



# Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Nov 14, 2019 – 03:05 AM EST

PDB ID : 5KPV  
EMDB ID: : EMD-8280  
Title : Structure of RelA bound to ribosome in presence of A/R tRNA (Structure II)  
Authors : Loveland, A.B.; Bah, E.; Madireddy, R.; Zhang, Y.; Brilot, A.F.; Grigorieff, N.; Korostelev, A.A.  
Deposited on : 2016-07-05  
Resolution : 4.10 Å(reported)

This is a Full wwPDB/EMDatabank EM Map/Model Validation Report  
for a publicly released PDB/EMDB entry.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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MolProbity : 4.02b-467  
Percentile statistics : 20171227.v01 (using entries in the PDB archive December 27th 2017)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.4

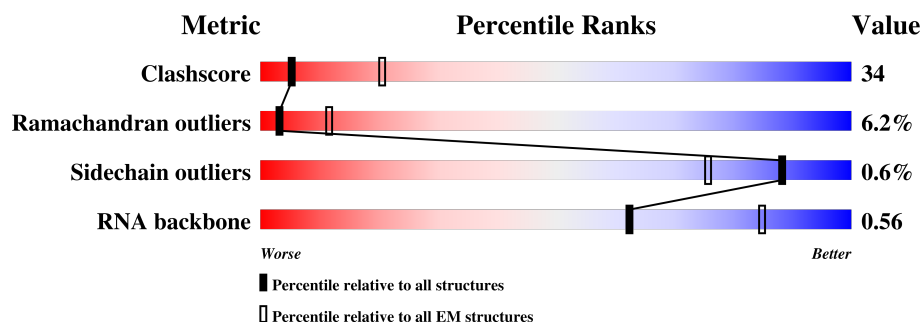
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 4.10 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)	EM structures (#Entries)
Clashscore	136327	1886
Ramachandran outliers	132723	1663
Sidechain outliers	132532	1531
RNA backbone	3747	458

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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  $\leq 5\%$ .

Mol	Chain	Length	Quality of chain
1	A	273	43% 53% ..
2	B	209	45% 53% .
3	C	201	39% 55% 6%
4	D	179	34% 62% ...
5	E	177	46% 52% ..
6	F	149	37% 54% 9%
7	G	165	21% 52% 6% 21%
8	H	142	27% 67% 5% ..





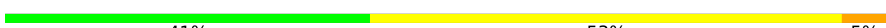
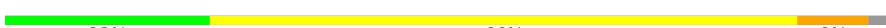







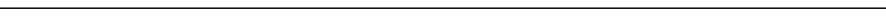

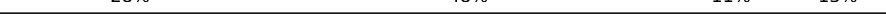









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Mol	Chain	Length	Quality of chain
9	I	142	
10	J	123	
11	K	144	
12	L	136	
13	M	127	
14	N	117	
15	O	115	
16	P	118	
17	Q	103	
18	R	110	
19	S	100	
20	T	104	
21	U	94	
22	V	85	
23	W	78	
24	X	63	
25	Y	59	
26	Z	70	
27	1	57	
28	2	55	
29	3	46	
30	4	65	
31	5	38	
32	6	241	
33	7	233	

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Mol	Chain	Length	Quality of chain
34	8	206	
35	9	167	
36	10	135	
37	11	179	
38	12	130	
39	13	130	
40	14	103	
41	15	129	
42	16	124	
43	17	118	
44	18	101	
45	19	89	
46	20	82	
47	21	84	
48	22	75	
49	23	92	
50	24	87	
51	25	71	
52	26	1539	
53	27	2903	
54	28	120	
55	29	20	
56	30	76	
57	31	77	
58	32	77	

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Mol	Chain	Length	Quality of chain
59	33	750	<div><div></div><div>35%</div><div>48%</div><div>6%</div><div>10%</div></div>

## 2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 154603 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called 50S ribosomal protein L2.

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

- Molecule 2 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 3 is a protein called 50S ribosomal protein L4.

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

- Molecule 4 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	177	Total	C	N	O	S	0	0
			1410	899	249	256	6		

- Molecule 5 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 6 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 7 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	131	Total	C	N	O	S	0	0
			988	625	175	183	5		

- Molecule 8 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 9 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 10 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	122	Total	C	N	O	S	0	0
			938	587	180	165	6		

- Molecule 11 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	143	Total	C	N	O	S	0	0
			1045	649	206	189	1		

- Molecule 12 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 13 is a protein called 50S ribosomal protein L17.

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

- Molecule 14 is a protein called 50S ribosomal protein L18.

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

- Molecule 15 is a protein called 50S ribosomal protein L19.

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

- Molecule 16 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
16	P	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 17 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Q	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 18 is a protein called 50S ribosomal protein L22.

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

- Molecule 19 is a protein called 50S ribosomal protein L23.

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

- Molecule 20 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
20	T	102	Total	C	N	O	0	0
			779	492	146	141		

- Molecule 21 is a protein called 50S ribosomal protein L25.



Mol	Chain	Residues	Atoms					AltConf	Trace
21	U	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	75	Total	C	N	O	S	0	0
			575	356	116	102	1		

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	W	77	Total	C	N	O	S	0	0
			625	388	129	106	2		

- Molecule 24 is a protein called 50S ribosomal protein L29.

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

- Molecule 25 is a protein called 50S ribosomal protein L30.

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

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	Z	66	Total	C	N	O	S	0	0
			522	323	99	94	6		

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	1	56	Total	C	N	O	S	0	0
			444	269	94	80	1		

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
28	2	50	Total	C	N	O	0	0
			409	263	75	71		

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	3	46	Total	C	N	O	S	0	0
			377	228	90	57	2		

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	4	64	Total	C	N	O	S	0	0
			504	323	105	74	2		

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	5	38	Total	C	N	O	S	0	0
			302	185	65	48	4		

- Molecule 32 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	6	218	Total	C	N	O	S	0	0
			1704	1081	305	311	7		

- Molecule 33 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	7	206	Total	C	N	O	S	0	0
			1624	1028	305	288	3		

- Molecule 34 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	8	205	Total	C	N	O	S	0	0
			1643	1026	315	298	4		

- Molecule 35 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	9	157	Total	C	N	O	S	0	0
			1156	719	218	213	6		

- Molecule 36 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	10	100	Total	C	N	O	S	0	0
			817	515	148	148	6		

- Molecule 37 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	11	151	Total	C	N	O	S	0	0
			1181	735	227	215	4		

- Molecule 38 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	12	129	Total	C	N	O	S	0	0
			979	616	173	184	6		

- Molecule 39 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	13	127	Total	C	N	O	S	0	0
			1022	634	206	179	3		

- Molecule 40 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	14	98	Total	C	N	O	S	0	0
			786	493	150	142	1		

- Molecule 41 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	15	116	Total	C	N	O	S	0	0
			869	535	173	158	3		

- Molecule 42 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	16	123	Total	C	N	O	S	0	0
			955	590	196	165	4		

- Molecule 43 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	17	114	Total	C	N	O	S	0	0
			883	546	178	156	3		

- Molecule 44 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	18	100	Total	C	N	O	S	0	0
			805	499	164	139	3		

- Molecule 45 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	19	88	Total	C	N	O	S	0	0
			714	439	144	130	1		

- Molecule 46 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	20	82	Total	C	N	O	S	0	0
			649	406	128	114	1		

- Molecule 47 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	21	80	Total	C	N	O	S	0	0
			648	411	121	113	3		

- Molecule 48 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	22	65	Total	C	N	O	S	0	0
			535	339	100	95	1		

- Molecule 49 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	23	79	Total	C	N	O	S	0	0
			637	408	120	107	2		

- Molecule 50 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	24	85	Total	C	N	O	S	0	0
			665	411	137	114	3		

- Molecule 51 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	25	65	Total	C	N	O	S	0	0
			544	335	117	91	1		

- Molecule 52 is a RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	26	1539	Total	C	N	O	P	0	0
			33016	14725	6052	10700	1539		

- Molecule 53 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	27	2903	Total	C	N	O	P	0	0
			62322	27801	11468	20150	2903		

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
27	747	C	U	conflict	GB 802133627
27	1847	G	A	conflict	GB 802133627

- Molecule 54 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	28	120	Total	C	N	O	P	0	0
			2572	1145	471	836	120		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
28	120	A	-	conflict	GB 1028475309

- Molecule 55 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	29	20	Total	C	N	O	P	0	0
			432	195	86	132	19		

- Molecule 56 is a RNA chain called A-site tRNAPhe.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	30	76	Total	C	N	O	P	0	0
			1623	723	290	534	76		

- Molecule 57 is a RNA chain called P-site tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	31	77	Total	C	N	O	P	0	0
			1644	732	297	538	77		

- Molecule 58 is a RNA chain called E-site tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	32	77	Total	C	N	O	P	0	0
			1643	732	297	537	77		

- Molecule 59 is a protein called GTP pyrophosphokinase.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	33	675	Total	C	N	O	S	0	0
			4911	3070	904	915	22		

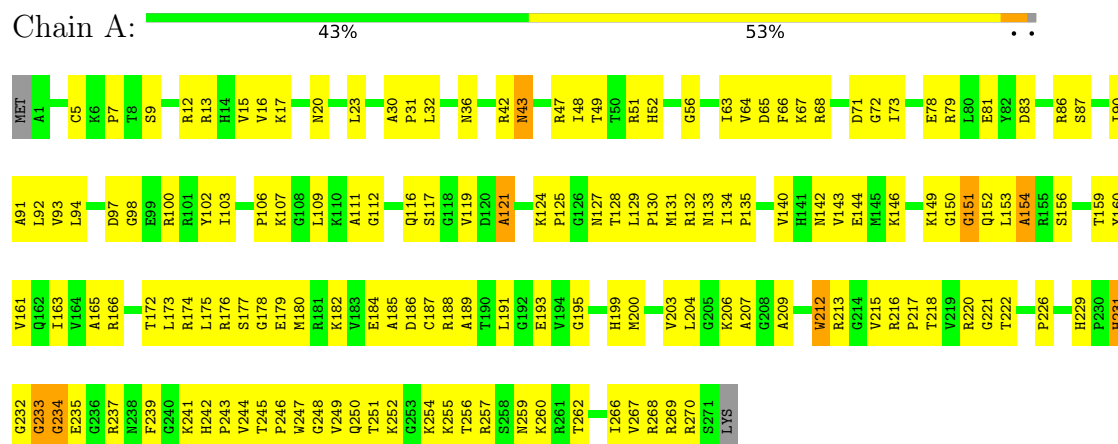
There are 7 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
33	-5	MET	-	expression tag	UNP P0AG20
33	-4	HIS	-	expression tag	UNP P0AG20
33	-3	HIS	-	expression tag	UNP P0AG20
33	-2	HIS	-	expression tag	UNP P0AG20
33	-1	HIS	-	expression tag	UNP P0AG20
33	0	HIS	-	expression tag	UNP P0AG20
33	1	HIS	-	expression tag	UNP P0AG20

### 3 Residue-property plots

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

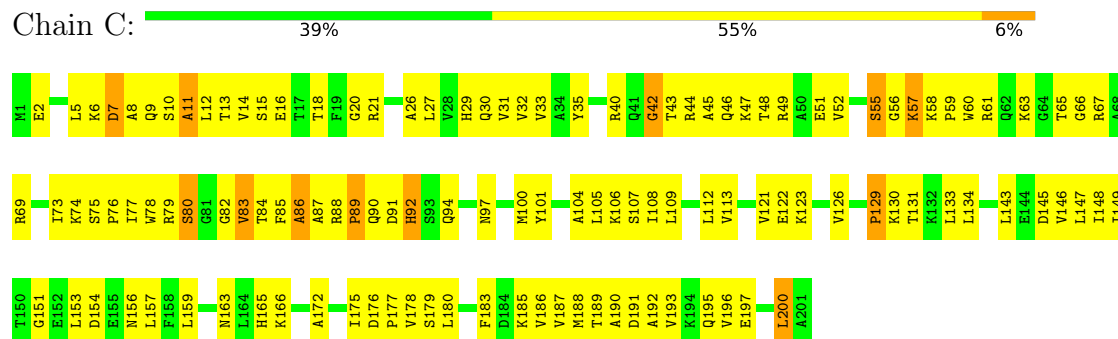
- Molecule 1: 50S ribosomal protein L2



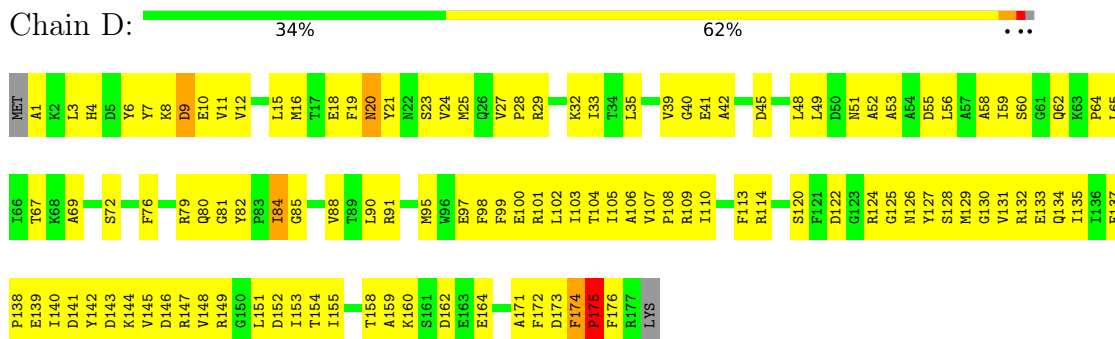
- Molecule 2: 50S ribosomal protein L3



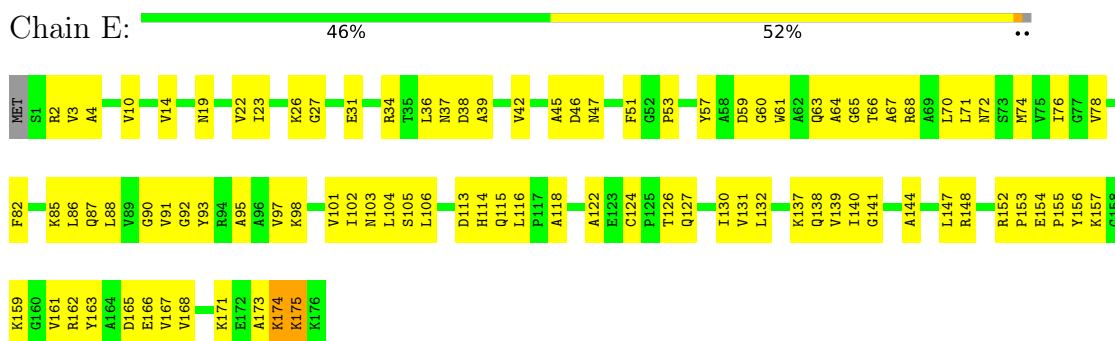
- Molecule 3: 50S ribosomal protein L4



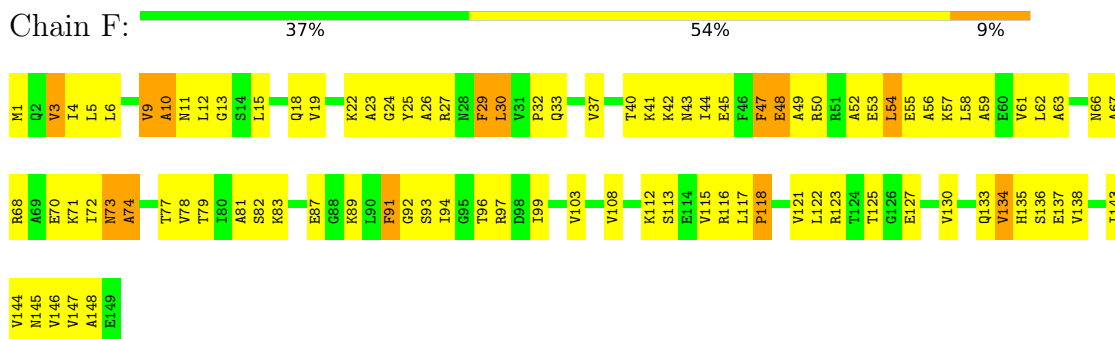
- Molecule 4: 50S ribosomal protein L5



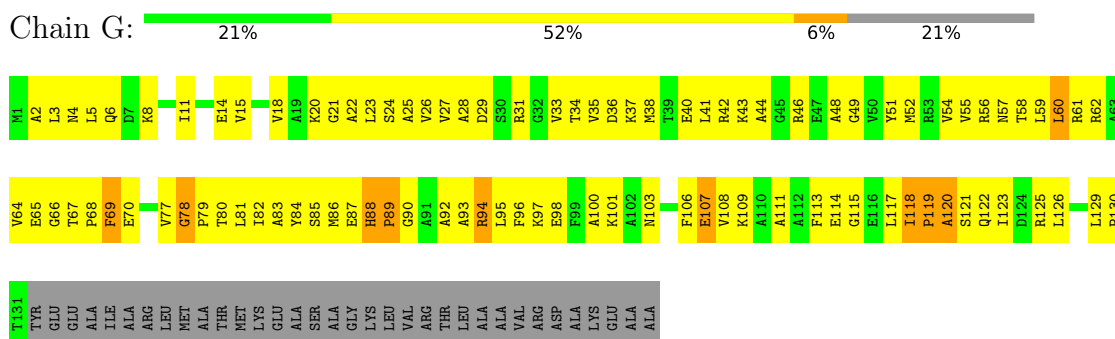
- Molecule 5: 50S ribosomal protein L6



- Molecule 6: 50S ribosomal protein L9



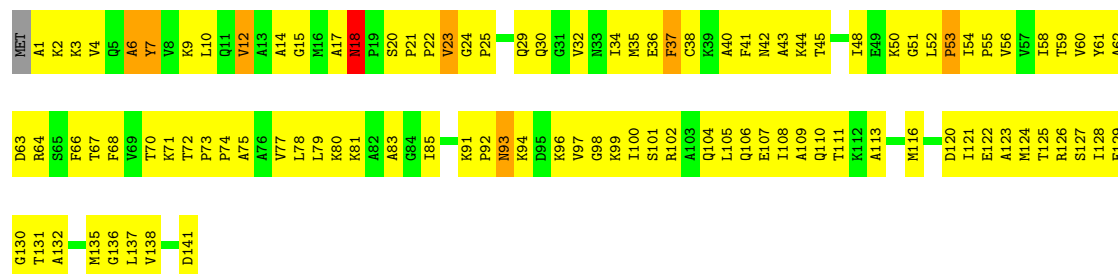
- Molecule 7: 50S ribosomal protein L10





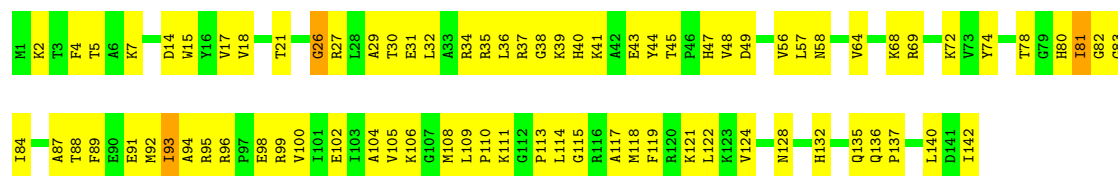
- Molecule 8: 50S ribosomal protein L11

Chain H:  27% 67% 5% ..



- Molecule 9: 50S ribosomal protein L13

Chain I:  44% 54% .



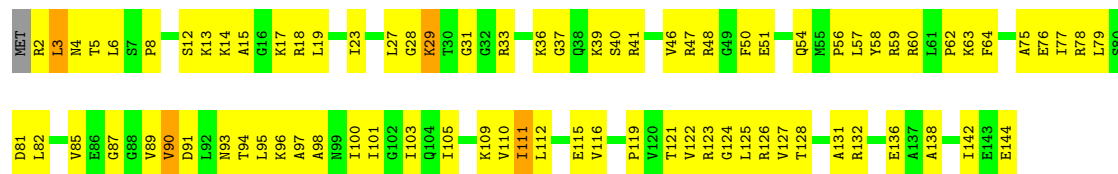
- Molecule 10: 50S ribosomal protein L14

Chain J:  37% 61% ..



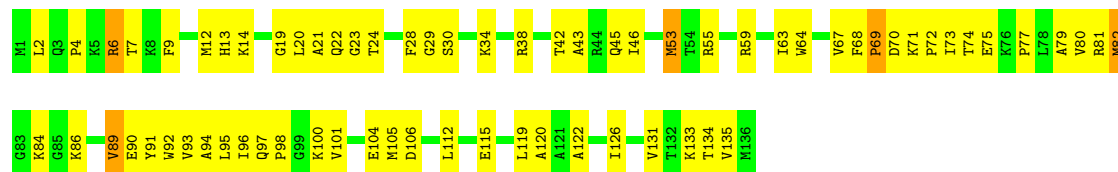
- Molecule 11: 50S ribosomal protein L15

Chain K:  43% 53% ..

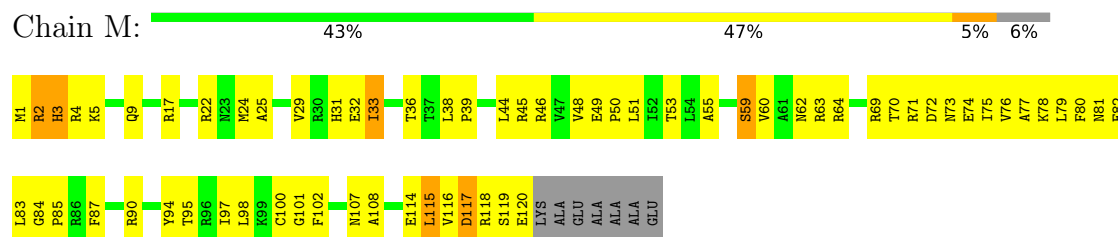


- Molecule 12: 50S ribosomal protein L16

Chain L:  49% 47% .



- Molecule 13: 50S ribosomal protein L17



- Molecule 14: 50S ribosomal protein L18



- Molecule 15: 50S ribosomal protein L19



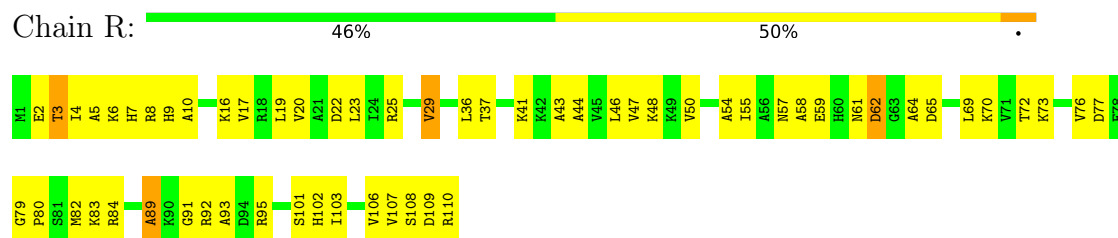
- Molecule 16: 50S ribosomal protein L20



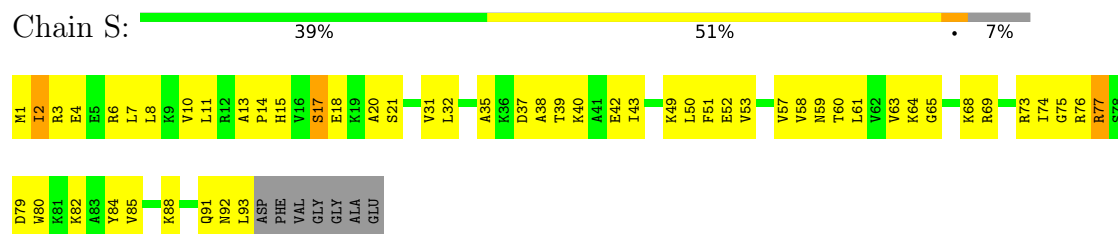
- Molecule 17: 50S ribosomal protein L21



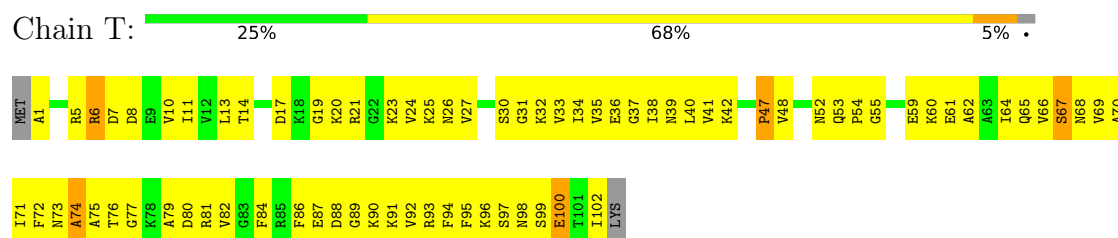
- Molecule 18: 50S ribosomal protein L22



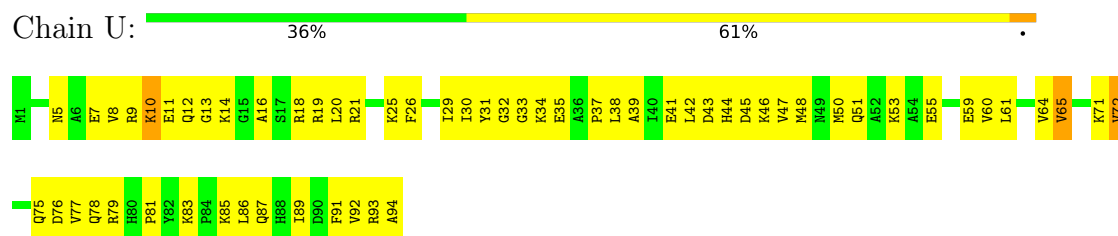
• Molecule 19: 50S ribosomal protein L23



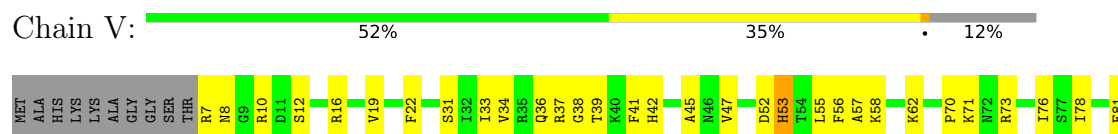
• Molecule 20: 50S ribosomal protein L24



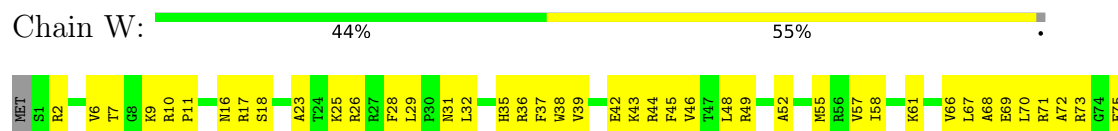
• Molecule 21: 50S ribosomal protein L25



• Molecule 22: 50S ribosomal protein L27



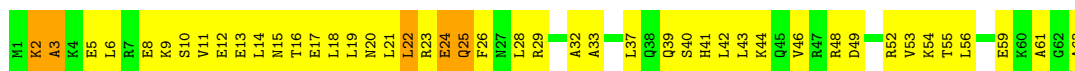
• Molecule 23: 50S ribosomal protein L28





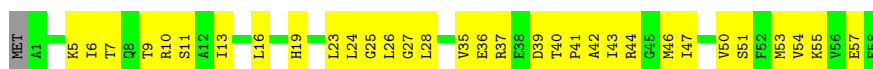
- Molecule 24: 50S ribosomal protein L29

Chain X: 29% 63% 8%



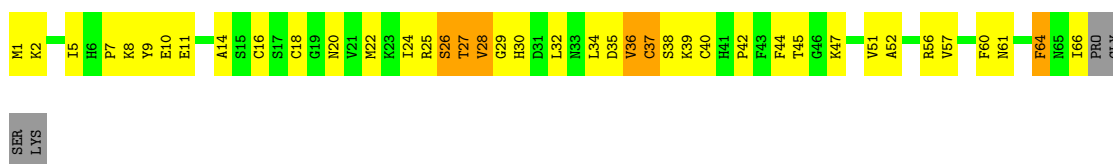
- Molecule 25: 50S ribosomal protein L30

Chain Y: 44% 54%



- Molecule 26: 50S ribosomal protein L31

Chain Z: 37% 49% 9% 6%



- Molecule 27: 50S ribosomal protein L32

Chain 1: 32% 58% 9%



- Molecule 28: 50S ribosomal protein L33

Chain 2: 47% 44% 9%



- Molecule 29: 50S ribosomal protein L34

Chain 3: 46% 52%



- Molecule 30: 50S ribosomal protein L35

Chain 4: 46% 51%



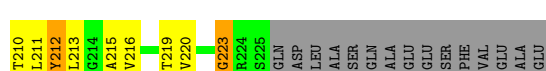
- Molecule 31: 50S ribosomal protein L36

Chain 5: 34% 55% 11%



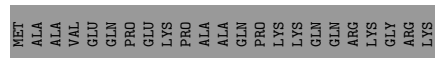
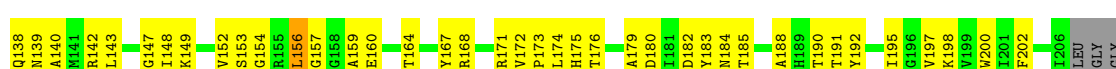
- Molecule 32: 30S ribosomal protein S2

Chain 6: 37% 49% 10%



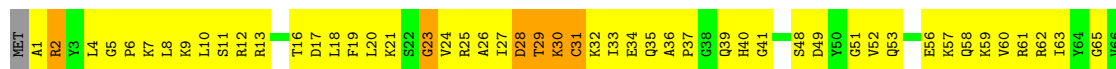
- Molecule 33: 30S ribosomal protein S3

Chain 7: 36% 50% 12%



- Molecule 34: 30S ribosomal protein S4

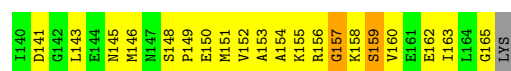
Chain 8: 32% 62% 5%





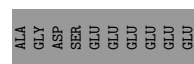
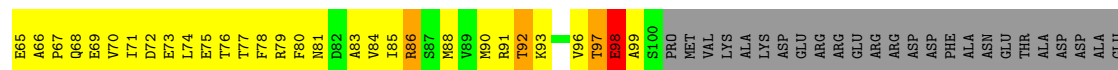
• Molecule 35: 30S ribosomal protein S5

Chain 9: 32% 54% 7% • 6%



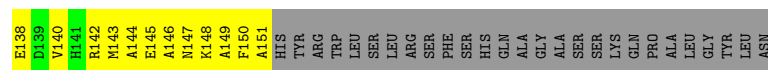
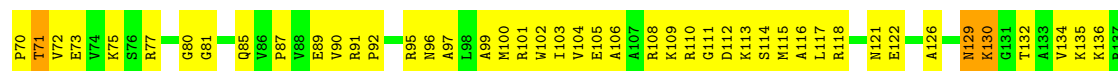
• Molecule 36: 30S ribosomal protein S6

Chain 10: 19% 50% 5% • 26%



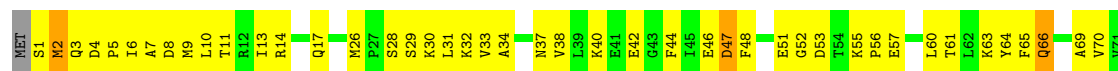
• Molecule 37: 30S ribosomal protein S7

Chain 11: 28% 53% • 16%

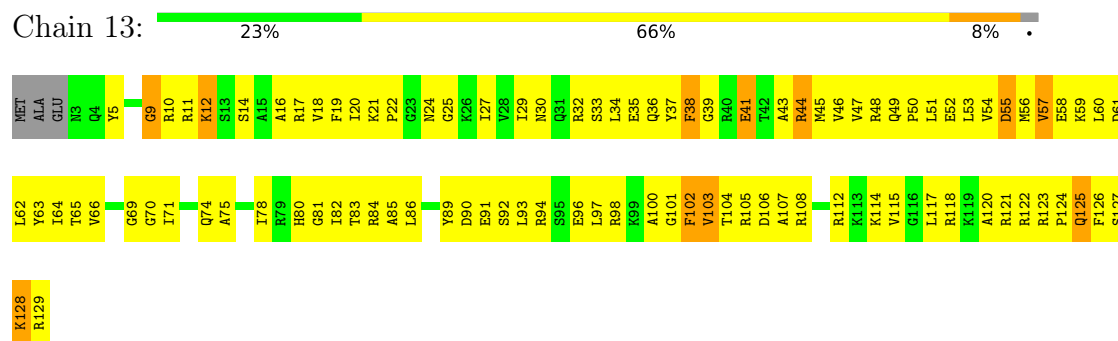


• Molecule 38: 30S ribosomal protein S8

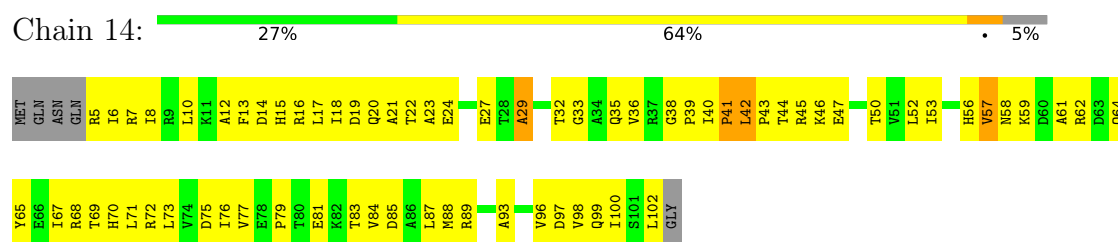
Chain 12: 41% 53% 5% •



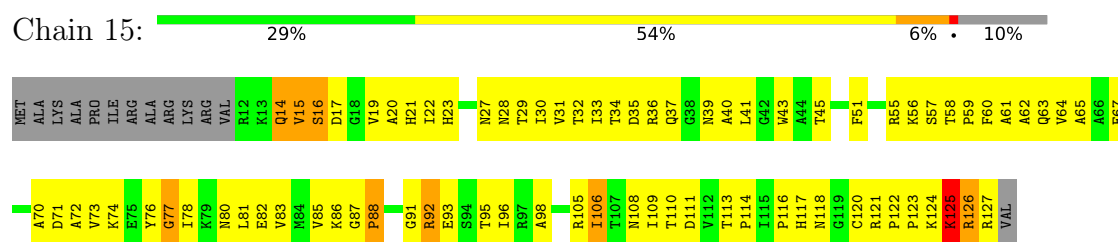
- Molecule 39: 30S ribosomal protein S9



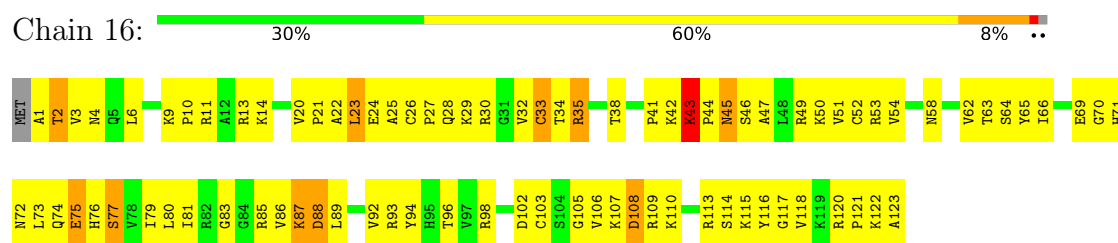
- Molecule 40: 30S ribosomal protein S10



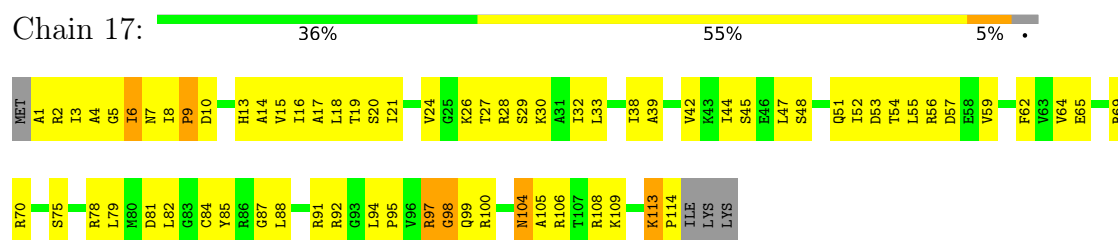
- Molecule 41: 30S ribosomal protein S11



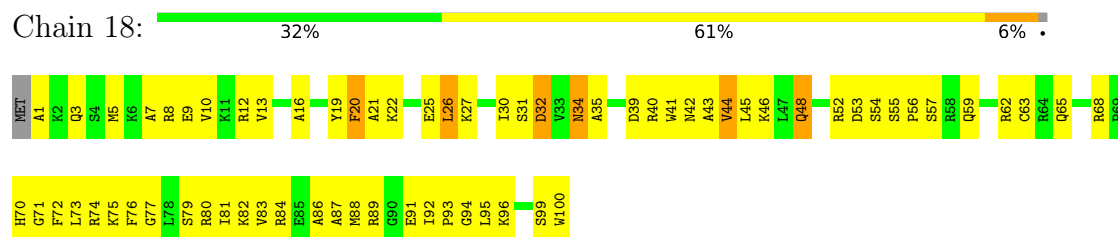
- Molecule 42: 30S ribosomal protein S12



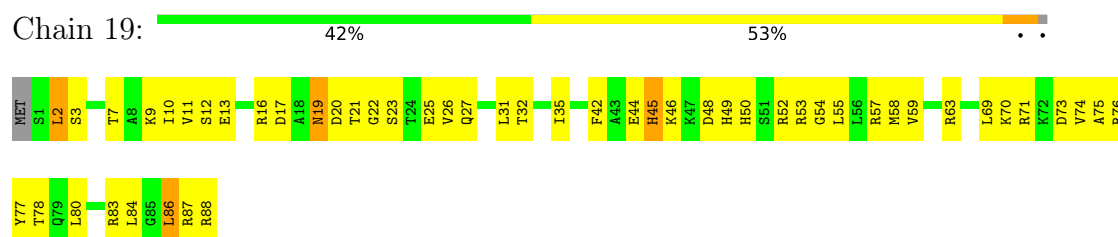
- Molecule 43: 30S ribosomal protein S13



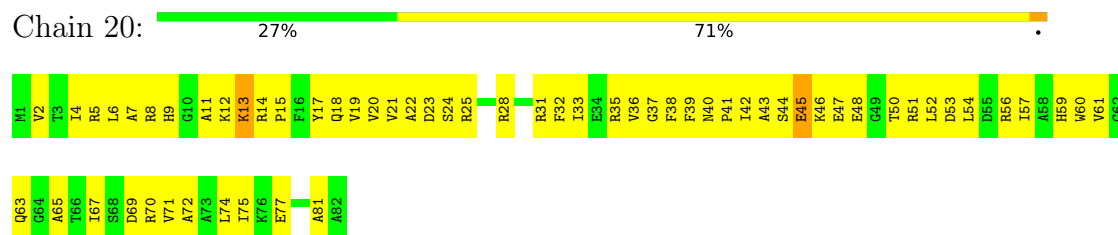
- Molecule 44: 30S ribosomal protein S14



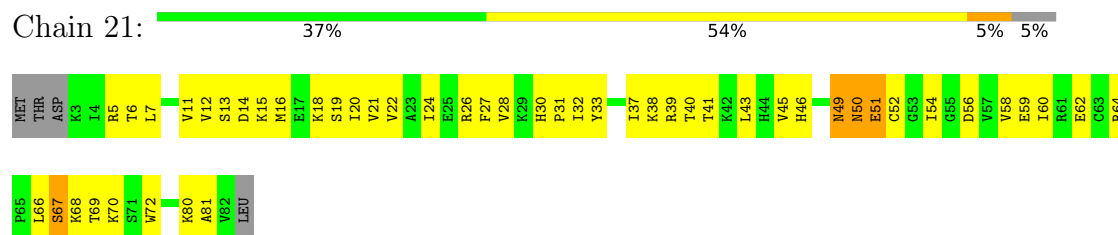
- Molecule 45: 30S ribosomal protein S15



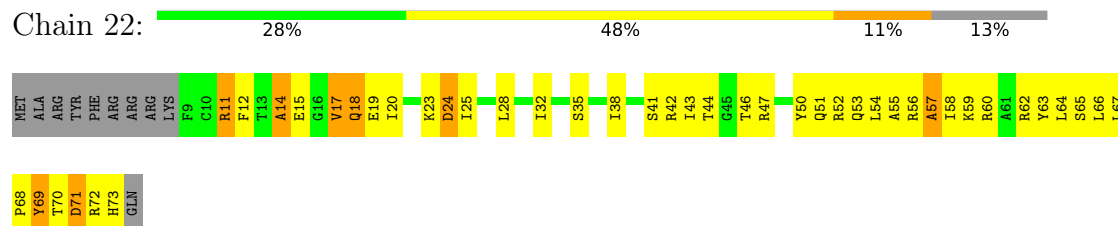
- Molecule 46: 30S ribosomal protein S16



- Molecule 47: 30S ribosomal protein S17



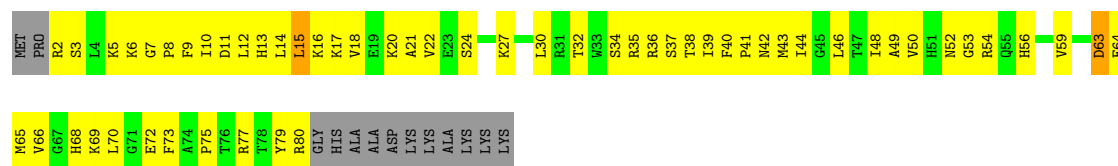
- Molecule 48: 30S ribosomal protein S18



- Molecule 49: 30S ribosomal protein S19

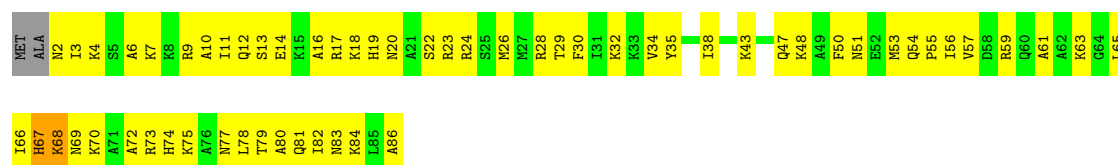


Chain 23: 25% 59% 14%



• Molecule 50: 30S ribosomal protein S20

Chain 24: 30% 66%



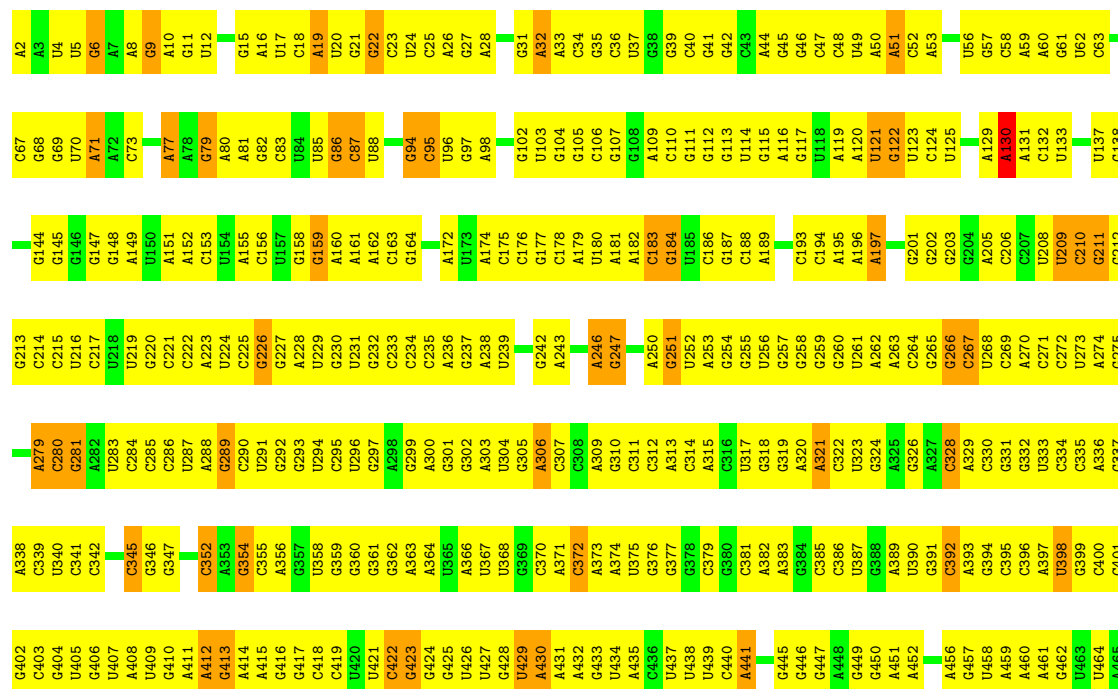
• Molecule 51: 30S ribosomal protein S21

Chain 25: 23% 62% 7% 8%

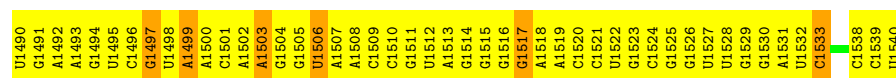


• Molecule 52: 16S ribosomal RNA

Chain 26: 20% 70% 10%

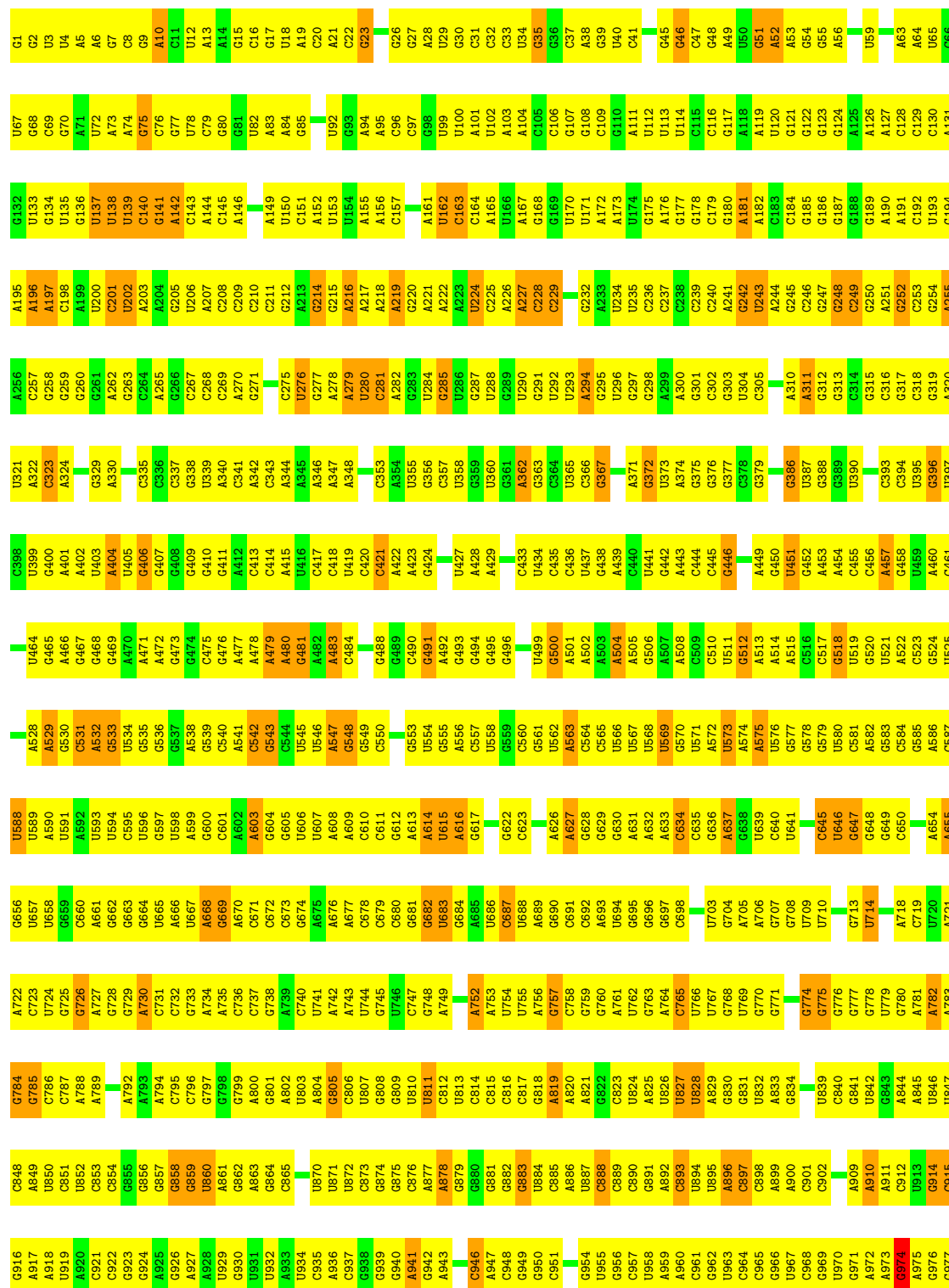


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C1367	A1368	C1369	G1370	G1371	G1372	G1373	A1374	G1379	G1380	G1381	G1382	C1383	C1384	C1385	C1386	C1387	C1388	C1389	U1390	U1391	C1392	C1393	A1394	C1395	A1396	C1397	A1398	C1399	C1400	G1401	C1402	G1403	C1404	A1405	U1406	C1407	A1408	C1409	U1410	C1411	C1412	C1413	U1414	G1415	G1416	U1417	U1418	U1419	U1420	U1421	G1422	G1423	U1424	U1425	G1426	G1427	A1428	G1429			
U1235	A1236	C1237	A1238	G1239	U1240	G1241	G1242	G1243	G1244	G1245	A1246	A1250	A1251	A1252	G1253	A1254	G1255	A1256	A1257	G1258	C1259	A1260	G1261	C1262	C1263	U1264	C1265	C1273	A1274	A1275	G1276	C1277	G1278	G1279	A1280	C1281	C1282	U1283	C1284	C1285	U1286	A1287	G1292	C1293	G1294	U1295	C1296	G1297	U1298	C1299	G1300	U1301	C1302	C1303	G1304	G1305					
A1170	A1171	G1172	G1173	G1174	G1175	A1180	G1181	G1182	U1183	G1184	G1185	G1186	G1187	G1190	A1191	C1192	G1193	U1194	C1195	A1196	A1197	G1198	U1199	C1200	A1201	C1202	C1203	C1204	U1205	G1206	G1207	C1208	C1209	C1210	U1211	U1212	A1213	C1214	G1215	A1216	C1217	C1218	A1219	G1220	G1221	G1222	C1223	U1224	A1225	C1226	U1227	C1228	A1229	U1301	C1302	C1303	C1304	C1305			
C1108	C1109	A1110	A1111	C1112	C1113	C1114	U1115	U1116	A1117	U1118	C1119	C1120	U1121	U1122	U1123	U1126	G1127	C1128	C1129	A1130	G1131	C1132	G1133	G1134	U1135	C1136	C1137	C1138	G1139	C1140	C1141	G1142	G1143	G1144	A1145	A1146	C1147	U1148	C1149	A1150	A1151	G1154	A1155	G1156	A1157	C1158	U1159	G1160	C1161	A1162	A1163	C1164	U1165	G1166	A1167	U1168	A1169				
A1045	A1046	G1047	C1048	U981	U982	U986	G987	U988	U989	C990	U991	U992	G993	A994	C995	G996	U997	C998	C999	U1000	C1001	A1004	A1005	G1006	U1007	U1008	C993	G945	U1009	U1010	A946	G947	C948	A949	U950	G951	U952	G953	C954	U955	U956	A957	A958	C959	U960	U961	C962	G963	A964	U965	C966	A969	C970	G971	C972	C1100	A1101	A1102	C1103	C1104	A1107
C956	C957	C958	C959	A960	A961	U962	U963	A964	A965	C966	G967	C968	C969	U970	U971	A972	A973	G974	U975	C976	C977	C978	C979	C980	C981	C982	C983	U984	U985	U986	U987	C988	A989	C990	U991	C992	U993	C994	C995	C996	C997	C998	C999	A900	A901	C902	G903	U904	U905	A906	A907	A908	A909	C910	U911	C912	A913	A915			
U788	U789	A790	G791	A792	U793	A794	C795	C796	U797	C798	U800	U801	A802	G803	A807	C808	G809	C810	C811	C812	A815	A816	C817	C818	A819	U820	G821	U822	C823	A824	A825	C826	U827	U828	G829	C830	A831	C832	G833	U834	U835	C836	U837	C838	C839	C840	C841	U842	U843	A844	A845	G846	C847	U854	U855						
C726	G727	A728	A729	G730	G731	C732	C735	C736	C737	C738	C739	U740	U741	U742	U743	U744	U745	A746	U747	A748	A749	C750	A687	C620	A621	A622	C623	C624	U625	U626	G627	A628	A629	U630	C631	U632	G633	C634	A635	U636	C637	U638	A642	C643	U644	G645	G646	C647	A648	U653	U654	G655	C656	U657	C658	U662					
A663	G664	A665	G666	G667	G668	G669	G670	G671	U672	A673	G674	G675	A676	U677	U678	C679	C680	A681	G682	G683	U684	U685	U686	A687	C688	C689	C690	C691	U692	G693	A694	C695	A696	U697	U706	U707	C708	U709	G710	G711	U712	G713	G714	U715	A716	U717	A718	G721	C722	U723	G724	G725									
U593	U594	A595	A596	U597	U598	C599	A600	G601	G604	U605	G606	A607	A608	U609	U610	C613	C614	G617	C618	U619	C620	A621	A622	C623	C624	U625	U626	G627	A628	A629	U630	C631	U632	G633	C634	A635	U636	C637	U638	A642	C643	U644	G645	G646	C647	A648	U653	U654	G655	C656	U657	C658	U662								
G530	U531	A532	A533	U534	U535	C536	G537	G538	A539	G540	G541	G542	U543	G544	G545	A546	A547	G548	C549	U551	U552	A553	A554	U555	C556	G557	G558	A559	A560	U561	U562	A563	C564	U565	G566	G567	G568	U569	U571	A572	C573	U574	G575	C576	G577	C578	A579	C580	G581	G584	G585	C586	G587	G588	G592						
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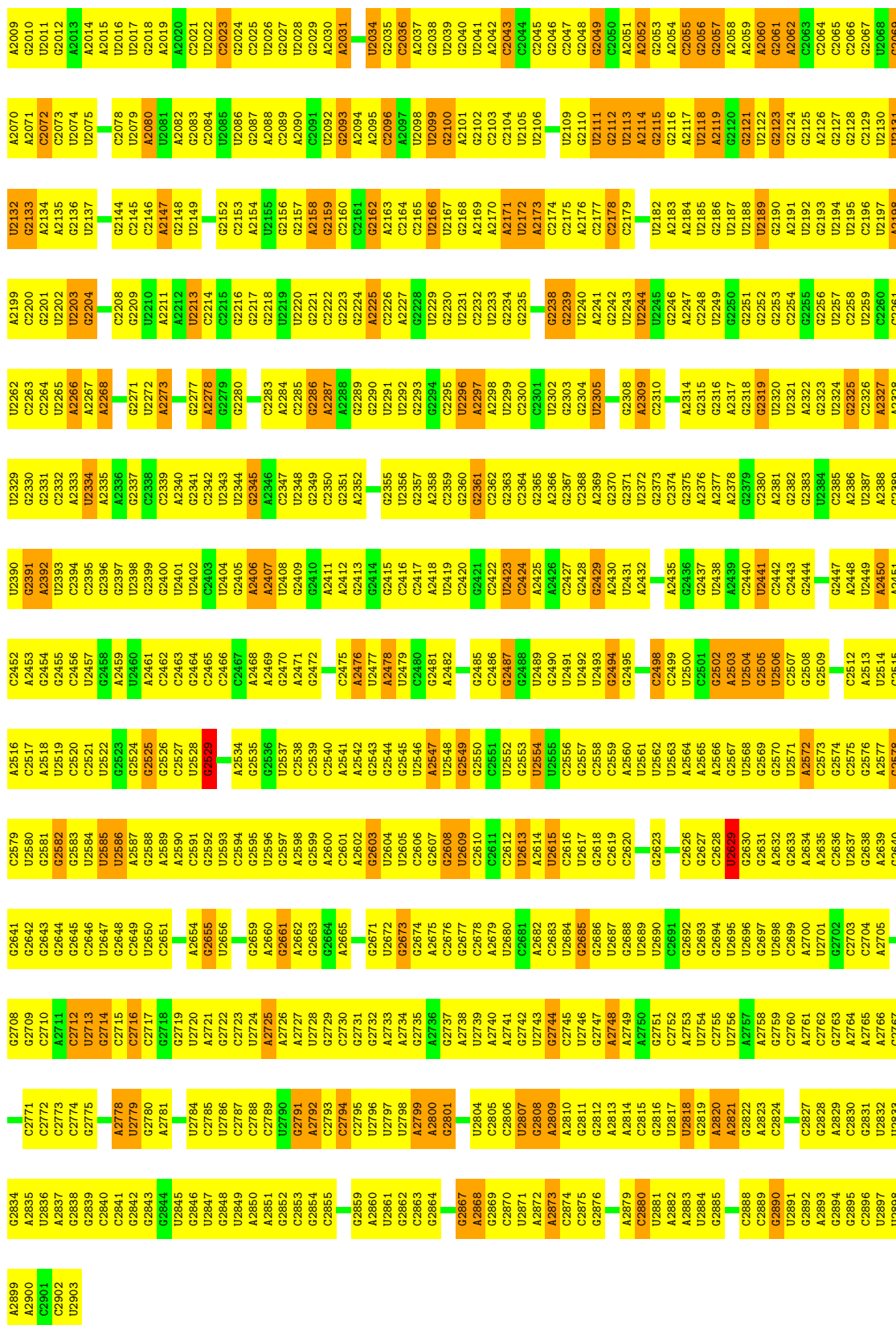


