2	1.07	1.22
46:BV:33:VAL:O	46:BV:62:GLU:HA	1.32	1.22
46:BV:94:LYS:O	46:BV:95:ILE:CD1	1.82	1.22
40:BW:8:ARG:HG3	40:BW:102:HIS:CE1	1.74	1.22
27:BA:337:C:OP1	42:BY:24:ARG:HB2	1.11	1.22
43:BZ:64:ALA:CB	43:BZ:85:MET:HA	1.70	1.22
1:AA:986:A:N3	22:AS:52:TYR:OH	1.69	1.22
41:BX:11:THR:O	41:BX:15:MET:HG3	1.08	1.22
48:B3:23:LEU:O	48:B3:28:LEU:HG	1.36	1.22
53:B7:34:ARG:HD2	53:B7:42:LEU:CD2	1.65	1.22
27:BA:1492:G:O4'	28:BD:97:ASP:OD1	1.55	1.22
38:BS:94:GLU:OE1	38:BS:94:GLU:O	1.55	1.22
52:B6:35:LEU:O	52:B6:36:GLU:CG	1.86	1.22
3:AW:76:A:C8	27:BA:2421:G:C4	2.27	1.22
27:BA:2793:G:C6	27:BA:2794:C:N4	2.07	1.22
30:BF:153:VAL:CG1	30:BF:157:LEU:HD21	1.69	1.22
44:BR:44:LEU:O	44:BR:48:VAL:CG2	1.87	1.22
45:BU:44:THR:CG2	46:BV:77:GLY:O	1.85	1.22
33:BI:133:LEU:CD1	33:BI:139:ALA:HB2	1.69	1.22
42:BY:41:ARG:O	42:BY:112:LEU:HB2	1.13	1.22
42:BY:49:GLU:OE2	42:BY:97:ARG:CZ	1.87	1.22
3:AW:25:C:C2	3:AW:26:G:C4	2.27	1.22
27:BA:10:G:N2	27:BA:2629:A:N3	1.88	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:7:U:O3'	2:AV:8:U:P	1.98	1.22
27:BA:389:G:OP2	50:B4:24:THR:HG22	1.40	1.21
27:BA:2626:C:C2'	27:BA:2627:G:C5'	2.17	1.21
27:BA:2768:C:C2	27:BA:2769:C:C6	2.28	1.21
30:BF:3:ALA:CB	30:BF:16:VAL:O	1.87	1.21
54:B8:23:MET:HE3	54:B8:48:PHE:CD2	1.75	1.21
27:BA:2410:G:C4	27:BA:2411:A:N7	2.09	1.21
29:BE:205:THR:CG2	29:BE:259:HIS:O	1.88	1.21
30:BF:230:GLY:O	30:BF:231:ARG:CG	1.88	1.21
35:BO:46:ALA:O	35:BO:47:THR:O	1.52	1.21
46:BV:50:ASP:OD1	46:BV:53:LYS:HE3	1.39	1.21
43:BZ:149:ALA:O	43:BZ:152:ILE:HG13	1.36	1.21
1:AA:1318:A:O2'	22:AS:37:ARG:HB3	1.36	1.21
48:B3:48:GLU:N	48:B3:48:GLU:OE1	1.70	1.21
27:BA:2353:G:N1	27:BA:2364:C:N4	1.69	1.21
27:BA:2447:G:C4	27:BA:2500:U:C5	2.27	1.21
27:BA:2674:G:H4'	35:BO:30:ARG:CG	1.71	1.21
27:BA:850:C:H4'	48:B3:18:ASP:CG	1.58	1.21
30:BF:102:LEU:CD2	30:BF:106:GLU:OE1	1.87	1.21
35:BO:103:ALA:HA	35:BO:122:ILE:O	1.39	1.21
45:BU:113:SER:O	45:BU:115:ASN:N	1.71	1.21
45:BU:6:THR:O	45:BU:9:VAL:HG23	1.40	1.21
46:BV:57:GLN:NE2	46:BV:100:GLY:O	1.72	1.21
43:BZ:151:ASP:HB3	43:BZ:153:LYS:NZ	1.55	1.21
27:BA:2023:G:C4'	27:BA:2618:G:OP1	1.87	1.21
27:BA:2734:A:N6	27:BA:2735:G:N3	1.88	1.21
45:BU:92:ARG:CA	45:BU:95:LEU:CD1	1.91	1.21
46:BV:11:GLN:NE2	46:BV:22:VAL:HG23	1.34	1.21
46:BV:91:THR:O	46:BV:92:ALA:HB2	1.32	1.21
43:BZ:100:THR:HG22	43:BZ:137:ASP:OD1	1.39	1.21
33:BI:75:LEU:CD1	33:BI:76:THR:H	1.54	1.21
42:BY:29:ALA:O	42:BY:33:GLU:OE2	1.55	1.21
27:BA:144:C:H5'	41:BX:36:GLU:OE1	1.37	1.21
27:BA:1599:C:OP1	41:BX:33:SER:OG	1.57	1.21
32:BH:53:ARG:NH1	32:BH:56:ASP:HA	1.55	1.21
1:AA:703:G:O3'	1:AA:704:A:P	1.99	1.21
27:BA:2373:G:O2'	27:BA:2374:C:H5'	1.36	1.21
27:BA:2620:C:O2'	27:BA:2621:A:C5'	1.87	1.21
30:BF:91:PRO:CB	30:BF:92:PRO:HD3	1.62	1.21
34:BN:60:ARG:O	34:BN:71:TYR:CB	1.87	1.21
34:BN:77:GLY:O	34:BN:79:PHE:N	1.74	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:97:GLN:HB2	31:BG:106:PHE:CE2	1.76	1.21
37:BQ:57:ARG:O	37:BQ:58:HIS:O	1.57	1.21
33:BI:102:LEU:CD1	33:BI:103:GLN:N	2.02	1.21
42:BY:101:LEU:CD2	42:BY:103:LEU:HD21	1.68	1.21
42:BY:103:LEU:CD2	42:BY:112:LEU:CD2	1.96	1.21
42:BY:43:ASN:ND2	42:BY:101:LEU:HD21	1.51	1.21
43:BZ:39:PHE:CA	43:BZ:43:PHE:CE2	2.21	1.21
41:BX:6:LYS:NZ	41:BX:29:ASP:HA	1.53	1.21
27:BA:849:A:N3	48:B3:21:ALA:HB1	1.55	1.21
50:B4:55:ARG:O	50:B4:56:VAL:O	1.57	1.21
30:BF:163:HIS:HB3	30:BF:166:ILE:HD12	1.21	1.21
37:BQ:69:ASN:ND2	37:BQ:70:ARG:N	1.88	1.21
49:B0:28:GLY:N	49:B0:60:PHE:CD2	1.98	1.21
48:B3:1:MET:SD	48:B3:3:ARG:HG2	1.79	1.21
27:BA:2226:C:H2'	27:BA:2227:A:O4'	1.06	1.21
27:BA:2663:G:H2'	27:BA:2664:G:C8	1.75	1.21
35:BO:25:LEU:HG	35:BO:38:VAL:O	1.35	1.21
1:AA:1320:C:C2	22:AS:72:GLY:HA3	1.75	1.21
53:B7:21:ARG:NH2	53:B7:43:THR:OG1	1.72	1.21
54:B8:36:LYS:HD3	54:B8:40:GLU:OE1	1.40	1.21
54:B8:52:LYS:O	54:B8:54:GLU:N	1.72	1.21
27:BA:826:U:H5'	27:BA:2429:G:P	1.79	1.21
28:BD:183:ILE:HG22	28:BD:184:LEU:N	1.31	1.21
31:BG:65:GLU:OE1	31:BG:65:GLU:O	1.59	1.21
36:BP:128:GLY:CA	36:BP:132:LYS:NZ	2.03	1.21
45:BU:117:ARG:HD3	45:BU:118:GLN:HG2	1.23	1.21
51:B5:18:MET:O	51:B5:21:SER:CB	1.89	1.21
27:BA:600:G:C5'	30:BF:30:LEU:HD11	1.71	1.21
43:BZ:100:THR:HA	43:BZ:137:ASP:OD2	1.03	1.21
43:BZ:71:MET:HG2	43:BZ:78:PRO:CG	1.71	1.21
27:BA:2268:A:OP1	27:BA:2268:A:O4'	1.57	1.20
27:BA:2519:U:OP1	27:BA:2519:U:H3'	1.35	1.20
28:BD:103:ILE:CD1	28:BD:104:ILE:HD11	1.71	1.20
28:BD:143:ILE:O	28:BD:152:GLN:CB	1.88	1.20
48:B3:20:LYS:HA	48:B3:23:LEU:CG	1.69	1.20
27:BA:2319:G:O5'	27:BA:2320:A:OP1	1.56	1.20
27:BA:2364:C:C5'	49:B0:38:VAL:CG1	2.17	1.20
28:BD:167:GLU:N	28:BD:182:MET:HE1	1.56	1.20
45:BU:65:ILE:CG2	45:BU:76:TYR:HE2	1.54	1.20
33:BI:103:GLN:NE2	33:BI:110:LEU:N	1.81	1.20
28:BD:210:LYS:CA	28:BD:213:LYS:HD3	1.69	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:65:G:HO3'	2:AV:66:A:P	0.71	1.20
1:AA:1311:G:O6	22:AS:2:PRO:HA	1.38	1.20
49:B0:37:LEU:CD1	49:B0:69:PHE:HB2	1.70	1.20
54:B8:50:LEU:CD2	54:B8:51:ALA:N	1.73	1.20
54:B8:60:LEU:CD1	54:B8:64:ARG:HB2	1.71	1.20
27:BA:2219:G:C2'	27:BA:2224:G:O5'	1.88	1.20
27:BA:2653:U:H3'	27:BA:2654:A:C8	1.76	1.20
27:BA:2848:G:N2	27:BA:2849:U:N3	1.79	1.20
31:BG:19:GLU:CB	31:BG:135:VAL:HG22	1.57	1.20
26:BB:57:A:C1'	31:BG:13:MET:SD	2.29	1.20
27:BA:2303:G:C5'	31:BG:99:ASP:HB3	1.70	1.20
27:BA:25:U:H5"	40:BW:80:PRO:CD	1.72	1.20
27:BA:1809:A:N6	50:B4:3:LYS:HG2	1.53	1.20
27:BA:2313:C:C5'	31:BG:51:ARG:HH11	1.52	1.20
37:BQ:36:ASN:OD1	43:BZ:116:VAL:HG12	1.38	1.20
45:BU:91:ASN:OD1	45:BU:95:LEU:HD21	1.37	1.20
46:BV:30:GLY:CA	46:BV:33:VAL:HG21	1.69	1.20
27:BA:1614:A:N7	40:BW:88:ARG:HD2	1.54	1.20
27:BA:1138:G:P	34:BN:57:TYR:OH	1.99	1.20
27:BA:2188:C:C4	27:BA:2189:U:O4	1.94	1.20
27:BA:2262:U:O2'	27:BA:2263:C:C5'	1.88	1.20
27:BA:965:C:O2'	27:BA:2272:U:C6	1.92	1.20
27:BA:2218:G:O2'	28:BD:146:LYS:CE	1.87	1.20
27:BA:998:C:H5"	45:BU:84:LYS:HZ1	1.04	1.20
28:BD:92:LEU:CD1	28:BD:102:TYR:CD1	2.24	1.20
30:BF:230:GLY:O	30:BF:231:ARG:HG2	1.07	1.20
2:AV:35:A:N1	4:AX:118:C:N3	1.88	1.20
33:BI:89:LEU:CD1	33:BI:93:ILE:CG2	2.17	1.20
42:BY:31:LEU:HD13	42:BY:113:GLU:OE1	1.36	1.20
42:BY:55:PHE:CE1	42:BY:89:ARG:NH1	2.07	1.20
26:BB:104:A:H1'	43:BZ:24:TYR:OH	1.36	1.20
27:BA:1566:A:C2	28:BD:212:HIS:HA	1.75	1.20
47:B2:55:ARG:HA	47:B2:58:THR:OG1	1.22	1.20
50:B4:51:ASP:O	50:B4:52:THR:CG2	1.88	1.20
3:AW:75:C:C2	27:BA:2395:C:H1'	1.55	1.20
34:BN:56:LYS:O	34:BN:59:LYS:HB2	1.37	1.20
37:BQ:145:PRO:O	37:BQ:146:THR:OG1	1.59	1.20
26:BB:89(A):A:N1	37:BQ:52:LYS:NZ	1.90	1.20
39:BT:28:THR:O	39:BT:29:THR:CG2	1.89	1.20
46:BV:91:THR:O	46:BV:92:ALA:CB	1.84	1.20
26:BB:7:G:O2'	38:BS:37:ARG:HG3	1.41	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:167:GLU:HB3	28:BD:170:TYR:HE1	1.07	1.20
29:BE:221:LYS:NZ	29:BE:233:ARG:HG2	1.55	1.20
32:BH:18:VAL:HG22	32:BH:23:VAL:CG2	1.69	1.20
35:BO:68:GLY:HA3	35:BO:78:ARG:NE	1.55	1.20
37:BQ:134:PHE:O	37:BQ:137:ARG:HB3	1.39	1.20
44:BR:79:LEU:O	44:BR:79:LEU:HD23	1.37	1.20
46:BV:59:GLU:O	46:BV:60:VAL:HG23	1.37	1.20
16:AM:94:ARG:C	16:AM:95:GLY:N	1.93	1.20
47:B2:55:ARG:C	47:B2:58:THR:OG1	1.79	1.20
50:B4:51:ASP:O	50:B4:52:THR:HG23	1.38	1.20
52:B6:8:ILE:N	52:B6:29:ARG:NH2	1.87	1.20
27:BA:2313:C:O2'	27:BA:2314:C:H5'	1.36	1.20
27:BA:2819:G:H5''	27:BA:2821:A:N6	1.55	1.20
28:BD:63:ILE:O	28:BD:64:ILE:HG13	1.38	1.20
32:BH:83:GLU:OE2	32:BH:84:LYS:N	1.72	1.20
33:BI:7:LYS:CD	33:BI:12:LYS:HZ2	1.43	1.20
40:BW:85:VAL:C	40:BW:86:LEU:HD23	1.63	1.20
52:B6:19:GLY:CA	52:B6:42:PRO:HG3	1.70	1.20
54:B8:55:TRP:CZ3	54:B8:59:LYS:CE	2.24	1.20
28:BD:158:GLY:N	28:BD:194:VAL:HG11	1.53	1.20
29:BE:77:PRO:CB	29:BE:187:HIS:H	1.55	1.20
30:BF:225:PRO:HG2	30:BF:231:ARG:NH2	1.54	1.20
32:BH:101:LYS:NZ	32:BH:115:GLU:HB2	1.53	1.20
36:BP:62:ALA:N	36:BP:107:LYS:HE3	0.89	1.20
44:BR:34:ILE:CG2	44:BR:35:THR:H	1.51	1.20
42:BY:74:VAL:CG1	42:BY:77:VAL:HG23	1.70	1.20
47:B2:30:ALA:O	47:B2:34:GLN:HB2	1.39	1.20
41:BX:47:VAL:HG12	41:BX:69:SER:OG	1.36	1.20
27:BA:2571:C:O2'	29:BE:243:PRO:CD	1.89	1.19
30:BF:168:ARG:NH2	30:BF:209:GLY:HA2	1.55	1.19
36:BP:113:GLN:O	36:BP:114:VAL:O	1.60	1.19
37:BQ:41:THR:HG22	37:BQ:125:TRP:CZ3	1.76	1.19
43:BZ:100:THR:HA	43:BZ:137:ASP:CG	1.63	1.19
51:B5:57:VAL:CG1	51:B5:58:LEU:H	1.55	1.19
48:B3:32:GLN:O	48:B3:32:GLN:CD	1.81	1.19
52:B6:21:TYR:OH	52:B6:43:VAL:CG2	1.90	1.19
54:B8:23:MET:CE	54:B8:48:PHE:HA	1.70	1.19
27:BA:2357:U:O2'	27:BA:2358:G:O5'	1.56	1.19
27:BA:2304:G:C4'	31:BG:105:SER:HB2	1.71	1.19
32:BH:82:TYR:CE2	32:BH:137:LYS:HB3	1.75	1.19
45:BU:33:ARG:HB2	45:BU:33:ARG:NH1	1.57	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:61:VAL:CA	46:BV:98:ILE:HD12	1.73	1.19
27:BA:2252:G:H2'	27:BA:2253:G:C5'	1.73	1.19
27:BA:2617:C:C2'	27:BA:2618:G:H5'	1.71	1.19
28:BD:111:VAL:O	28:BD:113:MET:N	1.74	1.19
27:BA:780:G:N1	28:BD:233:ASP:OD2	1.76	1.19
34:BN:19:MET:CB	34:BN:46:ILE:HG12	1.69	1.19
44:BR:20:LEU:HD11	44:BR:21:TYR:CD2	1.74	1.19
27:BA:2850:A:H2	44:BR:61:HIS:CE1	1.42	1.19
3:AW:25:C:C4	3:AW:26:G:C6	2.30	1.19
1:AA:1361:G:O3'	1:AA:361(A):C:P	1.99	1.19
1:AA:299:G:N2	1:AA:566:G:O6	1.75	1.19
52:B6:14:SER:HB2	52:B6:51:ARG:O	1.43	1.19
27:BA:1364:G:P	50:B4:3:LYS:HG3	1.83	1.19
27:BA:2352:A:H2	49:B0:30:VAL:CG1	1.35	1.19
27:BA:7:G:H5'	34:BN:6:PHE:CD2	1.60	1.19
34:BN:77:GLY:HA2	34:BN:80:LYS:CG	1.71	1.19
52:B6:19:GLY:CA	52:B6:42:PRO:CG	2.20	1.19
52:B6:8:ILE:CA	52:B6:29:ARG:HH21	1.54	1.19
27:BA:2717:G:C2	27:BA:2718:G:C8	2.30	1.19
27:BA:617:G:H4'	30:BF:219:ASN:OD1	1.38	1.19
34:BN:12:VAL:C	34:BN:38:VAL:CG1	2.07	1.19
27:BA:1012:U:O2	34:BN:21:ARG:CZ	1.91	1.19
45:BU:76:TYR:O	45:BU:80:ILE:HD12	1.04	1.19
41:BX:6:LYS:HB3	41:BX:27:ALA:O	1.42	1.19
1:AA:576:G:O3'	1:AA:577:G:P	2.01	1.19
54:B8:55:TRP:CE3	54:B8:59:LYS:HE3	1.76	1.19
27:BA:2210:G:O6	28:BD:148:GLY:HA2	1.01	1.19
27:BA:2574:G:O2'	29:BE:240:PRO:HB3	1.04	1.19
28:BD:118:GLY:O	28:BD:129:LEU:CG	1.91	1.19
28:BD:70:LYS:HG3	28:BD:73:ILE:CD1	1.71	1.19
31:BG:38:GLU:HG2	31:BG:41:LEU:CD1	1.71	1.19
32:BH:10:ILE:HG22	32:BH:14:VAL:CB	1.70	1.19
27:BA:557:U:H4'	34:BN:92:GLN:NE2	1.57	1.19
38:BS:108:SER:O	38:BS:110:THR:N	1.74	1.19
27:BA:2045:C:N4	27:BA:2623:G:H1	1.40	1.19
27:BA:2526:G:H2'	27:BA:2527:C:C5'	1.71	1.19
27:BA:2700:C:H2'	27:BA:2701:C:C4'	1.71	1.19
27:BA:445:C:H3'	45:BU:3:ARG:NH2	1.55	1.19
28:BD:167:GLU:HB2	28:BD:170:TYR:CD1	1.75	1.19
29:BE:211:GLN:N	29:BE:216:ARG:CZ	2.05	1.19
30:BF:163:HIS:HA	30:BF:166:ILE:HG13	1.24	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:167:ASP:OD2	30:BF:232:LEU:HG	1.03	1.19
38:BS:46:GLN:O	38:BS:47:LEU:HD23	1.02	1.19
46:BV:42:GLY:N	46:BV:54:TYR:CE1	2.03	1.19
42:BY:33:GLU:OE1	42:BY:34:GLU:HG3	1.06	1.19
43:BZ:20:ALA:C	43:BZ:34:LEU:HD21	1.52	1.19
1:AA:1004:A:H5''	1:AA:1025:U:C4	1.76	1.19
49:B0:43:THR:HG21	49:B0:75:GLY:N	1.55	1.19
27:BA:2870:C:O2	27:BA:2871:C:O4'	1.61	1.19
27:BA:1799:G:N2	28:BD:153:LEU:CG	2.05	1.19
36:BP:128:GLY:CA	36:BP:132:LYS:HZ2	1.55	1.19
46:BV:19:VAL:CB	46:BV:21:ARG:NH1	2.04	1.19
27:BA:2659:G:H2'	27:BA:2661:G:OP2	1.43	1.19
27:BA:1568:G:C5'	28:BD:60:GLN:NE2	1.98	1.19
26:BB:59:A:OP1	31:BG:141:VAL:CG2	1.90	1.19
31:BG:145:ASP:HB3	38:BS:15:GLU:O	1.40	1.19
45:BU:97:ASP:O	45:BU:101:ARG:CG	1.90	1.19
46:BV:14:VAL:CG2	46:BV:19:VAL:HG21	1.70	1.19
33:BI:77:VAL:HG21	33:BI:141:LEU:CD1	1.72	1.19
33:BI:95:SER:OG	33:BI:98:ILE:CD1	1.79	1.19
27:BA:83:G:H5''	42:BY:20:HIS:ND1	1.56	1.19
41:BX:12:GLU:O	41:BX:16:ASN:OD1	1.61	1.19
41:BX:9:HIS:HD1	41:BX:26:PHE:C	1.47	1.19
27:BA:2309:A:H5'	27:BA:2310:A:OP2	1.40	1.18
27:BA:2488:A:C2'	27:BA:2489:G:H5'	1.73	1.18
27:BA:2711:A:OP2	27:BA:2714:G:OP1	1.57	1.18
29:BE:268:LEU:HD23	29:BE:269:ILE:N	1.56	1.18
3:AW:72:C:O2'	3:AW:73:A:H5'	1.38	1.18
54:B8:50:LEU:HD23	54:B8:51:ALA:N	0.86	1.18
27:BA:1129:A:C2	27:BA:2570:G:H1'	1.78	1.18
27:BA:2880:C:H42	27:BA:2881:C:N4	1.41	1.18
29:BE:256:THR:HA	29:BE:259:HIS:CE1	1.78	1.18
30:BF:217:GLU:O	30:BF:218:VAL:HG23	1.05	1.18
34:BN:19:MET:HB2	34:BN:46:ILE:CG1	1.74	1.18
37:BQ:144:THR:OG1	37:BQ:145:PRO:HD3	1.43	1.18
44:BR:61:HIS:HA	44:BR:64:ARG:CD	1.73	1.18
43:BZ:159:THR:O	43:BZ:160:LEU:HD13	1.41	1.18
3:AW:25:C:N3	3:AW:26:G:N3	1.91	1.18
27:BA:144:C:C5'	41:BX:36:GLU:OE1	1.90	1.18
48:B3:7:LYS:O	48:B3:54:VAL:CG2	1.88	1.18
48:B3:9:VAL:CG2	48:B3:54:VAL:HA	1.73	1.18
27:BA:2815:C:H5'	51:B5:29:ASN:ND2	1.57	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1665:A:O3'	35:BO:66:LYS:HE2	1.06	1.18
27:BA:2314:C:C5'	31:BG:22:VAL:HG11	1.70	1.18
27:BA:2528:U:C5	27:BA:2530:A:C4	2.30	1.18
27:BA:2589:A:H2'	27:BA:2590:A:C5'	1.73	1.18
39:BT:12:ASP:O	39:BT:13:ILE:HG13	1.42	1.18
46:BV:61:VAL:HA	46:BV:98:ILE:CD1	1.72	1.18
27:BA:1129:A:C2	27:BA:2570:G:C1'	2.25	1.18
27:BA:2785:C:O2'	27:BA:2786:U:O5'	1.60	1.18
27:BA:2788:C:O3'	27:BA:2789:C:P	2.02	1.18
29:BE:200:ASP:HA	29:BE:266:LYS:HD2	1.22	1.18
27:BA:2746:U:O2	27:BA:2759:G:N2	1.74	1.18
28:BD:103:ILE:CG1	28:BD:104:ILE:HD11	1.52	1.18
32:BH:86:LEU:C	32:BH:86:LEU:HD13	1.63	1.18
36:BP:69:ILE:CG1	36:BP:70:ASP:H	1.57	1.18
37:BQ:49:VAL:CG2	37:BQ:121:ASP:N	2.01	1.18
44:BR:33:ARG:HA	44:BR:114:VAL:O	1.42	1.18
27:BA:1818:U:C3'	28:BD:155:ARG:HG2	1.74	1.18
30:BF:215:ALA:CB	30:BF:238:SER:O	1.91	1.18
34:BN:83:ILE:HG13	34:BN:84:ARG:N	1.15	1.18
37:BQ:127:ASN:HB3	37:BQ:128:PRO:CD	1.73	1.18
37:BQ:69:ASN:C	37:BQ:69:ASN:HD22	1.45	1.18
45:BU:65:ILE:CD1	45:BU:96:ALA:HB2	1.71	1.18
46:BV:94:LYS:C	46:BV:95:ILE:HD12	0.80	1.18
33:BI:92:SER:HB3	33:BI:122:ARG:NH1	1.58	1.18
42:BY:64:ASN:O	42:BY:72:ILE:HG23	1.41	1.18
1:AA:1222:G:OP2	1:AA:1322:C:C5	1.96	1.18
52:B6:12:MET:C	52:B6:13:GLU:OE1	1.82	1.18
53:B7:21:ARG:O	53:B7:24:THR:HG23	1.43	1.18
55:B9:7:VAL:CG1	55:B9:34:GLN:CD	2.01	1.18
27:BA:2013:A:P	40:BW:96:ILE:HG22	1.81	1.18
27:BA:2616:C:O2'	27:BA:2617:C:C5'	1.91	1.18
27:BA:2776:A:H4'	27:BA:2778:A:OP1	1.44	1.18
30:BF:102:LEU:N	30:BF:107:ARG:HH21	1.41	1.18
33:BI:37:ILE:CG2	33:BI:38:GLU:H	1.55	1.18
35:BO:4:GLN:O	35:BO:21:VAL:O	1.58	1.18
48:B3:53:LEU:CD2	48:B3:54:VAL:HG13	1.72	1.18
27:BA:16:G:C4'	51:B5:18:MET:SD	2.32	1.18
53:B7:7:PRO:C	53:B7:8:ASN:HD22	1.43	1.18
54:B8:7:HIS:O	54:B8:10:ALA:HB3	1.40	1.18
54:B8:36:LYS:CD	54:B8:40:GLU:OE1	1.90	1.18
27:BA:2206:C:O2'	27:BA:2207:C:C5'	1.91	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2730:C:H4'	29:BE:265:ASN:ND2	1.59	1.18
40:BW:29:LEU:O	40:BW:31:GLU:N	1.76	1.18
40:BW:30:GLU:HA	40:BW:33:ARG:CD	1.72	1.18
42:BY:101:LEU:CD2	42:BY:103:LEU:CD2	2.20	1.18
42:BY:23:VAL:HG23	42:BY:67:LEU:HD21	1.25	1.18
43:BZ:69:VAL:HG21	43:BZ:81:VAL:CG1	1.73	1.18
52:B6:19:GLY:HA2	52:B6:44:ALA:CB	1.74	1.18
52:B6:5:GLY:O	52:B6:7:ARG:N	1.74	1.18
27:BA:1078:U:OP1	56:BK:93:LYS:CG	1.92	1.18
27:BA:2573:C:C6	27:BA:2573:C:C5'	2.24	1.18
30:BF:219:ASN:O	30:BF:222:ASP:CB	1.90	1.18
33:BI:13:GLY:HA2	33:BI:15:LYS:CE	1.72	1.18
46:BV:4:ILE:CD1	46:BV:13:ARG:HG2	1.74	1.18
40:BW:104:THR:O	40:BW:105:VAL:CG1	1.92	1.18
48:B3:8:LEU:HD21	48:B3:31:LEU:HA	1.26	1.18
52:B6:41:ASP:HB2	52:B6:46:LYS:NZ	1.55	1.18
28:BD:92:LEU:CD1	28:BD:102:TYR:CE1	2.26	1.18
29:BE:214:VAL:HG21	29:BE:221:LYS:NZ	1.56	1.18
38:BS:99:GLU:OE1	38:BS:128:ASP:HB2	1.02	1.18
27:BA:2021:C:H5	45:BU:25:TRP:CZ2	1.61	1.18
3:AW:25:C:C4	3:AW:26:G:C2	2.31	1.18
41:BX:5:ILE:HG22	41:BX:6:LYS:N	1.25	1.18
41:BX:18:MET:SD	41:BX:25:GLN:N	2.15	1.18
33:BI:48:GLU:O	33:BI:52:GLN:HG3	1.44	1.18
1:AA:876:G:H1'	11:AH:11:THR:HG21	1.26	1.18
27:BA:1818:U:O5'	28:BD:155:ARG:HG3	1.05	1.17
27:BA:2013:A:OP1	40:BW:96:ILE:HG22	1.01	1.17
27:BA:2302:G:C6	27:BA:2315:G:O6	1.95	1.17
27:BA:2403:C:N4	27:BA:2415:G:O6	1.63	1.17
27:BA:593:G:C5'	54:B8:62:LEU:HD21	1.75	1.17
32:BH:87:GLU:HG3	32:BH:162:ARG:O	1.43	1.17
36:BP:117:GLU:OE2	36:BP:136:ALA:O	1.61	1.17
27:BA:245:G:H5'	36:BP:55:GLN:O	1.41	1.17
27:BA:2544:G:H5''	27:BA:2645:G:N7	1.56	1.17
35:BO:34:ASN:O	35:BO:35:ILE:O	1.62	1.17
47:B2:5:VAL:HG12	47:B2:6:GLN:N	1.38	1.17
48:B3:20:LYS:O	48:B3:23:LEU:HG	1.01	1.17
27:BA:2258:C:N4	27:BA:2426:A:H1'	1.60	1.17
27:BA:2546:U:H5'	27:BA:2565:A:C2	1.79	1.17
27:BA:2618:G:O2'	27:BA:2619:C:O5'	1.61	1.17
27:BA:2644:G:O5'	27:BA:2644:G:C8	1.98	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2869:G:C6	27:BA:2870:C:C5	2.19	1.17
29:BE:72:VAL:O	29:BE:73:ILE:CD1	1.93	1.17
36:BP:76:LEU:O	36:BP:81:VAL:HG23	1.41	1.17
51:B5:12:SER:CB	51:B5:15:LYS:HZ1	1.57	1.17
27:BA:1665:A:C2'	35:BO:66:LYS:NZ	2.08	1.17
27:BA:2255:G:C2	27:BA:2256:G:H1'	1.76	1.17
27:BA:2317:C:C5'	31:BG:150:SER:HA	1.75	1.17
27:BA:2583:G:H2'	27:BA:2584:U:O2	1.04	1.17
27:BA:1456:G:N2	27:BA:2704:C:N3	1.90	1.17
27:BA:2739:U:H2'	27:BA:2740:A:H5'	1.26	1.17
27:BA:2756:U:O2'	27:BA:2757:A:H5'	1.02	1.17
28:BD:128:ALA:HB3	28:BD:190:THR:CG2	1.54	1.17
29:BE:44:TYR:C	29:BE:309:PRO:HG3	1.63	1.17
32:BH:129:LYS:O	32:BH:130:ILE:CD1	1.93	1.17
27:BA:2684:U:H5'	35:BO:76:TYR:OH	1.44	1.17
46:BV:61:VAL:CA	46:BV:98:ILE:CD1	2.23	1.17
43:BZ:113:VAL:HG12	43:BZ:114:ASP:H	1.04	1.17
42:BY:103:LEU:CD1	42:BY:113:GLU:HB3	1.74	1.17
43:BZ:46:GLN:O	43:BZ:47:SER:O	1.62	1.17
41:BX:4:VAL:CG2	47:B2:24:LYS:HZ2	1.47	1.17
41:BX:11:THR:O	41:BX:15:MET:CG	1.91	1.17
1:AA:247:G:OP2	20:AQ:99:SER:HB2	1.39	1.17
49:B0:65:GLY:O	49:B0:66:LYS:CD	1.86	1.17
48:B3:59:VAL:O	48:B3:60:GLU:CG	1.92	1.17
27:BA:1278:A:OP1	44:BR:36:THR:OG1	1.61	1.17
27:BA:2219:G:C2'	27:BA:2224:G:C5'	2.21	1.17
27:BA:2359:C:O2'	27:BA:2360:A:O4'	1.61	1.17
27:BA:2653:U:N3	27:BA:2654:A:N6	1.93	1.17
27:BA:2754:U:H2'	27:BA:2756:U:OP1	0.99	1.17
27:BA:2865:U:C5	27:BA:2866:U:C5	2.33	1.17
35:BO:99:PHE:HE2	39:BT:24:LYS:CE	1.33	1.17
36:BP:57:VAL:HG12	36:BP:58:GLN:N	1.51	1.17
49:B0:49:GLN:NE2	49:B0:73:GLY:HA3	1.39	1.17
53:B7:30:ILE:CD1	53:B7:33:ARG:HD3	1.75	1.17
27:BA:2700:C:H2'	27:BA:2701:C:H4'	1.24	1.17
29:BE:205:THR:CG2	29:BE:259:HIS:C	2.11	1.17
32:BH:86:LEU:HA	32:BH:148:ARG:NH2	0.86	1.17
32:BH:86:LEU:N	32:BH:131:ILE:CG2	2.05	1.17
27:BA:2485:G:H5''	37:BQ:144:THR:CG2	1.74	1.17
37:BQ:20:ILE:HG13	37:BQ:21:SER:N	1.59	1.17
33:BI:95:SER:HA	33:BI:98:ILE:CD1	1.72	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:101:LEU:HD11	42:BY:112:LEU:CD1	1.74	1.17
42:BY:41:ARG:HB2	42:BY:112:LEU:HA	1.24	1.17
43:BZ:19:ILE:HB	43:BZ:39:PHE:CE1	1.79	1.17
6:AC:9:GLY:CA	17:AN:49:HIS:O	1.91	1.17
1:AA:1211:U:C3'	1:AA:1212:U:P	2.32	1.17
27:BA:864:G:O3'	27:BA:865:C:P	2.02	1.17
48:B3:40:THR:CB	48:B3:43:ILE:HD13	1.74	1.17
27:BA:1214:A:H2'	27:BA:1215:G:C8	1.80	1.17
27:BA:1364:G:OP1	50:B4:3:LYS:HG3	1.40	1.17
28:BD:63:ILE:HG22	28:BD:64:ILE:N	1.38	1.17
29:BE:303:PRO:CB	29:BE:307:LEU:HD13	1.46	1.17
32:BH:18:VAL:CG2	32:BH:23:VAL:HG22	1.73	1.17
49:B0:45:PHE:CZ	49:B0:78:PHE:HD2	1.62	1.17
27:BA:2009:G:H1'	44:BR:107:ASP:O	1.45	1.17
27:BA:2333:A:H1'	27:BA:2335:A:C5	1.79	1.17
27:BA:2423:U:C5	27:BA:2425:A:N6	2.12	1.17
27:BA:2543:G:C2'	27:BA:2544:G:C8	2.26	1.17
27:BA:2507:C:C2	27:BA:2583:G:N2	2.13	1.17
27:BA:2603:G:N3	27:BA:2604:U:C6	2.13	1.17
27:BA:564:C:OP1	46:BV:79:GLN:CG	1.91	1.17
38:BS:41:LYS:CD	38:BS:41:LYS:O	1.93	1.17
33:BI:95:SER:CA	33:BI:98:ILE:HD12	1.75	1.17
42:BY:101:LEU:CD2	42:BY:112:LEU:HD11	1.74	1.17
42:BY:35:TYR:OH	42:BY:113:GLU:HG3	1.43	1.17
43:BZ:2:GLU:CA	43:BZ:54:ILE:CG2	2.23	1.17
27:BA:1751:C:O4'	27:BA:2860:A:C2	1.95	1.17
49:B0:69:PHE:O	49:B0:70:ILE:HG23	1.42	1.17
27:BA:2263:C:C2'	27:BA:2264:C:H5'	1.74	1.17
27:BA:2482:G:C2'	27:BA:2483:C:H5'	1.74	1.17
27:BA:2776:A:C1'	27:BA:2778:A:N7	2.08	1.17
28:BD:158:GLY:CA	28:BD:194:VAL:CG1	2.17	1.17
30:BF:34:ALA:HB2	30:BF:110:ALA:CB	1.73	1.17
30:BF:62:GLY:CA	30:BF:65:ARG:NH2	2.05	1.17
33:BI:3:VAL:HG21	33:BI:21:VAL:CG2	1.74	1.17
34:BN:13:ASP:N	34:BN:38:VAL:HG11	1.51	1.17
44:BR:101:ALA:O	51:B5:41:LEU:CD1	1.93	1.17
40:BW:8:ARG:O	40:BW:10:VAL:HG23	1.43	1.17
50:B4:14:ILE:HG23	50:B4:16:TYR:CE1	1.80	1.17
27:BA:1263:U:C4'	51:B5:16:ARG:CZ	2.23	1.17
27:BA:2226:C:C2'	27:BA:2227:A:O4'	1.93	1.17
27:BA:2657:A:N6	27:BA:2664:G:H21	1.39	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2689:U:C6	27:BA:2713:A:N1	2.13	1.17
27:BA:2731:G:N2	27:BA:2732:G:N2	1.93	1.17
27:BA:856:C:H5'	49:B0:25:LYS:NZ	1.58	1.17
45:BU:115:ASN:O	45:BU:117:ARG:N	1.78	1.17
33:BI:95:SER:O	33:BI:98:ILE:HB	0.98	1.17
43:BZ:2:GLU:N	43:BZ:54:ILE:CG2	2.06	1.17
27:BA:1790:C:P	28:BD:224:VAL:HG13	1.85	1.17
53:B7:30:ILE:CA	53:B7:33:ARG:CD	2.11	1.16
27:BA:2209:C:O2'	27:BA:2210:G:H3'	1.43	1.16
27:BA:2603:G:C2	27:BA:2604:U:C6	2.33	1.16
30:BF:211:ASP:OD2	30:BF:211:ASP:O	1.61	1.16
34:BN:58:GLU:CA	34:BN:61:VAL:HG23	1.74	1.16
38:BS:23:ARG:HH21	38:BS:35:VAL:CG2	1.58	1.16
38:BS:33:ARG:O	38:BS:35:VAL:HG23	1.41	1.16
27:BA:2094:G:C6	27:BA:2196:C:N3	2.14	1.16
27:BA:2328:A:N6	27:BA:2329:G:O6	1.78	1.16
27:BA:2603:G:C2	27:BA:2604:U:C5	2.33	1.16
27:BA:2617:C:N3	27:BA:2618:G:H8	1.40	1.16
27:BA:2688:U:O2	27:BA:2719:G:N2	1.76	1.16
27:BA:2754:U:C2'	27:BA:2756:U:OP1	1.93	1.16
27:BA:2808:U:N3	27:BA:2892:A:C5	2.13	1.16
46:BV:11:GLN:NE2	46:BV:22:VAL:HG21	1.54	1.16
42:BY:101:LEU:CD2	42:BY:103:LEU:HD11	1.74	1.16
27:BA:1364:G:OP1	50:B4:3:LYS:CG	1.92	1.16
55:B9:7:VAL:HG11	55:B9:34:GLN:CG	1.61	1.16
27:BA:2258:C:OP1	49:B0:4:LYS:NZ	1.78	1.16
27:BA:2292:C:C2	27:BA:2293:C:C6	2.32	1.16
27:BA:2333:A:H3'	38:BS:13:ARG:HD3	1.28	1.16
30:BF:36:ARG:CA	30:BF:39:GLN:NE2	2.01	1.16
48:B3:20:LYS:CA	48:B3:23:LEU:HG	1.75	1.16
27:BA:1142:U:O3'	27:BA:142(A):A:P	2.04	1.16
27:BA:2838:G:H2'	27:BA:2839:G:H5'	1.27	1.16
27:BA:856:C:O2'	49:B0:24:LYS:HB2	1.44	1.16
28:BD:73:ILE:HG21	28:BD:95:TYR:CE2	1.78	1.16
29:BE:199:ALA:CB	29:BE:312:ARG:O	1.93	1.16
30:BF:219:ASN:O	30:BF:222:ASP:HB2	1.03	1.16
32:BH:10:ILE:HG23	32:BH:14:VAL:HG11	1.17	1.16
37:BQ:49:VAL:CG2	37:BQ:119:ASN:O	1.92	1.16
40:BW:86:LEU:HB3	40:BW:87:PRO:CD	1.74	1.16
27:BA:1080:C:O4'	56:BK:126:LYS:O	1.61	1.16
3:AW:37:YYG:H191	10:AG:79:ARG:HA	1.22	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:47:VAL:HG11	41:BX:69:SER:HB3	1.20	1.16
27:BA:1364:G:O5'	50:B4:3:LYS:HD3	1.39	1.16
27:BA:2358:G:N2	27:BA:2359:C:O4'	1.78	1.16
27:BA:2507:C:N3	27:BA:2583:G:C2	2.12	1.16
27:BA:2679:A:C2	29:BE:300:VAL:CG2	2.29	1.16
27:BA:2864:G:O2'	27:BA:2865:U:O4'	1.62	1.16
31:BG:93:LEU:HD22	31:BG:97:GLN:OE1	1.44	1.16
31:BG:97:GLN:CB	31:BG:106:PHE:CE2	2.27	1.16
32:BH:93:TYR:O	32:BH:94:ARG:CG	1.92	1.16
45:BU:21:ALA:HA	45:BU:24:PHE:CZ	1.78	1.16
27:BA:535:C:C3'	45:BU:53:LYS:HE2	1.76	1.16
51:B5:45:ILE:HG13	51:B5:52:TYR:CE1	1.80	1.16
51:B5:44:HIS:HA	51:B5:52:TYR:CZ	1.81	1.16
27:BA:458:G:H2'	53:B7:40:HIS:CE1	1.79	1.16
27:BA:592:G:N3	54:B8:3:LYS:HE3	1.52	1.16
27:BA:2049:G:C2	27:BA:2620:C:N3	2.14	1.16
27:BA:2212:A:H2'	27:BA:2213:U:C5	1.77	1.16
27:BA:2258:C:N4	27:BA:2426:A:C1'	2.09	1.16
27:BA:2432:A:C2	27:BA:2433:A:N1	2.13	1.16
27:BA:245:G:OP2	36:BP:53:ARG:NH1	1.78	1.16
27:BA:2586:C:O2	27:BA:2587:A:N7	1.76	1.16
32:BH:75:VAL:O	32:BH:77:GLY:N	1.75	1.16
34:BN:42:GLU:O	34:BN:132:LEU:O	1.61	1.16
37:BQ:56:ILE:N	37:BQ:56:ILE:HD13	1.48	1.16
45:BU:13:ARG:O	45:BU:16:LYS:CB	1.93	1.16
40:BW:32:ALA:CB	40:BW:35:ILE:CD1	2.23	1.16
42:BY:48:VAL:HG12	42:BY:49:GLU:N	1.46	1.16
43:BZ:39:PHE:O	43:BZ:43:PHE:CD2	1.99	1.16
28:BD:223:ASN:O	28:BD:224:VAL:O	1.63	1.16
47:B2:13:PRO:HD3	47:B2:16:ARG:NH1	1.60	1.16
51:B5:25:LEU:O	51:B5:26:THR:HG23	1.44	1.16
27:BA:2653:U:N3	27:BA:2654:A:C6	2.14	1.16
27:BA:931:G:OP1	48:B3:27:GLY:HA2	1.46	1.16
28:BD:168:GLY:O	28:BD:170:TYR:N	1.79	1.16
27:BA:2304:G:P	31:BG:99:ASP:OD2	2.02	1.16
35:BO:56:GLN:O	35:BO:58:VAL:HG23	1.45	1.16
27:BA:2320:A:N1	38:BS:13:ARG:O	1.79	1.16
3:AW:75:C:O2	27:BA:2395:C:H1'	1.41	1.16
27:BA:2491:U:O2'	27:BA:2492:U:H5'	1.02	1.16
27:BA:2761:G:H2'	27:BA:2762:G:H5'	1.19	1.16
31:BG:29:HIS:N	31:BG:69:ILE:HD13	1.59	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:91:HIS:C	37:BQ:111:THR:HG23	1.66	1.16
46:BV:30:GLY:O	46:BV:33:VAL:CG2	1.91	1.16
27:BA:993:G:O4'	46:BV:90:PHE:HE2	1.28	1.16
42:BY:63:ILE:HD11	42:BY:75:GLU:CA	1.74	1.16
42:BY:101:LEU:CD2	42:BY:103:LEU:CD1	2.24	1.16
42:BY:32:ARG:O	42:BY:34:GLU:N	1.77	1.16
41:BX:13:LYS:O	41:BX:16:ASN:OD1	1.64	1.16
1:AA:1315:U:OP2	22:AS:6:LYS:NZ	1.78	1.16
28:BD:139:LEU:O	28:BD:139:LEU:CD1	1.93	1.16
27:BA:849:A:C2	48:B3:21:ALA:CB	2.28	1.16
48:B3:59:VAL:HG12	48:B3:60:GLU:H	1.04	1.16
51:B5:57:VAL:HG12	51:B5:58:LEU:N	1.55	1.16
27:BA:2741:A:O2'	27:BA:2742:C:H5'	1.00	1.16
30:BF:219:ASN:N	30:BF:219:ASN:HD22	1.38	1.16
37:BQ:89:PRO:C	37:BQ:90:PHE:CD1	2.17	1.16
45:BU:13:ARG:HB2	45:BU:13:ARG:NH1	0.83	1.16
45:BU:92:ARG:HA	45:BU:95:LEU:HD12	1.21	1.16
27:BA:2317:C:H5'	31:BG:150:SER:CA	1.75	1.16
27:BA:2459:A:C8	27:BA:2460:U:C5	2.33	1.16
28:BD:66:PHE:O	28:BD:67:LYS:HD2	1.41	1.16
29:BE:218:GLY:O	29:BE:219:VAL:CG2	1.94	1.16
33:BI:7:LYS:CD	33:BI:12:LYS:HG2	1.74	1.16
37:BQ:45:GLN:HE22	37:BQ:153:PRO:CB	1.57	1.16
34:BN:10:VAL:CB	34:BN:36:VAL:HA	1.76	1.16
48:B3:53:LEU:HD23	48:B3:54:VAL:HG13	1.28	1.15
54:B8:58:MET:O	54:B8:60:LEU:N	1.77	1.15
27:BA:1050:A:O3'	27:BA:1051:G:P	2.04	1.15
27:BA:2215:G:O2'	27:BA:2216:G:H5'	1.41	1.15
27:BA:2592:G:C8	27:BA:2593:U:C5	2.34	1.15
27:BA:2768:C:C2	27:BA:2769:C:C5	2.33	1.15
28:BD:80:ILE:HB	28:BD:82:TYR:CE1	1.81	1.15
30:BF:47:GLY:C	30:BF:92:PRO:HG3	1.63	1.15
30:BF:96:LYS:CB	30:BF:98:ARG:CZ	1.80	1.15
27:BA:2316:C:C5'	31:BG:151:ILE:HD11	1.75	1.15
35:BO:98:ILE:CD1	35:BO:117:LEU:CB	2.23	1.15
37:BQ:51:GLU:HA	37:BQ:118:ALA:HB2	1.26	1.15
37:BQ:59:ASN:ND2	37:BQ:60:ALA:N	1.93	1.15
45:BU:28:ARG:HA	45:BU:31:GLN:HB2	1.17	1.15
27:BA:993:G:H4'	46:BV:90:PHE:CZ	1.81	1.15
27:BA:2633:G:N3	27:BA:2634:G:C8	2.15	1.15
28:BD:104:ILE:HD12	28:BD:104:ILE:N	1.57	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:268:LEU:HD23	29:BE:269:ILE:H	1.00	1.15
30:BF:144:PHE:CE2	30:BF:156:LEU:HD13	1.80	1.15
34:BN:135:ILE:O	34:BN:139:LEU:HD13	1.34	1.15
27:BA:558:G:OP2	34:BN:91:LYS:HB3	1.40	1.15
35:BO:66:LYS:HG3	35:BO:82:ASN:HD21	1.01	1.15
36:BP:114:VAL:HG23	36:BP:132:LYS:HB3	1.23	1.15
45:BU:99:ALA:CB	45:BU:106:PHE:CZ	2.28	1.15
42:BY:101:LEU:CD2	42:BY:112:LEU:HD21	1.76	1.15
1:AA:988:G:H4'	1:AA:1014:A:H61	1.07	1.15
51:B5:45:ILE:CG2	51:B5:52:TYR:CD1	2.28	1.15
54:B8:17:THR:OG1	54:B8:19:THR:OG1	1.63	1.15
27:BA:911:A:H2'	37:BQ:16:ARG:HE	1.03	1.15
27:BA:998:C:H5''	45:BU:84:LYS:NZ	1.61	1.15
27:BA:2344:U:O2'	27:BA:2345:G:O5'	1.64	1.15
27:BA:2776:A:N3	27:BA:2778:A:C5	2.15	1.15
27:BA:782:A:C2	28:BD:229:MET:SD	2.40	1.15
27:BA:801:G:OP1	30:BF:79:ARG:NE	1.79	1.15
30:BF:51:TYR:O	30:BF:55:ARG:CA	1.94	1.15
35:BO:62:VAL:CA	35:BO:84:CYS:SG	2.34	1.15
37:BQ:32:LYS:HZ1	43:BZ:172:LEU:HD11	1.00	1.15
44:BR:52:ILE:HG22	44:BR:53:HIS:N	1.54	1.15
42:BY:101:LEU:CD1	42:BY:112:LEU:CD1	2.25	1.15
28:BD:204:PHE:HD1	28:BD:204:PHE:N	1.43	1.15
27:BA:557:U:C4'	34:BN:92:GLN:HE21	1.59	1.15
27:BA:527:C:O2'	34:BN:95:ARG:NH1	1.79	1.15
37:BQ:67:ALA:O	37:BQ:71:PHE:CE1	1.98	1.15
27:BA:2009:G:H5''	40:BW:41:LYS:HD2	1.25	1.15
49:B0:77:ARG:O	49:B0:78:PHE:O	1.63	1.15
48:B3:30:ARG:HH11	48:B3:30:ARG:HG3	1.04	1.15
27:BA:2421:G:C5'	52:B6:4:ASP:OD1	1.93	1.15
27:BA:2258:C:C5	27:BA:2426:A:C4'	2.29	1.15
28:BD:85:ASN:OD1	28:BD:86:ARG:NH2	1.78	1.15
27:BA:1500:G:N2	28:BD:97:ASP:OD2	1.78	1.15
29:BE:205:THR:CG2	29:BE:259:HIS:CB	2.23	1.15
30:BF:3:ALA:HB3	30:BF:16:VAL:O	0.99	1.15
31:BG:19:GLU:OE1	31:BG:135:VAL:HG22	1.43	1.15
3:AW:25:C:C4	3:AW:26:G:N1	2.14	1.15
3:AW:25:C:N3	3:AW:26:G:C2	2.14	1.15
41:BX:18:MET:HE3	41:BX:25:GLN:O	1.42	1.15
41:BX:6:LYS:HE3	41:BX:29:ASP:N	1.60	1.15
27:BA:1080:C:O2'	56:BK:127:ILE:HD12	1.46	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2322:A:C5	27:BA:2323:G:C8	2.35	1.15
29:BE:174:LEU:O	29:BE:177:ALA:HB3	1.40	1.15
29:BE:205:THR:HG22	29:BE:259:HIS:HB2	1.26	1.15
27:BA:2771:C:C5'	29:BE:316:ARG:HD2	1.76	1.15
29:BE:74:GLU:CA	29:BE:293:TYR:HE2	1.57	1.15
30:BF:151:GLN:OE1	30:BF:154:VAL:CG2	1.95	1.15
30:BF:153:VAL:HG13	30:BF:157:LEU:CD2	1.74	1.15
35:BO:98:ILE:HD11	35:BO:117:LEU:CB	1.71	1.15
45:BU:44:THR:O	45:BU:47:TYR:HB2	1.45	1.15
45:BU:61:TRP:O	45:BU:65:ILE:HG12	1.00	1.15
27:BA:2197:U:O2'	27:BA:2198:A:H5''	1.42	1.15
27:BA:2373:G:C6	27:BA:2374:C:N4	2.15	1.15
28:BD:141:HIS:CE1	28:BD:191:VAL:O	1.99	1.15
29:BE:205:THR:HA	29:BE:261:ARG:HD2	1.22	1.15
34:BN:138:THR:OG1	34:BN:139:LEU:HD13	1.43	1.15
34:BN:15:ARG:NE	34:BN:40:ASN:ND2	1.94	1.15
34:BN:20:GLY:O	34:BN:22:VAL:N	1.79	1.15
42:BY:101:LEU:HG	42:BY:112:LEU:CD1	1.76	1.15
42:BY:46:ASP:HA	42:BY:102:ASP:OD2	0.98	1.15
47:B2:29:ASN:O	47:B2:34:GLN:CD	1.85	1.15
1:AA:937:A:O3'	1:AA:938:A:P	2.04	1.15
27:BA:1819:A:OP1	28:BD:154:VAL:HA	1.47	1.15
27:BA:2276:G:OP2	37:BQ:103:ALA:HA	1.40	1.15
27:BA:2507:C:C2	27:BA:2583:G:C2	2.33	1.15
27:BA:2815:C:O2'	27:BA:2816:C:C5'	1.94	1.15
27:BA:2832:U:C5	27:BA:2832:U:H5'	1.82	1.15
27:BA:458:G:H2'	53:B7:40:HIS:NE2	1.62	1.15
31:BG:93:LEU:HD22	31:BG:106:PHE:CD2	1.80	1.15
37:BQ:57:ARG:O	37:BQ:61:LEU:HG	1.47	1.15
45:BU:43:ALA:HB1	46:BV:75:LYS:HB3	1.19	1.15
43:BZ:112:LEU:HD23	43:BZ:113:VAL:N	1.61	1.15
3:AW:72:C:O2'	3:AW:73:A:C4'	1.95	1.15
27:BA:2348:U:C5'	54:B8:42:ARG:HH22	1.60	1.15
27:BA:2580:U:H5	27:BA:2581:G:N7	1.33	1.15
27:BA:2592:G:C5	27:BA:2593:U:C5	2.35	1.15
44:BR:104:ARG:HA	44:BR:105:ARG:NH2	1.61	1.15
38:BS:47:LEU:HD12	38:BS:58:LEU:CD2	1.76	1.15
35:BO:99:PHE:CD2	39:BT:24:LYS:CE	2.19	1.15
46:BV:31:ASP:O	46:BV:63:HIS:HB2	1.47	1.15
43:BZ:120:LEU:O	43:BZ:121:GLN:HG3	1.46	1.15
43:BZ:67:LYS:HD3	43:BZ:93:GLU:OE2	1.47	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:64:ALA:HB3	43:BZ:85:MET:CA	1.75	1.15
27:BA:1340:U:O4	41:BX:57:THR:HG22	1.47	1.15
27:BA:1404:C:O3'	27:BA:1405:U:P	2.04	1.15
1:AA:587:G:O3'	1:AA:588:G:P	2.04	1.15
48:B3:20:LYS:CA	48:B3:23:LEU:CD1	2.24	1.14
27:BA:2205:C:O2'	27:BA:2228:G:N2	1.81	1.14
27:BA:2432:A:H2	27:BA:2433:A:C5	1.64	1.14
27:BA:2768:C:N3	27:BA:2769:C:H5	1.15	1.14
27:BA:2785:C:O2	29:BE:100:TRP:CD1	1.98	1.14
30:BF:32:GLY:C	30:BF:35:VAL:HG23	1.66	1.14
32:BH:44:VAL:HA	32:BH:49:ILE:CG2	1.77	1.14
32:BH:85:ALA:HA	32:BH:131:ILE:CG2	1.75	1.14
34:BN:134:GLU:O	34:BN:138:THR:HG23	0.97	1.14
49:B0:61:ALA:HB2	49:B0:81:ILE:HD13	1.28	1.14
50:B4:5:LEU:CB	50:B4:56:VAL:HG13	1.76	1.14
27:BA:2528:U:C5	27:BA:2530:A:N3	2.14	1.14
27:BA:491:G:O6	40:BW:49:LYS:NZ	1.80	1.14
30:BF:52:ALA:CA	30:BF:55:ARG:HB3	1.77	1.14
32:BH:159:LYS:H	32:BH:162:ARG:NH2	1.43	1.14
32:BH:63:LEU:O	32:BH:66:THR:HG22	1.45	1.14
35:BO:64:ARG:NH2	35:BO:100:GLY:HA3	1.62	1.14
36:BP:71:GLU:O	36:BP:74:THR:N	1.80	1.14
38:BS:31:LYS:NZ	38:BS:99:GLU:HB3	1.62	1.14
45:BU:73:GLY:O	45:BU:74:MET:HG2	1.47	1.14
49:B0:23:VAL:HG12	49:B0:24:LYS:H	1.07	1.14
27:BA:2231:C:H5''	50:B4:39:VAL:HG22	1.22	1.14
27:BA:2051:A:O2'	29:BE:238:LEU:CG	1.94	1.14
27:BA:2410:G:N3	27:BA:2411:A:C8	2.15	1.14
29:BE:211:GLN:NE2	29:BE:216:ARG:H	1.40	1.14
29:BE:48:MET:O	29:BE:49:THR:HG22	1.48	1.14
34:BN:45:VAL:N	34:BN:132:LEU:HB2	1.24	1.14
35:BO:77:ILE:HD13	35:BO:77:ILE:C	1.58	1.14
45:BU:8:ILE:HD12	45:BU:8:ILE:N	1.61	1.14
43:BZ:103:ARG:HG2	43:BZ:139:THR:HG22	1.17	1.14
49:B0:37:LEU:CD1	49:B0:70:ILE:CD1	2.24	1.14
51:B5:18:MET:O	51:B5:21:SER:OG	1.62	1.14
54:B8:26:LYS:HD2	54:B8:44:LYS:C	1.67	1.14
55:B9:32:HIS:O	55:B9:34:GLN:N	1.79	1.14
27:BA:126:A:C5	53:B7:18:PHE:CE2	2.34	1.14
27:BA:1799:G:O6	28:BD:177:SER:HB2	1.45	1.14
27:BA:2265:U:C2	27:BA:2266:A:N7	2.15	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2425:A:O2'	27:BA:2426:A:OP2	1.62	1.14
27:BA:2061:G:N7	27:BA:2501:C:H1'	1.62	1.14
27:BA:2626:C:C2'	27:BA:2627:G:H5''	1.78	1.14
27:BA:2842:G:H2'	27:BA:2843:G:H5'	1.29	1.14
28:BD:175:LEU:HD12	28:BD:179:GLU:CB	1.77	1.14
29:BE:44:TYR:C	29:BE:74:GLU:OE1	1.84	1.14
32:BH:129:LYS:C	32:BH:130:ILE:CD1	2.15	1.14
37:BQ:67:ALA:HB2	37:BQ:70:ARG:CZ	1.76	1.14
44:BR:61:HIS:CA	44:BR:64:ARG:HD3	1.76	1.14
33:BI:95:SER:O	33:BI:98:ILE:CB	1.94	1.14
27:BA:325:G:H21	42:BY:7:GLN:NE2	1.44	1.14
41:BX:47:VAL:CG1	41:BX:69:SER:CB	2.24	1.14
26:BB:59:A:OP1	31:BG:141:VAL:HG22	1.46	1.14
31:BG:56:ARG:CG	31:BG:65:GLU:HB2	1.77	1.14
44:BR:77:ARG:NH1	44:BR:77:ARG:CB	1.72	1.14
48:B3:18:ASP:OD2	48:B3:49:LYS:NZ	1.80	1.14
27:BA:2021:C:OP2	51:B5:15:LYS:CE	1.95	1.14
55:B9:3:VAL:O	55:B9:5:SER:N	1.81	1.14
27:BA:2626:C:C2'	27:BA:2627:G:H5'	1.78	1.14
27:BA:2717:G:H8	27:BA:2717:G:C5'	1.59	1.14
30:BF:215:ALA:HB1	30:BF:241:ALA:HB3	1.20	1.14
30:BF:94:THR:O	30:BF:96:LYS:N	1.81	1.14
31:BG:151:ILE:HD13	31:BG:156:ARG:NH2	1.63	1.14
31:BG:76:ARG:O	31:BG:77:ASP:O	1.64	1.14
33:BI:95:SER:OG	33:BI:98:ILE:HD12	0.97	1.14
13:AJ:51:ARG:HB2	13:AJ:59:SER:HB3	1.16	1.14
47:B2:55:ARG:O	47:B2:58:THR:OG1	1.65	1.14
1:AA:1319:A:O3'	22:AS:70:LYS:NZ	1.79	1.14
27:BA:1917:U:H3'	27:BA:1918:A:H8	1.02	1.14
49:B0:39:ARG:HG2	49:B0:69:PHE:CZ	1.81	1.14
27:BA:242:G:H3'	54:B8:5:LYS:NZ	1.62	1.14
27:BA:2287:A:H2	27:BA:2289:G:C1'	1.50	1.14
27:BA:2821:A:H2	27:BA:2822:G:C4	1.66	1.14
27:BA:605:C:H3'	30:BF:105:LYS:CE	1.64	1.14
28:BD:167:GLU:CB	28:BD:170:TYR:CE1	2.31	1.14
31:BG:105:SER:OG	31:BG:131:THR:CG2	1.95	1.14
36:BP:113:GLN:N	36:BP:113:GLN:NE2	1.95	1.14
37:BQ:56:ILE:H	37:BQ:56:ILE:CD1	1.47	1.14
38:BS:35:VAL:CA	38:BS:103:ASP:CB	2.26	1.14
40:BW:65:LEU:O	40:BW:69:LEU:HD21	1.45	1.14
27:BA:126:A:N6	53:B7:18:PHE:CE2	2.15	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1368:G:OP1	53:B7:25:LYS:CD	1.95	1.14
27:BA:1453:A:C6	44:BR:77:ARG:HD3	1.82	1.14
27:BA:2254:C:O2'	27:BA:2255:G:H5'	1.46	1.14
27:BA:2258:C:C4	27:BA:2426:A:C1'	2.30	1.14
28:BD:149:ARG:CB	28:BD:152:GLN:NE2	1.95	1.14
27:BA:1820:U:O2	28:BD:200:THR:CG2	1.95	1.14
29:BE:71:THR:HG21	29:BE:299:SER:OG	1.47	1.14
30:BF:147:LEU:HD11	30:BF:156:LEU:HD11	1.15	1.14
30:BF:47:GLY:N	30:BF:92:PRO:HB2	1.60	1.14
32:BH:137:LYS:CD	32:BH:138:GLN:H	1.60	1.14
34:BN:60:ARG:HA	34:BN:71:TYR:CD2	1.82	1.14
34:BN:66:ASP:O	34:BN:68:GLY:N	1.79	1.14
40:BW:85:VAL:HG12	40:BW:95:ILE:HD11	1.20	1.14
4:AX:121:G:H1	25:AY:191:ARG:CA	1.47	1.14
3:AW:25:C:C5	3:AW:26:G:C6	2.34	1.14
28:BD:61:TYR:OH	28:BD:214:MET:CE	1.95	1.14
40:BW:90:ARG:CB	40:BW:90:ARG:NH1	2.10	1.14
13:AJ:45:ARG:NH2	17:AN:36:PHE:HE2	1.42	1.14
50:B4:5:LEU:HB2	50:B4:56:VAL:HG13	1.16	1.14
53:B7:30:ILE:C	53:B7:33:ARG:HB2	1.66	1.14
53:B7:34:ARG:HD3	53:B7:42:LEU:CD2	1.73	1.14
54:B8:4:MET:HB2	54:B8:7:HIS:CE1	1.83	1.14
27:BA:1364:G:P	50:B4:3:LYS:CG	2.35	1.14
28:BD:80:ILE:HD13	28:BD:82:TYR:CE1	1.82	1.14
29:BE:77:PRO:HB2	29:BE:187:HIS:N	1.62	1.14
27:BA:2310:A:C2'	31:BG:55:LYS:HE2	1.78	1.14
45:BU:43:ALA:CB	46:BV:75:LYS:HB3	1.78	1.14
43:BZ:105:GLN:C	43:BZ:142:ASN:HD21	1.51	1.14
49:B0:37:LEU:CD1	49:B0:70:ILE:HD13	1.78	1.14
52:B6:2:ALA:HB2	52:B6:11:LYS:HZ2	0.99	1.14
27:BA:2292:C:N3	27:BA:2293:C:C5	2.15	1.14
27:BA:495:G:N2	40:BW:61:ASN:HD21	1.44	1.14
29:BE:44:TYR:CA	29:BE:309:PRO:CD	2.22	1.14
35:BO:62:VAL:HA	35:BO:84:CYS:SG	1.86	1.14
44:BR:77:ARG:HB2	44:BR:77:ARG:NH1	0.82	1.14
46:BV:43:GLU:C	46:BV:44:GLN:NE2	2.00	1.14
42:BY:73:HIS:C	42:BY:91:LEU:CD1	2.06	1.14
42:BY:51:LEU:HA	42:BY:97:ARG:NH2	1.63	1.14
43:BZ:3:LEU:HD21	43:BZ:38:ALA:HB3	1.14	1.14
32:BH:53:ARG:HH11	32:BH:56:ASP:CA	1.60	1.14
33:BI:51:LYS:O	33:BI:55:GLN:HG3	1.47	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:15:GLU:HG2	7:AD:63:LYS:HB3	1.27	1.14
54:B8:26:LYS:HE3	54:B8:45:GLY:N	1.61	1.13
29:BE:72:VAL:C	29:BE:73:ILE:CD1	2.16	1.13
32:BH:96:SER:O	32:BH:97:LYS:O	1.64	1.13
34:BN:19:MET:HE2	34:BN:22:VAL:HG21	1.30	1.13
37:BQ:23:ILE:H	37:BQ:24:PRO:HD3	1.08	1.13
48:B3:8:LEU:HD23	48:B3:31:LEU:HA	1.18	1.13
27:BA:1364:G:C3'	50:B4:3:LYS:HD3	1.73	1.13
28:BD:66:PHE:O	28:BD:66:PHE:CD2	2.00	1.13
33:BI:7:LYS:CB	33:BI:12:LYS:HD3	1.77	1.13
34:BN:25:GLN:CA	34:BN:28:GLU:HG2	1.76	1.13
36:BP:64:ILE:HD12	36:BP:106:VAL:CA	1.77	1.13
37:BQ:72:VAL:O	37:BQ:73:GLN:CG	1.94	1.13
39:BT:12:ASP:O	39:BT:13:ILE:CG1	1.95	1.13
47:B2:30:ALA:O	47:B2:34:GLN:CB	1.95	1.13
3:AW:37:YYG:N20	10:AG:83:ALA:HB1	1.51	1.13
34:BN:105:LEU:HG	34:BN:106:GLY:H	1.12	1.13
55:B9:4:ARG:O	55:B9:36:GLN:CG	1.97	1.13
27:BA:2261:C:OP2	49:B0:14:ARG:HG2	0.95	1.13
27:BA:2259:G:N2	27:BA:2282:G:C6	2.10	1.13
27:BA:2472:G:H2'	27:BA:2475:C:N4	1.60	1.13
27:BA:2674:G:H4'	35:BO:30:ARG:HG2	1.28	1.13
27:BA:2678:C:N3	27:BA:2679:A:C8	2.16	1.13
27:BA:572:A:H2'	27:BA:573:G:H1'	1.20	1.13
44:BR:36:THR:HG21	44:BR:40:LYS:HB3	1.18	1.13
48:B3:20:LYS:HD3	48:B3:23:LEU:CD1	1.76	1.13
27:BA:2453:A:O2'	27:BA:2454:G:C5'	1.95	1.13
27:BA:2470:G:N2	27:BA:2471:C:N1	1.96	1.13
27:BA:2507:C:N3	27:BA:2583:G:N3	1.97	1.13
27:BA:2574:G:C8	27:BA:2575:C:H5	1.66	1.13
28:BD:81:GLU:O	28:BD:83:ASP:OD2	1.64	1.13
30:BF:51:TYR:O	30:BF:55:ARG:HB3	1.44	1.13
31:BG:142:ALA:HB2	31:BG:151:ILE:CG1	1.77	1.13
34:BN:13:ASP:N	34:BN:38:VAL:HG13	1.55	1.13
35:BO:13:ASN:O	35:BO:15:GLY:N	1.78	1.13
36:BP:64:ILE:CD1	36:BP:106:VAL:HA	1.77	1.13
37:BQ:58:HIS:HA	37:BQ:61:LEU:HD12	1.18	1.13
38:BS:61:ALA:CB	38:BS:88:ALA:HB2	1.77	1.13
43:BZ:100:THR:CA	43:BZ:137:ASP:OD2	1.96	1.13
42:BY:103:LEU:HD22	42:BY:108:ARG:O	1.44	1.13
28:BD:210:LYS:HA	28:BD:213:LYS:CD	1.77	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:3:ASP:HA	47:B2:24:LYS:HD3	1.15	1.13
1:AA:65:U:C6	1:AA:200:G:H4'	1.83	1.13
51:B5:45:ILE:HG23	51:B5:52:TYR:CE1	1.82	1.13
27:BA:2056:G:C2	51:B5:4:HIS:O	2.01	1.13
27:BA:2570:G:C2'	27:BA:2571:C:H6	1.61	1.13
27:BA:2735:G:C6	27:BA:2770:G:N2	2.15	1.13
30:BF:6:TYR:CD2	30:BF:140:VAL:HA	1.83	1.13
30:BF:1:MET:O	30:BF:3:ALA:N	1.79	1.13
32:BH:101:LYS:NZ	32:BH:115:GLU:CB	2.10	1.13
35:BO:1:MET:N	35:BO:32:TYR:CD2	2.16	1.13
49:B0:37:LEU:HD13	49:B0:69:PHE:HB2	1.20	1.13
27:BA:2742:C:OP1	55:B9:35:ARG:NH1	1.81	1.13
27:BA:2064:C:H1'	27:BA:2450:A:C6	1.83	1.13
3:AW:76:A:H2'	27:BA:2422:A:C6	1.81	1.13
27:BA:2492:U:O2'	27:BA:2493:U:O5'	1.65	1.13
27:BA:2554:U:H3'	27:BA:2554:U:C6	1.82	1.13
27:BA:2768:C:O2'	27:BA:2769:C:H5'	1.48	1.13
27:BA:2832:U:H1'	27:BA:2834:G:H21	1.06	1.13
27:BA:600:G:H5'	30:BF:30:LEU:CD1	1.78	1.13
26:BB:28:C:OP1	38:BS:44:ARG:NH2	1.80	1.13
28:BD:143:ILE:O	28:BD:152:GLN:CA	1.97	1.13
28:BD:75:GLY:HA3	28:BD:115:ILE:O	1.37	1.13
29:BE:201:VAL:H	29:BE:266:LYS:CD	1.60	1.13
30:BF:215:ALA:O	30:BF:242:GLU:HG3	1.49	1.13
30:BF:51:TYR:O	30:BF:55:ARG:CB	1.97	1.13
35:BO:35:ILE:N	35:BO:35:ILE:HD12	1.63	1.13
42:BY:46:ASP:CA	42:BY:102:ASP:OD2	1.95	1.13
41:BX:56:ASN:N	41:BX:56:ASN:HD22	1.34	1.13
27:BA:749:C:H2'	27:BA:750:A:H8	1.11	1.13
50:B4:42:PHE:O	50:B4:61:LYS:HE3	1.42	1.13
27:BA:2056:G:N1	51:B5:4:HIS:O	1.78	1.13
30:BF:168:ARG:O	30:BF:168:ARG:CD	1.96	1.13
32:BH:55:SER:CB	32:BH:60:HIS:HB2	1.78	1.13
34:BN:15:ARG:CB	34:BN:43:ARG:CG	1.94	1.13
34:BN:52:GLN:CA	34:BN:55:GLU:CD	2.17	1.13
37:BQ:62:GLU:O	37:BQ:63:ALA:O	1.65	1.13
45:BU:56:ASP:O	45:BU:60:LEU:CD2	1.96	1.13
43:BZ:112:LEU:HD23	43:BZ:113:VAL:H	1.02	1.13
27:BA:2090:G:C5	27:BA:2230:G:O6	2.01	1.13
27:BA:2709:G:O2'	27:BA:2710:C:H5'	1.46	1.13
28:BD:85:ASN:ND2	28:BD:86:ARG:NE	1.96	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2052:G:H21	29:BE:245:ARG:CG	1.62	1.13
34:BN:63:ILE:HD12	34:BN:71:TYR:CE2	1.83	1.13
36:BP:114:VAL:CG2	36:BP:132:LYS:CB	2.27	1.13
37:BQ:91:HIS:O	37:BQ:111:THR:CG2	1.97	1.13
44:BR:96:ARG:HD2	44:BR:115:GLU:OE1	1.47	1.13
38:BS:104:ILE:O	38:BS:106:LEU:N	1.78	1.13
1:AA:958:A:C4	22:AS:55:LYS:HD2	1.83	1.13
41:BX:44:GLN:OE1	41:BX:45:TYR:N	1.80	1.13
32:BH:168:VAL:O	32:BH:169:ARG:HG2	0.96	1.13
13:AJ:46:ARG:NH1	17:AN:59:ALA:HB1	1.62	1.13
27:BA:1479:G:H2'	27:BA:1480:G:H8	1.05	1.13
49:B0:36:ILE:C	49:B0:68:VAL:CG1	2.15	1.13
49:B0:38:VAL:O	49:B0:40:GLN:HG3	1.41	1.13
54:B8:55:TRP:HZ3	54:B8:59:LYS:CE	1.60	1.13
27:BA:2305:A:C3'	27:BA:2306:C:H5''	1.77	1.13
29:BE:205:THR:HG21	29:BE:259:HIS:CB	1.77	1.13
29:BE:44:TYR:CA	29:BE:309:PRO:HD3	1.79	1.13
32:BH:44:VAL:CA	32:BH:49:ILE:HG22	1.78	1.13
34:BN:75:PRO:HD3	34:BN:136:SER:OG	1.46	1.13
36:BP:124:ASP:O	36:BP:125:PHE:CD2	2.01	1.13
37:BQ:123:ILE:CG2	37:BQ:125:TRP:HB2	1.79	1.13
38:BS:35:VAL:HA	38:BS:103:ASP:HB3	1.13	1.13
27:BA:2354:G:N3	49:B0:32:LYS:HE3	1.62	1.12
27:BA:2228:G:C8	27:BA:2229:C:C5	2.37	1.12
27:BA:2339:G:H2'	27:BA:2340:G:H8	1.12	1.12
27:BA:2565:A:H5''	27:BA:2566:A:OP2	1.48	1.12
27:BA:2617:C:N3	27:BA:2618:G:C8	2.16	1.12
27:BA:2838:G:C2'	27:BA:2839:G:H5'	1.77	1.12
29:BE:205:THR:OG1	29:BE:257:GLY:C	1.87	1.12
37:BQ:48:ASN:OD1	37:BQ:121:ASP:HB3	1.48	1.12
33:BI:116:GLU:HG2	33:BI:132:LYS:HE3	1.28	1.13
33:BI:68:LEU:HB3	33:BI:72:LEU:HD11	1.15	1.13
27:BA:1012:U:O2	34:BN:21:ARG:NH1	1.82	1.12
27:BA:2526:G:C5	27:BA:2527:C:C5	2.36	1.12
27:BA:2570:G:N3	27:BA:2571:C:C5	2.16	1.12
27:BA:637:A:C8	36:BP:111:ALA:HB2	1.82	1.12
27:BA:1568:G:H3'	28:BD:60:GLN:NE2	1.62	1.12
30:BF:167:ASP:CG	30:BF:232:LEU:HG	1.69	1.12
30:BF:62:GLY:CA	30:BF:65:ARG:HH21	1.57	1.12
30:BF:96:LYS:CA	30:BF:98:ARG:CZ	2.15	1.12
32:BH:40:MET:HB2	32:BH:64:HIS:NE2	1.61	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:35:VAL:CA	38:BS:103:ASP:HB3	1.79	1.12
33:BI:95:SER:HB2	33:BI:98:ILE:CD1	1.79	1.12
42:BY:33:GLU:CD	42:BY:34:GLU:HG3	1.68	1.13
42:BY:66:ASP:HB2	42:BY:71:VAL:O	1.47	1.13
43:BZ:69:VAL:HG12	43:BZ:70:GLN:H	1.06	1.12
16:AM:91:ARG:NH2	16:AM:103:THR:HG21	1.64	1.12
1:AA:1319:A:C4'	22:AS:70:LYS:NZ	2.04	1.13
27:BA:1080:C:H4'	56:BK:126:LYS:O	1.35	1.12
1:AA:1098:C:H4'	1:AA:1167:A:H2	1.12	1.12
1:AA:405:U:O3'	1:AA:406:G:P	2.07	1.12
27:BA:1287:A:O4'	44:BR:104:ARG:CD	1.95	1.12
27:BA:2320:A:C6	38:BS:9:PRO:HB3	1.84	1.12
27:BA:2332:U:C1'	27:BA:2336:A:N6	2.11	1.12
27:BA:2526:G:C2'	27:BA:2527:C:H5'	1.78	1.12
27:BA:2759:G:O2'	27:BA:2760:C:H5'	1.48	1.12
29:BE:71:THR:HG22	29:BE:299:SER:HB2	1.18	1.12
27:BA:2679:A:H2	29:BE:300:VAL:HG22	1.07	1.12
32:BH:42:ILE:O	32:BH:52:THR:CG2	1.96	1.12
27:BA:911:A:C8	37:BQ:16:ARG:HD2	1.83	1.12
46:BV:50:ASP:H	46:BV:53:LYS:CD	1.62	1.12
49:B0:42:GLY:CA	49:B0:66:LYS:HA	1.78	1.12
49:B0:61:ALA:CB	49:B0:81:ILE:HD13	1.79	1.12
52:B6:35:LEU:O	52:B6:36:GLU:HG3	0.96	1.12
27:BA:2432:A:N3	27:BA:2432:A:H2'	1.54	1.12
27:BA:2741:A:C2'	27:BA:2742:C:H5'	1.79	1.12
27:BA:994:C:C2	45:BU:53:LYS:HD2	1.71	1.12
29:BE:180:ILE:CG2	29:BE:186:GLU:O	1.95	1.12
30:BF:52:ALA:CA	30:BF:55:ARG:HE	1.60	1.12
32:BH:10:ILE:HG22	32:BH:14:VAL:HB	1.31	1.12
33:BI:4:ILE:HG22	33:BI:4:ILE:O	1.48	1.12
35:BO:21:VAL:HA	35:BO:41:ALA:HB2	1.29	1.12
37:BQ:56:ILE:HG12	37:BQ:113:ALA:O	1.48	1.12
27:BA:995:C:H1'	45:BU:57:PHE:CE2	1.84	1.12
42:BY:43:ASN:ND2	42:BY:101:LEU:HD23	1.62	1.12
43:BZ:30:VAL:O	43:BZ:31:SER:O	1.68	1.12
41:BX:24:LEU:HD11	41:BX:68:LEU:HD22	1.24	1.12
49:B0:45:PHE:CZ	49:B0:78:PHE:CD2	2.36	1.12
49:B0:36:ILE:HB	49:B0:68:VAL:HG11	1.27	1.12
48:B3:16:PRO:CB	48:B3:19:GLN:CD	2.17	1.12
27:BA:2633:G:C2	27:BA:2634:G:N7	2.17	1.12
27:BA:2679:A:H2	29:BE:300:VAL:CG2	1.59	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:164:ALA:HA	30:BF:232:LEU:HD12	1.14	1.12
30:BF:33:LYS:HA	30:BF:36:ARG:HG3	1.20	1.12
30:BF:34:ALA:HB2	30:BF:110:ALA:HB1	1.26	1.12
31:BG:145:ASP:CB	38:BS:15:GLU:O	1.96	1.12
44:BR:100:LEU:HD23	44:BR:112:ALA:CA	1.80	1.12
40:BW:36:LEU:HD11	40:BW:47:VAL:HG11	1.27	1.12
43:BZ:129:ARG:HE	43:BZ:129:ARG:HA	1.09	1.12
27:BA:2352:A:C2	49:B0:30:VAL:HG11	1.71	1.12
49:B0:37:LEU:O	49:B0:40:GLN:HG3	1.49	1.12
53:B7:17:GLY:CA	53:B7:44:VAL:HG22	1.66	1.12
27:BA:2530:A:C2'	27:BA:2531:A:H5''	1.79	1.12
27:BA:2689:U:H5'	27:BA:2690:C:H5'	1.29	1.12
27:BA:1819:A:H2'	28:BD:177:SER:HA	1.21	1.12
29:BE:74:GLU:CB	29:BE:293:TYR:HE2	1.60	1.12
30:BF:168:ARG:CZ	30:BF:209:GLY:HA2	1.79	1.12
34:BN:12:VAL:HG13	34:BN:13:ASP:H	1.14	1.12
34:BN:13:ASP:CA	34:BN:38:VAL:HG11	1.51	1.12
36:BP:144:ASP:C	36:BP:145:LEU:CD1	2.18	1.12
27:BA:995:C:P	45:BU:54:LYS:HE2	1.88	1.12
33:BI:141:LEU:CD1	33:BI:142:LYS:O	1.97	1.12
16:AM:91:ARG:HH12	16:AM:103:THR:HG22	0.97	1.12
16:AM:94:ARG:CA	16:AM:95:GLY:N	2.12	1.12
27:BA:138:G:H5''	41:BX:43:GLU:HG3	1.12	1.12
41:BX:17:ASP:HA	41:BX:20:PHE:CE1	1.84	1.12
27:BA:72:U:H5'	41:BX:2:TRP:CH2	1.85	1.12
41:BX:14:ALA:CA	41:BX:17:ASP:CG	2.17	1.12
41:BX:22:ASN:HA	41:BX:68:LEU:HD11	1.21	1.12
3:AW:37:YYG:O23	10:AG:83:ALA:HB3	0.96	1.12
1:AA:733:A:O3'	1:AA:734:G:P	2.08	1.12
42:BY:9:LYS:HE3	42:BY:13:ARG:NH1	1.64	1.12
49:B0:39:ARG:O	49:B0:40:GLN:O	1.66	1.12
54:B8:60:LEU:CD2	54:B8:60:LEU:C	2.18	1.12
27:BA:2740:A:O2'	27:BA:2741:A:H5'	1.50	1.12
27:BA:2893:G:HO2'	27:BA:2894:G:C1'	1.49	1.12
29:BE:205:THR:CG2	29:BE:259:HIS:HB2	1.80	1.12
30:BF:46:TYR:O	30:BF:92:PRO:O	1.65	1.12
27:BA:557:U:H5'	34:BN:92:GLN:HE21	1.14	1.12
36:BP:65:ASP:CB	36:BP:109:LEU:CB	2.14	1.12
52:B6:32:GLN:CB	52:B6:35:LEU:CD1	2.19	1.12
54:B8:23:MET:HE3	54:B8:48:PHE:HD2	0.95	1.12
27:BA:1151:G:H4'	45:BU:81:ASN:CG	1.68	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2082:A:N6	27:BA:2239:G:O6	1.83	1.12
27:BA:2406:U:C4	36:BP:55:GLN:CB	2.18	1.12
27:BA:2530:A:H2'	27:BA:2531:A:H5''	1.22	1.12
27:BA:1568:G:C3'	28:BD:60:GLN:NE2	2.13	1.12
30:BF:167:ASP:OD2	30:BF:232:LEU:CG	1.96	1.12
31:BG:57:THR:HG22	31:BG:58:VAL:H	1.08	1.12
33:BI:29:PHE:O	33:BI:33:GLN:CD	1.86	1.12
33:BI:75:LEU:HD13	33:BI:76:THR:H	1.00	1.12
42:BY:29:ALA:O	42:BY:33:GLU:CD	1.87	1.12
42:BY:101:LEU:CD1	42:BY:113:GLU:HB2	1.79	1.12
1:AA:986:A:H1'	22:AS:55:LYS:HA	1.25	1.12
3:AW:37:YYG:H101	10:AG:83:ALA:HB1	1.23	1.12
31:BG:81:GLU:O	31:BG:85:GLN:CG	1.97	1.12
48:B3:1:MET:SD	48:B3:3:ARG:CG	2.37	1.12
48:B3:22:ALA:HA	48:B3:46:ASN:HD21	1.06	1.12
48:B3:1:MET:HE1	48:B3:3:ARG:HD2	1.30	1.12
50:B4:6:HIS:CG	50:B4:56:VAL:HG23	1.85	1.12
27:BA:2022:U:C4	51:B5:9:LYS:NZ	2.16	1.12
27:BA:2528:U:P	55:B9:30:VAL:HG11	1.89	1.12
30:BF:45:ASP:O	30:BF:46:TYR:CD1	2.03	1.12
37:BQ:65:ARG:O	37:BQ:68:ALA:HB3	1.46	1.12
43:BZ:105:GLN:HB2	43:BZ:141:MET:SD	1.88	1.12
27:BA:2267:A:C5'	27:BA:2268:A:OP1	1.97	1.12
27:BA:2332:U:H1'	27:BA:2336:A:N6	1.64	1.12
29:BE:193:PHE:CE2	29:BE:199:ALA:CB	2.31	1.12
29:BE:214:VAL:CG2	29:BE:221:LYS:HZ1	1.63	1.12
30:BF:32:GLY:O	30:BF:35:VAL:CG2	1.96	1.12
32:BH:10:ILE:HD11	32:BH:49:ILE:CG1	1.78	1.12
27:BA:557:U:C4'	34:BN:92:GLN:NE2	2.13	1.12
37:BQ:16:ARG:NH1	37:BQ:16:ARG:CB	1.96	1.12
38:BS:31:LYS:HB3	38:BS:32:PRO:HD3	1.22	1.12
40:BW:23:LEU:O	40:BW:25:ARG:N	1.83	1.12
33:BI:116:GLU:HG2	33:BI:132:LYS:CE	1.80	1.12
26:BB:77:U:OP1	43:BZ:80:HIS:CE1	2.03	1.12
34:BN:10:VAL:HG11	34:BN:36:VAL:HG23	1.24	1.12
29:BE:107:GLU:HB3	29:BE:110:ARG:CZ	1.78	1.12
50:B4:50:LEU:O	50:B4:51:ASP:O	1.67	1.12
1:AA:436:C:H2'	1:AA:437:U:C6	1.84	1.12
1:AA:1340:A:O2'	2:AV:31:A:O2'	1.67	1.12
27:BA:2391:G:O2'	27:BA:2392:A:H5'	1.47	1.11
27:BA:2633:G:C2	27:BA:2634:G:C5	2.37	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2679:A:N3	29:BE:300:VAL:HG11	1.63	1.11
28:BD:167:GLU:O	28:BD:170:TYR:CD1	2.01	1.11
27:BA:616:A:H5''	30:BF:42:ARG:HH12	1.11	1.11
36:BP:112:GLY:C	36:BP:113:GLN:CD	2.09	1.11
51:B5:44:HIS:HA	51:B5:52:TYR:OH	0.94	1.11
52:B6:40:TYR:O	52:B6:47:HIS:HA	1.47	1.11
27:BA:2397:G:C6	27:BA:2420:C:C2	2.37	1.11
29:BE:39:GLN:NE2	29:BE:174:LEU:CD1	2.12	1.11
30:BF:167:ASP:O	30:BF:168:ARG:HG3	1.49	1.11
35:BO:98:ILE:HD11	35:BO:117:LEU:HB2	1.33	1.11
37:BQ:142:LYS:O	37:BQ:143:VAL:HG22	1.46	1.11
38:BS:41:LYS:HD3	38:BS:41:LYS:O	0.96	1.11
27:BA:564:C:OP1	46:BV:79:GLN:HG2	0.96	1.11
43:BZ:116:VAL:CA	43:BZ:169:VAL:HG22	1.79	1.11
27:BA:337:C:OP1	42:BY:24:ARG:CB	1.98	1.11
1:AA:975:A:C8	1:AA:1357:A:C2	2.37	1.11
27:BA:1791:A:OP1	28:BD:210:LYS:HD3	1.32	1.11
27:BA:1789:A:H4'	28:BD:224:VAL:HG11	1.29	1.11
2:AV:75:C:N4	27:BA:2252:G:H22	1.47	1.11
55:B9:19:ARG:O	55:B9:22:ARG:HB2	1.47	1.11
27:BA:1818:U:H5''	28:BD:155:ARG:HB2	1.26	1.11
27:BA:2232:U:H2'	27:BA:2233:U:H5'	1.14	1.11
27:BA:2414:G:N3	27:BA:2415:G:C8	2.17	1.11
27:BA:2258:C:C4	27:BA:2426:A:H1'	1.83	1.11
27:BA:2592:G:C8	27:BA:2593:U:H5	1.69	1.11
27:BA:2748:A:C8	27:BA:2749:A:C4	2.38	1.11
36:BP:66:VAL:HG12	36:BP:67:ARG:H	1.01	1.11
36:BP:77:ALA:HB2	36:BP:81:VAL:CG1	1.80	1.11
39:BT:50:GLU:O	39:BT:52:THR:N	1.84	1.11
27:BA:1364:G:O5'	50:B4:3:LYS:CD	1.97	1.11
27:BA:1952:A:H2	35:BO:22:ILE:HG23	1.02	1.11
27:BA:2227:A:C2	27:BA:2228:G:C2	2.37	1.11
27:BA:2678:C:O2	27:BA:2679:A:C1'	1.98	1.11
27:BA:2730:C:H4'	29:BE:265:ASN:HD21	0.95	1.11
27:BA:2869:G:C5	27:BA:2870:C:H5	1.41	1.11
28:BD:128:ALA:HB2	28:BD:190:THR:HB	1.22	1.11
28:BD:118:GLY:O	28:BD:129:LEU:CD2	1.98	1.11
28:BD:66:PHE:C	28:BD:67:LYS:CD	2.18	1.11
29:BE:268:LEU:CD2	29:BE:269:ILE:N	2.13	1.11
29:BE:70:VAL:HG12	29:BE:71:THR:N	1.38	1.11
30:BF:51:TYR:C	30:BF:55:ARG:HB3	1.70	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:101:LYS:CG	32:BH:115:GLU:HA	1.78	1.11
44:BR:104:ARG:HA	44:BR:105:ARG:HH21	1.04	1.11
46:BV:5:ILE:HD12	46:BV:12:TYR:CZ	1.85	1.11
46:BV:91:THR:C	46:BV:92:ALA:HB3	1.59	1.11
43:BZ:172:LEU:HG	43:BZ:173:PRO:HD2	1.13	1.11
27:BA:82:G:H5'	27:BA:296:C:OP1	1.47	1.11
50:B4:23:GLU:OE2	50:B4:29:PRO:CB	1.99	1.11
53:B7:17:GLY:C	53:B7:44:VAL:HG21	1.70	1.11
27:BA:1364:G:H3'	50:B4:3:LYS:CE	1.81	1.11
27:BA:2330:G:C2'	27:BA:2331:G:H5'	1.81	1.11
27:BA:2431:U:C2	27:BA:2433:A:OP2	2.02	1.11
27:BA:2474:C:H2'	27:BA:2475:C:H5'	1.31	1.11
27:BA:2570:G:N3	27:BA:2571:C:C6	2.17	1.11
28:BD:181:ARG:HB3	28:BD:181:ARG:NH1	1.64	1.11
34:BN:12:VAL:CG1	34:BN:13:ASP:H	1.61	1.11
34:BN:78:ILE:O	34:BN:82:THR:HG23	1.48	1.11
37:BQ:49:VAL:HG23	37:BQ:121:ASP:H	1.14	1.11
38:BS:23:ARG:NH2	38:BS:35:VAL:CG2	2.11	1.11
45:BU:108:ALA:O	45:BU:110:VAL:N	1.82	1.11
40:BW:32:ALA:CA	40:BW:35:ILE:CD1	2.27	1.11
43:BZ:159:THR:HG23	43:BZ:160:LEU:H	0.96	1.11
3:AW:76:A:C2	54:B8:32:GLN:HB3	1.86	1.11
27:BA:2615:U:H3	51:B5:8:LYS:HG2	1.08	1.11
27:BA:1032:A:OP1	55:B9:8:LYS:HG2	1.51	1.11
27:BA:1966:A:N3	27:BA:2593:U:H5'	1.65	1.11
27:BA:2287:A:C2	27:BA:2289:G:N9	2.19	1.11
27:BA:2463:C:C2	27:BA:2464:C:C5	2.39	1.11
27:BA:2482:G:C5	27:BA:2483:C:C5	2.39	1.11
27:BA:2752:C:N4	27:BA:2753:A:C2	2.19	1.11
31:BG:102:GLY:CA	31:BG:134:LEU:CD1	2.27	1.11
31:BG:29:HIS:CE1	31:BG:64:ARG:NH1	2.17	1.11
34:BN:38:VAL:O	34:BN:39:VAL:CG1	1.98	1.11
34:BN:15:ARG:CA	34:BN:43:ARG:HG2	1.81	1.11
37:BQ:49:VAL:CG1	37:BQ:119:ASN:O	1.99	1.11
46:BV:30:GLY:HA3	46:BV:33:VAL:HG21	1.11	1.11
43:BZ:6:LYS:O	43:BZ:31:SER:HB3	1.26	1.11
41:BX:9:HIS:CE1	41:BX:27:ALA:CA	2.34	1.11
1:AA:1313:U:C5	22:AS:4:SER:HB2	1.39	1.11
50:B4:5:LEU:H	50:B4:5:LEU:HD23	1.07	1.11
27:BA:2235:G:H2'	27:BA:2236:C:H6	1.01	1.11
27:BA:2302:G:C6	27:BA:2315:G:C6	2.38	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2295:C:N4	27:BA:2337:G:H1	1.48	1.11
29:BE:269:ILE:HG23	29:BE:297:LYS:HZ3	0.96	1.11
29:BE:303:PRO:HB2	29:BE:307:LEU:CD1	1.80	1.11
30:BF:168:ARG:CZ	30:BF:209:GLY:CA	2.28	1.11
27:BA:452:G:P	30:BF:55:ARG:HH22	1.73	1.11
32:BH:36:PHE:CD2	32:BH:70:LEU:CD1	2.31	1.11
27:BA:1952:A:C2	35:BO:22:ILE:HG23	1.86	1.11
35:BO:77:ILE:CD1	35:BO:77:ILE:C	2.12	1.11
46:BV:54:TYR:O	46:BV:56:VAL:N	1.81	1.11
50:B4:18:GLY:H	50:B4:33:VAL:HG21	1.10	1.11
27:BA:1818:U:O2	28:BD:153:LEU:HA	1.51	1.11
27:BA:1819:A:H2'	28:BD:177:SER:CA	1.81	1.11
27:BA:2352:A:N1	49:B0:30:VAL:HG12	1.64	1.11
27:BA:2623:G:N2	27:BA:2624:G:C4	2.19	1.11
27:BA:2716:U:H2'	27:BA:2717:G:C5'	1.80	1.11
27:BA:398:G:OP2	50:B4:59:PHE:CE2	2.04	1.11
27:BA:990:A:C6	27:BA:1186:G:H1'	1.84	1.11
29:BE:180:ILE:HA	29:BE:183:ASP:CG	1.71	1.11
27:BA:1140:C:H41	34:BN:49:ARG:HD2	1.14	1.11
37:BQ:48:ASN:O	37:BQ:121:ASP:HB2	1.47	1.11
38:BS:109:PRO:HA	38:BS:115:VAL:HG11	1.23	1.11
46:BV:19:VAL:HG12	46:BV:21:ARG:NH1	1.40	1.11
42:BY:45:GLY:C	42:BY:62:VAL:CG1	2.18	1.11
43:BZ:3:LEU:HB3	43:BZ:34:LEU:HA	1.11	1.11
27:BA:1599:C:P	41:BX:33:SER:OG	2.08	1.11
17:AN:24:CYS:HB2	17:AN:40:CYS:H	1.00	1.11
1:AA:1005:A:H4'	1:AA:1037:C:H1'	1.32	1.11
27:BA:1665:A:O2'	35:BO:66:LYS:NZ	1.84	1.11
27:BA:2360:A:C8	27:BA:2361:A:C8	2.39	1.11
27:BA:2476:A:N7	27:BA:2477:C:C5	2.19	1.11
27:BA:2526:G:H2'	27:BA:2527:C:H5'	1.12	1.11
27:BA:826:U:OP1	27:BA:2429:G:OP1	1.69	1.11
26:BB:57:A:O4'	31:BG:13:MET:SD	2.09	1.11
29:BE:267:ARG:HD3	29:BE:297:LYS:HD3	1.29	1.11
30:BF:200:PRO:HB3	30:BF:212:VAL:CG1	1.81	1.11
32:BH:166:GLU:O	32:BH:167:LEU:HD22	1.45	1.11
44:BR:85:PRO:O	44:BR:87:TYR:N	1.83	1.11
45:BU:86:ALA:HB3	45:BU:90:LEU:HD21	1.33	1.11
46:BV:61:VAL:N	46:BV:98:ILE:HD12	1.66	1.11
49:B0:49:GLN:NE2	49:B0:73:GLY:CA	2.09	1.11
27:BA:2327:A:N1	27:BA:2328:A:C2	2.19	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2509:G:C2	27:BA:2580:U:O2	2.03	1.11
27:BA:2771:C:H5'	29:BE:316:ARG:CD	1.79	1.11
27:BA:2785:C:H5''	29:BE:99:VAL:CG2	1.79	1.11
27:BA:6:A:H4'	34:BN:4:ALA:O	1.50	1.11
27:BA:997:G:P	45:BU:93:LYS:HE2	1.91	1.11
29:BE:256:THR:HA	29:BE:259:HIS:HE1	0.96	1.11
29:BE:44:TYR:CE1	29:BE:308:VAL:CA	2.34	1.11
31:BG:19:GLU:HB2	31:BG:135:VAL:HG21	1.31	1.11
31:BG:27:ILE:C	31:BG:69:ILE:HG21	1.71	1.11
32:BH:23:VAL:HG12	32:BH:74:MET:HE3	1.15	1.11
35:BO:79:PHE:HA	39:BT:22:VAL:HG22	1.25	1.11
36:BP:101:ASP:O	36:BP:102:ASP:OD1	1.67	1.11
37:BQ:65:ARG:NH2	37:BQ:85:ILE:HB	1.63	1.11
43:BZ:168:VAL:O	43:BZ:169:VAL:HG23	0.94	1.11
33:BI:92:SER:HA	33:BI:122:ARG:HG3	1.14	1.11
42:BY:14:ALA:HB1	42:BY:15:PRO:CD	1.79	1.11
42:BY:72:ILE:HG22	42:BY:73:HIS:H	1.12	1.11
1:AA:1222:G:OP1	1:AA:1321:C:H2'	1.49	1.11
41:BX:47:VAL:CG1	41:BX:69:SER:HB3	1.79	1.11
1:AA:1502:A:H2	1:AA:1505:G:N1	1.48	1.11
51:B5:40:LYS:HE2	51:B5:46:CYS:HB2	1.31	1.10
27:BA:2059:A:C6	27:BA:2503:A:N7	2.03	1.10
27:BA:2507:C:C2	27:BA:2583:G:N3	2.19	1.10
27:BA:2813:A:C2'	27:BA:2814:C:C6	2.14	1.10
27:BA:2839:G:O2'	44:BR:92:GLY:HA3	1.50	1.10
30:BF:1:MET:C	30:BF:18:LEU:HG	1.44	1.10
31:BG:102:GLY:HA3	31:BG:134:LEU:CD1	1.81	1.10
38:BS:106:LEU:O	38:BS:107:ASN:O	1.66	1.10
46:BV:30:GLY:O	46:BV:63:HIS:HB2	1.50	1.10
34:BN:58:GLU:CA	34:BN:61:VAL:CG2	2.28	1.10
36:BP:116:HIS:CD2	36:BP:118:LEU:HD11	1.85	1.10
44:BR:19:ALA:O	44:BR:22:ARG:HB3	1.50	1.10
38:BS:32:PRO:HG2	38:BS:100:ALA:CB	1.81	1.10
40:BW:29:LEU:HG	40:BW:33:ARG:HD2	1.33	1.10
40:BW:30:GLU:CA	40:BW:33:ARG:CD	2.26	1.10
42:BY:71:VAL:CG2	42:BY:93:THR:H	1.62	1.10
42:BY:51:LEU:CA	42:BY:97:ARG:HH21	1.64	1.10
43:BZ:26:LYS:O	43:BZ:27:GLU:CG	1.98	1.10
1:AA:1222:G:OP2	1:AA:1322:C:C4	2.04	1.10
41:BX:22:ASN:HA	41:BX:68:LEU:CD1	1.80	1.10
1:AA:1097:C:O2'	1:AA:1168:A:N3	1.83	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2354:G:O2'	49:B0:31:VAL:HG12	1.44	1.10
27:BA:1799:G:C6	28:BD:177:SER:HB2	1.85	1.10
27:BA:2066:C:O2	27:BA:2445:G:N2	1.83	1.10
27:BA:2556:C:O2'	27:BA:2557:G:H5'	1.49	1.10
27:BA:2628:C:H1'	27:BA:2781:A:H2'	1.31	1.10
29:BE:71:THR:HG23	29:BE:299:SER:HB2	1.31	1.10
31:BG:20:LYS:HA	31:BG:76:ARG:HB3	1.20	1.10
37:BQ:42:TYR:O	37:BQ:125:TRP:HH2	1.34	1.10
27:BA:446:G:H3'	45:BU:5:LYS:HZ1	1.00	1.10
55:B9:14:CYS:HA	55:B9:27:CYS:HB2	1.28	1.10
27:BA:2469:A:H8	27:BA:2469:A:H5'	1.16	1.10
27:BA:2848:G:N2	27:BA:2867:G:H1'	1.66	1.10
27:BA:2893:G:O3'	27:BA:2894:G:H4'	1.49	1.10
27:BA:398:G:OP2	50:B4:59:PHE:CZ	2.02	1.10
29:BE:269:ILE:HD12	29:BE:269:ILE:H	0.95	1.10
45:BU:46:GLU:O	45:BU:49:ASP:HB2	1.50	1.10
33:BI:115:ILE:CG1	33:BI:131:VAL:HG13	1.78	1.10
42:BY:47:THR:O	42:BY:98:VAL:HG13	1.49	1.10
43:BZ:24:TYR:O	43:BZ:84:TYR:HA	1.47	1.10
47:B2:7:GLU:OE2	47:B2:8:ILE:HG13	1.51	1.10
27:BA:1917:U:H3'	27:BA:1918:A:C8	1.85	1.10
27:BA:687:C:O4'	53:B7:4:THR:HG22	1.52	1.10
54:B8:26:LYS:CE	54:B8:45:GLY:N	2.13	1.10
27:BA:1809:A:H62	50:B4:3:LYS:CG	1.65	1.10
27:BA:2021:C:C5	45:BU:25:TRP:CZ2	2.39	1.10
29:BE:214:VAL:CG2	29:BE:221:LYS:NZ	2.12	1.10
29:BE:62:ARG:O	29:BE:63:GLU:OE2	1.66	1.10
27:BA:600:G:H5''	30:BF:27:ARG:NH1	1.65	1.10
27:BA:2316:C:C5'	31:BG:142:ALA:CB	2.24	1.10
33:BI:7:LYS:NZ	33:BI:8:ASP:OD1	1.82	1.10
36:BP:69:ILE:HA	36:BP:73:VAL:HG23	1.32	1.10
37:BQ:56:ILE:O	37:BQ:112:ALA:CB	1.99	1.10
46:BV:91:THR:C	46:BV:92:ALA:CA	2.20	1.10
54:B8:4:MET:CA	54:B8:5:LYS:NZ	2.13	1.10
27:BA:2423:U:H5'	27:BA:2423:U:C6	1.87	1.10
29:BE:79:ARG:O	29:BE:187:HIS:NE2	1.83	1.10
29:BE:263:GLU:CG	29:BE:266:LYS:HE2	1.82	1.10
29:BE:39:GLN:CD	29:BE:174:LEU:CD1	2.20	1.10
27:BA:2316:C:C4'	31:BG:151:ILE:HD11	1.68	1.10
31:BG:28:GLY:C	31:BG:69:ILE:HD11	1.69	1.10
34:BN:45:VAL:O	34:BN:46:ILE:HG13	1.48	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:59:ARG:O	45:BU:62:ILE:N	1.84	1.10
42:BY:101:LEU:HD13	42:BY:113:GLU:HB2	1.16	1.10
42:BY:50:VAL:HG12	42:BY:51:LEU:N	1.64	1.10
41:BX:24:LEU:CB	41:BX:26:PHE:HZ	1.65	1.10
48:B3:8:LEU:HD23	48:B3:31:LEU:CA	1.68	1.10
52:B6:42:PRO:HG2	52:B6:44:ALA:HB3	1.14	1.10
27:BA:2552:U:O2	27:BA:2554:U:H5''	1.49	1.10
27:BA:2677:G:O2'	27:BA:2678:C:H5'	1.51	1.10
27:BA:2818:G:OP1	27:BA:2837:G:O2'	1.69	1.10
27:BA:637:A:H8	36:BP:111:ALA:HB2	0.97	1.10
29:BE:211:GLN:O	29:BE:216:ARG:HD2	0.93	1.10
30:BF:102:LEU:H	30:BF:107:ARG:NH2	1.49	1.10
30:BF:157:LEU:HB2	30:BF:158:GLU:OE2	1.43	1.10
33:BI:7:LYS:HB2	33:BI:14:LYS:HE2	1.22	1.10
38:BS:128:ASP:O	38:BS:129:ILE:HG12	1.49	1.10
46:BV:34:GLU:O	46:BV:35:LEU:CD2	2.00	1.10
53:B7:11:LYS:O	53:B7:13:ALA:N	1.85	1.10
27:BA:1022:G:O5'	34:BN:52:GLN:OE1	1.69	1.10
27:BA:2094:G:O6	27:BA:2196:C:N4	1.83	1.10
27:BA:2393:A:O2'	27:BA:2394:C:O5'	1.69	1.10
27:BA:2498:C:O2'	27:BA:2499:C:C5'	2.00	1.10
27:BA:2623:G:H21	27:BA:2624:G:C1'	1.64	1.10
27:BA:2722:G:N1	27:BA:2723:C:C4	2.19	1.10
27:BA:2811:G:N2	27:BA:2891:G:N3	1.84	1.10
27:BA:2894:G:O3'	27:BA:2895:U:P	2.09	1.10
27:BA:850:C:H4'	48:B3:18:ASP:OD1	0.93	1.10
28:BD:166:LYS:O	28:BD:167:GLU:CD	1.89	1.10
30:BF:47:GLY:C	30:BF:92:PRO:HG2	1.60	1.10
37:BQ:45:GLN:HB3	37:BQ:152:SER:HB3	1.12	1.10
44:BR:75:LEU:O	44:BR:77:ARG:N	1.84	1.10
27:BA:2718:G:OP1	39:BT:38:ASN:ND2	1.82	1.10
42:BY:101:LEU:HD22	42:BY:103:LEU:HG	1.28	1.10
16:AM:94:ARG:C	16:AM:95:GLY:CA	2.20	1.10
47:B2:26:GLU:HG2	47:B2:27:LEU:H	0.94	1.10
41:BX:25:GLN:N	41:BX:25:GLN:OE1	1.83	1.10
1:AA:1156:G:H1'	1:AA:1179:A:H61	0.93	1.10
53:B7:21:ARG:O	53:B7:24:THR:HG22	1.40	1.10
54:B8:60:LEU:HD23	54:B8:60:LEU:C	1.69	1.10
27:BA:2216:G:C2'	27:BA:2217:G:H5'	1.81	1.10
27:BA:2227:A:N1	27:BA:2228:G:N1	1.99	1.10
27:BA:2296:U:O4	38:BS:16:ALA:HB2	1.49	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2827:C:O2	27:BA:2828:C:C6	2.04	1.10
28:BD:140:VAL:HG22	28:BD:191:VAL:HG12	1.31	1.10
30:BF:102:LEU:HB3	30:BF:107:ARG:NE	1.66	1.10
30:BF:153:VAL:HG13	30:BF:157:LEU:HD21	1.16	1.10
33:BI:43:ASN:O	33:BI:45:LYS:N	1.82	1.10
36:BP:77:ALA:HB2	36:BP:81:VAL:HG11	1.19	1.10
44:BR:100:LEU:HD23	44:BR:112:ALA:C	1.71	1.10
46:BV:50:ASP:H	46:BV:53:LYS:HE3	0.98	1.10
27:BA:2013:A:P	40:BW:96:ILE:CG2	2.38	1.10
49:B0:49:GLN:HE22	49:B0:73:GLY:CA	1.56	1.10
55:B9:25:VAL:CG2	55:B9:34:GLN:HB3	1.82	1.10
27:BA:2565:A:C5'	27:BA:2566:A:OP2	2.00	1.10
27:BA:2654:A:H61	27:BA:2667:C:N4	1.48	1.10
27:BA:2781:A:H5''	27:BA:2782:G:C5'	1.82	1.10
27:BA:2819:G:H3'	27:BA:2821:A:N6	1.66	1.10
32:BH:10:ILE:HG21	32:BH:14:VAL:HG11	1.27	1.10
35:BO:7:ARG:HD3	35:BO:44:LYS:HE3	1.18	1.10
36:BP:128:GLY:HA2	36:BP:132:LYS:HZ2	0.97	1.10
44:BR:36:THR:CG2	44:BR:40:LYS:CB	2.29	1.10
46:BV:33:VAL:HB	46:BV:63:HIS:CD2	1.87	1.10
46:BV:31:ASP:O	46:BV:63:HIS:O	1.69	1.10
27:BA:85:G:OP2	42:BY:65:VAL:CB	2.00	1.10
50:B4:15:ILE:N	50:B4:15:ILE:HD12	1.67	1.09
50:B4:46:GLU:C	50:B4:47:GLU:HG3	1.72	1.09
52:B6:32:GLN:CA	52:B6:35:LEU:HD12	1.82	1.09
27:BA:1034:G:P	55:B9:18:ARG:NH2	2.25	1.09
27:BA:1368:G:OP1	53:B7:25:LYS:HE3	1.38	1.09
27:BA:2683:C:H2'	27:BA:2684:U:H5'	1.33	1.09
27:BA:2722:G:C2	27:BA:2723:C:C4	2.36	1.09
31:BG:93:LEU:HD13	31:BG:94:ALA:H	1.12	1.09
32:BH:90:GLY:HA2	32:BH:159:LYS:CG	1.81	1.09
37:BQ:58:HIS:HA	37:BQ:61:LEU:CD1	1.82	1.09
44:BR:20:LEU:HD13	44:BR:21:TYR:N	0.78	1.09
25:AY:224:ALA:CA	27:BA:2554:U:C4	2.34	1.09
55:B9:25:VAL:CG2	55:B9:34:GLN:CB	2.28	1.09
27:BA:2044:C:N4	27:BA:2624:G:H1	1.50	1.09
27:BA:965:C:H5'	27:BA:2273:A:H1'	1.21	1.09
27:BA:2718:G:C2'	27:BA:2719:G:H8	1.65	1.09
28:BD:128:ALA:HB2	28:BD:190:THR:CG2	1.56	1.09
28:BD:66:PHE:CD2	28:BD:67:LYS:HD2	1.87	1.09
29:BE:79:ARG:C	29:BE:187:HIS:NE2	2.04	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:61:VAL:CG1	34:BN:62:ASP:OD1	1.98	1.09
39:BT:37:GLU:CG	39:BT:38:ASN:H	1.64	1.09
42:BY:43:ASN:HD21	42:BY:103:LEU:CD2	1.65	1.09
27:BA:1598:C:H5''	41:BX:34:LYS:HG2	1.32	1.09
43:BZ:95:SER:OG	43:BZ:122:ILE:CG1	1.99	1.09
1:AA:1500:A:H5''	1:AA:1508:G:H5''	1.17	1.09
1:AA:1098:C:H4'	1:AA:1167:A:C2	1.87	1.09
55:B9:24:LEU:HD13	55:B9:35:ARG:HG3	1.27	1.09
27:BA:2195:C:H2'	27:BA:2196:C:O4'	1.51	1.09
27:BA:2316:C:H4'	31:BG:151:ILE:HD11	1.09	1.09
27:BA:2679:A:C2	29:BE:300:VAL:HG22	1.86	1.09
27:BA:2742:C:C5'	55:B9:35:ARG:HH12	1.64	1.09
27:BA:2748:A:N7	27:BA:2749:A:N3	1.99	1.09
27:BA:2880:C:H2'	27:BA:2881:C:C5'	1.80	1.09
27:BA:976:C:OP1	45:BU:48:ARG:NH1	1.84	1.09
28:BD:146:LYS:HD2	28:BD:147:PRO:HD2	1.32	1.09
28:BD:183:ILE:O	28:BD:184:LEU:CD2	1.98	1.09
29:BE:74:GLU:CB	29:BE:293:TYR:CE2	2.33	1.09
35:BO:47:THR:HB	35:BO:48:PRO:HD2	1.18	1.09
36:BP:64:ILE:HD12	36:BP:106:VAL:HA	1.16	1.09
37:BQ:41:THR:O	37:BQ:125:TRP:HZ3	1.33	1.09
37:BQ:125:TRP:O	37:BQ:126:VAL:CG2	2.00	1.09
44:BR:78:LYS:O	44:BR:82:GLU:CB	1.99	1.09
38:BS:60:SER:O	38:BS:88:ALA:HA	1.51	1.09
48:B3:48:GLU:O	48:B3:51:ALA:N	1.84	1.09
52:B6:13:GLU:OE1	52:B6:13:GLU:N	1.84	1.09
27:BA:1162:G:H4'	46:BV:23:GLU:CB	1.81	1.09
27:BA:2227:A:C6	27:BA:2228:G:C6	2.38	1.09
27:BA:6:A:H5'	34:BN:4:ALA:N	0.77	1.09
27:BA:1799:G:N2	28:BD:153:LEU:HG	1.66	1.09
31:BG:38:GLU:HG2	31:BG:41:LEU:HD12	1.19	1.09
32:BH:25:VAL:CG1	32:BH:78:VAL:HG21	1.82	1.09
35:BO:19:VAL:HG13	35:BO:42:THR:O	1.51	1.09
37:BQ:49:VAL:CG1	37:BQ:50:VAL:H	1.65	1.09
46:BV:50:ASP:N	46:BV:53:LYS:CE	2.16	1.09
42:BY:101:LEU:HD22	42:BY:103:LEU:HD11	1.17	1.09
42:BY:74:VAL:N	42:BY:91:LEU:HD11	1.65	1.09
43:BZ:4:THR:O	43:BZ:33:ALA:HB1	1.51	1.09
47:B2:6:GLN:O	47:B2:9:ARG:N	1.83	1.09
13:AJ:46:ARG:HH11	17:AN:59:ALA:HB1	0.97	1.09
8:AE:78:HIS:HB2	11:AH:104:ARG:HD2	1.35	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:143:ILE:CG2	43:BZ:144:GLY:H	1.65	1.09
27:BA:1364:G:O5'	50:B4:3:LYS:CG	1.99	1.09
54:B8:60:LEU:HD23	54:B8:60:LEU:O	1.51	1.09
27:BA:2286:A:H5'	27:BA:2287:A:H4'	1.33	1.09
27:BA:2689:U:C1'	27:BA:2713:A:C2	2.34	1.09
27:BA:2815:C:O2	27:BA:2816:C:C6	2.06	1.09
34:BN:15:ARG:HD3	34:BN:43:ARG:CD	1.81	1.09
35:BO:35:ILE:HD11	35:BO:65:THR:HG21	1.11	1.09
36:BP:55:GLN:HG3	36:BP:56:LYS:HG2	1.35	1.09
38:BS:32:PRO:CG	38:BS:100:ALA:HB1	1.81	1.09
46:BV:39:PHE:C	46:BV:40:VAL:HG22	1.73	1.09
40:BW:82:LEU:HD23	40:BW:98:LYS:O	0.92	1.09
53:B7:34:ARG:CD	53:B7:42:LEU:HD21	1.78	1.09
27:BA:2251:G:N2	27:BA:2252:G:N3	2.01	1.09
27:BA:2546:U:C4'	27:BA:2565:A:C2	2.35	1.09
31:BG:93:LEU:CD2	31:BG:106:PHE:CD2	2.35	1.09
35:BO:22:ILE:HB	35:BO:40:VAL:O	1.52	1.09
37:BQ:94:ARG:CZ	37:BQ:105:PHE:O	2.00	1.09
27:BA:974:G:N7	46:BV:80:TYR:CZ	2.18	1.09
42:BY:101:LEU:CD1	42:BY:112:LEU:HG	1.82	1.09
42:BY:55:PHE:CE2	42:BY:89:ARG:CZ	2.30	1.09
42:BY:66:ASP:O	42:BY:68:ASP:N	1.85	1.09
43:BZ:3:LEU:HD21	43:BZ:38:ALA:CB	1.80	1.09
1:AA:1347:G:H8	12:AI:107:ARG:HB3	1.17	1.09
7:AD:9:CYS:SG	7:AD:31:CYS:HA	1.91	1.09
1:AA:196:A:O3'	1:AA:197:A:P	2.11	1.09
1:AA:1098:C:C4'	1:AA:1167:A:H2	1.65	1.09
1:AA:60:A:N6	1:AA:107:G:O2'	1.84	1.09
50:B4:42:PHE:O	50:B4:57:ASP:HA	1.34	1.09
54:B8:23:MET:HE1	54:B8:48:PHE:HA	1.15	1.09
27:BA:2332:U:C1'	27:BA:2336:A:H62	1.63	1.09
27:BA:2815:C:H2'	27:BA:2816:C:H5'	1.18	1.09
28:BD:131:LEU:HD13	28:BD:171:VAL:HG21	1.24	1.09
28:BD:89:ASN:O	28:BD:105:ALA:CB	2.01	1.09
29:BE:76:PRO:CB	29:BE:77:PRO:HD3	1.83	1.09
45:BU:74:MET:HE1	45:BU:78:THR:HG21	1.28	1.09
43:BZ:116:VAL:CG2	43:BZ:169:VAL:HG21	1.82	1.09
27:BA:2348:U:H5''	54:B8:42:ARG:HH22	1.00	1.09
27:BA:1782:C:C2	27:BA:2609:U:C5	2.39	1.09
27:BA:2187:G:C2'	27:BA:2188:C:H5'	1.82	1.09
27:BA:2239:G:H2'	27:BA:2240:C:H6	1.15	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2309:A:OP2	27:BA:2309:A:O4'	1.66	1.09
27:BA:2327:A:N7	27:BA:2388:A:N6	2.00	1.09
27:BA:2543:G:C2'	27:BA:2544:G:H5'	1.82	1.09
27:BA:2771:C:O2	27:BA:2771:C:H2'	1.52	1.09
28:BD:128:ALA:CB	28:BD:190:THR:CA	2.25	1.09
28:BD:143:ILE:H	28:BD:143:ILE:HD12	1.11	1.09
30:BF:37:ALA:HB1	30:BF:102:LEU:HB2	1.25	1.09
27:BA:2303:G:H5'	31:BG:99:ASP:HB3	1.14	1.09
32:BH:101:LYS:HB3	32:BH:114:ILE:O	1.50	1.09
32:BH:113:GLU:OE1	32:BH:114:ILE:N	1.86	1.09
33:BI:5:PHE:O	33:BI:36:ALA:CB	2.01	1.09
35:BO:63:VAL:HG13	35:BO:102:VAL:HG11	1.14	1.09
36:BP:57:VAL:CG1	36:BP:58:GLN:H	1.63	1.09
28:BD:226:GLY:O	28:BD:227:VAL:CG1	2.01	1.09
41:BX:14:ALA:HA	41:BX:17:ASP:CG	1.71	1.09
43:BZ:156:GLU:HG2	43:BZ:157:GLY:H	1.01	1.09
1:AA:39:G:N7	1:AA:547:A:H8	1.49	1.09
50:B4:6:HIS:ND1	50:B4:56:VAL:CG2	2.14	1.09
52:B6:41:ASP:HB3	52:B6:47:HIS:H	1.06	1.09
27:BA:2333:A:C1'	27:BA:2335:A:C4	2.35	1.09
27:BA:2623:G:N2	27:BA:2624:G:N9	2.00	1.09
29:BE:180:ILE:HG21	29:BE:187:HIS:CB	1.83	1.09
31:BG:98:PHE:CA	31:BG:104:PHE:HD2	1.65	1.09
31:BG:49:PRO:HB2	31:BG:72:LYS:H	1.11	1.09
34:BN:80:LYS:O	34:BN:83:ILE:HG12	1.53	1.09
37:BQ:28:ILE:HG23	37:BQ:62:GLU:HG2	1.15	1.09
27:BA:29:U:C5'	45:BU:11:ARG:HH12	1.66	1.09
45:BU:94:VAL:C	45:BU:98:ILE:HD13	1.63	1.09
27:BA:993:G:C1'	46:BV:90:PHE:HE2	1.56	1.09
49:B0:42:GLY:HA2	49:B0:66:LYS:HA	1.12	1.09
50:B4:58:LYS:HG2	50:B4:62:ARG:HE	1.12	1.09
55:B9:4:ARG:O	55:B9:36:GLN:HG2	1.50	1.09
27:BA:1457:A:C2	27:BA:2703:C:N4	2.21	1.09
27:BA:2712:U:C3'	27:BA:712(A):A:H5''	1.82	1.09
30:BF:22:PHE:CE2	30:BF:115:LEU:HB3	1.86	1.09
32:BH:15:THR:HG23	32:BH:26:LYS:H	1.18	1.09
33:BI:7:LYS:HA	33:BI:12:LYS:O	1.47	1.09
27:BA:2561:A:O2'	35:BO:40:VAL:HG11	0.91	1.09
35:BO:8:LEU:HB2	35:BO:83:ALA:HA	1.18	1.09
38:BS:63:SER:O	38:BS:67:ALA:O	1.71	1.09
45:BU:99:ALA:CB	45:BU:106:PHE:CE2	2.34	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:34:G:H2'	2:AV:35:A:H5''	1.31	1.09
42:BY:57:GLY:CA	42:BY:97:ARG:HH22	1.65	1.09
42:BY:50:VAL:CG1	42:BY:51:LEU:H	1.63	1.09
28:BD:213:LYS:HB3	28:BD:215:LYS:N	1.64	1.09
47:B2:22:ASP:O	47:B2:26:GLU:OE2	1.71	1.09
49:B0:52:GLY:O	49:B0:53:MET:CG	2.00	1.09
32:BH:17:THR:HB	32:BH:24:THR:OG1	1.51	1.09
3:AW:45:G:O3'	3:AW:46:G:H5'	1.53	1.09
48:B3:8:LEU:HA	48:B3:54:VAL:HG11	1.24	1.08
54:B8:16:ILE:HG23	54:B8:21:LYS:C	1.72	1.08
27:BA:2219:G:H2'	27:BA:2224:G:O5'	1.40	1.08
27:BA:2254:C:C2'	27:BA:2255:G:C5'	2.22	1.08
27:BA:2567:G:C2	27:BA:2568:C:C5	2.41	1.08
27:BA:2572:A:OP2	29:BE:242:ASN:N	1.82	1.08
31:BG:22:VAL:O	31:BG:23:VAL:CG1	2.00	1.08
35:BO:98:ILE:CD1	35:BO:117:LEU:HB3	1.81	1.08
35:BO:9:LYS:O	35:BO:83:ALA:HB1	1.50	1.08
26:BB:89(A):A:C2	37:BQ:52:LYS:NZ	2.19	1.08
45:BU:59:ARG:CA	45:BU:62:ILE:CG1	1.94	1.08
40:BW:32:ALA:HA	40:BW:35:ILE:HG13	1.22	1.08
40:BW:80:PRO:HB2	40:BW:100:THR:HG21	1.35	1.08
53:B7:30:ILE:O	53:B7:33:ARG:HB2	0.92	1.08
54:B8:62:LEU:HB2	54:B8:63:PRO:HD3	1.35	1.08
55:B9:25:VAL:HB	55:B9:34:GLN:HB2	1.15	1.08
27:BA:1032:A:OP1	55:B9:8:LYS:HG3	1.49	1.08
27:BA:1364:G:C5'	50:B4:3:LYS:HD3	1.82	1.08
27:BA:2048:G:H1	27:BA:2620:C:N4	1.49	1.08
27:BA:2234:G:H2'	27:BA:2235:G:H5'	1.29	1.08
27:BA:2328:A:H2'	27:BA:2329:G:H8	1.18	1.08
27:BA:2457:U:C4	27:BA:2458:G:N3	2.15	1.08
27:BA:2572:A:H5''	27:BA:2574:G:H5'	1.31	1.08
27:BA:2618:G:C6	27:BA:2619:C:C5	2.31	1.08
27:BA:2819:G:H3'	27:BA:2821:A:H62	1.14	1.08
27:BA:2821:A:C2	27:BA:2822:G:C4	2.38	1.08
29:BE:180:ILE:HG21	29:BE:187:HIS:HA	1.14	1.08
30:BF:236:THR:O	30:BF:239:ALA:N	1.85	1.08
30:BF:115:LEU:CG	30:BF:246:ARG:HH22	1.64	1.08
36:BP:94:ARG:HD3	36:BP:120:LEU:CB	1.83	1.08
40:BW:30:GLU:N	40:BW:33:ARG:HD2	1.66	1.08
42:BY:43:ASN:HD21	42:BY:103:LEU:HD21	1.01	1.08
42:BY:51:LEU:HD12	42:BY:97:ARG:HG2	1.26	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:71:VAL:HG23	42:BY:93:THR:HG23	1.35	1.08
43:BZ:69:VAL:HG22	43:BZ:81:VAL:HG13	1.15	1.08
47:B2:39:ALA:HB3	47:B2:40:PRO:HD3	1.34	1.08
27:BA:2360:A:C8	27:BA:2361:A:H8	1.70	1.08
27:BA:2484:G:N2	27:BA:2485:G:H1'	1.66	1.08
27:BA:2498:C:C2'	27:BA:2499:C:H5''	1.83	1.08
27:BA:2815:C:O2'	27:BA:2816:C:H5''	1.48	1.08
30:BF:103:ASN:O	30:BF:104:ASP:O	1.70	1.08
31:BG:98:PHE:CA	31:BG:104:PHE:CD2	2.35	1.08
38:BS:31:LYS:CD	38:BS:99:GLU:HB2	1.82	1.08
46:BV:5:ILE:CG2	46:BV:39:PHE:HA	1.83	1.08
51:B5:11:THR:HG21	51:B5:19:ARG:HH22	1.11	1.08
27:BA:1820:U:O2	28:BD:200:THR:HG23	1.50	1.08
27:BA:2197:U:C2'	27:BA:2224:G:H22	1.66	1.08
27:BA:2262:U:C2'	27:BA:2263:C:H5'	1.83	1.08
27:BA:2634:G:H2'	27:BA:2635:C:O5'	1.54	1.08
27:BA:2731:G:H22	27:BA:2732:G:N2	1.47	1.08
27:BA:2769:C:H2'	27:BA:2770:G:O5'	1.34	1.08
29:BE:77:PRO:HB3	29:BE:187:HIS:C	1.74	1.08
32:BH:43:THR:HG23	32:BH:52:THR:HG22	1.22	1.08
36:BP:65:ASP:HA	36:BP:109:LEU:H	0.99	1.08
45:BU:94:VAL:O	45:BU:98:ILE:HD12	1.31	1.08
40:BW:30:GLU:N	40:BW:33:ARG:CD	2.15	1.08
40:BW:58:ALA:HA	40:BW:62:HIS:HB2	1.21	1.08
42:BY:50:VAL:HG12	42:BY:51:LEU:H	0.96	1.08
42:BY:79:LEU:HD12	42:BY:80:GLU:H	0.99	1.08
49:B0:35:ASN:O	49:B0:36:ILE:HG12	1.53	1.08
27:BA:592:G:H2'	54:B8:3:LYS:HE3	1.14	1.08
54:B8:4:MET:HB2	54:B8:7:HIS:HE1	0.93	1.08
29:BE:268:LEU:HD23	29:BE:269:ILE:HD12	1.27	1.08
31:BG:28:GLY:HA2	31:BG:69:ILE:HD12	1.13	1.08
34:BN:48:GLY:O	34:BN:53:ILE:HD13	1.54	1.08
34:BN:95:ARG:CA	34:BN:98:PHE:CE1	2.34	1.08
35:BO:14:SER:CB	35:BO:86:ILE:HD12	1.84	1.08
35:BO:35:ILE:HD11	35:BO:65:THR:HG22	1.23	1.08
38:BS:47:LEU:HD12	38:BS:58:LEU:HD21	1.30	1.08
46:BV:35:LEU:C	46:BV:60:VAL:HG13	1.72	1.08
46:BV:61:VAL:HA	46:BV:98:ILE:HG13	1.22	1.08
43:BZ:142:ASN:H	43:BZ:171:VAL:HG21	0.98	1.08
49:B0:46:LYS:HG2	49:B0:58:THR:H	1.10	1.08
55:B9:14:CYS:CA	55:B9:27:CYS:CB	2.31	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2271:G:O2'	27:BA:2272:U:O5'	1.71	1.08
27:BA:2391:G:O2'	27:BA:2392:A:OP2	1.70	1.08
27:BA:2415:G:N2	27:BA:2416:C:C1'	2.07	1.08
27:BA:2544:G:O2'	27:BA:2545:G:H5'	1.50	1.08
27:BA:2739:U:C2'	27:BA:2740:A:H5''	1.82	1.08
27:BA:593:G:O2'	54:B8:58:MET:HE1	1.50	1.08
27:BA:993:G:C4'	46:BV:90:PHE:CE2	2.36	1.08
44:BR:84:ALA:HB3	44:BR:85:PRO:CD	1.83	1.08
38:BS:116:PHE:O	38:BS:120:GLU:OE1	1.69	1.08
45:BU:7:GLY:C	45:BU:8:ILE:CD1	2.22	1.08
40:BW:66:GLU:CG	40:BW:67:ASP:H	1.66	1.08
33:BI:133:LEU:HD11	33:BI:139:ALA:CB	1.83	1.08
1:AA:1320:C:N3	22:AS:72:GLY:HA3	1.68	1.08
1:AA:1319:A:C3'	22:AS:70:LYS:HZ1	1.67	1.08
3:AW:37:YYG:H102	10:AG:83:ALA:CB	1.83	1.08
16:AM:66:LEU:HA	16:AM:70:LEU:HD12	1.20	1.08
27:BA:1819:A:OP1	28:BD:155:ARG:N	1.86	1.08
27:BA:2094:G:C6	27:BA:2196:C:C4	2.40	1.08
27:BA:2225:A:H5''	27:BA:2226:C:H5''	1.25	1.08
27:BA:2250:G:H5'	37:BQ:102:ARG:HD3	1.13	1.08
27:BA:2447:G:C2	27:BA:2500:U:O4	2.07	1.08
27:BA:2579:C:C6	27:BA:2579:C:C5'	2.12	1.08
27:BA:2742:C:H5''	55:B9:35:ARG:HH12	1.18	1.08
27:BA:2805:G:H2'	27:BA:2807:G:O4'	1.54	1.08
27:BA:2712:U:C3'	27:BA:712(A):A:P	2.40	1.08
32:BH:43:THR:CG2	32:BH:52:THR:HG22	1.77	1.08
35:BO:98:ILE:HG22	35:BO:99:PHE:H	1.00	1.08
38:BS:24:LEU:HA	38:BS:33:ARG:NH2	1.68	1.08
3:AW:76:A:C8	27:BA:2421:G:H2'	1.88	1.08
27:BA:2869:G:H21	27:BA:2870:C:H1'	0.96	1.08
37:BQ:67:ALA:N	37:BQ:70:ARG:CZ	2.03	1.08
38:BS:31:LYS:HD3	38:BS:99:GLU:HB2	1.08	1.08
45:BU:92:ARG:N	45:BU:95:LEU:HD11	1.69	1.08
46:BV:50:ASP:N	46:BV:53:LYS:HE3	1.69	1.08
34:BN:10:VAL:HG12	34:BN:36:VAL:HG22	1.34	1.08
1:AA:1248:A:N3	12:AI:70:LYS:NZ	1.99	1.08
27:BA:270(M):U:H4'	27:BA:270(N):G:H4'	1.35	1.08
1:AA:115:G:O3'	1:AA:116:A:P	2.12	1.08
50:B4:63:PHE:O	50:B4:65:ASP:OD2	1.69	1.08
53:B7:30:ILE:CG1	53:B7:33:ARG:HD2	1.82	1.08
55:B9:4:ARG:O	55:B9:36:GLN:CB	2.01	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2397:G:C2	27:BA:2420:C:O2	2.05	1.08
27:BA:2468:G:H22	27:BA:2481:G:H2'	1.10	1.08
27:BA:2494:G:C2	27:BA:2495:G:N7	2.22	1.08
27:BA:2740:A:C2'	27:BA:2741:A:H5'	1.81	1.08
27:BA:2768:C:H2'	27:BA:2769:C:H5'	1.08	1.08
29:BE:180:ILE:CG2	29:BE:187:HIS:HB3	1.82	1.08
29:BE:210:THR:HG22	29:BE:255:GLN:HG2	1.13	1.08
35:BO:68:GLY:HA3	35:BO:78:ARG:HE	1.00	1.08
37:BQ:67:ALA:H	37:BQ:70:ARG:CZ	1.52	1.08
38:BS:49:THR:C	38:BS:52:PRO:N	2.07	1.08
45:BU:21:ALA:CA	45:BU:24:PHE:HZ	1.65	1.08
46:BV:51:ALA:HA	46:BV:54:TYR:HD1	1.16	1.08
49:B0:23:VAL:HG12	49:B0:24:LYS:N	1.63	1.08
27:BA:1364:G:C3'	50:B4:3:LYS:HZ2	1.67	1.08
52:B6:14:SER:HB3	52:B6:52:GLU:HA	1.27	1.08
27:BA:458:G:H5''	53:B7:39:ARG:HD2	1.08	1.08
53:B7:42:LEU:O	53:B7:46:ASP:OD1	1.72	1.08
27:BA:2306:C:N4	31:BG:53:LYS:HZ3	1.44	1.08
27:BA:2570:G:C4	27:BA:2571:C:C5	2.42	1.08
27:BA:2653:U:C2	27:BA:2654:A:C6	2.41	1.08
27:BA:2657:A:H62	27:BA:2664:G:N2	1.50	1.08
29:BE:70:VAL:CG1	29:BE:296:VAL:CA	2.32	1.08
30:BF:22:PHE:CZ	30:BF:115:LEU:CB	2.37	1.08
33:BI:7:LYS:CD	33:BI:12:LYS:HZ3	1.50	1.08
34:BN:80:LYS:O	34:BN:84:ARG:HG3	1.53	1.08
35:BO:10:VAL:HG21	35:BO:16:ALA:HB3	1.22	1.08
27:BA:1287:A:H8	44:BR:104:ARG:HG2	1.14	1.08
45:BU:21:ALA:HA	45:BU:24:PHE:HZ	0.94	1.08
45:BU:28:ARG:HA	45:BU:31:GLN:CB	1.83	1.08
27:BA:535:C:O2'	45:BU:53:LYS:HG2	0.90	1.08
40:BW:24:ILE:O	40:BW:25:ARG:O	1.72	1.08
40:BW:32:ALA:HB1	40:BW:35:ILE:HD12	1.19	1.08
33:BI:103:GLN:HE21	33:BI:109:LYS:C	1.56	1.08
29:BE:109:ASP:HA	29:BE:112:LEU:HB2	1.36	1.08
32:BH:170:LEU:HD13	32:BH:170:LEU:O	0.92	1.08
1:AA:1004:A:H2'	1:AA:1036:G:O6	1.54	1.08
5:AB:185:ILE:HG22	5:AB:199:TYR:HB2	1.34	1.08
3:AW:40:C:O3'	10:AG:147:ALA:HB1	1.50	1.08
52:B6:28:ARG:NH1	52:B6:28:ARG:CB	2.17	1.07
27:BA:965:C:H4'	27:BA:2273:A:N3	1.69	1.07
27:BA:2316:C:H5'	31:BG:142:ALA:HB1	1.13	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:825:C:H4'	27:BA:2428:G:C5	1.88	1.07
27:BA:2485:G:C2'	27:BA:2486:G:C5'	2.30	1.07
27:BA:2700:C:C3'	27:BA:2701:C:H5''	1.83	1.07
27:BA:636:G:OP1	36:BP:127:GLU:HG2	1.50	1.07
28:BD:73:ILE:HG22	28:BD:95:TYR:HD2	0.91	1.07
29:BE:240:PRO:HB2	29:BE:243:PRO:HG2	1.35	1.07
35:BO:25:LEU:HD21	35:BO:40:VAL:CG2	1.73	1.07
35:BO:7:ARG:NE	35:BO:44:LYS:HE3	1.68	1.07
36:BP:128:GLY:HA3	36:BP:132:LYS:HZ3	1.19	1.07
37:BQ:17:ARG:C	37:BQ:18:GLU:HG3	1.62	1.07
38:BS:34:LEU:HG	38:BS:102:LEU:HA	1.33	1.07
46:BV:94:LYS:CA	46:BV:95:ILE:HD12	1.84	1.07
55:B9:14:CYS:HA	55:B9:27:CYS:HB3	1.17	1.07
27:BA:2470:G:N2	27:BA:2471:C:C6	2.21	1.07
27:BA:2531:A:C2'	27:BA:2532:G:C5'	2.31	1.07
27:BA:2701:C:H3'	27:BA:2702:U:C5'	1.84	1.07
28:BD:165:GLY:O	28:BD:172:ILE:HB	0.90	1.07
28:BD:63:ILE:C	28:BD:64:ILE:HG13	1.71	1.07
29:BE:200:ASP:CA	29:BE:266:LYS:HD2	1.84	1.07
30:BF:194:PHE:HB2	30:BF:211:ASP:O	1.52	1.07
30:BF:27:ARG:O	30:BF:31:ILE:HG13	1.36	1.07
36:BP:132:LYS:H	36:BP:132:LYS:HD2	0.97	1.07
46:BV:61:VAL:HG21	46:BV:97:GLY:HA2	1.27	1.07
43:BZ:78:PRO:O	43:BZ:79:ILE:HG13	1.54	1.07
27:BA:1566:A:C6	28:BD:212:HIS:ND1	2.21	1.07
27:BA:2:G:N2	27:BA:2902:C:C2	2.22	1.07
50:B4:5:LEU:HB2	50:B4:56:VAL:CG1	1.83	1.07
27:BA:2482:G:C2'	27:BA:2483:C:C5'	2.29	1.07
27:BA:2554:U:H3'	27:BA:2554:U:H6	1.09	1.07
27:BA:2679:A:N3	29:BE:300:VAL:HG13	1.65	1.07
29:BE:222:ARG:HH11	29:BE:222:ARG:HG3	0.97	1.07
32:BH:15:THR:CG2	32:BH:26:LYS:CB	2.27	1.07
37:BQ:25:GLY:O	37:BQ:26:LYS:CG	2.02	1.07
37:BQ:28:ILE:HG22	37:BQ:29:ALA:H	1.16	1.07
46:BV:50:ASP:N	46:BV:53:LYS:CD	2.16	1.07
43:BZ:116:VAL:HA	43:BZ:169:VAL:HG22	1.11	1.07
43:BZ:114:ASP:HB2	43:BZ:170:SER:O	1.53	1.07
51:B5:45:ILE:HG13	51:B5:52:TYR:HE1	0.92	1.07
53:B7:36:ALA:O	53:B7:38:GLY:N	1.87	1.07
27:BA:529:A:C2	27:BA:2022:U:OP1	2.07	1.07
27:BA:2215:G:C2'	27:BA:2216:G:H8	1.65	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2472:G:C2'	27:BA:2475:C:H42	1.66	1.07
27:BA:2616:C:H2'	27:BA:2617:C:H5'	1.15	1.07
27:BA:2819:G:C2	27:BA:2821:A:C8	2.41	1.07
27:BA:2885:C:C4	27:BA:2886:G:C8	2.42	1.07
29:BE:210:THR:CA	29:BE:216:ARG:NH2	2.16	1.07
30:BF:168:ARG:NH1	30:BF:209:GLY:C	2.08	1.07
30:BF:231:ARG:O	30:BF:232:LEU:CD2	2.02	1.07
31:BG:36:ASN:O	31:BG:39:ASP:N	1.86	1.07
34:BN:65:ASN:ND2	34:BN:69:TYR:CE1	2.23	1.07
36:BP:92:ASP:OD1	36:BP:94:ARG:HG3	1.53	1.07
43:BZ:154:LEU:HD13	43:BZ:160:LEU:HD11	1.35	1.07
33:BI:115:ILE:HG12	33:BI:131:VAL:CG1	1.83	1.07
43:BZ:2:GLU:C	43:BZ:54:ILE:CG2	2.22	1.07
43:BZ:5:ALA:HB3	43:BZ:33:ALA:HA	1.34	1.07
27:BA:145:G:H4'	41:BX:1:SER:HB2	1.28	1.07
41:BX:31:ARG:O	41:BX:32:ALA:O	1.69	1.07
1:AA:939:G:H5''	10:AG:102:ARG:NH2	1.67	1.07
49:B0:37:LEU:HG	49:B0:68:VAL:HG12	1.29	1.07
27:BA:1665:A:H4'	35:BO:66:LYS:CE	1.85	1.07
27:BA:2227:A:H2	27:BA:2228:G:C2	1.69	1.07
27:BA:2263:C:O2'	27:BA:2264:C:H5'	1.52	1.07
27:BA:2358:G:C2	27:BA:2359:C:O4'	2.08	1.07
27:BA:2392:A:C2'	27:BA:2393:A:H5'	1.85	1.07
27:BA:526:A:C2	27:BA:2626:C:C1'	2.37	1.07
30:BF:237:GLU:O	30:BF:239:ALA:N	1.87	1.07
30:BF:59:GLU:CB	30:BF:61:PHE:HE2	1.68	1.07
27:BA:2313:C:H5'	31:BG:72:LYS:HG3	1.10	1.07
33:BI:7:LYS:CG	33:BI:12:LYS:CD	2.31	1.07
34:BN:19:MET:HG2	34:BN:46:ILE:HD11	1.35	1.07
35:BO:31:ARG:HB2	35:BO:32:TYR:CE1	1.89	1.07
36:BP:110:GLY:O	36:BP:111:ALA:O	1.70	1.07
37:BQ:76:GLY:HA3	37:BQ:132:VAL:HG11	1.12	1.07
44:BR:37:THR:HA	44:BR:111:LEU:HA	1.37	1.07
44:BR:34:ILE:HG22	44:BR:35:THR:N	1.63	1.07
45:BU:72:HIS:CE1	45:BU:110:VAL:HG11	1.89	1.07
48:B3:20:LYS:CA	48:B3:23:LEU:CG	2.31	1.07
51:B5:4:HIS:HB2	51:B5:5:PRO:HD3	1.37	1.07
27:BA:1129:A:O2'	27:BA:2515:C:O2	1.69	1.07
27:BA:2216:G:H2'	27:BA:2217:G:H5'	1.08	1.07
27:BA:2317:C:H5'	31:BG:150:SER:HA	1.18	1.07
27:BA:2437:U:C5'	27:BA:2598:A:H2	1.67	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2584:U:N1	27:BA:2585:U:C5	2.23	1.07
27:BA:2681:C:H5	27:BA:2727:G:N2	1.51	1.07
28:BD:131:LEU:HD13	28:BD:171:VAL:HG22	1.16	1.07
30:BF:102:LEU:HD23	30:BF:106:GLU:OE1	1.53	1.07
27:BA:2749:A:O4'	32:BH:62:ALA:HB2	0.90	1.07
34:BN:19:MET:CE	34:BN:19:MET:CA	2.28	1.07
37:BQ:127:ASN:HB3	37:BQ:128:PRO:HD3	1.08	1.07
45:BU:94:VAL:O	45:BU:98:ILE:CD1	0.77	1.07
40:BW:96:ILE:HD12	40:BW:96:ILE:H	0.96	1.07
33:BI:103:GLN:NE2	33:BI:109:LYS:HA	1.70	1.07
33:BI:77:VAL:HG11	33:BI:143:VAL:HG22	1.08	1.07
43:BZ:37:LYS:C	43:BZ:40:ASP:OD1	1.91	1.07
3:AW:25:C:C2'	3:AW:26:G:C8	2.29	1.07
27:BA:1827:C:H5'	27:BA:1971:A:H4'	1.19	1.07
41:BX:51:GLN:O	41:BX:52:VAL:CG2	2.01	1.07
1:AA:1211:U:O3'	1:AA:1212:U:OP1	1.68	1.07
31:BG:44:ILE:HG22	31:BG:83:PHE:HE2	1.19	1.07
27:BA:2249:U:N3	27:BA:2253:G:OP2	1.88	1.07
27:BA:2287:A:N1	27:BA:2289:G:H1'	1.67	1.07
27:BA:2328:A:C5	27:BA:2329:G:N7	2.23	1.07
27:BA:2385:C:N3	27:BA:2386:C:C6	2.23	1.07
27:BA:2438:U:OP1	27:BA:2599:G:O2'	1.72	1.07
27:BA:1819:A:OP1	28:BD:154:VAL:CA	2.02	1.07
32:BH:43:THR:CG2	32:BH:52:THR:HG23	1.78	1.07
34:BN:19:MET:CB	34:BN:46:ILE:CD1	2.31	1.07
3:AW:76:A:H2	54:B8:32:GLN:HB3	0.95	1.07
52:B6:45:LYS:O	52:B6:46:LYS:HE2	0.90	1.07
53:B7:21:ARG:HB3	53:B7:31:LEU:HD11	1.07	1.07
27:BA:1151:G:C4'	45:BU:81:ASN:ND2	1.76	1.07
27:BA:2543:G:C8	27:BA:2544:G:N7	2.21	1.07
27:BA:2573:C:H5'	27:BA:2573:C:H6	1.05	1.07
27:BA:2574:G:C3'	27:BA:2575:C:H6	1.67	1.07
27:BA:2574:G:N7	27:BA:2575:C:H5	1.53	1.07
27:BA:2439:A:C1'	27:BA:2587:A:OP1	2.02	1.07
27:BA:2731:G:C2	27:BA:2732:G:C2	2.42	1.07
29:BE:214:VAL:HG21	29:BE:221:LYS:HZ1	0.94	1.07
32:BH:7:PRO:CD	32:BH:68:ARG:HD3	1.84	1.07
36:BP:114:VAL:CG2	36:BP:132:LYS:HB2	1.82	1.07
36:BP:114:VAL:HG21	36:BP:132:LYS:C	1.75	1.07
37:BQ:57:ARG:N	37:BQ:61:LEU:HD21	1.69	1.07
44:BR:104:ARG:CA	44:BR:105:ARG:HH21	1.68	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:41:LYS:NZ	38:BS:68:GLU:OE2	1.86	1.07
45:BU:8:ILE:N	45:BU:11:ARG:HD3	1.69	1.07
45:BU:57:PHE:O	45:BU:59:ARG:N	1.88	1.07
40:BW:85:VAL:O	40:BW:86:LEU:CD2	2.03	1.07
27:BA:2013:A:OP1	40:BW:96:ILE:CB	2.02	1.07
33:BI:77:VAL:HG21	33:BI:141:LEU:HD12	1.13	1.07
33:BI:77:VAL:HB	33:BI:142:LYS:O	1.52	1.07
33:BI:80:PRO:HB3	33:BI:146:THR:HG23	1.11	1.07
42:BY:18:GLU:C	42:BY:21:LYS:NZ	2.07	1.07
42:BY:31:LEU:O	42:BY:34:GLU:CG	1.98	1.07
43:BZ:69:VAL:HG11	43:BZ:81:VAL:HG22	1.37	1.07
43:BZ:40:ASP:HB2	43:BZ:41:ARG:NE	1.70	1.07
47:B2:62:GLU:O	47:B2:64:GLY:N	1.87	1.07
27:BA:1080:C:O2	56:BK:127:ILE:HG13	1.52	1.07
31:BG:44:ILE:O	31:BG:83:PHE:CE2	2.07	1.07
48:B3:9:VAL:N	48:B3:54:VAL:HG12	1.69	1.07
52:B6:12:MET:HB2	52:B6:27:ASN:ND2	1.70	1.07
27:BA:2052:G:H21	29:BE:245:ARG:HG2	1.11	1.07
27:BA:2283:C:N3	27:BA:2284:C:H1'	1.69	1.07
27:BA:2286:A:H5''	27:BA:2287:A:H5'	1.33	1.07
27:BA:2521:C:C2	27:BA:2522:U:C6	2.42	1.07
27:BA:1457:A:N1	27:BA:2703:C:N4	2.03	1.07
27:BA:2819:G:C3'	27:BA:2821:A:H62	1.68	1.07
30:BF:223:LEU:O	30:BF:225:PRO:N	1.88	1.07
34:BN:19:MET:HE2	34:BN:19:MET:HA	1.12	1.07
27:BA:2485:G:H5''	37:BQ:144:THR:HG22	1.08	1.07
46:BV:93:ILE:HG22	46:BV:95:ILE:HD11	1.37	1.07
27:BA:1367:A:O2'	53:B7:25:LYS:NZ	1.87	1.07
27:BA:2839:G:C4	27:BA:2840:C:C5	2.43	1.07
27:BA:494:G:H4'	40:BW:6:ILE:HG22	1.29	1.07
27:BA:910:A:H3'	37:BQ:17:ARG:HH21	1.18	1.07
28:BD:175:LEU:CG	28:BD:180:VAL:N	2.11	1.07
30:BF:235:PHE:HB3	30:BF:239:ALA:HB1	1.37	1.07
34:BN:135:ILE:O	34:BN:139:LEU:HD11	1.53	1.07
37:BQ:136:TRP:O	37:BQ:139:ALA:N	1.87	1.07
39:BT:37:GLU:HG2	39:BT:38:ASN:H	0.90	1.07
43:BZ:163:ASP:OD2	43:BZ:164:PRO:CD	0.77	1.07
42:BY:52:ARG:HD2	42:BY:95:ASN:CG	1.74	1.07
47:B2:27:LEU:HD11	47:B2:53:ILE:HD13	1.30	1.07
1:AA:1005:A:H5'	1:AA:1037:C:H1'	1.36	1.07
27:BA:1943:U:H1'	27:BA:1945:G:H5'	1.34	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:56:C:O2'	31:BG:56:ARG:CD	2.03	1.06
49:B0:44:LYS:HA	49:B0:64:ASP:OD1	1.52	1.06
50:B4:7:PRO:HG2	50:B4:56:VAL:HG11	1.35	1.06
52:B6:8:ILE:N	52:B6:29:ARG:HH21	1.50	1.06
53:B7:30:ILE:CD1	53:B7:33:ARG:CD	2.30	1.06
55:B9:4:ARG:HA	55:B9:36:GLN:HA	1.29	1.06
27:BA:2437:U:C5'	27:BA:2598:A:C2	2.37	1.06
27:BA:593:G:O2'	54:B8:58:MET:CE	2.03	1.06
28:BD:174:ARG:HG2	28:BD:174:ARG:HH11	0.95	1.06
30:BF:102:LEU:HD21	30:BF:106:GLU:OE1	1.55	1.06
32:BH:85:ALA:O	32:BH:148:ARG:NH2	1.68	1.06
34:BN:87:LEU:N	34:BN:87:LEU:HD12	1.70	1.06
35:BO:7:ARG:NE	35:BO:44:LYS:CD	2.17	1.06
40:BW:19:LEU:CD1	51:B5:25:LEU:HD21	1.84	1.06
27:BA:2465:C:O2	27:BA:2485:G:N1	1.87	1.06
27:BA:2774:C:OP1	27:BA:2774:C:H4'	1.47	1.06
28:BD:118:GLY:O	28:BD:129:LEU:HD21	1.49	1.06
30:BF:37:ALA:HB3	30:BF:102:LEU:HD12	1.35	1.06
30:BF:103:ASN:HB2	30:BF:106:GLU:CD	1.74	1.06
32:BH:36:PHE:CD2	32:BH:70:LEU:HD13	1.86	1.06
32:BH:86:LEU:H	32:BH:131:ILE:HG23	0.93	1.06
34:BN:21:ARG:O	34:BN:24:SER:OG	1.70	1.06
35:BO:25:LEU:HD12	35:BO:38:VAL:HG12	1.33	1.06
45:BU:41:ASN:ND2	45:BU:42:ALA:H	1.53	1.06
40:BW:81:ALA:C	40:BW:82:LEU:HD22	1.75	1.06
27:BA:337:C:H3'	27:BA:338:G:H5''	1.09	1.06
42:BY:91:LEU:HD23	42:BY:91:LEU:N	1.68	1.06
1:AA:977:A:N6	1:AA:1224:G:O5'	1.88	1.06
1:AA:815:A:O2'	1:AA:1527:C:H1'	1.55	1.06
49:B0:37:LEU:O	49:B0:40:GLN:CG	2.02	1.06
53:B7:18:PHE:O	53:B7:19:ARG:O	1.72	1.06
27:BA:1612:C:C2'	53:B7:3:ARG:NE	2.12	1.06
27:BA:1675:C:C2	29:BE:225:LYS:HG2	1.90	1.06
27:BA:2219:G:C2'	27:BA:2224:G:H5'	1.84	1.06
27:BA:2086:U:N3	27:BA:2233:U:O4	1.88	1.06
30:BF:32:GLY:CA	30:BF:35:VAL:CG2	2.33	1.06
30:BF:85:LYS:N	30:BF:85:LYS:HD2	1.67	1.06
27:BA:2316:C:H5'	31:BG:142:ALA:HB3	1.11	1.06
32:BH:101:LYS:HG3	32:BH:115:GLU:HA	1.12	1.06
34:BN:27:ALA:CA	34:BN:30:ALA:HB2	1.62	1.06
27:BA:2406:U:O4	36:BP:55:GLN:HB2	1.30	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2378:A:N3	38:BS:26:LEU:CD2	2.16	1.06
27:BA:1952:A:H2	35:BO:22:ILE:CG2	1.68	1.06
27:BA:2273:A:C8	27:BA:2274:A:C8	2.43	1.06
27:BA:2392:A:H2'	27:BA:2393:A:H5'	1.07	1.06
27:BA:2051:A:N6	27:BA:2614:A:N7	2.03	1.06
27:BA:2657:A:N7	27:BA:2664:G:N2	2.04	1.06
27:BA:526:A:H2	27:BA:2626:C:C1'	1.67	1.06
28:BD:131:LEU:CD1	28:BD:183:ILE:CG2	2.32	1.06
29:BE:216:ARG:NH1	29:BE:253:GLN:HB3	1.69	1.06
29:BE:39:GLN:OE1	29:BE:174:LEU:CD2	2.04	1.06
44:BR:100:LEU:CD2	44:BR:113:LEU:N	2.18	1.06
38:BS:109:PRO:O	38:BS:116:PHE:CD1	2.08	1.06
42:BY:63:ILE:HD11	42:BY:75:GLU:N	0.74	1.06
26:BB:74:U:O2	43:BZ:29:ASN:ND2	1.87	1.06
26:BB:75:G:O2'	43:BZ:32:PHE:CD2	1.93	1.06
1:AA:1222:G:OP1	1:AA:1321:C:C2'	2.04	1.06
27:BA:138:G:H8	41:BX:42:GLU:OE1	1.36	1.06
27:BA:58:G:H2'	27:BA:73:A:N6	1.70	1.06
41:BX:24:LEU:O	41:BX:26:PHE:HE1	0.73	1.06
41:BX:47:VAL:CG1	41:BX:69:SER:OG	2.02	1.06
43:BZ:96:VAL:HG13	43:BZ:97:PRO:HD2	1.27	1.06
1:AA:1156:G:H1'	1:AA:1179:A:N6	1.70	1.06
43:BZ:143:ILE:HG22	43:BZ:144:GLY:N	1.63	1.06
27:BA:2359:C:C4	27:BA:2360:A:C2	2.43	1.06
27:BA:2463:C:O2	27:BA:2464:C:C5	2.09	1.06
27:BA:2645:G:OP2	27:BA:2645:G:O4'	1.74	1.06
33:BI:8:ASP:HA	33:BI:11:GLY:C	1.69	1.06
35:BO:25:LEU:HD22	35:BO:40:VAL:CG2	1.73	1.06
35:BO:25:LEU:HD22	35:BO:40:VAL:HG23	1.08	1.06
36:BP:128:GLY:HA2	36:BP:132:LYS:NZ	1.65	1.06
46:BV:95:ILE:N	46:BV:95:ILE:HD12	1.68	1.06
43:BZ:67:LYS:NZ	43:BZ:67:LYS:CA	2.18	1.06
27:BA:1809:A:H62	50:B4:3:LYS:HG2	0.90	1.06
27:BA:242:G:C3'	54:B8:5:LYS:HZ3	1.67	1.06
27:BA:2423:U:C6	27:BA:2425:A:C5	2.44	1.06
28:BD:175:LEU:CD1	28:BD:179:GLU:C	2.23	1.06
30:BF:98:ARG:O	30:BF:99:SER:O	1.72	1.06
34:BN:31:LEU:O	34:BN:33:GLY:N	1.88	1.06
34:BN:45:VAL:N	34:BN:132:LEU:CB	2.15	1.06
46:BV:65:ARG:O	46:BV:93:ILE:CG2	2.04	1.06
42:BY:43:ASN:HD21	42:BY:101:LEU:HD21	0.90	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:2:GLU:N	43:BZ:54:ILE:HG23	1.67	1.06
32:BH:168:VAL:HG12	32:BH:169:ARG:H	1.20	1.06
47:B2:39:ALA:HB3	47:B2:40:PRO:CD	1.84	1.06
52:B6:41:ASP:HB2	52:B6:46:LYS:HZ2	0.90	1.06
27:BA:126:A:N7	53:B7:18:PHE:CE1	2.22	1.06
27:BA:2458:G:O6	27:BA:2490:G:H2'	1.56	1.06
27:BA:1966:A:N3	27:BA:2593:U:C5'	2.19	1.06
30:BF:102:LEU:HD22	30:BF:103:ASN:H	1.16	1.06
32:BH:113:GLU:C	32:BH:113:GLU:OE1	1.92	1.06
32:BH:93:TYR:CE1	32:BH:106:VAL:O	2.09	1.06
35:BO:25:LEU:CG	35:BO:38:VAL:O	2.04	1.06
27:BA:2495:G:H4'	37:BQ:101:MET:HG3	1.31	1.06
44:BR:20:LEU:HD12	44:BR:21:TYR:CD2	1.88	1.06
27:BA:993:G:N2	45:BU:54:LYS:NZ	2.04	1.06
27:BA:1163:G:H5'	46:BV:23:GLU:OE1	1.54	1.06
27:BA:2199:A:H3'	27:BA:2205:C:C6	1.90	1.06
27:BA:2556:C:O2'	27:BA:2557:G:C5'	2.01	1.06
27:BA:2631:G:H4'	27:BA:2892:A:OP1	1.54	1.06
27:BA:2635:C:O2	27:BA:2783:G:N2	1.89	1.06
27:BA:993:G:C1'	46:BV:90:PHE:CE2	2.29	1.06
30:BF:239:ALA:O	30:BF:241:ALA:N	1.89	1.06
32:BH:140:VAL:O	32:BH:143:LEU:CD2	2.03	1.06
36:BP:65:ASP:HB2	36:BP:109:LEU:HB3	1.14	1.06
36:BP:67:ARG:O	36:BP:71:GLU:HG2	1.55	1.06
37:BQ:31:PHE:CE2	37:BQ:85:ILE:O	2.08	1.06
37:BQ:87:LYS:O	37:BQ:88:PHE:CG	2.09	1.06
38:BS:32:PRO:CG	38:BS:100:ALA:CB	2.34	1.06
42:BY:29:ALA:O	42:BY:30:ASP:O	1.74	1.06
42:BY:28:SER:HB3	42:BY:99:THR:CG2	1.85	1.06
1:AA:1320:C:C1'	22:AS:73:GLU:HG2	1.86	1.06
1:AA:976:G:H2'	1:AA:361(A):C:N4	1.69	1.06
1:AA:1405:G:N2	1:AA:1518:A:N3	2.03	1.06
27:BA:1030:G:O3'	27:BA:1031:G:P	2.13	1.06
27:BA:1453:A:N6	44:BR:77:ARG:HD3	1.70	1.06
27:BA:2043:C:N4	27:BA:2777:G:C4	2.23	1.06
27:BA:2520:C:C5	27:BA:2567:G:C4	2.44	1.06
30:BF:91:PRO:HG2	30:BF:92:PRO:HD2	1.08	1.06
31:BG:20:LYS:HA	31:BG:76:ARG:CB	1.86	1.06
34:BN:52:GLN:HA	34:BN:55:GLU:OE1	1.54	1.06
38:BS:98:GLU:HG3	38:BS:99:GLU:H	1.12	1.06
45:BU:110:VAL:O	45:BU:114:ARG:HG3	1.56	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2354:G:N3	49:B0:32:LYS:CE	2.19	1.06
52:B6:28:ARG:CZ	52:B6:28:ARG:HB3	1.84	1.06
27:BA:1364:G:H3'	50:B4:3:LYS:HD2	1.22	1.06
27:BA:2262:U:H2'	27:BA:2263:C:H5'	1.34	1.06
27:BA:2384:G:H2'	27:BA:2386:C:OP2	1.52	1.06
27:BA:2700:C:H3'	27:BA:2701:C:H5''	1.09	1.06
27:BA:2862:G:C2'	27:BA:2863:C:H6	1.66	1.06
30:BF:196:THR:HA	30:BF:236:THR:HG23	1.12	1.06
31:BG:71:ALA:O	31:BG:72:LYS:CD	2.02	1.06
34:BN:53:ILE:HG23	34:BN:135:ILE:CD1	1.86	1.06
36:BP:69:ILE:HG13	36:BP:70:ASP:N	1.52	1.06
37:BQ:142:LYS:HG3	37:BQ:143:VAL:N	1.39	1.06
37:BQ:65:ARG:CZ	37:BQ:85:ILE:HB	1.86	1.06
44:BR:77:ARG:HH11	44:BR:77:ARG:CG	1.66	1.06
27:BA:973:A:C6	46:BV:81:ARG:CD	2.37	1.06
40:BW:36:LEU:CD1	40:BW:47:VAL:CG1	2.33	1.06
33:BI:133:LEU:HD11	33:BI:139:ALA:HB2	1.37	1.06
42:BY:103:LEU:HD23	42:BY:108:ARG:HB3	1.36	1.06
43:BZ:69:VAL:HG13	43:BZ:81:VAL:HG22	1.33	1.06
43:BZ:6:LYS:C	43:BZ:31:SER:CB	2.24	1.06
43:BZ:71:MET:CB	43:BZ:78:PRO:HD3	1.85	1.06
43:BZ:26:LYS:HB2	43:BZ:84:TYR:OH	1.51	1.06
27:BA:1827:C:H41	28:BD:225:ARG:NH1	1.51	1.06
27:BA:1341:U:O2'	41:BX:53:ASN:HB3	1.56	1.06
1:AA:409:G:H5''	7:AD:25:ARG:HB2	1.06	1.06
42:BY:84:GLY:O	42:BY:85:GLU:O	1.73	1.06
1:AA:37:U:N3	1:AA:397:A:N1	2.01	1.06
49:B0:58:THR:O	49:B0:60:PHE:N	1.88	1.05
49:B0:61:ALA:O	49:B0:62:LEU:HD12	0.88	1.05
27:BA:2350:C:H2'	27:BA:2351:G:H8	1.15	1.05
27:BA:911:A:N9	37:BQ:16:ARG:HD2	1.61	1.05
29:BE:193:PHE:CE2	29:BE:311:PHE:HD1	1.72	1.05
29:BE:70:VAL:CG1	29:BE:296:VAL:H	1.68	1.05
36:BP:114:VAL:HG23	36:BP:132:LYS:HB2	1.31	1.05
37:BQ:127:ASN:CB	37:BQ:128:PRO:CD	2.34	1.05
27:BA:997:G:OP1	45:BU:93:LYS:CE	2.04	1.05
46:BV:20:ILE:HG23	46:BV:67:LYS:HD2	1.38	1.05
50:B4:35:VAL:HG12	50:B4:36:TRP:H	1.22	1.05
50:B4:46:GLU:OE1	50:B4:54:GLY:HA3	1.54	1.05
27:BA:1287:A:C1'	44:BR:104:ARG:HH11	1.69	1.05
27:BA:2302:G:O6	27:BA:2315:G:O6	1.72	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2847:U:OP2	27:BA:2847:U:C5	2.08	1.05
28:BD:131:LEU:CD1	28:BD:171:VAL:CG2	2.34	1.05
30:BF:24:THR:HB	30:BF:25:PRO:HD2	1.34	1.05
32:BH:82:TYR:CE1	32:BH:137:LYS:HG3	1.90	1.05
34:BN:19:MET:HB2	34:BN:45:VAL:O	1.54	1.05
34:BN:77:GLY:O	34:BN:80:LYS:N	1.89	1.05
36:BP:64:ILE:HB	36:BP:107:LYS:O	1.57	1.05
37:BQ:85:ILE:CG2	37:BQ:122:PHE:CB	2.16	1.05
33:BI:68:LEU:HD21	33:BI:108:LEU:HD12	1.29	1.05
27:BA:104:U:C4	42:BY:17:HIS:CE1	2.44	1.05
1:AA:1320:C:N4	22:AS:36:ARG:CG	2.18	1.05
28:BD:208:GLY:CA	28:BD:211:HIS:NE2	2.19	1.05
28:BD:222:PRO:O	28:BD:224:VAL:HG23	1.56	1.05
27:BA:1697:G:H3'	27:BA:1698:A:C5'	1.85	1.05
1:AA:764:C:H2'	1:AA:765:G:C8	1.91	1.05
48:B3:20:LYS:CA	48:B3:23:LEU:HD11	1.86	1.05
48:B3:40:THR:HG21	48:B3:43:ILE:HD13	1.17	1.05
27:BA:2503:A:H4'	27:BA:2504:U:OP1	1.56	1.05
27:BA:2615:U:O2'	27:BA:2616:C:C5'	2.03	1.05
27:BA:557:U:H5'	34:BN:92:GLN:NE2	1.69	1.05
30:BF:164:ALA:HB1	30:BF:232:LEU:HD13	1.39	1.05
32:BH:86:LEU:HA	32:BH:148:ARG:CZ	1.84	1.05
37:BQ:50:VAL:HG12	37:BQ:51:GLU:H	0.91	1.05
38:BS:56:ASP:O	38:BS:57:THR:HG23	1.56	1.05
46:BV:19:VAL:HB	46:BV:21:ARG:NH1	1.67	1.05
46:BV:5:ILE:O	46:BV:6:GLN:CG	2.02	1.05
48:B3:1:MET:SD	48:B3:1:MET:O	2.14	1.05
54:B8:23:MET:HE2	54:B8:23:MET:HA	1.08	1.05
27:BA:2286:A:C5'	27:BA:2287:A:C4'	2.33	1.05
27:BA:2380:C:H2'	27:BA:2381:C:C5'	1.86	1.05
27:BA:2045:C:N3	27:BA:2624:G:C2	2.23	1.05
27:BA:2766:G:C5'	27:BA:2767:C:OP2	2.03	1.05
27:BA:388:G:P	50:B4:29:PRO:HG3	1.95	1.05
29:BE:200:ASP:O	29:BE:311:PHE:HA	1.55	1.05
30:BF:92:PRO:O	30:BF:96:LYS:HD2	1.50	1.05
32:BH:52:THR:O	32:BH:54:PRO:HD3	1.56	1.05
36:BP:62:ALA:HB2	36:BP:105:TYR:HB2	1.35	1.05
44:BR:33:ARG:HB3	44:BR:115:GLU:HB3	1.39	1.05
45:BU:74:MET:HE3	45:BU:78:THR:HG21	1.08	1.05
45:BU:92:ARG:C	45:BU:95:LEU:CG	2.20	1.05
46:BV:72:ARG:CA	46:BV:88:GLN:HG2	1.81	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:926:G:H22	4:AX:116:U:P	1.79	1.05
33:BI:80:PRO:CB	33:BI:146:THR:HG23	1.85	1.05
42:BY:45:GLY:C	42:BY:62:VAL:HG11	1.75	1.05
42:BY:47:THR:O	42:BY:48:VAL:HG23	1.56	1.05
42:BY:23:VAL:HG23	42:BY:67:LEU:CD2	1.83	1.05
43:BZ:39:PHE:CA	43:BZ:43:PHE:CD2	2.38	1.05
43:BZ:2:GLU:CA	43:BZ:54:ILE:HG23	1.85	1.05
41:BX:3:ASP:OD2	47:B2:24:LYS:HD2	0.89	1.05
41:BX:24:LEU:CB	41:BX:26:PHE:CZ	2.39	1.05
50:B4:49:PHE:HZ	50:B4:70:GLY:O	1.28	1.05
48:B3:4:LEU:O	48:B3:36:VAL:HA	1.57	1.05
55:B9:7:VAL:HG13	55:B9:34:GLN:CG	1.63	1.05
27:BA:2022:U:H4'	27:BA:2023:G:OP1	1.54	1.05
27:BA:2210:G:O2'	27:BA:2211:G:OP2	1.74	1.05
27:BA:2470:G:N1	27:BA:2471:C:C4	2.24	1.05
27:BA:2488:A:H2'	27:BA:2489:G:H5'	1.15	1.05
27:BA:2544:G:C5'	27:BA:2645:G:N7	2.19	1.05
25:AY:224:ALA:CA	27:BA:2554:U:O4	2.05	1.05
27:BA:2746:U:H4'	32:BH:138:GLN:HA	1.34	1.05
27:BA:2838:G:C6	27:BA:2839:G:N7	2.24	1.05
27:BA:614:U:H3'	27:BA:615:G:H4'	1.32	1.05
28:BD:143:ILE:HB	28:BD:152:GLN:C	1.75	1.05
29:BE:254:GLY:O	29:BE:255:GLN:O	1.74	1.05
37:BQ:41:THR:CG2	37:BQ:126:VAL:HA	1.85	1.05
37:BQ:17:ARG:N	37:BQ:17:ARG:HD3	1.71	1.05
37:BQ:46:VAL:HG12	37:BQ:124:ALA:HB3	1.32	1.05
44:BR:79:LEU:HD22	44:BR:80:PHE:N	1.69	1.05
45:BU:27:SER:O	45:BU:29:SER:OG	1.72	1.05
45:BU:7:GLY:O	45:BU:9:VAL:N	1.88	1.05
45:BU:99:ALA:CB	45:BU:106:PHE:CD2	2.40	1.05
40:BW:75:TYR:CE1	40:BW:104:THR:OG1	2.07	1.05
50:B4:14:ILE:HG21	50:B4:37:SER:OG	1.56	1.05
52:B6:37:LEU:CD2	52:B6:51:ARG:HA	1.87	1.05
53:B7:13:ALA:O	53:B7:14:LYS:O	1.74	1.05
27:BA:1260:G:H5"	40:BW:83:LYS:NZ	1.72	1.05
27:BA:2094:G:N1	27:BA:2196:C:N3	2.03	1.05
27:BA:2577:A:C2	27:BA:2614:A:C2	2.44	1.05
29:BE:221:LYS:HE3	29:BE:233:ARG:CA	1.86	1.05
30:BF:164:ALA:CB	30:BF:232:LEU:CD1	2.34	1.05
27:BA:2314:C:OP1	31:BG:74:THR:HG22	1.55	1.05
34:BN:18:ILE:O	34:BN:22:VAL:CG2	2.02	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:37:LYS:HG3	43:BZ:41:ARG:NH1	1.71	1.05
41:BX:6:LYS:NZ	41:BX:29:ASP:CA	2.19	1.05
1:AA:1030:C:H2'	1:AA:30(A):G:N7	1.71	1.05
41:BX:44:GLN:OE1	41:BX:45:TYR:CA	2.03	1.05
53:B7:30:ILE:CA	53:B7:33:ARG:CG	2.31	1.05
27:BA:2405:G:N2	27:BA:2413:G:C6	2.24	1.05
27:BA:247:G:O6	54:B8:11:LYS:NZ	1.89	1.05
27:BA:2785:C:H1'	29:BE:100:TRP:NE1	1.72	1.05
27:BA:2819:G:H2'	27:BA:2821:A:N7	1.71	1.05
36:BP:144:ASP:O	36:BP:145:LEU:CD1	2.04	1.05
37:BQ:65:ARG:NH2	37:BQ:122:PHE:CE2	2.24	1.05
45:BU:34:ASN:O	45:BU:38:THR:OG1	1.73	1.05
45:BU:74:MET:HE2	45:BU:78:THR:HG21	1.06	1.05
45:BU:89:ASP:O	45:BU:90:LEU:HD23	1.57	1.05
40:BW:104:THR:O	40:BW:105:VAL:HG13	1.57	1.05
43:BZ:159:THR:O	43:BZ:160:LEU:CD1	2.05	1.05
49:B0:43:THR:HG21	49:B0:75:GLY:HA3	1.07	1.05
54:B8:29:LYS:O	54:B8:30:ARG:O	1.74	1.05
27:BA:2286:A:C5'	27:BA:2287:A:C5'	2.30	1.05
27:BA:2309:A:H4'	27:BA:2309:A:OP2	1.49	1.05
27:BA:2314:C:H5''	31:BG:22:VAL:CG1	1.85	1.05
27:BA:2389:G:OP1	27:BA:2390:U:H5'	1.55	1.05
27:BA:25:U:H5''	40:BW:80:PRO:HD3	1.28	1.05
28:BD:131:LEU:CD1	28:BD:183:ILE:HG21	1.86	1.05
29:BE:79:ARG:HA	29:BE:186:GLU:HA	1.38	1.05
30:BF:34:ALA:CB	30:BF:110:ALA:HB1	1.85	1.05
30:BF:163:HIS:CA	30:BF:166:ILE:HG13	1.87	1.05
32:BH:85:ALA:CA	32:BH:131:ILE:HG21	1.84	1.05
33:BI:3:VAL:HG21	33:BI:21:VAL:HG23	1.11	1.05
34:BN:19:MET:CB	34:BN:46:ILE:CG1	2.33	1.05
35:BO:79:PHE:HA	39:BT:22:VAL:CG2	1.86	1.05
36:BP:62:ALA:O	36:BP:107:LYS:HD2	0.88	1.05
38:BS:72:GLU:HB3	38:BS:74:PRO:HD2	1.35	1.05
39:BT:37:GLU:HG2	39:BT:38:ASN:N	1.60	1.05
42:BY:78:THR:HA	42:BY:89:ARG:HG3	1.07	1.05
43:BZ:20:ALA:O	43:BZ:34:LEU:HD21	1.54	1.05
27:BA:1080:C:H1'	56:BK:127:ILE:HA	1.06	1.05
33:BI:47:LEU:HD12	33:BI:48:GLU:N	1.70	1.05
20:AQ:22:LEU:HD12	20:AQ:23:VAL:O	1.56	1.05
33:BI:59:ALA:HA	33:BI:62:LEU:HD12	1.37	1.05
1:AA:983:A:O3'	1:AA:984:C:P	2.15	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2198:A:N1	27:BA:2225:A:N6	2.04	1.05
27:BA:2210:G:C6	28:BD:148:GLY:CA	2.39	1.05
27:BA:2234:G:N1	27:BA:2235:G:C5	2.25	1.05
27:BA:2331:G:C5	27:BA:2332:U:N3	2.25	1.05
27:BA:2450:A:C5'	27:BA:2497:A:N6	2.20	1.05
28:BD:175:LEU:HG	28:BD:180:VAL:N	1.71	1.05
28:BD:131:LEU:N	28:BD:187:CYS:O	1.89	1.05
30:BF:201:SER:O	30:BF:204:ALA:CB	2.03	1.05
31:BG:22:VAL:HB	31:BG:24:HIS:NE2	1.69	1.05
31:BG:24:HIS:O	31:BG:25:MET:CG	2.05	1.05
32:BH:102:LEU:HD23	32:BH:114:ILE:O	1.55	1.05
37:BQ:56:ILE:O	37:BQ:112:ALA:HB1	1.54	1.05
45:BU:92:ARG:N	46:BV:10:LYS:NZ	2.03	1.05
50:B4:23:GLU:OE2	50:B4:29:PRO:HB3	1.56	1.05
50:B4:6:HIS:HB2	50:B4:7:PRO:CD	1.86	1.05
27:BA:1031:G:C4'	55:B9:8:LYS:NZ	2.07	1.05
27:BA:1456:G:N2	27:BA:2704:C:C2	2.24	1.05
27:BA:2647:U:C2'	27:BA:2648:C:H5'	1.87	1.05
27:BA:2781:A:C5'	27:BA:2782:G:O5'	2.04	1.05
28:BD:175:LEU:HG	28:BD:179:GLU:O	0.89	1.05
29:BE:271:ILE:HD13	29:BE:294:THR:HG22	1.34	1.05
30:BF:157:LEU:O	30:BF:159:ALA:N	1.89	1.05
30:BF:219:ASN:C	30:BF:222:ASP:HB2	1.75	1.05
30:BF:4:THR:O	30:BF:139:VAL:CG2	2.03	1.05
33:BI:7:LYS:CA	33:BI:12:LYS:HD3	1.87	1.05
27:BA:1078:U:OP1	56:BK:93:LYS:HG3	1.47	1.05
34:BN:53:ILE:HG23	34:BN:135:ILE:HD11	1.38	1.05
45:BU:92:ARG:O	45:BU:95:LEU:HG	0.89	1.05
46:BV:20:ILE:CG2	46:BV:67:LYS:HD2	1.86	1.05
43:BZ:114:ASP:CB	43:BZ:170:SER:O	2.05	1.05
33:BI:98:ILE:HG22	33:BI:99:ALA:N	1.69	1.05
27:BA:1827:C:N4	28:BD:225:ARG:HH12	1.54	1.05
41:BX:33:SER:CA	41:BX:37:VAL:HG23	1.87	1.05
3:AW:37:YYG:C10	10:AG:83:ALA:CB	2.33	1.05
40:BW:90:ARG:HB2	40:BW:90:ARG:CZ	1.82	1.05
27:BA:414:C:N4	27:BA:2409:G:H1	1.55	1.05
27:BA:2212:A:O2'	27:BA:2213:U:C5	1.89	1.04
2:AV:75:C:C4	27:BA:2252:G:N2	2.19	1.04
27:BA:2385:C:O2	27:BA:2386:C:C6	2.09	1.04
27:BA:2572:A:H5''	27:BA:2574:G:C5'	1.87	1.04
27:BA:2717:G:N2	27:BA:2718:G:C5	2.25	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2785:C:C5	27:BA:2786:U:O4	2.10	1.04
27:BA:994:C:O2'	45:BU:54:LYS:HG2	1.57	1.04
26:BB:18:G:H3'	31:BG:149:ARG:HH11	1.20	1.04
29:BE:201:VAL:HG22	29:BE:311:PHE:HB3	1.39	1.04
30:BF:163:HIS:O	30:BF:166:ILE:CG1	2.05	1.04
30:BF:200:PRO:CB	30:BF:212:VAL:HG11	1.86	1.04
31:BG:29:HIS:N	31:BG:69:ILE:CD1	2.15	1.04
36:BP:112:GLY:O	36:BP:113:GLN:CD	1.95	1.04
44:BR:34:ILE:HG23	44:BR:35:THR:H	1.23	1.04
44:BR:79:LEU:HD23	44:BR:79:LEU:C	1.61	1.04
38:BS:74:PRO:O	38:BS:75:THR:O	1.73	1.04
46:BV:11:GLN:HE22	46:BV:22:VAL:HG21	1.12	1.04
52:B6:37:LEU:HD23	52:B6:51:ARG:HA	1.08	1.04
27:BA:2268:A:OP1	27:BA:2268:A:C4'	2.03	1.04
27:BA:2385:C:C2	27:BA:2386:C:C6	2.45	1.04
27:BA:2246:G:C4	27:BA:2426:A:C2	2.45	1.04
27:BA:2584:U:C2'	27:BA:2585:U:H5	1.69	1.04
27:BA:2836:U:O2	27:BA:2883:A:C6	2.10	1.04
28:BD:118:GLY:C	28:BD:129:LEU:HD21	1.78	1.04
28:BD:146:LYS:CD	28:BD:147:PRO:CD	2.25	1.04
28:BD:85:ASN:CG	28:BD:86:ARG:CZ	2.26	1.04
34:BN:95:ARG:CA	34:BN:98:PHE:CD1	2.40	1.04
36:BP:117:GLU:HA	36:BP:136:ALA:O	1.57	1.04
36:BP:95:ASP:O	36:BP:96:VAL:O	1.74	1.04
37:BQ:142:LYS:HE2	37:BQ:143:VAL:N	1.70	1.04
45:BU:8:ILE:HA	45:BU:11:ARG:HD3	1.06	1.04
45:BU:6:THR:O	45:BU:7:GLY:O	1.74	1.04
42:BY:63:ILE:HG12	42:BY:75:GLU:CD	1.77	1.04
1:AA:1318:A:H5'	22:AS:10:PHE:CB	1.87	1.04
27:BA:2196:C:H5''	27:BA:2197:U:OP2	1.22	1.04
27:BA:2227:A:C2	27:BA:2228:G:C4	2.45	1.04
27:BA:2320:A:N3	27:BA:2333:A:C6	2.25	1.04
27:BA:2543:G:O2'	27:BA:2544:G:H5'	1.57	1.04
27:BA:2852:G:C2	27:BA:2853:C:N3	2.26	1.04
27:BA:526:A:H2	27:BA:2626:C:H1'	1.20	1.04
29:BE:221:LYS:HE3	29:BE:233:ARG:HA	1.09	1.04
30:BF:196:THR:HA	30:BF:236:THR:HG21	1.36	1.04
30:BF:1:MET:C	30:BF:18:LEU:CG	2.23	1.04
31:BG:19:GLU:OE1	31:BG:135:VAL:HA	1.57	1.04
27:BA:7:G:C5'	34:BN:6:PHE:CD2	2.38	1.04
35:BO:77:ILE:HD13	35:BO:78:ARG:CA	1.86	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:65:ILE:HD13	45:BU:96:ALA:HB2	1.04	1.04
46:BV:60:VAL:O	46:BV:98:ILE:HB	0.88	1.04
50:B4:6:HIS:HB2	50:B4:7:PRO:HD3	1.32	1.04
52:B6:38:LYS:O	52:B6:50:PHE:CB	2.04	1.04
53:B7:27:GLY:O	53:B7:31:LEU:HG	1.57	1.04
27:BA:2485:G:C2	27:BA:2486:G:H1'	1.91	1.04
27:BA:2762:G:C5	27:BA:2763:G:C5	2.45	1.04
27:BA:931:G:OP1	48:B3:27:GLY:CA	2.05	1.04
29:BE:45:LYS:HZ1	29:BE:303:PRO:CD	1.70	1.04
32:BH:41:THR:CG2	32:BH:52:THR:HB	1.86	1.04
36:BP:66:VAL:O	36:BP:68:GLU:N	1.91	1.04
27:BA:2495:G:H4'	37:BQ:101:MET:CG	1.86	1.04
44:BR:38:VAL:CB	44:BR:39:PRO:CD	2.22	1.04
1:AA:926:G:N2	4:AX:116:U:P	2.30	1.04
42:BY:101:LEU:HD21	42:BY:103:LEU:CD2	1.81	1.04
47:B2:29:ASN:O	47:B2:34:GLN:CG	2.05	1.04
2:AV:40:C:H2'	2:AV:41:U:H5''	1.36	1.04
9:AF:95:GLU:HB2	9:AF:96:PRO:CD	1.88	1.04
2:AV:74:C:N4	27:BA:2253:G:H1	1.52	1.04
27:BA:2364:C:C5'	49:B0:38:VAL:HG12	1.82	1.04
49:B0:43:THR:CG2	49:B0:75:GLY:CA	2.31	1.04
50:B4:68:ARG:HD3	50:B4:72:LYS:HG2	1.38	1.04
55:B9:7:VAL:HG13	55:B9:34:GLN:HG2	1.21	1.04
27:BA:1287:A:H8	44:BR:104:ARG:CG	1.69	1.04
27:BA:446:G:H3'	45:BU:5:LYS:NZ	1.71	1.04
28:BD:130:PRO:HB3	28:BD:186:LYS:O	1.55	1.04
29:BE:180:ILE:HA	29:BE:183:ASP:OD2	0.87	1.04
29:BE:218:GLY:O	29:BE:219:VAL:HG22	1.55	1.04
34:BN:51:GLU:O	34:BN:53:ILE:N	1.90	1.04
27:BA:564:C:O4'	45:BU:37:GLN:OE1	1.74	1.04
27:BA:973:A:C6	46:BV:81:ARG:HD2	1.93	1.04
27:BA:2304:G:O4'	31:BG:105:SER:HB2	1.54	1.04
27:BA:2459:A:C8	27:BA:2460:U:C6	2.44	1.04
27:BA:1456:G:C2	27:BA:2704:C:N3	2.25	1.04
27:BA:2741:A:H2'	27:BA:2742:C:H6	1.16	1.04
27:BA:2808:U:O3'	27:BA:2810:A:OP1	1.73	1.04
27:BA:650:C:OP1	54:B8:17:THR:OG1	1.73	1.04
33:BI:37:ILE:HG23	33:BI:38:GLU:H	1.21	1.04
36:BP:94:ARG:HD3	36:BP:120:LEU:CG	1.85	1.04
26:BB:48:A:P	38:BS:107:ASN:ND2	2.30	1.04
27:BA:1151:G:O2'	45:BU:81:ASN:ND2	1.90	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:36:LEU:CD1	40:BW:47:VAL:HG12	1.88	1.04
43:BZ:120:LEU:CD2	43:BZ:120:LEU:H	1.70	1.04
33:BI:121:ILE:HG22	33:BI:122:ARG:N	1.67	1.04
27:BA:1826:G:OP1	28:BD:227:VAL:HG22	1.56	1.04
28:BD:208:GLY:HA3	28:BD:210:LYS:NZ	1.69	1.04
41:BX:44:GLN:OE1	41:BX:45:TYR:CB	2.06	1.04
27:BA:1751:C:O4'	27:BA:2860:A:H2	1.34	1.04
27:BA:1218:C:OP2	45:BU:15:LYS:NZ	1.89	1.04
27:BA:2376:A:C2	38:BS:102:LEU:CD2	2.41	1.04
27:BA:2881:C:O2'	27:BA:2882:A:O5'	1.76	1.04
26:BB:115:G:H5'	38:BS:59:ALA:HB2	1.38	1.04
29:BE:222:ARG:CD	29:BE:232:ARG:C	2.25	1.04
32:BH:23:VAL:HG12	32:BH:74:MET:CE	1.87	1.04
44:BR:107:ASP:OD1	44:BR:109:ALA:N	1.90	1.04
27:BA:1151:G:C3'	45:BU:81:ASN:HD21	1.70	1.04
46:BV:4:ILE:HG12	46:BV:13:ARG:HA	1.10	1.04
40:BW:32:ALA:CA	40:BW:35:ILE:HD12	1.85	1.04
40:BW:55:ALA:HA	40:BW:107:LEU:CD1	1.87	1.04
53:B7:13:ALA:O	53:B7:16:HIS:O	1.73	1.04
27:BA:2264:C:H2'	27:BA:2265:U:O5'	1.56	1.04
27:BA:2330:G:H1	27:BA:2385:C:N4	1.56	1.04
27:BA:2330:G:N1	27:BA:2385:C:N4	2.05	1.04
27:BA:2570:G:C2'	27:BA:2571:C:C6	2.38	1.04
27:BA:911:A:H2'	37:BQ:16:ARG:NE	1.71	1.04
44:BR:36:THR:HG22	44:BR:40:LYS:HB2	1.36	1.04
39:BT:36:CYS:O	39:BT:37:GLU:O	1.74	1.04
39:BT:50:GLU:CA	39:BT:55:ALA:HB3	1.88	1.04
33:BI:133:LEU:CD1	33:BI:139:ALA:CB	2.35	1.04
1:AA:1308:U:C5'	16:AM:110:ARG:HH22	1.70	1.04
1:AA:975:A:C4	1:AA:1357:A:C2	2.46	1.04
3:AW:76:A:H2'	27:BA:2422:A:N1	1.73	1.04
27:BA:932:G:H5'	48:B3:29:ARG:NH2	1.68	1.04
48:B3:3:ARG:HD3	48:B3:60:GLU:HB3	1.35	1.04
50:B4:18:GLY:H	50:B4:33:VAL:CG2	1.70	1.04
27:BA:1672:C:O2	27:BA:2582:G:O4'	1.75	1.04
27:BA:2327:A:C2	27:BA:2328:A:C2	2.46	1.04
27:BA:2520:C:O2	27:BA:2521:C:C6	2.11	1.04
27:BA:2573:C:O5'	27:BA:2574:G:OP1	1.75	1.04
27:BA:2718:G:C2'	27:BA:2719:G:C8	2.38	1.04
27:BA:2739:U:C2'	27:BA:2740:A:C5'	2.35	1.04
27:BA:2808:U:O2	27:BA:2892:A:N1	1.88	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2869:G:N2	27:BA:2870:C:H1'	1.58	1.04
36:BP:77:ALA:CA	36:BP:81:VAL:CB	2.07	1.04
27:BA:2520:C:H2'	27:BA:2521:C:H5'	1.37	1.04
27:BA:2678:C:O2	27:BA:2679:A:C8	2.09	1.04
29:BE:299:SER:OG	29:BE:301:PRO:HD3	1.58	1.04
43:BZ:90:GLU:N	43:BZ:91:PRO:HD2	1.67	1.04
27:BA:104:U:N3	42:BY:17:HIS:CE1	1.98	1.04
42:BY:31:LEU:CD2	42:BY:31:LEU:H	1.68	1.04
42:BY:87:VAL:CG1	42:BY:88:PRO:HD2	1.87	1.04
43:BZ:6:LYS:C	43:BZ:31:SER:HB3	1.76	1.04
1:AA:1198:G:O2'	13:AJ:54:PHE:HE2	1.41	1.04
41:BX:6:LYS:CB	41:BX:27:ALA:O	2.05	1.04
27:BA:1598:C:C5'	41:BX:34:LYS:HG3	1.87	1.04
41:BX:28:VAL:HG22	41:BX:62:LYS:O	1.58	1.04
27:BA:440:G:OP1	42:BY:6:LYS:CD	2.05	1.04
49:B0:38:VAL:HA	49:B0:40:GLN:CD	1.79	1.03
53:B7:34:ARG:HD2	53:B7:42:LEU:HD21	1.25	1.03
27:BA:1365:A:OP2	50:B4:3:LYS:HD2	1.58	1.03
27:BA:2485:G:O2'	27:BA:2486:G:H5'	0.86	1.03
27:BA:2313:C:H5''	31:BG:51:ARG:HH11	1.17	1.03
32:BH:90:GLY:HA2	32:BH:159:LYS:HG3	1.05	1.03
37:BQ:45:GLN:OE1	37:BQ:153:PRO:CD	2.06	1.03
37:BQ:27:GLY:O	37:BQ:62:GLU:OE2	1.74	1.03
37:BQ:94:ARG:HD3	37:BQ:106:GLY:CA	1.88	1.03
40:BW:76:VAL:CG2	40:BW:102:HIS:O	2.06	1.03
49:B0:70:ILE:O	49:B0:71:ASN:O	1.75	1.03
27:BA:2253:G:O2'	27:BA:2254:C:O5'	1.77	1.03
27:BA:2804:C:C5	27:BA:2805:G:C6	2.46	1.03
27:BA:2880:C:C2'	27:BA:2881:C:H5'	1.87	1.03
29:BE:42:ALA:H	29:BE:189:MET:HE1	1.16	1.03
31:BG:29:HIS:HB3	31:BG:69:ILE:HG12	1.39	1.03
27:BA:2406:U:N3	36:BP:55:GLN:CB	2.20	1.03
44:BR:100:LEU:HD23	44:BR:113:LEU:N	1.73	1.03
46:BV:4:ILE:HD11	46:BV:13:ARG:CG	1.87	1.03
46:BV:59:GLU:CD	46:BV:99:GLN:HA	1.77	1.03
33:BI:97:GLN:HA	33:BI:100:GLU:OE2	1.57	1.03
42:BY:87:VAL:HG13	42:BY:88:PRO:HD2	1.06	1.03
28:BD:211:HIS:ND1	28:BD:212:HIS:HD2	1.56	1.03
1:AA:65:U:O2	1:AA:199:G:N2	1.90	1.03
1:AA:764:C:H2'	1:AA:765:G:H8	1.20	1.03
3:AW:72:C:O2'	3:AW:73:A:O4'	1.74	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:66:LYS:N	49:B0:66:LYS:HD2	1.67	1.03
50:B4:10:VAL:H	50:B4:11:PRO:HD3	1.13	1.03
27:BA:2268:A:H4'	27:BA:2269:A:OP2	1.55	1.03
27:BA:2546:U:C5'	27:BA:2565:A:C2	2.41	1.03
27:BA:2615:U:N3	51:B5:8:LYS:HG2	1.72	1.03
27:BA:2839:G:C5	27:BA:2840:C:C5	2.46	1.03
27:BA:1818:U:H5''	28:BD:155:ARG:CB	1.87	1.03
28:BD:167:GLU:HG2	28:BD:182:MET:HE3	1.36	1.03
28:BD:74:PRO:CG	28:BD:96:ALA:CB	2.26	1.03
33:BI:6:LEU:HB2	33:BI:36:ALA:HB2	1.34	1.03
35:BO:101:PRO:HB2	35:BO:122:ILE:CD1	1.86	1.03
36:BP:73:VAL:HG13	36:BP:76:LEU:HD23	1.36	1.03
46:BV:70:TYR:O	46:BV:71:ILE:O	1.75	1.03
27:BA:974:G:N7	46:BV:80:TYR:CD1	2.26	1.03
52:B6:29:ARG:O	52:B6:31:THR:N	1.91	1.03
27:BA:1161:C:O2'	46:BV:22:VAL:CG1	2.06	1.03
27:BA:965:C:C4'	27:BA:2273:A:N3	2.20	1.03
27:BA:2310:A:C8	31:BG:55:LYS:NZ	2.26	1.03
27:BA:2313:C:C4	27:BA:2314:C:N4	2.26	1.03
27:BA:2314:C:O2'	27:BA:2315:G:O5'	1.75	1.03
27:BA:2320:A:H2	27:BA:2333:A:N3	1.55	1.03
27:BA:2616:C:O2'	27:BA:2617:C:H5''	1.59	1.03
27:BA:2737:G:C4	27:BA:2738:A:N7	2.26	1.03
27:BA:592:G:H2'	54:B8:3:LYS:CE	1.86	1.03
28:BD:68:ARG:HH21	28:BD:128:ALA:HB3	1.22	1.03
28:BD:66:PHE:O	28:BD:66:PHE:CG	2.08	1.03
32:BH:93:TYR:HB3	32:BH:106:VAL:HG22	1.08	1.03
32:BH:87:GLU:OE2	32:BH:162:ARG:HB2	1.58	1.03
27:BA:1131:G:H1	34:BN:69:TYR:HH	1.05	1.03
35:BO:45:ASP:HA	35:BO:54:LYS:HG3	1.40	1.03
44:BR:100:LEU:HD23	44:BR:112:ALA:HA	1.35	1.03
44:BR:36:THR:HG23	44:BR:40:LYS:CD	1.88	1.03
44:BR:58:GLY:CA	44:BR:80:PHE:HE2	1.63	1.03
27:BA:535:C:C4'	45:BU:53:LYS:HE3	1.75	1.03
46:BV:57:GLN:HG2	46:BV:58:ALA:H	1.22	1.03
40:BW:66:GLU:HG2	40:BW:67:ASP:H	1.18	1.03
33:BI:145:VAL:HG12	33:BI:146:THR:H	0.90	1.03
42:BY:31:LEU:N	42:BY:31:LEU:HD23	1.66	1.03
31:BG:12:GLU:OE1	31:BG:12:GLU:O	1.76	1.03
49:B0:65:GLY:HA2	49:B0:66:LYS:HZ2	1.20	1.03
50:B4:32:HIS:O	50:B4:33:VAL:O	1.75	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:25:PHE:O	54:B8:26:LYS:O	1.76	1.03
27:BA:1031:G:H4'	55:B9:8:LYS:CE	1.87	1.03
27:BA:2256:G:C2	27:BA:2257:U:C2	2.46	1.03
27:BA:2292:C:C2	27:BA:2293:C:C5	2.45	1.03
27:BA:2416:C:OP1	36:BP:51:PHE:HE2	1.07	1.03
27:BA:2620:C:O2'	27:BA:2621:A:O5'	1.70	1.03
27:BA:2717:G:C4	27:BA:2718:G:C8	2.46	1.03
27:BA:2783:G:C6	27:BA:2784:C:N4	2.25	1.03
27:BA:2839:G:C6	27:BA:2840:C:C4	2.47	1.03
27:BA:2785:C:C5'	29:BE:99:VAL:HA	1.88	1.03
31:BG:21:VAL:CG1	31:BG:132:VAL:CB	2.34	1.03
27:BA:2745:C:C1'	32:BH:142:GLU:HG3	1.87	1.03
27:BA:1140:C:N4	34:BN:49:ARG:HD2	1.73	1.03
37:BQ:48:ASN:OD1	37:BQ:121:ASP:CB	2.06	1.03
44:BR:36:THR:CG2	44:BR:40:LYS:CD	2.37	1.03
45:BU:38:THR:HA	45:BU:41:ASN:OD1	1.23	1.03
51:B5:29:ASN:O	51:B5:30:LEU:O	1.76	1.03
27:BA:1131:G:N1	34:BN:69:TYR:CE1	2.27	1.03
27:BA:1140:C:C4	34:BN:49:ARG:NE	2.27	1.03
27:BA:1248:G:OP1	45:BU:2:PRO:HB2	1.55	1.03
27:BA:2584:U:C6	27:BA:2584:U:C3'	2.31	1.03
27:BA:2805:G:H3'	27:BA:2807:G:P	1.98	1.03
31:BG:53:LYS:CG	31:BG:54:ALA:H	1.71	1.03
35:BO:35:ILE:CD1	35:BO:65:THR:CG2	2.37	1.03
33:BI:115:ILE:HG23	33:BI:131:VAL:HG22	1.41	1.03
33:BI:141:LEU:HD13	33:BI:142:LYS:N	1.71	1.03
42:BY:14:ALA:HB1	42:BY:15:PRO:HD2	1.40	1.03
42:BY:57:GLY:N	42:BY:97:ARG:HH22	1.57	1.03
43:BZ:34:LEU:HD13	43:BZ:39:PHE:HZ	0.91	1.03
32:BH:168:VAL:HG12	32:BH:169:ARG:N	1.70	1.03
27:BA:440:G:OP1	42:BY:6:LYS:HD2	1.55	1.03
1:AA:901:A:O2'	1:AA:1513:A:OP1	1.72	1.03
27:BA:1939:U:H1'	27:BA:2592:G:H4'	1.41	1.03
27:BA:2436:G:C2'	27:BA:2437:U:O5'	2.05	1.03
27:BA:2457:U:H2'	27:BA:2458:G:O4'	1.58	1.03
26:BB:57:A:C1'	31:BG:13:MET:HE2	1.74	1.03
32:BH:85:ALA:C	32:BH:148:ARG:NH2	2.11	1.03
33:BI:21:VAL:HG11	33:BI:30:LEU:CD1	1.88	1.03
35:BO:22:ILE:HG13	35:BO:41:ALA:HA	1.38	1.03
44:BR:55:ALA:HA	44:BR:80:PHE:CD1	1.92	1.03
38:BS:105:GLY:C	38:BS:106:LEU:HD23	1.77	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:120:LEU:HD23	43:BZ:120:LEU:N	1.70	1.03
27:BA:1263:U:H4'	51:B5:16:ARG:NE	1.72	1.03
53:B7:30:ILE:HD13	53:B7:33:ARG:HH11	1.17	1.03
27:BA:831:G:H3'	27:BA:944:G:H22	1.23	1.03
28:BD:158:GLY:HA2	28:BD:194:VAL:CG2	1.88	1.03
28:BD:158:GLY:HA2	28:BD:194:VAL:HG13	1.40	1.03
28:BD:66:PHE:O	28:BD:67:LYS:CD	2.07	1.03
28:BD:80:ILE:HD12	28:BD:80:ILE:O	0.86	1.03
29:BE:82:ALA:O	29:BE:83:LEU:CG	2.05	1.03
32:BH:102:LEU:H	32:BH:102:LEU:HD23	1.23	1.03
32:BH:40:MET:HG2	32:BH:64:HIS:HE1	0.97	1.03
34:BN:12:VAL:CG1	34:BN:13:ASP:N	2.17	1.03
46:BV:19:VAL:HG12	46:BV:21:ARG:NH2	1.71	1.03
40:BW:83:LYS:HG2	40:BW:97:LYS:HD3	1.36	1.03
33:BI:121:ILE:CG2	33:BI:122:ARG:H	1.72	1.03
33:BI:141:LEU:HD13	33:BI:142:LYS:O	1.58	1.03
42:BY:71:VAL:HG12	42:BY:72:ILE:H	1.22	1.03
1:AA:1308:U:H5'	16:AM:110:ARG:HH22	1.21	1.03
47:B2:20:LEU:C	47:B2:20:LEU:HD13	1.74	1.03
47:B2:30:ALA:O	47:B2:34:GLN:CG	2.07	1.03
1:AA:944:G:C6	1:AA:1337:G:H2'	1.93	1.03
28:BD:232:VAL:O	28:BD:232:VAL:HG23	1.56	1.03
51:B5:34:PRO:CG	51:B5:36:CYS:SG	2.47	1.03
49:B0:37:LEU:HD11	49:B0:70:ILE:CD1	1.86	1.03
48:B3:37:LEU:CD1	48:B3:43:ILE:HG21	1.88	1.03
51:B5:45:ILE:CG1	51:B5:52:TYR:HE1	1.70	1.03
27:BA:2235:G:H2'	27:BA:2236:C:C6	1.93	1.03
27:BA:2313:C:H5''	31:BG:51:ARG:NH1	1.74	1.03
27:BA:2546:U:H5'	27:BA:2565:A:N1	1.73	1.03
28:BD:75:GLY:O	28:BD:115:ILE:N	1.91	1.03
29:BE:308:VAL:HG12	29:BE:310:PHE:CE1	1.94	1.03
36:BP:66:VAL:HG12	36:BP:67:ARG:N	1.69	1.03
43:BZ:112:LEU:HD13	43:BZ:142:ASN:HA	1.06	1.03
43:BZ:142:ASN:N	43:BZ:171:VAL:HG21	1.74	1.03
27:BA:1130:U:H5''	27:BA:2515:C:O2'	1.59	1.03
27:BA:2317:C:H5'	31:BG:150:SER:CB	1.89	1.03
27:BA:2415:G:C6	27:BA:2416:C:C5	2.38	1.03
27:BA:2258:C:C4	27:BA:2426:A:O4'	2.11	1.03
27:BA:2542:A:O4'	27:BA:2542:A:OP2	1.75	1.03
27:BA:2649:U:H2'	27:BA:2650:U:H6	1.23	1.03
27:BA:6:A:O2'	34:BN:6:PHE:CD2	2.11	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:175:LEU:CG	28:BD:180:VAL:HA	1.89	1.03
30:BF:32:GLY:CA	30:BF:35:VAL:HG21	1.89	1.03
30:BF:93:LYS:CA	30:BF:96:LYS:HE3	1.60	1.03
34:BN:12:VAL:O	34:BN:38:VAL:CG1	2.05	1.03
35:BO:1:MET:O	35:BO:2:ILE:HD12	1.51	1.03
44:BR:58:GLY:HA2	44:BR:80:PHE:CZ	1.93	1.03
44:BR:77:ARG:HB2	44:BR:77:ARG:CZ	1.87	1.03
27:BA:904:C:O4'	43:BZ:166:LEU:HD21	1.57	1.03
33:BI:98:ILE:HD13	33:BI:115:ILE:CD1	1.89	1.03
42:BY:42:VAL:HG12	42:BY:43:ASN:N	1.70	1.03
43:BZ:71:MET:HA	43:BZ:78:PRO:CA	1.89	1.03
49:B0:37:LEU:HD11	49:B0:70:ILE:HD11	1.35	1.02
27:BA:2528:U:P	55:B9:30:VAL:CG1	2.46	1.02
27:BA:2236:C:H2'	27:BA:2237:G:H5'	1.35	1.02
27:BA:2331:G:N2	27:BA:2385:C:H5	1.56	1.02
27:BA:2468:G:O2'	27:BA:2469:A:H5'	1.56	1.02
27:BA:2711:A:P	27:BA:2712:U:O3'	2.17	1.02
27:BA:2790:A:H5''	27:BA:2791:C:OP1	1.58	1.02
27:BA:775:G:H5'	27:BA:777:A:H1'	1.40	1.02
28:BD:167:GLU:O	28:BD:168:GLY:O	1.75	1.02
31:BG:38:GLU:CG	31:BG:41:LEU:HD12	1.89	1.02
34:BN:25:GLN:CA	34:BN:28:GLU:CG	2.35	1.02
34:BN:95:ARG:C	34:BN:98:PHE:HD1	1.61	1.02
35:BO:1:MET:O	35:BO:2:ILE:HD13	1.58	1.02
43:BZ:159:THR:HG23	43:BZ:160:LEU:N	1.71	1.02
51:B5:19:ARG:C	51:B5:21:SER:H	1.62	1.02
55:B9:7:VAL:C	55:B9:8:LYS:HE3	1.76	1.02
27:BA:2262:U:OP2	49:B0:14:ARG:CZ	2.06	1.02
27:BA:2394:C:C4	27:BA:2395:C:C4	2.47	1.02
27:BA:2482:G:C6	27:BA:2483:C:C5	2.47	1.02
27:BA:2520:C:C2'	27:BA:2521:C:H5'	1.88	1.02
27:BA:2742:C:P	55:B9:35:ARG:NH1	2.31	1.02
28:BD:167:GLU:C	28:BD:170:TYR:CD1	2.33	1.02
30:BF:163:HIS:HB3	30:BF:166:ILE:CD1	1.90	1.02
31:BG:93:LEU:CD1	31:BG:94:ALA:N	2.22	1.02
40:BW:103:ILE:HG22	40:BW:103:ILE:O	1.56	1.02
40:BW:84:ARG:HB3	40:BW:96:ILE:HD11	1.37	1.02
42:BY:78:THR:HA	42:BY:89:ARG:CG	1.88	1.02
1:AA:977:A:N6	1:AA:1224:G:P	2.31	1.02
13:AJ:45:ARG:NH2	17:AN:36:PHE:CE2	2.27	1.02
27:BA:1479:G:H2'	27:BA:1480:G:C8	1.93	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:156:GLU:HG2	43:BZ:157:GLY:N	1.71	1.02
7:AD:99:SER:HB3	7:AD:139:ARG:HG3	1.39	1.02
49:B0:45:PHE:CE1	49:B0:78:PHE:CG	2.46	1.02
49:B0:49:GLN:O	49:B0:49:GLN:NE2	1.93	1.02
51:B5:56:GLN:O	51:B5:57:VAL:HG23	1.57	1.02
27:BA:2226:C:O2	27:BA:2227:A:C1'	2.01	1.02
27:BA:2236:C:C2'	27:BA:2237:G:H5'	1.88	1.02
27:BA:2328:A:C4	27:BA:2329:G:N7	2.27	1.02
27:BA:2446:G:H5'	27:BA:2446:G:H8	1.24	1.02
27:BA:2689:U:C5'	27:BA:2690:C:H5'	1.88	1.02
27:BA:526:A:C2	27:BA:2626:C:H1'	1.94	1.02
28:BD:63:ILE:O	28:BD:64:ILE:CG1	2.07	1.02
34:BN:19:MET:CG	34:BN:46:ILE:HD11	1.88	1.02
27:BA:2275:C:O2	37:BQ:103:ALA:HB3	1.59	1.02
27:BA:1278:A:O3'	44:BR:34:ILE:HD12	1.59	1.02
44:BR:60:LEU:HG	44:BR:61:HIS:H	1.24	1.02
27:BA:1162:G:C4'	46:BV:23:GLU:HB2	1.88	1.02
27:BA:2470:G:N2	27:BA:2471:C:C5	2.20	1.02
27:BA:2447:G:C5	27:BA:2500:U:H5	1.56	1.02
27:BA:2689:U:H5'	27:BA:2690:C:H5''	1.33	1.02
27:BA:2693:A:C2	27:BA:2694:G:C5	2.48	1.02
32:BH:93:TYR:HE1	32:BH:106:VAL:O	1.36	1.02
32:BH:130:ILE:O	32:BH:131:ILE:HG23	1.56	1.02
32:BH:97:LYS:O	32:BH:98:GLN:CG	2.07	1.02
35:BO:25:LEU:CD1	35:BO:38:VAL:HG12	1.88	1.02
27:BA:1665:A:H5''	35:BO:66:LYS:HD3	1.38	1.02
36:BP:112:GLY:HA2	36:BP:113:GLN:HE22	1.21	1.02
27:BA:2406:U:H1'	36:BP:57:VAL:HG22	1.38	1.02
27:BA:2276:G:OP2	37:BQ:104:PRO:HD2	1.59	1.02
42:BY:74:VAL:HG12	42:BY:77:VAL:HG23	1.33	1.02
41:BX:24:LEU:HB2	41:BX:26:PHE:HZ	1.19	1.02
27:BA:1598:C:C5'	41:BX:34:LYS:CG	2.36	1.02
27:BA:94:G:N2	47:B2:42:ASN:ND2	2.06	1.02
53:B7:1:MET:SD	53:B7:1:MET:O	2.17	1.02
48:B3:23:LEU:O	48:B3:28:LEU:CG	2.08	1.02
54:B8:30:ARG:HD2	54:B8:44:LYS:HD2	1.41	1.02
54:B8:61:MET:O	54:B8:63:PRO:HD2	1.57	1.02
27:BA:2216:G:H2'	27:BA:2217:G:C5'	1.89	1.02
27:BA:2227:A:N1	27:BA:2228:G:C5	2.27	1.02
27:BA:2574:G:C5'	27:BA:2575:C:OP2	2.07	1.02
30:BF:148:VAL:HG12	30:BF:148:VAL:O	1.58	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:239:ALA:C	30:BF:241:ALA:H	1.57	1.02
34:BN:87:LEU:H	34:BN:87:LEU:HD12	1.23	1.02
27:BA:2683:C:H2'	35:BO:76:TYR:OH	1.60	1.02
37:BQ:65:ARG:NE	37:BQ:122:PHE:CE2	2.27	1.02
37:BQ:28:ILE:HG23	37:BQ:62:GLU:CG	1.87	1.02
27:BA:2850:A:C2	44:BR:61:HIS:NE2	2.25	1.02
38:BS:20:TYR:CE2	38:BS:21:HIS:CD2	2.46	1.02
45:BU:34:ASN:HA	45:BU:37:GLN:HB3	1.39	1.02
45:BU:59:ARG:O	45:BU:62:ILE:CB	2.08	1.02
43:BZ:116:VAL:CG2	43:BZ:169:VAL:CG2	2.35	1.02
27:BA:856:C:C5'	49:B0:25:LYS:HZ1	1.71	1.02
50:B4:58:LYS:O	50:B4:61:LYS:HG3	1.58	1.02
27:BA:126:A:N6	53:B7:18:PHE:HE2	1.52	1.02
27:BA:2543:G:C6	27:BA:2544:G:C6	2.47	1.02
27:BA:2616:C:O2'	27:BA:2617:C:H5'	1.52	1.02
27:BA:535:C:C5'	45:BU:53:LYS:CE	2.37	1.02
27:BA:564:C:OP2	46:BV:79:GLN:CD	1.98	1.02
28:BD:167:GLU:HB3	28:BD:170:TYR:CE1	1.91	1.02
29:BE:174:LEU:HD12	29:BE:174:LEU:H	1.23	1.02
29:BE:180:ILE:CB	29:BE:187:HIS:HB3	1.88	1.02
29:BE:45:LYS:HZ1	29:BE:302:GLY:C	1.63	1.02
30:BF:214:THR:O	30:BF:216:SER:N	1.93	1.02
30:BF:96:LYS:CG	30:BF:98:ARG:NH1	2.22	1.02
32:BH:10:ILE:HG21	32:BH:14:VAL:CG1	1.80	1.02
38:BS:33:ARG:O	38:BS:35:VAL:CG2	2.06	1.02
33:BI:133:LEU:HD12	33:BI:139:ALA:HB2	1.39	1.02
42:BY:42:VAL:CG1	42:BY:43:ASN:H	1.72	1.02
42:BY:70:ALA:O	42:BY:93:THR:CG2	2.06	1.02
1:AA:1313:U:C5	22:AS:4:SER:HB3	1.63	1.02
3:AW:39:PSU:H4'	14:AK:54:ARG:HH22	1.13	1.02
48:B3:37:LEU:HD12	48:B3:43:ILE:HG21	1.41	1.02
27:BA:1137:G:OP1	34:BN:60:ARG:NH2	1.92	1.02
27:BA:2195:C:C5'	27:BA:2195:C:H6	1.72	1.02
27:BA:2709:G:H2'	27:BA:2710:C:H5'	1.39	1.02
28:BD:89:ASN:HD21	28:BD:199:ARG:NE	1.57	1.02
29:BE:62:ARG:O	29:BE:63:GLU:CG	2.07	1.02
27:BA:605:C:H3'	30:BF:105:LYS:HE2	1.39	1.02
30:BF:243:VAL:O	30:BF:246:ARG:N	1.91	1.02
32:BH:102:LEU:HD21	32:BH:114:ILE:HB	1.42	1.02
27:BA:1140:C:OP1	34:BN:18:ILE:HD11	1.56	1.02
35:BO:35:ILE:C	35:BO:62:VAL:HB	1.55	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:41:THR:OG1	37:BQ:126:VAL:HA	1.58	1.02
37:BQ:58:HIS:CE1	37:BQ:59:ASN:HB3	1.94	1.02
27:BA:1287:A:C4'	44:BR:104:ARG:HD2	1.89	1.02
44:BR:38:VAL:HB	44:BR:39:PRO:HD2	1.06	1.02
27:BA:25:U:H4'	40:BW:79:GLY:HA2	1.02	1.02
54:B8:62:LEU:HB2	54:B8:63:PRO:CD	1.88	1.02
27:BA:1270:C:H4'	27:BA:1271:G:H5''	1.39	1.02
27:BA:1818:U:H3'	28:BD:155:ARG:CG	1.90	1.02
27:BA:2305:A:H3'	27:BA:2306:C:H5''	1.02	1.02
27:BA:2572:A:C5'	27:BA:2574:G:H5'	1.89	1.02
27:BA:2768:C:C2'	27:BA:2769:C:C5'	2.26	1.02
28:BD:70:LYS:HG3	28:BD:73:ILE:HD11	1.42	1.02
30:BF:4:THR:O	30:BF:139:VAL:HG11	1.59	1.02
30:BF:164:ALA:HB1	30:BF:232:LEU:CD1	1.88	1.02
30:BF:215:ALA:O	30:BF:242:GLU:CG	2.08	1.02
33:BI:4:ILE:O	33:BI:4:ILE:CG2	2.07	1.02
35:BO:7:ARG:NE	35:BO:44:LYS:CE	2.22	1.02
44:BR:107:ASP:CG	44:BR:108:GLY:H	1.62	1.02
44:BR:107:ASP:CG	44:BR:108:GLY:N	2.12	1.02
27:BA:564:C:P	46:BV:79:GLN:HG2	1.98	1.02
37:BQ:32:LYS:NZ	43:BZ:172:LEU:HD11	1.71	1.02
43:BZ:4:THR:C	43:BZ:33:ALA:HB1	1.78	1.02
28:BD:204:PHE:CD1	28:BD:204:PHE:N	2.18	1.02
49:B0:26:PHE:N	49:B0:60:PHE:CD1	2.20	1.02
48:B3:9:VAL:H	48:B3:54:VAL:HG12	1.22	1.02
52:B6:28:ARG:HB3	52:B6:28:ARG:HH11	1.20	1.02
27:BA:125:G:H5''	53:B7:19:ARG:HH11	0.86	1.02
53:B7:32:ALA:HA	53:B7:35:ARG:CG	1.90	1.02
53:B7:18:PHE:H	53:B7:44:VAL:CG2	1.72	1.02
27:BA:1783:A:C2	27:BA:2587:A:C2	2.47	1.02
27:BA:2653:U:H2'	27:BA:2654:A:N7	1.75	1.02
27:BA:2645:G:C4'	27:BA:2732:G:O2'	2.07	1.02
26:BB:11:C:N4	38:BS:11:ARG:HH12	1.56	1.02
29:BE:190:ASN:O	29:BE:192:ILE:N	1.93	1.02
29:BE:61:PRO:HA	29:BE:69:PRO:HA	1.38	1.02
30:BF:241:ALA:O	30:BF:245:GLU:CD	1.98	1.02
2:AV:57:G:O4'	31:BG:56:ARG:NH1	1.93	1.02
35:BO:11:ALA:O	35:BO:99:PHE:HB2	1.59	1.02
36:BP:128:GLY:HA3	36:BP:132:LYS:NZ	1.72	1.02
37:BQ:44:ALA:CB	37:BQ:126:VAL:O	2.08	1.02
37:BQ:45:GLN:CB	37:BQ:152:SER:HB3	1.88	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:61:VAL:CG2	46:BV:98:ILE:H	1.73	1.02
40:BW:67:ASP:CG	40:BW:68:ARG:H	1.59	1.02
40:BW:82:LEU:HD23	40:BW:98:LYS:C	1.79	1.02
53:B7:32:ALA:HA	53:B7:35:ARG:HG3	1.42	1.02
27:BA:929:G:H21	48:B3:43:ILE:N	1.58	1.02
28:BD:104:ILE:HB	28:BD:106:PRO:CD	1.89	1.02
27:BA:2052:G:N2	29:BE:245:ARG:HG2	1.75	1.02
30:BF:96:LYS:HB2	30:BF:98:ARG:NH2	1.73	1.02
33:BI:37:ILE:CG2	33:BI:38:GLU:N	2.17	1.02
35:BO:7:ARG:CD	35:BO:44:LYS:CE	2.38	1.02
36:BP:94:ARG:HB2	36:BP:120:LEU:HD22	1.36	1.02
37:BQ:133:GLU:OE1	37:BQ:133:GLU:O	1.78	1.02
33:BI:95:SER:C	33:BI:98:ILE:HB	1.80	1.02
33:BI:115:ILE:HG12	33:BI:131:VAL:HG13	1.31	1.02
42:BY:30:ASP:CG	42:BY:31:LEU:CD2	2.28	1.02
42:BY:42:VAL:HG12	42:BY:43:ASN:H	0.88	1.02
26:BB:75:G:H1'	43:BZ:22:VAL:CG2	1.89	1.02
1:AA:979:C:H5"	1:AA:1222:G:O6	1.60	1.02
47:B2:30:ALA:CA	47:B2:34:GLN:HG2	1.89	1.02
47:B2:29:ASN:O	47:B2:34:GLN:HG2	1.60	1.02
27:BA:94:G:H21	47:B2:42:ASN:HD22	1.04	1.02
1:AA:1463:C:OP1	39:BT:47:ARG:HG2	1.59	1.02
49:B0:45:PHE:CD1	49:B0:78:PHE:CA	2.42	1.01
27:BA:592:G:N3	54:B8:3:LYS:HE2	1.73	1.01
27:BA:593:G:H5'	54:B8:62:LEU:HD21	1.38	1.01
27:BA:2043:C:OP2	27:BA:2779:U:O4	1.78	1.01
27:BA:2197:U:H2'	27:BA:2224:G:H22	1.19	1.01
27:BA:2423:U:C6	27:BA:2423:U:C5'	2.43	1.01
27:BA:2461:C:N3	27:BA:2462:U:C5	2.28	1.01
27:BA:2584:U:H2'	27:BA:2585:U:H5	1.19	1.01
27:BA:2782:G:OP2	27:BA:2782:G:C8	2.12	1.01
27:BA:2785:C:C5'	29:BE:99:VAL:CG2	2.37	1.01
28:BD:183:ILE:CG2	28:BD:184:LEU:N	1.99	1.01
39:BT:50:GLU:HA	39:BT:55:ALA:CB	1.89	1.01
45:BU:41:ASN:HD22	45:BU:42:ALA:N	1.58	1.01
45:BU:44:THR:OG1	46:BV:77:GLY:O	1.76	1.01
48:B3:30:ARG:HH11	48:B3:30:ARG:CG	1.68	1.01
48:B3:3:ARG:HB2	48:B3:60:GLU:HA	1.37	1.01
27:BA:963:U:C1'	27:BA:2250:G:N2	2.22	1.01
27:BA:2302:G:N1	27:BA:2315:G:C6	2.28	1.01
27:BA:2616:C:C2	27:BA:2617:C:C5	2.48	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2626:C:C5'	27:BA:2626:C:H6	1.72	1.01
27:BA:2781:A:OP1	27:BA:2781:A:O4'	1.77	1.01
27:BA:2845:G:H2'	27:BA:2846:G:H8	1.25	1.01
28:BD:141:HIS:CE1	28:BD:192:GLY:O	2.12	1.01
29:BE:205:THR:O	29:BE:206:LYS:HG3	1.59	1.01
30:BF:56:THR:HB	30:BF:57:PRO:HD2	1.41	1.01
31:BG:103:ASN:OD1	31:BG:134:LEU:N	1.92	1.01
35:BO:61:VAL:HG12	35:BO:62:VAL:H	1.18	1.01
35:BO:78:ARG:C	35:BO:79:PHE:HD2	1.61	1.01
35:BO:92:SER:HB2	35:BO:113:LYS:NZ	1.75	1.01
44:BR:25:ALA:O	44:BR:29:LEU:HD23	1.60	1.01
45:BU:63:GLN:O	45:BU:65:ILE:N	1.92	1.01
27:BA:974:G:C8	46:BV:80:TYR:CD1	2.47	1.01
40:BW:17:VAL:O	40:BW:20:VAL:HG23	1.60	1.01
43:BZ:163:ASP:OD2	43:BZ:164:PRO:CG	2.08	1.01
33:BI:112:LYS:HD3	33:BI:112:LYS:N	1.75	1.01
33:BI:109:LYS:CE	33:BI:109:LYS:H	1.74	1.01
33:BI:68:LEU:CD2	33:BI:108:LEU:CD1	1.90	1.01
42:BY:103:LEU:HA	42:BY:108:ARG:CB	1.89	1.01
26:BB:75:G:H1'	43:BZ:22:VAL:HG22	1.40	1.01
27:BA:148:C:H2'	27:BA:149:A:C8	1.93	1.01
41:BX:11:THR:C	41:BX:15:MET:HG3	1.79	1.01
17:AN:24:CYS:HB2	17:AN:40:CYS:N	1.75	1.01
1:AA:1005:A:C5'	1:AA:1037:C:H1'	1.88	1.01
27:BA:2896:C:O5'	27:BA:2896:C:C6	2.12	1.01
48:B3:59:VAL:O	48:B3:60:GLU:HG3	1.55	1.01
55:B9:25:VAL:CB	55:B9:34:GLN:HB2	1.69	1.01
27:BA:2093:G:H4'	33:BI:25:TYR:HA	1.41	1.01
27:BA:2286:A:C8	27:BA:2286:A:H3'	1.95	1.01
27:BA:2287:A:H62	27:BA:2344:U:H5	1.04	1.01
27:BA:2330:G:N2	27:BA:2331:G:C1'	2.23	1.01
27:BA:2689:U:C5'	27:BA:2690:C:C5'	2.36	1.01
27:BA:904:C:O2'	43:BZ:166:LEU:HD11	1.59	1.01
33:BI:6:LEU:HD22	33:BI:14:LYS:HD3	1.38	1.01
33:BI:6:LEU:CB	33:BI:36:ALA:HB2	1.90	1.01
36:BP:141:GLU:HB2	36:BP:145:LEU:HD22	1.02	1.01
36:BP:66:VAL:HG23	36:BP:67:ARG:NH2	1.73	1.01
38:BS:12:ARG:NH1	38:BS:20:TYR:CD2	2.21	1.01
38:BS:33:ARG:HB3	38:BS:35:VAL:CG2	1.90	1.01
39:BT:4:ARG:N	39:BT:4:ARG:HE	1.57	1.01
46:BV:50:ASP:OD1	46:BV:53:LYS:CE	2.07	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B3:33:GLN:NE2	48:B3:34:GLU:O	1.94	1.01
52:B6:28:ARG:CB	52:B6:28:ARG:HH11	1.72	1.01
27:BA:1819:A:H5''	28:BD:157:ALA:HB2	1.41	1.01
27:BA:801:G:P	30:BF:79:ARG:NE	2.33	1.01
29:BE:221:LYS:CE	29:BE:233:ARG:HA	1.90	1.01
29:BE:45:LYS:HZ1	29:BE:303:PRO:CA	1.73	1.01
30:BF:240:LEU:HD22	30:BF:243:VAL:HG21	1.38	1.01
32:BH:145:ALA:O	32:BH:147:ILE:N	1.92	1.01
34:BN:139:LEU:H	34:BN:139:LEU:HD13	1.20	1.01
35:BO:35:ILE:HG21	35:BO:63:VAL:HA	1.37	1.01
27:BA:871:U:OP1	37:BQ:24:PRO:O	1.78	1.01
37:BQ:85:ILE:HG22	37:BQ:122:PHE:CD2	1.95	1.01
45:BU:42:ALA:O	45:BU:45:TYR:HB2	1.60	1.01
33:BI:77:VAL:HG23	33:BI:141:LEU:CD1	1.83	1.01
27:BA:296:C:H6	27:BA:338:G:N2	1.58	1.01
43:BZ:53:ASP:CG	43:BZ:62:PHE:O	1.98	1.01
27:BA:729:G:C6	28:BD:207:ALA:HA	1.95	1.01
27:BA:58:G:H1	27:BA:69:C:H42	1.09	1.01
41:BX:30:ASP:O	41:BX:62:LYS:HE2	1.56	1.01
27:BA:1620:G:C1'	53:B7:1:MET:N	2.22	1.01
27:BA:2758:A:P	27:BA:2758:A:H3'	2.01	1.01
29:BE:70:VAL:CG1	29:BE:296:VAL:N	2.22	1.01
33:BI:22:ALA:O	33:BI:23:ASP:O	1.77	1.01
34:BN:25:GLN:HA	34:BN:28:GLU:HG2	1.03	1.01
35:BO:35:ILE:CG2	35:BO:63:VAL:CA	2.09	1.01
36:BP:65:ASP:CA	36:BP:109:LEU:H	1.71	1.01
37:BQ:32:LYS:HZ1	43:BZ:172:LEU:CD1	1.73	1.01
44:BR:20:LEU:O	44:BR:22:ARG:N	1.94	1.01
38:BS:31:LYS:HB3	38:BS:32:PRO:HD2	1.40	1.01
45:BU:28:ARG:O	45:BU:31:GLN:N	1.92	1.01
45:BU:8:ILE:CA	45:BU:11:ARG:CD	2.38	1.01
27:BA:2009:G:H5''	40:BW:41:LYS:CD	1.77	1.01
43:BZ:138:VAL:O	43:BZ:139:THR:OG1	1.79	1.01
50:B4:20:VAL:O	50:B4:30:GLU:OE1	1.77	1.01
53:B7:26:SER:O	53:B7:29:ASN:HB2	1.59	1.01
53:B7:34:ARG:NH1	53:B7:42:LEU:HD23	1.75	1.01
27:BA:2307:G:C1'	27:BA:2311:A:N6	2.15	1.01
3:AW:75:C:C2	27:BA:2395:C:C1'	2.40	1.01
27:BA:2531:A:H2'	27:BA:2532:G:H5''	1.39	1.01
27:BA:2597:G:C2'	27:BA:2598:A:C8	2.43	1.01
27:BA:2051:A:H4'	29:BE:238:LEU:HD21	1.41	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:27:SER:HB3	45:BU:31:GLN:NE2	1.76	1.01
40:BW:42:ARG:O	40:BW:44:ALA:N	1.93	1.01
33:BI:103:GLN:NE2	33:BI:109:LYS:CA	2.22	1.01
43:BZ:24:TYR:CD2	43:BZ:84:TYR:HD1	1.79	1.01
41:BX:44:GLN:OE1	41:BX:45:TYR:HB2	1.60	1.01
54:B8:26:LYS:CD	54:B8:44:LYS:C	2.24	1.01
27:BA:2339:G:H2'	27:BA:2340:G:C8	1.96	1.01
27:BA:2348:U:H5''	54:B8:42:ARG:NH2	1.76	1.01
27:BA:2410:G:C2'	27:BA:2411:A:C8	2.43	1.01
27:BA:2570:G:N3	27:BA:2570:G:H2'	1.72	1.01
27:BA:2575:C:H2'	27:BA:2575:C:O2	1.61	1.01
27:BA:2580:U:C6	27:BA:2581:G:N7	2.18	1.01
27:BA:2577:A:N1	27:BA:2614:A:C2	2.29	1.01
27:BA:2812:G:O2'	27:BA:2813:A:H5'	1.58	1.01
30:BF:102:LEU:CD2	30:BF:103:ASN:H	1.74	1.01
30:BF:59:GLU:O	30:BF:61:PHE:CE2	2.12	1.01
32:BH:146:ASN:O	32:BH:150:VAL:CG2	2.08	1.01
32:BH:166:GLU:CA	32:BH:167:LEU:HD23	1.88	1.01
33:BI:37:ILE:HG22	33:BI:38:GLU:N	1.73	1.01
34:BN:50:GLU:HA	34:BN:53:ILE:HG21	1.35	1.01
37:BQ:45:GLN:HB3	37:BQ:152:SER:CB	1.90	1.01
40:BW:8:ARG:O	40:BW:10:VAL:N	1.93	1.01
43:BZ:145:ASP:O	43:BZ:146:HIS:CD2	2.14	1.01
27:BA:969:U:C4'	48:B3:14:GLY:O	2.06	1.01
27:BA:2570:G:H2'	27:BA:2571:C:C5	1.95	1.01
27:BA:2722:G:N3	27:BA:2723:C:C6	2.28	1.01
27:BA:1664:A:N3	27:BA:2726:U:O4	1.93	1.01
29:BE:229:GLN:C	29:BE:231:TRP:H	1.60	1.01
27:BA:2316:C:H5'	31:BG:151:ILE:HD11	1.43	1.01
35:BO:2:ILE:HD13	35:BO:33:ALA:O	1.61	1.01
37:BQ:32:LYS:NZ	43:BZ:172:LEU:CD1	2.23	1.01
38:BS:31:LYS:HD3	38:BS:99:GLU:CB	1.88	1.01
39:BT:11:THR:HG22	39:BT:12:ASP:H	1.20	1.01
45:BU:55:ARG:O	45:BU:57:PHE:N	1.93	1.01
46:BV:40:VAL:HB	46:BV:51:ALA:HB1	1.37	1.01
40:BW:85:VAL:HG12	40:BW:95:ILE:CD1	1.90	1.01
26:BB:77:U:OP1	43:BZ:14:LEU:HD11	1.57	1.01
3:AW:25:C:C4	3:AW:26:G:C5	2.47	1.01
47:B2:30:ALA:O	47:B2:34:GLN:HG2	1.58	1.01
1:AA:247:G:OP2	20:AQ:99:SER:CB	2.07	1.01
7:AD:21:LEU:O	7:AD:113:SER:HB2	1.60	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1063:G:H5'	56:BK:88:GLY:H	1.25	1.01
52:B6:24:THR:O	52:B6:25:THR:HG23	1.60	1.01
27:BA:459:U:OP1	53:B7:40:HIS:CA	2.08	1.01
27:BA:125:G:N2	53:B7:10:ARG:HA	1.75	1.01
27:BA:2364:C:H5''	49:B0:38:VAL:HG12	1.01	1.01
27:BA:2394:C:C4	27:BA:2395:C:N3	2.29	1.01
27:BA:243:U:OP2	54:B8:7:HIS:NE2	1.94	1.01
27:BA:2689:U:C6	27:BA:2713:A:C6	2.49	1.01
27:BA:2832:U:O2'	27:BA:2834:G:N3	1.90	1.01
27:BA:1819:A:C2'	28:BD:177:SER:HA	1.90	1.01
32:BH:15:THR:HG22	32:BH:26:LYS:O	1.59	1.01
32:BH:93:TYR:O	32:BH:94:ARG:HG2	1.57	1.01
37:BQ:28:ILE:CG2	37:BQ:62:GLU:HG2	1.90	1.01
45:BU:103:PRO:C	45:BU:107:LYS:HG2	1.82	1.01
40:BW:96:ILE:N	40:BW:96:ILE:HD12	1.66	1.01
27:BA:2215:G:O2'	27:BA:2216:G:C5'	2.09	1.01
27:BA:2217:G:O2'	27:BA:2218:G:H5'	1.57	1.01
27:BA:2403:C:O2	27:BA:2403:C:H2'	1.56	1.01
27:BA:2422:A:C4	27:BA:2424:C:C5	2.49	1.01
27:BA:2528:U:C4	27:BA:2530:A:N3	2.29	1.01
27:BA:2633:G:H1	27:BA:2785:C:H42	1.09	1.01
27:BA:270(P):C:OP2	33:BI:45:LYS:HD3	1.60	1.01
27:BA:2717:G:N2	27:BA:2718:G:C4	2.28	1.01
27:BA:2761:G:C2'	27:BA:2762:G:H5'	1.90	1.01
29:BE:205:THR:O	29:BE:206:LYS:CG	2.08	1.01
29:BE:206:LYS:O	29:BE:257:GLY:HA2	1.61	1.01
29:BE:267:ARG:HB2	29:BE:297:LYS:HD2	1.42	1.01
30:BF:144:PHE:CD2	30:BF:156:LEU:HD13	1.94	1.01
30:BF:193:LEU:HD13	30:BF:223:LEU:HB2	1.43	1.01
34:BN:27:ALA:CB	34:BN:30:ALA:HB3	1.91	1.01
35:BO:37:ASP:O	35:BO:62:VAL:HG23	1.58	1.01
35:BO:64:ARG:HD3	35:BO:81:GLU:HB3	1.42	1.01
44:BR:22:ARG:HG3	44:BR:26:LYS:HE3	1.42	1.01
46:BV:14:VAL:HG12	46:BV:15:SER:N	1.75	1.01
46:BV:51:ALA:HA	46:BV:54:TYR:CD1	1.95	1.01
43:BZ:120:LEU:H	43:BZ:120:LEU:HD23	0.87	1.01
43:BZ:126:GLY:O	43:BZ:129:ARG:CB	2.08	1.01
33:BI:121:ILE:HG22	33:BI:122:ARG:H	0.85	1.01
27:BA:2297:C:C2'	27:BA:2298:A:H8	1.73	1.00
27:BA:2646:C:H2'	27:BA:2647:U:H5'	1.41	1.00
27:BA:2726:U:H3'	27:BA:2727:G:H8	1.24	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2839:G:N3	27:BA:2840:C:C6	2.29	1.00
27:BA:783:A:H4'	27:BA:2588:G:O3'	1.60	1.00
28:BD:167:GLU:CB	28:BD:170:TYR:CD1	2.43	1.00
28:BD:175:LEU:N	28:BD:175:LEU:HD23	1.72	1.00
30:BF:225:PRO:CG	30:BF:231:ARG:NH2	2.20	1.00
35:BO:98:ILE:HG13	35:BO:117:LEU:HB3	1.43	1.00
36:BP:114:VAL:O	36:BP:115:ARG:HG3	0.83	1.00
37:BQ:94:ARG:NH1	37:BQ:105:PHE:O	1.93	1.00
48:B3:8:LEU:HD22	48:B3:31:LEU:HA	1.36	1.00
27:BA:2187:G:O2'	27:BA:2188:C:H5'	1.59	1.00
27:BA:2195:C:O5'	27:BA:2195:C:H6	1.43	1.00
27:BA:2286:A:H4'	27:BA:2287:A:O4'	1.61	1.00
27:BA:2314:C:H5'	31:BG:22:VAL:HG11	1.38	1.00
27:BA:2343:C:O2'	27:BA:2344:U:H5'	1.58	1.00
27:BA:2552:U:O2	27:BA:2554:U:C5'	2.09	1.00
27:BA:2746:U:O2	27:BA:2759:G:C2	2.13	1.00
31:BG:35:ALA:O	31:BG:36:ASN:CG	1.99	1.00
37:BQ:65:ARG:NE	37:BQ:85:ILE:HB	1.76	1.00
27:BA:973:A:N6	46:BV:81:ARG:CD	2.24	1.00
2:AV:35:A:C2	4:AX:118:C:O2	1.88	1.00
33:BI:145:VAL:HG12	33:BI:146:THR:N	1.72	1.00
42:BY:45:GLY:HA2	42:BY:62:VAL:HG12	1.42	1.00
42:BY:52:ARG:HD2	42:BY:95:ASN:OD1	1.59	1.00
43:BZ:39:PHE:HA	43:BZ:43:PHE:CZ	1.96	1.00
47:B2:13:PRO:HA	47:B2:16:ARG:HD2	1.40	1.00
27:BA:138:G:C8	41:BX:42:GLU:OE1	2.14	1.00
27:BA:1614:A:C5	40:BW:88:ARG:HD2	1.95	1.00
27:BA:2896:C:O5'	27:BA:2896:C:H6	1.40	1.00
27:BA:1248:G:OP1	45:BU:2:PRO:HB3	1.60	1.00
27:BA:2103:C:N3	27:BA:2187:G:O6	1.94	1.00
27:BA:2246:G:O2'	27:BA:2247:A:C5'	2.07	1.00
27:BA:2253:G:C2'	27:BA:2254:C:O5'	2.07	1.00
27:BA:2869:G:N2	27:BA:2870:C:C1'	2.19	1.00
27:BA:973:A:H61	46:BV:81:ARG:CD	1.73	1.00
28:BD:198:GLY:O	28:BD:200:THR:HG23	1.61	1.00
27:BA:2575:C:H5'	29:BE:241:TRP:HE1	1.22	1.00
30:BF:96:LYS:CB	30:BF:98:ARG:NH1	0.86	1.00
36:BP:112:GLY:CA	36:BP:113:GLN:HE22	1.74	1.00
36:BP:53:ARG:HD2	36:BP:53:ARG:H	1.21	1.00
36:BP:83:GLU:O	36:BP:92:ASP:N	1.95	1.00
48:B3:40:THR:HG23	48:B3:43:ILE:CD1	1.67	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B3:59:VAL:O	48:B3:60:GLU:HG2	1.61	1.00
50:B4:11:PRO:HA	50:B4:40:HIS:CD2	1.96	1.00
27:BA:398:G:OP1	50:B4:58:LYS:NZ	1.93	1.00
54:B8:16:ILE:CG1	54:B8:22:VAL:CG2	2.22	1.00
54:B8:19:THR:HB	54:B8:21:LYS:NZ	1.77	1.00
55:B9:10:MET:CB	55:B9:32:HIS:HD2	1.75	1.00
27:BA:2310:A:H2'	31:BG:55:LYS:CE	1.90	1.00
27:BA:2520:C:N3	27:BA:2521:C:C5	2.30	1.00
27:BA:2558:C:C2	27:BA:2559:C:C5	2.50	1.00
27:BA:2792:G:N2	27:BA:2804:C:N3	2.08	1.00
27:BA:994:C:O3'	45:BU:54:LYS:HE2	1.58	1.00
29:BE:303:PRO:HB2	29:BE:307:LEU:HD13	1.02	1.00
32:BH:41:THR:HB	32:BH:52:THR:HB	1.42	1.00
37:BQ:16:ARG:HB3	37:BQ:16:ARG:CZ	1.90	1.00
27:BA:1251:C:H5''	45:BU:10:ARG:HE	1.22	1.00
45:BU:36:PHE:O	45:BU:39:LEU:CB	2.09	1.00
42:BY:101:LEU:CD2	42:BY:103:LEU:HG	1.79	1.00
42:BY:43:ASN:HD21	42:BY:112:LEU:HD21	1.23	1.00
43:BZ:47:SER:O	43:BZ:49:THR:N	1.94	1.00
3:AW:25:C:C6	3:AW:26:G:C5	2.49	1.00
1:AA:1318:A:H5'	22:AS:10:PHE:CG	1.96	1.00
27:BA:95:G:C5'	47:B2:41:GLU:OE1	2.07	1.00
16:AM:23:TYR:HE2	16:AM:70:LEU:HD22	1.24	1.00
1:AA:585:G:O2'	1:AA:879:C:H5''	1.61	1.00
49:B0:61:ALA:C	49:B0:62:LEU:HD12	1.80	1.00
27:BA:2188:C:N4	27:BA:2189:U:O4	1.95	1.00
27:BA:2209:C:N4	27:BA:2215:G:H1	1.58	1.00
27:BA:2234:G:C6	27:BA:2235:G:N7	2.29	1.00
27:BA:2423:U:C6	27:BA:2425:A:C6	2.50	1.00
27:BA:2457:U:O2'	27:BA:2458:G:H5'	1.60	1.00
27:BA:2640:G:H1	27:BA:2774:C:H42	1.02	1.00
29:BE:171:SER:O	29:BE:175:ASP:CB	2.08	1.00
29:BE:44:TYR:CG	29:BE:307:LEU:O	2.14	1.00
32:BH:58:LYS:O	32:BH:61:ARG:HB3	1.62	1.00
33:BI:7:LYS:HA	33:BI:12:LYS:HD3	1.43	1.00
35:BO:66:LYS:HG3	35:BO:82:ASN:ND2	1.75	1.00
38:BS:34:LEU:HD21	38:BS:102:LEU:HA	1.42	1.00
38:BS:110:THR:OG1	38:BS:111:PRO:HD2	1.61	1.00
45:BU:33:ARG:CB	45:BU:33:ARG:HH11	1.75	1.00
46:BV:42:GLY:CA	46:BV:54:TYR:OH	2.09	1.00
27:BA:1262:A:P	40:BW:99:ARG:NH2	2.35	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:8:ARG:HG2	40:BW:9:TYR:N	1.75	1.00
43:BZ:91:PRO:HB2	43:BZ:127:PRO:HA	1.42	1.00
27:BA:458:G:C5'	53:B7:39:ARG:CD	2.39	1.00
27:BA:2286:A:H3'	27:BA:2286:A:H8	1.26	1.00
45:BU:47:TYR:CE2	46:BV:74:TYR:O	2.14	1.00
43:BZ:149:ALA:HA	43:BZ:152:ILE:HD11	1.43	1.00
42:BY:46:ASP:OD2	42:BY:101:LEU:HA	1.59	1.00
43:BZ:51:LEU:HD11	43:BZ:63:PRO:HB2	1.42	1.00
43:BZ:6:LYS:H	43:BZ:7:PRO:CD	1.74	1.00
41:BX:33:SER:C	41:BX:37:VAL:HG23	1.82	1.00
43:BZ:95:SER:CB	43:BZ:122:ILE:HG12	1.92	1.00
5:AB:145:LEU:O	5:AB:149:LEU:HB2	1.61	1.00
27:BA:2857:G:O5'	27:BA:2857:G:H8	1.44	1.00
8:AE:144:THR:C	8:AE:145:LYS:N	2.14	1.00
53:B7:8:ASN:HB2	53:B7:11:LYS:HB3	1.42	1.00
27:BA:1262:A:OP2	40:BW:99:ARG:NH2	1.92	1.00
27:BA:2327:A:C2	27:BA:2328:A:N3	2.29	1.00
27:BA:2423:U:O2'	27:BA:2425:A:H3'	1.62	1.00
27:BA:2543:G:C5	27:BA:2544:G:C5	2.49	1.00
27:BA:2567:G:O2'	27:BA:2568:C:H5'	1.62	1.00
27:BA:2709:G:O2'	27:BA:2710:C:C5'	2.09	1.00
30:BF:36:ARG:HA	30:BF:39:GLN:HE22	0.89	1.00
32:BH:41:THR:CB	32:BH:52:THR:HB	1.91	1.00
37:BQ:49:VAL:HG13	37:BQ:50:VAL:H	1.22	1.00
38:BS:61:ALA:HB2	38:BS:88:ALA:HB2	1.03	1.00
39:BT:4:ARG:C	39:BT:5:GLU:HG3	1.77	1.00
42:BY:31:LEU:O	42:BY:34:GLU:CB	2.09	1.00
42:BY:77:VAL:O	42:BY:78:THR:HG23	1.61	1.00
1:AA:975:A:N9	1:AA:1357:A:C2	2.30	1.00
1:AA:409:G:C5'	7:AD:25:ARG:HB2	1.91	1.00
52:B6:37:LEU:O	52:B6:38:LYS:CG	2.08	1.00
27:BA:2225:A:H4'	27:BA:2226:C:O5'	1.54	1.00
27:BA:2599:G:H2'	27:BA:2600:A:O4'	1.60	1.00
27:BA:2862:G:C2'	27:BA:2863:C:C6	2.43	1.00
29:BE:271:ILE:CD1	29:BE:294:THR:HG22	1.89	1.00
36:BP:76:LEU:O	36:BP:81:VAL:CG2	2.01	1.00
44:BR:21:TYR:HB3	44:BR:47:PHE:CD2	1.96	1.00
45:BU:92:ARG:H	46:BV:10:LYS:HZ1	1.05	1.00
46:BV:62:GLU:HB2	46:BV:96:LEU:HD21	1.43	1.00
43:BZ:159:THR:C	43:BZ:160:LEU:CD1	2.30	1.00
1:AA:1400:C:C2	2:AV:34:G:N2	2.28	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1227:A:OP1	22:AS:80:TYR:CZ	2.14	1.00
1:AA:695:A:H2	1:AA:787:A:H4'	1.22	1.00
53:B7:44:VAL:C	53:B7:46:ASP:H	1.53	1.00
27:BA:125:G:N2	53:B7:10:ARG:N	2.09	1.00
27:BA:2045:C:C4	27:BA:2624:G:C2	2.50	1.00
27:BA:2589:A:H2'	27:BA:2590:A:H5''	1.27	1.00
27:BA:2625:G:C3'	27:BA:2626:C:C5	2.45	1.00
27:BA:2654:A:N6	27:BA:2667:C:H42	1.59	1.00
27:BA:2741:A:H2'	27:BA:2742:C:O4'	1.62	1.00
27:BA:2839:G:C4	27:BA:2840:C:C6	2.49	1.00
27:BA:2870:C:H2'	27:BA:2870:C:O2	1.62	1.00
29:BE:94:ARG:HB3	29:BE:95:PRO:HD2	1.04	1.00
32:BH:147:ILE:HD12	32:BH:150:VAL:HB	1.41	1.00
37:BQ:34:GLY:CA	37:BQ:74:ASN:O	2.09	1.00
46:BV:4:ILE:HD13	46:BV:13:ARG:HG2	1.39	1.00
47:B2:57:LYS:O	47:B2:60:GLN:HB3	1.61	1.00
1:AA:60:A:O3'	1:AA:61:G:P	2.20	1.00
27:BA:1351:C:H2'	27:BA:1352:U:H6	1.26	1.00
50:B4:42:PHE:O	50:B4:57:ASP:CA	1.99	1.00
27:BA:2403:C:C4	27:BA:2415:G:C6	2.50	1.00
27:BA:2813:A:H2'	27:BA:2814:C:C5	1.96	1.00
27:BA:2815:C:H5'	51:B5:29:ASN:HD22	0.84	1.00
30:BF:144:PHE:O	30:BF:146:ASP:N	1.93	1.00
30:BF:164:ALA:CB	30:BF:232:LEU:HD12	1.92	1.00
37:BQ:94:ARG:CD	37:BQ:106:GLY:CA	2.40	1.00
43:BZ:62:PHE:CG	43:BZ:87:THR:HG22	1.96	1.00
27:BA:2305:A:H3'	27:BA:2306:C:C5'	1.92	0.99
27:BA:2484:G:C2	27:BA:2485:G:O4'	2.15	0.99
27:BA:2567:G:HO2'	27:BA:2568:C:H6	1.08	0.99
27:BA:2733:A:H1'	29:BE:318:ASN:ND2	1.77	0.99
27:BA:931:G:H2'	27:BA:932:G:C8	1.96	0.99
27:BA:957:A:OP1	37:BQ:95:GLU:CB	2.10	0.99
28:BD:146:LYS:HD3	28:BD:147:PRO:HD2	1.03	0.99
27:BA:1675:C:C4	29:BE:225:LYS:HG2	1.95	0.99
31:BG:21:VAL:CG1	31:BG:132:VAL:HB	1.92	0.99
35:BO:68:GLY:CA	35:BO:78:ARG:HE	1.74	0.99
36:BP:66:VAL:C	36:BP:67:ARG:HE	1.65	0.99
37:BQ:12:PRO:HB2	37:BQ:20:ILE:HD11	1.41	0.99
46:BV:62:GLU:N	46:BV:98:ILE:HD11	1.75	0.99
49:B0:30:VAL:CG2	49:B0:63:SER:OG	2.09	0.99
52:B6:39:LYS:HA	52:B6:50:PHE:HD1	1.23	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:21:TYR:CE1	52:B6:43:VAL:HG23	1.97	0.99
27:BA:594:U:H5'	54:B8:58:MET:HE1	1.43	0.99
55:B9:10:MET:CB	55:B9:32:HIS:CD2	2.45	0.99
27:BA:2322:A:C6	27:BA:2323:G:C8	2.51	0.99
27:BA:2815:C:C2'	27:BA:2816:C:C5'	2.39	0.99
27:BA:2838:G:C5	27:BA:2839:G:N7	2.30	0.99
27:BA:563:G:N2	45:BU:37:GLN:HE22	1.60	0.99
27:BA:1568:G:C3'	28:BD:60:GLN:HE21	1.72	0.99
28:BD:66:PHE:C	28:BD:67:LYS:HD3	1.80	0.99
29:BE:74:GLU:N	29:BE:74:GLU:OE2	1.94	0.99
30:BF:3:ALA:CB	30:BF:16:VAL:C	2.28	0.99
31:BG:97:GLN:OE1	31:BG:106:PHE:CE2	2.14	0.99
27:BA:2314:C:H5''	31:BG:22:VAL:HG11	1.37	0.99
31:BG:24:HIS:HB3	31:BG:72:LYS:HA	1.42	0.99
34:BN:42:GLU:O	34:BN:132:LEU:C	2.00	0.99
37:BQ:41:THR:HG22	37:BQ:125:TRP:CE3	1.95	0.99
37:BQ:46:VAL:HB	37:BQ:124:ALA:O	0.83	0.99
44:BR:36:THR:CG2	44:BR:40:LYS:HB3	1.89	0.99
44:BR:93:GLY:O	44:BR:95:THR:N	1.95	0.99
28:BD:213:LYS:HB3	28:BD:215:LYS:H	1.17	0.99
41:BX:24:LEU:CD1	41:BX:68:LEU:HD22	1.90	0.99
1:AA:1313:U:H5	22:AS:4:SER:HB3	0.86	0.99
49:B0:36:ILE:CB	49:B0:68:VAL:HG11	1.92	0.99
54:B8:52:LYS:C	54:B8:54:GLU:H	1.60	0.99
27:BA:1782:C:O2	27:BA:2609:U:O4'	1.78	0.99
27:BA:2273:A:N7	27:BA:2274:A:C8	2.30	0.99
27:BA:2275:C:O2	37:BQ:103:ALA:CB	2.09	0.99
27:BA:2577:A:N1	27:BA:2614:A:H2	1.60	0.99
27:BA:2603:G:N1	27:BA:2604:U:C5	2.29	0.99
27:BA:2769:C:O2'	27:BA:2770:G:H5'	1.62	0.99
27:BA:2785:C:O2'	29:BE:100:TRP:HB2	1.62	0.99
27:BA:600:G:H5''	30:BF:27:ARG:HH11	1.23	0.99
27:BA:974(A):C:H1'	27:BA:989:G:H22	1.24	0.99
26:BB:59:A:P	31:BG:141:VAL:HG22	2.01	0.99
28:BD:161:ALA:C	28:BD:162:GLN:NE2	2.16	0.99
28:BD:89:ASN:O	28:BD:105:ALA:HB1	1.58	0.99
29:BE:222:ARG:HD3	29:BE:232:ARG:CA	1.92	0.99
36:BP:141:GLU:CB	36:BP:145:LEU:HD22	1.92	0.99
37:BQ:54:VAL:O	37:BQ:56:ILE:N	1.96	0.99
45:BU:65:ILE:CG2	45:BU:76:TYR:CE2	2.37	0.99
27:BA:973:A:N6	46:BV:81:ARG:CG	1.87	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:74:VAL:CG1	42:BY:77:VAL:CG2	2.40	0.99
1:AA:939:G:P	10:AG:102:ARG:HH12	1.84	0.99
27:BA:414:C:N3	27:BA:2409:G:N2	2.10	0.99
6:AC:48:TYR:OH	6:AC:122:GLU:OE1	1.80	0.99
50:B4:5:LEU:HD12	50:B4:60:ASN:ND2	1.77	0.99
55:B9:10:MET:HB3	55:B9:32:HIS:CD2	1.97	0.99
27:BA:2464:C:N4	27:BA:2487:G:C5	2.31	0.99
27:BA:2576:G:OP1	27:BA:2576:G:H3'	1.61	0.99
27:BA:2587:A:O2'	27:BA:2588:G:C5'	2.08	0.99
27:BA:2821:A:H2	27:BA:2822:G:C5	1.68	0.99
27:BA:1818:U:C5'	28:BD:155:ARG:CB	2.41	0.99
28:BD:85:ASN:CG	28:BD:86:ARG:NE	2.15	0.99
30:BF:37:ALA:CB	30:BF:102:LEU:HB2	1.92	0.99
30:BF:63:SER:H	30:BF:65:ARG:HE	1.04	0.99
31:BG:19:GLU:HB2	31:BG:135:VAL:CG2	1.79	0.99
31:BG:21:VAL:HG13	31:BG:132:VAL:HG23	1.03	0.99
34:BN:15:ARG:CD	34:BN:43:ARG:CD	2.38	0.99
34:BN:58:GLU:O	34:BN:61:VAL:HB	1.62	0.99
37:BQ:31:PHE:HA	37:BQ:85:ILE:HD11	1.44	0.99
44:BR:43:GLU:O	44:BR:45:ARG:N	1.94	0.99
38:BS:32:PRO:HG2	38:BS:100:ALA:HB1	1.00	0.99
38:BS:87:LEU:H	38:BS:87:LEU:HD22	1.26	0.99
33:BI:94:THR:CG2	33:BI:96:LYS:HB3	1.91	0.99
1:AA:1320:C:O2	22:AS:72:GLY:C	1.99	0.99
27:BA:1340:U:C5	41:BX:55:GLN:NE2	2.29	0.99
1:AA:889:A:N6	1:AA:908:A:N7	2.11	0.99
1:AA:761:G:O2'	20:AQ:104:LYS:HA	1.60	0.99
1:AA:671:G:H5'	9:AF:77:ARG:HH21	1.26	0.99
27:BA:856:C:O2'	49:B0:24:LYS:CB	2.09	0.99
54:B8:41:ILE:C	54:B8:43:GLY:H	1.65	0.99
27:BA:2090:G:N1	27:BA:2230:G:O6	1.94	0.99
27:BA:2210:G:C5	28:BD:148:GLY:HA3	1.97	0.99
27:BA:2361:A:C2'	27:BA:2362:G:H5'	1.92	0.99
27:BA:2527:C:O3'	55:B9:30:VAL:HG12	1.61	0.99
27:BA:2555:U:OP2	27:BA:2555:U:H6	1.45	0.99
29:BE:44:TYR:CD1	29:BE:309:PRO:HD3	1.97	0.99
38:BS:24:LEU:HA	38:BS:33:ARG:HH22	0.83	0.99
27:BA:1156:A:C8	45:BU:55:ARG:NH2	2.29	0.99
42:BY:73:HIS:HA	42:BY:91:LEU:HD11	1.12	0.99
47:B2:55:ARG:O	47:B2:58:THR:N	1.96	0.99
33:BI:65:ALA:HB1	33:BI:134:HIS:HB2	1.44	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1264:G:P	51:B5:19:ARG:HH12	1.84	0.99
53:B7:38:GLY:O	53:B7:39:ARG:HB2	1.62	0.99
27:BA:2082:A:C6	27:BA:2239:G:C6	2.50	0.99
27:BA:2345:G:N7	27:BA:2371:G:N2	2.08	0.99
27:BA:2584:U:H3'	27:BA:2584:U:H6	1.21	0.99
27:BA:2666:C:C3'	27:BA:2667:C:H5'	1.93	0.99
27:BA:2759:G:H2'	27:BA:2760:C:O5'	1.58	0.99
28:BD:100:LYS:O	28:BD:101:ARG:HG3	1.62	0.99
30:BF:5:ILE:HA	30:BF:139:VAL:HG11	1.42	0.99
27:BA:2303:G:H4'	31:BG:99:ASP:CB	1.92	0.99
32:BH:93:TYR:CG	32:BH:106:VAL:HG22	1.88	0.99
33:BI:3:VAL:CG2	33:BI:21:VAL:HG23	1.91	0.99
35:BO:98:ILE:CG1	35:BO:117:LEU:HB3	1.92	0.99
35:BO:63:VAL:N	35:BO:84:CYS:SG	2.34	0.99
38:BS:32:PRO:CD	38:BS:100:ALA:HA	1.92	0.99
45:BU:31:GLN:O	45:BU:33:ARG:N	1.95	0.99
43:BZ:69:VAL:HG21	43:BZ:81:VAL:HG13	1.03	0.99
41:BX:4:VAL:CG2	47:B2:24:LYS:HZ1	1.65	0.99
33:BI:48:GLU:HG3	33:BI:52:GLN:HE21	1.26	0.99
27:BA:2710:C:O2'	27:BA:2711:A:C5'	2.10	0.99
27:BA:801:G:OP2	30:BF:79:ARG:HD3	1.61	0.99
27:BA:1993:U:H4'	29:BE:228:ARG:NH2	1.77	0.99
30:BF:163:HIS:HA	30:BF:166:ILE:CG1	1.92	0.99
30:BF:243:VAL:O	30:BF:246:ARG:CB	2.11	0.99
27:BA:1665:A:C2'	35:BO:66:LYS:HZ3	1.70	0.99
40:BW:10:VAL:HG13	40:BW:46:PHE:HE2	1.23	0.99
40:BW:81:ALA:O	40:BW:82:LEU:HD13	1.62	0.99
16:AM:87:TYR:HB2	22:AS:73:GLU:O	1.62	0.99
27:BA:1826:G:OP2	28:BD:227:VAL:CG2	2.09	0.99
52:B6:22:TYR:O	52:B6:23:THR:CG2	2.11	0.99
49:B0:24:LYS:HG2	49:B0:56:ASP:CG	1.82	0.99
50:B4:16:TYR:O	50:B4:17:GLN:HG3	0.82	0.99
27:BA:125:G:C3'	53:B7:19:ARG:NH1	2.25	0.99
27:BA:125:G:N2	53:B7:10:ARG:CA	2.25	0.99
27:BA:2310:A:C5	31:BG:55:LYS:NZ	2.30	0.99
27:BA:2469:A:H5'	27:BA:2469:A:C8	1.95	0.99
27:BA:558:G:P	34:BN:91:LYS:CB	2.51	0.99
28:BD:110:LYS:HA	28:BD:110:LYS:HZ3	0.82	0.99
30:BF:220:THR:HA	30:BF:224:ALA:HB2	1.42	0.99
32:BH:120:LEU:HD13	32:BH:143:LEU:HD12	1.43	0.99
35:BO:2:ILE:HG22	35:BO:21:VAL:HG21	1.42	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2406:U:H3	36:BP:55:GLN:CB	1.73	0.99
38:BS:27:LEU:HB2	38:BS:33:ARG:HH22	1.20	0.99
27:BA:1152:C:H5''	45:BU:80:ILE:HG21	1.45	0.99
48:B3:20:LYS:HA	48:B3:23:LEU:HD11	0.99	0.99
54:B8:60:LEU:O	54:B8:61:MET:O	1.79	0.99
27:BA:1262:A:H2	51:B5:10:LYS:HE2	1.20	0.99
27:BA:1818:U:H3'	28:BD:155:ARG:HG2	0.99	0.99
27:BA:1994:C:OP1	29:BE:227:ALA:HB1	1.62	0.99
27:BA:2429:G:C5'	27:BA:2430:A:OP2	2.10	0.99
27:BA:2531:A:H2'	27:BA:2532:G:H5'	1.02	0.99
27:BA:2768:C:C4	27:BA:2769:C:C5	2.35	0.99
27:BA:911:A:N1	37:BQ:16:ARG:CA	2.26	0.99
29:BE:201:VAL:HA	29:BE:310:PHE:O	1.61	0.99
29:BE:263:GLU:HG3	29:BE:266:LYS:HE2	1.00	0.99
30:BF:196:THR:HG23	30:BF:236:THR:HG21	1.44	0.99
30:BF:245:GLU:H	30:BF:245:GLU:CD	1.63	0.99
31:BG:56:ARG:HG2	31:BG:65:GLU:HB2	1.01	0.99
27:BA:1021:A:C8	34:BN:49:ARG:NH1	2.31	0.99
36:BP:117:GLU:OE2	36:BP:136:ALA:CA	2.11	0.99
37:BQ:142:LYS:CE	37:BQ:143:VAL:N	2.26	0.99
37:BQ:42:TYR:O	43:BZ:119:ASN:ND2	1.95	0.99
38:BS:32:PRO:HD2	38:BS:101:VAL:H	1.27	0.99
45:BU:59:ARG:O	45:BU:62:ILE:HG12	1.62	0.99
34:BN:10:VAL:HB	34:BN:36:VAL:CA	1.92	0.99
27:BA:138:G:H5''	41:BX:43:GLU:CG	1.93	0.99
41:BX:9:HIS:ND1	41:BX:26:PHE:C	2.15	0.99
1:AA:1005:A:C4'	1:AA:1037:C:H1'	1.93	0.99
49:B0:43:THR:OG1	49:B0:75:GLY:C	2.01	0.99
48:B3:16:PRO:HB2	48:B3:19:GLN:CG	1.93	0.99
50:B4:73:LYS:HG3	50:B4:73:LYS:OXT	1.61	0.99
27:BA:1034:G:H5'	55:B9:18:ARG:NE	1.77	0.99
27:BA:1140:C:C5	34:BN:49:ARG:CG	2.44	0.99
27:BA:1287:A:C8	44:BR:104:ARG:HG2	1.96	0.99
27:BA:2210:G:C6	28:BD:148:GLY:HA3	1.97	0.99
27:BA:2239:G:H2'	27:BA:2240:C:C6	1.98	0.99
28:BD:143:ILE:HG12	28:BD:153:LEU:CB	1.92	0.99
27:BA:2210:G:C6	28:BD:148:GLY:HA2	1.98	0.99
30:BF:159:ALA:O	30:BF:160:LEU:HD23	1.62	0.99
30:BF:214:THR:OG1	30:BF:216:SER:O	1.81	0.99
34:BN:79:PHE:O	34:BN:83:ILE:HG23	1.63	0.99
36:BP:77:ALA:CB	36:BP:81:VAL:CG1	2.41	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:67:ALA:CB	37:BQ:70:ARG:HH11	1.65	0.99
45:BU:20:ARG:HH12	46:BV:75:LYS:CE	1.76	0.99
40:BW:36:LEU:HD11	40:BW:47:VAL:HG12	1.40	0.99
40:BW:84:ARG:HB2	40:BW:96:ILE:HD13	1.45	0.99
33:BI:89:LEU:HD12	33:BI:93:ILE:CG2	1.92	0.99
43:BZ:2:GLU:CA	43:BZ:54:ILE:HG21	1.87	0.99
53:B7:21:ARG:CB	53:B7:31:LEU:HD11	1.92	0.98
53:B7:34:ARG:HH11	53:B7:42:LEU:HD23	1.09	0.98
27:BA:2219:G:H2'	27:BA:2224:G:H5'	1.41	0.98
27:BA:2354:G:C2	49:B0:32:LYS:CE	2.46	0.98
29:BE:263:GLU:HG3	29:BE:266:LYS:CE	1.91	0.98
35:BO:101:PRO:CB	35:BO:122:ILE:HD11	1.93	0.98
47:B2:11:MET:O	47:B2:12:THR:O	1.81	0.98
47:B2:3:LEU:O	47:B2:4:HIS:HB2	1.59	0.98
27:BA:1210:A:H5'	27:BA:1211:U:H3'	1.43	0.98
51:B5:11:THR:CG2	51:B5:19:ARG:HH22	1.76	0.98
27:BA:2654:A:N6	27:BA:2667:C:N4	2.11	0.98
28:BD:73:ILE:CG2	28:BD:95:TYR:CE2	2.43	0.98
30:BF:225:PRO:O	30:BF:231:ARG:CG	2.09	0.98
31:BG:13:MET:HE3	31:BG:13:MET:HA	1.45	0.98
32:BH:93:TYR:CE1	32:BH:106:VAL:C	2.35	0.98
32:BH:93:TYR:O	32:BH:94:ARG:HG3	1.60	0.98
34:BN:60:ARG:O	34:BN:71:TYR:CG	2.16	0.98
36:BP:132:LYS:H	36:BP:132:LYS:CD	1.74	0.98
37:BQ:58:HIS:CA	37:BQ:61:LEU:CD1	2.41	0.98
40:BW:86:LEU:HB3	40:BW:87:PRO:HD2	1.43	0.98
33:BI:95:SER:HG	33:BI:98:ILE:HD12	1.27	0.98
42:BY:71:VAL:CG1	42:BY:72:ILE:H	1.76	0.98
43:BZ:37:LYS:HA	43:BZ:40:ASP:OD2	1.61	0.98
43:BZ:39:PHE:O	43:BZ:43:PHE:CG	2.16	0.98
1:AA:1227:A:OP1	22:AS:80:TYR:OH	1.79	0.98
41:BX:6:LYS:HZ1	41:BX:29:ASP:HA	1.05	0.98
27:BA:71:A:O2'	41:BX:2:TRP:HZ2	1.46	0.98
1:AA:1030:C:C4	1:AA:30(A):G:O6	2.16	0.98
42:BY:81:LYS:HD2	42:BY:83:ASP:H	1.28	0.98
27:BA:2755:C:O5'	27:BA:2755:C:C6	2.15	0.98
48:B3:7:LYS:O	48:B3:54:VAL:CB	2.10	0.98
54:B8:26:LYS:CE	54:B8:45:GLY:H	1.72	0.98
55:B9:29:ASN:HB2	55:B9:32:HIS:ND1	1.78	0.98
27:BA:2354:G:H1'	49:B0:32:LYS:HG2	1.43	0.98
27:BA:2463:C:C2	27:BA:2464:C:H5	1.78	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2552:U:C2	27:BA:2554:U:H5'	1.96	0.98
27:BA:2616:C:C2	27:BA:2617:C:H5	1.81	0.98
27:BA:2712:U:H3'	27:BA:2714:G:OP2	1.60	0.98
27:BA:2836:U:O2	27:BA:2883:A:C5	2.16	0.98
27:BA:612:G:H4'	27:BA:616:A:N6	1.78	0.98
27:BA:2712:U:C3'	27:BA:712(A):A:C5'	2.39	0.98
27:BA:965:C:H5'	27:BA:2273:A:C1'	1.92	0.98
28:BD:74:PRO:CD	28:BD:96:ALA:HB2	1.93	0.98
30:BF:57:PRO:O	30:BF:79:ARG:HB2	1.62	0.98
32:BH:120:LEU:HD13	32:BH:143:LEU:CD1	1.93	0.98
33:BI:31:PHE:CE1	33:BI:36:ALA:HB3	1.98	0.98
34:BN:45:VAL:H	34:BN:132:LEU:HD22	1.28	0.98
35:BO:37:ASP:HB2	35:BO:62:VAL:HG21	1.45	0.98
36:BP:62:ALA:CA	36:BP:107:LYS:HE3	1.93	0.98
37:BQ:137:ARG:HH11	37:BQ:138:ARG:HG2	1.28	0.98
37:BQ:47:GLU:OE2	37:BQ:151:SER:C	2.02	0.98
44:BR:87:TYR:OH	44:BR:116:LEU:HB2	1.63	0.98
44:BR:34:ILE:CG2	44:BR:35:THR:N	2.12	0.98
44:BR:52:ILE:HG22	44:BR:53:HIS:H	1.19	0.98
27:BA:2376:A:H2	38:BS:102:LEU:HD22	0.96	0.98
38:BS:61:ALA:HB2	38:BS:88:ALA:CB	1.91	0.98
46:BV:50:ASP:N	46:BV:53:LYS:HD2	1.76	0.98
6:AC:9:GLY:HA2	17:AN:49:HIS:O	1.62	0.98
47:B2:2:VAL:H	47:B2:4:HIS:CE1	1.80	0.98
27:BA:138:G:H3'	27:BA:138:G:N3	1.78	0.98
1:AA:60:A:C2	1:AA:107:G:N3	2.31	0.98
52:B6:28:ARG:HG3	52:B6:30:ASN:HB3	1.44	0.98
27:BA:2246:G:C2'	27:BA:2247:A:H5'	1.92	0.98
27:BA:2356:C:H2'	27:BA:2357:U:O5'	1.64	0.98
27:BA:2392:A:C8	27:BA:2393:A:C8	2.51	0.98
27:BA:2472:G:H2'	27:BA:2475:C:H42	0.83	0.98
27:BA:2574:G:C2'	27:BA:2575:C:H6	1.75	0.98
27:BA:2647:U:O2'	27:BA:2648:C:C5'	2.10	0.98
27:BA:2679:A:C2	29:BE:300:VAL:HG21	1.98	0.98
29:BE:212:GLY:O	29:BE:216:ARG:HG3	1.54	0.98
30:BF:115:LEU:HG	30:BF:246:ARG:CZ	1.92	0.98
31:BG:18:ILE:HG22	31:BG:19:GLU:H	1.25	0.98
35:BO:11:ALA:HB1	35:BO:99:PHE:HB3	1.45	0.98
40:BW:69:LEU:N	40:BW:69:LEU:HD23	1.76	0.98
1:AA:958:A:N9	22:AS:55:LYS:HD2	1.76	0.98
27:BA:1364:G:P	50:B4:2:GLN:O	2.21	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:42:PHE:O	50:B4:61:LYS:CE	2.11	0.98
53:B7:34:ARG:HD3	53:B7:42:LEU:HD23	1.29	0.98
27:BA:2520:C:N3	27:BA:2521:C:H5	1.59	0.98
27:BA:526:A:C2	27:BA:2626:C:O4'	2.16	0.98
28:BD:175:LEU:CD2	28:BD:180:VAL:CA	2.27	0.98
30:BF:224:ALA:HB3	30:BF:225:PRO:HD3	1.43	0.98
32:BH:130:ILE:HG22	32:BH:131:ILE:H	1.26	0.98
27:BA:1137:G:O2'	34:BN:82:THR:HA	1.61	0.98
44:BR:36:THR:HG21	44:BR:40:LYS:CB	1.88	0.98
46:BV:61:VAL:HG22	46:BV:98:ILE:H	1.23	0.98
43:BZ:123:VAL:HB	43:BZ:159:THR:HG21	1.41	0.98
27:BA:85:G:P	42:BY:65:VAL:CB	2.51	0.98
27:BA:1566:A:H2	28:BD:212:HIS:HA	1.17	0.98
49:B0:49:GLN:OE1	49:B0:74:LYS:O	1.80	0.98
48:B3:20:LYS:O	48:B3:23:LEU:CB	2.11	0.98
48:B3:31:LEU:HD23	48:B3:32:GLN:CA	1.93	0.98
51:B5:12:SER:CB	51:B5:15:LYS:NZ	2.19	0.98
27:BA:2601:C:O2	27:BA:2603:G:N7	1.96	0.98
27:BA:593:G:H5''	54:B8:62:LEU:CD2	1.94	0.98
29:BE:76:PRO:CB	29:BE:77:PRO:CD	2.35	0.98
32:BH:101:LYS:CG	32:BH:115:GLU:CA	2.40	0.98
34:BN:60:ARG:CA	34:BN:71:TYR:CD2	2.46	0.98
35:BO:35:ILE:HG23	35:BO:62:VAL:C	1.82	0.98
44:BR:25:ALA:O	44:BR:29:LEU:CD2	2.11	0.98
38:BS:34:LEU:HG	38:BS:102:LEU:CA	1.93	0.98
46:BV:61:VAL:CG2	46:BV:97:GLY:CA	2.40	0.98
40:BW:103:ILE:CG2	40:BW:103:ILE:O	2.08	0.98
47:B2:63:GLU:OE2	47:B2:63:GLU:O	1.82	0.98
27:BA:2:G:C2	27:BA:2902:C:N3	2.31	0.98
27:BA:1351:C:H2'	27:BA:1352:U:C6	1.98	0.98
40:BW:19:LEU:HD13	51:B5:25:LEU:HD21	1.00	0.98
52:B6:24:THR:O	52:B6:25:THR:CG2	2.11	0.98
27:BA:2687:U:H2'	27:BA:2687:U:O2	1.61	0.98
27:BA:2869:G:H21	27:BA:2870:C:C1'	1.76	0.98
27:BA:380:U:O2'	50:B4:15:ILE:HB	1.64	0.98
27:BA:599:G:O2'	30:BF:30:LEU:HD21	1.62	0.98
28:BD:167:GLU:HB2	28:BD:170:TYR:HD1	1.20	0.98
33:BI:4:ILE:O	33:BI:5:PHE:O	1.81	0.98
36:BP:104:ASP:O	36:BP:105:TYR:CD1	2.16	0.98
37:BQ:49:VAL:HG22	37:BQ:119:ASN:O	1.63	0.98
44:BR:110:PRO:O	44:BR:111:LEU:O	1.80	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2850:A:N3	44:BR:61:HIS:HE1	1.61	0.98
27:BA:563:G:H21	45:BU:37:GLN:NE2	1.61	0.98
45:BU:65:ILE:HG22	45:BU:76:TYR:HE2	1.00	0.98
43:BZ:18:MET:C	43:BZ:36:ARG:HG3	1.82	0.98
27:BA:75:G:H4'	47:B2:51:LYS:HZ1	1.27	0.98
27:BA:68:G:H2'	27:BA:69:C:C6	1.99	0.98
1:AA:254:G:O2'	20:AQ:16:GLN:O	1.81	0.98
1:AA:376:G:H5''	19:AP:5:ARG:HD2	1.45	0.98
49:B0:45:PHE:HE1	49:B0:78:PHE:CD2	1.62	0.98
53:B7:30:ILE:CB	53:B7:33:ARG:HD2	1.92	0.98
27:BA:2094:G:C2	27:BA:2196:C:C2	2.50	0.98
27:BA:2219:G:O2'	27:BA:2224:G:P	2.22	0.98
27:BA:2459:A:N7	27:BA:2460:U:C5	2.31	0.98
27:BA:2626:C:O2'	27:BA:2627:G:H5''	1.62	0.98
27:BA:856:C:HO2'	49:B0:24:LYS:HB2	1.24	0.98
27:BA:1819:A:H2'	28:BD:177:SER:CB	1.94	0.98
31:BG:24:HIS:C	31:BG:129:ASP:OD2	2.00	0.98
32:BH:10:ILE:HG22	32:BH:14:VAL:CG1	1.80	0.98
32:BH:58:LYS:HG3	32:BH:59:HIS:H	1.29	0.98
32:BH:86:LEU:HD22	32:BH:87:GLU:H	1.27	0.98
37:BQ:45:GLN:OE1	37:BQ:153:PRO:HD2	1.63	0.98
45:BU:61:TRP:HZ3	45:BU:94:VAL:N	1.61	0.98
40:BW:84:ARG:CB	40:BW:96:ILE:CD1	2.42	0.98
43:BZ:13:LYS:O	43:BZ:15:ASP:N	1.96	0.98
43:BZ:68:ALA:C	43:BZ:69:VAL:HG23	1.81	0.98
49:B0:46:LYS:CE	49:B0:58:THR:OG1	2.11	0.98
49:B0:28:GLY:N	49:B0:60:PHE:HD2	1.35	0.98
27:BA:1364:G:C3'	50:B4:3:LYS:NZ	2.26	0.98
50:B4:5:LEU:CD2	50:B4:5:LEU:H	1.76	0.98
27:BA:2436:G:H2'	27:BA:2437:U:O5'	1.61	0.98
27:BA:2460:U:O2	27:BA:2493:U:C5	2.17	0.98
27:BA:2492:U:C2'	27:BA:2493:U:O5'	2.11	0.98
27:BA:2690:C:H6	27:BA:2690:C:H3'	1.27	0.98
27:BA:2785:C:C2'	27:BA:2786:U:C6	2.46	0.98
27:BA:2826:A:C5	27:BA:2827:C:H5	1.71	0.98
27:BA:2848:G:H22	27:BA:2867:G:H1'	0.82	0.98
32:BH:101:LYS:HZ1	32:BH:115:GLU:CB	1.70	0.98
35:BO:37:ASP:O	35:BO:61:VAL:HG13	1.64	0.98
36:BP:65:ASP:HA	36:BP:109:LEU:N	1.79	0.98
27:BA:30:G:OP1	45:BU:8:ILE:HD11	0.80	0.98
46:BV:33:VAL:HB	46:BV:63:HIS:ND1	1.78	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:97:LYS:HE3	40:BW:99:ARG:NH1	1.79	0.98
1:AA:926:G:N2	4:AX:116:U:OP2	1.96	0.98
42:BY:86:GLU:O	42:BY:87:VAL:CG2	2.11	0.98
53:B7:43:THR:C	53:B7:46:ASP:CG	2.21	0.98
27:BA:2564:A:H2'	27:BA:2565:A:H8	0.97	0.98
27:BA:2595:G:H1'	27:BA:2599:G:H22	1.26	0.98
27:BA:2622:C:C2	27:BA:2623:G:C8	2.52	0.98
32:BH:123:GLU:O	32:BH:130:ILE:CG2	2.11	0.98
34:BN:19:MET:HB2	34:BN:46:ILE:HG12	0.99	0.98
35:BO:81:GLU:HG2	35:BO:82:ASN:H	1.26	0.98
37:BQ:33:MET:HB3	37:BQ:83:PHE:HB3	1.43	0.98
38:BS:116:PHE:O	38:BS:120:GLU:CD	2.01	0.98
45:BU:28:ARG:N	45:BU:31:GLN:HG3	1.77	0.98
45:BU:89:ASP:HB3	46:BV:51:ALA:HB3	1.46	0.98
2:AV:34:G:C2'	2:AV:35:A:H5''	1.93	0.98
1:AA:815:A:H2	1:AA:1528:U:H1'	1.29	0.98
25:AY:251:THR:CA	27:BA:1943:U:H5'	1.94	0.98
9:AF:95:GLU:HB2	9:AF:96:PRO:HD3	1.42	0.98
27:BA:1620:G:O4'	53:B7:1:MET:N	1.97	0.98
53:B7:44:VAL:O	53:B7:46:ASP:N	1.96	0.97
54:B8:50:LEU:HD23	54:B8:51:ALA:CA	1.94	0.97
27:BA:2258:C:H5	27:BA:2426:A:C4'	1.71	0.97
27:BA:2584:U:H2'	27:BA:2585:U:C5	1.98	0.97
27:BA:712(A):A:C5'	27:BA:2714:G:OP2	2.12	0.97
27:BA:1568:G:O5'	28:BD:60:GLN:HG2	0.82	0.97
29:BE:208:LYS:H	29:BE:257:GLY:HA3	1.27	0.97
29:BE:221:LYS:HZ1	29:BE:233:ARG:HG2	1.22	0.97
30:BF:36:ARG:O	30:BF:39:GLN:OE1	1.81	0.97
30:BF:96:LYS:N	30:BF:98:ARG:NH2	2.09	0.97
33:BI:7:LYS:CA	33:BI:14:LYS:HG2	1.94	0.97
36:BP:52:LYS:CD	36:BP:53:ARG:NH1	2.26	0.97
44:BR:46:GLY:O	44:BR:49:ASP:HB3	1.62	0.97
45:BU:117:ARG:CD	45:BU:118:GLN:HG2	1.93	0.97
45:BU:30:LYS:O	45:BU:32:TYR:HD2	1.45	0.97
45:BU:44:THR:HG21	46:BV:78:VAL:HG12	1.44	0.97
46:BV:30:GLY:CA	46:BV:33:VAL:CG2	2.40	0.97
46:BV:49:GLU:HB3	46:BV:53:LYS:HD2	1.44	0.97
42:BY:101:LEU:HG	42:BY:112:LEU:HD11	0.99	0.97
27:BA:1791:A:OP1	28:BD:210:LYS:HD2	1.61	0.97
28:BD:61:TYR:HH	28:BD:214:MET:CE	1.70	0.97
47:B2:27:LEU:HD11	47:B2:53:ILE:CD1	1.93	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:6:LYS:CE	41:BX:29:ASP:HA	1.93	0.97
27:BA:2020:A:C5	51:B5:9:LYS:HE2	1.92	0.97
54:B8:57:ARG:O	54:B8:58:MET:O	1.81	0.97
27:BA:1031:G:H4'	55:B9:8:LYS:CD	1.92	0.97
27:BA:2392:A:H2'	27:BA:2393:A:C5'	1.94	0.97
27:BA:2428:G:H5''	27:BA:2429:G:OP1	1.64	0.97
27:BA:2465:C:O2'	27:BA:2466:C:O5'	1.82	0.97
28:BD:140:VAL:HG12	28:BD:141:HIS:N	1.78	0.97
28:BD:85:ASN:ND2	28:BD:86:ARG:CD	2.27	0.97
29:BE:201:VAL:H	29:BE:266:LYS:HD2	1.29	0.97
29:BE:46:ALA:HB3	29:BE:72:VAL:O	1.63	0.97
30:BF:243:VAL:O	30:BF:246:ARG:HB2	1.64	0.97
45:BU:95:LEU:O	45:BU:106:PHE:HE1	1.46	0.97
45:BU:7:GLY:O	45:BU:9:VAL:HG23	1.64	0.97
42:BY:31:LEU:H	42:BY:31:LEU:HD23	0.82	0.97
27:BA:85:G:C5'	42:BY:65:VAL:HG12	1.93	0.97
3:AW:25:C:N3	3:AW:26:G:C4	2.30	0.97
41:BX:35:GLY:O	41:BX:37:VAL:N	1.97	0.97
1:AA:1117:G:N2	1:AA:1180:A:H1'	1.77	0.97
1:AA:39:G:N7	1:AA:547:A:C8	2.31	0.97
13:AJ:10:GLY:HA3	13:AJ:16:LEU:HD21	1.45	0.97
50:B4:14:ILE:HB	50:B4:37:SER:O	1.63	0.97
27:BA:2226:C:H2'	27:BA:2227:A:C4'	1.94	0.97
27:BA:2232:U:H2'	27:BA:2233:U:C5'	1.93	0.97
27:BA:558:G:P	34:BN:91:LYS:HB3	2.04	0.97
30:BF:25:PRO:O	30:BF:26:VAL:CG2	2.12	0.97
34:BN:52:GLN:HA	34:BN:55:GLU:CG	1.93	0.97
37:BQ:142:LYS:O	37:BQ:143:VAL:CG2	2.11	0.97
37:BQ:49:VAL:CG1	37:BQ:50:VAL:N	2.22	0.97
45:BU:53:LYS:HA	45:BU:56:ASP:OD2	1.64	0.97
46:BV:61:VAL:HG22	46:BV:98:ILE:N	1.78	0.97
40:BW:11:ARG:HH11	40:BW:11:ARG:HG3	1.26	0.97
42:BY:49:GLU:HG2	42:BY:59:GLU:HA	1.45	0.97
28:BD:211:HIS:CE1	28:BD:212:HIS:HD2	1.82	0.97
41:BX:3:ASP:CG	47:B2:24:LYS:HD2	1.84	0.97
33:BI:62:LEU:O	33:BI:66:LYS:HE2	1.64	0.97
50:B4:23:GLU:CD	50:B4:29:PRO:HG3	1.84	0.97
27:BA:1669:A:H5''	27:BA:2550:G:OP1	1.64	0.97
27:BA:2464:C:H42	27:BA:2486:G:H1	1.01	0.97
27:BA:2464:C:C4	27:BA:2487:G:C6	2.53	0.97
27:BA:2555:U:OP2	27:BA:2555:U:C6	2.17	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2567:G:N3	27:BA:2568:C:H5	1.49	0.97
27:BA:2678:C:O2	27:BA:2679:A:N9	1.97	0.97
27:BA:2717:G:H8	27:BA:2717:G:H5'	0.81	0.97
29:BE:101:THR:O	29:BE:103:GLU:HG3	1.64	0.97
29:BE:76:PRO:HB3	29:BE:292:PRO:HG2	1.44	0.97
30:BF:115:LEU:O	30:BF:118:THR:N	1.97	0.97
30:BF:36:ARG:C	30:BF:39:GLN:HE22	1.67	0.97
32:BH:86:LEU:N	32:BH:148:ARG:NH2	2.12	0.97
32:BH:159:LYS:H	32:BH:162:ARG:HH22	0.97	0.97
36:BP:57:VAL:HG12	36:BP:58:GLN:H	0.80	0.97
43:BZ:14:LEU:HD21	43:BZ:79:ILE:HG21	1.46	0.97
1:AA:953:G:O2'	16:AM:124:PRO:O	1.80	0.97
42:BY:9:LYS:NZ	42:BY:13:ARG:NH2	2.13	0.97
49:B0:46:LYS:HG2	49:B0:58:THR:N	1.79	0.97
50:B4:14:ILE:HG23	50:B4:16:TYR:CD1	1.99	0.97
54:B8:62:LEU:CB	54:B8:63:PRO:HD3	1.94	0.97
27:BA:2093:G:C1'	27:BA:2198:A:N1	2.26	0.97
27:BA:2248:C:H2'	27:BA:2249:U:H5'	1.43	0.97
27:BA:2404:C:N4	27:BA:2405:G:C6	2.32	0.97
27:BA:2532:G:H8	27:BA:2532:G:C5'	1.75	0.97
27:BA:2613:U:H5'	27:BA:2613:U:H6	1.27	0.97
27:BA:2652:C:C4	27:BA:2653:U:C4	2.51	0.97
27:BA:557:U:C5'	34:BN:92:GLN:NE2	2.24	0.97
27:BA:747:U:OP2	51:B5:2:ALA:N	1.96	0.97
27:BA:994:C:H4'	45:BU:54:LYS:CE	1.95	0.97
34:BN:12:VAL:HG12	34:BN:13:ASP:N	1.80	0.97
35:BO:62:VAL:C	35:BO:84:CYS:SG	2.43	0.97
35:BO:95:GLY:O	35:BO:97:ARG:N	1.96	0.97
44:BR:73:VAL:HG12	44:BR:77:ARG:CZ	1.93	0.97
45:BU:95:LEU:O	45:BU:106:PHE:CE1	2.18	0.97
45:BU:13:ARG:CG	45:BU:13:ARG:HH11	1.77	0.97
45:BU:27:SER:O	45:BU:28:ARG:C	2.01	0.97
45:BU:59:ARG:HA	45:BU:62:ILE:HG13	0.98	0.97
45:BU:95:LEU:O	45:BU:98:ILE:HB	1.62	0.97
46:BV:62:GLU:O	46:BV:95:ILE:HG23	0.80	0.97
43:BZ:90:GLU:N	43:BZ:91:PRO:CD	2.27	0.97
2:AV:35:A:N6	4:AX:117:U:O4	1.97	0.97
47:B2:26:GLU:HG2	47:B2:27:LEU:N	1.77	0.97
41:BX:30:ASP:O	41:BX:62:LYS:CE	2.08	0.97
50:B4:5:LEU:C	50:B4:7:PRO:HD2	1.84	0.97
28:BD:129:LEU:CD2	28:BD:130:PRO:HD3	1.93	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2574:G:C2'	29:BE:240:PRO:HB3	1.95	0.97
29:BE:74:GLU:CA	29:BE:293:TYR:CD2	2.41	0.97
32:BH:34:ARG:HH12	32:BH:73:ASN:HB2	1.26	0.97
35:BO:8:LEU:HD23	35:BO:8:LEU:N	1.80	0.97
27:BA:2378:A:C4	38:BS:26:LEU:HD21	1.95	0.97
45:BU:94:VAL:C	45:BU:98:ILE:HD11	1.70	0.97
42:BY:79:LEU:HD12	42:BY:80:GLU:N	1.78	0.97
41:BX:33:SER:N	41:BX:37:VAL:HG23	1.80	0.97
2:AV:13:C:H4'	27:BA:1924:C:O2'	1.64	0.97
51:B5:33:CYS:HB3	51:B5:37:HIS:H	1.29	0.97
48:B3:40:THR:OG1	48:B3:43:ILE:CD1	2.13	0.97
53:B7:18:PHE:N	53:B7:44:VAL:CG2	2.27	0.97
27:BA:2259:G:C8	27:BA:2260:C:C5	2.52	0.97
27:BA:2497:A:O2'	27:BA:2498:C:O5'	1.81	0.97
27:BA:2554:U:H6	27:BA:2554:U:C3'	1.77	0.97
27:BA:2689:U:C4	27:BA:2713:A:N6	2.33	0.97
27:BA:2832:U:H1'	27:BA:2834:G:N2	1.79	0.97
35:BO:73:ASP:O	35:BO:75:SER:N	1.97	0.97
36:BP:77:ALA:CB	36:BP:81:VAL:HG11	1.94	0.97
37:BQ:85:ILE:CB	37:BQ:122:PHE:CD2	2.48	0.97
37:BQ:36:ASN:HB2	43:BZ:114:ASP:O	1.65	0.97
37:BQ:65:ARG:NH2	37:BQ:122:PHE:CD2	2.32	0.97
44:BR:33:ARG:CB	44:BR:115:GLU:HB3	1.95	0.97
44:BR:52:ILE:O	44:BR:54:LEU:N	1.98	0.97
44:BR:60:LEU:CG	44:BR:61:HIS:H	1.75	0.97
44:BR:67:LEU:HD13	44:BR:68:ARG:N	1.79	0.97
44:BR:84:ALA:HB3	44:BR:85:PRO:HD3	1.44	0.97
46:BV:19:VAL:HG11	46:BV:21:ARG:NH1	1.77	0.97
47:B2:13:PRO:CA	47:B2:16:ARG:HD2	1.93	0.97
47:B2:31:ARG:O	47:B2:33:VAL:C	1.89	0.97
41:BX:17:ASP:HA	41:BX:20:PHE:HE1	1.18	0.97
41:BX:24:LEU:C	41:BX:26:PHE:HE1	1.52	0.97
41:BX:28:VAL:HG11	41:BX:64:ALA:CB	1.95	0.97
1:AA:436:C:H2'	1:AA:437:U:N1	1.80	0.97
1:AA:1340:A:C2'	2:AV:31:A:O2'	2.11	0.97
27:BA:856:C:O3'	49:B0:56:ASP:OD2	1.82	0.97
27:BA:932:G:C5'	48:B3:29:ARG:HH21	1.69	0.97
48:B3:8:LEU:HD22	48:B3:31:LEU:CA	1.86	0.97
27:BA:126:A:C5	53:B7:18:PHE:CD2	2.51	0.97
53:B7:34:ARG:NH1	53:B7:42:LEU:CA	2.28	0.97
27:BA:458:G:H5'	53:B7:39:ARG:CD	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2393:A:OP2	54:B8:32:GLN:NE2	1.96	0.97
27:BA:1031:G:H4'	55:B9:8:LYS:HZ3	0.83	0.97
27:BA:2734:A:H5''	27:BA:2734:A:H8	1.27	0.97
28:BD:140:VAL:HG12	28:BD:141:HIS:H	1.23	0.97
29:BE:79:ARG:HH12	29:BE:105:HIS:N	1.61	0.97
39:BT:50:GLU:HA	39:BT:55:ALA:HB3	0.99	0.97
45:BU:49:ASP:N	45:BU:52:ASN:HD21	1.51	0.97
27:BA:30:G:P	45:BU:8:ILE:HD11	2.04	0.97
42:BY:33:GLU:OE2	42:BY:33:GLU:N	1.98	0.97
27:BA:75:G:O3'	47:B2:51:LYS:NZ	1.96	0.97
53:B7:29:ASN:O	53:B7:31:LEU:N	1.96	0.97
53:B7:3:ARG:O	53:B7:4:THR:HG23	1.64	0.97
27:BA:2445:G:C2'	27:BA:2446:G:H5'	1.94	0.97
27:BA:2520:C:O2	27:BA:2521:C:H6	1.44	0.97
27:BA:2701:C:H3'	27:BA:2702:U:H5''	1.46	0.97
27:BA:2848:G:N2	27:BA:2849:U:C2	2.23	0.97
28:BD:134:ILE:HG23	28:BD:135:PRO:HD2	1.45	0.97
30:BF:52:ALA:HB1	30:BF:55:ARG:CZ	1.94	0.97
31:BG:19:GLU:OE1	31:BG:135:VAL:CG2	2.13	0.97
37:BQ:50:VAL:HG12	37:BQ:51:GLU:N	1.75	0.97
26:BB:12:C:O2	38:BS:10:MET:SD	2.22	0.97
38:BS:89:GLY:HA3	38:BS:125:ALA:HB1	1.43	0.97
45:BU:26:GLY:O	45:BU:27:SER:HB2	1.63	0.97
45:BU:28:ARG:N	45:BU:31:GLN:CD	2.17	0.97
40:BW:36:LEU:HD22	40:BW:44:ALA:HA	1.44	0.97
43:BZ:159:THR:CG2	43:BZ:160:LEU:H	1.76	0.97
33:BI:101:SER:O	33:BI:103:GLN:N	1.98	0.97
47:B2:7:GLU:CD	47:B2:8:ILE:CG1	2.33	0.97
27:BA:1080:C:C1'	56:BK:127:ILE:HA	1.95	0.97
27:BA:1299:G:H4'	27:BA:1301:A:N3	1.79	0.97
49:B0:24:LYS:CG	49:B0:56:ASP:OD2	2.13	0.97
27:BA:849:A:H2	48:B3:21:ALA:HB1	1.14	0.97
27:BA:1807:G:H21	27:BA:1809:A:H5'	1.30	0.97
27:BA:2336:A:O2'	27:BA:2337:G:H5'	0.79	0.97
28:BD:178:GLY:O	28:BD:179:GLU:HG2	1.65	0.97
29:BE:269:ILE:N	29:BE:269:ILE:HD12	1.79	0.97
29:BE:315:VAL:O	29:BE:317:PRO:N	1.98	0.97
30:BF:197:SER:HB3	30:BF:239:ALA:N	1.74	0.97
27:BA:2250:G:N7	37:BQ:102:ARG:HA	1.80	0.97
37:BQ:17:ARG:O	37:BQ:18:GLU:HG2	1.61	0.97
39:BT:53:ASP:O	39:BT:56:ARG:NE	1.98	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:105:ALA:O	45:BU:108:ALA:HB3	1.64	0.97
46:BV:33:VAL:HB	46:BV:63:HIS:CE1	1.98	0.97
40:BW:12:ILE:O	40:BW:14:PRO:HD3	1.65	0.97
42:BY:101:LEU:HD21	42:BY:103:LEU:HD21	0.97	0.97
1:AA:1225:A:H4'	22:AS:78:ARG:HD3	1.44	0.97
1:AA:1156:G:C1'	1:AA:1179:A:H61	1.77	0.97
50:B4:40:HIS:HB3	50:B4:41:PRO:HD3	1.46	0.96
53:B7:32:ALA:HA	53:B7:35:ARG:CD	1.95	0.96
27:BA:2250:G:C5'	37:BQ:102:ARG:CD	2.43	0.96
27:BA:2262:U:O5'	49:B0:14:ARG:NH2	1.98	0.96
27:BA:2494:G:N2	27:BA:2495:G:N9	2.13	0.96
27:BA:2776:A:C4	27:BA:2778:A:N7	2.33	0.96
27:BA:2880:C:N4	27:BA:2881:C:N4	2.13	0.96
29:BE:48:MET:O	29:BE:49:THR:CG2	2.13	0.96
32:BH:42:ILE:C	32:BH:52:THR:HG21	1.86	0.96
34:BN:138:THR:OG1	34:BN:139:LEU:CD1	2.06	0.96
34:BN:50:GLU:HA	34:BN:53:ILE:CG2	1.92	0.96
36:BP:130:ARG:HA	36:BP:133:VAL:HG21	1.46	0.96
38:BS:87:LEU:O	38:BS:90:LEU:N	1.97	0.96
45:BU:44:THR:HG23	46:BV:77:GLY:O	1.63	0.96
27:BA:1152:C:H5''	45:BU:80:ILE:CG2	1.94	0.96
45:BU:8:ILE:HA	45:BU:11:ARG:CD	1.94	0.96
43:BZ:67:LYS:CD	43:BZ:93:GLU:OE2	2.12	0.96
33:BI:120:ALA:O	33:BI:121:ILE:O	1.83	0.96
42:BY:72:ILE:CG2	42:BY:73:HIS:H	1.78	0.96
43:BZ:69:VAL:HG22	43:BZ:82:ASP:H	1.30	0.96
3:AW:25:C:C2	3:AW:26:G:N3	2.31	0.96
27:BA:1827:C:H41	28:BD:225:ARG:HH12	1.03	0.96
17:AN:24:CYS:CB	17:AN:40:CYS:N	2.26	0.96
48:B3:26:LEU:HD21	48:B3:46:ASN:HB3	1.46	0.96
50:B4:10:VAL:H	50:B4:11:PRO:CD	1.77	0.96
27:BA:1786:A:H2	27:BA:2590:A:H1'	1.28	0.96
27:BA:2227:A:C2	27:BA:2228:G:C5	2.52	0.96
27:BA:2251:G:N2	27:BA:2252:G:C4	2.33	0.96
27:BA:2331:G:O3'	49:B0:70:ILE:HB	1.62	0.96
27:BA:2574:G:C4	27:BA:2575:C:C6	2.52	0.96
27:BA:2674:G:H2'	27:BA:2675:A:H8	1.14	0.96
27:BA:2720:U:OP1	27:BA:2720:U:H4'	1.62	0.96
27:BA:2758:A:OP2	27:BA:2758:A:C3'	2.12	0.96
28:BD:146:LYS:HZ2	28:BD:184:LEU:HD11	1.25	0.96
29:BE:269:ILE:HG13	29:BE:297:LYS:HG3	1.47	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:53:LYS:HG2	31:BG:54:ALA:N	1.76	0.96
31:BG:94:ALA:O	31:BG:95:THR:OG1	1.80	0.96
33:BI:5:PHE:O	33:BI:36:ALA:HB2	1.63	0.96
34:BN:23:ALA:HA	34:BN:26:VAL:HG21	1.46	0.96
36:BP:81:VAL:HG12	36:BP:81:VAL:O	1.64	0.96
27:BA:2250:G:H5"	37:BQ:102:ARG:HD3	1.42	0.96
37:BQ:50:VAL:CG1	37:BQ:51:GLU:H	1.74	0.96
38:BS:111:PRO:C	38:BS:114:LYS:N	2.19	0.96
42:BY:32:ARG:C	42:BY:33:GLU:OE2	2.03	0.96
42:BY:78:THR:C	42:BY:89:ARG:HG3	1.84	0.96
43:BZ:46:GLN:O	43:BZ:49:THR:OG1	1.83	0.96
43:BZ:71:MET:CG	43:BZ:78:PRO:CG	2.36	0.96
3:AW:25:C:C4	3:AW:26:G:C4	2.54	0.96
1:AA:1286:A:N6	1:AA:1354:C:H5"	1.79	0.96
6:AC:91:LEU:HD11	6:AC:99:VAL:HG22	1.45	0.96
51:B5:46:CYS:HB3	51:B5:47:PRO:HD2	1.47	0.96
52:B6:8:ILE:CA	52:B6:29:ARG:NH2	2.27	0.96
27:BA:1287:A:C1'	44:BR:104:ARG:NH1	2.26	0.96
27:BA:2051:A:O2'	29:BE:238:LEU:CD2	2.12	0.96
27:BA:2094:G:O6	27:BA:2196:C:C4	2.18	0.96
27:BA:2262:U:C2'	27:BA:2263:C:C5'	2.42	0.96
27:BA:2324:C:H42	27:BA:2331:G:H1	1.01	0.96
27:BA:2457:U:H2'	27:BA:2458:G:H5'	1.45	0.96
27:BA:2051:A:N6	27:BA:2614:A:C8	2.33	0.96
27:BA:2688:U:C2	27:BA:2719:G:C2	2.53	0.96
30:BF:167:ASP:O	30:BF:168:ARG:CG	2.13	0.96
27:BA:801:G:OP1	30:BF:79:ARG:CZ	2.14	0.96
35:BO:1:MET:CA	35:BO:2:ILE:HD12	1.94	0.96
38:BS:34:LEU:HD11	38:BS:103:ASP:H	1.27	0.96
38:BS:122:ALA:O	38:BS:125:ALA:HB3	1.66	0.96
38:BS:76:GLY:O	38:BS:82:TYR:CB	2.13	0.96
45:BU:56:ASP:O	45:BU:60:LEU:HG	1.65	0.96
46:BV:69:ILE:H	46:BV:91:THR:HG22	1.27	0.96
43:BZ:105:GLN:O	43:BZ:142:ASN:ND2	1.97	0.96
42:BY:71:VAL:HG12	42:BY:72:ILE:N	1.76	0.96
27:BA:1566:A:N1	28:BD:212:HIS:ND1	2.13	0.96
28:BD:216:ALA:HB1	28:BD:223:ASN:HB2	1.46	0.96
27:BA:1:G:H1	27:BA:2902:C:H41	0.96	0.96
29:BE:107:GLU:HG2	29:BE:110:ARG:NH2	1.79	0.96
1:AA:1517:G:N3	27:BA:1919:A:H4'	1.80	0.96
50:B4:33:VAL:O	50:B4:34:ASP:OD1	1.82	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2423:U:O2'	27:BA:2424:C:OP2	1.82	0.96
27:BA:2607:G:H2'	27:BA:2608:G:H5'	1.47	0.96
27:BA:2741:A:H2'	27:BA:2742:C:C6	1.99	0.96
27:BA:2745:C:H1'	32:BH:142:GLU:HG3	0.98	0.96
27:BA:2819:G:H5''	27:BA:2821:A:H61	1.16	0.96
27:BA:2836:U:C2	27:BA:2883:A:C6	2.54	0.96
27:BA:446:G:OP2	45:BU:3:ARG:CZ	2.14	0.96
27:BA:684:G:OP1	53:B7:16:HIS:CE1	2.18	0.96
27:BA:974:G:O3'	46:BV:82:ARG:NH2	1.99	0.96
28:BD:175:LEU:HD12	28:BD:179:GLU:HB2	1.42	0.96
29:BE:99:VAL:HG12	29:BE:100:TRP:H	1.26	0.96
26:BB:18:G:H3'	31:BG:149:ARG:NH1	1.80	0.96
27:BA:2406:U:H3	36:BP:55:GLN:HB3	1.23	0.96
36:BP:66:VAL:HB	36:BP:67:ARG:NE	1.79	0.96
43:BZ:91:PRO:CD	43:BZ:127:PRO:HB3	1.94	0.96
43:BZ:6:LYS:O	43:BZ:31:SER:HB2	1.66	0.96
27:BA:10:G:N2	27:BA:2629:A:C4	2.32	0.96
27:BA:2100:G:C4	27:BA:2190:G:C2	2.54	0.96
27:BA:2227:A:C2	27:BA:2228:G:C6	2.52	0.96
27:BA:2234:G:C2'	27:BA:2235:G:H5'	1.94	0.96
27:BA:2333:A:C1'	27:BA:2335:A:N3	2.29	0.96
27:BA:2472:G:C2'	27:BA:2473:U:OP1	2.14	0.96
27:BA:2538:C:O2'	27:BA:2539:C:O5'	1.81	0.96
27:BA:2567:G:H2'	27:BA:2568:C:C5	1.99	0.96
27:BA:2638:G:N2	27:BA:2778:A:N6	1.79	0.96
27:BA:2862:G:O2'	27:BA:2863:C:O4'	1.82	0.96
27:BA:2870:C:O2	27:BA:2871:C:C1'	2.13	0.96
29:BE:193:PHE:HE2	29:BE:199:ALA:CB	1.75	0.96
29:BE:206:LYS:O	29:BE:257:GLY:CA	2.12	0.96
29:BE:201:VAL:N	29:BE:266:LYS:HD2	1.77	0.96
30:BF:52:ALA:N	30:BF:55:ARG:HB3	1.81	0.96
38:BS:94:GLU:C	38:BS:94:GLU:CD	2.21	0.96
46:BV:4:ILE:HG12	46:BV:13:ARG:CA	1.96	0.96
43:BZ:116:VAL:HG23	43:BZ:169:VAL:HG21	0.96	0.96
42:BY:51:LEU:HA	42:BY:97:ARG:HH21	0.82	0.96
1:AA:1314:C:N4	22:AS:4:SER:O	1.98	0.96
33:BI:58:ALA:O	33:BI:62:LEU:HG	1.65	0.96
1:AA:652:U:H1'	1:AA:653:A:H2	1.30	0.96
27:BA:396:G:OP1	50:B4:10:VAL:HA	1.62	0.96
27:BA:14:A:C2	27:BA:2625:G:O2'	2.19	0.96
27:BA:2298:A:C4	27:BA:2321:G:N2	2.34	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2352:A:C8	27:BA:2366:A:N1	2.33	0.96
27:BA:2509:G:H2'	27:BA:2510:C:H5'	1.45	0.96
27:BA:2689:U:H1'	27:BA:2713:A:C2	1.98	0.96
27:BA:2845:G:O2'	27:BA:2846:G:H5'	0.78	0.96
27:BA:803:U:H2'	27:BA:804:A:H5'	1.48	0.96
28:BD:85:ASN:OD1	28:BD:86:ARG:CZ	2.13	0.96
29:BE:217:TRP:O	29:BE:219:VAL:HG23	1.65	0.96
30:BF:52:ALA:HA	30:BF:55:ARG:CD	1.95	0.96
31:BG:58:VAL:O	31:BG:58:VAL:HG12	1.61	0.96
31:BG:64:ARG:HB2	31:BG:67:ASP:OD2	1.66	0.96
31:BG:20:LYS:CA	31:BG:76:ARG:HB3	1.96	0.96
32:BH:82:TYR:CD2	32:BH:137:LYS:HB3	2.01	0.96
27:BA:2495:G:C4'	37:BQ:101:MET:HG3	1.95	0.96
37:BQ:88:PHE:HB2	37:BQ:90:PHE:CZ	2.00	0.96
45:BU:111:ASP:HA	45:BU:114:ARG:HD2	1.45	0.96
40:BW:96:ILE:H	40:BW:96:ILE:CD1	1.74	0.96
43:BZ:176:LEU:HD23	43:BZ:177:THR:N	1.80	0.96
28:BD:208:GLY:CA	28:BD:210:LYS:HZ1	1.64	0.96
41:BX:52:VAL:HG22	41:BX:65:VAL:O	1.66	0.96
50:B4:6:HIS:HB2	50:B4:56:VAL:HG21	1.45	0.96
52:B6:12:MET:SD	52:B6:54:LYS:CB	2.53	0.96
55:B9:25:VAL:CG1	55:B9:34:GLN:HB2	1.95	0.96
27:BA:1759:A:C8	27:BA:2696:U:O2	2.17	0.96
27:BA:2354:G:N2	49:B0:32:LYS:HE3	1.78	0.96
27:BA:2412:A:C2'	27:BA:2413:G:H5'	1.94	0.96
27:BA:2430:A:H2'	27:BA:2431:U:H5''	1.48	0.96
27:BA:2429:G:H5'	27:BA:2430:A:OP2	1.64	0.96
27:BA:2446:G:N1	27:BA:2501:C:C5	2.33	0.96
27:BA:2528:U:H5	27:BA:2530:A:C4	1.77	0.96
27:BA:2850:A:H2'	27:BA:2851:A:H8	1.29	0.96
29:BE:176:HIS:O	29:BE:179:ASP:HB2	1.64	0.96
29:BE:46:ALA:HB3	29:BE:72:VAL:C	1.78	0.96
35:BO:77:ILE:CD1	35:BO:79:PHE:HE2	1.77	0.96
44:BR:33:ARG:HB3	44:BR:115:GLU:CB	1.96	0.96
45:BU:39:LEU:O	45:BU:41:ASN:ND2	1.99	0.96
27:BA:535:C:O3'	45:BU:53:LYS:HE2	1.66	0.96
43:BZ:103:ARG:CG	43:BZ:139:THR:HG22	1.95	0.96
43:BZ:159:THR:C	43:BZ:160:LEU:HD12	1.86	0.96
1:AA:1061:G:OP1	13:AJ:59:SER:HA	1.66	0.96
31:BG:82:GLU:C	31:BG:85:GLN:HG3	1.85	0.96
27:BA:1612:C:H2'	53:B7:3:ARG:NE	1.29	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:126:A:C6	53:B7:18:PHE:CD2	2.54	0.96
27:BA:2574:G:H3'	27:BA:2575:C:H6	1.30	0.96
27:BA:2864:G:H2'	27:BA:2865:U:C6	2.01	0.96
27:BA:533:G:H1	27:BA:560:C:H42	1.13	0.96
27:BA:600:G:O2'	30:BF:109:LEU:HD11	1.65	0.96
29:BE:44:TYR:HA	29:BE:309:PRO:HD3	0.96	0.96
30:BF:217:GLU:C	30:BF:218:VAL:HG23	1.82	0.96
30:BF:223:LEU:O	30:BF:231:ARG:HD2	1.65	0.96
30:BF:196:THR:CA	30:BF:236:THR:CG2	2.42	0.96
30:BF:39:GLN:O	30:BF:40:ALA:O	1.83	0.96
30:BF:81:PRO:CB	30:BF:87:ARG:CB	2.29	0.96
32:BH:90:GLY:C	32:BH:159:LYS:HE3	1.86	0.96
33:BI:13:GLY:HA2	33:BI:15:LYS:HE3	1.44	0.96
33:BI:13:GLY:CA	33:BI:15:LYS:NZ	2.28	0.96
27:BA:1078:U:OP1	56:BK:93:LYS:CD	2.12	0.96
34:BN:103:VAL:O	34:BN:104:TYR:CD2	2.18	0.96
36:BP:128:GLY:O	36:BP:131:GLU:HB2	1.65	0.96
27:BA:957:A:OP1	37:BQ:95:GLU:HB2	1.64	0.96
46:BV:62:GLU:C	46:BV:95:ILE:CG2	2.26	0.96
42:BY:101:LEU:HD11	42:BY:112:LEU:HG	0.98	0.96
43:BZ:69:VAL:HG22	43:BZ:81:VAL:CG1	1.89	0.96
41:BX:3:ASP:O	41:BX:4:VAL:CG1	2.13	0.96
37:BQ:108:SER:O	37:BQ:109:VAL:CG1	2.12	0.96
1:AA:1311:G:C6	22:AS:2:PRO:HA	2.01	0.96
27:BA:932:G:C5'	48:B3:24:LYS:HZ3	1.77	0.96
27:BA:2815:C:C5'	51:B5:29:ASN:HD22	1.78	0.96
53:B7:43:THR:O	53:B7:45:SER:N	1.97	0.96
27:BA:593:G:N9	54:B8:3:LYS:NZ	2.12	0.96
54:B8:4:MET:HA	54:B8:5:LYS:HZ2	1.31	0.96
27:BA:2215:G:H2'	27:BA:2216:G:H8	0.79	0.96
27:BA:2352:A:N1	49:B0:30:VAL:CG1	2.25	0.96
3:AW:76:A:H8	27:BA:2421:G:N3	1.55	0.96
27:BA:2048:G:C6	27:BA:2621:A:C2	2.54	0.96
27:BA:2661:G:O2'	27:BA:2662:A:H5'	1.66	0.96
29:BE:193:PHE:CE2	29:BE:311:PHE:CD1	2.53	0.96
31:BG:142:ALA:HB2	31:BG:151:ILE:CD1	1.96	0.96
31:BG:27:ILE:C	31:BG:69:ILE:CG2	2.29	0.96
27:BA:1078:U:OP2	56:BK:93:LYS:HG3	1.66	0.96
34:BN:27:ALA:O	34:BN:29:GLN:N	1.95	0.96
35:BO:7:ARG:HE	35:BO:44:LYS:CD	1.77	0.96
46:BV:5:ILE:HG23	46:BV:39:PHE:HA	0.96	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:89:LEU:HD11	33:BI:93:ILE:CG2	1.92	0.96
34:BN:10:VAL:HB	34:BN:36:VAL:HA	0.98	0.96
41:BX:22:ASN:CA	41:BX:68:LEU:HD11	1.95	0.96
1:AA:377:G:OP1	19:AP:3:LYS:HD2	1.65	0.96
49:B0:69:PHE:O	49:B0:70:ILE:CG2	2.14	0.96
51:B5:45:ILE:CG2	51:B5:52:TYR:HD1	1.73	0.96
52:B6:40:TYR:N	52:B6:50:PHE:CE1	2.33	0.96
27:BA:594:U:H5'	54:B8:58:MET:CE	1.95	0.96
27:BA:2230:G:O2'	27:BA:2231:C:O4'	1.83	0.96
27:BA:2612:C:O2'	27:BA:2613:U:H5''	1.65	0.96
27:BA:2753:A:C8	27:BA:2754:U:C5	2.53	0.96
27:BA:2758:A:OP2	27:BA:2758:A:O4'	1.83	0.96
27:BA:2819:G:N3	27:BA:2821:A:N7	2.14	0.96
27:BA:2887:U:H2'	27:BA:2888:C:H6	1.30	0.96
28:BD:131:LEU:CD1	28:BD:171:VAL:HG22	1.93	0.96
27:BA:2578:G:C5	29:BE:237:ASN:ND2	2.34	0.96
30:BF:22:PHE:HZ	30:BF:115:LEU:HD12	1.31	0.96
30:BF:240:LEU:CD2	30:BF:243:VAL:HG21	1.95	0.96
35:BO:7:ARG:CZ	35:BO:44:LYS:HD2	1.96	0.96
35:BO:35:ILE:HA	35:BO:62:VAL:C	1.84	0.96
36:BP:112:GLY:CA	36:BP:113:GLN:NE2	2.27	0.96
37:BQ:65:ARG:HH21	37:BQ:85:ILE:HB	1.24	0.96
40:BW:104:THR:O	40:BW:105:VAL:HG12	1.62	0.96
2:AV:65:G:C3'	2:AV:66:A:OP2	2.11	0.96
27:BA:1518:C:H3'	27:BA:1519:G:H4'	1.46	0.96
53:B7:43:THR:OG1	53:B7:44:VAL:N	1.95	0.95
55:B9:14:CYS:CA	55:B9:27:CYS:HB2	1.95	0.95
27:BA:2249:U:C2	27:BA:2253:G:OP2	2.18	0.95
27:BA:712(A):A:H5'	27:BA:2713:A:H5''	1.48	0.95
27:BA:2838:G:C4	27:BA:2839:G:C8	2.54	0.95
27:BA:7:G:H5'	34:BN:6:PHE:HD2	1.28	0.95
27:BA:1817:G:OP1	28:BD:63:ILE:HD11	1.65	0.95
30:BF:6:TYR:CE2	30:BF:140:VAL:HA	2.01	0.95
35:BO:58:VAL:HG12	35:BO:59:LYS:N	1.81	0.95
36:BP:132:LYS:N	36:BP:132:LYS:HD2	1.76	0.95
36:BP:70:ASP:O	36:BP:74:THR:CG2	2.13	0.95
45:BU:44:THR:HA	45:BU:47:TYR:CD1	2.00	0.95
40:BW:11:ARG:NH2	40:BW:98:LYS:HB3	1.81	0.95
27:BA:1262:A:P	40:BW:99:ARG:HH21	1.89	0.95
33:BI:75:LEU:HD13	33:BI:76:THR:N	1.80	0.95
42:BY:101:LEU:O	42:BY:103:LEU:CG	2.13	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:28:SER:CB	42:BY:99:THR:HG23	1.95	0.95
53:B7:10:ARG:O	53:B7:14:LYS:HG3	1.64	0.95
27:BA:1223:C:C5	46:BV:87:ARG:NH2	2.34	0.95
27:BA:2094:G:N1	27:BA:2196:C:C2	2.34	0.95
27:BA:2385:C:O2	27:BA:2386:C:O4'	1.84	0.95
27:BA:2581:G:N1	27:BA:2610:C:H2'	1.80	0.95
27:BA:849:A:N3	48:B3:21:ALA:CB	2.26	0.95
28:BD:106:PRO:CA	28:BD:194:VAL:O	2.14	0.95
28:BD:151:GLY:O	28:BD:152:GLN:OE1	1.81	0.95
29:BE:99:VAL:HG12	29:BE:100:TRP:N	1.79	0.95
32:BH:84:LYS:HG3	32:BH:140:VAL:HG12	1.44	0.95
32:BH:41:THR:HB	32:BH:52:THR:CB	1.96	0.95
33:BI:7:LYS:HA	33:BI:14:LYS:CG	1.96	0.95
44:BR:105:ARG:O	44:BR:107:ASP:N	1.97	0.95
44:BR:87:TYR:HD1	44:BR:94:TYR:CD2	1.84	0.95
38:BS:24:LEU:CA	38:BS:33:ARG:HH22	1.77	0.95
42:BY:49:GLU:CG	42:BY:59:GLU:HA	1.95	0.95
42:BY:51:LEU:HD12	42:BY:97:ARG:CG	1.96	0.95
49:B0:46:LYS:HZ3	49:B0:81:ILE:HD11	1.32	0.95
27:BA:469:G:H1	53:B7:40:HIS:HE2	1.12	0.95
54:B8:26:LYS:HD2	54:B8:44:LYS:HA	0.98	0.95
27:BA:2199:A:H3'	27:BA:2205:C:H6	1.27	0.95
27:BA:2324:C:N4	27:BA:2331:G:H1	1.64	0.95
27:BA:2400:G:O3'	52:B6:20:PHE:CZ	2.19	0.95
27:BA:1783:A:N1	27:BA:2587:A:H2	1.64	0.95
27:BA:2698:U:H2'	27:BA:2699:C:C6	2.01	0.95
27:BA:2845:G:C2'	27:BA:2846:G:H5'	1.95	0.95
27:BA:2850:A:C2	44:BR:61:HIS:HE1	1.74	0.95
29:BE:176:HIS:O	29:BE:179:ASP:CB	2.14	0.95
30:BF:32:GLY:HA2	30:BF:35:VAL:HG21	0.98	0.95
27:BA:2310:A:C4	31:BG:55:LYS:NZ	2.35	0.95
35:BO:25:LEU:HD12	35:BO:38:VAL:CG1	1.96	0.95
37:BQ:33:MET:CE	37:BQ:34:GLY:O	2.14	0.95
44:BR:87:TYR:CD1	44:BR:94:TYR:CD2	2.53	0.95
38:BS:19:ASP:O	38:BS:21:HIS:N	1.98	0.95
40:BW:8:ARG:HD2	40:BW:9:TYR:CD1	2.00	0.95
47:B2:7:GLU:OE1	47:B2:8:ILE:CG1	2.14	0.95
49:B0:38:VAL:O	49:B0:40:GLN:CG	1.97	0.95
50:B4:58:LYS:HG2	50:B4:62:ARG:NE	1.80	0.95
27:BA:2309:A:H5''	27:BA:2310:A:H8	1.21	0.95
27:BA:2649:U:H2'	27:BA:2650:U:C6	2.01	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2785:C:O2	29:BE:100:TRP:NE1	1.98	0.95
31:BG:49:PRO:HB2	31:BG:72:LYS:N	1.79	0.95
32:BH:101:LYS:HG3	32:BH:115:GLU:CA	1.96	0.95
34:BN:139:LEU:N	34:BN:139:LEU:HD13	1.79	0.95
36:BP:92:ASP:HB2	36:BP:118:LEU:HD13	1.46	0.95
37:BQ:85:ILE:HG23	37:BQ:122:PHE:HB3	1.46	0.95
46:BV:43:GLU:O	46:BV:44:GLN:NE2	1.99	0.95
27:BA:1789:A:O3'	28:BD:224:VAL:HG13	1.67	0.95
27:BA:68:G:H2'	27:BA:69:C:H6	1.30	0.95
27:BA:2446:G:N2	27:BA:2501:C:N4	2.15	0.95
27:BA:2531:A:C2'	27:BA:2532:G:H5'	1.93	0.95
27:BA:1669:A:O3'	27:BA:2550:G:OP1	1.85	0.95
27:BA:2579:C:C6	27:BA:2579:C:C4'	2.50	0.95
27:BA:2623:G:O2'	27:BA:2825:C:O2'	1.78	0.95
27:BA:2785:C:C4'	29:BE:99:VAL:CA	2.10	0.95
27:BA:2808:U:N3	27:BA:2892:A:C6	2.31	0.95
28:BD:167:GLU:O	28:BD:170:TYR:O	1.84	0.95
28:BD:146:LYS:NZ	28:BD:184:LEU:CD1	2.29	0.95
29:BE:229:GLN:C	29:BE:231:TRP:N	2.12	0.95
31:BG:93:LEU:HD12	31:BG:94:ALA:N	1.80	0.95
32:BH:104:LEU:HB3	32:BH:151:ARG:NH1	1.80	0.95
36:BP:94:ARG:CB	36:BP:120:LEU:HD23	1.79	0.95
36:BP:141:GLU:HB2	36:BP:145:LEU:CD2	1.96	0.95
37:BQ:143:VAL:O	37:BQ:144:THR:CG2	2.14	0.95
37:BQ:58:HIS:N	37:BQ:61:LEU:HD11	1.81	0.95
40:BW:39:THR:HA	51:B5:28:PRO:HG3	1.48	0.95
27:BA:25:U:C5'	40:BW:79:GLY:HA3	1.94	0.95
42:BY:63:ILE:HD11	42:BY:74:VAL:C	1.85	0.95
28:BD:213:LYS:C	28:BD:215:LYS:H	1.59	0.95
1:AA:1517:G:H1'	27:BA:1919:A:H5''	1.46	0.95
1:AA:1182:G:O2'	1:AA:1183:A:OP2	1.71	0.95
50:B4:14:ILE:O	50:B4:14:ILE:HG22	1.67	0.95
50:B4:23:GLU:OE2	50:B4:29:PRO:HG3	1.66	0.95
27:BA:2232:U:C2'	27:BA:2233:U:H5'	1.97	0.95
27:BA:2268:A:C4'	27:BA:2269:A:OP2	2.14	0.95
27:BA:2300:G:O2'	27:BA:2301:C:H5'	1.65	0.95
27:BA:2488:A:H2'	27:BA:2489:G:O5'	1.66	0.95
27:BA:2544:G:C2'	27:BA:2545:G:H5'	1.95	0.95
27:BA:2581:G:C2	27:BA:2610:C:C6	2.54	0.95
27:BA:2617:C:O2	27:BA:2618:G:O4'	1.84	0.95
27:BA:932:G:C4'	48:B3:24:LYS:HZ3	1.78	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:60:HIS:HA	32:BH:63:LEU:HB2	1.46	0.95
27:BA:2250:G:H5''	37:BQ:102:ARG:CG	1.97	0.95
37:BQ:87:LYS:O	37:BQ:88:PHE:HD2	1.46	0.95
27:BA:1287:A:N9	44:BR:104:ARG:NH1	2.14	0.95
45:BU:15:LYS:O	45:BU:16:LYS:O	1.82	0.95
27:BA:446:G:C3'	45:BU:5:LYS:HZ1	1.78	0.95
43:BZ:91:PRO:CG	43:BZ:127:PRO:HB3	1.95	0.95
33:BI:77:VAL:HG23	33:BI:141:LEU:HD11	0.99	0.95
42:BY:53:GLY:O	42:BY:56:ALA:N	2.00	0.95
42:BY:63:ILE:HG12	42:BY:75:GLU:OE2	1.64	0.95
43:BZ:13:LYS:C	43:BZ:15:ASP:H	1.65	0.95
43:BZ:26:LYS:C	43:BZ:27:GLU:HG3	1.86	0.95
47:B2:34:GLN:N	47:B2:34:GLN:OE1	2.00	0.95
41:BX:25:GLN:CD	41:BX:65:VAL:HG22	1.87	0.95
41:BX:47:VAL:HB	41:BX:69:SER:CB	1.96	0.95
27:BA:2261:C:P	49:B0:14:ARG:HG2	2.07	0.95
48:B3:23:LEU:C	48:B3:28:LEU:HD12	1.85	0.95
27:BA:1312:U:HO2'	27:BA:1314:C:H5	1.13	0.95
27:BA:2236:C:C3'	27:BA:2237:G:H5'	1.97	0.95
27:BA:2326:C:H2'	27:BA:2326:C:O2	1.61	0.95
27:BA:2565:A:O3'	27:BA:2566:A:O4'	1.85	0.95
27:BA:2782:G:OP2	27:BA:2782:G:N7	2.00	0.95
27:BA:6:A:O2'	34:BN:6:PHE:HD2	1.48	0.95
30:BF:34:ALA:O	30:BF:35:VAL:O	1.84	0.95
31:BG:100:ASP:O	31:BG:102:GLY:N	1.99	0.95
31:BG:19:GLU:CG	31:BG:135:VAL:HG22	1.96	0.95
33:BI:7:LYS:N	33:BI:14:LYS:HG2	1.38	0.95
34:BN:54:VAL:HG13	34:BN:135:ILE:HA	1.47	0.95
35:BO:66:LYS:NZ	35:BO:67:ARG:CD	2.19	0.95
37:BQ:145:PRO:C	37:BQ:146:THR:HG1	1.68	0.95
27:BA:875:G:OP1	43:BZ:146:HIS:CD2	2.20	0.95
43:BZ:112:LEU:HA	43:BZ:174:PRO:HD2	1.48	0.95
42:BY:78:THR:HB	42:BY:87:VAL:O	1.66	0.95
47:B2:20:LEU:C	47:B2:20:LEU:CD1	2.35	0.95
50:B4:48:ARG:HG2	50:B4:49:PHE:N	1.79	0.95
27:BA:2795:G:H2'	27:BA:2795:G:N3	1.80	0.95
53:B7:43:THR:O	53:B7:46:ASP:CG	2.05	0.95
54:B8:58:MET:SD	54:B8:61:MET:CG	2.55	0.95
27:BA:1568:G:P	28:BD:60:GLN:CG	2.31	0.95
27:BA:1993:U:O2'	29:BE:224:GLY:HA3	1.65	0.95
27:BA:2543:G:N7	27:BA:2544:G:O6	1.99	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2574:G:C5	27:BA:2575:C:H5	1.46	0.95
27:BA:2691:C:O2'	27:BA:2692:C:C5'	2.15	0.95
27:BA:2712:U:H5''	27:BA:2714:G:O5'	1.64	0.95
28:BD:174:ARG:CG	28:BD:174:ARG:HH11	1.80	0.95
31:BG:142:ALA:CB	31:BG:151:ILE:CD1	2.44	0.95
32:BH:166:GLU:O	32:BH:167:LEU:HD23	1.46	0.95
38:BS:31:LYS:HZ2	38:BS:99:GLU:HB3	1.30	0.95
27:BA:139:G:H3'	27:BA:141(A):C:O2	1.66	0.95
27:BA:144:C:C5'	41:BX:36:GLU:CD	2.34	0.95
3:AW:1:G:H22	3:AW:2:C:N4	1.65	0.95
27:BA:440:G:OP2	42:BY:3:GLN:OE1	1.85	0.95
27:BA:2219:G:O2'	27:BA:2224:G:OP1	1.83	0.95
27:BA:2406:U:H3	36:BP:55:GLN:CG	1.78	0.95
27:BA:2405:G:N2	27:BA:2413:G:O6	2.00	0.95
27:BA:2422:A:C4	27:BA:2424:C:H5	1.84	0.95
27:BA:2066:C:N3	27:BA:2445:G:N2	2.14	0.95
28:BD:103:ILE:HD11	28:BD:104:ILE:HD11	1.48	0.95
29:BE:70:VAL:HG11	29:BE:296:VAL:H	0.95	0.95
30:BF:24:THR:HB	30:BF:25:PRO:HD3	1.46	0.95
30:BF:94:THR:C	30:BF:96:LYS:H	1.70	0.95
31:BG:49:PRO:HB3	31:BG:72:LYS:O	0.78	0.95
32:BH:55:SER:HB3	32:BH:60:HIS:HB2	1.45	0.95
27:BA:142(A):A:C4'	34:BN:21:ARG:NH2	2.29	0.95
27:BA:244:A:O2'	36:BP:56:LYS:HA	1.64	0.95
36:BP:64:ILE:CD1	36:BP:106:VAL:HG12	1.97	0.95
36:BP:77:ALA:N	36:BP:81:VAL:CG2	2.24	0.95
37:BQ:94:ARG:HD3	37:BQ:106:GLY:HA2	0.96	0.95
40:BW:41:LYS:O	40:BW:42:ARG:O	1.84	0.95
42:BY:43:ASN:ND2	42:BY:103:LEU:HD21	1.81	0.95
43:BZ:71:MET:HA	43:BZ:78:PRO:HA	1.48	0.95
27:BA:1544:C:H2'	27:BA:1545:A:H4'	1.48	0.95
16:AM:122:LYS:HD2	25:AY:153:GLY:CA	1.97	0.95
2:AV:56:C:H1'	31:BG:56:ARG:NE	1.81	0.95
48:B3:59:VAL:HG12	48:B3:60:GLU:N	1.77	0.95
27:BA:2045:C:O2	51:B5:22:HIS:CE1	2.20	0.95
52:B6:29:ARG:HG2	52:B6:30:ASN:N	1.80	0.95
52:B6:8:ILE:HA	52:B6:29:ARG:HE	1.28	0.95
27:BA:2209:C:C2'	27:BA:2210:G:C3'	2.32	0.95
27:BA:2412:A:H2'	27:BA:2413:G:H5'	1.49	0.95
27:BA:2432:A:C2	27:BA:2433:A:C5	2.47	0.95
27:BA:1953:A:N3	27:BA:2560:C:H1'	1.81	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2648:C:C2'	27:BA:2649:U:H5'	1.96	0.95
27:BA:2684:U:H1'	35:BO:70:ARG:HH22	1.26	0.95
27:BA:831:G:H3'	27:BA:944:G:N2	1.80	0.95
29:BE:189:MET:O	29:BE:190:ASN:CG	2.06	0.95
30:BF:113:SER:O	30:BF:116:ALA:HB3	1.66	0.95
30:BF:243:VAL:O	30:BF:246:ARG:CA	2.15	0.95
31:BG:103:ASN:C	31:BG:104:PHE:CD1	2.41	0.95
32:BH:101:LYS:CE	32:BH:115:GLU:CB	2.45	0.95
33:BI:43:ASN:N	33:BI:43:ASN:HD22	1.50	0.95
35:BO:66:LYS:HD2	35:BO:66:LYS:C	1.84	0.95
27:BA:1665:A:C2'	35:BO:66:LYS:HZ1	1.75	0.95
27:BA:2378:A:C4	38:BS:26:LEU:HD23	1.96	0.95
46:BV:14:VAL:HG12	46:BV:15:SER:H	1.32	0.95
46:BV:30:GLY:C	46:BV:33:VAL:HG23	1.75	0.95
42:BY:33:GLU:CD	42:BY:34:GLU:H	1.69	0.95
42:BY:72:ILE:HG22	42:BY:73:HIS:N	1.72	0.95
1:AA:1320:C:C2	22:AS:72:GLY:CA	2.49	0.95
28:BD:61:TYR:OH	28:BD:214:MET:HE1	1.67	0.95
29:BE:107:GLU:CB	29:BE:110:ARG:NE	2.28	0.95
50:B4:48:ARG:HG2	50:B4:49:PHE:H	1.30	0.95
41:BX:47:VAL:HG11	41:BX:69:SER:CB	1.90	0.95
27:BA:2896:C:C6	27:BA:2896:C:H3'	2.02	0.95
27:BA:2670:A:H5''	27:BA:2670:A:H8	1.30	0.95
1:AA:1237:C:O3'	1:AA:1238:A:P	2.25	0.95
27:BA:380:U:HO2'	50:B4:15:ILE:HB	1.31	0.94
27:BA:2236:C:H2'	27:BA:2237:G:C5'	1.96	0.94
27:BA:2313:C:N4	27:BA:2314:C:N4	2.14	0.94
27:BA:2488:A:C2'	27:BA:2489:G:C5'	2.39	0.94
27:BA:2527:C:O3'	55:B9:30:VAL:CG1	2.15	0.94
27:BA:2574:G:N9	27:BA:2575:C:C5	2.33	0.94
27:BA:2578:G:C2'	27:BA:2579:C:O5'	2.15	0.94
27:BA:2631:G:C5	27:BA:2632:A:C8	2.54	0.94
28:BD:80:ILE:HD13	28:BD:82:TYR:HE1	1.23	0.94
31:BG:151:ILE:HD13	31:BG:156:ARG:HH22	1.31	0.94
32:BH:10:ILE:HD11	32:BH:49:ILE:HG13	1.48	0.94
32:BH:143:LEU:CD2	32:BH:144:ALA:N	2.19	0.94
38:BS:17:ARG:HH11	38:BS:18:THR:HA	1.31	0.94
45:BU:28:ARG:N	45:BU:31:GLN:CG	2.30	0.94
45:BU:56:ASP:O	45:BU:60:LEU:CG	2.15	0.94
43:BZ:172:LEU:CG	43:BZ:173:PRO:CD	2.39	0.94
33:BI:80:PRO:HB3	33:BI:146:THR:CG2	1.96	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:45:GLY:CA	42:BY:62:VAL:HG12	1.90	0.94
47:B2:51:LYS:O	47:B2:52:ALA:C	2.04	0.94
41:BX:68:LEU:N	41:BX:68:LEU:HD23	1.79	0.94
33:BI:63:ALA:O	33:BI:67:LYS:HG2	1.67	0.94
39:BT:49:LEU:C	39:BT:49:LEU:HD23	1.87	0.94
27:BA:2331:G:HO2'	49:B0:70:ILE:HG21	1.13	0.94
27:BA:1077:A:N3	56:BK:134:SER:OG	1.98	0.94
27:BA:17:G:OP1	51:B5:13:LYS:NZ	2.00	0.94
27:BA:2415:G:N2	27:BA:2416:C:H1'	1.81	0.94
27:BA:2521:C:N3	27:BA:2522:U:C6	2.35	0.94
27:BA:2678:C:O2	27:BA:2679:A:O4'	1.82	0.94
27:BA:2804:C:C5	27:BA:2805:G:N1	2.34	0.94
27:BA:2826:A:N7	27:BA:2827:C:H5	1.65	0.94
27:BA:2888:C:O2	27:BA:2889:C:C6	2.20	0.94
27:BA:965:C:O2'	27:BA:2272:U:H6	1.38	0.94
32:BH:55:SER:O	32:BH:57:GLU:HG2	1.67	0.94
32:BH:93:TYR:C	32:BH:94:ARG:HG3	1.83	0.94
34:BN:134:GLU:C	34:BN:138:THR:HG23	1.87	0.94
43:BZ:112:LEU:CD1	43:BZ:142:ASN:HA	1.97	0.94
43:BZ:123:VAL:HB	43:BZ:159:THR:CG2	1.96	0.94
42:BY:30:ASP:CG	42:BY:31:LEU:HD23	1.87	0.94
39:BT:49:LEU:HD23	39:BT:49:LEU:O	1.65	0.94
25:AY:225:SER:CA	27:BA:2554:U:H3	1.80	0.94
53:B7:31:LEU:HD23	53:B7:31:LEU:N	1.77	0.94
27:BA:242:G:H3'	54:B8:5:LYS:HZ3	0.79	0.94
27:BA:1129:A:C2	27:BA:2570:G:O4'	2.20	0.94
27:BA:2249:U:N3	27:BA:2253:G:P	2.39	0.94
27:BA:2517:C:C2	27:BA:2542:A:N6	2.34	0.94
27:BA:2652:C:O2'	27:BA:2653:U:H5'	1.66	0.94
27:BA:2832:U:H6	27:BA:2832:U:C5'	1.58	0.94
27:BA:592:G:C2'	54:B8:3:LYS:HE3	1.96	0.94
27:BA:1818:U:C5'	28:BD:155:ARG:HB2	1.96	0.94
34:BN:136:SER:O	34:BN:138:THR:N	2.00	0.94
43:BZ:113:VAL:HG12	43:BZ:114:ASP:N	1.82	0.94
33:BI:89:LEU:HD13	33:BI:93:ILE:HG22	1.47	0.94
27:BA:749:C:H2'	27:BA:750:A:C8	2.00	0.94
27:BA:1620:G:H1'	53:B7:1:MET:N	1.81	0.94
48:B3:8:LEU:CD2	48:B3:31:LEU:C	2.33	0.94
40:BW:19:LEU:CD1	51:B5:25:LEU:CD2	2.43	0.94
52:B6:32:GLN:CG	52:B6:35:LEU:HD12	1.96	0.94
52:B6:8:ILE:H	52:B6:8:ILE:HD13	1.32	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1181:C:HO2'	27:BA:1182:A:H8	1.05	0.94
27:BA:193:U:H2'	27:BA:194:G:H8	1.32	0.94
26:BB:29:A:OP1	38:BS:39:SER:O	1.84	0.94
28:BD:194:VAL:HG23	28:BD:195:GLY:H	1.30	0.94
33:BI:7:LYS:CA	33:BI:12:LYS:O	2.11	0.94
35:BO:47:THR:HB	35:BO:48:PRO:CD	1.97	0.94
27:BA:2406:U:H1'	36:BP:57:VAL:CG2	1.97	0.94
45:BU:99:ALA:CB	45:BU:106:PHE:CE1	2.28	0.94
33:BI:68:LEU:HD11	33:BI:108:LEU:CD2	1.97	0.94
42:BY:28:SER:CB	42:BY:99:THR:CG2	2.44	0.94
42:BY:53:GLY:O	42:BY:55:PHE:N	2.00	0.94
42:BY:78:THR:CA	42:BY:89:ARG:CG	2.44	0.94
43:BZ:35:ASP:N	43:BZ:39:PHE:CE2	2.34	0.94
39:BT:42:LEU:C	39:BT:44:ARG:N	2.21	0.94
51:B5:18:MET:O	51:B5:21:SER:HB3	1.65	0.94
27:BA:2254:C:O2'	27:BA:2255:G:C5'	2.14	0.94
27:BA:2450:A:C2	27:BA:2451:A:C4	2.55	0.94
27:BA:2487:G:O2'	27:BA:2488:A:H5'	1.68	0.94
27:BA:2693:A:N1	27:BA:2694:G:C6	2.36	0.94
27:BA:2825:C:H6	27:BA:2825:C:C5'	1.80	0.94
30:BF:220:THR:CA	30:BF:224:ALA:HB2	1.97	0.94
32:BH:120:LEU:CD1	32:BH:143:LEU:HD12	1.97	0.94
42:BY:55:PHE:CE2	42:BY:89:ARG:NH2	2.35	0.94
1:AA:1319:A:C3'	22:AS:70:LYS:NZ	2.28	0.94
49:B0:41:ARG:H	49:B0:67:VAL:HG22	1.33	0.94
27:BA:2306:C:H42	31:BG:53:LYS:HZ2	1.03	0.94
27:BA:2346:A:H1'	27:BA:2383:G:C8	2.03	0.94
27:BA:2574:G:H2'	27:BA:2575:C:C6	2.02	0.94
27:BA:2642:G:C2'	27:BA:2643:G:H5'	1.95	0.94
27:BA:2740:A:H8	27:BA:2740:A:H5'	1.31	0.94
27:BA:527:C:H5"	27:BA:2779:U:O2	1.67	0.94
27:BA:495:G:H21	40:BW:61:ASN:ND2	1.65	0.94
29:BE:203:GLY:HA3	29:BE:303:PRO:CD	1.97	0.94
27:BA:2731:G:OP1	29:BE:265:ASN:CB	2.16	0.94
32:BH:101:LYS:CG	32:BH:115:GLU:HB2	1.97	0.94
36:BP:92:ASP:HB3	36:BP:118:LEU:HD13	0.95	0.94
37:BQ:58:HIS:O	37:BQ:61:LEU:N	2.00	0.94
37:BQ:88:PHE:HB2	37:BQ:90:PHE:HE1	1.18	0.94
44:BR:77:ARG:HB2	44:BR:77:ARG:HH12	1.33	0.94
45:BU:115:ASN:O	45:BU:116:ALA:C	2.03	0.94
45:BU:8:ILE:H	45:BU:11:ARG:HH11	1.05	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:4:ILE:CD1	46:BV:13:ARG:CG	2.44	0.94
46:BV:30:GLY:O	46:BV:31:ASP:O	1.85	0.94
43:BZ:118:HIS:O	43:BZ:120:LEU:HD23	1.66	0.94
33:BI:95:SER:HB2	33:BI:98:ILE:HD11	1.44	0.94
43:BZ:39:PHE:N	43:BZ:39:PHE:HD2	1.66	0.94
41:BX:14:ALA:HA	41:BX:17:ASP:OD2	1.68	0.94
1:AA:576:G:N7	1:AA:881:G:H1'	1.82	0.94
11:AH:21:LYS:O	11:AH:63:LEU:HD11	1.67	0.94
49:B0:41:ARG:H	49:B0:67:VAL:CG2	1.80	0.94
48:B3:26:LEU:HD12	48:B3:28:LEU:HD11	1.48	0.94
27:BA:2278:A:H4'	37:BQ:19:TYR:HB3	1.48	0.94
27:BA:2331:G:N7	27:BA:2332:U:C4	2.36	0.94
27:BA:2509:G:O2'	27:BA:2510:C:C5'	2.15	0.94
27:BA:2537:U:H2'	27:BA:2538:C:H6	1.32	0.94
27:BA:2543:G:N7	27:BA:2544:G:C6	2.36	0.94
27:BA:1129:A:N1	27:BA:2570:G:O4'	1.99	0.94
27:BA:2617:C:H2'	27:BA:2618:G:H5'	0.95	0.94
27:BA:2617:C:C2	27:BA:2618:G:H8	1.84	0.94
28:BD:66:PHE:C	28:BD:67:LYS:HD2	1.86	0.94
29:BE:211:GLN:C	29:BE:216:ARG:CD	2.28	0.94
30:BF:111:VAL:O	30:BF:114:ALA:CB	2.14	0.94
31:BG:102:GLY:HA2	31:BG:134:LEU:HD12	1.49	0.94
34:BN:77:GLY:HA2	34:BN:80:LYS:HG3	1.44	0.94
27:BA:1665:A:C5'	35:BO:66:LYS:HD3	1.96	0.94
35:BO:98:ILE:HG22	35:BO:99:PHE:N	1.80	0.94
37:BQ:65:ARG:O	37:BQ:68:ALA:CB	2.15	0.94
44:BR:20:LEU:HD11	44:BR:21:TYR:HD2	1.17	0.94
44:BR:22:ARG:CG	44:BR:26:LYS:HE3	1.97	0.94
40:BW:8:ARG:HG2	40:BW:9:TYR:H	1.30	0.94
28:BD:213:LYS:HG2	28:BD:215:LYS:O	1.68	0.94
50:B4:23:GLU:OE2	50:B4:29:PRO:CG	2.14	0.94
50:B4:2:GLN:O	50:B4:3:LYS:HG3	1.66	0.94
27:BA:1666:G:O2'	35:BO:6:SER:HB3	1.65	0.94
27:BA:199:A:N1	27:BA:2433:A:C8	2.36	0.94
27:BA:2364:C:O2'	27:BA:2365:G:H5'	1.68	0.94
27:BA:2439:A:N3	27:BA:2439:A:H2'	1.81	0.94
27:BA:2049:G:N2	27:BA:2620:C:C2	2.36	0.94
27:BA:2689:U:C4'	27:BA:2690:C:H5'	1.98	0.94
27:BA:2776:A:N3	27:BA:2778:A:N7	2.16	0.94
27:BA:932:G:H5''	48:B3:29:ARG:HH22	1.32	0.94
28:BD:143:ILE:HD12	28:BD:143:ILE:N	1.82	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:146:LYS:HZ1	28:BD:184:LEU:HD11	1.14	0.94
30:BF:115:LEU:HG	30:BF:246:ARG:HH22	1.15	0.94
33:BI:7:LYS:HG3	33:BI:12:LYS:CB	1.97	0.94
34:BN:58:GLU:HG2	34:BN:61:VAL:HG21	1.50	0.94
37:BQ:87:LYS:C	37:BQ:88:PHE:CG	2.37	0.94
37:BQ:89:PRO:O	37:BQ:90:PHE:CG	2.21	0.94
44:BR:36:THR:HG23	44:BR:40:LYS:HD2	1.46	0.94
44:BR:38:VAL:HG11	44:BR:39:PRO:HD3	1.45	0.94
38:BS:83:LEU:N	38:BS:83:LEU:HD12	1.77	0.94
45:BU:110:VAL:O	45:BU:113:SER:OG	1.84	0.94
27:BA:2010:G:P	40:BW:41:LYS:HG3	2.08	0.94
40:BW:67:ASP:OD1	40:BW:68:ARG:N	1.99	0.94
52:B6:37:LEU:HD23	52:B6:51:ARG:CA	1.95	0.94
52:B6:21:TYR:CZ	52:B6:43:VAL:CG2	2.47	0.94
54:B8:9:MET:O	54:B8:12:ARG:O	1.86	0.94
27:BA:593:G:H5''	54:B8:62:LEU:HD21	1.44	0.94
27:BA:1140:C:H5	34:BN:49:ARG:HG3	1.19	0.94
27:BA:1287:A:C8	44:BR:104:ARG:NH1	2.35	0.94
27:BA:2048:G:N1	27:BA:2621:A:C2	2.36	0.94
27:BA:2416:C:C2'	27:BA:2417:C:H5''	1.98	0.94
27:BA:2804:C:H5	27:BA:2805:G:C6	1.84	0.94
29:BE:233:ARG:O	29:BE:234:ARG:HG3	0.77	0.94
29:BE:269:ILE:HG13	29:BE:297:LYS:CG	1.98	0.94
30:BF:48:SER:H	30:BF:92:PRO:HG2	1.21	0.94
31:BG:27:ILE:O	31:BG:29:HIS:N	2.00	0.94
34:BN:90:LYS:HD2	34:BN:90:LYS:O	1.68	0.94
35:BO:35:ILE:CD1	35:BO:65:THR:HG21	1.95	0.94
37:BQ:41:THR:CG2	37:BQ:125:TRP:CE3	2.51	0.94
37:BQ:31:PHE:CA	37:BQ:85:ILE:HD11	1.98	0.94
44:BR:52:ILE:CG2	44:BR:53:HIS:N	2.26	0.94
38:BS:31:LYS:CD	38:BS:99:GLU:CB	2.42	0.94
45:BU:61:TRP:HZ3	45:BU:94:VAL:H	0.99	0.94
45:BU:59:ARG:O	45:BU:62:ILE:CG1	2.15	0.94
42:BY:28:SER:OG	42:BY:30:ASP:OD1	1.84	0.94
42:BY:73:HIS:HD2	42:BY:88:PRO:HB2	1.31	0.94
42:BY:73:HIS:CA	42:BY:91:LEU:CG	2.33	0.94
3:AW:25:C:N4	3:AW:26:G:C2	2.33	0.94
27:BA:1080:C:H4'	56:BK:126:LYS:C	1.87	0.94
1:AA:1289:A:H2	1:AA:1372:U:H4'	1.30	0.94
1:AA:953:G:O2'	16:AM:125:ARG:CA	2.14	0.94
32:BH:168:VAL:C	32:BH:169:ARG:HG2	1.88	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AJ:45:ARG:HH21	17:AN:36:PHE:HE2	1.14	0.94
13:AJ:64:GLU:HB3	17:AN:59:ALA:HB2	1.49	0.94
27:BA:2755:C:H6	27:BA:2755:C:C5'	1.80	0.94
52:B6:12:MET:O	52:B6:25:THR:OG1	1.86	0.94
53:B7:31:LEU:HD23	53:B7:31:LEU:H	1.33	0.94
27:BA:1140:C:C5	34:BN:49:ARG:CD	2.51	0.94
27:BA:142(A):A:H4'	34:BN:21:ARG:HH22	1.15	0.94
27:BA:2196:C:C5'	27:BA:2197:U:OP2	2.10	0.94
27:BA:2567:G:C2	27:BA:2568:C:C4	2.56	0.94
27:BA:2820:A:N3	27:BA:2820:A:C5'	2.29	0.94
28:BD:130:PRO:N	28:BD:188:ARG:HG2	1.83	0.94
29:BE:211:GLN:H	29:BE:216:ARG:NE	1.66	0.94
30:BF:59:GLU:HB2	30:BF:61:PHE:HE2	0.81	0.94
26:BB:59:A:OP1	31:BG:141:VAL:HG21	1.68	0.94
43:BZ:130:ILE:CD1	43:BZ:130:ILE:O	2.15	0.94
42:BY:101:LEU:HD21	42:BY:112:LEU:HD21	0.96	0.94
27:BA:104:U:C4	42:BY:17:HIS:HE1	1.79	0.94
42:BY:73:HIS:HA	42:BY:91:LEU:CD2	1.98	0.94
41:BX:25:GLN:HE22	41:BX:65:VAL:HG13	1.32	0.94
27:BA:1059:G:H21	56:BK:131:THR:HG23	1.29	0.94
49:B0:7:VAL:O	49:B0:7:VAL:HG12	1.67	0.94
27:BA:1140:C:OP1	34:BN:18:ILE:CD1	2.16	0.94
27:BA:1262:A:C2	51:B5:10:LYS:HE2	2.03	0.94
27:BA:2332:U:H1'	27:BA:2336:A:H62	1.21	0.94
27:BA:2415:G:H21	27:BA:2416:C:C1'	1.81	0.94
27:BA:2592:G:C5	27:BA:2593:U:C6	2.56	0.94
27:BA:2880:C:H2'	27:BA:2881:C:H5'	0.96	0.94
31:BG:74:THR:O	31:BG:75:LEU:HG	1.68	0.94
32:BH:40:MET:CG	32:BH:64:HIS:CE1	2.51	0.94
36:BP:69:ILE:O	36:BP:71:GLU:N	2.01	0.94
36:BP:73:VAL:HG13	36:BP:76:LEU:CD2	1.97	0.94
44:BR:38:VAL:HG12	44:BR:39:PRO:N	1.72	0.94
27:BA:566:U:OP2	46:BV:81:ARG:NE	2.00	0.94
40:BW:13:SER:O	40:BW:17:VAL:HG23	1.66	0.94
27:BA:904:C:C1'	43:BZ:166:LEU:HD21	1.97	0.94
43:BZ:37:LYS:O	43:BZ:41:ARG:CZ	2.14	0.94
47:B2:8:ILE:HA	47:B2:11:MET:CG	1.98	0.94
48:B3:11:SER:OG	48:B3:13:ILE:HG12	1.68	0.93
27:BA:2021:C:OP2	51:B5:15:LYS:HE2	1.68	0.93
27:BA:126:A:C8	53:B7:18:PHE:CE1	2.56	0.93
27:BA:1646:C:H3'	27:BA:1647:G:C5'	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2195:C:O5'	27:BA:2195:C:C6	2.21	0.93
27:BA:2605:U:O2	27:BA:2606:C:H5	1.51	0.93
27:BA:2781:A:H5''	27:BA:2782:G:H5'	1.47	0.93
27:BA:2869:G:C2'	27:BA:2870:C:H5'	1.98	0.93
29:BE:80:ALA:HB2	29:BE:187:HIS:CD2	2.03	0.93
32:BH:120:LEU:CA	32:BH:121:GLU:OE1	2.16	0.93
33:BI:5:PHE:O	33:BI:36:ALA:HB1	1.67	0.93
34:BN:50:GLU:CA	34:BN:53:ILE:CG2	2.36	0.93
35:BO:77:ILE:HD13	35:BO:78:ARG:H	1.28	0.93
36:BP:68:GLU:O	36:BP:71:GLU:HG3	1.67	0.93
37:BQ:127:ASN:CB	37:BQ:128:PRO:HD3	1.97	0.93
33:BI:68:LEU:HD22	33:BI:108:LEU:HD13	1.47	0.93
42:BY:101:LEU:CD1	42:BY:112:LEU:CG	2.41	0.93
28:BD:208:GLY:N	28:BD:211:HIS:NE2	2.16	0.93
41:BX:6:LYS:CE	41:BX:29:ASP:N	2.31	0.93
31:BG:82:GLU:O	31:BG:85:GLN:CD	2.07	0.93
50:B4:7:PRO:O	50:B4:8:LYS:HB2	1.68	0.93
52:B6:14:SER:CB	52:B6:51:ARG:O	2.16	0.93
27:BA:2333:A:C1'	27:BA:2335:A:C2	2.50	0.93
27:BA:2468:G:C8	27:BA:2476:A:N1	2.35	0.93
27:BA:2717:G:N1	27:BA:2718:G:N7	2.16	0.93
27:BA:2741:A:HO2'	27:BA:2742:C:H5'	1.29	0.93
27:BA:527:C:C6	27:BA:2779:U:C6	2.56	0.93
28:BD:138:THR:O	28:BD:162:GLN:HA	1.69	0.93
28:BD:174:ARG:HG2	28:BD:174:ARG:NH1	1.77	0.93
29:BE:197:GLU:O	29:BE:268:LEU:N	2.01	0.93
32:BH:30:GLY:HA3	32:BH:78:VAL:O	1.68	0.93
27:BA:1138:G:OP1	34:BN:57:TYR:OH	1.83	0.93
27:BA:911:A:C6	37:BQ:16:ARG:CA	2.50	0.93
37:BQ:58:HIS:C	37:BQ:61:LEU:HG	1.86	0.93
27:BA:25:U:C4'	40:BW:79:GLY:HA2	1.95	0.93
41:BX:28:VAL:O	41:BX:30:ASP:N	2.01	0.93
36:BP:75:LEU:O	36:BP:75:LEU:CD2	2.16	0.93
1:AA:889:A:H4'	1:AA:890:G:H4'	1.44	0.93
27:BA:2098:U:H3	27:BA:2191:G:H1	1.06	0.93
27:BA:2329:G:N2	27:BA:2386:C:N3	2.16	0.93
27:BA:2392:A:N7	27:BA:2393:A:C5	2.37	0.93
27:BA:2748:A:H8	27:BA:2749:A:C4	1.84	0.93
29:BE:216:ARG:HH21	29:BE:255:GLN:HA	1.34	0.93
29:BE:71:THR:HG21	29:BE:299:SER:CA	1.97	0.93
31:BG:14:ARG:HA	31:BG:137:PRO:HD3	1.49	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:101:LYS:HG2	32:BH:115:GLU:CB	1.98	0.93
34:BN:61:VAL:HG22	34:BN:139:LEU:HB2	1.47	0.93
34:BN:50:GLU:CA	34:BN:53:ILE:HG21	1.95	0.93
34:BN:87:LEU:HB3	34:BN:88:PRO:CD	1.97	0.93
38:BS:41:LYS:CD	38:BS:41:LYS:C	2.32	0.93
45:BU:107:LYS:O	45:BU:108:ALA:O	1.86	0.93
33:BI:68:LEU:CB	33:BI:72:LEU:HD11	1.96	0.93
42:BY:17:HIS:O	42:BY:20:HIS:HB3	1.68	0.93
42:BY:23:VAL:CG2	42:BY:67:LEU:HD21	1.98	0.93
43:BZ:143:ILE:HG22	43:BZ:144:GLY:H	0.79	0.93
48:B3:20:LYS:HD3	48:B3:23:LEU:HD12	1.51	0.93
27:BA:2209:C:H2'	27:BA:2210:G:H3'	0.94	0.93
27:BA:2048:G:N1	27:BA:2620:C:N4	2.16	0.93
27:BA:2762:G:C8	27:BA:2763:G:N7	2.36	0.93
27:BA:2842:G:C2	27:BA:2876:G:C2	2.56	0.93
27:BA:856:C:H5'	49:B0:25:LYS:HZ1	0.81	0.93
28:BD:196:ASN:HA	28:BD:199:ARG:HD3	1.47	0.93
29:BE:271:ILE:HG12	29:BE:294:THR:HA	1.46	0.93
31:BG:145:ASP:HB3	38:BS:15:GLU:C	1.88	0.93
31:BG:56:ARG:HG2	31:BG:65:GLU:CB	1.97	0.93
34:BN:21:ARG:HA	34:BN:24:SER:HB3	1.48	0.93
34:BN:95:ARG:HA	34:BN:98:PHE:CD1	2.03	0.93
35:BO:99:PHE:O	35:BO:119:PRO:CG	2.16	0.93
46:BV:14:VAL:CG1	46:BV:15:SER:H	1.81	0.93
46:BV:42:GLY:CA	46:BV:54:TYR:CE2	2.42	0.93
46:BV:4:ILE:HD11	46:BV:13:ARG:HD3	1.51	0.93
43:BZ:141:MET:CA	43:BZ:171:VAL:HG11	1.97	0.93
33:BI:98:ILE:HD13	33:BI:115:ILE:HD12	1.48	0.93
1:AA:1222:G:OP2	1:AA:1322:C:N4	2.00	0.93
47:B2:47:LYS:O	47:B2:48:GLU:O	1.84	0.93
53:B7:34:ARG:HH11	53:B7:42:LEU:CD2	1.79	0.93
27:BA:2328:A:C6	27:BA:2329:G:O6	2.21	0.93
27:BA:2523:G:N2	27:BA:2541:A:N3	2.16	0.93
27:BA:2542:A:O2'	27:BA:2543:G:C8	2.20	0.93
27:BA:2546:U:O4'	27:BA:2565:A:C2	2.22	0.93
29:BE:269:ILE:CD1	29:BE:269:ILE:H	1.77	0.93
27:BA:1021:A:H8	34:BN:49:ARG:NH1	1.63	0.93
35:BO:68:GLY:HA2	35:BO:78:ARG:HG2	1.50	0.93
37:BQ:56:ILE:CG1	37:BQ:113:ALA:O	2.17	0.93
37:BQ:49:VAL:HG12	37:BQ:50:VAL:N	1.84	0.93
38:BS:16:ALA:O	38:BS:17:ARG:HB3	1.68	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:38:ASN:OD1	39:BT:39:ASN:N	2.01	0.93
46:BV:20:ILE:O	46:BV:21:ARG:NH2	2.00	0.93
47:B2:59:ILE:HG23	47:B2:60:GLN:H	1.32	0.93
27:BA:1598:C:O3'	41:BX:33:SER:OG	1.86	0.93
27:BA:1603:A:H2'	27:BA:1604:C:C6	2.02	0.93
27:BA:1080:C:C1'	56:BK:126:LYS:O	2.10	0.93
1:AA:952:U:O2	16:AM:126:LYS:O	1.85	0.93
49:B0:43:THR:HG21	49:B0:75:GLY:H	1.30	0.93
49:B0:37:LEU:HD12	49:B0:70:ILE:HD13	1.48	0.93
49:B0:45:PHE:CG	49:B0:78:PHE:HA	2.02	0.93
27:BA:1364:G:C4'	50:B4:3:LYS:HD3	1.97	0.93
53:B7:20:ALA:O	53:B7:21:ARG:C	2.06	0.93
54:B8:36:LYS:CE	54:B8:40:GLU:OE1	2.16	0.93
27:BA:2250:G:H5''	37:BQ:102:ARG:CD	1.97	0.93
27:BA:2330:G:H2'	27:BA:2331:G:H5'	1.48	0.93
27:BA:2520:C:C2	27:BA:2521:C:C5	2.57	0.93
27:BA:2574:G:C2'	27:BA:2575:C:C6	2.52	0.93
27:BA:2604:U:O2	27:BA:2605:U:C6	2.21	0.93
27:BA:2640:G:H1	27:BA:2774:C:N4	1.65	0.93
27:BA:530:G:O6	27:BA:2021:C:H3'	1.66	0.93
28:BD:110:LYS:CA	28:BD:110:LYS:HZ3	1.79	0.93
27:BA:2512:C:OP1	29:BE:219:VAL:HG13	1.69	0.93
31:BG:142:ALA:HB2	31:BG:151:ILE:HG12	1.51	0.93
33:BI:28:ASN:O	33:BI:32:LYS:HB2	1.65	0.93
36:BP:65:ASP:HB3	36:BP:109:LEU:HB2	1.49	0.93
37:BQ:49:VAL:HG21	37:BQ:120:HIS:HA	1.50	0.93
37:BQ:67:ALA:CB	37:BQ:70:ARG:CZ	2.36	0.93
33:BI:103:GLN:HE21	33:BI:109:LYS:CA	1.81	0.93
33:BI:98:ILE:HG22	33:BI:99:ALA:H	1.24	0.93
42:BY:31:LEU:CD1	42:BY:101:LEU:HB2	1.99	0.93
1:AA:1320:C:O4'	22:AS:73:GLU:HG2	1.68	0.93
41:BX:33:SER:C	41:BX:37:VAL:CG2	2.37	0.93
41:BX:76:GLU:OE1	41:BX:77:VAL:N	2.01	0.93
27:BA:1079:C:O2'	56:BK:130:GLY:HA2	1.68	0.93
2:AV:9:A:C2	2:AV:45:G:C4	2.56	0.93
51:B5:12:SER:HB3	51:B5:15:LYS:HZ2	1.28	0.93
55:B9:10:MET:HB2	55:B9:32:HIS:HD2	1.33	0.93
27:BA:2292:C:C4	27:BA:2293:C:C5	2.56	0.93
27:BA:2313:C:C5'	31:BG:51:ARG:NH1	2.29	0.93
27:BA:2333:A:P	38:BS:13:ARG:NH1	2.41	0.93
27:BA:2330:G:H1	27:BA:2385:C:H41	1.17	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2652:C:H2'	27:BA:2653:U:H6	1.33	0.93
27:BA:2682:U:C5	29:BE:48:MET:CE	2.52	0.93
27:BA:2893:G:O3'	27:BA:2894:G:C4'	2.16	0.93
29:BE:180:ILE:HG21	29:BE:187:HIS:HB3	1.46	0.93
29:BE:210:THR:HG22	29:BE:255:GLN:CG	1.97	0.93
30:BF:196:THR:C	30:BF:236:THR:OG1	2.07	0.93
30:BF:225:PRO:O	30:BF:231:ARG:HG3	1.68	0.93
34:BN:15:ARG:CB	34:BN:43:ARG:CD	2.36	0.93
37:BQ:137:ARG:HD3	37:BQ:138:ARG:N	1.83	0.93
37:BQ:41:THR:O	37:BQ:125:TRP:CZ3	2.21	0.93
45:BU:117:ARG:HD3	45:BU:118:GLN:CG	1.97	0.93
40:BW:11:ARG:O	40:BW:12:ILE:CG1	2.16	0.93
40:BW:84:ARG:HB3	40:BW:96:ILE:CD1	1.99	0.93
47:B2:8:ILE:O	47:B2:11:MET:HG2	1.69	0.93
48:B3:1:MET:CE	48:B3:3:ARG:CD	2.46	0.93
27:BA:2400:G:O3'	52:B6:20:PHE:HZ	1.51	0.93
27:BA:1568:G:C4'	28:BD:60:GLN:NE2	2.21	0.93
27:BA:2262:U:HO2'	27:BA:2263:C:H5''	1.19	0.93
27:BA:2357:U:O2'	27:BA:2358:G:C5'	2.16	0.93
27:BA:2653:U:H3'	27:BA:2654:A:H8	1.16	0.93
29:BE:221:LYS:NZ	29:BE:233:ARG:CG	2.32	0.93
29:BE:269:ILE:HD11	29:BE:296:VAL:CA	1.99	0.93
29:BE:271:ILE:HG23	29:BE:293:TYR:O	1.68	0.93
34:BN:25:GLN:HA	34:BN:28:GLU:HG3	1.49	0.93
34:BN:88:PRO:HB2	34:BN:90:LYS:N	1.84	0.93
39:BT:21:PHE:O	39:BT:22:VAL:CG1	2.17	0.93
42:BY:70:ALA:O	42:BY:93:THR:HG21	1.68	0.93
43:BZ:71:MET:CG	43:BZ:78:PRO:CD	1.89	0.93
3:AW:25:C:O2	3:AW:26:G:H1'	1.68	0.93
1:AA:1221:G:H5'	22:AS:36:ARG:HH11	1.23	0.93
41:BX:55:GLN:C	41:BX:56:ASN:HD22	1.69	0.93
54:B8:55:TRP:CE3	54:B8:59:LYS:CE	2.48	0.93
27:BA:2320:A:C6	38:BS:13:ARG:O	2.20	0.93
27:BA:2526:G:C5	27:BA:2527:C:H5	1.85	0.93
27:BA:2661:G:N3	27:BA:2662:A:N7	2.17	0.93
27:BA:2801:A:C2	27:BA:2895:U:O2'	2.22	0.93
27:BA:2826:A:C5	27:BA:2827:C:H6	1.77	0.93
28:BD:143:ILE:HG12	28:BD:153:LEU:HB3	1.51	0.93
29:BE:177:ALA:O	29:BE:179:ASP:N	2.00	0.93
29:BE:45:LYS:NZ	29:BE:302:GLY:C	2.20	0.93
27:BA:2749:A:C1'	32:BH:62:ALA:HB2	1.99	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:27:LEU:HB2	38:BS:33:ARG:CZ	1.98	0.93
46:BV:40:VAL:CG1	46:BV:51:ALA:O	2.16	0.93
40:BW:10:VAL:HB	40:BW:101:SER:O	1.68	0.93
43:BZ:142:ASN:H	43:BZ:171:VAL:CG2	1.82	0.93
42:BY:31:LEU:O	42:BY:32:ARG:O	1.86	0.93
43:BZ:35:ASP:N	43:BZ:39:PHE:CZ	2.35	0.93
48:B3:1:MET:HE3	48:B3:3:ARG:HD2	1.48	0.93
50:B4:7:PRO:CG	50:B4:56:VAL:HG11	1.99	0.93
52:B6:2:ALA:CB	52:B6:11:LYS:NZ	2.31	0.93
27:BA:1204:A:HO2'	30:BF:230:GLY:N	1.66	0.93
27:BA:2262:U:P	49:B0:14:ARG:HH21	1.92	0.93
27:BA:2455:G:H2'	27:BA:2456:C:H5'	1.51	0.93
27:BA:2804:C:C6	27:BA:2805:G:N1	2.37	0.93
27:BA:2842:G:O2'	27:BA:2843:G:H5'	1.65	0.93
27:BA:2845:G:HO2'	27:BA:2846:G:H5'	1.31	0.93
27:BA:2852:G:H1	27:BA:2865:U:H3	0.96	0.93
27:BA:2881:C:H2'	27:BA:2882:A:H8	1.32	0.93
27:BA:675:A:N3	27:BA:2443:C:O2'	2.02	0.93
29:BE:67:THR:O	29:BE:68:VAL:HG23	1.69	0.93
30:BF:111:VAL:O	30:BF:112:ARG:O	1.86	0.93
30:BF:164:ALA:HA	30:BF:232:LEU:CD1	1.96	0.93
33:BI:5:PHE:HB3	33:BI:17:GLU:O	1.69	0.93
34:BN:78:ILE:O	34:BN:82:THR:CG2	2.17	0.93
37:BQ:41:THR:HG21	37:BQ:126:VAL:CA	1.98	0.93
38:BS:81:ALA:HB3	38:BS:117:ALA:HB1	1.49	0.93
45:BU:69:ALA:HA	45:BU:79:PHE:CZ	2.04	0.93
40:BW:23:LEU:HD22	40:BW:24:ILE:N	1.84	0.93
40:BW:32:ALA:HB2	40:BW:35:ILE:HD12	1.49	0.93
33:BI:68:LEU:HB3	33:BI:72:LEU:CD1	1.99	0.93
42:BY:78:THR:C	42:BY:89:ARG:CG	2.34	0.93
26:BB:77:U:OP1	43:BZ:14:LEU:CD1	2.17	0.93
43:BZ:34:LEU:CD1	43:BZ:39:PHE:HZ	1.81	0.93
43:BZ:62:PHE:CD2	43:BZ:87:THR:CG2	2.51	0.93
16:AM:3:ARG:HH12	31:BG:90:LEU:CD1	1.81	0.93
48:B3:50:VAL:HB	48:B3:53:LEU:HD12	1.49	0.92
52:B6:12:MET:HE3	52:B6:54:LYS:H	1.33	0.92
27:BA:459:U:OP2	53:B7:40:HIS:CG	2.22	0.92
27:BA:1612:C:C2	53:B7:3:ARG:NH1	2.36	0.92
27:BA:2207:C:N3	27:BA:2218:G:N1	2.16	0.92
27:BA:2431:U:H2'	27:BA:2432:A:H3'	1.50	0.92
27:BA:2555:U:H2'	27:BA:2556:C:H5'	0.94	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2575:C:OP1	29:BE:241:TRP:CD1	2.22	0.92
27:BA:2597:G:C6	27:BA:2598:A:N6	2.36	0.92
27:BA:2737:G:H2'	27:BA:2738:A:H8	1.33	0.92
32:BH:85:ALA:HA	32:BH:131:ILE:HG21	0.94	0.92
32:BH:91:VAL:O	32:BH:91:VAL:HG12	1.67	0.92
36:BP:114:VAL:C	36:BP:115:ARG:HG3	1.89	0.92
37:BQ:94:ARG:NE	37:BQ:106:GLY:HA3	1.84	0.92
37:BQ:42:TYR:CD2	43:BZ:119:ASN:HA	2.05	0.92
42:BY:35:TYR:HH	42:BY:113:GLU:HG3	1.15	0.92
42:BY:74:VAL:HG12	42:BY:74:VAL:O	1.65	0.92
41:BX:2:TRP:O	41:BX:3:ASP:O	1.87	0.92
27:BA:1907:G:H1	27:BA:1923:U:H3	0.98	0.92
49:B0:65:GLY:CA	49:B0:66:LYS:HD2	1.99	0.92
27:BA:2314:C:C5'	31:BG:22:VAL:CG1	2.45	0.92
27:BA:2322:A:OP1	27:BA:2322:A:O4'	1.87	0.92
27:BA:2623:G:N2	27:BA:2624:G:C1'	2.31	0.92
27:BA:2638:G:O2'	27:BA:2639:A:C8	2.21	0.92
27:BA:2852:G:N2	27:BA:2853:C:O2	2.03	0.92
28:BD:158:GLY:HA2	28:BD:194:VAL:CB	1.97	0.92
29:BE:218:GLY:O	29:BE:219:VAL:HG23	1.68	0.92
29:BE:222:ARG:HD2	29:BE:222:ARG:H	1.33	0.92
29:BE:233:ARG:C	29:BE:234:ARG:HG3	1.87	0.92
29:BE:76:PRO:HB2	29:BE:77:PRO:HD3	0.92	0.92
32:BH:96:SER:HA	32:BH:124:VAL:HG21	1.50	0.92
35:BO:10:VAL:HG13	35:BO:12:ASP:OD1	1.69	0.92
36:BP:130:ARG:O	36:BP:133:VAL:HB	1.69	0.92
27:BA:2378:A:O2'	38:BS:30:GLY:CA	2.17	0.92
43:BZ:103:ARG:HD3	43:BZ:103:ARG:H	1.34	0.92
41:BX:47:VAL:HB	41:BX:69:SER:HB2	1.50	0.92
27:BA:1102:C:N3	27:BA:1104:C:C4	2.37	0.92
48:B3:43:ILE:N	48:B3:43:ILE:HD12	1.84	0.92
53:B7:34:ARG:O	53:B7:35:ARG:O	1.85	0.92
53:B7:8:ASN:HB2	53:B7:11:LYS:CB	1.98	0.92
27:BA:2333:A:C8	27:BA:2335:A:H2	1.81	0.92
27:BA:2469:A:H61	27:BA:2481:G:H1'	1.34	0.92
27:BA:2546:U:C4'	27:BA:2565:A:H2	1.78	0.92
27:BA:2869:G:O2'	27:BA:2870:C:H5'	1.68	0.92
27:BA:1819:A:OP2	28:BD:153:LEU:HG	1.69	0.92
28:BD:74:PRO:HA	28:BD:116:MET:CE	1.99	0.92
29:BE:79:ARG:NH1	29:BE:104:PHE:CA	2.32	0.92
27:BA:2636:U:H4'	29:BE:84:ARG:HH22	0.76	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:14:ARG:HA	31:BG:137:PRO:CD	1.99	0.92
31:BG:18:ILE:HG22	31:BG:19:GLU:N	1.81	0.92
33:BI:13:GLY:HA2	33:BI:15:LYS:NZ	1.84	0.92
36:BP:109:LEU:HD13	36:BP:110:GLY:N	1.85	0.92
44:BR:38:VAL:HB	44:BR:39:PRO:CD	1.93	0.92
42:BY:30:ASP:O	42:BY:34:GLU:HG3	1.58	0.92
42:BY:57:GLY:HA2	42:BY:97:ARG:HH22	1.31	0.92
43:BZ:69:VAL:HG12	43:BZ:70:GLN:N	1.84	0.92
41:BX:25:GLN:C	41:BX:26:PHE:CD1	2.43	0.92
41:BX:56:ASN:N	41:BX:56:ASN:ND2	2.11	0.92
41:BX:8:PRO:O	41:BX:10:VAL:HG23	1.69	0.92
1:AA:953:G:H1'	16:AM:125:ARG:C	1.88	0.92
32:BH:53:ARG:HH11	32:BH:56:ASP:HA	0.78	0.92
32:BH:108:TYR:O	32:BH:109:SER:HB3	1.68	0.92
27:BA:856:C:O2'	49:B0:24:LYS:HD3	1.70	0.92
49:B0:37:LEU:HG	49:B0:68:VAL:CG1	1.98	0.92
48:B3:40:THR:HG21	48:B3:43:ILE:CG1	1.98	0.92
51:B5:45:ILE:N	51:B5:52:TYR:CE1	2.37	0.92
52:B6:16:ALA:O	52:B6:48:VAL:HG11	1.68	0.92
27:BA:1367:A:C3'	53:B7:25:LYS:NZ	2.33	0.92
27:BA:2410:G:H2'	27:BA:2411:A:N7	1.83	0.92
27:BA:2414:G:C2	27:BA:2415:G:N7	2.37	0.92
27:BA:2445:G:H2'	27:BA:2446:G:H5'	1.51	0.92
27:BA:2603:G:C6	27:BA:2604:U:C5	2.58	0.92
27:BA:2628:C:O2	27:BA:2781:A:O2'	1.86	0.92
27:BA:2631:G:C6	27:BA:2632:A:C8	2.57	0.92
27:BA:2682:U:C6	29:BE:48:MET:HE2	2.03	0.92
27:BA:2689:U:H4'	27:BA:2690:C:H5'	1.49	0.92
27:BA:2819:G:N3	27:BA:2821:A:C8	2.36	0.92
27:BA:2862:G:H2'	27:BA:2863:C:C6	2.03	0.92
27:BA:995:C:H1'	45:BU:57:PHE:CZ	2.05	0.92
28:BD:135:PRO:CG	28:BD:138:THR:CG2	2.28	0.92
30:BF:147:LEU:HD12	30:BF:156:LEU:HD11	0.93	0.92
30:BF:163:HIS:CB	30:BF:166:ILE:HD12	1.98	0.92
32:BH:14:VAL:HG12	32:BH:14:VAL:O	1.67	0.92
34:BN:87:LEU:HB3	34:BN:88:PRO:HD2	1.51	0.92
45:BU:39:LEU:O	45:BU:41:ASN:N	2.03	0.92
45:BU:88:ILE:HB	46:BV:52:GLY:CA	1.99	0.92
46:BV:60:VAL:C	46:BV:98:ILE:HB	1.90	0.92
43:BZ:67:LYS:HZ1	43:BZ:67:LYS:CA	1.79	0.92
33:BI:145:VAL:O	33:BI:146:THR:HG22	1.69	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:104:U:O4	42:BY:17:HIS:CE1	2.22	0.92
43:BZ:79:ILE:O	43:BZ:80:HIS:ND1	2.02	0.92
47:B2:2:VAL:H	47:B2:4:HIS:HE1	0.96	0.92
3:AW:37:YYG:C21	10:AG:83:ALA:HB1	1.86	0.92
1:AA:1030:C:H2'	1:AA:30(A):G:H8	1.30	0.92
27:BA:1034:G:C5'	55:B9:18:ARG:NH2	2.33	0.92
27:BA:2228:G:H8	27:BA:2228:G:H5''	1.29	0.92
27:BA:2373:G:C2	27:BA:2374:C:C4	2.58	0.92
27:BA:2552:U:C2	27:BA:2554:U:C5'	2.53	0.92
27:BA:2734:A:N6	27:BA:2735:G:C2	2.33	0.92
27:BA:2759:G:C2'	27:BA:2760:C:O5'	2.17	0.92
27:BA:2825:C:H2'	27:BA:2826:A:O4'	1.70	0.92
28:BD:70:LYS:HG3	28:BD:73:ILE:HD13	1.48	0.92
29:BE:206:LYS:O	29:BE:208:LYS:N	2.02	0.92
27:BA:1993:U:C4'	29:BE:228:ARG:HH21	1.81	0.92
27:BA:1665:A:H4'	35:BO:66:LYS:CD	1.99	0.92
44:BR:63:ARG:HH21	44:BR:77:ARG:HG2	1.19	0.92
45:BU:28:ARG:H	45:BU:31:GLN:CD	1.69	0.92
42:BY:55:PHE:HZ	42:BY:89:ARG:CZ	1.80	0.92
43:BZ:26:LYS:O	43:BZ:27:GLU:HG3	1.67	0.92
1:AA:1317:C:O2'	22:AS:10:PHE:CE2	2.09	0.92
1:AA:1225:A:C4'	22:AS:78:ARG:HD3	1.98	0.92
27:BA:71:A:O2'	41:BX:2:TRP:CZ2	2.22	0.92
27:BA:1301:A:HO2'	27:BA:1302:A:H8	0.95	0.92
50:B4:46:GLU:OE1	50:B4:54:GLY:CA	2.15	0.92
53:B7:22:MET:O	53:B7:24:THR:N	2.03	0.92
54:B8:16:ILE:CB	54:B8:22:VAL:HG22	1.99	0.92
55:B9:4:ARG:CA	55:B9:36:GLN:HA	2.00	0.92
27:BA:2287:A:N6	27:BA:2344:U:C6	2.38	0.92
27:BA:2488:A:O2'	27:BA:2489:G:H5'	1.70	0.92
27:BA:2515:C:N4	27:BA:2569:G:N1	1.82	0.92
27:BA:2790:A:C5'	27:BA:2791:C:OP1	2.17	0.92
30:BF:32:GLY:CA	30:BF:35:VAL:HG23	1.98	0.92
32:BH:74:MET:O	32:BH:78:VAL:HG23	1.68	0.92
34:BN:45:VAL:C	34:BN:46:ILE:CG1	2.36	0.92
36:BP:67:ARG:CZ	36:BP:111:ALA:O	2.16	0.92
36:BP:68:GLU:O	36:BP:71:GLU:CG	2.17	0.92
37:BQ:76:GLY:CA	37:BQ:132:VAL:HG11	2.00	0.92
45:BU:44:THR:HA	45:BU:47:TYR:HD1	1.34	0.92
45:BU:76:TYR:O	45:BU:80:ILE:CG1	2.18	0.92
33:BI:132:LYS:HA	33:BI:138:THR:CG2	1.99	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:51:TYR:O	51:B5:52:TYR:HB2	1.66	0.92
53:B7:30:ILE:CG1	53:B7:33:ARG:CD	2.47	0.92
53:B7:18:PHE:H	53:B7:44:VAL:HG21	1.17	0.92
27:BA:1668:A:O5'	35:BO:5:GLU:OE2	1.86	0.92
27:BA:2436:G:C6	27:BA:2437:U:C4	2.56	0.92
27:BA:2468:G:O2'	27:BA:2469:A:H8	1.51	0.92
27:BA:2584:U:H6	27:BA:2585:U:C6	1.84	0.92
27:BA:2606:C:H5''	27:BA:2606:C:H6	1.34	0.92
27:BA:2617:C:C2'	27:BA:2618:G:C5'	2.37	0.92
27:BA:2619:C:O2'	27:BA:2620:C:H5'	1.70	0.92
27:BA:2717:G:C5'	27:BA:2717:G:C8	2.43	0.92
28:BD:129:LEU:HD23	28:BD:130:PRO:HD3	1.48	0.92
29:BE:190:ASN:O	29:BE:192:ILE:CA	2.18	0.92
33:BI:13:GLY:C	33:BI:15:LYS:HD2	1.90	0.92
34:BN:13:ASP:HA	34:BN:38:VAL:HG12	0.92	0.92
37:BQ:33:MET:HB3	37:BQ:83:PHE:CB	1.99	0.92
37:BQ:50:VAL:HG12	37:BQ:52:LYS:H	1.34	0.92
37:BQ:89:PRO:C	37:BQ:90:PHE:HD1	1.68	0.92
31:BG:145:ASP:CG	38:BS:15:GLU:O	2.08	0.92
38:BS:81:ALA:HB1	38:BS:118:ILE:N	1.85	0.92
27:BA:1059:G:C2	56:BK:131:THR:CG2	2.47	0.92
1:AA:1288:A:N6	1:AA:1371:G:O2'	2.02	0.92
43:BZ:96:VAL:HG12	43:BZ:97:PRO:HD2	1.52	0.92
50:B4:41:PRO:HB2	50:B4:57:ASP:HB3	1.48	0.92
27:BA:1263:U:C4'	51:B5:16:ARG:NH2	2.33	0.92
27:BA:1151:G:C3'	45:BU:81:ASN:ND2	2.29	0.92
27:BA:2212:A:C2'	27:BA:2213:U:H5	1.63	0.92
27:BA:2384:G:H5''	27:BA:2386:C:P	2.09	0.92
27:BA:2463:C:N3	27:BA:2464:C:H5	1.68	0.92
27:BA:248:G:N2	27:BA:2431:U:C4'	2.33	0.92
27:BA:2740:A:N1	27:BA:2764:A:N3	2.18	0.92
28:BD:106:PRO:HA	28:BD:194:VAL:O	1.67	0.92
28:BD:175:LEU:CG	28:BD:180:VAL:CA	2.46	0.92
29:BE:200:ASP:HA	29:BE:266:LYS:CD	2.00	0.92
29:BE:45:LYS:NZ	29:BE:303:PRO:C	2.23	0.92
27:BA:605:C:O3'	30:BF:103:ASN:ND2	2.03	0.92
32:BH:102:LEU:CD2	32:BH:114:ILE:O	2.17	0.92
32:BH:86:LEU:N	32:BH:131:ILE:HG22	1.82	0.92
33:BI:7:LYS:HG3	33:BI:12:LYS:HG2	1.00	0.92
45:BU:13:ARG:HB2	45:BU:13:ARG:HH12	1.27	0.92
46:BV:74:TYR:CE1	46:BV:87:ARG:C	2.43	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:8:ARG:O	40:BW:10:VAL:CG2	2.18	0.92
43:BZ:149:ALA:HB3	43:BZ:165:GLU:N	1.82	0.92
27:BA:337:C:H3'	27:BA:338:G:C5'	1.98	0.92
1:AA:1320:C:H42	22:AS:36:ARG:HG3	1.13	0.92
27:BA:2833:G:OP1	27:BA:2833:G:H8	1.51	0.92
27:BA:1077:A:O2'	56:BK:134:SER:HA	1.68	0.92
27:BA:2424:C:H2'	27:BA:2424:C:O2	1.68	0.92
27:BA:2552:U:N3	27:BA:2554:U:H5'	1.84	0.92
27:BA:2711:A:OP2	27:BA:2714:G:P	2.28	0.92
31:BG:19:GLU:CD	31:BG:135:VAL:HG22	1.89	0.92
31:BG:49:PRO:HD3	31:BG:73:VAL:HG22	1.51	0.92
37:BQ:42:TYR:CE2	43:BZ:116:VAL:HG21	2.04	0.92
26:BB:9:G:OP1	38:BS:37:ARG:NH2	2.02	0.92
45:BU:40:LEU:CD2	45:BU:40:LEU:H	1.83	0.92
45:BU:72:HIS:CE1	45:BU:110:VAL:HG21	2.04	0.92
40:BW:71:VAL:HG12	40:BW:106:ILE:O	1.68	0.92
33:BI:68:LEU:HD21	33:BI:108:LEU:HD11	1.49	0.92
1:AA:1221:G:C5'	22:AS:36:ARG:NH1	2.32	0.92
3:AW:37:YYG:H191	10:AG:79:ARG:CA	1.99	0.92
34:BN:106:GLY:C	34:BN:107:ASN:HD22	1.67	0.92
29:BE:107:GLU:O	29:BE:110:ARG:HG3	1.70	0.92
33:BI:59:ALA:O	33:BI:62:LEU:HB2	1.69	0.92
27:BA:818:G:N2	27:BA:1189:A:H62	1.68	0.92
27:BA:818:G:H21	27:BA:1189:A:N6	1.66	0.92
53:B7:43:THR:CA	53:B7:46:ASP:OD1	2.17	0.92
27:BA:1675:C:N3	29:BE:225:LYS:CG	2.31	0.92
27:BA:2350:C:H2'	27:BA:2351:G:C8	2.04	0.92
27:BA:2680:C:H5'	29:BE:302:GLY:H	1.34	0.92
27:BA:2698:U:H2'	27:BA:2699:C:H6	1.30	0.92
29:BE:99:VAL:O	29:BE:100:TRP:CD2	2.22	0.92
31:BG:29:HIS:CE1	31:BG:64:ARG:HH12	1.85	0.92
34:BN:136:SER:O	34:BN:137:GLU:C	2.08	0.92
34:BN:94:GLY:O	34:BN:97:ALA:HB3	1.70	0.92
35:BO:112:MET:O	35:BO:115:ILE:N	2.03	0.92
35:BO:35:ILE:CD1	35:BO:65:THR:HG22	1.99	0.92
35:BO:98:ILE:CG2	35:BO:99:PHE:H	1.83	0.92
37:BQ:91:HIS:N	37:BQ:111:THR:CG2	2.33	0.92
27:BA:1161:C:HO2'	46:BV:22:VAL:HG11	1.32	0.92
16:AM:91:ARG:HD2	16:AM:97:PRO:O	1.69	0.92
1:AA:409:G:H5''	7:AD:25:ARG:CB	1.99	0.92
53:B7:30:ILE:CD1	53:B7:33:ARG:NH1	1.72	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B9:11:CYS:SG	55:B9:14:CYS:N	2.39	0.91
27:BA:2216:G:C2'	27:BA:2217:G:C5'	2.45	0.91
27:BA:2494:G:N1	27:BA:2495:G:C5	2.38	0.91
27:BA:2546:U:O4'	27:BA:2565:A:H2	1.52	0.91
27:BA:2051:A:N1	27:BA:2618:G:O6	2.02	0.91
27:BA:2737:G:N3	27:BA:2738:A:C8	2.38	0.91
27:BA:2754:U:H2'	27:BA:2756:U:P	2.09	0.91
29:BE:45:LYS:CE	29:BE:303:PRO:O	2.17	0.91
29:BE:70:VAL:HG11	29:BE:296:VAL:CA	1.90	0.91
31:BG:53:LYS:HG2	31:BG:54:ALA:H	1.28	0.91
27:BA:2310:A:H2'	31:BG:55:LYS:HE2	0.95	0.91
32:BH:95:ALA:O	32:BH:127:GLN:HA	1.70	0.91
37:BQ:85:ILE:HB	37:BQ:122:PHE:CD2	2.05	0.91
38:BS:36:ALA:HA	38:BS:45:ALA:HB2	1.52	0.91
3:AW:37:YYG:C24	10:AG:83:ALA:HB3	1.99	0.91
40:BW:90:ARG:CB	40:BW:90:ARG:CZ	2.45	0.91
27:BA:1417:C:N3	27:BA:1581:G:N2	2.18	0.91
48:B3:9:VAL:HG22	48:B3:54:VAL:HA	1.49	0.91
27:BA:2051:A:C4'	29:BE:238:LEU:HD21	1.98	0.91
27:BA:2317:C:C5	27:BA:2318:G:O6	2.23	0.91
27:BA:2320:A:N6	38:BS:9:PRO:CB	2.31	0.91
27:BA:2575:C:H5'	29:BE:241:TRP:NE1	1.85	0.91
27:BA:2641:G:C6	27:BA:2774:C:C4	2.58	0.91
27:BA:2854:G:C2	27:BA:2864:G:C5	2.58	0.91
27:BA:993:G:H4'	46:BV:90:PHE:HZ	1.28	0.91
28:BD:135:PRO:HG3	28:BD:138:THR:HG21	1.48	0.91
34:BN:19:MET:CG	34:BN:46:ILE:CD1	2.47	0.91
35:BO:78:ARG:C	35:BO:79:PHE:CD2	2.43	0.91
36:BP:132:LYS:O	36:BP:135:GLY:N	2.03	0.91
37:BQ:140:TYR:CD1	37:BQ:147:VAL:HG13	2.02	0.91
45:BU:7:GLY:CA	45:BU:8:ILE:HD12	2.00	0.91
46:BV:11:GLN:CD	46:BV:22:VAL:HG23	1.89	0.91
42:BY:79:LEU:CD1	42:BY:80:GLU:H	1.82	0.91
1:AA:975:A:C5	1:AA:1357:A:H2	1.87	0.91
47:B2:59:ILE:HG12	47:B2:60:GLN:N	1.84	0.91
27:BA:1603:A:H2'	27:BA:1604:C:H6	1.30	0.91
41:BX:24:LEU:HB3	41:BX:26:PHE:CZ	2.02	0.91
31:BG:88:LEU:O	31:BG:88:LEU:CD2	2.16	0.91
31:BG:59:GLY:O	31:BG:60:GLU:CG	2.19	0.91
1:AA:277:C:OP1	20:AQ:41:LYS:HD2	1.67	0.91
27:BA:1698:A:O2'	27:BA:1699:G:H3'	1.70	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:44:ARG:HG3	39:BT:45:GLU:H	1.34	0.91
40:BW:21:VAL:HG23	40:BW:22:ASP:H	1.36	0.91
52:B6:29:ARG:HG2	52:B6:30:ASN:H	1.33	0.91
27:BA:2255:G:N2	27:BA:2256:G:H1'	1.85	0.91
27:BA:2431:U:O2	27:BA:2433:A:OP2	1.87	0.91
27:BA:2739:U:H2'	27:BA:2740:A:H5''	1.46	0.91
27:BA:872:A:O2'	37:BQ:31:PHE:HB2	1.69	0.91
29:BE:199:ALA:HB1	29:BE:312:ARG:O	1.68	0.91
27:BA:2770:G:C1'	29:BE:316:ARG:HH12	1.77	0.91
31:BG:14:ARG:HA	31:BG:137:PRO:HG3	1.49	0.91
34:BN:80:LYS:O	34:BN:81:ARG:O	1.89	0.91
37:BQ:12:PRO:HB2	37:BQ:20:ILE:CD1	2.00	0.91
37:BQ:57:ARG:O	37:BQ:61:LEU:CG	2.17	0.91
45:BU:57:PHE:HA	45:BU:60:LEU:HG	1.50	0.91
2:AV:35:A:N1	4:AX:118:C:C4	2.37	0.91
27:BA:101:G:OP2	42:BY:107:LYS:NZ	2.04	0.91
1:AA:977:A:N6	1:AA:1224:G:OP1	2.03	0.91
27:BA:1301:A:H62	27:BA:1303:G:H1'	1.31	0.91
27:BA:2341:G:C5	27:BA:2342:C:C4	2.59	0.91
27:BA:2468:G:N2	27:BA:2481:G:H2'	1.83	0.91
27:BA:2620:C:O2'	27:BA:2621:A:H5''	1.71	0.91
27:BA:2887:U:C2	27:BA:2888:C:C5	2.58	0.91
27:BA:929:G:H1'	48:B3:43:ILE:CG1	2.00	0.91
27:BA:2218:G:HO2'	28:BD:146:LYS:HE3	1.30	0.91
30:BF:111:VAL:HA	30:BF:220:THR:HG22	1.51	0.91
30:BF:24:THR:CB	30:BF:25:PRO:CD	2.46	0.91
32:BH:127:GLN:O	32:BH:130:ILE:HD11	1.70	0.91
36:BP:65:ASP:HB3	36:BP:109:LEU:HB3	0.94	0.91
36:BP:116:HIS:HD2	36:BP:118:LEU:HD11	1.29	0.91
36:BP:52:LYS:HD3	36:BP:53:ARG:HH11	1.16	0.91
37:BQ:143:VAL:HG23	37:BQ:144:THR:H	1.35	0.91
37:BQ:42:TYR:O	37:BQ:125:TRP:CH2	2.23	0.91
45:BU:25:TRP:O	45:BU:28:ARG:NH1	2.03	0.91
43:BZ:103:ARG:HG2	43:BZ:139:THR:CG2	1.99	0.91
43:BZ:46:GLN:HB2	43:BZ:49:THR:OG1	1.68	0.91
43:BZ:78:PRO:O	43:BZ:79:ILE:CG1	2.19	0.91
41:BX:14:ALA:N	41:BX:17:ASP:OD2	2.02	0.91
1:AA:1340:A:C1'	2:AV:31:A:O2'	2.18	0.91
1:AA:261:U:H5	23:AT:79:ARG:NH2	1.68	0.91
48:B3:39:ASP:HA	48:B3:44:ARG:HH21	1.34	0.91
53:B7:43:THR:CA	53:B7:46:ASP:OD2	2.17	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:687:C:O4'	53:B7:4:THR:CG2	2.18	0.91
27:BA:2053:G:OP1	29:BE:241:TRP:HA	1.69	0.91
27:BA:2290:G:C6	27:BA:2291:U:N3	2.38	0.91
27:BA:2311:A:OP2	27:BA:2311:A:O4'	1.88	0.91
27:BA:2414:G:C2	27:BA:2415:G:C8	2.58	0.91
27:BA:2528:U:O4	27:BA:2530:A:N3	2.03	0.91
27:BA:2579:C:H6	27:BA:2579:C:C4'	1.84	0.91
27:BA:2826:A:C6	27:BA:2827:C:H6	1.69	0.91
28:BD:145:LEU:N	28:BD:152:GLN:CB	2.23	0.91
27:BA:1568:G:C5'	28:BD:60:GLN:HG2	2.00	0.91
26:BB:57:A:O2'	31:BG:13:MET:SD	2.28	0.91
32:BH:101:LYS:HE2	32:BH:115:GLU:HB2	1.52	0.91
37:BQ:49:VAL:HA	37:BQ:121:ASP:HB2	1.53	0.91
44:BR:79:LEU:C	44:BR:79:LEU:HD22	1.82	0.91
46:BV:57:GLN:CG	46:BV:58:ALA:H	1.82	0.91
42:BY:103:LEU:HD22	42:BY:112:LEU:CD2	2.00	0.91
27:BA:138:G:H1'	41:BX:42:GLU:HG2	1.50	0.91
1:AA:1287:A:H61	1:AA:1371:G:C4'	1.84	0.91
1:AA:21:G:N2	1:AA:914:A:N7	2.19	0.91
51:B5:33:CYS:CB	51:B5:37:HIS:N	2.34	0.91
49:B0:38:VAL:C	49:B0:40:GLN:HG3	1.91	0.91
48:B3:8:LEU:HD22	48:B3:31:LEU:C	1.91	0.91
27:BA:1368:G:OP1	53:B7:25:LYS:HD2	1.68	0.91
27:BA:2185:C:C2	27:BA:2186:G:C8	2.59	0.91
27:BA:859:G:O2'	27:BA:2268:A:C2	2.23	0.91
27:BA:2309:A:C3'	27:BA:2310:A:H5'	2.01	0.91
27:BA:2473:U:O2	27:BA:2473:U:H2'	1.67	0.91
27:BA:2589:A:C5	27:BA:2590:A:N7	2.39	0.91
27:BA:2657:A:C6	27:BA:2665:A:N7	2.38	0.91
28:BD:131:LEU:HD12	28:BD:184:LEU:O	1.71	0.91
28:BD:89:ASN:HD21	28:BD:199:ARG:HE	1.04	0.91
29:BE:180:ILE:HB	29:BE:187:HIS:HB3	1.50	0.91
29:BE:45:LYS:NZ	29:BE:303:PRO:CD	2.30	0.91
29:BE:45:LYS:CE	29:BE:303:PRO:CG	2.33	0.91
30:BF:115:LEU:CG	30:BF:246:ARG:NH2	2.28	0.91
32:BH:82:TYR:CZ	32:BH:137:LYS:CG	2.54	0.91
33:BI:7:LYS:CG	33:BI:12:LYS:HD3	1.95	0.91
37:BQ:129:ASP:OD1	37:BQ:132:VAL:HG23	1.69	0.91
27:BA:911:A:C2'	37:BQ:16:ARG:HE	1.84	0.91
44:BR:107:ASP:CG	44:BR:109:ALA:H	1.73	0.91
44:BR:19:ALA:O	44:BR:22:ARG:CB	2.17	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:100:THR:CG2	43:BZ:137:ASP:OD1	2.17	0.91
27:BA:342:G:H2'	27:BA:343:C:C6	2.05	0.91
42:BY:87:VAL:HG13	42:BY:88:PRO:CD	1.97	0.91
41:BX:24:LEU:HB2	41:BX:26:PHE:CZ	2.03	0.91
27:BA:1364:G:C2'	50:B4:3:LYS:HZ3	1.77	0.91
52:B6:5:GLY:C	52:B6:7:ARG:H	1.74	0.91
55:B9:15:LYS:N	55:B9:26:ILE:O	2.01	0.91
27:BA:1819:A:H5''	28:BD:157:ALA:CB	2.01	0.91
27:BA:2468:G:O2'	27:BA:2469:A:C5'	2.18	0.91
27:BA:586:A:N1	27:BA:809:G:O2'	2.02	0.91
28:BD:133:ASN:O	28:BD:134:ILE:HG13	1.68	0.91
29:BE:267:ARG:HG3	29:BE:297:LYS:HB2	1.51	0.91
30:BF:163:HIS:CB	30:BF:166:ILE:CD1	2.48	0.91
30:BF:33:LYS:CA	30:BF:36:ARG:HG3	2.00	0.91
30:BF:60:SER:HB3	30:BF:69:HIS:HB3	1.51	0.91
32:BH:121:GLU:OE1	32:BH:121:GLU:N	2.03	0.91
44:BR:85:PRO:C	44:BR:87:TYR:H	1.74	0.91
45:BU:65:ILE:HD13	45:BU:96:ALA:CB	1.98	0.91
40:BW:75:TYR:CD1	40:BW:104:THR:OG1	2.22	0.91
47:B2:4:HIS:O	47:B2:8:ILE:HD12	1.69	0.91
1:AA:1314:C:H3'	22:AS:6:LYS:HD3	1.50	0.91
27:BA:2:G:N1	27:BA:2902:C:N3	2.19	0.91
3:AW:39:PSU:C4'	14:AK:54:ARG:HH22	1.84	0.91
1:AA:405:U:O4	7:AD:2:GLY:N	2.04	0.91
1:AA:31:G:O2'	1:AA:46:G:H5'	1.71	0.91
54:B8:23:MET:CE	54:B8:23:MET:CA	2.49	0.91
54:B8:26:LYS:HZ2	54:B8:44:LYS:H	1.11	0.91
27:BA:2380:C:H2'	27:BA:2381:C:H5'	1.53	0.91
27:BA:2558:C:O2	27:BA:2559:C:C5	2.24	0.91
27:BA:2570:G:C2	27:BA:2571:C:C5	2.59	0.91
27:BA:2603:G:C4	27:BA:2604:U:C6	2.59	0.91
27:BA:592:G:O2'	54:B8:3:LYS:HG3	1.69	0.91
27:BA:873:G:OP1	37:BQ:30:GLN:OE1	1.89	0.91
29:BE:222:ARG:NH1	29:BE:222:ARG:HG3	1.77	0.91
27:BA:1993:U:H4'	29:BE:228:ARG:HH21	1.32	0.91
31:BG:105:SER:HB3	31:BG:131:THR:HG22	1.53	0.91
27:BA:2306:C:H42	31:BG:53:LYS:NZ	1.57	0.91
32:BH:140:VAL:O	32:BH:143:LEU:HD23	1.70	0.91
32:BH:7:PRO:HD3	32:BH:68:ARG:HD3	1.51	0.91
34:BN:95:ARG:C	34:BN:98:PHE:CD1	2.40	0.91
37:BQ:42:TYR:C	37:BQ:125:TRP:HH2	1.74	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:85:G:P	42:BY:65:VAL:HG21	2.10	0.91
27:BA:1827:C:N4	28:BD:225:ARG:NH1	2.15	0.91
41:BX:3:ASP:CA	47:B2:24:LYS:HD3	1.99	0.91
1:AA:1211:U:C3'	1:AA:1212:U:OP1	2.17	0.91
49:B0:33:ALA:HB3	49:B0:66:LYS:H	1.35	0.91
50:B4:20:VAL:HG12	50:B4:30:GLU:OE1	1.69	0.91
27:BA:1151:G:C2'	45:BU:81:ASN:ND2	2.34	0.91
27:BA:2226:C:N3	27:BA:2227:A:H1'	1.84	0.91
27:BA:2346:A:O2'	27:BA:2347:C:OP1	1.87	0.91
27:BA:2432:A:N1	27:BA:2433:A:N1	2.19	0.91
27:BA:2822:G:OP1	29:BE:207:GLY:CA	2.19	0.91
28:BD:130:PRO:HA	28:BD:188:ARG:HA	1.51	0.91
29:BE:79:ARG:O	29:BE:187:HIS:HE1	1.37	0.91
29:BE:267:ARG:HD3	29:BE:297:LYS:CD	2.01	0.91
30:BF:52:ALA:HA	30:BF:55:ARG:CB	1.99	0.91
27:BA:2495:G:H4'	37:BQ:101:MET:CB	2.00	0.91
27:BA:2251:G:H5''	37:BQ:102:ARG:HH22	1.34	0.91
44:BR:36:THR:HG22	44:BR:40:LYS:CB	1.96	0.91
44:BR:87:TYR:HE1	44:BR:94:TYR:HB3	1.13	0.91
27:BA:18:C:C4'	45:BU:23:GLY:O	2.18	0.91
46:BV:39:PHE:O	46:BV:40:VAL:HG22	0.73	0.91
40:BW:8:ARG:CG	40:BW:102:HIS:CE1	2.54	0.91
33:BI:145:VAL:CG1	33:BI:146:THR:H	1.76	0.91
42:BY:103:LEU:HA	42:BY:108:ARG:HB2	1.51	0.91
27:BA:1546:C:H3'	27:BA:1547:C:P	2.11	0.91
1:AA:1030:C:C2'	1:AA:30(A):G:C8	2.52	0.91
1:AA:826:C:H5'	11:AH:12:ARG:HE	1.32	0.91
27:BA:856:C:O2'	49:B0:24:LYS:CG	2.17	0.91
50:B4:15:ILE:N	50:B4:15:ILE:CD1	2.32	0.91
53:B7:34:ARG:HH11	53:B7:42:LEU:HA	1.18	0.91
27:BA:1031:G:O2'	55:B9:8:LYS:NZ	2.03	0.91
27:BA:1031:G:H4'	55:B9:8:LYS:HD3	1.52	0.91
27:BA:1818:U:O5'	28:BD:155:ARG:CB	2.19	0.91
27:BA:2051:A:C2	27:BA:2618:G:C6	2.59	0.91
27:BA:2051:A:H4'	29:BE:238:LEU:CD2	2.00	0.91
27:BA:2290:G:N2	27:BA:2343:C:H1'	1.86	0.91
27:BA:2380:C:H2'	27:BA:2381:C:H5''	1.49	0.91
27:BA:2391:G:C2'	27:BA:2392:A:OP2	2.17	0.91
27:BA:2567:G:C4	27:BA:2568:C:H5	1.88	0.91
27:BA:2678:C:N3	27:BA:2679:A:N7	2.19	0.91
27:BA:2729:G:C2	27:BA:2730:C:C2	2.58	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2740:A:O2'	27:BA:2741:A:C5'	2.19	0.91
27:BA:2825:C:H5	27:BA:2825:C:OP2	1.53	0.91
27:BA:2826:A:N1	27:BA:2827:C:C6	2.39	0.91
27:BA:974(A):C:O4'	27:BA:1186:G:N2	2.04	0.91
30:BF:215:ALA:C	30:BF:242:GLU:HG3	1.92	0.91
32:BH:102:LEU:HD22	32:BH:122:ILE:HD12	1.53	0.91
34:BN:65:ASN:H	34:BN:69:TYR:HB2	1.35	0.91
34:BN:74:ARG:HB3	34:BN:76:ASP:OD2	1.70	0.91
35:BO:92:SER:HB2	35:BO:113:LYS:HZ3	1.34	0.91
37:BQ:94:ARG:NE	37:BQ:106:GLY:CA	2.34	0.91
26:BB:8:U:OP1	38:BS:37:ARG:HD2	1.70	0.91
45:BU:91:ASN:C	45:BU:95:LEU:HD11	1.92	0.91
43:BZ:6:LYS:H	43:BZ:7:PRO:HD3	1.33	0.91
27:BA:135:G:H1	27:BA:144:C:H42	1.17	0.91
7:AD:23:GLY:CA	7:AD:113:SER:HB3	2.00	0.91
27:BA:1944:U:H1'	27:BA:1955:U:H1'	1.53	0.91
27:BA:324:A:H62	27:BA:339:U:H1'	1.35	0.91
50:B4:13:LYS:O	50:B4:14:ILE:HB	1.67	0.90
53:B7:41:GLN:O	53:B7:42:LEU:CG	2.18	0.90
27:BA:2246:G:HO2'	27:BA:2247:A:H5'	1.22	0.90
27:BA:2428:G:C5'	27:BA:2429:G:OP1	2.18	0.90
27:BA:2434:A:O2'	27:BA:2435:A:O5'	1.87	0.90
27:BA:2460:U:N3	27:BA:2492:U:O4	2.03	0.90
27:BA:2493:U:O2	27:BA:2493:U:H2'	1.71	0.90
27:BA:2689:U:N1	27:BA:2713:A:N1	2.19	0.90
27:BA:2821:A:C2'	27:BA:2822:G:O4'	2.20	0.90
28:BD:80:ILE:CD1	28:BD:82:TYR:HE1	1.84	0.90
27:BA:2785:C:C2'	29:BE:100:TRP:HD1	1.84	0.90
29:BE:87:GLU:O	29:BE:94:ARG:N	2.01	0.90
30:BF:148:VAL:CG1	30:BF:148:VAL:O	2.20	0.90
33:BI:7:LYS:HA	33:BI:14:LYS:HG3	1.53	0.90
34:BN:47:THR:OG1	34:BN:53:ILE:HD11	1.70	0.90
35:BO:92:SER:CB	35:BO:113:LYS:HZ2	1.84	0.90
37:BQ:87:LYS:C	37:BQ:88:PHE:CD2	2.44	0.90
44:BR:41:ALA:HB1	44:BR:114:VAL:HG21	1.51	0.90
44:BR:37:THR:O	44:BR:38:VAL:O	1.89	0.90
45:BU:27:SER:O	45:BU:29:SER:CA	2.19	0.90
27:BA:445:C:H3'	45:BU:3:ARG:CZ	2.00	0.90
46:BV:4:ILE:CG1	46:BV:13:ARG:HA	2.00	0.90
1:AA:1320:C:H1'	22:AS:73:GLU:HG2	1.51	0.90
40:BW:89:ALA:N	40:BW:92:ARG:O	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:55:TRP:CZ3	54:B8:59:LYS:NZ	2.39	0.90
27:BA:1031:G:C4'	55:B9:8:LYS:HD3	2.01	0.90
27:BA:1994:C:OP1	29:BE:227:ALA:CB	2.20	0.90
27:BA:2207:C:N3	27:BA:2218:G:C6	2.40	0.90
27:BA:2494:G:N3	27:BA:2495:G:C8	2.38	0.90
27:BA:2605:U:O2'	27:BA:2606:C:O5'	1.86	0.90
27:BA:2607:G:C2'	27:BA:2608:G:H5'	2.01	0.90
27:BA:2653:U:C2'	27:BA:2654:A:N7	2.33	0.90
31:BG:14:ARG:HA	31:BG:137:PRO:CG	2.00	0.90
32:BH:36:PHE:CD2	32:BH:70:LEU:HD11	2.04	0.90
35:BO:61:VAL:HG12	35:BO:62:VAL:N	1.84	0.90
27:BA:911:A:C6	37:BQ:16:ARG:HA	2.06	0.90
44:BR:44:LEU:O	44:BR:44:LEU:HD13	1.70	0.90
45:BU:30:LYS:O	45:BU:32:TYR:CD2	2.24	0.90
46:BV:61:VAL:C	46:BV:98:ILE:HD11	1.92	0.90
4:AX:120:A:H2'	4:AX:121:G:C8	2.05	0.90
33:BI:132:LYS:HA	33:BI:138:THR:HG21	1.50	0.90
27:BA:321:G:H4'	30:BF:206:ASN:HB3	1.53	0.90
43:BZ:19:ILE:N	43:BZ:36:ARG:CG	2.34	0.90
1:AA:1320:C:O2	22:AS:72:GLY:O	1.90	0.90
1:AA:408:A:H5''	7:AD:22:LYS:O	1.70	0.90
1:AA:196:A:HO3'	1:AA:197:A:P	1.91	0.90
1:AA:65:U:H4'	1:AA:199:G:O2'	1.71	0.90
3:AW:76:A:N9	27:BA:2421:G:C4	2.33	0.90
27:BA:2331:G:O2'	49:B0:70:ILE:HG21	0.73	0.90
27:BA:388:G:OP2	50:B4:29:PRO:HG3	1.70	0.90
50:B4:30:GLU:O	50:B4:31:ILE:HD13	1.69	0.90
50:B4:58:LYS:HG2	50:B4:59:PHE:H	1.33	0.90
27:BA:1646:C:C3'	27:BA:1647:G:H5'	2.00	0.90
27:BA:2225:A:C5'	27:BA:2226:C:H5''	1.87	0.90
27:BA:2479:G:OP1	27:BA:2537:U:O4'	1.88	0.90
27:BA:2804:C:H5	27:BA:2805:G:O6	1.54	0.90
28:BD:78:ALA:O	28:BD:79:THR:CG2	2.19	0.90
27:BA:2306:C:O2	31:BG:27:ILE:HG12	1.72	0.90
33:BI:42:ALA:O	33:BI:45:LYS:HB2	1.70	0.90
34:BN:15:ARG:HD3	34:BN:43:ARG:HD2	0.93	0.90
36:BP:55:GLN:OE1	36:BP:55:GLN:HA	1.69	0.90
37:BQ:59:ASN:HD22	37:BQ:60:ALA:N	1.61	0.90
42:BY:90:PRO:C	42:BY:91:LEU:HD23	1.91	0.90
1:AA:975:A:C4	1:AA:1357:A:N3	2.39	0.90
47:B2:4:HIS:N	47:B2:8:ILE:HD11	1.85	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:3(A):G:N1	1:AA:1037:C:O2	2.04	0.90
33:BI:134:HIS:ND1	33:BI:135:PRO:HD2	1.86	0.90
26:BB:40:U:H3'	26:BB:41:U:H5'	1.52	0.90
51:B5:33:CYS:HB3	51:B5:37:HIS:N	1.86	0.90
25:AY:222:MET:CA	27:BA:2556:C:O2'	2.19	0.90
49:B0:29:GLU:O	49:B0:31:VAL:N	2.04	0.90
48:B3:22:ALA:HA	48:B3:46:ASN:ND2	1.86	0.90
54:B8:9:MET:O	54:B8:14:ILE:HD13	1.70	0.90
27:BA:2657:A:H62	27:BA:2664:G:H21	1.05	0.90
27:BA:2746:U:C2	27:BA:2759:G:N2	2.37	0.90
28:BD:103:ILE:HG12	28:BD:104:ILE:HD13	1.50	0.90
28:BD:145:LEU:H	28:BD:152:GLN:HB2	1.34	0.90
27:BA:2210:G:N7	28:BD:148:GLY:HA3	1.86	0.90
29:BE:210:THR:CA	29:BE:216:ARG:HH22	1.82	0.90
30:BF:236:THR:O	30:BF:239:ALA:CB	2.19	0.90
34:BN:15:ARG:NE	34:BN:40:ASN:HD21	1.64	0.90
35:BO:111:PHE:O	35:BO:112:MET:C	2.08	0.90
27:BA:911:A:C2	37:BQ:17:ARG:NE	2.15	0.90
38:BS:116:PHE:HA	38:BS:119:GLN:OE1	1.70	0.90
45:BU:13:ARG:NH1	45:BU:13:ARG:CB	1.68	0.90
46:BV:49:GLU:O	46:BV:54:TYR:CZ	2.25	0.90
43:BZ:172:LEU:CD2	43:BZ:173:PRO:N	2.27	0.90
1:AA:976:G:H2'	1:AA:361(A):C:H42	1.32	0.90
16:AM:91:ARG:HH22	16:AM:103:THR:HG21	1.34	0.90
47:B2:17:GLU:O	47:B2:19:GLU:N	2.04	0.90
47:B2:52:ALA:O	47:B2:56:ILE:CD1	2.14	0.90
31:BG:59:GLY:C	31:BG:60:GLU:HG3	1.92	0.90
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.53	0.90
1:AA:876:G:C1'	11:AH:11:THR:HG21	2.00	0.90
50:B4:14:ILE:HG22	50:B4:37:SER:H	1.37	0.90
53:B7:44:VAL:C	53:B7:46:ASP:N	2.24	0.90
27:BA:2331:G:H4'	49:B0:70:ILE:HG12	1.52	0.90
27:BA:2484:G:N1	27:BA:2485:G:C8	2.40	0.90
27:BA:2526:G:C6	27:BA:2527:C:C5	2.58	0.90
29:BE:211:GLN:NE2	29:BE:216:ARG:N	2.17	0.90
29:BE:214:VAL:HG22	29:BE:221:LYS:HD2	1.52	0.90
27:BA:2571:C:HO2'	29:BE:243:PRO:HD3	1.27	0.90
30:BF:164:ALA:CA	30:BF:232:LEU:CD1	2.50	0.90
30:BF:223:LEU:HD12	30:BF:223:LEU:C	1.87	0.90
30:BF:81:PRO:CA	30:BF:87:ARG:HB3	2.01	0.90
32:BH:10:ILE:CD1	32:BH:49:ILE:HG13	2.02	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:15:THR:HG23	32:BH:26:LYS:N	1.87	0.90
44:BR:97:VAL:HG13	44:BR:114:VAL:HG22	1.53	0.90
46:BV:28:GLU:OE2	46:BV:93:ILE:HB	1.72	0.90
40:BW:68:ARG:O	40:BW:110:LYS:N	2.04	0.90
28:BD:208:GLY:O	28:BD:210:LYS:HG2	1.72	0.90
47:B2:48:GLU:O	47:B2:49:LEU:C	2.08	0.90
27:BA:1598:C:H5''	41:BX:34:LYS:HG3	1.48	0.90
13:AJ:64:GLU:HG2	17:AN:59:ALA:HA	1.53	0.90
47:B2:39:ALA:CB	47:B2:40:PRO:HD3	2.01	0.90
3:AW:41:U:H6	3:AW:41:U:H5'	1.34	0.90
49:B0:42:GLY:HA2	49:B0:66:LYS:CA	2.02	0.90
27:BA:1669:A:O3'	27:BA:2550:G:P	2.29	0.90
27:BA:2227:A:C2	27:BA:2228:G:N1	2.37	0.90
27:BA:2379:G:OP1	38:BS:30:GLY:HA2	1.69	0.90
27:BA:2446:G:N2	27:BA:2501:C:H41	1.69	0.90
27:BA:2504:U:H3'	27:BA:2504:U:C6	2.07	0.90
27:BA:2721:A:H2'	27:BA:2722:G:H8	1.37	0.90
27:BA:801:G:P	30:BF:79:ARG:CZ	2.60	0.90
28:BD:148:GLY:O	28:BD:150:GLY:N	2.05	0.90
29:BE:216:ARG:HH11	29:BE:253:GLN:HB3	1.37	0.90
29:BE:94:ARG:CB	29:BE:95:PRO:CD	2.43	0.90
30:BF:62:GLY:N	30:BF:65:ARG:NH2	2.18	0.90
32:BH:10:ILE:HD11	32:BH:49:ILE:HG12	1.50	0.90
35:BO:77:ILE:HD11	35:BO:79:PHE:HE2	0.98	0.90
38:BS:41:LYS:HZ1	38:BS:68:GLU:CD	1.74	0.90
46:BV:59:GLU:O	46:BV:60:VAL:HG22	1.69	0.90
27:BA:296:C:H6	27:BA:338:G:H21	0.97	0.90
43:BZ:53:ASP:OD2	43:BZ:62:PHE:O	1.88	0.90
31:BG:82:GLU:C	31:BG:85:GLN:CG	2.37	0.90
41:BX:47:VAL:CB	41:BX:69:SER:CB	2.49	0.90
1:AA:1500:A:H5''	1:AA:1508:G:C5'	2.02	0.90
1:AA:1005:A:H4'	1:AA:1037:C:C1'	2.01	0.90
27:BA:1482:U:H3'	27:BA:1482:U:H6	1.37	0.90
51:B5:45:ILE:HG23	51:B5:52:TYR:HD1	1.09	0.90
54:B8:23:MET:CE	54:B8:48:PHE:HD2	1.81	0.90
27:BA:1062:G:H22	56:BK:92:PRO:HG3	1.36	0.90
27:BA:2209:C:O2'	27:BA:2210:G:C3'	2.19	0.90
27:BA:2258:C:C5	27:BA:2426:A:C1'	2.54	0.90
27:BA:2484:G:H2'	27:BA:2485:G:C5'	2.02	0.90
27:BA:2583:G:C1'	27:BA:2584:U:O2	2.19	0.90
27:BA:2675:A:H2'	27:BA:2676:C:H5'	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2722:G:C2	27:BA:2723:C:C5	2.59	0.90
27:BA:2739:U:H6	27:BA:2739:U:H3'	1.35	0.90
27:BA:993:G:O4'	46:BV:90:PHE:CE2	2.20	0.90
28:BD:128:ALA:HB1	28:BD:190:THR:HG22	1.48	0.90
34:BN:23:ALA:HA	34:BN:26:VAL:CG2	2.00	0.90
36:BP:94:ARG:CG	36:BP:120:LEU:CD2	2.27	0.90
37:BQ:49:VAL:HG13	37:BQ:119:ASN:O	1.71	0.90
44:BR:18:LEU:CD1	44:BR:19:ALA:N	2.35	0.90
38:BS:59:ALA:O	38:BS:91:ARG:NH1	2.04	0.90
45:BU:44:THR:CB	46:BV:77:GLY:O	2.19	0.90
33:BI:94:THR:HG23	33:BI:96:LYS:HB3	1.53	0.90
27:BA:1566:A:C2	28:BD:212:HIS:CA	2.53	0.90
27:BA:1339:G:N2	27:BA:1603:A:H8	1.70	0.90
43:BZ:95:SER:HG	43:BZ:122:ILE:HG12	1.36	0.90
1:AA:1340:A:C4'	2:AV:31:A:O2'	2.19	0.90
50:B4:35:VAL:HG12	50:B4:36:TRP:N	1.86	0.90
27:BA:2052:G:H4'	29:BE:239:GLY:O	1.72	0.90
27:BA:2265:U:O2	27:BA:2266:A:N7	2.04	0.90
27:BA:2366:A:C8	27:BA:2367:G:N7	2.40	0.90
27:BA:2397:G:C5	27:BA:2420:C:O2	2.24	0.90
27:BA:2436:G:N1	27:BA:2437:U:C2	2.40	0.90
27:BA:526:A:N1	27:BA:2626:C:O4'	2.03	0.90
27:BA:2769:C:O2'	27:BA:2770:G:C5'	2.19	0.90
28:BD:128:ALA:CB	28:BD:190:THR:HA	2.00	0.90
29:BE:315:VAL:O	29:BE:317:PRO:CD	2.20	0.90
30:BF:112:ARG:O	30:BF:113:SER:C	2.10	0.90
32:BH:130:ILE:HG22	32:BH:131:ILE:N	1.87	0.90
32:BH:64:HIS:O	32:BH:66:THR:N	2.05	0.90
37:BQ:41:THR:C	37:BQ:125:TRP:HZ3	1.73	0.90
44:BR:87:TYR:CD1	44:BR:94:TYR:HB3	2.07	0.90
45:BU:47:TYR:HE2	46:BV:74:TYR:O	1.53	0.90
40:BW:79:GLY:O	40:BW:80:PRO:C	2.07	0.90
33:BI:109:LYS:HE3	33:BI:109:LYS:H	1.34	0.90
33:BI:93:ILE:O	33:BI:93:ILE:HG13	1.69	0.90
33:BI:95:SER:CB	33:BI:98:ILE:HD11	1.98	0.90
13:AJ:11:PHE:CE2	17:AN:55:GLY:HA3	2.07	0.90
1:AA:279:A:N7	20:AQ:95:TYR:CE2	2.40	0.90
1:AA:22:G:O2'	1:AA:913:A:N1	2.05	0.90
27:BA:2094:G:C2	27:BA:2196:C:O2	2.25	0.90
27:BA:2331:G:C5	27:BA:2332:U:C4	2.58	0.90
26:BB:51:G:OP2	38:BS:72:GLU:HG2	1.71	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:106:PRO:O	28:BD:107:LYS:O	1.88	0.90
29:BE:199:ALA:O	29:BE:266:LYS:HB2	1.72	0.90
29:BE:45:LYS:CD	29:BE:303:PRO:O	2.19	0.90
31:BG:35:ALA:O	31:BG:36:ASN:ND2	2.04	0.90
35:BO:36:GLY:N	35:BO:62:VAL:HB	1.87	0.90
27:BA:2406:U:O4	36:BP:55:GLN:HB3	1.43	0.90
37:BQ:49:VAL:HG22	37:BQ:121:ASP:H	1.00	0.90
26:BB:48:A:OP1	38:BS:110:THR:HB	1.71	0.90
43:BZ:90:GLU:H	43:BZ:91:PRO:CD	1.85	0.90
47:B2:27:LEU:CD1	47:B2:53:ILE:HD13	2.00	0.90
31:BG:84:LEU:O	31:BG:88:LEU:HB2	1.71	0.90
26:BB:99:A:H2'	26:BB:100:G:C8	2.07	0.90
27:BA:2241:A:H8	27:BA:2241:A:H5'	1.34	0.90
27:BA:2248:C:H2'	27:BA:2248:C:O2	1.70	0.90
27:BA:2695:C:O2'	27:BA:2696:U:C6	2.24	0.90
27:BA:2700:C:H3'	27:BA:2701:C:C5'	2.00	0.90
27:BA:2635:C:C2	27:BA:2783:G:N2	2.38	0.90
27:BA:451:C:OP1	30:BF:49:ASP:N	2.05	0.90
27:BA:598:G:N2	30:BF:33:LYS:HZ1	1.60	0.90
28:BD:145:LEU:H	28:BD:152:GLN:CB	1.55	0.90
29:BE:205:THR:OG1	29:BE:258:TYR:N	2.04	0.90
29:BE:43:GLY:HA3	29:BE:75:THR:OG1	1.72	0.90
30:BF:195:VAL:HG13	30:BF:213:ALA:HB3	1.52	0.90
30:BF:219:ASN:H	30:BF:219:ASN:ND2	1.70	0.90
31:BG:18:ILE:CG2	31:BG:19:GLU:H	1.84	0.90
37:BQ:57:ARG:C	37:BQ:61:LEU:HG	1.93	0.90
39:BT:11:THR:HG22	39:BT:12:ASP:N	1.87	0.90
45:BU:28:ARG:CA	45:BU:31:GLN:CG	2.50	0.90
33:BI:77:VAL:CG1	33:BI:143:VAL:HG22	2.01	0.90
42:BY:101:LEU:CD1	42:BY:103:LEU:HD11	2.02	0.90
28:BD:213:LYS:CB	28:BD:215:LYS:H	1.83	0.90
49:B0:23:VAL:CG1	49:B0:24:LYS:N	2.19	0.89
49:B0:28:GLY:HA3	49:B0:60:PHE:HB3	1.51	0.89
53:B7:9:ASN:O	53:B7:10:ARG:C	2.07	0.89
27:BA:1139:G:OP1	34:BN:46:ILE:CG2	2.20	0.89
27:BA:2484:G:H22	27:BA:2485:G:C1'	1.80	0.89
27:BA:2633:G:O2'	27:BA:2634:G:H5'	1.71	0.89
27:BA:2734:A:C5'	27:BA:2734:A:H8	1.83	0.89
27:BA:2821:A:H2'	27:BA:2822:G:C1'	2.01	0.89
27:BA:564:C:OP2	46:BV:79:GLN:OE1	1.89	0.89
27:BA:2682:U:C5	29:BE:48:MET:HE1	2.08	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:102:LEU:HB3	30:BF:107:ARG:HE	1.29	0.89
27:BA:2304:G:H4'	31:BG:105:SER:HB2	1.53	0.89
27:BA:2311:A:OP2	31:BG:55:LYS:HE3	1.72	0.89
32:BH:93:TYR:CG	32:BH:106:VAL:CG2	2.48	0.89
34:BN:77:GLY:HA2	34:BN:80:LYS:HG2	1.49	0.89
27:BA:2251:G:H5"	37:BQ:102:ARG:CZ	2.03	0.89
39:BT:21:PHE:C	39:BT:22:VAL:HG13	1.93	0.89
45:BU:41:ASN:ND2	45:BU:42:ALA:N	2.16	0.89
47:B2:20:LEU:O	47:B2:23:LEU:N	2.05	0.89
27:BA:1339:G:H5'	41:BX:13:LYS:HE3	1.54	0.89
32:BH:111:PRO:C	32:BH:112:VAL:HG23	1.91	0.89
3:AW:45:G:HO3'	3:AW:46:G:C5'	1.85	0.89
40:BW:21:VAL:HG23	40:BW:22:ASP:N	1.86	0.89
1:AA:41:G:H2'	1:AA:42:G:C8	2.05	0.89
1:AA:463:A:OP2	19:AP:75:ARG:NH2	2.05	0.89
3:AW:33:U:C2	3:AW:35:A:H5'	2.06	0.89
48:B3:43:ILE:H	48:B3:43:ILE:HD12	1.36	0.89
48:B3:54:VAL:HG23	48:B3:55:ARG:H	1.33	0.89
54:B8:26:LYS:CG	54:B8:44:LYS:HA	2.03	0.89
27:BA:1782:C:N3	27:BA:2609:U:C6	2.39	0.89
27:BA:2330:G:C2	27:BA:2331:G:H1'	2.06	0.89
3:AW:76:A:C4	27:BA:2422:A:N6	2.41	0.89
27:BA:825:C:C4'	27:BA:2428:G:N7	2.35	0.89
27:BA:2578:G:O2'	27:BA:2579:C:O5'	1.91	0.89
27:BA:2848:G:H22	27:BA:2867:G:C1'	1.78	0.89
30:BF:34:ALA:CB	30:BF:110:ALA:CB	2.47	0.89
32:BH:147:ILE:HA	32:BH:150:VAL:CG2	2.01	0.89
36:BP:94:ARG:CD	36:BP:120:LEU:HD22	1.99	0.89
37:BQ:42:TYR:HD2	43:BZ:119:ASN:HA	1.35	0.89
46:BV:35:LEU:O	46:BV:60:VAL:CG1	2.20	0.89
42:BY:103:LEU:HD13	42:BY:113:GLU:HB3	1.51	0.89
42:BY:31:LEU:O	42:BY:34:GLU:HB2	1.72	0.89
42:BY:73:HIS:N	42:BY:91:LEU:CD1	2.29	0.89
41:BX:25:GLN:CA	41:BX:25:GLN:OE1	2.20	0.89
27:BA:1697:G:H3'	27:BA:1698:A:H5'	1.52	0.89
33:BI:60:GLU:O	33:BI:63:ALA:N	2.06	0.89
27:BA:2482:G:H2'	27:BA:2483:C:H5'	0.89	0.89
27:BA:2634:G:C2'	27:BA:2635:C:O5'	2.20	0.89
27:BA:2635:C:O2'	27:BA:2636:U:O5'	1.91	0.89
27:BA:2771:C:N3	27:BA:2772:C:C5	2.40	0.89
27:BA:2799:A:H5"	27:BA:2801:A:OP2	1.70	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:929:G:H1'	48:B3:43:ILE:HG13	1.55	0.89
28:BD:152:GLN:O	28:BD:153:LEU:HB2	1.72	0.89
29:BE:44:TYR:O	29:BE:74:GLU:OE1	1.90	0.89
30:BF:196:THR:CA	30:BF:236:THR:HG23	2.01	0.89
36:BP:52:LYS:HD3	36:BP:53:ARG:HH12	1.36	0.89
44:BR:102:GLU:HG3	44:BR:103:ARG:H	1.34	0.89
38:BS:31:LYS:NZ	38:BS:99:GLU:CB	2.34	0.89
42:BY:41:ARG:O	42:BY:112:LEU:HB3	1.71	0.89
47:B2:47:LYS:O	47:B2:48:GLU:C	2.11	0.89
41:BX:9:HIS:HE1	41:BX:27:ALA:HA	1.34	0.89
28:BD:235:PRO:O	28:BD:236:PHE:C	2.07	0.89
1:AA:677:U:H3	1:AA:713:G:H1	1.18	0.89
27:BA:1277:G:N3	44:BR:23:ASN:ND2	2.19	0.89
27:BA:1966:A:C2	27:BA:2593:U:C4'	2.56	0.89
27:BA:2023:G:C5'	27:BA:2617:C:O2'	2.20	0.89
27:BA:2330:G:H21	27:BA:2331:G:H1'	1.09	0.89
27:BA:2356:C:OP1	49:B0:19:LYS:HD2	1.72	0.89
27:BA:2356:C:H2'	27:BA:2357:U:C5'	2.02	0.89
27:BA:2472:G:O2'	27:BA:2473:U:OP1	1.90	0.89
27:BA:2553:G:C8	27:BA:2554:U:O4'	2.25	0.89
27:BA:2657:A:N7	27:BA:2658:C:C6	2.40	0.89
27:BA:29:U:H4'	45:BU:11:ARG:CZ	2.02	0.89
27:BA:572:A:H2'	27:BA:573:G:C1'	2.03	0.89
28:BD:71:ASP:OD1	28:BD:118:GLY:N	2.06	0.89
28:BD:85:ASN:ND2	28:BD:86:ARG:CZ	2.36	0.89
29:BE:77:PRO:HB2	29:BE:187:HIS:H	0.76	0.89
29:BE:81:VAL:HB	29:BE:100:TRP:CZ3	2.07	0.89
30:BF:84:VAL:C	30:BF:85:LYS:CD	2.39	0.89
32:BH:101:LYS:HZ1	32:BH:115:GLU:CG	1.84	0.89
32:BH:167:LEU:N	32:BH:167:LEU:HD23	1.86	0.89
32:BH:71:LEU:O	32:BH:73:ASN:N	2.05	0.89
34:BN:82:THR:OG1	34:BN:83:ILE:N	2.03	0.89
26:BB:7:G:HO2'	38:BS:37:ARG:HG3	1.38	0.89
46:BV:11:GLN:HE22	46:BV:22:VAL:CB	1.85	0.89
33:BI:102:LEU:C	33:BI:102:LEU:HD12	1.91	0.89
42:BY:78:THR:HG21	42:BY:88:PRO:HA	1.53	0.89
28:BD:211:HIS:HD1	28:BD:212:HIS:CD2	1.91	0.89
41:BX:33:SER:O	41:BX:37:VAL:HG23	1.72	0.89
27:BA:1626:G:N7	27:BA:1634:A:H2	1.70	0.89
27:BA:1609:A:C6	27:BA:1616:A:H2	1.90	0.89
27:BA:2060:A:OP1	30:BF:64:GLY:HA2	1.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2228:G:N7	27:BA:2229:C:N1	2.21	0.89
27:BA:2310:A:C2	31:BG:55:LYS:HD3	2.07	0.89
27:BA:2492:U:O2'	27:BA:2493:U:C5'	2.19	0.89
27:BA:1033:U:C5	27:BA:2750:A:C2	2.59	0.89
27:BA:2785:C:HO2'	27:BA:2786:U:P	1.96	0.89
27:BA:2799:A:C5'	27:BA:2801:A:OP2	2.20	0.89
27:BA:631:A:C2	27:BA:2416:C:O4'	2.26	0.89
29:BE:70:VAL:HG22	29:BE:297:LYS:HA	1.55	0.89
30:BF:193:LEU:HD13	30:BF:223:LEU:CB	2.01	0.89
31:BG:76:ARG:HB2	31:BG:77:ASP:OD1	1.71	0.89
32:BH:64:HIS:C	32:BH:66:THR:H	1.75	0.89
34:BN:12:VAL:HG12	34:BN:38:VAL:HG21	1.54	0.89
34:BN:61:VAL:HG22	34:BN:139:LEU:CB	2.02	0.89
34:BN:65:ASN:HB2	34:BN:69:TYR:CE1	2.07	0.89
38:BS:82:TYR:O	38:BS:86:LEU:HG	1.72	0.89
45:BU:39:LEU:O	45:BU:40:LEU:C	2.11	0.89
43:BZ:26:LYS:N	43:BZ:84:TYR:CE1	2.40	0.89
1:AA:1221:G:H5'	22:AS:36:ARG:HH12	1.33	0.89
47:B2:51:LYS:O	47:B2:56:ILE:HD11	1.71	0.89
1:AA:3(A):G:O6	1:AA:1037:C:N3	2.06	0.89
27:BA:869:G:H1	27:BA:908:C:H42	1.19	0.89
3:AW:41:U:H4'	10:AG:143:ARG:HB3	1.55	0.89
50:B4:7:PRO:HD3	50:B4:56:VAL:HG21	1.51	0.89
50:B4:5:LEU:HD23	50:B4:5:LEU:N	1.87	0.89
52:B6:14:SER:CB	52:B6:52:GLU:HA	2.02	0.89
53:B7:12:ARG:O	53:B7:15:THR:OG1	1.90	0.89
27:BA:2468:G:N1	27:BA:2481:G:C4	2.41	0.89
27:BA:2550:G:C4	27:BA:2551:C:H5	1.91	0.89
27:BA:2758:A:C1'	27:BA:2758:A:OP2	2.20	0.89
27:BA:2861:G:H5''	27:BA:2861:G:H8	1.37	0.89
27:BA:494:G:H4'	40:BW:6:ILE:HG23	1.51	0.89
28:BD:127:ASN:O	28:BD:190:THR:HB	1.70	0.89
30:BF:103:ASN:CB	30:BF:106:GLU:OE2	2.19	0.89
30:BF:243:VAL:HA	30:BF:246:ARG:CG	2.03	0.89
30:BF:52:ALA:CB	30:BF:55:ARG:NE	2.31	0.89
30:BF:52:ALA:O	30:BF:54:LEU:N	2.06	0.89
30:BF:91:PRO:HG2	30:BF:92:PRO:CD	2.02	0.89
31:BG:97:GLN:HB2	31:BG:106:PHE:HE2	1.32	0.89
32:BH:102:LEU:HD12	32:BH:104:LEU:HD11	1.54	0.89
32:BH:148:ARG:HH11	32:BH:163:TYR:HA	1.08	0.89
35:BO:12:ASP:HB2	35:BO:95:GLY:HA3	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:88:PHE:CB	37:BQ:90:PHE:HE1	1.86	0.89
44:BR:107:ASP:OD1	44:BR:108:GLY:N	2.06	0.89
44:BR:67:LEU:CD2	44:BR:71:GLN:HA	2.03	0.89
45:BU:86:ALA:HB3	45:BU:90:LEU:CD2	2.02	0.89
46:BV:57:GLN:HG2	46:BV:58:ALA:N	1.85	0.89
46:BV:74:TYR:HD1	46:BV:86:HIS:O	1.55	0.89
43:BZ:163:ASP:OD2	43:BZ:164:PRO:N	2.05	0.89
27:BA:321:G:H1'	30:BF:206:ASN:HD22	1.38	0.89
43:BZ:16:GLU:OE1	43:BZ:16:GLU:HA	1.72	0.89
28:BD:213:LYS:CB	28:BD:215:LYS:HB2	2.02	0.89
28:BD:216:ALA:HA	28:BD:222:PRO:N	1.85	0.89
47:B2:26:GLU:CG	47:B2:27:LEU:H	1.82	0.89
41:BX:39:ASP:O	41:BX:41:VAL:N	2.05	0.89
34:BN:105:LEU:HG	34:BN:106:GLY:N	1.86	0.89
39:BT:45:GLU:O	39:BT:48:ASN:ND2	2.05	0.89
54:B8:38:GLY:O	54:B8:41:ILE:N	2.05	0.89
27:BA:592:G:C2	54:B8:3:LYS:CE	2.55	0.89
27:BA:197:A:C6	27:BA:2430:A:C8	2.60	0.89
27:BA:2522:U:O2	27:BA:2543:G:N1	2.04	0.89
27:BA:2791:C:N4	27:BA:2893:G:N7	2.20	0.89
27:BA:2898:U:N3	27:BA:2899:G:N7	2.21	0.89
29:BE:304:ASP:O	29:BE:307:LEU:HB2	1.73	0.89
29:BE:74:GLU:HA	29:BE:293:TYR:HD2	1.19	0.89
30:BF:162:VAL:HG12	30:BF:163:HIS:H	1.35	0.89
32:BH:86:LEU:CD1	32:BH:87:GLU:N	2.33	0.89
27:BA:1077:A:C2	56:BK:134:SER:OG	2.24	0.89
34:BN:60:ARG:HA	34:BN:71:TYR:CE2	2.07	0.89
37:BQ:65:ARG:NH2	37:BQ:85:ILE:C	2.25	0.89
44:BR:101:ALA:O	51:B5:41:LEU:HD13	1.73	0.89
44:BR:97:VAL:HA	44:BR:114:VAL:HG13	1.53	0.89
46:BV:49:GLU:HA	46:BV:53:LYS:NZ	1.88	0.89
46:BV:66:GLY:C	46:BV:67:LYS:N	2.26	0.89
27:BA:338:G:OP1	42:BY:21:LYS:HD2	1.73	0.89
27:BA:85:G:OP1	42:BY:65:VAL:HG21	1.72	0.89
28:BD:213:LYS:HB3	28:BD:215:LYS:CA	2.02	0.89
49:B0:48:GLY:HA3	49:B0:55:ARG:HB2	1.54	0.89
48:B3:8:LEU:HB3	48:B3:32:GLN:N	1.88	0.89
53:B7:24:THR:O	53:B7:28:ARG:HG3	1.72	0.89
54:B8:16:ILE:HG13	54:B8:22:VAL:HG21	1.50	0.89
27:BA:2331:G:C6	27:BA:2332:U:N3	2.39	0.89
27:BA:2494:G:N2	27:BA:2495:G:C8	2.39	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2528:U:H5	27:BA:2530:A:C2	1.90	0.89
27:BA:2520:C:C5	27:BA:2567:G:N9	2.41	0.89
27:BA:2574:G:HO2'	29:BE:240:PRO:CB	1.69	0.89
27:BA:2051:A:N7	27:BA:2614:A:C6	2.40	0.89
27:BA:2712:U:H3'	27:BA:2714:G:P	2.12	0.89
27:BA:856:C:C5'	49:B0:25:LYS:NZ	2.30	0.89
26:BB:47:C:O3'	38:BS:107:ASN:CG	2.11	0.89
28:BD:74:PRO:HG2	28:BD:96:ALA:N	1.87	0.89
30:BF:115:LEU:CD2	30:BF:246:ARG:HH22	1.86	0.89
30:BF:37:ALA:CB	30:BF:102:LEU:HD12	2.02	0.89
34:BN:94:GLY:O	34:BN:98:PHE:CE1	2.24	0.89
27:BA:2674:G:H4'	35:BO:30:ARG:HG3	1.54	0.89
35:BO:86:ILE:HG22	35:BO:87:ILE:H	1.38	0.89
36:BP:53:ARG:CD	36:BP:53:ARG:H	1.86	0.89
44:BR:97:VAL:HG13	44:BR:114:VAL:CG2	2.03	0.89
33:BI:77:VAL:HG11	33:BI:143:VAL:CG2	2.02	0.89
42:BY:18:GLU:HB3	42:BY:21:LYS:NZ	1.88	0.89
43:BZ:2:GLU:H	43:BZ:54:ILE:HG23	1.23	0.89
43:BZ:39:PHE:C	43:BZ:43:PHE:CD2	2.46	0.89
27:BA:71:A:H4'	27:BA:72:U:H3'	1.54	0.89
41:BX:11:THR:C	41:BX:15:MET:SD	2.51	0.89
3:AW:37:YYG:H102	10:AG:83:ALA:HB2	1.54	0.89
1:AA:25:C:H4'	1:AA:524:G:H21	1.36	0.89
48:B3:22:ALA:O	48:B3:26:LEU:HG	1.73	0.89
50:B4:41:PRO:CG	50:B4:57:ASP:OD2	2.21	0.89
27:BA:972:G:N7	27:BA:1188:U:O4	2.06	0.89
27:BA:2013:A:H2'	27:BA:2014:A:O4'	1.73	0.89
27:BA:2309:A:H3'	27:BA:2310:A:H5'	1.54	0.89
27:BA:2322:A:C4	27:BA:2323:G:H8	1.91	0.89
27:BA:2454:G:C2	27:BA:2455:G:H1'	2.07	0.89
27:BA:2482:G:H2'	27:BA:2483:C:H5''	1.54	0.89
27:BA:2555:U:C2'	27:BA:2556:C:C5'	2.38	0.89
27:BA:2574:G:H3'	27:BA:2575:C:C6	2.06	0.89
27:BA:532:A:OP2	27:BA:2021:C:N4	2.06	0.89
30:BF:150:THR:HB	30:BF:207:LEU:CD2	2.02	0.89
32:BH:15:THR:HG21	32:BH:26:LYS:HB2	0.91	0.89
34:BN:87:LEU:H	34:BN:87:LEU:CD1	1.86	0.89
36:BP:129:ALA:O	36:BP:133:VAL:HG23	1.73	0.89
27:BA:2277:G:O3'	37:BQ:15:THR:CG2	2.20	0.89
37:BQ:48:ASN:OD1	37:BQ:48:ASN:O	1.91	0.89
44:BR:55:ALA:HA	44:BR:80:PHE:CE1	2.06	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:3:ALA:O	40:BW:4:LYS:HG3	1.73	0.89
40:BW:5:ALA:HB2	40:BW:54:ALA:HB2	1.54	0.89
42:BY:11:GLN:HA	42:BY:21:LYS:HE3	1.53	0.89
42:BY:11:GLN:HG3	42:BY:21:LYS:HE2	1.53	0.89
16:AM:97:PRO:HG2	16:AM:103:THR:HG22	1.52	0.89
27:BA:1545:A:H5'	27:BA:545(A):A:OP2	1.72	0.89
1:AA:1319:A:H4'	22:AS:70:LYS:CE	2.03	0.89
27:BA:282:A:N7	27:BA:360:G:N2	2.19	0.89
48:B3:8:LEU:HB3	48:B3:32:GLN:HA	1.55	0.89
50:B4:57:ASP:O	50:B4:58:LYS:O	1.91	0.89
27:BA:2046:G:OP1	51:B5:19:ARG:HA	1.71	0.89
52:B6:32:GLN:HB3	52:B6:35:LEU:HD12	0.89	0.89
53:B7:8:ASN:O	53:B7:9:ASN:O	1.91	0.89
27:BA:1022:G:C5'	34:BN:52:GLN:OE1	2.20	0.89
27:BA:2276:G:OP2	37:BQ:103:ALA:CA	2.20	0.89
27:BA:2384:G:C2'	27:BA:2386:C:OP2	2.21	0.89
27:BA:2457:U:C2'	27:BA:2458:G:C5'	2.51	0.89
27:BA:2535:G:N2	27:BA:2536:G:H1'	1.88	0.89
27:BA:2543:G:C2'	27:BA:2544:G:H8	1.71	0.89
27:BA:2623:G:H21	27:BA:2624:G:H1'	1.34	0.89
27:BA:2893:G:OP2	27:BA:2893:G:H8	1.56	0.89
27:BA:598:G:H21	30:BF:33:LYS:HZ1	1.11	0.89
27:BA:932:G:H5''	48:B3:29:ARG:NH2	1.84	0.89
27:BA:994:C:O2	45:BU:53:LYS:CG	2.19	0.89
28:BD:68:ARG:O	28:BD:69:ASP:OD2	1.91	0.89
29:BE:231:TRP:CE3	29:BE:234:ARG:NH2	2.41	0.89
27:BA:2684:U:C1'	35:BO:70:ARG:CZ	2.41	0.89
35:BO:81:GLU:HG2	35:BO:82:ASN:N	1.83	0.89
37:BQ:88:PHE:C	37:BQ:90:PHE:HE1	1.76	0.89
38:BS:41:LYS:NZ	38:BS:68:GLU:CD	2.26	0.89
45:BU:49:ASP:N	45:BU:52:ASN:ND2	1.99	0.89
46:BV:74:TYR:CE1	46:BV:86:HIS:O	2.26	0.89
27:BA:487:C:H1'	40:BW:53:SER:OG	1.73	0.89
33:BI:79:ILE:O	33:BI:145:VAL:HG13	1.72	0.89
43:BZ:34:LEU:CD1	43:BZ:35:ASP:H	1.85	0.89
43:BZ:79:ILE:HG22	43:BZ:80:HIS:CE1	2.08	0.89
27:BA:1102:C:N3	27:BA:1104:C:C5	2.41	0.89
51:B5:34:PRO:HD2	51:B5:36:CYS:SG	2.12	0.88
52:B6:21:TYR:CE1	52:B6:43:VAL:CG2	2.55	0.88
52:B6:8:ILE:HA	52:B6:29:ARG:NE	1.88	0.88
27:BA:1368:G:P	53:B7:25:LYS:NZ	2.45	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2246:G:C2	27:BA:2247:A:C5	2.60	0.88
27:BA:2316:C:N4	27:BA:2317:C:N4	2.20	0.88
27:BA:2320:A:H1'	27:BA:2333:A:N6	1.87	0.88
27:BA:2550:G:H2'	27:BA:2551:C:C6	2.08	0.88
27:BA:2606:C:C5'	27:BA:2606:C:C6	2.56	0.88
27:BA:674:G:C5'	30:BF:69:HIS:HA	2.02	0.88
29:BE:314:ALA:O	29:BE:317:PRO:HD3	1.71	0.88
27:BA:2749:A:C4'	32:BH:62:ALA:HB2	2.04	0.88
32:BH:91:VAL:N	32:BH:159:LYS:HE3	1.87	0.88
36:BP:69:ILE:HA	36:BP:73:VAL:CG2	2.01	0.88
37:BQ:51:GLU:HA	37:BQ:118:ALA:CB	2.03	0.88
44:BR:60:LEU:HG	44:BR:61:HIS:N	1.87	0.88
27:BA:1162:G:H4'	46:BV:23:GLU:HB2	0.93	0.88
46:BV:40:VAL:O	46:BV:51:ALA:CB	2.21	0.88
27:BA:85:G:C5'	42:BY:65:VAL:CG1	2.49	0.88
47:B2:20:LEU:HD13	47:B2:23:LEU:HB2	1.52	0.88
47:B2:54:ALA:O	47:B2:55:ARG:C	2.09	0.88
41:BX:76:GLU:OE1	41:BX:77:VAL:CG2	2.22	0.88
27:BA:1805:U:H5'	28:BD:235:PRO:CB	2.03	0.88
6:AC:16:ARG:HH22	6:AC:184:TYR:H	1.17	0.88
49:B0:37:LEU:HB3	49:B0:69:PHE:CG	2.08	0.88
50:B4:40:HIS:HB3	50:B4:41:PRO:CD	2.02	0.88
52:B6:19:GLY:O	52:B6:42:PRO:HB2	1.73	0.88
54:B8:26:LYS:O	54:B8:27:SER:HB2	1.71	0.88
54:B8:4:MET:HA	54:B8:5:LYS:HZ1	1.07	0.88
27:BA:1818:U:C4'	28:BD:155:ARG:HG3	2.01	0.88
27:BA:2240:C:O2	27:BA:2240:C:H2'	1.71	0.88
27:BA:2265:U:C2'	27:BA:2266:A:OP1	2.21	0.88
27:BA:2476:A:C8	27:BA:2477:C:C6	2.60	0.88
27:BA:2573:C:P	27:BA:2574:G:OP1	2.32	0.88
27:BA:2689:U:O2	27:BA:2713:A:OP2	1.89	0.88
27:BA:2703:C:O2'	27:BA:2704:C:O5'	1.91	0.88
27:BA:910:A:N7	37:BQ:12:PRO:O	2.06	0.88
28:BD:131:LEU:CD1	28:BD:171:VAL:HG21	2.00	0.88
27:BA:2784:C:OP1	29:BE:95:PRO:CG	2.19	0.88
32:BH:104:LEU:CB	32:BH:151:ARG:HH12	1.85	0.88
34:BN:95:ARG:O	34:BN:98:PHE:N	2.04	0.88
44:BR:75:LEU:HA	44:BR:78:LYS:HB3	1.52	0.88
38:BS:31:LYS:HB3	38:BS:100:ALA:HA	1.53	0.88
39:BT:4:ARG:O	39:BT:5:GLU:HG2	1.72	0.88
45:BU:74:MET:HE2	45:BU:78:THR:CG2	1.81	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:993:G:C4'	46:BV:90:PHE:HE2	1.80	0.88
46:BV:61:VAL:HG22	46:BV:97:GLY:CA	2.03	0.88
33:BI:116:GLU:CG	33:BI:132:LYS:HE3	2.03	0.88
1:AA:975:A:C5	1:AA:1357:A:C2	2.61	0.88
32:BH:53:ARG:NH1	32:BH:56:ASP:CA	2.28	0.88
27:BA:227:A:H61	27:BA:2407:G:H8	1.20	0.88
50:B4:6:HIS:HB2	50:B4:56:VAL:CG2	2.02	0.88
52:B6:19:GLY:HA2	52:B6:44:ALA:HB3	1.53	0.88
27:BA:1799:G:H21	28:BD:153:LEU:CG	1.86	0.88
27:BA:2216:G:O2'	27:BA:2217:G:H5''	1.71	0.88
27:BA:2468:G:C6	27:BA:2481:G:C6	2.61	0.88
27:BA:2832:U:C6	27:BA:2832:U:C4'	2.55	0.88
27:BA:911:A:N9	37:BQ:16:ARG:CD	2.35	0.88
29:BE:217:TRP:CZ2	29:BE:251:PRO:HB3	2.09	0.88
30:BF:221:GLU:O	30:BF:222:ASP:O	1.91	0.88
30:BF:48:SER:N	30:BF:92:PRO:HG3	1.70	0.88
33:BI:43:ASN:C	33:BI:45:LYS:N	2.23	0.88
34:BN:19:MET:HE2	34:BN:19:MET:CA	1.98	0.88
35:BO:112:MET:O	35:BO:114:ILE:N	2.06	0.88
45:BU:47:TYR:CE1	46:BV:75:LYS:O	2.15	0.88
27:BA:1546:C:H3'	27:BA:1547:C:OP1	1.74	0.88
27:BA:748:G:H8	27:BA:750:A:OP2	1.55	0.88
27:BA:1924:C:C4	27:BA:1925:C:C5	2.61	0.88
27:BA:2262:U:H6	49:B0:14:ARG:HH22	0.93	0.88
52:B6:19:GLY:CA	52:B6:44:ALA:CB	2.51	0.88
53:B7:34:ARG:HH12	53:B7:42:LEU:HA	1.37	0.88
27:BA:2255:G:C5	27:BA:2256:G:C8	2.62	0.88
27:BA:2343:C:H5'	27:BA:2374:C:OP1	1.73	0.88
27:BA:2353:G:N2	27:BA:2364:C:C4	2.32	0.88
27:BA:2416:C:H2'	27:BA:2417:C:C5'	2.03	0.88
27:BA:2745:C:C2'	32:BH:142:GLU:OE2	2.22	0.88
27:BA:859:G:O2'	27:BA:2268:A:N3	2.06	0.88
28:BD:105:ALA:N	28:BD:106:PRO:CD	2.35	0.88
28:BD:184:LEU:HB2	28:BD:187:CYS:SG	2.14	0.88
29:BE:205:THR:HG21	29:BE:259:HIS:H	1.14	0.88
30:BF:55:ARG:HG3	30:BF:56:THR:N	1.87	0.88
33:BI:25:TYR:HD2	33:BI:25:TYR:N	1.70	0.88
35:BO:63:VAL:HG12	35:BO:102:VAL:HG13	1.54	0.88
36:BP:128:GLY:C	36:BP:132:LYS:HD3	1.92	0.88
37:BQ:131:ALA:HA	37:BQ:134:PHE:CE2	2.08	0.88
44:BR:113:LEU:HD13	44:BR:113:LEU:C	1.94	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:51:LEU:N	42:BY:51:LEU:HD13	1.88	0.88
27:BA:1080:C:H1'	56:BK:127:ILE:CA	1.99	0.88
1:AA:1347:G:C8	12:AI:107:ARG:HB3	2.07	0.88
49:B0:48:GLY:HA3	49:B0:55:ARG:CB	2.03	0.88
27:BA:2254:C:H2'	27:BA:2255:G:H5'	0.91	0.88
27:BA:2410:G:C2'	27:BA:2411:A:H8	1.82	0.88
27:BA:2448:A:OP2	27:BA:2498:C:OP1	1.90	0.88
27:BA:2546:U:C5'	27:BA:2565:A:H2	1.83	0.88
27:BA:2839:G:C2	27:BA:2840:C:C2	2.62	0.88
27:BA:2884:U:H2'	27:BA:2885:C:O4'	1.73	0.88
27:BA:932:G:H5'	48:B3:24:LYS:NZ	1.88	0.88
28:BD:167:GLU:C	28:BD:170:TYR:CE1	2.46	0.88
30:BF:111:VAL:C	30:BF:114:ALA:HB3	1.92	0.88
30:BF:200:PRO:HB3	30:BF:212:VAL:HG11	0.92	0.88
32:BH:7:PRO:HD3	32:BH:68:ARG:CD	2.03	0.88
27:BA:1140:C:N4	34:BN:49:ARG:CD	2.36	0.88
34:BN:66:ASP:C	34:BN:68:GLY:N	2.18	0.88
40:BW:38:TYR:CD1	51:B5:41:LEU:HD21	2.07	0.88
43:BZ:105:GLN:C	43:BZ:142:ASN:ND2	2.25	0.88
42:BY:73:HIS:CE1	42:BY:90:PRO:HA	2.08	0.88
43:BZ:51:LEU:CD1	43:BZ:63:PRO:HB2	2.04	0.88
1:AA:1318:A:H4'	22:AS:10:PHE:HD2	1.37	0.88
27:BA:1087:G:N2	27:BA:1104:C:O4'	2.07	0.88
49:B0:64:ASP:O	49:B0:66:LYS:NZ	2.06	0.88
50:B4:16:TYR:C	50:B4:17:GLN:HG3	1.92	0.88
51:B5:15:LYS:HZ3	51:B5:15:LYS:HB2	1.39	0.88
27:BA:1163:G:H3'	27:BA:1164:G:P	2.11	0.88
27:BA:199:A:C2	27:BA:2433:A:C5	2.60	0.88
27:BA:2652:C:C6	27:BA:2653:U:C6	2.61	0.88
27:BA:2712:U:C3'	27:BA:2714:G:OP2	2.20	0.88
27:BA:2740:A:C8	27:BA:2741:A:N7	2.42	0.88
27:BA:2777:G:O5'	27:BA:2777:G:C8	2.26	0.88
27:BA:2881:C:C2'	27:BA:2882:A:O5'	2.21	0.88
27:BA:389:G:OP2	50:B4:24:THR:CG2	2.20	0.88
28:BD:155:ARG:C	28:BD:157:ALA:H	1.75	0.88
28:BD:86:ARG:N	28:BD:86:ARG:HD2	1.87	0.88
27:BA:2682:U:C6	29:BE:48:MET:CE	2.56	0.88
30:BF:47:GLY:HA2	30:BF:92:PRO:CA	2.03	0.88
32:BH:83:GLU:CD	32:BH:84:LYS:N	2.26	0.88
33:BI:21:VAL:HG11	33:BI:30:LEU:HD12	1.56	0.88
34:BN:54:VAL:HG22	34:BN:135:ILE:HD13	1.55	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:115:ASN:HD22	45:BU:115:ASN:H	1.21	0.88
46:BV:4:ILE:HD11	46:BV:13:ARG:NE	1.87	0.88
42:BY:101:LEU:HB3	42:BY:113:GLU:OE1	1.73	0.88
43:BZ:40:ASP:CG	43:BZ:41:ARG:CZ	2.42	0.88
13:AJ:63:PHE:HE2	17:AN:49:HIS:CE1	1.91	0.88
27:BA:1080:C:C2'	56:BK:127:ILE:HD12	2.03	0.88
37:BQ:149:ILE:H	37:BQ:149:ILE:HD12	1.39	0.88
48:B3:30:ARG:HG3	48:B3:30:ARG:NH1	1.86	0.88
53:B7:30:ILE:O	53:B7:33:ARG:CA	2.21	0.88
27:BA:2251:G:C5'	37:BQ:102:ARG:HH22	1.86	0.88
27:BA:2303:G:C5'	31:BG:99:ASP:CB	2.51	0.88
27:BA:2304:G:C4'	31:BG:105:SER:CB	2.52	0.88
27:BA:2320:A:C6	38:BS:9:PRO:CB	2.56	0.88
27:BA:2295:C:N4	27:BA:2337:G:N1	2.21	0.88
27:BA:2432:A:C2	27:BA:2433:A:C2	2.60	0.88
27:BA:2554:U:C6	27:BA:2554:U:C3'	2.44	0.88
27:BA:2597:G:C2'	27:BA:2598:A:H8	1.83	0.88
27:BA:2626:C:O5'	27:BA:2626:C:C6	2.27	0.88
27:BA:2653:U:H3	27:BA:2654:A:N6	1.71	0.88
27:BA:2663:G:H2'	27:BA:2664:G:H8	1.35	0.88
27:BA:2688:U:O2	27:BA:2719:G:N3	2.06	0.88
27:BA:2813:A:O2'	27:BA:2814:C:H6	1.57	0.88
28:BD:161:ALA:CA	28:BD:162:GLN:NE2	2.37	0.88
27:BA:2574:G:O2'	29:BE:240:PRO:CA	2.21	0.88
29:BE:304:ASP:O	29:BE:307:LEU:CB	2.22	0.88
30:BF:157:LEU:HB2	30:BF:158:GLU:CD	1.93	0.88
30:BF:6:TYR:HE2	30:BF:140:VAL:HG22	1.36	0.88
32:BH:101:LYS:HG2	32:BH:115:GLU:CA	2.01	0.88
32:BH:93:TYR:HB3	32:BH:106:VAL:CG2	1.99	0.88
33:BI:2:LYS:CD	33:BI:39:ALA:HB2	2.03	0.88
35:BO:31:ARG:C	35:BO:32:TYR:CD1	2.47	0.88
37:BQ:41:THR:CB	37:BQ:126:VAL:HA	2.03	0.88
37:BQ:58:HIS:CG	37:BQ:59:ASN:H	1.90	0.88
44:BR:18:LEU:HD13	44:BR:18:LEU:C	1.94	0.88
38:BS:23:ARG:CZ	38:BS:35:VAL:HG21	2.03	0.88
39:BT:28:THR:C	39:BT:29:THR:HG23	1.93	0.88
46:BV:40:VAL:HG12	46:BV:55:THR:HG23	1.53	0.88
42:BY:101:LEU:CD2	42:BY:101:LEU:O	2.21	0.88
42:BY:41:ARG:CB	42:BY:112:LEU:HA	1.98	0.88
42:BY:57:GLY:H	42:BY:97:ARG:NH2	1.70	0.88
1:AA:986:A:O2'	22:AS:55:LYS:O	1.90	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B2:23:LEU:CA	47:B2:26:GLU:OE1	2.18	0.88
41:BX:17:ASP:CA	41:BX:20:PHE:CE1	2.56	0.88
42:BY:9:LYS:HE3	42:BY:13:ARG:CZ	2.04	0.88
50:B4:41:PRO:HB3	50:B4:59:PHE:HE1	1.38	0.88
52:B6:19:GLY:HA2	52:B6:44:ALA:HB2	1.56	0.88
27:BA:1782:C:C2	27:BA:2609:U:H6	1.66	0.88
27:BA:2236:C:C2'	27:BA:2237:G:C5'	2.50	0.88
27:BA:2756:U:N3	27:BA:2759:G:O6	2.07	0.88
28:BD:143:ILE:C	28:BD:152:GLN:HB2	1.94	0.88
29:BE:201:VAL:N	29:BE:266:LYS:CD	2.37	0.88
34:BN:83:ILE:O	34:BN:86:MET:N	2.05	0.88
35:BO:90:ASP:O	35:BO:92:SER:N	2.07	0.88
38:BS:27:LEU:HB2	38:BS:33:ARG:HH21	1.09	0.88
46:BV:83:ARG:O	46:BV:84:THR:OG1	1.89	0.88
43:BZ:176:LEU:C	43:BZ:176:LEU:HD23	1.93	0.88
42:BY:51:LEU:O	42:BY:52:ARG:HG3	1.73	0.88
42:BY:28:SER:CB	42:BY:99:THR:CB	2.48	0.88
34:BN:10:VAL:CG1	34:BN:36:VAL:CG2	1.97	0.88
41:BX:20:PHE:HD1	41:BX:22:ASN:N	1.70	0.88
1:AA:1311:G:O6	22:AS:2:PRO:CA	2.20	0.88
1:AA:236:G:H5''	20:AQ:42:TYR:OH	1.74	0.88
27:BA:1055:G:N7	27:BA:1056:G:H1'	1.89	0.88
49:B0:43:THR:OG1	49:B0:75:GLY:O	1.90	0.88
50:B4:41:PRO:HG2	50:B4:57:ASP:CB	2.03	0.88
51:B5:15:LYS:O	51:B5:18:MET:N	2.06	0.88
27:BA:2206:C:C2'	27:BA:2207:C:H5'	2.04	0.88
27:BA:2361:A:H2'	27:BA:2362:G:H5'	1.55	0.88
27:BA:2471:C:O2	27:BA:2479:G:N2	2.06	0.88
27:BA:2589:A:H2'	27:BA:2590:A:H5'	1.54	0.88
27:BA:2023:G:H5''	27:BA:2617:C:O2'	1.73	0.88
27:BA:2700:C:C2'	27:BA:2701:C:H4'	2.03	0.88
27:BA:2731:G:N2	27:BA:2732:G:C2	2.42	0.88
27:BA:2734:A:C8	27:BA:2734:A:H5''	2.09	0.88
27:BA:2768:C:C2	27:BA:2769:C:H6	1.86	0.88
27:BA:2783:G:O5'	27:BA:2783:G:H8	1.57	0.88
29:BE:315:VAL:O	29:BE:317:PRO:HD3	1.74	0.88
30:BF:39:GLN:N	30:BF:39:GLN:OE1	2.07	0.88
37:BQ:46:VAL:O	37:BQ:124:ALA:C	2.11	0.88
37:BQ:57:ARG:C	37:BQ:61:LEU:HD21	1.93	0.88
46:BV:59:GLU:C	46:BV:60:VAL:HG23	1.93	0.88
40:BW:8:ARG:CG	40:BW:9:TYR:H	1.85	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:55:PHE:HB3	42:BY:58:GLU:OE2	1.73	0.88
2:AV:7:U:O4	2:AV:49:C:N4	2.07	0.88
1:AA:46:G:O3'	1:AA:47:C:P	2.32	0.88
50:B4:32:HIS:O	50:B4:34:ASP:OD1	1.92	0.88
53:B7:21:ARG:HH12	53:B7:43:THR:HG23	1.31	0.88
27:BA:2366:A:C8	27:BA:2367:G:C8	2.62	0.88
27:BA:2463:C:O2	27:BA:2464:C:C6	2.26	0.88
27:BA:1127:A:C2	27:BA:2518:A:N3	2.41	0.88
27:BA:2739:U:O2'	27:BA:2740:A:H5''	1.74	0.88
29:BE:99:VAL:CG1	29:BE:100:TRP:H	1.87	0.88
29:BE:222:ARG:HD3	29:BE:232:ARG:HA	1.56	0.88
30:BF:6:TYR:CE1	30:BF:139:VAL:HB	2.08	0.88
30:BF:59:GLU:O	30:BF:61:PHE:HD2	1.55	0.88
27:BA:2313:C:H5'	31:BG:72:LYS:CB	2.04	0.88
32:BH:90:GLY:CA	32:BH:159:LYS:HG3	2.00	0.88
32:BH:43:THR:HG23	32:BH:52:THR:HG23	0.88	0.88
34:BN:27:ALA:HA	34:BN:30:ALA:HB3	0.92	0.88
34:BN:45:VAL:C	34:BN:46:ILE:HG13	1.86	0.88
34:BN:58:GLU:HA	34:BN:61:VAL:CB	2.03	0.88
34:BN:95:ARG:HA	34:BN:98:PHE:CE1	2.08	0.88
36:BP:94:ARG:HB2	36:BP:120:LEU:HD21	0.89	0.88
37:BQ:67:ALA:H	37:BQ:70:ARG:NH2	1.72	0.88
46:BV:40:VAL:CB	46:BV:51:ALA:HB1	2.03	0.88
42:BY:26:THR:O	42:BY:27:LEU:HG	1.73	0.88
1:AA:978:A:O2'	22:AS:37:ARG:NH2	2.06	0.88
27:BA:1801:G:H8	27:BA:1801:G:OP1	1.57	0.88
27:BA:2364:C:H5'	49:B0:38:VAL:CG1	2.01	0.87
27:BA:2396:G:P	50:B4:28:ARG:NH1	2.48	0.87
52:B6:39:LYS:HA	52:B6:50:PHE:CD1	2.09	0.87
54:B8:5:LYS:C	54:B8:7:HIS:N	2.25	0.87
27:BA:198:C:H4'	27:BA:2243:U:O2'	1.74	0.87
27:BA:2018:G:N2	45:BU:34:ASN:HD22	1.71	0.87
27:BA:2045:C:H42	27:BA:2623:G:H1	0.88	0.87
27:BA:2320:A:H8	27:BA:2320:A:O5'	1.56	0.87
27:BA:2333:A:C4	27:BA:2335:A:C2	2.61	0.87
27:BA:2425:A:O2'	27:BA:2426:A:P	2.32	0.87
27:BA:1128:A:C6	27:BA:2518:A:N6	2.41	0.87
27:BA:2689:U:C5'	27:BA:2690:C:H5''	2.03	0.87
27:BA:2734:A:N7	27:BA:2735:G:C8	2.42	0.87
27:BA:2523:G:O4'	27:BA:2765:A:N7	2.07	0.87
27:BA:34:C:H2'	27:BA:455:C:H41	1.36	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:230:GLY:C	30:BF:231:ARG:CG	2.40	0.87
26:BB:57:A:C4'	31:BG:13:MET:SD	2.62	0.87
32:BH:25:VAL:HG12	32:BH:78:VAL:HG21	1.56	0.87
34:BN:19:MET:HB3	34:BN:46:ILE:CD1	2.04	0.87
36:BP:101:ASP:O	36:BP:102:ASP:CG	2.13	0.87
37:BQ:58:HIS:ND1	37:BQ:59:ASN:N	2.20	0.87
37:BQ:61:LEU:O	37:BQ:62:GLU:C	2.13	0.87
44:BR:90:ARG:HH22	44:BR:117:VAL:HG22	1.38	0.87
27:BA:535:C:H4'	45:BU:53:LYS:HE3	0.88	0.87
40:BW:85:VAL:CG1	40:BW:95:ILE:HD11	2.03	0.87
43:BZ:6:LYS:C	43:BZ:31:SER:OG	2.11	0.87
43:BZ:14:LEU:CD2	43:BZ:79:ILE:HG21	2.04	0.87
1:AA:975:A:N7	1:AA:1357:A:H2	1.73	0.87
47:B2:8:ILE:C	47:B2:11:MET:HG2	1.94	0.87
27:BA:1339:G:H5'	41:BX:13:LYS:CE	2.04	0.87
2:AV:7:U:C4	2:AV:49:C:C5	2.61	0.87
1:AA:579:G:H4'	1:AA:728:A:H1'	1.55	0.87
51:B5:34:PRO:CD	51:B5:36:CYS:SG	2.63	0.87
3:AW:76:A:N7	27:BA:2421:G:C2'	2.32	0.87
50:B4:14:ILE:HG23	50:B4:16:TYR:HE1	1.32	0.87
27:BA:2021:C:P	51:B5:15:LYS:HE3	2.13	0.87
27:BA:2458:G:O6	27:BA:2490:G:C2'	2.21	0.87
27:BA:2482:G:C5	27:BA:2483:C:C6	2.63	0.87
27:BA:2509:G:N3	27:BA:2580:U:O2	2.06	0.87
27:BA:2642:G:O2'	27:BA:2643:G:C5'	2.15	0.87
27:BA:2666:C:H3'	27:BA:2667:C:H5'	1.56	0.87
27:BA:532:A:H3'	27:BA:533:G:O4'	1.74	0.87
30:BF:56:THR:HB	30:BF:57:PRO:CD	2.04	0.87
31:BG:11:HIS:NE2	31:BG:15:GLU:OE2	2.05	0.87
32:BH:93:TYR:HE1	32:BH:106:VAL:C	1.75	0.87
39:BT:14:GLU:OE1	39:BT:14:GLU:HA	1.73	0.87
43:BZ:51:LEU:CD2	43:BZ:52:PHE:N	2.33	0.87
1:AA:1024:G:O3'	1:AA:1025:U:P	2.31	0.87
1:AA:266:G:H22	1:AA:270:A:H62	1.20	0.87
1:AA:243:A:H4'	1:AA:244:U:H5'	1.57	0.87
5:AB:32:ILE:HD11	5:AB:40:HIS:HB3	1.57	0.87
27:BA:1350:C:H42	27:BA:1381:G:H1	1.18	0.87
27:BA:2022:U:N3	51:B5:9:LYS:NZ	2.22	0.87
27:BA:2742:C:OP1	55:B9:35:ARG:CZ	2.22	0.87
27:BA:2838:G:C5	27:BA:2839:G:C8	2.62	0.87
27:BA:2862:G:H2'	27:BA:2863:C:C5	2.08	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2881:C:N4	27:BA:2882:A:H62	1.72	0.87
26:BB:50:G:OP1	38:BS:74:PRO:HB2	1.72	0.87
28:BD:149:ARG:HB2	28:BD:152:GLN:HE21	1.38	0.87
27:BA:2745:C:C1'	32:BH:142:GLU:OE2	2.22	0.87
34:BN:19:MET:CE	34:BN:22:VAL:HG21	2.05	0.87
36:BP:106:VAL:CG2	36:BP:122:ALA:HB1	2.03	0.87
36:BP:77:ALA:CA	36:BP:81:VAL:CG1	2.51	0.87
37:BQ:140:TYR:O	37:BQ:143:VAL:HG22	1.74	0.87
27:BA:911:A:C2	37:BQ:16:ARG:HA	2.09	0.87
37:BQ:57:ARG:C	37:BQ:61:LEU:CG	2.42	0.87
44:BR:21:TYR:HB3	44:BR:47:PHE:CE2	2.09	0.87
46:BV:74:TYR:CZ	46:BV:87:ARG:C	2.44	0.87
40:BW:83:LYS:HA	40:BW:97:LYS:HG2	1.54	0.87
43:BZ:10:PRO:O	43:BZ:14:LEU:N	2.08	0.87
41:BX:33:SER:CA	41:BX:37:VAL:CG2	2.51	0.87
41:BX:48:THR:O	41:BX:50:GLU:OE2	1.91	0.87
41:BX:6:LYS:CE	41:BX:29:ASP:CA	2.52	0.87
50:B4:51:ASP:O	50:B4:52:THR:HG22	1.75	0.87
25:AY:223:ARG:CA	27:BA:2555:U:N3	2.37	0.87
48:B3:38:GLU:O	48:B3:40:THR:HG22	1.74	0.87
48:B3:54:VAL:HG23	48:B3:55:ARG:N	1.89	0.87
51:B5:15:LYS:O	51:B5:16:ARG:C	2.09	0.87
51:B5:42:SER:O	51:B5:43:HIS:HB2	1.73	0.87
54:B8:12:ARG:HD2	54:B8:13:ARG:HD2	1.57	0.87
27:BA:1163:G:HO3'	27:BA:1164:G:P	1.32	0.87
27:BA:2266:A:N6	27:BA:2273:A:OP2	2.07	0.87
27:BA:2287:A:C2	27:BA:2289:G:C8	2.63	0.87
27:BA:2364:C:C5'	49:B0:38:VAL:HG11	2.03	0.87
27:BA:2509:G:OP1	27:BA:2555:U:H5'	1.73	0.87
27:BA:2528:U:HO2'	27:BA:2529:G:H8	1.21	0.87
27:BA:2616:C:C2'	27:BA:2617:C:C5'	2.44	0.87
27:BA:2706:G:H8	27:BA:2706:G:O5'	1.57	0.87
27:BA:2759:G:O2'	27:BA:2760:C:C5'	2.23	0.87
28:BD:75:GLY:C	28:BD:115:ILE:O	2.11	0.87
28:BD:73:ILE:HG22	28:BD:95:TYR:CD2	1.80	0.87
30:BF:144:PHE:C	30:BF:146:ASP:H	1.77	0.87
30:BF:164:ALA:CB	30:BF:232:LEU:HD13	2.02	0.87
34:BN:60:ARG:CA	34:BN:71:TYR:HD2	1.88	0.87
36:BP:71:GLU:O	36:BP:73:VAL:N	2.07	0.87
45:BU:5:LYS:O	45:BU:7:GLY:N	2.07	0.87
42:BY:101:LEU:HD13	42:BY:103:LEU:HD11	1.57	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:68:ALA:O	43:BZ:69:VAL:HG23	0.70	0.87
41:BX:4:VAL:HG21	47:B2:24:LYS:HZ1	1.37	0.87
27:BA:932:G:C5'	48:B3:24:LYS:NZ	2.38	0.87
52:B6:8:ILE:HA	52:B6:29:ARG:HH21	1.37	0.87
27:BA:1034:G:O5'	55:B9:18:ARG:NH2	2.07	0.87
27:BA:2093:G:C4	27:BA:2225:A:N6	2.42	0.87
27:BA:2197:U:H6	27:BA:2224:G:H22	1.18	0.87
27:BA:2067:G:H1	27:BA:2443:C:N4	1.72	0.87
27:BA:2633:G:N2	27:BA:2634:G:C5	2.43	0.87
27:BA:2657:A:N6	27:BA:2664:G:N2	2.12	0.87
27:BA:2781:A:H5''	27:BA:2782:G:O5'	1.68	0.87
27:BA:2821:A:N3	27:BA:2822:G:C8	2.42	0.87
27:BA:2825:C:C6	27:BA:2825:C:H3'	2.10	0.87
27:BA:514:A:O3'	45:BU:32:TYR:OH	1.92	0.87
30:BF:106:GLU:O	30:BF:109:LEU:HB2	1.74	0.87
30:BF:212:VAL:HG12	30:BF:212:VAL:O	1.72	0.87
31:BG:135:VAL:HG12	31:BG:135:VAL:O	1.73	0.87
31:BG:57:THR:HG22	31:BG:58:VAL:N	1.90	0.87
32:BH:159:LYS:N	32:BH:162:ARG:HH22	1.72	0.87
27:BA:1020:A:H1'	34:BN:49:ARG:NH2	1.89	0.87
38:BS:27:LEU:HD13	38:BS:27:LEU:C	1.93	0.87
45:BU:98:ILE:O	45:BU:101:ARG:N	2.08	0.87
27:BA:994:C:H4'	45:BU:54:LYS:HE3	1.56	0.87
43:BZ:92:VAL:HG13	43:BZ:124:ALA:CB	2.04	0.87
43:BZ:24:TYR:CD2	43:BZ:84:TYR:CD1	2.61	0.87
43:BZ:26:LYS:HB3	43:BZ:26:LYS:NZ	1.89	0.87
1:AA:551:U:H5'	15:AL:119:LYS:HE2	1.53	0.87
48:B3:20:LYS:CD	48:B3:23:LEU:HD12	2.03	0.87
51:B5:25:LEU:O	51:B5:26:THR:CG2	2.23	0.87
55:B9:20:HIS:C	55:B9:22:ARG:H	1.78	0.87
55:B9:24:LEU:CD1	55:B9:35:ARG:HG3	2.05	0.87
27:BA:2259:G:N7	27:BA:2260:C:C4	2.43	0.87
27:BA:2373:G:N1	27:BA:2374:C:N4	2.22	0.87
27:BA:2445:G:O2'	27:BA:2446:G:H5'	1.75	0.87
27:BA:2626:C:H2'	27:BA:2627:G:H5'	0.89	0.87
27:BA:2661:G:C4	27:BA:2662:A:N7	2.42	0.87
27:BA:2699:C:O2	27:BA:2699:C:H2'	1.73	0.87
27:BA:2679:A:H61	27:BA:2728:U:H3	1.23	0.87
27:BA:602:G:O3'	27:BA:603:A:H4'	1.70	0.87
28:BD:131:LEU:HD11	28:BD:183:ILE:HG21	0.89	0.87
29:BE:79:ARG:NH1	29:BE:104:PHE:O	2.02	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:180:ILE:CG2	29:BE:187:HIS:CB	2.48	0.87
29:BE:211:GLN:O	29:BE:216:ARG:NH1	2.07	0.87
33:BI:7:LYS:CG	33:BI:12:LYS:HA	2.03	0.87
35:BO:40:VAL:HG12	35:BO:40:VAL:O	1.74	0.87
36:BP:64:ILE:HD12	36:BP:106:VAL:CB	2.05	0.87
36:BP:64:ILE:O	36:BP:108:VAL:HA	1.74	0.87
37:BQ:65:ARG:HE	37:BQ:85:ILE:HB	1.38	0.87
38:BS:40:ASN:HA	38:BS:114:LYS:HZ2	1.35	0.87
38:BS:56:ASP:O	38:BS:57:THR:CG2	2.22	0.87
38:BS:74:PRO:O	38:BS:80:SER:N	2.07	0.87
45:BU:20:ARG:HH12	46:BV:75:LYS:NZ	1.73	0.87
43:BZ:141:MET:HA	43:BZ:171:VAL:HG11	1.55	0.87
43:BZ:141:MET:SD	43:BZ:141:MET:N	2.46	0.87
1:AA:1320:C:H42	22:AS:36:ARG:CG	1.79	0.87
32:BH:170:LEU:C	32:BH:170:LEU:HD13	1.94	0.87
7:AD:23:GLY:O	7:AD:112:VAL:HG12	1.75	0.87
3:AW:45:G:O3'	3:AW:46:G:C5'	2.22	0.87
1:AA:37:U:O2	1:AA:397:A:N6	2.07	0.87
1:AA:891:U:H2'	1:AA:892:A:H8	1.36	0.87
48:B3:3:ARG:HD3	48:B3:60:GLU:CB	2.03	0.87
54:B8:16:ILE:HG22	54:B8:21:LYS:O	1.74	0.87
27:BA:2044:C:H42	27:BA:2624:G:H1	0.88	0.87
27:BA:2227:A:N6	27:BA:2228:G:O6	2.06	0.87
27:BA:2317:C:C6	27:BA:2318:G:N7	2.43	0.87
27:BA:806:C:O2'	27:BA:2445:G:O4'	1.93	0.87
27:BA:623:G:H2'	27:BA:624:C:H6	1.40	0.87
29:BE:221:LYS:HZ3	29:BE:233:ARG:HG2	1.37	0.87
29:BE:210:THR:CG2	29:BE:255:GLN:HG2	2.03	0.87
30:BF:4:THR:O	30:BF:139:VAL:CG1	2.23	0.87
32:BH:51:VAL:HG21	32:BH:68:ARG:HE	1.39	0.87
36:BP:67:ARG:HH11	36:BP:111:ALA:C	1.77	0.87
38:BS:12:ARG:NH1	38:BS:20:TYR:HE2	1.37	0.87
40:BW:23:LEU:C	40:BW:25:ARG:H	1.76	0.87
40:BW:86:LEU:HB3	40:BW:87:PRO:HD3	1.56	0.87
3:AW:25:C:N4	3:AW:26:G:C6	2.41	0.87
49:B0:52:GLY:O	49:B0:53:MET:HG2	1.73	0.87
1:AA:32:A:H2'	1:AA:33:A:C8	2.10	0.87
50:B4:6:HIS:CB	50:B4:56:VAL:CG2	2.51	0.87
52:B6:45:LYS:C	52:B6:46:LYS:HE2	1.95	0.87
53:B7:38:GLY:O	53:B7:39:ARG:CB	2.22	0.87
54:B8:30:ARG:NH2	54:B8:41:ILE:HG23	1.88	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1031:G:H5'	55:B9:8:LYS:HD3	1.57	0.87
27:BA:2044:C:C2	27:BA:2624:G:N2	2.38	0.87
27:BA:2188:C:C4	27:BA:2189:U:C4	2.63	0.87
27:BA:2084:C:O2	27:BA:2235:G:N2	2.06	0.87
27:BA:2247:A:H2'	27:BA:2248:C:H6	1.39	0.87
27:BA:2251:G:C8	27:BA:2450:A:H4'	2.10	0.87
27:BA:248:G:N2	27:BA:2431:U:H4'	1.90	0.87
27:BA:2653:U:OP2	27:BA:2654:A:H3'	1.74	0.87
27:BA:2657:A:C5	27:BA:2664:G:N2	2.42	0.87
27:BA:2695:C:H2'	27:BA:2696:U:C6	2.10	0.87
27:BA:2822:G:OP1	29:BE:207:GLY:HA2	1.74	0.87
28:BD:196:ASN:HA	28:BD:199:ARG:CD	2.04	0.87
30:BF:197:SER:HB3	30:BF:239:ALA:H	1.37	0.87
30:BF:39:GLN:OE1	30:BF:40:ALA:N	2.06	0.87
31:BG:53:LYS:CG	31:BG:54:ALA:N	2.33	0.87
27:BA:2314:C:OP1	31:BG:74:THR:CG2	2.23	0.87
31:BG:97:GLN:OE1	31:BG:106:PHE:HE2	1.56	0.87
35:BO:29:GLY:O	35:BO:30:ARG:O	1.90	0.87
37:BQ:140:TYR:CG	37:BQ:147:VAL:HG11	2.09	0.87
27:BA:2296:U:N3	38:BS:16:ALA:HB2	1.90	0.87
38:BS:98:GLU:CG	38:BS:99:GLU:H	1.88	0.87
46:BV:42:GLY:O	46:BV:54:TYR:OH	1.93	0.87
43:BZ:141:MET:CB	43:BZ:171:VAL:HG11	2.05	0.87
33:BI:91:GLY:O	33:BI:92:SER:O	1.92	0.87
43:BZ:85:MET:O	43:BZ:86:VAL:HG23	1.75	0.87
1:AA:988:G:H4'	1:AA:1014:A:N6	1.90	0.87
27:BA:1789:A:OP1	28:BD:226:GLY:HA2	1.75	0.87
28:BD:208:GLY:HA2	28:BD:210:LYS:HZ3	0.72	0.87
27:BA:1339:G:N2	27:BA:1603:A:C8	2.43	0.87
34:BN:105:LEU:CG	34:BN:106:GLY:H	1.86	0.87
27:BA:1301:A:H62	27:BA:1303:G:C1'	1.87	0.87
27:BA:1350:C:N3	27:BA:1381:G:N2	2.21	0.87
53:B7:30:ILE:HD11	53:B7:33:ARG:HH12	1.39	0.87
53:B7:21:ARG:HD2	53:B7:31:LEU:HD13	1.57	0.87
27:BA:2364:C:H5'	49:B0:38:VAL:HG11	1.54	0.87
27:BA:2468:G:HO2'	27:BA:2469:A:H8	0.90	0.87
27:BA:746:A:O2'	27:BA:2611:U:O2'	1.81	0.87
27:BA:2049:G:C2	27:BA:2620:C:C2	2.61	0.87
27:BA:637:A:OP2	36:BP:126:SER:OG	1.91	0.87
27:BA:830:G:C4	27:BA:2448:A:N7	2.42	0.87
28:BD:89:ASN:C	28:BD:105:ALA:HB2	1.95	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:222:ARG:CG	29:BE:232:ARG:HA	2.05	0.87
29:BE:61:PRO:HB3	29:BE:69:PRO:HB3	1.56	0.87
32:BH:7:PRO:HD2	32:BH:68:ARG:HD3	1.54	0.87
33:BI:7:LYS:HG3	33:BI:12:LYS:HD3	1.55	0.87
37:BQ:44:ALA:HB1	37:BQ:126:VAL:O	1.73	0.87
37:BQ:41:THR:HG21	37:BQ:126:VAL:HA	1.52	0.87
37:BQ:36:ASN:HB3	37:BQ:41:THR:N	1.90	0.87
37:BQ:89:PRO:HA	37:BQ:113:ALA:HB2	1.57	0.87
45:BU:8:ILE:N	45:BU:11:ARG:CD	2.38	0.87
27:BA:325:G:N2	42:BY:7:GLN:NE2	2.23	0.87
13:AJ:61:GLU:OE1	17:AN:49:HIS:HE1	1.58	0.87
27:BA:138:G:H2'	27:BA:139:G:H4'	1.57	0.87
7:AD:9:CYS:SG	7:AD:31:CYS:CA	2.63	0.87
13:AJ:46:ARG:HH11	17:AN:59:ALA:CB	1.85	0.87
50:B4:68:ARG:CG	50:B4:72:LYS:CG	2.52	0.86
52:B6:41:ASP:HB3	52:B6:47:HIS:N	1.90	0.86
54:B8:8:LYS:O	54:B8:11:LYS:N	2.07	0.86
27:BA:2087:G:O6	27:BA:2233:U:C5	2.28	0.86
27:BA:2234:G:C6	27:BA:2235:G:C5	2.62	0.86
27:BA:2330:G:C2	27:BA:2331:G:C1'	2.57	0.86
27:BA:2439:A:N3	27:BA:2439:A:C2'	2.37	0.86
27:BA:2475:C:O2	27:BA:2529:G:N2	2.08	0.86
27:BA:2721:A:N3	27:BA:2722:G:C8	2.43	0.86
26:BB:24:G:O2'	26:BB:27:C:N4	2.07	0.86
28:BD:74:PRO:CA	28:BD:116:MET:HE2	1.98	0.86
28:BD:86:ARG:O	28:BD:87:SER:OG	1.92	0.86
29:BE:225:LYS:O	29:BE:226:HIS:ND1	2.08	0.86
30:BF:140:VAL:HG23	30:BF:234:VAL:HB	1.57	0.86
31:BG:142:ALA:HB2	31:BG:151:ILE:HD11	1.55	0.86
35:BO:92:SER:CB	35:BO:113:LYS:NZ	2.38	0.86
36:BP:67:ARG:N	36:BP:67:ARG:NE	2.23	0.86
40:BW:66:GLU:HG2	40:BW:67:ASP:N	1.89	0.86
1:AA:1400:C:C5	2:AV:34:G:N1	2.43	0.86
28:BD:213:LYS:C	28:BD:215:LYS:N	2.28	0.86
1:AA:983:A:C3'	1:AA:984:C:P	2.63	0.86
3:AW:76:A:C4	27:BA:2422:A:C6	2.60	0.86
49:B0:36:ILE:O	49:B0:37:LEU:HD23	1.75	0.86
53:B7:30:ILE:HA	53:B7:33:ARG:HD2	0.95	0.86
27:BA:2043:C:H5	27:BA:2777:G:H1'	1.17	0.86
27:BA:2414:G:C4	27:BA:2415:G:C8	2.63	0.86
27:BA:2474:C:H41	27:BA:2529:G:N2	1.73	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2870:C:O2	27:BA:2871:C:C6	2.28	0.86
28:BD:104:ILE:CD1	28:BD:104:ILE:N	2.32	0.86
32:BH:148:ARG:HH12	32:BH:164:GLU:H	1.22	0.86
34:BN:27:ALA:O	34:BN:28:GLU:C	2.12	0.86
27:BA:1667:G:H5''	35:BO:5:GLU:OE1	1.75	0.86
27:BA:993:G:C4'	46:BV:90:PHE:CZ	2.56	0.86
40:BW:104:THR:C	40:BW:105:VAL:HG13	1.91	0.86
1:AA:173:U:H5'	1:AA:197:A:H5'	1.57	0.86
49:B0:36:ILE:O	49:B0:37:LEU:CD2	2.23	0.86
54:B8:16:ILE:N	54:B8:16:ILE:HD12	1.91	0.86
54:B8:6:THR:O	54:B8:7:HIS:C	2.14	0.86
27:BA:1240:U:H3'	27:BA:1241:A:H8	1.38	0.86
27:BA:2276:G:OP2	37:BQ:104:PRO:CD	2.22	0.86
27:BA:2785:C:H5''	29:BE:99:VAL:HG22	0.89	0.86
31:BG:49:PRO:CB	31:BG:72:LYS:H	1.87	0.86
31:BG:99:ASP:N	31:BG:104:PHE:CD2	2.42	0.86
32:BH:36:PHE:HD2	32:BH:70:LEU:HD13	1.39	0.86
35:BO:25:LEU:HD21	35:BO:40:VAL:HG23	0.88	0.86
36:BP:114:VAL:HG11	36:BP:133:VAL:HA	1.57	0.86
37:BQ:31:PHE:CD2	37:BQ:85:ILE:O	2.29	0.86
45:BU:27:SER:O	45:BU:29:SER:CB	2.23	0.86
27:BA:535:C:C5'	45:BU:53:LYS:HE2	2.04	0.86
33:BI:75:LEU:CD1	33:BI:76:THR:N	2.36	0.86
42:BY:49:GLU:OE2	42:BY:97:ARG:NH1	0.72	0.86
28:BD:216:ALA:HB1	28:BD:223:ASN:CB	2.04	0.86
47:B2:24:LYS:HA	47:B2:27:LEU:HD12	1.56	0.86
1:AA:60:A:H62	1:AA:110:C:N4	1.72	0.86
3:AW:76:A:H2	54:B8:32:GLN:CB	1.83	0.86
49:B0:38:VAL:HA	49:B0:40:GLN:NE2	1.89	0.86
51:B5:44:HIS:HA	51:B5:52:TYR:HH	1.06	0.86
52:B6:2:ALA:CB	52:B6:11:LYS:HZ2	1.85	0.86
27:BA:2228:G:N7	27:BA:2229:C:C4	2.42	0.86
27:BA:2313:C:O2'	27:BA:2314:C:C5'	2.23	0.86
27:BA:2395:C:H3'	27:BA:2395:C:C6	2.09	0.86
27:BA:2457:U:C5	27:BA:2458:G:N3	2.42	0.86
27:BA:2536:G:C6	27:BA:2537:U:N3	2.43	0.86
27:BA:1953:A:H62	27:BA:2550:G:H4'	1.40	0.86
27:BA:2589:A:C6	27:BA:2590:A:N7	2.42	0.86
27:BA:495:G:N2	40:BW:61:ASN:ND2	2.22	0.86
28:BD:126:GLY:O	28:BD:127:ASN:O	1.92	0.86
29:BE:45:LYS:HE2	29:BE:301:PRO:HB2	1.54	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:38:ALA:O	30:BF:39:GLN:C	2.13	0.86
33:BI:13:GLY:CA	33:BI:15:LYS:CE	2.53	0.86
34:BN:63:ILE:HG21	34:BN:71:TYR:OH	1.74	0.86
36:BP:61:ALA:HB1	36:BP:107:LYS:CE	2.04	0.86
45:BU:92:ARG:CA	45:BU:95:LEU:CG	2.52	0.86
27:BA:25:U:C4'	40:BW:79:GLY:CA	2.51	0.86
42:BY:108:ARG:O	42:BY:112:LEU:HD23	1.73	0.86
41:BX:9:HIS:ND1	41:BX:27:ALA:N	2.24	0.86
31:BG:88:LEU:N	31:BG:89:PRO:CD	2.38	0.86
43:BZ:156:GLU:CG	43:BZ:157:GLY:H	1.81	0.86
1:AA:463:A:P	19:AP:75:ARG:HH22	1.98	0.86
49:B0:49:GLN:O	49:B0:73:GLY:HA3	1.76	0.86
50:B4:46:GLU:O	50:B4:47:GLU:HG3	0.69	0.86
54:B8:26:LYS:HG3	54:B8:45:GLY:CA	2.03	0.86
27:BA:2484:G:H2'	27:BA:2485:G:O5'	1.75	0.86
27:BA:2558:C:N3	27:BA:2559:C:C4	2.43	0.86
27:BA:2561:A:C5	27:BA:2562:U:C6	2.64	0.86
27:BA:1968:G:OP1	27:BA:2592:G:OP1	1.94	0.86
27:BA:564:C:P	46:BV:79:GLN:CG	2.61	0.86
27:BA:687:C:C4'	53:B7:4:THR:HG22	2.04	0.86
27:BA:2712:U:O2'	27:BA:712(A):A:C5'	2.24	0.86
26:BB:56:G:H4'	26:BB:57:A:H5''	1.58	0.86
29:BE:43:GLY:O	29:BE:309:PRO:O	1.94	0.86
30:BF:102:LEU:CD2	30:BF:106:GLU:CD	2.43	0.86
30:BF:81:PRO:CA	30:BF:87:ARG:CB	2.53	0.86
34:BN:15:ARG:CG	34:BN:43:ARG:HD2	2.05	0.86
34:BN:16:ASP:N	34:BN:45:VAL:HG23	1.83	0.86
37:BQ:11:LYS:HD2	37:BQ:91:HIS:CD2	2.09	0.86
37:BQ:36:ASN:C	37:BQ:41:THR:HB	1.95	0.86
37:BQ:59:ASN:CG	37:BQ:60:ALA:H	1.75	0.86
37:BQ:58:HIS:N	37:BQ:61:LEU:CD1	2.39	0.86
44:BR:93:GLY:C	44:BR:95:THR:H	1.79	0.86
38:BS:110:THR:HG22	38:BS:115:VAL:HG23	1.56	0.86
39:BT:6:CYS:HB3	39:BT:9:CYS:O	1.76	0.86
45:BU:6:THR:O	45:BU:9:VAL:CG2	2.23	0.86
46:BV:3:ALA:C	46:BV:12:TYR:OH	2.08	0.86
46:BV:35:LEU:H	46:BV:60:VAL:CG1	1.89	0.86
46:BV:61:VAL:C	46:BV:98:ILE:CD1	2.43	0.86
3:AW:37:YYG:O22	10:AG:85:TYR:N	2.08	0.86
1:AA:173:U:H5	1:AA:198:G:HO2'	0.87	0.86
50:B4:41:PRO:HG2	50:B4:57:ASP:HB2	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2393:A:H4'	54:B8:13:ARG:HH21	1.39	0.86
54:B8:38:GLY:O	54:B8:40:GLU:N	2.09	0.86
27:BA:1780:A:H3'	27:BA:1781:C:C5'	2.04	0.86
27:BA:2060:A:O2'	27:BA:2502:G:O5'	1.94	0.86
27:BA:2187:G:H2'	27:BA:2188:C:O4'	1.75	0.86
27:BA:248:G:N2	27:BA:2431:U:O4'	2.08	0.86
27:BA:2648:C:H2'	27:BA:2649:U:H5'	1.56	0.86
27:BA:2752:C:O2	27:BA:2752:C:H2'	1.73	0.86
28:BD:104:ILE:HD12	28:BD:104:ILE:H	1.34	0.86
29:BE:304:ASP:O	29:BE:307:LEU:CG	2.23	0.86
34:BN:47:THR:OG1	34:BN:53:ILE:CD1	2.23	0.86
35:BO:75:SER:C	35:BO:76:TYR:HD1	1.78	0.86
38:BS:17:ARG:C	38:BS:17:ARG:CD	2.43	0.86
45:BU:14:HIS:ND1	45:BU:36:PHE:CZ	2.23	0.86
43:BZ:67:LYS:HA	43:BZ:67:LYS:CE	2.05	0.86
33:BI:102:LEU:HD12	33:BI:103:GLN:CA	2.05	0.86
42:BY:18:GLU:CA	42:BY:21:LYS:HZ2	1.88	0.86
42:BY:46:ASP:HA	42:BY:102:ASP:CG	1.95	0.86
43:BZ:57:GLU:C	43:BZ:59:GLY:H	1.75	0.86
28:BD:208:GLY:C	28:BD:210:LYS:HG2	1.96	0.86
50:B4:49:PHE:CZ	50:B4:71:SER:OG	2.20	0.86
27:BA:1620:G:H1'	53:B7:1:MET:H2	1.38	0.86
27:BA:1063:G:C5'	56:BK:88:GLY:H	1.87	0.86
7:AD:127:THR:HB	7:AD:147:ALA:HB3	1.58	0.86
51:B5:34:PRO:HG2	51:B5:36:CYS:SG	2.14	0.86
27:BA:2363:C:O2'	49:B0:38:VAL:HG11	1.75	0.86
48:B3:16:PRO:HB2	48:B3:19:GLN:OE1	1.75	0.86
50:B4:23:GLU:O	50:B4:25:MET:N	2.08	0.86
53:B7:21:ARG:NH2	53:B7:43:THR:CB	2.38	0.86
27:BA:1034:G:H5'	55:B9:18:ARG:CZ	2.05	0.86
27:BA:954:G:O2'	27:BA:2274:A:N1	2.09	0.86
27:BA:2276:G:C2	27:BA:2277:G:C8	2.64	0.86
27:BA:2306:C:C4	31:BG:53:LYS:NZ	2.43	0.86
27:BA:2311:A:C2	31:BG:53:LYS:NZ	2.42	0.86
27:BA:2416:C:H2'	27:BA:2417:C:H5'	1.57	0.86
27:BA:2564:A:C2'	27:BA:2565:A:H8	1.84	0.86
27:BA:2578:G:N7	29:BE:237:ASN:CG	2.29	0.86
27:BA:2677:G:O2'	27:BA:2678:C:C5'	2.22	0.86
27:BA:2722:G:C4	27:BA:2723:C:C5	2.63	0.86
27:BA:2768:C:H2'	27:BA:2769:C:O5'	1.75	0.86
27:BA:2768:C:O2	27:BA:2769:C:C6	2.28	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:963:U:H1'	27:BA:2250:G:H21	1.34	0.86
27:BA:989:G:OP1	48:B3:31:LEU:CD1	2.22	0.86
27:BA:997:G:OP1	45:BU:92:ARG:HD2	1.74	0.86
29:BE:268:LEU:CD2	29:BE:295:LEU:O	2.23	0.86
27:BA:605:C:C3'	30:BF:105:LYS:CE	2.42	0.86
30:BF:102:LEU:HB2	30:BF:107:ARG:NH2	1.90	0.86
31:BG:19:GLU:OE1	31:BG:135:VAL:CA	2.22	0.86
34:BN:94:GLY:O	34:BN:98:PHE:CD1	2.29	0.86
37:BQ:58:HIS:O	37:BQ:61:LEU:CG	2.20	0.86
38:BS:89:GLY:O	38:BS:93:GLN:HG3	1.75	0.86
40:BW:10:VAL:HG13	40:BW:46:PHE:CE2	2.10	0.86
1:AA:1289:A:C2	1:AA:1372:U:H4'	2.10	0.86
7:AD:23:GLY:C	7:AD:112:VAL:HG12	1.94	0.86
3:AW:40:C:O2'	10:AG:147:ALA:HB3	1.75	0.86
49:B0:37:LEU:CG	49:B0:68:VAL:HG12	2.06	0.86
27:BA:1364:G:H8	27:BA:1364:G:H5'	1.40	0.86
27:BA:2235:G:C4	27:BA:2236:C:C5	2.63	0.86
27:BA:2425:A:HO2'	27:BA:2426:A:P	1.98	0.86
27:BA:2432:A:C2'	27:BA:2432:A:N3	2.37	0.86
27:BA:2517:C:O2'	27:BA:2518:A:O5'	1.88	0.86
27:BA:2525:G:HO2'	27:BA:2742:C:HO2'	0.98	0.86
27:BA:2573:C:C4'	27:BA:2573:C:H6	1.88	0.86
27:BA:2584:U:C2'	27:BA:2585:U:C5	2.55	0.86
27:BA:2768:C:O2'	27:BA:2769:C:C5'	2.23	0.86
28:BD:131:LEU:CD1	28:BD:183:ILE:HG22	2.06	0.86
27:BA:2784:C:O2'	29:BE:98:GLU:O	1.92	0.86
30:BF:219:ASN:H	30:BF:219:ASN:HD22	0.95	0.86
45:BU:89:ASP:CB	46:BV:51:ALA:HB3	2.06	0.86
43:BZ:129:ARG:NE	43:BZ:129:ARG:HA	1.91	0.86
43:BZ:39:PHE:HD2	43:BZ:39:PHE:H	0.87	0.86
43:BZ:41:ARG:O	43:BZ:44:ARG:HB2	1.75	0.86
47:B2:55:ARG:O	47:B2:58:THR:CB	2.23	0.86
47:B2:7:GLU:OE1	47:B2:8:ILE:HG13	1.75	0.86
41:BX:38:ALA:O	41:BX:39:ASP:C	2.14	0.86
27:BA:2386:C:H4'	49:B0:39:ARG:NH2	1.90	0.86
27:BA:2457:U:H2'	27:BA:2458:G:C5'	2.05	0.86
27:BA:2494:G:N2	27:BA:2495:G:C4	2.43	0.86
27:BA:2509:G:C2'	27:BA:2510:C:C5'	2.52	0.86
27:BA:2832:U:C1'	27:BA:2834:G:H21	1.87	0.86
27:BA:443:A:N7	30:BF:43:LYS:CD	2.38	0.86
27:BA:988:A:OP1	48:B3:11:SER:N	2.08	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:28:C:OP2	38:BS:41:LYS:HE3	1.75	0.86
29:BE:235:ILE:HG23	29:BE:236:GLY:N	1.89	0.86
30:BF:214:THR:H	30:BF:218:VAL:CG2	1.89	0.86
27:BA:2748:A:H2'	32:BH:62:ALA:HB1	1.57	0.86
34:BN:42:GLU:C	34:BN:132:LEU:O	2.14	0.86
37:BQ:65:ARG:HH21	37:BQ:85:ILE:CB	1.89	0.86
44:BR:43:GLU:OE2	44:BR:43:GLU:N	2.08	0.86
45:BU:33:ARG:HB2	45:BU:33:ARG:HH11	1.27	0.86
27:BA:581:C:P	45:BU:33:ARG:HH12	1.99	0.86
45:BU:88:ILE:HB	46:BV:52:GLY:HA3	1.58	0.86
27:BA:1260:G:C5'	40:BW:83:LYS:NZ	2.38	0.86
1:AA:790:A:O5'	2:AV:38:A:O2'	1.92	0.86
33:BI:68:LEU:HD11	33:BI:108:LEU:HD21	1.57	0.86
33:BI:114:LYS:HD2	33:BI:132:LYS:O	1.76	0.86
41:BX:34:LYS:O	41:BX:35:GLY:O	1.91	0.86
27:BA:414:C:H42	27:BA:2409:G:H1	0.87	0.86
27:BA:1364:G:P	50:B4:3:LYS:HG2	2.15	0.86
51:B5:50:GLY:HA2	51:B5:57:VAL:HB	1.57	0.86
27:BA:1287:A:C5'	44:BR:104:ARG:CD	2.54	0.86
27:BA:1646:C:H5''	27:BA:1647:G:H5'	1.56	0.86
27:BA:2049:G:C6	27:BA:2620:C:N4	2.43	0.86
27:BA:2416:C:O2	27:BA:2417:C:C6	2.29	0.86
27:BA:2469:A:N6	27:BA:2481:G:H1'	1.90	0.86
27:BA:2471:C:H2'	27:BA:2472:G:O5'	1.75	0.86
27:BA:2642:G:HO2'	27:BA:2643:G:H5'	1.35	0.86
28:BD:160:SER:O	28:BD:176:ALA:HB2	1.74	0.86
29:BE:205:THR:HG22	29:BE:259:HIS:CB	1.95	0.86
30:BF:84:VAL:C	30:BF:86:GLY:H	1.78	0.86
27:BA:1062:G:N2	56:BK:92:PRO:HG3	1.90	0.86
36:BP:124:ASP:O	36:BP:125:PHE:CG	2.28	0.86
37:BQ:118:ALA:O	37:BQ:119:ASN:HB3	1.75	0.86
37:BQ:57:ARG:C	37:BQ:61:LEU:CD2	2.44	0.86
44:BR:77:ARG:O	44:BR:81:ASP:OD1	1.93	0.86
46:BV:33:VAL:CB	46:BV:63:HIS:CG	2.58	0.86
42:BY:103:LEU:HD11	42:BY:113:GLU:HB3	1.58	0.86
42:BY:32:ARG:O	42:BY:33:GLU:C	2.14	0.86
42:BY:66:ASP:O	42:BY:67:LEU:C	2.14	0.86
43:BZ:37:LYS:C	43:BZ:41:ARG:NH1	2.28	0.86
43:BZ:48:THR:HG22	43:BZ:48:THR:O	1.75	0.86
16:AM:94:ARG:H	16:AM:95:GLY:N	1.73	0.86
47:B2:61:GLY:O	47:B2:64:GLY:N	2.08	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1211:U:H3'	1:AA:1212:U:OP1	1.76	0.86
7:AD:15:GLU:HG2	7:AD:63:LYS:CB	2.04	0.86
1:AA:939:G:H5''	10:AG:102:ARG:CZ	2.05	0.86
27:BA:1087:G:N2	27:BA:1104:C:O5'	2.08	0.86
50:B4:58:LYS:CD	50:B4:62:ARG:HH21	1.89	0.85
51:B5:11:THR:HB	51:B5:16:ARG:HE	1.40	0.85
53:B7:24:THR:HG21	53:B7:27:GLY:HA3	1.56	0.85
27:BA:1309:G:H21	27:BA:1611:C:H5'	1.41	0.85
27:BA:2096:U:H3	27:BA:2193:G:H1	1.24	0.85
27:BA:2311:A:O2'	27:BA:2312:U:O5'	1.94	0.85
27:BA:2320:A:N6	38:BS:13:ARG:O	2.08	0.85
27:BA:2328:A:H2'	27:BA:2329:G:C8	2.08	0.85
27:BA:1129:A:N3	27:BA:2570:G:H1'	1.91	0.85
29:BE:105:HIS:HB2	29:BE:108:LEU:HG	1.56	0.85
29:BE:44:TYR:CD1	29:BE:309:PRO:CD	2.58	0.85
30:BF:149:LYS:HB2	30:BF:152:GLU:HG3	1.58	0.85
31:BG:22:VAL:HB	31:BG:24:HIS:CE1	2.10	0.85
34:BN:25:GLN:O	34:BN:26:VAL:C	2.11	0.85
37:BQ:58:HIS:CG	37:BQ:59:ASN:N	2.42	0.85
37:BQ:67:ALA:O	37:BQ:71:PHE:HD1	1.28	0.85
45:BU:28:ARG:CA	45:BU:31:GLN:HG3	2.05	0.85
40:BW:32:ALA:HB2	40:BW:35:ILE:CD1	2.05	0.85
43:BZ:172:LEU:HG	43:BZ:173:PRO:CD	2.02	0.85
33:BI:121:ILE:HD12	33:BI:121:ILE:H	1.40	0.85
42:BY:101:LEU:HD21	42:BY:112:LEU:CG	2.06	0.85
43:BZ:39:PHE:O	43:BZ:43:PHE:HB2	1.75	0.85
3:AW:25:C:C6	3:AW:26:G:C8	2.64	0.85
1:AA:1060:C:C5'	13:AJ:51:ARG:HB3	2.05	0.85
1:AA:958:A:N3	22:AS:55:LYS:HB2	1.91	0.85
16:AM:91:ARG:O	16:AM:96:LEU:N	2.08	0.85
47:B2:20:LEU:O	47:B2:21:ASP:O	1.95	0.85
32:BH:110:HIS:O	32:BH:111:PRO:O	1.92	0.85
2:AV:7:U:O4	2:AV:49:C:C4	2.29	0.85
27:BA:1613:G:H3'	27:BA:1614:A:H5'	1.56	0.85
9:AF:50:TYR:HE1	21:AR:77:GLY:HA2	1.39	0.85
48:B3:8:LEU:HB3	48:B3:32:GLN:CA	2.06	0.85
27:BA:2198:A:H5'	27:BA:2199:A:OP2	1.75	0.85
27:BA:2209:C:H42	27:BA:2215:G:H1	0.88	0.85
27:BA:2198:A:C6	27:BA:2225:A:N6	2.44	0.85
27:BA:2227:A:H8	27:BA:2227:A:O5'	1.59	0.85
27:BA:2296:U:O4	31:BG:145:ASP:CG	2.15	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2324:C:O2'	27:BA:2325:G:OP1	1.94	0.85
27:BA:2330:G:C2	27:BA:2331:G:C4	2.65	0.85
27:BA:2354:G:O2'	49:B0:31:VAL:CG1	2.23	0.85
27:BA:2416:C:O2'	27:BA:2417:C:H5''	1.76	0.85
27:BA:2652:C:C6	27:BA:2653:U:H5	1.83	0.85
27:BA:2827:C:O2	27:BA:2828:C:H6	1.50	0.85
27:BA:573:G:H3'	27:BA:574:C:H5''	1.58	0.85
28:BD:140:VAL:CG1	28:BD:141:HIS:H	1.88	0.85
29:BE:265:ASN:HD22	29:BE:265:ASN:C	1.78	0.85
30:BF:52:ALA:HA	30:BF:55:ARG:CG	2.06	0.85
31:BG:38:GLU:HA	31:BG:41:LEU:HG	1.54	0.85
33:BI:24:GLY:HA2	33:BI:27:ASN:HB3	1.57	0.85
34:BN:46:ILE:HG13	34:BN:132:LEU:HD13	1.57	0.85
44:BR:46:GLY:O	44:BR:49:ASP:CB	2.24	0.85
38:BS:62:HIS:HB2	38:BS:65:ASP:CG	1.97	0.85
40:BW:66:GLU:CG	40:BW:67:ASP:N	2.39	0.85
33:BI:94:THR:HG22	33:BI:97:GLN:HG3	1.58	0.85
27:BA:764:A:OP1	28:BD:212:HIS:NE2	2.09	0.85
47:B2:20:LEU:HD13	47:B2:20:LEU:O	1.76	0.85
47:B2:52:ALA:C	47:B2:56:ILE:CG1	2.35	0.85
41:BX:57:THR:HB	41:BX:59:ASP:OD2	1.76	0.85
41:BX:9:HIS:CE1	41:BX:27:ALA:CB	2.59	0.85
27:BA:95:G:O2'	47:B2:42:ASN:O	1.95	0.85
1:AA:495:U:H2'	1:AA:496:A:H5'	1.58	0.85
27:BA:1063:G:H4'	56:BK:88:GLY:HA3	1.56	0.85
1:AA:932:C:OP1	10:AG:4:ARG:HG2	1.75	0.85
49:B0:44:LYS:O	49:B0:45:PHE:CD1	2.29	0.85
27:BA:2298:A:N9	27:BA:2321:G:N2	2.23	0.85
27:BA:2322:A:C4	27:BA:2323:G:C8	2.63	0.85
27:BA:2484:G:H21	27:BA:2485:G:C1'	1.84	0.85
27:BA:2530:A:H2'	27:BA:2531:A:C5'	2.05	0.85
27:BA:2547:U:C6	27:BA:2566:A:C2	2.64	0.85
27:BA:2625:G:H3'	27:BA:2626:C:H5	1.10	0.85
27:BA:2698:U:N3	27:BA:2699:C:C5	2.43	0.85
27:BA:2785:C:H2'	27:BA:2786:U:H6	1.41	0.85
27:BA:2853:C:H3'	27:BA:2853:C:H6	1.40	0.85
27:BA:919:G:N2	27:BA:2268:A:H5''	1.91	0.85
30:BF:6:TYR:CE1	30:BF:139:VAL:CB	2.57	0.85
31:BG:21:VAL:HG11	31:BG:132:VAL:CG2	2.04	0.85
33:BI:23:ASP:HB2	33:BI:25:TYR:CE2	2.11	0.85
33:BI:43:ASN:N	33:BI:43:ASN:ND2	2.22	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:103:VAL:HG12	34:BN:104:TYR:H	1.41	0.85
34:BN:19:MET:HB3	34:BN:46:ILE:HD13	1.57	0.85
34:BN:49:ARG:O	34:BN:53:ILE:HB	1.76	0.85
34:BN:51:GLU:C	34:BN:53:ILE:H	1.77	0.85
35:BO:24:VAL:HG11	35:BO:32:TYR:O	1.76	0.85
35:BO:65:THR:OG1	35:BO:67:ARG:HG2	1.76	0.85
36:BP:67:ARG:HE	36:BP:67:ARG:N	1.73	0.85
37:BQ:65:ARG:CZ	37:BQ:122:PHE:HE2	1.89	0.85
37:BQ:76:GLY:HA3	37:BQ:132:VAL:CG1	2.02	0.85
38:BS:31:LYS:HZ3	38:BS:99:GLU:HB3	1.40	0.85
27:BA:446:G:H5'	45:BU:5:LYS:HE3	1.58	0.85
1:AA:1224:G:O3'	1:AA:1225:A:P	2.33	0.85
16:AM:92:HIS:CG	16:AM:98:VAL:HG21	2.11	0.85
20:AQ:21:VAL:HG12	20:AQ:23:VAL:HG23	1.58	0.85
20:AQ:8:GLY:HA3	20:AQ:22:LEU:O	1.75	0.85
49:B0:37:LEU:CB	49:B0:69:PHE:HD2	1.70	0.85
49:B0:80:SER:OG	49:B0:84:ALA:CB	2.25	0.85
52:B6:37:LEU:HD21	52:B6:51:ARG:HG2	0.86	0.85
53:B7:30:ILE:HA	53:B7:33:ARG:HG3	1.57	0.85
53:B7:7:PRO:C	53:B7:8:ASN:ND2	2.29	0.85
54:B8:7:HIS:O	54:B8:8:LYS:O	1.94	0.85
27:BA:1818:U:C3'	28:BD:155:ARG:CG	2.52	0.85
27:BA:2246:G:N2	27:BA:2247:A:C4	2.44	0.85
27:BA:2252:G:O6	27:BA:2253:G:O6	1.93	0.85
27:BA:2523:G:N1	27:BA:2541:A:C2	2.45	0.85
27:BA:2532:G:C5'	27:BA:2532:G:C8	2.59	0.85
27:BA:2573:C:C6	27:BA:2573:C:C4'	2.59	0.85
27:BA:25:U:H5''	40:BW:80:PRO:HD2	1.58	0.85
27:BA:2774:C:C2	27:BA:2775:A:C8	2.64	0.85
27:BA:2854:G:C6	27:BA:2864:G:O6	2.29	0.85
28:BD:131:LEU:HD11	28:BD:183:ILE:HG22	1.57	0.85
30:BF:6:TYR:CE2	30:BF:140:VAL:CG2	2.60	0.85
31:BG:97:GLN:HB3	31:BG:106:PHE:CE2	2.10	0.85
31:BG:77:ASP:N	31:BG:77:ASP:OD1	2.06	0.85
44:BR:39:PRO:O	44:BR:42:LYS:N	2.09	0.85
26:BB:76:G:OP1	43:BZ:32:PHE:CZ	2.07	0.85
27:BA:76:C:O2'	47:B2:55:ARG:HA	1.76	0.85
47:B2:4:HIS:H	47:B2:8:ILE:HD11	1.40	0.85
49:B0:61:ALA:CB	49:B0:80:SER:O	2.23	0.85
54:B8:26:LYS:HZ2	54:B8:44:LYS:N	1.73	0.85
27:BA:2077:A:N7	27:BA:2238:G:O6	2.10	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2262:U:P	49:B0:14:ARG:NH2	2.49	0.85
27:BA:2287:A:H2	27:BA:2289:G:O4'	1.59	0.85
27:BA:2311:A:H2'	27:BA:2312:U:C6	2.10	0.85
27:BA:2785:C:C2'	27:BA:2786:U:C5	2.55	0.85
27:BA:919:G:N2	27:BA:2268:A:C5'	2.38	0.85
28:BD:145:LEU:N	28:BD:152:GLN:HB2	1.88	0.85
28:BD:154:VAL:HG21	28:BD:160:SER:HA	1.56	0.85
28:BD:162:GLN:N	28:BD:162:GLN:CD	2.29	0.85
29:BE:210:THR:HA	29:BE:216:ARG:HH22	1.03	0.85
29:BE:225:LYS:O	29:BE:229:GLN:NE2	2.09	0.85
30:BF:168:ARG:NH1	30:BF:209:GLY:CA	2.37	0.85
30:BF:196:THR:CG2	30:BF:236:THR:HG21	2.06	0.85
34:BN:15:ARG:HG2	34:BN:43:ARG:HB3	1.56	0.85
35:BO:101:PRO:O	35:BO:102:VAL:HG22	1.74	0.85
36:BP:120:LEU:HD11	36:BP:122:ALA:HB2	1.57	0.85
38:BS:47:LEU:CD1	38:BS:58:LEU:HD21	2.06	0.85
43:BZ:24:TYR:N	43:BZ:83:PHE:O	2.09	0.85
43:BZ:25:ASN:OD1	43:BZ:26:LYS:N	2.08	0.85
43:BZ:85:MET:O	43:BZ:86:VAL:CG2	2.23	0.85
41:BX:14:ALA:CA	41:BX:17:ASP:OD2	2.19	0.85
1:AA:1237:C:O2'	1:AA:1300:G:N2	2.09	0.85
1:AA:668:G:N3	18:AO:46:HIS:NE2	2.23	0.85
53:B7:32:ALA:CA	53:B7:35:ARG:HG3	2.06	0.85
55:B9:24:LEU:HD22	55:B9:35:ARG:CG	2.06	0.85
27:BA:2080:G:N1	27:BA:2241:A:C6	2.45	0.85
27:BA:2255:G:C2	27:BA:2256:G:C1'	2.59	0.85
27:BA:2278:A:P	37:BQ:20:ILE:HG22	2.16	0.85
27:BA:2282:G:N2	27:BA:2427:C:O2	2.08	0.85
27:BA:2447:G:C6	27:BA:2500:U:C5	2.65	0.85
27:BA:2592:G:C2	27:BA:2603:G:C6	2.64	0.85
27:BA:2051:A:H2	27:BA:2618:G:C6	1.93	0.85
27:BA:2839:G:H2'	27:BA:2840:C:H6	1.41	0.85
27:BA:1799:G:N3	28:BD:153:LEU:HD21	1.92	0.85
29:BE:45:LYS:CE	29:BE:303:PRO:CD	2.55	0.85
30:BF:102:LEU:CD2	30:BF:103:ASN:N	2.40	0.85
30:BF:235:PHE:HB3	30:BF:239:ALA:CB	2.06	0.85
27:BA:598:G:C2	30:BF:33:LYS:NZ	2.43	0.85
31:BG:149:ARG:O	31:BG:151:ILE:N	2.06	0.85
35:BO:8:LEU:HB2	35:BO:83:ALA:CA	2.06	0.85
37:BQ:41:THR:CG2	37:BQ:126:VAL:CA	2.54	0.85
37:BQ:89:PRO:O	37:BQ:90:PHE:CE1	2.30	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:100:LEU:CD2	44:BR:112:ALA:HA	2.05	0.85
44:BR:39:PRO:O	44:BR:41:ALA:N	2.08	0.85
43:BZ:24:TYR:HD2	43:BZ:84:TYR:HD1	1.24	0.85
16:AM:92:HIS:CD2	16:AM:98:VAL:CG2	2.51	0.85
3:AW:37:YYG:O23	10:AG:83:ALA:CA	2.24	0.85
1:AA:196:A:O3'	1:AA:197:A:OP2	1.89	0.85
50:B4:41:PRO:CB	50:B4:57:ASP:OD2	2.21	0.85
52:B6:19:GLY:CA	52:B6:44:ALA:HB3	2.06	0.85
27:BA:1024:G:N7	27:BA:1025:G:C8	2.44	0.85
27:BA:2411:A:O2'	27:BA:2412:A:H8	1.59	0.85
27:BA:2525:G:N1	27:BA:2539:C:N4	2.24	0.85
27:BA:2574:G:C8	27:BA:2575:C:C5	2.55	0.85
27:BA:2731:G:H22	27:BA:2732:G:H21	1.22	0.85
30:BF:102:LEU:H	30:BF:107:ARG:HH21	0.85	0.85
30:BF:93:LYS:CB	30:BF:96:LYS:HE3	2.07	0.85
34:BN:46:ILE:O	34:BN:47:THR:O	1.94	0.85
36:BP:69:ILE:HG13	36:BP:70:ASP:H	0.70	0.85
44:BR:74:LYS:CA	44:BR:77:ARG:HH22	1.89	0.85
26:BB:7:G:O2'	38:BS:37:ARG:CG	2.24	0.85
40:BW:80:PRO:O	40:BW:100:THR:CG2	2.25	0.85
33:BI:115:ILE:HA	33:BI:131:VAL:HA	1.58	0.85
16:AM:91:ARG:NH1	16:AM:103:THR:HG22	1.65	0.85
41:BX:55:GLN:O	41:BX:63:LYS:N	2.09	0.85
32:BH:111:PRO:O	32:BH:112:VAL:HG22	1.77	0.85
1:AA:116:A:H61	1:AA:313:A:H1'	1.42	0.85
27:BA:929:G:N3	48:B3:43:ILE:HG13	1.92	0.85
54:B8:23:MET:CE	54:B8:48:PHE:CD2	2.58	0.85
27:BA:2286:A:C4'	27:BA:2287:A:O4'	2.24	0.85
27:BA:2360:A:N7	27:BA:2361:A:N7	2.24	0.85
27:BA:2648:C:C4	27:BA:2649:U:C4	2.65	0.85
27:BA:673:C:C1'	30:BF:82:GLN:OE1	2.25	0.85
27:BA:797:C:H5''	30:BF:57:PRO:HB3	1.59	0.85
28:BD:66:PHE:HD2	28:BD:67:LYS:HD2	1.42	0.85
28:BD:80:ILE:CD1	28:BD:82:TYR:CE1	2.59	0.85
29:BE:240:PRO:CB	29:BE:243:PRO:HG2	2.05	0.85
27:BA:617:G:C4'	30:BF:219:ASN:OD1	2.22	0.85
30:BF:91:PRO:CB	30:BF:92:PRO:HD2	1.88	0.85
33:BI:6:LEU:HB2	33:BI:36:ALA:CB	2.06	0.85
37:BQ:57:ARG:CA	37:BQ:61:LEU:HD21	2.06	0.85
37:BQ:35:ASN:CB	37:BQ:75:SER:HB2	2.07	0.85
37:BQ:85:ILE:CG2	37:BQ:122:PHE:CD2	2.54	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:8:ARG:HD2	40:BW:9:TYR:HD1	1.38	0.85
43:BZ:37:LYS:CG	43:BZ:41:ARG:HH12	1.90	0.85
47:B2:24:LYS:C	47:B2:26:GLU:OE2	2.15	0.85
27:BA:269:U:H5''	27:BA:270(Y):G:H2'	1.59	0.85
27:BA:2304:G:H1	27:BA:2312:U:H3	1.20	0.85
27:BA:2397:G:N1	27:BA:2420:C:C2	2.42	0.85
27:BA:2494:G:C2	27:BA:2495:G:C5	2.65	0.85
27:BA:2662:A:H2'	27:BA:2663:G:H5'	1.56	0.85
27:BA:2783:G:C4	27:BA:2784:C:C5	2.65	0.85
27:BA:458:G:H5''	53:B7:39:ARG:CD	2.01	0.85
27:BA:527:C:C2'	34:BN:95:ARG:NH1	2.39	0.85
27:BA:774:A:H1'	27:BA:775:G:C8	2.12	0.85
27:BA:1799:G:N1	28:BD:153:LEU:HD21	1.90	0.85
29:BE:269:ILE:CD1	29:BE:295:LEU:O	2.25	0.85
30:BF:109:LEU:O	30:BF:112:ARG:HB2	1.76	0.85
30:BF:5:ILE:HB	30:BF:14:GLY:C	1.95	0.85
31:BG:25:MET:SD	31:BG:129:ASP:HB3	2.16	0.85
31:BG:49:PRO:HG3	31:BG:73:VAL:HG23	1.57	0.85
31:BG:64:ARG:CB	31:BG:67:ASP:OD2	2.24	0.85
32:BH:44:VAL:HA	32:BH:49:ILE:HG22	0.89	0.85
34:BN:12:VAL:CG1	34:BN:38:VAL:HG21	2.07	0.85
35:BO:7:ARG:NH2	35:BO:44:LYS:HD2	1.92	0.85
36:BP:62:ALA:CB	36:BP:105:TYR:HB2	2.06	0.85
45:BU:42:ALA:O	45:BU:43:ALA:O	1.94	0.85
40:BW:32:ALA:O	40:BW:35:ILE:N	2.09	0.85
40:BW:36:LEU:HA	40:BW:39:THR:HG22	1.58	0.85
27:BA:106:C:H2'	27:BA:107:C:H5''	1.59	0.85
42:BY:71:VAL:HG22	42:BY:93:THR:CB	2.07	0.85
1:AA:1318:A:O2'	22:AS:37:ARG:CB	2.21	0.85
28:BD:208:GLY:C	28:BD:211:HIS:NE2	2.30	0.85
3:AW:37:YYG:C21	10:AG:83:ALA:HB3	1.89	0.85
1:AA:559:A:H4'	1:AA:560:U:O5'	1.75	0.85
1:AA:173:U:C5	1:AA:198:G:H1'	2.11	0.85
16:AM:122:LYS:NZ	25:AY:154:GLY:CA	2.40	0.85
27:BA:1809:A:N6	50:B4:3:LYS:CG	2.30	0.85
52:B6:35:LEU:C	52:B6:36:GLU:HG3	1.98	0.85
27:BA:752:A:C5	27:BA:1781:C:H1'	2.12	0.85
27:BA:2259:G:N7	27:BA:2260:C:C5	2.44	0.85
27:BA:2268:A:C5'	27:BA:2269:A:OP2	2.25	0.85
27:BA:2309:A:H3'	27:BA:2310:A:C5'	2.07	0.85
27:BA:2445:G:O2'	27:BA:2446:G:C5'	2.24	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2446:G:H21	27:BA:2501:C:H41	1.25	0.85
27:BA:2526:G:C2'	27:BA:2527:C:C5'	2.42	0.85
27:BA:2045:C:N3	27:BA:2624:G:N3	2.24	0.85
27:BA:2044:C:C6	27:BA:2625:G:N2	2.45	0.85
28:BD:155:ARG:O	28:BD:157:ALA:N	2.09	0.85
28:BD:175:LEU:HD11	28:BD:180:VAL:H	1.40	0.85
27:BA:2731:G:OP1	29:BE:265:ASN:HB3	1.75	0.85
29:BE:70:VAL:HG13	29:BE:296:VAL:CA	1.97	0.85
29:BE:308:VAL:HG12	29:BE:310:PHE:HE1	1.40	0.85
29:BE:74:GLU:H	29:BE:74:GLU:CD	1.80	0.85
35:BO:64:ARG:NH2	35:BO:100:GLY:CA	2.40	0.85
36:BP:66:VAL:CG2	36:BP:109:LEU:O	2.15	0.85
26:BB:12:C:N3	38:BS:10:MET:CE	2.40	0.85
26:BB:104:A:C1'	43:BZ:24:TYR:OH	2.24	0.85
27:BA:1479:G:C2'	27:BA:1480:G:H8	1.89	0.85
49:B0:43:THR:O	49:B0:64:ASP:CG	2.15	0.84
27:BA:1669:A:C5'	27:BA:2550:G:OP1	2.25	0.84
27:BA:963:U:C1'	27:BA:2250:G:H21	1.87	0.84
27:BA:2333:A:H1'	27:BA:2335:A:C6	2.12	0.84
27:BA:2531:A:C2'	27:BA:2532:G:H5''	2.04	0.84
27:BA:2603:G:C6	27:BA:2604:U:H5	1.94	0.84
27:BA:2782:G:H2'	27:BA:2783:G:H5'	1.59	0.84
29:BE:61:PRO:CA	29:BE:69:PRO:HA	2.06	0.84
32:BH:82:TYR:CZ	32:BH:137:LYS:HB3	2.11	0.84
32:BH:8:ILE:HG22	32:BH:9:GLU:H	1.41	0.84
33:BI:4:ILE:CB	33:BI:37:ILE:O	2.23	0.84
36:BP:117:GLU:OE2	36:BP:136:ALA:CB	2.25	0.84
36:BP:77:ALA:HA	36:BP:81:VAL:CG1	2.07	0.84
37:BQ:72:VAL:HG21	37:BQ:83:PHE:HZ	1.42	0.84
44:BR:36:THR:CG2	44:BR:40:LYS:HD3	2.04	0.84
44:BR:52:ILE:HG21	44:BR:94:TYR:CD1	2.12	0.84
38:BS:109:PRO:HA	38:BS:115:VAL:CG1	2.05	0.84
33:BI:121:ILE:O	33:BI:122:ARG:HB2	1.75	0.84
42:BY:47:THR:CG2	42:BY:100:ASP:HB2	2.07	0.84
42:BY:71:VAL:CG2	42:BY:93:THR:N	2.39	0.84
43:BZ:34:LEU:HD13	43:BZ:35:ASP:H	1.42	0.84
41:BX:30:ASP:O	41:BX:31:ARG:O	1.94	0.84
43:BZ:96:VAL:CG1	43:BZ:97:PRO:CD	2.55	0.84
39:BT:48:ASN:OD1	39:BT:49:LEU:N	2.10	0.84
49:B0:22:GLY:O	49:B0:23:VAL:O	1.94	0.84
49:B0:46:LYS:CG	49:B0:58:THR:H	1.90	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:43:THR:O	49:B0:64:ASP:OD1	1.94	0.84
49:B0:43:THR:CG2	49:B0:75:GLY:N	2.40	0.84
48:B3:31:LEU:CD2	48:B3:32:GLN:HB3	2.07	0.84
48:B3:40:THR:HG23	48:B3:43:ILE:HD13	0.85	0.84
27:BA:574:C:H41	27:BA:2054:A:C5'	1.89	0.84
27:BA:2369:A:H2'	27:BA:2370:G:H8	1.42	0.84
27:BA:2693:A:N1	27:BA:2694:G:C5	2.45	0.84
29:BE:222:ARG:HH11	29:BE:222:ARG:CG	1.88	0.84
31:BG:107:GLY:O	31:BG:129:ASP:N	2.10	0.84
32:BH:86:LEU:C	32:BH:86:LEU:CD1	2.40	0.84
35:BO:17:ARG:NH2	35:BO:47:THR:C	2.30	0.84
35:BO:31:ARG:CB	35:BO:32:TYR:CE1	2.59	0.84
35:BO:77:ILE:HD11	35:BO:79:PHE:CD2	2.11	0.84
36:BP:94:ARG:CB	36:BP:120:LEU:HD21	1.80	0.84
37:BQ:140:TYR:O	37:BQ:141:MET:C	2.16	0.84
37:BQ:23:ILE:N	37:BQ:24:PRO:HD3	1.91	0.84
38:BS:9:PRO:HG2	38:BS:14:ARG:HB3	1.58	0.84
38:BS:17:ARG:HD2	38:BS:18:THR:N	1.92	0.84
45:BU:74:MET:HE3	45:BU:78:THR:CG2	1.86	0.84
43:BZ:124:ALA:H	43:BZ:159:THR:HG21	1.42	0.84
27:BA:292:C:H2'	27:BA:293:U:H3	1.41	0.84
47:B2:62:GLU:N	47:B2:62:GLU:OE1	2.09	0.84
41:BX:24:LEU:O	41:BX:25:GLN:OE1	1.94	0.84
41:BX:7:HIS:ND1	41:BX:8:PRO:HD2	1.92	0.84
27:BA:2896:C:C3'	27:BA:2896:C:C6	2.60	0.84
3:AW:74:C:OP1	50:B4:22:MET:HE2	1.76	0.84
48:B3:26:LEU:HD21	48:B3:46:ASN:HD22	1.39	0.84
52:B6:37:LEU:CD2	52:B6:51:ARG:CA	2.53	0.84
52:B6:45:LYS:O	52:B6:46:LYS:NZ	2.10	0.84
53:B7:7:PRO:O	53:B7:8:ASN:ND2	2.10	0.84
27:BA:1264:G:OP1	51:B5:16:ARG:HG2	1.76	0.84
27:BA:1140:C:H1'	27:BA:142(A):A:N1	1.92	0.84
27:BA:2252:G:H2'	27:BA:2253:G:H5'	0.85	0.84
27:BA:2309:A:C5'	27:BA:2310:A:C8	2.60	0.84
27:BA:2061:G:N7	27:BA:2501:C:C1'	2.40	0.84
27:BA:2729:G:C2	27:BA:2730:C:O2	2.29	0.84
27:BA:2808:U:N3	27:BA:2892:A:N7	2.24	0.84
28:BD:175:LEU:HD11	28:BD:180:VAL:CA	2.07	0.84
29:BE:80:ALA:HB2	29:BE:187:HIS:NE2	1.92	0.84
29:BE:74:GLU:HB2	29:BE:293:TYR:HE2	1.40	0.84
30:BF:102:LEU:HD22	30:BF:106:GLU:HB2	1.57	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:83:GLU:OE1	32:BH:84:LYS:C	2.16	0.84
27:BA:2041:U:H5'	34:BN:70:PHE:CE1	2.12	0.84
35:BO:113:LYS:O	35:BO:117:LEU:HD23	1.76	0.84
35:BO:71:ARG:O	35:BO:73:ASP:N	2.10	0.84
36:BP:113:GLN:HE21	36:BP:113:GLN:N	1.71	0.84
37:BQ:72:VAL:CG2	37:BQ:135:ALA:HB1	2.07	0.84
44:BR:44:LEU:HD11	44:BR:48:VAL:HG21	1.57	0.84
38:BS:128:ASP:O	38:BS:129:ILE:CG1	2.24	0.84
38:BS:31:LYS:CB	38:BS:32:PRO:HD3	1.99	0.84
38:BS:91:ARG:O	38:BS:94:GLU:HG3	1.77	0.84
46:BV:35:LEU:N	46:BV:60:VAL:CG1	2.40	0.84
40:BW:32:ALA:CA	40:BW:35:ILE:HG13	2.07	0.84
40:BW:67:ASP:CG	40:BW:68:ARG:N	2.24	0.84
40:BW:70:TYR:CD2	40:BW:71:VAL:N	2.45	0.84
43:BZ:107:GLU:OE2	43:BZ:141:MET:HG3	1.77	0.84
43:BZ:113:VAL:HG23	43:BZ:174:PRO:HG3	1.58	0.84
43:BZ:39:PHE:O	43:BZ:43:PHE:CB	2.25	0.84
32:BH:155:PRO:HB2	32:BH:169:ARG:HG3	1.60	0.84
27:BA:1924:C:N3	27:BA:1925:C:C5	2.45	0.84
48:B3:36:VAL:O	48:B3:37:LEU:HD23	1.77	0.84
51:B5:13:LYS:HD3	51:B5:14:SER:N	1.92	0.84
51:B5:15:LYS:NZ	51:B5:15:LYS:HB2	1.92	0.84
52:B6:19:GLY:HA3	52:B6:42:PRO:HG2	1.53	0.84
53:B7:43:THR:HA	53:B7:46:ASP:OD1	1.77	0.84
53:B7:8:ASN:O	53:B7:9:ASN:C	2.16	0.84
27:BA:1251:C:H5''	45:BU:10:ARG:NE	1.91	0.84
27:BA:1937:A:H3'	27:BA:1938:A:H5''	1.59	0.84
27:BA:2197:U:H2'	27:BA:2224:G:N2	1.89	0.84
27:BA:2236:C:C3'	27:BA:2237:G:C5'	2.54	0.84
27:BA:2332:U:O4'	27:BA:2336:A:N6	2.09	0.84
27:BA:2358:G:N3	27:BA:2358:G:H2'	1.91	0.84
27:BA:2428:G:O2'	27:BA:2429:G:C8	2.29	0.84
27:BA:2507:C:O2	27:BA:2583:G:N3	2.10	0.84
27:BA:452:G:H3'	27:BA:453:C:H5''	1.59	0.84
27:BA:637:A:C8	36:BP:111:ALA:HB1	2.12	0.84
27:BA:910:A:H3'	37:BQ:17:ARG:NH2	1.91	0.84
27:BA:973:A:H2'	27:BA:974:G:H5''	1.56	0.84
28:BD:181:ARG:CZ	28:BD:181:ARG:HB3	2.02	0.84
29:BE:70:VAL:HG11	29:BE:295:LEU:CD2	2.06	0.84
30:BF:106:GLU:O	30:BF:107:ARG:O	1.94	0.84
31:BG:140:ARG:O	31:BG:142:ALA:N	2.10	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:73:VAL:O	31:BG:73:VAL:HG12	1.76	0.84
32:BH:101:LYS:CG	32:BH:115:GLU:CB	2.54	0.84
32:BH:83:GLU:C	32:BH:83:GLU:CD	2.36	0.84
27:BA:6:A:C4'	34:BN:4:ALA:N	2.40	0.84
35:BO:52:VAL:O	35:BO:53:LYS:HB2	1.76	0.84
37:BQ:56:ILE:HG22	37:BQ:61:LEU:HD22	1.56	0.84
38:BS:34:LEU:CD1	38:BS:103:ASP:H	1.90	0.84
45:BU:99:ALA:HB2	45:BU:106:PHE:CE1	1.77	0.84
40:BW:85:VAL:CG1	40:BW:95:ILE:CD1	2.56	0.84
41:BX:45:TYR:OH	41:BX:75:GLN:OE1	1.95	0.84
47:B2:39:ALA:CB	47:B2:40:PRO:CD	2.53	0.84
1:AA:811:C:OP1	1:AA:898:G:H5'	1.75	0.84
27:BA:176:G:H3'	27:BA:177:G:H8	1.42	0.84
27:BA:404:C:H4'	27:BA:405:U:H5'	1.56	0.84
27:BA:14:A:N3	27:BA:2625:G:O2'	2.08	0.84
27:BA:2416:C:N3	27:BA:2417:C:C5	2.45	0.84
27:BA:2783:G:C5	27:BA:2784:C:C5	2.65	0.84
29:BE:226:HIS:HA	29:BE:229:GLN:HG3	1.57	0.84
29:BE:44:TYR:N	29:BE:309:PRO:CG	2.24	0.84
33:BI:6:LEU:O	33:BI:6:LEU:HD13	1.76	0.84
37:BQ:48:ASN:O	37:BQ:121:ASP:CB	2.24	0.84
27:BA:2277:G:O3'	37:BQ:15:THR:CB	2.26	0.84
38:BS:23:ARG:HH21	38:BS:35:VAL:CB	1.90	0.84
27:BA:995:C:C1'	45:BU:57:PHE:CE2	2.58	0.84
45:BU:95:LEU:C	45:BU:98:ILE:HD13	1.97	0.84
42:BY:103:LEU:HA	42:BY:108:ARG:HB3	1.57	0.84
42:BY:74:VAL:CB	42:BY:77:VAL:HG23	2.07	0.84
43:BZ:19:ILE:N	43:BZ:36:ARG:HG3	1.91	0.84
27:BA:2:G:C2	27:BA:2902:C:C2	2.64	0.84
33:BI:47:LEU:HD12	33:BI:48:GLU:H	1.38	0.84
27:BA:1274:A:C6	27:BA:1302:A:H2	1.95	0.84
27:BA:1840:G:H1	27:BA:1902:C:H42	1.24	0.84
1:AA:1327:C:H5''	24:AU:20:LYS:HE2	1.57	0.84
3:AW:72:C:C2'	3:AW:73:A:C5'	2.55	0.84
27:BA:2395:C:H5''	50:B4:28:ARG:NH1	1.92	0.84
27:BA:2020:A:C5	51:B5:9:LYS:CE	2.40	0.84
27:BA:2283:C:C2	27:BA:2284:C:H1'	2.12	0.84
27:BA:2312:U:H5'	31:BG:53:LYS:HA	0.87	0.84
27:BA:2455:G:C2'	27:BA:2456:C:H5'	2.08	0.84
27:BA:2537:U:H2'	27:BA:2538:C:C6	2.12	0.84
27:BA:2615:U:HO2'	27:BA:2616:C:H5'	1.38	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:219:ASN:N	30:BF:219:ASN:ND2	2.14	0.84
30:BF:241:ALA:O	30:BF:245:GLU:OE1	1.59	0.84
30:BF:52:ALA:CA	30:BF:55:ARG:CB	2.54	0.84
32:BH:34:ARG:HD2	32:BH:36:PHE:CZ	2.12	0.84
34:BN:46:ILE:HD11	34:BN:132:LEU:HD11	1.60	0.84
35:BO:9:LYS:HD3	35:BO:81:GLU:OE2	1.78	0.84
36:BP:117:GLU:OE2	36:BP:136:ALA:HB1	1.77	0.84
36:BP:62:ALA:HB2	36:BP:104:ASP:O	1.78	0.84
44:BR:20:LEU:O	44:BR:21:TYR:C	2.16	0.84
44:BR:63:ARG:NH2	44:BR:77:ARG:CG	2.37	0.84
45:BU:28:ARG:HA	45:BU:31:GLN:CG	2.06	0.84
46:BV:4:ILE:CD1	46:BV:13:ARG:CD	2.52	0.84
46:BV:49:GLU:HB3	46:BV:53:LYS:CD	2.07	0.84
42:BY:101:LEU:CG	42:BY:103:LEU:HD11	2.07	0.84
42:BY:45:GLY:HA2	42:BY:62:VAL:HG11	0.90	0.84
1:AA:1219:U:O2'	22:AS:34:TRP:CB	2.19	0.84
31:BG:82:GLU:O	31:BG:85:GLN:HG3	1.77	0.84
31:BG:12:GLU:O	31:BG:12:GLU:CD	2.14	0.84
49:B0:24:LYS:CG	49:B0:56:ASP:CG	2.45	0.84
40:BW:19:LEU:HD13	51:B5:25:LEU:CG	2.06	0.84
52:B6:16:ALA:C	52:B6:18:THR:H	1.78	0.84
53:B7:17:GLY:HA2	53:B7:44:VAL:HG21	1.15	0.84
27:BA:2051:A:C5	27:BA:2614:A:N6	2.43	0.84
27:BA:2264:C:C2'	27:BA:2265:U:O5'	2.24	0.84
27:BA:2276:G:O2'	27:BA:2277:G:O5'	1.94	0.84
27:BA:2411:A:N3	27:BA:2412:A:N7	2.26	0.84
27:BA:2423:U:H1'	27:BA:2425:A:C4	2.12	0.84
27:BA:2484:G:C2	27:BA:2485:G:C8	2.66	0.84
27:BA:2528:U:C5	27:BA:2530:A:C2	2.65	0.84
27:BA:2532:G:H8	27:BA:2532:G:O5'	1.60	0.84
27:BA:2722:G:C2	27:BA:2723:C:C6	2.65	0.84
27:BA:2729:G:O2'	27:BA:2730:C:H5'	1.76	0.84
27:BA:2847:U:OP2	27:BA:2847:U:H6	1.61	0.84
27:BA:2886:G:N2	27:BA:2887:U:N1	2.25	0.84
27:BA:535:C:HO2'	45:BU:53:LYS:HG2	1.04	0.84
29:BE:304:ASP:O	29:BE:307:LEU:HG	1.78	0.84
30:BF:153:VAL:CG1	30:BF:157:LEU:CD2	2.45	0.84
30:BF:223:LEU:O	30:BF:224:ALA:C	2.12	0.84
30:BF:240:LEU:HA	30:BF:243:VAL:HG23	1.60	0.84
34:BN:46:ILE:HD11	34:BN:132:LEU:CD1	2.07	0.84
27:BA:1140:C:C4	34:BN:49:ARG:CD	2.61	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:2:ILE:HD12	35:BO:2:ILE:N	1.91	0.84
37:BQ:41:THR:HG21	37:BQ:126:VAL:N	1.93	0.84
39:BT:53:ASP:C	39:BT:56:ARG:HE	1.81	0.84
27:BA:994:C:O2	45:BU:53:LYS:HB3	1.76	0.84
43:BZ:35:ASP:H	43:BZ:39:PHE:HZ	1.22	0.84
41:BX:18:MET:HE3	41:BX:25:GLN:C	1.98	0.84
7:AD:31:CYS:O	7:AD:33:MET:N	2.09	0.84
1:AA:579:G:O5'	1:AA:728:A:O2'	1.96	0.84
27:BA:2006:C:O2'	27:BA:2823:A:N3	2.10	0.84
27:BA:2411:A:C2	27:BA:2412:A:C5	2.66	0.84
27:BA:2468:G:H22	27:BA:2481:G:C2'	1.90	0.84
27:BA:2504:U:C3'	27:BA:2504:U:C6	2.61	0.84
27:BA:2676:C:H3'	27:BA:2676:C:C6	2.13	0.84
27:BA:1638:C:O3'	27:BA:2709:G:N2	2.11	0.84
27:BA:2839:G:C2	27:BA:2840:C:N1	2.45	0.84
27:BA:911:A:H2	37:BQ:17:ARG:NE	1.23	0.84
28:BD:146:LYS:HB2	28:BD:149:ARG:HG3	1.59	0.84
29:BE:205:THR:C	29:BE:206:LYS:HG3	1.96	0.84
29:BE:225:LYS:C	29:BE:226:HIS:ND1	2.31	0.84
29:BE:94:ARG:CB	29:BE:95:PRO:HD2	2.00	0.84
30:BF:210:ALA:O	30:BF:211:ASP:HB3	1.76	0.84
30:BF:223:LEU:C	30:BF:223:LEU:CD1	2.37	0.84
30:BF:33:LYS:HA	30:BF:36:ARG:CG	2.07	0.84
31:BG:25:MET:N	31:BG:129:ASP:OD2	2.10	0.84
35:BO:35:ILE:CG2	35:BO:62:VAL:C	2.46	0.84
35:BO:7:ARG:NE	35:BO:44:LYS:HD2	1.91	0.84
35:BO:17:ARG:HH21	35:BO:47:THR:HA	1.42	0.84
44:BR:113:LEU:CD1	44:BR:114:VAL:N	2.38	0.84
45:BU:13:ARG:H	45:BU:13:ARG:CZ	1.90	0.84
45:BU:14:HIS:O	45:BU:15:LYS:C	2.11	0.84
40:BW:6:ILE:HA	40:BW:103:ILE:O	1.78	0.84
40:BW:12:ILE:O	40:BW:14:PRO:CD	2.26	0.84
43:BZ:112:LEU:HD13	43:BZ:142:ASN:CA	2.00	0.84
43:BZ:147:ILE:O	43:BZ:168:VAL:CB	2.23	0.84
28:BD:213:LYS:CG	28:BD:215:LYS:CB	2.22	0.84
49:B0:61:ALA:CB	49:B0:80:SER:HA	2.07	0.84
48:B3:3:ARG:CB	48:B3:60:GLU:HA	2.07	0.84
54:B8:8:LYS:O	54:B8:9:MET:C	2.14	0.84
27:BA:1264:G:OP1	51:B5:19:ARG:NH1	2.10	0.84
27:BA:2252:G:C8	27:BA:2252:G:H3'	2.13	0.84
27:BA:2296:U:C4	38:BS:16:ALA:CB	2.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2607:G:H2'	27:BA:2608:G:C5'	2.07	0.84
27:BA:775:G:HO2'	27:BA:791:C:N4	1.76	0.84
28:BD:75:GLY:O	28:BD:115:ILE:O	1.94	0.84
27:BA:1818:U:C4'	28:BD:155:ARG:CG	2.55	0.84
29:BE:71:THR:CG2	29:BE:299:SER:CA	2.55	0.84
31:BG:93:LEU:HD22	31:BG:106:PHE:HD2	1.39	0.84
35:BO:68:GLY:CA	35:BO:78:ARG:NE	2.37	0.84
37:BQ:20:ILE:CG1	37:BQ:21:SER:N	2.38	0.84
37:BQ:20:ILE:HG13	37:BQ:21:SER:H	1.38	0.84
37:BQ:69:ASN:C	37:BQ:69:ASN:ND2	2.21	0.84
38:BS:81:ALA:CB	38:BS:117:ALA:HB1	2.07	0.84
38:BS:87:LEU:H	38:BS:87:LEU:CD2	1.90	0.84
42:BY:18:GLU:CB	42:BY:21:LYS:NZ	2.40	0.84
27:BA:338:G:H5'	42:BY:24:ARG:NH1	1.93	0.84
42:BY:49:GLU:CD	42:BY:97:ARG:HH12	1.60	0.84
43:BZ:40:ASP:OD2	43:BZ:41:ARG:CZ	2.26	0.84
28:BD:211:HIS:ND1	28:BD:212:HIS:CD2	2.46	0.84
27:BA:1566:A:C6	28:BD:212:HIS:CE1	2.66	0.84
47:B2:46:ILE:O	47:B2:47:LYS:O	1.96	0.84
1:AA:406:G:H21	7:AD:119:GLN:HE22	1.22	0.84
49:B0:24:LYS:HG3	49:B0:56:ASP:OD1	1.77	0.84
44:BR:101:ALA:O	51:B5:41:LEU:HD12	1.75	0.84
51:B5:57:VAL:HG12	51:B5:58:LEU:H	0.73	0.84
27:BA:2097:C:N3	27:BA:2192:G:N2	2.25	0.84
27:BA:2309:A:C5'	27:BA:2310:A:OP2	2.24	0.84
27:BA:2314:C:O2'	27:BA:2315:G:C5'	2.26	0.84
27:BA:248:G:H21	27:BA:2431:U:C4'	1.89	0.84
27:BA:2561:A:C6	27:BA:2562:U:C5	2.65	0.84
26:BB:48:A:OP2	38:BS:107:ASN:ND2	2.11	0.84
28:BD:140:VAL:HG13	28:BD:190:THR:C	1.98	0.84
29:BE:199:ALA:CA	29:BE:312:ARG:O	2.24	0.84
30:BF:52:ALA:HA	30:BF:55:ARG:HB3	1.57	0.84
32:BH:164:GLU:OE1	32:BH:164:GLU:CA	2.26	0.84
33:BI:21:VAL:HG11	33:BI:30:LEU:HD11	1.57	0.84
37:BQ:66:ASN:HB2	37:BQ:70:ARG:HH21	1.43	0.84
37:BQ:85:ILE:HG22	37:BQ:122:PHE:CD1	2.10	0.84
44:BR:100:LEU:CD2	44:BR:113:LEU:H	1.87	0.84
44:BR:61:HIS:HA	44:BR:64:ARG:HD3	0.89	0.84
46:BV:40:VAL:CG1	46:BV:55:THR:CG2	2.56	0.84
43:BZ:15:ASP:OD1	43:BZ:16:GLU:N	2.11	0.84
43:BZ:34:LEU:CD1	43:BZ:35:ASP:N	2.41	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:18:MET:CA	43:BZ:36:ARG:HG3	2.08	0.84
47:B2:50:ARG:HA	47:B2:53:ILE:HD12	1.60	0.84
1:AA:695:A:C2	1:AA:787:A:H4'	2.13	0.84
49:B0:38:VAL:CA	49:B0:40:GLN:HG3	2.08	0.83
48:B3:20:LYS:CD	48:B3:23:LEU:CD1	2.55	0.83
53:B7:30:ILE:CA	53:B7:33:ARG:HG3	2.07	0.83
27:BA:2253:G:H2'	27:BA:2254:C:O5'	1.78	0.83
27:BA:2295:C:N3	27:BA:2337:G:N2	2.26	0.83
27:BA:2313:C:H5'	31:BG:51:ARG:HH11	1.42	0.83
27:BA:2293:C:N3	27:BA:2339:G:O6	2.11	0.83
27:BA:2411:A:HO2'	27:BA:2412:A:H8	0.86	0.83
27:BA:2484:G:H1'	37:BQ:142:LYS:NZ	1.93	0.83
27:BA:2539:C:H2'	27:BA:2540:C:O5'	1.78	0.83
27:BA:1457:A:C2	27:BA:2703:C:C4	2.66	0.83
27:BA:610:C:H2'	27:BA:611:C:H6	1.42	0.83
26:BB:103:U:O2'	43:BZ:67:LYS:HG2	1.77	0.83
29:BE:203:GLY:HA3	29:BE:303:PRO:HD3	1.58	0.83
29:BE:267:ARG:CB	29:BE:297:LYS:HD2	2.08	0.83
30:BF:215:ALA:HB2	30:BF:238:SER:C	1.98	0.83
32:BH:101:LYS:HZ1	32:BH:115:GLU:HG3	1.42	0.83
33:BI:9:VAL:O	33:BI:9:VAL:HG12	1.78	0.83
34:BN:25:GLN:HA	34:BN:28:GLU:CB	2.07	0.83
35:BO:26:GLY:HA3	35:BO:30:ARG:NH1	1.93	0.83
27:BA:910:A:H62	37:BQ:12:PRO:CA	1.91	0.83
38:BS:118:ILE:HG23	38:BS:119:GLN:H	1.43	0.83
38:BS:30:GLY:O	38:BS:31:LYS:CE	2.26	0.83
42:BY:49:GLU:HG2	42:BY:59:GLU:CA	2.02	0.83
42:BY:57:GLY:N	42:BY:97:ARG:NH2	2.26	0.83
27:BA:1789:A:H4'	28:BD:224:VAL:CG1	2.07	0.83
41:BX:31:ARG:HE	41:BX:31:ARG:N	1.75	0.83
2:AV:65:G:H3'	2:AV:66:A:OP2	1.78	0.83
1:AA:406:G:N2	1:AA:437:U:O2	2.11	0.83
27:BA:441:U:OP2	42:BY:3:GLN:HG2	1.76	0.83
27:BA:1300:U:H1'	27:BA:1626:G:N2	1.93	0.83
49:B0:43:THR:CG2	49:B0:75:GLY:H	1.90	0.83
50:B4:63:PHE:O	50:B4:65:ASP:N	2.11	0.83
53:B7:14:LYS:O	53:B7:15:THR:C	2.16	0.83
55:B9:7:VAL:HG11	55:B9:34:GLN:HG2	0.85	0.83
27:BA:1151:G:O3'	45:BU:81:ASN:OD1	1.97	0.83
27:BA:1139:G:O2'	27:BA:142(A):A:N3	2.11	0.83
27:BA:2185:C:H2'	27:BA:2186:G:H8	1.41	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2268:A:H5'	27:BA:2269:A:OP2	1.78	0.83
27:BA:2386:C:C4'	49:B0:39:ARG:HH21	1.90	0.83
27:BA:2061:G:N3	27:BA:2503:A:H2	1.74	0.83
27:BA:1782:C:O2	27:BA:2609:U:H6	1.36	0.83
27:BA:2618:G:C5	27:BA:2619:C:H5	1.96	0.83
27:BA:2657:A:C8	27:BA:2658:C:C6	2.65	0.83
27:BA:2679:A:C5	27:BA:2680:C:C5	2.65	0.83
27:BA:2688:U:N3	27:BA:2719:G:C4	2.46	0.83
28:BD:141:HIS:HE1	28:BD:192:GLY:O	1.58	0.83
30:BF:239:ALA:C	30:BF:241:ALA:N	2.26	0.83
30:BF:96:LYS:N	30:BF:98:ARG:CZ	2.41	0.83
27:BA:2304:G:O4'	31:BG:105:SER:CB	2.25	0.83
27:BA:2313:C:C4'	31:BG:72:LYS:HG3	2.07	0.83
31:BG:97:GLN:CD	31:BG:106:PHE:CD2	2.51	0.83
35:BO:1:MET:H1	35:BO:32:TYR:HD2	0.87	0.83
37:BQ:56:ILE:HD11	37:BQ:115:SER:N	1.93	0.83
27:BA:907:U:O2'	37:BQ:88:PHE:CZ	2.30	0.83
38:BS:114:LYS:O	38:BS:117:ALA:N	2.11	0.83
38:BS:116:PHE:O	38:BS:119:GLN:HB2	1.78	0.83
38:BS:127:LEU:CD2	38:BS:127:LEU:O	2.26	0.83
46:BV:67:LYS:HD3	46:BV:70:TYR:CE1	2.13	0.83
27:BA:973:A:C6	46:BV:81:ARG:CG	2.61	0.83
40:BW:82:LEU:HD21	40:BW:98:LYS:O	1.76	0.83
43:BZ:69:VAL:CG1	43:BZ:70:GLN:H	1.90	0.83
31:BG:90:LEU:O	31:BG:92:GLU:OE2	1.95	0.83
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.11	0.83
56:BK:71:LYS:HG2	56:BK:72:THR:C	1.97	0.83
52:B6:46:LYS:CA	52:B6:46:LYS:NZ	2.12	0.83
27:BA:2258:C:C5	27:BA:2426:A:H4'	2.14	0.83
27:BA:2344:U:O2'	27:BA:2345:G:P	2.34	0.83
27:BA:2550:G:C4	27:BA:2551:C:C5	2.66	0.83
27:BA:2589:A:C2'	27:BA:2590:A:C5'	2.43	0.83
27:BA:2628:C:C1'	27:BA:2781:A:H2'	2.07	0.83
27:BA:2785:C:H4'	29:BE:99:VAL:CB	2.07	0.83
29:BE:295:LEU:HD23	29:BE:296:VAL:H	1.41	0.83
27:BA:801:G:OP2	30:BF:79:ARG:CD	2.25	0.83
32:BH:86:LEU:HD13	32:BH:87:GLU:CA	2.08	0.83
34:BN:136:SER:HA	34:BN:139:LEU:CD2	2.08	0.83
34:BN:21:ARG:HA	34:BN:24:SER:CB	2.08	0.83
35:BO:101:PRO:O	35:BO:102:VAL:CG2	2.26	0.83
35:BO:35:ILE:CG2	35:BO:63:VAL:N	2.33	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:61:ALA:HB1	36:BP:107:LYS:NZ	1.93	0.83
27:BA:245:G:P	36:BP:53:ARG:NH1	2.51	0.83
37:BQ:142:LYS:CD	37:BQ:143:VAL:H	1.92	0.83
37:BQ:31:PHE:HZ	37:BQ:88:PHE:CD2	1.96	0.83
45:BU:13:ARG:CA	45:BU:13:ARG:NH1	2.41	0.83
45:BU:44:THR:HG21	46:BV:77:GLY:O	1.78	0.83
40:BW:34:ASN:HD22	51:B5:39:LYS:HB2	1.42	0.83
47:B2:2:VAL:C	47:B2:4:HIS:HD1	1.80	0.83
1:AA:1005:A:H5'	1:AA:1037:C:O2	1.78	0.83
50:B4:6:HIS:HE1	50:B4:55:ARG:HB2	1.42	0.83
52:B6:42:PRO:CG	52:B6:44:ALA:HB3	2.04	0.83
27:BA:126:A:OP1	53:B7:44:VAL:CG1	2.26	0.83
54:B8:16:ILE:HG13	54:B8:22:VAL:HG22	0.85	0.83
27:BA:1665:A:C4'	35:BO:66:LYS:CE	2.51	0.83
27:BA:2476:A:C8	27:BA:2477:C:C5	2.66	0.83
27:BA:2484:G:H2'	27:BA:2485:G:H5'	1.60	0.83
27:BA:2580:U:H6	27:BA:2581:G:C8	1.51	0.83
27:BA:2716:U:H2'	27:BA:2717:G:H5'	1.59	0.83
29:BE:174:LEU:O	29:BE:177:ALA:CB	2.25	0.83
30:BF:103:ASN:HB3	30:BF:106:GLU:HG3	1.60	0.83
30:BF:7:ASP:C	30:BF:11:ASN:N	2.31	0.83
31:BG:102:GLY:HA3	31:BG:134:LEU:HD12	0.85	0.83
32:BH:148:ARG:NH1	32:BH:163:TYR:CA	2.34	0.83
27:BA:1131:G:N1	34:BN:69:TYR:CZ	2.46	0.83
35:BO:60:ALA:HA	35:BO:87:ILE:HD13	1.59	0.83
38:BS:34:LEU:CD2	38:BS:102:LEU:CA	2.52	0.83
46:BV:3:ALA:CB	46:BV:12:TYR:OH	2.26	0.83
46:BV:31:ASP:C	46:BV:63:HIS:O	2.17	0.83
46:BV:78:VAL:HB	46:BV:80:TYR:CD1	2.14	0.83
4:AX:119:U:H2'	4:AX:120:A:C8	2.13	0.83
27:BA:85:G:OP1	42:BY:65:VAL:HG11	1.77	0.83
41:BX:18:MET:HE1	41:BX:25:GLN:HB2	1.58	0.83
41:BX:26:PHE:N	41:BX:26:PHE:CD1	2.44	0.83
1:AA:600:C:OP1	11:AH:97:VAL:HB	1.78	0.83
3:AW:65:G:H2'	3:AW:66:A:O4'	1.77	0.83
48:B3:20:LYS:O	48:B3:23:LEU:N	2.11	0.83
50:B4:14:ILE:HG13	50:B4:38:GLY:O	1.78	0.83
27:BA:1364:G:H2'	50:B4:3:LYS:HZ2	0.77	0.83
50:B4:41:PRO:HB2	50:B4:57:ASP:CB	2.09	0.83
51:B5:4:HIS:CB	51:B5:5:PRO:HD3	2.07	0.83
27:BA:180:G:OP1	53:B7:32:ALA:HB1	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:23:MET:SD	54:B8:24:ALA:N	2.52	0.83
55:B9:27:CYS:O	55:B9:29:ASN:N	2.11	0.83
55:B9:7:VAL:O	55:B9:8:LYS:HE2	1.75	0.83
27:BA:2322:A:C6	27:BA:2323:G:N9	2.46	0.83
27:BA:2353:G:C2	27:BA:2364:C:N4	2.44	0.83
27:BA:2458:G:C8	27:BA:2490:G:N1	2.46	0.83
27:BA:2552:U:C5'	27:BA:2553:G:OP2	2.23	0.83
27:BA:2648:C:H42	27:BA:2672:G:H1	1.25	0.83
27:BA:2659:G:C2'	27:BA:2661:G:OP2	2.27	0.83
27:BA:2722:G:C6	27:BA:2723:C:N4	2.47	0.83
27:BA:26:G:N1	27:BA:27:G:N2	2.25	0.83
27:BA:2854:G:N1	27:BA:2864:G:C6	2.46	0.83
28:BD:141:HIS:HB3	28:BD:154:VAL:HG11	1.60	0.83
30:BF:163:HIS:CA	30:BF:166:ILE:CD1	2.56	0.83
30:BF:3:ALA:O	30:BF:16:VAL:N	2.10	0.83
32:BH:95:ALA:H	32:BH:127:GLN:NE2	1.75	0.83
34:BN:19:MET:HE2	34:BN:22:VAL:CG2	2.08	0.83
34:BN:13:ASP:C	34:BN:38:VAL:HG11	1.99	0.83
34:BN:61:VAL:CG2	34:BN:139:LEU:HB3	2.08	0.83
37:BQ:135:ALA:O	37:BQ:138:ARG:N	2.11	0.83
37:BQ:46:VAL:HG22	37:BQ:156:ASN:ND2	1.94	0.83
31:BG:145:ASP:CB	38:BS:15:GLU:C	2.45	0.83
40:BW:24:ILE:HG22	40:BW:35:ILE:HB	1.58	0.83
42:BY:55:PHE:CZ	42:BY:89:ARG:NH2	2.46	0.83
27:BA:1924:C:C2	27:BA:1925:C:C6	2.67	0.83
27:BA:1079:C:O2'	56:BK:130:GLY:CA	2.27	0.83
52:B6:37:LEU:C	52:B6:38:LYS:HG3	1.97	0.83
52:B6:36:GLU:C	52:B6:52:GLU:CD	2.36	0.83
27:BA:1205:U:O2	30:BF:232:LEU:CD1	2.19	0.83
27:BA:1367:A:C2'	53:B7:25:LYS:NZ	2.41	0.83
27:BA:1568:G:OP2	28:BD:60:GLN:HB2	0.93	0.83
27:BA:2219:G:O2'	27:BA:2224:G:H5''	1.78	0.83
27:BA:2852:G:C2	27:BA:2853:C:C2	2.66	0.83
30:BF:6:TYR:CE2	30:BF:140:VAL:HG22	2.13	0.83
35:BO:24:VAL:CG1	35:BO:32:TYR:O	2.27	0.83
44:BR:24:GLN:HB2	44:BR:44:LEU:HD23	1.60	0.83
44:BR:63:ARG:HH22	44:BR:77:ARG:HG2	1.40	0.83
43:BZ:105:GLN:CB	43:BZ:141:MET:SD	2.66	0.83
1:AA:979:C:OP1	1:AA:1223:C:N4	2.11	0.83
27:BA:1340:U:O4	41:BX:57:THR:CG2	2.26	0.83
27:BA:72:U:C5'	41:BX:2:TRP:CH2	2.62	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:15:GLU:CG	7:AD:63:LYS:HB3	2.07	0.83
1:AA:1180:A:O2'	1:AA:1184:G:H1'	1.78	0.83
2:AV:74:C:H42	27:BA:2253:G:H1	0.85	0.83
3:AW:75:C:O2	27:BA:2395:C:C1'	2.25	0.83
48:B3:22:ALA:O	48:B3:26:LEU:CD1	2.26	0.83
52:B6:48:VAL:O	52:B6:50:PHE:HE1	1.56	0.83
27:BA:2090:G:C2	27:BA:2230:G:C6	2.66	0.83
27:BA:2093:G:C5	27:BA:2225:A:N7	2.47	0.83
27:BA:2253:G:O2'	27:BA:2254:C:C5'	2.26	0.83
27:BA:2320:A:H2	27:BA:2333:A:C2	1.78	0.83
27:BA:2485:G:H2'	27:BA:2486:G:C5'	2.05	0.83
27:BA:2561:A:H2'	27:BA:2562:U:O5'	1.79	0.83
27:BA:1966:A:C2	27:BA:2593:U:H4'	2.13	0.83
27:BA:2618:G:HO2'	27:BA:2619:C:C5'	1.92	0.83
27:BA:2740:A:N9	27:BA:2741:A:N7	2.25	0.83
27:BA:2744:G:H2'	27:BA:2745:C:H5'	1.59	0.83
26:BB:11:C:N4	38:BS:11:ARG:NH1	2.26	0.83
28:BD:143:ILE:HB	28:BD:153:LEU:N	1.94	0.83
28:BD:148:GLY:C	28:BD:150:GLY:H	1.82	0.83
29:BE:250:VAL:O	29:BE:251:PRO:O	1.95	0.83
29:BE:199:ALA:HA	29:BE:312:ARG:O	1.77	0.83
29:BE:46:ALA:CB	29:BE:72:VAL:C	2.42	0.83
30:BF:102:LEU:HD23	30:BF:106:GLU:CD	1.99	0.83
27:BA:2316:C:C4'	31:BG:142:ALA:HB1	2.07	0.83
34:BN:70:PHE:O	34:BN:71:TYR:HB2	1.76	0.83
35:BO:43:VAL:HB	35:BO:55:GLY:N	1.94	0.83
36:BP:128:GLY:O	36:BP:131:GLU:N	2.11	0.83
46:BV:71:ILE:O	46:BV:72:ARG:HG2	1.77	0.83
40:BW:69:LEU:HD22	40:BW:109:GLU:CB	2.08	0.83
43:BZ:10:PRO:O	43:BZ:14:LEU:HB2	1.78	0.83
1:AA:1061:G:H5'	13:AJ:59:SER:OG	1.77	0.83
41:BX:13:LYS:O	41:BX:16:ASN:N	2.12	0.83
41:BX:23:LYS:HA	41:BX:66:VAL:O	1.79	0.83
1:AA:410:G:P	7:AD:25:ARG:HG3	2.18	0.83
1:AA:674:G:H2'	1:AA:675:A:H8	1.44	0.83
27:BA:1943:U:C1'	27:BA:1945:G:H5'	2.08	0.83
27:BA:1055:G:C5	27:BA:1056:G:O2'	2.31	0.83
3:AW:76:A:C2'	27:BA:2422:A:C6	2.62	0.83
27:BA:856:C:O2'	49:B0:24:LYS:CD	2.27	0.83
49:B0:61:ALA:HB2	49:B0:80:SER:O	1.78	0.83
54:B8:30:ARG:HG2	54:B8:31:HIS:N	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2430:A:H2'	27:BA:2431:U:C5'	2.08	0.83
27:BA:2520:C:C6	27:BA:2567:G:H1'	2.14	0.83
27:BA:2636:U:O2'	29:BE:84:ARG:NH1	2.11	0.83
27:BA:2648:C:O2'	27:BA:2649:U:H5'	1.77	0.83
29:BE:222:ARG:HG2	29:BE:232:ARG:CA	2.08	0.83
27:BA:2251:G:P	37:BQ:102:ARG:HE	2.02	0.83
37:BQ:133:GLU:OE1	37:BQ:134:PHE:N	2.11	0.83
37:BQ:54:VAL:O	37:BQ:56:ILE:HD12	1.78	0.83
26:BB:114:G:H1'	38:BS:46:GLN:NE2	1.93	0.83
38:BS:31:LYS:HZ3	38:BS:99:GLU:CB	1.92	0.83
45:BU:27:SER:HB3	45:BU:31:GLN:CD	1.99	0.83
45:BU:61:TRP:C	45:BU:65:ILE:HG12	1.98	0.83
46:BV:67:LYS:HE3	46:BV:94:LYS:HD2	1.60	0.83
40:BW:58:ALA:O	40:BW:60:ASN:N	2.12	0.83
33:BI:94:THR:HG23	33:BI:97:GLN:H	1.42	0.83
42:BY:101:LEU:HD13	42:BY:113:GLU:HB3	1.58	0.83