• Molecule 53: 23S ribosomal RNA

Chain 27: 19% 68% 12%

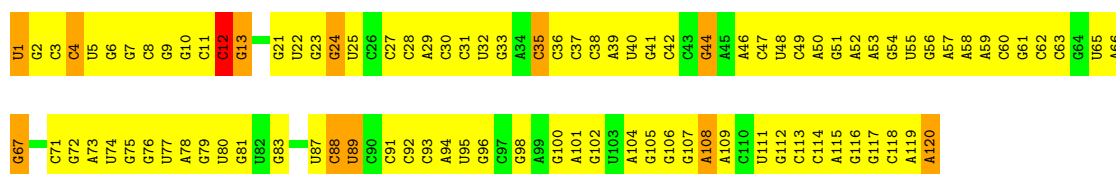


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G1950	G1888	A1821	C1761	U1693	G1631	C1565	U1497	A1433	A1366	G1300	G1235	C1170	U1105	C1044	A979
G1951	G1889	A1822	A1762	C1694	A1632	A1566	C1498	A1434	A1367	A1301	G1236	C1171	G1106	C1045	A980
A1952	G1890	G1823	G1763	G1695	G1633	G1567	C1499	G1435	G1368	A1302	G1237	C1172	G1107	A1046	A981
G1953	A1890	G1824	C1764	G1696	A1634	G1568	G1500	G1436	G1369	G1303	G1238	U1173	A1111	G1047	C982
G1954	G1891	U1825	U1765	G1697	A1635	A1569	G1501	C1437	C1370	U1174	G1239	U1175	G1112	A1048	A983
U1955	C1892	G1826	G1766	A1698	U1636	A1570	A1502	U1438	G1371	C1306	U1240	A1176	U1113	C1049	A984
U1956	C1893	U1827	G1767	G1699	A1637	A1571	A1503	A1439	U1372	A1307	U1241	U1177	U1114	A0951	C985
G1957	C1894	G1828	C1768	A1700	A1638	A1572	A1504	U1440	A1373	A1308	A1242	U1178	G1115	G1051	A988
G1958	C1895	A1829	U1769	G1701	G1639	A1573	A1505	G1441	G1374	A1309	U1243	C1178	G1115	C1052	G989
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A1960	G1897	G1831	C1771	G1703	A1641	U1575	C1507	U1443	G1376	U1312	A1244	U1180	U1119	A1054	C991
C1961	G1898	C1832	A1772	C1704	G1642	U1576	A1508	G1444	G1377	U1313	U1245	U1181	G1120	G1055	C992
C1962	A1899	C1833	A1773	A1705	G1646	C1577	A1509	G1445	A1378	C1314	G1248	G1182	G1121	G1056	G993
G1963	A1900	U1837	C1774	C1706	U1647	U1578	G1510	A1446	U1379	U1315	U1249	U1183	G1122	A1057	C994
G1964	A1901	G1837	U1775	G1707	U1647	A1579	G1511	C1447	G1379	U1316	G1250	U1184	C1123	U1058	C995
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A1966	G1903	G1839	G1777	U1709	G1649	G1581	U1513	G1449	A1384	G1318	G1252	G1186	G1125	U1060	A997
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G1968	G1905	U1841	U1779	A1711	G1651	C1583	A1515	C1451	C1386	C1320	A1254	U1188	A1127	G1062	C998
A1969	C1906	G1842	U1780	U1712	G1652	C1584	A1516	G1452	A1387	A1321	U1255	U1189	G1128	G1063	U999
U1970	U1970	C1843	U1781	G1715	G1653	A1586	C1517	A1453	G1388	U1326	C1257	G1190	A1129	U1064	G1003
G1971	G1971	C1844	U1782	U1716	A1654	G1587	C1518	C1454	G1389	A1327	G1258	G1191	U1130	U1065	U1004
G1972	G1972	G1845	A1783	U1717	A1655	G1588	U1519	G1455	U1390	A1328	G1259	G1192	G1131	U1066	U1005
G1973	A1912	G1846	A1784	A1717	C1656	U1589	U1520	C1461	U1394	U1325	A1260	G1193	U1132	A1067	C1005
C1974	A1913	G1847	A1785	G1718	U1657	A1590	G1521	C1462	U1395	U1326	A1261	A1194	A1133	G1068	C1006
G1975	C1914	A1848	U1786	G1719	C1658	A1591	A1522	C1463	G1396	C1330	G1262	G1195	A1134	G1069	C1007
U1976	U1915	G1849	A1787	U1720	G1659	C1592	U1523	C1464	C1398	G1331	A1263	G1196	C1135	A1070	A1008
A1977	G1850	C1839	G1788	G1721	G1660	A1593	G1524	G1465	C1399	G1332	A1264	G1197	G1136	G1071	A1009
U1978	U1917	G1851	A1789	A1722	G1661	U1594	A1525	G1466	C1400	G1333	A1265	U1199	G1137	G1072	A1010
U1979	A1918	U1852	C1790	A1722	G1662	C1595	C1526	U1467	U1401	G1334	G1266	C1200	G1138	A1073	G1011
G1980	A1853	A1853	U1791	C1728	G1663	A1596	G1527	U1468	G1402	C1335	G1267	U1201	G1139	G1074	U1012
A1981	U1854	C1854	A1792	U1729	A1664	A1597	A1528	C1469	A1403	A1336	U1267	U1202	C1140	G1075	C1013
U1982	G1922	G1857	C1793	C1730	A1665	A1598	G1529	A1470	C1404	U1337	A1268	A1204	A1141	C1076	A1014
G1983	C1921	G1858	A1794	G1731	G1666	U1599	G1530	G1471	C1405	U1340	G1270	A1205	A1142	U1077	U1015
C1985	G1924	U1859	C1795	C1732	G1667	G1600	C1531	G1472	U1406	G1341	G1271	A1143	A1143	G1078	U1018
C1986	C1925	G1860	U1796	G1733	A1668	G1601	A1532	C1473	G1407	A1342	A1272	A1144	C1145	C1079	U1019
A1987	U1926	G1861	U1797	U1736	A1669	A1602	C1533	G1474	G1410	U1343	U1273	G1208	C1146	A1080	A1020
G1988	G1927	G1862	G1799	G1737	C1670	A1603	U1534	G1475	U1411	U1344	G1278	U1209	C1147	U1081	A1021
G1989	A1928	G1863	U1799	G1738	A1672	C1604	A1535	G1476	U1412	G1345	G1279	G1210	U1148	U1082	G1022
C1990	G1929	A1801	C1732	U1739	G1673	C1605	C1536	A1477	A1413	C1346	G1280	G1212	G1149	U1083	U1023
U1991	G1930	G1867	A1802	G1740	G1674	C1606	G1537	U1478	A1413	A1347	G1281	A1213	C1150	A1085	G1024
G1992	U1931	C1868	A1803	C1741	C1675	A1607	U1542	G1479	G1416	C1348	U1282	A1214	A1151	G1025	G1026
U1993	A1932	G1869	C1804	U1742	A1676	A1609	G1543	C1480	C1417	C1349	U1283	G1215	C1152	G1027	G1027
C1994	G1933	C1870	A1805	G1743	A1677	A1610	U1548	U1481	G1418	C1350	G1283	G1216	C1153	A1088	A1028
U1995	U1934	A1871	C1806	A1744	A1678	C1611	A1549	G1482	A1418	U1351	A1284	U1217	G1154	A1089	A1029
C1996	G1935	A1872	G1807	U1745	A1679	C1612	C1550	G1483	A1419	U1352	A1285	G1218	A1155	A1090	A1030
C1997	A1936	G1873	A1808	A1746	U1680	G1613	C1551	U1484	A1420	A1353	A1286	U1219	A1156	G1091	C1030
A1998	U1937	C1874	U1809	U1747	G1681	A1614	A1551	U1485	G1421	A1354	A1287	G1220	G1157	C1092	G1031
G1999	A1938	G1875	A1810	C1748	G1682	C1615	A1552	U1486	G1422	G1355	G1288	G1223	C1158	G1093	A1032
C2000	U1939	A1876	G1811	U1748	G1683	A1616	U1555	U1487	G1423	G1356	C1289	U1224	U1159	U1094	U1033
C2001	U1940	A1877	U1812	C1752	G1684	C1617	G1558	C1488	G1424	C1357	C1290	G1225	G1160	A1095	G1036
G2002	G2002	G1878	G1813	G1753	C1685	A1618	C1489	G1490	G1425	G1358	G1291	A1226	C1161	U1097	G1037
A2003	U1943	C1879	G1814	A1754	G1686	G1619	U1559	A1491	G1426	A1359	U1294	G1227	G1162	G1038	G1038
G2004	U1944	U1880	A1815	G1755	G1687	G1620	U1563	G1491	A1427	C1360	U1295	G1228	A1165	A1039	A1039
A2005	G1945	C1881	C1816	G1756	U1688	U1621	G1560	G1492	C1428	C1361	C1295	G1229	G1166	U1101	G1040
C2006	U1946	U1882	A1817	G1757	A1689	G1622	C1561	G1493	G1429	C1362	G1296	A1230	C1167	C1102	G1041
G2007	U1947	U1883	U1818	U1758	A1690	G1623	U1563	G1494	G1430	C1363	C1297	G1231	G1168	A1103	G1042
C2008	G1948	G1884	A1819	A1759	C1691	G1623	U1563	A1495	A1431	G1364	C1298	U1231	G1168	A1103	G1042

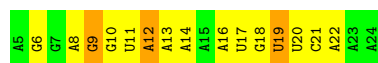


- Molecule 54: 5S ribosomal RNA

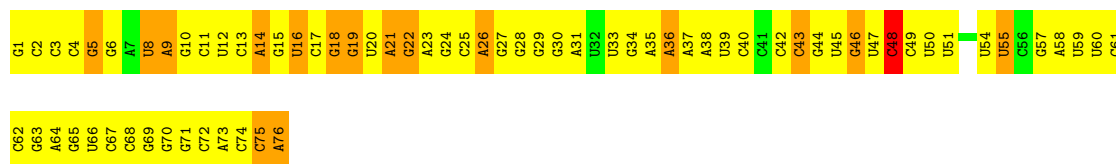
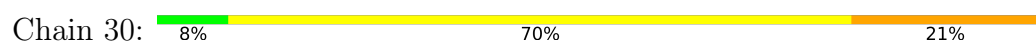
Chain 28:  20% 70% 9%



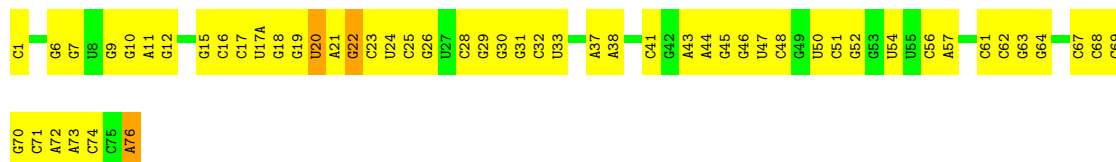
• Molecule 55: mRNA



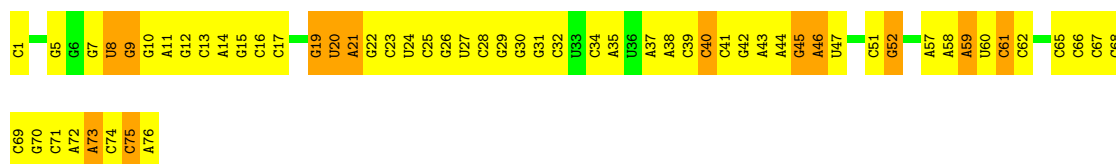
• Molecule 56: A-site tRNA<sup>Phe</sup>



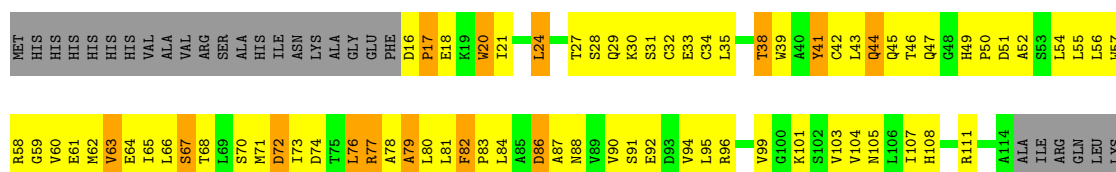
• Molecule 57: P-site tRNA<sup>fMet</sup>



• Molecule 58: E-site tRNA<sup>fMet</sup>



• Molecule 59: GTP pyrophosphokinase



G723	R724	W725	L726	G727	K728	L729	W730	Q731	V732	P733	D734	W735	I736	D737	A738	R739	R740	L741	H742	GLY	SER																																					
SER	ALA	G664	Y665	S666	L667	V668	V669	R670	V671	V672	A673	N674	D675	R676	S677	G678	L679	L680	R681	D682	A688	N689	E690	K691	G694	L695	G696	V697	A698	S699	R700	S701	D702	T703	K704	Q705	Q706	L707	A708	T709	I710	D711	H712	T713	I714	E715	T716	Y717	N718	L719	Q720	V721	L722					
E600	G601	N604	L605	N606	H607	H608	I609	A610	R611	C612	C613	Q614	P615	I616	P617	G618	D619	E620	I621	V633	H634	R635	A636	D637	C638	E639	Q640	L641	A642	E643	L644	R645	S646	H647	A648	P649	E650	R651	I652	V653	D654	A655	V656	H657	G658	E659	SER	TYR										
K491	A494	W495	F496	R497	R501	D514	I521	S522	E527	L531	P532	R533	D540	A544	I551	N554	N565	K566	A569	Q572	D573	A576	L577	L580	Q581	GLN	LYS	SER	Y585	T586	P587	R590	R596	V597	V598	V599																						
P419	A420	G421	S422	T423	P424	F427	A428	Y429	H430	I431	H432	S433	D434	V435	G436	H437	R438	C439	A442	K443	I444	G445	G446	R447	T448	F451	T452	Y453	G458	D459	Q460	T461	E462	I463	T464	Q466	K467	Q468	P469	M470	S471	R472	R473	M477	P478	M479	Y482	V483	T484	T485	S486	R487						
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
Q264	L194	K195	W196	E197	L198	E199	D200	Y201	C202	F203	R204	Y205	L206	E210	Y211	I214	A215	L218	H219	F146	R147	E220	R221	D224	R225	E226	H227	L153	Y228	I229	E230	E231	F232	G233	H234	L235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239	M240	K241	A242	E243	G244	L173	V245	K246	A247	E248	V249	Y250	T179	G251	R252	I259	W260	M263			
E336	I336	Q337	I338	T339	T340	K341	Q342	M343	V351	ALA	ALA	HIS	TRP	LYS	TYR	LYS	GLU	G360	S368	E371	I374	A382	TRP	GLN	H297	T298	H299	Y300	R301	F302	V233	G234	H235	L236	R237	A238	E239																					

## 4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	46935	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	1.6	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	30488	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor



## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 2$	RMSZ	$\# Z  > 2$
1	A	0.34	0/2121	0.71	0/2852
10	J	0.32	0/947	0.68	0/1268
11	K	0.34	0/1054	0.71	1/1403 (0.1%)
12	L	0.36	0/1093	0.64	0/1460
13	M	0.35	0/973	0.65	1/1301 (0.1%)
14	N	0.33	0/902	0.63	0/1209
15	O	0.35	0/929	0.67	0/1242
16	P	0.38	0/960	0.60	0/1278
17	Q	0.36	0/829	0.79	1/1107 (0.1%)
18	R	0.32	0/864	0.67	0/1156
19	S	0.34	0/744	0.76	0/994
2	B	0.37	0/1586	0.70	0/2134
20	T	0.35	0/787	0.68	0/1051
21	U	0.35	0/766	0.66	1/1025 (0.1%)
22	V	0.39	0/582	0.68	0/769
23	W	0.34	0/635	0.65	0/848
24	X	0.32	0/510	0.62	0/677
25	Y	0.33	0/453	0.68	0/605
26	Z	0.40	0/531	0.76	0/709
27	1	0.31	0/450	0.71	0/599
28	2	0.38	0/416	0.68	0/554
29	3	0.39	0/380	0.67	0/498
3	C	0.39	0/1571	0.70	0/2113
30	4	0.35	0/513	0.62	0/676
31	5	0.33	0/303	0.74	0/397
32	6	0.40	0/1735	0.67	1/2338 (0.0%)
33	7	0.35	0/1651	0.64	0/2225
34	8	0.33	0/1665	0.68	2/2227 (0.1%)
35	9	0.33	0/1169	0.67	0/1573
36	10	0.35	0/835	0.75	1/1128 (0.1%)
37	11	0.32	0/1195	0.62	0/1602
38	12	0.35	0/989	0.70	0/1326
39	13	0.35	0/1034	0.71	0/1375
4	D	0.35	0/1434	0.62	0/1926

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
40	14	0.35	0/796	0.71	1/1077 (0.1%)
41	15	0.36	0/885	0.73	1/1195 (0.1%)
42	16	0.36	0/969	0.76	1/1300 (0.1%)
43	17	0.31	0/892	0.70	0/1193
44	18	0.46	0/817	0.61	0/1088
45	19	0.32	0/722	0.58	0/964
46	20	0.37	0/659	0.71	0/884
47	21	0.35	0/657	0.72	0/881
48	22	0.38	0/544	0.62	0/731
49	23	0.36	0/652	0.72	0/877
5	E	0.32	0/1343	0.65	0/1816
50	24	0.33	0/671	0.55	0/888
51	25	0.41	0/550	0.73	1/728 (0.1%)
52	26	0.51	1/36967 (0.0%)	0.72	4/57666 (0.0%)
53	27	0.54	3/69801 (0.0%)	0.72	7/108894 (0.0%)
54	28	0.41	1/2876 (0.0%)	0.71	1/4483 (0.0%)
55	29	0.97	0/486	0.74	0/757
56	30	0.65	1/1813 (0.1%)	0.77	0/2823
57	31	0.44	1/1836 (0.1%)	0.70	0/2859
58	32	0.89	2/1835 (0.1%)	0.77	1/2857 (0.0%)
59	33	0.65	6/4985 (0.1%)	1.09	37/6770 (0.5%)
6	F	0.40	0/1122	0.66	0/1515
7	G	0.45	0/1001	0.79	3/1350 (0.2%)
8	H	0.42	0/1046	0.79	1/1410 (0.1%)
9	I	0.33	0/1152	0.64	0/1551
All	All	0.50	15/167683 (0.0%)	0.72	66/250202 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
52	26	0	13
53	27	0	34
56	30	0	1
59	33	0	3
All	All	0	51

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	33	156	ARG	CZ-NH2	-10.66	1.19	1.33
59	33	152	LYS	CD-CE	-7.76	1.31	1.51
53	27	1379	U	O3'-P	-7.76	1.51	1.61
59	33	17	PRO	CA-CB	-7.25	1.39	1.53
52	26	2	A	OP3-P	-7.00	1.52	1.61
57	31	1	C	OP3-P	-6.99	1.52	1.61
54	28	1	U	OP3-P	-6.86	1.52	1.61
53	27	1	G	OP3-P	-6.85	1.52	1.61
56	30	1	G	OP3-P	-6.81	1.52	1.61
58	32	1	C	OP3-P	-6.77	1.53	1.61
59	33	20	TRP	NE1-CE2	-6.58	1.28	1.37
59	33	20	TRP	CG-CD1	-6.03	1.28	1.36
53	27	2504	U	N1-C2	5.48	1.43	1.38
58	32	40	C	N1-C2	5.24	1.45	1.40
59	33	20	TRP	CD2-CE2	-5.20	1.35	1.41

All (66) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	33	156	ARG	NE-CZ-NH1	19.76	130.18	120.30
59	33	156	ARG	NH1-CZ-NH2	-13.83	104.19	119.40
59	33	17	PRO	N-CA-CB	-11.16	89.90	103.30
59	33	17	PRO	CA-CB-CG	10.28	124.33	104.80
59	33	63	VAL	CG1-CB-CG2	-9.25	96.11	110.90
59	33	156	ARG	NE-CZ-NH2	-9.17	115.72	120.30
59	33	152	LYS	CD-CE-NZ	8.56	131.39	111.70
59	33	332	LYS	CA-CB-CG	8.35	131.77	113.40
59	33	38	THR	CA-CB-CG2	-8.34	100.73	112.40
59	33	197	GLU	OE1-CD-OE2	-8.23	113.43	123.30
34	8	23	GLY	N-CA-C	8.06	133.26	113.10
59	33	232	PHE	CD1-CE1-CZ	7.84	129.51	120.10
59	33	24	LEU	CB-CG-CD2	-7.70	97.91	111.00
59	33	327	LEU	CD1-CG-CD2	-7.29	88.63	110.50
59	33	152	LYS	CB-CG-CD	-7.25	92.75	111.60
59	33	17	PRO	CB-CA-C	-6.89	94.77	112.00
17	Q	50	GLY	N-CA-C	-6.87	95.92	113.10
59	33	169	ASP	CB-CG-OD1	6.61	124.25	118.30
59	33	471	PRO	N-CA-CB	6.46	111.06	103.30
59	33	86	ASP	CB-CG-OD1	-6.38	112.56	118.30
53	27	974	G	N9-C1'-C2'	6.34	122.25	114.00
59	33	351	VAL	CB-CA-C	6.33	123.43	111.40
42	16	43	LYS	N-CA-C	6.19	127.71	111.00
13	M	119	SER	N-CA-C	-6.17	94.35	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	27	1379	U	P-O3'-C3'	6.17	127.10	119.70
59	33	225	ARG	NE-CZ-NH2	-6.12	117.24	120.30
53	27	1320	C	N1-C1'-C2'	6.05	121.86	114.00
59	33	170	GLU	OE1-CD-OE2	6.01	130.51	123.30
59	33	587	PRO	N-CA-CB	5.99	110.49	103.30
59	33	76	LEU	N-CA-CB	-5.94	98.52	110.40
59	33	79	ALA	CB-CA-C	5.93	119.00	110.10
59	33	149	VAL	CA-CB-CG1	-5.82	102.18	110.90
7	G	129	LEU	N-CA-C	-5.80	95.33	111.00
52	26	1347	G	C1'-O4'-C4'	-5.79	105.27	109.90
59	33	77	ARG	NE-CZ-NH2	5.74	123.17	120.30
59	33	82	PHE	CB-CG-CD2	5.67	124.77	120.80
54	28	12	C	N1-C1'-C2'	5.65	121.35	114.00
36	10	98	GLU	N-CA-C	5.60	126.12	111.00
34	8	151	GLN	N-CA-C	-5.55	96.03	111.00
41	15	125	LYS	N-CA-C	5.53	125.92	111.00
59	33	566	LYS	N-CA-C	5.51	125.88	111.00
7	G	60	LEU	N-CA-C	-5.50	96.17	111.00
59	33	225	ARG	NE-CZ-NH1	5.47	123.03	120.30
59	33	293	LEU	CB-CG-CD1	-5.46	101.72	111.00
59	33	469	PRO	N-CA-CB	5.46	109.85	103.30
52	26	130	A	N9-C1'-C2'	5.46	121.09	114.00
7	G	107	GLU	N-CA-C	-5.45	96.29	111.00
58	32	45	G	N9-C1'-C2'	5.45	121.08	114.00
52	26	496	A	N9-C1'-C2'	5.37	120.98	114.00
59	33	243	GLU	OE1-CD-OE2	5.34	129.71	123.30
59	33	232	PHE	CG-CD1-CE1	-5.31	114.96	120.80
53	27	1174	U	N1-C1'-C2'	5.27	120.85	114.00
53	27	1565	C	N1-C1'-C2'	5.27	120.85	114.00
59	33	210	GLU	CA-CB-CG	-5.27	101.81	113.40
51	25	25	ALA	N-CA-C	-5.23	96.87	111.00
53	27	1451	C	N1-C1'-C2'	5.23	120.80	114.00
59	33	67	SER	O-C-N	-5.21	114.36	122.70
40	14	38	GLY	N-CA-C	-5.21	100.08	113.10
53	27	1267	U	N1-C1'-C2'	5.18	120.73	114.00
8	H	18	ASN	N-CA-C	5.16	124.92	111.00
59	33	161	ARG	NE-CZ-NH1	5.11	122.86	120.30
21	U	8	VAL	N-CA-C	-5.11	97.20	111.00
59	33	197	GLU	CG-CD-OE2	5.09	128.49	118.30
52	26	1300	G	N9-C1'-C2'	5.09	120.62	114.00
11	K	87	GLY	N-CA-C	-5.06	100.44	113.10
32	6	31	PHE	N-CA-C	-5.05	97.35	111.00

There are no chirality outliers.

All (51) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
52	26	1026	G	Sidechain
52	26	1167	A	Sidechain
52	26	1213	A	Sidechain
52	26	130	A	Sidechain
52	26	1316	G	Sidechain
52	26	159	G	Sidechain
52	26	266	G	Sidechain
52	26	820	U	Sidechain
52	26	872	A	Sidechain
52	26	873	A	Sidechain
52	26	88	U	Sidechain
52	26	898	G	Sidechain
52	26	958	A	Sidechain
53	27	1091	G	Sidechain
53	27	1191	G	Sidechain
53	27	1204	A	Sidechain
53	27	1266	G	Sidechain
53	27	1268	A	Sidechain
53	27	1332	G	Sidechain
53	27	1666	G	Sidechain
53	27	1814	G	Sidechain
53	27	1828	G	Sidechain
53	27	1937	A	Sidechain
53	27	1964	G	Sidechain
53	27	1983	G	Sidechain
53	27	201	C	Sidechain
53	27	202	U	Sidechain
53	27	2109	U	Sidechain
53	27	2121	G	Sidechain
53	27	214	G	Sidechain
53	27	2244	U	Sidechain
53	27	2266	A	Sidechain
53	27	2529	G	Sidechain
53	27	2595	G	Sidechain
53	27	2596	U	Sidechain
53	27	2629	U	Sidechain
53	27	2661	G	Sidechain
53	27	2725	A	Sidechain
53	27	2807	U	Sidechain
53	27	2890	G	Sidechain

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Mol	Chain	Res	Type	Group
53	27	446	G	Sidechain
53	27	500	G	Sidechain
53	27	512	G	Sidechain
53	27	52	A	Sidechain
53	27	683	U	Sidechain
53	27	726	G	Sidechain
53	27	757	G	Sidechain
56	30	48	C	Sidechain
59	33	156	ARG	Sidechain
59	33	407	TYR	Sidechain
59	33	41	TYR	Sidechain

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2082	0	2157	183	0
2	B	1565	0	1616	121	0
3	C	1552	0	1619	137	0
4	D	1410	0	1447	150	0
5	E	1323	0	1374	88	0
6	F	1111	0	1148	83	0
7	G	988	0	1025	124	0
8	H	1032	0	1088	136	0
9	I	1129	0	1162	89	0
10	J	938	0	1012	90	0
11	K	1045	0	1117	89	0
12	L	1074	0	1157	70	0
13	M	960	0	1000	75	0
14	N	892	0	923	73	0
15	O	917	0	965	78	0
16	P	947	0	1022	94	0
17	Q	816	0	839	90	0
18	R	857	0	922	52	0
19	S	738	0	807	55	0
20	T	779	0	834	79	0
21	U	753	0	780	71	0
22	V	575	0	592	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
23	W	625	0	655	45	0
24	X	509	0	543	60	0
25	Y	449	0	491	41	0
26	Z	522	0	521	52	0
27	1	444	0	461	52	0
28	2	409	0	440	20	0
29	3	377	0	418	33	0
30	4	504	0	574	33	0
31	5	302	0	343	30	0
32	6	1704	0	1732	124	0
33	7	1624	0	1699	111	0
34	8	1643	0	1710	168	0
35	9	1156	0	1199	110	0
36	10	817	0	808	98	0
37	11	1181	0	1240	97	0
38	12	979	0	1034	84	0
39	13	1022	0	1070	130	0
40	14	786	0	828	92	0
41	15	869	0	878	89	0
42	16	955	0	1019	118	0
43	17	883	0	944	97	0
44	18	805	0	847	95	0
45	19	714	0	737	54	0
46	20	649	0	666	87	0
47	21	648	0	691	52	0
48	22	535	0	552	54	0
49	23	637	0	665	71	0
50	24	665	0	714	67	0
51	25	544	0	579	80	0
52	26	33016	0	16617	1573	0
53	27	62322	0	31345	2882	0
54	28	2572	0	1302	116	0
55	29	432	0	218	14	0
56	30	1623	0	821	75	0
57	31	1644	0	836	46	0
58	32	1643	0	836	66	0
59	33	4911	0	4550	655	0
All	All	154603	0	105189	8829	0

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 34.