43:BZ:51:LEU:C	43:BZ:51:LEU:HD23	1.98	0.83
28:BD:211:HIS:CE1	28:BD:212:HIS:CD2	2.67	0.83
1:AA:47:C:H4'	1:AA:48:C:C5'	2.08	0.83
3:AW:40:C:O3'	10:AG:147:ALA:CB	2.26	0.83
3:AW:75:C:H41	50:B4:28:ARG:N	1.75	0.83
49:B0:67:VAL:O	49:B0:68:VAL:HG23	1.79	0.83
50:B4:59:PHE:N	50:B4:62:ARG:HE	1.76	0.83
54:B8:12:ARG:O	54:B8:13:ARG:O	1.96	0.83
27:BA:2336:A:C2'	27:BA:2337:G:H5'	2.07	0.83
27:BA:2450:A:C5'	27:BA:2497:A:H62	1.86	0.83
27:BA:2504:U:H6	27:BA:2504:U:O5'	1.60	0.83
27:BA:2474:C:H41	27:BA:2529:G:H21	1.25	0.83
27:BA:2542:A:O2'	27:BA:2543:G:H8	1.59	0.83
27:BA:1966:A:C2	27:BA:2593:U:H5'	2.13	0.83
27:BA:2681:C:C5	27:BA:2727:G:N2	2.43	0.83
27:BA:965:C:O2'	27:BA:2272:U:C5	2.32	0.83
27:BA:2785:C:C2	29:BE:100:TRP:CD1	2.67	0.83
29:BE:226:HIS:HA	29:BE:229:GLN:CG	2.01	0.83
32:BH:100:LYS:C	32:BH:101:LYS:HD2	1.99	0.83
27:BA:1036:G:OP1	32:BH:58:LYS:HD2	1.78	0.83
33:BI:43:ASN:C	33:BI:45:LYS:H	1.80	0.83
37:BQ:32:LYS:HD2	37:BQ:32:LYS:C	1.99	0.83
37:BQ:88:PHE:C	37:BQ:90:PHE:CE1	2.52	0.83
38:BS:12:ARG:HD2	38:BS:20:TYR:CE2	2.13	0.83
38:BS:20:TYR:HE2	38:BS:21:HIS:CD2	1.94	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:86:LEU:HD23	38:BS:124:ASP:HB2	1.60	0.83
45:BU:44:THR:OG1	46:BV:77:GLY:C	2.17	0.83
45:BU:49:ASP:HA	45:BU:52:ASN:CG	1.97	0.83
45:BU:91:ASN:OD1	45:BU:95:LEU:CD2	2.25	0.83
45:BU:98:ILE:C	45:BU:100:ALA:N	2.28	0.83
46:BV:67:LYS:O	46:BV:91:THR:HB	1.78	0.83
40:BW:24:ILE:HG22	40:BW:35:ILE:CD1	2.08	0.83
43:BZ:112:LEU:HD23	43:BZ:172:LEU:O	1.78	0.83
43:BZ:15:ASP:O	43:BZ:16:GLU:HB2	1.76	0.83
28:BD:208:GLY:HA3	28:BD:210:LYS:CE	2.09	0.83
47:B2:7:GLU:OE1	47:B2:8:ILE:HG12	1.77	0.83
1:AA:922:G:N3	1:AA:1398:A:H2	1.77	0.83
27:BA:1944:U:C1'	27:BA:1955:U:H1'	2.09	0.83
33:BI:65:ALA:CB	33:BI:134:HIS:HB2	2.09	0.83
2:AV:25:C:H2'	2:AV:26:G:O5'	1.77	0.83
27:BA:1079:C:H1'	56:BK:130:GLY:HA2	1.59	0.83
1:AA:1190:G:H5'	6:AC:176:HIS:NE2	1.93	0.83
49:B0:70:ILE:HG12	49:B0:71:ASN:H	1.44	0.83
48:B3:50:VAL:O	48:B3:53:LEU:HB2	1.79	0.83
50:B4:14:ILE:CG2	50:B4:16:TYR:CE1	2.62	0.83
52:B6:2:ALA:HB3	52:B6:11:LYS:HE3	1.60	0.83
53:B7:8:ASN:O	53:B7:11:LYS:N	2.12	0.83
27:BA:2263:C:O2'	27:BA:2264:C:C5'	2.24	0.83
27:BA:1128:A:N6	27:BA:2489:G:O2'	2.12	0.83
27:BA:2521:C:H2'	27:BA:2522:U:O5'	1.79	0.83
27:BA:2528:U:OP2	55:B9:30:VAL:HG11	1.78	0.83
27:BA:2578:G:H2'	27:BA:2579:C:O5'	1.79	0.83
27:BA:2633:G:C2	27:BA:2634:G:C8	2.61	0.83
27:BA:2652:C:C5	27:BA:2653:U:O4	2.31	0.83
27:BA:2722:G:H2'	27:BA:2723:C:H6	1.44	0.83
27:BA:2731:G:N2	27:BA:2732:G:H21	1.75	0.83
27:BA:2898:U:N3	27:BA:2899:G:C5	2.46	0.83
29:BE:180:ILE:CG2	29:BE:187:HIS:HA	2.04	0.83
30:BF:242:GLU:O	30:BF:245:GLU:HB2	1.78	0.83
30:BF:52:ALA:O	30:BF:55:ARG:HG2	1.79	0.83
33:BI:7:LYS:HD2	33:BI:12:LYS:CE	2.09	0.83
34:BN:50:GLU:O	34:BN:51:GLU:O	1.97	0.83
36:BP:109:LEU:HD13	36:BP:109:LEU:C	1.99	0.83
37:BQ:44:ALA:HB3	37:BQ:126:VAL:O	1.79	0.83
44:BR:74:LYS:O	44:BR:75:LEU:O	1.97	0.83
46:BV:62:GLU:HB2	46:BV:96:LEU:CD2	2.08	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:112:LEU:HA	43:BZ:174:PRO:CD	2.09	0.83
42:BY:43:ASN:HD22	42:BY:101:LEU:CD2	1.90	0.83
42:BY:28:SER:CA	42:BY:99:THR:OG1	2.27	0.83
41:BX:28:VAL:CG1	41:BX:64:ALA:HB3	2.08	0.83
49:B0:44:LYS:O	49:B0:45:PHE:HD1	1.62	0.82
27:BA:932:G:H4'	48:B3:24:LYS:HZ3	1.42	0.82
27:BA:2742:C:C5'	55:B9:35:ARG:NH1	2.40	0.82
27:BA:2742:C:H5''	55:B9:35:ARG:NH1	1.94	0.82
27:BA:2061:G:C8	27:BA:2501:C:H1'	2.14	0.82
27:BA:2306:C:N4	31:BG:53:LYS:HZ2	1.57	0.82
27:BA:2380:C:C2'	27:BA:2381:C:H5''	2.08	0.82
27:BA:2457:U:H2'	27:BA:2458:G:C4'	2.08	0.82
27:BA:2523:G:C2'	27:BA:2524:G:H5'	2.08	0.82
27:BA:2543:G:C4	27:BA:2544:G:C5	2.67	0.82
27:BA:2556:C:O2'	27:BA:2557:G:H5''	1.77	0.82
27:BA:2589:A:C4	27:BA:2590:A:C8	2.67	0.82
27:BA:2707:G:C2'	27:BA:2708:G:O5'	2.26	0.82
27:BA:2689:U:C6	27:BA:2713:A:N6	2.47	0.82
27:BA:2864:G:H2'	27:BA:2865:U:H6	1.40	0.82
27:BA:2885:C:N4	27:BA:2886:G:C8	2.47	0.82
27:BA:566:U:OP2	46:BV:81:ARG:CZ	2.25	0.82
27:BA:994:C:N1	45:BU:53:LYS:HD2	1.93	0.82
28:BD:161:ALA:CA	28:BD:162:GLN:HE22	1.91	0.82
28:BD:80:ILE:C	28:BD:80:ILE:HD12	1.98	0.82
27:BA:2578:G:C8	29:BE:237:ASN:OD1	2.31	0.82
30:BF:1:MET:O	30:BF:18:LEU:CD2	2.28	0.82
30:BF:194:PHE:CE2	30:BF:204:ALA:O	2.32	0.82
32:BH:101:LYS:CD	32:BH:115:GLU:HB2	2.08	0.82
33:BI:2:LYS:HG2	33:BI:39:ALA:H	1.44	0.82
27:BA:1006:C:H4'	34:BN:28:GLU:OE2	1.78	0.82
35:BO:112:MET:O	35:BO:115:ILE:HG13	1.78	0.82
44:BR:36:THR:HG23	44:BR:40:LYS:HD3	1.60	0.82
45:BU:94:VAL:CG1	46:BV:4:ILE:HD13	2.09	0.82
46:BV:77:GLY:O	46:BV:78:VAL:HG13	1.79	0.82
6:AC:12:LEU:CD2	17:AN:51:GLY:HA3	2.08	0.82
27:BA:2331:G:C2'	49:B0:70:ILE:HG21	2.07	0.82
52:B6:24:THR:C	52:B6:25:THR:HG23	1.99	0.82
27:BA:1076:C:H1'	56:BK:91:GLU:HG2	1.59	0.82
27:BA:2012:G:O3'	40:BW:96:ILE:HG21	1.79	0.82
27:BA:2066:C:C2	27:BA:2445:G:C2	2.67	0.82
27:BA:2195:C:C6	27:BA:2195:C:OP2	2.31	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:963:U:C2'	27:BA:2250:G:H21	1.92	0.82
27:BA:919:G:H21	27:BA:2268:A:H5'	1.44	0.82
27:BA:2297:C:H2'	27:BA:2298:A:H8	0.77	0.82
27:BA:2064:C:C2	27:BA:2450:A:N6	2.47	0.82
27:BA:2526:G:C4	27:BA:2527:C:C6	2.68	0.82
27:BA:1051:G:H4'	27:BA:2752:C:O2'	1.79	0.82
28:BD:151:GLY:C	28:BD:152:GLN:OE1	2.17	0.82
27:BA:2512:C:H4'	29:BE:235:ILE:HD12	1.59	0.82
27:BA:2785:C:O4'	29:BE:98:GLU:O	1.95	0.82
33:BI:7:LYS:HD3	33:BI:12:LYS:HZ2	1.45	0.82
33:BI:31:PHE:HE1	33:BI:35:LEU:O	1.62	0.82
36:BP:104:ASP:O	36:BP:105:TYR:CG	2.31	0.82
45:BU:31:GLN:C	45:BU:33:ARG:H	1.79	0.82
43:BZ:112:LEU:CD2	43:BZ:113:VAL:N	2.41	0.82
2:AV:35:A:N6	4:AX:117:U:C4	2.47	0.82
4:AX:120:A:H2'	4:AX:121:G:H8	1.40	0.82
42:BY:103:LEU:CD2	42:BY:108:ARG:O	2.27	0.82
42:BY:101:LEU:HD21	42:BY:112:LEU:CD1	2.09	0.82
42:BY:71:VAL:CG2	42:BY:93:THR:CG2	2.18	0.82
1:AA:986:A:C1'	22:AS:55:LYS:HA	2.09	0.82
1:AA:1347:G:H22	1:AA:1373:G:H2'	1.42	0.82
1:AA:65:U:C4'	1:AA:199:G:O2'	2.26	0.82
27:BA:1364:G:H3'	50:B4:3:LYS:NZ	1.93	0.82
27:BA:2199:A:C5	27:BA:2225:A:C2	2.67	0.82
27:BA:2256:G:N2	27:BA:2257:U:O2	2.13	0.82
27:BA:2364:C:O2'	27:BA:2365:G:C5'	2.28	0.82
27:BA:2450:A:H5''	27:BA:2497:A:H62	1.01	0.82
27:BA:2484:G:H1'	37:BQ:142:LYS:HZ2	1.43	0.82
27:BA:2781:A:C5'	27:BA:2782:G:C5'	2.57	0.82
27:BA:31:C:H5''	27:BA:1239:G:OP1	1.79	0.82
27:BA:34:C:H2'	27:BA:455:C:N4	1.94	0.82
27:BA:631:A:H2	27:BA:2415:G:N3	1.76	0.82
28:BD:110:LYS:NZ	28:BD:110:LYS:CA	2.38	0.82
28:BD:74:PRO:CA	28:BD:116:MET:CE	2.54	0.82
26:BB:18:G:O5'	31:BG:149:ARG:HD3	1.79	0.82
34:BN:20:GLY:C	34:BN:22:VAL:N	2.32	0.82
27:BA:1131:G:C2	34:BN:69:TYR:CE1	2.67	0.82
37:BQ:82:LYS:C	37:BQ:84:ARG:H	1.79	0.82
46:BV:15:SER:O	46:BV:97:GLY:O	1.96	0.82
46:BV:5:ILE:HD12	46:BV:5:ILE:H	1.44	0.82
4:AX:119:U:H2'	4:AX:120:A:H8	1.43	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:133:LEU:N	33:BI:138:THR:HG22	1.93	0.82
27:BA:338:G:H5'	42:BY:24:ARG:HH11	1.42	0.82
3:AW:25:C:C6	3:AW:26:G:N7	2.47	0.82
16:AM:92:HIS:NE2	16:AM:98:VAL:HG21	1.93	0.82
41:BX:14:ALA:N	41:BX:17:ASP:CG	2.23	0.82
6:AC:91:LEU:HD21	6:AC:99:VAL:H	1.44	0.82
3:AW:33:U:O2	3:AW:35:A:H3'	1.80	0.82
27:BA:2081:C:C5'	50:B4:35:VAL:HG21	2.09	0.82
51:B5:12:SER:O	51:B5:13:LYS:C	2.17	0.82
40:BW:19:LEU:CG	51:B5:25:LEU:HG	2.09	0.82
27:BA:1368:G:P	53:B7:25:LYS:CE	2.67	0.82
27:BA:2098:U:O2	27:BA:2191:G:N2	2.12	0.82
27:BA:2067:G:N2	27:BA:2444:G:C4	2.46	0.82
27:BA:2575:C:OP1	29:BE:241:TRP:NE1	2.12	0.82
27:BA:2703:C:C2'	27:BA:2704:C:O5'	2.27	0.82
27:BA:2718:G:N2	27:BA:2719:G:H1'	1.94	0.82
27:BA:2793:G:N1	27:BA:2794:C:N4	2.28	0.82
27:BA:2799:A:H3'	27:BA:2801:A:OP2	1.78	0.82
27:BA:2832:U:H6	27:BA:2832:U:H5''	1.44	0.82
29:BE:79:ARG:NH2	29:BE:104:PHE:O	2.10	0.82
27:BA:1260:G:C5'	40:BW:83:LYS:HZ1	1.92	0.82
27:BA:337:C:C3'	27:BA:338:G:H5''	2.02	0.82
27:BA:338:G:N7	42:BY:21:LYS:HB3	1.94	0.82
42:BY:14:ALA:CB	42:BY:15:PRO:CD	2.54	0.82
42:BY:78:THR:CG2	42:BY:88:PRO:CA	2.22	0.82
3:AW:25:C:N1	3:AW:26:G:N9	2.28	0.82
41:BX:17:ASP:N	41:BX:17:ASP:OD1	2.13	0.82
41:BX:6:LYS:HE3	41:BX:29:ASP:H	1.42	0.82
1:AA:946:A:N3	1:AA:1333:A:C2	2.48	0.82
42:BY:4:PRO:O	42:BY:5:ASP:HB2	1.76	0.82
16:AM:3:ARG:HH12	31:BG:90:LEU:HD13	1.43	0.82
27:BA:1364:G:O5'	50:B4:3:LYS:HG2	1.78	0.82
54:B8:26:LYS:HD3	54:B8:43:GLY:C	1.99	0.82
54:B8:55:TRP:O	54:B8:56:ALA:O	1.96	0.82
27:BA:2267:A:O4'	27:BA:2267:A:OP1	1.97	0.82
27:BA:2306:C:H42	27:BA:2311:A:H2	1.26	0.82
27:BA:2574:G:C3'	27:BA:2575:C:C6	2.59	0.82
27:BA:1759:A:H5'	27:BA:2715:C:H1'	1.61	0.82
27:BA:2758:A:OP2	27:BA:2758:A:C4'	2.27	0.82
26:BB:17:C:OP1	31:BG:147:ALA:HA	1.79	0.82
30:BF:193:LEU:CD1	30:BF:223:LEU:HB2	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:35:THR:O	32:BH:36:PHE:CD1	2.32	0.82
34:BN:54:VAL:HG22	34:BN:135:ILE:CD1	2.09	0.82
37:BQ:17:ARG:CD	37:BQ:17:ARG:N	2.36	0.82
37:BQ:17:ARG:H	37:BQ:17:ARG:HD3	1.40	0.82
38:BS:46:GLN:HB3	38:BS:57:THR:HG21	1.60	0.82
40:BW:17:VAL:O	40:BW:20:VAL:CG2	2.27	0.82
33:BI:68:LEU:CG	33:BI:108:LEU:HD13	2.10	0.82
42:BY:71:VAL:HG22	42:BY:93:THR:N	1.95	0.82
28:BD:211:HIS:HD1	28:BD:212:HIS:HD2	1.19	0.82
27:BA:75:G:H4'	47:B2:51:LYS:NZ	1.93	0.82
27:BA:1338:G:H4'	41:BX:12:GLU:OE1	1.79	0.82
31:BG:44:ILE:O	31:BG:83:PHE:HZ	1.58	0.82
48:B3:37:LEU:HD12	48:B3:43:ILE:CG2	2.09	0.82
48:B3:50:VAL:HB	48:B3:53:LEU:CD1	2.10	0.82
55:B9:7:VAL:HG11	55:B9:25:VAL:HG23	1.62	0.82
27:BA:1033:U:C5	27:BA:2750:A:N3	2.48	0.82
27:BA:1287:A:C5'	44:BR:104:ARG:HG3	2.09	0.82
27:BA:2207:C:O2	27:BA:2218:G:C2	2.33	0.82
27:BA:2292:C:O2	27:BA:2293:C:C6	2.32	0.82
27:BA:2399:G:N2	27:BA:2400:G:H1'	1.94	0.82
27:BA:2423:U:O4'	27:BA:2425:A:C8	2.32	0.82
27:BA:2586:C:C2	27:BA:2587:A:N7	2.47	0.82
27:BA:2695:C:C2'	27:BA:2696:U:C6	2.63	0.82
27:BA:2711:A:OP1	27:BA:2712:U:O3'	1.95	0.82
27:BA:2689:U:C5	27:BA:2713:A:C6	2.67	0.82
27:BA:2788:C:H5''	27:BA:2789:C:OP2	1.80	0.82
27:BA:495:G:H21	40:BW:61:ASN:HD21	0.85	0.82
27:BA:933:A:OP1	48:B3:24:LYS:NZ	2.13	0.82
28:BD:166:LYS:O	28:BD:167:GLU:OE2	1.96	0.82
30:BF:11:ASN:OD1	30:BF:160:LEU:HD11	1.78	0.82
32:BH:51:VAL:CG2	32:BH:68:ARG:HG2	2.10	0.82
34:BN:60:ARG:O	34:BN:71:TYR:CD2	2.33	0.82
36:BP:61:ALA:HB1	36:BP:107:LYS:HE2	1.60	0.82
37:BQ:123:ILE:HG21	37:BQ:125:TRP:HB2	1.60	0.82
37:BQ:65:ARG:HH21	37:BQ:85:ILE:C	1.81	0.82
38:BS:17:ARG:HD3	38:BS:17:ARG:C	1.99	0.82
46:BV:21:ARG:HE	46:BV:21:ARG:HA	1.45	0.82
47:B2:30:ALA:CA	47:B2:34:GLN:CG	2.57	0.82
47:B2:52:ALA:O	47:B2:53:ILE:C	2.17	0.82
27:BA:1059:G:H22	56:BK:131:THR:HG23	1.35	0.82
40:BW:90:ARG:CB	40:BW:90:ARG:HH11	1.81	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:946:A:N3	1:AA:1333:A:H2	1.77	0.82
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.45	0.82
50:B4:62:ARG:C	50:B4:65:ASP:OD2	2.17	0.82
53:B7:14:LYS:O	53:B7:16:HIS:N	2.12	0.82
27:BA:1637:A:H4'	27:BA:2711:A:HO2'	1.45	0.82
27:BA:1780:A:H3'	27:BA:1781:C:H5''	1.60	0.82
27:BA:196:A:C2	27:BA:2068:U:H5	1.98	0.82
27:BA:2013:A:H4'	40:BW:96:ILE:HG22	1.62	0.82
27:BA:2267:A:H5''	27:BA:2268:A:O4'	1.80	0.82
27:BA:2418:A:H2'	27:BA:2419:U:C6	2.15	0.82
27:BA:2595:G:O5'	27:BA:2595:G:H8	1.61	0.82
27:BA:2681:C:O2'	27:BA:2682:U:C5'	2.27	0.82
27:BA:2712:U:O2'	27:BA:712(A):A:O5'	1.97	0.82
27:BA:2716:U:C2	27:BA:2717:G:N7	2.47	0.82
27:BA:827:U:OP2	27:BA:2429:G:OP2	1.98	0.82
26:BB:57:A:C2'	31:BG:13:MET:SD	2.66	0.82
31:BG:136:ARG:HB3	31:BG:137:PRO:HD2	1.62	0.82
32:BH:36:PHE:O	32:BH:37:HIS:O	1.98	0.82
27:BA:1076:C:O2	56:BK:92:PRO:HD2	1.80	0.82
34:BN:134:GLU:O	34:BN:138:THR:CB	2.27	0.82
37:BQ:57:ARG:O	37:BQ:61:LEU:CD2	2.27	0.82
37:BQ:65:ARG:HH22	37:BQ:87:LYS:H	1.24	0.82
46:BV:19:VAL:HB	46:BV:21:ARG:HH11	1.44	0.82
46:BV:72:ARG:O	46:BV:88:GLN:HG2	1.80	0.82
43:BZ:172:LEU:CD2	43:BZ:173:PRO:CG	2.58	0.82
33:BI:108:LEU:HD23	33:BI:109:LYS:O	1.80	0.82
27:BA:322:A:OP2	27:BA:322:A:H8	1.63	0.82
43:BZ:19:ILE:N	43:BZ:36:ARG:HG2	1.95	0.82
47:B2:4:HIS:O	47:B2:7:GLU:OE2	1.96	0.82
1:AA:1319:A:H5'	22:AS:70:LYS:HE2	1.60	0.82
1:AA:429:U:P	7:AD:13:ARG:HE	2.02	0.82
27:BA:1364:G:OP1	50:B4:3:LYS:HG2	1.79	0.82
50:B4:58:LYS:CD	50:B4:62:ARG:NH2	2.43	0.82
52:B6:40:TYR:O	52:B6:47:HIS:CA	2.27	0.82
53:B7:21:ARG:CB	53:B7:31:LEU:CD1	2.53	0.82
27:BA:193:U:H2'	27:BA:194:G:C8	2.13	0.82
27:BA:2508:G:N1	27:BA:2582:G:O6	2.13	0.82
27:BA:2557:G:H2'	27:BA:2558:C:H6	1.44	0.82
27:BA:388:G:H2'	27:BA:390:A:N7	1.94	0.82
27:BA:2218:G:O2'	28:BD:146:LYS:HE2	1.80	0.82
28:BD:161:ALA:N	28:BD:162:GLN:HE22	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:167:GLU:H	28:BD:182:MET:HE1	1.39	0.82
27:BA:2304:G:H4'	31:BG:105:SER:CB	2.10	0.82
35:BO:98:ILE:HG21	35:BO:118:ALA:HA	1.62	0.82
44:BR:29:LEU:H	44:BR:29:LEU:HD22	1.44	0.82
46:BV:21:ARG:HA	46:BV:21:ARG:NE	1.95	0.82
43:BZ:141:MET:O	43:BZ:142:ASN:CG	2.18	0.82
43:BZ:172:LEU:HD23	43:BZ:173:PRO:CG	2.09	0.82
33:BI:103:GLN:O	33:BI:104:ALA:C	2.16	0.82
1:AA:1221:G:H5''	1:AA:1321:C:O2	1.80	0.82
27:BA:138:G:H1'	41:BX:42:GLU:CG	2.09	0.82
6:AC:18:TRP:HB3	6:AC:20:SER:O	1.80	0.82
1:AA:280:C:O2	20:AQ:39:SER:N	2.12	0.82
5:AB:174:VAL:O	5:AB:178:ARG:HB2	1.79	0.82
49:B0:77:ARG:O	49:B0:79:ILE:HG13	1.80	0.82
48:B3:40:THR:CG2	48:B3:43:ILE:CG1	2.58	0.82
54:B8:26:LYS:CD	54:B8:43:GLY:C	2.48	0.82
27:BA:1031:G:C5'	55:B9:8:LYS:HD3	2.10	0.82
27:BA:2416:C:C2'	27:BA:2417:C:C5'	2.57	0.82
27:BA:2565:A:O3'	27:BA:2566:A:C4'	2.27	0.82
27:BA:2592:G:C4	27:BA:2593:U:C6	2.67	0.82
27:BA:2612:C:O2'	27:BA:2613:U:C5'	2.28	0.82
27:BA:2647:U:HO2'	27:BA:2648:C:H5'	1.40	0.82
27:BA:2819:G:C5'	27:BA:2821:A:N6	2.42	0.82
31:BG:38:GLU:HA	31:BG:41:LEU:CG	2.08	0.82
32:BH:25:VAL:HG11	32:BH:78:VAL:HG21	1.62	0.82
34:BN:22:VAL:O	34:BN:26:VAL:HG23	1.80	0.82
34:BN:58:GLU:HA	34:BN:61:VAL:HG23	0.84	0.82
36:BP:103:ALA:O	36:BP:104:ASP:CG	2.18	0.82
37:BQ:45:GLN:O	37:BQ:155:GLY:O	1.96	0.82
27:BA:2320:A:N1	38:BS:13:ARG:HG2	1.95	0.82
45:BU:27:SER:C	45:BU:29:SER:N	2.32	0.82
40:BW:70:TYR:HE2	40:BW:72:LYS:HA	1.44	0.82
1:AA:1400:C:C4	2:AV:34:G:C2	2.68	0.82
33:BI:86:GLY:C	33:BI:88:ARG:HA	2.00	0.82
27:BA:85:G:O5'	42:BY:65:VAL:HG12	1.73	0.82
41:BX:37:VAL:O	41:BX:38:ALA:C	2.15	0.82
41:BX:3:ASP:HA	47:B2:24:LYS:CD	2.06	0.82
31:BG:82:GLU:O	31:BG:85:GLN:CG	2.27	0.82
1:AA:279:A:N7	20:AQ:95:TYR:HE2	1.77	0.82
1:AA:939:G:H5''	10:AG:102:ARG:HH22	1.43	0.82
27:BA:1063:G:H5'	56:BK:88:GLY:N	1.95	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:23:VAL:HG13	49:B0:24:LYS:H	1.42	0.82
49:B0:46:LYS:HD2	49:B0:46:LYS:N	1.93	0.82
51:B5:16:ARG:O	51:B5:19:ARG:HB3	1.78	0.82
27:BA:2508:G:O2'	27:BA:2509:G:C5'	2.25	0.82
27:BA:2508:G:N2	27:BA:2509:G:H1'	1.94	0.82
27:BA:2623:G:H4'	27:BA:2826:A:H1'	1.62	0.82
27:BA:2658:C:H2'	27:BA:2659:G:O5'	1.79	0.82
27:BA:2689:U:O4'	27:BA:2713:A:C2	2.32	0.82
27:BA:2741:A:C2'	27:BA:2742:C:O4'	2.26	0.82
27:BA:2773:C:O2'	27:BA:2774:C:O4'	1.97	0.82
27:BA:647:G:H1'	27:BA:2351:G:OP1	1.80	0.82
30:BF:230:GLY:C	30:BF:231:ARG:HG2	1.99	0.82
30:BF:52:ALA:HA	30:BF:55:ARG:HE	0.99	0.82
32:BH:10:ILE:CD1	32:BH:49:ILE:CG1	2.56	0.82
34:BN:61:VAL:CG2	34:BN:139:LEU:CB	2.58	0.82
35:BO:61:VAL:CG1	35:BO:62:VAL:H	1.92	0.82
36:BP:128:GLY:O	36:BP:131:GLU:CB	2.27	0.82
37:BQ:88:PHE:O	37:BQ:90:PHE:CE1	2.33	0.82
45:BU:17:VAL:O	45:BU:18:LEU:C	2.16	0.82
46:BV:3:ALA:HB2	46:BV:44:GLN:OE1	1.80	0.82
33:BI:77:VAL:CB	33:BI:142:LYS:O	2.27	0.82
43:BZ:6:LYS:CA	43:BZ:31:SER:HB3	2.10	0.82
43:BZ:2:GLU:HA	43:BZ:54:ILE:HG23	1.61	0.82
1:AA:975:A:C4	1:AA:1357:A:H2	1.90	0.82
47:B2:2:VAL:HG12	47:B2:3:LEU:H	1.44	0.82
17:AN:24:CYS:HB3	17:AN:40:CYS:H	1.42	0.82
50:B4:17:GLN:O	50:B4:19:GLN:NE2	2.13	0.81
54:B8:30:ARG:HH21	54:B8:41:ILE:HG23	1.45	0.81
27:BA:2347:C:C2	27:BA:2348:U:C5	2.68	0.81
27:BA:2517:C:C4	27:BA:2542:A:C6	2.68	0.81
27:BA:2584:U:C5	27:BA:2585:U:N1	2.46	0.81
27:BA:2627:G:H8	27:BA:2627:G:H5'	1.43	0.81
27:BA:2633:G:N2	27:BA:2634:G:C4	2.48	0.81
28:BD:66:PHE:O	28:BD:67:LYS:HB3	1.77	0.81
29:BE:174:LEU:H	29:BE:174:LEU:CD1	1.92	0.81
29:BE:214:VAL:HG22	29:BE:221:LYS:NZ	1.94	0.81
29:BE:70:VAL:HG13	29:BE:296:VAL:CB	2.09	0.81
30:BF:110:ALA:O	30:BF:111:VAL:C	2.17	0.81
30:BF:81:PRO:HA	30:BF:87:ARG:CB	2.09	0.81
27:BA:2312:U:H5'	31:BG:53:LYS:CB	2.09	0.81
32:BH:58:LYS:O	32:BH:59:HIS:O	1.96	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:43:ASN:HD22	33:BI:43:ASN:H	1.27	0.81
37:BQ:136:TRP:O	37:BQ:139:ALA:HB3	1.78	0.81
37:BQ:31:PHE:HE2	37:BQ:86:ARG:HA	1.45	0.81
46:BV:5:ILE:CD1	46:BV:12:TYR:CZ	2.63	0.81
42:BY:43:ASN:OD1	42:BY:112:LEU:HD22	1.80	0.81
16:AM:92:HIS:CE1	16:AM:110:ARG:NH2	2.48	0.81
13:AJ:11:PHE:CD2	17:AN:55:GLY:HA3	2.15	0.81
1:AA:947:G:H4'	1:AA:1332:A:H2	1.43	0.81
1:AA:815:A:C2	1:AA:1528:U:H1'	2.13	0.81
7:AD:78:LEU:HD21	7:AD:139:ARG:HH21	1.45	0.81
49:B0:79:ILE:O	49:B0:81:ILE:HD12	1.80	0.81
48:B3:19:GLN:C	48:B3:23:LEU:HD21	2.00	0.81
53:B7:30:ILE:HG12	53:B7:33:ARG:HD2	1.60	0.81
27:BA:2009:G:C1'	44:BR:107:ASP:O	2.27	0.81
27:BA:2457:U:C5	27:BA:2458:G:C4	2.68	0.81
27:BA:2525:G:C2	27:BA:2539:C:C4	2.68	0.81
27:BA:2570:G:H2'	27:BA:2571:C:H6	1.00	0.81
27:BA:2678:C:H2'	27:BA:2679:A:O5'	1.80	0.81
27:BA:2729:G:N2	27:BA:2730:C:O2	2.14	0.81
27:BA:563:G:C6	27:BA:2018:G:C5	2.68	0.81
28:BD:141:HIS:O	28:BD:143:ILE:N	2.14	0.81
30:BF:102:LEU:CB	30:BF:107:ARG:NH2	2.43	0.81
30:BF:223:LEU:O	30:BF:231:ARG:CD	2.28	0.81
33:BI:21:VAL:CG1	33:BI:30:LEU:HD11	2.10	0.81
35:BO:53:LYS:O	35:BO:56:GLN:HG2	1.81	0.81
35:BO:56:GLN:OE1	35:BO:56:GLN:HA	1.78	0.81
37:BQ:143:VAL:HG23	37:BQ:144:THR:N	1.94	0.81
44:BR:20:LEU:CG	44:BR:21:TYR:N	2.41	0.81
27:BA:18:C:O3'	45:BU:23:GLY:HA3	1.80	0.81
27:BA:1260:G:H5''	40:BW:83:LYS:HZ1	1.39	0.81
40:BW:84:ARG:HB2	40:BW:96:ILE:CD1	2.05	0.81
47:B2:13:PRO:HA	47:B2:16:ARG:CD	2.10	0.81
27:BA:1972:A:H2'	27:BA:1973:G:H8	1.45	0.81
50:B4:35:VAL:C	50:B4:36:TRP:CD1	2.54	0.81
27:BA:125:G:C4'	53:B7:19:ARG:HH11	1.94	0.81
53:B7:30:ILE:CD1	53:B7:33:ARG:CZ	2.56	0.81
27:BA:2041:U:H2'	27:BA:2042:A:H5'	1.63	0.81
27:BA:2234:G:C2	27:BA:2235:G:C8	2.68	0.81
27:BA:2698:U:O2	27:BA:2699:C:H6	1.57	0.81
26:BB:47:C:C3'	38:BS:107:ASN:HD21	1.92	0.81
26:BB:57:A:H1'	31:BG:13:MET:SD	2.07	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:220:THR:O	30:BF:221:GLU:C	2.19	0.81
32:BH:119:GLY:O	32:BH:121:GLU:OE1	1.96	0.81
34:BN:14:ALA:HB3	34:BN:40:ASN:HB2	1.60	0.81
36:BP:62:ALA:CB	36:BP:105:TYR:O	2.21	0.81
27:BA:910:A:H2'	37:BQ:17:ARG:NH2	1.94	0.81
46:BV:49:GLU:HA	46:BV:53:LYS:HZ1	1.42	0.81
27:BA:2012:G:OP1	40:BW:98:LYS:HD3	1.80	0.81
48:B3:12:PRO:HG2	48:B3:20:LYS:NZ	1.95	0.81
51:B5:12:SER:HG	51:B5:14:SER:HG	1.22	0.81
52:B6:41:ASP:CB	52:B6:47:HIS:H	1.91	0.81
53:B7:30:ILE:O	53:B7:33:ARG:N	2.13	0.81
53:B7:43:THR:CA	53:B7:46:ASP:CG	2.48	0.81
27:BA:1139:G:OP1	34:BN:46:ILE:HG23	1.78	0.81
27:BA:2090:G:C4	27:BA:2230:G:C6	2.68	0.81
27:BA:2242:G:C5	27:BA:2243:U:H5	1.98	0.81
27:BA:2365:G:OP1	49:B0:39:ARG:O	1.98	0.81
27:BA:248:G:C2	27:BA:2431:U:H4'	2.16	0.81
27:BA:2520:C:O2'	27:BA:2521:C:H5'	1.80	0.81
27:BA:2549:G:O2'	27:BA:2550:G:H5'	1.81	0.81
27:BA:2762:G:C6	27:BA:2763:G:C6	2.68	0.81
27:BA:2854:G:C2	27:BA:2864:G:C6	2.68	0.81
29:BE:205:THR:OG1	29:BE:257:GLY:O	1.97	0.81
29:BE:304:ASP:OD1	29:BE:307:LEU:HD11	1.80	0.81
29:BE:45:LYS:HZ3	29:BE:301:PRO:C	1.82	0.81
30:BF:197:SER:N	30:BF:236:THR:OG1	2.13	0.81
31:BG:146:LYS:O	31:BG:148:SER:N	2.14	0.81
31:BG:22:VAL:C	31:BG:23:VAL:HG13	2.01	0.81
31:BG:97:GLN:OE1	31:BG:106:PHE:CD2	2.33	0.81
35:BO:17:ARG:NE	35:BO:47:THR:N	2.28	0.81
44:BR:97:VAL:HG22	44:BR:114:VAL:HG11	1.61	0.81
38:BS:10:MET:O	38:BS:12:ARG:N	2.13	0.81
38:BS:53:ASN:O	38:BS:54:GLY:C	2.17	0.81
38:BS:94:GLU:CD	38:BS:95:ALA:N	2.33	0.81
45:BU:28:ARG:O	45:BU:30:LYS:N	2.12	0.81
27:BA:1156:A:H8	45:BU:55:ARG:HH22	1.25	0.81
46:BV:11:GLN:HE22	46:BV:22:VAL:HG23	0.97	0.81
42:BY:43:ASN:HD21	42:BY:112:LEU:CD2	1.93	0.81
43:BZ:37:LYS:O	43:BZ:40:ASP:CG	2.19	0.81
43:BZ:26:LYS:O	43:BZ:27:GLU:CB	2.28	0.81
43:BZ:69:VAL:HG11	43:BZ:81:VAL:CG2	2.10	0.81
28:BD:210:LYS:HA	28:BD:213:LYS:HD3	0.84	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:18:MET:CE	41:BX:25:GLN:HB2	2.10	0.81
47:B2:20:LEU:O	47:B2:21:ASP:C	2.17	0.81
1:AA:769:G:H21	1:AA:900:A:H61	1.24	0.81
1:AA:1237:C:HO2'	1:AA:1300:G:H22	1.27	0.81
49:B0:39:ARG:HG2	49:B0:69:PHE:HE1	1.41	0.81
27:BA:932:G:P	48:B3:29:ARG:HH21	2.04	0.81
27:BA:2367:G:C2	27:BA:2368:C:C5	2.68	0.81
27:BA:2443:C:C5	27:BA:2444:G:N7	2.48	0.81
27:BA:2482:G:N7	27:BA:2483:C:H5	1.78	0.81
27:BA:2722:G:N3	27:BA:2723:C:C5	2.48	0.81
29:BE:79:ARG:HA	29:BE:186:GLU:CA	2.11	0.81
32:BH:85:ALA:C	32:BH:148:ARG:HH22	1.76	0.81
32:BH:58:LYS:HG3	32:BH:59:HIS:N	1.95	0.81
33:BI:7:LYS:CB	33:BI:12:LYS:CD	2.55	0.81
33:BI:7:LYS:CA	33:BI:14:LYS:CG	2.57	0.81
27:BA:2251:G:O5'	37:BQ:102:ARG:NH2	2.11	0.81
37:BQ:46:VAL:HG12	37:BQ:124:ALA:CB	2.10	0.81
44:BR:78:LYS:HG3	44:BR:82:GLU:HG3	1.60	0.81
43:BZ:99:HIS:O	43:BZ:135:VAL:HG13	1.80	0.81
42:BY:101:LEU:HD21	42:BY:112:LEU:HD11	1.62	0.81
42:BY:18:GLU:CB	42:BY:21:LYS:HZ2	1.94	0.81
6:AC:18:TRP:CD1	17:AN:51:GLY:O	2.32	0.81
27:BA:1058:G:C2	56:BK:117:ASN:OD1	2.34	0.81
50:B4:51:ASP:C	50:B4:52:THR:HG23	1.98	0.81
11:AH:18:ARG:HH11	11:AH:18:ARG:HG3	1.44	0.81
3:AW:74:C:OP1	50:B4:22:MET:CE	2.28	0.81
52:B6:8:ILE:HA	52:B6:29:ARG:NH2	1.93	0.81
27:BA:2329:G:H2'	27:BA:2330:G:H8	1.45	0.81
27:BA:2065:C:N4	27:BA:2445:G:H1	1.78	0.81
27:BA:2649:U:O2'	27:BA:2650:U:O5'	1.98	0.81
27:BA:2668:G:N2	27:BA:2669:G:C4	2.49	0.81
27:BA:2720:U:O4	27:BA:2873:A:N6	2.14	0.81
29:BE:101:THR:OG1	29:BE:103:GLU:OE2	1.97	0.81
29:BE:185:GLY:O	29:BE:187:HIS:CD2	2.33	0.81
29:BE:269:ILE:HD11	29:BE:296:VAL:C	2.01	0.81
29:BE:267:ARG:CD	29:BE:297:LYS:HD3	2.08	0.81
30:BF:238:SER:O	30:BF:241:ALA:HB2	1.81	0.81
31:BG:17:ARG:O	31:BG:18:ILE:O	1.98	0.81
27:BA:2303:G:C4'	31:BG:99:ASP:CB	2.57	0.81
33:BI:13:GLY:HA3	33:BI:15:LYS:NZ	1.95	0.81
34:BN:52:GLN:O	34:BN:56:LYS:HE2	1.79	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:43:ALA:O	45:BU:44:THR:C	2.16	0.81
47:B2:15:GLU:O	47:B2:17:GLU:N	2.13	0.81
41:BX:11:THR:C	41:BX:15:MET:CG	2.44	0.81
1:AA:562:C:O2'	15:AL:15:ARG:HB3	1.80	0.81
18:AO:87:ILE:O	18:AO:88:ARG:HB2	1.78	0.81
27:BA:706:A:O5'	27:BA:706:A:H8	1.63	0.81
50:B4:5:LEU:HA	50:B4:56:VAL:HA	1.59	0.81
50:B4:68:ARG:HG2	50:B4:72:LYS:HG2	1.58	0.81
51:B5:56:GLN:O	51:B5:57:VAL:CG2	2.29	0.81
52:B6:47:HIS:O	52:B6:48:VAL:HB	1.79	0.81
53:B7:30:ILE:HD13	53:B7:33:ARG:HD3	0.85	0.81
54:B8:36:LYS:HE2	54:B8:40:GLU:OE1	1.78	0.81
27:BA:1031:G:O3'	55:B9:8:LYS:HE2	1.80	0.81
27:BA:2344:U:HO2'	27:BA:2345:G:P	2.02	0.81
27:BA:2361:A:C2	27:BA:2362:G:H1'	2.15	0.81
27:BA:2521:C:O4'	27:BA:2565:A:H1'	1.81	0.81
27:BA:2581:G:N2	27:BA:2610:C:C6	2.49	0.81
27:BA:2592:G:N7	27:BA:2593:U:C4	2.49	0.81
27:BA:2707:G:H2'	27:BA:2708:G:O5'	1.80	0.81
29:BE:73:ILE:HD13	29:BE:73:ILE:N	1.86	0.81
30:BF:103:ASN:CB	30:BF:106:GLU:HG3	2.10	0.81
30:BF:22:PHE:HE2	30:BF:118:THR:OG1	1.64	0.81
30:BF:45:ASP:O	30:BF:46:TYR:CG	2.33	0.81
31:BG:140:ARG:HA	31:BG:143:LYS:NZ	1.96	0.81
32:BH:41:THR:CB	32:BH:52:THR:CB	2.57	0.81
34:BN:54:VAL:HA	34:BN:135:ILE:HD12	1.60	0.81
35:BO:7:ARG:HE	35:BO:44:LYS:HD3	1.43	0.81
37:BQ:72:VAL:HG21	37:BQ:135:ALA:HB1	1.63	0.81
46:BV:12:TYR:O	46:BV:13:ARG:HB2	1.81	0.81
40:BW:27:LYS:O	40:BW:70:TYR:HB2	1.81	0.81
43:BZ:40:ASP:CB	43:BZ:41:ARG:CZ	2.59	0.81
13:AJ:49:VAL:HG11	17:AN:45:ARG:HB2	1.62	0.81
1:AA:1312:G:O6	22:AS:2:PRO:O	1.98	0.81
49:B0:52:GLY:O	49:B0:53:MET:HG3	1.81	0.81
1:AA:1329:A:O2'	16:AM:24:GLY:HA2	1.79	0.81
49:B0:36:ILE:O	49:B0:37:LEU:HG	1.81	0.81
52:B6:19:GLY:O	52:B6:20:PHE:HB2	1.81	0.81
27:BA:2256:G:N1	27:BA:2257:U:C2	2.49	0.81
27:BA:2329:G:H2'	27:BA:2330:G:C8	2.16	0.81
27:BA:2358:G:N2	27:BA:2359:C:C4'	2.43	0.81
27:BA:2423:U:C5	27:BA:2425:A:C6	2.67	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:825:C:O3'	27:BA:2428:G:N7	2.14	0.81
27:BA:2533:A:C8	27:BA:2534:A:N7	2.49	0.81
27:BA:2606:C:H5''	27:BA:2606:C:C6	2.15	0.81
27:BA:2821:A:O2'	27:BA:2822:G:O4'	1.98	0.81
27:BA:458:G:H5'	53:B7:39:ARG:HD3	1.62	0.81
28:BD:106:PRO:HB3	28:BD:141:HIS:NE2	1.95	0.81
28:BD:158:GLY:CA	28:BD:194:VAL:CG2	2.57	0.81
28:BD:74:PRO:HG3	28:BD:96:ALA:HB2	0.81	0.81
29:BE:198:TYR:HE2	29:BE:265:ASN:O	1.63	0.81
29:BE:46:ALA:CB	29:BE:72:VAL:O	2.28	0.81
30:BF:223:LEU:HD12	30:BF:224:ALA:CA	2.11	0.81
27:BA:599:G:O2'	30:BF:30:LEU:CD2	2.29	0.81
32:BH:151:ARG:O	32:BH:161:ILE:HG12	1.80	0.81
35:BO:24:VAL:HG21	35:BO:32:TYR:N	1.96	0.81
37:BQ:56:ILE:CD1	37:BQ:113:ALA:O	2.29	0.81
37:BQ:144:THR:OG1	37:BQ:145:PRO:CD	2.27	0.81
38:BS:86:LEU:CD2	38:BS:124:ASP:HB2	2.11	0.81
45:BU:69:ALA:O	45:BU:79:PHE:CE1	2.33	0.81
46:BV:40:VAL:HA	46:BV:51:ALA:HA	1.60	0.81
43:BZ:64:ALA:CB	43:BZ:85:MET:CA	2.44	0.81
16:AM:91:ARG:HD3	16:AM:96:LEU:HD12	1.62	0.81
47:B2:13:PRO:HD3	47:B2:16:ARG:HH11	1.43	0.81
27:BA:131:G:N2	27:BA:149:A:N1	2.28	0.81
50:B4:10:VAL:N	50:B4:11:PRO:CD	2.43	0.81
51:B5:11:THR:HB	51:B5:16:ARG:NE	1.96	0.81
27:BA:650:C:H5''	54:B8:19:THR:HG23	1.61	0.81
55:B9:29:ASN:CB	55:B9:32:HIS:ND1	2.44	0.81
27:BA:2051:A:N7	27:BA:2614:A:N7	2.29	0.81
27:BA:2249:U:O2	27:BA:2253:G:OP2	1.97	0.81
27:BA:2353:G:O2'	49:B0:30:VAL:O	1.98	0.81
27:BA:2431:U:O4	27:BA:2434:A:OP2	1.99	0.81
27:BA:2557:G:H2'	27:BA:2558:C:C6	2.15	0.81
27:BA:2634:G:C2	27:BA:2635:C:C6	2.68	0.81
27:BA:2731:G:C2	27:BA:2732:G:N2	2.46	0.81
27:BA:2758:A:OP2	27:BA:2758:A:H3'	1.80	0.81
28:BD:80:ILE:CB	28:BD:82:TYR:CE1	2.64	0.81
29:BE:222:ARG:CD	29:BE:232:ARG:HA	2.11	0.81
29:BE:45:LYS:CE	29:BE:301:PRO:HB2	2.10	0.81
30:BF:217:GLU:O	30:BF:218:VAL:HG22	1.80	0.81
32:BH:164:GLU:OE1	32:BH:164:GLU:HA	1.80	0.81
34:BN:136:SER:OG	34:BN:137:GLU:N	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1666:G:P	35:BO:66:LYS:HE2	2.21	0.81
36:BP:106:VAL:HG23	36:BP:122:ALA:HB1	1.61	0.81
45:BU:59:ARG:C	45:BU:62:ILE:CG1	2.33	0.81
43:BZ:151:ASP:CB	43:BZ:153:LYS:NZ	2.41	0.81
43:BZ:81:VAL:HG12	43:BZ:82:ASP:N	1.95	0.81
47:B2:54:ALA:O	47:B2:56:ILE:N	2.13	0.81
41:BX:4:VAL:HG22	47:B2:24:LYS:CE	2.11	0.81
3:AW:37:YYG:H102	10:AG:83:ALA:HB1	1.48	0.81
1:AA:279:A:C8	20:AQ:95:TYR:HE2	1.98	0.81
2:AV:1:G:O2'	37:BQ:98:GLY:HA2	1.79	0.81
27:BA:2188:C:C6	27:BA:2189:U:C5	2.69	0.81
27:BA:2188:C:C5	27:BA:2189:U:C5	2.69	0.81
27:BA:2449:U:O4'	27:BA:2449:U:OP1	1.99	0.81
27:BA:2734:A:N6	27:BA:2735:G:C4	2.47	0.81
27:BA:2815:C:O2'	27:BA:2816:C:H5'	1.69	0.81
27:BA:2885:C:N3	27:BA:2886:G:C8	2.49	0.81
28:BD:130:PRO:CA	28:BD:188:ARG:HG2	2.09	0.81
28:BD:146:LYS:HD3	28:BD:147:PRO:HD3	1.63	0.81
29:BE:229:GLN:O	29:BE:230:GLY:C	2.18	0.81
30:BF:151:GLN:HA	30:BF:154:VAL:HG23	1.61	0.81
32:BH:104:LEU:C	32:BH:151:ARG:HH12	1.83	0.81
32:BH:32:LEU:C	32:BH:32:LEU:HD23	2.02	0.81
32:BH:36:PHE:HD2	32:BH:70:LEU:CD1	1.90	0.81
44:BR:47:PHE:O	44:BR:48:VAL:C	2.16	0.81
44:BR:73:VAL:O	44:BR:74:LYS:C	2.19	0.81
45:BU:88:ILE:HG22	46:BV:55:THR:CG2	2.11	0.81
43:BZ:147:ILE:C	43:BZ:168:VAL:HB	2.01	0.81
33:BI:88:ARG:HD3	33:BI:122:ARG:HB3	1.59	0.81
27:BA:85:G:OP2	42:BY:65:VAL:CG2	2.29	0.81
43:BZ:71:MET:CG	43:BZ:78:PRO:HG3	2.10	0.81
1:AA:1317:C:O2'	22:AS:10:PHE:CE1	2.34	0.81
28:BD:224:VAL:HG12	28:BD:225:ARG:N	1.96	0.81
41:BX:4:VAL:HG23	41:BX:5:ILE:H	1.46	0.81
28:BD:235:PRO:O	28:BD:236:PHE:O	1.99	0.81
48:B3:31:LEU:CD2	48:B3:32:GLN:CB	2.59	0.81
27:BA:1287:A:C5'	44:BR:104:ARG:HD2	2.11	0.81
27:BA:2199:A:H2'	27:BA:2205:C:O4'	1.80	0.81
27:BA:2286:A:H5'	27:BA:2287:A:O4'	1.79	0.81
27:BA:2309:A:H5''	27:BA:2310:A:N7	1.95	0.81
27:BA:2315:G:O2'	27:BA:2316:C:O5'	1.98	0.81
27:BA:2258:C:H5	27:BA:2426:A:O4'	1.20	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:807:U:H5'	27:BA:2445:G:H4'	1.62	0.81
27:BA:2556:C:H2'	27:BA:2557:G:C4'	2.11	0.81
27:BA:2726:U:H3'	27:BA:2727:G:C8	2.15	0.81
27:BA:2740:A:C8	27:BA:2740:A:H5'	2.14	0.81
27:BA:584:C:H42	27:BA:1256:G:H1	1.29	0.81
27:BA:612:G:H4'	27:BA:616:A:H61	1.43	0.81
28:BD:167:GLU:CB	28:BD:170:TYR:HE1	1.74	0.81
29:BE:105:HIS:ND1	29:BE:108:LEU:HD11	1.95	0.81
29:BE:204:VAL:O	29:BE:205:THR:O	1.99	0.81
27:BA:599:G:H5'	30:BF:29:ASP:OD2	1.81	0.81
33:BI:7:LYS:CE	33:BI:12:LYS:HG2	2.10	0.81
45:BU:78:THR:O	45:BU:79:PHE:C	2.17	0.81
45:BU:91:ASN:O	45:BU:95:LEU:HD11	1.78	0.81
40:BW:86:LEU:HB2	40:BW:94:ASP:O	1.81	0.81
33:BI:81:ALA:O	33:BI:147:GLU:HA	1.80	0.81
28:BD:208:GLY:O	28:BD:211:HIS:CD2	2.33	0.81
1:AA:22:G:H1'	1:AA:914:A:N6	1.96	0.81
50:B4:14:ILE:CG2	50:B4:37:SER:OG	2.28	0.80
53:B7:21:ARG:HH12	53:B7:43:THR:H	1.28	0.80
27:BA:825:C:H4'	27:BA:2428:G:C6	2.16	0.80
27:BA:2622:C:C2	27:BA:2623:G:N7	2.49	0.80
27:BA:2658:C:H2'	27:BA:2659:G:C5'	2.10	0.80
27:BA:2663:G:O2'	27:BA:2664:G:O4'	1.98	0.80
27:BA:2683:C:C2'	27:BA:2684:U:H5'	2.10	0.80
28:BD:100:LYS:O	28:BD:101:ARG:CG	2.28	0.80
28:BD:68:ARG:NH2	28:BD:128:ALA:HB3	1.96	0.80
29:BE:216:ARG:NH2	29:BE:255:GLN:HA	1.96	0.80
30:BF:223:LEU:C	30:BF:225:PRO:HD2	2.01	0.80
44:BR:25:ALA:N	44:BR:44:LEU:HD21	1.96	0.80
38:BS:122:ALA:O	38:BS:125:ALA:N	2.14	0.80
26:BB:116:G:H4'	38:BS:64:SER:OG	1.80	0.80
45:BU:103:PRO:O	45:BU:107:LYS:CG	2.23	0.80
45:BU:73:GLY:O	45:BU:74:MET:CG	2.28	0.80
8:AE:144:THR:O	8:AE:147:ASP:HB2	1.81	0.80
48:B3:30:ARG:HE	48:B3:33:GLN:HG3	1.44	0.80
52:B6:41:ASP:CB	52:B6:46:LYS:HZ2	1.84	0.80
52:B6:54:LYS:HZ3	52:B6:54:LYS:HB2	1.46	0.80
27:BA:2314:C:C2'	27:BA:2315:G:O5'	2.29	0.80
27:BA:2498:C:H2'	27:BA:2499:C:H5''	1.62	0.80
27:BA:2627:G:C6	27:BA:2777:G:O6	2.34	0.80
27:BA:449:A:OP2	30:BF:85:LYS:HB3	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:919:G:H21	27:BA:2268:A:C5'	1.95	0.80
28:BD:66:PHE:O	28:BD:67:LYS:CB	2.29	0.80
29:BE:99:VAL:O	29:BE:100:TRP:CG	2.34	0.80
32:BH:86:LEU:N	32:BH:131:ILE:HG23	1.79	0.80
27:BA:910:A:C3'	37:BQ:17:ARG:HH21	1.93	0.80
37:BQ:31:PHE:CE2	37:BQ:86:ARG:HA	2.16	0.80
46:BV:40:VAL:CG1	46:BV:55:THR:HG23	2.11	0.80
33:BI:68:LEU:CG	33:BI:108:LEU:CD1	2.59	0.80
1:AA:1367:C:OP1	12:AI:114:TYR:HA	1.80	0.80
41:BX:58:MET:C	41:BX:59:ASP:OD2	2.18	0.80
21:AR:73:ALA:HB1	21:AR:79:LEU:HD11	1.63	0.80
5:AB:54:THR:HG21	5:AB:201:ILE:HD11	1.62	0.80
48:B3:8:LEU:HA	48:B3:54:VAL:CG1	2.11	0.80
51:B5:52:TYR:O	51:B5:53:ASP:OD1	1.99	0.80
54:B8:30:ARG:HB3	54:B8:44:LYS:HE3	1.62	0.80
27:BA:974(A):C:C6	27:BA:1186:G:N1	2.50	0.80
27:BA:1952:A:H1'	27:BA:2560:C:O2'	1.82	0.80
27:BA:2227:A:C2	27:BA:2228:G:N3	2.48	0.80
27:BA:2498:C:H3'	27:BA:2498:C:P	2.21	0.80
27:BA:2060:A:O2'	27:BA:2502:G:C5'	2.28	0.80
27:BA:2508:G:C2'	27:BA:2509:G:H5'	2.10	0.80
27:BA:2593:U:H3	27:BA:2600:A:H61	1.29	0.80
27:BA:2659:G:O2'	27:BA:2663:G:N2	2.14	0.80
27:BA:2690:C:H6	27:BA:2690:C:C3'	1.95	0.80
27:BA:2745:C:H1'	32:BH:142:GLU:CD	2.01	0.80
27:BA:1818:U:H5''	28:BD:155:ARG:CG	1.99	0.80
28:BD:168:GLY:C	28:BD:170:TYR:H	1.84	0.80
29:BE:62:ARG:O	29:BE:63:GLU:HG3	1.80	0.80
32:BH:127:GLN:HG3	32:BH:128:THR:H	1.46	0.80
34:BN:58:GLU:HA	34:BN:61:VAL:HG21	1.59	0.80
36:BP:67:ARG:NH1	36:BP:111:ALA:C	2.32	0.80
45:BU:56:ASP:O	45:BU:60:LEU:HD21	1.79	0.80
40:BW:37:ARG:HH22	51:B5:48:ASN:HD21	1.26	0.80
42:BY:101:LEU:C	42:BY:101:LEU:HD23	2.01	0.80
42:BY:101:LEU:O	42:BY:101:LEU:HD23	1.82	0.80
42:BY:66:ASP:OD2	42:BY:72:ILE:HA	1.82	0.80
26:BB:77:U:H5'	43:BZ:80:HIS:ND1	1.96	0.80
47:B2:21:ASP:O	47:B2:22:ASP:C	2.18	0.80
1:AA:1311:G:N7	22:AS:2:PRO:N	2.29	0.80
9:AF:50:TYR:CE1	21:AR:77:GLY:HA2	2.15	0.80
51:B5:12:SER:OG	51:B5:14:SER:OG	1.98	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2021:C:OP2	51:B5:15:LYS:HE3	1.80	0.80
52:B6:16:ALA:HB2	52:B6:50:PHE:CE2	2.16	0.80
27:BA:2212:A:H2'	27:BA:2213:U:C6	2.16	0.80
27:BA:2273:A:N7	27:BA:2274:A:N7	2.29	0.80
27:BA:2348:U:O4	27:BA:2382:G:N2	2.15	0.80
27:BA:2394:C:N4	27:BA:2395:C:N3	2.28	0.80
27:BA:2558:C:N3	27:BA:2559:C:C5	2.50	0.80
27:BA:2785:C:O2'	29:BE:100:TRP:CB	2.28	0.80
26:BB:57:A:C1'	31:BG:13:MET:HE1	2.11	0.80
29:BE:180:ILE:CG2	29:BE:187:HIS:CA	2.54	0.80
32:BH:23:VAL:CG1	32:BH:74:MET:HE3	2.07	0.80
32:BH:90:GLY:CA	32:BH:159:LYS:HE3	2.11	0.80
35:BO:58:VAL:CG1	35:BO:59:LYS:N	2.45	0.80
35:BO:86:ILE:HG22	35:BO:87:ILE:N	1.95	0.80
37:BQ:136:TRP:HA	37:BQ:136:TRP:CE3	2.15	0.80
1:AA:790:A:C5'	2:AV:38:A:O2'	2.29	0.80
33:BI:98:ILE:HD13	33:BI:115:ILE:HD13	1.62	0.80
47:B2:8:ILE:HA	47:B2:11:MET:HG2	1.63	0.80
2:AV:65:G:O3'	2:AV:66:A:O5'	1.99	0.80
41:BX:44:GLN:C	41:BX:44:GLN:CD	2.40	0.80
27:BA:397:G:H5''	50:B4:59:PHE:HZ	1.44	0.80
52:B6:54:LYS:HA	52:B6:54:LYS:HZ2	1.43	0.80
54:B8:26:LYS:CB	54:B8:44:LYS:HA	2.10	0.80
27:BA:630(A):C:H3'	27:BA:1631:A:P	2.22	0.80
27:BA:1807:G:N2	27:BA:1809:A:H5'	1.96	0.80
27:BA:1996:C:H2'	27:BA:1997:G:H4'	1.63	0.80
27:BA:2093:G:C6	27:BA:2225:A:N7	2.48	0.80
27:BA:2352:A:C8	27:BA:2366:A:C6	2.70	0.80
27:BA:2376:A:H2	38:BS:102:LEU:CD2	1.86	0.80
27:BA:250:G:OP2	54:B8:12:ARG:NH2	2.13	0.80
27:BA:2516:G:C4	27:BA:2569:G:N2	2.50	0.80
27:BA:2695:C:H2'	27:BA:2696:U:C5	2.17	0.80
27:BA:2703:C:O2'	27:BA:2704:C:C5'	2.29	0.80
27:BA:2850:A:C5	27:BA:2851:A:N7	2.49	0.80
27:BA:2808:U:C4	27:BA:2892:A:N7	2.49	0.80
27:BA:637:A:OP2	36:BP:110:GLY:N	2.14	0.80
26:BB:11:C:H41	38:BS:11:ARG:HH12	1.26	0.80
29:BE:221:LYS:HB3	29:BE:222:ARG:HD2	1.63	0.80
29:BE:42:ALA:CB	29:BE:310:PHE:HA	2.11	0.80
31:BG:35:ALA:O	31:BG:36:ASN:CB	2.30	0.80
31:BG:38:GLU:HA	31:BG:41:LEU:CD1	2.12	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:102:LEU:HD21	32:BH:114:ILE:CB	2.11	0.80
34:BN:51:GLU:C	34:BN:53:ILE:N	2.29	0.80
34:BN:63:ILE:HB	34:BN:71:TYR:CE1	2.17	0.80
34:BN:82:THR:O	34:BN:85:GLY:N	2.13	0.80
35:BO:27:GLY:O	35:BO:28:SER:O	2.00	0.80
36:BP:69:ILE:CA	36:BP:73:VAL:HG23	2.11	0.80
27:BA:2250:G:H5''	37:BQ:102:ARG:HB3	1.61	0.80
38:BS:98:GLU:HG3	38:BS:99:GLU:N	1.95	0.80
35:BO:78:ARG:O	39:BT:22:VAL:HG22	1.82	0.80
45:BU:21:ALA:CA	45:BU:24:PHE:CZ	2.50	0.80
45:BU:33:ARG:NH1	45:BU:33:ARG:CB	2.35	0.80
45:BU:36:PHE:O	45:BU:37:GLN:O	2.00	0.80
45:BU:61:TRP:CZ3	45:BU:94:VAL:N	2.43	0.80
47:B2:45:ARG:HG3	47:B2:49:LEU:HG	1.64	0.80
41:BX:9:HIS:HB2	41:BX:26:PHE:HA	1.63	0.80
1:AA:1005:A:C4	1:AA:1036:G:N2	2.50	0.80
27:BA:2857:G:C8	27:BA:2857:G:O5'	2.32	0.80
1:AA:971:G:N2	1:AA:1363:A:OP2	2.13	0.80
25:AY:22:PRO:CA	56:BK:22:PRO:HA	2.12	0.80
50:B4:5:LEU:CD2	50:B4:5:LEU:N	2.42	0.80
52:B6:12:MET:HB2	52:B6:27:ASN:HD21	1.43	0.80
53:B7:22:MET:O	53:B7:28:ARG:HG3	1.82	0.80
55:B9:24:LEU:HD13	55:B9:35:ARG:CG	2.12	0.80
27:BA:1675:C:C4	29:BE:225:LYS:CG	2.64	0.80
27:BA:2021:C:P	51:B5:15:LYS:CE	2.70	0.80
27:BA:2463:C:N3	27:BA:2464:C:C5	2.45	0.80
27:BA:2625:G:H3'	27:BA:2626:C:C6	2.17	0.80
27:BA:2690:C:C6	27:BA:2690:C:H3'	2.16	0.80
27:BA:2776:A:C1'	27:BA:2778:A:C8	2.51	0.80
27:BA:2887:U:C2	27:BA:2888:C:C6	2.70	0.80
29:BE:42:ALA:HB1	29:BE:310:PHE:HA	1.64	0.80
36:BP:66:VAL:CG1	36:BP:67:ARG:H	1.79	0.80
37:BQ:67:ALA:HB2	37:BQ:70:ARG:HH12	1.44	0.80
44:BR:100:LEU:C	51:B5:44:HIS:CD2	2.55	0.80
44:BR:20:LEU:CD1	44:BR:21:TYR:CG	2.64	0.80
38:BS:49:THR:N	38:BS:55:ASP:CG	2.35	0.80
45:BU:14:HIS:CE1	45:BU:36:PHE:CE2	2.69	0.80
46:BV:72:ARG:C	46:BV:88:GLN:HG2	2.02	0.80
40:BW:11:ARG:HH11	40:BW:11:ARG:CG	1.94	0.80
43:BZ:92:VAL:HG13	43:BZ:124:ALA:HB2	1.63	0.80
27:BA:326:G:H2'	27:BA:327:G:H8	1.47	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:498:G:O2'	42:BY:82:THR:HG23	1.81	0.80
27:BA:311:A:N6	27:BA:329:G:H5'	1.95	0.80
49:B0:46:LYS:HG3	49:B0:58:THR:CB	2.10	0.80
27:BA:849:A:H2	48:B3:21:ALA:CB	1.77	0.80
55:B9:25:VAL:HB	55:B9:34:GLN:CA	2.08	0.80
55:B9:14:CYS:CA	55:B9:27:CYS:HB3	1.93	0.80
27:BA:1034:G:C5'	55:B9:18:ARG:CZ	2.60	0.80
27:BA:2298:A:H1'	27:BA:2321:G:N2	1.96	0.80
27:BA:2333:A:C8	27:BA:2335:A:N3	2.49	0.80
27:BA:2470:G:N1	27:BA:2471:C:N4	2.29	0.80
27:BA:2584:U:C3'	27:BA:2584:U:H6	1.78	0.80
27:BA:2675:A:C2'	27:BA:2676:C:H5'	2.10	0.80
27:BA:2840:C:N3	27:BA:2841:C:C4	2.49	0.80
27:BA:592:G:C2	54:B8:3:LYS:NZ	2.48	0.80
27:BA:910:A:C2'	37:BQ:17:ARG:NH2	2.45	0.80
28:BD:143:ILE:HG12	28:BD:153:LEU:CA	2.06	0.80
30:BF:168:ARG:N	30:BF:232:LEU:O	2.14	0.80
32:BH:40:MET:CB	32:BH:64:HIS:NE2	2.44	0.80
37:BQ:133:GLU:CD	37:BQ:134:PHE:N	2.35	0.80
44:BR:39:PRO:O	44:BR:40:LYS:C	2.20	0.80
44:BR:65:LEU:O	44:BR:68:ARG:N	2.15	0.80
39:BT:12:ASP:O	39:BT:13:ILE:HG12	1.79	0.80
27:BA:446:G:OP2	45:BU:3:ARG:NE	2.13	0.80
2:AV:34:G:C3'	2:AV:35:A:H5''	2.11	0.80
27:BA:290:G:H2'	27:BA:291:C:O4'	1.82	0.80
27:BA:85:G:P	42:BY:65:VAL:CG2	2.70	0.80
42:BY:91:LEU:CD2	42:BY:91:LEU:N	2.44	0.80
43:BZ:52:PHE:O	43:BZ:53:ASP:HB2	1.81	0.80
3:AW:25:C:C2	3:AW:26:G:N9	2.48	0.80
1:AA:1221:G:C5'	22:AS:36:ARG:HH12	1.94	0.80
1:AA:975:A:N9	1:AA:1357:A:H2	1.70	0.80
13:AJ:51:ARG:HB2	13:AJ:59:SER:CB	2.07	0.80
6:AC:18:TRP:NE1	17:AN:53:LEU:O	2.14	0.80
32:BH:155:PRO:O	32:BH:169:ARG:HG3	1.81	0.80
1:AA:571:U:O2	1:AA:917:G:H4'	1.81	0.80
27:BA:1011:G:OP2	45:BU:75:ASN:HB3	1.81	0.80
27:BA:2252:G:C6	27:BA:2253:G:C6	2.70	0.80
27:BA:2286:A:C8	27:BA:2286:A:C3'	2.64	0.80
27:BA:2543:G:C6	27:BA:2544:G:N1	2.49	0.80
27:BA:2561:A:C6	27:BA:2562:U:C6	2.70	0.80
27:BA:2748:A:N7	27:BA:2749:A:C4	2.48	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2753:A:N7	27:BA:2754:U:C5	2.49	0.80
27:BA:826:U:H5'	27:BA:2429:G:OP2	1.80	0.80
26:BB:24:G:H2'	26:BB:56:G:O6	1.82	0.80
28:BD:140:VAL:CG2	28:BD:191:VAL:HG12	2.10	0.80
29:BE:222:ARG:NE	29:BE:232:ARG:O	2.15	0.80
27:BA:2311:A:H2	31:BG:53:LYS:NZ	1.79	0.80
34:BN:75:PRO:CD	34:BN:136:SER:OG	2.27	0.80
35:BO:63:VAL:HG13	35:BO:102:VAL:CB	2.09	0.80
27:BA:1665:A:C3'	35:BO:66:LYS:CE	2.52	0.80
37:BQ:82:LYS:HB2	37:BQ:125:TRP:CB	2.11	0.80
37:BQ:36:ASN:CG	43:BZ:116:VAL:HG12	2.01	0.80
44:BR:75:LEU:O	44:BR:78:LYS:N	2.15	0.80
45:BU:40:LEU:H	45:BU:40:LEU:HD23	1.46	0.80
45:BU:46:GLU:O	45:BU:49:ASP:CB	2.30	0.80
46:BV:3:ALA:HB3	46:BV:12:TYR:OH	1.82	0.80
46:BV:30:GLY:HA3	46:BV:33:VAL:CG2	2.01	0.80
42:BY:41:ARG:O	42:BY:112:LEU:CA	2.30	0.80
42:BY:15:PRO:O	42:BY:18:GLU:HB2	1.82	0.80
42:BY:69:LYS:O	42:BY:70:ALA:HB3	1.81	0.80
43:BZ:69:VAL:CG1	43:BZ:81:VAL:CG2	2.54	0.80
41:BX:28:VAL:HG11	41:BX:64:ALA:HB3	1.64	0.80
27:BA:138:G:C8	41:BX:42:GLU:CD	2.55	0.80
40:BW:89:ALA:O	40:BW:90:ARG:NH1	2.14	0.80
15:AL:117:ARG:CZ	15:AL:124:LYS:HD2	2.11	0.80
33:BI:62:LEU:C	33:BI:66:LYS:HE2	2.01	0.80
27:BA:1924:C:C2	27:BA:1925:C:C5	2.69	0.80
1:AA:1182:G:H4'	1:AA:1183:A:C5'	2.02	0.80
1:AA:579:G:C4'	1:AA:728:A:H1'	2.12	0.80
1:AA:813:U:OP1	1:AA:904:C:H5'	1.80	0.80
27:BA:2248:C:C2'	27:BA:2249:U:H5'	2.11	0.80
27:BA:2380:C:C2'	27:BA:2381:C:C5'	2.60	0.80
27:BA:2666:C:C5	27:BA:2667:C:C5	2.70	0.80
27:BA:2813:A:C8	27:BA:2814:C:C5	2.70	0.80
27:BA:2839:G:C2	27:BA:2840:C:C6	2.70	0.80
27:BA:565:C:O2'	27:BA:1253:A:C2	2.34	0.80
27:BA:995:C:OP2	45:BU:54:LYS:HE2	1.81	0.80
30:BF:101:ASP:O	30:BF:102:LEU:O	2.00	0.80
30:BF:214:THR:H	30:BF:218:VAL:HG23	1.46	0.80
27:BA:2315:G:H5'	31:BG:133:ASN:HD22	1.47	0.80
33:BI:7:LYS:N	33:BI:14:LYS:CG	2.34	0.80
36:BP:117:GLU:CD	36:BP:136:ALA:C	2.40	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:910:A:N6	37:BQ:11:LYS:O	2.15	0.80
37:BQ:142:LYS:HG3	37:BQ:143:VAL:H	0.63	0.80
37:BQ:58:HIS:CA	37:BQ:61:LEU:HG	2.12	0.80
45:BU:108:ALA:O	45:BU:109:LEU:C	2.19	0.80
45:BU:80:ILE:HA	45:BU:83:LEU:HD12	1.64	0.80
46:BV:30:GLY:C	46:BV:33:VAL:HG21	1.89	0.80
43:BZ:112:LEU:CD2	43:BZ:172:LEU:O	2.29	0.80
33:BI:102:LEU:CD1	33:BI:103:GLN:H	1.80	0.80
42:BY:89:ARG:HB3	42:BY:90:PRO:HD2	1.64	0.80
1:AA:988:G:O2'	1:AA:1015:A:N6	2.15	0.80
1:AA:1221:G:OP1	1:AA:1320:C:N4	2.15	0.80
1:AA:1318:A:H5'	22:AS:10:PHE:HB3	1.63	0.80
16:AM:98:VAL:HG23	16:AM:110:ARG:HH21	1.47	0.80
1:AA:1320:C:C4	22:AS:36:ARG:HG3	2.15	0.80
47:B2:13:PRO:N	47:B2:16:ARG:HD2	1.96	0.80
41:BX:6:LYS:HZ1	41:BX:29:ASP:CA	1.86	0.80
27:BA:1080:C:H4'	56:BK:126:LYS:CA	2.10	0.80
2:AV:7:U:C4	2:AV:49:C:C4	2.70	0.80
16:AM:23:TYR:CE2	16:AM:70:LEU:HD22	2.13	0.80
42:BY:81:LYS:HG2	42:BY:82:THR:H	1.47	0.80
1:AA:41:G:H2'	1:AA:42:G:H8	1.46	0.80
48:B3:23:LEU:CA	48:B3:28:LEU:CD1	2.19	0.80
54:B8:62:LEU:CB	54:B8:63:PRO:CD	2.49	0.80
27:BA:1163:G:O3'	27:BA:1164:G:OP1	2.00	0.80
27:BA:2082:A:N6	27:BA:2239:G:C6	2.50	0.80
27:BA:2240:C:C2'	27:BA:2240:C:O2	2.29	0.80
27:BA:2270:G:O6	27:BA:2271:G:C2	2.35	0.80
27:BA:2259:G:C2	27:BA:2282:G:C5	2.58	0.80
27:BA:2445:G:H2'	27:BA:2446:G:C8	2.16	0.80
27:BA:2509:G:H2'	27:BA:2510:C:C5'	2.11	0.80
27:BA:2540:C:O2'	27:BA:2541:A:O5'	1.99	0.80
27:BA:2575:C:H5''	27:BA:2576:G:OP2	1.81	0.80
27:BA:2741:A:O2'	27:BA:2742:C:C4'	2.28	0.80
27:BA:2776:A:N9	27:BA:2778:A:N7	2.29	0.80
27:BA:2814:C:H2'	27:BA:2815:C:C6	2.16	0.80
27:BA:854:G:H1	27:BA:923:C:H42	1.30	0.80
27:BA:994:C:N3	45:BU:53:LYS:CD	2.25	0.80
29:BE:174:LEU:N	29:BE:174:LEU:HD12	1.95	0.80
29:BE:214:VAL:HG22	29:BE:221:LYS:CD	2.12	0.80
29:BE:268:LEU:HD22	29:BE:269:ILE:N	1.97	0.80
30:BF:107:ARG:O	30:BF:108:GLN:C	2.19	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:58:ALA:HB2	30:BF:79:ARG:N	1.95	0.80
34:BN:21:ARG:C	34:BN:24:SER:HG	1.83	0.80
34:BN:41:ALA:HB1	34:BN:75:PRO:CB	2.12	0.80
1:AA:339:C:OP2	35:BO:97:ARG:CZ	2.30	0.80
37:BQ:102:ARG:O	37:BQ:104:PRO:HD3	1.82	0.80
37:BQ:151:SER:HB3	37:BQ:155:GLY:O	1.82	0.80
44:BR:61:HIS:C	44:BR:64:ARG:HH11	1.85	0.80
38:BS:109:PRO:O	38:BS:116:PHE:CZ	2.35	0.80
38:BS:83:LEU:N	38:BS:83:LEU:CD1	2.43	0.80
27:BA:445:C:C3'	45:BU:3:ARG:NH2	2.43	0.80
40:BW:23:LEU:C	40:BW:25:ARG:N	2.34	0.80
40:BW:70:TYR:HD2	40:BW:71:VAL:N	1.80	0.80
43:BZ:116:VAL:HA	43:BZ:169:VAL:CG2	2.04	0.80
42:BY:19:ARG:N	42:BY:21:LYS:HZ2	1.79	0.80
1:AA:1288:A:N1	1:AA:1371:G:C1'	2.41	0.80
1:AA:65:U:C4	1:AA:200:G:O2'	2.35	0.80
1:AA:436:C:C2'	1:AA:437:U:C6	2.64	0.80
27:BA:227:A:N1	27:BA:2407:G:H1'	1.91	0.80
27:BA:818:G:H21	27:BA:1189:A:H62	0.84	0.80
1:AA:250:A:H4'	1:AA:251:G:O5'	1.82	0.80
1:AA:1240:U:O4'	10:AG:42:ILE:HD11	1.82	0.80
1:AA:129(A):G:O2'	1:AA:190(E):U:H3'	1.81	0.80
29:BE:65:MET:SD	29:BE:65:MET:O	2.39	0.80
49:B0:65:GLY:CA	49:B0:66:LYS:HZ2	1.94	0.79
27:BA:2067:G:C2	27:BA:2444:G:C2	2.70	0.79
27:BA:2077:A:C4	27:BA:2435:A:C8	2.70	0.79
27:BA:2242:G:C2	27:BA:2243:U:C5	2.70	0.79
27:BA:2464:C:N4	27:BA:2486:G:H1	1.80	0.79
27:BA:2547:U:C5	27:BA:2566:A:C4	2.70	0.79
27:BA:2653:U:C3'	27:BA:2654:A:C8	2.61	0.79
27:BA:2768:C:N4	27:BA:2769:C:H41	1.79	0.79
27:BA:2825:C:C3'	27:BA:2825:C:C6	2.63	0.79
27:BA:2880:C:O2'	44:BR:90:ARG:HD3	1.81	0.79
27:BA:396:G:H5''	50:B4:10:VAL:O	1.82	0.79
28:BD:131:LEU:HG	28:BD:187:CYS:HB2	1.63	0.79
32:BH:120:LEU:HD23	32:BH:120:LEU:H	1.46	0.79
32:BH:41:THR:HG22	32:BH:52:THR:HB	1.64	0.79
37:BQ:65:ARG:HE	37:BQ:85:ILE:CB	1.95	0.79
38:BS:23:ARG:CZ	38:BS:37:ARG:NH2	2.44	0.79
46:BV:72:ARG:N	46:BV:88:GLN:HG2	1.97	0.79
33:BI:145:VAL:O	33:BI:146:THR:CG2	2.29	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B2:52:ALA:O	47:B2:56:ILE:HG12	1.82	0.79
39:BT:42:LEU:O	39:BT:44:ARG:HA	1.81	0.79
27:BA:1482:U:H3'	27:BA:1482:U:C6	2.17	0.79
27:BA:1482:U:H1'	27:BA:1512:G:H22	1.47	0.79
1:AA:767:A:N6	1:AA:813:U:H3	1.80	0.79
48:B3:40:THR:OG1	48:B3:43:ILE:HD11	1.81	0.79
54:B8:16:ILE:HD12	54:B8:16:ILE:H	1.44	0.79
27:BA:2742:C:OP1	55:B9:35:ARG:HD3	1.82	0.79
27:BA:2296:U:O4	38:BS:16:ALA:CB	2.29	0.79
27:BA:2340:G:O2'	27:BA:2341:G:O5'	2.01	0.79
27:BA:2261:C:O4'	27:BA:2388:A:H1'	1.82	0.79
27:BA:2458:G:C5	27:BA:2490:G:C2	2.69	0.79
27:BA:2464:C:N4	27:BA:2487:G:O6	2.14	0.79
27:BA:2544:G:H2'	27:BA:2545:G:H8	1.47	0.79
27:BA:2580:U:C5	27:BA:2581:G:H8	1.67	0.79
27:BA:2507:C:N3	27:BA:2582:G:N2	2.30	0.79
27:BA:2744:G:C2'	27:BA:2745:C:H5'	2.11	0.79
27:BA:2865:U:N3	27:BA:2866:U:C5	2.50	0.79
27:BA:2893:G:O2'	27:BA:2894:G:O4'	2.00	0.79
27:BA:446:G:H5'	45:BU:5:LYS:CE	2.13	0.79
27:BA:994:C:O2	45:BU:53:LYS:CB	2.31	0.79
28:BD:105:ALA:N	28:BD:106:PRO:HD3	1.97	0.79
29:BE:189:MET:O	29:BE:190:ASN:CB	2.29	0.79
30:BF:34:ALA:HB2	30:BF:110:ALA:HB2	1.60	0.79
27:BA:675:A:P	30:BF:69:HIS:O	2.40	0.79
27:BA:2315:G:H5'	31:BG:133:ASN:ND2	1.96	0.79
31:BG:29:HIS:CE1	31:BG:64:ARG:CZ	2.65	0.79
35:BO:66:LYS:HZ2	35:BO:67:ARG:HD3	0.67	0.79
38:BS:28:LYS:HB3	38:BS:28:LYS:NZ	1.96	0.79
43:BZ:138:VAL:C	43:BZ:139:THR:HG1	1.86	0.79
1:AA:1400:C:C6	2:AV:34:G:N1	2.50	0.79
43:BZ:20:ALA:O	43:BZ:34:LEU:CD2	2.30	0.79
43:BZ:40:ASP:HB2	43:BZ:41:ARG:CZ	2.11	0.79
33:BI:52:GLN:HA	33:BI:55:GLN:CD	2.03	0.79
1:AA:1339:A:C2	2:AV:31:A:H1'	2.17	0.79
1:AA:1291:G:H5'	12:AI:40:LEU:CD2	2.12	0.79
27:BA:2386:C:C4'	49:B0:39:ARG:NH2	2.45	0.79
49:B0:48:GLY:O	49:B0:54:GLY:O	1.99	0.79
48:B3:42:ALA:HB3	48:B3:43:ILE:HD12	1.63	0.79
52:B6:21:TYR:OH	52:B6:43:VAL:HG22	1.82	0.79
53:B7:42:LEU:O	53:B7:43:THR:O	2.01	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:19:THR:CB	54:B8:21:LYS:NZ	2.45	0.79
55:B9:4:ARG:O	55:B9:36:GLN:HB3	1.78	0.79
27:BA:1364:G:H3'	50:B4:3:LYS:HD3	1.15	0.79
27:BA:2317:C:C5	27:BA:2318:G:C6	2.70	0.79
27:BA:2361:A:C2	27:BA:2362:G:C1'	2.65	0.79
27:BA:2403:C:N4	27:BA:2415:G:C5	2.48	0.79
27:BA:2464:C:H2'	27:BA:2465:C:H6	1.46	0.79
27:BA:2479:G:C2'	27:BA:2480:C:O5'	2.30	0.79
27:BA:2555:U:O2'	27:BA:2556:C:H5'	1.80	0.79
27:BA:1783:A:N1	27:BA:2587:A:C2	2.47	0.79
27:BA:2688:U:H2'	27:BA:2688:U:O2	1.82	0.79
27:BA:2718:G:N3	27:BA:2719:G:C8	2.50	0.79
27:BA:2845:G:H2'	27:BA:2846:G:C8	2.15	0.79
28:BD:76:ARG:HD3	28:BD:113:MET:CE	2.13	0.79
28:BD:131:LEU:HA	28:BD:134:ILE:HD12	1.64	0.79
29:BE:222:ARG:N	29:BE:222:ARG:HD2	1.96	0.79
31:BG:54:ALA:O	31:BG:55:LYS:HB2	1.80	0.79
34:BN:65:ASN:N	34:BN:68:GLY:O	2.14	0.79
34:BN:83:ILE:HD11	34:BN:84:ARG:HG2	1.64	0.79
35:BO:22:ILE:CB	35:BO:40:VAL:O	2.30	0.79
27:BA:1666:G:C4'	35:BO:67:ARG:HH22	1.95	0.79
36:BP:116:HIS:HD2	36:BP:118:LEU:CD1	1.95	0.79
38:BS:32:PRO:O	38:BS:101:VAL:CG1	2.29	0.79
39:BT:54:THR:HG23	39:BT:55:ALA:H	1.47	0.79
46:BV:19:VAL:HG12	46:BV:21:ARG:HH22	1.44	0.79
40:BW:26:GLY:O	40:BW:27:LYS:HG3	1.82	0.79
27:BA:496:G:H1'	40:BW:61:ASN:HD22	1.46	0.79
1:AA:977:A:H62	1:AA:1224:G:P	2.00	0.79
27:BA:1772:G:H2'	27:BA:1773:A:H4'	1.64	0.79
29:BE:107:GLU:HB3	29:BE:110:ARG:CD	2.13	0.79
27:BA:2856:C:C6	27:BA:2856:C:H3'	2.17	0.79
1:AA:21:G:C2	1:AA:915:A:N6	2.50	0.79
1:AA:25:C:H4'	1:AA:524:G:N2	1.96	0.79
1:AA:302:G:H2'	1:AA:556:C:H5''	1.63	0.79
49:B0:70:ILE:HG12	49:B0:71:ASN:N	1.98	0.79
51:B5:45:ILE:CG2	51:B5:52:TYR:CE1	2.61	0.79
52:B6:32:GLN:HB3	52:B6:35:LEU:CG	2.11	0.79
54:B8:19:THR:HB	54:B8:21:LYS:HZ2	1.44	0.79
27:BA:2348:U:H3'	54:B8:42:ARG:CZ	2.12	0.79
27:BA:1062:G:C2	56:BK:134:SER:O	2.35	0.79
27:BA:1076:C:H1'	56:BK:91:GLU:CG	2.11	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1939:U:C1'	27:BA:2592:G:H4'	2.11	0.79
27:BA:2089:U:O2	27:BA:2231:C:N3	2.16	0.79
27:BA:2264:C:C4	27:BA:2265:U:C5	2.71	0.79
27:BA:2366:A:N7	27:BA:2367:G:C5	2.50	0.79
27:BA:2422:A:H2'	27:BA:2424:C:C5	2.17	0.79
27:BA:199:A:C6	27:BA:2433:A:N7	2.49	0.79
27:BA:2445:G:H2'	27:BA:2446:G:H8	1.47	0.79
27:BA:2569:G:C2	27:BA:2570:G:N7	2.50	0.79
27:BA:1786:A:C2	27:BA:2590:A:H1'	2.17	0.79
27:BA:2633:G:N3	27:BA:2634:G:N7	2.23	0.79
27:BA:2799:A:C3'	27:BA:2801:A:P	2.59	0.79
30:BF:157:LEU:C	30:BF:159:ALA:H	1.85	0.79
30:BF:150:THR:HB	30:BF:207:LEU:HD21	1.62	0.79
30:BF:225:PRO:CG	30:BF:231:ARG:HH21	1.95	0.79
32:BH:145:ALA:O	32:BH:148:ARG:N	2.15	0.79
32:BH:85:ALA:CA	32:BH:131:ILE:CG2	2.48	0.79
34:BN:54:VAL:O	34:BN:58:GLU:HG3	1.82	0.79
34:BN:61:VAL:HG21	34:BN:139:LEU:HB3	1.63	0.79
36:BP:94:ARG:HD3	36:BP:120:LEU:HD23	1.10	0.79
37:BQ:91:HIS:O	37:BQ:92:VAL:HG13	1.83	0.79
38:BS:127:LEU:O	38:BS:127:LEU:HD22	1.81	0.79
27:BA:2378:A:O2'	38:BS:29:SER:O	1.99	0.79
40:BW:13:SER:O	40:BW:14:PRO:C	2.21	0.79
42:BY:23:VAL:CG2	42:BY:67:LEU:CD2	2.59	0.79
43:BZ:26:LYS:HB3	43:BZ:26:LYS:HZ3	1.46	0.79
50:B4:48:ARG:O	50:B4:49:PHE:C	2.21	0.79
3:AW:24:G:O6	3:AW:45:G:N2	2.15	0.79
1:AA:1205:U:H4'	6:AC:195:VAL:CG2	2.13	0.79
1:AA:1148:U:H5'	12:AI:5:TYR:OH	1.83	0.79
48:B3:23:LEU:N	48:B3:23:LEU:HD23	1.97	0.79
48:B3:9:VAL:HG22	48:B3:54:VAL:CA	2.12	0.79
27:BA:2251:G:N2	27:BA:2252:G:C2	2.51	0.79
27:BA:2277:G:O3'	37:BQ:15:THR:OG1	2.00	0.79
27:BA:2520:C:C6	27:BA:2567:G:C1'	2.64	0.79
27:BA:2603:G:C5	27:BA:2604:U:H5	2.00	0.79
27:BA:2683:C:C5	27:BA:2684:U:C5	2.71	0.79
27:BA:2690:C:C6	27:BA:2690:C:C3'	2.66	0.79
27:BA:2799:A:O2'	27:BA:2802:G:N3	2.14	0.79
27:BA:2813:A:O2'	27:BA:2814:C:C6	2.30	0.79
28:BD:183:ILE:C	28:BD:184:LEU:HD23	1.99	0.79
30:BF:112:ARG:O	30:BF:114:ALA:CA	2.30	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:94:GLY:O	34:BN:97:ALA:N	2.16	0.79
37:BQ:49:VAL:HG21	37:BQ:120:HIS:CA	2.13	0.79
27:BA:1287:A:H1'	44:BR:104:ARG:NH1	1.95	0.79
38:BS:15:GLU:O	38:BS:16:ALA:CB	2.30	0.79
46:BV:50:ASP:CA	46:BV:53:LYS:HG3	2.12	0.79
40:BW:30:GLU:H	40:BW:33:ARG:HD2	1.44	0.79
33:BI:145:VAL:C	33:BI:146:THR:HG22	2.03	0.79
42:BY:43:ASN:HD22	42:BY:101:LEU:HD23	1.41	0.79
42:BY:73:HIS:CE1	42:BY:89:ARG:O	2.35	0.79
28:BD:211:HIS:HD1	28:BD:212:HIS:H	1.29	0.79
47:B2:8:ILE:CA	47:B2:11:MET:HG2	2.12	0.79
27:BA:1080:C:C4'	56:BK:126:LYS:C	2.46	0.79
29:BE:109:ASP:HA	29:BE:112:LEU:CB	2.10	0.79
1:AA:173:U:C5'	1:AA:197:A:H5'	2.12	0.79
1:AA:65:U:C6	1:AA:200:G:C4'	2.65	0.79
1:AA:501:C:P	15:AL:124:LYS:HD3	2.22	0.79
1:AA:254:G:H21	20:AQ:16:GLN:CD	1.86	0.79
20:AQ:15:MET:HB3	20:AQ:18:THR:HB	1.64	0.79
48:B3:22:ALA:CA	48:B3:46:ASN:HD21	1.90	0.79
27:BA:1364:G:C1'	50:B4:3:LYS:HZ3	1.94	0.79
27:BA:579:G:H1'	51:B5:10:LYS:HZ3	1.47	0.79
27:BA:2400:G:O2'	52:B6:20:PHE:CE1	1.97	0.79
54:B8:60:LEU:HD11	54:B8:64:ARG:HB2	0.81	0.79
27:BA:1137:G:H21	34:BN:86:MET:HE1	1.47	0.79
27:BA:1820:U:O2	28:BD:200:THR:HG22	1.81	0.79
27:BA:2250:G:H5''	37:BQ:102:ARG:CB	2.13	0.79
27:BA:2484:G:N2	27:BA:2485:G:N9	2.31	0.79
27:BA:2536:G:H2'	27:BA:2537:U:H5'	1.64	0.79
27:BA:2564:A:C2'	27:BA:2565:A:C8	2.55	0.79
27:BA:2606:C:C2'	27:BA:2607:G:O5'	2.30	0.79
27:BA:2652:C:H2'	27:BA:2653:U:C6	2.17	0.79
27:BA:2712:U:HO3'	27:BA:712(A):A:P	1.57	0.79
27:BA:2801:A:H2	27:BA:2895:U:O2'	1.59	0.79
27:BA:2842:G:H2'	27:BA:2843:G:C5'	2.10	0.79
28:BD:104:ILE:HB	28:BD:106:PRO:HD2	1.62	0.79
30:BF:32:GLY:O	30:BF:35:VAL:N	2.14	0.79
33:BI:49:ALA:O	33:BI:53:LYS:HG2	1.83	0.79
34:BN:15:ARG:HH12	34:BN:40:ASN:HA	1.47	0.79
34:BN:54:VAL:HA	34:BN:135:ILE:HG23	1.64	0.79
35:BO:1:MET:CB	35:BO:2:ILE:HD12	2.13	0.79
37:BQ:28:ILE:HG22	37:BQ:29:ALA:N	1.96	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:74:LYS:HA	44:BR:77:ARG:HH22	1.48	0.79
39:BT:21:PHE:O	39:BT:22:VAL:HG12	1.82	0.79
45:BU:106:PHE:O	45:BU:107:LYS:C	2.19	0.79
45:BU:113:SER:O	45:BU:114:ARG:C	2.19	0.79
40:BW:10:VAL:CG1	40:BW:46:PHE:HE2	1.96	0.79
43:BZ:108:VAL:O	43:BZ:108:VAL:HG12	1.82	0.79
42:BY:20:HIS:HA	42:BY:67:LEU:HD21	1.63	0.79
43:BZ:14:LEU:HD23	43:BZ:14:LEU:O	1.81	0.79
1:AA:1058:G:OP1	6:AC:199:LYS:HE3	1.83	0.79
27:BA:1789:A:OP1	28:BD:226:GLY:CA	2.30	0.79
47:B2:27:LEU:CD1	47:B2:53:ILE:CD1	2.59	0.79
1:AA:1494:G:OP1	25:AY:117:GLY:CA	2.30	0.79
27:BA:885:C:H41	27:BA:889:C:H1'	1.46	0.79
49:B0:28:GLY:CA	49:B0:60:PHE:HB3	2.12	0.79
49:B0:36:ILE:CA	49:B0:68:VAL:CG1	2.61	0.79
27:BA:2394:C:C4	27:BA:2395:C:N4	2.51	0.79
27:BA:2574:G:H5''	27:BA:2575:C:P	2.23	0.79
27:BA:2681:C:O2'	27:BA:2682:U:P	2.40	0.79
27:BA:2722:G:C6	27:BA:2723:C:C4	2.71	0.79
27:BA:2819:G:N2	27:BA:2821:A:C8	2.50	0.79
30:BF:115:LEU:O	30:BF:118:THR:OG1	2.01	0.79
30:BF:51:TYR:O	30:BF:55:ARG:HA	1.81	0.79
34:BN:27:ALA:HA	34:BN:30:ALA:HB2	0.80	0.79
35:BO:58:VAL:HG12	35:BO:59:LYS:H	1.47	0.79
37:BQ:49:VAL:HG21	37:BQ:119:ASN:O	1.83	0.79
37:BQ:138:ARG:HA	37:BQ:141:MET:HG3	1.64	0.79
38:BS:127:LEU:C	38:BS:127:LEU:HD23	2.02	0.79
45:BU:107:LYS:O	45:BU:110:VAL:CB	2.23	0.79
45:BU:117:ARG:CG	45:BU:118:GLN:H	1.92	0.79
43:BZ:67:LYS:HA	43:BZ:67:LYS:HZ2	1.44	0.79
42:BY:74:VAL:N	42:BY:91:LEU:CD1	2.40	0.79
43:BZ:62:PHE:HB2	43:BZ:85:MET:SD	2.22	0.79
43:BZ:51:LEU:HD11	43:BZ:64:ALA:N	1.98	0.79
47:B2:2:VAL:O	47:B2:4:HIS:CE1	2.35	0.79
47:B2:58:THR:O	47:B2:59:ILE:C	2.21	0.79
47:B2:4:HIS:C	47:B2:8:ILE:HD12	2.02	0.79
27:BA:1943:U:H1'	27:BA:1945:G:C5'	2.13	0.79
27:BA:1558:A:C2	27:BA:1560:G:H1'	2.17	0.79
27:BA:484:C:H2'	27:BA:485:C:C6	2.18	0.79
27:BA:1328:G:H2'	27:BA:1330:C:C5	2.17	0.79
49:B0:37:LEU:O	49:B0:40:GLN:HG2	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:4:ASP:OD1	50:B4:11:PRO:HG3	1.81	0.79
52:B6:16:ALA:C	52:B6:48:VAL:HG11	2.02	0.79
54:B8:26:LYS:O	54:B8:27:SER:CB	2.29	0.79
27:BA:2309:A:P	27:BA:2309:A:O4'	2.40	0.79
27:BA:2354:G:C1'	49:B0:32:LYS:HG2	2.13	0.79
27:BA:2717:G:N1	27:BA:2718:G:C5	2.51	0.79
27:BA:2768:C:H42	27:BA:2769:C:H41	1.31	0.79
27:BA:2776:A:H1'	27:BA:2778:A:H8	1.43	0.79
27:BA:2818:G:N2	27:BA:2829:C:N3	2.30	0.79
28:BD:143:ILE:HD13	28:BD:153:LEU:N	1.95	0.79
30:BF:33:LYS:N	30:BF:36:ARG:HE	1.80	0.79
32:BH:130:ILE:CG2	32:BH:131:ILE:H	1.96	0.79
34:BN:15:ARG:HD2	34:BN:43:ARG:HD2	1.62	0.79
35:BO:34:ASN:O	35:BO:35:ILE:C	2.21	0.79
36:BP:114:VAL:CG2	36:BP:132:LYS:HB3	2.03	0.79
44:BR:113:LEU:HD13	44:BR:114:VAL:CA	2.12	0.79
38:BS:110:THR:HG1	38:BS:111:PRO:HD2	1.46	0.79
46:BV:30:GLY:O	46:BV:63:HIS:CB	2.28	0.79
46:BV:40:VAL:O	46:BV:51:ALA:HB2	1.83	0.79
46:BV:49:GLU:CB	46:BV:53:LYS:HD2	2.12	0.79
40:BW:20:VAL:HG11	40:BW:47:VAL:HG22	1.61	0.79
40:BW:32:ALA:CA	40:BW:35:ILE:CG1	2.56	0.79
1:AA:1059:C:H2'	13:AJ:52:GLY:HA2	1.65	0.79
28:BD:213:LYS:CG	28:BD:215:LYS:O	2.31	0.79
47:B2:27:LEU:O	47:B2:30:ALA:N	2.16	0.79
47:B2:56:ILE:O	47:B2:59:ILE:HG23	1.82	0.79
33:BI:48:GLU:O	33:BI:52:GLN:CG	2.28	0.79
1:AA:651:C:O3'	1:AA:652:U:P	2.41	0.79
1:AA:20:U:O4'	1:AA:572:A:N1	2.16	0.79
1:AA:162:A:N3	1:AA:348:G:H4'	1.98	0.79
48:B3:9:VAL:HG23	48:B3:54:VAL:HA	1.62	0.79
50:B4:68:ARG:HG2	50:B4:72:LYS:CB	2.13	0.79
27:BA:592:G:C2	54:B8:3:LYS:HE2	2.16	0.79
27:BA:2320:A:N3	27:BA:2333:A:N1	2.30	0.79
27:BA:2459:A:H8	27:BA:2460:U:C5	2.00	0.79
27:BA:2721:A:H2'	27:BA:2722:G:C8	2.17	0.79
27:BA:2875:C:N4	27:BA:2876:G:C6	2.51	0.79
27:BA:2886:G:N2	27:BA:2887:U:C2	2.51	0.79
27:BA:1819:A:H2'	28:BD:177:SER:OG	1.82	0.79
30:BF:51:TYR:O	30:BF:55:ARG:N	2.15	0.79
36:BP:69:ILE:HB	36:BP:73:VAL:HG21	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:94:ARG:HD3	36:BP:120:LEU:HB2	1.63	0.79
45:BU:43:ALA:CB	46:BV:75:LYS:CB	2.60	0.79
46:BV:40:VAL:C	46:BV:51:ALA:CB	2.51	0.79
46:BV:69:ILE:CG2	46:BV:88:GLN:HB3	2.12	0.79
40:BW:44:ALA:O	40:BW:45:TYR:C	2.21	0.79
40:BW:55:ALA:CA	40:BW:107:LEU:CD1	2.60	0.79
42:BY:55:PHE:CD1	42:BY:89:ARG:NH1	2.51	0.79
43:BZ:48:THR:OG1	43:BZ:66:VAL:O	1.99	0.79
43:BZ:4:THR:O	43:BZ:33:ALA:CB	2.31	0.79
3:AW:25:C:N1	3:AW:26:G:C4	2.51	0.79
1:AA:976:G:OP2	1:AA:1358:U:O4'	2.00	0.79
19:AP:20:VAL:HG11	19:AP:32:TYR:HB2	1.64	0.79
3:AW:72:C:C2'	3:AW:73:A:O4'	2.31	0.79
48:B3:40:THR:CB	48:B3:43:ILE:CD1	2.44	0.79
48:B3:51:ALA:C	48:B3:53:LEU:H	1.85	0.79
48:B3:8:LEU:O	48:B3:9:VAL:HG13	1.83	0.79
50:B4:11:PRO:HA	50:B4:40:HIS:HD2	1.44	0.79
52:B6:28:ARG:HG3	52:B6:30:ASN:CB	2.12	0.79
52:B6:37:LEU:N	52:B6:52:GLU:OE2	2.15	0.79
27:BA:2064:C:H1'	27:BA:2450:A:N6	1.98	0.79
27:BA:2593:U:O2	27:BA:2600:A:N1	2.15	0.79
27:BA:2746:U:C4'	32:BH:138:GLN:HA	2.11	0.79
27:BA:2793:G:C6	27:BA:2794:C:C4	2.70	0.79
27:BA:2820:A:C2	27:BA:2820:A:H5''	2.18	0.79
27:BA:2843:G:C4	27:BA:2844:G:C8	2.71	0.79
27:BA:2862:G:O2'	27:BA:2863:C:C6	1.96	0.79
29:BE:102:ASP:CG	29:BE:104:PHE:CE1	2.56	0.79
29:BE:79:ARG:NH1	29:BE:104:PHE:HA	1.98	0.79
29:BE:262:THR:HG1	29:BE:266:LYS:NZ	1.81	0.79
27:BA:2771:C:H5'	29:BE:316:ARG:HD2	0.89	0.79
27:BA:2303:G:C4'	31:BG:99:ASP:HB3	2.13	0.79
27:BA:1140:C:N4	34:BN:49:ARG:CZ	2.45	0.79
34:BN:79:PHE:HD1	34:BN:79:PHE:N	1.80	0.79
27:BA:2334:G:H21	38:BS:12:ARG:HG3	1.48	0.79
45:BU:13:ARG:NH1	45:BU:13:ARG:N	2.30	0.79
40:BW:55:ALA:HA	40:BW:107:LEU:HD11	1.65	0.79
41:BX:4:VAL:HG22	47:B2:24:LYS:HZ2	0.68	0.79
41:BX:5:ILE:CG2	41:BX:6:LYS:N	1.93	0.79
1:AA:279:A:C8	20:AQ:95:TYR:CE2	2.71	0.79
13:AJ:64:GLU:OE1	17:AN:57:ARG:HB3	1.83	0.79
27:BA:440:G:P	42:BY:3:GLN:CD	2.61	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:60:A:H61	1:AA:107:G:HO2'	1.30	0.79
19:AP:6:LEU:HB2	19:AP:17:TYR:HB3	1.63	0.79
27:BA:988:A:OP2	48:B3:11:SER:HB3	1.83	0.78
50:B4:68:ARG:CZ	50:B4:72:LYS:HD3	2.14	0.78
27:BA:1263:U:H4'	51:B5:16:ARG:NH2	1.93	0.78
27:BA:1456:G:H1	27:BA:2704:C:N4	1.80	0.78
27:BA:1799:G:H21	28:BD:153:LEU:HG	1.44	0.78
27:BA:2195:C:C5'	27:BA:2195:C:C6	2.62	0.78
27:BA:2394:C:C5	27:BA:2395:C:C4	2.70	0.78
27:BA:2428:G:C8	27:BA:2428:G:H3'	2.18	0.78
27:BA:830:G:C5	27:BA:2448:A:C8	2.71	0.78
27:BA:1129:A:O2'	27:BA:2515:C:H2'	1.83	0.78
27:BA:2776:A:C4	27:BA:2778:A:C5	2.69	0.78
27:BA:2785:C:C5	27:BA:2786:U:C4	2.70	0.78
27:BA:2840:C:H2'	27:BA:2841:C:C6	2.18	0.78
27:BA:599:G:H1	27:BA:658:C:H42	1.30	0.78
27:BA:712(A):A:C8	27:BA:2713:A:OP1	2.34	0.78
28:BD:90:ILE:HG21	28:BD:103:ILE:N	1.98	0.78
29:BE:222:ARG:NH2	29:BE:234:ARG:HB2	1.97	0.78
30:BF:104:ASP:O	30:BF:105:LYS:C	2.22	0.78
32:BH:105:SER:O	32:BH:106:VAL:HG23	1.82	0.78
33:BI:24:GLY:O	33:BI:25:TYR:O	2.00	0.78
35:BO:58:VAL:CG1	35:BO:59:LYS:H	1.95	0.78
27:BA:1666:G:C4'	35:BO:67:ARG:NH2	2.46	0.78
36:BP:53:ARG:HD2	36:BP:53:ARG:N	1.96	0.78
36:BP:57:VAL:CG1	36:BP:58:GLN:N	2.27	0.78
37:BQ:18:GLU:HG2	37:BQ:23:ILE:HD11	1.65	0.78
45:BU:111:ASP:C	45:BU:113:SER:N	2.31	0.78
4:AX:120:A:H2	25:AY:193:HIS:CA	1.49	0.78
33:BI:92:SER:HB3	33:BI:122:ARG:HH11	1.43	0.78
43:BZ:25:ASN:HA	43:BZ:84:TYR:CD1	2.18	0.78
1:AA:1318:A:H5'	22:AS:10:PHE:CD2	2.17	0.78
41:BX:4:VAL:CG1	47:B2:24:LYS:NZ	2.46	0.78
29:BE:107:GLU:O	29:BE:110:ARG:N	2.15	0.78
27:BA:1416:G:H21	27:BA:1582:C:H42	1.31	0.78
19:AP:20:VAL:HG11	19:AP:32:TYR:CB	2.13	0.78
27:BA:979:G:H3'	27:BA:980:A:C5'	2.11	0.78
27:BA:352:G:O5'	27:BA:352:G:H8	1.66	0.78
51:B5:11:THR:HG21	51:B5:19:ARG:NH2	1.94	0.78
51:B5:6:VAL:HG13	51:B5:7:PRO:HD2	1.65	0.78
52:B6:36:GLU:HB3	52:B6:52:GLU:HB2	1.63	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B9:24:LEU:CD2	55:B9:36:GLN:H	1.96	0.78
27:BA:2227:A:C6	27:BA:2228:G:C5	2.70	0.78
27:BA:2458:G:C8	27:BA:2490:G:C6	2.70	0.78
27:BA:2570:G:C2	27:BA:2571:C:C6	2.70	0.78
27:BA:2592:G:N2	27:BA:2603:G:C6	2.51	0.78
27:BA:2646:C:C2'	27:BA:2647:U:H5'	2.13	0.78
27:BA:1664:A:N3	27:BA:2726:U:C4	2.51	0.78
27:BA:2737:G:C4	27:BA:2738:A:C8	2.71	0.78
27:BA:2810:A:N7	27:BA:2811:G:N9	2.32	0.78
27:BA:2831:G:H5'	27:BA:2834:G:O2'	1.84	0.78
27:BA:54:G:O2'	53:B7:35:ARG:NH2	2.16	0.78
27:BA:649:G:O3'	54:B8:17:THR:HG21	1.83	0.78
29:BE:222:ARG:HG2	29:BE:232:ARG:N	1.98	0.78
31:BG:38:GLU:O	31:BG:41:LEU:HB2	1.84	0.78
34:BN:65:ASN:O	34:BN:66:ASP:C	2.21	0.78
35:BO:35:ILE:CG1	35:BO:62:VAL:HG12	2.10	0.78
36:BP:94:ARG:O	36:BP:95:ASP:HB3	1.83	0.78
38:BS:32:PRO:HD2	38:BS:101:VAL:N	1.98	0.78
45:BU:25:TRP:HB3	45:BU:28:ARG:NH1	1.98	0.78
27:BA:566:U:OP2	46:BV:81:ARG:NH2	2.16	0.78
46:BV:94:LYS:O	46:BV:95:ILE:CG1	2.30	0.78
27:BA:338:G:C8	42:BY:21:LYS:HB3	2.18	0.78
47:B2:6:GLN:O	47:B2:9:ARG:HB3	1.82	0.78
1:AA:563:A:C2	15:AL:15:ARG:NH1	2.51	0.78
1:AA:983:A:H3'	1:AA:984:C:P	2.23	0.78
27:BA:1857:G:H2'	27:BA:1858:G:C8	2.17	0.78
48:B3:20:LYS:C	48:B3:23:LEU:CG	2.27	0.78
52:B6:19:GLY:C	52:B6:42:PRO:HB2	2.02	0.78
54:B8:19:THR:HB	54:B8:21:LYS:HZ1	1.46	0.78
54:B8:6:THR:C	54:B8:8:LYS:N	2.35	0.78
27:BA:2737:G:H2'	27:BA:2738:A:C8	2.18	0.78
27:BA:2758:A:C2'	27:BA:2759:G:O5'	2.31	0.78
27:BA:2758:A:P	27:BA:2758:A:C3'	2.70	0.78
27:BA:2881:C:N4	27:BA:2882:A:N6	2.31	0.78
27:BA:562:U:O2'	27:BA:563:G:H5''	1.82	0.78
28:BD:143:ILE:H	28:BD:143:ILE:CD1	1.81	0.78
28:BD:167:GLU:O	28:BD:170:TYR:CG	2.36	0.78
28:BD:142:ASN:HB2	28:BD:190:THR:H	1.48	0.78
2:AV:56:C:H1'	31:BG:56:ARG:CD	2.12	0.78
35:BO:8:LEU:N	35:BO:8:LEU:CD2	2.45	0.78
38:BS:49:THR:H	38:BS:55:ASP:CG	1.87	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:13:ARG:C	45:BU:16:LYS:HB2	2.01	0.78
40:BW:97:LYS:CE	40:BW:99:ARG:NH1	2.46	0.78
42:BY:47:THR:HG21	42:BY:100:ASP:HB2	1.64	0.78
41:BX:13:LYS:C	41:BX:16:ASN:OD1	2.22	0.78
27:BA:440:G:P	42:BY:3:GLN:OE1	2.41	0.78
54:B8:60:LEU:HD11	54:B8:64:ARG:HB3	1.62	0.78
27:BA:2320:A:C2	27:BA:2333:A:N3	2.40	0.78
27:BA:2410:G:N3	27:BA:2411:A:N7	2.25	0.78
27:BA:2604:U:O2'	27:BA:2605:U:H5'	1.84	0.78
27:BA:752:A:C6	27:BA:1781:C:H1'	2.19	0.78
28:BD:131:LEU:HG	28:BD:187:CYS:O	1.82	0.78
29:BE:45:LYS:HZ2	29:BE:303:PRO:C	1.81	0.78
30:BF:5:ILE:CB	30:BF:14:GLY:O	2.19	0.78
30:BF:163:HIS:CA	30:BF:166:ILE:CG1	2.56	0.78
27:BA:600:G:C5'	30:BF:27:ARG:HH11	1.96	0.78
30:BF:4:THR:O	30:BF:139:VAL:CB	2.31	0.78
26:BB:57:A:H1'	31:BG:13:MET:HE2	0.79	0.78
35:BO:64:ARG:O	35:BO:82:ASN:HA	1.83	0.78
37:BQ:42:TYR:C	37:BQ:125:TRP:CH2	2.56	0.78
44:BR:61:HIS:O	44:BR:64:ARG:N	2.16	0.78
46:BV:33:VAL:HG12	46:BV:34:GLU:H	1.45	0.78
43:BZ:26:LYS:O	43:BZ:27:GLU:CD	2.21	0.78
43:BZ:37:LYS:O	43:BZ:41:ARG:CD	2.32	0.78
43:BZ:62:PHE:CE2	43:BZ:87:THR:HB	2.18	0.78
43:BZ:71:MET:HG2	43:BZ:78:PRO:HD2	1.53	0.78
3:AW:25:C:N4	3:AW:26:G:H1	1.81	0.78
1:AA:978:A:H1'	22:AS:37:ARG:HH12	1.47	0.78
47:B2:6:GLN:HA	47:B2:9:ARG:HB3	1.66	0.78
41:BX:9:HIS:CE1	41:BX:27:ALA:HB2	2.18	0.78
27:BA:94:G:H22	47:B2:42:ASN:HD22	1.30	0.78
41:BX:75:GLN:CB	41:BX:78:ALA:O	2.24	0.78
1:AA:563:A:H2	15:AL:15:ARG:NH1	1.81	0.78
49:B0:36:ILE:HG22	49:B0:36:ILE:O	1.83	0.78
53:B7:17:GLY:O	53:B7:18:PHE:C	2.20	0.78
27:BA:2230:G:O2'	27:BA:2231:C:C5'	2.32	0.78
27:BA:2418:A:O2'	27:BA:2419:U:O4'	2.00	0.78
27:BA:2487:G:H2'	27:BA:2488:A:O5'	1.84	0.78
27:BA:2603:G:N3	27:BA:2604:U:H6	1.80	0.78
27:BA:457:A:H1'	27:BA:459:U:C2	2.18	0.78
29:BE:299:SER:OG	29:BE:301:PRO:CD	2.29	0.78
29:BE:45:LYS:NZ	29:BE:303:PRO:CA	2.37	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:163:HIS:C	30:BF:166:ILE:HG13	2.03	0.78
30:BF:168:ARG:C	30:BF:233:THR:HG22	2.00	0.78
31:BG:18:ILE:O	31:BG:135:VAL:HG11	1.83	0.78
31:BG:58:VAL:CG1	31:BG:58:VAL:O	2.32	0.78
35:BO:106:LEU:HD23	35:BO:106:LEU:H	1.46	0.78
35:BO:103:ALA:CA	35:BO:122:ILE:O	2.28	0.78
35:BO:31:ARG:O	35:BO:32:TYR:CG	2.37	0.78
27:BA:910:A:C8	37:BQ:17:ARG:NH2	2.49	0.78
44:BR:60:LEU:CD2	44:BR:61:HIS:H	1.96	0.78
44:BR:67:LEU:HB2	44:BR:76:VAL:HG11	1.63	0.78
43:BZ:151:ASP:HB3	43:BZ:153:LYS:HZ3	1.46	0.78
43:BZ:90:GLU:O	43:BZ:92:VAL:HG23	1.83	0.78
27:BA:341:G:H2'	27:BA:342:G:O4'	1.83	0.78
1:AA:1358:U:H5''	17:AN:33:VAL:O	1.82	0.78
28:BD:202:LYS:O	28:BD:204:PHE:HE1	1.67	0.78
27:BA:1059:G:H5''	56:BK:115:ASP:OD2	1.83	0.78
3:AW:9:A:C2	3:AW:45:G:C5	2.71	0.78
27:BA:1530:G:H21	27:BA:1531:C:H5	1.32	0.78
6:AC:11:ARG:HG2	6:AC:15:THR:O	1.82	0.78
48:B3:23:LEU:HA	48:B3:28:LEU:HD11	1.59	0.78
48:B3:19:GLN:O	48:B3:23:LEU:HD23	1.81	0.78
27:BA:1782:C:N3	27:BA:2609:U:C5	2.51	0.78
27:BA:2089:U:H3	27:BA:2231:C:H42	1.32	0.78
27:BA:2252:G:C2'	27:BA:2253:G:C5'	2.46	0.78
2:AV:74:C:N4	27:BA:2253:G:N1	2.09	0.78
27:BA:2310:A:N7	31:BG:55:LYS:NZ	2.30	0.78
27:BA:2603:G:C4	27:BA:2604:U:C5	2.72	0.78
27:BA:2605:U:O2'	27:BA:2606:C:C5'	2.32	0.78
27:BA:2712:U:O3'	27:BA:712(A):A:O5'	2.00	0.78
27:BA:2821:A:C2	27:BA:2822:G:N7	2.51	0.78
27:BA:617:G:OP1	30:BF:221:GLU:CB	2.32	0.78
27:BA:974(A):C:H1'	27:BA:989:G:N2	1.97	0.78
30:BF:30:LEU:O	30:BF:31:ILE:O	2.01	0.78
27:BA:2311:A:C2	31:BG:53:LYS:CE	2.67	0.78
27:BA:2311:A:N3	31:BG:53:LYS:HE2	1.98	0.78
32:BH:95:ALA:O	32:BH:127:GLN:HB2	1.83	0.78
33:BI:25:TYR:HD2	33:BI:25:TYR:H	0.86	0.78
27:BA:2093:G:H4'	33:BI:29:PHE:CZ	2.18	0.78
34:BN:135:ILE:C	34:BN:139:LEU:HD11	2.03	0.78
35:BO:14:SER:HB3	35:BO:86:ILE:HD12	1.64	0.78
37:BQ:142:LYS:HE2	37:BQ:143:VAL:O	1.83	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:63:ARG:HH21	44:BR:77:ARG:CG	1.95	0.78
38:BS:114:LYS:O	38:BS:115:VAL:C	2.22	0.78
38:BS:127:LEU:O	38:BS:128:ASP:O	2.02	0.78
38:BS:20:TYR:CE2	38:BS:21:HIS:HD2	1.95	0.78
45:BU:46:GLU:O	45:BU:47:TYR:O	2.02	0.78
45:BU:83:LEU:O	45:BU:86:ALA:HB2	1.84	0.78
46:BV:39:PHE:CE2	46:BV:41:GLY:C	2.57	0.78
46:BV:40:VAL:O	46:BV:51:ALA:HB1	1.84	0.78
40:BW:81:ALA:HB1	40:BW:97:LYS:HD2	1.63	0.78
43:BZ:149:ALA:HB3	43:BZ:164:PRO:C	2.03	0.78
33:BI:94:THR:HG21	33:BI:96:LYS:HB3	1.63	0.78
43:BZ:51:LEU:HD23	43:BZ:52:PHE:CA	2.12	0.78
41:BX:28:VAL:O	41:BX:62:LYS:CB	2.28	0.78
41:BX:50:GLU:CB	41:BX:67:ARG:O	2.32	0.78
1:AA:15:G:O6	1:AA:1396:A:N6	2.16	0.78
3:AW:45:G:HO3'	3:AW:46:G:H5'	1.43	0.78
27:BA:176:G:C3'	27:BA:177:G:H8	1.97	0.78
1:AA:275:G:H4'	20:AQ:14:LYS:HB3	1.64	0.78
1:AA:991:U:O3'	1:AA:992:U:P	2.42	0.78
1:AA:737:A:H4'	9:AF:72:VAL:HG11	1.63	0.78
2:AV:57:G:C1'	31:BG:56:ARG:HH12	1.96	0.78
27:BA:126:A:P	53:B7:44:VAL:HG11	2.24	0.78
53:B7:5:TYR:O	53:B7:6:GLN:C	2.22	0.78
54:B8:6:THR:O	54:B8:8:LYS:CA	2.31	0.78
27:BA:1782:C:O2	27:BA:2609:U:N1	2.16	0.78
27:BA:2250:G:H3'	27:BA:2250:G:C8	2.18	0.78
27:BA:2263:C:H2'	27:BA:2264:C:H5'	1.66	0.78
27:BA:2349:G:C2	27:BA:2369:A:C2	2.72	0.78
27:BA:2461:C:N3	27:BA:2462:U:H5	1.79	0.78
27:BA:2571:C:O2	27:BA:2571:C:H2'	1.83	0.78
27:BA:2657:A:H2'	27:BA:2658:C:H5'	1.65	0.78
28:BD:81:GLU:O	28:BD:82:TYR:C	2.22	0.78
29:BE:42:ALA:HA	29:BE:311:PHE:CE2	2.17	0.78
29:BE:81:VAL:CG1	29:BE:100:TRP:HZ3	1.96	0.78
30:BF:195:VAL:CG1	30:BF:213:ALA:HB3	2.13	0.78
31:BG:29:HIS:HE1	31:BG:64:ARG:CZ	1.97	0.78
31:BG:56:ARG:CG	31:BG:65:GLU:CB	2.60	0.78
34:BN:79:PHE:O	34:BN:83:ILE:CG2	2.31	0.78
37:BQ:23:ILE:H	37:BQ:24:PRO:CD	1.92	0.78
37:BQ:49:VAL:HA	37:BQ:121:ASP:CB	2.14	0.78
44:BR:18:LEU:O	44:BR:19:ALA:C	2.22	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:99:ALA:HA	45:BU:106:PHE:CB	1.87	0.78
40:BW:16:LYS:O	40:BW:17:VAL:C	2.22	0.78
40:BW:68:ARG:C	40:BW:69:LEU:HD23	2.04	0.78
27:BA:85:G:H5'	42:BY:65:VAL:HG12	1.65	0.78
43:BZ:42:ALA:O	43:BZ:45:GLN:N	2.17	0.78
41:BX:13:LYS:H	41:BX:13:LYS:HD3	1.48	0.78
6:AC:12:LEU:HD21	17:AN:51:GLY:HA3	1.66	0.78
1:AA:497:A:O2'	1:AA:498:U:P	2.41	0.78
3:AW:9:A:N1	3:AW:45:G:C6	2.52	0.78
19:AP:20:VAL:CG1	19:AP:32:TYR:HB2	2.13	0.78
27:BA:1027:A:H61	27:BA:1126:A:H1'	1.49	0.78
49:B0:14:ARG:C	49:B0:14:ARG:HD2	2.01	0.78
27:BA:2815:C:C5'	51:B5:29:ASN:ND2	2.43	0.78
27:BA:1665:A:H4'	35:BO:66:LYS:HZ2	1.45	0.78
27:BA:2056:G:OP2	27:BA:2504:U:OP2	2.01	0.78
27:BA:2318:G:C8	27:BA:2318:G:O5'	2.37	0.78
27:BA:2395:C:C3'	27:BA:2395:C:C6	2.67	0.78
27:BA:2466:C:O2'	27:BA:2467:C:H5'	1.83	0.78
27:BA:2520:C:C2	27:BA:2521:C:H5	1.95	0.78
27:BA:2597:G:H2'	27:BA:2598:A:H8	1.01	0.78
27:BA:2607:G:C6	27:BA:2608:G:C2	2.72	0.78
27:BA:2722:G:H2'	27:BA:2723:C:C6	2.17	0.78
27:BA:2894:G:C3'	27:BA:2895:U:P	2.71	0.78
27:BA:558:G:P	34:BN:91:LYS:HB2	2.21	0.78
28:BD:143:ILE:HD13	28:BD:153:LEU:H	1.49	0.78
28:BD:146:LYS:HD2	28:BD:147:PRO:CD	2.07	0.78
28:BD:196:ASN:CA	28:BD:199:ARG:HD3	2.14	0.78
29:BE:218:GLY:C	29:BE:219:VAL:HG23	2.04	0.78
29:BE:205:THR:CA	29:BE:261:ARG:HD2	2.08	0.78
30:BF:215:ALA:CA	30:BF:242:GLU:HG3	2.14	0.78
32:BH:121:GLU:CD	32:BH:121:GLU:N	2.37	0.78
27:BA:1140:C:N4	34:BN:49:ARG:NE	2.30	0.78
35:BO:103:ALA:HB3	35:BO:105:GLU:HG2	1.65	0.78
35:BO:66:LYS:C	35:BO:66:LYS:CD	2.52	0.78
37:BQ:156:ASN:O	37:BQ:156:ASN:OD1	2.01	0.78
44:BR:60:LEU:CG	44:BR:61:HIS:N	2.45	0.78
44:BR:80:PHE:O	44:BR:84:ALA:CB	2.32	0.78
27:BA:996:A:O3'	45:BU:93:LYS:HG2	1.83	0.78
33:BI:89:LEU:HD11	33:BI:93:ILE:HG21	1.66	0.78
42:BY:31:LEU:HD13	42:BY:101:LEU:CB	2.13	0.78
41:BX:18:MET:SD	41:BX:24:LEU:HA	2.24	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:571:U:H3'	1:AA:572:A:C5'	2.13	0.78
7:AD:141:ARG:HB3	7:AD:142:PRO:HD2	1.65	0.78
5:AB:180:LEU:O	5:AB:181:PHE:HB2	1.81	0.78
49:B0:24:LYS:CG	49:B0:56:ASP:OD1	2.32	0.78
48:B3:15:TYR:HB3	48:B3:16:PRO:HD2	1.65	0.78
48:B3:8:LEU:HD23	48:B3:31:LEU:C	1.98	0.78
50:B4:14:ILE:C	50:B4:15:ILE:HD12	2.05	0.78
27:BA:1263:U:C1'	51:B5:16:ARG:NH2	2.46	0.78
27:BA:2225:A:O2'	27:BA:2226:C:OP2	2.02	0.78
27:BA:2227:A:C6	27:BA:2228:G:O6	2.37	0.78
27:BA:2584:U:C1'	27:BA:2585:U:H5	1.97	0.78
27:BA:2604:U:C2	27:BA:2605:U:C5	2.71	0.78
27:BA:2744:G:C4	27:BA:2761:G:N2	2.52	0.78
27:BA:2827:C:O2	27:BA:2827:C:H2'	1.84	0.78
26:BB:8:U:H5'	38:BS:37:ARG:NE	1.99	0.78
29:BE:189:MET:O	29:BE:190:ASN:OD1	2.00	0.78
29:BE:256:THR:CA	29:BE:259:HIS:HE1	1.87	0.78
27:BA:617:G:OP1	30:BF:221:GLU:CG	2.18	0.78
31:BG:93:LEU:HD21	31:BG:106:PHE:CD2	2.16	0.78
35:BO:17:ARG:NH2	35:BO:47:THR:HA	1.99	0.78
37:BQ:56:ILE:O	37:BQ:61:LEU:HD11	1.82	0.78
38:BS:72:GLU:CB	38:BS:74:PRO:HD2	2.12	0.78
27:BA:563:G:H21	45:BU:37:GLN:CD	1.87	0.78
40:BW:20:VAL:HG13	40:BW:47:VAL:HG21	1.61	0.78
40:BW:82:LEU:HD21	40:BW:100:THR:H	1.48	0.78
6:AC:9:GLY:N	17:AN:49:HIS:O	2.17	0.78
27:BA:94:G:O3'	47:B2:41:GLU:OE2	2.02	0.78
2:AV:70:C:H2'	2:AV:71:G:H8	1.47	0.78
37:BQ:108:SER:O	37:BQ:109:VAL:HG22	1.82	0.78
28:BD:232:VAL:O	28:BD:232:VAL:CG2	2.27	0.78
1:AA:43:C:OP1	19:AP:12:LYS:HB3	1.84	0.78
49:B0:36:ILE:H	49:B0:68:VAL:HG22	1.49	0.78
48:B3:8:LEU:CA	48:B3:54:VAL:HG11	2.11	0.78
51:B5:11:THR:CG2	51:B5:19:ARG:NH2	2.47	0.78
54:B8:8:LYS:C	54:B8:10:ALA:N	2.37	0.78
54:B8:56:ALA:O	54:B8:57:ARG:C	2.22	0.78
54:B8:5:LYS:O	54:B8:7:HIS:ND1	2.17	0.78
27:BA:1240:U:H3'	27:BA:1241:A:C8	2.19	0.78
27:BA:2264:C:C4	27:BA:2277:G:C6	2.72	0.78
27:BA:2392:A:C2'	27:BA:2393:A:C5'	2.59	0.78
27:BA:2479:G:H2'	27:BA:2480:C:O5'	1.84	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2495:G:O2'	37:BQ:101:MET:CE	2.32	0.78
27:BA:2618:G:C6	27:BA:2619:C:H5	1.96	0.78
27:BA:2618:G:HO2'	27:BA:2619:C:P	2.06	0.78
27:BA:2652:C:H5	27:BA:2653:U:C4	2.01	0.78
27:BA:2716:U:C2'	27:BA:2717:G:C5'	2.60	0.78
27:BA:2729:G:H2'	27:BA:2730:C:O4'	1.83	0.78
27:BA:2762:G:N7	27:BA:2763:G:C5	2.51	0.78
27:BA:2785:C:H4'	29:BE:99:VAL:C	2.03	0.78
27:BA:780:G:C6	28:BD:233:ASP:OD2	2.37	0.78
28:BD:158:GLY:CA	28:BD:194:VAL:HG21	2.13	0.78
29:BE:105:HIS:H	29:BE:108:LEU:HD12	1.49	0.78
29:BE:79:ARG:C	29:BE:187:HIS:CE1	2.50	0.78
30:BF:214:THR:N	30:BF:218:VAL:CG2	2.44	0.78
30:BF:239:ALA:O	30:BF:242:GLU:N	2.13	0.78
32:BH:93:TYR:C	32:BH:94:ARG:CG	2.46	0.78
34:BN:42:GLU:HA	34:BN:133:GLY:HA3	1.66	0.78
34:BN:87:LEU:CB	34:BN:88:PRO:CD	2.61	0.78
36:BP:66:VAL:HB	36:BP:67:ARG:NH1	1.97	0.78
37:BQ:56:ILE:HD11	37:BQ:115:SER:H	1.47	0.78
37:BQ:82:LYS:HG2	37:BQ:84:ARG:HG3	1.64	0.78
38:BS:35:VAL:HG11	38:BS:37:ARG:CZ	2.13	0.78
45:BU:59:ARG:O	45:BU:62:ILE:CA	2.31	0.78
45:BU:68:GLY:O	45:BU:70:ARG:N	2.17	0.78
42:BY:92:ASP:O	42:BY:94:SER:N	2.17	0.78
43:BZ:40:ASP:OD2	43:BZ:41:ARG:NH2	2.16	0.78
43:BZ:71:MET:HG3	43:BZ:78:PRO:HG3	1.65	0.78
27:BA:1518:C:H3'	27:BA:1519:G:C4'	2.14	0.78
27:BA:476:G:N2	27:BA:478:A:H2'	1.99	0.78
27:BA:932:G:H5'	48:B3:24:LYS:CE	2.14	0.77
27:BA:2652:C:H42	27:BA:2668:G:H1	1.29	0.77
27:BA:2827:C:O2'	27:BA:2828:C:H5'	1.83	0.77
27:BA:603:A:H2'	27:BA:604:G:C8	2.19	0.77
28:BD:129:LEU:HB3	28:BD:130:PRO:HD2	1.66	0.77
28:BD:162:GLN:OE1	28:BD:174:ARG:HB3	1.84	0.77
28:BD:106:PRO:C	28:BD:194:VAL:O	2.21	0.77
29:BE:240:PRO:HB2	29:BE:243:PRO:CG	2.13	0.77
27:BA:2636:U:H4'	29:BE:84:ARG:CZ	2.13	0.77
30:BF:102:LEU:CD2	30:BF:106:GLU:CB	2.62	0.77
30:BF:167:ASP:HB3	30:BF:232:LEU:H	1.48	0.77
30:BF:231:ARG:C	30:BF:232:LEU:HD23	2.02	0.77
30:BF:32:GLY:O	30:BF:35:VAL:CB	2.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:20:GLY:O	34:BN:21:ARG:C	2.22	0.77
35:BO:63:VAL:CG1	35:BO:102:VAL:HG11	1.88	0.77
38:BS:100:ALA:H	38:BS:127:LEU:HD21	1.49	0.77
46:BV:21:ARG:O	46:BV:92:ALA:HB1	1.83	0.77
27:BA:1260:G:H5''	40:BW:83:LYS:HZ3	1.47	0.77
42:BY:31:LEU:CD1	42:BY:113:GLU:OE1	2.27	0.77
43:BZ:18:MET:C	43:BZ:36:ARG:CG	2.52	0.77
12:AI:11:LYS:HG3	12:AI:108:VAL:HG11	1.66	0.77
48:B3:8:LEU:HD23	48:B3:32:GLN:N	1.97	0.77
50:B4:35:VAL:CG1	50:B4:36:TRP:H	1.95	0.77
53:B7:43:THR:HA	53:B7:46:ASP:CG	2.04	0.77
27:BA:126:A:C8	53:B7:18:PHE:CD1	2.73	0.77
27:BA:2065:C:H42	27:BA:2445:G:H1	1.31	0.77
27:BA:2094:G:C6	27:BA:2196:C:N4	2.46	0.77
27:BA:2197:U:C6	27:BA:2224:G:N1	2.52	0.77
27:BA:2375:G:N1	27:BA:2379:G:C6	2.52	0.77
27:BA:2398:U:C6	27:BA:2398:U:H3'	2.19	0.77
27:BA:2446:G:H5'	27:BA:2446:G:C8	2.15	0.77
27:BA:1127:A:N1	27:BA:2518:A:N3	2.31	0.77
27:BA:2523:G:H2'	27:BA:2524:G:H5'	1.63	0.77
27:BA:2556:C:C3'	27:BA:2557:G:H5'	2.10	0.77
27:BA:2769:C:H2'	27:BA:2770:G:C5'	2.13	0.77
27:BA:2850:A:C4	27:BA:2851:A:N7	2.52	0.77
29:BE:214:VAL:HG22	29:BE:221:LYS:CE	2.14	0.77
29:BE:222:ARG:HD3	29:BE:233:ARG:N	1.98	0.77
29:BE:62:ARG:C	29:BE:63:GLU:HG3	2.04	0.77
31:BG:97:GLN:O	31:BG:104:PHE:HB3	1.85	0.77
32:BH:32:LEU:HD12	32:BH:136:ASP:OD2	1.84	0.77
33:BI:43:ASN:ND2	33:BI:43:ASN:H	1.81	0.77
35:BO:101:PRO:CB	35:BO:122:ILE:CD1	2.54	0.77
27:BA:2277:G:O3'	37:BQ:20:ILE:HG22	1.84	0.77
44:BR:18:LEU:HD13	44:BR:19:ALA:N	1.99	0.77
44:BR:91:GLN:O	44:BR:92:GLY:O	2.02	0.77
27:BA:994:C:H4'	45:BU:54:LYS:HE2	1.66	0.77
45:BU:59:ARG:O	45:BU:62:ILE:HB	1.82	0.77
46:BV:19:VAL:O	46:BV:21:ARG:HG2	1.83	0.77
43:BZ:107:GLU:H	43:BZ:107:GLU:CD	1.87	0.77
42:BY:101:LEU:CD1	42:BY:112:LEU:HD12	2.15	0.77
42:BY:14:ALA:HB1	42:BY:15:PRO:HD3	1.66	0.77
42:BY:55:PHE:CD2	42:BY:89:ARG:NH1	2.36	0.77
42:BY:73:HIS:HE1	42:BY:90:PRO:HA	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:14:ALA:HB1	41:BX:18:MET:CE	2.13	0.77
1:AA:1502:A:H2	1:AA:1505:G:H1	0.82	0.77
27:BA:1301:A:N7	27:BA:1303:G:O4'	2.18	0.77
1:AA:540:G:O2'	7:AD:42:GLN:NE2	2.17	0.77
6:AC:106:VAL:HG12	6:AC:108:ASN:H	1.49	0.77
27:BA:747:U:P	51:B5:2:ALA:HB3	2.24	0.77
27:BA:1034:G:H5'	55:B9:18:ARG:HE	1.45	0.77
27:BA:2195:C:P	27:BA:2195:C:C6	2.77	0.77
27:BA:2218:G:H2'	27:BA:2219:G:O5'	1.84	0.77
27:BA:2281:C:O2'	27:BA:2282:G:O5'	2.01	0.77
27:BA:2436:G:O6	27:BA:2437:U:C4	2.38	0.77
27:BA:2464:C:C4	27:BA:2487:G:N1	2.52	0.77
27:BA:2626:C:C5'	27:BA:2626:C:C6	2.63	0.77
27:BA:2762:G:C5	27:BA:2763:G:C6	2.72	0.77
29:BE:235:ILE:CG2	29:BE:236:GLY:N	2.47	0.77
30:BF:196:THR:CA	30:BF:236:THR:HG21	2.11	0.77
27:BA:2310:A:N9	31:BG:55:LYS:NZ	2.32	0.77
32:BH:84:LYS:O	32:BH:131:ILE:CG2	2.32	0.77
33:BI:13:GLY:CA	33:BI:15:LYS:HZ1	1.93	0.77
34:BN:58:GLU:CG	34:BN:61:VAL:HG21	2.13	0.77
35:BO:10:VAL:CG2	35:BO:16:ALA:HB3	2.11	0.77
37:BQ:48:ASN:C	37:BQ:48:ASN:OD1	2.23	0.77
44:BR:83:ILE:O	44:BR:84:ALA:C	2.22	0.77
39:BT:24:LYS:O	39:BT:25:ASP:HB2	1.81	0.77
45:BU:15:LYS:O	45:BU:16:LYS:C	2.21	0.77
45:BU:33:ARG:HG2	45:BU:34:ASN:H	1.48	0.77
40:BW:15:ARG:O	40:BW:18:ARG:HB2	1.84	0.77
40:BW:80:PRO:O	40:BW:100:THR:CB	2.32	0.77
42:BY:14:ALA:CB	42:BY:15:PRO:HD2	2.12	0.77
42:BY:73:HIS:CD2	42:BY:88:PRO:HB2	2.18	0.77
3:AW:1:G:H21	3:AW:2:C:N4	1.80	0.77
1:AA:1517:G:C8	27:BA:1920:C:OP1	2.38	0.77
1:AA:403:C:N4	1:AA:547:A:H5'	1.99	0.77
33:BI:134:HIS:CG	33:BI:135:PRO:HD2	2.19	0.77
1:AA:1366:C:OP2	12:AI:117:HIS:NE2	2.18	0.77
27:BA:225:A:O2'	27:BA:257:A:H4'	1.82	0.77
49:B0:36:ILE:O	49:B0:37:LEU:CG	2.32	0.77
49:B0:37:LEU:HD13	49:B0:69:PHE:CB	2.09	0.77
48:B3:4:LEU:O	48:B3:36:VAL:CA	2.33	0.77
52:B6:40:TYR:N	52:B6:50:PHE:CD1	2.53	0.77
54:B8:7:HIS:O	54:B8:10:ALA:CB	2.29	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:530:G:C6	27:BA:2021:C:O2	2.38	0.77
27:BA:2264:C:C4	27:BA:2277:G:O6	2.38	0.77
27:BA:2532:G:H8	27:BA:2532:G:H5'	1.46	0.77
29:BE:44:TYR:HE1	29:BE:308:VAL:HG13	1.48	0.77
30:BF:150:THR:HG23	30:BF:203:ALA:HB1	1.66	0.77
30:BF:51:TYR:C	30:BF:55:ARG:CB	2.45	0.77
31:BG:38:GLU:CB	31:BG:41:LEU:HD12	2.14	0.77
31:BG:98:PHE:HA	31:BG:104:PHE:HD2	0.89	0.77
32:BH:84:LYS:CG	32:BH:140:VAL:HG12	2.14	0.77
34:BN:39:VAL:HA	34:BN:103:VAL:CG1	2.14	0.77
34:BN:103:VAL:O	34:BN:104:TYR:CG	2.37	0.77
35:BO:21:VAL:HA	35:BO:41:ALA:CB	2.12	0.77
36:BP:120:LEU:CD1	36:BP:122:ALA:HB2	2.15	0.77
44:BR:41:ALA:HB1	44:BR:114:VAL:CG2	2.14	0.77
38:BS:32:PRO:HD2	38:BS:100:ALA:HA	1.64	0.77
38:BS:87:LEU:O	38:BS:88:ALA:C	2.23	0.77
43:BZ:168:VAL:C	43:BZ:169:VAL:HG23	2.01	0.77
27:BA:321:G:H1'	30:BF:206:ASN:ND2	1.98	0.77
42:BY:43:ASN:ND2	42:BY:112:LEU:CD2	2.46	0.77
47:B2:45:ARG:O	47:B2:46:ILE:C	2.22	0.77
41:BX:13:LYS:CA	41:BX:16:ASN:OD1	2.32	0.77
1:AA:501:C:OP1	15:AL:124:LYS:HD3	1.84	0.77
1:AA:303:A:O2'	1:AA:555:C:O2'	2.00	0.77
27:BA:125:G:H22	53:B7:10:ARG:N	1.82	0.77
54:B8:58:MET:O	54:B8:61:MET:N	2.18	0.77
27:BA:1818:U:O2	28:BD:153:LEU:CA	2.33	0.77
27:BA:2051:A:N7	27:BA:2614:A:C5	2.52	0.77
27:BA:2359:C:HO2'	27:BA:2360:A:C1'	1.96	0.77
27:BA:2446:G:C5'	27:BA:2446:G:H8	1.95	0.77
27:BA:2543:G:H2'	27:BA:2544:G:H5'	1.66	0.77
27:BA:2646:C:H2'	27:BA:2647:U:C5'	2.13	0.77
27:BA:2700:C:C3'	27:BA:2701:C:C5'	2.58	0.77
27:BA:396:G:H4'	50:B4:39:VAL:HG12	1.65	0.77
27:BA:616:A:H5''	30:BF:42:ARG:NH1	1.95	0.77
28:BD:129:LEU:CD2	28:BD:130:PRO:CD	2.61	0.77
28:BD:106:PRO:HG3	28:BD:141:HIS:CD2	2.20	0.77
28:BD:198:GLY:O	28:BD:200:THR:CG2	2.32	0.77
28:BD:80:ILE:HD13	28:BD:82:TYR:CD1	2.19	0.77
29:BE:189:MET:C	29:BE:190:ASN:OD1	2.22	0.77
30:BF:30:LEU:O	30:BF:33:LYS:HB2	1.85	0.77
30:BF:62:GLY:HA3	30:BF:65:ARG:HH21	0.69	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:146:LYS:HG3	38:BS:15:GLU:HG3	1.66	0.77
32:BH:84:LYS:O	32:BH:131:ILE:HG22	1.84	0.77
35:BO:77:ILE:CD1	35:BO:78:ARG:CA	2.53	0.77
37:BQ:94:ARG:NH2	37:BQ:105:PHE:O	2.18	0.77
37:BQ:45:GLN:NE2	37:BQ:153:PRO:CB	2.20	0.77
44:BR:28:LEU:CD1	44:BR:32:GLY:HA2	2.14	0.77
38:BS:76:GLY:C	38:BS:82:TYR:HB2	2.04	0.77
45:BU:99:ALA:CB	45:BU:106:PHE:CG	2.41	0.77
46:BV:50:ASP:CG	46:BV:53:LYS:HE3	2.04	0.77
27:BA:973:A:C2	46:BV:81:ARG:HD2	2.13	0.77
40:BW:25:ARG:HG2	40:BW:26:GLY:H	1.50	0.77
43:BZ:149:ALA:O	43:BZ:152:ILE:CG1	2.27	0.77
43:BZ:172:LEU:HD23	43:BZ:173:PRO:CA	2.13	0.77
41:BX:23:LYS:HE2	41:BX:67:ARG:NH1	1.99	0.77
1:AA:1298:C:N4	10:AG:114:ARG:O	2.18	0.77
1:AA:1062:U:OP1	13:AJ:58:ASP:OD2	2.03	0.77
2:AV:5:A:H2'	2:AV:6:U:H6	1.48	0.77
50:B4:14:ILE:CG2	50:B4:16:TYR:HE1	1.97	0.77
27:BA:2228:G:H8	27:BA:2229:C:C6	2.01	0.77
27:BA:2584:U:C1'	27:BA:2585:U:C5	2.67	0.77
27:BA:2747:G:H2'	27:BA:2748:A:H5''	1.66	0.77
27:BA:2637:U:O2	27:BA:2782:G:N2	2.18	0.77
27:BA:2805:G:C3'	27:BA:2807:G:P	2.73	0.77
27:BA:2812:G:O2'	27:BA:2813:A:C5'	2.32	0.77
27:BA:2887:U:O2	27:BA:2888:C:C6	2.37	0.77
28:BD:129:LEU:HD22	28:BD:130:PRO:CD	2.14	0.77
35:BO:75:SER:O	35:BO:76:TYR:CD1	2.38	0.77
37:BQ:28:ILE:HG12	37:BQ:62:GLU:OE2	1.84	0.77
45:BU:25:TRP:C	45:BU:28:ARG:NH1	2.38	0.77
45:BU:28:ARG:N	45:BU:31:GLN:OE1	2.18	0.77
45:BU:54:LYS:O	45:BU:58:ARG:HG3	1.85	0.77
45:BU:94:VAL:HG11	46:BV:4:ILE:HG21	1.67	0.77
43:BZ:154:LEU:HD13	43:BZ:160:LEU:CD1	2.12	0.77
27:BA:326:G:H22	27:BA:337:C:H1'	1.50	0.77
41:BX:33:SER:O	41:BX:37:VAL:CG2	2.33	0.77
42:BY:5:ASP:O	42:BY:9:LYS:HD3	1.83	0.77
27:BA:693:C:O2'	27:BA:1353:A:C2	2.38	0.77
40:BW:21:VAL:CG2	40:BW:22:ASP:H	1.98	0.77
1:AA:302:G:N3	1:AA:556:C:H4'	1.98	0.77
49:B0:41:ARG:N	49:B0:67:VAL:HG22	1.99	0.77
49:B0:44:LYS:C	49:B0:45:PHE:CD1	2.58	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B3:6:VAL:HG23	48:B3:55:ARG:O	1.85	0.77
48:B3:9:VAL:H	48:B3:54:VAL:CG1	1.97	0.77
53:B7:35:ARG:O	53:B7:36:ALA:O	2.03	0.77
27:BA:1652:A:N6	27:BA:1653:G:H21	1.83	0.77
27:BA:2213:U:O3'	27:BA:2215:G:C8	2.38	0.77
27:BA:2286:A:N6	52:B6:31:THR:O	2.17	0.77
27:BA:2385:C:H2'	27:BA:2386:C:H5''	1.65	0.77
27:BA:2570:G:N3	27:BA:2570:G:C2'	2.47	0.77
27:BA:2739:U:C6	27:BA:2739:U:H3'	2.18	0.77
27:BA:527:C:C5	27:BA:2779:U:H3'	2.19	0.77
27:BA:828:U:H2'	27:BA:829:A:C8	2.20	0.77
29:BE:201:VAL:O	29:BE:262:THR:OG1	2.02	0.77
29:BE:312:ARG:C	29:BE:314:ALA:N	2.38	0.77
29:BE:87:GLU:C	29:BE:94:ARG:H	1.86	0.77
30:BF:141:SER:OG	30:BF:144:PHE:CD1	2.38	0.77
30:BF:225:PRO:O	30:BF:231:ARG:HG2	1.73	0.77
30:BF:6:TYR:HE2	30:BF:140:VAL:CG2	1.97	0.77
32:BH:98:GLN:HB2	32:BH:103:VAL:CG2	2.15	0.77
32:BH:162:ARG:HB3	32:BH:166:GLU:HG3	1.64	0.77
33:BI:2:LYS:HD2	33:BI:39:ALA:HB2	1.67	0.77
34:BN:39:VAL:HG12	34:BN:104:TYR:N	1.99	0.77
34:BN:38:VAL:O	34:BN:39:VAL:HG22	1.85	0.77
35:BO:63:VAL:HG11	35:BO:102:VAL:CG2	2.15	0.77
37:BQ:133:GLU:C	37:BQ:133:GLU:CD	2.42	0.77
37:BQ:136:TRP:O	37:BQ:139:ALA:CB	2.33	0.77
37:BQ:46:VAL:O	37:BQ:124:ALA:N	2.18	0.77
37:BQ:65:ARG:NH2	37:BQ:85:ILE:CB	2.47	0.77
44:BR:33:ARG:CA	44:BR:114:VAL:O	2.29	0.77
38:BS:38:LYS:HG2	38:BS:106:LEU:HD12	1.65	0.77
27:BA:1151:G:C2'	45:BU:81:ASN:HD21	1.96	0.77
46:BV:49:GLU:O	46:BV:54:TYR:CE1	2.37	0.77
40:BW:86:LEU:CB	40:BW:87:PRO:CD	2.56	0.77
43:BZ:151:ASP:HB3	43:BZ:153:LYS:HZ2	1.46	0.77
27:BA:145:G:C4'	41:BX:1:SER:HB2	2.13	0.77
1:AA:1494:G:O2'	27:BA:1912:A:O2'	2.03	0.77
1:AA:1181:G:H4'	1:AA:1184:G:C4'	2.14	0.77
27:BA:477:A:H2'	27:BA:478:A:C8	2.20	0.77
27:BA:358:U:H3'	27:BA:359:A:H5'	1.65	0.77
21:AR:53:ARG:HD2	21:AR:58:LEU:O	1.84	0.77
49:B0:41:ARG:O	49:B0:74:LYS:HE2	1.84	0.77
27:BA:2350:C:O2'	27:BA:2351:G:O5'	2.01	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2352:A:N7	27:BA:2366:A:C6	2.53	0.77
27:BA:2403:C:N3	27:BA:2414:G:N2	2.31	0.77
27:BA:2436:G:O2'	27:BA:2437:U:O5'	2.03	0.77
27:BA:2470:G:O6	27:BA:2481:G:C2	2.38	0.77
27:BA:2481:G:O2'	27:BA:2482:G:H5'	1.85	0.77
27:BA:2447:G:N7	27:BA:2500:U:C5	2.53	0.77
27:BA:2584:U:C6	27:BA:2585:U:H6	1.99	0.77
27:BA:2654:A:H61	27:BA:2667:C:H42	1.16	0.77
27:BA:2678:C:O2'	27:BA:2679:A:H5'	1.83	0.77
27:BA:2718:G:H21	27:BA:2719:G:H1'	1.48	0.77
27:BA:2825:C:C5	27:BA:2825:C:OP2	2.38	0.77
27:BA:527:C:H6	27:BA:2779:U:C6	1.98	0.77
28:BD:129:LEU:HB3	28:BD:130:PRO:CD	2.15	0.77
28:BD:71:ASP:C	28:BD:73:ILE:H	1.86	0.77
31:BG:142:ALA:HB1	31:BG:151:ILE:HD11	1.62	0.77
32:BH:89:VAL:HG12	32:BH:159:LYS:HA	1.67	0.77
33:BI:6:LEU:HD12	33:BI:35:LEU:HA	1.67	0.77
34:BN:15:ARG:NH1	34:BN:40:ASN:HA	2.00	0.77
35:BO:88:ARG:O	35:BO:90:ASP:OD1	2.03	0.77
36:BP:102:ASP:O	36:BP:103:ALA:CB	2.33	0.77
37:BQ:46:VAL:CA	37:BQ:124:ALA:O	2.33	0.77
39:BT:53:ASP:HA	39:BT:56:ARG:HG2	1.64	0.77
45:BU:20:ARG:NH1	46:BV:75:LYS:CE	2.47	0.77
46:BV:63:HIS:HA	46:BV:95:ILE:HG13	1.66	0.77
2:AV:35:A:N1	4:AX:118:C:C2	2.40	0.77
33:BI:114:LYS:O	33:BI:115:ILE:O	2.03	0.77
33:BI:82:LYS:HE3	33:BI:149:LYS:O	1.85	0.77
27:BA:294:A:H4'	42:BY:15:PRO:CG	2.14	0.77
42:BY:31:LEU:HD13	42:BY:113:GLU:CD	2.04	0.77
43:BZ:53:ASP:CB	43:BZ:62:PHE:O	2.33	0.77
41:BX:14:ALA:CA	41:BX:17:ASP:OD1	2.28	0.77
1:AA:65:U:C2	1:AA:200:G:H1'	2.19	0.77
42:BY:9:LYS:HZ2	42:BY:13:ARG:NH2	1.82	0.77
49:B0:61:ALA:HB2	49:B0:80:SER:HA	1.66	0.77
50:B4:14:ILE:HD12	50:B4:16:TYR:CE1	2.20	0.77
50:B4:17:GLN:HA	50:B4:33:VAL:CB	2.14	0.77
52:B6:16:ALA:HB2	52:B6:50:PHE:HE2	1.50	0.77
27:BA:1364:G:N7	50:B4:2:GLN:OE1	2.17	0.77
27:BA:2264:C:N4	27:BA:2277:G:O6	2.17	0.77
27:BA:2385:C:C2'	27:BA:2386:C:H5''	2.15	0.77
27:BA:957:A:H61	27:BA:2458:G:H4'	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2494:G:N1	27:BA:2495:G:N7	2.32	0.77
27:BA:2045:C:N4	27:BA:2623:G:N1	2.22	0.77
27:BA:2679:A:C6	27:BA:2680:C:C5	2.72	0.77
27:BA:2717:G:O2'	27:BA:2718:G:O5'	2.02	0.77
27:BA:1033:U:H6	27:BA:2750:A:C2	2.01	0.77
27:BA:1657:C:H5'	29:BE:234:ARG:NH1	2.00	0.77
29:BE:308:VAL:CG1	29:BE:310:PHE:CE1	2.68	0.77
32:BH:147:ILE:O	32:BH:161:ILE:CD1	2.32	0.77
34:BN:27:ALA:C	34:BN:30:ALA:HB3	2.05	0.77
37:BQ:58:HIS:CB	37:BQ:111:THR:O	2.21	0.77
44:BR:81:ASP:O	44:BR:85:PRO:HD2	1.85	0.77
44:BR:87:TYR:CD1	44:BR:94:TYR:HD2	2.00	0.77
27:BA:993:G:N2	45:BU:54:LYS:HZ1	1.83	0.77
45:BU:91:ASN:O	45:BU:95:LEU:CD1	2.33	0.77
46:BV:60:VAL:C	46:BV:98:ILE:HD12	2.05	0.77
40:BW:12:ILE:O	40:BW:101:SER:OG	2.01	0.77
1:AA:1320:C:C2	22:AS:72:GLY:C	2.57	0.77
25:AY:251:THR:CA	27:BA:1943:U:C5'	2.63	0.77
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.20	0.77
1:AA:886:G:N2	1:AA:912:C:H1'	1.99	0.77
27:BA:923:C:C2	49:B0:26:PHE:CE2	2.70	0.77
50:B4:68:ARG:HG2	50:B4:72:LYS:HA	1.67	0.77
27:BA:1999:C:O2'	27:BA:2687:U:O2'	1.99	0.77
27:BA:2189:U:HO2'	27:BA:2190:G:H8	1.29	0.77
27:BA:2415:G:C6	27:BA:2416:C:H5	2.03	0.77
27:BA:2423:U:C6	27:BA:2425:A:N7	2.54	0.77
27:BA:248:G:O2'	27:BA:2432:A:OP1	2.03	0.77
27:BA:2579:C:H6	27:BA:2579:C:H5''	0.61	0.77
27:BA:2653:U:C2	27:BA:2654:A:C5	2.72	0.77
27:BA:2771:C:C2'	27:BA:2771:C:O2	2.30	0.77
26:BB:59:A:P	31:BG:141:VAL:CG2	2.69	0.77
29:BE:199:ALA:HB2	29:BE:312:ARG:O	1.85	0.77
29:BE:70:VAL:CG1	29:BE:295:LEU:CD2	2.63	0.77
29:BE:48:MET:C	29:BE:49:THR:CG2	2.53	0.77
30:BF:196:THR:C	30:BF:236:THR:HG1	1.89	0.77
30:BF:237:GLU:C	30:BF:239:ALA:N	2.37	0.77
27:BA:673:C:H1'	30:BF:82:GLN:OE1	1.84	0.77
27:BA:2317:C:C5'	31:BG:150:SER:CB	2.63	0.77
32:BH:95:ALA:O	32:BH:127:GLN:CA	2.32	0.77
27:BA:2561:A:HO2'	35:BO:40:VAL:HG11	0.96	0.77
35:BO:88:ARG:HG2	35:BO:92:SER:O	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:94:ARG:CB	36:BP:120:LEU:HD22	1.99	0.77
44:BR:111:LEU:O	44:BR:112:ALA:HB2	1.85	0.77
38:BS:85:GLY:HA3	38:BS:121:GLY:HA3	1.65	0.77
27:BA:2018:G:C2	45:BU:34:ASN:ND2	2.52	0.77
46:BV:2:PHE:HA	46:BV:15:SER:HB3	1.67	0.77
40:BW:70:TYR:O	40:BW:107:LEU:HD23	1.85	0.77
43:BZ:69:VAL:O	43:BZ:70:GLN:NE2	2.18	0.77
27:BA:1339:G:H22	27:BA:1603:A:H8	1.32	0.77
1:AA:1375:A:OP1	10:AG:28:ASN:ND2	2.18	0.77
3:AW:37:YYG:C19	10:AG:83:ALA:O	2.33	0.77
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.50	0.77
27:BA:772:C:H2'	27:BA:773:U:C6	2.19	0.77
48:B3:25:ALA:O	48:B3:27:GLY:N	2.19	0.76
50:B4:17:GLN:HA	50:B4:33:VAL:HB	1.67	0.76
53:B7:30:ILE:HA	53:B7:33:ARG:CB	2.14	0.76
27:BA:2528:U:P	55:B9:30:VAL:HG12	2.24	0.76
27:BA:2192:G:OP2	27:BA:2192:G:H8	1.68	0.76
27:BA:2209:C:O2'	27:BA:2210:G:H8	1.68	0.76
27:BA:2225:A:H5''	27:BA:2226:C:C4'	2.15	0.76
27:BA:2356:C:C2'	27:BA:2357:U:O5'	2.28	0.76
27:BA:2363:C:O2'	27:BA:2364:C:H5'	1.84	0.76
27:BA:2591:C:N4	27:BA:2604:U:O4	2.18	0.76
27:BA:2626:C:OP2	27:BA:2626:C:H5	1.67	0.76
27:BA:2645:G:H3'	27:BA:2646:C:H5'	1.67	0.76
27:BA:2648:C:N4	27:BA:2672:G:H1	1.82	0.76
27:BA:446:G:OP2	45:BU:3:ARG:CD	2.33	0.76
29:BE:74:GLU:O	29:BE:75:THR:OG1	2.02	0.76
30:BF:210:ALA:O	30:BF:211:ASP:CB	2.33	0.76
35:BO:17:ARG:HE	35:BO:47:THR:HA	1.49	0.76
36:BP:94:ARG:CD	36:BP:120:LEU:CB	2.64	0.76
27:BA:245:G:P	36:BP:53:ARG:CZ	2.73	0.76
36:BP:83:GLU:O	36:BP:92:ASP:CA	2.33	0.76
37:BQ:142:LYS:C	37:BQ:143:VAL:HG22	2.06	0.76
37:BQ:87:LYS:O	37:BQ:88:PHE:CB	2.33	0.76
27:BA:1275:A:H61	44:BR:19:ALA:CB	1.97	0.76
44:BR:33:ARG:O	44:BR:33:ARG:HG3	1.85	0.76
45:BU:80:ILE:N	45:BU:83:LEU:HD12	2.00	0.76
33:BI:108:LEU:HD23	33:BI:108:LEU:C	2.06	0.76
42:BY:11:GLN:HG3	42:BY:21:LYS:CE	2.14	0.76
27:BA:310:A:P	42:BY:53:GLY:H	2.07	0.76
43:BZ:62:PHE:CG	43:BZ:87:THR:CG2	2.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:986:A:C2	22:AS:52:TYR:CE2	2.73	0.76
41:BX:47:VAL:CB	41:BX:69:SER:HB3	2.14	0.76
1:AA:436:C:O2'	1:AA:437:U:O4'	2.02	0.76
3:AW:72:C:C2'	3:AW:73:A:H5'	2.13	0.76
27:BA:770:G:H5'	53:B7:10:ARG:HH11	1.50	0.76
27:BA:2049:G:C2	27:BA:2620:C:C4	2.73	0.76
27:BA:2231:C:H5''	50:B4:39:VAL:CG2	2.12	0.76
27:BA:2259:G:C5	27:BA:2260:C:C4	2.74	0.76
27:BA:2397:G:C6	27:BA:2420:C:N3	2.52	0.76
27:BA:2463:C:N3	27:BA:2487:G:O6	2.18	0.76
27:BA:2501:C:O2'	27:BA:2502:G:OP2	2.02	0.76
27:BA:2520:C:N4	27:BA:2567:G:C5	2.53	0.76
27:BA:2049:G:N1	27:BA:2620:C:C4	2.53	0.76
27:BA:2688:U:H2'	27:BA:2719:G:N2	2.00	0.76
27:BA:2762:G:N7	27:BA:2763:G:N7	2.33	0.76
27:BA:2772:C:C4	27:BA:2773:C:N4	2.53	0.76
27:BA:38:A:H2'	27:BA:39:C:C6	2.20	0.76
27:BA:514:A:H2'	27:BA:515:A:C8	2.20	0.76
27:BA:531:C:H5'	27:BA:532:A:N3	2.00	0.76
27:BA:995:C:OP2	45:BU:54:LYS:CE	2.33	0.76
27:BA:1819:A:OP2	28:BD:154:VAL:N	2.17	0.76
30:BF:88:SER:O	30:BF:89:ALA:CB	2.32	0.76
31:BG:21:VAL:CG2	31:BG:132:VAL:HG23	2.15	0.76
33:BI:7:LYS:HG2	33:BI:8:ASP:OD1	1.84	0.76
34:BN:39:VAL:O	34:BN:40:ASN:CB	2.33	0.76
35:BO:64:ARG:HH22	35:BO:100:GLY:HA3	1.42	0.76
35:BO:75:SER:O	35:BO:76:TYR:HD1	1.67	0.76
37:BQ:50:VAL:CG1	37:BQ:51:GLU:OE1	2.34	0.76
37:BQ:76:GLY:C	37:BQ:82:LYS:N	2.39	0.76
45:BU:47:TYR:O	45:BU:49:ASP:N	2.17	0.76
43:BZ:92:VAL:O	43:BZ:93:GLU:C	2.23	0.76
1:AA:173:U:H5	1:AA:198:G:O2'	1.68	0.76
1:AA:509:A:H8	7:AD:54:TYR:HE2	1.32	0.76
27:BA:2386:C:C1'	49:B0:39:ARG:HH21	1.98	0.76
48:B3:42:ALA:O	48:B3:44:ARG:N	2.18	0.76
50:B4:21:VAL:CG1	50:B4:22:MET:N	2.12	0.76
3:AW:75:C:H5	50:B4:28:ARG:H	1.30	0.76
50:B4:58:LYS:HG2	50:B4:59:PHE:N	1.99	0.76
27:BA:2349:G:OP2	54:B8:42:ARG:NE	2.17	0.76
27:BA:1024:G:H5''	27:BA:1025:G:H5''	1.64	0.76
27:BA:1140:C:H5	34:BN:49:ARG:CG	1.88	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1646:C:H3'	27:BA:1647:G:H5'	1.62	0.76
27:BA:2225:A:C4'	27:BA:2226:C:H5''	2.06	0.76
27:BA:2403:C:C5	27:BA:2415:G:N1	2.52	0.76
27:BA:631:A:C2	27:BA:2415:G:N2	2.53	0.76
27:BA:2769:C:C2'	27:BA:2770:G:C5'	2.63	0.76
28:BD:228:ALA:O	28:BD:229:MET:O	2.03	0.76
28:BD:70:LYS:CG	28:BD:73:ILE:HD11	2.16	0.76
29:BE:201:VAL:H	29:BE:266:LYS:CE	1.98	0.76
30:BF:102:LEU:HD21	30:BF:106:GLU:HB3	1.65	0.76
30:BF:240:LEU:HD23	30:BF:243:VAL:CG2	2.14	0.76
30:BF:243:VAL:HA	30:BF:246:ARG:HD2	0.80	0.76
32:BH:84:LYS:HG3	32:BH:140:VAL:CG1	2.15	0.76
36:BP:66:VAL:CG2	36:BP:67:ARG:NH2	2.07	0.76
37:BQ:57:ARG:O	37:BQ:58:HIS:C	2.23	0.76
44:BR:23:ASN:HA	44:BR:26:LYS:HD2	1.67	0.76
27:BA:1279:G:H5'	44:BR:34:ILE:CD1	2.16	0.76
38:BS:75:THR:O	38:BS:80:SER:N	2.18	0.76
45:BU:111:ASP:O	45:BU:112:ALA:C	2.23	0.76
40:BW:104:THR:C	40:BW:105:VAL:CG1	2.51	0.76
42:BY:103:LEU:HD22	42:BY:108:ARG:C	2.04	0.76
1:AA:988:G:H21	1:AA:1016:A:H1'	1.50	0.76
27:BA:1081:U:O4'	56:BK:127:ILE:HD11	1.86	0.76
1:AA:3(A):G:C6	1:AA:1037:C:N3	2.52	0.76
1:AA:1098:C:C4'	1:AA:1167:A:C2	2.56	0.76
33:BI:59:ALA:HA	33:BI:62:LEU:CD1	2.13	0.76
27:BA:2386:C:H4'	49:B0:39:ARG:CZ	2.15	0.76
54:B8:4:MET:HG2	54:B8:5:LYS:H	1.51	0.76
27:BA:1646:C:C3'	27:BA:1647:G:C5'	2.62	0.76
27:BA:2259:G:N1	27:BA:2282:G:C6	2.53	0.76
27:BA:2519:U:C3'	27:BA:2519:U:OP1	2.28	0.76
27:BA:2611:U:H3'	27:BA:2611:U:H6	1.50	0.76
27:BA:475:U:H4'	27:BA:510:C:H5'	1.68	0.76
27:BA:617:G:O3'	30:BF:219:ASN:OD1	2.04	0.76
28:BD:141:HIS:O	28:BD:142:ASN:C	2.24	0.76
29:BE:246:VAL:CG1	29:BE:247:ARG:N	2.48	0.76
30:BF:209:GLY:O	30:BF:210:ALA:O	2.02	0.76
30:BF:240:LEU:CD2	30:BF:243:VAL:CG2	2.62	0.76
30:BF:93:LYS:C	30:BF:96:LYS:HE3	2.05	0.76
32:BH:159:LYS:H	32:BH:162:ARG:CZ	1.98	0.76
32:BH:51:VAL:CG2	32:BH:68:ARG:CG	2.63	0.76
34:BN:63:ILE:O	34:BN:69:TYR:HB3	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:103:ALA:CB	35:BO:105:GLU:HG2	2.15	0.76
37:BQ:129:ASP:CG	37:BQ:132:VAL:HG23	2.06	0.76
44:BR:79:LEU:O	44:BR:79:LEU:CD2	2.17	0.76
38:BS:23:ARG:HH21	38:BS:35:VAL:HG21	0.95	0.76
27:BA:998:C:C5'	45:BU:84:LYS:NZ	2.48	0.76
43:BZ:107:GLU:O	43:BZ:109:GLN:N	2.16	0.76
27:BA:106:C:O2'	27:BA:293:U:O2'	2.04	0.76
27:BA:296:C:N3	27:BA:344:G:N2	2.34	0.76
43:BZ:34:LEU:HD12	43:BZ:35:ASP:N	2.00	0.76
27:BA:1566:A:C2	28:BD:212:HIS:CG	2.74	0.76
47:B2:50:ARG:CA	47:B2:53:ILE:HD12	2.15	0.76
41:BX:8:PRO:HD3	47:B2:33:VAL:HG22	1.68	0.76
1:AA:1118:C:H1'	1:AA:1179:A:C8	2.20	0.76
27:BA:2182:G:H2'	27:BA:2183:C:C6	2.20	0.76
49:B0:37:LEU:HD12	49:B0:69:PHE:HB2	1.66	0.76
48:B3:20:LYS:HD3	48:B3:23:LEU:HD11	1.66	0.76
27:BA:2045:C:C2	27:BA:2624:G:N2	2.53	0.76
27:BA:2207:C:N4	27:BA:2218:G:O6	2.18	0.76
27:BA:2236:C:H3'	27:BA:2237:G:H5'	1.68	0.76
27:BA:2521:C:C4	27:BA:2522:U:C5	2.73	0.76
27:BA:2581:G:H2'	27:BA:2581:G:N3	1.99	0.76
27:BA:2604:U:O2	27:BA:2604:U:H2'	1.85	0.76
27:BA:2695:C:HO2'	27:BA:2696:U:H6	1.30	0.76
27:BA:2848:G:N2	27:BA:2849:U:O2	2.14	0.76
27:BA:529:A:O2'	27:BA:530:G:C8	2.36	0.76
27:BA:627:A:N6	27:BA:636:G:O2'	2.19	0.76
28:BD:161:ALA:C	28:BD:162:GLN:CD	2.43	0.76
30:BF:84:VAL:CA	30:BF:85:LYS:HD2	2.00	0.76
30:BF:87:ARG:O	30:BF:88:SER:OG	2.02	0.76
32:BH:124:VAL:O	32:BH:124:VAL:HG13	1.84	0.76
32:BH:166:GLU:OE2	32:BH:166:GLU:HA	1.85	0.76
34:BN:54:VAL:CA	34:BN:135:ILE:HD12	2.15	0.76
34:BN:12:VAL:HG12	34:BN:38:VAL:HG11	1.66	0.76
35:BO:111:PHE:O	35:BO:113:LYS:N	2.17	0.76
35:BO:7:ARG:HD3	35:BO:44:LYS:CE	2.05	0.76
37:BQ:65:ARG:HH21	37:BQ:122:PHE:HD2	1.26	0.76
37:BQ:31:PHE:CZ	37:BQ:88:PHE:CD2	2.74	0.76
27:BA:2320:A:H61	38:BS:14:ARG:CA	1.98	0.76
38:BS:31:LYS:CB	38:BS:32:PRO:CD	2.45	0.76
46:BV:49:GLU:C	46:BV:53:LYS:HD2	2.06	0.76
43:BZ:172:LEU:HD21	43:BZ:173:PRO:HG2	1.67	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:98:ILE:CG2	33:BI:99:ALA:N	2.44	0.76
42:BY:64:ASN:O	42:BY:66:ASP:OD1	2.04	0.76
42:BY:71:VAL:HG21	42:BY:93:THR:H	1.50	0.76
1:AA:979:C:C5'	1:AA:1222:G:O6	2.33	0.76
47:B2:23:LEU:HA	47:B2:26:GLU:OE1	1.85	0.76
47:B2:55:ARG:O	47:B2:56:ILE:C	2.23	0.76
47:B2:8:ILE:HA	47:B2:11:MET:HG3	1.67	0.76
3:AW:37:YYG:H192	10:AG:78:ARG:O	1.84	0.76
40:BW:90:ARG:HH11	40:BW:90:ARG:HB2	0.94	0.76
29:BE:109:ASP:CA	29:BE:112:LEU:HB2	1.99	0.76
7:AD:15:GLU:OE1	7:AD:59:ARG:NH2	2.17	0.76
1:AA:462:G:H21	19:AP:82:GLN:HE21	1.34	0.76
56:BK:49:LYS:HZ3	56:BK:73:PRO:HA	1.49	0.76
49:B0:46:LYS:CG	49:B0:58:THR:N	2.47	0.76
50:B4:68:ARG:HG2	50:B4:72:LYS:CG	2.15	0.76
27:BA:247:G:N1	54:B8:8:LYS:HE3	1.89	0.76
27:BA:2100:G:C5	27:BA:2190:G:N1	2.53	0.76
27:BA:2259:G:C2	27:BA:2282:G:N1	2.54	0.76
27:BA:2310:A:N3	31:BG:55:LYS:HD3	1.99	0.76
27:BA:2332:U:C4'	27:BA:2336:A:N6	2.48	0.76
27:BA:2393:A:C2'	27:BA:2394:C:O5'	2.33	0.76
27:BA:2465:C:N3	27:BA:2485:G:O6	2.19	0.76
27:BA:2472:G:H2'	27:BA:2473:U:OP1	1.84	0.76
27:BA:2468:G:C6	27:BA:2481:G:N1	2.54	0.76
27:BA:2539:C:C2'	27:BA:2540:C:O5'	2.32	0.76
27:BA:2573:C:OP1	27:BA:2574:G:OP1	2.02	0.76
27:BA:1966:A:C2	27:BA:2593:U:C5'	2.67	0.76
27:BA:2744:G:N3	27:BA:2761:G:N2	2.34	0.76
27:BA:412:A:H61	27:BA:2411:A:H1'	1.49	0.76
27:BA:814:C:P	46:BV:84:THR:HG22	2.26	0.76
27:BA:963:U:O2'	27:BA:2250:G:N2	2.18	0.76
28:BD:167:GLU:HG2	28:BD:182:MET:CE	2.13	0.76
28:BD:167:GLU:N	28:BD:170:TYR:O	2.18	0.76
28:BD:92:LEU:HD12	28:BD:102:TYR:CD1	2.19	0.76
29:BE:70:VAL:CG1	29:BE:71:THR:N	2.14	0.76
30:BF:224:ALA:HB3	30:BF:225:PRO:CD	2.16	0.76
31:BG:156:ARG:HG2	31:BG:156:ARG:O	1.83	0.76
32:BH:94:ARG:HB3	32:BH:127:GLN:HE22	1.51	0.76
32:BH:82:TYR:CE1	32:BH:137:LYS:CG	2.67	0.76
33:BI:3:VAL:HG11	33:BI:21:VAL:CG2	2.15	0.76
34:BN:46:ILE:CG1	34:BN:132:LEU:HD13	2.14	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2378:A:C2	38:BS:26:LEU:HD23	2.20	0.76
45:BU:43:ALA:HB1	46:BV:75:LYS:CB	2.08	0.76
46:BV:40:VAL:HA	46:BV:51:ALA:CA	2.16	0.76
43:BZ:57:GLU:O	43:BZ:59:GLY:N	2.18	0.76
1:AA:1221:G:H1'	22:AS:54:GLY:HA3	1.66	0.76
27:BA:1546:C:O3'	27:BA:1547:C:OP2	2.03	0.76
1:AA:263:A:OP1	23:AT:75:ASN:HB2	1.85	0.76
28:BD:234:HIS:O	28:BD:237:GLY:HA3	1.85	0.76
50:B4:18:GLY:N	50:B4:33:VAL:CG2	2.49	0.76
27:BA:650:C:C5'	54:B8:19:THR:HG23	2.16	0.76
27:BA:1140:C:OP1	34:BN:18:ILE:CG1	2.34	0.76
27:BA:1214:A:H2'	27:BA:1215:G:H8	1.46	0.76
27:BA:1665:A:O3'	35:BO:66:LYS:NZ	2.04	0.76
27:BA:2251:G:OP1	37:BQ:102:ARG:CZ	2.34	0.76
27:BA:2265:U:O2'	27:BA:2266:A:OP1	2.03	0.76
27:BA:2321:G:H2'	27:BA:2321:G:N3	2.00	0.76
27:BA:1028:A:H1'	27:BA:2487:G:OP1	1.85	0.76
27:BA:2516:G:C5	27:BA:2569:G:N2	2.53	0.76
27:BA:2713:A:H5''	27:BA:2714:G:OP2	1.84	0.76
28:BD:143:ILE:HG21	28:BD:153:LEU:HB2	1.67	0.76
29:BE:177:ALA:O	29:BE:180:ILE:N	2.19	0.76
29:BE:217:TRP:CD2	29:BE:251:PRO:HG3	2.21	0.76
29:BE:225:LYS:C	29:BE:229:GLN:HE21	1.74	0.76
29:BE:269:ILE:HA	29:BE:297:LYS:HE2	1.66	0.76
30:BF:157:LEU:C	30:BF:159:ALA:N	2.37	0.76
30:BF:46:TYR:C	30:BF:92:PRO:HB2	2.05	0.76
32:BH:35:THR:O	32:BH:36:PHE:CG	2.39	0.76
33:BI:3:VAL:HG21	33:BI:21:VAL:CB	2.16	0.76
35:BO:87:ILE:HG23	35:BO:92:SER:N	2.00	0.76
37:BQ:136:TRP:HE3	37:BQ:136:TRP:HA	1.51	0.76
27:BA:1287:A:C1'	44:BR:104:ARG:HD2	2.16	0.76
45:BU:28:ARG:HG2	45:BU:29:SER:H	1.48	0.76
43:BZ:100:THR:HG22	43:BZ:137:ASP:CG	2.06	0.76
42:BY:34:GLU:O	42:BY:35:TYR:CD2	2.38	0.76
42:BY:74:VAL:HB	42:BY:77:VAL:CG2	2.14	0.76
26:BB:74:U:H2'	26:BB:75:G:H8	1.50	0.76
1:AA:1060:C:H5''	13:AJ:51:ARG:HB3	1.66	0.76
47:B2:4:HIS:O	47:B2:8:ILE:CD1	2.33	0.76
47:B2:52:ALA:C	47:B2:56:ILE:HG12	2.06	0.76
17:AN:40:CYS:O	17:AN:43:CYS:SG	2.44	0.76
1:AA:563:A:H2	15:AL:15:ARG:HH12	1.34	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1913:A:N1	27:BA:1916:A:H2'	2.00	0.76
27:BA:1027:A:N6	27:BA:1126:A:H1'	2.00	0.76
50:B4:6:HIS:CE1	50:B4:56:VAL:H	2.03	0.76
54:B8:60:LEU:CD1	54:B8:64:ARG:CB	2.47	0.76
27:BA:1364:G:H2'	50:B4:3:LYS:HZ1	1.47	0.76
27:BA:1567:A:H4'	27:BA:1568:G:C2	2.21	0.76
27:BA:2196:C:C2	27:BA:2197:U:O2	2.38	0.76
27:BA:2199:A:C3'	27:BA:2205:C:H6	1.98	0.76
27:BA:2324:C:N3	27:BA:2331:G:N2	2.30	0.76
27:BA:2421:G:H5''	27:BA:2422:A:OP2	1.84	0.76
27:BA:2579:C:C5	27:BA:2579:C:H5''	2.15	0.76
27:BA:2617:C:H2'	27:BA:2618:G:O5'	1.85	0.76
27:BA:2626:C:H3'	27:BA:2626:C:C6	2.21	0.76
27:BA:2684:U:H1'	35:BO:70:ARG:HH21	1.42	0.76
27:BA:2720:U:OP1	27:BA:2720:U:C4'	2.34	0.76
27:BA:2882:A:C2'	27:BA:2883:A:O5'	2.34	0.76
27:BA:449:A:OP1	30:BF:85:LYS:N	2.19	0.76
27:BA:994:C:O2'	45:BU:54:LYS:HA	1.86	0.76
28:BD:89:ASN:C	28:BD:105:ALA:CB	2.54	0.76
30:BF:237:GLU:O	30:BF:238:SER:C	2.24	0.76
30:BF:47:GLY:HA3	30:BF:92:PRO:HG2	1.67	0.76
27:BA:6:A:H4'	34:BN:4:ALA:C	2.04	0.76
45:BU:106:PHE:O	45:BU:108:ALA:N	2.18	0.76
42:BY:15:PRO:HB2	42:BY:18:GLU:HG3	1.66	0.76
43:BZ:62:PHE:CE2	43:BZ:87:THR:CG2	2.68	0.76
43:BZ:64:ALA:HB3	43:BZ:85:MET:HA	0.84	0.76
27:BA:2:G:C2	27:BA:2902:C:O2	2.38	0.76
29:BE:107:GLU:CB	29:BE:110:ARG:CZ	2.60	0.76
16:AM:122:LYS:CD	25:AY:153:GLY:CA	2.63	0.76
43:BZ:131:PRO:O	43:BZ:133:GLU:N	2.19	0.76
49:B0:46:LYS:HE3	49:B0:58:THR:HG1	1.48	0.76
49:B0:67:VAL:HG11	49:B0:74:LYS:HG2	0.79	0.76
48:B3:4:LEU:N	48:B3:37:LEU:O	2.18	0.76
50:B4:13:LYS:O	50:B4:14:ILE:CB	2.32	0.76
50:B4:58:LYS:HD2	50:B4:62:ARG:HH21	1.48	0.76
27:BA:686:G:O6	53:B7:12:ARG:NE	2.19	0.76
53:B7:17:GLY:HA2	53:B7:44:VAL:HG22	0.77	0.76
27:BA:2020:A:N6	27:BA:2034:U:O4	2.16	0.76
27:BA:2023:G:H5''	27:BA:2617:C:HO2'	1.51	0.76
27:BA:2638:G:O2'	27:BA:2639:A:H8	1.68	0.76
27:BA:2731:G:N1	27:BA:2732:G:C2	2.53	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:194:VAL:HG23	28:BD:195:GLY:N	2.01	0.76
29:BE:217:TRP:CE3	29:BE:251:PRO:HG3	2.21	0.76
30:BF:102:LEU:HB3	30:BF:107:ARG:CZ	2.16	0.76
32:BH:121:GLU:HG2	32:BH:133:LYS:O	1.86	0.76
35:BO:31:ARG:HB2	35:BO:32:TYR:HE1	1.50	0.76
35:BO:66:LYS:HZ1	35:BO:67:ARG:CZ	1.96	0.76
37:BQ:33:MET:HE1	37:BQ:34:GLY:O	1.84	0.76
37:BQ:31:PHE:CZ	37:BQ:88:PHE:HD2	2.04	0.76
44:BR:84:ALA:CB	44:BR:85:PRO:CD	2.58	0.76
38:BS:122:ALA:O	38:BS:125:ALA:CB	2.32	0.76
45:BU:41:ASN:O	45:BU:42:ALA:C	2.24	0.76
42:BY:32:ARG:O	42:BY:35:TYR:N	2.17	0.76
42:BY:74:VAL:HG11	42:BY:77:VAL:CG2	2.14	0.76
43:BZ:79:ILE:O	43:BZ:80:HIS:CG	2.39	0.76
41:BX:4:VAL:HG13	47:B2:24:LYS:HZ3	1.49	0.76
47:B2:50:ARG:O	47:B2:53:ILE:HB	1.86	0.76
47:B2:3:LEU:HB3	47:B2:8:ILE:HD11	1.66	0.76
41:BX:24:LEU:CD1	41:BX:68:LEU:CD2	2.64	0.76
2:AV:48:C:H2'	2:AV:48:C:O2	1.84	0.76
40:BW:19:LEU:HD22	51:B5:25:LEU:HG	0.77	0.76
27:BA:2438:U:H4'	27:BA:2440:C:OP1	1.85	0.76
27:BA:2519:U:N3	27:BA:2542:A:C5	2.53	0.76
27:BA:2691:C:C2'	27:BA:2692:C:H5'	2.16	0.76
27:BA:2744:G:C6	27:BA:2745:C:C4	2.74	0.76
27:BA:792:G:N7	27:BA:2440:C:H1'	2.01	0.76
29:BE:44:TYR:CE1	29:BE:308:VAL:CB	2.60	0.76
30:BF:236:THR:O	30:BF:237:GLU:C	2.25	0.76
30:BF:89:ALA:HB1	30:BF:90:HIS:NE2	2.01	0.76
31:BG:103:ASN:O	31:BG:104:PHE:CG	2.38	0.76
32:BH:15:THR:CG2	32:BH:26:LYS:CA	2.63	0.76
34:BN:19:MET:HB3	34:BN:46:ILE:CG1	2.16	0.76
35:BO:35:ILE:CD1	35:BO:35:ILE:N	2.37	0.76
36:BP:110:GLY:HA2	36:BP:129:ALA:HB2	1.66	0.76
27:BA:2880:C:H1'	44:BR:91:GLN:O	1.86	0.76
27:BA:1753:G:OP1	39:BT:51:TRP:HZ3	1.68	0.76
45:BU:17:VAL:HA	45:BU:20:ARG:HG3	1.67	0.76
42:BY:102:ASP:O	42:BY:103:LEU:HD23	1.86	0.76
28:BD:208:GLY:C	28:BD:211:HIS:CE1	2.59	0.76
47:B2:49:LEU:O	47:B2:50:ARG:C	2.23	0.76
41:BX:4:VAL:HG13	47:B2:24:LYS:NZ	2.01	0.76
1:AA:562:C:H1'	15:AL:15:ARG:HD2	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AJ:46:ARG:NH1	17:AN:59:ALA:CB	2.46	0.76
1:AA:891:U:H2'	1:AA:892:A:C8	2.20	0.76
1:AA:1286:A:H62	1:AA:1354:C:H5''	1.51	0.76
54:B8:60:LEU:HD22	54:B8:61:MET:N	2.01	0.75
27:BA:2307:G:C2'	27:BA:2311:A:N6	2.49	0.75
27:BA:2366:A:N7	27:BA:2367:G:N7	2.33	0.75
27:BA:2285:C:O2	27:BA:2384:G:N2	2.19	0.75
27:BA:2548:G:C8	27:BA:2548:G:H3'	2.20	0.75
27:BA:2869:G:H2'	27:BA:2870:C:H5'	1.66	0.75
27:BA:775:G:H22	27:BA:788:A:P	2.09	0.75
27:BA:965:C:C1'	27:BA:2273:A:C2	2.68	0.75
30:BF:220:THR:HB	30:BF:224:ALA:HB2	1.67	0.75
31:BG:19:GLU:HB3	31:BG:135:VAL:HG21	1.04	0.75
32:BH:116:PRO:HB2	32:BH:120:LEU:O	1.86	0.75
32:BH:121:GLU:OE2	32:BH:134:GLY:CA	2.24	0.75
32:BH:159:LYS:N	32:BH:162:ARG:NH2	2.29	0.75
32:BH:75:VAL:O	32:BH:78:VAL:N	2.18	0.75
33:BI:4:ILE:C	33:BI:5:PHE:CD2	2.60	0.75
35:BO:122:ILE:HD12	35:BO:122:ILE:H	1.51	0.75
35:BO:3:GLN:HG2	35:BO:4:GLN:N	2.01	0.75
38:BS:27:LEU:HD13	38:BS:28:LYS:N	2.01	0.75
38:BS:36:ALA:HA	38:BS:45:ALA:CB	2.15	0.75
45:BU:12:ARG:O	45:BU:13:ARG:C	2.23	0.75
40:BW:50:VAL:HG12	40:BW:50:VAL:O	1.86	0.75
43:BZ:25:ASN:HA	43:BZ:84:TYR:CE1	2.21	0.75
27:BA:1790:C:O2	27:BA:1790:C:H2'	1.86	0.75
27:BA:865:C:O2'	27:BA:866:A:N7	2.18	0.75
1:AA:1376:U:H5''	10:AG:94:ARG:HH22	1.51	0.75
27:BA:2385:C:O2'	49:B0:39:ARG:NH2	2.19	0.75
27:BA:2433:A:H2	50:B4:32:HIS:CE1	2.04	0.75
50:B4:58:LYS:O	50:B4:61:LYS:CG	2.33	0.75
27:BA:1312:U:O2'	27:BA:1314:C:H5	1.68	0.75
27:BA:2185:C:H2'	27:BA:2186:G:C8	2.21	0.75
27:BA:2208:U:H3	27:BA:2216:G:H1	0.80	0.75
27:BA:2317:C:C5'	31:BG:150:SER:CA	2.49	0.75
27:BA:2631:G:H2'	27:BA:2632:A:O5'	1.85	0.75
27:BA:2769:C:O2	27:BA:2770:G:O4'	2.05	0.75
30:BF:102:LEU:CB	30:BF:107:ARG:CZ	2.63	0.75
27:BA:600:G:H5'	30:BF:30:LEU:HD11	0.82	0.75
31:BG:21:VAL:HG13	31:BG:132:VAL:CA	2.15	0.75
27:BA:527:C:H2'	34:BN:95:ARG:HH11	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:21:VAL:CA	35:BO:41:ALA:HB2	2.15	0.75
36:BP:66:VAL:HB	36:BP:110:GLY:O	1.85	0.75
44:BR:79:LEU:HD22	44:BR:80:PHE:CA	2.16	0.75
39:BT:21:PHE:O	39:BT:22:VAL:HG13	1.83	0.75
45:BU:113:SER:C	45:BU:115:ASN:N	2.39	0.75
40:BW:36:LEU:HA	40:BW:39:THR:CG2	2.16	0.75
40:BW:50:VAL:HG21	40:BW:103:ILE:HG21	1.68	0.75
42:BY:73:HIS:NE2	42:BY:89:ARG:O	2.19	0.75
43:BZ:10:PRO:O	43:BZ:14:LEU:CB	2.34	0.75
47:B2:17:GLU:O	47:B2:18:ALA:C	2.24	0.75
27:BA:2858:C:O2	27:BA:2858:C:H2'	1.85	0.75
27:BA:1534:G:N2	27:BA:1538:G:N3	2.34	0.75
20:AQ:44:ALA:CB	20:AQ:59:ILE:HD11	2.16	0.75
8:AE:51:VAL:HB	8:AE:52:PRO:HD3	1.67	0.75
48:B3:39:ASP:HA	48:B3:44:ARG:NH2	2.02	0.75
27:BA:2298:A:C4	27:BA:2321:G:C2	2.74	0.75
27:BA:2325:G:C6	27:BA:2326:C:H5	2.04	0.75
27:BA:957:A:C2	27:BA:2459:A:H5'	2.20	0.75
27:BA:2482:G:C6	27:BA:2483:C:C6	2.74	0.75
27:BA:2488:A:H3'	27:BA:2488:A:C8	2.20	0.75
27:BA:2526:G:O2'	27:BA:2527:C:H5'	1.85	0.75
27:BA:2532:G:O5'	27:BA:2532:G:C8	2.39	0.75
27:BA:2606:C:H2'	27:BA:2607:G:O5'	1.86	0.75
27:BA:1456:G:H22	27:BA:2703:C:H5	1.32	0.75
27:BA:2821:A:C2	27:BA:2822:G:C8	2.74	0.75
27:BA:2836:U:C2	27:BA:2883:A:N6	2.53	0.75
27:BA:803:U:C2'	27:BA:804:A:H5'	2.16	0.75
27:BA:825:C:O3'	27:BA:2428:G:C8	2.40	0.75
27:BA:911:A:H2	37:BQ:17:ARG:CD	2.00	0.75
27:BA:782:A:C2	28:BD:233:ASP:OD2	2.39	0.75
28:BD:67:LYS:N	28:BD:67:LYS:HD3	2.00	0.75
28:BD:77:VAL:HG12	28:BD:77:VAL:O	1.85	0.75
28:BD:80:ILE:CG1	28:BD:82:TYR:HE1	1.99	0.75
30:BF:220:THR:HB	30:BF:224:ALA:CB	2.16	0.75
30:BF:20:ASP:O	30:BF:23:GLU:HB2	1.86	0.75
30:BF:87:ARG:O	30:BF:88:SER:CB	2.35	0.75
31:BG:151:ILE:CD1	31:BG:156:ARG:HH22	1.98	0.75
32:BH:102:LEU:CD2	32:BH:102:LEU:H	1.98	0.75
33:BI:28:ASN:HA	33:BI:32:LYS:HG2	1.68	0.75
34:BN:65:ASN:CG	34:BN:69:TYR:CD1	2.60	0.75
36:BP:73:VAL:CG1	36:BP:76:LEU:HD23	2.15	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:96:VAL:HG23	36:BP:101:ASP:H	1.49	0.75
37:BQ:31:PHE:C	37:BQ:85:ILE:HD11	2.05	0.75
43:BZ:130:ILE:HD12	43:BZ:130:ILE:C	2.04	0.75
42:BY:57:GLY:HA2	42:BY:97:ARG:NH2	2.00	0.75
47:B2:48:GLU:O	47:B2:50:ARG:N	2.19	0.75
41:BX:33:SER:O	41:BX:34:LYS:C	2.23	0.75
1:AA:673:G:H2'	1:AA:674:G:C8	2.21	0.75
2:AV:40:C:C2'	2:AV:41:U:H5''	2.15	0.75
1:AA:261:U:C5	23:AT:79:ARG:NH2	2.53	0.75
50:B4:17:GLN:CA	50:B4:33:VAL:HB	2.17	0.75
51:B5:46:CYS:C	51:B5:48:ASN:H	1.88	0.75
27:BA:2586:C:H2'	27:BA:2587:A:H5'	1.68	0.75
27:BA:2661:G:C6	27:BA:2662:A:N6	2.53	0.75
27:BA:2666:C:C5	27:BA:2667:C:C6	2.74	0.75
27:BA:2825:C:C5	27:BA:2825:C:O5'	2.40	0.75
27:BA:583:G:P	45:BU:10:ARG:NH1	2.58	0.75
28:BD:107:LYS:HB2	28:BD:195:GLY:HA2	1.69	0.75
28:BD:135:PRO:HG2	28:BD:138:THR:HG21	0.78	0.75
28:BD:198:GLY:C	28:BD:200:THR:N	2.39	0.75
29:BE:211:GLN:OE1	29:BE:212:GLY:N	2.17	0.75
29:BE:63:GLU:O	29:BE:67:THR:HA	1.85	0.75
30:BF:167:ASP:HB3	30:BF:232:LEU:N	2.02	0.75
30:BF:220:THR:CB	30:BF:224:ALA:HB2	2.16	0.75
31:BG:24:HIS:C	31:BG:25:MET:HG2	2.04	0.75
35:BO:17:ARG:NH2	35:BO:47:THR:CA	2.49	0.75
36:BP:64:ILE:CB	36:BP:107:LYS:O	2.23	0.75
36:BP:69:ILE:CA	36:BP:73:VAL:CG2	2.65	0.75
44:BR:32:GLY:O	44:BR:33:ARG:HB3	1.83	0.75
44:BR:37:THR:HA	44:BR:111:LEU:CA	2.15	0.75
44:BR:46:GLY:O	44:BR:50:HIS:N	2.19	0.75
27:BA:995:C:P	45:BU:54:LYS:CE	2.71	0.75
45:BU:74:MET:HE1	45:BU:78:THR:CG2	1.97	0.75
46:BV:39:PHE:CD2	46:BV:40:VAL:N	2.54	0.75
46:BV:46:VAL:HG12	46:BV:46:VAL:O	1.86	0.75
1:AA:979:C:OP1	1:AA:1222:G:O6	2.04	0.75
31:BG:44:ILE:HG22	31:BG:83:PHE:CE2	2.12	0.75
27:BA:1917:U:C3'	27:BA:1918:A:H8	1.93	0.75
42:BY:81:LYS:CG	42:BY:82:THR:H	1.95	0.75
8:AE:95:ALA:HB3	8:AE:96:PRO:HD3	1.68	0.75
49:B0:20:TYR:O	49:B0:21:LEU:O	2.04	0.75
50:B4:41:PRO:CB	50:B4:57:ASP:HB3	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:68:ARG:CD	50:B4:72:LYS:CG	2.57	0.75
27:BA:2284:C:OP2	52:B6:9:ILE:HG13	1.85	0.75
54:B8:25:PHE:O	54:B8:26:LYS:C	2.23	0.75
27:BA:1131:G:N2	34:BN:69:TYR:CZ	2.55	0.75
27:BA:199:A:C2	27:BA:2433:A:C4	2.74	0.75
27:BA:2188:C:C5	27:BA:2189:U:O4	2.39	0.75
27:BA:2197:U:H5	27:BA:2224:G:C4	2.05	0.75
27:BA:859:G:O2'	27:BA:2268:A:C4	2.38	0.75
27:BA:2516:G:C2	27:BA:2569:G:N3	2.55	0.75
27:BA:2658:C:C2'	27:BA:2659:G:O5'	2.34	0.75
27:BA:2741:A:C2'	27:BA:2742:C:H6	1.95	0.75
27:BA:2865:U:C6	27:BA:2866:U:C5	2.75	0.75
27:BA:973:A:N6	46:BV:81:ARG:NE	2.35	0.75
27:BA:606:U:H5'	30:BF:103:ASN:CG	2.07	0.75
27:BA:443:A:N7	30:BF:43:LYS:HD2	2.01	0.75
32:BH:128:THR:HG23	32:BH:129:LYS:H	1.52	0.75
32:BH:23:VAL:CG1	32:BH:74:MET:CE	2.64	0.75
34:BN:19:MET:CA	34:BN:19:MET:HE3	2.17	0.75
34:BN:77:GLY:O	34:BN:78:ILE:C	2.22	0.75
36:BP:142:LEU:O	36:BP:145:LEU:HD13	1.87	0.75
37:BQ:91:HIS:N	37:BQ:111:THR:HG23	2.00	0.75
2:AV:1:G:H4'	37:BQ:97:ASP:OD2	1.85	0.75
45:BU:94:VAL:O	45:BU:98:ILE:HD11	0.94	0.75
33:BI:108:LEU:CD2	33:BI:109:LYS:O	2.34	0.75
42:BY:27:LEU:HD23	42:BY:98:VAL:HG12	1.69	0.75
47:B2:13:PRO:CD	47:B2:16:ARG:NH1	2.45	0.75
49:B0:50:GLY:C	49:B0:52:GLY:H	1.88	0.75
27:BA:270:A:H2'	27:BA:270(A):A:H4'	1.69	0.75
27:BA:126:A:C5	53:B7:18:PHE:CZ	2.66	0.75
27:BA:2219:G:O2'	27:BA:2224:G:H5'	1.71	0.75
27:BA:2232:U:C2'	27:BA:2233:U:C5'	2.61	0.75
27:BA:2520:C:C4	27:BA:2567:G:C8	2.74	0.75
27:BA:2530:A:C3'	27:BA:2531:A:H5''	2.17	0.75
27:BA:2603:G:C5	27:BA:2604:U:C5	2.75	0.75
27:BA:2626:C:C3'	27:BA:2626:C:C6	2.70	0.75
27:BA:2043:C:C4	27:BA:2777:G:N3	2.54	0.75
27:BA:2793:G:O6	27:BA:2794:C:N4	2.19	0.75
26:BB:51:G:OP2	38:BS:72:GLU:CG	2.34	0.75
28:BD:155:ARG:C	28:BD:157:ALA:N	2.38	0.75
29:BE:205:THR:HG23	29:BE:259:HIS:N	1.97	0.75
31:BG:56:ARG:HA	31:BG:63:ILE:O	1.86	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:120:LEU:HD23	32:BH:120:LEU:N	2.01	0.75
37:BQ:136:TRP:O	37:BQ:139:ALA:CA	2.34	0.75
37:BQ:33:MET:CB	37:BQ:83:PHE:HB2	2.17	0.75
38:BS:30:GLY:O	38:BS:31:LYS:HE2	1.86	0.75
35:BO:99:PHE:HD2	39:BT:24:LYS:CE	1.93	0.75
43:BZ:115:ILE:O	43:BZ:169:VAL:HG13	1.87	0.75
43:BZ:3:LEU:CB	43:BZ:34:LEU:HA	2.05	0.75
1:AA:1199:U:H4'	13:AJ:54:PHE:CE2	2.22	0.75
39:BT:45:GLU:O	39:BT:48:ASN:CG	2.25	0.75
27:BA:2755:C:H6	27:BA:2755:C:O5'	1.58	0.75
1:AA:20:U:O4'	1:AA:572:A:C6	2.40	0.75
27:BA:176:G:H3'	27:BA:177:G:C8	2.21	0.75
27:BA:332:A:H2'	27:BA:334:C:OP2	1.86	0.75
27:BA:983:A:C8	27:BA:984:A:H1'	2.22	0.75
28:BD:230:ASN:O	28:BD:231:ALA:HB2	1.85	0.75
20:AQ:87:LYS:O	20:AQ:91:ARG:HB3	1.87	0.75
25:AY:225:SER:CA	27:BA:2554:U:N3	2.49	0.75
48:B3:30:ARG:NH1	48:B3:30:ARG:CG	2.38	0.75
27:BA:650:C:OP1	54:B8:19:THR:OG1	2.05	0.75
54:B8:23:MET:CE	54:B8:48:PHE:CA	2.59	0.75
55:B9:29:ASN:HD22	55:B9:32:HIS:HE1	1.32	0.75
27:BA:2302:G:O2'	27:BA:2303:G:O5'	2.02	0.75
27:BA:2635:C:N3	27:BA:2783:G:N1	2.34	0.75
27:BA:2722:G:N1	27:BA:2723:C:N3	2.31	0.75
27:BA:2734:A:C8	27:BA:2734:A:C5'	2.69	0.75
27:BA:2788:C:H5''	27:BA:2789:C:P	2.27	0.75
27:BA:2826:A:N7	27:BA:2827:C:C5	2.46	0.75
27:BA:2852:G:N3	27:BA:2853:C:C2	2.55	0.75
27:BA:387:U:H4'	27:BA:388:G:O4'	1.87	0.75
27:BA:602:G:H21	27:BA:655:A:H2'	1.52	0.75
27:BA:910:A:N6	37:BQ:12:PRO:C	2.40	0.75
29:BE:222:ARG:HG2	29:BE:232:ARG:HA	1.69	0.75
31:BG:76:ARG:CB	31:BG:77:ASP:OD1	2.35	0.75
32:BH:82:TYR:CZ	32:BH:137:LYS:HG3	2.20	0.75
32:BH:41:THR:HG22	32:BH:52:THR:CB	2.17	0.75
33:BI:12:LYS:O	33:BI:14:LYS:HG3	1.86	0.75
34:BN:137:GLU:N	34:BN:141:ALA:H	1.83	0.75
35:BO:10:VAL:HG21	35:BO:16:ALA:CB	2.12	0.75
27:BA:1952:A:N3	35:BO:22:ILE:HD13	2.02	0.75
35:BO:1:MET:CB	35:BO:2:ILE:CD1	2.64	0.75
38:BS:32:PRO:HG3	38:BS:100:ALA:CB	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:535:C:C5'	45:BU:53:LYS:HE3	2.12	0.75
45:BU:44:THR:HG21	46:BV:78:VAL:CG1	2.17	0.75
27:BA:494:G:C4'	40:BW:6:ILE:CG2	2.55	0.75
33:BI:92:SER:CB	33:BI:122:ARG:NH1	2.45	0.75
42:BY:78:THR:H	42:BY:89:ARG:CZ	2.00	0.75
43:BZ:19:ILE:CB	43:BZ:39:PHE:CE1	2.66	0.75
47:B2:59:ILE:O	47:B2:60:GLN:C	2.25	0.75
47:B2:62:GLU:O	47:B2:63:GLU:C	2.24	0.75
1:AA:578:C:O2	1:AA:728:A:H2	1.69	0.75
40:BW:2:GLU:HA	40:BW:108:GLY:HA2	1.67	0.75
48:B3:48:GLU:HG2	48:B3:49:LYS:H	1.51	0.75
50:B4:6:HIS:CE1	50:B4:55:ARG:HB2	2.21	0.75
27:BA:1651:G:H1	27:BA:2006:C:H42	1.33	0.75
27:BA:2206:C:O2'	27:BA:2207:C:C4'	2.34	0.75
27:BA:2211:G:H2'	27:BA:2211:G:N3	2.00	0.75
27:BA:2213:U:H2'	27:BA:2213:U:O2	1.85	0.75
27:BA:2330:G:O2'	27:BA:2331:G:H5'	1.85	0.75
27:BA:2526:G:H2'	27:BA:2527:C:O5'	1.87	0.75
27:BA:2567:G:C4	27:BA:2568:C:C5	2.67	0.75
27:BA:2615:U:C2'	27:BA:2616:C:O5'	2.33	0.75
27:BA:2665:A:O2'	27:BA:2666:C:O4'	2.03	0.75
27:BA:2881:C:H2'	27:BA:2882:A:C8	2.21	0.75
27:BA:510:C:P	27:BA:512:G:H1	2.09	0.75
27:BA:530:G:H5''	27:BA:561:G:O6	1.87	0.75
29:BE:222:ARG:CD	29:BE:222:ARG:H	1.96	0.75
29:BE:235:ILE:HG23	29:BE:236:GLY:H	1.51	0.75
29:BE:200:ASP:C	29:BE:266:LYS:HD2	2.07	0.75
29:BE:76:PRO:HB2	29:BE:77:PRO:HD2	1.63	0.75
30:BF:140:VAL:CG2	30:BF:234:VAL:HB	2.17	0.75
31:BG:103:ASN:C	31:BG:104:PHE:CG	2.59	0.75
32:BH:32:LEU:CD1	32:BH:136:ASP:OD2	2.35	0.75
35:BO:64:ARG:CD	35:BO:81:GLU:HB3	2.17	0.75
35:BO:66:LYS:HD2	35:BO:67:ARG:N	2.00	0.75
40:BW:68:ARG:O	40:BW:110:LYS:HB2	1.86	0.75
40:BW:24:ILE:HG22	40:BW:35:ILE:CB	2.16	0.75
43:BZ:154:LEU:C	43:BZ:154:LEU:HD23	2.07	0.75
43:BZ:116:VAL:CB	43:BZ:169:VAL:HG22	2.16	0.75
33:BI:102:LEU:HD12	33:BI:103:GLN:H	0.93	0.75
42:BY:43:ASN:ND2	42:BY:112:LEU:HD21	1.98	0.75
1:AA:986:A:N3	22:AS:52:TYR:CZ	2.54	0.75
28:BD:222:PRO:O	28:BD:224:VAL:CG2	2.25	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AB:163:PHE:HA	5:AB:185:ILE:O	1.87	0.75
27:BA:269:U:H5	27:BA:270(Z):U:P	2.09	0.75
1:AA:693:G:H2'	1:AA:694:A:C8	2.22	0.75
49:B0:79:ILE:O	49:B0:81:ILE:CD1	2.33	0.75
48:B3:23:LEU:O	48:B3:28:LEU:CD1	2.35	0.75
27:BA:1156:A:P	45:BU:55:ARG:NH1	2.60	0.75
27:BA:2403:C:C2'	27:BA:2403:C:O2	2.32	0.75
27:BA:2430:A:C2'	27:BA:2431:U:H5''	2.16	0.75
27:BA:2473:U:O2	27:BA:2473:U:C2'	2.34	0.75
27:BA:2543:G:N9	27:BA:2544:G:N7	2.35	0.75
27:BA:2604:U:O2	27:BA:2605:U:C5	2.40	0.75
27:BA:2633:G:C4	27:BA:2634:G:C8	2.75	0.75
27:BA:2671:A:H2'	27:BA:2672:G:H8	1.52	0.75
27:BA:2716:U:N3	27:BA:2717:G:N7	2.33	0.75
27:BA:2813:A:C8	27:BA:2814:C:H5	2.04	0.75
27:BA:2828:C:N3	27:BA:2829:C:C4	2.55	0.75
27:BA:932:G:OP1	48:B3:29:ARG:NE	2.20	0.75
29:BE:200:ASP:O	29:BE:311:PHE:CA	2.34	0.75
27:BA:617:G:OP1	30:BF:221:GLU:HB2	1.87	0.75
30:BF:52:ALA:CB	30:BF:55:ARG:HH21	1.75	0.75
31:BG:19:GLU:OE1	31:BG:135:VAL:CB	2.34	0.75
32:BH:86:LEU:HD22	32:BH:87:GLU:N	2.01	0.75
34:BN:103:VAL:HG12	34:BN:104:TYR:N	2.01	0.75
34:BN:39:VAL:O	34:BN:40:ASN:HB2	1.85	0.75
34:BN:83:ILE:O	34:BN:85:GLY:N	2.20	0.75
34:BN:87:LEU:CB	34:BN:88:PRO:HD2	2.16	0.75
35:BO:105:GLU:O	35:BO:106:LEU:C	2.26	0.75
37:BQ:33:MET:HG3	37:BQ:83:PHE:CG	2.21	0.75
44:BR:62:ALA:CB	44:BR:80:PHE:HZ	1.99	0.75
33:BI:93:ILE:O	33:BI:93:ILE:CG1	2.35	0.75
42:BY:70:ALA:O	42:BY:71:VAL:HG23	1.87	0.75
47:B2:62:GLU:C	47:B2:64:GLY:N	2.36	0.75
27:BA:138:G:H8	41:BX:42:GLU:CD	1.89	0.75
2:AV:66:A:H2'	2:AV:67:A:C8	2.22	0.75
3:AW:31:A:N3	10:AG:144:MET:HE2	2.02	0.75
27:BA:1495:A:H2'	27:BA:1496:A:N7	2.02	0.75
7:AD:109:GLY:HA3	7:AD:165:MET:HG3	1.68	0.75
52:B6:8:ILE:HA	52:B6:29:ARG:CZ	2.17	0.74
27:BA:1673:U:H5	29:BE:225:LYS:CD	1.99	0.74
27:BA:1953:A:N6	27:BA:2550:G:H4'	2.01	0.74
27:BA:2100:G:C6	27:BA:2190:G:C6	2.74	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2414:G:N3	27:BA:2415:G:H8	1.84	0.74
27:BA:2468:G:C6	27:BA:2481:G:C2	2.74	0.74
27:BA:2626:C:H6	27:BA:2626:C:O5'	1.63	0.74
27:BA:2633:G:H1	27:BA:2785:C:N4	1.82	0.74
27:BA:2818:G:C2	27:BA:2829:C:N3	2.54	0.74
27:BA:380:U:O2'	50:B4:15:ILE:CB	2.35	0.74
28:BD:123:ILE:O	28:BD:125:ILE:N	2.20	0.74
30:BF:22:PHE:HZ	30:BF:115:LEU:CD1	2.00	0.74
30:BF:167:ASP:C	30:BF:168:ARG:HG3	2.07	0.74
27:BA:801:G:OP2	30:BF:79:ARG:CZ	2.35	0.74
31:BG:57:THR:H	31:BG:63:ILE:HA	1.50	0.74
34:BN:108:PRO:HG2	34:BN:109:TYR:CD1	2.21	0.74
35:BO:25:LEU:HD12	35:BO:38:VAL:CB	2.17	0.74
37:BQ:132:VAL:O	37:BQ:135:ALA:HB3	1.86	0.74
37:BQ:49:VAL:CG2	37:BQ:120:HIS:HA	2.17	0.74
37:BQ:67:ALA:HB2	37:BQ:70:ARG:HH11	0.93	0.74
45:BU:91:ASN:OD1	45:BU:92:ARG:N	2.19	0.74
46:BV:61:VAL:CG2	46:BV:98:ILE:N	2.42	0.74
46:BV:69:ILE:CG2	46:BV:88:GLN:CB	2.65	0.74
40:BW:15:ARG:O	40:BW:18:ARG:N	2.20	0.74
33:BI:92:SER:HA	33:BI:122:ARG:CG	2.08	0.74
42:BY:50:VAL:HG12	42:BY:52:ARG:H	1.50	0.74
1:AA:988:G:N2	1:AA:1016:A:H1'	2.01	0.74
16:AM:88:ARG:HB2	16:AM:98:VAL:CG1	2.16	0.74
28:BD:208:GLY:O	28:BD:211:HIS:CE1	2.40	0.74
27:BA:76:C:O2'	47:B2:55:ARG:CA	2.35	0.74
27:BA:1518:C:C3'	27:BA:1519:G:H4'	2.15	0.74
16:AM:122:LYS:NZ	25:AY:153:GLY:CA	2.50	0.74
27:BA:882:G:H1	27:BA:894:C:H42	1.34	0.74
48:B3:44:ARG:O	48:B3:48:GLU:OE1	2.05	0.74
48:B3:53:LEU:HD22	48:B3:54:VAL:HG13	1.67	0.74
53:B7:10:ARG:O	53:B7:11:LYS:O	2.05	0.74
27:BA:126:A:H5''	53:B7:18:PHE:HD1	1.52	0.74
27:BA:2251:G:P	37:BQ:102:ARG:NE	2.58	0.74
27:BA:2379:G:P	38:BS:30:GLY:HA2	2.26	0.74
27:BA:827:U:OP1	27:BA:2430:A:OP2	2.05	0.74
27:BA:2482:G:C2'	27:BA:2483:C:H5''	2.14	0.74
27:BA:2485:G:N2	27:BA:2486:G:H1'	2.01	0.74
27:BA:2576:G:H3'	27:BA:2576:G:P	2.27	0.74
27:BA:2641:G:O6	27:BA:2773:C:N3	2.20	0.74
27:BA:2850:A:H2'	27:BA:2851:A:C8	2.19	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:445:C:OP1	45:BU:2:PRO:CD	2.36	0.74
27:BA:910:A:N6	37:BQ:12:PRO:CA	2.49	0.74
27:BA:911:A:H5''	27:BA:912:C:H5''	1.67	0.74
29:BE:205:THR:CG2	29:BE:258:TYR:C	2.54	0.74
32:BH:123:GLU:OE2	32:BH:123:GLU:N	2.20	0.74
32:BH:147:ILE:HD12	32:BH:150:VAL:CB	2.18	0.74
33:BI:31:PHE:CZ	33:BI:36:ALA:HB3	2.21	0.74
34:BN:65:ASN:CB	34:BN:69:TYR:CE1	2.69	0.74
35:BO:65:THR:OG1	35:BO:67:ARG:CG	2.34	0.74
36:BP:66:VAL:O	36:BP:67:ARG:C	2.25	0.74
37:BQ:142:LYS:C	37:BQ:142:LYS:CE	2.55	0.74
45:BU:52:ASN:O	45:BU:53:LYS:C	2.24	0.74
40:BW:32:ALA:O	40:BW:34:ASN:N	2.20	0.74
42:BY:50:VAL:C	42:BY:51:LEU:HD13	2.07	0.74
42:BY:92:ASP:OD1	42:BY:92:ASP:C	2.25	0.74
26:BB:77:U:OP1	43:BZ:80:HIS:CD2	2.40	0.74
27:BA:1398:C:H2'	27:BA:1399:C:H6	1.52	0.74
27:BA:440:G:O5'	42:BY:3:GLN:NE2	2.20	0.74
49:B0:50:GLY:O	49:B0:52:GLY:N	2.20	0.74
27:BA:715:G:H2'	27:BA:716:A:C8	2.22	0.74
48:B3:37:LEU:HD13	48:B3:43:ILE:HG21	1.67	0.74
27:BA:388:G:OP2	50:B4:29:PRO:CG	2.36	0.74
27:BA:2063:C:O2	27:BA:2450:A:N1	2.19	0.74
27:BA:2294:C:C4	27:BA:2339:G:O6	2.40	0.74
27:BA:2422:A:O2'	27:BA:2424:C:C6	2.39	0.74
27:BA:2489:G:N7	27:BA:2490:G:N7	2.35	0.74
27:BA:2555:U:C5	27:BA:2556:C:C6	2.75	0.74
27:BA:2571:C:O2'	29:BE:243:PRO:CG	2.35	0.74
27:BA:2576:G:N3	27:BA:2576:G:H2'	2.02	0.74
27:BA:2636:U:C4'	29:BE:84:ARG:NH2	2.21	0.74
27:BA:2638:G:C4	27:BA:2775:A:C2	2.75	0.74
27:BA:2737:G:N1	27:BA:2767:C:N4	1.97	0.74
27:BA:2804:C:C6	27:BA:2805:G:C6	2.75	0.74
27:BA:2886:G:C2	27:BA:2887:U:C6	2.76	0.74
28:BD:175:LEU:HD23	28:BD:175:LEU:H	1.47	0.74
29:BE:99:VAL:CG1	29:BE:100:TRP:N	2.46	0.74
30:BF:215:ALA:HA	30:BF:239:ALA:HA	1.69	0.74
31:BG:13:MET:O	31:BG:15:GLU:N	2.21	0.74
32:BH:15:THR:HG23	32:BH:26:LYS:HB2	1.63	0.74
32:BH:41:THR:CG2	32:BH:52:THR:CB	2.66	0.74
1:AA:1422:G:OP1	35:BO:48:PRO:HA	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:87:ILE:HG21	35:BO:91:LYS:HA	1.68	0.74
36:BP:94:ARG:O	36:BP:95:ASP:CB	2.34	0.74
37:BQ:27:GLY:O	37:BQ:28:ILE:HG12	1.87	0.74
44:BR:90:ARG:HH12	44:BR:117:VAL:CG2	2.00	0.74
38:BS:110:THR:OG1	38:BS:111:PRO:CD	2.34	0.74
26:BB:115:G:H5'	38:BS:59:ALA:CB	2.13	0.74
38:BS:60:SER:HA	38:BS:91:ARG:HD3	1.68	0.74
46:BV:57:GLN:O	46:BV:58:ALA:HB2	1.87	0.74
42:BY:43:ASN:ND2	42:BY:103:LEU:CD2	2.45	0.74
42:BY:31:LEU:HD12	42:BY:101:LEU:HB2	1.67	0.74
28:BD:224:VAL:HG12	28:BD:225:ARG:H	1.51	0.74
27:BA:1546:C:HO3'	27:BA:1547:C:P	1.42	0.74
1:AA:1117:G:H21	1:AA:1180:A:H1'	1.52	0.74
1:AA:1206:G:O4'	6:AC:194:GLY:HA2	1.87	0.74
27:BA:1472:A:C2'	27:BA:1473:G:H8	1.99	0.74
56:BK:85:ILE:CD1	56:BK:87:LYS:O	2.35	0.74
49:B0:35:ASN:O	49:B0:36:ILE:CG1	2.33	0.74
48:B3:6:VAL:CG2	48:B3:54:VAL:CG2	2.65	0.74
27:BA:2093:G:N2	27:BA:2198:A:N6	2.34	0.74
27:BA:2250:G:H5'	37:BQ:102:ARG:CD	2.07	0.74
27:BA:2256:G:N2	27:BA:2257:U:C2	2.55	0.74
27:BA:2333:A:H1'	27:BA:2335:A:C2	2.18	0.74
27:BA:2461:C:C2	27:BA:2462:U:C6	2.75	0.74
27:BA:2446:G:N2	27:BA:2501:C:C5	2.54	0.74
27:BA:2508:G:N2	27:BA:2509:G:C1'	2.50	0.74
27:BA:2511:U:O2'	27:BA:2512:C:H5'	1.87	0.74
27:BA:2748:A:C8	27:BA:2749:A:C5	2.75	0.74
27:BA:2783:G:H2'	27:BA:2784:C:H6	1.50	0.74
27:BA:991:C:OP2	27:BA:1186:G:OP2	2.05	0.74
28:BD:146:LYS:HZ2	28:BD:184:LEU:CD1	1.92	0.74
28:BD:167:GLU:HB2	28:BD:170:TYR:CE1	2.06	0.74
29:BE:45:LYS:HE3	29:BE:303:PRO:HG2	0.79	0.74
32:BH:55:SER:O	32:BH:57:GLU:N	2.20	0.74
32:BH:83:GLU:C	32:BH:83:GLU:OE2	2.25	0.74
34:BN:68:GLY:O	34:BN:69:TYR:HB2	1.88	0.74
34:BN:74:ARG:O	34:BN:75:PRO:C	2.23	0.74
36:BP:77:ALA:CA	36:BP:81:VAL:CG2	2.65	0.74
37:BQ:72:VAL:CG2	37:BQ:135:ALA:CB	2.65	0.74
37:BQ:31:PHE:HA	37:BQ:85:ILE:CD1	2.18	0.74
38:BS:23:ARG:NH2	38:BS:37:ARG:NH2	2.35	0.74
38:BS:46:GLN:HB3	38:BS:57:THR:CG2	2.16	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:68:GLY:O	45:BU:71:LEU:N	2.21	0.74
33:BI:76:THR:HB	33:BI:144:HIS:CE1	2.21	0.74
43:BZ:51:LEU:HD23	43:BZ:52:PHE:H	1.49	0.74
47:B2:22:ASP:O	47:B2:23:LEU:C	2.25	0.74
41:BX:9:HIS:ND1	41:BX:26:PHE:O	2.16	0.74
31:BG:44:ILE:C	31:BG:83:PHE:HZ	1.91	0.74
1:AA:1502:A:C2	1:AA:1505:G:N1	2.38	0.74
1:AA:463:A:P	19:AP:75:ARG:NH2	2.60	0.74
1:AA:1201:A:H4'	1:AA:1202:G:H5''	1.68	0.74
49:B0:18:PRO:HB2	49:B0:36:ILE:CD1	2.16	0.74
27:BA:530:G:C6	27:BA:2021:C:H3'	2.22	0.74
27:BA:2391:G:O2'	27:BA:2392:A:P	2.46	0.74
27:BA:2623:G:H4'	27:BA:2826:A:C1'	2.18	0.74
27:BA:2626:C:C4'	27:BA:2626:C:C6	2.70	0.74
27:BA:2754:U:C2'	27:BA:2756:U:P	2.72	0.74
27:BA:627:A:H4'	27:BA:627:A:OP2	1.87	0.74
28:BD:140:VAL:HG22	28:BD:191:VAL:CG1	2.13	0.74
28:BD:140:VAL:HG13	28:BD:190:THR:O	1.88	0.74
29:BE:269:ILE:CA	29:BE:297:LYS:HE2	2.17	0.74
30:BF:215:ALA:CB	30:BF:241:ALA:HB3	2.09	0.74
31:BG:102:GLY:HA2	31:BG:134:LEU:CD1	2.07	0.74
31:BG:65:GLU:OE1	31:BG:65:GLU:C	2.25	0.74
32:BH:104:LEU:HB2	32:BH:151:ARG:HH12	1.42	0.74
32:BH:7:PRO:N	32:BH:50:THR:HG1	1.85	0.74
33:BI:43:ASN:O	33:BI:45:LYS:C	2.24	0.74
33:BI:53:LYS:O	33:BI:57:GLN:OE1	2.04	0.74
33:BI:5:PHE:C	33:BI:36:ALA:HB2	2.06	0.74
34:BN:53:ILE:CG2	34:BN:135:ILE:HD11	2.15	0.74
35:BO:17:ARG:HB2	35:BO:45:ASP:O	1.87	0.74
37:BQ:36:ASN:OD1	43:BZ:116:VAL:CG1	2.29	0.74
38:BS:33:ARG:HB3	38:BS:35:VAL:HG22	1.69	0.74
46:BV:69:ILE:HG22	46:BV:88:GLN:CB	2.18	0.74
40:BW:55:ALA:N	40:BW:107:LEU:HD12	2.02	0.74
43:BZ:19:ILE:HB	43:BZ:39:PHE:HE1	1.43	0.74
1:AA:1298:C:P	10:AG:114:ARG:HH12	2.11	0.74
48:B3:53:LEU:HD23	48:B3:53:LEU:C	2.07	0.74
53:B7:13:ALA:O	53:B7:14:LYS:C	2.25	0.74
54:B8:60:LEU:HD22	54:B8:60:LEU:C	2.07	0.74
27:BA:990:A:N6	27:BA:1186:G:N3	2.35	0.74
27:BA:1666:G:N2	27:BA:1669:A:H62	1.85	0.74
27:BA:2317:C:H5	27:BA:2318:G:O6	1.66	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2488:A:C6	27:BA:2489:G:C5	2.76	0.74
27:BA:2652:C:C2'	27:BA:2653:U:H5'	2.16	0.74
27:BA:2870:C:C2'	27:BA:2870:C:O2	2.35	0.74
27:BA:2785:C:H5'	29:BE:99:VAL:HG22	1.63	0.74
30:BF:223:LEU:HD12	30:BF:224:ALA:H	0.93	0.74
32:BH:55:SER:C	32:BH:57:GLU:H	1.90	0.74
33:BI:13:GLY:CA	33:BI:15:LYS:HD2	2.16	0.74
34:BN:136:SER:O	34:BN:139:LEU:N	2.20	0.74
36:BP:62:ALA:O	36:BP:107:LYS:CE	2.36	0.74
37:BQ:49:VAL:CB	37:BQ:119:ASN:O	2.36	0.74
35:BO:99:PHE:CE2	39:BT:24:LYS:NZ	2.55	0.74
45:BU:117:ARG:NH1	45:BU:118:GLN:OE1	2.20	0.74
45:BU:98:ILE:O	45:BU:99:ALA:C	2.26	0.74
46:BV:31:ASP:O	46:BV:33:VAL:HG23	1.87	0.74
46:BV:40:VAL:CA	46:BV:51:ALA:HB1	2.17	0.74
45:BU:88:ILE:HG22	46:BV:55:THR:OG1	1.86	0.74
27:BA:904:C:H1'	43:BZ:166:LEU:HD21	1.70	0.74
43:BZ:174:PRO:O	43:BZ:175:ARG:HG2	1.86	0.74
33:BI:115:ILE:HG13	33:BI:131:VAL:HG13	1.68	0.74
27:BA:322:A:H1'	27:BA:341:G:O4'	1.88	0.74
42:BY:78:THR:HA	42:BY:89:ARG:H	1.51	0.74
43:BZ:12:GLN:O	43:BZ:15:ASP:HB3	1.87	0.74
43:BZ:40:ASP:O	43:BZ:41:ARG:C	2.25	0.74
47:B2:15:GLU:O	47:B2:16:ARG:C	2.22	0.74
47:B2:7:GLU:OE2	47:B2:8:ILE:CG1	2.32	0.74
41:BX:50:GLU:HB2	41:BX:67:ARG:O	1.87	0.74
31:BG:87:ALA:C	31:BG:89:PRO:HD2	2.07	0.74
1:AA:1181:G:H4'	1:AA:1184:G:O4'	1.88	0.74
11:AH:36:LEU:HA	11:AH:39:LEU:HB2	1.70	0.74
48:B3:16:PRO:CB	48:B3:19:GLN:OE1	2.34	0.74
51:B5:14:SER:O	51:B5:15:LYS:C	2.25	0.74
27:BA:530:G:C6	27:BA:2021:C:C2	2.76	0.74
27:BA:2191:G:H2'	27:BA:2192:G:O4'	1.87	0.74
27:BA:2239:G:N3	27:BA:2240:C:C6	2.56	0.74
27:BA:2298:A:C5	27:BA:2321:G:N1	2.55	0.74
27:BA:2441:C:O2'	27:BA:2442:C:O5'	2.05	0.74
27:BA:2458:G:C4	27:BA:2490:G:C2	2.75	0.74
27:BA:2831:G:H1'	27:BA:2883:A:C2	2.22	0.74
27:BA:579:G:H1'	51:B5:10:LYS:NZ	2.02	0.74
27:BA:2785:C:O4'	29:BE:99:VAL:HA	1.86	0.74
30:BF:138:VAL:O	30:BF:139:VAL:HG23	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:144:PHE:CD2	30:BF:156:LEU:CD1	2.71	0.74
31:BG:93:LEU:HD22	31:BG:106:PHE:CE2	2.22	0.74
33:BI:31:PHE:CE1	33:BI:35:LEU:O	2.40	0.74
34:BN:65:ASN:ND2	34:BN:69:TYR:CD1	2.54	0.74
36:BP:112:GLY:O	36:BP:113:GLN:OE1	2.06	0.74
37:BQ:10:ILE:O	37:BQ:10:ILE:HG13	1.88	0.74
27:BA:910:A:N6	37:BQ:12:PRO:HA	2.02	0.74
37:BQ:35:ASN:HB2	37:BQ:75:SER:HB2	1.68	0.74
38:BS:23:ARG:CZ	38:BS:37:ARG:HH22	2.00	0.74
46:BV:43:GLU:C	46:BV:44:GLN:HE21	1.90	0.74
46:BV:69:ILE:HG22	46:BV:88:GLN:HB3	1.70	0.74
43:BZ:154:LEU:CD1	43:BZ:160:LEU:HD11	2.17	0.74
43:BZ:67:LYS:HA	43:BZ:67:LYS:HZ1	0.84	0.74
33:BI:76:THR:HB	33:BI:144:HIS:HE1	1.51	0.74
42:BY:103:LEU:CD2	42:BY:112:LEU:HD23	2.14	0.74
1:AA:1308:U:H5'	16:AM:110:ARG:NH2	2.01	0.74
1:AA:1318:A:C5'	22:AS:10:PHE:HB3	2.18	0.74
27:BA:2859:G:O2'	27:BA:2860:A:H5'	1.87	0.74
49:B0:36:ILE:CA	49:B0:68:VAL:HG11	2.18	0.74
48:B3:9:VAL:N	48:B3:54:VAL:CG1	2.50	0.74
50:B4:7:PRO:CD	50:B4:56:VAL:CG2	2.27	0.74
27:BA:2393:A:H4'	54:B8:13:ARG:NH2	2.01	0.74
27:BA:2262:U:H6	49:B0:14:ARG:NH2	1.77	0.74
27:BA:2265:U:H2'	27:BA:2266:A:OP1	1.86	0.74
27:BA:2437:U:H5'	27:BA:2598:A:H2	1.01	0.74
27:BA:2613:U:H5'	27:BA:2613:U:C6	2.17	0.74
27:BA:2615:U:H2'	27:BA:2616:C:C6	2.23	0.74
27:BA:2678:C:C2	27:BA:2679:A:H8	2.05	0.74
27:BA:2866:U:O2	27:BA:2868:A:O2'	2.01	0.74
28:BD:63:ILE:HG22	28:BD:64:ILE:H	0.58	0.74
28:BD:65:ASP:C	28:BD:65:ASP:OD1	2.23	0.74
29:BE:198:TYR:HA	29:BE:266:LYS:O	1.88	0.74
29:BE:247:ARG:HB2	29:BE:249:THR:OG1	1.88	0.74
30:BF:216:SER:O	30:BF:217:GLU:HB2	1.87	0.74
32:BH:105:SER:O	32:BH:106:VAL:CG2	2.35	0.74
32:BH:48:VAL:HG23	32:BH:49:ILE:H	1.53	0.74
33:BI:50:GLN:HA	33:BI:53:LYS:HG2	1.68	0.74
35:BO:104:ARG:HD2	35:BO:104:ARG:H	1.53	0.74
27:BA:636:G:OP2	36:BP:126:SER:HA	1.88	0.74
37:BQ:94:ARG:CG	37:BQ:107:LYS:N	2.51	0.74
27:BA:2485:G:C5'	37:BQ:144:THR:CG2	2.46	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1287:A:H5'	44:BR:104:ARG:HG3	1.69	0.74
38:BS:97:VAL:O	38:BS:98:GLU:HB3	1.86	0.74
46:BV:35:LEU:HG	46:BV:63:HIS:HE2	1.52	0.74
46:BV:33:VAL:CB	46:BV:63:HIS:CD2	2.70	0.74
46:BV:78:VAL:HB	46:BV:80:TYR:CE1	2.22	0.74
46:BV:94:LYS:CA	46:BV:95:ILE:CD1	2.56	0.74
40:BW:8:ARG:NE	40:BW:102:HIS:HE1	1.85	0.74
43:BZ:67:LYS:O	43:BZ:67:LYS:HG3	1.88	0.74
42:BY:48:VAL:CG1	42:BY:49:GLU:N	2.19	0.74
43:BZ:26:LYS:HD2	43:BZ:27:GLU:OE2	1.87	0.74
1:AA:1199:U:C4'	13:AJ:54:PHE:CE2	2.71	0.74
41:BX:14:ALA:O	41:BX:17:ASP:N	2.20	0.74
41:BX:28:VAL:CG1	41:BX:64:ALA:CB	2.65	0.74
1:AA:1315:U:P	22:AS:6:LYS:HZ2	2.09	0.74
16:AM:66:LEU:C	16:AM:70:LEU:HB2	2.07	0.74
27:BA:2407:G:H5''	27:BA:2408:U:OP2	1.87	0.74
1:AA:137:C:O2'	19:AP:61:SER:O	2.04	0.74
50:B4:17:GLN:HA	50:B4:33:VAL:CG1	2.18	0.74
27:BA:2395:C:O3'	50:B4:28:ARG:HD2	1.87	0.74
51:B5:42:SER:O	51:B5:43:HIS:CB	2.35	0.74
27:BA:142(A):A:P	27:BA:1143:A:H8	2.11	0.74
27:BA:2276:G:C2'	27:BA:2277:G:O5'	2.35	0.74
27:BA:2373:G:O2'	27:BA:2374:C:C5'	2.29	0.74
27:BA:2462:U:C2	27:BA:2463:C:C6	2.75	0.74
27:BA:2567:G:H2'	27:BA:2568:C:H5	1.51	0.74
27:BA:2674:G:C2'	27:BA:2675:A:H8	1.95	0.74
27:BA:2773:C:H2'	27:BA:2774:C:H6	1.52	0.74
27:BA:2808:U:O2	27:BA:2892:A:N6	1.96	0.74
27:BA:2848:G:N1	27:BA:2867:G:N3	2.35	0.74
28:BD:142:ASN:N	28:BD:142:ASN:HD22	1.84	0.74
28:BD:74:PRO:CG	28:BD:96:ALA:CA	2.65	0.74
30:BF:102:LEU:HD22	30:BF:103:ASN:N	1.96	0.74
30:BF:215:ALA:CB	30:BF:238:SER:C	2.54	0.74
27:BA:443:A:C8	30:BF:43:LYS:HD2	2.22	0.74
30:BF:57:PRO:HG2	30:BF:58:ALA:H	1.52	0.74
27:BA:1665:A:H4'	35:BO:66:LYS:HD3	1.69	0.74
36:BP:130:ARG:HA	36:BP:133:VAL:CG2	2.18	0.74
37:BQ:51:GLU:OE1	37:BQ:51:GLU:N	2.20	0.74
45:BU:63:GLN:C	45:BU:65:ILE:N	2.41	0.74
43:BZ:141:MET:O	43:BZ:142:ASN:ND2	2.20	0.74
42:BY:28:SER:OG	42:BY:99:THR:HG23	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B2:51:LYS:O	47:B2:54:ALA:CB	2.36	0.74
56:BK:49:LYS:NZ	56:BK:73:PRO:HA	2.03	0.74
1:AA:745:C:H1'	1:AA:836:G:O2'	1.88	0.74
1:AA:948:C:H4'	1:AA:1306:A:O3'	1.88	0.74
15:AL:54:LYS:CG	15:AL:75:HIS:HE1	2.01	0.74
48:B3:23:LEU:HA	48:B3:28:LEU:HD12	0.74	0.74
52:B6:33:ALA:O	52:B6:35:LEU:N	2.21	0.74
52:B6:42:PRO:O	52:B6:44:ALA:O	2.05	0.74
54:B8:31:HIS:O	54:B8:32:GLN:HG2	1.86	0.74
27:BA:2051:A:O2'	29:BE:238:LEU:HD23	1.88	0.74
27:BA:2251:G:P	37:BQ:102:ARG:HH21	2.11	0.74
27:BA:2255:G:C6	27:BA:2256:G:C8	2.76	0.74
27:BA:830:G:N7	27:BA:2448:A:C8	2.56	0.74
27:BA:2737:G:N3	27:BA:2738:A:N7	2.36	0.74
27:BA:790:C:OP1	27:BA:1781:C:N4	2.21	0.74
27:BA:911:A:C2	37:BQ:17:ARG:CD	2.71	0.74
28:BD:63:ILE:CG2	28:BD:64:ILE:N	2.08	0.74
27:BA:1567:A:N7	28:BD:84:PRO:HB3	2.03	0.74
29:BE:44:TYR:HD1	29:BE:309:PRO:CD	1.98	0.74
30:BF:167:ASP:O	30:BF:168:ARG:CD	2.35	0.74
30:BF:81:PRO:CA	30:BF:87:ARG:CG	2.26	0.74
31:BG:46:GLY:O	31:BG:47:GLN:HG3	1.88	0.74
32:BH:127:GLN:HG3	32:BH:128:THR:N	2.03	0.74
37:BQ:82:LYS:HB3	37:BQ:123:ILE:HG22	1.70	0.74
37:BQ:45:GLN:CD	37:BQ:153:PRO:HB2	2.09	0.74
37:BQ:16:ARG:NH1	37:BQ:19:TYR:HD1	1.86	0.74
37:BQ:32:LYS:HZ2	43:BZ:172:LEU:CD1	2.01	0.74
44:BR:43:GLU:C	44:BR:45:ARG:N	2.36	0.74
44:BR:58:GLY:O	44:BR:59:ASP:HB3	1.88	0.74
38:BS:17:ARG:HH11	38:BS:18:THR:CA	2.01	0.74
38:BS:40:ASN:HA	38:BS:114:LYS:HZ1	1.53	0.74
45:BU:83:LEU:O	45:BU:86:ALA:CB	2.36	0.74
46:BV:95:ILE:N	46:BV:95:ILE:CD1	2.33	0.74
40:BW:45:TYR:HD2	40:BW:46:PHE:N	1.85	0.74
33:BI:80:PRO:HA	33:BI:146:THR:O	1.87	0.74
42:BY:48:VAL:HG12	42:BY:49:GLU:H	0.62	0.74
42:BY:63:ILE:CG1	42:BY:75:GLU:OE2	2.36	0.74
41:BX:9:HIS:ND1	41:BX:27:ALA:CA	2.50	0.74
42:BY:9:LYS:HZ1	42:BY:13:ARG:HH22	1.34	0.74
1:AA:47:C:H4'	1:AA:48:C:H5''	1.69	0.74
27:BA:1697:G:H5''	27:BA:1698:A:H5'	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:81:LYS:HB3	42:BY:81:LYS:NZ	2.03	0.74
2:AV:25:C:H4'	27:BA:1923:U:OP2	1.87	0.74
1:AA:1286:A:N6	1:AA:1355:G:P	2.61	0.74
27:BA:1101:U:H2'	27:BA:1102:C:H6	1.51	0.74
27:BA:190:A:H2'	27:BA:191:A:C8	2.23	0.74
48:B3:16:PRO:HB3	48:B3:19:GLN:NE2	2.03	0.73
27:BA:1365:A:P	50:B4:3:LYS:HD2	2.28	0.73
50:B4:7:PRO:HD2	50:B4:56:VAL:CB	2.18	0.73
50:B4:5:LEU:HD21	50:B4:9:ALA:HA	1.68	0.73
54:B8:9:MET:O	54:B8:14:ILE:CD1	2.35	0.73
54:B8:19:THR:CB	54:B8:21:LYS:HZ2	1.98	0.73
27:BA:1935:G:H2'	27:BA:1962:C:N3	2.02	0.73
27:BA:2046:G:OP1	51:B5:19:ARG:CA	2.35	0.73
27:BA:2188:C:C5	27:BA:2189:U:C4	2.76	0.73
27:BA:2093:G:C4	27:BA:2198:A:C6	2.58	0.73
27:BA:2206:C:HO2'	27:BA:2207:C:C4'	2.00	0.73
27:BA:2264:C:H2'	27:BA:2265:U:C5'	2.16	0.73
27:BA:2309:A:C5'	27:BA:2310:A:H8	1.96	0.73
27:BA:2370:G:C2'	27:BA:2371:G:O5'	2.34	0.73
27:BA:2431:U:C4	27:BA:2434:A:OP2	2.41	0.73
27:BA:2507:C:N1	27:BA:2583:G:N2	2.36	0.73
27:BA:2531:A:C2	27:BA:2658:C:H1'	2.23	0.73
27:BA:2838:G:N2	27:BA:2881:C:C2	2.56	0.73
27:BA:974(A):C:C1'	27:BA:989:G:H22	2.00	0.73
27:BA:990:A:N6	27:BA:1186:G:H1'	2.03	0.73
28:BD:104:ILE:HB	28:BD:106:PRO:HD3	1.68	0.73
28:BD:143:ILE:CG1	28:BD:153:LEU:CA	2.66	0.73
28:BD:175:LEU:CD1	28:BD:180:VAL:CA	2.65	0.73
29:BE:192:ILE:O	29:BE:193:PHE:C	2.25	0.73
29:BE:265:ASN:O	29:BE:265:ASN:ND2	2.21	0.73
27:BA:2745:C:O2	32:BH:142:GLU:OE2	2.05	0.73
36:BP:124:ASP:HB3	36:BP:130:ARG:NH2	2.02	0.73
37:BQ:56:ILE:O	37:BQ:112:ALA:HB2	1.88	0.73
44:BR:18:LEU:HD12	44:BR:19:ALA:N	2.02	0.73
42:BY:101:LEU:HD23	42:BY:103:LEU:HG	1.67	0.73
42:BY:102:ASP:C	42:BY:108:ARG:HD3	2.07	0.73
27:BA:58:G:H2'	27:BA:73:A:C6	2.21	0.73
41:BX:31:ARG:CA	41:BX:31:ARG:NE	2.51	0.73
3:AW:65:G:C6	3:AW:66:A:C5	2.77	0.73
2:AV:4:G:H2'	2:AV:5:A:C8	2.23	0.73
27:BA:1427:A:OP1	27:BA:1427:A:H8	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:988:A:OP1	48:B3:11:SER:HB2	1.88	0.73
51:B5:45:ILE:H	51:B5:52:TYR:HE1	1.35	0.73
27:BA:2466:C:OP1	55:B9:5:SER:O	2.05	0.73
27:BA:2404:C:N4	27:BA:2405:G:N1	2.36	0.73
27:BA:2468:G:N2	27:BA:2481:G:C2'	2.48	0.73
27:BA:2816:C:H2'	27:BA:2817:G:O5'	1.88	0.73
27:BA:2838:G:C6	27:BA:2839:G:C5	2.75	0.73
27:BA:2868:A:H8	27:BA:2868:A:O5'	1.71	0.73
27:BA:911:A:C8	37:BQ:16:ARG:CD	2.60	0.73
28:BD:128:ALA:HB2	28:BD:190:THR:HA	1.57	0.73
29:BE:214:VAL:CG2	29:BE:221:LYS:HZ2	2.01	0.73
29:BE:222:ARG:CD	29:BE:232:ARG:CA	2.64	0.73
32:BH:89:VAL:O	32:BH:160:GLY:N	2.21	0.73
32:BH:63:LEU:O	32:BH:66:THR:CG2	2.31	0.73
36:BP:66:VAL:C	36:BP:67:ARG:NE	2.40	0.73
37:BQ:125:TRP:C	37:BQ:126:VAL:HG23	2.05	0.73
44:BR:90:ARG:HH12	44:BR:117:VAL:HG21	1.53	0.73
35:BO:79:PHE:CG	39:BT:22:VAL:HG21	2.24	0.73
45:BU:82:GLY:O	45:BU:85:ARG:HB2	1.87	0.73
43:BZ:116:VAL:HG23	43:BZ:169:VAL:HG22	1.64	0.73
33:BI:145:VAL:O	33:BI:146:THR:CB	2.34	0.73
42:BY:31:LEU:CD1	42:BY:101:LEU:CB	2.66	0.73
42:BY:70:ALA:O	42:BY:93:THR:HG23	1.89	0.73
27:BA:358:U:H3'	27:BA:359:A:C5'	2.17	0.73
1:AA:1095:U:OP2	1:AA:1108:G:N1	2.15	0.73
27:BA:1489:U:H4'	27:BA:1490:A:OP2	1.87	0.73
1:AA:136:C:O2'	19:AP:63:GLY:HA3	1.86	0.73
49:B0:65:GLY:O	49:B0:66:LYS:CE	2.35	0.73
52:B6:12:MET:HE3	52:B6:54:LYS:N	2.02	0.73
27:BA:2048:G:C6	27:BA:2621:A:N1	2.57	0.73
27:BA:2266:A:H5''	27:BA:2267:A:C5	2.22	0.73
27:BA:2395:C:H3'	27:BA:2395:C:H6	1.51	0.73
27:BA:2838:G:C2	27:BA:2839:G:C8	2.76	0.73
27:BA:2853:C:H2'	27:BA:2854:G:O5'	1.88	0.73
28:BD:76:ARG:HD3	28:BD:113:MET:HE2	1.70	0.73
29:BE:268:LEU:HD21	29:BE:295:LEU:O	1.88	0.73
30:BF:47:GLY:HA2	30:BF:92:PRO:HB2	0.80	0.73
32:BH:104:LEU:CB	32:BH:151:ARG:CZ	2.48	0.73
33:BI:7:LYS:CB	33:BI:14:LYS:HE2	2.10	0.73
33:BI:7:LYS:HG3	33:BI:12:LYS:CA	2.18	0.73
35:BO:31:ARG:O	35:BO:32:TYR:CD1	2.42	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:75:SER:O	37:BQ:132:VAL:HG21	1.88	0.73
37:BQ:68:ALA:CB	37:BQ:136:TRP:HZ3	2.01	0.73
38:BS:28:LYS:HB3	38:BS:28:LYS:HZ3	1.54	0.73
39:BT:21:PHE:C	39:BT:22:VAL:CG1	2.54	0.73
45:BU:55:ARG:C	45:BU:57:PHE:N	2.40	0.73
45:BU:7:GLY:C	45:BU:9:VAL:H	1.88	0.73
46:BV:33:VAL:HB	46:BV:63:HIS:NE2	2.02	0.73
45:BU:47:TYR:CE2	46:BV:74:TYR:C	2.61	0.73
43:BZ:100:THR:CA	43:BZ:137:ASP:CG	2.50	0.73
42:BY:92:ASP:O	42:BY:93:THR:C	2.24	0.73
1:AA:1318:A:H4'	22:AS:10:PHE:CD2	2.23	0.73
41:BX:32:ALA:HA	41:BX:36:GLU:HG3	1.69	0.73
3:AW:37:YYG:H31	3:AW:37:YYG:C1'	2.18	0.73
31:BG:60:GLU:O	31:BG:61:PHE:HB2	1.86	0.73
41:BX:46:ASP:OD1	41:BX:46:ASP:N	2.20	0.73
1:AA:1005:A:H5'	1:AA:1037:C:C1'	2.15	0.73
1:AA:3(A):G:N1	1:AA:1037:C:C2	2.56	0.73
1:AA:60:A:N6	1:AA:107:G:HO2'	1.82	0.73
1:AA:900:A:H2'	1:AA:901:A:C8	2.23	0.73
27:BA:2183:C:H2'	27:BA:2184:G:H8	1.53	0.73
1:AA:634:C:H2'	1:AA:635:G:H8	1.52	0.73
52:B6:17:GLY:O	52:B6:18:THR:HB	1.88	0.73
27:BA:1819:A:OP1	28:BD:154:VAL:C	2.27	0.73
27:BA:2021:C:C6	45:BU:25:TRP:CH2	2.76	0.73
27:BA:2093:G:N7	27:BA:2225:A:C5	2.57	0.73
27:BA:2349:G:O6	27:BA:2350:C:C5	2.42	0.73
27:BA:2410:G:H2'	27:BA:2411:A:H8	1.00	0.73
27:BA:2517:C:C5	27:BA:2542:A:C5	2.76	0.73
27:BA:2592:G:N2	27:BA:2603:G:C5	2.57	0.73
27:BA:2543:G:O2'	27:BA:2645:G:N7	2.20	0.73
27:BA:2676:C:O2	27:BA:2732:G:N2	2.21	0.73
27:BA:2741:A:C2'	27:BA:2742:C:C5'	2.57	0.73
27:BA:573:G:H2'	27:BA:574:C:H3'	1.70	0.73
27:BA:849:A:H2	48:B3:21:ALA:CA	2.00	0.73
28:BD:175:LEU:O	28:BD:176:ALA:C	2.26	0.73
28:BD:141:HIS:HE1	28:BD:191:VAL:O	1.68	0.73
29:BE:267:ARG:HB2	29:BE:297:LYS:CD	2.17	0.73
30:BF:63:SER:H	30:BF:65:ARG:NE	1.82	0.73
30:BF:96:LYS:CB	30:BF:98:ARG:NH2	2.41	0.73
32:BH:140:VAL:O	32:BH:143:LEU:HD22	1.86	0.73
33:BI:3:VAL:HG11	33:BI:21:VAL:HG21	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:43:ASN:HA	33:BI:46:ALA:CB	2.18	0.73
34:BN:39:VAL:HA	34:BN:103:VAL:HG13	1.69	0.73
34:BN:18:ILE:O	34:BN:20:GLY:N	2.21	0.73
35:BO:3:GLN:HA	35:BO:21:VAL:CG1	2.19	0.73
36:BP:65:ASP:O	36:BP:69:ILE:HG23	1.89	0.73
37:BQ:146:THR:O	37:BQ:147:VAL:HB	1.87	0.73
37:BQ:51:GLU:OE2	37:BQ:148:ASN:HB2	1.88	0.73
44:BR:31:HIS:HD2	44:BR:34:ILE:HD11	1.53	0.73
27:BA:2320:A:C5	38:BS:9:PRO:HB3	2.23	0.73
39:BT:13:ILE:HG22	39:BT:14:GLU:OE2	1.89	0.73
45:BU:40:LEU:CD2	45:BU:40:LEU:N	2.45	0.73
45:BU:80:ILE:CA	45:BU:83:LEU:HD12	2.17	0.73
43:BZ:141:MET:O	43:BZ:142:ASN:CB	2.36	0.73
33:BI:105:GLN:O	33:BI:107:GLY:N	2.22	0.73
33:BI:133:LEU:HD11	33:BI:139:ALA:HB3	1.71	0.73
42:BY:73:HIS:HA	42:BY:91:LEU:HD21	1.69	0.73
43:BZ:18:MET:HG3	43:BZ:35:ASP:HA	1.70	0.73
43:BZ:46:GLN:C	43:BZ:47:SER:O	2.27	0.73
41:BX:14:ALA:C	41:BX:17:ASP:OD1	2.26	0.73
27:BA:1340:U:C6	41:BX:55:GLN:NE2	2.53	0.73
39:BT:46:ALA:O	39:BT:49:LEU:HB3	1.88	0.73
1:AA:1237:C:O2	1:AA:1335:C:H5'	1.88	0.73
1:AA:266:G:N2	1:AA:270:A:H62	1.85	0.73
1:AA:1250:A:H4'	12:AI:67:GLY:C	2.08	0.73
49:B0:71:ASN:O	49:B0:72:LYS:C	2.26	0.73
48:B3:3:ARG:HB2	48:B3:60:GLU:CA	2.18	0.73
52:B6:19:GLY:HA3	52:B6:42:PRO:HG3	0.74	0.73
27:BA:1799:G:C6	28:BD:177:SER:CB	2.70	0.73
27:BA:2187:G:H2'	27:BA:2188:C:H5'	1.70	0.73
27:BA:2589:A:O2'	27:BA:2590:A:H5''	1.88	0.73
27:BA:2892:A:H2'	27:BA:2893:G:C1'	2.18	0.73
27:BA:535:C:H5''	45:BU:53:LYS:CE	2.19	0.73
29:BE:42:ALA:HA	29:BE:311:PHE:HE2	1.53	0.73
30:BF:196:THR:OG1	30:BF:201:SER:N	2.22	0.73
30:BF:33:LYS:CA	30:BF:36:ARG:CG	2.66	0.73
31:BG:105:SER:CB	31:BG:131:THR:CG2	2.57	0.73
34:BN:54:VAL:HG11	34:BN:138:THR:HB	1.70	0.73
34:BN:79:PHE:CD1	34:BN:79:PHE:N	2.52	0.73
34:BN:83:ILE:CG1	34:BN:84:ARG:N	1.94	0.73
36:BP:76:LEU:CA	36:BP:81:VAL:HG21	2.17	0.73
37:BQ:91:HIS:CA	37:BQ:111:THR:HG23	2.17	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:34:LEU:HG	38:BS:102:LEU:C	2.08	0.73
27:BA:994:C:O2'	45:BU:54:LYS:CG	2.36	0.73
45:BU:98:ILE:N	45:BU:98:ILE:HD12	2.04	0.73
46:BV:63:HIS:ND1	46:BV:63:HIS:N	2.35	0.73
33:BI:116:GLU:HG2	33:BI:132:LYS:HE2	1.69	0.73
33:BI:89:LEU:HD12	33:BI:93:ILE:HG23	1.68	0.73
43:BZ:4:THR:O	43:BZ:5:ALA:HB3	1.86	0.73
1:AA:1059:C:C2'	13:AJ:52:GLY:HA2	2.18	0.73
27:BA:58:G:H1	27:BA:69:C:N4	1.83	0.73
1:AA:953:G:H1'	16:AM:125:ARG:O	1.89	0.73
11:AH:44:PHE:O	11:AH:64:LYS:HB3	1.88	0.73
50:B4:31:ILE:HD13	50:B4:31:ILE:N	2.02	0.73
52:B6:19:GLY:HA3	52:B6:42:PRO:CB	2.17	0.73
27:BA:2025:C:H2'	27:BA:2026:C:C6	2.23	0.73
27:BA:2218:G:C2	27:BA:2219:G:C8	2.76	0.73
27:BA:2446:G:N1	27:BA:2501:C:H5	1.76	0.73
27:BA:2574:G:C4	27:BA:2575:C:C4	2.68	0.73
27:BA:2601:C:N3	27:BA:2603:G:O6	2.21	0.73
27:BA:2781:A:H5'	27:BA:2782:G:O5'	1.86	0.73
27:BA:850:C:H42	27:BA:928:G:H1	1.35	0.73
29:BE:79:ARG:CZ	29:BE:104:PHE:O	2.36	0.73
29:BE:193:PHE:CZ	29:BE:312:ARG:O	2.42	0.73
29:BE:85:ALA:O	29:BE:96:LEU:O	2.07	0.73
30:BF:56:THR:CB	30:BF:57:PRO:CD	2.65	0.73
32:BH:64:HIS:C	32:BH:66:THR:N	2.33	0.73
34:BN:68:GLY:O	34:BN:69:TYR:CD1	2.42	0.73
35:BO:73:ASP:C	35:BO:75:SER:H	1.91	0.73
36:BP:64:ILE:O	36:BP:108:VAL:CA	2.35	0.73
37:BQ:94:ARG:HG2	37:BQ:107:LYS:H	1.54	0.73
37:BQ:28:ILE:HG23	37:BQ:62:GLU:CB	2.18	0.73
38:BS:18:THR:C	38:BS:19:ASP:OD1	2.27	0.73
45:BU:110:VAL:C	45:BU:113:SER:OG	2.26	0.73
27:BA:1152:C:H1'	45:BU:77:SER:HB3	1.71	0.73
46:BV:64:GLY:H	46:BV:95:ILE:HG13	1.53	0.73
46:BV:77:GLY:O	46:BV:78:VAL:CG1	2.37	0.73
40:BW:6:ILE:O	40:BW:7:ALA:HB2	1.88	0.73
33:BI:115:ILE:CG1	33:BI:131:VAL:CG1	2.55	0.73
42:BY:47:THR:O	42:BY:48:VAL:CG2	2.35	0.73
43:BZ:40:ASP:N	43:BZ:40:ASP:OD1	2.18	0.73
28:BD:215:LYS:O	28:BD:216:ALA:O	2.06	0.73
47:B2:55:ARG:HA	47:B2:58:THR:CB	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:111:A:H4'	47:B2:62:GLU:OE2	1.88	0.73
3:AW:39:PSU:C5'	14:AK:54:ARG:HH22	2.01	0.73
27:BA:2755:C:C6	27:BA:2755:C:C5'	2.67	0.73
1:AA:376:G:O3'	19:AP:5:ARG:NH1	2.21	0.73
2:AV:13:C:H4'	27:BA:1924:C:HO2'	1.52	0.73
16:AM:122:LYS:HZ3	25:AY:153:GLY:CA	2.00	0.73
1:AA:54:C:N4	1:AA:352:C:H2'	2.04	0.73
27:BA:989:G:N7	48:B3:13:ILE:HD12	2.04	0.73
27:BA:2349:G:OP2	54:B8:42:ARG:NH2	2.22	0.73
27:BA:1021:A:H2	27:BA:1122:G:H5''	1.51	0.73
27:BA:2241:A:C8	27:BA:2241:A:H5'	2.22	0.73
27:BA:2261:C:C3'	49:B0:14:ARG:HH21	2.01	0.73
27:BA:2330:G:N1	27:BA:2331:G:C4	2.56	0.73
27:BA:2341:G:C6	27:BA:2342:C:N4	2.57	0.73
27:BA:2290:G:H21	27:BA:2343:C:H1'	1.52	0.73
27:BA:2422:A:C2'	27:BA:2424:C:C5	2.71	0.73
27:BA:2445:G:C2'	27:BA:2446:G:C5'	2.67	0.73
27:BA:2457:U:C5	27:BA:2458:G:C2	2.67	0.73
27:BA:2459:A:N7	27:BA:2460:U:C6	2.55	0.73
27:BA:2528:U:O2'	27:BA:2529:G:H8	1.72	0.73
27:BA:2532:G:H5'	27:BA:2532:G:C8	2.22	0.73
27:BA:2579:C:C3'	27:BA:2579:C:C6	2.72	0.73
31:BG:14:ARG:CA	31:BG:137:PRO:HG3	2.18	0.73
32:BH:14:VAL:HG12	32:BH:16:VAL:HG23	1.70	0.73
37:BQ:142:LYS:HE2	37:BQ:143:VAL:C	2.09	0.73
44:BR:116:LEU:O	44:BR:116:LEU:HD12	1.88	0.73
44:BR:24:GLN:CB	44:BR:44:LEU:HD23	2.19	0.73
38:BS:48:VAL:HA	38:BS:55:ASP:OD1	1.89	0.73
40:BW:70:TYR:O	40:BW:107:LEU:HA	1.88	0.73
40:BW:23:LEU:HD13	40:BW:35:ILE:CG2	2.19	0.73
40:BW:82:LEU:N	40:BW:82:LEU:HD22	2.03	0.73
27:BA:342:G:H1	27:BA:344:G:N2	1.86	0.73
42:BY:45:GLY:C	42:BY:62:VAL:CB	2.55	0.73
43:BZ:26:LYS:CB	43:BZ:84:TYR:OH	2.32	0.73
3:AW:25:C:C2	3:AW:26:G:H1'	2.23	0.73
41:BX:76:GLU:OE1	41:BX:77:VAL:HG22	1.89	0.73
1:AA:1097:C:O2	1:AA:1168:A:H2	1.70	0.73
27:BA:1528:A:H61	27:BA:1543:A:H62	1.35	0.73
1:AA:267:C:OP2	20:AQ:67:LYS:HD3	1.88	0.73
48:B3:9:VAL:HG22	48:B3:54:VAL:CB	2.19	0.73
54:B8:26:LYS:NZ	54:B8:44:LYS:N	2.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B9:23:VAL:O	55:B9:24:LEU:HD23	1.89	0.73
27:BA:2258:C:H41	27:BA:2426:A:C1'	1.99	0.73
27:BA:965:C:O4'	27:BA:2273:A:N3	2.22	0.73
27:BA:2455:G:C2	27:BA:2498:C:N4	2.57	0.73
27:BA:2869:G:C6	27:BA:2870:C:C4	2.77	0.73
27:BA:2880:C:N3	27:BA:2881:C:C5	2.56	0.73
28:BD:117:SER:HB3	28:BD:128:ALA:O	1.88	0.73
29:BE:77:PRO:HB3	29:BE:188:ALA:N	2.02	0.73
30:BF:112:ARG:C	30:BF:114:ALA:N	2.41	0.73
30:BF:6:TYR:HE1	30:BF:139:VAL:HB	1.50	0.73
30:BF:92:PRO:O	30:BF:93:LYS:C	2.24	0.73
31:BG:128:LEU:O	31:BG:129:ASP:CB	2.37	0.73
31:BG:18:ILE:O	31:BG:19:GLU:HB2	1.89	0.73
27:BA:2745:C:H1'	32:BH:142:GLU:OE2	1.88	0.73
35:BO:17:ARG:HH21	35:BO:47:THR:CA	2.01	0.73
37:BQ:47:GLU:OE1	37:BQ:47:GLU:N	2.22	0.73
44:BR:38:VAL:HG22	44:BR:99:LYS:HE3	1.70	0.73
45:BU:51:ARG:O	45:BU:52:ASN:O	2.07	0.73
46:BV:60:VAL:O	46:BV:98:ILE:CA	2.37	0.73
46:BV:67:LYS:CG	46:BV:70:TYR:HE1	2.01	0.73
43:BZ:45:GLN:HE21	43:BZ:45:GLN:N	1.87	0.73
41:BX:13:LYS:O	41:BX:14:ALA:C	2.26	0.73
41:BX:47:VAL:HG12	41:BX:69:SER:HG	1.52	0.73
33:BI:51:LYS:O	33:BI:55:GLN:CG	2.30	0.73
42:BY:9:LYS:CE	42:BY:13:ARG:CZ	2.67	0.73
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.23	0.73
1:AA:762:C:H2'	1:AA:763:G:C8	2.24	0.73
27:BA:1609:A:C6	27:BA:1616:A:C2	2.76	0.73
20:AQ:44:ALA:HB2	20:AQ:59:ILE:HD11	1.70	0.73
49:B0:30:VAL:O	49:B0:30:VAL:HG12	1.86	0.73
48:B3:7:LYS:O	48:B3:54:VAL:HB	1.89	0.73
52:B6:46:LYS:HZ1	52:B6:46:LYS:HA	1.52	0.73
27:BA:593:G:O2'	54:B8:58:MET:HE3	1.85	0.73
27:BA:1238:G:C2	27:BA:1239:G:H1'	2.24	0.73
27:BA:2313:C:C5'	31:BG:72:LYS:CG	2.41	0.73
27:BA:2605:U:O2	27:BA:2606:C:C5	2.40	0.73
27:BA:2615:U:H2'	27:BA:2616:C:O5'	1.87	0.73
27:BA:2666:C:C2'	27:BA:2667:C:H5'	2.18	0.73
27:BA:2816:C:C2'	27:BA:2817:G:O5'	2.35	0.73
27:BA:674:G:H5''	30:BF:69:HIS:HA	1.70	0.73
29:BE:205:THR:O	29:BE:206:LYS:HG2	1.89	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:198:TYR:CE2	29:BE:265:ASN:O	2.40	0.73
29:BE:86:TYR:O	29:BE:87:GLU:O	2.07	0.73
37:BQ:123:ILE:HG22	37:BQ:125:TRP:HB2	1.69	0.73
37:BQ:47:GLU:OE2	37:BQ:151:SER:CA	2.37	0.73
37:BQ:67:ALA:O	37:BQ:71:PHE:HE1	1.70	0.73
38:BS:46:GLN:C	38:BS:47:LEU:HD23	2.05	0.73
45:BU:5:LYS:O	45:BU:6:THR:C	2.27	0.73
45:BU:88:ILE:HG22	46:BV:55:THR:HG21	1.71	0.73
46:BV:5:ILE:HD12	46:BV:5:ILE:N	2.04	0.73
43:BZ:123:VAL:HA	43:BZ:161:ALA:HB3	1.69	0.73
43:BZ:75:LYS:O	43:BZ:76:ARG:HB2	1.89	0.73
42:BY:33:GLU:CG	42:BY:34:GLU:H	2.02	0.73
42:BY:63:ILE:CG1	42:BY:75:GLU:N	2.51	0.73
43:BZ:43:PHE:H	43:BZ:43:PHE:HD2	1.36	0.73
1:AA:1181:G:H4'	1:AA:1184:G:H5'	1.71	0.73
37:BQ:149:ILE:HD12	37:BQ:149:ILE:N	2.03	0.73
49:B0:49:GLN:HE21	49:B0:49:GLN:C	1.93	0.73
50:B4:41:PRO:HG2	50:B4:57:ASP:OD2	1.87	0.73
53:B7:8:ASN:HD22	53:B7:8:ASN:N	1.85	0.73
55:B9:7:VAL:CG1	55:B9:25:VAL:CG2	2.66	0.73
27:BA:1287:A:C8	44:BR:104:ARG:CG	2.61	0.73
27:BA:1364:G:C3'	50:B4:3:LYS:HD2	2.00	0.73
27:BA:2218:G:N3	27:BA:2219:G:C8	2.57	0.73
27:BA:2330:G:H2'	27:BA:2331:G:C5'	2.18	0.73
27:BA:2330:G:N2	27:BA:2331:G:N3	2.37	0.73
27:BA:2444:G:C6	27:BA:2445:G:C6	2.77	0.73
27:BA:2623:G:N2	27:BA:2624:G:H1'	2.00	0.73
27:BA:2641:G:C6	27:BA:2774:C:N4	2.57	0.73
27:BA:2821:A:N3	27:BA:2822:G:N9	2.36	0.73
27:BA:566:U:O5'	46:BV:81:ARG:NH2	2.21	0.73
27:BA:994:C:OP2	45:BU:54:LYS:CE	2.26	0.73
28:BD:200:THR:OG1	28:BD:201:ASP:OD2	2.07	0.73
29:BE:173:ARG:HB2	29:BE:174:LEU:HD12	1.71	0.73
29:BE:201:VAL:H	29:BE:266:LYS:NZ	1.86	0.73
32:BH:30:GLY:O	32:BH:78:VAL:HG13	1.88	0.73
34:BN:56:LYS:O	34:BN:59:LYS:CB	2.27	0.73
34:BN:83:ILE:CD1	34:BN:84:ARG:HG2	2.19	0.73
37:BQ:32:LYS:NZ	43:BZ:172:LEU:HD13	2.02	0.73
43:BZ:125:PRO:O	43:BZ:127:PRO:HD3	1.88	0.73
43:BZ:69:VAL:C	43:BZ:70:GLN:NE2	2.42	0.73
1:AA:976:G:OP2	1:AA:1358:U:C1'	2.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AM:94:ARG:C	16:AM:95:GLY:HA3	2.06	0.73
47:B2:63:GLU:OE2	47:B2:63:GLU:C	2.28	0.73
41:BX:28:VAL:CG2	41:BX:62:LYS:O	2.37	0.73
27:BA:10:G:C2	27:BA:2629:A:C4	2.76	0.73
41:BX:44:GLN:CD	41:BX:45:TYR:N	2.41	0.73
3:AW:9:A:C2	3:AW:45:G:C4	2.77	0.73
1:AA:20:U:C4	1:AA:916:G:N1	2.57	0.73
1:AA:1298:C:P	10:AG:114:ARG:NH1	2.62	0.73
6:AC:150:LYS:HB2	6:AC:173:VAL:HG21	1.70	0.73
10:AG:74:GLU:HG2	10:AG:75:VAL:H	1.52	0.73
49:B0:49:GLN:HE22	49:B0:73:GLY:HA3	1.04	0.72
50:B4:5:LEU:CD2	50:B4:9:ALA:HA	2.19	0.72
55:B9:10:MET:HB2	55:B9:32:HIS:CD2	2.15	0.72
27:BA:2207:C:C2	27:BA:2218:G:C2	2.77	0.72
27:BA:2332:U:C4'	27:BA:2336:A:H61	2.02	0.72
27:BA:2359:C:C4	27:BA:2360:A:N1	2.57	0.72
3:AW:76:A:N9	27:BA:2422:A:C5	2.46	0.72
27:BA:2446:G:N2	27:BA:2501:C:C4	2.56	0.72
27:BA:2447:G:N9	27:BA:2500:U:H5	1.84	0.72
27:BA:746:A:O5'	27:BA:2612:C:C5	2.42	0.72
27:BA:2619:C:O2'	27:BA:2620:C:C5'	2.37	0.72
27:BA:2625:G:H2'	27:BA:2626:C:C6	2.24	0.72
27:BA:2653:U:P	27:BA:2654:A:H3'	2.29	0.72
27:BA:2684:U:C2	27:BA:2725:A:N1	2.57	0.72
27:BA:2767:C:H2'	27:BA:2768:C:O5'	1.89	0.72
27:BA:2870:C:C2	27:BA:2871:C:C6	2.77	0.72
27:BA:452:G:P	30:BF:55:ARG:NH2	2.35	0.72
27:BA:593:G:H1'	54:B8:3:LYS:HZ3	0.90	0.72
27:BA:688:U:H5'	27:BA:1780:A:N1	2.04	0.72
27:BA:1568:G:OP2	28:BD:60:GLN:CG	2.27	0.72
29:BE:39:GLN:HB2	29:BE:174:LEU:HG	1.70	0.72
29:BE:200:ASP:H	29:BE:312:ARG:H	1.37	0.72
29:BE:212:GLY:C	29:BE:214:VAL:H	1.92	0.72
29:BE:224:GLY:O	29:BE:225:LYS:HB2	1.89	0.72
29:BE:70:VAL:HG11	29:BE:295:LEU:HD22	1.71	0.72
30:BF:168:ARG:CZ	30:BF:209:GLY:HA3	2.15	0.72
31:BG:93:LEU:HD13	31:BG:94:ALA:N	1.96	0.72
34:BN:94:GLY:O	34:BN:97:ALA:CB	2.35	0.72
35:BO:63:VAL:CG1	35:BO:102:VAL:CG2	2.67	0.72
35:BO:42:THR:HG22	35:BO:57:VAL:HA	1.70	0.72
27:BA:2406:U:H3	36:BP:55:GLN:HG3	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:14:SER:N	44:BR:17:ARG:HG2	2.03	0.72
44:BR:72:ASP:C	44:BR:72:ASP:OD2	2.28	0.72
38:BS:34:LEU:CD1	38:BS:103:ASP:N	2.51	0.72
38:BS:117:ALA:HA	38:BS:120:GLU:CD	2.09	0.72
38:BS:121:GLY:O	38:BS:125:ALA:N	2.20	0.72
38:BS:46:GLN:O	38:BS:47:LEU:CG	2.36	0.72
38:BS:82:TYR:O	38:BS:86:LEU:CD1	2.37	0.72
27:BA:994:C:O2'	45:BU:54:LYS:CA	2.37	0.72
27:BA:1791:A:P	28:BD:210:LYS:CD	2.76	0.72
28:BD:139:LEU:C	28:BD:139:LEU:HD12	2.10	0.72
27:BA:1274:A:C6	27:BA:1302:A:C2	2.77	0.72
48:B3:26:LEU:CD2	48:B3:46:ASN:HD22	2.02	0.72
50:B4:10:VAL:N	50:B4:11:PRO:HD3	1.96	0.72
3:AW:74:C:P	50:B4:22:MET:HE3	2.29	0.72
27:BA:2422:A:OP2	52:B6:4:ASP:OD1	2.06	0.72
27:BA:1005:C:H5	27:BA:1143:A:H5''	1.54	0.72
27:BA:2066:C:O2	27:BA:2445:G:C2	2.43	0.72
27:BA:2421:G:H5''	52:B6:4:ASP:CG	2.09	0.72
27:BA:197:A:N6	27:BA:248:G:H22	1.87	0.72
27:BA:2516:G:O2'	27:BA:2517:C:O5'	2.06	0.72
27:BA:2520:C:C2	27:BA:2521:C:C6	2.77	0.72
27:BA:2546:U:C5'	27:BA:2565:A:N1	2.49	0.72
27:BA:2570:G:C4	27:BA:2571:C:H5	2.02	0.72
27:BA:746:A:OP1	27:BA:2612:C:C2	2.43	0.72
27:BA:2700:C:C2'	27:BA:2701:C:C4'	2.60	0.72
27:BA:2716:U:C2'	27:BA:2717:G:H5''	2.19	0.72
27:BA:2785:C:C6	27:BA:2786:U:C4	2.77	0.72
27:BA:931:G:P	48:B3:27:GLY:HA3	2.29	0.72
26:BB:49:C:OP1	38:BS:111:PRO:HD2	1.89	0.72
28:BD:116:MET:HG2	28:BD:117:SER:N	2.02	0.72
28:BD:170:TYR:HB2	28:BD:182:MET:SD	2.29	0.72
29:BE:204:VAL:H	29:BE:303:PRO:HG3	1.54	0.72
30:BF:153:VAL:HG13	30:BF:157:LEU:HD22	1.71	0.72
30:BF:196:THR:HG22	30:BF:197:SER:H	1.52	0.72
33:BI:6:LEU:HB3	33:BI:35:LEU:O	1.89	0.72
35:BO:79:PHE:CA	39:BT:22:VAL:CG2	2.67	0.72
37:BQ:140:TYR:O	37:BQ:142:LYS:N	2.22	0.72
37:BQ:91:HIS:O	37:BQ:92:VAL:CG1	2.37	0.72
38:BS:64:SER:O	38:BS:67:ALA:N	2.21	0.72
38:BS:92:ALA:O	38:BS:95:ALA:N	2.22	0.72
27:BA:994:C:C5	46:BV:72:ARG:NH1	2.27	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:24:ILE:HB	40:BW:32:ALA:HB1	1.71	0.72
43:BZ:125:PRO:HG3	43:BZ:130:ILE:HG22	1.71	0.72
33:BI:141:LEU:HD22	33:BI:142:LYS:H	1.53	0.72
43:BZ:3:LEU:HB3	43:BZ:34:LEU:CA	2.06	0.72
1:AA:1226:C:C4	16:AM:104:ARG:HG3	2.23	0.72
47:B2:3:LEU:O	47:B2:4:HIS:CB	2.36	0.72
1:AA:761:G:H1'	20:AQ:103:GLY:O	1.89	0.72
27:BA:482:A:N3	27:BA:482:A:H2'	2.02	0.72
19:AP:13:HIS:O	19:AP:15:PRO:HD3	1.88	0.72
48:B3:22:ALA:O	48:B3:26:LEU:CG	2.36	0.72
27:BA:2400:G:H4'	52:B6:20:PHE:CE1	2.24	0.72
53:B7:24:THR:CG2	53:B7:27:GLY:HA3	2.18	0.72
54:B8:14:ILE:CG2	54:B8:15:LYS:N	2.52	0.72
27:BA:1612:C:C2'	53:B7:3:ARG:HE	1.98	0.72
27:BA:2225:A:H5'	27:BA:2226:C:H5'	1.67	0.72
27:BA:2298:A:C1'	27:BA:2321:G:N2	2.51	0.72
27:BA:2422:A:N3	27:BA:2424:C:C6	2.55	0.72
27:BA:2484:G:H22	27:BA:2485:G:H1'	1.36	0.72
27:BA:2743:C:C2	27:BA:2762:G:C2	2.77	0.72
27:BA:2762:G:N7	27:BA:2763:G:C6	2.58	0.72
27:BA:2866:U:H5''	27:BA:2867:G:OP1	1.90	0.72
26:BB:50:G:OP1	38:BS:75:THR:HG23	1.89	0.72
29:BE:45:LYS:HD2	29:BE:303:PRO:O	1.90	0.72
30:BF:193:LEU:HD11	30:BF:231:ARG:HB3	1.71	0.72
30:BF:215:ALA:HB2	30:BF:238:SER:O	1.87	0.72
32:BH:102:LEU:CD2	32:BH:114:ILE:HB	2.18	0.72
32:BH:82:TYR:CZ	32:BH:137:LYS:CB	2.72	0.72
34:BN:82:THR:OG1	34:BN:83:ILE:HG23	1.89	0.72
37:BQ:135:ALA:O	37:BQ:136:TRP:C	2.28	0.72
37:BQ:142:LYS:HE3	37:BQ:142:LYS:CA	2.19	0.72
44:BR:28:LEU:O	44:BR:30:THR:N	2.21	0.72
38:BS:85:GLY:O	38:BS:86:LEU:C	2.26	0.72
46:BV:36:LYS:HA	46:BV:60:VAL:HG22	1.71	0.72
46:BV:62:GLU:CB	46:BV:96:LEU:HD21	2.19	0.72
40:BW:14:PRO:O	40:BW:17:VAL:HB	1.89	0.72
40:BW:29:LEU:HG	40:BW:30:GLU:H	1.55	0.72
40:BW:79:GLY:O	40:BW:80:PRO:O	2.07	0.72
43:BZ:113:VAL:CG1	43:BZ:114:ASP:H	1.88	0.72
33:BI:141:LEU:HD13	33:BI:142:LYS:C	2.10	0.72
42:BY:87:VAL:CG1	42:BY:88:PRO:CD	2.60	0.72
26:BB:75:G:H1'	43:BZ:22:VAL:HG21	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1792:G:OP1	28:BD:204:PHE:CZ	2.42	0.72
41:BX:9:HIS:H	41:BX:26:PHE:HA	1.53	0.72
41:BX:6:LYS:HD2	41:BX:27:ALA:HB1	1.70	0.72
27:BA:95:G:H1'	47:B2:42:ASN:HB3	1.72	0.72
27:BA:1710:C:O2'	27:BA:2858:C:N4	2.22	0.72
7:AD:11:LEU:C	7:AD:13:ARG:H	1.93	0.72
1:AA:462:G:H21	19:AP:82:GLN:NE2	1.86	0.72
49:B0:49:GLN:NE2	49:B0:73:GLY:O	2.04	0.72
50:B4:41:PRO:CG	50:B4:57:ASP:CB	2.67	0.72
50:B4:5:LEU:CA	50:B4:56:VAL:HG13	2.20	0.72
50:B4:68:ARG:HD3	50:B4:72:LYS:CG	2.17	0.72
27:BA:1263:U:O4'	51:B5:16:ARG:NH2	2.23	0.72
51:B5:45:ILE:N	51:B5:52:TYR:CZ	2.57	0.72
27:BA:2066:C:N3	27:BA:2445:G:C2	2.58	0.72
27:BA:1028:A:C2	27:BA:2486:G:O2'	2.41	0.72
27:BA:2487:G:C2'	27:BA:2488:A:O5'	2.36	0.72
27:BA:2497:A:O2'	27:BA:2498:C:P	2.47	0.72
27:BA:2533:A:H2'	27:BA:2534:A:C8	2.24	0.72
27:BA:2575:C:C2'	27:BA:2575:C:O2	2.37	0.72
27:BA:2585:U:O2'	27:BA:2586:C:OP2	2.06	0.72
27:BA:2633:G:C4	27:BA:2634:G:N7	2.57	0.72
27:BA:2656:U:C4	27:BA:2665:A:N6	2.57	0.72
27:BA:2668:G:H21	27:BA:2669:G:H1'	1.54	0.72
27:BA:2815:C:O2	27:BA:2816:C:C5	2.42	0.72
27:BA:2819:G:C4	27:BA:2821:A:N7	2.57	0.72
27:BA:446:G:OP2	45:BU:3:ARG:HD3	1.90	0.72
27:BA:1817:G:OP1	28:BD:63:ILE:CD1	2.37	0.72
29:BE:206:LYS:O	29:BE:257:GLY:HA3	1.90	0.72
29:BE:42:ALA:H	29:BE:189:MET:CE	2.00	0.72
30:BF:163:HIS:HA	30:BF:166:ILE:CD1	2.16	0.72
30:BF:36:ARG:O	30:BF:39:GLN:CD	2.26	0.72
31:BG:140:ARG:HA	31:BG:143:LYS:HZ3	1.52	0.72
37:BQ:47:GLU:HA	37:BQ:124:ALA:H	1.53	0.72
40:BW:24:ILE:HG22	40:BW:35:ILE:HD12	1.71	0.72
27:BA:496:G:P	40:BW:62:HIS:HE2	2.12	0.72
43:BZ:150:GLY:H	43:BZ:165:GLU:H	1.37	0.72
27:BA:84:A:OP1	42:BY:20:HIS:NE2	2.22	0.72
10:AG:77:SER:HB3	10:AG:84:ASN:HB3	1.71	0.72
32:BH:53:ARG:HD2	32:BH:56:ASP:HA	1.70	0.72
5:AB:170:GLU:HG3	5:AB:173:ALA:HB3	1.70	0.72
20:AQ:67:LYS:O	20:AQ:68:ARG:HB2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:45:PHE:HZ	49:B0:78:PHE:HD2	1.33	0.72
54:B8:5:LYS:HB3	54:B8:60:LEU:HA	1.70	0.72
55:B9:19:ARG:O	55:B9:22:ARG:CB	2.32	0.72
27:BA:1131:G:N1	34:BN:69:TYR:HE1	1.84	0.72
27:BA:1363:C:P	50:B4:55:ARG:HH22	2.12	0.72
27:BA:2250:G:H3'	27:BA:2250:G:H8	1.53	0.72
27:BA:2320:A:N3	27:BA:2333:A:C5	2.57	0.72
27:BA:2348:U:H3'	54:B8:42:ARG:NH2	2.05	0.72
27:BA:2356:C:H2'	27:BA:2357:U:H5'	1.72	0.72
27:BA:2359:C:C5	27:BA:2360:A:C2	2.78	0.72
27:BA:2416:C:OP1	36:BP:51:PHE:CD2	2.39	0.72
27:BA:2077:A:C4	27:BA:2435:A:N7	2.57	0.72
27:BA:2497:A:H2'	27:BA:2498:C:OP2	1.88	0.72
27:BA:2520:C:C4	27:BA:2567:G:C5	2.77	0.72
27:BA:2701:C:H3'	27:BA:2702:U:H5'	1.72	0.72
27:BA:1455:G:O6	27:BA:2705:A:C2	2.42	0.72
27:BA:2774:C:OP2	29:BE:260:GLN:NE2	2.23	0.72
27:BA:2789:C:O2'	27:BA:2893:G:N2	2.22	0.72
27:BA:592:G:N2	54:B8:3:LYS:HE2	2.05	0.72
27:BA:2712:U:O2'	27:BA:712(A):A:P	2.46	0.72
29:BE:228:ARG:O	29:BE:231:TRP:N	2.22	0.72
29:BE:269:ILE:CD1	29:BE:295:LEU:C	2.57	0.72
30:BF:5:ILE:CA	30:BF:139:VAL:HG11	2.20	0.72
32:BH:83:GLU:OE1	32:BH:85:ALA:N	2.23	0.72
27:BA:1076:C:C1'	56:BK:91:GLU:CG	2.68	0.72
35:BO:31:ARG:HB2	35:BO:32:TYR:CD1	2.24	0.72
36:BP:67:ARG:NH1	36:BP:109:LEU:HD12	2.05	0.72
37:BQ:46:VAL:O	37:BQ:124:ALA:O	2.08	0.72
44:BR:27:SER:O	44:BR:30:THR:HB	1.90	0.72
45:BU:85:ARG:CZ	45:BU:116:ALA:O	2.36	0.72
27:BA:993:G:C2	45:BU:54:LYS:NZ	2.56	0.72
27:BA:446:G:C5'	45:BU:5:LYS:HE3	2.19	0.72
45:BU:88:ILE:HG22	46:BV:52:GLY:HA2	1.71	0.72
46:BV:74:TYR:HE1	46:BV:87:ARG:O	1.73	0.72
40:BW:82:LEU:O	40:BW:84:ARG:CD	2.27	0.72
27:BA:146:G:C2	27:BA:147:U:H1'	2.24	0.72
56:BK:85:ILE:HG12	56:BK:87:LYS:O	1.90	0.72
32:BH:20:GLY:O	32:BH:21:ASN:HB3	1.88	0.72
27:BA:265:A:N6	27:BA:428:A:C5	2.57	0.72
49:B0:46:LYS:HG3	49:B0:58:THR:HG23	0.75	0.72
49:B0:48:GLY:CA	49:B0:55:ARG:HA	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:29:ARG:O	52:B6:30:ASN:C	2.28	0.72
54:B8:37:SER:OG	54:B8:38:GLY:N	2.21	0.72
27:BA:592:G:H21	54:B8:3:LYS:HE2	1.55	0.72
27:BA:126:A:OP1	53:B7:44:VAL:HG13	1.89	0.72
27:BA:1953:A:N6	27:BA:2550:G:C4'	2.53	0.72
27:BA:197:A:C5	27:BA:2430:A:C8	2.78	0.72
27:BA:2256:G:C2'	27:BA:2257:U:H5'	2.20	0.72
27:BA:2286:A:C5'	27:BA:2287:A:O4'	2.37	0.72
27:BA:2348:U:C5'	54:B8:42:ARG:NH2	2.44	0.72
27:BA:2508:G:C2	27:BA:2582:G:O6	2.41	0.72
27:BA:2551:C:H2'	27:BA:2552:U:H6	1.53	0.72
27:BA:2606:C:O2	27:BA:2607:G:C8	2.42	0.72
29:BE:44:TYR:HD1	29:BE:309:PRO:HD2	1.55	0.72
29:BE:77:PRO:CB	29:BE:187:HIS:N	2.36	0.72
32:BH:145:ALA:C	32:BH:147:ILE:H	1.93	0.72
34:BN:46:ILE:CD1	34:BN:132:LEU:CD1	2.68	0.72
35:BO:11:ALA:HB1	35:BO:99:PHE:CB	2.18	0.72
44:BR:105:ARG:NE	44:BR:105:ARG:N	2.38	0.72
44:BR:36:THR:CG2	44:BR:40:LYS:HD2	2.10	0.72
44:BR:58:GLY:HA2	44:BR:80:PHE:HE2	0.93	0.72
38:BS:34:LEU:HD21	38:BS:102:LEU:CA	2.15	0.72
45:BU:40:LEU:HD23	45:BU:40:LEU:N	2.03	0.72
45:BU:95:LEU:HD23	45:BU:95:LEU:N	2.05	0.72
40:BW:27:LYS:HB3	40:BW:31:GLU:OE2	1.89	0.72
1:AA:1222:G:P	1:AA:1321:C:O2	2.48	0.72
28:BD:61:TYR:OH	28:BD:214:MET:HE3	1.88	0.72
47:B2:26:GLU:O	47:B2:27:LEU:C	2.27	0.72
2:AV:12:U:H1'	27:BA:1923:U:O2'	1.87	0.72
1:AA:126:G:OP1	1:AA:633:G:N2	2.22	0.72
49:B0:61:ALA:HB3	49:B0:81:ILE:HD13	1.71	0.72
53:B7:36:ALA:O	53:B7:37:LYS:C	2.28	0.72
54:B8:30:ARG:CD	54:B8:44:LYS:HD2	2.19	0.72
27:BA:2428:G:H5''	27:BA:2429:G:P	2.29	0.72
27:BA:830:G:N7	27:BA:2448:A:H8	1.87	0.72
27:BA:2536:G:C6	27:BA:2537:U:C4	2.78	0.72
27:BA:2548:G:H8	27:BA:2548:G:H3'	1.55	0.72
27:BA:2589:A:N1	27:BA:2606:C:N4	2.38	0.72
27:BA:783:A:H4'	27:BA:2589:A:P	2.29	0.72
27:BA:1819:A:C5'	28:BD:157:ALA:HB2	2.19	0.72
28:BD:181:ARG:CB	28:BD:181:ARG:CZ	2.66	0.72
29:BE:101:THR:O	29:BE:103:GLU:CG	2.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:243:VAL:C	30:BF:246:ARG:H	1.92	0.72
32:BH:41:THR:HG22	32:BH:52:THR:CG2	2.18	0.72
32:BH:75:VAL:HG12	32:BH:76:GLU:N	2.05	0.72
36:BP:81:VAL:CG1	36:BP:81:VAL:O	2.36	0.72
37:BQ:93:ILE:O	37:BQ:94:ARG:HB2	1.88	0.72
46:BV:42:GLY:C	46:BV:54:TYR:OH	2.26	0.72
40:BW:12:ILE:CG2	40:BW:13:SER:N	2.52	0.72
33:BI:103:GLN:CD	33:BI:109:LYS:HA	2.08	0.72
33:BI:98:ILE:CG2	33:BI:99:ALA:H	1.99	0.72
27:BA:294:A:H4'	42:BY:15:PRO:HG2	1.71	0.72
42:BY:35:TYR:OH	42:BY:113:GLU:CG	2.31	0.72
43:BZ:5:ALA:HB3	43:BZ:33:ALA:CA	2.15	0.72
3:AW:25:C:C6	3:AW:26:G:C4	2.77	0.72
1:AA:976:G:O5'	1:AA:1358:U:H1'	1.88	0.72
27:BA:1827:C:C5'	27:BA:1971:A:H4'	2.12	0.72
27:BA:1906:G:C4	27:BA:1929:G:C6	2.78	0.72
1:AA:668:G:H5'	18:AO:48:LYS:O	1.89	0.72
25:AY:22:PRO:CA	56:BK:22:PRO:CA	2.68	0.72
1:AA:217:C:O2'	1:AA:461:C:N4	2.23	0.72
50:B4:6:HIS:CB	50:B4:56:VAL:HG23	2.19	0.72
50:B4:5:LEU:HD12	50:B4:60:ASN:HD22	1.55	0.72
27:BA:2468:G:C6	27:BA:2481:G:C5	2.78	0.72
27:BA:2659:G:H1'	27:BA:2663:G:H1	1.53	0.72
27:BA:2734:A:N7	27:BA:2735:G:C5	2.58	0.72
28:BD:127:ASN:C	28:BD:190:THR:HB	2.09	0.72
27:BA:2785:C:C2'	29:BE:100:TRP:CD1	2.66	0.72
29:BE:79:ARG:CA	29:BE:186:GLU:HA	2.17	0.72
30:BF:223:LEU:HA	30:BF:231:ARG:HD2	1.71	0.72
31:BG:97:GLN:CD	31:BG:106:PHE:HD2	1.92	0.72
32:BH:106:VAL:O	32:BH:106:VAL:HG12	1.87	0.72
32:BH:58:LYS:HA	32:BH:61:ARG:HD2	1.70	0.72
32:BH:66:THR:CG2	32:BH:67:THR:N	2.53	0.72
36:BP:106:VAL:HG21	36:BP:122:ALA:CB	2.20	0.72
37:BQ:65:ARG:NH2	37:BQ:122:PHE:HE2	1.84	0.72
39:BT:5:GLU:OE1	39:BT:56:ARG:NH2	2.23	0.72
45:BU:115:ASN:C	45:BU:117:ARG:N	2.43	0.72
37:BQ:36:ASN:HD21	43:BZ:116:VAL:HB	1.54	0.72
27:BA:1341:U:H4'	41:BX:54:THR:O	1.90	0.72
42:BY:9:LYS:HZ1	42:BY:13:ARG:NH2	1.86	0.72
27:BA:1626:G:N7	27:BA:1634:A:C2	2.57	0.72
16:AM:3:ARG:HH12	31:BG:90:LEU:HD11	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:51:G:H1'	27:BA:118:A:N6	2.04	0.72
1:AA:1123:A:O2'	13:AJ:38:ILE:HG22	1.90	0.72
27:BA:350:U:O2	27:BA:350:U:H2'	1.90	0.72
48:B3:44:ARG:O	48:B3:45:GLY:O	2.07	0.72
50:B4:68:ARG:CB	50:B4:72:LYS:HG2	2.20	0.72
27:BA:125:G:H21	53:B7:10:ARG:N	1.88	0.72
27:BA:1996:C:H6	27:BA:1996:C:H5''	1.53	0.72
27:BA:2028:U:H2'	27:BA:2029:G:C8	2.25	0.72
27:BA:2235:G:C4	27:BA:2236:C:C6	2.78	0.72
27:BA:2320:A:C2	27:BA:2333:A:C4	2.78	0.72
27:BA:2378:A:H2'	27:BA:2379:G:O5'	1.89	0.72
27:BA:2411:A:H2	27:BA:2412:A:C5	2.06	0.72
27:BA:2478:A:N7	27:BA:2479:G:C8	2.58	0.72
27:BA:2468:G:O6	27:BA:2481:G:C5	2.42	0.72
27:BA:2546:U:N3	27:BA:2567:G:N7	2.34	0.72
27:BA:2649:U:C2'	27:BA:2650:U:O5'	2.38	0.72
27:BA:2655:G:N3	27:BA:2655:G:H3'	2.05	0.72
27:BA:2678:C:C2'	27:BA:2679:A:O5'	2.35	0.72
27:BA:2740:A:N1	27:BA:2764:A:C4	2.42	0.72
27:BA:2741:A:C2	27:BA:2742:C:H1'	2.25	0.72
27:BA:2886:G:H21	27:BA:2887:U:H1'	1.54	0.72
29:BE:295:LEU:CD2	29:BE:296:VAL:H	2.03	0.72
27:BA:2303:G:C4'	31:BG:99:ASP:OD2	2.36	0.72
35:BO:95:GLY:C	35:BO:97:ARG:H	1.92	0.72
36:BP:55:GLN:OE1	36:BP:55:GLN:CA	2.38	0.72
36:BP:94:ARG:CZ	36:BP:120:LEU:HB2	1.93	0.72
38:BS:58:LEU:HG	38:BS:58:LEU:O	1.90	0.72
40:BW:5:ALA:CB	40:BW:54:ALA:HB2	2.19	0.72
43:BZ:118:HIS:O	43:BZ:120:LEU:CD2	2.38	0.72
43:BZ:105:GLN:HB2	43:BZ:141:MET:CG	2.18	0.72
33:BI:75:LEU:HD12	33:BI:76:THR:H	1.53	0.72
27:BA:84:A:C6	27:BA:99:U:H1'	2.23	0.72
27:BA:338:G:C8	42:BY:21:LYS:CB	2.72	0.72
42:BY:18:GLU:HB3	42:BY:21:LYS:CE	2.19	0.72
43:BZ:13:LYS:C	43:BZ:36:ARG:HH21	1.89	0.72
1:AA:361(A):C:O3'	1:AA:1362:C:P	2.47	0.72
41:BX:16:ASN:HB2	41:BX:20:PHE:CE2	2.25	0.72
3:AW:37:YYG:H31	3:AW:37:YYG:C2'	2.20	0.72
50:B4:48:ARG:HG2	50:B4:49:PHE:CD1	2.24	0.72
1:AA:1404:C:O2	1:AA:1519:A:O2'	2.08	0.72
6:AC:48:TYR:OH	6:AC:122:GLU:CD	2.28	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1924:C:N4	27:BA:1925:C:N4	2.38	0.72
1:AA:652:U:H1'	1:AA:653:A:C2	2.20	0.72
1:AA:1237:C:C3'	1:AA:1238:A:P	2.78	0.72
56:BK:49:LYS:CE	56:BK:73:PRO:HG3	2.19	0.72
50:B4:20:VAL:O	50:B4:21:VAL:O	2.07	0.72
52:B6:32:GLN:HB3	52:B6:35:LEU:CB	2.20	0.72
27:BA:1608:A:H2'	27:BA:1611:C:N4	2.05	0.72
27:BA:2056:G:H1	51:B5:4:HIS:C	1.92	0.72
27:BA:2218:G:C2'	27:BA:2219:G:O5'	2.36	0.72
27:BA:2283:C:C6	27:BA:2389:G:N3	2.57	0.72
27:BA:2397:G:O6	27:BA:2420:C:N3	2.23	0.72
27:BA:2540:C:C2'	27:BA:2541:A:O5'	2.37	0.72
27:BA:2716:U:H2'	27:BA:2717:G:H5''	1.68	0.72
27:BA:2717:G:O2'	27:BA:2718:G:C5'	2.38	0.72
27:BA:2854:G:N2	27:BA:2864:G:C5	2.58	0.72
27:BA:557:U:H4'	34:BN:92:GLN:HE21	1.21	0.72
26:BB:80:U:HO2'	27:BA:918:A:H8	1.36	0.72
27:BA:971:C:N4	27:BA:972:G:H21	1.88	0.72
29:BE:177:ALA:O	29:BE:178:LEU:C	2.28	0.72
30:BF:103:ASN:O	30:BF:107:ARG:HG3	1.89	0.72
32:BH:40:MET:HB2	32:BH:54:PRO:HG3	1.71	0.72
33:BI:21:VAL:O	33:BI:22:ALA:HB3	1.89	0.72
34:BN:48:GLY:O	34:BN:53:ILE:CD1	2.37	0.72
37:BQ:153:PRO:O	37:BQ:154:ALA:CB	2.37	0.72
27:BA:910:A:C3'	37:BQ:17:ARG:NH2	2.52	0.72
27:BA:2021:C:C5	45:BU:25:TRP:CH2	2.78	0.72
45:BU:14:HIS:NE2	45:BU:36:PHE:CE2	2.58	0.72
45:BU:35:ALA:O	45:BU:38:THR:OG1	2.07	0.72
45:BU:57:PHE:C	45:BU:59:ARG:N	2.41	0.72
40:BW:30:GLU:HA	40:BW:33:ARG:HD3	0.76	0.72
43:BZ:149:ALA:CA	43:BZ:152:ILE:HD11	2.20	0.72
43:BZ:18:MET:HA	43:BZ:36:ARG:H	1.55	0.72
43:BZ:51:LEU:HD21	43:BZ:63:PRO:CB	2.20	0.72
43:BZ:63:PRO:O	43:BZ:64:ALA:CB	2.37	0.72
47:B2:30:ALA:HA	47:B2:34:GLN:CG	2.18	0.72
47:B2:51:LYS:HA	47:B2:54:ALA:HB2	1.72	0.72
41:BX:17:ASP:O	41:BX:22:ASN:O	2.07	0.72
41:BX:39:ASP:O	41:BX:40:ALA:C	2.27	0.72
3:AW:37:YYG:O22	10:AG:84:ASN:O	2.07	0.72
1:AA:429:U:OP2	7:AD:13:ARG:NH2	2.23	0.72
1:AA:173:U:H5'	1:AA:197:A:C5'	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:748:G:C8	27:BA:750:A:OP2	2.42	0.72
27:BA:1906:G:O4'	27:BA:1929:G:C8	2.43	0.72
1:AA:427:U:H5'	7:AD:41:GLY:HA2	1.69	0.72
27:BA:2421:G:OP1	52:B6:4:ASP:CG	2.28	0.71
27:BA:2652:C:H5	27:BA:2653:U:O4	1.73	0.71
27:BA:2676:C:C3'	27:BA:2676:C:C6	2.73	0.71
27:BA:2680:C:H5'	29:BE:302:GLY:N	2.05	0.71
27:BA:2783:G:H8	27:BA:2783:G:C5'	2.03	0.71
27:BA:2866:U:H4'	27:BA:2867:G:O5'	1.89	0.71
27:BA:29:U:C5'	45:BU:11:ARG:NH1	2.44	0.71
27:BA:613:U:O5'	27:BA:615:G:H8	1.73	0.71
27:BA:747:U:OP1	51:B5:2:ALA:CB	2.28	0.71
26:BB:12:C:N3	38:BS:10:MET:HE1	2.05	0.71
26:BB:57:A:H2	31:BG:17:ARG:HH12	1.34	0.71
28:BD:175:LEU:HD12	28:BD:179:GLU:HB3	1.70	0.71
29:BE:201:VAL:N	29:BE:266:LYS:NZ	2.38	0.71
30:BF:155:SER:N	30:BF:157:LEU:HG	2.05	0.71
30:BF:58:ALA:CB	30:BF:79:ARG:N	2.53	0.71
30:BF:96:LYS:H	30:BF:98:ARG:CZ	2.01	0.71
31:BG:19:GLU:HB3	31:BG:135:VAL:HG22	1.09	0.71
2:AV:56:C:C1'	31:BG:56:ARG:NE	2.53	0.71
32:BH:14:VAL:O	32:BH:16:VAL:HG23	1.90	0.71
36:BP:52:LYS:CD	36:BP:53:ARG:HH12	1.97	0.71
37:BQ:151:SER:HB3	37:BQ:155:GLY:C	2.10	0.71
37:BQ:23:ILE:O	37:BQ:23:ILE:HG22	1.90	0.71
37:BQ:56:ILE:H	37:BQ:56:ILE:HD13	0.63	0.71
38:BS:32:PRO:O	38:BS:101:VAL:HG12	1.89	0.71
38:BS:100:ALA:HB3	38:BS:127:LEU:HD21	1.71	0.71
45:BU:111:ASP:C	45:BU:113:SER:H	1.93	0.71
45:BU:20:ARG:HH12	46:BV:75:LYS:HE3	1.54	0.71
45:BU:27:SER:C	45:BU:31:GLN:HG3	2.10	0.71
46:BV:39:PHE:O	46:BV:40:VAL:CB	2.37	0.71
42:BY:49:GLU:HG3	42:BY:59:GLU:HA	1.72	0.71
42:BY:73:HIS:N	42:BY:91:LEU:HD12	2.04	0.71
1:AA:976:G:OP2	1:AA:1358:U:C4'	2.38	0.71
47:B2:43:PRO:HB2	47:B2:46:ILE:H	1.53	0.71
27:BA:1059:G:N3	56:BK:127:ILE:HG23	2.05	0.71
31:BG:44:ILE:C	31:BG:83:PHE:CZ	2.63	0.71
1:AA:18:C:H42	1:AA:917:G:H1	1.35	0.71
27:BA:404:C:H4'	27:BA:405:U:C5'	2.21	0.71
27:BA:1472:A:H2'	27:BA:1473:G:H8	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:38:VAL:HA	49:B0:40:GLN:CG	2.19	0.71
49:B0:68:VAL:O	49:B0:68:VAL:HG12	1.90	0.71
27:BA:2241:A:H2'	27:BA:2242:G:C8	2.25	0.71
27:BA:2482:G:C5	27:BA:2483:C:H5	1.97	0.71
27:BA:2605:U:H6	27:BA:2605:U:C5'	2.02	0.71
27:BA:2732:G:OP2	27:BA:2732:G:C8	2.43	0.71
27:BA:2766:G:N3	27:BA:2766:G:H2'	2.05	0.71
27:BA:2785:C:C2	29:BE:100:TRP:NE1	2.58	0.71
27:BA:489:G:H3'	27:BA:491:G:P	2.29	0.71
27:BA:574:C:H41	27:BA:2054:A:H5'	1.54	0.71
27:BA:931:G:OP1	48:B3:27:GLY:HA3	1.89	0.71
27:BA:932:G:H5'	48:B3:24:LYS:HE2	1.72	0.71
27:BA:997:G:P	45:BU:93:LYS:CE	2.76	0.71
28:BD:115:ILE:HB	28:BD:127:ASN:OD1	1.90	0.71
29:BE:70:VAL:HG13	29:BE:296:VAL:HB	1.71	0.71
29:BE:47:GLY:CA	29:BE:305:LYS:HE2	2.21	0.71
30:BF:215:ALA:HA	30:BF:242:GLU:HG3	1.72	0.71
31:BG:21:VAL:CB	31:BG:132:VAL:HG23	2.19	0.71
31:BG:140:ARG:HD2	31:BG:144:ARG:HH22	1.53	0.71
32:BH:55:SER:CB	32:BH:60:HIS:CB	2.63	0.71
35:BO:35:ILE:HG22	35:BO:62:VAL:O	1.89	0.71
27:BA:1665:A:C1'	35:BO:66:LYS:HZ3	2.02	0.71
37:BQ:58:HIS:CA	37:BQ:61:LEU:CG	2.68	0.71
44:BR:45:ARG:HD3	44:BR:97:VAL:HG23	1.72	0.71
38:BS:31:LYS:CB	38:BS:32:PRO:HD2	2.16	0.71
38:BS:40:ASN:HA	38:BS:114:LYS:HZ3	1.55	0.71
45:BU:111:ASP:O	45:BU:113:SER:CA	2.38	0.71
45:BU:32:TYR:HD2	45:BU:32:TYR:H	1.38	0.71
46:BV:60:VAL:O	46:BV:98:ILE:CG1	2.38	0.71
43:BZ:91:PRO:HG2	43:BZ:127:PRO:HB3	1.70	0.71
33:BI:141:LEU:HD11	33:BI:142:LYS:O	1.89	0.71
42:BY:40:VAL:HG12	42:BY:41:ARG:HG2	1.71	0.71
47:B2:8:ILE:O	47:B2:11:MET:CG	2.37	0.71
47:B2:30:ALA:HA	47:B2:34:GLN:HG3	1.72	0.71
47:B2:5:VAL:CG1	47:B2:6:GLN:N	2.13	0.71
27:BA:145:G:H4'	41:BX:1:SER:CB	2.15	0.71
1:AA:20:U:N3	1:AA:916:G:C2	2.58	0.71
27:BA:2386:C:H4'	49:B0:39:ARG:NE	2.06	0.71
52:B6:16:ALA:CB	52:B6:50:PHE:CE2	2.72	0.71
27:BA:2400:G:C2'	52:B6:20:PHE:HE1	2.03	0.71
53:B7:26:SER:O	53:B7:27:GLY:C	2.28	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B7:27:GLY:O	53:B7:28:ARG:C	2.26	0.71
54:B8:13:ARG:HB3	54:B8:24:ALA:HB1	1.70	0.71
27:BA:592:G:N3	54:B8:3:LYS:NZ	2.37	0.71
55:B9:24:LEU:HD22	55:B9:35:ARG:HG2	1.70	0.71
27:BA:2100:G:H1'	27:BA:2190:G:N2	2.05	0.71
27:BA:2446:G:N3	27:BA:2501:C:H5	1.86	0.71
27:BA:2511:U:C5	27:BA:2512:C:C5	2.77	0.71
27:BA:2512:C:H4'	29:BE:235:ILE:CD1	2.19	0.71
27:BA:2550:G:H2'	27:BA:2551:C:H6	1.51	0.71
27:BA:1637:A:C4'	27:BA:2711:A:O2'	2.24	0.71
27:BA:2756:U:C2'	27:BA:2757:A:H5'	2.20	0.71
27:BA:2783:G:N1	27:BA:2784:C:N4	2.39	0.71
27:BA:971:C:H42	27:BA:972:G:H21	1.37	0.71
29:BE:204:VAL:H	29:BE:303:PRO:CG	2.03	0.71
30:BF:20:ASP:O	30:BF:21:VAL:O	2.08	0.71
30:BF:214:THR:C	30:BF:216:SER:N	2.40	0.71
30:BF:30:LEU:O	30:BF:31:ILE:C	2.28	0.71
31:BG:95:THR:O	31:BG:97:GLN:N	2.23	0.71
32:BH:104:LEU:HB3	32:BH:151:ARG:HH11	1.55	0.71
32:BH:69:SER:O	32:BH:70:LEU:C	2.28	0.71
33:BI:3:VAL:O	33:BI:18:ILE:HA	1.90	0.71
36:BP:68:GLU:O	36:BP:71:GLU:HG2	1.89	0.71
37:BQ:45:GLN:HE22	37:BQ:153:PRO:HB2	0.65	0.71
27:BA:446:G:OP2	45:BU:3:ARG:NH1	2.23	0.71
46:BV:5:ILE:CD1	46:BV:12:TYR:CE1	2.73	0.71
46:BV:83:ARG:O	46:BV:84:THR:HG23	1.90	0.71
27:BA:82:G:C5'	27:BA:296:C:OP1	2.34	0.71
42:BY:19:ARG:HG2	42:BY:22:GLN:NE2	2.05	0.71
42:BY:45:GLY:C	42:BY:62:VAL:HB	2.10	0.71
43:BZ:26:LYS:CB	43:BZ:26:LYS:NZ	2.52	0.71
47:B2:5:VAL:O	47:B2:6:GLN:C	2.27	0.71
27:BA:1398:C:H2'	27:BA:1399:C:C6	2.25	0.71
27:BA:10:G:C2	27:BA:2629:A:C5	2.78	0.71
1:AA:1242:C:O2'	1:AA:1303:C:H5''	1.89	0.71
11:AH:27:PRO:HB2	11:AH:32:LYS:HZ3	1.55	0.71
49:B0:61:ALA:C	49:B0:62:LEU:CD1	2.48	0.71
48:B3:18:ASP:O	48:B3:20:LYS:N	2.24	0.71
52:B6:14:SER:HB3	52:B6:52:GLU:CA	2.15	0.71
52:B6:41:ASP:HA	52:B6:47:HIS:O	1.90	0.71
53:B7:19:ARG:O	53:B7:20:ALA:C	2.26	0.71
27:BA:1134:G:H3'	27:BA:1136:G:OP2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1184:G:OP1	48:B3:29:ARG:HB3	1.89	0.71
27:BA:1287:A:H8	44:BR:104:ARG:CD	2.03	0.71
27:BA:2320:A:C2	27:BA:2333:A:N1	2.58	0.71
27:BA:2354:G:N3	49:B0:32:LYS:CG	2.53	0.71
27:BA:2077:A:N3	27:BA:2435:A:C8	2.58	0.71
27:BA:2461:C:O2	27:BA:2462:U:C6	2.42	0.71
27:BA:2468:G:O6	27:BA:2481:G:N1	2.23	0.71
27:BA:2523:G:C2	27:BA:2541:A:N3	2.57	0.71
27:BA:2585:U:C2'	27:BA:2586:C:OP2	2.38	0.71
27:BA:1456:G:N2	27:BA:2704:C:C4	2.57	0.71
27:BA:974:G:N7	46:BV:80:TYR:CE2	2.59	0.71
28:BD:85:ASN:N	28:BD:85:ASN:HD22	1.88	0.71
28:BD:89:ASN:ND2	28:BD:199:ARG:NE	2.34	0.71
29:BE:211:GLN:CD	29:BE:212:GLY:N	2.44	0.71
27:BA:2730:C:C4'	29:BE:265:ASN:ND2	2.48	0.71
30:BF:1:MET:C	30:BF:18:LEU:CD2	2.59	0.71
35:BO:25:LEU:HD12	35:BO:38:VAL:C	2.10	0.71
35:BO:99:PHE:CD2	39:BT:24:LYS:HE3	2.21	0.71
36:BP:120:LEU:C	36:BP:120:LEU:HD13	2.10	0.71
38:BS:17:ARG:CD	38:BS:18:THR:N	2.52	0.71
38:BS:21:HIS:CD2	38:BS:24:LEU:HD12	2.24	0.71
40:BW:24:ILE:CG2	40:BW:35:ILE:HB	2.20	0.71
43:BZ:114:ASP:CA	43:BZ:170:SER:O	2.37	0.71
43:BZ:78:PRO:C	43:BZ:79:ILE:HG13	2.11	0.71
28:BD:208:GLY:O	28:BD:211:HIS:NE2	2.24	0.71
41:BX:14:ALA:HB1	41:BX:18:MET:HE1	1.72	0.71
41:BX:31:ARG:NE	41:BX:31:ARG:N	2.39	0.71
43:BZ:95:SER:HA	43:BZ:122:ILE:HA	1.72	0.71
27:BA:1102:C:C2	27:BA:1104:C:C5	2.79	0.71
1:AA:20:U:O4'	1:AA:572:A:C2	2.43	0.71
1:AA:426:G:O2'	7:AD:42:GLN:N	2.23	0.71
3:AW:76:A:C8	27:BA:2422:A:C5	2.77	0.71
49:B0:9:SER:O	49:B0:10:SER:O	2.09	0.71
48:B3:6:VAL:HA	48:B3:55:ARG:O	1.90	0.71
50:B4:40:HIS:CB	50:B4:41:PRO:CD	2.67	0.71
52:B6:19:GLY:CA	52:B6:42:PRO:HG2	2.13	0.71
27:BA:1287:A:C5'	44:BR:104:ARG:CG	2.69	0.71
27:BA:1287:A:H5''	44:BR:104:ARG:CD	2.20	0.71
27:BA:2197:U:C5	27:BA:2224:G:C4	2.77	0.71
27:BA:2404:C:N4	27:BA:2405:G:C5	2.57	0.71
27:BA:2431:U:H2'	27:BA:2431:U:O2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2464:C:H2'	27:BA:2465:C:C6	2.24	0.71
27:BA:2543:G:HO2'	27:BA:2544:G:H5'	1.52	0.71
27:BA:2618:G:C5	27:BA:2619:C:C5	2.61	0.71
27:BA:2619:C:C2'	27:BA:2620:C:H5'	2.21	0.71
27:BA:2049:G:N3	27:BA:2620:C:N3	2.39	0.71
27:BA:2748:A:C8	27:BA:2749:A:N3	2.53	0.71
27:BA:2826:A:C4	27:BA:2827:C:H6	2.08	0.71
27:BA:2838:G:O2'	27:BA:2839:G:H5'	1.91	0.71
27:BA:2838:G:C4	27:BA:2839:G:H8	2.08	0.71
27:BA:2852:G:N3	27:BA:2853:C:N3	2.38	0.71
27:BA:636:G:OP1	36:BP:127:GLU:CG	2.32	0.71
27:BA:806:C:O2'	27:BA:2445:G:C4'	2.39	0.71
28:BD:128:ALA:HB3	28:BD:190:THR:HG22	0.72	0.71
31:BG:49:PRO:HD3	31:BG:73:VAL:CG2	2.19	0.71
32:BH:66:THR:HG23	32:BH:67:THR:N	2.05	0.71
35:BO:1:MET:HB2	35:BO:2:ILE:CD1	2.21	0.71
37:BQ:33:MET:CB	37:BQ:83:PHE:CB	2.66	0.71
44:BR:80:PHE:O	44:BR:84:ALA:HB3	1.90	0.71
44:BR:84:ALA:HB3	44:BR:85:PRO:HD2	1.68	0.71
27:BA:2333:A:H2'	38:BS:13:ARG:HG3	1.71	0.71
38:BS:76:GLY:O	38:BS:83:LEU:CD1	2.39	0.71
45:BU:42:ALA:O	45:BU:45:TYR:CB	2.37	0.71
43:BZ:108:VAL:O	43:BZ:109:GLN:HG3	1.91	0.71
3:AW:37:YYG:C21	10:AG:84:ASN:C	2.58	0.71
1:AA:1339:A:C2	2:AV:31:A:C1'	2.74	0.71
1:AA:1181:G:H4'	1:AA:1184:G:C5'	2.20	0.71
1:AA:426:G:H4'	7:AD:41:GLY:O	1.89	0.71
1:AA:427:U:H1'	1:AA:541:G:OP1	1.90	0.71
2:AV:14:A:H2'	2:AV:15:G:H8	1.55	0.71
1:AA:574:A:N3	1:AA:883:C:H1'	2.05	0.71
27:BA:733:G:OP2	27:BA:761:A:N6	2.22	0.71
5:AB:75:LYS:HA	5:AB:78:GLN:HB2	1.73	0.71
27:BA:2354:G:N3	49:B0:32:LYS:HG3	2.05	0.71
48:B3:1:MET:SD	48:B3:3:ARG:HG3	2.30	0.71
52:B6:12:MET:HB2	52:B6:27:ASN:HD22	1.51	0.71
53:B7:11:LYS:CE	53:B7:11:LYS:HA	2.21	0.71
53:B7:34:ARG:O	53:B7:35:ARG:C	2.28	0.71
55:B9:7:VAL:HG12	55:B9:34:GLN:NE2	2.05	0.71
27:BA:1259:G:H2'	27:BA:1260:G:C8	2.26	0.71
27:BA:2332:U:C2'	27:BA:2336:A:H62	2.03	0.71
27:BA:2343:C:H4'	27:BA:2373:G:O3'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2491:U:HO2'	27:BA:2492:U:H5'	0.86	0.71
27:BA:2504:U:O5'	27:BA:2504:U:C6	2.42	0.71
27:BA:2520:C:C2'	27:BA:2521:C:C5'	2.67	0.71
27:BA:2521:C:C2'	27:BA:2522:U:O5'	2.38	0.71
27:BA:2619:C:O2	27:BA:2619:C:H2'	1.90	0.71
27:BA:2666:C:H5	27:BA:2667:C:C5	2.07	0.71
27:BA:2762:G:C6	27:BA:2763:G:C5	2.79	0.71
27:BA:2802:G:H2'	27:BA:2803:C:H6	1.54	0.71
27:BA:397:G:OP2	50:B4:10:VAL:HG11	1.91	0.71
32:BH:66:THR:O	32:BH:69:SER:OG	2.08	0.71
35:BO:37:ASP:C	35:BO:62:VAL:HG23	2.11	0.71
35:BO:3:GLN:O	35:BO:4:GLN:C	2.28	0.71
27:BA:244:A:O2'	36:BP:56:LYS:CA	2.38	0.71
36:BP:73:VAL:O	36:BP:76:LEU:HB3	1.91	0.71
45:BU:13:ARG:O	45:BU:16:LYS:N	2.24	0.71
46:BV:75:LYS:HE2	46:BV:75:LYS:HA	1.70	0.71
43:BZ:113:VAL:O	43:BZ:171:VAL:HA	1.90	0.71
1:AA:1226:C:OP2	16:AM:103:THR:OG1	2.08	0.71
6:AC:9:GLY:HA3	17:AN:49:HIS:O	1.88	0.71
27:BA:1791:A:O2'	28:BD:204:PHE:HB2	1.90	0.71
1:AA:410:G:OP2	7:AD:25:ARG:NE	2.23	0.71
2:AV:12:U:O2'	27:BA:1924:C:O4'	2.06	0.71
6:AC:106:VAL:HG12	6:AC:108:ASN:N	2.05	0.71
27:BA:190:A:OP2	27:BA:205:G:N2	2.20	0.71
3:AW:72:C:HO2'	3:AW:73:A:C4'	1.94	0.71
48:B3:31:LEU:CD2	48:B3:32:GLN:CA	2.61	0.71
48:B3:42:ALA:O	48:B3:43:ILE:C	2.28	0.71
50:B4:18:GLY:N	50:B4:33:VAL:HG21	1.96	0.71
55:B9:10:MET:HB3	55:B9:32:HIS:NE2	2.05	0.71
27:BA:2546:U:H4'	27:BA:2565:A:C2	2.24	0.71
27:BA:2607:G:O2'	27:BA:2608:G:H5'	1.91	0.71
27:BA:2793:G:N1	27:BA:2794:C:C4	2.59	0.71
27:BA:2825:C:C4'	27:BA:2825:C:C6	2.73	0.71
27:BA:2892:A:H2'	27:BA:2893:G:H1'	1.71	0.71
27:BA:614:U:C3'	27:BA:615:G:H4'	2.17	0.71
27:BA:775:G:H2'	27:BA:794:G:N7	2.05	0.71
28:BD:131:LEU:HB3	28:BD:171:VAL:HG21	1.72	0.71
30:BF:215:ALA:C	30:BF:242:GLU:CG	2.54	0.71
32:BH:101:LYS:CB	32:BH:114:ILE:O	2.33	0.71
36:BP:124:ASP:C	36:BP:125:PHE:CG	2.63	0.71
37:BQ:142:LYS:HE2	37:BQ:143:VAL:CA	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:102:LEU:HD12	38:BS:129:ILE:HD12	1.72	0.71
26:BB:8:U:P	38:BS:37:ARG:HD2	2.31	0.71
40:BW:30:GLU:O	40:BW:33:ARG:HB2	1.91	0.71
43:BZ:92:VAL:O	43:BZ:94:VAL:HG23	1.90	0.71
42:BY:26:THR:C	42:BY:27:LEU:HG	2.10	0.71
1:AA:965:A:O2'	1:AA:966:G:H5''	1.91	0.71
41:BX:25:GLN:HE22	41:BX:65:VAL:CG1	2.02	0.71
27:BA:1:G:C2	27:BA:2902:C:N4	2.56	0.71
27:BA:2795:G:C2'	27:BA:2795:G:N3	2.53	0.71
27:BA:216:A:H2'	27:BA:217:G:C8	2.25	0.71
49:B0:35:ASN:HA	49:B0:68:VAL:HG22	1.70	0.71
51:B5:6:VAL:H	51:B5:8:LYS:NZ	1.88	0.71
52:B6:16:ALA:O	52:B6:19:GLY:N	2.24	0.71
27:BA:1183:G:C5'	48:B3:29:ARG:HG3	2.20	0.71
27:BA:1364:G:H22	27:BA:1366:A:H3'	1.55	0.71
27:BA:2314:C:O2'	31:BG:133:ASN:ND2	2.23	0.71
27:BA:2327:A:O2'	27:BA:2328:A:O4'	2.01	0.71
27:BA:2507:C:C4	27:BA:2583:G:C2	2.79	0.71
27:BA:2631:G:C2'	27:BA:2632:A:O5'	2.39	0.71
27:BA:2762:G:O6	27:BA:2763:G:C6	2.44	0.71
27:BA:464:U:O4'	53:B7:12:ARG:NH2	2.24	0.71
27:BA:974:G:C8	46:BV:80:TYR:CG	2.78	0.71
28:BD:130:PRO:CB	28:BD:186:LYS:O	2.35	0.71
28:BD:196:ASN:O	28:BD:196:ASN:OD1	2.09	0.71
30:BF:202:THR:HG22	30:BF:203:ALA:H	1.55	0.71
30:BF:22:PHE:O	30:BF:23:GLU:O	2.08	0.71
31:BG:55:LYS:O	31:BG:63:ILE:O	2.09	0.71
31:BG:38:GLU:OE2	31:BG:71:ALA:CB	2.39	0.71
27:BA:2313:C:H4'	31:BG:72:LYS:HB3	1.72	0.71
33:BI:1:MET:HG3	33:BI:3:VAL:CG2	2.21	0.71
34:BN:139:LEU:N	34:BN:139:LEU:CD1	2.53	0.71
34:BN:18:ILE:O	34:BN:18:ILE:CG2	2.38	0.71
35:BO:35:ILE:CG2	35:BO:62:VAL:O	2.37	0.71
35:BO:56:GLN:O	35:BO:58:VAL:CG2	2.34	0.71
39:BT:4:ARG:N	39:BT:4:ARG:NE	2.37	0.71
39:BT:8:TYR:CE1	39:BT:54:THR:HB	2.26	0.71
46:BV:51:ALA:O	46:BV:55:THR:HG23	1.91	0.71
43:BZ:37:LYS:C	43:BZ:40:ASP:CG	2.49	0.71
1:AA:958:A:C2	22:AS:55:LYS:CB	2.58	0.71
27:BA:1418:G:O6	27:BA:1577:C:H5''	1.91	0.71
27:BA:1324:G:H1'	27:BA:1616:A:N6	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:850:C:C4'	48:B3:18:ASP:CG	2.48	0.71
48:B3:59:VAL:C	48:B3:60:GLU:HG3	2.10	0.71
53:B7:29:ASN:O	53:B7:30:ILE:C	2.29	0.71
53:B7:27:GLY:C	53:B7:31:LEU:HG	2.10	0.71
27:BA:2081:C:H2'	27:BA:2082:A:H8	1.53	0.71
27:BA:2189:U:O2'	27:BA:2190:G:H5'	1.90	0.71
27:BA:2228:G:N7	27:BA:2229:C:C2	2.58	0.71
27:BA:919:G:N2	27:BA:2268:A:H5'	2.03	0.71
27:BA:2316:C:H4'	31:BG:151:ILE:HD12	0.71	0.71
27:BA:2327:A:N7	27:BA:2388:A:C6	2.59	0.71
27:BA:2485:G:C2	27:BA:2486:G:C1'	2.74	0.71
27:BA:623:G:H2'	27:BA:624:C:C6	2.26	0.71
27:BA:826:U:C2	27:BA:828:U:H1'	2.26	0.71
27:BA:974:G:H4'	27:BA:974(A):C:OP1	1.91	0.71
28:BD:141:HIS:CE1	28:BD:191:VAL:C	2.63	0.71
28:BD:166:LYS:HB2	28:BD:171:VAL:HA	1.73	0.71
28:BD:186:LYS:O	28:BD:187:CYS:O	2.08	0.71
29:BE:268:LEU:CD2	29:BE:269:ILE:H	1.83	0.71
30:BF:166:ILE:O	30:BF:168:ARG:HG3	1.91	0.71
31:BG:129:ASP:O	31:BG:130:VAL:CG1	2.38	0.71
31:BG:23:VAL:HG23	31:BG:23:VAL:O	1.91	0.71
32:BH:137:LYS:CD	32:BH:138:GLN:N	2.34	0.71
27:BA:2748:A:C2'	32:BH:62:ALA:HB1	2.21	0.71
34:BN:12:VAL:CA	34:BN:38:VAL:HG22	2.21	0.71
34:BN:75:PRO:O	34:BN:77:GLY:N	2.23	0.71
44:BR:105:ARG:NE	44:BR:105:ARG:CA	2.52	0.71
44:BR:28:LEU:O	44:BR:31:HIS:N	2.23	0.71
38:BS:20:TYR:O	38:BS:23:ARG:HB3	1.91	0.71
46:BV:74:TYR:CE1	46:BV:87:ARG:O	2.42	0.71
27:BA:25:U:H5'	40:BW:79:GLY:HA3	1.72	0.71
27:BA:108:U:H2'	27:BA:109:G:H8	1.56	0.71
27:BA:84:A:N7	42:BY:111:ARG:NH2	2.39	0.71
42:BY:80:GLU:HG2	42:BY:86:GLU:HG2	1.72	0.71
1:AA:1318:A:C5'	22:AS:10:PHE:CB	2.68	0.71
16:AM:94:ARG:HB2	16:AM:96:LEU:HD21	1.73	0.71
47:B2:30:ALA:HB1	47:B2:46:ILE:CD1	2.20	0.71
41:BX:33:SER:O	41:BX:37:VAL:CB	2.38	0.71
1:AA:586:C:H5'	1:AA:879:C:OP1	1.90	0.71
1:AA:265:G:H4'	20:AQ:66:SER:H	1.55	0.71
8:AE:9:LYS:HD2	8:AE:112:LEU:HD23	1.72	0.71
27:BA:2009:G:O2'	44:BR:106:GLY:O	2.06	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2051:A:N6	27:BA:2614:A:C5	2.58	0.71
27:BA:965:C:C5'	27:BA:2273:A:H1'	2.13	0.71
27:BA:2320:A:C8	27:BA:2320:A:O5'	2.43	0.71
27:BA:2367:G:O2'	27:BA:2368:C:H5'	1.90	0.71
27:BA:2385:C:O2	27:BA:2386:C:H6	1.72	0.71
27:BA:2520:C:C4	27:BA:2567:G:N7	2.59	0.71
27:BA:2693:A:C2	27:BA:2694:G:N7	2.58	0.71
27:BA:2783:G:H2'	27:BA:2784:C:C6	2.25	0.71
27:BA:592:G:O2'	54:B8:3:LYS:CG	2.38	0.71
30:BF:107:ARG:O	30:BF:109:LEU:N	2.24	0.71
30:BF:115:LEU:HG	30:BF:246:ARG:NH1	2.05	0.71
30:BF:51:TYR:O	30:BF:54:LEU:C	2.28	0.71
32:BH:158:GLY:O	32:BH:159:LYS:HB2	1.91	0.71
32:BH:147:ILE:O	32:BH:161:ILE:HD13	1.91	0.71
33:BI:1:MET:HG3	33:BI:3:VAL:HG23	1.72	0.71
34:BN:38:VAL:O	34:BN:39:VAL:CB	2.38	0.71
35:BO:105:GLU:O	35:BO:107:ARG:N	2.24	0.71
36:BP:66:VAL:CG2	36:BP:110:GLY:O	2.39	0.71
37:BQ:142:LYS:CD	37:BQ:143:VAL:N	2.52	0.71
38:BS:61:ALA:CB	38:BS:84:THR:O	2.39	0.71
46:BV:6:GLN:HE22	46:BV:10:LYS:HB3	1.56	0.71
40:BW:8:ARG:HG3	40:BW:102:HIS:ND1	2.05	0.71
43:BZ:66:VAL:CG2	43:BZ:68:ALA:O	2.38	0.71
27:BA:1773:A:OP1	27:BA:1828:G:H3'	1.90	0.71
20:AQ:15:MET:CB	20:AQ:18:THR:HB	2.21	0.71
6:AC:16:ARG:NH2	6:AC:184:TYR:H	1.89	0.71
49:B0:7:VAL:O	49:B0:7:VAL:CG1	2.38	0.70
54:B8:3:LYS:C	54:B8:4:MET:HE3	2.11	0.70
55:B9:7:VAL:CG1	55:B9:25:VAL:HG23	2.21	0.70
27:BA:1456:G:N1	27:BA:2704:C:N4	2.39	0.70
27:BA:2218:G:C4	27:BA:2219:G:C8	2.77	0.70
27:BA:2305:A:N1	27:BA:2312:U:O2	2.24	0.70
27:BA:2370:G:H2'	27:BA:2371:G:H8	1.55	0.70
27:BA:2386:C:H4'	49:B0:39:ARG:HH21	1.51	0.70
27:BA:2402:C:H5''	27:BA:2403:C:OP1	1.90	0.70
27:BA:2450:A:H2'	27:BA:2451:A:H8	1.56	0.70
25:AY:224:ALA:CA	27:BA:2554:U:N3	2.54	0.70
27:BA:2520:C:C5	27:BA:2567:G:C8	2.78	0.70
27:BA:2620:C:H4'	29:BE:252:GLN:HB2	1.73	0.70
27:BA:2681:C:N4	27:BA:2725:A:N7	2.39	0.70
27:BA:2802:G:H2'	27:BA:2803:C:C6	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2815:C:C2	27:BA:2816:C:C5	2.79	0.70
27:BA:2835:A:N6	27:BA:2879:C:OP2	2.24	0.70
27:BA:2838:G:C6	27:BA:2839:G:C8	2.79	0.70
27:BA:2808:U:N1	27:BA:2892:A:N6	2.39	0.70
27:BA:957:A:OP1	37:BQ:95:GLU:HB3	1.90	0.70
28:BD:166:LYS:HA	28:BD:172:ILE:H	1.54	0.70
29:BE:202:ALA:HA	29:BE:262:THR:HB	1.73	0.70
29:BE:246:VAL:HG12	29:BE:247:ARG:N	2.05	0.70
30:BF:138:VAL:O	30:BF:139:VAL:CB	2.39	0.70
30:BF:19:PRO:O	30:BF:20:ASP:C	2.29	0.70
31:BG:129:ASP:O	31:BG:130:VAL:HG13	1.90	0.70
31:BG:14:ARG:H	31:BG:14:ARG:HD2	1.55	0.70
32:BH:120:LEU:HD13	32:BH:143:LEU:HD13	1.73	0.70
34:BN:62:ASP:O	34:BN:64:GLY:N	2.24	0.70
35:BO:17:ARG:NE	35:BO:47:THR:HA	2.06	0.70
36:BP:131:GLU:O	36:BP:132:LYS:C	2.29	0.70
36:BP:60:GLU:O	36:BP:61:ALA:CB	2.39	0.70
37:BQ:45:GLN:CB	37:BQ:152:SER:CB	2.62	0.70
38:BS:13:ARG:O	38:BS:13:ARG:HG2	1.90	0.70
31:BG:145:ASP:HB3	38:BS:15:GLU:CA	2.21	0.70
38:BS:76:GLY:O	38:BS:82:TYR:N	2.23	0.70
38:BS:93:GLN:C	38:BS:93:GLN:OE1	2.29	0.70
27:BA:996:A:H5'	45:BU:93:LYS:HG3	1.71	0.70
45:BU:88:ILE:CG2	46:BV:52:GLY:HA2	2.21	0.70
43:BZ:24:TYR:HD2	43:BZ:84:TYR:CD1	2.06	0.70
43:BZ:57:GLU:C	43:BZ:59:GLY:N	2.43	0.70
47:B2:4:HIS:N	47:B2:8:ILE:CD1	2.53	0.70
41:BX:25:GLN:NE2	41:BX:65:VAL:HG13	2.03	0.70
13:AJ:34:VAL:HG12	13:AJ:36:GLY:H	1.56	0.70
27:BA:1173:G:H22	27:BA:1175:U:H3'	1.56	0.70
1:AA:1418:A:N3	27:BA:1959:G:H1'	2.06	0.70
52:B6:8:ILE:HG23	52:B6:30:ASN:H	1.55	0.70
53:B7:15:THR:OG1	53:B7:16:HIS:N	2.17	0.70
27:BA:125:G:C3'	53:B7:19:ARG:HH11	1.95	0.70
53:B7:43:THR:O	53:B7:46:ASP:OD1	2.08	0.70
27:BA:1364:G:C8	27:BA:1364:G:H5'	2.26	0.70
27:BA:1937:A:N1	27:BA:1940:U:H5	1.89	0.70
27:BA:2086:U:C4	27:BA:2233:U:O4	2.44	0.70
27:BA:2197:U:HO2'	27:BA:2198:A:H5''	1.56	0.70
27:BA:2242:G:C4	27:BA:2243:U:C5	2.78	0.70
27:BA:2252:G:C8	27:BA:2252:G:C3'	2.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2378:A:C2'	27:BA:2379:G:O5'	2.39	0.70
27:BA:2415:G:C5	27:BA:2416:C:C5	2.79	0.70
27:BA:2439:A:H1'	27:BA:2587:A:P	2.32	0.70
27:BA:2517:C:N3	27:BA:2542:A:N6	2.38	0.70
27:BA:2583:G:N9	27:BA:2584:U:O2	2.24	0.70
27:BA:2607:G:O6	27:BA:2608:G:C2	2.44	0.70
27:BA:2758:A:H2'	27:BA:2759:G:O5'	1.91	0.70
27:BA:2845:G:HO2'	27:BA:2846:G:C4'	2.03	0.70
27:BA:564:C:P	46:BV:79:GLN:CD	2.70	0.70
27:BA:673:C:O4'	30:BF:82:GLN:NE2	2.25	0.70
28:BD:68:ARG:O	28:BD:69:ASP:CG	2.29	0.70
29:BE:61:PRO:HB3	29:BE:69:PRO:CB	2.20	0.70
30:BF:197:SER:O	30:BF:198:ASP:CB	2.39	0.70
31:BG:19:GLU:HB3	31:BG:135:VAL:HG23	1.61	0.70
33:BI:13:GLY:HA3	33:BI:15:LYS:HZ2	1.55	0.70
34:BN:45:VAL:H	34:BN:132:LEU:CD2	2.02	0.70
35:BO:64:ARG:HH22	35:BO:100:GLY:CA	2.04	0.70
35:BO:73:ASP:C	35:BO:75:SER:N	2.44	0.70
37:BQ:130:PRO:C	37:BQ:132:VAL:H	1.93	0.70
27:BA:1279:G:P	44:BR:34:ILE:HD12	2.31	0.70
44:BR:97:VAL:HG22	44:BR:114:VAL:CG1	2.22	0.70
27:BA:2320:A:H61	38:BS:14:ARG:HA	1.55	0.70
40:BW:96:ILE:N	40:BW:96:ILE:CD1	2.40	0.70
40:BW:81:ALA:CB	40:BW:97:LYS:HD2	2.20	0.70
33:BI:80:PRO:O	33:BI:148:GLN:CG	2.39	0.70
27:BA:86:C:OP1	42:BY:68:ASP:CG	2.29	0.70
42:BY:33:GLU:CG	42:BY:34:GLU:N	2.54	0.70
47:B2:35:ALA:O	47:B2:36:ALA:C	2.28	0.70
47:B2:59:ILE:HG23	47:B2:60:GLN:N	2.06	0.70
41:BX:7:HIS:HB2	41:BX:8:PRO:CD	2.20	0.70
50:B4:70:GLY:O	50:B4:71:SER:OG	2.09	0.70
1:AA:983:A:H4'	17:AN:3:ARG:HH22	1.56	0.70
27:BA:1470:G:N2	27:BA:1522:G:C2	2.59	0.70
23:AT:67:ALA:HA	23:AT:72:LEU:O	1.91	0.70
49:B0:51:VAL:O	49:B0:51:VAL:HG12	1.91	0.70
27:BA:2262:U:C5	49:B0:14:ARG:NH1	2.60	0.70
49:B0:36:ILE:N	49:B0:68:VAL:CG2	2.54	0.70
48:B3:16:PRO:CB	48:B3:19:GLN:NE2	2.54	0.70
48:B3:12:PRO:HG2	48:B3:20:LYS:HZ1	1.53	0.70
50:B4:56:VAL:HG12	50:B4:57:ASP:N	2.06	0.70
53:B7:44:VAL:N	53:B7:46:ASP:OD2	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1034:G:O4'	55:B9:18:ARG:CZ	2.39	0.70
27:BA:1259:G:H2'	27:BA:1260:G:H8	1.56	0.70
27:BA:2298:A:C2	27:BA:2299:G:H1'	2.27	0.70
27:BA:2344:U:C2'	27:BA:2345:G:OP2	2.32	0.70
27:BA:2415:G:C5	27:BA:2416:C:H5	2.09	0.70
27:BA:2468:G:C8	27:BA:2476:A:C2	2.78	0.70
27:BA:2476:A:C2	27:BA:2481:G:N2	2.59	0.70
27:BA:2447:G:C8	27:BA:2500:U:H5	2.09	0.70
27:BA:2880:C:C2'	27:BA:2881:C:C5'	2.58	0.70
27:BA:905:U:O2'	43:BZ:117:VAL:HG13	1.90	0.70
27:BA:2575:C:C5'	29:BE:241:TRP:HE1	2.01	0.70
30:BF:163:HIS:O	30:BF:166:ILE:HG13	1.86	0.70
30:BF:92:PRO:O	30:BF:96:LYS:CD	2.07	0.70
32:BH:130:ILE:HD12	32:BH:130:ILE:N	1.96	0.70
34:BN:74:ARG:HD2	34:BN:141:ALA:O	1.91	0.70
34:BN:19:MET:CE	34:BN:22:VAL:HG11	2.21	0.70
34:BN:24:SER:O	34:BN:28:GLU:HG2	1.92	0.70
27:BA:1140:C:C4	34:BN:49:ARG:HD2	2.24	0.70
34:BN:52:GLN:CA	34:BN:55:GLU:OE1	2.29	0.70
35:BO:12:ASP:HA	35:BO:97:ARG:O	1.90	0.70
35:BO:90:ASP:N	35:BO:90:ASP:OD1	2.24	0.70
27:BA:910:A:H62	37:BQ:12:PRO:C	1.93	0.70
26:BB:48:A:P	38:BS:107:ASN:HD21	2.04	0.70
45:BU:10:ARG:O	45:BU:13:ARG:NH1	2.22	0.70
45:BU:25:TRP:C	45:BU:28:ARG:HH11	1.93	0.70
45:BU:93:LYS:O	45:BU:94:VAL:HG23	1.90	0.70
46:BV:39:PHE:HD2	46:BV:40:VAL:N	1.89	0.70
27:BA:494:G:C4'	40:BW:6:ILE:HG22	2.16	0.70
43:BZ:91:PRO:HB2	43:BZ:127:PRO:CA	2.20	0.70
42:BY:19:ARG:N	42:BY:21:LYS:NZ	2.36	0.70
43:BZ:2:GLU:O	43:BZ:3:LEU:O	2.09	0.70
43:BZ:69:VAL:HG13	43:BZ:81:VAL:CG2	2.16	0.70
50:B4:49:PHE:CE1	50:B4:71:SER:OG	2.44	0.70
1:AA:922:G:N3	1:AA:1398:A:C2	2.58	0.70
27:BA:1620:G:C1'	53:B7:1:MET:H3	2.03	0.70
27:BA:49:A:N6	27:BA:176:G:N1	2.39	0.70
1:AA:791:G:H22	1:AA:1498:U:P	2.13	0.70
48:B3:37:LEU:HB3	48:B3:38:GLU:OE1	1.91	0.70
53:B7:24:THR:O	53:B7:28:ARG:NE	2.23	0.70
27:BA:458:G:C2'	53:B7:40:HIS:NE2	2.50	0.70
54:B8:26:LYS:HG3	54:B8:45:GLY:C	2.10	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B9:3:VAL:O	55:B9:3:VAL:HG12	1.89	0.70
27:BA:2616:C:N3	27:BA:2617:C:C5	2.58	0.70
27:BA:2882:A:H2'	27:BA:2883:A:O5'	1.91	0.70
28:BD:65:ASP:CG	28:BD:66:PHE:N	2.44	0.70
29:BE:228:ARG:O	29:BE:230:GLY:N	2.24	0.70
30:BF:102:LEU:HD21	30:BF:106:GLU:CB	2.21	0.70
31:BG:29:HIS:CB	31:BG:69:ILE:HG12	2.18	0.70
34:BN:51:GLU:O	34:BN:54:VAL:N	2.25	0.70
35:BO:20:LEU:HG	35:BO:44:LYS:HG2	1.73	0.70
37:BQ:67:ALA:C	37:BQ:71:PHE:CE1	2.64	0.70
38:BS:55:ASP:OD1	38:BS:56:ASP:N	2.23	0.70
27:BA:583:G:P	45:BU:10:ARG:HH11	2.13	0.70
27:BA:995:C:O2'	45:BU:57:PHE:CG	2.40	0.70
45:BU:20:ARG:HH11	46:BV:75:LYS:HD2	1.56	0.70
43:BZ:67:LYS:CA	43:BZ:67:LYS:CE	2.68	0.70
33:BI:109:LYS:H	33:BI:109:LYS:HE2	1.56	0.70
42:BY:11:GLN:O	42:BY:21:LYS:NZ	2.24	0.70
42:BY:92:ASP:OD1	42:BY:94:SER:N	2.25	0.70
43:BZ:35:ASP:OD1	43:BZ:37:LYS:N	2.24	0.70
43:BZ:45:GLN:N	43:BZ:45:GLN:NE2	2.40	0.70
1:AA:1358:U:OP1	17:AN:34:TYR:HA	1.91	0.70
47:B2:60:GLN:O	47:B2:63:GLU:CB	2.39	0.70
47:B2:6:GLN:O	47:B2:9:ARG:CA	2.39	0.70
7:AD:31:CYS:C	7:AD:33:MET:H	1.95	0.70
16:AM:122:LYS:HZ3	25:AY:154:GLY:CA	2.02	0.70
27:BA:740:U:O4	27:BA:758:C:H1'	1.91	0.70
27:BA:1779:U:H3'	27:BA:1779:U:H6	1.55	0.70
52:B6:32:GLN:HA	52:B6:35:LEU:HD12	1.71	0.70
27:BA:1028:A:H2	27:BA:2486:G:O2'	1.75	0.70
27:BA:2075:U:C4	27:BA:2238:G:C6	2.79	0.70
27:BA:2216:G:O2'	27:BA:2217:G:C5'	2.40	0.70
27:BA:2496:C:N4	27:BA:2497:A:C2	2.59	0.70
27:BA:2783:G:C6	27:BA:2784:C:C4	2.79	0.70
27:BA:2821:A:H2'	27:BA:2822:G:O4'	1.89	0.70
27:BA:2853:C:H3'	27:BA:2853:C:C6	2.25	0.70
27:BA:2721:A:O2'	27:BA:2874:C:H5'	1.90	0.70
27:BA:1819:A:N9	28:BD:177:SER:OG	2.24	0.70
27:BA:1492:G:C1'	28:BD:97:ASP:OD1	2.39	0.70
27:BA:2785:C:O2'	29:BE:100:TRP:CD1	2.43	0.70
30:BF:93:LYS:O	30:BF:96:LYS:CD	2.39	0.70
34:BN:12:VAL:HB	34:BN:38:VAL:CG2	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:14:ALA:H	34:BN:40:ASN:ND2	1.88	0.70
27:BA:2040:C:H4'	34:BN:69:TYR:HE2	1.54	0.70
37:BQ:58:HIS:O	37:BQ:59:ASN:C	2.29	0.70
44:BR:67:LEU:HD22	44:BR:71:GLN:HA	1.73	0.70
38:BS:35:VAL:N	38:BS:103:ASP:HB3	2.05	0.70
38:BS:127:LEU:C	38:BS:127:LEU:CD2	2.60	0.70
38:BS:19:ASP:O	38:BS:22:GLN:N	2.21	0.70
38:BS:87:LEU:N	38:BS:87:LEU:HD22	2.03	0.70
40:BW:29:LEU:CG	40:BW:33:ARG:HD2	2.16	0.70
33:BI:77:VAL:HB	33:BI:143:VAL:HA	1.74	0.70
27:BA:296:C:C6	27:BA:338:G:N2	2.40	0.70
1:AA:279:A:H5'	1:AA:280:C:H3'	1.73	0.70
7:AD:20:TYR:O	7:AD:22:LYS:N	2.23	0.70
53:B7:1:MET:C	53:B7:1:MET:SD	2.67	0.70
1:AA:1240:U:N3	10:AG:30:ILE:O	2.24	0.70
49:B0:38:VAL:HG12	49:B0:39:ARG:N	2.07	0.70
40:BW:19:LEU:HB3	51:B5:25:LEU:HD11	1.73	0.70
54:B8:30:ARG:HD2	54:B8:44:LYS:CD	2.20	0.70
27:BA:1021:A:C2	27:BA:1122:G:H5''	2.26	0.70
27:BA:199:A:C6	27:BA:2433:A:C8	2.79	0.70
27:BA:2090:G:C5	27:BA:2230:G:C6	2.79	0.70
27:BA:2251:G:P	37:BQ:102:ARG:NH2	2.63	0.70
27:BA:2305:A:H5'	27:BA:2306:C:OP2	1.91	0.70
27:BA:2330:G:C2	27:BA:2331:G:N9	2.59	0.70
27:BA:2450:A:H2'	27:BA:2451:A:C8	2.27	0.70
27:BA:2638:G:O6	27:BA:2776:A:OP2	2.09	0.70
27:BA:2779:U:H5''	27:BA:2780:G:O5'	1.91	0.70
28:BD:105:ALA:O	28:BD:194:VAL:O	2.08	0.70
29:BE:252:GLN:O	29:BE:254:GLY:N	2.21	0.70
29:BE:268:LEU:C	29:BE:268:LEU:CD2	2.55	0.70
30:BF:93:LYS:HB2	30:BF:96:LYS:CE	2.22	0.70
32:BH:70:LEU:O	32:BH:73:ASN:HB2	1.91	0.70
34:BN:53:ILE:CG2	34:BN:54:VAL:N	2.54	0.70
35:BO:47:THR:CB	35:BO:48:PRO:HD2	2.09	0.70
36:BP:114:VAL:CG2	36:BP:132:LYS:C	2.58	0.70
37:BQ:140:TYR:HD1	37:BQ:147:VAL:HG11	0.67	0.70
37:BQ:69:ASN:HD22	37:BQ:70:ARG:CA	2.03	0.70
44:BR:45:ARG:O	44:BR:46:GLY:C	2.30	0.70
38:BS:115:VAL:O	38:BS:118:ILE:HG22	1.91	0.70
38:BS:35:VAL:O	38:BS:45:ALA:HB1	1.91	0.70
45:BU:7:GLY:HA3	45:BU:8:ILE:HD12	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:76:G:H4'	43:BZ:80:HIS:HB3	1.73	0.70
1:AA:947:G:C4'	1:AA:1332:A:H2	2.05	0.70
1:AA:409:G:O3'	7:AD:25:ARG:HG3	1.90	0.70
27:BA:2670:A:H5''	27:BA:2670:A:C8	2.22	0.70
1:AA:1250:A:H4'	12:AI:67:GLY:HA2	1.74	0.70
19:AP:11:SER:H	19:AP:14:ASN:HB3	1.55	0.70
49:B0:36:ILE:CA	49:B0:68:VAL:HG13	2.22	0.70
48:B3:41:PRO:O	48:B3:42:ALA:O	2.10	0.70
51:B5:32:GLU:HG2	51:B5:39:LYS:HG2	1.74	0.70
51:B5:8:LYS:O	51:B5:9:LYS:HB2	1.90	0.70
27:BA:2286:A:N6	52:B6:32:GLN:O	2.25	0.70
27:BA:1667:G:OP2	27:BA:1667:G:H8	1.75	0.70
27:BA:2470:G:C4	27:BA:2471:C:C5	2.78	0.70
27:BA:270(P):C:H4'	33:BI:42:ALA:HB1	1.74	0.70
27:BA:2783:G:C8	27:BA:2783:G:O5'	2.43	0.70
27:BA:2633:G:N2	27:BA:2785:C:N3	2.32	0.70
27:BA:2821:A:C2'	27:BA:2822:G:C1'	2.69	0.70
27:BA:2869:G:H2'	27:BA:2870:C:C5'	2.22	0.70
27:BA:2888:C:C2	27:BA:2889:C:C6	2.79	0.70
27:BA:400:G:H1	50:B4:63:PHE:HE1	1.40	0.70
28:BD:74:PRO:HG2	28:BD:96:ALA:CA	2.21	0.70
31:BG:140:ARG:HD2	31:BG:144:ARG:NH2	2.07	0.70
32:BH:153:PRO:HB3	32:BH:161:ILE:O	1.92	0.70
34:BN:58:GLU:HG2	34:BN:139:LEU:HB3	1.73	0.70
34:BN:19:MET:HE1	34:BN:22:VAL:HG11	1.74	0.70
39:BT:6:CYS:SG	39:BT:31:PHE:HA	2.32	0.70
45:BU:63:GLN:O	45:BU:64:ARG:C	2.28	0.70
45:BU:85:ARG:NH1	45:BU:116:ALA:O	2.24	0.70
46:BV:83:ARG:O	46:BV:84:THR:CB	2.39	0.70
43:BZ:35:ASP:N	43:BZ:39:PHE:HE2	1.85	0.70
47:B2:12:THR:HB	47:B2:13:PRO:HD2	1.71	0.70
47:B2:4:HIS:H	47:B2:8:ILE:CD1	2.05	0.70
41:BX:20:PHE:CD1	41:BX:22:ASN:N	2.58	0.70
1:AA:1314:C:C6	22:AS:6:LYS:HG2	2.25	0.70
1:AA:1037:C:O3'	1:AA:1038:C:P	2.49	0.70
1:AA:1407:C:O2'	27:BA:1912:A:N6	2.18	0.70
3:AW:40:C:O2'	10:AG:147:ALA:CB	2.39	0.70
39:BT:47:ARG:O	39:BT:48:ASN:CB	2.40	0.70
10:AG:145:ALA:O	10:AG:146:GLU:HB3	1.90	0.70
27:BA:1665:A:N3	35:BO:67:ARG:NH1	2.39	0.70
27:BA:2268:A:OP1	27:BA:2268:A:H4'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2372:G:N1	27:BA:2373:G:C6	2.59	0.70
27:BA:2405:G:C2	27:BA:2413:G:O6	2.45	0.70
27:BA:2436:G:C2	27:BA:2437:U:C2	2.79	0.70
27:BA:2454:G:N2	27:BA:2455:G:H1'	2.06	0.70
27:BA:2514:U:O4'	29:BE:247:ARG:NH1	2.25	0.70
27:BA:2515:C:C4	27:BA:2570:G:C6	2.79	0.70
27:BA:1782:C:N3	27:BA:2609:U:H6	1.82	0.70
27:BA:2052:G:H1'	29:BE:245:ARG:O	1.92	0.70
29:BE:268:LEU:CD2	29:BE:269:ILE:HD12	2.16	0.70
27:BA:2785:C:H4'	29:BE:99:VAL:HA	0.70	0.70
33:BI:43:ASN:C	33:BI:46:ALA:H	1.94	0.70
35:BO:17:ARG:O	35:BO:18:GLU:HG3	1.92	0.70
37:BQ:49:VAL:HG11	37:BQ:119:ASN:O	1.90	0.70
37:BQ:20:ILE:CG1	37:BQ:21:SER:H	2.01	0.70
44:BR:38:VAL:HG12	44:BR:39:PRO:HD3	0.74	0.70
44:BR:51:LEU:O	44:BR:54:LEU:HB2	1.92	0.70
44:BR:75:LEU:O	44:BR:76:VAL:C	2.29	0.70
38:BS:32:PRO:O	38:BS:101:VAL:HG13	1.92	0.70
40:BW:43:GLY:O	40:BW:44:ALA:O	2.10	0.70
42:BY:43:ASN:O	42:BY:44:ALA:HB3	1.90	0.70
42:BY:78:THR:CA	42:BY:89:ARG:CD	2.67	0.70
43:BZ:3:LEU:HD22	43:BZ:34:LEU:C	2.12	0.70
27:BA:1566:A:C2	28:BD:212:HIS:CB	2.75	0.70
41:BX:28:VAL:HG11	41:BX:64:ALA:HB2	1.74	0.70
6:AC:12:LEU:HD11	17:AN:51:GLY:CA	2.20	0.70
5:AB:112:VAL:HA	5:AB:115:LEU:HB3	1.71	0.70
27:BA:1805:U:H5'	28:BD:235:PRO:CG	2.22	0.70
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.26	0.70
3:AW:7:U:O2'	3:AW:49:C:OP2	2.08	0.70
51:B5:58:LEU:O	51:B5:59:ALA:HB2	1.90	0.70
27:BA:1137:G:O2'	34:BN:82:THR:CA	2.39	0.70
27:BA:1287:A:H5''	44:BR:104:ARG:HG3	1.73	0.70
27:BA:2224:G:O2'	27:BA:2225:A:H5'	1.91	0.70
27:BA:2226:C:O2	27:BA:2227:A:O2'	2.08	0.70
27:BA:2333:A:N9	27:BA:2335:A:N3	2.40	0.70
27:BA:2358:G:N3	27:BA:2359:C:H5'	2.07	0.70
27:BA:2478:A:H2'	27:BA:2479:G:H5'	1.73	0.70
27:BA:2493:U:O2	27:BA:2494:G:O4'	2.08	0.70
27:BA:2045:C:N3	27:BA:2624:G:N2	2.40	0.70
27:BA:2703:C:O2'	27:BA:2704:C:H5'	1.90	0.70
27:BA:2785:C:H5'	29:BE:99:VAL:CG2	2.18	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2840:C:C2	27:BA:2841:C:C5	2.80	0.70
27:BA:2870:C:H2'	27:BA:2871:C:O4'	1.92	0.70
27:BA:54:G:C1'	53:B7:35:ARG:HH22	2.05	0.70
29:BE:211:GLN:HG2	29:BE:212:GLY:H	1.57	0.70
27:BA:2733:A:N3	29:BE:318:ASN:HB2	2.07	0.70
30:BF:5:ILE:HA	30:BF:139:VAL:CG1	2.22	0.70
37:BQ:72:VAL:CG2	37:BQ:83:PHE:HZ	2.03	0.70
37:BQ:82:LYS:HB2	37:BQ:125:TRP:HB3	1.74	0.70
40:BW:26:GLY:O	40:BW:27:LYS:CG	2.39	0.70
43:BZ:159:THR:O	43:BZ:160:LEU:HB2	1.90	0.70
1:AA:1224:G:HO3'	1:AA:1225:A:P	2.13	0.70
28:BD:211:HIS:C	28:BD:213:LYS:N	2.42	0.70
2:AV:69:U:H2'	2:AV:70:C:C6	2.27	0.70
1:AA:944:G:O6	1:AA:1337:G:H8	1.75	0.70
27:BA:1300:U:H3'	27:BA:1635:G:OP1	1.92	0.70
1:AA:1329:A:H5''	16:AM:26:GLY:N	2.07	0.70
27:BA:885:C:N4	27:BA:889:C:H1'	2.06	0.70
27:BA:218:A:H2'	27:BA:219:G:O4'	1.92	0.70
56:BK:19:THR:H	56:BK:20:PRO:CD	2.04	0.70
27:BA:382:G:H1	27:BA:392:C:H42	1.39	0.70
49:B0:25:LYS:C	49:B0:60:PHE:HE1	1.91	0.70
49:B0:49:GLN:HE21	49:B0:49:GLN:CA	2.04	0.70
48:B3:26:LEU:HB2	48:B3:28:LEU:HD21	1.74	0.70
48:B3:50:VAL:O	48:B3:51:ALA:C	2.30	0.70
50:B4:14:ILE:O	50:B4:14:ILE:CG2	2.39	0.70
40:BW:37:ARG:HH22	51:B5:48:ASN:ND2	1.90	0.70
52:B6:16:ALA:C	52:B6:18:THR:N	2.45	0.70
52:B6:33:ALA:C	52:B6:35:LEU:H	1.95	0.70
27:BA:1010:A:O2'	27:BA:1152:C:O2	2.10	0.70
27:BA:1152:C:O3'	45:BU:80:ILE:HD13	1.92	0.70
27:BA:2103:C:O2	27:BA:2187:G:C2	2.43	0.70
27:BA:2265:U:N3	27:BA:2266:A:N7	2.39	0.70
27:BA:2267:A:H5''	27:BA:2268:A:P	2.32	0.70
27:BA:2316:C:N4	27:BA:2317:C:C4	2.60	0.70
27:BA:2320:A:H2	27:BA:2333:A:C4	2.09	0.70
27:BA:2474:C:C2'	27:BA:2475:C:H5'	2.15	0.70
27:BA:2536:G:C2'	27:BA:2537:U:H5'	2.21	0.70
25:AY:223:ARG:CA	27:BA:2555:U:C4	2.75	0.70
27:BA:2657:A:C2'	27:BA:2658:C:H5'	2.22	0.70
27:BA:2688:U:C2	27:BA:2719:G:N3	2.58	0.70
27:BA:2737:G:C5	27:BA:2738:A:N7	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2825:C:H6	27:BA:2825:C:C4'	2.05	0.70
27:BA:2839:G:O2'	27:BA:2840:C:H5'	1.92	0.70
27:BA:993:G:H21	45:BU:54:LYS:HZ1	1.39	0.70
29:BE:44:TYR:CB	29:BE:307:LEU:O	2.40	0.70
27:BA:2733:A:H1'	29:BE:318:ASN:HD21	1.57	0.70
30:BF:102:LEU:CB	30:BF:107:ARG:NE	2.52	0.70
30:BF:42:ARG:NH1	30:BF:221:GLU:OE1	2.24	0.70
30:BF:37:ALA:O	30:BF:107:ARG:NH1	2.25	0.70
32:BH:146:ASN:O	32:BH:146:ASN:OD1	2.09	0.70
35:BO:101:PRO:HB3	35:BO:120:GLU:O	1.91	0.70
35:BO:101:PRO:HD3	39:BT:26:GLY:HA2	1.72	0.70
27:BA:1287:A:C4'	44:BR:104:ARG:CD	2.64	0.70
38:BS:82:TYR:O	38:BS:86:LEU:CG	2.38	0.70
45:BU:43:ALA:O	45:BU:45:TYR:CA	2.40	0.70
46:BV:40:VAL:C	46:BV:51:ALA:HB1	2.12	0.70
40:BW:32:ALA:HA	40:BW:35:ILE:HD11	1.70	0.70
40:BW:8:ARG:O	40:BW:9:TYR:C	2.30	0.70
43:BZ:125:PRO:CG	43:BZ:130:ILE:HG22	2.22	0.70
1:AA:926:G:N1	4:AX:116:U:OP1	2.24	0.70
43:BZ:41:ARG:NE	43:BZ:41:ARG:H	1.90	0.70
27:BA:1827:C:H2'	27:BA:1828:G:O4'	1.91	0.70
1:AA:1315:U:OP2	22:AS:6:LYS:CD	2.40	0.70
1:AA:815:A:O2'	1:AA:1527:C:C1'	2.38	0.70
1:AA:25:C:C4'	1:AA:524:G:H21	2.05	0.70
15:AL:28:LYS:HB2	15:AL:30:ALA:HB2	1.72	0.70
15:AL:45:PRO:HD2	15:AL:50:SER:HA	1.74	0.70
27:BA:2356:C:P	49:B0:21:LEU:HD11	2.26	0.69
53:B7:34:ARG:CZ	53:B7:42:LEU:HD23	2.22	0.69
27:BA:2051:A:H2	27:BA:2618:G:N1	1.90	0.69
27:BA:2325:G:C5	27:BA:2326:C:H5	2.09	0.69
27:BA:2328:A:C2'	27:BA:2329:G:H8	2.01	0.69
27:BA:2423:U:O2	27:BA:2423:U:H2'	1.92	0.69
27:BA:2523:G:O4'	27:BA:2765:A:C8	2.44	0.69
27:BA:2620:C:O2'	27:BA:2621:A:C4'	2.40	0.69
27:BA:2740:A:H8	27:BA:2740:A:C5'	2.05	0.69
27:BA:2821:A:H2'	27:BA:2822:G:C8	2.26	0.69
27:BA:2838:G:C2	27:BA:2881:C:N3	2.59	0.69
27:BA:581:C:H5''	45:BU:32:TYR:HB2	1.72	0.69
28:BD:110:LYS:O	28:BD:111:VAL:C	2.29	0.69
28:BD:87:SER:O	28:BD:156:ALA:HB2	1.92	0.69
28:BD:166:LYS:C	28:BD:182:MET:HE1	2.12	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:152:GLU:O	30:BF:155:SER:HB3	1.92	0.69
32:BH:98:GLN:HB2	32:BH:103:VAL:HG21	1.74	0.69
33:BI:7:LYS:HB2	33:BI:14:LYS:CE	2.12	0.69
34:BN:136:SER:HA	34:BN:139:LEU:HD21	1.73	0.69
34:BN:15:ARG:CG	34:BN:43:ARG:CG	2.68	0.69
34:BN:5:GLU:HA	34:BN:109:TYR:CE2	2.27	0.69
35:BO:19:VAL:CG1	35:BO:42:THR:O	2.36	0.69
37:BQ:152:SER:OG	37:BQ:153:PRO:HD2	1.92	0.69
44:BR:111:LEU:O	44:BR:112:ALA:CB	2.40	0.69
40:BW:40:ASN:O	40:BW:41:LYS:O	2.10	0.69
40:BW:56:ALA:O	40:BW:58:ALA:N	2.25	0.69
40:BW:58:ALA:O	40:BW:59:VAL:C	2.29	0.69
43:BZ:91:PRO:HD2	43:BZ:127:PRO:HB3	1.74	0.69
43:BZ:71:MET:HA	43:BZ:78:PRO:CB	2.22	0.69
1:AA:1221:G:H5''	1:AA:1321:C:C2	2.27	0.69
27:BA:1791:A:P	28:BD:210:LYS:HD2	2.32	0.69
28:BD:139:LEU:CD1	28:BD:139:LEU:C	2.59	0.69
1:AA:769:G:N2	1:AA:900:A:H61	1.90	0.69
27:BA:2833:G:OP1	27:BA:2833:G:C8	2.39	0.69
1:AA:1291:G:H4'	12:AI:38:GLN:O	1.92	0.69
27:BA:1327:C:H3'	27:BA:1328:G:H8	1.57	0.69
1:AA:1125:U:O4	13:AJ:5:ARG:NH1	2.24	0.69
50:B4:33:VAL:C	50:B4:34:ASP:OD1	2.30	0.69
52:B6:2:ALA:HB3	52:B6:11:LYS:CE	2.21	0.69
54:B8:60:LEU:CD2	54:B8:61:MET:O	2.40	0.69
27:BA:2012:G:O3'	40:BW:96:ILE:CG2	2.38	0.69
27:BA:2236:C:H2'	27:BA:2236:C:O2	1.91	0.69
27:BA:2327:A:C5	27:BA:2388:A:C6	2.80	0.69
27:BA:2373:G:H1	27:BA:2380:C:H42	1.40	0.69
27:BA:830:G:C8	27:BA:2448:A:C8	2.79	0.69
27:BA:2543:G:C8	27:BA:2544:G:C5	2.80	0.69
27:BA:2657:A:C3'	27:BA:2658:C:H5'	2.22	0.69
27:BA:2768:C:HO2'	27:BA:2769:C:H5'	1.57	0.69
27:BA:2842:G:C3'	27:BA:2843:G:H5'	2.22	0.69
28:BD:141:HIS:HE1	28:BD:192:GLY:C	1.95	0.69
30:BF:22:PHE:O	30:BF:23:GLU:C	2.30	0.69
32:BH:49:ILE:HD12	32:BH:49:ILE:N	2.01	0.69
34:BN:12:VAL:HG12	34:BN:38:VAL:CG2	2.22	0.69
34:BN:15:ARG:O	34:BN:16:ASP:HB2	1.92	0.69
34:BN:5:GLU:OE2	34:BN:6:PHE:O	2.10	0.69
34:BN:63:ILE:HB	34:BN:71:TYR:CZ	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:83:ILE:CG1	34:BN:84:ARG:HG2	2.22	0.69
37:BQ:116:HIS:O	37:BQ:116:HIS:CD2	2.45	0.69
27:BA:873:G:H4'	37:BQ:32:LYS:CG	2.22	0.69
38:BS:100:ALA:CB	38:BS:127:LEU:HD21	2.23	0.69
38:BS:115:VAL:O	38:BS:117:ALA:N	2.25	0.69
45:BU:39:LEU:HB3	45:BU:40:LEU:HD23	1.74	0.69
45:BU:56:ASP:O	45:BU:60:LEU:HD23	1.89	0.69
27:BA:1162:G:O2'	46:BV:23:GLU:CD	2.31	0.69
43:BZ:91:PRO:HG2	43:BZ:127:PRO:CB	2.23	0.69
33:BI:101:SER:O	33:BI:102:LEU:C	2.30	0.69
33:BI:95:SER:HA	33:BI:98:ILE:HG13	0.70	0.69
27:BA:328:U:O2'	42:BY:94:SER:CB	2.41	0.69
42:BY:102:ASP:HB3	42:BY:108:ARG:NH1	2.06	0.69
47:B2:23:LEU:O	47:B2:27:LEU:HG	1.93	0.69
47:B2:27:LEU:CD2	47:B2:49:LEU:HB3	2.22	0.69
7:AD:3:ARG:HG3	7:AD:118:ARG:HH11	1.55	0.69
1:AA:255:G:H1'	20:AQ:16:GLN:NE2	2.07	0.69
49:B0:9:SER:O	49:B0:10:SER:C	2.30	0.69
27:BA:2355:C:H5'	49:B0:21:LEU:CD2	2.23	0.69
48:B3:45:GLY:O	48:B3:46:ASN:C	2.31	0.69
27:BA:1441:G:H4'	27:BA:1628:G:OP1	1.93	0.69
27:BA:1668:A:H1'	27:BA:1669:A:C2	2.26	0.69
27:BA:2359:C:C5	27:BA:2360:A:N1	2.60	0.69
27:BA:2437:U:H5'	27:BA:2598:A:N1	2.06	0.69
27:BA:2657:A:C5	27:BA:2658:C:C6	2.80	0.69
28:BD:85:ASN:CG	28:BD:86:ARG:NH2	2.44	0.69
30:BF:6:TYR:CE2	30:BF:140:VAL:CA	2.74	0.69
31:BG:38:GLU:HG2	31:BG:41:LEU:HD11	1.70	0.69
32:BH:82:TYR:CE2	32:BH:137:LYS:CB	2.67	0.69
33:BI:35:LEU:O	33:BI:36:ALA:CB	2.39	0.69
34:BN:95:ARG:O	34:BN:96:GLU:C	2.28	0.69
44:BR:37:THR:O	44:BR:38:VAL:C	2.29	0.69
44:BR:61:HIS:C	44:BR:64:ARG:NH1	2.44	0.69
44:BR:89:ASP:OD1	44:BR:90:ARG:CG	2.40	0.69
44:BR:56:LYS:NZ	44:BR:94:TYR:OH	2.21	0.69
42:BY:71:VAL:HG22	42:BY:93:THR:HG23	0.71	0.69
43:BZ:51:LEU:HD11	43:BZ:64:ALA:H	1.56	0.69
34:BN:10:VAL:HG11	34:BN:36:VAL:CB	2.16	0.69
27:BA:1405:U:H2'	27:BA:1406:U:C6	2.26	0.69
27:BA:1087:G:H21	27:BA:1104:C:C5'	2.04	0.69
1:AA:541:G:H4'	7:AD:42:GLN:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:574:A:HO2'	1:AA:882:C:C2'	2.04	0.69
21:AR:80:PRO:O	21:AR:82:THR:N	2.23	0.69
49:B0:47:ALA:HB1	49:B0:73:GLY:O	1.93	0.69
49:B0:33:ALA:CB	49:B0:66:LYS:H	2.03	0.69
48:B3:40:THR:HG21	48:B3:43:ILE:HG12	1.74	0.69
52:B6:42:PRO:C	52:B6:44:ALA:N	2.43	0.69
53:B7:12:ARG:O	53:B7:13:ALA:O	2.10	0.69
53:B7:26:SER:HA	53:B7:29:ASN:HD22	1.57	0.69
27:BA:1223:C:C4	46:BV:87:ARG:NH2	2.55	0.69
27:BA:2194:G:C6	27:BA:2195:C:N4	2.60	0.69
27:BA:2233:U:O2	27:BA:2234:G:N9	2.25	0.69
27:BA:2373:G:C4	27:BA:2374:C:C5	2.80	0.69
27:BA:2470:G:N1	27:BA:2471:C:C5	2.51	0.69
27:BA:2581:G:H1	27:BA:2610:C:C2'	2.05	0.69
27:BA:2740:A:C4	27:BA:2741:A:N7	2.60	0.69
27:BA:2898:U:O2	27:BA:2898:U:H2'	1.92	0.69
30:BF:25:PRO:C	30:BF:26:VAL:HG23	2.12	0.69
31:BG:146:LYS:O	31:BG:147:ALA:C	2.30	0.69
35:BO:43:VAL:HG23	35:BO:56:GLN:H	1.55	0.69
36:BP:114:VAL:HG21	36:BP:132:LYS:CB	2.22	0.69
37:BQ:49:VAL:CG2	37:BQ:120:HIS:CA	2.70	0.69
37:BQ:65:ARG:NE	37:BQ:85:ILE:CB	2.53	0.69
44:BR:62:ALA:HB1	44:BR:80:PHE:HZ	1.55	0.69
38:BS:76:GLY:C	38:BS:80:SER:N	2.46	0.69
38:BS:97:VAL:O	38:BS:98:GLU:CB	2.40	0.69
27:BA:563:G:N2	45:BU:37:GLN:NE2	2.27	0.69
27:BA:1156:A:OP1	45:BU:55:ARG:NH2	2.23	0.69
46:BV:44:GLN:HE21	46:BV:44:GLN:N	1.91	0.69
40:BW:14:PRO:HD3	40:BW:101:SER:OG	1.92	0.69
33:BI:102:LEU:C	33:BI:102:LEU:CD1	2.56	0.69
42:BY:53:GLY:O	42:BY:54:ASP:C	2.30	0.69
27:BA:1789:A:C4'	28:BD:224:VAL:HG11	2.16	0.69
47:B2:51:LYS:O	47:B2:54:ALA:CA	2.40	0.69
1:AA:566:G:H8	1:AA:566:G:O5'	1.75	0.69
7:AD:24:GLU:HB2	7:AD:112:VAL:HG11	1.72	0.69
1:AA:275:G:H5'	20:AQ:14:LYS:HD3	1.74	0.69
1:AA:518:C:H2'	1:AA:530:G:C8	2.27	0.69
3:AW:14:A:C5	3:AW:22:G:C2	2.81	0.69
3:AW:76:A:C8	27:BA:2421:G:C2'	2.73	0.69
53:B7:19:ARG:O	53:B7:22:MET:N	2.25	0.69
27:BA:1134:G:O6	27:BA:1137:G:N7	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1782:C:O2	27:BA:2609:U:C1'	2.40	0.69
27:BA:2210:G:O2'	27:BA:2211:G:P	2.50	0.69
27:BA:2341:G:C6	27:BA:2342:C:C4	2.80	0.69
27:BA:2484:G:C2	27:BA:2485:G:C1'	2.74	0.69
27:BA:2520:C:H2'	27:BA:2521:C:C5'	2.20	0.69
27:BA:2561:A:C5	27:BA:2562:U:C5	2.80	0.69
27:BA:2880:C:N4	27:BA:2881:C:H41	1.90	0.69
27:BA:54:G:H1'	53:B7:35:ARG:HH22	1.58	0.69
28:BD:154:VAL:CG2	28:BD:160:SER:HA	2.23	0.69
29:BE:84:ARG:HB2	29:BE:174:LEU:HD23	1.74	0.69
30:BF:147:LEU:HD12	30:BF:156:LEU:HD12	1.72	0.69
26:BB:57:A:O4'	31:BG:13:MET:CE	2.34	0.69
32:BH:52:THR:O	32:BH:54:PRO:CD	2.37	0.69
33:BI:8:ASP:O	33:BI:9:VAL:HB	1.93	0.69
34:BN:13:ASP:CA	34:BN:38:VAL:HG13	1.82	0.69
35:BO:64:ARG:HH21	35:BO:100:GLY:HA3	1.57	0.69
35:BO:10:VAL:CG1	35:BO:12:ASP:O	2.41	0.69
35:BO:78:ARG:O	35:BO:79:PHE:CD2	2.45	0.69
36:BP:69:ILE:O	36:BP:70:ASP:C	2.31	0.69
37:BQ:94:ARG:NE	37:BQ:106:GLY:HA2	2.01	0.69
45:BU:103:PRO:CA	45:BU:107:LYS:HE2	2.22	0.69
45:BU:75:ASN:O	45:BU:78:THR:OG1	2.10	0.69
43:BZ:109:GLN:O	56:BK:94:ARG:HA	1.92	0.69
27:BA:139:G:H2'	27:BA:141(A):C:O2'	1.93	0.69
27:BA:58:G:N2	27:BA:70:G:C5	2.59	0.69
29:BE:109:ASP:OD2	29:BE:112:LEU:HD23	1.91	0.69
1:AA:1288:A:C6	1:AA:1371:G:H1'	2.27	0.69
27:BA:1918:A:H2'	27:BA:1919:A:N7	2.07	0.69
2:AV:4:G:H2'	2:AV:5:A:H8	1.54	0.69
7:AD:185:PHE:HE2	7:AD:189:PRO:HD3	1.55	0.69
49:B0:41:ARG:O	49:B0:42:GLY:O	2.10	0.69
48:B3:44:ARG:O	48:B3:45:GLY:C	2.30	0.69
27:BA:1034:G:C4'	55:B9:18:ARG:CZ	2.71	0.69
27:BA:2087:G:C6	27:BA:2233:U:C6	2.80	0.69
27:BA:2228:G:H8	27:BA:2228:G:C5'	2.05	0.69
27:BA:2267:A:N1	27:BA:2272:U:O4	2.26	0.69
27:BA:2078:C:H4'	27:BA:2434:A:H5'	1.73	0.69
27:BA:2510:C:N4	27:BA:2511:U:C4	2.60	0.69
27:BA:2579:C:C2'	27:BA:2580:U:C5'	2.33	0.69
27:BA:2712:U:H2'	27:BA:712(A):A:H5''	0.69	0.69
29:BE:307:LEU:O	29:BE:309:PRO:HD3	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:70:VAL:HG22	29:BE:297:LYS:CA	2.22	0.69
30:BF:153:VAL:C	30:BF:155:SER:N	2.45	0.69
31:BG:142:ALA:HB3	31:BG:151:ILE:HD11	1.70	0.69
37:BQ:67:ALA:HB1	37:BQ:71:PHE:CE1	2.27	0.69
44:BR:90:ARG:NH1	44:BR:117:VAL:HG11	2.07	0.69
44:BR:52:ILE:CD1	44:BR:94:TYR:HB2	2.23	0.69
27:BA:2320:A:N7	38:BS:9:PRO:HD3	2.06	0.69
45:BU:20:ARG:NH1	46:BV:75:LYS:HD2	2.08	0.69
45:BU:62:ILE:O	45:BU:65:ILE:HB	1.92	0.69
45:BU:66:ASN:O	45:BU:68:GLY:N	2.26	0.69
45:BU:68:GLY:HA2	45:BU:71:LEU:HB2	1.74	0.69
27:BA:1152:C:H5''	45:BU:80:ILE:HG22	1.75	0.69
40:BW:70:TYR:HD2	40:BW:71:VAL:H	1.40	0.69
27:BA:294:A:H4'	42:BY:15:PRO:CD	2.22	0.69
27:BA:310:A:H2'	27:BA:312:G:N7	2.07	0.69
42:BY:101:LEU:O	42:BY:101:LEU:HD22	1.92	0.69
42:BY:92:ASP:O	42:BY:92:ASP:OD1	2.09	0.69
41:BX:13:LYS:HA	41:BX:16:ASN:ND2	2.07	0.69
27:BA:138:G:N7	41:BX:39:ASP:OD1	2.24	0.69
27:BA:1:G:N2	27:BA:2902:C:C4	2.59	0.69
1:AA:15:G:H1'	8:AE:19:MET:SD	2.32	0.69
3:AW:9:A:N3	3:AW:45:G:H2'	2.07	0.69
1:AA:1190:G:H5'	6:AC:176:HIS:CE1	2.27	0.69
48:B3:31:LEU:HD22	48:B3:32:GLN:CB	2.21	0.69
50:B4:10:VAL:O	50:B4:10:VAL:HG12	1.92	0.69
50:B4:23:GLU:CD	50:B4:29:PRO:CG	2.57	0.69
51:B5:13:LYS:CD	51:B5:14:SER:N	2.56	0.69
27:BA:2209:C:O2'	27:BA:2210:G:C8	2.45	0.69
27:BA:2247:A:H2'	27:BA:2248:C:C6	2.24	0.69
27:BA:2333:A:O4'	27:BA:2335:A:C4	2.45	0.69
27:BA:2423:U:C2'	27:BA:2424:C:OP2	2.39	0.69
27:BA:2470:G:O6	27:BA:2481:G:N2	2.25	0.69
27:BA:2511:U:C2'	27:BA:2512:C:H5'	2.23	0.69
27:BA:2511:U:C6	27:BA:2512:C:C5	2.80	0.69
27:BA:629:G:H5''	27:BA:649:G:O2'	1.92	0.69
27:BA:650:C:OP1	54:B8:19:THR:CG2	2.40	0.69
27:BA:974(A):C:H6	27:BA:1186:G:N1	1.89	0.69
29:BE:269:ILE:HD12	29:BE:295:LEU:O	1.92	0.69
30:BF:168:ARG:HH12	30:BF:209:GLY:C	1.91	0.69
30:BF:214:THR:N	30:BF:218:VAL:HG21	1.96	0.69
30:BF:237:GLU:O	30:BF:240:LEU:N	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:79:ARG:HG2	30:BF:79:ARG:O	1.92	0.69
32:BH:164:GLU:OE1	32:BH:164:GLU:N	2.25	0.69
27:BA:1665:A:C1'	35:BO:66:LYS:NZ	2.54	0.69
36:BP:128:GLY:CA	36:BP:132:LYS:HZ3	1.84	0.69
36:BP:52:LYS:CE	36:BP:53:ARG:HH12	2.05	0.69
27:BA:2275:C:O2	37:BQ:103:ALA:HB2	1.93	0.69
37:BQ:127:ASN:CB	37:BQ:128:PRO:HD2	2.23	0.69
27:BA:2277:G:O3'	37:BQ:15:THR:HG21	1.58	0.69
37:BQ:65:ARG:HH21	37:BQ:85:ILE:CA	2.05	0.69
44:BR:24:GLN:CB	44:BR:44:LEU:CD2	2.70	0.69
44:BR:47:PHE:O	44:BR:50:HIS:N	2.26	0.69
38:BS:35:VAL:HG11	38:BS:37:ARG:NH2	2.08	0.69
39:BT:6:CYS:O	39:BT:8:TYR:N	2.23	0.69
45:BU:63:GLN:O	45:BU:66:ASN:N	2.25	0.69
45:BU:104:GLU:CD	46:BV:46:VAL:CG1	2.61	0.69
43:BZ:163:ASP:CG	43:BZ:164:PRO:HD3	1.79	0.69
43:BZ:81:VAL:CG1	43:BZ:82:ASP:N	2.56	0.69
47:B2:26:GLU:O	47:B2:29:ASN:N	2.25	0.69
47:B2:35:ALA:O	47:B2:37:GLY:N	2.26	0.69
7:AD:12:CYS:O	7:AD:33:MET:HB3	1.92	0.69
27:BA:1212:G:O2'	27:BA:1213:A:H8	1.74	0.69
16:AM:122:LYS:HZ1	25:AY:154:GLY:CA	2.03	0.69
1:AA:426:G:O2'	7:AD:42:GLN:CA	2.40	0.69
27:BA:772:C:H2'	27:BA:773:U:H6	1.57	0.69
34:BN:8:ALA:HB1	34:BN:11:ILE:HD11	1.75	0.69
49:B0:37:LEU:CD1	49:B0:70:ILE:HD11	2.04	0.69
27:BA:2414:G:C4	27:BA:2415:G:N7	2.60	0.69
27:BA:2445:G:O2'	27:BA:2446:G:H5''	1.93	0.69
27:BA:245:G:H1	27:BA:253:C:H42	1.39	0.69
27:BA:2471:C:C2'	27:BA:2472:G:O5'	2.41	0.69
27:BA:2520:C:C6	27:BA:2567:G:N9	2.61	0.69
27:BA:2822:G:H8	27:BA:2822:G:OP2	1.74	0.69
27:BA:2818:G:N2	27:BA:2829:C:C2	2.61	0.69
27:BA:2840:C:O2'	27:BA:2841:C:H5'	1.90	0.69
27:BA:671:C:N4	27:BA:809:G:H1	1.90	0.69
28:BD:163:VAL:O	28:BD:165:GLY:N	2.26	0.69
28:BD:73:ILE:HG22	28:BD:74:PRO:HD2	1.75	0.69
30:BF:223:LEU:O	30:BF:225:PRO:CD	2.41	0.69
33:BI:7:LYS:HG2	33:BI:12:LYS:HA	1.74	0.69
34:BN:65:ASN:O	34:BN:68:GLY:O	2.11	0.69
36:BP:67:ARG:HH11	36:BP:111:ALA:CA	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:26:LYS:HE3	37:BQ:28:ILE:HD12	1.75	0.69
37:BQ:82:LYS:C	37:BQ:84:ARG:N	2.44	0.69
38:BS:76:GLY:O	38:BS:80:SER:O	2.11	0.69
45:BU:47:TYR:CD1	46:BV:75:LYS:O	2.46	0.69
46:BV:20:ILE:O	46:BV:21:ARG:CZ	2.40	0.69
46:BV:41:GLY:N	46:BV:54:TYR:CD1	2.61	0.69
48:B3:50:VAL:O	48:B3:51:ALA:O	2.10	0.69
48:B3:59:VAL:CG1	48:B3:60:GLU:H	1.82	0.69
52:B6:2:ALA:CB	52:B6:11:LYS:CE	2.70	0.69
53:B7:21:ARG:CZ	53:B7:43:THR:OG1	2.41	0.69
54:B8:50:LEU:HD22	54:B8:51:ALA:N	2.01	0.69
55:B9:13:ASN:O	55:B9:14:CYS:C	2.31	0.69
27:BA:2197:U:H2'	27:BA:2224:G:H1	1.58	0.69
27:BA:2276:G:C4	27:BA:2277:G:H8	2.11	0.69
27:BA:2308:G:H5'	27:BA:2309:A:OP1	1.91	0.69
27:BA:2411:A:O2'	27:BA:2412:A:C5'	2.41	0.69
27:BA:2734:A:H5'	27:BA:2735:G:OP2	1.92	0.69
27:BA:2804:C:C6	27:BA:2805:G:C2	2.81	0.69
27:BA:2810:A:C8	27:BA:2811:G:C1'	2.75	0.69
27:BA:2888:C:H2'	27:BA:2889:C:O4'	1.92	0.69
27:BA:373:U:C2	27:BA:400:G:N2	2.61	0.69
28:BD:134:ILE:CG2	28:BD:135:PRO:HD2	2.20	0.69
29:BE:44:TYR:CG	29:BE:309:PRO:HD3	2.28	0.69
30:BF:144:PHE:HE2	30:BF:156:LEU:HD13	1.52	0.69
35:BO:37:ASP:O	35:BO:61:VAL:CG1	2.39	0.69
36:BP:127:GLU:HA	36:BP:127:GLU:OE1	1.91	0.69
37:BQ:41:THR:C	37:BQ:125:TRP:CZ3	2.63	0.69
38:BS:86:LEU:H	38:BS:121:GLY:HA2	1.58	0.69
45:BU:45:TYR:O	45:BU:46:GLU:C	2.30	0.69
46:BV:33:VAL:HG12	46:BV:34:GLU:N	2.08	0.69
40:BW:32:ALA:C	40:BW:34:ASN:H	1.96	0.69
42:BY:47:THR:O	42:BY:98:VAL:CG1	2.35	0.69
42:BY:31:LEU:HD11	42:BY:99:THR:O	1.93	0.69
43:BZ:50:GLY:O	43:BZ:51:LEU:CB	2.40	0.69
43:BZ:24:TYR:CB	43:BZ:83:PHE:O	2.41	0.69
27:BA:76:C:O2'	47:B2:55:ARG:HG3	1.93	0.69
41:BX:23:LYS:HA	41:BX:67:ARG:HA	1.75	0.69
47:B2:20:LEU:HD12	47:B2:21:ASP:N	2.07	0.69
17:AN:27:CYS:SG	17:AN:43:CYS:N	2.60	0.69
37:BQ:108:SER:C	37:BQ:109:VAL:HG22	2.13	0.69
1:AA:65:U:C5	1:AA:200:G:H4'	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1181:G:O3'	1:AA:1184:G:H5'	1.93	0.69
25:AY:252:CYS:CA	27:BA:1942:C:O3'	2.40	0.69
3:AW:34:G:OP1	3:AW:34:G:H8	1.75	0.69
21:AR:53:ARG:HH11	21:AR:59:SER:HA	1.58	0.69
1:AA:1492:A:H2'	1:AA:1493:A:O4'	1.93	0.69
28:BD:121:ALA:O	28:BD:122:ASP:HB3	1.92	0.69
6:AC:156:ARG:HB2	6:AC:196:LEU:HD22	1.75	0.69
13:AJ:90:LEU:H	13:AJ:91:PRO:HD2	1.56	0.69
7:AD:62:GLN:HE22	7:AD:65:ARG:HH11	1.40	0.69
49:B0:46:LYS:CB	49:B0:58:THR:HG23	2.21	0.69
48:B3:33:GLN:CD	48:B3:34:GLU:N	2.47	0.69
53:B7:9:ASN:O	53:B7:11:LYS:O	2.10	0.69
27:BA:1183:G:H5''	48:B3:29:ARG:HG3	1.74	0.69
27:BA:2462:U:N3	27:BA:2463:C:C5	2.61	0.69
27:BA:2251:G:OP2	27:BA:2496:C:OP2	2.11	0.69
27:BA:2535:G:N3	27:BA:2535:G:H2'	2.06	0.69
27:BA:2631:G:C6	27:BA:2632:A:N7	2.59	0.69
27:BA:962:G:H2'	27:BA:963:U:C6	2.28	0.69
28:BD:73:ILE:HB	28:BD:95:TYR:HE2	1.57	0.69
30:BF:163:HIS:C	30:BF:166:ILE:CG1	2.61	0.69
34:BN:48:GLY:O	34:BN:50:GLU:N	2.25	0.69
34:BN:94:GLY:C	34:BN:98:PHE:CD1	2.66	0.69
27:BA:1666:G:O4'	35:BO:67:ARG:NH2	2.26	0.69
35:BO:71:ARG:C	35:BO:73:ASP:N	2.46	0.69
36:BP:77:ALA:N	36:BP:81:VAL:CB	2.55	0.69
37:BQ:44:ALA:HB3	37:BQ:126:VAL:C	2.12	0.69
38:BS:110:THR:HG22	38:BS:115:VAL:CG2	2.21	0.69
27:BA:2021:C:C5	45:BU:25:TRP:HZ2	2.09	0.69
33:BI:116:GLU:HG3	33:BI:132:LYS:HG3	1.75	0.69
42:BY:16:LEU:O	42:BY:19:ARG:HB2	1.93	0.69
43:BZ:1:MET:CE	43:BZ:52:PHE:CD2	2.76	0.69
43:BZ:64:ALA:CB	43:BZ:85:MET:C	2.61	0.69
3:AW:37:YYG:H101	3:AW:37:YYG:N20	2.07	0.69
41:BX:76:GLU:OE1	41:BX:77:VAL:HG23	1.92	0.69
1:AA:665:A:C1'	1:AA:733:A:H1'	2.22	0.69
1:AA:1340:A:O4'	2:AV:31:A:O2'	2.10	0.69
27:BA:1624:G:H2'	27:BA:1625:C:C5	2.27	0.69
27:BA:761:A:H8	27:BA:761:A:O5'	1.75	0.69
1:AA:778:G:H2'	1:AA:779:C:C6	2.28	0.69
2:AV:60:C:H5'	2:AV:61:C:OP2	1.93	0.69
49:B0:61:ALA:HB3	49:B0:80:SER:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B7:18:PHE:O	53:B7:19:ARG:C	2.30	0.69
27:BA:125:G:C4'	53:B7:19:ARG:NH1	2.53	0.69
55:B9:7:VAL:HG12	55:B9:34:GLN:OE1	1.91	0.69
27:BA:2233:U:O2	27:BA:2234:G:C8	2.45	0.69
2:AV:75:C:H42	27:BA:2252:G:H22	1.41	0.69
27:BA:2333:A:C4	27:BA:2335:A:N1	2.60	0.69
27:BA:2356:C:C2'	27:BA:2357:U:C5'	2.71	0.69
27:BA:2405:G:C2	27:BA:2413:G:C6	2.81	0.69
27:BA:2246:G:N9	27:BA:2426:A:C2	2.60	0.69
27:BA:2454:G:C2	27:BA:2455:G:C1'	2.75	0.69
27:BA:2483:C:H2'	27:BA:2484:G:O5'	1.93	0.69
27:BA:2485:G:H2'	27:BA:2486:G:O4'	1.93	0.69
27:BA:2487:G:O2'	27:BA:2488:A:C5'	2.41	0.69
27:BA:2548:G:H2'	27:BA:2549:G:O5'	1.93	0.69
27:BA:2573:C:C6	27:BA:2573:C:C3'	2.75	0.69
27:BA:2048:G:C2	27:BA:2621:A:C2	2.79	0.69
27:BA:2668:G:N2	27:BA:2669:G:N9	2.41	0.69
27:BA:2638:G:H2'	27:BA:2775:A:N1	2.08	0.69
27:BA:2776:A:C2	27:BA:2778:A:C5	2.81	0.69
27:BA:613:U:O5'	27:BA:615:G:C8	2.46	0.69
28:BD:93:ILE:HG22	28:BD:101:ARG:O	1.93	0.69
28:BD:179:GLU:O	28:BD:180:VAL:CG2	2.41	0.69
29:BE:211:GLN:CG	29:BE:212:GLY:N	2.56	0.69
29:BE:243:PRO:O	29:BE:244:SER:HB2	1.93	0.69
29:BE:44:TYR:O	29:BE:74:GLU:CD	2.30	0.69
30:BF:36:ARG:O	30:BF:39:GLN:NE2	2.26	0.69
32:BH:137:LYS:HD2	32:BH:138:GLN:H	0.67	0.69
35:BO:77:ILE:HD12	35:BO:77:ILE:C	2.12	0.69
38:BS:100:ALA:N	38:BS:127:LEU:HD21	2.08	0.69
38:BS:49:THR:O	38:BS:52:PRO:O	2.11	0.69
46:BV:74:TYR:CD1	46:BV:86:HIS:C	2.65	0.69
40:BW:23:LEU:CD2	40:BW:24:ILE:N	2.56	0.69
40:BW:45:TYR:CD2	40:BW:46:PHE:N	2.61	0.69
40:BW:70:TYR:HE2	40:BW:72:LYS:CA	2.04	0.69
42:BY:11:GLN:CA	42:BY:21:LYS:HE3	2.23	0.69
42:BY:63:ILE:CD1	42:BY:75:GLU:CA	2.50	0.69
47:B2:24:LYS:O	47:B2:25:THR:C	2.31	0.69
27:BA:1339:G:H5'	41:BX:13:LYS:NZ	2.08	0.69
3:AW:31:A:N3	10:AG:144:MET:CE	2.55	0.69
3:AW:7:U:O3'	3:AW:8:U:P	2.51	0.69
48:B3:48:GLU:CG	48:B3:49:LYS:H	2.05	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:46:CYS:CB	51:B5:47:PRO:HD2	2.21	0.68
53:B7:42:LEU:C	53:B7:46:ASP:OD1	2.31	0.68
54:B8:30:ARG:HB3	54:B8:44:LYS:CE	2.22	0.68
54:B8:8:LYS:O	54:B8:10:ALA:CA	2.41	0.68
27:BA:1608:A:H2'	27:BA:1611:C:H41	1.57	0.68
27:BA:2199:A:H3'	27:BA:2205:C:C5	2.28	0.68
27:BA:2250:G:C8	27:BA:2250:G:C3'	2.75	0.68
27:BA:2303:G:C4'	31:BG:99:ASP:CG	2.62	0.68
27:BA:2423:U:H6	27:BA:2425:A:N7	1.91	0.68
27:BA:2597:G:H8	27:BA:2597:G:OP2	1.75	0.68
27:BA:2842:G:O2'	27:BA:2843:G:C5'	2.41	0.68
27:BA:2854:G:C6	27:BA:2864:G:C6	2.80	0.68
27:BA:514:A:H2'	27:BA:515:A:H8	1.56	0.68
27:BA:957:A:P	37:BQ:95:GLU:HB3	2.33	0.68
28:BD:123:ILE:H	28:BD:123:ILE:HD12	1.58	0.68
28:BD:141:HIS:CE1	28:BD:192:GLY:C	2.66	0.68
27:BA:2210:G:N7	28:BD:148:GLY:CA	2.55	0.68
29:BE:94:ARG:HB3	29:BE:95:PRO:HD3	1.69	0.68
30:BF:22:PHE:CE2	30:BF:115:LEU:C	2.66	0.68
30:BF:140:VAL:HG11	30:BF:236:THR:HG22	1.74	0.68
30:BF:157:LEU:CB	30:BF:158:GLU:OE2	2.18	0.68
30:BF:215:ALA:O	30:BF:242:GLU:CB	2.40	0.68
30:BF:39:GLN:N	30:BF:39:GLN:CD	2.45	0.68
34:BN:46:ILE:CD1	34:BN:132:LEU:HD13	2.23	0.68
27:BA:1665:A:C4'	35:BO:66:LYS:HD3	2.23	0.68
37:BQ:59:ASN:O	37:BQ:60:ALA:C	2.31	0.68
44:BR:116:LEU:O	44:BR:116:LEU:CD1	2.41	0.68
45:BU:13:ARG:CZ	45:BU:13:ARG:CB	2.62	0.68
45:BU:55:ARG:C	45:BU:57:PHE:H	1.97	0.68
27:BA:107:C:H6	27:BA:107:C:H5'	1.58	0.68
42:BY:11:GLN:HA	42:BY:21:LYS:CE	2.23	0.68
42:BY:27:LEU:HD12	42:BY:27:LEU:N	2.07	0.68
42:BY:49:GLU:CD	42:BY:97:ARG:HH11	1.75	0.68
1:AA:1198:G:O2'	13:AJ:55:LYS:HE3	1.93	0.68
1:AA:1199:U:O4'	13:AJ:54:PHE:CE2	2.46	0.68
1:AA:1222:G:OP1	1:AA:1321:C:O2'	2.10	0.68
27:BA:729:G:H3'	27:BA:729:G:N3	2.08	0.68
27:BA:1339:G:C5'	41:BX:13:LYS:HE3	2.22	0.68
41:BX:13:LYS:HA	41:BX:16:ASN:HD21	1.59	0.68
41:BX:39:ASP:O	41:BX:42:GLU:N	2.27	0.68
3:AW:37:YYG:H31	3:AW:37:YYG:H1'	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AE:16:THR:O	8:AE:26:PHE:HB2	1.92	0.68
49:B0:52:GLY:O	49:B0:53:MET:CB	2.40	0.68
3:AW:9:A:C6	3:AW:45:G:N1	2.60	0.68
27:BA:1879:C:H2'	27:BA:1880:C:H6	1.58	0.68
32:BH:108:TYR:CD2	32:BH:108:TYR:N	2.60	0.68
40:BW:21:VAL:CG2	40:BW:22:ASP:N	2.54	0.68
18:AO:45:VAL:O	18:AO:46:HIS:HB2	1.93	0.68
2:AV:19:G:H5'	2:AV:20:G:OP2	1.94	0.68
49:B0:44:LYS:HB3	49:B0:45:PHE:CE1	2.28	0.68
50:B4:20:VAL:CG1	50:B4:30:GLU:OE1	2.41	0.68
50:B4:68:ARG:HG2	50:B4:72:LYS:CA	2.23	0.68
51:B5:40:LYS:CD	51:B5:49:CYS:SG	2.60	0.68
52:B6:29:ARG:O	52:B6:31:THR:O	2.12	0.68
27:BA:2048:G:C2	27:BA:2621:A:N3	2.61	0.68
27:BA:2305:A:N1	27:BA:2312:U:H1'	2.09	0.68
27:BA:2331:G:H2'	27:BA:2332:U:O4'	1.94	0.68
27:BA:2468:G:HO2'	27:BA:2469:A:H5'	1.56	0.68
27:BA:2561:A:C5	27:BA:2562:U:H6	2.12	0.68
27:BA:2561:A:HO2'	35:BO:40:VAL:CG1	1.86	0.68
27:BA:2709:G:C2'	27:BA:2710:C:C5'	2.53	0.68
27:BA:2692:C:N4	27:BA:2717:G:H1	1.90	0.68
27:BA:612:G:O2'	27:BA:615:G:H2'	1.93	0.68
26:BB:37:C:O2	38:BS:111:PRO:HG2	1.91	0.68
29:BE:102:ASP:OD2	29:BE:104:PHE:HE1	1.74	0.68
27:BA:2822:G:OP1	29:BE:207:GLY:C	2.32	0.68
30:BF:103:ASN:HB2	30:BF:106:GLU:CG	2.23	0.68
30:BF:24:THR:CB	30:BF:25:PRO:HD3	2.15	0.68
31:BG:98:PHE:CA	31:BG:104:PHE:CE2	2.76	0.68
35:BO:104:ARG:O	35:BO:105:GLU:C	2.29	0.68
37:BQ:153:PRO:O	37:BQ:154:ALA:HB3	1.93	0.68
37:BQ:32:LYS:HZ2	43:BZ:172:LEU:HD13	1.57	0.68
44:BR:49:ASP:O	44:BR:52:ILE:HB	1.92	0.68
45:BU:17:VAL:O	45:BU:20:ARG:N	2.26	0.68
45:BU:43:ALA:HB2	46:BV:75:LYS:HB3	1.74	0.68
40:BW:25:ARG:CG	40:BW:26:GLY:H	2.06	0.68
40:BW:28:SER:O	40:BW:29:LEU:O	2.10	0.68
43:BZ:102:GLY:O	43:BZ:103:ARG:C	2.32	0.68
43:BZ:148:THR:O	43:BZ:149:ALA:O	2.11	0.68
41:BX:28:VAL:HG23	41:BX:62:LYS:HB3	1.75	0.68
1:AA:586:C:H1'	1:AA:878:G:O2'	1.93	0.68
27:BA:2795:G:OP2	27:BA:2795:G:C4	2.47	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:13:U:H3	1:AA:21:G:H1	1.39	0.68
1:AA:1240:U:N3	10:AG:30:ILE:HG22	2.08	0.68
27:BA:1689:A:H2'	27:BA:1690:A:H8	1.58	0.68
51:B5:33:CYS:SG	51:B5:36:CYS:C	2.71	0.68
49:B0:9:SER:OG	49:B0:10:SER:N	2.20	0.68
49:B0:45:PHE:CE1	49:B0:78:PHE:CB	2.76	0.68
27:BA:988:A:P	48:B3:11:SER:CB	2.81	0.68
51:B5:30:LEU:CD2	51:B5:41:LEU:HD23	2.23	0.68
51:B5:58:LEU:O	51:B5:59:ALA:CB	2.41	0.68
53:B7:22:MET:O	53:B7:23:LYS:C	2.29	0.68
53:B7:21:ARG:C	53:B7:24:THR:HG22	2.14	0.68
27:BA:1368:G:P	53:B7:25:LYS:HE3	2.31	0.68
55:B9:7:VAL:HG11	55:B9:25:VAL:CG2	2.23	0.68
27:BA:1062:G:H22	56:BK:92:PRO:CG	2.05	0.68
27:BA:1313:U:H2'	27:BA:1610:A:C2	2.28	0.68
27:BA:2363:C:C2'	27:BA:2364:C:H5'	2.24	0.68
27:BA:2459:A:N1	27:BA:2494:G:C4	2.61	0.68
27:BA:2510:C:C4	27:BA:2511:U:C4	2.81	0.68
27:BA:2654:A:H61	27:BA:2667:C:H41	1.41	0.68
27:BA:2678:C:H2'	27:BA:2679:A:O4'	1.93	0.68
27:BA:577:G:O2'	27:BA:1254:A:OP1	2.11	0.68
28:BD:119:PRO:N	28:BD:129:LEU:HD21	2.07	0.68
28:BD:131:LEU:HB3	28:BD:171:VAL:HG11	1.75	0.68
28:BD:175:LEU:CB	28:BD:179:GLU:O	2.41	0.68
29:BE:190:ASN:O	29:BE:192:ILE:HA	1.93	0.68
29:BE:205:THR:OG1	29:BE:258:TYR:CA	2.41	0.68
31:BG:38:GLU:HA	31:BG:41:LEU:HD12	1.74	0.68
31:BG:49:PRO:CB	31:BG:72:LYS:CA	2.70	0.68
32:BH:91:VAL:O	32:BH:91:VAL:CG1	2.41	0.68
34:BN:135:ILE:O	34:BN:139:LEU:CD2	2.41	0.68
34:BN:76:ASP:OD2	34:BN:76:ASP:N	2.25	0.68
35:BO:25:LEU:CD1	35:BO:38:VAL:C	2.62	0.68
36:BP:59:GLU:O	36:BP:60:GLU:CG	2.35	0.68
44:BR:18:LEU:CD1	44:BR:18:LEU:C	2.61	0.68
44:BR:73:VAL:HG12	44:BR:77:ARG:NH2	2.08	0.68
38:BS:83:LEU:O	38:BS:85:GLY:N	2.26	0.68
45:BU:72:HIS:CE1	45:BU:110:VAL:CG1	2.74	0.68
45:BU:95:LEU:HD23	45:BU:95:LEU:H	1.58	0.68
27:BA:325:G:H21	42:BY:7:GLN:HE22	1.39	0.68
27:BA:337:C:P	42:BY:24:ARG:HB2	2.29	0.68
42:BY:33:GLU:OE1	42:BY:34:GLU:HG2	1.85	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:74:VAL:HB	42:BY:77:VAL:HG23	1.72	0.68
43:BZ:64:ALA:CB	43:BZ:84:TYR:O	2.42	0.68
43:BZ:6:LYS:N	43:BZ:7:PRO:CD	2.51	0.68
27:BA:1340:U:H5	41:BX:55:GLN:NE2	1.92	0.68
31:BG:88:LEU:N	31:BG:89:PRO:HD3	2.09	0.68
1:AA:559:A:H4'	1:AA:560:U:C5'	2.23	0.68
3:AW:40:C:C3'	10:AG:147:ALA:HB1	2.22	0.68
18:AO:28:GLN:O	18:AO:32:LEU:HG	1.94	0.68
1:AA:162:A:H1'	1:AA:348:G:O2'	1.94	0.68
49:B0:67:VAL:O	49:B0:68:VAL:CG2	2.42	0.68
48:B3:6:VAL:HG22	48:B3:54:VAL:HG21	1.76	0.68
50:B4:17:GLN:HA	50:B4:33:VAL:HG11	1.74	0.68
27:BA:1809:A:N6	50:B4:3:LYS:CB	2.56	0.68
27:BA:1138:G:O5'	34:BN:57:TYR:OH	2.12	0.68
27:BA:1612:C:O2'	53:B7:5:TYR:HB2	1.94	0.68
27:BA:2242:G:C4	27:BA:2243:U:H5	2.11	0.68
27:BA:2247:A:O2'	27:BA:2248:C:H5'	1.94	0.68
27:BA:2274:A:O3'	27:BA:2275:C:H3'	1.92	0.68
27:BA:2318:G:O5'	27:BA:2318:G:H8	1.74	0.68
27:BA:2359:C:N3	27:BA:2360:A:C2	2.62	0.68
27:BA:2734:A:C8	27:BA:2735:G:C8	2.81	0.68
27:BA:2737:G:C2	27:BA:2738:A:N7	2.61	0.68
27:BA:2762:G:C5	27:BA:2763:G:N7	2.60	0.68
27:BA:2864:G:C2'	27:BA:2865:U:C6	2.75	0.68
27:BA:2888:C:N3	27:BA:2889:C:C5	2.61	0.68
27:BA:2893:G:OP2	27:BA:2893:G:C8	2.44	0.68
28:BD:188:ARG:O	28:BD:189:ALA:HB2	1.93	0.68
30:BF:162:VAL:HG12	30:BF:163:HIS:N	2.08	0.68
30:BF:38:ALA:C	30:BF:39:GLN:OE1	2.31	0.68
31:BG:53:LYS:HG3	31:BG:54:ALA:H	1.55	0.68
32:BH:101:LYS:HE2	32:BH:115:GLU:CB	2.18	0.68
27:BA:2640:G:H4'	34:BN:70:PHE:CD2	2.28	0.68
27:BA:2640:G:H4'	34:BN:70:PHE:HD2	1.58	0.68
34:BN:81:ARG:O	34:BN:82:THR:C	2.30	0.68
37:BQ:56:ILE:C	37:BQ:61:LEU:HD21	2.14	0.68
44:BR:74:LYS:N	44:BR:77:ARG:HH22	1.91	0.68
38:BS:12:ARG:CD	38:BS:20:TYR:CZ	2.55	0.68
39:BT:29:THR:HB	39:BT:31:PHE:CE1	2.28	0.68
27:BA:28:A:N3	45:BU:11:ARG:NH2	2.42	0.68
46:BV:54:TYR:O	46:BV:55:THR:C	2.32	0.68
46:BV:68:LYS:O	46:BV:69:ILE:O	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:159:THR:O	43:BZ:160:LEU:CB	2.40	0.68
43:BZ:37:LYS:O	43:BZ:40:ASP:OD1	2.10	0.68
1:AA:1060:C:O4'	13:AJ:52:GLY:HA3	1.93	0.68
27:BA:764:A:OP1	28:BD:212:HIS:CD2	2.46	0.68
41:BX:18:MET:CE	41:BX:25:GLN:H	2.05	0.68
1:AA:529:G:C6	15:AL:49:ASN:ND2	2.61	0.68
27:BA:659:C:H2'	27:BA:660:G:H8	1.58	0.68
48:B3:50:VAL:CB	48:B3:53:LEU:HD12	2.23	0.68
50:B4:62:ARG:O	50:B4:65:ASP:OD2	2.12	0.68
52:B6:16:ALA:HB1	52:B6:42:PRO:HD3	1.75	0.68
27:BA:1166:C:N3	27:BA:1183:G:N2	2.40	0.68
27:BA:1568:G:H5''	28:BD:60:GLN:CD	2.14	0.68
27:BA:1612:C:H2'	53:B7:3:ARG:HE	1.44	0.68
27:BA:2007:C:H4'	27:BA:2824:C:O2'	1.92	0.68
27:BA:2209:C:H2'	27:BA:2210:G:O3'	1.94	0.68
27:BA:2355:C:N4	27:BA:2356:C:N4	2.41	0.68
27:BA:2369:A:C2'	27:BA:2370:G:O5'	2.41	0.68
27:BA:2386:C:H2'	27:BA:2387:U:C5	2.29	0.68
27:BA:2261:C:H1'	27:BA:2388:A:N3	2.09	0.68
27:BA:2423:U:C6	27:BA:2425:A:N6	2.53	0.68
27:BA:2486:G:N1	27:BA:2487:G:C8	2.62	0.68
27:BA:2525:G:N2	27:BA:2539:C:C4	2.62	0.68
27:BA:2679:A:O2'	29:BE:300:VAL:HG12	1.93	0.68
27:BA:2808:U:OP1	27:BA:2809:A:OP2	2.12	0.68
27:BA:2839:G:C5	27:BA:2840:C:C4	2.80	0.68
29:BE:76:PRO:CB	29:BE:292:PRO:HG2	2.21	0.68
30:BF:242:GLU:O	30:BF:245:GLU:CB	2.42	0.68
27:BA:2314:C:H5''	31:BG:22:VAL:HG13	1.76	0.68
32:BH:104:LEU:CA	32:BH:151:ARG:HH12	2.06	0.68
34:BN:18:ILE:O	34:BN:18:ILE:HG23	1.92	0.68
34:BN:12:VAL:CB	34:BN:38:VAL:CG2	2.71	0.68
37:BQ:126:VAL:O	37:BQ:127:ASN:O	2.11	0.68
38:BS:103:ASP:OD2	38:BS:105:GLY:N	2.27	0.68
38:BS:115:VAL:O	38:BS:116:PHE:C	2.32	0.68
38:BS:117:ALA:O	38:BS:118:ILE:C	2.31	0.68
45:BU:14:HIS:NE2	45:BU:36:PHE:CZ	2.59	0.68
40:BW:39:THR:CA	51:B5:28:PRO:HG3	2.23	0.68
40:BW:4:LYS:HG2	40:BW:106:ILE:HA	1.75	0.68
2:AV:35:A:N6	4:AX:117:U:N3	2.42	0.68
1:AA:1357:A:O2'	17:AN:34:TYR:CE2	2.45	0.68
47:B2:62:GLU:C	47:B2:64:GLY:H	1.97	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:58:MET:N	41:BX:59:ASP:OD2	2.26	0.68
7:AD:12:CYS:CB	7:AD:31:CYS:O	2.41	0.68
7:AD:23:GLY:HA2	7:AD:113:SER:HB3	1.74	0.68
3:AW:76:A:H2'	27:BA:2422:A:C2	2.28	0.68
53:B7:30:ILE:CA	53:B7:33:ARG:HB2	2.23	0.68
27:BA:1031:G:O3'	55:B9:8:LYS:CE	2.41	0.68
27:BA:2189:U:O2'	27:BA:2190:G:H8	1.76	0.68
27:BA:2096:U:O2	27:BA:2193:G:N2	2.25	0.68
27:BA:2239:G:C4	27:BA:2240:C:C6	2.82	0.68
27:BA:2258:C:N4	27:BA:2426:A:O4'	2.19	0.68
27:BA:2316:C:O3'	31:BG:151:ILE:HG13	1.94	0.68
27:BA:2061:G:N3	27:BA:2503:A:C2	2.59	0.68
27:BA:2570:G:C2	27:BA:2571:C:C4	2.82	0.68
27:BA:2642:G:C2'	27:BA:2643:G:C5'	2.70	0.68
27:BA:2828:C:N3	27:BA:2829:C:C5	2.62	0.68
27:BA:960:A:C2	27:BA:2495:G:N2	2.58	0.68
29:BE:243:PRO:O	29:BE:244:SER:CB	2.40	0.68
30:BF:110:ALA:O	30:BF:112:ARG:N	2.26	0.68
30:BF:163:HIS:CB	30:BF:166:ILE:HD11	2.24	0.68
32:BH:150:VAL:HG12	32:BH:151:ARG:HG2	1.76	0.68
34:BN:38:VAL:O	34:BN:39:VAL:CG2	2.42	0.68
35:BO:9:LYS:N	35:BO:83:ALA:HB2	2.09	0.68
36:BP:106:VAL:CG2	36:BP:122:ALA:CB	2.71	0.68
36:BP:129:ALA:C	36:BP:133:VAL:HG23	2.13	0.68
37:BQ:74:ASN:HB3	43:BZ:174:PRO:HB2	1.75	0.68
44:BR:100:LEU:HD21	44:BR:113:LEU:N	2.06	0.68
44:BR:20:LEU:HD22	44:BR:24:GLN:HG3	1.76	0.68
38:BS:34:LEU:C	38:BS:103:ASP:HB3	2.13	0.68
38:BS:53:ASN:O	38:BS:55:ASP:CA	2.42	0.68
45:BU:70:ARG:O	45:BU:71:LEU:C	2.30	0.68
46:BV:50:ASP:O	46:BV:54:TYR:CD1	2.46	0.68
40:BW:29:LEU:O	40:BW:30:GLU:C	2.31	0.68
40:BW:8:ARG:HD2	40:BW:9:TYR:CE1	2.28	0.68
27:BA:104:U:O4	42:BY:17:HIS:NE2	2.27	0.68
43:BZ:14:LEU:CD2	43:BZ:79:ILE:CG2	2.71	0.68
1:AA:989:C:O4'	1:AA:1016:A:H2	1.76	0.68
13:AJ:53:PRO:O	13:AJ:54:PHE:HB3	1.93	0.68
47:B2:26:GLU:HA	47:B2:29:ASN:HD22	1.57	0.68
1:AA:1500:A:C5'	1:AA:1508:G:H5''	2.11	0.68
27:BA:2856:C:C6	27:BA:2856:C:C3'	2.76	0.68
1:AA:1339:A:H2	2:AV:31:A:C1'	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1156:G:H3'	1:AA:1157:A:P	2.33	0.68
1:AA:126:G:H4'	1:AA:634:C:O2'	1.94	0.68
7:AD:152:SER:O	7:AD:158:ILE:HG13	1.93	0.68
51:B5:46:CYS:N	51:B5:49:CYS:HB2	2.09	0.68
51:B5:6:VAL:HG13	51:B5:7:PRO:CD	2.23	0.68
53:B7:21:ARG:CZ	53:B7:43:THR:CB	2.70	0.68
27:BA:1034:G:OP2	55:B9:18:ARG:NH2	2.19	0.68
27:BA:1664:A:C8	27:BA:1664:A:H3'	2.29	0.68
27:BA:2195:C:C5	27:BA:2195:C:P	2.86	0.68
27:BA:2077:A:C2	27:BA:2244:U:N3	2.60	0.68
27:BA:2246:G:H2'	27:BA:2247:A:H8	1.57	0.68
27:BA:2269:A:H2'	27:BA:2270:G:O5'	1.94	0.68
27:BA:2317:C:H2'	27:BA:2318:G:C8	2.29	0.68
27:BA:807:U:H1'	27:BA:2445:G:OP1	1.94	0.68
27:BA:2454:G:O2'	27:BA:2455:G:H5'	1.93	0.68
27:BA:2450:A:OP1	27:BA:2497:A:C8	2.44	0.68
27:BA:2562:U:O2	27:BA:2563:U:O4'	2.12	0.68
27:BA:2771:C:C2	27:BA:2772:C:C5	2.81	0.68
27:BA:2854:G:C6	27:BA:2855:C:N4	2.61	0.68
27:BA:687:C:O2	27:BA:787:U:H5"	1.93	0.68
28:BD:186:LYS:O	28:BD:187:CYS:C	2.32	0.68
28:BD:81:GLU:O	28:BD:83:ASP:CG	2.32	0.68
32:BH:73:ASN:O	32:BH:74:MET:C	2.30	0.68
34:BN:63:ILE:HG21	34:BN:71:TYR:CZ	2.28	0.68
35:BO:101:PRO:CB	35:BO:120:GLU:O	2.42	0.68
36:BP:120:LEU:CD1	36:BP:122:ALA:CB	2.71	0.68
37:BQ:48:ASN:OD1	37:BQ:121:ASP:HB2	1.91	0.68
44:BR:21:TYR:HB3	44:BR:47:PHE:HD2	1.58	0.68
44:BR:43:GLU:C	44:BR:45:ARG:H	1.95	0.68
44:BR:87:TYR:CE1	44:BR:94:TYR:CB	2.66	0.68
26:BB:37:C:O2	38:BS:111:PRO:CG	2.42	0.68
38:BS:24:LEU:O	38:BS:27:LEU:HB3	1.94	0.68
45:BU:36:PHE:H	45:BU:36:PHE:HD1	1.41	0.68
33:BI:68:LEU:CA	33:BI:72:LEU:HD21	2.23	0.68
33:BI:68:LEU:CD2	33:BI:108:LEU:HD11	2.15	0.68
43:BZ:47:SER:O	43:BZ:49:THR:OG1	2.12	0.68
1:AA:1221:G:OP1	1:AA:1321:C:N4	2.27	0.68
28:BD:208:GLY:HA3	28:BD:211:HIS:NE2	2.09	0.68
27:BA:76:C:HO2'	47:B2:55:ARG:HA	1.59	0.68
27:BA:1341:U:OP2	27:BA:1397:U:N3	2.26	0.68
41:BX:68:LEU:N	41:BX:68:LEU:CD2	2.53	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1004:A:H5''	1:AA:1025:U:C5	2.28	0.68
2:AV:10:G:C6	2:AV:26:G:C4	2.82	0.68
27:BA:1520:U:H2'	27:BA:1521:G:H5''	1.75	0.68
1:AA:1329:A:H4'	16:AM:24:GLY:O	1.94	0.68
12:AI:53:VAL:HB	12:AI:58:ARG:HH22	1.59	0.68
27:BA:2262:U:OP2	49:B0:14:ARG:NH2	2.27	0.68
27:BA:2258:C:OP1	49:B0:4:LYS:CE	2.41	0.68
49:B0:37:LEU:C	49:B0:69:PHE:CE2	2.67	0.68
49:B0:8:GLY:O	49:B0:9:SER:C	2.32	0.68
53:B7:20:ALA:O	53:B7:22:MET:N	2.26	0.68
53:B7:35:ARG:NH1	53:B7:35:ARG:HB3	2.09	0.68
54:B8:22:VAL:N	54:B8:48:PHE:CE2	2.57	0.68
55:B9:25:VAL:CA	55:B9:34:GLN:HB3	2.20	0.68
27:BA:1007:C:O4'	34:BN:86:MET:O	2.12	0.68
27:BA:530:G:N1	27:BA:2021:C:C2	2.62	0.68
27:BA:2209:C:N4	27:BA:2215:G:N1	2.30	0.68
27:BA:2218:G:N1	27:BA:2219:G:C5	2.61	0.68
27:BA:2218:G:C6	27:BA:2219:G:N7	2.62	0.68
27:BA:2199:A:C4	27:BA:2225:A:C2	2.81	0.68
27:BA:2303:G:H4'	31:BG:99:ASP:HB2	1.73	0.68
27:BA:2311:A:C2	31:BG:53:LYS:HE2	2.28	0.68
27:BA:2552:U:H3	27:BA:2554:U:H5'	1.58	0.68
27:BA:2581:G:H1	27:BA:2610:C:H2'	1.49	0.68
27:BA:606:U:OP1	30:BF:104:ASP:N	2.27	0.68
29:BE:87:GLU:O	29:BE:93:GLN:N	2.27	0.68
30:BF:223:LEU:CD1	30:BF:224:ALA:CA	2.70	0.68
27:BA:801:G:OP1	30:BF:79:ARG:NH2	2.26	0.68
32:BH:32:LEU:HD11	32:BH:34:ARG:HH21	1.58	0.68
34:BN:77:GLY:CA	34:BN:80:LYS:HG2	2.23	0.68
35:BO:103:ALA:O	35:BO:104:ARG:C	2.31	0.68
37:BQ:140:TYR:CE1	37:BQ:147:VAL:HG13	2.29	0.68
38:BS:32:PRO:HG3	38:BS:100:ALA:HB2	1.76	0.68
38:BS:35:VAL:N	38:BS:103:ASP:CB	2.56	0.68
35:BO:79:PHE:CG	39:BT:22:VAL:CG2	2.77	0.68
45:BU:34:ASN:O	45:BU:35:ALA:O	2.10	0.68
45:BU:57:PHE:O	45:BU:58:ARG:C	2.29	0.68
45:BU:92:ARG:HA	45:BU:95:LEU:HD11	0.70	0.68
40:BW:97:LYS:NZ	40:BW:99:ARG:HH12	1.89	0.68
43:BZ:74:ARG:O	43:BZ:76:ARG:N	2.27	0.68
33:BI:131:VAL:O	33:BI:138:THR:HB	1.94	0.68
41:BX:22:ASN:CA	41:BX:68:LEU:CD1	2.65	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B2:42:ASN:OD1	47:B2:42:ASN:C	2.32	0.68
1:AA:1289:A:C2	1:AA:1372:U:C4'	2.77	0.68
42:BY:3:GLN:HB2	42:BY:6:LYS:HD2	1.76	0.68
27:BA:1063:G:H4'	56:BK:88:GLY:CA	2.22	0.68
1:AA:376:G:C5'	19:AP:5:ARG:HD2	2.23	0.68
1:AA:22:G:C1'	1:AA:914:A:N6	2.56	0.68
11:AH:97:VAL:HG13	11:AH:98:LYS:H	1.57	0.68
8:AE:80:ILE:HD13	8:AE:138:ALA:HB1	1.75	0.68
1:AA:584:G:H1	1:AA:757:U:H3	1.40	0.68
5:AB:124:SER:HB2	5:AB:125:PRO:HD2	1.75	0.68
27:BA:304:G:H1	27:BA:313:C:H42	1.41	0.68
27:BA:2385:C:O2'	49:B0:39:ARG:CZ	2.42	0.68
49:B0:46:LYS:NZ	49:B0:81:ILE:HD11	2.07	0.68
48:B3:32:GLN:C	48:B3:32:GLN:CD	2.52	0.68
50:B4:59:PHE:O	50:B4:60:ASN:C	2.32	0.68
54:B8:22:VAL:H	54:B8:48:PHE:HE2	1.36	0.68
54:B8:26:LYS:CE	54:B8:44:LYS:N	2.57	0.68
27:BA:2195:C:H2'	27:BA:2196:C:C4'	2.23	0.68
27:BA:2228:G:C8	27:BA:2228:G:H5''	2.21	0.68
27:BA:2298:A:C1'	27:BA:2321:G:H22	2.07	0.68
27:BA:2344:U:H2'	27:BA:2345:G:OP2	1.93	0.68
27:BA:2466:C:N4	27:BA:2467:C:N4	2.42	0.68
27:BA:2526:G:C4	27:BA:2527:C:H6	2.12	0.68
27:BA:2730:C:H2'	27:BA:2731:G:C8	2.28	0.68
27:BA:2785:C:O3'	29:BE:99:VAL:HG13	1.94	0.68
27:BA:2888:C:C2	27:BA:2889:C:C5	2.82	0.68
27:BA:510:C:O5'	27:BA:512:G:N1	2.27	0.68
27:BA:963:U:O2	27:BA:2250:G:N2	2.23	0.68
27:BA:965:C:O4'	27:BA:2273:A:C2	2.47	0.68
27:BA:973:A:C6	46:BV:81:ARG:NE	2.62	0.68
28:BD:70:LYS:HG3	28:BD:70:LYS:O	1.92	0.68
27:BA:1673:U:H5	29:BE:225:LYS:HD3	1.58	0.68
29:BE:70:VAL:O	29:BE:71:THR:CG2	2.42	0.68
30:BF:168:ARG:HH22	30:BF:209:GLY:HA2	1.56	0.68
30:BF:35:VAL:O	30:BF:36:ARG:C	2.33	0.68
32:BH:120:LEU:HB3	32:BH:143:LEU:CD1	2.23	0.68
32:BH:94:ARG:HB3	32:BH:127:GLN:NE2	2.09	0.68
37:BQ:31:PHE:HZ	37:BQ:88:PHE:CE2	2.12	0.68
38:BS:12:ARG:HD2	38:BS:20:TYR:CE1	2.23	0.68
38:BS:81:ALA:O	38:BS:82:TYR:C	2.33	0.68
45:BU:10:ARG:O	45:BU:11:ARG:C	2.32	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:149:ALA:HB1	43:BZ:164:PRO:HA	1.75	0.68
27:BA:328:U:HO2'	42:BY:94:SER:CB	2.06	0.68
47:B2:27:LEU:HD21	47:B2:53:ILE:HD11	1.73	0.68
47:B2:30:ALA:C	47:B2:34:GLN:CG	2.42	0.68
41:BX:17:ASP:HA	41:BX:20:PHE:CZ	2.29	0.68
27:BA:1614:A:C5	40:BW:88:ARG:CD	2.76	0.68
1:AA:411:A:OP2	7:AD:25:ARG:NH2	2.27	0.68
1:AA:1156:G:O2'	1:AA:1180:A:N6	2.25	0.68
27:BA:1274:A:N1	27:BA:1302:A:H2	1.91	0.68
27:BA:979:G:H3'	27:BA:980:A:H5'	1.75	0.68
1:AA:1493:A:H4'	25:AY:116:GLY:CA	2.23	0.68
8:AE:103:GLY:O	8:AE:107:ARG:HB2	1.94	0.68
27:BA:1829:A:H3'	27:BA:1830:C:H6	1.59	0.68
49:B0:37:LEU:HD11	49:B0:71:ASN:ND2	2.09	0.68
48:B3:18:ASP:O	48:B3:21:ALA:N	2.27	0.68
50:B4:58:LYS:O	50:B4:61:LYS:N	2.10	0.68
27:BA:1031:G:C4'	55:B9:8:LYS:CE	2.65	0.68
27:BA:2235:G:N3	27:BA:2236:C:C6	2.62	0.68
27:BA:2282:G:C5'	27:BA:2283:C:O5'	2.42	0.68
27:BA:2526:G:C2	27:BA:2527:C:C6	2.82	0.68
27:BA:2555:U:O2'	27:BA:2556:C:C5'	2.40	0.68
27:BA:2603:G:C4	27:BA:2604:U:H6	2.07	0.68
27:BA:2747:G:C2'	27:BA:2748:A:H5''	2.24	0.68
27:BA:2771:C:O2	27:BA:2772:C:C6	2.47	0.68
27:BA:801:G:OP2	30:BF:79:ARG:NE	2.25	0.68
27:BA:196:A:C2	27:BA:805:G:N1	2.62	0.68
28:BD:74:PRO:CD	28:BD:96:ALA:CB	2.64	0.68
29:BE:70:VAL:HB	29:BE:295:LEU:HD21	1.75	0.68
30:BF:241:ALA:O	30:BF:245:GLU:OE2	2.11	0.68
30:BF:57:PRO:O	30:BF:58:ALA:CB	2.42	0.68
30:BF:57:PRO:O	30:BF:58:ALA:HB3	1.94	0.68
32:BH:10:ILE:HG21	32:BH:14:VAL:HG12	1.71	0.68
34:BN:103:VAL:C	34:BN:104:TYR:CG	2.68	0.68
35:BO:20:LEU:HG	35:BO:44:LYS:CG	2.23	0.68
35:BO:8:LEU:HD23	35:BO:8:LEU:H	1.57	0.68
44:BR:45:ARG:HG2	44:BR:46:GLY:N	2.08	0.68
39:BT:15:PRO:C	39:BT:17:THR:H	1.97	0.68
40:BW:26:GLY:HA2	40:BW:71:VAL:O	1.94	0.68
40:BW:6:ILE:O	40:BW:7:ALA:CB	2.41	0.68
43:BZ:106:GLY:H	43:BZ:141:MET:HG2	1.59	0.68
43:BZ:154:LEU:CD1	43:BZ:160:LEU:CD1	2.72	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:101:LEU:HD11	42:BY:112:LEU:HD12	1.74	0.68
43:BZ:5:ALA:C	43:BZ:33:ALA:HB2	2.13	0.68
43:BZ:19:ILE:CB	43:BZ:39:PHE:HE1	2.05	0.68
43:BZ:79:ILE:O	43:BZ:80:HIS:CB	2.42	0.68
1:AA:1222:G:P	1:AA:1322:C:C5	2.86	0.68
13:AJ:63:PHE:CE2	17:AN:49:HIS:CE1	2.79	0.68
27:BA:75:G:C3'	47:B2:51:LYS:HZ3	2.07	0.68
27:BA:58:G:C2'	27:BA:73:A:N6	2.52	0.68
1:AA:946:A:H61	1:AA:1235:U:H3	1.41	0.68
27:BA:1079:C:C1'	56:BK:130:GLY:HA2	2.24	0.68
1:AA:1250:A:H4'	12:AI:67:GLY:CA	2.24	0.68
11:AH:23:SER:HB2	11:AH:60:ARG:HD2	1.76	0.68
48:B3:3:ARG:HA	48:B3:37:LEU:O	1.94	0.67
50:B4:21:VAL:HG12	50:B4:22:MET:H	0.58	0.67
53:B7:30:ILE:CA	53:B7:33:ARG:CB	2.72	0.67
27:BA:650:C:P	54:B8:19:THR:HG21	2.33	0.67
27:BA:1005:C:H1'	34:BN:21:ARG:HG3	1.75	0.67
27:BA:2099:U:H3	27:BA:2190:G:H1	1.42	0.67
27:BA:2227:A:N1	27:BA:2228:G:O6	2.21	0.67
27:BA:2283:C:C4	27:BA:2284:C:H1'	2.29	0.67
27:BA:2508:G:C2'	27:BA:2509:G:C5'	2.71	0.67
27:BA:2648:C:H2'	27:BA:2649:U:C5'	2.24	0.67
27:BA:2680:C:H4'	29:BE:300:VAL:HA	1.75	0.67
27:BA:2886:G:H21	27:BA:2887:U:C1'	2.06	0.67
28:BD:146:LYS:CB	28:BD:149:ARG:HG3	2.24	0.67
29:BE:104:PHE:HB3	29:BE:108:LEU:HD12	1.76	0.67
29:BE:201:VAL:HG22	29:BE:311:PHE:CB	2.20	0.67
29:BE:198:TYR:CE2	29:BE:265:ASN:C	2.68	0.67
30:BF:114:ALA:O	30:BF:117:ALA:N	2.26	0.67
30:BF:34:ALA:O	30:BF:35:VAL:C	2.32	0.67
30:BF:37:ALA:HB1	30:BF:102:LEU:CB	2.16	0.67
33:BI:6:LEU:HB3	33:BI:35:LEU:C	2.14	0.67
34:BN:45:VAL:N	34:BN:132:LEU:HD22	2.05	0.67
35:BO:110:ASP:O	35:BO:111:PHE:CD2	2.44	0.67
35:BO:101:PRO:HB3	35:BO:122:ILE:HD11	1.75	0.67
36:BP:131:GLU:O	36:BP:134:GLU:N	2.27	0.67
44:BR:20:LEU:HD12	44:BR:21:TYR:CG	2.27	0.67
45:BU:105:ALA:O	45:BU:108:ALA:CB	2.39	0.67
40:BW:100:THR:O	40:BW:101:SER:OG	2.12	0.67
33:BI:115:ILE:CG2	33:BI:131:VAL:HG22	2.21	0.67
33:BI:77:VAL:O	33:BI:77:VAL:HG12	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:31:LEU:HD13	42:BY:101:LEU:HB2	1.72	0.67
27:BA:1566:A:C2	28:BD:212:HIS:ND1	2.62	0.67
47:B2:54:ALA:HB3	47:B2:55:ARG:HD2	1.75	0.67
27:BA:111:A:C4'	47:B2:62:GLU:OE2	2.42	0.67
2:AV:65:G:C2	2:AV:66:A:C5	2.81	0.67
32:BH:17:THR:HB	32:BH:24:THR:HG1	1.59	0.67
1:AA:944:G:C3'	1:AA:945:G:H5'	2.24	0.67
5:AB:61:LEU:HA	5:AB:64:ARG:HD2	1.76	0.67
27:BA:668:G:H2'	27:BA:670:A:H62	1.58	0.67
27:BA:1400:G:H2'	27:BA:1401:G:C8	2.29	0.67
27:BA:1157:G:O2'	48:B3:31:LEU:HD13	1.94	0.67
54:B8:13:ARG:HB3	54:B8:24:ALA:CB	2.24	0.67
27:BA:2219:G:O2'	27:BA:2224:G:O5'	2.02	0.67
27:BA:2287:A:N3	27:BA:2289:G:C8	2.62	0.67
27:BA:2631:G:C5	27:BA:2632:A:H8	2.07	0.67
27:BA:2633:G:O2'	27:BA:2634:G:C5'	2.42	0.67
27:BA:2779:U:H4'	27:BA:2781:A:N7	2.08	0.67
27:BA:592:G:N2	54:B8:3:LYS:NZ	2.42	0.67
28:BD:130:PRO:HA	28:BD:188:ARG:HG2	1.76	0.67
29:BE:190:ASN:C	29:BE:192:ILE:C	2.52	0.67
29:BE:222:ARG:CG	29:BE:232:ARG:CA	2.69	0.67
31:BG:71:ALA:O	31:BG:72:LYS:CE	2.42	0.67
31:BG:93:LEU:HD22	31:BG:97:GLN:CD	2.14	0.67
32:BH:130:ILE:CG2	32:BH:131:ILE:N	2.57	0.67
34:BN:79:PHE:HD1	34:BN:79:PHE:H	1.40	0.67
35:BO:11:ALA:CB	35:BO:99:PHE:HB3	2.23	0.67
36:BP:92:ASP:HB3	36:BP:118:LEU:HB3	1.76	0.67
36:BP:94:ARG:CD	36:BP:120:LEU:HB2	2.23	0.67
37:BQ:72:VAL:HG21	37:BQ:135:ALA:CB	2.23	0.67
37:BQ:34:GLY:N	37:BQ:83:PHE:HB2	2.09	0.67
27:BA:2850:A:N3	44:BR:61:HIS:CE1	2.39	0.67
38:BS:33:ARG:HB3	38:BS:35:VAL:HG23	1.74	0.67
38:BS:9:PRO:CG	38:BS:14:ARG:HB3	2.23	0.67
46:BV:31:ASP:O	46:BV:63:HIS:CB	2.34	0.67
40:BW:43:GLY:O	40:BW:44:ALA:C	2.29	0.67
43:BZ:130:ILE:CD1	43:BZ:130:ILE:C	2.62	0.67
1:AA:1224:G:H4'	16:AM:102:ARG:NH1	2.09	0.67
27:BA:729:G:C5	28:BD:207:ALA:HA	2.29	0.67
28:BD:213:LYS:CA	28:BD:215:LYS:H	2.06	0.67
47:B2:13:PRO:HD3	47:B2:16:ARG:HH12	1.59	0.67
41:BX:5:ILE:HG13	41:BX:40:ALA:HB1	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:168:VAL:CG1	32:BH:169:ARG:H	1.90	0.67
33:BI:48:GLU:HG3	33:BI:52:GLN:NE2	2.07	0.67
27:BA:1906:G:C4	27:BA:1929:G:C5	2.82	0.67
1:AA:826:C:H4'	11:AH:12:ARG:HG2	1.75	0.67
27:BA:311:A:H62	27:BA:329:G:H5'	1.57	0.67
1:AA:355:C:H1'	1:AA:388:G:H2'	1.77	0.67
52:B6:39:LYS:O	52:B6:40:TYR:HD1	1.77	0.67
55:B9:10:MET:CA	55:B9:10:MET:CE	2.73	0.67
27:BA:1005:C:H2'	27:BA:1006:C:H6	1.60	0.67
27:BA:1239:G:HO2'	27:BA:1240:U:H6	1.42	0.67
27:BA:2020:A:N7	51:B5:9:LYS:NZ	2.34	0.67
27:BA:2191:G:N2	27:BA:2192:G:H1'	2.09	0.67
27:BA:2206:C:O2'	27:BA:2207:C:O4'	2.11	0.67
27:BA:2285:C:H1'	27:BA:2288:A:N7	2.10	0.67
27:BA:2334:G:N2	38:BS:12:ARG:HG3	2.10	0.67
27:BA:2423:U:H1'	27:BA:2425:A:N9	2.10	0.67
27:BA:2474:C:N4	27:BA:2529:G:N2	2.42	0.67
27:BA:2546:U:O2	27:BA:2567:G:H8	1.76	0.67
27:BA:2739:U:C6	27:BA:2739:U:C3'	2.73	0.67
27:BA:2757:A:H2'	27:BA:2758:A:H8	1.60	0.67
27:BA:2809:A:C4'	27:BA:2811:G:N7	2.56	0.67
27:BA:2842:G:N2	27:BA:2876:G:N3	2.40	0.67
27:BA:673:C:H4'	30:BF:82:GLN:CD	2.14	0.67
31:BG:101:THR:O	31:BG:102:GLY:C	2.32	0.67
32:BH:10:ILE:CD1	32:BH:48:VAL:O	2.41	0.67
36:BP:113:GLN:C	36:BP:114:VAL:O	2.32	0.67
36:BP:120:LEU:HD13	36:BP:121:ILE:N	2.09	0.67
37:BQ:91:HIS:O	37:BQ:111:THR:HA	1.95	0.67
37:BQ:86:ARG:HH21	37:BQ:123:ILE:HD12	1.59	0.67
44:BR:44:LEU:CD1	44:BR:48:VAL:CG2	2.30	0.67
44:BR:55:ALA:HB1	44:BR:80:PHE:HA	1.76	0.67
38:BS:56:ASP:C	38:BS:57:THR:HG23	2.14	0.67
40:BW:66:GLU:CD	40:BW:67:ASP:H	1.97	0.67
33:BI:68:LEU:HD11	33:BI:108:LEU:CD1	2.24	0.67
42:BY:103:LEU:HD22	42:BY:112:LEU:HD23	1.71	0.67
26:BB:76:G:OP1	43:BZ:10:PRO:HB3	1.93	0.67
47:B2:7:GLU:CD	47:B2:8:ILE:H	1.97	0.67
27:BA:1080:C:H2'	56:BK:127:ILE:HD12	1.74	0.67
36:BP:75:LEU:C	36:BP:75:LEU:HD23	2.14	0.67
20:AQ:22:LEU:HD12	20:AQ:23:VAL:C	2.14	0.67
1:AA:429:U:P	7:AD:13:ARG:HH21	2.16	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AW:40:C:O2'	10:AG:144:MET:HA	1.93	0.67
1:AA:762:C:H5'	20:AQ:104:LYS:HD3	1.76	0.67
1:AA:1268:A:H4'	24:AU:20:LYS:HA	1.75	0.67
1:AA:1095:U:P	1:AA:1108:G:H22	2.17	0.67
28:BD:121:ALA:O	28:BD:122:ASP:CB	2.43	0.67
5:AB:239:VAL:HG12	5:AB:240:GLN:H	1.60	0.67
1:AA:597:G:H21	11:AH:94:TYR:HE2	1.42	0.67
51:B5:28:PRO:HB2	51:B5:30:LEU:HG	1.75	0.67
51:B5:51:TYR:O	51:B5:52:TYR:CB	2.40	0.67
27:BA:2235:G:C5	27:BA:2236:C:C5	2.82	0.67
27:BA:2520:C:C5	27:BA:2567:G:C5	2.82	0.67
27:BA:2865:U:C5	27:BA:2866:U:C6	2.82	0.67
26:BB:56:G:H4'	26:BB:57:A:C5'	2.23	0.67
30:BF:59:GLU:O	30:BF:60:SER:C	2.32	0.67
32:BH:102:LEU:HD12	32:BH:104:LEU:CD1	2.24	0.67
37:BQ:11:LYS:HD2	37:BQ:91:HIS:HD2	1.57	0.67
37:BQ:130:PRO:C	37:BQ:132:VAL:N	2.47	0.67
37:BQ:69:ASN:ND2	37:BQ:70:ARG:CA	2.58	0.67
44:BR:52:ILE:HD13	44:BR:94:TYR:CB	2.25	0.67
38:BS:28:LYS:CB	38:BS:28:LYS:NZ	2.56	0.67
45:BU:33:ARG:HB2	45:BU:33:ARG:CZ	2.24	0.67
45:BU:43:ALA:HA	45:BU:46:GLU:OE2	1.95	0.67
46:BV:12:TYR:CG	46:BV:13:ARG:N	2.58	0.67
46:BV:72:ARG:N	46:BV:88:GLN:CG	2.56	0.67
40:BW:55:ALA:HA	40:BW:107:LEU:HD13	1.75	0.67
40:BW:69:LEU:N	40:BW:69:LEU:CD2	2.50	0.67
33:BI:84:GLY:N	33:BI:147:GLU:OE2	2.28	0.67
43:BZ:5:ALA:CB	43:BZ:33:ALA:HA	2.19	0.67
1:AA:236:G:C5'	20:AQ:42:TYR:OH	2.42	0.67
1:AA:32:A:H2'	1:AA:33:A:H8	1.60	0.67
27:BA:256:A:H2'	27:BA:257:A:C8	2.29	0.67
49:B0:19:LYS:O	49:B0:35:ASN:O	2.13	0.67
48:B3:39:ASP:CG	48:B3:40:THR:H	1.96	0.67
27:BA:929:G:O2'	48:B3:43:ILE:HG12	1.94	0.67
27:BA:686:G:O2'	53:B7:6:GLN:OE1	2.10	0.67
27:BA:1273:U:H4'	27:BA:1275:A:OP2	1.93	0.67
27:BA:199:A:N1	27:BA:2433:A:N7	2.42	0.67
27:BA:2052:G:H21	29:BE:245:ARG:CD	2.07	0.67
27:BA:2330:G:N1	27:BA:2331:G:N3	2.41	0.67
27:BA:2339:G:N3	27:BA:2340:G:C8	2.62	0.67
27:BA:2283:C:H1'	27:BA:2389:G:H21	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2422:A:H5''	27:BA:2423:U:OP1	1.94	0.67
27:BA:2426:A:OP1	27:BA:2426:A:H8	1.77	0.67
27:BA:2491:U:HO2'	27:BA:2492:U:C5'	1.81	0.67
27:BA:2528:U:O2	27:BA:2536:G:C2	2.48	0.67
27:BA:2648:C:N4	27:BA:2649:U:O4	2.27	0.67
27:BA:2785:C:C6	27:BA:2786:U:C5	2.83	0.67
27:BA:2837:G:N1	27:BA:2882:A:C6	2.62	0.67
27:BA:532:A:C3'	27:BA:533:G:O4'	2.43	0.67
28:BD:109:LEU:HD13	28:BD:115:ILE:HG12	1.75	0.67
28:BD:181:ARG:HH11	28:BD:181:ARG:HB3	1.55	0.67
28:BD:188:ARG:O	28:BD:189:ALA:CB	2.42	0.67
29:BE:102:ASP:C	29:BE:103:GLU:HG3	2.15	0.67
27:BA:2512:C:H5''	29:BE:219:VAL:CG1	2.25	0.67
30:BF:138:VAL:O	30:BF:139:VAL:HB	1.94	0.67
30:BF:39:GLN:O	30:BF:40:ALA:C	2.33	0.67
35:BO:10:VAL:HG12	35:BO:12:ASP:O	1.95	0.67
35:BO:99:PHE:HD2	39:BT:24:LYS:HE3	1.58	0.67
37:BQ:33:MET:HG3	37:BQ:83:PHE:CB	2.25	0.67
44:BR:87:TYR:HD1	44:BR:94:TYR:CG	2.13	0.67
38:BS:104:ILE:HG22	38:BS:104:ILE:O	1.94	0.67
39:BT:8:TYR:O	39:BT:10:GLY:N	2.28	0.67
46:BV:67:LYS:CD	46:BV:70:TYR:CE1	2.77	0.67
33:BI:89:LEU:HD11	33:BI:93:ILE:HG22	1.59	0.67
33:BI:94:THR:CG2	33:BI:97:GLN:HG3	2.25	0.67
42:BY:58:GLU:H	42:BY:97:ARG:HH12	1.42	0.67
1:AA:1060:C:H5'	13:AJ:52:GLY:H	1.59	0.67
27:BA:1444:G:O3'	27:BA:444(A):A:H8	1.77	0.67
27:BA:95:G:C1'	47:B2:42:ASN:HB3	2.24	0.67
1:AA:1463:C:OP1	39:BT:47:ARG:CG	2.39	0.67
39:BT:44:ARG:CG	39:BT:45:GLU:H	2.08	0.67
1:AA:761:G:HO2'	20:AQ:104:LYS:HA	1.59	0.67
27:BA:2660:A:H8	27:BA:2660:A:O5'	1.77	0.67
49:B0:67:VAL:HG12	49:B0:74:LYS:HG2	1.69	0.67
27:BA:1809:A:N1	50:B4:43:TRP:CH2	2.62	0.67
52:B6:32:GLN:HA	52:B6:35:LEU:CD1	2.23	0.67
27:BA:592:G:C4	54:B8:3:LYS:HE3	2.29	0.67
27:BA:1137:G:H21	34:BN:86:MET:CE	2.06	0.67
27:BA:1294:U:O2'	44:BR:26:LYS:CD	2.43	0.67
27:BA:18:C:O3'	45:BU:23:GLY:CA	2.42	0.67
27:BA:2048:G:C6	27:BA:2620:C:N4	2.63	0.67
27:BA:2228:G:C8	27:BA:2229:C:H6	2.07	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2357:U:O2'	27:BA:2358:G:H5''	1.95	0.67
27:BA:960:A:H2	27:BA:2496:C:H1'	1.57	0.67
27:BA:2523:G:C1'	27:BA:2765:A:N7	2.57	0.67
27:BA:2712:U:H5''	27:BA:2714:G:C5'	2.24	0.67
27:BA:2765:A:H2'	27:BA:2765:A:N3	2.08	0.67
27:BA:396:G:C4'	50:B4:39:VAL:CG1	2.73	0.67
27:BA:530:G:N2	27:BA:2021:C:C6	2.62	0.67
27:BA:593:G:H5''	54:B8:62:LEU:HD23	1.74	0.67
27:BA:5:A:HO2'	34:BN:4:ALA:N	1.92	0.67
27:BA:650:C:H5''	54:B8:19:THR:CG2	2.24	0.67
27:BA:873:G:H4'	37:BQ:32:LYS:HG2	1.75	0.67
29:BE:269:ILE:HG23	29:BE:297:LYS:HZ1	1.56	0.67
29:BE:80:ALA:N	29:BE:187:HIS:NE2	2.42	0.67
32:BH:101:LYS:HB2	32:BH:113:GLU:CD	2.14	0.67
37:BQ:36:ASN:OD1	43:BZ:116:VAL:N	2.28	0.67
37:BQ:91:HIS:C	37:BQ:92:VAL:HG13	2.15	0.67
44:BR:22:ARG:CG	44:BR:26:LYS:CE	2.72	0.67
44:BR:72:ASP:O	44:BR:76:VAL:HG21	1.91	0.67
38:BS:128:ASP:C	38:BS:129:ILE:HG12	2.15	0.67
45:BU:111:ASP:OD1	45:BU:111:ASP:N	2.26	0.67
27:BA:995:C:OP2	45:BU:54:LYS:NZ	2.27	0.67
46:BV:35:LEU:HG	46:BV:63:HIS:NE2	2.10	0.67
46:BV:39:PHE:CZ	46:BV:42:GLY:HA2	2.30	0.67
46:BV:5:ILE:HD12	46:BV:12:TYR:CE1	2.29	0.67
43:BZ:120:LEU:C	43:BZ:121:GLN:HG3	2.14	0.67
43:BZ:129:ARG:CA	43:BZ:129:ARG:HE	1.93	0.67
27:BA:97:C:H2'	27:BA:98:G:O4'	1.94	0.67
43:BZ:37:LYS:CA	43:BZ:41:ARG:NH1	2.57	0.67
1:AA:989:C:C4'	1:AA:1016:A:H2	2.07	0.67
27:BA:1789:A:OP1	28:BD:226:GLY:N	2.28	0.67
47:B2:13:PRO:CD	47:B2:16:ARG:HH11	2.07	0.67
47:B2:56:ILE:O	47:B2:59:ILE:CG2	2.41	0.67
41:BX:16:ASN:HB2	41:BX:20:PHE:HE2	1.59	0.67
1:AA:436:C:O2	1:AA:437:U:C2	2.47	0.67
49:B0:39:ARG:CG	49:B0:69:PHE:CE1	2.65	0.67
27:BA:1252:G:C8	27:BA:1253:A:H1'	2.30	0.67
27:BA:1800:C:C6	27:BA:1800:C:H3'	2.30	0.67
27:BA:2044:C:N3	27:BA:2624:G:C2	2.62	0.67
27:BA:2208:U:O2'	27:BA:2209:C:H5'	1.93	0.67
27:BA:2234:G:C2	27:BA:2235:G:N9	2.63	0.67
27:BA:2289:G:O3'	27:BA:2383:G:O2'	2.12	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2317:C:H2'	27:BA:2318:G:H8	1.60	0.67
27:BA:2349:G:C6	27:BA:2369:A:N1	2.62	0.67
27:BA:2394:C:C6	27:BA:2395:C:N4	2.63	0.67
27:BA:2431:U:N3	27:BA:2434:A:OP2	2.28	0.67
27:BA:2523:G:C2	27:BA:2541:A:C2	2.82	0.67
27:BA:2564:A:OP1	27:BA:2648:C:H4'	1.95	0.67
27:BA:566:U:P	46:BV:81:ARG:NH2	2.67	0.67
27:BA:576:U:OP1	27:BA:2503:A:OP1	2.13	0.67
27:BA:7:G:H5'	34:BN:6:PHE:CG	2.25	0.67
27:BA:965:C:H1'	27:BA:2273:A:C2	2.29	0.67
28:BD:70:LYS:NZ	28:BD:70:LYS:HB3	2.10	0.67
30:BF:58:ALA:HB2	30:BF:79:ARG:HB2	1.77	0.67
31:BG:19:GLU:HB2	31:BG:135:VAL:CG1	2.24	0.67
32:BH:60:HIS:HA	32:BH:63:LEU:CB	2.23	0.67
32:BH:67:THR:O	32:BH:70:LEU:HB3	1.94	0.67
32:BH:23:VAL:CG1	32:BH:74:MET:SD	2.83	0.67
32:BH:75:VAL:O	32:BH:76:GLU:C	2.31	0.67
35:BO:77:ILE:CD1	35:BO:79:PHE:CE2	2.56	0.67
35:BO:99:PHE:HE2	39:BT:24:LYS:CD	2.08	0.67
36:BP:128:GLY:O	36:BP:129:ALA:C	2.33	0.67
26:BB:47:C:O3'	38:BS:107:ASN:OD1	2.13	0.67
38:BS:47:LEU:H	38:BS:57:THR:HG22	1.60	0.67
46:BV:4:ILE:CD1	46:BV:13:ARG:HD3	2.23	0.67
40:BW:20:VAL:HG11	40:BW:47:VAL:HG21	0.69	0.67
40:BW:23:LEU:HD13	40:BW:35:ILE:HG21	1.77	0.67
43:BZ:148:THR:HG22	43:BZ:168:VAL:H	1.58	0.67
3:AW:25:C:N1	3:AW:26:G:C8	2.63	0.67
28:BD:211:HIS:O	28:BD:213:LYS:N	2.27	0.67
41:BX:7:HIS:CB	41:BX:8:PRO:CD	2.72	0.67
1:AA:1289:A:H1'	1:AA:1371:G:N2	2.10	0.67
2:AV:69:U:H2'	2:AV:70:C:H6	1.59	0.67
2:AV:31:A:OP1	12:AI:127:LYS:HG3	1.95	0.67
1:AA:36:C:H4'	15:AL:117:ARG:NH2	2.09	0.67
27:BA:1212:G:O2'	27:BA:1213:A:C8	2.46	0.67
27:BA:1079:C:C2'	56:BK:130:GLY:HA2	2.24	0.67
27:BA:1085:A:H1'	27:BA:1086:A:H4'	1.77	0.67
27:BA:120:U:C2	27:BA:150:C:C4	2.83	0.67
1:AA:1297:C:O2'	10:AG:114:ARG:HD3	1.95	0.67
27:BA:1138:G:OP1	34:BN:82:THR:HG22	1.95	0.67
27:BA:1140:C:H4'	27:BA:142(A):A:C5	2.29	0.67
27:BA:1429:G:H2'	27:BA:1430:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2248:C:O2	27:BA:2248:C:C2'	2.43	0.67
27:BA:2266:A:C2	27:BA:2272:U:C2	2.83	0.67
27:BA:2287:A:N1	27:BA:2289:G:N9	2.43	0.67
27:BA:2410:G:C2	27:BA:2411:A:C8	2.83	0.67
27:BA:2487:G:HO2'	27:BA:2488:A:H5'	1.57	0.67
27:BA:2608:G:H8	27:BA:2608:G:H3'	1.59	0.67
27:BA:2718:G:C2	27:BA:2719:G:C4	2.82	0.67
27:BA:2742:C:O2	27:BA:2742:C:H2'	1.95	0.67
27:BA:650:C:O2	27:BA:650:C:H2'	1.94	0.67
28:BD:103:ILE:CD1	28:BD:104:ILE:CD1	2.47	0.67
28:BD:75:GLY:N	28:BD:115:ILE:O	2.27	0.67
28:BD:175:LEU:HD21	28:BD:180:VAL:HA	0.67	0.67
29:BE:197:GLU:O	29:BE:267:ARG:HA	1.94	0.67
31:BG:95:THR:HG22	31:BG:96:SER:N	2.09	0.67
35:BO:122:ILE:N	35:BO:122:ILE:HD12	2.10	0.67
36:BP:102:ASP:O	36:BP:103:ALA:HB2	1.95	0.67
45:BU:27:SER:CB	45:BU:31:GLN:NE2	2.56	0.67
42:BY:41:ARG:HB2	42:BY:112:LEU:CA	2.13	0.67
42:BY:74:VAL:O	42:BY:75:GLU:C	2.32	0.67
43:BZ:37:LYS:CA	43:BZ:40:ASP:OD1	2.42	0.67
41:BX:4:VAL:CB	47:B2:24:LYS:NZ	2.57	0.67
27:BA:135:G:H1	27:BA:144:C:N4	1.91	0.67
1:AA:1375:A:OP1	10:AG:12:LEU:HD21	1.95	0.67
1:AA:1340:A:H4'	2:AV:31:A:O2'	1.94	0.67
3:AW:44:A:C2'	3:AW:45:G:H5'	2.25	0.67
27:BA:481:G:OP2	42:BY:81:LYS:HG2	1.94	0.67
1:AA:254:G:H4'	20:AQ:18:THR:OG1	1.95	0.67
1:AA:43:C:OP1	19:AP:12:LYS:CB	2.43	0.67
1:AA:1298:C:H5''	1:AA:1299:A:OP1	1.93	0.67
1:AA:521:G:O6	15:AL:49:ASN:ND2	2.28	0.67
27:BA:1853:A:H2'	27:BA:1854:A:C8	2.30	0.67
2:AV:75:C:N4	27:BA:2252:G:N2	2.29	0.67
50:B4:23:GLU:CD	50:B4:29:PRO:HB3	2.15	0.67
27:BA:2215:G:C4	27:BA:2216:G:N7	2.62	0.67
27:BA:2234:G:C2	27:BA:2235:G:C4	2.83	0.67
27:BA:2246:G:H2'	27:BA:2247:A:H5'	1.74	0.67
27:BA:2289:G:N1	27:BA:2290:G:C5	2.63	0.67
27:BA:2320:A:N3	27:BA:2333:A:C2	2.62	0.67
27:BA:2488:A:C2'	27:BA:2489:G:O5'	2.35	0.67
27:BA:2528:U:H3'	27:BA:2528:U:H6	1.60	0.67
27:BA:2520:C:H5	27:BA:2567:G:C4	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2647:U:H3	27:BA:2673:G:H1	1.41	0.67
27:BA:1456:G:N2	27:BA:2703:C:H5	1.93	0.67
27:BA:2820:A:O2'	29:BE:207:GLY:O	2.13	0.67
29:BE:44:TYR:CD1	29:BE:308:VAL:CA	2.64	0.67
31:BG:49:PRO:HG3	31:BG:73:VAL:N	2.10	0.67
32:BH:148:ARG:HH12	32:BH:164:GLU:N	1.92	0.67
32:BH:14:VAL:HG12	32:BH:16:VAL:CG2	2.25	0.67
32:BH:67:THR:HA	32:BH:70:LEU:HB2	1.75	0.67
33:BI:29:PHE:CD1	33:BI:29:PHE:N	2.62	0.67
27:BA:2780:G:H22	34:BN:80:LYS:NZ	1.91	0.67
35:BO:66:LYS:NZ	35:BO:67:ARG:NE	2.43	0.67
37:BQ:133:GLU:CG	37:BQ:134:PHE:N	2.57	0.67
37:BQ:33:MET:HG3	37:BQ:83:PHE:HB2	1.77	0.67
37:BQ:82:LYS:O	37:BQ:84:ARG:N	2.28	0.67
39:BT:15:PRO:O	39:BT:17:THR:N	2.25	0.67
45:BU:25:TRP:H	45:BU:28:ARG:HD2	1.60	0.67
45:BU:65:ILE:CB	45:BU:76:TYR:HE2	2.08	0.67
27:BA:99:U:N3	42:BY:107:LYS:HD2	2.10	0.67
42:BY:51:LEU:CD2	42:BY:95:ASN:CG	2.64	0.67
43:BZ:14:LEU:HD21	43:BZ:79:ILE:CG2	2.23	0.67
43:BZ:38:ALA:O	43:BZ:39:PHE:C	2.33	0.67
28:BD:208:GLY:O	28:BD:209:ASN:C	2.33	0.67
28:BD:208:GLY:O	28:BD:210:LYS:CG	2.42	0.67
28:BD:224:VAL:CG1	28:BD:225:ARG:H	2.07	0.67
7:AD:98:GLU:OE2	7:AD:103:ASN:ND2	2.24	0.67
27:BA:1906:G:C8	27:BA:1929:G:C4	2.83	0.67
1:AA:1498:U:H1'	1:AA:1499:A:C8	2.30	0.67
51:B5:23:HIS:O	51:B5:24:ALA:HB2	1.93	0.67
1:AA:759:A:H8	1:AA:759:A:H5'	1.60	0.67
49:B0:37:LEU:N	49:B0:68:VAL:CG1	2.36	0.67
49:B0:48:GLY:HA2	49:B0:56:ASP:H	1.59	0.67
52:B6:24:THR:O	52:B6:25:THR:HG22	1.94	0.67
27:BA:142(A):A:O3'	34:BN:21:ARG:CZ	2.43	0.67
27:BA:2217:G:O2'	27:BA:2218:G:C5'	2.38	0.67
27:BA:2230:G:O2'	27:BA:2231:C:H5'	1.94	0.67
27:BA:2430:A:C2'	27:BA:2431:U:C5'	2.72	0.67
27:BA:2511:U:H2'	27:BA:2512:C:H5'	1.77	0.67
27:BA:2519:U:P	27:BA:2519:U:H3'	2.34	0.67
27:BA:2543:G:H2'	27:BA:2544:G:H8	0.82	0.67
27:BA:2561:A:N6	27:BA:2562:U:C5	2.63	0.67
27:BA:2645:G:H4'	27:BA:2732:G:C2'	2.21	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2652:C:H2'	27:BA:2653:U:O4'	1.95	0.67
27:BA:2788:C:HO3'	27:BA:2789:C:P	2.18	0.67
28:BD:131:LEU:CG	28:BD:187:CYS:HB2	2.24	0.67
27:BA:2679:A:N3	29:BE:300:VAL:CG2	2.58	0.67
29:BE:67:THR:O	29:BE:68:VAL:CG2	2.43	0.67
30:BF:201:SER:HB2	30:BF:204:ALA:HB3	1.76	0.67
34:BN:78:ILE:HG22	34:BN:79:PHE:CD1	2.30	0.67
35:BO:92:SER:HB3	35:BO:113:LYS:HZ2	1.57	0.67
35:BO:25:LEU:CD1	35:BO:38:VAL:O	2.43	0.67
35:BO:20:LEU:HG	35:BO:44:LYS:HD3	1.77	0.67
27:BA:2485:G:C4'	37:BQ:144:THR:HG22	2.23	0.67
37:BQ:65:ARG:HH22	37:BQ:87:LYS:N	1.91	0.67
37:BQ:72:VAL:O	37:BQ:73:GLN:CB	2.43	0.67
37:BQ:65:ARG:HE	37:BQ:85:ILE:CG2	2.08	0.67
45:BU:104:GLU:O	45:BU:105:ALA:C	2.34	0.67
46:BV:44:GLN:NE2	46:BV:44:GLN:N	2.42	0.67
33:BI:95:SER:HB2	33:BI:117:LEU:HD12	1.77	0.67
33:BI:119:ASP:CG	33:BI:120:ALA:N	2.47	0.67
43:BZ:29:ASN:O	43:BZ:30:VAL:CG2	2.43	0.67
43:BZ:25:ASN:C	43:BZ:84:TYR:CE1	2.68	0.67
28:BD:213:LYS:CB	28:BD:215:LYS:O	2.43	0.67
41:BX:28:VAL:HG23	41:BX:62:LYS:CG	2.25	0.67
41:BX:52:VAL:CG1	41:BX:53:ASN:N	2.57	0.67
1:AA:1319:A:H4'	22:AS:70:LYS:HZ3	0.57	0.67
1:AA:1347:G:H3'	12:AI:108:VAL:HA	1.76	0.67
1:AA:3(A):G:C2	1:AA:1037:C:O2	2.48	0.67
25:AY:252:CYS:CA	27:BA:1943:U:P	2.83	0.67
27:BA:1955:U:H2'	27:BA:1955:U:O2	1.94	0.67
49:B0:29:GLU:HA	49:B0:62:LEU:HD22	1.78	0.66
49:B0:38:VAL:CA	49:B0:40:GLN:CG	2.73	0.66
48:B3:16:PRO:HB3	48:B3:19:GLN:CD	2.13	0.66
48:B3:30:ARG:NE	48:B3:33:GLN:HB2	2.10	0.66
50:B4:41:PRO:HB2	50:B4:57:ASP:CG	2.15	0.66
50:B4:59:PHE:HA	50:B4:62:ARG:NE	2.09	0.66
52:B6:19:GLY:C	52:B6:42:PRO:CB	2.63	0.66
27:BA:1062:G:N2	56:BK:134:SER:O	2.26	0.66
27:BA:1287:A:H5'	44:BR:104:ARG:CG	2.25	0.66
27:BA:199:A:C5	27:BA:2434:A:N1	2.62	0.66
27:BA:2090:G:C4	27:BA:2230:G:O6	2.48	0.66
27:BA:2399:G:H2'	27:BA:2400:G:O5'	1.95	0.66
27:BA:2419:U:O4	54:B8:31:HIS:CE1	2.48	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2482:G:C3'	27:BA:2483:C:C5'	2.72	0.66
27:BA:2511:U:C6	27:BA:2512:C:H5	2.12	0.66
27:BA:2595:G:H1'	27:BA:2599:G:N2	2.05	0.66
27:BA:2605:U:H2'	27:BA:2606:C:C5'	2.25	0.66
27:BA:2730:C:H2'	27:BA:2731:G:H8	1.60	0.66
26:BB:15:A:H1'	26:BB:109:G:C8	2.31	0.66
28:BD:105:ALA:O	28:BD:107:LYS:N	2.28	0.66
28:BD:119:PRO:CA	28:BD:129:LEU:HD21	2.24	0.66
28:BD:142:ASN:H	28:BD:142:ASN:HD22	1.42	0.66
29:BE:48:MET:C	29:BE:49:THR:HG23	2.15	0.66
30:BF:197:SER:CB	30:BF:236:THR:OG1	2.44	0.66
30:BF:32:GLY:O	30:BF:33:LYS:C	2.31	0.66
31:BG:57:THR:O	31:BG:63:ILE:HB	1.94	0.66
31:BG:94:ALA:C	31:BG:95:THR:HG1	1.90	0.66
32:BH:8:ILE:HG22	32:BH:9:GLU:N	2.10	0.66
33:BI:13:GLY:CA	33:BI:15:LYS:CD	2.73	0.66
34:BN:73:LYS:HB3	34:BN:140:GLY:HA3	1.77	0.66
27:BA:527:C:H2'	34:BN:95:ARG:NH1	2.08	0.66
37:BQ:156:ASN:O	37:BQ:157:ALA:HB3	1.95	0.66
44:BR:113:LEU:CD1	44:BR:113:LEU:C	2.63	0.66
38:BS:64:SER:O	38:BS:65:ASP:C	2.33	0.66
39:BT:12:ASP:C	39:BT:13:ILE:HG13	2.15	0.66
45:BU:31:GLN:O	45:BU:33:ARG:O	1.96	0.66
27:BA:993:G:H1'	46:BV:90:PHE:CE2	2.29	0.66
33:BI:112:LYS:CD	33:BI:112:LYS:N	2.55	0.66
42:BY:43:ASN:CG	42:BY:112:LEU:HD22	2.16	0.66
43:BZ:41:ARG:O	43:BZ:44:ARG:CB	2.43	0.66
28:BD:210:LYS:O	28:BD:211:HIS:C	2.32	0.66
47:B2:20:LEU:CD1	47:B2:21:ASP:N	2.58	0.66
56:BK:71:LYS:CG	56:BK:72:THR:C	2.64	0.66
13:AJ:24:VAL:HA	13:AJ:34:VAL:HG11	1.76	0.66
1:AA:1426:C:H42	1:AA:1474:G:H1	1.42	0.66
46:BV:38:LEU:HD23	46:BV:38:LEU:N	2.09	0.66
27:BA:397:G:OP1	50:B4:40:HIS:C	2.33	0.66
55:B9:25:VAL:HG11	55:B9:34:GLN:HB2	1.75	0.66
27:BA:1754:C:H5'	39:BT:39:ASN:ND2	2.10	0.66
27:BA:2212:A:H2'	27:BA:2212:A:N3	2.10	0.66
27:BA:2093:G:N7	27:BA:2225:A:N7	2.44	0.66
27:BA:2304:G:H4'	31:BG:105:SER:O	1.94	0.66
27:BA:2410:G:C4	27:BA:2411:A:C5	2.82	0.66
27:BA:2526:G:C4	27:BA:2527:C:C5	2.82	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2562:U:N3	27:BA:2563:U:C4	2.63	0.66
27:BA:2648:C:C4	27:BA:2649:U:O4	2.48	0.66
27:BA:2814:C:H2'	27:BA:2815:C:C5	2.30	0.66
27:BA:932:G:C5'	48:B3:29:ARG:HH22	1.83	0.66
28:BD:108:ASN:CG	28:BD:109:LEU:H	1.98	0.66
29:BE:70:VAL:CG1	29:BE:296:VAL:HB	2.25	0.66
30:BF:195:VAL:HG13	30:BF:213:ALA:CB	2.25	0.66
30:BF:48:SER:H	30:BF:92:PRO:CG	1.82	0.66
31:BG:29:HIS:H	31:BG:69:ILE:HD13	1.59	0.66
37:BQ:25:GLY:C	37:BQ:26:LYS:HG2	2.13	0.66
27:BA:2378:A:O4'	38:BS:101:VAL:HG23	1.95	0.66
38:BS:12:ARG:CZ	38:BS:20:TYR:CE2	2.74	0.66
38:BS:66:LEU:N	38:BS:66:LEU:HD12	2.09	0.66
27:BA:2320:A:C6	38:BS:9:PRO:HG3	2.25	0.66
46:BV:20:ILE:HG21	46:BV:67:LYS:HD2	1.73	0.66
43:BZ:110:GLY:C	43:BZ:112:LEU:H	1.98	0.66
43:BZ:116:VAL:CG2	43:BZ:169:VAL:HG22	2.16	0.66
2:AV:35:A:N6	4:AX:117:U:H3	1.93	0.66
42:BY:69:LYS:O	42:BY:70:ALA:CB	2.40	0.66
43:BZ:37:LYS:CG	43:BZ:41:ARG:NH1	2.44	0.66
41:BX:7:HIS:ND1	41:BX:8:PRO:CD	2.58	0.66
1:AA:1319:A:C5'	22:AS:70:LYS:HE2	2.24	0.66
2:AV:70:C:H2'	2:AV:71:G:C8	2.29	0.66
1:AA:950:U:H3	1:AA:1231:G:H1	1.42	0.66
1:AA:22:G:H1'	1:AA:914:A:C6	2.30	0.66
27:BA:1538:G:H2'	27:BA:1539:G:H1'	1.77	0.66
1:AA:597:G:N2	11:AH:94:TYR:HE2	1.93	0.66
1:AA:189:G:H1	1:AA:190(J):U:H3	1.40	0.66
2:AV:56:C:O2	31:BG:56:ARG:NE	2.28	0.66
27:BA:125:G:C5'	53:B7:19:ARG:NH1	2.27	0.66
55:B9:25:VAL:HB	55:B9:34:GLN:HB3	0.68	0.66
27:BA:142(A):A:H5''	27:BA:1143:A:P	2.35	0.66
27:BA:2457:U:C3'	27:BA:2458:G:H5'	2.17	0.66
27:BA:2460:U:O2	27:BA:2493:U:H5	1.74	0.66
27:BA:2549:G:C2'	27:BA:2550:G:H5'	2.25	0.66
27:BA:2611:U:C3'	27:BA:2611:U:C6	2.78	0.66
27:BA:2677:G:C2'	27:BA:2678:C:O5'	2.43	0.66
27:BA:2744:G:N3	27:BA:2761:G:C2	2.63	0.66
27:BA:2862:G:N3	27:BA:2863:C:C6	2.63	0.66
27:BA:455:C:OP1	27:BA:472:A:N1	2.29	0.66
28:BD:71:ASP:CA	28:BD:73:ILE:HG13	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:201:VAL:CA	29:BE:310:PHE:O	2.42	0.66
30:BF:215:ALA:HA	30:BF:242:GLU:CG	2.26	0.66
30:BF:32:GLY:C	30:BF:35:VAL:CG2	2.44	0.66
30:BF:96:LYS:HB3	30:BF:98:ARG:NH1	1.01	0.66
32:BH:100:LYS:O	32:BH:101:LYS:HD2	1.95	0.66
32:BH:75:VAL:HG12	32:BH:76:GLU:H	1.60	0.66
32:BH:84:LYS:O	32:BH:131:ILE:HB	1.94	0.66
34:BN:56:LYS:HD3	34:BN:56:LYS:N	2.10	0.66
34:BN:68:GLY:O	34:BN:69:TYR:CB	2.42	0.66
36:BP:128:GLY:O	36:BP:131:GLU:CA	2.44	0.66
46:BV:3:ALA:O	46:BV:12:TYR:CZ	2.31	0.66
46:BV:42:GLY:HA3	46:BV:54:TYR:OH	1.83	0.66
33:BI:95:SER:HB2	33:BI:117:LEU:CD1	2.25	0.66
43:BZ:24:TYR:HB3	43:BZ:83:PHE:O	1.96	0.66
43:BZ:35:ASP:CA	43:BZ:39:PHE:CZ	2.63	0.66
27:BA:1566:A:N6	28:BD:212:HIS:CE1	2.63	0.66
27:BA:76:C:H4'	47:B2:55:ARG:HG3	1.76	0.66
27:BA:95:G:O2'	47:B2:42:ASN:HB3	1.95	0.66
1:AA:59:A:OP1	1:AA:61:G:OP1	2.13	0.66
27:BA:484:C:H2'	27:BA:485:C:H6	1.60	0.66
27:BA:1766:U:H2'	27:BA:1767:C:C6	2.30	0.66
49:B0:11:LYS:O	49:B0:12:ASN:O	2.13	0.66
49:B0:29:GLU:OE1	49:B0:29:GLU:HA	1.95	0.66
50:B4:43:TRP:HA	50:B4:61:LYS:HE3	1.78	0.66
50:B4:7:PRO:O	50:B4:8:LYS:CB	2.43	0.66
27:BA:2421:G:OP1	52:B6:2:ALA:O	2.11	0.66
55:B9:24:LEU:HD22	55:B9:35:ARG:HA	1.75	0.66
27:BA:1754:C:H5'	39:BT:39:ASN:HD21	1.60	0.66
27:BA:1996:C:C5'	27:BA:1996:C:H6	2.08	0.66
27:BA:2278:A:C2'	27:BA:2279:G:O5'	2.43	0.66
27:BA:2373:G:C5	27:BA:2374:C:N4	2.63	0.66
27:BA:2489:G:C8	27:BA:2490:G:N7	2.63	0.66
27:BA:2526:G:C5	27:BA:2527:C:C6	2.82	0.66
27:BA:2704:C:H2'	27:BA:2705:A:O4'	1.95	0.66
27:BA:2813:A:H2'	27:BA:2814:C:H6	0.75	0.66
27:BA:2842:G:N1	27:BA:2876:G:C2	2.63	0.66
27:BA:2846:G:C2	27:BA:2847:U:O2	2.49	0.66
27:BA:532:A:H2'	27:BA:533:G:O4'	1.94	0.66
27:BA:2210:G:C5	28:BD:148:GLY:CA	2.71	0.66
28:BD:198:GLY:O	28:BD:200:THR:CA	2.43	0.66
27:BA:1492:G:C4'	28:BD:97:ASP:OD1	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:104:ASP:O	30:BF:106:GLU:N	2.28	0.66
30:BF:153:VAL:HG11	30:BF:207:LEU:HD13	1.77	0.66
30:BF:56:THR:HG22	30:BF:57:PRO:HD3	1.76	0.66
33:BI:3:VAL:CG2	33:BI:21:VAL:CG2	2.62	0.66
33:BI:23:ASP:HB2	33:BI:25:TYR:CD2	2.31	0.66
33:BI:7:LYS:HE2	33:BI:12:LYS:HG2	1.77	0.66
35:BO:68:GLY:HA2	35:BO:78:ARG:CG	2.24	0.66
37:BQ:48:ASN:C	37:BQ:121:ASP:HB2	2.16	0.66
37:BQ:45:GLN:OE1	37:BQ:153:PRO:N	2.28	0.66
38:BS:34:LEU:CG	38:BS:102:LEU:CA	2.56	0.66
45:BU:93:LYS:O	45:BU:94:VAL:CB	2.44	0.66
33:BI:99:ALA:O	33:BI:100:GLU:C	2.34	0.66
26:BB:77:U:H5'	43:BZ:80:HIS:CE1	2.31	0.66
1:AA:953:G:O3'	16:AM:124:PRO:O	2.13	0.66
41:BX:75:GLN:O	41:BX:76:GLU:C	2.34	0.66
27:BA:270(M):U:H4'	27:BA:270(N):G:C4'	2.21	0.66
1:AA:292:G:C5	1:AA:293:G:H1'	2.30	0.66
27:BA:1357:U:H2'	27:BA:1358:G:O4'	1.95	0.66
1:AA:187:C:N3	23:AT:105:SER:HB3	2.11	0.66
48:B3:12:PRO:HB2	48:B3:20:LYS:HE2	1.78	0.66
50:B4:23:GLU:CG	50:B4:29:PRO:HB3	2.26	0.66
27:BA:974(A):C:H6	27:BA:1186:G:C2	2.13	0.66
27:BA:2016:U:H2'	27:BA:2017:U:O4'	1.95	0.66
27:BA:2266:A:H5''	27:BA:2267:A:C4	2.31	0.66
27:BA:2397:G:C4	27:BA:2420:C:O2	2.49	0.66
27:BA:2422:A:C2	27:BA:2424:C:C5	2.82	0.66
27:BA:2431:U:OP2	27:BA:2432:A:OP2	2.12	0.66
27:BA:2461:C:C2	27:BA:2462:U:C5	2.83	0.66
27:BA:2572:A:H5'	27:BA:2574:G:H5'	1.75	0.66
27:BA:2712:U:O3'	27:BA:712(A):A:OP1	2.06	0.66
27:BA:2740:A:C5	27:BA:2764:A:C5	2.82	0.66
27:BA:2744:G:O6	27:BA:2745:C:N4	2.29	0.66
27:BA:2762:G:O6	27:BA:2763:G:N1	2.28	0.66
27:BA:2785:C:H2'	27:BA:2786:U:H5	1.51	0.66
27:BA:2815:C:H2'	27:BA:2816:C:H6	1.61	0.66
27:BA:2822:G:OP1	29:BE:258:TYR:HE2	1.79	0.66
27:BA:2853:C:C2'	27:BA:2854:G:O5'	2.44	0.66
27:BA:511:U:C5	27:BA:512:G:N3	2.64	0.66
28:BD:172:ILE:HA	28:BD:182:MET:HG2	1.78	0.66
28:BD:196:ASN:CB	28:BD:199:ARG:HD3	2.26	0.66
30:BF:202:THR:HG22	30:BF:203:ALA:N	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:97:GLN:CD	31:BG:106:PHE:CE2	2.69	0.66
32:BH:147:ILE:HA	32:BH:150:VAL:HB	1.76	0.66
33:BI:8:ASP:HA	33:BI:12:LYS:N	2.09	0.66
34:BN:42:GLU:HA	34:BN:133:GLY:CA	2.26	0.66
35:BO:3:GLN:HA	35:BO:21:VAL:HG11	1.77	0.66
35:BO:93:PRO:HD2	35:BO:113:LYS:CD	2.26	0.66
37:BQ:28:ILE:CG2	37:BQ:29:ALA:H	1.99	0.66
37:BQ:84:ARG:O	37:BQ:122:PHE:HB3	1.96	0.66
44:BR:46:GLY:O	44:BR:47:PHE:O	2.14	0.66
44:BR:83:ILE:O	44:BR:85:PRO:N	2.28	0.66
44:BR:96:ARG:O	44:BR:96:ARG:HG3	1.96	0.66
45:BU:110:VAL:O	45:BU:114:ARG:CG	2.37	0.66
42:BY:78:THR:HG22	42:BY:88:PRO:C	2.15	0.66
42:BY:71:VAL:HG22	42:BY:93:THR:H	1.36	0.66
1:AA:1286:A:H61	1:AA:1355:G:P	2.19	0.66
1:AA:18:C:C2	1:AA:918:A:C2	2.83	0.66
1:AA:1205:U:O2'	6:AC:195:VAL:HG23	1.95	0.66
49:B0:46:LYS:NZ	49:B0:60:PHE:C	2.49	0.66
48:B3:37:LEU:CD1	48:B3:43:ILE:CG2	2.71	0.66
48:B3:7:LYS:HG2	48:B3:8:LEU:H	1.60	0.66
51:B5:3:LYS:HD3	51:B5:3:LYS:N	2.11	0.66
27:BA:126:A:OP1	53:B7:44:VAL:HG11	1.95	0.66
27:BA:2094:G:N2	27:BA:2196:C:O2	2.28	0.66
27:BA:2246:G:N2	27:BA:2247:A:C5	2.63	0.66
27:BA:2376:A:H2'	27:BA:2377:A:C8	2.31	0.66
27:BA:2424:C:O2	27:BA:2424:C:C2'	2.43	0.66
27:BA:2493:U:C2'	27:BA:2494:G:O5'	2.44	0.66
27:BA:2528:U:H5	27:BA:2530:A:N3	1.66	0.66
27:BA:2746:U:H4'	32:BH:138:GLN:CA	2.18	0.66
27:BA:532:A:OP2	27:BA:2021:C:C4	2.49	0.66
27:BA:604:G:H21	27:BA:657:U:H4'	1.61	0.66
27:BA:969:U:H2'	27:BA:970:C:O4'	1.95	0.66
27:BA:1799:G:N1	28:BD:177:SER:OG	2.29	0.66
29:BE:217:TRP:CE2	29:BE:251:PRO:CB	2.79	0.66
32:BH:130:ILE:C	32:BH:131:ILE:HG12	2.16	0.66
34:BN:90:LYS:NZ	34:BN:95:ARG:NH2	2.43	0.66
35:BO:52:VAL:O	35:BO:53:LYS:CB	2.44	0.66
37:BQ:137:ARG:NH1	37:BQ:138:ARG:HG2	2.07	0.66
37:BQ:35:ASN:CB	37:BQ:75:SER:CB	2.73	0.66
44:BR:24:GLN:HB2	44:BR:44:LEU:CD2	2.24	0.66
44:BR:84:ALA:CB	44:BR:85:PRO:HD3	2.21	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:12:ARG:HD2	38:BS:20:TYR:OH	1.93	0.66
45:BU:103:PRO:HA	45:BU:107:LYS:HE2	1.78	0.66
45:BU:34:ASN:OD1	45:BU:37:GLN:NE2	2.28	0.66
45:BU:40:LEU:HD22	45:BU:40:LEU:H	1.60	0.66
27:BA:1223:C:N4	46:BV:87:ARG:HH21	1.92	0.66
43:BZ:119:ASN:HB3	43:BZ:120:LEU:HD23	1.77	0.66
42:BY:31:LEU:O	42:BY:34:GLU:HG3	1.92	0.66
42:BY:92:ASP:OD1	42:BY:94:SER:CB	2.44	0.66
43:BZ:39:PHE:O	43:BZ:40:ASP:O	2.14	0.66
1:AA:958:A:O4'	22:AS:55:LYS:NZ	2.24	0.66
13:AJ:51:ARG:HA	17:AN:45:ARG:CZ	2.25	0.66
41:BX:3:ASP:C	41:BX:4:VAL:HG13	2.14	0.66
1:AA:1236:A:H4'	1:AA:1304:G:C4'	2.26	0.66
3:AW:9:A:N1	3:AW:45:G:C5	2.63	0.66
1:AA:890:G:O2'	1:AA:891:U:C6	2.47	0.66
1:AA:22:G:H4'	1:AA:885:G:C8	2.31	0.66
18:AO:24:SER:O	18:AO:28:GLN:HG2	1.95	0.66
27:BA:1559:G:C4	27:BA:1559:G:H3'	2.30	0.66
19:AP:7:ALA:H	19:AP:18:ARG:H	1.42	0.66
27:BA:1529:A:N7	27:BA:1543:A:C8	2.64	0.66
8:AE:81:GLU:HA	8:AE:89:ILE:O	1.94	0.66
1:AA:112:G:H5'	1:AA:389:A:H4'	1.77	0.66
48:B3:23:LEU:CB	48:B3:28:LEU:HD12	2.21	0.66
48:B3:26:LEU:CD2	48:B3:46:ASN:HB3	2.22	0.66
50:B4:59:PHE:H	50:B4:62:ARG:HE	1.41	0.66
27:BA:1365:A:H5''	50:B4:3:LYS:CE	2.25	0.66
27:BA:1799:G:H21	28:BD:153:LEU:CD1	2.07	0.66
27:BA:2080:G:C6	27:BA:2241:A:C6	2.84	0.66
27:BA:2218:G:C5	27:BA:2219:G:N7	2.63	0.66
27:BA:2253:G:O2'	27:BA:2254:C:H5'	1.95	0.66
27:BA:2269:A:C2'	27:BA:2270:G:O5'	2.44	0.66
27:BA:2328:A:C6	27:BA:2329:G:C6	2.83	0.66
27:BA:2330:G:C2	27:BA:2331:G:N3	2.64	0.66
27:BA:2525:G:N2	27:BA:2539:C:C5	2.64	0.66
27:BA:1670:C:P	27:BA:2550:G:OP2	2.53	0.66
27:BA:2678:C:O2'	27:BA:2679:A:C5'	2.44	0.66
27:BA:2826:A:N6	27:BA:2827:C:C4	2.60	0.66
27:BA:397:G:H5'	50:B4:40:HIS:O	1.95	0.66
27:BA:973:A:C2'	27:BA:974:G:H5''	2.26	0.66
28:BD:106:PRO:HG3	28:BD:141:HIS:HD2	1.61	0.66
29:BE:238:LEU:N	29:BE:238:LEU:HD22	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:144:PHE:CE2	30:BF:156:LEU:CD1	2.70	0.66
32:BH:95:ALA:O	32:BH:127:GLN:CB	2.44	0.66
32:BH:47:ASN:O	32:BH:48:VAL:HG13	1.96	0.66
32:BH:87:GLU:HB3	32:BH:164:GLU:OE1	1.96	0.66
27:BA:1952:A:C2	35:BO:22:ILE:CG2	2.61	0.66
38:BS:119:GLN:O	38:BS:120:GLU:C	2.33	0.66
38:BS:58:LEU:O	38:BS:60:SER:N	2.29	0.66
45:BU:8:ILE:O	45:BU:11:ARG:CG	2.43	0.66
27:BA:1161:C:O4'	46:BV:8:GLY:O	2.13	0.66
42:BY:74:VAL:CG1	42:BY:74:VAL:O	2.39	0.66
43:BZ:39:PHE:O	43:BZ:43:PHE:HD2	1.77	0.66
43:BZ:4:THR:O	43:BZ:5:ALA:CB	2.43	0.66
43:BZ:85:MET:C	43:BZ:86:VAL:HG23	2.15	0.66
47:B2:51:LYS:O	47:B2:54:ALA:HB3	1.96	0.66
2:AV:8:U:O2	2:AV:48:C:H1'	1.96	0.66
1:AA:1004:A:C2'	1:AA:1036:G:O6	2.38	0.66
27:BA:2859:G:H2'	27:BA:2860:A:O4'	1.96	0.66
27:BA:414:C:H2'	27:BA:415:A:H8	1.60	0.66
27:BA:1620:G:C1'	53:B7:1:MET:H2	1.97	0.66
1:AA:1240:U:C4	10:AG:30:ILE:HG23	2.31	0.66
5:AB:101:MET:HA	5:AB:108:ILE:HG13	1.78	0.66
50:B4:41:PRO:CB	50:B4:57:ASP:CB	2.73	0.66
52:B6:46:LYS:CE	52:B6:46:LYS:HA	2.22	0.66
27:BA:1031:G:C2'	55:B9:8:LYS:NZ	2.57	0.66
27:BA:2093:G:N3	27:BA:2198:A:N6	0.66	0.66
27:BA:2307:G:H5''	27:BA:2307:G:H8	1.61	0.66
27:BA:2356:C:C2'	27:BA:2357:U:H5'	2.26	0.66
27:BA:2369:A:H2'	27:BA:2370:G:C8	2.29	0.66
27:BA:2411:A:C2	27:BA:2412:A:C6	2.83	0.66
27:BA:2246:G:C4	27:BA:2426:A:N3	2.63	0.66
27:BA:2472:G:O2'	27:BA:2473:U:P	2.53	0.66
27:BA:2539:C:N3	27:BA:2540:C:C5	2.64	0.66
27:BA:2574:G:O3'	27:BA:2575:C:O4'	2.12	0.66
27:BA:2616:C:N3	27:BA:2617:C:H5	1.90	0.66
27:BA:2754:U:O2'	27:BA:2756:U:P	2.53	0.66
27:BA:2817:G:N1	27:BA:2818:G:C4	2.64	0.66
27:BA:565:C:OP1	46:BV:79:GLN:O	2.13	0.66
27:BA:780:G:H1	28:BD:233:ASP:CG	1.98	0.66
28:BD:71:ASP:C	28:BD:73:ILE:HG13	2.16	0.66
28:BD:90:ILE:HG21	28:BD:102:TYR:C	2.17	0.66
29:BE:177:ALA:C	29:BE:179:ASP:N	2.45	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:295:LEU:CD2	29:BE:296:VAL:N	2.59	0.66
30:BF:37:ALA:CB	30:BF:102:LEU:CB	2.70	0.66
30:BF:165:ASP:O	30:BF:166:ILE:C	2.33	0.66
32:BH:147:ILE:HD13	32:BH:150:VAL:HG11	1.78	0.66
32:BH:51:VAL:HG21	32:BH:68:ARG:NE	2.10	0.66
32:BH:67:THR:HG23	32:BH:70:LEU:HD13	1.77	0.66
27:BA:2093:G:H5'	33:BI:25:TYR:CG	2.31	0.66
33:BI:28:ASN:HA	33:BI:32:LYS:CG	2.26	0.66
35:BO:43:VAL:HG12	35:BO:45:ASP:N	2.10	0.66
35:BO:68:GLY:HA3	35:BO:78:ARG:CZ	2.25	0.66
35:BO:64:ARG:NH1	35:BO:81:GLU:OE1	2.27	0.66
36:BP:130:ARG:CA	36:BP:133:VAL:CG2	2.74	0.66
37:BQ:88:PHE:O	37:BQ:90:PHE:HE1	1.76	0.66
27:BA:1279:G:H5'	44:BR:34:ILE:HD11	1.77	0.66
44:BR:44:LEU:O	44:BR:48:VAL:HG21	1.93	0.66
45:BU:104:GLU:CD	46:BV:46:VAL:HG13	2.15	0.66
37:BQ:36:ASN:CB	43:BZ:114:ASP:O	2.43	0.66
33:BI:121:ILE:CD1	33:BI:121:ILE:H	2.08	0.66
33:BI:124:LEU:HG	33:BI:125:GLY:N	2.10	0.66
33:BI:68:LEU:CB	33:BI:72:LEU:HD21	2.26	0.66
43:BZ:13:LYS:O	43:BZ:36:ARG:CZ	2.43	0.66
43:BZ:1:MET:O	43:BZ:2:GLU:HB3	1.95	0.66
27:BA:1527:G:O5'	27:BA:1527:G:H8	1.79	0.66
47:B2:13:PRO:O	47:B2:14:ALA:C	2.33	0.66
27:BA:70:G:H5'	27:BA:75:G:N2	2.10	0.66
37:BQ:108:SER:O	37:BQ:109:VAL:CG2	2.43	0.66
1:AA:1004:A:O2'	1:AA:1037:C:O2	2.14	0.66
1:AA:944:G:O6	1:AA:1337:G:H2'	1.95	0.66
11:AH:27:PRO:O	11:AH:32:LYS:HD2	1.95	0.66
27:BA:1315:C:O2'	27:BA:1392:A:H1'	1.94	0.66
49:B0:39:ARG:CG	49:B0:69:PHE:CZ	2.70	0.66
49:B0:37:LEU:HD13	49:B0:70:ILE:CD1	2.22	0.66
48:B3:51:ALA:C	48:B3:53:LEU:N	2.37	0.66
27:BA:126:A:OP2	53:B7:17:GLY:CA	2.43	0.66
55:B9:7:VAL:HG23	55:B9:36:GLN:CG	2.26	0.66
27:BA:2313:C:N4	27:BA:2314:C:H41	1.90	0.66
27:BA:2360:A:N7	27:BA:2361:A:H8	1.51	0.66
27:BA:2597:G:C4	27:BA:2598:A:N7	2.64	0.66
27:BA:2605:U:O5'	27:BA:2605:U:H6	1.79	0.66
27:BA:1265:A:OP2	27:BA:2615:U:O5'	2.14	0.66
27:BA:2639:A:C4	27:BA:2778:A:C2	2.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2684:U:O2	27:BA:2725:A:N1	2.29	0.66
27:BA:2712:U:H3'	27:BA:2714:G:O5'	1.96	0.66
28:BD:131:LEU:CD1	28:BD:187:CYS:HB2	2.26	0.66
28:BD:146:LYS:CB	28:BD:149:ARG:CG	2.74	0.66
28:BD:175:LEU:CD1	28:BD:179:GLU:CB	2.67	0.66
29:BE:224:GLY:O	29:BE:225:LYS:CB	2.44	0.66
30:BF:168:ARG:HD2	30:BF:168:ARG:C	2.08	0.66
30:BF:223:LEU:CA	30:BF:231:ARG:HD2	2.25	0.66
30:BF:244:ALA:HB3	30:BF:245:GLU:OE2	1.96	0.66
30:BF:242:GLU:O	30:BF:246:ARG:HG3	1.95	0.66
31:BG:29:HIS:CG	31:BG:29:HIS:O	2.47	0.66
35:BO:14:SER:CB	35:BO:86:ILE:CD1	2.70	0.66
35:BO:66:LYS:HZ1	35:BO:67:ARG:NE	1.93	0.66
37:BQ:35:ASN:HB3	37:BQ:75:SER:CB	2.26	0.66
38:BS:72:GLU:HB3	38:BS:74:PRO:CD	2.20	0.66
27:BA:2013:A:OP1	40:BW:96:ILE:CA	2.44	0.66
43:BZ:176:LEU:C	43:BZ:176:LEU:CD2	2.64	0.66
43:BZ:71:MET:HG3	43:BZ:78:PRO:CG	2.21	0.66
34:BN:10:VAL:CB	34:BN:36:VAL:CA	2.64	0.66
27:BA:144:C:C4'	41:BX:36:GLU:OE1	2.44	0.66
41:BX:25:GLN:N	41:BX:25:GLN:CD	2.47	0.66
1:AA:1348:U:OP1	12:AI:109:VAL:HA	1.96	0.66
2:AV:66:A:H2'	2:AV:67:A:H8	1.59	0.66
47:B2:39:ALA:O	47:B2:40:PRO:O	2.13	0.66
1:AA:760:G:N1	20:AQ:104:LYS:O	2.29	0.66
1:AA:949:A:H4'	1:AA:1364:U:H3	1.61	0.66
1:AA:578:C:O2'	1:AA:729:A:O4'	2.13	0.66
6:AC:7:PRO:O	6:AC:11:ARG:HB2	1.95	0.66
15:AL:102:ARG:HB3	15:AL:109:GLY:HA2	1.78	0.66
27:BA:1197:G:C2	27:BA:1250:G:C2	2.84	0.66
48:B3:18:ASP:O	48:B3:19:GLN:C	2.35	0.66
52:B6:32:GLN:HB3	52:B6:35:LEU:HB2	1.77	0.66
27:BA:2349:G:C6	27:BA:2350:C:C6	2.84	0.66
27:BA:2355:C:C4	27:BA:2356:C:N4	2.64	0.66
27:BA:2373:G:C2	27:BA:2374:C:N3	2.64	0.66
27:BA:2060:A:O2'	27:BA:2502:G:O4'	2.14	0.66
27:BA:2604:U:H2'	27:BA:2605:U:C6	2.31	0.66
27:BA:2624:G:H8	27:BA:2624:G:O5'	1.78	0.66
27:BA:2689:U:C1'	27:BA:2713:A:N1	2.55	0.66
27:BA:2741:A:OP2	27:BA:2742:C:H5	1.79	0.66
27:BA:2862:G:N2	27:BA:2863:C:C2	2.64	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:468:G:C2'	27:BA:469:G:H5'	2.25	0.66
27:BA:973:A:H61	46:BV:81:ARG:HG3	0.51	0.66
27:BA:994:C:H1'	45:BU:53:LYS:HB2	1.78	0.66
29:BE:199:ALA:O	29:BE:200:ASP:OD1	2.14	0.66
29:BE:206:LYS:C	29:BE:257:GLY:O	2.34	0.66
29:BE:315:VAL:CG1	29:BE:316:ARG:N	2.59	0.66
29:BE:62:ARG:C	29:BE:63:GLU:CG	2.59	0.66
30:BF:214:THR:C	30:BF:216:SER:H	1.99	0.66
31:BG:49:PRO:CG	31:BG:72:LYS:C	2.63	0.66
32:BH:116:PRO:HB2	32:BH:120:LEU:C	2.16	0.66
32:BH:85:ALA:C	32:BH:131:ILE:CG2	2.63	0.66
33:BI:13:GLY:HA2	33:BI:15:LYS:HZ1	1.57	0.66
33:BI:22:ALA:O	33:BI:25:TYR:HB2	1.96	0.66
33:BI:7:LYS:CD	33:BI:12:LYS:CG	2.57	0.66
27:BA:1077:A:O3'	56:BK:93:LYS:HG3	1.96	0.66
34:BN:65:ASN:CA	34:BN:68:GLY:O	2.44	0.66
35:BO:19:VAL:HG13	35:BO:42:THR:C	2.16	0.66
36:BP:101:ASP:O	36:BP:102:ASP:CB	2.43	0.66
36:BP:92:ASP:CB	36:BP:118:LEU:CD1	2.42	0.66
37:BQ:85:ILE:HA	37:BQ:122:PHE:HA	1.77	0.66
37:BQ:27:GLY:O	37:BQ:28:ILE:CG1	2.44	0.66
44:BR:97:VAL:CA	44:BR:114:VAL:HG13	2.26	0.66
38:BS:32:PRO:CD	38:BS:100:ALA:CA	2.72	0.66
38:BS:15:GLU:O	38:BS:16:ALA:HB2	1.86	0.66
38:BS:34:LEU:HD21	38:BS:102:LEU:HG	1.76	0.66
38:BS:80:SER:O	38:BS:81:ALA:C	2.34	0.66
38:BS:87:LEU:HA	38:BS:90:LEU:HD12	1.78	0.66
40:BW:47:VAL:O	40:BW:51:LEU:HD13	1.96	0.66
43:BZ:116:VAL:CB	43:BZ:169:VAL:CG2	2.73	0.66
33:BI:92:SER:CA	33:BI:122:ARG:HG3	2.09	0.66
47:B2:6:GLN:O	47:B2:7:GLU:C	2.33	0.66
41:BX:9:HIS:HB2	41:BX:26:PHE:CA	2.25	0.66
1:AA:946:A:O2'	1:AA:1333:A:C2'	2.43	0.66
27:BA:2896:C:H6	27:BA:2896:C:C5'	2.08	0.66
27:BA:1416:G:N2	27:BA:1582:C:H42	1.93	0.66
27:BA:1833:U:H2'	27:BA:1834:U:H6	1.60	0.66
50:B4:39:VAL:O	50:B4:39:VAL:HG12	1.95	0.65
52:B6:16:ALA:O	52:B6:18:THR:N	2.29	0.65
54:B8:4:MET:CA	54:B8:5:LYS:HZ1	1.93	0.65
27:BA:1131:G:C2	34:BN:69:TYR:CZ	2.84	0.65
27:BA:2031:A:N6	27:BA:2498:C:C5	2.65	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2208:U:O2	27:BA:2216:G:N2	2.23	0.65
27:BA:2273:A:N7	27:BA:2274:A:C5	2.64	0.65
27:BA:2376:A:C6	38:BS:119:GLN:NE2	2.63	0.65
27:BA:2411:A:H2	27:BA:2412:A:C6	2.15	0.65
27:BA:2498:C:OP1	27:BA:2498:C:H3'	1.96	0.65
27:BA:2515:C:O2	27:BA:2515:C:H2'	1.95	0.65
27:BA:2574:G:N7	27:BA:2575:C:C5	2.40	0.65
27:BA:2615:U:C2'	27:BA:2616:C:H5'	2.27	0.65
27:BA:2725:A:C4	27:BA:2727:G:C8	2.84	0.65
27:BA:2748:A:N7	27:BA:2749:A:N1	2.44	0.65
27:BA:2839:G:N2	27:BA:2840:C:C2	2.64	0.65
27:BA:575:A:H2'	27:BA:576:U:C6	2.31	0.65
27:BA:873:G:H4'	37:BQ:32:LYS:HB3	1.78	0.65
27:BA:959:A:H2'	27:BA:960:A:C8	2.31	0.65
28:BD:125:ILE:HG22	28:BD:126:GLY:N	2.11	0.65
28:BD:93:ILE:O	28:BD:93:ILE:HG23	1.95	0.65
29:BE:176:HIS:O	29:BE:179:ASP:N	2.29	0.65
29:BE:198:TYR:CD2	29:BE:265:ASN:C	2.69	0.65
29:BE:86:TYR:O	29:BE:94:ARG:O	2.14	0.65
30:BF:22:PHE:HE2	30:BF:118:THR:HG1	1.42	0.65
30:BF:167:ASP:CB	30:BF:232:LEU:N	2.59	0.65
34:BN:23:ALA:CA	34:BN:26:VAL:CG2	2.75	0.65
34:BN:53:ILE:HG23	34:BN:135:ILE:HD12	1.75	0.65
35:BO:25:LEU:HD21	35:BO:40:VAL:N	2.11	0.65
36:BP:94:ARG:HD2	36:BP:120:LEU:HA	1.77	0.65
37:BQ:102:ARG:O	37:BQ:104:PRO:CD	2.43	0.65
37:BQ:89:PRO:HA	37:BQ:113:ALA:CB	2.26	0.65
44:BR:20:LEU:CD2	44:BR:24:GLN:HG3	2.26	0.65
44:BR:85:PRO:O	44:BR:88:ARG:N	2.29	0.65
26:BB:28:C:OP2	38:BS:41:LYS:HG3	1.96	0.65
40:BW:106:ILE:CG2	40:BW:107:LEU:N	2.59	0.65
42:BY:19:ARG:C	42:BY:67:LEU:HD22	2.16	0.65
43:BZ:40:ASP:OD2	43:BZ:41:ARG:NH1	2.28	0.65
27:BA:1826:G:OP1	28:BD:227:VAL:HG23	1.87	0.65
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.10	0.65
1:AA:938:A:H5''	10:AG:95:ARG:HH22	1.62	0.65
33:BI:63:ALA:O	33:BI:67:LYS:HE2	1.96	0.65
1:AA:551:U:H5'	15:AL:119:LYS:CE	2.23	0.65
1:AA:1291:G:H5'	12:AI:40:LEU:HD23	1.76	0.65
8:AE:152:ARG:HH11	11:AH:43:GLY:HA3	1.60	0.65
49:B0:61:ALA:HB2	49:B0:81:ILE:HD11	1.70	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:372:G:O2'	50:B4:63:PHE:CZ	2.49	0.65
53:B7:34:ARG:HH11	53:B7:42:LEU:CA	1.97	0.65
27:BA:459:U:P	53:B7:40:HIS:HA	2.35	0.65
27:BA:1819:A:P	28:BD:154:VAL:N	2.69	0.65
27:BA:2086:U:N3	27:BA:2233:U:C4	2.56	0.65
27:BA:2246:G:N3	27:BA:2247:A:C8	2.64	0.65
27:BA:2250:G:H8	37:BQ:102:ARG:HG2	1.61	0.65
27:BA:2278:A:H2'	27:BA:2279:G:O5'	1.97	0.65
27:BA:2372:G:H5''	27:BA:2372:G:H8	1.61	0.65
27:BA:2416:C:C2	27:BA:2417:C:C6	2.84	0.65
27:BA:2452:C:N4	27:BA:2453:A:C6	2.64	0.65
27:BA:2031:A:N6	27:BA:2498:C:C6	2.64	0.65
27:BA:2497:A:C2'	27:BA:2498:C:OP2	2.44	0.65
27:BA:2620:C:O2'	27:BA:2621:A:O4'	2.14	0.65
27:BA:2698:U:O2	27:BA:2698:U:H2'	1.94	0.65
27:BA:2721:A:C4	27:BA:2722:G:N7	2.63	0.65
27:BA:2779:U:C4'	27:BA:2781:A:N7	2.59	0.65
26:BB:15:A:H5'	26:BB:16:G:N7	2.12	0.65
28:BD:144:GLU:OE1	28:BD:144:GLU:O	2.13	0.65
27:BA:2218:G:C2'	28:BD:146:LYS:HE3	2.25	0.65
28:BD:175:LEU:HB2	28:BD:179:GLU:H	1.60	0.65
28:BD:179:GLU:O	28:BD:180:VAL:HG22	1.96	0.65
29:BE:269:ILE:CG2	29:BE:297:LYS:NZ	2.47	0.65
29:BE:45:LYS:HE3	29:BE:303:PRO:CB	2.22	0.65
29:BE:70:VAL:HG11	29:BE:295:LEU:HD23	1.78	0.65
30:BF:102:LEU:CD2	30:BF:106:GLU:HB2	2.23	0.65
30:BF:102:LEU:CA	30:BF:107:ARG:HH21	2.09	0.65
30:BF:197:SER:O	30:BF:198:ASP:HB2	1.97	0.65
30:BF:223:LEU:C	30:BF:225:PRO:CD	2.65	0.65
38:BS:30:GLY:O	38:BS:31:LYS:HE3	1.94	0.65
38:BS:53:ASN:C	38:BS:55:ASP:N	2.48	0.65
38:BS:75:THR:O	38:BS:76:GLY:C	2.35	0.65
45:BU:34:ASN:HA	45:BU:37:GLN:CB	2.21	0.65
40:BW:24:ILE:CG2	40:BW:32:ALA:HB1	2.26	0.65
43:BZ:172:LEU:C	43:BZ:172:LEU:HD23	2.13	0.65
27:BA:307:G:H21	27:BA:330:A:H62	1.45	0.65
42:BY:30:ASP:CB	42:BY:31:LEU:HD23	2.25	0.65
42:BY:55:PHE:CG	42:BY:89:ARG:NH1	2.65	0.65
43:BZ:22:VAL:O	43:BZ:83:PHE:HB2	1.96	0.65
43:BZ:53:ASP:HB2	43:BZ:62:PHE:O	1.95	0.65
1:AA:985:C:H2'	1:AA:986:A:H8	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:15:GLU:OE2	7:AD:66:ARG:NH1	2.27	0.65
1:AA:407:G:O5'	1:AA:407:G:H8	1.79	0.65
27:BA:1470:G:H2'	27:BA:1519:G:O6	1.95	0.65
6:AC:38:ARG:HB3	6:AC:94:LEU:HD21	1.78	0.65
27:BA:1425:G:O2'	27:BA:1573:G:N2	2.29	0.65
21:AR:70:ILE:O	21:AR:74:ARG:HD2	1.96	0.65
32:BH:28:PRO:HG2	32:BH:79:SER:HA	1.78	0.65
14:AK:110:ASP:HB3	21:AR:85:LEU:HB3	1.77	0.65
8:AE:29:GLY:HA2	8:AE:46:GLY:O	1.97	0.65
3:AW:75:C:C4	50:B4:28:ARG:HB2	2.31	0.65
51:B5:10:LYS:HG3	51:B5:11:THR:O	1.95	0.65
52:B6:44:ALA:O	52:B6:45:LYS:C	2.34	0.65
53:B7:27:GLY:O	53:B7:31:LEU:CG	2.41	0.65
27:BA:687:C:C5'	53:B7:4:THR:HG22	2.26	0.65
27:BA:1819:A:C8	28:BD:177:SER:OG	2.50	0.65
27:BA:2093:G:H1'	27:BA:2198:A:C2	2.29	0.65
27:BA:2291:U:O2'	27:BA:2374:C:H1'	1.95	0.65
27:BA:2391:G:HO2'	27:BA:2392:A:P	2.16	0.65
27:BA:2458:G:N7	27:BA:2490:G:C6	2.64	0.65
27:BA:2677:G:H2'	27:BA:2678:C:O5'	1.96	0.65
27:BA:2731:G:N1	27:BA:2732:G:N1	2.45	0.65
27:BA:2733:A:C2	29:BE:318:ASN:HB2	2.31	0.65
28:BD:123:ILE:O	28:BD:124:LYS:C	2.34	0.65
28:BD:152:GLN:O	28:BD:153:LEU:CB	2.44	0.65
28:BD:172:ILE:HG13	28:BD:182:MET:CE	2.26	0.65
29:BE:70:VAL:CG1	29:BE:296:VAL:CB	2.72	0.65
29:BE:315:VAL:O	29:BE:316:ARG:C	2.34	0.65
30:BF:140:VAL:HG12	30:BF:140:VAL:O	1.95	0.65
31:BG:38:GLU:OE2	31:BG:71:ALA:HA	1.97	0.65
32:BH:101:LYS:HG2	32:BH:115:GLU:HB2	1.62	0.65
32:BH:84:LYS:O	32:BH:131:ILE:CB	2.45	0.65
34:BN:38:VAL:HG12	34:BN:39:VAL:N	2.10	0.65
36:BP:67:ARG:NH1	36:BP:111:ALA:CA	2.59	0.65
44:BR:32:GLY:O	44:BR:33:ARG:CB	2.44	0.65
44:BR:45:ARG:HD3	44:BR:97:VAL:CG2	2.25	0.65
27:BA:1251:C:C5'	45:BU:10:ARG:CD	2.75	0.65
45:BU:95:LEU:CA	45:BU:98:ILE:HD13	2.25	0.65
45:BU:98:ILE:HG22	45:BU:106:PHE:HD1	1.61	0.65
46:BV:11:GLN:HE21	46:BV:22:VAL:HG21	1.59	0.65
40:BW:68:ARG:HH21	40:BW:110:LYS:HG3	1.61	0.65
43:BZ:159:THR:C	43:BZ:160:LEU:HD13	2.07	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:68:LEU:HD22	33:BI:72:LEU:HD21	1.79	0.65
2:AV:12:U:HO2'	27:BA:1924:C:C1'	2.08	0.65
7:AD:173:TRP:CG	7:AD:189:PRO:HB3	2.31	0.65
2:AV:43:G:H2'	2:AV:44:A:H8	1.60	0.65
1:AA:789:U:O2	1:AA:792:A:H8	1.77	0.65
50:B4:59:PHE:N	50:B4:62:ARG:NE	2.44	0.65
54:B8:41:ILE:C	54:B8:43:GLY:N	2.31	0.65
54:B8:58:MET:HA	54:B8:61:MET:HG2	1.79	0.65
27:BA:1809:A:N6	50:B4:3:LYS:HB3	2.12	0.65
27:BA:2015:A:H8	27:BA:2016:U:C6	2.15	0.65
27:BA:2242:G:C6	27:BA:2243:U:C5	2.84	0.65
27:BA:2247:A:O2'	27:BA:2248:C:C5'	2.45	0.65
27:BA:2317:C:C5	27:BA:2318:G:N7	2.64	0.65
27:BA:2411:A:C2	27:BA:2412:A:N7	2.64	0.65
27:BA:2511:U:H2'	27:BA:2512:C:H6	1.62	0.65
27:BA:2548:G:H2'	27:BA:2549:G:C5'	2.26	0.65
27:BA:2573:C:O5'	27:BA:2573:C:H6	1.79	0.65
27:BA:2657:A:C5	27:BA:2658:C:C5	2.79	0.65
27:BA:2667:C:C2	27:BA:2668:G:C8	2.84	0.65
27:BA:2666:C:OP2	27:BA:2667:C:H5	1.78	0.65
27:BA:563:G:C5	27:BA:2018:G:C6	2.85	0.65
27:BA:5:A:H5'	29:BE:94:ARG:NH2	2.11	0.65
27:BA:687:C:H5''	53:B7:4:THR:HA	1.78	0.65
28:BD:129:LEU:HD22	28:BD:130:PRO:HD2	1.78	0.65
28:BD:133:ASN:C	28:BD:134:ILE:HG13	2.16	0.65
28:BD:77:VAL:HG21	28:BD:109:LEU:HB3	1.78	0.65
29:BE:193:PHE:CZ	29:BE:199:ALA:HB2	2.30	0.65
29:BE:198:TYR:CE1	29:BE:267:ARG:HB3	2.31	0.65
29:BE:269:ILE:HD11	29:BE:296:VAL:N	2.11	0.65
29:BE:73:ILE:O	29:BE:293:TYR:HD2	1.80	0.65
30:BF:107:ARG:O	30:BF:110:ALA:N	2.29	0.65
30:BF:138:VAL:O	30:BF:139:VAL:CG2	2.44	0.65
27:BA:2316:C:C5'	31:BG:142:ALA:HB3	2.06	0.65
32:BH:130:ILE:O	32:BH:131:ILE:CG2	2.40	0.65
34:BN:138:THR:CB	34:BN:139:LEU:HD13	2.25	0.65
27:BA:1140:C:C5	34:BN:49:ARG:HD2	2.29	0.65
34:BN:94:GLY:O	34:BN:95:ARG:C	2.34	0.65
35:BO:112:MET:O	35:BO:113:LYS:C	2.33	0.65
36:BP:62:ALA:HB3	36:BP:105:TYR:C	2.14	0.65
36:BP:76:LEU:HG	36:BP:81:VAL:HG23	1.78	0.65
44:BR:61:HIS:O	44:BR:62:ALA:C	2.34	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:33:ARG:N	45:BU:35:ALA:HB3	2.11	0.65
45:BU:95:LEU:O	45:BU:98:ILE:HD13	1.95	0.65
33:BI:121:ILE:CG2	33:BI:122:ARG:N	2.42	0.65
27:BA:322:A:C2	27:BA:341:G:C5	2.85	0.65
27:BA:326:G:N2	27:BA:337:C:H1'	2.10	0.65
42:BY:27:LEU:HD23	42:BY:98:VAL:CG1	2.26	0.65
28:BD:210:LYS:C	28:BD:213:LYS:HB2	1.83	0.65
47:B2:4:HIS:O	47:B2:5:VAL:O	2.15	0.65
47:B2:6:GLN:CA	47:B2:9:ARG:HB3	2.25	0.65
41:BX:13:LYS:N	41:BX:13:LYS:HD3	2.10	0.65
43:BZ:96:VAL:HG12	43:BZ:97:PRO:CD	2.21	0.65
20:AQ:22:LEU:CD1	20:AQ:23:VAL:O	2.41	0.65
39:BT:49:LEU:C	39:BT:49:LEU:CD2	2.63	0.65
27:BA:1102:C:C4	27:BA:1104:C:N4	2.64	0.65
27:BA:1559:G:C6	27:BA:1560:G:H4'	2.32	0.65
1:AA:720:C:C5	1:AA:721:G:H2'	2.30	0.65
49:B0:28:GLY:H	49:B0:60:PHE:HD2	0.71	0.65
50:B4:41:PRO:HB3	50:B4:59:PHE:CE1	2.27	0.65
51:B5:44:HIS:CB	51:B5:52:TYR:OH	2.43	0.65
54:B8:31:HIS:O	54:B8:32:GLN:CG	2.44	0.65
27:BA:2348:U:C3'	54:B8:42:ARG:NH2	2.59	0.65
27:BA:2208:U:H2'	27:BA:2209:C:C6	2.31	0.65
27:BA:2356:C:O2'	27:BA:2357:U:H5'	1.96	0.65
27:BA:834:C:O2'	27:BA:2358:G:H2'	1.97	0.65
27:BA:2484:G:C2'	27:BA:2485:G:O5'	2.41	0.65
27:BA:2496:C:C4	27:BA:2497:A:C2	2.84	0.65
27:BA:14:A:H2	27:BA:2625:G:O2'	1.76	0.65
27:BA:2712:U:C5'	27:BA:2714:G:O5'	2.42	0.65
27:BA:2817:G:C6	27:BA:2818:G:C5	2.85	0.65
27:BA:2870:C:O2	27:BA:2871:C:H6	1.79	0.65
27:BA:396:G:C4'	50:B4:39:VAL:HG12	2.26	0.65
30:BF:33:LYS:O	30:BF:34:ALA:C	2.31	0.65
2:AV:56:C:C2'	31:BG:56:ARG:CZ	2.74	0.65
31:BG:74:THR:O	31:BG:75:LEU:CG	2.41	0.65
32:BH:119:GLY:O	32:BH:121:GLU:CD	2.34	0.65
33:BI:19:LYS:O	33:BI:21:VAL:N	2.28	0.65
35:BO:17:ARG:NE	35:BO:47:THR:CA	2.59	0.65
35:BO:66:LYS:CG	35:BO:82:ASN:HD21	1.94	0.65
36:BP:94:ARG:CD	36:BP:120:LEU:HA	2.27	0.65
37:BQ:85:ILE:CA	37:BQ:122:PHE:CD2	2.79	0.65
38:BS:122:ALA:O	38:BS:125:ALA:CA	2.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:98:ILE:O	45:BU:100:ALA:CA	2.43	0.65
33:BI:133:LEU:H	33:BI:138:THR:CB	2.09	0.65
41:BX:18:MET:CE	41:BX:25:GLN:CB	2.74	0.65
1:AA:406:G:H4'	7:AD:5:ILE:HD13	1.77	0.65
1:AA:1156:G:O3'	1:AA:1157:A:P	2.53	0.65
27:BA:1417:C:H42	27:BA:1581:G:H1	1.42	0.65
6:AC:50:ALA:HB1	6:AC:70:VAL:HG11	1.78	0.65
1:AA:691:G:H1	14:AK:52:GLY:HA2	1.62	0.65
27:BA:126:A:OP2	53:B7:17:GLY:C	2.34	0.65
53:B7:35:ARG:HB3	53:B7:35:ARG:HH11	1.61	0.65
27:BA:2093:G:H1'	27:BA:2198:A:C6	2.28	0.65
27:BA:2297:C:O2'	27:BA:2298:A:H5'	1.95	0.65
27:BA:2541:A:H2	27:BA:2765:A:H61	1.44	0.65
27:BA:2597:G:C5	27:BA:2598:A:N6	2.65	0.65
27:BA:2637:U:C5	27:BA:2638:G:C5	2.84	0.65
27:BA:2666:C:H2'	27:BA:2667:C:H5'	1.76	0.65
27:BA:2671:A:C2'	27:BA:2672:G:O5'	2.44	0.65
27:BA:2745:C:C2	32:BH:142:GLU:OE2	2.49	0.65
27:BA:2774:C:H2'	27:BA:2775:A:H8	1.62	0.65
27:BA:34:C:C2'	27:BA:455:C:H41	2.09	0.65
28:BD:130:PRO:HA	28:BD:188:ARG:CA	2.25	0.65
28:BD:158:GLY:CA	28:BD:194:VAL:HG13	2.10	0.65
28:BD:70:LYS:HZ3	28:BD:70:LYS:HB3	1.62	0.65
27:BA:2572:A:N7	29:BE:241:TRP:CG	2.65	0.65
27:BA:1140:C:C5	34:BN:49:ARG:NE	2.65	0.65
37:BQ:134:PHE:C	37:BQ:137:ARG:HB3	2.16	0.65
37:BQ:45:GLN:OE1	37:BQ:153:PRO:CG	2.45	0.65
44:BR:105:ARG:CZ	44:BR:105:ARG:N	2.59	0.65
38:BS:83:LEU:O	38:BS:84:THR:C	2.35	0.65
1:AA:1220:G:H21	22:AS:54:GLY:CA	2.10	0.65
28:BD:209:ASN:O	28:BD:212:HIS:HB2	1.96	0.65
3:AW:37:YYG:H101	10:AG:83:ALA:CB	2.12	0.65
1:AA:1236:A:H4'	1:AA:1304:G:C5'	2.27	0.65
33:BI:63:ALA:HA	33:BI:66:LYS:CE	2.26	0.65
1:AA:509:A:C8	7:AD:54:TYR:HE2	2.11	0.65
1:AA:1053:G:H8	1:AA:1053:G:H5''	1.61	0.65
1:AA:194:C:O2'	23:AT:68:LYS:HD3	1.97	0.65
49:B0:23:VAL:HG12	49:B0:26:PHE:HE1	1.60	0.65
27:BA:929:G:N2	48:B3:43:ILE:N	2.40	0.65
3:AW:75:C:N4	50:B4:28:ARG:HG3	2.12	0.65
53:B7:24:THR:O	53:B7:28:ARG:CG	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:593:G:C5'	54:B8:62:LEU:CD2	2.55	0.65
27:BA:1309:G:OP2	53:B7:9:ASN:ND2	2.29	0.65
27:BA:2206:C:H2'	27:BA:2207:C:O4'	1.97	0.65
27:BA:2428:G:O2'	27:BA:2429:G:N7	2.27	0.65
27:BA:2595:G:H3'	27:BA:2595:G:C8	2.32	0.65
27:BA:2758:A:OP2	27:BA:2758:A:C2'	2.45	0.65
27:BA:2783:G:N1	27:BA:2784:C:C4	2.65	0.65
27:BA:2817:G:C2	27:BA:2818:G:H1'	2.32	0.65
26:BB:57:A:C2	31:BG:17:ARG:NH1	2.64	0.65
27:BA:1568:G:C5'	28:BD:60:GLN:CG	2.68	0.65
33:BI:12:LYS:O	33:BI:14:LYS:N	2.29	0.65
34:BN:63:ILE:CG2	34:BN:71:TYR:CZ	2.79	0.65
35:BO:75:SER:C	35:BO:76:TYR:CD1	2.67	0.65
35:BO:90:ASP:O	35:BO:91:LYS:C	2.34	0.65
37:BQ:46:VAL:CG1	37:BQ:124:ALA:O	2.42	0.65
37:BQ:131:ALA:HA	37:BQ:134:PHE:HE2	1.62	0.65
37:BQ:75:SER:O	37:BQ:129:ASP:OD2	2.15	0.65
44:BR:55:ALA:HB1	44:BR:79:LEU:CD2	2.26	0.65
31:BG:146:LYS:HE3	38:BS:15:GLU:CD	2.16	0.65
35:BO:80:ASP:N	39:BT:22:VAL:O	2.29	0.65
45:BU:68:GLY:O	45:BU:69:ALA:C	2.33	0.65
45:BU:8:ILE:H	45:BU:11:ARG:NH1	1.88	0.65
45:BU:102:GLU:CB	46:BV:43:GLU:OE2	2.45	0.65
42:BY:50:VAL:HG13	42:BY:95:ASN:HB3	1.79	0.65
42:BY:86:GLU:C	42:BY:87:VAL:HG23	2.16	0.65
43:BZ:51:LEU:C	43:BZ:51:LEU:CD2	2.62	0.65
1:AA:1226:C:N4	16:AM:104:ARG:HG3	2.11	0.65
27:BA:2859:G:C2'	27:BA:2860:A:H5'	2.27	0.65
1:AA:1205:U:H4'	6:AC:195:VAL:HG23	1.78	0.65
2:AV:47:U:H1'	2:AV:50:U:OP1	1.97	0.65
49:B0:48:GLY:O	49:B0:55:ARG:HA	1.96	0.65
48:B3:31:LEU:HD22	48:B3:32:GLN:HG3	1.77	0.65
48:B3:48:GLU:HG2	48:B3:49:LYS:N	2.11	0.65
50:B4:23:GLU:O	50:B4:24:THR:C	2.34	0.65
52:B6:19:GLY:O	52:B6:20:PHE:CB	2.45	0.65
52:B6:47:HIS:O	52:B6:48:VAL:CB	2.45	0.65
55:B9:14:CYS:N	55:B9:27:CYS:HB2	2.12	0.65
55:B9:7:VAL:HG12	55:B9:25:VAL:CG2	2.26	0.65
27:BA:2742:C:OP1	55:B9:35:ARG:CD	2.45	0.65
27:BA:2068:U:O2	27:BA:2430:A:C2	2.50	0.65
27:BA:2479:G:OP1	27:BA:2537:U:C4'	2.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2633:G:H2'	27:BA:2634:G:H8	1.60	0.65
27:BA:2684:U:N3	27:BA:2725:A:N6	2.44	0.65
27:BA:2635:C:N3	27:BA:2783:G:N2	2.43	0.65
28:BD:129:LEU:C	28:BD:188:ARG:HG2	2.17	0.65
28:BD:141:HIS:CD2	28:BD:142:ASN:ND2	2.65	0.65
28:BD:73:ILE:CB	28:BD:95:TYR:CE2	2.79	0.65
27:BA:2574:G:HO2'	29:BE:240:PRO:HB3	0.82	0.65
27:BA:2620:C:H4'	29:BE:252:GLN:CG	2.26	0.65
29:BE:206:LYS:N	29:BE:257:GLY:O	2.30	0.65
31:BG:24:HIS:CB	31:BG:72:LYS:HD3	2.27	0.65
33:BI:28:ASN:O	33:BI:32:LYS:CB	2.44	0.65
34:BN:136:SER:O	34:BN:139:LEU:HD22	1.97	0.65
35:BO:101:PRO:HB2	35:BO:122:ILE:HD12	1.77	0.65
36:BP:65:ASP:HB2	36:BP:109:LEU:CB	2.06	0.65
37:BQ:41:THR:CG2	37:BQ:125:TRP:CZ3	2.65	0.65
37:BQ:142:LYS:C	37:BQ:142:LYS:HE3	2.17	0.65
37:BQ:67:ALA:HB1	37:BQ:71:PHE:HE1	1.61	0.65
37:BQ:76:GLY:O	37:BQ:124:ALA:HA	1.97	0.65
27:BA:535:C:H5''	45:BU:53:LYS:HZ1	1.62	0.65
40:BW:13:SER:HB3	40:BW:16:LYS:HD2	1.78	0.65
27:BA:84:A:OP2	42:BY:111:ARG:NH1	2.30	0.65
43:BZ:25:ASN:CA	43:BZ:84:TYR:CE1	2.80	0.65
3:AW:25:C:C2	3:AW:26:G:C1'	2.79	0.65
41:BX:24:LEU:HD13	41:BX:66:VAL:O	1.96	0.65
27:BA:1082:U:O4'	56:BK:118:ALA:N	2.28	0.65
1:AA:1373:G:H5''	12:AI:42:ARG:HH21	1.61	0.65
1:AA:815:A:OP2	1:AA:816:A:H8	1.80	0.65
27:BA:1482:U:H2'	27:BA:1483:G:H4'	1.78	0.65
27:BA:1350:C:N4	27:BA:1381:G:H1	1.93	0.65
27:BA:1472:A:H2'	27:BA:1473:G:C8	2.31	0.65
2:AV:14:A:H2'	2:AV:15:G:C8	2.31	0.65
27:BA:1843:C:H2'	27:BA:1844:C:C6	2.32	0.65
49:B0:33:ALA:HB2	49:B0:65:GLY:HA3	1.79	0.65
55:B9:4:ARG:HA	55:B9:36:GLN:CA	2.16	0.65
27:BA:1135:C:H2'	27:BA:1136:G:H8	1.62	0.65
27:BA:1366:A:H8	27:BA:1366:A:OP2	1.79	0.65
27:BA:1800:C:C6	27:BA:1800:C:C3'	2.79	0.65
27:BA:1996:C:H2'	27:BA:1997:G:C4'	2.27	0.65
27:BA:2100:G:C5	27:BA:2190:G:C6	2.83	0.65
27:BA:2191:G:C2	27:BA:2192:G:H1'	2.31	0.65
27:BA:2090:G:C2	27:BA:2230:G:O6	2.48	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2242:G:C5	27:BA:2243:U:C5	2.83	0.65
27:BA:2432:A:N1	27:BA:2433:A:C6	2.59	0.65
27:BA:247:G:H4'	27:BA:386:G:N3	2.12	0.65
27:BA:2492:U:H2'	27:BA:2493:U:O5'	1.95	0.65
27:BA:2597:G:H2'	27:BA:2598:A:N7	2.05	0.65
27:BA:747:U:C5	27:BA:2613:U:C5	2.84	0.65
27:BA:2622:C:H2'	27:BA:2623:G:H8	1.61	0.65
27:BA:2625:G:C3'	27:BA:2626:C:C6	2.76	0.65
27:BA:27:G:C2	27:BA:512:G:H2'	2.31	0.65
27:BA:2816:C:H6	27:BA:2816:C:H5'	1.60	0.65
27:BA:2869:G:C2'	27:BA:2870:C:C5'	2.74	0.65
28:BD:141:HIS:HE1	28:BD:191:VAL:C	1.99	0.65
28:BD:198:GLY:O	28:BD:200:THR:CB	2.45	0.65
29:BE:71:THR:HG23	29:BE:299:SER:CB	2.05	0.65
29:BE:45:LYS:CE	29:BE:303:PRO:C	2.65	0.65
29:BE:70:VAL:HG12	29:BE:71:THR:H	0.54	0.65
30:BF:111:VAL:HA	30:BF:220:THR:CG2	2.24	0.65
32:BH:113:GLU:OE1	32:BH:114:ILE:CA	2.45	0.65
32:BH:89:VAL:O	32:BH:89:VAL:HG12	1.97	0.65
33:BI:7:LYS:HG3	33:BI:12:LYS:HA	1.73	0.65
34:BN:38:VAL:C	34:BN:39:VAL:HG13	2.11	0.65
27:BA:1665:A:H1'	35:BO:67:ARG:CD	2.27	0.65
37:BQ:47:GLU:OE1	37:BQ:150:ASP:O	2.13	0.65
37:BQ:65:ARG:NE	37:BQ:122:PHE:CZ	2.64	0.65
38:BS:58:LEU:O	38:BS:59:ALA:C	2.35	0.65
46:BV:33:VAL:HG23	46:BV:63:HIS:HB2	1.79	0.65
40:BW:17:VAL:O	40:BW:20:VAL:CB	2.45	0.65
33:BI:77:VAL:CG2	33:BI:142:LYS:O	2.45	0.65
42:BY:31:LEU:HD13	42:BY:101:LEU:HB3	1.77	0.65
42:BY:58:GLU:N	42:BY:97:ARG:HH12	1.94	0.65
43:BZ:19:ILE:CA	43:BZ:36:ARG:HG2	2.18	0.65
27:BA:1969:A:H4'	27:BA:1970:A:H5'	1.78	0.65
47:B2:20:LEU:HD22	47:B2:53:ILE:HG23	1.79	0.65
47:B2:43:PRO:O	47:B2:44:GLY:C	2.34	0.65
41:BX:28:VAL:HG23	41:BX:62:LYS:CB	2.27	0.65
41:BX:28:VAL:O	41:BX:29:ASP:C	2.35	0.65
27:BA:227:A:N6	27:BA:2407:G:C8	2.60	0.65
1:AA:1353:G:OP1	24:AU:10:ARG:NH2	2.30	0.65
52:B6:19:GLY:CA	52:B6:42:PRO:CB	2.75	0.65
53:B7:11:LYS:O	53:B7:12:ARG:C	2.36	0.65
27:BA:1952:A:C2	35:BO:22:ILE:HD13	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2041:U:C2'	27:BA:2042:A:H5'	2.27	0.65
27:BA:2195:C:C4	27:BA:2196:C:C5	2.85	0.65
27:BA:2246:G:C2'	27:BA:2247:A:C5'	2.69	0.65
27:BA:2305:A:C3'	27:BA:2306:C:C5'	2.64	0.65
27:BA:2369:A:H2'	27:BA:2370:G:O5'	1.97	0.65
27:BA:2431:U:O2	27:BA:2433:A:C8	2.50	0.65
27:BA:1128:A:N6	27:BA:2518:A:H61	1.92	0.65
27:BA:2536:G:C5	27:BA:2537:U:C4	2.85	0.65
27:BA:2657:A:N6	27:BA:2665:A:N7	2.45	0.65
27:BA:2748:A:H2	27:BA:2758:A:N7	1.95	0.65
27:BA:1049:C:N4	27:BA:2751:G:O6	2.29	0.65
27:BA:2840:C:C4	27:BA:2841:C:C4	2.85	0.65
27:BA:2840:C:C4	27:BA:2841:C:N4	2.65	0.65
27:BA:517:C:C2'	40:BW:18:ARG:HH22	2.10	0.65
27:BA:780:G:H2'	27:BA:782:A:C8	2.32	0.65
26:BB:24:G:C5	26:BB:56:G:C4	2.85	0.65
27:BA:1492:G:H4'	28:BD:99:GLU:OE2	1.97	0.65
29:BE:269:ILE:HG13	29:BE:297:LYS:HG2	1.76	0.65
29:BE:45:LYS:HZ3	29:BE:302:GLY:N	1.94	0.65
32:BH:147:ILE:HA	32:BH:150:VAL:CB	2.27	0.65
32:BH:104:LEU:CA	32:BH:151:ARG:NH1	2.60	0.65
33:BI:7:LYS:CG	33:BI:12:LYS:NZ	2.59	0.65
34:BN:63:ILE:HD12	34:BN:71:TYR:HE2	1.55	0.65
37:BQ:85:ILE:HA	37:BQ:122:PHE:CB	2.26	0.65
27:BA:872:A:O2'	37:BQ:31:PHE:CB	2.43	0.65
37:BQ:67:ALA:C	37:BQ:71:PHE:HE1	1.97	0.65
44:BR:67:LEU:O	44:BR:69:ASP:N	2.30	0.65
44:BR:90:ARG:NH1	44:BR:117:VAL:CG1	2.60	0.65
44:BR:96:ARG:CG	44:BR:115:GLU:HG3	2.27	0.65
40:BW:36:LEU:HD13	40:BW:47:VAL:HB	1.79	0.65
43:BZ:140:LYS:N	43:BZ:141:MET:CE	2.60	0.65
1:AA:1400:C:C5	2:AV:34:G:C6	2.85	0.65
42:BY:24:ARG:O	42:BY:25:ALA:HB2	1.96	0.65
1:AA:986:A:C2	22:AS:52:TYR:HE2	2.14	0.65
27:BA:1900:A:C2	27:BA:1970:A:C6	2.85	0.65
47:B2:7:GLU:CG	47:B2:8:ILE:N	2.56	0.65
47:B2:6:GLN:O	47:B2:9:ARG:CB	2.44	0.65
1:AA:1229:A:O2'	16:AM:125:ARG:NH1	2.30	0.65
37:BQ:108:SER:O	37:BQ:109:VAL:CB	2.45	0.65
13:AJ:38:ILE:HG13	13:AJ:38:ILE:O	1.97	0.65
3:AW:14:A:C6	3:AW:22:G:C2	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:451:A:H61	1:AA:480:U:H2'	1.62	0.65
1:AA:369:C:H42	1:AA:392:G:H1	1.44	0.65
49:B0:65:GLY:CA	49:B0:66:LYS:CD	2.70	0.64
27:BA:1567:A:N1	28:BD:82:TYR:O	2.29	0.64
27:BA:1996:C:H2'	27:BA:1997:G:C5'	2.28	0.64
27:BA:2317:C:C5	27:BA:2318:G:C5	2.85	0.64
27:BA:2327:A:C6	27:BA:2328:A:C2	2.85	0.64
27:BA:2358:G:C2'	27:BA:2358:G:N3	2.60	0.64
27:BA:2379:G:OP1	38:BS:30:GLY:CA	2.43	0.64
27:BA:2404:C:C4	27:BA:2405:G:C5	2.85	0.64
27:BA:2563:U:H2'	27:BA:2565:A:OP2	1.97	0.64
27:BA:270(H):C:N3	27:BA:270(R):G:N2	2.45	0.64
27:BA:2810:A:N7	27:BA:2811:G:C4	2.65	0.64
27:BA:2887:U:H2'	27:BA:2888:C:C6	2.22	0.64
28:BD:76:ARG:HA	28:BD:114:GLU:H	1.61	0.64
27:BA:2024:G:OP1	29:BE:245:ARG:NH1	2.30	0.64
27:BA:2621:A:O2'	29:BE:255:GLN:NE2	2.30	0.64
30:BF:236:THR:O	30:BF:239:ALA:HB3	1.97	0.64
30:BF:56:THR:CB	30:BF:57:PRO:HD2	2.24	0.64
27:BA:801:G:P	30:BF:79:ARG:CD	2.85	0.64
30:BF:81:PRO:O	30:BF:82:GLN:CB	2.45	0.64
27:BA:2312:U:C5'	31:BG:53:LYS:CA	2.44	0.64
32:BH:32:LEU:HD23	32:BH:33:THR:N	2.12	0.64
34:BN:21:ARG:CA	34:BN:24:SER:HB3	2.25	0.64
35:BO:13:ASN:C	35:BO:15:GLY:N	2.51	0.64
27:BA:2278:A:C4'	37:BQ:19:TYR:HB3	2.25	0.64
44:BR:65:LEU:O	44:BR:66:VAL:C	2.35	0.64
27:BA:1251:C:H5'	45:BU:10:ARG:HD3	1.78	0.64
45:BU:72:HIS:ND1	45:BU:110:VAL:HG21	2.12	0.64
46:BV:35:LEU:CA	46:BV:60:VAL:HG13	2.27	0.64
43:BZ:107:GLU:CD	43:BZ:107:GLU:N	2.50	0.64
43:BZ:112:LEU:CD2	43:BZ:113:VAL:O	2.45	0.64
43:BZ:172:LEU:CD2	43:BZ:173:PRO:HG2	2.26	0.64
27:BA:325:G:H21	42:BY:7:GLN:HE21	1.38	0.64
42:BY:23:VAL:HG23	42:BY:67:LEU:HD23	1.75	0.64
43:BZ:1:MET:HE2	43:BZ:52:PHE:CD2	2.32	0.64
43:BZ:37:LYS:CD	43:BZ:41:ARG:HH12	2.10	0.64
28:BD:224:VAL:CG1	28:BD:225:ARG:N	2.60	0.64
47:B2:17:GLU:O	47:B2:20:LEU:N	2.28	0.64
41:BX:3:ASP:CG	41:BX:4:VAL:H	1.99	0.64
1:AA:1236:A:H5'	1:AA:1304:G:H5''	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:575:G:N2	1:AA:880:C:O2	2.30	0.64
1:AA:1005:A:H5'	1:AA:1037:C:C2	2.32	0.64
1:AA:280:C:O2	20:AQ:38:ARG:HG3	1.95	0.64
1:AA:1156:G:N3	1:AA:1179:A:N1	2.44	0.64
28:BD:169:LYS:H	28:BD:169:LYS:HZ3	1.44	0.64
52:B6:12:MET:CA	52:B6:13:GLU:OE1	2.44	0.64
52:B6:28:ARG:CG	52:B6:28:ARG:O	2.45	0.64
52:B6:32:GLN:CA	52:B6:35:LEU:CD1	2.63	0.64
54:B8:26:LYS:HB2	54:B8:44:LYS:HA	1.78	0.64
55:B9:14:CYS:SG	55:B9:32:HIS:CD2	2.90	0.64
27:BA:1130:U:H5''	27:BA:2515:C:HO2'	1.61	0.64
27:BA:1993:U:C5'	29:BE:228:ARG:HE	2.10	0.64
27:BA:2082:A:C5	27:BA:2239:G:N1	2.64	0.64
27:BA:2341:G:C5	27:BA:2342:C:N4	2.65	0.64
27:BA:2492:U:O2'	27:BA:2493:U:H5'	1.95	0.64
27:BA:2504:U:H6	27:BA:2504:U:C5'	2.10	0.64
27:BA:2574:G:N9	27:BA:2575:C:C6	2.62	0.64
27:BA:2619:C:C2'	27:BA:2620:C:C5'	2.75	0.64
27:BA:2725:A:C2	27:BA:2727:G:C8	2.86	0.64
27:BA:2732:G:OP2	27:BA:2732:G:H8	1.81	0.64
27:BA:2734:A:N7	27:BA:2735:G:C4	2.65	0.64
27:BA:2043:C:N4	27:BA:2777:G:N3	2.44	0.64
27:BA:2799:A:O2'	27:BA:2802:G:N1	2.26	0.64
27:BA:2842:G:N1	27:BA:2876:G:N1	2.44	0.64
27:BA:673:C:C4'	30:BF:82:GLN:NE2	2.61	0.64
27:BA:875:G:OP1	43:BZ:146:HIS:CG	2.50	0.64
27:BA:963:U:H2'	27:BA:964:C:C6	2.32	0.64
28:BD:129:LEU:CB	28:BD:130:PRO:CD	2.74	0.64
29:BE:74:GLU:HB3	29:BE:293:TYR:CE2	2.27	0.64
34:BN:83:ILE:HG13	34:BN:84:ARG:CA	2.20	0.64
35:BO:79:PHE:HD2	35:BO:79:PHE:N	1.95	0.64
36:BP:109:LEU:CD1	36:BP:109:LEU:C	2.65	0.64
36:BP:69:ILE:CB	36:BP:73:VAL:HG21	2.27	0.64
37:BQ:49:VAL:HA	37:BQ:121:ASP:CG	2.17	0.64
37:BQ:122:PHE:HB2	37:BQ:136:TRP:CZ2	2.33	0.64
37:BQ:35:ASN:HB3	37:BQ:75:SER:HB2	1.78	0.64
38:BS:16:ALA:O	38:BS:17:ARG:CB	2.45	0.64
38:BS:61:ALA:HB1	38:BS:84:THR:O	1.97	0.64
38:BS:74:PRO:O	38:BS:75:THR:C	2.35	0.64
45:BU:88:ILE:CG2	46:BV:55:THR:HG1	2.10	0.64
40:BW:56:ALA:O	40:BW:57:ASN:C	2.36	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:69:LEU:HA	40:BW:109:GLU:HA	1.78	0.64
43:BZ:172:LEU:O	43:BZ:174:PRO:HD3	1.97	0.64
43:BZ:81:VAL:CG1	43:BZ:82:ASP:H	2.10	0.64
1:AA:938:A:C5'	10:AG:95:ARG:HH22	2.11	0.64
43:BZ:156:GLU:CG	43:BZ:157:GLY:N	2.46	0.64
39:BT:47:ARG:O	39:BT:48:ASN:HB3	1.97	0.64
27:BA:1520:U:C6	27:BA:1520:U:H3'	2.32	0.64
27:BA:1055:G:C4	27:BA:1056:G:O2'	2.49	0.64
1:AA:713:G:H2'	1:AA:714:G:C8	2.33	0.64
1:AA:948:C:H6	1:AA:948:C:O5'	1.80	0.64
21:AR:74:ARG:HG2	21:AR:81:PHE:HB3	1.78	0.64
6:AC:157:ILE:HD12	6:AC:164:ARG:HG3	1.79	0.64
27:BA:1949:G:H2'	27:BA:1950:G:C8	2.33	0.64
49:B0:70:ILE:HD13	49:B0:70:ILE:N	2.12	0.64
50:B4:16:TYR:O	50:B4:17:GLN:CB	2.43	0.64
51:B5:46:CYS:HB3	51:B5:47:PRO:CD	2.26	0.64
54:B8:58:MET:O	54:B8:59:LYS:C	2.33	0.64
55:B9:11:CYS:H	55:B9:32:HIS:HE2	1.46	0.64
27:BA:1152:C:C4'	45:BU:77:SER:HA	2.27	0.64
27:BA:1262:A:H2	51:B5:10:LYS:CE	2.02	0.64
27:BA:1492:G:H21	27:BA:1493:C:H42	1.46	0.64
27:BA:2234:G:N1	27:BA:2235:G:N7	2.42	0.64
27:BA:2256:G:C2	27:BA:2257:U:O2	2.50	0.64
27:BA:2335:A:O2'	27:BA:2336:A:C8	2.51	0.64
3:AW:76:A:N9	27:BA:2421:G:C5	2.64	0.64
27:BA:2424:C:H5'	27:BA:2425:A:H5'	1.79	0.64
27:BA:2548:G:C3'	27:BA:2548:G:C8	2.79	0.64
27:BA:2633:G:H8	27:BA:2633:G:O5'	1.81	0.64
27:BA:2686:G:C5	27:BA:2687:U:C6	2.85	0.64
27:BA:2752:C:C2'	27:BA:2752:C:O2	2.44	0.64
27:BA:2785:C:C4	27:BA:2786:U:C4	2.86	0.64
27:BA:2827:C:O2	27:BA:2828:C:C5	2.50	0.64
27:BA:452:G:N2	27:BA:457:A:C2	2.65	0.64
27:BA:746:A:C2'	27:BA:2611:U:O2'	2.45	0.64
29:BE:221:LYS:HZ3	29:BE:233:ARG:CG	2.02	0.64
30:BF:22:PHE:CZ	30:BF:115:LEU:HD12	2.23	0.64
30:BF:91:PRO:HB2	30:BF:92:PRO:HD3	0.66	0.64
34:BN:135:ILE:O	34:BN:136:SER:O	2.14	0.64
34:BN:56:LYS:H	34:BN:56:LYS:HD3	1.61	0.64
34:BN:75:PRO:O	34:BN:76:ASP:C	2.35	0.64
27:BA:911:A:C2	37:BQ:17:ARG:HD3	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:94:ARG:HG2	37:BQ:107:LYS:N	2.11	0.64
44:BR:100:LEU:HD21	44:BR:113:LEU:CB	2.27	0.64
44:BR:90:ARG:HH12	44:BR:117:VAL:CG1	2.10	0.64
38:BS:109:PRO:HB2	38:BS:116:PHE:CZ	2.33	0.64
38:BS:56:ASP:CG	38:BS:57:THR:H	2.01	0.64
1:AA:926:G:C2	4:AX:116:U:P	2.90	0.64
33:BI:88:ARG:CD	33:BI:122:ARG:HB3	2.27	0.64
27:BA:342:G:N1	27:BA:344:G:N2	2.45	0.64
42:BY:108:ARG:O	42:BY:112:LEU:CD2	2.42	0.64
42:BY:43:ASN:ND2	42:BY:112:LEU:CD1	2.61	0.64
43:BZ:46:GLN:O	43:BZ:47:SER:C	2.34	0.64
1:AA:1061:G:H1'	13:AJ:56:HIS:HE1	1.61	0.64
6:AC:29:TYR:HE2	17:AN:54:PRO:HG2	1.62	0.64
27:BA:837:C:C3'	27:BA:838:C:P	2.85	0.64
7:AD:12:CYS:HB3	7:AD:31:CYS:O	1.96	0.64
13:AJ:64:GLU:CB	17:AN:59:ALA:HB2	2.25	0.64
7:AD:98:GLU:O	7:AD:99:SER:C	2.29	0.64
1:AA:393:A:OP2	19:AP:12:LYS:HD3	1.98	0.64
49:B0:58:THR:O	49:B0:59:LEU:C	2.35	0.64
48:B3:6:VAL:CG2	48:B3:54:VAL:HG23	2.26	0.64
50:B4:46:GLU:OE2	50:B4:55:ARG:N	2.30	0.64
52:B6:13:GLU:O	52:B6:52:GLU:O	2.16	0.64
52:B6:12:MET:CE	52:B6:54:LYS:O	2.46	0.64
27:BA:1184:G:C2'	27:BA:1185:C:H5'	2.26	0.64
27:BA:1568:G:C5'	28:BD:60:GLN:CD	2.65	0.64
27:BA:2040:C:H4'	34:BN:69:TYR:CE2	2.32	0.64
27:BA:2386:C:H1'	49:B0:39:ARG:HH21	1.62	0.64
27:BA:2411:A:O2'	27:BA:2412:A:H5'	1.97	0.64
27:BA:2550:G:C6	27:BA:2559:C:N3	2.66	0.64
27:BA:2699:C:O2	27:BA:2699:C:C2'	2.42	0.64
27:BA:2715:C:N3	27:BA:2716:U:C5	2.65	0.64
27:BA:2718:G:C4	27:BA:2719:G:C8	2.86	0.64
27:BA:2839:G:C6	27:BA:2840:C:N4	2.64	0.64
27:BA:530:G:C2	27:BA:2021:C:C2	2.86	0.64
29:BE:175:ASP:O	29:BE:177:ALA:N	2.29	0.64
30:BF:103:ASN:CB	30:BF:106:GLU:CG	2.75	0.64
31:BG:49:PRO:CB	31:BG:72:LYS:N	2.52	0.64
34:BN:101:VAL:O	34:BN:102:ARG:CG	2.45	0.64
34:BN:49:ARG:C	34:BN:53:ILE:HB	2.17	0.64
34:BN:82:THR:O	34:BN:83:ILE:C	2.36	0.64
37:BQ:86:ARG:NH2	37:BQ:123:ILE:HD12	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:127:ASN:HB2	37:BQ:128:PRO:HD2	1.80	0.64
37:BQ:51:GLU:N	37:BQ:51:GLU:CD	2.51	0.64
44:BR:28:LEU:O	44:BR:29:LEU:C	2.36	0.64
38:BS:56:ASP:OD1	38:BS:57:THR:N	2.30	0.64
45:BU:78:THR:O	45:BU:79:PHE:O	2.14	0.64
45:BU:88:ILE:CG2	46:BV:55:THR:CB	2.74	0.64
40:BW:19:LEU:CD2	51:B5:25:LEU:CG	2.43	0.64
27:BA:310:A:OP1	42:BY:53:GLY:N	2.24	0.64
27:BA:307:G:H21	27:BA:330:A:N6	1.95	0.64
43:BZ:34:LEU:CD1	43:BZ:39:PHE:CZ	2.60	0.64
43:BZ:54:ILE:CG2	43:BZ:55:THR:N	2.59	0.64
1:AA:1060:C:H2'	1:AA:1061:G:H8	1.63	0.64
6:AC:5:ILE:HG23	13:AJ:51:ARG:HH22	1.62	0.64
16:AM:91:ARG:HH22	16:AM:103:THR:CG2	2.09	0.64
27:BA:1791:A:O2'	28:BD:204:PHE:O	2.16	0.64
27:BA:1341:U:O2'	41:BX:53:ASN:CB	2.38	0.64
41:BX:28:VAL:HG13	41:BX:64:ALA:HB3	1.79	0.64
3:AW:37:YYG:H15	10:AG:84:ASN:O	1.93	0.64
27:BA:1914:C:P	27:BA:1916:A:H62	2.21	0.64
42:BY:9:LYS:HE3	42:BY:13:ARG:HH12	1.59	0.64
27:BA:1972:A:H2'	27:BA:1973:G:C8	2.31	0.64
14:AK:18:ARG:HH21	14:AK:37:GLY:HA2	1.62	0.64
49:B0:66:LYS:CD	49:B0:66:LYS:N	2.38	0.64
27:BA:2045:C:C4	27:BA:2624:G:N2	2.65	0.64
27:BA:2058:A:H2'	27:BA:2059:A:H8	1.63	0.64
27:BA:2081:C:H4'	50:B4:35:VAL:HG21	1.80	0.64
27:BA:2225:A:H4'	27:BA:2226:C:H5'	0.95	0.64
27:BA:2256:G:H2'	27:BA:2257:U:H5'	1.80	0.64
27:BA:2521:C:O2	27:BA:2522:U:O4'	2.15	0.64
27:BA:2543:G:C5	27:BA:2544:G:O6	2.43	0.64
27:BA:2834:G:H3'	27:BA:2834:G:H8	1.63	0.64
27:BA:530:G:H3'	27:BA:530:G:OP2	1.97	0.64
27:BA:854:G:H1	27:BA:923:C:N4	1.94	0.64
29:BE:205:THR:OG1	29:BE:206:LYS:N	2.29	0.64
29:BE:222:ARG:O	29:BE:227:ALA:HA	1.97	0.64
27:BA:2822:G:P	29:BE:258:TYR:HE2	2.21	0.64
29:BE:199:ALA:HA	29:BE:312:ARG:C	2.18	0.64
29:BE:81:VAL:HB	29:BE:100:TRP:HZ3	1.62	0.64
30:BF:6:TYR:HE1	30:BF:139:VAL:CB	2.08	0.64
31:BG:25:MET:O	31:BG:71:ALA:HB3	1.97	0.64
31:BG:28:GLY:N	31:BG:69:ILE:HD13	2.09	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:20:LYS:HG2	31:BG:76:ARG:HG2	1.80	0.64
32:BH:95:ALA:H	32:BH:127:GLN:HE21	1.44	0.64
27:BA:1140:C:OP1	34:BN:18:ILE:HG13	1.96	0.64
34:BN:60:ARG:HA	34:BN:63:ILE:HD12	1.79	0.64
36:BP:129:ALA:O	36:BP:131:GLU:N	2.30	0.64
37:BQ:85:ILE:CA	37:BQ:122:PHE:HD2	2.10	0.64
37:BQ:88:PHE:O	37:BQ:90:PHE:CD1	2.51	0.64
45:BU:28:ARG:C	45:BU:31:GLN:H	1.97	0.64
45:BU:40:LEU:O	45:BU:43:ALA:HB3	1.98	0.64
45:BU:47:TYR:CZ	46:BV:74:TYR:O	2.50	0.64
27:BA:974:G:N7	46:BV:80:TYR:CG	2.66	0.64
46:BV:93:ILE:O	46:BV:95:ILE:CD1	2.45	0.64
43:BZ:92:VAL:C	43:BZ:94:VAL:N	2.49	0.64
33:BI:121:ILE:N	33:BI:121:ILE:HD12	2.12	0.64
43:BZ:3:LEU:CD2	43:BZ:38:ALA:CB	2.70	0.64
41:BX:18:MET:HE3	41:BX:25:GLN:CA	2.28	0.64
1:AA:1024:G:O3'	1:AA:1025:U:H4'	1.96	0.64
1:AA:1339:A:O2'	2:AV:40:C:O2	2.16	0.64
1:AA:1182:G:H4'	1:AA:1183:A:H5''	1.78	0.64
15:AL:70:ILE:HG12	15:AL:100:ILE:HD11	1.79	0.64
56:BK:56:VAL:HG22	56:BK:70:ILE:HG23	1.79	0.64
49:B0:61:ALA:HB2	49:B0:80:SER:CA	2.28	0.64
50:B4:14:ILE:CG2	50:B4:16:TYR:CD1	2.80	0.64
50:B4:46:GLU:N	50:B4:53:GLU:O	2.31	0.64
50:B4:41:PRO:HG2	50:B4:57:ASP:CG	2.17	0.64
52:B6:21:TYR:CE1	52:B6:43:VAL:HG21	2.32	0.64
52:B6:8:ILE:O	52:B6:28:ARG:HA	1.97	0.64
53:B7:11:LYS:CA	53:B7:11:LYS:HE3	2.28	0.64
54:B8:30:ARG:CG	54:B8:31:HIS:N	2.61	0.64
55:B9:24:LEU:HD22	55:B9:36:GLN:H	1.61	0.64
27:BA:1252:G:OP2	27:BA:1252:G:H4'	1.98	0.64
27:BA:2236:C:C2'	27:BA:2237:G:H5''	2.28	0.64
27:BA:2263:C:C3'	27:BA:2264:C:H5'	2.26	0.64
27:BA:953:A:O2'	27:BA:2266:A:OP2	2.12	0.64
27:BA:2578:G:N7	29:BE:237:ASN:OD1	2.30	0.64
27:BA:2725:A:N3	27:BA:2727:G:C8	2.65	0.64
27:BA:2737:G:C2	27:BA:2738:A:C5	2.85	0.64
27:BA:2843:G:C5	27:BA:2844:G:N7	2.66	0.64
27:BA:380:U:OP1	50:B4:16:TYR:HA	1.97	0.64
27:BA:930:U:H2'	27:BA:931:G:H1'	1.79	0.64
28:BD:60:GLN:N	28:BD:62:ARG:HH11	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:212:GLY:O	29:BE:214:VAL:N	2.30	0.64
29:BE:268:LEU:C	29:BE:297:LYS:HE2	2.18	0.64
27:BA:606:U:OP1	30:BF:105:LYS:HD2	1.95	0.64
30:BF:147:LEU:HD11	30:BF:156:LEU:CD1	2.02	0.64
30:BF:155:SER:O	30:BF:158:GLU:OE2	2.16	0.64
31:BG:75:LEU:O	31:BG:80:ALA:HB2	1.97	0.64
34:BN:15:ARG:CG	34:BN:43:ARG:CD	2.71	0.64
34:BN:40:ASN:O	34:BN:41:ALA:C	2.35	0.64
35:BO:101:PRO:HA	35:BO:120:GLU:O	1.97	0.64
36:BP:113:GLN:HB2	36:BP:115:ARG:CZ	2.27	0.64
37:BQ:35:ASN:N	37:BQ:75:SER:HA	2.12	0.64
44:BR:89:ASP:OD1	44:BR:90:ARG:HG3	1.95	0.64
35:BO:79:PHE:CA	39:BT:22:VAL:HG22	2.14	0.64
33:BI:80:PRO:O	33:BI:148:GLN:HG3	1.96	0.64
42:BY:29:ALA:O	42:BY:30:ASP:C	2.34	0.64
16:AM:92:HIS:CE1	16:AM:110:ARG:CZ	2.80	0.64
32:BH:53:ARG:CB	32:BH:56:ASP:OD1	2.21	0.64
1:AA:436:C:C2	1:AA:437:U:N3	2.65	0.64
1:AA:674:G:H2'	1:AA:675:A:C8	2.31	0.64
42:BY:4:PRO:O	42:BY:5:ASP:CB	2.45	0.64
1:AA:568:G:N3	1:AA:574:A:H2	1.95	0.64
1:AA:265:G:O2'	20:AQ:66:SER:HA	1.97	0.64
21:AR:46:GLU:HB3	21:AR:85:LEU:HD13	1.78	0.64
27:BA:1202:C:C2	27:BA:1243:G:N2	2.64	0.64
49:B0:37:LEU:C	49:B0:40:GLN:HG3	2.18	0.64
49:B0:48:GLY:HA2	49:B0:55:ARG:HA	1.79	0.64
50:B4:11:PRO:O	50:B4:12:CYS:HB2	1.96	0.64
40:BW:19:LEU:CD1	51:B5:25:LEU:CG	2.74	0.64
51:B5:46:CYS:H	51:B5:49:CYS:HB2	1.62	0.64
52:B6:19:GLY:CA	52:B6:44:ALA:HB2	2.23	0.64
27:BA:2212:A:C1'	27:BA:2213:U:C5	2.81	0.64
27:BA:2226:C:O2	27:BA:2227:A:C2'	2.46	0.64
27:BA:2239:G:C4	27:BA:2240:C:C5	2.86	0.64
27:BA:2259:G:N2	27:BA:2282:G:C2	2.66	0.64
27:BA:2511:U:H2'	27:BA:2512:C:C5'	2.27	0.64
27:BA:2472:G:H21	27:BA:2529:G:H1	1.46	0.64
27:BA:2662:A:C2	27:BA:2663:G:O4'	2.50	0.64
27:BA:2769:C:O2'	27:BA:2770:G:O5'	2.10	0.64
27:BA:2637:U:O2	27:BA:2782:G:C2	2.51	0.64
27:BA:446:G:C5'	45:BU:5:LYS:HZ1	2.10	0.64
28:BD:90:ILE:HG23	28:BD:91:ALA:N	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:204:VAL:O	29:BE:205:THR:C	2.34	0.64
29:BE:268:LEU:HD23	29:BE:295:LEU:O	1.97	0.64
29:BE:314:ALA:O	29:BE:315:VAL:O	2.15	0.64
30:BF:236:THR:O	30:BF:239:ALA:CA	2.46	0.64
31:BG:11:HIS:O	31:BG:15:GLU:HG3	1.98	0.64
35:BO:105:GLU:O	35:BO:108:ASP:N	2.31	0.64
35:BO:23:LYS:HG3	35:BO:24:VAL:N	2.10	0.64
35:BO:63:VAL:HG13	35:BO:102:VAL:HG13	0.64	0.64
36:BP:94:ARG:HG2	36:BP:120:LEU:HD23	1.71	0.64
44:BR:45:ARG:O	44:BR:49:ASP:HB2	1.98	0.64
38:BS:33:ARG:CB	38:BS:35:VAL:CG2	2.73	0.64
45:BU:61:TRP:O	45:BU:65:ILE:HG13	1.90	0.64
45:BU:88:ILE:CB	46:BV:52:GLY:HA2	2.28	0.64
46:BV:83:ARG:O	46:BV:84:THR:CG2	2.46	0.64
27:BA:326:G:H2'	27:BA:327:G:C8	2.32	0.64
1:AA:1367:C:OP1	12:AI:115:GLY:N	2.31	0.64
27:BA:1790:C:OP2	28:BD:224:VAL:HG13	1.98	0.64
27:BA:72:U:C5'	41:BX:2:TRP:CZ2	2.80	0.64
41:BX:25:GLN:CA	41:BX:26:PHE:CD1	2.81	0.64
33:BI:65:ALA:HB1	33:BI:134:HIS:CB	2.25	0.64
16:AM:3:ARG:NH1	31:BG:90:LEU:HD13	2.13	0.64
1:AA:801:U:H2'	1:AA:802:A:H8	1.62	0.64
27:BA:1742:C:H2'	27:BA:1743:G:O4'	1.98	0.64
48:B3:48:GLU:O	48:B3:51:ALA:CA	2.46	0.64
27:BA:1453:A:N6	44:BR:77:ARG:CD	2.52	0.64
27:BA:2097:C:H42	27:BA:2192:G:H1	1.46	0.64
27:BA:2447:G:C8	27:BA:2500:U:C5	2.84	0.64
27:BA:2452:C:N4	27:BA:2453:A:N6	2.46	0.64
27:BA:2561:A:C8	27:BA:2561:A:H3'	2.32	0.64
27:BA:2576:G:C3'	27:BA:2576:G:OP1	2.43	0.64
27:BA:2603:G:H2'	27:BA:2604:U:O5'	1.97	0.64
27:BA:2611:U:C3'	27:BA:2611:U:H6	2.10	0.64
27:BA:2717:G:C2	27:BA:2718:G:C4	2.76	0.64
27:BA:2748:A:H1'	32:BH:66:THR:HB	1.79	0.64
27:BA:2853:C:C3'	27:BA:2853:C:C6	2.81	0.64
27:BA:2881:C:C5	27:BA:2882:A:N7	2.66	0.64
27:BA:742:G:H4'	27:BA:1675:C:O2'	1.98	0.64
28:BD:166:LYS:O	28:BD:167:GLU:OE1	2.15	0.64
28:BD:175:LEU:HD12	28:BD:179:GLU:CA	2.27	0.64
29:BE:70:VAL:C	29:BE:71:THR:HG23	2.18	0.64
29:BE:72:VAL:O	29:BE:73:ILE:HD12	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:105:LYS:O	30:BF:106:GLU:C	2.36	0.64
30:BF:36:ARG:N	30:BF:39:GLN:NE2	2.46	0.64
31:BG:95:THR:HG22	31:BG:96:SER:H	1.62	0.64
32:BH:10:ILE:CD1	32:BH:49:ILE:HG12	2.25	0.64
32:BH:67:THR:O	32:BH:70:LEU:CB	2.46	0.64
34:BN:27:ALA:HB1	34:BN:30:ALA:HB3	1.79	0.64
34:BN:38:VAL:C	34:BN:39:VAL:HG22	2.17	0.64
27:BA:1140:C:C4	34:BN:49:ARG:CZ	2.79	0.64
34:BN:58:GLU:C	34:BN:61:VAL:HB	2.18	0.64
34:BN:93:ARG:O	34:BN:94:GLY:C	2.35	0.64
44:BR:20:LEU:CD2	44:BR:24:GLN:CD	2.66	0.64
44:BR:43:GLU:O	44:BR:44:LEU:C	2.35	0.64
39:BT:6:CYS:SG	39:BT:31:PHE:CD2	2.91	0.64
45:BU:53:LYS:CA	45:BU:56:ASP:OD2	2.43	0.64
45:BU:20:ARG:NH1	46:BV:75:LYS:NZ	2.46	0.64
40:BW:17:VAL:C	40:BW:20:VAL:HG23	2.19	0.64
40:BW:23:LEU:CD1	40:BW:35:ILE:CG2	2.76	0.64
37:BQ:74:ASN:CB	43:BZ:174:PRO:HB2	2.28	0.64
42:BY:103:LEU:CD2	42:BY:108:ARG:HB3	2.22	0.64
47:B2:49:LEU:O	47:B2:53:ILE:HG13	1.98	0.64
41:BX:33:SER:O	41:BX:37:VAL:N	2.26	0.64
41:BX:75:GLN:O	41:BX:77:VAL:N	2.31	0.64
3:AW:23:A:OP2	3:AW:45:G:O6	2.16	0.64
1:AA:522:C:H2'	1:AA:523:A:H8	1.62	0.64
51:B5:16:ARG:O	51:B5:19:ARG:CB	2.45	0.64
52:B6:41:ASP:CB	52:B6:46:LYS:NZ	2.47	0.64
27:BA:2227:A:C8	27:BA:2227:A:O5'	2.47	0.64
27:BA:2370:G:H2'	27:BA:2371:G:O5'	1.97	0.64
27:BA:2372:G:C2	27:BA:2373:G:C5	2.86	0.64
27:BA:2374:C:H2'	27:BA:2375:G:C8	2.33	0.64
27:BA:2386:C:H2'	27:BA:2387:U:C6	2.33	0.64
27:BA:2392:A:C8	27:BA:2393:A:N7	2.65	0.64
27:BA:2428:G:C3'	27:BA:2428:G:C8	2.80	0.64
27:BA:2543:G:N7	27:BA:2544:G:C5	2.62	0.64
27:BA:2564:A:C6	27:BA:2647:U:H4'	2.33	0.64
27:BA:2717:G:C6	27:BA:2718:G:N7	2.66	0.64
27:BA:2691:C:N4	27:BA:2719:G:N2	2.46	0.64
27:BA:2840:C:H2'	27:BA:2841:C:H6	1.59	0.64
27:BA:380:U:HO2'	50:B4:15:ILE:CB	2.06	0.64
27:BA:966:G:H1'	27:BA:2267:A:N6	2.13	0.64
27:BA:1819:A:P	28:BD:154:VAL:HA	2.38	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:65:ASP:OD1	28:BD:66:PHE:CA	2.44	0.64
28:BD:81:GLU:O	28:BD:82:TYR:O	2.16	0.64
29:BE:102:ASP:CG	29:BE:104:PHE:HE1	1.96	0.64
29:BE:228:ARG:O	29:BE:229:GLN:C	2.35	0.64
29:BE:44:TYR:CD2	29:BE:307:LEU:C	2.70	0.64
30:BF:145:GLU:HG3	30:BF:196:THR:HG21	1.79	0.64
30:BF:150:THR:CB	30:BF:207:LEU:HD21	2.28	0.64
30:BF:223:LEU:C	30:BF:231:ARG:HD2	2.17	0.64
31:BG:105:SER:OG	31:BG:131:THR:HG21	1.96	0.64
32:BH:122:ILE:HG12	32:BH:132:VAL:HG22	1.78	0.64
32:BH:41:THR:HB	32:BH:52:THR:OG1	1.97	0.64
34:BN:12:VAL:HG13	34:BN:13:ASP:N	1.95	0.64
34:BN:94:GLY:O	34:BN:95:ARG:O	2.16	0.64
27:BA:2685:G:OP1	35:BO:78:ARG:NH1	2.31	0.64
36:BP:64:ILE:CD1	36:BP:106:VAL:CG1	2.73	0.64
46:BV:59:GLU:OE2	46:BV:99:GLN:HG2	1.98	0.64
40:BW:24:ILE:CB	40:BW:32:ALA:HB1	2.28	0.64
27:BA:25:U:C4'	40:BW:79:GLY:HA3	2.25	0.64
27:BA:294:A:O2'	42:BY:15:PRO:CG	2.46	0.64
42:BY:101:LEU:O	42:BY:102:ASP:C	2.36	0.64
42:BY:46:ASP:N	42:BY:62:VAL:CB	2.61	0.64
42:BY:58:GLU:H	42:BY:97:ARG:NH1	1.96	0.64
1:AA:1014:A:N3	22:AS:34:TRP:CE3	2.66	0.64
6:AC:91:LEU:HD11	6:AC:99:VAL:CG2	2.22	0.64
27:BA:1332:G:C5	27:BA:1609:A:N6	2.65	0.64
12:AI:103:THR:HG22	12:AI:105:ASP:H	1.63	0.64
27:BA:1559:G:N1	27:BA:1560:G:H4'	2.13	0.64
7:AD:185:PHE:CE2	7:AD:189:PRO:HD3	2.32	0.64
27:BA:1804:C:H42	27:BA:1813:G:H1	1.46	0.64
14:AK:99:GLN:HG2	14:AK:105:VAL:HG11	1.78	0.64
49:B0:36:ILE:H	49:B0:68:VAL:CG2	2.10	0.64
51:B5:56:GLN:C	51:B5:57:VAL:HG23	2.18	0.64
52:B6:2:ALA:O	52:B6:4:ASP:OD1	2.16	0.64
27:BA:1993:U:H4'	29:BE:228:ARG:CZ	2.28	0.64
27:BA:2098:U:N3	27:BA:2191:G:N1	2.41	0.64
27:BA:2199:A:C3'	27:BA:2205:C:C6	2.76	0.64
27:BA:2093:G:C5	27:BA:2225:A:C5	2.86	0.64
27:BA:2252:G:O5'	27:BA:2252:G:H8	1.80	0.64
27:BA:2391:G:O2'	27:BA:2392:A:C5'	2.35	0.64
27:BA:2395:C:H5''	50:B4:28:ARG:HH11	1.59	0.64
27:BA:2446:G:C5'	27:BA:2446:G:C8	2.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2478:A:N7	27:BA:2479:G:N7	2.46	0.64
27:BA:2604:U:H2'	27:BA:2605:U:C5	2.33	0.64
27:BA:2605:U:C2'	27:BA:2606:C:C5'	2.76	0.64
27:BA:2626:C:OP2	27:BA:2626:C:C5	2.51	0.64
27:BA:2839:G:N1	27:BA:2840:C:C4	2.65	0.64
27:BA:673:C:H5'	30:BF:80:VAL:HG11	1.80	0.64
29:BE:93:GLN:O	29:BE:94:ARG:HG3	1.98	0.64
31:BG:21:VAL:HG22	31:BG:132:VAL:HG23	1.80	0.64
34:BN:54:VAL:HG11	34:BN:138:THR:CB	2.28	0.64
34:BN:41:ALA:HB1	34:BN:75:PRO:HB3	1.80	0.64
37:BQ:12:PRO:CB	37:BQ:20:ILE:CD1	2.73	0.64
44:BR:33:ARG:HB2	44:BR:115:GLU:HB3	1.77	0.64
44:BR:44:LEU:HD13	44:BR:48:VAL:HG21	0.68	0.64
45:BU:65:ILE:HD11	45:BU:96:ALA:HB2	1.76	0.64
40:BW:72:LYS:HB3	40:BW:106:ILE:HG21	1.80	0.64
1:AA:1198:G:O2'	13:AJ:54:PHE:CE2	2.28	0.64
47:B2:27:LEU:O	47:B2:30:ALA:HB3	1.97	0.64
27:BA:76:C:O3'	47:B2:55:ARG:HG3	1.98	0.64
43:BZ:96:VAL:HG13	43:BZ:97:PRO:CD	2.16	0.64
1:AA:65:U:H4'	1:AA:66:G:H5'	1.78	0.64
1:AA:404:U:H5'	7:AD:122:ARG:HD2	1.79	0.64
27:BA:1697:G:C3'	27:BA:1698:A:H5'	2.27	0.64
27:BA:1096:A:N1	56:BK:12:GLN:OE1	2.31	0.64
48:B3:1:MET:HE3	48:B3:3:ARG:CD	2.22	0.63
48:B3:26:LEU:HD21	48:B3:46:ASN:ND2	2.11	0.63
50:B4:9:ALA:O	50:B4:10:VAL:HG23	1.98	0.63
50:B4:6:HIS:CG	50:B4:56:VAL:CG2	2.62	0.63
53:B7:30:ILE:N	53:B7:33:ARG:HD2	2.11	0.63
53:B7:43:THR:O	53:B7:44:VAL:C	2.36	0.63
27:BA:2261:C:OP2	49:B0:14:ARG:CB	2.45	0.63
27:BA:2310:A:C4	31:BG:55:LYS:CE	2.81	0.63
27:BA:2313:C:C4	27:BA:2314:C:C4	2.85	0.63
27:BA:2345:G:C8	27:BA:2371:G:N2	2.66	0.63
27:BA:2065:C:N4	27:BA:2445:G:N1	2.40	0.63
27:BA:2717:G:C4	27:BA:2718:G:N7	2.60	0.63
27:BA:858:U:H5'	49:B0:20:TYR:OH	1.98	0.63
28:BD:103:ILE:HG12	28:BD:104:ILE:HD12	0.63	0.63
28:BD:174:ARG:CG	28:BD:174:ARG:NH1	2.49	0.63
29:BE:206:LYS:C	29:BE:257:GLY:CA	2.67	0.63
29:BE:256:THR:CA	29:BE:259:HIS:CE1	2.71	0.63
29:BE:201:VAL:HG13	29:BE:310:PHE:C	2.18	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:93:LEU:CD2	31:BG:97:GLN:OE1	2.36	0.63
32:BH:102:LEU:HD13	32:BH:122:ILE:HD13	1.79	0.63
32:BH:57:GLU:O	32:BH:58:LYS:C	2.37	0.63
32:BH:87:GLU:OE2	32:BH:162:ARG:CB	2.41	0.63
35:BO:17:ARG:C	35:BO:18:GLU:HG3	2.18	0.63
37:BQ:152:SER:O	37:BQ:155:GLY:N	2.30	0.63
44:BR:19:ALA:O	44:BR:20:LEU:O	2.14	0.63
45:BU:49:ASP:CA	45:BU:52:ASN:CG	2.59	0.63
40:BW:39:THR:OG1	40:BW:40:ASN:N	2.31	0.63
33:BI:68:LEU:CG	33:BI:108:LEU:HD11	2.26	0.63
42:BY:46:ASP:N	42:BY:62:VAL:HB	2.13	0.63
1:AA:1308:U:H5''	16:AM:110:ARG:HH22	1.57	0.63
41:BX:13:LYS:HA	41:BX:16:ASN:OD1	1.96	0.63
1:AA:940:C:H2'	1:AA:941:G:C8	2.33	0.63
27:BA:1416:G:H1'	27:BA:1583:A:N1	2.12	0.63
1:AA:450:G:H21	19:AP:13:HIS:CE1	2.16	0.63
27:BA:1365:A:H5''	50:B4:3:LYS:HE3	1.80	0.63
27:BA:1462:C:H4'	27:BA:2703:C:H5'	1.79	0.63
27:BA:2103:C:N3	27:BA:2187:G:C6	2.65	0.63
27:BA:2299:G:H2'	27:BA:2300:G:H8	1.63	0.63
27:BA:2319:G:P	27:BA:2320:A:OP1	2.56	0.63
27:BA:2429:G:H5''	27:BA:2430:A:OP2	1.95	0.63
27:BA:197:A:C6	27:BA:2430:A:N7	2.65	0.63
27:BA:2436:G:C2	27:BA:2437:U:N1	2.66	0.63
27:BA:2436:G:N1	27:BA:2437:U:N3	2.45	0.63
27:BA:2457:U:O2'	27:BA:2458:G:C5'	2.40	0.63
27:BA:2484:G:C1'	37:BQ:142:LYS:NZ	2.61	0.63
27:BA:2507:C:C5	27:BA:2508:G:N7	2.67	0.63
27:BA:2684:U:C1'	35:BO:70:ARG:HH22	1.83	0.63
27:BA:2700:C:H2'	27:BA:2701:C:O4'	1.97	0.63
27:BA:2864:G:C2'	27:BA:2865:U:H6	2.09	0.63
27:BA:631:A:H2	27:BA:2415:G:C2	2.17	0.63
27:BA:848:G:H2'	27:BA:849:A:H8	1.62	0.63
30:BF:1:MET:O	30:BF:18:LEU:HG	1.97	0.63
30:BF:39:GLN:O	30:BF:42:ARG:N	2.30	0.63
32:BH:123:GLU:O	32:BH:125:PRO:HD2	1.99	0.63
32:BH:126:SER:O	32:BH:128:THR:N	2.31	0.63
33:BI:9:VAL:O	33:BI:10:LYS:HB3	1.97	0.63
35:BO:43:VAL:HG11	35:BO:54:LYS:HA	1.80	0.63
35:BO:85:VAL:O	35:BO:87:ILE:CD1	2.45	0.63
36:BP:106:VAL:HG23	36:BP:123:ASP:H	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:118:ALA:O	37:BQ:119:ASN:CB	2.46	0.63
37:BQ:31:PHE:O	37:BQ:85:ILE:HD11	1.99	0.63
44:BR:55:ALA:CB	44:BR:79:LEU:HD21	2.28	0.63
38:BS:27:LEU:O	38:BS:28:LYS:C	2.36	0.63
45:BU:113:SER:O	45:BU:115:ASN:CA	2.46	0.63
27:BA:29:U:C4'	45:BU:11:ARG:NH1	2.11	0.63
27:BA:1156:A:N7	45:BU:55:ARG:NH2	2.45	0.63
40:BW:6:ILE:HG12	40:BW:7:ALA:H	1.63	0.63
27:BA:343:C:N3	27:BA:344:G:C2	2.66	0.63
42:BY:30:ASP:O	42:BY:31:LEU:C	2.37	0.63
42:BY:71:VAL:HG22	42:BY:93:THR:CA	2.28	0.63
43:BZ:3:LEU:O	43:BZ:56:VAL:CG2	2.46	0.63
26:BB:77:U:C5'	43:BZ:80:HIS:CE1	2.81	0.63
1:AA:1225:A:OP2	16:AM:104:ARG:HB2	1.96	0.63
41:BX:25:GLN:N	41:BX:26:PHE:CE1	2.66	0.63
11:AH:91:ARG:HG3	20:AQ:32:TYR:O	1.98	0.63
27:BA:1482:U:C3'	27:BA:1482:U:C6	2.80	0.63
1:AA:1376:U:C5'	10:AG:94:ARG:HH22	2.12	0.63
16:AM:15:VAL:O	16:AM:19:LEU:HG	1.98	0.63
50:B4:21:VAL:O	50:B4:22:MET:HB2	1.97	0.63
27:BA:2396:G:OP1	50:B4:28:ARG:CZ	2.47	0.63
50:B4:30:GLU:C	50:B4:31:ILE:CD1	2.47	0.63
51:B5:46:CYS:O	51:B5:49:CYS:N	2.28	0.63
27:BA:1032:A:P	55:B9:8:LYS:CG	2.87	0.63
27:BA:2234:G:N1	27:BA:2235:G:C4	2.66	0.63
27:BA:2317:C:C4	27:BA:2318:G:C6	2.87	0.63
27:BA:2349:G:OP2	54:B8:42:ARG:CZ	2.46	0.63
27:BA:2485:G:N3	27:BA:2486:G:C1'	2.61	0.63
27:BA:2616:C:H2'	27:BA:2617:C:C6	2.32	0.63
27:BA:2676:C:H3'	27:BA:2676:C:H6	1.61	0.63
27:BA:2786:U:H2'	27:BA:2787:C:H6	1.64	0.63
27:BA:825:C:C4'	27:BA:2428:G:O6	2.47	0.63
28:BD:103:ILE:C	28:BD:104:ILE:HD12	2.18	0.63
28:BD:131:LEU:O	28:BD:132:GLU:C	2.36	0.63
29:BE:198:TYR:CZ	29:BE:267:ARG:HB3	2.33	0.63
29:BE:222:ARG:CD	29:BE:232:ARG:O	2.45	0.63
27:BA:2679:A:C2'	29:BE:300:VAL:CG1	2.76	0.63
29:BE:47:GLY:HA2	29:BE:305:LYS:HG2	1.79	0.63
30:BF:211:ASP:O	30:BF:211:ASP:CG	2.36	0.63
30:BF:31:ILE:O	30:BF:32:GLY:C	2.36	0.63
31:BG:49:PRO:CG	31:BG:73:VAL:HG23	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:53:LYS:O	31:BG:54:ALA:HB2	1.97	0.63
32:BH:91:VAL:N	32:BH:159:LYS:CE	2.61	0.63
36:BP:114:VAL:CG2	36:BP:133:VAL:N	2.41	0.63
37:BQ:94:ARG:CG	37:BQ:107:LYS:H	2.10	0.63
37:BQ:130:PRO:HB2	37:BQ:134:PHE:CZ	2.34	0.63
37:BQ:134:PHE:O	37:BQ:137:ARG:CB	2.31	0.63
44:BR:22:ARG:HG3	44:BR:26:LYS:CE	2.22	0.63
44:BR:42:LYS:C	44:BR:43:GLU:OE2	2.36	0.63
45:BU:17:VAL:O	45:BU:20:ARG:HB2	1.99	0.63
46:BV:39:PHE:CD2	46:BV:41:GLY:N	2.66	0.63
46:BV:61:VAL:HG22	46:BV:97:GLY:C	2.19	0.63
46:BV:91:THR:O	46:BV:92:ALA:HB3	1.72	0.63
40:BW:24:ILE:HA	40:BW:35:ILE:HD13	1.79	0.63
43:BZ:67:LYS:CA	43:BZ:67:LYS:HZ2	2.05	0.63
33:BI:79:ILE:HD12	33:BI:79:ILE:N	2.14	0.63
42:BY:46:ASP:N	42:BY:62:VAL:HG11	2.12	0.63
42:BY:74:VAL:CB	42:BY:77:VAL:CG2	2.70	0.63
42:BY:46:ASP:CG	42:BY:98:VAL:CG1	2.67	0.63
1:AA:985:C:H2'	1:AA:986:A:C8	2.32	0.63
1:AA:1059:C:O2'	13:AJ:53:PRO:HD2	1.98	0.63
1:AA:1199:U:H4'	13:AJ:54:PHE:CZ	2.33	0.63
41:BX:26:PHE:HD1	41:BX:26:PHE:N	1.94	0.63
41:BX:6:LYS:HZ2	41:BX:29:ASP:CA	2.08	0.63
1:AA:1315:U:OP2	22:AS:6:LYS:CE	2.46	0.63
1:AA:429:U:OP2	7:AD:13:ARG:NE	2.32	0.63
27:BA:414:C:C2	27:BA:2409:G:N2	2.64	0.63
27:BA:2261:C:H3'	49:B0:14:ARG:NH2	2.14	0.63
27:BA:397:G:H5''	50:B4:59:PHE:CZ	2.30	0.63
54:B8:4:MET:SD	54:B8:4:MET:N	2.72	0.63
27:BA:2067:G:H1	27:BA:2443:C:H42	1.44	0.63
27:BA:830:G:N9	27:BA:2448:A:N7	2.45	0.63
27:BA:2059:A:C5	27:BA:2503:A:N7	2.67	0.63
27:BA:2579:C:O2'	27:BA:2580:U:H5'	1.96	0.63
27:BA:2620:C:H4'	29:BE:252:GLN:HG2	1.80	0.63
27:BA:2619:C:H2'	27:BA:2620:C:O5'	1.98	0.63
27:BA:2644:G:P	27:BA:2644:G:H8	2.21	0.63
27:BA:2653:U:N1	27:BA:2654:A:N7	2.46	0.63
27:BA:2737:G:C6	27:BA:2767:C:N4	2.57	0.63
27:BA:2861:G:C8	27:BA:2861:G:H5''	2.26	0.63
27:BA:2898:U:C2	27:BA:2899:G:C8	2.86	0.63
27:BA:558:G:OP2	34:BN:91:LYS:CB	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:105:ALA:H	28:BD:106:PRO:HD3	1.61	0.63
28:BD:175:LEU:HD21	28:BD:180:VAL:C	2.19	0.63
28:BD:75:GLY:HA3	28:BD:115:ILE:C	2.17	0.63
29:BE:175:ASP:O	29:BE:176:HIS:C	2.35	0.63
29:BE:192:ILE:O	29:BE:194:ARG:HG2	1.99	0.63
29:BE:217:TRP:CE2	29:BE:251:PRO:HB3	2.33	0.63
29:BE:45:LYS:N	29:BE:74:GLU:OE1	2.31	0.63
30:BF:103:ASN:O	30:BF:104:ASP:C	2.33	0.63
30:BF:20:ASP:O	30:BF:21:VAL:C	2.36	0.63
31:BG:20:LYS:HA	31:BG:76:ARG:CG	2.28	0.63
27:BA:270(O):U:C5	33:BI:53:LYS:NZ	2.65	0.63
34:BN:47:THR:O	34:BN:53:ILE:HD11	1.98	0.63
35:BO:14:SER:OG	35:BO:86:ILE:HD12	1.98	0.63
36:BP:94:ARG:H	36:BP:94:ARG:HD2	1.63	0.63
37:BQ:143:VAL:CG2	37:BQ:144:THR:H	2.06	0.63
37:BQ:66:ASN:O	37:BQ:68:ALA:N	2.31	0.63
37:BQ:33:MET:C	37:BQ:83:PHE:HB2	2.18	0.63
44:BR:20:LEU:C	44:BR:22:ARG:N	2.52	0.63
45:BU:94:VAL:O	45:BU:98:ILE:HD13	0.82	0.63
46:BV:49:GLU:CA	46:BV:53:LYS:HD2	2.28	0.63
33:BI:95:SER:C	33:BI:98:ILE:CB	2.53	0.63
27:BA:291:C:C2'	27:BA:292:C:H5'	2.28	0.63
27:BA:322:A:N3	27:BA:341:G:C8	2.67	0.63
42:BY:20:HIS:HA	42:BY:67:LEU:CD2	2.27	0.63
42:BY:55:PHE:HE2	42:BY:89:ARG:HH22	1.46	0.63
26:BB:75:G:C1'	43:BZ:22:VAL:CG2	2.74	0.63
43:BZ:55:THR:HG23	43:BZ:58:GLY:HA2	1.80	0.63
27:BA:1789:A:C4'	28:BD:224:VAL:CG1	2.76	0.63
1:AA:1287:A:N6	1:AA:1371:G:C4'	2.59	0.63
1:AA:600:C:H4'	11:AH:128:GLY:O	1.98	0.63
2:AV:57:G:H2'	2:AV:58:A:H5"	1.80	0.63
49:B0:36:ILE:N	49:B0:68:VAL:HG22	2.12	0.63
49:B0:69:PHE:C	49:B0:70:ILE:HG23	2.17	0.63
48:B3:53:LEU:HD23	48:B3:53:LEU:O	1.99	0.63
50:B4:63:PHE:HD2	50:B4:69:ARG:NH2	1.96	0.63
40:BW:19:LEU:CD1	51:B5:25:LEU:HG	2.28	0.63
53:B7:8:ASN:HB2	53:B7:11:LYS:HB2	1.80	0.63
27:BA:2043:C:C5	27:BA:2777:G:C1'	2.67	0.63
27:BA:2353:G:H1	27:BA:2364:C:H41	1.31	0.63
27:BA:2396:G:H2'	27:BA:2396:G:N3	2.11	0.63
27:BA:199:A:N7	27:BA:2434:A:N6	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2616:C:C2	27:BA:2617:C:C6	2.86	0.63
27:BA:2655:G:C2'	27:BA:2655:G:N3	2.61	0.63
27:BA:2657:A:C6	27:BA:2665:A:C5	2.86	0.63
27:BA:2689:U:O4'	27:BA:2713:A:H2	1.79	0.63
27:BA:2803:C:H2'	27:BA:2803:C:O2	1.99	0.63
27:BA:2845:G:O2'	27:BA:2846:G:C4'	2.41	0.63
27:BA:2881:C:HO2'	27:BA:2882:A:P	2.21	0.63
27:BA:533:G:HO2'	45:BU:45:TYR:HD2	1.44	0.63
27:BA:584:C:N4	27:BA:1256:G:H1	1.94	0.63
27:BA:2712:U:O2'	27:BA:712(A):A:OP1	2.16	0.63
27:BA:904:C:H1'	43:BZ:166:LEU:CD2	2.28	0.63
31:BG:93:LEU:CD2	31:BG:106:PHE:HD2	1.94	0.63
32:BH:87:GLU:CG	32:BH:162:ARG:O	2.34	0.63
34:BN:19:MET:HG2	34:BN:132:LEU:HD11	1.80	0.63
34:BN:5:GLU:N	34:BN:109:TYR:HE2	1.97	0.63
37:BQ:91:HIS:H	37:BQ:111:THR:CG2	2.09	0.63
37:BQ:47:GLU:OE2	37:BQ:151:SER:HA	1.99	0.63
38:BS:87:LEU:O	38:BS:90:LEU:HB2	1.97	0.63
46:BV:61:VAL:HG12	46:BV:95:ILE:HG22	0.70	0.63
33:BI:108:LEU:HD23	33:BI:109:LYS:N	2.13	0.63
33:BI:145:VAL:O	33:BI:146:THR:HB	1.98	0.63
43:BZ:47:SER:O	43:BZ:48:THR:C	2.35	0.63
28:BD:139:LEU:O	28:BD:139:LEU:HD13	1.92	0.63
1:AA:1347:G:H3'	12:AI:108:VAL:CA	2.27	0.63
1:AA:1025:U:H2'	1:AA:1026:G:C8	2.33	0.63
27:BA:1805:U:C5'	28:BD:235:PRO:CB	2.76	0.63
1:AA:450:G:H4'	19:AP:42:ARG:HG2	1.79	0.63
27:BA:1779:U:H3'	27:BA:1779:U:C6	2.34	0.63
27:BA:259:G:H2'	27:BA:260:G:H8	1.63	0.63
14:AK:61:ALA:HB1	14:AK:94:ALA:HB2	1.81	0.63
49:B0:46:LYS:CD	49:B0:46:LYS:N	2.60	0.63
50:B4:17:GLN:CB	50:B4:33:VAL:HB	2.28	0.63
51:B5:31:THR:OG1	51:B5:32:GLU:N	2.32	0.63
27:BA:1012:U:O2	34:BN:21:ARG:NE	2.31	0.63
27:BA:2189:U:C2'	27:BA:2190:G:H8	2.12	0.63
27:BA:2100:G:C1'	27:BA:2190:G:N2	2.61	0.63
27:BA:2252:G:H3'	27:BA:2252:G:H8	1.63	0.63
27:BA:2314:C:O2'	27:BA:2315:G:H5'	1.96	0.63
27:BA:2509:G:C2	27:BA:2580:U:C2	2.87	0.63
27:BA:2619:C:H2'	27:BA:2620:C:C5'	2.28	0.63
27:BA:2712:U:H2'	27:BA:712(A):A:C4'	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1664:A:N3	27:BA:2726:U:N3	2.46	0.63
27:BA:2774:C:C6	27:BA:2774:C:H5'	2.34	0.63
27:BA:2637:U:N3	27:BA:2782:G:N1	2.47	0.63
27:BA:2887:U:N3	27:BA:2888:C:C5	2.66	0.63
27:BA:585:G:C6	27:BA:1251:C:C5	2.85	0.63
28:BD:179:GLU:C	28:BD:180:VAL:HG23	2.19	0.63
29:BE:211:GLN:N	29:BE:216:ARG:NH1	2.45	0.63
34:BN:12:VAL:CB	34:BN:38:VAL:HG21	2.29	0.63
34:BN:60:ARG:CB	34:BN:71:TYR:HD2	2.10	0.63
35:BO:17:ARG:HH21	35:BO:47:THR:C	2.02	0.63
44:BR:44:LEU:HD13	44:BR:48:VAL:HG23	1.73	0.63
44:BR:72:ASP:C	44:BR:76:VAL:CG2	2.65	0.63
31:BG:145:ASP:HB3	38:BS:15:GLU:HA	1.80	0.63
45:BU:28:ARG:O	45:BU:29:SER:C	2.36	0.63
27:BA:994:C:HO2'	45:BU:54:LYS:HG2	1.64	0.63
46:BV:57:GLN:O	46:BV:58:ALA:CB	2.47	0.63
42:BY:51:LEU:HD23	42:BY:52:ARG:HG3	1.81	0.63
1:AA:1308:U:H3'	16:AM:99:ARG:HH12	1.63	0.63
47:B2:48:GLU:O	47:B2:51:LYS:N	2.32	0.63
3:AW:1:G:N2	3:AW:2:C:C4	2.61	0.63
1:AA:946:A:O2'	1:AA:1333:A:H1'	1.99	0.63
41:BX:76:GLU:CD	41:BX:77:VAL:HG23	2.19	0.63
3:AW:9:A:C6	3:AW:45:G:C2	2.87	0.63
39:BT:45:GLU:O	39:BT:48:ASN:OD1	2.17	0.63
1:AA:255:G:H1'	20:AQ:16:GLN:HE21	1.63	0.63
27:BA:2651:C:C2	27:BA:2670:A:C2	2.85	0.63
1:AA:971:G:C5	1:AA:1365:G:H5'	2.34	0.63
1:AA:20:U:C2	1:AA:916:G:C2	2.87	0.63
1:AA:813:U:OP1	1:AA:904:C:C5'	2.46	0.63
1:AA:789:U:O2	1:AA:792:A:C8	2.51	0.63
27:BA:162:U:H4'	27:BA:171:G:H21	1.64	0.63
27:BA:17:G:P	51:B5:13:LYS:HZ2	2.19	0.63
52:B6:11:LYS:HE2	52:B6:26:LYS:HE2	1.80	0.63
54:B8:50:LEU:CD2	54:B8:51:ALA:CA	2.68	0.63
54:B8:52:LYS:C	54:B8:54:GLU:N	2.31	0.63
55:B9:7:VAL:CG2	55:B9:36:GLN:HG3	2.29	0.63
27:BA:1664:A:H8	27:BA:1664:A:H3'	1.63	0.63
27:BA:2234:G:C5	27:BA:2235:G:N7	2.66	0.63
27:BA:2241:A:H2'	27:BA:2242:G:H8	1.64	0.63
27:BA:2462:U:H1'	27:BA:2491:U:O4	1.99	0.63
27:BA:1129:A:N1	27:BA:2570:G:C1'	2.60	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:511:U:H5	27:BA:512:G:N3	1.97	0.63
27:BA:1818:U:C4'	28:BD:155:ARG:HG2	2.26	0.63
27:BA:2680:C:C4'	29:BE:300:VAL:HA	2.29	0.63
29:BE:201:VAL:HG13	29:BE:310:PHE:O	1.99	0.63
29:BE:80:ALA:CB	29:BE:187:HIS:NE2	2.61	0.63
30:BF:102:LEU:HB2	30:BF:107:ARG:CZ	2.26	0.63
30:BF:6:TYR:CD1	30:BF:139:VAL:HG12	2.34	0.63
30:BF:168:ARG:C	30:BF:193:LEU:HG	2.19	0.63
31:BG:141:VAL:HA	31:BG:144:ARG:NH1	2.13	0.63
31:BG:47:GLN:HE21	31:BG:79:MET:HG3	1.63	0.63
32:BH:41:THR:HG22	32:BH:52:THR:HG21	1.79	0.63
32:BH:40:MET:CB	32:BH:64:HIS:CE1	2.81	0.63
32:BH:71:LEU:O	32:BH:72:ALA:C	2.37	0.63
36:BP:114:VAL:HG21	36:BP:133:VAL:H	1.54	0.63
37:BQ:142:LYS:HE3	37:BQ:142:LYS:HA	1.79	0.63
45:BU:59:ARG:O	45:BU:60:LEU:C	2.36	0.63
46:BV:93:ILE:C	46:BV:95:ILE:HD11	2.19	0.63
43:BZ:112:LEU:HD21	43:BZ:172:LEU:N	2.14	0.63
42:BY:41:ARG:HD2	42:BY:111:ARG:HA	1.81	0.63
42:BY:41:ARG:C	42:BY:112:LEU:CB	2.62	0.63
43:BZ:26:LYS:HG2	43:BZ:27:GLU:HG3	1.81	0.63
43:BZ:64:ALA:HB1	43:BZ:84:TYR:O	1.99	0.63
27:BA:67:U:H2'	27:BA:68:G:C8	2.34	0.63
32:BH:169:ARG:HE	32:BH:169:ARG:HA	1.64	0.63
27:BA:1906:G:C5	27:BA:1929:G:C6	2.86	0.63
27:BA:1555:G:C8	27:BA:1555:G:O5'	2.51	0.63
27:BA:1556:C:H2'	27:BA:1557:C:H6	1.64	0.63
5:AB:103:THR:O	5:AB:104:ASN:HB2	1.99	0.63
49:B0:68:VAL:O	49:B0:69:PHE:HB2	1.93	0.63
52:B6:2:ALA:CB	52:B6:11:LYS:HE3	2.28	0.63
27:BA:2421:G:P	52:B6:2:ALA:O	2.56	0.63
54:B8:16:ILE:CG2	54:B8:22:VAL:HG22	2.29	0.63
55:B9:7:VAL:CG1	55:B9:34:GLN:NE2	2.60	0.63
27:BA:1287:A:H5''	44:BR:104:ARG:CG	2.29	0.63
27:BA:142(A):A:OP2	27:BA:1143:A:C8	2.52	0.63
27:BA:2093:G:N9	27:BA:2198:A:N1	2.47	0.63
27:BA:2286:A:C5'	27:BA:2287:A:H4'	2.17	0.63
27:BA:2369:A:O2'	27:BA:2370:G:H5'	1.98	0.63
27:BA:2395:C:C3'	27:BA:2395:C:H6	2.09	0.63
27:BA:2398:U:O5'	27:BA:2398:U:H6	1.82	0.63
27:BA:2586:C:O2	27:BA:2587:A:C8	2.52	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2615:U:C2'	27:BA:2616:C:C5'	2.75	0.63
27:BA:2624:G:H1'	51:B5:22:HIS:HE2	1.64	0.63
27:BA:2716:U:O2'	27:BA:2717:G:H5''	1.98	0.63
27:BA:2843:G:C5	27:BA:2844:G:C8	2.87	0.63
27:BA:590:A:H4'	30:BF:97:ASP:OD2	1.99	0.63
27:BA:614:U:H3'	27:BA:615:G:C4'	2.19	0.63
27:BA:675:A:OP1	30:BF:69:HIS:O	2.16	0.63
28:BD:110:LYS:HA	28:BD:110:LYS:CE	2.29	0.63
29:BE:79:ARG:NH1	29:BE:105:HIS:N	2.32	0.63
29:BE:176:HIS:O	29:BE:179:ASP:CG	2.36	0.63
27:BA:2052:G:N2	29:BE:245:ARG:CG	2.44	0.63
27:BA:673:C:H5'	30:BF:80:VAL:CG1	2.29	0.63
31:BG:141:VAL:HA	31:BG:144:ARG:HH11	1.62	0.63
32:BH:127:GLN:CG	32:BH:128:THR:N	2.61	0.63
32:BH:34:ARG:HH12	32:BH:73:ASN:CB	2.07	0.63
33:BI:39:ALA:O	33:BI:44:LEU:HG	1.99	0.63
34:BN:58:GLU:CA	34:BN:61:VAL:HB	2.29	0.63
36:BP:145:LEU:HD12	36:BP:145:LEU:N	2.04	0.63
36:BP:77:ALA:HA	36:BP:81:VAL:CG2	2.16	0.63
37:BQ:130:PRO:O	37:BQ:133:GLU:N	2.31	0.63
37:BQ:50:VAL:HG13	37:BQ:51:GLU:OE1	1.98	0.63
37:BQ:85:ILE:N	37:BQ:85:ILE:HD12	2.14	0.63
44:BR:22:ARG:HG2	44:BR:26:LYS:HZ1	1.63	0.63
44:BR:36:THR:HG21	44:BR:40:LYS:HD3	1.79	0.63
38:BS:76:GLY:O	38:BS:82:TYR:CA	2.45	0.63
45:BU:43:ALA:C	45:BU:45:TYR:N	2.51	0.63
45:BU:93:LYS:O	45:BU:94:VAL:HB	1.99	0.63
46:BV:71:ILE:C	46:BV:88:GLN:HG3	2.20	0.63
43:BZ:160:LEU:N	43:BZ:160:LEU:HD12	2.13	0.63
33:BI:133:LEU:HD12	33:BI:139:ALA:CB	2.12	0.63
27:BA:99:U:N3	42:BY:107:LYS:CD	2.61	0.63
27:BA:294:A:O2'	42:BY:15:PRO:HG3	1.99	0.63
27:BA:1566:A:N1	28:BD:212:HIS:CE1	2.66	0.63
47:B2:31:ARG:C	47:B2:34:GLN:N	2.51	0.63
41:BX:23:LYS:O	41:BX:68:LEU:CD2	2.46	0.63
41:BX:6:LYS:HD2	41:BX:27:ALA:CB	2.28	0.63
7:AD:10:ARG:O	7:AD:13:ARG:HB2	1.99	0.63
8:AE:17:ALA:HA	8:AE:26:PHE:HB3	1.78	0.63
1:AA:17:U:C2	1:AA:919:A:C2	2.86	0.63
1:AA:509:A:H8	7:AD:54:TYR:CE2	2.15	0.63
1:AA:1418:A:H8	1:AA:1419:G:O4'	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:18:PRO:HB2	49:B0:36:ILE:HD13	1.79	0.63
49:B0:49:GLN:HE21	49:B0:49:GLN:N	1.97	0.63
50:B4:58:LYS:HD2	50:B4:62:ARG:NH2	2.11	0.63
51:B5:18:MET:O	51:B5:19:ARG:O	2.17	0.63
53:B7:33:ARG:O	53:B7:34:ARG:C	2.36	0.63
54:B8:16:ILE:HG22	54:B8:17:THR:N	2.14	0.63
27:BA:1077:A:O3'	56:BK:93:LYS:CG	2.47	0.63
27:BA:1270:C:C4'	27:BA:1271:G:H5''	2.23	0.63
27:BA:2051:A:C4'	29:BE:238:LEU:CD2	2.71	0.63
27:BA:2093:G:C4	27:BA:2198:A:N1	2.65	0.63
27:BA:2287:A:C2	27:BA:2289:G:O4'	2.39	0.63
27:BA:2322:A:N3	27:BA:2322:A:H2'	2.14	0.63
27:BA:2395:C:H6	27:BA:2395:C:O5'	1.81	0.63
27:BA:2436:G:C6	27:BA:2437:U:C5	2.87	0.63
27:BA:2628:C:H1'	27:BA:2781:A:C2'	2.20	0.63
27:BA:2689:U:N1	27:BA:2713:A:C6	2.62	0.63
27:BA:2737:G:C6	27:BA:2738:A:N6	2.66	0.63
27:BA:388:G:P	50:B4:29:PRO:CG	2.82	0.63
27:BA:14:A:N1	27:BA:526:A:C6	2.66	0.63
27:BA:627:A:H2'	27:BA:628:G:O4'	1.99	0.63
28:BD:116:MET:O	28:BD:117:SER:OG	2.17	0.63
29:BE:211:GLN:H	29:BE:216:ARG:NH2	1.93	0.63
27:BA:1255:U:O4	30:BF:67:GLN:O	2.17	0.63
31:BG:23:VAL:HG12	31:BG:130:VAL:HB	1.81	0.63
31:BG:135:VAL:CG1	31:BG:135:VAL:O	2.47	0.63
33:BI:5:PHE:C	33:BI:36:ALA:CB	2.66	0.63
35:BO:31:ARG:C	35:BO:32:TYR:CG	2.72	0.63
36:BP:113:GLN:O	36:BP:114:VAL:C	2.35	0.63
36:BP:71:GLU:C	36:BP:73:VAL:N	2.52	0.63
37:BQ:51:GLU:CA	37:BQ:118:ALA:HB2	2.18	0.63
37:BQ:127:ASN:HB2	37:BQ:128:PRO:CD	2.29	0.63
44:BR:22:ARG:HG2	44:BR:26:LYS:NZ	2.14	0.63
38:BS:33:ARG:CB	38:BS:35:VAL:HG23	2.29	0.63
43:BZ:119:ASN:HB3	43:BZ:120:LEU:CD2	2.29	0.63
43:BZ:123:VAL:HB	43:BZ:159:THR:HG23	1.81	0.63
33:BI:141:LEU:HD13	33:BI:142:LYS:CA	2.29	0.63
26:BB:75:G:C4	43:BZ:22:VAL:HG21	2.34	0.63
43:BZ:15:ASP:O	43:BZ:16:GLU:CB	2.46	0.63
43:BZ:42:ALA:O	43:BZ:43:PHE:C	2.36	0.63
1:AA:587:G:OP1	11:AH:92:ARG:NH2	2.32	0.63
42:BY:84:GLY:O	42:BY:85:GLU:C	2.37	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:66:LYS:O	33:BI:69:LYS:HE2	1.99	0.63
42:BY:81:LYS:HG2	42:BY:82:THR:N	2.12	0.63
1:AA:1285:A:H4'	1:AA:1286:A:O5'	1.98	0.63
27:BA:354:G:N3	27:BA:355:G:N7	2.47	0.63
27:BA:1306:C:H2'	27:BA:1307:A:O4'	1.99	0.63
2:AV:61:C:H2'	2:AV:62:A:H8	1.64	0.62
52:B6:21:TYR:HE1	52:B6:43:VAL:HG21	1.64	0.62
52:B6:40:TYR:H	52:B6:50:PHE:HE1	1.36	0.62
27:BA:125:G:C2	53:B7:10:ARG:HA	2.34	0.62
27:BA:1786:A:H2	27:BA:2590:A:C1'	2.04	0.62
27:BA:965:C:C4'	27:BA:2273:A:C2	2.82	0.62
27:BA:2579:C:H3'	27:BA:2579:C:C6	2.34	0.62
27:BA:2051:A:C2	27:BA:2618:G:O6	2.51	0.62
27:BA:2620:C:C4'	29:BE:252:GLN:CG	2.76	0.62
27:BA:2663:G:C8	27:BA:2664:G:N7	2.67	0.62
27:BA:2819:G:C3'	27:BA:2821:A:N6	2.42	0.62
27:BA:531:C:H3'	27:BA:532:A:H4'	1.79	0.62
27:BA:674:G:H4'	30:BF:69:HIS:HA	1.81	0.62
28:BD:116:MET:HG2	28:BD:117:SER:H	1.63	0.62
28:BD:161:ALA:N	28:BD:162:GLN:NE2	2.45	0.62
28:BD:160:SER:O	28:BD:176:ALA:CB	2.47	0.62
28:BD:85:ASN:ND2	28:BD:86:ARG:HD2	2.14	0.62
29:BE:251:PRO:O	29:BE:252:GLN:NE2	2.32	0.62
31:BG:57:THR:N	31:BG:63:ILE:HA	2.13	0.62
32:BH:23:VAL:HG11	32:BH:74:MET:SD	2.39	0.62
33:BI:43:ASN:O	33:BI:44:LEU:C	2.35	0.62
34:BN:20:GLY:C	34:BN:22:VAL:H	2.00	0.62
34:BN:83:ILE:HG12	34:BN:84:ARG:H	1.48	0.62
34:BN:95:ARG:O	34:BN:97:ALA:N	2.32	0.62
36:BP:104:ASP:O	36:BP:105:TYR:CB	2.46	0.62
37:BQ:88:PHE:CB	37:BQ:90:PHE:CE1	2.60	0.62
45:BU:13:ARG:H	45:BU:13:ARG:NH1	1.95	0.62
33:BI:112:LYS:HD3	33:BI:112:LYS:H	1.60	0.62
33:BI:133:LEU:H	33:BI:138:THR:HG22	1.61	0.62
33:BI:83:ALA:HB2	33:BI:89:LEU:HA	1.80	0.62
42:BY:55:PHE:O	42:BY:58:GLU:HB2	1.97	0.62
1:AA:1360:A:C8	17:AN:18:VAL:HG12	2.34	0.62
47:B2:24:LYS:O	47:B2:26:GLU:OE2	2.17	0.62
47:B2:5:VAL:HG12	47:B2:6:GLN:H	0.54	0.62
41:BX:33:SER:H	41:BX:36:GLU:HG3	1.63	0.62
27:BA:95:G:P	47:B2:41:GLU:OE1	2.57	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:299:G:H2'	1:AA:300:A:C8	2.34	0.62
1:AA:173:U:H4'	1:AA:197:A:H5'	1.80	0.62
27:BA:2896:C:C3'	27:BA:2896:C:H6	2.12	0.62
27:BA:8:A:C2	27:BA:2896:C:O2	2.52	0.62
1:AA:25:C:H4'	1:AA:524:G:C2	2.34	0.62
1:AA:398:C:H2'	1:AA:399:G:C8	2.34	0.62
27:BA:1899:G:N2	27:BA:1902:C:H41	1.96	0.62
27:BA:1496:A:C8	27:BA:1496:A:O5'	2.51	0.62
1:AA:1095:U:OP1	1:AA:1108:G:N2	2.31	0.62
1:AA:1498:U:H1'	1:AA:1499:A:N7	2.14	0.62
27:BA:2355:C:H5'	49:B0:21:LEU:HD22	1.80	0.62
27:BA:2352:A:H2	49:B0:30:VAL:HG12	0.85	0.62
48:B3:50:VAL:O	48:B3:53:LEU:N	2.27	0.62
51:B5:15:LYS:O	51:B5:16:ARG:O	2.17	0.62
27:BA:2421:G:OP1	52:B6:4:ASP:OD1	2.17	0.62
27:BA:1655:A:H4'	29:BE:211:GLN:HA	1.80	0.62
27:BA:197:A:C5	27:BA:2430:A:N7	2.67	0.62
27:BA:2061:G:C1'	27:BA:2503:A:C2	2.82	0.62
27:BA:2320:A:C6	38:BS:9:PRO:CG	2.79	0.62
27:BA:2434:A:HO2'	27:BA:2435:A:P	2.22	0.62
27:BA:2450:A:H5''	27:BA:2497:A:H61	1.53	0.62
27:BA:2475:C:O2'	27:BA:2477:C:P	2.57	0.62
27:BA:2447:G:C2	27:BA:2500:U:C4	2.85	0.62
27:BA:2533:A:H2'	27:BA:2534:A:H8	1.64	0.62
27:BA:2615:U:H2'	27:BA:2616:C:H6	1.63	0.62
27:BA:2842:G:H1	27:BA:2875:C:H42	1.47	0.62
27:BA:2838:G:C2	27:BA:2881:C:C2	2.87	0.62
27:BA:2894:G:H2'	27:BA:2894:G:N3	2.14	0.62
30:BF:104:ASP:HB2	30:BF:105:LYS:HD2	1.81	0.62
32:BH:128:THR:HG23	32:BH:129:LYS:N	2.14	0.62
35:BO:101:PRO:CA	35:BO:120:GLU:O	2.47	0.62
35:BO:11:ALA:C	35:BO:99:PHE:HB2	2.18	0.62
36:BP:125:PHE:H	36:BP:130:ARG:HH21	1.47	0.62
36:BP:61:ALA:CB	36:BP:107:LYS:NZ	2.62	0.62
44:BR:96:ARG:HG2	44:BR:115:GLU:HG3	1.81	0.62
38:BS:20:TYR:CD2	38:BS:21:HIS:HD2	2.17	0.62
38:BS:86:LEU:CD2	38:BS:124:ASP:CB	2.76	0.62
46:BV:59:GLU:HG2	46:BV:100:GLY:H	1.63	0.62
43:BZ:151:ASP:HB3	43:BZ:153:LYS:HZ1	1.60	0.62
33:BI:133:LEU:HB2	33:BI:138:THR:HA	1.80	0.62
43:BZ:40:ASP:HB2	43:BZ:41:ARG:HE	1.60	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1358:U:OP1	17:AN:34:TYR:CA	2.47	0.62
41:BX:25:GLN:OE1	41:BX:25:GLN:HA	1.98	0.62
41:BX:52:VAL:C	41:BX:53:ASN:HD22	2.02	0.62
13:AJ:11:PHE:CZ	17:AN:55:GLY:HA3	2.34	0.62
1:AA:940:C:H2'	1:AA:941:G:H8	1.64	0.62
1:AA:1286:A:H1'	24:AU:22:ARG:HH21	1.63	0.62
27:BA:324:A:N6	27:BA:339:U:H1'	2.12	0.62
27:BA:1801:G:C8	27:BA:1801:G:OP1	2.47	0.62
42:BY:109:GLU:HG2	42:BY:109:GLU:O	1.97	0.62
49:B0:43:THR:HG23	49:B0:75:GLY:HA3	1.72	0.62
50:B4:73:LYS:CG	50:B4:73:LYS:OXT	2.43	0.62
52:B6:42:PRO:O	52:B6:44:ALA:N	2.32	0.62
27:BA:2077:A:H2	27:BA:2244:U:C2	2.17	0.62
27:BA:2080:G:C6	27:BA:2241:A:N1	2.67	0.62
27:BA:2398:U:C3'	27:BA:2398:U:C6	2.82	0.62
27:BA:2418:A:C2'	27:BA:2419:U:O4'	2.47	0.62
27:BA:2507:C:N4	27:BA:2582:G:N1	2.47	0.62
27:BA:2605:U:HO2'	27:BA:2606:C:P	2.20	0.62
27:BA:2608:G:C8	27:BA:2608:G:H3'	2.34	0.62
27:BA:2671:A:H2'	27:BA:2672:G:C8	2.34	0.62
27:BA:2692:C:H2'	27:BA:2693:A:O5'	2.00	0.62
27:BA:2709:G:C3'	27:BA:2710:C:H5'	2.28	0.62
27:BA:2745:C:C2'	27:BA:2746:U:O5'	2.46	0.62
27:BA:2779:U:H5'	27:BA:2781:A:C8	2.35	0.62
27:BA:2837:G:C6	27:BA:2882:A:C6	2.87	0.62
27:BA:464:U:O2'	53:B7:12:ARG:NH2	2.32	0.62
27:BA:907:U:O2'	37:BQ:88:PHE:CE1	2.52	0.62
27:BA:931:G:P	48:B3:27:GLY:CA	2.87	0.62
28:BD:197:GLY:O	28:BD:199:ARG:N	2.32	0.62
30:BF:103:ASN:O	30:BF:107:ARG:CG	2.47	0.62
30:BF:216:SER:O	30:BF:217:GLU:CB	2.47	0.62
31:BG:28:GLY:N	31:BG:69:ILE:HG21	2.15	0.62
31:BG:49:PRO:HB2	31:BG:72:LYS:CA	2.28	0.62
34:BN:50:GLU:O	34:BN:51:GLU:C	2.36	0.62
35:BO:3:GLN:HG2	35:BO:4:GLN:H	1.63	0.62
35:BO:71:ARG:NH2	35:BO:77:ILE:HG21	2.14	0.62
37:BQ:142:LYS:C	37:BQ:142:LYS:HE2	2.20	0.62
27:BA:2840:C:H5''	44:BR:53:HIS:CD2	2.34	0.62
38:BS:115:VAL:O	38:BS:118:ILE:CG2	2.47	0.62
45:BU:117:ARG:CD	45:BU:118:GLN:H	2.11	0.62
46:BV:42:GLY:HA3	46:BV:54:TYR:HE2	1.56	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:17:VAL:HA	40:BW:20:VAL:HG21	1.80	0.62
40:BW:58:ALA:HA	40:BW:62:HIS:CB	2.15	0.62
43:BZ:163:ASP:OD2	43:BZ:164:PRO:HD3	0.81	0.62
33:BI:141:LEU:CD1	33:BI:142:LYS:N	2.57	0.62
42:BY:102:ASP:O	42:BY:103:LEU:CD2	2.48	0.62
27:BA:84:A:OP1	42:BY:20:HIS:CD2	2.52	0.62
42:BY:32:ARG:O	42:BY:34:GLU:CA	2.47	0.62
42:BY:66:ASP:C	42:BY:68:ASP:N	2.53	0.62
43:BZ:62:PHE:CE2	43:BZ:87:THR:CB	2.82	0.62
47:B2:14:ALA:O	47:B2:17:GLU:HB2	1.98	0.62
47:B2:61:GLY:O	47:B2:62:GLU:C	2.38	0.62
41:BX:31:ARG:HA	41:BX:31:ARG:NE	2.14	0.62
27:BA:2857:G:H3'	27:BA:2857:G:C8	2.34	0.62
1:AA:18:C:N3	1:AA:917:G:N2	2.42	0.62
15:AL:54:LYS:HG2	15:AL:75:HIS:CE1	2.34	0.62
27:BA:1575:C:H2'	27:BA:1576:U:O2	1.99	0.62
1:AA:1210:C:H4'	1:AA:1214:C:H42	1.65	0.62
27:BA:1216:G:N2	27:BA:1234:U:H1'	2.14	0.62
48:B3:46:ASN:C	48:B3:48:GLU:OE1	2.37	0.62
48:B3:51:ALA:O	48:B3:52:HIS:C	2.33	0.62
52:B6:48:VAL:HG12	52:B6:49:VAL:O	1.99	0.62
53:B7:34:ARG:HG2	53:B7:35:ARG:N	2.13	0.62
27:BA:1022:G:H5''	34:BN:52:GLN:OE1	1.96	0.62
27:BA:1568:G:H3'	28:BD:60:GLN:CD	2.19	0.62
27:BA:1820:U:H3	28:BD:198:GLY:HA2	1.64	0.62
27:BA:2193:G:H2'	27:BA:2194:G:O4'	1.99	0.62
27:BA:2253:G:O2'	27:BA:2254:C:P	2.58	0.62
27:BA:2258:C:C6	27:BA:2426:A:H4'	2.33	0.62
27:BA:2258:C:OP2	27:BA:2258:C:O4'	2.18	0.62
27:BA:2268:A:H3'	27:BA:2268:A:C8	2.35	0.62
27:BA:2331:G:H21	27:BA:2385:C:H5	0.76	0.62
27:BA:2739:U:H5	27:BA:2763:G:C2	2.17	0.62
27:BA:687:C:C4'	53:B7:4:THR:CG2	2.77	0.62
27:BA:669:G:N3	27:BA:801:G:N1	2.46	0.62
27:BA:917:A:H3'	27:BA:918:A:H5''	1.82	0.62
27:BA:929:G:H21	48:B3:43:ILE:CA	2.12	0.62
26:BB:114:G:H1'	38:BS:46:GLN:HE21	1.65	0.62
28:BD:119:PRO:O	28:BD:133:ASN:ND2	2.31	0.62
28:BD:90:ILE:CG2	28:BD:91:ALA:N	2.61	0.62
28:BD:95:TYR:HB2	28:BD:99:GLU:O	1.99	0.62
29:BE:265:ASN:C	29:BE:265:ASN:ND2	2.52	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:93:LYS:HB2	30:BF:96:LYS:HE3	1.80	0.62
31:BG:47:GLN:NE2	31:BG:79:MET:HG3	2.13	0.62
32:BH:30:GLY:CA	32:BH:78:VAL:O	2.46	0.62
27:BA:2093:G:O2'	33:BI:29:PHE:CD2	2.53	0.62
34:BN:101:VAL:O	34:BN:102:ARG:HG3	1.99	0.62
34:BN:12:VAL:C	34:BN:38:VAL:HG22	2.20	0.62
35:BO:79:PHE:N	35:BO:79:PHE:CD2	2.66	0.62
37:BQ:130:PRO:O	37:BQ:132:VAL:N	2.32	0.62
37:BQ:152:SER:CB	37:BQ:153:PRO:HD2	2.29	0.62
37:BQ:82:LYS:CB	37:BQ:123:ILE:HG22	2.29	0.62
38:BS:122:ALA:HA	38:BS:125:ALA:HB3	1.80	0.62
38:BS:100:ALA:H	38:BS:127:LEU:CD2	2.11	0.62
38:BS:76:GLY:O	38:BS:83:LEU:HD13	1.98	0.62
39:BT:10:GLY:H	39:BT:52:THR:HB	1.64	0.62
45:BU:69:ALA:HB3	45:BU:76:TYR:CZ	2.34	0.62
45:BU:69:ALA:O	45:BU:79:PHE:CZ	2.52	0.62
45:BU:89:ASP:CG	46:BV:51:ALA:N	2.44	0.62
45:BU:93:LYS:N	45:BU:93:LYS:HD3	2.13	0.62
46:BV:33:VAL:O	46:BV:62:GLU:CA	2.28	0.62
46:BV:39:PHE:CE2	46:BV:41:GLY:CA	2.82	0.62
27:BA:108:U:H2'	27:BA:109:G:C8	2.34	0.62
43:BZ:51:LEU:HA	43:BZ:65:LEU:HD12	1.82	0.62
26:BB:76:G:O3'	43:BZ:80:HIS:CG	2.53	0.62
47:B2:20:LEU:CD2	47:B2:53:ILE:HG23	2.29	0.62
41:BX:6:LYS:NZ	41:BX:29:ASP:N	2.46	0.62
17:AN:24:CYS:HB2	17:AN:39:LEU:HA	1.81	0.62
6:AC:29:TYR:CE2	17:AN:54:PRO:HG2	2.34	0.62
32:BH:170:LEU:C	32:BH:170:LEU:CD1	2.62	0.62
3:AW:44:A:O2'	3:AW:45:G:H5'	2.00	0.62
1:AA:764:C:C2'	1:AA:765:G:H8	2.03	0.62
38:BS:70:GLY:O	38:BS:71:TRP:CE3	2.52	0.62
49:B0:31:VAL:O	49:B0:32:LYS:C	2.37	0.62
48:B3:6:VAL:HG22	48:B3:7:LYS:N	2.14	0.62
27:BA:2395:C:H4'	50:B4:28:ARG:HD2	1.81	0.62
54:B8:9:MET:O	54:B8:14:ILE:CG1	2.48	0.62
27:BA:1139:G:OP1	34:BN:19:MET:O	2.17	0.62
27:BA:1649:G:O2'	44:BR:104:ARG:NH1	2.30	0.62
27:BA:1655:A:C5'	29:BE:211:GLN:HA	2.29	0.62
27:BA:1809:A:O2'	27:BA:1810:A:H5'	1.99	0.62
27:BA:2014:A:H2'	27:BA:2015:A:C2	2.34	0.62
27:BA:2292:C:H42	27:BA:2340:G:H1	1.44	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2306:C:O2	31:BG:27:ILE:HA	1.99	0.62
27:BA:2333:A:O4'	27:BA:2335:A:N3	2.31	0.62
27:BA:2391:G:H2'	27:BA:2392:A:OP2	1.98	0.62
27:BA:2396:G:N2	27:BA:2397:G:C8	2.67	0.62
27:BA:2427:C:H5'	27:BA:2427:C:H6	1.64	0.62
27:BA:2468:G:C2'	27:BA:2469:A:H5'	2.29	0.62
27:BA:2472:G:C2'	27:BA:2475:C:N4	2.42	0.62
27:BA:2504:U:C6	27:BA:2504:U:C4'	2.82	0.62
27:BA:2603:G:H8	27:BA:2603:G:H5''	1.64	0.62
27:BA:2653:U:C3'	27:BA:2654:A:N7	2.62	0.62
27:BA:2712:U:O3'	27:BA:712(A):A:C5'	2.40	0.62
27:BA:2748:A:C2	27:BA:2758:A:N7	2.66	0.62
27:BA:2756:U:O2	27:BA:2756:U:C2'	2.47	0.62
27:BA:2772:C:N4	27:BA:2773:C:N4	2.47	0.62
27:BA:2822:G:C8	27:BA:2822:G:OP2	2.52	0.62
27:BA:2870:C:N3	27:BA:2871:C:C6	2.67	0.62
27:BA:530:G:H1'	27:BA:532:A:OP2	1.99	0.62
27:BA:2574:G:O2'	29:BE:240:PRO:HA	2.00	0.62
36:BP:120:LEU:HD12	36:BP:122:ALA:HB3	1.81	0.62
36:BP:67:ARG:O	36:BP:68:GLU:C	2.37	0.62
37:BQ:116:HIS:O	37:BQ:117:GLY:C	2.38	0.62
37:BQ:58:HIS:N	37:BQ:61:LEU:CG	2.62	0.62
37:BQ:65:ARG:NE	37:BQ:122:PHE:CD2	2.67	0.62
44:BR:52:ILE:O	44:BR:55:ALA:N	2.32	0.62
43:BZ:139:THR:O	43:BZ:140:LYS:HB2	2.00	0.62
43:BZ:140:LYS:CA	43:BZ:141:MET:SD	2.81	0.62
27:BA:83:G:H5''	42:BY:20:HIS:CE1	2.33	0.62
43:BZ:5:ALA:O	43:BZ:33:ALA:CB	2.31	0.62
13:AJ:61:GLU:OE1	17:AN:49:HIS:CE1	2.47	0.62
47:B2:29:ASN:C	47:B2:34:GLN:HG2	2.19	0.62
47:B2:55:ARG:O	47:B2:58:THR:CA	2.48	0.62
47:B2:60:GLN:O	47:B2:63:GLU:HB3	1.99	0.62
1:AA:562:C:H1'	15:AL:15:ARG:CD	2.30	0.62
1:AA:1528:U:H2'	1:AA:1530:G:H5'	1.81	0.62
27:BA:1916:A:H8	27:BA:1916:A:OP2	1.81	0.62
1:AA:436:C:C2'	1:AA:437:U:O4'	2.47	0.62
1:AA:403:C:H42	1:AA:547:A:H5'	1.64	0.62
18:AO:36:ILE:HD11	18:AO:60:VAL:HG22	1.81	0.62
10:AG:71:PRO:HG2	10:AG:91:VAL:HG11	1.82	0.62
27:BA:1222:C:H42	27:BA:1227:A:H61	1.45	0.62
1:AA:1193:G:O2'	8:AE:25:ARG:NH2	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AW:76:A:O2'	27:BA:2395:C:N3	2.32	0.62
49:B0:24:LYS:O	49:B0:25:LYS:HB2	1.98	0.62
50:B4:7:PRO:HD2	50:B4:56:VAL:HG21	0.66	0.62
50:B4:63:PHE:O	50:B4:66:SER:N	2.33	0.62
51:B5:11:THR:CB	51:B5:16:ARG:HE	2.09	0.62
51:B5:40:LYS:HD2	51:B5:49:CYS:SG	2.38	0.62
27:BA:2058:A:H2'	27:BA:2059:A:C8	2.35	0.62
27:BA:2100:G:N9	27:BA:2190:G:N2	2.48	0.62
27:BA:2276:G:N3	27:BA:2277:G:C8	2.67	0.62
27:BA:2347:C:H2'	27:BA:2348:U:H6	1.65	0.62
27:BA:2478:A:H1'	27:BA:2529:G:N7	2.14	0.62
27:BA:2517:C:C4	27:BA:2542:A:N6	2.68	0.62
27:BA:2520:C:H6	27:BA:2567:G:H1'	1.64	0.62
27:BA:2569:G:N1	27:BA:2570:G:N7	2.47	0.62
27:BA:2684:U:C4	27:BA:2725:A:N6	2.67	0.62
27:BA:2638:G:C2	27:BA:2778:A:N6	2.63	0.62
27:BA:2792:G:H1'	27:BA:2805:G:N2	2.14	0.62
27:BA:2894:G:HO3'	27:BA:2895:U:P	2.20	0.62
27:BA:467:G:OP1	53:B7:30:ILE:HG23	1.99	0.62
27:BA:657:U:H2'	27:BA:658:C:C6	2.34	0.62
30:BF:93:LYS:CB	30:BF:96:LYS:CE	2.78	0.62
31:BG:29:HIS:ND1	31:BG:69:ILE:HD11	2.14	0.62
32:BH:48:VAL:HG23	32:BH:49:ILE:N	2.14	0.62
32:BH:88:LEU:O	32:BH:88:LEU:HD23	1.98	0.62
34:BN:61:VAL:HG12	34:BN:62:ASP:N	2.13	0.62
35:BO:65:THR:HG1	35:BO:67:ARG:HG2	1.63	0.62
37:BQ:94:ARG:CZ	37:BQ:106:GLY:HA3	2.30	0.62
38:BS:111:PRO:O	38:BS:114:LYS:O	2.18	0.62
27:BA:2378:A:H1'	38:BS:26:LEU:HD22	1.80	0.62
38:BS:34:LEU:O	38:BS:103:ASP:HB3	2.00	0.62
45:BU:109:LEU:O	45:BU:111:ASP:N	2.32	0.62
43:BZ:67:LYS:CB	43:BZ:67:LYS:HZ2	2.13	0.62
27:BA:293:U:O2'	27:BA:294:A:O4'	2.16	0.62
42:BY:26:THR:O	42:BY:27:LEU:CG	2.46	0.62
43:BZ:70:GLN:O	43:BZ:72:ASP:OD2	2.17	0.62
28:BD:226:GLY:C	28:BD:227:VAL:HG12	2.12	0.62
41:BX:52:VAL:CG2	41:BX:66:VAL:HG22	2.29	0.62
1:AA:60:A:C6	1:AA:107:G:O2'	2.49	0.62
23:AT:23:ARG:HA	23:AT:26:ASN:HD21	1.64	0.62
27:BA:2354:G:O5'	49:B0:31:VAL:HG21	2.00	0.62
49:B0:6:GLY:O	49:B0:8:GLY:N	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B3:25:ALA:C	48:B3:27:GLY:N	2.51	0.62
48:B3:8:LEU:CD2	48:B3:32:GLN:N	2.59	0.62
50:B4:47:GLU:OE2	50:B4:73:LYS:NZ	2.27	0.62
53:B7:43:THR:C	53:B7:46:ASP:OD1	2.35	0.62
27:BA:1263:U:C1'	51:B5:16:ARG:HH22	2.13	0.62
27:BA:1284:A:H2'	27:BA:1285:G:C8	2.33	0.62
27:BA:1889:A:H2'	27:BA:1890:A:C8	2.35	0.62
27:BA:2077:A:C2	27:BA:2244:U:C2	2.87	0.62
27:BA:2389:G:OP1	27:BA:2390:U:C5'	2.42	0.62
27:BA:2863:C:N3	27:BA:2864:G:N7	2.47	0.62
29:BE:70:VAL:CG1	29:BE:295:LEU:HD23	2.30	0.62
30:BF:1:MET:O	30:BF:18:LEU:HD23	1.99	0.62
31:BG:38:GLU:CA	31:BG:41:LEU:HD12	2.30	0.62
34:BN:12:VAL:CB	34:BN:38:VAL:HG22	2.30	0.62
27:BA:1006:C:O2'	34:BN:86:MET:HB3	1.99	0.62
36:BP:128:GLY:O	36:BP:132:LYS:HD3	1.99	0.62
36:BP:62:ALA:HB2	36:BP:105:TYR:CB	2.22	0.62
38:BS:27:LEU:CD1	38:BS:28:LYS:N	2.62	0.62
38:BS:30:GLY:O	38:BS:31:LYS:CB	2.47	0.62
38:BS:97:VAL:HG12	38:BS:98:GLU:N	2.13	0.62
39:BT:8:TYR:O	39:BT:53:ASP:HB2	1.99	0.62
27:BA:1156:A:P	45:BU:55:ARG:HH12	2.23	0.62
40:BW:19:LEU:O	40:BW:20:VAL:C	2.37	0.62
40:BW:8:ARG:CD	40:BW:9:TYR:HD1	2.12	0.62
33:BI:80:PRO:O	33:BI:148:GLN:HG2	1.99	0.62
42:BY:64:ASN:O	42:BY:72:ILE:CG2	2.34	0.62
43:BZ:52:PHE:H	43:BZ:65:LEU:HD11	1.64	0.62
27:BA:76:C:C3'	47:B2:55:ARG:HG3	2.29	0.62
41:BX:18:MET:CE	41:BX:25:GLN:O	2.35	0.62
41:BX:38:ALA:HB1	41:BX:49:VAL:HG13	1.81	0.62
3:AW:37:YYG:H101	3:AW:37:YYG:C21	2.30	0.62
7:AD:23:GLY:N	7:AD:113:SER:HB3	2.15	0.62
27:BA:1418:G:H1	27:BA:1577:C:H3'	1.64	0.62
1:AA:323:U:H3	1:AA:327:A:H62	1.45	0.62
27:BA:153:C:H42	27:BA:173:G:H1	1.47	0.62
10:AG:111:ARG:HD2	10:AG:123:GLU:HB2	1.81	0.62
48:B3:59:VAL:C	48:B3:60:GLU:CG	2.62	0.62
27:BA:1264:G:OP1	51:B5:11:THR:HG21	2.00	0.62
27:BA:771:G:OP2	53:B7:11:LYS:NZ	2.33	0.62
27:BA:1140:C:H4'	27:BA:142(A):A:C6	2.34	0.62
27:BA:2207:C:C2	27:BA:2218:G:N1	2.68	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2208:U:H2'	27:BA:2209:C:H6	1.63	0.62
27:BA:2211:G:C2'	27:BA:2211:G:N3	2.62	0.62
27:BA:2246:G:H2'	27:BA:2247:A:C8	2.34	0.62
27:BA:2259:G:C2	27:BA:2282:G:O6	2.49	0.62
27:BA:2397:G:C2	27:BA:2398:U:C2	2.88	0.62
27:BA:2503:A:C4'	27:BA:2504:U:OP1	2.38	0.62
27:BA:2516:G:N2	27:BA:2569:G:H1'	2.14	0.62
27:BA:2595:G:C2	27:BA:2597:G:O5'	2.53	0.62
27:BA:2850:A:C4	27:BA:2851:A:C8	2.87	0.62
27:BA:30:G:H2'	27:BA:31:C:C6	2.35	0.62
26:BB:24:G:C6	26:BB:56:G:N3	2.67	0.62
28:BD:172:ILE:N	28:BD:182:MET:HE2	2.15	0.62
29:BE:80:ALA:CA	29:BE:187:HIS:NE2	2.63	0.62
30:BF:16:VAL:HG12	30:BF:17:ASP:N	2.13	0.62
30:BF:37:ALA:CB	30:BF:102:LEU:CD1	2.78	0.62
30:BF:52:ALA:HB2	30:BF:55:ARG:HH21	0.80	0.62
30:BF:58:ALA:HB2	30:BF:79:ARG:CB	2.30	0.62
27:BA:450:G:OP2	30:BF:85:LYS:O	2.17	0.62
32:BH:42:ILE:C	32:BH:52:THR:CG2	2.56	0.62
32:BH:75:VAL:C	32:BH:77:GLY:N	2.47	0.62
34:BN:21:ARG:H	34:BN:21:ARG:HD2	1.64	0.62
34:BN:83:ILE:HG13	34:BN:84:ARG:HG2	1.81	0.62
35:BO:14:SER:HB3	35:BO:86:ILE:CD1	2.30	0.62
35:BO:17:ARG:CZ	35:BO:47:THR:HA	2.30	0.62
36:BP:65:ASP:CB	36:BP:109:LEU:H	2.13	0.62
36:BP:114:VAL:HG12	36:BP:115:ARG:N	2.14	0.62
44:BR:89:ASP:OD1	44:BR:90:ARG:CA	2.48	0.62
39:BT:6:CYS:SG	39:BT:31:PHE:HD2	2.23	0.62
33:BI:144:HIS:O	33:BI:144:HIS:CD2	2.52	0.62
42:BY:105:ASP:O	42:BY:108:ARG:N	2.22	0.62
42:BY:43:ASN:ND2	42:BY:102:ASP:O	2.33	0.62
43:BZ:18:MET:HA	43:BZ:35:ASP:HA	1.82	0.62
43:BZ:17:SER:O	43:BZ:36:ARG:N	2.33	0.62
43:BZ:26:LYS:N	43:BZ:84:TYR:HE1	1.95	0.62
1:AA:965:A:O2'	1:AA:966:G:C5'	2.47	0.62
47:B2:20:LEU:CD2	47:B2:53:ILE:CG2	2.77	0.62
50:B4:49:PHE:O	50:B4:50:LEU:O	2.17	0.62
27:BA:302:C:H2'	27:BA:303:U:C6	2.35	0.62
27:BA:1980:G:C6	27:BA:1982:C:N4	2.68	0.62
3:AW:72:C:H2'	3:AW:73:A:H8	1.64	0.62
49:B0:68:VAL:HG21	49:B0:72:LYS:HE3	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AW:73:A:O3'	50:B4:22:MET:SD	2.58	0.62
27:BA:2022:U:C4'	27:BA:2023:G:OP1	2.36	0.62
27:BA:2261:C:H2'	27:BA:2261:C:O2	1.99	0.62
27:BA:2353:G:C2	27:BA:2364:C:N3	2.62	0.62
27:BA:2476:A:N7	27:BA:2477:C:C6	2.66	0.62
27:BA:2468:G:N1	27:BA:2481:G:C5	2.67	0.62
27:BA:2721:A:C2	27:BA:2722:G:C8	2.87	0.62
27:BA:2822:G:OP1	29:BE:258:TYR:CE2	2.53	0.62
27:BA:2836:U:H6	27:BA:2836:U:H3'	1.64	0.62
27:BA:2885:C:N3	27:BA:2886:G:C1'	2.63	0.62
27:BA:673:C:C4'	30:BF:82:GLN:CD	2.67	0.62
28:BD:71:ASP:HA	28:BD:73:ILE:HG13	1.82	0.62
29:BE:104:PHE:CB	29:BE:108:LEU:HD12	2.29	0.62
29:BE:242:ASN:N	29:BE:243:PRO:HD2	2.14	0.62
27:BA:443:A:N7	30:BF:43:LYS:HD3	2.14	0.62
31:BG:24:HIS:CB	31:BG:72:LYS:HA	2.26	0.62
32:BH:14:VAL:CG1	32:BH:14:VAL:O	2.40	0.62
32:BH:15:THR:HG23	32:BH:26:LYS:CA	2.29	0.62
32:BH:86:LEU:CD2	32:BH:87:GLU:H	2.09	0.62
34:BN:42:GLU:CA	34:BN:132:LEU:O	2.47	0.62
34:BN:90:LYS:HZ3	34:BN:95:ARG:NH2	1.97	0.62
35:BO:71:ARG:C	35:BO:73:ASP:H	2.00	0.62
36:BP:129:ALA:O	36:BP:130:ARG:C	2.38	0.62
37:BQ:48:ASN:HD21	37:BQ:122:PHE:HD1	1.47	0.62
46:BV:14:VAL:HG21	46:BV:19:VAL:HG21	0.77	0.62
45:BU:20:ARG:NH1	46:BV:75:LYS:CD	2.63	0.62
43:BZ:120:LEU:CD2	43:BZ:120:LEU:N	2.43	0.62
33:BI:86:GLY:CA	33:BI:88:ARG:N	2.63	0.62
42:BY:102:ASP:HB3	42:BY:108:ARG:CZ	2.30	0.62
28:BD:213:LYS:O	28:BD:215:LYS:HG2	1.99	0.62
2:AV:7:U:H5'	2:AV:8:U:P	2.39	0.62
3:AW:40:C:H2'	3:AW:41:U:H5'	1.82	0.62
1:AA:261:U:C5	23:AT:79:ARG:CZ	2.83	0.62
1:AA:20:U:H1'	1:AA:572:A:C4	2.35	0.62
20:AQ:67:LYS:O	20:AQ:68:ARG:CB	2.46	0.62
14:AK:99:GLN:HA	14:AK:105:VAL:HG21	1.82	0.62
1:AA:829:G:O2'	5:AB:26:PRO:HG2	1.99	0.62
27:BA:2261:C:H3'	49:B0:14:ARG:HH21	1.64	0.62
48:B3:26:LEU:HD21	48:B3:46:ASN:CB	2.26	0.62
50:B4:64:GLY:O	50:B4:67:TYR:C	2.38	0.62
52:B6:2:ALA:HB2	52:B6:11:LYS:HZ1	1.57	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B7:11:LYS:HE3	53:B7:11:LYS:HA	1.80	0.62
27:BA:592:G:H2'	54:B8:3:LYS:CD	2.30	0.62
27:BA:2228:G:H5'	27:BA:2229:C:OP2	1.99	0.62
27:BA:2403:C:H42	27:BA:2414:G:H1	1.46	0.62
27:BA:2488:A:C3'	27:BA:2488:A:C8	2.83	0.62
27:BA:2516:G:N7	27:BA:2517:C:N4	2.47	0.62
27:BA:2606:C:C6	27:BA:2606:C:H5'	2.34	0.62
27:BA:2641:G:C6	27:BA:2774:C:C5	2.87	0.62
27:BA:2653:U:H3'	27:BA:2654:A:N7	2.15	0.62
27:BA:2652:C:C2'	27:BA:2653:U:H6	2.11	0.62
27:BA:2681:C:H1'	27:BA:2682:U:C5	2.35	0.62
27:BA:2827:C:C2	27:BA:2828:C:C5	2.88	0.62
27:BA:2801:A:H2	27:BA:2895:U:HO2'	0.75	0.62
27:BA:530:G:C2	27:BA:2021:C:N1	2.68	0.62
27:BA:574:C:N4	27:BA:2054:A:C5'	2.61	0.62
27:BA:1656:C:P	29:BE:233:ARG:HD3	2.40	0.62
30:BF:11:ASN:CG	30:BF:160:LEU:HD11	2.20	0.62
30:BF:196:THR:OG1	30:BF:201:SER:OG	1.84	0.62
27:BA:673:C:C5'	30:BF:80:VAL:HG11	2.30	0.62
31:BG:142:ALA:CB	31:BG:151:ILE:CG1	2.65	0.62
33:BI:2:LYS:HG2	33:BI:39:ALA:N	2.15	0.62
34:BN:136:SER:CA	34:BN:139:LEU:CD2	2.78	0.62
34:BN:15:ARG:HG2	34:BN:43:ARG:CB	2.30	0.62
37:BQ:41:THR:OG1	37:BQ:126:VAL:CA	2.43	0.62
44:BR:99:LYS:HA	44:BR:112:ALA:HB1	1.81	0.62
44:BR:52:ILE:C	44:BR:54:LEU:H	2.02	0.62
39:BT:37:GLU:O	39:BT:39:ASN:N	2.33	0.62
45:BU:28:ARG:CA	45:BU:31:GLN:OE1	2.48	0.62
45:BU:57:PHE:C	45:BU:59:ARG:H	2.03	0.62
45:BU:99:ALA:HA	45:BU:106:PHE:HB2	1.76	0.62
46:BV:72:ARG:O	46:BV:74:TYR:CE2	2.53	0.62
40:BW:32:ALA:CA	40:BW:35:ILE:HD11	2.27	0.62
40:BW:32:ALA:C	40:BW:34:ASN:N	2.53	0.62
40:BW:70:TYR:CE2	40:BW:72:LYS:N	2.68	0.62
1:AA:1400:C:N3	2:AV:34:G:N2	2.46	0.62
1:AA:1197:G:H2'	1:AA:1198:G:H5'	1.80	0.62
1:AA:1224:G:H4'	16:AM:102:ARG:HH11	1.65	0.62
47:B2:26:GLU:O	47:B2:29:ASN:HB2	2.00	0.62
27:BA:1598:C:H5'	41:BX:34:LYS:HB2	1.81	0.62
41:BX:9:HIS:NE2	41:BX:27:ALA:HB2	2.14	0.62
6:AC:12:LEU:CD1	17:AN:51:GLY:HA3	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:120:A:H3'	1:AA:120:A:C8	2.35	0.62
27:BA:1912:A:N7	27:BA:1918:A:H2	1.97	0.62
1:AA:940:C:OP2	10:AG:102:ARG:HD3	2.00	0.62
27:BA:1417:C:H3'	27:BA:1418:G:H8	1.65	0.62
27:BA:1324:G:H4'	27:BA:1616:A:N7	2.14	0.62
1:AA:426:G:H1'	7:AD:42:GLN:HG3	1.81	0.62
49:B0:25:LYS:HE2	49:B0:57:HIS:ND1	2.15	0.61
48:B3:17:LYS:O	48:B3:18:ASP:C	2.37	0.61
27:BA:2021:C:OP2	51:B5:15:LYS:NZ	2.33	0.61
55:B9:7:VAL:HG23	55:B9:36:GLN:OE1	2.00	0.61
27:BA:1152:C:H4'	45:BU:77:SER:HA	1.81	0.61
27:BA:1652:A:H62	27:BA:1653:G:H21	1.48	0.61
27:BA:563:G:C6	27:BA:2018:G:C6	2.88	0.61
27:BA:2266:A:H4'	27:BA:2267:A:C2	2.35	0.61
27:BA:2361:A:C3'	27:BA:2362:G:H5'	2.30	0.61
27:BA:2384:G:O5'	27:BA:2386:C:OP1	2.18	0.61
27:BA:2488:A:N1	27:BA:2489:G:C5	2.68	0.61
27:BA:2522:U:O2'	27:BA:2647:U:OP1	2.17	0.61
27:BA:2544:G:C4	27:BA:2545:G:C8	2.88	0.61
27:BA:2572:A:C5'	27:BA:2574:G:C5'	2.64	0.61
27:BA:2618:G:C2'	27:BA:2619:C:O5'	2.47	0.61
27:BA:2665:A:C8	27:BA:2665:A:H5''	2.34	0.61
27:BA:712(A):A:C5'	27:BA:2713:A:H5''	2.26	0.61
27:BA:2744:G:C2	27:BA:2761:G:C2	2.88	0.61
27:BA:2759:G:C2'	27:BA:2760:C:C5'	2.78	0.61
27:BA:387:U:H3'	50:B4:23:GLU:OE2	2.00	0.61
27:BA:752:A:N7	27:BA:1781:C:O2	2.32	0.61
27:BA:684:G:N2	27:BA:794:G:C2	2.69	0.61
28:BD:160:SER:C	28:BD:162:GLN:HE22	2.03	0.61
27:BA:1567:A:C5	28:BD:84:PRO:HB3	2.35	0.61
29:BE:77:PRO:HG2	29:BE:186:GLU:HB2	1.82	0.61
29:BE:301:PRO:O	29:BE:303:PRO:CD	2.27	0.61
30:BF:141:SER:OG	30:BF:144:PHE:CE1	2.51	0.61
36:BP:66:VAL:CG1	36:BP:67:ARG:N	2.43	0.61
37:BQ:92:VAL:CG1	37:BQ:111:THR:N	2.49	0.61
37:BQ:131:ALA:HA	37:BQ:134:PHE:CD2	2.34	0.61
44:BR:47:PHE:O	44:BR:49:ASP:N	2.32	0.61
46:BV:35:LEU:N	46:BV:60:VAL:HG13	2.14	0.61
40:BW:82:LEU:O	40:BW:83:LYS:C	2.38	0.61
43:BZ:103:ARG:NH1	43:BZ:137:ASP:O	2.32	0.61
33:BI:68:LEU:HA	33:BI:72:LEU:HD21	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:322:A:OP2	27:BA:322:A:C8	2.50	0.61
43:BZ:26:LYS:HB2	43:BZ:84:TYR:HH	1.65	0.61
34:BN:36:VAL:HG12	34:BN:36:VAL:O	2.00	0.61
27:BA:138:G:C5'	41:BX:43:GLU:CG	2.61	0.61
41:BX:52:VAL:CG2	41:BX:65:VAL:O	2.47	0.61
1:AA:1314:C:H3'	22:AS:6:LYS:CD	2.27	0.61
1:AA:1287:A:H61	1:AA:1371:G:H4'	1.62	0.61
32:BH:169:ARG:HA	32:BH:169:ARG:NE	2.15	0.61
27:BA:865:C:N4	27:BA:908:C:N4	2.48	0.61
7:AD:23:GLY:HA2	7:AD:112:VAL:C	2.20	0.61
8:AE:79:GLU:HG3	8:AE:93:PRO:HD2	1.82	0.61
33:BI:62:LEU:O	33:BI:66:LYS:HG3	2.00	0.61
1:AA:671:G:H5'	9:AF:77:ARG:NH2	2.07	0.61
27:BA:1924:C:C4	27:BA:1925:C:C4	2.88	0.61
27:BA:1426:G:H5''	27:BA:1427:A:H5''	1.81	0.61
1:AA:1091:U:OP1	1:AA:1172:C:H4'	2.00	0.61
14:AK:65:ALA:HB1	14:AK:98:LEU:HG	1.81	0.61
49:B0:40:GLN:N	49:B0:69:PHE:CZ	2.68	0.61
50:B4:47:GLU:HA	50:B4:53:GLU:H	1.66	0.61
55:B9:11:CYS:HB3	55:B9:32:HIS:CE1	2.36	0.61
27:BA:1034:G:H5'	55:B9:18:ARG:NH2	2.09	0.61
27:BA:1131:G:C4	34:BN:65:ASN:CG	2.63	0.61
27:BA:1270:C:H4'	27:BA:1271:G:C5'	2.21	0.61
27:BA:1819:A:H4'	27:BA:1820:U:C5'	2.30	0.61
27:BA:198:C:H2'	27:BA:199:A:H5''	1.81	0.61
27:BA:2206:C:C2'	27:BA:2207:C:O4'	2.47	0.61
27:BA:2259:G:N2	27:BA:2282:G:N1	2.46	0.61
27:BA:2304:G:H4'	31:BG:105:SER:C	2.20	0.61
27:BA:2416:C:C2	27:BA:2417:C:C5	2.88	0.61
27:BA:248:G:N3	27:BA:2431:U:H4'	2.14	0.61
27:BA:2504:U:H6	27:BA:2504:U:C4'	2.13	0.61
27:BA:2521:C:N3	27:BA:2522:U:C5	2.68	0.61
27:BA:2516:G:C6	27:BA:2569:G:C2	2.88	0.61
27:BA:2581:G:C6	27:BA:2610:C:H6	2.10	0.61
27:BA:2611:U:C5	51:B5:4:HIS:NE2	2.68	0.61
27:BA:2782:G:P	27:BA:2782:G:C8	2.93	0.61
27:BA:2787:C:O2	27:BA:2787:C:H2'	1.99	0.61
27:BA:2814:C:C2	27:BA:2815:C:C5	2.87	0.61
27:BA:2831:G:H1'	27:BA:2883:A:N3	2.15	0.61
27:BA:2852:G:C2	27:BA:2853:C:O2	2.52	0.61
27:BA:2886:G:N2	27:BA:2887:U:C1'	2.63	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:163:VAL:O	28:BD:163:VAL:HG12	2.00	0.61
28:BD:130:PRO:CA	28:BD:188:ARG:HA	2.29	0.61
32:BH:101:LYS:HZ3	32:BH:115:GLU:CB	2.10	0.61
32:BH:153:PRO:O	32:BH:154:GLU:C	2.38	0.61
32:BH:149:ALA:C	32:BH:161:ILE:HD11	2.15	0.61
32:BH:43:THR:HG22	32:BH:52:THR:HG22	1.75	0.61
33:BI:21:VAL:CG1	33:BI:30:LEU:CD1	2.66	0.61
33:BI:24:GLY:O	33:BI:25:TYR:C	2.39	0.61
35:BO:63:VAL:CG1	35:BO:102:VAL:CB	2.75	0.61
36:BP:141:GLU:OE1	36:BP:141:GLU:O	2.18	0.61
37:BQ:58:HIS:CE1	37:BQ:59:ASN:CB	2.77	0.61
38:BS:105:GLY:C	38:BS:106:LEU:CD2	2.61	0.61
38:BS:103:ASP:C	38:BS:105:GLY:H	2.04	0.61
45:BU:10:ARG:C	45:BU:13:ARG:HH12	2.03	0.61
46:BV:65:ARG:O	46:BV:93:ILE:CB	2.48	0.61
40:BW:69:LEU:HD22	40:BW:109:GLU:HB2	1.83	0.61
42:BY:32:ARG:C	42:BY:34:GLU:N	2.52	0.61
43:BZ:45:GLN:HE21	43:BZ:45:GLN:H	1.45	0.61
27:BA:70:G:H1'	27:BA:73:A:H1'	1.81	0.61
27:BA:144:C:H5''	41:BX:36:GLU:OE1	1.93	0.61
6:AC:12:LEU:CD1	17:AN:51:GLY:CA	2.78	0.61
27:BA:2896:C:C6	27:BA:2896:C:C4'	2.83	0.61
2:AV:12:U:O2'	27:BA:1924:C:C1'	2.48	0.61
1:AA:1291:G:OP1	10:AG:37:ASN:ND2	2.33	0.61
27:BA:185:U:H4'	27:BA:218:A:H4'	1.81	0.61
27:BA:660:G:H2'	27:BA:661:C:C6	2.34	0.61
27:BA:989:G:C8	48:B3:13:ILE:CD1	2.83	0.61
27:BA:1268:A:H2'	27:BA:1269:A:C8	2.35	0.61
27:BA:2043:C:C4	27:BA:2777:G:C4	2.88	0.61
27:BA:2069:G:C2	27:BA:2443:C:C2	2.89	0.61
27:BA:2233:U:O2	27:BA:2234:G:C1'	2.48	0.61
27:BA:2077:A:H2	27:BA:2244:U:O2	1.83	0.61
27:BA:2315:G:C5'	31:BG:133:ASN:HD22	2.13	0.61
27:BA:2423:U:N1	27:BA:2425:A:C5	2.68	0.61
27:BA:2455:G:N2	27:BA:2498:C:N4	2.48	0.61
27:BA:2562:U:H2'	27:BA:2562:U:O2	1.99	0.61
27:BA:2693:A:C2	27:BA:2694:G:C4	2.88	0.61
27:BA:2628:C:O2	27:BA:2781:A:C2'	2.47	0.61
27:BA:2805:G:H2'	27:BA:2807:G:C4'	2.30	0.61
27:BA:2817:G:C2	27:BA:2818:G:C4	2.88	0.61
27:BA:458:G:H3'	53:B7:39:ARG:HB2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:780:G:N1	28:BD:233:ASP:CG	2.51	0.61
28:BD:167:GLU:CA	28:BD:170:TYR:CD1	2.82	0.61
27:BA:2785:C:N1	29:BE:100:TRP:CD1	2.67	0.61
29:BE:81:VAL:CB	29:BE:100:TRP:CZ3	2.83	0.61
29:BE:39:GLN:CD	29:BE:174:LEU:CG	2.68	0.61
30:BF:84:VAL:H	30:BF:87:ARG:HE	1.49	0.61
27:BA:2304:G:H5'	31:BG:105:SER:O	1.99	0.61
34:BN:60:ARG:C	34:BN:71:TYR:CD2	2.73	0.61
35:BO:63:VAL:CG1	35:BO:102:VAL:HG22	2.30	0.61
36:BP:113:GLN:O	36:BP:115:ARG:CD	2.48	0.61
37:BQ:131:ALA:CA	37:BQ:134:PHE:CE2	2.83	0.61
37:BQ:85:ILE:HA	37:BQ:122:PHE:HB3	1.81	0.61
44:BR:62:ALA:HB1	44:BR:80:PHE:CZ	2.35	0.61
44:BR:97:VAL:HG13	44:BR:114:VAL:HG21	1.82	0.61
46:BV:61:VAL:HG21	46:BV:97:GLY:CA	2.12	0.61
46:BV:61:VAL:C	46:BV:98:ILE:HD12	2.18	0.61
43:BZ:125:PRO:CG	43:BZ:130:ILE:CG2	2.78	0.61
33:BI:133:LEU:HD12	33:BI:138:THR:O	1.99	0.61
33:BI:68:LEU:CD1	33:BI:108:LEU:CD1	2.78	0.61
43:BZ:46:GLN:C	43:BZ:49:THR:OG1	2.37	0.61
43:BZ:9:THR:O	43:BZ:13:LYS:HB2	2.00	0.61
1:AA:361(A):C:O3'	1:AA:1362:C:H5''	1.99	0.61
41:BX:14:ALA:HB1	41:BX:18:MET:HE2	1.81	0.61
41:BX:33:SER:O	41:BX:37:VAL:HB	1.99	0.61
27:BA:1710:C:O2'	27:BA:2858:C:N3	2.32	0.61
1:AA:15:G:H4'	8:AE:24:ARG:HH22	1.64	0.61
33:BI:63:ALA:HA	33:BI:66:LYS:HE2	1.81	0.61
27:BA:1274:A:C2	27:BA:1302:A:H2	2.18	0.61
15:AL:54:LYS:HG3	15:AL:75:HIS:HE1	1.65	0.61
3:AW:72:C:H2'	3:AW:73:A:O4'	1.99	0.61
49:B0:48:GLY:CA	49:B0:55:ARG:CA	2.79	0.61
50:B4:14:ILE:CB	50:B4:37:SER:O	2.42	0.61
27:BA:1223:C:N4	46:BV:87:ARG:HE	1.98	0.61
27:BA:1610:A:OP2	27:BA:1610:A:H8	1.83	0.61
27:BA:2251:G:H3'	37:BQ:102:ARG:HH22	1.65	0.61
27:BA:2252:G:C6	27:BA:2253:G:O6	2.54	0.61
27:BA:2276:G:C4	27:BA:2277:G:C8	2.89	0.61
27:BA:2337:G:C6	27:BA:2338:G:O6	2.53	0.61
27:BA:245:G:OP2	36:BP:53:ARG:CZ	2.48	0.61
27:BA:2520:C:O2'	27:BA:2521:C:C5'	2.47	0.61
27:BA:2526:G:N7	27:BA:2527:C:H5	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2573:C:OP1	27:BA:2575:C:OP2	2.18	0.61
27:BA:2611:U:H3'	27:BA:2611:U:C6	2.32	0.61
27:BA:2712:U:C3'	27:BA:2714:G:P	2.85	0.61
26:BB:42:C:O2'	31:BG:47:GLN:HA	2.00	0.61
28:BD:71:ASP:C	28:BD:73:ILE:N	2.50	0.61
29:BE:202:ALA:HA	29:BE:262:THR:CB	2.30	0.61
29:BE:271:ILE:CD1	29:BE:294:THR:CG2	2.73	0.61
31:BG:98:PHE:C	31:BG:104:PHE:CD2	2.73	0.61
32:BH:60:HIS:O	32:BH:63:LEU:HB3	2.00	0.61
32:BH:67:THR:O	32:BH:68:ARG:C	2.38	0.61
36:BP:77:ALA:CA	36:BP:81:VAL:HG11	2.24	0.61
37:BQ:43:PRO:O	37:BQ:125:TRP:CZ2	2.53	0.61
37:BQ:67:ALA:CA	37:BQ:71:PHE:HE1	2.14	0.61
38:BS:117:ALA:CA	38:BS:120:GLU:CD	2.65	0.61
38:BS:76:GLY:C	38:BS:80:SER:C	2.59	0.61
45:BU:109:LEU:O	45:BU:110:VAL:C	2.37	0.61
45:BU:117:ARG:NE	45:BU:118:GLN:HG2	2.14	0.61
45:BU:15:LYS:HG2	45:BU:19:LYS:HE2	1.82	0.61
27:BA:994:C:HO2'	45:BU:54:LYS:HA	1.65	0.61
33:BI:98:ILE:O	33:BI:99:ALA:C	2.39	0.61
26:BB:74:U:C2	43:BZ:29:ASN:ND2	2.65	0.61
27:BA:729:G:N2	27:BA:1775:U:C6	2.69	0.61
28:BD:202:LYS:O	28:BD:204:PHE:CE1	2.50	0.61
47:B2:23:LEU:N	47:B2:26:GLU:OE1	2.33	0.61
47:B2:35:ALA:O	47:B2:38:GLY:N	2.29	0.61
1:AA:1248:A:C2'	12:AI:70:LYS:HZ1	2.12	0.61
7:AD:70:ILE:CD1	7:AD:100:ARG:CZ	2.77	0.61
12:AI:32:ASP:HB3	12:AI:35:GLU:HB2	1.83	0.61
1:AA:595:G:H2'	1:AA:641:U:O4	2.01	0.61
27:BA:460:A:C8	27:BA:461:C:C5	2.89	0.61
1:AA:741:G:O2'	18:AO:55:GLY:HA3	2.00	0.61
50:B4:14:ILE:HG22	50:B4:37:SER:N	2.10	0.61
51:B5:8:LYS:O	51:B5:9:LYS:CB	2.49	0.61
53:B7:33:ARG:HB3	53:B7:37:LYS:HD2	1.82	0.61
27:BA:54:G:H1'	53:B7:35:ARG:NH2	2.15	0.61
53:B7:43:THR:O	53:B7:46:ASP:N	2.34	0.61
55:B9:20:HIS:O	55:B9:22:ARG:N	2.32	0.61
27:BA:2219:G:C2	27:BA:2224:G:O4'	2.53	0.61
27:BA:2344:U:O2	27:BA:2344:U:H2'	1.98	0.61
27:BA:2331:G:N2	27:BA:2385:C:C5	2.43	0.61
27:BA:2400:G:C2	27:BA:2401:U:O2	2.54	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2567:G:H2'	27:BA:2568:C:C6	2.36	0.61
27:BA:2655:G:C3'	27:BA:2655:G:N3	2.63	0.61
27:BA:2688:U:N3	27:BA:2719:G:N3	2.48	0.61
27:BA:2840:C:C2	27:BA:2841:C:C6	2.88	0.61
27:BA:2868:A:C2'	27:BA:2869:G:H5'	2.30	0.61
27:BA:669:G:O2'	27:BA:801:G:N2	2.34	0.61
27:BA:974:G:C5	46:BV:80:TYR:CZ	2.87	0.61
29:BE:61:PRO:HB3	29:BE:69:PRO:CA	2.30	0.61
30:BF:59:GLU:CB	30:BF:61:PHE:CE2	2.56	0.61
31:BG:27:ILE:O	31:BG:69:ILE:HD13	1.99	0.61
31:BG:51:ARG:NH1	31:BG:72:LYS:HB2	2.16	0.61
35:BO:86:ILE:CG2	35:BO:87:ILE:H	2.11	0.61
36:BP:94:ARG:CD	36:BP:120:LEU:CA	2.79	0.61
37:BQ:136:TRP:CE3	37:BQ:139:ALA:CB	2.84	0.61
37:BQ:47:GLU:OE2	37:BQ:152:SER:N	2.34	0.61
37:BQ:65:ARG:CZ	37:BQ:122:PHE:CD2	2.78	0.61
27:BA:2378:A:O3'	38:BS:30:GLY:HA2	2.00	0.61
38:BS:30:GLY:O	38:BS:31:LYS:HB2	1.99	0.61
46:BV:33:VAL:CB	46:BV:63:HIS:CE1	2.79	0.61
46:BV:50:ASP:CA	46:BV:53:LYS:HE3	2.31	0.61
46:BV:59:GLU:CG	46:BV:99:GLN:HA	2.31	0.61
27:BA:566:U:C5'	46:BV:81:ARG:NH2	2.63	0.61
46:BV:94:LYS:C	46:BV:95:ILE:CG1	2.66	0.61
46:BV:61:VAL:HG23	46:BV:98:ILE:H	1.63	0.61
40:BW:26:GLY:HA2	40:BW:71:VAL:HG23	1.82	0.61
42:BY:43:ASN:ND2	42:BY:112:LEU:HD11	2.16	0.61
27:BA:85:G:OP1	42:BY:65:VAL:CG2	2.46	0.61
1:AA:1004:A:O2'	1:AA:1037:C:C2	2.54	0.61
47:B2:39:ALA:HB3	47:B2:40:PRO:HD2	1.78	0.61
27:BA:481:G:OP2	42:BY:81:LYS:CG	2.49	0.61
27:BA:2755:C:C6	27:BA:2755:C:C4'	2.84	0.61
34:BN:7:ASP:O	34:BN:8:ALA:HB2	1.98	0.61
27:BA:738:G:N2	27:BA:739:G:O2'	2.33	0.61
27:BA:1221:C:H2'	27:BA:1221:C:O2	2.01	0.61
27:BA:220:G:H22	27:BA:427:U:H2'	1.66	0.61
2:AV:56:C:H1'	31:BG:56:ARG:HD2	1.82	0.61
3:AW:76:A:C8	27:BA:2422:A:C8	2.47	0.61
49:B0:35:ASN:HA	49:B0:68:VAL:CG2	2.29	0.61
48:B3:22:ALA:CA	48:B3:46:ASN:ND2	2.58	0.61
50:B4:17:GLN:HG2	50:B4:33:VAL:HG12	1.82	0.61
50:B4:68:ARG:CB	50:B4:72:LYS:CG	2.79	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:5:LEU:C	50:B4:6:HIS:ND1	2.53	0.61
27:BA:458:G:C2'	53:B7:40:HIS:CE1	2.70	0.61
27:BA:1151:G:O3'	45:BU:81:ASN:CG	2.39	0.61
27:BA:2321:G:N2	27:BA:2322:A:H1'	2.15	0.61
27:BA:2396:G:O5'	27:BA:2396:G:C8	2.53	0.61
27:BA:2410:G:N9	27:BA:2411:A:N7	2.46	0.61
27:BA:2498:C:HO2'	27:BA:2499:C:C5'	2.12	0.61
27:BA:2519:U:C2	27:BA:2542:A:C6	2.88	0.61
27:BA:2695:C:O2'	27:BA:2696:U:O4'	2.19	0.61
27:BA:2695:C:O2	27:BA:2696:U:C5	2.54	0.61
27:BA:2695:C:C2'	27:BA:2696:U:H6	2.12	0.61
27:BA:472:A:H2'	27:BA:473:G:H5'	1.83	0.61
27:BA:647:G:H2'	27:BA:648:G:H8	1.65	0.61
28:BD:154:VAL:O	28:BD:154:VAL:HG12	1.98	0.61
29:BE:229:GLN:O	29:BE:231:TRP:HD1	1.82	0.61
30:BF:220:THR:CA	30:BF:224:ALA:CB	2.76	0.61
31:BG:141:VAL:N	31:BG:144:ARG:NH1	2.48	0.61
31:BG:75:LEU:HD22	31:BG:79:MET:HB3	1.82	0.61
33:BI:35:LEU:O	33:BI:36:ALA:HB3	2.01	0.61
34:BN:63:ILE:CD1	34:BN:71:TYR:CE2	2.73	0.61
35:BO:35:ILE:HG13	35:BO:62:VAL:HG12	1.82	0.61
36:BP:77:ALA:HB2	36:BP:81:VAL:HG12	1.79	0.61
37:BQ:117:GLY:O	37:BQ:118:ALA:HB3	2.01	0.61
37:BQ:64:ALA:O	37:BQ:65:ARG:C	2.37	0.61
44:BR:25:ALA:O	44:BR:29:LEU:HD22	2.00	0.61
38:BS:17:ARG:NH1	38:BS:18:THR:HA	2.11	0.61
45:BU:72:HIS:HE1	45:BU:107:LYS:HA	1.66	0.61
46:BV:39:PHE:CE2	46:BV:41:GLY:N	2.68	0.61
46:BV:5:ILE:HD13	46:BV:12:TYR:CE1	2.36	0.61
27:BA:1187:G:O4'	46:BV:82:ARG:NH2	2.33	0.61
42:BY:74:VAL:O	42:BY:76:ASP:N	2.33	0.61
43:BZ:26:LYS:N	43:BZ:84:TYR:CZ	2.69	0.61
1:AA:979:C:OP1	1:AA:1222:G:C6	2.53	0.61
47:B2:20:LEU:HD13	47:B2:23:LEU:CB	2.29	0.61
27:BA:865:C:O2	27:BA:865:C:H2'	2.01	0.61
27:BA:2409:G:H8	27:BA:2409:G:O5'	1.82	0.61
7:AD:78:LEU:HD21	7:AD:139:ARG:NH2	2.15	0.61
1:AA:949:A:C4'	1:AA:1364:U:H3	2.13	0.61
16:AM:24:GLY:O	16:AM:29:ARG:HD2	2.01	0.61
27:BA:1327:C:H3'	27:BA:1328:G:C8	2.35	0.61
27:BA:1227:A:H8	27:BA:1227:A:H3'	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:88:VAL:HG13	8:AE:97:GLY:HA3	1.82	0.61
27:BA:2081:C:H5'	50:B4:35:VAL:HG21	1.82	0.61
50:B4:58:LYS:HG2	50:B4:62:ARG:CZ	2.31	0.61
51:B5:41:LEU:O	51:B5:42:SER:C	2.38	0.61
53:B7:26:SER:O	53:B7:29:ASN:CB	2.42	0.61
27:BA:2742:C:O5'	55:B9:35:ARG:NH1	2.34	0.61
27:BA:1287:A:C8	44:BR:104:ARG:CD	2.82	0.61
27:BA:530:G:O6	27:BA:2022:U:H5'	2.00	0.61
27:BA:2046:G:N2	27:BA:2623:G:C4	2.68	0.61
27:BA:2198:A:H2'	27:BA:2198:A:N3	2.16	0.61
27:BA:2246:G:C2	27:BA:2247:A:N7	2.69	0.61
27:BA:2262:U:C6	49:B0:14:ARG:NH2	2.60	0.61
27:BA:2508:G:H2'	27:BA:2509:G:C5'	2.29	0.61
27:BA:2525:G:N1	27:BA:2539:C:C4	2.68	0.61
27:BA:2542:A:O4'	27:BA:2542:A:P	2.57	0.61
27:BA:2549:G:C2	27:BA:2550:G:C8	2.88	0.61
27:BA:2557:G:C4	27:BA:2558:C:C5	2.89	0.61
27:BA:2574:G:C1'	29:BE:240:PRO:HB3	2.30	0.61
27:BA:2734:A:N7	27:BA:2735:G:N7	2.48	0.61
27:BA:2752:C:N4	27:BA:2753:A:N1	2.49	0.61
27:BA:848:G:H21	27:BA:933:A:H1'	1.66	0.61
28:BD:146:LYS:CG	28:BD:147:PRO:HD2	2.25	0.61
29:BE:81:VAL:CB	29:BE:100:TRP:HZ3	2.13	0.61
31:BG:156:ARG:CG	31:BG:156:ARG:O	2.49	0.61
37:BQ:137:ARG:CD	37:BQ:138:ARG:N	2.62	0.61
46:BV:50:ASP:CB	46:BV:53:LYS:CG	2.28	0.61
33:BI:109:LYS:CE	33:BI:109:LYS:N	2.57	0.61
42:BY:41:ARG:CB	42:BY:112:LEU:CA	2.72	0.61
43:BZ:13:LYS:O	43:BZ:18:MET:O	2.18	0.61
1:AA:958:A:C4	22:AS:55:LYS:CD	2.73	0.61
1:AA:1220:G:H21	22:AS:54:GLY:HA2	1.66	0.61
34:BN:10:VAL:CG1	34:BN:36:VAL:HA	2.29	0.61
27:BA:1527:G:O5'	27:BA:1527:G:C8	2.53	0.61
3:AW:37:YYG:C19	10:AG:78:ARG:O	2.48	0.61
1:AA:1494:G:P	25:AY:117:GLY:CA	2.89	0.61
1:AA:665:A:H1'	1:AA:733:A:H1'	1.83	0.61
2:AV:10:G:O6	2:AV:26:G:C4	2.53	0.61
1:AA:1237:C:H3'	1:AA:1238:A:P	2.40	0.61
1:AA:579:G:O4'	1:AA:728:A:N3	2.33	0.61
1:AA:1377:A:P	10:AG:94:ARG:NH2	2.74	0.61
15:AL:54:LYS:HG2	15:AL:75:HIS:HE1	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AL:37:CYS:O	15:AL:79:GLU:HA	2.01	0.61
18:AO:3:ILE:HG21	18:AO:34:LEU:HD21	1.83	0.61
49:B0:61:ALA:CB	49:B0:80:SER:CA	2.78	0.61
49:B0:65:GLY:HA2	49:B0:66:LYS:NZ	2.06	0.61
50:B4:15:ILE:H	50:B4:15:ILE:CD1	2.12	0.61
27:BA:2395:C:C4'	50:B4:28:ARG:HH11	2.14	0.61
27:BA:1365:A:H5''	50:B4:3:LYS:NZ	2.16	0.61
27:BA:2056:G:H21	51:B5:8:LYS:HZ1	1.49	0.61
27:BA:2454:G:O2'	27:BA:2455:G:C5'	2.48	0.61
27:BA:2459:A:N7	27:BA:2460:U:C4	2.69	0.61
27:BA:2514:U:H2'	27:BA:2515:C:O4'	2.00	0.61
27:BA:2605:U:O2'	27:BA:2606:C:H5''	2.01	0.61
27:BA:2740:A:C1'	27:BA:2741:A:C8	2.84	0.61
27:BA:2809:A:N3	27:BA:2811:G:O6	2.34	0.61
27:BA:2854:G:N2	27:BA:2864:G:C4	2.69	0.61
27:BA:535:C:H5''	45:BU:53:LYS:HE2	1.82	0.61
27:BA:606:U:OP1	30:BF:104:ASP:HB2	2.01	0.61
27:BA:617:G:H4'	30:BF:219:ASN:CG	2.17	0.61
27:BA:1818:U:P	28:BD:155:ARG:HB3	2.41	0.61
29:BE:247:ARG:HD2	29:BE:249:THR:OG1	2.01	0.61
29:BE:303:PRO:HB2	29:BE:307:LEU:HB3	1.83	0.61
30:BF:16:VAL:CG1	30:BF:17:ASP:N	2.63	0.61
30:BF:193:LEU:HD11	30:BF:231:ARG:CB	2.31	0.61
30:BF:52:ALA:C	30:BF:55:ARG:HB3	2.20	0.61
33:BI:43:ASN:HA	33:BI:46:ALA:HB2	1.81	0.61
35:BO:16:ALA:O	35:BO:17:ARG:HG3	2.00	0.61
36:BP:120:LEU:HD12	36:BP:122:ALA:CB	2.30	0.61
36:BP:57:VAL:O	36:BP:58:GLN:HB3	2.01	0.61
37:BQ:84:ARG:NH2	37:BQ:123:ILE:HD12	2.15	0.61
37:BQ:94:ARG:CZ	37:BQ:106:GLY:CA	2.78	0.61
44:BR:86:ARG:C	44:BR:87:TYR:HD2	2.03	0.61
38:BS:27:LEU:CD1	38:BS:27:LEU:C	2.66	0.61
39:BT:53:ASP:CA	39:BT:56:ARG:HE	2.13	0.61
45:BU:26:GLY:O	45:BU:27:SER:CB	2.44	0.61
27:BA:29:U:O3'	45:BU:8:ILE:HG13	2.01	0.61
45:BU:92:ARG:O	45:BU:95:LEU:CB	2.48	0.61
46:BV:3:ALA:N	46:BV:14:VAL:O	2.30	0.61
46:BV:40:VAL:CA	46:BV:51:ALA:HA	2.31	0.61
43:BZ:163:ASP:OD2	43:BZ:164:PRO:HD2	0.79	0.61
33:BI:129:VAL:O	33:BI:131:VAL:HG23	2.00	0.61
33:BI:80:PRO:CA	33:BI:146:THR:HG23	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:71:VAL:HG12	42:BY:91:LEU:HB2	1.83	0.61
1:AA:1061:G:O4'	13:AJ:56:HIS:CE1	2.54	0.61
28:BD:208:GLY:O	28:BD:211:HIS:CG	2.53	0.61
27:BA:72:U:N3	27:BA:112:U:H1'	2.15	0.61
27:BA:94:G:O3'	47:B2:41:GLU:CD	2.39	0.61
40:BW:88:ARG:O	40:BW:91:GLY:N	2.29	0.61
9:AF:69:GLU:O	9:AF:72:VAL:HG23	2.01	0.61
5:AB:102:LEU:HD23	5:AB:177:ALA:HB2	1.83	0.61
1:AA:357:G:H1'	1:AA:368:U:O2	2.01	0.61
48:B3:16:PRO:HB2	48:B3:19:GLN:HG2	1.83	0.61
48:B3:39:ASP:OD1	48:B3:40:THR:N	2.30	0.61
50:B4:14:ILE:HD12	50:B4:16:TYR:HE1	1.63	0.61
27:BA:2080:G:H5'	50:B4:32:HIS:HB3	1.82	0.61
50:B4:59:PHE:CA	50:B4:62:ARG:NE	2.63	0.61
52:B6:54:LYS:NZ	52:B6:54:LYS:HB2	2.12	0.61
54:B8:16:ILE:HG23	54:B8:22:VAL:CG2	2.31	0.61
55:B9:4:ARG:O	55:B9:36:GLN:CA	2.48	0.61
27:BA:1800:C:H3'	27:BA:1800:C:H6	1.65	0.61
27:BA:2423:U:C1'	27:BA:2425:A:C8	2.83	0.61
27:BA:2425:A:C2'	27:BA:2426:A:OP2	2.48	0.61
27:BA:2503:A:C8	27:BA:2503:A:H3'	2.34	0.61
27:BA:2619:C:H2'	27:BA:2620:C:H5'	1.83	0.61
27:BA:2620:C:O2'	27:BA:2621:A:P	2.59	0.61
27:BA:2692:C:O2	27:BA:2847:U:O2'	2.08	0.61
27:BA:2701:C:C3'	27:BA:2702:U:C5'	2.73	0.61
27:BA:2706:G:O5'	27:BA:2706:G:C8	2.48	0.61
27:BA:2767:C:H2'	27:BA:2768:C:C5'	2.31	0.61
27:BA:2811:G:N2	27:BA:2891:G:H1'	2.16	0.61
27:BA:2821:A:H2'	27:BA:2821:A:N3	2.16	0.61
27:BA:783:A:N1	27:BA:785:G:H1'	2.16	0.61
27:BA:784:A:O2'	27:BA:785:G:H5''	2.00	0.61
27:BA:974(A):C:C6	27:BA:989:G:N1	2.69	0.61
27:BA:974(A):C:H2'	27:BA:974(A):C:O2	2.00	0.61
28:BD:175:LEU:HG	28:BD:180:VAL:CA	2.24	0.61
29:BE:221:LYS:HE3	29:BE:233:ARG:CB	2.30	0.61
29:BE:240:PRO:CG	29:BE:243:PRO:HG2	2.30	0.61
29:BE:39:GLN:CB	29:BE:174:LEU:HG	2.30	0.61
27:BA:2682:U:C6	29:BE:48:MET:SD	2.94	0.61
30:BF:6:TYR:CD1	30:BF:139:VAL:HB	2.35	0.61
27:BA:1204:A:O2'	30:BF:230:GLY:N	2.33	0.61
36:BP:128:GLY:O	36:BP:129:ALA:O	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:9:SER:O	37:BQ:11:LYS:HE2	2.00	0.61
44:BR:102:GLU:HG3	44:BR:103:ARG:N	2.12	0.61
45:BU:88:ILE:CB	46:BV:52:GLY:CA	2.77	0.61
46:BV:40:VAL:HG12	46:BV:55:THR:CG2	2.25	0.61
40:BW:80:PRO:O	40:BW:100:THR:HG23	2.00	0.61
43:BZ:149:ALA:O	43:BZ:150:GLY:C	2.38	0.61
33:BI:132:LYS:CA	33:BI:138:THR:CG2	2.77	0.61
33:BI:86:GLY:C	33:BI:88:ARG:CA	2.69	0.61
27:BA:294:A:H3'	27:BA:294:A:C8	2.36	0.61
42:BY:40:VAL:O	42:BY:41:ARG:HB2	2.00	0.61
42:BY:51:LEU:HD22	42:BY:95:ASN:HB3	1.82	0.61
1:AA:1060:C:H4'	13:AJ:52:GLY:N	2.15	0.61
27:BA:1791:A:C8	27:BA:1792:G:C8	2.88	0.61
27:BA:1791:A:P	28:BD:210:LYS:HD3	2.37	0.61
47:B2:15:GLU:O	47:B2:17:GLU:C	2.39	0.61
41:BX:4:VAL:CB	47:B2:24:LYS:HZ2	2.10	0.61
27:BA:144:C:H2'	27:BA:145:G:H8	1.65	0.61
27:BA:10:G:C2	27:BA:2629:A:C6	2.89	0.61
27:BA:439:G:H5''	42:BY:6:LYS:NZ	2.16	0.61
7:AD:98:GLU:CD	7:AD:103:ASN:HD21	2.04	0.61
27:BA:689:A:H2'	27:BA:690:G:O4'	2.01	0.61
7:AD:173:TRP:CD2	7:AD:189:PRO:HB3	2.35	0.61
8:AE:11:ILE:HD11	8:AE:108:ALA:HB2	1.83	0.61
48:B3:16:PRO:C	48:B3:19:GLN:OE1	2.39	0.61
55:B9:3:VAL:HG12	55:B9:5:SER:O	1.99	0.61
27:BA:1287:A:C8	27:BA:1287:A:H5'	2.36	0.61
27:BA:2296:U:H3'	27:BA:2296:U:H6	1.65	0.61
27:BA:2429:G:H5'	27:BA:2430:A:P	2.41	0.61
27:BA:2432:A:C2	27:BA:2433:A:C4	2.89	0.61
27:BA:2483:C:C2'	27:BA:2484:G:O5'	2.46	0.61
27:BA:2504:U:C3'	27:BA:2504:U:H6	2.12	0.61
27:BA:2695:C:O2'	27:BA:2696:U:H6	1.76	0.61
27:BA:2728:U:H2'	27:BA:2729:G:C8	2.36	0.61
27:BA:2740:A:C6	27:BA:2764:A:C5	2.68	0.61
27:BA:2810:A:N7	27:BA:2811:G:C1'	2.63	0.61
27:BA:594:U:H5'	54:B8:58:MET:HE2	1.80	0.61
27:BA:874:G:H1	27:BA:903:C:H42	1.47	0.61
26:BB:9:G:OP1	38:BS:23:ARG:NH1	2.34	0.61
28:BD:196:ASN:CA	28:BD:199:ARG:CD	2.77	0.61
27:BA:2733:A:H61	29:BE:316:ARG:HD3	1.64	0.61
30:BF:63:SER:N	30:BF:65:ARG:HE	1.87	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:81:PRO:O	30:BF:82:GLN:HB3	2.01	0.61
32:BH:59:HIS:O	32:BH:61:ARG:N	2.34	0.61
34:BN:20:GLY:O	34:BN:22:VAL:CA	2.49	0.61
27:BA:557:U:C5'	34:BN:92:GLN:HB2	2.31	0.61
35:BO:35:ILE:HD12	35:BO:62:VAL:CG1	2.30	0.61
35:BO:14:SER:HB2	35:BO:86:ILE:HD12	1.81	0.61
37:BQ:46:VAL:C	37:BQ:124:ALA:O	2.38	0.61
38:BS:122:ALA:CA	38:BS:125:ALA:HB3	2.31	0.61
39:BT:10:GLY:O	39:BT:11:THR:O	2.19	0.61
46:BV:40:VAL:CG1	46:BV:55:THR:HG22	2.30	0.61
46:BV:67:LYS:HG2	46:BV:70:TYR:HE1	1.65	0.61
40:BW:5:ALA:HB3	40:BW:50:VAL:O	2.00	0.61
40:BW:66:GLU:O	40:BW:69:LEU:CD2	2.48	0.61
43:BZ:89:GLY:C	43:BZ:91:PRO:HD2	2.21	0.61
1:AA:1400:C:C5	2:AV:34:G:C2	2.89	0.61
33:BI:115:ILE:HG12	33:BI:131:VAL:CG2	2.31	0.61
42:BY:101:LEU:CD2	42:BY:101:LEU:C	2.66	0.61
1:AA:405:U:O4	7:AD:2:GLY:CA	2.48	0.61
1:AA:585:G:O2'	1:AA:879:C:C5'	2.43	0.61
27:BA:1027:A:C6	27:BA:1126:A:N3	2.69	0.61
27:BA:265:A:C5	27:BA:428:A:N6	2.68	0.61
23:AT:87:LYS:O	23:AT:91:LEU:HG	2.01	0.61
9:AF:49:ALA:HB2	21:AR:78:LEU:O	1.99	0.61
26:BB:105:G:H2'	26:BB:106:G:H8	1.66	0.61
49:B0:61:ALA:HB1	49:B0:80:SER:HA	1.82	0.60
49:B0:65:GLY:O	49:B0:66:LYS:CG	2.48	0.60
27:BA:988:A:OP1	48:B3:11:SER:CB	2.49	0.60
48:B3:31:LEU:HD22	48:B3:32:GLN:N	2.08	0.60
50:B4:21:VAL:O	50:B4:22:MET:CB	2.49	0.60
50:B4:36:TRP:CD1	50:B4:36:TRP:N	2.69	0.60
51:B5:45:ILE:CB	51:B5:52:TYR:CE1	2.84	0.60
27:BA:1759:A:H4'	27:BA:2715:C:O4'	2.01	0.60
27:BA:2051:A:C5	27:BA:2614:A:N7	2.69	0.60
27:BA:2093:G:H4'	33:BI:29:PHE:CE1	2.36	0.60
27:BA:2252:G:C6	27:BA:2253:G:C5	2.89	0.60
27:BA:2268:A:P	27:BA:2268:A:O4'	2.59	0.60
27:BA:2443:C:H2'	27:BA:2444:G:O4'	2.01	0.60
27:BA:1669:A:C4'	27:BA:2550:G:OP1	2.49	0.60
27:BA:2553:G:C6	27:BA:2554:U:O2	2.54	0.60
27:BA:2572:A:C8	29:BE:241:TRP:CD1	2.89	0.60
27:BA:2758:A:OP2	27:BA:2758:A:C8	2.54	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:600:G:O2'	30:BF:109:LEU:CD1	2.45	0.60
29:BE:247:ARG:HB3	29:BE:249:THR:HG23	1.82	0.60
29:BE:74:GLU:HB2	29:BE:293:TYR:CE2	2.19	0.60
27:BA:38:A:C2	30:BF:46:TYR:OH	2.54	0.60
30:BF:88:SER:O	30:BF:89:ALA:HB2	2.01	0.60
31:BG:49:PRO:HG3	31:BG:73:VAL:CG2	2.28	0.60
34:BN:22:VAL:HG12	34:BN:23:ALA:N	2.15	0.60
27:BA:1020:A:C1'	34:BN:49:ARG:NH2	2.64	0.60
36:BP:64:ILE:HD13	36:BP:106:VAL:HG12	1.81	0.60
36:BP:67:ARG:HH11	36:BP:111:ALA:HB3	1.66	0.60
44:BR:20:LEU:CD2	44:BR:24:GLN:CG	2.79	0.60
38:BS:118:ILE:HG23	38:BS:119:GLN:N	2.13	0.60
45:BU:117:ARG:CG	45:BU:118:GLN:N	2.64	0.60
46:BV:69:ILE:HG21	46:BV:88:GLN:C	2.21	0.60
40:BW:23:LEU:C	40:BW:23:LEU:CD2	2.69	0.60
43:BZ:125:PRO:HG2	43:BZ:130:ILE:CG2	2.30	0.60
43:BZ:34:LEU:O	43:BZ:35:ASP:CB	2.47	0.60
43:BZ:81:VAL:HG12	43:BZ:82:ASP:H	1.64	0.60
16:AM:93:ARG:C	16:AM:95:GLY:N	2.51	0.60
27:BA:1544:C:C2'	27:BA:1545:A:H4'	2.27	0.60
7:AD:18:LYS:HA	7:AD:33:MET:CE	2.31	0.60
1:AA:20:U:C2	1:AA:916:G:N2	2.69	0.60
14:AK:58:PRO:HA	14:AK:90:GLY:HA3	1.82	0.60
49:B0:75:GLY:O	49:B0:76:ALA:HB2	2.01	0.60
48:B3:5:LYS:CB	48:B3:36:VAL:HG12	2.31	0.60
3:AW:75:C:N4	50:B4:28:ARG:HB2	2.16	0.60
27:BA:688:U:H5'	27:BA:1780:A:C2	2.36	0.60
27:BA:2215:G:C2'	27:BA:2216:G:C8	2.55	0.60
27:BA:2330:G:HO2'	27:BA:2331:G:H5'	1.65	0.60
27:BA:1129:A:N6	27:BA:2491:U:OP1	2.35	0.60
27:BA:2537:U:C6	27:BA:2538:C:H5	2.19	0.60
27:BA:783:A:C4'	27:BA:2589:A:P	2.88	0.60
27:BA:2603:G:H2'	27:BA:2604:U:O4'	2.01	0.60
27:BA:2684:U:N3	27:BA:2725:A:C6	2.69	0.60
27:BA:2754:U:O2'	27:BA:2756:U:OP2	2.19	0.60
27:BA:530:G:C2	27:BA:2021:C:C6	2.88	0.60
27:BA:531:C:O2	45:BU:28:ARG:CZ	2.49	0.60
28:BD:167:GLU:O	28:BD:168:GLY:C	2.38	0.60
29:BE:229:GLN:O	29:BE:231:TRP:CD1	2.54	0.60
29:BE:254:GLY:O	29:BE:255:GLN:C	2.39	0.60
30:BF:167:ASP:CG	30:BF:232:LEU:CG	2.59	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:195:VAL:O	30:BF:236:THR:HG23	2.01	0.60
34:BN:62:ASP:N	34:BN:62:ASP:OD1	2.34	0.60
35:BO:13:ASN:O	35:BO:14:SER:C	2.37	0.60
35:BO:17:ARG:CZ	35:BO:47:THR:CA	2.79	0.60
35:BO:17:ARG:HE	35:BO:47:THR:CA	2.13	0.60
44:BR:71:GLN:O	44:BR:72:ASP:CB	2.49	0.60
37:BQ:42:TYR:CZ	43:BZ:116:VAL:HG21	2.35	0.60
43:BZ:92:VAL:CG1	43:BZ:124:ALA:HB2	2.31	0.60
28:BD:203:PRO:C	28:BD:204:PHE:HD1	2.02	0.60
27:BA:1789:A:H5''	28:BD:224:VAL:CG1	2.32	0.60
47:B2:60:GLN:O	47:B2:61:GLY:C	2.40	0.60
27:BA:1274:A:C5	27:BA:1302:A:C2	2.89	0.60
27:BA:1087:G:N2	27:BA:1104:C:C5'	2.64	0.60
56:BK:56:VAL:HG13	56:BK:70:ILE:HA	1.82	0.60
27:BA:1556:C:H2'	27:BA:1557:C:C6	2.36	0.60
9:AF:23:LYS:HA	9:AF:26:ILE:HD12	1.83	0.60
49:B0:48:GLY:CA	49:B0:55:ARG:CB	2.78	0.60
48:B3:31:LEU:HD22	48:B3:32:GLN:HB3	1.81	0.60
50:B4:58:LYS:C	50:B4:61:LYS:HG3	2.13	0.60
50:B4:60:ASN:O	50:B4:63:PHE:HB2	2.01	0.60
52:B6:28:ARG:HG2	52:B6:28:ARG:O	2.01	0.60
27:BA:1162:G:O3'	46:BV:23:GLU:OE1	2.20	0.60
27:BA:2279:G:H2'	27:BA:2280:G:H8	1.66	0.60
27:BA:2287:A:N1	27:BA:2289:G:C1'	2.39	0.60
27:BA:2307:G:H1'	27:BA:2311:A:H61	0.59	0.60
27:BA:2393:A:O2'	27:BA:2394:C:O4'	2.19	0.60
27:BA:2400:G:O3'	52:B6:20:PHE:CE1	2.53	0.60
27:BA:2531:A:C4	27:BA:2532:G:C8	2.89	0.60
27:BA:2555:U:C5	27:BA:2556:C:C5	2.89	0.60
27:BA:2662:A:H2'	27:BA:2663:G:C5'	2.31	0.60
27:BA:1638:C:C3'	27:BA:2709:G:H22	2.15	0.60
27:BA:2711:A:OP2	27:BA:2712:U:O3'	2.03	0.60
27:BA:2733:A:H3'	27:BA:2733:A:H8	1.66	0.60
27:BA:2741:A:O2'	27:BA:2742:C:O4'	2.18	0.60
27:BA:2776:A:C2	27:BA:2778:A:C6	2.88	0.60
27:BA:2786:U:H2'	27:BA:2787:C:C6	2.35	0.60
27:BA:496:G:H1'	40:BW:61:ASN:ND2	2.15	0.60
27:BA:650:C:OP1	54:B8:19:THR:HG21	2.01	0.60
30:BF:84:VAL:C	30:BF:86:GLY:N	2.44	0.60
30:BF:96:LYS:HB2	30:BF:98:ARG:NH1	0.68	0.60
34:BN:27:ALA:N	34:BN:30:ALA:HB2	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:53:ILE:HG22	34:BN:54:VAL:HG23	1.82	0.60
35:BO:103:ALA:HB3	35:BO:105:GLU:CG	2.31	0.60
27:BA:2278:A:OP1	37:BQ:20:ILE:HG22	2.02	0.60
44:BR:58:GLY:C	44:BR:80:PHE:HE2	2.03	0.60
38:BS:118:ILE:O	38:BS:119:GLN:C	2.38	0.60
38:BS:61:ALA:HB1	38:BS:84:THR:HG22	1.83	0.60
45:BU:115:ASN:H	45:BU:115:ASN:ND2	1.94	0.60
46:BV:50:ASP:CG	46:BV:53:LYS:CE	2.65	0.60
40:BW:8:ARG:CG	40:BW:102:HIS:HE1	2.09	0.60
43:BZ:165:GLU:O	43:BZ:166:LEU:HB2	2.01	0.60
43:BZ:13:LYS:C	43:BZ:15:ASP:N	2.36	0.60
43:BZ:41:ARG:H	43:BZ:41:ARG:HE	1.49	0.60
43:BZ:62:PHE:CE1	43:BZ:87:THR:HG21	2.36	0.60
43:BZ:69:VAL:CB	43:BZ:81:VAL:HG13	2.24	0.60
1:AA:976:G:O5'	1:AA:1358:U:O2'	2.18	0.60
16:AM:87:TYR:HE1	22:AS:75:ALA:O	1.84	0.60
27:BA:1444:G:O3'	27:BA:444(A):A:C8	2.54	0.60
41:BX:4:VAL:HG23	41:BX:5:ILE:N	2.16	0.60
3:AW:37:YYG:H141	10:AG:84:ASN:ND2	2.15	0.60
27:BA:414:C:N4	27:BA:2409:G:N1	2.30	0.60
1:AA:126:G:H4'	1:AA:634:C:H1'	1.81	0.60
50:B4:56:VAL:HG12	50:B4:57:ASP:H	1.66	0.60
50:B4:6:HIS:CB	50:B4:7:PRO:CD	2.65	0.60
51:B5:50:GLY:HA2	51:B5:57:VAL:CB	2.31	0.60
52:B6:36:GLU:C	52:B6:52:GLU:OE2	2.39	0.60
52:B6:8:ILE:N	52:B6:8:ILE:HD13	2.05	0.60
53:B7:3:ARG:O	53:B7:4:THR:CG2	2.45	0.60
54:B8:12:ARG:O	54:B8:14:ILE:HD13	1.99	0.60
55:B9:7:VAL:HG21	55:B9:36:GLN:HG3	1.83	0.60
27:BA:1818:U:O2	27:BA:1818:U:H2'	2.00	0.60
27:BA:2292:C:H2'	27:BA:2293:C:H6	1.66	0.60
27:BA:2415:G:H22	27:BA:2416:C:H1'	1.64	0.60
27:BA:2458:G:O2'	27:BA:2459:A:C8	2.50	0.60
27:BA:2597:G:C6	27:BA:2598:A:C6	2.88	0.60
27:BA:2695:C:O2	27:BA:2696:U:C4	2.54	0.60
27:BA:511:U:OP2	27:BA:512:G:C5	2.53	0.60
27:BA:637:A:OP2	36:BP:126:SER:CB	2.48	0.60
27:BA:911:A:H2'	37:BQ:16:ARG:CD	2.31	0.60
27:BA:971:C:P	27:BA:974(A):C:O2	2.59	0.60
28:BD:175:LEU:CD2	28:BD:175:LEU:H	2.09	0.60
31:BG:151:ILE:CD1	31:BG:156:ARG:NH2	2.51	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:89:VAL:O	32:BH:159:LYS:HA	2.00	0.60
32:BH:88:LEU:HD23	32:BH:88:LEU:C	2.21	0.60
34:BN:83:ILE:O	34:BN:84:ARG:C	2.40	0.60
34:BN:83:ILE:HG13	34:BN:84:ARG:H	0.45	0.60
27:BA:2566:A:H61	35:BO:28:SER:HA	1.65	0.60
37:BQ:120:HIS:CE1	43:BZ:76:ARG:HH12	2.19	0.60
44:BR:74:LYS:O	44:BR:77:ARG:NH1	2.33	0.60
44:BR:87:TYR:HE1	44:BR:94:TYR:CB	2.03	0.60
45:BU:93:LYS:O	45:BU:94:VAL:CG2	2.48	0.60
45:BU:92:ARG:C	45:BU:95:LEU:CD1	2.53	0.60
46:BV:5:ILE:O	46:BV:6:GLN:CB	2.50	0.60
40:BW:11:ARG:NH1	40:BW:11:ARG:CG	2.61	0.60
27:BA:495:G:O3'	40:BW:62:HIS:NE2	2.33	0.60
42:BY:33:GLU:HG2	42:BY:34:GLU:N	2.16	0.60
1:AA:1318:A:C4'	22:AS:10:PHE:CD2	2.83	0.60
27:BA:148:C:N3	27:BA:149:A:C6	2.70	0.60
31:BG:60:GLU:O	31:BG:61:PHE:CB	2.50	0.60
1:AA:1403:C:H1'	1:AA:1500:A:N1	2.17	0.60
7:AD:24:GLU:O	7:AD:27:TYR:HB2	2.02	0.60
27:BA:1358:G:H3'	27:BA:1371:G:H1	1.65	0.60
28:BD:169:LYS:H	28:BD:169:LYS:NZ	1.99	0.60
27:BA:280:C:N3	27:BA:283:A:N6	2.49	0.60
49:B0:8:GLY:O	49:B0:10:SER:N	2.33	0.60
48:B3:11:SER:CB	48:B3:13:ILE:HG12	2.31	0.60
52:B6:12:MET:HE1	52:B6:54:LYS:O	2.02	0.60
54:B8:26:LYS:HE3	54:B8:45:GLY:CA	2.31	0.60
27:BA:1800:C:C3'	27:BA:1800:C:H6	2.14	0.60
27:BA:2264:C:C5	27:BA:2265:U:H5	2.20	0.60
27:BA:2358:G:H5''	27:BA:2359:C:OP2	2.01	0.60
27:BA:2365:G:OP1	49:B0:40:GLN:O	2.20	0.60
27:BA:2423:U:C1'	27:BA:2425:A:C4	2.83	0.60
27:BA:826:U:OP1	27:BA:2428:G:H3'	2.01	0.60
27:BA:2740:A:H2'	27:BA:2741:A:H5'	1.77	0.60
27:BA:2825:C:C5	27:BA:2825:C:P	2.94	0.60
27:BA:2623:G:H5'	27:BA:2826:A:O2'	2.01	0.60
27:BA:532:A:C8	27:BA:561:G:N2	2.69	0.60
27:BA:783:A:C2	27:BA:785:G:H1'	2.37	0.60
27:BA:976:C:OP1	45:BU:48:ARG:CZ	2.49	0.60
27:BA:998:C:H5''	45:BU:84:LYS:HZ3	1.60	0.60
30:BF:26:VAL:HG12	30:BF:27:ARG:N	2.16	0.60
31:BG:22:VAL:CB	31:BG:24:HIS:NE2	2.57	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:12:VAL:HG12	34:BN:38:VAL:CG1	2.31	0.60
37:BQ:16:ARG:H	37:BQ:20:ILE:HG12	1.64	0.60
37:BQ:42:TYR:HB2	37:BQ:43:PRO:HD3	1.83	0.60
44:BR:90:ARG:HH12	44:BR:117:VAL:HG11	1.66	0.60
44:BR:75:LEU:HD23	44:BR:78:LYS:HD3	1.82	0.60
40:BW:84:ARG:CB	40:BW:96:ILE:HD11	2.12	0.60
33:BI:92:SER:H	33:BI:122:ARG:CZ	2.13	0.60
28:BD:208:GLY:H	28:BD:211:HIS:CE1	2.20	0.60
47:B2:46:ILE:O	47:B2:47:LYS:C	2.40	0.60
27:BA:148:C:N3	27:BA:149:A:N6	2.50	0.60
33:BI:52:GLN:HA	33:BI:55:GLN:CG	2.32	0.60
56:BK:22:PRO:HG2	56:BK:23:PRO:HD3	1.82	0.60
8:AE:152:ARG:NH1	11:AH:42:GLU:O	2.34	0.60
27:BA:265:A:N7	27:BA:428:A:C6	2.69	0.60
1:AA:627:G:H2'	1:AA:628:G:H8	1.65	0.60
14:AK:40:ILE:HG23	14:AK:75:TYR:HD2	1.66	0.60
10:AG:66:VAL:HG12	10:AG:70:LYS:HE2	1.84	0.60
2:AV:20:G:H2'	2:AV:20:G:N3	2.15	0.60
48:B3:20:LYS:O	48:B3:23:LEU:CA	2.50	0.60
50:B4:56:VAL:CG1	50:B4:57:ASP:H	2.14	0.60
52:B6:32:GLN:CG	52:B6:35:LEU:CD1	2.68	0.60
53:B7:21:ARG:HD2	53:B7:31:LEU:CD1	2.31	0.60
27:BA:2334:G:H5'	38:BS:12:ARG:O	2.01	0.60
27:BA:2339:G:C4	27:BA:2340:G:C8	2.90	0.60
27:BA:2351:G:C2	27:BA:2365:G:C6	2.90	0.60
27:BA:2386:C:O4'	49:B0:39:ARG:NH2	2.35	0.60
27:BA:2461:C:O2	27:BA:2462:U:H6	1.84	0.60
27:BA:2485:G:H5''	37:BQ:144:THR:HG21	1.79	0.60
27:BA:2491:U:H5'	27:BA:2570:G:H5'	1.82	0.60
27:BA:2504:U:H3'	27:BA:2504:U:H6	1.66	0.60
27:BA:2615:U:H3	51:B5:8:LYS:CG	1.98	0.60
27:BA:2634:G:C6	27:BA:2635:C:C5	2.89	0.60
27:BA:2697:G:C6	27:BA:2698:U:C5	2.90	0.60
27:BA:2718:G:C4	27:BA:2719:G:N7	2.70	0.60
27:BA:2756:U:HO2'	27:BA:2757:A:H5'	1.54	0.60
27:BA:2774:C:H2'	27:BA:2774:C:O2	1.99	0.60
27:BA:533:G:H1	27:BA:560:C:N4	1.93	0.60
27:BA:594:U:H4'	54:B8:58:MET:HE2	1.83	0.60
28:BD:168:GLY:C	28:BD:170:TYR:N	2.46	0.60
29:BE:77:PRO:CB	29:BE:187:HIS:C	2.60	0.60
30:BF:220:THR:OG1	30:BF:221:GLU:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:84:VAL:H	30:BF:87:ARG:NE	1.98	0.60
31:BG:46:GLY:O	31:BG:47:GLN:CG	2.49	0.60
27:BA:2303:G:O3'	31:BG:99:ASP:OD2	0.60	0.60
27:BA:2041:U:H5'	34:BN:70:PHE:HE1	1.60	0.60
35:BO:100:GLY:O	35:BO:101:PRO:O	2.19	0.60
35:BO:20:LEU:HG	35:BO:44:LYS:CD	2.31	0.60
37:BQ:9:SER:O	37:BQ:10:ILE:O	2.20	0.60
37:BQ:68:ALA:HB1	37:BQ:136:TRP:CZ3	2.37	0.60
44:BR:98:LEU:O	44:BR:113:LEU:O	2.19	0.60
27:BA:2334:G:H21	38:BS:12:ARG:CG	2.14	0.60
38:BS:18:THR:O	38:BS:19:ASP:OD1	2.18	0.60
39:BT:13:ILE:CG2	39:BT:14:GLU:OE2	2.49	0.60
27:BA:581:C:OP1	45:BU:33:ARG:NH1	2.32	0.60
45:BU:66:ASN:OD1	45:BU:66:ASN:N	2.29	0.60
46:BV:59:GLU:HG2	46:BV:100:GLY:N	2.17	0.60
27:BA:2013:A:C4'	40:BW:96:ILE:HG22	2.31	0.60
33:BI:95:SER:C	33:BI:98:ILE:CG1	2.68	0.60
47:B2:27:LEU:CD2	47:B2:53:ILE:HD11	2.31	0.60
1:AA:1287:A:N6	1:AA:1371:G:H4'	2.15	0.60
1:AA:64:G:H4'	1:AA:65:U:H5''	1.82	0.60
1:AA:939:G:C5'	10:AG:102:ARG:HH22	2.12	0.60
32:BH:28:PRO:CG	32:BH:79:SER:HA	2.31	0.60
1:AA:801:U:H2'	1:AA:802:A:C8	2.37	0.60
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.66	0.60
1:AA:92:C:H2'	1:AA:93:G:H8	1.66	0.60
27:BA:1364:G:O6	50:B4:2:GLN:OE1	2.19	0.60
50:B4:6:HIS:NE2	50:B4:55:ARG:HG3	2.16	0.60
27:BA:2013:A:OP1	40:BW:96:ILE:HB	1.95	0.60
27:BA:2087:G:C6	27:BA:2233:U:C5	2.89	0.60
27:BA:2300:G:H2'	27:BA:2301:C:H6	1.66	0.60
27:BA:2328:A:C4	27:BA:2329:G:C8	2.88	0.60
27:BA:2332:U:H4'	27:BA:2336:A:N6	2.17	0.60
27:BA:2428:G:H8	27:BA:2428:G:H3'	1.64	0.60
27:BA:2468:G:O2'	27:BA:2469:A:C8	2.36	0.60
27:BA:1672:C:C2	27:BA:2582:G:O4'	2.53	0.60
27:BA:2619:C:C2'	27:BA:2620:C:O5'	2.50	0.60
27:BA:2626:C:C5	27:BA:2626:C:P	2.95	0.60
27:BA:2741:A:N3	27:BA:2742:C:H1'	2.17	0.60
27:BA:2850:A:N6	27:BA:2851:A:N6	2.49	0.60
27:BA:530:G:H3'	27:BA:530:G:P	2.42	0.60
27:BA:610:C:H2'	27:BA:611:C:C6	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:12:C:N3	38:BS:10:MET:HE3	2.16	0.60
26:BB:51:G:OP2	38:BS:72:GLU:CD	2.39	0.60
28:BD:77:VAL:CB	28:BD:113:MET:CA	2.23	0.60
28:BD:85:ASN:HD22	28:BD:86:ARG:HD2	1.66	0.60
31:BG:35:ALA:C	31:BG:36:ASN:CG	2.58	0.60
32:BH:88:LEU:HD11	32:BH:94:ARG:HA	1.84	0.60
34:BN:18:ILE:O	34:BN:22:VAL:HG21	2.00	0.60
34:BN:48:GLY:O	34:BN:49:ARG:C	2.40	0.60
35:BO:43:VAL:HG12	35:BO:45:ASP:H	1.67	0.60
27:BA:2251:G:P	37:BQ:102:ARG:CZ	2.90	0.60
44:BR:37:THR:CA	44:BR:111:LEU:HA	2.22	0.60
44:BR:26:LYS:O	44:BR:27:SER:C	2.40	0.60
44:BR:38:VAL:O	44:BR:39:PRO:C	2.39	0.60
38:BS:122:ALA:C	38:BS:125:ALA:HB3	2.22	0.60
38:BS:23:ARG:HE	38:BS:35:VAL:CG1	2.15	0.60
40:BW:15:ARG:O	40:BW:16:LYS:C	2.40	0.60
40:BW:59:VAL:HG12	40:BW:60:ASN:N	2.16	0.60
43:BZ:171:VAL:O	43:BZ:171:VAL:HG23	2.02	0.60
42:BY:11:GLN:C	42:BY:21:LYS:HZ1	2.05	0.60
42:BY:66:ASP:H	42:BY:72:ILE:HG12	1.65	0.60
42:BY:77:VAL:O	42:BY:78:THR:CG2	2.44	0.60
43:BZ:39:PHE:N	43:BZ:39:PHE:CD2	2.39	0.60
43:BZ:54:ILE:HG23	43:BZ:55:THR:N	2.17	0.60
47:B2:4:HIS:O	47:B2:8:ILE:CG1	2.49	0.60
41:BX:5:ILE:HG22	41:BX:6:LYS:CA	2.27	0.60
6:AC:18:TRP:CD1	17:AN:54:PRO:HA	2.36	0.60
7:AD:22:LYS:HA	7:AD:115:ARG:NH2	2.15	0.60
1:AA:376:G:H5''	19:AP:5:ARG:CD	2.27	0.60
1:AA:113:G:H21	1:AA:353:A:H2'	1.66	0.60
27:BA:1191:G:H2'	27:BA:1192:G:H8	1.66	0.60
8:AE:39:GLY:HA2	8:AE:69:VAL:HB	1.84	0.60
48:B3:41:PRO:O	48:B3:44:ARG:HB3	2.02	0.60
51:B5:30:LEU:HD21	51:B5:41:LEU:HD23	1.82	0.60
51:B5:57:VAL:CG1	51:B5:58:LEU:N	2.29	0.60
52:B6:54:LYS:NZ	52:B6:54:LYS:CB	2.64	0.60
27:BA:2226:C:N3	27:BA:2227:A:N3	2.49	0.60
27:BA:2242:G:N1	27:BA:2243:U:C5	2.70	0.60
27:BA:2295:C:H2'	27:BA:2295:C:O2	2.02	0.60
27:BA:2331:G:C4	27:BA:2332:U:C2	2.90	0.60
27:BA:2353:G:N2	27:BA:2364:C:C2	2.63	0.60
27:BA:2067:G:N1	27:BA:2444:G:C6	2.70	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2493:U:N3	27:BA:2494:G:N7	2.45	0.60
27:BA:2689:U:N1	27:BA:2713:A:C2	2.67	0.60
27:BA:2740:A:C2	27:BA:2764:A:C2	2.90	0.60
27:BA:2635:C:N4	27:BA:2784:C:H42	2.00	0.60
27:BA:674:G:O3'	30:BF:69:HIS:O	2.18	0.60
28:BD:128:ALA:CB	28:BD:190:THR:HB	2.01	0.60
27:BA:2679:A:C4	29:BE:300:VAL:HG11	2.35	0.60
29:BE:303:PRO:HB2	29:BE:307:LEU:CG	2.30	0.60
29:BE:61:PRO:HD2	29:BE:62:ARG:HG3	1.84	0.60
29:BE:63:GLU:OE1	29:BE:64:GLY:N	2.35	0.60
29:BE:87:GLU:O	29:BE:94:ARG:O	2.19	0.60
30:BF:168:ARG:C	30:BF:193:LEU:CG	2.67	0.60
34:BN:15:ARG:CB	34:BN:43:ARG:CB	2.77	0.60
27:BA:1022:G:O6	34:BN:47:THR:HG21	2.02	0.60
34:BN:98:PHE:N	34:BN:98:PHE:CD1	2.70	0.60
35:BO:63:VAL:HG11	35:BO:102:VAL:HG22	1.81	0.60
35:BO:93:PRO:HD2	35:BO:113:LYS:HD2	1.84	0.60
36:BP:67:ARG:HH11	36:BP:111:ALA:CB	2.15	0.60
37:BQ:72:VAL:HG22	37:BQ:135:ALA:CB	2.32	0.60
27:BA:2485:G:H5'	37:BQ:144:THR:HG22	1.77	0.60
44:BR:21:TYR:O	44:BR:22:ARG:O	2.19	0.60
38:BS:86:LEU:H	38:BS:121:GLY:CA	2.15	0.60
38:BS:23:ARG:NH2	38:BS:37:ARG:HH21	2.00	0.60
39:BT:6:CYS:O	39:BT:7:ASP:CG	2.40	0.60
45:BU:16:LYS:O	45:BU:17:VAL:C	2.40	0.60
45:BU:61:TRP:C	45:BU:65:ILE:CG1	2.62	0.60
43:BZ:116:VAL:C	43:BZ:118:HIS:H	2.05	0.60
33:BI:116:GLU:CG	33:BI:132:LYS:HG3	2.32	0.60
42:BY:101:LEU:HD22	42:BY:103:LEU:CD2	1.99	0.60
42:BY:71:VAL:CG1	42:BY:93:THR:H	2.13	0.60
3:AW:25:C:C1'	3:AW:26:G:C8	2.85	0.60
28:BD:204:PHE:CD2	28:BD:209:ASN:HB2	2.37	0.60
27:BA:1397:U:O2	27:BA:1397:U:H2'	2.01	0.60
27:BA:95:G:O2'	47:B2:42:ASN:CB	2.49	0.60
29:BE:109:ASP:HA	29:BE:112:LEU:H	1.64	0.60
27:BA:1710:C:O2'	27:BA:2858:C:C4	2.55	0.60
1:AA:47:C:H4'	1:AA:48:C:H5'	1.84	0.60
1:AA:983:A:H1'	1:AA:1049:U:O2	2.02	0.60
56:BK:21:ALA:N	56:BK:22:PRO:HD2	2.17	0.60
27:BA:589:C:H42	27:BA:668:G:H1	1.47	0.60
27:BA:1766:U:H2'	27:BA:1767:C:H6	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1490:C:H6	1:AA:1490:C:H5''	1.67	0.60
48:B3:25:ALA:C	48:B3:27:GLY:H	2.05	0.60
51:B5:15:LYS:HA	51:B5:18:MET:CG	2.32	0.60
52:B6:32:GLN:HG2	52:B6:35:LEU:CD1	2.32	0.60
55:B9:10:MET:CA	55:B9:10:MET:HE3	2.32	0.60
27:BA:1182:A:H2'	27:BA:1183:G:O4'	2.01	0.60
27:BA:2215:G:C4	27:BA:2216:G:C8	2.90	0.60
27:BA:2277:G:H2'	27:BA:2277:G:N3	2.16	0.60
27:BA:2302:G:N1	27:BA:2315:G:C5	2.70	0.60
27:BA:2330:G:H2'	27:BA:2331:G:O4'	2.02	0.60
27:BA:2357:U:O2'	27:BA:2358:G:P	2.59	0.60
27:BA:2417:C:C2	27:BA:2418:A:C8	2.90	0.60
27:BA:2061:G:H1'	27:BA:2503:A:C2	2.36	0.60
27:BA:2548:G:C2'	27:BA:2549:G:O5'	2.48	0.60
27:BA:2578:G:H2'	27:BA:2579:C:C5'	2.30	0.60
27:BA:2634:G:H2'	27:BA:2635:C:C5'	2.32	0.60
27:BA:2686:G:C6	27:BA:2687:U:C5	2.90	0.60
27:BA:2881:C:H2'	27:BA:2882:A:O5'	2.00	0.60
28:BD:146:LYS:HZ1	28:BD:184:LEU:CD1	2.01	0.60
27:BA:780:G:C6	28:BD:233:ASP:CG	2.75	0.60
28:BD:86:ARG:HG2	28:BD:88:ALA:HB3	1.84	0.60
29:BE:199:ALA:HA	29:BE:314:ALA:HA	1.83	0.60
30:BF:93:LYS:HB2	30:BF:96:LYS:HE2	1.84	0.60
32:BH:64:HIS:O	32:BH:67:THR:N	2.35	0.60
33:BI:21:VAL:O	33:BI:22:ALA:CB	2.50	0.60
34:BN:23:ALA:O	34:BN:24:SER:C	2.40	0.60
34:BN:52:GLN:CB	34:BN:55:GLU:OE1	2.50	0.60
27:BA:2251:G:C4'	37:BQ:102:ARG:HH22	2.14	0.60
38:BS:118:ILE:O	38:BS:121:GLY:N	2.35	0.60
38:BS:48:VAL:CG1	38:BS:55:ASP:OD2	2.50	0.60
26:BB:51:G:OP1	38:BS:72:GLU:OE1	2.20	0.60
45:BU:111:ASP:O	45:BU:113:SER:C	2.39	0.60
45:BU:86:ALA:CB	45:BU:90:LEU:CD2	2.79	0.60
40:BW:17:VAL:HA	40:BW:20:VAL:CG2	2.32	0.60
43:BZ:108:VAL:O	43:BZ:109:GLN:CG	2.50	0.60
27:BA:876:C:H5'	43:BZ:165:GLU:OE2	2.02	0.60
33:BI:133:LEU:H	33:BI:138:THR:CG2	2.15	0.60
33:BI:98:ILE:HG21	33:BI:115:ILE:CD1	2.32	0.60
33:BI:98:ILE:HG21	33:BI:115:ILE:HD12	1.83	0.60
43:BZ:35:ASP:N	43:BZ:39:PHE:HZ	1.88	0.60
41:BX:30:ASP:C	41:BX:31:ARG:O	2.39	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:53:ARG:NH1	32:BH:56:ASP:O	2.35	0.60
1:AA:880:C:OP2	15:AL:8:ASN:HB2	2.01	0.60
1:AA:1254:C:OP1	13:AJ:45:ARG:HD2	2.01	0.60
1:AA:429:U:H5'	7:AD:32:ALA:HB2	1.84	0.60
27:BA:1829:A:H5''	27:BA:1830:C:H5	1.66	0.60
16:AM:19:LEU:HD13	16:AM:25:ILE:HG21	1.82	0.60
27:BA:701:G:H1	27:BA:731:C:H42	1.48	0.60
49:B0:33:ALA:HB2	49:B0:65:GLY:CA	2.32	0.60
48:B3:8:LEU:O	48:B3:9:VAL:CG1	2.50	0.60
51:B5:46:CYS:O	51:B5:48:ASN:N	2.34	0.60
27:BA:2615:U:C4	51:B5:8:LYS:HG2	2.37	0.60
53:B7:34:ARG:NE	53:B7:42:LEU:HD23	2.13	0.60
55:B9:29:ASN:HD22	55:B9:32:HIS:CE1	2.16	0.60
27:BA:1430:C:H2'	27:BA:1431:U:C6	2.36	0.60
27:BA:2060:A:HO2'	27:BA:2502:G:C5'	2.07	0.60
27:BA:2064:C:N1	27:BA:2450:A:N6	2.50	0.60
27:BA:2297:C:O2	27:BA:2322:A:C8	2.55	0.60
27:BA:2351:G:N2	27:BA:2365:G:C5	2.70	0.60
27:BA:2528:U:H3'	27:BA:2528:U:C6	2.37	0.60
27:BA:2546:U:O2	27:BA:2567:G:C8	2.55	0.60
27:BA:2550:G:H2'	27:BA:2551:C:C5	2.37	0.60
27:BA:2553:G:N7	27:BA:2554:U:C2	2.70	0.60
27:BA:2074:U:O2'	27:BA:2597:G:O2'	1.80	0.60
27:BA:2662:A:C2	27:BA:2663:G:C4'	2.85	0.60
27:BA:2728:U:H6	27:BA:2728:U:O5'	1.85	0.60
27:BA:2745:C:H2'	32:BH:142:GLU:OE2	1.98	0.60
27:BA:2792:G:C6	27:BA:2793:G:O6	2.55	0.60
28:BD:68:ARG:HH21	28:BD:190:THR:HG22	1.65	0.60
27:BA:443:A:H62	30:BF:39:GLN:HB2	1.66	0.60
32:BH:120:LEU:O	32:BH:121:GLU:OE1	2.16	0.60
32:BH:122:ILE:HG22	32:BH:123:GLU:N	2.17	0.60
34:BN:135:ILE:O	34:BN:139:LEU:CG	2.49	0.60
34:BN:83:ILE:HD11	34:BN:84:ARG:CG	2.31	0.60
27:BA:557:U:H5''	34:BN:92:GLN:HB2	1.84	0.60
44:BR:20:LEU:HD21	44:BR:24:GLN:OE1	2.02	0.60
27:BA:1152:C:C5'	45:BU:80:ILE:HG21	2.25	0.60
45:BU:88:ILE:HB	46:BV:52:GLY:HA2	1.80	0.60
42:BY:51:LEU:C	42:BY:52:ARG:HG3	2.22	0.60
27:BA:1751:C:C4'	27:BA:2860:A:C2	2.83	0.60
1:AA:755:G:H2'	1:AA:756:C:C6	2.36	0.60
1:AA:1156:G:C3'	1:AA:1157:A:P	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:270(K):C:H3'	27:BA:270(L):U:O4'	2.01	0.60
27:BA:1936:A:H2	27:BA:1943:U:H3	1.49	0.60
27:BA:711:G:H1	27:BA:720:C:H42	1.50	0.60
1:AA:290:C:H6	1:AA:290:C:O5'	1.84	0.60
51:B5:30:LEU:HD23	51:B5:41:LEU:HA	1.84	0.59
52:B6:29:ARG:CG	52:B6:30:ASN:N	2.58	0.59
27:BA:125:G:H21	53:B7:10:ARG:CA	2.10	0.59
27:BA:127:A:N6	53:B7:18:PHE:HZ	2.00	0.59
27:BA:1278:A:O2'	44:BR:27:SER:HB3	2.01	0.59
27:BA:2032:G:H21	27:BA:2055:C:H42	1.49	0.59
27:BA:2411:A:O2'	27:BA:2412:A:O5'	2.19	0.59
27:BA:2521:C:O2	27:BA:2522:U:C1'	2.50	0.59
27:BA:2558:C:H2'	27:BA:2558:C:O2	2.01	0.59
27:BA:2633:G:N1	27:BA:2634:G:C5	2.70	0.59
27:BA:2679:A:C4	27:BA:2680:C:C6	2.90	0.59
27:BA:2786:U:C5'	29:BE:100:TRP:HB2	2.32	0.59
27:BA:802:A:H2'	27:BA:803:U:C6	2.37	0.59
27:BA:973:A:N1	46:BV:81:ARG:CG	2.63	0.59
27:BA:1819:A:C4	28:BD:177:SER:HB3	2.37	0.59
29:BE:212:GLY:C	29:BE:214:VAL:N	2.54	0.59
27:BA:2572:A:N7	29:BE:241:TRP:CD1	2.70	0.59
29:BE:295:LEU:HD23	29:BE:296:VAL:N	2.11	0.59
30:BF:7:ASP:OD2	30:BF:13:ASP:OD2	2.19	0.59
32:BH:71:LEU:C	32:BH:73:ASN:N	2.55	0.59
32:BH:74:MET:O	32:BH:75:VAL:O	2.20	0.59
32:BH:96:SER:O	32:BH:97:LYS:C	2.40	0.59
27:BA:1006:C:H1'	34:BN:86:MET:SD	2.42	0.59
44:BR:60:LEU:HD23	44:BR:61:HIS:H	1.65	0.59
38:BS:114:LYS:O	38:BS:117:ALA:HB3	2.02	0.59
45:BU:8:ILE:O	45:BU:11:ARG:HG2	2.02	0.59
47:B2:2:VAL:HG12	47:B2:3:LEU:N	2.14	0.59
29:BE:112:LEU:C	29:BE:112:LEU:HD13	2.23	0.59
7:AD:55:ALA:O	7:AD:59:ARG:HG2	2.02	0.59
27:BA:1102:C:O2	27:BA:1104:C:C5	2.55	0.59
1:AA:25:C:H4'	1:AA:524:G:N3	2.17	0.59
1:AA:509:A:C8	7:AD:54:TYR:CE2	2.90	0.59
1:AA:529:G:C5	15:AL:49:ASN:ND2	2.70	0.59
27:BA:303:U:H2'	27:BA:304:G:H8	1.67	0.59
5:AB:91:PRO:HG3	5:AB:155:LEU:H	1.66	0.59
1:AA:454:C:H3'	1:AA:455:C:H6	1.67	0.59
1:AA:1441:G:H1'	1:AA:1461:G:H22	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AC:23:TYR:HD2	6:AC:24:ALA:N	2.00	0.59
27:BA:364:C:H2'	27:BA:365:C:C6	2.37	0.59
27:BA:666:G:H2'	27:BA:667:U:C6	2.36	0.59
1:AA:1216:G:OP1	17:AN:5:ALA:CB	2.50	0.59
1:AA:689:C:O5'	1:AA:689:C:H6	1.85	0.59
48:B3:19:GLN:CD	48:B3:19:GLN:H	2.06	0.59
27:BA:929:G:C1'	48:B3:43:ILE:HG13	2.32	0.59
27:BA:747:U:P	51:B5:2:ALA:CB	2.89	0.59
52:B6:54:LYS:NZ	52:B6:54:LYS:HA	2.17	0.59
27:BA:1140:C:H4'	27:BA:142(A):A:C4	2.36	0.59
27:BA:2061:G:C4	27:BA:2503:A:C2	2.90	0.59
27:BA:2257:U:C2'	27:BA:2258:C:OP2	2.50	0.59
27:BA:2300:G:O2'	27:BA:2301:C:C5'	2.45	0.59
27:BA:2303:G:H4'	31:BG:99:ASP:HB3	1.71	0.59
27:BA:2390:U:H6	27:BA:2390:U:H3'	1.67	0.59
27:BA:2422:A:O2'	27:BA:2424:C:H6	1.84	0.59
27:BA:2553:G:O6	27:BA:2554:U:O2	2.19	0.59
27:BA:2573:C:O5'	27:BA:2573:C:C6	2.54	0.59
27:BA:2686:G:C5	27:BA:2687:U:C5	2.89	0.59
27:BA:2691:C:C4	27:BA:2719:G:N2	2.70	0.59
27:BA:396:G:OP1	50:B4:10:VAL:CA	2.44	0.59
27:BA:515:A:H2'	27:BA:516:C:C6	2.37	0.59
27:BA:6:A:O2'	34:BN:6:PHE:HA	2.02	0.59
27:BA:856:C:C4'	49:B0:25:LYS:NZ	2.65	0.59
27:BA:911:A:C8	27:BA:2264:C:H1'	2.37	0.59
29:BE:211:GLN:N	29:BE:216:ARG:NH2	2.48	0.59
30:BF:165:ASP:O	30:BF:168:ARG:HB3	2.02	0.59
32:BH:55:SER:C	32:BH:57:GLU:N	2.55	0.59
34:BN:54:VAL:HG12	34:BN:139:LEU:HD12	1.84	0.59
34:BN:57:TYR:O	34:BN:60:ARG:HB2	2.03	0.59
36:BP:62:ALA:O	36:BP:107:LYS:CG	2.48	0.59
37:BQ:45:GLN:CD	37:BQ:153:PRO:CB	2.69	0.59
27:BA:1287:A:N9	44:BR:104:ARG:HH11	1.39	0.59
38:BS:104:ILE:HG22	38:BS:106:LEU:O	2.02	0.59
38:BS:128:ASP:O	38:BS:129:ILE:CD1	2.49	0.59
35:BO:78:ARG:O	39:BT:22:VAL:CG2	2.49	0.59
45:BU:13:ARG:O	45:BU:16:LYS:CA	2.50	0.59
33:BI:82:LYS:O	33:BI:83:ALA:HB2	2.02	0.59
43:BZ:29:ASN:C	43:BZ:30:VAL:HG23	2.23	0.59
1:AA:1224:G:C6	1:AA:1322:C:H4'	2.37	0.59
27:BA:1466:G:H2'	27:BA:1547:C:C5	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B2:51:LYS:O	47:B2:52:ALA:O	2.20	0.59
47:B2:60:GLN:NE2	47:B2:65:ASP:HA	2.17	0.59
1:AA:1374:A:H1'	10:AG:31:MET:SD	2.42	0.59
1:AA:1189:C:O2'	6:AC:176:HIS:HD2	1.84	0.59
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.01	0.59
1:AA:375:U:O5'	1:AA:375:U:H6	1.85	0.59
27:BA:1227:A:H3'	27:BA:1227:A:C8	2.37	0.59
1:AA:324:G:N2	1:AA:327:A:C8	2.70	0.59
27:BA:273(A):G:H2'	27:BA:273(B):C:C6	2.37	0.59
1:AA:532:A:N6	6:AC:159:GLY:O	2.35	0.59
21:AR:36:ASN:HB3	21:AR:40:LEU:HG	1.83	0.59
12:AI:78:LYS:HD3	12:AI:101:PHE:HE2	1.66	0.59
1:AA:62:U:H5''	1:AA:385:C:O2'	2.02	0.59
27:BA:223:A:H4'	27:BA:223:A:OP2	2.01	0.59
27:BA:2353:G:N2	49:B0:32:LYS:HE2	2.17	0.59
49:B0:73:GLY:O	49:B0:74:LYS:O	2.20	0.59
48:B3:50:VAL:O	48:B3:53:LEU:CB	2.49	0.59
53:B7:24:THR:HG23	53:B7:28:ARG:H	1.67	0.59
27:BA:2230:G:O2'	27:BA:2231:C:C4'	2.50	0.59
27:BA:2279:G:C4	27:BA:2280:G:C8	2.90	0.59
27:BA:2317:C:C5'	31:BG:150:SER:HB3	2.31	0.59
27:BA:412:A:N6	27:BA:2411:A:H1'	2.17	0.59
27:BA:2416:C:O2	27:BA:2417:C:H6	1.80	0.59
27:BA:2479:G:OP1	27:BA:2537:U:C1'	2.50	0.59
27:BA:2517:C:HO2'	27:BA:2518:A:C5'	1.90	0.59
27:BA:2569:G:C2	27:BA:2570:G:C8	2.90	0.59
27:BA:2571:C:O2'	29:BE:243:PRO:HG3	2.00	0.59
27:BA:2625:G:C2'	27:BA:2626:C:C6	2.85	0.59
27:BA:2725:A:C4	27:BA:2727:G:N7	2.70	0.59
27:BA:2733:A:C8	27:BA:2733:A:H3'	2.37	0.59
27:BA:2776:A:N3	27:BA:2778:A:C8	2.70	0.59
27:BA:647:G:OP1	27:BA:2352:A:H4'	2.01	0.59
27:BA:2712:U:C2'	27:BA:712(A):A:P	2.90	0.59
27:BA:830:G:C5	27:BA:2448:A:N7	2.68	0.59
28:BD:175:LEU:N	28:BD:175:LEU:CD2	2.46	0.59
29:BE:237:ASN:C	29:BE:238:LEU:HD22	2.23	0.59
29:BE:315:VAL:C	29:BE:317:PRO:HD3	2.21	0.59
30:BF:102:LEU:HD23	30:BF:103:ASN:N	2.16	0.59
27:BA:605:C:C3'	30:BF:105:LYS:HE2	2.22	0.59
30:BF:115:LEU:O	30:BF:116:ALA:C	2.40	0.59
30:BF:81:PRO:HB3	30:BF:87:ARG:HB3	0.63	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:38:GLU:CG	31:BG:41:LEU:CD1	2.60	0.59
35:BO:110:ASP:O	35:BO:111:PHE:CE1	2.53	0.59
36:BP:73:VAL:O	36:BP:76:LEU:N	2.35	0.59
37:BQ:68:ALA:HB1	37:BQ:136:TRP:HZ3	1.66	0.59
37:BQ:18:GLU:CG	37:BQ:23:ILE:HD11	2.31	0.59
44:BR:52:ILE:HD12	44:BR:94:TYR:HB2	1.83	0.59
31:BG:145:ASP:OD2	38:BS:15:GLU:O	2.20	0.59
38:BS:85:GLY:O	38:BS:88:ALA:HB3	2.02	0.59
38:BS:92:ALA:O	38:BS:94:GLU:N	2.34	0.59
45:BU:33:ARG:HB3	45:BU:33:ARG:HH11	1.62	0.59
45:BU:4:ALA:C	45:BU:6:THR:N	2.52	0.59
43:BZ:107:GLU:C	43:BZ:109:GLN:H	2.05	0.59
27:BA:291:C:H2'	27:BA:292:C:H5'	1.84	0.59
26:BB:77:U:P	43:BZ:80:HIS:CE1	2.95	0.59
1:AA:1318:A:C5'	22:AS:10:PHE:CD2	2.85	0.59
27:BA:1524:G:H2'	27:BA:1525:G:O4'	2.02	0.59
27:BA:2857:G:H2'	27:BA:2858:C:C5'	2.31	0.59
3:AW:40:C:H4'	10:AG:147:ALA:HB1	1.83	0.59
10:AG:102:ARG:HG2	10:AG:106:GLN:HE22	1.67	0.59
56:BK:85:ILE:CG1	56:BK:87:LYS:O	2.49	0.59
27:BA:1726:G:H2'	27:BA:1727:U:H5'	1.85	0.59
3:AW:72:C:C2'	3:AW:73:A:O5'	2.49	0.59
48:B3:16:PRO:O	48:B3:17:LYS:O	2.20	0.59
50:B4:44:THR:O	50:B4:46:GLU:OE2	2.19	0.59
54:B8:12:ARG:O	54:B8:13:ARG:C	2.40	0.59
54:B8:9:MET:O	54:B8:13:ARG:O	2.19	0.59
27:BA:676:A:C8	27:BA:2443:C:H1'	2.37	0.59
27:BA:2064:C:C1'	27:BA:2450:A:N6	2.65	0.59
27:BA:1127:A:C6	27:BA:2518:A:C2	2.90	0.59
27:BA:2593:U:C2	27:BA:2600:A:N1	2.70	0.59
27:BA:2648:C:C2	27:BA:2673:G:N2	2.71	0.59
27:BA:2793:G:C2	27:BA:2794:C:C4	2.91	0.59
27:BA:2875:C:N4	27:BA:2876:G:O6	2.34	0.59
27:BA:2885:C:N4	27:BA:2886:G:N7	2.49	0.59
27:BA:527:C:H5	27:BA:2779:U:H3'	1.63	0.59
27:BA:686:G:C8	53:B7:7:PRO:HA	2.37	0.59
27:BA:971:C:OP2	27:BA:974(A):C:O2	2.20	0.59
26:BB:18:G:OP1	31:BG:149:ARG:HA	2.02	0.59
30:BF:37:ALA:HB1	30:BF:107:ARG:NH2	2.18	0.59
31:BG:57:THR:CG2	31:BG:58:VAL:H	1.92	0.59
32:BH:103:VAL:HG12	32:BH:103:VAL:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:104:LEU:C	32:BH:151:ARG:NH1	2.56	0.59
36:BP:114:VAL:HG11	36:BP:133:VAL:CA	2.31	0.59
37:BQ:49:VAL:CA	37:BQ:121:ASP:HB2	2.29	0.59
37:BQ:136:TRP:O	37:BQ:137:ARG:C	2.39	0.59
37:BQ:35:ASN:HB2	37:BQ:75:SER:HA	1.84	0.59
37:BQ:63:ALA:O	37:BQ:64:ALA:C	2.40	0.59
44:BR:36:THR:HG22	44:BR:37:THR:N	2.16	0.59
44:BR:41:ALA:O	44:BR:43:GLU:N	2.35	0.59
38:BS:83:LEU:HA	38:BS:86:LEU:HD12	1.84	0.59
46:BV:39:PHE:HE2	46:BV:41:GLY:CA	2.16	0.59
46:BV:42:GLY:N	46:BV:54:TYR:OH	2.29	0.59
46:BV:67:LYS:CD	46:BV:70:TYR:HE1	2.15	0.59
27:BA:487:C:C1'	40:BW:53:SER:OG	2.50	0.59
43:BZ:146:HIS:HD2	43:BZ:170:SER:HB2	1.66	0.59
43:BZ:147:ILE:HG13	43:BZ:168:VAL:CG1	2.33	0.59
42:BY:31:LEU:CA	42:BY:113:GLU:OE2	2.38	0.59
1:AA:1224:G:C8	1:AA:1322:C:OP1	2.55	0.59
1:AA:946:A:O2'	1:AA:1333:A:C1'	2.50	0.59
1:AA:1408:A:O2'	27:BA:1913:A:O2'	2.09	0.59
27:BA:1913:A:N1	27:BA:1917:U:C5	2.71	0.59
27:BA:1805:U:C5'	28:BD:235:PRO:HB3	2.32	0.59
1:AA:1095:U:H5'	1:AA:1109:C:C2	2.36	0.59
27:BA:215:G:H4'	27:BA:216:A:H4'	1.85	0.59
1:AA:624:C:H4'	19:AP:10:GLY:HA2	1.83	0.59
8:AE:28:PHE:CD1	8:AE:28:PHE:N	2.69	0.59
25:AY:229:GLY:CA	27:BA:2602:A:N1	2.65	0.59
13:AJ:50:ILE:HD12	17:AN:41:ARG:HD2	1.83	0.59
27:BA:855:G:O2'	49:B0:25:LYS:HD3	2.02	0.59
48:B3:36:VAL:O	48:B3:37:LEU:CD2	2.50	0.59
27:BA:372:G:O2'	50:B4:63:PHE:CE2	2.51	0.59
53:B7:26:SER:O	53:B7:29:ASN:N	2.35	0.59
27:BA:592:G:N2	54:B8:3:LYS:CE	2.62	0.59
55:B9:10:MET:HA	55:B9:10:MET:CE	2.31	0.59
55:B9:24:LEU:HD22	55:B9:35:ARG:CA	2.31	0.59
27:BA:2217:G:H2'	27:BA:2218:G:O5'	2.02	0.59
27:BA:2584:U:H5	27:BA:2585:U:C2'	2.15	0.59
27:BA:2051:A:C6	27:BA:2614:A:N7	2.68	0.59
27:BA:2617:C:C2	27:BA:2618:G:C8	2.77	0.59
27:BA:2653:U:OP2	27:BA:2654:A:C3'	2.48	0.59
27:BA:270(P):C:OP2	33:BI:45:LYS:CD	2.43	0.59
27:BA:2817:G:H2'	27:BA:2818:G:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2834:G:H3'	27:BA:2834:G:C8	2.37	0.59
27:BA:2862:G:C4	27:BA:2863:C:C5	2.90	0.59
27:BA:468:G:H2'	27:BA:469:G:H5'	1.82	0.59
27:BA:856:C:C4'	49:B0:25:LYS:HZ2	2.14	0.59
27:BA:910:A:C5	37:BQ:12:PRO:O	2.56	0.59
27:BA:997:G:H5''	45:BU:92:ARG:HD2	1.83	0.59
28:BD:103:ILE:CB	28:BD:104:ILE:HD12	2.29	0.59
29:BE:70:VAL:O	29:BE:71:THR:HG23	2.02	0.59
30:BF:22:PHE:CE2	30:BF:118:THR:OG1	2.50	0.59
30:BF:193:LEU:N	30:BF:233:THR:HG22	1.91	0.59
30:BF:6:TYR:CD1	30:BF:139:VAL:CB	2.85	0.59
30:BF:94:THR:C	30:BF:96:LYS:N	2.34	0.59
32:BH:13:GLY:O	32:BH:15:THR:N	2.35	0.59
32:BH:87:GLU:CD	32:BH:162:ARG:HB2	2.23	0.59
32:BH:58:LYS:C	32:BH:61:ARG:HB3	2.23	0.59
35:BO:28:SER:O	35:BO:29:GLY:C	2.40	0.59
35:BO:88:ARG:NE	35:BO:94:ARG:HG2	2.17	0.59
36:BP:76:LEU:HG	36:BP:81:VAL:CG2	2.31	0.59
38:BS:111:PRO:O	38:BS:116:PHE:HB2	2.03	0.59
27:BA:2378:A:N9	38:BS:26:LEU:CD2	2.64	0.59
45:BU:111:ASP:HA	45:BU:114:ARG:CD	2.28	0.59
27:BA:995:C:N1	45:BU:57:PHE:CE2	2.70	0.59
46:BV:6:GLN:NE2	46:BV:10:LYS:HB3	2.17	0.59
1:AA:1060:C:H2'	1:AA:1061:G:C8	2.37	0.59
27:BA:1394:U:H4'	27:BA:1603:A:H4'	1.83	0.59
41:BX:35:GLY:O	41:BX:36:GLU:C	2.40	0.59
41:BX:24:LEU:CD1	41:BX:66:VAL:O	2.51	0.59
56:BK:116:LEU:HD13	56:BK:117:ASN:N	2.18	0.59
7:AD:12:CYS:HB2	7:AD:31:CYS:O	2.03	0.59
27:BA:324:A:H62	27:BA:339:U:C1'	2.14	0.59
2:AV:43:G:H2'	2:AV:44:A:C8	2.37	0.59
1:AA:1192:C:C6	1:AA:1192:C:H3'	2.37	0.59
27:BA:1454:U:O2	27:BA:1454:U:H2'	2.02	0.59
50:B4:56:VAL:CG1	50:B4:57:ASP:N	2.65	0.59
51:B5:44:HIS:CA	51:B5:52:TYR:CZ	2.68	0.59
54:B8:30:ARG:NH2	54:B8:41:ILE:CG2	2.65	0.59
55:B9:20:HIS:C	55:B9:22:ARG:N	2.48	0.59
27:BA:1366:A:OP2	27:BA:1366:A:C8	2.55	0.59
27:BA:2194:G:C5	27:BA:2195:C:N4	2.70	0.59
27:BA:2331:G:O3'	49:B0:70:ILE:CB	2.45	0.59
27:BA:2354:G:N3	49:B0:32:LYS:HE2	2.13	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2373:G:N1	27:BA:2374:C:C4	2.70	0.59
27:BA:2372:G:C6	27:BA:2373:G:O6	2.56	0.59
27:BA:2474:C:H5	27:BA:2475:C:C4	2.21	0.59
27:BA:2493:U:H2'	27:BA:2494:G:O5'	2.02	0.59
27:BA:2507:C:C6	27:BA:2508:G:N7	2.70	0.59
27:BA:2622:C:N3	27:BA:2623:G:N7	2.49	0.59
27:BA:2668:G:N2	27:BA:2669:G:H1'	2.18	0.59
27:BA:1662:C:O2'	27:BA:2687:U:OP1	2.20	0.59
27:BA:2785:C:C4	27:BA:2786:U:O4	2.56	0.59
27:BA:2797:U:H1'	27:BA:2799:A:C8	2.38	0.59
27:BA:650:C:OP1	54:B8:17:THR:CB	2.51	0.59
27:BA:932:G:H4'	48:B3:24:LYS:NZ	2.16	0.59
26:BB:29:A:OP2	38:BS:41:LYS:HB2	2.02	0.59
27:BA:2620:C:H4'	29:BE:252:GLN:CB	2.33	0.59
29:BE:269:ILE:HD13	29:BE:295:LEU:C	2.22	0.59
27:BA:600:G:C5'	30:BF:27:ARG:NH1	2.54	0.59
30:BF:58:ALA:CB	30:BF:79:ARG:HB2	2.33	0.59
30:BF:6:TYR:CE2	30:BF:140:VAL:HG23	2.37	0.59
32:BH:123:GLU:OE2	32:BH:131:ILE:O	2.20	0.59
32:BH:25:VAL:HG12	32:BH:78:VAL:HG11	1.84	0.59
32:BH:50:THR:OG1	32:BH:51:VAL:N	2.36	0.59
34:BN:24:SER:C	34:BN:28:GLU:HG2	2.23	0.59
34:BN:58:GLU:CA	34:BN:61:VAL:CB	2.73	0.59
34:BN:65:ASN:N	34:BN:69:TYR:HB2	2.11	0.59
35:BO:14:SER:N	35:BO:95:GLY:HA2	2.18	0.59
27:BA:2674:G:C4'	35:BO:30:ARG:HG2	2.20	0.59
46:BV:3:ALA:HB3	46:BV:12:TYR:HH	1.66	0.59
33:BI:110:LEU:HD11	33:BI:133:LEU:CD2	2.33	0.59
27:BA:325:G:H2'	27:BA:326:G:C8	2.37	0.59
13:AJ:64:GLU:HB3	17:AN:59:ALA:CB	2.30	0.59
3:AW:41:U:H2'	3:AW:42:G:O4'	2.03	0.59
27:BA:2896:C:H6	27:BA:2896:C:C4'	2.16	0.59
27:BA:481:G:O2'	27:BA:482:A:H8	1.86	0.59
13:AJ:16:LEU:HB3	13:AJ:70:ARG:HE	1.67	0.59
27:BA:1324:G:C1'	27:BA:1616:A:H62	2.16	0.59
1:AA:667:G:O2'	18:AO:49:ASP:OD1	2.18	0.59
20:AQ:5:VAL:HA	20:AQ:59:ILE:O	2.03	0.59
5:AB:17:PHE:HD1	5:AB:18:GLY:N	2.00	0.59
27:BA:1928:A:H8	27:BA:1928:A:H5''	1.67	0.59
1:AA:380:G:N2	1:AA:382:A:H3'	2.18	0.59
49:B0:41:ARG:HB2	49:B0:74:LYS:NZ	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:59:PHE:HA	50:B4:62:ARG:CD	2.32	0.59
50:B4:58:LYS:CG	50:B4:62:ARG:HH21	2.15	0.59
51:B5:13:LYS:CD	51:B5:14:SER:H	2.15	0.59
52:B6:7:ARG:C	52:B6:29:ARG:NH2	2.54	0.59
27:BA:2082:A:C6	27:BA:2239:G:O6	2.45	0.59
27:BA:2243:U:O2	27:BA:2244:U:C6	2.55	0.59
27:BA:2418:A:H2'	27:BA:2419:U:O4'	2.03	0.59
27:BA:2435:A:C2	27:BA:2436:G:N9	2.71	0.59
27:BA:2469:A:C8	27:BA:2469:A:C5'	2.80	0.59
27:BA:2471:C:N3	27:BA:2479:G:N1	2.50	0.59
27:BA:2446:G:H21	27:BA:2501:C:N4	1.87	0.59
27:BA:2544:G:N3	27:BA:2545:G:C8	2.71	0.59
27:BA:2648:C:C2'	27:BA:2649:U:C5'	2.79	0.59
27:BA:2841:C:O2	27:BA:2877:G:C2	2.55	0.59
27:BA:2880:C:N4	27:BA:2881:C:C4	2.67	0.59
28:BD:86:ARG:N	28:BD:86:ARG:CD	2.61	0.59
32:BH:101:LYS:HZ3	32:BH:115:GLU:HB2	1.58	0.59
32:BH:120:LEU:HB3	32:BH:143:LEU:HD11	1.83	0.59
33:BI:13:GLY:HA2	33:BI:15:LYS:CD	2.29	0.59
35:BO:79:PHE:CD2	39:BT:22:VAL:HG21	2.38	0.59
44:BR:51:LEU:HD11	44:BR:70:LEU:HD21	1.85	0.59
38:BS:32:PRO:CG	38:BS:100:ALA:CA	2.80	0.59
38:BS:12:ARG:HB3	38:BS:20:TYR:CE1	2.38	0.59
46:BV:40:VAL:CA	46:BV:51:ALA:CB	2.80	0.59
46:BV:35:LEU:H	46:BV:60:VAL:HG12	1.66	0.59
40:BW:81:ALA:O	40:BW:82:LEU:CD1	2.46	0.59
43:BZ:103:ARG:CB	43:BZ:139:THR:HG22	2.33	0.59
43:BZ:85:MET:O	43:BZ:86:VAL:HG22	2.03	0.59
1:AA:1320:C:C4'	22:AS:73:GLU:HG2	2.32	0.59
27:BA:72:U:C4'	47:B2:57:LYS:HZ2	2.16	0.59
27:BA:440:G:O5'	42:BY:3:GLN:CD	2.40	0.59
1:AA:397:A:N6	1:AA:548:G:C5	2.71	0.59
2:AV:10:G:O6	2:AV:26:G:C5	2.56	0.59
1:AA:130:A:C8	20:AQ:63:ARG:HG3	2.37	0.59
27:BA:1482:U:C3'	27:BA:1482:U:H6	2.13	0.59
27:BA:269:U:H3	27:BA:270:A:H62	1.48	0.59
27:BA:270:A:H2'	27:BA:270(A):A:C4'	2.32	0.59
1:AA:758:G:O5'	1:AA:758:G:H8	1.85	0.59
27:BA:1222:C:H42	27:BA:1227:A:N6	2.00	0.59
27:BA:728:G:H8	27:BA:728:G:OP2	1.86	0.59
27:BA:255:A:H4'	27:BA:255:A:OP1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2356:C:H4'	49:B0:17:ASN:ND2	2.18	0.59
49:B0:61:ALA:HB2	49:B0:80:SER:C	2.23	0.59
27:BA:988:A:P	48:B3:11:SER:HB2	2.42	0.59
52:B6:31:THR:O	52:B6:32:GLN:C	2.40	0.59
52:B6:42:PRO:HD3	52:B6:50:PHE:HZ	1.68	0.59
53:B7:21:ARG:HH22	53:B7:43:THR:N	2.00	0.59
27:BA:1263:U:C2'	51:B5:16:ARG:NH2	2.66	0.59
27:BA:1287:A:C8	44:BR:104:ARG:HD2	2.37	0.59
27:BA:1455:G:O6	27:BA:2705:A:N3	2.35	0.59
27:BA:2290:G:C5	27:BA:2291:U:N3	2.70	0.59
27:BA:2392:A:N7	27:BA:2393:A:C4	2.70	0.59
27:BA:2419:U:P	54:B8:41:ILE:HD11	2.42	0.59
27:BA:2422:A:C2'	27:BA:2424:C:H5	2.15	0.59
27:BA:2462:U:C2	27:BA:2463:C:C5	2.91	0.59
27:BA:2507:C:N3	27:BA:2583:G:C4	2.70	0.59
27:BA:2709:G:O2'	27:BA:2710:C:H5"	1.98	0.59
27:BA:2720:U:O4	27:BA:2872:G:C6	2.55	0.59
27:BA:2751:G:N3	27:BA:2751:G:H2'	2.16	0.59
27:BA:2758:A:OP2	27:BA:2758:A:N9	2.36	0.59
27:BA:2735:G:C6	27:BA:2770:G:C2	2.91	0.59
27:BA:450:G:N2	27:BA:454:A:H2	1.99	0.59
27:BA:529:A:O2'	27:BA:530:G:H8	1.84	0.59
28:BD:68:ARG:HH21	28:BD:190:THR:CG2	2.15	0.59
29:BE:175:ASP:O	29:BE:178:LEU:N	2.36	0.59
30:BF:1:MET:SD	30:BF:18:LEU:HB2	2.43	0.59
33:BI:23:ASP:OD1	33:BI:23:ASP:N	2.35	0.59
33:BI:29:PHE:O	33:BI:33:GLN:CG	2.50	0.59
33:BI:5:PHE:N	33:BI:5:PHE:CD2	2.71	0.59
34:BN:68:GLY:O	34:BN:69:TYR:HD1	1.86	0.59
35:BO:37:ASP:HB2	35:BO:62:VAL:CG2	2.28	0.59
36:BP:66:VAL:HB	36:BP:111:ALA:O	2.03	0.59
38:BS:81:ALA:CB	38:BS:117:ALA:CB	2.80	0.59
45:BU:70:ARG:O	45:BU:73:GLY:N	2.36	0.59
46:BV:41:GLY:N	46:BV:54:TYR:CE1	2.71	0.59
27:BA:814:C:OP1	46:BV:84:THR:HG22	2.03	0.59
40:BW:83:LYS:CA	40:BW:97:LYS:HG2	2.29	0.59
27:BA:342:G:H2'	27:BA:343:C:C5	2.38	0.59
42:BY:26:THR:C	42:BY:27:LEU:CG	2.68	0.59
22:AS:55:LYS:HE2	22:AS:56:GLN:HE21	1.66	0.59
28:BD:213:LYS:HB3	28:BD:215:LYS:C	2.23	0.59
28:BD:209:ASN:O	28:BD:213:LYS:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:33:SER:HA	41:BX:37:VAL:HG21	1.85	0.59
32:BH:168:VAL:CG1	32:BH:169:ARG:N	2.44	0.59
42:BY:81:LYS:HB3	42:BY:81:LYS:HZ3	1.65	0.59
27:BA:270(Z):U:H2'	27:BA:270(Z):U:O2	2.02	0.59
27:BA:311:A:H1'	27:BA:332:A:C5	2.37	0.59
1:AA:1095:U:H6	1:AA:1095:U:O5'	1.86	0.59
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.38	0.59
1:AA:776:G:N2	1:AA:802:A:OP2	2.36	0.59
1:AA:522:C:H2'	1:AA:523:A:C8	2.38	0.59
49:B0:30:VAL:HG22	49:B0:63:SER:CB	2.32	0.59
49:B0:37:LEU:CD1	49:B0:71:ASN:ND2	2.66	0.59
48:B3:53:LEU:CD2	48:B3:54:VAL:CG1	2.65	0.59
48:B3:9:VAL:CG2	48:B3:54:VAL:CA	2.62	0.59
55:B9:10:MET:HA	55:B9:10:MET:HE3	1.84	0.59
55:B9:5:SER:O	55:B9:6:SER:OG	2.21	0.59
27:BA:1937:A:N1	27:BA:1940:U:C5	2.71	0.59
27:BA:1996:C:H5''	27:BA:1996:C:C6	2.36	0.59
27:BA:1661:G:H1	27:BA:1999:C:H42	1.50	0.59
27:BA:2188:C:C6	27:BA:2189:U:H5	2.19	0.59
27:BA:2230:G:H2'	27:BA:2231:C:C6	2.38	0.59
27:BA:2292:C:N3	27:BA:2293:C:C4	2.69	0.59
27:BA:2313:C:H5''	31:BG:51:ARG:CD	2.32	0.59
27:BA:2356:C:O2'	49:B0:17:ASN:ND2	2.35	0.59
27:BA:2454:G:C4	27:BA:2455:G:C8	2.91	0.59
27:BA:2595:G:H2'	27:BA:2597:G:C8	2.37	0.59
27:BA:2639:A:OP2	27:BA:2640:G:N7	2.35	0.59
27:BA:26:G:H1	27:BA:27:G:H21	1.47	0.59
27:BA:2717:G:C4	27:BA:2718:G:H8	2.14	0.59
27:BA:2810:A:H2'	27:BA:2811:G:O5'	1.93	0.59
27:BA:2821:A:O2'	27:BA:2822:G:C1'	2.51	0.59
27:BA:2892:A:H3'	27:BA:2893:G:C8	2.38	0.59
27:BA:574:C:H41	27:BA:2054:A:H5''	1.67	0.59
28:BD:128:ALA:HB1	28:BD:190:THR:N	2.18	0.59
28:BD:74:PRO:CG	28:BD:96:ALA:N	2.63	0.59
29:BE:267:ARG:CD	29:BE:297:LYS:CD	2.77	0.59
29:BE:193:PHE:HE2	29:BE:311:PHE:HD1	1.47	0.59
27:BA:801:G:OP2	30:BF:79:ARG:NH1	2.36	0.59
31:BG:128:LEU:O	31:BG:129:ASP:HB3	2.00	0.59
31:BG:28:GLY:O	31:BG:29:HIS:C	2.39	0.59
32:BH:105:SER:C	32:BH:106:VAL:HG23	2.22	0.59
33:BI:43:ASN:O	33:BI:45:LYS:CA	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:12:VAL:C	34:BN:38:VAL:CG2	2.71	0.59
34:BN:58:GLU:HG2	34:BN:61:VAL:CG2	2.29	0.59
34:BN:60:ARG:HD2	34:BN:71:TYR:CE2	2.38	0.59
37:BQ:26:LYS:CE	37:BQ:28:ILE:HD12	2.32	0.59
37:BQ:36:ASN:O	37:BQ:41:THR:HB	2.02	0.59
37:BQ:50:VAL:HG12	37:BQ:52:LYS:N	2.12	0.59
37:BQ:72:VAL:HG22	37:BQ:135:ALA:HB2	1.83	0.59
37:BQ:33:MET:CG	37:BQ:83:PHE:HB2	2.32	0.59
27:BA:994:C:H1'	45:BU:53:LYS:CB	2.33	0.59
27:BA:974:G:H8	46:BV:80:TYR:CD1	2.17	0.59
40:BW:97:LYS:CE	40:BW:99:ARG:HH12	2.15	0.59
43:BZ:149:ALA:HA	43:BZ:152:ILE:CD1	2.26	0.59
43:BZ:173:PRO:C	43:BZ:175:ARG:H	2.05	0.59
27:BA:297:C:C5	27:BA:298:G:C4	2.91	0.59
42:BY:32:ARG:CA	42:BY:33:GLU:OE2	2.51	0.59
41:BX:28:VAL:HG23	41:BX:62:LYS:HG2	1.84	0.59
41:BX:23:LYS:CA	41:BX:66:VAL:O	2.50	0.59
7:AD:30:LYS:C	7:AD:32:ALA:H	2.07	0.59
1:AA:173:U:C6	1:AA:198:G:H1'	2.38	0.59
3:AW:9:A:C5	3:AW:45:G:C2	2.91	0.59
1:AA:17:U:H3	1:AA:918:A:H61	1.50	0.59
1:AA:19:C:O2	1:AA:917:G:C2	2.55	0.59
1:AA:1291:G:C5'	12:AI:40:LEU:HD23	2.32	0.59
15:AL:54:LYS:HB3	15:AL:70:ILE:HB	1.85	0.59
23:AT:72:LEU:HB3	23:AT:77:ALA:HB2	1.83	0.59
6:AC:180:ALA:HB1	6:AC:203:PHE:HE1	1.66	0.59
27:BA:123:G:H1	27:BA:128:C:H42	1.51	0.59
7:AD:201:GLN:O	7:AD:205:GLU:HG2	2.03	0.59
50:B4:17:GLN:HB3	50:B4:33:VAL:HB	1.85	0.59
55:B9:19:ARG:O	55:B9:19:ARG:CG	2.51	0.59
27:BA:1255:U:C4	30:BF:67:GLN:O	2.56	0.59
27:BA:2100:G:C6	27:BA:2190:G:C5	2.91	0.59
27:BA:2208:U:O2'	27:BA:2209:C:O4'	2.20	0.59
27:BA:2298:A:H1'	27:BA:2322:A:H1'	1.83	0.59
27:BA:2415:G:H4'	36:BP:51:PHE:HA	1.83	0.59
27:BA:2417:C:O2'	27:BA:2418:A:H5'	2.02	0.59
27:BA:245:G:N2	27:BA:254:G:H1'	2.18	0.59
27:BA:2485:G:N3	27:BA:2486:G:H1'	2.16	0.59
27:BA:2023:G:O4'	27:BA:2618:G:OP1	2.20	0.59
27:BA:2675:A:C3'	27:BA:2676:C:H5'	2.32	0.59
27:BA:2684:U:O2	35:BO:70:ARG:NH2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2692:C:N3	27:BA:2718:G:C6	2.70	0.59
27:BA:2813:A:N9	27:BA:2814:C:C5	2.71	0.59
27:BA:2821:A:C2	27:BA:2822:G:N9	2.71	0.59
27:BA:2874:C:H6	27:BA:2874:C:O5'	1.86	0.59
27:BA:809:G:C5	27:BA:810:U:C4	2.91	0.59
27:BA:834:C:O2'	27:BA:2358:G:C2'	2.51	0.59
27:BA:995:C:H1'	45:BU:57:PHE:CD2	2.34	0.59
28:BD:149:ARG:CA	28:BD:152:GLN:HE22	2.11	0.59
29:BE:269:ILE:N	29:BE:297:LYS:HE2	2.18	0.59
31:BG:151:ILE:HG21	31:BG:156:ARG:CZ	2.32	0.59
35:BO:26:GLY:HA3	35:BO:30:ARG:CZ	2.33	0.59
36:BP:113:GLN:O	36:BP:115:ARG:HG3	2.01	0.59
36:BP:145:LEU:N	36:BP:145:LEU:CD1	2.63	0.59
27:BA:2406:U:C1'	36:BP:57:VAL:CG2	2.78	0.59
27:BA:2378:A:C5	38:BS:26:LEU:HD21	2.37	0.59
45:BU:117:ARG:HG3	45:BU:118:GLN:H	1.65	0.59
45:BU:89:ASP:OD1	46:BV:51:ALA:CB	2.20	0.59
46:BV:96:LEU:HD23	46:BV:96:LEU:H	1.67	0.59
43:BZ:150:GLY:N	43:BZ:165:GLU:H	2.01	0.59
43:BZ:151:ASP:CB	43:BZ:153:LYS:HZ3	2.12	0.59
2:AV:34:G:C3'	2:AV:35:A:C5'	2.80	0.59
33:BI:95:SER:CB	33:BI:117:LEU:HD12	2.33	0.59
27:BA:295:G:H2'	27:BA:295:G:N3	2.18	0.59
42:BY:73:HIS:CD2	42:BY:89:ARG:O	2.56	0.59
43:BZ:69:VAL:HG22	43:BZ:82:ASP:N	2.11	0.59
1:AA:988:G:O2'	1:AA:1015:A:C6	2.55	0.59
1:AA:1309:G:H5''	16:AM:88:ARG:NH1	2.18	0.59
47:B2:2:VAL:N	47:B2:4:HIS:CE1	2.62	0.59
1:AA:436:C:C2	1:AA:437:U:C4	2.91	0.59
7:AD:3:ARG:HG3	7:AD:118:ARG:NH1	2.16	0.59
1:AA:761:G:H2'	1:AA:762:C:C6	2.38	0.59
1:AA:1286:A:C6	1:AA:1354:C:H5''	2.38	0.59
1:AA:18:C:N4	1:AA:917:G:H1	2.01	0.59
11:AH:29:SER:HB2	11:AH:32:LYS:HZ1	1.68	0.59
1:AA:932:C:H4'	10:AG:4:ARG:NH2	2.18	0.59
5:AB:69:LEU:HB2	5:AB:159:PRO:HB2	1.84	0.59
1:AA:545:C:H5''	7:AD:72:GLU:HG2	1.84	0.59
51:B5:33:CYS:SG	51:B5:36:CYS:CA	2.90	0.58
40:BW:34:ASN:ND2	51:B5:39:LYS:HB2	2.17	0.58
27:BA:2377:A:H2'	27:BA:2378:A:C8	2.38	0.58
27:BA:2462:U:C2'	27:BA:2463:C:O5'	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1129:A:N1	27:BA:2570:G:C4'	2.66	0.58
27:BA:2574:G:C2	27:BA:2575:C:C4	2.91	0.58
27:BA:2704:C:H2'	27:BA:2705:A:C8	2.38	0.58
27:BA:2780:G:N2	34:BN:80:LYS:NZ	2.50	0.58
27:BA:2781:A:P	27:BA:2781:A:O4'	2.61	0.58
27:BA:2782:G:C2'	27:BA:2783:G:H5'	2.30	0.58
27:BA:2844:G:N2	27:BA:2845:G:O4'	2.36	0.58
27:BA:586:A:N1	27:BA:809:G:C2'	2.65	0.58
27:BA:825:C:C4'	27:BA:2428:G:C6	2.86	0.58
26:BB:113:C:O2'	38:BS:56:ASP:OD1	2.21	0.58
28:BD:200:THR:OG1	28:BD:201:ASP:CG	2.42	0.58
29:BE:102:ASP:HA	29:BE:104:PHE:CZ	2.37	0.58
32:BH:138:GLN:O	32:BH:140:VAL:N	2.36	0.58
34:BN:53:ILE:HG23	34:BN:54:VAL:N	2.17	0.58
37:BQ:116:HIS:O	37:BQ:118:ALA:O	2.21	0.58
37:BQ:85:ILE:HG23	37:BQ:136:TRP:HZ2	1.68	0.58
37:BQ:85:ILE:CD1	37:BQ:85:ILE:O	2.50	0.58
38:BS:32:PRO:HD2	38:BS:100:ALA:CA	2.32	0.58
38:BS:47:LEU:CD1	38:BS:58:LEU:CD2	2.67	0.58
39:BT:5:GLU:O	39:BT:8:TYR:N	2.36	0.58
45:BU:104:GLU:OE1	46:BV:46:VAL:CG1	2.50	0.58
45:BU:88:ILE:HG21	46:BV:55:THR:HG1	1.57	0.58
43:BZ:110:GLY:O	43:BZ:112:LEU:N	2.34	0.58
43:BZ:115:ILE:O	43:BZ:169:VAL:HA	2.03	0.58
43:BZ:46:GLN:CB	43:BZ:49:THR:OG1	2.46	0.58
1:AA:1309:G:OP2	16:AM:99:ARG:NH1	2.36	0.58
28:BD:213:LYS:CB	28:BD:215:LYS:CB	2.72	0.58
43:BZ:95:SER:OG	43:BZ:122:ILE:CB	2.51	0.58
1:AA:947:G:H4'	1:AA:1332:A:C2	2.32	0.58
1:AA:298:A:H3'	1:AA:299:G:H8	1.68	0.58
1:AA:587:G:C3'	1:AA:588:G:P	2.91	0.58
27:BA:479:A:O2'	27:BA:480:A:H3'	2.02	0.58
42:BY:81:LYS:NZ	42:BY:81:LYS:CB	2.66	0.58
1:AA:1249:C:O3'	12:AI:66:ARG:HG2	2.02	0.58
1:AA:1084:G:H2'	1:AA:1085:U:C6	2.37	0.58
27:BA:1769:G:H2'	27:BA:1770:G:H8	1.67	0.58
25:AY:222:MET:CA	27:BA:2556:C:H1'	2.33	0.58
48:B3:48:GLU:CG	48:B3:49:LYS:N	2.66	0.58
50:B4:10:VAL:O	50:B4:10:VAL:CG1	2.51	0.58
3:AW:75:C:N4	50:B4:28:ARG:CB	2.66	0.58
51:B5:30:LEU:CD2	51:B5:41:LEU:HA	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:44:HIS:CA	51:B5:52:TYR:HH	1.88	0.58
54:B8:14:ILE:O	54:B8:15:LYS:HB2	2.03	0.58
27:BA:1133:U:O2'	27:BA:1134:G:H5''	2.03	0.58
27:BA:1966:A:N3	27:BA:2593:U:H5''	2.15	0.58
27:BA:1993:U:H5''	29:BE:228:ARG:HE	1.68	0.58
27:BA:2070:G:H2'	27:BA:2071:A:C8	2.38	0.58
27:BA:2189:U:H2'	27:BA:2190:G:H8	1.67	0.58
27:BA:2234:G:C4	27:BA:2235:G:C8	2.91	0.58
27:BA:2276:G:N1	27:BA:2277:G:N7	2.51	0.58
27:BA:2298:A:H1'	27:BA:2321:G:H21	1.64	0.58
27:BA:2370:G:H2'	27:BA:2371:G:C8	2.38	0.58
27:BA:2515:C:N4	27:BA:2570:G:O6	2.37	0.58
27:BA:2526:G:O2'	27:BA:2527:C:C5'	2.49	0.58
27:BA:2538:C:HO2'	27:BA:2539:C:P	2.24	0.58
27:BA:2578:G:C6	29:BE:237:ASN:ND2	2.71	0.58
27:BA:2681:C:O2	27:BA:2681:C:H2'	2.01	0.58
27:BA:2875:C:C4	27:BA:2876:G:C5	2.91	0.58
27:BA:2892:A:OP1	27:BA:2892:A:H4'	2.03	0.58
27:BA:673:C:C4'	30:BF:82:GLN:OE1	2.50	0.58
28:BD:167:GLU:C	28:BD:168:GLY:O	2.41	0.58
29:BE:172:ASP:O	29:BE:175:ASP:N	2.36	0.58
30:BF:6:TYR:HE1	30:BF:138:VAL:C	2.07	0.58
30:BF:22:PHE:CE2	30:BF:115:LEU:CB	2.75	0.58
30:BF:197:SER:CB	30:BF:239:ALA:N	2.60	0.58
32:BH:101:LYS:HE2	32:BH:115:GLU:CG	2.33	0.58
35:BO:14:SER:OG	35:BO:94:ARG:HB2	2.03	0.58
36:BP:94:ARG:HD3	36:BP:120:LEU:CA	2.32	0.58
37:BQ:50:VAL:HG12	37:BQ:51:GLU:OE1	2.02	0.58
38:BS:72:GLU:O	38:BS:74:PRO:C	2.37	0.58
39:BT:5:GLU:HB3	39:BT:53:ASP:OD2	2.02	0.58
45:BU:21:ALA:C	45:BU:24:PHE:CZ	2.76	0.58
45:BU:57:PHE:CA	45:BU:60:LEU:HG	2.29	0.58
40:BW:17:VAL:O	40:BW:20:VAL:N	2.36	0.58
27:BA:496:G:OP1	40:BW:62:HIS:CE1	2.56	0.58
43:BZ:150:GLY:H	43:BZ:165:GLU:N	2.00	0.58
1:AA:1221:G:O3'	22:AS:77:THR:HG21	2.03	0.58
47:B2:13:PRO:O	47:B2:16:ARG:HB2	2.03	0.58
47:B2:19:GLU:HG2	47:B2:23:LEU:HD21	1.84	0.58
47:B2:49:LEU:O	47:B2:50:ARG:O	2.21	0.58
47:B2:51:LYS:C	47:B2:54:ALA:HB3	2.23	0.58
27:BA:72:U:C4'	47:B2:57:LYS:NZ	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:2:TRP:O	41:BX:3:ASP:C	2.41	0.58
41:BX:5:ILE:HG22	41:BX:6:LYS:H	0.43	0.58
1:AA:953:G:C2'	16:AM:125:ARG:HA	2.30	0.58
50:B4:48:ARG:CG	50:B4:49:PHE:CD1	2.85	0.58
1:AA:121:C:H4'	1:AA:122:G:N7	2.19	0.58
7:AD:106:TYR:HA	7:AD:111:ALA:HB3	1.85	0.58
1:AA:900:A:H2'	1:AA:901:A:H8	1.68	0.58
48:B3:39:ASP:CG	48:B3:40:THR:N	2.57	0.58
48:B3:48:GLU:O	48:B3:49:LYS:C	2.41	0.58
50:B4:63:PHE:CD2	50:B4:69:ARG:NH2	2.71	0.58
54:B8:50:LEU:CD2	54:B8:50:LEU:C	2.62	0.58
27:BA:1492:G:H21	27:BA:1493:C:N4	2.01	0.58
27:BA:2246:G:N3	27:BA:2426:A:N3	2.52	0.58
27:BA:2262:U:C2'	27:BA:2263:C:H5''	2.21	0.58
27:BA:2266:A:H4'	27:BA:2267:A:N3	2.17	0.58
27:BA:2386:C:H4'	49:B0:39:ARG:HE	1.68	0.58
27:BA:2414:G:H2'	27:BA:2415:G:H8	1.68	0.58
27:BA:2423:U:H5''	27:BA:2423:U:C6	2.36	0.58
27:BA:2443:C:C5	27:BA:2444:G:C8	2.91	0.58
27:BA:2482:G:C4	27:BA:2483:C:C6	2.91	0.58
27:BA:2512:C:C4'	29:BE:235:ILE:HD12	2.31	0.58
27:BA:1129:A:C4	27:BA:2570:G:H1'	2.38	0.58
27:BA:2586:C:H2'	27:BA:2587:A:C5'	2.32	0.58
27:BA:2596:U:C5	27:BA:2597:G:C5	2.91	0.58
27:BA:2691:C:C2'	27:BA:2692:C:C5'	2.79	0.58
27:BA:2696:U:C4	27:BA:2714:G:N2	2.71	0.58
27:BA:807:U:C5'	27:BA:2445:G:H4'	2.31	0.58
28:BD:87:SER:O	28:BD:156:ALA:CB	2.52	0.58
27:BA:2049:G:O2'	29:BE:253:GLN:OE1	2.22	0.58
29:BE:39:GLN:OE1	29:BE:174:LEU:CG	2.51	0.58
33:BI:25:TYR:N	33:BI:25:TYR:CD2	2.44	0.58
34:BN:13:ASP:O	34:BN:38:VAL:HG11	2.03	0.58
34:BN:23:ALA:O	34:BN:26:VAL:HB	2.03	0.58
35:BO:101:PRO:C	35:BO:102:VAL:CG2	2.71	0.58
35:BO:13:ASN:C	35:BO:15:GLY:H	2.04	0.58
35:BO:43:VAL:HB	35:BO:55:GLY:H	1.69	0.58
37:BQ:36:ASN:C	37:BQ:41:THR:CB	2.69	0.58
37:BQ:72:VAL:HG21	37:BQ:83:PHE:CZ	2.32	0.58
37:BQ:35:ASN:HB2	37:BQ:75:SER:CB	2.33	0.58
39:BT:6:CYS:C	39:BT:7:ASP:CG	2.62	0.58
45:BU:117:ARG:HD3	45:BU:118:GLN:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:24:ILE:HG22	40:BW:32:ALA:HB1	1.85	0.58
40:BW:42:ARG:HG2	40:BW:43:GLY:H	1.68	0.58
33:BI:133:LEU:HD12	33:BI:138:THR:C	2.23	0.58
42:BY:51:LEU:HD21	42:BY:95:ASN:CG	2.24	0.58
43:BZ:30:VAL:O	43:BZ:31:SER:C	2.40	0.58
1:AA:975:A:N7	1:AA:1357:A:C2	2.61	0.58
47:B2:51:LYS:HA	47:B2:54:ALA:CB	2.33	0.58
41:BX:17:ASP:CA	41:BX:20:PHE:HE1	2.00	0.58
1:AA:173:U:C4'	1:AA:197:A:H5'	2.33	0.58
33:BI:65:ALA:CB	33:BI:134:HIS:CB	2.81	0.58
42:BY:81:LYS:CG	42:BY:82:THR:N	2.66	0.58
27:BA:1102:C:N3	27:BA:1104:C:N4	2.51	0.58
27:BA:339:U:H2'	27:BA:340:A:C8	2.38	0.58
27:BA:1743:G:H3'	27:BA:1746:G:H5'	1.85	0.58
7:AD:157:LEU:HD23	7:AD:160:GLN:HG3	1.84	0.58
1:AA:1468:A:H2'	1:AA:1469:G:O4'	2.03	0.58
20:AQ:57:VAL:HG12	20:AQ:76:LEU:HA	1.84	0.58
1:AA:736:C:OP1	21:AR:72:ARG:NH2	2.36	0.58
27:BA:988:A:P	48:B3:11:SER:HB3	2.42	0.58
50:B4:5:LEU:HD12	50:B4:60:ASN:HD21	1.64	0.58
51:B5:40:LYS:HE2	51:B5:46:CYS:CB	2.21	0.58
52:B6:11:LYS:HZ3	54:B8:35:GLY:H	1.49	0.58
27:BA:197:A:H2	27:BA:2434:A:H62	1.49	0.58
27:BA:199:A:N6	27:BA:2434:A:C6	2.71	0.58
27:BA:2186:G:C2	27:BA:2187:G:N7	2.72	0.58
27:BA:2188:C:C5	27:BA:2189:U:H5	2.21	0.58
27:BA:2067:G:N3	27:BA:2444:G:C2	2.71	0.58
27:BA:2570:G:C5'	27:BA:2571:C:OP2	2.50	0.58
27:BA:2581:G:C6	27:BA:2610:C:H2'	2.38	0.58
27:BA:2671:A:O2'	27:BA:2672:G:O5'	2.21	0.58
27:BA:270(P):C:H2'	27:BA:270(Q):C:C6	2.39	0.58
27:BA:445:C:H3'	45:BU:3:ARG:HH21	1.62	0.58
28:BD:173:VAL:O	28:BD:180:VAL:HG13	2.03	0.58
28:BD:130:PRO:HA	28:BD:188:ARG:CG	2.33	0.58
30:BF:115:LEU:HD21	30:BF:246:ARG:HH22	1.67	0.58
31:BG:54:ALA:O	31:BG:55:LYS:CB	2.50	0.58
33:BI:24:GLY:CA	33:BI:27:ASN:HB3	2.31	0.58
33:BI:9:VAL:O	33:BI:10:LYS:CB	2.51	0.58
35:BO:85:VAL:O	35:BO:87:ILE:HD11	2.03	0.58
44:BR:22:ARG:HG2	44:BR:26:LYS:HE3	1.81	0.58
38:BS:53:ASN:OD1	38:BS:53:ASN:O	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:82:TYR:C	38:BS:83:LEU:HD12	2.24	0.58
43:BZ:141:MET:CB	43:BZ:171:VAL:CG1	2.79	0.58
33:BI:103:GLN:NE2	33:BI:109:LYS:C	2.32	0.58
33:BI:145:VAL:CG1	33:BI:146:THR:N	2.47	0.58
1:AA:977:A:H2'	1:AA:977:A:N3	2.18	0.58
27:BA:63:U:H3'	27:BA:63:U:H6	1.68	0.58
27:BA:144:C:H4'	41:BX:36:GLU:OE1	2.03	0.58
41:BX:55:GLN:C	41:BX:56:ASN:ND2	2.51	0.58
41:BX:57:THR:C	41:BX:59:ASP:OD2	2.41	0.58
41:BX:7:HIS:O	41:BX:26:PHE:HB3	2.03	0.58
27:BA:94:G:O2'	47:B2:41:GLU:CD	2.42	0.58
17:AN:40:CYS:N	17:AN:43:CYS:SG	2.77	0.58
27:BA:1613:G:H2'	27:BA:1617:C:H42	1.68	0.58
1:AA:576:G:C8	1:AA:881:G:H1'	2.38	0.58
1:AA:54:C:H41	1:AA:352:C:H2'	1.68	0.58
1:AA:1418:A:C8	1:AA:1419:G:H1'	2.38	0.58
14:AK:12:ARG:NH1	14:AK:40:ILE:HA	2.18	0.58
27:BA:222:A:N6	27:BA:232:G:N3	2.51	0.58
5:AB:28:PHE:CZ	5:AB:42:ILE:HD11	2.39	0.58
15:AL:82:VAL:O	15:AL:83:VAL:HB	2.01	0.58
32:BH:117:GLU:O	32:BH:118:GLU:C	2.42	0.58
7:AD:29:PRO:HB3	7:AD:34:GLU:HG2	1.85	0.58
27:BA:300:A:O2'	27:BA:318:C:H1'	2.03	0.58
7:AD:102:ASP:HB3	7:AD:136:PRO:HB3	1.84	0.58
51:B5:40:LYS:HE3	51:B5:48:ASN:HB2	1.85	0.58
27:BA:2371:G:O2'	52:B6:47:HIS:NE2	2.32	0.58
54:B8:26:LYS:N	54:B8:46:LYS:HA	2.18	0.58
54:B8:57:ARG:O	54:B8:58:MET:C	2.40	0.58
54:B8:58:MET:HE1	54:B8:61:MET:HE3	1.79	0.58
27:BA:1364:G:N2	27:BA:1366:A:H3'	2.18	0.58
27:BA:2090:G:N3	27:BA:2230:G:C6	2.71	0.58
27:BA:2189:U:H2'	27:BA:2190:G:C8	2.39	0.58
27:BA:2217:G:C2'	27:BA:2218:G:O5'	2.52	0.58
27:BA:2246:G:N3	27:BA:2426:A:C2	2.71	0.58
27:BA:2428:G:O5'	27:BA:2429:G:OP1	2.20	0.58
27:BA:2458:G:C4	27:BA:2490:G:N2	2.71	0.58
27:BA:2455:G:N2	27:BA:2498:C:H41	2.01	0.58
27:BA:2561:A:C2'	27:BA:2562:U:O5'	2.44	0.58
27:BA:2565:A:O5'	27:BA:2566:A:OP2	2.21	0.58
27:BA:2567:G:HO2'	27:BA:2568:C:H5'	1.64	0.58
27:BA:2689:U:C2	27:BA:2713:A:C6	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2745:C:O2	32:BH:142:GLU:CD	2.42	0.58
27:BA:2836:U:H2'	27:BA:2837:G:H8	1.68	0.58
27:BA:2888:C:O2	27:BA:2889:C:N1	2.36	0.58
27:BA:526:A:H4'	27:BA:527:C:OP1	2.03	0.58
29:BE:315:VAL:HG12	29:BE:316:ARG:N	2.17	0.58
29:BE:99:VAL:C	29:BE:100:TRP:CG	2.75	0.58
30:BF:6:TYR:CE1	30:BF:139:VAL:N	2.63	0.58
27:BA:449:A:OP1	30:BF:85:LYS:CA	2.51	0.58
31:BG:42:GLY:HA2	31:BG:48:MET:SD	2.44	0.58
34:BN:51:GLU:O	34:BN:52:GLN:C	2.41	0.58
34:BN:71:TYR:O	34:BN:72:PRO:O	2.21	0.58
34:BN:84:ARG:HA	34:BN:87:LEU:HD13	1.86	0.58
36:BP:67:ARG:NH1	36:BP:109:LEU:CD1	2.66	0.58
38:BS:116:PHE:C	38:BS:120:GLU:OE2	2.42	0.58
45:BU:9:VAL:HG12	45:BU:13:ARG:HH21	1.68	0.58
46:BV:39:PHE:HB3	46:BV:54:TYR:HB3	1.86	0.58
46:BV:77:GLY:C	46:BV:78:VAL:HG13	2.23	0.58
27:BA:974:G:C3'	46:BV:82:ARG:NH2	2.66	0.58
40:BW:12:ILE:HD11	40:BW:42:ARG:CD	2.33	0.58
27:BA:322:A:C1'	27:BA:341:G:O4'	2.51	0.58
43:BZ:9:THR:O	43:BZ:13:LYS:CB	2.52	0.58
1:AA:1060:C:H5''	13:AJ:51:ARG:HD3	1.84	0.58
1:AA:565:U:H3'	1:AA:566:G:C8	2.38	0.58
1:AA:1342:C:H2'	1:AA:1343:G:C8	2.37	0.58
27:BA:319:C:N4	27:BA:320:A:N6	2.52	0.58
49:B0:67:VAL:CG1	49:B0:74:LYS:CG	2.47	0.58
50:B4:33:VAL:HG12	50:B4:34:ASP:N	2.19	0.58
50:B4:55:ARG:C	50:B4:56:VAL:O	2.41	0.58
51:B5:15:LYS:HA	51:B5:18:MET:HG3	1.86	0.58
53:B7:25:LYS:O	53:B7:28:ARG:HB2	2.04	0.58
54:B8:36:LYS:CG	54:B8:40:GLU:OE1	2.50	0.58
55:B9:13:ASN:O	55:B9:14:CYS:O	2.22	0.58
27:BA:1031:G:O2'	55:B9:8:LYS:CE	2.50	0.58
27:BA:1163:G:C2	27:BA:1164:G:C8	2.91	0.58
27:BA:1366:A:OP1	50:B4:1:MET:N	2.34	0.58
27:BA:1638:C:C5'	27:BA:2710:C:H1'	2.33	0.58
27:BA:2071:A:C2	27:BA:2441:C:N3	2.71	0.58
27:BA:2481:G:C2'	27:BA:2482:G:OP2	2.51	0.58
27:BA:2485:G:N3	27:BA:2486:G:O4'	2.36	0.58
27:BA:2447:G:N7	27:BA:2500:U:C6	2.71	0.58
27:BA:2555:U:C6	27:BA:2556:C:C6	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2610:C:H4'	27:BA:2611:U:O5'	2.03	0.58
27:BA:2636:U:C3'	29:BE:84:ARG:HH12	2.17	0.58
27:BA:2652:C:N1	27:BA:2653:U:C6	2.72	0.58
27:BA:2668:G:C2	27:BA:2669:G:C8	2.92	0.58
27:BA:2715:C:C2	27:BA:2716:U:C5	2.92	0.58
27:BA:2627:G:H1'	27:BA:2781:A:C2	2.38	0.58
27:BA:26:G:C6	27:BA:27:G:N2	2.71	0.58
27:BA:2880:C:O2'	44:BR:90:ARG:CD	2.51	0.58
28:BD:179:GLU:C	28:BD:180:VAL:CG2	2.72	0.58
27:BA:780:G:O6	28:BD:233:ASP:CG	2.42	0.58
28:BD:83:ASP:N	28:BD:83:ASP:OD2	2.35	0.58
29:BE:264:LEU:O	29:BE:265:ASN:ND2	2.36	0.58
29:BE:308:VAL:CG1	29:BE:310:PHE:HE1	2.12	0.58
32:BH:66:THR:CG2	32:BH:67:THR:H	2.15	0.58
34:BN:63:ILE:CB	34:BN:71:TYR:CZ	2.87	0.58
36:BP:104:ASP:C	36:BP:105:TYR:CG	2.73	0.58
36:BP:83:GLU:O	36:BP:92:ASP:HA	2.04	0.58
37:BQ:36:ASN:HD21	43:BZ:116:VAL:CG1	2.16	0.58
44:BR:22:ARG:HG2	44:BR:26:LYS:CE	2.34	0.58
44:BR:24:GLN:HB3	44:BR:44:LEU:CD2	2.33	0.58
26:BB:11:C:H41	38:BS:11:ARG:NH1	1.96	0.58
45:BU:115:ASN:HD22	45:BU:115:ASN:N	1.96	0.58
45:BU:46:GLU:O	45:BU:47:TYR:C	2.40	0.58
27:BA:446:G:C5'	45:BU:5:LYS:CE	2.80	0.58
46:BV:40:VAL:HA	46:BV:54:TYR:HD1	1.67	0.58
43:BZ:6:LYS:N	43:BZ:7:PRO:HD3	2.13	0.58
16:AM:94:ARG:HB2	16:AM:96:LEU:CD2	2.34	0.58
27:BA:763:G:O2'	27:BA:764:A:H5'	2.04	0.58
28:BD:208:GLY:HA3	28:BD:210:LYS:HE2	1.86	0.58
47:B2:11:MET:O	47:B2:16:ARG:HG3	2.02	0.58
27:BA:75:G:C4'	47:B2:51:LYS:NZ	2.65	0.58
1:AA:1097:C:H5'	1:AA:1169:A:H4'	1.85	0.58
49:B0:50:GLY:C	49:B0:52:GLY:N	2.57	0.58
1:AA:939:G:OP1	10:AG:102:ARG:NH1	2.36	0.58
27:BA:1944:U:H1'	27:BA:1955:U:C1'	2.31	0.58
27:BA:2409:G:C8	27:BA:2409:G:O5'	2.55	0.58
2:AV:13:C:C4'	27:BA:1924:C:O2'	2.47	0.58
27:BA:1840:G:H1	27:BA:1902:C:N4	1.99	0.58
25:AY:22:PRO:CA	56:BK:22:PRO:HB3	2.33	0.58
56:BK:49:LYS:HZ1	56:BK:73:PRO:HG3	1.69	0.58
27:BA:273(A):G:H2'	27:BA:273(B):C:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AK:79:SER:HA	14:AK:104:GLN:HB3	1.85	0.58
19:AP:22:THR:HA	19:AP:33:ILE:HG13	1.84	0.58
50:B4:23:GLU:O	50:B4:26:SER:N	2.37	0.58
50:B4:6:HIS:CE1	50:B4:55:ARG:HG3	2.38	0.58
51:B5:12:SER:O	51:B5:14:SER:OG	2.22	0.58
52:B6:16:ALA:C	52:B6:48:VAL:CG1	2.71	0.58
54:B8:38:GLY:O	54:B8:39:ASP:C	2.41	0.58
55:B9:19:ARG:O	55:B9:20:HIS:HB2	2.04	0.58
27:BA:2197:U:O2'	27:BA:2198:A:C5'	2.35	0.58
27:BA:2276:G:C6	27:BA:2277:G:N7	2.72	0.58
27:BA:2279:G:C5	27:BA:2280:G:N7	2.72	0.58
27:BA:2292:C:N4	27:BA:2293:C:N4	2.51	0.58
27:BA:2398:U:H4'	27:BA:2399:G:OP1	2.04	0.58
27:BA:2435:A:C2	27:BA:2436:G:C1'	2.86	0.58
27:BA:2510:C:N3	27:BA:2578:G:O6	2.37	0.58
27:BA:2631:G:C4	27:BA:2632:A:C8	2.91	0.58
27:BA:2679:A:H2'	29:BE:300:VAL:HG13	1.85	0.58
27:BA:2744:G:C6	27:BA:2745:C:N4	2.72	0.58
27:BA:2819:G:H8	27:BA:2819:G:O5'	1.87	0.58
27:BA:2838:G:N3	27:BA:2839:G:C8	2.71	0.58
29:BE:199:ALA:HA	29:BE:314:ALA:CA	2.33	0.58
29:BE:206:LYS:H	29:BE:257:GLY:C	2.05	0.58
32:BH:102:LEU:N	32:BH:102:LEU:HD23	2.05	0.58
32:BH:52:THR:C	32:BH:54:PRO:HD3	2.23	0.58
36:BP:56:LYS:HG3	36:BP:57:VAL:H	1.68	0.58
37:BQ:36:ASN:HD21	43:BZ:116:VAL:CB	2.16	0.58
37:BQ:36:ASN:ND2	43:BZ:116:VAL:CG1	2.67	0.58
44:BR:101:ALA:C	51:B5:41:LEU:HD12	2.23	0.58
38:BS:19:ASP:O	38:BS:20:TYR:C	2.41	0.58
39:BT:23:HIS:ND1	39:BT:24:LYS:O	2.36	0.58
39:BT:50:GLU:HG3	39:BT:55:ALA:CB	2.34	0.58
45:BU:28:ARG:HG2	45:BU:29:SER:N	2.16	0.58
45:BU:76:TYR:O	45:BU:80:ILE:HG13	2.01	0.58
45:BU:89:ASP:OD2	46:BV:50:ASP:HB3	2.03	0.58
40:BW:8:ARG:CD	40:BW:9:TYR:CD1	2.82	0.58
1:AA:436:C:H2'	1:AA:437:U:C1'	2.33	0.58
1:AA:668:G:H4'	18:AO:48:LYS:O	2.03	0.58
56:BK:71:LYS:HA	56:BK:72:THR:HA	1.84	0.58
27:BA:1528:A:N3	27:BA:1529:A:H1'	2.19	0.58
56:BK:49:LYS:NZ	56:BK:73:PRO:CA	2.67	0.58
32:BH:19:ASN:HD22	32:BH:19:ASN:C	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AL:82:VAL:O	15:AL:106:ASP:HB2	2.03	0.58
48:B3:23:LEU:C	48:B3:28:LEU:CD1	2.57	0.58
48:B3:53:LEU:CD2	48:B3:53:LEU:C	2.71	0.58
53:B7:30:ILE:HD13	53:B7:33:ARG:NE	2.18	0.58
27:BA:1005:C:H2'	27:BA:1006:C:C6	2.38	0.58
27:BA:2032:G:N2	27:BA:2055:C:H42	2.01	0.58
27:BA:2075:U:O4	27:BA:2238:G:O6	2.19	0.58
27:BA:2290:G:N2	27:BA:2343:C:C1'	2.63	0.58
27:BA:2333:A:H5'	27:BA:2335:A:O4'	2.03	0.58
27:BA:2447:G:C6	27:BA:2500:U:C4	2.91	0.58
27:BA:2555:U:H5	27:BA:2556:C:C5	2.21	0.58
27:BA:2593:U:H3	27:BA:2600:A:N6	2.01	0.58
27:BA:2640:G:N1	27:BA:2774:C:N4	2.33	0.58
27:BA:2666:C:C3'	27:BA:2667:C:C5'	2.76	0.58
27:BA:2666:C:C6	27:BA:2667:C:C6	2.92	0.58
27:BA:2731:G:N1	27:BA:2732:G:N2	2.51	0.58
27:BA:2826:A:N6	27:BA:2827:C:C6	2.38	0.58
27:BA:2881:C:C4	27:BA:2882:A:N7	2.71	0.58
27:BA:712(A):A:H8	27:BA:2713:A:OP1	1.87	0.58
27:BA:959:A:H2'	27:BA:960:A:H8	1.67	0.58
27:BA:989:G:OP2	48:B3:11:SER:HB2	2.04	0.58
27:BA:995:C:H2'	27:BA:995:C:O2	2.03	0.58
29:BE:222:ARG:NH1	29:BE:222:ARG:CG	2.58	0.58
32:BH:15:THR:HG22	32:BH:26:LYS:C	2.23	0.58
34:BN:25:GLN:N	34:BN:28:GLU:HG2	2.18	0.58
35:BO:106:LEU:N	35:BO:106:LEU:HD23	2.15	0.58
36:BP:52:LYS:NZ	36:BP:53:ARG:HH12	2.01	0.58
37:BQ:116:HIS:CG	37:BQ:116:HIS:O	2.56	0.58
37:BQ:136:TRP:C	37:BQ:139:ALA:H	2.05	0.58
37:BQ:59:ASN:C	37:BQ:59:ASN:HD22	2.05	0.58
38:BS:109:PRO:HB2	38:BS:116:PHE:CE2	2.39	0.58
38:BS:13:ARG:CG	38:BS:13:ARG:O	2.51	0.58
45:BU:104:GLU:OE2	46:BV:46:VAL:CG1	2.51	0.58
45:BU:72:HIS:HE1	45:BU:110:VAL:HG21	1.67	0.58
45:BU:28:ARG:CG	45:BU:29:SER:N	2.66	0.58
45:BU:47:TYR:O	45:BU:48:ARG:C	2.41	0.58
1:AA:790:A:H5'	2:AV:38:A:O2'	2.04	0.58
33:BI:111:ASP:HB3	33:BI:114:LYS:HG2	1.85	0.58
43:BZ:15:ASP:OD1	43:BZ:15:ASP:C	2.42	0.58
27:BA:72:U:C4	27:BA:112:U:H1'	2.38	0.58
41:BX:33:SER:HA	41:BX:37:VAL:CG2	2.30	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:23:GLY:HA2	7:AD:113:SER:CB	2.34	0.58
7:AD:10:ARG:HG2	7:AD:40:PRO:HG3	1.84	0.58
27:BA:441:U:OP2	42:BY:3:GLN:CG	2.51	0.58
1:AA:39:G:C8	1:AA:498:U:C4	2.92	0.58
27:BA:1538:G:H2'	27:BA:1539:G:C1'	2.33	0.58
27:BA:518:G:H1'	40:BW:77:ASP:OD1	2.03	0.58
1:AA:1134:G:H1	1:AA:1140:C:H42	1.52	0.58
27:BA:2262:U:H5	49:B0:14:ARG:NH1	2.00	0.58
52:B6:39:LYS:CA	52:B6:50:PHE:CD1	2.86	0.58
52:B6:12:MET:HE3	52:B6:54:LYS:C	2.23	0.58
55:B9:29:ASN:HB2	55:B9:32:HIS:CE1	2.39	0.58
27:BA:1241:A:OP2	27:BA:1241:A:C8	2.57	0.58
27:BA:2197:U:H2'	27:BA:2224:G:N1	2.19	0.58
27:BA:2090:G:C2	27:BA:2230:G:C5	2.92	0.58
27:BA:2309:A:C3'	27:BA:2310:A:C5'	2.72	0.58
27:BA:2679:A:C6	27:BA:2729:G:C6	2.92	0.58
27:BA:447:A:N6	27:BA:454:A:N7	2.51	0.58
27:BA:919:G:H2'	27:BA:920:G:C8	2.39	0.58
27:BA:974(A):C:C6	27:BA:1186:G:C2	2.90	0.58
27:BA:1799:G:N1	28:BD:177:SER:CB	2.67	0.58
29:BE:206:LYS:C	29:BE:257:GLY:HA2	2.24	0.58
30:BF:153:VAL:C	30:BF:155:SER:H	2.06	0.58
30:BF:21:VAL:O	30:BF:22:PHE:C	2.40	0.58
32:BH:147:ILE:CD1	32:BH:150:VAL:CG1	2.82	0.58
27:BA:1062:G:N3	56:BK:134:SER:O	2.36	0.58
34:BN:83:ILE:CG1	34:BN:84:ARG:CG	2.81	0.58
35:BO:63:VAL:HG12	35:BO:63:VAL:O	2.04	0.58
36:BP:113:GLN:O	36:BP:115:ARG:HD2	2.04	0.58
38:BS:32:PRO:HD3	38:BS:100:ALA:HA	1.81	0.58
45:BU:105:ALA:O	45:BU:106:PHE:C	2.42	0.58
45:BU:95:LEU:O	45:BU:98:ILE:CB	2.44	0.58
45:BU:94:VAL:HG13	46:BV:13:ARG:HG2	1.86	0.58
46:BV:30:GLY:O	46:BV:33:VAL:HG21	1.94	0.58
46:BV:34:GLU:C	46:BV:35:LEU:HD23	2.17	0.58
46:BV:4:ILE:O	46:BV:4:ILE:HG22	2.03	0.58
46:BV:50:ASP:OD1	46:BV:53:LYS:HE2	2.01	0.58
40:BW:66:GLU:O	40:BW:69:LEU:HD21	2.03	0.58
43:BZ:103:ARG:CD	43:BZ:103:ARG:H	2.14	0.58
43:BZ:53:ASP:O	43:BZ:54:ILE:HD12	2.04	0.58
43:BZ:72:ASP:OD2	43:BZ:72:ASP:N	2.37	0.58
1:AA:976:G:C5'	1:AA:1358:U:HO2'	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:23:LYS:CA	41:BX:67:ARG:HA	2.34	0.58
41:BX:46:ASP:O	41:BX:47:VAL:O	2.21	0.58
27:BA:2856:C:H2'	27:BA:2857:G:H5'	1.86	0.58
7:AD:18:LYS:HA	7:AD:33:MET:HE1	1.86	0.58
1:AA:1339:A:H2	2:AV:31:A:O4'	1.86	0.58
27:BA:1482:U:H1'	27:BA:1512:G:N2	2.18	0.58
27:BA:352:G:O5'	27:BA:352:G:C8	2.54	0.58
1:AA:886:G:H22	1:AA:912:C:H1'	1.67	0.58
27:BA:264:C:C3'	27:BA:265:A:H5''	2.34	0.58
50:B4:14:ILE:HG21	50:B4:37:SER:C	2.25	0.58
27:BA:2052:G:N1	27:BA:2618:G:C8	2.72	0.58
27:BA:2263:C:H6	27:BA:2263:C:H5'	1.68	0.58
27:BA:2268:A:C3'	27:BA:2268:A:C8	2.87	0.58
27:BA:2344:U:O2'	27:BA:2345:G:C5'	2.51	0.58
27:BA:2458:G:O6	27:BA:2490:G:O2'	2.21	0.58
27:BA:249:C:O2	54:B8:11:LYS:NZ	2.35	0.58
27:BA:575:A:H4'	27:BA:2500:U:H5'	1.84	0.58
27:BA:2517:C:C5	27:BA:2542:A:C6	2.92	0.58
27:BA:2546:U:O2'	27:BA:2547:U:OP2	2.16	0.58
27:BA:2569:G:N3	27:BA:2570:G:C8	2.72	0.58
27:BA:2573:C:C6	27:BA:2573:C:H3'	2.39	0.58
27:BA:2605:U:O5'	27:BA:2605:U:C6	2.56	0.58
27:BA:2679:A:H2'	27:BA:2680:C:O5'	2.04	0.58
27:BA:2864:G:HO2'	27:BA:2865:U:C1'	2.10	0.58
27:BA:990:A:C6	27:BA:1186:G:C1'	2.75	0.58
28:BD:183:ILE:HG22	28:BD:184:LEU:H	0.47	0.58
28:BD:197:GLY:H	28:BD:199:ARG:NH1	2.02	0.58
28:BD:77:VAL:HB	28:BD:113:MET:N	2.16	0.58
29:BE:221:LYS:CE	29:BE:233:ARG:CG	2.81	0.58
29:BE:47:GLY:HA2	29:BE:305:LYS:HE2	1.86	0.58
29:BE:44:TYR:CA	29:BE:307:LEU:O	2.52	0.58
30:BF:225:PRO:C	30:BF:230:GLY:N	2.43	0.58
30:BF:223:LEU:HD23	30:BF:233:THR:OG1	2.04	0.58
30:BF:236:THR:O	30:BF:239:ALA:HB2	2.02	0.58
30:BF:243:VAL:CB	30:BF:246:ARG:HD2	2.33	0.58
30:BF:35:VAL:O	30:BF:38:ALA:N	2.36	0.58
32:BH:9:GLU:CD	32:BH:11:PRO:HD3	2.24	0.58
34:BN:66:ASP:O	34:BN:67:ASN:C	2.39	0.58
35:BO:114:ILE:O	35:BO:116:SER:N	2.37	0.58
35:BO:3:GLN:HA	35:BO:21:VAL:HG12	1.85	0.58
36:BP:132:LYS:O	36:BP:133:VAL:C	2.42	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:85:ILE:HD12	37:BQ:85:ILE:H	1.69	0.58
44:BR:52:ILE:CD1	44:BR:94:TYR:CB	2.81	0.58
45:BU:115:ASN:O	45:BU:117:ARG:CA	2.51	0.58
40:BW:25:ARG:HG2	40:BW:26:GLY:N	2.18	0.58
27:BA:487:C:C2	40:BW:53:SER:OG	2.57	0.58
27:BA:496:G:P	40:BW:62:HIS:NE2	2.76	0.58
1:AA:1320:C:O4'	22:AS:73:GLU:CG	2.47	0.58
27:BA:76:C:H5'	47:B2:51:LYS:HB3	1.85	0.58
27:BA:1598:C:H5'	41:BX:34:LYS:CB	2.33	0.58
50:B4:48:ARG:CG	50:B4:49:PHE:N	2.59	0.58
1:AA:560:U:H5'	1:AA:566:G:N2	2.18	0.58
1:AA:567:G:O6	15:AL:15:ARG:NH2	2.37	0.58
33:BI:47:LEU:CD1	33:BI:48:GLU:N	2.59	0.58
1:AA:405:U:C3'	1:AA:406:G:P	2.92	0.58
3:AW:40:C:H4'	10:AG:147:ALA:CB	2.34	0.58
1:AA:983:A:HO2'	1:AA:1049:U:HO2'	1.48	0.58
1:AA:578:C:H4'	1:AA:729:A:C4'	2.34	0.58
18:AO:45:VAL:O	18:AO:46:HIS:CB	2.52	0.58
11:AH:18:ARG:HG3	11:AH:18:ARG:NH1	2.13	0.58
27:BA:1742:C:H2'	27:BA:1743:G:C1'	2.33	0.58
1:AA:523:A:C2	15:AL:91:LYS:HB3	2.39	0.58
27:BA:1813:G:H2'	27:BA:1814:G:O4'	2.04	0.58
27:BA:136:G:C3'	27:BA:137:C:H4'	2.33	0.58
27:BA:2013:A:H4'	40:BW:96:ILE:CG2	2.34	0.57
27:BA:2344:U:O2	27:BA:2344:U:C2'	2.51	0.57
27:BA:2346:A:C1'	27:BA:2383:G:C8	2.82	0.57
27:BA:2404:C:N4	27:BA:2405:G:C2	2.72	0.57
27:BA:2423:U:O2'	27:BA:2424:C:P	2.62	0.57
27:BA:2435:A:H2'	27:BA:2436:G:H5''	1.84	0.57
27:BA:2470:G:H1	27:BA:2471:C:N4	2.02	0.57
27:BA:2542:A:H5'	27:BA:2543:G:OP1	2.04	0.57
27:BA:2572:A:OP2	29:BE:241:TRP:HB2	2.04	0.57
27:BA:2647:U:O2	27:BA:2673:G:N2	2.36	0.57
27:BA:270(O):U:H5''	27:BA:270(P):C:C5	2.39	0.57
27:BA:2767:C:C2'	27:BA:2768:C:O5'	2.52	0.57
27:BA:2810:A:H8	27:BA:2811:G:O4'	1.77	0.57
27:BA:527:C:C6	27:BA:2779:U:C5	2.92	0.57
28:BD:73:ILE:CG2	28:BD:74:PRO:HD2	2.33	0.57
30:BF:244:ALA:C	30:BF:246:ARG:N	2.54	0.57
30:BF:37:ALA:HB1	30:BF:107:ARG:CZ	2.34	0.57
32:BH:41:THR:CB	32:BH:52:THR:OG1	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:38:GLU:O	33:BI:39:ALA:C	2.42	0.57
27:BA:1666:G:H4'	35:BO:67:ARG:NH2	2.19	0.57
44:BR:48:VAL:O	44:BR:51:LEU:HB2	2.03	0.57
38:BS:114:LYS:O	38:BS:117:ALA:CB	2.52	0.57
38:BS:47:LEU:HD12	38:BS:58:LEU:HD23	1.78	0.57
38:BS:61:ALA:HB1	38:BS:84:THR:CG2	2.34	0.57
45:BU:47:TYR:HD2	45:BU:50:ARG:HD2	1.69	0.57
46:BV:43:GLU:O	46:BV:44:GLN:CD	2.42	0.57
46:BV:66:GLY:HA2	46:BV:93:ILE:HA	1.86	0.57
27:BA:325:G:H2'	27:BA:326:G:H8	1.69	0.57
43:BZ:40:ASP:O	43:BZ:44:ARG:HG2	2.04	0.57
41:BX:9:HIS:ND1	41:BX:27:ALA:HA	2.10	0.57
1:AA:575:G:OP1	1:AA:575:G:H4'	2.03	0.57
1:AA:60:A:H61	1:AA:107:G:C2'	2.13	0.57
3:AW:41:U:H6	3:AW:41:U:C5'	2.13	0.57
28:BD:234:HIS:O	28:BD:235:PRO:O	2.22	0.57
1:AA:426:G:C1'	7:AD:42:GLN:HA	2.34	0.57
27:BA:264:C:C2'	27:BA:265:A:H5''	2.34	0.57
27:BA:668:G:H2'	27:BA:670:A:N7	2.19	0.57
27:BA:1372:U:H2'	27:BA:1373:A:H8	1.68	0.57
27:BA:1372:U:H2'	27:BA:1373:A:C8	2.39	0.57
5:AB:93:VAL:HG21	5:AB:97:TRP:HD1	1.69	0.57
48:B3:40:THR:O	48:B3:40:THR:HG23	2.04	0.57
50:B4:14:ILE:CG2	50:B4:37:SER:H	2.13	0.57
52:B6:48:VAL:O	52:B6:50:PHE:HD1	1.73	0.57
54:B8:55:TRP:HZ3	54:B8:59:LYS:NZ	1.86	0.57
27:BA:1184:G:O2'	27:BA:1185:C:H5'	2.03	0.57
27:BA:1265:A:OP2	27:BA:2615:U:P	2.63	0.57
27:BA:198:C:C4'	27:BA:2243:U:O2'	2.49	0.57
27:BA:198:C:HO2'	27:BA:2243:U:HO2'	1.37	0.57
27:BA:2268:A:H3'	27:BA:2268:A:H8	1.69	0.57
27:BA:2347:C:H2'	27:BA:2348:U:C6	2.38	0.57
27:BA:2464:C:C2	27:BA:2465:C:C6	2.91	0.57
27:BA:2468:G:C6	27:BA:2481:G:C4	2.91	0.57
27:BA:2547:U:C6	27:BA:2566:A:N1	2.72	0.57
27:BA:2694:G:C6	27:BA:2695:C:C5	2.92	0.57
27:BA:2826:A:C2	27:BA:2827:C:H6	2.21	0.57
27:BA:2862:G:N3	27:BA:2863:C:C5	2.71	0.57
27:BA:635:C:H2'	27:BA:636:G:O4'	2.05	0.57
27:BA:648:G:H2'	27:BA:649:G:C8	2.39	0.57
27:BA:830:G:C8	27:BA:2448:A:N7	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:76:ARG:O	28:BD:113:MET:HG2	2.02	0.57
29:BE:75:THR:HG21	29:BE:189:MET:SD	2.43	0.57
30:BF:102:LEU:CB	30:BF:107:ARG:HH21	2.11	0.57
30:BF:138:VAL:HG12	30:BF:138:VAL:O	2.04	0.57
32:BH:148:ARG:NH1	32:BH:164:GLU:H	1.98	0.57
35:BO:46:ALA:C	35:BO:47:THR:O	2.39	0.57
36:BP:70:ASP:OD1	36:BP:115:ARG:HB2	2.04	0.57
37:BQ:71:PHE:HB3	37:BQ:138:ARG:HH11	1.69	0.57
37:BQ:88:PHE:CA	37:BQ:90:PHE:HE1	2.17	0.57
37:BQ:9:SER:O	37:BQ:10:ILE:C	2.43	0.57
38:BS:120:GLU:O	38:BS:121:GLY:C	2.42	0.57
45:BU:36:PHE:N	45:BU:36:PHE:CD1	2.72	0.57
43:BZ:147:ILE:HG13	43:BZ:168:VAL:HG11	1.85	0.57
1:AA:989:C:H4'	1:AA:1016:A:C2	2.39	0.57
1:AA:1059:C:H2'	13:AJ:52:GLY:CA	2.33	0.57
27:BA:94:G:O3'	47:B2:41:GLU:OE1	2.22	0.57
1:AA:1236:A:H4'	1:AA:1304:G:H5''	1.86	0.57
32:BH:53:ARG:NH1	32:BH:56:ASP:C	2.57	0.57
3:AW:39:PSU:C4'	14:AK:54:ARG:NH2	2.44	0.57
16:AM:3:ARG:NH1	31:BG:90:LEU:CD1	2.61	0.57
1:AA:667:G:H4'	18:AO:51:HIS:ND1	2.19	0.57
27:BA:270(W):G:H3'	27:BA:270(X):G:H8	1.68	0.57
1:AA:1328:C:H5''	16:AM:28:ALA:HB1	1.86	0.57
5:AB:17:PHE:HD1	5:AB:18:GLY:H	1.50	0.57
48:B3:20:LYS:HA	48:B3:23:LEU:HD12	1.66	0.57
48:B3:3:ARG:HD3	48:B3:60:GLU:CA	2.34	0.57
50:B4:4:ASP:HB3	50:B4:5:LEU:CD2	2.34	0.57
52:B6:9:ILE:HG22	52:B6:9:ILE:O	2.02	0.57
53:B7:21:ARG:NH2	53:B7:43:THR:HG23	2.14	0.57
27:BA:1799:G:N2	28:BD:153:LEU:CD1	2.66	0.57
27:BA:2187:G:O2'	27:BA:2188:C:C5'	2.45	0.57
27:BA:2441:C:C2'	27:BA:2442:C:O5'	2.51	0.57
27:BA:245:G:H22	27:BA:254:G:H1'	1.69	0.57
27:BA:2716:U:O2	27:BA:2717:G:C8	2.57	0.57
27:BA:2766:G:C2	27:BA:2767:C:C6	2.92	0.57
27:BA:2769:C:HO2'	27:BA:2770:G:H5'	1.68	0.57
27:BA:2783:G:C2	27:BA:2784:C:C4	2.93	0.57
27:BA:2785:C:H4'	29:BE:99:VAL:CG1	2.35	0.57
27:BA:2792:G:N3	27:BA:2805:G:N2	2.38	0.57
27:BA:2827:C:O2'	27:BA:2828:C:C5'	2.52	0.57
27:BA:2828:C:C2	27:BA:2829:C:C5	2.92	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:374:A:H2'	27:BA:375:C:O4'	2.04	0.57
27:BA:575:A:C4'	27:BA:2500:U:H5'	2.35	0.57
27:BA:196:A:C2	27:BA:805:G:C2	2.93	0.57
28:BD:128:ALA:HB1	28:BD:190:THR:CA	2.28	0.57
29:BE:211:GLN:O	29:BE:216:ARG:CZ	2.52	0.57
29:BE:222:ARG:NE	29:BE:232:ARG:C	2.56	0.57
27:BA:2514:U:C1'	29:BE:247:ARG:HH12	2.18	0.57
29:BE:311:PHE:N	29:BE:311:PHE:CD2	2.72	0.57
30:BF:166:ILE:O	30:BF:167:ASP:O	2.22	0.57
30:BF:58:ALA:O	30:BF:59:GLU:OE2	2.22	0.57
32:BH:147:ILE:CD1	32:BH:150:VAL:HG11	2.34	0.57
34:BN:19:MET:CB	34:BN:46:ILE:HD13	2.15	0.57
35:BO:93:PRO:HD2	35:BO:113:LYS:HD3	1.87	0.57
35:BO:98:ILE:CG2	35:BO:118:ALA:HA	2.34	0.57
36:BP:66:VAL:CB	36:BP:67:ARG:NE	2.52	0.57
36:BP:73:VAL:HA	36:BP:76:LEU:HB2	1.86	0.57
44:BR:36:THR:CG2	44:BR:40:LYS:CG	2.82	0.57
44:BR:55:ALA:CB	44:BR:79:LEU:CD2	2.82	0.57
39:BT:13:ILE:HD12	39:BT:33:SER:OG	2.03	0.57
45:BU:8:ILE:C	45:BU:11:ARG:HD3	2.20	0.57
45:BU:88:ILE:HG22	45:BU:88:ILE:O	2.04	0.57
45:BU:8:ILE:H	45:BU:11:ARG:CD	2.15	0.57
45:BU:95:LEU:N	45:BU:98:ILE:HD13	2.18	0.57
45:BU:89:ASP:CG	46:BV:51:ALA:HB3	2.24	0.57
40:BW:19:LEU:HD22	51:B5:25:LEU:CB	2.30	0.57
40:BW:10:VAL:CG1	40:BW:46:PHE:CE2	2.80	0.57
43:BZ:91:PRO:CG	43:BZ:127:PRO:CB	2.75	0.57
4:AX:116:U:H2'	4:AX:117:U:C6	2.39	0.57
43:BZ:58:GLY:O	43:BZ:59:GLY:C	2.42	0.57
43:BZ:5:ALA:O	43:BZ:6:LYS:HB3	2.03	0.57
1:AA:976:G:P	1:AA:1358:U:H1'	2.43	0.57
41:BX:57:THR:CB	41:BX:59:ASP:OD2	2.52	0.57
1:AA:1030:C:N4	1:AA:30(A):G:O6	2.38	0.57
13:AJ:11:PHE:CD2	17:AN:55:GLY:CA	2.86	0.57
1:AA:815:A:OP2	1:AA:816:A:C8	2.57	0.57
42:BY:3:GLN:HB3	42:BY:4:PRO:HD2	1.87	0.57
3:AW:41:U:H5'	3:AW:41:U:C6	2.27	0.57
27:BA:1352:U:H2'	27:BA:1352:U:O2	2.03	0.57
27:BA:481:G:H1	27:BA:509:C:H42	1.52	0.57
27:BA:1301:A:N6	27:BA:1303:G:H1'	2.12	0.57
1:AA:263:A:H5'	23:AT:79:ARG:HD3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:578:C:H4'	1:AA:729:A:H4'	1.86	0.57
27:BA:311:A:N3	27:BA:311:A:H2'	2.17	0.57
27:BA:1317:A:H2'	27:BA:1318:C:C6	2.39	0.57
1:AA:768:A:OP1	1:AA:804:U:H5''	2.04	0.57
52:B6:8:ILE:H	52:B6:29:ARG:NH2	1.93	0.57
27:BA:1020:A:H1'	34:BN:49:ARG:HH21	1.64	0.57
27:BA:1991:U:C6	27:BA:1991:U:H3'	2.39	0.57
27:BA:2069:G:N3	27:BA:2443:C:O2	2.36	0.57
27:BA:2078:C:H2'	27:BA:2079:U:O4'	2.04	0.57
27:BA:2245:U:O2'	27:BA:2436:G:OP2	2.20	0.57
27:BA:2465:C:HO2'	27:BA:2466:C:P	2.23	0.57
27:BA:2572:A:C5'	27:BA:2574:G:H4'	2.34	0.57
27:BA:2075:U:O2'	27:BA:2596:U:O2	2.22	0.57
27:BA:2617:C:O2'	27:BA:2618:G:H5'	2.02	0.57
27:BA:2844:G:H2'	27:BA:2844:G:N3	2.19	0.57
27:BA:590:A:O3'	30:BF:97:ASP:OD2	2.22	0.57
28:BD:107:LYS:O	28:BD:108:ASN:HB3	2.05	0.57
28:BD:128:ALA:CB	28:BD:190:THR:N	2.68	0.57
28:BD:175:LEU:HD21	28:BD:181:ARG:N	2.20	0.57
30:BF:214:THR:O	30:BF:216:SER:C	2.42	0.57
30:BF:193:LEU:O	30:BF:233:THR:HB	2.04	0.57
30:BF:237:GLU:O	30:BF:239:ALA:CA	2.52	0.57
27:BA:449:A:OP2	30:BF:85:LYS:CB	2.50	0.57
30:BF:91:PRO:O	30:BF:96:LYS:NZ	2.36	0.57
27:BA:2311:A:N3	31:BG:53:LYS:CE	2.68	0.57
32:BH:96:SER:HA	32:BH:124:VAL:CG2	2.30	0.57
33:BI:7:LYS:CG	33:BI:12:LYS:HZ2	2.11	0.57
34:BN:58:GLU:C	34:BN:61:VAL:H	2.08	0.57
34:BN:87:LEU:HB3	34:BN:88:PRO:HD3	1.85	0.57
35:BO:101:PRO:C	35:BO:102:VAL:HG23	2.24	0.57
35:BO:43:VAL:CG2	35:BO:56:GLN:H	2.16	0.57
27:BA:1665:A:C4'	35:BO:66:LYS:CD	2.75	0.57
44:BR:62:ALA:CB	44:BR:80:PHE:CZ	2.86	0.57
46:BV:5:ILE:HD12	46:BV:12:TYR:OH	2.03	0.57
40:BW:8:ARG:HH11	40:BW:8:ARG:HB3	1.68	0.57
43:BZ:113:VAL:HG23	43:BZ:174:PRO:CG	2.32	0.57
42:BY:20:HIS:N	42:BY:67:LEU:HD22	2.19	0.57
42:BY:74:VAL:HB	42:BY:77:VAL:HG21	1.87	0.57
43:BZ:37:LYS:HD2	43:BZ:41:ARG:HH12	1.68	0.57
1:AA:1061:G:H1'	13:AJ:56:HIS:CE1	2.39	0.57
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1614:A:C8	40:BW:88:ARG:HD2	2.35	0.57
27:BA:1913:A:H61	27:BA:1917:U:P	2.27	0.57
7:AD:23:GLY:CA	7:AD:113:SER:CB	2.80	0.57
1:AA:15:G:C6	1:AA:1396:A:C6	2.92	0.57
27:BA:1351:C:O2'	27:BA:1571:A:H1'	2.04	0.57
27:BA:498:G:H8	27:BA:498:G:O5'	1.88	0.57
27:BA:204:A:OP1	27:BA:206:U:H1'	2.04	0.57
27:BA:1802:A:H3'	27:BA:1803:A:C8	2.40	0.57
27:BA:270(S):G:H2'	27:BA:270(T):G:C8	2.40	0.57
27:BA:856:C:C5'	49:B0:25:LYS:HZ2	2.16	0.57
49:B0:41:ARG:O	49:B0:67:VAL:HG13	2.03	0.57
48:B3:31:LEU:HD22	48:B3:32:GLN:CG	2.33	0.57
50:B4:4:ASP:HB3	50:B4:5:LEU:HD23	1.86	0.57
27:BA:142(A):A:P	27:BA:1143:A:C8	2.96	0.57
27:BA:742:G:O2'	27:BA:1676:A:H4'	2.05	0.57
27:BA:2047:U:H2'	27:BA:2048:G:C8	2.40	0.57
27:BA:2213:U:O3'	27:BA:2215:G:P	2.62	0.57
27:BA:2360:A:C5	27:BA:2361:A:C8	2.80	0.57
27:BA:2461:C:H1'	27:BA:2492:U:N3	2.18	0.57
27:BA:2447:G:N3	27:BA:2500:U:O4	2.37	0.57
27:BA:2679:A:H5''	29:BE:261:ARG:NE	2.20	0.57
27:BA:2679:A:C2	27:BA:2680:C:C6	2.92	0.57
27:BA:2717:G:O2'	27:BA:2718:G:O4'	2.17	0.57
27:BA:2684:U:H3	27:BA:2725:A:N6	2.02	0.57
27:BA:380:U:H4'	50:B4:15:ILE:O	2.04	0.57
27:BA:929:G:H1'	48:B3:43:ILE:HG12	1.86	0.57
28:BD:167:GLU:O	28:BD:170:TYR:N	2.37	0.57
28:BD:76:ARG:HG2	28:BD:76:ARG:HH11	1.69	0.57
28:BD:85:ASN:ND2	28:BD:85:ASN:N	2.49	0.57
29:BE:222:ARG:O	29:BE:227:ALA:CB	2.53	0.57
29:BE:70:VAL:HB	29:BE:295:LEU:CD2	2.34	0.57
30:BF:3:ALA:CA	30:BF:16:VAL:O	2.50	0.57
30:BF:91:PRO:CG	30:BF:92:PRO:CD	2.41	0.57
31:BG:129:ASP:C	31:BG:130:VAL:HG13	2.25	0.57
26:BB:57:A:H4'	31:BG:13:MET:SD	2.43	0.57
27:BA:2317:C:H5''	31:BG:150:SER:HA	1.78	0.57
32:BH:15:THR:CG2	32:BH:26:LYS:O	2.45	0.57
35:BO:25:LEU:HD21	35:BO:40:VAL:CB	2.32	0.57
36:BP:110:GLY:H	36:BP:126:SER:HG	1.53	0.57
44:BR:44:LEU:O	44:BR:48:VAL:CB	2.51	0.57
39:BT:8:TYR:HE1	39:BT:54:THR:HB	1.66	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:69:ALA:CA	45:BU:79:PHE:CZ	2.84	0.57
43:BZ:112:LEU:HD22	43:BZ:113:VAL:O	2.04	0.57
33:BI:80:PRO:CA	33:BI:146:THR:O	2.51	0.57
27:BA:295:G:OP1	27:BA:338:G:N1	2.38	0.57
42:BY:101:LEU:CD2	42:BY:112:LEU:CD1	2.53	0.57
26:BB:75:G:C1'	43:BZ:22:VAL:HG21	2.35	0.57
43:BZ:24:TYR:CA	43:BZ:83:PHE:O	2.51	0.57
1:AA:1060:C:C4'	13:AJ:51:ARG:HB3	2.33	0.57
1:AA:1223:C:OP2	22:AS:78:ARG:NH2	2.36	0.57
47:B2:9:ARG:HA	47:B2:59:ILE:HD11	1.86	0.57
27:BA:138:G:O6	27:BA:142:G:O2'	2.23	0.57
41:BX:50:GLU:N	41:BX:50:GLU:CD	2.57	0.57
29:BE:107:GLU:O	29:BE:109:ASP:N	2.38	0.57
41:BX:45:TYR:O	41:BX:46:ASP:C	2.41	0.57
1:AA:120:A:H3'	1:AA:120:A:H8	1.68	0.57
1:AA:110:C:O2'	19:AP:25:ARG:O	2.23	0.57
7:AD:3:ARG:HH22	7:AD:74:GLN:NE2	2.01	0.57
3:AW:9:A:C6	3:AW:45:G:C6	2.92	0.57
1:AA:939:G:P	10:AG:102:ARG:NH1	2.68	0.57
7:AD:70:ILE:HD12	7:AD:100:ARG:CZ	2.34	0.57
27:BA:1521:G:H5'	27:BA:1522:G:C8	2.39	0.57
1:AA:570:G:H2'	1:AA:571:U:C5	2.40	0.57
10:AG:26:PHE:HB2	10:AG:101:LEU:HD22	1.86	0.57
1:AA:375:U:O3'	19:AP:6:LEU:HD22	2.04	0.57
1:AA:828:A:N6	1:AA:858:G:O2'	2.37	0.57
1:AA:664:G:H22	1:AA:741:G:H1	1.53	0.57
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.40	0.57
11:AH:96:GLY:HA2	11:AH:130:GLY:HA3	1.87	0.57
49:B0:59:LEU:O	49:B0:60:PHE:CD1	2.58	0.57
48:B3:6:VAL:HG22	48:B3:54:VAL:CG2	2.31	0.57
27:BA:2419:U:OP1	54:B8:41:ILE:HD11	2.05	0.57
27:BA:1032:A:P	55:B9:8:LYS:HG3	2.43	0.57
27:BA:1363:C:H1'	27:BA:1810:A:H1'	1.87	0.57
27:BA:1664:A:H2'	27:BA:1665:A:H8	1.68	0.57
27:BA:2264:C:C5	27:BA:2265:U:C5	2.93	0.57
27:BA:2299:G:H2'	27:BA:2300:G:C8	2.39	0.57
27:BA:2311:A:C2'	27:BA:2312:U:O5'	2.53	0.57
27:BA:2385:C:C4	27:BA:2386:C:C5	2.90	0.57
27:BA:2468:G:O2'	27:BA:2469:A:H5''	2.01	0.57
27:BA:2476:A:N3	27:BA:2481:G:N2	2.51	0.57
27:BA:2481:G:O2'	27:BA:2482:G:H8	1.88	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2509:G:HO2'	27:BA:2510:C:H5'	1.61	0.57
27:BA:2589:A:C6	27:BA:2590:A:C5	2.92	0.57
27:BA:2717:G:HO2'	27:BA:2718:G:C4'	2.17	0.57
27:BA:2785:C:C5'	29:BE:99:VAL:CA	2.64	0.57
28:BD:143:ILE:HB	28:BD:152:GLN:CA	2.34	0.57
27:BA:1799:G:H21	28:BD:153:LEU:HD11	1.70	0.57
29:BE:203:GLY:CA	29:BE:303:PRO:HD3	2.33	0.57
30:BF:150:THR:HG22	30:BF:203:ALA:O	2.05	0.57
32:BH:96:SER:O	32:BH:98:GLN:HG3	2.04	0.57
34:BN:90:LYS:CD	34:BN:90:LYS:O	2.47	0.57
38:BS:102:LEU:N	38:BS:102:LEU:HD12	2.19	0.57
38:BS:117:ALA:O	38:BS:120:GLU:N	2.38	0.57
38:BS:56:ASP:CG	38:BS:57:THR:N	2.58	0.57
46:BV:65:ARG:O	46:BV:93:ILE:HG13	2.04	0.57
43:BZ:107:GLU:OE2	43:BZ:141:MET:CG	2.51	0.57
33:BI:115:ILE:CG2	33:BI:129:VAL:CG1	2.83	0.57
43:BZ:29:ASN:O	43:BZ:30:VAL:HG23	2.05	0.57
1:AA:965:A:H1'	1:AA:969:A:C8	2.39	0.57
1:AA:1060:C:H5'	13:AJ:52:GLY:N	2.19	0.57
27:BA:545(A):A:OP2	27:BA:1546:C:N4	2.38	0.57
47:B2:20:LEU:HD22	47:B2:23:LEU:CB	2.34	0.57
27:BA:60:G:N7	27:BA:63:U:H5	2.02	0.57
41:BX:22:ASN:HA	41:BX:68:LEU:CG	2.34	0.57
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.05	0.57
16:AM:8:GLU:HG3	16:AM:22:ILE:HG12	1.85	0.57
19:AP:59:TRP:O	19:AP:64:ALA:HB3	2.05	0.57
34:BN:131:THR:O	34:BN:131:THR:OG1	2.22	0.57
2:AV:19:G:H5'	2:AV:20:G:P	2.44	0.57
2:AV:56:C:H2'	31:BG:56:ARG:NH1	2.19	0.57
49:B0:67:VAL:HG12	49:B0:74:LYS:HA	1.86	0.57
27:BA:2046:G:OP1	51:B5:19:ARG:N	2.38	0.57
52:B6:26:LYS:C	52:B6:27:ASN:OD1	2.43	0.57
27:BA:1163:G:H3'	27:BA:1164:G:OP2	2.03	0.57
27:BA:2192:G:OP2	27:BA:2192:G:C8	2.54	0.57
27:BA:2255:G:N1	27:BA:2256:G:H1'	2.19	0.57
27:BA:2292:C:C4	27:BA:2293:C:C4	2.92	0.57
27:BA:2461:C:O2'	27:BA:2462:U:H5'	2.03	0.57
27:BA:2551:C:C2	27:BA:2552:U:C6	2.93	0.57
27:BA:2574:G:N3	27:BA:2575:C:C5	2.65	0.57
27:BA:2617:C:H1'	29:BE:245:ARG:NH2	2.20	0.57
27:BA:2661:G:C2	27:BA:2662:A:N7	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2693:A:N6	27:BA:2694:G:O6	2.37	0.57
27:BA:2712:U:HO3'	27:BA:2714:G:P	2.26	0.57
27:BA:2744:G:N1	27:BA:2745:C:C4	2.72	0.57
27:BA:2852:G:O2'	27:BA:2853:C:H5'	2.05	0.57
27:BA:452:G:N2	27:BA:458:G:N3	2.52	0.57
27:BA:783:A:H2'	27:BA:784:A:H4'	1.86	0.57
27:BA:993:G:N2	45:BU:54:LYS:HZ3	2.02	0.57
28:BD:144:GLU:CD	28:BD:188:ARG:H	2.08	0.57
28:BD:80:ILE:O	28:BD:80:ILE:CG1	2.40	0.57
30:BF:55:ARG:HG3	30:BF:56:THR:H	1.66	0.57
31:BG:20:LYS:N	31:BG:76:ARG:HB3	2.19	0.57
34:BN:16:ASP:H	34:BN:45:VAL:HG23	1.65	0.57
34:BN:45:VAL:N	34:BN:132:LEU:CD2	2.66	0.57
35:BO:79:PHE:HA	39:BT:22:VAL:HG23	1.83	0.57
36:BP:65:ASP:OD1	36:BP:65:ASP:N	2.38	0.57
36:BP:67:ARG:HG2	36:BP:68:GLU:H	1.69	0.57
36:BP:77:ALA:CB	36:BP:81:VAL:HG12	2.34	0.57
27:BA:2250:G:C8	37:BQ:102:ARG:HA	2.39	0.57
37:BQ:55:GLN:O	37:BQ:56:ILE:C	2.42	0.57
37:BQ:58:HIS:H	37:BQ:112:ALA:HB2	1.69	0.57
44:BR:87:TYR:CD1	44:BR:94:TYR:CB	2.84	0.57
45:BU:55:ARG:O	45:BU:56:ASP:C	2.43	0.57
45:BU:79:PHE:O	45:BU:80:ILE:C	2.43	0.57
46:BV:69:ILE:HG22	46:BV:88:GLN:HB2	1.87	0.57
46:BV:83:ARG:C	46:BV:84:THR:OG1	2.42	0.57
40:BW:24:ILE:HB	40:BW:32:ALA:CB	2.34	0.57
40:BW:35:ILE:O	40:BW:39:THR:N	2.37	0.57
43:BZ:66:VAL:HG22	43:BZ:68:ALA:H	1.69	0.57
1:AA:1060:C:H4'	13:AJ:51:ARG:HB3	1.85	0.57
3:AW:30:G:N2	10:AG:144:MET:SD	2.77	0.57
1:AA:130:A:H5'	20:AQ:63:ARG:HH21	1.68	0.57
19:AP:7:ALA:O	19:AP:17:TYR:HA	2.05	0.57
1:AA:1298:C:C5	10:AG:114:ARG:HB3	2.39	0.57
27:BA:659:C:H2'	27:BA:660:G:C8	2.37	0.57
27:BA:1841:U:H2'	27:BA:1842:G:H8	1.70	0.57
27:BA:607:U:H3'	27:BA:608:A:H8	1.69	0.57
1:AA:24:U:O2'	1:AA:525:C:C1'	2.53	0.57
49:B0:37:LEU:HB3	49:B0:69:PHE:HD2	0.79	0.57
53:B7:32:ALA:HA	53:B7:35:ARG:HD2	1.85	0.57
27:BA:1151:G:H4'	45:BU:81:ASN:OD1	2.05	0.57
27:BA:1240:U:C3'	27:BA:1241:A:H8	2.14	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2075:U:C4	27:BA:2238:G:O6	2.58	0.57
27:BA:2284:C:O2	27:BA:2284:C:H2'	2.03	0.57
27:BA:2295:C:H42	27:BA:2337:G:H1	1.37	0.57
27:BA:2350:C:C2'	27:BA:2351:G:O5'	2.52	0.57
27:BA:2385:C:O2	27:BA:2385:C:C2'	2.52	0.57
27:BA:792:G:C5	27:BA:2440:C:H1'	2.40	0.57
27:BA:2472:G:C2	27:BA:2475:C:C2	2.93	0.57
27:BA:2512:C:H5''	29:BE:219:VAL:HG13	1.86	0.57
27:BA:2533:A:C8	27:BA:2534:A:C8	2.93	0.57
27:BA:2515:C:N3	27:BA:2569:G:N2	2.53	0.57
27:BA:2583:G:C4	27:BA:2584:U:O2	2.58	0.57
27:BA:2051:A:C5	27:BA:2614:A:C6	2.90	0.57
27:BA:2722:G:N1	27:BA:2723:C:N4	2.48	0.57
27:BA:2678:C:H42	27:BA:2729:G:H1	1.52	0.57
27:BA:2809:A:C1'	27:BA:2811:G:N7	2.66	0.57
27:BA:2821:A:N3	27:BA:2822:G:C4	2.72	0.57
27:BA:2866:U:O2	27:BA:2868:A:H4'	2.05	0.57
27:BA:2868:A:H2'	27:BA:2869:G:H5'	1.87	0.57
28:BD:68:ARG:N	28:BD:68:ARG:HD3	2.20	0.57
28:BD:73:ILE:CB	28:BD:95:TYR:HE2	2.15	0.57
29:BE:205:THR:HG23	29:BE:259:HIS:CA	1.99	0.57
29:BE:73:ILE:HB	29:BE:294:THR:OG1	2.04	0.57
34:BN:54:VAL:CG1	34:BN:138:THR:CB	2.83	0.57
34:BN:136:SER:OG	34:BN:141:ALA:HA	2.05	0.57
34:BN:27:ALA:C	34:BN:29:GLN:N	2.58	0.57
34:BN:4:ALA:O	34:BN:5:GLU:C	2.43	0.57
35:BO:24:VAL:HG13	35:BO:32:TYR:O	2.02	0.57
35:BO:91:LYS:HB3	35:BO:111:PHE:CE2	2.40	0.57
36:BP:142:LEU:O	36:BP:143:THR:C	2.42	0.57
37:BQ:49:VAL:CG2	37:BQ:120:HIS:C	2.71	0.57
37:BQ:58:HIS:N	37:BQ:61:LEU:HG	2.19	0.57
39:BT:9:CYS:O	39:BT:9:CYS:SG	2.63	0.57
45:BU:59:ARG:CA	45:BU:62:ILE:HG13	1.94	0.57
45:BU:72:HIS:ND1	45:BU:110:VAL:HG11	2.17	0.57
45:BU:9:VAL:O	45:BU:12:ARG:HB2	2.04	0.57
40:BW:82:LEU:CD2	40:BW:100:THR:H	2.15	0.57
40:BW:12:ILE:HG23	40:BW:13:SER:H	1.69	0.57
40:BW:42:ARG:HG2	40:BW:43:GLY:N	2.20	0.57
33:BI:132:LYS:HA	33:BI:138:THR:CB	2.35	0.57
33:BI:91:GLY:O	33:BI:92:SER:C	2.42	0.57
42:BY:34:GLU:C	42:BY:35:TYR:CG	2.77	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:66:VAL:CG2	43:BZ:69:VAL:HG23	2.34	0.57
1:AA:966:G:H2'	1:AA:967:C:C6	2.40	0.57
41:BX:19:ASP:O	41:BX:20:PHE:C	2.43	0.57
1:AA:1314:C:H6	22:AS:6:LYS:HG2	1.66	0.57
1:AA:946:A:H2'	1:AA:947:G:H8	1.70	0.57
27:BA:414:C:H2'	27:BA:415:A:C8	2.39	0.57
39:BT:42:LEU:C	39:BT:44:ARG:CA	2.73	0.57
27:BA:2896:C:H6	27:BA:2896:C:H3'	1.62	0.57
27:BA:1086:A:OP1	27:BA:1104:C:H4'	2.04	0.57
1:AA:17:U:C2	1:AA:919:A:H2	2.23	0.57
3:AW:64:A:H2'	3:AW:65:G:O4'	2.04	0.57
1:AA:426:G:O2'	7:AD:42:GLN:HA	2.05	0.57
1:AA:187:C:H1'	23:AT:104:LEU:HD23	1.87	0.57
27:BA:1743:G:H3'	27:BA:1746:G:P	2.45	0.57
7:AD:101:LEU:HD13	7:AD:138:TYR:CD2	2.40	0.57
27:BA:929:G:H2'	48:B3:37:LEU:HD13	1.86	0.57
48:B3:54:VAL:CG2	48:B3:55:ARG:N	2.59	0.57
27:BA:1076:C:O2	56:BK:92:PRO:CD	2.51	0.57
27:BA:2092:U:H5	27:BA:2227:A:N6	2.03	0.57
27:BA:2299:G:O6	27:BA:2300:G:O6	2.22	0.57
27:BA:2341:G:H2'	27:BA:2342:C:C6	2.40	0.57
27:BA:2431:U:O2	27:BA:2432:A:H3'	2.05	0.57
27:BA:2627:G:C8	27:BA:2627:G:H5'	2.34	0.57
27:BA:2655:G:H2'	27:BA:2655:G:N3	2.19	0.57
27:BA:2681:C:H4'	27:BA:2682:U:H5'	1.87	0.57
27:BA:2697:G:C5	27:BA:2698:U:C5	2.93	0.57
27:BA:2701:C:H5	27:BA:2703:C:OP2	1.87	0.57
27:BA:2811:G:H22	27:BA:2891:G:H1'	1.68	0.57
27:BA:775:G:N2	27:BA:787:U:C3'	2.68	0.57
28:BD:142:ASN:N	28:BD:142:ASN:ND2	2.52	0.57
28:BD:158:GLY:O	28:BD:194:VAL:HG13	2.04	0.57
28:BD:172:ILE:HG13	28:BD:182:MET:HE2	1.86	0.57
30:BF:194:PHE:HZ	30:BF:207:LEU:HD12	1.68	0.57
31:BG:103:ASN:CG	31:BG:133:ASN:HA	2.25	0.57
26:BB:58:A:O3'	31:BG:141:VAL:CG2	2.53	0.57
31:BG:21:VAL:HG13	31:BG:132:VAL:HA	1.86	0.57
32:BH:27:GLY:HA3	32:BH:78:VAL:HG12	1.86	0.57
33:BI:3:VAL:CB	33:BI:21:VAL:HG23	2.34	0.57
37:BQ:51:GLU:HA	37:BQ:118:ALA:CA	2.34	0.57
26:BB:89(A):A:H2	37:BQ:52:LYS:NZ	1.95	0.57
44:BR:88:ARG:O	44:BR:89:ASP:HB3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:94:TYR:C	44:BR:117:VAL:HG12	2.25	0.57
38:BS:76:GLY:C	38:BS:83:LEU:HD13	2.25	0.57
45:BU:94:VAL:HG11	46:BV:4:ILE:HD13	1.87	0.57
46:BV:63:HIS:HA	46:BV:95:ILE:CG1	2.33	0.57
40:BW:13:SER:OG	40:BW:16:LYS:HG3	2.04	0.57
40:BW:36:LEU:CA	40:BW:39:THR:HG22	2.33	0.57
40:BW:50:VAL:HG21	40:BW:103:ILE:CG2	2.34	0.57
40:BW:83:LYS:HG2	40:BW:97:LYS:CD	2.24	0.57
43:BZ:105:GLN:HB2	43:BZ:141:MET:HG2	1.85	0.57
43:BZ:116:VAL:O	43:BZ:116:VAL:HG13	2.04	0.57
33:BI:125:GLY:O	33:BI:144:HIS:HA	2.05	0.57
27:BA:85:G:OP2	42:BY:65:VAL:HG21	2.01	0.57
27:BA:99:U:C2	42:BY:107:LYS:HD3	2.40	0.57
42:BY:19:ARG:NH1	42:BY:67:LEU:C	2.58	0.57
42:BY:20:HIS:O	42:BY:22:GLN:N	2.38	0.57
42:BY:30:ASP:OD1	42:BY:31:LEU:HG	2.05	0.57
42:BY:44:ALA:HB1	42:BY:65:VAL:HG22	1.87	0.57
43:BZ:37:LYS:CA	43:BZ:40:ASP:OD2	2.45	0.57
27:BA:1081:U:C1'	56:BK:127:ILE:HD11	2.34	0.57
1:AA:59:A:H5''	1:AA:60:A:H5'	1.87	0.57
3:AW:44:A:H2'	3:AW:45:G:O4'	2.04	0.57
1:AA:728:A:N7	18:AO:54:ARG:HD2	2.20	0.57
27:BA:1857:G:H1	27:BA:1884:A:N6	2.02	0.57
10:AG:69:VAL:HA	10:AG:138:LYS:HD2	1.86	0.57
7:AD:170:VAL:HG12	7:AD:171:GLY:H	1.70	0.57
27:BA:856:C:C2'	49:B0:24:LYS:HB2	2.34	0.57
48:B3:27:GLY:O	48:B3:28:LEU:HD23	2.05	0.57
48:B3:59:VAL:CG1	48:B3:60:GLU:N	2.49	0.57
27:BA:1139:G:OP1	34:BN:46:ILE:HG21	2.01	0.57
27:BA:2195:C:C2	27:BA:2196:C:C6	2.93	0.57
27:BA:2313:C:H5'	31:BG:72:LYS:HB2	1.87	0.57
27:BA:2423:U:C1'	27:BA:2425:A:C5	2.88	0.57
27:BA:2454:G:C5	27:BA:2455:G:C8	2.93	0.57
27:BA:2031:A:H2'	27:BA:2455:G:O2'	2.05	0.57
27:BA:2523:G:O2'	27:BA:2524:G:H5'	2.05	0.57
27:BA:2592:G:C5	27:BA:2593:U:C4	2.91	0.57
27:BA:2637:U:C2	27:BA:2782:G:C2	2.93	0.57
27:BA:2729:G:N1	27:BA:2730:C:N3	2.53	0.57
27:BA:2729:G:O2'	27:BA:2730:C:C5'	2.52	0.57
27:BA:606:U:P	30:BF:104:ASP:HB2	2.45	0.57
29:BE:269:ILE:HD11	29:BE:296:VAL:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:100:LEU:O	30:BF:101:ASP:C	2.43	0.57
30:BF:49:ASP:HB3	30:BF:52:ALA:HB3	1.87	0.57
46:BV:69:ILE:HD12	46:BV:69:ILE:N	2.20	0.57
27:BA:520:G:P	40:BW:25:ARG:HH21	2.27	0.57
43:BZ:92:VAL:HG12	43:BZ:93:GLU:N	2.20	0.57
27:BA:338:G:P	42:BY:21:LYS:HD2	2.45	0.57
1:AA:1219:U:OP2	17:AN:19:ARG:NH1	2.34	0.57
41:BX:16:ASN:N	41:BX:16:ASN:OD1	2.33	0.57
27:BA:1620:G:H1'	53:B7:1:MET:H3	1.64	0.57
1:AA:826:C:O5'	1:AA:826:C:H6	1.87	0.57
1:AA:609:A:H2'	1:AA:610:G:O4'	2.05	0.57
1:AA:708:C:H4'	14:AK:37:GLY:HA3	1.87	0.57
27:BA:1168:G:H2'	27:BA:1169:G:O4'	2.04	0.57
5:AB:46:LYS:HA	5:AB:46:LYS:HE2	1.86	0.57
48:B3:5:LYS:HA	48:B3:36:VAL:HG12	1.87	0.56
54:B8:14:ILE:HG23	54:B8:15:LYS:N	2.19	0.56
27:BA:2246:G:C2	27:BA:2426:A:N3	2.73	0.56
27:BA:2252:G:C3'	27:BA:2253:G:H5'	2.35	0.56
27:BA:2313:C:H4'	31:BG:72:LYS:CB	2.34	0.56
27:BA:2410:G:C2'	27:BA:2411:A:N7	2.63	0.56
27:BA:2556:C:H2'	27:BA:2557:G:H5'	0.57	0.56
27:BA:2657:A:C6	27:BA:2664:G:N2	2.53	0.56
27:BA:270(I):G:N2	27:BA:270(R):G:H1'	2.20	0.56
27:BA:2880:C:N3	27:BA:2881:C:C4	2.73	0.56
27:BA:2836:U:C2	27:BA:2883:A:C5	2.87	0.56
27:BA:2884:U:C6	27:BA:2885:C:C6	2.93	0.56
27:BA:389:G:O6	36:BP:54:PRO:HB3	2.04	0.56
27:BA:945:A:H2'	27:BA:945:A:N3	2.20	0.56
26:BB:28:C:OP2	38:BS:41:LYS:CE	2.52	0.56
29:BE:45:LYS:CE	29:BE:303:PRO:HD2	2.32	0.56
29:BE:44:TYR:CG	29:BE:307:LEU:C	2.78	0.56
30:BF:211:ASP:OD2	30:BF:211:ASP:C	2.37	0.56
31:BG:18:ILE:C	31:BG:135:VAL:HG21	2.25	0.56
31:BG:149:ARG:C	31:BG:151:ILE:H	2.05	0.56
33:BI:9:VAL:O	33:BI:9:VAL:CG1	2.50	0.56
37:BQ:59:ASN:O	37:BQ:61:LEU:N	2.38	0.56
39:BT:13:ILE:HG13	39:BT:33:SER:HB2	1.87	0.56
42:BY:23:VAL:HG12	42:BY:23:VAL:O	2.04	0.56
47:B2:7:GLU:CG	47:B2:8:ILE:H	2.18	0.56
27:BA:1598:C:C5'	41:BX:34:LYS:CB	2.83	0.56
2:AV:8:U:H1'	2:AV:48:C:H1'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:878:G:OP1	11:AH:88:LYS:HB3	2.04	0.56
2:AV:9:A:C2	2:AV:45:G:C5	2.93	0.56
18:AO:63:ARG:HH12	18:AO:87:ILE:HG12	1.70	0.56
7:AD:173:TRP:CZ3	7:AD:193:ASP:O	2.58	0.56
49:B0:36:ILE:O	49:B0:36:ILE:CG2	2.52	0.56
54:B8:60:LEU:HD23	54:B8:61:MET:O	2.04	0.56
27:BA:1034:G:O4'	55:B9:18:ARG:NH2	2.37	0.56
55:B9:24:LEU:HD22	55:B9:35:ARG:HG3	1.87	0.56
27:BA:1249:U:C6	27:BA:1249:U:H3'	2.40	0.56
27:BA:2019:A:H2'	27:BA:2020:A:O4'	2.05	0.56
27:BA:2343:C:C2'	27:BA:2344:U:H5'	2.35	0.56
27:BA:2421:G:C5'	27:BA:2422:A:OP2	2.51	0.56
27:BA:2605:U:C2'	27:BA:2606:C:O5'	2.53	0.56
27:BA:2606:C:O2'	27:BA:2607:G:O5'	2.23	0.56
27:BA:2644:G:P	27:BA:2644:G:C8	2.97	0.56
27:BA:2690:C:H2'	27:BA:2691:C:OP2	2.05	0.56
27:BA:2734:A:C8	27:BA:2734:A:C4'	2.88	0.56
27:BA:2814:C:H2'	27:BA:2815:C:H6	1.64	0.56
27:BA:2840:C:O3'	44:BR:53:HIS:CE1	2.58	0.56
27:BA:830:G:O6	27:BA:2446:G:O4'	2.22	0.56
29:BE:186:GLU:O	29:BE:187:HIS:CD2	2.58	0.56
29:BE:221:LYS:CE	29:BE:233:ARG:CA	2.64	0.56
29:BE:271:ILE:HD11	29:BE:294:THR:HG22	1.85	0.56
30:BF:193:LEU:HD13	30:BF:223:LEU:HB3	1.86	0.56
32:BH:121:GLU:OE2	32:BH:133:LYS:O	2.23	0.56
34:BN:4:ALA:O	34:BN:5:GLU:O	2.23	0.56
34:BN:65:ASN:HB2	34:BN:68:GLY:O	2.05	0.56
34:BN:77:GLY:O	34:BN:79:PHE:CA	2.50	0.56
27:BA:2780:G:H22	34:BN:80:LYS:HZ2	1.54	0.56
35:BO:10:VAL:HG12	35:BO:11:ALA:N	2.20	0.56
35:BO:35:ILE:CG1	35:BO:65:THR:HG22	2.35	0.56
36:BP:124:ASP:HB3	36:BP:130:ARG:HH21	1.67	0.56
27:BA:2251:G:C3'	37:BQ:102:ARG:HH22	2.18	0.56
37:BQ:47:GLU:HB3	37:BQ:123:ILE:HG12	1.87	0.56
37:BQ:70:ARG:HD2	37:BQ:71:PHE:HE1	1.69	0.56
38:BS:121:GLY:O	38:BS:122:ALA:C	2.44	0.56
38:BS:17:ARG:HD3	38:BS:17:ARG:O	2.04	0.56
38:BS:80:SER:O	38:BS:83:LEU:HD13	2.05	0.56
45:BU:108:ALA:O	45:BU:110:VAL:CA	2.52	0.56
45:BU:111:ASP:CA	45:BU:114:ARG:HD2	2.29	0.56
45:BU:63:GLN:C	45:BU:65:ILE:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:61:VAL:HG11	46:BV:95:ILE:C	2.24	0.56
33:BI:122:ARG:O	33:BI:124:LEU:N	2.38	0.56
27:BA:72:U:H5'	41:BX:2:TRP:CZ3	2.39	0.56
41:BX:13:LYS:HA	41:BX:16:ASN:CG	2.25	0.56
41:BX:23:LYS:HA	41:BX:67:ARG:CA	2.34	0.56
1:AA:1517:G:C4	27:BA:1919:A:O3'	2.57	0.56
39:BT:45:GLU:HG3	39:BT:47:ARG:O	2.06	0.56
1:AA:677:U:H2'	1:AA:678:U:C6	2.40	0.56
1:AA:1192:C:H3'	1:AA:1192:C:H6	1.70	0.56
51:B5:33:CYS:HB2	51:B5:37:HIS:CA	2.36	0.56
49:B0:64:ASP:C	49:B0:66:LYS:HZ1	2.08	0.56
48:B3:1:MET:HE1	48:B3:3:ARG:CD	2.20	0.56
48:B3:30:ARG:HE	48:B3:33:GLN:CG	2.16	0.56
54:B8:5:LYS:HB3	54:B8:59:LYS:O	2.05	0.56
27:BA:1251:C:H5'	45:BU:10:ARG:CD	2.35	0.56
27:BA:1665:A:H1'	35:BO:67:ARG:HD2	1.86	0.56
27:BA:2080:G:C2	27:BA:2241:A:C2	2.93	0.56
27:BA:2261:C:N3	27:BA:2262:U:C5	2.73	0.56
27:BA:2281:C:HO2'	27:BA:2282:G:P	2.28	0.56
27:BA:2299:G:C2'	27:BA:2300:G:H5'	2.34	0.56
27:BA:2395:C:C5'	50:B4:28:ARG:HH11	2.18	0.56
27:BA:2396:G:O2'	50:B4:27:THR:N	2.34	0.56
27:BA:746:A:O5'	27:BA:2612:C:C6	2.58	0.56
27:BA:2617:C:O2'	27:BA:2618:G:C5'	2.52	0.56
27:BA:2712:U:O3'	27:BA:2714:G:OP2	2.22	0.56
27:BA:2740:A:C2'	27:BA:2741:A:N7	2.64	0.56
27:BA:605:C:H2'	27:BA:606:U:C6	2.40	0.56
27:BA:929:G:H21	48:B3:42:ALA:C	2.09	0.56
27:BA:994:C:H4'	27:BA:994:C:OP2	2.05	0.56
28:BD:73:ILE:HB	28:BD:95:TYR:CE2	2.37	0.56
29:BE:205:THR:HG22	29:BE:259:HIS:C	2.17	0.56
29:BE:270:ASP:O	29:BE:271:ILE:HG13	2.05	0.56
29:BE:71:THR:CG2	29:BE:299:SER:HA	2.36	0.56
29:BE:45:LYS:NZ	29:BE:303:PRO:HD2	2.17	0.56
30:BF:102:LEU:HD13	30:BF:107:ARG:HG2	1.87	0.56
30:BF:168:ARG:NH2	30:BF:209:GLY:CA	2.44	0.56
30:BF:196:THR:HG22	30:BF:197:SER:N	2.19	0.56
32:BH:104:LEU:HB2	32:BH:151:ARG:NH2	2.15	0.56
32:BH:55:SER:OG	32:BH:60:HIS:HB2	2.05	0.56
33:BI:24:GLY:O	33:BI:29:PHE:CE1	2.58	0.56
34:BN:13:ASP:CA	34:BN:38:VAL:HG12	1.84	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:8:LEU:CB	35:BO:83:ALA:HA	2.12	0.56
35:BO:9:LYS:H	35:BO:83:ALA:HB2	1.71	0.56
36:BP:65:ASP:HB3	36:BP:109:LEU:CA	2.31	0.56
44:BR:59:ASP:O	44:BR:60:LEU:C	2.44	0.56
44:BR:65:LEU:O	44:BR:67:LEU:N	2.38	0.56
44:BR:78:LYS:O	44:BR:82:GLU:CG	2.53	0.56
38:BS:34:LEU:HD21	38:BS:102:LEU:CB	2.35	0.56
26:BB:8:U:H5'	38:BS:37:ARG:CZ	2.35	0.56
26:BB:29:A:OP1	38:BS:39:SER:C	2.42	0.56
38:BS:46:GLN:CD	38:BS:57:THR:HG21	2.25	0.56
45:BU:105:ALA:O	45:BU:106:PHE:O	2.24	0.56
45:BU:108:ALA:O	45:BU:111:ASP:N	2.36	0.56
45:BU:20:ARG:HH12	46:BV:75:LYS:HZ1	1.52	0.56
27:BA:533:G:O2'	45:BU:45:TYR:HD2	1.88	0.56
46:BV:50:ASP:HB2	46:BV:53:LYS:H	1.70	0.56
40:BW:38:TYR:CD1	51:B5:41:LEU:CD2	2.87	0.56
40:BW:46:PHE:O	40:BW:47:VAL:C	2.43	0.56
40:BW:84:ARG:O	40:BW:96:ILE:HD12	2.05	0.56
43:BZ:141:MET:HB2	43:BZ:171:VAL:HG11	1.84	0.56
49:B0:42:GLY:HA3	49:B0:66:LYS:HA	1.78	0.56
48:B3:6:VAL:HG23	48:B3:54:VAL:HG23	1.88	0.56
27:BA:2284:C:OP2	52:B6:9:ILE:CG1	2.53	0.56
54:B8:4:MET:HG2	54:B8:5:LYS:N	2.19	0.56
27:BA:1031:G:C3'	55:B9:8:LYS:NZ	2.69	0.56
27:BA:125:G:H3'	53:B7:19:ARG:HH12	1.60	0.56
27:BA:1611:C:H2'	27:BA:1612:C:C6	2.40	0.56
27:BA:2316:C:C3'	31:BG:142:ALA:HB1	2.34	0.56
27:BA:2334:G:P	38:BS:12:ARG:O	2.64	0.56
27:BA:2376:A:N6	38:BS:109:PRO:HG3	2.20	0.56
27:BA:2493:U:O2	27:BA:2493:U:C2'	2.46	0.56
27:BA:2546:U:H5'	27:BA:2565:A:H2	1.39	0.56
27:BA:2544:G:H5'	27:BA:2645:G:N7	2.14	0.56
27:BA:2657:A:N7	27:BA:2658:C:C4	2.64	0.56
27:BA:1998:G:O3'	27:BA:2724:C:H4'	2.04	0.56
27:BA:2862:G:H2'	27:BA:2863:C:H5	1.70	0.56
27:BA:373:U:H4'	27:BA:374:A:C8	2.40	0.56
27:BA:397:G:O2'	27:BA:2231:C:H1'	2.05	0.56
27:BA:515:A:H2'	27:BA:516:C:H6	1.70	0.56
27:BA:566:U:C5'	46:BV:81:ARG:HH22	2.17	0.56
27:BA:963:U:H2'	27:BA:964:C:H6	1.70	0.56
27:BA:974:G:O6	46:BV:80:TYR:OH	2.16	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:111:VAL:C	28:BD:113:MET:N	2.57	0.56
28:BD:125:ILE:CG2	28:BD:126:GLY:N	2.68	0.56
28:BD:138:THR:O	28:BD:162:GLN:CA	2.50	0.56
28:BD:163:VAL:HA	28:BD:172:ILE:O	2.06	0.56
29:BE:186:GLU:C	29:BE:187:HIS:CG	2.79	0.56
31:BG:19:GLU:CA	31:BG:135:VAL:HG21	2.27	0.56
31:BG:18:ILE:CG2	31:BG:19:GLU:N	2.47	0.56
36:BP:73:VAL:HG13	36:BP:76:LEU:HB3	1.87	0.56
37:BQ:93:ILE:O	37:BQ:94:ARG:CB	2.52	0.56
44:BR:107:ASP:OD1	44:BR:108:GLY:C	2.44	0.56
44:BR:67:LEU:CD1	44:BR:68:ARG:N	2.64	0.56
44:BR:71:GLN:O	44:BR:72:ASP:HB2	2.04	0.56
44:BR:79:LEU:HD22	44:BR:80:PHE:HA	1.87	0.56
39:BT:10:GLY:HA2	39:BT:53:ASP:OD2	2.06	0.56
40:BW:23:LEU:O	40:BW:24:ILE:C	2.44	0.56
33:BI:96:LYS:C	33:BI:98:ILE:N	2.58	0.56
27:BA:99:U:H3	42:BY:107:LYS:CD	2.17	0.56
42:BY:101:LEU:CD2	42:BY:112:LEU:CG	2.78	0.56
27:BA:338:G:C5'	42:BY:24:ARG:NH1	2.67	0.56
42:BY:43:ASN:O	42:BY:44:ALA:CB	2.52	0.56
42:BY:67:LEU:O	42:BY:70:ALA:N	2.36	0.56
43:BZ:51:LEU:CD1	43:BZ:64:ALA:H	2.17	0.56
43:BZ:6:LYS:CA	43:BZ:31:SER:CB	2.78	0.56
1:AA:1061:G:H5'	13:AJ:59:SER:HG	1.69	0.56
1:AA:968:A:H5''	1:AA:969:A:OP2	2.05	0.56
41:BX:25:GLN:NE2	41:BX:65:VAL:HG22	2.20	0.56
47:B2:12:THR:C	47:B2:16:ARG:HD2	2.25	0.56
41:BX:3:ASP:CG	41:BX:4:VAL:N	2.59	0.56
34:BN:106:GLY:CA	34:BN:107:ASN:ND2	2.68	0.56
5:AB:112:VAL:CA	5:AB:113:HIS:N	2.67	0.56
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.05	0.56
3:AW:40:C:C4'	10:AG:147:ALA:HB1	2.35	0.56
1:AA:908:A:H2'	1:AA:909:A:H8	1.69	0.56
27:BA:404:C:O5'	27:BA:404:C:H6	1.87	0.56
5:AB:164:VAL:HG21	5:AB:170:GLU:CB	2.35	0.56
27:BA:706:A:C8	27:BA:706:A:O5'	2.53	0.56
20:AQ:87:LYS:O	20:AQ:91:ARG:CB	2.52	0.56
27:BA:136:G:O3'	27:BA:137:C:H4'	2.04	0.56
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.39	0.56
49:B0:33:ALA:HB3	49:B0:66:LYS:N	2.13	0.56
49:B0:80:SER:OG	49:B0:84:ALA:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B3:5:LYS:HG3	48:B3:36:VAL:CG1	2.36	0.56
48:B3:7:LYS:HG2	48:B3:8:LEU:N	2.21	0.56
54:B8:25:PHE:HA	54:B8:46:LYS:HG2	1.87	0.56
55:B9:17:VAL:CG1	55:B9:18:ARG:N	2.68	0.56
27:BA:1186:G:H2'	27:BA:1187:G:H8	1.70	0.56
27:BA:2218:G:C6	27:BA:2219:G:C5	2.94	0.56
27:BA:2255:G:C4	27:BA:2256:G:C8	2.93	0.56
27:BA:2443:C:C6	27:BA:2444:G:C8	2.93	0.56
25:AY:225:SER:CA	27:BA:2554:U:C2	2.88	0.56
27:BA:2603:G:C2'	27:BA:2604:U:O5'	2.53	0.56
27:BA:2045:C:N4	27:BA:2624:G:N1	2.53	0.56
27:BA:2815:C:H2'	27:BA:2816:C:C6	2.38	0.56
27:BA:592:G:H21	54:B8:3:LYS:CE	2.18	0.56
27:BA:664:C:H2'	27:BA:665:C:C6	2.40	0.56
27:BA:971:C:O2	27:BA:972:G:O2'	2.19	0.56
26:BB:12:C:C2	38:BS:10:MET:SD	2.98	0.56
28:BD:131:LEU:CA	28:BD:134:ILE:HD12	2.35	0.56
28:BD:146:LYS:CB	28:BD:147:PRO:HD2	2.33	0.56
29:BE:192:ILE:O	29:BE:194:ARG:CG	2.54	0.56
29:BE:200:ASP:HA	29:BE:266:LYS:CG	2.36	0.56
36:BP:64:ILE:HD12	36:BP:106:VAL:CG1	2.34	0.56
27:BA:636:G:P	36:BP:126:SER:HA	2.45	0.56
36:BP:61:ALA:HB1	36:BP:107:LYS:HZ3	1.70	0.56
37:BQ:71:PHE:CD1	37:BQ:71:PHE:N	2.74	0.56
37:BQ:35:ASN:H	37:BQ:76:GLY:H	1.54	0.56
44:BR:20:LEU:HD21	44:BR:24:GLN:CD	2.26	0.56
38:BS:12:ARG:HB2	38:BS:20:TYR:OH	2.05	0.56
38:BS:32:PRO:HA	38:BS:49:THR:OG1	2.04	0.56
39:BT:53:ASP:O	39:BT:56:ARG:CZ	2.53	0.56
45:BU:4:ALA:C	45:BU:6:THR:H	1.95	0.56
45:BU:47:TYR:HE2	46:BV:74:TYR:C	2.05	0.56
43:BZ:67:LYS:CB	43:BZ:67:LYS:NZ	2.68	0.56
42:BY:41:ARG:C	42:BY:112:LEU:HB3	2.26	0.56
1:AA:988:G:C4'	1:AA:1014:A:H61	1.99	0.56
47:B2:27:LEU:HD23	47:B2:49:LEU:HD13	1.88	0.56
41:BX:33:SER:CA	41:BX:37:VAL:HG21	2.36	0.56
27:BA:1598:C:H5'	41:BX:34:LYS:CG	2.31	0.56
34:BN:105:LEU:H	34:BN:105:LEU:HD23	1.71	0.56
41:BX:76:GLU:OE1	41:BX:77:VAL:CA	2.53	0.56
1:AA:406:G:C5'	7:AD:5:ILE:HG21	2.34	0.56
1:AA:573:A:H2'	1:AA:574:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BK:25:GLY:HA2	56:BK:35:ILE:HD13	1.88	0.56
53:B7:15:THR:HG1	53:B7:16:HIS:H	1.48	0.56
53:B7:26:SER:CA	53:B7:29:ASN:HD22	2.18	0.56
27:BA:2352:A:H2	49:B0:30:VAL:CB	2.11	0.56
27:BA:2431:U:C2'	27:BA:2432:A:H3'	2.31	0.56
27:BA:2464:C:N3	27:BA:2486:G:N2	2.53	0.56
27:BA:2472:G:N2	27:BA:2477:C:OP1	2.24	0.56
27:BA:2509:G:N2	27:BA:2510:C:H1'	2.20	0.56
27:BA:2535:G:H21	27:BA:2536:G:H1'	1.66	0.56
27:BA:2607:G:O6	27:BA:2608:G:N2	2.38	0.56
27:BA:2677:G:C5	27:BA:2678:C:H5	2.23	0.56
27:BA:2753:A:C8	27:BA:2754:U:H5	2.18	0.56
27:BA:2809:A:H5'	27:BA:2809:A:N3	2.21	0.56
27:BA:2810:A:O2'	27:BA:2811:G:H5'	1.96	0.56
27:BA:2839:G:N1	27:BA:2840:C:N3	2.52	0.56
27:BA:664:C:H2'	27:BA:665:C:H6	1.69	0.56
27:BA:671:C:N4	27:BA:809:G:N1	2.53	0.56
27:BA:918:A:N3	27:BA:918:A:H5'	2.21	0.56
27:BA:996:A:O3'	45:BU:93:LYS:CG	2.54	0.56
28:BD:85:ASN:HD22	28:BD:86:ARG:CD	2.15	0.56
30:BF:98:ARG:N	30:BF:98:ARG:HD3	2.21	0.56
31:BG:24:HIS:HB2	31:BG:72:LYS:HD3	1.88	0.56
32:BH:148:ARG:HH11	32:BH:163:TYR:CA	2.00	0.56
36:BP:101:ASP:C	36:BP:102:ASP:OD1	2.43	0.56
37:BQ:45:GLN:OE1	37:BQ:152:SER:HB3	2.04	0.56
37:BQ:47:GLU:OE1	37:BQ:47:GLU:CA	2.54	0.56
37:BQ:67:ALA:CB	37:BQ:71:PHE:HE1	2.18	0.56
27:BA:444:C:OP2	45:BU:2:PRO:CG	2.54	0.56
45:BU:7:GLY:C	45:BU:8:ILE:HD13	2.23	0.56
46:BV:96:LEU:CD2	46:BV:96:LEU:H	2.19	0.56
27:BA:338:G:H8	42:BY:21:LYS:HB2	1.70	0.56
42:BY:93:THR:O	42:BY:94:SER:O	2.23	0.56
43:BZ:79:ILE:HG22	43:BZ:80:HIS:ND1	2.21	0.56
1:AA:1061:G:C1'	13:AJ:56:HIS:CE1	2.87	0.56
1:AA:1317:C:C6	17:AN:16:PHE:CD2	2.94	0.56
41:BX:6:LYS:HB2	41:BX:27:ALA:O	2.03	0.56
1:AA:1347:G:H22	1:AA:1373:G:C2'	2.16	0.56
1:AA:116:A:H61	1:AA:313:A:C1'	2.17	0.56
8:AE:105:VAL:HB	8:AE:106:PRO:HD3	1.86	0.56
27:BA:678:C:H42	27:BA:799:G:H1	1.54	0.56
33:BI:54:GLU:HA	33:BI:54:GLU:OE1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:38:VAL:C	49:B0:40:GLN:CG	2.64	0.56
49:B0:68:VAL:HG12	49:B0:71:ASN:HD22	1.70	0.56
50:B4:20:VAL:HG12	50:B4:20:VAL:O	2.05	0.56
3:AW:75:C:N4	50:B4:28:ARG:CG	2.68	0.56
51:B5:12:SER:HB3	51:B5:15:LYS:HZ1	0.75	0.56
27:BA:2021:C:P	51:B5:15:LYS:HE2	2.41	0.56
51:B5:46:CYS:C	51:B5:48:ASN:N	2.57	0.56
52:B6:8:ILE:HG22	52:B6:28:ARG:HB2	1.85	0.56
54:B8:26:LYS:CG	54:B8:44:LYS:C	2.62	0.56
27:BA:1273:U:C2	27:BA:2003:G:H5'	2.41	0.56
27:BA:1638:C:H4'	27:BA:2710:C:O2	2.06	0.56
27:BA:1656:C:OP1	29:BE:233:ARG:HB3	2.06	0.56
27:BA:1657:C:H3'	27:BA:1657:C:C6	2.41	0.56
27:BA:574:C:N4	27:BA:2054:A:H5''	2.20	0.56
27:BA:2377:A:O2'	27:BA:2378:A:O5'	2.20	0.56
27:BA:2380:C:C2'	27:BA:2381:C:H5'	2.27	0.56
27:BA:2530:A:C3'	27:BA:2531:A:C5'	2.83	0.56
27:BA:2707:G:O2'	27:BA:2708:G:O5'	2.23	0.56
27:BA:532:A:C2'	27:BA:533:G:O4'	2.53	0.56
27:BA:598:G:H2'	27:BA:599:G:O4'	2.04	0.56
27:BA:673:C:O4'	30:BF:82:GLN:OE1	2.22	0.56
28:BD:66:PHE:O	28:BD:67:LYS:CG	2.54	0.56
29:BE:186:GLU:C	29:BE:187:HIS:CD2	2.78	0.56
29:BE:199:ALA:HB1	29:BE:312:ARG:H	1.70	0.56
29:BE:211:GLN:O	29:BE:216:ARG:NE	2.36	0.56
32:BH:83:GLU:CA	32:BH:83:GLU:OE2	2.52	0.56
33:BI:8:ASP:O	33:BI:9:VAL:CB	2.53	0.56
34:BN:52:GLN:CA	34:BN:55:GLU:CG	2.75	0.56
36:BP:73:VAL:C	36:BP:76:LEU:H	2.08	0.56
37:BQ:136:TRP:CE3	37:BQ:139:ALA:HB2	2.40	0.56
37:BQ:36:ASN:CB	37:BQ:41:THR:N	2.66	0.56
44:BR:51:LEU:CD1	44:BR:70:LEU:HD21	2.35	0.56
38:BS:110:THR:CG2	38:BS:115:VAL:HG23	2.32	0.56
38:BS:81:ALA:HB1	38:BS:118:ILE:H	1.68	0.56
45:BU:13:ARG:CZ	45:BU:13:ARG:N	2.62	0.56
45:BU:13:ARG:NH1	45:BU:13:ARG:CG	2.46	0.56
45:BU:85:ARG:O	45:BU:86:ALA:O	2.23	0.56
40:BW:103:ILE:HG23	40:BW:103:ILE:O	2.05	0.56
33:BI:121:ILE:O	33:BI:122:ARG:CB	2.49	0.56
33:BI:81:ALA:O	33:BI:147:GLU:CA	2.53	0.56
42:BY:102:ASP:C	42:BY:103:LEU:HG	2.26	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1222:G:H5'	22:AS:77:THR:HG21	1.87	0.56
1:AA:397:A:C6	1:AA:548:G:C5	2.94	0.56
1:AA:18:C:N3	1:AA:918:A:C2	2.74	0.56
1:AA:579:G:H1'	1:AA:728:A:C2	2.41	0.56
21:AR:80:PRO:C	21:AR:82:THR:H	2.08	0.56
27:BA:286:C:H2'	27:BA:287:C:H5'	1.88	0.56
27:BA:1904:G:H21	27:BA:1928:A:H2	1.51	0.56
27:BA:1684:C:H2'	27:BA:1685:C:C6	2.41	0.56
49:B0:46:LYS:HB2	49:B0:79:ILE:HD12	1.87	0.56
52:B6:17:GLY:O	52:B6:18:THR:CB	2.54	0.56
53:B7:30:ILE:O	53:B7:31:LEU:C	2.44	0.56
54:B8:55:TRP:O	54:B8:56:ALA:C	2.44	0.56
27:BA:1759:A:H5'	27:BA:2715:C:C1'	2.34	0.56
27:BA:1818:U:P	28:BD:155:ARG:CB	2.93	0.56
27:BA:1267:U:C5	27:BA:2012:G:N2	2.74	0.56
27:BA:2215:G:O2'	27:BA:2216:G:O4'	2.21	0.56
27:BA:2311:A:HO2'	27:BA:2312:U:C5'	2.17	0.56
27:BA:2351:G:N2	27:BA:2365:G:C4	2.73	0.56
27:BA:830:G:O6	27:BA:2446:G:C1'	2.54	0.56
27:BA:2562:U:N3	27:BA:2563:U:N3	2.44	0.56
27:BA:2637:U:C5	27:BA:2638:G:C6	2.94	0.56
27:BA:2668:G:N2	27:BA:2669:G:C1'	2.69	0.56
27:BA:2684:U:O4'	35:BO:76:TYR:OH	2.16	0.56
27:BA:2837:G:C6	27:BA:2882:A:N6	2.74	0.56
27:BA:2852:G:N2	27:BA:2853:C:C2	2.72	0.56
27:BA:535:C:H5''	45:BU:53:LYS:NZ	2.19	0.56
28:BD:115:ILE:HD12	28:BD:115:ILE:C	2.26	0.56
30:BF:138:VAL:C	30:BF:139:VAL:HG23	2.25	0.56
30:BF:163:HIS:CA	30:BF:166:ILE:HD12	2.33	0.56
30:BF:33:LYS:O	30:BF:36:ARG:HG2	2.06	0.56
30:BF:61:PHE:O	30:BF:62:GLY:C	2.43	0.56
34:BN:27:ALA:CB	34:BN:30:ALA:CB	2.65	0.56
34:BN:60:ARG:HB3	34:BN:71:TYR:HD2	1.69	0.56
35:BO:112:MET:O	35:BO:115:ILE:CG1	2.49	0.56
37:BQ:46:VAL:O	37:BQ:124:ALA:CA	2.53	0.56
39:BT:21:PHE:HB2	39:BT:31:PHE:HD1	1.69	0.56
45:BU:13:ARG:O	45:BU:14:HIS:C	2.44	0.56
25:AY:193:HIS:CA	25:AY:194:THR:CA	2.83	0.56
43:BZ:37:LYS:CA	43:BZ:40:ASP:CG	2.74	0.56
1:AA:988:G:N3	1:AA:1015:A:C2	2.74	0.56
47:B2:20:LEU:O	47:B2:23:LEU:CA	2.22	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1310:G:H1	27:BA:1604:C:H42	1.50	0.56
1:AA:1347:G:H5''	12:AI:107:ARG:HA	1.87	0.56
1:AA:946:A:C2	1:AA:1333:A:H2	2.23	0.56
33:BI:60:GLU:O	33:BI:62:LEU:N	2.39	0.56
1:AA:377:G:P	19:AP:5:ARG:HH11	2.29	0.56
27:BA:1079:C:O2	56:BK:130:GLY:HA3	2.06	0.56
3:AW:14:A:C6	3:AW:22:G:N3	2.73	0.56
1:AA:640:A:H2'	11:AH:115:SER:OG	2.06	0.56
27:BA:44:A:H2'	27:BA:45:G:C8	2.41	0.56
1:AA:1382:C:O5'	1:AA:1382:C:H6	1.88	0.56
50:B4:2:GLN:C	50:B4:3:LYS:HG3	2.25	0.56
54:B8:23:MET:SD	54:B8:48:PHE:HA	2.46	0.56
27:BA:2197:U:C2'	27:BA:2198:A:H5''	2.34	0.56
27:BA:2092:U:H5	27:BA:2227:A:H62	1.52	0.56
27:BA:2313:C:C5	27:BA:2314:C:C5	2.94	0.56
27:BA:2370:G:C4	27:BA:2371:G:C8	2.93	0.56
27:BA:2468:G:H8	27:BA:2476:A:N1	1.97	0.56
27:BA:2486:G:N1	27:BA:2487:G:N7	2.53	0.56
27:BA:2501:C:HO2'	27:BA:2502:G:P	2.28	0.56
27:BA:2521:C:C2	27:BA:2522:U:H6	2.14	0.56
27:BA:2525:G:C6	27:BA:2539:C:N4	2.74	0.56
27:BA:747:U:H5	27:BA:2613:U:C5	2.23	0.56
27:BA:2626:C:P	27:BA:2626:C:H5	2.28	0.56
27:BA:2633:G:C8	27:BA:2633:G:OP2	2.58	0.56
27:BA:2687:U:C2'	27:BA:2687:U:O2	2.40	0.56
27:BA:2704:C:C2'	27:BA:2705:A:O4'	2.53	0.56
27:BA:2721:A:C4	27:BA:2722:G:C8	2.93	0.56
27:BA:1665:A:N7	27:BA:2726:U:O2	2.39	0.56
27:BA:2729:G:C6	27:BA:2730:C:N3	2.73	0.56
27:BA:2783:G:C5	27:BA:2784:C:H5	2.23	0.56
27:BA:2792:G:H1	27:BA:2803:C:H42	1.53	0.56
27:BA:2885:C:H2'	27:BA:2885:C:O2	2.03	0.56
27:BA:776:G:N7	27:BA:793:A:H2'	2.20	0.56
28:BD:116:MET:CG	28:BD:117:SER:H	2.16	0.56
28:BD:167:GLU:CA	28:BD:170:TYR:CE1	2.88	0.56
29:BE:189:MET:O	29:BE:190:ASN:HB3	2.05	0.56
29:BE:271:ILE:CG2	29:BE:272:GLY:N	2.69	0.56
30:BF:165:ASP:O	30:BF:168:ARG:CG	2.54	0.56
30:BF:215:ALA:CA	30:BF:242:GLU:CG	2.82	0.56
32:BH:10:ILE:CG1	32:BH:49:ILE:CG1	2.84	0.56
32:BH:94:ARG:CB	32:BH:127:GLN:HE22	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:88:ARG:C	35:BO:90:ASP:N	2.48	0.56
36:BP:114:VAL:HG12	36:BP:115:ARG:H	1.70	0.56
38:BS:76:GLY:CA	38:BS:82:TYR:HB2	2.36	0.56
39:BT:28:THR:O	39:BT:29:THR:HG22	1.99	0.56
27:BA:514:A:H4'	45:BU:32:TYR:OH	2.06	0.56
45:BU:69:ALA:O	45:BU:79:PHE:HE1	1.86	0.56
27:BA:1152:C:H4'	45:BU:80:ILE:HD12	1.86	0.56
46:BV:57:GLN:HE22	46:BV:100:GLY:C	2.07	0.56
33:BI:102:LEU:O	33:BI:103:GLN:O	2.24	0.56
33:BI:115:ILE:CG2	33:BI:129:VAL:HG11	2.36	0.56
42:BY:22:GLN:C	42:BY:24:ARG:H	2.07	0.56
43:BZ:40:ASP:C	43:BZ:44:ARG:HG2	2.26	0.56
1:AA:977:A:C6	1:AA:1224:G:OP1	2.57	0.56
1:AA:1317:C:C4	17:AN:16:PHE:CE1	2.94	0.56
47:B2:27:LEU:HD11	47:B2:53:ILE:HD11	1.87	0.56
1:AA:1156:G:N2	1:AA:1179:A:C2	2.70	0.56
43:BZ:156:GLU:O	43:BZ:157:GLY:C	2.43	0.56
14:AK:44:SER:H	14:AK:47:VAL:HB	1.70	0.56
48:B3:1:MET:CE	48:B3:3:ARG:CG	2.83	0.56
48:B3:33:GLN:NE2	48:B3:34:GLU:C	2.59	0.56
50:B4:14:ILE:HD11	50:B4:39:VAL:HG21	1.88	0.56
52:B6:26:LYS:O	52:B6:27:ASN:OD1	2.23	0.56
27:BA:2421:G:OP1	52:B6:4:ASP:OD2	2.24	0.56
53:B7:25:LYS:O	53:B7:26:SER:C	2.45	0.56
55:B9:24:LEU:CD2	55:B9:35:ARG:CG	2.83	0.56
27:BA:2009:G:C2'	44:BR:106:GLY:O	2.53	0.56
27:BA:2199:A:C4	27:BA:2225:A:H2	2.23	0.56
27:BA:2396:G:OP1	50:B4:28:ARG:NH1	2.39	0.56
27:BA:2398:U:H2'	27:BA:2399:G:H8	1.71	0.56
27:BA:2471:C:H2'	27:BA:2472:G:C5'	2.36	0.56
27:BA:2584:U:H6	27:BA:2585:U:C5	2.04	0.56
27:BA:2595:G:C3'	27:BA:2595:G:C8	2.88	0.56
27:BA:2653:U:C4	27:BA:2654:A:C6	2.91	0.56
27:BA:27:G:C8	27:BA:27:G:H3'	2.41	0.56
27:BA:2819:G:C4'	27:BA:2821:A:H62	2.17	0.56
27:BA:2899:G:HO2'	27:BA:2900:A:H8	1.53	0.56
27:BA:974(A):C:C6	27:BA:1186:G:N2	2.74	0.56
28:BD:135:PRO:HG2	28:BD:138:THR:CB	2.34	0.56
28:BD:143:ILE:CB	28:BD:153:LEU:N	2.68	0.56
28:BD:134:ILE:HG21	28:BD:163:VAL:HG21	1.88	0.56
28:BD:166:LYS:C	28:BD:167:GLU:CD	2.65	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:205:THR:HG22	29:BE:261:ARG:HG3	1.88	0.56
27:BA:2052:G:C4'	29:BE:239:GLY:O	2.51	0.56
33:BI:7:LYS:HB2	33:BI:12:LYS:CE	2.35	0.56
34:BN:74:ARG:C	34:BN:76:ASP:OD2	2.44	0.56
36:BP:71:GLU:O	36:BP:72:ASN:C	2.44	0.56
37:BQ:33:MET:CG	37:BQ:83:PHE:CB	2.84	0.56
45:BU:14:HIS:CD2	45:BU:36:PHE:CE2	2.93	0.56
46:BV:15:SER:O	46:BV:99:GLN:HG3	2.06	0.56
43:BZ:113:VAL:CG1	43:BZ:114:ASP:N	2.56	0.56
33:BI:114:LYS:HB3	33:BI:132:LYS:O	2.06	0.56
42:BY:79:LEU:CD1	42:BY:80:GLU:N	2.52	0.56
27:BA:95:G:H1'	47:B2:42:ASN:CB	2.35	0.56
1:AA:436:C:C3'	1:AA:437:U:C6	2.89	0.56
7:AD:98:GLU:O	7:AD:100:ARG:N	2.39	0.56
13:AJ:10:GLY:CA	13:AJ:16:LEU:HD21	2.28	0.56
1:AA:29:G:O2'	1:AA:295:C:H4'	2.06	0.56
1:AA:1298:C:C4	10:AG:114:ARG:HB3	2.41	0.56
1:AA:1418:A:C8	1:AA:1419:G:C1'	2.89	0.56
27:BA:1829:A:H5''	27:BA:1830:C:C5	2.41	0.56
1:AA:191:G:N2	23:AT:103:GLY:O	2.39	0.56
27:BA:1841:U:H2'	27:BA:1842:G:C8	2.40	0.56
1:AA:818:G:O2'	1:AA:820:U:C5	2.59	0.56
3:AW:16:U:O2'	3:AW:17:U:OP2	2.21	0.56
11:AH:135:CYS:SG	11:AH:136:GLU:N	2.78	0.56
27:BA:1264:G:P	51:B5:19:ARG:NH1	2.69	0.56
27:BA:2303:G:C2	27:BA:2314:C:N3	2.75	0.56
27:BA:2395:C:C6	27:BA:2395:C:O5'	2.59	0.56
27:BA:826:U:OP1	27:BA:2428:G:O5'	2.24	0.56
27:BA:2515:C:C4	27:BA:2570:G:O6	2.60	0.56
27:BA:2831:G:C1'	27:BA:2883:A:C2	2.88	0.56
27:BA:2887:U:C6	27:BA:2887:U:O5'	2.59	0.56
27:BA:447:A:C8	27:BA:473:G:C6	2.93	0.56
27:BA:929:G:O2'	48:B3:37:LEU:HD13	2.05	0.56
27:BA:2770:G:H1'	29:BE:316:ARG:HH12	1.66	0.56
32:BH:51:VAL:HG22	32:BH:68:ARG:HG2	1.86	0.56
32:BH:86:LEU:CD2	32:BH:87:GLU:N	2.68	0.56
32:BH:88:LEU:HD13	32:BH:127:GLN:O	2.04	0.56
34:BN:19:MET:CB	34:BN:46:ILE:HD11	2.21	0.56
27:BA:2674:G:C4'	35:BO:30:ARG:HG3	2.33	0.56
35:BO:87:ILE:HG22	35:BO:88:ARG:N	2.21	0.56
36:BP:96:VAL:CG2	36:BP:101:ASP:H	2.18	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:636:G:OP1	36:BP:127:GLU:N	2.39	0.56
36:BP:58:GLN:HG3	36:BP:59:GLU:N	2.21	0.56
37:BQ:31:PHE:CA	37:BQ:85:ILE:CD1	2.79	0.56
44:BR:51:LEU:O	44:BR:52:ILE:C	2.44	0.56
45:BU:35:ALA:O	45:BU:36:PHE:C	2.43	0.56
40:BW:19:LEU:HB3	51:B5:25:LEU:CD1	2.34	0.56
43:BZ:172:LEU:HD21	43:BZ:173:PRO:CG	2.29	0.56
43:BZ:176:LEU:HD23	43:BZ:177:THR:CA	2.36	0.56
33:BI:86:GLY:C	33:BI:88:ARG:N	2.59	0.56
42:BY:34:GLU:O	42:BY:35:TYR:CB	2.54	0.56
42:BY:51:LEU:O	42:BY:52:ARG:CG	2.50	0.56
43:BZ:64:ALA:HB2	43:BZ:85:MET:C	2.25	0.56
1:AA:1320:C:H1'	22:AS:73:GLU:CG	2.29	0.56
1:AA:958:A:N1	22:AS:55:LYS:HB2	2.17	0.56
47:B2:34:GLN:CA	47:B2:34:GLN:OE1	2.54	0.56
47:B2:52:ALA:HA	47:B2:55:ARG:NH1	2.21	0.56
41:BX:7:HIS:CG	41:BX:8:PRO:HD2	2.41	0.56
1:AA:30(A):G:N1	1:AA:1031:G:C6	2.74	0.56
27:BA:1082:U:C2	56:BK:117:ASN:ND2	2.74	0.56
1:AA:59:A:H3'	1:AA:60:A:C5'	2.36	0.56
20:AQ:65:ILE:HG13	20:AQ:69:LYS:O	2.04	0.56
27:BA:1274:A:N3	27:BA:1297:C:H1'	2.21	0.56
27:BA:270(X):G:H2'	27:BA:270(Y):G:C5'	2.36	0.56
27:BA:1027:A:C6	27:BA:1126:A:C4	2.93	0.56
27:BA:1177:A:H2'	27:BA:1178:C:C6	2.41	0.56
7:AD:140:VAL:CG1	7:AD:144:ASP:HB2	2.35	0.56
48:B3:8:LEU:HD23	48:B3:32:GLN:H	1.69	0.55
50:B4:32:HIS:O	50:B4:33:VAL:C	2.40	0.55
50:B4:17:GLN:CD	50:B4:34:ASP:HA	2.26	0.55
53:B7:43:THR:HA	53:B7:46:ASP:OD2	1.96	0.55
54:B8:62:LEU:HB3	54:B8:63:PRO:HD3	1.83	0.55
55:B9:7:VAL:CG2	55:B9:36:GLN:CG	2.85	0.55
27:BA:1131:G:C6	34:BN:69:TYR:HE1	2.24	0.55
27:BA:1254:A:N7	27:BA:1256:G:C4	2.74	0.55
27:BA:1612:C:H2'	53:B7:3:ARG:CD	2.29	0.55
27:BA:530:G:H1	27:BA:2021:C:C4'	2.18	0.55
27:BA:2185:C:C2	27:BA:2186:G:N7	2.73	0.55
27:BA:2422:A:N9	27:BA:2424:C:H5	2.03	0.55
27:BA:2531:A:C6	27:BA:2532:G:C5	2.94	0.55
27:BA:2533:A:C2'	27:BA:2534:A:H8	2.19	0.55
27:BA:2540:C:H2'	27:BA:2541:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2715:C:C4	27:BA:2716:U:C5	2.94	0.55
27:BA:2734:A:N7	27:BA:2735:G:N9	2.54	0.55
27:BA:2744:G:C4	27:BA:2761:G:C2	2.94	0.55
27:BA:2825:C:C6	27:BA:2825:C:C5'	2.73	0.55
27:BA:2865:U:C6	27:BA:2866:U:C6	2.94	0.55
27:BA:628:G:H1	27:BA:635:C:H42	1.54	0.55
29:BE:199:ALA:HB1	29:BE:312:ARG:N	2.20	0.55
29:BE:271:ILE:HG22	29:BE:272:GLY:N	2.20	0.55
30:BF:149:LYS:HB2	30:BF:152:GLU:CG	2.35	0.55
31:BG:104:PHE:CD1	31:BG:104:PHE:N	2.74	0.55
31:BG:13:MET:O	31:BG:14:ARG:C	2.44	0.55
32:BH:32:LEU:CD2	32:BH:32:LEU:C	2.74	0.55
32:BH:51:VAL:HG22	32:BH:68:ARG:CG	2.35	0.55
56:BK:96:ILE:HG21	56:BK:138:GLU:HB2	1.88	0.55
34:BN:12:VAL:HB	34:BN:38:VAL:HG22	1.87	0.55
34:BN:26:VAL:O	34:BN:30:ALA:N	2.39	0.55
34:BN:83:ILE:C	34:BN:85:GLY:N	2.59	0.55
35:BO:63:VAL:O	35:BO:102:VAL:HG13	2.06	0.55
35:BO:31:ARG:CB	35:BO:32:TYR:CD1	2.87	0.55
37:BQ:84:ARG:HH21	37:BQ:123:ILE:HD12	1.71	0.55
38:BS:90:LEU:HA	38:BS:93:GLN:HE21	1.71	0.55
35:BO:80:ASP:HB2	39:BT:23:HIS:HA	1.88	0.55
27:BA:564:C:C1'	45:BU:37:GLN:OE1	2.54	0.55
45:BU:79:PHE:O	45:BU:82:GLY:N	2.40	0.55
43:BZ:123:VAL:HA	43:BZ:161:ALA:CB	2.36	0.55
4:AX:121:G:N2	25:AY:192:ILE:CA	2.69	0.55
33:BI:68:LEU:HD11	33:BI:108:LEU:HD22	1.87	0.55
1:AA:1014:A:C2	22:AS:34:TRP:CZ3	2.95	0.55
28:BD:208:GLY:HA3	28:BD:210:LYS:HZ1	1.47	0.55
28:BD:216:ALA:HB1	28:BD:223:ASN:H	1.70	0.55
41:BX:35:GLY:C	41:BX:37:VAL:N	2.58	0.55
5:AB:145:LEU:HD13	5:AB:149:LEU:HD12	1.87	0.55
1:AA:761:G:H5''	20:AQ:102:GLY:HA3	1.88	0.55
1:AA:20:U:C4'	1:AA:572:A:C6	2.90	0.55
1:AA:127:G:P	1:AA:635:G:H1'	2.46	0.55
1:AA:627:G:H2'	1:AA:628:G:C8	2.41	0.55
27:BA:154:G:H5''	27:BA:155:C:H5	1.70	0.55
1:AA:242:C:C2	1:AA:285:G:N2	2.74	0.55
2:AV:27:C:H2'	2:AV:28:C:C6	2.41	0.55
27:BA:840:C:H42	27:BA:938:G:H1	1.54	0.55
1:AA:957:U:H4'	22:AS:79:THR:HB	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:43:THR:OG1	49:B0:44:LYS:N	2.32	0.55
48:B3:54:VAL:CG2	48:B3:55:ARG:H	2.01	0.55
51:B5:19:ARG:C	51:B5:21:SER:N	2.33	0.55
53:B7:21:ARG:C	53:B7:24:THR:CG2	2.69	0.55
54:B8:26:LYS:CE	54:B8:44:LYS:C	2.65	0.55
54:B8:21:LYS:HB3	54:B8:48:PHE:CZ	2.41	0.55
27:BA:1248:G:H2'	45:BU:2:PRO:O	2.07	0.55
27:BA:1937:A:H3'	27:BA:1938:A:C5'	2.34	0.55
27:BA:197:A:N6	27:BA:2430:A:C8	2.73	0.55
27:BA:2213:U:H5''	27:BA:2213:U:C6	2.41	0.55
27:BA:2224:G:O2'	27:BA:2225:A:C5'	2.54	0.55
27:BA:2299:G:C6	27:BA:2300:G:C6	2.94	0.55
27:BA:2432:A:C2	27:BA:2433:A:N6	2.68	0.55
27:BA:2460:U:H2'	27:BA:2461:C:H6	1.71	0.55
27:BA:2508:G:H2'	27:BA:2509:G:O5'	2.05	0.55
27:BA:2513:G:C5	27:BA:2514:U:C4	2.95	0.55
27:BA:2528:U:OP1	55:B9:30:VAL:CG1	2.53	0.55
27:BA:2543:G:O2'	27:BA:2544:G:C5'	2.46	0.55
27:BA:2596:U:C5	27:BA:2597:G:N7	2.74	0.55
27:BA:2023:G:H5'	27:BA:2617:C:O2'	2.06	0.55
27:BA:2653:U:C2	27:BA:2654:A:N7	2.74	0.55
27:BA:2693:A:C6	27:BA:2694:G:C6	2.95	0.55
27:BA:2735:G:C5	27:BA:2770:G:N2	2.73	0.55
27:BA:2844:G:N2	27:BA:2845:G:C1'	2.69	0.55
27:BA:535:C:H4'	45:BU:53:LYS:CD	2.24	0.55
27:BA:746:A:O2'	51:B5:2:ALA:HB2	2.05	0.55
28:BD:197:GLY:C	28:BD:199:ARG:N	2.59	0.55
28:BD:196:ASN:HB2	28:BD:199:ARG:HB2	1.88	0.55
28:BD:63:ILE:O	28:BD:64:ILE:CB	2.54	0.55
30:BF:163:HIS:CG	30:BF:166:ILE:HD11	2.41	0.55
30:BF:215:ALA:O	30:BF:242:GLU:CA	2.55	0.55
32:BH:101:LYS:NZ	32:BH:115:GLU:HB3	2.13	0.55
34:BN:15:ARG:HB3	34:BN:43:ARG:HG2	0.56	0.55
35:BO:103:ALA:O	35:BO:106:LEU:HG	2.06	0.55
37:BQ:130:PRO:HA	37:BQ:133:GLU:HB3	1.89	0.55
37:BQ:46:VAL:HG22	37:BQ:156:ASN:HD22	1.72	0.55
37:BQ:50:VAL:C	37:BQ:51:GLU:CD	2.65	0.55
37:BQ:66:ASN:O	37:BQ:67:ALA:C	2.42	0.55
44:BR:93:GLY:C	44:BR:95:THR:N	2.48	0.55
38:BS:64:SER:O	38:BS:66:LEU:N	2.39	0.55
40:BW:44:ALA:O	40:BW:47:VAL:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2013:A:OP1	40:BW:96:ILE:HA	2.06	0.55
2:AV:34:G:H3'	2:AV:35:A:C5'	2.36	0.55
27:BA:80:G:H1	27:BA:106:C:H42	1.55	0.55
42:BY:105:ASP:O	42:BY:107:LYS:N	2.39	0.55
43:BZ:34:LEU:O	43:BZ:35:ASP:HB3	2.05	0.55
43:BZ:18:MET:C	43:BZ:36:ARG:HE	2.07	0.55
6:AC:5:ILE:HG21	13:AJ:61:GLU:OE2	2.07	0.55
27:BA:138:G:C4'	41:BX:43:GLU:HG3	2.33	0.55
41:BX:52:VAL:HG12	41:BX:53:ASN:N	2.21	0.55
27:BA:1080:C:O2'	56:BK:127:ILE:CD1	2.39	0.55
29:BE:107:GLU:HB3	29:BE:110:ARG:HE	1.57	0.55
27:BA:1709:U:O2'	27:BA:2859:G:N3	2.24	0.55
27:BA:1751:C:C1'	27:BA:2860:A:C2	2.89	0.55
7:AD:31:CYS:HB3	7:AD:33:MET:SD	2.46	0.55
2:AV:23:A:H2'	2:AV:24:G:C8	2.40	0.55
27:BA:1907:G:C6	27:BA:1908:C:N4	2.74	0.55
27:BA:1416:G:H2'	27:BA:1417:C:C6	2.42	0.55
27:BA:1805:U:C5'	28:BD:235:PRO:CG	2.85	0.55
1:AA:579:G:C1'	1:AA:728:A:N3	2.68	0.55
27:BA:51:G:H1'	27:BA:118:A:H62	1.69	0.55
12:AI:55:ALA:HB3	12:AI:58:ARG:NE	2.22	0.55
22:AS:40:ILE:HD13	22:AS:62:ILE:HD13	1.88	0.55
14:AK:33:THR:HA	14:AK:39:PRO:HA	1.88	0.55
49:B0:67:VAL:C	49:B0:68:VAL:HG23	2.26	0.55
48:B3:41:PRO:O	48:B3:45:GLY:N	2.33	0.55
48:B3:9:VAL:HG22	48:B3:54:VAL:HG12	1.87	0.55
50:B4:58:LYS:HD3	50:B4:62:ARG:NH2	2.20	0.55
27:BA:2615:U:C2	51:B5:7:PRO:HA	2.41	0.55
27:BA:464:U:C1'	53:B7:12:ARG:NH2	2.70	0.55
27:BA:1367:A:H2'	53:B7:25:LYS:HD2	1.87	0.55
27:BA:2291:U:H2'	27:BA:2292:C:H6	1.72	0.55
27:BA:2351:G:C2	27:BA:2365:G:C5	2.95	0.55
27:BA:2376:A:OP1	27:BA:2376:A:C8	2.60	0.55
27:BA:2381:C:H6	27:BA:2381:C:H5'	1.70	0.55
27:BA:2416:C:O2	27:BA:2416:C:H2'	2.06	0.55
27:BA:2447:G:C5	27:BA:2500:U:C6	2.85	0.55
27:BA:2476:A:H2'	27:BA:2477:C:O4'	2.06	0.55
27:BA:2508:G:C2	27:BA:2509:G:C8	2.94	0.55
27:BA:2570:G:C3'	27:BA:2571:C:C6	2.90	0.55
27:BA:2725:A:C5	27:BA:2727:G:C5	2.94	0.55
27:BA:2727:G:H2'	27:BA:2728:U:C5	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2759:G:C8	27:BA:2759:G:H3'	2.41	0.55
27:BA:447:A:C6	27:BA:454:A:N7	2.75	0.55
27:BA:458:G:H2'	53:B7:40:HIS:HE2	1.64	0.55
27:BA:559:G:H2'	27:BA:560:C:C6	2.42	0.55
26:BB:24:G:N7	26:BB:56:G:C4	2.74	0.55
27:BA:1816:G:C8	28:BD:63:ILE:HG13	2.41	0.55
29:BE:44:TYR:CD2	29:BE:307:LEU:O	2.59	0.55
29:BE:44:TYR:CZ	29:BE:308:VAL:CA	2.89	0.55
30:BF:101:ASP:C	30:BF:102:LEU:O	2.45	0.55
30:BF:108:GLN:O	30:BF:109:LEU:C	2.44	0.55
30:BF:114:ALA:O	30:BF:115:LEU:C	2.43	0.55
31:BG:141:VAL:CA	31:BG:144:ARG:HH11	2.19	0.55
32:BH:136:ASP:O	32:BH:137:LYS:C	2.43	0.55
34:BN:39:VAL:HG12	34:BN:104:TYR:H	1.71	0.55
34:BN:41:ALA:O	34:BN:42:GLU:C	2.44	0.55
37:BQ:116:HIS:CD2	37:BQ:119:ASN:HB3	2.41	0.55
27:BA:2378:A:C1'	38:BS:101:VAL:HG23	2.36	0.55
27:BA:995:C:C2	45:BU:57:PHE:CE2	2.94	0.55
46:BV:68:LYS:O	46:BV:69:ILE:C	2.44	0.55
43:BZ:163:ASP:CB	43:BZ:164:PRO:CD	2.79	0.55
27:BA:107:C:H2'	27:BA:108:U:C6	2.41	0.55
42:BY:55:PHE:CB	42:BY:58:GLU:OE2	2.50	0.55
43:BZ:18:MET:N	43:BZ:36:ARG:HG3	2.21	0.55
16:AM:94:ARG:C	16:AM:95:GLY:C	2.64	0.55
27:BA:1566:A:N3	28:BD:212:HIS:CA	2.70	0.55
27:BA:76:C:C4'	47:B2:55:ARG:HG3	2.36	0.55
41:BX:17:ASP:CA	41:BX:20:PHE:CZ	2.89	0.55
41:BX:18:MET:HE1	41:BX:25:GLN:CB	2.35	0.55
41:BX:24:LEU:C	41:BX:26:PHE:CZ	2.73	0.55
41:BX:25:GLN:NE2	41:BX:65:VAL:CG1	2.65	0.55
40:BW:89:ALA:HB3	40:BW:92:ARG:H	1.71	0.55
2:AV:7:U:H5'	2:AV:8:U:OP2	2.05	0.55
1:AA:564:C:H4'	11:AH:91:ARG:NH2	2.20	0.55
2:AV:41:U:H2'	2:AV:41:U:O2	2.04	0.55
27:BA:414:C:N3	27:BA:2409:G:C2	2.73	0.55
8:AE:147:ASP:HA	8:AE:150:ARG:HB2	1.89	0.55
27:BA:1634:A:O2'	27:BA:1635:G:OP1	2.23	0.55
1:AA:738:C:H4'	9:AF:70:ASP:HA	1.88	0.55
8:AE:80:ILE:HD12	8:AE:91:LEU:HB3	1.88	0.55
1:AA:505:G:OP2	1:AA:534:U:O2'	2.13	0.55
26:BB:110:G:H2'	26:BB:111:U:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:39:ARG:HG2	49:B0:69:PHE:HZ	1.61	0.55
49:B0:38:VAL:CA	49:B0:40:GLN:CD	2.64	0.55
27:BA:2331:G:C3'	49:B0:70:ILE:HG13	2.27	0.55
27:BA:969:U:C5'	48:B3:14:GLY:O	2.55	0.55
44:BR:100:LEU:CA	51:B5:44:HIS:CD2	2.90	0.55
27:BA:2047:U:H2'	27:BA:2048:G:H8	1.72	0.55
27:BA:2067:G:H8	27:BA:2067:G:O5'	1.90	0.55
27:BA:2372:G:H5''	27:BA:2372:G:C8	2.40	0.55
27:BA:2380:C:H3'	27:BA:2380:C:C6	2.41	0.55
27:BA:2412:A:C3'	27:BA:2413:G:H5'	2.36	0.55
27:BA:2481:G:O2'	27:BA:2482:G:OP2	2.22	0.55
27:BA:2508:G:C2'	27:BA:2509:G:O5'	2.54	0.55
27:BA:2517:C:C5	27:BA:2542:A:N7	2.75	0.55
27:BA:2638:G:C8	27:BA:2775:A:N1	2.75	0.55
27:BA:2881:C:C6	27:BA:2882:A:N7	2.75	0.55
27:BA:2894:G:H3'	27:BA:2895:U:P	2.45	0.55
28:BD:158:GLY:HA2	28:BD:194:VAL:HG22	1.84	0.55
29:BE:175:ASP:C	29:BE:177:ALA:N	2.56	0.55
29:BE:193:PHE:HD1	29:BE:193:PHE:H	1.54	0.55
30:BF:111:VAL:O	30:BF:115:LEU:N	2.33	0.55
30:BF:27:ARG:O	30:BF:28:SER:C	2.43	0.55
34:BN:102:ARG:HB3	34:BN:104:TYR:OH	2.06	0.55
34:BN:23:ALA:O	34:BN:26:VAL:N	2.39	0.55
35:BO:8:LEU:HD23	35:BO:19:VAL:O	2.06	0.55
44:BR:52:ILE:C	44:BR:54:LEU:N	2.51	0.55
38:BS:122:ALA:O	38:BS:123:ILE:C	2.45	0.55
38:BS:83:LEU:CD1	38:BS:83:LEU:H	2.18	0.55
46:BV:74:TYR:HE2	46:BV:88:GLN:NE2	2.05	0.55
33:BI:104:ALA:O	33:BI:105:GLN:O	2.24	0.55
1:AA:965:A:OP1	1:AA:1198:G:H5''	2.06	0.55
27:BA:1826:G:H8	27:BA:1826:G:OP2	1.89	0.55
27:BA:729:G:N1	28:BD:206:LYS:O	2.39	0.55
28:BD:61:TYR:OH	28:BD:214:MET:SD	2.46	0.55
41:BX:5:ILE:HG23	41:BX:6:LYS:N	2.12	0.55
41:BX:7:HIS:HB2	41:BX:8:PRO:HD2	1.89	0.55
41:BX:75:GLN:O	41:BX:77:VAL:C	2.45	0.55
27:BA:1918:A:C8	27:BA:1918:A:OP2	2.60	0.55
1:AA:173:U:H5'	1:AA:197:A:C4'	2.36	0.55
27:BA:2408:U:H2'	27:BA:2409:G:O5'	2.06	0.55
1:AA:22:G:O2'	1:AA:913:A:C2	2.54	0.55
56:BK:85:ILE:HD11	56:BK:87:LYS:O	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:38:LEU:HD23	46:BV:38:LEU:H	1.70	0.55
38:BS:70:GLY:O	38:BS:71:TRP:HE3	1.87	0.55
5:AB:84:GLU:HG3	5:AB:212:GLN:NE2	2.21	0.55
2:AV:59:U:O2	2:AV:59:U:C2'	2.55	0.55
49:B0:28:GLY:N	49:B0:60:PHE:CG	2.69	0.55
48:B3:7:LYS:O	48:B3:54:VAL:CG1	2.54	0.55
50:B4:68:ARG:HB2	50:B4:72:LYS:CG	2.36	0.55
27:BA:2419:U:OP1	52:B6:24:THR:CG2	2.55	0.55
54:B8:56:ALA:O	54:B8:58:MET:N	2.40	0.55
27:BA:2093:G:OP2	33:BI:25:TYR:CE2	2.59	0.55
27:BA:2093:G:C5	27:BA:2225:A:N6	2.74	0.55
27:BA:2231:C:OP1	50:B4:39:VAL:HA	2.07	0.55
27:BA:2446:G:C2	27:BA:2501:C:C4	2.86	0.55
27:BA:2447:G:C4	27:BA:2500:U:C4	2.91	0.55
27:BA:2466:C:C4	27:BA:2467:C:C4	2.94	0.55
27:BA:2514:U:H3'	27:BA:2514:U:C6	2.41	0.55
27:BA:2678:C:N3	27:BA:2679:A:C5	2.75	0.55
27:BA:2693:A:C6	27:BA:2694:G:O6	2.59	0.55
27:BA:2698:U:C2'	27:BA:2698:U:O2	2.54	0.55
27:BA:2756:U:N3	27:BA:2759:G:C6	2.73	0.55
27:BA:2783:G:C8	27:BA:2783:G:C5'	2.86	0.55
27:BA:2839:G:N2	27:BA:2840:C:H1'	2.21	0.55
27:BA:792:G:H2'	27:BA:2440:C:N3	2.21	0.55
28:BD:164:LEU:O	28:BD:172:ILE:HG21	2.07	0.55
29:BE:319:ASP:O	29:BE:320:GLN:C	2.44	0.55
30:BF:79:ARG:CG	30:BF:79:ARG:O	2.54	0.55
31:BG:140:ARG:O	31:BG:141:VAL:C	2.45	0.55
27:BA:2317:C:H4'	31:BG:150:SER:HB3	1.88	0.55
31:BG:28:GLY:O	31:BG:69:ILE:HD11	2.05	0.55
34:BN:103:VAL:CG1	34:BN:104:TYR:H	2.15	0.55
36:BP:66:VAL:CB	36:BP:110:GLY:O	2.48	0.55
36:BP:94:ARG:NE	36:BP:120:LEU:HB2	2.22	0.55
36:BP:131:GLU:O	36:BP:133:VAL:N	2.39	0.55
37:BQ:47:GLU:CD	37:BQ:47:GLU:N	2.60	0.55
27:BA:907:U:O2'	37:BQ:88:PHE:HZ	1.88	0.55
38:BS:38:LYS:CG	38:BS:106:LEU:HD12	2.37	0.55
38:BS:72:GLU:CB	38:BS:74:PRO:CD	2.84	0.55
27:BA:994:C:C2'	45:BU:54:LYS:HG2	2.35	0.55
46:BV:6:GLN:CD	46:BV:10:LYS:HG2	2.27	0.55
46:BV:35:LEU:HG	46:BV:63:HIS:CE1	2.42	0.55
46:BV:43:GLU:C	46:BV:44:GLN:HE22	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:5:ILE:H	46:BV:5:ILE:CD1	2.17	0.55
33:BI:132:LYS:CA	33:BI:138:THR:HG21	2.29	0.55
42:BY:102:ASP:O	42:BY:108:ARG:HD3	2.05	0.55
42:BY:15:PRO:HD2	42:BY:18:GLU:OE2	2.07	0.55
42:BY:78:THR:HG22	42:BY:89:ARG:N	2.21	0.55
1:AA:988:G:N3	1:AA:1015:A:H2	2.05	0.55
27:BA:1772:G:N2	27:BA:1774:C:H5'	2.21	0.55
28:BD:208:GLY:HA3	28:BD:211:HIS:CD2	2.42	0.55
1:AA:1235:U:OP1	24:AU:3:LYS:HD3	2.06	0.55
1:AA:1098:C:O4'	1:AA:1167:A:H2	1.90	0.55
1:AA:1376:U:O3'	10:AG:94:ARG:NH2	2.39	0.55
27:BA:1690:A:H2'	27:BA:1690:A:N3	2.21	0.55
1:AA:62:U:H5''	1:AA:385:C:C2'	2.36	0.55
1:AA:1326:C:H5''	24:AU:19:GLY:HA2	1.88	0.55
54:B8:36:LYS:HG2	54:B8:40:GLU:OE2	2.06	0.55
54:B8:61:MET:O	54:B8:62:LEU:HB2	2.07	0.55
27:BA:1031:G:C3'	55:B9:8:LYS:CE	2.85	0.55
27:BA:198:C:H4'	27:BA:2243:U:HO2'	1.71	0.55
27:BA:1268:A:OP2	27:BA:2006:C:OP2	2.25	0.55
27:BA:2100:G:C2	27:BA:2190:G:C4	2.95	0.55
27:BA:2281:C:O2'	27:BA:2282:G:P	2.64	0.55
27:BA:2306:C:C6	27:BA:2306:C:H3'	2.41	0.55
27:BA:2353:G:C2	27:BA:2364:C:C4	2.88	0.55
27:BA:2354:G:N3	27:BA:2355:C:C6	2.75	0.55
27:BA:2385:C:O2	27:BA:2385:C:H2'	2.05	0.55
27:BA:2410:G:C4	27:BA:2411:A:C8	2.70	0.55
27:BA:2454:G:H2'	27:BA:2455:G:O4'	2.07	0.55
27:BA:2469:A:H2'	27:BA:2470:G:H5'	1.89	0.55
27:BA:2496:C:N4	27:BA:2497:A:N1	2.55	0.55
27:BA:2567:G:C2	27:BA:2568:C:N4	2.74	0.55
27:BA:2836:U:N3	27:BA:2883:A:N6	2.54	0.55
27:BA:826:U:OP1	27:BA:2429:G:P	2.65	0.55
26:BB:49:C:OP1	38:BS:110:THR:OG1	2.21	0.55
28:BD:172:ILE:HG12	28:BD:182:MET:HG3	1.88	0.55
28:BD:144:GLU:HG3	28:BD:188:ARG:HB2	1.88	0.55
30:BF:57:PRO:O	30:BF:79:ARG:CB	2.48	0.55
34:BN:57:TYR:HB2	34:BN:135:ILE:HG21	1.89	0.55
34:BN:136:SER:HA	34:BN:139:LEU:HD22	1.88	0.55
27:BA:1140:C:C6	34:BN:49:ARG:HG3	2.32	0.55
36:BP:62:ALA:CB	36:BP:104:ASP:O	2.52	0.55
44:BR:85:PRO:C	44:BR:87:TYR:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:87:TYR:CD1	44:BR:94:TYR:CG	2.93	0.55
38:BS:40:ASN:CA	38:BS:114:LYS:NZ	2.46	0.55
27:BA:2021:C:H6	45:BU:25:TRP:CH2	2.22	0.55
45:BU:25:TRP:CB	45:BU:28:ARG:NH1	2.67	0.55
45:BU:33:ARG:HA	45:BU:36:PHE:CD1	2.42	0.55
27:BA:994:C:N3	45:BU:53:LYS:CE	2.70	0.55
45:BU:55:ARG:O	45:BU:58:ARG:N	2.40	0.55
45:BU:61:TRP:O	45:BU:65:ILE:CB	2.53	0.55
45:BU:98:ILE:HB	45:BU:106:PHE:CE1	2.42	0.55
45:BU:89:ASP:CG	46:BV:51:ALA:CB	2.70	0.55
40:BW:11:ARG:O	40:BW:12:ILE:CB	2.55	0.55
43:BZ:172:LEU:O	43:BZ:174:PRO:CD	2.55	0.55
42:BY:71:VAL:HA	42:BY:93:THR:HG22	1.88	0.55
43:BZ:4:THR:O	43:BZ:34:LEU:N	2.40	0.55
43:BZ:37:LYS:HA	43:BZ:40:ASP:CG	2.26	0.55
43:BZ:45:GLN:CA	43:BZ:45:GLN:NE2	2.69	0.55
47:B2:28:LEU:HG	47:B2:31:ARG:HH21	1.72	0.55
41:BX:14:ALA:CB	41:BX:18:MET:HE1	2.36	0.55
1:AA:1030:C:N3	1:AA:30(A):G:C6	2.75	0.55
29:BE:107:GLU:CG	29:BE:110:ARG:CZ	2.85	0.55
27:BA:2856:C:O5'	27:BA:2856:C:H6	1.89	0.55
7:AD:20:TYR:C	7:AD:22:LYS:H	2.10	0.55
1:AA:1392:G:H21	1:AA:1502:A:H8	1.55	0.55
3:AW:29:A:O2'	3:AW:30:G:H5'	2.06	0.55
1:AA:501:C:OP2	15:AL:124:LYS:HD3	2.06	0.55
32:BH:20:GLY:O	32:BH:21:ASN:CB	2.51	0.55
27:BA:284:U:H2'	27:BA:285:C:C6	2.40	0.55
27:BA:666:G:H2'	27:BA:667:U:H6	1.72	0.55
1:AA:390:C:O3'	19:AP:28:ARG:NH2	2.40	0.55
16:AM:44:ARG:HB3	16:AM:46:LYS:HG2	1.88	0.55
13:AJ:7:LYS:HB3	13:AJ:97:GLU:HB2	1.89	0.55
49:B0:31:VAL:HG12	49:B0:32:LYS:N	2.21	0.55
48:B3:50:VAL:HB	48:B3:53:LEU:HB2	1.89	0.55
53:B7:17:GLY:O	53:B7:19:ARG:N	2.39	0.55
54:B8:62:LEU:HB2	54:B8:63:PRO:HD2	1.83	0.55
27:BA:2022:U:H1'	27:BA:2034:U:C2	2.42	0.55
27:BA:2189:U:O2'	27:BA:2190:G:O4'	2.25	0.55
27:BA:2196:C:H2'	27:BA:2196:C:O2	2.05	0.55
27:BA:2256:G:N1	27:BA:2257:U:N3	2.55	0.55
27:BA:2349:G:O6	27:BA:2350:C:C4	2.60	0.55
27:BA:2392:A:N7	27:BA:2393:A:N7	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:825:C:C3'	27:BA:2428:G:N7	2.69	0.55
27:BA:2564:A:C6	27:BA:2565:A:N6	2.75	0.55
27:BA:2625:G:C8	27:BA:2626:C:C4	2.95	0.55
27:BA:2657:A:N1	27:BA:2665:A:C8	2.74	0.55
27:BA:2703:C:H2'	27:BA:2704:C:O5'	2.03	0.55
28:BD:143:ILE:CD1	28:BD:153:LEU:N	2.68	0.55
28:BD:131:LEU:CG	28:BD:171:VAL:HG21	2.35	0.55
28:BD:63:ILE:O	28:BD:64:ILE:HG23	2.05	0.55
30:BF:60:SER:HB3	30:BF:69:HIS:CB	2.30	0.55
31:BG:29:HIS:HE1	31:BG:64:ARG:NH1	1.81	0.55
32:BH:41:THR:H	32:BH:54:PRO:HG3	1.72	0.55
32:BH:67:THR:HA	32:BH:70:LEU:CB	2.36	0.55
33:BI:5:PHE:CB	33:BI:17:GLU:O	2.49	0.55
34:BN:58:GLU:CB	34:BN:61:VAL:HG21	2.37	0.55
35:BO:102:VAL:HG12	35:BO:103:ALA:H	1.71	0.55
36:BP:92:ASP:HB3	36:BP:118:LEU:CB	2.37	0.55
37:BQ:147:VAL:CG1	37:BQ:148:ASN:N	2.69	0.55
44:BR:58:GLY:CA	44:BR:80:PHE:CZ	2.76	0.55
38:BS:23:ARG:HH21	38:BS:35:VAL:CG1	2.18	0.55
27:BA:2010:G:OP1	40:BW:41:LYS:HG3	2.06	0.55
43:BZ:173:PRO:C	43:BZ:175:ARG:N	2.58	0.55
43:BZ:73:LYS:HG3	43:BZ:75:LYS:HE3	1.87	0.55
42:BY:67:LEU:O	42:BY:68:ASP:C	2.45	0.55
42:BY:51:LEU:CD1	42:BY:97:ARG:CG	2.80	0.55
1:AA:1219:U:HO2'	22:AS:34:TRP:HB3	1.61	0.55
47:B2:22:ASP:O	47:B2:25:THR:N	2.40	0.55
47:B2:34:GLN:O	47:B2:35:ALA:C	2.44	0.55
27:BA:138:G:H5'	41:BX:43:GLU:HG3	1.77	0.55
41:BX:7:HIS:HB2	41:BX:8:PRO:HD3	1.87	0.55
1:AA:1236:A:C5'	1:AA:1304:G:H5''	2.37	0.55
7:AD:26:CYS:O	7:AD:31:CYS:HB2	2.06	0.55
33:BI:60:GLU:C	33:BI:62:LEU:N	2.59	0.55
27:BA:1358:G:N1	27:BA:1371:G:H2'	2.21	0.55
1:AA:188:C:H1'	23:AT:105:SER:O	2.06	0.55
1:AA:112:G:C5'	1:AA:389:A:H4'	2.36	0.55
27:BA:153:C:H1'	27:BA:175:G:N2	2.21	0.55
1:AA:1451:A:H3'	1:AA:1451:A:C8	2.41	0.55
27:BA:363(A):A:N3	27:BA:363(A):A:H2'	2.20	0.55
49:B0:68:VAL:O	49:B0:69:PHE:CB	2.54	0.55
27:BA:1809:A:H61	50:B4:3:LYS:HB3	1.71	0.55
50:B4:63:PHE:O	50:B4:64:GLY:C	2.44	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:13:GLU:O	52:B6:52:GLU:HA	2.06	0.55
52:B6:46:LYS:CA	52:B6:46:LYS:CE	2.84	0.55
27:BA:1034:G:C5'	55:B9:18:ARG:HH21	2.08	0.55
27:BA:1261:C:OP1	40:BW:97:LYS:NZ	2.40	0.55
27:BA:1653:G:H5''	27:BA:1653:G:H8	1.72	0.55
27:BA:2386:C:C1'	49:B0:39:ARG:NH2	2.68	0.55
27:BA:2485:G:H4'	37:BQ:144:THR:HG22	1.88	0.55
27:BA:2693:A:N3	27:BA:2694:G:C8	2.75	0.55
27:BA:2720:U:O4	27:BA:2872:G:C5	2.59	0.55
27:BA:2804:C:C5	27:BA:2805:G:O6	2.44	0.55
27:BA:2807:G:C8	27:BA:2808:U:H5	2.25	0.55
27:BA:5:A:C6	27:BA:2899:G:N1	2.75	0.55
27:BA:687:C:N3	27:BA:787:U:O3'	2.40	0.55
27:BA:965:C:O2'	27:BA:2273:A:H2	1.88	0.55
26:BB:15:A:H5'	26:BB:16:G:C8	2.42	0.55
26:BB:24:G:O6	26:BB:56:G:H2'	2.06	0.55
27:BA:1819:A:P	28:BD:154:VAL:CA	2.92	0.55
27:BA:1799:G:N1	28:BD:177:SER:HB2	2.19	0.55
31:BG:29:HIS:O	31:BG:29:HIS:CD2	2.60	0.55
32:BH:82:TYR:CZ	32:BH:137:LYS:HG2	2.41	0.55
32:BH:40:MET:CB	32:BH:54:PRO:HG3	2.37	0.55
33:BI:7:LYS:HB2	33:BI:12:LYS:HZ2	1.72	0.55
34:BN:136:SER:CA	34:BN:139:LEU:HD21	2.37	0.55
27:BA:142(A):A:O3'	34:BN:21:ARG:NH2	2.39	0.55
35:BO:110:ASP:C	35:BO:111:PHE:CG	2.71	0.55
36:BP:110:GLY:CA	36:BP:129:ALA:HB2	2.35	0.55
37:BQ:84:ARG:O	37:BQ:85:ILE:HG23	2.07	0.55
37:BQ:85:ILE:HA	37:BQ:122:PHE:CA	2.37	0.55
26:BB:115:G:C5'	38:BS:59:ALA:HB2	2.25	0.55
39:BT:37:GLU:O	39:BT:38:ASN:C	2.44	0.55
45:BU:24:PHE:CD1	45:BU:28:ARG:HG3	2.42	0.55
40:BW:66:GLU:O	40:BW:68:ARG:N	2.39	0.55
43:BZ:111:GLY:O	43:BZ:174:PRO:HG3	2.06	0.55
43:BZ:75:LYS:O	43:BZ:76:ARG:CB	2.55	0.55
2:AV:34:G:H3'	2:AV:35:A:H5''	1.88	0.55
33:BI:77:VAL:CG1	33:BI:143:VAL:HA	2.37	0.55
43:BZ:37:LYS:O	43:BZ:41:ARG:HD2	2.06	0.55
47:B2:52:ALA:O	47:B2:56:ILE:HD11	1.84	0.55
1:AA:1211:U:O3'	1:AA:1212:U:O5'	1.95	0.55
29:BE:107:GLU:HG2	29:BE:110:ARG:CZ	2.37	0.55
1:AA:922:G:H2'	1:AA:923:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:39:G:C8	1:AA:547:A:C8	2.95	0.55
39:BT:42:LEU:O	39:BT:44:ARG:CA	2.55	0.55
1:AA:1259:C:H42	1:AA:1276:G:H1	1.53	0.55
26:BB:95:U:H2'	26:BB:96:G:C8	2.42	0.55
12:AI:37:PHE:N	12:AI:37:PHE:CD2	2.74	0.55
48:B3:19:GLN:OE1	48:B3:19:GLN:N	2.39	0.55
53:B7:38:GLY:O	53:B7:39:ARG:CG	2.55	0.55
27:BA:16:G:O6	27:BA:525:U:C4	2.59	0.55
27:BA:2080:G:C6	27:BA:2241:A:N6	2.75	0.55
27:BA:2331:G:H2'	27:BA:2332:U:C1'	2.37	0.55
27:BA:2355:C:H2'	27:BA:2355:C:O2	2.06	0.55
27:BA:2288:A:O2'	27:BA:2385:C:OP1	2.09	0.55
27:BA:1637:A:O3'	27:BA:2711:A:H4'	2.07	0.55
27:BA:2785:C:C5'	29:BE:99:VAL:CB	2.85	0.55
27:BA:2791:C:O2'	27:BA:2792:G:O4'	2.20	0.55
27:BA:931:G:H2'	27:BA:932:G:N9	2.20	0.55
28:BD:143:ILE:CG1	28:BD:153:LEU:CB	2.78	0.55
29:BE:190:ASN:C	29:BE:192:ILE:N	2.60	0.55
29:BE:210:THR:HA	29:BE:216:ARG:HH21	1.57	0.55
29:BE:205:THR:N	29:BE:259:HIS:O	2.39	0.55
32:BH:85:ALA:CA	32:BH:131:ILE:HG22	2.34	0.55
34:BN:24:SER:OG	34:BN:25:GLN:N	2.40	0.55
34:BN:38:VAL:HG12	34:BN:39:VAL:H	1.70	0.55
35:BO:104:ARG:HH12	35:BO:122:ILE:HA	1.71	0.55
27:BA:2727:G:H4'	35:BO:70:ARG:CZ	2.37	0.55
36:BP:120:LEU:CD1	36:BP:120:LEU:C	2.76	0.55
37:BQ:49:VAL:HG21	37:BQ:119:ASN:C	2.27	0.55
27:BA:873:G:H4'	37:BQ:32:LYS:CB	2.36	0.55
27:BA:1287:A:N7	44:BR:105:ARG:O	2.39	0.55
38:BS:116:PHE:O	38:BS:120:GLU:OE2	2.25	0.55
38:BS:31:LYS:CE	38:BS:99:GLU:HB2	2.37	0.55
46:BV:78:VAL:CB	46:BV:80:TYR:CD1	2.88	0.55
40:BW:8:ARG:HG3	40:BW:102:HIS:HE1	1.56	0.55
33:BI:68:LEU:CD2	33:BI:72:LEU:HD21	2.36	0.55
42:BY:74:VAL:HG12	42:BY:77:VAL:CG2	2.19	0.55
42:BY:78:THR:N	42:BY:89:ARG:NE	2.55	0.55
43:BZ:38:ALA:O	43:BZ:40:ASP:N	2.39	0.55
27:BA:147:U:H2'	27:BA:148:C:O4'	2.07	0.55
41:BX:30:ASP:HB3	41:BX:62:LYS:HB2	1.89	0.55
1:AA:564:C:O2'	11:AH:91:ARG:NH1	2.40	0.55
33:BI:62:LEU:O	33:BI:66:LYS:CE	2.48	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:670:G:O2'	9:AF:77:ARG:NH2	2.40	0.55
27:BA:1899:G:H22	27:BA:1902:C:H41	1.54	0.55
1:AA:1250:A:C2	1:AA:1370:G:O2'	2.54	0.55
27:BA:184:C:H2'	27:BA:185:U:C6	2.42	0.55
27:BA:1802:A:H61	27:BA:1822:G:H1'	1.72	0.55
27:BA:1179:C:H2'	27:BA:1180:C:C6	2.42	0.55
1:AA:1074:G:H2'	1:AA:1075:C:O4'	2.07	0.55
49:B0:22:GLY:O	49:B0:23:VAL:C	2.46	0.55
48:B3:1:MET:O	48:B3:3:ARG:HG3	2.07	0.55
27:BA:2209:C:N4	27:BA:2215:G:C6	2.73	0.55
27:BA:2355:C:C4	27:BA:2356:C:C4	2.95	0.55
27:BA:2462:U:C4	27:BA:2463:C:C4	2.95	0.55
27:BA:2472:G:H2'	27:BA:2475:C:C4	2.39	0.55
27:BA:2056:G:OP2	27:BA:2504:U:H5''	2.07	0.55
27:BA:2603:G:N1	27:BA:2604:U:C4	2.74	0.55
27:BA:2051:A:C5	27:BA:2614:A:C5	2.94	0.55
27:BA:2676:C:H2'	27:BA:2677:G:O5'	2.07	0.55
27:BA:2678:C:N4	27:BA:2729:G:H1	2.05	0.55
27:BA:2725:A:H2'	27:BA:2726:U:H5''	1.87	0.55
27:BA:2740:A:C2	27:BA:2764:A:N3	2.75	0.55
27:BA:2767:C:C4	27:BA:2768:C:C4	2.95	0.55
27:BA:2821:A:C2	27:BA:2822:G:C6	2.89	0.55
27:BA:2864:G:O2'	27:BA:2865:U:C1'	2.54	0.55
27:BA:857:C:H42	27:BA:920:G:H1	1.55	0.55
28:BD:156:ALA:HB1	28:BD:196:ASN:HB3	1.88	0.55
30:BF:11:ASN:ND2	30:BF:160:LEU:HD11	2.21	0.55
31:BG:142:ALA:HB2	31:BG:151:ILE:HG13	1.83	0.55
32:BH:100:LYS:HG3	32:BH:100:LYS:O	2.07	0.55
32:BH:32:LEU:HD21	32:BH:34:ARG:HB2	1.89	0.55
27:BA:270(O):U:O4	33:BI:53:LYS:NZ	2.40	0.55
34:BN:25:GLN:O	34:BN:27:ALA:C	2.45	0.55
35:BO:66:LYS:H	35:BO:82:ASN:ND2	2.04	0.55
44:BR:18:LEU:O	44:BR:20:LEU:N	2.39	0.55
44:BR:81:ASP:O	44:BR:85:PRO:CD	2.54	0.55
38:BS:114:LYS:O	38:BS:115:VAL:O	2.24	0.55
38:BS:116:PHE:C	38:BS:120:GLU:OE1	2.41	0.55
38:BS:39:SER:O	38:BS:41:LYS:N	2.40	0.55
45:BU:43:ALA:HA	45:BU:46:GLU:CD	2.28	0.55
40:BW:68:ARG:NE	40:BW:110:LYS:HB3	2.22	0.55
33:BI:133:LEU:CD1	33:BI:139:ALA:HB3	2.25	0.55
33:BI:76:THR:CB	33:BI:144:HIS:HE1	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:3:LEU:O	43:BZ:56:VAL:HG22	2.07	0.55
1:AA:1317:C:C5	17:AN:16:PHE:CG	2.96	0.55
28:BD:213:LYS:CB	28:BD:215:LYS:CA	2.79	0.55
41:BX:40:ALA:N	41:BX:43:GLU:OE1	2.40	0.55
41:BX:50:GLU:OE1	41:BX:50:GLU:CA	2.55	0.55
27:BA:1059:G:H22	56:BK:131:THR:N	2.06	0.55
6:AC:12:LEU:HD11	17:AN:51:GLY:N	2.21	0.55
1:AA:279:A:H4'	1:AA:280:C:OP2	2.06	0.55
27:BA:1912:A:C8	27:BA:1913:A:H1'	2.41	0.55
7:AD:23:GLY:HA2	7:AD:113:SER:CA	2.37	0.55
1:AA:939:G:O2'	1:AA:940:C:O4'	2.24	0.55
1:AA:761:G:C5'	20:AQ:102:GLY:HA3	2.37	0.55
27:BA:1482:U:C1'	27:BA:1512:G:H22	2.20	0.55
27:BA:1609:A:C5	27:BA:1616:A:C2	2.95	0.55
1:AA:294:U:H2'	1:AA:295:C:C6	2.42	0.55
27:BA:215:G:H4'	27:BA:216:A:O5'	2.06	0.55
1:AA:1091:U:H5'	1:AA:1172:C:H5'	1.89	0.55
12:AI:37:PHE:HD2	12:AI:37:PHE:N	2.05	0.55
27:BA:1449:A:N6	27:BA:449(A):G:C6	2.75	0.55
51:B5:42:SER:O	51:B5:43:HIS:ND1	2.40	0.54
27:BA:1638:C:H4'	27:BA:2709:G:N2	2.21	0.54
27:BA:747:U:O2	27:BA:2015:A:H2	1.90	0.54
27:BA:2056:G:H22	51:B5:4:HIS:C	2.01	0.54
27:BA:2321:G:C2'	27:BA:2321:G:N3	2.70	0.54
27:BA:2384:G:C3'	27:BA:2386:C:OP2	2.55	0.54
27:BA:2392:A:N6	27:BA:2393:A:N6	2.54	0.54
27:BA:2400:G:N2	27:BA:2401:U:O2	2.40	0.54
27:BA:2065:C:O2	27:BA:2449:U:N3	2.39	0.54
27:BA:1128:A:N6	27:BA:2489:G:HO2'	2.05	0.54
27:BA:197:A:H61	27:BA:248:G:H22	1.52	0.54
27:BA:2494:G:C2	27:BA:2495:G:C4	2.93	0.54
27:BA:249:C:O2'	54:B8:8:LYS:HG3	2.08	0.54
27:BA:2558:C:C2'	27:BA:2559:C:H5'	2.37	0.54
27:BA:2589:A:C5	27:BA:2590:A:C8	2.93	0.54
27:BA:2610:C:O4'	27:BA:2610:C:OP2	2.25	0.54
27:BA:2735:G:N1	27:BA:2770:G:N2	2.53	0.54
29:BE:242:ASN:HD22	29:BE:242:ASN:N	2.03	0.54
27:BA:2620:C:C4'	29:BE:252:GLN:HG2	2.38	0.54
29:BE:269:ILE:HA	29:BE:297:LYS:CE	2.37	0.54
29:BE:71:THR:CG2	29:BE:299:SER:OG	2.31	0.54
29:BE:44:TYR:HA	29:BE:307:LEU:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2770:G:H1'	29:BE:316:ARG:NH1	2.22	0.54
30:BF:81:PRO:O	30:BF:82:GLN:CG	2.55	0.54
27:BA:590:A:H5''	30:BF:97:ASP:HB2	1.89	0.54
31:BG:19:GLU:HB2	31:BG:135:VAL:HG11	1.88	0.54
31:BG:25:MET:SD	31:BG:129:ASP:CB	2.91	0.54
32:BH:126:SER:O	32:BH:127:GLN:C	2.45	0.54
32:BH:15:THR:O	32:BH:25:VAL:HA	2.08	0.54
32:BH:34:ARG:HD2	32:BH:36:PHE:HZ	1.69	0.54
44:BR:64:ARG:HG2	44:BR:65:LEU:N	2.22	0.54
27:BA:994:C:C4'	45:BU:54:LYS:HE2	2.35	0.54
45:BU:69:ALA:HA	45:BU:79:PHE:CE2	2.41	0.54
27:BA:1152:C:C5'	45:BU:80:ILE:CG2	2.77	0.54
27:BA:1163:G:C5'	46:BV:23:GLU:OE1	2.44	0.54
40:BW:50:VAL:CG1	40:BW:50:VAL:O	2.54	0.54
33:BI:122:ARG:C	33:BI:124:LEU:H	2.11	0.54
27:BA:1790:C:OP1	28:BD:224:VAL:HA	2.08	0.54
28:BD:209:ASN:O	28:BD:210:LYS:C	2.45	0.54
27:BA:1545:A:H5'	27:BA:545(A):A:P	2.46	0.54
27:BA:545(A):A:H3'	27:BA:1546:C:P	2.47	0.54
40:BW:88:ARG:C	40:BW:91:GLY:H	2.10	0.54
7:AD:22:LYS:HG3	7:AD:115:ARG:HH22	1.73	0.54
1:AA:501:C:H3'	1:AA:501:C:C6	2.42	0.54
1:AA:20:U:C4	1:AA:916:G:C2	2.96	0.54
1:AA:1240:U:P	10:AG:116:ALA:H	2.30	0.54
1:AA:523:A:H2	15:AL:91:LYS:HB3	1.73	0.54
15:AL:37:CYS:HA	15:AL:57:LYS:O	2.07	0.54
1:AA:62:U:C5'	1:AA:385:C:O2'	2.56	0.54
49:B0:86:THR:O	49:B0:87:GLU:C	2.45	0.54
13:AJ:6:ILE:HG22	13:AJ:98:ILE:HG12	1.88	0.54
53:B7:30:ILE:N	53:B7:33:ARG:HG3	2.22	0.54
27:BA:2094:G:N1	27:BA:2196:C:C4	2.66	0.54
27:BA:2246:G:N3	27:BA:2247:A:N7	2.56	0.54
27:BA:2281:C:OP2	27:BA:2281:C:H6	1.90	0.54
27:BA:2289:G:N2	27:BA:2290:G:C4	2.76	0.54
27:BA:2414:G:H2'	27:BA:2415:G:C8	2.42	0.54
27:BA:2479:G:C6	27:BA:2480:C:N3	2.75	0.54
27:BA:2495:G:O2'	37:BQ:101:MET:HE2	1.92	0.54
27:BA:2693:A:C2	27:BA:2694:G:C8	2.95	0.54
27:BA:2716:U:C2	27:BA:2717:G:C8	2.96	0.54
27:BA:2745:C:O2'	32:BH:142:GLU:N	2.39	0.54
27:BA:2735:G:O6	27:BA:2770:G:N2	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2853:C:O2'	27:BA:2854:G:H5'	2.08	0.54
27:BA:2862:G:HO2'	27:BA:2863:C:C1'	2.21	0.54
27:BA:781:A:H5'	27:BA:782:A:H8	1.73	0.54
28:BD:174:ARG:HD3	28:BD:180:VAL:HG22	1.88	0.54
30:BF:144:PHE:C	30:BF:146:ASP:N	2.45	0.54
30:BF:200:PRO:CB	30:BF:205:ARG:HD3	2.37	0.54
30:BF:238:SER:HA	30:BF:241:ALA:HB2	1.89	0.54
32:BH:115:GLU:O	32:BH:115:GLU:OE1	2.25	0.54
32:BH:122:ILE:C	32:BH:123:GLU:OE2	2.46	0.54
35:BO:66:LYS:H	35:BO:82:ASN:HD22	1.54	0.54
35:BO:60:ALA:HB1	35:BO:85:VAL:O	2.07	0.54
37:BQ:129:ASP:CG	37:BQ:132:VAL:CG2	2.75	0.54
37:BQ:33:MET:HE2	37:BQ:74:ASN:O	2.05	0.54
44:BR:104:ARG:CA	44:BR:105:ARG:NH2	2.43	0.54
44:BR:72:ASP:C	44:BR:76:VAL:HG21	2.28	0.54
38:BS:63:SER:O	38:BS:68:GLU:HA	2.07	0.54
38:BS:92:ALA:C	38:BS:94:GLU:H	2.10	0.54
45:BU:28:ARG:CA	45:BU:31:GLN:CB	2.69	0.54
46:BV:19:VAL:CG1	46:BV:21:ARG:HH22	2.14	0.54
42:BY:103:LEU:HD11	42:BY:113:GLU:CB	2.36	0.54
43:BZ:66:VAL:HG23	43:BZ:68:ALA:O	2.07	0.54
27:BA:110:G:C2	27:BA:111:A:C5	2.95	0.54
5:AB:145:LEU:O	5:AB:149:LEU:CB	2.47	0.54
1:AA:1310:G:N7	22:AS:2:PRO:HD3	2.22	0.54
27:BA:1906:G:C1'	27:BA:1929:G:C8	2.91	0.54
1:AA:1237:C:OP1	1:AA:1303:C:O2'	2.14	0.54
1:AA:1298:C:OP2	10:AG:114:ARG:NH1	2.40	0.54
27:BA:1472:A:C2'	27:BA:1473:G:C8	2.86	0.54
20:AQ:67:LYS:HA	20:AQ:70:ARG:NH2	2.22	0.54
19:AP:8:ARG:NH1	19:AP:11:SER:O	2.33	0.54
1:AA:598:U:H4'	11:AH:94:TYR:HB3	1.89	0.54
1:AA:160:A:H2'	1:AA:161:A:O4'	2.07	0.54
9:AF:76:ALA:HB1	9:AF:80:ARG:HH21	1.71	0.54
18:AO:82:ILE:O	18:AO:86:GLY:N	2.34	0.54
14:AK:72:ALA:O	14:AK:77:MET:HB2	2.07	0.54
1:AA:749:C:H2'	1:AA:749:C:O2	2.07	0.54
27:BA:2081:C:C4'	50:B4:35:VAL:HG21	2.36	0.54
50:B4:41:PRO:CB	50:B4:57:ASP:CG	2.73	0.54
52:B6:42:PRO:HD3	52:B6:50:PHE:CZ	2.42	0.54
54:B8:9:MET:HA	54:B8:12:ARG:HG2	1.89	0.54
54:B8:54:GLU:O	54:B8:55:TRP:O	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:242:G:C3'	54:B8:5:LYS:NZ	2.48	0.54
27:BA:1163:G:O2'	27:BA:1164:G:H5'	2.07	0.54
27:BA:1610:A:OP1	27:BA:1611:C:H5	1.90	0.54
27:BA:2292:C:N4	27:BA:2340:G:H1	2.04	0.54
27:BA:2471:C:C2	27:BA:2479:G:N2	2.65	0.54
27:BA:2510:C:N4	27:BA:2511:U:O4	2.41	0.54
27:BA:2570:G:C3'	27:BA:2571:C:H6	2.18	0.54
27:BA:2623:G:C2	27:BA:2624:G:C4	2.94	0.54
27:BA:2736:G:N1	27:BA:2769:C:C4	2.75	0.54
27:BA:2799:A:O5'	27:BA:2801:A:OP2	2.25	0.54
27:BA:2854:G:N1	27:BA:2864:G:C5	2.72	0.54
27:BA:683:C:N4	27:BA:684:G:O6	2.39	0.54
29:BE:311:PHE:C	29:BE:312:ARG:HG3	2.27	0.54
31:BG:56:ARG:C	31:BG:63:ILE:HG13	2.28	0.54
32:BH:130:ILE:N	32:BH:130:ILE:CD1	2.59	0.54
32:BH:90:GLY:CA	32:BH:159:LYS:CE	2.85	0.54
33:BI:7:LYS:HB2	33:BI:12:LYS:HD3	1.77	0.54
33:BI:40:THR:O	33:BI:41:PRO:C	2.45	0.54
34:BN:21:ARG:CA	34:BN:24:SER:CB	2.84	0.54
34:BN:15:ARG:CG	34:BN:43:ARG:CB	2.85	0.54
36:BP:115:ARG:O	36:BP:117:GLU:N	2.40	0.54
36:BP:96:VAL:HG23	36:BP:101:ASP:N	2.21	0.54
44:BR:84:ALA:O	44:BR:87:TYR:HB2	2.07	0.54
38:BS:110:THR:O	38:BS:116:PHE:CD1	2.61	0.54
45:BU:78:THR:OG1	45:BU:79:PHE:N	2.39	0.54
45:BU:7:GLY:CA	45:BU:8:ILE:CD1	2.79	0.54
46:BV:50:ASP:CB	46:BV:53:LYS:H	2.20	0.54
40:BW:25:ARG:CG	40:BW:26:GLY:N	2.71	0.54
42:BY:31:LEU:HB3	42:BY:113:GLU:CD	2.27	0.54
42:BY:55:PHE:CZ	42:BY:89:ARG:NE	2.63	0.54
42:BY:70:ALA:O	42:BY:71:VAL:CG2	2.54	0.54
42:BY:47:THR:O	42:BY:98:VAL:HA	2.06	0.54
47:B2:27:LEU:O	47:B2:28:LEU:C	2.45	0.54
41:BX:23:LYS:O	41:BX:68:LEU:HD22	2.05	0.54
7:AD:23:GLY:N	7:AD:113:SER:CB	2.70	0.54
7:AD:23:GLY:HA2	7:AD:113:SER:N	2.22	0.54
13:AJ:64:GLU:CG	17:AN:59:ALA:HA	2.32	0.54
1:AA:397:A:C5	1:AA:548:G:N7	2.75	0.54
42:BY:83:ASP:N	42:BY:83:ASP:OD1	2.40	0.54
27:BA:1055:G:H21	27:BA:1084:A:H2	1.54	0.54
27:BA:1324:G:H1'	27:BA:1616:A:H62	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:270:A:C6	27:BA:370:G:H1'	2.42	0.54
27:BA:715:G:H8	27:BA:715:G:H5'	1.72	0.54
8:AE:7:GLU:HB3	8:AE:112:LEU:HD11	1.88	0.54
27:BA:286:C:H2'	27:BA:287:C:C5'	2.37	0.54
23:AT:41:VAL:O	23:AT:45:GLN:HB2	2.07	0.54
11:AH:111:ILE:HG22	11:AH:134:ILE:HD12	1.89	0.54
5:AB:96:ARG:H	5:AB:96:ARG:HD2	1.72	0.54
27:BA:1257:C:O2'	30:BF:83:ALA:HB1	2.08	0.54
1:AA:1127:G:H2'	1:AA:1128:C:C6	2.42	0.54
1:AA:1054:C:H1'	1:AA:1196:U:C5	2.41	0.54
51:B5:34:PRO:HG3	51:B5:36:CYS:SG	2.41	0.54
50:B4:23:GLU:O	50:B4:26:SER:O	2.25	0.54
52:B6:28:ARG:HB2	52:B6:28:ARG:HH11	1.66	0.54
54:B8:54:GLU:O	54:B8:55:TRP:C	2.43	0.54
55:B9:18:ARG:HA	55:B9:22:ARG:O	2.07	0.54
27:BA:1264:G:O6	27:BA:1265:A:N6	2.40	0.54
27:BA:2022:U:O4	51:B5:9:LYS:HD3	2.07	0.54
27:BA:2299:G:C6	27:BA:2300:G:O6	2.61	0.54
27:BA:2414:G:C4	27:BA:2415:G:H8	2.18	0.54
27:BA:2575:C:C5'	27:BA:2576:G:OP2	2.52	0.54
27:BA:2725:A:N1	27:BA:2727:G:H1'	2.22	0.54
27:BA:2737:G:C2	27:BA:2738:A:C8	2.95	0.54
27:BA:2839:G:H21	27:BA:2840:C:H1'	1.73	0.54
27:BA:535:C:O3'	45:BU:53:LYS:CE	2.49	0.54
27:BA:650:C:C5'	54:B8:19:THR:CG2	2.82	0.54
29:BE:296:VAL:HG12	29:BE:297:LYS:N	2.22	0.54
30:BF:37:ALA:CB	30:BF:102:LEU:CG	2.86	0.54
30:BF:150:THR:CG2	30:BF:207:LEU:HD21	2.38	0.54
30:BF:163:HIS:CD2	30:BF:166:ILE:HD11	2.41	0.54
30:BF:140:VAL:HB	30:BF:235:PHE:C	2.27	0.54
32:BH:143:LEU:CG	32:BH:144:ALA:N	2.70	0.54
34:BN:136:SER:CA	34:BN:139:LEU:HD22	2.38	0.54
36:BP:65:ASP:OD1	36:BP:68:GLU:OE1	2.26	0.54
44:BR:59:ASP:N	44:BR:80:PHE:HE2	2.04	0.54
39:BT:6:CYS:O	39:BT:7:ASP:OD2	2.25	0.54
45:BU:110:VAL:C	45:BU:113:SER:HG	2.07	0.54
45:BU:41:ASN:CG	45:BU:42:ALA:H	2.07	0.54
45:BU:92:ARG:O	45:BU:95:LEU:CD1	2.52	0.54
46:BV:74:TYR:CE1	46:BV:86:HIS:C	2.80	0.54
43:BZ:67:LYS:HD2	43:BZ:93:GLU:OE2	2.02	0.54
27:BA:107:C:H4'	27:BA:293:U:C2	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:295:G:OP1	27:BA:338:G:C2	2.60	0.54
42:BY:51:LEU:CD2	42:BY:95:ASN:CB	2.86	0.54
42:BY:51:LEU:N	42:BY:51:LEU:CD1	2.61	0.54
27:BA:328:U:O2'	42:BY:94:SER:HB2	2.06	0.54
27:BA:1790:C:N4	27:BA:1828:G:H2'	2.22	0.54
41:BX:22:ASN:C	41:BX:68:LEU:HD11	2.27	0.54
1:AA:1118:C:H1'	1:AA:1179:A:N9	2.23	0.54
1:AA:695:A:H2'	1:AA:696:A:C8	2.42	0.54
1:AA:760:G:N2	20:AQ:94:ASN:OD1	2.41	0.54
1:AA:971:G:O2'	1:AA:1365:G:O2'	2.06	0.54
5:AB:103:THR:O	5:AB:104:ASN:CB	2.54	0.54
1:AA:315:A:H1'	1:AA:353:A:C2	2.42	0.54
8:AE:15:ARG:HG2	8:AE:28:PHE:CD2	2.43	0.54
5:AB:18:GLY:HA3	5:AB:41:ILE:HA	1.90	0.54
27:BA:582:G:H1	27:BA:1258:C:H42	1.55	0.54
27:BA:1632:A:H8	27:BA:1632:A:O5'	1.90	0.54
3:AW:72:C:H2'	3:AW:73:A:C8	2.43	0.54
49:B0:30:VAL:HG23	49:B0:62:LEU:HB3	1.90	0.54
49:B0:30:VAL:O	49:B0:31:VAL:CG2	2.55	0.54
54:B8:36:LYS:HE2	54:B8:40:GLU:CD	2.27	0.54
55:B9:7:VAL:HG13	55:B9:34:GLN:HG3	1.75	0.54
27:BA:2100:G:C5	27:BA:2190:G:C2	2.95	0.54
27:BA:2299:G:C4	27:BA:2300:G:N7	2.76	0.54
27:BA:2393:A:C4'	54:B8:13:ARG:NH2	2.68	0.54
27:BA:2436:G:C6	27:BA:2437:U:N3	2.76	0.54
27:BA:2067:G:C2	27:BA:2444:G:C4	2.96	0.54
27:BA:2468:G:O6	27:BA:2481:G:O6	2.19	0.54
27:BA:2475:C:O2	27:BA:2529:G:C2	2.60	0.54
27:BA:2544:G:H2'	27:BA:2545:G:H5'	1.85	0.54
27:BA:2641:G:N1	27:BA:2774:C:C4	2.76	0.54
27:BA:2759:G:H2'	27:BA:2760:C:C5'	2.38	0.54
30:BF:201:SER:CB	30:BF:204:ALA:HB3	2.38	0.54
34:BN:93:ARG:O	34:BN:94:GLY:O	2.25	0.54
36:BP:132:LYS:O	36:BP:135:GLY:CA	2.55	0.54
36:BP:92:ASP:HB3	36:BP:118:LEU:CG	2.34	0.54
37:BQ:66:ASN:O	37:BQ:69:ASN:N	2.40	0.54
44:BR:55:ALA:HB1	44:BR:79:LEU:HD21	1.86	0.54
44:BR:77:ARG:C	44:BR:81:ASP:OD1	2.45	0.54
38:BS:76:GLY:C	38:BS:80:SER:O	2.45	0.54
27:BA:1251:C:O5'	45:BU:10:ARG:HG3	2.07	0.54
45:BU:14:HIS:CG	45:BU:36:PHE:CZ	2.94	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:41:ASN:O	45:BU:43:ALA:N	2.40	0.54
45:BU:74:MET:HE2	45:BU:78:THR:CB	2.35	0.54
45:BU:70:ARG:HA	45:BU:74:MET:O	2.08	0.54
46:BV:40:VAL:CA	46:BV:51:ALA:CA	2.84	0.54
46:BV:72:ARG:O	46:BV:88:GLN:N	2.40	0.54
43:BZ:124:ALA:H	43:BZ:159:THR:CG2	2.18	0.54
43:BZ:91:PRO:N	43:BZ:127:PRO:HB3	2.22	0.54
43:BZ:140:LYS:N	43:BZ:141:MET:SD	2.80	0.54
43:BZ:52:PHE:O	43:BZ:53:ASP:CB	2.53	0.54
1:AA:975:A:N6	1:AA:1367:C:O4'	2.41	0.54
1:AA:976:G:OP2	1:AA:1358:U:H4'	2.06	0.54
27:BA:1792:G:OP1	28:BD:204:PHE:CE1	2.61	0.54
47:B2:3:LEU:HD22	47:B2:8:ILE:CD1	2.38	0.54
7:AD:78:LEU:CD2	7:AD:139:ARG:HH21	2.17	0.54
2:AV:9:A:C2	2:AV:45:G:N3	2.76	0.54
27:BA:1511:A:H2'	27:BA:1512:G:O4'	2.07	0.54
1:AA:668:G:C5'	18:AO:48:LYS:O	2.56	0.54
6:AC:150:LYS:HE3	6:AC:167:TRP:HE1	1.71	0.54
56:BK:19:THR:N	56:BK:20:PRO:CD	2.68	0.54
1:AA:741:G:H5'	18:AO:39:LEU:HD11	1.90	0.54
16:AM:14:ARG:HA	16:AM:44:ARG:HA	1.89	0.54
39:BT:20:MET:CB	39:BT:30:HIS:HA	2.37	0.54
14:AK:57:THR:HG23	14:AK:60:ALA:H	1.73	0.54
19:AP:4:ILE:HG12	19:AP:21:VAL:HG13	1.88	0.54
1:AA:325:A:H2'	1:AA:326:G:O4'	2.07	0.54
2:AV:56:C:C5	2:AV:57:G:C6	2.96	0.54
2:AV:56:C:H2'	31:BG:56:ARG:CZ	2.37	0.54
27:BA:2331:G:C4'	49:B0:70:ILE:CG1	2.22	0.54
27:BA:989:G:N7	48:B3:13:ILE:CD1	2.70	0.54
48:B3:38:GLU:O	48:B3:39:ASP:C	2.45	0.54
50:B4:39:VAL:O	50:B4:39:VAL:CG1	2.55	0.54
27:BA:1024:G:N7	27:BA:1025:G:N7	2.55	0.54
27:BA:142(A):A:C3'	34:BN:21:ARG:NH2	2.71	0.54
27:BA:1140:C:H1'	27:BA:142(A):A:C6	2.43	0.54
27:BA:1673:U:C5	29:BE:225:LYS:HD3	2.41	0.54
27:BA:2330:G:C3'	27:BA:2331:G:H5'	2.38	0.54
27:BA:2386:C:O2'	27:BA:2387:U:O5'	2.26	0.54
27:BA:2458:G:C5	27:BA:2490:G:N3	2.74	0.54
27:BA:2484:G:N3	27:BA:2485:G:O4'	2.41	0.54
27:BA:2529:G:H5''	27:BA:2530:A:H5''	1.88	0.54
27:BA:2543:G:C1'	27:BA:2544:G:C8	2.91	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2654:A:O5'	27:BA:2654:A:H8	1.90	0.54
27:BA:2694:G:C6	27:BA:2695:C:C4	2.96	0.54
27:BA:2705:A:N6	27:BA:2706:G:N1	2.55	0.54
27:BA:2734:A:C5'	27:BA:2735:G:OP2	2.55	0.54
27:BA:2871:C:H2'	27:BA:2871:C:O2	2.08	0.54
27:BA:2889:C:H2'	27:BA:2891:G:O4'	2.07	0.54
27:BA:669:G:C4	27:BA:801:G:C6	2.96	0.54
27:BA:814:C:OP1	46:BV:84:THR:HA	2.06	0.54
28:BD:154:VAL:HA	28:BD:157:ALA:HB3	1.89	0.54
29:BE:181:VAL:CG1	29:BE:181:VAL:O	2.55	0.54
29:BE:42:ALA:N	29:BE:189:MET:HE1	2.02	0.54
30:BF:106:GLU:O	30:BF:107:ARG:C	2.44	0.54
30:BF:157:LEU:HB2	30:BF:158:GLU:OE1	2.06	0.54
27:BA:675:A:H5'	30:BF:69:HIS:C	2.28	0.54
32:BH:101:LYS:NZ	32:BH:115:GLU:HG3	2.20	0.54
32:BH:40:MET:HA	32:BH:54:PRO:CB	2.37	0.54
33:BI:2:LYS:CD	33:BI:39:ALA:CB	2.82	0.54
34:BN:12:VAL:HB	34:BN:38:VAL:HG21	1.87	0.54
34:BN:15:ARG:CG	34:BN:43:ARG:HB3	2.30	0.54
34:BN:52:GLN:HA	34:BN:55:GLU:OE2	1.97	0.54
34:BN:80:LYS:C	34:BN:84:ARG:HG3	2.25	0.54
35:BO:90:ASP:O	35:BO:92:SER:HB3	2.08	0.54
27:BA:2251:G:OP1	37:BQ:102:ARG:NH2	2.41	0.54
37:BQ:92:VAL:HG12	37:BQ:110:GLY:C	2.26	0.54
44:BR:74:LYS:N	44:BR:77:ARG:NH2	2.55	0.54
39:BT:5:GLU:O	39:BT:8:TYR:C	2.45	0.54
27:BA:487:C:O2	40:BW:53:SER:OG	2.26	0.54
43:BZ:106:GLY:N	43:BZ:142:ASN:ND2	2.42	0.54
33:BI:102:LEU:HD11	33:BI:103:GLN:HG3	1.88	0.54
42:BY:47:THR:HG22	42:BY:100:ASP:O	2.07	0.54
42:BY:46:ASP:OD1	42:BY:98:VAL:HG13	2.07	0.54
42:BY:50:VAL:CG1	42:BY:51:LEU:N	2.33	0.54
47:B2:2:VAL:N	47:B2:4:HIS:HE1	1.82	0.54
1:AA:1236:A:OP1	24:AU:2:GLY:N	2.41	0.54
1:AA:408:A:C5'	7:AD:22:LYS:O	2.50	0.54
1:AA:60:A:N3	1:AA:107:G:N2	2.53	0.54
1:AA:110:C:O2'	19:AP:25:ARG:HA	2.07	0.54
1:AA:1354:C:H2'	1:AA:1355:G:C8	2.43	0.54
32:BH:108:TYR:O	32:BH:109:SER:CB	2.47	0.54
5:AB:164:VAL:HG21	5:AB:170:GLU:HB3	1.89	0.54
1:AA:1240:U:N3	10:AG:30:ILE:CG2	2.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AG:71:PRO:HA	10:AG:138:LYS:HE3	1.90	0.54
7:AD:101:LEU:HD13	7:AD:138:TYR:HD2	1.72	0.54
1:AA:160:A:N1	1:AA:343:U:H1'	2.22	0.54
1:AA:1263:C:H42	1:AA:1272:G:H1	1.55	0.54
6:AC:188:LEU:HD12	6:AC:190:ARG:HG3	1.89	0.54
49:B0:64:ASP:C	49:B0:66:LYS:NZ	2.61	0.54
48:B3:8:LEU:HD23	48:B3:31:LEU:CG	2.38	0.54
27:BA:396:G:H5''	50:B4:10:VAL:HG13	1.90	0.54
50:B4:23:GLU:HA	50:B4:27:THR:O	2.07	0.54
27:BA:2079:U:O3'	50:B4:32:HIS:HD2	1.90	0.54
50:B4:6:HIS:CE1	50:B4:55:ARG:CB	2.91	0.54
27:BA:1612:C:N1	53:B7:3:ARG:CZ	2.71	0.54
54:B8:16:ILE:N	54:B8:16:ILE:CD1	2.64	0.54
27:BA:1138:G:P	34:BN:57:TYR:CZ	3.00	0.54
27:BA:1677:A:H2'	27:BA:1678:G:C8	2.43	0.54
27:BA:2054:A:C2	27:BA:2616:C:N3	2.76	0.54
27:BA:2208:U:C2	27:BA:2217:G:C2	2.95	0.54
27:BA:2320:A:N6	38:BS:14:ARG:CB	2.71	0.54
27:BA:2421:G:C5'	52:B6:4:ASP:CG	2.71	0.54
27:BA:2466:C:C4	27:BA:2467:C:N4	2.75	0.54
27:BA:2607:G:C2'	27:BA:2608:G:C5'	2.73	0.54
27:BA:2698:U:N3	27:BA:2699:C:H5	1.88	0.54
28:BD:140:VAL:HA	28:BD:191:VAL:HA	1.89	0.54
29:BE:300:VAL:N	29:BE:301:PRO:CD	2.70	0.54
29:BE:44:TYR:CE1	29:BE:308:VAL:HG13	2.36	0.54
29:BE:44:TYR:HE1	29:BE:308:VAL:CG1	2.18	0.54
31:BG:97:GLN:CB	31:BG:106:PHE:CZ	2.88	0.54
32:BH:121:GLU:CG	32:BH:133:LYS:O	2.54	0.54
33:BI:6:LEU:HB2	33:BI:36:ALA:CA	2.36	0.54
34:BN:45:VAL:CA	34:BN:132:LEU:HB2	2.28	0.54
34:BN:25:GLN:HG2	34:BN:28:GLU:HG3	1.90	0.54
34:BN:25:GLN:O	34:BN:27:ALA:N	2.40	0.54
27:BA:2250:G:C5'	37:BQ:102:ARG:HB3	2.35	0.54
45:BU:23:GLY:O	45:BU:24:PHE:O	2.25	0.54
40:BW:75:TYR:HE1	40:BW:104:THR:HG1	1.33	0.54
40:BW:68:ARG:O	40:BW:110:LYS:CB	2.54	0.54
43:BZ:40:ASP:CB	43:BZ:41:ARG:NH2	2.70	0.54
1:AA:986:A:N3	22:AS:52:TYR:CE2	2.73	0.54
27:BA:1789:A:O3'	28:BD:224:VAL:CG1	2.51	0.54
27:BA:67:U:H2'	27:BA:68:G:H8	1.73	0.54
41:BX:19:ASP:OD1	41:BX:20:PHE:CG	2.57	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:28:VAL:C	41:BX:30:ASP:N	2.60	0.54
27:BA:72:U:O5'	41:BX:2:TRP:CZ2	2.60	0.54
31:BG:81:GLU:C	31:BG:85:GLN:HG2	2.15	0.54
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.08	0.54
32:BH:168:VAL:O	32:BH:169:ARG:CD	2.54	0.54
1:AA:563:A:C5	1:AA:567:G:H1'	2.43	0.54
26:BB:100:G:N2	27:BA:863:A:H4'	2.22	0.54
27:BA:227:A:N1	27:BA:2407:G:C1'	2.64	0.54
1:AA:1377:A:OP1	10:AG:94:ARG:NE	2.41	0.54
1:AA:686:U:H1'	14:AK:42:TRP:NE1	2.23	0.54
1:AA:1115:C:H1'	17:AN:61:TRP:O	2.08	0.54
48:B3:21:ALA:C	48:B3:23:LEU:N	2.61	0.54
48:B3:8:LEU:HD23	48:B3:31:LEU:CB	2.34	0.54
54:B8:7:HIS:C	54:B8:10:ALA:HB3	2.21	0.54
27:BA:125:G:H5''	53:B7:19:ARG:CZ	2.33	0.54
27:BA:1646:C:C5'	27:BA:1647:G:H5'	2.32	0.54
27:BA:2252:G:C5	27:BA:2253:G:N7	2.76	0.54
27:BA:2308:G:C5'	27:BA:2309:A:OP1	2.55	0.54
27:BA:2373:G:C4	27:BA:2374:C:C4	2.96	0.54
27:BA:2419:U:H5''	52:B6:24:THR:HG22	1.89	0.54
27:BA:2419:U:OP1	52:B6:24:THR:HG21	2.08	0.54
27:BA:2495:G:H4'	37:BQ:101:MET:HB3	1.85	0.54
27:BA:2697:G:C4	27:BA:2698:U:C6	2.96	0.54
27:BA:2741:A:N3	27:BA:2742:C:C1'	2.71	0.54
27:BA:2793:G:C2	27:BA:2794:C:N3	2.76	0.54
27:BA:2821:A:H2'	27:BA:2822:G:N9	2.22	0.54
27:BA:2842:G:H2'	27:BA:2843:G:O4'	2.07	0.54
27:BA:2899:G:O2'	27:BA:2900:A:H8	1.90	0.54
27:BA:684:G:O2'	27:BA:788:A:N6	2.41	0.54
27:BA:775:G:H4'	27:BA:777:A:C4	2.43	0.54
27:BA:851:U:O2'	48:B3:45:GLY:HA3	2.08	0.54
28:BD:77:VAL:CG2	28:BD:113:MET:HA	2.26	0.54
29:BE:39:GLN:OE1	29:BE:174:LEU:HD11	1.96	0.54
29:BE:79:ARG:HA	29:BE:186:GLU:N	2.23	0.54
29:BE:71:THR:HG23	29:BE:299:SER:CA	2.33	0.54
29:BE:47:GLY:HA3	29:BE:305:LYS:HE2	1.89	0.54
30:BF:220:THR:HA	30:BF:224:ALA:CB	2.30	0.54
27:BA:2310:A:C4	31:BG:55:LYS:HD3	2.42	0.54
32:BH:85:ALA:C	32:BH:131:ILE:HG22	2.26	0.54
34:BN:94:GLY:O	34:BN:97:ALA:CA	2.54	0.54
37:BQ:136:TRP:HE3	37:BQ:139:ALA:HB2	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:58:HIS:C	37:BQ:59:ASN:HD22	2.10	0.54
37:BQ:64:ALA:HB2	37:BQ:142:LYS:HD3	1.90	0.54
38:BS:106:LEU:O	38:BS:107:ASN:C	2.45	0.54
38:BS:18:THR:OG1	38:BS:19:ASP:N	2.40	0.54
45:BU:115:ASN:ND2	45:BU:115:ASN:N	2.52	0.54
45:BU:14:HIS:CD2	45:BU:36:PHE:HE2	2.25	0.54
1:AA:958:A:C8	22:AS:55:LYS:HD2	2.41	0.54
1:AA:1317:C:C2'	22:AS:10:PHE:CE2	2.91	0.54
1:AA:409:G:OP2	7:AD:22:LYS:HE2	2.08	0.54
27:BA:1079:C:C2'	56:BK:130:GLY:CA	2.86	0.54
1:AA:315:A:H1'	1:AA:353:A:N1	2.23	0.54
1:AA:621:A:H2'	1:AA:622:A:C8	2.43	0.54
6:AC:178:LEU:O	6:AC:179:ARG:CB	2.55	0.54
49:B0:39:ARG:O	49:B0:40:GLN:C	2.45	0.54
50:B4:28:ARG:HB3	50:B4:29:PRO:HD2	1.90	0.54
50:B4:59:PHE:HA	50:B4:62:ARG:HD2	1.90	0.54
54:B8:50:LEU:CG	54:B8:51:ALA:H	2.06	0.54
27:BA:1024:G:C5'	27:BA:1025:G:H5''	2.36	0.54
27:BA:1262:A:P	40:BW:99:ARG:HH22	2.24	0.54
27:BA:199:A:C6	27:BA:2434:A:N1	2.76	0.54
27:BA:27:G:N2	27:BA:512:G:H2'	2.23	0.54
27:BA:617:G:H2'	27:BA:618:G:C8	2.43	0.54
27:BA:780:G:H2'	27:BA:782:A:N7	2.22	0.54
28:BD:141:HIS:ND1	28:BD:141:HIS:N	2.56	0.54
27:BA:1819:A:C2'	28:BD:177:SER:OG	2.54	0.54
28:BD:68:ARG:NH2	28:BD:190:THR:CG2	2.71	0.54
30:BF:243:VAL:CA	30:BF:246:ARG:CG	2.83	0.54
30:BF:58:ALA:CB	30:BF:79:ARG:CB	2.86	0.54
35:BO:34:ASN:C	35:BO:35:ILE:O	2.41	0.54
46:BV:5:ILE:CD1	46:BV:12:TYR:OH	2.56	0.54
46:BV:93:ILE:C	46:BV:95:ILE:CD1	2.77	0.54
40:BW:20:VAL:CG1	40:BW:47:VAL:CG2	2.29	0.54
33:BI:133:LEU:N	33:BI:138:THR:CG2	2.68	0.54
27:BA:337:C:P	42:BY:24:ARG:CB	2.93	0.54
42:BY:11:GLN:CB	42:BY:21:LYS:HE3	2.38	0.54
43:BZ:48:THR:CG2	43:BZ:48:THR:O	2.49	0.54
1:AA:1059:C:O2'	13:AJ:52:GLY:HA2	2.07	0.54
27:BA:444(A):A:H3'	27:BA:1460:A:H1'	1.90	0.54
1:AA:1315:U:H3	1:AA:1319:A:H62	1.54	0.54
1:AA:1289:A:H1'	1:AA:1371:G:H21	1.73	0.54
1:AA:121:C:H41	1:AA:235:C:H3'	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1406:U:H1'	1:AA:1518:A:O4'	2.08	0.54
1:AA:65:U:N3	1:AA:200:G:H1'	2.21	0.54
1:AA:405:U:O4	7:AD:2:GLY:HA3	2.08	0.54
27:BA:817:C:H2'	27:BA:818:G:O4'	2.08	0.54
1:AA:263:A:H2'	1:AA:264:U:H5'	1.90	0.54
26:BB:40:U:C3'	26:BB:41:U:H5'	2.34	0.54
1:AA:1205:U:H4'	6:AC:195:VAL:HG21	1.90	0.54
27:BA:2183:C:H2'	27:BA:2184:G:C8	2.40	0.54
1:AA:1306:A:H61	1:AA:1331:G:H1'	1.73	0.54
15:AL:100:ILE:HD13	15:AL:100:ILE:H	1.72	0.54
6:AC:70:VAL:HG12	6:AC:72:LYS:H	1.73	0.54
14:AK:121:PRO:HB2	14:AK:125:PHE:HB2	1.89	0.54
27:BA:868:U:H3	27:BA:909:A:H61	1.55	0.54
49:B0:20:TYR:O	49:B0:21:LEU:C	2.46	0.54
49:B0:24:LYS:O	49:B0:25:LYS:CB	2.56	0.54
48:B3:20:LYS:HD2	48:B3:23:LEU:HD12	1.90	0.54
50:B4:68:ARG:NH1	50:B4:72:LYS:HD3	2.22	0.54
51:B5:13:LYS:O	51:B5:16:ARG:HB2	2.07	0.54
52:B6:45:LYS:C	52:B6:46:LYS:CE	2.65	0.54
27:BA:249:C:O2'	54:B8:8:LYS:CG	2.56	0.54
27:BA:142(A):A:H3'	27:BA:1143:A:H5'	1.90	0.54
27:BA:126:A:OP2	53:B7:17:GLY:HA3	2.08	0.54
27:BA:1671:U:O2'	29:BE:225:LYS:NZ	2.21	0.54
27:BA:2052:G:N2	29:BE:245:ARG:CD	2.69	0.54
27:BA:2185:C:N3	27:BA:2186:G:N7	2.56	0.54
27:BA:2195:C:H6	27:BA:2195:C:P	2.25	0.54
27:BA:2218:G:C4	27:BA:2219:G:N7	2.76	0.54
27:BA:2270:G:O6	27:BA:2271:G:N2	2.39	0.54
27:BA:2349:G:N3	27:BA:2369:A:C2	2.75	0.54
27:BA:2376:A:C2	27:BA:2377:A:C4	2.96	0.54
27:BA:2681:C:H5	27:BA:2727:G:C2	2.20	0.54
27:BA:2758:A:O2'	27:BA:2759:G:O5'	2.26	0.54
27:BA:2836:U:H2'	27:BA:2837:G:C8	2.42	0.54
27:BA:2881:C:H6	27:BA:2881:C:H3'	1.72	0.54
27:BA:30:G:H2'	27:BA:31:C:H6	1.71	0.54
27:BA:447:A:C5	27:BA:473:G:C5	2.96	0.54
27:BA:447:A:N7	27:BA:473:G:C6	2.76	0.54
26:BB:42:C:H1'	31:BG:47:GLN:CA	2.38	0.54
28:BD:90:ILE:CG2	28:BD:103:ILE:N	2.68	0.54
27:BA:2574:G:H1'	29:BE:240:PRO:CG	2.37	0.54
27:BA:2622:C:H5'	29:BE:255:GLN:OE1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2682:U:O4'	29:BE:48:MET:HG3	2.08	0.54
32:BH:147:ILE:HA	32:BH:150:VAL:HG21	1.86	0.54
32:BH:86:LEU:HD23	32:BH:148:ARG:NE	2.23	0.54
33:BI:7:LYS:CB	33:BI:12:LYS:HZ2	2.21	0.54
34:BN:47:THR:O	34:BN:53:ILE:CD1	2.56	0.54
34:BN:69:TYR:O	34:BN:71:TYR:HD1	1.90	0.54
35:BO:68:GLY:CA	35:BO:78:ARG:HG2	2.32	0.54
37:BQ:66:ASN:C	37:BQ:68:ALA:N	2.57	0.54
44:BR:101:ALA:HB1	51:B5:41:LEU:HD12	1.89	0.54
44:BR:116:LEU:O	44:BR:117:VAL:C	2.45	0.54
38:BS:34:LEU:HD12	38:BS:103:ASP:HB3	1.88	0.54
38:BS:31:LYS:CE	38:BS:99:GLU:CB	2.86	0.54
39:BT:50:GLU:HG3	39:BT:55:ALA:HB1	1.89	0.54
27:BA:994:C:O2'	45:BU:54:LYS:N	2.41	0.54
45:BU:66:ASN:O	45:BU:67:ALA:C	2.47	0.54
46:BV:75:LYS:CE	46:BV:75:LYS:HA	2.38	0.54
40:BW:25:ARG:O	40:BW:26:GLY:C	2.46	0.54
40:BW:39:THR:HA	51:B5:28:PRO:CG	2.28	0.54
40:BW:36:LEU:CD1	40:BW:47:VAL:CB	2.85	0.54
40:BW:49:LYS:O	40:BW:51:LEU:N	2.40	0.54
43:BZ:112:LEU:CD1	43:BZ:177:THR:HG21	2.38	0.54
27:BA:321:G:H2'	27:BA:341:G:H4'	1.89	0.54
27:BA:85:G:H1	27:BA:97:C:H42	1.54	0.54
42:BY:101:LEU:CB	42:BY:113:GLU:OE1	2.51	0.54
43:BZ:37:LYS:O	43:BZ:41:ARG:NE	2.40	0.54
41:BX:6:LYS:HZ2	41:BX:28:VAL:C	2.11	0.54
7:AD:27:TYR:OH	7:AD:106:TYR:OH	2.26	0.54
7:AD:30:LYS:C	7:AD:32:ALA:N	2.61	0.54
2:AV:31:A:OP1	12:AI:127:LYS:CG	2.55	0.54
1:AA:983:A:H5'	1:AA:984:C:OP2	2.07	0.54
1:AA:1305:G:H5''	24:AU:5:ASP:HB2	1.90	0.54
27:BA:1173:G:N2	27:BA:1175:U:H3'	2.22	0.54
27:BA:285:C:H42	27:BA:354:G:N2	2.05	0.54
27:BA:546:C:C5	27:BA:1221:C:OP1	2.61	0.54
12:AI:96:LEU:HG	12:AI:101:PHE:HB2	1.90	0.54
13:AJ:84:GLN:HA	13:AJ:88:LEU:HD12	1.91	0.54
1:AA:1504:G:P	1:AA:1504:G:H3'	2.48	0.54
3:AW:75:C:N4	50:B4:28:ARG:N	2.50	0.53
25:AY:223:ARG:CA	27:BA:2555:U:C2	2.92	0.53
49:B0:30:VAL:O	49:B0:31:VAL:HG23	2.08	0.53
53:B7:41:GLN:O	53:B7:42:LEU:CB	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:125:G:H5''	53:B7:19:ARG:CD	2.38	0.53
27:BA:1648:C:H2'	27:BA:1649:G:H8	1.72	0.53
27:BA:2248:C:C3'	27:BA:2249:U:H5'	2.38	0.53
27:BA:2252:G:C8	27:BA:2252:G:O5'	2.60	0.53
27:BA:2317:C:H5'	31:BG:150:SER:HB2	1.86	0.53
27:BA:2414:G:N1	27:BA:2415:G:N7	2.56	0.53
27:BA:2415:G:C4	27:BA:2416:C:C5	2.92	0.53
27:BA:2452:C:C4	27:BA:2453:A:C6	2.96	0.53
27:BA:2515:C:H41	27:BA:2569:G:H1	1.38	0.53
27:BA:2589:A:N6	27:BA:2590:A:N6	2.56	0.53
27:BA:2608:G:C3'	27:BA:2608:G:C8	2.91	0.53
27:BA:2051:A:N1	27:BA:2618:G:C6	2.68	0.53
27:BA:2666:C:H2'	27:BA:2667:C:C5'	2.38	0.53
27:BA:2687:U:H5''	27:BA:2688:U:OP2	2.07	0.53
27:BA:2785:C:N1	27:BA:2786:U:C5	2.76	0.53
27:BA:2898:U:N3	27:BA:2899:G:C8	2.76	0.53
27:BA:517:C:O2'	40:BW:18:ARG:NH2	2.38	0.53
27:BA:775:G:N2	27:BA:788:A:OP2	2.41	0.53
28:BD:89:ASN:H	28:BD:105:ALA:CB	2.20	0.53
28:BD:131:LEU:CB	28:BD:171:VAL:HG21	2.37	0.53
28:BD:60:GLN:N	28:BD:62:ARG:NH1	2.56	0.53
28:BD:82:TYR:C	28:BD:83:ASP:OD2	2.46	0.53
27:BA:1500:G:H21	28:BD:97:ASP:CG	2.11	0.53
29:BE:208:LYS:H	29:BE:257:GLY:CA	2.11	0.53
30:BF:33:LYS:O	30:BF:36:ARG:CG	2.57	0.53
36:BP:126:SER:O	36:BP:130:ARG:HG3	2.08	0.53
27:BA:2484:G:C1'	37:BQ:142:LYS:HZ2	2.16	0.53
37:BQ:86:ARG:NH2	37:BQ:123:ILE:CD1	2.71	0.53
44:BR:67:LEU:HD22	44:BR:67:LEU:C	2.28	0.53
38:BS:63:SER:O	38:BS:67:ALA:C	2.46	0.53
39:BT:10:GLY:HA3	39:BT:53:ASP:CG	2.28	0.53
45:BU:39:LEU:C	45:BU:41:ASN:ND2	2.61	0.53
40:BW:35:ILE:O	40:BW:39:THR:HG22	2.09	0.53
42:BY:80:GLU:HG2	42:BY:86:GLU:HA	1.89	0.53
27:BA:144:C:OP1	41:BX:36:GLU:OE2	2.26	0.53
1:AA:105:G:H2'	1:AA:106:C:C6	2.43	0.53
1:AA:1418:A:N7	1:AA:1419:G:H1'	2.23	0.53
27:BA:391:G:H2'	27:BA:392:C:C6	2.43	0.53
1:AA:345:C:H4'	1:AA:346:G:O5'	2.07	0.53
9:AF:97:PHE:HB2	21:AR:32:ARG:HH21	1.73	0.53
15:AL:42:THR:OG1	15:AL:52:LEU:HB3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B0:45:PHE:HD1	49:B0:78:PHE:HA	1.53	0.53
48:B3:11:SER:C	48:B3:13:ILE:H	2.09	0.53
48:B3:29:ARG:O	48:B3:30:ARG:O	2.25	0.53
48:B3:8:LEU:CB	48:B3:32:GLN:HA	2.35	0.53
27:BA:397:G:P	50:B4:10:VAL:HG11	2.49	0.53
53:B7:21:ARG:NH1	53:B7:43:THR:H	1.98	0.53
53:B7:43:THR:OG1	53:B7:44:VAL:HG23	2.08	0.53
27:BA:254:G:O6	54:B8:4:MET:HB3	2.08	0.53
27:BA:196:A:C2	27:BA:2068:U:C5	2.89	0.53
27:BA:199:A:N1	27:BA:2433:A:C5	2.74	0.53
27:BA:2053:G:H1'	29:BE:245:ARG:HG3	1.90	0.53
27:BA:196:A:N3	27:BA:2068:U:H5	2.05	0.53
27:BA:2084:C:N3	27:BA:2235:G:N1	2.51	0.53
27:BA:2205:C:H6	27:BA:2205:C:O5'	1.90	0.53
27:BA:2346:A:HO2'	27:BA:2347:C:P	2.22	0.53
27:BA:2350:C:C2	27:BA:2351:G:C8	2.96	0.53
27:BA:2411:A:H2'	27:BA:2412:A:C8	2.44	0.53
27:BA:2412:A:H2'	27:BA:2413:G:C5'	2.31	0.53
27:BA:2557:G:C4	27:BA:2558:C:H5	2.26	0.53
27:BA:2558:C:H2'	27:BA:2559:C:H5'	1.88	0.53
27:BA:2589:A:C3'	27:BA:2590:A:H5''	2.35	0.53
27:BA:2661:G:H2'	27:BA:2662:A:C8	2.43	0.53
27:BA:1665:A:N7	27:BA:2726:U:N3	2.55	0.53
27:BA:2736:G:O2'	27:BA:2737:G:H5'	2.08	0.53
27:BA:496:G:OP1	40:BW:62:HIS:HE1	1.90	0.53
27:BA:774:A:C1'	27:BA:775:G:C8	2.87	0.53
27:BA:947:G:H2'	27:BA:948:G:H8	1.73	0.53
27:BA:1819:A:P	28:BD:154:VAL:H	2.27	0.53
29:BE:180:ILE:CB	29:BE:183:ASP:OD2	2.54	0.53
29:BE:222:ARG:C	29:BE:227:ALA:HA	2.28	0.53
32:BH:119:GLY:C	32:BH:121:GLU:OE1	2.46	0.53
34:BN:65:ASN:HB2	34:BN:69:TYR:HD1	0.53	0.53
38:BS:116:PHE:CD2	38:BS:119:GLN:OE1	2.60	0.53
27:BA:2334:G:C5'	38:BS:12:ARG:O	2.56	0.53
38:BS:61:ALA:HB2	38:BS:84:THR:O	2.09	0.53
38:BS:80:SER:O	38:BS:81:ALA:O	2.26	0.53
38:BS:87:LEU:CD2	38:BS:87:LEU:N	2.65	0.53
45:BU:34:ASN:O	45:BU:38:THR:CB	2.55	0.53
45:BU:71:LEU:CD2	45:BU:71:LEU:C	2.77	0.53
46:BV:12:TYR:CD2	46:BV:13:ARG:N	2.70	0.53
46:BV:72:ARG:HG3	46:BV:88:GLN:HG3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:12:ILE:HG23	40:BW:13:SER:N	2.23	0.53
40:BW:29:LEU:C	40:BW:31:GLU:N	2.57	0.53
33:BI:123:ALA:O	33:BI:124:LEU:O	2.25	0.53
33:BI:68:LEU:HD11	33:BI:108:LEU:HD11	1.89	0.53
43:BZ:40:ASP:CG	43:BZ:41:ARG:NH1	2.61	0.53
43:BZ:63:PRO:O	43:BZ:64:ALA:HB2	2.08	0.53
1:AA:1317:C:C4	17:AN:16:PHE:CZ	2.97	0.53
27:BA:1790:C:C5'	27:BA:1828:G:H1	2.21	0.53
27:BA:76:C:H4'	47:B2:55:ARG:CD	2.38	0.53
7:AD:123:HIS:HB2	7:AD:125:HIS:NE2	2.23	0.53
1:AA:949:A:H4'	1:AA:1364:U:N3	2.23	0.53
1:AA:915:A:N7	1:AA:916:G:C8	2.76	0.53
56:BK:71:LYS:HA	56:BK:72:THR:CA	2.38	0.53
27:BA:1534:G:N3	27:BA:1534:G:H2'	2.23	0.53
56:BK:49:LYS:HE2	56:BK:73:PRO:HG3	1.90	0.53
27:BA:1473:G:H2'	27:BA:1474:C:O4'	2.08	0.53
16:AM:10:PRO:HG2	16:AM:18:ALA:HB1	1.90	0.53
2:AV:18:G:H2'	2:AV:19:G:O5'	2.08	0.53
49:B0:70:ILE:CG1	49:B0:71:ASN:H	2.17	0.53
48:B3:9:VAL:O	48:B3:53:LEU:O	2.27	0.53
50:B4:1:MET:C	50:B4:2:GLN:HG3	2.29	0.53
51:B5:50:GLY:CA	51:B5:57:VAL:HB	2.35	0.53
54:B8:36:LYS:HG2	54:B8:40:GLU:CD	2.27	0.53
27:BA:2012:G:OP1	40:BW:98:LYS:CD	2.53	0.53
27:BA:2019:A:N1	27:BA:2035:G:O6	2.41	0.53
27:BA:2077:A:C2	27:BA:2244:U:O2	2.62	0.53
27:BA:2243:U:O2	27:BA:2244:U:O4'	2.25	0.53
27:BA:2305:A:H1'	31:BG:129:ASP:HB2	1.89	0.53
27:BA:2450:A:H5''	27:BA:2497:A:C6	2.27	0.53
27:BA:2539:C:N3	27:BA:2540:C:H5	2.06	0.53
27:BA:2561:A:C4	27:BA:2562:U:H6	2.25	0.53
27:BA:2623:G:C2	27:BA:2624:G:N9	2.76	0.53
27:BA:2781:A:H5'	27:BA:2782:G:O4'	2.08	0.53
27:BA:2810:A:C2'	27:BA:2811:G:C5'	2.09	0.53
27:BA:2868:A:C4	27:BA:2869:G:C8	2.96	0.53
27:BA:464:U:C4'	53:B7:12:ARG:NH2	2.71	0.53
27:BA:530:G:HO2'	27:BA:531:C:C5'	2.22	0.53
27:BA:786:C:H2'	27:BA:787:U:O4'	2.08	0.53
27:BA:789:A:HO2'	27:BA:1781:C:H42	1.56	0.53
27:BA:834:C:HO2'	27:BA:2358:G:H2'	1.72	0.53
27:BA:989:G:C8	48:B3:13:ILE:HD12	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:148:GLY:C	28:BD:150:GLY:N	2.49	0.53
29:BE:203:GLY:HA3	29:BE:303:PRO:HD2	1.86	0.53
30:BF:197:SER:HA	30:BF:215:ALA:HB2	1.90	0.53
27:BA:600:G:C4'	30:BF:30:LEU:HD11	2.36	0.53
31:BG:141:VAL:HA	31:BG:144:ARG:HD3	1.90	0.53
31:BG:27:ILE:C	31:BG:29:HIS:H	2.04	0.53
31:BG:93:LEU:O	31:BG:94:ALA:HB3	2.09	0.53
32:BH:55:SER:HB2	32:BH:60:HIS:HB2	1.82	0.53
34:BN:82:THR:O	34:BN:85:GLY:CA	2.56	0.53
37:BQ:36:ASN:CG	43:BZ:116:VAL:CG1	2.76	0.53
44:BR:67:LEU:O	44:BR:68:ARG:C	2.46	0.53
45:BU:12:ARG:O	45:BU:15:LYS:N	2.42	0.53
46:BV:10:LYS:O	46:BV:12:TYR:N	2.41	0.53
46:BV:88:GLN:OE1	46:BV:90:PHE:HE1	1.91	0.53
40:BW:8:ARG:C	40:BW:10:VAL:N	2.57	0.53
40:BW:12:ILE:HG22	40:BW:13:SER:N	2.22	0.53
43:BZ:149:ALA:CB	43:BZ:164:PRO:C	2.76	0.53
43:BZ:113:VAL:O	43:BZ:171:VAL:CA	2.57	0.53
42:BY:20:HIS:C	42:BY:22:GLN:N	2.62	0.53
42:BY:66:ASP:CG	42:BY:72:ILE:HA	2.28	0.53
12:AI:114:TYR:HD1	13:AJ:60:ARG:HG2	1.74	0.53
1:AA:1319:A:C4'	22:AS:70:LYS:CE	2.77	0.53
5:AB:112:VAL:C	5:AB:113:HIS:CA	2.73	0.53
1:AA:563:A:O2'	1:AA:566:G:O2'	2.25	0.53
1:AA:15:G:O6	1:AA:1396:A:C6	2.62	0.53
1:AA:762:C:H2'	1:AA:763:G:H8	1.71	0.53
1:AA:376:G:H5''	19:AP:5:ARG:HB2	1.90	0.53
27:BA:1079:C:H1'	56:BK:130:GLY:CA	2.34	0.53
1:AA:667:G:H1	1:AA:739:C:H42	1.56	0.53
27:BA:269:U:C5'	27:BA:270(Y):G:H2'	2.35	0.53
1:AA:1066:C:H2'	1:AA:1067:A:C8	2.43	0.53
27:BA:1743:G:C3'	27:BA:1746:G:H5'	2.37	0.53
7:AD:159:ARG:O	7:AD:163:GLU:HB3	2.08	0.53
1:AA:697:U:H3	1:AA:798:G:H1'	1.74	0.53
1:AA:68:G:H2'	1:AA:69:G:O4'	2.07	0.53
49:B0:70:ILE:CG1	49:B0:71:ASN:N	2.71	0.53
54:B8:55:TRP:HE3	54:B8:59:LYS:CE	2.12	0.53
55:B9:20:HIS:HB2	55:B9:22:ARG:HG3	1.90	0.53
55:B9:24:LEU:CD2	55:B9:35:ARG:HG2	2.38	0.53
27:BA:2250:G:H3'	37:BQ:102:ARG:HG2	1.90	0.53
27:BA:2320:A:N1	38:BS:13:ARG:CG	2.70	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2435:A:C2	27:BA:2436:G:H1'	2.43	0.53
27:BA:2472:G:H8	27:BA:2472:G:O5'	1.91	0.53
27:BA:2495:G:H2'	27:BA:2496:C:O4'	2.08	0.53
27:BA:2516:G:N1	27:BA:2569:G:C2	2.76	0.53
27:BA:2527:C:O2'	27:BA:2528:U:H5'	2.08	0.53
27:BA:2744:G:H1'	27:BA:2761:G:N2	2.23	0.53
27:BA:2842:G:C6	27:BA:2876:G:N1	2.76	0.53
27:BA:684:G:N2	27:BA:794:G:N3	2.57	0.53
26:BB:114:G:H1'	38:BS:46:GLN:HE22	1.73	0.53
28:BD:79:THR:H	28:BD:91:ALA:HB1	1.73	0.53
29:BE:211:GLN:N	29:BE:216:ARG:NE	2.40	0.53
27:BA:2821:A:O3'	29:BE:258:TYR:HE2	1.91	0.53
29:BE:267:ARG:CG	29:BE:297:LYS:HB2	2.34	0.53
30:BF:237:GLU:C	30:BF:239:ALA:H	2.11	0.53
27:BA:674:G:C4'	30:BF:69:HIS:HA	2.39	0.53
2:AV:56:C:O2'	31:BG:56:ARG:NH1	2.42	0.53
31:BG:24:HIS:CD2	31:BG:72:LYS:HB3	2.44	0.53
27:BA:2748:A:O2'	32:BH:62:ALA:O	2.25	0.53
33:BI:28:ASN:OD1	33:BI:28:ASN:C	2.46	0.53
33:BI:41:PRO:O	33:BI:42:ALA:C	2.47	0.53
34:BN:15:ARG:HE	34:BN:40:ASN:HD21	1.55	0.53
35:BO:104:ARG:O	35:BO:105:GLU:O	2.26	0.53
35:BO:10:VAL:CG1	35:BO:11:ALA:N	2.71	0.53
37:BQ:156:ASN:O	37:BQ:156:ASN:CG	2.46	0.53
37:BQ:31:PHE:CE1	37:BQ:88:PHE:HD2	2.26	0.53
38:BS:20:TYR:O	38:BS:23:ARG:CB	2.55	0.53
38:BS:27:LEU:CA	38:BS:33:ARG:CZ	2.86	0.53
45:BU:72:HIS:CE1	45:BU:110:VAL:CG2	2.84	0.53
46:BV:42:GLY:CA	46:BV:54:TYR:HH	2.18	0.53
45:BU:88:ILE:O	46:BV:52:GLY:HA2	2.08	0.53
45:BU:50:ARG:CZ	46:BV:74:TYR:CD2	2.85	0.53
40:BW:48:ALA:O	40:BW:49:LYS:C	2.46	0.53
40:BW:69:LEU:HD22	40:BW:109:GLU:CA	2.38	0.53
40:BW:85:VAL:HA	40:BW:95:ILE:HG12	0.72	0.53
43:BZ:117:VAL:O	43:BZ:117:VAL:HG12	2.08	0.53
43:BZ:90:GLU:HG3	43:BZ:90:GLU:O	2.09	0.53
42:BY:71:VAL:HG21	42:BY:93:THR:N	2.15	0.53
42:BY:78:THR:N	42:BY:89:ARG:CD	2.71	0.53
43:BZ:79:ILE:O	43:BZ:80:HIS:HB2	2.07	0.53
47:B2:27:LEU:O	47:B2:30:ALA:CB	2.57	0.53
1:AA:946:A:H1'	1:AA:1334:G:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2857:G:C3'	27:BA:2857:G:C8	2.91	0.53
27:BA:1300:U:H1'	27:BA:1626:G:H22	1.74	0.53
27:BA:1274:A:C5	27:BA:1302:A:H2	2.26	0.53
27:BA:1530:G:H22	27:BA:1532:C:N4	2.06	0.53
1:AA:794:A:H4'	1:AA:1521:G:O2'	2.08	0.53
1:AA:775:G:O2'	1:AA:776:G:H5'	2.08	0.53
1:AA:903:G:OP1	1:AA:1512:U:OP1	2.25	0.53
27:BA:1882:C:H2'	27:BA:1883:G:H5'	1.89	0.53
49:B0:23:VAL:HG12	49:B0:26:PHE:CE1	2.43	0.53
48:B3:2:PRO:HB2	48:B3:39:ASP:HB3	1.91	0.53
53:B7:8:ASN:O	53:B7:11:LYS:CA	2.56	0.53
55:B9:10:MET:C	55:B9:10:MET:HE3	2.29	0.53
55:B9:3:VAL:O	55:B9:3:VAL:CG1	2.55	0.53
27:BA:1031:G:C4'	55:B9:8:LYS:CD	2.67	0.53
27:BA:2044:C:C5	27:BA:2625:G:N2	2.76	0.53
27:BA:2345:G:N2	27:BA:2381:C:H3'	2.23	0.53
27:BA:2415:G:N2	27:BA:2416:C:O4'	2.37	0.53
27:BA:2512:C:OP1	29:BE:219:VAL:CG1	2.51	0.53
27:BA:2553:G:N7	27:BA:2554:U:C1'	2.71	0.53
27:BA:2547:U:C5	27:BA:2566:A:C5	2.96	0.53
27:BA:2634:G:O2'	27:BA:2635:C:H5'	2.08	0.53
27:BA:1752:C:H4'	27:BA:2862:G:OP1	2.09	0.53
27:BA:563:G:O6	27:BA:2018:G:N7	2.42	0.53
27:BA:612:G:H1'	27:BA:617:G:H22	1.74	0.53
27:BA:782:A:O2'	28:BD:229:MET:HA	2.08	0.53
27:BA:961:C:C4	27:BA:2031:A:N3	2.77	0.53
27:BA:971:C:N4	27:BA:972:G:N2	2.57	0.53
28:BD:77:VAL:HG12	28:BD:111:VAL:O	2.08	0.53
28:BD:141:HIS:CD2	28:BD:142:ASN:HD21	2.27	0.53
30:BF:6:TYR:HE1	30:BF:138:VAL:O	1.92	0.53
31:BG:105:SER:HB3	31:BG:131:THR:CG2	2.30	0.53
31:BG:21:VAL:HG12	31:BG:132:VAL:HB	1.87	0.53
31:BG:36:ASN:O	31:BG:38:GLU:N	2.42	0.53
27:BA:2303:G:C5'	31:BG:99:ASP:CG	2.77	0.53
34:BN:136:SER:C	34:BN:141:ALA:H	2.11	0.53
34:BN:23:ALA:O	34:BN:26:VAL:CB	2.57	0.53
34:BN:37:ALA:HA	34:BN:102:ARG:O	2.08	0.53
34:BN:47:THR:OG1	34:BN:53:ILE:HD12	2.09	0.53
37:BQ:136:TRP:HA	37:BQ:139:ALA:CB	2.39	0.53
37:BQ:35:ASN:O	37:BQ:36:ASN:C	2.46	0.53
37:BQ:35:ASN:HB2	37:BQ:75:SER:CA	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:100:LEU:HB2	44:BR:112:ALA:HA	1.91	0.53
44:BR:20:LEU:O	44:BR:22:ARG:CA	2.57	0.53
27:BA:1294:U:O2'	44:BR:26:LYS:HD3	2.08	0.53
44:BR:36:THR:CG2	44:BR:37:THR:N	2.71	0.53
44:BR:38:VAL:CG1	44:BR:39:PRO:HD2	1.89	0.53
45:BU:40:LEU:HD21	46:BV:83:ARG:NH1	2.23	0.53
40:BW:43:GLY:O	40:BW:46:PHE:HB2	2.07	0.53
27:BA:1260:G:H5'	40:BW:83:LYS:HZ1	1.72	0.53
43:BZ:105:GLN:CB	43:BZ:141:MET:HG2	2.39	0.53
33:BI:109:LYS:N	33:BI:109:LYS:HE2	2.20	0.53
42:BY:19:ARG:O	42:BY:22:GLN:HB2	2.09	0.53
1:AA:989:C:C4'	1:AA:1016:A:C2	2.91	0.53
1:AA:1222:G:OP2	1:AA:1322:C:H5	1.80	0.53
27:BA:729:G:N1	27:BA:1775:U:C4	2.77	0.53
47:B2:20:LEU:HD22	47:B2:23:LEU:HB3	1.90	0.53
47:B2:29:ASN:C	47:B2:34:GLN:CG	2.74	0.53
47:B2:34:GLN:CD	47:B2:34:GLN:H	2.11	0.53
27:BA:110:G:N1	27:BA:111:A:C6	2.77	0.53
41:BX:34:LYS:O	41:BX:38:ALA:N	2.40	0.53
41:BX:32:ALA:C	41:BX:37:VAL:HG23	2.29	0.53
1:AA:1030:C:C2'	1:AA:30(A):G:N7	2.58	0.53
56:BK:49:LYS:NZ	56:BK:73:PRO:HG3	2.23	0.53
1:AA:1067:A:H3'	1:AA:1093:A:O3'	2.08	0.53
27:BA:265:A:C5	27:BA:428:A:C6	2.97	0.53
1:AA:720:C:H6	1:AA:720:C:O5'	1.92	0.53
1:AA:1130:A:O5'	12:AI:20:ARG:NH2	2.40	0.53
27:BA:638:G:H2'	27:BA:639:U:O4'	2.09	0.53
2:AV:1:G:O2'	37:BQ:98:GLY:CA	2.55	0.53
2:AV:56:C:C2'	31:BG:56:ARG:NH1	2.72	0.53
27:BA:2364:C:C4'	49:B0:38:VAL:CG1	2.87	0.53
48:B3:22:ALA:O	48:B3:26:LEU:HD12	2.08	0.53
27:BA:2011:U:H2'	27:BA:2012:G:O4'	2.08	0.53
27:BA:2207:C:O2	27:BA:2218:G:N2	2.42	0.53
27:BA:2217:G:N3	27:BA:2218:G:C8	2.76	0.53
27:BA:2261:C:O4'	27:BA:2388:A:C1'	2.56	0.53
27:BA:2325:G:C2	27:BA:2326:C:C5	2.97	0.53
27:BA:2331:G:C6	27:BA:2332:U:C4	2.94	0.53
27:BA:2415:G:N3	27:BA:2415:G:H2'	2.22	0.53
27:BA:2486:G:C2	27:BA:2487:G:C8	2.97	0.53
27:BA:2488:A:C6	27:BA:2489:G:N7	2.76	0.53
27:BA:2497:A:O2'	27:BA:2498:C:C6	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2526:G:N3	27:BA:2527:C:C6	2.76	0.53
27:BA:2537:U:C6	27:BA:2538:C:C5	2.96	0.53
27:BA:2543:G:N9	27:BA:2544:G:C8	2.76	0.53
27:BA:2633:G:N1	27:BA:2634:G:N7	2.56	0.53
27:BA:2658:C:H2'	27:BA:2659:G:H5'	1.88	0.53
27:BA:2641:G:N1	27:BA:2774:C:C5	2.76	0.53
27:BA:387:U:C3'	50:B4:23:GLU:OE2	2.56	0.53
27:BA:585:G:N1	27:BA:1251:C:C5	2.77	0.53
27:BA:911:A:C2	37:BQ:16:ARG:HG2	2.01	0.53
35:BO:64:ARG:HD2	35:BO:81:GLU:OE1	2.09	0.53
36:BP:67:ARG:NH1	36:BP:111:ALA:HB3	2.22	0.53
27:BA:911:A:C1'	37:BQ:16:ARG:HD2	2.37	0.53
38:BS:108:SER:C	38:BS:110:THR:N	2.59	0.53
38:BS:116:PHE:HD2	38:BS:119:GLN:OE1	1.92	0.53
38:BS:23:ARG:HE	38:BS:35:VAL:HG11	1.73	0.53
38:BS:76:GLY:N	38:BS:82:TYR:HD1	2.06	0.53
38:BS:87:LEU:HD13	38:BS:90:LEU:HD12	1.89	0.53
45:BU:41:ASN:HD22	45:BU:41:ASN:C	2.10	0.53
45:BU:83:LEU:O	45:BU:86:ALA:N	2.36	0.53
45:BU:94:VAL:HG12	45:BU:98:ILE:HD11	1.91	0.53
45:BU:88:ILE:CG2	46:BV:55:THR:CG2	2.86	0.53
43:BZ:126:GLY:O	43:BZ:127:PRO:O	2.26	0.53
33:BI:94:THR:CG2	33:BI:97:GLN:H	2.16	0.53
27:BA:295:G:O5'	27:BA:296:C:OP2	2.27	0.53
42:BY:66:ASP:O	42:BY:68:ASP:CA	2.55	0.53
43:BZ:68:ALA:O	43:BZ:69:VAL:CB	2.46	0.53
1:AA:1225:A:OP2	1:AA:1226:C:H5	1.91	0.53
7:AD:58:LEU:HD13	7:AD:59:ARG:HH11	1.73	0.53
1:AA:1340:A:C3'	2:AV:31:A:O2'	2.56	0.53
27:BA:1328:G:H2'	27:BA:1330:C:H5	1.71	0.53
27:BA:1575:C:H6	27:BA:1575:C:H3'	1.74	0.53
3:AW:16:U:H1'	3:AW:17:U:OP2	2.08	0.53
20:AQ:3:LYS:HB3	20:AQ:61:GLU:O	2.07	0.53
20:AQ:9:VAL:HG12	20:AQ:56:VAL:HG22	1.91	0.53
27:BA:1433:U:O5'	27:BA:1433:U:H6	1.92	0.53
27:BA:1978:A:H2'	27:BA:1979:C:O4'	2.08	0.53
48:B3:25:ALA:O	48:B3:26:LEU:C	2.47	0.53
48:B3:30:ARG:CZ	48:B3:33:GLN:HB2	2.38	0.53
48:B3:39:ASP:CB	48:B3:44:ARG:NH2	2.72	0.53
52:B6:42:PRO:O	52:B6:43:VAL:C	2.44	0.53
52:B6:49:VAL:HG12	52:B6:50:PHE:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:14:ILE:O	54:B8:15:LYS:CB	2.57	0.53
27:BA:2052:G:H2'	27:BA:2053:G:H8	1.74	0.53
27:BA:2205:C:HO2'	27:BA:2228:G:N2	2.03	0.53
27:BA:2277:G:C2'	27:BA:2277:G:N3	2.72	0.53
27:BA:2282:G:H5''	27:BA:2283:C:O5'	2.09	0.53
27:BA:2394:C:N3	27:BA:2395:C:N3	2.54	0.53
27:BA:2453:A:O2'	27:BA:2454:G:O5'	2.26	0.53
27:BA:2484:G:C2	27:BA:2485:G:N9	2.74	0.53
27:BA:2488:A:N6	27:BA:2489:G:C6	2.77	0.53
27:BA:2490:G:H4'	27:BA:2491:U:OP1	2.09	0.53
27:BA:2453:A:O3'	27:BA:2572:A:O2'	2.26	0.53
27:BA:2715:C:H2'	27:BA:2716:U:H6	1.73	0.53
27:BA:2767:C:C4	27:BA:2768:C:C5	2.96	0.53
27:BA:2868:A:C5	27:BA:2869:G:N7	2.77	0.53
27:BA:38:A:H2'	27:BA:39:C:H6	1.71	0.53
27:BA:561:G:H21	45:BU:45:TYR:HE2	1.55	0.53
27:BA:591:C:C4	27:BA:592:G:N7	2.77	0.53
27:BA:806:C:O2'	27:BA:2445:G:H4'	2.08	0.53
28:BD:127:ASN:O	28:BD:190:THR:CB	2.51	0.53
28:BD:141:HIS:C	28:BD:143:ILE:N	2.61	0.53
30:BF:105:LYS:HD2	30:BF:105:LYS:N	2.24	0.53
30:BF:92:PRO:O	30:BF:94:THR:N	2.40	0.53
32:BH:100:LYS:O	32:BH:100:LYS:CG	2.57	0.53
32:BH:67:THR:HG23	32:BH:70:LEU:CD1	2.39	0.53
33:BI:21:VAL:HG21	33:BI:30:LEU:CD1	2.39	0.53
33:BI:2:LYS:CG	33:BI:39:ALA:HB2	2.38	0.53
33:BI:3:VAL:HB	33:BI:19:LYS:O	2.08	0.53
44:BR:107:ASP:CG	44:BR:109:ALA:N	2.41	0.53
38:BS:41:LYS:CE	38:BS:68:GLU:OE2	2.57	0.53
45:BU:104:GLU:OE2	46:BV:46:VAL:HG11	2.08	0.53
27:BA:1251:C:C5'	45:BU:10:ARG:NE	2.68	0.53
45:BU:5:LYS:C	45:BU:7:GLY:N	2.62	0.53
45:BU:76:TYR:N	45:BU:76:TYR:CD1	2.75	0.53
43:BZ:149:ALA:C	43:BZ:152:ILE:HG13	2.22	0.53
33:BI:108:LEU:C	33:BI:108:LEU:CD2	2.77	0.53
33:BI:81:ALA:O	33:BI:148:GLN:HG3	2.08	0.53
33:BI:99:ALA:O	33:BI:101:SER:N	2.41	0.53
42:BY:73:HIS:CA	42:BY:91:LEU:HG	2.07	0.53
42:BY:80:GLU:HA	42:BY:86:GLU:HA	1.90	0.53
43:BZ:69:VAL:O	43:BZ:70:GLN:HB3	2.07	0.53
1:AA:1058:G:H2'	1:AA:1059:C:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1826:G:C6	27:BA:1827:C:C5	2.96	0.53
27:BA:60:G:N7	27:BA:63:U:C5	2.77	0.53
41:BX:18:MET:CE	41:BX:25:GLN:CA	2.87	0.53
27:BA:440:G:H3'	42:BY:3:GLN:HE21	1.74	0.53
1:AA:403:C:N4	1:AA:547:A:C5'	2.70	0.53
27:BA:1906:G:C1'	27:BA:1929:G:N7	2.72	0.53
27:BA:1582:C:H3'	27:BA:1583:A:H4'	1.91	0.53
1:AA:398:C:H2'	1:AA:399:G:H8	1.74	0.53
27:BA:120:U:N3	27:BA:150:C:N4	2.55	0.53
32:BH:19:ASN:C	32:BH:21:ASN:H	2.11	0.53
10:AG:146:GLU:O	10:AG:149:ARG:HB2	2.08	0.53
1:AA:726:C:N4	1:AA:731:G:H1	2.07	0.53
6:AC:35:GLU:OE2	6:AC:97:LYS:HG3	2.09	0.53
1:AA:645:C:H2'	1:AA:646:U:C6	2.44	0.53
1:AA:831:U:H2'	1:AA:832:C:C6	2.44	0.53
8:AE:36:ASP:O	8:AE:37:ARG:HB2	2.09	0.53
56:BK:99:LYS:HD2	56:BK:99:LYS:H	1.74	0.53
27:BA:126:A:H5''	53:B7:18:PHE:CD1	2.39	0.53
27:BA:990:A:C5	27:BA:1186:G:H1'	2.41	0.53
27:BA:2094:G:N2	27:BA:2196:C:C2	2.76	0.53
27:BA:2093:G:O6	27:BA:2225:A:N7	2.40	0.53
27:BA:2316:C:C5'	31:BG:151:ILE:CD1	2.56	0.53
27:BA:2369:A:O2'	27:BA:2370:G:C5'	2.57	0.53
27:BA:2469:A:H8	27:BA:2469:A:C5'	2.04	0.53
27:BA:2489:G:C5	27:BA:2490:G:C5	2.97	0.53
27:BA:2592:G:H2'	27:BA:2593:U:C5'	2.38	0.53
27:BA:2616:C:O5'	27:BA:2616:C:H6	1.92	0.53
27:BA:2626:C:C3'	27:BA:2627:G:C5'	2.87	0.53
27:BA:2642:G:H2'	27:BA:2643:G:C5'	2.39	0.53
27:BA:2682:U:O2'	29:BE:61:PRO:HD3	2.09	0.53
27:BA:2710:C:O2'	27:BA:2711:A:C4'	2.56	0.53
27:BA:2791:C:C5	27:BA:2807:G:N1	2.77	0.53
27:BA:2846:G:H22	27:BA:2869:G:H1	1.54	0.53
28:BD:183:ILE:HG23	28:BD:184:LEU:N	2.16	0.53
29:BE:201:VAL:CG1	29:BE:310:PHE:O	2.57	0.53
30:BF:150:THR:HB	30:BF:207:LEU:HD22	1.89	0.53
30:BF:223:LEU:HD13	30:BF:223:LEU:C	2.26	0.53
30:BF:52:ALA:O	30:BF:55:ARG:CG	2.54	0.53
27:BA:674:G:H5''	30:BF:69:HIS:CA	2.37	0.53
35:BO:44:LYS:O	35:BO:45:ASP:HB3	2.09	0.53
35:BO:88:ARG:HG3	35:BO:92:SER:OG	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:49:VAL:CG1	37:BQ:119:ASN:H	2.21	0.53
44:BR:49:ASP:O	44:BR:50:HIS:C	2.47	0.53
46:BV:33:VAL:C	46:BV:63:HIS:CE1	2.82	0.53
40:BW:84:ARG:CB	40:BW:96:ILE:HD13	2.15	0.53
43:BZ:139:THR:C	43:BZ:141:MET:HE1	2.30	0.53
42:BY:14:ALA:HB3	42:BY:18:GLU:OE1	2.09	0.53
42:BY:30:ASP:CG	42:BY:31:LEU:N	2.62	0.53
42:BY:78:THR:H	42:BY:89:ARG:NE	2.06	0.53
1:AA:1308:U:C5'	16:AM:110:ARG:NH2	2.56	0.53
1:AA:1198:G:HO2'	13:AJ:54:PHE:HE2	0.62	0.53
47:B2:31:ARG:O	47:B2:34:GLN:N	2.38	0.53
27:BA:138:G:C3'	27:BA:138:G:N3	2.63	0.53
1:AA:436:C:N3	1:AA:437:U:C4	2.76	0.53
7:AD:98:GLU:C	7:AD:100:ARG:N	2.56	0.53
1:AA:696:A:N3	1:AA:786:G:O2'	2.36	0.53
27:BA:2037:G:H2'	27:BA:2038:G:C8	2.44	0.53
7:AD:141:ARG:HB3	7:AD:142:PRO:CD	2.36	0.53
1:AA:54:C:C4	1:AA:352:C:H2'	2.44	0.53
27:BA:1778:U:C6	27:BA:1784:A:H2	2.27	0.53
1:AA:757:U:H5'	1:AA:822:C:O2	2.08	0.53
27:BA:815:C:H5'	27:BA:1224:G:N2	2.24	0.53
23:AT:61:SER:O	23:AT:65:LYS:HG2	2.08	0.53
49:B0:68:VAL:HG21	49:B0:72:LYS:CE	2.39	0.53
27:BA:989:G:OP2	48:B3:11:SER:CB	2.57	0.53
50:B4:24:THR:C	50:B4:26:SER:H	2.13	0.53
50:B4:58:LYS:HG2	50:B4:62:ARG:NH2	2.24	0.53
54:B8:8:LYS:C	54:B8:10:ALA:H	2.06	0.53
27:BA:1031:G:O3'	55:B9:8:LYS:CD	2.56	0.53
27:BA:1429:G:O4'	27:BA:1568:G:H1'	2.09	0.53
27:BA:1440:G:H2'	27:BA:1441:G:O4'	2.08	0.53
27:BA:2067:G:C2	27:BA:2444:G:N3	2.77	0.53
27:BA:2191:G:N3	27:BA:2192:G:H1'	2.24	0.53
27:BA:2259:G:H2'	27:BA:2260:C:C6	2.44	0.53
27:BA:2272:U:H6	27:BA:2273:A:H2	1.56	0.53
27:BA:2333:A:N9	27:BA:2335:A:N1	2.54	0.53
27:BA:2418:A:O2'	27:BA:2419:U:H5'	2.09	0.53
27:BA:2455:G:C6	27:BA:2456:C:C4	2.97	0.53
27:BA:2567:G:C2'	27:BA:2568:C:C5	2.85	0.53
27:BA:2785:C:O2'	29:BE:100:TRP:CG	2.61	0.53
27:BA:645:C:OP2	27:BA:2369:A:C4'	2.57	0.53
27:BA:687:C:C2	27:BA:788:A:O4'	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:793:A:OP1	27:BA:2071:A:O2'	2.25	0.53
27:BA:972:G:OP1	27:BA:975:G:OP1	2.26	0.53
28:BD:107:LYS:HG2	28:BD:193:GLU:OE1	2.09	0.53
28:BD:77:VAL:HB	28:BD:113:MET:HA	0.58	0.53
28:BD:119:PRO:HA	28:BD:129:LEU:HD21	1.90	0.53
28:BD:68:ARG:NH2	28:BD:190:THR:HG21	2.23	0.53
29:BE:304:ASP:N	29:BE:304:ASP:OD1	2.40	0.53
29:BE:41:PHE:O	29:BE:42:ALA:HB2	2.09	0.53
30:BF:151:GLN:OE1	30:BF:151:GLN:HA	2.09	0.53
30:BF:39:GLN:O	30:BF:42:ARG:CB	2.57	0.53
30:BF:57:PRO:HG2	30:BF:58:ALA:N	2.21	0.53
30:BF:97:ASP:C	30:BF:98:ARG:HD3	2.29	0.53
31:BG:38:GLU:OE2	31:BG:71:ALA:CA	2.56	0.53
33:BI:38:GLU:O	33:BI:40:THR:N	2.41	0.53
35:BO:88:ARG:CG	35:BO:92:SER:OG	2.57	0.53
37:BQ:56:ILE:HD11	37:BQ:113:ALA:O	2.09	0.53
27:BA:2484:G:C2'	37:BQ:142:LYS:NZ	2.72	0.53
44:BR:55:ALA:HB1	44:BR:79:LEU:HD22	1.90	0.53
44:BR:77:ARG:NH1	44:BR:77:ARG:CG	2.38	0.53
38:BS:59:ALA:O	38:BS:91:ARG:CZ	2.56	0.53
27:BA:1252:G:H22	45:BU:37:GLN:HB2	1.74	0.53
27:BA:997:G:H5''	45:BU:92:ARG:CD	2.31	0.53
46:BV:64:GLY:N	46:BV:95:ILE:HG13	2.21	0.53
45:BU:40:LEU:HD21	46:BV:83:ARG:HH12	1.74	0.53
40:BW:84:ARG:HA	40:BW:84:ARG:HE	1.74	0.53
43:BZ:118:HIS:CE1	43:BZ:167:THR:OG1	2.62	0.53
43:BZ:146:HIS:CD2	43:BZ:170:SER:HB2	2.44	0.53
43:BZ:74:ARG:HD3	43:BZ:75:LYS:H	1.73	0.53
42:BY:19:ARG:NH1	42:BY:67:LEU:HB3	2.24	0.53
42:BY:26:THR:O	42:BY:27:LEU:CB	2.56	0.53
42:BY:78:THR:HA	42:BY:89:ARG:N	2.22	0.53
43:BZ:35:ASP:OD1	43:BZ:35:ASP:C	2.47	0.53
27:BA:729:G:O2'	27:BA:763:G:H4'	2.08	0.53
41:BX:40:ALA:O	41:BX:41:VAL:C	2.47	0.53
1:AA:1374:A:OP1	10:AG:36:LYS:NZ	2.42	0.53
27:BA:94:G:H21	47:B2:42:ASN:ND2	1.84	0.53
27:BA:1697:G:O6	27:BA:1698:A:C6	2.62	0.53
27:BA:269:U:H5	27:BA:270(Y):G:O3'	1.90	0.53
1:AA:375:U:H4'	19:AP:17:TYR:CE2	2.44	0.53
27:BA:2182:G:H2'	27:BA:2183:C:C5	2.43	0.53
27:BA:264:C:H2'	27:BA:265:A:H5''	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:355:G:H2'	27:BA:356:G:C8	2.44	0.53
11:AH:82:HIS:O	11:AH:137:VAL:HA	2.09	0.53
27:BA:2330:G:O2'	49:B0:71:ASN:OD1	2.26	0.53
49:B0:77:ARG:O	49:B0:79:ILE:CG1	2.54	0.53
50:B4:28:ARG:HB3	50:B4:29:PRO:CD	2.39	0.53
50:B4:30:GLU:O	50:B4:31:ILE:CD1	2.53	0.53
50:B4:39:VAL:H	50:B4:40:HIS:CE1	2.26	0.53
51:B5:4:HIS:CB	51:B5:5:PRO:CD	2.80	0.53
27:BA:2056:G:N2	51:B5:5:PRO:HA	2.24	0.53
53:B7:30:ILE:HD13	53:B7:33:ARG:CZ	2.31	0.53
27:BA:1151:G:O2'	45:BU:77:SER:O	2.27	0.53
27:BA:570:G:H2'	27:BA:2030:A:N6	2.24	0.53
27:BA:2187:G:H2'	27:BA:2188:C:C5'	2.35	0.53
27:BA:2295:C:N4	27:BA:2337:G:C6	2.77	0.53
27:BA:2303:G:C3'	31:BG:99:ASP:CG	2.57	0.53
27:BA:2489:G:C5	27:BA:2490:G:N7	2.77	0.53
27:BA:2787:C:H5''	27:BA:2788:C:OP2	2.08	0.53
27:BA:2799:A:C3'	27:BA:2801:A:OP2	2.54	0.53
27:BA:2893:G:O2'	27:BA:2894:G:N9	2.29	0.53
27:BA:486:C:O2'	40:BW:60:ASN:ND2	2.42	0.53
27:BA:532:A:N7	45:BU:45:TYR:CE2	2.77	0.53
27:BA:684:G:C2	27:BA:794:G:C2	2.97	0.53
27:BA:848:G:H3'	27:BA:848:G:C8	2.43	0.53
27:BA:965:C:H4'	27:BA:2273:A:C2	2.43	0.53
28:BD:157:ALA:O	28:BD:158:GLY:C	2.46	0.53
29:BE:268:LEU:HD11	29:BE:271:ILE:HD11	1.90	0.53
29:BE:44:TYR:CE1	29:BE:308:VAL:CG1	2.92	0.53
30:BF:58:ALA:HB2	30:BF:79:ARG:CA	2.39	0.53
34:BN:134:GLU:C	34:BN:138:THR:CG2	2.63	0.53
27:BA:1012:U:C2	34:BN:21:ARG:NH1	2.74	0.53
34:BN:25:GLN:O	34:BN:28:GLU:N	2.42	0.53
35:BO:40:VAL:CG1	35:BO:40:VAL:O	2.47	0.53
35:BO:63:VAL:CG1	35:BO:63:VAL:O	2.57	0.53
35:BO:86:ILE:CG2	35:BO:87:ILE:N	2.66	0.53
37:BQ:10:ILE:O	37:BQ:10:ILE:CG1	2.55	0.53
37:BQ:50:VAL:CG1	37:BQ:52:LYS:H	2.16	0.53
44:BR:59:ASP:CG	44:BR:60:LEU:HD23	2.30	0.53
26:BB:7:G:C2'	38:BS:37:ARG:HG3	2.38	0.53
46:BV:39:PHE:CE2	46:BV:42:GLY:N	2.77	0.53
40:BW:11:ARG:HA	40:BW:11:ARG:NE	2.19	0.53
40:BW:12:ILE:HD11	40:BW:42:ARG:HD3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:117:LEU:HD22	33:BI:121:ILE:CD1	2.39	0.53
42:BY:50:VAL:HA	42:BY:97:ARG:HG3	1.91	0.53
43:BZ:25:ASN:C	43:BZ:84:TYR:HE1	2.12	0.53
27:BA:1790:C:P	28:BD:224:VAL:CG1	2.79	0.53
41:BX:6:LYS:HD2	41:BX:27:ALA:C	2.29	0.53
41:BX:23:LYS:HG2	41:BX:67:ARG:HA	1.90	0.53
1:AA:1315:U:OP2	22:AS:6:LYS:HD2	2.08	0.53
1:AA:1517:G:N9	27:BA:1919:A:O3'	2.41	0.53
7:AD:15:GLU:OE1	7:AD:59:ARG:CZ	2.57	0.53
49:B0:44:LYS:C	49:B0:45:PHE:CG	2.82	0.52
50:B4:58:LYS:CG	50:B4:59:PHE:H	2.04	0.52
54:B8:60:LEU:CD2	54:B8:60:LEU:O	2.35	0.52
27:BA:1062:G:N2	56:BK:92:PRO:CG	2.69	0.52
27:BA:1255:U:C5	30:BF:67:GLN:O	2.62	0.52
27:BA:1648:C:H2'	27:BA:1649:G:C8	2.43	0.52
27:BA:1658:C:C5'	29:BE:230:GLY:HA3	2.38	0.52
27:BA:2100:G:C4	27:BA:2190:G:N2	2.77	0.52
27:BA:2224:G:O2'	27:BA:2225:A:O4'	2.26	0.52
27:BA:2549:G:N3	27:BA:2550:G:C8	2.76	0.52
27:BA:2570:G:N2	27:BA:2571:C:C2	2.78	0.52
27:BA:2605:U:C6	27:BA:2605:U:C4'	2.93	0.52
27:BA:2880:C:C4	27:BA:2881:C:C5	2.97	0.52
28:BD:94:ASN:OD1	28:BD:100:LYS:HE2	2.09	0.52
29:BE:205:THR:HG23	29:BE:258:TYR:C	2.24	0.52
29:BE:296:VAL:CG1	29:BE:297:LYS:N	2.72	0.52
30:BF:142:ASP:O	30:BF:144:PHE:N	2.42	0.52
34:BN:54:VAL:CG1	34:BN:138:THR:HB	2.38	0.52
34:BN:49:ARG:O	34:BN:50:GLU:C	2.47	0.52
35:BO:22:ILE:CG1	35:BO:40:VAL:O	2.57	0.52
36:BP:115:ARG:C	36:BP:117:GLU:N	2.61	0.52
36:BP:125:PHE:O	36:BP:130:ARG:NE	2.42	0.52
36:BP:66:VAL:C	36:BP:68:GLU:N	2.62	0.52
37:BQ:134:PHE:O	37:BQ:135:ALA:O	2.27	0.52
37:BQ:65:ARG:NH1	37:BQ:87:LYS:HB2	2.24	0.52
44:BR:80:PHE:O	44:BR:84:ALA:HB2	2.07	0.52
38:BS:46:GLN:C	38:BS:47:LEU:CG	2.78	0.52
39:BT:13:ILE:HD12	39:BT:33:SER:CB	2.38	0.52
45:BU:14:HIS:O	45:BU:15:LYS:O	2.27	0.52
27:BA:1151:G:C3'	45:BU:81:ASN:CG	2.78	0.52
46:BV:50:ASP:CB	46:BV:53:LYS:HE3	2.39	0.52
40:BW:95:ILE:HG22	40:BW:96:ILE:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:142:ASN:CA	43:BZ:171:VAL:HG21	2.36	0.52
42:BY:87:VAL:CG1	42:BY:88:PRO:N	2.72	0.52
43:BZ:5:ALA:O	43:BZ:6:LYS:CB	2.57	0.52
43:BZ:71:MET:SD	43:BZ:78:PRO:HD3	2.39	0.52
43:BZ:62:PHE:CD1	43:BZ:87:THR:HG21	2.44	0.52
47:B2:26:GLU:HG2	47:B2:27:LEU:HG	1.91	0.52
27:BA:135:G:C2	27:BA:145:G:C6	2.96	0.52
27:BA:1598:C:C5'	41:BX:34:LYS:HB2	2.39	0.52
27:BA:2858:C:C2'	27:BA:2858:C:O2	2.57	0.52
1:AA:1339:A:C2	2:AV:31:A:O4'	2.61	0.52
3:AW:9:A:H1'	3:AW:45:G:O2'	2.10	0.52
1:AA:585:G:N3	1:AA:879:C:H4'	2.24	0.52
27:BA:2795:G:N9	27:BA:2795:G:OP2	2.42	0.52
1:AA:20:U:C1'	1:AA:572:A:C2	2.92	0.52
1:AA:162:A:O2'	1:AA:348:G:O3'	2.24	0.52
27:BA:1529:A:N7	27:BA:1543:A:H8	2.06	0.52
1:AA:450:G:H1	1:AA:483:C:H42	1.56	0.52
27:BA:304:G:H1	27:BA:313:C:N4	2.03	0.52
9:AF:37:VAL:HA	9:AF:65:VAL:HG12	1.91	0.52
11:AH:112:LEU:HD22	11:AH:114:THR:HG22	1.92	0.52
27:BA:989:G:P	48:B3:31:LEU:HD12	2.45	0.52
48:B3:39:ASP:CA	48:B3:44:ARG:NH2	2.72	0.52
54:B8:4:MET:HE3	54:B8:4:MET:N	2.24	0.52
55:B9:4:ARG:O	55:B9:36:GLN:HA	2.09	0.52
55:B9:2:LYS:O	55:B9:4:ARG:N	2.42	0.52
27:BA:1028:A:H2'	27:BA:1029:A:H8	1.74	0.52
27:BA:1030:G:H1	27:BA:1124:C:H42	1.57	0.52
27:BA:1163:G:C2'	27:BA:1164:G:H5'	2.39	0.52
27:BA:2041:U:H2'	27:BA:2042:A:C5'	2.34	0.52
27:BA:2046:G:H1'	51:B5:22:HIS:ND1	2.24	0.52
27:BA:2185:C:C2'	27:BA:2186:G:H8	2.17	0.52
27:BA:2212:A:H1'	27:BA:2213:U:O4	2.08	0.52
27:BA:2324:C:C2'	27:BA:2325:G:OP1	2.57	0.52
27:BA:2423:U:HO2'	27:BA:2424:C:P	2.23	0.52
27:BA:2526:G:N3	27:BA:2527:C:H6	2.06	0.52
27:BA:2553:G:H8	27:BA:2554:U:O4'	1.87	0.52
27:BA:2589:A:N3	27:BA:2590:A:C8	2.77	0.52
27:BA:2600:A:H2'	27:BA:2601:C:C5	2.44	0.52
27:BA:2742:C:N3	27:BA:2743:C:C5	2.77	0.52
27:BA:2745:C:O2'	27:BA:2746:U:O5'	2.23	0.52
27:BA:2748:A:H2	27:BA:2758:A:H62	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2838:G:H2'	27:BA:2839:G:C5'	2.19	0.52
27:BA:2692:C:H1'	27:BA:2847:U:O2'	2.10	0.52
27:BA:2887:U:O2'	27:BA:2888:C:H5'	2.08	0.52
27:BA:687:C:H2'	27:BA:688:U:C6	2.44	0.52
27:BA:994:C:C4	45:BU:53:LYS:NZ	2.66	0.52
30:BF:168:ARG:CA	30:BF:232:LEU:O	2.57	0.52
31:BG:21:VAL:HG11	31:BG:132:VAL:HG21	1.87	0.52
27:BA:2093:G:OP2	33:BI:25:TYR:CZ	2.62	0.52
34:BN:39:VAL:CA	34:BN:103:VAL:HG13	2.36	0.52
34:BN:19:MET:CG	34:BN:46:ILE:HD13	2.35	0.52
35:BO:102:VAL:O	35:BO:122:ILE:O	2.26	0.52
36:BP:124:ASP:O	36:BP:125:PHE:CE2	2.56	0.52
37:BQ:69:ASN:ND2	37:BQ:70:ARG:H	2.00	0.52
44:BR:104:ARG:O	44:BR:107:ASP:OD2	2.27	0.52
44:BR:38:VAL:CG1	44:BR:39:PRO:N	2.46	0.52
44:BR:67:LEU:HD13	44:BR:68:ARG:CA	2.39	0.52
44:BR:96:ARG:O	44:BR:98:LEU:HG	2.10	0.52
38:BS:27:LEU:CB	38:BS:33:ARG:CZ	2.75	0.52
45:BU:46:GLU:O	45:BU:49:ASP:N	2.42	0.52
45:BU:62:ILE:HD13	45:BU:62:ILE:N	2.24	0.52
27:BA:997:G:OP1	45:BU:92:ARG:HB2	2.09	0.52
45:BU:98:ILE:HB	45:BU:106:PHE:CD1	2.43	0.52
40:BW:29:LEU:HG	40:BW:33:ARG:CD	2.23	0.52
40:BW:36:LEU:HD13	40:BW:47:VAL:CB	2.39	0.52
27:BA:495:G:O2'	40:BW:62:HIS:CD2	2.62	0.52
43:BZ:108:VAL:HG12	56:BK:93:LYS:HD2	1.91	0.52
27:BA:338:G:C8	42:BY:21:LYS:HB2	2.43	0.52
27:BA:83:G:C5'	42:BY:20:HIS:ND1	2.49	0.52
42:BY:47:THR:OG1	42:BY:60:GLY:O	2.27	0.52
43:BZ:50:GLY:O	43:BZ:51:LEU:HB2	2.08	0.52
27:BA:1524:G:C4	27:BA:1525:G:C8	2.97	0.52
27:BA:1525:G:C5	27:BA:1526:G:C5	2.97	0.52
41:BX:7:HIS:ND1	41:BX:8:PRO:N	2.56	0.52
7:AD:11:LEU:C	7:AD:13:ARG:N	2.63	0.52
1:AA:429:U:OP2	7:AD:13:ARG:CZ	2.57	0.52
39:BT:46:ALA:O	39:BT:48:ASN:OD1	2.27	0.52
27:BA:1102:C:C4	27:BA:1104:C:C4	2.97	0.52
27:BA:1609:A:C5	27:BA:1616:A:N3	2.77	0.52
27:BA:118:A:C8	27:BA:119:A:C8	2.97	0.52
1:AA:1298:C:OP2	10:AG:114:ARG:NH2	2.42	0.52
7:AD:172:PRO:HG2	7:AD:193:ASP:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1358:G:C8	27:BA:1371:G:C6	2.97	0.52
38:BS:70:GLY:C	38:BS:71:TRP:CE3	2.82	0.52
1:AA:24:U:O2'	1:AA:525:C:O4'	2.28	0.52
6:AC:142:MET:HA	6:AC:146:ALA:HB3	1.91	0.52
46:BV:7:THR:O	46:BV:9:GLY:O	2.27	0.52
31:BG:86:THR:O	31:BG:86:THR:HG22	2.09	0.52
49:B0:48:GLY:HA2	49:B0:56:ASP:N	2.24	0.52
49:B0:58:THR:O	49:B0:58:THR:OG1	2.24	0.52
49:B0:37:LEU:O	49:B0:68:VAL:HA	2.09	0.52
48:B3:11:SER:OG	48:B3:13:ILE:CG1	2.50	0.52
50:B4:11:PRO:CA	50:B4:40:HIS:CD2	2.82	0.52
27:BA:16:G:C5'	51:B5:18:MET:SD	2.96	0.52
52:B6:12:MET:CE	52:B6:54:LYS:C	2.78	0.52
55:B9:4:ARG:C	55:B9:36:GLN:HG2	2.26	0.52
55:B9:5:SER:O	55:B9:6:SER:CB	2.57	0.52
27:BA:1007:C:N3	27:BA:1008:C:N4	2.57	0.52
27:BA:1151:G:C4'	45:BU:81:ASN:CG	2.48	0.52
27:BA:1638:C:H5''	27:BA:2710:C:H1'	1.92	0.52
27:BA:2068:U:O2	27:BA:2430:A:N1	2.43	0.52
27:BA:2296:U:OP2	27:BA:2296:U:O4'	2.27	0.52
27:BA:2299:G:C5	27:BA:2300:G:N7	2.77	0.52
27:BA:2311:A:H2'	27:BA:2312:U:H6	1.73	0.52
27:BA:2474:C:H5	27:BA:2475:C:N3	2.07	0.52
27:BA:2488:A:C2	27:BA:2489:G:C4	2.97	0.52
27:BA:2447:G:O6	27:BA:2501:C:O2	2.28	0.52
27:BA:2544:G:H2'	27:BA:2545:G:C8	2.37	0.52
27:BA:2657:A:C6	27:BA:2665:A:C8	2.97	0.52
27:BA:2681:C:O2	27:BA:2681:C:C2'	2.57	0.52
27:BA:2682:U:H2'	27:BA:2683:C:O5'	2.09	0.52
27:BA:1637:A:O2'	27:BA:2711:A:H1'	2.09	0.52
27:BA:2728:U:O5'	27:BA:2728:U:C6	2.62	0.52
27:BA:2762:G:H2'	27:BA:2763:G:H8	1.74	0.52
27:BA:2737:G:N2	27:BA:2767:C:N3	2.43	0.52
27:BA:2826:A:N1	27:BA:2827:C:H6	1.94	0.52
27:BA:747:U:N3	51:B5:3:LYS:HD2	2.24	0.52
27:BA:848:G:H2'	27:BA:849:A:C8	2.42	0.52
27:BA:919:G:H2'	27:BA:920:G:H8	1.75	0.52
28:BD:107:LYS:HB3	28:BD:193:GLU:HB2	1.92	0.52
28:BD:145:LEU:HD13	28:BD:146:LYS:N	2.23	0.52
28:BD:144:GLU:HB3	28:BD:188:ARG:O	2.08	0.52
29:BE:61:PRO:CB	29:BE:69:PRO:HA	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:70:VAL:C	29:BE:71:THR:CG2	2.78	0.52
31:BG:103:ASN:CA	31:BG:104:PHE:CD1	2.93	0.52
31:BG:56:ARG:HA	31:BG:63:ILE:HA	1.90	0.52
32:BH:140:VAL:O	32:BH:141:GLY:C	2.47	0.52
34:BN:60:ARG:HD2	34:BN:71:TYR:HE2	1.73	0.52
34:BN:74:ARG:CB	34:BN:76:ASP:OD2	2.53	0.52
34:BN:88:PRO:C	34:BN:90:LYS:N	2.62	0.52
38:BS:90:LEU:HA	38:BS:93:GLN:NE2	2.24	0.52
46:BV:69:ILE:CG2	46:BV:88:GLN:HB2	2.38	0.52
42:BY:41:ARG:O	42:BY:112:LEU:HA	2.10	0.52
1:AA:1320:C:H1'	22:AS:73:GLU:N	2.24	0.52
13:AJ:60:ARG:O	13:AJ:61:GLU:HB2	2.08	0.52
22:AS:39:THR:HA	22:AS:70:LYS:HA	1.89	0.52
29:BE:107:GLU:CG	29:BE:110:ARG:NH2	2.63	0.52
1:AA:403:C:OP2	7:AD:74:GLN:NE2	2.32	0.52
27:BA:1943:U:H4'	27:BA:1944:U:H5'	1.91	0.52
27:BA:1697:G:O6	27:BA:1698:A:N6	2.41	0.52
39:BT:47:ARG:O	39:BT:48:ASN:CG	2.47	0.52
27:BA:1906:G:N9	27:BA:1929:G:C5	2.78	0.52
1:AA:265:G:H4'	20:AQ:66:SER:N	2.23	0.52
27:BA:1174:A:N1	27:BA:1176:G:H8	2.08	0.52
1:AA:770:C:O2'	1:AA:899:C:O2	2.27	0.52
27:BA:1554:A:O5'	27:BA:1555:G:OP2	2.27	0.52
27:BA:152:G:H2'	27:BA:153:C:H5'	1.91	0.52
5:AB:91:PRO:HG2	5:AB:155:LEU:HB2	1.91	0.52
19:AP:4:ILE:HG12	19:AP:21:VAL:CG1	2.39	0.52
15:AL:53:ARG:NH1	15:AL:93:LEU:HD22	2.24	0.52
1:AA:340:U:H2'	1:AA:341:C:H6	1.74	0.52
49:B0:45:PHE:HE1	49:B0:78:PHE:CE2	2.22	0.52
40:BW:37:ARG:NH2	51:B5:48:ASN:HD21	2.01	0.52
53:B7:22:MET:HA	53:B7:28:ARG:HG2	1.91	0.52
54:B8:10:ALA:HA	54:B8:14:ILE:HG21	1.92	0.52
27:BA:594:U:C5'	54:B8:58:MET:CE	2.79	0.52
27:BA:2056:G:H21	51:B5:8:LYS:NZ	2.08	0.52
27:BA:2197:U:H2'	27:BA:2224:G:C2	2.41	0.52
27:BA:2212:A:O2'	27:BA:2213:U:C6	2.51	0.52
27:BA:2259:G:N7	27:BA:2260:C:N4	2.56	0.52
27:BA:2283:C:H1'	27:BA:2389:G:N2	2.25	0.52
27:BA:2297:C:N4	27:BA:2320:A:C8	2.77	0.52
27:BA:2355:C:H5''	27:BA:2356:C:OP2	2.08	0.52
27:BA:2447:G:H3'	27:BA:2500:U:OP2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2524:G:N1	27:BA:2540:C:C4	2.77	0.52
27:BA:2586:C:O5'	27:BA:2586:C:H6	1.91	0.52
27:BA:2733:A:H2'	27:BA:2734:A:O4'	2.09	0.52
27:BA:2735:G:N1	27:BA:2770:G:C2	2.77	0.52
27:BA:2523:G:C4	27:BA:2765:A:N6	2.77	0.52
27:BA:2771:C:N3	27:BA:2772:C:C4	2.77	0.52
27:BA:2828:C:H42	27:BA:2829:C:N4	2.07	0.52
27:BA:2842:G:H1	27:BA:2875:C:N4	2.07	0.52
28:BD:143:ILE:CG1	28:BD:153:LEU:N	2.73	0.52
28:BD:158:GLY:HA3	28:BD:194:VAL:HG21	1.89	0.52
28:BD:67:LYS:O	28:BD:67:LYS:HG2	2.10	0.52
27:BA:2786:U:O5'	29:BE:100:TRP:HB2	2.08	0.52
29:BE:200:ASP:H	29:BE:312:ARG:N	2.06	0.52
29:BE:229:GLN:HB2	29:BE:231:TRP:HB2	1.91	0.52
29:BE:271:ILE:HD11	29:BE:294:THR:CG2	2.40	0.52
29:BE:303:PRO:HB2	29:BE:307:LEU:CB	2.38	0.52
30:BF:167:ASP:CB	30:BF:232:LEU:H	2.20	0.52
30:BF:238:SER:C	30:BF:241:ALA:CB	2.68	0.52
27:BA:442:G:O4'	30:BF:44:GLN:OE1	2.28	0.52
31:BG:63:ILE:HG23	31:BG:64:ARG:N	2.24	0.52
34:BN:21:ARG:O	34:BN:24:SER:CB	2.56	0.52
34:BN:76:ASP:O	34:BN:80:LYS:HG2	2.09	0.52
37:BQ:18:GLU:CB	37:BQ:23:ILE:HD11	2.40	0.52
27:BA:2333:A:C3'	38:BS:13:ARG:HD3	2.19	0.52
38:BS:22:GLN:OE1	38:BS:23:ARG:N	2.42	0.52
39:BT:22:VAL:N	39:BT:29:THR:OG1	2.43	0.52
39:BT:53:ASP:C	39:BT:56:ARG:NE	2.52	0.52
45:BU:46:GLU:O	45:BU:49:ASP:CA	2.58	0.52
33:BI:77:VAL:CB	33:BI:143:VAL:HA	2.38	0.52
27:BA:327:G:C2	27:BA:328:U:H6	2.27	0.52
43:BZ:34:LEU:HD13	43:BZ:39:PHE:CE1	2.38	0.52
1:AA:1089:G:O2'	1:AA:1169:A:H2	1.92	0.52
1:AA:1231:G:H5''	12:AI:126:SER:OG	2.09	0.52
27:BA:270(X):G:H2'	27:BA:270(Y):G:H5'	1.90	0.52
1:AA:1297:C:H1'	1:AA:1298:C:H5	1.75	0.52
15:AL:71:PRO:O	15:AL:102:ARG:HD2	2.09	0.52
5:AB:36:ARG:HB2	5:AB:41:ILE:HD13	1.90	0.52
1:AA:818:G:C2'	1:AA:819:A:H5''	2.39	0.52
16:AM:11:ARG:HH12	16:AM:46:LYS:HB3	1.74	0.52
27:BA:381:G:H1	27:BA:393:C:H42	1.56	0.52
6:AC:205:GLY:O	6:AC:206:GLU:HB2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B3:7:LYS:CG	48:B3:8:LEU:H	2.22	0.52
52:B6:41:ASP:HB2	52:B6:46:LYS:HZ3	1.65	0.52
54:B8:31:HIS:C	54:B8:32:GLN:CG	2.78	0.52
27:BA:1127:A:C6	27:BA:2518:A:H2	2.27	0.52
27:BA:1140:C:N4	34:BN:49:ARG:NH1	2.57	0.52
27:BA:1251:C:C5'	45:BU:10:ARG:HG3	2.39	0.52
27:BA:2048:G:N1	27:BA:2621:A:N3	2.58	0.52
27:BA:2380:C:C3'	27:BA:2381:C:C5'	2.87	0.52
27:BA:2404:C:C4	27:BA:2405:G:C4	2.98	0.52
27:BA:2429:G:C5'	27:BA:2430:A:P	2.97	0.52
27:BA:2476:A:N7	27:BA:2477:C:H5	1.99	0.52
27:BA:2479:G:C2	27:BA:2480:C:O2	2.62	0.52
27:BA:2531:A:C2	27:BA:2658:C:O2	2.63	0.52
27:BA:2565:A:C3'	27:BA:2566:A:O4'	2.57	0.52
27:BA:2520:C:N4	27:BA:2567:G:C6	2.78	0.52
27:BA:2056:G:O6	27:BA:2577:A:H1'	2.08	0.52
27:BA:2597:G:O6	27:BA:2598:A:N6	2.41	0.52
27:BA:2605:U:H2'	27:BA:2606:C:H5'	1.92	0.52
27:BA:2633:G:H8	27:BA:2633:G:P	2.31	0.52
27:BA:2657:A:C3'	27:BA:2658:C:C5'	2.87	0.52
27:BA:2662:A:C2	27:BA:2663:G:H4'	2.44	0.52
27:BA:2731:G:OP1	29:BE:265:ASN:HB2	2.07	0.52
27:BA:388:G:H5'	50:B4:24:THR:CG2	2.39	0.52
29:BE:102:ASP:OD1	29:BE:104:PHE:CZ	2.62	0.52
29:BE:189:MET:C	29:BE:190:ASN:CG	2.68	0.52
29:BE:208:LYS:N	29:BE:257:GLY:HA3	2.11	0.52
29:BE:70:VAL:CB	29:BE:295:LEU:CD2	2.87	0.52
30:BF:153:VAL:O	30:BF:155:SER:N	2.42	0.52
30:BF:239:ALA:O	30:BF:242:GLU:CG	2.54	0.52
30:BF:26:VAL:CG1	30:BF:27:ARG:N	2.72	0.52
27:BA:443:A:OP1	30:BF:44:GLN:HB2	2.09	0.52
32:BH:120:LEU:CD1	32:BH:143:LEU:CD1	2.69	0.52
33:BI:39:ALA:O	33:BI:40:THR:C	2.47	0.52
34:BN:21:ARG:CD	34:BN:21:ARG:H	2.23	0.52
35:BO:104:ARG:NH1	35:BO:122:ILE:HA	2.24	0.52
36:BP:114:VAL:HG21	36:BP:132:LYS:HB2	1.81	0.52
36:BP:73:VAL:CG1	36:BP:76:LEU:HB3	2.40	0.52
44:BR:22:ARG:NH2	44:BR:69:ASP:HB3	2.25	0.52
44:BR:50:HIS:O	44:BR:51:LEU:C	2.48	0.52
45:BU:39:LEU:O	45:BU:41:ASN:C	2.48	0.52
40:BW:4:LYS:CG	40:BW:106:ILE:HA	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:69:LEU:HD22	40:BW:109:GLU:HA	1.92	0.52
40:BW:48:ALA:O	40:BW:51:LEU:HB2	2.09	0.52
40:BW:5:ALA:CB	40:BW:50:VAL:O	2.57	0.52
43:BZ:113:VAL:H	43:BZ:174:PRO:HD3	1.74	0.52
33:BI:130:PRO:HA	33:BI:140:THR:HA	1.90	0.52
42:BY:11:GLN:CG	42:BY:21:LYS:CE	2.87	0.52
42:BY:44:ALA:HB1	42:BY:65:VAL:CG2	2.40	0.52
1:AA:1061:G:H5''	13:AJ:59:SER:H	1.74	0.52
1:AA:30(A):G:C2	1:AA:1031:G:N1	2.77	0.52
50:B4:48:ARG:O	50:B4:49:PHE:O	2.27	0.52
2:AV:48:C:C2'	2:AV:48:C:O2	2.55	0.52
8:AE:17:ALA:HA	8:AE:26:PHE:CB	2.39	0.52
27:BA:479:A:O2'	27:BA:481:G:H5''	2.10	0.52
1:AA:1231:G:OP1	12:AI:126:SER:HB2	2.09	0.52
1:AA:578:C:H2'	1:AA:579:G:C8	2.45	0.52
27:BA:484:C:H6	27:BA:484:C:O5'	1.92	0.52
1:AA:791:G:OP2	1:AA:791:G:H8	1.92	0.52
27:BA:549:G:H2'	27:BA:550:G:O4'	2.09	0.52
50:B4:7:PRO:HD2	50:B4:56:VAL:CG1	2.39	0.52
51:B5:6:VAL:N	51:B5:8:LYS:CE	2.73	0.52
53:B7:21:ARG:CZ	53:B7:43:THR:HG21	2.30	0.52
27:BA:594:U:C5'	54:B8:58:MET:HE2	2.40	0.52
27:BA:1029:A:H2'	27:BA:1030:G:O4'	2.10	0.52
27:BA:1255:U:H5''	27:BA:1256:G:H5''	1.90	0.52
27:BA:2228:G:C8	27:BA:2228:G:C5'	2.89	0.52
27:BA:2287:A:N1	27:BA:2289:G:C4	2.77	0.52
27:BA:2306:C:C5	27:BA:2311:A:N1	2.77	0.52
27:BA:2312:U:H5'	31:BG:53:LYS:HB2	1.89	0.52
27:BA:2330:G:N3	27:BA:2331:G:C1'	2.71	0.52
27:BA:2419:U:OP2	54:B8:41:ILE:CD1	2.57	0.52
27:BA:2584:U:C5	27:BA:2585:U:H2'	2.45	0.52
27:BA:2049:G:N1	27:BA:2620:C:N4	2.58	0.52
27:BA:2682:U:H6	29:BE:48:MET:SD	2.32	0.52
27:BA:2767:C:H2'	27:BA:2768:C:H5'	1.92	0.52
27:BA:2642:G:C2	27:BA:2773:C:C2	2.97	0.52
27:BA:2865:U:C2	27:BA:2866:U:C5	2.97	0.52
27:BA:1818:U:O2	28:BD:153:LEU:HD12	2.10	0.52
29:BE:77:PRO:HB2	29:BE:186:GLU:HB2	1.90	0.52
30:BF:153:VAL:HG11	30:BF:207:LEU:CD1	2.39	0.52
31:BG:18:ILE:O	31:BG:135:VAL:HG21	2.10	0.52
31:BG:55:LYS:O	31:BG:65:GLU:CB	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:124:VAL:O	32:BH:124:VAL:HG22	2.09	0.52
32:BH:58:LYS:HG3	32:BH:59:HIS:ND1	2.24	0.52
34:BN:39:VAL:O	34:BN:40:ASN:CG	2.48	0.52
35:BO:25:LEU:HD12	35:BO:38:VAL:HB	1.92	0.52
36:BP:132:LYS:N	36:BP:132:LYS:CD	2.48	0.52
36:BP:66:VAL:CA	36:BP:67:ARG:NE	2.70	0.52
44:BR:81:ASP:CG	44:BR:82:GLU:H	2.13	0.52
44:BR:92:GLY:HA2	44:BR:94:TYR:CE1	2.44	0.52
38:BS:11:ARG:HA	38:BS:14:ARG:CZ	2.40	0.52
38:BS:26:LEU:HD22	38:BS:101:VAL:CG2	2.40	0.52
38:BS:34:LEU:HD21	38:BS:102:LEU:CG	2.39	0.52
45:BU:17:VAL:HG11	45:BU:36:PHE:HA	1.90	0.52
43:BZ:145:ASP:O	43:BZ:146:HIS:CG	2.59	0.52
43:BZ:152:ILE:HG22	43:BZ:153:LYS:N	2.23	0.52
1:AA:1317:C:C2	17:AN:16:PHE:CE2	2.97	0.52
27:BA:1790:C:OP2	28:BD:224:VAL:CG1	2.57	0.52
47:B2:2:VAL:C	47:B2:4:HIS:ND1	2.50	0.52
41:BX:33:SER:N	41:BX:37:VAL:CG2	2.64	0.52
1:AA:1374:A:H1'	10:AG:31:MET:HE1	1.92	0.52
1:AA:197:A:C6	1:AA:220:G:O2'	2.62	0.52
13:AJ:66:ARG:NH1	17:AN:57:ARG:NH1	2.57	0.52
27:BA:2795:G:H3'	27:BA:2795:G:P	2.50	0.52
27:BA:1417:C:H3'	27:BA:1418:G:C8	2.43	0.52
29:BE:65:MET:SD	29:BE:65:MET:C	2.85	0.52
1:AA:686:U:H2'	1:AA:686:U:O2	2.09	0.52
27:BA:383:U:HO2'	27:BA:384:U:H5	1.57	0.52
49:B0:36:ILE:C	49:B0:37:LEU:HG	2.30	0.52
3:AW:74:C:P	50:B4:22:MET:CE	2.95	0.52
51:B5:45:ILE:CB	51:B5:52:TYR:HE1	2.19	0.52
54:B8:14:ILE:HG22	54:B8:15:LYS:N	2.23	0.52
27:BA:126:A:C5	53:B7:18:PHE:CG	2.97	0.52
27:BA:563:G:O6	27:BA:2018:G:C5	2.63	0.52
27:BA:2279:G:C6	27:BA:2280:G:C5	2.97	0.52
27:BA:2300:G:H2'	27:BA:2301:C:C6	2.44	0.52
27:BA:2376:A:H2'	27:BA:2377:A:H8	1.75	0.52
27:BA:2454:G:C2'	27:BA:2455:G:C5'	2.76	0.52
27:BA:2471:C:N3	27:BA:2479:G:N2	2.58	0.52
27:BA:2474:C:C5	27:BA:2475:C:C2	2.98	0.52
27:BA:2584:U:C5	27:BA:2585:U:C2'	2.93	0.52
27:BA:2623:G:C2	27:BA:2624:G:C8	2.97	0.52
27:BA:2654:A:O3'	27:BA:2655:G:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2792:G:C6	27:BA:2793:G:C6	2.98	0.52
28:BD:64:ILE:HD13	28:BD:102:TYR:O	2.08	0.52
27:BA:2218:G:HO2'	28:BD:146:LYS:CE	1.95	0.52
28:BD:167:GLU:O	28:BD:170:TYR:C	2.47	0.52
28:BD:75:GLY:N	28:BD:116:MET:HB2	2.25	0.52
29:BE:199:ALA:HB1	29:BE:312:ARG:C	2.29	0.52
30:BF:22:PHE:CZ	30:BF:115:LEU:CG	2.93	0.52
30:BF:88:SER:O	30:BF:89:ALA:HB3	2.09	0.52
31:BG:55:LYS:O	31:BG:56:ARG:HG2	2.09	0.52
32:BH:10:ILE:CG2	32:BH:14:VAL:CB	2.50	0.52
27:BA:270(O):U:H5	33:BI:53:LYS:NZ	2.07	0.52
35:BO:35:ILE:HA	35:BO:62:VAL:CA	1.87	0.52
37:BQ:133:GLU:HG3	37:BQ:134:PHE:H	1.73	0.52
37:BQ:140:TYR:O	37:BQ:142:LYS:C	2.48	0.52
37:BQ:49:VAL:HG22	37:BQ:120:HIS:C	2.20	0.52
37:BQ:54:VAL:C	37:BQ:56:ILE:N	2.62	0.52
44:BR:75:LEU:O	44:BR:77:ARG:CA	2.58	0.52
45:BU:102:GLU:HB3	45:BU:105:ALA:HB3	1.91	0.52
45:BU:113:SER:O	45:BU:115:ASN:C	2.48	0.52
45:BU:115:ASN:HA	45:BU:118:GLN:O	2.09	0.52
45:BU:47:TYR:OH	46:BV:74:TYR:O	2.27	0.52
27:BA:1151:G:C4'	45:BU:81:ASN:OD1	2.58	0.52
45:BU:8:ILE:C	45:BU:11:ARG:CG	2.78	0.52
46:BV:50:ASP:N	46:BV:53:LYS:CG	2.72	0.52
40:BW:84:ARG:HA	40:BW:84:ARG:NE	2.25	0.52
2:AV:37:G:H2'	2:AV:38:A:H8	1.74	0.52
42:BY:46:ASP:CG	42:BY:98:VAL:HG13	2.30	0.52
1:AA:1220:G:H1'	22:AS:52:TYR:HD2	1.75	0.52
27:BA:72:U:O4	27:BA:112:U:O4'	2.28	0.52
1:AA:281:G:O2'	1:AA:282:A:H8	1.91	0.52
27:BA:869:G:H2'	27:BA:870:A:O4'	2.10	0.52
10:AG:106:GLN:O	10:AG:110:GLN:HG2	2.09	0.52
27:BA:1079:C:O2	56:BK:130:GLY:CA	2.57	0.52
27:BA:282:A:C5	27:BA:360:G:N2	2.77	0.52
27:BA:1530:G:H1'	27:BA:1542:G:C6	2.45	0.52
1:AA:1377:A:OP1	10:AG:94:ARG:CZ	2.58	0.52
1:AA:660:G:H1	1:AA:745:C:H42	1.56	0.52
1:AA:218:C:H5'	1:AA:461:C:N4	2.25	0.52
27:BA:758:C:H2'	27:BA:759:G:C8	2.45	0.52
27:BA:301:G:H2'	27:BA:302:C:C6	2.44	0.52
48:B3:7:LYS:HA	48:B3:33:GLN:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:14:ILE:HG13	50:B4:38:GLY:C	2.29	0.52
27:BA:594:U:C4'	54:B8:58:MET:HE2	2.39	0.52
27:BA:1034:G:O4'	55:B9:18:ARG:NH1	2.43	0.52
27:BA:1163:G:C6	27:BA:1164:G:N7	2.78	0.52
27:BA:1263:U:O2'	51:B5:16:ARG:NH2	2.42	0.52
27:BA:2103:C:C2	27:BA:2187:G:N1	2.46	0.52
27:BA:2330:G:N3	27:BA:2331:G:O4'	2.42	0.52
27:BA:2373:G:N3	27:BA:2374:C:C4	2.78	0.52
27:BA:2533:A:C2'	27:BA:2534:A:C8	2.90	0.52
27:BA:2625:G:C3'	27:BA:2626:C:H5	2.01	0.52
27:BA:2632:A:H2'	27:BA:2632:A:N3	2.24	0.52
27:BA:2668:G:C2	27:BA:2669:G:N9	2.77	0.52
27:BA:2673:G:C2	27:BA:2674:G:C5	2.98	0.52
27:BA:2710:C:O2'	27:BA:2711:A:O4'	2.28	0.52
27:BA:2718:G:C2	27:BA:2719:G:N9	2.77	0.52
27:BA:2734:A:C6	27:BA:2735:G:C4	2.98	0.52
27:BA:2761:G:C2'	27:BA:2762:G:C5'	2.79	0.52
27:BA:2827:C:O2	27:BA:2827:C:C2'	2.52	0.52
27:BA:974(A):C:C5	27:BA:1186:G:N1	2.72	0.52
28:BD:154:VAL:HG21	28:BD:160:SER:CA	2.35	0.52
29:BE:101:THR:O	29:BE:102:ASP:C	2.47	0.52
29:BE:104:PHE:HB3	29:BE:108:LEU:CD1	2.40	0.52
29:BE:271:ILE:HG12	29:BE:294:THR:CA	2.30	0.52
30:BF:105:LYS:O	30:BF:106:GLU:O	2.28	0.52
30:BF:165:ASP:O	30:BF:168:ARG:CB	2.58	0.52
30:BF:237:GLU:O	30:BF:239:ALA:C	2.48	0.52
31:BG:140:ARG:O	31:BG:143:LYS:N	2.43	0.52
31:BG:21:VAL:O	31:BG:75:LEU:O	2.27	0.52
31:BG:25:MET:O	31:BG:71:ALA:O	2.28	0.52
32:BH:23:VAL:HG12	32:BH:74:MET:SD	2.49	0.52
33:BI:1:MET:CB	33:BI:22:ALA:H	2.22	0.52
34:BN:139:LEU:H	34:BN:139:LEU:CD1	1.95	0.52
34:BN:15:ARG:NH1	34:BN:40:ASN:CA	2.70	0.52
35:BO:101:PRO:O	35:BO:102:VAL:HG23	2.09	0.52
35:BO:8:LEU:CB	35:BO:82:ASN:O	2.58	0.52
36:BP:67:ARG:HG2	36:BP:68:GLU:N	2.25	0.52
37:BQ:147:VAL:HG13	37:BQ:148:ASN:N	2.25	0.52
37:BQ:27:GLY:C	37:BQ:28:ILE:CG1	2.78	0.52
44:BR:82:GLU:HA	44:BR:82:GLU:OE1	2.09	0.52
38:BS:52:PRO:O	38:BS:53:ASN:C	2.48	0.52
45:BU:98:ILE:N	45:BU:98:ILE:CD1	2.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:42:GLY:HA3	46:BV:54:TYR:HH	1.72	0.52
43:BZ:134:LEU:HD23	43:BZ:135:VAL:N	2.25	0.52
33:BI:103:GLN:HG2	33:BI:109:LYS:HA	1.92	0.52
27:BA:99:U:N3	42:BY:107:LYS:HD3	2.25	0.52
42:BY:103:LEU:CD2	42:BY:108:ARG:C	2.76	0.52
42:BY:34:GLU:C	42:BY:35:TYR:CD2	2.83	0.52
27:BA:94:G:H22	47:B2:42:ASN:ND2	1.94	0.52
1:AA:1004:A:H5''	1:AA:1025:U:O4	2.05	0.52
1:AA:1097:C:C4'	1:AA:1169:A:H4'	2.39	0.52
27:BA:280:C:O2'	27:BA:281:G:C4	2.63	0.52
9:AF:94:GLN:HB3	21:AR:32:ARG:HH11	1.74	0.52
23:AT:60:GLU:HA	23:AT:63:ILE:HD12	1.91	0.52
49:B0:65:GLY:CA	49:B0:66:LYS:NZ	2.68	0.52
49:B0:80:SER:OG	49:B0:84:ALA:HB3	2.06	0.52
48:B3:12:PRO:O	48:B3:20:LYS:HE2	2.10	0.52
50:B4:63:PHE:C	50:B4:65:ASP:OD2	2.47	0.52
27:BA:1012:U:O2	34:BN:21:ARG:HG2	2.10	0.52
27:BA:1033:U:H2'	27:BA:2750:A:C2	2.45	0.52
27:BA:993:G:H1'	27:BA:1162:G:N2	2.25	0.52
27:BA:2072:G:N1	27:BA:2438:U:N3	2.58	0.52
27:BA:2284:C:C2'	27:BA:2284:C:O2	2.58	0.52
27:BA:2410:G:C5	27:BA:2411:A:C5	2.98	0.52
27:BA:2475:C:O2'	27:BA:2477:C:OP2	2.28	0.52
27:BA:2592:G:H2'	27:BA:2593:U:H5'	1.92	0.52
27:BA:2628:C:C2'	27:BA:2781:A:H2'	2.39	0.52
27:BA:2543:G:O3'	27:BA:2645:G:O6	2.28	0.52
27:BA:2663:G:C2'	27:BA:2664:G:C8	2.70	0.52
27:BA:2704:C:O2'	27:BA:2705:A:O4'	2.27	0.52
27:BA:2753:A:N7	27:BA:2754:U:C4	2.78	0.52
27:BA:2762:G:H2'	27:BA:2763:G:C8	2.45	0.52
27:BA:2817:G:N3	27:BA:2818:G:H1'	2.25	0.52
27:BA:2839:G:C6	27:BA:2840:C:C5	2.85	0.52
27:BA:2848:G:C6	27:BA:2867:G:N2	2.77	0.52
27:BA:573:G:C3'	27:BA:574:C:H5''	2.36	0.52
27:BA:632:A:H2'	27:BA:633:A:C8	2.45	0.52
27:BA:945:A:H2'	27:BA:946:G:O5'	2.10	0.52
29:BE:81:VAL:HG11	29:BE:100:TRP:HZ3	1.75	0.52
29:BE:39:GLN:HE22	29:BE:174:LEU:HD11	1.54	0.52
32:BH:121:GLU:O	32:BH:123:GLU:OE1	2.28	0.52
32:BH:163:TYR:O	32:BH:166:GLU:HG2	2.10	0.52
32:BH:166:GLU:OE2	32:BH:166:GLU:CA	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:30:GLY:HA3	32:BH:78:VAL:C	2.28	0.52
32:BH:57:GLU:O	32:BH:59:HIS:N	2.42	0.52
32:BH:60:HIS:O	32:BH:63:LEU:CB	2.58	0.52
27:BA:2563:U:H4'	35:BO:27:GLY:HA2	1.92	0.52
36:BP:127:GLU:O	36:BP:128:GLY:C	2.47	0.52
37:BQ:41:THR:HG21	37:BQ:125:TRP:CE3	2.44	0.52
44:BR:52:ILE:O	44:BR:53:HIS:C	2.48	0.52
38:BS:127:LEU:HD23	38:BS:127:LEU:O	2.03	0.52
38:BS:127:LEU:O	38:BS:128:ASP:C	2.47	0.52
35:BO:101:PRO:HD3	39:BT:26:GLY:CA	2.40	0.52
39:BT:8:TYR:CD1	39:BT:54:THR:HB	2.44	0.52
46:BV:4:ILE:CG1	46:BV:13:ARG:HD3	2.39	0.52
46:BV:33:VAL:CB	46:BV:63:HIS:ND1	2.63	0.52
46:BV:93:ILE:O	46:BV:95:ILE:HD11	2.09	0.52
40:BW:80:PRO:CB	40:BW:100:THR:HG21	2.25	0.52
43:BZ:151:ASP:CB	43:BZ:153:LYS:HZ2	2.16	0.52
33:BI:117:LEU:HD22	33:BI:121:ILE:HD11	1.91	0.52
42:BY:31:LEU:O	42:BY:32:ARG:C	2.49	0.52
47:B2:50:ARG:O	47:B2:53:ILE:CB	2.57	0.52
27:BA:1340:U:H4'	27:BA:1394:U:H1'	1.92	0.52
31:BG:60:GLU:O	31:BG:61:PHE:HD1	1.93	0.52
41:BX:45:TYR:CE2	41:BX:73:ASP:HA	2.45	0.52
1:AA:279:A:C2	20:AQ:98:LEU:HD13	2.45	0.52
1:AA:15:G:H2'	1:AA:16:A:C8	2.45	0.52
1:AA:17:U:H3	1:AA:918:A:N6	2.07	0.52
1:AA:275:G:H5'	20:AQ:14:LYS:CD	2.39	0.52
27:BA:980:A:N3	27:BA:2037:G:O2'	2.38	0.52
27:BA:983:A:H3'	27:BA:984:A:O4'	2.10	0.52
27:BA:1689:A:H2'	27:BA:1690:A:C8	2.42	0.52
27:BA:1422:G:H2'	27:BA:1423:G:C8	2.43	0.52
27:BA:223:A:H5'	27:BA:224:G:H5'	1.91	0.52
27:BA:619:G:N7	27:BA:620:G:C2	2.78	0.52
5:AB:47:THR:HG23	5:AB:202:PRO:HD2	1.91	0.52
11:AH:34:GLU:HA	11:AH:37:ARG:HB3	1.91	0.52
49:B0:37:LEU:CG	49:B0:68:VAL:CG1	2.78	0.52
50:B4:7:PRO:CD	50:B4:56:VAL:HG11	2.39	0.52
51:B5:10:LYS:O	51:B5:11:THR:C	2.48	0.52
52:B6:16:ALA:CB	52:B6:42:PRO:HG3	2.40	0.52
53:B7:43:THR:O	53:B7:45:SER:OG	2.26	0.52
54:B8:55:TRP:CE3	54:B8:59:LYS:NZ	2.75	0.52
54:B8:60:LEU:C	54:B8:61:MET:O	2.47	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1263:U:H3'	27:BA:1264:G:C8	2.45	0.52
27:BA:2064:C:H1'	27:BA:2450:A:C5	2.41	0.52
27:BA:2197:U:C2'	27:BA:2224:G:N2	2.46	0.52
27:BA:2082:A:C5	27:BA:2239:G:C6	2.97	0.52
27:BA:2305:A:H8	27:BA:2306:C:H5''	1.75	0.52
27:BA:2307:G:C5'	27:BA:2307:G:H8	2.22	0.52
27:BA:2311:A:OP2	31:BG:55:LYS:CE	2.52	0.52
27:BA:2485:G:O2'	27:BA:2486:G:C4'	2.54	0.52
27:BA:2531:A:N3	27:BA:2532:G:H5'	2.25	0.52
27:BA:2549:G:H8	27:BA:2549:G:H5''	1.74	0.52
27:BA:2807:G:C8	27:BA:2808:U:C5	2.98	0.52
27:BA:770:G:H5'	53:B7:10:ARG:NH1	2.21	0.52
26:BB:80:U:H2'	26:BB:81:G:C8	2.44	0.52
29:BE:238:LEU:N	29:BE:238:LEU:CD2	2.73	0.52
30:BF:197:SER:HB3	30:BF:236:THR:O	2.10	0.52
31:BG:97:GLN:CG	31:BG:106:PHE:CE2	2.93	0.52
27:BA:2313:C:C5'	31:BG:72:LYS:CB	2.84	0.52
32:BH:34:ARG:HG2	32:BH:35:THR:H	1.75	0.52
32:BH:7:PRO:HD3	32:BH:68:ARG:NE	2.24	0.52
33:BI:43:ASN:HA	33:BI:46:ALA:HB3	1.92	0.52
34:BN:14:ALA:HB3	34:BN:40:ASN:CB	2.36	0.52
44:BR:60:LEU:HD23	44:BR:61:HIS:N	2.24	0.52
44:BR:67:LEU:HB2	44:BR:76:VAL:CG1	2.35	0.52
27:BA:2378:A:C1'	38:BS:26:LEU:HD22	2.40	0.52
38:BS:33:ARG:HB2	38:BS:48:VAL:HB	1.92	0.52
45:BU:104:GLU:O	45:BU:105:ALA:O	2.28	0.52
46:BV:74:TYR:CE1	46:BV:87:ARG:CA	2.93	0.52
40:BW:17:VAL:CA	40:BW:20:VAL:HG23	2.40	0.52
40:BW:11:ARG:CZ	40:BW:98:LYS:HB3	2.38	0.52
43:BZ:114:ASP:HA	43:BZ:170:SER:O	2.07	0.52
37:BQ:42:TYR:CE2	43:BZ:119:ASN:HA	2.43	0.52
42:BY:11:GLN:CB	42:BY:21:LYS:CE	2.88	0.52
42:BY:18:GLU:CB	42:BY:21:LYS:HZ1	2.23	0.52
43:BZ:25:ASN:CA	43:BZ:84:TYR:CD1	2.90	0.52
1:AA:1317:C:OP1	17:AN:16:PHE:HA	2.10	0.52
28:BD:216:ALA:CB	28:BD:223:ASN:HB2	2.30	0.52
47:B2:47:LYS:O	47:B2:50:ARG:N	2.44	0.52
27:BA:76:C:H4'	47:B2:55:ARG:CG	2.40	0.52
1:AA:1230:C:H2'	1:AA:1231:G:H8	1.74	0.52
27:BA:1530:G:N3	27:BA:1530:G:H2'	2.25	0.52
1:AA:294:U:OP1	1:AA:610:G:O2'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:759:G:H2'	27:BA:760:G:H8	1.75	0.52
27:BA:272:G:H1	27:BA:365:C:N4	2.08	0.52
1:AA:731:G:OP1	1:AA:766:A:H1'	2.09	0.52
11:AH:38:ILE:HG13	11:AH:118:VAL:HB	1.92	0.52
2:AV:75:C:H42	27:BA:2252:G:H1	1.58	0.51
48:B3:2:PRO:O	48:B3:39:ASP:N	2.43	0.51
27:BA:1456:G:C2	27:BA:2704:C:C4	2.97	0.51
27:BA:1567:A:H4'	27:BA:1568:G:N1	2.25	0.51
27:BA:2320:A:H61	38:BS:13:ARG:C	2.12	0.51
27:BA:2336:A:O2'	27:BA:2337:G:O5'	2.23	0.51
27:BA:2361:A:C4	27:BA:2362:G:C8	2.98	0.51
27:BA:2329:G:O6	27:BA:2387:U:O4	2.28	0.51
27:BA:960:A:H2	27:BA:2495:G:H21	1.50	0.51
27:BA:2511:U:C2'	27:BA:2512:C:C5'	2.86	0.51
27:BA:2515:C:N4	27:BA:2569:G:C6	2.74	0.51
27:BA:2491:U:H4'	27:BA:2570:G:OP1	2.10	0.51
27:BA:2589:A:C2	27:BA:2590:A:C8	2.99	0.51
27:BA:2715:C:C2	27:BA:2716:U:C6	2.98	0.51
27:BA:2827:C:C2'	27:BA:2828:C:O5'	2.58	0.51
27:BA:2832:U:H3'	27:BA:2832:U:C2	2.41	0.51
27:BA:452:G:H21	27:BA:457:A:H2	1.56	0.51
27:BA:574:C:N4	27:BA:2054:A:H5'	2.22	0.51
27:BA:686:G:N3	27:BA:686:G:H5''	2.25	0.51
28:BD:142:ASN:ND2	28:BD:142:ASN:H	2.09	0.51
27:BA:1799:G:H22	28:BD:153:LEU:HG	1.64	0.51
29:BE:172:ASP:O	29:BE:173:ARG:C	2.46	0.51
29:BE:263:GLU:C	29:BE:266:LYS:HE3	2.30	0.51
30:BF:153:VAL:CB	30:BF:157:LEU:HD21	2.18	0.51
26:BB:57:A:O4'	31:BG:13:MET:HE1	2.06	0.51
32:BH:7:PRO:CD	32:BH:68:ARG:CD	2.64	0.51
35:BO:97:ARG:HG2	35:BO:98:ILE:N	2.25	0.51
44:BR:67:LEU:HD13	44:BR:67:LEU:C	2.29	0.51
45:BU:40:LEU:CD2	46:BV:83:ARG:NH1	2.73	0.51
46:BV:59:GLU:OE1	46:BV:99:GLN:HA	2.07	0.51
40:BW:105:VAL:O	40:BW:105:VAL:HG23	2.10	0.51
40:BW:9:TYR:H	40:BW:9:TYR:HD1	1.58	0.51
43:BZ:125:PRO:HG3	43:BZ:130:ILE:CG2	2.38	0.51
1:AA:1400:C:N3	2:AV:34:G:C2	2.78	0.51
33:BI:94:THR:HG23	33:BI:96:LYS:CB	2.34	0.51
27:BA:321:G:H4'	30:BF:206:ASN:CB	2.34	0.51
42:BY:46:ASP:N	42:BY:62:VAL:CG1	2.70	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B2:6:GLN:C	47:B2:9:ARG:HB3	2.29	0.51
1:AA:280:C:C1'	20:AQ:38:ARG:NE	2.74	0.51
1:AA:1097:C:O2	1:AA:1168:A:C2	2.59	0.51
1:AA:889:A:C4'	1:AA:890:G:H4'	2.28	0.51
1:AA:761:G:C1'	20:AQ:103:GLY:O	2.59	0.51
27:BA:360:G:H2'	27:BA:361:G:O4'	2.10	0.51
27:BA:1328:G:H4'	27:BA:1329:U:H5	1.74	0.51
27:BA:1027:A:C5	27:BA:1126:A:C2	2.98	0.51
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.24	0.51
15:AL:85:ILE:HG12	15:AL:98:TYR:HB3	1.92	0.51
6:AC:52:LEU:O	6:AC:53:ALA:HB2	2.10	0.51
27:BA:1355:G:H1	27:BA:1376:C:H42	1.58	0.51
27:BA:1141:U:H2'	27:BA:1141:U:O2	2.10	0.51
19:AP:48:TRP:HD1	19:AP:48:TRP:H	1.58	0.51
50:B4:5:LEU:HD21	50:B4:9:ALA:CA	2.33	0.51
50:B4:68:ARG:CG	50:B4:72:LYS:HA	2.36	0.51
27:BA:1362:C:H2'	27:BA:1363:C:H6	1.75	0.51
27:BA:2054:A:OP1	27:BA:2055:C:H1'	2.10	0.51
27:BA:2236:C:C2'	27:BA:2236:C:O2	2.55	0.51
27:BA:2252:G:N1	27:BA:2253:G:C6	2.78	0.51
27:BA:2268:A:C8	27:BA:2268:A:H5''	2.45	0.51
27:BA:2283:C:C2	27:BA:2284:C:C1'	2.90	0.51
27:BA:2339:G:C4	27:BA:2340:G:N7	2.78	0.51
27:BA:2400:G:C3'	52:B6:20:PHE:CE1	2.94	0.51
27:BA:2422:A:H2'	27:BA:2424:C:H5	1.72	0.51
27:BA:2495:G:N3	27:BA:2496:C:H1'	2.26	0.51
27:BA:2519:U:C3'	27:BA:2519:U:P	2.98	0.51
27:BA:2544:G:C4	27:BA:2545:G:N7	2.78	0.51
27:BA:1265:A:OP2	27:BA:2615:U:OP1	2.28	0.51
27:BA:2616:C:H2'	27:BA:2617:C:H6	1.74	0.51
27:BA:2657:A:C5	27:BA:2665:A:C6	2.98	0.51
27:BA:2741:A:C3'	27:BA:2742:C:H5'	2.31	0.51
27:BA:2792:G:N2	27:BA:2804:C:O2	2.34	0.51
27:BA:2797:U:H1'	27:BA:2799:A:H8	1.74	0.51
27:BA:2810:A:C8	27:BA:2811:G:N9	2.78	0.51
27:BA:2814:C:C2	27:BA:2815:C:H5	2.28	0.51
27:BA:2838:G:N1	27:BA:2839:G:C8	2.78	0.51
27:BA:30:G:OP1	45:BU:8:ILE:CG1	2.55	0.51
27:BA:5:A:H5'	29:BE:94:ARG:HH22	1.73	0.51
27:BA:775:G:H22	27:BA:787:U:C3'	2.23	0.51
28:BD:76:ARG:HG2	28:BD:113:MET:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:118:GLY:O	28:BD:129:LEU:HG	1.99	0.51
28:BD:133:ASN:O	28:BD:134:ILE:CG1	2.51	0.51
29:BE:204:VAL:N	29:BE:303:PRO:HG3	2.23	0.51
30:BF:196:THR:CB	30:BF:236:THR:HG21	2.40	0.51
32:BH:37:HIS:CG	32:BH:40:MET:HG3	2.45	0.51
36:BP:52:LYS:CE	36:BP:53:ARG:NH1	2.70	0.51
37:BQ:46:VAL:CG2	37:BQ:156:ASN:ND2	2.70	0.51
37:BQ:82:LYS:CG	37:BQ:84:ARG:HG3	2.37	0.51
44:BR:105:ARG:C	44:BR:107:ASP:N	2.62	0.51
44:BR:67:LEU:HD23	44:BR:72:ASP:H	1.75	0.51
40:BW:29:LEU:HG	40:BW:30:GLU:N	2.22	0.51
40:BW:4:LYS:HD2	40:BW:106:ILE:HG12	1.91	0.51
43:BZ:112:LEU:HD22	43:BZ:171:VAL:HB	1.93	0.51
43:BZ:116:VAL:C	43:BZ:118:HIS:N	2.63	0.51
42:BY:22:GLN:C	42:BY:24:ARG:N	2.64	0.51
42:BY:49:GLU:O	42:BY:49:GLU:OE2	2.28	0.51
42:BY:51:LEU:HD22	42:BY:51:LEU:C	2.31	0.51
42:BY:87:VAL:HG12	42:BY:88:PRO:N	2.26	0.51
43:BZ:12:GLN:O	43:BZ:36:ARG:NH2	2.43	0.51
27:BA:1524:G:C5	27:BA:1525:G:C8	2.98	0.51
47:B2:45:ARG:O	47:B2:46:ILE:O	2.28	0.51
41:BX:51:GLN:O	41:BX:52:VAL:CB	2.57	0.51
41:BX:52:VAL:O	41:BX:53:ASN:ND2	2.43	0.51
34:BN:107:ASN:N	34:BN:107:ASN:ND2	2.51	0.51
2:AV:7:U:C3'	2:AV:8:U:P	2.96	0.51
1:AA:219:C:H4'	1:AA:381:C:H4'	1.92	0.51
1:AA:1097:C:H4'	1:AA:1169:A:C4'	2.40	0.51
1:AA:888:G:H21	1:AA:909:A:H62	1.58	0.51
1:AA:972:C:OP1	1:AA:1366:C:H5'	2.10	0.51
13:AJ:90:LEU:N	13:AJ:91:PRO:HD2	2.26	0.51
49:B0:73:GLY:O	49:B0:74:LYS:C	2.48	0.51
27:BA:850:C:O2'	48:B3:46:ASN:OD1	2.18	0.51
50:B4:68:ARG:HB2	50:B4:72:LYS:HG2	1.93	0.51
53:B7:22:MET:C	53:B7:24:THR:N	2.61	0.51
27:BA:19:C:OP1	45:BU:23:GLY:HA2	2.10	0.51
27:BA:2023:G:H8	27:BA:2023:G:OP2	1.92	0.51
27:BA:2411:A:N3	27:BA:2412:A:C8	2.78	0.51
27:BA:2411:A:C2'	27:BA:2412:A:H8	2.23	0.51
27:BA:2399:G:O6	27:BA:2418:A:C6	2.63	0.51
27:BA:2461:C:C4	27:BA:2462:U:H5	2.28	0.51
27:BA:2520:C:H2'	27:BA:2520:C:O2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2551:C:O2	27:BA:2552:U:C6	2.63	0.51
27:BA:2552:U:O2	27:BA:2552:U:H2'	2.10	0.51
27:BA:2562:U:C4	27:BA:2563:U:C4	2.98	0.51
27:BA:2805:G:H3'	27:BA:2807:G:H5''	1.93	0.51
27:BA:465:G:C6	27:BA:466:A:C6	2.98	0.51
27:BA:573:G:H3'	27:BA:574:C:C5'	2.36	0.51
27:BA:830:G:C6	27:BA:2446:G:O4'	2.63	0.51
27:BA:918:A:H5'	27:BA:919:G:C8	2.45	0.51
27:BA:932:G:OP1	48:B3:29:ARG:NH2	2.43	0.51
27:BA:946:G:H2'	27:BA:947:G:C8	2.45	0.51
28:BD:60:GLN:O	28:BD:60:GLN:OE1	2.27	0.51
29:BE:180:ILE:C	29:BE:183:ASP:OD2	2.46	0.51
27:BA:2620:C:C4'	29:BE:252:GLN:HB2	2.40	0.51
29:BE:47:GLY:N	29:BE:72:VAL:HG22	2.25	0.51
30:BF:201:SER:HB2	30:BF:204:ALA:CB	2.40	0.51
30:BF:61:PHE:HB2	30:BF:67:GLN:OE1	2.10	0.51
27:BA:2316:C:O3'	31:BG:142:ALA:HB1	2.10	0.51
32:BH:64:HIS:HA	32:BH:67:THR:OG1	2.10	0.51
34:BN:135:ILE:HG22	34:BN:139:LEU:HD11	1.92	0.51
34:BN:82:THR:O	34:BN:83:ILE:O	2.29	0.51
35:BO:73:ASP:O	35:BO:75:SER:OG	2.21	0.51
36:BP:67:ARG:HD3	36:BP:111:ALA:O	2.10	0.51
27:BA:2416:C:P	36:BP:51:PHE:CE2	2.93	0.51
36:BP:57:VAL:O	36:BP:58:GLN:CB	2.59	0.51
37:BQ:85:ILE:CA	37:BQ:122:PHE:HB3	2.39	0.51
37:BQ:16:ARG:NH1	37:BQ:19:TYR:CD1	2.74	0.51
37:BQ:29:ALA:HB3	37:BQ:66:ASN:HD21	1.75	0.51
45:BU:34:ASN:CA	45:BU:37:GLN:HB3	2.27	0.51
27:BA:995:C:C1'	45:BU:57:PHE:CD2	2.93	0.51
45:BU:66:ASN:HA	45:BU:76:TYR:CE1	1.97	0.51
46:BV:57:GLN:CG	46:BV:58:ALA:N	2.52	0.51
46:BV:67:LYS:HG3	46:BV:94:LYS:HG3	1.91	0.51
40:BW:66:GLU:O	40:BW:67:ASP:C	2.49	0.51
33:BI:68:LEU:HD21	33:BI:108:LEU:HD13	0.57	0.51
27:BA:294:A:O2'	42:BY:15:PRO:HG2	2.10	0.51
42:BY:33:GLU:O	42:BY:35:TYR:N	2.43	0.51
42:BY:63:ILE:CD1	42:BY:75:GLU:HA	2.37	0.51
43:BZ:51:LEU:HD21	43:BZ:63:PRO:CA	2.40	0.51
1:AA:1061:G:OP1	13:AJ:51:ARG:HD2	2.09	0.51
47:B2:29:ASN:O	47:B2:34:GLN:OE1	2.26	0.51
27:BA:148:C:C4	27:BA:149:A:N6	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AW:37:YYG:C19	10:AG:78:ARG:C	2.79	0.51
3:AW:37:YYG:C19	10:AG:79:ARG:HG2	2.41	0.51
17:AN:37:PHE:HE1	17:AN:53:LEU:HD13	1.75	0.51
1:AA:665:A:H2'	1:AA:725:G:N2	2.25	0.51
1:AA:927:G:N2	1:AA:1391:U:H1'	2.25	0.51
3:AW:40:C:H2'	3:AW:41:U:C5'	2.40	0.51
27:BA:1943:U:C1'	27:BA:1945:G:C5'	2.83	0.51
27:BA:2407:G:H2'	27:BA:2407:G:N3	2.25	0.51
33:BI:136:GLU:OE1	33:BI:136:GLU:N	2.41	0.51
27:BA:2181:G:C3'	27:BA:2182:G:H5''	2.41	0.51
56:BK:73:PRO:HD2	56:BK:74:PRO:CA	2.41	0.51
1:AA:1201:A:O2'	1:AA:1202:G:OP2	2.21	0.51
6:AC:52:LEU:O	6:AC:53:ALA:CB	2.58	0.51
1:AA:192:U:H1'	23:AT:103:GLY:HA2	1.92	0.51
1:AA:327:A:H4'	1:AA:328:C:OP1	2.10	0.51
27:BA:551:G:C4'	27:BA:1220:A:H2	2.24	0.51
48:B3:12:PRO:HB2	48:B3:20:LYS:CE	2.40	0.51
48:B3:8:LEU:HD22	48:B3:30:ARG:O	2.09	0.51
50:B4:56:VAL:HG12	50:B4:61:LYS:NZ	2.23	0.51
53:B7:5:TYR:O	53:B7:7:PRO:N	2.43	0.51
27:BA:2090:G:C4	27:BA:2230:G:N1	2.78	0.51
27:BA:2269:A:O5'	27:BA:2269:A:H8	1.93	0.51
27:BA:2503:A:C8	27:BA:2503:A:C3'	2.94	0.51
27:BA:2555:U:C2'	27:BA:2556:C:O5'	2.57	0.51
27:BA:1783:A:C2	27:BA:2588:G:H1'	2.45	0.51
27:BA:2656:U:C6	27:BA:2656:U:H3'	2.45	0.51
27:BA:2688:U:O2'	27:BA:2689:U:P	2.67	0.51
27:BA:2684:U:O2	27:BA:2725:A:C2	2.63	0.51
27:BA:2753:A:C8	27:BA:2754:U:C6	2.98	0.51
27:BA:2808:U:O4	27:BA:2892:A:N7	2.43	0.51
27:BA:2825:C:H5	27:BA:2825:C:P	2.30	0.51
27:BA:2840:C:N4	27:BA:2841:C:N4	2.59	0.51
27:BA:965:C:H2'	27:BA:966:G:O4'	2.10	0.51
26:BB:24:G:C8	26:BB:56:G:C5	2.98	0.51
28:BD:166:LYS:HA	28:BD:182:MET:HE2	1.92	0.51
28:BD:65:ASP:O	28:BD:66:PHE:CB	2.59	0.51
31:BG:141:VAL:C	31:BG:143:LYS:H	2.13	0.51
31:BG:98:PHE:HB3	31:BG:104:PHE:CE2	2.45	0.51
32:BH:51:VAL:HG21	32:BH:68:ARG:CG	2.39	0.51
33:BI:21:VAL:C	33:BI:26:ALA:HB2	2.24	0.51
34:BN:54:VAL:N	34:BN:135:ILE:HD12	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:25:GLN:HA	34:BN:28:GLU:HB2	1.90	0.51
34:BN:45:VAL:HG12	34:BN:46:ILE:N	2.26	0.51
27:BA:2251:G:C4'	37:BQ:102:ARG:NH2	2.67	0.51
37:BQ:139:ALA:O	37:BQ:143:VAL:HG13	2.11	0.51
38:BS:104:ILE:HG21	38:BS:109:PRO:HD3	1.93	0.51
38:BS:24:LEU:HA	38:BS:27:LEU:CB	2.39	0.51
43:BZ:90:GLU:H	43:BZ:91:PRO:HD3	1.70	0.51
33:BI:103:GLN:CG	33:BI:109:LYS:HA	2.40	0.51
42:BY:51:LEU:CD2	42:BY:95:ASN:HB3	2.41	0.51
43:BZ:42:ALA:O	43:BZ:45:GLN:HB2	2.10	0.51
1:AA:1060:C:C4'	13:AJ:52:GLY:HA3	2.39	0.51
16:AM:91:ARG:CD	16:AM:96:LEU:HD12	2.37	0.51
41:BX:14:ALA:C	41:BX:17:ASP:CG	2.68	0.51
41:BX:41:VAL:HG11	41:BX:66:VAL:HG21	1.92	0.51
31:BG:81:GLU:O	31:BG:85:GLN:HG3	2.03	0.51
31:BG:78:GLU:O	31:BG:82:GLU:OE2	2.28	0.51
27:BA:1917:U:H5''	27:BA:1918:A:N7	2.24	0.51
1:AA:571:U:H3'	1:AA:572:A:H5'	1.90	0.51
1:AA:991:U:OP1	1:AA:1018:C:OP1	2.28	0.51
27:BA:1575:C:H3'	27:BA:1575:C:C6	2.46	0.51
3:AW:69:U:H2'	3:AW:70:C:C6	2.46	0.51
27:BA:1639:U:H2'	27:BA:1640:C:H5'	1.91	0.51
27:BA:949:C:H2'	27:BA:950:G:C8	2.45	0.51
1:AA:1514:C:H6	1:AA:1514:C:O5'	1.93	0.51
1:AA:1510:U:H3	1:AA:1525:G:H1	1.56	0.51
49:B0:43:THR:CB	49:B0:75:GLY:CA	2.88	0.51
51:B5:10:LYS:C	51:B5:11:THR:O	2.49	0.51
52:B6:46:LYS:HZ3	52:B6:46:LYS:CB	2.17	0.51
52:B6:53:LYS:O	52:B6:54:LYS:NZ	2.44	0.51
54:B8:3:LYS:C	54:B8:4:MET:CE	2.77	0.51
27:BA:593:G:HO2'	54:B8:58:MET:CE	2.17	0.51
54:B8:6:THR:C	54:B8:8:LYS:H	2.12	0.51
55:B9:11:CYS:C	55:B9:13:ASN:H	2.13	0.51
27:BA:2287:A:N6	27:BA:2344:U:H5	1.72	0.51
27:BA:2399:G:N2	27:BA:2400:G:C1'	2.71	0.51
27:BA:2416:C:H2'	27:BA:2417:C:H5''	1.74	0.51
27:BA:957:A:H2	27:BA:2459:A:H5'	1.74	0.51
27:BA:2484:G:C2'	27:BA:2485:G:H5'	2.36	0.51
27:BA:2550:G:N1	27:BA:2559:C:C2	2.79	0.51
27:BA:2576:G:OP1	27:BA:2577:A:OP1	2.29	0.51
27:BA:2577:A:H2	27:BA:2614:A:C2	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2734:A:C8	27:BA:2734:A:C3'	2.93	0.51
27:BA:2788:C:C3'	27:BA:2789:C:P	2.98	0.51
27:BA:2815:C:C2	27:BA:2816:C:C6	2.95	0.51
27:BA:2887:U:H6	27:BA:2887:U:O5'	1.93	0.51
27:BA:450:G:N2	27:BA:454:A:C2	2.77	0.51
29:BE:210:THR:C	29:BE:216:ARG:CZ	2.77	0.51
29:BE:43:GLY:N	29:BE:309:PRO:O	2.42	0.51
30:BF:223:LEU:O	30:BF:225:PRO:CA	2.57	0.51
30:BF:94:THR:HG23	30:BF:95:GLU:H	1.75	0.51
32:BH:120:LEU:CB	32:BH:143:LEU:CD1	2.89	0.51
32:BH:122:ILE:C	32:BH:123:GLU:CD	2.69	0.51
32:BH:67:THR:O	32:BH:70:LEU:N	2.43	0.51
32:BH:75:VAL:C	32:BH:77:GLY:H	2.09	0.51
35:BO:14:SER:H	35:BO:95:GLY:HA2	1.75	0.51
36:BP:64:ILE:CD1	36:BP:106:VAL:CA	2.58	0.51
36:BP:114:VAL:HG21	36:BP:132:LYS:CA	2.39	0.51
36:BP:114:VAL:CG1	36:BP:133:VAL:HA	2.35	0.51
36:BP:69:ILE:C	36:BP:71:GLU:N	2.63	0.51
44:BR:28:LEU:HD13	44:BR:32:GLY:CA	2.40	0.51
26:BB:115:G:C5'	38:BS:59:ALA:CB	2.84	0.51
38:BS:92:ALA:C	38:BS:94:GLU:N	2.63	0.51
46:BV:23:GLU:O	46:BV:24:SER:CB	2.58	0.51
42:BY:50:VAL:C	42:BY:51:LEU:CD1	2.77	0.51
1:AA:1221:G:O2'	22:AS:77:THR:HG23	2.10	0.51
27:BA:1773:A:H2'	27:BA:1774:C:O4'	2.10	0.51
47:B2:30:ALA:HB1	47:B2:46:ILE:HD12	1.93	0.51
27:BA:58:G:C2	27:BA:73:A:C2	2.98	0.51
41:BX:30:ASP:O	41:BX:62:LYS:NZ	2.43	0.51
1:AA:1517:G:C1'	27:BA:1919:A:H5''	2.31	0.51
27:BA:498:G:H3'	27:BA:498:G:C8	2.44	0.51
1:AA:25:C:H5'	1:AA:524:G:H1'	1.93	0.51
27:BA:1528:A:N6	27:BA:1543:A:H62	2.06	0.51
1:AA:1206:G:H2'	1:AA:1207:G:O4'	2.11	0.51
1:AA:1127:G:O5'	1:AA:1127:G:H8	1.93	0.51
1:AA:1484:C:H2'	1:AA:1485:U:O4'	2.11	0.51
14:AK:66:LEU:HB3	14:AK:70:LYS:HE3	1.93	0.51
27:BA:2356:C:H4'	49:B0:17:ASN:CG	2.30	0.51
27:BA:987:G:OP1	48:B3:10:LYS:CE	2.58	0.51
27:BA:991:C:C5	27:BA:1185:C:N4	2.78	0.51
27:BA:2013:A:P	40:BW:96:ILE:HG21	2.33	0.51
27:BA:2029:G:H2'	27:BA:2030:A:H3'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2219:G:H2'	27:BA:2224:G:H8	1.76	0.51
27:BA:2264:C:C5	27:BA:2277:G:O6	2.63	0.51
27:BA:2392:A:C3'	27:BA:2393:A:H5'	2.40	0.51
27:BA:2461:C:H1'	27:BA:2492:U:C2	2.46	0.51
27:BA:1669:A:C3'	27:BA:2550:G:OP1	2.57	0.51
27:BA:2592:G:C2	27:BA:2603:G:O6	2.64	0.51
27:BA:2700:C:C2'	27:BA:2701:C:H5''	2.41	0.51
27:BA:2762:G:N7	27:BA:2763:G:O6	2.43	0.51
27:BA:782:A:H2	28:BD:233:ASP:OD2	1.88	0.51
27:BA:1656:C:OP2	29:BE:233:ARG:HD3	2.10	0.51
30:BF:34:ALA:HB1	30:BF:110:ALA:HB1	1.84	0.51
34:BN:109:TYR:O	34:BN:110:ASP:C	2.49	0.51
34:BN:15:ARG:NH1	34:BN:40:ASN:CG	2.42	0.51
27:BA:637:A:N7	36:BP:111:ALA:CB	2.70	0.51
37:BQ:152:SER:CB	37:BQ:153:PRO:CD	2.88	0.51
45:BU:22:LYS:N	45:BU:24:PHE:CZ	2.79	0.51
45:BU:28:ARG:CA	45:BU:31:GLN:CD	2.77	0.51
45:BU:30:LYS:O	45:BU:32:TYR:N	2.43	0.51
46:BV:21:ARG:NE	46:BV:21:ARG:CA	2.72	0.51
46:BV:94:LYS:O	46:BV:95:ILE:HG13	2.07	0.51
43:BZ:145:ASP:C	43:BZ:146:HIS:CG	2.84	0.51
33:BI:94:THR:HG23	33:BI:97:GLN:N	2.19	0.51
43:BZ:62:PHE:CZ	43:BZ:87:THR:HG21	2.46	0.51
43:BZ:51:LEU:CD2	43:BZ:63:PRO:CB	2.88	0.51
1:AA:1235:U:H5''	24:AU:3:LYS:HB2	1.92	0.51
20:AQ:40:LYS:HD3	20:AQ:42:TYR:HE1	1.76	0.51
27:BA:2857:G:N2	27:BA:2859:G:C8	2.78	0.51
1:AA:60:A:N6	1:AA:107:G:C2'	2.73	0.51
27:BA:408:G:H2'	27:BA:409:C:O4'	2.11	0.51
27:BA:1210:A:N3	27:BA:1212:G:N2	2.57	0.51
1:AA:1241:G:H8	1:AA:1241:G:OP2	1.93	0.51
27:BA:1418:G:N2	27:BA:1580:A:C2	2.79	0.51
27:BA:1332:G:C5	27:BA:1609:A:C6	2.99	0.51
27:BA:1350:C:C2	27:BA:1381:G:N2	2.75	0.51
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.25	0.51
27:BA:760:G:C2	27:BA:761:A:H1'	2.46	0.51
1:AA:897:C:O2	1:AA:903:G:C2	2.64	0.51
27:BA:609(A):G:H22	27:BA:618(A):C:H2'	1.76	0.51
8:AE:126:ARG:HA	8:AE:131:ILE:HG13	1.93	0.51
1:AA:118:U:H3'	1:AA:288:A:H61	1.74	0.51
1:AA:1381:U:H2'	1:AA:1381:U:O2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:83:G:H4'	48:B3:52:HIS:CD2	2.45	0.51
50:B4:5:LEU:CB	50:B4:56:VAL:CG1	2.61	0.51
27:BA:1263:U:H1'	51:B5:16:ARG:HH22	1.75	0.51
52:B6:35:LEU:C	52:B6:36:GLU:CG	2.70	0.51
53:B7:11:LYS:CA	53:B7:11:LYS:CE	2.86	0.51
53:B7:11:LYS:CG	53:B7:12:ARG:H	2.23	0.51
53:B7:33:ARG:O	53:B7:37:LYS:HB2	2.11	0.51
54:B8:16:ILE:CG2	54:B8:22:VAL:CG2	2.88	0.51
27:BA:1363:C:H2'	27:BA:1364:G:H5''	1.91	0.51
27:BA:2233:U:C2	27:BA:2234:G:C8	2.98	0.51
27:BA:2274:A:H2'	27:BA:2276:G:H5''	1.93	0.51
27:BA:2313:C:C6	27:BA:2314:C:C5	2.99	0.51
27:BA:2330:G:H21	27:BA:2331:G:C1'	2.01	0.51
27:BA:2458:G:N7	27:BA:2490:G:C5	2.78	0.51
27:BA:2531:A:C2	27:BA:2532:G:O4'	2.64	0.51
27:BA:2740:A:C3'	27:BA:2741:A:H5'	2.32	0.51
27:BA:1630:G:H2'	27:BA:630(A):C:C6	2.46	0.51
27:BA:644:A:O2'	27:BA:646:A:N7	2.43	0.51
27:BA:802:A:H2'	27:BA:803:U:H6	1.74	0.51
26:BB:28:C:P	38:BS:41:LYS:HG3	2.51	0.51
28:BD:140:VAL:CG1	28:BD:141:HIS:N	2.47	0.51
28:BD:70:LYS:CB	28:BD:73:ILE:HD11	2.38	0.51
29:BE:214:VAL:CG2	29:BE:221:LYS:CE	2.79	0.51
29:BE:267:ARG:HD3	29:BE:297:LYS:CB	2.41	0.51
29:BE:75:THR:CG2	29:BE:189:MET:SD	2.99	0.51
30:BF:103:ASN:O	30:BF:106:GLU:HB2	2.10	0.51
30:BF:240:LEU:HD23	30:BF:243:VAL:HG23	1.91	0.51
31:BG:14:ARG:CA	31:BG:137:PRO:HD3	2.31	0.51
31:BG:55:LYS:O	31:BG:65:GLU:HB2	2.10	0.51
32:BH:86:LEU:HB3	32:BH:130:ILE:O	2.10	0.51
34:BN:53:ILE:HG22	34:BN:54:VAL:H	1.76	0.51
35:BO:1:MET:CB	35:BO:2:ILE:HD11	2.41	0.51
37:BQ:126:VAL:HG12	37:BQ:127:ASN:N	2.24	0.51
37:BQ:35:ASN:CB	37:BQ:75:SER:HA	2.41	0.51
44:BR:28:LEU:HD11	44:BR:32:GLY:HA2	1.90	0.51
38:BS:34:LEU:HG	38:BS:101:VAL:O	2.11	0.51
40:BW:10:VAL:CB	40:BW:101:SER:O	2.50	0.51
40:BW:4:LYS:CG	40:BW:106:ILE:HG12	2.41	0.51
27:BA:85:G:P	42:BY:65:VAL:HB	2.33	0.51
42:BY:78:THR:HG22	42:BY:88:PRO:HA	0.55	0.51
13:AJ:51:ARG:CB	13:AJ:59:SER:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1406:U:H2'	27:BA:1407:C:C6	2.46	0.51
1:AA:946:A:H2'	1:AA:947:G:C8	2.46	0.51
1:AA:949:A:H1'	1:AA:1364:U:O2	2.11	0.51
1:AA:1095:U:H5'	1:AA:1109:C:N3	2.26	0.51
1:AA:792:A:C4	1:AA:794:A:N6	2.79	0.51
27:BA:123:G:H1	27:BA:128:C:N4	2.09	0.51
1:AA:730:G:C5	1:AA:731:G:H1'	2.46	0.51
15:AL:23:LYS:O	15:AL:97:ARG:HD3	2.10	0.51
1:AA:539:A:OP1	15:AL:114:LYS:HE2	2.11	0.51
5:AB:63:MET:HB3	5:AB:225:ALA:HB1	1.91	0.51
10:AG:33:ASP:HB2	10:AG:35:LYS:HD3	1.91	0.51
49:B0:60:PHE:N	49:B0:81:ILE:HG12	2.26	0.51
48:B3:3:ARG:CD	48:B3:60:GLU:HA	2.40	0.51
51:B5:17:ASP:O	51:B5:18:MET:C	2.48	0.51
54:B8:50:LEU:O	54:B8:51:ALA:HB3	2.10	0.51
27:BA:1278:A:C5'	44:BR:34:ILE:HG21	2.41	0.51
27:BA:1657:C:H6	27:BA:1657:C:O5'	1.93	0.51
27:BA:1665:A:N7	27:BA:2726:U:C2	2.79	0.51
27:BA:2212:A:N3	27:BA:2213:U:H5''	2.26	0.51
27:BA:2212:A:H2	27:BA:2213:U:H3'	1.75	0.51
27:BA:2331:G:H4'	49:B0:70:ILE:CB	2.28	0.51
27:BA:2327:A:C5	27:BA:2388:A:N1	2.79	0.51
27:BA:2403:C:C4	27:BA:2415:G:N1	2.73	0.51
27:BA:2462:U:H2'	27:BA:2463:C:O5'	2.10	0.51
27:BA:2574:G:H1'	29:BE:240:PRO:HG3	1.91	0.51
27:BA:2657:A:C8	27:BA:2665:A:N6	2.79	0.51
27:BA:2662:A:N3	27:BA:2662:A:H2'	2.25	0.51
27:BA:2686:G:C4	27:BA:2687:U:C6	2.98	0.51
27:BA:2725:A:C6	27:BA:2727:G:C4	2.98	0.51
27:BA:2758:A:OP1	27:BA:2758:A:H3'	2.10	0.51
27:BA:2783:G:O6	27:BA:2784:C:N4	2.40	0.51
27:BA:558:G:O5'	34:BN:91:LYS:HB2	2.11	0.51
28:BD:115:ILE:O	28:BD:116:MET:HB2	2.11	0.51
29:BE:228:ARG:HD2	29:BE:228:ARG:N	2.26	0.51
29:BE:295:LEU:HD22	29:BE:296:VAL:N	2.26	0.51
29:BE:45:LYS:CD	29:BE:301:PRO:HB2	2.41	0.51
30:BF:243:VAL:CA	30:BF:246:ARG:CD	2.51	0.51
30:BF:52:ALA:N	30:BF:55:ARG:CB	2.67	0.51
31:BG:140:ARG:HB3	31:BG:144:ARG:HH12	1.76	0.51
31:BG:38:GLU:OE2	31:BG:71:ALA:HB1	2.10	0.51
27:BA:2093:G:H5'	33:BI:25:TYR:CD1	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:35:ILE:CA	35:BO:62:VAL:C	2.70	0.51
36:BP:66:VAL:O	36:BP:68:GLU:CA	2.59	0.51
44:BR:56:LYS:HD3	44:BR:94:TYR:CZ	2.46	0.51
44:BR:96:ARG:HE	44:BR:117:VAL:HA	1.75	0.51
45:BU:104:GLU:OE1	46:BV:46:VAL:HG12	2.11	0.51
45:BU:86:ALA:CB	45:BU:90:LEU:HD21	2.22	0.51
40:BW:34:ASN:HA	40:BW:37:ARG:HB3	1.91	0.51
43:BZ:116:VAL:HG22	43:BZ:116:VAL:O	2.09	0.51
33:BI:115:ILE:HG23	33:BI:129:VAL:HG12	1.93	0.51
27:BA:293:U:H2'	27:BA:294:A:C8	2.46	0.51
42:BY:30:ASP:CG	42:BY:31:LEU:H	2.12	0.51
1:AA:976:G:C2'	1:AA:361(A):C:N4	2.60	0.51
1:AA:1060:C:C5	6:AC:2:GLY:CA	2.93	0.51
41:BX:18:MET:HE3	41:BX:25:GLN:HB2	1.92	0.51
41:BX:5:ILE:HG13	41:BX:40:ALA:CB	2.39	0.51
1:AA:1030:C:C2'	1:AA:30(A):G:H8	2.06	0.51
1:AA:1030:C:C2	1:AA:30(A):G:N7	2.78	0.51
41:BX:75:GLN:O	41:BX:78:ALA:N	2.44	0.51
40:BW:88:ARG:HD3	40:BW:91:GLY:O	2.11	0.51
27:BA:1418:G:OP1	27:BA:1588:C:H4'	2.11	0.51
1:AA:25:C:O2'	1:AA:524:G:N2	2.43	0.51
27:BA:177:G:N3	27:BA:177:G:H2'	2.26	0.51
56:BK:49:LYS:HZ1	56:BK:73:PRO:CA	2.23	0.51
27:BA:1495:A:H2'	27:BA:1496:A:C8	2.46	0.51
1:AA:1441:G:H1'	1:AA:1461:G:N2	2.25	0.51
7:AD:170:VAL:HG12	7:AD:171:GLY:N	2.26	0.51
23:AT:63:ILE:HG21	23:AT:81:LYS:HG3	1.93	0.51
10:AG:59:LEU:O	10:AG:63:LYS:HG2	2.10	0.51
51:B5:33:CYS:SG	51:B5:37:HIS:N	2.83	0.51
3:AW:76:A:C2	54:B8:32:GLN:CB	2.71	0.51
27:BA:2331:G:O4'	49:B0:70:ILE:HG13	2.03	0.51
27:BA:2400:G:C4'	52:B6:20:PHE:CE1	2.93	0.51
54:B8:38:GLY:C	54:B8:40:GLU:N	2.64	0.51
55:B9:19:ARG:HD2	55:B9:24:LEU:HD12	1.92	0.51
27:BA:2189:U:O2'	27:BA:2190:G:C5'	2.57	0.51
27:BA:2217:G:HO2'	27:BA:2218:G:H5'	1.72	0.51
27:BA:2271:G:O2'	27:BA:2272:U:C5'	2.57	0.51
27:BA:2276:G:N3	27:BA:2277:G:H8	2.06	0.51
27:BA:2323:G:H2'	27:BA:2324:C:C6	2.46	0.51
27:BA:2357:U:C2'	27:BA:2358:G:C5'	2.89	0.51
27:BA:2357:U:C2'	27:BA:2358:G:O5'	2.55	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2363:C:H2'	27:BA:2364:C:H5'	1.92	0.51
27:BA:2411:A:C2'	27:BA:2412:A:C8	2.94	0.51
27:BA:2519:U:O2	27:BA:2542:A:C2	2.63	0.51
27:BA:2528:U:C6	27:BA:2528:U:C3'	2.94	0.51
27:BA:2567:G:N3	27:BA:2568:C:C6	2.69	0.51
27:BA:2584:U:H5	27:BA:2585:U:C3'	2.24	0.51
27:BA:2595:G:O5'	27:BA:2595:G:C8	2.52	0.51
27:BA:2604:U:O2'	27:BA:2605:U:C5'	2.55	0.51
27:BA:2640:G:C6	27:BA:2774:C:N4	2.68	0.51
27:BA:2647:U:H2'	27:BA:2648:C:C6	2.46	0.51
27:BA:2734:A:C5	27:BA:2735:G:C4	2.98	0.51
27:BA:2749:A:H62	27:BA:2753:A:N6	2.08	0.51
27:BA:2768:C:H42	27:BA:2769:C:N4	2.03	0.51
27:BA:2772:C:C2'	27:BA:2773:C:O5'	2.59	0.51
27:BA:827:U:C4	27:BA:2430:A:C6	2.99	0.51
27:BA:904:C:O2'	43:BZ:166:LEU:CD1	2.47	0.51
28:BD:89:ASN:N	28:BD:105:ALA:CB	2.74	0.51
28:BD:170:TYR:O	28:BD:182:MET:HE1	2.10	0.51
28:BD:197:GLY:C	28:BD:199:ARG:H	2.14	0.51
30:BF:52:ALA:CA	30:BF:55:ARG:CG	2.86	0.51
31:BG:99:ASP:N	31:BG:104:PHE:CE2	2.79	0.51
32:BH:49:ILE:O	32:BH:50:THR:HB	2.11	0.51
32:BH:51:VAL:HG13	32:BH:64:HIS:HB3	1.93	0.51
35:BO:38:VAL:HG22	35:BO:61:VAL:HG22	1.92	0.51
36:BP:59:GLU:O	36:BP:60:GLU:HG3	2.09	0.51
37:BQ:142:LYS:CE	37:BQ:143:VAL:O	2.58	0.51
37:BQ:156:ASN:O	37:BQ:157:ALA:CB	2.59	0.51
38:BS:48:VAL:HG12	38:BS:55:ASP:OD2	2.10	0.51
39:BT:54:THR:HG23	39:BT:55:ALA:N	2.21	0.51
27:BA:1151:G:C1'	45:BU:81:ASN:HD21	2.22	0.51
46:BV:42:GLY:O	46:BV:48:GLY:HA2	2.10	0.51
46:BV:49:GLU:HA	46:BV:53:LYS:HZ2	1.75	0.51
40:BW:70:TYR:CE2	40:BW:72:LYS:CA	2.89	0.51
42:BY:79:LEU:CG	42:BY:80:GLU:N	2.73	0.51
1:AA:1358:U:OP1	17:AN:34:TYR:C	2.50	0.51
1:AA:976:G:OP2	1:AA:1358:U:H1'	2.10	0.51
13:AJ:48:THR:HG22	13:AJ:60:ARG:HG3	1.93	0.51
41:BX:3:ASP:C	47:B2:24:LYS:NZ	2.64	0.51
47:B2:59:ILE:CG1	47:B2:60:GLN:N	2.56	0.51
27:BA:70:G:H4'	27:BA:71:A:H5'	1.93	0.51
6:AC:12:LEU:HD11	17:AN:51:GLY:HA3	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AN:24:CYS:HB2	17:AN:39:LEU:CA	2.41	0.51
50:B4:49:PHE:CE1	50:B4:70:GLY:O	2.54	0.51
7:AD:22:LYS:HB2	7:AD:26:CYS:SG	2.51	0.51
27:BA:1518:C:C2	27:BA:1519:G:H1'	2.46	0.51
1:AA:1150:U:H2'	1:AA:1151:A:C8	2.46	0.51
27:BA:2182:G:H2'	27:BA:2183:C:N1	2.25	0.51
27:BA:2182:G:N3	27:BA:2183:C:N3	2.58	0.51
11:AH:20:TYR:HA	11:AH:65:TYR:OH	2.10	0.51
51:B5:23:HIS:O	51:B5:24:ALA:CB	2.56	0.51
11:AH:113:SER:HB2	11:AH:134:ILE:HD11	1.92	0.51
14:AK:42:TRP:HZ3	14:AK:47:VAL:HG21	1.76	0.51
22:AS:44:MET:HA	22:AS:47:HIS:HD2	1.76	0.51
1:AA:1253:G:OP1	13:AJ:44:VAL:HB	2.11	0.51
2:AV:55:U:C2	2:AV:57:G:OP2	2.64	0.51
49:B0:37:LEU:CB	49:B0:69:PHE:CG	2.83	0.51
49:B0:68:VAL:O	49:B0:68:VAL:CG1	2.56	0.51
48:B3:31:LEU:O	48:B3:33:GLN:N	2.43	0.51
48:B3:37:LEU:CB	48:B3:38:GLU:OE1	2.55	0.51
50:B4:41:PRO:CG	50:B4:57:ASP:HB2	2.34	0.51
51:B5:6:VAL:H	51:B5:8:LYS:CE	2.21	0.51
27:BA:1367:A:C2'	53:B7:25:LYS:HZ3	2.04	0.51
27:BA:2753:A:O2'	55:B9:15:LYS:NZ	2.44	0.51
27:BA:125:G:H22	53:B7:10:ARG:H	1.55	0.51
27:BA:192:C:H3'	27:BA:193:U:C6	2.46	0.51
27:BA:2015:A:C8	27:BA:2016:U:C5	2.99	0.51
27:BA:2060:A:H1'	27:BA:2502:G:C4	2.46	0.51
27:BA:2213:U:C2'	27:BA:2213:U:O2	2.56	0.51
27:BA:2254:C:H2'	27:BA:2255:G:O5'	2.09	0.51
27:BA:2394:C:N3	27:BA:2395:C:C4	2.78	0.51
27:BA:2466:C:C2'	27:BA:2467:C:H5'	2.40	0.51
27:BA:2517:C:C6	27:BA:2542:A:N7	2.79	0.51
27:BA:2555:U:HO2'	27:BA:2556:C:P	2.34	0.51
27:BA:2678:C:C2'	27:BA:2679:A:C5'	2.89	0.51
27:BA:2781:A:C4'	27:BA:2782:G:O5'	2.55	0.51
27:BA:2635:C:N3	27:BA:2783:G:C2	2.79	0.51
27:BA:449:A:P	30:BF:85:LYS:HA	2.50	0.51
27:BA:527:C:OP1	27:BA:527:C:H4'	2.11	0.51
27:BA:566:U:P	46:BV:81:ARG:HH21	2.34	0.51
27:BA:599:G:H1	27:BA:658:C:N4	2.05	0.51
27:BA:787:U:C4	27:BA:791:C:C5	2.99	0.51
27:BA:974:G:O6	46:BV:80:TYR:CZ	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:74:PRO:HD3	28:BD:96:ALA:HB2	1.87	0.51
29:BE:193:PHE:CZ	29:BE:199:ALA:CB	2.92	0.51
32:BH:62:ALA:O	32:BH:65:GLY:N	2.44	0.51
34:BN:137:GLU:O	34:BN:138:THR:C	2.50	0.51
36:BP:122:ALA:O	36:BP:141:GLU:HA	2.10	0.51
36:BP:65:ASP:OD1	36:BP:68:GLU:CD	2.49	0.51
44:BR:105:ARG:NH2	44:BR:105:ARG:N	2.59	0.51
44:BR:45:ARG:C	44:BR:49:ASP:HB2	2.31	0.51
27:BA:2839:G:HO2'	44:BR:92:GLY:HA3	1.71	0.51
26:BB:8:U:C5'	38:BS:37:ARG:CZ	2.88	0.51
27:BA:1011:G:OP2	45:BU:75:ASN:CB	2.56	0.51
46:BV:39:PHE:C	46:BV:40:VAL:CG2	2.47	0.51
46:BV:67:LYS:CE	46:BV:94:LYS:HD2	2.37	0.51
43:BZ:112:LEU:HA	43:BZ:174:PRO:CG	2.40	0.51
42:BY:46:ASP:CG	42:BY:98:VAL:HG11	2.31	0.51
42:BY:46:ASP:OD2	42:BY:98:VAL:CG1	2.59	0.51
43:BZ:4:THR:C	43:BZ:33:ALA:CB	2.68	0.51
47:B2:60:GLN:O	47:B2:63:GLU:HB2	2.11	0.51
41:BX:28:VAL:HG23	41:BX:28:VAL:O	2.11	0.51
1:AA:815:A:N1	1:AA:1508:G:N2	2.59	0.51
27:BA:1470:G:N1	27:BA:1520:U:N3	2.54	0.51
27:BA:1520:U:H6	27:BA:1520:U:O5'	1.93	0.51
12:AI:112:LYS:HG3	12:AI:117:HIS:O	2.10	0.51
27:BA:269:U:O4	27:BA:370:G:N7	2.44	0.51
25:AY:22:PRO:CA	56:BK:22:PRO:CB	2.88	0.51
1:AA:1240:U:C4	10:AG:30:ILE:CG2	2.93	0.51
1:AA:583:A:H2'	1:AA:584:G:O4'	2.11	0.51
1:AA:112:G:C4'	1:AA:389:A:H4'	2.41	0.51
1:AA:781:A:O2'	1:AA:1522:U:O2	2.22	0.51
1:AA:1344:C:H4'	12:AI:120:ARG:HB3	1.92	0.51
25:AY:301:LYS:CA	25:AY:302:ILE:CA	2.88	0.51
15:AL:88:GLY:O	15:AL:99:HIS:CE1	2.64	0.51
27:BA:1389:G:H2'	27:BA:1390:U:C6	2.46	0.51
27:BA:1763:G:H5'	27:BA:1763:G:C8	2.46	0.51
49:B0:76:ALA:O	49:B0:78:PHE:CD1	2.64	0.50
48:B3:9:VAL:HG22	48:B3:54:VAL:CG1	2.40	0.50
53:B7:22:MET:O	53:B7:24:THR:O	2.29	0.50
27:BA:1819:A:H5''	28:BD:157:ALA:HB1	1.90	0.50
27:BA:2195:C:H6	27:BA:2195:C:H5''	1.65	0.50
27:BA:2246:G:H1	27:BA:2258:C:H42	1.58	0.50
27:BA:2265:U:O2'	27:BA:2266:A:P	2.69	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2280:G:C2	27:BA:2281:C:C5	2.99	0.50
27:BA:2302:G:C2	27:BA:2315:G:C6	2.99	0.50
27:BA:2325:G:C4	27:BA:2326:C:C5	3.00	0.50
27:BA:2361:A:O2'	27:BA:2362:G:H5'	2.11	0.50
27:BA:2352:A:N7	27:BA:2366:A:N1	2.53	0.50
27:BA:2433:A:C2	50:B4:32:HIS:CE1	2.93	0.50
27:BA:2549:G:C4	27:BA:2550:G:C8	2.99	0.50
27:BA:2550:G:O2'	27:BA:2551:C:H5'	2.11	0.50
27:BA:2589:A:C3'	27:BA:2590:A:C5'	2.89	0.50
27:BA:29:U:O2	27:BA:511:U:O2	2.29	0.50
27:BA:685:A:O4'	27:BA:688:U:O4	2.28	0.50
27:BA:826:U:N3	27:BA:828:U:H1'	2.26	0.50
28:BD:104:ILE:C	28:BD:106:PRO:HD2	2.31	0.50
29:BE:47:GLY:CA	29:BE:305:LYS:HG2	2.41	0.50
29:BE:70:VAL:O	29:BE:71:THR:HG22	2.12	0.50
30:BF:102:LEU:HD22	30:BF:106:GLU:CB	2.25	0.50
30:BF:2:GLU:C	30:BF:18:LEU:HD21	2.32	0.50
33:BI:6:LEU:HB3	33:BI:36:ALA:HB2	1.84	0.50
35:BO:87:ILE:HG23	35:BO:92:SER:H	1.74	0.50
46:BV:3:ALA:CA	46:BV:12:TYR:OH	2.59	0.50
46:BV:14:VAL:CG2	46:BV:19:VAL:CG2	2.54	0.50
40:BW:24:ILE:C	40:BW:25:ARG:O	2.46	0.50
40:BW:97:LYS:HE3	40:BW:99:ARG:HH11	1.68	0.50
43:BZ:149:ALA:CB	43:BZ:164:PRO:HA	2.41	0.50
42:BY:15:PRO:O	42:BY:18:GLU:CB	2.56	0.50
42:BY:11:GLN:CG	42:BY:21:LYS:HE2	2.35	0.50
26:BB:104:A:H1'	43:BZ:24:TYR:CZ	2.37	0.50
43:BZ:85:MET:C	43:BZ:86:VAL:CG2	2.77	0.50
28:BD:215:LYS:C	28:BD:216:ALA:O	2.48	0.50
47:B2:24:LYS:HE3	47:B2:28:LEU:HD12	1.93	0.50
41:BX:22:ASN:CA	41:BX:68:LEU:CG	2.88	0.50
5:AB:115:LEU:HB2	5:AB:145:LEU:HD12	1.93	0.50
1:AA:942:G:H2'	1:AA:943:U:H6	1.76	0.50
11:AH:88:LYS:O	11:AH:90:GLY:N	2.44	0.50
42:BY:81:LYS:HD2	42:BY:83:ASP:N	2.11	0.50
27:BA:1924:C:N4	27:BA:1925:C:H41	2.09	0.50
27:BA:1274:A:C2	27:BA:1302:A:C2	2.98	0.50
27:BA:176:G:H2'	27:BA:177:G:C8	2.46	0.50
1:AA:129(A):G:N1	1:AA:190(D):U:H4'	2.26	0.50
27:BA:212:G:H2'	27:BA:213:A:H8	1.76	0.50
14:AK:12:ARG:HH12	14:AK:40:ILE:HA	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AB:17:PHE:CD1	5:AB:18:GLY:N	2.78	0.50
1:AA:642:A:C2	11:AH:113:SER:O	2.64	0.50
9:AF:2:ARG:HH22	18:AO:2:PRO:HG2	1.75	0.50
27:BA:1797:C:C2	27:BA:1823:G:N2	2.79	0.50
2:AV:56:C:C2	31:BG:56:ARG:NH2	2.79	0.50
48:B3:5:LYS:CA	48:B3:36:VAL:HG12	2.41	0.50
53:B7:28:ARG:O	53:B7:31:LEU:HB2	2.11	0.50
53:B7:38:GLY:O	53:B7:39:ARG:HG3	2.12	0.50
27:BA:1203:G:H1'	27:BA:1241:A:N1	2.25	0.50
27:BA:1251:C:H5''	45:BU:10:ARG:CD	2.41	0.50
27:BA:1658:C:H5''	29:BE:230:GLY:HA3	1.93	0.50
27:BA:1819:A:H4'	27:BA:1820:U:H5'	1.93	0.50
27:BA:2210:G:N7	28:BD:148:GLY:C	2.65	0.50
27:BA:2292:C:OP2	38:BS:25:ARG:NH2	2.44	0.50
27:BA:2306:C:C3'	27:BA:2306:C:C6	2.95	0.50
27:BA:2400:G:N1	27:BA:2417:C:C4	2.79	0.50
27:BA:2431:U:C2'	27:BA:2431:U:O2	2.56	0.50
27:BA:2478:A:C1'	27:BA:2529:G:N7	2.74	0.50
27:BA:2526:G:C6	27:BA:2527:C:C6	2.98	0.50
27:BA:1669:A:O2'	27:BA:2549:G:H4'	2.11	0.50
27:BA:2562:U:N3	27:BA:2563:U:C2	2.69	0.50
27:BA:2575:C:H5'	29:BE:241:TRP:CE2	2.46	0.50
27:BA:1264:G:O3'	27:BA:2615:U:H5''	2.10	0.50
27:BA:2734:A:C8	27:BA:2734:A:H3'	2.47	0.50
27:BA:2834:G:C6	27:BA:2879:C:C2	2.99	0.50
27:BA:972:G:C8	27:BA:974:G:OP1	2.64	0.50
27:BA:993:G:H2'	27:BA:993:G:N3	2.26	0.50
28:BD:113:MET:N	28:BD:113:MET:SD	2.84	0.50
28:BD:73:ILE:HD13	28:BD:95:TYR:CE2	2.46	0.50
29:BE:199:ALA:HA	29:BE:314:ALA:N	2.27	0.50
27:BA:2773:C:OP1	29:BE:262:THR:HG22	2.12	0.50
29:BE:267:ARG:C	29:BE:297:LYS:HD2	2.32	0.50
27:BA:2679:A:C2'	29:BE:300:VAL:HG12	2.41	0.50
30:BF:220:THR:C	30:BF:222:ASP:N	2.60	0.50
31:BG:22:VAL:CB	31:BG:24:HIS:CE1	2.89	0.50
32:BH:25:VAL:HG21	32:BH:74:MET:HB3	1.92	0.50
32:BH:86:LEU:CD1	32:BH:87:GLU:C	2.80	0.50
33:BI:19:LYS:O	33:BI:21:VAL:HG23	2.12	0.50
36:BP:73:VAL:HA	36:BP:76:LEU:CB	2.40	0.50
37:BQ:91:HIS:O	37:BQ:111:THR:CA	2.58	0.50
44:BR:22:ARG:NH2	44:BR:69:ASP:CB	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:116:PHE:C	38:BS:120:GLU:CD	2.68	0.50
45:BU:47:TYR:C	45:BU:49:ASP:N	2.62	0.50
27:BA:974:G:N7	46:BV:80:TYR:CD2	2.79	0.50
46:BV:96:LEU:N	46:BV:96:LEU:HD23	2.26	0.50
27:BA:24:G:O3'	40:BW:102:HIS:NE2	2.44	0.50
33:BI:105:GLN:O	33:BI:106:HIS:C	2.49	0.50
42:BY:11:GLN:CA	42:BY:21:LYS:CE	2.88	0.50
1:AA:978:A:N7	1:AA:1361:G:N2	2.58	0.50
28:BD:208:GLY:CA	28:BD:210:LYS:CE	2.73	0.50
27:BA:76:C:O3'	47:B2:55:ARG:CG	2.60	0.50
31:BG:84:LEU:O	31:BG:88:LEU:CB	2.54	0.50
1:AA:1352:C:OP2	24:AU:3:LYS:NZ	2.29	0.50
27:BA:863:A:H2'	27:BA:864:G:C8	2.45	0.50
1:AA:410:G:P	7:AD:25:ARG:NE	2.84	0.50
1:AA:901:A:H8	1:AA:901:A:O5'	1.94	0.50
1:AA:877:C:O2'	11:AH:89:PRO:HG2	2.11	0.50
1:AA:1286:A:H62	1:AA:1354:C:C5'	2.20	0.50
11:AH:29:SER:CB	11:AH:32:LYS:HZ1	2.23	0.50
5:AB:174:VAL:HG13	5:AB:184:VAL:HG11	1.94	0.50
56:BK:23:PRO:HG2	56:BK:24:VAL:H	1.76	0.50
27:BA:264:C:O2'	27:BA:265:A:H2'	2.12	0.50
5:AB:15:VAL:HG22	5:AB:209:ARG:HD2	1.93	0.50
10:AG:113:GLU:HG3	10:AG:118:VAL:HB	1.93	0.50
6:AC:139:GLN:HA	6:AC:170:GLN:HE22	1.76	0.50
1:AA:1397:C:O2	1:AA:1397:C:H2'	2.11	0.50
2:AV:2:C:O2'	27:BA:2255:G:O2'	2.30	0.50
49:B0:67:VAL:HG23	49:B0:68:VAL:N	2.26	0.50
27:BA:929:G:C2'	48:B3:37:LEU:HD13	2.41	0.50
51:B5:45:ILE:N	51:B5:45:ILE:HD12	2.26	0.50
53:B7:9:ASN:O	53:B7:11:LYS:N	2.44	0.50
54:B8:16:ILE:CD1	54:B8:16:ILE:H	2.20	0.50
27:BA:1809:A:C6	50:B4:43:TRP:HH2	2.30	0.50
27:BA:1935:G:O2'	27:BA:1937:A:H2	1.94	0.50
27:BA:192:C:H3'	27:BA:193:U:H6	1.77	0.50
27:BA:1991:U:H2'	27:BA:1992:G:H5''	1.92	0.50
27:BA:2045:C:N4	27:BA:2624:G:C2	2.79	0.50
27:BA:2212:A:C2'	27:BA:2213:U:C6	2.80	0.50
27:BA:2234:G:N3	27:BA:2235:G:C8	2.78	0.50
27:BA:2262:U:H5'	27:BA:2387:U:O2	2.10	0.50
27:BA:2352:A:C2	49:B0:30:VAL:O	2.65	0.50
27:BA:2352:A:O2'	27:BA:2353:G:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2381:C:H6	27:BA:2381:C:C5'	2.24	0.50
27:BA:2397:G:H2'	27:BA:2398:U:C6	2.47	0.50
27:BA:2398:U:O2'	27:BA:2399:G:OP1	2.29	0.50
27:BA:2450:A:C2	27:BA:2451:A:N9	2.80	0.50
27:BA:2462:U:C4	27:BA:2463:C:C5	2.99	0.50
27:BA:2482:G:C4	27:BA:2483:C:H6	2.28	0.50
27:BA:2549:G:C6	27:BA:2550:G:N7	2.79	0.50
27:BA:2556:C:H2'	27:BA:2557:G:O4'	2.11	0.50
27:BA:2588:G:O6	27:BA:2589:A:C6	2.64	0.50
27:BA:2612:C:C2'	27:BA:2613:U:C5'	2.89	0.50
27:BA:2636:U:C2'	27:BA:2637:U:O5'	2.60	0.50
27:BA:2690:C:C6	27:BA:2690:C:O5'	2.65	0.50
27:BA:2698:U:C2'	27:BA:2699:C:H6	2.15	0.50
27:BA:2827:C:N3	27:BA:2828:C:C5	2.79	0.50
27:BA:2839:G:H2'	27:BA:2840:C:C6	2.32	0.50
27:BA:447:A:N7	27:BA:473:G:C5	2.79	0.50
28:BD:167:GLU:OE1	28:BD:167:GLU:HA	2.10	0.50
28:BD:74:PRO:HG3	28:BD:96:ALA:CA	2.32	0.50
29:BE:190:ASN:C	29:BE:192:ILE:CA	2.79	0.50
30:BF:19:PRO:O	30:BF:21:VAL:N	2.44	0.50
30:BF:28:SER:O	30:BF:29:ASP:C	2.49	0.50
32:BH:147:ILE:O	32:BH:147:ILE:HD12	2.11	0.50
34:BN:70:PHE:O	34:BN:71:TYR:CB	2.53	0.50
35:BO:1:MET:SD	35:BO:67:ARG:HD2	2.52	0.50
36:BP:65:ASP:CB	36:BP:109:LEU:CA	2.86	0.50
37:BQ:133:GLU:HG3	37:BQ:134:PHE:CD1	2.46	0.50
37:BQ:85:ILE:CG2	37:BQ:136:TRP:HZ2	2.24	0.50
44:BR:28:LEU:CD1	44:BR:32:GLY:CA	2.87	0.50
27:BA:298:G:H8	27:BA:298:G:O5'	1.94	0.50
1:AA:1226:C:OP2	16:AM:103:THR:CB	2.60	0.50
41:BX:13:LYS:CD	41:BX:13:LYS:H	2.22	0.50
41:BX:18:MET:CE	41:BX:25:GLN:N	2.70	0.50
41:BX:7:HIS:CB	41:BX:8:PRO:HD2	2.41	0.50
27:BA:1080:C:H2'	56:BK:127:ILE:CD1	2.41	0.50
1:AA:1005:A:C5'	1:AA:1037:C:O2	2.54	0.50
1:AA:1340:A:C4'	2:AV:31:A:HO2'	2.19	0.50
1:AA:497:A:HO2'	1:AA:498:U:P	2.29	0.50
1:AA:944:G:O6	1:AA:1337:G:C8	2.62	0.50
27:BA:1619:G:N3	53:B7:1:MET:HB3	2.26	0.50
1:AA:1250:A:OP1	12:AI:66:ARG:NE	2.45	0.50
27:BA:546:C:N4	27:BA:1221:C:OP1	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AI:74:ILE:HA	12:AI:77:ILE:HD12	1.93	0.50
49:B0:14:ARG:HH11	49:B0:14:ARG:H	1.58	0.50
49:B0:40:GLN:N	49:B0:69:PHE:CE1	2.79	0.50
48:B3:43:ILE:CD1	48:B3:43:ILE:N	2.57	0.50
48:B3:6:VAL:CG2	48:B3:7:LYS:N	2.74	0.50
52:B6:16:ALA:HB1	52:B6:42:PRO:CD	2.41	0.50
53:B7:11:LYS:HA	53:B7:11:LYS:HE2	1.94	0.50
53:B7:30:ILE:CD1	53:B7:33:ARG:NE	2.75	0.50
27:BA:1160:G:H2'	27:BA:1161:C:C6	2.46	0.50
27:BA:1500:G:O2'	28:BD:98:GLY:O	2.29	0.50
27:BA:2195:C:N3	27:BA:2196:C:C6	2.80	0.50
27:BA:2303:G:H4'	31:BG:99:ASP:CG	2.31	0.50
27:BA:2349:G:H3'	27:BA:2350:C:H5''	1.93	0.50
27:BA:2352:A:C8	27:BA:2366:A:N6	2.80	0.50
27:BA:2386:C:H1'	49:B0:39:ARG:NH2	2.26	0.50
27:BA:2508:G:H2'	27:BA:2509:G:H5'	1.92	0.50
27:BA:2514:U:C3'	27:BA:2514:U:C6	2.94	0.50
27:BA:2652:C:C2'	27:BA:2653:U:C5'	2.88	0.50
27:BA:2652:C:C4	27:BA:2653:U:N3	2.78	0.50
27:BA:2717:G:O2'	27:BA:2718:G:C4'	2.59	0.50
27:BA:2745:C:H2'	27:BA:2746:U:O5'	2.11	0.50
27:BA:2892:A:OP1	27:BA:2892:A:C4'	2.59	0.50
29:BE:198:TYR:HE2	29:BE:265:ASN:C	2.12	0.50
29:BE:233:ARG:O	29:BE:234:ARG:CB	2.48	0.50
31:BG:103:ASN:O	31:BG:104:PHE:CD2	2.65	0.50
31:BG:98:PHE:C	31:BG:104:PHE:HD2	2.10	0.50
27:BA:2313:C:C4'	31:BG:51:ARG:NH1	2.75	0.50
35:BO:24:VAL:HG21	35:BO:32:TYR:CA	2.41	0.50
35:BO:3:GLN:CG	35:BO:4:GLN:H	2.23	0.50
37:BQ:94:ARG:HG2	37:BQ:107:LYS:O	2.11	0.50
37:BQ:85:ILE:HD13	37:BQ:85:ILE:O	2.11	0.50
44:BR:28:LEU:HD13	44:BR:32:GLY:HA2	1.92	0.50
44:BR:45:ARG:HG2	44:BR:46:GLY:H	1.77	0.50
44:BR:91:GLN:C	44:BR:92:GLY:O	2.50	0.50
31:BG:145:ASP:CB	38:BS:15:GLU:HA	2.41	0.50
31:BG:146:LYS:HE3	38:BS:15:GLU:OE1	2.11	0.50
45:BU:115:ASN:O	45:BU:117:ARG:HG3	2.12	0.50
46:BV:35:LEU:C	46:BV:60:VAL:CG1	2.64	0.50
40:BW:17:VAL:O	40:BW:20:VAL:HB	2.10	0.50
43:BZ:141:MET:HA	43:BZ:171:VAL:CG1	2.36	0.50
33:BI:93:ILE:HG12	33:BI:121:ILE:HB	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:74:U:H2'	26:BB:75:G:C8	2.40	0.50
47:B2:45:ARG:HE	47:B2:49:LEU:HD21	1.76	0.50
27:BA:134:C:H2'	27:BA:135:G:O4'	2.11	0.50
2:AV:65:G:N1	2:AV:66:A:C5	2.80	0.50
1:AA:280:C:O2	20:AQ:38:ARG:HA	2.11	0.50
1:AA:1517:G:H1'	27:BA:1919:A:C5'	2.29	0.50
1:AA:403:C:H42	1:AA:547:A:C5'	2.24	0.50
1:AA:1285:A:OP2	24:AU:24:ARG:HG2	2.11	0.50
1:AA:17:U:O2	1:AA:919:A:C2	2.64	0.50
1:AA:579:G:H1'	1:AA:728:A:N3	2.27	0.50
27:BA:1899:G:N2	27:BA:1902:C:N4	2.58	0.50
7:AD:62:GLN:HE22	7:AD:65:ARG:HD3	1.75	0.50
27:BA:1555:G:O5'	27:BA:1555:G:H8	1.93	0.50
1:AA:1127:G:H2'	1:AA:1128:C:H6	1.75	0.50
27:BA:1071:G:H2'	27:BA:1072:C:H5'	1.93	0.50
27:BA:1000:A:C8	27:BA:1154:G:N2	2.80	0.50
6:AC:43:LEU:O	6:AC:47:LEU:HB2	2.11	0.50
49:B0:62:LEU:O	49:B0:63:SER:C	2.49	0.50
49:B0:37:LEU:CA	49:B0:69:PHE:CD2	2.92	0.50
54:B8:16:ILE:HG22	54:B8:17:THR:H	1.76	0.50
27:BA:1668:A:H61	27:BA:1676:A:H61	1.57	0.50
27:BA:2095:C:N3	27:BA:2194:G:O6	2.44	0.50
27:BA:2298:A:C1'	27:BA:2322:A:O2'	2.60	0.50
27:BA:2325:G:C5	27:BA:2326:C:C5	2.96	0.50
27:BA:2325:G:C2	27:BA:2326:C:C6	3.00	0.50
27:BA:2384:G:H3'	27:BA:2386:C:P	2.51	0.50
3:AW:76:A:C4	27:BA:2421:G:C5	3.00	0.50
27:BA:2453:A:H61	27:BA:2500:U:H3	1.59	0.50
27:BA:247:G:C6	54:B8:11:LYS:NZ	2.62	0.50
27:BA:2544:G:C2	27:BA:2545:G:C5	3.00	0.50
27:BA:2564:A:N1	27:BA:2647:U:H4'	2.26	0.50
27:BA:2592:G:C8	27:BA:2593:U:C6	2.97	0.50
27:BA:2705:A:N6	27:BA:2706:G:C2	2.79	0.50
27:BA:2771:C:C2	27:BA:2772:C:C6	2.99	0.50
27:BA:2863:C:C2	27:BA:2864:G:C8	2.99	0.50
27:BA:2850:A:C2	27:BA:2869:G:H4'	2.47	0.50
26:BB:8:U:H5'	38:BS:37:ARG:CD	2.41	0.50
28:BD:104:ILE:CD1	28:BD:104:ILE:H	2.02	0.50
29:BE:216:ARG:HD3	29:BE:253:GLN:HA	1.92	0.50
30:BF:165:ASP:O	30:BF:168:ARG:HG3	2.10	0.50
32:BH:18:VAL:HG22	32:BH:23:VAL:HG22	0.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:3:VAL:HG21	33:BI:21:VAL:H	1.76	0.50
27:BA:2041:U:C5'	34:BN:70:PHE:HE1	2.24	0.50
34:BN:83:ILE:HG13	34:BN:84:ARG:CG	2.41	0.50
35:BO:10:VAL:CG1	35:BO:12:ASP:OD1	2.52	0.50
36:BP:92:ASP:C	36:BP:92:ASP:OD1	2.50	0.50
37:BQ:135:ALA:O	37:BQ:137:ARG:N	2.45	0.50
37:BQ:142:LYS:CE	37:BQ:142:LYS:CA	2.88	0.50
37:BQ:65:ARG:NH2	37:BQ:85:ILE:O	2.44	0.50
38:BS:23:ARG:HH21	38:BS:35:VAL:HG11	1.77	0.50
38:BS:41:LYS:HZ3	38:BS:68:GLU:CD	2.11	0.50
45:BU:8:ILE:H	45:BU:11:ARG:HD3	1.65	0.50
45:BU:39:LEU:C	45:BU:41:ASN:N	2.61	0.50
43:BZ:159:THR:CG2	43:BZ:160:LEU:N	2.45	0.50
33:BI:111:ASP:C	33:BI:112:LYS:HD3	2.30	0.50
33:BI:124:LEU:CG	33:BI:125:GLY:N	2.74	0.50
27:BA:338:G:H8	42:BY:21:LYS:CB	2.20	0.50
42:BY:33:GLU:CD	42:BY:34:GLU:N	2.51	0.50
43:BZ:1:MET:HE1	43:BZ:52:PHE:CD2	2.45	0.50
1:AA:1308:U:H3'	16:AM:99:ARG:NH1	2.26	0.50
41:BX:8:PRO:CD	47:B2:33:VAL:HG22	2.40	0.50
1:AA:1516:G:H22	1:AA:1518:A:H3'	1.76	0.50
1:AA:1181:G:H5'	1:AA:1184:G:O4'	2.12	0.50
1:AA:60:A:N1	1:AA:107:G:C2'	2.74	0.50
27:BA:1300:U:O2	27:BA:1626:G:C2	2.64	0.50
27:BA:1518:C:H2'	27:BA:1519:G:O2'	2.11	0.50
27:BA:1055:G:C8	27:BA:1056:G:H1'	2.45	0.50
27:BA:1418:G:N2	27:BA:1578:U:OP2	2.32	0.50
1:AA:1291:G:O2'	12:AI:38:GLN:HB3	2.12	0.50
27:BA:204:A:H8	27:BA:204:A:OP1	1.94	0.50
27:BA:206:U:H2'	27:BA:207:A:H8	1.76	0.50
6:AC:141:VAL:HG11	6:AC:202:ILE:HG12	1.92	0.50
1:AA:835:U:OP1	21:AR:61:LYS:HD2	2.11	0.50
5:AB:167:PRO:HG2	5:AB:192:SER:HB3	1.93	0.50
51:B5:18:MET:C	51:B5:21:SER:HB3	2.32	0.50
27:BA:458:G:H8	53:B7:38:GLY:O	1.95	0.50
54:B8:23:MET:HE3	54:B8:48:PHE:CG	2.41	0.50
27:BA:2210:G:H4'	27:BA:2211:G:O5'	2.11	0.50
27:BA:2312:U:H5'	31:BG:53:LYS:N	2.21	0.50
27:BA:2313:C:C5'	31:BG:51:ARG:CD	2.89	0.50
27:BA:2354:G:C2	27:BA:2355:C:C6	3.00	0.50
27:BA:2410:G:C2	27:BA:2411:A:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2431:U:O2	27:BA:2433:A:P	2.69	0.50
27:BA:2436:G:N2	27:BA:2437:U:C1'	2.75	0.50
27:BA:2516:G:N1	27:BA:2569:G:N3	2.59	0.50
27:BA:2545:G:N2	27:BA:2546:U:C2	2.80	0.50
27:BA:2569:G:C4	27:BA:2570:G:C8	2.99	0.50
27:BA:2569:G:C6	27:BA:2570:G:N7	2.80	0.50
27:BA:2571:C:C2'	27:BA:2571:C:O2	2.54	0.50
27:BA:2671:A:H2'	27:BA:2672:G:O5'	2.11	0.50
27:BA:2776:A:N3	27:BA:2778:A:C6	2.73	0.50
27:BA:2852:G:O6	27:BA:2866:U:O4	2.29	0.50
27:BA:2886:G:N2	27:BA:2887:U:H1'	2.22	0.50
27:BA:851:U:H2'	27:BA:852:G:H8	1.77	0.50
26:BB:15:A:C4	26:BB:109:G:C4	2.99	0.50
26:BB:9:G:OP1	38:BS:23:ARG:CZ	2.60	0.50
28:BD:142:ASN:CB	28:BD:190:THR:HG23	2.41	0.50
28:BD:166:LYS:HA	28:BD:182:MET:CE	2.42	0.50
28:BD:68:ARG:H	28:BD:68:ARG:HD3	1.76	0.50
28:BD:70:LYS:CG	28:BD:73:ILE:CD1	2.65	0.50
27:BA:2053:G:H1'	29:BE:245:ARG:CG	2.42	0.50
29:BE:78:MET:O	29:BE:79:ARG:O	2.29	0.50
30:BF:39:GLN:CA	30:BF:39:GLN:OE1	2.60	0.50
30:BF:57:PRO:CG	30:BF:58:ALA:N	2.74	0.50
30:BF:98:ARG:C	30:BF:99:SER:O	2.44	0.50
34:BN:92:GLN:O	34:BN:95:ARG:HB2	2.11	0.50
35:BO:87:ILE:CG2	35:BO:88:ARG:N	2.75	0.50
35:BO:88:ARG:CZ	35:BO:94:ARG:HG2	2.42	0.50
44:BR:20:LEU:O	44:BR:22:ARG:C	2.50	0.50
44:BR:33:ARG:HB2	44:BR:113:LEU:HD11	1.94	0.50
27:BA:25:U:C5'	40:BW:80:PRO:HD3	2.20	0.50
33:BI:89:LEU:HD13	33:BI:92:SER:O	2.12	0.50
42:BY:11:GLN:CA	42:BY:21:LYS:HZ1	2.25	0.50
1:AA:1221:G:H5''	1:AA:1321:C:N3	2.26	0.50
1:AA:986:A:H2	22:AS:52:TYR:CE2	2.26	0.50
1:AA:1219:U:O2	22:AS:34:TRP:CD1	2.64	0.50
27:BA:1404:C:HO3'	27:BA:1405:U:P	2.24	0.50
13:AJ:11:PHE:HE2	13:AJ:65:LEU:HG	1.75	0.50
42:BY:81:LYS:NZ	42:BY:83:ASP:HB2	2.26	0.50
1:AA:19:C:O2'	1:AA:572:A:N1	2.36	0.50
6:AC:106:VAL:O	6:AC:107:GLN:O	2.22	0.50
1:AA:1123:A:O2'	13:AJ:38:ILE:CG2	2.58	0.50
1:AA:778:G:H2'	1:AA:779:C:H6	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1020:U:H2'	1:AA:1021:G:C8	2.46	0.50
52:B6:16:ALA:HB1	52:B6:42:PRO:HG3	1.94	0.50
27:BA:1155:A:H2'	27:BA:1157:G:N7	2.25	0.50
27:BA:2385:C:O2	27:BA:2386:C:C1'	2.59	0.50
27:BA:2511:U:C5	27:BA:2512:C:H5	2.26	0.50
27:BA:2562:U:C2'	27:BA:2562:U:O2	2.59	0.50
27:BA:746:A:C2'	27:BA:2611:U:HO2'	2.20	0.50
27:BA:2620:C:O4'	29:BE:252:GLN:HG3	2.12	0.50
27:BA:2642:G:H2'	27:BA:2643:G:H5'	1.90	0.50
27:BA:2740:A:C8	27:BA:2740:A:C5'	2.89	0.50
27:BA:2810:A:C8	27:BA:2811:G:C8	2.99	0.50
27:BA:2839:G:N1	27:BA:2840:C:C2	2.79	0.50
27:BA:2862:G:C2	27:BA:2863:C:C4	2.99	0.50
27:BA:963:U:H1'	27:BA:2250:G:H22	1.62	0.50
27:BA:1567:A:C8	28:BD:84:PRO:HB3	2.46	0.50
27:BA:2820:A:O2'	29:BE:207:GLY:C	2.50	0.50
29:BE:229:GLN:O	29:BE:231:TRP:CA	2.57	0.50
30:BF:157:LEU:O	30:BF:158:GLU:C	2.47	0.50
31:BG:27:ILE:C	31:BG:69:ILE:HD13	2.31	0.50
35:BO:15:GLY:O	35:BO:46:ALA:HB1	2.12	0.50