All (8829) 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)
53:27:45:G:H5''	53:27:46:G:H5'	1.22	1.18
59:33:17:PRO:HB3	59:33:39:TRP:NE1	1.57	1.17
7:G:55:VAL:HA	53:27:1084:A:H5'	1.26	1.15
53:27:1702:G:H2'	53:27:1703:G:H5''	1.15	1.14
59:33:24:LEU:HD21	59:33:70:SER:HA	1.19	1.12
8:H:126:ARG:HB3	53:27:1080:A:H4'	1.27	1.12
53:27:1300:G:H4'	53:27:1301:A:H5''	1.19	1.11
7:G:8:LYS:HA	7:G:11:ILE:HG22	1.34	1.10
59:33:63:VAL:HG11	59:33:80:LEU:HG	1.34	1.09
34:8:116:LEU:HB3	34:8:122:ILE:HD11	1.33	1.09
53:27:2672:U:H2'	53:27:2673:G:H5''	1.30	1.09
39:13:20:ILE:HD11	39:13:60:LEU:HD13	1.36	1.08
59:33:65:ILE:HG21	59:33:157:ILE:HD11	1.31	1.08
39:13:41:GLU:HB2	39:13:44:ARG:HH22	1.19	1.07
53:27:279:A:H2'	53:27:280:U:H5'	1.36	1.06
8:H:123:ALA:HB1	53:27:1081:U:H5''	1.30	1.06
53:27:1869:G:H3'	53:27:1870:C:H5''	1.32	1.06
53:27:742:A:H2'	53:27:743:A:C8	1.91	1.06
41:15:88:PRO:HD3	51:25:28:LEU:HD21	1.38	1.05
1:A:81:GLU:HB2	1:A:90:ILE:HD11	1.36	1.04
37:11:4:ARG:HH22	52:26:1092:A:H5'	1.18	1.04
8:H:20:SER:HA	8:H:24:GLY:HA3	1.40	1.04
53:27:189:G:H2'	53:27:205:G:H22	1.18	1.03
53:27:2243:U:H2'	53:27:2244:U:H6	1.23	1.03
59:33:59:GLY:HA2	59:33:82:PHE:CE1	1.92	1.03
59:33:703:THR:HG23	59:33:705:GLN:H	1.23	1.03
13:M:95:THR:HA	13:M:115:LEU:HA	1.38	1.03
53:27:1702:G:C2'	53:27:1703:G:H5''	1.89	1.03
59:33:77:ARG:HH12	59:33:103:VAL:HG21	1.24	1.03
43:17:15:VAL:HG23	43:17:16:ILE:HD12	1.42	1.02
59:33:31:SER:HB3	59:33:73:ILE:HG21	1.38	1.02
37:11:4:ARG:NH2	52:26:1092:A:H5'	1.75	1.02
43:17:7:ASN:HD22	43:17:21:ILE:HG13	1.19	1.02
53:27:248:G:H5'	53:27:249:C:H5'	1.41	1.02
53:27:1659:G:H2'	53:27:1660:G:H5''	1.43	1.00
7:G:58:THR:HG21	7:G:82:ILE:H	1.25	1.00
53:27:1827:U:H5'	53:27:1971:U:H5''	1.44	1.00
59:33:232:PHE:CE1	59:33:329:PRO:HD2	1.97	0.99
52:26:1412:C:H2'	52:26:1413:A:C8	1.97	0.98
18:R:59:GLU:HA	18:R:64:ALA:HA	1.46	0.98
52:26:1259:C:H3'	52:26:1260:G:H5''	1.43	0.98
53:27:275:C:H2'	53:27:276:U:H4'	1.46	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:66:LEU:HD12	59:33:79:ALA:HB2	1.44	0.97
41:15:87:GLY:H	41:15:113:THR:HG22	1.27	0.97
53:27:1180:U:H2'	53:27:1181:U:C6	1.99	0.97
53:27:528:A:H2	53:27:2042:A:H2'	1.30	0.97
1:A:255:LYS:HG2	53:27:1844:C:H5''	1.44	0.97
53:27:2241:A:H2'	53:27:2242:G:C8	2.00	0.97
9:I:81:ILE:HG23	9:I:82:GLY:H	1.25	0.97
59:33:49:HIS:HB3	59:33:50:PRO:HD2	1.47	0.96
13:M:90:ARG:HH21	53:27:2881:U:H5'	1.25	0.96
48:22:70:THR:HG23	48:22:71:ASP:H	1.29	0.96
53:27:1796:U:H2'	53:27:1797:G:H8	1.29	0.96
52:26:835:U:H2'	52:26:836:G:H5''	1.47	0.96
59:33:44:GLN:HB3	59:33:45:GLN:HB2	1.46	0.95
32:6:66:ILE:HB	32:6:88:GLN:HG3	1.49	0.95
53:27:184:C:H2'	53:27:185:G:C8	2.02	0.95
9:I:27:ARG:HH22	53:27:1142:A:H4'	1.32	0.95
7:G:88:HIS:HB3	7:G:89:PRO:HD3	1.49	0.95
4:D:139:GLU:HA	26:Z:28:VAL:HG13	1.47	0.95
41:15:109:ILE:HD12	51:25:16:ARG:HD2	1.49	0.94
32:6:104:LYS:NZ	52:26:1073:U:H4'	1.82	0.94
53:27:742:A:H2'	53:27:743:A:H8	1.26	0.94
10:J:49:ARG:HH22	52:26:1423:G:H5'	1.30	0.94
59:33:327:LEU:HA	59:33:332:LYS:HA	1.49	0.94
59:33:62:MET:CE	59:33:79:ALA:HA	1.97	0.94
59:33:169:ASP:O	59:33:170:GLU:HG3	1.67	0.94
53:27:807:U:H2'	53:27:808:G:C8	2.03	0.94
17:Q:49:ILE:HB	17:Q:51:VAL:O	1.68	0.94
53:27:1502:A:H2'	53:27:1503:A:H5''	1.50	0.93
59:33:95:LEU:O	59:33:99:VAL:HG12	1.67	0.93
48:22:17:VAL:HG22	48:22:18:GLN:H	1.31	0.93
34:8:21:LYS:HE3	34:8:25:ARG:HB3	1.51	0.93
41:15:34:THR:HG22	41:15:40:ALA:HA	1.46	0.93
11:K:77:ILE:HD11	11:K:110:VAL:HG13	1.50	0.93
52:26:1412:C:H2'	52:26:1413:A:H8	1.30	0.93
52:26:664:G:H22	52:26:741:G:H1	0.95	0.93
53:27:2508:G:H1	53:27:2580:U:H5	1.04	0.93
29:3:1:MET:H1	53:27:1620:G:H5'	1.33	0.93
39:13:27:ILE:HD11	39:13:34:LEU:HB2	1.49	0.92
53:27:2277:G:H2'	53:27:2278:A:H5''	1.49	0.92
58:32:9:G:H2'	58:32:11:A:H62	1.31	0.92
43:17:88:LEU:HA	43:17:91:ARG:HE	1.35	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:18:C:H2'	52:26:19:A:H5''	1.51	0.92
36:10:29:ILE:HG21	36:10:64:VAL:HG21	1.51	0.92
52:26:1132:C:H2'	52:26:1133:G:H5''	1.51	0.92
35:9:107:GLY:HA3	52:26:9:G:H5'	1.52	0.92
53:27:184:C:H2'	53:27:185:G:H8	1.33	0.92
10:J:30:ARG:HD2	53:27:2674:G:H4'	1.51	0.92
22:V:19:VAL:HA	22:V:34:VAL:HG22	1.51	0.92
41:15:109:ILE:H	51:25:4:LYS:HZ3	1.10	0.92
53:27:1173:U:H2'	53:27:1174:U:H4'	1.51	0.92
53:27:807:U:H2'	53:27:808:G:H8	1.35	0.92
46:20:5:ARG:HB2	52:26:376:G:H5''	1.50	0.91
54:28:3:C:H2'	54:28:4:C:H5''	1.50	0.91
53:27:528:A:C2	53:27:2042:A:H2'	2.05	0.91
59:33:676:ARG:HG3	59:33:677:SER:H	1.36	0.91
18:R:36:LEU:HD13	18:R:48:LYS:HA	1.52	0.91
59:33:38:THR:HG21	59:33:77:ARG:HB3	1.53	0.91
53:27:140:C:H2'	53:27:141:G:H4'	1.52	0.91
53:27:1869:G:H3'	53:27:1870:C:C5'	2.01	0.91
1:A:129:LEU:HD11	1:A:134:ILE:HG13	1.51	0.91
40:14:57:VAL:HG22	40:14:58:ASN:H	1.35	0.91
52:26:1033:G:H2'	52:26:1034:G:H4'	1.50	0.91
52:26:235:C:H2'	52:26:236:A:C8	2.05	0.91
50:24:34:VAL:HG11	50:24:78:LEU:HD21	1.53	0.91
33:7:185:THR:HG22	33:7:198:LYS:HG2	1.53	0.91
42:16:53:ARG:HA	42:16:63:THR:HA	1.52	0.90
53:27:728:G:HO2'	53:27:730:A:H8	1.18	0.90
11:K:85:VAL:HG21	11:K:95:LEU:HD23	1.53	0.90
56:30:18:G:H1	56:30:55:U:H1'	1.34	0.90
53:27:1965:C:H3'	53:27:1966:A:H8	1.37	0.90
27:1:54:ILE:HG23	27:1:56:LYS:H	1.35	0.90
52:26:1129:C:H2'	52:26:1139:G:N7	1.86	0.90
52:26:828:U:H3'	52:26:829:G:H5''	1.53	0.90
52:26:963:G:H2'	52:26:964:A:H8	1.33	0.90
53:27:195:A:H2'	53:27:198:C:H41	1.36	0.90
27:1:8:THR:HG23	27:1:11:LYS:H	1.36	0.90
50:24:9:ARG:HD3	52:26:107:G:O6	1.72	0.90
47:21:64:ARG:HD2	52:26:264:C:H4'	1.54	0.90
41:15:116:PRO:HB3	52:26:676:A:H1'	1.51	0.90
37:11:129:ASN:HA	37:11:134:VAL:HG11	1.54	0.90
14:N:62:LEU:HD13	14:N:70:ALA:HA	1.53	0.90
53:27:1300:G:C4'	53:27:1301:A:H5''	2.02	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2114:A:H61	53:27:2117:A:H62	1.19	0.89
59:33:24:LEU:CD2	59:33:70:SER:HA	2.02	0.89
40:14:43:PRO:HA	52:26:1151:A:H5'	1.51	0.89
53:27:1172:C:H2'	53:27:1173:U:H5''	1.55	0.89
40:14:15:HIS:HB3	40:14:70:HIS:NE2	1.88	0.89
52:26:440:C:H3'	52:26:441:A:H5''	1.54	0.89
52:26:405:U:H3'	52:26:406:G:H5'	1.53	0.89
1:A:131:MET:HA	1:A:134:ILE:HD12	1.53	0.89
53:27:1171:G:H3'	53:27:1172:C:H4'	1.55	0.89
59:33:214:ILE:HD11	59:33:260:TRP:HE3	1.35	0.89
59:33:698:ALA:HB3	59:33:711:ASP:HB2	1.53	0.88
59:33:82:PHE:CG	59:33:83:PRO:HD3	2.08	0.88
42:16:49:ARG:HG3	42:16:89:LEU:HD11	1.55	0.88
53:27:1300:G:H4'	53:27:1301:A:C5'	2.04	0.88
36:10:66:ALA:HB1	36:10:67:PRO:HD2	1.56	0.88
21:U:72:VAL:HG12	21:U:93:ARG:HA	1.52	0.88
44:18:80:ARG:HA	44:18:83:VAL:HG12	1.55	0.88
35:9:80:LEU:HD13	35:9:122:VAL:HG11	1.54	0.88
3:C:60:TRP:HE1	3:C:69:ARG:HG3	1.37	0.88
53:27:2553:G:H1'	53:27:2582:G:H21	1.38	0.88
53:27:596:U:H2'	53:27:597:G:C8	2.09	0.88
59:33:96:ARG:HG2	59:33:104:VAL:HG11	1.54	0.88
14:N:35:ILE:HG22	14:N:53:THR:HG23	1.55	0.88
51:25:3:ILE:N	51:25:19:LYS:HZ1	1.71	0.88
52:26:193:C:H2'	52:26:194:C:C6	2.08	0.88
39:13:91:GLU:HA	39:13:94:ARG:HB2	1.53	0.88
15:O:52:ARG:HH21	53:27:2720:U:H5''	1.39	0.88
53:27:2800:A:H3'	53:27:2801:G:H5'	1.55	0.88
43:17:27:THR:HG21	52:26:1328:C:H5''	1.55	0.87
53:27:2086:U:H2'	53:27:2087:G:C8	2.09	0.87
53:27:2848:G:H2'	53:27:2867:G:H21	1.39	0.87
59:33:175:ALA:HA	59:33:178:CYS:SG	2.14	0.87
59:33:225:ARG:HD2	59:33:276:VAL:HG13	1.56	0.87
59:33:81:LEU:HA	59:33:84:LEU:HD13	1.54	0.87
53:27:2747:G:H1	53:27:2754:U:H2'	1.39	0.87
59:33:20:TRP:CE2	59:33:63:VAL:HB	2.10	0.87
8:H:56:VAL:HA	8:H:70:THR:HA	1.53	0.87
52:26:664:G:N2	52:26:741:G:H1	1.71	0.87
32:6:53:LEU:HD22	32:6:219:THR:HG21	1.55	0.87
53:27:1261:C:H2'	53:27:1262:A:H5''	1.56	0.87
4:D:48:LEU:HA	4:D:51:ASN:HD22	1.39	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:147:ARG:HD3	4:D:148:VAL:H	1.38	0.87
20:T:17:ASP:HB3	20:T:20:LYS:HG3	1.55	0.87
59:33:300:TYR:CE1	59:33:329:PRO:HD3	2.10	0.87
53:27:1076:C:H2'	53:27:1077:A:H8	1.40	0.86
34:8:61:ARG:HH21	34:8:67:LEU:HA	1.40	0.86
53:27:1796:U:H2'	53:27:1797:G:C8	2.10	0.86
59:33:63:VAL:HG11	59:33:80:LEU:CG	2.05	0.86
45:19:71:ARG:NH2	52:26:754:C:H5'	1.91	0.86
53:27:2685:G:H2'	53:27:2686:G:H8	1.41	0.86
53:27:955:U:H5	53:27:962:G:H1	1.23	0.86
40:14:65:TYR:HB3	44:18:95:LEU:HD11	1.58	0.86
8:H:123:ALA:HB1	53:27:1081:U:C5'	2.06	0.86
59:33:143:VAL:HG22	59:33:145:ASP:H	1.37	0.86
59:33:284:GLU:OE2	59:33:341:LYS:HE2	1.74	0.86
34:8:28:ASP:O	34:8:30:LYS:N	2.07	0.86
18:R:3:THR:HG21	18:R:58:ALA:HB2	1.55	0.86
59:33:61:GLU:O	59:33:64:GLU:HG2	1.76	0.86
39:13:17:ARG:NH2	52:26:1129:C:H5''	1.91	0.85
9:I:108:MET:HE1	53:27:1138:G:H21	1.39	0.85
53:27:2604:U:H2'	53:27:2605:U:C6	2.10	0.85
37:11:12:LEU:HD12	37:11:13:PRO:HD2	1.56	0.85
3:C:57:LYS:HE3	3:C:73:ILE:HG21	1.59	0.85
59:33:197:GLU:HG2	59:33:201:TYR:CE2	2.12	0.85
4:D:76:PHE:HE2	53:27:2310:C:H2'	1.39	0.85
59:33:444:ILE:HG22	59:33:461:ILE:HD12	1.58	0.85
59:33:74:ASP:HA	59:33:77:ARG:NH2	1.91	0.85
1:A:124:LYS:HD2	1:A:125:PRO:HD2	1.56	0.85
53:27:1597:A:H5''	53:27:1598:A:H5'	1.58	0.85
53:27:2786:U:H2'	53:27:2787:C:H6	1.42	0.85
59:33:17:PRO:HG3	59:33:39:TRP:CZ2	2.12	0.85
46:20:20:VAL:HG23	46:20:35:ARG:HA	1.59	0.85
39:13:17:ARG:HH22	52:26:1129:C:H5''	1.39	0.85
39:13:18:VAL:HA	39:13:64:ILE:HG22	1.59	0.85
53:27:1904:G:H21	53:27:1905:C:H1'	1.42	0.85
52:26:309:A:H2'	52:26:310:G:H8	1.42	0.85
41:15:83:VAL:HB	41:15:109:ILE:HA	1.59	0.84
36:10:29:ILE:HG23	36:10:70:VAL:HG11	1.57	0.84
47:21:15:LYS:O	52:26:275:G:H4'	1.76	0.84
53:27:1843:C:H2'	53:27:1844:C:C6	2.11	0.84
41:15:15:VAL:HG22	41:15:16:SER:H	1.40	0.84
53:27:1965:C:H3'	53:27:1966:A:C8	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:91:SER:O	59:33:94:VAL:HG12	1.76	0.84
52:26:531:U:H4'	52:26:532:A:H5'	1.60	0.84
50:24:43:LYS:HB2	50:24:86:ALA:HB2	1.56	0.84
59:33:20:TRP:CH2	59:33:76:LEU:HB3	2.11	0.84
41:15:124:LYS:HD3	52:26:780:A:H5''	1.58	0.84
14:N:24:THR:HG22	14:N:42:PRO:HD3	1.57	0.84
23:W:67:LEU:HD11	23:W:77:TYR:HB2	1.60	0.84
40:14:32:THR:HG23	40:14:83:THR:HG23	1.59	0.84
53:27:2514:U:H2'	53:27:2515:C:C6	2.12	0.84
53:27:2508:G:N1	53:27:2580:U:H5	1.74	0.84
46:20:39:PHE:HA	46:20:50:THR:HG23	1.59	0.84
34:8:146:GLU:HA	34:8:149:LYS:HB2	1.59	0.84
53:27:581:C:H2'	53:27:582:A:C8	2.13	0.84
59:33:24:LEU:HD21	59:33:70:SER:CA	2.07	0.84
7:G:55:VAL:HA	53:27:1084:A:C5'	2.08	0.83
19:S:61:LEU:HD11	19:S:82:LYS:HE2	1.58	0.83
53:27:2162:G:H2'	53:27:2163:A:H5'	1.59	0.83
36:10:86:ARG:HD3	48:22:63:TYR:O	1.78	0.83
39:13:98:ARG:HG3	39:13:103:VAL:HG21	1.61	0.83
59:33:293:LEU:HD12	59:33:322:ILE:HG21	1.59	0.83
53:27:287:G:H2'	53:27:288:U:C6	2.12	0.83
53:27:596:U:H2'	53:27:597:G:H8	1.40	0.83
1:A:12:ARG:HH21	53:27:728:G:H4'	1.43	0.83
7:G:81:LEU:HD13	53:27:1107:G:H5'	1.56	0.83
52:26:235:C:H2'	52:26:236:A:H8	1.42	0.83
53:27:2672:U:C2'	53:27:2673:G:H5''	2.07	0.83
58:32:41:C:H2'	58:32:42:G:C8	2.13	0.83
59:33:62:MET:HE3	59:33:79:ALA:HA	1.60	0.83
53:27:1266:G:H22	53:27:2012:G:H2'	1.44	0.83
53:27:2329:U:H2'	53:27:2330:G:C8	2.14	0.83
33:7:89:VAL:O	33:7:93:ILE:HG13	1.79	0.83
35:9:23:THR:HA	35:9:28:ARG:HA	1.58	0.83
18:R:83:LYS:HD3	18:R:95:ARG:HH12	1.43	0.83
52:26:1119:C:H2'	52:26:1120:C:C6	2.14	0.83
47:21:45:VAL:HG21	47:21:60:ILE:HD13	1.61	0.83
33:7:31:ASN:HD21	33:7:58:ARG:HD2	1.43	0.83
5:E:154:GLU:HG2	5:E:156:TYR:H	1.43	0.83
52:26:940:C:H2'	52:26:941:G:C8	2.14	0.82
53:27:565:C:H2'	53:27:566:U:C6	2.14	0.82
59:33:147:ARG:HA	59:33:150:VAL:HG12	1.60	0.82
9:I:27:ARG:NH2	53:27:1142:A:H4'	1.94	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:21:LEU:HA	24:X:25:GLN:HB3	1.58	0.82
52:26:695:A:H2'	52:26:696:A:C8	2.14	0.82
53:27:2453:A:H2'	53:27:2454:G:H8	1.43	0.82
53:27:799:G:H5''	53:27:800:A:H2'	1.60	0.82
32:6:174:GLU:HA	32:6:177:ASN:HD22	1.43	0.82
11:K:79:LEU:HD12	11:K:112:LEU:HA	1.60	0.82
39:13:53:LEU:HD12	39:13:54:VAL:HG13	1.61	0.82
46:20:46:LYS:HG3	46:20:47:GLU:H	1.42	0.82
53:27:760:G:H2'	53:27:761:A:O4'	1.78	0.82
15:O:59:THR:HG22	15:O:72:VAL:HG12	1.60	0.82
53:27:435:C:H2'	53:27:436:C:H5'	1.59	0.82
53:27:1693:U:H3'	53:27:1694:C:H5'	1.61	0.82
58:32:22:G:N7	58:32:46:A:N1	2.27	0.82
9:I:56:VAL:HB	9:I:124:VAL:HG12	1.62	0.82
24:X:17:GLU:HB2	24:X:53:VAL:HG11	1.62	0.82
52:26:62:U:H2'	52:26:63:C:C6	2.15	0.82
53:27:2591:C:H2'	53:27:2592:G:C8	2.14	0.82
53:27:2014:A:H2'	53:27:2015:A:C8	2.14	0.82
53:27:2327:A:H2'	53:27:2328:A:C8	2.15	0.82
59:33:30:LYS:O	59:33:33:GLU:HG2	1.79	0.82
34:8:149:LYS:HG2	34:8:150:LYS:H	1.43	0.82
52:26:352:C:H4'	52:26:354:G:OP1	1.79	0.82
59:33:686:ILE:HG21	59:33:729:LEU:HD23	1.61	0.82
8:H:4:VAL:HG13	8:H:7:TYR:HB2	1.61	0.82
51:25:4:LYS:HE3	51:25:6:ARG:HB2	1.58	0.81
52:26:112:G:H21	52:26:354:G:H5'	1.45	0.81
52:26:1052:U:H2'	52:26:1200:C:H41	1.44	0.81
34:8:16:THR:HG22	34:8:17:ASP:H	1.44	0.81
53:27:2243:U:H2'	53:27:2244:U:C6	2.12	0.81
31:5:2:LYS:HB2	31:5:35:GLN:HB3	1.59	0.81
4:D:147:ARG:HD3	4:D:148:VAL:N	1.95	0.81
52:26:1527:U:H2'	52:26:1528:U:C6	2.16	0.81
53:27:1594:U:H2'	53:27:1595:C:C6	2.15	0.81
53:27:833:A:H2'	53:27:834:G:H8	1.46	0.81
41:15:16:SER:HA	41:15:78:ILE:HA	1.63	0.81
52:26:1033:G:C2'	52:26:1034:G:H4'	2.09	0.81
52:26:920:U:H2'	52:26:921:U:C6	2.15	0.81
53:27:1697:G:H3'	53:27:1698:A:H5''	1.63	0.81
3:C:46:GLN:HB2	3:C:86:ALA:HB1	1.62	0.81
35:9:156:ARG:HD2	38:12:42:GLU:HG3	1.60	0.81
40:14:36:VAL:HG23	40:14:76:ILE:HA	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1011:C:H2'	52:26:1012:A:H8	1.46	0.81
52:26:1218:C:H2'	52:26:1219:A:C8	2.14	0.81
53:27:2848:G:H2'	53:27:2867:G:N2	1.95	0.81
8:H:21:PRO:HB2	8:H:22:PRO:HD3	1.63	0.81
36:10:10:VAL:HB	36:10:58:HIS:HB3	1.63	0.81
52:26:1513:A:H2'	52:26:1514:G:H8	1.44	0.81
4:D:35:LEU:HG	4:D:153:ILE:HG22	1.63	0.81
50:24:3:ILE:HA	50:24:7:LYS:HD3	1.62	0.81
51:25:23:GLU:HG3	51:25:24:LYS:H	1.44	0.81
52:26:677:U:H2'	52:26:678:U:C6	2.15	0.81
59:33:45:GLN:HG2	59:33:46:THR:HG23	1.63	0.81
37:11:113:LYS:HB2	37:11:117:LEU:HD13	1.61	0.81
39:13:41:GLU:HB2	39:13:44:ARG:NH2	1.95	0.81
52:26:398:U:H2'	52:26:399:G:C8	2.15	0.81
52:26:673:A:H2'	52:26:674:G:C8	2.16	0.81
52:26:955:U:H1'	52:26:1227:A:H61	1.46	0.81
53:27:1667:G:H22	53:27:1991:U:H3'	1.46	0.81
58:32:31:G:H2'	58:32:32:C:H5'	1.63	0.81
32:6:39:ILE:HG22	32:6:40:ILE:H	1.46	0.81
53:27:2047:C:H2'	53:27:2048:G:H8	1.45	0.80
58:32:14:A:H3'	58:32:15:G:H8	1.45	0.80
59:33:43:LEU:HG	59:33:44:GLN:OE1	1.80	0.80
59:33:58:ARG:O	59:33:61:GLU:HG2	1.81	0.80
15:O:3:ILE:H	15:O:3:ILE:HD12	1.46	0.80
46:20:67:ILE:HG23	46:20:71:VAL:HB	1.61	0.80
52:26:502:A:H2'	52:26:503:C:C6	2.15	0.80
53:27:1266:G:N2	53:27:2012:G:H2'	1.95	0.80
56:30:18:G:H22	56:30:55:U:H6	1.26	0.80
34:8:123:MET:HA	34:8:128:VAL:HA	1.63	0.80
39:13:83:THR:HG21	39:13:102:PHE:HB3	1.63	0.80
53:27:2092:U:H4'	53:27:2093:G:H5''	1.61	0.80
53:27:890:C:H2'	53:27:891:G:O4'	1.80	0.80
8:H:25:PRO:O	8:H:29:GLN:HG2	1.80	0.80
53:27:2087:G:H2'	53:27:2088:A:C8	2.16	0.80
32:6:183:PHE:HB3	32:6:197:PHE:HD2	1.46	0.80
59:33:409:PHE:O	59:33:460:GLN:HA	1.81	0.80
5:E:97:VAL:HG23	5:E:124:CYS:SG	2.21	0.80
8:H:14:ALA:HB2	8:H:50:LYS:HA	1.62	0.80
22:V:52:ASP:O	22:V:53:HIS:HB2	1.81	0.80
52:26:532:A:H3'	52:26:533:A:H5''	1.62	0.80
40:14:10:LEU:HD11	40:14:72:ARG:HB2	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:594:U:H2'	53:27:595:C:C6	2.17	0.80
43:17:82:LEU:HD11	49:23:65:MET:HG2	1.63	0.80
53:27:565:C:H2'	53:27:566:U:H6	1.47	0.80
44:18:39:ASP:HA	44:18:42:ASN:HD22	1.47	0.80
46:20:7:ALA:HB3	46:20:18:GLN:HB3	1.64	0.80
53:27:2564:A:C2	53:27:2647:U:H4'	2.17	0.80
58:32:51:C:H2'	58:32:52:G:C8	2.16	0.80
5:E:23:ILE:HD13	5:E:71:LEU:HD21	1.61	0.80
53:27:191:A:H2'	53:27:192:C:C6	2.17	0.80
53:27:2493:U:H3'	53:27:2494:G:H5''	1.63	0.80
34:8:169:TRP:CD1	34:8:185:PRO:HG3	2.17	0.80
6:F:44:ILE:O	6:F:48:GLU:HG3	1.82	0.80
52:26:1306:A:N6	52:26:1331:G:H1'	1.97	0.79
42:16:27:PRO:HG2	52:26:363:A:C2	2.17	0.79
54:28:115:A:H2'	54:28:116:G:C8	2.17	0.79
59:33:645:ARG:HA	59:33:649:PRO:HB3	1.64	0.79
52:26:677:U:H3	52:26:713:G:H22	1.27	0.79
53:27:1659:G:C2'	53:27:1660:G:H5''	2.11	0.79
59:33:65:ILE:HG21	59:33:157:ILE:CD1	2.09	0.79
44:18:45:LEU:HD22	44:18:46:LYS:HD2	1.63	0.79
56:30:72:C:H2'	56:30:73:A:H8	1.48	0.79
5:E:162:ARG:CZ	5:E:168:VAL:HG21	2.12	0.79
51:25:49:ALA:O	51:25:53:LYS:HG3	1.82	0.79
3:C:79:ARG:NH2	53:27:471:A:H5''	1.98	0.79
40:14:81:GLU:HA	40:14:84:VAL:HG12	1.62	0.79
52:26:1391:U:H2'	52:26:1392:G:C8	2.17	0.79
59:33:59:GLY:HA2	59:33:82:PHE:CZ	2.18	0.79
34:8:103:ARG:HD2	34:8:167:PRO:HG2	1.65	0.79
6:F:68:ARG:HA	6:F:71:LYS:HB2	1.64	0.79
52:26:1259:C:C3'	52:26:1260:G:H5''	2.12	0.79
52:26:1391:U:H2'	52:26:1392:G:H8	1.45	0.79
53:27:2508:G:H2'	53:27:2509:G:H8	1.48	0.79
18:R:20:VAL:HG11	18:R:44:ALA:HA	1.65	0.79
23:W:28:PHE:HE2	53:27:379:G:H21	1.31	0.79
6:F:4:ILE:HG22	6:F:37:VAL:O	1.82	0.79
24:X:9:LYS:HZ2	24:X:11:VAL:HG23	1.47	0.79
52:26:1513:A:H2'	52:26:1514:G:C8	2.18	0.79
53:27:1825:U:H2'	53:27:1826:G:C8	2.18	0.79
53:27:355:U:H2'	53:27:356:G:C8	2.18	0.79
52:26:880:C:H2'	52:26:881:G:H8	1.47	0.79
53:27:2071:A:H2'	53:27:2072:C:C6	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:43:LEU:HA	59:33:56:LEU:HD12	1.65	0.79
32:6:96:LEU:HB2	32:6:99:MET:HB3	1.64	0.79
1:A:256:THR:OG1	53:27:1798:U:H5'	1.83	0.79
8:H:126:ARG:HH21	53:27:1080:A:H5''	1.46	0.79
36:10:12:PRO:O	36:10:15:SER:HB3	1.82	0.78
43:17:114:PRO:HG2	52:26:1228:C:H5'	1.65	0.78
1:A:200:MET:HB2	53:27:1820:U:C2	2.16	0.78
53:27:2065:C:H2'	53:27:2066:C:C6	2.17	0.78
59:33:77:ARG:NH1	59:33:103:VAL:HG21	1.98	0.78
59:33:17:PRO:HG3	59:33:39:TRP:HZ2	1.46	0.78
35:9:114:LEU:O	35:9:119:VAL:HG22	1.83	0.78
52:26:440:C:C3'	52:26:441:A:H5''	2.12	0.78
53:27:2443:C:H2'	53:27:2444:G:C8	2.19	0.78
53:27:2788:C:H2'	53:27:2789:C:C6	2.17	0.78
32:6:183:PHE:HB3	32:6:197:PHE:CD2	2.18	0.78
39:13:51:LEU:HB3	39:13:56:MET:HB2	1.66	0.78
52:26:403:C:H2'	52:26:404:G:H8	1.48	0.78
53:27:1281:G:H2'	53:27:1282:U:C6	2.18	0.78
53:27:248:G:C5'	53:27:249:C:H5'	2.12	0.78
53:27:577:G:H2'	53:27:578:G:C8	2.18	0.78
59:33:57:TRP:O	59:33:60:VAL:HG22	1.84	0.78
42:16:98:ARG:HH21	42:16:106:VAL:HA	1.48	0.78
52:26:17:U:H2'	52:26:18:C:C6	2.18	0.78
53:27:2417:C:H2'	53:27:2418:A:C8	2.19	0.78
5:E:51:PHE:CZ	5:E:68:ARG:HA	2.17	0.78
36:10:78:PHE:HD1	36:10:84:VAL:HG11	1.46	0.78
41:15:109:ILE:H	51:25:4:LYS:NZ	1.82	0.78
38:12:106:SER:HA	52:26:642:A:N7	1.99	0.78
52:26:917:G:H2'	52:26:918:A:C8	2.18	0.78
53:27:138:U:H3'	53:27:139:U:H5'	1.65	0.78
53:27:613:A:N3	53:27:613:A:H3'	1.98	0.78
1:A:144:GLU:HA	1:A:151:GLY:HA2	1.64	0.78
6:F:26:ALA:HA	6:F:30:LEU:HB2	1.65	0.78
36:10:38:ARG:HE	36:10:97:THR:HA	1.48	0.78
45:19:71:ARG:HH22	52:26:754:C:H5'	1.48	0.78
52:26:1352:C:H2'	52:26:1353:G:C8	2.19	0.78
53:27:1502:A:C2'	53:27:1503:A:H5''	2.12	0.78
59:33:611:ARG:HA	59:33:614:GLN:HE21	1.49	0.78
59:33:613:CYS:HA	59:33:742:HIS:HB3	1.64	0.78
4:D:140:ILE:HG22	4:D:142:TYR:H	1.49	0.78
7:G:56:ARG:HE	7:G:83:ALA:HA	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2036:C:H2'	53:27:2037:A:C8	2.19	0.78
53:27:2786:U:H2'	53:27:2787:C:C6	2.18	0.78
59:33:159:HIS:O	59:33:163:VAL:HB	1.83	0.78
6:F:96:THR:HA	6:F:115:VAL:HG11	1.66	0.78
53:27:1478:G:H2'	53:27:1479:G:H8	1.47	0.78
3:C:146:VAL:HG12	3:C:185:LYS:HB2	1.66	0.78
19:S:80:TRP:HZ3	19:S:82:LYS:HB3	1.48	0.78
20:T:10:VAL:HG12	20:T:71:ILE:HA	1.65	0.78
40:14:7:ARG:HA	40:14:75:ASP:HA	1.65	0.78
47:21:11:VAL:HB	47:21:56:ASP:H	1.49	0.78
51:25:25:ALA:HB2	55:29:9:G:H4'	1.65	0.78
58:32:41:C:H2'	58:32:42:G:H8	1.49	0.78
12:L:21:ALA:HB1	12:L:100:LYS:HD3	1.65	0.78
53:27:704:G:H2'	53:27:726:G:H22	1.49	0.77
53:27:891:G:H2'	53:27:892:A:H8	1.47	0.77
19:S:7:LEU:HD13	19:S:49:LYS:HG3	1.67	0.77
52:26:1356:G:H2'	52:26:1357:A:C8	2.19	0.77
52:26:769:G:H4'	52:26:1513:A:H4'	1.67	0.77
53:27:646:U:H3'	53:27:647:G:H5''	1.65	0.77
59:33:293:LEU:HD11	59:33:307:PHE:CE2	2.19	0.77
33:7:51:VAL:HG21	33:7:54:ILE:HG23	1.66	0.77
53:27:1923:U:H2'	53:27:1924:C:H6	1.49	0.77
53:27:609:A:H2'	53:27:610:C:O4'	1.85	0.77
53:27:59:U:O2'	53:27:73:A:H2'	1.84	0.77
54:28:65:U:H3'	54:28:108:A:N6	2.00	0.77
59:33:232:PHE:HE1	59:33:329:PRO:HD2	1.45	0.77
8:H:83:ALA:HB3	8:H:85:ILE:HG12	1.66	0.77
21:U:10:LYS:HG3	21:U:11:GLU:H	1.47	0.77
8:H:9:LYS:HE2	53:27:1061:U:OP1	1.84	0.77
53:27:189:G:H2'	53:27:205:G:N2	1.99	0.77
53:27:1906:G:H2'	53:27:1907:G:H5''	1.67	0.77
53:27:20:C:H2'	53:27:21:A:C8	2.19	0.77
53:27:2396:G:H2'	53:27:2397:G:H8	1.48	0.77
17:Q:32:THR:HA	17:Q:62:GLU:HA	1.66	0.77
22:V:36:GLN:NE2	22:V:39:THR:HA	2.00	0.77
52:26:1142:G:H3'	52:26:1143:G:H8	1.50	0.77
52:26:1512:U:H2'	52:26:1513:A:C8	2.19	0.77
52:26:20:U:H2'	52:26:21:G:O4'	1.84	0.77
52:26:412:A:H62	52:26:431:A:H61	1.31	0.77
52:26:742:G:H2'	52:26:743:A:H8	1.49	0.77
59:33:292:ALA:O	59:33:296:VAL:HG13	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:109:LYS:HD2	52:26:1227:A:OP2	1.84	0.77
49:23:10:ILE:HG22	49:23:38:THR:H	1.49	0.77
59:33:20:TRP:CD1	59:33:64:GLU:HA	2.20	0.77
59:33:674:ASN:HD21	59:33:736:ILE:HG21	1.49	0.77
13:M:2:ARG:HG3	13:M:5:LYS:HB2	1.65	0.77
42:16:98:ARG:HB2	42:16:116:TYR:HA	1.64	0.77
53:27:1314:C:H2'	53:27:1315:C:H6	1.50	0.77
53:27:1394:U:H4'	53:27:1603:A:H4'	1.65	0.77
53:27:873:C:H2'	53:27:874:G:C8	2.20	0.77
4:D:3:LEU:HG	4:D:100:GLU:HG2	1.67	0.77
42:16:25:ALA:HB2	52:26:554:A:H5'	1.66	0.77
59:33:17:PRO:HB3	59:33:39:TRP:CE2	2.20	0.77
59:33:327:LEU:HD23	59:33:332:LYS:CB	2.15	0.77
21:U:9:ARG:HG2	21:U:41:GLU:HB2	1.66	0.77
52:26:79:G:H2'	52:26:80:A:C8	2.19	0.77
53:27:1904:G:N2	53:27:1905:C:H1'	1.99	0.77
53:27:2104:C:H42	53:27:2185:U:H3	1.31	0.77
3:C:57:LYS:HG2	3:C:59:PRO:HG3	1.65	0.77
20:T:10:VAL:HA	20:T:72:PHE:H	1.48	0.77
44:18:80:ARG:HA	44:18:83:VAL:CG1	2.13	0.77
32:6:104:LYS:HZ3	52:26:1073:U:H4'	1.46	0.77
52:26:460:A:H2'	52:26:461:A:C8	2.19	0.77
53:27:1775:U:H2'	53:27:1776:G:O4'	1.84	0.77
7:G:59:LEU:C	7:G:61:ARG:H	1.89	0.77
14:N:13:ARG:HH22	53:27:2335:A:H5'	1.49	0.76
53:27:955:U:H5	53:27:962:G:N1	1.83	0.76
59:33:101:LYS:HE3	59:33:105:ASN:HD21	1.51	0.76
10:J:13:ASN:HB3	10:J:98:ARG:HB2	1.65	0.76
53:27:1076:C:H2'	53:27:1077:A:C8	2.20	0.76
53:27:163:C:H2'	53:27:164:C:O4'	1.85	0.76
53:27:302:C:H2'	53:27:303:G:H8	1.48	0.76
53:27:859:G:H1'	53:27:860:U:H5	1.50	0.76
59:33:99:VAL:HG13	59:33:103:VAL:HB	1.67	0.76
59:33:65:ILE:HG12	59:33:161:ARG:NH2	2.00	0.76
1:A:129:LEU:HD13	1:A:133:ASN:HB2	1.68	0.76
21:U:16:ALA:HA	21:U:19:ARG:NE	1.99	0.76
58:32:7:G:H3'	58:32:8:U:H5'	1.68	0.76
52:26:687:A:N3	52:26:688:G:H1'	2.01	0.76
53:27:851:C:H2'	53:27:852:U:C6	2.20	0.76
59:33:670:ARG:HH22	59:33:700:ARG:HH21	1.31	0.76
14:N:51:ALA:HB3	14:N:78:VAL:HG22	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1173:U:C2'	53:27:1174:U:H4'	2.16	0.76
53:27:640:C:H2'	53:27:641:U:C6	2.21	0.76
42:16:41:PRO:HD2	42:16:46:SER:HA	1.68	0.76
53:27:2082:A:H2'	53:27:2083:G:O4'	1.85	0.76
53:27:873:C:H2'	53:27:874:G:H8	1.50	0.76
59:33:616:ILE:HG21	59:33:667:LEU:HD12	1.67	0.76
50:24:14:GLU:HA	50:24:17:ARG:HG2	1.67	0.76
7:G:48:ALA:HB3	7:G:51:TYR:CE2	2.20	0.76
12:L:20:LEU:HD23	21:U:81:PRO:HG2	1.65	0.76
53:27:195:A:H2'	53:27:198:C:N4	2.01	0.76
59:33:293:LEU:HD11	59:33:307:PHE:HE2	1.49	0.76
35:9:52:ALA:HB3	35:9:58:ALA:HB2	1.68	0.76
53:27:2060:A:H1'	53:27:2502:G:H1'	1.65	0.76
53:27:20:C:H2'	53:27:21:A:H8	1.51	0.76
32:6:113:LEU:HA	32:6:143:LEU:HD13	1.67	0.76
32:6:39:ILE:H	32:6:39:ILE:HD12	1.48	0.76
52:26:216:U:H4'	52:26:464:U:H4'	1.68	0.76
53:27:2628:C:O2'	53:27:2781:A:H2'	1.85	0.76
57:31:62:C:H2'	57:31:63:G:C8	2.21	0.76
1:A:269:ARG:HG2	1:A:270:ARG:H	1.50	0.76
22:V:62:LYS:HG3	22:V:81:GLU:HG3	1.66	0.76
53:27:2231:U:H2'	53:27:2232:C:C6	2.22	0.75
59:33:63:VAL:HG12	59:33:79:ALA:HB3	1.67	0.75
34:8:125:ASN:HA	34:8:141:VAL:HG23	1.68	0.75
21:U:9:ARG:HH22	21:U:12:GLN:HA	1.52	0.75
45:19:63:ARG:HH22	45:19:87:ARG:HH22	1.32	0.75
52:26:123:U:H5''	52:26:311:C:O2'	1.86	0.75
53:27:1434:A:H2'	53:27:1435:G:H8	1.51	0.75
53:27:1591:A:H2'	53:27:1592:C:C6	2.21	0.75
53:27:197:A:H4'	53:27:2069:G:OP2	1.86	0.75
53:27:2286:G:H4'	53:27:2287:A:O5'	1.85	0.75
53:27:1664:A:H61	53:27:1996:C:H42	1.34	0.75
53:27:2131:U:H5'	53:27:2132:U:H5''	1.68	0.75
53:27:2591:C:H2'	53:27:2592:G:H8	1.50	0.75
54:28:30:C:H1'	54:28:57:A:H61	1.50	0.75
52:26:429:U:H4'	52:26:430:A:O5'	1.87	0.75
52:26:458:U:H2'	52:26:459:A:C8	2.21	0.75
53:27:1447:C:H2'	53:27:1448:G:H8	1.51	0.75
53:27:2629:U:O2'	53:27:2630:G:H5''	1.86	0.75
57:31:62:C:H2'	57:31:63:G:H8	1.51	0.75
7:G:28:ALA:HA	7:G:81:LEU:HB3	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:102:ARG:HB3	8:H:141:ASP:HB3	1.67	0.75
14:N:56:LYS:HA	14:N:59:ALA:HB3	1.68	0.75
20:T:25:LYS:HD2	20:T:36:GLU:HB3	1.67	0.75
21:U:42:LEU:HD13	21:U:47:VAL:HG21	1.68	0.75
13:M:38:LEU:HB3	13:M:39:PRO:HD3	1.67	0.75
59:33:226:GLU:O	59:33:229:ILE:HG12	1.86	0.75
39:13:50:PRO:HB3	39:13:83:THR:HG22	1.68	0.75
53:27:1270:C:H5''	53:27:1271:G:O5'	1.86	0.75
53:27:2740:A:H2'	53:27:2741:A:C8	2.22	0.75
1:A:106:PRO:HG2	1:A:109:LEU:HB2	1.68	0.75
39:13:39:GLY:HA2	39:13:44:ARG:NE	2.02	0.75
42:16:41:PRO:HB3	42:16:88:ASP:OD2	1.87	0.75
7:G:61:ARG:HD2	53:27:1046:A:O4'	1.87	0.75
53:27:1261:C:C2'	53:27:1262:A:H5''	2.17	0.75
59:33:642:ALA:O	59:33:645:ARG:HB2	1.87	0.75
11:K:95:LEU:HB3	11:K:100:ILE:HD11	1.68	0.75
47:21:26:ARG:NH2	52:26:237:G:H5''	2.01	0.75
52:26:830:G:H2'	52:26:831:A:H8	1.50	0.75
53:27:814:C:H1'	53:27:1225:G:H21	1.52	0.75
53:27:1258:U:H2'	53:27:1259:G:C8	2.22	0.75
53:27:680:C:H2'	53:27:681:G:H8	1.50	0.75
52:26:1347:G:N2	52:26:1373:G:H2'	2.02	0.74
53:27:1096:A:H3'	53:27:1097:U:H5''	1.67	0.74
53:27:634:C:H2'	53:27:635:C:C6	2.21	0.74
9:I:93:ILE:HD13	9:I:100:VAL:HG21	1.68	0.74
41:15:118:ASN:HB2	52:26:718:A:H5'	1.69	0.74
52:26:309:A:H2'	52:26:310:G:C8	2.22	0.74
52:26:317:U:H2'	52:26:318:G:H8	1.52	0.74
52:26:955:U:C1'	52:26:1227:A:H61	2.00	0.74
53:27:755:U:H2'	53:27:756:A:C8	2.22	0.74
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	0.74
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.68	0.74
59:33:66:LEU:CD1	59:33:79:ALA:HB2	2.17	0.74
14:N:7:ARG:HA	14:N:10:ARG:HH11	1.52	0.74
36:10:44:ARG:HA	36:10:58:HIS:HA	1.68	0.74
39:13:32:ARG:HD2	39:13:37:TYR:HD1	1.51	0.74
41:15:23:HIS:HB3	41:15:30:ILE:HG23	1.67	0.74
52:26:1119:C:H2'	52:26:1120:C:H6	1.49	0.74
53:27:1903:G:H2'	53:27:1904:G:H8	1.52	0.74
53:27:365:U:H2'	53:27:366:C:C6	2.23	0.74
53:27:404:A:H1'	53:27:406:G:C4	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:279:VAL:CG1	59:33:336:ILE:HG12	2.17	0.74
20:T:31:GLY:O	20:T:66:VAL:HG23	1.87	0.74
38:12:6:ILE:HD11	38:12:76:ARG:CZ	2.17	0.74
53:27:181:A:H2'	53:27:182:A:C8	2.22	0.74
53:27:2406:A:H5'	53:27:2407:A:OP1	1.87	0.74
59:33:17:PRO:HB3	59:33:39:TRP:CD1	2.22	0.74
34:8:149:LYS:HG2	34:8:150:LYS:N	2.02	0.74
35:9:98:ALA:HB1	35:9:101:GLY:HA3	1.68	0.74
7:G:58:THR:HG21	7:G:82:ILE:N	2.01	0.74
45:19:53:ARG:NH2	52:26:579:A:H4'	2.03	0.74
53:27:2514:U:H2'	53:27:2515:C:H6	1.50	0.74
53:27:2547:A:H2'	53:27:2548:U:C6	2.22	0.74
53:27:479:A:H4'	53:27:480:A:OP1	1.87	0.74
53:27:740:C:H5''	53:27:1784:A:OP1	1.88	0.74
59:33:160:LEU:HD12	59:33:198:LEU:HD22	1.69	0.74
59:33:279:VAL:HG11	59:33:336:ILE:HG12	1.70	0.74
59:33:31:SER:CB	59:33:73:ILE:HG21	2.16	0.74
59:33:59:GLY:HA2	59:33:82:PHE:HE1	1.45	0.74
22:V:22:PHE:CD2	53:27:922:C:H1'	2.22	0.74
52:26:1402:C:H2'	52:26:1403:C:O4'	1.88	0.74
53:27:1405:U:H2'	53:27:1406:U:C6	2.23	0.74
53:27:2019:A:H2	53:27:2035:G:H22	1.36	0.74
53:27:2277:G:C2'	53:27:2278:A:H5''	2.16	0.74
53:27:581:C:H2'	53:27:582:A:H8	1.51	0.74
30:4:49:VAL:HG11	30:4:57:VAL:HG21	1.70	0.74
59:33:43:LEU:HG	59:33:44:GLN:CD	2.07	0.74
11:K:110:VAL:HG21	11:K:127:VAL:HG22	1.67	0.74
16:P:55:GLN:HE22	53:27:535:G:H21	1.34	0.74
1:A:180:MET:HB2	1:A:267:VAL:HB	1.69	0.74
21:U:25:LYS:HG2	21:U:43:ASP:HA	1.70	0.74
39:13:44:ARG:O	39:13:47:VAL:HG22	1.88	0.74
53:27:1199:U:H2'	53:27:1200:C:C6	2.22	0.74
53:27:2508:G:H2'	53:27:2509:G:C8	2.23	0.74
1:A:5:CYS:SG	1:A:12:ARG:HD2	2.28	0.74
49:23:39:ILE:HB	49:23:66:VAL:HA	1.68	0.74
53:27:2105:U:H2'	53:27:2106:U:C6	2.23	0.74
59:33:160:LEU:HD12	59:33:198:LEU:CD2	2.18	0.74
4:D:105:ILE:HG13	4:D:106:ALA:H	1.52	0.74
8:H:53:PRO:O	8:H:77:VAL:HG21	1.88	0.74
25:Y:27:GLY:HA3	25:Y:37:ARG:HH21	1.52	0.74
41:15:23:HIS:HB3	41:15:30:ILE:CG2	2.17	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:81:A:H2'	52:26:82:G:C8	2.22	0.73
53:27:1857:G:N2	53:27:1884:G:H2'	2.02	0.73
54:28:88:C:H5''	54:28:89:U:OP1	1.87	0.73
59:33:153:LEU:O	59:33:157:ILE:HG23	1.88	0.73
59:33:20:TRP:CZ2	59:33:63:VAL:HB	2.22	0.73
52:26:1241:G:H2'	52:26:1242:G:H8	1.53	0.73
52:26:323:U:H2'	52:26:324:G:O4'	1.88	0.73
42:16:114:SER:HB3	52:26:35:G:H21	1.53	0.73
52:26:513:C:H2'	52:26:514:C:C6	2.24	0.73
53:27:2177:C:H3'	53:27:2178:C:H5''	1.69	0.73
35:9:152:VAL:HA	35:9:155:LYS:HZ1	1.51	0.73
11:K:82:LEU:HD11	11:K:90:VAL:HG21	1.70	0.73
52:26:715:A:H2'	52:26:716:A:H8	1.53	0.73
52:26:901:A:C5	52:26:902:G:H1'	2.23	0.73
53:27:1478:G:H2'	53:27:1479:G:C8	2.23	0.73
34:8:120:LYS:HG2	34:8:130:ASN:HD21	1.52	0.73
37:11:75:LYS:HE2	37:11:77:ARG:HB2	1.70	0.73
52:26:178:C:H2'	52:26:179:A:H8	1.52	0.73
52:26:835:U:C2'	52:26:836:G:H5''	2.18	0.73
53:27:2423:U:O2'	53:27:2425:A:H2'	1.89	0.73
53:27:959:A:H2'	53:27:960:A:C8	2.24	0.73
32:6:33:ALA:HB2	32:6:39:ILE:HD11	1.69	0.73
52:26:628:G:H2'	52:26:629:A:H8	1.53	0.73
52:26:946:A:H2'	52:26:947:G:C8	2.24	0.73
53:27:1179:G:H2'	53:27:1180:U:H4'	1.70	0.73
53:27:1611:C:H2'	53:27:1612:C:H6	1.52	0.73
53:27:1635:A:H2'	53:27:1636:U:O4'	1.89	0.73
53:27:1853:A:H2'	53:27:1854:A:C8	2.23	0.73
53:27:2646:C:H2'	53:27:2647:U:O4'	1.88	0.73
53:27:2650:U:H2'	53:27:2651:C:C6	2.23	0.73
53:27:2853:C:H2'	53:27:2854:G:H8	1.54	0.73
59:33:408:VAL:HG22	59:33:458:GLY:HA2	1.70	0.73
1:A:140:VAL:HG12	1:A:191:LEU:HA	1.70	0.73
45:19:53:ARG:HH22	52:26:579:A:H4'	1.54	0.73
52:26:229:U:H2'	52:26:230:G:C8	2.22	0.73
53:27:796:C:H2'	53:27:797:G:C8	2.24	0.73
53:27:2185:U:H2'	53:27:2186:G:C8	2.24	0.73
53:27:2261:C:H1'	53:27:2388:A:N3	2.04	0.73
53:27:2604:U:H2'	53:27:2605:U:H6	1.53	0.73
53:27:96:C:H2'	53:27:97:C:H6	1.52	0.73
16:P:27:ARG:HA	16:P:33:VAL:HG12	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:3:ALA:HA	24:X:6:LEU:HD13	1.71	0.73
53:27:825:A:H2'	53:27:826:U:C6	2.24	0.73
16:P:10:ARG:HH22	53:27:514:A:H5'	1.53	0.73
39:13:16:ALA:HB2	39:13:66:VAL:HG23	1.70	0.73
39:13:41:GLU:CB	39:13:44:ARG:HH22	1.99	0.73
52:26:721:G:H4'	52:26:722:G:O4'	1.88	0.73
53:27:2493:U:C3'	53:27:2494:G:H5''	2.19	0.73
30:4:4:LYS:NZ	53:27:254:G:N7	2.37	0.73
56:30:54:U:H2'	56:30:55:U:H5''	1.70	0.73
59:33:27:THR:HG23	59:33:28:SER:H	1.52	0.73
59:33:599:VAL:HG21	59:33:631:ILE:HD13	1.71	0.73
6:F:134:VAL:HG23	6:F:135:HIS:H	1.53	0.73
6:F:93:SER:HB2	6:F:123:ARG:HE	1.52	0.73
6:F:9:VAL:HB	6:F:13:GLY:HA3	1.70	0.73
15:O:105:LYS:HD2	52:26:1433:A:OP1	1.89	0.73
59:33:183:ALA:HB3	59:33:184:PRO:HD3	1.68	0.73
32:6:56:LEU:O	32:6:59:ILE:HG12	1.89	0.73
36:10:73:GLU:O	36:10:77:THR:HG23	1.88	0.72
51:25:48:LYS:HG2	52:26:723:U:C6	2.23	0.72
52:26:714:G:H2'	52:26:715:A:C8	2.24	0.72
52:26:715:A:H2'	52:26:716:A:C8	2.23	0.72
53:27:171:U:H2'	53:27:172:A:H8	1.52	0.72
53:27:741:U:H2'	53:27:742:A:C8	2.24	0.72
13:M:117:ASP:CG	13:M:118:ARG:H	1.90	0.72
52:26:1007:U:H2'	52:26:1008:U:C6	2.24	0.72
52:26:784:A:H2'	52:26:785:G:C8	2.23	0.72
53:27:1599:U:H2'	53:27:1600:C:C6	2.24	0.72
59:33:96:ARG:HE	59:33:104:VAL:HG21	1.52	0.72
59:33:20:TRP:HD1	59:33:64:GLU:HA	1.52	0.72
4:D:114:ARG:HH11	43:17:70:ARG:HH11	1.38	0.72
41:15:109:ILE:N	51:25:4:LYS:HZ3	1.85	0.72
52:26:211:G:N3	52:26:211:G:H3'	2.03	0.72
53:27:1744:A:H3'	53:27:1745:A:H8	1.54	0.72
11:K:39:LYS:HG2	53:27:832:U:OP1	1.89	0.72
32:6:215:ALA:O	32:6:219:THR:HG23	1.88	0.72
11:K:33:ARG:HG2	11:K:40:SER:HA	1.71	0.72
47:21:30:HIS:CD2	47:21:32:ILE:H	2.06	0.72
52:26:317:U:H2'	52:26:318:G:C8	2.25	0.72
59:33:408:VAL:CG1	59:33:409:PHE:N	2.52	0.72
59:33:96:ARG:HG2	59:33:104:VAL:CG1	2.18	0.72
52:26:628:G:H2'	52:26:629:A:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1197:G:H2'	53:27:1198:U:H6	1.53	0.72
53:27:1406:U:H2'	53:27:1407:G:O4'	1.90	0.72
59:33:31:SER:HB3	59:33:73:ILE:CG2	2.17	0.72
11:K:91:ASP:HA	11:K:123:ARG:HB3	1.72	0.72
52:26:1494:G:H5'	53:27:1913:A:C2	2.24	0.72
53:27:1857:G:H1'	53:27:1885:A:N6	2.04	0.72
53:27:2432:A:H1'	58:32:75:C:O4'	1.90	0.72
53:27:2588:G:H2'	53:27:2589:A:O4'	1.90	0.72
53:27:2685:G:H2'	53:27:2686:G:C8	2.24	0.72
53:27:399:U:H2'	53:27:400:G:C8	2.25	0.72
4:D:24:VAL:O	4:D:27:VAL:HG12	1.88	0.72
7:G:26:VAL:HG11	7:G:77:VAL:HG11	1.71	0.72
17:Q:76:LYS:HB2	17:Q:85:LYS:HB2	1.70	0.72
52:26:963:G:H2'	52:26:964:A:C8	2.22	0.72
53:27:676:A:H62	53:27:802:A:H61	1.36	0.72
59:33:225:ARG:CD	59:33:276:VAL:HG13	2.19	0.72
59:33:54:LEU:HB2	59:33:57:TRP:CD1	2.25	0.72
59:33:616:ILE:O	59:33:618:GLY:N	2.23	0.72
59:33:689:ASN:HD21	59:33:728:LYS:HD3	1.54	0.72
46:20:13:LYS:NZ	52:26:392:C:O3'	2.22	0.72
59:33:327:LEU:HD23	59:33:332:LYS:HA	1.71	0.72
50:24:48:LYS:HA	50:24:51:ASN:HD22	1.54	0.72
52:26:21:G:H2'	52:26:22:G:C8	2.25	0.72
52:26:764:C:H2'	52:26:765:G:O4'	1.90	0.72
53:27:2537:U:H2'	53:27:2538:C:C6	2.25	0.72
59:33:411:PRO:HD3	59:33:461:ILE:O	1.89	0.72
10:J:49:ARG:HH22	52:26:1423:G:C5'	2.03	0.72
20:T:27:VAL:HG23	20:T:33:VAL:HG12	1.72	0.72
53:27:1486:U:H2'	53:27:1487:U:C6	2.25	0.72
53:27:1923:U:H2'	53:27:1924:C:C6	2.24	0.72
53:27:2262:U:H2'	53:27:2263:C:C6	2.24	0.72
53:27:220:G:H22	53:27:427:U:H2'	1.55	0.72
31:5:32:LYS:HE3	53:27:2478:A:H5'	1.70	0.72
3:C:18:THR:HA	3:C:106:LYS:HE3	1.72	0.72
20:T:6:ARG:O	20:T:24:VAL:HB	1.90	0.72
52:26:1011:C:H2'	52:26:1012:A:C8	2.24	0.71
52:26:1346:A:O2'	52:26:1347:G:H4'	1.89	0.71
53:27:1133:A:H4'	53:27:1134:A:H5''	1.71	0.71
53:27:1440:U:H2'	53:27:1441:G:C8	2.24	0.71
53:27:16:C:H2'	53:27:17:G:H8	1.55	0.71
53:27:1778:U:H3'	53:27:1784:A:N6	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2730:C:H2'	53:27:2731:G:C8	2.25	0.71
53:27:2799:A:C2'	53:27:2800:A:H5'	2.20	0.71
59:33:66:LEU:HD12	59:33:79:ALA:CB	2.19	0.71
1:A:146:LYS:HB2	1:A:149:LYS:HB2	1.70	0.71
3:C:77:ILE:HG13	3:C:78:TRP:HD1	1.54	0.71
20:T:17:ASP:HB3	20:T:20:LYS:CG	2.19	0.71
52:26:1157:A:H4'	52:26:1158:C:O5'	1.89	0.71
52:26:328:C:H4'	52:26:329:A:H5'	1.71	0.71
37:11:2:ARG:HH12	52:26:932:C:N4	1.88	0.71
1:A:207:ALA:HB2	53:27:1790:C:O2'	1.90	0.71
53:27:1946:U:H2'	53:27:1947:C:C6	2.25	0.71
53:27:2146:C:H4'	53:27:2147:A:C5	2.25	0.71
53:27:960:A:H8	53:27:960:A:O5'	1.72	0.71
16:P:86:SER:O	17:Q:52:PRO:HD3	1.89	0.71
39:13:114:LYS:HB2	39:13:117:LEU:HD22	1.70	0.71
52:26:1413:A:H2	52:26:1487:G:H22	1.38	0.71
51:25:46:ARG:NH1	52:26:1532:U:H5	1.88	0.71
53:27:2417:C:H2'	53:27:2418:A:H8	1.54	0.71
53:27:64:A:H2'	53:27:65:U:C6	2.25	0.71
59:33:327:LEU:HD23	59:33:332:LYS:CA	2.20	0.71
59:33:88:ASN:HD22	59:33:90:VAL:HG13	1.54	0.71
32:6:113:LEU:HD13	32:6:143:LEU:HB3	1.72	0.71
4:D:139:GLU:HB3	26:Z:28:VAL:HG22	1.72	0.71
16:P:19:GLN:HE22	17:Q:73:LYS:HE2	1.55	0.71
43:17:94:LEU:HB3	43:17:95:PRO:HD2	1.72	0.71
51:25:65:ARG:HD2	52:26:1088:G:H4'	1.72	0.71
52:26:1219:A:H2'	52:26:1220:G:C8	2.25	0.71
9:I:30:THR:HG21	53:27:1005:C:O2'	1.89	0.71
53:27:1064:C:H2'	53:27:1065:U:O4'	1.91	0.71
53:27:1447:C:H2'	53:27:1448:G:C8	2.26	0.71
53:27:207:A:H2'	53:27:208:C:O4'	1.90	0.71
53:27:2498:C:O2'	53:27:2499:C:H5'	1.91	0.71
53:27:280:U:H3	53:27:360:U:H3	1.37	0.71
53:27:310:A:O2'	53:27:311:A:H5''	1.90	0.71
59:33:241:LYS:HD3	59:33:246:LYS:NZ	2.04	0.71
34:8:120:LYS:HB3	34:8:128:VAL:HG21	1.72	0.71
17:Q:24:LYS:HA	17:Q:94:THR:OG1	1.89	0.71
52:26:56:U:H2'	52:26:57:G:H8	1.54	0.71
53:27:1746:A:H2'	53:27:1747:U:C6	2.25	0.71
59:33:424:PRO:HD2	59:33:451:PHE:O	1.91	0.71
34:8:21:LYS:HD3	34:8:28:ASP:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:157:LYS:HD3	5:E:159:LYS:HE2	1.72	0.71
8:H:10:LEU:HD21	8:H:12:VAL:HG22	1.73	0.71
10:J:17:ARG:HG3	10:J:18:ARG:HG2	1.73	0.71
48:22:70:THR:HG23	48:22:71:ASP:N	2.03	0.71
52:26:1107:C:H2'	52:26:1108:G:O4'	1.91	0.71
52:26:81:A:H62	52:26:86:G:H21	1.38	0.71
53:27:1590:A:H2'	53:27:1591:A:C8	2.26	0.71
24:X:41:HIS:CD2	53:27:96:C:H4'	2.25	0.71
54:28:12:C:O2'	54:28:13:G:H5'	1.90	0.71
16:P:36:GLN:O	16:P:39:ILE:HG22	1.91	0.71
16:P:54:ARG:HD3	53:27:1155:A:H5''	1.72	0.71
44:18:16:ALA:HA	44:18:54:SER:HA	1.72	0.71
47:21:50:ASN:O	47:21:52:CYS:N	2.24	0.71
52:26:885:G:H2'	52:26:886:G:H8	1.55	0.71
53:27:1268:A:H2'	53:27:1269:A:O4'	1.91	0.71
53:27:2697:G:H2'	53:27:2698:U:O4'	1.91	0.71
40:14:6:ILE:HG12	40:14:102:LEU:HA	1.73	0.71
44:18:39:ASP:HA	44:18:42:ASN:ND2	2.05	0.71
50:24:4:LYS:O	50:24:7:LYS:HG2	1.91	0.71
52:26:1437:A:H2'	52:26:1438:G:H8	1.56	0.71
53:27:2731:G:H2'	53:27:2732:G:C8	2.25	0.71
59:33:612:CYS:HG	59:33:634:HIS:CD2	2.09	0.71
32:6:31:PHE:HB2	32:6:39:ILE:HB	1.73	0.71
1:A:47:ARG:NH2	53:27:774:G:H5''	2.06	0.71
8:H:135:MET:HB2	53:27:1063:G:H4'	1.72	0.71
52:26:918:A:H2'	52:26:919:A:C8	2.25	0.71
56:30:4:C:H2'	56:30:5:G:C8	2.26	0.71
59:33:82:PHE:CD2	59:33:83:PRO:HD3	2.25	0.71
39:13:98:ARG:NH2	52:26:1180:A:OP2	2.24	0.71
42:16:81:ILE:HD13	42:16:96:THR:HA	1.72	0.71
41:15:122:PRO:HG2	51:25:34:ARG:O	1.91	0.71
52:26:1395:C:H5'	52:26:1395:C:H6	1.56	0.71
52:26:212:G:H2'	52:26:213:G:H8	1.56	0.71
52:26:24:U:H2'	52:26:25:C:H6	1.56	0.71
53:27:1709:U:H2'	53:27:1710:G:C8	2.26	0.71
53:27:1830:C:H2'	53:27:1831:G:H8	1.55	0.71
34:8:12:ARG:HA	34:8:33:ILE:HG13	1.73	0.71
35:9:160:VAL:HA	35:9:163:ILE:HG12	1.71	0.71
4:D:141:ASP:O	4:D:142:TYR:HB3	1.90	0.71
7:G:97:LYS:HG2	7:G:101:LYS:HE2	1.73	0.71
51:25:19:LYS:HB3	51:25:24:LYS:HG3	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1206:G:C2	52:26:1207:G:H1'	2.26	0.70
52:26:361:G:H2'	52:26:362:G:O4'	1.91	0.70
53:27:2131:U:O5'	53:27:2133:G:H4'	1.91	0.70
53:27:2208:C:H2'	53:27:2209:G:C8	2.26	0.70
53:27:2698:U:H2'	53:27:2699:C:C6	2.26	0.70
53:27:419:U:H2'	53:27:420:C:C6	2.26	0.70
52:26:1287:A:H2	52:26:1353:G:H1'	1.54	0.70
52:26:1432:G:H1'	52:26:1468:A:N6	2.07	0.70
53:27:1059:G:H3'	53:27:1060:U:H2'	1.73	0.70
48:22:11:ARG:HD2	48:22:14:ALA:CB	2.22	0.70
35:9:107:GLY:HA3	52:26:9:G:C5'	2.20	0.70
53:27:783:A:H2'	53:27:784:G:H4'	1.74	0.70
56:30:65:G:H2'	56:30:66:U:C6	2.26	0.70
24:X:2:LYS:HD3	53:27:102:U:H1'	1.72	0.70
53:27:1477:A:H2'	53:27:1478:G:O4'	1.91	0.70
53:27:690:G:H2'	53:27:691:C:H6	1.56	0.70
59:33:293:LEU:O	59:33:296:VAL:HG22	1.90	0.70
59:33:286:LEU:HD21	59:33:343:MET:CE	2.21	0.70
32:6:52:ALA:O	32:6:56:LEU:HD13	1.90	0.70
2:B:125:TRP:CD1	2:B:160:LYS:HB3	2.26	0.70
36:10:38:ARG:NE	36:10:98:GLU:H	1.90	0.70
52:26:1307:U:H2'	52:26:1308:U:C6	2.26	0.70
52:26:1464:U:H2'	52:26:1465:A:C8	2.27	0.70
52:26:834:U:H2'	52:26:835:U:C6	2.27	0.70
53:27:1152:C:H2'	53:27:1153:C:H6	1.57	0.70
53:27:2073:C:H2'	53:27:2074:U:H6	1.57	0.70
53:27:2231:U:H2'	53:27:2232:C:H6	1.55	0.70
53:27:2415:G:H2'	53:27:2416:C:C6	2.27	0.70
53:27:488:G:H1'	53:27:492:A:N6	2.06	0.70
53:27:871:U:H2'	53:27:872:U:C6	2.27	0.70
59:33:225:ARG:O	59:33:229:ILE:HG23	1.92	0.70
59:33:82:PHE:CD1	59:33:83:PRO:HD3	2.25	0.70
34:8:131:ILE:HG21	52:26:620:C:H1'	1.73	0.70
1:A:12:ARG:HA	1:A:15:VAL:HG23	1.73	0.70
12:L:69:PRO:HA	12:L:94:ALA:HB2	1.74	0.70
25:Y:16:LEU:HB2	25:Y:19:HIS:HD2	1.57	0.70
26:Z:35:ASP:CG	26:Z:36:VAL:H	1.95	0.70
44:18:42:ASN:O	44:18:45:LEU:HB3	1.91	0.70
52:26:1301:U:O2	52:26:1301:U:H2'	1.92	0.70
53:27:2715:C:C3'	53:27:2716:C:H5''	2.22	0.70
53:27:679:C:H2'	53:27:680:C:C6	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:51:ARG:HH22	53:27:1825:U:P	2.13	0.70
10:J:98:ARG:HH21	52:26:339:C:H3'	1.56	0.70
37:11:71:THR:HG23	37:11:95:ARG:HH22	1.56	0.70
52:26:70:U:H5''	52:26:71:A:OP1	1.91	0.70
53:27:2504:U:H2'	53:27:2505:G:H3'	1.72	0.70
59:33:434:ASP:HA	59:33:437:HIS:ND1	2.05	0.70
52:26:1070:U:H2'	52:26:1071:C:C6	2.27	0.70
53:27:1259:G:H2'	53:27:1260:A:H8	1.56	0.70
53:27:1370:C:H2'	53:27:1371:G:O4'	1.92	0.70
53:27:1842:G:H2'	53:27:1843:C:C6	2.27	0.70
53:27:2136:G:N7	53:27:2156:G:H1'	2.07	0.70
53:27:218:A:H3'	53:27:219:A:H8	1.56	0.70
59:33:132:VAL:HG11	59:33:136:ARG:HB2	1.73	0.70
59:33:274:PHE:CD1	59:33:277:ARG:NH1	2.60	0.70
7:G:5:LEU:HA	7:G:8:LYS:HB2	1.74	0.70
48:22:15:GLU:HG2	52:26:845:A:OP1	1.92	0.70
53:27:394:C:H2'	53:27:395:U:O4'	1.92	0.70
1:A:257:ARG:NH2	1:A:266:ILE:HD11	2.06	0.70
9:I:58:ASN:HD21	9:I:128:ASN:HB2	1.56	0.70
19:S:80:TRP:CZ3	19:S:82:LYS:HB3	2.26	0.70
42:16:41:PRO:HG3	42:16:49:ARG:HG2	1.74	0.70
59:33:44:GLN:CB	59:33:45:GLN:HB2	2.21	0.70
35:9:20:VAL:HG23	35:9:31:SER:HB3	1.73	0.70
18:R:29:VAL:HG21	18:R:69:LEU:HG	1.73	0.70
53:27:197:A:H2'	53:27:198:C:O4'	1.91	0.69
53:27:2638:G:H1'	53:27:2778:A:H61	1.57	0.69
53:27:2704:C:H2'	53:27:2705:A:O4'	1.91	0.69
53:27:5:A:H2'	53:27:6:A:C8	2.27	0.69
53:27:878:A:H3'	53:27:879:G:H8	1.56	0.69
55:29:21:C:H2'	55:29:22:A:H8	1.57	0.69
58:32:46:A:H2'	58:32:47:U:H5''	1.72	0.69
58:32:65:C:H2'	58:32:66:C:C6	2.27	0.69
59:33:77:ARG:HH12	59:33:99:VAL:CG2	2.05	0.69
8:H:20:SER:O	8:H:25:PRO:HD3	1.91	0.69
36:10:9:MET:HB2	36:10:85:ILE:HG13	1.74	0.69
34:8:7:LYS:HG2	52:26:430:A:OP2	1.92	0.69
52:26:512:U:H2'	52:26:513:C:C6	2.26	0.69
53:27:419:U:H2'	53:27:420:C:H6	1.57	0.69
59:33:64:GLU:O	59:33:68:THR:HG23	1.90	0.69
59:33:675:ASP:N	59:33:706:GLN:O	2.24	0.69
59:33:74:ASP:HA	59:33:77:ARG:CZ	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:102:ILE:HD12	33:7:102:ILE:O	1.92	0.69
2:B:98:VAL:HG11	2:B:182:ALA:HA	1.73	0.69
18:R:89:ALA:O	18:R:92:ARG:HG2	1.91	0.69
20:T:11:ILE:HG13	20:T:20:LYS:O	1.92	0.69
42:16:117:GLY:HA2	52:26:35:G:O2'	1.92	0.69
52:26:1409:C:H2'	52:26:1410:A:C8	2.27	0.69
52:26:800:G:H2'	52:26:801:U:C5	2.26	0.69
53:27:1021:A:C8	53:27:1023:U:H1'	2.27	0.69
53:27:891:G:H2'	53:27:892:A:C8	2.26	0.69
59:33:410:THR:HB	59:33:411:PRO:HD2	1.74	0.69
34:8:58:GLN:O	34:8:62:ARG:HG2	1.92	0.69
1:A:200:MET:HE3	52:26:773:G:H4'	1.72	0.69
8:H:56:VAL:HB	8:H:70:THR:HG22	1.75	0.69
52:26:1409:C:H2'	52:26:1410:A:H8	1.58	0.69
53:27:1180:U:H2'	53:27:1181:U:C5	2.27	0.69
54:28:95:U:H2'	54:28:96:G:H8	1.58	0.69
59:33:65:ILE:CD1	59:33:161:ARG:HH21	2.05	0.69
39:13:83:THR:HB	39:13:97:LEU:HD21	1.75	0.69
49:23:65:MET:HB3	49:23:73:PHE:HE2	1.57	0.69
50:24:32:LYS:HE2	52:26:1439:G:OP1	1.93	0.69
53:27:814:C:H1'	53:27:1225:G:N2	2.08	0.69
53:27:215:G:H4'	53:27:216:A:H4'	1.74	0.69
56:30:14:A:H61	56:30:21:A:H1'	1.56	0.69
4:D:76:PHE:CE2	53:27:2310:C:H2'	2.26	0.69
15:O:51:ASN:O	53:27:2845:U:H5''	1.92	0.69
15:O:24:THR:HB	15:O:87:ARG:HB2	1.73	0.69
16:P:91:ARG:HH22	53:27:998:C:P	2.16	0.69
40:14:12:ALA:HB2	40:14:96:VAL:HG13	1.73	0.69
52:26:148:G:H2'	52:26:149:A:O4'	1.92	0.69
52:26:18:C:C2'	52:26:19:A:H5''	2.20	0.69
52:26:56:U:H2'	52:26:57:G:C8	2.28	0.69
53:27:2168:G:H2'	53:27:2169:A:O4'	1.93	0.69
53:27:2291:U:H2'	53:27:2292:U:C6	2.28	0.69
53:27:2389:G:H5''	53:27:2390:U:O4'	1.92	0.69
53:27:689:A:H2'	53:27:690:G:C8	2.27	0.69
35:9:59:ILE:O	35:9:63:MET:HG2	1.92	0.69
2:B:125:TRP:CG	2:B:160:LYS:HB3	2.28	0.69
4:D:105:ILE:HD12	4:D:138:PRO:HG2	1.75	0.69
15:O:91:VAL:HG21	15:O:96:LEU:HD11	1.73	0.69
39:13:35:GLU:HA	39:13:39:GLY:HA3	1.74	0.69
44:18:7:ALA:HA	44:18:10:VAL:HG12	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:538:A:H2'	53:27:539:G:O4'	1.92	0.69
55:29:8:A:H2'	55:29:9:G:C8	2.28	0.69
56:30:15:G:H3'	56:30:16:U:H5''	1.73	0.69
35:9:79:THR:HG22	35:9:121:ASN:HB2	1.75	0.69
46:20:46:LYS:HG3	46:20:47:GLU:N	2.07	0.69
52:26:265:G:H2'	52:26:267:C:H5	1.56	0.69
52:26:439:U:H2'	52:26:440:C:O4'	1.90	0.69
53:27:1825:U:H2'	53:27:1826:G:H8	1.56	0.69
12:L:81:ARG:HD3	53:27:2251:G:OP1	1.93	0.69
53:27:755:U:H2'	53:27:756:A:H8	1.57	0.69
55:29:8:A:H2'	55:29:9:G:H8	1.57	0.69
59:33:39:TRP:CA	59:33:80:LEU:HD13	2.23	0.69
33:7:122:GLN:HB3	33:7:127:VAL:HG11	1.75	0.69
34:8:30:LYS:H	34:8:30:LYS:HD2	1.58	0.69
3:C:189:THR:HG22	3:C:191:ASP:H	1.57	0.69
19:S:10:VAL:HA	19:S:35:ALA:HB2	1.75	0.69
44:18:48:GLN:HG2	49:23:11:ASP:OD1	1.93	0.69
52:26:286:C:H2'	52:26:287:U:C6	2.27	0.69
53:27:1070:A:H2'	53:27:1097:U:OP1	1.93	0.69
53:27:1251:C:O2'	53:27:1252:G:H3'	1.93	0.69
53:27:1297:C:H2'	53:27:1298:C:H6	1.55	0.69
53:27:2059:A:H2'	53:27:2503:A:N6	2.07	0.69
59:33:39:TRP:CH2	59:33:43:LEU:HD22	2.27	0.69
24:X:9:LYS:HD2	24:X:10:SER:H	1.57	0.69
24:X:17:GLU:HA	24:X:20:ASN:HD22	1.58	0.69
41:15:126:ARG:HB3	51:25:34:ARG:HH21	1.58	0.69
52:26:1507:A:H2'	52:26:1508:A:C8	2.28	0.69
52:26:620:C:H2'	52:26:621:A:O4'	1.92	0.69
53:27:1159:U:H2'	53:27:1160:G:H8	1.58	0.69
53:27:138:U:H3'	53:27:139:U:C5'	2.23	0.69
53:27:2195:U:H2'	53:27:2196:C:H6	1.58	0.69
53:27:2372:U:H2'	53:27:2373:G:C8	2.28	0.69
53:27:910:A:H2'	53:27:911:A:C8	2.27	0.69
59:33:27:THR:HG23	59:33:31:SER:HB2	1.75	0.69
59:33:371:GLU:HA	59:33:374:ILE:CB	2.22	0.69
10:J:98:ARG:NH2	52:26:339:C:H3'	2.08	0.69
15:O:47:ILE:HD11	15:O:61:ARG:HB2	1.75	0.69
36:10:38:ARG:HB3	36:10:63:ASN:HD22	1.56	0.69
52:26:208:U:H4'	52:26:209:U:C5	2.27	0.69
52:26:635:A:H2'	52:26:636:U:C6	2.28	0.69
53:27:2092:U:C4'	53:27:2093:G:H5''	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:39:GLN:HG3	34:8:40:HIS:ND1	2.08	0.69
34:8:36:ALA:HA	34:8:41:GLY:HA3	1.74	0.69
38:12:79:ARG:HB2	38:12:80:PRO:HD2	1.74	0.68
27:1:46:GLY:HA3	27:1:54:ILE:CG2	2.23	0.68
52:26:819:A:H4'	52:26:820:U:OP2	1.92	0.68
53:27:1019:U:H3	53:27:1142:A:H62	1.38	0.68
53:27:300:A:N3	53:27:319:G:H1'	2.08	0.68
53:27:340:A:H2'	53:27:341:C:O4'	1.93	0.68
53:27:582:A:H2'	53:27:583:G:H8	1.58	0.68
11:K:78:ARG:CZ	53:27:626:A:H2'	2.22	0.68
53:27:939:G:H2'	53:27:940:G:H8	1.57	0.68
55:29:19:U:H2'	55:29:20:U:C6	2.28	0.68
29:3:12:ARG:NE	29:3:44:VAL:HG21	2.08	0.68
52:26:1379:G:O2'	52:26:1380:U:H5'	1.93	0.68
53:27:1794:A:H2'	53:27:1795:C:H6	1.58	0.68
56:30:50:U:H2'	56:30:51:U:O4'	1.92	0.68
59:33:714:ILE:HD13	59:33:716:ILE:HB	1.75	0.68
59:33:666:SER:HA	59:33:715:GLU:HA	1.74	0.68
34:8:167:PRO:HB2	34:8:170:LEU:HD21	1.75	0.68
2:B:6:GLY:HA3	2:B:29:VAL:HG22	1.72	0.68
2:B:48:ILE:HG23	2:B:84:LEU:HD11	1.74	0.68
7:G:119:PRO:HG2	7:G:120:ALA:H	1.57	0.68
38:12:40:LYS:HD3	38:12:47:ASP:HA	1.75	0.68
46:20:17:TYR:HB2	46:20:39:PHE:HB3	1.75	0.68
52:26:1033:G:C3'	52:26:1034:G:H4'	2.22	0.68
52:26:1170:A:H2'	52:26:1171:A:O4'	1.93	0.68
53:27:1607:C:H4'	53:27:1608:A:O5'	1.94	0.68
53:27:593:U:H2'	53:27:594:U:C6	2.29	0.68
54:28:3:C:C2'	54:28:4:C:H5''	2.21	0.68
59:33:38:THR:HG21	59:33:77:ARG:CB	2.23	0.68
1:A:246:PRO:HD2	1:A:247:TRP:CZ3	2.28	0.68
1:A:71:ASP:O	1:A:73:ILE:N	2.27	0.68
7:G:59:LEU:H	7:G:62:ARG:HE	1.42	0.68
17:Q:49:ILE:HG22	17:Q:54:VAL:N	2.08	0.68
22:V:42:HIS:NE2	22:V:73:ARG:HD3	2.07	0.68
52:26:491:G:H2'	52:26:492:C:C6	2.29	0.68
53:27:1038:G:H2'	53:27:1039:A:C8	2.28	0.68
53:27:2678:C:H2'	53:27:2679:A:O4'	1.94	0.68
53:27:2884:U:H3'	53:27:2884:U:O2	1.93	0.68
15:O:52:ARG:NH2	53:27:2720:U:H5''	2.08	0.68
36:10:48:ALA:HB1	48:22:68:PRO:HG3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1382:C:H2'	52:26:1383:C:H6	1.57	0.68
53:27:2721:A:H1'	53:27:2873:A:C8	2.28	0.68
59:33:157:ILE:O	59:33:161:ARG:HG2	1.93	0.68
29:3:34:ARG:NE	29:3:39:ARG:HD2	2.08	0.68
59:33:622:VAL:HA	59:33:654:ASP:HA	1.75	0.68
35:9:38:VAL:HG22	35:9:66:ALA:HB1	1.76	0.68
7:G:4:ASN:O	7:G:8:LYS:HG3	1.93	0.68
42:16:45:ASN:O	42:16:46:SER:HB2	1.93	0.68
52:26:574:A:N3	52:26:883:C:H1'	2.09	0.68
53:27:1177:G:H2'	53:27:1178:C:H4'	1.76	0.68
15:O:26:GLU:HB3	15:O:84:SER:OG	1.93	0.68
25:Y:40:THR:HG22	25:Y:43:ILE:HG12	1.76	0.68
52:26:129:A:H1'	52:26:130:A:N7	2.08	0.68
34:8:115:GLN:HE22	52:26:406:G:H21	1.40	0.68
52:26:578:C:H2'	52:26:579:A:H8	1.58	0.68
53:27:1801:A:H8	53:27:1801:A:H5'	1.59	0.68
53:27:2247:A:H2'	53:27:2248:C:C6	2.29	0.68
53:27:319:G:H2'	53:27:320:A:O4'	1.93	0.68
20:T:6:ARG:N	53:27:85:G:OP1	2.25	0.68
56:30:49:C:H2'	56:30:50:U:C6	2.29	0.68
59:33:409:PHE:HB2	59:33:458:GLY:O	1.94	0.68
2:B:9:VAL:O	15:O:4:ILE:HD11	1.93	0.68
5:E:57:TYR:HB3	5:E:59:ASP:OD1	1.94	0.68
8:H:83:ALA:HB1	8:H:98:GLY:HA3	1.74	0.68
10:J:10:VAL:HG12	10:J:12:ASP:H	1.59	0.68
37:11:111:GLY:HA2	37:11:118:ARG:HD3	1.76	0.68
52:26:422:C:H5''	52:26:423:G:OP1	1.94	0.68
52:26:878:A:H2'	52:26:879:C:C6	2.29	0.68
53:27:1196:C:H2'	53:27:1197:G:C8	2.29	0.68
53:27:2617:U:H2'	53:27:2618:G:O4'	1.93	0.68
27:1:49:ARG:HG2	53:27:2884:U:C6	2.29	0.68
53:27:688:U:H2'	53:27:689:A:C8	2.28	0.68
34:8:21:LYS:NZ	34:8:25:ARG:HE	1.91	0.68
34:8:70:GLN:HA	34:8:73:ASN:HD22	1.59	0.68
39:13:118:ARG:H	39:13:124:PRO:HD3	1.58	0.68
50:24:34:VAL:O	50:24:38:ILE:HG13	1.94	0.68
52:26:193:C:H2'	52:26:194:C:H6	1.57	0.68
52:26:943:U:H2'	52:26:944:G:H8	1.59	0.68
53:27:281:C:H2'	53:27:282:A:H8	1.58	0.68
53:27:634:C:H2'	53:27:635:C:H6	1.58	0.68
59:33:725:VAL:O	59:33:729:LEU:HG	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:105:ILE:HG13	4:D:106:ALA:N	2.08	0.68
5:E:88:LEU:HB3	5:E:93:TYR:HB3	1.75	0.68
8:H:61:TYR:HE2	8:H:67:THR:HG23	1.59	0.68
9:I:80:HIS:CD2	53:27:2642:G:H5'	2.29	0.68
13:M:33:ILE:HD12	13:M:118:ARG:HH22	1.58	0.68
41:15:30:ILE:CD1	41:15:45:THR:HG22	2.24	0.68
53:27:1807:G:H2'	53:27:1808:A:H5'	1.74	0.68
53:27:2272:U:H5''	53:27:2273:A:OP1	1.94	0.68
53:27:2328:A:H2'	53:27:2329:U:C6	2.28	0.68
53:27:704:G:H2'	53:27:726:G:N2	2.07	0.68
59:33:719:LEU:HD12	59:33:720:GLN:N	2.09	0.68
3:C:57:LYS:HE3	3:C:73:ILE:HD13	1.75	0.68
14:N:71:ALA:HB2	14:N:102:ARG:HG2	1.76	0.68
10:J:120:PRO:HB2	15:O:65:ASN:ND2	2.09	0.68
23:W:9:LYS:HE2	53:27:397:U:OP2	1.93	0.68
41:15:124:LYS:CD	52:26:780:A:H5''	2.24	0.67
51:25:29:ALA:HA	51:25:32:ARG:NE	2.09	0.67
52:26:1096:C:H2'	52:26:1097:C:C6	2.30	0.67
52:26:1274:A:O2'	52:26:1275:A:H5''	1.94	0.67
52:26:313:A:H2'	52:26:314:C:C6	2.30	0.67
53:27:2538:C:H2'	53:27:2539:C:H6	1.58	0.67
53:27:29:U:H2'	53:27:30:G:C8	2.29	0.67
53:27:45:G:C5'	53:27:46:G:H5'	2.14	0.67
53:27:795:C:H2'	53:27:796:C:C6	2.28	0.67
25:Y:13:ILE:HD11	53:27:989:G:C5	2.28	0.67
2:B:51:THR:HB	2:B:79:LEU:HD23	1.76	0.67
10:J:22:ILE:HD12	10:J:23:LYS:HB2	1.77	0.67
23:W:37:PHE:O	23:W:45:PHE:HA	1.94	0.67
24:X:16:THR:HA	24:X:19:LEU:HD12	1.75	0.67
51:25:50:SER:HA	51:25:53:LYS:HD2	1.77	0.67
53:27:1686:C:H2'	53:27:1687:G:O4'	1.95	0.67
53:27:2131:U:H5'	53:27:2132:U:H3'	1.77	0.67
16:P:10:ARG:NH2	53:27:514:A:H5'	2.10	0.67
53:27:971:G:H2'	53:27:972:A:O4'	1.93	0.67
56:30:13:C:O2'	56:30:14:A:H5''	1.94	0.67
59:33:686:ILE:HD13	59:33:729:LEU:HA	1.76	0.67
1:A:172:THR:HG22	1:A:182:LYS:HG2	1.76	0.67
4:D:7:TYR:O	4:D:12:VAL:HG23	1.94	0.67
9:I:81:ILE:HG23	9:I:82:GLY:N	2.06	0.67
21:U:16:ALA:HA	21:U:19:ARG:HE	1.58	0.67
41:15:30:ILE:HD13	41:15:45:THR:HG22	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:74:GLN:O	42:16:76:HIS:N	2.28	0.67
52:26:1010:U:H2'	52:26:1011:C:C6	2.29	0.67
52:26:1052:U:H2'	52:26:1200:C:N4	2.08	0.67
52:26:112:G:H22	52:26:315:A:H2	1.42	0.67
52:26:1472:U:H2'	52:26:1473:G:C8	2.29	0.67
53:27:1788:C:H2'	53:27:1789:A:H8	1.57	0.67
9:I:78:THR:HG22	53:27:2641:G:H5''	1.77	0.67
53:27:534:U:H2'	53:27:535:G:H8	1.59	0.67
53:27:688:U:H2'	53:27:689:A:H8	1.59	0.67
59:33:241:LYS:HG3	59:33:246:LYS:HD3	1.76	0.67
12:L:59:ARG:NH2	59:33:736:ILE:HB	2.08	0.67
1:A:269:ARG:HG2	1:A:270:ARG:N	2.10	0.67
1:A:30:ALA:HB3	1:A:31:PRO:HD3	1.77	0.67
2:B:142:VAL:HB	2:B:143:PRO:HD2	1.75	0.67
39:13:17:ARG:HD3	52:26:1147:C:O2'	1.93	0.67
22:V:58:LYS:NZ	53:27:2366:A:H4'	2.10	0.67
53:27:228:C:H42	53:27:417:C:H1'	1.60	0.67
56:30:72:C:H2'	56:30:73:A:C8	2.29	0.67
58:32:67:C:H2'	58:32:68:C:C6	2.30	0.67
34:8:1:ALA:CB	34:8:67:LEU:HD11	2.24	0.67
14:N:56:LYS:O	14:N:60:GLU:HG3	1.92	0.67
26:Z:44:PHE:CD1	26:Z:45:THR:HG23	2.29	0.67
36:10:3:HIS:O	36:10:92:THR:HG22	1.95	0.67
51:25:48:LYS:HG2	52:26:723:U:H6	1.59	0.67
52:26:1023:U:H2'	52:26:1024:G:C8	2.30	0.67
53:27:2024:G:H2'	53:27:2025:C:C6	2.29	0.67
53:27:2195:U:H2'	53:27:2196:C:C6	2.28	0.67
53:27:2644:G:H3'	53:27:2645:G:N2	2.08	0.67
53:27:2715:C:H3'	53:27:2716:C:H5''	1.77	0.67
2:B:40:LEU:HD12	2:B:40:LEU:H	1.57	0.67
8:H:78:LEU:HA	8:H:81:LYS:HB3	1.74	0.67
18:R:76:VAL:HG22	18:R:103:ILE:HA	1.77	0.67
24:X:12:GLU:N	24:X:12:GLU:OE1	2.26	0.67
41:15:108:ASN:HA	51:25:4:LYS:HZ1	1.59	0.67
42:16:85:ARG:HA	42:16:93:ARG:HA	1.75	0.67
52:26:613:C:H2'	52:26:614:C:C6	2.30	0.67
53:27:1611:C:H2'	53:27:1612:C:C6	2.29	0.67
59:33:210:GLU:HG3	59:33:260:TRP:CH2	2.29	0.67
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	0.67
59:33:701:SER:HA	59:33:708:ALA:HA	1.75	0.67
20:T:84:PHE:CE1	20:T:93:ARG:HG2	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:72:VAL:HG12	37:11:89:GLU:HA	1.77	0.67
46:20:22:ALA:HA	46:20:33:ILE:HD12	1.77	0.67
52:26:1305:G:HO2'	52:26:1306:A:H8	1.42	0.67
52:26:810:C:H2'	52:26:811:C:H6	1.60	0.67
53:27:660:C:H2'	53:27:661:A:C8	2.29	0.67
53:27:704:G:H1'	53:27:727:A:N6	2.10	0.67
59:33:95:LEU:HD13	59:33:107:ILE:HD12	1.77	0.67
59:33:20:TRP:CD1	59:33:63:VAL:HG23	2.30	0.67
14:N:29:HIS:HB3	14:N:36:TYR:HB2	1.76	0.67
17:Q:37:GLU:HA	17:Q:53:PHE:HD1	1.60	0.67
39:13:66:VAL:HG21	39:13:74:GLN:HB3	1.76	0.67
42:16:88:ASP:HB2	52:26:523:A:N1	2.10	0.67
43:17:48:SER:HB2	43:17:51:GLN:HG3	1.75	0.67
53:27:191:A:H2'	53:27:192:C:H6	1.56	0.67
29:3:39:ARG:NH2	53:27:468:G:N7	2.40	0.67
54:28:51:G:H2'	54:28:52:A:C8	2.30	0.67
59:33:63:VAL:CG1	59:33:80:LEU:HG	2.20	0.67
33:7:80:GLY:O	33:7:84:GLU:HG3	1.95	0.67
52:26:830:G:H2'	52:26:831:A:C8	2.29	0.67
53:27:1716:U:H2'	53:27:1717:A:H8	1.60	0.67
53:27:2226:C:H3'	53:27:2227:A:H8	1.60	0.67
53:27:2572:A:OP1	53:27:2574:G:H4'	1.95	0.67
13:M:90:ARG:NH2	53:27:2881:U:H5'	2.07	0.67
53:27:872:U:H2'	53:27:873:C:C6	2.30	0.67
3:C:43:THR:O	53:27:38:A:H1'	1.94	0.67
6:F:12:LEU:HD22	6:F:19:VAL:HG11	1.77	0.67
11:K:2:ARG:O	11:K:2:ARG:HG2	1.94	0.67
13:M:90:ARG:HH21	53:27:2881:U:C5'	2.05	0.67
23:W:7:THR:OG1	23:W:9:LYS:HG3	1.95	0.67
25:Y:27:GLY:HA3	25:Y:37:ARG:NH2	2.09	0.67
27:1:46:GLY:HA3	27:1:54:ILE:HG22	1.77	0.67
42:16:47:ALA:HB2	52:26:529:G:H22	1.60	0.67
49:23:63:ASP:O	49:23:66:VAL:HG23	1.95	0.67
52:26:1162:C:H2'	52:26:1163:A:C8	2.30	0.67
52:26:501:C:H2'	52:26:502:A:C8	2.29	0.67
52:26:778:G:H2'	52:26:779:C:O4'	1.95	0.67
54:28:24:G:H1'	54:28:27:C:H42	1.58	0.67
59:33:286:LEU:HD21	59:33:343:MET:HE1	1.77	0.67
59:33:598:VAL:HB	59:33:656:VAL:CG2	2.25	0.67
33:7:120:THR:HG23	33:7:188:ALA:HB2	1.77	0.67
34:8:33:ILE:HG23	34:8:34:GLU:OE1	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:20:ASN:HB2	26:Z:39:LYS:HD3	1.77	0.67
52:26:286:C:H2'	52:26:287:U:H6	1.60	0.66
53:27:1443:U:H2'	53:27:1444:G:H8	1.59	0.66
53:27:2791:G:H2'	53:27:2792:A:C8	2.29	0.66
34:8:1:ALA:HB2	34:8:67:LEU:HD11	1.76	0.66
38:12:46:GLU:N	38:12:63:LYS:HG3	2.10	0.66
52:26:677:U:H2'	52:26:678:U:H6	1.57	0.66
53:27:2233:U:H2'	53:27:2234:G:C8	2.30	0.66
31:5:14:CYS:SG	31:5:33:HIS:ND1	2.68	0.66
34:8:134:TYR:HD1	52:26:620:C:H4'	1.60	0.66
1:A:16:VAL:HB	1:A:203:VAL:HG22	1.76	0.66
36:10:78:PHE:CD1	36:10:84:VAL:HG11	2.29	0.66
52:26:1162:C:H2'	52:26:1163:A:H8	1.59	0.66
53:27:1851:U:H2'	53:27:1852:U:O4'	1.96	0.66
57:31:44:A:H2'	57:31:45:G:O4'	1.96	0.66
59:33:281:ILE:HD11	59:33:338:ILE:CG1	2.26	0.66
1:A:32:LEU:HD22	1:A:63:ILE:HD11	1.76	0.66
5:E:34:ARG:HE	5:E:70:LEU:HD21	1.59	0.66
8:H:55:PRO:HG2	8:H:71:LYS:HB2	1.78	0.66
8:H:61:TYR:CE2	8:H:67:THR:HG23	2.30	0.66
41:15:15:VAL:HG22	41:15:16:SER:N	2.09	0.66
42:16:110:LYS:HG3	52:26:539:A:P	2.35	0.66
52:26:1349:A:H3'	52:26:1350:A:H8	1.61	0.66
52:26:668:G:H2'	52:26:669:G:H8	1.60	0.66
53:27:1990:C:H2'	53:27:1991:U:C6	2.30	0.66
59:33:408:VAL:HA	59:33:458:GLY:HA2	1.76	0.66
59:33:611:ARG:HA	59:33:614:GLN:NE2	2.10	0.66
1:A:42:ARG:HG2	1:A:48:ILE:HA	1.77	0.66
10:J:19:VAL:HB	10:J:41:ILE:HD13	1.76	0.66
13:M:22:ARG:HH11	13:M:71:ARG:HB2	1.60	0.66
37:11:132:THR:O	37:11:135:LYS:HB3	1.96	0.66
43:17:7:ASN:ND2	43:17:21:ILE:HG13	2.03	0.66
52:26:426:U:H2'	52:26:427:U:C6	2.31	0.66
53:27:2087:G:H2'	53:27:2088:A:H8	1.59	0.66
53:27:2462:C:H2'	53:27:2463:C:C6	2.30	0.66
59:33:218:LEU:HD21	59:33:259:ILE:HD13	1.78	0.66
59:33:285:ARG:HG3	59:33:288:ASP:H	1.61	0.66
59:33:634:HIS:NE2	59:33:640:GLN:HB2	2.09	0.66
2:B:28:GLU:OE2	2:B:30:GLU:HG3	1.95	0.66
3:C:57:LYS:HD3	53:27:469:G:H5'	1.78	0.66
3:C:48:THR:HG22	3:C:86:ALA:HB3	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:45:MET:O	39:13:49:GLN:N	2.27	0.66
45:19:88:ARG:HE	53:27:713:G:H3'	1.60	0.66
36:10:86:ARG:HE	52:26:673:A:H4'	1.60	0.66
52:26:801:U:H2'	52:26:802:A:H8	1.61	0.66
52:26:827:U:H2'	52:26:870:U:O4	1.96	0.66
53:27:1077:A:N1	53:27:1088:A:H2'	2.11	0.66
53:27:2064:C:H2'	53:27:2065:C:C6	2.31	0.66
37:11:80:GLY:HA2	55:29:11:U:O2'	1.94	0.66
58:32:14:A:H3'	58:32:15:G:C8	2.30	0.66
58:32:19:G:H2'	58:32:20:U:C5	2.30	0.66
59:33:281:ILE:HD11	59:33:338:ILE:HG13	1.78	0.66
35:9:45:VAL:HG12	35:9:46:GLY:N	2.11	0.66
2:B:55:LYS:HG3	2:B:77:ARG:HA	1.78	0.66
2:B:63:PRO:HG3	53:27:2787:C:H1'	1.76	0.66
5:E:86:LEU:HD11	5:E:144:ALA:HB1	1.77	0.66
7:G:2:ALA:HB1	7:G:6:GLN:OE1	1.95	0.66
38:12:3:GLN:OE1	38:12:3:GLN:N	2.29	0.66
53:27:181:A:H2'	53:27:182:A:H8	1.58	0.66
53:27:185:G:H2'	53:27:186:G:H8	1.60	0.66
53:27:208:C:H2'	53:27:209:C:H6	1.60	0.66
53:27:2189:U:H2'	53:27:2190:G:H8	1.59	0.66
53:27:2661:G:H2'	53:27:2662:A:C8	2.31	0.66
59:33:73:ILE:O	59:33:77:ARG:HG3	1.96	0.66
34:8:125:ASN:HD22	34:8:141:VAL:HG22	1.61	0.66
4:D:90:LEU:O	4:D:90:LEU:HD12	1.96	0.66
5:E:72:ASN:O	5:E:76:ILE:HG12	1.95	0.66
23:W:70:LEU:HA	23:W:73:ARG:HG2	1.77	0.66
40:14:20:GLN:O	40:14:24:GLU:HG3	1.96	0.66
45:19:88:ARG:HD2	53:27:714:U:C5	2.30	0.66
44:18:81:ILE:HG21	52:26:1202:U:C2	2.31	0.66
52:26:1236:A:H2'	52:26:1237:C:C6	2.31	0.66
53:27:1199:U:H2'	53:27:1200:C:H6	1.59	0.66
29:3:1:MET:N	53:27:1620:G:H5'	2.10	0.66
20:T:42:LYS:HD2	53:27:499:U:H5''	1.76	0.66
54:28:65:U:H3'	54:28:108:A:H61	1.61	0.66
54:28:75:G:H2'	54:28:76:G:H8	1.59	0.66
59:33:527:GLU:O	59:33:531:LEU:N	2.22	0.66
33:7:134:LYS:O	33:7:138:GLN:HG2	1.96	0.66
11:K:132:ARG:O	11:K:136:GLU:HG2	1.95	0.66
12:L:70:ASP:OD1	12:L:71:LYS:N	2.29	0.66
21:U:55:GLU:HB3	21:U:59:GLU:CD	2.15	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1399:C:H1'	52:26:1400:C:OP2	1.95	0.66
52:26:1464:U:H2'	52:26:1465:A:H8	1.59	0.66
52:26:381:C:H2'	52:26:382:A:O4'	1.95	0.66
42:16:49:ARG:HH12	52:26:523:A:H61	1.42	0.66
8:H:9:LYS:HB2	53:27:1061:U:H5	1.61	0.66
53:27:1082:U:H2'	53:27:1083:U:H4'	1.76	0.66
53:27:2144:G:N3	53:27:2146:C:H1'	2.09	0.66
53:27:962:G:H2'	53:27:963:U:O4'	1.96	0.66
59:33:621:ILE:HA	59:33:635:ARG:O	1.95	0.66
32:6:186:VAL:HG21	32:6:192:PRO:HB3	1.78	0.66
34:8:115:GLN:NE2	52:26:406:G:H21	1.94	0.66
34:8:87:GLU:HB2	34:8:187:ARG:HB2	1.78	0.66
12:L:42:THR:HA	12:L:93:VAL:HG12	1.77	0.66
15:O:77:SER:O	15:O:80:VAL:HG22	1.96	0.66
19:S:11:LEU:HD12	19:S:50:LEU:HD22	1.77	0.66
27:1:8:THR:HG23	27:1:11:LYS:N	2.09	0.66
41:15:14:GLN:HA	41:15:76:TYR:HA	1.78	0.66
52:26:765:G:H3'	52:26:812:G:H22	1.61	0.66
52:26:946:A:H2'	52:26:947:G:H8	1.58	0.66
53:27:1197:G:H2'	53:27:1198:U:C6	2.31	0.66
59:33:179:THR:HG21	59:33:206:LEU:HD12	1.77	0.66
59:33:703:THR:HG21	59:33:707:LEU:HB2	1.78	0.66
9:I:27:ARG:HH22	53:27:1142:A:C4'	2.08	0.66
15:O:62:LYS:HE2	15:O:64:SER:HB3	1.78	0.66
16:P:36:GLN:HE21	53:27:563:A:C2'	2.08	0.66
25:Y:10:ARG:HB2	25:Y:53:MET:HB2	1.77	0.66
38:12:76:ARG:NH1	38:12:125:ILE:HG23	2.11	0.65
39:13:121:ARG:HD3	52:26:1345:U:OP1	1.97	0.65
46:20:70:ARG:O	46:20:74:LEU:HG	1.96	0.65
52:26:1463:U:H2'	52:26:1464:U:C6	2.31	0.65
52:26:950:U:H2'	52:26:951:G:H8	1.60	0.65
53:27:1172:C:C2'	53:27:1173:U:H5''	2.24	0.65
34:8:149:LYS:HD3	34:8:177:MET:HG3	1.78	0.65
4:D:141:ASP:HB2	4:D:144:LYS:HB2	1.78	0.65
26:Z:66:ILE:HG23	26:Z:66:ILE:O	1.97	0.65
42:16:11:ARG:HG3	52:26:562:U:H1'	1.78	0.65
52:26:555:U:H2'	52:26:556:C:C6	2.30	0.65
52:26:736:C:H2'	52:26:737:C:C6	2.31	0.65
52:26:755:G:H2'	52:26:756:C:H6	1.61	0.65
52:26:878:A:H2'	52:26:879:C:H6	1.59	0.65
52:26:936:C:H2'	52:26:937:A:H8	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:950:U:H2'	52:26:951:G:C8	2.32	0.65
53:27:1111:A:O2'	53:27:1112:G:H4'	1.96	0.65
53:27:1704:C:H2'	53:27:1705:A:C8	2.32	0.65
53:27:2024:G:H2'	53:27:2025:C:H6	1.60	0.65
53:27:2557:G:H2'	53:27:2558:C:C6	2.31	0.65
53:27:2688:G:H1'	53:27:2721:A:N6	2.11	0.65
59:33:16:ASP:OD1	59:33:17:PRO:HD2	1.96	0.65
59:33:668:VAL:HG13	59:33:713:THR:HG22	1.78	0.65
32:6:206:ILE:HG13	32:6:207:ARG:N	2.11	0.65
6:F:117:LEU:HD13	6:F:121:VAL:HA	1.78	0.65
18:R:70:LYS:HB3	18:R:110:ARG:OXT	1.97	0.65
20:T:36:GLU:HA	20:T:61:GLU:HG2	1.78	0.65
36:10:71:ILE:HA	36:10:74:LEU:HD12	1.78	0.65
47:21:14:ASP:C	47:21:16:MET:H	1.99	0.65
52:26:34:C:H2'	52:26:35:G:C8	2.32	0.65
53:27:129:C:H2'	53:27:130:C:C6	2.31	0.65
53:27:839:U:H2'	53:27:840:C:C6	2.31	0.65
58:32:7:G:H3'	58:32:8:U:C5'	2.24	0.65
33:7:70:ALA:HA	33:7:105:VAL:HG12	1.78	0.65
4:D:51:ASN:HB3	4:D:149:ARG:NH2	2.10	0.65
14:N:26:LEU:HB2	14:N:90:VAL:HG21	1.78	0.65
21:U:51:GLN:OE1	21:U:86:LEU:HD21	1.97	0.65
38:12:88:LYS:HG3	38:12:89:ASP:H	1.60	0.65
52:26:1307:U:H2'	52:26:1308:U:H6	1.62	0.65
52:26:1342:C:H2'	52:26:1343:G:C8	2.31	0.65
52:26:398:U:H2'	52:26:399:G:H8	1.61	0.65
52:26:936:C:H2'	52:26:937:A:C8	2.32	0.65
53:27:783:A:H8	53:27:784:G:H4'	1.60	0.65
53:27:984:A:H5''	53:27:985:C:OP2	1.97	0.65
32:6:12:GLY:H	32:6:14:HIS:HE1	1.44	0.65
33:7:27:GLU:OE1	33:7:27:GLU:N	2.30	0.65
15:O:97:TYR:HD1	15:O:100:ARG:HD2	1.62	0.65
37:11:134:VAL:O	37:11:138:GLU:HG3	1.97	0.65
42:16:43:LYS:HB3	42:16:44:PRO:CD	2.27	0.65
50:24:67:HIS:O	50:24:69:ASN:N	2.29	0.65
51:25:4:LYS:HE2	51:25:6:ARG:NH1	2.11	0.65
52:26:113:G:H2'	52:26:114:U:C6	2.31	0.65
52:26:1159:U:H5	52:26:1182:G:H2'	1.61	0.65
52:26:484:G:C5	52:26:486:U:H1'	2.31	0.65
53:27:813:U:H1'	53:27:1226:A:N3	2.12	0.65
4:D:130:GLY:HA3	53:27:2305:U:H5''	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2455:G:H2'	53:27:2456:C:C6	2.30	0.65
59:33:58:ARG:HD3	59:33:159:HIS:CE1	2.31	0.65
59:33:325:VAL:HG22	59:33:335:GLU:HG2	1.78	0.65
59:33:17:PRO:CB	59:33:39:TRP:NE1	2.50	0.65
59:33:670:ARG:HH21	59:33:709:THR:HG21	1.61	0.65
16:P:49:ARG:HH21	17:Q:74:ILE:HD12	1.60	0.65
21:U:30:ILE:HG22	21:U:91:PHE:HB2	1.78	0.65
22:V:70:PRO:HD3	54:28:12:C:N4	2.12	0.65
26:Z:44:PHE:HD1	26:Z:45:THR:HG23	1.62	0.65
40:14:40:ILE:HB	40:14:73:LEU:HB3	1.77	0.65
43:17:113:LYS:H	43:17:114:PRO:HD2	1.60	0.65
28:2:21:THR:HG21	30:4:33:THR:HA	1.78	0.65
9:I:110:PRO:HB3	53:27:1007:C:O3'	1.95	0.65
16:P:2:ARG:HA	53:27:1248:G:O2'	1.96	0.65
53:27:2784:U:H2'	53:27:2785:C:H6	1.60	0.65
53:27:542:C:H2'	53:27:543:G:H5'	1.78	0.65
58:32:51:C:H2'	58:32:52:G:H8	1.59	0.65
2:B:164:GLN:HE22	53:27:2822:G:H5''	1.61	0.65
5:E:93:TYR:HD1	5:E:106:LEU:HA	1.62	0.65
38:12:6:ILE:CG2	38:12:31:LEU:HD11	2.27	0.65
51:25:46:ARG:HH12	52:26:1532:U:H5	1.45	0.65
52:26:406:G:H2'	52:26:407:U:H6	1.61	0.65
52:26:514:C:H2'	52:26:515:G:H8	1.61	0.65
52:26:578:C:H2'	52:26:579:A:C8	2.32	0.65
53:27:1441:G:H2'	53:27:1442:U:C6	2.32	0.65
53:27:2247:A:H2'	53:27:2248:C:H6	1.62	0.65
5:E:157:LYS:HD2	53:27:2659:G:OP1	1.97	0.65
30:4:1:PRO:HA	53:27:591:U:O2'	1.96	0.65
32:6:185:ILE:HG13	32:6:199:ILE:O	1.97	0.65
38:12:95:MET:O	38:12:98:LEU:HG	1.96	0.65
52:26:1157:A:H5'	52:26:1158:C:C6	2.32	0.65
52:26:1477:U:H2'	52:26:1478:U:C6	2.31	0.65
52:26:505:G:OP2	52:26:535:A:H5'	1.97	0.65
53:27:2010:G:H2'	53:27:2011:U:H6	1.61	0.65
53:27:2112:G:H2'	53:27:2113:U:H5'	1.78	0.65
53:27:491:G:N2	53:27:492:A:H1'	2.12	0.65
58:32:27:U:O2'	58:32:28:C:H5'	1.97	0.65
59:33:684:THR:HA	59:33:687:LEU:HD12	1.79	0.65
59:33:35:LEU:HD11	59:33:73:ILE:HA	1.78	0.65
59:33:62:MET:HE2	59:33:82:PHE:CD1	2.31	0.65
3:C:10:SER:O	3:C:12:LEU:N	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:79:THR:HG21	6:F:147:VAL:HG23	1.79	0.65
9:I:37:ARG:HG3	9:I:39:LYS:HG3	1.77	0.65
12:L:29:GLY:HA2	12:L:106:ASP:HB2	1.79	0.65
22:V:33:ILE:HG22	22:V:34:VAL:HG23	1.79	0.65
23:W:17:ARG:NE	23:W:23:ALA:HB2	2.11	0.65
43:17:14:ALA:HA	43:17:44:ILE:HD11	1.79	0.65
49:23:30:LEU:HD22	49:23:48:ILE:HG22	1.79	0.65
7:G:31:ARG:HG3	53:27:1054:A:H4'	1.79	0.65
53:27:2037:A:H2'	53:27:2038:G:C8	2.32	0.65
53:27:2073:C:O2'	53:27:2074:U:H5'	1.97	0.65
53:27:2615:U:H5'	53:27:2615:U:H6	1.60	0.65
59:33:39:TRP:CZ3	59:33:43:LEU:HD22	2.32	0.65
33:7:23:ALA:HB3	33:7:28:PHE:HD1	1.61	0.65
1:A:180:MET:HB2	1:A:268:ARG:H	1.61	0.65
13:M:63:ARG:HA	13:M:80:PHE:HE2	1.62	0.65
41:15:124:LYS:HG3	41:15:125:LYS:N	2.10	0.65
43:17:21:ILE:HB	43:17:24:VAL:CG1	2.26	0.65
45:19:86:LEU:O	45:19:87:ARG:HB3	1.97	0.65
52:26:270:A:H2'	52:26:271:C:C6	2.32	0.65
52:26:33:A:H2'	52:26:34:C:C6	2.32	0.65
53:27:3:U:H2'	53:27:4:U:C6	2.32	0.65
34:8:12:ARG:CD	34:8:37:PRO:HA	2.27	0.65
1:A:47:ARG:HH21	53:27:774:G:H5''	1.62	0.65
1:A:68:ARG:HB2	1:A:128:THR:HG21	1.78	0.65
4:D:175:PRO:O	4:D:176:PHE:HB2	1.96	0.65
19:S:40:LYS:HZ1	19:S:59:ASN:HA	1.60	0.65
37:11:3:ARG:O	37:11:5:VAL:N	2.30	0.64
48:22:54:LEU:O	48:22:57:ALA:HB3	1.96	0.64
52:26:1007:U:H2'	52:26:1008:U:H6	1.59	0.64
53:27:2246:G:H2'	53:27:2247:A:C8	2.31	0.64
35:9:122:VAL:O	35:9:122:VAL:HG23	1.97	0.64
50:24:19:HIS:O	50:24:23:ARG:HG2	1.98	0.64
52:26:1137:C:H4'	52:26:1138:G:N1	2.12	0.64
52:26:678:U:H2'	52:26:679:C:O4'	1.97	0.64
53:27:2297:A:N1	53:27:2321:U:C5	2.66	0.64
53:27:2443:C:H2'	53:27:2444:G:H8	1.61	0.64
10:J:30:ARG:HA	53:27:2675:A:H5'	1.80	0.64
53:27:437:U:H2'	53:27:438:G:H8	1.61	0.64
53:27:580:U:H2'	53:27:581:C:C6	2.31	0.64
59:33:20:TRP:NE1	59:33:63:VAL:C	2.50	0.64
35:9:156:ARG:O	35:9:158:LYS:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:71:ARG:HB2	10:J:73:ASP:OD1	1.97	0.64
40:14:12:ALA:HB3	40:14:18:ILE:HD12	1.79	0.64
49:23:53:GLY:HA3	52:26:958:A:H61	1.60	0.64
52:26:1251:A:H2'	52:26:1252:A:O4'	1.97	0.64
52:26:690:G:H2'	52:26:691:G:C8	2.32	0.64
8:H:126:ARG:HE	53:27:1080:A:H5''	1.62	0.64
53:27:1794:A:H2'	53:27:1795:C:C6	2.32	0.64
53:27:18:U:H2'	53:27:19:A:C8	2.32	0.64
53:27:2008:C:H2'	53:27:2009:A:H8	1.62	0.64
53:27:2220:U:H2'	53:27:2221:G:H8	1.62	0.64
53:27:2810:A:H2'	53:27:2811:G:O4'	1.98	0.64
17:Q:37:GLU:HA	17:Q:53:PHE:CD1	2.32	0.64
19:S:40:LYS:NZ	19:S:59:ASN:HA	2.13	0.64
46:20:5:ARG:HB2	52:26:376:G:C5'	2.26	0.64
52:26:458:U:H2'	52:26:459:A:H8	1.60	0.64
53:27:1387:A:H2'	53:27:1388:G:C8	2.33	0.64
53:27:1935:G:H3'	53:27:1962:C:H42	1.63	0.64
53:27:1936:A:H3'	53:27:1937:A:H5'	1.77	0.64
53:27:1987:A:H2'	53:27:1988:G:H8	1.62	0.64
53:27:1999:C:H5''	53:27:2723:C:O2'	1.98	0.64
53:27:2845:U:H2'	53:27:2846:G:O4'	1.98	0.64
54:28:119:A:C3'	54:28:120:A:H5''	2.28	0.64
5:E:104:LEU:HD21	5:E:130:ILE:HD11	1.78	0.64
12:L:67:VAL:HG12	12:L:100:LYS:NZ	2.11	0.64
35:9:131:ASN:HD21	52:26:18:C:P	2.21	0.64
52:26:600:A:H2'	52:26:601:G:C8	2.33	0.64
53:27:1287:A:H3'	53:27:1288:G:H21	1.63	0.64
53:27:1720:U:H2'	53:27:1721:G:O4'	1.98	0.64
53:27:2515:C:H2'	53:27:2516:A:C8	2.32	0.64
53:27:2708:G:H2'	53:27:2709:G:H8	1.63	0.64
53:27:445:C:O2'	53:27:446:G:H5'	1.98	0.64
53:27:833:A:H2'	53:27:834:G:C8	2.32	0.64
53:27:963:U:H2'	53:27:964:C:H6	1.61	0.64
24:X:49:ASP:O	24:X:53:VAL:HG23	1.96	0.64
51:25:4:LYS:HE2	51:25:6:ARG:HH11	1.60	0.64
52:26:797:C:H2'	52:26:798:U:C6	2.32	0.64
53:27:1367:A:H2'	53:27:1368:G:H5'	1.80	0.64
53:27:1484:U:H2'	53:27:1485:U:C6	2.32	0.64
53:27:1709:U:H2'	53:27:1710:G:H8	1.60	0.64
53:27:2644:G:H3'	53:27:2645:G:H21	1.61	0.64
53:27:2671:G:H2'	53:27:2672:U:C6	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:441:U:H2'	53:27:442:G:C8	2.33	0.64
53:27:909:A:H2'	53:27:912:C:C5	2.33	0.64
56:30:13:C:C2'	56:30:14:A:H5''	2.28	0.64
53:27:884:U:H5'	59:33:612:CYS:HB3	1.79	0.64
59:33:77:ARG:NH1	59:33:99:VAL:CG2	2.61	0.64
32:6:9:LEU:HB3	32:6:12:GLY:HA2	1.80	0.64
10:J:6:THR:HG23	53:27:1666:G:O3'	1.97	0.64
11:K:3:LEU:O	11:K:5:THR:N	2.29	0.64
12:L:29:GLY:CA	12:L:106:ASP:HB2	2.28	0.64
21:U:21:ARG:HA	21:U:25:LYS:O	1.98	0.64
48:22:54:LEU:HG	48:22:58:ILE:HD11	1.78	0.64
49:23:65:MET:HB3	49:23:73:PHE:CE2	2.33	0.64
52:26:1299:A:C2'	52:26:1301:U:H1'	2.27	0.64
41:15:39:ASN:HA	52:26:683:G:H21	1.61	0.64
53:27:1387:A:H2'	53:27:1388:G:H8	1.61	0.64
53:27:1502:A:C3'	53:27:1503:A:H5''	2.27	0.64
53:27:1842:G:H2'	53:27:1843:C:H6	1.62	0.64
14:N:13:ARG:NH2	53:27:2335:A:H5'	2.12	0.64
53:27:2637:U:H2'	53:27:2638:G:O4'	1.97	0.64
53:27:2869:G:H2'	53:27:2870:C:H6	1.62	0.64
59:33:18:GLU:O	59:33:21:ILE:HG12	1.98	0.64
59:33:282:VAL:HG12	59:33:341:LYS:HG2	1.80	0.64
31:5:37:GLN:CD	53:27:1125:G:H5'	2.18	0.64
44:18:68:ARG:NH1	44:18:70:HIS:HB2	2.13	0.64
49:23:21:ALA:HA	49:23:27:LYS:HZ2	1.62	0.64
52:26:86:G:H4'	52:26:87:C:C6	2.33	0.64
53:27:2450:A:O2'	53:27:2451:A:H5'	1.97	0.64
53:27:2899:A:H2'	53:27:2900:A:C8	2.32	0.64
12:L:75:GLU:OE2	53:27:957:C:H5'	1.98	0.64
56:30:9:A:H1'	56:30:46:G:C2	2.32	0.64
59:33:147:ARG:HA	59:33:150:VAL:CG1	2.28	0.64
59:33:671:VAL:HG21	59:33:735:VAL:HG13	1.79	0.64
33:7:149:LYS:HG2	33:7:200:TRP:HB2	1.78	0.64
33:7:54:ILE:HG22	33:7:67:ILE:HG12	1.78	0.64
23:W:10:ARG:HG3	23:W:11:PRO:HD2	1.80	0.64
4:D:114:ARG:HH11	43:17:70:ARG:HD2	1.62	0.64
26:Z:66:ILE:CD1	44:18:41:TRP:HB2	2.27	0.64
52:26:1206:G:H2'	52:26:1207:G:O4'	1.98	0.64
52:26:382:A:H2'	52:26:383:A:C8	2.32	0.64
53:27:106:C:H2'	53:27:107:G:H8	1.63	0.64
53:27:1113:U:H2'	53:27:1114:C:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1486:U:H2'	53:27:1487:U:H6	1.61	0.64
34:8:10:LEU:HD13	34:8:62:ARG:HD2	1.79	0.64
1:A:237:ARG:HD3	53:27:2591:C:OP1	1.98	0.64
10:J:38:ILE:HD12	10:J:38:ILE:N	2.13	0.64
17:Q:73:LYS:NZ	17:Q:86:GLN:HE21	1.96	0.64
17:Q:68:ARG:HH11	17:Q:90:ARG:HD3	1.62	0.64
36:10:63:ASN:HB2	36:10:96:VAL:HG21	1.80	0.64
43:17:28:ARG:NH2	43:17:62:PHE:HB2	2.13	0.64
47:21:68:LYS:O	47:21:69:THR:HB	1.98	0.64
52:26:999:C:H2'	52:26:1000:A:C8	2.33	0.64
52:26:1159:U:C5	52:26:1182:G:H2'	2.33	0.64
53:27:1089:A:H2	53:27:1090:A:H62	1.45	0.64
53:27:1357:C:H2'	53:27:1358:G:O4'	1.98	0.64
53:27:1341:G:C2	53:27:1398:C:H4'	2.33	0.64
53:27:2369:A:H2'	53:27:2370:G:H8	1.62	0.64
53:27:247:G:H4'	53:27:386:G:C2	2.33	0.64
53:27:947:A:H2'	53:27:948:C:C6	2.32	0.64
32:6:124:THR:HA	32:6:127:LYS:HD2	1.80	0.64
1:A:90:ILE:C	1:A:90:ILE:HD12	2.18	0.64
2:B:180:VAL:HG13	2:B:187:LEU:HD13	1.79	0.64
2:B:52:THR:O	2:B:77:ARG:HG2	1.96	0.64
4:D:39:VAL:O	4:D:41:GLU:HG3	1.98	0.64
11:K:93:ASN:O	11:K:95:LEU:N	2.27	0.64
37:11:92:PRO:O	37:11:95:ARG:HB3	1.96	0.63
50:24:82:ILE:O	50:24:86:ALA:N	2.22	0.63
51:25:66:ARG:HG3	52:26:1099:G:H5'	1.79	0.63
43:17:106:ARG:NH1	52:26:1228:C:OP1	2.30	0.63
52:26:287:U:H2'	52:26:288:A:C8	2.33	0.63
53:27:1570:A:H2'	53:27:1571:A:C8	2.33	0.63
53:27:1906:G:C2'	53:27:1907:G:H5''	2.27	0.63
53:27:2888:C:H2'	53:27:2889:C:H6	1.63	0.63
53:27:435:C:C2'	53:27:436:C:H5'	2.26	0.63
59:33:17:PRO:CB	59:33:39:TRP:CE2	2.81	0.63
33:7:19:SER:HB3	33:7:21:TRP:HE1	1.63	0.63
33:7:96:VAL:HB	33:7:97:PRO:HD2	1.80	0.63
4:D:4:HIS:O	4:D:7:TYR:HB3	1.98	0.63
5:E:98:LYS:HZ1	5:E:103:ASN:HB2	1.63	0.63
26:Z:11:GLU:HG2	26:Z:25:ARG:HD2	1.81	0.63
52:26:149:A:H61	52:26:172:A:H62	1.47	0.63
52:26:341:C:H2'	52:26:342:C:H6	1.63	0.63
53:27:1383:A:H2'	53:27:1384:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1508:A:H2'	53:27:1509:A:O4'	1.98	0.63
53:27:1660:G:H2'	53:27:1661:G:H8	1.62	0.63
53:27:1741:C:H2'	53:27:1742:U:C6	2.33	0.63
53:27:2693:G:H2'	53:27:2694:G:H8	1.62	0.63
3:C:47:LYS:HE3	53:27:451:U:H4'	1.80	0.63
53:27:780:G:H2'	53:27:782:A:C5	2.33	0.63
53:27:872:U:H2'	53:27:873:C:H6	1.62	0.63
54:28:119:A:H3'	54:28:120:A:H5''	1.79	0.63
57:31:69:C:H2'	57:31:70:G:H8	1.63	0.63
59:33:54:LEU:HB2	59:33:57:TRP:NE1	2.12	0.63
9:I:47:HIS:ND1	9:I:48:VAL:HG23	2.13	0.63
18:R:6:LYS:HB2	18:R:103:ILE:O	1.98	0.63
18:R:93:ALA:HB2	53:27:1614:A:N1	2.14	0.63
45:19:20:ASP:HA	52:26:750:C:O2'	1.98	0.63
52:26:1365:G:H2'	52:26:1366:C:O4'	1.98	0.63
52:26:824:G:H2'	52:26:825:A:H8	1.63	0.63
53:27:2114:A:N6	53:27:2117:A:H62	1.93	0.63
53:27:2162:G:O2'	53:27:2171:A:H5'	1.98	0.63
53:27:2316:G:H2'	53:27:2317:A:H8	1.63	0.63
53:27:2552:U:C6	53:27:2554:U:H5'	2.32	0.63
53:27:2588:G:C2'	53:27:2589:A:H5'	2.28	0.63
53:27:2773:C:H2'	53:27:2774:C:H6	1.63	0.63
33:7:67:ILE:HB	33:7:102:ILE:HG22	1.80	0.63
3:C:2:GLU:HA	3:C:13:THR:HA	1.78	0.63
36:10:46:GLN:HB2	36:10:56:LYS:HG2	1.80	0.63
28:2:8:ILE:HD12	28:2:50:GLU:HG3	1.80	0.63
52:26:1516:G:H2'	52:26:1518:A:OP2	1.98	0.63
52:26:233:C:H2'	52:26:234:C:H6	1.64	0.63
52:26:742:G:H2'	52:26:743:A:C8	2.33	0.63
53:27:202:U:H2'	53:27:203:A:O4'	1.98	0.63
53:27:277:G:H4'	53:27:278:A:C8	2.34	0.63
53:27:499:U:H2'	53:27:500:G:O4'	1.98	0.63
59:33:240:MET:O	59:33:243:GLU:HG2	1.98	0.63
59:33:232:PHE:CZ	59:33:329:PRO:HD2	2.33	0.63
59:33:429:TYR:HD1	59:33:433:SER:HA	1.64	0.63
59:33:672:VAL:HG12	59:33:736:ILE:HD11	1.80	0.63
52:26:1005:A:H2'	52:26:1006:G:O4'	1.98	0.63
52:26:1347:G:O2'	52:26:1373:G:N1	2.31	0.63
34:8:120:LYS:HE3	52:26:439:U:H5''	1.81	0.63
51:25:44:ARG:NH2	52:26:722:G:OP2	2.31	0.63
53:27:1174:U:O2	53:27:1174:U:H2'	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1740:G:H2'	53:27:1741:C:O4'	1.98	0.63
53:27:1854:A:N6	53:27:1888:G:H1'	2.14	0.63
53:27:2208:C:H2'	53:27:2209:G:H8	1.63	0.63
53:27:680:C:H2'	53:27:681:G:C8	2.32	0.63
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63
35:9:61:LYS:HE3	52:26:1073:U:P	2.38	0.63
20:T:11:ILE:HG22	20:T:70:ALA:O	1.98	0.63
21:U:14:LYS:NZ	54:28:98:G:H22	1.96	0.63
22:V:38:GLY:HA2	53:27:2330:G:H21	1.63	0.63
26:Z:56:ARG:HH22	49:23:68:HIS:HE1	1.46	0.63
26:Z:66:ILE:HD11	44:18:41:TRP:HB2	1.79	0.63
40:14:62:ARG:NH1	52:26:1367:C:H5'	2.13	0.63
48:22:38:ILE:H	48:22:38:ILE:HD12	1.62	0.63
53:27:1454:C:HO2'	53:27:1455:G:H8	1.47	0.63
53:27:2869:G:H2'	53:27:2870:C:C6	2.33	0.63
3:C:151:GLY:HA2	3:C:195:GLN:OE1	1.99	0.63
52:26:1287:A:C2	52:26:1353:G:H1'	2.33	0.63
52:26:597:G:H2'	52:26:598:U:H5'	1.81	0.63
53:27:1563:U:H2'	53:27:1564:C:C6	2.34	0.63
53:27:2028:U:H2'	53:27:2029:G:C8	2.33	0.63
53:27:1783:A:C6	53:27:2587:A:C2	2.87	0.63
13:M:72:ASP:OD2	13:M:75:ILE:HG12	1.98	0.63
36:10:63:ASN:CB	36:10:96:VAL:HG21	2.29	0.63
41:15:111:ASP:OD1	41:15:113:THR:HG23	1.98	0.63
42:16:25:ALA:CB	52:26:554:A:H5'	2.27	0.63
47:21:68:LYS:HB2	52:26:267:C:OP1	1.99	0.63
52:26:1138:G:H3'	52:26:1138:G:N3	2.13	0.63
53:27:2291:U:O2'	53:27:2374:C:H1'	1.99	0.63
53:27:784:G:O2'	53:27:785:G:H5'	1.98	0.63
1:A:233:GLY:HA3	53:27:2598:A:H5''	1.81	0.63
40:14:85:ASP:HB3	40:14:89:ARG:NH2	2.13	0.63
44:18:80:ARG:CA	44:18:83:VAL:HG12	2.28	0.63
52:26:1033:G:C4	52:26:1034:G:H1'	2.34	0.63
52:26:707:U:H2'	52:26:708:C:C6	2.34	0.63
16:P:2:ARG:HD2	53:27:1248:G:C2	2.34	0.63
53:27:1658:C:H2'	53:27:1659:G:C8	2.33	0.63
53:27:186:G:H2'	53:27:187:G:H8	1.64	0.63
53:27:849:A:H2'	53:27:850:U:C6	2.34	0.63
59:33:62:MET:CE	59:33:82:PHE:CD1	2.82	0.63
59:33:88:ASN:ND2	59:33:90:VAL:HG13	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:73:ASN:HB3	20:T:76:THR:OG1	1.99	0.63
42:16:29:LYS:HE3	42:16:58:ASN:HD22	1.64	0.62
47:21:12:VAL:HB	47:21:21:VAL:HG13	1.81	0.62
52:26:151:A:H2'	52:26:152:A:O4'	1.99	0.62
52:26:175:C:H2'	52:26:176:C:H6	1.64	0.62
52:26:560:A:H4'	52:26:561:U:H5'	1.79	0.62
52:26:607:A:H2'	52:26:608:A:H8	1.63	0.62
53:27:1059:G:H2'	53:27:1060:U:C5	2.33	0.62
53:27:1139:G:O2'	53:27:1140:C:H5'	1.98	0.62
53:27:1564:C:H2'	53:27:1565:C:C6	2.34	0.62
53:27:171:U:H2'	53:27:172:A:C8	2.33	0.62
53:27:1967:C:H2'	53:27:1968:G:O4'	1.98	0.62
53:27:2099:U:H2'	53:27:2100:G:H5''	1.81	0.62
56:30:2:C:H2'	56:30:3:C:O4'	1.99	0.62
10:J:22:ILE:HG13	10:J:40:LYS:O	1.99	0.62
10:J:71:ARG:HB3	10:J:72:PRO:HD2	1.80	0.62
18:R:82:MET:HB3	18:R:84:ARG:HH22	1.64	0.62
37:11:22:LEU:O	37:11:26:VAL:HG23	1.99	0.62
38:12:10:LEU:HD12	38:12:76:ARG:HB2	1.80	0.62
42:16:106:VAL:O	42:16:118:VAL:HG22	2.00	0.62
46:20:19:VAL:HG13	46:20:36:VAL:O	1.99	0.62
46:20:50:THR:HG22	46:20:52:LEU:HD11	1.80	0.62
50:24:11:ILE:HG13	50:24:12:GLN:N	2.14	0.62
52:26:1142:G:H3'	52:26:1143:G:C8	2.33	0.62
52:26:1360:A:H2'	52:26:1361:G:O4'	1.98	0.62
52:26:223:A:H2'	52:26:224:U:C6	2.34	0.62
53:27:1514:G:O2'	53:27:1515:A:H5''	1.98	0.62
53:27:1702:G:H2'	53:27:1703:G:C5'	2.10	0.62
53:27:969:G:H2'	53:27:970:U:C6	2.34	0.62
33:7:39:ARG:HG3	33:7:54:ILE:HD11	1.81	0.62
4:D:62:GLN:HE21	4:D:88:VAL:HG13	1.62	0.62
5:E:37:ASN:HD22	5:E:63:GLN:CD	2.02	0.62
8:H:1:ALA:HB1	8:H:61:TYR:CE1	2.35	0.62
8:H:72:THR:HB	8:H:111:THR:HG22	1.80	0.62
11:K:23:ILE:HD12	11:K:23:ILE:H	1.63	0.62
11:K:63:LYS:HZ3	30:4:11:LYS:HE3	1.63	0.62
13:M:114:GLU:OE2	13:M:118:ARG:HD3	1.99	0.62
40:14:40:ILE:HD12	40:14:73:LEU:HD22	1.82	0.62
49:23:5:LYS:HG3	49:23:6:LYS:N	2.14	0.62
50:24:17:ARG:HG3	50:24:18:LYS:N	2.14	0.62
52:26:999:C:H2'	52:26:1000:A:H8	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1144:G:H21	52:26:1146:A:H62	1.45	0.62
52:26:607:A:H2'	52:26:608:A:C8	2.34	0.62
41:15:39:ASN:HB2	52:26:684:U:H1'	1.81	0.62
8:H:126:ARG:NH2	53:27:1080:A:H5''	2.11	0.62
53:27:2037:A:H2'	53:27:2038:G:H8	1.62	0.62
59:33:154:ALA:O	59:33:157:ILE:HG12	1.98	0.62
31:5:4:ARG:HB2	53:27:2466:C:OP1	1.99	0.62
1:A:119:VAL:HG12	1:A:130:PRO:HG2	1.80	0.62
24:X:11:VAL:HA	24:X:14:LEU:HD12	1.80	0.62
41:15:17:ASP:HB3	41:15:36:ARG:HH21	1.62	0.62
53:27:1433:A:H2'	53:27:1434:A:C8	2.35	0.62
53:27:1434:A:H2'	53:27:1435:G:C8	2.34	0.62
12:L:45:GLN:HE21	53:27:2485:G:H5''	1.65	0.62
18:R:57:ASN:OD1	53:27:495:G:H1'	1.98	0.62
59:33:29:GLN:HA	59:33:32:CYS:SG	2.39	0.62
35:9:20:VAL:CG2	35:9:31:SER:HB3	2.29	0.62
1:A:124:LYS:HB3	1:A:127:ASN:ND2	2.14	0.62
2:B:148:GLN:HB2	2:B:152:PRO:HG2	1.81	0.62
5:E:87:GLN:C	5:E:88:LEU:HD12	2.20	0.62
9:I:95:ARG:HG2	9:I:96:ARG:HG2	1.81	0.62
20:T:11:ILE:HD11	20:T:19:GLY:HA2	1.81	0.62
40:14:73:LEU:CD2	40:14:75:ASP:HB2	2.30	0.62
52:26:188:C:H2'	52:26:189:A:O4'	1.98	0.62
52:26:990:C:H2'	52:26:991:U:O4'	1.99	0.62
27:1:8:THR:HG21	53:27:2021:C:OP1	1.99	0.62
53:27:225:C:H2'	53:27:226:A:O4'	1.98	0.62
53:27:514:A:H2'	53:27:515:A:C8	2.34	0.62
54:28:1:U:H6	54:28:1:U:H5'	1.65	0.62
7:G:121:SER:HB3	7:G:126:LEU:HD23	1.82	0.62
13:M:63:ARG:HA	13:M:80:PHE:CE2	2.34	0.62
19:S:51:PHE:O	19:S:53:VAL:HG13	1.99	0.62
21:U:37:PRO:HG2	54:28:73:A:H2	1.65	0.62
24:X:12:GLU:O	24:X:15:ASN:HB3	1.99	0.62
38:12:46:GLU:O	38:12:61:THR:HB	2.00	0.62