37:BQ:82:LYS:HB2	37:BQ:125:TRP:HB2	1.90	0.50
37:BQ:33:MET:HG3	37:BQ:83:PHE:CD1	2.47	0.50
45:BU:98:ILE:O	45:BU:100:ALA:C	2.50	0.50
46:BV:91:THR:C	46:BV:92:ALA:HB2	1.84	0.50
40:BW:12:ILE:CD1	40:BW:42:ARG:HD2	2.41	0.50
40:BW:23:LEU:CD1	40:BW:35:ILE:HG21	2.39	0.50
40:BW:45:TYR:O	40:BW:46:PHE:C	2.49	0.50
40:BW:58:ALA:O	40:BW:61:ASN:N	2.44	0.50
40:BW:7:ALA:O	40:BW:10:VAL:CG2	2.59	0.50
40:BW:86:LEU:CB	40:BW:87:PRO:HD2	2.28	0.50
43:BZ:67:LYS:O	43:BZ:67:LYS:CG	2.58	0.50
43:BZ:51:LEU:HD21	43:BZ:52:PHE:O	2.10	0.50
47:B2:15:GLU:C	47:B2:17:GLU:N	2.64	0.50
31:BG:60:GLU:C	31:BG:61:PHE:HD1	2.15	0.50
36:BP:75:LEU:C	36:BP:75:LEU:CD2	2.74	0.50
12:AI:111:ARG:HG2	12:AI:112:LYS:O	2.12	0.50
31:BG:90:LEU:C	31:BG:92:GLU:OE2	2.49	0.50
11:AH:12:ARG:HH11	11:AH:27:PRO:HD3	1.76	0.50
1:AA:1249:C:O2'	12:AI:73:GLN:NE2	2.45	0.50
1:AA:1291:G:H5'	12:AI:40:LEU:HD21	1.92	0.50
27:BA:978:G:C6	27:BA:979:G:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:173:TRP:CD1	7:AD:189:PRO:HB3	2.47	0.50
1:AA:112:G:H4'	1:AA:389:A:O5'	2.12	0.50
27:BA:738:G:N3	27:BA:739:G:H1'	2.27	0.50
5:AB:162:ILE:H	5:AB:162:ILE:HD13	1.76	0.50
27:BA:721:C:H2'	27:BA:722:A:C8	2.47	0.50
1:AA:582:U:H1'	20:AQ:105:ALA:OXT	2.12	0.50
27:BA:1118:C:H2'	27:BA:1119:C:O4'	2.12	0.50
2:AV:58:A:C6	2:AV:61:C:C6	2.99	0.50
48:B3:13:ILE:O	48:B3:15:TYR:CD1	2.65	0.50
53:B7:11:LYS:HG3	53:B7:12:ARG:H	1.77	0.50
53:B7:12:ARG:O	53:B7:13:ALA:C	2.50	0.50
53:B7:30:ILE:HG12	53:B7:33:ARG:CD	2.29	0.50
27:BA:1367:A:O2'	53:B7:25:LYS:CE	2.59	0.50
27:BA:2209:C:HO2'	27:BA:2210:G:H8	1.42	0.50
27:BA:2325:G:C6	27:BA:2326:C:C5	2.94	0.50
27:BA:2327:A:C6	27:BA:2328:A:N1	2.80	0.50
27:BA:2335:A:N6	27:BA:2337:G:N2	2.59	0.50
27:BA:2349:G:C4	27:BA:2369:A:C2	3.00	0.50
27:BA:2531:A:C3'	27:BA:2532:G:C5'	2.88	0.50
27:BA:2586:C:C2'	27:BA:2587:A:H5'	2.41	0.50
27:BA:2633:G:C2'	27:BA:2634:G:O5'	2.59	0.50
27:BA:2696:U:O4	27:BA:2714:G:N2	2.44	0.50
27:BA:2712:U:H5''	27:BA:2714:G:H4'	1.94	0.50
27:BA:2768:C:O2	27:BA:2769:C:H6	1.81	0.50
27:BA:2868:A:C5	27:BA:2869:G:C8	2.99	0.50
27:BA:2830:G:N3	27:BA:2883:A:H2	2.10	0.50
27:BA:611:C:H2'	27:BA:611:C:O2	2.11	0.50
27:BA:747:U:C5	27:BA:2613:U:C4	3.00	0.50
28:BD:175:LEU:CD1	28:BD:179:GLU:CA	2.89	0.50
29:BE:185:GLY:O	29:BE:187:HIS:HD2	1.91	0.50
29:BE:217:TRP:O	29:BE:218:GLY:C	2.47	0.50
27:BA:1993:U:C4'	29:BE:228:ARG:NH2	2.51	0.50
27:BA:2771:C:C4'	29:BE:316:ARG:HD2	2.40	0.50
29:BE:74:GLU:O	29:BE:75:THR:CB	2.60	0.50
27:BA:600:G:HO2'	30:BF:109:LEU:HD11	1.75	0.50
31:BG:64:ARG:HB3	31:BG:67:ASP:OD2	2.08	0.50
32:BH:124:VAL:O	32:BH:125:PRO:C	2.49	0.50
34:BN:53:ILE:CG2	34:BN:54:VAL:HG23	2.41	0.50
34:BN:58:GLU:O	34:BN:61:VAL:CB	2.48	0.50
35:BO:9:LYS:C	35:BO:83:ALA:HB1	2.26	0.50
36:BP:128:GLY:C	36:BP:132:LYS:CD	2.73	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:130:ARG:CA	36:BP:133:VAL:HG23	2.42	0.50
36:BP:66:VAL:HG21	36:BP:110:GLY:O	2.11	0.50
44:BR:105:ARG:HA	44:BR:105:ARG:NE	2.25	0.50
44:BR:77:ARG:O	44:BR:78:LYS:C	2.50	0.50
38:BS:10:MET:H	38:BS:13:ARG:HE	1.60	0.50
46:BV:72:ARG:CG	46:BV:88:GLN:HG3	2.27	0.50
40:BW:106:ILE:HG23	40:BW:107:LEU:N	2.26	0.50
40:BW:49:LYS:C	40:BW:51:LEU:H	2.16	0.50
43:BZ:116:VAL:O	43:BZ:118:HIS:N	2.44	0.50
43:BZ:106:GLY:N	43:BZ:141:MET:HG2	2.25	0.50
43:BZ:141:MET:O	43:BZ:142:ASN:HB2	2.09	0.50
43:BZ:164:PRO:O	43:BZ:165:GLU:O	2.29	0.50
43:BZ:113:VAL:N	43:BZ:174:PRO:HD3	2.27	0.50
43:BZ:67:LYS:HB2	43:BZ:67:LYS:HZ2	1.77	0.50
33:BI:86:GLY:O	33:BI:88:ARG:HA	2.11	0.50
27:BA:322:A:C2	27:BA:341:G:C4	3.00	0.50
42:BY:89:ARG:O	42:BY:91:LEU:HD21	2.12	0.50
41:BX:17:ASP:O	41:BX:20:PHE:CE1	2.65	0.50
41:BX:76:GLU:OE1	41:BX:76:GLU:C	2.50	0.50
2:AV:24:G:H2'	2:AV:25:C:C6	2.47	0.50
1:AA:1205:U:C4'	6:AC:195:VAL:CG2	2.88	0.50
1:AA:1298:C:H5''	1:AA:1299:A:P	2.52	0.50
3:AW:7:U:C2	3:AW:49:C:C5	3.00	0.50
14:AK:18:ARG:NH2	14:AK:37:GLY:HA2	2.27	0.50
6:AC:119:ARG:HG2	6:AC:140:ARG:HH12	1.75	0.50
22:AS:60:VAL:HG11	22:AS:74:PHE:HB3	1.94	0.50
56:BK:9:ILE:HG22	56:BK:10:LYS:N	2.27	0.50
27:BA:2076:U:H3'	27:BA:2076:U:C6	2.47	0.50
49:B0:55:ARG:HB3	49:B0:55:ARG:CZ	2.42	0.50
50:B4:26:SER:O	50:B4:27:THR:O	2.30	0.50
27:BA:397:G:OP1	50:B4:40:HIS:HA	2.12	0.50
27:BA:1022:G:P	34:BN:52:GLN:NE2	2.85	0.50
27:BA:1138:G:OP1	34:BN:82:THR:CG2	2.60	0.50
27:BA:1657:C:C6	27:BA:1657:C:O5'	2.65	0.50
27:BA:1993:U:H2'	27:BA:1994:C:O4'	2.12	0.50
27:BA:2043:C:N4	27:BA:2777:G:C5	2.78	0.50
27:BA:2186:G:N1	27:BA:2187:G:O6	2.37	0.50
27:BA:2230:G:H2'	27:BA:2231:C:H6	1.76	0.50
27:BA:2345:G:H21	27:BA:2381:C:H3'	1.75	0.50
27:BA:2459:A:H8	27:BA:2460:U:H5	1.58	0.50
27:BA:2485:G:H2'	27:BA:2486:G:C4'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2604:U:C2'	27:BA:2604:U:O2	2.52	0.50
27:BA:2615:U:O2'	27:BA:2616:C:O5'	2.30	0.50
27:BA:270(O):U:C4	33:BI:53:LYS:NZ	2.80	0.50
27:BA:2725:A:H2'	27:BA:2727:G:N7	2.26	0.50
27:BA:2820:A:O2'	29:BE:207:GLY:CA	2.60	0.50
27:BA:2865:U:C4	27:BA:2866:U:C4	2.94	0.50
27:BA:2691:C:O2'	27:BA:2871:C:O2'	2.29	0.50
27:BA:446:G:C5'	45:BU:5:LYS:NZ	2.74	0.50
27:BA:673:C:N4	27:BA:808:G:C6	2.80	0.50
27:BA:873:G:H5'	37:BQ:32:LYS:HG3	1.94	0.50
27:BA:996:A:H61	27:BA:1159:U:H3	1.60	0.50
28:BD:140:VAL:C	28:BD:141:HIS:HD1	2.14	0.50
28:BD:73:ILE:CD1	28:BD:95:TYR:CE2	2.95	0.50
29:BE:268:LEU:C	29:BE:268:LEU:HD22	2.27	0.50
30:BF:214:THR:O	30:BF:215:ALA:C	2.45	0.50
30:BF:29:ASP:O	30:BF:30:LEU:C	2.50	0.50
32:BH:47:ASN:O	32:BH:48:VAL:CG1	2.60	0.50
32:BH:87:GLU:CG	32:BH:162:ARG:HB2	2.42	0.50
34:BN:136:SER:C	34:BN:138:THR:N	2.63	0.50
34:BN:77:GLY:HA2	34:BN:80:LYS:CB	2.39	0.50
34:BN:80:LYS:O	34:BN:81:ARG:C	2.49	0.50
35:BO:13:ASN:ND2	35:BO:97:ARG:HB3	2.27	0.50
36:BP:116:HIS:CG	36:BP:118:LEU:HD11	2.39	0.50
36:BP:60:GLU:O	36:BP:61:ALA:HB2	2.10	0.50
27:BA:910:A:H62	37:BQ:11:LYS:C	2.15	0.50
37:BQ:16:ARG:NH1	37:BQ:17:ARG:N	2.60	0.50
44:BR:59:ASP:N	44:BR:80:PHE:CE2	2.79	0.50
38:BS:27:LEU:CB	38:BS:33:ARG:HH22	1.93	0.50
38:BS:41:LYS:C	38:BS:42:HIS:CG	2.84	0.50
27:BA:994:C:O3'	45:BU:54:LYS:HG2	2.12	0.50
45:BU:102:GLU:HB2	46:BV:43:GLU:OE2	2.12	0.50
46:BV:78:VAL:CG2	46:BV:80:TYR:CD1	2.95	0.50
46:BV:69:ILE:N	46:BV:91:THR:HG22	2.11	0.50
43:BZ:94:VAL:HG11	43:BZ:130:ILE:HG21	1.94	0.50
43:BZ:98:VAL:HA	43:BZ:134:LEU:O	2.11	0.50
33:BI:119:ASP:OD1	33:BI:120:ALA:N	2.45	0.50
42:BY:30:ASP:CG	42:BY:31:LEU:CG	2.80	0.50
6:AC:5:ILE:HG23	13:AJ:51:ARG:NH2	2.25	0.50
27:BA:764:A:C8	27:BA:764:A:H5''	2.46	0.50
47:B2:33:VAL:O	47:B2:34:GLN:C	2.48	0.50
1:AA:1005:A:O3'	1:AA:1037:C:O2'	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:23:GLY:HA2	7:AD:112:VAL:O	2.12	0.50
1:AA:219:C:O3'	1:AA:220:G:P	2.70	0.50
1:AA:1097:C:H1'	1:AA:1168:A:C2	2.47	0.50
1:AA:1181:G:C4'	1:AA:1184:G:H5'	2.41	0.50
1:AA:106:C:H2'	1:AA:107:G:H8	1.75	0.50
3:AW:30:G:O2'	3:AW:31:A:H5'	2.12	0.50
1:AA:1298:C:O5'	10:AG:114:ARG:NH1	2.40	0.50
2:AV:59:U:H2'	2:AV:59:U:O2	2.10	0.50
8:AE:122:GLU:HB3	8:AE:126:ARG:HG2	1.93	0.50
49:B0:14:ARG:C	49:B0:14:ARG:CD	2.75	0.49
49:B0:36:ILE:N	49:B0:68:VAL:CG1	2.75	0.49
48:B3:7:LYS:O	48:B3:54:VAL:HG11	2.12	0.49
48:B3:8:LEU:HB2	48:B3:33:GLN:H	1.77	0.49
54:B8:58:MET:O	54:B8:60:LEU:CA	2.57	0.49
27:BA:1275:A:H61	44:BR:19:ALA:HB1	1.74	0.49
27:BA:1450:C:H2'	27:BA:1451:C:H4'	1.94	0.49
27:BA:1678:G:N2	27:BA:1989:G:H22	2.10	0.49
27:BA:1935:G:H2'	27:BA:1962:C:H42	1.77	0.49
27:BA:531:C:HO2'	27:BA:2020:A:HO2'	1.60	0.49
27:BA:2044:C:C5	27:BA:2625:G:C2	3.00	0.49
27:BA:2087:G:N1	27:BA:2233:U:C6	2.80	0.49
27:BA:2051:A:H5'	27:BA:2578:G:O4'	2.13	0.49
27:BA:2657:A:H8	27:BA:2658:C:H5	1.41	0.49
27:BA:2681:C:C4'	29:BE:48:MET:SD	3.00	0.49
27:BA:270(G):C:H2'	27:BA:270(H):C:H6	1.76	0.49
27:BA:2748:A:O2'	32:BH:65:GLY:C	2.51	0.49
27:BA:2641:G:O6	27:BA:2774:C:C5	2.65	0.49
27:BA:2854:G:N2	27:BA:2864:G:C8	2.80	0.49
27:BA:821:A:O2'	27:BA:945:A:H3'	2.12	0.49
27:BA:993:G:C8	27:BA:1162:G:N1	2.80	0.49
28:BD:125:ILE:CG2	28:BD:126:GLY:H	2.24	0.49
29:BE:83:LEU:HD12	29:BE:178:LEU:HD23	1.94	0.49
29:BE:193:PHE:HA	29:BE:197:GLU:OE1	2.12	0.49
29:BE:301:PRO:C	29:BE:303:PRO:HD2	2.21	0.49
30:BF:104:ASP:O	30:BF:107:ARG:N	2.45	0.49
30:BF:155:SER:OG	30:BF:156:LEU:N	2.45	0.49
30:BF:167:ASP:O	30:BF:168:ARG:HD2	2.11	0.49
31:BG:141:VAL:CA	31:BG:144:ARG:NH1	2.75	0.49
32:BH:87:GLU:HG3	32:BH:162:ARG:C	2.27	0.49
35:BO:17:ARG:HE	35:BO:47:THR:N	2.09	0.49
36:BP:59:GLU:OE1	36:BP:60:GLU:CB	2.58	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:141:MET:O	37:BQ:142:LYS:O	2.30	0.49
27:BA:2840:C:O3'	44:BR:53:HIS:NE2	2.45	0.49
38:BS:9:PRO:CG	38:BS:14:ARG:CB	2.89	0.49
40:BW:24:ILE:HA	40:BW:35:ILE:CD1	2.42	0.49
40:BW:38:TYR:HB3	51:B5:30:LEU:HD21	1.93	0.49
33:BI:98:ILE:O	33:BI:99:ALA:O	2.30	0.49
42:BY:24:ARG:O	42:BY:25:ALA:CB	2.60	0.49
42:BY:40:VAL:O	42:BY:41:ARG:CB	2.59	0.49
43:BZ:26:LYS:CB	43:BZ:26:LYS:HZ2	2.25	0.49
47:B2:8:ILE:CA	47:B2:11:MET:CG	2.75	0.49
47:B2:7:GLU:CD	47:B2:8:ILE:N	2.64	0.49
27:BA:142:G:OP1	27:BA:1595:G:O2'	2.23	0.49
27:BA:1081:U:C4'	56:BK:127:ILE:HD11	2.41	0.49
31:BG:60:GLU:O	31:BG:61:PHE:CD1	2.65	0.49
41:BX:45:TYR:HE2	41:BX:73:ASP:HA	1.77	0.49
32:BH:155:PRO:HB2	32:BH:169:ARG:CG	2.37	0.49
1:AA:943:U:OP1	1:AA:945:G:O6	2.29	0.49
1:AA:877:C:O3'	11:AH:89:PRO:HD2	2.12	0.49
1:AA:891:U:C5	1:AA:906:G:C2	3.00	0.49
2:AV:10:G:N1	2:AV:26:G:H1'	2.27	0.49
27:BA:1300:U:O4	27:BA:1626:G:H3'	2.12	0.49
27:BA:1189:A:OP2	27:BA:1190:G:N7	2.44	0.49
1:AA:1328:C:OP1	16:AM:28:ALA:HB1	2.12	0.49
1:AA:1149:C:OP1	12:AI:9:ARG:HD3	2.11	0.49
27:BA:1539:G:H2'	27:BA:1540:G:C8	2.47	0.49
1:AA:1418:A:H8	1:AA:1419:G:C1'	2.25	0.49
1:AA:1084:G:H3'	1:AA:1085:U:H3'	1.94	0.49
14:AK:40:ILE:HG23	14:AK:75:TYR:CD2	2.47	0.49
1:AA:981:U:H6	1:AA:981:U:O5'	1.95	0.49
49:B0:39:ARG:C	49:B0:40:GLN:O	2.47	0.49
48:B3:42:ALA:C	48:B3:44:ARG:N	2.65	0.49
50:B4:58:LYS:CG	50:B4:59:PHE:N	2.66	0.49
53:B7:26:SER:O	53:B7:27:GLY:O	2.30	0.49
55:B9:2:LYS:C	55:B9:4:ARG:H	2.14	0.49
27:BA:1809:A:H61	50:B4:3:LYS:CB	2.25	0.49
27:BA:1819:A:OP2	28:BD:153:LEU:CG	2.53	0.49
27:BA:2075:U:H3'	27:BA:2238:G:N2	2.27	0.49
27:BA:2094:G:C2	27:BA:2196:C:N3	2.68	0.49
27:BA:2277:G:H3'	27:BA:2278:A:H5''	1.94	0.49
27:BA:2296:U:N3	38:BS:16:ALA:CB	2.71	0.49
27:BA:2325:G:H8	27:BA:2325:G:C5'	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2359:C:C4	27:BA:2360:A:H2	2.17	0.49
27:BA:2398:U:O2'	27:BA:2399:G:P	2.69	0.49
27:BA:2459:A:H2'	27:BA:2460:U:H5'	1.94	0.49
27:BA:2487:G:C2'	27:BA:2488:A:C5'	2.90	0.49
27:BA:2533:A:C3'	27:BA:2534:A:H8	2.25	0.49
27:BA:2540:C:H2'	27:BA:2541:A:O5'	2.12	0.49
27:BA:2618:G:N1	27:BA:2619:C:C4	2.51	0.49
27:BA:2627:G:N3	27:BA:2781:A:H2	2.10	0.49
27:BA:2631:G:C4	27:BA:2632:A:H8	2.27	0.49
27:BA:1457:A:C6	27:BA:2703:C:N4	2.80	0.49
27:BA:2776:A:C4	27:BA:2778:A:C6	2.99	0.49
27:BA:389:G:O4'	27:BA:2413:G:H4'	2.13	0.49
27:BA:512:G:H5'	27:BA:513:A:OP1	2.12	0.49
27:BA:669:G:N3	27:BA:669:G:H2'	2.26	0.49
27:BA:674:G:O3'	30:BF:69:HIS:C	2.51	0.49
27:BA:778:G:C6	27:BA:779:U:N3	2.81	0.49
27:BA:856:C:HO2'	49:B0:24:LYS:CB	2.02	0.49
28:BD:105:ALA:N	28:BD:106:PRO:HD2	2.24	0.49
30:BF:112:ARG:O	30:BF:115:LEU:N	2.45	0.49
30:BF:140:VAL:HB	30:BF:235:PHE:O	2.12	0.49
30:BF:200:PRO:CB	30:BF:212:VAL:CG1	2.67	0.49
30:BF:89:ALA:HB1	30:BF:90:HIS:CD2	2.47	0.49
31:BG:20:LYS:HA	31:BG:76:ARG:HG2	1.93	0.49
31:BG:97:GLN:CB	31:BG:106:PHE:CD2	2.90	0.49
32:BH:10:ILE:HD11	32:BH:48:VAL:O	1.99	0.49
32:BH:140:VAL:HA	32:BH:143:LEU:CD2	2.42	0.49
32:BH:140:VAL:HA	32:BH:143:LEU:HD22	1.94	0.49
32:BH:145:ALA:C	32:BH:147:ILE:N	2.51	0.49
27:BA:1036:G:P	32:BH:58:LYS:HD2	2.52	0.49
27:BA:1077:A:H2	56:BK:134:SER:OG	1.88	0.49
34:BN:12:VAL:O	34:BN:38:VAL:HA	2.11	0.49
36:BP:58:GLN:HG3	36:BP:59:GLU:H	1.77	0.49
37:BQ:68:ALA:CB	37:BQ:136:TRP:CZ3	2.89	0.49
44:BR:23:ASN:OD1	44:BR:24:GLN:N	2.45	0.49
44:BR:83:ILE:O	44:BR:86:ARG:N	2.45	0.49
38:BS:81:ALA:C	38:BS:83:LEU:H	2.13	0.49
27:BA:2319:G:H4'	38:BS:9:PRO:CD	2.42	0.49
45:BU:115:ASN:O	45:BU:117:ARG:C	2.50	0.49
27:BA:19:C:P	45:BU:23:GLY:HA3	2.51	0.49
45:BU:69:ALA:HB3	45:BU:76:TYR:CE1	2.47	0.49
45:BU:69:ALA:O	45:BU:74:MET:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BW:36:LEU:CD1	40:BW:47:VAL:HB	2.42	0.49
43:BZ:154:LEU:C	43:BZ:154:LEU:CD2	2.80	0.49
43:BZ:74:ARG:O	43:BZ:76:ARG:HG2	2.12	0.49
33:BI:115:ILE:HG12	33:BI:131:VAL:HG22	1.95	0.49
43:BZ:26:LYS:O	43:BZ:27:GLU:HB2	2.10	0.49
27:BA:1772:G:H2'	27:BA:1773:A:C4'	2.37	0.49
47:B2:7:GLU:HG2	47:B2:8:ILE:N	2.26	0.49
1:AA:1374:A:O3'	10:AG:28:ASN:CG	2.50	0.49
1:AA:1229:A:H8	1:AA:1229:A:O5'	1.95	0.49
1:AA:562:C:C1'	15:AL:15:ARG:HD2	2.41	0.49
7:AD:21:LEU:HD11	7:AD:67:ILE:HA	1.93	0.49
27:BA:1924:C:C5	27:BA:1925:C:H5	2.30	0.49
3:AW:65:G:C4	3:AW:66:A:C8	3.00	0.49
27:BA:2182:G:C5	27:BA:2183:C:N4	2.80	0.49
1:AA:1065:U:O2	1:AA:1066:C:H5	1.95	0.49
27:BA:265:A:N7	27:BA:428:A:N1	2.61	0.49
27:BA:1316:U:H2'	27:BA:1317:A:C8	2.48	0.49
1:AA:1353:G:H5'	24:AU:13:ILE:HG21	1.93	0.49
1:AA:741:G:C5'	18:AO:39:LEU:HD11	2.41	0.49
9:AF:80:ARG:HG3	9:AF:88:VAL:HG21	1.95	0.49
1:AA:1359:C:OP1	17:AN:22:THR:OG1	2.15	0.49
1:AA:416:G:H2'	1:AA:417:C:C6	2.48	0.49
27:BA:1602:U:OP2	27:BA:1602:U:C4	2.64	0.49
50:B4:43:TRP:HA	50:B4:56:VAL:O	2.13	0.49
50:B4:5:LEU:HD22	50:B4:9:ALA:HA	1.94	0.49
53:B7:21:ARG:HH22	53:B7:43:THR:CA	2.24	0.49
27:BA:1142:U:C3'	27:BA:142(A):A:P	3.00	0.49
27:BA:1638:C:OP1	27:BA:2711:A:H5'	2.12	0.49
27:BA:1655:A:H4'	29:BE:212:GLY:N	2.27	0.49
27:BA:2327:A:H2'	27:BA:2328:A:C8	2.48	0.49
27:BA:2337:G:C2	27:BA:2338:G:N7	2.80	0.49
27:BA:2286:A:H1'	27:BA:2346:A:H61	1.76	0.49
27:BA:2416:C:C2'	27:BA:2417:C:H5'	2.31	0.49
27:BA:2458:G:C6	27:BA:2490:G:N3	2.80	0.49
27:BA:2521:C:O4'	27:BA:2565:A:C1'	2.56	0.49
27:BA:1670:C:OP2	27:BA:2550:G:OP2	2.29	0.49
27:BA:2605:U:C4'	27:BA:2605:U:H6	2.26	0.49
27:BA:2677:G:C4	27:BA:2678:C:H5	2.29	0.49
27:BA:2686:G:C4	27:BA:2687:U:H6	2.30	0.49
27:BA:2819:G:C5'	27:BA:2821:A:H62	2.17	0.49
27:BA:2894:G:N3	27:BA:2894:G:C2'	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:39:C:H2'	27:BA:40:C:C6	2.47	0.49
27:BA:452:G:C3'	27:BA:453:C:H5''	2.36	0.49
27:BA:464:U:C4'	53:B7:12:ARG:HH22	2.24	0.49
27:BA:606:U:H5'	30:BF:103:ASN:OD1	2.13	0.49
27:BA:648:G:H2'	27:BA:649:G:H8	1.77	0.49
26:BB:60:C:H2'	26:BB:61:G:H8	1.78	0.49
28:BD:173:VAL:O	28:BD:175:LEU:HD23	2.12	0.49
29:BE:193:PHE:CE2	29:BE:199:ALA:HB1	2.38	0.49
29:BE:215:LYS:HZ3	29:BE:215:LYS:HB3	1.77	0.49
29:BE:46:ALA:HB2	29:BE:72:VAL:C	2.28	0.49
30:BF:93:LYS:O	30:BF:96:LYS:CB	2.57	0.49
31:BG:140:ARG:HA	31:BG:143:LYS:HZ2	1.72	0.49
32:BH:147:ILE:HA	32:BH:150:VAL:HG23	1.85	0.49
34:BN:134:GLU:O	34:BN:138:THR:OG1	2.30	0.49
34:BN:46:ILE:O	34:BN:47:THR:C	2.49	0.49
34:BN:63:ILE:O	34:BN:71:TYR:CE1	2.66	0.49
38:BS:31:LYS:NZ	38:BS:99:GLU:HB2	2.27	0.49
38:BS:86:LEU:N	38:BS:121:GLY:CA	2.75	0.49
45:BU:72:HIS:NE2	45:BU:110:VAL:HG11	2.21	0.49
45:BU:66:ASN:CG	45:BU:76:TYR:CZ	2.85	0.49
46:BV:29:ALA:O	46:BV:31:ASP:N	2.45	0.49
43:BZ:91:PRO:CB	43:BZ:127:PRO:HB3	2.41	0.49
27:BA:292:C:H2'	27:BA:293:U:N3	2.19	0.49
1:AA:986:A:H2'	1:AA:987:G:C8	2.47	0.49
16:AM:92:HIS:CG	16:AM:98:VAL:CG2	2.89	0.49
27:BA:142:G:OP1	27:BA:1596:A:H5'	2.12	0.49
29:BE:107:GLU:C	29:BE:110:ARG:HG3	2.29	0.49
43:BZ:95:SER:OG	43:BZ:122:ILE:HG23	2.12	0.49
1:AA:1406:U:C2	1:AA:1517:G:N2	2.77	0.49
1:AA:1179:A:H2'	1:AA:1180:A:C8	2.47	0.49
1:AA:939:G:OP1	10:AG:102:ARG:NH2	2.44	0.49
27:BA:1213:A:N1	27:BA:1237:A:H1'	2.27	0.49
1:AA:676:A:H2'	1:AA:677:U:C6	2.47	0.49
18:AO:42:HIS:O	18:AO:45:VAL:O	2.30	0.49
7:AD:62:GLN:NE2	7:AD:65:ARG:HD3	2.27	0.49
1:AA:1343:G:H4'	12:AI:122:ALA:HB3	1.94	0.49
27:BA:1627:G:H1	27:BA:1639:U:H3	1.60	0.49
21:AR:21:LYS:H	21:AR:55:ARG:HH12	1.60	0.49
27:BA:704:G:C4	27:BA:726:G:N2	2.80	0.49
22:AS:15:LEU:HD22	22:AS:33:THR:HG21	1.94	0.49
1:AA:1464:G:H2'	1:AA:1465:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1100:C:O2'	1:AA:1101:A:H4'	2.12	0.49
1:AA:1203:C:OP1	17:AN:2:ALA:N	2.45	0.49
49:B0:35:ASN:C	49:B0:36:ILE:HG12	2.30	0.49
49:B0:45:PHE:CD1	49:B0:78:PHE:CB	2.96	0.49
49:B0:48:GLY:HA2	49:B0:55:ARG:CA	2.40	0.49
48:B3:13:ILE:O	48:B3:15:TYR:CE1	2.65	0.49
48:B3:31:LEU:CG	48:B3:32:GLN:H	2.14	0.49
50:B4:58:LYS:HG2	50:B4:62:ARG:HH21	1.75	0.49
50:B4:6:HIS:HE2	50:B4:55:ARG:HG3	1.77	0.49
27:BA:1152:C:O4'	45:BU:77:SER:HA	2.13	0.49
27:BA:1638:C:H4'	27:BA:2709:G:H22	1.76	0.49
27:BA:2259:G:H2'	27:BA:2260:C:O4'	2.12	0.49
27:BA:2279:G:N7	49:B0:11:LYS:HD2	2.27	0.49
27:BA:2322:A:P	27:BA:2322:A:O4'	2.71	0.49
27:BA:2341:G:O6	27:BA:2342:C:N4	2.44	0.49
27:BA:2356:C:O2'	27:BA:2357:U:C5'	2.59	0.49
27:BA:2343:C:C5'	27:BA:2374:C:OP1	2.53	0.49
27:BA:2399:G:C2'	27:BA:2400:G:O5'	2.60	0.49
27:BA:2474:C:N4	27:BA:2529:G:H21	2.01	0.49
27:BA:2607:G:H2'	27:BA:2608:G:O5'	2.12	0.49
27:BA:2665:A:N3	27:BA:2665:A:H2'	2.27	0.49
27:BA:2678:C:H2'	27:BA:2679:A:C5'	2.42	0.49
27:BA:2690:C:C2'	27:BA:2691:C:OP2	2.58	0.49
27:BA:2843:G:C6	27:BA:2844:G:N7	2.80	0.49
27:BA:617:G:C8	27:BA:618:G:N7	2.80	0.49
27:BA:872:A:O2'	37:BQ:31:PHE:CG	2.65	0.49
29:BE:198:TYR:HD2	29:BE:265:ASN:C	2.13	0.49
30:BF:238:SER:O	30:BF:241:ALA:CA	2.54	0.49
32:BH:86:LEU:HB2	32:BH:148:ARG:HE	1.78	0.49
34:BN:23:ALA:CA	34:BN:26:VAL:HG23	2.41	0.49
34:BN:52:GLN:HB3	34:BN:55:GLU:OE1	2.11	0.49
36:BP:69:ILE:CA	36:BP:73:VAL:HG21	2.40	0.49
37:BQ:50:VAL:C	37:BQ:51:GLU:OE1	2.49	0.49
37:BQ:61:LEU:O	37:BQ:63:ALA:C	2.50	0.49
44:BR:105:ARG:O	44:BR:107:ASP:HB3	2.12	0.49
44:BR:110:PRO:O	44:BR:111:LEU:C	2.50	0.49
44:BR:72:ASP:OD2	44:BR:72:ASP:O	2.30	0.49
31:BG:145:ASP:CB	38:BS:15:GLU:CA	2.90	0.49
38:BS:76:GLY:HA2	38:BS:82:TYR:HB2	1.93	0.49
45:BU:68:GLY:C	45:BU:70:ARG:N	2.64	0.49
45:BU:84:LYS:C	45:BU:86:ALA:N	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:22:VAL:O	46:BV:23:GLU:O	2.30	0.49
46:BV:40:VAL:HG13	46:BV:55:THR:HG22	1.93	0.49
27:BA:337:C:OP1	42:BY:21:LYS:O	2.30	0.49
43:BZ:19:ILE:CG2	43:BZ:39:PHE:HE1	2.25	0.49
43:BZ:21:ALA:H	43:BZ:32:PHE:HB2	1.76	0.49
16:AM:81:LEU:HA	16:AM:84:ILE:HG12	1.94	0.49
1:AA:1219:U:OP1	17:AN:15:LYS:CE	2.60	0.49
27:BA:444(A):A:P	27:BA:444(A):A:H8	2.35	0.49
47:B2:25:THR:O	47:B2:26:GLU:C	2.48	0.49
41:BX:25:GLN:C	41:BX:26:PHE:CG	2.84	0.49
1:AA:120:A:C8	1:AA:120:A:O5'	2.65	0.49
1:AA:404:U:H5'	7:AD:122:ARG:CD	2.41	0.49
1:AA:1330:U:H4'	16:AM:23:TYR:CE1	2.47	0.49
1:AA:1462:G:H2'	1:AA:1463:C:C6	2.46	0.49
1:AA:254:G:N2	20:AQ:16:GLN:CD	2.60	0.49
1:AA:19:C:C2	1:AA:917:G:C2	3.01	0.49
2:AV:5:A:H2'	2:AV:6:U:C6	2.38	0.49
10:AG:74:GLU:HG2	10:AG:75:VAL:N	2.25	0.49
3:AW:14:A:C5	3:AW:22:G:N2	2.80	0.49
7:AD:101:LEU:HD22	7:AD:138:TYR:HB3	1.94	0.49
1:AA:686:U:O2	14:AK:42:TRP:HZ2	1.96	0.49
5:AB:152:PHE:CD1	5:AB:152:PHE:C	2.86	0.49
1:AA:144:G:H1	1:AA:178:C:H42	1.60	0.49
40:BW:52:GLU:HA	40:BW:52:GLU:OE2	2.13	0.49
30:BF:120:ASP:OD1	30:BF:120:ASP:N	2.45	0.49
3:AW:72:C:C3'	3:AW:73:A:H5'	2.39	0.49
27:BA:988:A:P	48:B3:11:SER:H	2.30	0.49
48:B3:50:VAL:CG1	48:B3:53:LEU:HD12	2.42	0.49
27:BA:1005:C:C5	27:BA:1143:A:H5''	2.42	0.49
27:BA:1657:C:H3'	27:BA:1657:C:H6	1.77	0.49
27:BA:2185:C:C4	27:BA:2186:G:N7	2.80	0.49
27:BA:2242:G:N3	27:BA:2243:U:C6	2.81	0.49
27:BA:2300:G:HO2'	27:BA:2301:C:H5'	1.73	0.49
27:BA:2395:C:OP2	27:BA:2396:G:OP2	2.31	0.49
27:BA:2423:U:C6	27:BA:2423:U:C4'	2.95	0.49
27:BA:2447:G:H4'	27:BA:2448:A:O5'	2.12	0.49
27:BA:2463:C:C2	27:BA:2464:C:C6	2.93	0.49
27:BA:247:G:N1	54:B8:8:LYS:CE	2.62	0.49
27:BA:2536:G:C3'	27:BA:2537:U:H5'	2.42	0.49
27:BA:2606:C:O2	27:BA:2607:G:N9	2.46	0.49
27:BA:2714:G:H2'	27:BA:2715:C:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2749:A:H5'	32:BH:62:ALA:HA	1.94	0.49
27:BA:2747:G:C2	27:BA:2754:U:N3	2.80	0.49
27:BA:444:C:OP2	45:BU:2:PRO:HG3	2.11	0.49
27:BA:775:G:C2'	27:BA:794:G:N7	2.73	0.49
28:BD:107:LYS:O	28:BD:108:ASN:CB	2.59	0.49
28:BD:107:LYS:HG2	28:BD:108:ASN:N	2.27	0.49
28:BD:80:ILE:HB	28:BD:82:TYR:CZ	2.42	0.49
29:BE:222:ARG:HG2	29:BE:232:ARG:H	1.75	0.49
26:BB:57:A:N3	31:BG:13:MET:CE	2.75	0.49
31:BG:29:HIS:HE2	31:BG:64:ARG:HH22	1.60	0.49
31:BG:98:PHE:CB	31:BG:104:PHE:CE2	2.96	0.49
32:BH:69:SER:O	32:BH:72:ALA:N	2.46	0.49
56:BK:93:LYS:H	56:BK:96:ILE:HD11	1.77	0.49
34:BN:52:GLN:CA	34:BN:55:GLU:HG3	2.41	0.49
34:BN:58:GLU:CB	34:BN:61:VAL:CG2	2.89	0.49
35:BO:104:ARG:HD2	35:BO:104:ARG:N	2.19	0.49
35:BO:106:LEU:O	35:BO:107:ARG:C	2.50	0.49
36:BP:129:ALA:C	36:BP:131:GLU:N	2.65	0.49
27:BA:389:G:O6	36:BP:54:PRO:CB	2.60	0.49
37:BQ:45:GLN:OE1	37:BQ:153:PRO:CB	2.60	0.49
39:BT:5:GLU:O	39:BT:6:CYS:C	2.49	0.49
45:BU:21:ALA:O	45:BU:22:LYS:O	2.30	0.49
45:BU:73:GLY:O	45:BU:74:MET:CB	2.61	0.49
46:BV:10:LYS:O	46:BV:11:GLN:C	2.50	0.49
40:BW:5:ALA:HB2	40:BW:54:ALA:CB	2.34	0.49
40:BW:60:ASN:C	40:BW:61:ASN:OD1	2.51	0.49
33:BI:108:LEU:HD23	33:BI:109:LYS:C	2.33	0.49
27:BA:290:G:C8	27:BA:290:G:OP2	2.66	0.49
27:BA:291:C:N4	27:BA:349:G:C6	2.81	0.49
43:BZ:14:LEU:CD2	43:BZ:14:LEU:O	2.56	0.49
43:BZ:69:VAL:HG13	43:BZ:81:VAL:HA	1.95	0.49
43:BZ:69:VAL:CG1	43:BZ:81:VAL:HG13	2.43	0.49
17:AN:16:PHE:O	17:AN:18:VAL:N	2.45	0.49
1:AA:1225:A:O2'	22:AS:80:TYR:HB2	2.12	0.49
27:BA:729:G:H1'	27:BA:763:G:O3'	2.13	0.49
28:BD:213:LYS:HB3	28:BD:215:LYS:O	2.11	0.49
41:BX:32:ALA:C	41:BX:37:VAL:CG2	2.81	0.49
1:AA:281:G:HO2'	1:AA:282:A:H8	1.61	0.49
1:AA:280:C:H1'	20:AQ:38:ARG:NE	2.27	0.49
7:AD:21:LEU:C	7:AD:113:SER:HB2	2.28	0.49
3:AW:23:A:O2'	3:AW:24:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1248:A:N3	12:AI:70:LYS:CE	2.75	0.49
1:AA:116:A:N1	1:AA:313:A:O2'	2.41	0.49
1:AA:501:C:OP1	15:AL:124:LYS:CD	2.57	0.49
9:AF:95:GLU:CB	9:AF:96:PRO:HD3	2.29	0.49
27:BA:1924:C:C4	27:BA:1925:C:N4	2.80	0.49
1:AA:1242:C:O2'	1:AA:1303:C:C5'	2.60	0.49
27:BA:1497:U:H6	27:BA:1497:U:O5'	1.95	0.49
27:BA:1805:U:H5'	28:BD:235:PRO:HG2	1.95	0.49
27:BA:1332:G:N7	27:BA:1609:A:N6	2.60	0.49
5:AB:71:VAL:HG11	5:AB:170:GLU:HG2	1.94	0.49
27:BA:2181:G:H2'	27:BA:2182:G:H5''	1.93	0.49
27:BA:1496:A:H8	27:BA:1496:A:O5'	1.93	0.49
27:BA:303:U:H2'	27:BA:304:G:C8	2.45	0.49
27:BA:1422:G:N2	27:BA:1576:U:C2	2.80	0.49
1:AA:92:C:H2'	1:AA:93:G:C8	2.48	0.49
1:AA:1130:A:P	12:AI:20:ARG:HH22	2.36	0.49
1:AA:1194:U:H4'	8:AE:22:GLY:C	2.33	0.49
48:B3:12:PRO:HG2	48:B3:20:LYS:HZ3	1.73	0.49
52:B6:31:THR:O	52:B6:32:GLN:O	2.31	0.49
53:B7:35:ARG:O	53:B7:36:ALA:C	2.50	0.49
27:BA:1252:G:N2	45:BU:37:GLN:HB2	2.27	0.49
27:BA:1287:A:H5''	44:BR:104:ARG:HD3	1.92	0.49
27:BA:2215:G:O2'	27:BA:2216:G:C4'	2.58	0.49
27:BA:2243:U:O2	27:BA:2244:U:N1	2.46	0.49
27:BA:2311:A:O2'	31:BG:53:LYS:HG3	2.12	0.49
27:BA:2366:A:N7	27:BA:2367:G:C8	2.78	0.49
27:BA:2431:U:N3	27:BA:2433:A:OP2	2.43	0.49
27:BA:2447:G:C5	27:BA:2500:U:C4	2.92	0.49
27:BA:2616:C:C4	27:BA:2617:C:H5	2.30	0.49
27:BA:2834:G:C3'	27:BA:2834:G:C8	2.95	0.49
27:BA:452:G:C2	27:BA:458:G:C2	3.01	0.49
27:BA:452:G:OP1	30:BF:52:ALA:HB1	2.13	0.49
29:BE:177:ALA:C	29:BE:179:ASP:H	2.13	0.49
29:BE:250:VAL:C	29:BE:251:PRO:O	2.49	0.49
27:BA:2821:A:O3'	29:BE:258:TYR:CE2	2.66	0.49
30:BF:55:ARG:CG	30:BF:56:THR:N	2.68	0.49
31:BG:35:ALA:O	31:BG:36:ASN:HB2	2.12	0.49
32:BH:10:ILE:CG1	32:BH:49:ILE:HG13	2.42	0.49
32:BH:66:THR:HG22	32:BH:67:THR:H	1.76	0.49
33:BI:43:ASN:CA	33:BI:46:ALA:H	2.26	0.49
35:BO:43:VAL:CG1	35:BO:54:LYS:HA	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:113:GLN:O	36:BP:115:ARG:CG	2.61	0.49
36:BP:130:ARG:O	36:BP:133:VAL:CB	2.53	0.49
37:BQ:85:ILE:HA	37:BQ:122:PHE:CD2	2.47	0.49
37:BQ:16:ARG:C	37:BQ:17:ARG:HD3	2.32	0.49
44:BR:22:ARG:HH21	44:BR:69:ASP:HB3	1.77	0.49
44:BR:34:ILE:HG23	44:BR:35:THR:N	2.03	0.49
38:BS:35:VAL:CG1	38:BS:37:ARG:CZ	2.89	0.49
45:BU:44:THR:O	45:BU:47:TYR:CB	2.38	0.49
45:BU:87:ASN:HD22	45:BU:87:ASN:C	2.16	0.49
46:BV:34:GLU:O	46:BV:35:LEU:CG	2.58	0.49
33:BI:119:ASP:C	33:BI:119:ASP:OD1	2.50	0.49
33:BI:82:LYS:O	33:BI:89:LEU:HD23	2.12	0.49
27:BA:83:G:O3'	42:BY:20:HIS:CE1	2.65	0.49
42:BY:89:ARG:O	42:BY:91:LEU:CD2	2.61	0.49
42:BY:71:VAL:CG1	42:BY:93:THR:N	2.76	0.49
43:BZ:2:GLU:O	43:BZ:54:ILE:HG22	1.99	0.49
43:BZ:50:GLY:O	43:BZ:51:LEU:HB3	2.11	0.49
43:BZ:51:LEU:CD2	43:BZ:52:PHE:O	2.60	0.49
27:BA:70:G:H5'	27:BA:75:G:H22	1.78	0.49
41:BX:28:VAL:HG22	41:BX:62:LYS:C	2.32	0.49
41:BX:6:LYS:HZ2	41:BX:29:ASP:N	2.09	0.49
13:AJ:11:PHE:CE2	13:AJ:65:LEU:HG	2.47	0.49
17:AN:27:CYS:N	17:AN:43:CYS:HB3	2.27	0.49
43:BZ:95:SER:HB3	43:BZ:122:ILE:HG12	1.89	0.49
5:AB:115:LEU:HD22	5:AB:149:LEU:HD13	1.93	0.49
20:AQ:22:LEU:HD12	20:AQ:23:VAL:N	2.28	0.49
3:AW:40:C:O4'	10:AG:148:ASN:OD1	2.30	0.49
27:BA:1697:G:C5'	27:BA:1698:A:H5'	2.40	0.49
27:BA:1085:A:H1'	27:BA:1086:A:C4'	2.43	0.49
1:AA:1240:U:C2	10:AG:30:ILE:O	2.65	0.49
34:BN:7:ASP:O	34:BN:8:ALA:CB	2.59	0.49
1:AA:1521:G:H2'	1:AA:1522:U:H6	1.77	0.49
56:BK:95:LYS:O	56:BK:95:LYS:HG2	2.12	0.49
49:B0:11:LYS:O	49:B0:12:ASN:C	2.50	0.49
27:BA:17:G:P	51:B5:13:LYS:NZ	2.84	0.49
27:BA:1022:G:O6	34:BN:47:THR:CB	2.60	0.49
27:BA:1653:G:OP1	27:BA:2822:G:N1	2.43	0.49
27:BA:1266:G:HO2'	27:BA:2012:G:H1	1.60	0.49
27:BA:2254:C:C2'	27:BA:2255:G:O5'	2.61	0.49
27:BA:2305:A:C2	31:BG:72:LYS:HE2	2.48	0.49
27:BA:2322:A:N3	27:BA:2322:A:C2'	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2347:C:N3	27:BA:2348:U:C5	2.80	0.49
27:BA:2358:G:C6	27:BA:2359:C:C2	3.00	0.49
27:BA:2346:A:H4'	27:BA:2383:G:O4'	2.12	0.49
27:BA:2450:A:OP1	27:BA:2497:A:C5	2.59	0.49
27:BA:2492:U:O2'	27:BA:2493:U:P	2.68	0.49
27:BA:2523:G:N2	27:BA:2541:A:H1'	2.28	0.49
27:BA:1672:C:H4'	27:BA:2553:G:O3'	2.12	0.49
27:BA:2564:A:N6	27:BA:2565:A:N6	2.60	0.49
27:BA:2509:G:C4	27:BA:2580:U:O2	2.65	0.49
27:BA:2622:C:O2	27:BA:2623:G:H8	1.79	0.49
27:BA:2653:U:N3	27:BA:2654:A:C5	2.79	0.49
27:BA:2821:A:H2'	27:BA:2822:G:H1'	1.92	0.49
27:BA:2870:C:O2	27:BA:2871:C:N1	2.45	0.49
27:BA:2788:C:H2'	27:BA:2892:A:C2	2.47	0.49
26:BB:24:G:C6	26:BB:56:G:C2	3.01	0.49
28:BD:146:LYS:HB3	28:BD:149:ARG:CG	2.42	0.49
29:BE:193:PHE:CD2	29:BE:311:PHE:CD1	3.00	0.49
27:BA:2784:C:H5'	29:BE:95:PRO:O	2.13	0.49
30:BF:145:GLU:HG3	30:BF:196:THR:CG2	2.43	0.49
30:BF:85:LYS:N	30:BF:85:LYS:CD	2.42	0.49
30:BF:99:SER:O	30:BF:100:LEU:HG	2.13	0.49
27:BA:2313:C:O3'	31:BG:51:ARG:NH1	2.46	0.49
31:BG:98:PHE:HB3	31:BG:104:PHE:HE2	1.78	0.49
36:BP:116:HIS:CD2	36:BP:118:LEU:CD1	2.71	0.49
44:BR:28:LEU:C	44:BR:30:THR:N	2.66	0.49
44:BR:65:LEU:O	44:BR:68:ARG:HB2	2.12	0.49
44:BR:38:VAL:CG2	44:BR:99:LYS:HE3	2.40	0.49
38:BS:115:VAL:HG12	38:BS:116:PHE:N	2.28	0.49
46:BV:40:VAL:HG13	46:BV:55:THR:CG2	2.41	0.49
46:BV:61:VAL:CG1	46:BV:96:LEU:N	2.75	0.49
40:BW:45:TYR:O	40:BW:48:ALA:HB3	2.13	0.49
40:BW:86:LEU:HD23	40:BW:86:LEU:N	2.10	0.49
43:BZ:151:ASP:OD1	43:BZ:151:ASP:N	2.46	0.49
43:BZ:166:LEU:O	43:BZ:167:THR:C	2.50	0.49
42:BY:51:LEU:CD2	42:BY:52:ARG:HG3	2.41	0.49
43:BZ:6:LYS:CB	43:BZ:31:SER:HB3	2.43	0.49
47:B2:51:LYS:O	47:B2:53:ILE:N	2.45	0.49
1:AA:815:A:HO2'	1:AA:1527:C:C1'	2.26	0.49
1:AA:291:C:H3'	1:AA:305:G:H22	1.78	0.49
27:BA:1912:A:C5	27:BA:1918:A:H2	2.30	0.49
1:AA:106:C:H2'	1:AA:107:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:36:C:O2'	1:AA:501:C:H5''	2.13	0.49
6:AC:122:GLU:HA	6:AC:125:GLU:CG	2.43	0.49
1:AA:376:G:OP2	19:AP:67:THR:HG21	2.13	0.49
2:AV:24:G:H2'	2:AV:25:C:H6	1.77	0.49
27:BA:1324:G:O3'	27:BA:1325:G:H4'	2.13	0.49
27:BA:270(A):A:H62	27:BA:270(Z):U:H5''	1.78	0.49
1:AA:127:G:OP1	1:AA:635:G:H1'	2.13	0.49
27:BA:1804:C:N4	27:BA:1813:G:H1	2.11	0.49
5:AB:73:THR:HG21	5:AB:97:TRP:H	1.77	0.49
1:AA:24:U:O2'	1:AA:525:C:H1'	2.13	0.49
27:BA:880:G:H1	27:BA:897:C:H42	1.61	0.49
27:BA:662:G:H2'	27:BA:663:G:C8	2.48	0.49
51:B5:16:ARG:O	51:B5:17:ASP:C	2.49	0.49
54:B8:61:MET:O	54:B8:63:PRO:CD	2.46	0.49
27:BA:1163:G:H2'	27:BA:1164:G:C5'	2.43	0.49
27:BA:1264:G:H3'	27:BA:1265:A:C5'	2.43	0.49
27:BA:1758:G:N7	27:BA:2695:C:H4'	2.28	0.49
27:BA:2059:A:C2	27:BA:2503:A:N7	2.63	0.49
27:BA:2297:C:O2'	27:BA:2298:A:C5'	2.61	0.49
27:BA:2359:C:N3	27:BA:2360:A:H2	2.10	0.49
27:BA:2392:A:C5	27:BA:2393:A:C5	3.01	0.49
27:BA:2399:G:C2	27:BA:2400:G:N9	2.81	0.49
27:BA:2402:C:C6	27:BA:2402:C:O5'	2.65	0.49
27:BA:2410:G:C2	27:BA:2411:A:C5	3.01	0.49
27:BA:244:A:O2'	36:BP:56:LYS:CB	2.60	0.49
27:BA:243:U:H5''	27:BA:244:A:OP2	2.11	0.49
27:BA:2493:U:O2'	27:BA:2494:G:O5'	2.31	0.49
27:BA:2523:G:H2'	27:BA:2524:G:C5'	2.37	0.49
27:BA:2555:U:H2'	27:BA:2556:C:O5'	2.10	0.49
27:BA:2571:C:H2'	27:BA:2572:A:OP1	2.12	0.49
27:BA:2703:C:O4'	27:BA:2703:C:O2	2.29	0.49
27:BA:2729:G:N3	27:BA:2730:C:C2	2.80	0.49
27:BA:637:A:P	36:BP:126:SER:OG	2.70	0.49
27:BA:974:G:C5	46:BV:80:TYR:CE2	2.99	0.49
29:BE:176:HIS:HA	29:BE:179:ASP:OD1	2.13	0.49
29:BE:305:LYS:O	29:BE:306:ARG:HB2	2.12	0.49
30:BF:113:SER:O	30:BF:114:ALA:C	2.51	0.49
27:BA:443:A:N6	30:BF:39:GLN:HB2	2.26	0.49
32:BH:36:PHE:C	32:BH:37:HIS:HD1	2.16	0.49
32:BH:55:SER:HB2	32:BH:60:HIS:CB	2.39	0.49
32:BH:62:ALA:O	32:BH:63:LEU:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:8:ILE:CG2	32:BH:9:GLU:H	2.13	0.49
34:BN:12:VAL:C	34:BN:38:VAL:CB	2.79	0.49
34:BN:15:ARG:CB	34:BN:43:ARG:HD2	2.22	0.49
35:BO:77:ILE:O	35:BO:78:ARG:HG2	2.12	0.49
36:BP:116:HIS:CD2	36:BP:118:LEU:HD21	2.48	0.49
36:BP:71:GLU:HG3	36:BP:72:ASN:H	1.78	0.49
37:BQ:122:PHE:CB	37:BQ:136:TRP:HZ2	2.25	0.49
44:BR:105:ARG:CZ	44:BR:105:ARG:H	2.26	0.49
44:BR:28:LEU:C	44:BR:28:LEU:CD1	2.81	0.49
45:BU:36:PHE:O	45:BU:39:LEU:HB3	2.07	0.49
27:BA:1156:A:P	45:BU:55:ARG:CZ	2.93	0.49
45:BU:91:ASN:O	45:BU:95:LEU:HD13	2.10	0.49
27:BA:566:U:H5''	46:BV:81:ARG:HH22	1.78	0.49
46:BV:93:ILE:O	46:BV:95:ILE:HD13	2.12	0.49
27:BA:496:G:P	40:BW:62:HIS:CE1	3.06	0.49
40:BW:85:VAL:HG12	40:BW:95:ILE:CG1	2.43	0.49
43:BZ:108:VAL:O	43:BZ:108:VAL:CG1	2.55	0.49
4:AX:117:U:O2'	4:AX:118:C:H5'	2.12	0.49
33:BI:115:ILE:HG12	33:BI:131:VAL:HG11	1.86	0.49
42:BY:16:LEU:O	42:BY:19:ARG:N	2.40	0.49
13:AJ:47:PHE:HE1	13:AJ:63:PHE:HB2	1.78	0.49
27:BA:1789:A:H5''	27:BA:1790:C:OP2	2.13	0.49
27:BA:1547:C:H2'	27:BA:1548:C:C6	2.47	0.49
47:B2:22:ASP:O	47:B2:26:GLU:CD	2.47	0.49
47:B2:50:ARG:O	47:B2:53:ILE:HD12	2.13	0.49
42:BY:9:LYS:NZ	42:BY:13:ARG:CZ	2.76	0.49
8:AE:79:GLU:OE2	11:AH:104:ARG:HD3	2.13	0.49
2:AV:25:C:C2'	2:AV:26:G:O5'	2.50	0.49
1:AA:22:G:C2	1:AA:914:A:N7	2.80	0.49
21:AR:58:LEU:HD22	21:AR:62:GLU:HG2	1.95	0.49
1:AA:1067:A:O2'	1:AA:1068:G:OP2	2.27	0.49
27:BA:184:C:C4	27:BA:213:A:N6	2.80	0.49
1:AA:596:C:H2'	1:AA:597:G:H8	1.78	0.49
1:AA:62:U:O5'	1:AA:385:C:O2'	2.31	0.49
1:AA:1378:C:H2'	1:AA:1378:C:O2	2.13	0.49
27:BA:1644:C:H2'	27:BA:1645:G:H8	1.76	0.49
1:AA:484:G:C8	1:AA:486:U:C2	3.00	0.49
27:BA:2081:C:H5'	50:B4:35:VAL:CG2	2.42	0.49
51:B5:25:LEU:C	51:B5:26:THR:HG23	2.25	0.49
27:BA:771:G:OP1	53:B7:14:LYS:HD2	2.13	0.49
55:B9:4:ARG:C	55:B9:36:GLN:HA	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1968:G:C8	27:BA:1968:G:H3'	2.47	0.49
27:BA:2009:G:C6	27:BA:2010:G:N7	2.80	0.49
27:BA:2023:G:H2'	27:BA:2024:G:C8	2.48	0.49
27:BA:2205:C:N4	27:BA:2206:C:H41	2.11	0.49
27:BA:2239:G:C5	27:BA:2240:C:C5	3.00	0.49
27:BA:2300:G:H1	27:BA:2316:C:H42	1.59	0.49
27:BA:2329:G:N3	27:BA:2330:G:C8	2.80	0.49
27:BA:2294:C:N3	27:BA:2339:G:O6	2.45	0.49
27:BA:2340:G:C2'	27:BA:2341:G:O5'	2.61	0.49
27:BA:2349:G:N1	27:BA:2369:A:N1	2.60	0.49
27:BA:2373:G:H2'	27:BA:2374:C:C6	2.47	0.49
27:BA:2454:G:N3	27:BA:2455:G:C1'	2.76	0.49
27:BA:2454:G:H2'	27:BA:2455:G:C5'	2.23	0.49
27:BA:2061:G:C4	27:BA:2503:A:H2	2.28	0.49
27:BA:2519:U:C6	27:BA:2541:A:N6	2.80	0.49
27:BA:2556:C:C3'	27:BA:2557:G:C5'	2.78	0.49
27:BA:2565:A:O3'	27:BA:2566:A:H4'	2.09	0.49
27:BA:2722:G:C5	27:BA:2723:C:C5	3.01	0.49
27:BA:2854:G:C2	27:BA:2864:G:C4	3.00	0.49
27:BA:468:G:H2'	27:BA:469:G:O4'	2.13	0.49
27:BA:529:A:O2'	27:BA:530:G:P	2.71	0.49
27:BA:849:A:N3	48:B3:21:ALA:HB2	2.23	0.49
28:BD:103:ILE:HG13	28:BD:104:ILE:CD1	2.21	0.49
28:BD:74:PRO:C	28:BD:116:MET:HE2	2.33	0.49
28:BD:76:ARG:HG2	28:BD:76:ARG:NH1	2.28	0.49
29:BE:176:HIS:HA	29:BE:179:ASP:CG	2.33	0.49
29:BE:252:GLN:C	29:BE:254:GLY:N	2.67	0.49
30:BF:200:PRO:HD3	30:BF:214:THR:HG22	1.94	0.49
32:BH:43:THR:HG21	32:BH:51:VAL:C	2.33	0.49
34:BN:74:ARG:HD2	34:BN:141:ALA:C	2.32	0.49
34:BN:52:GLN:HA	34:BN:55:GLU:HG3	1.88	0.49
27:BA:2467:C:O3'	37:BQ:141:MET:HE3	2.13	0.49
44:BR:20:LEU:HD12	44:BR:21:TYR:CE2	2.43	0.49
46:BV:39:PHE:HE2	46:BV:41:GLY:C	2.11	0.49
27:BA:496:G:C1'	40:BW:61:ASN:HD22	2.19	0.49
27:BA:80:G:O5'	27:BA:80:G:H8	1.95	0.49
26:BB:76:G:O3'	43:BZ:80:HIS:CD2	2.66	0.49
27:BA:145:G:H2'	27:BA:146:G:H8	1.78	0.49
27:BA:67:U:C2	27:BA:68:G:N7	2.81	0.49
27:BA:1:G:C6	27:BA:2902:C:N4	2.71	0.49
5:AB:112:VAL:N	5:AB:113:HIS:N	2.61	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2857:G:N2	27:BA:2860:A:OP2	2.40	0.49
43:BZ:143:ILE:CG2	43:BZ:144:GLY:N	2.38	0.49
7:AD:68:TYR:CZ	7:AD:97:LEU:HB3	2.48	0.49
27:BA:176:G:H21	27:BA:177:G:H1'	1.78	0.49
12:AI:104:ARG:O	12:AI:105:ASP:HB2	2.13	0.49
15:AL:54:LYS:CG	15:AL:75:HIS:CE1	2.88	0.49
1:AA:126:G:C4'	1:AA:634:C:O2'	2.60	0.49
22:AS:44:MET:HA	22:AS:47:HIS:CD2	2.48	0.49
27:BA:1796:U:H2'	27:BA:1797:C:C5	2.47	0.49
48:B3:31:LEU:HD21	48:B3:32:GLN:HB3	1.90	0.49
52:B6:8:ILE:HD13	52:B6:29:ARG:CZ	2.43	0.49
53:B7:10:ARG:O	53:B7:13:ALA:HB3	2.13	0.49
27:BA:1062:G:H2'	27:BA:1062:G:N3	2.28	0.49
27:BA:1851:U:H3	27:BA:1891:G:H1	1.60	0.49
27:BA:2207:C:C4	27:BA:2218:G:C6	3.00	0.49
27:BA:2242:G:C2	27:BA:2243:U:C6	2.99	0.49
27:BA:2326:C:C2'	27:BA:2326:C:O2	2.41	0.49
27:BA:2370:G:C6	27:BA:2371:G:C5	3.01	0.49
27:BA:2439:A:N3	27:BA:2439:A:O2'	2.45	0.49
27:BA:2478:A:H2'	27:BA:2479:G:C5'	2.42	0.49
27:BA:2553:G:C8	27:BA:2554:U:C1'	2.95	0.49
27:BA:2633:G:H8	27:BA:2633:G:OP2	1.95	0.49
27:BA:2655:G:O2'	27:BA:2656:U:C5	2.66	0.49
27:BA:2712:U:H5''	27:BA:2714:G:C4'	2.43	0.49
27:BA:2788:C:H2'	27:BA:2892:A:H2	1.78	0.49
27:BA:2805:G:H3'	27:BA:2807:G:C5'	2.42	0.49
27:BA:2885:C:N3	27:BA:2886:G:N9	2.61	0.49
27:BA:527:C:C5	27:BA:2779:U:C6	2.99	0.49
27:BA:598:G:H21	30:BF:33:LYS:HZ3	0.49	0.49
27:BA:641:C:H2'	27:BA:642:G:O4'	2.13	0.49
27:BA:989:G:C8	48:B3:13:ILE:HD11	2.48	0.49
28:BD:124:LYS:O	28:BD:127:ASN:ND2	2.46	0.49
28:BD:167:GLU:CB	28:BD:170:TYR:HD1	1.99	0.49
28:BD:128:ALA:CA	28:BD:190:THR:HA	2.43	0.49
28:BD:62:ARG:HH22	28:BD:83:ASP:HB3	1.78	0.49
29:BE:207:GLY:N	29:BE:257:GLY:O	2.46	0.49
30:BF:167:ASP:HB2	30:BF:232:LEU:HB2	1.95	0.49
30:BF:197:SER:O	30:BF:238:SER:HB3	2.13	0.49
30:BF:221:GLU:O	30:BF:222:ASP:C	2.50	0.49
30:BF:36:ARG:C	30:BF:39:GLN:NE2	2.45	0.49
31:BG:99:ASP:N	31:BG:104:PHE:HD2	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:47:GLN:CD	31:BG:75:LEU:HD23	2.34	0.49
32:BH:32:LEU:HD11	32:BH:136:ASP:OD2	2.13	0.49
27:BA:270(P):C:O3'	33:BI:42:ALA:HB2	2.13	0.49
33:BI:6:LEU:HD22	33:BI:6:LEU:O	2.13	0.49
34:BN:80:LYS:O	34:BN:83:ILE:CG1	2.42	0.49
37:BQ:31:PHE:CZ	37:BQ:88:PHE:CE2	2.98	0.49
44:BR:63:ARG:NH2	44:BR:77:ARG:HA	2.28	0.49
38:BS:86:LEU:O	38:BS:87:LEU:C	2.50	0.49
45:BU:39:LEU:HB3	45:BU:40:LEU:CD2	2.41	0.49
46:BV:22:VAL:CG1	46:BV:23:GLU:N	2.76	0.49
45:BU:102:GLU:HB3	46:BV:43:GLU:OE2	2.11	0.49
46:BV:18:ASP:OD2	46:BV:94:LYS:HE2	2.13	0.49
43:BZ:128:ARG:O	43:BZ:129:ARG:HG2	2.13	0.49
33:BI:68:LEU:HB3	33:BI:72:LEU:HD21	1.94	0.49
12:AI:115:GLY:O	12:AI:116:LYS:C	2.52	0.49
41:BX:14:ALA:O	41:BX:15:MET:C	2.51	0.49
7:AD:100:ARG:HB2	7:AD:103:ASN:HB3	1.95	0.49
27:BA:270:A:C8	27:BA:270(A):A:H1'	2.48	0.49
27:BA:678:C:N4	27:BA:799:G:H1	2.11	0.49
1:AA:370:C:O2'	1:AA:482:A:O2'	2.26	0.49
7:AD:126:ILE:O	7:AD:132:ARG:HB3	2.13	0.49
1:AA:1233:G:H2'	1:AA:1234:C:C6	2.47	0.49
20:AQ:29:HIS:N	20:AQ:33:GLY:O	2.46	0.49
51:B5:34:PRO:HG2	51:B5:35:GLN:H	1.77	0.48
27:BA:2354:G:O2'	49:B0:32:LYS:HB2	2.12	0.48
27:BA:932:G:OP1	48:B3:29:ARG:CZ	2.60	0.48
27:BA:1263:U:O4'	51:B5:16:ARG:CZ	2.59	0.48
52:B6:37:LEU:CD2	52:B6:51:ARG:CG	2.52	0.48
53:B7:9:ASN:O	53:B7:10:ARG:O	2.28	0.48
27:BA:1367:A:O2'	53:B7:25:LYS:CD	2.60	0.48
54:B8:4:MET:CE	54:B8:4:MET:N	2.76	0.48
27:BA:530:G:C4	27:BA:2021:C:N3	2.81	0.48
27:BA:2239:G:C2	27:BA:2240:C:C6	3.01	0.48
27:BA:2237:G:O2'	27:BA:2239:G:N7	2.47	0.48
27:BA:2298:A:C4	27:BA:2321:G:N1	2.79	0.48
27:BA:2333:A:H3'	38:BS:13:ARG:CD	2.20	0.48
27:BA:2531:A:H2	27:BA:2658:C:H1'	1.73	0.48
27:BA:2543:G:C3'	27:BA:2544:G:H5'	2.43	0.48
27:BA:2549:G:C2	27:BA:2550:G:N7	2.81	0.48
27:BA:2645:G:OP2	27:BA:2645:G:C8	2.66	0.48
27:BA:2628:C:H1'	27:BA:2781:A:N3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2808:U:H5''	27:BA:2809:A:OP2	2.13	0.48
27:BA:2822:G:P	29:BE:258:TYR:CE2	3.05	0.48
27:BA:511:U:C5	27:BA:512:G:H1'	2.48	0.48
28:BD:134:ILE:CG2	28:BD:163:VAL:HG21	2.43	0.48
28:BD:170:TYR:C	28:BD:182:MET:SD	2.92	0.48
28:BD:141:HIS:NE2	28:BD:191:VAL:O	2.44	0.48
30:BF:223:LEU:O	30:BF:231:ARG:CG	2.61	0.48
30:BF:244:ALA:C	30:BF:246:ARG:H	2.15	0.48
32:BH:159:LYS:N	32:BH:162:ARG:NH1	2.61	0.48
36:BP:60:GLU:O	36:BP:61:ALA:HB3	2.12	0.48
36:BP:71:GLU:C	36:BP:73:VAL:H	2.16	0.48
37:BQ:143:VAL:C	37:BQ:144:THR:HG23	2.21	0.48
38:BS:106:LEU:C	38:BS:107:ASN:O	2.44	0.48
27:BA:2296:U:H3	38:BS:16:ALA:HB2	1.75	0.48
39:BT:37:GLU:CG	39:BT:38:ASN:N	2.37	0.48
45:BU:72:HIS:ND1	45:BU:110:VAL:CG2	2.77	0.48
27:BA:535:C:H5'	45:BU:53:LYS:HE3	1.93	0.48
27:BA:1152:C:C1'	45:BU:77:SER:HB3	2.42	0.48
43:BZ:110:GLY:C	43:BZ:112:LEU:N	2.65	0.48
43:BZ:126:GLY:O	43:BZ:127:PRO:C	2.51	0.48
42:BY:33:GLU:C	42:BY:35:TYR:N	2.66	0.48
42:BY:49:GLU:OE2	42:BY:49:GLU:C	2.51	0.48
42:BY:51:LEU:HD22	42:BY:95:ASN:CB	2.43	0.48
43:BZ:29:ASN:O	43:BZ:30:VAL:HG22	2.12	0.48
16:AM:77:ASN:O	16:AM:81:LEU:HD13	2.13	0.48
1:AA:1014:A:C2	22:AS:34:TRP:CH2	3.01	0.48
41:BX:52:VAL:HA	41:BX:65:VAL:O	2.13	0.48
41:BX:77:VAL:O	41:BX:78:ALA:C	2.51	0.48
1:AA:235:C:H2'	1:AA:236:G:H8	1.78	0.48
1:AA:280:C:O4'	20:AQ:38:ARG:CZ	2.61	0.48
27:BA:440:G:H5''	42:BY:2:LYS:HB3	1.94	0.48
1:AA:983:A:C1'	1:AA:1049:U:O2	2.60	0.48
1:AA:671:G:C2	1:AA:672:U:C2	3.00	0.48
1:AA:1237:C:HO2'	1:AA:1300:G:N2	2.03	0.48
27:BA:2182:G:C2	27:BA:2183:C:N3	2.81	0.48
1:AA:1172:C:H2'	1:AA:1173:G:H8	1.78	0.48
27:BA:1513:C:H6	27:BA:1513:C:H3'	1.77	0.48
27:BA:823:G:H2'	27:BA:824:A:C8	2.48	0.48
20:AQ:90:ILE:HA	20:AQ:93:GLN:HB2	1.95	0.48
1:AA:526:C:O5'	1:AA:526:C:H6	1.96	0.48
27:BA:366:C:H2'	27:BA:366:C:O2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:14:ILE:HD11	50:B4:39:VAL:CG2	2.43	0.48
27:BA:1022:G:O5'	34:BN:52:GLN:CD	2.48	0.48
27:BA:1077:A:H1'	56:BK:92:PRO:HG3	1.94	0.48
27:BA:1799:G:N1	28:BD:153:LEU:CD2	2.62	0.48
27:BA:2206:C:H2'	27:BA:2207:C:C6	2.48	0.48
27:BA:2259:G:C8	27:BA:2260:C:C6	3.00	0.48
27:BA:2354:G:C4	27:BA:2355:C:C6	3.01	0.48
25:AY:232:VAL:CA	27:BA:2452:C:OP1	2.61	0.48
27:BA:197:A:N6	27:BA:248:G:N2	2.59	0.48
27:BA:2517:C:O2'	27:BA:2518:A:P	2.71	0.48
27:BA:2519:U:O2	27:BA:2542:A:N1	2.46	0.48
27:BA:2595:G:H2'	27:BA:2597:G:OP2	2.12	0.48
27:BA:2708:G:H5'	44:BR:68:ARG:O	2.12	0.48
27:BA:2865:U:N3	27:BA:2866:U:C4	2.80	0.48
27:BA:387:U:H3'	50:B4:29:PRO:HG3	1.96	0.48
27:BA:530:G:H1'	27:BA:532:A:P	2.54	0.48
27:BA:585:G:H2'	27:BA:586:A:C8	2.47	0.48
27:BA:585:G:N2	27:BA:1256:G:C6	2.81	0.48
26:BB:15:A:C2	26:BB:109:G:N3	2.81	0.48
26:BB:60:C:H2'	26:BB:61:G:C8	2.48	0.48
28:BD:65:ASP:OD2	28:BD:101:ARG:HD3	2.13	0.48
28:BD:108:ASN:CG	28:BD:109:LEU:N	2.64	0.48
31:BG:146:LYS:HG3	38:BS:15:GLU:CG	2.38	0.48
32:BH:104:LEU:HD12	32:BH:104:LEU:N	2.27	0.48
32:BH:52:THR:O	32:BH:64:HIS:HD2	1.97	0.48
33:BI:1:MET:HB3	33:BI:22:ALA:H	1.77	0.48
34:BN:41:ALA:O	34:BN:132:LEU:O	2.31	0.48
34:BN:21:ARG:CA	34:BN:24:SER:OG	2.61	0.48
27:BA:2780:G:N2	34:BN:80:LYS:HZ2	2.09	0.48
35:BO:114:ILE:O	35:BO:115:ILE:C	2.51	0.48
35:BO:24:VAL:HG11	35:BO:32:TYR:C	2.34	0.48
36:BP:76:LEU:CB	36:BP:81:VAL:CG2	2.91	0.48
37:BQ:18:GLU:HB3	37:BQ:23:ILE:HD11	1.95	0.48
37:BQ:25:GLY:C	37:BQ:26:LYS:CG	2.76	0.48
37:BQ:43:PRO:O	37:BQ:44:ALA:C	2.52	0.48
44:BR:100:LEU:HD21	44:BR:113:LEU:HB3	1.94	0.48
44:BR:58:GLY:O	44:BR:59:ASP:CB	2.59	0.48
45:BU:109:LEU:C	45:BU:111:ASP:N	2.64	0.48
45:BU:8:ILE:C	45:BU:11:ARG:CD	2.81	0.48
45:BU:28:ARG:CA	45:BU:31:GLN:HB2	2.12	0.48
45:BU:39:LEU:O	45:BU:41:ASN:CA	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:47:TYR:HA	45:BU:50:ARG:CG	2.43	0.48
43:BZ:126:GLY:C	43:BZ:129:ARG:HB2	2.17	0.48
43:BZ:142:ASN:O	43:BZ:171:VAL:HG21	2.13	0.48
33:BI:116:GLU:CG	33:BI:130:PRO:O	2.61	0.48
43:BZ:1:MET:O	43:BZ:2:GLU:CB	2.61	0.48
43:BZ:20:ALA:O	43:BZ:21:ALA:HB2	2.13	0.48
43:BZ:54:ILE:HG23	43:BZ:55:THR:H	1.78	0.48
43:BZ:52:PHE:H	43:BZ:65:LEU:CD1	2.26	0.48
47:B2:27:LEU:CD1	47:B2:53:ILE:HD11	2.41	0.48
47:B2:34:GLN:O	47:B2:37:GLY:N	2.45	0.48
27:BA:75:G:C3'	47:B2:51:LYS:NZ	2.73	0.48
41:BX:50:GLU:CD	41:BX:50:GLU:H	2.15	0.48
43:BZ:95:SER:CA	43:BZ:122:ILE:HA	2.40	0.48
1:AA:1037:C:O3'	1:AA:1038:C:H5'	2.12	0.48
1:AA:939:G:H5''	10:AG:102:ARG:NH1	2.25	0.48
1:AA:944:G:C8	1:AA:945:G:C8	3.01	0.48
1:AA:1286:A:N6	1:AA:1354:C:O3'	2.46	0.48
1:AA:130:A:H8	1:AA:130:A:OP1	1.95	0.48
1:AA:1095:U:H5'	1:AA:1109:C:O2	2.13	0.48
27:BA:391:G:H2'	27:BA:392:C:H6	1.77	0.48
1:AA:323:U:H3	1:AA:327:A:N6	2.10	0.48
27:BA:1065:U:H3'	27:BA:1066:U:H5''	1.95	0.48
5:AB:70:PHE:O	5:AB:92:TYR:HA	2.13	0.48
1:AA:362:G:H8	15:AL:34:ARG:HH22	1.61	0.48
7:AD:79:PHE:HB2	7:AD:93:PHE:CZ	2.48	0.48
27:BA:2261:C:H3'	49:B0:14:ARG:NE	2.28	0.48
48:B3:30:ARG:NE	48:B3:33:GLN:CB	2.77	0.48
52:B6:37:LEU:CD2	52:B6:51:ARG:N	2.76	0.48
55:B9:29:ASN:HB3	55:B9:32:HIS:ND1	2.28	0.48
27:BA:1321:A:H2'	27:BA:1321:A:N3	2.28	0.48
27:BA:2034:U:H2'	27:BA:2034:U:O2	2.13	0.48
27:BA:2089:U:H3	27:BA:2231:C:N4	2.05	0.48
27:BA:2246:G:H1'	27:BA:2426:A:H2	1.78	0.48
27:BA:2331:G:C5	27:BA:2332:U:C2	2.99	0.48
27:BA:2354:G:C5	27:BA:2355:C:C5	3.01	0.48
27:BA:2423:U:O4'	27:BA:2425:A:N7	2.46	0.48
27:BA:2488:A:O5'	27:BA:2488:A:H8	1.95	0.48
27:BA:2513:G:C6	27:BA:2514:U:N3	2.81	0.48
27:BA:2567:G:N2	27:BA:2568:C:C5	2.81	0.48
27:BA:2633:G:H2'	27:BA:2634:G:O5'	2.14	0.48
27:BA:2647:U:O2	27:BA:2648:C:C5	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2658:C:C2'	27:BA:2659:G:C5'	2.86	0.48
27:BA:2739:U:HO2'	27:BA:2740:A:H5''	1.75	0.48
27:BA:2817:G:N2	27:BA:2818:G:H1'	2.28	0.48
27:BA:386:G:HO2'	27:BA:387:U:P	2.36	0.48
27:BA:528:A:N6	27:BA:2042:A:H2'	2.28	0.48
27:BA:602:G:H2'	27:BA:655:A:C2	2.48	0.48
29:BE:269:ILE:CD1	29:BE:296:VAL:N	2.75	0.48
29:BE:317:PRO:HG2	29:BE:320:GLN:HG2	1.94	0.48
30:BF:194:PHE:N	30:BF:211:ASP:OD2	2.46	0.48
30:BF:37:ALA:HB2	30:BF:102:LEU:CG	2.43	0.48
30:BF:6:TYR:CD1	30:BF:139:VAL:CG1	2.96	0.48
32:BH:101:LYS:CB	32:BH:113:GLU:CD	2.81	0.48
33:BI:23:ASP:O	33:BI:24:GLY:C	2.51	0.48
34:BN:12:VAL:O	34:BN:38:VAL:CB	2.60	0.48
35:BO:91:LYS:HB3	35:BO:111:PHE:HE2	1.77	0.48
37:BQ:111:THR:HG22	37:BQ:112:ALA:N	2.27	0.48
37:BQ:27:GLY:C	37:BQ:28:ILE:HG13	2.32	0.48
38:BS:81:ALA:C	38:BS:83:LEU:N	2.51	0.48
45:BU:8:ILE:N	45:BU:11:ARG:HH11	1.90	0.48
43:BZ:148:THR:HB	43:BZ:166:LEU:O	2.14	0.48
33:BI:94:THR:HG22	33:BI:97:GLN:CG	2.38	0.48
27:BA:307:G:N2	27:BA:310:A:O4'	2.45	0.48
42:BY:20:HIS:O	42:BY:23:VAL:N	2.46	0.48
42:BY:28:SER:HB3	42:BY:99:THR:CA	2.34	0.48
42:BY:34:GLU:O	42:BY:35:TYR:CG	2.65	0.48
42:BY:58:GLU:HG2	42:BY:76:ASP:OD2	2.13	0.48
1:AA:1225:A:OP2	1:AA:1226:C:C5	2.66	0.48
16:AM:81:LEU:HD21	16:AM:88:ARG:HE	1.76	0.48
27:BA:148:C:C2	27:BA:149:A:C6	3.01	0.48
41:BX:18:MET:SD	41:BX:24:LEU:CA	2.99	0.48
3:AW:37:YYG:H191	10:AG:83:ALA:O	2.12	0.48
17:AN:26:ARG:HH12	17:AN:46:GLU:HB2	1.78	0.48
1:AA:953:G:O2'	16:AM:124:PRO:C	2.50	0.48
41:BX:46:ASP:O	41:BX:47:VAL:C	2.50	0.48
27:BA:864:G:HO3'	27:BA:865:C:P	2.30	0.48
7:AD:22:LYS:C	7:AD:113:SER:HB3	2.33	0.48
13:AJ:8:LEU:HB2	13:AJ:70:ARG:HB2	1.94	0.48
1:AA:474:G:P	19:AP:75:ARG:HG2	2.54	0.48
1:AA:244:U:C4	1:AA:894:G:C6	3.02	0.48
1:AA:273:A:H2'	1:AA:274:A:O4'	2.13	0.48
1:AA:1305:G:O2'	1:AA:1331:G:N2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:791:G:N2	1:AA:1497:G:O3'	2.43	0.48
1:AA:598:U:H4'	11:AH:94:TYR:CB	2.43	0.48
1:AA:834:C:H2'	1:AA:835:U:C6	2.48	0.48
12:AI:26:VAL:HB	12:AI:33:PHE:HB2	1.96	0.48
49:B0:37:LEU:HD11	49:B0:71:ASN:HD21	1.76	0.48
48:B3:53:LEU:HD22	48:B3:54:VAL:HG22	1.95	0.48
44:BR:101:ALA:CA	51:B5:41:LEU:HD12	2.42	0.48
52:B6:49:VAL:C	52:B6:50:PHE:CD1	2.87	0.48
27:BA:1021:A:N3	27:BA:1122:G:O3'	2.47	0.48
27:BA:1239:G:C2'	27:BA:1240:U:H6	2.26	0.48
27:BA:1275:A:H2'	27:BA:1276:A:O4'	2.13	0.48
27:BA:1456:G:N1	27:BA:2704:C:C4	2.81	0.48
27:BA:2212:A:H2'	27:BA:2213:U:H5''	1.94	0.48
27:BA:2234:G:C6	27:BA:2235:G:C6	3.01	0.48
27:BA:2256:G:N1	27:BA:2257:U:O2	2.47	0.48
27:BA:2378:A:C2	38:BS:26:LEU:CD2	2.89	0.48
27:BA:2393:A:O2'	27:BA:2394:C:P	2.71	0.48
27:BA:2434:A:O2'	27:BA:2435:A:C5'	2.60	0.48
27:BA:2474:C:H2'	27:BA:2475:C:C5'	2.23	0.48
27:BA:2586:C:H3'	27:BA:2586:C:C6	2.49	0.48
27:BA:2045:C:C2	27:BA:2624:G:C2	2.95	0.48
27:BA:2644:G:H3'	27:BA:2644:G:C8	2.47	0.48
27:BA:270(Q):C:H2'	27:BA:270(R):G:H8	1.79	0.48
27:BA:2696:U:N3	27:BA:2714:G:N2	2.61	0.48
27:BA:2742:C:OP1	55:B9:35:ARG:NE	2.46	0.48
27:BA:2842:G:N2	27:BA:2876:G:C4	2.81	0.48
27:BA:2830:G:N2	27:BA:2883:A:C2	2.80	0.48
27:BA:647:G:H2'	27:BA:648:G:C8	2.46	0.48
28:BD:167:GLU:O	28:BD:170:TYR:CA	2.61	0.48
27:BA:782:A:N1	28:BD:229:MET:SD	2.85	0.48
27:BA:780:G:O6	28:BD:233:ASP:OD1	2.31	0.48
29:BE:214:VAL:HG21	29:BE:221:LYS:HZ2	1.61	0.48
30:BF:203:ALA:C	30:BF:205:ARG:N	2.64	0.48
30:BF:6:TYR:OH	30:BF:234:VAL:HG12	2.12	0.48
30:BF:89:ALA:CB	30:BF:90:HIS:NE2	2.73	0.48
32:BH:101:LYS:CE	32:BH:115:GLU:CG	2.90	0.48
32:BH:147:ILE:CD1	32:BH:150:VAL:HB	2.28	0.48
32:BH:75:VAL:CG1	32:BH:76:GLU:H	2.22	0.48
32:BH:93:TYR:CD2	32:BH:159:LYS:HE2	2.48	0.48
36:BP:115:ARG:C	36:BP:117:GLU:H	2.16	0.48
37:BQ:85:ILE:CG2	37:BQ:136:TRP:CZ2	2.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:62:GLU:O	37:BQ:63:ALA:C	2.42	0.48
44:BR:20:LEU:CD1	44:BR:21:TYR:CE2	2.89	0.48
27:BA:514:A:C3'	45:BU:32:TYR:OH	2.61	0.48
33:BI:68:LEU:CD1	33:BI:108:LEU:CD2	2.81	0.48
33:BI:114:LYS:O	33:BI:115:ILE:C	2.51	0.48
42:BY:80:GLU:HG2	42:BY:86:GLU:CG	2.43	0.48
42:BY:93:THR:O	42:BY:94:SER:C	2.51	0.48
43:BZ:25:ASN:OD1	43:BZ:25:ASN:C	2.51	0.48
43:BZ:66:VAL:CG2	43:BZ:69:VAL:CG2	2.92	0.48
43:BZ:6:LYS:HB2	43:BZ:31:SER:HB3	1.96	0.48
1:AA:987:G:H21	1:AA:1014:A:H2	1.62	0.48
13:AJ:47:PHE:CE1	13:AJ:63:PHE:HB2	2.49	0.48
28:BD:206:LYS:HD3	28:BD:206:LYS:H	1.78	0.48
27:BA:545(A):A:N7	27:BA:1546:C:C2	2.82	0.48
47:B2:34:GLN:O	47:B2:35:ALA:O	2.31	0.48
34:BN:107:ASN:N	34:BN:107:ASN:HD22	2.09	0.48
1:AA:815:A:HO2'	1:AA:1527:C:H1'	1.72	0.48
42:BY:9:LYS:CE	42:BY:13:ARG:NH2	2.75	0.48
1:AA:20:U:H1'	1:AA:572:A:N3	2.29	0.48
11:AH:29:SER:CB	11:AH:32:LYS:NZ	2.77	0.48
1:AA:1279:A:N3	1:AA:1279:A:H2'	2.26	0.48
56:BK:49:LYS:HZ1	56:BK:73:PRO:CG	2.26	0.48
20:AQ:64:PRO:HB3	20:AQ:70:ARG:HH11	1.77	0.48
7:AD:201:GLN:O	7:AD:205:GLU:CG	2.61	0.48
56:BK:9:ILE:HG22	56:BK:10:LYS:H	1.78	0.48
49:B0:30:VAL:C	49:B0:31:VAL:HG23	2.33	0.48
48:B3:3:ARG:HH11	48:B3:3:ARG:HG2	1.79	0.48
27:BA:1364:G:C5	50:B4:2:GLN:OE1	2.66	0.48
50:B4:46:GLU:CD	50:B4:54:GLY:HA3	2.29	0.48
50:B4:68:ARG:HH11	50:B4:72:LYS:HE2	1.78	0.48
27:BA:1612:C:C2	53:B7:3:ARG:CZ	2.95	0.48
54:B8:3:LYS:HA	54:B8:4:MET:HE1	1.96	0.48
27:BA:1140:C:H4'	27:BA:142(A):A:C2	2.48	0.48
27:BA:125:G:C3'	53:B7:19:ARG:HH12	2.21	0.48
27:BA:1651:G:H2'	27:BA:1652:A:H8	1.76	0.48
27:BA:1655:A:H2'	27:BA:1656:C:O4'	2.14	0.48
27:BA:1967:C:N4	27:BA:1968:G:C2	2.81	0.48
27:BA:2226:C:C4	27:BA:2227:A:N3	2.82	0.48
27:BA:2242:G:N3	27:BA:2243:U:C5	2.80	0.48
27:BA:2264:C:H2'	27:BA:2265:U:H5'	1.94	0.48
27:BA:2304:G:C1'	31:BG:105:SER:CB	2.91	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2308:G:H5'	27:BA:2309:A:P	2.52	0.48
27:BA:835:A:O4'	27:BA:2358:G:H1'	2.13	0.48
27:BA:2401:U:H2'	27:BA:2402:C:O4'	2.12	0.48
27:BA:2406:U:O4	36:BP:55:GLN:CA	2.55	0.48
27:BA:2423:U:H5'	27:BA:2423:U:C5	2.40	0.48
27:BA:2251:G:H8	27:BA:2450:A:H4'	1.73	0.48
27:BA:2468:G:C2'	27:BA:2469:A:C8	2.97	0.48
27:BA:2453:A:H2	27:BA:2504:U:O2	1.96	0.48
27:BA:2049:G:H1	27:BA:2619:C:N4	2.11	0.48
27:BA:2622:C:C2'	27:BA:2623:G:O5'	2.62	0.48
27:BA:2652:C:C2'	27:BA:2653:U:C6	2.92	0.48
27:BA:2832:U:O2'	27:BA:2834:G:C4	2.61	0.48
27:BA:458:G:O2'	27:BA:469:G:N1	2.40	0.48
27:BA:687:C:O2'	27:BA:1780:A:N6	2.41	0.48
27:BA:684:G:C2	27:BA:775:G:C6	3.01	0.48
27:BA:873:G:H2'	27:BA:874:G:O4'	2.13	0.48
27:BA:873:G:OP1	37:BQ:30:GLN:CD	2.51	0.48
26:BB:24:G:H2'	26:BB:56:G:C6	2.48	0.48
26:BB:45:A:H1'	31:BG:76:ARG:HH12	1.79	0.48
28:BD:106:PRO:O	28:BD:107:LYS:C	2.51	0.48
28:BD:175:LEU:CD1	28:BD:179:GLU:HB3	2.40	0.48
28:BD:62:ARG:HD3	28:BD:62:ARG:N	2.27	0.48
29:BE:225:LYS:O	29:BE:226:HIS:CG	2.66	0.48
29:BE:205:THR:CB	29:BE:259:HIS:N	2.71	0.48
29:BE:71:THR:HG21	29:BE:299:SER:HA	1.88	0.48
30:BF:22:PHE:CD2	30:BF:116:ALA:HA	2.49	0.48
30:BF:230:GLY:C	30:BF:231:ARG:HG3	2.19	0.48
30:BF:236:THR:O	30:BF:237:GLU:O	2.31	0.48
30:BF:197:SER:O	30:BF:238:SER:CB	2.61	0.48
30:BF:238:SER:C	30:BF:241:ALA:HB2	2.33	0.48
32:BH:102:LEU:N	32:BH:102:LEU:CD2	2.70	0.48
32:BH:10:ILE:HD11	32:BH:49:ILE:CG2	2.42	0.48
32:BH:101:LYS:HB2	32:BH:113:GLU:OE2	2.13	0.48
33:BI:7:LYS:HA	33:BI:12:LYS:CD	2.29	0.48
34:BN:39:VAL:HA	34:BN:103:VAL:HG12	1.92	0.48
34:BN:5:GLU:CA	34:BN:109:TYR:HE2	2.27	0.48
35:BO:63:VAL:HG11	35:BO:102:VAL:HG21	1.93	0.48
1:AA:339:C:P	35:BO:97:ARG:NH2	2.78	0.48
37:BQ:16:ARG:HH11	37:BQ:16:ARG:HB2	1.54	0.48
44:BR:45:ARG:O	44:BR:49:ASP:N	2.41	0.48
44:BR:67:LEU:O	44:BR:67:LEU:HD22	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:15:GLU:HG2	38:BS:16:ALA:N	2.29	0.48
45:BU:88:ILE:CG2	46:BV:55:THR:HG21	2.39	0.48
27:BA:519:U:O3'	40:BW:25:ARG:NH2	2.46	0.48
43:BZ:139:THR:O	43:BZ:140:LYS:CB	2.60	0.48
2:AV:37:G:N2	4:AX:116:U:C2	2.81	0.48
27:BA:310:A:OP1	42:BY:52:ARG:HB3	2.13	0.48
42:BY:51:LEU:HD21	42:BY:95:ASN:CB	2.43	0.48
43:BZ:29:ASN:C	43:BZ:30:VAL:CG2	2.82	0.48
1:AA:1320:C:H1'	22:AS:73:GLU:CA	2.43	0.48
28:BD:216:ALA:CA	28:BD:222:PRO:N	2.69	0.48
27:BA:1544:C:H2'	27:BA:1545:A:C4'	2.33	0.48
27:BA:1598:C:H5'	41:BX:34:LYS:HG3	1.82	0.48
1:AA:1313:U:OP1	22:AS:6:LYS:O	2.32	0.48
1:AA:1030:C:C4	1:AA:30(A):G:C6	2.97	0.48
2:AV:65:G:C2	2:AV:66:A:N7	2.81	0.48
1:AA:65:U:O4'	1:AA:199:G:O2'	2.30	0.48
6:AC:121:ALA:O	6:AC:125:GLU:HG2	2.13	0.48
6:AC:122:GLU:HA	6:AC:125:GLU:HG3	1.95	0.48
27:BA:119:A:O2'	27:BA:120:U:P	2.72	0.48
27:BA:49:A:C2	27:BA:118:A:N7	2.82	0.48
1:AA:1329:A:H4'	16:AM:24:GLY:C	2.33	0.48
27:BA:317:G:N2	27:BA:334:C:O2	2.42	0.48
27:BA:1474:C:H2'	27:BA:1475:G:N7	2.29	0.48
1:AA:794:A:O2'	1:AA:1521:G:O3'	2.32	0.48
1:AA:194:C:O4'	23:AT:64:ASP:HB3	2.13	0.48
27:BA:259:G:H2'	27:BA:260:G:C8	2.47	0.48
1:AA:109:A:N7	1:AA:326:G:C2	2.81	0.48
12:AI:20:ARG:O	12:AI:60:ASP:N	2.47	0.48
52:B6:13:GLU:O	52:B6:52:GLU:CA	2.61	0.48
55:B9:3:VAL:C	55:B9:5:SER:N	2.65	0.48
27:BA:1022:G:O6	34:BN:47:THR:CG2	2.61	0.48
27:BA:1028:A:H2'	27:BA:1029:A:C8	2.48	0.48
27:BA:2283:C:OP1	52:B6:3:LYS:NZ	2.47	0.48
27:BA:2302:G:C2'	27:BA:2303:G:O5'	2.60	0.48
27:BA:2315:G:C2'	27:BA:2316:C:O5'	2.61	0.48
27:BA:2348:U:O2'	27:BA:2349:G:H5'	2.14	0.48
27:BA:2372:G:N1	27:BA:2373:G:C5	2.82	0.48
27:BA:2487:G:H2'	27:BA:2488:A:C5'	2.43	0.48
27:BA:2548:G:C5	27:BA:2549:G:N7	2.82	0.48
27:BA:2075:U:O2'	27:BA:2596:U:N3	2.45	0.48
27:BA:2700:C:C2'	27:BA:2701:C:C5'	2.90	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2729:G:C2'	27:BA:2730:C:O4'	2.58	0.48
27:BA:2840:C:O2'	27:BA:2841:C:C5'	2.61	0.48
28:BD:104:ILE:CB	28:BD:106:PRO:HD3	2.39	0.48
28:BD:175:LEU:N	28:BD:179:GLU:O	2.45	0.48
27:BA:782:A:H2	28:BD:229:MET:SD	2.23	0.48
27:BA:2514:U:C1'	29:BE:247:ARG:NH1	2.76	0.48
27:BA:673:C:H4'	30:BF:82:GLN:OE1	2.12	0.48
31:BG:77:ASP:O	31:BG:79:MET:N	2.47	0.48
32:BH:123:GLU:C	32:BH:125:PRO:CD	2.81	0.48
32:BH:68:ARG:O	32:BH:71:LEU:HB2	2.13	0.48
27:BA:6:A:H4'	34:BN:4:ALA:N	2.23	0.48
35:BO:1:MET:HB2	35:BO:2:ILE:HD11	1.93	0.48
35:BO:73:ASP:HB3	35:BO:75:SER:OG	2.14	0.48
44:BR:62:ALA:HB3	44:BR:80:PHE:HZ	1.73	0.48
38:BS:66:LEU:O	38:BS:67:ALA:O	2.31	0.48
46:BV:67:LYS:HG2	46:BV:70:TYR:CE1	2.48	0.48
46:BV:69:ILE:HG21	46:BV:88:GLN:CB	2.42	0.48
46:BV:88:GLN:O	46:BV:89:ASN:OD1	2.30	0.48
40:BW:83:LYS:HA	40:BW:97:LYS:CG	2.36	0.48
27:BA:106:C:C2'	27:BA:107:C:H5''	2.35	0.48
16:AM:77:ASN:HA	16:AM:80:ARG:HB3	1.95	0.48
27:BA:1523:U:C4	27:BA:1524:G:N7	2.82	0.48
1:AA:946:A:O2'	1:AA:1333:A:O2'	2.26	0.48
2:AV:49:C:O2	2:AV:49:C:H2'	2.12	0.48
1:AA:413:G:N3	1:AA:413:G:H2'	2.28	0.48
33:BI:60:GLU:C	33:BI:62:LEU:H	2.17	0.48
6:AC:48:TYR:HE1	6:AC:122:GLU:OE2	1.96	0.48
27:BA:1528:A:H61	27:BA:1543:A:N6	2.09	0.48
27:BA:286:C:H2'	27:BA:287:C:O5'	2.13	0.48
26:BB:70:C:H42	26:BB:106:G:H1	1.61	0.48
1:AA:1216:G:H5''	17:AN:5:ALA:CB	2.43	0.48
27:BA:221:A:H4'	27:BA:222:A:O5'	2.12	0.48
1:AA:482:A:N3	1:AA:482:A:H2'	2.27	0.48
18:AO:64:ARG:HA	18:AO:67:LEU:HD12	1.94	0.48
8:AE:87:SER:OG	8:AE:130:ASN:HB3	2.13	0.48
51:B5:33:CYS:HB2	51:B5:37:HIS:N	2.28	0.48
49:B0:9:SER:O	49:B0:11:LYS:HG3	2.13	0.48
49:B0:16:SER:O	49:B0:17:ASN:CB	2.62	0.48
54:B8:30:ARG:HG2	54:B8:31:HIS:H	1.77	0.48
54:B8:31:HIS:C	54:B8:32:GLN:HG3	2.34	0.48
27:BA:1264:G:H3'	27:BA:1265:A:H5''	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1889:A:H2'	27:BA:1890:A:H8	1.77	0.48
27:BA:2213:U:H4'	27:BA:2215:G:N7	2.29	0.48
27:BA:2217:G:C2	27:BA:2218:G:C8	3.02	0.48
27:BA:2093:G:C8	27:BA:2225:A:C6	3.01	0.48
27:BA:2304:G:H2'	27:BA:2305:A:O5'	2.14	0.48
27:BA:807:U:O4'	27:BA:2445:G:H5'	2.14	0.48
27:BA:2450:A:C2	27:BA:2451:A:N3	2.82	0.48
27:BA:2524:G:N2	27:BA:2540:C:C6	2.82	0.48
27:BA:2561:A:C8	27:BA:2561:A:C3'	2.96	0.48
27:BA:2617:C:H2'	27:BA:2617:C:O2	2.13	0.48
27:BA:2633:G:N1	27:BA:2634:G:C6	2.81	0.48
27:BA:2645:G:O4'	27:BA:2645:G:P	2.70	0.48
27:BA:2683:C:C5	27:BA:2684:U:H5	2.25	0.48
27:BA:2685:G:N2	27:BA:2725:A:C5	2.82	0.48
27:BA:2846:G:N2	27:BA:2847:U:O2	2.47	0.48
27:BA:447:A:OP2	45:BU:5:LYS:NZ	2.37	0.48
28:BD:168:GLY:N	28:BD:170:TYR:CE1	2.82	0.48
29:BE:221:LYS:HZ1	29:BE:233:ARG:CG	2.07	0.48
29:BE:42:ALA:HB2	29:BE:310:PHE:HA	1.91	0.48
30:BF:32:GLY:O	30:BF:35:VAL:CA	2.61	0.48
30:BF:32:GLY:O	30:BF:36:ARG:HG2	2.14	0.48
31:BG:136:ARG:HB3	31:BG:137:PRO:CD	2.39	0.48
31:BG:36:ASN:O	31:BG:37:ALA:C	2.52	0.48
26:BB:45:A:H1'	31:BG:76:ARG:NH1	2.28	0.48
32:BH:136:ASP:O	32:BH:138:GLN:N	2.47	0.48
32:BH:120:LEU:HD12	32:BH:143:LEU:HD12	1.91	0.48
32:BH:75:VAL:O	32:BH:77:GLY:CA	2.58	0.48
33:BI:30:LEU:HA	33:BI:33:GLN:NE2	2.29	0.48
34:BN:61:VAL:HG11	34:BN:62:ASP:OD1	2.03	0.48
35:BO:5:GLU:HB2	35:BO:20:LEU:HD22	1.95	0.48
27:BA:874:G:OP1	37:BQ:32:LYS:NZ	2.47	0.48
37:BQ:52:LYS:HD3	37:BQ:52:LYS:HA	1.57	0.48
44:BR:36:THR:HG21	44:BR:40:LYS:CD	2.29	0.48
44:BR:59:ASP:CG	44:BR:60:LEU:CD2	2.82	0.48
38:BS:52:PRO:O	38:BS:53:ASN:O	2.31	0.48
38:BS:87:LEU:O	38:BS:90:LEU:CA	2.62	0.48
45:BU:42:ALA:O	45:BU:46:GLU:HG3	2.13	0.48
45:BU:8:ILE:N	45:BU:11:ARG:HD2	2.28	0.48
40:BW:96:ILE:C	40:BW:96:ILE:CD1	2.82	0.48
33:BI:102:LEU:HA	33:BI:106:HIS:HB2	1.96	0.48
33:BI:119:ASP:CG	33:BI:120:ALA:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BI:83:ALA:CB	33:BI:89:LEU:HA	2.44	0.48
43:BZ:3:LEU:CD2	43:BZ:35:ASP:HB3	2.44	0.48
1:AA:1224:G:C6	1:AA:1362:C:N4	2.64	0.48
27:BA:1969:A:C4'	27:BA:1970:A:H5'	2.41	0.48
27:BA:1338:G:C2'	41:BX:13:LYS:NZ	2.73	0.48
41:BX:38:ALA:O	41:BX:41:VAL:HG23	2.13	0.48
41:BX:76:GLU:CD	41:BX:77:VAL:CG2	2.81	0.48
1:AA:575:G:N3	1:AA:881:G:C2	2.81	0.48
1:AA:1517:G:C2	27:BA:1919:A:O2'	2.61	0.48
7:AD:30:LYS:O	7:AD:32:ALA:N	2.39	0.48
1:AA:406:G:H21	7:AD:119:GLN:NE2	2.01	0.48
16:AM:23:TYR:O	16:AM:67:GLU:N	2.46	0.48
1:AA:116:A:H2'	1:AA:117:G:O4'	2.14	0.48
27:BA:1943:U:N1	27:BA:1945:G:H5'	2.28	0.48
1:AA:671:G:H2'	1:AA:672:U:C6	2.49	0.48
11:AH:36:LEU:HD13	11:AH:48:TYR:HB2	1.96	0.48
1:AA:126:G:H4'	1:AA:634:C:C1'	2.44	0.48
27:BA:1777:U:H2'	27:BA:1778:U:H6	1.78	0.48
1:AA:719:C:H3'	1:AA:720:C:C6	2.49	0.48
1:AA:1353:G:H5'	24:AU:13:ILE:CG2	2.44	0.48
11:AH:6:ILE:O	11:AH:10:LEU:HG	2.13	0.48
1:AA:51:A:N1	1:AA:314:C:O2'	2.46	0.48
27:BA:896:A:N3	27:BA:896:A:H3'	2.28	0.48
25:AY:225:SER:CA	27:BA:2554:U:O2	2.62	0.48
49:B0:65:GLY:O	49:B0:66:LYS:HE3	2.12	0.48
50:B4:56:VAL:CG1	50:B4:61:LYS:NZ	2.77	0.48
53:B7:22:MET:O	53:B7:28:ARG:CG	2.58	0.48
55:B9:2:LYS:HZ3	55:B9:2:LYS:N	2.12	0.48
27:BA:1998:G:O2'	27:BA:2724:C:H1'	2.13	0.48
27:BA:2033:A:O2'	27:BA:2034:U:P	2.71	0.48
27:BA:2185:C:H2'	27:BA:2186:G:O4'	2.14	0.48
27:BA:2189:U:C2'	27:BA:2190:G:C8	2.94	0.48
27:BA:2206:C:H5'	27:BA:2228:G:H21	1.79	0.48
27:BA:2208:U:O4	27:BA:2216:G:O6	2.31	0.48
27:BA:2352:A:H2'	27:BA:2353:G:O4'	2.14	0.48
27:BA:2368:C:H42	27:BA:2369:A:N6	2.12	0.48
27:BA:2417:C:H2'	27:BA:2418:A:H8	1.78	0.48
27:BA:2447:G:N1	27:BA:2500:U:C4	2.81	0.48
27:BA:2461:C:H2'	27:BA:2462:U:C5'	2.43	0.48
27:BA:1028:A:H2	27:BA:2486:G:C2'	2.27	0.48
27:BA:2633:G:C2	27:BA:2634:G:C4	2.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2679:A:C2'	27:BA:2680:C:O5'	2.61	0.48
27:BA:2689:U:C4	27:BA:2713:A:C6	2.97	0.48
27:BA:270(H):C:C2	27:BA:270(R):G:N2	2.82	0.48
27:BA:2819:G:C4	27:BA:2821:A:C5	3.02	0.48
27:BA:2848:G:C2	27:BA:2867:G:N3	2.81	0.48
27:BA:29:U:H5'	45:BU:11:ARG:NH1	2.26	0.48
27:BA:527:C:H5''	27:BA:2779:U:C2	2.46	0.48
28:BD:145:LEU:CD1	28:BD:146:LYS:N	2.77	0.48
29:BE:102:ASP:O	29:BE:103:GLU:CG	2.62	0.48
29:BE:44:TYR:N	29:BE:309:PRO:HG2	1.92	0.48
30:BF:1:MET:SD	30:BF:23:GLU:HG2	2.53	0.48
27:BA:1022:G:OP2	34:BN:52:GLN:NE2	2.46	0.48
27:BA:6:A:C2'	34:BN:6:PHE:CD2	2.83	0.48
34:BN:92:GLN:O	34:BN:93:ARG:C	2.51	0.48
27:BA:1665:A:H4'	35:BO:67:ARG:HD3	1.92	0.48
44:BR:65:LEU:HD23	44:BR:68:ARG:HD2	1.95	0.48
44:BR:81:ASP:O	44:BR:82:GLU:C	2.52	0.48
38:BS:104:ILE:C	38:BS:106:LEU:N	2.62	0.48
45:BU:107:LYS:O	45:BU:111:ASP:OD1	2.32	0.48
45:BU:20:ARG:NH1	46:BV:75:LYS:HE3	2.22	0.48
45:BU:66:ASN:OD1	45:BU:76:TYR:CZ	2.66	0.48
40:BW:68:ARG:HE	40:BW:110:LYS:HB3	1.79	0.48
40:BW:12:ILE:HD11	40:BW:42:ARG:HD2	1.95	0.48
43:BZ:114:ASP:HA	43:BZ:171:VAL:HA	1.96	0.48
43:BZ:139:THR:C	43:BZ:141:MET:CE	2.82	0.48
33:BI:84:GLY:O	33:BI:85:GLU:HG3	2.14	0.48
27:BA:294:A:H2'	27:BA:295:G:H5''	1.96	0.48
27:BA:338:G:C4'	42:BY:24:ARG:NH1	2.76	0.48
13:AJ:60:ARG:O	13:AJ:61:GLU:CB	2.62	0.48
27:BA:1790:C:H5''	27:BA:1828:G:H1	1.78	0.48
28:BD:210:LYS:HG3	28:BD:211:HIS:H	1.79	0.48
41:BX:3:ASP:C	47:B2:24:LYS:HZ2	2.17	0.48
47:B2:7:GLU:OE2	47:B2:8:ILE:CD1	2.62	0.48
27:BA:1340:U:H6	41:BX:55:GLN:HE22	1.49	0.48
27:BA:1059:G:N2	56:BK:127:ILE:O	2.46	0.48
33:BI:63:ALA:HA	33:BI:66:LYS:HE3	1.96	0.48
1:AA:255:G:H4'	20:AQ:17:LYS:CG	2.44	0.48
27:BA:1907:G:N2	27:BA:1924:C:C2	2.82	0.48
27:BA:1324:G:C1'	27:BA:1616:A:N6	2.74	0.48
56:BK:71:LYS:HZ2	56:BK:72:THR:HG22	1.79	0.48
27:BA:332:A:C2'	27:BA:334:C:OP2	2.58	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:984:A:H3'	27:BA:985:C:C5	2.48	0.48
11:AH:64:LYS:HG2	11:AH:79:VAL:HG21	1.95	0.48
1:AA:573:A:N3	1:AA:883:C:O2'	2.47	0.48
27:BA:1171:G:H2'	27:BA:1173:G:H4'	1.94	0.48
56:BK:19:THR:H	56:BK:20:PRO:HD2	1.78	0.48
1:AA:594:G:H2'	1:AA:595:G:O4'	2.14	0.48
21:AR:29:PHE:HE1	21:AR:36:ASN:OD1	1.96	0.48
27:BA:1837:C:O2'	27:BA:1928:A:H1'	2.14	0.48
6:AC:182:ILE:HG12	6:AC:203:PHE:HA	1.96	0.48
7:AD:140:VAL:HG13	7:AD:144:ASP:HB2	1.95	0.48
23:AT:81:LYS:HA	23:AT:84:LEU:HB3	1.95	0.48
1:AA:1292:U:OP1	12:AI:39:GLY:HA3	2.14	0.48
1:AA:929:G:H5'	1:AA:1533:C:H42	1.78	0.48
27:BA:1369:G:H2'	27:BA:1370:C:O4'	2.14	0.48
48:B3:5:LYS:HG3	48:B3:36:VAL:HG12	1.95	0.48
50:B4:20:VAL:O	50:B4:30:GLU:CD	2.51	0.48
54:B8:14:ILE:HG23	54:B8:15:LYS:H	1.78	0.48
27:BA:530:G:C5	27:BA:2021:C:C2	3.01	0.48
27:BA:2244:U:O2	27:BA:2434:A:H1'	2.13	0.48
27:BA:2276:G:H2'	27:BA:2277:G:O5'	2.12	0.48
27:BA:2281:C:OP2	27:BA:2281:C:C6	2.67	0.48
27:BA:2285:C:C2	27:BA:2384:G:N2	2.82	0.48
27:BA:2485:G:H5'	37:BQ:142:LYS:HZ1	1.79	0.48
27:BA:2528:U:H5	27:BA:2530:A:C5	2.27	0.48
27:BA:2634:G:N1	27:BA:2635:C:C5	2.82	0.48
27:BA:2673:G:N1	27:BA:2674:G:C5	2.81	0.48
27:BA:2681:C:H4'	29:BE:48:MET:SD	2.53	0.48
27:BA:2695:C:H2'	27:BA:2696:U:H6	1.67	0.48
27:BA:2793:G:C5	27:BA:2794:C:C5	3.02	0.48
27:BA:673:C:O4'	30:BF:82:GLN:CD	2.52	0.48
27:BA:1819:A:C4	28:BD:177:SER:CB	2.96	0.48
27:BA:674:G:H5'	30:BF:69:HIS:HA	1.92	0.48
31:BG:29:HIS:CE1	31:BG:64:ARG:NH2	2.81	0.48
32:BH:85:ALA:HB1	32:BH:164:GLU:HG2	1.94	0.48
32:BH:86:LEU:CG	32:BH:87:GLU:N	2.77	0.48
34:BN:108:PRO:HD2	34:BN:109:TYR:H	1.78	0.48
34:BN:15:ARG:NH1	34:BN:40:ASN:CB	2.77	0.48
34:BN:63:ILE:CB	34:BN:71:TYR:CE1	2.95	0.48
35:BO:11:ALA:CA	35:BO:99:PHE:HB2	2.44	0.48
35:BO:64:ARG:HG2	35:BO:81:GLU:O	2.14	0.48
35:BO:2:ILE:HG21	35:BO:8:LEU:HD13	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2250:G:C8	37:BQ:102:ARG:HG2	2.46	0.48
37:BQ:84:ARG:HH21	37:BQ:123:ILE:CD1	2.27	0.48
37:BQ:152:SER:OG	37:BQ:153:PRO:CD	2.60	0.48
37:BQ:16:ARG:HA	37:BQ:17:ARG:HD3	1.95	0.48
44:BR:24:GLN:C	44:BR:44:LEU:HD21	2.34	0.48
46:BV:33:VAL:C	46:BV:63:HIS:ND1	2.67	0.48
46:BV:88:GLN:OE1	46:BV:90:PHE:CE1	2.67	0.48
40:BW:20:VAL:HG12	40:BW:47:VAL:HG11	1.96	0.48
40:BW:36:LEU:HD22	40:BW:44:ALA:CA	2.31	0.48
33:BI:103:GLN:NE2	33:BI:109:LYS:CB	2.76	0.48
42:BY:75:GLU:O	42:BY:76:ASP:O	2.32	0.48
43:BZ:24:TYR:HD2	43:BZ:25:ASN:N	2.11	0.48
1:AA:1358:U:OP1	17:AN:35:ARG:N	2.47	0.48
28:BD:216:ALA:HB1	28:BD:223:ASN:N	2.28	0.48
41:BX:31:ARG:O	41:BX:32:ALA:C	2.46	0.48
2:AV:71:G:H2'	2:AV:72:C:H6	1.77	0.48
15:AL:117:ARG:HB2	15:AL:117:ARG:NH1	2.28	0.48
1:AA:1268:A:H2	1:AA:1327:C:H1'	1.78	0.48
56:BK:19:THR:N	56:BK:20:PRO:HD2	2.28	0.48
34:BN:8:ALA:O	34:BN:11:ILE:HG13	2.14	0.48
15:AL:41:ARG:HG2	15:AL:42:THR:H	1.78	0.48
14:AK:67:ASP:HA	14:AK:70:LYS:HD2	1.95	0.48
5:AB:82:ARG:HB2	5:AB:94:ASN:HD21	1.79	0.48
29:BE:111:THR:HG22	29:BE:111:THR:O	2.13	0.48
2:AV:20:G:N3	2:AV:20:G:C2'	2.77	0.48
27:BA:1657:C:H5'	29:BE:234:ARG:HH11	1.77	0.48
27:BA:1800:C:C4	27:BA:1817:G:N1	2.81	0.48
27:BA:2241:A:O2'	27:BA:2242:G:O5'	2.32	0.48
27:BA:2256:G:N2	27:BA:2257:U:C1'	2.77	0.48
27:BA:2331:G:O2'	49:B0:70:ILE:CB	2.56	0.48
27:BA:2364:C:C2'	27:BA:2365:G:O5'	2.62	0.48
27:BA:2436:G:O6	27:BA:2437:U:O4	2.31	0.48
27:BA:2461:C:C2	27:BA:2462:U:H6	2.27	0.48
27:BA:2538:C:C2'	27:BA:2539:C:O5'	2.61	0.48
27:BA:2549:G:N1	27:BA:2550:G:N7	2.62	0.48
27:BA:2560:C:H2'	27:BA:2560:C:O2	2.14	0.48
27:BA:2437:U:C4'	27:BA:2598:A:C2	2.97	0.48
27:BA:2711:A:P	27:BA:2714:G:OP1	2.67	0.48
27:BA:2716:U:H2'	27:BA:2717:G:O5'	2.10	0.48
27:BA:2718:G:N3	27:BA:2719:G:N9	2.62	0.48
27:BA:2773:C:C2'	27:BA:2774:C:H6	2.24	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2627:G:H1'	27:BA:2781:A:H2	1.78	0.48
27:BA:27:G:H2'	27:BA:28:A:H8	1.79	0.48
27:BA:2844:G:C6	27:BA:2845:G:C5	3.01	0.48
27:BA:603:A:H2'	27:BA:604:G:H8	1.77	0.48
28:BD:70:LYS:CB	28:BD:70:LYS:NZ	2.76	0.48
28:BD:80:ILE:O	28:BD:82:TYR:CD1	2.67	0.48
29:BE:102:ASP:C	29:BE:103:GLU:CG	2.82	0.48
29:BE:45:LYS:HD2	29:BE:303:PRO:C	2.33	0.48
30:BF:50:GLU:HG3	30:BF:51:TYR:H	1.79	0.48
30:BF:93:LYS:C	30:BF:96:LYS:HG3	2.14	0.48
32:BH:34:ARG:HH11	32:BH:70:LEU:HD23	1.78	0.48
32:BH:40:MET:CA	32:BH:54:PRO:HG3	2.44	0.48
32:BH:59:HIS:O	32:BH:60:HIS:C	2.50	0.48
37:BQ:143:VAL:CG2	37:BQ:144:THR:N	2.64	0.48
37:BQ:34:GLY:C	37:BQ:74:ASN:O	2.53	0.48
37:BQ:45:GLN:CD	37:BQ:153:PRO:N	2.67	0.48
37:BQ:56:ILE:N	37:BQ:56:ILE:CD1	2.24	0.48
37:BQ:28:ILE:CG1	37:BQ:62:GLU:HG2	2.44	0.48
44:BR:61:HIS:O	44:BR:63:ARG:N	2.47	0.48
38:BS:86:LEU:HD21	38:BS:124:ASP:HB2	1.95	0.48
38:BS:12:ARG:CD	38:BS:20:TYR:CE2	2.91	0.48
27:BA:1251:C:C5'	45:BU:10:ARG:HD3	2.41	0.48
43:BZ:127:PRO:O	43:BZ:128:ARG:C	2.53	0.48
43:BZ:135:VAL:O	43:BZ:136:VAL:CG2	2.62	0.48
43:BZ:151:ASP:O	43:BZ:153:LYS:HD2	2.13	0.48
43:BZ:91:PRO:HG2	43:BZ:128:ARG:N	2.29	0.48
33:BI:68:LEU:CD1	33:BI:108:LEU:HD22	2.43	0.48
43:BZ:37:LYS:CA	43:BZ:41:ARG:HH12	2.25	0.48
47:B2:23:LEU:HD23	47:B2:23:LEU:H	1.79	0.48
47:B2:43:PRO:O	47:B2:46:ILE:HB	2.14	0.48
47:B2:8:ILE:O	47:B2:11:MET:CB	2.61	0.48
27:BA:110:G:C2	27:BA:111:A:C4	3.02	0.48
27:BA:72:U:C4	27:BA:112:U:C1'	2.97	0.48
27:BA:1341:U:OP2	27:BA:1397:U:C2	2.67	0.48
27:BA:71:A:C2	27:BA:73:A:N7	2.82	0.48
27:BA:1:G:N2	27:BA:2902:C:N3	2.61	0.48
27:BA:2857:G:N2	27:BA:2859:G:H3'	2.29	0.48
1:AA:436:C:C2	1:AA:437:U:C2	3.02	0.48
27:BA:441:U:OP2	42:BY:3:GLN:NE2	2.45	0.48
1:AA:60:A:N1	1:AA:107:G:O2'	2.44	0.48
1:AA:695:A:H2	1:AA:787:A:C4'	2.10	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1470:G:N2	27:BA:1522:G:N1	2.61	0.48
11:AH:17:THR:HB	11:AH:18:ARG:NH2	2.28	0.48
27:BA:978:G:N2	27:BA:986:C:N3	2.62	0.48
1:AA:1504:G:OP1	1:AA:1504:G:H3'	2.14	0.48
27:BA:710:G:H1	27:BA:721:C:H42	1.62	0.48
27:BA:1044:G:O3'	27:BA:1045:A:H4'	2.14	0.48
2:AV:32:C:OP2	12:AI:128:ARG:O	2.32	0.48
51:B5:11:THR:HG22	51:B5:19:ARG:NH2	2.28	0.47
54:B8:9:MET:O	54:B8:14:ILE:HG12	2.14	0.47
27:BA:1024:G:N2	27:BA:1139:G:N2	2.62	0.47
27:BA:1183:G:H5''	48:B3:29:ARG:CG	2.42	0.47
27:BA:489:G:H1'	27:BA:1284:A:C5	2.48	0.47
27:BA:1782:C:N3	27:BA:2609:U:H5	2.10	0.47
27:BA:2033:A:O2'	27:BA:2034:U:O5'	2.29	0.47
27:BA:2195:C:C6	27:BA:2195:C:C4'	2.97	0.47
27:BA:2257:U:H2'	27:BA:2258:C:OP2	2.13	0.47
27:BA:2313:C:C5	27:BA:2314:C:N4	2.79	0.47
27:BA:2341:G:C8	27:BA:2342:C:C5	3.02	0.47
27:BA:2354:G:C4	27:BA:2355:C:C5	3.02	0.47
27:BA:2475:C:H2'	27:BA:2477:C:P	2.54	0.47
27:BA:2519:U:OP2	27:BA:2519:U:C6	2.67	0.47
27:BA:2049:G:H1	27:BA:2619:C:H42	1.62	0.47
27:BA:2766:G:C2'	27:BA:2766:G:N3	2.75	0.47
27:BA:535:C:C5'	45:BU:53:LYS:NZ	2.77	0.47
27:BA:954:G:H2'	27:BA:955:C:O4'	2.14	0.47
28:BD:130:PRO:O	28:BD:134:ILE:CD1	2.62	0.47
28:BD:196:ASN:HB2	28:BD:199:ARG:HD3	1.96	0.47
28:BD:89:ASN:O	28:BD:105:ALA:HB2	1.88	0.47
29:BE:203:GLY:CA	29:BE:303:PRO:CD	2.81	0.47
30:BF:164:ALA:O	30:BF:167:ASP:HB2	2.14	0.47
32:BH:22:THR:HG23	32:BH:34:ARG:O	2.14	0.47
32:BH:34:ARG:NH1	32:BH:73:ASN:HB2	2.10	0.47
35:BO:71:ARG:O	35:BO:72:PRO:C	2.51	0.47
35:BO:90:ASP:C	35:BO:92:SER:N	2.66	0.47
37:BQ:88:PHE:O	37:BQ:113:ALA:HB2	2.14	0.47
37:BQ:116:HIS:CD2	37:BQ:118:ALA:O	2.67	0.47
37:BQ:36:ASN:ND2	37:BQ:41:THR:N	2.62	0.47
37:BQ:87:LYS:O	37:BQ:88:PHE:HB3	2.14	0.47
44:BR:20:LEU:CD1	44:BR:21:TYR:CA	2.48	0.47
38:BS:22:GLN:OE1	38:BS:22:GLN:C	2.53	0.47
39:BT:38:ASN:O	39:BT:39:ASN:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:103:PRO:CB	45:BU:107:LYS:HE2	2.44	0.47
27:BA:1215:G:O3'	45:BU:8:ILE:CG2	2.62	0.47
45:BU:95:LEU:CD2	45:BU:95:LEU:H	2.19	0.47
46:BV:61:VAL:CG1	46:BV:95:ILE:C	2.83	0.47
46:BV:61:VAL:HG13	46:BV:96:LEU:N	2.29	0.47
40:BW:24:ILE:HD13	40:BW:36:LEU:CD1	2.44	0.47
33:BI:124:LEU:HD12	33:BI:125:GLY:H	1.79	0.47
42:BY:19:ARG:O	42:BY:22:GLN:N	2.42	0.47
42:BY:19:ARG:HA	42:BY:22:GLN:HG3	1.96	0.47
42:BY:76:ASP:O	42:BY:77:VAL:C	2.51	0.47
43:BZ:66:VAL:HG23	43:BZ:69:VAL:HG23	1.96	0.47
43:BZ:71:MET:O	43:BZ:72:ASP:C	2.52	0.47
1:AA:977:A:C2	1:AA:1223:C:H5	2.32	0.47
1:AA:986:A:C2	22:AS:52:TYR:CZ	3.01	0.47
27:BA:764:A:H8	27:BA:764:A:H5''	1.79	0.47
47:B2:25:THR:O	47:B2:26:GLU:O	2.32	0.47
41:BX:12:GLU:OE1	41:BX:13:LYS:NZ	2.47	0.47
20:AQ:22:LEU:O	20:AQ:23:VAL:CG2	2.60	0.47
1:AA:1405:G:H21	1:AA:1518:A:H1'	1.79	0.47
1:AA:1517:G:H3'	1:AA:1518:A:C8	2.49	0.47
27:BA:1520:U:H6	27:BA:1520:U:H3'	1.79	0.47
1:AA:1366:C:P	12:AI:117:HIS:HE2	2.35	0.47
1:AA:1230:C:O2'	16:AM:126:LYS:HE2	2.14	0.47
3:AW:33:U:O2	3:AW:35:A:H5'	2.13	0.47
27:BA:270(A):A:H3'	27:BA:270(A):A:N3	2.29	0.47
27:BA:120:U:H2'	27:BA:120:U:O2	2.14	0.47
56:BK:73:PRO:HD2	56:BK:74:PRO:HA	1.96	0.47
28:BD:122:ASP:O	28:BD:122:ASP:CG	2.51	0.47
27:BA:1358:G:N7	27:BA:1371:G:C6	2.82	0.47
12:AI:48:GLU:N	12:AI:49:PRO:HD2	2.29	0.47
49:B0:37:LEU:CA	49:B0:68:VAL:HG13	2.36	0.47
26:BB:83:G:H4'	48:B3:52:HIS:HD2	1.78	0.47
27:BA:1364:G:C6	50:B4:2:GLN:OE1	2.68	0.47
50:B4:41:PRO:CG	50:B4:57:ASP:CG	2.80	0.47
52:B6:54:LYS:CA	52:B6:54:LYS:NZ	2.76	0.47
27:BA:1078:U:C2	27:BA:1088:A:H1'	2.49	0.47
27:BA:1129:A:H2	27:BA:2570:G:C8	2.31	0.47
27:BA:2052:G:C5'	29:BE:239:GLY:O	2.62	0.47
27:BA:2069:G:C2	27:BA:2443:C:O2	2.67	0.47
27:BA:2093:G:H4'	33:BI:25:TYR:CA	2.30	0.47
27:BA:2228:G:C5	27:BA:2229:C:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2234:G:N2	27:BA:2235:G:C4	2.82	0.47
27:BA:2259:G:O6	27:BA:2281:C:N3	2.47	0.47
27:BA:2263:C:H42	27:BA:2278:A:N6	2.12	0.47
27:BA:2294:C:C2	27:BA:2339:G:C6	3.02	0.47
27:BA:2310:A:C2'	31:BG:55:LYS:CE	2.69	0.47
27:BA:2316:C:C4'	31:BG:142:ALA:CB	2.77	0.47
27:BA:2324:C:O2'	27:BA:2325:G:P	2.71	0.47
27:BA:2346:A:O2'	27:BA:2347:C:P	2.70	0.47
27:BA:2367:G:C2	27:BA:2368:C:C6	3.01	0.47
27:BA:2380:C:C3'	27:BA:2380:C:C6	2.97	0.47
27:BA:2392:A:N6	27:BA:2393:A:C6	2.83	0.47
27:BA:2468:G:C5	27:BA:2481:G:C2	3.02	0.47
27:BA:2562:U:O2	27:BA:2563:U:N1	2.47	0.47
27:BA:2567:G:N2	27:BA:2568:C:C4	2.80	0.47
27:BA:2639:A:H1'	27:BA:2778:A:H2	1.78	0.47
27:BA:2649:U:H2'	27:BA:2650:U:O5'	2.12	0.47
27:BA:2717:G:C5	27:BA:2718:G:N7	2.82	0.47
27:BA:2623:G:C4'	27:BA:2826:A:H1'	2.39	0.47
27:BA:575:A:H4'	27:BA:2500:U:C5'	2.44	0.47
27:BA:832:G:P	27:BA:944:G:H22	2.37	0.47
28:BD:144:GLU:CG	28:BD:188:ARG:H	2.27	0.47
28:BD:89:ASN:ND2	28:BD:199:ARG:HE	1.88	0.47
29:BE:215:LYS:O	29:BE:216:ARG:C	2.53	0.47
30:BF:6:TYR:CE1	30:BF:138:VAL:C	2.88	0.47
30:BF:197:SER:OG	30:BF:236:THR:OG1	2.25	0.47
30:BF:39:GLN:O	30:BF:42:ARG:CA	2.62	0.47
30:BF:93:LYS:C	30:BF:96:LYS:CE	2.80	0.47
32:BH:129:LYS:O	32:BH:130:ILE:CG1	2.61	0.47
33:BI:9:VAL:C	33:BI:10:LYS:HG2	2.35	0.47
27:BA:1062:G:H22	56:BK:92:PRO:CD	2.27	0.47
34:BN:63:ILE:HB	34:BN:71:TYR:CD1	2.49	0.47
37:BQ:94:ARG:HG3	37:BQ:107:LYS:N	2.28	0.47
37:BQ:87:LYS:HZ2	37:BQ:115:SER:HA	1.79	0.47
37:BQ:17:ARG:HA	37:BQ:22:GLY:HA3	1.95	0.47
38:BS:27:LEU:CA	38:BS:33:ARG:NH2	2.74	0.47
38:BS:62:HIS:HB2	38:BS:65:ASP:OD2	2.14	0.47
39:BT:24:LYS:O	39:BT:25:ASP:CB	2.60	0.47
40:BW:79:GLY:C	40:BW:80:PRO:O	2.50	0.47
40:BW:82:LEU:CD2	40:BW:82:LEU:N	2.74	0.47
33:BI:83:ALA:N	33:BI:147:GLU:HB3	2.29	0.47
27:BA:99:U:O2	42:BY:107:LYS:HD3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:17:HIS:O	42:BY:20:HIS:N	2.47	0.47
43:BZ:40:ASP:O	43:BZ:41:ARG:O	2.32	0.47
27:BA:1566:A:N3	28:BD:212:HIS:HB3	2.28	0.47
27:BA:729:G:C3'	27:BA:729:G:N3	2.75	0.47
41:BX:6:LYS:CD	41:BX:27:ALA:HB1	2.43	0.47
17:AN:24:CYS:HB3	17:AN:40:CYS:HB3	1.78	0.47
29:BE:109:ASP:OD2	29:BE:112:LEU:CD2	2.57	0.47
1:AA:278:G:OP2	20:AQ:41:LYS:NZ	2.40	0.47
1:AA:429:U:H4'	1:AA:430:A:O5'	2.13	0.47
27:BA:414:C:OP1	27:BA:1879:C:O2'	2.32	0.47
27:BA:1924:C:C5	27:BA:1925:C:C5	3.02	0.47
11:AH:29:SER:HB2	11:AH:32:LYS:NZ	2.28	0.47
27:BA:405:U:H5''	27:BA:406:G:O5'	2.14	0.47
27:BA:382:G:H1	27:BA:392:C:N4	2.09	0.47
27:BA:1359:A:OP2	27:BA:1371:G:N2	2.48	0.47
27:BA:1718:G:N1	27:BA:1741:C:N4	2.58	0.47
16:AM:22:ILE:HD12	16:AM:25:ILE:HD12	1.95	0.47
27:BA:152:G:H3'	27:BA:152:G:C8	2.48	0.47
1:AA:934:C:H5	1:AA:1344:C:H3'	1.79	0.47
7:AD:76:ARG:O	7:AD:79:PHE:HB3	2.13	0.47
1:AA:1540:U:H2'	1:AA:1541:U:O4'	2.13	0.47
27:BA:289:A:O2'	27:BA:351:G:N7	2.46	0.47
10:AG:49:ILE:HA	10:AG:52:GLU:HB2	1.96	0.47
27:BA:1855:G:H1	27:BA:1887:C:H42	1.62	0.47
2:AV:19:G:H1'	2:AV:57:G:N2	2.30	0.47
2:AV:60:C:OP2	2:AV:61:C:C5	2.68	0.47
27:BA:2354:G:C2'	49:B0:32:LYS:HG2	2.44	0.47
49:B0:78:PHE:N	49:B0:78:PHE:CD1	2.81	0.47
27:BA:1264:G:N7	27:BA:1265:A:C5	2.81	0.47
27:BA:1312:U:H1'	27:BA:1313:U:C5	2.49	0.47
27:BA:1657:C:OP1	29:BE:232:ARG:C	2.52	0.47
27:BA:1935:G:HO2'	27:BA:1937:A:H2	1.61	0.47
27:BA:2045:C:C4	27:BA:2624:G:N1	2.81	0.47
27:BA:2103:C:H42	27:BA:2186:G:H1	1.60	0.47
27:BA:2199:A:C6	27:BA:2225:A:N3	2.81	0.47
27:BA:2228:G:H8	27:BA:2229:C:C5	2.13	0.47
27:BA:2247:A:C2'	27:BA:2248:C:O5'	2.62	0.47
27:BA:2269:A:H2'	27:BA:2270:G:O4'	2.14	0.47
27:BA:2296:U:H3'	27:BA:2296:U:C6	2.48	0.47
27:BA:2465:C:C2	27:BA:2485:G:N1	2.70	0.47
27:BA:2537:U:C5	27:BA:2538:C:H5	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2657:A:C5	27:BA:2665:A:C5	3.02	0.47
27:BA:2679:A:C5	27:BA:2680:C:C6	3.02	0.47
27:BA:2785:C:H5''	29:BE:99:VAL:CB	2.43	0.47
27:BA:2885:C:N4	27:BA:2886:G:C5	2.83	0.47
27:BA:775:G:H2'	27:BA:794:G:C8	2.49	0.47
28:BD:152:GLN:CA	28:BD:152:GLN:OE1	2.62	0.47
28:BD:194:VAL:HG21	28:BD:196:ASN:OD1	2.14	0.47
28:BD:85:ASN:HD21	28:BD:86:ARG:CZ	2.25	0.47
29:BE:270:ASP:OD2	29:BE:270:ASP:N	2.46	0.47
30:BF:195:VAL:HG13	30:BF:213:ALA:C	2.35	0.47
30:BF:223:LEU:HD13	30:BF:224:ALA:N	2.14	0.47
30:BF:35:VAL:O	30:BF:38:ALA:CB	2.62	0.47
2:AV:56:C:C1'	31:BG:56:ARG:CD	2.89	0.47
32:BH:123:GLU:C	32:BH:125:PRO:HD2	2.35	0.47
32:BH:161:ILE:HG13	32:BH:161:ILE:O	2.13	0.47
32:BH:51:VAL:HG23	32:BH:68:ARG:HG2	1.95	0.47
36:BP:94:ARG:HD3	36:BP:120:LEU:HD22	1.59	0.47
44:BR:100:LEU:HA	51:B5:44:HIS:HD2	1.78	0.47
39:BT:36:CYS:O	39:BT:37:GLU:C	2.46	0.47
45:BU:10:ARG:CA	45:BU:13:ARG:HH12	2.26	0.47
42:BY:101:LEU:CD2	42:BY:112:LEU:CD2	2.55	0.47
42:BY:19:ARG:HA	42:BY:22:GLN:NE2	2.29	0.47
43:BZ:12:GLN:O	43:BZ:15:ASP:CB	2.59	0.47
43:BZ:79:ILE:C	43:BZ:80:HIS:CG	2.85	0.47
27:BA:1771:C:H2'	27:BA:1772:G:C8	2.49	0.47
47:B2:27:LEU:HD22	47:B2:49:LEU:HB3	1.96	0.47
27:BA:1343:G:H5'	27:BA:1598:C:OP2	2.14	0.47
1:AA:1373:G:C5'	12:AI:42:ARG:HH21	2.27	0.47
3:AW:40:C:HO2'	10:AG:147:ALA:HB3	1.74	0.47
27:BA:410:G:C2	27:BA:2407:G:N7	2.83	0.47
13:AJ:24:VAL:O	13:AJ:28:ARG:HG3	2.14	0.47
27:BA:1174:A:N6	27:BA:1177:A:C2	2.83	0.47
27:BA:949:C:H2'	27:BA:950:G:H8	1.79	0.47
1:AA:1325:C:OP1	24:AU:15:ARG:NE	2.47	0.47
48:B3:5:LYS:HA	48:B3:35:ARG:O	2.14	0.47
27:BA:1364:G:O6	50:B4:2:GLN:CD	2.53	0.47
51:B5:31:THR:HG23	51:B5:32:GLU:N	2.29	0.47
27:BA:1265:A:N6	27:BA:2013:A:H5'	2.29	0.47
27:BA:1278:A:H5''	44:BR:34:ILE:CG2	2.44	0.47
27:BA:2082:A:H61	27:BA:2237:G:H1'	1.79	0.47
27:BA:2252:G:C3'	27:BA:2253:G:C5'	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2475:C:HO2'	27:BA:2477:C:P	2.35	0.47
27:BA:2478:A:C2'	27:BA:2479:G:H5'	2.41	0.47
27:BA:2711:A:H3'	27:BA:2712:U:H5'	1.97	0.47
27:BA:2785:C:C2'	27:BA:2786:U:H6	2.10	0.47
27:BA:826:U:C6	27:BA:828:U:H6	2.32	0.47
28:BD:81:GLU:C	28:BD:82:TYR:O	2.51	0.47
29:BE:214:VAL:HG12	29:BE:215:LYS:N	2.29	0.47
29:BE:263:GLU:O	29:BE:266:LYS:HE3	2.15	0.47
27:BA:617:G:C3'	30:BF:219:ASN:OD1	2.61	0.47
31:BG:95:THR:CG2	31:BG:96:SER:H	2.25	0.47
32:BH:147:ILE:O	32:BH:150:VAL:HB	2.14	0.47
33:BI:5:PHE:CD2	33:BI:17:GLU:C	2.87	0.47
27:BA:1077:A:C4'	56:BK:92:PRO:HG2	2.44	0.47
27:BA:1022:G:O6	34:BN:47:THR:HB	2.14	0.47
35:BO:21:VAL:HG22	35:BO:39:VAL:HG11	1.95	0.47
35:BO:37:ASP:CB	35:BO:62:VAL:HG21	2.30	0.47
37:BQ:85:ILE:HG23	37:BQ:136:TRP:CZ2	2.48	0.47
44:BR:100:LEU:CA	51:B5:44:HIS:HD2	2.28	0.47
44:BR:90:ARG:NH2	44:BR:117:VAL:HG22	2.18	0.47
38:BS:46:GLN:C	38:BS:47:LEU:HG	2.35	0.47
38:BS:83:LEU:C	38:BS:87:LEU:HD23	2.35	0.47
38:BS:85:GLY:O	38:BS:86:LEU:O	2.32	0.47
45:BU:55:ARG:HA	45:BU:58:ARG:HD2	1.96	0.47
45:BU:66:ASN:C	45:BU:68:GLY:N	2.67	0.47
43:BZ:154:LEU:CD1	43:BZ:160:LEU:HD12	2.45	0.47
42:BY:18:GLU:HB3	42:BY:21:LYS:HZ1	1.74	0.47
43:BZ:3:LEU:HD22	43:BZ:35:ASP:HB3	1.97	0.47
43:BZ:52:PHE:N	43:BZ:65:LEU:HD11	2.28	0.47
27:BA:1398:C:H4'	41:BX:23:LYS:NZ	2.30	0.47
40:BW:89:ALA:O	40:BW:90:ARG:HB2	2.13	0.47
31:BG:88:LEU:C	31:BG:88:LEU:CD2	2.79	0.47
1:AA:1097:C:C4'	1:AA:1169:A:C4'	2.92	0.47
1:AA:1242:C:O5'	1:AA:1242:C:H6	1.97	0.47
37:BQ:149:ILE:H	37:BQ:149:ILE:CD1	2.17	0.47
1:AA:33:A:H2'	1:AA:34:C:C6	2.49	0.47
1:AA:1280:A:C8	13:AJ:41:PRO:HD2	2.50	0.47
27:BA:460:A:C4	27:BA:461:C:C6	3.02	0.47
1:AA:1511:G:H2'	1:AA:1512:U:O4'	2.14	0.47
27:BA:914:C:H2'	27:BA:915:C:H5'	1.97	0.47
27:BA:1835:G:H1'	27:BA:1931:U:O2	2.14	0.47
27:BA:651:G:H3'	27:BA:652:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AF:48:LEU:HD13	9:AF:52:ILE:HB	1.97	0.47
2:AV:56:C:C5	2:AV:57:G:C5	3.02	0.47
49:B0:28:GLY:N	49:B0:60:PHE:HB3	2.29	0.47
48:B3:40:THR:HG21	48:B3:43:ILE:HD11	1.80	0.47
50:B4:9:ALA:O	50:B4:10:VAL:CG2	2.62	0.47
27:BA:54:G:C2'	53:B7:35:ARG:HH22	2.27	0.47
54:B8:16:ILE:HG23	54:B8:22:VAL:HG23	1.95	0.47
27:BA:1156:A:P	45:BU:55:ARG:NH2	2.88	0.47
27:BA:2017:U:H3	51:B5:10:LYS:NZ	2.11	0.47
27:BA:2254:C:O2'	27:BA:2255:G:H5''	2.09	0.47
27:BA:2255:G:C6	27:BA:2256:G:C4	3.02	0.47
27:BA:2273:A:H8	27:BA:2274:A:C8	2.20	0.47
27:BA:2305:A:N7	27:BA:2306:C:C6	2.82	0.47
27:BA:2316:C:C4	27:BA:2317:C:C4	3.03	0.47
27:BA:2333:A:H4'	27:BA:2335:A:O4'	2.14	0.47
27:BA:2361:A:OP1	54:B8:27:SER:O	2.32	0.47
27:BA:2390:U:C6	27:BA:2390:U:H3'	2.49	0.47
27:BA:2402:C:O5'	27:BA:2402:C:H6	1.97	0.47
27:BA:2462:U:N3	27:BA:2463:C:C4	2.83	0.47
27:BA:2478:A:C8	27:BA:2479:G:C8	3.02	0.47
27:BA:2479:G:H2'	27:BA:2480:C:O4'	2.14	0.47
27:BA:2508:G:C2	27:BA:2509:G:N9	2.83	0.47
27:BA:2051:A:C2	27:BA:2618:G:N1	2.75	0.47
27:BA:2656:U:C6	27:BA:2656:U:C3'	2.98	0.47
27:BA:2691:C:H42	27:BA:2719:G:N2	2.12	0.47
27:BA:2637:U:N3	27:BA:2782:G:C2	2.83	0.47
27:BA:2785:C:C2'	27:BA:2786:U:O5'	2.58	0.47
27:BA:2817:G:C4	27:BA:2830:G:N2	2.81	0.47
27:BA:2836:U:C6	27:BA:2836:U:C3'	2.98	0.47
27:BA:2841:C:C2	27:BA:2877:G:N1	2.83	0.47
27:BA:5:A:C4	27:BA:2899:G:N2	2.83	0.47
27:BA:530:G:N1	27:BA:2021:C:N1	2.61	0.47
27:BA:989:G:HO2'	27:BA:990:A:P	2.37	0.47
28:BD:84:PRO:O	28:BD:85:ASN:HB3	2.13	0.47
29:BE:211:GLN:HB3	29:BE:216:ARG:HG2	1.94	0.47
29:BE:202:ALA:CA	29:BE:262:THR:HB	2.44	0.47
30:BF:93:LYS:O	30:BF:94:THR:C	2.53	0.47
34:BN:136:SER:C	34:BN:139:LEU:HD22	2.35	0.47
34:BN:74:ARG:HB3	34:BN:76:ASP:CG	2.34	0.47
36:BP:62:ALA:C	36:BP:107:LYS:CD	2.69	0.47
36:BP:120:LEU:O	36:BP:140:VAL:O	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BP:65:ASP:CA	36:BP:109:LEU:N	2.56	0.47
37:BQ:122:PHE:HB2	37:BQ:136:TRP:HZ2	1.77	0.47
44:BR:39:PRO:HA	44:BR:42:LYS:HB2	1.96	0.47
38:BS:121:GLY:O	38:BS:125:ALA:HB2	2.15	0.47
27:BA:2378:A:C2'	38:BS:30:GLY:HA3	2.37	0.47
39:BT:50:GLU:O	39:BT:51:TRP:C	2.46	0.47
27:BA:994:C:C3'	45:BU:54:LYS:HE2	2.41	0.47
45:BU:98:ILE:CG2	45:BU:106:PHE:HD1	2.25	0.47
40:BW:40:ASN:O	40:BW:41:LYS:C	2.51	0.47
42:BY:30:ASP:HB2	42:BY:31:LEU:HD23	1.97	0.47
43:BZ:4:THR:O	43:BZ:33:ALA:CA	2.62	0.47
43:BZ:8:ARG:O	43:BZ:9:THR:HG23	2.14	0.47
3:AW:25:C:H3'	3:AW:26:G:H8	0.49	0.47
27:BA:1566:A:N3	28:BD:212:HIS:CB	2.78	0.47
27:BA:131:G:N2	27:BA:132:G:C5	2.83	0.47
41:BX:67:ARG:C	41:BX:68:LEU:HD23	2.34	0.47
1:AA:6:G:O2'	1:AA:298:A:H1'	2.14	0.47
7:AD:22:LYS:C	7:AD:113:SER:CB	2.83	0.47
1:AA:37:U:OP2	15:AL:123:LYS:HD3	2.13	0.47
11:AH:98:LYS:O	11:AH:98:LYS:HG2	2.15	0.47
19:AP:6:LEU:HA	19:AP:18:ARG:O	2.15	0.47
5:AB:180:LEU:O	5:AB:181:PHE:CB	2.58	0.47
1:AA:1298:C:C4	10:AG:114:ARG:O	2.67	0.47
1:AA:745:C:H5'	1:AA:851:G:H1'	1.96	0.47
15:AL:85:ILE:HA	15:AL:100:ILE:HA	1.95	0.47
27:BA:619:G:H3'	27:BA:619:G:C8	2.50	0.47
15:AL:12:ARG:HD2	15:AL:13:LYS:HZ2	1.79	0.47
49:B0:48:GLY:C	49:B0:55:ARG:HA	2.35	0.47
48:B3:33:GLN:CG	48:B3:34:GLU:N	2.77	0.47
52:B6:42:PRO:C	52:B6:44:ALA:H	2.18	0.47
27:BA:1152:C:H1'	45:BU:77:SER:CB	2.42	0.47
27:BA:1638:C:OP1	27:BA:2710:C:O2'	2.33	0.47
27:BA:1952:A:N3	35:BO:22:ILE:CD1	2.76	0.47
27:BA:2044:C:C4	27:BA:2625:G:C2	3.02	0.47
27:BA:2255:G:C6	27:BA:2256:G:C5	3.02	0.47
27:BA:2305:A:N7	27:BA:2306:C:C5	2.83	0.47
27:BA:2320:A:N6	38:BS:14:ARG:HA	2.25	0.47
27:BA:2325:G:N3	27:BA:2326:C:H6	2.12	0.47
27:BA:2402:C:C6	27:BA:2402:C:C3'	2.97	0.47
27:BA:2415:G:H22	27:BA:2416:C:C1'	2.16	0.47
27:BA:2484:G:C2'	27:BA:2485:G:C5'	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2488:A:N1	27:BA:2489:G:C4	2.83	0.47
27:BA:2494:G:N1	27:BA:2495:G:C6	2.82	0.47
27:BA:2550:G:C2'	27:BA:2551:C:H6	2.25	0.47
27:BA:2565:A:C4'	27:BA:2566:A:OP2	2.59	0.47
27:BA:1783:A:H2	27:BA:2588:G:H1'	1.79	0.47
27:BA:2593:U:O2	27:BA:2600:A:C2	2.66	0.47
27:BA:2615:U:H2'	27:BA:2616:C:C5'	2.44	0.47
27:BA:2657:A:C4	27:BA:2665:A:C6	3.01	0.47
27:BA:2679:A:N6	27:BA:2729:G:O6	2.47	0.47
27:BA:2692:C:C2'	27:BA:2693:A:O5'	2.62	0.47
27:BA:2733:A:C3'	27:BA:2733:A:C8	2.96	0.47
27:BA:2740:A:O2'	27:BA:2741:A:H5''	2.13	0.47
27:BA:2691:C:O4'	27:BA:2872:G:N7	2.47	0.47
27:BA:2875:C:C4	27:BA:2876:G:N7	2.83	0.47
28:BD:131:LEU:HG	28:BD:187:CYS:C	2.34	0.47
28:BD:146:LYS:C	28:BD:149:ARG:HG2	2.34	0.47
28:BD:107:LYS:CG	28:BD:193:GLU:OE1	2.62	0.47
29:BE:264:LEU:O	29:BE:265:ASN:C	2.52	0.47
29:BE:45:LYS:CE	29:BE:303:PRO:CA	2.93	0.47
30:BF:22:PHE:HE2	30:BF:115:LEU:C	2.18	0.47
30:BF:96:LYS:C	30:BF:98:ARG:NH1	2.53	0.47
31:BG:53:LYS:O	31:BG:54:ALA:CB	2.63	0.47
32:BH:138:GLN:C	32:BH:140:VAL:H	2.18	0.47
33:BI:30:LEU:O	33:BI:35:LEU:HG	2.15	0.47
34:BN:88:PRO:CB	34:BN:90:LYS:N	2.68	0.47
35:BO:60:ALA:CB	35:BO:85:VAL:O	2.63	0.47
36:BP:92:ASP:N	36:BP:118:LEU:HD22	2.30	0.47
44:BR:107:ASP:C	44:BR:107:ASP:OD1	2.53	0.47
44:BR:46:GLY:O	44:BR:47:PHE:C	2.53	0.47
38:BS:100:ALA:HB3	38:BS:127:LEU:CD2	2.40	0.47
38:BS:121:GLY:O	38:BS:125:ALA:CB	2.63	0.47
38:BS:49:THR:N	38:BS:55:ASP:OD2	2.47	0.47
46:BV:68:LYS:C	46:BV:69:ILE:HD12	2.35	0.47
46:BV:78:VAL:HG21	46:BV:80:TYR:HD1	1.80	0.47
40:BW:8:ARG:CD	40:BW:102:HIS:HE1	2.27	0.47
40:BW:6:ILE:HG23	40:BW:7:ALA:N	2.30	0.47
43:BZ:118:HIS:CE1	43:BZ:166:LEU:O	2.67	0.47
33:BI:68:LEU:CD1	33:BI:108:LEU:HD11	2.45	0.47
42:BY:17:HIS:O	42:BY:20:HIS:CB	2.53	0.47
1:AA:1199:U:O4'	13:AJ:54:PHE:CD2	2.68	0.47
1:AA:1360:A:N7	17:AN:18:VAL:HG12	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1790:C:H5'	27:BA:1791:A:OP2	2.14	0.47
27:BA:1566:A:N3	28:BD:212:HIS:HA	2.22	0.47
28:BD:213:LYS:HG3	28:BD:215:LYS:CG	2.33	0.47
47:B2:11:MET:O	47:B2:12:THR:C	2.52	0.47
27:BA:135:G:H1'	27:BA:145:G:H22	1.79	0.47
41:BX:13:LYS:O	41:BX:16:ASN:CG	2.47	0.47
41:BX:12:GLU:C	41:BX:16:ASN:OD1	2.44	0.47
6:AC:8:ILE:O	6:AC:12:LEU:HG	2.14	0.47
1:AA:1288:A:C2	1:AA:1371:G:N3	2.82	0.47
1:AA:197:A:H8	1:AA:197:A:O5'	1.98	0.47
1:AA:312:C:H2'	1:AA:313:A:H8	1.80	0.47
1:AA:501:C:H2'	1:AA:502:G:H8	1.79	0.47
33:BI:65:ALA:CB	33:BI:134:HIS:CG	2.97	0.47
1:AA:1237:C:H2'	1:AA:1335:C:H4'	1.97	0.47
2:AV:9:A:N3	2:AV:45:G:C4	2.83	0.47
27:BA:1332:G:C4	27:BA:1609:A:N1	2.82	0.47
5:AB:170:GLU:O	5:AB:174:VAL:HG23	2.13	0.47
1:AA:192:U:H2'	1:AA:193:C:C6	2.49	0.47
5:AB:160:ASP:O	5:AB:161:ALA:CB	2.62	0.47
24:AU:16:GLY:O	24:AU:17:THR:C	2.52	0.47
6:AC:36:ASP:HA	6:AC:39:ILE:HD12	1.97	0.47
1:AA:1114:C:O2'	17:AN:60:SER:O	2.30	0.47
27:BA:1040:C:H2'	27:BA:1040:C:O2	2.15	0.47
49:B0:77:ARG:O	49:B0:78:PHE:C	2.42	0.47
48:B3:1:MET:SD	48:B3:3:ARG:CD	2.96	0.47
27:BA:388:G:OP2	50:B4:29:PRO:CD	2.62	0.47
53:B7:33:ARG:CA	53:B7:37:LYS:HD2	2.45	0.47
53:B7:43:THR:O	53:B7:45:SER:CA	2.62	0.47
27:BA:1647:G:OP2	27:BA:1647:G:H3'	2.14	0.47
27:BA:197:A:H61	27:BA:248:G:N2	2.11	0.47
27:BA:2045:C:N4	27:BA:2624:G:C6	2.83	0.47
27:BA:2086:U:O4	27:BA:2233:U:O4	2.32	0.47
27:BA:2282:G:C4'	27:BA:2283:C:O5'	2.62	0.47
27:BA:2330:G:C6	27:BA:2385:C:N4	2.81	0.47
27:BA:2447:G:C6	27:BA:2501:C:O2	2.68	0.47
27:BA:2053:G:N1	27:BA:2617:C:C4	2.82	0.47
27:BA:2692:C:O2	27:BA:2847:U:H4'	2.14	0.47
27:BA:468:G:H2'	27:BA:469:G:C5'	2.44	0.47
26:BB:49:C:OP1	38:BS:111:PRO:CD	2.60	0.47
28:BD:110:LYS:O	28:BD:111:VAL:O	2.31	0.47
29:BE:247:ARG:CB	29:BE:249:THR:OG1	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:315:VAL:C	29:BE:317:PRO:CD	2.80	0.47
30:BF:113:SER:O	30:BF:114:ALA:O	2.32	0.47
27:BA:443:A:N6	30:BF:39:GLN:CB	2.78	0.47
32:BH:124:VAL:O	32:BH:126:SER:N	2.47	0.47
32:BH:94:ARG:CA	32:BH:127:GLN:HE22	2.27	0.47
32:BH:148:ARG:HH12	32:BH:163:TYR:HA	1.63	0.47
35:BO:31:ARG:HB3	35:BO:32:TYR:CE1	2.49	0.47
35:BO:33:ALA:HB1	35:BO:39:VAL:CG2	2.44	0.47
37:BQ:65:ARG:HG2	37:BQ:85:ILE:HG21	1.96	0.47
45:BU:99:ALA:HB3	45:BU:106:PHE:CE1	2.42	0.47
45:BU:8:ILE:O	45:BU:11:ARG:HG3	2.14	0.47
45:BU:93:LYS:C	45:BU:94:VAL:HG23	2.35	0.47
46:BV:12:TYR:O	46:BV:13:ARG:CB	2.58	0.47
27:BA:993:G:C3'	46:BV:90:PHE:CE2	2.70	0.47
43:BZ:134:LEU:HD11	43:BZ:155:PRO:HG2	1.95	0.47
43:BZ:149:ALA:HB1	43:BZ:163:ASP:O	2.15	0.47
43:BZ:92:VAL:HA	43:BZ:124:ALA:HB1	1.97	0.47
2:AV:18:G:C2'	2:AV:19:G:O5'	2.63	0.47
48:B3:51:ALA:O	48:B3:53:LEU:CA	2.58	0.47
48:B3:50:VAL:HB	48:B3:53:LEU:CB	2.44	0.47
50:B4:20:VAL:O	50:B4:30:GLU:CG	2.63	0.47
50:B4:39:VAL:C	50:B4:40:HIS:CG	2.88	0.47
27:BA:1140:C:H41	34:BN:49:ARG:CD	1.98	0.47
27:BA:1809:A:H3'	27:BA:1810:A:N3	2.30	0.47
27:BA:1889:A:N1	27:BA:2234:G:O2'	2.43	0.47
27:BA:2261:C:C2'	27:BA:2261:C:O2	2.63	0.47
27:BA:2277:G:OP1	37:BQ:105:PHE:O	2.33	0.47
27:BA:2391:G:N2	27:BA:2429:G:H21	2.13	0.47
27:BA:2400:G:H4'	52:B6:20:PHE:CZ	2.49	0.47
27:BA:2503:A:O2'	27:BA:2504:U:OP1	2.20	0.47
27:BA:2515:C:N4	27:BA:2570:G:C6	2.83	0.47
27:BA:2579:C:H2'	27:BA:2580:U:H5'	0.62	0.47
27:BA:2611:U:C5'	27:BA:2611:U:C6	2.98	0.47
27:BA:2657:A:N7	27:BA:2665:A:N6	2.63	0.47
27:BA:2742:C:C2'	27:BA:2742:C:O2	2.59	0.47
27:BA:2815:C:HO2'	27:BA:2816:C:H5''	1.71	0.47
27:BA:2875:C:N3	27:BA:2876:G:C5	2.83	0.47
27:BA:459:U:OP1	53:B7:40:HIS:N	2.45	0.47
27:BA:655:A:O3'	27:BA:656:G:O4'	2.33	0.47
27:BA:604:G:N2	27:BA:657:U:H4'	2.29	0.47
27:BA:775:G:N2	27:BA:787:U:H3'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:74:GLU:CA	29:BE:293:TYR:HD2	2.06	0.47
27:BA:2679:A:C1'	29:BE:300:VAL:CG1	2.93	0.47
29:BE:193:PHE:CD2	29:BE:311:PHE:HD1	2.28	0.47
30:BF:151:GLN:HA	30:BF:154:VAL:CG2	2.39	0.47
30:BF:58:ALA:C	30:BF:59:GLU:OE2	2.53	0.47
27:BA:2313:C:H4'	31:BG:72:LYS:CG	2.45	0.47
32:BH:147:ILE:HD12	32:BH:150:VAL:CG1	2.44	0.47
36:BP:102:ASP:O	36:BP:102:ASP:CG	2.53	0.47
27:BA:2406:U:O4	36:BP:54:PRO:C	2.52	0.47
37:BQ:61:LEU:O	37:BQ:63:ALA:N	2.47	0.47
37:BQ:93:ILE:HG22	37:BQ:94:ARG:H	1.79	0.47
38:BS:34:LEU:HD11	38:BS:103:ASP:N	2.07	0.47
39:BT:13:ILE:CG1	39:BT:33:SER:HB2	2.45	0.47
45:BU:9:VAL:HG12	45:BU:13:ARG:NH2	2.28	0.47
46:BV:40:VAL:CA	46:BV:54:TYR:HD1	2.28	0.47
40:BW:19:LEU:O	40:BW:20:VAL:O	2.32	0.47
40:BW:23:LEU:HD13	40:BW:35:ILE:HG22	1.96	0.47
43:BZ:118:HIS:O	43:BZ:119:ASN:HB3	2.13	0.47
42:BY:32:ARG:C	42:BY:33:GLU:CD	2.72	0.47
43:BZ:62:PHE:CD1	43:BZ:87:THR:CG2	2.97	0.47
1:AA:975:A:O4'	1:AA:1358:U:O2	2.32	0.47
1:AA:1221:G:O3'	1:AA:1321:C:O2	2.33	0.47
12:AI:114:TYR:CB	13:AJ:60:ARG:NH1	2.78	0.47
28:BD:208:GLY:CA	28:BD:211:HIS:CD2	2.94	0.47
27:BA:1545:A:H3'	27:BA:545(A):A:C8	2.50	0.47
41:BX:3:ASP:CG	47:B2:24:LYS:CD	2.63	0.47
47:B2:59:ILE:HG12	47:B2:60:GLN:H	1.76	0.47
41:BX:43:GLU:H	41:BX:43:GLU:CD	2.16	0.47
47:B2:19:GLU:CD	47:B2:20:LEU:N	2.68	0.47
27:BA:63:U:C6	27:BA:63:U:H3'	2.48	0.47
41:BX:13:LYS:O	41:BX:15:MET:N	2.47	0.47
41:BX:25:GLN:HA	41:BX:64:ALA:O	2.14	0.47
27:BA:1617:C:H5''	27:BA:1618:A:OP2	2.15	0.47
1:AA:1118:C:C4'	1:AA:1179:A:O4'	2.63	0.47
3:AW:40:C:C3'	10:AG:147:ALA:CB	2.92	0.47
27:BA:479:A:H1'	27:BA:480:A:C8	2.50	0.47
1:AA:254:G:H4'	20:AQ:18:THR:HG21	1.97	0.47
2:AV:13:C:O2	2:AV:13:C:H2'	2.14	0.47
27:BA:1906:G:C2	27:BA:1929:G:O6	2.67	0.47
2:AV:11:C:H2'	2:AV:12:U:H6	1.80	0.47
27:BA:1304:C:H42	27:BA:1624:G:H1	1.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1054:A:H62	27:BA:1056:G:H21	1.62	0.47
1:AA:826:C:C4'	11:AH:12:ARG:HG2	2.42	0.47
1:AA:32:A:C6	1:AA:33:A:C6	3.03	0.47
1:AA:252:U:O2'	1:AA:275:G:N2	2.48	0.47
1:AA:375:U:H4'	19:AP:6:LEU:HD23	1.97	0.47
1:AA:737:A:H2'	1:AA:738:C:C6	2.50	0.47
56:BK:73:PRO:HD2	56:BK:74:PRO:N	2.30	0.47
1:AA:1491:G:HO2'	1:AA:1492:A:H8	1.61	0.47
27:BA:1401:G:C6	27:BA:1402:C:C4	3.02	0.47
27:BA:1832:C:N4	27:BA:1833:U:C4	2.83	0.47
1:AA:686:U:H1'	14:AK:42:TRP:HE1	1.78	0.47
5:AB:152:PHE:C	5:AB:152:PHE:HD1	2.17	0.47
1:AA:35:G:O2'	15:AL:121:GLY:HA2	2.15	0.47
27:BA:88:G:N3	27:BA:88:G:H2'	2.30	0.47
1:AA:1438:G:OP1	23:AT:34:LYS:HE3	2.15	0.47
1:AA:1082:G:H2'	1:AA:1083:U:O4'	2.15	0.47
5:AB:19:HIS:CE1	5:AB:206:ASP:HB2	2.50	0.47
20:AQ:81:ARG:HG2	20:AQ:84:LEU:HG	1.96	0.47
2:AV:75:C:H42	27:BA:2252:G:N2	2.03	0.47
49:B0:31:VAL:CG1	49:B0:32:LYS:N	2.77	0.47
49:B0:36:ILE:N	49:B0:68:VAL:HG21	2.28	0.47
50:B4:11:PRO:CA	50:B4:40:HIS:HD2	2.22	0.47
52:B6:16:ALA:HB1	52:B6:42:PRO:CG	2.45	0.47
52:B6:36:GLU:HA	52:B6:52:GLU:OE2	2.14	0.47
52:B6:12:MET:HE3	52:B6:54:LYS:CA	2.44	0.47
53:B7:31:LEU:C	53:B7:33:ARG:N	2.64	0.47
53:B7:33:ARG:CB	53:B7:37:LYS:HD2	2.45	0.47
54:B8:26:LYS:H	54:B8:45:GLY:C	2.18	0.47
27:BA:630(A):C:C3'	27:BA:1631:A:P	3.00	0.47
27:BA:2195:C:H5''	27:BA:2195:C:C6	2.46	0.47
27:BA:2266:A:N1	27:BA:2272:U:H3'	2.29	0.47
27:BA:2299:G:O2'	27:BA:2300:G:H5'	2.15	0.47
27:BA:2367:G:N3	27:BA:2368:C:C6	2.83	0.47
27:BA:645:C:OP2	27:BA:2369:A:O4'	2.33	0.47
27:BA:2071:A:C2	27:BA:2441:C:C4	3.03	0.47
27:BA:2531:A:C8	27:BA:2531:A:O5'	2.67	0.47
27:BA:2679:A:H2'	29:BE:300:VAL:CG1	2.44	0.47
27:BA:2772:C:N3	27:BA:2773:C:C4	2.83	0.47
27:BA:2807:G:O6	27:BA:2892:A:N7	2.47	0.47
27:BA:2900:A:H2'	27:BA:2901:C:O4'	2.15	0.47
27:BA:637:A:C8	36:BP:111:ALA:HB3	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:642:G:H21	27:BA:646:A:H61	1.63	0.47
27:BA:910:A:C2'	37:BQ:17:ARG:HH22	2.28	0.47
27:BA:930:U:OP1	48:B3:37:LEU:HD21	2.15	0.47
26:BB:17:C:OP1	31:BG:147:ALA:CA	2.59	0.47
28:BD:119:PRO:HA	28:BD:129:LEU:CD2	2.44	0.47
28:BD:164:LEU:HD23	28:BD:164:LEU:HA	1.66	0.47
28:BD:131:LEU:HD11	28:BD:187:CYS:HB2	1.95	0.47
28:BD:97:ASP:HB3	28:BD:99:GLU:OE2	2.15	0.47
30:BF:112:ARG:O	30:BF:114:ALA:C	2.53	0.47
31:BG:49:PRO:HG3	31:BG:72:LYS:C	2.32	0.47
32:BH:158:GLY:O	32:BH:159:LYS:CB	2.60	0.47
33:BI:6:LEU:CD1	33:BI:6:LEU:O	2.58	0.47
34:BN:77:GLY:O	34:BN:79:PHE:C	2.52	0.47
35:BO:107:ARG:HG3	35:BO:115:ILE:HG21	1.96	0.47
27:BA:2415:G:O3'	36:BP:51:PHE:CD2	2.67	0.47
37:BQ:45:GLN:HA	37:BQ:125:TRP:CD1	2.49	0.47
38:BS:80:SER:OG	38:BS:81:ALA:N	2.48	0.47
39:BT:6:CYS:C	39:BT:8:TYR:N	2.65	0.47
46:BV:19:VAL:CG1	46:BV:21:ARG:CZ	2.46	0.47
46:BV:43:GLU:H	46:BV:44:GLN:HE22	1.62	0.47
46:BV:61:VAL:HG13	46:BV:96:LEU:HD23	1.97	0.47
42:BY:45:GLY:C	42:BY:62:VAL:HG12	2.16	0.47
43:BZ:63:PRO:O	43:BZ:64:ALA:HB3	2.12	0.47
43:BZ:71:MET:CA	43:BZ:78:PRO:HA	2.32	0.47
43:BZ:63:PRO:O	43:BZ:85:MET:HA	2.15	0.47
16:AM:92:HIS:NE2	16:AM:98:VAL:CG2	2.71	0.47
41:BX:11:THR:O	41:BX:15:MET:SD	2.68	0.47
41:BX:32:ALA:CB	41:BX:36:GLU:HB2	2.44	0.47
41:BX:48:THR:O	41:BX:50:GLU:CD	2.52	0.47
3:AW:37:YYG:H193	10:AG:79:ARG:HG2	1.97	0.47
29:BE:109:ASP:CA	29:BE:112:LEU:CB	2.80	0.47
1:AA:562:C:O2'	15:AL:15:ARG:CB	2.57	0.47
1:AA:1254:C:H2'	1:AA:1255:G:H8	1.79	0.47
39:BT:44:ARG:HG3	39:BT:45:GLU:N	2.17	0.47
27:BA:1434:A:H61	27:BA:1558:A:N6	2.13	0.47
1:AA:1305:G:H21	1:AA:1331:G:H2'	1.80	0.47
56:BK:18:ALA:O	56:BK:19:THR:HG23	2.15	0.47
1:AA:191:G:O2'	23:AT:102:GLY:HA2	2.14	0.47
1:AA:834:C:H2'	1:AA:835:U:H6	1.79	0.47
27:BA:721:C:H2'	27:BA:722:A:H8	1.80	0.47
7:AD:198:VAL:O	7:AD:199:ASN:HB3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AL:60:LEU:HD23	15:AL:64:TYR:CB	2.44	0.47
2:AV:64:A:OP1	49:B0:7:VAL:HA	2.15	0.47
49:B0:41:ARG:O	49:B0:67:VAL:CG1	2.62	0.47
48:B3:43:ILE:CD1	48:B3:43:ILE:H	2.08	0.47
48:B3:26:LEU:HD22	48:B3:47:VAL:HG23	1.95	0.47
52:B6:12:MET:HA	52:B6:13:GLU:OE1	2.14	0.47
55:B9:24:LEU:CD2	55:B9:35:ARG:HG3	2.45	0.47
27:BA:1031:G:O2'	55:B9:8:LYS:HE2	2.15	0.47
27:BA:1781:C:H6	27:BA:1781:C:H3'	1.80	0.47
27:BA:2283:C:C6	27:BA:2389:G:C2	3.03	0.47
27:BA:2322:A:C6	27:BA:2323:G:C1'	2.71	0.47
27:BA:2331:G:C4	27:BA:2332:U:N3	2.80	0.47
27:BA:2364:C:H4'	49:B0:38:VAL:CG1	2.45	0.47
27:BA:2428:G:C5'	27:BA:2429:G:P	2.97	0.47
27:BA:2488:A:HO2'	27:BA:2489:G:H5'	1.76	0.47
27:BA:2505:G:O2'	27:BA:2506:U:H5''	2.15	0.47
27:BA:2533:A:N7	27:BA:2534:A:N7	2.62	0.47
27:BA:2554:U:C4'	27:BA:2554:U:C6	2.98	0.47
27:BA:2596:U:C6	27:BA:2597:G:C8	3.03	0.47
27:BA:2673:G:N1	27:BA:2674:G:C6	2.82	0.47
27:BA:2689:U:O4'	27:BA:2713:A:N1	2.48	0.47
27:BA:2836:U:H3'	27:BA:2836:U:C6	2.48	0.47
27:BA:2881:C:C3'	27:BA:2881:C:C6	2.98	0.47
27:BA:605:C:H2'	27:BA:606:U:H6	1.80	0.47
27:BA:792:G:O2'	27:BA:793:A:P	2.73	0.47
27:BA:988:A:H4'	27:BA:1155:A:H2	1.80	0.47
28:BD:162:GLN:OE1	28:BD:162:GLN:N	2.48	0.47
28:BD:173:VAL:O	28:BD:175:LEU:CD2	2.63	0.47
28:BD:75:GLY:H	28:BD:116:MET:HB2	1.79	0.47
29:BE:199:ALA:CA	29:BE:312:ARG:C	2.82	0.47
29:BE:262:THR:OG1	29:BE:266:LYS:NZ	2.47	0.47
27:BA:451:C:P	30:BF:49:ASP:H	2.31	0.47
30:BF:55:ARG:HG3	30:BF:56:THR:OG1	2.15	0.47
31:BG:23:VAL:O	31:BG:23:VAL:CG2	2.62	0.47
31:BG:97:GLN:HB2	31:BG:106:PHE:CZ	2.38	0.47
32:BH:60:HIS:O	32:BH:61:ARG:C	2.53	0.47
32:BH:70:LEU:O	32:BH:73:ASN:CB	2.62	0.47
33:BI:40:THR:O	33:BI:43:ASN:N	2.48	0.47
33:BI:8:ASP:N	33:BI:12:LYS:HA	2.18	0.47
34:BN:15:ARG:HA	34:BN:44:ALA:N	2.29	0.47
36:BP:65:ASP:CB	36:BP:109:LEU:N	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:101:MET:SD	37:BQ:101:MET:O	2.73	0.47
38:BS:46:GLN:CB	38:BS:57:THR:HG21	2.38	0.47
38:BS:76:GLY:C	38:BS:83:LEU:CD1	2.83	0.47
46:BV:87:ARG:O	46:BV:88:GLN:O	2.33	0.47
27:BA:25:U:C5'	40:BW:80:PRO:HD2	2.39	0.47
43:BZ:114:ASP:OD1	43:BZ:114:ASP:N	2.47	0.47
33:BI:141:LEU:CD2	33:BI:142:LYS:H	2.25	0.47
42:BY:33:GLU:C	42:BY:35:TYR:H	2.18	0.47
1:AA:1060:C:C5	6:AC:2:GLY:O	2.68	0.47
27:BA:1827:C:H1'	27:BA:1970:A:H2	1.80	0.47
27:BA:143:C:O4'	27:BA:143:C:OP2	2.33	0.47
56:BK:116:LEU:HD11	56:BK:124:ALA:HA	1.96	0.47
1:AA:436:C:C4	1:AA:437:U:O4	2.68	0.47
1:AA:116:A:N6	1:AA:313:A:N3	2.63	0.47
1:AA:939:G:C5'	10:AG:102:ARG:NH1	2.78	0.47
27:BA:1805:U:H5'	28:BD:235:PRO:HB3	1.89	0.47
1:AA:1377:A:P	10:AG:94:ARG:HH21	2.37	0.47
1:AA:659:U:H2'	1:AA:660:G:C8	2.50	0.47
27:BA:730:C:OP2	27:BA:761:A:OP1	2.33	0.47
21:AR:80:PRO:HB2	21:AR:83:GLU:HB2	1.97	0.47
1:AA:817:C:H4'	1:AA:818:G:OP1	2.14	0.47
1:AA:95:U:H2'	1:AA:96:G:C8	2.50	0.47
1:AA:260:G:OP2	23:AT:83:ARG:NH1	2.48	0.47
27:BA:2079:U:O3'	50:B4:32:HIS:CD2	2.67	0.47
50:B4:14:ILE:CG1	50:B4:39:VAL:HB	2.45	0.47
50:B4:68:ARG:HB2	50:B4:72:LYS:HG3	1.97	0.47
51:B5:18:MET:O	51:B5:21:SER:N	2.48	0.47
27:BA:2287:A:OP1	52:B6:32:GLN:NE2	2.48	0.47
53:B7:21:ARG:NH2	53:B7:43:THR:CA	2.77	0.47
27:BA:592:G:N2	54:B8:3:LYS:HZ1	2.04	0.47
54:B8:58:MET:HB3	54:B8:59:LYS:H	1.53	0.47
55:B9:10:MET:HB3	55:B9:32:HIS:HE2	1.77	0.47
27:BA:1666:G:N2	27:BA:1669:A:N6	2.57	0.47
27:BA:2217:G:C2	27:BA:2218:G:C5	3.02	0.47
27:BA:954:G:O2'	27:BA:2274:A:C2	2.63	0.47
27:BA:2309:A:H5'	27:BA:2310:A:P	2.48	0.47
27:BA:2331:G:H4'	49:B0:70:ILE:HG13	0.57	0.47
27:BA:2411:A:HO2'	27:BA:2412:A:C5'	2.25	0.47
27:BA:2491:U:O2'	27:BA:2492:U:O5'	2.31	0.47
27:BA:2511:U:C4	27:BA:2512:C:C5	3.03	0.47
27:BA:2511:U:H2'	27:BA:2512:C:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:242:G:O2'	27:BA:254:G:N1	2.46	0.47
27:BA:2509:G:H1	27:BA:2579:C:H42	1.62	0.47
27:BA:2652:C:H2'	27:BA:2653:U:C5'	2.45	0.47
27:BA:2682:U:C2'	27:BA:2683:C:O5'	2.62	0.47
27:BA:2043:C:P	27:BA:2779:U:O4	2.72	0.47
27:BA:2881:C:H3'	27:BA:2881:C:C6	2.50	0.47
27:BA:533:G:OP1	45:BU:25:TRP:HB2	2.15	0.47
27:BA:602:G:N2	27:BA:655:A:H2'	2.27	0.47
27:BA:687:C:N3	27:BA:788:A:O5'	2.48	0.47
27:BA:780:G:N3	27:BA:785:G:O6	2.48	0.47
27:BA:872:A:H2'	27:BA:873:G:H8	1.80	0.47
28:BD:74:PRO:HD2	28:BD:96:ALA:H	1.80	0.47
29:BE:246:VAL:HG13	29:BE:247:ARG:H	1.79	0.47
29:BE:269:ILE:N	29:BE:269:ILE:CD1	2.51	0.47
31:BG:71:ALA:C	31:BG:72:LYS:HD3	2.24	0.47
32:BH:36:PHE:C	32:BH:37:HIS:ND1	2.68	0.47
32:BH:48:VAL:CG2	32:BH:49:ILE:H	2.18	0.47
34:BN:12:VAL:CG1	34:BN:38:VAL:CG2	2.82	0.47
35:BO:102:VAL:HG12	35:BO:103:ALA:N	2.30	0.47
35:BO:9:LYS:N	35:BO:83:ALA:CB	2.78	0.47
36:BP:127:GLU:O	36:BP:131:GLU:HG3	2.15	0.47
36:BP:61:ALA:C	36:BP:62:ALA:CA	2.77	0.47
37:BQ:136:TRP:HA	37:BQ:139:ALA:HB3	1.96	0.47
37:BQ:52:LYS:HD2	37:BQ:53:PRO:HD2	1.96	0.47
37:BQ:54:VAL:O	37:BQ:54:VAL:HG13	2.15	0.47
38:BS:18:THR:O	38:BS:19:ASP:CG	2.53	0.47
40:BW:36:LEU:HD13	40:BW:47:VAL:CG1	2.38	0.47
40:BW:57:ASN:O	40:BW:58:ALA:O	2.32	0.47
43:BZ:73:LYS:HG3	43:BZ:75:LYS:CE	2.45	0.47
42:BY:102:ASP:O	42:BY:103:LEU:HG	2.15	0.47
42:BY:52:ARG:CD	42:BY:95:ASN:OD1	2.48	0.47
1:AA:1198:G:H2'	1:AA:1199:U:O4'	2.14	0.47
27:BA:1789:A:H5''	28:BD:224:VAL:HG12	1.96	0.47
41:BX:25:GLN:NE2	41:BX:65:VAL:CG2	2.78	0.47
1:AA:1314:C:H41	22:AS:4:SER:C	2.09	0.47
27:BA:1057:A:H61	27:BA:1081:U:H3	1.63	0.47
29:BE:109:ASP:HA	29:BE:112:LEU:N	2.29	0.47
1:AA:1287:A:N6	1:AA:1371:G:O4'	2.46	0.47
1:AA:575:G:N2	1:AA:881:G:C4	2.83	0.47
1:AA:124:G:H4'	1:AA:291:C:O2'	2.15	0.47
1:AA:405:U:O3'	1:AA:406:G:O4'	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1396:A:N3	1:AA:1398:A:C2	2.83	0.47
27:BA:1862:G:H1	27:BA:1880:C:N4	2.13	0.47
27:BA:2755:C:O5'	27:BA:2755:C:C5	2.64	0.47
1:AA:971:G:N7	1:AA:1365:G:H5'	2.29	0.47
28:BD:230:ASN:O	28:BD:231:ALA:CB	2.54	0.47
40:BW:52:GLU:OE2	40:BW:52:GLU:CA	2.63	0.47
27:BA:89:G:H3'	27:BA:90:U:H5''	1.96	0.47
27:BA:2395:C:O3'	50:B4:28:ARG:NH1	2.48	0.46
27:BA:2432:A:N6	50:B4:31:ILE:H	2.13	0.46
52:B6:11:LYS:HZ3	54:B8:35:GLY:N	2.14	0.46
53:B7:17:GLY:C	53:B7:44:VAL:CG2	2.49	0.46
27:BA:489:G:N2	27:BA:1321:A:OP1	2.47	0.46
27:BA:1664:A:C8	27:BA:1664:A:C3'	2.96	0.46
27:BA:2248:C:C3'	27:BA:2249:U:C5'	2.93	0.46
27:BA:2341:G:C6	27:BA:2342:C:N3	2.84	0.46
27:BA:2380:C:H3'	27:BA:2380:C:H6	1.80	0.46
27:BA:2442:C:O2'	27:BA:2443:C:H5'	2.15	0.46
27:BA:830:G:N1	27:BA:2446:G:O4'	2.48	0.46
27:BA:2495:G:O2'	37:BQ:101:MET:HE1	2.14	0.46
27:BA:2032:G:N2	27:BA:2499:C:N3	2.63	0.46
27:BA:2527:C:C2'	27:BA:2528:U:O5'	2.62	0.46
27:BA:2690:C:HO2'	27:BA:2691:C:H6	1.63	0.46
27:BA:2816:C:C5'	27:BA:2816:C:H6	2.28	0.46
27:BA:987:G:OP1	48:B3:10:LYS:HE3	2.14	0.46
27:BA:998:C:C5'	45:BU:84:LYS:HZ3	2.23	0.46
29:BE:225:LYS:O	29:BE:226:HIS:CE1	2.69	0.46
29:BE:268:LEU:CD2	29:BE:270:ASP:N	2.78	0.46
30:BF:159:ALA:O	30:BF:160:LEU:CD2	2.49	0.46
31:BG:136:ARG:HD2	31:BG:136:ARG:H	1.80	0.46
32:BH:33:THR:OG1	32:BH:33:THR:O	2.32	0.46
32:BH:83:GLU:CD	32:BH:84:LYS:C	2.74	0.46
33:BI:3:VAL:HG21	33:BI:21:VAL:HB	1.95	0.46
33:BI:7:LYS:CD	33:BI:12:LYS:CE	2.84	0.46
36:BP:67:ARG:CZ	36:BP:109:LEU:HD12	2.45	0.46
44:BR:20:LEU:HD22	44:BR:20:LEU:C	2.35	0.46
27:BA:2841:C:OP1	44:BR:53:HIS:HE1	1.97	0.46
39:BT:11:THR:CG2	39:BT:12:ASP:H	1.94	0.46
46:BV:43:GLU:N	46:BV:44:GLN:HE22	2.13	0.46
46:BV:18:ASP:HA	46:BV:96:LEU:HA	1.97	0.46
40:BW:25:ARG:O	40:BW:27:LYS:N	2.48	0.46
40:BW:8:ARG:HB3	40:BW:8:ARG:NH1	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:36:ASN:ND2	43:BZ:116:VAL:HB	2.27	0.46
43:BZ:112:LEU:HD21	43:BZ:171:VAL:C	2.35	0.46
33:BI:95:SER:HB2	33:BI:117:LEU:HD11	1.97	0.46
42:BY:102:ASP:O	42:BY:108:ARG:HB3	2.15	0.46
43:BZ:51:LEU:HD21	43:BZ:63:PRO:HB3	1.97	0.46
1:AA:1219:U:OP1	17:AN:15:LYS:HE3	2.14	0.46
27:BA:1775:U:H2'	27:BA:1776:G:O4'	2.15	0.46
27:BA:139:G:C8	27:BA:142:G:H1'	2.51	0.46
1:AA:733:A:HO3'	1:AA:734:G:P	2.33	0.46
1:AA:426:G:C4'	7:AD:42:GLN:HA	2.44	0.46
1:AA:1279:A:H5''	1:AA:1280:A:OP1	2.15	0.46
1:AA:1280:A:N7	13:AJ:40:LEU:HD22	2.30	0.46
1:AA:574:A:C4	1:AA:883:C:O2'	2.59	0.46
1:AA:757:U:H2'	1:AA:758:G:O4'	2.15	0.46
11:AH:49:GLU:OE1	11:AH:60:ARG:HB3	2.16	0.46
5:AB:28:PHE:HZ	5:AB:42:ILE:HD11	1.80	0.46
14:AK:29:ILE:HG22	14:AK:44:SER:HB2	1.97	0.46
27:BA:1823:G:C2	27:BA:1824:G:C8	3.03	0.46
50:B4:33:VAL:O	50:B4:34:ASP:CG	2.51	0.46
50:B4:68:ARG:NE	50:B4:72:LYS:HG2	2.25	0.46
54:B8:30:ARG:HD2	54:B8:44:LYS:HZ2	1.80	0.46
54:B8:4:MET:CA	54:B8:5:LYS:HZ2	2.06	0.46
55:B9:25:VAL:HG23	55:B9:34:GLN:HB3	1.84	0.46
27:BA:1184:G:H2'	27:BA:1185:C:H5'	1.97	0.46
27:BA:1255:U:OP1	27:BA:1256:G:H5''	2.15	0.46
27:BA:1670:C:OP2	27:BA:1671:U:H5	1.97	0.46
27:BA:2024:G:H2'	27:BA:2025:C:O4'	2.15	0.46
27:BA:2067:G:N2	27:BA:2444:G:N3	2.62	0.46
27:BA:2199:A:C6	27:BA:2225:A:C2	3.03	0.46
27:BA:2314:C:H2'	27:BA:2315:G:H8	1.80	0.46
27:BA:2412:A:H2'	27:BA:2413:G:O4'	2.16	0.46
27:BA:2431:U:C2	27:BA:2433:A:C8	3.03	0.46
27:BA:2478:A:N7	27:BA:2479:G:C5	2.83	0.46
27:BA:2484:G:C2'	37:BQ:142:LYS:HZ3	2.28	0.46
27:BA:2495:G:C2	27:BA:2496:C:H1'	2.50	0.46
27:BA:2538:C:O2'	27:BA:2539:C:P	2.71	0.46
27:BA:2075:U:O2'	27:BA:2596:U:C2	2.62	0.46
27:BA:2681:C:O2'	27:BA:2682:U:H5'	2.12	0.46
27:BA:2705:A:C5	27:BA:2706:G:C5	3.03	0.46
27:BA:2720:U:C2	27:BA:2721:A:C8	3.03	0.46
27:BA:2679:A:N6	27:BA:2728:U:H3	2.00	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2817:G:C2	27:BA:2818:G:N9	2.84	0.46
28:BD:188:ARG:HB3	28:BD:189:ALA:H	1.57	0.46
28:BD:141:HIS:CE1	28:BD:193:GLU:O	2.69	0.46
29:BE:176:HIS:O	29:BE:179:ASP:CA	2.64	0.46
29:BE:200:ASP:O	29:BE:312:ARG:N	2.48	0.46
29:BE:212:GLY:O	29:BE:216:ARG:CG	2.45	0.46
29:BE:44:TYR:HA	29:BE:309:PRO:HG3	1.44	0.46
30:BF:148:VAL:O	30:BF:149:LYS:HG3	2.15	0.46
30:BF:167:ASP:OD1	30:BF:167:ASP:N	2.44	0.46
30:BF:202:THR:CG2	30:BF:203:ALA:H	2.27	0.46
31:BG:19:GLU:HB2	31:BG:135:VAL:CB	2.42	0.46
26:BB:43:C:H1'	31:BG:47:GLN:NE2	2.30	0.46
32:BH:115:GLU:O	32:BH:115:GLU:CD	2.54	0.46
32:BH:159:LYS:N	32:BH:162:ARG:HH12	2.14	0.46
32:BH:85:ALA:CB	32:BH:164:GLU:HG2	2.45	0.46
33:BI:23:ASP:O	33:BI:25:TYR:N	2.48	0.46
33:BI:26:ALA:HB1	33:BI:30:LEU:HD12	1.96	0.46
34:BN:103:VAL:CG1	34:BN:104:TYR:N	2.71	0.46
35:BO:19:VAL:HA	35:BO:42:THR:O	2.15	0.46
35:BO:21:VAL:HG13	35:BO:39:VAL:CG1	2.45	0.46
36:BP:94:ARG:HH21	36:BP:118:LEU:HB2	1.80	0.46
37:BQ:45:GLN:HA	37:BQ:125:TRP:NE1	2.30	0.46
37:BQ:93:ILE:HG22	37:BQ:94:ARG:N	2.31	0.46
38:BS:34:LEU:HB3	38:BS:101:VAL:O	2.16	0.46
38:BS:97:VAL:HG12	38:BS:98:GLU:H	1.78	0.46
38:BS:98:GLU:CG	38:BS:99:GLU:N	2.60	0.46
45:BU:7:GLY:HA3	45:BU:8:ILE:CD1	2.44	0.46
45:BU:95:LEU:O	45:BU:98:ILE:CD1	2.62	0.46
46:BV:14:VAL:HG13	46:BV:15:SER:H	1.74	0.46
40:BW:45:TYR:O	40:BW:46:PHE:O	2.33	0.46
33:BI:68:LEU:CD1	33:BI:108:LEU:HD13	2.40	0.46
33:BI:116:GLU:HG3	33:BI:130:PRO:O	2.14	0.46
42:BY:103:LEU:HD23	42:BY:108:ARG:CB	2.26	0.46
43:BZ:71:MET:HA	43:BZ:78:PRO:HB3	1.95	0.46
1:AA:1222:G:N7	1:AA:1322:C:N4	2.62	0.46
1:AA:1224:G:C2	1:AA:1362:C:O2	2.50	0.46
6:AC:18:TRP:CD1	17:AN:53:LEU:O	2.67	0.46
13:AJ:11:PHE:CG	17:AN:55:GLY:HA3	2.50	0.46
1:AA:1371:G:H5''	12:AI:68:GLY:CA	2.46	0.46
27:BA:1917:U:C3'	27:BA:1918:A:C8	2.79	0.46
7:AD:59:ARG:CZ	7:AD:59:ARG:HA	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:6:LYS:HA	42:BY:9:LYS:HB2	1.96	0.46
1:AA:36:C:H5''	15:AL:123:LYS:HA	1.97	0.46
27:BA:693:C:HO2'	27:BA:1353:A:H2	1.55	0.46
12:AI:37:PHE:CZ	12:AI:74:ILE:HG12	2.50	0.46
22:AS:13:ASP:HA	22:AS:16:LEU:HB3	1.97	0.46
27:BA:1437:C:HO2'	27:BA:1516:U:HO2'	1.63	0.46
27:BA:1872:A:C5	27:BA:1878:G:H1'	2.50	0.46
1:AA:7:G:H21	8:AE:121:LYS:HG2	1.80	0.46
3:AW:72:C:H2'	3:AW:73:A:O5'	2.15	0.46
49:B0:29:GLU:OE1	49:B0:29:GLU:CA	2.62	0.46
50:B4:14:ILE:HD11	50:B4:39:VAL:CB	2.45	0.46
52:B6:39:LYS:O	52:B6:40:TYR:CD1	2.64	0.46
54:B8:30:ARG:CG	54:B8:31:HIS:H	2.27	0.46
27:BA:1023:U:H2'	27:BA:1024:G:O4'	2.15	0.46
27:BA:2000:G:H2'	27:BA:2001:A:H8	1.81	0.46
27:BA:2093:G:C5	27:BA:2225:A:C6	3.04	0.46
27:BA:2315:G:C4'	31:BG:133:ASN:HD22	2.28	0.46
27:BA:2343:C:HO2'	27:BA:2344:U:H5'	1.70	0.46
27:BA:2367:G:N3	27:BA:2368:C:C5	2.83	0.46
27:BA:2385:C:C2	27:BA:2386:C:H6	2.18	0.46
27:BA:2078:C:C4'	27:BA:2434:A:H5'	2.43	0.46
27:BA:2485:G:C2'	27:BA:2486:G:O4'	2.63	0.46
27:BA:2489:G:O6	27:BA:2490:G:C6	2.68	0.46
27:BA:2460:U:C2	27:BA:2493:U:C5	3.00	0.46
27:BA:2516:G:H22	27:BA:2569:G:H1'	1.81	0.46
27:BA:1129:A:C2	27:BA:2570:G:C8	3.03	0.46
27:BA:2662:A:H2	27:BA:2663:G:H4'	1.80	0.46
27:BA:2808:U:P	27:BA:2809:A:OP2	2.73	0.46
27:BA:641:C:H1'	27:BA:2350:C:OP1	2.16	0.46
27:BA:987:G:OP2	48:B3:15:TYR:OH	2.33	0.46
28:BD:131:LEU:CG	28:BD:187:CYS:O	2.59	0.46
30:BF:103:ASN:C	30:BF:104:ASP:O	2.47	0.46
31:BG:63:ILE:O	31:BG:64:ARG:C	2.53	0.46
32:BH:15:THR:CG2	32:BH:26:LYS:C	2.83	0.46
34:BN:56:LYS:H	34:BN:56:LYS:CD	2.23	0.46
36:BP:114:VAL:O	36:BP:115:ARG:CB	2.53	0.46
36:BP:66:VAL:HG23	36:BP:109:LEU:C	2.21	0.46
37:BQ:126:VAL:CG1	37:BQ:127:ASN:N	2.78	0.46
44:BR:18:LEU:HD21	44:BR:22:ARG:NH2	2.30	0.46
38:BS:21:HIS:CD2	38:BS:24:LEU:CD1	2.96	0.46
38:BS:66:LEU:CD1	38:BS:66:LEU:N	2.77	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:446:G:H8	45:BU:3:ARG:HH12	1.63	0.46
46:BV:35:LEU:N	46:BV:60:VAL:HG11	2.28	0.46
46:BV:55:THR:O	46:BV:56:VAL:HG23	2.15	0.46
40:BW:69:LEU:HD22	40:BW:109:GLU:HB3	1.91	0.46
42:BY:49:GLU:CB	42:BY:97:ARG:HH11	2.29	0.46
43:BZ:62:PHE:CZ	43:BZ:87:THR:CG2	2.99	0.46
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.81	0.46
13:AJ:51:ARG:HA	17:AN:45:ARG:NH2	2.30	0.46
47:B2:4:HIS:O	47:B2:8:ILE:HG13	2.13	0.46
41:BX:52:VAL:HG22	41:BX:66:VAL:HA	1.97	0.46
10:AG:31:MET:HG2	10:AG:32:ARG:N	2.30	0.46
1:AA:1030:C:C2	1:AA:30(A):G:C5	3.03	0.46
1:AA:1405:G:N3	1:AA:1518:A:O2'	2.42	0.46
1:AA:501:C:H1'	1:AA:549:C:H1'	1.97	0.46
13:AJ:12:ASP:O	13:AJ:16:LEU:HD23	2.16	0.46
11:AH:63:LEU:H	11:AH:63:LEU:HD22	1.81	0.46
1:AA:920:U:O4'	1:AA:1080:A:C6	2.68	0.46
1:AA:244:U:C6	1:AA:894:G:C2	3.04	0.46
27:BA:269:U:C5	27:BA:270(Z):U:P	3.00	0.46
27:BA:476:G:H22	27:BA:478:A:H2'	1.79	0.46
1:AA:1150:U:H1'	1:AA:1280:A:N6	2.30	0.46
11:AH:65:TYR:HA	11:AH:79:VAL:HG23	1.96	0.46
12:AI:45:ALA:O	12:AI:78:LYS:HG3	2.15	0.46
1:AA:256:U:H2'	1:AA:257:G:O4'	2.15	0.46
11:AH:9:MET:HG3	11:AH:26:VAL:HG21	1.96	0.46
41:BX:71:ASP:HB3	41:BX:72:ASP:H	1.57	0.46
6:AC:10:PHE:O	6:AC:10:PHE:CG	2.67	0.46
49:B0:22:GLY:C	49:B0:23:VAL:O	2.52	0.46
49:B0:45:PHE:C	49:B0:46:LYS:HD2	2.35	0.46
49:B0:67:VAL:HG11	49:B0:74:LYS:CD	2.38	0.46
50:B4:38:GLY:O	50:B4:39:VAL:CB	2.63	0.46
50:B4:58:LYS:CG	50:B4:62:ARG:HE	2.04	0.46
54:B8:30:ARG:HH21	54:B8:41:ILE:CG2	2.22	0.46
55:B9:31:LYS:O	55:B9:32:HIS:CG	2.68	0.46
27:BA:1781:C:C6	27:BA:1781:C:H3'	2.51	0.46
27:BA:2060:A:O2'	27:BA:2502:G:C4'	2.64	0.46
27:BA:2307:G:C8	27:BA:2307:G:H5''	2.47	0.46
27:BA:2297:C:N4	27:BA:2320:A:N9	2.64	0.46
27:BA:645:C:OP2	27:BA:2369:A:H4'	2.15	0.46
27:BA:2435:A:C2	27:BA:2436:G:C8	3.04	0.46
27:BA:2474:C:C5	27:BA:2475:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2491:U:C2'	27:BA:2492:U:H5'	2.26	0.46
27:BA:2546:U:C2'	27:BA:2547:U:OP2	2.63	0.46
27:BA:2564:A:C4	27:BA:2565:A:N7	2.84	0.46
27:BA:2576:G:C2'	27:BA:2576:G:N3	2.77	0.46
27:BA:2620:C:C5	27:BA:2621:A:C8	3.03	0.46
27:BA:2633:G:C8	27:BA:2633:G:O5'	2.64	0.46
27:BA:2636:U:H3	27:BA:2782:G:H1	1.64	0.46
27:BA:2649:U:H2'	27:BA:2650:U:C5	2.49	0.46
27:BA:2773:C:H2'	27:BA:2774:C:O5'	2.16	0.46
27:BA:2813:A:C4	27:BA:2814:C:C5	3.03	0.46
27:BA:2817:G:C2	27:BA:2818:G:C1'	2.98	0.46
27:BA:2842:G:C2	27:BA:2876:G:N2	2.83	0.46
27:BA:466:A:OP1	53:B7:34:ARG:NH2	2.49	0.46
27:BA:602:G:H2'	27:BA:655:A:N1	2.30	0.46
27:BA:687:C:O2	27:BA:787:U:C5'	2.62	0.46
27:BA:828:U:H4'	27:BA:831:G:C2	2.50	0.46
27:BA:932:G:O2'	27:BA:933:A:C8	2.63	0.46
27:BA:965:C:O2'	27:BA:2273:A:C2	2.69	0.46
28:BD:167:GLU:C	28:BD:170:TYR:O	2.53	0.46
28:BD:175:LEU:HB2	28:BD:179:GLU:N	2.28	0.46
30:BF:199:GLU:O	30:BF:200:PRO:O	2.34	0.46
27:BA:451:C:O5'	30:BF:49:ASP:HB2	2.15	0.46
32:BH:40:MET:HA	32:BH:54:PRO:CG	2.46	0.46
32:BH:86:LEU:CA	32:BH:148:ARG:HH22	2.04	0.46
33:BI:42:ALA:HB3	33:BI:43:ASN:ND2	2.30	0.46
36:BP:53:ARG:CB	36:BP:54:PRO:CD	2.93	0.46
37:BQ:145:PRO:O	37:BQ:146:THR:CB	2.58	0.46
37:BQ:18:GLU:HG2	37:BQ:23:ILE:CD1	2.41	0.46
37:BQ:32:LYS:HD2	37:BQ:32:LYS:O	2.15	0.46
44:BR:56:LYS:O	44:BR:57:ARG:C	2.54	0.46
45:BU:113:SER:C	45:BU:115:ASN:H	2.11	0.46
45:BU:46:GLU:C	45:BU:49:ASP:HB2	2.30	0.46
46:BV:69:ILE:HG23	46:BV:89:ASN:O	2.15	0.46
42:BY:51:LEU:CA	42:BY:97:ARG:NH2	2.44	0.46
43:BZ:8:ARG:C	43:BZ:9:THR:HG23	2.36	0.46
41:BX:52:VAL:HG13	41:BX:65:VAL:O	2.15	0.46
1:AA:567:G:O6	15:AL:5:PRO:HG3	2.16	0.46
33:BI:56:ARG:O	33:BI:60:GLU:CB	2.64	0.46
33:BI:59:ALA:HA	33:BI:62:LEU:CG	2.44	0.46
7:AD:70:ILE:HD11	7:AD:100:ARG:CZ	2.44	0.46
39:BT:44:ARG:CG	39:BT:45:GLU:N	2.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1906:G:C8	27:BA:1929:G:C5	3.04	0.46
27:BA:1906:G:O5'	27:BA:1929:G:O2'	2.24	0.46
27:BA:1300:U:C6	27:BA:1301:A:C2	3.03	0.46
1:AA:1368:G:C8	12:AI:112:LYS:HD2	2.51	0.46
27:BA:1079:C:O2'	56:BK:130:GLY:N	2.49	0.46
27:BA:1079:C:O2	56:BK:130:GLY:C	2.54	0.46
1:AA:1376:U:C3'	10:AG:94:ARG:NH2	2.78	0.46
1:AA:126:G:H4'	1:AA:634:C:C2'	2.45	0.46
5:AB:60:ASP:O	5:AB:64:ARG:HB3	2.15	0.46
19:AP:27:LYS:C	19:AP:29:ASP:H	2.18	0.46
1:AA:1053:G:H5''	1:AA:1053:G:C8	2.47	0.46
10:AG:70:LYS:HB3	10:AG:96:GLN:HG2	1.96	0.46
5:AB:155:LEU:HB2	5:AB:159:PRO:HG3	1.97	0.46
22:AS:66:MET:HB2	22:AS:74:PHE:CE2	2.50	0.46
1:AA:143:A:H4'	1:AA:144:G:C8	2.49	0.46
5:AB:160:ASP:O	5:AB:161:ALA:HB2	2.15	0.46
6:AC:82:GLU:HG3	6:AC:83:ARG:N	2.31	0.46
1:AA:1443:G:C8	1:AA:1443:G:H5'	2.50	0.46
27:BA:380:U:O2'	50:B4:15:ILE:CA	2.63	0.46
27:BA:2395:C:H4'	50:B4:28:ARG:HH11	1.81	0.46
27:BA:2045:C:C2	51:B5:22:HIS:CE1	3.01	0.46
52:B6:16:ALA:CB	52:B6:42:PRO:CG	2.93	0.46
52:B6:37:LEU:CG	52:B6:51:ARG:HG2	2.40	0.46
54:B8:26:LYS:HD3	54:B8:43:GLY:O	2.16	0.46
27:BA:1255:U:H5''	27:BA:1256:G:C5'	2.46	0.46
27:BA:2078:C:H4'	27:BA:2434:A:C5'	2.41	0.46
27:BA:2256:G:C6	27:BA:2257:U:N3	2.83	0.46
27:BA:2343:C:H2'	27:BA:2343:C:O2	2.15	0.46
27:BA:2358:G:C2	27:BA:2359:C:H5'	2.49	0.46
27:BA:2450:A:N3	27:BA:2451:A:N9	2.63	0.46
27:BA:2515:C:O2	27:BA:2515:C:C2'	2.64	0.46
27:BA:2616:C:C5'	27:BA:2616:C:H6	2.28	0.46
27:BA:2617:C:O2	27:BA:2618:G:H5'	2.14	0.46
27:BA:2631:G:C2	27:BA:2632:A:H1'	2.51	0.46
27:BA:2793:G:C5	27:BA:2794:C:C4	3.03	0.46
27:BA:2839:G:N2	27:BA:2840:C:N1	2.64	0.46
27:BA:2631:G:C4'	27:BA:2892:A:OP1	2.45	0.46
27:BA:636:G:O5'	36:BP:126:SER:HB2	2.15	0.46
27:BA:783:A:C6	27:BA:785:G:H1'	2.49	0.46
27:BA:995:C:O2	45:BU:57:PHE:CD2	2.68	0.46
28:BD:109:LEU:HD11	28:BD:126:GLY:HA3	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BD:191:VAL:HG23	28:BD:192:GLY:N	2.29	0.46
30:BF:11:ASN:HD21	30:BF:160:LEU:CG	2.27	0.46
30:BF:200:PRO:HB2	30:BF:205:ARG:HD3	1.97	0.46
27:BA:1205:U:C2	30:BF:232:LEU:HD11	2.28	0.46
30:BF:215:ALA:CA	30:BF:239:ALA:HA	2.42	0.46
31:BG:27:ILE:O	31:BG:69:ILE:HG21	1.68	0.46
31:BG:29:HIS:N	31:BG:69:ILE:CG1	2.76	0.46
31:BG:67:ASP:N	31:BG:67:ASP:OD1	2.46	0.46
32:BH:52:THR:O	32:BH:64:HIS:CD2	2.68	0.46
32:BH:58:LYS:O	32:BH:59:HIS:C	2.54	0.46
32:BH:86:LEU:HD11	32:BH:87:GLU:C	2.35	0.46
33:BI:21:VAL:HG21	33:BI:30:LEU:HD12	1.96	0.46
37:BQ:130:PRO:HB2	37:BQ:134:PHE:CE1	2.51	0.46
27:BA:2320:A:C2	38:BS:13:ARG:HG2	2.50	0.46
38:BS:19:ASP:HB3	38:BS:22:GLN:HG3	1.51	0.46
40:BW:61:ASN:N	40:BW:61:ASN:OD1	2.49	0.46
43:BZ:159:THR:O	43:BZ:160:LEU:CG	2.64	0.46
43:BZ:117:VAL:HB	43:BZ:167:THR:HB	1.96	0.46
42:BY:11:GLN:HA	42:BY:21:LYS:HZ1	1.80	0.46
42:BY:50:VAL:CA	42:BY:51:LEU:HD13	2.44	0.46
1:AA:1224:G:C6	1:AA:1322:C:C4'	2.99	0.46
1:AA:575:G:N2	1:AA:880:C:C2	2.73	0.46
1:AA:120:A:C8	1:AA:120:A:C3'	2.99	0.46
42:BY:2:LYS:C	42:BY:3:GLN:HG3	2.35	0.46
1:AA:15:G:H1'	8:AE:19:MET:CG	2.46	0.46
1:AA:60:A:N1	1:AA:107:G:N3	2.62	0.46
1:AA:890:G:N2	1:AA:907:A:O5'	2.49	0.46
27:BA:2755:C:H6	27:BA:2755:C:C4'	2.23	0.46
27:BA:1522:G:O5'	27:BA:1522:G:H8	1.99	0.46
5:AB:239:VAL:HG12	5:AB:240:GLN:N	2.27	0.46
1:AA:597:G:C8	1:AA:597:G:O5'	2.68	0.46
27:BA:220:G:N2	27:BA:427:U:H2'	2.31	0.46
1:AA:1144:G:N2	1:AA:1146:A:H62	2.12	0.46
1:AA:118:U:H3'	1:AA:288:A:N6	2.31	0.46
1:AA:184:G:H4'	1:AA:224:C:H4'	1.97	0.46
23:AT:50:GLU:H	23:AT:99:LEU:HD12	1.80	0.46
27:BA:2356:C:OP2	49:B0:21:LEU:HD21	2.16	0.46
53:B7:38:GLY:C	53:B7:40:HIS:CE1	2.89	0.46
27:BA:1676:A:H2'	27:BA:1677:A:O4'	2.16	0.46
27:BA:194:G:C6	27:BA:195:A:C5	3.04	0.46
27:BA:2100:G:H1'	27:BA:2190:G:H21	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2218:G:C2	27:BA:2219:G:C5	3.03	0.46
27:BA:2261:C:H3'	49:B0:14:ARG:CZ	2.46	0.46
27:BA:2336:A:C2'	27:BA:2337:G:C5'	2.80	0.46
27:BA:2340:G:HO2'	27:BA:2341:G:C5'	2.22	0.46
27:BA:2402:C:C6	27:BA:2402:C:H3'	2.50	0.46
27:BA:2414:G:C5	27:BA:2415:G:N7	2.84	0.46
27:BA:2453:A:HO2'	27:BA:2454:G:C5'	2.19	0.46
27:BA:2461:C:C2'	27:BA:2462:U:H5'	2.45	0.46
27:BA:2469:A:C5	27:BA:2470:G:C8	3.03	0.46
27:BA:1783:A:C6	27:BA:2587:A:C2	3.04	0.46
27:BA:2633:G:H5'	27:BA:2812:G:H5'	1.98	0.46
27:BA:2713:A:C3'	27:BA:2714:G:H5''	2.45	0.46
27:BA:2762:G:C4	27:BA:2763:G:C8	3.02	0.46
27:BA:2772:C:C2	27:BA:2773:C:C5	3.03	0.46
27:BA:510:C:P	27:BA:512:G:H22	2.38	0.46
28:BD:158:GLY:O	28:BD:160:SER:N	2.49	0.46
27:BA:1818:U:O4	28:BD:66:PHE:CE1	2.68	0.46
28:BD:76:ARG:HA	28:BD:114:GLU:N	2.30	0.46
29:BE:232:ARG:O	29:BE:233:ARG:C	2.53	0.46
27:BA:2574:G:C2'	29:BE:240:PRO:CB	2.75	0.46
29:BE:246:VAL:HG12	29:BE:247:ARG:O	2.15	0.46
29:BE:262:THR:OG1	29:BE:263:GLU:N	2.46	0.46
29:BE:77:PRO:CG	29:BE:186:GLU:HB2	2.46	0.46
30:BF:157:LEU:O	30:BF:160:LEU:N	2.48	0.46
30:BF:16:VAL:CG1	30:BF:17:ASP:H	2.29	0.46
31:BG:134:LEU:C	31:BG:135:VAL:HG23	2.36	0.46
31:BG:97:GLN:HB3	31:BG:106:PHE:CZ	2.49	0.46
32:BH:95:ALA:N	32:BH:127:GLN:NE2	2.54	0.46
27:BA:1140:C:P	34:BN:18:ILE:HD11	2.51	0.46
34:BN:47:THR:O	34:BN:48:GLY:O	2.34	0.46
34:BN:5:GLU:HA	34:BN:109:TYR:HE2	1.78	0.46
36:BP:108:VAL:O	36:BP:125:PHE:HB3	2.15	0.46
36:BP:73:VAL:HG13	36:BP:76:LEU:CB	2.46	0.46
44:BR:41:ALA:O	44:BR:42:LYS:C	2.54	0.46
38:BS:34:LEU:HG	38:BS:103:ASP:N	2.31	0.46
45:BU:108:ALA:O	45:BU:110:VAL:HB	2.15	0.46
43:BZ:174:PRO:C	43:BZ:175:ARG:HG2	2.36	0.46
42:BY:92:ASP:OD1	42:BY:94:SER:HB3	2.13	0.46
26:BB:77:U:H5'	43:BZ:80:HIS:HD1	1.78	0.46
43:BZ:71:MET:HA	43:BZ:78:PRO:N	2.31	0.46
1:AA:1226:C:C5	16:AM:104:ARG:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AM:84:ILE:HG13	16:AM:85:GLY:H	1.80	0.46
27:BA:1465:G:O2'	27:BA:545(A):A:C2	2.68	0.46
1:AA:1345:U:O2	1:AA:1375:A:N1	2.49	0.46
1:AA:1248:A:H2'	12:AI:70:LYS:HZ1	1.80	0.46
27:BA:1520:U:C6	27:BA:1520:U:C3'	2.98	0.46
27:BA:2795:G:OP2	27:BA:2795:G:H3'	2.16	0.46
1:AA:20:U:C6	1:AA:916:G:N2	2.83	0.46
27:BA:323:G:C5	27:BA:333:G:C8	3.04	0.46
5:AB:54:THR:HG22	5:AB:58:ILE:HD11	1.97	0.46
27:BA:885:C:H41	27:BA:889:C:C1'	2.23	0.46
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.51	0.46
11:AH:35:ILE:O	11:AH:39:LEU:HD23	2.16	0.46
27:BA:385:C:H42	27:BA:391:G:H1	1.64	0.46
27:BA:588:U:O4	27:BA:670:A:H2'	2.14	0.46
1:AA:324:G:N2	1:AA:327:A:H8	2.13	0.46
1:AA:1007:C:C2	1:AA:1022:G:N2	2.83	0.46
1:AA:1429:C:H2'	1:AA:1430:C:H6	1.81	0.46
39:BT:18:GLY:O	39:BT:19:THR:HB	2.15	0.46
7:AD:128:VAL:O	7:AD:130:GLY:N	2.49	0.46
1:AA:780:A:O5'	1:AA:780:A:H8	1.98	0.46
27:BA:1956:U:H2'	27:BA:1956:U:O2	2.15	0.46
48:B3:31:LEU:O	48:B3:32:GLN:C	2.53	0.46
48:B3:41:PRO:HA	48:B3:44:ARG:HB3	1.97	0.46
48:B3:47:VAL:C	48:B3:48:GLU:OE1	2.49	0.46
50:B4:5:LEU:HD11	50:B4:8:LYS:CB	2.32	0.46
53:B7:34:ARG:HH12	53:B7:42:LEU:CA	2.14	0.46
54:B8:13:ARG:CB	54:B8:24:ALA:HB1	2.44	0.46
27:BA:2097:C:N4	27:BA:2192:G:H1	2.14	0.46
27:BA:2194:G:H2'	27:BA:2194:G:N3	2.30	0.46
27:BA:2234:G:O6	27:BA:2235:G:C6	2.69	0.46
27:BA:2361:A:N3	27:BA:2362:G:O4'	2.48	0.46
27:BA:2461:C:C1'	27:BA:2492:U:N3	2.78	0.46
27:BA:2482:G:N7	27:BA:2483:C:C5	2.61	0.46
27:BA:2514:U:H2'	27:BA:2515:C:C6	2.51	0.46
27:BA:1128:A:C5	27:BA:2518:A:N6	2.84	0.46
27:BA:2520:C:N4	27:BA:2567:G:N7	2.61	0.46
27:BA:2584:U:N1	27:BA:2585:U:C4	2.82	0.46
27:BA:2648:C:C5	27:BA:2649:U:C5	3.03	0.46
27:BA:2748:A:H4'	32:BH:65:GLY:O	2.16	0.46
27:BA:2748:A:H8	27:BA:2749:A:C5	2.21	0.46
27:BA:2638:G:N2	27:BA:2776:A:C8	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2824:C:C4	27:BA:2825:C:C2	3.04	0.46
27:BA:2885:C:N3	27:BA:2886:G:H1'	2.31	0.46
27:BA:487:C:H42	27:BA:493:G:H1	1.62	0.46
27:BA:791:C:O2'	27:BA:792:G:H5''	2.15	0.46
27:BA:853:G:H2'	27:BA:854:G:C8	2.51	0.46
27:BA:961:C:N4	27:BA:2031:A:N3	2.64	0.46
28:BD:63:ILE:O	28:BD:64:ILE:CG2	2.64	0.46
28:BD:80:ILE:CG1	28:BD:82:TYR:CE1	2.84	0.46
27:BA:1818:U:OP1	28:BD:86:ARG:O	2.33	0.46
29:BE:44:TYR:CD2	29:BE:306:ARG:O	2.69	0.46
30:BF:31:ILE:HG22	30:BF:32:GLY:N	2.31	0.46
27:BA:449:A:OP1	30:BF:85:LYS:HA	2.16	0.46
31:BG:98:PHE:C	31:BG:104:PHE:CE2	2.89	0.46
32:BH:66:THR:O	32:BH:67:THR:C	2.54	0.46
33:BI:4:ILE:O	33:BI:4:ILE:HG23	2.11	0.46
34:BN:44:ALA:C	34:BN:45:VAL:HG23	2.36	0.46
34:BN:68:GLY:O	34:BN:69:TYR:CG	2.69	0.46
34:BN:63:ILE:CG2	34:BN:71:TYR:OH	2.56	0.46
34:BN:84:ARG:CA	34:BN:87:LEU:HD13	2.45	0.46
37:BQ:35:ASN:O	37:BQ:126:VAL:HG22	2.15	0.46
44:BR:96:ARG:HH21	44:BR:117:VAL:HG23	1.80	0.46
44:BR:18:LEU:HD12	44:BR:19:ALA:H	1.80	0.46
44:BR:72:ASP:O	44:BR:73:VAL:O	2.34	0.46
44:BR:89:ASP:OD1	44:BR:89:ASP:C	2.49	0.46
38:BS:32:PRO:CG	38:BS:100:ALA:HA	2.38	0.46
38:BS:82:TYR:CB	38:BS:83:LEU:HD12	2.46	0.46
38:BS:94:GLU:CG	38:BS:95:ALA:N	2.77	0.46
45:BU:10:ARG:HA	45:BU:13:ARG:NH1	2.31	0.46
45:BU:57:PHE:O	45:BU:60:LEU:N	2.48	0.46
46:BV:37:ALA:O	46:BV:58:ALA:HB1	2.15	0.46
40:BW:69:LEU:O	40:BW:70:TYR:HB3	2.15	0.46
27:BA:298:G:H1	27:BA:338:G:H4'	1.81	0.46
42:BY:43:ASN:CG	42:BY:112:LEU:CD2	2.81	0.46
42:BY:49:GLU:CG	42:BY:59:GLU:CA	2.66	0.46
42:BY:51:LEU:HD22	42:BY:95:ASN:ND2	2.31	0.46
26:BB:75:G:N9	43:BZ:22:VAL:HG21	2.31	0.46
1:AA:361(A):C:C3'	1:AA:1362:C:H5''	2.46	0.46
27:BA:1525:G:H2'	27:BA:1526:G:H5'	1.98	0.46
27:BA:74:A:H4'	27:BA:75:G:O4'	2.16	0.46
41:BX:54:THR:O	41:BX:55:GLN:HB2	2.15	0.46
1:AA:246:A:O2'	1:AA:247:G:OP2	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2857:G:C5'	27:BA:2857:G:H8	2.26	0.46
1:AA:949:A:H2'	1:AA:950:U:C6	2.51	0.46
1:AA:261:U:H5	23:AT:79:ARG:CZ	2.21	0.46
27:BA:1899:G:H22	27:BA:1902:C:N4	2.11	0.46
18:AO:32:LEU:HB2	18:AO:63:ARG:HG2	1.97	0.46
27:BA:1358:G:H2'	27:BA:1371:G:N2	2.30	0.46
15:AL:25:PRO:C	15:AL:27:LEU:H	2.18	0.46
5:AB:9:GLU:OE2	5:AB:12:GLU:HG2	2.16	0.46
49:B0:30:VAL:HG13	49:B0:63:SER:OG	2.16	0.46
48:B3:1:MET:N	48:B3:2:PRO:CD	2.78	0.46
48:B3:4:LEU:HD11	48:B3:39:ASP:HA	1.98	0.46
27:BA:1263:U:H1'	51:B5:16:ARG:NH2	2.30	0.46
55:B9:10:MET:HB3	55:B9:11:CYS:H	1.48	0.46
27:BA:2013:A:H8	27:BA:2013:A:H5''	1.81	0.46
27:BA:2096:U:H2'	27:BA:2097:C:H6	1.81	0.46
27:BA:2094:G:C5	27:BA:2196:C:N3	2.80	0.46
27:BA:2216:G:C2	27:BA:2217:G:C8	3.03	0.46
27:BA:2271:G:O2'	27:BA:2272:U:P	2.72	0.46
27:BA:2273:A:C8	27:BA:2274:A:N9	2.84	0.46
27:BA:2570:G:C2'	27:BA:2571:C:C5	2.79	0.46
27:BA:2584:U:H5	27:BA:2585:U:H3'	1.80	0.46
27:BA:2649:U:HO2'	27:BA:2650:U:P	2.38	0.46
27:BA:2657:A:N6	27:BA:2664:G:C2	2.66	0.46
27:BA:2679:A:H5''	29:BE:261:ARG:CD	2.45	0.46
27:BA:2830:G:C2	27:BA:2883:A:H2	2.34	0.46
27:BA:2887:U:C2'	27:BA:2888:C:H5'	2.46	0.46
28:BD:159:THR:O	28:BD:176:ALA:HB1	2.16	0.46
29:BE:221:LYS:CE	29:BE:233:ARG:CB	2.94	0.46
29:BE:251:PRO:O	29:BE:252:GLN:HG2	2.15	0.46
29:BE:77:PRO:HB3	29:BE:187:HIS:CA	2.43	0.46
29:BE:82:ALA:O	29:BE:83:LEU:CB	2.63	0.46
30:BF:239:ALA:O	30:BF:242:GLU:HG3	2.16	0.46
31:BG:11:HIS:CG	31:BG:15:GLU:OE2	2.58	0.46
31:BG:22:VAL:CG2	31:BG:24:HIS:CE1	2.98	0.46
31:BG:48:MET:HA	31:BG:49:PRO:HD3	1.75	0.46
35:BO:77:ILE:CD1	35:BO:78:ARG:HA	2.42	0.46
36:BP:76:LEU:CB	36:BP:81:VAL:HG21	2.46	0.46
37:BQ:152:SER:O	37:BQ:153:PRO:C	2.54	0.46
37:BQ:29:ALA:O	37:BQ:30:GLN:O	2.34	0.46
37:BQ:43:PRO:O	37:BQ:45:GLN:HG2	2.15	0.46
44:BR:97:VAL:CG1	44:BR:114:VAL:HG22	2.36	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:63:ARG:HH22	44:BR:77:ARG:HA	1.81	0.46
44:BR:65:LEU:HA	44:BR:68:ARG:HB2	1.98	0.46
44:BR:94:TYR:O	44:BR:116:LEU:HA	2.16	0.46
38:BS:103:ASP:C	38:BS:105:GLY:N	2.68	0.46
38:BS:41:LYS:O	38:BS:42:HIS:CB	2.64	0.46
39:BT:50:GLU:C	39:BT:52:THR:N	2.66	0.46
45:BU:117:ARG:HG3	45:BU:118:GLN:N	2.28	0.46
45:BU:14:HIS:NE2	45:BU:36:PHE:HE2	2.10	0.46
45:BU:8:ILE:C	45:BU:11:ARG:HG2	2.36	0.46
45:BU:94:VAL:HG11	46:BV:4:ILE:CG2	2.42	0.46
45:BU:91:ASN:CG	45:BU:95:LEU:HD21	2.26	0.46
46:BV:59:GLU:HB3	46:BV:60:VAL:H	1.51	0.46
40:BW:36:LEU:HD23	40:BW:39:THR:HG21	1.98	0.46
43:BZ:154:LEU:HA	43:BZ:155:PRO:HD3	1.81	0.46
27:BA:349:G:N3	27:BA:349:G:H2'	2.31	0.46
42:BY:34:GLU:O	42:BY:35:TYR:HB3	2.16	0.46
42:BY:92:ASP:CG	42:BY:94:SER:HB3	2.36	0.46
16:AM:94:ARG:NH2	27:BA:887:A:OP2	2.49	0.46
41:BX:1:SER:C	41:BX:2:TRP:HD1	2.19	0.46
27:BA:2857:G:H22	27:BA:2859:G:H3'	1.81	0.46
27:BA:1710:C:HO2'	27:BA:2858:C:N4	2.07	0.46
1:AA:909:A:C2	1:AA:910:C:H1'	2.51	0.46
20:AQ:15:MET:HB2	20:AQ:18:THR:HB	1.98	0.46
27:BA:1906:G:C6	27:BA:1929:G:N1	2.84	0.46
3:AW:34:G:OP1	3:AW:34:G:C8	2.64	0.46
27:BA:270:A:N6	27:BA:370:G:C4	2.84	0.46
16:AM:27:LYS:O	16:AM:28:ALA:HB2	2.16	0.46
43:BZ:131:PRO:C	43:BZ:133:GLU:N	2.69	0.46
1:AA:450:G:N2	19:AP:13:HIS:CE1	2.83	0.46
18:AO:33:THR:O	18:AO:36:ILE:HG22	2.16	0.46
22:AS:47:HIS:O	22:AS:62:ILE:HG22	2.16	0.46
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.51	0.46
49:B0:41:ARG:HB2	49:B0:74:LYS:CE	2.46	0.46
27:BA:929:G:C1'	48:B3:43:ILE:CG1	2.83	0.46
53:B7:26:SER:OG	53:B7:27:GLY:N	2.47	0.46
54:B8:16:ILE:HD13	54:B8:64:ARG:OXT	2.16	0.46
54:B8:57:ARG:O	54:B8:60:LEU:HB3	2.16	0.46
27:BA:1367:A:H2'	53:B7:25:LYS:CD	2.46	0.46
27:BA:1952:A:H1'	27:BA:2560:C:HO2'	1.80	0.46
27:BA:2015:A:C8	27:BA:2016:U:C6	3.01	0.46
27:BA:2349:G:O6	27:BA:2350:C:C6	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2377:A:H2'	27:BA:2378:A:N7	2.30	0.46
27:BA:576:U:H5''	27:BA:2503:A:OP1	2.16	0.46
27:BA:2567:G:C2'	27:BA:2568:C:C6	2.99	0.46
27:BA:2581:G:C2	27:BA:2610:C:C5	3.03	0.46
27:BA:2729:G:C2	27:BA:2730:C:N3	2.84	0.46
27:BA:2882:A:O2'	27:BA:2883:A:O5'	2.34	0.46
27:BA:593:G:C2	27:BA:665:C:C2	3.04	0.46
27:BA:944:G:O2'	27:BA:945:A:OP2	2.22	0.46
27:BA:989:G:O2'	27:BA:990:A:P	2.74	0.46
27:BA:995:C:C2'	45:BU:57:PHE:CD2	2.99	0.46
26:BB:8:U:O2	26:BB:112:G:O6	2.34	0.46
28:BD:86:ARG:HG2	28:BD:88:ALA:CB	2.45	0.46
29:BE:72:VAL:CA	29:BE:73:ILE:HD13	2.30	0.46
30:BF:11:ASN:HD21	30:BF:160:LEU:HG	1.81	0.46
27:BA:2313:C:H5''	31:BG:51:ARG:HD3	1.96	0.46
32:BH:147:ILE:CD1	32:BH:150:VAL:CB	2.91	0.46
32:BH:41:THR:N	32:BH:54:PRO:HG3	2.31	0.46
27:BA:2749:A:C1'	32:BH:62:ALA:CB	2.76	0.46
33:BI:6:LEU:CB	33:BI:36:ALA:CB	2.75	0.46
34:BN:27:ALA:O	34:BN:31:LEU:N	2.48	0.46
36:BP:109:LEU:HD13	36:BP:110:GLY:C	2.36	0.46
44:BR:44:LEU:HD13	44:BR:44:LEU:C	2.34	0.46
38:BS:84:THR:O	38:BS:88:ALA:HB2	2.15	0.46
45:BU:32:TYR:N	45:BU:32:TYR:HD2	2.08	0.46
46:BV:33:VAL:CG1	46:BV:34:GLU:N	2.78	0.46
27:BA:974:G:H3'	46:BV:82:ARG:NH2	2.30	0.46
40:BW:55:ALA:CA	40:BW:107:LEU:HD11	2.35	0.46
43:BZ:114:ASP:HB3	43:BZ:171:VAL:HG12	1.97	0.46
33:BI:96:LYS:C	33:BI:98:ILE:H	2.18	0.46
1:AA:958:A:C4	22:AS:55:LYS:HB2	2.51	0.46
27:BA:1394:U:H5''	27:BA:1603:A:O3'	2.15	0.46
1:AA:1346:A:N6	1:AA:1374:A:H3'	2.31	0.46
1:AA:1304:G:H21	1:AA:1333:A:H62	1.62	0.46
1:AA:1347:G:OP2	12:AI:107:ARG:HD2	2.15	0.46
1:AA:755:G:H21	11:AH:1:MET:CE	2.28	0.46
27:BA:439:G:H5''	42:BY:6:LYS:HZ3	1.81	0.46
27:BA:440:G:OP1	42:BY:6:LYS:HD3	2.06	0.46
1:AA:60:A:N6	1:AA:108:G:H5'	2.31	0.46
1:AA:116:A:N6	1:AA:313:A:H1'	2.22	0.46
27:BA:1582:C:C3'	27:BA:1583:A:H4'	2.46	0.46
27:BA:212:G:H2'	27:BA:213:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:690:G:H2'	1:AA:691:G:C8	2.51	0.46
1:AA:7:G:N2	8:AE:121:LYS:HB3	2.31	0.46
49:B0:44:LYS:O	49:B0:45:PHE:CB	2.63	0.46
48:B3:22:ALA:CB	48:B3:46:ASN:ND2	2.79	0.46
50:B4:4:ASP:CG	50:B4:11:PRO:HG3	2.36	0.46
53:B7:31:LEU:CD2	53:B7:31:LEU:H	2.05	0.46
27:BA:1036:G:OP1	32:BH:58:LYS:CD	2.56	0.46
27:BA:2067:G:H3'	27:BA:2068:U:C5'	2.46	0.46
27:BA:2224:G:O5'	27:BA:2224:G:H8	1.99	0.46
27:BA:2271:G:C2'	27:BA:2272:U:O5'	2.62	0.46
27:BA:2320:A:H61	38:BS:14:ARG:CB	2.29	0.46
27:BA:2331:G:C2'	27:BA:2332:U:O4'	2.63	0.46
27:BA:2370:G:O2'	27:BA:2371:G:O5'	2.33	0.46
27:BA:2384:G:H3'	27:BA:2386:C:OP2	2.16	0.46
27:BA:2390:U:C6	27:BA:2390:U:C3'	2.99	0.46
27:BA:2519:U:C2	27:BA:2542:A:C5	3.04	0.46
27:BA:2548:G:C6	27:BA:2549:G:N7	2.84	0.46
27:BA:2547:U:C6	27:BA:2566:A:C6	3.04	0.46
27:BA:2516:G:C2	27:BA:2569:G:C2	3.04	0.46
27:BA:2580:U:H2'	27:BA:2581:G:O4'	2.15	0.46
27:BA:2641:G:O6	27:BA:2774:C:N4	2.48	0.46
27:BA:2653:U:OP2	27:BA:2654:A:H2'	2.15	0.46
27:BA:2666:C:O5'	27:BA:2666:C:H6	1.98	0.46
27:BA:2722:G:N3	27:BA:2723:C:N1	2.60	0.46
27:BA:2731:G:H4'	29:BE:264:LEU:HD12	1.98	0.46
27:BA:2766:G:C5'	27:BA:2767:C:P	3.02	0.46
27:BA:2783:G:C6	27:BA:2784:C:C5	3.04	0.46
27:BA:27:G:H3'	27:BA:27:G:H8	1.80	0.46
27:BA:2898:U:O2	27:BA:2898:U:C2'	2.63	0.46
27:BA:387:U:H2'	27:BA:387:U:O2	2.15	0.46
27:BA:640:C:O2	27:BA:648:G:C2	2.69	0.46
27:BA:794:G:C2	27:BA:795:C:C2	3.04	0.46
27:BA:856:C:C1'	49:B0:24:LYS:HB2	2.45	0.46
27:BA:957:A:C2	27:BA:2459:A:C5'	2.96	0.46
26:BB:24:G:C2'	26:BB:27:C:N4	2.79	0.46
28:BD:114:GLU:O	28:BD:115:ILE:HG23	2.16	0.46
28:BD:144:GLU:OE2	28:BD:187:CYS:HA	2.16	0.46
29:BE:217:TRP:CD2	29:BE:251:PRO:CG	2.98	0.46
29:BE:226:HIS:CD2	29:BE:229:GLN:OE1	2.68	0.46
27:BA:2051:A:C2'	29:BE:238:LEU:CD2	2.93	0.46
29:BE:67:THR:C	29:BE:68:VAL:HG23	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:193:LEU:HA	30:BF:211:ASP:OD1	2.15	0.46
27:BA:1952:A:C2	35:BO:22:ILE:CD1	2.99	0.46
35:BO:99:PHE:HE2	39:BT:24:LYS:NZ	1.96	0.46
44:BR:103:ARG:O	44:BR:105:ARG:NH2	2.49	0.46
44:BR:73:VAL:O	44:BR:75:LEU:C	2.54	0.46
44:BR:95:THR:HG23	44:BR:115:GLU:O	2.16	0.46
44:BR:99:LYS:HA	44:BR:112:ALA:CB	2.45	0.46
38:BS:49:THR:HG23	38:BS:52:PRO:HD2	1.98	0.46
38:BS:87:LEU:HA	38:BS:90:LEU:HB2	1.98	0.46
45:BU:24:PHE:N	45:BU:24:PHE:CD1	2.81	0.46
45:BU:46:GLU:O	45:BU:50:ARG:N	2.48	0.46
46:BV:33:VAL:CG1	46:BV:34:GLU:H	2.21	0.46
43:BZ:124:ALA:O	43:BZ:159:THR:HB	2.16	0.46
33:BI:115:ILE:CG2	33:BI:129:VAL:HG12	2.46	0.46
33:BI:77:VAL:HG12	33:BI:143:VAL:HG13	1.97	0.46
33:BI:77:VAL:HG12	33:BI:79:ILE:HD11	1.98	0.46
42:BY:50:VAL:CA	42:BY:97:ARG:HG3	2.46	0.46
42:BY:31:LEU:CD1	42:BY:99:THR:O	2.64	0.46
43:BZ:12:GLN:O	43:BZ:15:ASP:O	2.34	0.46
1:AA:1225:A:C5'	22:AS:78:ARG:HD3	2.45	0.46
27:BA:1826:G:P	28:BD:227:VAL:HG22	2.30	0.46
27:BA:1789:A:C5'	28:BD:224:VAL:CG1	2.94	0.46
27:BA:1341:U:O2'	27:BA:1342:A:P	2.74	0.46
3:AW:37:YYG:O23	10:AG:83:ALA:C	2.34	0.46
27:BA:1707:G:H1	27:BA:1751:C:H42	1.64	0.46
33:BI:62:LEU:O	33:BI:66:LYS:CG	2.64	0.46
1:AA:863:U:H2'	1:AA:865:A:OP2	2.16	0.46
1:AA:302:G:C8	1:AA:302:G:H5''	2.50	0.46
1:AA:1278:U:H5''	1:AA:1279:A:H5'	1.98	0.46
1:AA:568:G:N2	1:AA:574:A:C2	2.77	0.46
23:AT:66:ALA:HB3	23:AT:72:LEU:HD12	1.98	0.46
27:BA:1315:C:H42	27:BA:1337:G:H1	1.63	0.46
1:AA:1192:C:C6	1:AA:1192:C:C3'	2.99	0.46
1:AA:241:C:H42	1:AA:285:G:H1	1.64	0.46
2:AV:27:C:H2'	2:AV:28:C:H6	1.80	0.46
5:AB:80:ILE:HG23	5:AB:212:GLN:HG2	1.98	0.46
16:AM:11:ARG:HH12	16:AM:46:LYS:HD2	1.81	0.46
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.51	0.46
1:AA:195:A:OP1	23:AT:65:LYS:NZ	2.28	0.46
27:BA:2261:C:H3'	49:B0:14:ARG:HE	1.80	0.45
48:B3:8:LEU:C	48:B3:9:VAL:HG13	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1612:C:N1	53:B7:3:ARG:NH2	2.64	0.45
27:BA:1008:C:O2'	27:BA:1009:A:H8	1.99	0.45
27:BA:1166:C:H2'	27:BA:1167:U:C6	2.51	0.45
27:BA:1254:A:C8	27:BA:1256:G:C8	3.04	0.45
27:BA:1367:A:O2'	53:B7:25:LYS:HD3	2.16	0.45
27:BA:1938:A:HO2'	27:BA:1939:U:C5'	2.30	0.45
27:BA:2361:A:H2	27:BA:2362:G:H1'	1.75	0.45
27:BA:2479:G:C6	27:BA:2480:C:C2	3.03	0.45
27:BA:2532:G:N2	27:BA:2662:A:N1	2.64	0.45
27:BA:2536:G:N1	27:BA:2537:U:C2	2.84	0.45
27:BA:1670:C:P	27:BA:2550:G:P	3.14	0.45
27:BA:2570:G:H5'	27:BA:2571:C:OP2	2.15	0.45
27:BA:2575:C:OP1	29:BE:241:TRP:HD1	1.91	0.45
27:BA:2637:U:C2	27:BA:2782:G:N2	2.84	0.45
27:BA:2644:G:C8	27:BA:2644:G:C3'	2.99	0.45
27:BA:2658:C:C4	27:BA:2664:G:N2	2.84	0.45
27:BA:2688:U:C2'	27:BA:2688:U:O2	2.55	0.45
27:BA:2740:A:N9	27:BA:2741:A:C8	2.82	0.45
27:BA:2776:A:N3	27:BA:2778:A:C4	2.77	0.45
27:BA:2803:C:O2	27:BA:2803:C:C2'	2.64	0.45
27:BA:2826:A:OP2	27:BA:2826:A:H8	1.99	0.45
27:BA:2828:C:O2	27:BA:2829:C:C6	2.69	0.45
27:BA:1817:G:OP2	28:BD:155:ARG:NH2	2.49	0.45
28:BD:194:VAL:CG2	28:BD:195:GLY:N	2.69	0.45
29:BE:102:ASP:OD1	29:BE:104:PHE:HZ	1.99	0.45
27:BA:2052:G:C2	29:BE:245:ARG:HG2	2.48	0.45
27:BA:2621:A:O2'	29:BE:255:GLN:CD	2.54	0.45
29:BE:61:PRO:CB	29:BE:69:PRO:CA	2.95	0.45
30:BF:150:THR:CG2	30:BF:203:ALA:HB1	2.43	0.45
26:BB:42:C:O2	31:BG:47:GLN:HB3	2.15	0.45
32:BH:166:GLU:HA	32:BH:167:LEU:HD23	1.88	0.45
33:BI:31:PHE:O	33:BI:34:GLY:N	2.49	0.45
34:BN:14:ALA:N	34:BN:40:ASN:ND2	2.56	0.45
34:BN:60:ARG:CD	34:BN:71:TYR:HE2	2.29	0.45
35:BO:5:GLU:CB	35:BO:20:LEU:HD22	2.46	0.45
36:BP:67:ARG:CD	36:BP:111:ALA:O	2.64	0.45
37:BQ:124:ALA:HB2	37:BQ:136:TRP:CD1	2.51	0.45
37:BQ:134:PHE:O	37:BQ:138:ARG:HG3	2.16	0.45
37:BQ:137:ARG:O	37:BQ:141:MET:HG2	2.16	0.45
37:BQ:59:ASN:CG	37:BQ:60:ALA:N	2.47	0.45
38:BS:86:LEU:HD21	38:BS:124:ASP:CB	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:14:VAL:CG1	46:BV:15:SER:N	2.39	0.45
46:BV:49:GLU:HB3	46:BV:53:LYS:HD3	1.95	0.45
46:BV:49:GLU:O	46:BV:54:TYR:OH	2.32	0.45
46:BV:74:TYR:CG	46:BV:86:HIS:O	2.56	0.45
27:BA:517:C:H2'	40:BW:18:ARG:HH22	1.81	0.45
40:BW:73:ALA:O	40:BW:106:ILE:HB	2.16	0.45
40:BW:85:VAL:HG13	40:BW:95:ILE:CD1	2.43	0.45
43:BZ:112:LEU:HD12	43:BZ:177:THR:HG21	1.96	0.45
42:BY:47:THR:HG23	42:BY:100:ASP:HB2	1.93	0.45
42:BY:101:LEU:HD13	42:BY:103:LEU:CD1	2.39	0.45
42:BY:102:ASP:O	42:BY:103:LEU:CG	2.64	0.45
41:BX:18:MET:HE3	41:BX:25:GLN:CB	2.46	0.45
31:BG:60:GLU:C	31:BG:61:PHE:CD1	2.89	0.45
7:AD:25:ARG:C	7:AD:27:TYR:N	2.69	0.45
1:AA:404:U:O4	7:AD:2:GLY:HA2	2.16	0.45
1:AA:765:G:H1	1:AA:812:C:C2'	2.29	0.45
1:AA:909:A:H3'	1:AA:910:C:C6	2.50	0.45
27:BA:270:A:N7	27:BA:270(A):A:H8	2.14	0.45
1:AA:1149:C:OP1	12:AI:9:ARG:NH1	2.50	0.45
19:AP:20:VAL:HG11	19:AP:32:TYR:HB3	1.97	0.45
8:AE:152:ARG:HA	11:AH:64:LYS:HZ1	1.81	0.45
27:BA:1174:A:N1	27:BA:1176:G:C8	2.84	0.45
27:BA:1778:U:C6	27:BA:1784:A:C2	3.04	0.45
1:AA:721:G:H4'	1:AA:722:A:O4'	2.17	0.45
27:BA:1741:C:H2'	27:BA:1742:C:O4'	2.17	0.45
2:AV:28:C:H2'	2:AV:29:A:H8	1.81	0.45
1:AA:402:G:H5'	1:AA:621:A:H1'	1.98	0.45
27:BA:1106:G:H2'	27:BA:1107:G:C8	2.51	0.45
27:BA:861:A:H62	27:BA:916:G:H21	1.64	0.45
49:B0:37:LEU:CB	49:B0:68:VAL:CG1	2.93	0.45
27:BA:929:G:HO2'	48:B3:43:ILE:HG12	1.82	0.45
50:B4:23:GLU:C	50:B4:25:MET:N	2.70	0.45
50:B4:47:GLU:O	50:B4:72:LYS:O	2.33	0.45
50:B4:41:PRO:CD	50:B4:57:ASP:OD2	2.63	0.45
52:B6:12:MET:CE	52:B6:54:LYS:H	2.18	0.45
27:BA:1239:G:O2'	27:BA:1240:U:H6	1.98	0.45
27:BA:1275:A:H61	44:BR:19:ALA:HB2	1.77	0.45
27:BA:2066:C:N3	27:BA:2445:G:N1	2.65	0.45
27:BA:2292:C:C2	27:BA:2293:C:H6	2.18	0.45
27:BA:2308:G:OP2	27:BA:2310:A:N6	2.49	0.45
27:BA:2445:G:HO2'	27:BA:2446:G:H5''	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2512:C:O2	27:BA:2513:G:H1'	2.16	0.45
27:BA:2534:A:C2	27:BA:2535:G:C8	3.04	0.45
27:BA:2586:C:C3'	27:BA:2586:C:C6	2.99	0.45
27:BA:2589:A:N6	27:BA:2590:A:H62	2.14	0.45
27:BA:2603:G:O2'	27:BA:2604:U:H5'	2.16	0.45
27:BA:2617:C:C2'	27:BA:2618:G:O5'	2.45	0.45
27:BA:2623:G:H4'	27:BA:2826:A:O4'	2.16	0.45
27:BA:2627:G:C5'	27:BA:2627:G:H8	2.20	0.45
27:BA:2676:C:H6	27:BA:2676:C:C3'	2.23	0.45
27:BA:2677:G:C2'	27:BA:2678:C:C5'	2.94	0.45
27:BA:2728:U:O2'	27:BA:2729:G:H5'	2.17	0.45
27:BA:2782:G:C8	27:BA:2782:G:O5'	2.69	0.45
27:BA:2792:G:N2	27:BA:2804:C:C4	2.83	0.45
27:BA:491:G:H2'	27:BA:492:A:C8	2.52	0.45
27:BA:692:C:H42	27:BA:770:G:H1	1.64	0.45
27:BA:821:A:H2'	27:BA:946:G:C8	2.51	0.45
27:BA:946:G:H2'	27:BA:947:G:O4'	2.15	0.45
26:BB:8:U:H2'	26:BB:9:G:H8	1.81	0.45
28:BD:143:ILE:CG2	28:BD:153:LEU:HB2	2.43	0.45
29:BE:101:THR:O	29:BE:102:ASP:O	2.33	0.45
29:BE:81:VAL:HG23	29:BE:81:VAL:O	2.17	0.45
27:BA:606:U:H5'	30:BF:103:ASN:ND2	2.31	0.45
30:BF:3:ALA:HB2	30:BF:17:ASP:C	2.36	0.45
30:BF:220:THR:O	30:BF:222:ASP:N	2.50	0.45
32:BH:119:GLY:O	32:BH:121:GLU:OE2	2.35	0.45
32:BH:88:LEU:O	32:BH:88:LEU:CD2	2.62	0.45
34:BN:15:ARG:HA	34:BN:43:ARG:HG2	1.83	0.45
35:BO:105:GLU:CD	35:BO:105:GLU:H	2.20	0.45
35:BO:39:VAL:HG12	35:BO:40:VAL:N	2.31	0.45
35:BO:92:SER:HB3	35:BO:113:LYS:NZ	2.22	0.45
36:BP:114:VAL:CG2	36:BP:132:LYS:CA	2.94	0.45
44:BR:29:LEU:CD2	44:BR:29:LEU:H	2.23	0.45
40:BW:68:ARG:HE	40:BW:110:LYS:CB	2.29	0.45
43:BZ:166:LEU:HD13	43:BZ:167:THR:N	2.31	0.45
42:BY:78:THR:N	42:BY:89:ARG:HD2	2.31	0.45
43:BZ:8:ARG:O	43:BZ:9:THR:CG2	2.64	0.45
1:AA:1060:C:N4	6:AC:2:GLY:HA3	2.31	0.45
27:BA:59:U:O5'	27:BA:73:A:N6	2.49	0.45
41:BX:23:LYS:O	41:BX:68:LEU:HD21	2.07	0.45
3:AW:37:YYG:H31	3:AW:37:YYG:O2'	2.15	0.45
17:AN:39:LEU:HD22	17:AN:43:CYS:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1618:A:OP1	27:BA:1618:A:H8	1.99	0.45
27:BA:2857:G:C2	27:BA:2859:G:OP2	2.69	0.45
1:AA:411:A:H2'	1:AA:413:G:H1'	1.97	0.45
7:AD:57:ARG:NH2	8:AE:111:GLU:OE2	2.50	0.45
1:AA:60:A:C2	1:AA:107:G:C2	3.02	0.45
1:AA:1067:A:HO2'	1:AA:1068:G:P	2.38	0.45
8:AE:102:ALA:O	8:AE:107:ARG:NH2	2.49	0.45
6:AC:52:LEU:HA	6:AC:70:VAL:HG22	1.96	0.45
23:AT:45:GLN:HG2	23:AT:91:LEU:HD22	1.99	0.45
1:AA:1216:G:OP1	17:AN:5:ALA:HB3	2.16	0.45
13:AJ:27:ALA:HB2	13:AJ:85:LEU:HD21	1.99	0.45
50:B4:42:PHE:CG	50:B4:43:TRP:N	2.84	0.45
51:B5:45:ILE:CG1	51:B5:52:TYR:CE1	2.61	0.45
52:B6:33:ALA:C	52:B6:35:LEU:N	2.63	0.45
55:B9:17:VAL:CG2	55:B9:26:ILE:HD12	2.46	0.45
27:BA:126:A:N7	27:BA:127:A:C6	2.84	0.45
27:BA:1628:G:H1	27:BA:1638:C:H42	1.63	0.45
27:BA:1655:A:H4'	29:BE:211:GLN:C	2.37	0.45
27:BA:530:G:N1	27:BA:2021:C:H3'	2.31	0.45
27:BA:2051:A:C6	27:BA:2614:A:C5	3.04	0.45
27:BA:2212:A:H1'	27:BA:2213:U:C4	2.52	0.45
27:BA:2215:G:C2'	27:BA:2216:G:C5'	2.94	0.45
27:BA:2219:G:HO2'	27:BA:2224:G:P	2.15	0.45
27:BA:2325:G:N3	27:BA:2326:C:C6	2.84	0.45
27:BA:2331:G:N7	27:BA:2332:U:O4	2.48	0.45
27:BA:2380:C:C5	27:BA:2381:C:C5	3.05	0.45
27:BA:2380:C:C4	27:BA:2381:C:C5	3.03	0.45
27:BA:2464:C:C2'	27:BA:2465:C:H6	2.21	0.45
27:BA:2494:G:N2	27:BA:2495:G:C1'	2.77	0.45
27:BA:1954:G:N3	27:BA:2551:C:H5''	2.32	0.45
27:BA:2643:G:C6	27:BA:2644:G:C2	3.04	0.45
27:BA:2677:G:C4	27:BA:2678:C:C5	3.04	0.45
27:BA:2846:G:H1	27:BA:2869:G:H1	1.63	0.45
26:BB:28:C:OP2	38:BS:41:LYS:CG	2.63	0.45
28:BD:106:PRO:CB	28:BD:141:HIS:NE2	2.74	0.45
28:BD:146:LYS:CB	28:BD:149:ARG:HG2	2.47	0.45
30:BF:194:PHE:CZ	30:BF:204:ALA:O	2.70	0.45
27:BA:2313:C:C5'	31:BG:51:ARG:HD2	2.47	0.45
31:BG:74:THR:C	31:BG:75:LEU:HG	2.36	0.45
33:BI:4:ILE:O	33:BI:5:PHE:C	2.51	0.45
34:BN:65:ASN:CB	34:BN:68:GLY:O	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:64:ALA:HA	37:BQ:142:LYS:HG2	1.98	0.45
37:BQ:97:ASP:OD1	37:BQ:107:LYS:HD2	2.16	0.45
38:BS:48:VAL:HG13	38:BS:55:ASP:OD2	2.16	0.45
46:BV:65:ARG:O	46:BV:93:ILE:CG1	2.65	0.45
40:BW:38:TYR:HB2	51:B5:30:LEU:HD11	1.97	0.45
27:BA:495:G:C2	40:BW:61:ASN:ND2	2.84	0.45
40:BW:81:ALA:CA	40:BW:82:LEU:HD22	2.45	0.45
43:BZ:154:LEU:O	43:BZ:154:LEU:HD23	2.15	0.45
1:AA:1308:U:H4'	16:AM:92:HIS:CE1	2.51	0.45
1:AA:1222:G:H5'	22:AS:77:THR:CG2	2.46	0.45
47:B2:45:ARG:HE	47:B2:49:LEU:CD2	2.29	0.45
41:BX:32:ALA:HA	41:BX:36:GLU:CG	2.42	0.45
41:BX:37:VAL:O	41:BX:38:ALA:O	2.33	0.45
41:BX:28:VAL:CG2	41:BX:62:LYS:HG2	2.46	0.45
27:BA:1081:U:O4'	56:BK:127:ILE:CD1	2.60	0.45
31:BG:88:LEU:H	31:BG:89:PRO:HD3	1.80	0.45
1:AA:665:A:C8	1:AA:733:A:N3	2.84	0.45
1:AA:274:A:O2'	1:AA:275:G:O4'	2.33	0.45
27:BA:1530:G:O6	27:BA:1540:G:C6	2.70	0.45
1:AA:1298:C:OP2	10:AG:114:ARG:CZ	2.64	0.45
13:AJ:40:LEU:HB3	13:AJ:41:PRO:HD2	1.97	0.45
1:AA:1067:A:O2'	1:AA:1068:G:P	2.74	0.45
1:AA:1499:A:O2'	1:AA:1520:G:H5'	2.16	0.45
1:AA:1057:G:H5''	6:AC:154:SER:HB2	1.98	0.45
5:AB:69:LEU:HD23	5:AB:91:PRO:HB2	1.98	0.45
1:AA:531:U:H4'	1:AA:532:A:C5'	2.46	0.45
1:AA:935:A:H2'	1:AA:936:C:C6	2.51	0.45
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.52	0.45
1:AA:625:G:H4'	19:AP:16:HIS:CG	2.51	0.45
49:B0:37:LEU:HG	49:B0:71:ASN:ND2	2.32	0.45
49:B0:49:GLN:O	49:B0:72:LYS:O	2.34	0.45
54:B8:60:LEU:CG	54:B8:64:ARG:HB2	2.42	0.45
55:B9:14:CYS:HA	55:B9:26:ILE:O	2.16	0.45
27:BA:1782:C:H5''	27:BA:1783:A:P	2.56	0.45
27:BA:2080:G:C5'	50:B4:32:HIS:HB3	2.44	0.45
27:BA:2262:U:H3	27:BA:2278:A:H61	1.65	0.45
27:BA:2350:C:N4	27:BA:2382:G:N1	2.65	0.45
27:BA:2463:C:C2'	27:BA:2464:C:O5'	2.65	0.45
27:BA:2531:A:C6	27:BA:2532:G:C4	3.04	0.45
27:BA:2543:G:H2'	27:BA:2544:G:C5'	2.41	0.45
27:BA:2679:A:H5''	29:BE:261:ARG:HD3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:511:U:OP2	27:BA:512:G:C6	2.70	0.45
27:BA:671:C:N3	27:BA:809:G:N2	2.65	0.45
27:BA:872:A:H2'	27:BA:873:G:C8	2.51	0.45
27:BA:929:G:N2	48:B3:43:ILE:HA	2.31	0.45
27:BA:994:C:O3'	45:BU:54:LYS:CE	2.48	0.45
27:BA:780:G:C2	28:BD:233:ASP:OD2	2.64	0.45
29:BE:222:ARG:O	29:BE:227:ALA:CA	2.63	0.45
26:BB:58:A:O3'	31:BG:141:VAL:HG22	2.16	0.45
32:BH:41:THR:C	32:BH:52:THR:HG21	2.37	0.45
32:BH:55:SER:OG	32:BH:57:GLU:CG	2.64	0.45
32:BH:84:LYS:CG	32:BH:140:VAL:CG1	2.86	0.45
34:BN:5:GLU:CA	34:BN:109:TYR:CE2	2.97	0.45
37:BQ:47:GLU:OE1	37:BQ:47:GLU:C	2.54	0.45
44:BR:100:LEU:C	51:B5:44:HIS:HD2	2.15	0.45
44:BR:38:VAL:O	44:BR:39:PRO:O	2.33	0.45
38:BS:81:ALA:CB	38:BS:118:ILE:H	2.28	0.45
38:BS:27:LEU:H	38:BS:33:ARG:NH1	2.14	0.45
38:BS:86:LEU:HB2	38:BS:87:LEU:HD22	1.98	0.45
45:BU:17:VAL:HG13	45:BU:39:LEU:HD12	1.98	0.45
45:BU:55:ARG:HA	45:BU:58:ARG:CD	2.46	0.45
40:BW:106:ILE:HG22	40:BW:107:LEU:N	2.32	0.45
40:BW:13:SER:O	40:BW:14:PRO:O	2.35	0.45
40:BW:15:ARG:O	40:BW:18:ARG:CB	2.62	0.45
27:BA:2013:A:P	40:BW:96:ILE:HB	2.57	0.45
33:BI:115:ILE:CA	33:BI:131:VAL:HG13	2.47	0.45
33:BI:133:LEU:H	33:BI:138:THR:HB	1.80	0.45
42:BY:30:ASP:CG	42:BY:31:LEU:HG	2.37	0.45
1:AA:1221:G:OP1	1:AA:1321:C:C4	2.69	0.45
27:BA:1791:A:N6	27:BA:1828:G:O2'	2.50	0.45
27:BA:1792:G:P	28:BD:204:PHE:CE2	3.10	0.45
47:B2:19:GLU:HG2	47:B2:23:LEU:CD2	2.45	0.45
47:B2:29:ASN:O	47:B2:30:ALA:C	2.53	0.45
27:BA:139:G:C3'	27:BA:141(A):C:H1'	2.47	0.45
27:BA:1406:U:H2'	27:BA:1407:C:H6	1.80	0.45
1:AA:30(D):A:OP2	1:AA:1031:G:C8	2.69	0.45
1:AA:1229:A:C2	16:AM:125:ARG:O	2.70	0.45
1:AA:304:U:H2'	1:AA:305:G:H8	1.82	0.45
1:AA:60:A:H62	1:AA:110:C:H42	1.61	0.45
1:AA:944:G:C6	1:AA:1337:G:C2'	2.83	0.45
1:AA:952:U:H5'	1:AA:972:C:H41	1.82	0.45
1:AA:971:G:C8	1:AA:1365:G:H4'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AR:62:GLU:HB3	21:AR:66:LEU:HD23	1.98	0.45
27:BA:1779:U:H3	27:BA:1785:A:N6	2.14	0.45
1:AA:1409:C:H42	1:AA:1491:G:H1	1.64	0.45
27:BA:1853:A:H2'	27:BA:1854:A:H8	1.78	0.45
1:AA:451:A:H1'	1:AA:452:A:C8	2.52	0.45
1:AA:1443:G:H8	1:AA:1443:G:H5'	1.81	0.45
27:BA:1149:G:H2'	27:BA:1150:C:O4'	2.16	0.45
15:AL:69:TYR:HB2	15:AL:90:VAL:HG21	1.99	0.45
2:AV:56:C:C2'	31:BG:56:ARG:NE	2.80	0.45
27:BA:2354:G:C4	49:B0:32:LYS:HE2	2.51	0.45
48:B3:21:ALA:O	48:B3:25:ALA:N	2.43	0.45
48:B3:40:THR:HG23	48:B3:43:ILE:CG1	2.37	0.45
48:B3:46:ASN:O	48:B3:47:VAL:C	2.54	0.45
52:B6:8:ILE:HG21	52:B6:30:ASN:HB2	1.97	0.45
53:B7:20:ALA:O	53:B7:23:LYS:N	2.49	0.45
55:B9:11:CYS:N	55:B9:14:CYS:SG	2.89	0.45
27:BA:2093:G:C1'	27:BA:2198:A:C6	2.95	0.45
27:BA:2100:G:C4	27:BA:2190:G:N1	2.79	0.45
27:BA:2345:G:H21	27:BA:2381:C:C3'	2.30	0.45
27:BA:2378:A:H1'	38:BS:101:VAL:CG2	2.47	0.45
27:BA:244:A:O2'	36:BP:56:LYS:HB3	2.17	0.45
27:BA:2759:G:C8	27:BA:2759:G:C3'	2.99	0.45
27:BA:27:G:C8	27:BA:27:G:C3'	3.00	0.45
27:BA:2793:G:N2	27:BA:2803:C:C2	2.83	0.45
27:BA:2864:G:O2'	27:BA:2865:U:C6	2.70	0.45
27:BA:2898:U:C4	27:BA:2899:G:N7	2.85	0.45
27:BA:570:G:H2'	27:BA:2030:A:C6	2.51	0.45
27:BA:586:A:N6	27:BA:809:G:O2'	2.49	0.45
27:BA:830:G:O6	27:BA:2446:G:H1'	2.17	0.45
26:BB:16:G:OP2	26:BB:16:G:H3'	2.17	0.45
28:BD:146:LYS:HD2	28:BD:147:PRO:CG	2.45	0.45
28:BD:141:HIS:CB	28:BD:154:VAL:HG11	2.41	0.45
28:BD:131:LEU:CB	28:BD:171:VAL:HG11	2.46	0.45
29:BE:210:THR:C	29:BE:216:ARG:NH2	2.70	0.45
29:BE:224:GLY:O	29:BE:225:LYS:HG3	2.15	0.45
29:BE:42:ALA:HA	29:BE:311:PHE:CD2	2.51	0.45
29:BE:68:VAL:HG13	29:BE:69:PRO:HD2	1.97	0.45
30:BF:144:PHE:HD2	30:BF:156:LEU:CD1	2.25	0.45
30:BF:200:PRO:HD3	30:BF:214:THR:CG2	2.47	0.45
31:BG:101:THR:O	31:BG:103:ASN:CG	2.54	0.45
31:BG:25:MET:CE	31:BG:128:LEU:HB3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:52:THR:HB	31:BG:67:ASP:O	2.16	0.45
32:BH:113:GLU:OE1	32:BH:114:ILE:C	2.55	0.45
32:BH:25:VAL:HG12	32:BH:78:VAL:CG2	2.38	0.45
32:BH:40:MET:HE1	32:BH:42:ILE:N	2.31	0.45
32:BH:85:ALA:O	32:BH:148:ARG:CZ	2.56	0.45
34:BN:42:GLU:O	34:BN:43:ARG:C	2.53	0.45
34:BN:46:ILE:HD11	34:BN:132:LEU:HD13	1.86	0.45
34:BN:90:LYS:HZ2	34:BN:95:ARG:NH2	2.15	0.45
37:BQ:140:TYR:CB	37:BQ:147:VAL:HG11	2.47	0.45
44:BR:55:ALA:CA	44:BR:80:PHE:CE1	2.92	0.45
38:BS:110:THR:HG1	38:BS:111:PRO:CD	2.18	0.45
38:BS:30:GLY:O	38:BS:31:LYS:CG	2.65	0.45
45:BU:109:LEU:O	45:BU:113:SER:OG	2.33	0.45
45:BU:25:TRP:HB3	45:BU:28:ARG:CZ	2.45	0.45
27:BA:995:C:O2'	45:BU:57:PHE:CD2	2.64	0.45
46:BV:61:VAL:CG1	46:BV:95:ILE:CG2	2.41	0.45
27:BA:487:C:H1'	40:BW:53:SER:HA	1.98	0.45
42:BY:28:SER:N	42:BY:99:THR:OG1	2.49	0.45
43:BZ:19:ILE:HD12	43:BZ:19:ILE:N	2.27	0.45
47:B2:29:ASN:C	47:B2:34:GLN:CD	2.71	0.45
27:BA:1395:A:P	27:BA:1603:A:H5''	2.57	0.45
27:BA:139:G:H3'	27:BA:141(A):C:H1'	1.97	0.45
5:AB:112:VAL:O	5:AB:116:GLU:N	2.40	0.45
1:AA:1229:A:O3'	2:AV:30:G:H5''	2.16	0.45
7:AD:20:TYR:HA	7:AD:31:CYS:SG	2.56	0.45
1:AA:65:U:H2'	1:AA:381:C:C5	2.51	0.45
13:AJ:64:GLU:HG2	17:AN:59:ALA:CA	2.33	0.45
27:BA:324:A:N7	27:BA:340:A:H1'	2.30	0.45
1:AA:275:G:H4'	20:AQ:14:LYS:CB	2.39	0.45
27:BA:358:U:C3'	27:BA:359:A:H5'	2.40	0.45
27:BA:1779:U:C3'	27:BA:1779:U:C6	2.99	0.45
3:AW:7:U:HO2'	3:AW:49:C:P	2.37	0.45
34:BN:8:ALA:CB	34:BN:11:ILE:HD11	2.45	0.45
1:AA:323:U:O4	1:AA:327:A:N7	2.49	0.45
1:AA:858:G:H1	1:AA:869:G:H3'	1.81	0.45
1:AA:113:G:H1'	1:AA:354:G:H5''	1.98	0.45
1:AA:1490:C:C6	1:AA:1490:C:H5''	2.48	0.45
1:AA:1525:G:H2'	1:AA:1526:G:O4'	2.16	0.45
27:BA:725:G:N1	27:BA:726:G:N2	2.65	0.45
15:AL:32:PHE:HB3	15:AL:84:LEU:HD21	1.98	0.45
17:AN:12:ARG:O	17:AN:13:THR:C	2.54	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:187:ARG:O	7:AD:188:LEU:C	2.50	0.45
50:B4:31:ILE:HG22	50:B4:32:HIS:H	1.80	0.45
52:B6:49:VAL:CG1	52:B6:50:PHE:N	2.80	0.45
54:B8:16:ILE:HG23	54:B8:22:VAL:HG22	1.93	0.45
27:BA:1252:G:H8	27:BA:1253:A:C8	2.35	0.45
27:BA:1992:G:N2	27:BA:1995:U:H5	2.15	0.45
27:BA:2095:C:N3	27:BA:2194:G:C6	2.84	0.45
27:BA:2187:G:C2'	27:BA:2188:C:C5'	2.72	0.45
27:BA:2317:C:N4	27:BA:2318:G:C6	2.85	0.45
27:BA:2320:A:C2	38:BS:13:ARG:CG	2.99	0.45
27:BA:2246:G:H1'	27:BA:2426:A:C2	2.51	0.45
27:BA:2430:A:H2'	27:BA:2431:U:H5'	1.97	0.45
27:BA:2458:G:O2'	27:BA:2459:A:N7	2.45	0.45
27:BA:2476:A:C8	27:BA:2477:C:H6	2.27	0.45
27:BA:2484:G:H1'	37:BQ:142:LYS:HZ3	1.77	0.45
27:BA:2489:G:C6	27:BA:2490:G:C6	3.04	0.45
27:BA:2570:G:N2	27:BA:2571:C:N1	2.65	0.45
27:BA:2657:A:H2'	27:BA:2658:C:C5'	2.42	0.45
27:BA:2714:G:C2'	27:BA:2715:C:H5'	2.46	0.45
27:BA:2731:G:H1	27:BA:2732:G:N2	2.15	0.45
27:BA:2734:A:H62	27:BA:2735:G:N3	1.48	0.45
27:BA:2821:A:H2	27:BA:2822:G:C6	2.28	0.45
27:BA:685:A:H5''	27:BA:686:G:H21	1.81	0.45
27:BA:992:C:H2'	27:BA:993:G:H5''	1.99	0.45
28:BD:126:GLY:C	28:BD:127:ASN:O	2.53	0.45
28:BD:152:GLN:O	28:BD:153:LEU:HD13	2.17	0.45
28:BD:170:TYR:O	28:BD:182:MET:SD	2.75	0.45
28:BD:80:ILE:CB	28:BD:82:TYR:HE1	2.16	0.45
30:BF:115:LEU:HG	30:BF:246:ARG:HH12	1.80	0.45
30:BF:214:THR:O	30:BF:216:SER:CA	2.61	0.45
27:BA:38:A:H1'	30:BF:46:TYR:CD2	2.52	0.45
31:BG:102:GLY:C	31:BG:134:LEU:HG	2.37	0.45
31:BG:103:ASN:O	31:BG:104:PHE:CD1	2.64	0.45
32:BH:10:ILE:HG22	32:BH:14:VAL:CG2	2.42	0.45
32:BH:34:ARG:HG2	32:BH:35:THR:N	2.31	0.45
32:BH:35:THR:C	32:BH:36:PHE:CD1	2.89	0.45
33:BI:21:VAL:HG13	33:BI:30:LEU:HD11	1.93	0.45
33:BI:37:ILE:HG23	33:BI:38:GLU:N	2.02	0.45
27:BA:1952:A:C2	35:BO:22:ILE:CG1	2.99	0.45
36:BP:92:ASP:O	36:BP:119:THR:O	2.34	0.45
44:BR:24:GLN:CB	44:BR:44:LEU:HD21	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:39:PRO:O	44:BR:41:ALA:C	2.54	0.45
44:BR:73:VAL:HG12	44:BR:77:ARG:NE	2.28	0.45
38:BS:118:ILE:CG2	38:BS:119:GLN:H	2.23	0.45
27:BA:2320:A:N6	38:BS:14:ARG:CA	2.74	0.45
38:BS:35:VAL:O	38:BS:45:ALA:CB	2.64	0.45
38:BS:83:LEU:O	38:BS:87:LEU:HD23	2.16	0.45
45:BU:63:GLN:O	45:BU:65:ILE:C	2.54	0.45
45:BU:95:LEU:CD2	45:BU:95:LEU:N	2.73	0.45
45:BU:96:ALA:O	45:BU:106:PHE:HE1	2.00	0.45
46:BV:39:PHE:CZ	46:BV:42:GLY:CA	2.97	0.45
46:BV:54:TYR:O	46:BV:56:VAL:HB	2.17	0.45
46:BV:71:ILE:O	46:BV:88:GLN:HG3	2.16	0.45
40:BW:75:TYR:CZ	40:BW:104:THR:HG21	2.52	0.45
27:BA:2013:A:P	40:BW:96:ILE:CB	2.96	0.45
33:BI:110:LEU:HD11	33:BI:133:LEU:HD22	1.99	0.45
33:BI:117:LEU:CD2	33:BI:121:ILE:HD11	2.47	0.45
42:BY:42:VAL:O	42:BY:112:LEU:HB3	2.17	0.45
42:BY:71:VAL:CG1	42:BY:91:LEU:HB2	2.44	0.45
42:BY:74:VAL:O	42:BY:77:VAL:HG23	2.16	0.45
42:BY:55:PHE:HE2	42:BY:89:ARG:NH2	2.00	0.45
43:BZ:69:VAL:CG2	43:BZ:82:ASP:H	2.15	0.45
1:AA:1318:A:C4'	22:AS:10:PHE:HD2	2.12	0.45
28:BD:202:LYS:HA	28:BD:203:PRO:HD3	1.87	0.45
28:BD:211:HIS:O	28:BD:214:MET:N	2.43	0.45
28:BD:211:HIS:O	28:BD:212:HIS:C	2.53	0.45
47:B2:58:THR:O	47:B2:60:GLN:N	2.49	0.45
47:B2:59:ILE:O	47:B2:60:GLN:O	2.34	0.45
27:BA:1081:U:H5'	56:BK:126:LYS:HB2	1.97	0.45
31:BG:83:PHE:O	31:BG:87:ALA:HB3	2.16	0.45
11:AH:11:THR:HA	11:AH:14:ARG:HD2	1.99	0.45
1:AA:397:A:C6	1:AA:548:G:N7	2.84	0.45
27:BA:1697:G:C3'	27:BA:1698:A:C5'	2.77	0.45
1:AA:22:G:C2'	1:AA:913:A:C2	3.00	0.45
27:BA:265:A:N7	27:BA:428:A:N6	2.65	0.45
1:AA:57:G:N2	1:AA:388:G:O6	2.48	0.45
27:BA:280:C:O2'	27:BA:281:G:H3'	2.17	0.45
27:BA:136:G:H3'	27:BA:137:C:H4'	1.98	0.45
27:BA:839:U:H2'	27:BA:840:C:C6	2.52	0.45
23:AT:30:LYS:HA	23:AT:33:ILE:HD12	1.99	0.45
27:BA:2385:C:HO2'	49:B0:39:ARG:CZ	2.30	0.45
49:B0:46:LYS:HE2	49:B0:58:THR:C	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:54:LYS:HZ3	52:B6:54:LYS:CB	2.21	0.45
53:B7:30:ILE:CB	53:B7:33:ARG:CD	2.72	0.45
27:BA:2742:C:P	55:B9:35:ARG:CZ	2.99	0.45
55:B9:24:LEU:CG	55:B9:35:ARG:HG3	2.47	0.45
27:BA:1364:G:C4	50:B4:3:LYS:NZ	2.83	0.45
27:BA:1666:G:H22	27:BA:1669:A:N6	2.15	0.45
27:BA:529:A:H62	27:BA:2042:A:H2	1.65	0.45
27:BA:2289:G:O2'	27:BA:2383:G:H1'	2.16	0.45
27:BA:2292:C:C4	27:BA:2293:C:H5	2.23	0.45
27:BA:2333:A:H1'	27:BA:2335:A:N1	2.30	0.45
27:BA:2468:G:N7	27:BA:2476:A:N1	2.63	0.45
27:BA:2494:G:C6	27:BA:2495:G:N7	2.84	0.45
27:BA:2630:G:O6	27:BA:2788:C:N3	2.50	0.45
27:BA:2712:U:C2	27:BA:712(A):A:N7	2.80	0.45
27:BA:2787:C:O2	27:BA:2787:C:C2'	2.62	0.45
27:BA:2828:C:N4	27:BA:2829:C:N4	2.65	0.45
27:BA:449:A:P	30:BF:85:LYS:HG3	2.56	0.45
27:BA:528:A:C8	27:BA:528:A:H3'	2.51	0.45
27:BA:611:C:O2	27:BA:617:G:C2	2.70	0.45
26:BB:57:A:N3	31:BG:13:MET:HE1	2.32	0.45
28:BD:161:ALA:O	28:BD:162:GLN:NE2	2.50	0.45
29:BE:201:VAL:HA	29:BE:311:PHE:HA	1.98	0.45
29:BE:311:PHE:O	29:BE:312:ARG:HG3	2.16	0.45
29:BE:83:LEU:CD1	29:BE:178:LEU:HD23	2.47	0.45
30:BF:163:HIS:HA	30:BF:166:ILE:HD11	1.98	0.45
26:BB:18:G:P	31:BG:149:ARG:HD3	2.55	0.45
31:BG:95:THR:CG2	31:BG:96:SER:N	2.76	0.45
32:BH:36:PHE:O	32:BH:37:HIS:C	2.54	0.45
34:BN:77:GLY:C	34:BN:79:PHE:N	2.55	0.45
34:BN:79:PHE:O	34:BN:83:ILE:HG12	2.16	0.45
35:BO:1:MET:HB3	35:BO:67:ARG:HG3	1.99	0.45
37:BQ:50:VAL:HG23	37:BQ:121:ASP:OD1	2.17	0.45
38:BS:76:GLY:O	38:BS:83:LEU:HD12	2.17	0.45
45:BU:114:ARG:HA	45:BU:117:ARG:HD2	1.99	0.45
46:BV:11:GLN:OE1	46:BV:22:VAL:HG23	2.15	0.45
46:BV:31:ASP:O	46:BV:63:HIS:C	2.50	0.45
46:BV:34:GLU:N	46:BV:63:HIS:CE1	2.85	0.45
46:BV:46:VAL:CG1	46:BV:46:VAL:O	2.58	0.45
40:BW:3:ALA:C	40:BW:4:LYS:HG3	2.36	0.45
40:BW:5:ALA:HB1	40:BW:50:VAL:HG13	1.99	0.45
42:BY:54:ASP:C	42:BY:56:ALA:N	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:71:VAL:CG1	42:BY:72:ILE:N	2.39	0.45
43:BZ:64:ALA:HB3	43:BZ:84:TYR:O	2.14	0.45
43:BZ:62:PHE:CB	43:BZ:85:MET:SD	3.01	0.45
27:BA:1827:C:OP1	27:BA:1971:A:O2'	2.22	0.45
27:BA:1900:A:C2	27:BA:1970:A:N1	2.85	0.45
27:BA:729:G:C6	27:BA:1775:U:N3	2.85	0.45
47:B2:55:ARG:HD2	47:B2:55:ARG:N	2.32	0.45
41:BX:33:SER:C	41:BX:37:VAL:HG21	2.35	0.45
41:BX:58:MET:C	41:BX:59:ASP:CG	2.76	0.45
27:BA:10:G:N2	27:BA:2629:A:N1	2.53	0.45
31:BG:44:ILE:O	31:BG:83:PHE:HE2	1.86	0.45
1:AA:1289:A:N1	1:AA:1372:U:H5'	2.32	0.45
1:AA:279:A:N7	20:AQ:95:TYR:CD2	2.84	0.45
1:AA:1118:C:H4'	1:AA:1179:A:O4'	2.16	0.45
1:AA:501:C:H6	1:AA:501:C:H3'	1.82	0.45
1:AA:942:G:H2'	1:AA:943:U:C6	2.52	0.45
1:AA:761:G:H4'	20:AQ:103:GLY:N	2.32	0.45
23:AT:76:ALA:HA	23:AT:79:ARG:NH1	2.31	0.45
12:AI:67:GLY:O	12:AI:73:GLN:NE2	2.45	0.45
1:AA:1205:U:C4'	6:AC:195:VAL:HG23	2.43	0.45
1:AA:948:C:H5'	1:AA:1306:A:O2'	2.17	0.45
49:B0:51:VAL:O	49:B0:51:VAL:CG1	2.63	0.45
27:BA:1227:A:C8	27:BA:1227:A:C3'	2.99	0.45
1:AA:828:A:H2'	1:AA:829:G:O4'	2.15	0.45
27:BA:546:C:H5	27:BA:1221:C:OP1	2.00	0.45
18:AO:3:ILE:H	18:AO:3:ILE:HG13	1.58	0.45
26:BB:105:G:H2'	26:BB:106:G:C8	2.47	0.45
1:AA:340:U:H2'	1:AA:341:C:C6	2.52	0.45
5:AB:153:ARG:HH22	5:AB:156:LYS:HB2	1.82	0.45
14:AK:24:SER:C	14:AK:26:ASN:H	2.19	0.45
48:B3:6:VAL:CA	48:B3:55:ARG:O	2.64	0.45
50:B4:14:ILE:HD11	50:B4:39:VAL:HB	1.97	0.45
55:B9:29:ASN:CB	55:B9:32:HIS:CE1	3.00	0.45
27:BA:1668:A:HO2'	27:BA:1669:A:P	2.40	0.45
27:BA:1270:C:H42	27:BA:2010:G:H1	1.62	0.45
27:BA:530:G:H1	27:BA:2021:C:C3'	2.30	0.45
27:BA:2100:G:N3	27:BA:2190:G:C2	2.85	0.45
27:BA:2234:G:C3'	27:BA:2235:G:H5'	2.44	0.45
27:BA:2279:G:C4	27:BA:2280:G:N7	2.85	0.45
27:BA:2283:C:C4	27:BA:2284:C:C1'	2.99	0.45
27:BA:2290:G:C2	27:BA:2291:U:O2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2296:U:C3'	27:BA:2296:U:C6	2.99	0.45
27:BA:2059:A:N6	27:BA:2503:A:N7	2.59	0.45
27:BA:2723:C:O2'	27:BA:2724:C:H5'	2.16	0.45
27:BA:2840:C:C2	27:BA:2841:C:C4	3.04	0.45
27:BA:2844:G:N1	27:BA:2845:G:C4	2.85	0.45
27:BA:2852:G:C4	27:BA:2853:C:N3	2.84	0.45
27:BA:2866:U:O2	27:BA:2868:A:C4'	2.64	0.45
27:BA:492:A:H61	40:BW:49:LYS:CE	2.30	0.45
27:BA:535:C:H4'	45:BU:53:LYS:CG	2.47	0.45
27:BA:827:U:H4'	27:BA:828:U:O2	2.17	0.45
27:BA:929:G:C2'	48:B3:43:ILE:HG12	2.46	0.45
27:BA:961:C:C4	27:BA:2031:A:C2	3.05	0.45
26:BB:59:A:C2	26:BB:60:C:H1'	2.52	0.45
28:BD:77:VAL:O	28:BD:111:VAL:O	2.35	0.45
29:BE:206:LYS:CA	29:BE:257:GLY:O	2.64	0.45
29:BE:44:TYR:CB	29:BE:309:PRO:HD3	2.43	0.45
30:BF:118:THR:O	30:BF:119:ALA:C	2.55	0.45
30:BF:238:SER:CA	30:BF:241:ALA:HB2	2.45	0.45
30:BF:36:ARG:HA	30:BF:39:GLN:HE21	1.64	0.45
31:BG:49:PRO:CD	31:BG:73:VAL:CG2	2.91	0.45
32:BH:124:VAL:O	32:BH:124:VAL:CG1	2.54	0.45
32:BH:14:VAL:CG1	32:BH:16:VAL:CG2	2.95	0.45
33:BI:1:MET:HE3	33:BI:23:ASP:CA	2.47	0.45
34:BN:96:GLU:C	34:BN:98:PHE:H	2.20	0.45
35:BO:33:ALA:CB	35:BO:39:VAL:HG22	2.47	0.45
35:BO:86:ILE:HG21	35:BO:94:ARG:NE	2.32	0.45
27:BA:2416:C:P	36:BP:51:PHE:CD2	3.10	0.45
27:BA:1278:A:H5''	44:BR:34:ILE:HG21	1.98	0.45
45:BU:33:ARG:HG2	45:BU:34:ASN:N	2.24	0.45
40:BW:30:GLU:CA	40:BW:33:ARG:CG	2.93	0.45
43:BZ:152:ILE:HG22	43:BZ:153:LYS:H	1.82	0.45
33:BI:81:ALA:N	33:BI:146:THR:O	2.49	0.45
42:BY:19:ARG:O	42:BY:22:GLN:CB	2.64	0.45
42:BY:75:GLU:O	42:BY:76:ASP:C	2.54	0.45
1:AA:1227:A:OP1	22:AS:80:TYR:CE2	2.66	0.45
1:AA:958:A:C1'	22:AS:55:LYS:HD2	2.45	0.45
28:BD:209:ASN:O	28:BD:210:LYS:O	2.34	0.45
28:BD:213:LYS:CG	28:BD:215:LYS:CA	2.94	0.45
47:B2:52:ALA:HA	47:B2:55:ARG:HD3	1.98	0.45
41:BX:29:ASP:CG	41:BX:30:ASP:OD1	2.55	0.45
41:BX:52:VAL:C	41:BX:53:ASN:ND2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BX:50:GLU:CG	41:BX:67:ARG:O	2.64	0.45
31:BG:83:PHE:O	31:BG:84:LEU:C	2.56	0.45
52:B6:22:TYR:O	52:B6:23:THR:CB	2.65	0.45
1:AA:1517:G:C8	27:BA:1920:C:P	3.10	0.45
7:AD:22:LYS:CA	7:AD:115:ARG:NH2	2.80	0.45
42:BY:2:LYS:O	42:BY:3:GLN:HG3	2.16	0.45
27:BA:270(L):U:H4'	27:BA:270(M):U:OP1	2.16	0.45
27:BA:1936:A:C6	27:BA:1945:G:C4	3.05	0.45
1:AA:21:G:N2	1:AA:915:A:N6	2.64	0.45
27:BA:1609:A:N3	27:BA:1609:A:H2'	2.31	0.45
12:AI:9:ARG:HB3	12:AI:104:ARG:HE	1.81	0.45
1:AA:450:G:N7	1:AA:481:G:C6	2.85	0.45
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.15	0.45
42:BY:109:GLU:O	42:BY:109:GLU:CG	2.65	0.45
1:AA:323:U:H5''	23:AT:23:ARG:HA	1.99	0.45
1:AA:544:G:C6	1:AA:545:C:C4	3.05	0.45
14:AK:103:LEU:O	14:AK:104:GLN:C	2.55	0.45
3:AW:16:U:C2'	3:AW:17:U:OP2	2.65	0.45
27:BA:182:A:H2'	27:BA:183:C:C6	2.52	0.45
27:BA:1910:G:N2	27:BA:1921:G:H1'	2.32	0.45
9:AF:57:GLN:HB2	9:AF:57:GLN:HE21	1.65	0.45
27:BA:422:A:H2'	27:BA:422:A:N3	2.31	0.45
49:B0:46:LYS:CE	49:B0:60:PHE:H	2.30	0.45
51:B5:42:SER:O	51:B5:43:HIS:CG	2.69	0.45
55:B9:17:VAL:HG21	55:B9:26:ILE:HD12	1.98	0.45
27:BA:1819:A:N3	28:BD:177:SER:HB3	2.32	0.45
27:BA:1991:U:C3'	27:BA:1991:U:C6	2.99	0.45
27:BA:2264:C:N4	27:BA:2277:G:C6	2.83	0.45
27:BA:2280:G:N1	27:BA:2281:C:C4	2.85	0.45
27:BA:2305:A:H8	27:BA:2306:C:C5'	2.29	0.45
27:BA:2353:G:C6	27:BA:2364:C:N4	2.71	0.45
27:BA:2385:C:C2'	27:BA:2386:C:C5'	2.93	0.45
27:BA:2392:A:C3'	27:BA:2393:A:C5'	2.94	0.45
27:BA:2455:G:C3'	27:BA:2456:C:H5'	2.47	0.45
27:BA:2464:C:C5	27:BA:2487:G:N1	2.85	0.45
27:BA:2645:G:OP2	27:BA:2645:G:C1'	2.63	0.45
27:BA:2679:A:N3	29:BE:300:VAL:CB	2.75	0.45
27:BA:2708:G:H2'	27:BA:2709:G:H8	1.82	0.45
27:BA:2717:G:C2	27:BA:2718:G:N9	2.77	0.45
27:BA:2741:A:C2'	27:BA:2742:C:C4'	2.93	0.45
27:BA:527:C:C6	27:BA:2779:U:H3'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2841:C:P	44:BR:53:HIS:CE1	3.10	0.45
27:BA:450:G:C2	27:BA:454:A:H2	2.34	0.45
27:BA:492:A:H2'	27:BA:493:G:O4'	2.17	0.45
27:BA:593:G:O4'	54:B8:3:LYS:NZ	2.23	0.45
27:BA:636:G:C5'	36:BP:126:SER:HB2	2.47	0.45
27:BA:682:G:O3'	53:B7:26:SER:HB2	2.17	0.45
28:BD:106:PRO:CG	28:BD:141:HIS:CD2	2.98	0.45
28:BD:143:ILE:CB	28:BD:152:GLN:C	2.66	0.45
28:BD:175:LEU:HD21	28:BD:181:ARG:H	1.80	0.45
28:BD:158:GLY:C	28:BD:194:VAL:HG13	2.36	0.45
28:BD:75:GLY:O	28:BD:115:ILE:C	2.55	0.45
29:BE:268:LEU:HD11	29:BE:271:ILE:CD1	2.46	0.45
30:BF:213:ALA:HB2	30:BF:218:VAL:HG13	1.33	0.45
30:BF:56:THR:O	30:BF:79:ARG:HD2	2.17	0.45
31:BG:19:GLU:OE1	31:BG:134:LEU:O	2.34	0.45
31:BG:55:LYS:O	31:BG:56:ARG:CG	2.64	0.45
2:AV:56:C:C1'	31:BG:56:ARG:CZ	2.95	0.45
32:BH:51:VAL:CG2	32:BH:68:ARG:HG3	2.43	0.45
34:BN:42:GLU:HG2	34:BN:43:ARG:H	1.81	0.45
34:BN:78:ILE:CG2	34:BN:79:PHE:CD1	2.99	0.45
35:BO:7:ARG:HH21	35:BO:44:LYS:HD2	1.76	0.45
27:BA:637:A:N7	36:BP:111:ALA:HB1	2.31	0.45
37:BQ:45:GLN:CD	37:BQ:153:PRO:CA	2.85	0.45
37:BQ:26:LYS:NZ	37:BQ:88:PHE:HB3	2.32	0.45
27:BA:2320:A:C6	38:BS:13:ARG:HG2	2.50	0.45
45:BU:72:HIS:CE1	45:BU:107:LYS:HA	2.50	0.45
27:BA:447:A:P	45:BU:5:LYS:HZ3	2.37	0.45
45:BU:89:ASP:O	45:BU:90:LEU:CD2	2.47	0.45
45:BU:89:ASP:OD1	46:BV:51:ALA:HB3	2.13	0.45
40:BW:85:VAL:HG13	40:BW:95:ILE:HD13	1.99	0.45
33:BI:86:GLY:HA3	33:BI:88:ARG:N	2.30	0.45
27:BA:85:G:OP1	42:BY:65:VAL:CG1	2.50	0.45
42:BY:31:LEU:CD2	42:BY:31:LEU:N	2.40	0.45
42:BY:51:LEU:C	42:BY:51:LEU:CD2	2.85	0.45
42:BY:63:ILE:HG13	42:BY:74:VAL:HA	1.98	0.45
42:BY:71:VAL:HG13	42:BY:72:ILE:H	1.73	0.45
1:AA:1320:C:H42	22:AS:36:ARG:CD	2.29	0.45
16:AM:84:ILE:HG13	16:AM:85:GLY:N	2.31	0.45
27:BA:146:G:H2'	27:BA:147:U:O4'	2.16	0.45
1:AA:30(A):G:C2	1:AA:1031:G:C6	3.04	0.45
6:AC:8:ILE:CG2	17:AN:50:LYS:O	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1082:U:N3	56:BK:117:ASN:ND2	2.64	0.45
7:AD:12:CYS:HB3	7:AD:31:CYS:HB3	1.76	0.45
8:AE:20:GLN:OE1	8:AE:21:ALA:N	2.49	0.45
3:AW:9:A:N6	3:AW:45:G:N1	2.65	0.45
2:AV:10:G:O6	2:AV:26:G:C8	2.69	0.45
27:BA:1924:C:N3	27:BA:1925:C:C4	2.84	0.45
27:BA:2670:A:H8	27:BA:2670:A:C5'	2.16	0.45
1:AA:33:A:OP2	1:AA:398:C:H5'	2.16	0.45
19:AP:7:ALA:N	19:AP:18:ARG:H	2.14	0.45
1:AA:574:A:H8	1:AA:574:A:O5'	2.00	0.45
1:AA:190(I):G:H2'	1:AA:190(J):U:C6	2.51	0.45
27:BA:124:G:OP1	27:BA:1376:C:H1'	2.16	0.45
1:AA:706:A:H4'	14:AK:29:ILE:HD11	1.99	0.45
27:BA:1602:U:O5'	27:BA:1602:U:C2	2.70	0.45
10:AG:64:GLN:HE21	10:AG:68:ASN:HD21	1.64	0.45
7:AD:191:ARG:NH2	7:AD:196:LEU:O	2.47	0.45
48:B3:20:LYS:O	48:B3:23:LEU:HB2	2.09	0.45
51:B5:18:MET:O	51:B5:19:ARG:C	2.55	0.45
51:B5:50:GLY:HA2	51:B5:57:VAL:CG2	2.47	0.45
27:BA:2393:A:C4'	54:B8:13:ARG:HH21	2.20	0.45
27:BA:1019:U:OP1	27:BA:1120:G:N2	2.43	0.45
27:BA:1152:C:H4'	45:BU:80:ILE:CD1	2.48	0.45
27:BA:1462:C:C5'	27:BA:2703:C:H5'	2.47	0.45
27:BA:1651:G:H2'	27:BA:1652:A:C8	2.52	0.45
27:BA:1651:G:H5''	44:BR:39:PRO:HG2	1.99	0.45
27:BA:1678:G:H22	27:BA:1989:G:H22	1.65	0.45
27:BA:2219:G:N3	27:BA:2224:G:O4'	2.49	0.45
27:BA:2292:C:N3	27:BA:2340:G:N2	2.61	0.45
27:BA:2298:A:C6	27:BA:2321:G:N1	2.85	0.45
27:BA:2314:C:H2'	27:BA:2315:G:O5'	2.14	0.45
27:BA:2378:A:O3'	38:BS:30:GLY:CA	2.65	0.45
27:BA:2395:C:C4'	27:BA:2395:C:C6	2.98	0.45
27:BA:1127:A:N1	27:BA:2518:A:C2	2.85	0.45
27:BA:2533:A:H2'	27:BA:2534:A:O4'	2.17	0.45
27:BA:2553:G:N7	27:BA:2554:U:N1	2.64	0.45
27:BA:270(P):C:O3'	33:BI:42:ALA:CB	2.64	0.45
27:BA:2734:A:C5	27:BA:2735:G:N9	2.84	0.45
27:BA:2766:G:N2	27:BA:2767:C:C6	2.85	0.45
27:BA:2784:C:C5'	29:BE:95:PRO:O	2.65	0.45
27:BA:2844:G:C2	27:BA:2845:G:N9	2.85	0.45
27:BA:54:G:H1	27:BA:116:C:H42	1.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:566:U:H3'	27:BA:567:A:H8	1.81	0.45
27:BA:601:C:P	30:BF:27:ARG:HH12	2.40	0.45
27:BA:746:A:H2'	27:BA:2611:U:O2'	2.17	0.45
26:BB:42:C:H1'	31:BG:47:GLN:HA	1.98	0.45
28:BD:124:LYS:HB2	28:BD:127:ASN:ND2	2.31	0.45
28:BD:172:ILE:HG13	28:BD:182:MET:HE3	1.98	0.45
27:BA:1567:A:C2	28:BD:82:TYR:O	2.69	0.45
29:BE:270:ASP:OD2	29:BE:295:LEU:HB3	2.16	0.45
29:BE:80:ALA:HB3	29:BE:181:VAL:HA	1.50	0.45
30:BF:243:VAL:O	30:BF:246:ARG:C	2.54	0.45
31:BG:146:LYS:C	31:BG:148:SER:N	2.70	0.45
32:BH:120:LEU:HA	32:BH:121:GLU:OE1	2.12	0.45
32:BH:55:SER:O	32:BH:57:GLU:CG	2.53	0.45
32:BH:97:LYS:C	32:BH:98:GLN:HG3	2.20	0.45
34:BN:21:ARG:O	34:BN:22:VAL:C	2.55	0.45
34:BN:39:VAL:HG12	34:BN:104:TYR:CA	2.46	0.45
27:BA:1022:G:OP2	34:BN:52:GLN:CD	2.55	0.45
36:BP:94:ARG:HD2	36:BP:119:THR:O	2.17	0.45
45:BU:15:LYS:HG2	45:BU:19:LYS:CE	2.47	0.45
45:BU:60:LEU:H	45:BU:60:LEU:HD23	1.82	0.45
46:BV:54:TYR:O	46:BV:56:VAL:CB	2.64	0.45
40:BW:81:ALA:C	40:BW:82:LEU:CD2	2.66	0.45
43:BZ:125:PRO:O	43:BZ:127:PRO:CD	2.61	0.45
43:BZ:148:THR:O	43:BZ:149:ALA:C	2.55	0.45
33:BI:132:LYS:HA	33:BI:138:THR:HB	1.98	0.45
27:BA:341:G:C2'	27:BA:342:G:O4'	2.62	0.45
27:BA:1826:G:C5	27:BA:1827:C:C5	3.05	0.45
28:BD:204:PHE:O	28:BD:205:VAL:O	2.35	0.45
27:BA:60:G:N3	27:BA:74:A:C6	2.85	0.45
41:BX:23:LYS:HD3	41:BX:65:VAL:HG11	1.98	0.45
1:AA:946:A:C2	1:AA:1333:A:C2	3.02	0.45
50:B4:48:ARG:CG	50:B4:49:PHE:CE1	2.98	0.45
11:AH:87:SER:HB3	11:AH:92:ARG:HA	1.99	0.45
7:AD:58:LEU:HD13	7:AD:59:ARG:NH1	2.32	0.45
1:AA:1502:A:H2	1:AA:1505:G:C2	2.29	0.45
3:AW:23:A:H2'	3:AW:24:G:C8	2.52	0.45
1:AA:48:C:OP1	1:AA:115:G:OP1	2.34	0.45
27:BA:1698:A:H1'	27:BA:1700:A:O5'	2.17	0.45
33:BI:63:ALA:CA	33:BI:66:LYS:HE2	2.45	0.45
1:AA:786:G:C2	1:AA:787:A:H1'	2.51	0.45
24:AU:20:LYS:HG3	24:AU:21:TYR:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1370:G:H5''	12:AI:12:GLU:CD	2.37	0.45
1:AA:1298:C:H3'	10:AG:114:ARG:NH1	2.32	0.45
1:AA:557:G:H5''	1:AA:558:G:OP2	2.17	0.45
6:AC:156:ARG:HD3	6:AC:193:TYR:O	2.16	0.45
11:AH:25:ASP:OD1	11:AH:60:ARG:HD3	2.17	0.45
27:BA:171:G:H2'	27:BA:172:C:C5	2.51	0.45
1:AA:692:U:H5	14:AK:26:ASN:HD21	1.60	0.45
1:AA:475:G:H2'	1:AA:476:G:C8	2.51	0.45
1:AA:1411:C:H2'	1:AA:1412:C:H6	1.81	0.45
1:AA:962:C:C2	1:AA:963:G:C8	3.05	0.45
53:B7:43:THR:N	53:B7:46:ASP:OD1	2.49	0.44
27:BA:1155:A:O2'	27:BA:1156:A:H2'	2.18	0.44
27:BA:1262:A:OP1	40:BW:99:ARG:NH2	2.35	0.44
27:BA:2185:C:N3	27:BA:2186:G:C5	2.85	0.44
27:BA:2228:G:C5	27:BA:2229:C:N1	2.85	0.44
27:BA:2234:G:O6	27:BA:2235:G:O6	2.34	0.44
27:BA:2251:G:C2	27:BA:2252:G:C4	3.03	0.44
27:BA:2263:C:N4	27:BA:2278:A:N6	2.65	0.44
27:BA:2341:G:N7	27:BA:2342:C:C4	2.85	0.44
27:BA:2438:U:C4'	27:BA:2440:C:OP1	2.63	0.44
27:BA:807:U:C4'	27:BA:2445:G:H4'	2.47	0.44
27:BA:245:G:P	36:BP:53:ARG:HH11	2.37	0.44
27:BA:2562:U:C2'	27:BA:2563:U:H5'	2.47	0.44
27:BA:2596:U:H5	27:BA:2597:G:N7	2.15	0.44
27:BA:270(P):C:H4'	33:BI:42:ALA:CB	2.43	0.44
27:BA:2757:A:H2'	27:BA:2758:A:O4'	2.17	0.44
27:BA:2762:G:C4	27:BA:2763:G:N7	2.85	0.44
27:BA:2771:C:H42	27:BA:2772:C:N4	2.15	0.44
27:BA:2777:G:C5'	27:BA:2777:G:N9	2.80	0.44
27:BA:2822:G:O2'	27:BA:2825:C:N4	2.47	0.44
27:BA:492:A:N1	40:BW:49:LYS:NZ	2.64	0.44
27:BA:792:G:H21	27:BA:2072:G:H1'	1.80	0.44
27:BA:193:U:H5'	27:BA:803:U:H1'	1.99	0.44
28:BD:165:GLY:O	28:BD:172:ILE:CA	2.61	0.44
30:BF:6:TYR:OH	30:BF:139:VAL:N	2.51	0.44
27:BA:599:G:HO2'	30:BF:30:LEU:HD21	1.74	0.44
32:BH:9:GLU:C	32:BH:10:ILE:HG13	2.37	0.44
27:BA:1077:A:O4'	56:BK:92:PRO:HG2	2.17	0.44
35:BO:112:MET:O	35:BO:114:ILE:C	2.55	0.44
35:BO:1:MET:HB3	35:BO:67:ARG:NE	2.32	0.44
37:BQ:88:PHE:HD1	37:BQ:88:PHE:O	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:92:VAL:HG12	37:BQ:111:THR:HA	0.92	0.44
37:BQ:95:GLU:CD	37:BQ:95:GLU:N	2.70	0.44
44:BR:36:THR:O	44:BR:112:ALA:O	2.34	0.44
44:BR:77:ARG:CZ	44:BR:77:ARG:CB	2.58	0.44
38:BS:117:ALA:HA	38:BS:120:GLU:OE2	2.16	0.44
45:BU:103:PRO:O	45:BU:107:LYS:N	2.50	0.44
45:BU:114:ARG:CA	45:BU:117:ARG:HD2	2.47	0.44
45:BU:76:TYR:O	45:BU:80:ILE:HD11	1.95	0.44
45:BU:92:ARG:N	46:BV:10:LYS:HZ1	1.90	0.44
46:BV:60:VAL:C	46:BV:98:ILE:CD1	2.83	0.44
40:BW:29:LEU:C	40:BW:33:ARG:HG3	2.37	0.44
40:BW:45:TYR:CD2	40:BW:45:TYR:C	2.91	0.44
40:BW:26:GLY:CA	40:BW:71:VAL:HG23	2.47	0.44
33:BI:75:LEU:O	33:BI:141:LEU:HD21	2.17	0.44
43:BZ:6:LYS:H	43:BZ:7:PRO:HD2	1.72	0.44
1:AA:1197:G:C8	1:AA:1197:G:P	3.10	0.44
27:BA:72:U:H1'	47:B2:57:LYS:HD2	1.99	0.44
41:BX:6:LYS:HE2	41:BX:29:ASP:HA	1.91	0.44
17:AN:27:CYS:H	17:AN:43:CYS:HB3	1.81	0.44
1:AA:279:A:OP1	1:AA:281:G:H5'	2.17	0.44
1:AA:1517:G:H3'	1:AA:1518:A:H8	1.80	0.44
27:BA:1916:A:C8	27:BA:1916:A:OP2	2.68	0.44
1:AA:1156:G:C2'	1:AA:1179:A:H61	2.29	0.44
9:AF:95:GLU:HB2	9:AF:96:PRO:HD2	1.90	0.44
27:BA:1063:G:O2'	56:BK:90:SER:O	2.27	0.44
27:BA:693:C:O2'	27:BA:1353:A:H2	1.94	0.44
27:BA:1908:C:H42	27:BA:1922:G:H1	1.66	0.44
26:BB:40:U:H3'	26:BB:41:U:C5'	2.36	0.44
1:AA:426:G:C2'	7:AD:42:GLN:HA	2.47	0.44
56:BK:80:LYS:HD2	56:BK:86:GLU:HG2	1.98	0.44
1:AA:111:G:H3'	1:AA:112:G:H8	1.82	0.44
5:AB:100:GLY:O	5:AB:104:ASN:HB3	2.16	0.44
27:BA:1449:A:N1	27:BA:449(A):G:N3	2.64	0.44
1:AA:227:G:H21	19:AP:62:VAL:HG12	1.82	0.44
1:AA:52:G:H5''	1:AA:52:G:H8	1.82	0.44
27:BA:1183:G:H5'	48:B3:29:ARG:NE	2.31	0.44
50:B4:20:VAL:HB	50:B4:30:GLU:CD	2.38	0.44
51:B5:12:SER:O	51:B5:14:SER:N	2.50	0.44
54:B8:16:ILE:HA	54:B8:22:VAL:HA	1.99	0.44
27:BA:1004:C:H1'	27:BA:1010:A:C4	2.52	0.44
27:BA:1283:G:H2'	27:BA:1285:G:N7	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2061:G:C5	27:BA:2063:C:N4	2.84	0.44
27:BA:2295:C:C6	27:BA:2338:G:N1	2.85	0.44
27:BA:2394:C:O2	27:BA:2394:C:H2'	2.17	0.44
27:BA:2397:G:C5	27:BA:2398:U:C4	3.04	0.44
27:BA:2416:C:N3	27:BA:2417:C:H5	2.10	0.44
27:BA:2474:C:C5	27:BA:2475:C:N3	2.85	0.44
27:BA:2508:G:C2	27:BA:2509:G:C1'	3.00	0.44
27:BA:2531:A:C5	27:BA:2532:G:N7	2.85	0.44
27:BA:2611:U:H5'	27:BA:2611:U:C6	2.51	0.44
27:BA:2634:G:N1	27:BA:2635:C:C6	2.86	0.44
27:BA:2643:G:H8	27:BA:2643:G:O5'	1.99	0.44
27:BA:2692:C:N3	27:BA:2717:G:N2	2.53	0.44
27:BA:2748:A:O2'	32:BH:62:ALA:HA	2.17	0.44
27:BA:2774:C:C2'	27:BA:2774:C:O2	2.63	0.44
27:BA:2842:G:N1	27:BA:2876:G:C6	2.85	0.44
27:BA:452:G:N2	27:BA:457:A:H2	2.13	0.44
27:BA:911:A:H5''	27:BA:912:C:C5'	2.43	0.44
28:BD:66:PHE:HD2	28:BD:67:LYS:CD	2.22	0.44
27:BA:1655:A:C4'	29:BE:211:GLN:HA	2.45	0.44
29:BE:45:LYS:NZ	29:BE:301:PRO:C	2.62	0.44
30:BF:168:ARG:HA	30:BF:232:LEU:O	2.18	0.44
33:BI:50:GLN:CG	33:BI:50:GLN:O	2.66	0.44
34:BN:52:GLN:CA	34:BN:55:GLU:OE2	2.61	0.44
35:BO:25:LEU:CB	35:BO:38:VAL:O	2.64	0.44
36:BP:56:LYS:O	36:BP:57:VAL:HB	2.18	0.44
27:BA:2278:A:P	37:BQ:15:THR:HG1	2.39	0.44
37:BQ:52:LYS:HA	37:BQ:53:PRO:HD3	1.82	0.44
37:BQ:85:ILE:O	37:BQ:85:ILE:HD12	2.16	0.44
44:BR:73:VAL:O	44:BR:74:LYS:O	2.35	0.44
38:BS:33:ARG:CG	38:BS:48:VAL:O	2.65	0.44
39:BT:15:PRO:C	39:BT:17:THR:N	2.63	0.44
39:BT:13:ILE:CD1	39:BT:33:SER:HB2	2.47	0.44
45:BU:91:ASN:C	45:BU:95:LEU:CD1	2.75	0.44
46:BV:18:ASP:CB	46:BV:96:LEU:HA	2.47	0.44
46:BV:19:VAL:O	46:BV:20:ILE:C	2.55	0.44
46:BV:33:VAL:CG2	46:BV:63:HIS:CG	3.00	0.44
40:BW:97:LYS:HZ1	40:BW:99:ARG:HH12	1.61	0.44
42:BY:105:ASP:O	42:BY:106:GLU:C	2.55	0.44
42:BY:103:LEU:CG	42:BY:112:LEU:HD21	2.24	0.44
43:BZ:69:VAL:HG21	43:BZ:81:VAL:HG11	1.87	0.44
27:BA:111:A:O4'	47:B2:62:GLU:OE2	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:148:C:C2	27:BA:149:A:C5	3.05	0.44
20:AQ:22:LEU:HD13	20:AQ:39:SER:OG	2.17	0.44
7:AD:31:CYS:C	7:AD:33:MET:N	2.60	0.44
8:AE:76:ILE:CG2	8:AE:142:LEU:HD22	2.47	0.44
1:AA:110:C:O2'	19:AP:25:ARG:CA	2.65	0.44
3:AW:40:C:C4'	10:AG:148:ASN:OD1	2.66	0.44
27:BA:1352:U:O2	27:BA:1353:A:N7	2.51	0.44
27:BA:504:U:H5''	27:BA:506:G:OP2	2.16	0.44
6:AC:91:LEU:HD21	6:AC:99:VAL:N	2.23	0.44
27:BA:311:A:H62	27:BA:329:G:C5'	2.28	0.44
27:BA:1528:A:C2	27:BA:1529:A:H1'	2.52	0.44
27:BA:476:G:H2'	27:BA:478:A:OP2	2.17	0.44
27:BA:772:C:H6	27:BA:772:C:O5'	2.00	0.44
1:AA:126:G:O2'	1:AA:634:C:O2'	2.33	0.44
27:BA:1359:A:N7	27:BA:1372:U:O4	2.50	0.44
27:BA:551:G:H4'	27:BA:1220:A:H2	1.80	0.44
27:BA:1763:G:H5'	27:BA:1763:G:H8	1.82	0.44
27:BA:1602:U:C6	27:BA:1602:U:C3'	3.00	0.44
1:AA:475:G:H2'	1:AA:476:G:H8	1.81	0.44
14:AK:45:GLY:O	14:AK:50:TYR:HB2	2.17	0.44
14:AK:111:ASP:O	14:AK:112:THR:C	2.55	0.44
49:B0:61:ALA:CB	49:B0:80:SER:C	2.84	0.44
49:B0:62:LEU:O	49:B0:63:SER:O	2.35	0.44
50:B4:35:VAL:C	50:B4:36:TRP:HD1	2.17	0.44
53:B7:32:ALA:HA	53:B7:35:ARG:HD3	1.93	0.44
53:B7:44:VAL:O	53:B7:45:SER:C	2.55	0.44
55:B9:10:MET:HE2	55:B9:11:CYS:N	2.32	0.44
27:BA:1287:A:H62	44:BR:106:GLY:HA3	1.82	0.44
27:BA:2191:G:H21	27:BA:2192:G:H1'	1.78	0.44
27:BA:2226:C:N4	27:BA:2227:A:C2	2.86	0.44
27:BA:2266:A:H2	27:BA:2272:U:C2	2.35	0.44
27:BA:965:C:O4'	27:BA:2273:A:C4	2.70	0.44
27:BA:2277:G:H1'	37:BQ:15:THR:HG23	1.68	0.44
27:BA:2327:A:C6	27:BA:2388:A:C6	3.05	0.44
27:BA:2333:A:H4'	27:BA:2334:G:H2'	2.00	0.44
27:BA:2073:C:H42	27:BA:2437:U:H3	1.64	0.44
27:BA:2618:G:O2'	27:BA:2619:C:P	2.66	0.44
27:BA:2730:C:H4'	29:BE:265:ASN:CG	2.29	0.44
27:BA:2804:C:H2'	27:BA:2804:C:H6	1.67	0.44
27:BA:2788:C:H4'	27:BA:2810:A:H5'	1.98	0.44
27:BA:2816:C:C2	27:BA:2831:G:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:573:G:N2	27:BA:2029:G:N2	2.65	0.44
27:BA:5:A:H2'	27:BA:6:A:O4'	2.16	0.44
27:BA:781:A:H5'	27:BA:782:A:C8	2.51	0.44
26:BB:17:C:H2'	26:BB:18:G:O4'	2.17	0.44
26:BB:51:G:P	38:BS:72:GLU:OE1	2.75	0.44
28:BD:175:LEU:O	28:BD:178:GLY:N	2.50	0.44
29:BE:204:VAL:N	29:BE:303:PRO:HD3	2.32	0.44
29:BE:68:VAL:HA	29:BE:69:PRO:HD3	1.72	0.44
30:BF:142:ASP:O	30:BF:145:GLU:N	2.47	0.44
30:BF:62:GLY:N	30:BF:65:ARG:CZ	2.78	0.44
30:BF:93:LYS:C	30:BF:96:LYS:CD	2.85	0.44
31:BG:24:HIS:HB3	31:BG:72:LYS:HD3	1.99	0.44
32:BH:122:ILE:HG22	32:BH:123:GLU:H	1.82	0.44
33:BI:7:LYS:CG	33:BI:12:LYS:CE	2.94	0.44
35:BO:64:ARG:HH21	35:BO:100:GLY:CA	2.24	0.44
35:BO:62:VAL:O	35:BO:63:VAL:HG23	2.17	0.44
35:BO:73:ASP:O	35:BO:74:GLY:C	2.49	0.44
37:BQ:91:HIS:N	37:BQ:111:THR:HG21	2.26	0.44
38:BS:52:PRO:O	38:BS:55:ASP:HB3	2.14	0.44
45:BU:34:ASN:O	45:BU:35:ALA:C	2.55	0.44
45:BU:63:GLN:O	45:BU:65:ILE:CA	2.65	0.44
40:BW:14:PRO:O	40:BW:17:VAL:CB	2.61	0.44
43:BZ:129:ARG:CA	43:BZ:129:ARG:NE	2.62	0.44
43:BZ:168:VAL:O	43:BZ:169:VAL:CB	2.59	0.44
33:BI:141:LEU:HD22	33:BI:142:LYS:HG2	1.98	0.44
27:BA:297:C:C2	27:BA:342:G:N2	2.84	0.44
42:BY:40:VAL:CG1	42:BY:41:ARG:HG2	2.46	0.44
1:AA:975:A:N3	1:AA:1357:A:N3	2.64	0.44
41:BX:3:ASP:OD2	47:B2:24:LYS:CE	2.60	0.44
1:AA:1347:G:O2'	1:AA:1348:U:OP2	2.32	0.44
2:AV:65:G:N2	2:AV:66:A:C4	2.86	0.44
27:BA:1914:C:OP2	27:BA:1916:A:N6	2.50	0.44
1:AA:65:U:O4'	1:AA:200:G:H5'	2.17	0.44
1:AA:407:G:N2	1:AA:436:C:H1'	2.32	0.44
1:AA:1097:C:C5'	1:AA:1169:A:H4'	2.47	0.44
1:AA:1169:A:O5'	1:AA:1169:A:H8	2.01	0.44
1:AA:60:A:N1	1:AA:107:G:H1'	2.32	0.44
33:BI:59:ALA:C	33:BI:62:LEU:HB2	2.34	0.44
1:AA:889:A:H62	1:AA:908:A:H62	1.65	0.44
27:BA:2755:C:C6	27:BA:2755:C:C3'	3.00	0.44
27:BA:1274:A:C4	27:BA:1302:A:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1102:C:H2'	27:BA:1103:A:H8	1.82	0.44
1:AA:667:G:H2'	1:AA:668:G:C8	2.53	0.44
1:AA:1327:C:H5''	24:AU:20:LYS:CE	2.37	0.44
3:AW:65:G:C5	3:AW:66:A:N7	2.85	0.44
27:BA:1529:A:H2'	27:BA:1530:G:H5'	1.99	0.44
11:AH:46:LYS:HE3	11:AH:64:LYS:HG3	1.99	0.44
1:AA:774:G:C4	1:AA:775:G:C8	3.05	0.44
5:AB:69:LEU:HB3	5:AB:162:ILE:HG22	1.99	0.44
15:AL:23:LYS:C	15:AL:24:VAL:HG23	2.37	0.44
20:AQ:46:ASP:HA	20:AQ:47:PRO:HD3	1.80	0.44
5:AB:88:ALA:HA	5:AB:222:ILE:HD11	2.00	0.44
48:B3:3:ARG:HD3	48:B3:60:GLU:HA	1.99	0.44
50:B4:58:LYS:CG	50:B4:62:ARG:NH2	2.76	0.44
53:B7:11:LYS:O	53:B7:13:ALA:CA	2.62	0.44
27:BA:1491:G:O2'	27:BA:1492:G:O4'	2.35	0.44
27:BA:1651:G:H1	27:BA:2006:C:N4	2.10	0.44
27:BA:1809:A:N1	50:B4:43:TRP:HH2	2.12	0.44
27:BA:2023:G:C8	27:BA:2023:G:OP2	2.70	0.44
27:BA:2234:G:N1	27:BA:2235:G:C6	2.84	0.44
27:BA:2240:C:H2'	27:BA:2241:A:C8	2.53	0.44
27:BA:2349:G:C5	27:BA:2350:C:C6	3.06	0.44
27:BA:2400:G:N1	27:BA:2401:U:C2	2.85	0.44
27:BA:2061:G:O6	27:BA:2501:C:O2	2.36	0.44
27:BA:2592:G:H2'	27:BA:2593:U:O5'	2.18	0.44
27:BA:2705:A:H8	27:BA:2705:A:O5'	2.00	0.44
27:BA:2876:G:H2'	27:BA:2877:G:H8	1.82	0.44
27:BA:674:G:C2	27:BA:804:A:C2	3.05	0.44
27:BA:775:G:C2'	27:BA:794:G:C8	3.00	0.44
27:BA:974:G:C6	46:BV:80:TYR:CZ	3.05	0.44
30:BF:153:VAL:HG12	30:BF:157:LEU:HD11	2.00	0.44
30:BF:140:VAL:HG12	30:BF:236:THR:HA	2.00	0.44
31:BG:102:GLY:HA2	31:BG:134:LEU:HD11	1.95	0.44
2:AV:56:C:C2'	31:BG:56:ARG:CD	2.92	0.44
31:BG:56:ARG:HG3	31:BG:65:GLU:CG	2.47	0.44
27:BA:2313:C:O5'	31:BG:72:LYS:HG3	2.10	0.44
33:BI:5:PHE:CD2	33:BI:17:GLU:O	2.70	0.44
27:BA:6:A:C2'	34:BN:6:PHE:HD2	2.23	0.44
34:BN:78:ILE:O	34:BN:82:THR:HG21	2.12	0.44
35:BO:97:ARG:HG2	35:BO:98:ILE:H	1.82	0.44
37:BQ:16:ARG:O	37:BQ:20:ILE:HG12	2.17	0.44
37:BQ:66:ASN:O	37:BQ:70:ARG:HG3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:51:LEU:HA	44:BR:51:LEU:HD23	1.83	0.44
27:BA:2840:C:C5'	44:BR:53:HIS:CD2	3.00	0.44
27:BA:2376:A:H62	38:BS:109:PRO:CG	2.31	0.44
38:BS:87:LEU:O	38:BS:88:ALA:O	2.36	0.44
39:BT:5:GLU:O	39:BT:8:TYR:CA	2.66	0.44
45:BU:63:GLN:HA	45:BU:66:ASN:CG	2.38	0.44
45:BU:7:GLY:C	45:BU:9:VAL:N	2.51	0.44
46:BV:50:ASP:HB2	46:BV:53:LYS:HG3	0.53	0.44
42:BY:79:LEU:O	42:BY:87:VAL:N	2.50	0.44
42:BY:93:THR:O	42:BY:96:VAL:HG23	2.17	0.44
26:BB:77:U:P	43:BZ:80:HIS:CD2	3.11	0.44
47:B2:18:ALA:O	47:B2:21:ASP:HB2	2.18	0.44
41:BX:31:ARG:HA	41:BX:31:ARG:CZ	2.47	0.44
41:BX:38:ALA:O	41:BX:41:VAL:HB	2.18	0.44
2:AV:68:U:H2'	2:AV:69:U:C6	2.52	0.44
1:AA:983:A:H3'	1:AA:983:A:N3	2.33	0.44
27:BA:1300:U:C6	27:BA:1301:A:H2	2.35	0.44
27:BA:1056:G:O6	27:BA:1101:U:O5'	2.34	0.44
1:AA:571:U:H3'	1:AA:572:A:H5''	1.94	0.44
56:BK:85:ILE:HG12	56:BK:87:LYS:H	1.82	0.44
1:AA:265:G:O2'	20:AQ:66:SER:CA	2.64	0.44
1:AA:791:G:N1	1:AA:1498:U:OP1	2.45	0.44
27:BA:154:G:H3'	27:BA:155:C:H6	1.82	0.44
1:AA:607:A:N1	19:AP:31:LYS:HG3	2.32	0.44
1:AA:425:G:O3'	7:AD:45:GLN:NE2	2.50	0.44
16:AM:40:ASN:HA	16:AM:41:PRO:HD3	1.88	0.44
2:AV:64:A:H5'	49:B0:7:VAL:HG22	1.98	0.44
49:B0:37:LEU:HG	49:B0:71:ASN:HD22	1.82	0.44
53:B7:28:ARG:O	53:B7:31:LEU:HG	2.18	0.44
53:B7:31:LEU:O	53:B7:35:ARG:HG3	2.17	0.44
52:B6:11:LYS:NZ	54:B8:35:GLY:H	2.15	0.44
27:BA:1933:G:O6	27:BA:1968:G:N2	2.50	0.44
27:BA:2232:U:C2'	27:BA:2233:U:H5''	2.45	0.44
27:BA:2259:G:C6	27:BA:2281:C:N3	2.85	0.44
27:BA:2272:U:C6	27:BA:2273:A:H2	2.36	0.44
27:BA:2302:G:C6	27:BA:2315:G:N1	2.81	0.44
27:BA:2309:A:N3	27:BA:2309:A:H2'	2.32	0.44
27:BA:2464:C:C4	27:BA:2487:G:C2	3.06	0.44
27:BA:2446:G:C2	27:BA:2501:C:N4	2.83	0.44
27:BA:2060:A:H1'	27:BA:2502:G:N3	2.32	0.44
27:BA:2514:U:H2'	27:BA:2515:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2531:A:O2'	27:BA:2532:G:H5''	2.18	0.44
27:BA:2548:G:C5	27:BA:2549:G:C8	3.06	0.44
27:BA:2708:G:OP1	44:BR:68:ARG:HG2	2.17	0.44
27:BA:2814:C:N1	27:BA:2815:C:H5	2.16	0.44
27:BA:2852:G:C6	27:BA:2866:U:O4	2.71	0.44
27:BA:37:C:H42	27:BA:442:G:H1	1.63	0.44
27:BA:581:C:H5''	45:BU:32:TYR:CB	2.44	0.44
28:BD:229:MET:SD	28:BD:233:ASP:HB2	2.58	0.44
29:BE:180:ILE:CG2	29:BE:186:GLU:C	2.80	0.44
30:BF:160:LEU:O	30:BF:165:ASP:OD2	2.36	0.44
30:BF:220:THR:CB	30:BF:224:ALA:CB	2.84	0.44
27:BA:451:C:P	30:BF:49:ASP:HB2	2.58	0.44
30:BF:99:SER:O	30:BF:100:LEU:CG	2.65	0.44
31:BG:129:ASP:O	31:BG:130:VAL:HG12	2.17	0.44
31:BG:13:MET:C	31:BG:15:GLU:N	2.71	0.44
34:BN:21:ARG:HA	34:BN:24:SER:OG	2.17	0.44
34:BN:74:ARG:O	34:BN:75:PRO:O	2.35	0.44
27:BA:1006:C:HO2'	34:BN:86:MET:HB3	1.82	0.44
35:BO:107:ARG:HG3	35:BO:115:ILE:CG2	2.48	0.44
37:BQ:42:TYR:N	37:BQ:43:PRO:CD	2.81	0.44
39:BT:27:ALA:C	39:BT:28:THR:HG23	2.38	0.44
39:BT:52:THR:HB	39:BT:53:ASP:H	1.61	0.44
45:BU:66:ASN:CB	45:BU:76:TYR:CZ	2.74	0.44
27:BA:1152:C:C1'	45:BU:77:SER:CB	2.96	0.44
43:BZ:164:PRO:O	43:BZ:165:GLU:C	2.54	0.44
43:BZ:148:THR:HB	43:BZ:166:LEU:H	1.81	0.44
43:BZ:74:ARG:O	43:BZ:75:LYS:C	2.56	0.44
42:BY:46:ASP:OD1	42:BY:47:THR:O	2.36	0.44
42:BY:51:LEU:HD22	42:BY:95:ASN:CG	2.37	0.44
1:AA:1221:G:H1'	22:AS:54:GLY:CA	2.41	0.44
1:AA:1221:G:OP1	1:AA:1321:C:N3	2.50	0.44
28:BD:213:LYS:HG3	28:BD:215:LYS:HB2	0.49	0.44
27:BA:1525:G:C2'	27:BA:1526:G:H5'	2.47	0.44
47:B2:3:LEU:HB3	47:B2:4:HIS:H	1.42	0.44
47:B2:56:ILE:HB	47:B2:57:LYS:H	1.48	0.44
26:BB:99:A:H2'	26:BB:100:G:H8	1.73	0.44
27:BA:2857:G:H2'	27:BA:2858:C:H5''	1.98	0.44
1:AA:1406:U:H1'	1:AA:1518:A:C4'	2.47	0.44
13:AJ:16:LEU:HD12	13:AJ:70:ARG:HG2	1.99	0.44
27:BA:1520:U:C2'	27:BA:1521:G:H5''	2.44	0.44
1:AA:22:G:N3	1:AA:914:A:N7	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1559:G:C4	27:BA:1559:G:C3'	2.92	0.44
27:BA:1330:C:O2	27:BA:1330:C:H2'	2.17	0.44
1:AA:427:U:H5'	7:AD:41:GLY:CA	2.43	0.44
2:AV:5:A:O2'	2:AV:6:U:H5'	2.17	0.44
27:BA:204:A:O2'	27:BA:205:G:P	2.75	0.44
1:AA:1496:C:H2'	1:AA:1497:G:C1'	2.47	0.44
1:AA:193:C:H2'	1:AA:194:C:C6	2.53	0.44
1:AA:451:A:N6	1:AA:480:U:H2'	2.28	0.44
1:AA:1203:C:H5''	17:AN:2:ALA:HB3	1.98	0.44
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.51	0.44
1:AA:658:G:O2'	18:AO:22:THR:HB	2.18	0.44
1:AA:796:C:OP1	14:AK:123:LYS:HD3	2.18	0.44
1:AA:1534:A:H3'	1:AA:1534:A:N3	2.32	0.44
49:B0:49:GLN:N	49:B0:49:GLN:NE2	2.66	0.44
48:B3:24:LYS:HG3	48:B3:24:LYS:O	2.17	0.44
48:B3:42:ALA:CB	48:B3:43:ILE:HD12	2.42	0.44
51:B5:10:LYS:NZ	51:B5:10:LYS:HB2	2.33	0.44
53:B7:20:ALA:O	53:B7:22:MET:C	2.56	0.44
53:B7:21:ARG:HB3	53:B7:31:LEU:HD12	1.78	0.44
27:BA:126:A:OP2	53:B7:44:VAL:HG21	2.17	0.44
54:B8:8:LYS:HA	54:B8:11:LYS:HG3	1.99	0.44
27:BA:1031:G:C1'	55:B9:8:LYS:HZ3	2.31	0.44
27:BA:1225:C:OP1	46:BV:87:ARG:HG3	2.18	0.44
27:BA:1379:A:H3'	27:BA:1379:A:N3	2.31	0.44
27:BA:1657:C:C5	27:BA:1658:C:H5	2.36	0.44
27:BA:2196:C:O2	27:BA:2197:U:O2	2.35	0.44
27:BA:2256:G:C2	27:BA:2257:U:N1	2.85	0.44
27:BA:911:A:H1'	27:BA:2264:C:O4'	2.18	0.44
27:BA:2296:U:O4	31:BG:145:ASP:OD2	2.35	0.44
27:BA:2370:G:C5	27:BA:2371:G:N7	2.85	0.44
27:BA:2400:G:N1	27:BA:2401:U:O2	2.50	0.44
27:BA:2417:C:C4	27:BA:2418:A:N7	2.85	0.44
27:BA:2418:A:HO2'	27:BA:2419:U:C4'	2.30	0.44
27:BA:2461:C:H2'	27:BA:2462:U:O5'	2.18	0.44
27:BA:2497:A:O2'	27:BA:2498:C:C5	2.67	0.44
27:BA:2514:U:O5'	27:BA:2514:U:H6	2.01	0.44
27:BA:2516:G:N7	27:BA:2517:C:C4	2.86	0.44
27:BA:2611:U:C4'	27:BA:2611:U:C6	3.01	0.44
27:BA:2644:G:H8	27:BA:2644:G:C5'	2.16	0.44
27:BA:2657:A:H3'	27:BA:2658:C:H5'	1.97	0.44
27:BA:2676:C:C2'	27:BA:2677:G:O5'	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2737:G:C2'	27:BA:2738:A:H8	2.18	0.44
27:BA:2756:U:O2'	27:BA:2757:A:O5'	2.33	0.44
27:BA:527:C:C6	27:BA:2779:U:H2'	2.53	0.44
27:BA:920:G:O5'	27:BA:920:G:C8	2.71	0.44
28:BD:194:VAL:CG2	28:BD:195:GLY:H	2.04	0.44
30:BF:11:ASN:HD21	30:BF:160:LEU:HD11	1.82	0.44
30:BF:1:MET:O	30:BF:18:LEU:CG	2.53	0.44
30:BF:213:ALA:HB3	30:BF:218:VAL:HG11	1.49	0.44
31:BG:103:ASN:N	31:BG:104:PHE:CE1	2.86	0.44
31:BG:24:HIS:O	31:BG:129:ASP:HB3	2.17	0.44
32:BH:101:LYS:HG2	32:BH:115:GLU:N	2.32	0.44
32:BH:151:ARG:HA	32:BH:152:PRO:HD2	1.76	0.44
33:BI:22:ALA:O	33:BI:23:ASP:C	2.47	0.44
35:BO:35:ILE:HG22	35:BO:63:VAL:HA	1.68	0.44
38:BS:27:LEU:N	38:BS:33:ARG:NH1	2.66	0.44
45:BU:85:ARG:C	45:BU:86:ALA:O	2.56	0.44
27:BA:492:A:N1	40:BW:49:LYS:HE2	2.33	0.44
33:BI:93:ILE:HG23	33:BI:122:ARG:HA	1.99	0.44
27:BA:292:C:H5''	27:BA:293:U:OP1	2.17	0.44
27:BA:297:C:N4	27:BA:298:G:N3	2.66	0.44
27:BA:342:G:H1	27:BA:344:G:H22	1.62	0.44
43:BZ:40:ASP:C	43:BZ:44:ARG:CG	2.86	0.44
3:AW:25:C:C5	3:AW:26:G:N7	2.74	0.44
27:BA:1546:C:H5''	27:BA:1547:C:O5'	2.17	0.44
47:B2:55:ARG:HB2	47:B2:56:ILE:H	1.67	0.44
1:AA:1288:A:H2	1:AA:1352:C:O2	2.00	0.44
1:AA:121:C:H1'	1:AA:123:C:H41	1.83	0.44
1:AA:173:U:C5	1:AA:198:G:O2'	2.55	0.44
27:BA:1942:C:H2'	27:BA:1943:U:C5	2.53	0.44
1:AA:501:C:H2'	1:AA:502:G:C8	2.52	0.44
1:AA:458:C:H42	1:AA:474:G:H1	1.66	0.44
27:BA:1805:U:H5'	28:BD:235:PRO:HB2	1.92	0.44
1:AA:667:G:OP2	1:AA:732:C:O2'	2.31	0.44
27:BA:1476:C:N4	27:BA:1517:G:H1'	2.33	0.44
27:BA:184:C:O3'	27:BA:217:G:N2	2.49	0.44
27:BA:1778:U:H3	27:BA:1785:A:H62	1.64	0.44
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.71	0.44
27:BA:1197:G:N3	27:BA:1250:G:C2	2.85	0.44
1:AA:1341:U:OP1	2:AV:32:C:C3'	2.62	0.44
27:BA:651:G:H3'	27:BA:652:C:H6	1.82	0.44
1:AA:1411:C:H42	1:AA:1489:G:H1	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AD:133:VAL:C	7:AD:135:LEU:H	2.21	0.44
1:AA:262:A:H5'	23:AT:74:LYS:HG3	1.99	0.44
23:AT:82:SER:O	23:AT:86:ARG:HB3	2.17	0.44
3:AW:76:A:H4'	27:BA:2395:C:O2	2.17	0.44
27:BA:2279:G:C6	27:BA:2280:G:C6	3.05	0.44
27:BA:2337:G:N1	27:BA:2338:G:O6	2.50	0.44
27:BA:2550:G:N3	27:BA:2551:C:C5	2.85	0.44
27:BA:2561:A:H8	27:BA:2561:A:H3'	1.79	0.44
27:BA:2615:U:O2	51:B5:8:LYS:N	2.50	0.44
27:BA:2657:A:C5	27:BA:2665:A:N6	2.86	0.44
27:BA:2679:A:C6	27:BA:2729:G:N1	2.86	0.44
27:BA:2701:C:H42	27:BA:2705:A:H62	1.65	0.44
27:BA:2805:G:H8	27:BA:2807:G:O4'	2.01	0.44
27:BA:2810:A:N7	27:BA:2811:G:C8	2.85	0.44
27:BA:2839:G:C2	27:BA:2840:C:C5	3.06	0.44
27:BA:2842:G:C2	27:BA:2876:G:N3	2.79	0.44
27:BA:2845:G:HO2'	27:BA:2846:G:C5'	1.91	0.44
27:BA:2888:C:N3	27:BA:2889:C:C4	2.85	0.44
27:BA:2808:U:N3	27:BA:2892:A:N6	2.49	0.44
27:BA:443:A:H62	30:BF:39:GLN:CB	2.30	0.44
27:BA:611:C:O2'	27:BA:616:A:C2	2.68	0.44
27:BA:918:A:OP1	27:BA:918:A:H4'	2.18	0.44
28:BD:107:LYS:H	28:BD:194:VAL:C	2.06	0.44
28:BD:197:GLY:N	28:BD:199:ARG:HD2	2.33	0.44
28:BD:73:ILE:HG13	28:BD:73:ILE:H	1.59	0.44
29:BE:96:LEU:C	29:BE:97:THR:HG23	2.38	0.44
30:BF:22:PHE:HZ	30:BF:115:LEU:CG	2.30	0.44
30:BF:164:ALA:C	30:BF:232:LEU:HD12	2.31	0.44
31:BG:128:LEU:O	31:BG:129:ASP:HB2	2.15	0.44
31:BG:14:ARG:HG3	31:BG:137:PRO:HG3	2.00	0.44
31:BG:98:PHE:N	31:BG:98:PHE:HD2	2.16	0.44
34:BN:22:VAL:O	34:BN:23:ALA:C	2.55	0.44
34:BN:21:ARG:C	34:BN:24:SER:OG	2.42	0.44
34:BN:41:ALA:HB1	34:BN:75:PRO:HB2	1.95	0.44
34:BN:54:VAL:CG1	34:BN:139:LEU:CD1	2.96	0.44
35:BO:8:LEU:CD2	35:BO:19:VAL:O	2.65	0.44
35:BO:24:VAL:CG1	35:BO:32:TYR:C	2.86	0.44
35:BO:17:ARG:CZ	35:BO:47:THR:N	2.79	0.44
35:BO:53:LYS:O	35:BO:54:LYS:O	2.35	0.44
36:BP:144:ASP:CA	36:BP:145:LEU:HD12	2.32	0.44
37:BQ:23:ILE:O	37:BQ:23:ILE:CG2	2.62	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:871:U:P	37:BQ:24:PRO:O	2.75	0.44
38:BS:109:PRO:O	38:BS:116:PHE:CG	2.66	0.44
38:BS:21:HIS:HA	38:BS:24:LEU:HG	1.99	0.44
33:BI:116:GLU:OE1	33:BI:130:PRO:HB2	2.17	0.44
33:BI:140:THR:HG22	33:BI:140:THR:O	2.17	0.44
42:BY:55:PHE:O	42:BY:56:ALA:C	2.55	0.44
43:BZ:69:VAL:CG1	43:BZ:70:GLN:N	2.58	0.44
1:AA:1226:C:H5''	16:AM:103:THR:O	2.17	0.44
47:B2:26:GLU:CG	47:B2:27:LEU:N	2.54	0.44
41:BX:14:ALA:O	41:BX:17:ASP:OD1	2.35	0.44
17:AN:37:PHE:HB3	17:AN:39:LEU:HD12	2.00	0.44
1:AA:881:G:OP2	15:AL:9:GLN:HG2	2.18	0.44
1:AA:924:C:H2'	1:AA:925:G:C8	2.53	0.44
1:AA:1181:G:C5'	1:AA:1184:G:O4'	2.66	0.44
8:AE:76:ILE:O	8:AE:93:PRO:HB3	2.17	0.44
1:AA:918:A:H2'	1:AA:919:A:O4'	2.18	0.44
3:AW:34:G:H3'	3:AW:35:A:H5''	2.00	0.44
5:AB:164:VAL:HG22	5:AB:165:VAL:N	2.32	0.44
27:BA:1472:A:C1'	27:BA:1473:G:C8	3.01	0.44
1:AA:193:C:O2'	23:AT:64:ASP:HB2	2.17	0.44
27:BA:221:A:N7	27:BA:266:G:N7	2.66	0.44
27:BA:270(S):G:H2'	27:BA:270(T):G:H8	1.81	0.44
16:AM:9:ILE:N	16:AM:10:PRO:CD	2.80	0.44
1:AA:1541:U:H2'	1:AA:1542:U:O3'	2.16	0.44
5:AB:79:ASP:O	5:AB:83:MET:HG2	2.18	0.44
49:B0:39:ARG:CG	49:B0:69:PHE:HE1	2.17	0.44
50:B4:7:PRO:CD	50:B4:56:VAL:CB	2.89	0.44
52:B6:8:ILE:HD12	52:B6:29:ARG:NE	2.33	0.44
53:B7:30:ILE:C	53:B7:33:ARG:CB	2.48	0.44
55:B9:24:LEU:HD22	55:B9:36:GLN:N	2.28	0.44
27:BA:1655:A:H4'	29:BE:211:GLN:CA	2.45	0.44
27:BA:2029:G:C5	27:BA:2031:A:OP1	2.70	0.44
27:BA:2228:G:C4'	27:BA:2228:G:C8	3.01	0.44
27:BA:2313:C:C4'	31:BG:72:LYS:CG	2.83	0.44
27:BA:2333:A:C5	27:BA:2335:A:C2	3.05	0.44
27:BA:2397:G:C6	27:BA:2398:U:C4	3.06	0.44
27:BA:2422:A:C2	27:BA:2424:C:C4	3.06	0.44
27:BA:2447:G:N1	27:BA:2500:U:O4	2.48	0.44
27:BA:2535:G:N2	27:BA:2536:G:C1'	2.72	0.44
27:BA:2581:G:N1	27:BA:2610:C:C2'	2.61	0.44
27:BA:2620:C:C6	27:BA:2621:A:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2634:G:C2'	27:BA:2635:C:C5'	2.93	0.44
27:BA:2751:G:N3	27:BA:2751:G:C2'	2.81	0.44
27:BA:2793:G:N2	27:BA:2803:C:O2	2.50	0.44
27:BA:2828:C:C2	27:BA:2829:C:C6	3.05	0.44
27:BA:2880:C:H1'	44:BR:92:GLY:O	2.18	0.44
27:BA:569:U:C4	27:BA:570:G:C6	3.06	0.44
27:BA:576:U:H5''	27:BA:2502:G:H2'	1.99	0.44
26:BB:18:G:H2'	26:BB:19:G:H8	1.82	0.44
28:BD:142:ASN:CG	28:BD:190:THR:HG23	2.39	0.44
28:BD:74:PRO:HA	28:BD:116:MET:HE3	1.94	0.44
29:BE:105:HIS:ND1	29:BE:108:LEU:CD1	2.74	0.44
29:BE:44:TYR:HD2	29:BE:306:ARG:O	2.00	0.44
30:BF:195:VAL:HG13	30:BF:213:ALA:CA	2.47	0.44
30:BF:164:ALA:O	30:BF:232:LEU:HB2	2.18	0.44
30:BF:33:LYS:O	30:BF:34:ALA:O	2.34	0.44
31:BG:55:LYS:C	31:BG:56:ARG:CG	2.86	0.44
32:BH:87:GLU:HB3	32:BH:164:GLU:CD	2.38	0.44
32:BH:85:ALA:C	32:BH:164:GLU:HG2	2.38	0.44
33:BI:5:PHE:CG	33:BI:17:GLU:O	2.71	0.44
34:BN:21:ARG:O	34:BN:22:VAL:O	2.35	0.44
35:BO:13:ASN:HD21	35:BO:97:ARG:HB3	1.83	0.44
36:BP:71:GLU:O	36:BP:74:THR:OG1	2.33	0.44
37:BQ:102:ARG:O	37:BQ:104:PRO:N	2.51	0.44
27:BA:1275:A:C2	44:BR:16:HIS:HB3	2.53	0.44
38:BS:120:GLU:OE1	38:BS:120:GLU:N	2.51	0.44
38:BS:37:ARG:HB2	38:BS:44:ARG:O	2.18	0.44
46:BV:5:ILE:N	46:BV:12:TYR:CZ	2.65	0.44
46:BV:64:GLY:N	46:BV:94:LYS:O	2.49	0.44
40:BW:26:GLY:C	40:BW:27:LYS:HG3	2.38	0.44
40:BW:24:ILE:HD13	40:BW:36:LEU:HG	2.00	0.44
40:BW:53:SER:O	40:BW:57:ASN:HB2	2.18	0.44
40:BW:3:ALA:HB2	40:BW:62:HIS:CB	2.48	0.44
43:BZ:146:HIS:HB3	43:BZ:170:SER:HB3	1.99	0.44
33:BI:141:LEU:HD13	33:BI:142:LYS:H	1.73	0.44
1:AA:1224:G:C5	1:AA:1322:C:H5'	2.53	0.44
28:BD:215:LYS:O	28:BD:216:ALA:C	2.56	0.44
47:B2:24:LYS:O	47:B2:27:LEU:N	2.51	0.44
47:B2:59:ILE:CG1	47:B2:60:GLN:H	2.29	0.44
41:BX:11:THR:O	41:BX:15:MET:HE2	2.16	0.44
32:BH:53:ARG:HD2	32:BH:56:ASP:CA	2.45	0.44
1:AA:3(A):G:O6	1:AA:1037:C:C4	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:754:C:H5'	1:AA:755:G:C8	2.52	0.44
1:AA:406:G:H5''	7:AD:5:ILE:HG21	1.99	0.44
1:AA:1399:C:C2	1:AA:1502:A:N6	2.85	0.44
6:AC:121:ALA:HA	6:AC:124:ILE:HD12	1.99	0.44
27:BA:482:A:N6	27:BA:506:G:C4	2.86	0.44
2:AV:11:C:H2'	2:AV:12:U:C6	2.53	0.44
1:AA:1239:A:H1'	1:AA:1241:G:C4	2.53	0.44
8:AE:95:ALA:CB	8:AE:96:PRO:HD3	2.44	0.44
1:AA:574:A:O2'	1:AA:882:C:C2'	2.60	0.44
15:AL:45:PRO:CD	15:AL:50:SER:HA	2.44	0.44
13:AJ:90:LEU:H	13:AJ:91:PRO:CD	2.27	0.44
27:BA:273(A):G:C6	27:BA:363(D):G:O6	2.71	0.44
27:BA:1835:G:N3	27:BA:1931:U:N3	2.66	0.44
15:AL:78:GLN:H	15:AL:81:SER:HB2	1.83	0.44
6:AC:64:VAL:HG12	6:AC:66:VAL:HG23	2.00	0.44
3:AW:50:U:O2'	3:AW:51:G:H5'	2.17	0.44
49:B0:49:GLN:CA	49:B0:49:GLN:NE2	2.76	0.44
27:BA:988:A:N6	48:B3:13:ILE:HG21	2.33	0.44
50:B4:35:VAL:CG1	50:B4:36:TRP:N	2.58	0.44
50:B4:58:LYS:O	50:B4:61:LYS:CB	2.65	0.44
50:B4:68:ARG:NH1	50:B4:72:LYS:HE2	2.33	0.44
27:BA:2021:C:OP1	51:B5:15:LYS:HE3	2.18	0.44
27:BA:747:U:C1'	51:B5:3:LYS:HZ2	2.31	0.44
54:B8:22:VAL:N	54:B8:48:PHE:HE2	1.90	0.44
27:BA:2419:U:OP2	54:B8:41:ILE:HD11	2.17	0.44
27:BA:1022:G:O2'	27:BA:1023:U:OP2	2.35	0.44
27:BA:1163:G:N1	27:BA:1164:G:C8	2.86	0.44
27:BA:1166:C:H42	27:BA:1183:G:H1	1.66	0.44
27:BA:1263:U:C4'	51:B5:16:ARG:NH1	2.77	0.44
27:BA:1675:C:C4	29:BE:225:LYS:HG3	2.51	0.44
27:BA:1935:G:H2'	27:BA:1962:C:C4	2.53	0.44
27:BA:2271:G:O2'	27:BA:2272:U:O2	2.35	0.44
27:BA:2313:C:H5''	31:BG:51:ARG:CZ	2.43	0.44
27:BA:2376:A:N3	27:BA:2377:A:C8	2.86	0.44
27:BA:2511:U:C4	27:BA:2512:C:C4	3.06	0.44
27:BA:2525:G:H1	27:BA:2539:C:N4	2.13	0.44
27:BA:2875:C:N4	27:BA:2876:G:C5	2.86	0.44
27:BA:680:G:C6	27:BA:681:G:C6	3.06	0.44
27:BA:685:A:H4'	27:BA:686:G:O5'	2.18	0.44
27:BA:775:G:C2	27:BA:787:U:H2'	2.51	0.44
27:BA:960:A:O4'	27:BA:2457:U:H4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:987:G:OP1	48:B3:10:LYS:HE2	2.17	0.44
29:BE:176:HIS:O	29:BE:177:ALA:C	2.55	0.44
29:BE:180:ILE:CG2	29:BE:183:ASP:OD2	2.66	0.44
30:BF:113:SER:O	30:BF:116:ALA:CB	2.51	0.44
30:BF:168:ARG:HD3	30:BF:168:ARG:O	2.06	0.44
30:BF:37:ALA:HB2	30:BF:102:LEU:HG	2.00	0.44
30:BF:38:ALA:O	30:BF:39:GLN:O	2.35	0.44
32:BH:90:GLY:HA2	32:BH:159:LYS:CE	2.48	0.44
32:BH:37:HIS:HA	32:BH:38:PRO:HD3	1.90	0.44
32:BH:44:VAL:CB	32:BH:49:ILE:HG22	2.46	0.44
32:BH:55:SER:OG	32:BH:57:GLU:HG2	2.18	0.44
32:BH:8:ILE:HD13	32:BH:72:ALA:HB2	1.99	0.44
27:BA:1077:A:H4'	56:BK:92:PRO:O	2.17	0.44
34:BN:54:VAL:HG13	34:BN:138:THR:OG1	2.18	0.44
34:BN:65:ASN:C	34:BN:68:GLY:O	2.56	0.44
34:BN:96:GLU:O	34:BN:98:PHE:N	2.51	0.44
27:BA:1665:A:C1'	35:BO:67:ARG:HD3	2.48	0.44
27:BA:2276:G:P	37:BQ:104:PRO:HD2	2.55	0.44
38:BS:81:ALA:CB	38:BS:118:ILE:N	2.69	0.44
38:BS:123:ILE:O	38:BS:124:ASP:C	2.55	0.44
38:BS:23:ARG:NE	38:BS:35:VAL:HG11	2.32	0.44
38:BS:37:ARG:N	38:BS:44:ARG:O	2.51	0.44
45:BU:65:ILE:O	45:BU:66:ASN:C	2.56	0.44
42:BY:22:GLN:O	42:BY:24:ARG:N	2.51	0.44
43:BZ:21:ALA:HA	43:BZ:81:VAL:O	2.18	0.44
13:AJ:49:VAL:O	13:AJ:60:ARG:HA	2.17	0.44
1:AA:1309:G:OP2	16:AM:99:ARG:CZ	2.66	0.44
27:BA:1790:C:O3'	28:BD:210:LYS:HE3	2.18	0.44
47:B2:52:ALA:HA	47:B2:55:ARG:HH11	1.82	0.44
47:B2:54:ALA:O	47:B2:56:ILE:CA	2.57	0.44
27:BA:148:C:C2'	27:BA:149:A:C8	2.85	0.44
27:BA:1080:C:H2'	27:BA:1081:U:O4'	2.17	0.44
1:AA:3(A):G:C5	1:AA:1004:A:H1'	2.53	0.44
1:AA:752:G:H1'	1:AA:754:C:N4	2.33	0.44
1:AA:695:A:H2'	1:AA:696:A:O4'	2.17	0.44
1:AA:254:G:H4'	20:AQ:18:THR:CB	2.47	0.44
1:AA:20:U:N1	1:AA:916:G:N2	2.65	0.44
27:BA:1805:U:H2'	27:BA:1806:C:H6	1.83	0.44
3:AW:65:G:O2'	3:AW:66:A:H5'	2.17	0.44
5:AB:54:THR:O	5:AB:58:ILE:HG13	2.17	0.44
32:BH:19:ASN:O	32:BH:21:ASN:N	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:184:C:H4'	27:BA:217:G:N2	2.33	0.44
3:AW:14:A:C6	3:AW:22:G:C4	3.06	0.44
34:BN:11:ILE:O	34:BN:11:ILE:HG22	2.18	0.44
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.53	0.44
1:AA:531:U:H4'	1:AA:532:A:O5'	2.17	0.44
1:AA:370:C:H42	1:AA:391:G:H1	1.66	0.44
1:AA:1128:C:H42	1:AA:1143:G:H1	1.63	0.44
7:AD:79:PHE:HE1	7:AD:204:ILE:HG13	1.82	0.44
1:AA:962:C:H2'	1:AA:963:G:O4'	2.18	0.44
20:AQ:58:GLU:HB2	20:AQ:74:LEU:HB3	1.99	0.44
11:AH:120:THR:O	11:AH:121:ASP:C	2.56	0.44
49:B0:35:ASN:CA	49:B0:68:VAL:CG2	2.95	0.43
49:B0:45:PHE:CE1	49:B0:78:PHE:CA	2.95	0.43
48:B3:8:LEU:HD23	48:B3:31:LEU:HD23	1.98	0.43
27:BA:2080:G:H5'	50:B4:33:VAL:N	2.33	0.43
50:B4:68:ARG:HB3	50:B4:72:LYS:HA	2.00	0.43
53:B7:11:LYS:HG3	53:B7:12:ARG:N	2.33	0.43
53:B7:43:THR:C	53:B7:45:SER:N	2.68	0.43
27:BA:1050:A:N1	27:BA:2751:G:C4	2.85	0.43
27:BA:1657:C:C3'	27:BA:1657:C:C6	3.01	0.43
27:BA:2264:C:N3	27:BA:2265:U:C6	2.86	0.43
27:BA:2302:G:C2	27:BA:2315:G:C5	3.06	0.43
27:BA:2320:A:N7	38:BS:9:PRO:CD	2.80	0.43
27:BA:2330:G:N2	27:BA:2331:G:C4	2.79	0.43
27:BA:2352:A:C2'	27:BA:2353:G:O5'	2.66	0.43
27:BA:2440:C:H5''	27:BA:2587:A:H4'	1.99	0.43
27:BA:2532:G:O2'	27:BA:2533:A:H5'	2.18	0.43
27:BA:2548:G:C6	27:BA:2549:G:C5	3.05	0.43
27:BA:2578:G:H2'	27:BA:2579:C:H5''	1.98	0.43
27:BA:2611:U:H5'	27:BA:2611:U:H6	1.83	0.43
27:BA:2620:C:HO2'	27:BA:2621:A:P	2.35	0.43
27:BA:2048:G:N2	27:BA:2620:C:N3	2.64	0.43
27:BA:2048:G:C5	27:BA:2621:A:C2	3.03	0.43
27:BA:2638:G:C6	27:BA:2776:A:OP2	2.70	0.43
27:BA:2792:G:C2	27:BA:2804:C:C4	3.06	0.43
27:BA:29:U:C4'	45:BU:11:ARG:HH22	2.31	0.43
27:BA:474:G:C6	27:BA:510:C:N4	2.86	0.43
27:BA:532:A:H2'	27:BA:533:G:C4'	2.48	0.43
27:BA:792:G:H21	27:BA:2072:G:C2'	2.31	0.43
27:BA:2210:G:N7	28:BD:148:GLY:O	2.51	0.43
28:BD:197:GLY:N	28:BD:199:ARG:HH11	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BE:267:ARG:HD3	29:BE:297:LYS:HB3	1.99	0.43
30:BF:87:ARG:O	30:BF:88:SER:HB2	2.17	0.43
31:BG:134:LEU:O	31:BG:135:VAL:CG2	2.65	0.43
31:BG:98:PHE:N	31:BG:98:PHE:CD2	2.85	0.43
32:BH:159:LYS:N	32:BH:162:ARG:CZ	2.74	0.43
32:BH:34:ARG:HB3	32:BH:36:PHE:HE1	1.83	0.43
33:BI:39:ALA:O	33:BI:40:THR:O	2.36	0.43
34:BN:103:VAL:O	34:BN:104:TYR:CE2	2.68	0.43
35:BO:11:ALA:CA	35:BO:99:PHE:CB	2.96	0.43
36:BP:55:GLN:CG	36:BP:56:LYS:N	2.80	0.43
44:BR:115:GLU:OE1	51:B5:56:GLN:NE2	2.43	0.43
44:BR:90:ARG:HB3	44:BR:91:GLN:H	1.57	0.43
38:BS:104:ILE:CG2	38:BS:104:ILE:O	2.65	0.43
38:BS:103:ASP:OD2	38:BS:105:GLY:CA	2.66	0.43
38:BS:26:LEU:HD22	38:BS:101:VAL:HG21	1.99	0.43
45:BU:99:ALA:HB3	45:BU:106:PHE:CZ	2.41	0.43
45:BU:55:ARG:O	45:BU:57:PHE:C	2.57	0.43
45:BU:64:ARG:O	45:BU:67:ALA:HB3	2.18	0.43
27:BA:996:A:O3'	45:BU:93:LYS:HE2	2.16	0.43
45:BU:43:ALA:HB2	46:BV:75:LYS:CB	2.40	0.43
43:BZ:141:MET:HB2	43:BZ:171:VAL:CG1	2.47	0.43
33:BI:92:SER:O	33:BI:93:ILE:HG22	2.18	0.43
41:BX:22:ASN:CA	41:BX:68:LEU:HG	2.48	0.43
41:BX:22:ASN:CB	41:BX:68:LEU:HG	2.48	0.43
41:BX:55:GLN:N	41:BX:63:LYS:O	2.51	0.43
17:AN:26:ARG:HB3	17:AN:43:CYS:HB2	2.01	0.43
20:AQ:22:LEU:HD11	20:AQ:24:GLU:HG2	1.99	0.43
7:AD:120:LEU:HG	7:AD:125:HIS:HB2	2.00	0.43
1:AA:908:A:H2'	1:AA:909:A:C8	2.52	0.43
11:AH:13:ILE:O	11:AH:17:THR:OG1	2.30	0.43
1:AA:162:A:C1'	1:AA:348:G:O2'	2.64	0.43
1:AA:393:A:P	19:AP:12:LYS:HD3	2.58	0.43
27:BA:668:G:C2'	27:BA:670:A:H62	2.29	0.43
21:AR:46:GLU:CB	21:AR:85:LEU:HD13	2.47	0.43
27:BA:162:U:H4'	27:BA:171:G:N3	2.33	0.43
10:AG:93:PRO:HA	10:AG:96:GLN:HB2	1.98	0.43
27:BA:1375:C:H2'	27:BA:1376:C:H6	1.83	0.43
7:AD:101:LEU:HB2	7:AD:138:TYR:HB3	2.00	0.43
1:AA:1326:C:H5"	24:AU:19:GLY:CA	2.48	0.43
5:AB:95:GLN:O	5:AB:96:ARG:C	2.56	0.43
1:AA:1511:G:C6	1:AA:1512:U:N3	2.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:996:A:N1	1:AA:1046:A:H4'	2.32	0.43
1:AA:517:G:N2	1:AA:533:A:OP2	2.51	0.43
5:AB:205:ASP:O	5:AB:211:ILE:HD11	2.18	0.43
1:AA:500:G:N2	1:AA:546:G:H1'	2.32	0.43
29:BE:274:GLY:H	29:BE:291:GLY:C	2.21	0.43
51:B5:33:CYS:HB2	51:B5:38:GLY:N	2.33	0.43
52:B6:28:ARG:O	52:B6:29:ARG:C	2.57	0.43
27:BA:1294:U:O2'	44:BR:26:LYS:NZ	2.43	0.43
27:BA:1367:A:C2'	53:B7:25:LYS:CD	2.96	0.43
27:BA:1818:U:O2	28:BD:153:LEU:N	2.51	0.43
27:BA:2065:C:O2	27:BA:2449:U:C4	2.71	0.43
27:BA:2218:G:C2	27:BA:2219:G:N7	2.86	0.43
27:BA:2246:G:O2'	27:BA:2247:A:H5''	2.11	0.43
27:BA:2255:G:C6	27:BA:2256:G:N9	2.86	0.43
27:BA:2295:C:C5	27:BA:2338:G:N1	2.86	0.43
27:BA:2325:G:C4	27:BA:2326:C:H5	2.36	0.43
27:BA:2509:G:HO2'	27:BA:2510:C:C5'	2.23	0.43
27:BA:2519:U:O2	27:BA:2542:A:C6	2.70	0.43
27:BA:2605:U:C6	27:BA:2605:U:C3'	3.01	0.43
27:BA:2648:C:C2	27:BA:2673:G:C2	3.05	0.43
27:BA:2747:G:O2'	27:BA:2748:A:H5''	2.18	0.43
27:BA:535:C:C3'	45:BU:53:LYS:CE	2.63	0.43
27:BA:558:G:H2'	27:BA:559:G:H8	1.82	0.43
27:BA:685:A:C1'	27:BA:688:U:O4	2.66	0.43
27:BA:746:A:C8	27:BA:2611:U:O3'	2.71	0.43
27:BA:769:G:H4'	27:BA:1379:A:N6	2.33	0.43
27:BA:853:G:H2'	27:BA:854:G:H8	1.82	0.43
26:BB:59:A:H2'	26:BB:60:C:O4'	2.18	0.43
28:BD:141:HIS:HE1	28:BD:192:GLY:CA	2.31	0.43
27:BA:1819:A:C4	28:BD:177:SER:OG	2.71	0.43
29:BE:41:PHE:HE1	29:BE:173:ARG:HH11	1.65	0.43
29:BE:42:ALA:CB	29:BE:310:PHE:CD2	3.01	0.43
27:BA:605:C:O5'	30:BF:105:LYS:HE2	2.18	0.43
30:BF:111:VAL:CA	30:BF:114:ALA:HB3	2.49	0.43
31:BG:14:ARG:H	31:BG:14:ARG:CD	2.28	0.43
31:BG:56:ARG:CG	31:BG:65:GLU:CG	2.96	0.43
31:BG:98:PHE:HA	31:BG:104:PHE:CE2	2.27	0.43
32:BH:34:ARG:HD2	32:BH:36:PHE:CE1	2.52	0.43
33:BI:12:LYS:O	33:BI:13:GLY:C	2.57	0.43
33:BI:2:LYS:HD3	33:BI:39:ALA:CB	2.47	0.43
34:BN:44:ALA:O	34:BN:45:VAL:CG2	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:151:SER:HB3	37:BQ:155:GLY:CA	2.48	0.43
37:BQ:32:LYS:HD2	37:BQ:33:MET:N	2.32	0.43
44:BR:28:LEU:C	44:BR:28:LEU:HD13	2.37	0.43
38:BS:27:LEU:CB	38:BS:33:ARG:HH21	1.97	0.43
26:BB:7:G:O3'	38:BS:37:ARG:HB3	2.17	0.43
38:BS:53:ASN:O	38:BS:53:ASN:CG	2.55	0.43
45:BU:61:TRP:CE3	45:BU:93:LYS:HA	2.53	0.43
45:BU:7:GLY:O	45:BU:8:ILE:CD1	2.63	0.43
46:BV:89:ASN:O	46:BV:90:PHE:C	2.56	0.43
40:BW:17:VAL:CA	40:BW:20:VAL:CG2	2.95	0.43
43:BZ:150:GLY:H	43:BZ:164:PRO:HA	1.83	0.43
43:BZ:166:LEU:HD13	43:BZ:167:THR:OG1	2.17	0.43
27:BA:292:C:C2'	27:BA:293:U:H3	2.21	0.43
42:BY:19:ARG:NH1	42:BY:68:ASP:N	2.66	0.43
42:BY:73:HIS:CE1	42:BY:90:PRO:CA	2.91	0.43
43:BZ:26:LYS:CA	43:BZ:84:TYR:OH	2.66	0.43
1:AA:1320:C:H2'	1:AA:1321:C:C6	2.53	0.43
1:AA:1060:C:C4'	13:AJ:52:GLY:N	2.81	0.43
12:AI:115:GLY:HA2	13:AJ:57:LYS:NZ	2.33	0.43
12:AI:114:TYR:HB2	13:AJ:60:ARG:NH1	2.34	0.43
27:BA:1566:A:N1	28:BD:212:HIS:CG	2.79	0.43
27:BA:1547:C:H2'	27:BA:1548:C:H6	1.83	0.43
47:B2:9:ARG:HB2	47:B2:59:ILE:CD1	2.48	0.43
27:BA:110:G:N2	27:BA:111:A:C4	2.86	0.43
41:BX:28:VAL:HG21	41:BX:64:ALA:HB2	2.01	0.43
41:BX:45:TYR:O	41:BX:47:VAL:O	2.35	0.43
41:BX:46:ASP:HB2	41:BX:47:VAL:H	1.64	0.43
15:AL:10:LEU:O	20:AQ:32:TYR:HE1	2.00	0.43
27:BA:1707:G:H2'	27:BA:1708:C:C6	2.53	0.43
7:AD:23:GLY:O	7:AD:112:VAL:O	2.36	0.43
1:AA:1181:G:C3'	1:AA:1184:G:H5'	2.48	0.43
8:AE:76:ILE:HG21	8:AE:142:LEU:HD22	2.00	0.43
3:AW:41:U:H4'	10:AG:143:ARG:CB	2.35	0.43
33:BI:134:HIS:N	33:BI:137:VAL:O	2.48	0.43
27:BA:1906:G:H2'	27:BA:1907:G:C8	2.52	0.43
27:BA:323:G:OP2	27:BA:340:A:C2	2.71	0.43
1:AA:667:G:H4'	18:AO:51:HIS:CG	2.52	0.43
27:BA:707:G:H1	27:BA:724:U:H3	1.66	0.43
1:AA:253:U:H4'	1:AA:276:G:O2'	2.18	0.43
21:AR:31:LEU:HD11	21:AR:62:GLU:HG3	2.00	0.43
10:AG:149:ARG:HD2	14:AK:59:TYR:OH	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:528:C:N4	15:AL:49:ASN:CG	2.71	0.43
1:AA:770:C:C4	1:AA:771:G:N7	2.86	0.43
27:BA:161:U:H5'	27:BA:162:U:C6	2.53	0.43
5:AB:93:VAL:HG11	5:AB:97:TRP:HA	2.00	0.43
1:AA:897:C:OP1	20:AQ:101:ARG:NH2	2.50	0.43
1:AA:980:C:H2'	1:AA:981:U:O4'	2.18	0.43
27:BA:521:G:H2'	27:BA:522:G:H8	1.81	0.43
9:AF:89:MET:HG2	21:AR:76:LEU:HD21	2.00	0.43
51:B5:34:PRO:HD2	51:B5:36:CYS:CB	2.48	0.43
2:AV:58:A:C5	2:AV:61:C:C4	3.06	0.43
48:B3:7:LYS:CG	48:B3:8:LEU:N	2.81	0.43
50:B4:14:ILE:HG21	50:B4:37:SER:CB	2.44	0.43
50:B4:63:PHE:C	50:B4:65:ASP:N	2.71	0.43
51:B5:44:HIS:CG	51:B5:52:TYR:OH	2.71	0.43
52:B6:16:ALA:HA	52:B6:50:PHE:CE2	2.54	0.43
52:B6:49:VAL:O	52:B6:50:PHE:CD1	2.71	0.43
52:B6:14:SER:CA	52:B6:51:ARG:O	2.66	0.43
27:BA:1156:A:H8	45:BU:55:ARG:NH2	1.88	0.43
27:BA:142(A):A:C4'	34:BN:21:ARG:HH21	2.23	0.43
27:BA:2217:G:C2	27:BA:2218:G:N7	2.86	0.43
27:BA:2226:C:C3'	27:BA:2227:A:O4'	2.64	0.43
27:BA:2249:U:N3	27:BA:2253:G:OP1	2.43	0.43
27:BA:2259:G:H2'	27:BA:2260:C:H6	1.82	0.43
27:BA:2304:G:C2'	27:BA:2305:A:O5'	2.66	0.43
27:BA:2322:A:OP1	27:BA:2322:A:C4'	2.67	0.43
27:BA:2328:A:C6	27:BA:2329:G:N7	2.83	0.43
27:BA:2352:A:N3	27:BA:2353:G:O4'	2.51	0.43
27:BA:2404:C:N4	27:BA:2405:G:C4	2.86	0.43
27:BA:631:A:C2	27:BA:2415:G:C2	2.98	0.43
27:BA:2416:C:C3'	27:BA:2417:C:C5'	2.96	0.43
27:BA:2482:G:C3'	27:BA:2483:C:H5'	2.41	0.43
27:BA:2588:G:H5''	27:BA:2589:A:OP2	2.19	0.43
27:BA:2596:U:H3'	27:BA:2597:G:C8	2.53	0.43
27:BA:2638:G:H2'	27:BA:2775:A:C2	2.53	0.43
27:BA:2666:C:OP2	27:BA:2667:C:C5	2.66	0.43
27:BA:2689:U:C4'	27:BA:2690:C:C5'	2.78	0.43
27:BA:2780:G:N2	34:BN:80:LYS:HZ1	2.15	0.43
27:BA:856:C:O2'	49:B0:24:LYS:HG2	2.13	0.43
27:BA:911:A:OP1	27:BA:912:C:H6	2.01	0.43
27:BA:948:G:H1	27:BA:969:U:H3	1.65	0.43
26:BB:28:C:H2'	26:BB:29:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BB:55:U:H2'	26:BB:56:G:C8	2.53	0.43
26:BB:6:C:H2'	26:BB:7:G:C8	2.53	0.43
28:BD:142:ASN:O	28:BD:189:ALA:HA	2.18	0.43
28:BD:166:LYS:CB	28:BD:171:VAL:HA	2.45	0.43
29:BE:180:ILE:CD1	29:BE:187:HIS:CB	2.97	0.43
30:BF:35:VAL:HB	30:BF:36:ARG:H	1.39	0.43
33:BI:6:LEU:CD2	33:BI:14:LYS:HD3	2.28	0.43
34:BN:25:GLN:CA	34:BN:28:GLU:HG3	2.28	0.43
34:BN:55:GLU:O	34:BN:56:LYS:C	2.56	0.43
35:BO:103:ALA:CB	35:BO:105:GLU:CG	2.91	0.43
35:BO:107:ARG:CG	35:BO:115:ILE:HG21	2.48	0.43
35:BO:53:LYS:O	35:BO:54:LYS:C	2.56	0.43
44:BR:101:ALA:O	51:B5:41:LEU:HD11	2.07	0.43
45:BU:18:LEU:HD22	45:BU:18:LEU:HA	1.79	0.43
45:BU:21:ALA:CB	45:BU:24:PHE:HZ	2.27	0.43
46:BV:22:VAL:HG12	46:BV:23:GLU:N	2.33	0.43
27:BA:1162:G:O2'	46:BV:23:GLU:OE1	2.35	0.43
40:BW:6:ILE:HG13	40:BW:104:THR:HG22	1.99	0.43
40:BW:14:PRO:O	40:BW:15:ARG:C	2.57	0.43
40:BW:23:LEU:HD23	40:BW:23:LEU:C	2.36	0.43
40:BW:55:ALA:N	40:BW:107:LEU:CD1	2.72	0.43
40:BW:58:ALA:C	40:BW:60:ASN:N	2.71	0.43
42:BY:20:HIS:C	42:BY:22:GLN:H	2.20	0.43
43:BZ:38:ALA:C	43:BZ:40:ASP:N	2.71	0.43
1:AA:1220:G:H1'	22:AS:52:TYR:CD2	2.53	0.43
27:BA:1788:C:C2	27:BA:1789:A:C8	3.07	0.43
28:BD:216:ALA:CB	28:BD:223:ASN:H	2.31	0.43
47:B2:19:GLU:OE1	47:B2:20:LEU:N	2.50	0.43
41:BX:11:THR:O	41:BX:12:GLU:C	2.56	0.43
41:BX:1:SER:C	41:BX:2:TRP:CD1	2.92	0.43
3:AW:43:G:H2'	3:AW:44:A:C8	2.52	0.43
1:AA:769:G:H22	1:AA:811:C:H1'	1.84	0.43
27:BA:1906:G:H1'	27:BA:1929:G:N7	2.32	0.43
1:AA:21:G:H2'	1:AA:22:G:C8	2.54	0.43
1:AA:1328:C:OP1	16:AM:28:ALA:CB	2.66	0.43
1:AA:1328:C:P	16:AM:28:ALA:CB	3.06	0.43
27:BA:1559:G:N3	27:BA:1559:G:C2'	2.81	0.43
27:BA:1857:G:C2	27:BA:1858:G:O6	2.71	0.43
1:AA:127:G:H4'	1:AA:635:G:O2'	2.18	0.43
27:BA:1173:G:N2	27:BA:1174:A:C2	2.84	0.43
27:BA:1812:A:H2'	27:BA:1813:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:160:A:C1'	1:AA:344:A:N7	2.81	0.43
1:AA:160:A:H1'	1:AA:344:A:N7	2.33	0.43
1:AA:626:U:H5''	19:AP:38:TYR:CD2	2.54	0.43
16:AM:33:ALA:HA	16:AM:59:TYR:HE2	1.83	0.43
48:B3:4:LEU:O	48:B3:37:LEU:N	2.49	0.43
50:B4:62:ARG:HG3	50:B4:62:ARG:H	1.42	0.43
51:B5:44:HIS:C	51:B5:52:TYR:CZ	2.92	0.43
51:B5:45:ILE:N	51:B5:52:TYR:OH	2.50	0.43
27:BA:1034:G:C4'	55:B9:18:ARG:NH2	2.80	0.43
27:BA:1163:G:C3'	27:BA:1164:G:O5'	2.63	0.43
27:BA:1665:A:H1'	35:BO:67:ARG:HD3	2.00	0.43
27:BA:1996:C:C5'	27:BA:1996:C:C6	2.95	0.43
27:BA:2044:C:N4	27:BA:2624:G:N1	2.32	0.43
27:BA:2065:C:H5'	27:BA:2252:G:O4'	2.18	0.43
27:BA:2267:A:C6	27:BA:2272:U:O4	2.72	0.43
27:BA:2259:G:N3	27:BA:2282:G:N1	2.66	0.43
27:BA:2297:C:O2'	27:BA:2298:A:O4'	2.28	0.43
27:BA:2302:G:C5	27:BA:2315:G:N1	2.86	0.43
27:BA:2298:A:H1'	27:BA:2322:A:O2'	2.18	0.43
27:BA:2392:A:C8	27:BA:2393:A:N9	2.86	0.43
27:BA:2475:C:C2'	27:BA:2477:C:P	3.07	0.43
27:BA:2478:A:H3'	27:BA:2478:A:C8	2.53	0.43
27:BA:2523:G:N3	27:BA:2765:A:N6	2.66	0.43
27:BA:2772:C:C4	27:BA:2773:C:C4	3.05	0.43
27:BA:2834:G:O6	27:BA:2835:A:C2	2.71	0.43
27:BA:2840:C:H4'	44:BR:53:HIS:NE2	2.33	0.43
27:BA:2854:G:C6	27:BA:2855:C:C4	3.06	0.43
27:BA:2885:C:O2	27:BA:2885:C:C2'	2.64	0.43
27:BA:2892:A:C2'	27:BA:2893:G:C1'	2.94	0.43
27:BA:563:G:H2'	27:BA:563:G:N3	2.33	0.43
27:BA:685:A:N3	27:BA:688:U:O4	2.51	0.43
27:BA:775:G:N2	27:BA:787:U:H2'	2.33	0.43
27:BA:968:G:H2'	27:BA:969:U:O4'	2.18	0.43
27:BA:994:C:C3'	45:BU:54:LYS:HG2	2.48	0.43
26:BB:59:A:H5''	26:BB:60:C:OP2	2.17	0.43
28:BD:143:ILE:N	28:BD:143:ILE:CD1	2.54	0.43
28:BD:77:VAL:O	28:BD:78:ALA:C	2.57	0.43
29:BE:267:ARG:CG	29:BE:297:LYS:HD2	2.48	0.43
27:BA:2679:A:H1'	29:BE:300:VAL:CG1	2.49	0.43
30:BF:25:PRO:HG2	30:BF:26:VAL:H	1.83	0.43
31:BG:27:ILE:C	31:BG:29:HIS:N	2.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:10:ILE:CG1	32:BH:49:ILE:HG12	2.48	0.43
27:BA:2093:G:O2'	33:BI:29:PHE:CE2	2.67	0.43
34:BN:31:LEU:C	34:BN:33:GLY:N	2.67	0.43
34:BN:5:GLU:HA	34:BN:109:TYR:CD2	2.52	0.43
34:BN:83:ILE:HD11	34:BN:84:ARG:HE	1.84	0.43
35:BO:60:ALA:HA	35:BO:85:VAL:O	2.18	0.43
36:BP:69:ILE:CG1	36:BP:70:ASP:N	2.30	0.43
44:BR:79:LEU:O	44:BR:80:PHE:C	2.57	0.43
38:BS:54:GLY:O	38:BS:55:ASP:O	2.35	0.43
38:BS:74:PRO:C	38:BS:75:THR:O	2.52	0.43
45:BU:10:ARG:HA	45:BU:13:ARG:HH12	1.83	0.43
45:BU:68:GLY:HA2	45:BU:71:LEU:CB	2.47	0.43
46:BV:54:TYR:O	46:BV:56:VAL:CA	2.63	0.43
45:BU:44:THR:CG2	46:BV:78:VAL:CG1	2.91	0.43
40:BW:13:SER:HB3	40:BW:16:LYS:HB2	2.01	0.43
27:BA:519:U:H5''	40:BW:25:ARG:HH22	1.83	0.43
42:BY:11:GLN:HG3	42:BY:21:LYS:NZ	2.34	0.43
43:BZ:51:LEU:HD21	43:BZ:63:PRO:HA	2.00	0.43
34:BN:10:VAL:CG1	34:BN:36:VAL:CA	2.94	0.43
1:AA:6:G:H4'	1:AA:298:A:O2'	2.19	0.43
1:AA:576:G:N7	1:AA:881:G:C1'	2.68	0.43
27:BA:1917:U:H6	27:BA:1918:A:C8	2.36	0.43
1:AA:16:A:H1'	8:AE:17:ALA:O	2.18	0.43
1:AA:765:G:N1	1:AA:812:C:H1'	2.33	0.43
1:AA:578:C:H1'	1:AA:729:A:H1'	2.00	0.43
1:AA:375:U:C4'	19:AP:17:TYR:CE2	3.01	0.43
1:AA:659:U:H2'	1:AA:660:G:H8	1.83	0.43
1:AA:187:C:O2	23:AT:105:SER:N	2.49	0.43
1:AA:112:G:OP1	19:AP:27:LYS:CG	2.67	0.43
1:AA:531:U:H4'	1:AA:532:A:H5''	2.01	0.43
1:AA:99:C:H2'	1:AA:101:A:C8	2.53	0.43
1:AA:766:A:H61	1:AA:1511:G:H1'	1.83	0.43
11:AH:38:ILE:HG22	11:AH:38:ILE:O	2.18	0.43
27:BA:347:A:H3'	27:BA:347:A:C8	2.53	0.43
27:BA:705:A:C8	27:BA:705:A:OP2	2.71	0.43
48:B3:4:LEU:N	48:B3:4:LEU:HD23	2.32	0.43
48:B3:5:LYS:CG	48:B3:36:VAL:HG12	2.48	0.43
27:BA:1364:G:OP2	50:B4:2:GLN:O	2.36	0.43
52:B6:16:ALA:HB3	52:B6:42:PRO:HB3	2.00	0.43
27:BA:1780:A:H3'	27:BA:1781:C:H5'	1.95	0.43
27:BA:1935:G:N2	27:BA:1962:C:H2'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2000:G:H2'	27:BA:2001:A:C8	2.53	0.43
27:BA:2058:A:H8	27:BA:2058:A:O5'	2.01	0.43
27:BA:2328:A:C6	27:BA:2329:G:C5	3.07	0.43
27:BA:2458:G:C5	27:BA:2490:G:C4	3.07	0.43
27:BA:2561:A:C4	27:BA:2562:U:C6	3.04	0.43
27:BA:2666:C:C2'	27:BA:2667:C:C5'	2.93	0.43
27:BA:2678:C:O2	27:BA:2679:A:H1'	2.07	0.43
27:BA:2727:G:H4'	35:BO:70:ARG:NE	2.33	0.43
27:BA:2736:G:C2'	27:BA:2737:G:H5'	2.48	0.43
27:BA:2743:C:C2	27:BA:2762:G:N2	2.86	0.43
27:BA:2641:G:O6	27:BA:2774:C:C4	2.71	0.43
27:BA:2846:G:C2	27:BA:2847:U:C2	3.06	0.43
27:BA:2850:A:N3	27:BA:2869:G:H4'	2.32	0.43
27:BA:27:G:O2'	27:BA:513:A:N6	2.52	0.43
27:BA:606:U:OP1	30:BF:104:ASP:CB	2.66	0.43
27:BA:830:G:C5	27:BA:2448:A:H8	2.23	0.43
29:BE:39:GLN:OE1	29:BE:174:LEU:CD1	2.57	0.43
29:BE:263:GLU:O	29:BE:264:LEU:HD23	2.18	0.43
31:BG:140:ARG:O	31:BG:143:LYS:HG3	2.17	0.43
32:BH:105:SER:C	32:BH:106:VAL:CG2	2.86	0.43
32:BH:60:HIS:O	32:BH:63:LEU:N	2.52	0.43
33:BI:43:ASN:HA	33:BI:46:ALA:H	1.84	0.43
35:BO:20:LEU:CD2	35:BO:44:LYS:HD3	2.49	0.43
35:BO:25:LEU:HD12	35:BO:38:VAL:O	2.13	0.43
37:BQ:140:TYR:O	37:BQ:142:LYS:O	2.35	0.43
37:BQ:26:LYS:NZ	37:BQ:88:PHE:CB	2.82	0.43
44:BR:105:ARG:N	44:BR:105:ARG:HE	2.13	0.43
27:BA:1287:A:N6	44:BR:106:GLY:HA3	2.33	0.43
44:BR:43:GLU:OE2	44:BR:43:GLU:CA	2.63	0.43
38:BS:115:VAL:C	38:BS:117:ALA:N	2.72	0.43
45:BU:34:ASN:O	45:BU:38:THR:CG2	2.66	0.43
45:BU:60:LEU:O	45:BU:61:TRP:C	2.57	0.43
46:BV:5:ILE:C	46:BV:6:GLN:HG2	2.19	0.43
40:BW:7:ALA:O	40:BW:10:VAL:HG21	2.18	0.43
40:BW:66:GLU:CD	40:BW:67:ASP:N	2.68	0.43
27:BA:295:G:C8	27:BA:345:A:H2	2.36	0.43
27:BA:307:G:N2	27:BA:309:G:H3'	2.32	0.43
42:BY:27:LEU:O	42:BY:28:SER:O	2.37	0.43
43:BZ:39:PHE:HB3	43:BZ:43:PHE:CE1	2.54	0.43
43:BZ:37:LYS:HA	43:BZ:41:ARG:NH1	2.30	0.43
1:AA:977:A:N3	1:AA:1223:C:C5	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1791:A:OP1	28:BD:210:LYS:HB3	2.18	0.43
47:B2:17:GLU:O	47:B2:19:GLU:OE1	2.37	0.43
47:B2:56:ILE:O	47:B2:57:LYS:C	2.55	0.43
27:BA:1394:U:H5''	27:BA:1604:C:P	2.58	0.43
41:BX:8:PRO:HG3	47:B2:33:VAL:HG22	2.00	0.43
33:BI:52:GLN:HA	33:BI:55:GLN:HG3	2.00	0.43
26:BB:100:G:H2'	26:BB:101:A:O4'	2.18	0.43
1:AA:1093:A:C2	1:AA:1109:C:O2	2.72	0.43
1:AA:1163:C:H42	1:AA:1173:G:H1	1.67	0.43
9:AF:49:ALA:HB2	21:AR:78:LEU:C	2.38	0.43
6:AC:178:LEU:O	6:AC:179:ARG:HB2	2.18	0.43
14:AK:120:ARG:HA	14:AK:121:PRO:HD3	1.87	0.43
27:BA:1930:G:O2'	27:BA:1931:U:P	2.77	0.43
23:AT:73:HIS:C	23:AT:74:LYS:HG2	2.38	0.43
1:AA:1006:C:O2	1:AA:1006:C:H2'	2.18	0.43
49:B0:24:LYS:HG3	49:B0:56:ASP:CG	2.25	0.43
49:B0:70:ILE:N	49:B0:70:ILE:CD1	2.81	0.43
49:B0:67:VAL:HG11	49:B0:74:LYS:CE	2.49	0.43
52:B6:19:GLY:O	52:B6:44:ALA:HB2	2.19	0.43
52:B6:48:VAL:C	52:B6:50:PHE:CE1	2.78	0.43
27:BA:459:U:P	53:B7:40:HIS:CG	3.10	0.43
54:B8:29:LYS:C	54:B8:30:ARG:O	2.54	0.43
27:BA:1249:U:C3'	27:BA:1249:U:C6	3.02	0.43
27:BA:1295:C:H5'	44:BR:26:LYS:NZ	2.34	0.43
27:BA:1952:A:C2	35:BO:22:ILE:HG12	2.54	0.43
27:BA:2033:A:N6	27:BA:2036:C:C2	2.87	0.43
27:BA:2199:A:C2'	27:BA:2205:C:C5'	2.95	0.43
27:BA:2210:G:H4'	27:BA:2211:G:C5'	2.49	0.43
27:BA:2233:U:H2'	27:BA:2234:G:O4'	2.18	0.43
27:BA:2264:C:C2'	27:BA:2265:U:C5'	2.91	0.43
27:BA:2290:G:C6	27:BA:2291:U:C2	3.06	0.43
27:BA:2521:C:H4'	27:BA:2565:A:O4'	2.18	0.43
27:BA:2540:C:P	27:BA:2540:C:H3'	2.58	0.43
27:BA:2562:U:O2	27:BA:2563:U:C1'	2.66	0.43
27:BA:2589:A:C6	27:BA:2606:C:N4	2.86	0.43
27:BA:2647:U:O2	27:BA:2648:C:C6	2.71	0.43
27:BA:2733:A:N3	29:BE:318:ASN:CB	2.77	0.43
27:BA:2739:U:C3'	27:BA:2740:A:C5'	2.97	0.43
27:BA:2748:A:O2'	32:BH:62:ALA:CA	2.67	0.43
27:BA:2757:A:H2'	27:BA:2758:A:C8	2.46	0.43
27:BA:2639:A:N3	27:BA:2778:A:C2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2803:C:N3	27:BA:2804:C:N3	2.66	0.43
27:BA:2819:G:C2'	27:BA:2821:A:H62	2.30	0.43
27:BA:2880:C:C4	27:BA:2881:C:C4	3.06	0.43
28:BD:85:ASN:CG	28:BD:86:ARG:HE	2.10	0.43
29:BE:180:ILE:CD1	29:BE:187:HIS:HB3	2.49	0.43
30:BF:6:TYR:C	30:BF:11:ASN:N	2.72	0.43
30:BF:220:THR:O	30:BF:225:PRO:HD2	2.19	0.43
30:BF:167:ASP:OD2	30:BF:231:ARG:C	2.56	0.43
27:BA:449:A:P	30:BF:85:LYS:CA	3.06	0.43
31:BG:56:ARG:HA	31:BG:63:ILE:CA	2.47	0.43
34:BN:135:ILE:CG2	34:BN:139:LEU:HD11	2.48	0.43
34:BN:12:VAL:N	34:BN:38:VAL:HG22	2.33	0.43
35:BO:102:VAL:CG1	35:BO:106:LEU:HD11	2.49	0.43
27:BA:1668:A:P	35:BO:5:GLU:OE2	2.77	0.43
36:BP:117:GLU:CA	36:BP:136:ALA:O	2.45	0.43
36:BP:61:ALA:CA	36:BP:62:ALA:N	2.77	0.43
37:BQ:133:GLU:HG3	37:BQ:134:PHE:N	2.29	0.43
37:BQ:16:ARG:CA	37:BQ:17:ARG:HD3	2.48	0.43
27:BA:1453:A:N6	44:BR:77:ARG:CG	2.82	0.43
38:BS:102:LEU:N	38:BS:102:LEU:CD1	2.81	0.43
45:BU:94:VAL:CG1	45:BU:98:ILE:HD11	2.49	0.43
46:BV:78:VAL:CG2	46:BV:82:ARG:HB2	2.49	0.43
1:AA:1197:G:C2'	1:AA:1198:G:H5'	2.47	0.43
1:AA:977:A:C5	1:AA:1224:G:OP1	2.72	0.43
1:AA:1308:U:H4'	16:AM:92:HIS:HE1	1.82	0.43
1:AA:1014:A:C2	22:AS:34:TRP:CE3	3.05	0.43
27:BA:1826:G:O2'	27:BA:1971:A:O5'	2.36	0.43
27:BA:1339:G:OP1	41:BX:63:LYS:NZ	2.37	0.43
27:BA:133:C:H2'	27:BA:134:C:H6	1.84	0.43
1:AA:564:C:H2'	1:AA:565:U:O4'	2.18	0.43
1:AA:1494:G:H5'	25:AY:115:THR:CA	2.49	0.43
1:AA:675:A:H1'	14:AK:116:HIS:CG	2.53	0.43
27:BA:269:U:C5	27:BA:270(Y):G:O3'	2.71	0.43
10:AG:149:ARG:HD2	14:AK:59:TYR:CZ	2.53	0.43
3:AW:14:A:N6	3:AW:22:G:C4	2.87	0.43
27:BA:1317:A:H2'	27:BA:1318:C:H6	1.80	0.43
1:AA:1506:U:O2'	1:AA:1507:A:H5'	2.19	0.43
27:BA:1859:A:N6	27:BA:1883:G:O2'	2.51	0.43
15:AL:87:GLY:O	15:AL:99:HIS:CE1	2.70	0.43
27:BA:860:U:H2'	27:BA:861:A:H5'	1.99	0.43
27:BA:346:A:H2'	27:BA:347:A:N7	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AI:27:THR:HB	12:AI:62:TYR:HD1	1.83	0.43
1:AA:1449:C:H42	1:AA:1454:G:H1	1.67	0.43
50:B4:14:ILE:O	50:B4:36:TRP:HA	2.18	0.43
50:B4:7:PRO:HD2	50:B4:56:VAL:HG11	2.01	0.43
27:BA:1890:A:C2	27:BA:1891:G:H1'	2.52	0.43
27:BA:2103:C:C2	27:BA:2187:G:C6	3.07	0.43
27:BA:2212:A:C2'	27:BA:2212:A:N3	2.78	0.43
27:BA:2246:G:C2	27:BA:2247:A:C8	3.06	0.43
27:BA:2264:C:C2	27:BA:2265:U:C6	3.07	0.43
27:BA:2337:G:O6	27:BA:2338:G:O6	2.36	0.43
27:BA:2476:A:H3'	27:BA:2476:A:H8	1.83	0.43
27:BA:2478:A:H1'	27:BA:2529:G:C8	2.53	0.43
27:BA:2586:C:H42	27:BA:2608:G:H1'	1.84	0.43
27:BA:2648:C:N3	27:BA:2672:G:N2	2.59	0.43
27:BA:2664:G:N2	27:BA:2665:A:H62	2.16	0.43
27:BA:2756:U:O2	27:BA:2756:U:O2'	2.31	0.43
27:BA:2861:G:H2'	27:BA:2862:G:H8	1.84	0.43
27:BA:2849:U:O4'	27:BA:2868:A:N3	2.50	0.43
27:BA:397:G:OP1	50:B4:40:HIS:CA	2.67	0.43
27:BA:581:C:P	45:BU:33:ARG:NH1	2.80	0.43
27:BA:611:C:O2	27:BA:617:G:N2	2.52	0.43
27:BA:684:G:N1	27:BA:794:G:C2	2.87	0.43
27:BA:747:U:O2	27:BA:2015:A:C2	2.71	0.43
27:BA:792:G:C5	27:BA:2440:C:C1'	3.02	0.43
27:BA:821:A:H2'	27:BA:946:G:H8	1.83	0.43
27:BA:920:G:O5'	27:BA:920:G:H8	2.01	0.43
27:BA:974:G:H3'	46:BV:82:ARG:CZ	2.49	0.43
26:BB:116:G:H4'	38:BS:64:SER:CB	2.49	0.43
28:BD:140:VAL:HG13	28:BD:191:VAL:N	2.31	0.43
28:BD:149:ARG:CG	28:BD:152:GLN:NE2	2.77	0.43
28:BD:86:ARG:H	28:BD:86:ARG:HD2	1.76	0.43
28:BD:89:ASN:N	28:BD:105:ALA:HB2	2.34	0.43
29:BE:247:ARG:C	29:BE:249:THR:H	2.21	0.43
29:BE:96:LEU:O	29:BE:97:THR:HG23	2.19	0.43
30:BF:34:ALA:HB1	30:BF:110:ALA:CB	2.45	0.43
30:BF:238:SER:O	30:BF:241:ALA:N	2.51	0.43
31:BG:97:GLN:CG	31:BG:106:PHE:CD2	3.01	0.43
31:BG:135:VAL:C	31:BG:136:ARG:O	2.57	0.43
32:BH:120:LEU:CD2	32:BH:120:LEU:H	2.15	0.43
32:BH:45:GLU:OE1	32:BH:49:ILE:HA	2.19	0.43
33:BI:7:LYS:HB2	33:BI:12:LYS:CD	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1077:A:H4'	56:BK:92:PRO:HG2	2.01	0.43
35:BO:27:GLY:O	35:BO:28:SER:C	2.54	0.43
35:BO:2:ILE:HB	35:BO:33:ALA:HB3	2.01	0.43
35:BO:1:MET:H3	35:BO:32:TYR:HB3	1.83	0.43
37:BQ:59:ASN:C	37:BQ:61:LEU:N	2.68	0.43
44:BR:61:HIS:HB3	44:BR:64:ARG:CZ	2.49	0.43
38:BS:34:LEU:HD23	38:BS:102:LEU:HA	1.79	0.43
38:BS:23:ARG:NH2	38:BS:35:VAL:HG11	2.34	0.43
38:BS:34:LEU:C	38:BS:103:ASP:CB	2.83	0.43
39:BT:23:HIS:CE1	39:BT:24:LYS:O	2.71	0.43
46:BV:40:VAL:C	46:BV:51:ALA:HB2	2.32	0.43
46:BV:93:ILE:N	46:BV:93:ILE:HD12	2.33	0.43
33:BI:122:ARG:C	33:BI:124:LEU:N	2.71	0.43
33:BI:148:GLN:O	33:BI:149:LYS:HB3	2.18	0.43
33:BI:95:SER:HG	33:BI:98:ILE:CD1	2.01	0.43
42:BY:11:GLN:HG3	42:BY:22:GLN:HE21	1.83	0.43
42:BY:19:ARG:HH12	42:BY:68:ASP:N	2.17	0.43
3:AW:10:G:N1	3:AW:26:G:C2	2.76	0.43
1:AA:1220:G:N2	22:AS:54:GLY:O	2.52	0.43
27:BA:1566:A:N3	28:BD:212:HIS:O	2.52	0.43
47:B2:55:ARG:C	47:B2:58:THR:CB	2.77	0.43
27:BA:1394:U:C5'	27:BA:1603:A:H4'	2.49	0.43
27:BA:63:U:H2'	27:BA:64:A:N7	2.34	0.43
27:BA:66:C:H2'	27:BA:67:U:O4'	2.19	0.43
41:BX:3:ASP:CA	47:B2:24:LYS:CD	2.79	0.43
43:BZ:95:SER:OG	43:BZ:122:ILE:CG2	2.67	0.43
3:AW:31:A:N3	10:AG:144:MET:HE1	2.32	0.43
1:AA:376:G:OP1	19:AP:5:ARG:HB2	2.19	0.43
32:BH:108:TYR:N	32:BH:108:TYR:HD2	2.10	0.43
27:BA:1510:A:H3'	27:BA:1511:A:C8	2.52	0.43
28:BD:234:HIS:HB3	28:BD:235:PRO:HD2	2.00	0.43
27:BA:1805:U:H5''	28:BD:235:PRO:HB3	1.98	0.43
1:AA:551:U:O5'	1:AA:551:U:H6	2.02	0.43
3:AW:65:G:O6	3:AW:66:A:C6	2.71	0.43
1:AA:1240:U:O2	10:AG:30:ILE:O	2.37	0.43
27:BA:881:G:H3'	27:BA:882:G:H8	1.82	0.43
1:AA:54:C:H41	1:AA:352:C:C2'	2.32	0.43
27:BA:264:C:O2'	27:BA:265:A:H3'	2.19	0.43
8:AE:81:GLU:HB3	8:AE:90:VAL:HG22	2.00	0.43
1:AA:322:C:O2'	23:AT:23:ARG:HG3	2.18	0.43
1:AA:834:C:C2	1:AA:853:G:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AR:21:LYS:H	21:AR:55:ARG:NH1	2.16	0.43
1:AA:1378:C:OP1	10:AG:7:ALA:HB3	2.19	0.43
3:AW:50:U:C2'	3:AW:51:G:H5'	2.48	0.43
27:BA:521:G:H2'	27:BA:522:G:C8	2.54	0.43
27:BA:127:A:N6	53:B7:18:PHE:CZ	2.84	0.43
27:BA:2309:A:H3'	27:BA:2310:A:O4'	2.19	0.43
27:BA:2359:C:C2	27:BA:2360:A:C2	3.07	0.43
27:BA:2373:G:N3	27:BA:2374:C:C5	2.87	0.43
27:BA:2396:G:C2	27:BA:2397:G:C8	3.07	0.43
27:BA:2398:U:H2'	27:BA:2399:G:C8	2.52	0.43
27:BA:2414:G:C6	27:BA:2415:G:N7	2.86	0.43
27:BA:2481:G:O2'	27:BA:2482:G:C8	2.71	0.43
27:BA:2489:G:C8	27:BA:2490:G:C8	3.06	0.43
27:BA:2553:G:N3	27:BA:2583:G:O4'	2.51	0.43
27:BA:2636:U:H4'	29:BE:84:ARG:NH1	2.31	0.43
27:BA:2648:C:N3	27:BA:2673:G:C2	2.87	0.43
27:BA:2001:A:H4'	27:BA:2689:U:H2'	2.01	0.43
27:BA:2698:U:H2'	27:BA:2699:C:C5	2.47	0.43
27:BA:2726:U:H2'	27:BA:2726:U:H6	1.62	0.43
27:BA:2731:G:C6	27:BA:2732:G:N1	2.86	0.43
27:BA:2737:G:N1	27:BA:2738:A:C5	2.87	0.43
27:BA:2739:U:H5	27:BA:2763:G:N1	2.17	0.43
27:BA:388:G:OP2	50:B4:29:PRO:HD3	2.18	0.43
27:BA:1818:U:C4	28:BD:155:ARG:NH1	2.87	0.43
28:BD:65:ASP:O	28:BD:66:PHE:HB3	2.19	0.43
28:BD:90:ILE:HG23	28:BD:91:ALA:H	1.82	0.43
29:BE:102:ASP:CG	29:BE:104:PHE:CZ	2.90	0.43
29:BE:242:ASN:N	29:BE:242:ASN:ND2	2.67	0.43
29:BE:63:GLU:HB2	29:BE:64:GLY:H	1.59	0.43
30:BF:6:TYR:CZ	30:BF:139:VAL:N	2.86	0.43
30:BF:1:MET:O	30:BF:18:LEU:HD21	2.15	0.43
30:BF:215:ALA:C	30:BF:242:GLU:HG2	2.37	0.43
30:BF:59:GLU:CA	30:BF:59:GLU:OE2	2.67	0.43
31:BG:102:GLY:O	31:BG:134:LEU:HB2	2.19	0.43
31:BG:51:ARG:NH1	31:BG:72:LYS:CB	2.82	0.43
34:BN:38:VAL:CG1	34:BN:39:VAL:H	2.29	0.43
35:BO:25:LEU:HD11	35:BO:39:VAL:C	2.39	0.43
35:BO:42:THR:CG2	35:BO:57:VAL:HA	2.44	0.43
36:BP:68:GLU:HA	36:BP:71:GLU:OE2	2.18	0.43
37:BQ:92:VAL:HG11	37:BQ:111:THR:N	2.31	0.43
37:BQ:137:ARG:C	37:BQ:137:ARG:HD3	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:23:HIS:CD2	39:BT:28:THR:N	2.87	0.43
27:BA:1251:C:C5'	45:BU:10:ARG:CG	2.97	0.43
45:BU:108:ALA:C	45:BU:110:VAL:N	2.59	0.43
46:BV:39:PHE:CZ	46:BV:42:GLY:N	2.87	0.43
46:BV:68:LYS:CG	46:BV:69:ILE:HD12	2.49	0.43
40:BW:51:LEU:O	40:BW:54:ALA:HB3	2.19	0.43
27:BA:80:G:O5'	27:BA:80:G:C8	2.72	0.43
42:BY:27:LEU:HB3	42:BY:98:VAL:H	1.83	0.43
42:BY:51:LEU:CD2	42:BY:95:ASN:ND2	2.82	0.43
1:AA:1060:C:H5''	13:AJ:51:ARG:CB	2.45	0.43
47:B2:49:LEU:HA	47:B2:49:LEU:HD23	1.87	0.43
47:B2:51:LYS:O	47:B2:53:ILE:C	2.43	0.43
27:BA:134:C:C2	27:BA:135:G:C8	3.06	0.43
27:BA:10:G:C2	27:BA:2629:A:C2	2.93	0.43
27:BA:837:C:H3'	27:BA:838:C:P	2.59	0.43
1:AA:297:G:N2	1:AA:300:A:OP2	2.48	0.43
1:AA:410:G:OP2	7:AD:25:ARG:CZ	2.67	0.43
1:AA:436:C:N3	1:AA:437:U:N3	2.65	0.43
1:AA:104:G:C6	1:AA:105:G:N7	2.87	0.43
27:BA:1626:G:C5	27:BA:1634:A:H2	2.35	0.43
27:BA:120:U:C2'	27:BA:120:U:O2	2.67	0.43
27:BA:978:G:C2	27:BA:986:C:N3	2.86	0.43
27:BA:799:G:OP1	27:BA:800:A:H3'	2.18	0.43
1:AA:401:C:H1'	1:AA:622:A:H1'	2.01	0.43
1:AA:1417:G:N2	1:AA:1484:C:C4	2.87	0.43
27:BA:812:C:H42	27:BA:1195:G:H1	1.66	0.43
49:B0:45:PHE:HE1	49:B0:78:PHE:CG	2.10	0.43
49:B0:75:GLY:O	49:B0:76:ALA:CB	2.66	0.43
48:B3:42:ALA:O	48:B3:45:GLY:N	2.52	0.43
48:B3:3:ARG:C	48:B3:4:LEU:HD23	2.39	0.43
50:B4:6:HIS:HB2	50:B4:56:VAL:HG23	1.88	0.43
51:B5:12:SER:O	51:B5:14:SER:C	2.57	0.43
27:BA:1031:G:C1'	55:B9:8:LYS:NZ	2.81	0.43
27:BA:1248:G:OP1	45:BU:2:PRO:CG	2.62	0.43
27:BA:1294:U:O2'	44:BR:26:LYS:HD2	2.15	0.43
27:BA:1650:G:H1	27:BA:2007:C:H42	1.67	0.43
27:BA:2208:U:H2'	27:BA:2209:C:O4'	2.18	0.43
27:BA:2218:G:H2'	27:BA:2219:G:H8	1.82	0.43
27:BA:2267:A:C5'	27:BA:2268:A:P	3.02	0.43
27:BA:2292:C:N3	27:BA:2293:C:C6	2.59	0.43
27:BA:2334:G:O5'	38:BS:12:ARG:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2261:C:C1'	27:BA:2388:A:H1'	2.48	0.43
27:BA:2410:G:C6	27:BA:2411:A:C6	3.07	0.43
27:BA:2450:A:N3	27:BA:2451:A:C8	2.87	0.43
27:BA:2535:G:N3	27:BA:2535:G:C2'	2.79	0.43
27:BA:2690:C:C4'	27:BA:2690:C:C6	3.02	0.43
27:BA:2725:A:C5	27:BA:2727:G:C4	3.07	0.43
27:BA:2773:C:C2'	27:BA:2774:C:O5'	2.66	0.43
27:BA:2774:C:O2	27:BA:2775:A:C8	2.71	0.43
27:BA:28:A:N6	27:BA:512:G:O2'	2.52	0.43
27:BA:624:C:H2'	27:BA:657:U:OP1	2.19	0.43
27:BA:774:A:HO2'	27:BA:775:G:H8	1.64	0.43
27:BA:918:A:C5'	27:BA:918:A:N3	2.82	0.43
27:BA:995:C:C2	45:BU:57:PHE:HE2	2.37	0.43
28:BD:176:ALA:O	28:BD:177:SER:C	2.57	0.43
29:BE:222:ARG:NH2	29:BE:234:ARG:CB	2.71	0.43
31:BG:103:ASN:CB	31:BG:133:ASN:HA	2.49	0.43
32:BH:153:PRO:O	32:BH:154:GLU:O	2.37	0.43
33:BI:3:VAL:CG1	33:BI:21:VAL:CG2	2.91	0.43
34:BN:39:VAL:N	34:BN:103:VAL:HG13	2.34	0.43
34:BN:19:MET:HE2	34:BN:22:VAL:CB	2.48	0.43
35:BO:63:VAL:HG22	35:BO:106:LEU:CD2	2.49	0.43
35:BO:3:GLN:CA	35:BO:21:VAL:CG1	2.93	0.43
35:BO:65:THR:HG23	35:BO:65:THR:O	2.18	0.43
35:BO:79:PHE:CB	39:BT:22:VAL:CG2	2.96	0.43
37:BQ:91:HIS:O	37:BQ:111:THR:CB	2.62	0.43
44:BR:106:GLY:O	44:BR:107:ASP:O	2.36	0.43
44:BR:63:ARG:HH22	44:BR:77:ARG:CG	2.22	0.43
38:BS:19:ASP:C	38:BS:21:HIS:N	2.63	0.43
38:BS:66:LEU:C	38:BS:67:ALA:O	2.57	0.43
45:BU:15:LYS:O	45:BU:18:LEU:HB2	2.19	0.43
46:BV:35:LEU:H	46:BV:60:VAL:HG13	1.72	0.43
40:BW:8:ARG:C	40:BW:10:VAL:HG23	2.28	0.43
43:BZ:112:LEU:HD21	43:BZ:172:LEU:O	2.15	0.43
42:BY:31:LEU:HA	42:BY:113:GLU:OE2	2.19	0.43
43:BZ:20:ALA:HB3	43:BZ:80:HIS:HA	2.00	0.43
1:AA:976:G:P	1:AA:1358:U:O2'	2.77	0.43
1:AA:1014:A:C4	22:AS:34:TRP:CE3	3.07	0.43
27:BA:133:C:H2'	27:BA:134:C:C6	2.54	0.43
41:BX:11:THR:O	41:BX:15:MET:N	2.50	0.43
41:BX:52:VAL:HG13	41:BX:53:ASN:N	2.34	0.43
1:AA:1319:A:H5'	22:AS:70:LYS:CE	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2:G:H2'	27:BA:3:U:C6	2.53	0.43
2:AV:40:C:H2'	2:AV:41:U:C5'	2.26	0.43
33:BI:63:ALA:O	33:BI:67:LYS:CG	2.54	0.43
1:AA:971:G:HO2'	1:AA:1365:G:C2'	2.22	0.43
3:AW:65:G:C6	3:AW:66:A:C6	3.06	0.43
15:AL:102:ARG:HE	15:AL:109:GLY:C	2.21	0.43
11:AH:44:PHE:O	11:AH:64:LYS:HD3	2.19	0.43
1:AA:367:U:H4'	1:AA:368:U:OP1	2.18	0.43
27:BA:223:A:N1	27:BA:407:G:O2'	2.45	0.43
32:BH:117:GLU:HG2	32:BH:118:GLU:N	2.34	0.43
27:BA:1802:A:H2'	27:BA:1802:A:N3	2.33	0.43
1:AA:390:C:H2'	1:AA:391:G:C8	2.54	0.43
26:BB:87:G:H3'	26:BB:88:C:C5'	2.49	0.43
48:B3:22:ALA:O	48:B3:26:LEU:HD11	2.14	0.43
48:B3:33:GLN:CG	48:B3:34:GLU:H	2.32	0.43
27:BA:126:A:OP2	53:B7:44:VAL:HG11	2.18	0.43
54:B8:8:LYS:HB3	54:B8:9:MET:H	1.56	0.43
55:B9:2:LYS:NZ	55:B9:2:LYS:HA	2.34	0.43
27:BA:1137:G:C5	27:BA:1138:G:H1'	2.53	0.43
27:BA:1363:C:H2'	27:BA:1363:C:O2	2.18	0.43
27:BA:1676:A:C2	27:BA:1993:U:H5'	2.54	0.43
27:BA:2065:C:O2	27:BA:2449:U:O4	2.37	0.43
27:BA:2086:U:H2'	27:BA:2087:G:C8	2.54	0.43
27:BA:2243:U:O2	27:BA:2243:U:H2'	2.18	0.43
27:BA:2275:C:O2'	27:BA:2276:G:OP2	2.37	0.43
27:BA:2283:C:C1'	27:BA:2389:G:H21	2.27	0.43
27:BA:2403:C:C2'	27:BA:2404:C:H5'	2.48	0.43
27:BA:2416:C:HO2'	27:BA:2417:C:H5''	1.80	0.43
27:BA:2438:U:O3'	27:BA:2439:A:H3'	2.19	0.43
27:BA:2446:G:N1	27:BA:2501:C:C6	2.85	0.43
27:BA:2461:C:H2'	27:BA:2462:U:H5'	2.01	0.43
27:BA:2472:G:N2	27:BA:2475:C:C2	2.87	0.43
27:BA:2528:U:O2'	27:BA:2529:G:C8	2.61	0.43
27:BA:2550:G:C5	27:BA:2551:C:C5	3.06	0.43
27:BA:2587:A:O2'	27:BA:2588:G:O5'	2.37	0.43
27:BA:2623:G:N3	27:BA:2623:G:H2'	2.34	0.43
27:BA:2626:C:H5'	27:BA:2626:C:H6	1.72	0.43
27:BA:2710:C:C2'	27:BA:2711:A:C5'	2.94	0.43
27:BA:2745:C:O2'	32:BH:142:GLU:CD	2.57	0.43
27:BA:2768:C:C6	27:BA:2768:C:H3'	2.53	0.43
27:BA:2819:G:C8	27:BA:2819:G:O5'	2.69	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2848:G:C2	27:BA:2849:U:N3	2.67	0.43
27:BA:2689:U:OP2	27:BA:2872:G:N2	2.52	0.43
27:BA:584:C:OP2	45:BU:10:ARG:NH2	2.45	0.43
27:BA:628:G:H8	27:BA:628:G:O5'	2.02	0.43
28:BD:115:ILE:C	28:BD:115:ILE:CD1	2.87	0.43
28:BD:183:ILE:C	28:BD:184:LEU:CD2	2.75	0.43
28:BD:71:ASP:O	28:BD:73:ILE:HG13	2.19	0.43
28:BD:93:ILE:O	28:BD:93:ILE:CG2	2.64	0.43
28:BD:78:ALA:HA	28:BD:94:ASN:ND2	2.33	0.43
30:BF:163:HIS:O	30:BF:166:ILE:CD1	2.66	0.43
30:BF:33:LYS:CA	30:BF:36:ARG:HG2	2.48	0.43
31:BG:140:ARG:C	31:BG:142:ALA:N	2.68	0.43
31:BG:23:VAL:HB	31:BG:130:VAL:HG12	2.00	0.43
31:BG:93:LEU:HD21	31:BG:106:PHE:CG	2.53	0.43
32:BH:122:ILE:CG2	32:BH:123:GLU:N	2.81	0.43
32:BH:82:TYR:OH	32:BH:137:LYS:HG2	2.19	0.43
32:BH:83:GLU:OE2	32:BH:132:VAL:O	2.36	0.43
34:BN:49:ARG:O	34:BN:53:ILE:N	2.51	0.43
27:BA:2674:G:O3'	35:BO:30:ARG:HA	2.19	0.43
35:BO:84:CYS:HB3	35:BO:85:VAL:H	1.57	0.43
36:BP:125:PHE:O	36:BP:130:ARG:CZ	2.67	0.43
44:BR:54:LEU:N	44:BR:54:LEU:CD1	2.82	0.43
38:BS:109:PRO:CB	38:BS:116:PHE:CE2	3.02	0.43
27:BA:2377:A:H4'	38:BS:129:ILE:O	2.19	0.43
38:BS:33:ARG:HG2	38:BS:48:VAL:O	2.19	0.43
38:BS:93:GLN:OE1	38:BS:94:GLU:N	2.51	0.43
45:BU:7:GLY:O	45:BU:8:ILE:HD13	2.18	0.43
40:BW:48:ALA:O	40:BW:51:LEU:N	2.41	0.43
40:BW:8:ARG:HB2	40:BW:102:HIS:ND1	2.33	0.43
42:BY:27:LEU:HD23	42:BY:98:VAL:CB	2.49	0.43
43:BZ:18:MET:HG3	43:BZ:35:ASP:CA	2.47	0.43
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.53	0.43
27:BA:76:C:P	47:B2:51:LYS:HD3	2.59	0.43
1:AA:123:C:H2'	1:AA:124:G:H8	1.84	0.43
1:AA:1515:C:H2'	1:AA:1516:G:H8	1.84	0.43
27:BA:409:C:H2'	27:BA:410:G:C8	2.54	0.43
1:AA:1463:C:OP1	39:BT:47:ARG:CD	2.67	0.43
1:AA:909:A:H3'	1:AA:910:C:H6	1.84	0.43
1:AA:255:G:H4'	20:AQ:17:LYS:HG2	2.01	0.43
1:AA:668:G:N3	18:AO:46:HIS:CE1	2.85	0.43
1:AA:1329:A:P	16:AM:28:ALA:HB3	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:662:G:O2'	1:AA:836:G:OP1	2.36	0.43
27:BA:1777:U:H2'	27:BA:1778:U:C6	2.53	0.43
27:BA:1829:A:N3	27:BA:1829:A:H2'	2.34	0.43
27:BA:1196:C:H2'	27:BA:1197:G:C8	2.54	0.43
27:BA:1202:C:O2	27:BA:1202:C:H2'	2.18	0.43
1:AA:833:U:H3	1:AA:853:G:H1	1.65	0.43
1:AA:143:A:H4'	1:AA:144:G:H8	1.83	0.43
1:AA:1194:U:H4'	8:AE:22:GLY:O	2.18	0.43
27:BA:1420:U:O2	27:BA:1421:G:N7	2.52	0.43
1:AA:146:G:H1	1:AA:176:C:H42	1.65	0.43
5:AB:136:VAL:HA	5:AB:139:LYS:HE3	2.01	0.43
2:AV:58:A:C5	2:AV:61:C:C5	3.07	0.42
49:B0:17:ASN:H	49:B0:18:PRO:HD3	1.82	0.42
48:B3:52:HIS:O	48:B3:53:LEU:C	2.57	0.42
27:BA:396:G:OP1	50:B4:10:VAL:HG22	2.18	0.42
50:B4:38:GLY:O	50:B4:39:VAL:HG23	2.18	0.42
50:B4:6:HIS:CE1	50:B4:55:ARG:CG	3.02	0.42
27:BA:125:G:OP2	53:B7:19:ARG:HD3	2.19	0.42
53:B7:24:THR:OG1	53:B7:26:SER:OG	2.33	0.42
54:B8:36:LYS:HG2	54:B8:40:GLU:OE1	2.19	0.42
54:B8:58:MET:O	54:B8:60:LEU:C	2.57	0.42
27:BA:142(A):A:OP2	27:BA:1143:A:N7	2.52	0.42
27:BA:2041:U:H5'	34:BN:70:PHE:CZ	2.53	0.42
27:BA:2196:C:O2	27:BA:2196:C:C2'	2.67	0.42
27:BA:2299:G:N1	27:BA:2300:G:C6	2.87	0.42
27:BA:2328:A:C8	27:BA:2329:G:N7	2.87	0.42
27:BA:2389:G:OP2	27:BA:2389:G:H3'	2.19	0.42
27:BA:2422:A:C1'	27:BA:2424:C:H5	2.31	0.42
27:BA:2446:G:C4	27:BA:2501:C:H5	2.35	0.42
27:BA:2550:G:C5	27:BA:2551:C:H5	2.34	0.42
27:BA:2626:C:C5	27:BA:2626:C:O5'	2.69	0.42
27:BA:2652:C:C4	27:BA:2653:U:C5	2.90	0.42
27:BA:2741:A:H5'	27:BA:2741:A:H8	1.82	0.42
27:BA:2638:G:N9	27:BA:2775:A:N1	2.67	0.42
27:BA:371:A:O2'	27:BA:372:G:P	2.77	0.42
27:BA:831:G:C6	27:BA:832:G:C5	3.07	0.42
26:BB:48:A:P	38:BS:107:ASN:CG	2.94	0.42
28:BD:75:GLY:O	28:BD:115:ILE:CA	2.64	0.42
28:BD:86:ARG:C	28:BD:87:SER:HG	2.07	0.42
27:BA:1655:A:H5''	29:BE:211:GLN:HG2	1.99	0.42
29:BE:214:VAL:HG21	29:BE:233:ARG:HG2	1.97	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2575:C:P	29:BE:241:TRP:HE1	2.41	0.42
29:BE:203:GLY:CA	29:BE:303:PRO:HG3	2.49	0.42
29:BE:87:GLU:OE1	29:BE:96:LEU:HD12	2.18	0.42
27:BA:38:A:H1'	30:BF:46:TYR:CE2	2.54	0.42
30:BF:81:PRO:HA	30:BF:87:ARG:HG2	0.53	0.42
31:BG:36:ASN:C	31:BG:38:GLU:N	2.72	0.42
27:BA:2303:G:H5''	31:BG:99:ASP:CG	2.40	0.42
32:BH:86:LEU:HD13	32:BH:87:GLU:C	2.39	0.42
33:BI:5:PHE:O	33:BI:6:LEU:HB2	2.19	0.42
44:BR:36:THR:CG2	44:BR:37:THR:H	2.30	0.42
44:BR:48:VAL:O	44:BR:49:ASP:C	2.57	0.42
38:BS:103:ASP:C	38:BS:103:ASP:OD2	2.57	0.42
38:BS:17:ARG:HH11	38:BS:18:THR:CB	2.32	0.42
38:BS:28:LYS:HZ2	38:BS:28:LYS:CB	2.31	0.42
38:BS:46:GLN:OE1	38:BS:57:THR:HG21	2.19	0.42
39:BT:54:THR:C	39:BT:56:ARG:H	2.22	0.42
45:BU:47:TYR:HA	45:BU:50:ARG:HG3	2.00	0.42
40:BW:50:VAL:HG11	40:BW:103:ILE:CG2	2.49	0.42
33:BI:102:LEU:O	33:BI:107:GLY:N	2.48	0.42
42:BY:45:GLY:HA2	42:BY:62:VAL:HG13	1.68	0.42
42:BY:44:ALA:O	42:BY:62:VAL:HG11	2.19	0.42
43:BZ:16:GLU:OE1	43:BZ:16:GLU:CA	2.49	0.42
43:BZ:26:LYS:N	43:BZ:84:TYR:OH	2.52	0.42
1:AA:977:A:C2	1:AA:1223:C:C5	3.06	0.42
13:AJ:51:ARG:HG3	13:AJ:60:ARG:O	2.19	0.42
1:AA:1317:C:C5	17:AN:16:PHE:CD1	3.06	0.42
28:BD:213:LYS:O	28:BD:214:MET:HB2	2.19	0.42
47:B2:26:GLU:OE2	47:B2:26:GLU:N	2.53	0.42
47:B2:36:ALA:O	47:B2:37:GLY:C	2.57	0.42
1:AA:429:U:P	7:AD:13:ARG:NE	2.81	0.42
7:AD:21:LEU:HD22	7:AD:114:ARG:HG3	2.01	0.42
3:AW:44:A:C2'	3:AW:45:G:C5'	2.96	0.42
20:AQ:97:SER:HB2	20:AQ:102:GLY:C	2.39	0.42
1:AA:17:U:N3	1:AA:919:A:C2	2.87	0.42
1:AA:570:G:H2'	1:AA:571:U:C6	2.54	0.42
27:BA:1286:A:N3	27:BA:1329:U:C4	2.87	0.42
3:AW:14:A:N6	3:AW:22:G:C5	2.86	0.42
27:BA:162:U:H4'	27:BA:171:G:N2	2.31	0.42
1:AA:1210:C:H4'	1:AA:1214:C:N4	2.31	0.42
27:BA:273:G:H1	27:BA:364:C:H42	1.66	0.42
27:BA:727:A:C2'	27:BA:728:G:O5'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1483:A:OP2	1:AA:1484:C:C5	2.72	0.42
51:B5:33:CYS:SG	51:B5:34:PRO:HD2	2.60	0.42
2:AV:19:G:H1'	2:AV:57:G:H21	1.84	0.42
48:B3:49:LYS:C	48:B3:51:ALA:N	2.72	0.42
50:B4:17:GLN:NE2	50:B4:34:ASP:HA	2.34	0.42
52:B6:5:GLY:C	52:B6:7:ARG:N	2.42	0.42
27:BA:1022:G:C2	27:BA:1140:C:C4	3.07	0.42
27:BA:2251:G:H2'	27:BA:2251:G:N3	2.34	0.42
27:BA:2255:G:N1	27:BA:2256:G:N9	2.67	0.42
27:BA:2256:G:N2	27:BA:2257:U:H1'	2.33	0.42
27:BA:2313:C:N4	27:BA:2314:C:H42	2.09	0.42
27:BA:2378:A:N9	38:BS:26:LEU:HD22	2.33	0.42
27:BA:2392:A:C6	27:BA:2393:A:N6	2.87	0.42
27:BA:2406:U:H1'	36:BP:57:VAL:HG23	1.93	0.42
27:BA:2494:G:H21	27:BA:2495:G:C1'	2.32	0.42
27:BA:2522:U:C2	27:BA:2543:G:N1	2.79	0.42
27:BA:2571:C:C2'	27:BA:2572:A:OP1	2.66	0.42
27:BA:2572:A:OP2	29:BE:242:ASN:ND2	2.52	0.42
27:BA:2615:U:H2'	27:BA:2616:C:C5	2.53	0.42
27:BA:2634:G:O6	27:BA:2785:C:N4	2.52	0.42
27:BA:2691:C:N4	27:BA:2719:G:H22	2.15	0.42
27:BA:2717:G:N1	27:BA:2718:G:C6	2.86	0.42
27:BA:2839:G:N2	27:BA:2840:C:C1'	2.82	0.42
27:BA:2886:G:N2	27:BA:2887:U:C6	2.83	0.42
27:BA:2578:G:C8	29:BE:237:ASN:CG	2.84	0.42
29:BE:311:PHE:N	29:BE:311:PHE:HD2	2.15	0.42
32:BH:7:PRO:C	32:BH:8:ILE:HG13	2.38	0.42
32:BH:88:LEU:HD22	32:BH:128:THR:HA	2.00	0.42
33:BI:7:LYS:HB2	33:BI:12:LYS:NZ	2.34	0.42
34:BN:78:ILE:HG22	34:BN:79:PHE:HD1	1.81	0.42
35:BO:17:ARG:HG3	35:BO:47:THR:H	1.84	0.42
27:BA:636:G:H3'	36:BP:126:SER:HB3	2.02	0.42
37:BQ:65:ARG:HE	37:BQ:85:ILE:HG21	1.83	0.42
44:BR:104:ARG:HB3	44:BR:107:ASP:OD2	2.19	0.42
44:BR:19:ALA:O	44:BR:20:LEU:C	2.57	0.42
38:BS:27:LEU:HD13	38:BS:28:LYS:CA	2.49	0.42
38:BS:41:LYS:HZ2	38:BS:42:HIS:CG	2.27	0.42
38:BS:76:GLY:O	38:BS:81:ALA:C	2.57	0.42
43:BZ:135:VAL:C	43:BZ:136:VAL:HG23	2.39	0.42
33:BI:94:THR:C	33:BI:96:LYS:N	2.73	0.42
42:BY:51:LEU:CB	42:BY:97:ARG:HE	2.29	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BY:73:HIS:CG	42:BY:91:LEU:HD21	2.54	0.42
42:BY:78:THR:HG22	42:BY:89:ARG:H	1.84	0.42
43:BZ:18:MET:HA	43:BZ:36:ARG:N	2.29	0.42
1:AA:1058:G:P	6:AC:199:LYS:HE3	2.60	0.42
47:B2:59:ILE:CG2	47:B2:60:GLN:N	2.71	0.42
47:B2:60:GLN:HE22	47:B2:65:ASP:HA	1.83	0.42
47:B2:7:GLU:O	47:B2:10:ASP:N	2.43	0.42
41:BX:2:TRP:CD1	41:BX:2:TRP:N	2.86	0.42
41:BX:50:GLU:OE1	41:BX:50:GLU:N	2.52	0.42
1:AA:1346:A:H61	1:AA:1374:A:H3'	1.84	0.42
33:BI:52:GLN:HA	33:BI:55:GLN:NE2	2.34	0.42
27:BA:1942:C:H3'	27:BA:1942:C:P	2.59	0.42
1:AA:36:C:O3'	15:AL:117:ARG:NH2	2.52	0.42
27:BA:2408:U:C2	27:BA:2409:G:N7	2.87	0.42
7:AD:78:LEU:CD2	7:AD:139:ARG:NH2	2.81	0.42
1:AA:1463:C:OP1	39:BT:47:ARG:HD3	2.19	0.42
1:AA:914:A:H2'	1:AA:915:A:C8	2.53	0.42
1:AA:578:C:H2'	1:AA:579:G:H8	1.82	0.42
3:AW:65:G:C2'	3:AW:66:A:H5'	2.49	0.42
1:AA:520:A:N6	1:AA:529:G:C2	2.87	0.42
27:BA:587:C:H4'	27:BA:588:U:OP2	2.19	0.42
27:BA:285:C:C4	27:BA:286:C:N4	2.87	0.42
1:AA:1216:G:H5''	17:AN:5:ALA:HB2	2.02	0.42
27:BA:123:G:H2'	27:BA:124:G:O4'	2.19	0.42
1:AA:69:G:H1	1:AA:99:C:H42	1.65	0.42
5:AB:15:VAL:HG21	5:AB:209:ARG:HB3	2.01	0.42
27:BA:1513:C:H2'	27:BA:1514:U:C5	2.54	0.42
16:AM:108:ARG:HD2	16:AM:108:ARG:HA	1.86	0.42
27:BA:500:G:H3'	27:BA:500:G:C8	2.54	0.42
1:AA:14:U:O5'	1:AA:14:U:H6	2.02	0.42
27:BA:536:A:H8	27:BA:536:A:O5'	2.02	0.42
52:B6:37:LEU:O	52:B6:38:LYS:HG2	2.12	0.42
52:B6:53:LYS:HE3	52:B6:53:LYS:HB3	1.90	0.42
54:B8:15:LYS:HE3	54:B8:15:LYS:HB2	1.72	0.42
27:BA:1138:G:OP1	34:BN:57:TYR:CZ	2.69	0.42
27:BA:1162:G:H2'	27:BA:1163:G:C8	2.55	0.42
27:BA:1968:G:H3'	27:BA:1968:G:H8	1.84	0.42
27:BA:2077:A:OP2	27:BA:2238:G:N1	2.49	0.42
27:BA:2080:G:P	50:B4:32:HIS:HD2	2.41	0.42
27:BA:2249:U:C4	27:BA:2253:G:OP1	2.72	0.42
27:BA:2320:A:H62	38:BS:9:PRO:HG3	0.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2322:A:C2	27:BA:2323:G:C8	3.07	0.42
27:BA:2348:U:C2'	27:BA:2349:G:H5'	2.49	0.42
27:BA:2410:G:C2	27:BA:2411:A:N9	2.88	0.42
3:AW:76:A:C4	27:BA:2421:G:C4	3.04	0.42
27:BA:2461:C:O5'	27:BA:2461:C:C6	2.72	0.42
27:BA:2512:C:O2	27:BA:2513:G:C1'	2.67	0.42
27:BA:2547:U:C4	27:BA:2566:A:C5	3.08	0.42
27:BA:2707:G:O2'	27:BA:2708:G:P	2.76	0.42
27:BA:680:G:H2'	27:BA:681:G:C8	2.54	0.42
27:BA:681:G:H1	27:BA:796:C:H42	1.65	0.42
27:BA:826:U:C6	27:BA:828:U:C6	3.07	0.42
28:BD:140:VAL:HG22	28:BD:191:VAL:HA	2.02	0.42
29:BE:222:ARG:HB3	29:BE:226:HIS:O	2.20	0.42
27:BA:2682:U:C1'	29:BE:49:THR:HA	2.49	0.42
30:BF:11:ASN:HD21	30:BF:160:LEU:CD1	2.33	0.42
30:BF:222:ASP:O	30:BF:231:ARG:NH1	2.53	0.42
30:BF:38:ALA:HB1	30:BF:221:GLU:HG2	2.01	0.42
30:BF:63:SER:O	30:BF:64:GLY:C	2.57	0.42
31:BG:57:THR:CG2	31:BG:58:VAL:N	2.62	0.42
32:BH:96:SER:C	32:BH:97:LYS:O	2.45	0.42
33:BI:3:VAL:HG11	33:BI:21:VAL:HG23	1.98	0.42
34:BN:108:PRO:CD	34:BN:109:TYR:H	2.32	0.42
34:BN:90:LYS:HD3	34:BN:95:ARG:NE	2.34	0.42
34:BN:95:ARG:C	34:BN:97:ALA:N	2.71	0.42
35:BO:105:GLU:HB2	35:BO:106:LEU:H	1.57	0.42
35:BO:106:LEU:O	35:BO:109:LYS:N	2.49	0.42
27:BA:1666:G:O3'	35:BO:6:SER:HB3	2.18	0.42
36:BP:102:ASP:O	36:BP:103:ALA:HB3	2.17	0.42
37:BQ:54:VAL:O	37:BQ:54:VAL:CG1	2.67	0.42
44:BR:65:LEU:O	44:BR:68:ARG:CB	2.68	0.42
38:BS:110:THR:C	38:BS:116:PHE:CD1	2.93	0.42
38:BS:83:LEU:C	38:BS:85:GLY:N	2.72	0.42
45:BU:32:TYR:N	45:BU:32:TYR:CD2	2.79	0.42
45:BU:7:GLY:O	45:BU:9:VAL:CG2	2.52	0.42
45:BU:87:ASN:O	45:BU:88:ILE:HD13	2.19	0.42
46:BV:59:GLU:HG2	46:BV:99:GLN:HA	2.00	0.42
40:BW:110:LYS:HD2	40:BW:110:LYS:HA	1.79	0.42
43:BZ:90:GLU:O	43:BZ:91:PRO:C	2.57	0.42
33:BI:89:LEU:HD12	33:BI:122:ARG:HA	2.01	0.42
42:BY:46:ASP:N	42:BY:62:VAL:HG21	2.34	0.42
1:AA:1317:C:N4	17:AN:16:PHE:CE1	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1971:A:H8	27:BA:1971:A:H3'	1.84	0.42
27:BA:63:U:H2'	27:BA:64:A:C8	2.54	0.42
40:BW:90:ARG:HB3	40:BW:90:ARG:CZ	2.41	0.42
34:BN:106:GLY:O	34:BN:107:ASN:OD1	2.28	0.42
1:AA:436:C:H3'	1:AA:437:U:C6	2.54	0.42
1:AA:436:C:H5''	1:AA:437:U:P	2.58	0.42
1:AA:983:A:H4'	17:AN:3:ARG:NH2	2.29	0.42
11:AH:16:ALA:HB1	11:AH:21:LYS:HB2	2.01	0.42
1:AA:971:G:N9	1:AA:1365:G:H4'	2.34	0.42
1:AA:971:G:O6	1:AA:1364:U:O2'	2.37	0.42
1:AA:190(F):G:N2	1:AA:263:A:O2'	2.51	0.42
27:BA:1328:G:H4'	27:BA:1329:U:C5	2.53	0.42
27:BA:1857:G:H21	27:BA:1886:C:H42	1.67	0.42
27:BA:1476:C:C5	27:BA:1477:A:N3	2.87	0.42
1:AA:948:C:C6	1:AA:948:C:O5'	2.67	0.42
1:AA:528:C:N4	15:AL:49:ASN:ND2	2.67	0.42
1:AA:598:U:H4'	11:AH:94:TYR:CD2	2.55	0.42
6:AC:38:ARG:CB	6:AC:94:LEU:HD21	2.46	0.42
27:BA:1718:G:N2	27:BA:1742:C:C2	2.87	0.42
27:BA:285:C:H2'	27:BA:286:C:N1	2.35	0.42
20:AQ:76:LEU:HD11	20:AQ:79:SER:HB3	2.01	0.42
7:AD:34:GLU:O	7:AD:35:ARG:HB2	2.19	0.42
1:AA:685:G:H2'	1:AA:686:U:H6	1.84	0.42
15:AL:26:ALA:O	15:AL:33:ARG:HD2	2.20	0.42
19:AP:36:ILE:HD12	19:AP:56:ALA:HB2	2.02	0.42
1:AA:512:U:H2'	1:AA:513:C:C6	2.54	0.42
7:AD:175:SER:O	7:AD:183:GLY:HA2	2.19	0.42
27:BA:1411:C:H2'	27:BA:1412:A:H8	1.83	0.42
17:AN:29:ARG:HG3	17:AN:31:ARG:H	1.83	0.42
27:BA:1509:C:O2	27:BA:1509:C:H2'	2.19	0.42
48:B3:53:LEU:O	48:B3:54:VAL:CG1	2.67	0.42
50:B4:14:ILE:HG21	50:B4:37:SER:CA	2.49	0.42
50:B4:5:LEU:HB2	50:B4:56:VAL:HG11	1.85	0.42
51:B5:12:SER:CB	51:B5:15:LYS:HZ2	2.13	0.42
51:B5:43:HIS:O	51:B5:52:TYR:HE2	2.02	0.42
52:B6:37:LEU:HD23	52:B6:37:LEU:HA	1.79	0.42
54:B8:16:ILE:CG2	54:B8:17:THR:N	2.82	0.42
55:B9:19:ARG:O	55:B9:19:ARG:HG3	2.19	0.42
27:BA:1279:G:H4'	44:BR:31:HIS:NE2	2.34	0.42
27:BA:1287:A:OP1	44:BR:105:ARG:NH2	2.51	0.42
27:BA:961:C:C5	27:BA:2031:A:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2043:C:N4	27:BA:2777:G:N9	2.66	0.42
27:BA:2217:G:C2'	27:BA:2218:G:C5'	2.97	0.42
27:BA:2251:G:C2	27:BA:2252:G:C2	3.07	0.42
27:BA:2267:A:O5'	27:BA:2268:A:OP1	2.35	0.42
27:BA:2454:G:C6	27:BA:2455:G:C4	3.07	0.42
27:BA:2498:C:O2'	27:BA:2499:C:C4'	2.64	0.42
27:BA:2446:G:C6	27:BA:2501:C:C5	3.06	0.42
27:BA:2533:A:N7	27:BA:2534:A:C5	2.88	0.42
27:BA:2576:G:H4'	27:BA:2577:A:C5'	2.49	0.42
27:BA:2606:C:C6	27:BA:2606:C:C4'	3.02	0.42
27:BA:2673:G:O2'	35:BO:30:ARG:NH2	2.52	0.42
27:BA:2674:G:C2'	27:BA:2675:A:C8	2.63	0.42
27:BA:2697:G:H2'	27:BA:2698:U:O4'	2.18	0.42
27:BA:1638:C:C4'	27:BA:2709:G:H22	2.32	0.42
27:BA:2724:C:H5''	29:BE:215:LYS:HZ1	1.85	0.42
27:BA:2725:A:C2'	27:BA:2726:U:H5''	2.48	0.42
27:BA:2727:G:N3	27:BA:2727:G:H2'	2.34	0.42
27:BA:2827:C:H2'	27:BA:2828:C:O5'	2.17	0.42
27:BA:2840:C:O2	27:BA:2841:C:C6	2.72	0.42
27:BA:412:A:H2'	27:BA:413:C:O4'	2.19	0.42
26:BB:59:A:H4'	31:BG:144:ARG:HG2	2.01	0.42
27:BA:1819:A:C2'	28:BD:177:SER:CB	2.82	0.42
28:BD:171:VAL:C	28:BD:182:MET:HG2	2.40	0.42
28:BD:80:ILE:CD1	28:BD:82:TYR:CD1	2.95	0.42
29:BE:202:ALA:CB	29:BE:262:THR:HB	2.49	0.42
29:BE:270:ASP:O	29:BE:271:ILE:CG1	2.66	0.42
29:BE:87:GLU:CD	29:BE:87:GLU:H	2.22	0.42
29:BE:94:ARG:CB	29:BE:95:PRO:HD3	2.40	0.42
31:BG:13:MET:HB3	31:BG:14:ARG:HD2	2.01	0.42
31:BG:55:LYS:H	31:BG:65:GLU:HG2	1.85	0.42
32:BH:15:THR:HG23	32:BH:26:LYS:CB	2.28	0.42
32:BH:30:GLY:HA3	32:BH:78:VAL:HA	2.02	0.42
33:BI:31:PHE:O	33:BI:32:LYS:C	2.56	0.42
27:BA:1007:C:C4'	34:BN:86:MET:O	2.68	0.42
35:BO:109:LYS:O	35:BO:110:ASP:HB2	2.20	0.42
35:BO:10:VAL:HG11	35:BO:12:ASP:O	2.17	0.42
35:BO:3:GLN:O	35:BO:21:VAL:HB	2.19	0.42
37:BQ:31:PHE:CG	37:BQ:85:ILE:CD1	3.03	0.42
37:BQ:49:VAL:HG13	37:BQ:50:VAL:N	2.02	0.42
38:BS:90:LEU:HD23	38:BS:93:GLN:HE21	1.84	0.42
39:BT:31:PHE:HD2	39:BT:32:CYS:SG	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1248:G:P	45:BU:2:PRO:HB3	2.55	0.42
45:BU:33:ARG:CA	45:BU:36:PHE:CD1	3.02	0.42
46:BV:30:GLY:O	46:BV:31:ASP:C	2.53	0.42
46:BV:35:LEU:O	46:BV:60:VAL:HA	2.19	0.42
46:BV:66:GLY:HA2	46:BV:93:ILE:HG13	2.01	0.42
46:BV:61:VAL:HG22	46:BV:96:LEU:C	2.15	0.42
40:BW:30:GLU:O	40:BW:33:ARG:CB	2.64	0.42
27:BA:1260:G:H5'	40:BW:83:LYS:NZ	2.30	0.42
43:BZ:41:ARG:N	43:BZ:41:ARG:CD	2.83	0.42
43:BZ:71:MET:HG2	43:BZ:78:PRO:HD3	0.44	0.42
27:BA:72:U:C1'	47:B2:57:LYS:HD2	2.49	0.42
27:BA:110:G:H2'	27:BA:111:A:C8	2.54	0.42
27:BA:1080:C:H4'	56:BK:126:LYS:HA	1.98	0.42
31:BG:40:ILE:O	31:BG:44:ILE:HG13	2.19	0.42
31:BG:78:GLU:O	31:BG:81:GLU:HB2	2.19	0.42
27:BA:1614:A:C5	40:BW:88:ARG:CG	2.98	0.42
1:AA:247:G:OP2	20:AQ:99:SER:CA	2.66	0.42
1:AA:397:A:N7	1:AA:548:G:C8	2.87	0.42
1:AA:878:G:H5'	11:AH:89:PRO:HB2	2.01	0.42
1:AA:1327:C:OP1	24:AU:20:LYS:HG2	2.19	0.42
40:BW:2:GLU:CA	40:BW:108:GLY:HA2	2.44	0.42
11:AH:39:LEU:HB3	11:AH:45:ILE:HG12	2.02	0.42
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.20	0.42
28:BD:169:LYS:HB2	28:BD:169:LYS:HE2	1.88	0.42
1:AA:1164:G:H1	1:AA:1172:C:H42	1.67	0.42
27:BA:281:G:C8	27:BA:281:G:O5'	2.72	0.42
8:AE:135:THR:O	8:AE:139:LEU:HG	2.20	0.42
27:BA:1974:C:H6	27:BA:1974:C:O5'	2.03	0.42
1:AA:1532:U:H3'	1:AA:1532:U:C6	2.55	0.42
35:BO:89:ASP:N	35:BO:89:ASP:OD1	2.52	0.42
49:B0:30:VAL:CG1	49:B0:63:SER:OG	2.67	0.42
48:B3:48:GLU:O	48:B3:51:ALA:HB2	2.19	0.42
48:B3:8:LEU:CA	48:B3:54:VAL:CG1	2.85	0.42
50:B4:14:ILE:CG2	50:B4:37:SER:C	2.87	0.42
50:B4:5:LEU:HG	50:B4:8:LYS:N	2.35	0.42
52:B6:46:LYS:C	52:B6:47:HIS:HD1	2.23	0.42
27:BA:1024:G:H3'	27:BA:1025:G:C5'	2.50	0.42
27:BA:1131:G:H4'	27:BA:1132:A:OP1	2.19	0.42
27:BA:585:G:C4	27:BA:1251:C:N4	2.87	0.42
27:BA:1647:G:H4'	27:BA:1648:C:C5'	2.49	0.42
27:BA:1999:C:H4'	27:BA:2723:C:O2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2321:G:H21	27:BA:2322:A:H1'	1.83	0.42
27:BA:2361:A:C2	27:BA:2362:G:N9	2.87	0.42
3:AW:76:A:C2	27:BA:2422:A:N6	2.57	0.42
27:BA:2436:G:N2	27:BA:2437:U:C2	2.87	0.42
27:BA:2441:C:HO2'	27:BA:2442:C:C5'	2.27	0.42
27:BA:2444:G:C6	27:BA:2445:G:N1	2.87	0.42
27:BA:2467:C:O3'	37:BQ:141:MET:CE	2.67	0.42
27:BA:2488:A:C6	27:BA:2489:G:C6	3.08	0.42
27:BA:2509:G:N2	27:BA:2510:C:C1'	2.82	0.42
27:BA:2652:C:N4	27:BA:2653:U:C4	2.86	0.42
27:BA:1663:C:O2'	27:BA:2686:G:C5'	2.68	0.42
27:BA:2886:G:C2	27:BA:2887:U:C5	3.07	0.42
27:BA:2892:A:H3'	27:BA:2893:G:H8	1.84	0.42
27:BA:446:G:OP1	45:BU:3:ARG:HB2	2.19	0.42
27:BA:451:C:H2'	27:BA:452:G:N7	2.34	0.42
27:BA:465:G:C6	27:BA:466:A:N6	2.88	0.42
27:BA:515:A:H3'	27:BA:516:C:C6	2.54	0.42
27:BA:774:A:O2'	27:BA:775:G:H8	2.02	0.42
27:BA:775:G:O2'	27:BA:794:G:C8	2.63	0.42
26:BB:24:G:C5	26:BB:56:G:N3	2.88	0.42
29:BE:42:ALA:HB1	29:BE:310:PHE:CA	2.43	0.42
29:BE:77:PRO:CB	29:BE:187:HIS:CA	2.98	0.42
29:BE:96:LEU:O	29:BE:97:THR:CG2	2.67	0.42
31:BG:71:ALA:O	31:BG:72:LYS:HE3	2.17	0.42
31:BG:49:PRO:CG	31:BG:72:LYS:H	2.31	0.42
32:BH:10:ILE:HD11	32:BH:49:ILE:HG21	2.01	0.42
32:BH:104:LEU:HD23	32:BH:151:ARG:HD2	2.01	0.42
32:BH:162:ARG:HB3	32:BH:166:GLU:CG	2.43	0.42
32:BH:148:ARG:NH1	32:BH:164:GLU:N	2.63	0.42
32:BH:88:LEU:HD13	32:BH:128:THR:HA	2.01	0.42
34:BN:137:GLU:N	34:BN:141:ALA:N	2.29	0.42
34:BN:80:LYS:O	34:BN:84:ARG:CG	2.44	0.42
35:BO:64:ARG:CD	35:BO:81:GLU:OE1	2.67	0.42
37:BQ:46:VAL:CG1	37:BQ:124:ALA:CB	2.90	0.42
37:BQ:49:VAL:HG23	37:BQ:121:ASP:N	1.96	0.42
37:BQ:93:ILE:CG2	37:BQ:94:ARG:H	2.30	0.42
44:BR:20:LEU:HD22	44:BR:24:GLN:CG	2.41	0.42
44:BR:74:LYS:O	44:BR:75:LEU:C	2.58	0.42
45:BU:106:PHE:C	45:BU:108:ALA:N	2.73	0.42
45:BU:29:SER:HG	45:BU:30:LYS:H	1.66	0.42
46:BV:58:ALA:O	46:BV:100:GLY:O	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BV:93:ILE:N	46:BV:93:ILE:CD1	2.82	0.42
40:BW:32:ALA:HB2	40:BW:35:ILE:HD11	1.94	0.42
40:BW:23:LEU:HD11	40:BW:35:ILE:CG2	2.49	0.42
40:BW:41:LYS:O	40:BW:42:ARG:C	2.55	0.42
27:BA:492:A:H61	40:BW:49:LYS:HE3	1.85	0.42
43:BZ:100:THR:CG2	43:BZ:137:ASP:CG	2.79	0.42
43:BZ:101:THR:HB	43:BZ:103:ARG:HD3	2.01	0.42
37:BQ:42:TYR:HB3	43:BZ:119:ASN:OD1	2.18	0.42
43:BZ:118:HIS:CD2	43:BZ:168:VAL:HA	2.54	0.42
33:BI:92:SER:H	33:BI:122:ARG:NH2	2.18	0.42
42:BY:34:GLU:O	42:BY:35:TYR:HD2	1.94	0.42
1:AA:979:C:P	1:AA:1222:G:O6	2.77	0.42
47:B2:55:ARG:O	47:B2:57:LYS:N	2.53	0.42
47:B2:57:LYS:O	47:B2:60:GLN:CB	2.50	0.42
41:BX:14:ALA:HA	41:BX:17:ASP:CB	2.48	0.42
41:BX:7:HIS:CG	41:BX:8:PRO:CD	3.01	0.42
1:AA:1319:A:H4'	22:AS:70:LYS:HE2	1.97	0.42
1:AA:562:C:H1'	15:AL:15:ARG:HB3	2.02	0.42
1:AA:410:G:P	7:AD:25:ARG:HE	2.42	0.42
1:AA:1339:A:N3	2:AV:31:A:H1'	2.32	0.42
27:BA:1102:C:N4	27:BA:1104:C:N4	2.68	0.42
1:AA:130:A:H5''	1:AA:190(F):G:H2'	2.00	0.42
1:AA:616:G:H1	1:AA:624:C:H42	1.67	0.42
1:AA:736:C:OP1	21:AR:72:ARG:CZ	2.68	0.42
1:AA:505:G:H4'	1:AA:534:U:C4	2.55	0.42
27:BA:1449:A:C6	27:BA:449(A):G:C4	3.07	0.42
1:AA:1115:C:H2'	1:AA:1116:C:O4'	2.20	0.42
56:BK:11:LEU:HD11	56:BK:28:LEU:HD21	2.01	0.42
5:AB:51:LEU:O	5:AB:55:PHE:HD1	2.02	0.42
1:AA:973:G:H3'	1:AA:974:A:H5''	2.01	0.42
27:BA:1755:A:OP2	27:BA:1755:A:H8	2.02	0.42
48:B3:6:VAL:CG2	48:B3:55:ARG:O	2.63	0.42
27:BA:2081:C:H5''	50:B4:35:VAL:HG21	1.98	0.42
50:B4:38:GLY:O	50:B4:39:VAL:HB	2.19	0.42
50:B4:5:LEU:CD1	50:B4:60:ASN:ND2	2.67	0.42
27:BA:747:U:C2	51:B5:3:LYS:HD2	2.53	0.42
51:B5:3:LYS:O	51:B5:4:HIS:C	2.58	0.42
52:B6:39:LYS:C	52:B6:50:PHE:CD1	2.93	0.42
27:BA:1163:G:H2'	27:BA:1164:G:H5'	2.00	0.42
27:BA:1259:G:C4	27:BA:1260:G:C8	3.08	0.42
27:BA:126:A:P	53:B7:44:VAL:CG1	2.96	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1278:A:OP1	44:BR:36:THR:CB	2.59	0.42
27:BA:142(A):A:O3'	34:BN:21:ARG:NE	2.53	0.42
27:BA:1667:G:H2'	27:BA:1991:U:O4	2.19	0.42
27:BA:2225:A:C3'	27:BA:2226:C:C5'	2.81	0.42
27:BA:963:U:C2'	27:BA:2250:G:N2	2.64	0.42
27:BA:2364:C:H4'	49:B0:38:VAL:HG13	2.01	0.42
27:BA:2330:G:C2	27:BA:2385:C:N4	2.85	0.42
27:BA:2403:C:C5	27:BA:2415:G:C2	3.07	0.42
27:BA:2537:U:C5	27:BA:2538:C:C5	3.07	0.42
27:BA:1129:A:C6	27:BA:2570:G:H4'	2.55	0.42
27:BA:2571:C:O2	27:BA:2574:G:H1'	2.20	0.42
27:BA:2622:C:H2'	27:BA:2623:G:O5'	2.20	0.42
27:BA:2634:G:O2'	27:BA:2635:C:C5'	2.68	0.42
27:BA:2844:G:C2	27:BA:2845:G:C8	3.07	0.42
27:BA:5:A:C2	27:BA:2899:G:C2	3.08	0.42
27:BA:451:C:OP1	30:BF:48:SER:HA	2.20	0.42
27:BA:747:U:C1'	51:B5:3:LYS:NZ	2.83	0.42
29:BE:242:ASN:N	29:BE:243:PRO:CD	2.81	0.42
30:BF:147:LEU:CD1	30:BF:156:LEU:CG	2.93	0.42
30:BF:39:GLN:O	30:BF:42:ARG:HB3	2.19	0.42
27:BA:673:C:H5''	30:BF:80:VAL:HG11	2.02	0.42
31:BG:19:GLU:N	31:BG:135:VAL:HG21	2.34	0.42
31:BG:55:LYS:O	31:BG:65:GLU:CA	2.67	0.42
33:BI:3:VAL:CG2	33:BI:19:LYS:O	2.68	0.42
27:BA:2684:U:O4'	35:BO:70:ARG:CZ	2.67	0.42
37:BQ:117:GLY:O	37:BQ:118:ALA:CB	2.66	0.42
39:BT:21:PHE:HB2	39:BT:31:PHE:CD1	2.52	0.42
45:BU:16:LYS:HB3	45:BU:17:VAL:H	1.39	0.42
46:BV:20:ILE:HG12	46:BV:67:LYS:HE3	1.80	0.42
46:BV:67:LYS:HG3	46:BV:94:LYS:CG	2.50	0.42
46:BV:94:LYS:N	46:BV:95:ILE:CD1	2.81	0.42
40:BW:105:VAL:CG2	40:BW:105:VAL:O	2.68	0.42
43:BZ:151:ASP:CA	43:BZ:153:LYS:HZ2	2.32	0.42
47:B2:30:ALA:N	47:B2:34:GLN:HG2	2.32	0.42
1:AA:953:G:C2'	16:AM:124:PRO:O	2.64	0.42
1:AA:587:G:O2'	11:AH:1:MET:SD	2.61	0.42
27:BA:1351:C:H4'	27:BA:1571:A:H2'	2.02	0.42
27:BA:480:A:H3'	27:BA:481:G:H5''	2.00	0.42
1:AA:57:G:N2	1:AA:388:G:C6	2.87	0.42
27:BA:1315:C:H2'	27:BA:1316:U:C6	2.54	0.42
1:AA:1506:U:O4	1:AA:1521:G:H5''	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AB:162:ILE:HD13	5:AB:162:ILE:N	2.35	0.42
27:BA:221:A:O2'	27:BA:271(B):G:N1	2.53	0.42
7:AD:102:ASP:O	7:AD:117:ALA:HB1	2.19	0.42
5:AB:80:ILE:CG2	5:AB:212:GLN:HG2	2.49	0.42
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.84	0.42
5:AB:82:ARG:HD2	5:AB:92:TYR:HE1	1.84	0.42
22:AS:64:GLU:HG3	22:AS:65:ASN:N	2.34	0.42
49:B0:33:ALA:CB	49:B0:66:LYS:N	2.77	0.42
48:B3:39:ASP:O	48:B3:40:THR:O	2.38	0.42
50:B4:46:GLU:HB2	50:B4:47:GLU:H	1.44	0.42
27:BA:400:G:N1	50:B4:63:PHE:HE1	2.13	0.42
52:B6:40:TYR:CA	52:B6:50:PHE:CE1	3.03	0.42
27:BA:2742:C:H5''	55:B9:35:ARG:HH22	1.85	0.42
27:BA:1462:C:H5'	27:BA:2703:C:H5'	2.00	0.42
27:BA:197:A:C4	27:BA:2430:A:C5	3.07	0.42
27:BA:2213:U:O3'	27:BA:2215:G:H8	1.99	0.42
27:BA:2249:U:O4	27:BA:2253:G:OP1	2.38	0.42
27:BA:2353:G:H8	27:BA:2353:G:O5'	2.03	0.42
27:BA:2385:C:O2	27:BA:2386:C:N1	2.49	0.42
27:BA:2400:G:C2	27:BA:2401:U:C2	3.07	0.42
27:BA:2465:C:HO2'	27:BA:2466:C:C5'	2.18	0.42
27:BA:2487:G:C2'	27:BA:2488:A:H5'	2.49	0.42
27:BA:2512:C:H5''	29:BE:219:VAL:HG11	2.00	0.42
27:BA:2531:A:C2	27:BA:2532:G:C1'	3.02	0.42
27:BA:2581:G:N3	27:BA:2581:G:C2'	2.76	0.42
27:BA:2635:C:N4	27:BA:2784:C:N4	2.65	0.42
27:BA:2729:G:H8	27:BA:2729:G:O5'	2.02	0.42
27:BA:2816:C:C2	27:BA:2831:G:N2	2.88	0.42
27:BA:2817:G:C4	27:BA:2818:G:C8	3.08	0.42
27:BA:809:G:C5	27:BA:810:U:C5	3.07	0.42
27:BA:1819:A:OP1	28:BD:157:ALA:HB3	2.19	0.42
28:BD:82:TYR:HA	28:BD:89:ASN:HB3	2.01	0.42
28:BD:89:ASN:ND2	28:BD:199:ARG:CZ	2.83	0.42
29:BE:211:GLN:CG	29:BE:212:GLY:H	2.18	0.42
29:BE:193:PHE:HZ	29:BE:312:ARG:O	2.00	0.42
30:BF:111:VAL:O	30:BF:115:LEU:HD23	2.19	0.42
30:BF:6:TYR:O	30:BF:11:ASN:N	2.52	0.42
30:BF:215:ALA:HB2	30:BF:239:ALA:N	2.32	0.42
30:BF:33:LYS:C	30:BF:36:ARG:HG2	2.40	0.42
30:BF:45:ASP:HB3	30:BF:98:ARG:HG3	2.01	0.42
31:BG:149:ARG:C	31:BG:151:ILE:N	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BG:51:ARG:HH11	31:BG:72:LYS:HB2	1.82	0.42
32:BH:101:LYS:HG3	32:BH:116:PRO:CD	2.49	0.42
32:BH:43:THR:HG21	32:BH:51:VAL:O	2.20	0.42
33:BI:1:MET:HG3	33:BI:3:VAL:HG22	1.97	0.42
34:BN:82:THR:O	34:BN:85:GLY:HA3	2.20	0.42
35:BO:45:ASP:OD1	35:BO:45:ASP:O	2.37	0.42
37:BQ:70:ARG:HD2	37:BQ:71:PHE:CE1	2.52	0.42
44:BR:41:ALA:C	44:BR:43:GLU:N	2.73	0.42
38:BS:97:VAL:O	38:BS:98:GLU:CG	2.68	0.42
45:BU:47:TYR:HE2	45:BU:50:ARG:NH1	2.17	0.42
45:BU:94:VAL:CA	45:BU:98:ILE:HD11	2.46	0.42
46:BV:43:GLU:N	46:BV:44:GLN:NE2	2.68	0.42
46:BV:18:ASP:HB3	46:BV:96:LEU:HA	2.00	0.42
40:BW:46:PHE:O	40:BW:48:ALA:N	2.53	0.42
43:BZ:171:VAL:O	43:BZ:171:VAL:CG2	2.68	0.42
33:BI:103:GLN:O	33:BI:104:ALA:O	2.38	0.42
33:BI:110:LEU:HD23	33:BI:111:ASP:N	2.35	0.42
42:BY:105:ASP:OD1	42:BY:105:ASP:N	2.53	0.42
42:BY:57:GLY:CA	42:BY:97:ARG:NH2	2.50	0.42
42:BY:92:ASP:C	42:BY:94:SER:N	2.73	0.42
1:AA:1223:C:H5''	1:AA:1224:G:H5''	2.00	0.42
1:AA:979:C:O2	17:AN:19:ARG:NE	2.51	0.42
27:BA:131:G:N2	27:BA:149:A:C2	2.87	0.42
27:BA:138:G:C2'	27:BA:139:G:H4'	2.38	0.42
5:AB:110:GLN:O	5:AB:113:HIS:HB2	2.20	0.42
1:AA:953:G:C3'	16:AM:124:PRO:O	2.68	0.42
20:AQ:25:ARG:HB3	20:AQ:38:ARG:HB3	2.01	0.42
27:BA:863:A:H61	27:BA:913:U:H3	1.66	0.42
27:BA:120:U:N3	27:BA:150:C:C4	2.87	0.42
27:BA:1559:G:N3	27:BA:1559:G:H2'	2.35	0.42
27:BA:1858:G:C2	27:BA:1885:A:C5	3.07	0.42
27:BA:2182:G:H2'	27:BA:2183:C:C2	2.55	0.42
24:AU:5:ASP:O	24:AU:11:GLY:HA3	2.19	0.42
27:BA:205:G:O2'	27:BA:206:U:P	2.78	0.42
1:AA:191:G:H21	23:AT:103:GLY:C	2.23	0.42
27:BA:270(C):C:H2'	27:BA:270(D):C:C6	2.54	0.42
1:AA:832:C:H1'	1:AA:855:G:N2	2.35	0.42
1:AA:599:C:O2'	11:AH:129:VAL:HA	2.20	0.42
48:B3:47:VAL:N	48:B3:48:GLU:OE1	2.52	0.42
50:B4:59:PHE:H	50:B4:62:ARG:NE	2.12	0.42
27:BA:1077:A:O3'	56:BK:93:LYS:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1254:A:N7	27:BA:1256:G:N9	2.68	0.42
27:BA:578:A:C2	27:BA:2018:G:O4'	2.73	0.42
27:BA:2263:C:C6	27:BA:2263:C:H5'	2.53	0.42
27:BA:2319:G:H4'	38:BS:9:PRO:N	2.35	0.42
27:BA:2327:A:N6	27:BA:2388:A:C5	2.88	0.42
27:BA:2395:C:H4'	50:B4:28:ARG:CD	2.49	0.42
27:BA:389:G:H1'	27:BA:2413:G:O4'	2.20	0.42
3:AW:76:A:N9	27:BA:2422:A:C6	2.80	0.42
27:BA:243:U:OP2	54:B8:7:HIS:CD2	2.70	0.42
27:BA:2522:U:C2	27:BA:2543:G:O6	2.73	0.42
27:BA:2648:C:C5	27:BA:2649:U:C4	3.08	0.42
27:BA:617:G:OP2	30:BF:42:ARG:CZ	2.67	0.42
27:BA:685:A:N3	27:BA:688:U:C4	2.88	0.42
27:BA:752:A:C8	27:BA:752:A:O5'	2.72	0.42
27:BA:803:U:H2'	27:BA:804:A:C5'	2.33	0.42
28:BD:144:GLU:OE1	28:BD:144:GLU:C	2.58	0.42
29:BE:242:ASN:O	29:BE:243:PRO:C	2.58	0.42
30:BF:52:ALA:O	30:BF:55:ARG:CB	2.68	0.42
30:BF:84:VAL:N	30:BF:87:ARG:HE	2.17	0.42
31:BG:150:SER:O	31:BG:151:ILE:O	2.37	0.42
32:BH:71:LEU:O	32:BH:74:MET:N	2.52	0.42
34:BN:17:CYS:O	34:BN:45:VAL:CG1	2.58	0.42
36:BP:65:ASP:HB3	36:BP:109:LEU:N	2.35	0.42
38:BS:10:MET:O	38:BS:11:ARG:C	2.55	0.42
38:BS:22:GLN:CA	38:BS:22:GLN:OE1	2.67	0.42
38:BS:58:LEU:HD11	38:BS:92:ALA:HA	2.00	0.42
39:BT:11:THR:CG2	39:BT:12:ASP:N	2.58	0.42
39:BT:29:THR:HB	39:BT:31:PHE:HE1	1.83	0.42
45:BU:72:HIS:ND1	45:BU:110:VAL:CG1	2.81	0.42
45:BU:28:ARG:C	45:BU:30:LYS:N	2.73	0.42
27:BA:563:G:H22	45:BU:37:GLN:HE22	1.57	0.42
46:BV:41:GLY:CA	46:BV:54:TYR:CE1	3.03	0.42
40:BW:60:ASN:HB3	40:BW:61:ASN:OD1	2.19	0.42
40:BW:68:ARG:HH21	40:BW:110:LYS:CG	2.29	0.42
43:BZ:125:PRO:HB2	43:BZ:126:GLY:H	1.71	0.42
1:AA:926:G:N1	4:AX:116:U:P	2.92	0.42
33:BI:75:LEU:HD12	33:BI:76:THR:N	2.20	0.42
27:BA:295:G:C8	27:BA:345:A:C2	3.08	0.42
27:BA:342:G:C2	27:BA:343:C:C2	3.08	0.42
42:BY:47:THR:C	42:BY:48:VAL:HG23	2.32	0.42
1:AA:1358:U:H5''	17:AN:34:TYR:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:10:VAL:CG1	34:BN:36:VAL:CB	2.88	0.42
27:BA:1771:C:H2'	27:BA:1772:G:H8	1.85	0.42
47:B2:43:PRO:C	47:B2:45:ARG:N	2.71	0.42
3:AW:37:YYG:H192	10:AG:84:ASN:HA	0.89	0.42
3:AW:37:YYG:H32	3:AW:38:A:O4'	2.20	0.42
6:AC:33:LEU:HD11	17:AN:54:PRO:HD2	2.01	0.42
1:AA:299:G:C2	1:AA:566:G:O6	2.63	0.42
1:AA:236:G:H2'	1:AA:237:C:C6	2.55	0.42
1:AA:428:G:O3'	7:AD:13:ARG:NH2	2.52	0.42
27:BA:2408:U:C2'	27:BA:2409:G:O5'	2.68	0.42
1:AA:891:U:H5	1:AA:906:G:C2	2.38	0.42
27:BA:481:G:O2'	27:BA:482:A:C8	2.71	0.42
1:AA:19:C:OP1	8:AE:86:ALA:HB1	2.20	0.42
27:BA:1857:G:H2'	27:BA:1858:G:N7	2.31	0.42
1:AA:1164:G:H1	1:AA:1172:C:N4	2.17	0.42
27:BA:815:C:H5'	27:BA:1224:G:H22	1.83	0.42
19:AP:55:ARG:O	19:AP:59:TRP:HD1	2.03	0.42
27:BA:401:A:N6	27:BA:423:A:C2	2.87	0.42
15:AL:97:ARG:O	15:AL:97:ARG:HG2	2.20	0.42
27:BA:1602:U:C6	27:BA:1602:U:H3'	2.55	0.42
1:AA:928:G:O2'	1:AA:1533:C:N4	2.47	0.42
6:AC:153:VAL:HB	6:AC:166:GLU:HB3	2.01	0.42
32:BH:139:ARG:H	32:BH:139:ARG:HG3	1.61	0.42
48:B3:20:LYS:CA	48:B3:23:LEU:HD12	2.36	0.42
52:B6:44:ALA:O	52:B6:45:LYS:O	2.38	0.42
52:B6:8:ILE:CD1	52:B6:8:ILE:H	2.14	0.42
53:B7:28:ARG:O	53:B7:31:LEU:CB	2.68	0.42
27:BA:976:C:H4'	27:BA:1156:A:N6	2.35	0.42
27:BA:125:G:C5'	53:B7:19:ARG:CD	2.97	0.42
27:BA:1612:C:C6	53:B7:3:ARG:NH2	2.88	0.42
27:BA:1673:U:H5	29:BE:225:LYS:HD2	1.81	0.42
27:BA:2417:C:N4	27:BA:2418:A:N6	2.68	0.42
27:BA:2513:G:H2'	27:BA:2514:U:C6	2.55	0.42
27:BA:2572:A:OP1	27:BA:2574:G:H4'	2.20	0.42
27:BA:2649:U:C2	27:BA:2650:U:C5	3.07	0.42
27:BA:2684:U:C2'	27:BA:2685:G:O5'	2.68	0.42
27:BA:2703:C:H2'	27:BA:2704:C:C6	2.54	0.42
27:BA:2744:G:O2'	27:BA:2745:C:H5'	2.20	0.42
27:BA:2749:A:N7	27:BA:2750:A:C8	2.88	0.42
27:BA:2783:G:C4	27:BA:2784:C:C6	3.08	0.42
27:BA:2837:G:C6	27:BA:2882:A:N1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:468:G:C3'	27:BA:469:G:C5'	2.96	0.42
27:BA:531:C:H41	45:BU:38:THR:HA	0.88	0.42
27:BA:674:G:H4'	30:BF:69:HIS:CA	2.48	0.42
27:BA:777:A:N7	27:BA:793:A:H2	2.17	0.42
28:BD:125:ILE:HG22	28:BD:126:GLY:H	1.80	0.42
28:BD:156:ALA:C	28:BD:158:GLY:H	2.23	0.42
29:BE:200:ASP:O	29:BE:311:PHE:C	2.58	0.42
29:BE:211:GLN:HG2	29:BE:212:GLY:N	2.22	0.42
27:BA:1655:A:O3'	29:BE:212:GLY:HA3	2.20	0.42
30:BF:52:ALA:O	30:BF:55:ARG:N	2.53	0.42
31:BG:102:GLY:C	31:BG:134:LEU:HD12	2.27	0.42
27:BA:2305:A:N6	31:BG:53:LYS:NZ	2.68	0.42
27:BA:2305:A:H2	31:BG:72:LYS:HE2	1.85	0.42
34:BN:137:GLU:O	34:BN:140:GLY:N	2.42	0.42
34:BN:23:ALA:O	34:BN:26:VAL:HG23	2.20	0.42
34:BN:63:ILE:CG2	34:BN:71:TYR:CE1	3.03	0.42
35:BO:116:SER:O	35:BO:117:LEU:C	2.58	0.42
35:BO:21:VAL:HG13	35:BO:39:VAL:HG13	2.02	0.42
35:BO:7:ARG:C	35:BO:8:LEU:CD2	2.87	0.42
36:BP:73:VAL:O	36:BP:76:LEU:CB	2.65	0.42
36:BP:80:ASP:O	36:BP:92:ASP:HA	2.20	0.42
37:BQ:122:PHE:CB	37:BQ:136:TRP:CZ2	3.00	0.42
37:BQ:72:VAL:HB	37:BQ:83:PHE:CZ	2.55	0.42
44:BR:70:LEU:HD23	44:BR:70:LEU:N	2.34	0.42
40:BW:8:ARG:CB	40:BW:102:HIS:ND1	2.83	0.42
42:BY:32:ARG:HG2	42:BY:33:GLU:H	1.84	0.42
42:BY:92:ASP:OD1	42:BY:94:SER:HB2	2.16	0.42
1:AA:979:C:O2	17:AN:19:ARG:HG2	2.19	0.42
47:B2:23:LEU:O	47:B2:24:LYS:C	2.56	0.42
1:AA:1314:C:C5	22:AS:6:LYS:HG2	2.55	0.42
1:AA:3(A):G:N1	1:AA:1038:C:H1'	2.35	0.42
27:BA:1710:C:HO2'	27:BA:2858:C:H42	1.64	0.42
7:AD:15:GLU:CD	7:AD:59:ARG:NH2	2.73	0.42
1:AA:925:G:H1	1:AA:1391:U:H3	1.68	0.42
8:AE:26:PHE:HB2	8:AE:27:ARG:H	1.74	0.42
1:AA:1181:G:C4'	1:AA:1184:G:O4'	2.62	0.42
1:AA:376:G:C4'	19:AP:5:ARG:HD2	2.49	0.42
27:BA:270:A:OP2	27:BA:270(X):G:N1	2.51	0.42
19:AP:7:ALA:HB3	19:AP:18:ARG:HB2	2.01	0.42
1:AA:509:A:O2'	1:AA:510:A:H5'	2.20	0.42
15:AL:44:THR:HA	15:AL:45:PRO:HD3	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:221:A:H8	27:BA:221:A:H3'	1.85	0.42
1:AA:489:C:H2'	1:AA:490:G:H8	1.85	0.42
49:B0:30:VAL:HG13	49:B0:63:SER:HG	1.84	0.42
48:B3:44:ARG:O	48:B3:48:GLU:CD	2.55	0.42
51:B5:41:LEU:O	51:B5:42:SER:O	2.38	0.42
52:B6:8:ILE:C	52:B6:29:ARG:HH21	2.18	0.42
54:B8:26:LYS:NZ	54:B8:44:LYS:H	1.93	0.42
55:B9:3:VAL:O	55:B9:4:ARG:C	2.48	0.42
27:BA:1667:G:C2'	27:BA:1991:U:O4	2.68	0.42
27:BA:1675:C:H42	29:BE:228:ARG:HH22	1.68	0.42
27:BA:197:A:H2'	27:BA:198:C:O4'	2.20	0.42
27:BA:2013:A:H4'	27:BA:2013:A:OP1	2.19	0.42
27:BA:2218:G:N1	27:BA:2219:G:N7	2.68	0.42
27:BA:2090:G:N1	27:BA:2230:G:C6	2.71	0.42
27:BA:641:C:O2	27:BA:2350:C:OP1	2.37	0.42
27:BA:631:A:C2	27:BA:2415:G:N3	2.68	0.42
27:BA:2418:A:OP2	54:B8:30:ARG:NH1	2.53	0.42
27:BA:2418:A:C2	27:BA:2419:U:O2	2.73	0.42
27:BA:2428:G:H1'	27:BA:2429:G:C6	2.55	0.42
27:BA:2431:U:P	27:BA:2432:A:OP2	2.78	0.42
27:BA:2453:A:HO2'	27:BA:2454:G:H5'	1.65	0.42
27:BA:2458:G:H2'	27:BA:2490:G:H1	1.85	0.42
27:BA:2684:U:C1'	35:BO:70:ARG:NH1	2.80	0.42
27:BA:2694:G:H8	27:BA:2694:G:O5'	2.02	0.42
27:BA:2693:A:C4	27:BA:2694:G:N7	2.88	0.42
27:BA:26:G:H1	27:BA:27:G:N2	2.05	0.42
27:BA:2737:G:O6	27:BA:2738:A:N6	2.52	0.42
27:BA:2744:G:N1	27:BA:2745:C:N3	2.68	0.42
27:BA:2752:C:H42	27:BA:2753:A:H2	1.43	0.42
27:BA:2812:G:C2'	27:BA:2813:A:O5'	2.68	0.42
27:BA:966:G:H1'	27:BA:2267:A:H62	1.82	0.42
28:BD:131:LEU:HG	28:BD:187:CYS:CB	2.44	0.42
27:BA:2622:C:C5'	29:BE:255:GLN:OE1	2.67	0.42
29:BE:268:LEU:HD11	29:BE:271:ILE:HG13	2.02	0.42
30:BF:200:PRO:HB3	30:BF:205:ARG:HD3	2.02	0.42
30:BF:22:PHE:O	30:BF:24:THR:OG1	2.38	0.42
30:BF:168:ARG:CA	30:BF:233:THR:HG22	2.48	0.42
27:BA:2315:G:C5'	31:BG:133:ASN:ND2	2.73	0.42
32:BH:142:GLU:O	32:BH:143:LEU:C	2.58	0.42
32:BH:90:GLY:HA2	32:BH:159:LYS:CD	2.47	0.42
34:BN:38:VAL:C	34:BN:39:VAL:CG2	2.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:82:THR:HG1	34:BN:83:ILE:HG23	1.85	0.42
35:BO:63:VAL:HG22	35:BO:106:LEU:HD22	2.02	0.42
35:BO:65:THR:HG1	35:BO:67:ARG:CG	2.26	0.42
36:BP:128:GLY:O	36:BP:132:LYS:CD	2.65	0.42
37:BQ:57:ARG:O	37:BQ:60:ALA:HB3	2.20	0.42
44:BR:22:ARG:NH2	44:BR:69:ASP:HA	2.35	0.42
44:BR:75:LEU:O	44:BR:77:ARG:C	2.58	0.42
38:BS:123:ILE:O	38:BS:126:GLY:N	2.41	0.42
40:BW:46:PHE:O	40:BW:49:LYS:N	2.52	0.42
43:BZ:94:VAL:O	43:BZ:123:VAL:N	2.37	0.42
33:BI:120:ALA:C	33:BI:121:ILE:O	2.54	0.42
43:BZ:40:ASP:HB2	43:BZ:41:ARG:H	1.39	0.42
1:AA:1222:G:P	1:AA:1322:C:H5	2.40	0.42
27:BA:1443:G:C2	27:BA:1444:G:H1'	2.54	0.42
41:BX:9:HIS:CB	41:BX:26:PHE:HA	2.42	0.42
6:AC:18:TRP:C	6:AC:20:SER:N	2.70	0.42
29:BE:112:LEU:C	29:BE:112:LEU:CD1	2.88	0.42
13:AJ:45:ARG:CZ	17:AN:36:PHE:HE2	2.23	0.42
1:AA:405:U:O3'	1:AA:406:G:O5'	2.35	0.42
1:AA:1398:A:H3'	1:AA:1398:A:C8	2.55	0.42
1:AA:1392:G:N2	1:AA:1502:A:H8	2.17	0.42
27:BA:227:A:H8	27:BA:227:A:O5'	2.02	0.42
7:AD:68:TYR:CE2	7:AD:97:LEU:HB3	2.54	0.42
39:BT:46:ALA:O	39:BT:49:LEU:N	2.38	0.42
1:AA:586:C:H4'	1:AA:878:G:O3'	2.19	0.42
27:BA:1212:G:N7	27:BA:1235:G:O6	2.53	0.42
27:BA:1299:G:H5'	27:BA:1301:A:H1'	2.00	0.42
16:AM:122:LYS:CE	25:AY:153:GLY:CA	2.98	0.42
27:BA:279:C:H2'	27:BA:360:G:O6	2.19	0.42
1:AA:668:G:C4'	18:AO:48:LYS:O	2.68	0.42
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.85	0.42
27:BA:706:A:H2'	27:BA:707:G:O4'	2.20	0.42
27:BA:2181:G:C2'	27:BA:2182:G:H5''	2.49	0.42
15:AL:75:HIS:HB3	15:AL:102:ARG:HH12	1.84	0.42
1:AA:450:G:O6	1:AA:481:G:H2'	2.20	0.42
1:AA:1125:U:C5	13:AJ:5:ARG:NH2	2.84	0.42
1:AA:328:C:H4'	1:AA:329:A:H5'	2.01	0.42
27:BA:738:G:H2'	27:BA:739:G:O4'	2.20	0.42
27:BA:272:G:H1	27:BA:365:C:H42	1.68	0.42
27:BA:618(A):C:N4	27:BA:619:G:H21	2.18	0.42
27:BA:618(A):C:C5	27:BA:619:G:N2	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AU:6:ARG:HH11	24:AU:15:ARG:HH22	1.66	0.42
5:AB:182:ILE:HA	5:AB:183:PRO:HD3	1.91	0.42
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.20	0.42
1:AA:870:U:H6	1:AA:870:U:O5'	2.02	0.42
7:AD:104:VAL:HG12	7:AD:104:VAL:O	2.20	0.42
49:B0:29:GLU:OE1	49:B0:62:LEU:CD2	2.68	0.41
50:B4:16:TYR:CE1	50:B4:37:SER:OG	2.73	0.41
50:B4:62:ARG:O	50:B4:66:SER:OG	2.37	0.41
54:B8:16:ILE:CG1	54:B8:22:VAL:HG21	2.22	0.41
54:B8:6:THR:O	54:B8:8:LYS:C	2.59	0.41
27:BA:1661:G:H1	27:BA:1999:C:N4	2.16	0.41
27:BA:1890:A:H2	27:BA:2235:G:O4'	2.03	0.41
27:BA:199:A:C6	27:BA:2434:A:C6	3.08	0.41
27:BA:2013:A:C4'	40:BW:96:ILE:CG2	2.97	0.41
27:BA:2333:A:C4'	27:BA:2335:A:O4'	2.68	0.41
27:BA:2379:G:P	38:BS:30:GLY:CA	3.05	0.41
27:BA:2436:G:N2	27:BA:2437:U:H1'	2.34	0.41
27:BA:792:G:C5	27:BA:2440:C:N1	2.88	0.41
27:BA:2479:G:O2'	27:BA:2480:C:O5'	2.38	0.41
27:BA:2567:G:N1	27:BA:2568:C:N4	2.68	0.41
27:BA:2774:C:C2'	27:BA:2775:A:H8	2.30	0.41
27:BA:2801:A:OP1	27:BA:2802:G:O4'	2.38	0.41
27:BA:2830:G:C6	27:BA:2831:G:N7	2.88	0.41
27:BA:2832:U:C1'	27:BA:2834:G:N2	2.62	0.41
28:BD:134:ILE:CG2	28:BD:135:PRO:CD	2.93	0.41
30:BF:100:LEU:HA	30:BF:100:LEU:HD23	1.66	0.41
30:BF:115:LEU:O	30:BF:117:ALA:N	2.53	0.41
30:BF:140:VAL:CG1	30:BF:236:THR:HA	2.50	0.41
30:BF:7:ASP:HB3	30:BF:13:ASP:HB2	2.01	0.41
30:BF:46:TYR:O	30:BF:92:PRO:HB2	2.19	0.41
31:BG:25:MET:SD	31:BG:128:LEU:CB	3.08	0.41
31:BG:141:VAL:N	31:BG:144:ARG:HH11	2.15	0.41
31:BG:140:ARG:CB	31:BG:144:ARG:HH12	2.33	0.41
32:BH:140:VAL:CA	32:BH:143:LEU:HD22	2.50	0.41
32:BH:98:GLN:HB2	32:BH:103:VAL:HG23	1.96	0.41
37:BQ:151:SER:HB3	37:BQ:155:GLY:HA2	2.02	0.41
37:BQ:25:GLY:O	37:BQ:26:LYS:HG3	2.06	0.41
37:BQ:42:TYR:CE2	43:BZ:116:VAL:CG2	2.91	0.41
37:BQ:64:ALA:O	37:BQ:66:ASN:N	2.53	0.41
37:BQ:70:ARG:HB2	37:BQ:71:PHE:CD1	2.55	0.41
45:BU:39:LEU:O	45:BU:42:ALA:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:91:ASN:CG	45:BU:92:ARG:N	2.73	0.41
45:BU:9:VAL:O	45:BU:10:ARG:C	2.56	0.41
43:BZ:149:ALA:HB1	43:BZ:164:PRO:CA	2.47	0.41
33:BI:102:LEU:O	33:BI:106:HIS:HB2	2.19	0.41
27:BA:327:G:C2	27:BA:328:U:C6	3.08	0.41
42:BY:54:ASP:C	42:BY:56:ALA:H	2.24	0.41
43:BZ:6:LYS:HA	43:BZ:31:SER:CB	2.48	0.41
1:AA:361(A):C:O3'	1:AA:1362:C:C5'	2.66	0.41
27:BA:729:G:C2	27:BA:1775:U:C6	3.07	0.41
27:BA:1603:A:C2'	27:BA:1604:C:H6	2.17	0.41
1:AA:1374:A:H1'	10:AG:31:MET:CE	2.50	0.41
1:AA:1287:A:H61	1:AA:1371:G:C5'	2.33	0.41
1:AA:1312:G:N7	22:AS:3:ARG:O	2.53	0.41
20:AQ:22:LEU:HA	20:AQ:40:LYS:O	2.19	0.41
7:AD:63:LYS:O	7:AD:67:ILE:HG13	2.20	0.41
1:AA:1097:C:O3'	1:AA:1168:A:O2'	2.28	0.41
10:AG:29:LYS:HZ1	10:AG:102:ARG:HE	1.68	0.41
1:AA:890:G:O2'	1:AA:891:U:H6	1.98	0.41
27:BA:1521:G:H3'	27:BA:1522:G:O4'	2.19	0.41
1:AA:578:C:O2'	1:AA:729:A:C1'	2.68	0.41
1:AA:1280:A:C8	13:AJ:40:LEU:HD22	2.55	0.41
11:AH:49:GLU:OE1	11:AH:51:VAL:HG23	2.20	0.41
14:AK:110:ASP:CB	21:AR:85:LEU:HB3	2.47	0.41
1:AA:776:G:H22	1:AA:802:A:P	2.44	0.41
1:AA:1451:A:C8	1:AA:1451:A:C3'	3.03	0.41
27:BA:1978:A:C2	27:BA:1979:C:H1'	2.55	0.41
19:AP:9:PHE:HB2	19:AP:16:HIS:O	2.20	0.41
33:BI:70:GLU:CG	33:BI:71:GLN:N	2.78	0.41
1:AA:79:G:H2'	1:AA:80:G:H8	1.85	0.41
27:BA:1377:G:H8	27:BA:1377:G:O5'	2.02	0.41
27:BA:2353:G:H21	49:B0:32:LYS:HE2	1.82	0.41
27:BA:2395:C:C4'	50:B4:28:ARG:HD2	2.49	0.41
54:B8:58:MET:HA	54:B8:61:MET:CG	2.49	0.41
27:BA:1022:G:P	34:BN:52:GLN:CD	2.98	0.41
27:BA:1163:G:C2'	27:BA:1164:G:C5'	2.99	0.41
27:BA:1203:G:N3	27:BA:1203:G:H3'	2.34	0.41
27:BA:1996:C:O2	27:BA:1997:G:H4'	2.21	0.41
27:BA:2246:G:H1	27:BA:2258:C:N4	2.18	0.41
27:BA:2340:G:HO2'	27:BA:2341:G:P	2.35	0.41
27:BA:2343:C:O2'	27:BA:2373:G:H4'	2.20	0.41
27:BA:2482:G:O6	27:BA:2483:C:C5	2.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2487:G:H2'	27:BA:2488:A:C8	2.55	0.41
27:BA:2539:C:O2	27:BA:2539:C:H2'	2.20	0.41
27:BA:2576:G:H4'	27:BA:2577:A:H5'	2.01	0.41
27:BA:2721:A:C2'	27:BA:2722:G:H8	2.20	0.41
27:BA:2623:G:O3'	27:BA:2826:A:H4'	2.20	0.41
27:BA:489:G:C8	27:BA:1284:A:N3	2.88	0.41
27:BA:796:C:H2'	27:BA:797:C:C6	2.56	0.41
26:BB:7:G:O2'	38:BS:37:ARG:CB	2.68	0.41
28:BD:144:GLU:HA	28:BD:150:GLY:O	2.20	0.41
29:BE:87:GLU:CA	29:BE:93:GLN:N	2.75	0.41
30:BF:203:ALA:C	30:BF:205:ARG:H	2.22	0.41
31:BG:56:ARG:CA	31:BG:63:ILE:HG13	2.50	0.41
33:BI:49:ALA:C	33:BI:53:LYS:HG2	2.40	0.41
35:BO:17:ARG:CZ	35:BO:46:ALA:C	2.89	0.41
35:BO:99:PHE:CE2	39:BT:24:LYS:CD	2.86	0.41
37:BQ:140:TYR:C	37:BQ:142:LYS:N	2.72	0.41
37:BQ:72:VAL:CB	37:BQ:83:PHE:HZ	2.33	0.41
46:BV:19:VAL:CG1	46:BV:21:ARG:NH2	2.58	0.41
43:BZ:92:VAL:O	43:BZ:123:VAL:O	2.38	0.41
43:BZ:136:VAL:O	43:BZ:137:ASP:OD1	2.38	0.41
33:BI:80:PRO:C	33:BI:146:THR:O	2.58	0.41
42:BY:32:ARG:HB3	42:BY:33:GLU:OE2	2.20	0.41
27:BA:1788:C:O2'	27:BA:1789:A:H5'	2.20	0.41
27:BA:1465:G:O2'	27:BA:545(A):A:H2	2.02	0.41
47:B2:28:LEU:O	47:B2:29:ASN:C	2.59	0.41
47:B2:2:VAL:CG1	47:B2:3:LEU:H	2.25	0.41
27:BA:1394:U:H4'	27:BA:1603:A:C5'	2.50	0.41
41:BX:17:ASP:C	41:BX:20:PHE:CE1	2.93	0.41
1:AA:30(D):A:H3'	1:AA:1031:G:O4'	2.20	0.41
6:AC:18:TRP:O	6:AC:19:GLU:C	2.49	0.41
1:AA:695:A:H2'	1:AA:696:A:H8	1.84	0.41
33:BI:134:HIS:O	33:BI:136:GLU:N	2.54	0.41
27:BA:1906:G:C5	27:BA:1929:G:C5	3.08	0.41
27:BA:1497:U:H3	27:BA:1577:C:H4'	1.85	0.41
3:AW:65:G:N1	3:AW:66:A:C4	2.88	0.41
27:BA:329:G:H8	27:BA:329:G:OP2	2.03	0.41
14:AK:58:PRO:CA	14:AK:90:GLY:HA3	2.47	0.41
5:AB:28:PHE:CD2	5:AB:194:PRO:HG3	2.55	0.41
56:BK:99:LYS:HD2	56:BK:99:LYS:N	2.35	0.41
27:BA:981:A:C8	27:BA:982:C:C5	3.08	0.41
56:BK:42:PHE:C	56:BK:44:ALA:H	2.23	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:BK:100:VAL:HG12	56:BK:101:THR:N	2.35	0.41
49:B0:67:VAL:HG11	49:B0:74:LYS:HE2	2.02	0.41
40:BW:38:TYR:CG	51:B5:41:LEU:HD21	2.54	0.41
51:B5:42:SER:C	51:B5:43:HIS:HD1	2.22	0.41
27:BA:126:A:N7	27:BA:127:A:C5	2.88	0.41
27:BA:19:C:OP1	45:BU:23:GLY:CA	2.68	0.41
27:BA:2187:G:H2'	27:BA:2188:C:C4'	2.50	0.41
27:BA:2320:A:N3	27:BA:2333:A:C4	2.87	0.41
27:BA:2352:A:H2'	27:BA:2353:G:C5'	2.50	0.41
27:BA:2353:G:H2'	27:BA:2354:G:O5'	2.20	0.41
27:BA:632:A:H2	27:BA:2403:C:H4'	1.84	0.41
27:BA:2423:U:N1	27:BA:2423:U:H5'	2.26	0.41
27:BA:2485:G:C2'	27:BA:2486:G:C4'	2.97	0.41
27:BA:2486:G:C6	27:BA:2487:G:N7	2.89	0.41
27:BA:2519:U:H2'	27:BA:2519:U:H6	1.59	0.41
27:BA:2547:U:C5	27:BA:2566:A:N3	2.88	0.41
27:BA:2568:C:O2	27:BA:2568:C:H2'	2.19	0.41
27:BA:2572:A:OP2	29:BE:242:ASN:CB	2.69	0.41
27:BA:2604:U:C2'	27:BA:2605:U:H5'	2.49	0.41
27:BA:2616:C:O2	27:BA:2617:C:C6	2.73	0.41
27:BA:2694:G:C5	27:BA:2695:C:C5	3.07	0.41
27:BA:2729:G:C6	27:BA:2730:C:C4	3.07	0.41
27:BA:380:U:HO2'	50:B4:15:ILE:C	2.24	0.41
27:BA:442:G:H1'	30:BF:46:TYR:HE1	1.85	0.41
27:BA:572:A:H2	27:BA:2033:A:C2	2.38	0.41
27:BA:626:U:H3'	27:BA:627:A:C5'	2.49	0.41
27:BA:654:A:C2	27:BA:655:A:C8	3.09	0.41
27:BA:535:C:O3'	27:BA:994:C:N3	2.54	0.41
27:BA:1657:C:C5'	29:BE:234:ARG:NH1	2.77	0.41
27:BA:2575:C:C5'	29:BE:241:TRP:NE1	2.67	0.41
30:BF:102:LEU:N	30:BF:107:ARG:NH2	2.22	0.41
30:BF:166:ILE:O	30:BF:167:ASP:C	2.59	0.41
30:BF:56:THR:O	30:BF:79:ARG:CD	2.68	0.41
31:BG:136:ARG:HD2	31:BG:136:ARG:N	2.36	0.41
31:BG:20:LYS:H	31:BG:76:ARG:HB3	1.86	0.41
32:BH:138:GLN:C	32:BH:140:VAL:N	2.72	0.41
27:BA:2745:C:O2	32:BH:142:GLU:CG	2.68	0.41
32:BH:91:VAL:C	32:BH:159:LYS:HZ2	2.23	0.41
34:BN:41:ALA:O	34:BN:44:ALA:N	2.53	0.41
34:BN:50:GLU:HB2	34:BN:51:GLU:H	1.65	0.41
35:BO:63:VAL:HG22	35:BO:102:VAL:HG11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BO:88:ARG:HB2	35:BO:92:SER:OG	2.19	0.41
36:BP:109:LEU:HD13	36:BP:110:GLY:CA	2.48	0.41
36:BP:55:GLN:HG3	36:BP:56:LYS:N	2.35	0.41
37:BQ:91:HIS:C	37:BQ:92:VAL:CG1	2.81	0.41
44:BR:21:TYR:O	44:BR:25:ALA:CB	2.69	0.41
44:BR:86:ARG:O	44:BR:87:TYR:HD2	2.03	0.41
38:BS:31:LYS:CB	38:BS:100:ALA:HA	2.38	0.41
45:BU:17:VAL:O	45:BU:20:ARG:CB	2.66	0.41
46:BV:14:VAL:HG11	46:BV:19:VAL:HG23	2.02	0.41
40:BW:68:ARG:O	40:BW:110:LYS:CA	2.66	0.41
43:BZ:118:HIS:O	43:BZ:119:ASN:CB	2.67	0.41
43:BZ:148:THR:CB	43:BZ:166:LEU:H	2.34	0.41
1:AA:1222:G:O5'	1:AA:1222:G:H8	2.04	0.41
1:AA:1308:U:H5''	16:AM:110:ARG:NH2	2.31	0.41
12:AI:114:TYR:HB3	13:AJ:60:ARG:NH1	2.34	0.41
47:B2:46:ILE:HG22	47:B2:47:LYS:N	2.35	0.41
47:B2:51:LYS:C	47:B2:54:ALA:CB	2.88	0.41
27:BA:76:C:H5''	47:B2:55:ARG:HE	1.85	0.41
1:AA:219:C:H4'	1:AA:381:C:C4'	2.50	0.41
2:AV:31:A:C4'	12:AI:127:LYS:HB2	2.40	0.41
1:AA:892:A:C2	1:AA:893:C:C2	3.09	0.41
27:BA:1626:G:C5	27:BA:1634:A:C2	3.09	0.41
27:BA:734:A:O2'	27:BA:1635:G:H5''	2.19	0.41
6:AC:14:ILE:HG22	6:AC:15:THR:HG23	2.02	0.41
43:BZ:131:PRO:C	43:BZ:133:GLU:H	2.23	0.41
27:BA:211:A:H2'	27:BA:212:G:O4'	2.20	0.41
7:AD:172:PRO:HG2	7:AD:193:ASP:CB	2.50	0.41
12:AI:55:ALA:HB3	12:AI:58:ARG:HE	1.85	0.41
19:AP:27:LYS:C	19:AP:29:ASP:N	2.73	0.41
2:AV:50:U:C2	2:AV:51:G:C8	3.08	0.41
5:AB:68:ILE:O	5:AB:91:PRO:HD2	2.20	0.41
27:BA:364:C:H2'	27:BA:365:C:C5	2.55	0.41
5:AB:28:PHE:HE2	5:AB:189:ASP:O	2.03	0.41
27:BA:299:A:O2'	27:BA:319:C:H4'	2.19	0.41
1:AA:642:A:N7	11:AH:115:SER:HA	2.36	0.41
1:AA:1511:G:C6	1:AA:1512:U:C2	3.08	0.41
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.55	0.41
9:AF:79:LEU:O	9:AF:85:VAL:HG21	2.21	0.41
1:AA:439:A:OP2	1:AA:494:G:N1	2.42	0.41
50:B4:14:ILE:HG23	50:B4:16:TYR:HD1	1.70	0.41
3:AW:75:C:C5	50:B4:27:THR:HB	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:26:LYS:CG	54:B8:44:LYS:CA	2.68	0.41
27:BA:1672:C:O2	27:BA:2582:G:C4'	2.66	0.41
27:BA:2082:A:N6	27:BA:2237:G:H1'	2.35	0.41
27:BA:2208:U:C2'	27:BA:2209:C:O4'	2.68	0.41
27:BA:2303:G:C2	27:BA:2314:C:C2	3.08	0.41
27:BA:2341:G:N7	27:BA:2342:C:N4	2.68	0.41
27:BA:2378:A:C1'	38:BS:101:VAL:CG2	2.98	0.41
27:BA:2411:A:O2'	27:BA:2412:A:C8	2.48	0.41
27:BA:2462:U:O2	27:BA:2463:C:C6	2.73	0.41
27:BA:2524:G:C6	27:BA:2525:G:C5	3.08	0.41
27:BA:2661:G:N3	27:BA:2662:A:C8	2.86	0.41
27:BA:2648:C:N4	27:BA:2672:G:N1	2.52	0.41
27:BA:2747:G:N2	27:BA:2754:U:H3	2.16	0.41
27:BA:2886:G:N3	27:BA:2887:U:C6	2.89	0.41
27:BA:612:G:C4'	27:BA:616:A:N6	2.67	0.41
27:BA:775:G:H2'	27:BA:794:G:C5	2.55	0.41
27:BA:944:G:N3	27:BA:944:G:H2'	2.36	0.41
27:BA:961:C:N4	27:BA:2031:A:H1'	2.34	0.41
28:BD:152:GLN:OE1	28:BD:152:GLN:N	2.51	0.41
29:BE:180:ILE:HG23	29:BE:183:ASP:OD2	2.20	0.41
29:BE:251:PRO:O	29:BE:252:GLN:CG	2.68	0.41
29:BE:44:TYR:CD1	29:BE:307:LEU:O	2.71	0.41
29:BE:80:ALA:N	29:BE:185:GLY:O	2.53	0.41
30:BF:242:GLU:O	30:BF:245:GLU:CD	2.55	0.41
30:BF:44:GLN:HB3	30:BF:45:ASP:H	1.76	0.41
27:BA:2315:G:H5''	31:BG:20:LYS:HD2	2.03	0.41
32:BH:124:VAL:HA	32:BH:130:ILE:HG13	2.03	0.41
32:BH:37:HIS:CE1	32:BH:67:THR:HG21	2.55	0.41
32:BH:51:VAL:HG22	32:BH:68:ARG:HG3	2.02	0.41
27:BA:1020:A:H4'	34:BN:49:ARG:HH22	1.85	0.41
37:BQ:66:ASN:CB	37:BQ:70:ARG:HH21	2.24	0.41
38:BS:9:PRO:HG3	38:BS:14:ARG:CB	2.51	0.41
45:BU:25:TRP:O	45:BU:26:GLY:C	2.58	0.41
33:BI:144:HIS:O	33:BI:144:HIS:CG	2.73	0.41
33:BI:124:LEU:HA	33:BI:145:VAL:HB	2.02	0.41
42:BY:11:GLN:HA	42:BY:21:LYS:NZ	2.35	0.41
42:BY:20:HIS:O	42:BY:21:LYS:C	2.58	0.41
42:BY:30:ASP:OD2	42:BY:31:LEU:CG	2.61	0.41
1:AA:1307:U:H4'	16:AM:109:THR:CG2	2.50	0.41
28:BD:205:VAL:HB	28:BD:206:LYS:HD3	2.01	0.41
47:B2:34:GLN:HB2	47:B2:35:ALA:H	1.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1339:G:O5'	27:BA:1339:G:C8	2.73	0.41
27:BA:143:C:O2'	27:BA:144:C:O4'	2.34	0.41
1:AA:947:G:C4'	1:AA:1332:A:C2	2.93	0.41
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.20	0.41
1:AA:120:A:H2'	1:AA:122:G:N7	2.35	0.41
1:AA:665:A:N9	1:AA:733:A:H1'	2.35	0.41
1:AA:1089:G:HO2'	1:AA:1169:A:H2	1.67	0.41
1:AA:1117:G:N2	1:AA:1180:A:C1'	2.65	0.41
1:AA:586:C:O2'	1:AA:878:G:H4'	2.21	0.41
1:AA:1241:G:H2'	1:AA:1242:C:C6	2.56	0.41
1:AA:20:U:C1'	1:AA:572:A:C4	3.02	0.41
27:BA:1324:G:N2	27:BA:1331:A:C4	2.89	0.41
27:BA:270:A:N1	27:BA:370:G:H1'	2.35	0.41
1:AA:1240:U:C1'	10:AG:42:ILE:HD11	2.50	0.41
12:AI:35:GLU:O	12:AI:38:GLN:HG2	2.21	0.41
27:BA:1530:G:P	27:BA:1539:G:H1	2.43	0.41
13:AJ:38:ILE:HG13	13:AJ:71:LEU:HB3	2.01	0.41
27:BA:711:G:H1	27:BA:720:C:N4	2.16	0.41
5:AB:152:PHE:O	5:AB:154:LEU:N	2.53	0.41
5:AB:82:ARG:HB2	5:AB:94:ASN:ND2	2.35	0.41
1:AA:330:C:C2	1:AA:331:G:C8	3.09	0.41
1:AA:1350:A:H62	12:AI:118:LYS:NZ	2.19	0.41
48:B3:26:LEU:HG	48:B3:26:LEU:H	1.45	0.41
55:B9:2:LYS:C	55:B9:4:ARG:N	2.74	0.41
27:BA:1021:A:C2	27:BA:1023:U:H1'	2.55	0.41
27:BA:1152:C:O4'	45:BU:77:SER:CB	2.68	0.41
27:BA:1238:G:C5	27:BA:1239:G:C8	3.08	0.41
27:BA:126:A:C4	53:B7:18:PHE:CG	3.08	0.41
27:BA:489:G:C8	27:BA:1284:A:C2	3.09	0.41
27:BA:1647:G:H4'	27:BA:1648:C:O5'	2.20	0.41
27:BA:1675:C:N3	29:BE:225:LYS:HA	2.36	0.41
27:BA:2096:U:H2'	27:BA:2097:C:C6	2.55	0.41
27:BA:2092:U:C5	27:BA:2227:A:N6	2.86	0.41
27:BA:2250:G:C3'	27:BA:2250:G:H8	2.22	0.41
27:BA:2276:G:HO2'	27:BA:2277:G:C5'	2.24	0.41
27:BA:2289:G:C2	27:BA:2290:G:C4	3.09	0.41
27:BA:2418:A:O2'	27:BA:2419:U:C5'	2.68	0.41
27:BA:2436:G:C2	27:BA:2437:U:C1'	3.02	0.41
27:BA:2537:U:O2'	27:BA:2538:C:H5'	2.20	0.41
27:BA:2540:C:O2	27:BA:2541:A:C1'	2.69	0.41
27:BA:2546:U:C3'	27:BA:2546:U:C6	3.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2574:G:C5'	27:BA:2575:C:P	2.99	0.41
27:BA:2656:U:H2'	27:BA:2657:A:H5'	2.01	0.41
27:BA:2683:C:C4	27:BA:2684:U:C5	3.09	0.41
27:BA:2756:U:O2	27:BA:2756:U:H2'	2.18	0.41
27:BA:2771:C:N4	27:BA:2772:C:N4	2.69	0.41
27:BA:2818:G:H1	27:BA:2828:C:H42	1.67	0.41
27:BA:2842:G:H8	27:BA:2842:G:O5'	2.04	0.41
27:BA:447:A:P	45:BU:5:LYS:NZ	2.94	0.41
27:BA:556:G:H2'	27:BA:557:U:O4'	2.20	0.41
27:BA:563:G:N2	45:BU:37:GLN:OE1	2.49	0.41
27:BA:972:G:N7	27:BA:1188:U:C4	2.84	0.41
26:BB:29:A:OP2	38:BS:41:LYS:CB	2.67	0.41
26:BB:5:C:H2'	26:BB:6:C:H6	1.85	0.41
28:BD:77:VAL:CG1	28:BD:111:VAL:O	2.68	0.41
30:BF:151:GLN:OE1	30:BF:154:VAL:HG23	2.07	0.41
30:BF:149:LYS:CB	30:BF:152:GLU:HG3	2.39	0.41
30:BF:163:HIS:O	30:BF:166:ILE:CA	2.62	0.41
30:BF:1:MET:C	30:BF:18:LEU:HD21	2.38	0.41
30:BF:38:ALA:O	30:BF:40:ALA:N	2.53	0.41
31:BG:106:PHE:O	31:BG:107:GLY:C	2.58	0.41
32:BH:10:ILE:O	32:BH:11:PRO:O	2.39	0.41
32:BH:102:LEU:O	32:BH:113:GLU:HA	2.21	0.41
32:BH:129:LYS:CA	32:BH:130:ILE:HD12	2.31	0.41
32:BH:75:VAL:CG1	32:BH:76:GLU:N	2.71	0.41
32:BH:91:VAL:H	32:BH:159:LYS:HD2	1.86	0.41
35:BO:14:SER:H	35:BO:95:GLY:CA	2.34	0.41
36:BP:110:GLY:C	36:BP:111:ALA:O	2.51	0.41
44:BR:28:LEU:HD13	44:BR:32:GLY:H	1.86	0.41
44:BR:67:LEU:C	44:BR:69:ASP:N	2.72	0.41
44:BR:99:LYS:HB3	51:B5:44:HIS:NE2	2.35	0.41
39:BT:54:THR:O	39:BT:56:ARG:N	2.47	0.41
45:BU:98:ILE:CB	45:BU:106:PHE:CD1	3.04	0.41
45:BU:117:ARG:NH1	45:BU:118:GLN:CD	2.74	0.41
45:BU:60:LEU:N	45:BU:60:LEU:HD23	2.35	0.41
46:BV:71:ILE:HG22	46:BV:72:ARG:N	2.35	0.41
40:BW:69:LEU:CD2	40:BW:109:GLU:HB2	2.50	0.41
40:BW:18:ARG:O	40:BW:19:LEU:C	2.59	0.41
27:BA:487:C:H1'	40:BW:53:SER:CA	2.51	0.41
43:BZ:104:SER:O	43:BZ:105:GLN:CD	2.59	0.41
43:BZ:107:GLU:OE1	43:BZ:107:GLU:N	2.34	0.41
43:BZ:70:GLN:HG3	43:BZ:72:ASP:HB3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:78:PRO:O	43:BZ:79:ILE:HG12	2.12	0.41
27:BA:76:C:C5'	47:B2:55:ARG:HE	2.34	0.41
1:AA:1374:A:O2'	10:AG:31:MET:SD	2.71	0.41
31:BG:83:PHE:C	31:BG:85:GLN:N	2.72	0.41
1:AA:565:U:H3'	1:AA:566:G:H8	1.83	0.41
1:AA:575:G:C4	1:AA:881:G:C2	3.09	0.41
33:BI:47:LEU:O	33:BI:51:LYS:HG3	2.20	0.41
1:AA:246:A:H62	1:AA:281:G:H21	1.69	0.41
1:AA:279:A:C2	20:AQ:98:LEU:CD1	3.04	0.41
27:BA:2857:G:C4	27:BA:2859:G:OP2	2.73	0.41
1:AA:1118:C:O4'	1:AA:1179:A:C1'	2.69	0.41
1:AA:939:G:O5'	10:AG:102:ARG:NH1	2.48	0.41
19:AP:3:LYS:HE2	19:AP:24:ALA:HB2	2.03	0.41
1:AA:19:C:H2'	1:AA:20:U:C6	2.56	0.41
11:AH:29:SER:HB3	11:AH:32:LYS:HG2	2.03	0.41
27:BA:49:A:H2	27:BA:118:A:N7	2.18	0.41
1:AA:250:A:H5'	1:AA:252:U:O4'	2.20	0.41
27:BA:1328:G:N2	27:BA:1330:C:C2	2.88	0.41
1:AA:26:A:H4'	1:AA:508:C:N4	2.36	0.41
13:AJ:39:PRO:O	13:AJ:40:LEU:HB2	2.20	0.41
27:BA:1811:G:H2'	27:BA:1812:A:C8	2.55	0.41
26:BB:69:G:H5'	26:BB:70:C:OP2	2.20	0.41
1:AA:1127:G:H21	1:AA:1147:C:H42	1.68	0.41
6:AC:139:GLN:HE21	6:AC:170:GLN:HE22	1.69	0.41
1:AA:1021:G:C2	1:AA:1022:G:H1'	2.56	0.41
8:AE:42:GLY:HA3	8:AE:66:MET:SD	2.60	0.41
17:AN:21:TYR:N	17:AN:21:TYR:CD1	2.89	0.41
49:B0:28:GLY:O	49:B0:62:LEU:HD22	2.20	0.41
27:BA:593:G:C8	54:B8:3:LYS:NZ	2.87	0.41
27:BA:1031:G:C3'	55:B9:8:LYS:HE2	2.51	0.41
27:BA:1061:U:OP1	27:BA:1062:G:H8	2.03	0.41
27:BA:1130:U:O2'	27:BA:1131:G:H8	2.03	0.41
27:BA:1451:C:H6	27:BA:1453:A:H4'	1.85	0.41
27:BA:2263:C:H2'	27:BA:2264:C:H6	1.85	0.41
27:BA:2307:G:O2'	27:BA:2311:A:C6	2.62	0.41
27:BA:2431:U:H2'	27:BA:2433:A:OP2	2.20	0.41
27:BA:2459:A:N1	27:BA:2494:G:C5	2.89	0.41
27:BA:1783:A:C2	27:BA:2607:G:N2	2.88	0.41
27:BA:1999:C:C2'	27:BA:2687:U:O2'	2.68	0.41
27:BA:26:G:O5'	27:BA:26:G:H8	2.03	0.41
27:BA:2692:C:C4	27:BA:2718:G:N1	2.87	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2831:G:O2'	27:BA:2883:A:H2'	2.20	0.41
27:BA:380:U:O2'	50:B4:15:ILE:N	2.52	0.41
27:BA:606:U:OP1	30:BF:105:LYS:CD	2.55	0.41
27:BA:669:G:N3	27:BA:669:G:C2'	2.83	0.41
27:BA:769:G:H2'	27:BA:770:G:H8	1.85	0.41
27:BA:673:C:N4	27:BA:808:G:N1	2.68	0.41
26:BB:49:C:P	38:BS:110:THR:OG1	2.78	0.41
26:BB:5:C:H2'	26:BB:6:C:C6	2.55	0.41
28:BD:108:ASN:O	28:BD:109:LEU:C	2.59	0.41
28:BD:81:GLU:C	28:BD:83:ASP:OD2	2.48	0.41
29:BE:105:HIS:HB3	29:BE:106:SER:H	1.56	0.41
29:BE:77:PRO:O	29:BE:79:ARG:N	2.49	0.41
27:BA:2783:G:O3'	29:BE:95:PRO:HB2	2.20	0.41
30:BF:167:ASP:OD2	30:BF:232:LEU:CD2	2.64	0.41
30:BF:167:ASP:HB2	30:BF:232:LEU:CB	2.51	0.41
30:BF:1:MET:HB2	30:BF:2:GLU:H	1.59	0.41
30:BF:56:THR:CG2	30:BF:57:PRO:HD3	2.45	0.41
30:BF:61:PHE:HB3	30:BF:65:ARG:NH1	2.35	0.41
32:BH:123:GLU:CD	32:BH:123:GLU:N	2.73	0.41
34:BN:44:ALA:O	34:BN:45:VAL:HG23	2.21	0.41
34:BN:55:GLU:O	34:BN:58:GLU:N	2.53	0.41
34:BN:70:PHE:HB2	34:BN:71:TYR:H	1.64	0.41
34:BN:75:PRO:HD3	34:BN:136:SER:CB	2.44	0.41
34:BN:96:GLU:C	34:BN:98:PHE:N	2.73	0.41
36:BP:132:LYS:O	36:BP:135:GLY:HA3	2.19	0.41
36:BP:133:VAL:C	36:BP:135:GLY:N	2.72	0.41
37:BQ:50:VAL:CA	37:BQ:51:GLU:OE1	2.69	0.41
37:BQ:82:LYS:HG2	37:BQ:84:ARG:CG	2.33	0.41
44:BR:37:THR:HA	44:BR:111:LEU:C	2.40	0.41
38:BS:22:GLN:H	38:BS:22:GLN:CD	2.20	0.41
38:BS:61:ALA:CB	38:BS:88:ALA:CB	2.70	0.41
38:BS:82:TYR:O	38:BS:86:LEU:HD12	2.19	0.41
45:BU:11:ARG:O	45:BU:12:ARG:C	2.59	0.41
46:BV:50:ASP:O	46:BV:54:TYR:CE1	2.73	0.41
46:BV:78:VAL:HG22	46:BV:82:ARG:HB2	2.02	0.41
27:BA:34:C:O4'	42:BY:8:ARG:NH1	2.54	0.41
33:BI:68:LEU:HD22	33:BI:72:LEU:CD2	2.49	0.41
27:BA:99:U:H3	42:BY:107:LYS:HD3	1.83	0.41
43:BZ:18:MET:O	43:BZ:36:ARG:NE	2.29	0.41
1:AA:1357:A:O2'	17:AN:34:TYR:HE2	1.99	0.41
1:AA:1060:C:C4	6:AC:2:GLY:HA3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:138:G:H1'	41:BX:42:GLU:CB	2.50	0.41
41:BX:28:VAL:C	41:BX:30:ASP:H	2.23	0.41
41:BX:37:VAL:HG12	41:BX:38:ALA:N	2.35	0.41
1:AA:563:A:N3	15:AL:15:ARG:NH1	2.68	0.41
27:BA:439:G:H5''	42:BY:6:LYS:HZ1	1.85	0.41
27:BA:1351:C:H42	27:BA:1380:G:H1	1.68	0.41
27:BA:1102:C:H2'	27:BA:1103:A:C8	2.55	0.41
1:AA:22:G:N2	1:AA:914:A:C8	2.89	0.41
1:AA:932:C:OP2	10:AG:3:ARG:HD2	2.21	0.41
27:BA:2182:G:C4	27:BA:2183:C:C4	3.07	0.41
27:BA:191:A:H62	27:BA:204:A:H62	1.66	0.41
1:AA:190(J):U:H2'	1:AA:190(K):G:H8	1.86	0.41
9:AF:10:LEU:HD11	9:AF:26:ILE:HD11	2.02	0.41
8:AE:36:ASP:OD1	8:AE:40:ARG:HB2	2.20	0.41
27:BA:1934:C:H4'	27:BA:1974:C:H4'	2.03	0.41
27:BA:1396:U:H6	27:BA:1396:U:H3'	1.86	0.41
48:B3:1:MET:O	48:B3:1:MET:CG	2.65	0.41
48:B3:27:GLY:C	48:B3:28:LEU:HD23	2.41	0.41
48:B3:42:ALA:HB3	48:B3:43:ILE:CD1	2.41	0.41
27:BA:396:G:C5'	50:B4:10:VAL:HG13	2.50	0.41
50:B4:20:VAL:O	50:B4:30:GLU:HG2	2.20	0.41
27:BA:126:A:C4	53:B7:18:PHE:CD2	3.06	0.41
27:BA:1239:G:H2'	27:BA:1240:U:H6	1.85	0.41
27:BA:1667:G:OP2	27:BA:1667:G:C8	2.64	0.41
27:BA:16:G:H5'	51:B5:18:MET:SD	2.59	0.41
27:BA:1935:G:H2'	27:BA:1962:C:N4	2.35	0.41
27:BA:2228:G:C8	27:BA:2228:G:C3'	3.03	0.41
27:BA:2235:G:C6	27:BA:2236:C:C4	3.08	0.41
27:BA:2339:G:C2	27:BA:2340:G:C4	3.08	0.41
27:BA:2634:G:C6	27:BA:2785:C:N4	2.88	0.41
27:BA:2711:A:C3'	27:BA:2712:U:H5'	2.50	0.41
27:BA:29:U:O5'	27:BA:29:U:H6	2.03	0.41
27:BA:556:G:H2'	27:BA:557:U:C6	2.56	0.41
28:BD:166:LYS:HA	28:BD:172:ILE:N	2.30	0.41
29:BE:71:THR:HG22	29:BE:299:SER:CB	2.03	0.41
30:BF:36:ARG:HB2	30:BF:37:ALA:H	1.53	0.41
30:BF:89:ALA:CB	30:BF:90:HIS:CD2	3.04	0.41
31:BG:24:HIS:HB2	31:BG:72:LYS:CD	2.51	0.41
31:BG:63:ILE:CG2	31:BG:64:ARG:N	2.83	0.41
31:BG:97:GLN:HB3	31:BG:106:PHE:CD2	2.52	0.41
32:BH:82:TYR:CE1	32:BH:137:LYS:CB	3.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BH:71:LEU:C	32:BH:73:ASN:H	2.22	0.41
32:BH:99:GLY:C	32:BH:101:LYS:H	2.22	0.41
33:BI:28:ASN:O	33:BI:32:LYS:CG	2.69	0.41
36:BP:110:GLY:N	36:BP:126:SER:HG	2.16	0.41
37:BQ:137:ARG:C	37:BQ:139:ALA:N	2.74	0.41
37:BQ:31:PHE:CZ	37:BQ:87:LYS:O	2.73	0.41
44:BR:47:PHE:C	44:BR:49:ASP:N	2.74	0.41
38:BS:86:LEU:HA	38:BS:125:ALA:HB2	2.03	0.41
45:BU:24:PHE:HB2	45:BU:28:ARG:HD2	2.02	0.41
45:BU:18:LEU:HD11	45:BU:30:LYS:HA	2.03	0.41
46:BV:31:ASP:O	46:BV:33:VAL:N	2.53	0.41
46:BV:61:VAL:HG22	46:BV:97:GLY:N	2.35	0.41
46:BV:65:ARG:O	46:BV:93:ILE:CA	2.69	0.41
46:BV:67:LYS:N	46:BV:92:ALA:O	2.53	0.41
40:BW:96:ILE:C	40:BW:96:ILE:HD13	2.41	0.41
43:BZ:172:LEU:C	43:BZ:172:LEU:CD2	2.81	0.41
33:BI:78:THR:O	33:BI:79:ILE:HG13	2.21	0.41
42:BY:41:ARG:HD3	42:BY:111:ARG:HG2	2.02	0.41
42:BY:20:HIS:CA	42:BY:67:LEU:CD2	2.98	0.41
47:B2:35:ALA:C	47:B2:37:GLY:N	2.73	0.41
27:BA:65:C:H2'	27:BA:66:C:H6	1.85	0.41
6:AC:8:ILE:HG21	17:AN:50:LYS:O	2.21	0.41
50:B4:51:ASP:N	50:B4:51:ASP:OD1	2.53	0.41
41:BX:44:GLN:CD	41:BX:45:TYR:CA	2.86	0.41
7:AD:13:ARG:HB3	7:AD:40:PRO:HD3	2.03	0.41
1:AA:549:C:C4	1:AA:550:G:N7	2.89	0.41
1:AA:878:G:H8	1:AA:878:G:O5'	2.02	0.41
24:AU:22:ARG:HA	24:AU:23:PRO:HD3	1.92	0.41
6:AC:91:LEU:CD1	6:AC:99:VAL:HG22	2.32	0.41
27:BA:817:C:H42	27:BA:1190:G:H1	1.67	0.41
1:AA:261:U:O4	23:AT:79:ARG:NE	2.54	0.41
1:AA:18:C:C2	1:AA:917:G:N2	2.80	0.41
27:BA:120:U:C6	27:BA:150:C:C2	3.08	0.41
10:AG:27:ILE:HA	10:AG:30:ILE:HD12	2.02	0.41
12:AI:102:LEU:O	12:AI:103:THR:CB	2.68	0.41
27:BA:1174:A:N6	27:BA:1177:A:N3	2.69	0.41
8:AE:102:ALA:HB1	8:AE:106:PRO:HB2	2.02	0.41
27:BA:1832:C:C4	27:BA:1833:U:C4	3.08	0.41
27:BA:1216:G:N2	27:BA:1234:U:C1'	2.82	0.41
1:AA:686:U:O2	14:AK:42:TRP:CZ2	2.74	0.41
1:AA:1115:C:O2	17:AN:61:TRP:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1424:G:N1	27:BA:1574:C:O2	2.53	0.41
1:AA:807:A:C6	1:AA:808:C:N3	2.88	0.41
1:AA:1132:C:H42	1:AA:1142:G:H1	1.67	0.41
49:B0:14:ARG:CD	49:B0:15:ASP:N	2.83	0.41
49:B0:16:SER:O	49:B0:17:ASN:HB2	2.20	0.41
48:B3:47:VAL:HA	48:B3:50:VAL:HG21	1.81	0.41
27:BA:2371:G:O3'	52:B6:47:HIS:CE1	2.73	0.41
52:B6:46:LYS:C	52:B6:47:HIS:ND1	2.74	0.41
54:B8:51:ALA:O	54:B8:54:GLU:HG3	2.20	0.41
27:BA:1166:C:O2	27:BA:1184:G:N2	2.54	0.41
27:BA:1239:G:N3	27:BA:1240:U:C5	2.88	0.41
27:BA:15:G:C2	27:BA:16:G:H1'	2.55	0.41
27:BA:2207:C:N4	27:BA:2218:G:C6	2.89	0.41
27:BA:2310:A:C4	31:BG:55:LYS:CD	3.03	0.41
27:BA:2351:G:H5'	27:BA:2352:A:OP1	2.19	0.41
27:BA:2488:A:C5	27:BA:2489:G:N7	2.89	0.41
27:BA:2606:C:C2	27:BA:2607:G:C8	3.08	0.41
27:BA:2730:C:C4'	29:BE:265:ASN:CG	2.87	0.41
27:BA:380:U:HO2'	50:B4:15:ILE:CA	2.34	0.41
27:BA:578:A:H2'	27:BA:579:G:H5''	2.02	0.41
27:BA:628:G:H2'	27:BA:629:G:H8	1.86	0.41
27:BA:6:A:H4'	34:BN:4:ALA:CA	2.50	0.41
28:BD:104:ILE:HB	28:BD:106:PRO:CG	2.49	0.41
28:BD:93:ILE:HD11	28:BD:115:ILE:HD11	2.02	0.41
28:BD:89:ASN:O	28:BD:105:ALA:CA	2.66	0.41
29:BE:267:ARG:CD	29:BE:297:LYS:CB	2.98	0.41
30:BF:115:LEU:C	30:BF:118:THR:HG1	2.13	0.41
30:BF:196:THR:CG2	30:BF:197:SER:H	2.24	0.41
30:BF:210:ALA:O	30:BF:211:ASP:CG	2.59	0.41
30:BF:3:ALA:HB2	30:BF:18:LEU:HD23	2.03	0.41
30:BF:93:LYS:CA	30:BF:96:LYS:CE	2.57	0.41
31:BG:24:HIS:CB	31:BG:72:LYS:CD	2.98	0.41
31:BG:29:HIS:ND1	31:BG:69:ILE:CG1	2.84	0.41
32:BH:140:VAL:C	32:BH:143:LEU:CD2	2.84	0.41
32:BH:143:LEU:O	32:BH:144:ALA:C	2.57	0.41
32:BH:57:GLU:HG2	32:BH:57:GLU:H	1.68	0.41
32:BH:82:TYR:CD1	32:BH:137:LYS:N	2.78	0.41
34:BN:101:VAL:O	34:BN:102:ARG:HG2	2.21	0.41
27:BA:1137:G:H5''	34:BN:60:ARG:NH2	2.35	0.41
36:BP:51:PHE:N	36:BP:51:PHE:CD1	2.88	0.41
37:BQ:20:ILE:HG13	37:BQ:21:SER:OG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BR:51:LEU:O	44:BR:54:LEU:N	2.44	0.41
44:BR:91:GLN:O	44:BR:92:GLY:C	2.54	0.41
27:BA:1249:U:H5''	45:BU:4:ALA:HB2	2.02	0.41
45:BU:68:GLY:O	45:BU:70:ARG:C	2.58	0.41
1:AA:1400:C:C2	2:AV:34:G:C2	3.05	0.41
42:BY:55:PHE:O	42:BY:56:ALA:O	2.39	0.41
43:BZ:40:ASP:CB	43:BZ:41:ARG:NE	2.56	0.41
43:BZ:2:GLU:HA	43:BZ:54:ILE:CG2	2.24	0.41
43:BZ:70:GLN:C	43:BZ:72:ASP:H	2.24	0.41
43:BZ:77:ALA:HA	43:BZ:78:PRO:HD2	1.77	0.41
1:AA:1060:C:C5	6:AC:2:GLY:C	2.93	0.41
27:BA:1544:C:C2	27:BA:1545:A:H1'	2.55	0.41
47:B2:48:GLU:HB3	47:B2:49:LEU:H	1.54	0.41
27:BA:76:C:C2'	47:B2:55:ARG:HG3	2.50	0.41
27:BA:131:G:C2	27:BA:149:A:N1	2.89	0.41
27:BA:72:U:C6	47:B2:57:LYS:HD2	2.56	0.41
41:BX:33:SER:C	41:BX:37:VAL:CB	2.87	0.41
41:BX:35:GLY:C	41:BX:37:VAL:H	2.24	0.41
10:AG:34:GLY:O	10:AG:36:LYS:N	2.53	0.41
2:AV:72:C:H2'	2:AV:73:A:O4'	2.20	0.41
1:AA:577:G:H4'	1:AA:816:A:H2'	2.02	0.41
1:AA:1404:C:H1'	1:AA:1519:A:O2'	2.20	0.41
1:AA:923:A:OP1	8:AE:21:ALA:HB2	2.21	0.41
1:AA:1330:U:H5''	16:AM:23:TYR:HA	2.02	0.41
27:BA:1470:G:N2	27:BA:1522:G:N2	2.67	0.41
27:BA:1087:G:N2	27:BA:1104:C:C4'	2.83	0.41
27:BA:1416:G:H21	27:BA:1582:C:N4	2.10	0.41
1:AA:17:U:O4'	1:AA:1080:A:H1'	2.21	0.41
1:AA:569:C:C2'	1:AA:570:G:OP2	2.69	0.41
1:AA:885:G:O2'	1:AA:915:A:C2	2.74	0.41
11:AH:27:PRO:HB2	11:AH:32:LYS:NZ	2.30	0.41
27:BA:270:A:C2'	27:BA:270(A):A:H4'	2.44	0.41
1:AA:1240:U:C6	10:AG:42:ILE:HD13	2.55	0.41
27:BA:1539:G:H2'	27:BA:1540:G:C5	2.56	0.41
1:AA:511:C:H42	1:AA:541:G:N2	2.19	0.41
27:BA:299:A:H1'	27:BA:319:C:O2'	2.20	0.41
27:BA:319:C:H2'	27:BA:320:A:C8	2.55	0.41
1:AA:1127:G:H21	1:AA:1147:C:N4	2.19	0.41
1:AA:1115:C:O4'	17:AN:61:TRP:HA	2.21	0.41
14:AK:23:ALA:HB2	14:AK:28:THR:HG23	2.03	0.41
27:BA:261:G:H2'	27:BA:262:A:H8	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:859:A:H2'	1:AA:860:A:C8	2.56	0.41
44:BR:118:GLU:OE2	44:BR:118:GLU:HA	2.19	0.41
49:B0:26:PHE:N	49:B0:26:PHE:CD1	2.89	0.41
48:B3:40:THR:O	48:B3:41:PRO:C	2.60	0.41
50:B4:63:PHE:HB3	50:B4:64:GLY:H	1.47	0.41
51:B5:31:THR:HG22	51:B5:42:SER:HA	2.02	0.41
52:B6:19:GLY:C	52:B6:44:ALA:HB2	2.42	0.41
52:B6:8:ILE:CA	52:B6:29:ARG:CZ	2.88	0.41
27:BA:1252:G:C8	27:BA:1253:A:C1'	3.03	0.41
27:BA:1254:A:H3'	27:BA:1256:G:H5''	2.02	0.41
27:BA:2206:C:C2	27:BA:2207:C:C6	3.09	0.41
27:BA:192:C:OP1	27:BA:2243:U:OP1	2.39	0.41
27:BA:2334:G:O4'	27:BA:2334:G:OP1	2.39	0.41
27:BA:827:U:C5	27:BA:2430:A:C2	3.09	0.41
27:BA:2439:A:C8	27:BA:2586:C:O3'	2.73	0.41
27:BA:2468:G:C2'	27:BA:2469:A:C5'	2.96	0.41
27:BA:2476:A:H3'	27:BA:2476:A:C8	2.56	0.41
27:BA:1028:A:H2	27:BA:2486:G:H2'	1.86	0.41
27:BA:2458:G:N7	27:BA:2490:G:N1	2.68	0.41
27:BA:2530:A:C2'	27:BA:2531:A:C5'	2.71	0.41
27:BA:2533:A:H3'	27:BA:2534:A:H8	1.85	0.41
27:BA:2548:G:O5'	27:BA:2548:G:H8	2.04	0.41
27:BA:2555:U:O2'	27:BA:2556:C:P	2.78	0.41
27:BA:2599:G:C2'	27:BA:2600:A:O4'	2.49	0.41
27:BA:2648:C:C6	27:BA:2649:U:C5	3.09	0.41
27:BA:2763:G:O5'	27:BA:2763:G:H8	2.04	0.41
27:BA:2768:C:C6	27:BA:2768:C:C3'	3.04	0.41
27:BA:2692:C:C1'	27:BA:2847:U:O2'	2.68	0.41
27:BA:2830:G:H2'	27:BA:2883:A:N1	2.36	0.41
27:BA:628:G:H2'	27:BA:629:G:C8	2.55	0.41
27:BA:784:A:N7	27:BA:792:G:C4	2.89	0.41
27:BA:989:G:OP2	48:B3:11:SER:OG	2.30	0.41
26:BB:8:U:H2'	26:BB:9:G:C8	2.55	0.41
28:BD:140:VAL:N	28:BD:161:ALA:O	2.50	0.41
28:BD:167:GLU:N	28:BD:182:MET:CE	2.51	0.41
28:BD:157:ALA:C	28:BD:194:VAL:HG11	2.29	0.41
29:BE:41:PHE:CD1	29:BE:193:PHE:CE1	3.09	0.41
29:BE:86:TYR:N	29:BE:86:TYR:CD1	2.88	0.41
30:BF:40:ALA:HB1	30:BF:100:LEU:HB2	2.02	0.41
30:BF:144:PHE:HE2	30:BF:156:LEU:HD22	1.86	0.41
30:BF:25:PRO:CG	30:BF:26:VAL:H	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:801:G:N7	30:BF:54:LEU:HD22	2.36	0.41
31:BG:100:ASP:HB2	31:BG:101:THR:H	1.66	0.41
32:BH:124:VAL:N	32:BH:125:PRO:CD	2.83	0.41
32:BH:145:ALA:HA	32:BH:148:ARG:HG3	2.01	0.41
32:BH:59:HIS:C	32:BH:61:ARG:N	2.72	0.41
34:BN:132:LEU:HA	34:BN:132:LEU:HD12	1.92	0.41
34:BN:136:SER:O	34:BN:138:THR:CA	2.66	0.41
34:BN:135:ILE:CA	34:BN:139:LEU:HD11	2.51	0.41
34:BN:48:GLY:C	34:BN:50:GLU:N	2.73	0.41
35:BO:27:GLY:C	35:BO:28:SER:O	2.56	0.41
35:BO:77:ILE:C	35:BO:78:ARG:CG	2.89	0.41
35:BO:60:ALA:CA	35:BO:85:VAL:O	2.69	0.41
36:BP:64:ILE:HD11	36:BP:106:VAL:HA	1.86	0.41
45:BU:11:ARG:CG	45:BU:12:ARG:H	2.34	0.41
27:BA:581:C:C5'	45:BU:32:TYR:HB2	2.47	0.41
27:BA:446:G:C4'	45:BU:5:LYS:HZ1	2.32	0.41
45:BU:80:ILE:O	45:BU:83:LEU:HB2	2.21	0.41
27:BA:1151:G:C1'	45:BU:81:ASN:ND2	2.81	0.41
2:AV:16:U:H4'	2:AV:18:G:C5'	2.51	0.41
49:B0:35:ASN:C	49:B0:68:VAL:HG21	2.41	0.41
49:B0:41:ARG:C	49:B0:67:VAL:HG22	2.41	0.41
48:B3:12:PRO:C	48:B3:15:TYR:HD1	2.25	0.41
51:B5:6:VAL:H	51:B5:8:LYS:HZ3	1.67	0.41
53:B7:13:ALA:O	53:B7:16:HIS:C	2.54	0.41
53:B7:30:ILE:O	53:B7:31:LEU:O	2.38	0.41
53:B7:31:LEU:O	53:B7:33:ARG:N	2.54	0.41
54:B8:26:LYS:HE3	54:B8:44:LYS:C	2.30	0.41
55:B9:17:VAL:HG13	55:B9:18:ARG:N	2.36	0.41
27:BA:1265:A:HO2'	27:BA:1266:G:P	2.44	0.41
27:BA:1309:G:OP1	53:B7:8:ASN:HA	2.21	0.41
27:BA:1781:C:C6	27:BA:1781:C:C3'	3.04	0.41
27:BA:2058:A:C8	27:BA:2058:A:O5'	2.74	0.41
27:BA:2239:G:H5''	27:BA:2240:C:OP2	2.21	0.41
27:BA:2272:U:O2	27:BA:2272:U:O4'	2.38	0.41
27:BA:2306:C:C4	27:BA:2311:A:N1	2.88	0.41
27:BA:2358:G:H21	27:BA:2359:C:C4'	2.30	0.41
27:BA:2581:G:N2	27:BA:2610:C:C5	2.89	0.41
25:AY:227:PRO:CA	27:BA:2584:U:H4'	2.51	0.41
27:BA:2588:G:H2'	27:BA:2589:A:O4'	2.21	0.41
27:BA:2682:U:C5	29:BE:48:MET:SD	3.13	0.41
27:BA:2686:G:C6	27:BA:2687:U:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:2743:C:N1	27:BA:2762:G:N2	2.69	0.41
27:BA:2774:C:H2'	27:BA:2775:A:C8	2.47	0.41
27:BA:2842:G:C2'	27:BA:2843:G:C5'	2.54	0.41
27:BA:530:G:O2'	27:BA:531:C:O5'	2.36	0.41
27:BA:825:C:O4'	27:BA:2428:G:O6	2.39	0.41
28:BD:77:VAL:HG11	28:BD:109:LEU:O	2.20	0.41
28:BD:175:LEU:HD12	28:BD:179:GLU:C	2.16	0.41
28:BD:78:ALA:HA	28:BD:94:ASN:HD22	1.85	0.41
27:BA:605:C:P	30:BF:105:LYS:HG2	2.61	0.41
30:BF:220:THR:O	30:BF:225:PRO:CD	2.68	0.41
30:BF:164:ALA:HB1	30:BF:232:LEU:HD12	1.71	0.41
31:BG:141:VAL:C	31:BG:143:LYS:N	2.74	0.41
31:BG:144:ARG:N	31:BG:144:ARG:HD2	2.36	0.41
31:BG:71:ALA:C	31:BG:72:LYS:CD	2.84	0.41
32:BH:25:VAL:CB	32:BH:78:VAL:HG21	2.44	0.41
34:BN:45:VAL:N	34:BN:132:LEU:CG	2.76	0.41
35:BO:34:ASN:C	35:BO:62:VAL:HG21	2.40	0.41
37:BQ:134:PHE:O	37:BQ:137:ARG:HD2	2.20	0.41
37:BQ:25:GLY:C	37:BQ:27:GLY:H	2.24	0.41
37:BQ:61:LEU:O	37:BQ:62:GLU:O	2.38	0.41
37:BQ:35:ASN:CB	37:BQ:75:SER:CA	2.98	0.41
38:BS:81:ALA:O	38:BS:83:LEU:CA	2.59	0.41
46:BV:49:GLU:O	46:BV:50:ASP:C	2.60	0.41
43:BZ:107:GLU:C	43:BZ:109:GLN:N	2.70	0.41
33:BI:88:ARG:HD3	33:BI:122:ARG:CB	2.42	0.41
42:BY:47:THR:HA	42:BY:61:GLU:HA	2.03	0.41
43:BZ:18:MET:C	43:BZ:19:ILE:HD12	2.38	0.41
43:BZ:34:LEU:HD13	43:BZ:35:ASP:N	2.16	0.41
43:BZ:41:ARG:CD	43:BZ:41:ARG:H	2.33	0.41
1:AA:1060:C:O2'	13:AJ:56:HIS:CD2	2.74	0.41
16:AM:81:LEU:HD21	16:AM:88:ARG:NE	2.35	0.41
1:AA:1197:G:OP1	1:AA:1197:G:H3'	2.20	0.41
27:BA:131:G:H1	27:BA:148:C:H42	1.69	0.41
47:B2:33:VAL:O	47:B2:34:GLN:O	2.38	0.41
47:B2:50:ARG:O	47:B2:51:LYS:C	2.57	0.41
47:B2:61:GLY:O	47:B2:65:ASP:N	2.47	0.41
13:AJ:11:PHE:CE1	17:AN:54:PRO:O	2.73	0.41
1:AA:1024:G:C3'	1:AA:1025:U:P	3.09	0.41
33:BI:48:GLU:CG	33:BI:52:GLN:HE21	2.14	0.41
1:AA:123:C:H2'	1:AA:124:G:C8	2.56	0.41
1:AA:279:A:N1	20:AQ:98:LEU:HD12	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:407:G:O5'	1:AA:407:G:C8	2.65	0.41
1:AA:717:C:H2'	1:AA:734:G:H5'	2.03	0.41
8:AE:79:GLU:OE2	11:AH:104:ARG:HA	2.21	0.41
1:AA:106:C:H6	1:AA:106:C:OP2	2.04	0.41
1:AA:939:G:OP1	10:AG:102:ARG:CZ	2.69	0.41
33:BI:63:ALA:N	33:BI:66:LYS:HE2	2.35	0.41
6:AC:48:TYR:CE1	6:AC:122:GLU:OE2	2.72	0.41
20:AQ:97:SER:CB	20:AQ:103:GLY:CA	2.99	0.41
27:BA:1303:G:H1	27:BA:1625:C:N4	2.19	0.41
1:AA:40:C:H2'	1:AA:41:G:O4'	2.20	0.41
1:AA:578:C:H4'	1:AA:729:A:O4'	2.21	0.41
27:BA:269:U:H5'	27:BA:270(Y):G:N3	2.35	0.41
12:AI:13:ALA:HA	12:AI:67:GLY:HA3	2.02	0.41
27:BA:256:A:H2'	27:BA:257:A:H8	1.78	0.41
1:AA:508:C:H4'	1:AA:509:A:O5'	2.21	0.41
27:BA:2181:G:H3'	27:BA:2182:G:H5''	2.03	0.41
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.56	0.41
1:AA:1087:G:OP1	1:AA:1389:C:H4'	2.21	0.41
12:AI:58:ARG:HB3	12:AI:59:PHE:HD1	1.86	0.41
27:BA:1315:C:N4	27:BA:1337:G:H1	2.19	0.41
1:AA:899:C:O2'	27:BA:1832:C:OP1	2.33	0.41
1:AA:1057:G:H4'	6:AC:197:GLY:N	2.36	0.41
27:BA:1842:G:H2'	27:BA:1843:C:O4'	2.21	0.41
27:BA:1202:C:N3	27:BA:1243:G:N2	2.56	0.41
27:BA:1422:G:H2'	27:BA:1423:G:H8	1.86	0.41
27:BA:815:C:H2'	27:BA:816:C:H6	1.85	0.41
1:AA:454:C:H3'	1:AA:455:C:C6	2.49	0.41
27:BA:1802:A:OP2	27:BA:1815:A:N6	2.51	0.41
27:BA:798:G:N1	27:BA:799:G:C6	2.88	0.41
1:AA:185:A:N3	23:AT:81:LYS:NZ	2.58	0.41
27:BA:619:G:C3'	27:BA:619:G:C8	3.03	0.41
5:AB:15:VAL:CG2	5:AB:209:ARG:HD2	2.50	0.41
27:BA:1513:C:H2'	27:BA:1514:U:C6	2.56	0.41
15:AL:60:LEU:HD23	15:AL:64:TYR:HB3	2.02	0.41
5:AB:85:ALA:HA	5:AB:88:ALA:HB3	2.02	0.41
27:BA:705:A:H8	27:BA:705:A:OP2	2.04	0.41
27:BA:1419:A:H3'	27:BA:1420:U:O4'	2.20	0.41
1:AA:512:U:H2'	1:AA:513:C:H6	1.85	0.41
27:BA:697:C:H2'	27:BA:698:C:H6	1.85	0.41
27:BA:1382:G:H2'	27:BA:1383:C:C6	2.56	0.41
14:AK:48:ILE:HD13	14:AK:63:LEU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AB:50:GLU:HB3	5:AB:200:ILE:O	2.20	0.41
27:BA:855:G:C2'	49:B0:25:LYS:HZ3	2.34	0.41
49:B0:6:GLY:O	49:B0:7:VAL:C	2.58	0.41
49:B0:37:LEU:CG	49:B0:71:ASN:ND2	2.84	0.41
48:B3:26:LEU:HD22	48:B3:47:VAL:CG2	2.51	0.41
27:BA:2046:G:H1'	51:B5:22:HIS:CE1	2.56	0.41
40:BW:23:LEU:HD11	51:B5:27:ALA:HB2	2.03	0.41
52:B6:29:ARG:C	52:B6:31:THR:N	2.71	0.41
52:B6:45:LYS:C	52:B6:46:LYS:NZ	2.73	0.41
53:B7:21:ARG:HH21	53:B7:44:VAL:HG23	1.85	0.41
54:B8:16:ILE:CA	54:B8:22:VAL:HG22	2.50	0.41
54:B8:23:MET:SD	54:B8:48:PHE:CA	3.08	0.41
27:BA:1012:U:H3'	27:BA:1012:U:C6	2.56	0.41
27:BA:1127:A:H2	27:BA:2518:A:H1'	1.87	0.41
27:BA:1364:G:C8	27:BA:1364:G:C5'	3.00	0.41
27:BA:2049:G:N1	27:BA:2619:C:N4	2.66	0.41
27:BA:2215:G:C2'	27:BA:2216:G:O5'	2.69	0.41
27:BA:2257:U:O2'	27:BA:2258:C:P	2.79	0.41
27:BA:2276:G:C2	27:BA:2277:G:N7	2.86	0.41
27:BA:2305:A:C8	27:BA:2306:C:C6	3.09	0.41
27:BA:2330:G:H2'	27:BA:2331:G:C4'	2.51	0.41
27:BA:2347:C:C2	27:BA:2348:U:H5	2.32	0.41
27:BA:2468:G:H2'	27:BA:2469:A:C8	2.56	0.41
27:BA:2516:G:C2'	27:BA:2517:C:O5'	2.68	0.41
27:BA:2531:A:O5'	27:BA:2531:A:H8	2.03	0.41
27:BA:2546:U:C2	27:BA:2567:G:C8	3.09	0.41
27:BA:2572:A:C3'	27:BA:2572:A:C8	3.04	0.41
27:BA:2574:G:N3	27:BA:2575:C:C6	2.88	0.41
27:BA:2691:C:C2'	27:BA:2692:C:O5'	2.69	0.41
27:BA:2693:A:N3	27:BA:2694:G:N7	2.68	0.41
27:BA:2710:C:H2'	27:BA:2711:A:H8	1.86	0.41
27:BA:2816:C:O2'	27:BA:2817:G:O5'	2.39	0.41
27:BA:2832:U:C6	27:BA:2832:U:C3'	2.94	0.41
27:BA:388:G:H5'	50:B4:24:THR:HG23	2.03	0.41
27:BA:447:A:C6	27:BA:473:G:C4	3.09	0.41
27:BA:581:C:OP2	45:BU:33:ARG:NH1	2.54	0.41
27:BA:603:A:N1	27:BA:625:G:C5	2.89	0.41
28:BD:145:LEU:C	28:BD:145:LEU:HD13	2.41	0.41
32:BH:10:ILE:HG13	32:BH:49:ILE:CG1	2.51	0.41
36:BP:95:ASP:O	36:BP:96:VAL:C	2.49	0.41
37:BQ:136:TRP:C	37:BQ:139:ALA:HB3	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BQ:140:TYR:CE1	37:BQ:147:VAL:CG1	2.80	0.41
37:BQ:17:ARG:O	37:BQ:22:GLY:O	2.38	0.41
37:BQ:42:TYR:H	37:BQ:43:PRO:CD	2.33	0.41
37:BQ:72:VAL:CG2	37:BQ:135:ALA:HB2	2.42	0.41
44:BR:20:LEU:HD13	44:BR:21:TYR:CB	2.40	0.41
38:BS:65:ASP:C	38:BS:66:LEU:HD12	2.41	0.41
39:BT:14:GLU:O	39:BT:15:PRO:O	2.39	0.41
27:BA:446:G:H5'	45:BU:5:LYS:HZ1	1.86	0.41
46:BV:3:ALA:O	46:BV:14:VAL:N	2.52	0.41
46:BV:73:LYS:C	46:BV:74:TYR:CD2	2.94	0.41
40:BW:4:LYS:HG2	40:BW:106:ILE:HG12	2.03	0.41
43:BZ:91:PRO:HG2	43:BZ:127:PRO:CA	2.51	0.41
4:AX:116:U:H2'	4:AX:117:U:H6	1.86	0.41
33:BI:95:SER:CA	33:BI:98:ILE:CB	2.83	0.41
42:BY:51:LEU:N	42:BY:97:ARG:HH21	2.16	0.41
1:AA:1317:C:N3	17:AN:16:PHE:CZ	2.89	0.41
16:AM:91:ARG:CB	16:AM:98:VAL:HG22	2.50	0.41
27:BA:1789:A:H2'	27:BA:1790:C:H1'	2.04	0.41
47:B2:9:ARG:HB2	47:B2:59:ILE:HD11	2.03	0.41
27:BA:140:A:H8	41:BX:48:THR:HG21	1.86	0.41
1:AA:1347:G:N2	1:AA:1373:G:C4	2.89	0.41
2:AV:67:A:O2'	2:AV:68:U:H5'	2.21	0.41
27:BA:1913:A:N6	27:BA:1917:U:O5'	2.54	0.41
13:AJ:64:GLU:OE1	17:AN:57:ARG:HD3	2.21	0.41
7:AD:119:GLN:HG2	7:AD:123:HIS:CD2	2.56	0.41
27:BA:693:C:H1'	27:BA:1353:A:H2	1.86	0.41
1:AA:672:U:O2	1:AA:672:U:H2'	2.21	0.41
42:BY:81:LYS:HZ2	42:BY:81:LYS:CB	2.33	0.41
27:BA:1298:C:H4'	27:BA:1302:A:N6	2.36	0.41
27:BA:1416:G:N2	27:BA:1582:C:N4	2.66	0.41
1:AA:571:U:O4	1:AA:865:A:N1	2.54	0.41
1:AA:18:C:C4	1:AA:918:A:N1	2.88	0.41
1:AA:579:G:O4'	1:AA:728:A:H1'	2.21	0.41
27:BA:1529:A:H3'	27:BA:1530:G:O4'	2.21	0.41
27:BA:477:A:C6	27:BA:478:A:N6	2.88	0.41
1:AA:1376:U:O4	10:AG:10:ARG:HD2	2.20	0.41
1:AA:54:C:C5	1:AA:352:C:H2'	2.56	0.41
1:AA:529:G:O6	15:AL:49:ASN:ND2	2.54	0.41
32:BH:28:PRO:HB2	32:BH:29:LYS:H	1.58	0.41
2:AV:50:U:H2'	2:AV:51:G:C8	2.56	0.41
27:BA:816:C:N4	27:BA:1192:G:O6	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AB:69:LEU:CD2	5:AB:91:PRO:HB2	2.51	0.41
27:BA:273:G:H2'	27:BA:273(A):G:C8	2.56	0.41
1:AA:95:U:H2'	1:AA:96:G:H8	1.85	0.41
27:BA:1195:G:C2'	27:BA:1226:G:H22	2.33	0.41
1:AA:157:G:C2	1:AA:165:C:N3	2.89	0.41
3:AW:52:U:O2'	3:AW:53:G:H5'	2.20	0.41
49:B0:39:ARG:CB	49:B0:69:PHE:HZ	2.35	0.40
48:B3:39:ASP:O	48:B3:44:ARG:HB2	2.21	0.40
50:B4:14:ILE:CG2	50:B4:37:SER:N	2.79	0.40
53:B7:21:ARG:O	53:B7:22:MET:O	2.39	0.40
54:B8:29:LYS:HB2	54:B8:30:ARG:H	1.71	0.40
27:BA:1023:U:H2'	27:BA:1024:G:C4'	2.51	0.40
27:BA:1364:G:OP1	50:B4:3:LYS:HA	2.21	0.40
27:BA:1647:G:H4'	27:BA:1648:C:H5'	2.03	0.40
27:BA:1665:A:C5	27:BA:2726:U:O2	2.73	0.40
27:BA:1966:A:N3	27:BA:2593:U:C4'	2.71	0.40
27:BA:2070:G:H2'	27:BA:2071:A:H8	1.82	0.40
27:BA:2246:G:HO2'	27:BA:2247:A:C5'	2.07	0.40
27:BA:2327:A:N1	27:BA:2328:A:H2	2.03	0.40
27:BA:2372:G:O6	27:BA:2373:G:O6	2.38	0.40
27:BA:2381:C:C3'	27:BA:2381:C:C6	3.04	0.40
27:BA:2290:G:O2'	27:BA:2381:C:H1'	2.21	0.40
27:BA:2406:U:O4	36:BP:55:GLN:N	2.53	0.40
27:BA:2434:A:O2'	27:BA:2435:A:P	2.76	0.40
27:BA:2491:U:C2'	27:BA:2492:U:C5'	2.88	0.40
27:BA:2053:G:N2	27:BA:2617:C:C6	2.89	0.40
27:BA:2048:G:O6	27:BA:2621:A:N1	2.54	0.40
27:BA:2637:U:H5	27:BA:2638:G:C6	2.36	0.40
27:BA:1630:G:O4'	27:BA:2698:U:OP1	2.39	0.40
27:BA:2779:U:C5'	27:BA:2781:A:C8	3.04	0.40
27:BA:2783:G:H2'	27:BA:2784:C:O4'	2.21	0.40
27:BA:2861:G:C4	27:BA:2862:G:N7	2.89	0.40
27:BA:2870:C:H2'	27:BA:2871:C:O5'	2.21	0.40
27:BA:527:C:O4'	27:BA:2779:U:C2	2.73	0.40
27:BA:611:C:O2'	27:BA:616:A:H2	2.02	0.40
27:BA:774:A:O2'	27:BA:775:G:C8	2.73	0.40
28:BD:143:ILE:HG21	28:BD:153:LEU:CB	2.46	0.40
28:BD:144:GLU:HB3	28:BD:188:ARG:C	2.42	0.40
29:BE:211:GLN:C	29:BE:211:GLN:CD	2.79	0.40
29:BE:45:LYS:HD3	29:BE:301:PRO:CG	2.52	0.40
30:BF:102:LEU:CD2	30:BF:106:GLU:CG	2.99	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BF:196:THR:OG1	30:BF:201:SER:CA	2.69	0.40
30:BF:52:ALA:N	30:BF:55:ARG:HE	2.13	0.40
32:BH:128:THR:CG2	32:BH:129:LYS:H	2.27	0.40
32:BH:7:PRO:HA	32:BH:50:THR:OG1	2.21	0.40
33:BI:3:VAL:CG1	33:BI:21:VAL:HG21	2.47	0.40
35:BO:102:VAL:HG11	35:BO:106:LEU:HD11	2.03	0.40
35:BO:20:LEU:CG	35:BO:44:LYS:HD3	2.47	0.40
37:BQ:62:GLU:C	37:BQ:63:ALA:O	2.44	0.40
37:BQ:74:ASN:N	37:BQ:74:ASN:OD1	2.54	0.40
44:BR:37:THR:HG22	44:BR:111:LEU:HD23	2.02	0.40
38:BS:36:ALA:CB	38:BS:118:ILE:HD13	2.51	0.40
39:BT:13:ILE:HD12	39:BT:33:SER:HB2	2.03	0.40
45:BU:52:ASN:HB2	45:BU:53:LYS:H	1.65	0.40
43:BZ:102:GLY:O	43:BZ:103:ARG:O	2.38	0.40
43:BZ:112:LEU:HD12	43:BZ:177:THR:CG2	2.52	0.40
33:BI:84:GLY:O	33:BI:85:GLU:CG	2.70	0.40
33:BI:92:SER:C	33:BI:93:ILE:CG2	2.90	0.40
42:BY:101:LEU:O	42:BY:103:LEU:CD1	2.68	0.40
42:BY:50:VAL:CG1	42:BY:52:ARG:H	2.28	0.40
42:BY:89:ARG:CB	42:BY:90:PRO:HD2	2.42	0.40
43:BZ:35:ASP:OD1	43:BZ:38:ALA:N	2.48	0.40
27:BA:1790:C:O3'	28:BD:210:LYS:HD2	2.21	0.40
47:B2:21:ASP:O	47:B2:22:ASP:O	2.37	0.40
27:BA:1344:G:N2	27:BA:1404:C:H1'	2.36	0.40
1:AA:198:G:H2'	1:AA:199:G:H8	1.87	0.40
1:AA:36:C:H4'	15:AL:117:ARG:HH22	1.82	0.40
1:AA:908:A:O5'	1:AA:908:A:H8	2.04	0.40
33:BI:134:HIS:CD2	33:BI:136:GLU:OE1	2.74	0.40
27:BA:1906:G:H1	27:BA:1924:C:H42	1.70	0.40
1:AA:950:U:C2	1:AA:951:G:C8	3.08	0.40
27:BA:1857:G:H1	27:BA:1884:A:H61	1.68	0.40
1:AA:1206:G:O4'	6:AC:194:GLY:CA	2.63	0.40
1:AA:112:G:OP1	19:AP:27:LYS:HD3	2.21	0.40
14:AK:42:TRP:CZ3	14:AK:47:VAL:HG21	2.55	0.40
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.85	0.40
1:AA:224:C:H2'	1:AA:225:C:C6	2.55	0.40
10:AG:5:ARG:HB3	10:AG:6:ARG:H	1.60	0.40
27:BA:1895:C:H2'	27:BA:1896:G:O4'	2.20	0.40
18:AO:35:ARG:HH12	18:AO:59:MET:HG3	1.86	0.40
9:AF:41:GLU:O	9:AF:42:GLU:HB3	2.21	0.40
2:AV:58:A:N7	2:AV:61:C:C4	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B4:58:LYS:CG	50:B4:62:ARG:NE	2.69	0.40
44:BR:101:ALA:CB	51:B5:41:LEU:HD12	2.52	0.40
51:B5:6:VAL:CG1	51:B5:7:PRO:N	2.83	0.40
53:B7:41:GLN:HB2	53:B7:42:LEU:H	1.60	0.40
54:B8:23:MET:HE3	54:B8:48:PHE:CB	2.51	0.40
27:BA:1022:G:N2	27:BA:1140:C:C2	2.89	0.40
27:BA:1208:C:C4	27:BA:1240:U:O4	2.74	0.40
27:BA:1669:A:C6	27:BA:1994:C:O2	2.74	0.40
27:BA:1996:C:H2'	27:BA:1997:G:O5'	2.22	0.40
27:BA:563:G:N1	27:BA:2018:G:C4	2.89	0.40
27:BA:2279:G:N1	27:BA:2280:G:C5	2.89	0.40
27:BA:2589:A:N1	27:BA:2606:C:C4	2.89	0.40
27:BA:2679:A:C5	27:BA:2680:C:H5	2.32	0.40
27:BA:2704:C:H2'	27:BA:2705:A:C1'	2.51	0.40
27:BA:2710:C:H2'	27:BA:2711:A:O4'	2.20	0.40
27:BA:2717:G:C2'	27:BA:2718:G:H5''	2.51	0.40
27:BA:2525:G:O2'	27:BA:2742:C:O2'	1.99	0.40
27:BA:2768:C:N4	27:BA:2769:C:N4	2.57	0.40
27:BA:30:G:N2	27:BA:511:U:H1'	2.36	0.40
29:BE:199:ALA:CA	29:BE:314:ALA:HA	2.50	0.40
30:BF:6:TYR:H	30:BF:139:VAL:HG12	1.86	0.40
30:BF:6:TYR:HH	30:BF:138:VAL:N	2.19	0.40
30:BF:94:THR:HG23	30:BF:95:GLU:N	2.36	0.40
34:BN:96:GLU:O	34:BN:99:GLU:N	2.54	0.40
36:BP:106:VAL:HG21	36:BP:122:ALA:CA	2.51	0.40
37:BQ:47:GLU:CB	37:BQ:123:ILE:HG12	2.49	0.40
37:BQ:131:ALA:N	37:BQ:134:PHE:CE2	2.89	0.40
37:BQ:16:ARG:N	37:BQ:20:ILE:HG12	2.35	0.40
44:BR:17:ARG:O	44:BR:20:LEU:HB3	2.21	0.40
31:BG:145:ASP:HB2	38:BS:15:GLU:C	2.39	0.40
38:BS:60:SER:O	38:BS:88:ALA:CA	2.43	0.40
39:BT:9:CYS:HB2	39:BT:36:CYS:HB3	1.68	0.40
39:BT:10:GLY:N	39:BT:52:THR:HB	2.33	0.40
45:BU:34:ASN:O	45:BU:38:THR:HG23	2.20	0.40
45:BU:84:LYS:C	45:BU:86:ALA:H	2.23	0.40
43:BZ:111:GLY:O	43:BZ:112:LEU:O	2.40	0.40
27:BA:294:A:C3'	27:BA:294:A:C8	3.05	0.40
42:BY:34:GLU:H	42:BY:34:GLU:HG3	1.43	0.40
42:BY:50:VAL:HG12	42:BY:52:ARG:N	2.26	0.40
42:BY:73:HIS:C	42:BY:91:LEU:HD12	2.26	0.40
42:BY:71:VAL:CB	42:BY:93:THR:H	2.26	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BZ:19:ILE:H	43:BZ:36:ARG:N	2.18	0.40
43:BZ:66:VAL:HG23	43:BZ:69:VAL:CG2	2.52	0.40
16:AM:77:ASN:HA	16:AM:80:ARG:HD3	2.04	0.40
27:BA:1397:U:O2	27:BA:1397:U:C2'	2.69	0.40
6:AC:17:ASP:O	6:AC:19:GLU:N	2.54	0.40
1:AA:1312:G:N7	22:AS:2:PRO:C	2.75	0.40
1:AA:575:G:C4	1:AA:881:G:N2	2.89	0.40
7:AD:58:LEU:HD23	7:AD:206:PHE:CE1	2.56	0.40
1:AA:376:G:H5''	19:AP:5:ARG:CB	2.51	0.40
1:AA:570:G:H2'	1:AA:571:U:H5	1.82	0.40
27:BA:311:A:H1'	27:BA:332:A:C4	2.56	0.40
21:AR:47:THR:O	21:AR:82:THR:HA	2.21	0.40
27:BA:1358:G:C5	27:BA:1371:G:C5	3.10	0.40
18:AO:39:LEU:HB3	18:AO:56:LEU:HD13	2.03	0.40
27:BA:270(C):C:P	27:BA:365:C:O2'	2.79	0.40
27:BA:124:G:H5'	27:BA:1376:C:O2'	2.22	0.40
27:BA:1763:G:H2'	27:BA:1764:G:H4'	2.04	0.40
27:BA:1153:C:C4	27:BA:1154:G:C6	3.09	0.40
7:AD:121:VAL:HG22	7:AD:126:ILE:HG13	2.03	0.40
7:AD:79:PHE:CE1	7:AD:204:ILE:HG13	2.56	0.40
1:AA:607:A:C6	19:AP:31:LYS:HG3	2.56	0.40
1:AA:150:C:H2'	1:AA:151:A:O4'	2.20	0.40
3:AW:72:C:C2	3:AW:73:A:C8	3.10	0.40
49:B0:65:GLY:C	49:B0:66:LYS:CE	2.77	0.40
49:B0:71:ASN:O	49:B0:73:GLY:N	2.54	0.40
48:B3:37:LEU:HA	48:B3:37:LEU:HD23	1.86	0.40
50:B4:23:GLU:CG	50:B4:29:PRO:CB	2.96	0.40
51:B5:10:LYS:HB2	51:B5:10:LYS:HZ2	1.86	0.40
53:B7:27:GLY:O	53:B7:28:ARG:O	2.39	0.40
27:BA:1363:C:O2	27:BA:1364:G:H5'	2.22	0.40
27:BA:1668:A:C6	27:BA:1674:G:C4	3.09	0.40
27:BA:194:G:C6	27:BA:195:A:C6	3.09	0.40
27:BA:2069:G:C2	27:BA:2443:C:N3	2.89	0.40
27:BA:2283:C:N3	27:BA:2325:G:N2	2.64	0.40
27:BA:2355:C:C5'	27:BA:2356:C:OP2	2.69	0.40
27:BA:2376:A:H2'	27:BA:2376:A:N3	2.35	0.40
27:BA:2491:U:C2'	27:BA:2491:U:O2	2.69	0.40
27:BA:2525:G:N2	27:BA:2539:C:C6	2.90	0.40
27:BA:2557:G:N9	27:BA:2558:C:H5	2.19	0.40
27:BA:2562:U:H2'	27:BA:2563:U:H5'	2.02	0.40
27:BA:2563:U:H3	27:BA:2566:A:H8	1.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:464:U:O2'	53:B7:12:ARG:CZ	2.69	0.40
27:BA:602:G:HO2'	27:BA:655:A:H2	1.65	0.40
28:BD:146:LYS:O	28:BD:149:ARG:HG2	2.21	0.40
28:BD:69:ASP:HA	28:BD:188:ARG:HH12	1.87	0.40
28:BD:74:PRO:HG2	28:BD:96:ALA:H	1.78	0.40
29:BE:205:THR:OG1	29:BE:258:TYR:C	2.59	0.40
27:BA:2305:A:H62	31:BG:53:LYS:HZ3	1.70	0.40
34:BN:135:ILE:O	34:BN:139:LEU:HD22	2.20	0.40
34:BN:57:TYR:HB2	34:BN:135:ILE:CG2	2.52	0.40
35:BO:63:VAL:CG2	35:BO:102:VAL:HG11	2.51	0.40
36:BP:66:VAL:O	36:BP:69:ILE:N	2.53	0.40
37:BQ:58:HIS:O	37:BQ:61:LEU:CB	2.68	0.40
37:BQ:28:ILE:CB	37:BQ:62:GLU:HG2	2.48	0.40
44:BR:16:HIS:O	44:BR:17:ARG:C	2.59	0.40
39:BT:10:GLY:CA	39:BT:53:ASP:CG	2.89	0.40
27:BA:29:U:C4'	45:BU:11:ARG:NH2	2.84	0.40
46:BV:71:ILE:O	46:BV:72:ARG:CB	2.60	0.40
27:BA:974:G:C8	46:BV:80:TYR:CE1	2.80	0.40
40:BW:100:THR:C	40:BW:101:SER:OG	2.60	0.40
40:BW:28:SER:O	40:BW:31:GLU:HB3	2.21	0.40
33:BI:92:SER:HB3	33:BI:122:ARG:CZ	2.39	0.40
27:BA:296:C:N3	27:BA:297:C:C4	2.90	0.40
27:BA:297:C:H2'	27:BA:298:G:O4'	2.22	0.40
42:BY:80:GLU:CG	42:BY:86:GLU:HG2	2.46	0.40
26:BB:75:G:N3	43:BZ:22:VAL:HG21	2.37	0.40
43:BZ:39:PHE:CA	43:BZ:43:PHE:CZ	2.80	0.40
27:BA:1342:A:H8	27:BA:1342:A:O5'	2.05	0.40
41:BX:58:MET:O	41:BX:59:ASP:OD2	2.39	0.40
1:AA:30(A):G:N1	1:AA:1031:G:N1	2.69	0.40
17:AN:24:CYS:HB3	17:AN:40:CYS:N	2.14	0.40
1:AA:560:U:H2'	8:AE:123:LEU:HD12	2.02	0.40
1:AA:564:C:H5'	20:AQ:32:TYR:CE2	2.56	0.40
7:AD:57:ARG:HB3	7:AD:206:PHE:HB2	2.02	0.40
42:BY:3:GLN:HB2	42:BY:6:LYS:CD	2.49	0.40
1:AA:15:G:C6	1:AA:1396:A:N1	2.90	0.40
33:BI:56:ARG:O	33:BI:60:GLU:HB2	2.22	0.40
1:AA:19:C:H2'	1:AA:20:U:H6	1.86	0.40
56:BK:71:LYS:HA	56:BK:72:THR:C	2.41	0.40
1:AA:275:G:H5'	20:AQ:14:LYS:NZ	2.36	0.40
1:AA:309:G:OP1	19:AP:27:LYS:HD2	2.21	0.40
56:BK:70:ILE:HD12	56:BK:70:ILE:N	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:1575:C:C3'	27:BA:1575:C:C6	3.05	0.40
27:BA:1153:C:H3'	27:BA:1154:G:C8	2.56	0.40
5:AB:19:HIS:CD2	5:AB:20:GLU:HG2	2.56	0.40
15:AL:60:LEU:HD23	15:AL:64:TYR:HB2	2.02	0.40
27:BA:812:C:H2'	27:BA:813:U:H6	1.86	0.40
16:AM:108:ARG:NH2	16:AM:114:ARG:HA	2.36	0.40
27:BA:898:C:H3'	27:BA:899:A:H5''	2.02	0.40
27:BA:1484:G:C2	27:BA:1506:C:C4	3.09	0.40
6:AC:88:ARG:CZ	6:AC:101:LEU:H	2.35	0.40
27:BA:1795:C:O5'	27:BA:1795:C:H6	2.05	0.40
49:B0:38:VAL:C	49:B0:69:PHE:CZ	2.95	0.40
48:B3:48:GLU:O	48:B3:51:ALA:CB	2.69	0.40
50:B4:24:THR:C	50:B4:26:SER:N	2.75	0.40
51:B5:58:LEU:HB3	51:B5:59:ALA:H	1.47	0.40
53:B7:21:ARG:O	53:B7:22:MET:C	2.58	0.40
54:B8:52:LYS:HE3	54:B8:52:LYS:HB2	1.75	0.40
27:BA:1008:C:HO2'	27:BA:1009:A:H8	1.66	0.40
27:BA:126:A:N7	53:B7:18:PHE:CD1	2.79	0.40
27:BA:1378:A:HO2'	27:BA:1379:A:P	2.44	0.40
27:BA:2370:G:C6	27:BA:2371:G:C6	3.09	0.40
27:BA:2416:C:C2'	27:BA:2416:C:O2	2.69	0.40
27:BA:2077:A:C5	27:BA:2435:A:N7	2.89	0.40
27:BA:2549:G:N2	27:BA:2559:C:O2	2.44	0.40
27:BA:2644:G:C8	27:BA:2644:G:C5'	2.99	0.40
27:BA:2682:U:H1'	29:BE:49:THR:HA	2.03	0.40
27:BA:2695:C:C2'	27:BA:2696:U:C5	2.93	0.40
27:BA:2813:A:C2	27:BA:2888:C:C2	3.10	0.40
27:BA:388:G:H5'	27:BA:389:G:OP2	2.21	0.40
27:BA:388:G:C2'	27:BA:390:A:N7	2.77	0.40
27:BA:397:G:OP2	50:B4:10:VAL:CG1	2.67	0.40
27:BA:533:G:H1'	27:BA:561:G:N2	2.37	0.40
26:BB:10:C:H2'	26:BB:11:C:H6	1.86	0.40
28:BD:128:ALA:HB1	28:BD:189:ALA:C	2.41	0.40
29:BE:179:ASP:OD1	29:BE:179:ASP:N	2.55	0.40
29:BE:215:LYS:HG3	29:BE:216:ARG:N	2.37	0.40
30:BF:158:GLU:HA	30:BF:161:ASP:OD2	2.22	0.40
30:BF:32:GLY:C	30:BF:36:ARG:HG2	2.41	0.40
30:BF:67:GLN:HB3	30:BF:68:ALA:H	1.67	0.40
31:BG:140:ARG:HD2	31:BG:144:ARG:CZ	2.51	0.40
32:BH:9:GLU:CA	32:BH:49:ILE:HD11	2.52	0.40
27:BA:1076:C:O2	56:BK:92:PRO:CG	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:42:GLU:HA	34:BN:132:LEU:O	2.20	0.40
34:BN:24:SER:HG	34:BN:25:GLN:H	1.70	0.40
35:BO:115:ILE:O	35:BO:121:VAL:HG21	2.21	0.40
35:BO:33:ALA:HB2	35:BO:39:VAL:HG22	2.03	0.40
36:BP:104:ASP:O	36:BP:105:TYR:HB2	2.20	0.40
36:BP:110:GLY:O	36:BP:111:ALA:C	2.48	0.40
37:BQ:136:TRP:CA	37:BQ:139:ALA:HB3	2.52	0.40
27:BA:1279:G:C5'	44:BR:34:ILE:CD1	2.95	0.40
39:BT:13:ILE:HG22	39:BT:14:GLU:CD	2.42	0.40
45:BU:24:PHE:HB2	45:BU:25:TRP:H	1.47	0.40
45:BU:27:SER:HB3	45:BU:28:ARG:H	1.65	0.40
45:BU:53:LYS:O	45:BU:56:ASP:N	2.54	0.40
45:BU:60:LEU:C	45:BU:62:ILE:N	2.73	0.40
40:BW:24:ILE:HG22	40:BW:35:ILE:CG1	2.52	0.40
27:BA:491:G:C6	40:BW:49:LYS:NZ	2.75	0.40
40:BW:27:LYS:H	40:BW:71:VAL:CG2	2.33	0.40
40:BW:27:LYS:H	40:BW:71:VAL:HG23	1.87	0.40
33:BI:84:GLY:C	33:BI:85:GLU:HG3	2.42	0.40
42:BY:48:VAL:HG21	42:BY:98:VAL:HG23	1.32	0.40
27:BA:1790:C:O2'	28:BD:210:LYS:HE3	2.20	0.40
27:BA:1444:G:O6	27:BA:1466:G:C6	2.74	0.40
47:B2:22:ASP:HB2	47:B2:23:LEU:H	1.78	0.40
27:BA:72:U:HO2'	27:BA:73:A:P	2.44	0.40
27:BA:138:G:O4'	41:BX:43:GLU:HG3	2.20	0.40
1:AA:673:G:N2	1:AA:734:G:H1'	2.37	0.40
1:AA:255:G:P	20:AQ:69:LYS:HZ3	2.44	0.40
27:BA:1624:G:H2'	27:BA:1625:C:C6	2.56	0.40
3:AW:65:G:C5	3:AW:66:A:C8	3.10	0.40
1:AA:375:U:H4'	19:AP:6:LEU:CD2	2.51	0.40
27:BA:977:G:H2'	27:BA:978:G:O4'	2.21	0.40
27:BA:357:A:H2'	27:BA:358:U:O4'	2.22	0.40
56:BK:86:GLU:C	56:BK:87:LYS:HG3	2.41	0.40
1:AA:126:G:C4'	1:AA:634:C:H1'	2.51	0.40
1:AA:791:G:N2	1:AA:1498:U:OP1	2.48	0.40
1:AA:1526:G:OP2	1:AA:1526:G:H8	2.05	0.40
23:AT:73:HIS:HB3	23:AT:74:LYS:HE2	2.04	0.40
5:AB:55:PHE:HD2	5:AB:221:LEU:HG	1.86	0.40
12:AI:28:VAL:N	12:AI:31:GLN:O	2.51	0.40
27:BA:1729:A:OP2	27:BA:1730:U:C4	2.75	0.40
14:AK:108:ILE:HB	21:AR:87:ARG:O	2.21	0.40
27:BA:1206:G:H1'	27:BA:1242:A:N6	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:AT:88:VAL:O	23:AT:92:LEU:HG	2.22	0.40
1:AA:421:U:N3	6:AC:127:ARG:CZ	2.84	0.40
1:AA:204:U:H2'	1:AA:204:U:O2	2.21	0.40
48:B3:53:LEU:HD22	48:B3:54:VAL:CG1	2.43	0.40
50:B4:5:LEU:CD1	50:B4:8:LYS:CB	2.99	0.40
55:B9:10:MET:C	55:B9:10:MET:CE	2.89	0.40
27:BA:1005:C:H6	27:BA:1143:A:OP1	2.05	0.40
27:BA:1165:U:H2'	27:BA:1166:C:C6	2.57	0.40
27:BA:1364:G:OP1	50:B4:3:LYS:CA	2.70	0.40
27:BA:1939:U:C1'	27:BA:2592:G:C4'	2.93	0.40
27:BA:1268:A:N6	27:BA:2012:G:O2'	2.54	0.40
27:BA:2014:A:C4	27:BA:2015:A:N1	2.89	0.40
27:BA:530:G:N1	27:BA:2021:C:O4'	2.52	0.40
27:BA:2045:C:H2'	27:BA:2046:G:O4'	2.22	0.40
27:BA:2093:G:P	33:BI:25:TYR:CE2	3.14	0.40
27:BA:2190:G:H2'	27:BA:2191:G:H8	1.87	0.40
27:BA:2292:C:C2'	27:BA:2293:C:O5'	2.70	0.40
27:BA:2317:C:C4	27:BA:2318:G:C5	3.09	0.40
27:BA:2395:C:C4'	27:BA:2395:C:H6	2.32	0.40
27:BA:2417:C:H2'	27:BA:2418:A:C8	2.55	0.40
27:BA:2475:C:OP1	27:BA:2476:A:OP2	2.39	0.40
27:BA:2588:G:C6	27:BA:2589:A:C5	3.09	0.40
27:BA:2666:C:C6	27:BA:2667:C:C5	3.08	0.40
27:BA:2681:C:N4	27:BA:2725:A:H62	2.20	0.40
27:BA:2779:U:O4'	27:BA:2781:A:N7	2.55	0.40
27:BA:2805:G:O3'	27:BA:2807:G:P	2.80	0.40
27:BA:2821:A:C2'	27:BA:2822:G:H1'	2.50	0.40
27:BA:2850:A:C6	27:BA:2851:A:C5	3.10	0.40
27:BA:29:U:H4'	45:BU:11:ARG:NH2	2.35	0.40
27:BA:444:C:O3'	45:BU:2:PRO:HD2	2.20	0.40
27:BA:636:G:H3'	36:BP:126:SER:CB	2.51	0.40
27:BA:957:A:OP2	37:BQ:94:ARG:O	2.39	0.40
26:BB:42:C:H2'	26:BB:43:C:C6	2.57	0.40
28:BD:83:ASP:HA	28:BD:84:PRO:HD3	1.85	0.40
27:BA:2574:G:H1'	29:BE:240:PRO:HB3	2.01	0.40
30:BF:154:VAL:O	30:BF:157:LEU:HB2	2.20	0.40
30:BF:51:TYR:O	30:BF:54:LEU:O	2.39	0.40
32:BH:137:LYS:O	32:BH:138:GLN:O	2.38	0.40
32:BH:141:GLY:O	32:BH:144:ALA:HB3	2.22	0.40
32:BH:146:ASN:C	32:BH:150:VAL:HG23	2.25	0.40
32:BH:8:ILE:CD1	32:BH:72:ALA:HB2	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BN:54:VAL:HG11	34:BN:138:THR:CG2	2.52	0.40
35:BO:111:PHE:O	35:BO:113:LYS:HB2	2.21	0.40
35:BO:22:ILE:H	35:BO:41:ALA:HB2	1.87	0.40
27:BA:1996:C:P	35:BO:31:ARG:HH12	2.44	0.40
35:BO:39:VAL:CG1	35:BO:40:VAL:N	2.84	0.40
35:BO:81:GLU:CG	35:BO:82:ASN:N	2.66	0.40
37:BQ:137:ARG:HD3	37:BQ:138:ARG:CA	2.48	0.40
38:BS:59:ALA:HA	38:BS:62:HIS:HE1	1.87	0.40
39:BT:53:ASP:CA	39:BT:56:ARG:HG2	2.43	0.40
45:BU:17:VAL:HA	45:BU:20:ARG:CG	2.46	0.40
45:BU:39:LEU:HB3	45:BU:40:LEU:H	1.46	0.40
27:BA:996:A:C5'	45:BU:93:LYS:HG3	2.46	0.40
46:BV:41:GLY:C	46:BV:54:TYR:CE1	2.87	0.40
46:BV:72:ARG:O	46:BV:74:TYR:CZ	2.74	0.40
40:BW:37:ARG:NH1	40:BW:38:TYR:HE2	2.20	0.40
33:BI:129:VAL:HA	33:BI:130:PRO:HD2	1.95	0.40
33:BI:132:LYS:C	33:BI:138:THR:HG22	2.42	0.40
27:BA:328:U:C2'	42:BY:94:SER:HG	2.19	0.40
42:BY:49:GLU:HB3	42:BY:97:ARG:HH11	1.85	0.40
43:BZ:18:MET:C	43:BZ:36:ARG:NE	2.75	0.40
43:BZ:79:ILE:CG2	43:BZ:80:HIS:CE1	2.92	0.40
47:B2:22:ASP:N	47:B2:22:ASP:OD1	2.49	0.40
47:B2:55:ARG:O	47:B2:57:LYS:C	2.55	0.40
27:BA:145:G:H2'	27:BA:146:G:C8	2.56	0.40
41:BX:39:ASP:O	41:BX:41:VAL:CA	2.70	0.40
6:AC:19:GLU:HA	6:AC:54:ARG:HH21	1.86	0.40
5:AB:109:SER:O	5:AB:113:HIS:N	2.54	0.40
1:AA:1330:U:H4'	16:AM:23:TYR:CD1	2.56	0.40
27:BA:1936:A:N6	27:BA:1945:G:C2	2.89	0.40
7:AD:96:LEU:HG	7:AD:139:ARG:CZ	2.51	0.40
7:AD:68:TYR:HB3	7:AD:70:ILE:HG12	2.03	0.40
7:AD:94:LEU:HA	7:AD:97:LEU:HD12	2.02	0.40
3:AW:65:G:C2'	3:AW:66:A:C5'	3.00	0.40
27:BA:332:A:C6	27:BA:335:C:C2	3.09	0.40
10:AG:26:PHE:CE2	10:AG:30:ILE:HD11	2.56	0.40
1:AA:162:A:N3	1:AA:348:G:C4'	2.77	0.40
1:AA:660:G:H1	1:AA:745:C:N4	2.18	0.40
1:AA:1067:A:H2'	1:AA:1093:A:O2'	2.22	0.40
1:AA:62:U:OP1	1:AA:386:C:H5'	2.21	0.40
27:BA:1882:C:C2'	27:BA:1883:G:H5'	2.52	0.40
20:AQ:56:VAL:O	20:AQ:77:VAL:HB	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1437:C:H2'	1:AA:1438:G:H8	1.87	0.40
15:AL:33:ARG:HG2	15:AL:60:LEU:HG	2.03	0.40
27:BA:1487:G:H2'	27:BA:1488:G:H8	1.86	0.40