44:18:95:LEU:HD12	44:18:96:LYS:H	1.65	0.62
53:27:155:A:H2'	53:27:156:A:C8	2.35	0.62
53:27:193:U:H2'	53:27:194:G:H8	1.65	0.62
53:27:2118:U:H5	53:27:2149:U:H1'	1.64	0.62
53:27:795:C:H2'	53:27:796:C:H6	1.65	0.62
53:27:876:C:H2'	53:27:877:A:O4'	2.00	0.62
59:33:726:LEU:HA	59:33:729:LEU:HD12	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:63:VAL:HG11	59:33:80:LEU:CD2	2.29	0.62
32:6:132:GLU:O	32:6:136:ARG:HG2	2.00	0.62
35:9:34:ALA:HB3	35:9:50:GLY:HA3	1.81	0.62
4:D:125:GLY:HA2	4:D:162:ASP:HA	1.81	0.62
6:F:40:THR:O	6:F:42:LYS:N	2.32	0.62
8:H:45:THR:HA	8:H:48:ILE:HG12	1.80	0.62
9:I:5:THR:HG23	9:I:45:THR:HG21	1.82	0.62
17:Q:63:VAL:HA	17:Q:96:VAL:HG12	1.80	0.62
43:17:14:ALA:CB	43:17:33:LEU:HD21	2.30	0.62
46:20:19:VAL:HG12	46:20:37:GLY:C	2.20	0.62
49:23:79:TYR:CZ	49:23:80:ARG:HB3	2.34	0.62
52:26:741:G:H2'	52:26:742:G:H8	1.64	0.62
53:27:1388:G:H2'	53:27:1389:G:H8	1.65	0.62
53:27:1772:A:H2'	53:27:1773:A:H4'	1.81	0.62
53:27:216:A:H2'	53:27:217:A:C8	2.35	0.62
53:27:2585:U:O2'	53:27:2586:U:H5'	1.99	0.62
53:27:2841:C:H2'	53:27:2842:G:H8	1.62	0.62
59:33:429:TYR:CE1	59:33:436:GLY:HA3	2.34	0.62
33:7:32:LEU:O	33:7:35:ASP:HB3	2.00	0.62
3:C:57:LYS:NZ	3:C:59:PRO:HG3	2.14	0.62
37:11:129:ASN:CA	37:11:134:VAL:HG11	2.29	0.62
43:17:28:ARG:CZ	43:17:62:PHE:HB2	2.29	0.62
52:26:477:C:H2'	52:26:478:A:H8	1.65	0.62
52:26:843:U:O5'	52:26:844:G:H5''	1.98	0.62
53:27:1386:C:H2'	53:27:1387:A:C8	2.35	0.62
53:27:1464:G:H2'	53:27:1465:G:C8	2.35	0.62
53:27:2086:U:H3	53:27:2233:U:H3	1.47	0.62
53:27:2103:C:H2'	53:27:2104:C:C6	2.34	0.62
53:27:2316:G:H2'	53:27:2317:A:C8	2.35	0.62
53:27:566:U:H2'	53:27:567:U:C6	2.34	0.62
53:27:709:U:H2'	53:27:710:U:C6	2.35	0.62
59:33:62:MET:SD	59:33:155:GLU:OE1	2.58	0.62
59:33:210:GLU:CG	59:33:260:TRP:CH2	2.83	0.62
34:8:94:GLU:CG	34:8:185:PRO:HG2	2.29	0.62
9:I:98:GLU:O	9:I:102:GLU:HG3	2.00	0.62
9:I:69:ARG:HE	9:I:89:PHE:HE2	1.47	0.62
39:13:37:TYR:O	39:13:38:PHE:HB3	1.99	0.62
52:26:106:C:H2'	52:26:107:G:H8	1.65	0.62
52:26:499:A:H4'	52:26:500:G:O5'	1.99	0.62
52:26:530:G:H2'	52:26:530:G:N3	2.14	0.62
51:25:44:ARG:HD2	52:26:723:U:P	2.40	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1105:U:H2'	53:27:1106:G:H8	1.65	0.62
53:27:1316:U:H2'	53:27:1317:G:H8	1.65	0.62
12:L:79:ALA:HA	53:27:2494:G:O2'	2.00	0.62
53:27:279:A:H2'	53:27:280:U:C5'	2.24	0.62
9:I:7:LYS:HE3	53:27:538:A:H5''	1.81	0.62
54:28:75:G:H2'	54:28:76:G:C8	2.33	0.62
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.82	0.62
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.62
33:7:49:ALA:HB1	33:7:75:VAL:HG22	1.82	0.62
21:U:65:VAL:HG13	21:U:65:VAL:O	2.00	0.62
39:13:125:GLN:HE22	52:26:1342:C:H4'	1.64	0.62
43:17:13:HIS:HB2	43:17:16:ILE:HD13	1.80	0.62
43:17:24:VAL:HG23	43:17:28:ARG:HB3	1.81	0.62
44:18:32:ASP:HB2	44:18:34:ASN:HD21	1.65	0.62
49:23:39:ILE:HD12	49:23:68:HIS:O	1.99	0.62
52:26:1435:G:H2'	52:26:1436:U:C6	2.34	0.62
52:26:256:U:H2'	52:26:257:G:C8	2.35	0.62
53:27:1214:A:H2'	53:27:1215:G:O4'	1.99	0.62
53:27:1485:U:H2'	53:27:1486:U:C6	2.35	0.62
53:27:1550:C:H2'	53:27:1551:A:C8	2.35	0.62
53:27:16:C:H2'	53:27:17:G:C8	2.35	0.62
53:27:2136:G:H2'	53:27:2136:G:N3	2.14	0.62
53:27:2470:G:H2'	53:27:2471:A:H8	1.64	0.62
53:27:277:G:H2'	53:27:277:G:N3	2.15	0.62
58:32:59:A:H2'	58:32:60:U:O4'	2.00	0.62
59:33:62:MET:HE2	59:33:79:ALA:HA	1.80	0.62
30:4:5:THR:O	30:4:7:ARG:N	2.33	0.62
33:7:62:SER:HB2	33:7:99:GLN:NE2	2.15	0.62
8:H:4:VAL:HA	8:H:7:TYR:CD2	2.34	0.62
19:S:8:LEU:HD13	24:X:21:LEU:HB2	1.82	0.62
40:14:67:ILE:HG13	40:14:67:ILE:O	1.99	0.61
42:16:79:ILE:CG2	42:16:103:CYS:HB2	2.30	0.61
46:20:6:LEU:HD22	46:20:17:TYR:HB3	1.82	0.61
28:2:37:LYS:HB2	28:2:48:TYR:CD2	2.35	0.61
52:26:1347:G:H22	52:26:1373:G:H2'	1.65	0.61
52:26:460:A:H2'	52:26:461:A:H8	1.62	0.61
52:26:796:C:O2'	52:26:797:C:H5'	1.99	0.61
7:G:34:THR:OG1	53:27:1056:G:H5'	1.99	0.61
53:27:1773:A:H2'	53:27:1774:C:O4'	1.99	0.61
53:27:1947:C:H2'	53:27:1948:G:H8	1.63	0.61
53:27:1667:G:N2	53:27:1991:U:H3'	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2229:U:H2'	53:27:2230:G:H8	1.64	0.61
53:27:441:U:H2'	53:27:442:G:H8	1.65	0.61
53:27:723:C:H2'	53:27:724:U:O4'	2.00	0.61
53:27:78:U:H2'	53:27:79:C:C6	2.35	0.61
54:28:111:U:H2'	54:28:112:G:H8	1.65	0.61
59:33:147:ARG:O	59:33:150:VAL:HG12	1.99	0.61
59:33:274:PHE:HB3	59:33:333:THR:HB	1.79	0.61
59:33:409:PHE:C	59:33:460:GLN:HA	2.20	0.61
59:33:621:ILE:HG22	59:33:635:ARG:HA	1.82	0.61
34:8:2:ARG:HE	34:8:114:ARG:HD3	1.65	0.61
16:P:44:TYR:HD1	16:P:47:ARG:HH11	1.46	0.61
44:18:92:ILE:N	44:18:92:ILE:HD12	2.15	0.61
51:25:36:PHE:HB3	51:25:40:PRO:HD3	1.81	0.61
52:26:1219:A:H2'	52:26:1220:G:H8	1.61	0.61
52:26:1510:C:H2'	52:26:1511:G:C8	2.35	0.61
52:26:291:U:O2'	52:26:292:G:H5'	2.00	0.61
15:O:38:ARG:CZ	52:26:345:C:H5'	2.29	0.61
52:26:801:U:H2'	52:26:802:A:C8	2.34	0.61
53:27:1333:G:H2'	53:27:1334:G:H8	1.65	0.61
53:27:1443:U:H2'	53:27:1444:G:C8	2.33	0.61
53:27:1688:U:H2'	53:27:1698:A:N1	2.15	0.61
53:27:1844:C:H2'	53:27:1845:G:H8	1.65	0.61
53:27:2692:G:H2'	53:27:2693:G:H8	1.65	0.61
53:27:2868:A:H3'	53:27:2869:G:C8	2.35	0.61
53:27:666:A:H2'	53:27:667:U:C6	2.35	0.61
53:27:825:A:H2'	53:27:826:U:H6	1.65	0.61
56:30:18:G:N1	56:30:55:U:H1'	2.12	0.61
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	0.61
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.61
32:6:103:TRP:CE3	32:6:156:LEU:HD21	2.36	0.61
7:G:96:PHE:HE1	7:G:125:ARG:HB2	1.64	0.61
14:N:108:ASP:O	14:N:112:GLU:HG3	2.00	0.61
19:S:65:GLY:HA3	19:S:77:ARG:HB2	1.82	0.61
25:Y:26:LEU:HD21	25:Y:46:MET:SD	2.39	0.61
52:26:49:U:H3	52:26:362:G:H1'	1.65	0.61
53:27:1463:C:H2'	53:27:1464:G:H8	1.66	0.61
53:27:1752:C:H2'	53:27:1753:G:C8	2.35	0.61
59:33:17:PRO:HB3	59:33:39:TRP:HE1	1.59	0.61
59:33:293:LEU:CD1	59:33:322:ILE:HG21	2.29	0.61
4:D:58:ALA:O	4:D:139:GLU:HG3	1.99	0.61
40:14:57:VAL:HG22	40:14:58:ASN:N	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:32:THR:HG23	41:15:43:TRP:HB3	1.81	0.61
52:26:1524:C:H2'	52:26:1525:G:C8	2.36	0.61
50:24:67:HIS:HB3	52:26:262:A:H5'	1.83	0.61
52:26:937:A:H2'	52:26:938:A:H8	1.65	0.61
53:27:1130:U:O2'	53:27:1131:G:OP1	2.17	0.61
53:27:1297:C:H2'	53:27:1298:C:C6	2.35	0.61
53:27:1599:U:H2'	53:27:1600:C:H6	1.65	0.61
53:27:1993:U:H2'	53:27:1994:C:H5'	1.81	0.61
53:27:2394:C:H2'	53:27:2395:C:O4'	2.00	0.61
53:27:2570:G:H2'	53:27:2571:U:O4'	2.00	0.61
53:27:437:U:H2'	53:27:438:G:C8	2.36	0.61
54:28:35:C:C2'	54:28:36:C:H5'	2.29	0.61
33:7:190:THR:HG21	33:7:195:ILE:HD12	1.82	0.61
1:A:161:VAL:HG11	1:A:173:LEU:HD13	1.81	0.61
6:F:67:ALA:O	6:F:71:LYS:HG3	2.01	0.61
11:K:122:VAL:HB	11:K:142:ILE:HA	1.81	0.61
19:S:37:ASP:OD1	19:S:38:ALA:N	2.32	0.61
38:12:34:ALA:O	38:12:38:VAL:HG23	2.00	0.61
39:13:100:ALA:HB1	39:13:102:PHE:HE2	1.64	0.61
27:1:49:ARG:HG2	53:27:2884:U:H6	1.62	0.61
41:15:88:PRO:CD	51:25:28:LEU:HD21	2.24	0.61
52:26:175:C:H2'	52:26:176:C:C6	2.36	0.61
52:26:418:C:H2'	52:26:419:C:C6	2.35	0.61
52:26:737:C:H2'	52:26:738:C:C6	2.36	0.61
53:27:1056:G:H4'	53:27:1086:A:C8	2.36	0.61
17:Q:83:TYR:CZ	53:27:1187:G:H5''	2.36	0.61
53:27:2267:A:H5''	53:27:2268:A:H5'	1.82	0.61
53:27:2837:A:H2'	53:27:2838:G:H8	1.65	0.61
53:27:696:G:H2'	53:27:697:G:H8	1.65	0.61
53:27:809:G:H2'	53:27:810:U:C6	2.36	0.61
55:29:19:U:H2'	55:29:20:U:H6	1.64	0.61
59:33:175:ALA:O	59:33:178:CYS:SG	2.59	0.61
4:D:3:LEU:HA	4:D:6:TYR:HB3	1.83	0.61
4:D:56:LEU:O	4:D:60:SER:N	2.27	0.61
8:H:2:LYS:HB2	8:H:61:TYR:HD1	1.65	0.61
26:Z:2:LYS:HB2	26:Z:5:ILE:CD1	2.30	0.61
41:15:17:ASP:HA	41:15:80:ASN:OD1	2.01	0.61
52:26:1258:G:H2'	52:26:1259:C:C6	2.36	0.61
52:26:359:G:H5''	59:33:451:PHE:CE2	2.36	0.61
52:26:82:G:H2'	52:26:83:C:O4'	2.00	0.61
16:P:58:GLN:HE21	53:27:1009:A:H5''	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1147:A:H2'	53:27:1148:U:O4'	2.01	0.61
53:27:1474:U:H2'	53:27:1475:G:H5'	1.83	0.61
53:27:1637:A:H2'	53:27:1638:C:C6	2.36	0.61
53:27:2026:U:H2'	53:27:2027:G:O4'	2.00	0.61
53:27:2027:G:H2'	53:27:2028:U:C6	2.35	0.61
53:27:2805:C:H2'	53:27:2806:C:H6	1.64	0.61
53:27:357:C:H2'	53:27:358:U:C6	2.35	0.61
53:27:443:A:H1'	53:27:1201:U:O4'	2.00	0.61
53:27:660:C:H2'	53:27:661:A:H8	1.62	0.61
1:A:146:LYS:HB2	1:A:149:LYS:HD2	1.81	0.61
40:14:85:ASP:HB3	40:14:89:ARG:HH21	1.66	0.61
42:16:42:LYS:NZ	52:26:912:C:OP1	2.34	0.61
43:17:14:ALA:HB3	43:17:33:LEU:HD21	1.83	0.61
44:18:63:CYS:HB2	44:18:79:SER:HB2	1.82	0.61
46:20:50:THR:HG22	46:20:52:LEU:CD1	2.31	0.61
52:26:1000:A:H2'	52:26:1001:C:C6	2.36	0.61
52:26:1053:G:N7	52:26:1199:U:H3'	2.16	0.61
52:26:994:A:N7	52:26:1216:A:H4'	2.16	0.61
52:26:487:A:H2'	52:26:488:C:O4'	2.00	0.61
52:26:551:U:H2'	52:26:552:U:C6	2.35	0.61
53:27:22:C:H2'	53:27:23:G:H5''	1.83	0.61
53:27:583:G:H2'	53:27:584:C:C6	2.36	0.61
53:27:616:A:H2'	53:27:617:G:O4'	2.01	0.61
53:27:859:G:H1'	53:27:860:U:C5	2.33	0.61
53:27:96:C:H2'	53:27:97:C:C6	2.34	0.61
54:28:59:A:H2'	54:28:60:C:O4'	2.01	0.61
59:33:161:ARG:O	59:33:162:GLU:HG2	2.01	0.61
34:8:144:ILE:HD13	34:8:177:MET:HB3	1.83	0.61
35:9:86:GLY:O	35:9:87:VAL:HG12	2.01	0.61
7:G:58:THR:HG21	7:G:81:LEU:HD12	1.82	0.61
11:K:132:ARG:HH21	11:K:142:ILE:HG21	1.65	0.61
16:P:87:VAL:HG12	16:P:89:ILE:H	1.65	0.61
17:Q:81:LYS:HD2	53:27:973:A:H5''	1.81	0.61
20:T:73:ASN:O	20:T:75:ALA:N	2.34	0.61
41:15:71:ASP:O	41:15:72:ALA:HB3	2.00	0.61
39:13:125:GLN:HE22	52:26:1342:C:C4'	2.13	0.61
52:26:214:C:H2'	52:26:215:C:C6	2.35	0.61
53:27:151:C:H2'	53:27:152:A:C8	2.36	0.61
53:27:1995:U:H2'	53:27:1996:C:C5	2.35	0.61
53:27:2853:C:H2'	53:27:2854:G:C8	2.36	0.61
58:32:22:G:H2'	58:32:23:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:9:G:H2'	58:32:11:A:N6	2.11	0.61
3:C:55:SER:OG	3:C:56:GLY:N	2.34	0.61
39:13:74:GLN:O	39:13:78:ILE:HG13	2.01	0.61
52:26:1254:A:H2'	52:26:1255:G:C8	2.36	0.61
52:26:1305:G:O2'	52:26:1306:A:H8	1.83	0.61
52:26:665:A:N3	52:26:732:C:H2'	2.16	0.61
53:27:1259:G:H2'	53:27:1260:A:C8	2.35	0.61
53:27:1987:A:H2'	53:27:1988:G:C8	2.36	0.61
53:27:2174:C:H2'	53:27:2175:C:H5'	1.82	0.61
53:27:2524:G:C3'	53:27:2525:G:H5''	2.31	0.61
53:27:522:A:H2'	53:27:523:C:H6	1.65	0.61
53:27:607:U:H2'	53:27:608:A:H8	1.65	0.61
53:27:466:A:N3	53:27:683:U:H1'	2.15	0.61
53:27:708:G:N2	53:27:724:U:H1'	2.15	0.61
53:27:935:C:H2'	53:27:936:A:H8	1.64	0.61
34:8:113:ALA:O	34:8:117:VAL:HG23	2.01	0.61
8:H:71:LYS:NZ	53:27:1060:U:H5''	2.15	0.61
13:M:33:ILE:HD12	13:M:118:ARG:NH2	2.16	0.61
17:Q:38:VAL:HG11	17:Q:57:GLY:HA3	1.83	0.61
36:10:3:HIS:HB2	36:10:92:THR:HA	1.83	0.61
27:1:28:SER:HB2	27:1:39:ARG:HD3	1.81	0.61
52:26:767:A:H2'	52:26:768:A:C8	2.36	0.61
53:27:1010:A:N3	53:27:1153:C:H1'	2.16	0.61
53:27:1173:U:C3'	53:27:1174:U:H4'	2.30	0.61
53:27:1406:U:H2'	53:27:1407:G:H5''	1.82	0.61
53:27:1683:U:H2'	53:27:1684:G:C8	2.36	0.61
53:27:2162:G:C2'	53:27:2163:A:H5'	2.29	0.61
53:27:2699:C:H2'	53:27:2700:A:H8	1.64	0.61
53:27:818:G:H2'	53:27:1187:G:N2	2.16	0.61
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	0.61
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.61
34:8:16:THR:O	34:8:33:ILE:HD11	2.00	0.61
35:9:152:VAL:HA	35:9:155:LYS:NZ	2.15	0.61
4:D:131:VAL:HG23	4:D:151:LEU:H	1.66	0.61
7:G:18:VAL:HA	7:G:86:MET:HE1	1.82	0.61
14:N:40:ILE:HG12	14:N:47:VAL:HG12	1.82	0.61
18:R:69:LEU:HA	18:R:109:ASP:HA	1.82	0.61
20:T:40:LEU:HA	20:T:60:LYS:O	2.01	0.61
21:U:46:LYS:O	21:U:50:MET:HG2	2.00	0.61
38:12:5:PRO:O	38:12:8:ASP:HB3	2.01	0.60
39:13:51:LEU:HD13	39:13:56:MET:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:46:LYS:HE2	40:14:68:ARG:HE	1.66	0.60
42:16:79:ILE:HG22	42:16:103:CYS:HB2	1.82	0.60
43:17:16:ILE:H	43:17:16:ILE:HD12	1.65	0.60
52:26:755:G:H2'	52:26:756:C:C6	2.37	0.60
52:26:904:U:H2'	52:26:905:U:C6	2.36	0.60
53:27:134:G:H2'	53:27:135:U:C6	2.36	0.60
53:27:1363:C:H2'	53:27:1364:G:H8	1.65	0.60
53:27:2159:G:H2'	53:27:2160:C:O4'	2.01	0.60
53:27:302:C:H2'	53:27:303:G:C8	2.34	0.60
53:27:549:G:H2'	53:27:550:C:C6	2.36	0.60
59:33:267:ASN:HD22	59:33:267:ASN:H	1.49	0.60
59:33:683:ILE:O	59:33:687:LEU:N	2.33	0.60
2:B:25:THR:HG21	2:B:193:VAL:HG22	1.82	0.60
3:C:121:VAL:HG12	3:C:123:LYS:H	1.66	0.60
6:F:93:SER:HB2	6:F:123:ARG:NE	2.16	0.60
8:H:10:LEU:CD2	8:H:12:VAL:HG22	2.31	0.60
21:U:75:GLN:HB2	21:U:92:VAL:HG23	1.83	0.60
40:14:19:ASP:O	40:14:22:THR:HB	2.01	0.60
51:25:64:ALA:O	51:25:65:ARG:HB3	2.02	0.60
52:26:406:G:H2'	52:26:407:U:C6	2.36	0.60
52:26:747:A:H2'	52:26:748:G:O4'	2.00	0.60
52:26:825:A:H2'	52:26:826:C:C6	2.36	0.60
52:26:857:C:H2'	52:26:858:G:O4'	2.00	0.60
53:27:1176:U:H2'	53:27:1177:G:C8	2.36	0.60
53:27:570:G:H2'	53:27:2030:A:N7	2.16	0.60
2:B:146:ILE:HD11	53:27:2051:A:H4'	1.83	0.60
53:27:2828:G:H2'	53:27:2829:A:H8	1.64	0.60
53:27:467:G:O2'	53:27:468:G:H5'	2.01	0.60
53:27:584:C:H2'	53:27:585:G:C8	2.37	0.60
32:6:206:ILE:O	32:6:210:THR:HG23	2.01	0.60
34:8:12:ARG:HA	34:8:34:GLU:H	1.66	0.60
1:A:12:ARG:HA	1:A:15:VAL:CG2	2.31	0.60
10:J:76:VAL:H	15:O:72:VAL:HG22	1.66	0.60
14:N:70:ALA:O	14:N:74:VAL:HG23	2.00	0.60
10:J:105:ARG:NH2	15:O:31:VAL:HG21	2.16	0.60
25:Y:16:LEU:HB2	25:Y:19:HIS:CD2	2.36	0.60
42:16:33:CYS:HA	42:16:54:VAL:HA	1.82	0.60
42:16:86:VAL:HG21	42:16:89:LEU:HB2	1.83	0.60
43:17:87:GLY:O	43:17:91:ARG:HG3	2.00	0.60
52:26:1211:U:H4'	52:26:1213:A:H1'	1.83	0.60
52:26:376:G:O2'	52:26:377:G:H5'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:81:A:N6	52:26:86:G:H21	1.98	0.60
1:A:213:ARG:NH2	53:27:1566:A:H5'	2.17	0.60
53:27:1892:C:H2'	53:27:1893:C:C6	2.35	0.60
53:27:2115:G:H2'	53:27:2117:A:OP2	2.01	0.60
53:27:2233:U:H2'	53:27:2234:G:H8	1.65	0.60
53:27:2372:U:H2'	53:27:2373:G:H8	1.63	0.60
11:K:60:ARG:O	53:27:2393:U:H5'	2.02	0.60
53:27:2812:G:H2'	53:27:2813:A:C8	2.35	0.60
53:27:2840:C:H2'	53:27:2841:C:C6	2.36	0.60
24:X:55:THR:HG21	53:27:77:G:O4'	2.01	0.60
53:27:566:U:H4'	53:27:809:G:OP2	2.01	0.60
58:32:72:A:H2	58:32:73:A:H62	1.49	0.60
59:33:96:ARG:NE	59:33:104:VAL:HG21	2.15	0.60
32:6:103:TRP:CH2	32:6:107:ARG:HD3	2.36	0.60
35:9:113:VAL:HG13	35:9:114:LEU:HD12	1.83	0.60
1:A:269:ARG:HG3	1:A:269:ARG:HH11	1.67	0.60
3:C:5:LEU:HD13	3:C:12:LEU:H	1.66	0.60
16:P:80:ASN:O	16:P:84:LYS:HG2	2.01	0.60
40:14:35:GLN:HG3	40:14:77:VAL:HB	1.82	0.60
40:14:44:THR:HG22	40:14:70:HIS:HA	1.84	0.60
46:20:71:VAL:O	46:20:75:ILE:HG13	2.01	0.60
50:24:2:ASN:OD1	50:24:3:ILE:N	2.34	0.60
53:27:1604:C:H2'	53:27:1605:C:C6	2.36	0.60
53:27:1657:U:H2'	53:27:1658:C:C6	2.36	0.60
53:27:2699:C:H2'	53:27:2700:A:C8	2.36	0.60
53:27:2898:U:H2'	53:27:2899:A:H8	1.66	0.60
53:27:796:C:H2'	53:27:797:G:H8	1.65	0.60
3:C:29:HIS:NE2	11:K:8:PRO:HD3	2.15	0.60
15:O:29:VAL:HG13	15:O:79:VAL:HG22	1.83	0.60
16:P:87:VAL:HG13	17:Q:49:ILE:HD11	1.83	0.60
24:X:9:LYS:HZ3	24:X:10:SER:HB2	1.66	0.60
42:16:106:VAL:HG23	42:16:116:TYR:HB3	1.82	0.60
51:25:11:PHE:O	51:25:12:ASP:HB2	2.01	0.60
41:15:39:ASN:HA	52:26:683:G:N2	2.17	0.60
53:27:1053:C:H5'	53:27:1053:C:H6	1.64	0.60
53:27:1260:A:H2'	53:27:1261:C:C6	2.36	0.60
53:27:145:C:H2'	53:27:146:A:H8	1.66	0.60
53:27:1741:C:H2'	53:27:1742:U:H6	1.66	0.60
53:27:215:G:C4'	53:27:216:A:H4'	2.31	0.60
53:27:2271:G:C5	53:27:2272:U:C4	2.90	0.60
53:27:2593:U:H2'	53:27:2594:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2619:C:O2'	53:27:2620:C:H5'	2.02	0.60
13:M:64:ARG:HH22	53:27:2852:G:P	2.24	0.60
53:27:418:C:H2'	53:27:419:U:C6	2.37	0.60
54:28:29:A:H2'	54:28:30:C:C6	2.36	0.60
58:32:45:G:H5'	58:32:46:A:OP2	2.01	0.60
34:8:30:LYS:HD2	34:8:30:LYS:N	2.16	0.60
41:15:27:ASN:HA	41:15:57:SER:HB3	1.83	0.60
49:23:10:ILE:HG22	49:23:38:THR:N	2.15	0.60
52:26:1314:C:H2'	52:26:1315:U:C6	2.37	0.60
52:26:637:C:H2'	52:26:638:U:C6	2.36	0.60
53:27:128:C:H2'	53:27:129:C:H6	1.67	0.60
53:27:1388:G:H2'	53:27:1389:G:C8	2.37	0.60
53:27:2183:A:H2'	53:27:2184:A:C8	2.37	0.60
53:27:2834:G:O2'	53:27:2835:A:H5'	2.00	0.60
53:27:404:A:H1'	53:27:406:G:N9	2.15	0.60
53:27:433:C:O2'	53:27:434:U:H5'	2.02	0.60
53:27:582:A:H2'	53:27:583:G:C8	2.36	0.60
53:27:690:G:H2'	53:27:691:C:C6	2.35	0.60
53:27:967:U:H2'	53:27:968:C:C6	2.37	0.60
56:30:42:C:H2'	56:30:43:C:C1'	2.31	0.60
34:8:120:LYS:CG	34:8:130:ASN:HD21	2.15	0.60
6:F:42:LYS:O	6:F:45:GLU:HB3	2.01	0.60
15:O:101:GLU:OE1	15:O:101:GLU:N	2.33	0.60
15:O:7:LEU:O	15:O:7:LEU:HD23	2.00	0.60
52:26:1147:C:H2'	52:26:1148:U:H6	1.67	0.60
52:26:1406:U:H2'	52:26:1407:C:O4'	2.01	0.60
52:26:403:C:H2'	52:26:404:G:C8	2.34	0.60
52:26:643:C:H2'	52:26:644:U:C6	2.37	0.60
52:26:940:C:H2'	52:26:941:G:H8	1.64	0.60
53:27:116:C:H2'	53:27:117:G:O4'	2.02	0.60
53:27:2060:A:C1'	53:27:2502:G:H1'	2.31	0.60
59:33:61:GLU:OE2	59:33:158:ALA:HB1	2.01	0.60
59:33:612:CYS:HG	59:33:634:HIS:CE1	2.14	0.60
59:33:61:GLU:HA	59:33:64:GLU:OE1	2.01	0.60
31:5:6:SER:O	31:5:7:VAL:HG22	2.01	0.60
35:9:107:GLY:HA3	52:26:9:G:H4'	1.84	0.60
14:N:30:ARG:HG3	14:N:102:ARG:NH2	2.17	0.60
26:Z:11:GLU:CG	26:Z:25:ARG:HD2	2.32	0.60
37:11:140:VAL:O	37:11:143:MET:HB2	2.01	0.60
40:14:8:ILE:HG12	40:14:100:ILE:HA	1.83	0.60
42:16:26:CYS:SG	42:16:29:LYS:HG2	2.41	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:484:G:C4	52:26:486:U:H1'	2.37	0.60
53:27:1044:C:H4'	53:27:1048:A:H1'	1.82	0.60
53:27:1165:A:H2'	53:27:1166:G:H8	1.66	0.60
53:27:588:U:H2'	53:27:589:U:C6	2.37	0.60
53:27:671:C:H2'	53:27:672:C:C6	2.37	0.60
54:28:49:C:H2'	54:28:50:A:H8	1.67	0.60
58:32:19:G:H2'	58:32:20:U:H5	1.64	0.60
58:32:31:G:C2'	58:32:32:C:H5'	2.31	0.60
32:6:17:HIS:HB2	32:6:202:ASN:ND2	2.17	0.60
35:9:17:VAL:HA	35:9:33:THR:O	2.02	0.60
8:H:12:VAL:O	8:H:53:PRO:HA	2.01	0.60
9:I:81:ILE:CG2	9:I:82:GLY:H	2.08	0.60
10:J:105:ARG:CZ	15:O:31:VAL:HG21	2.32	0.60
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.36	0.60
26:Z:37:CYS:N	26:Z:40:CYS:SG	2.75	0.60
38:12:63:LYS:HB3	38:12:70:VAL:HG21	1.83	0.60
41:15:33:ILE:O	41:15:41:LEU:HB2	2.02	0.60
45:19:7:THR:O	45:19:11:VAL:HG23	2.01	0.60
48:22:17:VAL:HG22	48:22:18:GLN:N	2.11	0.60
48:22:11:ARG:HD3	48:22:47:ARG:NE	2.16	0.60
48:22:70:THR:CG2	48:22:71:ASP:H	2.06	0.60
52:26:1448:C:H2'	52:26:1449:C:H6	1.67	0.60
52:26:1460:C:H2'	52:26:1461:G:H8	1.67	0.60
52:26:271:C:H2'	52:26:272:C:H6	1.67	0.60
34:8:9:LYS:NZ	52:26:428:G:H5''	2.17	0.60
52:26:437:U:C2'	52:26:438:U:H5'	2.32	0.60
52:26:587:G:O2'	52:26:588:G:H5'	2.01	0.60
53:27:2099:U:C3'	53:27:2100:G:H5''	2.32	0.60
53:27:372:G:H2'	53:27:400:G:O6	2.02	0.60
53:27:692:C:O2'	53:27:693:A:H5'	2.02	0.60
58:32:28:C:H2'	58:32:29:G:O4'	2.02	0.60
59:33:286:LEU:O	59:33:289:CYS:SG	2.54	0.60
59:33:572:GLN:O	59:33:576:ALA:N	2.35	0.60
32:6:67:LEU:HD12	32:6:153:MET:HE3	1.83	0.60
2:B:151:THR:HB	2:B:152:PRO:HD3	1.84	0.60
5:E:153:PRO:HG3	5:E:161:VAL:O	2.02	0.60
10:J:98:ARG:NH2	52:26:340:U:OP2	2.34	0.60
16:P:24:TYR:HB3	53:27:533:G:OP1	2.01	0.60
17:Q:2:TYR:CE2	17:Q:42:ALA:HB3	2.37	0.60
39:13:33:SER:OG	39:13:36:GLN:HG2	2.00	0.60
44:18:48:GLN:NE2	44:18:48:GLN:H	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:3:ILE:O	50:24:4:LYS:HG3	2.02	0.60
52:26:1113:C:H2'	52:26:1114:C:C6	2.37	0.60
42:16:83:GLY:HA3	52:26:552:U:O3'	2.01	0.60
52:26:633:G:H2'	52:26:634:C:C6	2.36	0.60
53:27:1188:U:O2'	53:27:1189:A:H5'	2.02	0.60
53:27:1931:U:H2'	53:27:1932:A:H8	1.66	0.60
53:27:2229:U:H2'	53:27:2230:G:C8	2.36	0.60
53:27:2290:G:H2'	53:27:2291:U:O4'	2.02	0.60
53:27:2328:A:H2'	53:27:2329:U:H6	1.67	0.60
22:V:56:PHE:CZ	53:27:2365:G:H4'	2.36	0.60
53:27:310:A:C2'	53:27:311:A:H5''	2.32	0.60
59:33:281:ILE:HG13	59:33:338:ILE:HG23	1.83	0.60
59:33:613:CYS:HG	59:33:634:HIS:HD1	1.46	0.60
59:33:621:ILE:HD11	59:33:656:VAL:O	2.02	0.60
4:D:90:LEU:HD13	4:D:95:MET:HA	1.83	0.60
13:M:3:HIS:O	13:M:4:ARG:HB2	2.01	0.60
50:24:35:TYR:HA	50:24:38:ILE:HD12	1.83	0.59
52:26:16:A:O2'	52:26:17:U:H5'	2.02	0.59
52:26:864:A:H2'	52:26:865:A:C8	2.36	0.59
8:H:71:LYS:HZ1	53:27:1060:U:H5''	1.66	0.59
53:27:1071:G:H4'	53:27:1089:A:OP2	2.01	0.59
53:27:1844:C:H2'	53:27:1845:G:C8	2.37	0.59
22:V:16:ARG:HE	53:27:2357:G:P	2.25	0.59
53:27:2475:C:C2'	53:27:2476:A:H5'	2.32	0.59
53:27:2475:C:H2'	53:27:2476:A:H5'	1.84	0.59
53:27:2648:G:H2'	53:27:2649:C:C6	2.36	0.59
54:28:95:U:H2'	54:28:96:G:C8	2.37	0.59
59:33:645:ARG:O	59:33:649:PRO:HD3	2.01	0.59
30:4:24:LYS:HB2	30:4:46:LYS:HE3	1.84	0.59
6:F:40:THR:HB	6:F:43:ASN:HD22	1.67	0.59
11:K:111:ILE:HD11	53:27:636:G:N1	2.17	0.59
12:L:75:GLU:HB2	12:L:90:GLU:HG3	1.84	0.59
17:Q:23:GLU:HG2	53:27:1161:C:O2'	2.02	0.59
26:Z:37:CYS:HB2	26:Z:39:LYS:HG2	1.83	0.59
44:18:43:ALA:C	44:18:45:LEU:H	2.05	0.59
53:27:1427:A:H4'	53:27:1428:C:O5'	2.01	0.59
53:27:1440:U:H2'	53:27:1441:G:H8	1.65	0.59
53:27:151:C:H2'	53:27:152:A:H8	1.67	0.59
53:27:1777:U:O2'	53:27:1778:U:H5'	2.01	0.59
53:27:2841:C:H2'	53:27:2842:G:C8	2.37	0.59
53:27:688:U:O2'	53:27:689:A:H5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:22:PHE:HD2	53:27:922:C:H1'	1.67	0.59
9:I:74:TYR:HB2	9:I:87:ALA:HB3	1.83	0.59
15:O:105:LYS:HB3	15:O:108:ARG:NH2	2.18	0.59
15:O:45:VAL:O	15:O:60:VAL:HA	2.01	0.59
20:T:35:VAL:HB	20:T:38:ILE:HG13	1.84	0.59
49:23:10:ILE:CD1	49:23:15:LEU:HB2	2.32	0.59
52:26:1137:C:H4'	52:26:1138:G:C2	2.37	0.59
52:26:823:C:H2'	52:26:824:G:C8	2.36	0.59
53:27:1788:C:H2'	53:27:1789:A:C8	2.36	0.59
53:27:1843:C:H2'	53:27:1844:C:H6	1.66	0.59
53:27:1827:U:C5'	53:27:1971:U:H5''	2.26	0.59
53:27:2134:A:H61	53:27:2156:G:H2'	1.66	0.59
53:27:2512:C:H2'	53:27:2513:A:O4'	2.02	0.59
53:27:576:U:H2'	53:27:577:G:C8	2.37	0.59
57:31:21:A:H61	57:31:46:G:H2'	1.68	0.59
33:7:118:SER:O	33:7:122:GLN:HG3	2.01	0.59
2:B:101:PHE:HZ	2:B:203:VAL:O	1.85	0.59
5:E:34:ARG:HB2	5:E:74:MET:SD	2.42	0.59
21:U:25:LYS:HB3	21:U:41:GLU:OE2	2.01	0.59
24:X:28:LEU:HD22	24:X:37:LEU:HD22	1.83	0.59
27:1:54:ILE:HG23	27:1:56:LYS:N	2.14	0.59
39:13:118:ARG:NH1	52:26:1233:G:H5'	2.18	0.59
52:26:216:U:H1'	52:26:466:A:N6	2.17	0.59
52:26:216:U:H2'	52:26:217:C:H6	1.67	0.59
52:26:815:A:H4'	52:26:817:C:C5	2.38	0.59
53:27:1906:G:C3'	53:27:1907:G:H5''	2.32	0.59
53:27:2267:A:H5''	53:27:2268:A:C5'	2.33	0.59
10:J:31:ARG:NH2	53:27:2676:C:OP2	2.34	0.59
53:27:832:U:H2'	53:27:833:A:C8	2.37	0.59
24:X:39:GLN:HA	53:27:95:A:O2'	2.01	0.59
54:28:24:G:H1'	54:28:27:C:N4	2.18	0.59
56:30:26:A:H2'	56:30:27:G:H5'	1.84	0.59
59:33:408:VAL:HG12	59:33:409:PHE:N	2.16	0.59
2:B:56:LYS:O	2:B:59:ARG:HB2	2.03	0.59
7:G:59:LEU:HB3	7:G:61:ARG:HB3	1.83	0.59
13:M:77:ALA:O	13:M:81:ASN:HB2	2.01	0.59
17:Q:34:GLU:HA	17:Q:60:LYS:HA	1.84	0.59
39:13:57:VAL:HG12	39:13:58:GLU:HG2	1.83	0.59
36:10:59:TYR:HE2	48:22:66:LEU:HD21	1.67	0.59
52:26:1252:A:H2'	52:26:1253:G:O4'	2.02	0.59
52:26:666:G:H2'	52:26:667:G:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1361:G:H2'	53:27:1362:C:C6	2.37	0.59
53:27:1579:A:H2'	53:27:1580:A:C8	2.38	0.59
53:27:2047:C:H2'	53:27:2048:G:C8	2.32	0.59
3:C:63:LYS:HE2	53:27:2060:A:OP2	2.02	0.59
53:27:2812:G:H2'	53:27:2813:A:H8	1.67	0.59
59:33:157:ILE:HG22	59:33:198:LEU:HD21	1.83	0.59
34:8:21:LYS:CE	34:8:25:ARG:HB3	2.29	0.59
2:B:9:VAL:HA	2:B:197:THR:HG23	1.83	0.59
5:E:102:ILE:HD11	5:E:116:LEU:HD11	1.83	0.59
8:H:124:MET:O	8:H:128:ILE:HG12	2.02	0.59
8:H:7:TYR:HE1	8:H:59:THR:HG23	1.67	0.59
14:N:7:ARG:CA	14:N:10:ARG:HH11	2.15	0.59
17:Q:35:PHE:HB2	17:Q:59:ILE:HB	1.83	0.59
39:13:25:GLY:N	39:13:58:GLU:HA	2.17	0.59
41:15:14:GLN:HE22	41:15:77:GLY:N	2.00	0.59
52:26:1163:A:H2'	52:26:1164:G:C8	2.38	0.59
52:26:1506:U:O2'	52:26:1507:A:H5'	2.02	0.59
52:26:229:U:H2'	52:26:230:G:H8	1.63	0.59
52:26:955:U:H2'	52:26:956:U:H6	1.67	0.59
52:26:96:U:H2'	52:26:97:G:H8	1.68	0.59
53:27:1179:G:C2'	53:27:1180:U:H4'	2.32	0.59
53:27:1182:G:H2'	53:27:1183:U:O4'	2.03	0.59
53:27:2419:U:H2'	53:27:2420:C:C5	2.38	0.59
2:B:149:ASN:HB3	53:27:2572:A:OP2	2.03	0.59
1:A:15:VAL:HA	1:A:204:LEU:O	2.02	0.59
10:J:33:ALA:HB1	10:J:37:ASP:OD2	2.02	0.59
24:X:6:LEU:HG	24:X:56:LEU:HD21	1.83	0.59
52:26:1390:U:H2'	52:26:1391:U:C6	2.37	0.59
52:26:335:C:H2'	52:26:336:A:H8	1.67	0.59
52:26:672:U:H2'	52:26:673:A:C8	2.37	0.59
53:27:1931:U:H2'	53:27:1932:A:C8	2.38	0.59
53:27:2544:G:H2'	53:27:2545:G:H8	1.68	0.59
53:27:2852:G:H2'	53:27:2853:C:C6	2.38	0.59
54:28:76:G:H2'	54:28:77:U:H6	1.66	0.59
54:28:87:U:H5''	54:28:88:C:OP2	2.02	0.59
34:8:173:ASP:OD2	34:8:176:LYS:HB3	2.03	0.59
34:8:1:ALA:HA	34:8:67:LEU:HD21	1.85	0.59
35:9:44:ARG:HA	35:9:72:ASN:HA	1.85	0.59
14:N:100:HIS:CD2	54:28:48:U:H4'	2.37	0.59
18:R:82:MET:HB3	18:R:84:ARG:NH2	2.17	0.59
27:1:2:VAL:HG22	27:1:3:GLN:O	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:21:13:SER:O	47:21:20:ILE:HG13	2.02	0.59
28:2:47:ILE:HG22	28:2:48:TYR:N	2.18	0.59
52:26:1354:U:H2'	52:26:1355:G:C8	2.37	0.59
34:8:8:LEU:HB3	52:26:430:A:OP1	2.02	0.59
52:26:67:C:H2'	52:26:68:G:C8	2.38	0.59
53:27:1312:U:H4'	53:27:1313:U:O5'	2.03	0.59
53:27:1826:G:H2'	53:27:1827:U:C6	2.37	0.59
53:27:1981:A:H5''	53:27:1982:U:OP2	2.02	0.59
53:27:2694:G:H2'	53:27:2695:U:C6	2.38	0.59
53:27:728:G:C2	53:27:730:A:C4	2.90	0.59
54:28:28:C:H2'	54:28:29:A:C8	2.37	0.59
33:7:113:LYS:HD3	33:7:184:ASN:CG	2.23	0.59
3:C:88:ARG:HG3	3:C:89:PRO:HD2	1.84	0.59
5:E:53:PRO:HB3	5:E:64:ALA:HB2	1.84	0.59
13:M:32:GLU:HB3	13:M:115:LEU:HD11	1.85	0.59
14:N:111:ARG:NH1	53:27:2376:A:N3	2.50	0.59
26:Z:44:PHE:O	26:Z:47:LYS:HE2	2.03	0.59
36:10:18:VAL:CG1	36:10:19:PRO:HD3	2.33	0.59
36:10:4:TYR:CE2	36:10:71:ILE:HG13	2.38	0.59
37:11:13:PRO:HA	37:11:20:GLU:HA	1.85	0.59
52:26:1019:A:H2'	52:26:1020:G:O4'	2.01	0.59
52:26:271:C:H2'	52:26:272:C:C6	2.38	0.59
53:27:522:A:H2'	53:27:523:C:C6	2.37	0.59
53:27:949:G:H2'	53:27:950:G:H8	1.68	0.59
59:33:65:ILE:HD13	59:33:157:ILE:CD1	2.33	0.59
32:6:65:LYS:HE3	32:6:155:GLY:HA3	1.85	0.59
33:7:56:ILE:HG23	33:7:63:ILE:HD11	1.84	0.59
1:A:91:ALA:HB3	1:A:103:ILE:CD1	2.32	0.59
1:A:52:HIS:CD2	1:A:218:THR:HA	2.38	0.59
1:A:257:ARG:NH1	53:27:1799:G:OP1	2.35	0.59
13:M:115:LEU:HD12	13:M:115:LEU:O	2.02	0.59
40:14:15:HIS:HB3	40:14:70:HIS:CD2	2.38	0.59
43:17:42:VAL:HG21	43:17:47:LEU:HD13	1.85	0.59
49:23:10:ILE:HD11	49:23:15:LEU:HB2	1.84	0.59
52:26:470:C:H2'	52:26:471:U:C6	2.38	0.59
52:26:52:C:O2'	52:26:53:A:H5'	2.03	0.59
52:26:666:G:H5'	52:26:726:C:H1'	1.85	0.59
53:27:1059:G:H2'	53:27:1060:U:C6	2.38	0.59
53:27:1542:U:H2'	53:27:1543:G:O4'	2.02	0.59
53:27:185:G:H2'	53:27:186:G:C8	2.37	0.59
53:27:2377:A:O2'	53:27:2378:A:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:279:A:C2'	53:27:280:U:H5'	2.25	0.59
53:27:296:U:H2'	53:27:297:G:H8	1.68	0.59
53:27:500:G:N2	53:27:502:A:H3'	2.18	0.59
14:N:15:ARG:NH1	54:28:9:G:OP2	2.35	0.59
59:33:639:GLU:O	59:33:643:GLU:HG3	2.03	0.59
59:33:703:THR:HG23	59:33:705:GLN:N	2.06	0.59
33:7:185:THR:CG2	33:7:198:LYS:HG2	2.29	0.59
4:D:107:VAL:HB	4:D:108:PRO:HD3	1.85	0.59
6:F:32:PRO:HB3	23:W:38:TRP:HB2	1.84	0.59
6:F:49:ALA:O	6:F:53:GLU:N	2.36	0.59
9:I:132:HIS:HD1	53:27:6:A:HO2'	1.51	0.59
19:S:1:MET:C	19:S:3:ARG:H	2.05	0.59
52:26:540:G:H2'	52:26:541:G:C8	2.38	0.58
52:26:981:U:H2'	52:26:982:U:C5	2.38	0.58
53:27:1066:U:H2'	53:27:1068:G:OP2	2.03	0.58
53:27:2600:A:H2'	53:27:2601:C:C6	2.38	0.58
53:27:2655:G:H1'	53:27:2656:U:H5	1.68	0.58
53:27:673:C:H2'	53:27:674:G:O4'	2.03	0.58
53:27:815:C:H2'	53:27:816:C:H6	1.68	0.58
59:33:613:CYS:HG	59:33:634:HIS:CE1	2.20	0.58
59:33:74:ASP:OD1	59:33:103:VAL:HG22	2.02	0.58
9:I:15:TRP:CE2	9:I:135:GLN:HG2	2.38	0.58
12:L:12:MET:HA	53:27:910:A:H62	1.67	0.58
43:17:15:VAL:HG13	43:17:33:LEU:HD22	1.85	0.58
43:17:7:ASN:HD22	43:17:21:ILE:CG1	2.05	0.58
52:26:477:C:H2'	52:26:478:A:C8	2.37	0.58
52:26:529:G:H4'	52:26:533:A:C2	2.38	0.58
8:H:92:PRO:HG2	53:27:1076:C:O2	2.04	0.58
53:27:2194:U:H2'	53:27:2195:U:C6	2.38	0.58
53:27:2579:C:H2'	53:27:2580:U:O2	2.03	0.58
57:31:6:G:O2'	57:31:7:G:H5'	2.03	0.58
59:33:224:ASP:O	59:33:228:TYR:CD1	2.55	0.58
34:8:10:LEU:HD22	34:8:62:ARG:NH1	2.18	0.58
1:A:43:ASN:HB3	1:A:49:THR:HG21	1.83	0.58
2:B:8:LYS:HB2	2:B:201:LEU:HD11	1.86	0.58
7:G:37:LYS:HA	7:G:40:GLU:HB2	1.84	0.58
8:H:101:SER:HA	8:H:141:ASP:HA	1.86	0.58
8:H:15:GLY:HA2	8:H:45:THR:OG1	2.03	0.58
9:I:132:HIS:ND1	53:27:6:A:O2'	2.36	0.58
11:K:132:ARG:NH2	11:K:142:ILE:HG21	2.18	0.58
13:M:72:ASP:O	13:M:76:VAL:HG23	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:93:ARG:HB2	20:T:102:ILE:HD12	1.86	0.58
40:14:22:THR:HG21	40:14:39:PRO:HG3	1.83	0.58
47:21:43:LEU:HD21	52:26:236:A:H5''	1.85	0.58
52:26:1057:G:H2'	52:26:1058:G:C8	2.39	0.58
52:26:1245:C:H2'	52:26:1246:A:H8	1.66	0.58
52:26:1338:G:H2'	52:26:1339:A:C8	2.39	0.58
52:26:197:A:C6	52:26:221:C:H4'	2.39	0.58
53:27:2112:G:N3	53:27:2112:G:H2'	2.17	0.58
53:27:2241:A:H2'	53:27:2242:G:H8	1.63	0.58
53:27:611:C:H2'	53:27:612:G:O4'	2.03	0.58
53:27:779:U:H2'	53:27:780:G:C8	2.38	0.58
58:32:9:G:OP1	58:32:9:G:H4'	2.03	0.58
59:33:240:MET:HB3	59:33:295:ILE:HD12	1.84	0.58
2:B:4:LEU:HG	2:B:32:ASN:HD22	1.69	0.58
3:C:159:LEU:O	53:27:321:U:H4'	2.03	0.58
5:E:98:LYS:NZ	5:E:103:ASN:HB2	2.17	0.58
7:G:114:GLU:O	7:G:122:GLN:HB3	2.02	0.58
10:J:25:LEU:HD23	10:J:26:GLY:N	2.18	0.58
17:Q:38:VAL:CG1	17:Q:57:GLY:HA3	2.33	0.58
41:15:28:ASN:OD1	41:15:29:THR:N	2.36	0.58
44:18:57:SER:OG	52:26:1316:G:H4'	2.03	0.58
47:21:51:GLU:HG2	47:21:52:CYS:H	1.68	0.58
51:25:4:LYS:CE	51:25:6:ARG:HB2	2.31	0.58
52:26:538:G:H2'	52:26:539:A:C8	2.37	0.58
52:26:707:U:H2'	52:26:708:C:H6	1.68	0.58
31:5:23:ILE:HD11	53:27:1032:A:H1'	1.86	0.58
53:27:1096:A:C3'	53:27:1097:U:H5''	2.32	0.58
53:27:144:A:H2'	53:27:145:C:C6	2.37	0.58
53:27:1464:G:H2'	53:27:1465:G:H8	1.67	0.58
53:27:2799:A:O2'	53:27:2800:A:H5'	2.03	0.58
18:R:61:ASN:OD1	53:27:496:G:H1'	2.03	0.58
56:30:54:U:C2'	56:30:55:U:H5''	2.33	0.58
59:33:241:LYS:HD3	59:33:246:LYS:HZ3	1.67	0.58
59:33:30:LYS:HD2	59:33:33:GLU:OE2	2.03	0.58
59:33:640:GLN:H	59:33:640:GLN:CD	2.06	0.58
59:33:79:ALA:O	59:33:82:PHE:CE1	2.56	0.58
33:7:105:VAL:HG11	33:7:114:LEU:HD11	1.86	0.58
2:B:1:MET:HG3	2:B:2:ILE:HG23	1.86	0.58
4:D:142:TYR:O	4:D:145:VAL:HG22	2.04	0.58
10:J:28:SER:O	10:J:30:ARG:N	2.37	0.58
11:K:75:ALA:H	11:K:105:ILE:HG23	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:89:VAL:HA	11:K:121:THR:HB	1.85	0.58
12:L:34:LYS:HE3	12:L:131:VAL:HG11	1.85	0.58
20:T:41:VAL:O	20:T:59:GLU:HA	2.04	0.58
36:10:64:VAL:HG22	36:10:65:GLU:N	2.19	0.58
52:26:532:A:H3'	52:26:533:A:C5'	2.31	0.58
3:C:66:GLY:O	53:27:1255:U:N3	2.36	0.58
53:27:1738:G:HO2'	53:27:1739:A:H8	1.51	0.58
2:B:146:ILE:CD1	53:27:2051:A:H4'	2.33	0.58
53:27:693:A:H2'	53:27:694:U:C6	2.38	0.58
53:27:94:A:H2'	53:27:95:A:C8	2.38	0.58
59:33:86:ASP:OD1	59:33:111:ARG:HD2	2.04	0.58
59:33:49:HIS:HB3	59:33:50:PRO:CD	2.28	0.58
53:27:894:U:H5'	59:33:643:GLU:OE2	2.03	0.58
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.68	0.58
33:7:176:THR:O	33:7:179:ALA:HB3	2.04	0.58
3:C:79:ARG:HH22	53:27:471:A:H5''	1.65	0.58
4:D:105:ILE:O	4:D:108:PRO:HD2	2.03	0.58
5:E:140:ILE:HD12	5:E:141:GLY:N	2.19	0.58
6:F:125:THR:OG1	6:F:148:ALA:HB2	2.03	0.58
8:H:125:THR:O	8:H:129:GLU:HG3	2.04	0.58
12:L:42:THR:OG1	12:L:45:GLN:HG3	2.03	0.58
19:S:50:LEU:HD23	24:X:26:PHE:CZ	2.38	0.58
43:17:62:PHE:O	43:17:64:VAL:HG13	2.04	0.58
50:24:50:PHE:HA	50:24:53:MET:HG2	1.84	0.58
52:26:1237:C:H4'	52:26:1334:G:N2	2.18	0.58
52:26:414:A:H2'	52:26:415:A:O4'	2.04	0.58
52:26:678:U:H2'	52:26:679:C:H6	1.69	0.58
53:27:1562:U:H2'	53:27:1563:U:O4'	2.04	0.58
53:27:1646:C:H5''	53:27:1647:U:H5'	1.86	0.58
53:27:2628:C:H4'	53:27:2781:A:C5	2.38	0.58
13:M:49:GLU:OE1	53:27:2839:G:H4'	2.03	0.58
59:33:155:GLU:O	59:33:159:HIS:CD2	2.56	0.58
59:33:232:PHE:CE1	59:33:329:PRO:CD	2.81	0.58
32:6:209:VAL:HA	32:6:212:TYR:HD2	1.67	0.58
34:8:29:THR:O	34:8:31:CYS:N	2.35	0.58
35:9:152:VAL:HG12	35:9:155:LYS:HZ1	1.69	0.58
2:B:1:MET:N	2:B:205:PRO:HG2	2.19	0.58
7:G:96:PHE:CE2	7:G:126:LEU:HB2	2.38	0.58
24:X:42:LEU:O	24:X:46:VAL:HG23	2.04	0.58
40:14:45:ARG:HG3	40:14:47:GLU:OE1	2.04	0.58
52:26:693:G:H2'	52:26:694:A:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:900:A:H2'	52:26:901:A:C8	2.38	0.58
53:27:1188:U:H2'	53:27:1189:A:O4'	2.03	0.58
53:27:1882:U:H2'	53:27:1883:U:C6	2.39	0.58
56:30:43:C:O2'	56:30:44:G:H5'	2.04	0.58
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	0.58
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.58
59:33:279:VAL:HG13	59:33:336:ILE:HG23	1.85	0.58
59:33:61:GLU:HA	59:33:64:GLU:CD	2.24	0.58
33:7:191:THR:O	52:26:1206:G:O2'	2.20	0.58
33:7:96:VAL:HB	33:7:97:PRO:CD	2.33	0.58
34:8:169:TRP:NE1	34:8:185:PRO:HG3	2.19	0.58
10:J:104:THR:HG22	10:J:105:ARG:H	1.67	0.58
13:M:2:ARG:HH11	13:M:2:ARG:HG2	1.68	0.58
16:P:51:GLN:HE22	53:27:560:C:H4'	1.68	0.58
24:X:15:ASN:O	24:X:19:LEU:HG	2.04	0.58
40:14:5:ARG:CB	40:14:79:PRO:HD3	2.33	0.58
47:21:14:ASP:HB2	47:21:20:ILE:HD12	1.85	0.58
51:25:25:ALA:HB2	55:29:9:G:C4'	2.32	0.58
52:26:1237:C:H4'	52:26:1334:G:H21	1.69	0.58
52:26:1275:A:H2'	52:26:1276:G:O4'	2.04	0.58
52:26:1282:C:H2'	52:26:1283:U:C6	2.39	0.58
52:26:1366:C:H2'	52:26:1367:C:C6	2.39	0.58
52:26:488:C:H2'	52:26:489:C:C6	2.39	0.58
52:26:545:C:H2'	52:26:546:A:O4'	2.03	0.58
52:26:920:U:H2'	52:26:921:U:H6	1.64	0.58
52:26:994:A:C8	52:26:1216:A:H4'	2.39	0.58
53:27:2052:A:H2'	53:27:2053:G:H8	1.69	0.58
53:27:2147:A:H2'	53:27:2148:G:O4'	2.03	0.58
53:27:2189:U:H2'	53:27:2190:G:C8	2.37	0.58
53:27:2800:A:H3'	53:27:2801:G:C5'	2.29	0.58
54:28:2:G:H2'	54:28:3:C:C6	2.38	0.58
59:33:47:GLN:OE1	59:33:55:LEU:HD13	2.04	0.58
59:33:691:LYS:HE3	59:33:724:ARG:NH2	2.19	0.58
34:8:146:GLU:HA	34:8:149:LYS:CB	2.32	0.58
34:8:53:GLN:HE22	35:9:111:ARG:NH2	2.02	0.58
35:9:65:LYS:HA	35:9:68:ARG:HG2	1.85	0.58
3:C:175:ILE:O	3:C:177:PRO:HD3	2.04	0.58
21:U:78:GLN:O	21:U:87:GLN:HB3	2.03	0.58
46:20:69:ASP:OD1	46:20:70:ARG:N	2.37	0.58
36:10:47:LEU:HB2	48:22:65:SER:OG	2.04	0.58
52:26:1352:C:H2'	52:26:1353:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:556:C:C2'	52:26:557:G:H5'	2.33	0.58
52:26:570:G:H2'	52:26:571:U:C6	2.39	0.58
52:26:77:A:H8	52:26:77:A:H5'	1.68	0.58
53:27:2178:C:H2'	53:27:2179:C:C6	2.39	0.58
53:27:250:G:H2'	53:27:251:A:O4'	2.03	0.58
53:27:2737:G:H2'	53:27:2738:A:C8	2.38	0.58
53:27:281:C:H2'	53:27:282:A:C8	2.38	0.58
53:27:438:G:H2'	53:27:439:A:C8	2.38	0.58
53:27:646:U:H3'	53:27:647:G:C5'	2.33	0.58
53:27:657:U:H2'	53:27:658:U:C6	2.39	0.58
54:28:35:C:H2'	54:28:36:C:H5'	1.85	0.58
59:33:65:ILE:CG1	59:33:161:ARG:HH21	2.17	0.58
59:33:431:ILE:O	59:33:432:HIS:HB2	2.04	0.58
59:33:491:LYS:O	59:33:494:ALA:HB3	2.04	0.58
34:8:200:VAL:HG11	35:9:102:THR:HG22	1.85	0.58
34:8:24:VAL:C	34:8:26:ALA:H	2.07	0.58
35:9:153:ALA:O	35:9:158:LYS:HA	2.04	0.58
4:D:4:HIS:O	4:D:8:LYS:HG2	2.03	0.58
5:E:173:ALA:O	5:E:175:LYS:N	2.37	0.58
8:H:60:VAL:HA	8:H:66:PHE:CB	2.34	0.58
11:K:76:GLU:OE1	53:27:636:G:N1	2.36	0.58
14:N:14:ALA:O	14:N:18:LEU:HB2	2.04	0.58
16:P:57:ARG:HA	16:P:60:TRP:CE3	2.39	0.58
24:X:9:LYS:NZ	24:X:10:SER:HB2	2.19	0.58
46:20:31:ARG:HG2	46:20:32:PHE:N	2.19	0.58
46:20:33:ILE:HD12	46:20:33:ILE:H	1.69	0.58
52:26:1079:G:H2'	52:26:1080:A:C8	2.38	0.58
52:26:1255:G:O2'	52:26:1258:G:H1'	2.04	0.58
52:26:1520:C:H2'	52:26:1521:C:C6	2.38	0.58
52:26:160:A:H2'	52:26:161:A:O4'	2.04	0.58
52:26:214:C:H2'	52:26:215:C:H6	1.69	0.58
52:26:27:G:H2'	52:26:28:A:C8	2.39	0.58
52:26:713:G:H2'	52:26:714:G:C8	2.39	0.58
52:26:825:A:H2'	52:26:826:C:H6	1.69	0.58
53:27:1484:U:H2'	53:27:1485:U:H6	1.69	0.58
53:27:1824:G:O2'	53:27:1825:U:H5'	2.04	0.58
53:27:2010:G:H2'	53:27:2011:U:C6	2.38	0.58
53:27:2391:G:O2'	53:27:2392:A:O5'	2.19	0.58
53:27:2503:A:N3	53:27:2503:A:H5'	2.19	0.58
53:27:2784:U:H2'	53:27:2785:C:C6	2.38	0.58
53:27:2840:C:H2'	53:27:2841:C:H6	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:409:G:H2'	53:27:410:G:C8	2.39	0.58
53:27:669:G:N3	53:27:669:G:H2'	2.19	0.58
59:33:61:GLU:C	59:33:64:GLU:HG2	2.24	0.58
59:33:635:ARG:HG2	59:33:636:ALA:H	1.67	0.58
32:6:75:ALA:O	32:6:79:VAL:HG23	2.04	0.58
4:D:59:ILE:HG22	4:D:98:PHE:HE1	1.68	0.58
7:G:43:LYS:HE2	7:G:98:GLU:HB3	1.86	0.58
8:H:60:VAL:HA	8:H:66:PHE:HB3	1.86	0.58
9:I:43:GLU:N	9:I:43:GLU:OE1	2.35	0.58
39:13:70:GLY:O	39:13:74:GLN:HG3	2.04	0.57
13:M:100:CYS:O	27:1:41:HIS:HD2	1.86	0.57
42:16:43:LYS:NZ	42:16:44:PRO:HD3	2.19	0.57
41:15:108:ASN:HA	51:25:4:LYS:NZ	2.18	0.57
52:26:1448:C:H2'	52:26:1449:C:C6	2.39	0.57
52:26:1456:A:H2'	52:26:1457:G:O4'	2.04	0.57
52:26:552:U:H2'	52:26:553:A:H8	1.69	0.57
53:27:1404:C:O2'	53:27:1405:U:H5'	2.04	0.57
53:27:1432:G:H2'	53:27:1433:A:C8	2.39	0.57
53:27:1463:C:H2'	53:27:1464:G:C8	2.39	0.57
53:27:1622:G:H2'	53:27:1623:G:H8	1.69	0.57
53:27:1651:G:C4	53:27:1652:A:C8	2.93	0.57
53:27:1652:A:H3'	53:27:1653:G:C8	2.39	0.57
53:27:1665:A:H2'	53:27:1666:G:O4'	2.03	0.57
6:F:24:GLY:HA3	53:27:2092:U:H4'	1.86	0.57
53:27:2418:A:C2	53:27:2419:U:H1'	2.39	0.57
53:27:2794:C:H2'	53:27:2794:C:O2	2.02	0.57
21:U:37:PRO:HG2	54:28:73:A:C2	2.38	0.57
34:8:16:THR:HG22	34:8:17:ASP:N	2.18	0.57
4:D:97:GLU:HG2	26:Z:25:ARG:HB2	1.86	0.57
6:F:83:LYS:HB2	6:F:91:PHE:HB2	1.86	0.57
10:J:44:LYS:O	10:J:54:LYS:HD3	2.04	0.57
16:P:49:ARG:NH2	17:Q:74:ILE:HD12	2.19	0.57
23:W:2:ARG:HD2	23:W:29:LEU:HD22	1.86	0.57
52:26:1441:A:N3	52:26:1441:A:H2'	2.18	0.57
52:26:502:A:H2'	52:26:503:C:H6	1.65	0.57
49:23:54:ARG:HD3	52:26:958:A:C4	2.40	0.57
52:26:986:U:H2'	52:26:987:G:C8	2.39	0.57
7:G:61:ARG:NH2	53:27:1045:C:O2'	2.37	0.57
53:27:1550:C:H2'	53:27:1551:A:H8	1.69	0.57
53:27:1657:U:H2'	53:27:1658:C:H6	1.69	0.57
53:27:2086:U:H2'	53:27:2087:G:H8	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2171:A:C2'	53:27:2172:U:H5'	2.34	0.57
53:27:2248:C:H3'	53:27:2249:U:H6	1.69	0.57
53:27:2547:A:H2'	53:27:2548:U:H6	1.67	0.57
53:27:478:A:N1	53:27:500:G:H4'	2.19	0.57
56:30:27:G:H2'	56:30:28:G:C8	2.39	0.57
59:33:154:ALA:HA	59:33:157:ILE:CD1	2.34	0.57
59:33:39:TRP:HA	59:33:80:LEU:HD13	1.85	0.57
59:33:408:VAL:HG13	59:33:409:PHE:H	1.69	0.57
32:6:90:PHE:O	32:6:149:GLY:HA3	2.04	0.57
33:7:108:PRO:HA	33:7:114:LEU:HD12	1.85	0.57
1:A:209:ALA:HA	1:A:212:TRP:CE2	2.39	0.57
1:A:178:GLY:O	1:A:270:ARG:HA	2.04	0.57
3:C:77:ILE:HG13	3:C:78:TRP:CD1	2.37	0.57
4:D:127:TYR:CE2	4:D:129:MET:HB3	2.38	0.57
5:E:101:VAL:HA	5:E:115:GLN:HA	1.86	0.57
16:P:47:ARG:NH2	16:P:51:GLN:OE1	2.37	0.57
27:1:11:LYS:HA	27:1:14:MET:HE3	1.86	0.57
38:12:8:ASP:HA	38:12:11:THR:HG22	1.86	0.57
42:16:4:ASN:ND2	52:26:880:C:OP1	2.38	0.57
43:17:54:THR:HA	43:17:57:ASP:HB3	1.86	0.57
43:17:7:ASN:ND2	43:17:21:ILE:N	2.52	0.57
47:21:60:ILE:HG22	47:21:72:TRP:HE3	1.68	0.57
49:23:21:ALA:HA	49:23:27:LYS:NZ	2.19	0.57
52:26:1136:C:H5''	52:26:1137:C:OP2	2.03	0.57
39:13:118:ARG:NH2	52:26:1234:C:OP1	2.34	0.57
53:27:1055:G:H2'	53:27:1056:G:O4'	2.05	0.57
53:27:1081:U:H2'	53:27:1082:U:C6	2.39	0.57
53:27:133:U:H2'	53:27:134:G:C8	2.39	0.57
53:27:1670:C:H2'	53:27:1671:U:O4'	2.04	0.57
53:27:1676:A:H2'	53:27:1677:A:C8	2.40	0.57
53:27:488:G:N2	53:27:491:G:H5''	2.19	0.57
57:31:24:U:H2'	57:31:25:C:C6	2.39	0.57
59:33:294:GLY:O	59:33:298:THR:HG23	2.03	0.57
53:27:873:C:OP1	59:33:704:LYS:HE2	2.05	0.57
10:J:48:PRO:HB2	10:J:49:ARG:HH11	1.68	0.57
13:M:29:VAL:HG12	13:M:78:LYS:HG2	1.86	0.57
21:U:43:ASP:OD2	21:U:46:LYS:HD3	2.04	0.57
36:10:7:VAL:HG22	36:10:61:LEU:HG	1.85	0.57
51:25:23:GLU:HG3	51:25:24:LYS:N	2.16	0.57
52:26:1326:U:H2'	52:26:1327:C:C6	2.39	0.57
52:26:24:U:H2'	52:26:25:C:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:358:U:H2'	52:26:359:G:H8	1.70	0.57
52:26:680:C:H2'	52:26:681:A:C8	2.39	0.57
52:26:85:U:H5''	52:26:86:G:H5'	1.86	0.57
52:26:892:A:H2'	52:26:893:C:C6	2.40	0.57
53:27:227:A:C2	53:27:2407:A:H1'	2.39	0.57
53:27:22:C:C3'	53:27:23:G:H5''	2.34	0.57
53:27:262:A:H2'	53:27:263:G:O4'	2.05	0.57
53:27:963:U:H2'	53:27:964:C:C6	2.38	0.57
57:31:28:C:H2'	57:31:29:G:H8	1.70	0.57
59:33:16:ASP:OD2	59:33:17:PRO:HG2	2.04	0.57
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	0.57
59:33:267:ASN:N	59:33:267:ASN:HD22	2.02	0.57
59:33:74:ASP:CA	59:33:77:ARG:NH2	2.66	0.57
32:6:49:PHE:O	32:6:52:ALA:HB3	2.03	0.57
35:9:33:THR:HA	35:9:50:GLY:O	2.04	0.57
4:D:139:GLU:OE1	4:D:139:GLU:N	2.37	0.57
8:H:18:ASN:H	8:H:37:PHE:HE2	1.49	0.57
36:10:51:ILE:HG21	36:10:86:ARG:HH12	1.70	0.57
36:10:9:MET:HE1	48:22:64:LEU:HD22	1.85	0.57
37:11:136:LYS:O	37:11:140:VAL:HG23	2.03	0.57
53:27:2009:A:H2'	53:27:2010:G:H8	1.70	0.57
53:27:2292:U:H2'	53:27:2293:G:H8	1.70	0.57
53:27:2524:G:H3'	53:27:2525:G:H5''	1.85	0.57
53:27:2805:C:H2'	53:27:2806:C:C6	2.39	0.57
53:27:2821:A:O2'	53:27:2822:G:H5'	2.05	0.57
53:27:681:G:H2'	53:27:682:G:O4'	2.04	0.57
59:33:239:GLU:CB	59:33:299:HIS:CE1	2.88	0.57
32:6:18:GLN:O	32:6:37:VAL:HG23	2.04	0.57
34:8:12:ARG:HD2	34:8:37:PRO:HA	1.85	0.57
13:M:32:GLU:O	13:M:114:GLU:HG3	2.03	0.57
24:X:48:ARG:NH2	53:27:75:G:H4'	2.19	0.57
36:10:52:ASN:O	36:10:53:LYS:HB2	2.04	0.57
46:20:51:ARG:C	46:20:52:LEU:HD12	2.25	0.57
52:26:59:A:H1'	52:26:354:G:C2	2.39	0.57
52:26:767:A:H2'	52:26:768:A:H8	1.70	0.57
53:27:1792:G:H2'	53:27:1793:C:H6	1.68	0.57
53:27:1979:U:O2'	53:27:1980:G:H5'	2.05	0.57
53:27:2123:G:H21	53:27:2176:A:H61	1.52	0.57
53:27:2170:A:H2'	53:27:2171:A:C4'	2.35	0.57
53:27:2671:G:H2'	53:27:2672:U:H6	1.68	0.57
3:C:163:ASN:HB2	53:27:322:A:OP2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:546:U:H5'	53:27:547:A:OP2	2.04	0.57
53:27:689:A:H2'	53:27:690:G:H8	1.67	0.57
53:27:736:C:H2'	53:27:737:C:H6	1.69	0.57
53:27:852:U:H2'	53:27:853:C:C6	2.39	0.57
53:27:914:G:H5'	53:27:915:C:OP2	2.03	0.57
59:33:281:ILE:CD1	59:33:338:ILE:HG13	2.35	0.57
59:33:443:LYS:HB3	59:33:446:GLY:O	2.04	0.57
59:33:613:CYS:SG	59:33:634:HIS:ND1	2.71	0.57
1:A:153:LEU:HD23	53:27:1799:G:H21	1.69	0.57
4:D:155:ILE:HD12	4:D:155:ILE:N	2.19	0.57
9:I:58:ASN:ND2	9:I:128:ASN:HB2	2.20	0.57
10:J:40:LYS:HE3	10:J:57:VAL:HG12	1.86	0.57
3:C:29:HIS:CE1	11:K:8:PRO:HD3	2.39	0.57
17:Q:74:ILE:CG2	17:Q:87:GLN:HB3	2.35	0.57
21:U:9:ARG:HH12	21:U:12:GLN:HA	1.69	0.57
45:19:73:ASP:HB3	45:19:76:ARG:HH21	1.70	0.57
28:2:47:ILE:H	28:2:47:ILE:HD12	1.69	0.57
52:26:1515:G:H2'	52:26:1516:G:H8	1.70	0.57
52:26:520:A:H3'	52:26:521:G:H5''	1.87	0.57
52:26:609:A:H2'	52:26:610:U:O4'	2.04	0.57
52:26:741:G:H2'	52:26:742:G:C8	2.40	0.57
41:15:125:LYS:HD2	52:26:797:C:OP1	2.03	0.57
53:27:1499:C:H2'	53:27:1500:G:H8	1.69	0.57
53:27:1609:A:H1'	53:27:1616:A:H1'	1.86	0.57
53:27:2074:U:H1'	53:27:2598:A:N3	2.20	0.57
53:27:234:U:H2'	53:27:235:U:C6	2.40	0.57
53:27:647:G:H2'	53:27:648:G:O4'	2.04	0.57
53:27:783:A:H2'	53:27:784:G:C5'	2.35	0.57
53:27:962:G:O2'	53:27:963:U:H5'	2.04	0.57
59:33:20:TRP:HE1	59:33:63:VAL:C	2.07	0.57
59:33:229:ILE:HG22	59:33:277:ARG:HG3	1.87	0.57
59:33:228:TYR:HB2	59:33:277:ARG:HH21	1.69	0.57
4:D:134:GLN:N	4:D:134:GLN:OE1	2.34	0.57
7:G:117:LEU:HB2	7:G:122:GLN:HE21	1.70	0.57
9:I:17:VAL:HG23	9:I:137:PRO:HB2	1.86	0.57
12:L:4:PRO:HB3	12:L:68:PHE:CE2	2.40	0.57
23:W:17:ARG:HE	23:W:23:ALA:HB2	1.70	0.57
23:W:18:SER:HB2	53:27:2080:A:H4'	1.85	0.57
24:X:61:ALA:C	24:X:63:ALA:H	2.07	0.57
52:26:123:U:H2'	52:26:124:C:C6	2.39	0.57
52:26:728:A:H2'	52:26:729:A:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:2:ILE:HG12	53:27:144:A:H5''	1.87	0.57
53:27:1998:A:H2'	53:27:1999:C:C6	2.40	0.57
11:K:111:ILE:HD11	53:27:636:G:C2	2.39	0.57
54:28:53:A:H2'	54:28:54:G:H5'	1.87	0.57
56:30:10:G:H2'	56:30:11:C:H6	1.69	0.57
59:33:596:ARG:HH11	59:33:665:TYR:HE2	1.53	0.57
59:33:81:LEU:CA	59:33:84:LEU:HD13	2.33	0.57
32:6:112:ARG:HH22	32:6:136:ARG:HH12	1.53	0.57
34:8:56:GLU:HG2	34:8:198:LEU:HB2	1.86	0.57
3:C:29:HIS:CD2	11:K:8:PRO:HD3	2.40	0.57
17:Q:56:GLY:O	17:Q:58:VAL:N	2.35	0.57
21:U:10:LYS:HG3	21:U:11:GLU:N	2.17	0.57
42:16:38:THR:HG22	42:16:50:LYS:HA	1.87	0.57
42:16:47:ALA:CB	52:26:529:G:H22	2.17	0.57
52:26:1033:G:H2'	52:26:1034:G:C4'	2.31	0.57
39:13:105:ARG:HG2	52:26:1117:A:O2'	2.05	0.57
52:26:1401:G:H8	52:26:1401:G:H5'	1.70	0.57
53:27:1073:A:H3'	53:27:1074:G:C8	2.40	0.57
53:27:2194:U:H2'	53:27:2195:U:H6	1.70	0.57
53:27:2793:C:H2'	53:27:2794:C:H6	1.70	0.57
53:27:2868:A:H3'	53:27:2869:G:H8	1.70	0.57
53:27:729:G:H2'	53:27:1775:U:H1'	1.86	0.57
56:30:66:U:H2'	56:30:67:C:C6	2.39	0.57
58:32:46:A:H2'	58:32:47:U:C5'	2.35	0.57
59:33:408:VAL:HG13	59:33:459:ASP:O	2.05	0.57
59:33:674:ASN:ND2	59:33:736:ILE:HG21	2.20	0.57
33:7:175:HIS:ND1	52:26:1108:G:H5'	2.20	0.57
6:F:67:ALA:HB2	6:F:138:VAL:HG21	1.87	0.57
6:F:82:SER:O	6:F:83:LYS:HG3	2.05	0.57
25:Y:23:LEU:HD11	25:Y:53:MET:HE1	1.86	0.57
40:14:41:PRO:O	40:14:42:LEU:HB2	2.04	0.57
52:26:1132:C:C2'	52:26:1133:G:H5''	2.30	0.57
52:26:1296:C:H4'	52:26:1302:C:N4	2.20	0.57
52:26:1323:G:H2'	52:26:1324:A:C8	2.40	0.57
52:26:1460:C:H2'	52:26:1461:G:C8	2.40	0.57
52:26:1490:U:H2'	52:26:1491:G:O4'	2.03	0.57
52:26:283:U:H2'	52:26:284:C:C6	2.40	0.57
52:26:81:A:H62	52:26:86:G:N2	2.02	0.57
52:26:572:A:N3	52:26:917:G:H1'	2.20	0.57
53:27:1153:C:H2'	53:27:1154:G:O4'	2.04	0.57
53:27:990:A:H1'	53:27:1156:A:N3	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1165:A:H2'	53:27:1166:G:C8	2.40	0.57
53:27:1287:A:H3'	53:27:1288:G:N2	2.19	0.57
53:27:1509:A:H2'	53:27:1510:G:C8	2.40	0.57
53:27:1590:A:H2'	53:27:1591:A:H8	1.68	0.57
1:A:254:LYS:O	53:27:1797:G:H4'	2.05	0.57
53:27:1854:A:H61	53:27:1888:G:H1'	1.70	0.57
53:27:190:A:H3'	53:27:191:A:H8	1.69	0.57
53:27:2262:U:H2'	53:27:2263:C:H6	1.67	0.57
53:27:2452:C:C2	53:27:2504:U:O4	2.58	0.57
53:27:997:G:O2'	53:27:998:C:H5'	2.05	0.57
29:3:27:GLY:O	29:3:30:VAL:HB	2.05	0.57
34:8:124:VAL:HG23	34:8:142:VAL:HB	1.85	0.57
34:8:57:LYS:HZ3	34:8:61:ARG:HD3	1.69	0.57
35:9:149:PRO:HG2	35:9:150:GLU:OE1	2.05	0.57
3:C:16:GLU:O	3:C:20:GLY:N	2.38	0.57
7:G:117:LEU:HD23	7:G:117:LEU:O	2.05	0.57
7:G:64:VAL:O	7:G:68:PRO:HD3	2.05	0.57
14:N:22:GLY:O	14:N:42:PRO:HG3	2.05	0.57
15:O:38:ARG:HG3	15:O:38:ARG:HH21	1.69	0.57
52:26:18:C:H2'	52:26:19:A:C5'	2.31	0.56
52:26:532:A:H4'	52:26:533:A:OP2	2.04	0.56
53:27:1593:A:H2'	53:27:1594:U:C6	2.40	0.56
53:27:1766:G:C6	53:27:1987:A:C6	2.92	0.56
53:27:2026:U:H2'	53:27:2027:G:C8	2.40	0.56
53:27:2216:G:H2'	53:27:2217:G:C8	2.40	0.56
53:27:826:U:H5''	53:27:2428:G:O3'	2.05	0.56
54:28:49:C:H2'	54:28:50:A:C8	2.41	0.56
57:31:21:A:H2'	57:31:46:G:H1	1.70	0.56
59:33:236:LEU:O	59:33:240:MET:HG2	2.04	0.56
59:33:466:GLN:HG2	59:33:467:LYS:HG2	1.87	0.56
32:6:165:ALA:O	32:6:169:HIS:HB3	2.05	0.56
7:G:48:ALA:HB3	7:G:51:TYR:CD2	2.38	0.56
16:P:104:ALA:HB1	17:Q:40:MET:HE1	1.86	0.56
36:10:91:ARG:HG2	36:10:92:THR:N	2.20	0.56
38:12:94:VAL:HB	38:12:99:GLY:O	2.05	0.56
41:15:20:ALA:N	41:15:82:GLU:O	2.38	0.56
42:16:113:ARG:CG	42:16:118:VAL:HB	2.35	0.56
44:18:1:ALA:HB1	52:26:1049:U:H5	1.70	0.56
52:26:219:U:H2'	52:26:220:G:H8	1.69	0.56
52:26:233:C:H2'	52:26:234:C:C6	2.41	0.56
52:26:49:U:O2'	52:26:50:A:H2'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:564:C:H2'	52:26:565:U:O4'	2.05	0.56
52:26:679:C:H2'	52:26:680:C:C6	2.40	0.56
52:26:846:G:H2'	52:26:847:G:C8	2.40	0.56
53:27:1216:G:H2'	53:27:1217:U:O4'	2.05	0.56
53:27:1506:U:H2'	53:27:1507:C:C6	2.41	0.56
53:27:1697:G:H3'	53:27:1698:A:C5'	2.35	0.56
53:27:2099:U:C2'	53:27:2100:G:H5''	2.35	0.56
53:27:2134:A:H1'	53:27:2158:A:H1'	1.86	0.56
53:27:2220:U:H2'	53:27:2221:G:C8	2.40	0.56
28:2:22:THR:HG23	53:27:2286:G:O6	2.05	0.56
53:27:2504:U:C2'	53:27:2505:G:H3'	2.34	0.56
53:27:2626:C:H2'	53:27:2627:G:C8	2.39	0.56
53:27:269:C:H2'	53:27:270:A:C8	2.40	0.56
53:27:2799:A:H2'	53:27:2800:A:H5'	1.87	0.56
53:27:942:G:H2'	53:27:943:A:H8	1.69	0.56
59:33:243:GLU:OE2	59:33:295:ILE:HG21	2.05	0.56
59:33:24:LEU:HD22	59:33:67:SER:HA	1.87	0.56
59:33:672:VAL:HG22	59:33:709:THR:HG22	1.87	0.56
10:J:76:VAL:HG12	15:O:72:VAL:CG2	2.34	0.56
38:12:6:ILE:HG21	38:12:31:LEU:HD11	1.87	0.56
43:17:15:VAL:O	43:17:19:THR:HG23	2.04	0.56
48:22:70:THR:HG22	48:22:73:HIS:CE1	2.40	0.56
50:24:55:PRO:HB3	52:26:193:C:H4'	1.87	0.56
52:26:1220:G:H2'	52:26:1221:G:H8	1.70	0.56
52:26:1342:C:H2'	52:26:1343:G:H8	1.71	0.56
52:26:257:G:H2'	52:26:258:G:H8	1.69	0.56
38:12:121:GLY:C	52:26:599:C:H4'	2.26	0.56
8:H:123:ALA:CB	53:27:1081:U:H5''	2.20	0.56
53:27:1435:G:O2'	53:27:1436:G:H5'	2.06	0.56
53:27:2061:G:H5''	53:27:2503:A:C4	2.39	0.56
53:27:2693:G:H2'	53:27:2694:G:C8	2.40	0.56
53:27:2772:C:H2'	53:27:2773:C:C6	2.41	0.56
53:27:449:A:H2'	53:27:450:G:O4'	2.05	0.56
53:27:693:A:H2'	53:27:694:U:O4'	2.06	0.56
31:5:38:GLY:OXT	53:27:1124:G:H1'	2.03	0.56
34:8:18:LEU:HB2	34:8:20:LEU:HG	1.87	0.56
3:C:57:LYS:HG2	3:C:59:PRO:CG	2.34	0.56
12:L:14:LYS:NZ	53:27:958:U:OP2	2.38	0.56
19:S:4:GLU:HA	19:S:7:LEU:HD12	1.86	0.56
19:S:40:LYS:HZ1	19:S:59:ASN:CA	2.18	0.56
39:13:32:ARG:HD2	39:13:37:TYR:CD1	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:70:GLY:HA3	52:26:1371:G:O3'	2.04	0.56
40:14:53:ILE:HG22	40:14:61:ALA:O	2.04	0.56
44:18:20:PHE:C	44:18:22:LYS:H	2.06	0.56
52:26:1261:A:H3'	52:26:1262:C:H6	1.70	0.56
52:26:1370:G:O2'	52:26:1371:G:H5'	2.05	0.56
52:26:405:U:C3'	52:26:406:G:H5'	2.31	0.56
16:P:2:ARG:HB2	53:27:1248:G:C8	2.39	0.56
53:27:662:G:H2'	53:27:663:G:H8	1.70	0.56
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	0.56
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.56
59:33:96:ARG:HE	59:33:104:VAL:CG2	2.18	0.56
31:5:7:VAL:HG22	31:5:38:GLY:HA2	1.87	0.56
4:D:110:ILE:O	4:D:113:PHE:HB2	2.05	0.56
7:G:87:GLU:HG3	7:G:92:ALA:H	1.70	0.56
15:O:13:LYS:HD3	15:O:76:HIS:HA	1.87	0.56
26:Z:16:CYS:SG	26:Z:20:ASN:N	2.78	0.56
36:10:10:VAL:HA	36:10:83:ALA:O	2.05	0.56
36:10:25:TYR:O	36:10:29:ILE:HG13	2.06	0.56
41:15:95:THR:HG23	41:15:96:ILE:N	2.21	0.56
42:16:107:LYS:O	42:16:108:ASP:CB	2.53	0.56
47:21:22:VAL:HG21	47:21:60:ILE:HD11	1.88	0.56
48:22:14:ALA:HA	48:22:50:TYR:HE2	1.71	0.56
50:24:20:ASN:OD1	50:24:65:LEU:HD13	2.04	0.56
52:26:1006:G:H2'	52:26:1007:U:C6	2.41	0.56
52:26:1033:G:H3'	52:26:1034:G:H4'	1.87	0.56
52:26:1113:C:H2'	52:26:1114:C:H6	1.69	0.56
52:26:1512:U:H2'	52:26:1513:A:H8	1.68	0.56
52:26:408:A:H2'	52:26:409:U:C6	2.40	0.56
53:27:1052:C:H2'	53:27:1053:C:H5'	1.88	0.56
53:27:1515:A:H2'	53:27:1516:G:O4'	2.05	0.56
53:27:1571:A:H2'	53:27:1572:A:C8	2.40	0.56
53:27:1655:A:H2'	53:27:1656:C:O4'	2.06	0.56
53:27:2031:A:OP2	53:27:2031:A:H3'	2.04	0.56
53:27:2730:C:H2'	53:27:2731:G:H8	1.69	0.56
53:27:464:U:O2'	53:27:465:G:H5'	2.06	0.56
59:33:95:LEU:HD13	59:33:107:ILE:CD1	2.36	0.56
31:5:30:GLU:OE2	31:5:32:LYS:HD3	2.05	0.56
3:C:105:LEU:HD21	3:C:177:PRO:HG3	1.87	0.56
3:C:148:ILE:HD13	3:C:187:VAL:HG11	1.86	0.56
7:G:113:PHE:O	7:G:123:ILE:HA	2.06	0.56
15:O:17:PRO:HG3	15:O:83:ILE:O	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:14:PRO:HA	19:S:32:LEU:HB3	1.85	0.56
39:13:17:ARG:HB2	39:13:65:THR:OG1	2.05	0.56
39:13:25:GLY:HA3	39:13:57:VAL:O	2.06	0.56
39:13:14:SER:HB2	39:13:69:GLY:HA3	1.86	0.56
40:14:67:ILE:HG22	44:18:95:LEU:HA	1.87	0.56
45:19:49:HIS:O	45:19:52:ARG:HB3	2.06	0.56
52:26:1230:C:H5'	57:31:30:G:H5''	1.87	0.56
52:26:1507:A:H2'	52:26:1508:A:H8	1.68	0.56
52:26:223:A:H2'	52:26:224:U:H6	1.70	0.56
52:26:34:C:H2'	52:26:35:G:H8	1.69	0.56
52:26:483:C:H2'	52:26:484:G:C8	2.41	0.56
53:27:1565:C:O2'	53:27:1566:A:H2'	2.06	0.56
53:27:1873:G:O2'	53:27:1874:C:H5'	2.05	0.56
53:27:2322:A:H2'	53:27:2323:G:O4'	2.05	0.56
53:27:2692:G:H2'	53:27:2693:G:C8	2.41	0.56
53:27:2817:U:H3'	53:27:2818:U:H5''	1.86	0.56
53:27:639:U:H2'	53:27:640:C:C6	2.41	0.56
53:27:778:G:H3'	53:27:779:U:H6	1.71	0.56
29:3:34:ARG:CZ	29:3:39:ARG:HD2	2.35	0.56
30:4:30:HIS:ND1	30:4:31:ILE:HG13	2.19	0.56
1:A:226:PRO:HG3	1:A:233:GLY:CA	2.35	0.56
2:B:62:LYS:HB2	2:B:63:PRO:HD3	1.87	0.56
5:E:93:TYR:CD1	5:E:106:LEU:HA	2.41	0.56
6:F:49:ALA:HA	6:F:52:ALA:HB3	1.87	0.56
11:K:77:ILE:HG13	11:K:110:VAL:HA	1.86	0.56
12:L:95:LEU:O	12:L:96:ILE:HD13	2.06	0.56
14:N:53:THR:O	14:N:59:ALA:HB2	2.05	0.56
38:12:10:LEU:HD22	38:12:74:ILE:HD11	1.87	0.56
43:17:10:ASP:OD1	43:17:45:SER:N	2.39	0.56
52:26:1225:A:H5'	52:26:1226:C:OP2	2.05	0.56
53:27:1062:G:OP1	53:27:1070:A:H4'	2.06	0.56
53:27:1127:A:C2'	53:27:1128:G:H5''	2.35	0.56
9:I:108:MET:CE	53:27:1138:G:H21	2.14	0.56
53:27:531:C:C5	53:27:2035:G:C2	2.93	0.56
53:27:2124:G:C5	53:27:2125:G:H1'	2.40	0.56
53:27:2573:C:H5''	53:27:2574:G:H5''	1.87	0.56
53:27:706:A:H2'	53:27:707:G:O4'	2.05	0.56
53:27:741:U:H2'	53:27:742:A:H8	1.70	0.56
59:33:622:VAL:HG12	59:33:652:ILE:HG22	1.86	0.56
34:8:125:ASN:HD22	34:8:141:VAL:CG2	2.19	0.56
1:A:52:HIS:NE2	1:A:218:THR:HA	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:78:VAL:HG12	6:F:79:THR:N	2.21	0.56
7:G:59:LEU:C	7:G:61:ARG:N	2.54	0.56
10:J:64:ARG:O	10:J:82:ASN:HA	2.05	0.56
18:R:46:LEU:O	18:R:50:VAL:HG23	2.06	0.56
50:24:28:ARG:O	50:24:32:LYS:HG2	2.06	0.56
52:26:1034:G:H2'	52:26:1034:G:N3	2.20	0.56
52:26:1241:G:H2'	52:26:1242:G:C8	2.37	0.56
53:27:1326:U:O2'	53:27:1327:A:H5'	2.05	0.56
53:27:145:C:H2'	53:27:146:A:C8	2.40	0.56
53:27:1810:A:H2'	53:27:1811:G:O4'	2.06	0.56
11:K:78:ARG:NH1	53:27:626:A:H2'	2.19	0.56
53:27:775:G:C5	53:27:794:A:C8	2.94	0.56
53:27:878:A:H5'	53:27:879:G:OP2	2.06	0.56
59:33:210:GLU:CD	59:33:260:TRP:CH2	2.78	0.56
32:6:209:VAL:HA	32:6:212:TYR:HB2	1.88	0.56
32:6:70:GLY:HA3	32:6:79:VAL:HG21	1.86	0.56
3:C:148:ILE:HD13	3:C:187:VAL:CG1	2.36	0.56
4:D:134:GLN:HE22	4:D:148:VAL:HA	1.71	0.56
7:G:28:ALA:CA	7:G:81:LEU:HB3	2.36	0.56
13:M:49:GLU:OE2	13:M:95:THR:HG22	2.05	0.56
17:Q:34:GLU:N	17:Q:34:GLU:OE1	2.38	0.56
18:R:8:ARG:HG3	18:R:102:HIS:ND1	2.20	0.56
21:U:9:ARG:HH12	21:U:12:GLN:CB	2.19	0.56
21:U:26:PHE:HE1	21:U:89:ILE:HG13	1.70	0.56
36:10:67:PRO:HB2	36:10:69:GLU:OE1	2.05	0.56
45:19:48:ASP:OD1	52:26:667:G:N3	2.39	0.56
52:26:1057:G:H2'	52:26:1058:G:H8	1.71	0.56
52:26:152:A:H3'	52:26:153:C:H6	1.71	0.56
52:26:246:A:O2'	52:26:247:G:O5'	2.08	0.56
52:26:584:G:H2'	52:26:585:G:H8	1.70	0.56
53:27:142:A:H2'	53:27:143:C:H6	1.71	0.56
53:27:172:A:H2'	53:27:173:A:H8	1.71	0.56
59:33:678:GLY:O	59:33:682:ASP:N	2.38	0.56
32:6:102:ASN:O	32:6:106:VAL:HG23	2.05	0.56
34:8:72:ARG:O	34:8:75:TYR:HB3	2.05	0.56
4:D:3:LEU:N	4:D:100:GLU:OE2	2.36	0.56
16:P:75:TYR:O	16:P:78:PHE:HB3	2.06	0.56
20:T:98:ASN:C	20:T:100:GLU:H	2.08	0.56
36:10:19:PRO:HA	36:10:22:ILE:HD12	1.88	0.56
27:1:27:LEU:HD21	27:1:36:LYS:HB3	1.88	0.56
39:13:10:ARG:O	39:13:10:ARG:HG3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:9:GLY:HA2	39:13:80:HIS:ND1	2.21	0.56
42:16:121:PRO:O	42:16:123:ALA:N	2.39	0.56
45:19:88:ARG:NE	53:27:714:U:OP2	2.39	0.56
46:20:13:LYS:N	46:20:13:LYS:HD2	2.21	0.56
52:26:579:A:O2'	52:26:580:C:H5'	2.05	0.56
53:27:1702:G:C3'	53:27:1703:G:H5''	2.36	0.56
53:27:1760:C:H2'	53:27:1761:C:O4'	2.06	0.56
53:27:2095:A:H2'	53:27:2096:C:C6	2.41	0.56
53:27:2643:G:C4	53:27:2644:G:C8	2.94	0.56
53:27:2650:U:H2'	53:27:2651:C:H6	1.67	0.56
53:27:2837:A:H2'	53:27:2838:G:C8	2.41	0.56
54:28:91:C:H2'	54:28:92:C:H6	1.70	0.56
59:33:27:THR:HG23	59:33:28:SER:N	2.21	0.56
59:33:34:CYS:SG	59:33:77:ARG:CD	2.94	0.56
32:6:112:ARG:HH22	32:6:136:ARG:NH1	2.04	0.56
34:8:8:LEU:HD21	34:8:31:CYS:HB2	1.86	0.56
1:A:117:SER:O	1:A:121:ALA:HB2	2.06	0.56
7:G:27:VAL:HG23	7:G:111:ALA:HB3	1.88	0.56
8:H:122:GLU:O	8:H:125:THR:HB	2.06	0.56
9:I:105:VAL:HG11	9:I:122:LEU:HD13	1.87	0.56
18:R:8:ARG:HG2	18:R:9:HIS:ND1	2.21	0.56
40:14:42:LEU:CD1	40:14:71:LEU:HD11	2.36	0.56
52:26:1457:G:O2'	52:26:1458:G:H5'	2.06	0.56
52:26:106:C:O2	52:26:379:C:H4'	2.05	0.56
53:27:1152:C:H2'	53:27:1153:C:C6	2.38	0.56
53:27:1352:U:O2'	53:27:1353:A:H5'	2.06	0.56
53:27:1881:C:H2'	53:27:1882:U:O4'	2.06	0.56
53:27:1995:U:H2'	53:27:1996:C:C6	2.41	0.56
53:27:248:G:H3'	53:27:249:C:C5'	2.35	0.56
53:27:2649:C:H2'	53:27:2650:U:H6	1.70	0.56
53:27:220:G:N2	53:27:427:U:H2'	2.20	0.56
53:27:520:G:H2'	53:27:521:U:C6	2.41	0.56
5:E:88:LEU:HD23	5:E:93:TYR:HB3	1.87	0.56
6:F:47:PHE:O	6:F:49:ALA:N	2.39	0.56
19:S:8:LEU:HD13	24:X:21:LEU:CB	2.35	0.56
41:15:63:GLN:HG3	41:15:98:ALA:HB2	1.87	0.55
52:26:697:U:H2'	52:26:698:G:H5'	1.88	0.55
52:26:922:G:H3'	52:26:923:A:C8	2.41	0.55
52:26:927:G:H4'	52:26:1503:A:N7	2.21	0.55
53:27:1410:G:H2'	53:27:1411:U:C6	2.40	0.55
53:27:1451:C:H4'	53:27:1452:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1423:G:N2	53:27:1576:U:H1'	2.21	0.55
53:27:1922:G:H2'	53:27:1923:U:C6	2.41	0.55
28:2:36:LYS:HD3	53:27:2344:U:OP1	2.05	0.55
53:27:218:A:H2	53:27:235:U:H4'	1.70	0.55
53:27:2368:C:H2'	53:27:2369:A:C8	2.41	0.55
53:27:898:C:H2'	53:27:899:A:O4'	2.05	0.55
59:33:101:LYS:HA	59:33:104:VAL:HG12	1.87	0.55
3:C:57:LYS:CE	3:C:73:ILE:HG21	2.34	0.55
4:D:80:GLN:NE2	4:D:81:GLY:H	2.04	0.55
12:L:97:GLN:OE1	12:L:97:GLN:N	2.38	0.55
44:18:1:ALA:HB1	52:26:1049:U:C5	2.41	0.55
44:18:20:PHE:O	44:18:21:ALA:HB3	2.06	0.55
47:21:30:HIS:CE1	47:21:31:PRO:HD2	2.41	0.55
52:26:1283:U:H2'	52:26:1284:C:C6	2.41	0.55
52:26:368:U:N3	59:33:448:ILE:HG22	2.21	0.55
53:27:1485:U:H2'	53:27:1486:U:H6	1.69	0.55
53:27:1992:G:H4'	53:27:1993:U:C5'	2.35	0.55
53:27:2016:U:H2'	53:27:2017:U:C6	2.41	0.55
53:27:2039:U:H2'	53:27:2040:G:H8	1.70	0.55
53:27:2333:A:O4'	53:27:2335:A:H1'	2.05	0.55
53:27:2:G:H2'	53:27:3:U:C6	2.41	0.55
53:27:395:U:H2'	53:27:396:G:N7	2.20	0.55
53:27:557:C:H2'	53:27:558:U:H6	1.72	0.55
54:28:60:C:H2'	54:28:61:G:C8	2.42	0.55
58:32:30:G:H3'	58:32:31:G:H8	1.70	0.55
59:33:155:GLU:O	59:33:159:HIS:HD2	1.89	0.55
34:8:9:LYS:HZ3	52:26:428:G:H5''	1.69	0.55
2:B:13:ARG:HG2	15:O:55:HIS:HE1	1.71	0.55
7:G:51:TYR:HE1	7:G:95:LEU:HD22	1.71	0.55
8:H:78:LEU:CD1	8:H:108:ILE:HG23	2.35	0.55
8:H:7:TYR:CE1	8:H:59:THR:HA	2.41	0.55
12:L:21:ALA:H	12:L:97:GLN:HB2	1.71	0.55
40:14:42:LEU:CB	40:14:71:LEU:HD11	2.36	0.55
42:16:21:PRO:C	42:16:23:LEU:N	2.55	0.55
45:19:23:SER:HB3	45:19:26:VAL:HG23	1.87	0.55
46:20:67:ILE:HD13	46:20:75:ILE:HD11	1.88	0.55
49:23:9:PHE:CE2	52:26:1318:A:H4'	2.40	0.55
52:26:1218:C:H2'	52:26:1219:A:H8	1.70	0.55
52:26:1332:A:H2'	52:26:1333:A:H8	1.71	0.55
52:26:1527:U:O2'	52:26:1528:U:H5'	2.06	0.55
52:26:305:G:H5''	52:26:306:A:OP1	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:579:A:H2'	52:26:580:C:H6	1.72	0.55
53:27:1041:G:H2'	53:27:1042:G:C8	2.42	0.55
53:27:1137:G:O2'	53:27:1138:G:H5'	2.05	0.55
53:27:1858:A:H1'	53:27:1885:A:C2	2.42	0.55
53:27:2123:G:N2	53:27:2176:A:H61	2.03	0.55
53:27:2677:G:O2'	53:27:2678:C:H5'	2.07	0.55
53:27:2043:C:H1'	53:27:2779:U:O4	2.06	0.55
53:27:2807:U:H1'	53:27:2892:G:N2	2.21	0.55
53:27:2848:G:O2'	53:27:2868:A:N6	2.39	0.55
53:27:493:G:O2'	53:27:494:G:H5'	2.06	0.55
57:31:69:C:H2'	57:31:70:G:C8	2.40	0.55
59:33:432:HIS:HD2	59:33:433:SER:H	1.55	0.55
6:F:93:SER:OG	6:F:121:VAL:HG23	2.06	0.55
10:J:6:THR:O	10:J:20:MET:HA	2.06	0.55
12:L:7:THR:HG22	12:L:9:PHE:H	1.71	0.55
13:M:69:ARG:O	13:M:71:ARG:N	2.37	0.55
28:2:16:THR:OG1	28:2:41:VAL:HG11	2.07	0.55
52:26:1258:G:H2'	52:26:1259:C:H6	1.70	0.55
47:21:62:GLU:OE2	52:26:235:C:H1'	2.07	0.55
52:26:488:C:H2'	52:26:489:C:H6	1.72	0.55
52:26:692:U:H2'	52:26:694:A:OP2	2.06	0.55
53:27:2053:G:H2'	53:27:2054:A:C8	2.41	0.55
53:27:2393:U:O2'	53:27:2394:C:H5'	2.05	0.55
53:27:2638:G:H1'	53:27:2778:A:N6	2.21	0.55
53:27:7:G:H2'	53:27:8:C:C6	2.41	0.55
59:33:92:GLU:O	59:33:96:ARG:HG3	2.07	0.55
35:9:107:GLY:HA3	52:26:9:G:C4'	2.37	0.55
15:O:46:VAL:HA	15:O:59:THR:O	2.07	0.55
21:U:14:LYS:HZ3	54:28:98:G:H22	1.54	0.55
36:10:4:TYR:CD2	36:10:71:ILE:HG13	2.41	0.55
42:16:110:LYS:HG3	52:26:539:A:OP1	2.06	0.55
45:19:9:LYS:O	45:19:12:SER:HB2	2.07	0.55
46:20:25:ARG:NH2	52:26:230:G:H4'	2.20	0.55
49:23:79:TYR:CG	49:23:80:ARG:N	2.75	0.55
51:25:65:ARG:HD2	52:26:1088:G:C4'	2.36	0.55
52:26:1226:C:H4'	52:26:1227:A:OP1	2.06	0.55
52:26:945:G:H21	52:26:1334:G:H4'	1.71	0.55
52:26:1354:U:H2'	52:26:1355:G:H8	1.71	0.55
34:8:25:ARG:HB2	52:26:410:G:OP2	2.07	0.55
52:26:440:C:H2'	52:26:441:A:C4'	2.37	0.55
53:27:1472:C:H2'	53:27:1473:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1790:C:H3'	53:27:1828:G:N2	2.21	0.55
11:K:54:GLN:HE22	53:27:2358:A:H61	1.55	0.55
53:27:84:A:C6	53:27:99:U:H5'	2.40	0.55
56:30:10:G:H2'	56:30:11:C:C6	2.41	0.55
59:33:424:PRO:O	59:33:427:PHE:HB3	2.07	0.55
59:33:599:VAL:HG21	59:33:631:ILE:CD1	2.35	0.55
59:33:71:MET:O	59:33:76:LEU:HD13	2.07	0.55
31:5:11:CYS:SG	31:5:12:ARG:N	2.75	0.55
32:6:112:ARG:HH12	32:6:136:ARG:HH22	1.54	0.55
32:6:86:CYS:O	32:6:87:ASP:HB3	2.06	0.55
35:9:76:ASN:HB2	35:9:81:GLN:OE1	2.07	0.55
1:A:220:ARG:HH21	53:27:1827:U:P	2.29	0.55
1:A:180:MET:CB	1:A:267:VAL:HB	2.35	0.55
9:I:109:LEU:HD13	9:I:118:MET:HG3	1.87	0.55
11:K:124:GLY:H	11:K:144:GLU:HA	1.70	0.55
12:L:34:LYS:HA	12:L:101:VAL:HA	1.87	0.55
12:L:22:GLN:O	12:L:24:THR:N	2.39	0.55
25:Y:9:THR:HG22	25:Y:53:MET:C	2.27	0.55
40:14:59:LYS:HD2	52:26:972:C:O3'	2.07	0.55
51:25:13:VAL:HG13	51:25:13:VAL:O	2.06	0.55
52:26:1299:A:C1'	52:26:1301:U:H1'	2.37	0.55
52:26:491:G:H2'	52:26:492:C:H6	1.69	0.55
52:26:923:A:H2'	52:26:924:C:O4'	2.07	0.55
53:27:1038:G:H2'	53:27:1039:A:H8	1.70	0.55
53:27:1196:C:H2'	53:27:1197:G:H8	1.71	0.55
53:27:2055:C:H5'	53:27:2056:G:O5'	2.07	0.55
53:27:2152:G:H2'	53:27:2153:C:C6	2.41	0.55
53:27:2075:U:H1'	53:27:2597:G:H21	1.69	0.55
10:J:30:ARG:HB2	53:27:2674:G:O2'	2.07	0.55
53:27:315:G:H2'	53:27:316:C:C6	2.41	0.55
3:C:131:THR:HG21	53:27:320:A:H2'	1.89	0.55
53:27:414:C:H2'	53:27:415:A:C8	2.42	0.55
32:6:165:ALA:HB3	32:6:190:SER:HB3	1.89	0.55
34:8:201:GLU:HG2	35:9:104:ILE:O	2.05	0.55
34:8:21:LYS:CE	34:8:25:ARG:HE	2.20	0.55
2:B:101:PHE:O	2:B:103:ASP:N	2.40	0.55
3:C:57:LYS:HZ3	3:C:59:PRO:HG3	1.71	0.55
20:T:82:VAL:O	20:T:96:LYS:HE2	2.06	0.55
39:13:17:ARG:NH2	39:13:65:THR:HG21	2.22	0.55
43:17:28:ARG:O	43:17:32:ILE:HG12	2.06	0.55
28:2:3:GLY:O	28:2:5:ARG:N	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1274:A:C2'	52:26:1275:A:H5''	2.37	0.55
52:26:234:C:H2'	52:26:235:C:C6	2.42	0.55
52:26:540:G:H2'	52:26:541:G:H8	1.72	0.55
52:26:728:A:H2'	52:26:729:A:H8	1.71	0.55
52:26:955:U:H2'	52:26:956:U:C6	2.42	0.55
53:27:1071:G:H1'	53:27:1089:A:H2'	1.88	0.55
53:27:1213:A:N6	53:27:1236:G:H1'	2.22	0.55
53:27:2266:A:H4'	53:27:2267:A:N3	2.22	0.55
53:27:2545:G:O2'	53:27:2546:U:H5'	2.07	0.55
53:27:2836:U:H2'	53:27:2837:A:C8	2.42	0.55
53:27:803:U:O2'	53:27:804:A:H5'	2.06	0.55
56:30:9:A:H1'	56:30:46:G:N3	2.22	0.55
30:4:41:ARG:HA	30:4:44:ARG:HH12	1.71	0.55
34:8:96:ARG:O	34:8:100:VAL:HG23	2.06	0.55
34:8:94:GLU:HG2	34:8:185:PRO:HG2	1.88	0.55
34:8:34:GLU:HG2	34:8:35:GLN:N	2.22	0.55
1:A:144:GLU:HG3	1:A:188:ARG:O	2.05	0.55
4:D:35:LEU:HG	4:D:153:ILE:CG2	2.35	0.55
5:E:38:ASP:OD1	5:E:39:ALA:N	2.40	0.55
10:J:22:ILE:HB	53:27:1952:A:C2	2.42	0.55
12:L:29:GLY:O	12:L:133:LYS:HD3	2.07	0.55
36:10:46:GLN:HA	36:10:56:LYS:HA	1.88	0.55
38:12:76:ARG:HH11	38:12:125:ILE:HG23	1.71	0.55
27:1:21:LEU:HD12	27:1:22:THR:H	1.71	0.55
44:18:26:LEU:HA	44:18:30:ILE:HD12	1.89	0.55
52:26:382:A:O2'	52:26:383:A:H5'	2.07	0.55
46:20:11:ALA:HB1	52:26:44:A:OP1	2.07	0.55
52:26:51:A:C2	52:26:116:A:H1'	2.41	0.55
52:26:580:C:H2'	52:26:581:G:O4'	2.07	0.55
52:26:927:G:H2'	52:26:928:G:H8	1.72	0.55
53:27:1287:A:O2'	53:27:1288:G:H5'	2.07	0.55
53:27:139:U:H2'	53:27:140:C:H5	1.72	0.55
53:27:1526:C:H2'	53:27:1527:G:O4'	2.07	0.55
53:27:2646:C:O5'	53:27:2646:C:H6	1.90	0.55
53:27:337:C:H2'	53:27:338:G:O4'	2.07	0.55
14:N:34:HIS:NE2	54:28:27:C:OP1	2.33	0.55
33:7:62:SER:HB2	33:7:99:GLN:HE21	1.71	0.55
4:D:122:ASP:CG	4:D:126:ASN:HB2	2.27	0.55
5:E:95:ALA:HA	5:E:104:LEU:HD23	1.88	0.55
20:T:10:VAL:HA	20:T:72:PHE:N	2.20	0.55
21:U:14:LYS:NZ	54:28:98:G:N2	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:10:LEU:HB3	40:14:98:VAL:HA	1.89	0.55
44:18:27:LYS:O	44:18:31:SER:HB2	2.07	0.55
45:19:31:LEU:O	45:19:35:ILE:HG13	2.07	0.55
52:26:1432:G:C2	52:26:1467:C:C5	2.94	0.55
52:26:184:G:H4'	52:26:224:U:H4'	1.88	0.55
52:26:475:C:H2'	52:26:476:U:C6	2.41	0.55
52:26:512:U:H2'	52:26:513:C:H6	1.69	0.55
52:26:70:U:H4'	52:26:71:A:C8	2.42	0.55
53:27:1252:G:O2'	53:27:1253:A:H5''	2.07	0.55
53:27:161:A:H3'	53:27:162:U:H5''	1.87	0.55
53:27:1704:C:H2'	53:27:1705:A:H8	1.72	0.55
53:27:1809:A:H2'	53:27:1810:A:C8	2.42	0.55
53:27:2191:A:H2'	53:27:2192:U:C6	2.41	0.55
53:27:2524:G:H2'	53:27:2525:G:O4'	2.06	0.55
53:27:2553:G:H1'	53:27:2582:G:N2	2.15	0.55
53:27:909:A:H2'	53:27:912:C:H5	1.70	0.55
53:27:996:A:H2'	53:27:997:G:H8	1.71	0.55
56:30:68:C:H2'	56:30:69:G:C8	2.42	0.55
37:11:142:ARG:HD3	58:32:41:C:H4'	1.88	0.55
59:33:20:TRP:CD1	59:33:64:GLU:CA	2.90	0.55
32:6:10:LYS:HB2	32:6:211:LEU:HD21	1.89	0.55
33:7:90:VAL:HA	33:7:93:ILE:HD12	1.89	0.55
1:A:78:GLU:OE1	1:A:100:ARG:NE	2.40	0.55
4:D:124:ARG:HA	4:D:160:LYS:O	2.07	0.55
4:D:172:PHE:O	4:D:174:PHE:N	2.40	0.55
4:D:64:PRO:HA	4:D:88:VAL:HG22	1.88	0.55
4:D:40:GLY:HA2	4:D:84:ILE:HD11	1.89	0.55
5:E:86:LEU:HD21	5:E:144:ALA:O	2.07	0.55
21:U:44:HIS:NE2	21:U:85:LYS:HB2	2.21	0.55
40:14:42:LEU:HD12	40:14:71:LEU:HD11	1.89	0.55
42:16:24:GLU:HG2	42:16:24:GLU:O	2.07	0.55
43:17:88:LEU:HB2	43:17:91:ARG:HH21	1.72	0.55
46:20:20:VAL:HG22	46:20:21:VAL:O	2.07	0.55
46:20:61:VAL:HA	46:20:65:ALA:HB3	1.88	0.55
49:23:39:ILE:HA	49:23:43:MET:SD	2.47	0.55
52:26:404:G:H2'	52:26:405:U:C6	2.42	0.55
52:26:434:U:H2'	52:26:435:A:O4'	2.07	0.55
53:27:1534:U:H4'	53:27:1537:G:O6	2.07	0.55
53:27:1830:C:H2'	53:27:1831:G:C8	2.40	0.55
53:27:2008:C:H2'	53:27:2009:A:C8	2.41	0.55
53:27:2111:U:H2'	53:27:2113:U:OP2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2170:A:H2'	53:27:2171:A:H4'	1.88	0.55
53:27:2102:G:N2	53:27:2188:U:H1'	2.22	0.55
53:27:2626:C:H2'	53:27:2627:G:O4'	2.07	0.55
53:27:580:U:H2'	53:27:581:C:H6	1.72	0.55
53:27:677:A:H2'	53:27:678:C:H6	1.71	0.55
59:33:408:VAL:HA	59:33:458:GLY:CA	2.37	0.55
59:33:43:LEU:HD13	59:33:56:LEU:HD13	1.89	0.55
59:33:38:THR:OG1	59:33:80:LEU:HD12	2.07	0.55
35:9:92:ARG:HB2	35:9:127:TYR:HB2	1.89	0.55
2:B:77:ARG:O	2:B:77:ARG:HG3	2.07	0.55
3:C:44:ARG:HD2	53:27:444:C:P	2.47	0.55
14:N:33:ARG:O	14:N:34:HIS:HB2	2.07	0.55
23:W:11:PRO:HB3	23:W:29:LEU:HD23	1.88	0.55
24:X:9:LYS:NZ	24:X:11:VAL:HG23	2.19	0.55
36:10:29:ILE:HG22	36:10:34:GLY:HA2	1.88	0.54
42:16:83:GLY:N	52:26:552:U:H4'	2.21	0.54
45:19:63:ARG:HH22	45:19:87:ARG:NH2	2.00	0.54
46:20:31:ARG:HG2	46:20:32:PHE:H	1.71	0.54
49:23:3:SER:HA	52:26:1314:C:H41	1.71	0.54
50:24:61:ALA:HB1	50:24:68:LYS:HA	1.87	0.54
52:26:1245:C:H2'	52:26:1246:A:C8	2.42	0.54
52:26:668:G:H2'	52:26:669:G:C8	2.41	0.54
52:26:81:A:H2'	52:26:82:G:H8	1.72	0.54
52:26:858:G:O6	52:26:869:G:H3'	2.07	0.54
53:27:155:A:H2'	53:27:156:A:H8	1.71	0.54
53:27:2027:G:H2'	53:27:2028:U:H6	1.71	0.54
53:27:2464:G:H2'	53:27:2465:C:H6	1.70	0.54
53:27:395:U:H2'	53:27:396:G:C8	2.42	0.54
53:27:402:A:H2'	53:27:403:U:H5'	1.89	0.54
32:6:114:LYS:O	32:6:117:GLU:HB3	2.06	0.54
34:8:12:ARG:O	34:8:34:GLU:HA	2.07	0.54
2:B:5:VAL:HG11	2:B:80:TRP:CE3	2.42	0.54
5:E:155:PRO:O	5:E:171:LYS:N	2.37	0.54
8:H:36:GLU:O	8:H:40:ALA:HB3	2.07	0.54
15:O:29:VAL:HG22	15:O:80:VAL:HA	1.88	0.54
20:T:26:ASN:OD1	20:T:34:ILE:HB	2.07	0.54
37:11:71:THR:HG22	37:11:72:VAL:HG13	1.87	0.54
38:12:77:VAL:HG12	38:12:84:ILE:HD12	1.89	0.54
43:17:39:ALA:HB3	43:17:42:VAL:HG13	1.88	0.54
52:26:112:G:H21	52:26:354:G:C5'	2.18	0.54
52:26:299:G:H2'	52:26:300:A:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:335:C:H2'	52:26:336:A:C8	2.41	0.54
52:26:909:A:H2'	52:26:910:C:O4'	2.05	0.54
53:27:111:A:H2'	53:27:112:U:O4'	2.07	0.54
53:27:142:A:H2'	53:27:143:C:C6	2.43	0.54
53:27:1609:A:H1'	53:27:1616:A:C1'	2.37	0.54
53:27:1664:A:H61	53:27:1996:C:N4	2.01	0.54
53:27:167:A:H2'	53:27:168:G:O4'	2.06	0.54
53:27:2162:G:H5'	53:27:2162:G:H8	1.72	0.54
53:27:2641:G:H2'	53:27:2642:G:H8	1.72	0.54
53:27:2686:G:H2'	53:27:2687:U:O4'	2.07	0.54
53:27:421:C:H2'	53:27:421:C:O2	2.07	0.54
3:C:97:ASN:CG	53:27:606:U:H5''	2.28	0.54
53:27:633:A:H2'	53:27:634:C:H5'	1.88	0.54
33:7:132:ALA:O	33:7:135:ARG:HB2	2.07	0.54
34:8:165:GLU:O	34:8:166:LYS:HB2	2.07	0.54
35:9:113:VAL:HG13	35:9:114:LEU:N	2.23	0.54
1:A:129:LEU:CD1	1:A:133:ASN:HB2	2.37	0.54
1:A:226:PRO:HG3	1:A:233:GLY:HA2	1.89	0.54
4:D:103:ILE:HA	4:D:107:VAL:CG2	2.37	0.54
38:12:4:ASP:OD2	38:12:7:ALA:HB2	2.07	0.54
43:17:97:ARG:HB2	43:17:99:GLN:HE22	1.73	0.54
44:18:25:GLU:HG3	44:18:26:LEU:N	2.22	0.54
44:18:65:GLN:HB3	44:18:82:LYS:HE2	1.89	0.54
40:14:67:ILE:HG22	44:18:95:LEU:CA	2.37	0.54
50:24:43:LYS:HB2	50:24:86:ALA:CB	2.33	0.54
52:26:1096:C:H2'	52:26:1097:C:H6	1.72	0.54
52:26:1275:A:H5'	52:26:1275:A:H8	1.72	0.54
43:17:16:ILE:HG12	52:26:1302:C:C5	2.42	0.54
52:26:45:G:H2'	52:26:46:G:C8	2.42	0.54
52:26:735:C:H2'	52:26:736:C:C6	2.42	0.54
53:27:2061:G:H1'	53:27:2062:A:H2'	1.90	0.54
53:27:2193:G:H2'	53:27:2194:U:C6	2.42	0.54
53:27:2216:G:H2'	53:27:2217:G:H8	1.71	0.54
53:27:373:U:H2'	53:27:374:A:H8	1.72	0.54
53:27:406:G:H2'	53:27:407:G:O4'	2.07	0.54
53:27:572:A:H5''	53:27:573:U:OP2	2.07	0.54
53:27:782:A:H4'	53:27:783:A:O5'	2.07	0.54
59:33:281:ILE:HG13	59:33:338:ILE:HA	1.89	0.54
59:33:597:VAL:HG13	59:33:655:ALA:HB1	1.90	0.54
59:33:698:ALA:CB	59:33:711:ASP:HB2	2.34	0.54
34:8:12:ARG:O	34:8:37:PRO:HG3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:85:LYS:HG2	5:E:131:VAL:HG22	1.90	0.54
6:F:18:GLN:NE2	6:F:44:ILE:HD11	2.22	0.54
9:I:49:ASP:OD2	9:I:121:LYS:NZ	2.39	0.54
12:L:59:ARG:HH22	59:33:736:ILE:HB	1.72	0.54
23:W:67:LEU:HD11	23:W:77:TYR:CB	2.36	0.54
26:Z:16:CYS:HB2	26:Z:36:VAL:O	2.07	0.54
38:12:86:LYS:HB3	38:12:90:GLU:HB3	1.89	0.54
45:19:27:GLN:HG2	52:26:657:U:H4'	1.89	0.54
46:20:44:SER:O	46:20:45:GLU:C	2.46	0.54
50:24:77:ASN:OD1	50:24:78:LEU:N	2.40	0.54
52:26:406:G:O2'	52:26:407:U:H5'	2.07	0.54
52:26:425:G:C2'	52:26:426:U:H5'	2.38	0.54
52:26:631:C:H5''	52:26:632:U:O4'	2.08	0.54
52:26:977:A:H1'	52:26:1223:C:N3	2.21	0.54
53:27:2041:U:H2'	53:27:2042:A:H8	1.72	0.54
27:1:31:LYS:HA	53:27:2885:G:N2	2.23	0.54
53:27:531:C:O2'	53:27:563:A:H5''	2.06	0.54
53:27:598:U:H2'	53:27:599:A:C8	2.43	0.54
53:27:917:A:H5''	53:27:2268:A:H61	1.71	0.54
54:28:101:A:H2'	54:28:102:G:O4'	2.07	0.54
29:3:29:GLN:O	29:3:32:ALA:HB3	2.07	0.54
59:33:438:ARG:HG3	59:33:465:THR:HB	1.90	0.54
59:33:610:ALA:HB2	59:33:633:VAL:O	2.08	0.54
1:A:248:GLY:HA3	53:27:2239:G:H5'	1.88	0.54
3:C:97:ASN:HB3	3:C:100:MET:HG3	1.89	0.54
4:D:140:ILE:HG22	4:D:142:TYR:N	2.21	0.54
5:E:23:ILE:CD1	5:E:71:LEU:HD21	2.36	0.54
7:G:56:ARG:NE	7:G:83:ALA:HA	2.20	0.54
10:J:58:LEU:HD12	10:J:59:LYS:O	2.08	0.54
16:P:48:ASP:OD2	53:27:534:U:O2'	2.18	0.54
36:10:69:GLU:O	36:10:73:GLU:HG2	2.08	0.54
39:13:51:LEU:CB	39:13:56:MET:HB2	2.37	0.54
39:13:83:THR:HG21	39:13:102:PHE:CB	2.36	0.54
42:16:49:ARG:NH1	42:16:88:ASP:OD2	2.41	0.54
44:18:80:ARG:HH11	44:18:80:ARG:HG3	1.73	0.54
50:24:70:LYS:HA	50:24:73:ARG:NH1	2.22	0.54
52:26:1044:A:C5	52:26:1045:C:H1'	2.41	0.54
52:26:1264:U:H2'	52:26:1265:C:C6	2.42	0.54
52:26:184:G:C4'	52:26:224:U:H4'	2.37	0.54
52:26:33:A:H2'	52:26:34:C:H6	1.72	0.54
52:26:413:G:H1'	52:26:428:G:N2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:596:A:H5'	52:26:596:A:H8	1.72	0.54
16:P:57:ARG:NH1	53:27:1154:G:OP2	2.36	0.54
53:27:1191:G:H2'	53:27:1192:G:H8	1.72	0.54
27:1:6:LYS:NZ	53:27:1262:A:H1'	2.23	0.54
19:S:59:ASN:ND2	53:27:1342:A:H5''	2.23	0.54
53:27:1812:U:H2'	53:27:1813:G:C8	2.43	0.54
53:27:1977:A:H2'	53:27:1978:A:O4'	2.08	0.54
53:27:2065:C:H2'	53:27:2066:C:H6	1.68	0.54
53:27:2411:A:H2'	53:27:2412:A:C8	2.43	0.54
53:27:818:G:H2'	53:27:1187:G:H22	1.71	0.54
53:27:974:G:H8	53:27:990:A:H62	1.55	0.54
54:28:62:C:H2'	54:28:63:C:H6	1.72	0.54
59:33:20:TRP:HD1	59:33:64:GLU:CA	2.21	0.54
59:33:664:GLY:O	59:33:717:TYR:HA	2.07	0.54
1:A:64:VAL:HG21	1:A:86:ARG:NH2	2.21	0.54
7:G:31:ARG:HB3	7:G:108:VAL:HG21	1.90	0.54
17:Q:14:VAL:HG21	17:Q:98:ILE:HG13	1.89	0.54
20:T:66:VAL:C	20:T:68:ASN:H	2.10	0.54
25:Y:39:ASP:OD1	25:Y:40:THR:N	2.40	0.54
39:13:12:LYS:HG2	52:26:1371:G:OP1	2.07	0.54
39:13:91:GLU:C	39:13:93:LEU:N	2.61	0.54
41:15:86:LYS:NZ	41:15:114:PRO:HD3	2.23	0.54
49:23:12:LEU:HA	49:23:15:LEU:HB3	1.90	0.54
49:23:18:VAL:O	49:23:22:VAL:HG23	2.07	0.54
51:25:32:ARG:HE	51:25:33:ARG:HH12	1.52	0.54
52:26:1259:C:H3'	52:26:1260:G:C5'	2.28	0.54
52:26:1324:A:H2'	52:26:1325:C:C6	2.43	0.54
53:27:1200:C:H2'	53:27:1201:U:H6	1.72	0.54
53:27:1239:G:H2'	53:27:1240:U:O4'	2.08	0.54
53:27:1316:U:H2'	53:27:1317:G:C8	2.41	0.54
53:27:1430:G:H2'	53:27:1431:A:C8	2.43	0.54
53:27:1935:G:H1'	53:27:1964:G:N2	2.21	0.54
53:27:2070:A:H2'	53:27:2071:A:C8	2.42	0.54
53:27:2297:A:N1	53:27:2321:U:H5	2.04	0.54
9:I:136:GLN:HE21	53:27:2899:A:H5'	1.72	0.54
53:27:542:C:H2'	53:27:543:G:C5'	2.38	0.54
21:U:14:LYS:HE2	54:28:98:G:C2	2.43	0.54
57:31:23:C:H2'	57:31:24:U:H6	1.73	0.54
33:7:86:LEU:O	33:7:90:VAL:HG23	2.07	0.54
34:8:49:ASP:O	34:8:52:VAL:HG22	2.08	0.54
1:A:207:ALA:HB1	53:27:1790:C:H4'	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:25:THR:HG21	2:B:193:VAL:CG2	2.37	0.54
5:E:82:PHE:CE2	5:E:137:LYS:HB2	2.43	0.54
8:H:106:GLN:O	8:H:110:GLN:HG3	2.08	0.54
13:M:55:ALA:HA	13:M:80:PHE:HE1	1.71	0.54
16:P:5:ARG:NH1	53:27:585:G:N7	2.56	0.54
39:13:129:ARG:HH21	57:31:33:U:H3'	1.71	0.54
41:15:40:ALA:HB3	52:26:684:U:O2	2.08	0.54
41:15:92:ARG:O	41:15:95:THR:HG22	2.07	0.54
42:16:41:PRO:HG3	42:16:49:ARG:CG	2.36	0.54
43:17:7:ASN:OD1	43:17:20:SER:HB2	2.08	0.54
47:21:11:VAL:HG11	47:21:54:ILE:HA	1.89	0.54
52:26:1297:G:H1'	52:26:1298:U:OP2	2.06	0.54
52:26:1436:U:H2'	52:26:1437:A:C8	2.42	0.54
52:26:1478:U:O2'	52:26:1479:C:H5'	2.08	0.54
52:26:987:G:H2'	52:26:988:G:H8	1.71	0.54
53:27:1582:C:H2'	53:27:1585:C:H42	1.73	0.54
53:27:1801:A:C8	53:27:1801:A:H5'	2.40	0.54
53:27:1901:A:H2'	53:27:1902:C:H6	1.73	0.54
53:27:530:G:C4	53:27:2035:G:H4'	2.42	0.54
53:27:2257:U:H2'	53:27:2258:C:C6	2.42	0.54
53:27:2461:A:H2'	53:27:2462:C:C6	2.43	0.54
53:27:2626:C:H2'	53:27:2627:G:H8	1.71	0.54
53:27:1654:A:C1'	53:27:2823:A:H5'	2.38	0.54
53:27:936:A:H2'	53:27:937:C:C6	2.43	0.54
14:N:68:LYS:HE3	54:28:49:C:O3'	2.08	0.54
54:28:6:G:H2'	54:28:7:G:H8	1.71	0.54
32:6:53:LEU:HA	32:6:56:LEU:HB2	1.89	0.54
1:A:239:PHE:O	1:A:241:LYS:HG3	2.07	0.54
4:D:16:MET:CE	4:D:27:VAL:HB	2.37	0.54
7:G:15:VAL:HG21	7:G:69:PHE:CE2	2.42	0.54
7:G:81:LEU:HD12	7:G:82:ILE:H	1.72	0.54
8:H:2:LYS:HG3	8:H:62:ALA:H	1.71	0.54
10:J:22:ILE:HD11	10:J:40:LYS:CG	2.38	0.54
10:J:71:ARG:NH2	10:J:105:ARG:HG3	2.22	0.54
11:K:90:VAL:CG1	11:K:95:LEU:HD11	2.38	0.54
21:U:60:VAL:O	21:U:61:LEU:HD12	2.08	0.54
37:11:38:ALA:O	37:11:42:VAL:HG23	2.08	0.54
39:13:5:TYR:HB2	39:13:20:ILE:HG23	1.90	0.54
46:20:8:ARG:HB3	46:20:28:ARG:NE	2.23	0.54
52:26:1157:A:H5'	52:26:1158:C:N1	2.23	0.54
52:26:538:G:H2'	52:26:539:A:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:769:G:O2'	52:26:770:C:H5'	2.07	0.54
53:27:1268:A:H2'	53:27:1269:A:H8	1.72	0.54
53:27:1827:U:H5'	53:27:1971:U:C5'	2.27	0.54
53:27:1832:C:H2'	53:27:1833:C:O4'	2.08	0.54
53:27:1930:G:O2'	53:27:1931:U:P	2.66	0.54
53:27:2098:U:H2'	53:27:2099:U:O4'	2.08	0.54
53:27:2277:G:C3'	53:27:2278:A:H5''	2.38	0.54
53:27:2739:U:H5''	53:27:2763:G:O6	2.07	0.54
59:33:134:ASN:O	59:33:135:VAL:HB	2.08	0.54
59:33:63:VAL:HG21	59:33:80:LEU:HD21	1.90	0.54
34:8:12:ARG:NH2	34:8:31:CYS:O	2.38	0.54
1:A:124:LYS:HB3	1:A:127:ASN:HD21	1.72	0.54
1:A:146:LYS:HD3	1:A:149:LYS:HD2	1.90	0.54
7:G:78:GLY:N	7:G:79:PRO:HD2	2.22	0.54
8:H:78:LEU:HD12	8:H:108:ILE:HG23	1.88	0.54
13:M:2:ARG:HG2	13:M:2:ARG:NH1	2.23	0.54
13:M:59:SER:HG	13:M:62:ASN:H	1.56	0.54
16:P:90:ASP:OD1	16:P:90:ASP:N	2.39	0.54
36:10:67:PRO:HG2	36:10:70:VAL:HG23	1.90	0.54
36:10:86:ARG:NH1	36:10:86:ARG:HB2	2.23	0.54
37:11:17:PHE:CE1	37:11:22:LEU:HD22	2.43	0.54
52:26:1090:U:H2'	52:26:1091:U:C6	2.43	0.54
52:26:846:G:H2'	52:26:847:G:H8	1.72	0.54
53:27:1587:G:H2'	53:27:1588:G:H8	1.73	0.54
53:27:1676:A:C6	53:27:1677:A:C6	2.95	0.54
53:27:1692:U:H2'	53:27:1694:C:C5	2.43	0.54
53:27:176:A:O2'	53:27:177:G:H5'	2.08	0.54
53:27:2153:C:H2'	53:27:2154:A:H5'	1.89	0.54
53:27:217:A:H2'	53:27:218:A:O4'	2.07	0.54
53:27:2286:G:H5''	53:27:2287:A:OP1	2.07	0.54
54:28:22:U:H2'	54:28:23:G:C8	2.43	0.54
54:28:30:C:H2'	54:28:31:C:O4'	2.07	0.54
54:28:39:A:H2'	54:28:40:U:C6	2.43	0.54
59:33:27:THR:CG2	59:33:28:SER:H	2.20	0.54
59:33:30:LYS:HD2	59:33:33:GLU:CD	2.28	0.54
59:33:702:ASP:O	59:33:703:THR:HG22	2.08	0.54
34:8:167:PRO:HB2	34:8:170:LEU:CD2	2.37	0.54
34:8:85:THR:HA	34:8:88:ASN:ND2	2.23	0.54
35:9:156:ARG:HG2	35:9:157:GLY:N	2.22	0.54
4:D:105:ILE:HB	26:Z:34:LEU:HD21	1.90	0.54
8:H:44:LYS:HG2	8:H:68:PHE:HE1	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:82:LEU:HD11	11:K:90:VAL:CG2	2.37	0.54
11:K:90:VAL:HG13	11:K:95:LEU:HD21	1.90	0.54
13:M:82:GLU:O	13:M:85:PRO:HG2	2.07	0.54
20:T:94:PHE:CE1	20:T:96:LYS:HA	2.43	0.54
39:13:91:GLU:C	39:13:93:LEU:H	2.10	0.54
39:13:93:LEU:O	39:13:96:GLU:HG2	2.08	0.54
41:15:15:VAL:HG13	41:15:16:SER:N	2.23	0.54
42:16:98:ARG:HH21	42:16:106:VAL:CA	2.20	0.54
46:20:12:LYS:HA	52:26:392:C:OP2	2.08	0.54
46:20:53:ASP:OD2	46:20:56:ARG:HB2	2.09	0.54
52:26:1127:G:H22	52:26:1145:A:H2	1.55	0.54
52:26:1332:A:H2'	52:26:1333:A:C8	2.43	0.54
52:26:386:C:H2'	52:26:387:U:O4'	2.08	0.54
52:26:943:U:H2'	52:26:944:G:C8	2.41	0.54
53:27:1141:U:H4'	53:27:1142:A:O4'	2.07	0.54
53:27:1159:U:H2'	53:27:1160:G:C8	2.42	0.54
53:27:1641:A:H2'	53:27:1642:G:O4'	2.08	0.54
53:27:1793:C:O2'	53:27:1794:A:H5'	2.08	0.54
53:27:1916:A:H2'	53:27:1917:U:O4'	2.07	0.54
53:27:1937:A:O2'	53:27:1938:A:H3'	2.07	0.54
53:27:211:C:H2'	53:27:212:G:C8	2.43	0.54
53:27:2898:U:H2'	53:27:2899:A:C8	2.43	0.54
53:27:732:C:H2'	53:27:733:G:O4'	2.08	0.54
32:6:113:LEU:HD13	32:6:143:LEU:CB	2.37	0.54
34:8:7:LYS:O	34:8:20:LEU:HD12	2.07	0.54
35:9:114:LEU:HB3	35:9:119:VAL:HG21	1.89	0.54
1:A:269:ARG:NH2	53:27:1798:U:P	2.81	0.54
6:F:112:LYS:O	6:F:115:VAL:HG23	2.08	0.54
17:Q:77:PHE:HD1	17:Q:84:ARG:HG2	1.72	0.54
24:X:17:GLU:O	24:X:20:ASN:HB2	2.08	0.54
39:13:125:GLN:NE2	52:26:1342:C:H4'	2.22	0.53
40:14:73:LEU:HD21	40:14:75:ASP:HB2	1.90	0.53
45:19:27:GLN:O	45:19:31:LEU:HG	2.08	0.53
46:20:36:VAL:HG23	46:20:53:ASP:HB3	1.90	0.53
52:26:1280:A:O2'	52:26:1281:C:H5'	2.08	0.53
46:20:25:ARG:HH22	52:26:230:G:H4'	1.72	0.53
52:26:263:A:H2'	52:26:264:C:H6	1.73	0.53
52:26:514:C:H2'	52:26:515:G:C8	2.40	0.53
42:16:65:TYR:OH	52:26:522:C:OP2	2.26	0.53