All (146) 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)
27:BA:6:A:C4'	27:BA:2902:C:O2'[8_554]	0.49	1.71
1:AA:359:U:OP1	33:BI:82:LYS:NZ[3_454]	0.68	1.52
27:BA:6:A:N9	27:BA:2902:C:C6[8_554]	0.88	1.32
27:BA:1:G:O6	27:BA:2898:U:C2[8_554]	0.92	1.28
27:BA:6:A:O4'	27:BA:2902:C:C2'[8_554]	0.97	1.23
27:BA:6:A:C4	27:BA:2902:C:C6[8_554]	1.05	1.15
27:BA:6:A:C5'	27:BA:2902:C:O2'[8_554]	1.09	1.11
27:BA:5:A:N6	27:BA:2901:C:C5[8_554]	1.10	1.10
27:BA:5:A:C8	27:BA:2901:C:O2[8_554]	1.12	1.08
27:BA:2899:G:C6	27:BA:2901:C:N4[8_554]	1.12	1.08
27:BA:5:A:N7	27:BA:2901:C:C2[8_554]	1.15	1.05
27:BA:1:G:O6	27:BA:2898:U:N1[8_554]	1.15	1.05
27:BA:1:G:C5	27:BA:2898:U:O2'[8_554]	1.15	1.05
27:BA:6:A:O4'	27:BA:2902:C:C1'[8_554]	1.18	1.02
27:BA:2:G:O6	27:BA:2899:G:C4[8_554]	1.20	1.00
27:BA:1:G:N7	27:BA:2898:U:C2'[8_554]	1.21	0.99
27:BA:1:G:O6	27:BA:2898:U:O2[8_554]	1.23	0.97
27:BA:5:A:N7	27:BA:2901:C:N1[8_554]	1.23	0.97
27:BA:1:G:C5	27:BA:2898:U:C2'[8_554]	1.24	0.96
27:BA:5:A:C5	27:BA:2901:C:C2[8_554]	1.27	0.93
27:BA:1:G:N7	27:BA:2898:U:O2'[8_554]	1.28	0.92
27:BA:4:C:N3	27:BA:2900:A:N3[8_554]	1.33	0.87
1:AA:359:U:OP1	33:BI:82:LYS:CE[3_454]	1.33	0.87
27:BA:1:G:C6	27:BA:2898:U:O2[8_554]	1.34	0.86
27:BA:5:A:C2	27:BA:2902:C:C4[8_554]	1.36	0.84
27:BA:6:A:C8	27:BA:2902:C:O4'[8_554]	1.37	0.83
27:BA:6:A:N9	27:BA:2902:C:N1[8_554]	1.38	0.82
27:BA:2900:A:N6	27:BA:2900:A:N6[8_554]	1.38	0.82
27:BA:6:A:C4'	27:BA:2902:C:C2'[8_554]	1.40	0.80
27:BA:6:A:C4	27:BA:2902:C:C5[8_554]	1.43	0.77
27:BA:2900:A:C6	27:BA:2900:A:C6[8_554]	1.45	0.75
27:BA:5:A:N3	27:BA:2902:C:N3[8_554]	1.47	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:5:A:C6	27:BA:2901:C:C4[8_554]	1.47	0.73
27:BA:3:U:C5	27:BA:2900:A:O4'[8_554]	1.47	0.73
27:BA:4:C:C2	27:BA:2900:A:N3[8_554]	1.47	0.73
27:BA:4:C:OP2	27:BA:2900:A:O2'[8_554]	1.47	0.73
27:BA:4:C:O2	27:BA:2900:A:C2[8_554]	1.48	0.72
27:BA:3:U:O4	27:BA:2900:A:C8[8_554]	1.49	0.71
27:BA:6:A:O4'	27:BA:2902:C:O2'[8_554]	1.50	0.70
27:BA:5:A:C2	27:BA:2902:C:N3[8_554]	1.51	0.69
27:BA:5:A:C5	27:BA:2901:C:N3[8_554]	1.51	0.69
27:BA:5:A:N7	27:BA:2901:C:O2[8_554]	1.52	0.68
29:BE:93:GLN:NE2	29:BE:96:LEU:CD1[8_554]	1.52	0.68
27:BA:2899:G:N1	27:BA:2901:C:N3[8_554]	1.52	0.68
27:BA:2:G:C6	27:BA:2899:G:N3[8_554]	1.53	0.67
27:BA:4:C:C2	27:BA:2900:A:C2[8_554]	1.55	0.65
27:BA:5:A:N9	27:BA:2901:C:O2[8_554]	1.55	0.65
27:BA:2:G:O6	27:BA:2899:G:N3[8_554]	1.55	0.65
27:BA:3:U:C6	27:BA:2900:A:O4'[8_554]	1.56	0.64
27:BA:5:A:N6	27:BA:2901:C:C4[8_554]	1.57	0.63
27:BA:5:A:N3	27:BA:2902:C:C2[8_554]	1.57	0.63
27:BA:6:A:C1'	27:BA:2902:C:C2'[8_554]	1.60	0.60
27:BA:2899:G:O6	27:BA:2901:C:N4[8_554]	1.60	0.60
27:BA:2900:A:C6	27:BA:2900:A:N6[8_554]	1.62	0.58
27:BA:4:C:N3	27:BA:2900:A:C2[8_554]	1.63	0.57
27:BA:1:G:C4	27:BA:2898:U:O2'[8_554]	1.63	0.57
27:BA:5:A:C6	27:BA:2901:C:N3[8_554]	1.64	0.56
27:BA:1:G:C8	27:BA:2898:U:O2'[8_554]	1.64	0.56
27:BA:1:G:N7	27:BA:2898:U:C3'[8_554]	1.66	0.54
27:BA:6:A:C1'	27:BA:2902:C:N1[8_554]	1.66	0.54
27:BA:6:A:N3	27:BA:2902:C:C5[8_554]	1.66	0.54
27:BA:2899:G:N1	27:BA:2901:C:C4[8_554]	1.70	0.50
27:BA:1:G:C6	27:BA:2898:U:C2'[8_554]	1.70	0.50
27:BA:6:A:C8	27:BA:2902:C:C6[8_554]	1.70	0.50
27:BA:1:G:O6	27:BA:2898:U:C1'[8_554]	1.71	0.49
27:BA:4:C:N4	27:BA:2901:C:C6[8_554]	1.73	0.47
27:BA:3:U:C4	27:BA:2900:A:C8[8_554]	1.73	0.47
27:BA:2:G:O6	27:BA:2899:G:N9[8_554]	1.73	0.47
27:BA:1:G:N7	27:BA:2898:U:O3'[8_554]	1.73	0.47
27:BA:3:U:O4	27:BA:2900:A:N7[8_554]	1.74	0.46
27:BA:6:A:C3'	27:BA:2902:C:C2'[8_554]	1.75	0.45
1:AA:359:U:P	33:BI:82:LYS:NZ[3_454]	1.76	0.44
27:BA:2899:G:C6	27:BA:2901:C:C4[8_554]	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:6:A:C8	27:BA:2902:C:C1'[8_554]	1.80	0.40
27:BA:5:A:N7	27:BA:2901:C:C1'[8_554]	1.81	0.39
27:BA:101:G:N3	27:BA:101:G:N3[7_555]	1.81	0.39
27:BA:2899:G:N1	27:BA:2901:C:N4[8_554]	1.82	0.38
27:BA:2899:G:O6	27:BA:2901:C:C4[8_554]	1.82	0.38
27:BA:6:A:C8	27:BA:2902:C:N1[8_554]	1.83	0.37
27:BA:4:C:C5	27:BA:2900:A:C2'[8_554]	1.83	0.37
27:BA:4:C:C5	27:BA:2901:C:O4'[8_554]	1.84	0.36
27:BA:6:A:O5'	27:BA:2902:C:C4'[8_554]	1.84	0.36
27:BA:5:A:N6	27:BA:2901:C:C6[8_554]	1.85	0.35
27:BA:6:A:C3'	27:BA:2902:C:O2'[8_554]	1.85	0.35
27:BA:6:A:C1'	27:BA:2902:C:C1'[8_554]	1.85	0.35
27:BA:6:A:C5	27:BA:2902:C:C6[8_554]	1.86	0.34
27:BA:2899:G:C5	27:BA:2901:C:N4[8_554]	1.86	0.34
27:BA:5:A:C8	27:BA:2901:C:C2[8_554]	1.87	0.33
27:BA:1:G:N9	27:BA:2898:U:O2'[8_554]	1.87	0.33
27:BA:1:G:N1	27:BA:2898:U:O2[8_554]	1.92	0.28
27:BA:1:G:C6	27:BA:2898:U:C2[8_554]	1.92	0.28
27:BA:2:G:N2	27:BA:5:A:N3[8_554]	1.92	0.28
27:BA:1:G:C6	27:BA:2898:U:C1'[8_554]	1.93	0.27
29:BE:93:GLN:NE2	29:BE:96:LEU:CD2[8_554]	1.93	0.27
1:AA:359:U:OP1	33:BI:82:LYS:CD[3_454]	1.93	0.27
27:BA:3:U:OP2	27:BA:2900:A:C5'[8_554]	1.94	0.26
27:BA:6:A:N9	27:BA:2902:C:C1'[8_554]	1.94	0.26
27:BA:2900:A:C5	27:BA:2900:A:N6[8_554]	1.94	0.26
27:BA:5:A:C5	27:BA:2901:C:O2[8_554]	1.95	0.25
27:BA:4:C:N3	27:BA:2900:A:C4[8_554]	1.96	0.24
27:BA:2:G:N1	27:BA:2899:G:N3[8_554]	1.96	0.24
27:BA:5:A:C2	27:BA:2902:C:N4[8_554]	1.97	0.23
27:BA:4:C:N4	27:BA:2901:C:C5[8_554]	1.99	0.21
27:BA:6:A:O5'	27:BA:2902:C:O2'[8_554]	1.99	0.21
27:BA:3:U:O4	27:BA:2899:G:O2'[8_554]	2.00	0.20
27:BA:1:G:O6	27:BA:2898:U:C2'[8_554]	2.00	0.20
27:BA:5:A:C4	27:BA:2901:C:O2[8_554]	2.01	0.19
27:BA:2900:A:C6	27:BA:2900:A:N1[8_554]	2.01	0.19
27:BA:5:A:C5	27:BA:2901:C:N1[8_554]	2.02	0.18
29:BE:93:GLN:NE2	29:BE:96:LEU:CG[8_554]	2.02	0.18
27:BA:2900:A:N1	27:BA:2900:A:N1[8_554]	2.02	0.18
27:BA:6:A:C1'	27:BA:2902:C:C6[8_554]	2.02	0.18
27:BA:3:U:O2	27:BA:2899:G:N2[8_554]	2.02	0.18
27:BA:6:A:O4'	27:BA:2902:C:N1[8_554]	2.04	0.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BA:3:U:N3	27:BA:2899:G:N2[8_554]	2.04	0.16
27:BA:4:C:C4	27:BA:2900:A:N3[8_554]	2.04	0.16
27:BA:2:G:N1	27:BA:5:A:N3[8_554]	2.04	0.16
27:BA:2:G:N1	27:BA:2899:G:C2[8_554]	2.04	0.16
27:BA:5:A:C6	27:BA:2901:C:C5[8_554]	2.05	0.15
27:BA:3:U:C5	27:BA:2899:G:O2'[8_554]	2.06	0.14
27:BA:6:A:C2'	27:BA:2902:C:C2'[8_554]	2.06	0.14
27:BA:3:U:C4	27:BA:2900:A:N9[8_554]	2.07	0.13
27:BA:2899:G:O6	27:BA:2901:C:C5[8_554]	2.08	0.12
27:BA:2902:C:O2'	34:BN:4:ALA:N[8_554]	2.08	0.12
27:BA:6:A:N3	27:BA:2902:C:C6[8_554]	2.10	0.10
27:BA:4:C:C4	27:BA:2900:A:C4[8_554]	2.10	0.10
27:BA:5:A:C4	27:BA:2901:C:C2[8_554]	2.10	0.10
27:BA:3:U:C2	27:BA:2899:G:N2[8_554]	2.11	0.09
27:BA:5:A:N1	27:BA:2901:C:N4[8_554]	2.11	0.09
27:BA:6:A:O5'	27:BA:2902:C:C3'[8_554]	2.11	0.09
27:BA:5:A:N1	27:BA:2901:C:C4[8_554]	2.12	0.08
27:BA:2:G:N1	27:BA:5:A:C2[8_554]	2.12	0.08
27:BA:2:G:C6	27:BA:2899:G:C4[8_554]	2.13	0.07
27:BA:4:C:C4	27:BA:2901:C:N1[8_554]	2.14	0.06
27:BA:6:A:C5	27:BA:2902:C:C5[8_554]	2.14	0.06
27:BA:1:G:C8	27:BA:2898:U:O3'[8_554]	2.15	0.05
27:BA:2:G:N7	27:BA:2899:G:C1'[8_554]	2.15	0.05
27:BA:5:A:C4	27:BA:2901:C:N3[8_554]	2.16	0.04
27:BA:5:A:N1	27:BA:2902:C:C4[8_554]	2.16	0.04
27:BA:6:A:N9	27:BA:2902:C:C5[8_554]	2.16	0.04
27:BA:2:G:N1	27:BA:2899:G:N2[8_554]	2.16	0.04
27:BA:5:A:N7	27:BA:2901:C:C2'[8_554]	2.17	0.03
27:BA:6:A:OP2	27:BA:2902:C:C5'[8_554]	2.18	0.02
27:BA:4:C:C4	27:BA:2901:C:C6[8_554]	2.18	0.02
27:BA:1:G:C6	27:BA:2898:U:N1[8_554]	2.18	0.02
27:BA:2:G:O6	27:BA:2899:G:C5[8_554]	2.19	0.01

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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

The Analysed column shows the number of residues for which the backbone conformation was

analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	AB	232/256 (91%)	183 (79%)	34 (15%)	15 (6%)	1	25
6	AC	204/239 (85%)	165 (81%)	23 (11%)	16 (8%)	1	20
7	AD	206/209 (99%)	156 (76%)	34 (16%)	16 (8%)	1	20
8	AE	146/162 (90%)	114 (78%)	29 (20%)	3 (2%)	9	50
9	AF	99/101 (98%)	85 (86%)	10 (10%)	4 (4%)	4	35
10	AG	153/156 (98%)	131 (86%)	18 (12%)	4 (3%)	7	45
11	AH	136/138 (99%)	101 (74%)	25 (18%)	10 (7%)	1	21
12	AI	125/128 (98%)	87 (70%)	30 (24%)	8 (6%)	2	25
13	AJ	96/105 (91%)	73 (76%)	14 (15%)	9 (9%)	1	16
14	AK	117/129 (91%)	89 (76%)	23 (20%)	5 (4%)	3	34
15	AL	122/135 (90%)	91 (75%)	14 (12%)	17 (14%)	0	6
16	AM	123/126 (98%)	96 (78%)	21 (17%)	6 (5%)	3	31
17	AN	58/61 (95%)	42 (72%)	12 (21%)	4 (7%)	1	22
18	AO	86/89 (97%)	76 (88%)	9 (10%)	1 (1%)	16	61
19	AP	81/88 (92%)	64 (79%)	10 (12%)	7 (9%)	1	17
20	AQ	102/105 (97%)	78 (76%)	17 (17%)	7 (7%)	1	22
21	AR	71/88 (81%)	54 (76%)	11 (16%)	6 (8%)	1	17
22	AS	78/93 (84%)	60 (77%)	15 (19%)	3 (4%)	4	37
23	AT	97/106 (92%)	79 (81%)	12 (12%)	6 (6%)	2	25
24	AU	22/27 (82%)	17 (77%)	3 (14%)	2 (9%)	1	17
28	BD	169/173 (98%)	60 (36%)	34 (20%)	75 (44%)	0	0
29	BE	183/338 (54%)	89 (49%)	35 (19%)	59 (32%)	0	0
30	BF	179/246 (73%)	51 (28%)	47 (26%)	81 (45%)	0	0
31	BG	116/176 (66%)	46 (40%)	31 (27%)	39 (34%)	0	0
32	BH	162/177 (92%)	74 (46%)	39 (24%)	49 (30%)	0	0
33	BI	144/149 (97%)	71 (49%)	29 (20%)	44 (31%)	0	0
34	BN	111/145 (77%)	34 (31%)	21 (19%)	56 (50%)	0	0
35	BO	120/122 (98%)	61 (51%)	27 (22%)	32 (27%)	0	1
36	BP	82/164 (50%)	28 (34%)	21 (26%)	33 (40%)	0	0
37	BQ	130/138 (94%)	38 (29%)	35 (27%)	57 (44%)	0	0
38	BS	105/186 (56%)	36 (34%)	20 (19%)	49 (47%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	BT	48/66 (73%)	17 (35%)	13 (27%)	18 (38%)	0	0
40	BW	104/113 (92%)	42 (40%)	15 (14%)	47 (45%)	0	0
41	BX	72/84 (86%)	26 (36%)	18 (25%)	28 (39%)	0	0
42	BY	108/119 (91%)	49 (45%)	20 (18%)	39 (36%)	0	0
43	BZ	175/253 (69%)	52 (30%)	53 (30%)	70 (40%)	0	0
44	BR	103/118 (87%)	35 (34%)	20 (19%)	48 (47%)	0	0
45	BU	115/118 (98%)	22 (19%)	23 (20%)	70 (61%)	0	0
46	BV	96/100 (96%)	39 (41%)	25 (26%)	32 (33%)	0	0
47	B2	62/70 (89%)	8 (13%)	9 (14%)	45 (73%)	0	0
48	B3	58/60 (97%)	24 (41%)	13 (22%)	21 (36%)	0	0
49	B0	84/91 (92%)	33 (39%)	16 (19%)	35 (42%)	0	0
50	B4	71/73 (97%)	21 (30%)	16 (22%)	34 (48%)	0	0
51	B5	56/60 (93%)	16 (29%)	17 (30%)	23 (41%)	0	0
52	B6	51/82 (62%)	21 (41%)	9 (18%)	21 (41%)	0	0
53	B7	44/47 (94%)	4 (9%)	7 (16%)	33 (75%)	0	0
54	B8	61/64 (95%)	23 (38%)	9 (15%)	29 (48%)	0	0
55	B9	33/36 (92%)	14 (42%)	9 (27%)	10 (30%)	0	0
56	BK	124/141 (88%)	93 (75%)	26 (21%)	5 (4%)	4	35
All	All	5320/6250 (85%)	2968 (56%)	1021 (19%)	1331 (25%)	0	2