45:19:71:ARG:HH22	52:26:754:C:C5'	2.18	0.53
53:27:1442:U:H2'	53:27:1443:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1894:C:H2'	53:27:1895:C:H6	1.73	0.53
53:27:2164:C:N4	53:27:2171:A:H62	2.06	0.53
53:27:2503:A:N3	53:27:2503:A:H2'	2.23	0.53
54:28:118:C:H2'	54:28:119:A:C8	2.42	0.53
56:30:6:G:H8	56:30:6:G:O5'	1.91	0.53
59:33:240:MET:HB3	59:33:295:ILE:CD1	2.38	0.53
33:7:149:LYS:HA	33:7:167:TYR:O	2.08	0.53
4:D:4:HIS:NE2	4:D:8:LYS:HD3	2.23	0.53
13:M:117:ASP:CG	13:M:118:ARG:N	2.61	0.53
15:O:89:GLY:O	15:O:112:ARG:HB2	2.08	0.53
16:P:58:GLN:HE21	53:27:1009:A:C5'	2.21	0.53
19:S:58:VAL:HG12	19:S:85:VAL:HG22	1.90	0.53
23:W:52:ALA:O	23:W:55:MET:HB2	2.08	0.53
38:12:9:MET:O	38:12:13:ILE:HG13	2.08	0.53
39:13:29:ILE:HG23	39:13:29:ILE:O	2.09	0.53
44:18:48:GLN:NE2	44:18:48:GLN:N	2.55	0.53
45:19:74:VAL:O	45:19:78:THR:HG23	2.08	0.53
52:26:1236:A:H2'	52:26:1237:C:H6	1.73	0.53
52:26:1237:C:OP1	52:26:1238:A:H1'	2.08	0.53
52:26:222:C:H2'	52:26:223:A:C8	2.43	0.53
10:J:98:ARG:HH22	52:26:340:U:P	2.31	0.53
52:26:468:A:H2'	52:26:469:C:C6	2.43	0.53
53:27:1744:A:H3'	53:27:1745:A:C8	2.39	0.53
53:27:2234:G:C4	53:27:2235:G:C8	2.96	0.53
53:27:2367:G:H2'	53:27:2368:C:H6	1.73	0.53
53:27:534:U:H2'	53:27:535:G:C8	2.40	0.53
53:27:9:G:H2'	53:27:2629:U:O4	2.08	0.53
57:31:11:A:O2'	57:31:12:G:H5'	2.08	0.53
59:33:308:ASP:OD2	59:33:310:TYR:CZ	2.61	0.53
59:33:43:LEU:O	59:33:44:GLN:HB2	2.08	0.53
1:A:87:SER:HB2	1:A:199:HIS:CD2	2.44	0.53
3:C:88:ARG:CG	3:C:89:PRO:HD2	2.38	0.53
8:H:59:THR:OG1	8:H:68:PHE:HA	2.08	0.53
10:J:22:ILE:HD11	10:J:40:LYS:HG2	1.91	0.53
13:M:24:MET:HE2	13:M:44:LEU:HD13	1.90	0.53
15:O:25:VAL:HG13	15:O:84:SER:O	2.07	0.53
22:V:47:VAL:HG21	22:V:76:ILE:O	2.08	0.53
36:10:1:MET:HG2	36:10:67:PRO:HD3	1.89	0.53
27:1:42:ILE:HG22	27:1:48:TYR:HB2	1.89	0.53
44:18:68:ARG:HH12	44:18:70:HIS:HB2	1.73	0.53
46:20:39:PHE:HA	46:20:50:THR:CG2	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:54:GLN:HE21	52:26:193:C:H1'	1.73	0.53
52:26:1414:U:H2'	52:26:1415:G:H8	1.72	0.53
53:27:100:U:H1'	53:27:101:A:C6	2.42	0.53
53:27:1056:G:O2'	53:27:1086:A:H1'	2.06	0.53
53:27:1758:U:C5	53:27:2696:U:H5'	2.43	0.53
53:27:2453:A:H2'	53:27:2454:G:C8	2.33	0.53
53:27:2813:A:H2'	53:27:2814:A:C8	2.43	0.53
53:27:357:C:H2'	53:27:358:U:H6	1.73	0.53
53:27:468:G:H2'	53:27:469:G:O4'	2.09	0.53
53:27:491:G:H3'	53:27:492:A:H8	1.73	0.53
53:27:13:A:N1	53:27:525:U:H2'	2.24	0.53
57:31:23:C:H2'	57:31:24:U:C6	2.43	0.53
59:33:286:LEU:HD21	59:33:343:MET:HE3	1.89	0.53
59:33:96:ARG:CG	59:33:104:VAL:HG21	2.38	0.53
32:6:55:GLU:O	32:6:59:ILE:HG23	2.08	0.53
8:H:75:ALA:O	8:H:79:LEU:HG	2.08	0.53
13:M:45:ARG:HG2	13:M:95:THR:HG21	1.90	0.53
17:Q:6:GLN:HB2	17:Q:11:GLN:HE21	1.73	0.53
21:U:5:ASN:HA	21:U:64:VAL:HB	1.91	0.53
21:U:87:GLN:NE2	54:28:77:U:H4'	2.23	0.53
39:13:14:SER:OG	39:13:74:GLN:HG2	2.09	0.53
42:16:106:VAL:HG12	42:16:107:LYS:N	2.24	0.53
51:25:66:ARG:CG	52:26:1099:G:H5'	2.38	0.53
44:18:100:TRP:HZ2	52:26:1368:A:H5''	1.74	0.53
52:26:250:A:H4'	52:26:251:G:O5'	2.08	0.53
53:27:1056:G:H4'	53:27:1086:A:H8	1.72	0.53
53:27:1260:A:H2'	53:27:1261:C:H6	1.73	0.53
53:27:1659:G:C3'	53:27:1660:G:H5''	2.38	0.53
53:27:211:C:H2'	53:27:212:G:H8	1.73	0.53
53:27:2345:G:N3	53:27:2381:A:H2'	2.24	0.53
53:27:2368:C:H2'	53:27:2369:A:H8	1.73	0.53
53:27:254:G:C2'	53:27:255:A:H5''	2.38	0.53
53:27:2799:A:H1'	53:27:2801:G:O4'	2.09	0.53
53:27:672:C:O2'	53:27:673:C:H5'	2.08	0.53
53:27:885:C:H2'	53:27:886:A:O4'	2.09	0.53
53:27:950:G:H2'	53:27:951:C:C6	2.43	0.53
17:Q:81:LYS:HE3	53:27:973:A:OP2	2.09	0.53
17:Q:74:ILE:HG22	17:Q:87:GLN:N	2.24	0.53
39:13:29:ILE:O	39:13:30:ASN:HB2	2.09	0.53
39:13:29:ILE:HA	39:13:64:ILE:HG13	1.91	0.53
42:16:113:ARG:HG2	42:16:118:VAL:HB	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:36:VAL:CG2	46:20:53:ASP:HB3	2.38	0.53
50:24:59:ARG:O	50:24:63:LYS:HG2	2.09	0.53
52:26:1097:C:H2'	52:26:1098:C:H6	1.73	0.53
40:14:7:ARG:NH2	52:26:1126:U:OP1	2.41	0.53
52:26:1213:A:N1	52:26:1215:G:H1'	2.24	0.53
52:26:283:U:H2'	52:26:284:C:H6	1.74	0.53
52:26:457:G:H2'	52:26:458:U:C6	2.43	0.53
7:G:4:ASN:HD22	53:27:1046:A:H2'	1.73	0.53
53:27:1094:U:H2'	53:27:1096:A:OP2	2.08	0.53
53:27:128:C:H2'	53:27:129:C:C6	2.43	0.53
53:27:2038:G:H2'	53:27:2039:U:C6	2.43	0.53
53:27:2039:U:H2'	53:27:2040:G:C8	2.43	0.53
53:27:2073:C:H2'	53:27:2074:U:C6	2.42	0.53
53:27:236:C:H2'	53:27:237:C:H6	1.74	0.53
53:27:2472:G:H2'	53:27:2475:C:H42	1.73	0.53
53:27:2590:A:H61	53:27:2604:U:H3	1.56	0.53
53:27:290:U:H2'	53:27:291:G:H8	1.73	0.53
53:27:401:A:H2'	53:27:402:A:C8	2.43	0.53
25:Y:25:GLY:O	53:27:929:U:H1'	2.09	0.53
53:27:999:U:H5''	53:27:1154:G:O6	2.08	0.53
58:32:66:C:H2'	58:32:67:C:O4'	2.08	0.53
59:33:29:GLN:O	59:33:32:CYS:SG	2.62	0.53
34:8:159:GLU:O	34:8:162:GLU:HG2	2.08	0.53
1:A:180:MET:HG2	1:A:268:ARG:HB2	1.89	0.53
3:C:57:LYS:O	3:C:59:PRO:HD3	2.08	0.53
6:F:55:GLU:HA	6:F:58:LEU:HD12	1.90	0.53
9:I:29:ALA:HA	9:I:32:LEU:HD12	1.90	0.53
11:K:33:ARG:CG	11:K:40:SER:HA	2.39	0.53
4:D:97:GLU:CG	26:Z:25:ARG:HB2	2.39	0.53
43:17:21:ILE:HB	43:17:24:VAL:HG12	1.90	0.53
44:18:40:ARG:O	44:18:43:ALA:HB3	2.09	0.53
52:26:1109:C:H2'	52:26:1110:A:O4'	2.08	0.53
52:26:149:A:N6	52:26:172:A:H62	2.07	0.53
52:26:494:G:O2'	52:26:496:A:H1'	2.08	0.53
52:26:689:C:H2'	52:26:690:G:O4'	2.08	0.53
53:27:1262:A:H2'	53:27:1263:U:O4'	2.09	0.53
53:27:1747:U:H2'	53:27:1748:C:C6	2.43	0.53
53:27:1752:C:H2'	53:27:1753:G:H8	1.72	0.53
53:27:2026:U:H2'	53:27:2027:G:H8	1.73	0.53
23:W:57:VAL:HG22	53:27:372:G:H5'	1.91	0.53
53:27:655:A:H1'	53:27:656:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:745:G:O2'	53:27:748:G:H1'	2.08	0.53
54:28:66:A:H5''	54:28:67:G:OP1	2.08	0.53
59:33:135:VAL:HG22	59:33:136:ARG:HG2	1.90	0.53
59:33:158:ALA:O	59:33:161:ARG:O	2.26	0.53
59:33:47:GLN:CD	59:33:55:LEU:HD13	2.29	0.53
33:7:149:LYS:HG3	33:7:200:TRP:CE3	2.44	0.53
1:A:79:ARG:HE	1:A:92:LEU:HD23	1.74	0.53
2:B:85:ALA:O	2:B:87:GLY:N	2.39	0.53
25:Y:43:ILE:O	25:Y:47:ILE:HG13	2.08	0.53
40:14:21:ALA:HA	40:14:24:GLU:CD	2.28	0.53
43:17:100:ARG:HH21	52:26:950:U:P	2.31	0.53
51:25:49:ALA:O	51:25:52:VAL:HG12	2.08	0.53
52:26:1462:C:H2'	52:26:1463:U:C6	2.44	0.53
52:26:524:G:H2'	52:26:525:C:C6	2.44	0.53
34:8:80:ARG:HH21	52:26:613:C:P	2.32	0.53
53:27:1127:A:O2'	53:27:1128:G:H5''	2.08	0.53
53:27:1646:C:H5''	53:27:1647:U:C5'	2.38	0.53
53:27:2113:U:H2'	53:27:2114:A:C8	2.43	0.53
53:27:2396:G:H2'	53:27:2397:G:C8	2.37	0.53
53:27:721:A:H2'	53:27:722:A:C8	2.44	0.53
58:32:21:A:H62	58:32:47:U:C5'	2.22	0.53
53:27:893:C:O2'	59:33:643:GLU:CD	2.47	0.53
59:33:681:ARG:O	59:33:685:THR:N	2.42	0.53
59:33:687:LEU:HA	59:33:690:GLU:CD	2.29	0.53
33:7:46:LEU:HD11	33:7:86:LEU:HD11	1.90	0.53
35:9:10:LEU:HD12	35:9:38:VAL:HB	1.90	0.53
35:9:52:ALA:HB3	35:9:58:ALA:CB	2.37	0.53
1:A:67:LYS:HG2	1:A:150:GLY:HA2	1.89	0.53
2:B:4:LEU:CD2	2:B:98:VAL:HA	2.38	0.53
6:F:135:HIS:ND1	6:F:137:GLU:HB2	2.23	0.53
22:V:16:ARG:HD3	53:27:2271:G:H5'	1.90	0.53
23:W:39:VAL:HG12	23:W:42:GLU:H	1.73	0.53
23:W:58:ILE:HD13	23:W:66:VAL:HG21	1.91	0.53
25:Y:23:LEU:HD11	25:Y:53:MET:CE	2.39	0.53
38:12:73:SER:O	38:12:129:ALA:N	2.39	0.53
39:13:19:PHE:HB2	39:13:63:TYR:O	2.09	0.53
40:14:42:LEU:HB2	40:14:71:LEU:HD11	1.91	0.53
46:20:38:PHE:CE2	46:20:51:ARG:HG2	2.44	0.53
52:26:673:A:H2'	52:26:674:G:H8	1.73	0.53
53:27:136:G:H2'	53:27:137:U:C6	2.43	0.53
53:27:1721:G:H2'	53:27:1738:G:H22	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1782:U:H2'	53:27:1783:A:H5'	1.90	0.53
53:27:1789:A:C5	53:27:1790:C:C4	2.97	0.53
53:27:2041:U:H2'	53:27:2042:A:C8	2.44	0.53
53:27:379:G:O4'	53:27:2232:C:H5''	2.09	0.53
53:27:2464:G:H2'	53:27:2465:C:C6	2.44	0.53
53:27:2590:A:O2'	53:27:2591:C:H5'	2.09	0.53
53:27:677:A:H2'	53:27:678:C:C6	2.44	0.53
53:27:875:G:H2'	53:27:876:C:C6	2.43	0.53
54:28:100:G:H2'	54:28:101:A:H8	1.74	0.53
59:33:20:TRP:CZ2	59:33:76:LEU:CG	2.92	0.53
32:6:9:LEU:HA	32:6:14:HIS:HE2	1.74	0.53
33:7:16:PRO:HG2	33:7:53:ARG:HH22	1.74	0.53
34:8:94:GLU:HG3	34:8:185:PRO:HG2	1.91	0.53
34:8:53:GLN:HE22	35:9:111:ARG:HH21	1.57	0.53
2:B:131:ASP:OD2	2:B:134:HIS:HB2	2.09	0.53
5:E:10:VAL:HG12	5:E:47:ASN:O	2.09	0.53
38:12:106:SER:HA	52:26:642:A:C5	2.42	0.53
35:9:165:GLY:HA2	38:12:113:ARG:HD2	1.90	0.53
38:12:6:ILE:HG22	38:12:31:LEU:HD11	1.89	0.53
27:1:30:ASP:OD2	27:1:33:SER:N	2.40	0.53
45:19:3:SER:O	45:19:7:THR:HG23	2.09	0.53
47:21:46:HIS:N	47:21:72:TRP:O	2.41	0.53
48:22:44:THR:OG1	48:22:46:THR:HG22	2.09	0.53
50:24:74:HIS:HA	50:24:77:ASN:HD21	1.73	0.53
52:26:1109:C:H2'	52:26:1110:A:C8	2.43	0.53
52:26:1135:U:H4'	52:26:1136:C:C5	2.44	0.53
52:26:178:C:H2'	52:26:179:A:C8	2.39	0.53
52:26:735:C:H2'	52:26:736:C:H6	1.73	0.53
53:27:1023:U:O2'	53:27:1122:G:H5'	2.08	0.53
53:27:1769:U:H2'	53:27:1770:G:H8	1.74	0.53
53:27:778:G:H3'	53:27:779:U:C6	2.44	0.53
53:27:813:U:H2'	53:27:814:C:C6	2.43	0.53
58:32:70:G:H2'	58:32:71:C:O4'	2.09	0.53
59:33:60:VAL:O	59:33:63:VAL:HG22	2.08	0.53
59:33:73:ILE:HG13	59:33:74:ASP:N	2.24	0.53
34:8:103:ARG:HB3	34:8:170:LEU:CD2	2.39	0.53
34:8:56:GLU:O	34:8:59:LYS:HB3	2.09	0.53
19:S:58:VAL:HG12	19:S:85:VAL:HG13	1.91	0.53
20:T:48:VAL:O	20:T:53:GLN:HG3	2.08	0.53
45:19:32:THR:OG1	45:19:84:LEU:HD21	2.08	0.53
52:26:1133:G:H2'	52:26:1134:G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:123:ARG:O	52:26:1343:G:H4'	2.09	0.53
53:27:217:A:C2	53:27:218:A:H1'	2.44	0.53
53:27:2317:A:H2'	53:27:2318:G:O4'	2.09	0.53
53:27:2485:G:H2'	53:27:2486:C:C6	2.43	0.53
53:27:2872:A:O2'	53:27:2873:A:H5'	2.08	0.53
53:27:2873:A:O2'	53:27:2874:C:H5'	2.08	0.53
23:W:9:LYS:CE	53:27:397:U:OP2	2.56	0.53
59:33:210:GLU:CD	59:33:260:TRP:CZ3	2.83	0.53
59:33:43:LEU:CD2	59:33:44:GLN:HE22	2.22	0.53
33:7:71:ARG:O	33:7:75:VAL:HG23	2.08	0.53
3:C:147:LEU:HD23	3:C:180:LEU:HD23	1.91	0.53
3:C:51:GLU:OE1	3:C:51:GLU:N	2.38	0.53
4:D:151:LEU:HD12	4:D:152:ASP:N	2.24	0.53
36:10:30:THR:HA	36:10:34:GLY:H	1.74	0.52
42:16:35:ARG:HD3	42:16:53:ARG:NH2	2.24	0.52
43:17:21:ILE:HB	43:17:24:VAL:HG11	1.91	0.52
46:20:46:LYS:HD2	52:26:617:G:H5'	1.92	0.52
46:20:60:TRP:HB3	46:20:65:ALA:HB2	1.91	0.52
52:26:1301:U:O2	52:26:1301:U:C2'	2.56	0.52
52:26:1327:C:H2'	52:26:1328:C:C6	2.43	0.52
51:25:46:ARG:NE	52:26:1533:C:H41	2.06	0.52
52:26:155:A:H2'	52:26:156:C:C6	2.44	0.52
52:26:676:A:O2'	52:26:677:U:H5'	2.09	0.52
52:26:680:C:H2'	52:26:681:A:H8	1.73	0.52
52:26:838:G:H2'	52:26:839:C:C6	2.43	0.52
53:27:1013:C:H2'	53:27:1014:A:H8	1.72	0.52
53:27:1314:C:O2'	53:27:1315:C:H5'	2.09	0.52
53:27:1483:G:H1'	53:27:1509:A:H2	1.74	0.52
53:27:172:A:H2'	53:27:173:A:C8	2.44	0.52
53:27:1838:C:H4'	53:27:1839:G:H8	1.73	0.52
27:1:18:HIS:CD2	53:27:2046:G:H1'	2.44	0.52
53:27:2075:U:H2'	53:27:2238:G:N2	2.24	0.52
6:F:25:TYR:CD1	53:27:2094:A:H5'	2.44	0.52
53:27:2217:G:O2'	53:27:2218:G:H5'	2.09	0.52
53:27:2534:A:H2'	53:27:2535:G:O4'	2.10	0.52
53:27:2545:G:C2'	53:27:2546:U:H5'	2.39	0.52
53:27:2593:U:H2'	53:27:2594:C:H6	1.74	0.52
53:27:2834:G:O6	53:27:2879:A:H2'	2.09	0.52
53:27:347:A:H2'	53:27:348:A:C8	2.44	0.52
53:27:228:C:N4	53:27:417:C:H1'	2.24	0.52
56:30:65:G:H2'	56:30:66:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:81:LEU:CD2	59:33:84:LEU:HD22	2.39	0.52
33:7:156:LEU:O	33:7:156:LEU:HD12	2.09	0.52
7:G:34:THR:HG21	53:27:1057:A:H1'	1.91	0.52
10:J:28:SER:C	10:J:30:ARG:H	2.11	0.52
12:L:45:GLN:HE21	53:27:2485:G:C5'	2.22	0.52
22:V:52:ASP:O	22:V:53:HIS:CB	2.53	0.52
24:X:40:SER:O	24:X:43:LEU:HB3	2.09	0.52
36:10:42:TRP:HB2	36:10:59:TYR:HB2	1.90	0.52
37:11:118:ARG:HA	37:11:121:ASN:HD22	1.74	0.52
39:13:115:VAL:HG21	40:14:62:ARG:HB2	1.91	0.52
39:13:49:GLN:N	39:13:50:PRO:HD2	2.24	0.52
46:20:38:PHE:O	46:20:50:THR:HG23	2.09	0.52
52:26:1182:G:H4'	52:26:1183:U:O5'	2.09	0.52
52:26:1365:G:H2'	52:26:1366:C:C6	2.44	0.52
52:26:181:A:H61	52:26:194:C:H2'	1.72	0.52
52:26:485:U:H5'	52:26:486:U:OP2	2.10	0.52
52:26:542:G:H2'	52:26:543:U:C6	2.44	0.52
52:26:593:U:H2'	52:26:594:U:C6	2.44	0.52
9:I:68:LYS:HZ2	53:27:1140:C:P	2.32	0.52
2:B:129:THR:HG22	53:27:1997:C:P	2.49	0.52
53:27:2271:G:H2'	53:27:2272:U:C6	2.44	0.52
53:27:2357:G:N2	53:27:2359:C:H3'	2.24	0.52
53:27:2590:A:H2'	53:27:2591:C:H6	1.73	0.52
58:32:57:A:H2'	58:32:58:A:H5'	1.89	0.52
59:33:99:VAL:CG2	59:33:103:VAL:HG21	2.39	0.52
59:33:599:VAL:HG22	59:33:655:ALA:HB2	1.90	0.52
59:33:42:CYS:HB2	59:33:84:LEU:HD11	1.91	0.52
34:8:120:LYS:HG2	34:8:130:ASN:ND2	2.21	0.52
1:A:91:ALA:HB3	1:A:103:ILE:HD11	1.90	0.52
2:B:118:PHE:HB2	53:27:2823:A:OP1	2.08	0.52
4:D:134:GLN:HE21	4:D:145:VAL:HG21	1.74	0.52
6:F:1:MET:HG3	6:F:3:VAL:HG23	1.92	0.52
9:I:35:ARG:HA	9:I:40:HIS:HD2	1.74	0.52
12:L:73:ILE:H	12:L:89:VAL:HG13	1.73	0.52
37:11:12:LEU:HD12	37:11:13:PRO:CD	2.34	0.52
42:16:98:ARG:HB3	42:16:105:GLY:HA2	1.91	0.52
42:16:51:VAL:HG23	42:16:64:SER:O	2.10	0.52
43:17:52:ILE:O	43:17:55:LEU:HB2	2.10	0.52
52:26:1163:A:H2'	52:26:1164:G:H8	1.74	0.52
52:26:132:C:H2'	52:26:133:U:H6	1.73	0.52
52:26:201:G:H2'	52:26:202:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:337:G:H2'	52:26:338:A:C8	2.44	0.52
52:26:556:C:O2'	52:26:557:G:H5'	2.09	0.52
53:27:1234:U:H2'	53:27:1235:G:O4'	2.09	0.52
53:27:1289:C:H2'	53:27:1290:C:H6	1.75	0.52
53:27:1700:A:H5'	53:27:1701:A:OP2	2.09	0.52
53:27:1804:C:H2'	53:27:1805:A:H8	1.74	0.52
9:I:80:HIS:CG	53:27:2642:G:H5'	2.45	0.52
53:27:2897:U:H2'	53:27:2898:U:C6	2.44	0.52
9:I:113:PRO:HD2	53:27:558:U:OP1	2.10	0.52
53:27:583:G:H2'	53:27:584:C:H6	1.74	0.52
53:27:584:C:H2'	53:27:585:G:H8	1.72	0.52
53:27:780:G:H5''	53:27:781:A:P	2.48	0.52
53:27:974:G:O2'	53:27:989:G:N2	2.39	0.52
56:30:22:G:H2'	56:30:23:A:H8	1.74	0.52
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	0.52
59:33:227:HIS:O	59:33:231:GLU:HG3	2.09	0.52
59:33:210:GLU:HB3	59:33:260:TRP:CZ3	2.43	0.52
59:33:31:SER:O	59:33:35:LEU:HD13	2.09	0.52
59:33:634:HIS:CE1	59:33:638:CYS:HB3	2.45	0.52
31:5:36:ARG:HG2	31:5:37:GLN:N	2.25	0.52
32:6:209:VAL:O	32:6:213:LEU:HD13	2.08	0.52
34:8:169:TRP:O	34:8:182:LYS:HB2	2.09	0.52
1:A:17:LYS:CE	53:27:1565:C:H5'	2.39	0.52
5:E:91:VAL:HG22	5:E:92:GLY:N	2.24	0.52
15:O:7:LEU:HA	15:O:10:GLU:OE2	2.09	0.52
20:T:84:PHE:HE1	20:T:93:ARG:HG2	1.72	0.52
1:A:135:PRO:HG2	36:10:80:PHE:CD1	2.44	0.52
38:12:42:GLU:HG2	38:12:100:ILE:HD13	1.91	0.52
39:13:108:ARG:HB3	52:26:1347:G:H8	1.75	0.52
44:18:92:ILE:HD12	44:18:92:ILE:H	1.73	0.52
45:19:44:GLU:O	45:19:46:LYS:N	2.42	0.52
52:26:284:C:H2'	52:26:285:C:H6	1.75	0.52
52:26:483:C:H2'	52:26:484:G:N7	2.24	0.52
52:26:600:A:H2'	52:26:601:G:H8	1.72	0.52
37:11:2:ARG:NH1	52:26:932:C:C5	2.77	0.52
53:27:1387:A:H5'	53:27:1469:A:H1'	1.90	0.52
1:A:218:THR:N	53:27:1790:C:OP1	2.34	0.52
53:27:190:A:H3'	53:27:191:A:C8	2.45	0.52
53:27:1960:A:O2'	53:27:1961:C:H5'	2.10	0.52
53:27:2171:A:O2'	53:27:2172:U:H5'	2.09	0.52
53:27:2246:G:H2'	53:27:2247:A:H8	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2486:C:H2'	53:27:2487:G:O4'	2.10	0.52
53:27:2606:C:O2'	53:27:2607:G:H5'	2.10	0.52
53:27:476:G:H1'	53:27:480:A:H61	1.74	0.52
53:27:839:U:H2'	53:27:840:C:H6	1.74	0.52
59:33:160:LEU:CD1	59:33:198:LEU:HD22	2.38	0.52
59:33:221:ARG:NH2	59:33:273:LEU:HD11	2.25	0.52
59:33:281:ILE:CG1	59:33:338:ILE:HG13	2.40	0.52
59:33:432:HIS:O	59:33:435:VAL:HG12	2.08	0.52
59:33:43:LEU:CD1	59:33:56:LEU:HD13	2.40	0.52
29:3:5:PHE:CD2	29:3:7:PRO:HD3	2.45	0.52
33:7:171:ARG:HG2	33:7:173:PRO:HD3	1.90	0.52
33:7:38:VAL:O	33:7:42:LEU:HD13	2.09	0.52
34:8:149:LYS:CD	34:8:177:MET:HG3	2.39	0.52
34:8:77:GLU:O	34:8:81:LEU:HG	2.10	0.52
1:A:119:VAL:HB	1:A:132:ARG:HH21	1.74	0.52
1:A:132:ARG:CA	1:A:166:ARG:HH22	2.22	0.52
1:A:130:PRO:HA	1:A:188:ARG:HA	1.92	0.52
4:D:105:ILE:C	4:D:108:PRO:HD2	2.30	0.52
7:G:27:VAL:HG12	7:G:83:ALA:CB	2.39	0.52
9:I:69:ARG:HD3	9:I:69:ARG:O	2.09	0.52
12:L:74:THR:HG22	12:L:89:VAL:N	2.25	0.52
16:P:65:ASN:CB	16:P:75:TYR:HB2	2.39	0.52
18:R:41:LYS:HB2	18:R:44:ALA:HB2	1.92	0.52
44:18:8:ARG:O	44:18:12:ARG:HG3	2.09	0.52
45:19:42:PHE:CE2	45:19:55:LEU:HD22	2.44	0.52
50:24:59:ARG:HH21	52:26:194:C:H5''	1.74	0.52
52:26:1023:U:H2'	52:26:1024:G:H8	1.74	0.52
52:26:106:C:H2'	52:26:107:G:C8	2.44	0.52
52:26:1337:G:H5''	52:26:1338:G:OP1	2.08	0.52
52:26:1347:G:O2'	52:26:1348:U:OP2	2.28	0.52
10:J:49:ARG:NH2	52:26:1423:G:H5'	2.13	0.52
52:26:422:C:H4'	52:26:423:G:N3	2.24	0.52
52:26:745:G:H2'	52:26:746:A:C8	2.45	0.52
53:27:1314:C:H2'	53:27:1315:C:C6	2.36	0.52
53:27:141:G:H5''	53:27:142:A:C8	2.44	0.52
53:27:1684:G:H2'	53:27:1685:C:O4'	2.09	0.52
53:27:1790:C:H2'	53:27:1791:A:C5	2.44	0.52
53:27:1871:A:H2'	53:27:1872:A:O4'	2.09	0.52
53:27:2298:A:H4'	53:27:2322:A:H4'	1.92	0.52
53:27:2323:G:H2'	53:27:2324:U:O4'	2.08	0.52
22:V:38:GLY:CA	53:27:2330:G:H21	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2331:G:H2'	53:27:2332:C:C6	2.44	0.52
53:27:2369:A:H2'	53:27:2370:G:C8	2.44	0.52
53:27:2437:G:H2'	53:27:2438:U:C6	2.45	0.52
2:B:83:ARG:HD3	53:27:2637:U:OP1	2.09	0.52
53:27:666:A:H2'	53:27:667:U:H6	1.74	0.52
59:33:58:ARG:NH1	59:33:159:HIS:ND1	2.58	0.52
59:33:59:GLY:O	59:33:63:VAL:HG13	2.09	0.52
59:33:726:LEU:HD23	59:33:729:LEU:HD12	1.92	0.52
33:7:19:SER:HB3	33:7:21:TRP:NE1	2.24	0.52
34:8:27:ILE:HD12	34:8:27:ILE:H	1.74	0.52
4:D:72:SER:OG	4:D:79:ARG:HA	2.09	0.52
12:L:75:GLU:HG3	12:L:90:GLU:OE1	2.09	0.52
26:Z:11:GLU:HA	26:Z:25:ARG:HA	1.91	0.52
37:11:37:THR:O	37:11:41:ILE:HG13	2.09	0.52
39:13:21:LYS:HB2	39:13:61:ASP:OD1	2.10	0.52
39:13:17:ARG:HH21	39:13:65:THR:HG21	1.74	0.52
41:15:22:ILE:HG12	41:15:31:VAL:HG22	1.90	0.52
41:15:51:PHE:CE2	41:15:64:VAL:HG11	2.44	0.52
42:16:43:LYS:CB	42:16:44:PRO:CD	2.88	0.52
52:26:1463:U:H2'	52:26:1464:U:C5	2.44	0.52
42:16:27:PRO:HD2	52:26:363:A:C5	2.45	0.52
52:26:955:U:H3	52:26:1225:A:H61	1.56	0.52
53:27:1423:G:H2'	53:27:1424:G:H8	1.74	0.52
53:27:1534:U:H1'	53:27:1537:G:H1	1.74	0.52
53:27:1719:G:H2'	53:27:1720:U:O4'	2.10	0.52
53:27:1838:C:N4	53:27:1898:U:H2'	2.24	0.52
53:27:1372:U:H1'	53:27:2214:C:O2	2.09	0.52
53:27:2308:G:H5''	53:27:2309:A:OP2	2.10	0.52
53:27:2347:C:H2'	53:27:2348:U:H6	1.75	0.52
53:27:2643:G:C5	53:27:2644:G:N7	2.78	0.52
53:27:37:C:H2'	53:27:38:A:H8	1.75	0.52
53:27:730:A:O2'	53:27:731:C:H5'	2.10	0.52
53:27:888:C:H2'	53:27:889:C:O4'	2.09	0.52
59:33:231:GLU:O	59:33:235:HIS:CD2	2.63	0.52
59:33:613:CYS:O	59:33:614:GLN:C	2.47	0.52
35:9:104:ILE:HA	35:9:121:ASN:O	2.09	0.52
1:A:165:ALA:HB3	1:A:172:THR:OG1	2.09	0.52
1:A:32:LEU:O	1:A:63:ILE:HG12	2.10	0.52
4:D:1:ALA:O	4:D:4:HIS:HB3	2.09	0.52
7:G:96:PHE:CD1	7:G:97:LYS:N	2.78	0.52
12:L:19:GLY:C	12:L:20:LEU:HD12	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:40:ILE:HD13	54:28:8:C:O2'	2.10	0.52
14:N:40:ILE:HG22	14:N:41:ALA:O	2.09	0.52
14:N:49:VAL:HG22	14:N:85:LYS:HD2	1.91	0.52
21:U:20:LEU:HD21	21:U:41:GLU:HG2	1.92	0.52
40:14:88:MET:O	40:14:89:ARG:HB2	2.10	0.52
40:14:67:ILE:HG23	44:18:95:LEU:HD13	1.90	0.52
45:19:63:ARG:NH2	45:19:87:ARG:HH22	2.06	0.52
46:20:14:ARG:HH22	52:26:618:C:H1'	1.74	0.52
52:26:1144:G:N2	52:26:1146:A:H62	2.08	0.52
40:14:47:GLU:HG3	52:26:1254:A:OP1	2.09	0.52
49:23:5:LYS:HB3	52:26:1313:U:OP2	2.10	0.52
52:26:736:C:H2'	52:26:737:C:H6	1.73	0.52
53:27:1271:G:O3'	53:27:1272:A:H4'	2.09	0.52
53:27:140:C:H2'	53:27:141:G:C4'	2.31	0.52
53:27:1927:A:H2'	53:27:1928:A:C8	2.45	0.52
53:27:1997:C:O2'	53:27:1998:A:H5'	2.09	0.52
53:27:2333:A:H5''	53:27:2334:U:OP1	2.10	0.52
53:27:2386:A:H2'	53:27:2387:U:O4'	2.10	0.52
53:27:2478:A:H2'	53:27:2479:U:O4'	2.09	0.52
53:27:40:U:H2'	53:27:41:C:C6	2.45	0.52
56:30:39:U:H2'	56:30:40:C:C6	2.45	0.52
59:33:65:ILE:HD11	59:33:161:ARG:HH21	1.73	0.52
59:33:405:ARG:HD2	59:33:419:PRO:HA	1.91	0.52
59:33:63:VAL:HA	59:33:79:ALA:CB	2.39	0.52
34:8:61:ARG:O	34:8:65:GLY:N	2.43	0.52
1:A:174:ARG:HA	1:A:179:GLU:O	2.10	0.52
8:H:104:GLN:HA	8:H:107:GLU:HG2	1.91	0.52
10:J:32:TYR:OH	53:27:2726:A:H5'	2.09	0.52
14:N:94:ARG:HB3	14:N:97:PHE:O	2.10	0.52
38:12:73:SER:HB3	38:12:129:ALA:HB3	1.92	0.52
39:13:41:GLU:OE1	39:13:44:ARG:NH2	2.43	0.52
47:21:64:ARG:O	47:21:66:LEU:HG	2.09	0.52
51:25:17:ARG:O	51:25:20:ARG:HG2	2.09	0.52
52:26:287:U:H2'	52:26:288:A:H8	1.72	0.52
52:26:824:G:H2'	52:26:825:A:C8	2.45	0.52
53:27:1293:C:H2'	53:27:1294:U:C6	2.44	0.52
53:27:1604:C:H2'	53:27:1605:C:H6	1.75	0.52
53:27:1651:G:H2'	53:27:1652:A:O4'	2.09	0.52
53:27:2092:U:H4'	53:27:2093:G:C5'	2.37	0.52
53:27:236:C:H2'	53:27:237:C:C6	2.45	0.52
53:27:2391:G:H2'	53:27:2424:C:N4	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2808:G:H5'	53:27:2809:A:OP1	2.09	0.52
53:27:513:A:H2'	53:27:514:A:C8	2.45	0.52
3:C:35:TYR:CE1	53:27:615:U:H2'	2.44	0.52
53:27:940:G:H3'	53:27:941:A:H5''	1.92	0.52
54:28:115:A:H2'	54:28:116:G:H8	1.73	0.52
56:30:70:G:H2'	56:30:71:G:C8	2.44	0.52
59:33:169:ASP:OD1	59:33:169:ASP:O	2.27	0.52
59:33:175:ALA:CA	59:33:178:CYS:SG	2.94	0.52
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	0.52
59:33:444:ILE:HG22	59:33:461:ILE:HG23	1.91	0.52
32:6:124:THR:HG22	32:6:127:LYS:HD2	1.91	0.52
33:7:149:LYS:HG3	33:7:149:LYS:O	2.10	0.52
33:7:5:HIS:CG	44:18:88:MET:HB3	2.44	0.52
34:8:124:VAL:O	34:8:126:GLY:N	2.43	0.52
35:9:68:ARG:HH22	52:26:1075:U:P	2.32	0.52
3:C:134:LEU:HD13	3:C:157:LEU:CD1	2.39	0.52
6:F:81:ALA:HA	6:F:147:VAL:O	2.10	0.52
8:H:121:ILE:HD12	8:H:122:GLU:N	2.25	0.52
16:P:36:GLN:HE21	53:27:563:A:H2'	1.72	0.52
17:Q:38:VAL:O	17:Q:53:PHE:HA	2.10	0.52
19:S:2:ILE:HG12	53:27:144:A:C5'	2.40	0.52
19:S:13:ALA:HB1	24:X:33:ALA:CB	2.40	0.52
37:11:112:ASP:H	37:11:118:ARG:HD3	1.74	0.52
39:13:105:ARG:HG2	52:26:1117:A:O3'	2.09	0.52
40:14:14:ASP:OD2	40:14:17:LEU:HB2	2.09	0.52
28:2:38:PHE:HZ	28:2:43:ARG:HG3	1.73	0.52
52:26:1015:G:H2'	52:26:1016:A:O4'	2.10	0.52
52:26:549:C:H2'	52:26:550:G:H8	1.75	0.52
52:26:635:A:H2'	52:26:636:U:H6	1.75	0.52
52:26:765:G:H3'	52:26:812:G:N2	2.24	0.52
53:27:1336:A:H2'	53:27:1337:G:H8	1.75	0.52
53:27:2113:U:H2'	53:27:2114:A:H8	1.74	0.52
53:27:218:A:H3'	53:27:219:A:C8	2.41	0.52
53:27:2508:G:C6	53:27:2580:U:H5	2.27	0.52
53:27:2639:A:H2'	53:27:2640:G:O4'	2.09	0.52
5:E:3:VAL:CG2	53:27:2751:G:H4'	2.40	0.52
53:27:2753:A:H2'	53:27:2754:U:O4'	2.09	0.52
53:27:2760:C:O2'	53:27:2761:A:H5'	2.10	0.52
53:27:30:G:H2'	53:27:31:C:O4'	2.10	0.52
53:27:828:U:H2'	53:27:829:A:C8	2.44	0.52
53:27:828:U:C6	53:27:829:A:N7	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:935:C:H2'	53:27:936:A:C8	2.45	0.52
54:28:76:G:H2'	54:28:77:U:C6	2.43	0.52
59:33:406:VAL:HG22	59:33:420:ALA:HA	1.92	0.52
33:7:20:THR:H	33:7:21:TRP:HD1	1.56	0.52
35:9:100:GLU:C	35:9:102:THR:H	2.10	0.52
2:B:149:ASN:HB2	53:27:2574:G:O2'	2.09	0.52
3:C:126:VAL:HG12	3:C:157:LEU:HB2	1.92	0.52
3:C:191:ASP:O	3:C:195:GLN:HG3	2.10	0.52
3:C:75:SER:OG	3:C:77:ILE:HG12	2.10	0.52
5:E:88:LEU:HB3	5:E:93:TYR:CB	2.40	0.52
7:G:27:VAL:HG12	7:G:83:ALA:HB2	1.91	0.52
9:I:40:HIS:CE1	9:I:41:LYS:HG3	2.44	0.52
9:I:72:LYS:HZ3	9:I:74:TYR:HE1	1.58	0.52
9:I:84:ILE:HG23	9:I:84:ILE:O	2.10	0.52
10:J:35:VAL:HG22	10:J:69:VAL:HG12	1.91	0.52
14:N:18:LEU:HD11	14:N:91:SER:HB2	1.91	0.52
25:Y:7:THR:HB	25:Y:55:LYS:HB3	1.92	0.52
37:11:2:ARG:HD3	52:26:1380:U:C4	2.45	0.52
38:12:88:LYS:HG2	52:26:600:A:OP1	2.10	0.52
39:13:22:PRO:HA	39:13:60:LEU:HD23	1.92	0.52
42:16:107:LYS:O	42:16:108:ASP:HB2	2.09	0.52
46:20:67:ILE:HD13	46:20:75:ILE:CD1	2.40	0.52
46:20:54:LEU:HD11	46:20:75:ILE:HG23	1.92	0.52
47:21:14:ASP:C	47:21:16:MET:N	2.63	0.52
52:26:1118:U:H2'	52:26:1119:C:C6	2.45	0.52
52:26:1353:G:H2'	52:26:1354:U:C6	2.45	0.52
52:26:70:U:H4'	52:26:71:A:H8	1.74	0.52
52:26:790:A:H2'	52:26:791:G:C8	2.45	0.52
53:27:1693:U:C3'	53:27:1694:C:H5'	2.37	0.52
53:27:205:G:O2'	53:27:206:U:OP2	2.28	0.52
53:27:247:G:H4'	53:27:386:G:C4	2.45	0.52
53:27:2846:G:H2'	53:27:2847:U:O4'	2.09	0.52
53:27:296:U:H2'	53:27:297:G:C8	2.45	0.52
53:27:569:U:H2'	53:27:570:G:C8	2.45	0.52
53:27:740:C:H2'	53:27:741:U:H6	1.75	0.52
53:27:877:A:H1'	53:27:900:A:H62	1.75	0.52
53:27:886:A:H2'	53:27:887:U:O4'	2.10	0.52
54:28:35:C:H2'	54:28:36:C:C5'	2.40	0.52
56:30:20:U:H2'	56:30:20:U:O2	2.10	0.52
32:6:26:MET:SD	32:6:188:THR:HA	2.49	0.52
33:7:129:PHE:CE2	33:7:156:LEU:HB2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:154:ALA:HA	1:A:159:THR:HG21	1.91	0.52
4:D:72:SER:CB	4:D:79:ARG:HA	2.39	0.52
4:D:76:PHE:HE1	53:27:2308:G:C5	2.27	0.52
5:E:39:ALA:HA	5:E:57:TYR:CE2	2.45	0.52
8:H:83:ALA:HA	8:H:99:LYS:O	2.10	0.52
24:X:24:GLU:O	24:X:28:LEU:HB2	2.10	0.52
37:11:115:MET:HA	37:11:118:ARG:HH21	1.76	0.51
38:12:29:SER:HB3	38:12:32:LYS:HG3	1.92	0.51
46:20:4:ILE:HG12	46:20:21:VAL:HG22	1.91	0.51
52:26:1306:A:H62	52:26:1331:G:H1'	1.72	0.51
52:26:144:G:H2'	52:26:145:G:O4'	2.10	0.51
52:26:626:G:H2'	52:26:627:G:C8	2.44	0.51
52:26:823:C:H2'	52:26:824:G:H8	1.75	0.51
52:26:874:G:C6	52:26:875:U:C4	2.99	0.51
53:27:1123:C:H2'	53:27:1124:G:H8	1.75	0.51
53:27:127:A:H5''	53:27:128:C:O4'	2.10	0.51
53:27:1386:C:H2'	53:27:1387:A:H8	1.75	0.51
53:27:1821:A:H2'	53:27:1822:C:C6	2.45	0.51
53:27:2358:A:H2'	53:27:2359:C:O4'	2.10	0.51
53:27:2583:G:H2'	53:27:2584:U:O4'	2.11	0.51
53:27:2839:G:H2'	53:27:2840:C:C6	2.46	0.51
53:27:48:G:O3'	53:27:51:G:H5'	2.10	0.51
16:P:51:GLN:HE22	53:27:560:C:C4'	2.23	0.51
53:27:562:U:O4'	53:27:2036:C:H5'	2.10	0.51
53:27:704:G:HO2'	53:27:705:A:H8	1.58	0.51
56:30:37:A:H2'	56:30:38:A:O4'	2.09	0.51
58:32:40:C:H2'	58:32:41:C:C6	2.44	0.51
59:33:147:ARG:C	59:33:150:VAL:HG12	2.30	0.51
59:33:439:CYS:HA	59:33:465:THR:HG22	1.92	0.51
32:6:26:MET:HG2	32:6:192:PRO:HG3	1.92	0.51
3:C:29:HIS:CE1	3:C:33:VAL:HG21	2.45	0.51
4:D:41:GLU:HB2	4:D:48:LEU:HD23	1.91	0.51
4:D:48:LEU:HA	4:D:51:ASN:ND2	2.17	0.51
7:G:96:PHE:CG	7:G:97:LYS:N	2.78	0.51
8:H:52:LEU:CD2	8:H:81:LYS:HB2	2.40	0.51
9:I:31:GLU:OE1	9:I:34:ARG:HD3	2.10	0.51
9:I:4:PHE:CE2	9:I:43:GLU:HB2	2.46	0.51
11:K:33:ARG:HD3	11:K:40:SER:O	2.10	0.51
12:L:75:GLU:CD	53:27:957:C:H5'	2.31	0.51
17:Q:14:VAL:CG2	17:Q:98:ILE:HG13	2.40	0.51
18:R:36:LEU:CD1	18:R:48:LYS:HA	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:75:GLU:HA	36:10:78:PHE:HD2	1.74	0.51
37:11:21:LEU:C	37:11:21:LEU:HD23	2.31	0.51
37:11:77:ARG:NH2	37:11:151:ALA:O	2.44	0.51
38:12:48:PHE:HB3	38:12:60:LEU:HD23	1.92	0.51
42:16:28:GLN:O	42:16:29:LYS:HG2	2.09	0.51
43:17:56:ARG:HA	43:17:59:VAL:HG22	1.91	0.51
48:22:68:PRO:HB3	48:22:73:HIS:CD2	2.45	0.51
52:26:132:C:H2'	52:26:133:U:C6	2.45	0.51
52:26:1527:U:H2'	52:26:1528:U:H6	1.71	0.51
52:26:268:U:H2'	52:26:269:C:C6	2.45	0.51
53:27:162:U:O2'	53:27:163:C:H5'	2.09	0.51
53:27:2126:A:H5'	53:27:2127:G:O5'	2.10	0.51
53:27:2376:A:H2'	53:27:2377:A:O4'	2.10	0.51
53:27:2415:G:H2'	53:27:2416:C:H6	1.73	0.51
53:27:2828:G:H2'	53:27:2829:A:C8	2.45	0.51
53:27:37:C:H2'	53:27:38:A:C8	2.45	0.51
59:33:20:TRP:CG	59:33:63:VAL:HG23	2.45	0.51
32:6:89:PHE:HB3	32:6:150:ILE:HA	1.92	0.51
32:6:8:MET:CE	32:6:10:LYS:HG2	2.41	0.51
33:7:153:SER:CB	33:7:164:THR:HG22	2.39	0.51
1:A:20:ASN:ND2	1:A:23:LEU:HG	2.26	0.51
1:A:93:VAL:HG12	1:A:94:LEU:N	2.25	0.51
2:B:146:ILE:HD12	2:B:146:ILE:N	2.25	0.51
3:C:79:ARG:O	3:C:80:SER:HB2	2.11	0.51
7:G:90:GLY:O	7:G:93:ALA:HB3	2.11	0.51
2:B:12:THR:HG21	15:O:4:ILE:HG23	1.91	0.51
17:Q:2:TYR:HE2	17:Q:42:ALA:HB3	1.73	0.51
18:R:62:ASP:N	18:R:62:ASP:OD1	2.41	0.51
26:Z:20:ASN:HB2	26:Z:39:LYS:CD	2.39	0.51
36:10:18:VAL:HG12	36:10:19:PRO:HD3	1.90	0.51
41:15:80:ASN:HA	41:15:105:ARG:O	2.11	0.51
52:26:1202:U:H2'	52:26:1203:C:O4'	2.11	0.51
52:26:1221:G:N2	52:26:1222:G:H1'	2.25	0.51
52:26:1305:G:H1'	52:26:1332:A:N6	2.24	0.51
52:26:162:A:H2'	52:26:163:C:O4'	2.11	0.51
52:26:257:G:H2'	52:26:258:G:C8	2.45	0.51
52:26:319:G:H2'	52:26:320:A:C8	2.45	0.51
53:27:1919:A:C2	53:27:1920:C:H1'	2.45	0.51
53:27:2051:A:H2'	53:27:2614:A:H61	1.75	0.51
53:27:2060:A:O2'	53:27:2061:G:OP2	2.25	0.51
53:27:2314:A:H2'	53:27:2315:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:234:U:H2'	53:27:235:U:H6	1.76	0.51
53:27:2418:A:H2'	53:27:2419:U:O4'	2.11	0.51
53:27:2713:U:H3'	53:27:2714:G:H5''	1.92	0.51
53:27:595:C:H2'	53:27:596:U:C6	2.45	0.51
53:27:595:C:H2'	53:27:596:U:H6	1.75	0.51
53:27:64:A:H2'	53:27:65:U:H6	1.74	0.51
53:27:697:G:H2'	53:27:698:C:C6	2.45	0.51
53:27:718:A:H2'	53:27:719:C:O4'	2.10	0.51
53:27:948:C:H2'	53:27:949:G:H8	1.75	0.51
14:N:68:LYS:HG3	54:28:50:A:OP1	2.11	0.51
1:A:132:ARG:O	1:A:166:ARG:NH2	2.44	0.51
2:B:109:VAL:HG12	2:B:110:THR:N	2.25	0.51
3:C:40:ARG:HG2	3:C:42:GLY:H	1.76	0.51
5:E:137:LYS:O	5:E:140:ILE:HG13	2.10	0.51
5:E:3:VAL:HG12	5:E:68:ARG:HD3	1.93	0.51
7:G:5:LEU:O	7:G:8:LYS:HB2	2.10	0.51
7:G:29:ASP:C	7:G:81:LEU:HD23	2.30	0.51
11:K:110:VAL:O	11:K:111:ILE:HB	2.10	0.51
16:P:74:SER:OG	16:P:77:LYS:HE2	2.10	0.51
17:Q:74:ILE:HG21	17:Q:87:GLN:HB3	1.91	0.51
18:R:16:LYS:O	18:R:19:LEU:HB3	2.09	0.51
25:Y:19:HIS:O	25:Y:23:LEU:HG	2.09	0.51
38:12:86:LYS:HD2	38:12:90:GLU:HG2	1.92	0.51
40:14:32:THR:HG23	40:14:83:THR:CG2	2.35	0.51
41:15:58:THR:HG23	41:15:59:PRO:HD2	1.93	0.51
52:26:1208:C:H2'	52:26:1209:C:C6	2.46	0.51
52:26:263:A:H2'	52:26:264:C:C6	2.45	0.51
42:16:113:ARG:NH2	52:26:501:C:OP1	2.43	0.51
52:26:826:C:H2'	52:26:827:U:C6	2.45	0.51
52:26:855:U:H2'	52:26:856:C:C6	2.45	0.51
53:27:1040:A:H2	53:27:1115:G:H22	1.58	0.51
9:I:26:GLY:HA3	53:27:1140:C:H5'	1.92	0.51
53:27:1494:A:H2	53:27:1579:A:H1'	1.73	0.51
53:27:1793:C:H2'	53:27:1794:A:H8	1.76	0.51
53:27:1936:A:H3'	53:27:1937:A:C5'	2.40	0.51
53:27:2196:C:O2'	53:27:2197:U:H5'	2.11	0.51
53:27:2719:G:H5'	53:27:2847:U:OP1	2.09	0.51
53:27:413:C:H2'	53:27:414:C:C6	2.45	0.51
53:27:575:A:O2'	53:27:576:U:H5'	2.10	0.51
53:27:841:G:H2'	53:27:842:U:C6	2.45	0.51
54:28:6:G:H2'	54:28:7:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:204:ARG:HG3	59:33:211:TYR:CE2	2.46	0.51
59:33:697:VAL:O	59:33:699:SER:N	2.43	0.51
4:D:3:LEU:CG	4:D:100:GLU:HG2	2.38	0.51
9:I:37:ARG:NH2	9:I:110:PRO:HG3	2.24	0.51
10:J:64:ARG:NE	15:O:67:GLU:OE1	2.43	0.51
10:J:76:VAL:HG12	15:O:72:VAL:HG21	1.92	0.51
11:K:111:ILE:H	11:K:128:THR:HG23	1.75	0.51
11:K:132:ARG:HG3	11:K:142:ILE:HD13	1.92	0.51
12:L:53:MET:HB2	12:L:120:ALA:HB2	1.91	0.51
13:M:2:ARG:HG2	13:M:3:HIS:N	2.26	0.51
15:O:13:LYS:HB2	15:O:76:HIS:ND1	2.25	0.51
2:B:188:LEU:HD11	15:O:7:LEU:HD11	1.92	0.51
44:18:52:ARG:NE	52:26:1317:C:N3	2.58	0.51
45:19:54:GLY:O	45:19:57:ARG:HB3	2.11	0.51
51:25:53:LYS:O	51:25:56:ALA:HB3	2.11	0.51
52:26:1082:A:H2'	52:26:1083:U:O4'	2.10	0.51
52:26:1401:G:H2'	52:26:1402:C:O4'	2.09	0.51
52:26:174:A:C2'	52:26:175:C:H5'	2.41	0.51
52:26:842:U:H2'	52:26:844:G:OP2	2.11	0.51
53:27:1229:C:H2'	53:27:1230:A:C8	2.46	0.51
53:27:1667:G:H22	53:27:1991:U:C3'	2.21	0.51
53:27:2164:C:H41	53:27:2171:A:H62	1.58	0.51
53:27:2493:U:C2'	53:27:2494:G:H5''	2.41	0.51
53:27:2583:G:H2'	53:27:2584:U:H5'	1.92	0.51
53:27:294:A:H2'	53:27:295:G:O4'	2.10	0.51
53:27:399:U:H2'	53:27:400:G:H8	1.74	0.51
54:28:91:C:H2'	54:28:92:C:C6	2.46	0.51
59:33:327:LEU:CD2	59:33:332:LYS:CB	2.87	0.51
59:33:444:ILE:CG2	59:33:461:ILE:HD12	2.38	0.51
59:33:683:ILE:O	59:33:687:LEU:HG	2.11	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:HB3	2.45	0.51
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	0.51
59:33:95:LEU:CD1	59:33:107:ILE:HD12	2.41	0.51
32:6:30:ILE:HA	32:6:40:ILE:HA	1.91	0.51
32:6:42:LEU:HA	32:6:45:THR:OG1	2.10	0.51
35:9:10:LEU:HB2	35:9:40:ASP:HA	1.92	0.51
4:D:11:VAL:HG22	4:D:171:ALA:HB1	1.92	0.51
7:G:60:LEU:HD12	7:G:64:VAL:CG2	2.41	0.51
8:H:40:ALA:HA	8:H:43:ALA:HB2	1.92	0.51
9:I:34:ARG:NH2	16:P:69:ARG:HD2	2.25	0.51
17:Q:71:LYS:HA	17:Q:90:ARG:HG3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:91:GLN:H	19:S:91:GLN:CD	2.14	0.51
37:11:23:ALA:O	37:11:26:VAL:HB	2.11	0.51
37:11:27:ASN:HB3	52:26:1374:A:O2'	2.11	0.51
42:16:45:ASN:ND2	42:16:88:ASP:OD1	2.44	0.51
52:26:1471:U:O2'	52:26:1472:U:H5'	2.11	0.51
52:26:202:G:H2'	52:26:203:G:C8	2.46	0.51
52:26:20:U:C2'	52:26:21:G:H5'	2.41	0.51
52:26:633:G:H2'	52:26:634:C:H6	1.74	0.51
52:26:839:C:H2'	52:26:840:C:C6	2.45	0.51
52:26:950:U:H4'	52:26:971:G:N2	2.25	0.51
53:27:1013:C:H2'	53:27:1014:A:C8	2.46	0.51
53:27:1312:U:H1'	53:27:1314:C:H41	1.75	0.51
53:27:1801:A:H5''	53:27:2203:U:H2'	1.92	0.51
53:27:1889:A:H8	53:27:1889:A:O5'	1.94	0.51
53:27:1930:G:N2	53:27:1968:G:H2'	2.26	0.51
53:27:2411:A:H2'	53:27:2412:A:H8	1.76	0.51
53:27:2861:U:H2'	53:27:2862:G:H8	1.75	0.51
53:27:32:C:H2'	53:27:33:C:C6	2.45	0.51
53:27:630:G:H4'	53:27:640:C:H4'	1.91	0.51
53:27:852:U:H2'	53:27:853:C:H6	1.76	0.51
59:33:156:ARG:O	59:33:160:LEU:HG	2.10	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:CB	2.94	0.51
35:9:12:GLU:HA	35:9:38:VAL:HG12	1.92	0.51
35:9:57:ALA:HA	35:9:60:GLN:HG2	1.92	0.51
6:F:29:PHE:O	6:F:33:GLN:HB2	2.10	0.51
10:J:40:LYS:HE3	10:J:57:VAL:CG1	2.40	0.51
11:K:64:PHE:HZ	30:4:14:LYS:HG2	1.75	0.51
12:L:67:VAL:HG12	12:L:100:LYS:HZ2	1.73	0.51
25:Y:46:MET:O	25:Y:50:VAL:HG22	2.10	0.51
26:Z:2:LYS:HB2	26:Z:5:ILE:HD11	1.92	0.51
38:12:77:VAL:HG11	38:12:124:ILE:HD11	1.92	0.51
39:13:30:ASN:HD21	39:13:65:THR:HA	1.76	0.51
39:13:48:ARG:HB3	39:13:52:GLU:OE2	2.10	0.51
52:26:1346:A:H61	52:26:1374:A:H5''	1.76	0.51
52:26:320:A:H2'	52:26:321:A:O4'	2.10	0.51
8:H:126:ARG:NE	53:27:1080:A:H5''	2.24	0.51
53:27:1793:C:H2'	53:27:1794:A:C8	2.45	0.51
53:27:1892:C:H2'	53:27:1893:C:H6	1.76	0.51
53:27:1947:C:H2'	53:27:1948:G:C8	2.44	0.51
53:27:528:A:C2	53:27:2042:A:C4	2.99	0.51
53:27:2126:A:H1'	53:27:2173:A:N6	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2475:C:H42	53:27:2529:G:H22	1.59	0.51
53:27:2583:G:C2'	53:27:2584:U:H5'	2.41	0.51
53:27:2607:G:H2'	53:27:2608:G:O4'	2.11	0.51
53:27:2773:C:H2'	53:27:2774:C:C6	2.44	0.51
53:27:859:G:O2'	53:27:860:U:P	2.68	0.51
54:28:104:A:H2'	54:28:105:G:O4'	2.11	0.51
56:30:44:G:H2'	56:30:45:U:H5'	1.93	0.51
59:33:179:THR:HG23	59:33:202:CYS:HB3	1.92	0.51
59:33:221:ARG:CZ	59:33:273:LEU:HD11	2.40	0.51
59:33:35:LEU:HD11	59:33:73:ILE:CA	2.39	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	0.51
34:8:190:LEU:HD12	34:8:190:LEU:O	2.10	0.51
5:E:114:HIS:CD2	5:E:147:LEU:HD21	2.46	0.51
11:K:109:LYS:HG2	11:K:126:ARG:HB2	1.93	0.51
20:T:84:PHE:CD1	20:T:93:ARG:HG2	2.45	0.51
12:L:20:LEU:CD2	21:U:81:PRO:HG2	2.37	0.51
24:X:21:LEU:HD23	24:X:25:GLN:HG2	1.91	0.51
24:X:23:ARG:O	24:X:25:GLN:N	2.44	0.51
42:16:66:ILE:HG12	42:16:96:THR:HG21	1.91	0.51
27:1:9:ARG:O	27:1:12:ARG:HG2	2.10	0.51
49:23:35:ARG:NH1	52:26:1320:C:N3	2.59	0.51
52:26:46:G:OP1	52:26:307:C:H4'	2.10	0.51
52:26:698:G:H2'	52:26:699:C:H6	1.76	0.51
52:26:987:G:H2'	52:26:988:G:C8	2.46	0.51
53:27:1494:A:H2'	53:27:1495:A:C8	2.46	0.51
53:27:1779:U:H5	53:27:1784:A:C8	2.29	0.51
53:27:1901:A:H2'	53:27:1902:C:C6	2.45	0.51
53:27:1912:A:N7	53:27:1917:U:C5	2.78	0.51
53:27:2135:A:H3'	53:27:2156:G:N2	2.26	0.51
6:F:112:LYS:HE2	53:27:2220:U:H5''	1.93	0.51
53:27:2461:A:H2'	53:27:2462:C:H6	1.75	0.51
53:27:2527:C:H2'	53:27:2528:U:O4'	2.10	0.51
53:27:2700:A:H2'	53:27:2701:U:C6	2.46	0.51
53:27:2804:U:H2'	53:27:2805:C:C6	2.46	0.51
53:27:7:G:H2'	53:27:8:C:H6	1.74	0.51
59:33:72:ASP:OD1	59:33:74:ASP:N	2.43	0.51
35:9:95:MET:HA	35:9:124:ALA:HA	1.92	0.51
1:A:48:ILE:HD11	1:A:51:ARG:HA	1.93	0.51
7:G:107:GLU:O	7:G:108:VAL:HB	2.11	0.51
7:G:59:LEU:HG	7:G:62:ARG:NH2	2.26	0.51
22:V:42:HIS:CD2	22:V:73:ARG:HD3	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:44:PHE:C	26:Z:47:LYS:HE2	2.31	0.51
42:16:23:LEU:HD12	42:16:24:GLU:H	1.75	0.51
44:18:25:GLU:HG3	44:18:26:LEU:H	1.76	0.51
52:26:1432:G:H1'	52:26:1468:A:H62	1.74	0.51
52:26:151:A:C2'	52:26:152:A:H5'	2.41	0.51
50:24:54:GLN:NE2	52:26:193:C:H1'	2.25	0.51
52:26:299:G:C6	52:26:300:A:C6	2.99	0.51
53:27:1019:U:H2'	53:27:1020:A:C8	2.46	0.51
53:27:1112:G:H2'	53:27:1113:U:O4'	2.11	0.51
53:27:138:U:H5	53:27:139:U:C6	2.29	0.51
53:27:1480:C:H2'	53:27:1481:U:O4'	2.10	0.51
27:1:3:GLN:HA	53:27:2615:U:C2	2.46	0.51
53:27:54:G:N2	53:27:55:G:H1'	2.26	0.51
59:33:99:VAL:HG22	59:33:103:VAL:HG21	1.93	0.51
32:6:60:ALA:HB3	32:6:223:GLY:HA3	1.92	0.51
3:C:129:PRO:HG3	3:C:156:ASN:HA	1.93	0.51
5:E:42:VAL:O	5:E:42:VAL:HG13	2.11	0.51
8:H:92:PRO:O	8:H:94:LYS:N	2.40	0.51
18:R:83:LYS:CD	18:R:95:ARG:HH12	2.21	0.51
39:13:121:ARG:HH11	52:26:1348:U:H4'	1.75	0.51
40:14:50:THR:HG23	40:14:64:GLN:HG2	1.91	0.51
27:1:46:GLY:HA3	27:1:54:ILE:HG21	1.93	0.51
43:17:84:CYS:HB3	49:23:73:PHE:HE1	1.76	0.51
47:21:45:VAL:HG13	47:21:72:TRP:O	2.10	0.51
49:23:37:SER:O	49:23:70:LEU:HG	2.11	0.51
52:26:1155:A:H2'	52:26:1156:G:O4'	2.11	0.51
52:26:1220:G:H2'	52:26:1221:G:C8	2.46	0.51
52:26:1473:G:H2'	52:26:1474:U:O4'	2.10	0.51
52:26:358:U:H2'	52:26:359:G:C8	2.45	0.51
52:26:828:U:H5'	52:26:829:G:OP2	2.11	0.51
53:27:211:C:H5'	53:27:1366:A:O2'	2.10	0.51
53:27:1630:A:H2'	53:27:1631:G:O4'	2.11	0.51
53:27:1635:A:O2'	53:27:1636:U:H5'	2.11	0.51
53:27:1827:U:O2'	53:27:1828:G:H5'	2.10	0.51
53:27:2134:A:N3	53:27:2134:A:H2'	2.26	0.51
53:27:2329:U:H2'	53:27:2330:G:H8	1.70	0.51
53:27:2581:G:H2'	53:27:2581:G:N3	2.26	0.51
53:27:540:C:H2'	53:27:541:A:H8	1.75	0.51
3:C:97:ASN:OD1	53:27:606:U:H5''	2.10	0.51
53:27:613:A:H4'	53:27:614:A:C8	2.46	0.51
58:32:21:A:H62	58:32:47:U:H5''	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:305:ASP:OD1	59:33:305:ASP:O	2.29	0.51
59:33:626:THR:OG1	59:33:630:GLY:O	2.29	0.51
59:33:612:CYS:SG	59:33:634:HIS:NE2	2.64	0.51
32:6:19:THR:OG1	32:6:20:ARG:N	2.41	0.51
33:7:148:ILE:HG12	33:7:149:LYS:N	2.26	0.51
33:7:35:ASP:OD1	33:7:56:ILE:HG21	2.11	0.51
34:8:17:ASP:CG	34:8:19:PHE:H	2.14	0.51
3:C:143:LEU:HB3	3:C:146:VAL:HG11	1.93	0.51
8:H:105:LEU:HB3	8:H:125:THR:HG23	1.93	0.51
15:O:12:MET:HG2	15:O:54:LEU:HA	1.92	0.51
18:R:8:ARG:HG3	18:R:102:HIS:CE1	2.46	0.51
19:S:40:LYS:HZ2	19:S:60:THR:HG22	1.76	0.51
38:12:113:ARG:HA	38:12:116:ARG:HH12	1.76	0.50
27:1:24:VAL:O	27:1:26:SER:N	2.42	0.50
47:21:11:VAL:HG23	47:21:56:ASP:O	2.10	0.50
47:21:68:LYS:O	52:26:254:G:OP1	2.29	0.50
52:26:1327:C:H2'	52:26:1328:C:H6	1.75	0.50
52:26:1429:A:H2'	52:26:1430:A:H8	1.75	0.50
52:26:112:G:N2	52:26:354:G:H5'	2.22	0.50
52:26:501:C:H2'	52:26:502:A:H8	1.72	0.50
52:26:678:U:H2'	52:26:679:C:C6	2.46	0.50
52:26:85:U:H5''	52:26:86:G:OP1	2.11	0.50
53:27:1030:C:H2'	53:27:1031:G:H8	1.77	0.50
53:27:1278:C:H2'	53:27:1279:G:H8	1.76	0.50
53:27:141:G:H3'	53:27:142:A:O4'	2.10	0.50
53:27:1558:C:O4'	53:27:1560:G:C8	2.64	0.50
53:27:1903:G:H2'	53:27:1904:G:C8	2.41	0.50
53:27:2070:A:H2'	53:27:2071:A:H8	1.76	0.50
30:4:41:ARG:HD3	53:27:2349:G:OP2	2.11	0.50
53:27:631:A:H2	53:27:2415:G:H21	1.60	0.50
53:27:338:G:H2'	53:27:339:U:C6	2.46	0.50
53:27:983:A:H3'	53:27:984:A:H8	1.76	0.50
58:32:43:A:H2'	58:32:44:A:H8	1.76	0.50
34:8:30:LYS:H	34:8:30:LYS:CD	2.22	0.50
1:A:71:ASP:HA	1:A:117:SER:OG	2.11	0.50
3:C:48:THR:O	3:C:52:VAL:HG23	2.11	0.50
5:E:165:ASP:OD1	5:E:166:GLU:N	2.45	0.50
8:H:120:ASP:O	8:H:123:ALA:HB3	2.11	0.50
10:J:76:VAL:H	15:O:72:VAL:CG2	2.24	0.50
11:K:90:VAL:HG13	11:K:95:LEU:HD11	1.93	0.50