All (1331) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	AB	24	TRP
5	AB	104	ASN
5	AB	153	ARG
5	AB	154	LEU
5	AB	161	ALA
6	AC	18	TRP
6	AC	19	GLU
6	AC	52	LEU
6	AC	53	ALA
7	AD	5	ILE
7	AD	20	TYR
7	AD	21	LEU
7	AD	29	PRO

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Mol	Chain	Res	Type
7	AD	32	ALA
7	AD	129	ASN
7	AD	170	VAL
9	AF	95	GLU
10	AG	35	LYS
11	AH	44	PHE
11	AH	74	PRO
11	AH	97	VAL
11	AH	121	ASP
11	AH	134	ILE
12	AI	12	GLU
12	AI	70	LYS
13	AJ	61	GLU
14	AK	104	GLN
15	AL	12	ARG
15	AL	27	LEU
15	AL	46	LYS
15	AL	48	PRO
15	AL	127	GLU
16	AM	28	ALA
16	AM	67	GLU
18	AO	88	ARG
20	AQ	34	LYS
20	AQ	99	SER
20	AQ	104	LYS
21	AR	81	PHE
21	AR	82	THR
21	AR	84	LYS
23	AT	71	THR
28	BD	64	ILE
28	BD	66	PHE
28	BD	67	LYS
28	BD	82	TYR
28	BD	85	ASN
28	BD	104	ILE
28	BD	106	PRO
28	BD	107	LYS
28	BD	108	ASN
28	BD	111	VAL
28	BD	112	GLY
28	BD	113	MET
28	BD	114	GLU

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Mol	Chain	Res	Type
28	BD	116	MET
28	BD	120	ASP
28	BD	122	ASP
28	BD	124	LYS
28	BD	125	ILE
28	BD	127	ASN
28	BD	142	ASN
28	BD	143	ILE
28	BD	145	LEU
28	BD	149	ARG
28	BD	153	LEU
28	BD	156	ALA
28	BD	158	GLY
28	BD	163	VAL
28	BD	164	LEU
28	BD	168	GLY
28	BD	169	LYS
28	BD	187	CYS
28	BD	189	ALA
28	BD	191	VAL
28	BD	199	ARG
28	BD	205	VAL
28	BD	210	LYS
28	BD	223	ASN
28	BD	224	VAL
28	BD	227	VAL
28	BD	229	MET
28	BD	231	ALA
28	BD	232	VAL
29	BE	41	PHE
29	BE	61	PRO
29	BE	79	ARG
29	BE	93	GLN
29	BE	94	ARG
29	BE	105	HIS
29	BE	108	LEU
29	BE	178	LEU
29	BE	205	THR
29	BE	207	GLY
29	BE	214	VAL
29	BE	229	GLN
29	BE	230	GLY

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Mol	Chain	Res	Type
29	BE	232	ARG
29	BE	233	ARG
29	BE	234	ARG
29	BE	244	SER
29	BE	251	PRO
29	BE	253	GLN
29	BE	255	GLN
29	BE	315	VAL
29	BE	316	ARG
30	BF	2	GLU
30	BF	6	TYR
30	BF	21	VAL
30	BF	23	GLU
30	BF	24	THR
30	BF	25	PRO
30	BF	31	ILE
30	BF	35	VAL
30	BF	36	ARG
30	BF	37	ALA
30	BF	40	ALA
30	BF	41	ASN
30	BF	54	LEU
30	BF	57	PRO
30	BF	58	ALA
30	BF	62	GLY
30	BF	63	SER
30	BF	82	GLN
30	BF	84	VAL
30	BF	85	LYS
30	BF	87	ARG
30	BF	88	SER
30	BF	89	ALA
30	BF	90	HIS
30	BF	91	PRO
30	BF	93	LYS
30	BF	95	GLU
30	BF	99	SER
30	BF	100	LEU
30	BF	102	LEU
30	BF	104	ASP
30	BF	105	LYS
30	BF	106	GLU

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Mol	Chain	Res	Type
30	BF	107	ARG
30	BF	108	GLN
30	BF	110	ALA
30	BF	111	VAL
30	BF	112	ARG
30	BF	113	SER
30	BF	114	ALA
30	BF	139	VAL
30	BF	145	GLU
30	BF	156	LEU
30	BF	158	GLU
30	BF	162	VAL
30	BF	166	ILE
30	BF	167	ASP
30	BF	193	LEU
30	BF	195	VAL
30	BF	198	ASP
30	BF	200	PRO
30	BF	202	THR
30	BF	203	ALA
30	BF	207	LEU
30	BF	210	ALA
30	BF	211	ASP
30	BF	215	ALA
30	BF	218	VAL
30	BF	222	ASP
30	BF	224	ALA
30	BF	237	GLU
30	BF	238	SER
30	BF	240	LEU
31	BG	11	HIS
31	BG	14	ARG
31	BG	18	ILE
31	BG	19	GLU
31	BG	21	VAL
31	BG	23	VAL
31	BG	36	ASN
31	BG	54	ALA
31	BG	55	LYS
31	BG	60	GLU
31	BG	77	ASP
31	BG	78	GLU

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Mol	Chain	Res	Type
31	BG	96	SER
31	BG	97	GLN
31	BG	100	ASP
31	BG	101	THR
31	BG	129	ASP
31	BG	141	VAL
31	BG	147	ALA
31	BG	150	SER
32	BH	11	PRO
32	BH	14	VAL
32	BH	21	ASN
32	BH	28	PRO
32	BH	37	HIS
32	BH	48	VAL
32	BH	49	ILE
32	BH	56	ASP
32	BH	58	LYS
32	BH	59	HIS
32	BH	72	ALA
32	BH	75	VAL
32	BH	76	GLU
32	BH	81	GLY
32	BH	97	LYS
32	BH	106	VAL
32	BH	111	PRO
32	BH	127	GLN
32	BH	138	GLN
32	BH	142	GLU
32	BH	146	ASN
32	BH	150	VAL
32	BH	167	LEU
32	BH	169	ARG
33	BI	5	PHE
33	BI	6	LEU
33	BI	7	LYS
33	BI	9	VAL
33	BI	13	GLY
33	BI	20	ASN
33	BI	23	ASP
33	BI	25	TYR
33	BI	36	ALA
33	BI	39	ALA

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Mol	Chain	Res	Type
33	BI	44	LEU
33	BI	92	SER
33	BI	98	ILE
33	BI	99	ALA
33	BI	100	GLU
33	BI	101	SER
33	BI	102	LEU
33	BI	103	GLN
33	BI	104	ALA
33	BI	105	GLN
33	BI	111	ASP
33	BI	114	LYS
33	BI	115	ILE
33	BI	121	ILE
33	BI	146	THR
33	BI	148	GLN
34	BN	5	GLU
34	BN	8	ALA
34	BN	15	ARG
34	BN	17	CYS
34	BN	21	ARG
34	BN	22	VAL
34	BN	24	SER
34	BN	26	VAL
34	BN	28	GLU
34	BN	32	ASP
34	BN	39	VAL
34	BN	44	ALA
34	BN	47	THR
34	BN	49	ARG
34	BN	50	GLU
34	BN	51	GLU
34	BN	52	GLN
34	BN	61	VAL
34	BN	63	ILE
34	BN	67	ASN
34	BN	69	TYR
34	BN	70	PHE
34	BN	72	PRO
34	BN	76	ASP
34	BN	78	ILE
34	BN	80	LYS

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Mol	Chain	Res	Type
34	BN	81	ARG
34	BN	83	ILE
34	BN	84	ARG
34	BN	95	ARG
34	BN	105	LEU
34	BN	136	SER
34	BN	137	GLU
35	BO	4	GLN
35	BO	14	SER
35	BO	28	SER
35	BO	30	ARG
35	BO	35	ILE
35	BO	47	THR
35	BO	74	GLY
35	BO	89	ASP
35	BO	91	LYS
35	BO	96	THR
35	BO	101	PRO
35	BO	102	VAL
35	BO	105	GLU
35	BO	106	LEU
35	BO	111	PHE
35	BO	112	MET
35	BO	113	LYS
35	BO	115	ILE
36	BP	55	GLN
36	BP	61	ALA
36	BP	66	VAL
36	BP	67	ARG
36	BP	69	ILE
36	BP	70	ASP
36	BP	72	ASN
36	BP	95	ASP
36	BP	96	VAL
36	BP	100	ALA
36	BP	102	ASP
36	BP	103	ALA
36	BP	105	TYR
36	BP	111	ALA
36	BP	114	VAL
36	BP	115	ARG
36	BP	117	GLU

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Mol	Chain	Res	Type
36	BP	127	GLU
36	BP	129	ALA
36	BP	131	GLU
36	BP	133	VAL
36	BP	143	THR
37	BQ	10	ILE
37	BQ	18	GLU
37	BQ	23	ILE
37	BQ	28	ILE
37	BQ	30	GLN
37	BQ	43	PRO
37	BQ	55	GLN
37	BQ	56	ILE
37	BQ	58	HIS
37	BQ	59	ASN
37	BQ	61	LEU
37	BQ	62	GLU
37	BQ	63	ALA
37	BQ	73	GLN
37	BQ	83	PHE
37	BQ	88	PHE
37	BQ	93	ILE
37	BQ	94	ARG
37	BQ	102	ARG
37	BQ	105	PHE
37	BQ	109	VAL
37	BQ	119	ASN
37	BQ	127	ASN
37	BQ	135	ALA
37	BQ	141	MET
37	BQ	142	LYS
37	BQ	144	THR
37	BQ	147	VAL
37	BQ	154	ALA
38	BS	11	ARG
38	BS	16	ALA
38	BS	17	ARG
38	BS	20	TYR
38	BS	31	LYS
38	BS	34	LEU
38	BS	41	LYS
38	BS	53	ASN

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Mol	Chain	Res	Type
38	BS	54	GLY
38	BS	55	ASP
38	BS	59	ALA
38	BS	72	GLU
38	BS	74	PRO
38	BS	75	THR
38	BS	81	ALA
38	BS	82	TYR
38	BS	84	THR
38	BS	86	LEU
38	BS	97	VAL
38	BS	98	GLU
38	BS	105	GLY
38	BS	107	ASN
38	BS	109	PRO
38	BS	115	VAL
38	BS	116	PHE
38	BS	117	ALA
38	BS	118	ILE
38	BS	123	ILE
38	BS	128	ASP
39	BT	5	GLU
39	BT	9	CYS
39	BT	11	THR
39	BT	12	ASP
39	BT	15	PRO
39	BT	29	THR
39	BT	37	GLU
39	BT	38	ASN
39	BT	51	TRP
40	BW	6	ILE
40	BW	7	ALA
40	BW	9	TYR
40	BW	17	VAL
40	BW	20	VAL
40	BW	22	ASP
40	BW	24	ILE
40	BW	25	ARG
40	BW	29	LEU
40	BW	30	GLU
40	BW	33	ARG
40	BW	39	THR

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Mol	Chain	Res	Type
40	BW	41	LYS
40	BW	42	ARG
40	BW	43	GLY
40	BW	44	ALA
40	BW	45	TYR
40	BW	46	PHE
40	BW	56	ALA
40	BW	57	ASN
40	BW	58	ALA
40	BW	59	VAL
40	BW	66	GLU
40	BW	67	ASP
40	BW	68	ARG
40	BW	89	ALA
40	BW	100	THR
41	BX	2	TRP
41	BX	3	ASP
41	BX	4	VAL
41	BX	5	ILE
41	BX	13	LYS
41	BX	19	ASP
41	BX	29	ASP
41	BX	30	ASP
41	BX	31	ARG
41	BX	32	ALA
41	BX	35	GLY
41	BX	36	GLU
41	BX	37	VAL
41	BX	38	ALA
41	BX	39	ASP
41	BX	40	ALA
41	BX	46	ASP
41	BX	47	VAL
41	BX	52	VAL
41	BX	57	THR
41	BX	76	GLU
42	BY	14	ALA
42	BY	25	ALA
42	BY	27	LEU
42	BY	28	SER
42	BY	30	ASP
42	BY	31	LEU

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Mol	Chain	Res	Type
42	BY	32	ARG
42	BY	33	GLU
42	BY	35	TYR
42	BY	44	ALA
42	BY	48	VAL
42	BY	50	VAL
42	BY	54	ASP
42	BY	67	LEU
42	BY	75	GLU
42	BY	76	ASP
42	BY	85	GLU
42	BY	93	THR
42	BY	94	SER
43	BZ	3	LEU
43	BZ	6	LYS
43	BZ	14	LEU
43	BZ	16	GLU
43	BZ	31	SER
43	BZ	34	LEU
43	BZ	35	ASP
43	BZ	40	ASP
43	BZ	41	ARG
43	BZ	46	GLN
43	BZ	47	SER
43	BZ	48	THR
43	BZ	51	LEU
43	BZ	69	VAL
43	BZ	72	ASP
43	BZ	73	LYS
43	BZ	75	LYS
43	BZ	79	ILE
43	BZ	80	HIS
43	BZ	86	VAL
43	BZ	93	GLU
43	BZ	108	VAL
43	BZ	132	GLN
43	BZ	142	ASN
43	BZ	149	ALA
43	BZ	153	LYS
43	BZ	160	LEU
43	BZ	161	ALA
43	BZ	165	GLU

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Mol	Chain	Res	Type
43	BZ	169	VAL
44	BR	18	LEU
44	BR	19	ALA
44	BR	20	LEU
44	BR	21	TYR
44	BR	22	ARG
44	BR	26	LYS
44	BR	28	LEU
44	BR	29	LEU
44	BR	33	ARG
44	BR	38	VAL
44	BR	39	PRO
44	BR	40	LYS
44	BR	44	LEU
44	BR	45	ARG
44	BR	47	PHE
44	BR	48	VAL
44	BR	52	ILE
44	BR	53	HIS
44	BR	60	LEU
44	BR	61	HIS
44	BR	62	ALA
44	BR	66	VAL
44	BR	68	ARG
44	BR	72	ASP
44	BR	73	VAL
44	BR	74	LYS
44	BR	75	LEU
44	BR	76	VAL
44	BR	82	GLU
44	BR	84	ALA
44	BR	86	ARG
44	BR	89	ASP
44	BR	94	TYR
44	BR	106	GLY
44	BR	107	ASP
44	BR	111	LEU
44	BR	112	ALA
45	BU	5	LYS
45	BU	6	THR
45	BU	7	GLY
45	BU	8	ILE

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Mol	Chain	Res	Type
45	BU	13	ARG
45	BU	16	LYS
45	BU	17	VAL
45	BU	20	ARG
45	BU	22	LYS
45	BU	24	PHE
45	BU	27	SER
45	BU	28	ARG
45	BU	29	SER
45	BU	32	TYR
45	BU	34	ASN
45	BU	35	ALA
45	BU	37	GLN
45	BU	38	THR
45	BU	39	LEU
45	BU	40	LEU
45	BU	41	ASN
45	BU	43	ALA
45	BU	44	THR
45	BU	47	TYR
45	BU	48	ARG
45	BU	52	ASN
45	BU	53	LYS
45	BU	54	LYS
45	BU	56	ASP
45	BU	58	ARG
45	BU	64	ARG
45	BU	67	ALA
45	BU	69	ALA
45	BU	71	LEU
45	BU	79	PHE
45	BU	80	ILE
45	BU	86	ALA
45	BU	94	VAL
45	BU	96	ALA
45	BU	97	ASP
45	BU	99	ALA
45	BU	105	ALA
45	BU	106	PHE
45	BU	107	LYS
45	BU	108	ALA
45	BU	109	LEU

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Mol	Chain	Res	Type
45	BU	112	ALA
45	BU	114	ARG
45	BU	116	ALA
45	BU	117	ARG
46	BV	5	ILE
46	BV	6	GLN
46	BV	8	GLY
46	BV	11	GLN
46	BV	13	ARG
46	BV	23	GLU
46	BV	24	SER
46	BV	28	GLU
46	BV	29	ALA
46	BV	31	ASP
46	BV	40	VAL
46	BV	55	THR
46	BV	58	ALA
46	BV	69	ILE
46	BV	71	ILE
46	BV	72	ARG
46	BV	84	THR
46	BV	88	GLN
46	BV	92	ALA
47	B2	2	VAL
47	B2	4	HIS
47	B2	5	VAL
47	B2	6	GLN
47	B2	7	GLU
47	B2	12	THR
47	B2	16	ARG
47	B2	17	GLU
47	B2	18	ALA
47	B2	21	ASP
47	B2	23	LEU
47	B2	25	THR
47	B2	26	GLU
47	B2	31	ARG
47	B2	33	VAL
47	B2	34	GLN
47	B2	35	ALA
47	B2	36	ALA
47	B2	40	PRO

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Mol	Chain	Res	Type
47	B2	46	ILE
47	B2	47	LYS
47	B2	48	GLU
47	B2	49	LEU
47	B2	50	ARG
47	B2	51	LYS
47	B2	52	ALA
47	B2	53	ILE
47	B2	54	ALA
47	B2	55	ARG
47	B2	56	ILE
47	B2	58	THR
47	B2	59	ILE
47	B2	60	GLN
47	B2	63	GLU
48	B3	17	LYS
48	B3	18	ASP
48	B3	19	GLN
48	B3	26	LEU
48	B3	30	ARG
48	B3	32	GLN
48	B3	42	ALA
48	B3	43	ILE
48	B3	46	ASN
48	B3	51	ALA
48	B3	52	HIS
48	B3	54	VAL
49	B0	9	SER
49	B0	10	SER
49	B0	12	ASN
49	B0	17	ASN
49	B0	21	LEU
49	B0	23	VAL
49	B0	25	LYS
49	B0	30	VAL
49	B0	33	ALA
49	B0	36	ILE
49	B0	38	VAL
49	B0	39	ARG
49	B0	40	GLN
49	B0	51	VAL
49	B0	53	MET

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Mol	Chain	Res	Type
49	B0	59	LEU
49	B0	63	SER
49	B0	68	VAL
49	B0	70	ILE
49	B0	71	ASN
49	B0	72	LYS
49	B0	74	LYS
49	B0	76	ALA
49	B0	78	PHE
49	B0	79	ILE
49	B0	81	ILE
50	B4	6	HIS
50	B4	10	VAL
50	B4	14	ILE
50	B4	17	GLN
50	B4	21	VAL
50	B4	24	THR
50	B4	27	THR
50	B4	32	HIS
50	B4	33	VAL
50	B4	39	VAL
50	B4	41	PRO
50	B4	49	PHE
50	B4	50	LEU
50	B4	51	ASP
50	B4	52	THR
50	B4	55	ARG
50	B4	56	VAL
50	B4	58	LYS
50	B4	59	PHE
50	B4	60	ASN
50	B4	64	GLY
50	B4	68	ARG
51	B5	7	PRO
51	B5	9	LYS
51	B5	13	LYS
51	B5	14	SER
51	B5	16	ARG
51	B5	19	ARG
51	B5	20	ARG
51	B5	30	LEU
51	B5	43	HIS

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Mol	Chain	Res	Type
51	B5	52	TYR
51	B5	57	VAL
52	B6	6	PRO
52	B6	8	ILE
52	B6	19	GLY
52	B6	20	PHE
52	B6	30	ASN
52	B6	32	GLN
52	B6	33	ALA
52	B6	34	LYS
52	B6	36	GLU
52	B6	45	LYS
53	B7	4	THR
53	B7	9	ASN
53	B7	10	ARG
53	B7	11	LYS
53	B7	12	ARG
53	B7	13	ALA
53	B7	14	LYS
53	B7	15	THR
53	B7	18	PHE
53	B7	19	ARG
53	B7	20	ALA
53	B7	22	MET
53	B7	23	LYS
53	B7	26	SER
53	B7	29	ASN
53	B7	30	ILE
53	B7	31	LEU
53	B7	33	ARG
53	B7	34	ARG
53	B7	35	ARG
53	B7	36	ALA
53	B7	37	LYS
53	B7	39	ARG
53	B7	43	THR
53	B7	44	VAL
53	B7	45	SER
54	B8	5	LYS
54	B8	6	THR
54	B8	7	HIS
54	B8	8	LYS

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Mol	Chain	Res	Type
54	B8	9	MET
54	B8	11	LYS
54	B8	13	ARG
54	B8	14	ILE
54	B8	15	LYS
54	B8	26	LYS
54	B8	27	SER
54	B8	30	ARG
54	B8	32	GLN
54	B8	34	THR
54	B8	39	ASP
54	B8	42	ARG
54	B8	53	ALA
54	B8	56	ALA
54	B8	57	ARG
54	B8	58	MET
54	B8	59	LYS
54	B8	61	MET
54	B8	62	LEU
55	B9	4	ARG
55	B9	6	SER
55	B9	11	CYS
55	B9	14	CYS
55	B9	28	SER
55	B9	33	LYS
56	BK	19	THR
5	AB	15	VAL
5	AB	17	PHE
5	AB	181	PHE
5	AB	232	PRO
6	AC	4	LYS
6	AC	25	GLY
6	AC	98	ASN
6	AC	179	ARG
6	AC	206	GLU
7	AD	12	CYS
7	AD	30	LYS
8	AE	11	ILE
8	AE	37	ARG
8	AE	95	ALA
9	AF	69	GLU
11	AH	89	PRO

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Mol	Chain	Res	Type
12	AI	68	GLY
12	AI	103	THR
12	AI	116	LYS
13	AJ	34	VAL
13	AJ	52	GLY
13	AJ	72	VAL
14	AK	126	ARG
15	AL	77	LEU
15	AL	105	TYR
15	AL	116	SER
15	AL	121	GLY
16	AM	7	VAL
17	AN	17	LYS
20	AQ	68	ARG
21	AR	37	VAL
22	AS	64	GLU
23	AT	68	LYS
24	AU	17	THR
24	AU	21	TYR
28	BD	77	VAL
28	BD	86	ARG
28	BD	117	SER
28	BD	147	PRO
28	BD	154	VAL
28	BD	159	THR
28	BD	160	SER
28	BD	176	ALA
28	BD	178	GLY
28	BD	183	ILE
28	BD	198	GLY
28	BD	209	ASN
28	BD	211	HIS
28	BD	212	HIS
28	BD	235	PRO
29	BE	67	THR
29	BE	76	PRO
29	BE	87	GLU
29	BE	102	ASP
29	BE	104	PHE
29	BE	176	HIS
29	BE	186	GLU
29	BE	225	LYS

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Mol	Chain	Res	Type
29	BE	245	ARG
30	BF	20	ASP
30	BF	26	VAL
30	BF	29	ASP
30	BF	33	LYS
30	BF	49	ASP
30	BF	53	GLY
30	BF	101	ASP
30	BF	143	ASP
30	BF	213	ALA
30	BF	217	GLU
30	BF	239	ALA
31	BG	28	GLY
31	BG	37	ALA
31	BG	61	PHE
31	BG	102	GLY
32	BH	8	ILE
32	BH	50	THR
32	BH	60	HIS
32	BH	65	GLY
32	BH	70	LEU
32	BH	71	LEU
32	BH	98	GLN
32	BH	109	SER
32	BH	131	ILE
32	BH	139	ARG
32	BH	159	LYS
33	BI	8	ASP
33	BI	10	LYS
33	BI	22	ALA
33	BI	61	GLU
33	BI	83	ALA
33	BI	106	HIS
33	BI	122	ARG
33	BI	123	ALA
33	BI	124	LEU
33	BI	145	VAL
34	BN	19	MET
34	BN	31	LEU
34	BN	40	ASN
34	BN	42	GLU
34	BN	46	ILE

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Mol	Chain	Res	Type
34	BN	48	GLY
34	BN	66	ASP
34	BN	77	GLY
34	BN	82	THR
34	BN	92	GLN
34	BN	94	GLY
34	BN	96	GLU
35	BO	22	ILE
35	BO	29	GLY
35	BO	53	LYS
35	BO	54	LYS
35	BO	72	PRO
36	BP	71	GLU
36	BP	110	GLY
36	BP	116	HIS
36	BP	130	ARG
37	BQ	27	GLY
37	BQ	57	ARG
37	BQ	64	ALA
37	BQ	67	ALA
37	BQ	90	PHE
37	BQ	95	GLU
37	BQ	116	HIS
37	BQ	117	GLY
37	BQ	121	ASP
37	BQ	131	ALA
37	BQ	136	TRP
38	BS	18	THR
38	BS	40	ASN
38	BS	42	HIS
38	BS	65	ASP
38	BS	67	ALA
38	BS	88	ALA
38	BS	93	GLN
38	BS	121	GLY
38	BS	122	ALA
39	BT	16	GLY
39	BT	25	ASP
39	BT	48	ASN
40	BW	12	ILE
40	BW	13	SER
40	BW	15	ARG

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Mol	Chain	Res	Type
40	BW	16	LYS
40	BW	26	GLY
40	BW	31	GLU
40	BW	47	VAL
40	BW	49	LYS
40	BW	50	VAL
40	BW	70	TYR
40	BW	80	PRO
40	BW	91	GLY
40	BW	99	ARG
40	BW	105	VAL
41	BX	14	ALA
41	BX	41	VAL
41	BX	50	GLU
41	BX	59	ASP
41	BX	73	ASP
42	BY	5	ASP
42	BY	21	LYS
42	BY	34	GLU
42	BY	56	ALA
42	BY	68	ASP
42	BY	81	LYS
42	BY	92	ASP
42	BY	106	GLU
43	BZ	2	GLU
43	BZ	5	ALA
43	BZ	7	PRO
43	BZ	21	ALA
43	BZ	27	GLU
43	BZ	37	LYS
43	BZ	39	PHE
43	BZ	42	ALA
43	BZ	53	ASP
43	BZ	58	GLY
43	BZ	59	GLY
43	BZ	64	ALA
43	BZ	76	ARG
43	BZ	112	LEU
43	BZ	127	PRO
43	BZ	139	THR
43	BZ	143	ILE
43	BZ	150	GLY

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Mol	Chain	Res	Type
43	BZ	157	GLY
43	BZ	167	THR
44	BR	42	LYS
44	BR	46	GLY
44	BR	49	ASP
44	BR	58	GLY
44	BR	88	ARG
44	BR	90	ARG
44	BR	92	GLY
44	BR	117	VAL
45	BU	12	ARG
45	BU	18	LEU
45	BU	31	GLN
45	BU	42	ALA
45	BU	45	TYR
45	BU	73	GLY
45	BU	110	VAL
45	BU	113	SER
45	BU	115	ASN
46	BV	17	GLY
46	BV	30	GLY
46	BV	42	GLY
46	BV	56	VAL
46	BV	75	LYS
47	B2	22	ASP
47	B2	27	LEU
47	B2	39	ALA
47	B2	61	GLY
48	B3	16	PRO
48	B3	44	ARG
48	B3	45	GLY
49	B0	42	GLY
49	B0	54	GLY
49	B0	67	VAL
50	B4	8	LYS
50	B4	12	CYS
50	B4	22	MET
50	B4	26	SER
50	B4	40	HIS
50	B4	47	GLU
50	B4	63	PHE
51	B5	15	LYS

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Mol	Chain	Res	Type
51	B5	24	ALA
51	B5	37	HIS
51	B5	42	SER
51	B5	45	ILE
51	B5	47	PRO
52	B6	3	LYS
52	B6	17	GLY
52	B6	18	THR
52	B6	23	THR
52	B6	43	VAL
52	B6	48	VAL
53	B7	21	ARG
53	B7	25	LYS
53	B7	27	GLY
53	B7	28	ARG
53	B7	42	LEU
54	B8	28	GLY
54	B8	36	LYS
55	B9	3	VAL
55	B9	9	LYS
56	BK	23	PRO
5	AB	96	ARG
5	AB	152	PHE
6	AC	28	GLN
6	AC	64	VAL
7	AD	179	GLU
11	AH	75	ARG
12	AI	55	ALA
13	AJ	54	PHE
14	AK	103	LEU
14	AK	128	ALA
15	AL	17	LYS
15	AL	83	VAL
16	AM	15	VAL
17	AN	31	ARG
19	AP	43	LYS
19	AP	81	ARG
28	BD	69	ASP
28	BD	78	ALA
28	BD	84	PRO
28	BD	101	ARG
28	BD	109	LEU

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Mol	Chain	Res	Type
28	BD	115	ILE
28	BD	132	GLU
28	BD	193	GLU
29	BE	39	GLN
29	BE	63	GLU
29	BE	75	THR
29	BE	77	PRO
29	BE	83	LEU
29	BE	103	GLU
29	BE	177	ALA
29	BE	187	HIS
29	BE	193	PHE
29	BE	213	PRO
29	BE	222	ARG
29	BE	223	LYS
29	BE	299	SER
30	BF	34	ALA
30	BF	52	ALA
30	BF	154	VAL
31	BG	20	LYS
31	BG	25	MET
31	BG	53	LYS
31	BG	64	ARG
31	BG	66	GLY
31	BG	93	LEU
32	BH	55	SER
32	BH	68	ARG
32	BH	91	VAL
32	BH	112	VAL
32	BH	137	LYS
32	BH	154	GLU
32	BH	168	VAL
34	BN	38	VAL
34	BN	41	ALA
34	BN	108	PRO
35	BO	45	ASP
35	BO	50	GLY
35	BO	99	PHE
36	BP	57	VAL
36	BP	68	GLU
36	BP	104	ASP
36	BP	132	LYS

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Mol	Chain	Res	Type
36	BP	136	ALA
37	BQ	21	SER
37	BQ	44	ALA
37	BQ	51	GLU
37	BQ	60	ALA
37	BQ	65	ARG
37	BQ	112	ALA
37	BQ	126	VAL
37	BQ	146	THR
38	BS	15	GLU
38	BS	56	ASP
38	BS	87	LEU
39	BT	36	CYS
40	BW	83	LYS
40	BW	98	LYS
41	BX	24	LEU
41	BX	34	LYS
42	BY	49	GLU
42	BY	70	ALA
42	BY	71	VAL
42	BY	102	ASP
43	BZ	10	PRO
43	BZ	11	LYS
43	BZ	26	LYS
43	BZ	103	ARG
43	BZ	125	PRO
45	BU	11	ARG
45	BU	19	LYS
45	BU	26	GLY
45	BU	60	LEU
46	BV	32	LYS
46	BV	50	ASP
46	BV	60	VAL
46	BV	90	PHE
47	B2	24	LYS
47	B2	45	ARG
48	B3	2	PRO
49	B0	32	LYS
49	B0	45	PHE
49	B0	69	PHE
50	B4	67	TYR
51	B5	51	TYR

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Mol	Chain	Res	Type
53	B7	2	LYS
54	B8	12	ARG
54	B8	55	TRP
5	AB	158	LEU
6	AC	16	ARG
6	AC	66	VAL
7	AD	4	TYR
7	AD	196	LEU
10	AG	90	GLU
11	AH	65	TYR
11	AH	73	ASP
11	AH	77	GLU
14	AK	13	GLN
15	AL	76	ASN
15	AL	96	VAL
15	AL	126	LYS
16	AM	117	VAL
19	AP	13	HIS
19	AP	44	THR
20	AQ	81	ARG
21	AR	21	LYS
21	AR	87	ARG
23	AT	69	GLY
23	AT	97	ALA
23	AT	98	PRO
28	BD	197	GLY
28	BD	206	LYS
28	BD	214	MET
28	BD	236	PHE
29	BE	173	ARG
29	BE	243	PRO
29	BE	254	GLY
29	BE	262	THR
29	BE	263	GLU
30	BF	32	GLY
30	BF	39	GLN
30	BF	119	ALA
31	BG	45	THR
31	BG	46	GLY
31	BG	85	GLN
31	BG	135	VAL
32	BH	74	MET

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Mol	Chain	Res	Type
32	BH	152	PRO
33	BI	24	GLY
33	BI	37	ILE
33	BI	60	GLU
33	BI	69	LYS
33	BI	135	PRO
34	BN	33	GLY
34	BN	71	TYR
34	BN	75	PRO
35	BO	17	ARG
35	BO	104	ARG
37	BQ	120	HIS
37	BQ	137	ARG
37	BQ	143	VAL
38	BS	19	ASP
38	BS	28	LYS
38	BS	119	GLN
39	BT	14	GLU
39	BT	39	ASN
40	BW	103	ILE
42	BY	41	ARG
43	BZ	70	GLN
43	BZ	91	PRO
43	BZ	109	GLN
43	BZ	117	VAL
43	BZ	151	ASP
43	BZ	152	ILE
43	BZ	156	GLU
43	BZ	166	LEU
44	BR	27	SER
44	BR	59	ASP
45	BU	14	HIS
45	BU	46	GLU
45	BU	87	ASN
45	BU	104	GLU
46	BV	20	ILE
46	BV	54	TYR
47	B2	14	ALA
47	B2	15	GLU
48	B3	40	THR
49	B0	7	VAL
51	B5	11	THR

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Mol	Chain	Res	Type
52	B6	21	TYR
54	B8	19	THR
55	B9	12	ASP
55	B9	21	GLY
5	AB	191	ASP
7	AD	131	ARG
7	AD	134	ASP
7	AD	143	GLY
9	AF	15	ASP
12	AI	105	ASP
13	AJ	32	ALA
13	AJ	58	ASP
13	AJ	90	LEU
15	AL	22	SER
19	AP	15	PRO
28	BD	63	ILE
28	BD	196	ASN
28	BD	202	LYS
29	BE	62	ARG
29	BE	70	VAL
29	BE	265	ASN
31	BG	95	THR
31	BG	151	ILE
32	BH	117	GLU
32	BH	118	GLU
32	BH	157	LYS
34	BN	7	ASP
34	BN	27	ALA
34	BN	87	LEU
34	BN	97	ALA
35	BO	2	ILE
35	BO	63	VAL
35	BO	110	ASP
36	BP	101	ASP
37	BQ	54	VAL
37	BQ	100	GLY
37	BQ	103	ALA
39	BT	6	CYS
39	BT	32	CYS
39	BT	55	ALA
40	BW	48	ALA
42	BY	51	LEU

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Mol	Chain	Res	Type
42	BY	101	LEU
43	BZ	50	GLY
43	BZ	52	PHE
43	BZ	111	GLY
44	BR	85	PRO
45	BU	74	MET
45	BU	111	ASP
47	B2	13	PRO
47	B2	62	GLU
48	B3	25	ALA
48	B3	59	VAL
49	B0	19	LYS
50	B4	3	LYS
50	B4	70	GLY
50	B4	71	SER
51	B5	5	PRO
51	B5	26	THR
52	B6	40	TYR
52	B6	47	HIS
54	B8	52	LYS
56	BK	100	VAL
5	AB	130	ARG
10	AG	81	GLY
15	AL	19	ARG
16	AM	68	GLY
20	AQ	4	LYS
20	AQ	66	SER
28	BD	185	GLY
29	BE	226	HIS
29	BE	309	PRO
31	BG	68	PRO
31	BG	140	ARG
33	BI	40	THR
35	BO	95	GLY
37	BQ	72	VAL
37	BQ	153	PRO
38	BS	47	LEU
38	BS	96	GLY
38	BS	104	ILE
40	BW	14	PRO
43	BZ	78	PRO
43	BZ	175	ARG

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Mol	Chain	Res	Type
45	BU	15	LYS
48	B3	47	VAL
50	B4	25	MET
51	B5	46	CYS
52	B6	49	VAL
56	BK	90	SER
56	BK	136	GLY
6	AC	5	ILE
7	AD	109	GLY
17	AN	7	ILE
29	BE	218	GLY
29	BE	240	PRO
29	BE	298	GLY
30	BF	209	GLY
32	BH	125	PRO
40	BW	21	VAL
42	BY	23	VAL
42	BY	42	VAL
42	BY	77	VAL
47	B2	43	PRO
52	B6	41	ASP
53	B7	6	GLN
6	AC	81	GLY
12	AI	100	GLY
17	AN	56	VAL
19	AP	19	ILE
22	AS	8	GLY
22	AS	45	VAL
28	BD	105	ALA
28	BD	194	VAL
29	BE	219	VAL
31	BG	136	ARG
34	BN	133	GLY
36	BP	128	GLY
38	BS	85	GLY
42	BY	53	GLY
49	B0	73	GLY
5	AB	124	SER
10	AG	71	PRO
15	AL	31	PRO
23	AT	96	GLY
29	BE	235	ILE

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Mol	Chain	Res	Type
33	BI	130	PRO
42	BY	36	GLY
43	BZ	90	GLU
46	BV	46	VAL
6	AC	14	ILE
9	AF	68	PRO
32	BH	130	ILE
33	BI	4	ILE
38	BS	110	THR
43	BZ	113	VAL
48	B3	13	ILE
13	AJ	82	ILE
19	AP	63	GLY
37	BQ	50	VAL
46	BV	22	VAL
51	B5	33	CYS

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	
5	AB	202/220 (92%)	173 (86%)	29 (14%)	4	25
6	AC	160/188 (85%)	146 (91%)	14 (9%)	12	45
7	AD	180/181 (99%)	162 (90%)	18 (10%)	9	38
8	AE	115/123 (94%)	94 (82%)	21 (18%)	2	15
9	AF	90/90 (100%)	83 (92%)	7 (8%)	16	52
10	AG	126/127 (99%)	116 (92%)	10 (8%)	15	51
11	AH	119/119 (100%)	91 (76%)	28 (24%)	1	7
12	AI	98/99 (99%)	90 (92%)	8 (8%)	14	49
13	AJ	88/92 (96%)	77 (88%)	11 (12%)	6	30
14	AK	90/99 (91%)	85 (94%)	5 (6%)	26	63
15	AL	104/111 (94%)	93 (89%)	11 (11%)	8	36

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
16	AM	100/101 (99%)	87 (87%)	13 (13%)	5	29
17	AN	49/50 (98%)	43 (88%)	6 (12%)	6	31
18	AO	79/80 (99%)	70 (89%)	9 (11%)	7	33
19	AP	72/74 (97%)	62 (86%)	10 (14%)	4	27
20	AQ	96/97 (99%)	87 (91%)	9 (9%)	11	42
21	AR	64/77 (83%)	57 (89%)	7 (11%)	8	35
22	AS	71/80 (89%)	64 (90%)	7 (10%)	10	39
23	AT	76/82 (93%)	68 (90%)	8 (10%)	8	37
24	AU	19/22 (86%)	19 (100%)	0	100	100
28	BD	135/135 (100%)	99 (73%)	36 (27%)	0	5
29	BE	156/284 (55%)	128 (82%)	28 (18%)	2	15
30	BF	152/193 (79%)	124 (82%)	28 (18%)	2	14
31	BG	102/147 (69%)	93 (91%)	9 (9%)	12	45
32	BH	137/147 (93%)	111 (81%)	26 (19%)	2	13
33	BI	119/119 (100%)	98 (82%)	21 (18%)	2	16
34	BN	95/121 (78%)	80 (84%)	15 (16%)	3	21
35	BO	101/101 (100%)	81 (80%)	20 (20%)	1	12
36	BP	67/126 (53%)	56 (84%)	11 (16%)	3	20
37	BQ	110/110 (100%)	83 (76%)	27 (24%)	1	6
38	BS	89/149 (60%)	73 (82%)	16 (18%)	2	15
39	BT	44/52 (85%)	30 (68%)	14 (32%)	0	2
40	BW	88/92 (96%)	74 (84%)	14 (16%)	3	21
41	BX	67/73 (92%)	44 (66%)	23 (34%)	0	2
42	BY	97/105 (92%)	80 (82%)	17 (18%)	2	17
43	BZ	151/203 (74%)	129 (85%)	22 (15%)	4	24
44	BR	89/101 (88%)	71 (80%)	18 (20%)	1	11
45	BU	96/97 (99%)	68 (71%)	28 (29%)	0	3
46	BV	79/79 (100%)	69 (87%)	10 (13%)	5	29
47	B2	51/56 (91%)	37 (72%)	14 (28%)	0	4
48	B3	52/52 (100%)	47 (90%)	5 (10%)	10	41
49	B0	64/67 (96%)	57 (89%)	7 (11%)	8	35

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	B4	66/66 (100%)	54 (82%)	12 (18%)	2	15
51	B5	51/53 (96%)	43 (84%)	8 (16%)	3	22
52	B6	46/69 (67%)	39 (85%)	7 (15%)	3	23
53	B7	39/40 (98%)	31 (80%)	8 (20%)	1	10
54	B8	50/51 (98%)	39 (78%)	11 (22%)	1	9
55	B9	34/35 (97%)	30 (88%)	4 (12%)	6	32
56	BK	108/113 (96%)	105 (97%)	3 (3%)	51	78
All	All	4533/5148 (88%)	3840 (85%)	693 (15%)	3	22

All (693) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	AB	10	LEU
5	AB	11	LEU
5	AB	15	VAL
5	AB	17	PHE
5	AB	21	ARG
5	AB	23	ARG
5	AB	28	PHE
5	AB	30	ARG
5	AB	36	ARG
5	AB	42	ILE
5	AB	48	MET
5	AB	64	ARG
5	AB	68	ILE
5	AB	96	ARG
5	AB	103	THR
5	AB	135	GLN
5	AB	147	LYS
5	AB	152	PHE
5	AB	154	LEU
5	AB	158	LEU
5	AB	162	ILE
5	AB	169	LYS
5	AB	198	ASP
5	AB	204	ASN
5	AB	205	ASP
5	AB	209	ARG
5	AB	212	GLN
5	AB	215	LEU

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Mol	Chain	Res	Type
5	AB	238	LEU
6	AC	3	ASN
6	AC	23	TYR
6	AC	28	GLN
6	AC	52	LEU
6	AC	82	GLU
6	AC	91	LEU
6	AC	98	ASN
6	AC	99	VAL
6	AC	156	ARG
6	AC	176	HIS
6	AC	177	THR
6	AC	188	LEU
6	AC	192	THR
6	AC	196	LEU
7	AD	9	CYS
7	AD	20	TYR
7	AD	31	CYS
7	AD	33	MET
7	AD	53	ASP
7	AD	60	GLU
7	AD	61	LYS
7	AD	71	SER
7	AD	78	LEU
7	AD	79	PHE
7	AD	103	ASN
7	AD	107	ARG
7	AD	122	ARG
7	AD	131	ARG
7	AD	182	LYS
7	AD	191	ARG
7	AD	193	ASP
7	AD	194	LEU
8	AE	5	ASP
8	AE	12	LEU
8	AE	13	ILE
8	AE	14	ARG
8	AE	15	ARG
8	AE	20	GLN
8	AE	27	ARG
8	AE	28	PHE
8	AE	38	GLN

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Mol	Chain	Res	Type
8	AE	41	VAL
8	AE	47	LYS
8	AE	56	GLN
8	AE	63	ARG
8	AE	64	ARG
8	AE	68	GLU
8	AE	80	ILE
8	AE	81	GLU
8	AE	89	ILE
8	AE	112	LEU
8	AE	135	THR
8	AE	150	ARG
9	AF	15	ASP
9	AF	48	LEU
9	AF	57	GLN
9	AF	86	ARG
9	AF	94	GLN
9	AF	95	GLU
9	AF	98	LEU
10	AG	3	ARG
10	AG	8	GLU
10	AG	31	MET
10	AG	36	LYS
10	AG	37	ASN
10	AG	103	TRP
10	AG	104	LEU
10	AG	106	GLN
10	AG	125	MET
10	AG	155	ARG
11	AH	3	THR
11	AH	6	ILE
11	AH	8	ASP
11	AH	14	ARG
11	AH	17	THR
11	AH	18	ARG
11	AH	25	ASP
11	AH	26	VAL
11	AH	37	ARG
11	AH	41	ARG
11	AH	49	GLU
11	AH	50	ARG
11	AH	56	LYS

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Mol	Chain	Res	Type
11	AH	58	TYR
11	AH	59	LEU
11	AH	63	LEU
11	AH	65	TYR
11	AH	77	GLU
11	AH	84	ARG
11	AH	98	LYS
11	AH	100	ILE
11	AH	101	PRO
11	AH	107	LEU
11	AH	112	LEU
11	AH	122	ARG
11	AH	126	LYS
11	AH	127	LEU
11	AH	136	GLU
12	AI	3	GLN
12	AI	37	PHE
12	AI	47	LEU
12	AI	50	LEU
12	AI	51	ARG
12	AI	102	LEU
12	AI	114	TYR
12	AI	116	LYS
13	AJ	13	HIS
13	AJ	45	ARG
13	AJ	47	PHE
13	AJ	60	ARG
13	AJ	62	HIS
13	AJ	63	PHE
13	AJ	71	LEU
13	AJ	73	ASP
13	AJ	82	ILE
13	AJ	87	THR
13	AJ	94	VAL
14	AK	18	ARG
14	AK	41	THR
14	AK	62	GLN
14	AK	103	LEU
14	AK	116	HIS
15	AL	7	ILE
15	AL	22	SER
15	AL	23	LYS

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Mol	Chain	Res	Type
15	AL	50	SER
15	AL	85	ILE
15	AL	99	HIS
15	AL	100	ILE
15	AL	101	VAL
15	AL	113	ARG
15	AL	126	LYS
15	AL	127	GLU
16	AM	32	GLU
16	AM	44	ARG
16	AM	48	LEU
16	AM	64	TRP
16	AM	66	LEU
16	AM	77	ASN
16	AM	80	ARG
16	AM	81	LEU
16	AM	86	CYS
16	AM	88	ARG
16	AM	96	LEU
16	AM	108	ARG
16	AM	110	ARG
17	AN	16	PHE
17	AN	21	TYR
17	AN	22	THR
17	AN	24	CYS
17	AN	42	ILE
17	AN	58	LYS
18	AO	3	ILE
18	AO	4	THR
18	AO	10	LYS
18	AO	34	LEU
18	AO	36	ILE
18	AO	38	ARG
18	AO	44	LYS
18	AO	46	HIS
18	AO	54	ARG
19	AP	3	LYS
19	AP	6	LEU
19	AP	12	LYS
19	AP	21	VAL
19	AP	27	LYS
19	AP	28	ARG

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Mol	Chain	Res	Type
19	AP	29	ASP
19	AP	34	GLU
19	AP	43	LYS
19	AP	48	TRP
20	AQ	20	THR
20	AQ	36	ILE
20	AQ	38	ARG
20	AQ	48	GLU
20	AQ	60	ILE
20	AQ	78	GLU
20	AQ	93	GLN
20	AQ	96	GLN
20	AQ	101	ARG
21	AR	28	GLU
21	AR	36	ASN
21	AR	47	THR
21	AR	49	LYS
21	AR	54	ARG
21	AR	79	LEU
21	AR	88	LYS
22	AS	15	LEU
22	AS	18	LYS
22	AS	25	LYS
22	AS	30	LEU
22	AS	34	TRP
22	AS	43	GLU
22	AS	61	TYR
23	AT	26	ASN
23	AT	30	LYS
23	AT	48	LYS
23	AT	71	THR
23	AT	73	HIS
23	AT	75	ASN
23	AT	90	GLN
23	AT	100	ILE
28	BD	62	ARG
28	BD	64	ILE
28	BD	65	ASP
28	BD	66	PHE
28	BD	67	LYS
28	BD	68	ARG
28	BD	70	LYS

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Mol	Chain	Res	Type
28	BD	71	ASP
28	BD	76	ARG
28	BD	83	ASP
28	BD	85	ASN
28	BD	86	ARG
28	BD	104	ILE
28	BD	110	LYS
28	BD	114	GLU
28	BD	120	ASP
28	BD	139	LEU
28	BD	141	HIS
28	BD	142	ASN
28	BD	143	ILE
28	BD	144	GLU
28	BD	152	GLN
28	BD	162	GLN
28	BD	174	ARG
28	BD	175	LEU
28	BD	181	ARG
28	BD	190	THR
28	BD	199	ARG
28	BD	201	ASP
28	BD	204	PHE
28	BD	205	VAL
28	BD	206	LYS
28	BD	223	ASN
28	BD	232	VAL
28	BD	233	ASP
28	BD	236	PHE
29	BE	38	VAL
29	BE	41	PHE
29	BE	49	THR
29	BE	63	GLU
29	BE	65	MET
29	BE	73	ILE
29	BE	86	TYR
29	BE	98	GLU
29	BE	104	PHE
29	BE	107	GLU
29	BE	109	ASP
29	BE	174	LEU
29	BE	179	ASP

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Mol	Chain	Res	Type
29	BE	183	ASP
29	BE	187	HIS
29	BE	192	ILE
29	BE	211	GLN
29	BE	215	LYS
29	BE	222	ARG
29	BE	228	ARG
29	BE	235	ILE
29	BE	238	LEU
29	BE	265	ASN
29	BE	268	LEU
29	BE	269	ILE
29	BE	295	LEU
29	BE	304	ASP
29	BE	311	PHE
30	BF	1	MET
30	BF	20	ASP
30	BF	35	VAL
30	BF	36	ARG
30	BF	39	GLN
30	BF	45	ASP
30	BF	49	ASP
30	BF	50	GLU
30	BF	54	LEU
30	BF	55	ARG
30	BF	56	THR
30	BF	59	GLU
30	BF	82	GLN
30	BF	85	LYS
30	BF	87	ARG
30	BF	94	THR
30	BF	100	LEU
30	BF	103	ASN
30	BF	107	ARG
30	BF	120	ASP
30	BF	142	ASP
30	BF	158	GLU
30	BF	167	ASP
30	BF	211	ASP
30	BF	219	ASN
30	BF	223	LEU
30	BF	242	GLU

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Mol	Chain	Res	Type
30	BF	245	GLU
31	BG	13	MET
31	BG	24	HIS
31	BG	67	ASP
31	BG	76	ARG
31	BG	77	ASP
31	BG	85	GLN
31	BG	93	LEU
31	BG	100	ASP
31	BG	104	PHE
32	BH	19	ASN
32	BH	32	LEU
32	BH	37	HIS
32	BH	40	MET
32	BH	49	ILE
32	BH	70	LEU
32	BH	76	GLU
32	BH	83	GLU
32	BH	86	LEU
32	BH	87	GLU
32	BH	101	LYS
32	BH	102	LEU
32	BH	108	TYR
32	BH	113	GLU
32	BH	115	GLU
32	BH	120	LEU
32	BH	121	GLU
32	BH	127	GLN
32	BH	130	ILE
32	BH	131	ILE
32	BH	137	LYS
32	BH	143	LEU
32	BH	157	LYS
32	BH	164	GLU
32	BH	167	LEU
32	BH	170	LEU
33	BI	5	PHE
33	BI	8	ASP
33	BI	12	LYS
33	BI	15	LYS
33	BI	18	ILE
33	BI	19	LYS

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Mol	Chain	Res	Type
33	BI	23	ASP
33	BI	25	TYR
33	BI	29	PHE
33	BI	43	ASN
33	BI	64	ASN
33	BI	70	GLU
33	BI	75	LEU
33	BI	79	ILE
33	BI	93	ILE
33	BI	102	LEU
33	BI	109	LYS
33	BI	110	LEU
33	BI	112	LYS
33	BI	119	ASP
33	BI	148	GLN
34	BN	7	ASP
34	BN	17	CYS
34	BN	19	MET
34	BN	21	ARG
34	BN	62	ASP
34	BN	70	PHE
34	BN	74	ARG
34	BN	76	ASP
34	BN	79	PHE
34	BN	87	LEU
34	BN	90	LYS
34	BN	98	PHE
34	BN	100	SER
34	BN	107	ASN
34	BN	139	LEU
35	BO	2	ILE
35	BO	3	GLN
35	BO	5	GLU
35	BO	7	ARG
35	BO	8	LEU
35	BO	23	LYS
35	BO	35	ILE
35	BO	66	LYS
35	BO	73	ASP
35	BO	77	ILE
35	BO	78	ARG
35	BO	79	PHE

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Mol	Chain	Res	Type
35	BO	82	ASN
35	BO	84	CYS
35	BO	87	ILE
35	BO	89	ASP
35	BO	90	ASP
35	BO	104	ARG
35	BO	106	LEU
35	BO	122	ILE
36	BP	53	ARG
36	BP	59	GLU
36	BP	67	ARG
36	BP	92	ASP
36	BP	94	ARG
36	BP	95	ASP
36	BP	109	LEU
36	BP	113	GLN
36	BP	123	ASP
36	BP	141	GLU
36	BP	145	LEU
37	BQ	10	ILE
37	BQ	16	ARG
37	BQ	17	ARG
37	BQ	32	LYS
37	BQ	33	MET
37	BQ	47	GLU
37	BQ	48	ASN
37	BQ	51	GLU
37	BQ	56	ILE
37	BQ	59	ASN
37	BQ	61	LEU
37	BQ	69	ASN
37	BQ	71	PHE
37	BQ	74	ASN
37	BQ	85	ILE
37	BQ	88	PHE
37	BQ	91	HIS
37	BQ	95	GLU
37	BQ	116	HIS
37	BQ	125	TRP
37	BQ	133	GLU
37	BQ	134	PHE
37	BQ	136	TRP

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Mol	Chain	Res	Type
37	BQ	142	LYS
37	BQ	148	ASN
37	BQ	149	ILE
37	BQ	152	SER
38	BS	12	ARG
38	BS	14	ARG
38	BS	17	ARG
38	BS	19	ASP
38	BS	21	HIS
38	BS	22	GLN
38	BS	27	LEU
38	BS	28	LYS
38	BS	34	LEU
38	BS	41	LYS
38	BS	83	LEU
38	BS	87	LEU
38	BS	93	GLN
38	BS	94	GLU
38	BS	106	LEU
38	BS	127	LEU
39	BT	4	ARG
39	BT	7	ASP
39	BT	8	TYR
39	BT	9	CYS
39	BT	12	ASP
39	BT	14	GLU
39	BT	20	MET
39	BT	21	PHE
39	BT	25	ASP
39	BT	36	CYS
39	BT	47	ARG
39	BT	49	LEU
39	BT	51	TRP
39	BT	54	THR
40	BW	11	ARG
40	BW	23	LEU
40	BW	52	GLU
40	BW	59	VAL
40	BW	61	ASN
40	BW	67	ASP
40	BW	69	LEU
40	BW	84	ARG

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Mol	Chain	Res	Type
40	BW	86	LEU
40	BW	90	ARG
40	BW	96	ILE
40	BW	103	ILE
40	BW	104	THR
40	BW	107	LEU
41	BX	2	TRP
41	BX	16	ASN
41	BX	17	ASP
41	BX	19	ASP
41	BX	20	PHE
41	BX	24	LEU
41	BX	25	GLN
41	BX	26	PHE
41	BX	30	ASP
41	BX	31	ARG
41	BX	36	GLU
41	BX	44	GLN
41	BX	45	TYR
41	BX	46	ASP
41	BX	47	VAL
41	BX	50	GLU
41	BX	56	ASN
41	BX	57	THR
41	BX	58	MET
41	BX	59	ASP
41	BX	68	LEU
41	BX	71	ASP
41	BX	76	GLU
42	BY	27	LEU
42	BY	31	LEU
42	BY	34	GLU
42	BY	51	LEU
42	BY	61	GLU
42	BY	66	ASP
42	BY	68	ASP
42	BY	73	HIS
42	BY	76	ASP
42	BY	77	VAL
42	BY	81	LYS
42	BY	83	ASP
42	BY	91	LEU

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Mol	Chain	Res	Type
42	BY	92	ASP
42	BY	97	ARG
42	BY	105	ASP
42	BY	112	LEU
43	BZ	2	GLU
43	BZ	24	TYR
43	BZ	26	LYS
43	BZ	32	PHE
43	BZ	35	ASP
43	BZ	39	PHE
43	BZ	40	ASP
43	BZ	41	ARG
43	BZ	43	PHE
43	BZ	45	GLN
43	BZ	49	THR
43	BZ	67	LYS
43	BZ	70	GLN
43	BZ	74	ARG
43	BZ	103	ARG
43	BZ	118	HIS
43	BZ	120	LEU
43	BZ	129	ARG
43	BZ	130	ILE
43	BZ	141	MET
43	BZ	151	ASP
43	BZ	154	LEU
44	BR	16	HIS
44	BR	20	LEU
44	BR	23	ASN
44	BR	28	LEU
44	BR	43	GLU
44	BR	52	ILE
44	BR	64	ARG
44	BR	67	LEU
44	BR	72	ASP
44	BR	77	ARG
44	BR	79	LEU
44	BR	80	PHE
44	BR	88	ARG
44	BR	91	GLN
44	BR	98	LEU
44	BR	105	ARG

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Mol	Chain	Res	Type
44	BR	107	ASP
44	BR	116	LEU
45	BU	8	ILE
45	BU	11	ARG
45	BU	13	ARG
45	BU	16	LYS
45	BU	18	LEU
45	BU	24	PHE
45	BU	25	TRP
45	BU	27	SER
45	BU	28	ARG
45	BU	32	TYR
45	BU	36	PHE
45	BU	39	LEU
45	BU	40	LEU
45	BU	41	ASN
45	BU	44	THR
45	BU	51	ARG
45	BU	59	ARG
45	BU	66	ASN
45	BU	71	LEU
45	BU	76	TYR
45	BU	85	ARG
45	BU	87	ASN
45	BU	95	LEU
45	BU	106	PHE
45	BU	111	ASP
45	BU	114	ARG
45	BU	115	ASN
45	BU	117	ARG
46	BV	13	ARG
46	BV	39	PHE
46	BV	44	GLN
46	BV	63	HIS
46	BV	69	ILE
46	BV	74	TYR
46	BV	80	TYR
46	BV	84	THR
46	BV	90	PHE
46	BV	95	ILE
47	B2	7	GLU
47	B2	19	GLU

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Mol	Chain	Res	Type
47	B2	20	LEU
47	B2	22	ASP
47	B2	26	GLU
47	B2	34	GLN
47	B2	45	ARG
47	B2	55	ARG
47	B2	56	ILE
47	B2	58	THR
47	B2	59	ILE
47	B2	60	GLN
47	B2	62	GLU
47	B2	63	GLU
48	B3	23	LEU
48	B3	30	ARG
48	B3	32	GLN
48	B3	38	GLU
48	B3	43	ILE
49	B0	10	SER
49	B0	14	ARG
49	B0	49	GLN
49	B0	57	HIS
49	B0	58	THR
49	B0	70	ILE
49	B0	81	ILE
50	B4	5	LEU
50	B4	15	ILE
50	B4	27	THR
50	B4	30	GLU
50	B4	31	ILE
50	B4	43	TRP
50	B4	46	GLU
50	B4	49	PHE
50	B4	57	ASP
50	B4	59	PHE
50	B4	68	ARG
50	B4	73	LYS
51	B5	3	LYS
51	B5	8	LYS
51	B5	10	LYS
51	B5	11	THR
51	B5	17	ASP
51	B5	22	HIS

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Mol	Chain	Res	Type
51	B5	33	CYS
51	B5	45	ILE
52	B6	4	ASP
52	B6	10	VAL
52	B6	22	TYR
52	B6	28	ARG
52	B6	40	TYR
52	B6	46	LYS
52	B6	54	LYS
53	B7	3	ARG
53	B7	4	THR
53	B7	8	ASN
53	B7	11	LYS
53	B7	24	THR
53	B7	31	LEU
53	B7	43	THR
53	B7	46	ASP
54	B8	4	MET
54	B8	5	LYS
54	B8	12	ARG
54	B8	16	ILE
54	B8	23	MET
54	B8	25	PHE
54	B8	31	HIS
54	B8	42	ARG
54	B8	58	MET
54	B8	60	LEU
54	B8	61	MET
55	B9	2	LYS
55	B9	8	LYS
55	B9	10	MET
55	B9	27	CYS
56	BK	101	THR
56	BK	106	GLU
56	BK	107	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (124) such sidechains are listed below:

Mol	Chain	Res	Type
5	AB	94	ASN
5	AB	204	ASN
5	AB	212	GLN

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Mol	Chain	Res	Type
5	AB	240	GLN
6	AC	136	GLN
6	AC	139	GLN
6	AC	170	GLN
6	AC	176	HIS
7	AD	42	GLN
7	AD	45	GLN
7	AD	62	GLN
7	AD	103	ASN
7	AD	119	GLN
7	AD	123	HIS
7	AD	154	ASN
8	AE	56	GLN
9	AF	13	ASN
9	AF	18	GLN
9	AF	32	ASN
9	AF	57	GLN
9	AF	94	GLN
10	AG	64	GLN
10	AG	68	ASN
10	AG	106	GLN
11	AH	82	HIS
12	AI	3	GLN
12	AI	87	GLN
13	AJ	56	HIS
14	AK	38	ASN
15	AL	49	ASN
15	AL	75	HIS
15	AL	99	HIS
16	AM	92	HIS
17	AN	49	HIS
18	AO	28	GLN
18	AO	37	ASN
19	AP	13	HIS
19	AP	16	HIS
19	AP	82	GLN
20	AQ	16	GLN
22	AS	14	HIS
22	AS	47	HIS
22	AS	56	GLN
23	AT	73	HIS
23	AT	75	ASN

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Mol	Chain	Res	Type
28	BD	60	GLN
28	BD	85	ASN
28	BD	89	ASN
28	BD	133	ASN
28	BD	141	HIS
28	BD	142	ASN
28	BD	162	GLN
28	BD	212	HIS
28	BD	223	ASN
29	BE	242	ASN
29	BE	259	HIS
29	BE	260	GLN
29	BE	318	ASN
30	BF	90	HIS
30	BF	103	ASN
30	BF	163	HIS
30	BF	206	ASN
30	BF	219	ASN
31	BG	47	GLN
31	BG	133	ASN
32	BH	127	GLN
33	BI	33	GLN
33	BI	43	ASN
33	BI	52	GLN
33	BI	64	ASN
33	BI	103	GLN
34	BN	92	GLN
34	BN	107	ASN
35	BO	82	ASN
36	BP	113	GLN
37	BQ	55	GLN
37	BQ	59	ASN
37	BQ	66	ASN
37	BQ	69	ASN
37	BQ	116	HIS
37	BQ	120	HIS
37	BQ	148	ASN
38	BS	21	HIS
38	BS	46	GLN
39	BT	39	ASN
40	BW	60	ASN
40	BW	61	ASN

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Mol	Chain	Res	Type
41	BX	53	ASN
41	BX	56	ASN
42	BY	7	GLN
42	BY	11	GLN
42	BY	17	HIS
42	BY	22	GLN
42	BY	43	ASN
42	BY	73	HIS
43	BZ	45	GLN
43	BZ	70	GLN
43	BZ	146	HIS
44	BR	31	HIS
44	BR	53	HIS
44	BR	61	HIS
45	BU	37	GLN
45	BU	72	HIS
45	BU	81	ASN
45	BU	87	ASN
45	BU	115	ASN
46	BV	44	GLN
46	BV	57	GLN
46	BV	86	HIS
47	B2	29	ASN
47	B2	42	ASN
48	B3	46	ASN
48	B3	52	HIS
49	B0	17	ASN
49	B0	71	ASN
50	B4	2	GLN
51	B5	29	ASN
51	B5	48	ASN
52	B6	27	ASN
52	B6	32	GLN
53	B7	8	ASN
53	B7	29	ASN
54	B8	31	HIS
55	B9	29	ASN

5.3.3 RNA ⓘ

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1498/1522 (98%)	518 (34%)	166 (11%)
2	AV	74/76 (97%)	16 (21%)	4 (5%)
26	BB	122/123 (99%)	44 (36%)	3 (2%)
27	BA	2785/2916 (95%)	1488 (53%)	360 (12%)
3	AW	70/76 (92%)	14 (20%)	4 (5%)
4	AX	5/18 (27%)	0	0
All	All	4554/4731 (96%)	2080 (45%)	537 (11%)

All (2080) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	6	G
1	AA	7	G
1	AA	8	A
1	AA	9	G
1	AA	12	U
1	AA	13	U
1	AA	14	U
1	AA	17	U
1	AA	25	C
1	AA	31	G
1	AA	32	A
1	AA	33	A
1	AA	38	G
1	AA	39	G
1	AA	41	G
1	AA	48	C
1	AA	49	U
1	AA	50	A
1	AA	51	A
1	AA	52	G
1	AA	54	C
1	AA	60	A
1	AA	61	G
1	AA	62	U
1	AA	65	U
1	AA	66	G
1	AA	68	G
1	AA	69	G
1	AA	70	G
1	AA	81	U

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Mol	Chain	Res	Type
1	AA	83	U
1	AA	89	C
1	AA	97	G
1	AA	106	C
1	AA	108	G
1	AA	113	G
1	AA	114	U
1	AA	116	A
1	AA	120	A
1	AA	121	C
1	AA	122	G
1	AA	123	C
1	AA	129(A)	G
1	AA	130	A
1	AA	131	C
1	AA	137	C
1	AA	144	G
1	AA	151	A
1	AA	152	A
1	AA	153	C
1	AA	161	A
1	AA	163	C
1	AA	181	G
1	AA	182	U
1	AA	190(E)	U
1	AA	190(F)	G
1	AA	190(G)	G
1	AA	193	C
1	AA	195	A
1	AA	196	A
1	AA	197	A
1	AA	198	G
1	AA	203	U
1	AA	204	U
1	AA	218	C
1	AA	219	C
1	AA	231	G
1	AA	236	G
1	AA	244	U
1	AA	245	C
1	AA	247	G
1	AA	251	G

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Mol	Chain	Res	Type
1	AA	252	U
1	AA	253	U
1	AA	259	G
1	AA	263	A
1	AA	264	U
1	AA	266	G
1	AA	267	C
1	AA	275	G
1	AA	279	A
1	AA	280	C
1	AA	281	G
1	AA	287	U
1	AA	289	G
1	AA	291	C
1	AA	299	G
1	AA	301	G
1	AA	306	G
1	AA	308	C
1	AA	316	G
1	AA	317	G
1	AA	319	G
1	AA	321	A
1	AA	323	U
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	352	C
1	AA	353	A
1	AA	355	C
1	AA	363	A
1	AA	367	U
1	AA	368	U
1	AA	373	A
1	AA	374	A
1	AA	388	G
1	AA	389	A
1	AA	390	C
1	AA	392	G
1	AA	397	A

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Mol	Chain	Res	Type
1	AA	398	C
1	AA	406	G
1	AA	410	G
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	432	A
1	AA	433	C
1	AA	438	G
1	AA	439	A
1	AA	445	G
1	AA	450	G
1	AA	460	A
1	AA	461	C
1	AA	462	G
1	AA	480	U
1	AA	481	G
1	AA	482	A
1	AA	483	C
1	AA	484	G
1	AA	485	G
1	AA	486	U
1	AA	488	C
1	AA	496	A
1	AA	497	A
1	AA	498	U
1	AA	500	G
1	AA	505	G
1	AA	508	C
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	512	U
1	AA	517	G
1	AA	518	C
1	AA	519	C

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Mol	Chain	Res	Type
1	AA	520	A
1	AA	521	G
1	AA	523	A
1	AA	524	G
1	AA	527	G
1	AA	530	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	536	C
1	AA	538	G
1	AA	546	G
1	AA	547	A
1	AA	551	U
1	AA	552	U
1	AA	553	A
1	AA	555	C
1	AA	557	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	566	G
1	AA	567	G
1	AA	568	G
1	AA	569	C
1	AA	570	G
1	AA	571	U
1	AA	572	A
1	AA	573	A
1	AA	574	A
1	AA	575	G
1	AA	576	G
1	AA	577	G
1	AA	579	G
1	AA	582	U
1	AA	589	C
1	AA	591	U
1	AA	594	G
1	AA	595	G
1	AA	596	C

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Mol	Chain	Res	Type
1	AA	607	A
1	AA	609	A
1	AA	618	C
1	AA	619	U
1	AA	623	C
1	AA	627	G
1	AA	632	A
1	AA	637	G
1	AA	642	A
1	AA	643	C
1	AA	650	G
1	AA	653	A
1	AA	654	G
1	AA	661	G
1	AA	665	A
1	AA	666	G
1	AA	667	G
1	AA	671	G
1	AA	672	U
1	AA	673	G
1	AA	674	G
1	AA	687	A
1	AA	688	G
1	AA	694	A
1	AA	695	A
1	AA	702	A
1	AA	703	G
1	AA	704	A
1	AA	714	G
1	AA	716	A
1	AA	718	G
1	AA	719	C
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	A
1	AA	745	C
1	AA	749	C
1	AA	751	U
1	AA	753	A
1	AA	754	C

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Mol	Chain	Res	Type
1	AA	755	G
1	AA	757	U
1	AA	759	A
1	AA	760	G
1	AA	761	G
1	AA	765	G
1	AA	774	G
1	AA	775	G
1	AA	777	A
1	AA	781	A
1	AA	782	A
1	AA	785	G
1	AA	787	A
1	AA	790	A
1	AA	791	G
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	801	U
1	AA	811	C
1	AA	812	C
1	AA	813	U
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	820	U
1	AA	821	G
1	AA	828	A
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	864	A
1	AA	866	C
1	AA	870	U
1	AA	872	A
1	AA	873	A
1	AA	874	G
1	AA	883	C
1	AA	884	U
1	AA	885	G
1	AA	889	A

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Mol	Chain	Res	Type
1	AA	890	G
1	AA	891	U
1	AA	898	G
1	AA	902	G
1	AA	913	A
1	AA	914	A
1	AA	916	G
1	AA	917	G
1	AA	919	A
1	AA	926	G
1	AA	927	G
1	AA	929	G
1	AA	931	C
1	AA	934	C
1	AA	935	A
1	AA	940	C
1	AA	945	G
1	AA	948	C
1	AA	949	A
1	AA	950	U
1	AA	956	U
1	AA	958	A
1	AA	959	A
1	AA	960	U
1	AA	961	U
1	AA	965	A
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	980	C
1	AA	982	U
1	AA	983	A
1	AA	984	C
1	AA	989	C
1	AA	991	U
1	AA	993	G

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Mol	Chain	Res	Type
1	AA	994	A
1	AA	1005	A
1	AA	1006	C
1	AA	1007	C
1	AA	1013	G
1	AA	1022	G
1	AA	1023	G
1	AA	1026	G
1	AA	30(A)	G
1	AA	1042	G
1	AA	1045	C
1	AA	1046	A
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1056	U
1	AA	1062	U
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1078	U
1	AA	1079	G
1	AA	1084	G
1	AA	1085	U
1	AA	1086	U
1	AA	1089	G
1	AA	1095	U
1	AA	1096	C
1	AA	1099	G
1	AA	1101	A
1	AA	1102	A
1	AA	1104	G
1	AA	1107	C
1	AA	1117	G
1	AA	1118	C
1	AA	1120	G
1	AA	1122	U
1	AA	1124	G
1	AA	1125	U

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Mol	Chain	Res	Type
1	AA	1126	U
1	AA	1128	C
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1144	G
1	AA	1145	C
1	AA	1146	A
1	AA	1147	C
1	AA	1148	U
1	AA	1151	A
1	AA	1152	A
1	AA	1154	G
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1169	A
1	AA	1177	G
1	AA	1180	A
1	AA	1183	A
1	AA	1184	G
1	AA	1185	G
1	AA	1186	G
1	AA	1188	A
1	AA	1190	G
1	AA	1191	A
1	AA	1192	C
1	AA	1196	U
1	AA	1197	G
1	AA	1199	U
1	AA	1200	C
1	AA	1201	A
1	AA	1202	G
1	AA	1211	U
1	AA	1212	U
1	AA	1214	C

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Mol	Chain	Res	Type
1	AA	1215	G
1	AA	1220	G
1	AA	1224	G
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1236	A
1	AA	1237	C
1	AA	1240	U
1	AA	1241	G
1	AA	1249	C
1	AA	1250	A
1	AA	1251	A
1	AA	1252	A
1	AA	1253	G
1	AA	1256	A
1	AA	1257	U
1	AA	1258	G
1	AA	1260	C
1	AA	1263	C
1	AA	1268	A
1	AA	1270	C
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	1289	A
1	AA	1292	U
1	AA	1293	G
1	AA	1297	C
1	AA	1298	C
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	1312	G
1	AA	1318	A

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Mol	Chain	Res	Type
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1329	A
1	AA	1331	G
1	AA	1332	A
1	AA	1336	C
1	AA	1338	G
1	AA	1340	A
1	AA	1345	U
1	AA	1346	A
1	AA	1347	G
1	AA	1348	U
1	AA	1354	C
1	AA	1361	G
1	AA	1363	A
1	AA	1364	U
1	AA	1365	G
1	AA	1381	U
1	AA	1386	G
1	AA	1394	A
1	AA	1395	C
1	AA	1397	C
1	AA	1398	A
1	AA	1399	C
1	AA	1400	C
1	AA	1401	G
1	AA	1402	C
1	AA	1419	G
1	AA	1432	G
1	AA	1436	U
1	AA	1437	C
1	AA	1440	C
1	AA	1442	G
1	AA	1443	G
1	AA	1449	C
1	AA	1452	C
1	AA	1454	G
1	AA	1468	A
1	AA	1475	G
1	AA	1482	G
1	AA	1488	G

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Mol	Chain	Res	Type
1	AA	1490	C
1	AA	1497	G
1	AA	1498	U
1	AA	1499	A
1	AA	1500	A
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1526	G
1	AA	1528	U
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1532	U
1	AA	1533	C
1	AA	1534	A
1	AA	1535	C
1	AA	1540	U
1	AA	1541	U
1	AA	1542	U
2	AV	8	U
2	AV	10	G
2	AV	16	U
2	AV	17	U
2	AV	18	G
2	AV	20	G
2	AV	35	A
2	AV	41	U
2	AV	47	U
2	AV	48	C
2	AV	49	C
2	AV	58	A
2	AV	59	U
2	AV	61	C
2	AV	73	A
2	AV	75	C

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Mol	Chain	Res	Type
3	AW	2	C
3	AW	3	G
3	AW	17	U
3	AW	18	G
3	AW	19	G
3	AW	21	A
3	AW	26	G
3	AW	34	G
3	AW	35	A
3	AW	36	A
3	AW	37	YYG
3	AW	41	U
3	AW	75	C
3	AW	76	A
26	BB	0	A
26	BB	1	U
26	BB	2	C
26	BB	3	C
26	BB	6	C
26	BB	8	U
26	BB	9	G
26	BB	10	C
26	BB	12	C
26	BB	13	A
26	BB	14	U
26	BB	15	A
26	BB	16	G
26	BB	21	G
26	BB	25	A
26	BB	35	U
26	BB	40	U
26	BB	41	U
26	BB	42	C
26	BB	43	C
26	BB	45	A
26	BB	46	A
26	BB	48	A
26	BB	57	A
26	BB	59	A
26	BB	62	C
26	BB	67	G
26	BB	69	G

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Mol	Chain	Res	Type
26	BB	73	A
26	BB	76	G
26	BB	84	C
26	BB	87	G
26	BB	88	C
26	BB	89	G
26	BB	90	C
26	BB	96	G
26	BB	99	A
26	BB	103	U
26	BB	108	C
26	BB	109	G
26	BB	111	U
26	BB	117	G
26	BB	119	A
26	BB	120	U
27	BA	14	A
27	BA	16	G
27	BA	26	G
27	BA	27	G
27	BA	34	C
27	BA	40	C
27	BA	46	C
27	BA	49	A
27	BA	50	U
27	BA	51	G
27	BA	52	A
27	BA	54	G
27	BA	55	G
27	BA	60	G
27	BA	61	G
27	BA	63	U
27	BA	71	A
27	BA	72	U
27	BA	73	A
27	BA	74	A
27	BA	75	G
27	BA	76	C
27	BA	82	G
27	BA	83	G
27	BA	84	A
27	BA	87	C

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Mol	Chain	Res	Type
27	BA	88	G
27	BA	89	G
27	BA	90	U
27	BA	91	A
27	BA	92	G
27	BA	94	G
27	BA	95	G
27	BA	97	C
27	BA	98	G
27	BA	102	G
27	BA	103	A
27	BA	104	U
27	BA	107	C
27	BA	108	U
27	BA	109	G
27	BA	110	G
27	BA	112	U
27	BA	113	G
27	BA	117	G
27	BA	119	A
27	BA	120	U
27	BA	121	G
27	BA	125	G
27	BA	126	A
27	BA	129	C
27	BA	131	G
27	BA	132	G
27	BA	133	C
27	BA	136	G
27	BA	137	C
27	BA	137(A)	G
27	BA	138	G
27	BA	139	G
27	BA	140	A
27	BA	141	A
27	BA	141(A)	C
27	BA	142	G
27	BA	143	C
27	BA	144	C
27	BA	152	G
27	BA	154	G
27	BA	163	U

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Mol	Chain	Res	Type
27	BA	164	U
27	BA	172	C
27	BA	173	G
27	BA	175	G
27	BA	177	G
27	BA	178	G
27	BA	179	G
27	BA	181	A
27	BA	182	A
27	BA	186	G
27	BA	191	A
27	BA	192	C
27	BA	193	U
27	BA	195	A
27	BA	196	A
27	BA	197	A
27	BA	198	C
27	BA	199	A
27	BA	204	A
27	BA	205	G
27	BA	215	G
27	BA	216	A
27	BA	218	A
27	BA	221	A
27	BA	222	A
27	BA	223	A
27	BA	225	A
27	BA	226	G
27	BA	227	A
27	BA	228	A
27	BA	229	A
27	BA	232	G
27	BA	233	A
27	BA	241	A
27	BA	242	G
27	BA	243	U
27	BA	245	G
27	BA	247	G
27	BA	248	G
27	BA	249	C
27	BA	250	G
27	BA	252	G

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Mol	Chain	Res	Type
27	BA	255	A
27	BA	259	G
27	BA	265	A
27	BA	266	G
27	BA	268	C
27	BA	269	U
27	BA	270	A
27	BA	270(A)	A
27	BA	270(B)	A
27	BA	270(C)	C
27	BA	270(D)	C
27	BA	270(G)	C
27	BA	270(L)	U
27	BA	270(M)	U
27	BA	270(N)	G
27	BA	270(O)	U
27	BA	270(T)	G
27	BA	270(U)	C
27	BA	270(V)	G
27	BA	270(X)	G
27	BA	270(Y)	G
27	BA	270(Z)	U
27	BA	271(A)	C
27	BA	271(B)	G
27	BA	271(C)	U
27	BA	271	G
27	BA	273(F)	C
27	BA	274	G
27	BA	275	G
27	BA	276	A
27	BA	277	C
27	BA	279	C
27	BA	280	C
27	BA	281	G
27	BA	282	A
27	BA	283	A
27	BA	286	C
27	BA	288	C
27	BA	289	A
27	BA	290	G
27	BA	291	C
27	BA	293	U

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Mol	Chain	Res	Type
27	BA	295	G
27	BA	297	C
27	BA	302	C
27	BA	310	A
27	BA	311	A
27	BA	312	G
27	BA	313	C
27	BA	316	C
27	BA	317	G
27	BA	320	A
27	BA	321	G
27	BA	322	A
27	BA	323	G
27	BA	324	A
27	BA	325	G
27	BA	328	U
27	BA	329	G
27	BA	330	A
27	BA	331	A
27	BA	332	A
27	BA	333	G
27	BA	334	C
27	BA	337	C
27	BA	338	G
27	BA	339	U
27	BA	340	A
27	BA	341	G
27	BA	342	G
27	BA	347	A
27	BA	348	G
27	BA	349	G
27	BA	350	U
27	BA	351	G
27	BA	354	G
27	BA	358	U
27	BA	359	A
27	BA	360	G
27	BA	362	U
27	BA	363(A)	A
27	BA	363(C)	G
27	BA	363(F)	A
27	BA	364	C

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Mol	Chain	Res	Type
27	BA	365	C
27	BA	371	A
27	BA	372	G
27	BA	373	U
27	BA	374	A
27	BA	380	U
27	BA	386	G
27	BA	387	U
27	BA	388	G
27	BA	390	A
27	BA	391	G
27	BA	397	G
27	BA	401	A
27	BA	404	C
27	BA	405	U
27	BA	406	G
27	BA	408	G
27	BA	411	G
27	BA	422	A
27	BA	423	A
27	BA	428	A
27	BA	431	U
27	BA	434	U
27	BA	435	C
27	BA	436	C
27	BA	442	G
27	BA	444	C
27	BA	445	C
27	BA	446	G
27	BA	447	A
27	BA	448	U
27	BA	449	A
27	BA	451	C
27	BA	452	G
27	BA	453	C
27	BA	455	C
27	BA	456	C
27	BA	457	A
27	BA	470	A
27	BA	471	A
27	BA	473	G
27	BA	474	G

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Mol	Chain	Res	Type
27	BA	475	U
27	BA	477	A
27	BA	478	A
27	BA	479	A
27	BA	480	A
27	BA	481	G
27	BA	482	A
27	BA	483	A
27	BA	489	G
27	BA	492	A
27	BA	493	G
27	BA	497	A
27	BA	501	A
27	BA	503	A
27	BA	504	U
27	BA	505	A
27	BA	506	G
27	BA	507	A
27	BA	508	G
27	BA	509	C
27	BA	512	G
27	BA	518	G
27	BA	525	U
27	BA	526	A
27	BA	527	C
27	BA	528	A
27	BA	529	A
27	BA	530	G
27	BA	531	C
27	BA	532	A
27	BA	533	G
27	BA	535	C
27	BA	541	C
27	BA	544	C
27	BA	545	G
27	BA	546	C
27	BA	548	A
27	BA	549	G
27	BA	551	G
27	BA	554	U
27	BA	559	G
27	BA	560	C

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Mol	Chain	Res	Type
27	BA	561	G
27	BA	562	U
27	BA	563	G
27	BA	565	C
27	BA	566	U
27	BA	567	A
27	BA	568	U
27	BA	570	G
27	BA	571	A
27	BA	572	A
27	BA	573	G
27	BA	574	C
27	BA	575	A
27	BA	586	A
27	BA	587	C
27	BA	588	U
27	BA	593	G
27	BA	595	C
27	BA	598	G
27	BA	599	G
27	BA	600	G
27	BA	601	C
27	BA	602	G
27	BA	603	A
27	BA	608	A
27	BA	609	A
27	BA	612	G
27	BA	613	U
27	BA	614	U
27	BA	615	G
27	BA	616	A
27	BA	617	G
27	BA	620	G
27	BA	621	A
27	BA	622	G
27	BA	624	C
27	BA	625	G
27	BA	627	A
27	BA	628	G
27	BA	634	C
27	BA	637	A
27	BA	639	U

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Mol	Chain	Res	Type
27	BA	640	C
27	BA	641	C
27	BA	643	A
27	BA	646	A
27	BA	647	G
27	BA	650	C
27	BA	653	A
27	BA	654	A
27	BA	655	A
27	BA	656	G
27	BA	662	G
27	BA	668	G
27	BA	669	G
27	BA	670	A
27	BA	671	C
27	BA	673	C
27	BA	675	A
27	BA	677	A
27	BA	684	G
27	BA	686	G
27	BA	687	C
27	BA	688	U
27	BA	690	G
27	BA	698	C
27	BA	699	A
27	BA	704	G
27	BA	705	A
27	BA	713	G
27	BA	715	G
27	BA	717	G
27	BA	718	A
27	BA	721	C
27	BA	726	G
27	BA	727	A
27	BA	728	G
27	BA	729	G
27	BA	730	C
27	BA	736	C
27	BA	739	G
27	BA	740	U
27	BA	741	G
27	BA	746	A

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Mol	Chain	Res	Type
27	BA	747	U
27	BA	748	G
27	BA	750	A
27	BA	751	A
27	BA	752	A
27	BA	753	C
27	BA	764	A
27	BA	765	G
27	BA	771	G
27	BA	775	G
27	BA	776	G
27	BA	777	A
27	BA	779	U
27	BA	781	A
27	BA	782	A
27	BA	783	A
27	BA	784	A
27	BA	785	G
27	BA	786	C
27	BA	787	U
27	BA	788	A
27	BA	789	A
27	BA	790	C
27	BA	791	C
27	BA	793	A
27	BA	794	G
27	BA	799	G
27	BA	800	A
27	BA	801	G
27	BA	802	A
27	BA	805	G
27	BA	806	C
27	BA	811	U
27	BA	812	C
27	BA	813	U
27	BA	816	C
27	BA	819	A
27	BA	820	A
27	BA	822	U
27	BA	826	U
27	BA	827	U
27	BA	828	U

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Mol	Chain	Res	Type
27	BA	829	A
27	BA	830	G
27	BA	831	G
27	BA	833	U
27	BA	847	U
27	BA	848	G
27	BA	859	G
27	BA	860	U
27	BA	861	A
27	BA	863	A
27	BA	865	C
27	BA	866	A
27	BA	867	C
27	BA	870	A
27	BA	873	G
27	BA	875	G
27	BA	877	U
27	BA	878	A
27	BA	881	G
27	BA	886	C
27	BA	887	A
27	BA	888	C
27	BA	889	C
27	BA	890	A
27	BA	896	A
27	BA	897	C
27	BA	899	A
27	BA	902	C
27	BA	906	G
27	BA	907	U
27	BA	910	A
27	BA	914	C
27	BA	915	C
27	BA	918	A
27	BA	919	G
27	BA	930	U
27	BA	931	G
27	BA	932	G
27	BA	933	A
27	BA	935	C
27	BA	941	A
27	BA	942	G

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Mol	Chain	Res	Type
27	BA	943	U
27	BA	944	G
27	BA	945	A
27	BA	946	G
27	BA	949	C
27	BA	957	A
27	BA	958	U
27	BA	959	A
27	BA	961	C
27	BA	962	G
27	BA	964	C
27	BA	966	G
27	BA	968	G
27	BA	972	G
27	BA	973	A
27	BA	974	G
27	BA	974(A)	C
27	BA	975	G
27	BA	976	C
27	BA	980	A
27	BA	982	C
27	BA	983	A
27	BA	984	A
27	BA	985	C
27	BA	986	C
27	BA	989	G
27	BA	990	A
27	BA	991	C
27	BA	993	G
27	BA	994	C
27	BA	995	C
27	BA	996	A
27	BA	997	G
27	BA	999	U
27	BA	1003	G
27	BA	1008	C
27	BA	1009	A
27	BA	1012	U
27	BA	1013	C
27	BA	1017	G
27	BA	1019	U
27	BA	1021	A

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Mol	Chain	Res	Type
27	BA	1022	G
27	BA	1023	U
27	BA	1024	G
27	BA	1025	G
27	BA	1026	U
27	BA	1033	U
27	BA	1041	C
27	BA	1044	G
27	BA	1045	A
27	BA	1046	A
27	BA	1049	C
27	BA	1056	G
27	BA	1058	G
27	BA	1060	U
27	BA	1061	U
27	BA	1062	G
27	BA	1063	G
27	BA	1066	U
27	BA	1067	A
27	BA	1068	G
27	BA	1069	A
27	BA	1070	A
27	BA	1071	G
27	BA	1072	C
27	BA	1073	A
27	BA	1081	U
27	BA	1084	A
27	BA	1085	A
27	BA	1086	A
27	BA	1087	G
27	BA	1088	A
27	BA	1089	G
27	BA	1090	U
27	BA	1093	G
27	BA	1096	A
27	BA	1097	U
27	BA	1098	A
27	BA	1099	G
27	BA	1101	U
27	BA	1102	C
27	BA	1103	A
27	BA	1105	U

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Mol	Chain	Res	Type
27	BA	1106	G
27	BA	1109	C
27	BA	1110	G
27	BA	1111	A
27	BA	1112	G
27	BA	1114	G
27	BA	1116	C
27	BA	1120	G
27	BA	1123	C
27	BA	1124	C
27	BA	1126	A
27	BA	1127	A
27	BA	1128	A
27	BA	1129	A
27	BA	1130	U
27	BA	1131	G
27	BA	1132	A
27	BA	1133	U
27	BA	1134	G
27	BA	1135	C
27	BA	1138	G
27	BA	1140	C
27	BA	1141	U
27	BA	1142	U
27	BA	142(A)	A
27	BA	1149	G
27	BA	1153	C
27	BA	1154	G
27	BA	1155	A
27	BA	1156	A
27	BA	1157	G
27	BA	1159	U
27	BA	1162	G
27	BA	1166	C
27	BA	1171	G
27	BA	1174	A
27	BA	1175	U
27	BA	1176	G
27	BA	1177	A
27	BA	1179	C
27	BA	1180	C
27	BA	1181	C

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Mol	Chain	Res	Type
27	BA	1182	A
27	BA	1183	G
27	BA	1184	G
27	BA	1185	C
27	BA	1186	G
27	BA	1190	G
27	BA	1197	G
27	BA	1199	U
27	BA	1202	C
27	BA	1203	G
27	BA	1204	A
27	BA	1205	U
27	BA	1206	G
27	BA	1207	C
27	BA	1208	C
27	BA	1209	G
27	BA	1210	A
27	BA	1211	U
27	BA	1212	G
27	BA	1214	A
27	BA	1220	A
27	BA	1221	C
27	BA	1222	C
27	BA	1227	A
27	BA	1228	G
27	BA	1229	G
27	BA	1234	U
27	BA	1236	G
27	BA	1237	A
27	BA	1239	G
27	BA	1240	U
27	BA	1241	A
27	BA	1244	G
27	BA	1246	A
27	BA	1247	A
27	BA	1248	G
27	BA	1249	U
27	BA	1251	C
27	BA	1252	G
27	BA	1253	A
27	BA	1254	A
27	BA	1255	U

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Mol	Chain	Res	Type
27	BA	1256	G
27	BA	1260	G
27	BA	1261	C
27	BA	1265	A
27	BA	1266	G
27	BA	1267	U
27	BA	1268	A
27	BA	1269	A
27	BA	1270	C
27	BA	1271	G
27	BA	1272	A
27	BA	1273	U
27	BA	1275	A
27	BA	1284	A
27	BA	1286	A
27	BA	1287	A
27	BA	1288	U
27	BA	1289	C
27	BA	1298	C
27	BA	1300	U
27	BA	1301	A
27	BA	1302	A
27	BA	1304	C
27	BA	1307	A
27	BA	1309	G
27	BA	1311	G
27	BA	1312	U
27	BA	1313	U
27	BA	1314	C
27	BA	1320	C
27	BA	1321	A
27	BA	1325	G
27	BA	1326	U
27	BA	1329	U
27	BA	1330	C
27	BA	1332	G
27	BA	1333	C
27	BA	1340	U
27	BA	1341	U
27	BA	1342	A
27	BA	1343	G
27	BA	1344	G

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Mol	Chain	Res	Type
27	BA	1345	C
27	BA	1350	C
27	BA	1352	U
27	BA	1361	G
27	BA	1363	C
27	BA	1364	G
27	BA	1365	A
27	BA	1366	A
27	BA	1368	G
27	BA	1378	A
27	BA	1379	A
27	BA	1384	A
27	BA	1385	G
27	BA	1391	U
27	BA	1392	A
27	BA	1394	U
27	BA	1395	A
27	BA	1397	U
27	BA	1398	C
27	BA	1402	C
27	BA	1404	C
27	BA	1407	C
27	BA	1415	U
27	BA	1416	G
27	BA	1417	C
27	BA	1418	G
27	BA	1419	A
27	BA	1420	U
27	BA	1421	G
27	BA	1422	G
27	BA	1425	G
27	BA	1426	G
27	BA	1427	A
27	BA	1428	C
27	BA	1429	G
27	BA	1438	U
27	BA	1439	A
27	BA	444(A)	A
27	BA	449(A)	G
27	BA	1451	C
27	BA	1454	U
27	BA	1455	G

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Mol	Chain	Res	Type
27	BA	1460	A
27	BA	1461	G
27	BA	1462	C
27	BA	1467	C
27	BA	1475	G
27	BA	1478	G
27	BA	1480	G
27	BA	1483	G
27	BA	1484	G
27	BA	1485	G
27	BA	1489	U
27	BA	1490	A
27	BA	1491	G
27	BA	1494	A
27	BA	1495	A
27	BA	1496	A
27	BA	1497	U
27	BA	1498	C
27	BA	1499	C
27	BA	1502	C
27	BA	1506	C
27	BA	1507	A
27	BA	1508	A
27	BA	1509	C
27	BA	1510	A
27	BA	1512	G
27	BA	1513	C
27	BA	1514	U
27	BA	1515	C
27	BA	1516	U
27	BA	1517	G
27	BA	1519	G
27	BA	1521	G
27	BA	1522	G
27	BA	1525	G
27	BA	1527	G
27	BA	1528	A
27	BA	1530	G
27	BA	1531	C
27	BA	1533	C
27	BA	1534	G
27	BA	1536	A

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Mol	Chain	Res	Type
27	BA	1537	C
27	BA	1538	G
27	BA	1539	G
27	BA	1540	G
27	BA	1543	A
27	BA	1544	C
27	BA	1545	A
27	BA	1547	C
27	BA	1553	A
27	BA	1554	A
27	BA	1555	G
27	BA	1558	A
27	BA	1559	G
27	BA	1560	G
27	BA	1561	G
27	BA	1566	A
27	BA	1567	A
27	BA	1568	G
27	BA	1569	A
27	BA	1571	A
27	BA	1572	A
27	BA	1573	G
27	BA	1574	C
27	BA	1575	C
27	BA	1577	C
27	BA	1578	U
27	BA	1579	A
27	BA	1583	A
27	BA	1586	A
27	BA	1587	A
27	BA	1588	C
27	BA	1602	U
27	BA	1603	A
27	BA	1606	G
27	BA	1607	C
27	BA	1608	A
27	BA	1609	A
27	BA	1610	A
27	BA	1611	C
27	BA	1612	C
27	BA	1613	G
27	BA	1614	A

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Mol	Chain	Res	Type
27	BA	1615	C
27	BA	1616	A
27	BA	1617	C
27	BA	1618	A
27	BA	1619	G
27	BA	1625	C
27	BA	1626	G
27	BA	1627	G
27	BA	1634	A
27	BA	1635	G
27	BA	1639	U
27	BA	1640	C
27	BA	1645	G
27	BA	1646	C
27	BA	1647	G
27	BA	1648	C
27	BA	1649	G
27	BA	1652	A
27	BA	1653	G
27	BA	1654	A
27	BA	1655	A
27	BA	1658	C
27	BA	1664	A
27	BA	1665	A
27	BA	1667	G
27	BA	1668	A
27	BA	1669	A
27	BA	1670	C
27	BA	1674	G
27	BA	1675	C
27	BA	1679	U
27	BA	1681	G
27	BA	1682	G
27	BA	1686	C
27	BA	1688	U
27	BA	1689	A
27	BA	1695	G
27	BA	1696	G
27	BA	1698	A
27	BA	1699	G
27	BA	1700	A
27	BA	1701	A

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Mol	Chain	Res	Type
27	BA	1703	G
27	BA	1705	G
27	BA	1706	U
27	BA	1707	G
27	BA	1718	G
27	BA	1726	G
27	BA	1728	G
27	BA	1729	A
27	BA	1730	U
27	BA	1731	G
27	BA	1732	A
27	BA	1733	G
27	BA	1735	C
27	BA	1743	G
27	BA	1747	G
27	BA	1755	A
27	BA	1756	G
27	BA	1757	U
27	BA	1758	G
27	BA	1759	A
27	BA	1760	A
27	BA	1762	A
27	BA	1763	G
27	BA	1764	G
27	BA	1767	C
27	BA	1772	G
27	BA	1773	A
27	BA	1774	C
27	BA	1775	U
27	BA	1776	G
27	BA	1780	A
27	BA	1781	C
27	BA	1782	C
27	BA	1783	A
27	BA	1784	A
27	BA	1786	A
27	BA	1787	A
27	BA	1788	C
27	BA	1790	C
27	BA	1791	A
27	BA	1800	C
27	BA	1801	G

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Mol	Chain	Res	Type
27	BA	1802	A
27	BA	1805	U
27	BA	1808	U
27	BA	1809	A
27	BA	1810	A
27	BA	1811	G
27	BA	1815	A
27	BA	1816	G
27	BA	1817	G
27	BA	1818	U
27	BA	1820	U
27	BA	1821	A
27	BA	1823	G
27	BA	1824	G
27	BA	1825	A
27	BA	1826	G
27	BA	1828	G
27	BA	1829	A
27	BA	1834	U
27	BA	1837	C
27	BA	1838	C
27	BA	1839	G
27	BA	1840	G
27	BA	1843	C
27	BA	1847	A
27	BA	1852	C
27	BA	1858	G
27	BA	1860	G
27	BA	1870	C
27	BA	1880	C
27	BA	1881	C
27	BA	1883	G
27	BA	1884	A
27	BA	1891	G
27	BA	1895	C
27	BA	1899	G
27	BA	1901	A
27	BA	1903	G
27	BA	1906	G
27	BA	1913	A
27	BA	1914	C
27	BA	1915	U

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Mol	Chain	Res	Type
27	BA	1916	A
27	BA	1917	U
27	BA	1918	A
27	BA	1919	A
27	BA	1923	U
27	BA	1925	C
27	BA	1928	A
27	BA	1929	G
27	BA	1930	G
27	BA	1931	U
27	BA	1934	C
27	BA	1936	A
27	BA	1937	A
27	BA	1938	A
27	BA	1939	U
27	BA	1940	U
27	BA	1941	C
27	BA	1942	C
27	BA	1943	U
27	BA	1944	U
27	BA	1945	G
27	BA	1947	C
27	BA	1953	A
27	BA	1954	G
27	BA	1955	U
27	BA	1956	U
27	BA	1957	C
27	BA	1958	C
27	BA	1960	A
27	BA	1962	C
27	BA	1963	U
27	BA	1964	G
27	BA	1965	C
27	BA	1966	A
27	BA	1967	C
27	BA	1968	G
27	BA	1969	A
27	BA	1970	A
27	BA	1971	A
27	BA	1972	A
27	BA	1981	A
27	BA	1982	C

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Mol	Chain	Res	Type
27	BA	1991	U
27	BA	1993	U
27	BA	1995	U
27	BA	1996	C
27	BA	1997	G
27	BA	2003	G
27	BA	2015	A
27	BA	2016	U
27	BA	2018	G
27	BA	2020	A
27	BA	2021	C
27	BA	2022	U
27	BA	2023	G
27	BA	2027	G
27	BA	2030	A
27	BA	2031	A
27	BA	2032	G
27	BA	2033	A
27	BA	2034	U
27	BA	2036	C
27	BA	2039	C
27	BA	2041	U
27	BA	2043	C
27	BA	2044	C
27	BA	2045	C
27	BA	2047	U
27	BA	2048	G
27	BA	2050	C
27	BA	2051	A
27	BA	2052	G
27	BA	2055	C
27	BA	2056	G
27	BA	2059	A
27	BA	2060	A
27	BA	2061	G
27	BA	2062	A
27	BA	2063	C
27	BA	2064	C
27	BA	2065	C
27	BA	2066	C
27	BA	2068	U
27	BA	2069	G

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Mol	Chain	Res	Type
27	BA	2076	U
27	BA	2077	A
27	BA	2080	G
27	BA	2083	G
27	BA	2087	G
27	BA	2091	U
27	BA	2092	U
27	BA	2093	G
27	BA	2094	G
27	BA	2098	U
27	BA	2099	U
27	BA	2182	G
27	BA	2188	C
27	BA	2190	G
27	BA	2191	G
27	BA	2192	G
27	BA	2193	G
27	BA	2194	G
27	BA	2195	C
27	BA	2196	C
27	BA	2197	U
27	BA	2198	A
27	BA	2205	C
27	BA	2206	C
27	BA	2207	C
27	BA	2208	U
27	BA	2209	C
27	BA	2210	G
27	BA	2211	G
27	BA	2212	A
27	BA	2213	U
27	BA	2217	G
27	BA	2224	G
27	BA	2225	A
27	BA	2226	C
27	BA	2227	A
27	BA	2228	G
27	BA	2232	U
27	BA	2233	U
27	BA	2234	G
27	BA	2235	G
27	BA	2236	C

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Mol	Chain	Res	Type
27	BA	2237	G
27	BA	2238	G
27	BA	2239	G
27	BA	2240	C
27	BA	2241	A
27	BA	2242	G
27	BA	2243	U
27	BA	2245	U
27	BA	2247	A
27	BA	2250	G
27	BA	2251	G
27	BA	2253	G
27	BA	2254	C
27	BA	2255	G
27	BA	2257	U
27	BA	2258	C
27	BA	2259	G
27	BA	2262	U
27	BA	2263	C
27	BA	2264	C
27	BA	2265	U
27	BA	2266	A
27	BA	2267	A
27	BA	2268	A
27	BA	2269	A
27	BA	2270	G
27	BA	2272	U
27	BA	2275	C
27	BA	2276	G
27	BA	2277	G
27	BA	2278	A
27	BA	2279	G
27	BA	2281	C
27	BA	2282	G
27	BA	2283	C
27	BA	2284	C
27	BA	2286	A
27	BA	2287	A
27	BA	2288	A
27	BA	2289	G
27	BA	2291	U
27	BA	2294	C

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Mol	Chain	Res	Type
27	BA	2296	U
27	BA	2297	C
27	BA	2300	G
27	BA	2303	G
27	BA	2304	G
27	BA	2306	C
27	BA	2307	G
27	BA	2308	G
27	BA	2309	A
27	BA	2310	A
27	BA	2311	A
27	BA	2312	U
27	BA	2313	C
27	BA	2314	C
27	BA	2315	G
27	BA	2317	C
27	BA	2318	G
27	BA	2319	G
27	BA	2320	A
27	BA	2321	G
27	BA	2322	A
27	BA	2323	G
27	BA	2325	G
27	BA	2327	A
27	BA	2334	G
27	BA	2335	A
27	BA	2336	A
27	BA	2337	G
27	BA	2339	G
27	BA	2341	G
27	BA	2342	C
27	BA	2343	C
27	BA	2345	G
27	BA	2346	A
27	BA	2347	C
27	BA	2348	U
27	BA	2350	C
27	BA	2351	G
27	BA	2352	A
27	BA	2353	G
27	BA	2355	C
27	BA	2357	U

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Mol	Chain	Res	Type
27	BA	2358	G
27	BA	2359	C
27	BA	2360	A
27	BA	2361	A
27	BA	2362	G
27	BA	2366	A
27	BA	2371	G
27	BA	2372	G
27	BA	2373	G
27	BA	2374	C
27	BA	2378	A
27	BA	2379	G
27	BA	2381	C
27	BA	2382	G
27	BA	2383	G
27	BA	2384	G
27	BA	2385	C
27	BA	2386	C
27	BA	2387	U
27	BA	2389	G
27	BA	2390	U
27	BA	2392	A
27	BA	2393	A
27	BA	2394	C
27	BA	2395	C
27	BA	2396	G
27	BA	2397	G
27	BA	2399	G
27	BA	2400	G
27	BA	2401	U
27	BA	2402	C
27	BA	2403	C
27	BA	2405	G
27	BA	2406	U
27	BA	2407	G
27	BA	2408	U
27	BA	2409	G
27	BA	2411	A
27	BA	2412	A
27	BA	2413	G
27	BA	2417	C
27	BA	2422	A

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Mol	Chain	Res	Type
27	BA	2423	U
27	BA	2424	C
27	BA	2425	A
27	BA	2426	A
27	BA	2427	C
27	BA	2428	G
27	BA	2430	A
27	BA	2431	U
27	BA	2432	A
27	BA	2434	A
27	BA	2435	A
27	BA	2436	G
27	BA	2437	U
27	BA	2438	U
27	BA	2439	A
27	BA	2441	C
27	BA	2442	C
27	BA	2444	G
27	BA	2446	G
27	BA	2448	A
27	BA	2449	U
27	BA	2451	A
27	BA	2453	A
27	BA	2455	G
27	BA	2456	C
27	BA	2458	G
27	BA	2463	C
27	BA	2464	C
27	BA	2465	C
27	BA	2466	C
27	BA	2468	G
27	BA	2469	A
27	BA	2470	G
27	BA	2472	G
27	BA	2473	U
27	BA	2475	C
27	BA	2476	A
27	BA	2478	A
27	BA	2479	G
27	BA	2480	C
27	BA	2482	G
27	BA	2483	C

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Mol	Chain	Res	Type
27	BA	2484	G
27	BA	2485	G
27	BA	2488	A
27	BA	2490	G
27	BA	2491	U
27	BA	2493	U
27	BA	2494	G
27	BA	2495	G
27	BA	2496	C
27	BA	2497	A
27	BA	2498	C
27	BA	2499	C
27	BA	2500	U
27	BA	2502	G
27	BA	2503	A
27	BA	2504	U
27	BA	2505	G
27	BA	2506	U
27	BA	2507	C
27	BA	2512	C
27	BA	2513	G
27	BA	2517	C
27	BA	2518	A
27	BA	2519	U
27	BA	2520	C
27	BA	2521	C
27	BA	2522	U
27	BA	2526	G
27	BA	2529	G
27	BA	2532	G
27	BA	2533	A
27	BA	2535	G
27	BA	2536	G
27	BA	2537	U
27	BA	2539	C
27	BA	2540	C
27	BA	2541	A
27	BA	2542	A
27	BA	2543	G
27	BA	2544	G
27	BA	2545	G
27	BA	2546	U

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Mol	Chain	Res	Type
27	BA	2547	U
27	BA	2549	G
27	BA	2551	C
27	BA	2552	U
27	BA	2553	G
27	BA	2554	U
27	BA	2555	U
27	BA	2556	C
27	BA	2557	G
27	BA	2558	C
27	BA	2561	A
27	BA	2562	U
27	BA	2565	A
27	BA	2566	A
27	BA	2567	G
27	BA	2568	C
27	BA	2569	G
27	BA	2570	G
27	BA	2572	A
27	BA	2573	C
27	BA	2574	G
27	BA	2575	C
27	BA	2576	G
27	BA	2577	A
27	BA	2578	G
27	BA	2579	C
27	BA	2580	U
27	BA	2581	G
27	BA	2582	G
27	BA	2583	G
27	BA	2584	U
27	BA	2585	U
27	BA	2586	C
27	BA	2587	A
27	BA	2588	G
27	BA	2590	A
27	BA	2591	C
27	BA	2596	U
27	BA	2597	G
27	BA	2598	A
27	BA	2599	G
27	BA	2600	A

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Mol	Chain	Res	Type
27	BA	2601	C
27	BA	2602	A
27	BA	2603	G
27	BA	2604	U
27	BA	2605	U
27	BA	2606	C
27	BA	2607	G
27	BA	2609	U
27	BA	2610	C
27	BA	2611	U
27	BA	2612	C
27	BA	2613	U
27	BA	2614	A
27	BA	2615	U
27	BA	2616	C
27	BA	2617	C
27	BA	2618	G
27	BA	2619	C
27	BA	2620	C
27	BA	2621	A
27	BA	2625	G
27	BA	2626	C
27	BA	2627	G
27	BA	2629	A
27	BA	2630	G
27	BA	2631	G
27	BA	2633	G
27	BA	2635	C
27	BA	2637	U
27	BA	2638	G
27	BA	2640	G
27	BA	2641	G
27	BA	2645	G
27	BA	2646	C
27	BA	2648	C
27	BA	2650	U
27	BA	2654	A
27	BA	2655	G
27	BA	2658	C
27	BA	2659	G
27	BA	2661	G
27	BA	2662	A

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Mol	Chain	Res	Type
27	BA	2663	G
27	BA	2665	A
27	BA	2666	C
27	BA	2667	C
27	BA	2672	G
27	BA	2676	C
27	BA	2677	G
27	BA	2678	C
27	BA	2679	A
27	BA	2680	C
27	BA	2681	C
27	BA	2682	U
27	BA	2683	C
27	BA	2685	G
27	BA	2686	G
27	BA	2687	U
27	BA	2689	U
27	BA	2690	C
27	BA	2691	C
27	BA	2693	A
27	BA	2698	U
27	BA	2699	C
27	BA	2701	C
27	BA	2702	U
27	BA	2703	C
27	BA	2704	C
27	BA	2705	A
27	BA	2707	G
27	BA	2708	G
27	BA	2709	G
27	BA	2710	C
27	BA	2712	U
27	BA	712(A)	A
27	BA	2713	A
27	BA	2714	G
27	BA	2717	G
27	BA	2718	G
27	BA	2719	G
27	BA	2720	U
27	BA	2721	A
27	BA	2723	C
27	BA	2725	A

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Mol	Chain	Res	Type
27	BA	2726	U
27	BA	2727	G
27	BA	2729	G
27	BA	2732	G
27	BA	2733	A
27	BA	2738	A
27	BA	2740	A
27	BA	2741	A
27	BA	2742	C
27	BA	2743	C
27	BA	2744	G
27	BA	2746	U
27	BA	2747	G
27	BA	2748	A
27	BA	2750	A
27	BA	2751	G
27	BA	2752	C
27	BA	2755	C
27	BA	2756	U
27	BA	2757	A
27	BA	2758	A
27	BA	2759	G
27	BA	2760	C
27	BA	2762	G
27	BA	2763	G
27	BA	2764	A
27	BA	2765	A
27	BA	2766	G
27	BA	2768	C
27	BA	2769	C
27	BA	2770	G
27	BA	2771	C
27	BA	2772	C
27	BA	2773	C
27	BA	2774	C
27	BA	2775	A
27	BA	2776	A
27	BA	2777	G
27	BA	2778	A
27	BA	2779	U
27	BA	2780	G
27	BA	2781	A

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Mol	Chain	Res	Type
27	BA	2782	G
27	BA	2783	G
27	BA	2784	C
27	BA	2786	U
27	BA	2787	C
27	BA	2788	C
27	BA	2789	C
27	BA	2790	A
27	BA	2791	C
27	BA	2793	G
27	BA	2794	C
27	BA	2795	G
27	BA	2798	C
27	BA	2799	A
27	BA	2802	G
27	BA	2803	C
27	BA	2804	C
27	BA	2805	G
27	BA	2809	A
27	BA	2810	A
27	BA	2811	G
27	BA	2812	G
27	BA	2815	C
27	BA	2816	C
27	BA	2817	G
27	BA	2818	G
27	BA	2819	G
27	BA	2820	A
27	BA	2821	A
27	BA	2822	G
27	BA	2826	A
27	BA	2827	C
27	BA	2829	C
27	BA	2832	U
27	BA	2833	G
27	BA	2834	G
27	BA	2835	A
27	BA	2836	U
27	BA	2839	G
27	BA	2843	G
27	BA	2844	G
27	BA	2845	G

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Mol	Chain	Res	Type
27	BA	2846	G
27	BA	2847	U
27	BA	2848	G
27	BA	2849	U
27	BA	2850	A
27	BA	2853	C
27	BA	2854	G
27	BA	2858	C
27	BA	2860	A
27	BA	2861	G
27	BA	2862	G
27	BA	2863	C
27	BA	2866	U
27	BA	2867	G
27	BA	2868	A
27	BA	2869	G
27	BA	2871	C
27	BA	2872	G
27	BA	2874	C
27	BA	2877	G
27	BA	2879	C
27	BA	2880	C
27	BA	2881	C
27	BA	2882	A
27	BA	2883	A
27	BA	2884	U
27	BA	2889	C
27	BA	2891	G
27	BA	2892	A
27	BA	2893	G
27	BA	2894	G
27	BA	2895	U
27	BA	2899	G
27	BA	2902	C

All (537) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	7	G
1	AA	8	A
1	AA	9	G

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Mol	Chain	Res	Type
1	AA	13	U
1	AA	25	C
1	AA	30	U
1	AA	38	G
1	AA	47	C
1	AA	48	C
1	AA	49	U
1	AA	50	A
1	AA	51	A
1	AA	119	A
1	AA	121	C
1	AA	129(A)	G
1	AA	181	G
1	AA	190(F)	G
1	AA	195	A
1	AA	196	A
1	AA	197	A
1	AA	202	U
1	AA	203	U
1	AA	231	G
1	AA	243	A
1	AA	244	U
1	AA	246	A
1	AA	250	A
1	AA	251	G
1	AA	262	A
1	AA	265	G
1	AA	266	G
1	AA	274	A
1	AA	279	A
1	AA	280	C
1	AA	286	G
1	AA	305	G
1	AA	327	A
1	AA	328	C
1	AA	329	A
1	AA	344	A
1	AA	345	C
1	AA	366	C
1	AA	367	U
1	AA	372	C
1	AA	388	G

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Mol	Chain	Res	Type
1	AA	402	G
1	AA	421	U
1	AA	422	C
1	AA	428	G
1	AA	429	U
1	AA	481	G
1	AA	484	G
1	AA	496	A
1	AA	497	A
1	AA	499	A
1	AA	508	C
1	AA	509	A
1	AA	511	C
1	AA	517	G
1	AA	518	C
1	AA	531	U
1	AA	533	A
1	AA	535	A
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	563	A
1	AA	566	G
1	AA	575	G
1	AA	595	G
1	AA	641	U
1	AA	652	U
1	AA	687	A
1	AA	701	C
1	AA	702	A
1	AA	703	G
1	AA	718	G
1	AA	721	G
1	AA	727	G
1	AA	748	C
1	AA	753	A
1	AA	759	A
1	AA	774	G
1	AA	792	A
1	AA	793	U
1	AA	812	C

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Mol	Chain	Res	Type
1	AA	815	A
1	AA	817	C
1	AA	818	G
1	AA	819	A
1	AA	851	G
1	AA	871	U
1	AA	872	A
1	AA	873	A
1	AA	883	C
1	AA	889	A
1	AA	903	G
1	AA	913	A
1	AA	914	A
1	AA	960	U
1	AA	965	A
1	AA	968	A
1	AA	974	A
1	AA	975	A
1	AA	982	U
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1030	C
1	AA	1049	U
1	AA	1053	G
1	AA	1065	U
1	AA	1067	A
1	AA	1085	U
1	AA	1100	C
1	AA	1101	A
1	AA	1108	G
1	AA	1124	G
1	AA	1125	U
1	AA	1145	C
1	AA	1151	A
1	AA	1157	A
1	AA	1159	U
1	AA	1182	G
1	AA	1190	G
1	AA	1196	U
1	AA	1201	A
1	AA	1211	U

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Mol	Chain	Res	Type
1	AA	1214	C
1	AA	1225	A
1	AA	1226	C
1	AA	1240	U
1	AA	1256	A
1	AA	1257	U
1	AA	1279	A
1	AA	1280	A
1	AA	1281	U
1	AA	1285	A
1	AA	1297	C
1	AA	1298	C
1	AA	1302	U
1	AA	1305	G
1	AA	1322	C
1	AA	1336	C
1	AA	1345	U
1	AA	1346	A
1	AA	1347	G
1	AA	1361	G
1	AA	1363	A
1	AA	1380	U
1	AA	1394	A
1	AA	1399	C
1	AA	1400	C
1	AA	1446	A
1	AA	1467	G
1	AA	1490	C
1	AA	1498	U
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1529	G
1	AA	1532	U
2	AV	7	U
2	AV	19	G
2	AV	45	G
2	AV	65	G
3	AW	16	U
3	AW	18	G

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Mol	Chain	Res	Type
3	AW	25	C
3	AW	35	A
26	BB	14	U
26	BB	56	G
26	BB	119	A
27	BA	13	A
27	BA	16	G
27	BA	36	G
27	BA	51	G
27	BA	60	G
27	BA	71	A
27	BA	74	A
27	BA	83	G
27	BA	90	U
27	BA	102	G
27	BA	107	C
27	BA	119	A
27	BA	128	C
27	BA	137	C
27	BA	139	G
27	BA	162	U
27	BA	181	A
27	BA	197	A
27	BA	204	A
27	BA	215	G
27	BA	221	A
27	BA	232	G
27	BA	241	A
27	BA	247	G
27	BA	249	C
27	BA	265	A
27	BA	270(B)	A
27	BA	270(L)	U
27	BA	270(M)	U
27	BA	270(Y)	G
27	BA	271(B)	G
27	BA	280	C
27	BA	289	A
27	BA	296	C
27	BA	312	G
27	BA	320	A
27	BA	323	G

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Mol	Chain	Res	Type
27	BA	331	A
27	BA	332	A
27	BA	333	G
27	BA	338	G
27	BA	370	G
27	BA	371	A
27	BA	386	G
27	BA	387	U
27	BA	390	A
27	BA	404	C
27	BA	434	U
27	BA	446	G
27	BA	448	U
27	BA	455	C
27	BA	463	G
27	BA	474	G
27	BA	478	A
27	BA	479	A
27	BA	482	A
27	BA	508	G
27	BA	526	A
27	BA	529	A
27	BA	530	G
27	BA	532	A
27	BA	548	A
27	BA	559	G
27	BA	566	U
27	BA	574	C
27	BA	579	G
27	BA	587	C
27	BA	615	G
27	BA	616	A
27	BA	620	G
27	BA	646	A
27	BA	654	A
27	BA	669	G
27	BA	670	A
27	BA	685	A
27	BA	686	G
27	BA	687	C
27	BA	704	G
27	BA	728	G

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Mol	Chain	Res	Type
27	BA	729	G
27	BA	746	A
27	BA	750	A
27	BA	751	A
27	BA	752	A
27	BA	762	U
27	BA	764	A
27	BA	776	G
27	BA	782	A
27	BA	787	U
27	BA	788	A
27	BA	789	A
27	BA	790	C
27	BA	792	G
27	BA	793	A
27	BA	800	A
27	BA	801	G
27	BA	805	G
27	BA	811	U
27	BA	817	C
27	BA	827	U
27	BA	829	A
27	BA	830	G
27	BA	837	C
27	BA	845	G
27	BA	846	C
27	BA	886	C
27	BA	930	U
27	BA	940	G
27	BA	944	G
27	BA	945	A
27	BA	957	A
27	BA	973	A
27	BA	974	G
27	BA	974(A)	C
27	BA	982	C
27	BA	989	G
27	BA	994	C
27	BA	1011	G
27	BA	1022	G
27	BA	1025	G
27	BA	1033	U

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Mol	Chain	Res	Type
27	BA	1045	A
27	BA	1061	U
27	BA	1069	A
27	BA	1085	A
27	BA	1100	C
27	BA	1102	C
27	BA	1110	G
27	BA	1126	A
27	BA	1128	A
27	BA	1130	U
27	BA	1131	G
27	BA	1140	C
27	BA	1141	U
27	BA	1154	G
27	BA	1163	G
27	BA	1169	G
27	BA	1173	G
27	BA	1179	C
27	BA	1180	C
27	BA	1181	C
27	BA	1183	G
27	BA	1190	G
27	BA	1202	C
27	BA	1206	G
27	BA	1210	A
27	BA	1220	A
27	BA	1248	G
27	BA	1250	G
27	BA	1252	G
27	BA	1253	A
27	BA	1254	A
27	BA	1255	U
27	BA	1265	A
27	BA	1287	A
27	BA	1288	U
27	BA	1300	U
27	BA	1302	A
27	BA	1311	G
27	BA	1312	U
27	BA	1320	C
27	BA	1324	G
27	BA	1325	G

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Mol	Chain	Res	Type
27	BA	1329	U
27	BA	1341	U
27	BA	1342	A
27	BA	1364	G
27	BA	1378	A
27	BA	1420	U
27	BA	1427	A
27	BA	1428	C
27	BA	1437	C
27	BA	1444	G
27	BA	1454	U
27	BA	1460	A
27	BA	1476	C
27	BA	1489	U
27	BA	1490	A
27	BA	1496	A
27	BA	1498	C
27	BA	1507	A
27	BA	1521	G
27	BA	1535	U
27	BA	1544	C
27	BA	1545	A
27	BA	1552	G
27	BA	1554	A
27	BA	1557	C
27	BA	1567	A
27	BA	1568	G
27	BA	1571	A
27	BA	1585	C
27	BA	1602	U
27	BA	1608	A
27	BA	1609	A
27	BA	1610	A
27	BA	1614	A
27	BA	1616	A
27	BA	1618	A
27	BA	1634	A
27	BA	1647	G
27	BA	1653	G
27	BA	1667	G
27	BA	1668	A
27	BA	1681	G

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Mol	Chain	Res	Type
27	BA	1693	U
27	BA	1699	G
27	BA	1702	G
27	BA	1742	C
27	BA	1758	G
27	BA	1763	G
27	BA	1772	G
27	BA	1784	A
27	BA	1800	C
27	BA	1809	A
27	BA	1815	A
27	BA	1816	G
27	BA	1819	A
27	BA	1820	U
27	BA	1828	G
27	BA	1838	C
27	BA	1848	A
27	BA	1905	C
27	BA	1914	C
27	BA	1915	U
27	BA	1924	C
27	BA	1929	G
27	BA	1930	G
27	BA	1936	A
27	BA	1938	A
27	BA	1939	U
27	BA	1943	U
27	BA	1954	G
27	BA	1964	G
27	BA	1966	A
27	BA	1968	G
27	BA	1970	A
27	BA	1980	G
27	BA	1992	G
27	BA	2019	A
27	BA	2022	U
27	BA	2030	A
27	BA	2032	G
27	BA	2033	A
27	BA	2042	A
27	BA	2047	U
27	BA	2049	G

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Mol	Chain	Res	Type
27	BA	2059	A
27	BA	2062	A
27	BA	2064	C
27	BA	2067	G
27	BA	2076	U
27	BA	2195	C
27	BA	2199	A
27	BA	2210	G
27	BA	2219	G
27	BA	2225	A
27	BA	2237	G
27	BA	2238	G
27	BA	2241	A
27	BA	2244	U
27	BA	2249	U
27	BA	2253	G
27	BA	2265	U
27	BA	2266	A
27	BA	2267	A
27	BA	2268	A
27	BA	2274	A
27	BA	2282	G
27	BA	2287	A
27	BA	2288	A
27	BA	2311	A
27	BA	2318	G
27	BA	2320	A
27	BA	2334	G
27	BA	2344	U
27	BA	2345	G
27	BA	2359	C
27	BA	2386	C
27	BA	2391	G
27	BA	2393	A
27	BA	2398	U
27	BA	2401	U
27	BA	2411	A
27	BA	2423	U
27	BA	2425	A
27	BA	2426	A
27	BA	2432	A
27	BA	2434	A

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Mol	Chain	Res	Type
27	BA	2436	G
27	BA	2439	A
27	BA	2447	G
27	BA	2449	U
27	BA	2451	A
27	BA	2469	A
27	BA	2472	G
27	BA	2481	G
27	BA	2484	G
27	BA	2492	U
27	BA	2493	U
27	BA	2497	A
27	BA	2498	C
27	BA	2502	G
27	BA	2503	A
27	BA	2517	C
27	BA	2519	U
27	BA	2532	G
27	BA	2545	G
27	BA	2555	U
27	BA	2565	A
27	BA	2576	G
27	BA	2578	G
27	BA	2581	G
27	BA	2582	G
27	BA	2587	A
27	BA	2589	A
27	BA	2598	A
27	BA	2606	C
27	BA	2609	U
27	BA	2610	C
27	BA	2612	C
27	BA	2613	U
27	BA	2620	C
27	BA	2627	G
27	BA	2654	A
27	BA	2665	A
27	BA	2681	C
27	BA	2688	U
27	BA	2689	U
27	BA	2690	C
27	BA	2703	C

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Mol	Chain	Res	Type
27	BA	2707	G
27	BA	2712	U
27	BA	2717	G
27	BA	2720	U
27	BA	2722	G
27	BA	2726	U
27	BA	2740	A
27	BA	2741	A
27	BA	2756	U
27	BA	2757	A
27	BA	2763	G
27	BA	2774	C
27	BA	2777	G
27	BA	2781	A
27	BA	2783	G
27	BA	2790	A
27	BA	2809	A
27	BA	2819	G
27	BA	2820	A
27	BA	2835	A
27	BA	2849	U
27	BA	2858	C
27	BA	2862	G
27	BA	2866	U
27	BA	2867	G
27	BA	2879	C
27	BA	2881	C
27	BA	2882	A
27	BA	2891	G

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

3 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	YYG	AW	37	10,3	27,42,43	1.04	2 (7%)	29,62,65	2.22	8 (27%)
3	PSU	AW	39	3	13,21,22	1.34	2 (15%)	18,30,33	6.15	4 (22%)
3	PSU	AW	55	3	13,21,22	1.52	2 (15%)	18,30,33	6.01	6 (33%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	YYG	AW	37	10,3	1/1/8/9	0/20/42/43	0/4/4/4
3	PSU	AW	39	3	-	0/7/25/26	0/2/2/2
3	PSU	AW	55	3	-	0/7/25/26	0/2/2/2

All (6) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	AW	39	PSU	C6-C5	-3.35	1.33	1.38
3	AW	55	PSU	C6-C5	-2.83	1.34	1.38
3	AW	37	YYG	C2-N2	2.01	1.38	1.35
3	AW	37	YYG	C6-N1	2.90	1.43	1.37
3	AW	39	PSU	C4-N3	3.01	1.38	1.33
3	AW	55	PSU	C4-N3	4.03	1.40	1.33

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AW	39	PSU	N1-C2-N3	-22.02	114.28	128.33
3	AW	55	PSU	N1-C2-N3	-21.73	114.47	128.33
3	AW	37	YYG	C13-C12-C11	-4.16	123.50	130.59
3	AW	37	YYG	O23-C21-O22	-3.83	119.71	124.70
3	AW	55	PSU	C4-C5-C1'	-2.41	116.83	121.23
3	AW	55	PSU	O2'-C2'-C1'	-2.10	107.21	111.83
3	AW	55	PSU	O4'-C1'-C2'	2.16	106.93	104.73
3	AW	37	YYG	O18-C16-C15	2.33	117.56	111.52
3	AW	37	YYG	C19-O18-C16	2.76	122.46	115.99
3	AW	37	YYG	C3-N3-C2	2.84	122.64	118.39
3	AW	39	PSU	O4'-C1'-C2'	2.86	107.64	104.73
3	AW	37	YYG	O23-C21-N20	4.17	118.47	110.64
3	AW	37	YYG	C3-N3-C4	4.77	125.54	118.39
3	AW	55	PSU	C6-N1-C2	5.07	123.63	115.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	AW	39	PSU	C6-N1-C2	5.18	123.81	115.47
3	AW	37	YYG	C24-O23-C21	6.06	123.12	115.63
3	AW	55	PSU	C4-N3-C2	11.36	125.07	115.25
3	AW	39	PSU	C4-N3-C2	12.30	125.88	115.25

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
3	AW	37	YYG	C15

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 42 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	AW	37	YYG	37	0
3	AW	39	PSU	5	0

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
27	BA	53
1	AA	40
3	AW	6

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Mol	Chain	Number of breaks
56	BK	5
2	AV	4
37	BQ	3
46	BV	2
45	BU	1
20	AQ	1
14	AK	1
8	AE	1
5	AB	1
6	AC	1
28	BD	1
36	BP	1
7	AD	1
26	BB	1
32	BH	1
16	AM	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BK	70:ILE	C	71:LYS	N	5.81
1	BK	73:PRO	C	74:PRO	N	5.30
1	BK	72:THR	C	73:PRO	N	5.11
1	AA	30(D):A	O3'	1031:G	P	4.82
1	BA	142(A):A	O3'	1143:A	P	4.82
1	AW	73:A	O3'	74:C	P	4.68
1	BK	71:LYS	C	72:THR	N	4.63
1	BA	1171:G	O3'	1173:G	P	4.41
1	AA	440:A	O3'	442:C	P	4.35
1	AA	1169:A	O3'	1171:G	P	4.14
1	BA	366:C	O3'	370:G	P	4.08
1	AA	70:G	O3'	73:C	P	3.98
1	AA	204:U	O3'	216:G	P	3.82
1	BA	449(A):G	O3'	1450:C	P	3.74
1	AA	93:G	O3'	95:U	P	3.70
1	BK	84:GLY	C	85:ILE	N	3.63
1	BA	890:A	O3'	892:G	P	3.61
1	BA	537:C	O3'	539:G	P	3.59
1	AW	63:C	O3'	64:A	P	3.53
1	BA	489:G	O3'	491:G	P	3.49
1	BA	1743:G	O3'	1746:G	P	3.48
1	BA	1712:C	O3'	1716:U	P	3.46
1	BA	926:A	O3'	928:G	P	3.40

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BA	99:U	O3'	101:G	P	3.39
1	BA	164:U	O3'	171:G	P	3.39
1	AA	84:U	O3'	88:A	P	3.37
1	BA	1718:G	O3'	1725:G	P	3.36
1	BA	1451:C	O3'	1453:A	P	3.31
1	BA	444(A):A	O3'	1445:C	P	3.30
1	BA	436:C	O3'	438:G	P	3.29
1	BQ	36:ASN	C	41:THR	N	3.29
1	AA	841:U	O3'	848:C	P	3.27
1	AA	3(A):G	O3'	1004:A	P	3.26
1	BA	41:C	O3'	43:G	P	3.26
1	BA	2795:G	O3'	2797:U	P	3.26
1	AA	1443:G	O3'	1446:A	P	3.25
1	AA	492:G	O3'	494:G	P	3.24
1	AW	5:A	O3'	6:U	P	3.24
1	BA	1735:C	O3'	1741:C	P	3.22
1	BA	630(A):C	O3'	1631:A	P	3.21
1	BA	2799:A	O3'	2801:A	P	3.18
1	BA	1872:A	O3'	1878:G	P	3.15
1	AA	99:C	O3'	101:A	P	3.11
1	BQ	12:PRO	C	15:THR	N	3.09
1	BA	155:C	O3'	161:U	P	3.05
1	BA	554:U	O3'	556:G	P	3.05
1	AA	463:A	O3'	474:G	P	3.01
1	BA	1480:G	O3'	1482:U	P	3.00
1	BA	1583:A	O3'	1585:C	P	2.99
1	BA	545(A):A	O3'	1546:C	P	2.98
1	BD	216:ALA	C	222:PRO	N	2.97
1	AW	45:G	O3'	46:G	P	2.94
1	AV	73:A	O3'	74:C	P	2.93
1	BA	1864:U	O3'	1869:G	P	2.92
1	AA	1455:G	O3'	1459:C	P	2.83
1	BA	2805:G	O3'	2807:G	P	2.80
1	AA	219:C	O3'	220:G	P	2.70
1	BA	2213:U	O3'	2215:G	P	2.62
1	AA	1156:G	O3'	1157:A	P	2.53
1	AW	7:U	O3'	8:U	P	2.51
1	AA	1037:C	O3'	1038:C	P	2.49
1	AA	361(A):C	O3'	1362:C	P	2.47
1	AA	991:U	O3'	992:U	P	2.42
1	AA	651:C	O3'	652:U	P	2.41
1	BQ	76:GLY	C	82:LYS	N	2.39

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AA	1224:G	O3'	1225:A	P	2.33
1	AA	46:G	O3'	47:C	P	2.32
1	AA	1024:G	O3'	1025:U	P	2.31
1	BV	66:GLY	C	67:LYS	N	2.26
1	AA	1237:C	O3'	1238:A	P	2.25
1	AA	60:A	O3'	61:G	P	2.20
1	AA	983:A	O3'	984:C	P	2.15
1	AE	144:THR	C	145:LYS	N	2.14
1	BA	1030:G	O3'	1031:G	P	2.13
1	AA	115:G	O3'	116:A	P	2.12
1	AA	196:A	O3'	197:A	P	2.11
1	BA	2894:G	O3'	2895:U	P	2.09
1	AA	733:A	O3'	734:G	P	2.08
1	AA	405:U	O3'	406:G	P	2.07
1	AA	587:G	O3'	588:G	P	2.04
1	AA	937:A	O3'	938:A	P	2.04
1	BA	1050:A	O3'	1051:G	P	2.04
1	BA	1142:U	O3'	142(A):A	P	2.04
1	BA	1404:C	O3'	1405:U	P	2.04
1	BA	864:G	O3'	865:C	P	2.02
1	BA	2788:C	O3'	2789:C	P	2.02
1	AA	576:G	O3'	577:G	P	2.01
1	AA	703:G	O3'	704:A	P	1.99
1	AA	1361:G	O3'	361(A):C	P	1.99
1	AV	7:U	O3'	8:U	P	1.98
1	BA	837:C	O3'	838:C	P	1.96
1	BA	1444:G	O3'	444(A):A	P	1.94
1	AM	94:ARG	C	95:GLY	N	1.93
1	BA	655:A	O3'	656:G	P	1.93
1	BA	686:G	O3'	687:C	P	1.92
1	AA	1030:C	O3'	30(A):G	P	1.91
1	AA	1101:A	O3'	1102:A	P	1.91
1	AB	112:VAL	C	113:HIS	N	1.85
1	BP	61:ALA	C	62:ALA	N	1.81
1	BV	91:THR	C	92:ALA	N	1.79
1	BB	11:C	O3'	12:C	P	1.25
1	AA	239:U	O3'	240:C	P	1.23
1	BA	1905:C	O3'	1906:G	P	1.20
1	AW	21:A	O3'	22:G	P	1.19
1	BA	110:G	O3'	111:A	P	1.19
1	AA	1182:G	O3'	1183:A	P	1.17
1	BA	1163:G	O3'	1164:G	P	1.16

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	BA	2712:U	O3'	712(A):A	P	1.16
1	BA	1103:A	O3'	1104:C	P	1.15
1	BA	1546:C	O3'	1547:C	P	1.13
1	BA	1055:G	O3'	1056:G	P	1.12
1	BA	2889:C	O3'	2891:G	P	1.08
1	BA	1924:C	O3'	1925:C	P	1.06
1	BA	2454:G	O3'	2455:G	P	1.06
1	AD	98:GLU	C	99:SER	N	1.00
1	BH	80:LYS	C	81:GLY	N	1.00
1	AC	106:VAL	C	107:GLN	N	0.98
1	AA	1211:U	O3'	1212:U	P	0.97
1	BU	50:ARG	C	51:ARG	N	0.91
1	BA	2196:C	O3'	2197:U	P	0.90
1	AK	112:THR	C	113:PRO	N	0.89
1	AV	65:G	O3'	66:A	P	0.85
1	AV	45:G	O3'	46:G	P	0.77
1	BA	2199:A	O3'	2205:C	P	0.75
1	AQ	22:LEU	C	23:VAL	N	0.64

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	1515/1522 (99%)	0.64	139 (9%) 11 15	236, 236, 236, 236	0
2	AV	76/76 (100%)	0.47	5 (6%) 22 23	236, 236, 236, 236	0
3	AW	73/76 (96%)	1.14	14 (19%) 2 6	236, 236, 236, 236	0
4	AX	17/18 (94%)	4.29	12 (70%) 0 2	236, 236, 236, 236	0
5	AB	234/256 (91%)	-0.02	5 (2%) 67 62	236, 236, 236, 236	0
6	AC	206/239 (86%)	0.02	8 (3%) 43 40	236, 236, 236, 236	0
7	AD	208/209 (99%)	0.32	21 (10%) 9 13	236, 236, 236, 236	0
8	AE	150/162 (92%)	0.21	12 (8%) 15 18	236, 236, 236, 236	0
9	AF	101/101 (100%)	0.09	7 (6%) 20 22	236, 236, 236, 236	0
10	AG	155/156 (99%)	0.19	11 (7%) 19 21	236, 236, 236, 236	0
11	AH	138/138 (100%)	-0.16	4 (2%) 55 50	236, 236, 236, 236	0
12	AI	127/128 (99%)	0.33	15 (11%) 6 11	236, 236, 236, 236	0
13	AJ	98/105 (93%)	0.98	18 (18%) 2 7	236, 236, 236, 236	0
14	AK	119/129 (92%)	-0.06	3 (2%) 61 56	236, 236, 236, 236	0
15	AL	124/135 (91%)	0.16	8 (6%) 22 23	236, 236, 236, 236	0
16	AM	125/126 (99%)	0.70	22 (17%) 2 7	236, 236, 236, 236	0
17	AN	60/61 (98%)	0.38	6 (10%) 9 13	236, 236, 236, 236	0
18	AO	88/89 (98%)	0.20	1 (1%) 82 78	236, 236, 236, 236	0
19	AP	83/88 (94%)	0.93	17 (20%) 1 6	236, 236, 236, 236	0
20	AQ	104/105 (99%)	-0.01	2 (1%) 70 65	236, 236, 236, 236	0
21	AR	73/88 (82%)	0.14	4 (5%) 29 29	236, 236, 236, 236	0
22	AS	80/93 (86%)	0.91	16 (20%) 1 6	236, 236, 236, 236	0
23	AT	99/106 (93%)	-0.02	5 (5%) 32 31	236, 236, 236, 236	0
24	AU	24/27 (88%)	1.13	6 (25%) 1 5	236, 236, 236, 236	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
25	AY	333/354 (94%)	1.48	101 (30%) 1 5	236, 236, 236, 236	0
26	BB	123/123 (100%)	0.33	0 100 100	236, 236, 236, 236	0
27	BA	2814/2916 (96%)	0.47	171 (6%) 25 25	236, 236, 236, 236	0
28	BD	173/173 (100%)	-0.28	3 (1%) 73 67	236, 236, 236, 236	0
29	BE	191/338 (56%)	0.22	11 (5%) 26 27	236, 236, 236, 236	0
30	BF	189/246 (76%)	-0.11	4 (2%) 67 62	236, 236, 236, 236	0
31	BG	122/176 (69%)	0.53	10 (8%) 14 17	236, 236, 236, 236	0
32	BH	164/177 (92%)	-0.01	9 (5%) 29 29	236, 236, 236, 236	0
33	BI	148/149 (99%)	0.10	4 (2%) 58 53	236, 236, 236, 236	0
34	BN	117/145 (80%)	-0.24	2 (1%) 73 67	236, 236, 236, 236	0
35	BO	122/122 (100%)	-0.05	2 (1%) 74 68	236, 236, 236, 236	0
36	BP	84/164 (51%)	0.16	2 (2%) 62 57	236, 236, 236, 236	0
37	BQ	138/138 (100%)	0.25	10 (7%) 18 21	236, 236, 236, 236	0
38	BS	113/186 (60%)	-0.05	3 (2%) 58 53	236, 236, 236, 236	0
39	BT	52/66 (78%)	0.33	0 100 100	236, 236, 236, 236	0
40	BW	108/113 (95%)	-0.10	1 (0%) 85 81	236, 236, 236, 236	0
41	BX	76/84 (90%)	-0.09	1 (1%) 79 73	236, 236, 236, 236	0
42	BY	110/119 (92%)	0.58	13 (11%) 6 11	236, 236, 236, 236	0
43	BZ	177/253 (69%)	0.16	12 (6%) 20 22	236, 236, 236, 236	0
44	BR	105/118 (88%)	-0.28	1 (0%) 84 79	236, 236, 236, 236	0
45	BU	117/118 (99%)	-0.31	4 (3%) 49 45	236, 236, 236, 236	0
46	BV	100/100 (100%)	-0.15	1 (1%) 84 79	236, 236, 236, 236	0
47	B2	64/70 (91%)	-0.62	0 100 100	236, 236, 236, 236	0
48	B3	60/60 (100%)	-0.35	1 (1%) 73 67	236, 236, 236, 236	0
49	B0	86/91 (94%)	0.14	5 (5%) 26 27	236, 236, 236, 236	0
50	B4	73/73 (100%)	0.01	2 (2%) 58 53	236, 236, 236, 236	0
51	B5	58/60 (96%)	0.14	5 (8%) 13 17	236, 236, 236, 236	0
52	B6	53/82 (64%)	-0.27	2 (3%) 44 41	236, 236, 236, 236	0
53	B7	46/47 (97%)	0.02	2 (4%) 39 36	236, 236, 236, 236	0
54	B8	63/64 (98%)	-0.25	0 100 100	236, 236, 236, 236	0
55	B9	35/36 (97%)	0.95	6 (17%) 2 7	236, 236, 236, 236	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
56	BK	133/141 (94%)	1.31	30 (22%) 1 5	236, 236, 236, 236	0
All	All	10424/11335 (91%)	0.36	779 (7%) 17 20	236, 236, 236, 236	0

All (779) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	AY	260	LYS	13.1
4	AX	123	A	12.7
56	BK	52	MET	10.5
27	BA	1532	C	9.5
4	AX	122	U	9.4
25	AY	287	LYS	8.9
25	AY	261	ASN	8.6
56	BK	14	PRO	8.2
25	AY	123	PHE	8.1
27	BA	1531	C	7.9
25	AY	154	GLY	7.8
56	BK	54	LEU	7.8
17	AN	5	ALA	7.8
25	AY	165	PRO	7.6
25	AY	52	ARG	7.6
56	BK	51	GLY	7.5
25	AY	46	GLY	7.4
25	AY	192	ILE	7.3
25	AY	166	GLY	7.2
1	AA	324	G	7.2
56	BK	13	LEU	7.1
56	BK	140	VAL	7.1
12	AI	15	ALA	7.0
6	AC	159	GLY	6.9
25	AY	259	ILE	6.9
27	BA	2798	C	6.8
25	AY	246	THR	6.8
49	B0	6	GLY	6.8
25	AY	321	THR	6.6
4	AX	130	U	6.6
56	BK	53	ILE	6.6
25	AY	316	ARG	6.5
27	BA	546	C	6.4
7	AD	133	VAL	6.4
13	AJ	72	VAL	6.3
25	AY	304	THR	6.1

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Mol	Chain	Res	Type	RSRZ
25	AY	301	LYS	6.1
25	AY	27	ASP	6.1
55	B9	34	GLN	6.1
29	BE	111	THR	6.0
4	AX	126	A	6.0
25	AY	264	LYS	6.0
25	AY	312	VAL	6.0
45	BU	6	THR	5.9
16	AM	123	ALA	5.8
27	BA	653	A	5.7
4	AX	127	U	5.7
32	BH	43	THR	5.6
25	AY	122	LEU	5.6
25	AY	186	THR	5.5
27	BA	1533	C	5.3
32	BH	44	VAL	5.3
16	AM	121	LYS	5.3
25	AY	127	LEU	5.3
56	BK	86	GLU	5.2
42	BY	5	ASP	5.2
1	AA	588	G	5.2
16	AM	16	ASP	5.2
10	AG	82	GLY	5.2
4	AX	121	G	5.1
25	AY	77	GLU	5.1
13	AJ	71	LEU	5.1
25	AY	129	ASN	5.1
56	BK	139	VAL	5.1
27	BA	1585	C	5.0
19	AP	70	ALA	5.0
3	AW	34	G	5.0
55	B9	25	VAL	5.0
27	BA	545	G	5.0
37	BQ	115	SER	5.0
1	AA	1260	C	5.0
25	AY	53	LYS	4.9
13	AJ	39	PRO	4.9
16	AM	122	LYS	4.9
25	AY	57	ASP	4.9
25	AY	258	GLN	4.9
34	BN	72	PRO	4.9
15	AL	71	PRO	4.9

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Mol	Chain	Res	Type	RSRZ
13	AJ	73	ASP	4.9
13	AJ	35	SER	4.9
56	BK	71	LYS	4.9
37	BQ	29	ALA	4.9
56	BK	138	GLU	4.8
25	AY	152	LEU	4.8
25	AY	229	GLY	4.8
25	AY	121	ALA	4.8
7	AD	200	GLU	4.8
22	AS	41	VAL	4.7
31	BG	45	THR	4.7
16	AM	120	LYS	4.7
33	BI	128	ASN	4.7
23	AT	70	SER	4.7
25	AY	45	ILE	4.6
31	BG	152	PRO	4.6
25	AY	265	ALA	4.6
45	BU	4	ALA	4.5
9	AF	7	ASN	4.5
1	AA	587	G	4.5
4	AX	128	A	4.5
27	BA	141	A	4.5
19	AP	79	VAL	4.4
31	BG	153	THR	4.4
22	AS	40	ILE	4.4
4	AX	124	C	4.4
7	AD	136	PRO	4.4
1	AA	589	C	4.4
35	BO	24	VAL	4.4
1	AA	1542	U	4.4
29	BE	319	ASP	4.4
22	AS	33	THR	4.3
22	AS	39	THR	4.3
22	AS	43	GLU	4.3
25	AY	313	THR	4.3
1	AA	1069	C	4.2
16	AM	5	ALA	4.2
25	AY	314	ASP	4.2
25	AY	331	HIS	4.1
12	AI	65	VAL	4.1
13	AJ	36	GLY	4.1
1	AA	974	A	4.1

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Mol	Chain	Res	Type	RSRZ
10	AG	83	ALA	4.1
1	AA	1106	G	4.1
25	AY	126	ASP	4.1
1	AA	89	C	4.1
27	BA	2035	G	4.1
15	AL	128	ALA	4.1
1	AA	88	A	4.1
13	AJ	85	LEU	4.0
3	AW	17	U	4.0
31	BG	154	LYS	4.0
4	AX	115	G	4.0
43	BZ	109	GLN	4.0
25	AY	311	ARG	4.0
42	BY	104	GLU	4.0
25	AY	187	GLU	4.0
1	AA	326	G	4.0
45	BU	7	GLY	4.0
7	AD	135	LEU	4.0
27	BA	2104	G	4.0
10	AG	81	GLY	4.0
27	BA	654	A	4.0
25	AY	153	GLY	3.9
56	BK	73	PRO	3.9
16	AM	15	VAL	3.9
16	AM	119	GLY	3.9
56	BK	89	SER	3.9
1	AA	1034	G	3.9
56	BK	95	LYS	3.9
25	AY	135	ALA	3.9
22	AS	38	SER	3.9
31	BG	138	GLY	3.8
25	AY	119	GLU	3.8
16	AM	43	THR	3.8
1	AA	1296	C	3.8
27	BA	2103	C	3.8
1	AA	994	A	3.8
12	AI	126	SER	3.8
56	BK	20	PRO	3.8
3	AW	38	A	3.8
25	AY	20	SER	3.8
22	AS	44	MET	3.7
3	AW	47	U	3.7

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Mol	Chain	Res	Type	RSRZ
25	AY	111	ILE	3.7
1	AA	1033	G	3.7
25	AY	330	GLY	3.7
25	AY	303	ARG	3.7
10	AG	80	VAL	3.7
1	AA	1319	A	3.7
1	AA	1068	G	3.7
1	AA	1361	G	3.7
24	AU	23	PRO	3.7
15	AL	68	ALA	3.7
1	AA	1026	G	3.7
19	AP	69	THR	3.7
51	B5	7	PRO	3.7
25	AY	302	ILE	3.7
13	AJ	6	ILE	3.6
10	AG	84	ASN	3.6
27	BA	1541	U	3.6
1	AA	1302	U	3.6
19	AP	66	PRO	3.6
33	BI	91	GLY	3.6
7	AD	102	ASP	3.6
25	AY	134	PHE	3.6
25	AY	185	VAL	3.6
15	AL	70	ILE	3.5
32	BH	107	GLY	3.5
49	B0	3	HIS	3.5
55	B9	24	LEU	3.5
13	AJ	34	VAL	3.5
3	AW	20	G	3.5
1	AA	973	G	3.5
25	AY	131	TYR	3.5
25	AY	143	GLU	3.5
27	BA	271(B)	G	3.5
19	AP	67	THR	3.4
25	AY	21	ASP	3.4
1	AA	195	A	3.4
42	BY	26	THR	3.4
3	AW	35	A	3.4
12	AI	46	ALA	3.4
25	AY	183	VAL	3.4
42	BY	9	LYS	3.4
48	B3	26	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
10	AG	85	TYR	3.4
56	BK	85	ILE	3.4
7	AD	109	GLY	3.4
1	AA	1125	U	3.4
15	AL	100	ILE	3.4
37	BQ	98	GLY	3.4
22	AS	32	LYS	3.4
3	AW	36	A	3.4
1	AA	1235	U	3.4
25	AY	315	HIS	3.4
30	BF	146	ASP	3.4
1	AA	1360	A	3.4
27	BA	2802	G	3.4
56	BK	15	ALA	3.4
1	AA	1368	G	3.3
25	AY	267	MET	3.3
56	BK	72	THR	3.3
6	AC	189	ALA	3.3
12	AI	124	GLN	3.3
8	AE	99	GLY	3.3
27	BA	501	A	3.3
19	AP	73	LEU	3.3
37	BQ	53	PRO	3.3
16	AM	50	GLU	3.3
56	BK	17	LYS	3.3
27	BA	271(A)	C	3.3
32	BH	108	TYR	3.3
24	AU	11	GLY	3.3
25	AY	56	GLU	3.3
27	BA	686	G	3.3
27	BA	270(B)	A	3.3
27	BA	1045	A	3.3
52	B6	5	GLY	3.3
6	AC	156	ARG	3.2
27	BA	1641	A	3.2
7	AD	199	ASN	3.2
56	BK	19	THR	3.2
13	AJ	38	ILE	3.2
9	AF	8	ILE	3.2
19	AP	71	ARG	3.2
25	AY	328	LEU	3.2
9	AF	89	MET	3.2

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Mol	Chain	Res	Type	RSRZ
31	BG	58	VAL	3.2
1	AA	325	A	3.2
27	BA	2615	U	3.2
27	BA	974	G	3.2
27	BA	1678	G	3.2
13	AJ	63	PHE	3.2
24	AU	4	GLY	3.2
27	BA	916	G	3.2
1	AA	1029	C	3.2
27	BA	2020	A	3.2
27	BA	973	A	3.2
19	AP	15	PRO	3.2
19	AP	34	GLU	3.2
27	BA	1251	C	3.2
27	BA	1252	G	3.1
27	BA	1476	C	3.1
43	BZ	124	ALA	3.1
20	AQ	39	SER	3.1
51	B5	2	ALA	3.1
56	BK	55	PRO	3.1
25	AY	255	SER	3.1
29	BE	110	ARG	3.1
27	BA	2801	A	3.1
6	AC	158	GLY	3.1
1	AA	1355	G	3.1
1	AA	1539	C	3.1
25	AY	247	GLY	3.1
27	BA	1667	G	3.1
16	AM	116	THR	3.1
1	AA	291	C	3.1
1	AA	1538	C	3.1
1	AA	1534	A	3.1
56	BK	12	GLN	3.1
27	BA	140	A	3.1
29	BE	62	ARG	3.1
8	AE	32	VAL	3.1
13	AJ	87	THR	3.1
1	AA	108	G	3.1
27	BA	2105	C	3.1
43	BZ	66	VAL	3.1
1	AA	1535	C	3.0
27	BA	281	G	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1046	A	3.0
29	BE	108	LEU	3.0
1	AA	871	U	3.0
25	AY	310	SER	3.0
27	BA	1072	C	3.0
7	AD	6	GLY	3.0
25	AY	214	MET	3.0
46	BV	88	GLN	3.0
27	BA	508	G	3.0
1	AA	1030	C	3.0
1	AA	585	G	3.0
22	AS	31	ILE	3.0
42	BY	25	ALA	3.0
7	AD	134	ASP	3.0
27	BA	1111	A	3.0
1	AA	28	G	3.0
27	BA	776	G	3.0
4	AX	118	C	3.0
16	AM	118	ALA	3.0
16	AM	48	LEU	3.0
25	AY	55	LEU	3.0
56	BK	11	LEU	3.0
1	AA	1541	U	3.0
29	BE	93	GLN	3.0
27	BA	2061	G	3.0
32	BH	106	VAL	2.9
25	AY	283	GLU	2.9
27	BA	1677	A	2.9
56	BK	96	ILE	2.9
1	AA	353	A	2.9
13	AJ	70	ARG	2.9
19	AP	35	LYS	2.9
1	AA	150	C	2.9
25	AY	284	ARG	2.9
16	AM	117	VAL	2.9
25	AY	170	THR	2.9
49	B0	2	ALA	2.9
27	BA	373	U	2.9
42	BY	105	ASP	2.9
1	AA	1027	C	2.9
25	AY	268	ILE	2.9
10	AG	53	LYS	2.9

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Mol	Chain	Res	Type	RSRZ
25	AY	142	THR	2.9
25	AY	213	ASN	2.9
27	BA	930	U	2.9
11	AH	3	THR	2.9
4	AX	114	U	2.9
27	BA	1624	G	2.9
56	BK	74	PRO	2.9
27	BA	1073	A	2.9
10	AG	78	ARG	2.8
1	AA	1107	C	2.8
21	AR	62	GLU	2.8
27	BA	1074	G	2.8
19	AP	78	GLY	2.8
29	BE	253	GLN	2.8
16	AM	57	ARG	2.8
53	B7	7	PRO	2.8
1	AA	1537	U	2.8
27	BA	1205	U	2.8
31	BG	59	GLY	2.8
1	AA	1252	A	2.8
27	BA	1378	A	2.8
34	BN	71	TYR	2.8
1	AA	1162	C	2.8
27	BA	1087	G	2.8
8	AE	43	LEU	2.8
23	AT	56	MET	2.8
42	BY	17	HIS	2.8
2	AV	21	A	2.8
27	BA	1248	G	2.8
5	AB	77	ALA	2.8
23	AT	59	ALA	2.8
25	AY	248	ILE	2.8
27	BA	890	A	2.8
27	BA	1042	G	2.8
10	AG	62	PHE	2.8
27	BA	400	G	2.8
27	BA	739	G	2.8
32	BH	50	THR	2.8
1	AA	1540	U	2.7
25	AY	243	HIS	2.7
27	BA	226	G	2.7
14	AK	41	THR	2.7

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Mol	Chain	Res	Type	RSRZ
27	BA	1083	U	2.7
25	AY	199	VAL	2.7
56	BK	76	SER	2.7
1	AA	1363	A	2.7
43	BZ	160	LEU	2.7
27	BA	1467	C	2.7
7	AD	8	VAL	2.7
43	BZ	162	ALA	2.7
7	AD	132	ARG	2.7
25	AY	159	VAL	2.7
8	AE	30	ALA	2.7
27	BA	280	C	2.7
1	AA	109	A	2.7
50	B4	72	LYS	2.7
9	AF	6	VAL	2.7
1	AA	769	G	2.7
12	AI	125	TYR	2.7
27	BA	1099	G	2.7
7	AD	125	HIS	2.7
42	BY	95	ASN	2.7
37	BQ	97	ASP	2.7
27	BA	2344	U	2.7
25	AY	130	MET	2.7
27	BA	677	A	2.7
20	AQ	52	LYS	2.7
27	BA	1674	G	2.7
1	AA	1533	C	2.7
3	AW	49	C	2.7
27	BA	1598	C	2.6
27	BA	1901	A	2.6
1	AA	81	U	2.6
27	BA	2500	U	2.6
42	BY	110	ALA	2.6
27	BA	1463	C	2.6
7	AD	103	ASN	2.6
27	BA	1106	G	2.6
42	BY	14	ALA	2.6
5	AB	214	ILE	2.6
25	AY	320	THR	2.6
22	AS	9	VAL	2.6
27	BA	1081	U	2.6
1	AA	315	A	2.6

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Mol	Chain	Res	Type	RSRZ
14	AK	75	TYR	2.6
25	AY	177	VAL	2.6
27	BA	1605	C	2.6
55	B9	7	VAL	2.6
30	BF	66	GLY	2.6
1	AA	80	G	2.6
1	AA	742	G	2.6
51	B5	8	LYS	2.6
25	AY	215	ASP	2.6
1	AA	1028	C	2.6
15	AL	62	SER	2.6
1	AA	404	U	2.6
12	AI	32	ASP	2.6
44	BR	97	VAL	2.6
1	AA	104	G	2.6
27	BA	308	G	2.6
27	BA	563	G	2.6
27	BA	931	G	2.6
27	BA	1980	G	2.6
27	BA	2062	A	2.6
56	BK	94	ARG	2.6
6	AC	24	ALA	2.6
13	AJ	23	ILE	2.6
27	BA	1600	C	2.6
30	BF	199	GLU	2.6
1	AA	82	U	2.6
7	AD	68	TYR	2.6
25	AY	80	ALA	2.6
1	AA	1362	C	2.6
25	AY	216	GLU	2.6
45	BU	5	LYS	2.6
22	AS	35	SER	2.6
27	BA	2447	G	2.6
1	AA	196	A	2.6
1	AA	1233	G	2.6
16	AM	113	PRO	2.6
1	AA	790	A	2.5
13	AJ	8	LEU	2.5
24	AU	5	ASP	2.5
27	BA	1494	A	2.5
27	BA	1080	C	2.5
27	BA	1104	C	2.5

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Mol	Chain	Res	Type	RSRZ
43	BZ	145	ASP	2.5
27	BA	575	A	2.5
27	BA	2794	C	2.5
1	AA	976	G	2.5
13	AJ	37	PRO	2.5
27	BA	1997	G	2.5
8	AE	29	GLY	2.5
11	AH	5	PRO	2.5
1	AA	1236	A	2.5
12	AI	45	ALA	2.5
27	BA	1086	A	2.5
27	BA	2501	C	2.5
27	BA	33	U	2.5
32	BH	49	ILE	2.5
55	B9	35	ARG	2.5
27	BA	782	A	2.5
1	AA	1297	C	2.5
27	BA	2452	C	2.5
1	AA	1232	U	2.5
42	BY	7	GLN	2.5
1	AA	522	C	2.5
27	BA	2254	C	2.5
25	AY	184	PRO	2.5
29	BE	109	ASP	2.5
1	AA	983	A	2.5
27	BA	1938	A	2.5
1	AA	1096	C	2.5
27	BA	678	C	2.5
10	AG	79	ARG	2.5
27	BA	2590	A	2.5
37	BQ	99	ASP	2.5
29	BE	171	SER	2.5
16	AM	42	ALA	2.5
1	AA	38	G	2.5
1	AA	546	G	2.5
25	AY	164	GLY	2.5
1	AA	1192	C	2.5
25	AY	249	MET	2.5
8	AE	46	GLY	2.5
19	AP	74	LEU	2.5
1	AA	27	G	2.5
1	AA	350	G	2.5

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Mol	Chain	Res	Type	RSRZ
27	BA	1254	A	2.5
25	AY	161	GLU	2.4
27	BA	985	C	2.4
8	AE	132	ALA	2.4
27	BA	747	U	2.4
13	AJ	86	MET	2.4
15	AL	83	VAL	2.4
31	BG	155	HIS	2.4
1	AA	221	C	2.4
1	AA	403	C	2.4
1	AA	1323	G	2.4
36	BP	115	ARG	2.4
6	AC	160	ALA	2.4
1	AA	43	C	2.4
27	BA	14	A	2.4
27	BA	896	A	2.4
28	BD	173	VAL	2.4
30	BF	81	PRO	2.4
27	BA	1992	G	2.4
28	BD	181	ARG	2.4
5	AB	76	GLN	2.4
29	BE	320	GLN	2.4
1	AA	800	G	2.4
27	BA	929	G	2.4
27	BA	193	U	2.4
17	AN	20	ALA	2.4
27	BA	2036	C	2.4
37	BQ	100	GLY	2.4
19	AP	39	TYR	2.4
1	AA	568	G	2.4
1	AA	1369	C	2.4
12	AI	35	GLU	2.4
22	AS	11	VAL	2.4
31	BG	106	PHE	2.4
1	AA	1148	U	2.4
25	AY	30	ARG	2.4
9	AF	42	GLU	2.4
1	AA	37	U	2.4
1	AA	619	U	2.4
1	AA	1129	C	2.4
1	AA	1147	C	2.4
27	BA	1088	A	2.4

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Mol	Chain	Res	Type	RSRZ
27	BA	1554	A	2.4
25	AY	271	SER	2.4
19	AP	77	ALA	2.4
1	AA	34	C	2.4
1	AA	172	A	2.4
24	AU	2	GLY	2.4
50	B4	73	LYS	2.4
25	AY	35	SER	2.3
27	BA	1046	A	2.3
27	BA	1888	G	2.3
29	BE	227	ALA	2.3
43	BZ	170	SER	2.3
7	AD	48	ALA	2.3
27	BA	2799	A	2.3
27	BA	2795	G	2.3
14	AK	11	LYS	2.3
16	AM	112	GLY	2.3
19	AP	36	ILE	2.3
25	AY	33	SER	2.3
25	AY	333	THR	2.3
27	BA	1781	C	2.3
1	AA	966	G	2.3
27	BA	1601	G	2.3
27	BA	907	U	2.3
8	AE	118	ILE	2.3
25	AY	160	PHE	2.3
1	AA	586	C	2.3
1	AA	1492	A	2.3
27	BA	531	C	2.3
23	AT	81	LYS	2.3
27	BA	270(Z)	U	2.3
3	AW	26	G	2.3
37	BQ	9	SER	2.3
25	AY	120	ALA	2.3
43	BZ	48	THR	2.3
1	AA	542	G	2.3
11	AH	32	LYS	2.3
12	AI	122	ALA	2.3
35	BO	23	LYS	2.3
56	BK	115	ASP	2.3
1	AA	1354	C	2.3
27	BA	1103	A	2.3

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Mol	Chain	Res	Type	RSRZ
1	AA	1047	G	2.3
1	AA	1356	G	2.3
10	AG	7	ALA	2.3
1	AA	1532	U	2.3
27	BA	2441	C	2.3
25	AY	266	LEU	2.3
27	BA	586	A	2.3
3	AW	33	U	2.3
16	AM	41	PRO	2.3
32	BH	104	LEU	2.3
22	AS	69	HIS	2.3
38	BS	18	THR	2.3
1	AA	1124	G	2.3
16	AM	32	GLU	2.3
27	BA	1089	G	2.3
27	BA	1236	G	2.3
25	AY	132	LEU	2.2
43	BZ	159	THR	2.2
32	BH	16	VAL	2.2
1	AA	174	C	2.2
27	BA	2043	C	2.2
1	AA	1305	G	2.2
22	AS	30	LEU	2.2
27	BA	2091	U	2.2
42	BY	43	ASN	2.2
43	BZ	167	THR	2.2
25	AY	157	LYS	2.2
27	BA	2499	C	2.2
43	BZ	65	LEU	2.2
1	AA	1202	G	2.2
1	AA	1251	A	2.2
2	AV	1	G	2.2
3	AW	7	U	2.2
16	AM	61	GLU	2.2
27	BA	1264	G	2.2
27	BA	1566	A	2.2
37	BQ	10	ILE	2.2
37	BQ	136	TRP	2.2
55	B9	5	SER	2.2
1	AA	1025	U	2.2
17	AN	6	LEU	2.2
27	BA	128	C	2.2

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Mol	Chain	Res	Type	RSRZ
27	BA	1075	C	2.2
40	BW	3	ALA	2.2
27	BA	2518	A	2.2
27	BA	895	U	2.2
51	B5	6	VAL	2.2
18	AO	19	PRO	2.2
27	BA	2809	A	2.2
2	AV	45	G	2.2
27	BA	778	G	2.2
27	BA	141(A)	C	2.2
38	BS	63	SER	2.2
1	AA	327	A	2.2
1	AA	532	A	2.2
27	BA	1847	A	2.2
27	BA	2453	A	2.2
49	B0	20	TYR	2.2
1	AA	664	G	2.2
27	BA	770	G	2.2
27	BA	1542	G	2.2
27	BA	2442	C	2.2
27	BA	1668	A	2.2
27	BA	1783	A	2.2
1	AA	29	G	2.2
3	AW	19	G	2.2
22	AS	15	LEU	2.2
27	BA	370	G	2.2
1	AA	25	C	2.2
1	AA	1536	C	2.2
9	AF	61	LEU	2.2
1	AA	222	U	2.2
33	BI	97	GLN	2.2
25	AY	270	ARG	2.2
1	AA	176	C	2.2
1	AA	526	C	2.2
12	AI	43	ALA	2.2
27	BA	1082	U	2.2
12	AI	64	THR	2.2
17	AN	37	PHE	2.2
21	AR	31	LEU	2.2
25	AY	138	MET	2.2
36	BP	79	ASP	2.2
25	AY	191	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
56	BK	125	MET	2.2
56	BK	114	PRO	2.2
27	BA	2504	U	2.2
42	BY	52	ARG	2.2
25	AY	351	LEU	2.2
1	AA	1259	C	2.1
2	AV	20	G	2.1
8	AE	10	MET	2.1
7	AD	107	ARG	2.1
7	AD	98	GLU	2.1
27	BA	1982	C	2.1
1	AA	1357	A	2.1
17	AN	3	ARG	2.1
27	BA	30	G	2.1
27	BA	1058	G	2.1
27	BA	1540	G	2.1
12	AI	44	VAL	2.1
7	AD	111	ALA	2.1
27	BA	192	C	2.1
27	BA	1625	C	2.1
12	AI	41	VAL	2.1
27	BA	372	G	2.1
27	BA	2867	G	2.1
15	AL	69	TYR	2.1
38	BS	60	SER	2.1
8	AE	154	GLY	2.1
1	AA	110	C	2.1
27	BA	1513	C	2.1
27	BA	1204	A	2.1
1	AA	755	G	2.1
1	AA	993	G	2.1
9	AF	1	MET	2.1
25	AY	110	GLU	2.1
21	AR	66	LEU	2.1
27	BA	1640	C	2.1
31	BG	80	ALA	2.1
25	AY	242	VAL	2.1
4	AX	129	A	2.1
27	BA	1944	U	2.1
23	AT	84	LEU	2.1
27	BA	275	G	2.1
27	BA	1377	G	2.1

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Mol	Chain	Res	Type	RSRZ
27	BA	2623	G	2.1
1	AA	26	A	2.1
5	AB	213	LEU	2.1
2	AV	19	G	2.1
27	BA	329	G	2.1
1	AA	280	C	2.1
1	AA	30(B)	C	2.1
19	AP	68	ASP	2.1
1	AA	975	A	2.1
27	BA	502	A	2.1
6	AC	149	ALA	2.1
52	B6	24	THR	2.1
1	AA	44	G	2.1
43	BZ	161	ALA	2.1
13	AJ	33	GLN	2.1
1	AA	569	C	2.1
1	AA	577	G	2.1
27	BA	1091	G	2.1
27	BA	1199	U	2.1
27	BA	1994	C	2.1
7	AD	170	VAL	2.1
51	B5	3	LYS	2.1
25	AY	334	PRO	2.1
1	AA	30(A)	G	2.1
3	AW	25	C	2.1
3	AW	53	G	2.1
11	AH	4	ASP	2.1
27	BA	2032	G	2.1
28	BD	209	ASN	2.0
1	AA	756	C	2.0
1	AA	1161	C	2.0
22	AS	66	MET	2.0
53	B7	4	THR	2.0
27	BA	2666	C	2.0
1	AA	7	G	2.0
1	AA	625	G	2.0
7	AD	2	GLY	2.0
25	AY	141	GLU	2.0
25	AY	254	ASP	2.0
25	AY	263	GLU	2.0
27	BA	785	G	2.0
27	BA	1642	G	2.0

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Mol	Chain	Res	Type	RSRZ
7	AD	7	PRO	2.0
27	BA	91	A	2.0
27	BA	1032	A	2.0
27	BA	1379	A	2.0
5	AB	208	ILE	2.0
8	AE	9	LYS	2.0
1	AA	12	U	2.0
1	AA	64	G	2.0
27	BA	2405	G	2.0
1	AA	653	A	2.0
27	BA	64	A	2.0
27	BA	2587	A	2.0
41	BX	52	VAL	2.0
6	AC	157	ILE	2.0
19	AP	76	GLN	2.0
8	AE	123	LEU	2.0
1	AA	90	U	2.0
1	AA	1358	U	2.0
1	AA	1032	G	2.0
16	AM	17	VAL	2.0
27	BA	1128	A	2.0
17	AN	38	GLY	2.0
21	AR	69	THR	2.0
49	B0	4	LYS	2.0
24	AU	25	LYS	2.0
1	AA	753	A	2.0
12	AI	34	ASN	2.0
27	BA	1140	C	2.0
33	BI	38	GLU	2.0

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

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(Å ²)	Q<0.9
3	YYG	AW	37	39/40	0.52	0.68	-	236,236,236,236	0
3	PSU	AW	55	20/21	0.85	0.18	-	236,236,236,236	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	LLDF	B-factors(\AA^2)	Q<0.9
3	PSU	AW	39	20/21	0.72	0.44	-	236,236,236,236	0

6.3 Carbohydrates [i](#)

There are no carbohydrates 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.