10:J:77:ILE:HG13	15:O:71:ARG:HG3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:68:ALA:HA	23:W:71:ARG:HG2	1.92	0.50
37:11:56:SER:HB3	37:11:59:GLU:HG2	1.92	0.50
37:11:64:ALA:HB1	37:11:126:ALA:HB3	1.92	0.50
38:12:28:SER:HB3	38:12:56:PRO:HB2	1.93	0.50
38:12:64:TYR:HD1	38:12:69:ALA:HA	1.76	0.50
39:13:126:PHE:CG	39:13:127:SER:N	2.79	0.50
49:23:68:HIS:HB3	49:23:72:GLU:OE1	2.11	0.50
51:25:31:VAL:HG22	51:25:31:VAL:O	2.11	0.50
52:26:1087:G:OP1	52:26:1389:C:H4'	2.11	0.50
52:26:147:G:H2'	52:26:148:G:C8	2.45	0.50
53:27:1268:A:H2'	53:27:1269:A:C8	2.46	0.50
53:27:1437:C:H2'	53:27:1438:U:C6	2.46	0.50
53:27:1462:C:H2'	53:27:1463:C:C6	2.47	0.50
1:A:257:ARG:NH1	53:27:1800:C:OP1	2.43	0.50
53:27:1972:G:H2'	53:27:1973:G:H8	1.76	0.50
53:27:2170:A:C2'	53:27:2171:A:H4'	2.41	0.50
53:27:227:A:N1	53:27:2407:A:H1'	2.25	0.50
53:27:22:C:C2'	53:27:23:G:H5''	2.40	0.50
31:5:3:VAL:HG21	53:27:2539:C:H5'	1.93	0.50
53:27:2902:C:H2'	53:27:2903:U:O4'	2.11	0.50
53:27:645:C:H2'	53:27:647:G:C8	2.45	0.50
53:27:766:U:H2'	53:27:767:U:H6	1.75	0.50
54:28:105:G:O2'	54:28:106:G:H5'	2.11	0.50
54:28:53:A:C2'	54:28:54:G:H5'	2.41	0.50
54:28:55:U:H2'	54:28:56:G:C8	2.47	0.50
56:30:3:C:O2'	56:30:4:C:H5'	2.11	0.50
59:33:228:TYR:HB2	59:33:277:ARG:NH2	2.26	0.50
32:6:71:THR:HA	32:6:92:ASN:O	2.10	0.50
33:7:142:ARG:HG3	33:7:143:LEU:HD12	1.93	0.50
3:C:134:LEU:HD13	3:C:157:LEU:HD11	1.93	0.50
3:C:40:ARG:HD2	3:C:92:HIS:CD2	2.45	0.50
7:G:118:ILE:HB	7:G:119:PRO:HD3	1.94	0.50
7:G:67:THR:N	7:G:68:PRO:CD	2.74	0.50
12:L:28:PHE:N	12:L:104:GLU:OE2	2.44	0.50
14:N:40:ILE:CG2	14:N:44:GLY:HA2	2.41	0.50
2:B:13:ARG:HG2	15:O:55:HIS:CE1	2.46	0.50
17:Q:101:ILE:O	17:Q:102:SER:HB2	2.12	0.50
18:R:23:LEU:HD11	27:1:21:LEU:HG	1.94	0.50
21:U:77:VAL:HG21	21:U:86:LEU:HD22	1.93	0.50
36:10:88:MET:SD	36:10:90:MET:HE1	2.52	0.50
39:13:89:TYR:O	39:13:92:SER:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:33:CYS:H	42:16:54:VAL:HG13	1.76	0.50
43:17:16:ILE:HG12	52:26:1302:C:C6	2.46	0.50
52:26:1115:U:H2'	52:26:1116:U:C6	2.46	0.50
52:26:1198:G:H2'	52:26:1199:U:O4'	2.11	0.50
52:26:1499:A:O2'	52:26:1500:A:H5'	2.12	0.50
52:26:332:G:O2'	52:26:333:U:H5'	2.11	0.50
52:26:390:U:H2'	52:26:391:G:C8	2.47	0.50
52:26:476:U:H2'	52:26:477:C:C6	2.46	0.50
52:26:890:G:H22	52:26:906:A:H3'	1.76	0.50
53:27:139:U:H2'	53:27:140:C:C5	2.45	0.50
53:27:156:A:O2'	53:27:157:C:H5'	2.10	0.50
53:27:1906:G:OP2	53:27:1930:G:H8	1.93	0.50
53:27:1937:A:C8	53:27:1939:U:H2'	2.47	0.50
53:27:355:U:H2'	53:27:356:G:H8	1.73	0.50
53:27:402:A:C2'	53:27:403:U:H5'	2.42	0.50
53:27:52:A:O2'	53:27:53:A:H5'	2.11	0.50
53:27:780:G:H3'	53:27:782:A:H62	1.75	0.50
59:33:214:ILE:HD11	59:33:260:TRP:CE3	2.28	0.50
59:33:612:CYS:SG	59:33:634:HIS:CD2	3.05	0.50
32:6:93:HIS:ND1	32:6:145:ASN:O	2.44	0.50
1:A:79:ARG:HA	1:A:111:ALA:HB1	1.93	0.50
4:D:147:ARG:CD	4:D:148:VAL:N	2.73	0.50
5:E:152:ARG:HG3	5:E:152:ARG:HH21	1.76	0.50
9:I:98:GLU:N	9:I:98:GLU:OE1	2.44	0.50
10:J:109:SER:N	10:J:113:MET:HE1	2.26	0.50
22:V:36:GLN:OE1	22:V:41:PHE:N	2.36	0.50
36:10:36:ILE:HA	36:10:64:VAL:HA	1.92	0.50
27:1:14:MET:HA	53:27:15:G:O2'	2.12	0.50
41:15:27:ASN:O	41:15:56:LYS:HG2	2.11	0.50
52:26:1326:U:H2'	52:26:1327:C:H6	1.76	0.50
52:26:1508:A:H2'	52:26:1509:C:H6	1.77	0.50
52:26:216:U:H2'	52:26:217:C:C6	2.45	0.50
52:26:427:U:H4'	52:26:541:G:H5''	1.93	0.50
52:26:950:U:H4'	52:26:971:G:C2	2.45	0.50
53:27:18:U:H2'	53:27:19:A:H8	1.74	0.50
53:27:2580:U:C4	53:27:2581:G:N7	2.79	0.50
53:27:468:G:H3'	53:27:469:G:H8	1.76	0.50
11:K:48:ARG:HD3	53:27:666:A:H4'	1.93	0.50
53:27:827:U:H5'	53:27:828:U:O5'	2.11	0.50
57:31:21:A:H2'	57:31:46:G:N1	2.26	0.50
59:33:101:LYS:O	59:33:104:VAL:HG12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:65:ILE:HD13	59:33:157:ILE:HG13	1.93	0.50
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	0.50
33:7:72:PRO:O	33:7:76:ILE:HG12	2.12	0.50
4:D:109:ARG:HH22	4:D:138:PRO:N	2.10	0.50
6:F:6:LEU:HD23	6:F:6:LEU:O	2.10	0.50
9:I:18:VAL:HG13	9:I:142:ILE:OXT	2.11	0.50
21:U:53:LYS:HB3	21:U:55:GLU:OE1	2.11	0.50
21:U:9:ARG:HD3	21:U:39:ALA:HB1	1.94	0.50
25:Y:46:MET:HG2	53:27:851:C:O4'	2.12	0.50
40:14:6:ILE:HB	40:14:76:ILE:HD12	1.93	0.50
52:26:1310:G:O2'	52:26:1311:A:H5'	2.11	0.50
46:20:46:LYS:HD3	52:26:617:G:H4'	1.93	0.50
38:12:106:SER:HA	52:26:642:A:C8	2.46	0.50
52:26:922:G:H2'	52:26:923:A:C8	2.47	0.50
53:27:103:A:H2'	53:27:104:A:O4'	2.11	0.50
53:27:108:G:O2'	53:27:109:C:H5'	2.12	0.50
53:27:1257:C:H2'	53:27:1258:U:C6	2.47	0.50
1:A:220:ARG:N	53:27:1789:A:OP1	2.41	0.50
53:27:2186:G:H2'	53:27:2187:U:O4'	2.11	0.50
23:W:29:LEU:HB2	53:27:2230:G:O3'	2.12	0.50
53:27:2660:A:H2'	53:27:2661:G:O4'	2.11	0.50
53:27:343:C:O2'	53:27:344:A:H5'	2.11	0.50
53:27:524:G:O2'	53:27:525:U:H5'	2.12	0.50
53:27:668:A:C2	53:27:670:A:C6	2.99	0.50
54:28:3:C:C3'	54:28:4:C:H5''	2.42	0.50
59:33:60:VAL:HA	59:33:63:VAL:HG22	1.93	0.50
1:A:132:ARG:HB3	1:A:185:ALA:HB1	1.93	0.50
1:A:156:SER:HB3	1:A:159:THR:OG1	2.12	0.50
3:C:88:ARG:O	3:C:90:GLN:N	2.43	0.50
4:D:40:GLY:HA2	4:D:84:ILE:CD1	2.41	0.50
5:E:102:ILE:O	5:E:113:ASP:HA	2.11	0.50
12:L:74:THR:HA	12:L:89:VAL:HA	1.92	0.50
20:T:47:PRO:HD3	20:T:55:GLY:HA2	1.93	0.50
26:Z:22:MET:HG2	26:Z:24:ILE:HG23	1.93	0.50
36:10:51:ILE:CG2	36:10:86:ARG:HH12	2.25	0.50
37:11:101:ARG:NH1	52:26:939:G:H5'	2.26	0.50
43:17:75:SER:O	43:17:78:ARG:HB3	2.11	0.50
44:18:73:LEU:C	44:18:75:LYS:H	2.14	0.50
46:20:8:ARG:HB3	46:20:28:ARG:CZ	2.42	0.50
53:27:1178:C:H2'	53:27:1180:U:C6	2.46	0.50
53:27:1287:A:C2'	53:27:1288:G:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:141:G:C5	53:27:142:A:H1'	2.47	0.50
53:27:1454:C:O2'	53:27:1455:G:H8	1.94	0.50
53:27:1591:A:H2'	53:27:1592:C:H6	1.76	0.50
53:27:754:U:H2'	53:27:755:U:C6	2.46	0.50
53:27:921:C:H2'	53:27:922:C:H6	1.75	0.50
56:30:58:A:H5'	56:30:60:U:O4	2.12	0.50
59:33:55:LEU:C	59:33:55:LEU:HD23	2.32	0.50
59:33:676:ARG:O	59:33:679:LEU:HD13	2.11	0.50
34:8:198:LEU:HA	34:8:201:GLU:OE1	2.12	0.50
7:G:57:ASN:N	7:G:57:ASN:OD1	2.42	0.50
10:J:58:LEU:HD11	10:J:86:LEU:HD22	1.94	0.50
16:P:38:VAL:HG13	16:P:39:ILE:N	2.27	0.50
20:T:86:PHE:CE1	20:T:91:LYS:HB2	2.46	0.50
21:U:7:GLU:HB2	21:U:41:GLU:OE1	2.12	0.50
24:X:28:LEU:O	24:X:32:ALA:N	2.44	0.50
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.27	0.50
38:12:47:ASP:OD1	38:12:48:PHE:N	2.44	0.50
39:13:50:PRO:O	39:13:54:VAL:HG22	2.12	0.50
40:14:39:PRO:HB2	40:14:72:ARG:HD2	1.94	0.50
46:20:25:ARG:O	52:26:110:C:O2'	2.28	0.50
52:26:1158:C:C2	52:26:1160:G:C8	2.99	0.50
52:26:1169:A:H2'	52:26:1170:A:C8	2.47	0.50
52:26:1206:G:N3	52:26:1207:G:H1'	2.27	0.50
52:26:431:A:H2'	52:26:432:A:O4'	2.12	0.50
52:26:440:C:C2'	52:26:441:A:H5''	2.42	0.50
42:16:25:ALA:O	52:26:553:A:O2'	2.30	0.50
53:27:1912:A:N7	53:27:1917:U:O4	2.45	0.50
53:27:2114:A:H61	53:27:2117:A:N6	1.99	0.50
53:27:2364:C:H2'	53:27:2365:G:O4'	2.11	0.50
53:27:2064:C:H1'	53:27:2450:A:C5	2.47	0.50
53:27:2590:A:H2'	53:27:2591:C:C6	2.47	0.50
53:27:2609:U:H5'	53:27:2610:C:OP2	2.11	0.50
53:27:2795:C:H2'	53:27:2796:U:O4'	2.12	0.50
53:27:708:G:H2'	53:27:709:U:C6	2.46	0.50
56:30:26:A:C2'	56:30:27:G:H5'	2.42	0.50
58:32:60:U:P	58:32:61:C:H5	2.35	0.50
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	0.50
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
34:8:59:LYS:O	34:8:63:ILE:HG13	2.12	0.50
1:A:140:VAL:HG23	1:A:161:VAL:HB	1.93	0.50
4:D:39:VAL:HG13	4:D:40:GLY:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:23:VAL:O	8:H:23:VAL:HG22	2.11	0.50
11:K:57:LEU:HA	11:K:60:ARG:NH1	2.26	0.50
10:J:73:ASP:OD2	15:O:79:VAL:HG11	2.12	0.50
16:P:25:GLY:O	16:P:29:ARG:NH1	2.44	0.50
21:U:20:LEU:HD23	21:U:25:LYS:O	2.11	0.50
36:10:2:ARG:HB3	36:10:92:THR:CG2	2.41	0.50
42:16:74:GLN:OE1	42:16:74:GLN:N	2.45	0.50
45:19:50:HIS:CE1	52:26:667:G:H4'	2.46	0.50
47:21:30:HIS:ND1	47:21:31:PRO:HD2	2.26	0.50
52:26:1206:G:C5	52:26:1207:G:C8	2.99	0.50
52:26:121:U:H5'	52:26:122:G:OP2	2.12	0.50
52:26:1387:G:H2'	52:26:1388:C:C6	2.46	0.50
52:26:1508:A:H2'	52:26:1509:C:O4'	2.12	0.50
52:26:1520:C:H2'	52:26:1521:C:H6	1.77	0.50
52:26:158:G:H21	52:26:162:A:N6	2.10	0.50
52:26:215:C:H2'	52:26:216:U:C6	2.47	0.50
52:26:237:G:H2'	52:26:238:A:H8	1.77	0.50
52:26:446:G:H2'	52:26:447:G:O4'	2.12	0.50
52:26:772:U:H2'	52:26:773:G:C8	2.47	0.50
52:26:916:U:H2'	52:26:917:G:H8	1.77	0.50
7:G:55:VAL:HG12	53:27:1084:A:H5''	1.94	0.50
53:27:1210:G:H5''	53:27:1212:G:O4'	2.12	0.50
53:27:2221:G:H2'	53:27:2222:C:C6	2.45	0.50
53:27:2223:G:H3'	53:27:2224:G:H8	1.77	0.50
27:1:3:GLN:HA	53:27:2615:U:N1	2.27	0.50
53:27:2679:A:H2'	53:27:2680:U:C6	2.47	0.50
53:27:2893:A:H4'	53:27:2894:G:O4'	2.11	0.50
53:27:362:A:H3'	53:27:363:G:H8	1.76	0.50
53:27:540:C:H2'	53:27:541:A:C8	2.47	0.50
58:32:43:A:H2'	58:32:44:A:C8	2.47	0.50
59:33:35:LEU:HA	59:33:77:ARG:HG2	1.93	0.50
33:7:21:TRP:HB3	33:7:58:ARG:H	1.76	0.50
33:7:61:LYS:O	33:7:61:LYS:HG2	2.11	0.50
1:A:124:LYS:HD2	1:A:125:PRO:CD	2.34	0.50
1:A:132:ARG:HA	1:A:166:ARG:HH12	1.76	0.50
1:A:231:HIS:O	1:A:241:LYS:NZ	2.45	0.50
37:11:62:GLU:HG3	37:11:66:GLU:OE2	2.12	0.50
39:13:35:GLU:CD	39:13:35:GLU:H	2.14	0.50
40:14:59:LYS:O	40:14:62:ARG:HG3	2.12	0.50
43:17:81:ASP:OD1	53:27:888:C:N4	2.41	0.50
44:18:19:TYR:O	44:18:22:LYS:HB3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:16:LYS:O	49:23:20:LYS:HG3	2.12	0.50
50:24:38:ILE:HD11	50:24:78:LEU:HD11	1.94	0.50
50:24:3:ILE:HG23	50:24:7:LYS:HZ1	1.77	0.50
51:25:34:ARG:HB2	51:25:36:PHE:CZ	2.46	0.50
52:26:1369:C:H2'	52:26:1370:G:C8	2.46	0.50
52:26:507:C:H5''	52:26:508:U:OP2	2.12	0.50
52:26:60:A:N3	52:26:61:G:H1'	2.26	0.50
53:27:1707:G:H1'	53:27:1756:G:C4	2.47	0.50
53:27:2359:C:O2'	53:27:2360:G:H5'	2.12	0.50
53:27:2641:G:H2'	53:27:2642:G:C8	2.47	0.50
53:27:322:A:H5'	53:27:340:A:H1'	1.94	0.50
53:27:878:A:H3'	53:27:879:G:C8	2.43	0.50
24:X:41:HIS:NE2	53:27:96:C:H4'	2.26	0.50
54:28:28:C:H2'	54:28:29:A:H8	1.74	0.50
56:30:74:C:H2'	59:33:432:HIS:HA	1.93	0.50
59:33:226:GLU:HA	59:33:229:ILE:CD1	2.42	0.50
59:33:444:ILE:O	59:33:444:ILE:HG13	2.12	0.50
59:33:65:ILE:HD13	59:33:157:ILE:HD11	1.93	0.50
4:D:98:PHE:HA	4:D:101:ARG:CZ	2.41	0.50
8:H:104:GLN:O	8:H:107:GLU:HG2	2.12	0.50
8:H:45:THR:HB	8:H:48:ILE:HB	1.93	0.50
11:K:19:LEU:HD22	53:27:587:C:O2'	2.12	0.50
11:K:81:ASP:OD1	11:K:81:ASP:C	2.49	0.50
15:O:108:ARG:NE	52:26:1463:U:OP1	2.44	0.50
16:P:27:ARG:HA	16:P:33:VAL:CG1	2.42	0.50
20:T:70:ALA:HB1	20:T:79:ALA:HB1	1.94	0.50
21:U:14:LYS:HE2	54:28:98:G:N1	2.27	0.50
26:Z:26:SER:OG	26:Z:28:VAL:HG23	2.12	0.50
26:Z:20:ASN:HB2	26:Z:39:LYS:CE	2.41	0.50
44:18:71:GLY:HA2	52:26:975:A:O2'	2.11	0.49
46:20:31:ARG:NH1	52:26:310:G:O3'	2.45	0.49
49:23:30:LEU:HD13	49:23:48:ILE:HG22	1.93	0.49
49:23:77:ARG:HD3	52:26:1225:A:O2'	2.11	0.49
52:26:1385:G:O2'	52:26:1386:G:H5'	2.12	0.49
52:26:184:G:H5'	52:26:224:U:O2'	2.11	0.49
52:26:424:G:H2'	52:26:425:G:H8	1.77	0.49
52:26:789:U:O2	52:26:792:A:H2'	2.11	0.49
53:27:123:G:H2'	53:27:124:G:H8	1.77	0.49
53:27:1263:U:H2'	53:27:1264:A:C4	2.47	0.49
53:27:1344:U:H3'	53:27:1345:C:H5'	1.93	0.49
53:27:1404:C:H2'	53:27:1405:U:H6	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1654:A:H1'	53:27:2823:A:H5'	1.94	0.49
53:27:1880:U:H2'	53:27:1881:C:C6	2.46	0.49
53:27:1972:G:H2'	53:27:1973:G:C8	2.47	0.49
53:27:2114:A:N6	53:27:2115:G:N3	2.60	0.49
53:27:226:A:H5''	53:27:257:C:O2'	2.12	0.49
53:27:2355:G:H2'	53:27:2356:U:O4'	2.12	0.49
53:27:262:A:C2'	53:27:263:G:H5'	2.42	0.49
53:27:2755:C:O2'	53:27:2756:U:H2'	2.12	0.49
59:33:99:VAL:CG1	59:33:103:VAL:HB	2.39	0.49
59:33:239:GLU:HG3	59:33:299:HIS:CE1	2.47	0.49
59:33:473:ARG:O	59:33:477:ASN:N	2.45	0.49
59:33:732:VAL:HB	59:33:735:VAL:HG23	1.94	0.49
32:6:40:ILE:HD12	32:6:201:GLY:HA2	1.94	0.49
2:B:177:VAL:HG22	2:B:178:VAL:N	2.27	0.49
3:C:85:PHE:O	3:C:86:ALA:C	2.51	0.49
7:G:60:LEU:HD12	7:G:64:VAL:HG21	1.94	0.49
8:H:73:PRO:HG2	8:H:78:LEU:HD11	1.93	0.49
13:M:49:GLU:HB2	13:M:50:PRO:HD3	1.94	0.49
16:P:77:LYS:HB3	16:P:116:LEU:HD21	1.93	0.49
21:U:9:ARG:HH12	21:U:12:GLN:CA	2.25	0.49
25:Y:40:THR:HG22	25:Y:43:ILE:H	1.76	0.49
37:11:41:ILE:HG23	37:11:116:ALA:HB2	1.95	0.49
45:19:13:GLU:HB3	45:19:83:ARG:HH21	1.76	0.49
51:25:64:ALA:HB1	51:25:66:ARG:NH2	2.27	0.49
52:26:1229:A:H2'	52:26:1230:C:C6	2.47	0.49
52:26:913:A:H4'	52:26:914:A:O5'	2.12	0.49
52:26:960:U:O2'	52:26:1223:C:H5''	2.12	0.49
53:27:1804:C:H2'	53:27:1805:A:C8	2.47	0.49
53:27:242:G:N2	53:27:254:G:H2'	2.27	0.49
53:27:2748:A:H2'	53:27:2749:A:O4'	2.13	0.49
53:27:530:G:N9	53:27:2035:G:H4'	2.28	0.49
39:13:129:ARG:NH2	57:31:33:U:H3'	2.27	0.49
59:33:296:VAL:HG23	59:33:297:HIS:CD2	2.47	0.49
59:33:327:LEU:HD23	59:33:332:LYS:HB3	1.93	0.49
59:33:432:HIS:CD2	59:33:433:SER:H	2.30	0.49
32:6:24:PRO:O	32:6:27:LYS:HB2	2.12	0.49
32:6:31:PHE:HB3	32:6:39:ILE:HD13	1.95	0.49
35:9:47:PHE:HZ	35:9:137:ARG:NH1	2.10	0.49
1:A:52:HIS:O	1:A:215:VAL:HG23	2.12	0.49
6:F:78:VAL:O	6:F:144:VAL:HG13	2.12	0.49
8:H:130:GLY:C	53:27:1088:A:H61	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:35:ILE:HG22	14:N:53:THR:CG2	2.36	0.49
17:Q:51:VAL:HB	17:Q:52:PRO:HD2	1.93	0.49
40:14:5:ARG:HG2	40:14:79:PRO:HD3	1.94	0.49
42:16:33:CYS:N	42:16:54:VAL:HG13	2.26	0.49
43:17:108:ARG:HD3	52:26:1307:U:O3'	2.11	0.49
52:26:1040:U:H2'	52:26:1041:G:C8	2.47	0.49
52:26:113:G:C5	52:26:114:U:C4	3.01	0.49
52:26:961:U:OP2	52:26:1223:C:H4'	2.12	0.49
52:26:1251:A:O2'	52:26:1370:G:H5'	2.12	0.49
52:26:1486:G:H2'	52:26:1487:G:C8	2.48	0.49
52:26:663:A:H5'	52:26:836:G:OP1	2.12	0.49
53:27:1255:U:H5''	53:27:1256:G:H5''	1.94	0.49
53:27:1911:U:H2'	53:27:1918:A:C2	2.47	0.49
53:27:2046:G:H2'	53:27:2047:C:C6	2.47	0.49
53:27:2543:G:H2'	53:27:2544:G:C8	2.47	0.49
53:27:2818:U:H2'	53:27:2819:G:C8	2.47	0.49
53:27:31:C:H2'	53:27:32:C:H6	1.77	0.49
53:27:539:G:H2'	53:27:540:C:C6	2.47	0.49
53:27:809:G:C5	53:27:810:U:C4	3.00	0.49
59:33:198:LEU:O	59:33:202:CYS:SG	2.70	0.49
59:33:408:VAL:CG1	59:33:409:PHE:H	2.22	0.49
59:33:676:ARG:CG	59:33:677:SER:H	2.11	0.49
31:5:37:GLN:HA	31:5:37:GLN:OE1	2.10	0.49
32:6:39:ILE:HG22	32:6:40:ILE:N	2.22	0.49
35:9:135:VAL:O	35:9:139:THR:HG23	2.12	0.49
1:A:245:THR:HG23	1:A:249:VAL:O	2.12	0.49
2:B:55:LYS:N	2:B:76:GLY:O	2.43	0.49
3:C:145:ASP:HA	3:C:166:LYS:HB3	1.94	0.49
5:E:37:ASN:HD22	5:E:63:GLN:NE2	2.10	0.49
6:F:4:ILE:HG23	6:F:4:ILE:O	2.12	0.49
9:I:15:TRP:CD1	9:I:135:GLN:HB3	2.47	0.49
12:L:53:MET:HE3	12:L:63:ILE:HG21	1.95	0.49
13:M:3:HIS:CD2	53:27:2820:A:H4'	2.47	0.49
14:N:2:ASP:N	14:N:5:SER:HG	2.10	0.49
16:P:55:GLN:O	16:P:58:GLN:HB3	2.11	0.49
24:X:48:ARG:O	24:X:52:ARG:HG3	2.13	0.49
37:11:110:ARG:HH22	37:11:121:ASN:C	2.16	0.49
37:11:59:GLU:O	37:11:62:GLU:HB3	2.12	0.49
38:12:116:ARG:HB2	38:12:116:ARG:NH1	2.27	0.49
50:24:50:PHE:HD1	50:24:78:LEU:HD23	1.78	0.49
50:24:81:GLN:O	50:24:84:LYS:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1061:G:H2'	52:26:1062:U:O4'	2.12	0.49
52:26:1062:U:H2'	52:26:1063:C:C6	2.47	0.49
52:26:24:U:O2'	52:26:25:C:H5'	2.13	0.49
52:26:579:A:H2'	52:26:580:C:C6	2.48	0.49
52:26:828:U:C4	52:26:859:G:C4	3.00	0.49
52:26:880:C:H2'	52:26:881:G:C8	2.36	0.49
52:26:919:A:H2'	52:26:920:U:C6	2.47	0.49
52:26:969:A:O2'	52:26:970:C:H5'	2.12	0.49
7:G:41:LEU:HB3	53:27:1082:U:O3'	2.12	0.49
53:27:123:G:H4'	53:27:1376:C:O5'	2.12	0.49
53:27:1406:U:C3'	53:27:1407:G:H5''	2.42	0.49
53:27:728:G:O2'	53:27:730:A:H8	1.89	0.49
53:27:80:G:O5'	53:27:346:A:H1'	2.13	0.49
56:30:71:G:H2'	56:30:72:C:C6	2.47	0.49
59:33:107:ILE:HG13	59:33:108:HIS:N	2.27	0.49
59:33:86:ASP:OD1	59:33:111:ARG:CD	2.61	0.49
59:33:20:TRP:HZ2	59:33:76:LEU:HG	1.77	0.49
59:33:304:PRO:O	59:33:305:ASP:HB3	2.12	0.49
59:33:340:THR:OG1	59:33:343:MET:HG3	2.12	0.49
59:33:419:PRO:HG2	59:33:422:SER:HB2	1.94	0.49
31:5:24:ARG:NH1	53:27:2742:G:OP2	2.45	0.49
34:8:173:ASP:HB3	34:8:178:GLU:HB3	1.94	0.49
1:A:68:ARG:NH1	1:A:128:THR:OG1	2.45	0.49
4:D:98:PHE:HA	4:D:101:ARG:NH1	2.27	0.49
5:E:4:ALA:HB2	5:E:65:GLY:HA2	1.93	0.49
7:G:52:MET:CG	7:G:86:MET:H	2.25	0.49
9:I:64:VAL:HG23	9:I:69:ARG:HB2	1.95	0.49
10:J:24:VAL:HA	10:J:39:ILE:HG22	1.94	0.49
11:K:62:PRO:HB2	30:4:29:ARG:HH11	1.78	0.49
12:L:86:LYS:HD2	53:27:956:G:OP1	2.13	0.49
13:M:90:ARG:NH2	53:27:2880:C:O3'	2.45	0.49
14:N:19:GLN:HG3	14:N:20:GLU:N	2.26	0.49
21:U:9:ARG:NH2	21:U:12:GLN:HA	2.23	0.49
26:Z:56:ARG:HG3	49:23:64:GLU:HA	1.93	0.49
38:12:104:SER:HA	38:12:109:VAL:HG22	1.93	0.49
38:12:72:GLU:N	38:12:129:ALA:O	2.45	0.49
44:18:9:GLU:O	44:18:13:VAL:HG23	2.13	0.49
44:18:48:GLN:HG2	49:23:11:ASP:CG	2.32	0.49
44:18:89:ARG:CZ	44:18:89:ARG:HB2	2.43	0.49
50:24:14:GLU:C	50:24:16:ALA:H	2.15	0.49
52:26:129:A:H1'	52:26:130:A:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1511:G:H2'	52:26:1512:U:C6	2.47	0.49
47:21:68:LYS:HD3	52:26:267:C:OP2	2.12	0.49
41:15:120:CYS:HB3	52:26:777:A:H2	1.78	0.49
53:27:1399:C:H2'	53:27:1400:U:H6	1.76	0.49
53:27:1271:G:C2	53:27:1617:C:H4'	2.47	0.49
53:27:1826:G:C6	53:27:1827:U:C4	3.01	0.49
53:27:1938:A:O2'	53:27:1939:U:H5'	2.13	0.49
53:27:2716:C:O2'	53:27:2717:C:H5'	2.12	0.49
53:27:28:A:H1'	53:27:513:A:C2	2.48	0.49
53:27:53:A:C8	53:27:54:G:C8	3.01	0.49
53:27:998:C:H2'	53:27:999:U:O4'	2.13	0.49
58:32:17:C:H5'	58:32:61:C:OP1	2.12	0.49
59:33:569:ALA:O	59:33:573:ASP:N	2.45	0.49
59:33:722:LEU:HD21	59:33:740:ARG:HB3	1.94	0.49
32:6:113:LEU:CA	32:6:143:LEU:HD13	2.40	0.49
32:6:202:ASN:OD1	32:6:203:ASP:N	2.45	0.49
32:6:68:PHE:HE2	32:6:88:GLN:HB2	1.77	0.49
34:8:94:GLU:HA	34:8:99:ASN:HD22	1.77	0.49
2:B:85:ALA:N	2:B:88:GLU:OE2	2.45	0.49
4:D:53:ALA:HA	4:D:64:PRO:HG3	1.93	0.49
7:G:24:SER:O	7:G:115:GLY:HA2	2.12	0.49
7:G:38:MET:O	7:G:42:ARG:HB2	2.12	0.49
8:H:6:ALA:H	8:H:7:TYR:HD2	1.61	0.49
15:O:20:ARG:HD2	15:O:112:ARG:CZ	2.42	0.49
15:O:47:ILE:CD1	15:O:61:ARG:HB2	2.42	0.49
20:T:61:GLU:OE1	20:T:61:GLU:N	2.45	0.49
25:Y:50:VAL:O	25:Y:54:VAL:HG22	2.12	0.49
38:12:74:ILE:O	38:12:74:ILE:HG23	2.12	0.49
39:13:94:ARG:HA	39:13:97:LEU:HB3	1.93	0.49
40:14:45:ARG:HB3	40:14:69:THR:HB	1.94	0.49
42:16:27:PRO:O	42:16:28:GLN:HG3	2.12	0.49
45:19:69:LEU:HD21	45:19:77:TYR:HA	1.93	0.49
46:20:19:VAL:HG12	46:20:37:GLY:O	2.12	0.49
48:22:17:VAL:HG13	48:22:18:GLN:N	2.27	0.49
49:23:32:THR:HG23	49:23:50:VAL:HA	1.95	0.49
52:26:20:U:O2'	52:26:21:G:H5'	2.12	0.49
52:26:471:U:H2'	52:26:472:U:C6	2.48	0.49
52:26:908:A:O2'	52:26:909:A:H5'	2.13	0.49
53:27:1060:U:C2	53:27:1062:G:H5'	2.47	0.49
53:27:1089:A:H2	53:27:1090:A:N6	2.11	0.49
53:27:1171:G:C3'	53:27:1172:C:H4'	2.35	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1353:A:C5	53:27:1378:A:C6	3.01	0.49
53:27:1353:A:C8	53:27:1378:A:N6	2.81	0.49
53:27:1563:U:H2'	53:27:1564:C:C5	2.48	0.49
53:27:1786:A:H1'	53:27:1938:A:N6	2.27	0.49
1:A:231:HIS:ND1	53:27:1826:G:OP1	2.39	0.49
53:27:2700:A:H2'	53:27:2701:U:H6	1.77	0.49
53:27:2793:C:H2'	53:27:2794:C:C6	2.47	0.49
53:27:783:A:H2'	53:27:784:G:C4'	2.41	0.49
54:28:119:A:H2'	54:28:120:A:H5''	1.94	0.49
4:D:72:SER:OG	57:31:56:C:H1'	2.13	0.49
57:31:73:A:H5''	57:31:74:C:H5'	1.95	0.49
59:33:195:LYS:O	59:33:199:GLU:HG3	2.12	0.49
59:33:327:LEU:HD23	59:33:332:LYS:HB2	1.93	0.49
59:33:41:TYR:OH	59:33:94:VAL:HG22	2.13	0.49
33:7:5:HIS:CE1	33:7:7:ASN:HB3	2.47	0.49
35:9:88:HIS:CE1	35:9:137:ARG:HD3	2.48	0.49
3:C:63:LYS:HD2	3:C:69:ARG:NH1	2.27	0.49
4:D:69:ALA:N	4:D:82:TYR:O	2.38	0.49
11:K:41:ARG:HH11	53:27:806:C:H3'	1.78	0.49
12:L:6:ARG:HD2	53:27:870:U:OP1	2.13	0.49
14:N:64:TYR:CD2	54:28:51:G:H5''	2.47	0.49
18:R:3:THR:HG21	18:R:58:ALA:CB	2.35	0.49
39:13:17:ARG:CD	52:26:1147:C:O2'	2.58	0.49
40:14:53:ILE:HG23	52:26:1060:U:H4'	1.94	0.49
42:16:51:VAL:HG23	42:16:64:SER:C	2.33	0.49
43:17:3:ILE:O	43:17:5:GLY:N	2.45	0.49
45:19:25:GLU:HG3	45:19:80:LEU:HD22	1.95	0.49
49:23:52:ASN:CG	49:23:53:GLY:H	2.16	0.49
50:24:72:ALA:HA	50:24:75:LYS:HD3	1.93	0.49
51:25:23:GLU:O	51:25:25:ALA:N	2.46	0.49
52:26:1147:C:H2'	52:26:1148:U:C6	2.47	0.49
52:26:117:G:O6	52:26:289:G:H1'	2.12	0.49
52:26:1237:C:C4'	52:26:1334:G:H21	2.25	0.49
52:26:303:A:H2'	52:26:304:U:O4'	2.13	0.49
52:26:843:U:OP1	52:26:844:G:H8	1.95	0.49
53:27:1297:C:OP1	53:27:2710:C:H4'	2.13	0.49
53:27:1439:A:H2'	53:27:1440:U:H5'	1.94	0.49
53:27:1468:U:H2'	53:27:1522:A:N6	2.27	0.49
53:27:1914:C:O4'	53:27:1914:C:O2	2.27	0.49
27:1:14:MET:SD	53:27:2045:C:H5''	2.52	0.49
5:E:2:ARG:HD2	53:27:2751:G:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2848:G:O2'	53:27:2849:U:H5'	2.12	0.49
53:27:414:C:H2'	53:27:415:A:H8	1.76	0.49
16:P:10:ARG:CZ	53:27:513:A:O2'	2.61	0.49
53:27:513:A:H2'	53:27:514:A:H8	1.76	0.49
53:27:611:C:H3'	53:27:612:G:H8	1.78	0.49
53:27:780:G:H21	53:27:783:A:H62	1.61	0.49
53:27:926:G:H2'	53:27:927:A:H8	1.77	0.49
29:3:13:ASN:O	29:3:17:GLY:N	2.44	0.49
58:32:29:G:H2'	58:32:30:G:O4'	2.12	0.49
58:32:22:G:H8	58:32:46:A:H61	1.59	0.49
59:33:624:PHE:HD1	59:33:652:ILE:HG12	1.77	0.49
30:4:41:ARG:HA	30:4:44:ARG:NH1	2.28	0.49
33:7:149:LYS:HB3	33:7:168:ARG:HG3	1.95	0.49
3:C:31:VAL:HG21	3:C:104:ALA:HB3	1.94	0.49
3:C:122:GLU:HA	3:C:190:ALA:CB	2.43	0.49
4:D:7:TYR:HA	4:D:11:VAL:CG2	2.43	0.49
5:E:34:ARG:NE	5:E:70:LEU:HD21	2.26	0.49
6:F:5:LEU:HD21	6:F:12:LEU:CD1	2.43	0.49
7:G:57:ASN:HB2	7:G:62:ARG:HD2	1.94	0.49
8:H:20:SER:N	8:H:21:PRO:CD	2.75	0.49
13:M:100:CYS:SG	13:M:101:GLY:N	2.85	0.49
13:M:31:HIS:CD2	53:27:1279:G:H4'	2.48	0.49
16:P:57:ARG:O	16:P:61:ILE:HG13	2.13	0.49
37:11:30:MET:SD	37:11:35:LYS:HB2	2.52	0.49
43:17:109:LYS:CD	52:26:1227:A:OP2	2.58	0.49
52:26:1404:C:H2'	52:26:1405:G:C8	2.48	0.49
52:26:231:U:O2'	52:26:232:G:H5'	2.11	0.49
52:26:751:U:H2'	52:26:752:G:O4'	2.13	0.49
38:12:80:PRO:HG2	52:26:878:A:H5''	1.95	0.49
52:26:757:U:O2'	52:26:879:C:H1'	2.13	0.49
52:26:882:C:O2'	52:26:883:C:H5'	2.12	0.49
52:26:928:G:H2'	52:26:929:G:H8	1.78	0.49
53:27:1011:G:C6	53:27:1151:A:C6	3.01	0.49
53:27:1565:C:C2	53:27:1567:G:C8	3.01	0.49
53:27:1652:A:H3'	53:27:1653:G:H8	1.78	0.49
53:27:226:A:H2'	53:27:227:A:O4'	2.12	0.49
53:27:942:G:H2'	53:27:943:A:C8	2.46	0.49
53:27:969:G:H2'	53:27:970:U:H6	1.75	0.49
56:30:47:U:H2'	56:30:50:U:OP1	2.12	0.49
57:31:71:C:H2'	57:31:72:A:O4'	2.12	0.49
59:33:154:ALA:C	59:33:157:ILE:HG12	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:228:TYR:CD2	59:33:277:ARG:NH2	2.81	0.49
59:33:624:PHE:CG	59:33:644:LEU:HD13	2.48	0.49
32:6:89:PHE:CE1	32:6:153:MET:HA	2.48	0.49
35:9:110:MET:HG3	35:9:139:THR:HG21	1.94	0.49
35:9:45:VAL:CG1	35:9:46:GLY:N	2.76	0.49
1:A:130:PRO:HD3	1:A:188:ARG:NH1	2.28	0.49
3:C:149:ILE:HG23	3:C:188:MET:HG3	1.95	0.49
3:C:55:SER:N	53:27:469:G:OP1	2.45	0.49
4:D:110:ILE:HB	4:D:113:PHE:CD1	2.47	0.49
4:D:122:ASP:OD2	4:D:124:ARG:HB2	2.13	0.49
8:H:7:TYR:N	8:H:7:TYR:CD2	2.81	0.49
9:I:98:GLU:HB2	9:I:124:VAL:HG23	1.95	0.49
13:M:46:ARG:HG2	53:27:2838:G:O3'	2.13	0.49
16:P:61:ILE:HG23	16:P:75:TYR:CZ	2.46	0.49
22:V:37:ARG:NH1	53:27:2387:U:H4'	2.27	0.49
39:13:98:ARG:HG3	39:13:103:VAL:CG2	2.37	0.49
43:17:52:ILE:HG22	43:17:56:ARG:HH12	1.78	0.49
49:23:38:THR:HA	49:23:69:LYS:HA	1.94	0.49
28:2:10:LEU:HD23	28:2:50:GLU:HA	1.93	0.49
51:25:37:TYR:O	51:25:37:TYR:CG	2.65	0.49
52:26:1139:G:H5''	52:26:1140:C:H5	1.78	0.49
40:14:72:ARG:NH2	52:26:1151:A:O2'	2.46	0.49
52:26:1250:A:H2'	52:26:1251:A:O4'	2.12	0.49
52:26:1238:A:N7	52:26:1301:U:O4	2.46	0.49
52:26:1349:A:H3'	52:26:1350:A:C8	2.44	0.49
52:26:1395:C:O2'	52:26:1396:A:H5'	2.13	0.49
15:O:108:ARG:HE	52:26:1463:U:P	2.36	0.49
52:26:1484:C:H2'	52:26:1485:U:O4'	2.12	0.49
52:26:1494:G:H5'	53:27:1913:A:N1	2.27	0.49
52:26:927:G:H4'	52:26:1503:A:C8	2.48	0.49
52:26:236:A:H2'	52:26:237:G:H8	1.78	0.49
34:8:12:ARG:NH2	52:26:429:U:OP2	2.46	0.49
52:26:520:A:N7	52:26:521:G:C8	2.81	0.49
52:26:686:U:O4	52:26:703:G:H2'	2.13	0.49
52:26:762:U:H2'	52:26:763:G:C8	2.47	0.49
53:27:1074:G:H2'	53:27:1075:C:C6	2.48	0.49
53:27:1353:A:H2'	53:27:1354:A:C8	2.48	0.49
53:27:1469:A:H2'	53:27:1470:A:C8	2.48	0.49
53:27:2036:C:H2'	53:27:2037:A:H8	1.76	0.49
53:27:2676:C:H2'	53:27:2677:G:H8	1.77	0.49
53:27:2694:G:H2'	53:27:2695:U:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2715:C:H2'	53:27:2716:C:H5''	1.95	0.49
53:27:2720:U:H2'	53:27:2721:A:O4'	2.13	0.49
53:27:744:U:H2'	53:27:745:G:O4'	2.13	0.49
58:32:60:U:H3'	58:32:61:C:H5''	1.94	0.49
29:3:24:THR:O	29:3:28:ARG:HG3	2.12	0.49
59:33:62:MET:SD	59:33:155:GLU:HB2	2.53	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HD23	2.48	0.49
33:7:154:GLY:HA3	33:7:195:ILE:HA	1.94	0.49
33:7:21:TRP:HB2	33:7:58:ARG:HB3	1.94	0.49
34:8:21:LYS:HZ2	34:8:25:ARG:HE	1.56	0.49
1:A:17:LYS:HE3	53:27:1565:C:H5'	1.95	0.49
6:F:135:HIS:CD2	6:F:136:SER:H	2.30	0.49
9:I:93:ILE:CD1	9:I:100:VAL:HG21	2.40	0.49
18:R:5:ALA:HB3	18:R:54:ALA:HB2	1.94	0.49
22:V:71:LYS:HD2	22:V:73:ARG:NH2	2.28	0.49
36:10:79:ARG:NH2	52:26:671:G:O2'	2.45	0.49
37:11:73:GLU:O	37:11:87:PRO:HA	2.12	0.49
52:26:1037:C:H2'	52:26:1038:C:H6	1.77	0.49
52:26:285:C:H2'	52:26:286:C:C6	2.48	0.49
52:26:409:U:H2'	52:26:410:G:C8	2.48	0.49
53:27:1012:U:H4'	53:27:1013:C:H5''	1.94	0.49
53:27:1146:C:H2'	53:27:1147:A:H8	1.78	0.49
53:27:1548:A:H2'	53:27:1549:A:C8	2.47	0.49
53:27:2182:U:H2'	53:27:2183:A:C8	2.47	0.49
53:27:2339:C:H2'	53:27:2340:A:C8	2.47	0.49
53:27:2588:G:H2'	53:27:2589:A:H5'	1.95	0.49
53:27:2888:C:H2'	53:27:2889:C:C6	2.45	0.49
53:27:555:G:O2'	53:27:556:A:H8	1.96	0.49
53:27:733:G:H3'	53:27:761:A:H61	1.77	0.49
53:27:877:A:O2'	53:27:900:A:N6	2.44	0.49
54:28:106:G:H2'	54:28:107:G:O4'	2.13	0.49
54:28:12:C:O4'	54:28:12:C:O2	2.31	0.49
56:30:31:A:C2	56:30:39:U:O2	2.66	0.49
59:33:607:HIS:HB2	59:33:633:VAL:HG23	1.95	0.49
59:33:694:VAL:HA	59:33:714:ILE:HG22	1.95	0.49
59:33:667:LEU:HD22	59:33:714:ILE:HD11	1.95	0.49
59:33:35:LEU:HD21	59:33:76:LEU:HD22	1.95	0.49
33:7:35:ASP:O	33:7:38:VAL:HG22	2.13	0.49
2:B:124:ARG:HH12	2:B:163:GLY:HA3	1.78	0.49
3:C:121:VAL:O	3:C:189:THR:HA	2.13	0.49
4:D:76:PHE:HE2	53:27:2310:C:C2'	2.19	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:56:ARG:HH21	7:G:83:ALA:HA	1.77	0.49
14:N:76:LYS:O	14:N:80:GLU:HG3	2.13	0.49
15:O:23:ASP:HA	15:O:89:GLY:H	1.77	0.49
23:W:37:PHE:CD2	23:W:48:LEU:HD12	2.47	0.49
24:X:8:GLU:OE1	24:X:8:GLU:N	2.46	0.49
25:Y:13:ILE:HD11	53:27:989:G:C4	2.48	0.49
36:10:97:THR:O	36:10:98:GLU:HB2	2.12	0.48
41:15:86:LYS:HZ1	41:15:114:PRO:HD3	1.77	0.48
51:25:48:LYS:HZ2	52:26:723:U:H3'	1.78	0.48
37:11:2:ARG:HA	52:26:1380:U:C5	2.48	0.48
52:26:1417:G:N2	52:26:1482:G:H2'	2.28	0.48
52:26:593:U:H2'	52:26:594:U:H6	1.78	0.48
52:26:5:U:H4'	52:26:6:G:C4	2.48	0.48
52:26:900:A:C2	52:26:901:A:C4	3.01	0.48
52:26:924:C:H2'	52:26:925:G:C8	2.48	0.48
31:5:23:ILE:CD1	53:27:1032:A:H1'	2.42	0.48
53:27:22:C:H3'	53:27:23:G:H5''	1.95	0.48
53:27:2616:C:H2'	53:27:2617:U:H6	1.78	0.48
53:27:72:U:C4	53:27:112:U:H4'	2.48	0.48
53:27:753:A:H2'	53:27:754:U:H6	1.78	0.48
54:28:60:C:H2'	54:28:61:G:H8	1.78	0.48
53:27:1923:U:H5''	57:31:24:U:O2'	2.12	0.48
59:33:333:THR:O	59:33:333:THR:HG22	2.13	0.48
59:33:676:ARG:O	59:33:679:LEU:HB2	2.13	0.48
59:33:684:THR:HA	59:33:687:LEU:HB2	1.95	0.48
59:33:73:ILE:HG13	59:33:74:ASP:H	1.78	0.48
32:6:117:GLU:O	32:6:121:GLN:HB2	2.13	0.48
35:9:113:VAL:HG13	35:9:114:LEU:CD1	2.43	0.48
1:A:129:LEU:HD11	1:A:134:ILE:CG1	2.36	0.48
8:H:32:VAL:HG22	8:H:64:ARG:NH1	2.27	0.48
11:K:90:VAL:O	11:K:90:VAL:HG12	2.12	0.48
15:O:29:VAL:HG13	15:O:79:VAL:O	2.12	0.48
17:Q:99:THR:OG1	17:Q:100:GLY:N	2.46	0.48
25:Y:35:VAL:HG22	25:Y:36:GLU:H	1.78	0.48
25:Y:39:ASP:OD1	25:Y:44:ARG:HD3	2.13	0.48
37:11:2:ARG:HB3	52:26:933:G:OP2	2.12	0.48
38:12:26:MET:N	38:12:57:GLU:OE2	2.45	0.48
44:18:100:TRP:O	52:26:1115:U:H1'	2.14	0.48
47:21:69:THR:HG22	47:21:70:LYS:N	2.28	0.48
26:Z:60:PHE:CE2	49:23:41:PRO:HD3	2.48	0.48
52:26:1515:G:H2'	52:26:1516:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:18:C:C3'	52:26:19:A:H5''	2.43	0.48
52:26:672:U:H2'	52:26:673:A:H8	1.76	0.48
41:15:117:HIS:HB3	52:26:718:A:C8	2.48	0.48
52:26:838:G:H2'	52:26:839:C:H6	1.78	0.48
53:27:1482:G:H1'	53:27:1509:A:N6	2.27	0.48
53:27:1689:A:C6	53:27:1700:A:C2	3.01	0.48
53:27:1934:C:H2'	53:27:1935:G:H8	1.77	0.48
53:27:2747:G:O6	53:27:2755:C:H5''	2.13	0.48
53:27:2836:U:H2'	53:27:2837:A:H8	1.78	0.48
53:27:452:G:H2'	53:27:453:A:H8	1.78	0.48
53:27:649:G:H2'	53:27:650:C:C6	2.48	0.48
53:27:84:A:H4'	53:27:85:G:O5'	2.12	0.48
59:33:435:VAL:HG22	59:33:465:THR:HG21	1.94	0.48
32:6:20:ARG:HH11	32:6:20:ARG:HG3	1.78	0.48
1:A:117:SER:HA	1:A:128:THR:O	2.13	0.48
1:A:184:GLU:HG3	1:A:186:ASP:H	1.78	0.48
1:A:36:ASN:HD21	53:27:1816:C:P	2.36	0.48
6:F:29:PHE:HB2	53:27:2198:A:C2	2.48	0.48
7:G:79:PRO:O	7:G:80:THR:OG1	2.25	0.48
8:H:9:LYS:HB2	53:27:1061:U:C5	2.45	0.48
9:I:36:LEU:HD22	9:I:121:LYS:HB2	1.94	0.48
10:J:104:THR:HG22	10:J:105:ARG:N	2.28	0.48
17:Q:87:GLN:HG3	53:27:1224:U:O2'	2.13	0.48
20:T:30:SER:OG	20:T:32:LYS:HG2	2.14	0.48
39:13:114:LYS:O	39:13:117:LEU:HB2	2.14	0.48
42:16:22:ALA:O	42:16:23:LEU:HB3	2.13	0.48
27:1:3:GLN:HE22	27:1:6:LYS:HA	1.78	0.48
43:17:7:ASN:ND2	43:17:18:LEU:HA	2.28	0.48
49:23:10:ILE:HD12	49:23:11:ASP:N	2.27	0.48
52:26:1221:G:C4	52:26:1222:G:C8	3.01	0.48
52:26:578:C:O2'	52:26:728:A:N3	2.46	0.48
52:26:916:U:H2'	52:26:917:G:C8	2.48	0.48
53:27:1438:U:O2'	53:27:1439:A:H5'	2.13	0.48
53:27:1728:C:C3'	53:27:1729:U:H5''	2.43	0.48
53:27:1664:A:N6	53:27:1996:C:H42	2.06	0.48
53:27:2135:A:H3'	53:27:2156:G:H21	1.78	0.48
53:27:2345:G:H5'	53:27:2347:C:O4'	2.13	0.48
53:27:239:C:H2'	53:27:240:C:O4'	2.14	0.48
53:27:2452:C:C2	53:27:2504:U:C4	3.01	0.48
53:27:26:G:C6	53:27:27:G:N1	2.81	0.48
53:27:284:U:H2'	53:27:285:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:154:ALA:HA	59:33:157:ILE:HG12	1.94	0.48
59:33:424:PRO:HD3	59:33:453:TYR:O	2.12	0.48
32:6:116:LEU:HD21	32:6:140:LEU:HB2	1.94	0.48
34:8:190:LEU:O	34:8:192:ALA:N	2.46	0.48
35:9:107:GLY:O	35:9:111:ARG:HB2	2.13	0.48
1:A:23:LEU:HD22	1:A:81:GLU:C	2.33	0.48
3:C:7:ASP:OD1	3:C:8:ALA:N	2.44	0.48
9:I:47:HIS:CE1	9:I:48:VAL:HG23	2.48	0.48
16:P:36:GLN:NE2	53:27:563:A:H2'	2.28	0.48
19:S:10:VAL:HG11	19:S:43:ILE:HA	1.96	0.48
21:U:55:GLU:H	21:U:55:GLU:CD	2.16	0.48
26:Z:57:VAL:O	26:Z:60:PHE:HB3	2.13	0.48
36:10:66:ALA:HB1	36:10:67:PRO:CD	2.35	0.48
27:1:18:HIS:C	27:1:20:ALA:H	2.17	0.48
48:22:41:SER:HB3	48:22:51:GLN:HG2	1.94	0.48
52:26:1255:G:H2'	52:26:1279:G:H1	1.78	0.48
52:26:585:G:H2'	52:26:586:C:C6	2.48	0.48
53:27:1023:U:O2	53:27:1023:U:H2'	2.11	0.48
53:27:1341:G:N1	53:27:1398:C:H4'	2.29	0.48
53:27:1649:G:H2'	53:27:1650:A:H8	1.78	0.48
53:27:1690:A:H2'	53:27:1691:C:O4'	2.13	0.48
53:27:2114:A:N3	53:27:2114:A:H2'	2.28	0.48
53:27:476:G:H1'	53:27:480:A:N6	2.27	0.48
53:27:635:C:H2'	53:27:636:G:C8	2.49	0.48
53:27:466:A:O4'	53:27:683:U:H4'	2.13	0.48
58:32:9:G:O5'	58:32:46:A:N3	2.46	0.48
32:6:86:CYS:SG	32:6:220:VAL:HG11	2.53	0.48
33:7:112:ALA:N	33:7:182:ASP:OD2	2.43	0.48
35:9:132:PRO:O	35:9:135:VAL:HG22	2.13	0.48
1:A:222:THR:HA	1:A:231:HIS:HB3	1.95	0.48
7:G:22:ALA:HA	7:G:118:ILE:HG21	1.94	0.48
8:H:96:LYS:HB2	8:H:138:VAL:HA	1.95	0.48
9:I:17:VAL:HG13	9:I:57:LEU:HD13	1.95	0.48
10:J:22:ILE:HD12	10:J:22:ILE:C	2.34	0.48
15:O:27:VAL:N	15:O:42:PHE:O	2.38	0.48
21:U:71:LYS:O	21:U:94:ALA:HB3	2.13	0.48
38:12:85:TYR:CD1	52:26:598:U:H4'	2.48	0.48
40:14:73:LEU:HD23	40:14:75:ASP:HB2	1.95	0.48
45:19:53:ARG:NH2	52:26:579:A:C4'	2.75	0.48
52:26:1273:C:H2'	52:26:1274:A:O4'	2.14	0.48
52:26:1283:U:O2'	52:26:1284:C:H5'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:41:G:H2'	52:26:42:G:C8	2.48	0.48
52:26:437:U:O2'	52:26:438:U:H5'	2.13	0.48
52:26:584:G:H2'	52:26:585:G:C8	2.47	0.48
52:26:779:C:H2'	52:26:780:A:O4'	2.13	0.48
52:26:917:G:H2'	52:26:918:A:H8	1.72	0.48
3:C:166:LYS:NZ	53:27:1205:A:O2'	2.47	0.48
53:27:48:G:C2	53:27:178:G:C6	3.01	0.48
53:27:2078:C:H2'	53:27:2079:U:C6	2.49	0.48
2:B:149:ASN:ND2	53:27:2572:A:H2'	2.29	0.48
53:27:2758:A:H2'	53:27:2759:G:H5'	1.96	0.48
53:27:2806:C:H2'	53:27:2807:U:O4'	2.13	0.48
53:27:2834:G:C2'	53:27:2835:A:H5'	2.44	0.48
53:27:538:A:H61	53:27:555:G:H1'	1.78	0.48
53:27:676:A:N6	53:27:802:A:H61	2.07	0.48
59:33:243:GLU:OE1	59:33:295:ILE:HG21	2.14	0.48
59:33:51:ASP:HB2	59:33:164:LYS:HD2	1.96	0.48
33:7:137:VAL:HA	33:7:148:ILE:HD13	1.94	0.48
34:8:143:SER:HB2	34:8:177:MET:O	2.14	0.48
4:D:141:ASP:CB	4:D:144:LYS:HB2	2.43	0.48
6:F:68:ARG:HA	6:F:71:LYS:CB	2.42	0.48
7:G:33:VAL:HG12	7:G:35:VAL:H	1.79	0.48
8:H:106:GLN:O	8:H:109:ALA:HB3	2.13	0.48
18:R:4:ILE:HG22	18:R:106:VAL:HA	1.94	0.48
36:10:92:THR:OG1	36:10:93:LYS:N	2.36	0.48
40:14:52:LEU:HD23	40:14:62:ARG:HG2	1.96	0.48
42:16:86:VAL:O	42:16:87:LYS:C	2.50	0.48
48:22:14:ALA:HA	48:22:50:TYR:CE2	2.49	0.48
52:26:1077:G:N2	52:26:1080:A:OP2	2.39	0.48
52:26:1088:G:H21	52:26:1167:A:H61	1.61	0.48
52:26:1264:U:H2'	52:26:1265:C:H6	1.79	0.48
52:26:1439:G:H2'	52:26:1440:U:O4'	2.14	0.48
52:26:27:G:H2'	52:26:28:A:O4'	2.14	0.48
52:26:451:A:H4'	52:26:452:A:O4'	2.13	0.48
52:26:486:U:H2'	52:26:486:U:O2	2.12	0.48
52:26:769:G:C2	52:26:770:C:C6	3.01	0.48
52:26:859:G:O6	52:26:869:G:H2'	2.14	0.48
53:27:586:A:C2	53:27:1254:A:C2	3.02	0.48
53:27:1299:G:H5''	53:27:1300:G:OP1	2.13	0.48
53:27:1336:A:H2'	53:27:1337:G:C8	2.49	0.48
53:27:1839:G:C5	53:27:1840:G:N7	2.82	0.48
53:27:2398:U:H2'	53:27:2399:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2259:U:C4	53:27:2427:C:N4	2.82	0.48
53:27:2493:U:H2'	53:27:2494:G:H5''	1.94	0.48
53:27:2542:A:H4'	53:27:2543:G:C8	2.48	0.48
53:27:2842:G:H2'	53:27:2843:G:H8	1.79	0.48
13:M:64:ARG:NH2	53:27:2851:A:O3'	2.47	0.48
53:27:30:G:H4'	53:27:1214:A:O2'	2.13	0.48
53:27:501:A:H2'	53:27:502:A:C8	2.49	0.48
53:27:758:C:H2'	53:27:758:C:O2	2.12	0.48
53:27:794:A:H2'	53:27:795:C:C6	2.49	0.48
53:27:805:G:H5'	53:27:806:C:C5	2.48	0.48
29:3:1:MET:H1	53:27:1620:G:C5'	2.17	0.48
59:33:134:ASN:C	59:33:135:VAL:HG12	2.33	0.48
59:33:407:TYR:O	59:33:458:GLY:CA	2.62	0.48
1:A:131:MET:HA	1:A:134:ILE:CD1	2.34	0.48
1:A:56:GLY:HA2	1:A:212:TRP:O	2.12	0.48
2:B:42:ASN:OD1	2:B:43:ASP:N	2.47	0.48
5:E:126:THR:HG22	5:E:127:GLN:N	2.29	0.48
7:G:36:ASP:O	7:G:40:GLU:HG2	2.13	0.48
7:G:51:TYR:CE1	7:G:95:LEU:HD22	2.49	0.48
8:H:34:ILE:O	8:H:37:PHE:HD2	1.96	0.48
20:T:65:GLN:HB3	20:T:68:ASN:OD1	2.13	0.48
43:17:95:PRO:HA	43:17:108:ARG:HG3	1.94	0.48
43:17:95:PRO:HB2	43:17:99:GLN:OE1	2.13	0.48
51:25:27:VAL:O	51:25:31:VAL:HG12	2.14	0.48
52:26:1498:U:H1'	52:26:1499:A:N7	2.29	0.48
34:8:205:LYS:HE2	52:26:26:A:O2'	2.14	0.48
52:26:810:C:H2'	52:26:811:C:C6	2.44	0.48
53:27:1065:U:H1'	53:27:1074:G:N2	2.28	0.48
53:27:1229:C:H2'	53:27:1230:A:H8	1.77	0.48
53:27:1594:U:H2'	53:27:1595:C:H6	1.72	0.48
53:27:1975:G:H2'	53:27:1976:U:O4'	2.13	0.48
53:27:2075:U:C1'	53:27:2597:G:H21	2.27	0.48
53:27:2720:U:O2'	53:27:2721:A:H5'	2.14	0.48
53:27:304:U:H2'	53:27:305:C:C6	2.49	0.48
53:27:671:C:H2'	53:27:672:C:H6	1.79	0.48
54:28:4:C:H6	54:28:4:C:H5'	1.79	0.48
58:32:10:G:H3'	58:32:11:A:C8	2.49	0.48
58:32:19:G:H4'	58:32:60:U:O4	2.13	0.48
59:33:636:ALA:O	59:33:637:ASP:HB2	2.14	0.48
31:5:36:ARG:O	31:5:37:GLN:CB	2.61	0.48
33:7:81:GLU:HG2	33:7:85:LYS:HE3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:177:SER:HB3	53:27:1799:G:O6	2.14	0.48
4:D:7:TYR:OH	4:D:29:ARG:HB3	2.13	0.48
12:L:43:ALA:HA	12:L:46:ILE:HD13	1.95	0.48
17:Q:59:ILE:HA	17:Q:101:ILE:HD13	1.95	0.48
38:12:116:ARG:HB2	38:12:116:ARG:CZ	2.44	0.48
40:14:14:ASP:HB3	40:14:17:LEU:HB3	1.96	0.48
44:18:13:VAL:HA	44:18:59:GLN:HE22	1.78	0.48
44:18:87:ALA:HA	44:18:92:ILE:HD13	1.94	0.48
49:23:10:ILE:HD11	49:23:15:LEU:HD13	1.94	0.48
52:26:1230:C:H2'	52:26:1231:G:H8	1.77	0.48
52:26:1243:C:H2'	52:26:1244:G:C8	2.49	0.48
52:26:1261:A:H3'	52:26:1262:C:C6	2.47	0.48
52:26:264:C:H2'	52:26:265:G:O4'	2.13	0.48
52:26:36:C:H2'	52:26:37:U:O4'	2.14	0.48
52:26:559:A:H4'	52:26:560:A:H3'	1.96	0.48
52:26:621:A:H2'	52:26:622:A:C8	2.49	0.48
52:26:698:G:H2'	52:26:699:C:C6	2.48	0.48
52:26:83:C:O5'	52:26:83:C:H6	1.97	0.48
52:26:865:A:H2'	52:26:866:C:O4'	2.13	0.48
49:23:54:ARG:HB3	52:26:958:A:C2	2.48	0.48
53:27:1360:G:H3'	53:27:1361:G:H8	1.79	0.48
53:27:1406:U:C2'	53:27:1407:G:H5''	2.43	0.48
53:27:1613:G:H3'	53:27:1614:A:C5'	2.44	0.48
53:27:1788:C:C2	53:27:1789:A:C8	3.02	0.48
53:27:1894:C:H2'	53:27:1895:C:C6	2.49	0.48
53:27:2472:G:H1'	53:27:2478:A:H61	1.78	0.48
53:27:2648:G:N2	53:27:2673:G:H1'	2.29	0.48
53:27:338:G:N2	53:27:339:U:H1'	2.29	0.48
53:27:808:G:H2'	53:27:809:G:C8	2.48	0.48
53:27:864:G:H2'	53:27:865:C:C6	2.49	0.48
59:33:101:LYS:HA	59:33:104:VAL:CG1	2.43	0.48
59:33:239:GLU:HB2	59:33:299:HIS:CE1	2.49	0.48
59:33:267:ASN:ND2	59:33:267:ASN:N	2.62	0.48
59:33:56:LEU:O	59:33:60:VAL:HG13	2.13	0.48
59:33:613:CYS:O	59:33:615:PRO:N	2.46	0.48
33:7:111:ASP:OD2	33:7:114:LEU:HG	2.14	0.48
35:9:82:HIS:CE1	35:9:146:MET:HA	2.49	0.48
2:B:26:VAL:HG22	2:B:188:LEU:HD22	1.95	0.48
2:B:49:GLN:NE2	2:B:79:LEU:HD13	2.29	0.48
4:D:105:ILE:O	4:D:109:ARG:HG3	2.14	0.48
4:D:52:ALA:O	4:D:55:ASP:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:93:TYR:HA	5:E:105:SER:O	2.13	0.48
8:H:20:SER:HB3	8:H:21:PRO:HD3	1.96	0.48
11:K:119:PRO:HG3	11:K:138:ALA:O	2.14	0.48
13:M:87:PHE:HZ	13:M:116:VAL:O	1.96	0.48
14:N:75:GLY:HA3	14:N:106:LEU:HG	1.96	0.48
16:P:12:ARG:O	16:P:15:LYS:HB3	2.14	0.48
20:T:71:ILE:O	20:T:71:ILE:HG13	2.13	0.48
27:1:11:LYS:NZ	53:27:2616:C:H5'	2.29	0.48
39:13:56:MET:O	39:13:58:GLU:N	2.46	0.48
44:18:72:PHE:HE2	44:18:74:ARG:HA	1.78	0.48
46:20:14:ARG:HE	46:20:42:ILE:CD1	2.27	0.48
49:23:79:TYR:CE1	52:26:1226:C:H5'	2.49	0.48
52:26:1203:C:H2'	52:26:1204:A:H8	1.79	0.48
52:26:1417:G:H2'	52:26:1482:G:N2	2.29	0.48
52:26:1469:C:H2'	52:26:1470:U:O4'	2.13	0.48
46:20:70:ARG:HD3	52:26:452:A:H8	1.77	0.48
52:26:49:U:C4	52:26:364:A:C6	3.02	0.48
52:26:694:A:H2'	52:26:695:A:O4'	2.14	0.48
53:27:2104:C:H2'	53:27:2105:U:O4'	2.14	0.48
53:27:227:A:C6	53:27:2407:A:H1'	2.49	0.48
53:27:2405:G:H1'	53:27:2412:A:H61	1.78	0.48
53:27:2485:G:H2'	53:27:2486:C:H6	1.78	0.48
53:27:2872:A:C2'	53:27:2873:A:H5'	2.44	0.48
53:27:452:G:H2'	53:27:453:A:C8	2.49	0.48
53:27:732:C:H2'	53:27:733:G:C8	2.49	0.48
53:27:764:A:C3'	53:27:765:C:H5'	2.44	0.48
57:31:17(A):U:H3'	57:31:18:G:C5'	2.44	0.48
59:33:177:GLU:HG3	59:33:181:ILE:HD12	1.95	0.48
59:33:333:THR:O	59:33:333:THR:CG2	2.61	0.48
33:7:147:GLY:HA3	33:7:171:ARG:O	2.13	0.48
33:7:69:THR:HG21	33:7:75:VAL:HG21	1.95	0.48
35:9:80:LEU:HD13	35:9:122:VAL:CG1	2.34	0.48
2:B:155:VAL:O	53:27:2619:C:H5'	2.14	0.48
8:H:55:PRO:HD2	8:H:74:PRO:HD3	1.96	0.48
10:J:106:GLU:CD	10:J:106:GLU:H	2.17	0.48
12:L:72:PRO:HB3	12:L:92:TRP:CZ3	2.49	0.48
13:M:63:ARG:HD2	13:M:80:PHE:CE2	2.49	0.48
16:P:90:ASP:OD2	17:Q:11:GLN:HB2	2.14	0.48
20:T:6:ARG:NH2	20:T:24:VAL:O	2.46	0.48
24:X:43:LEU:O	24:X:46:VAL:HB	2.14	0.48
39:13:43:ALA:O	39:13:46:VAL:HG13	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:5:ARG:N	40:14:76:ILE:O	2.47	0.48
41:15:21:HIS:CD2	52:26:707:U:H5''	2.49	0.48
41:15:55:ARG:HA	41:15:58:THR:OG1	2.14	0.48
45:19:88:ARG:HD2	53:27:714:U:H5	1.78	0.48
48:22:17:VAL:HG13	48:22:18:GLN:HG2	1.95	0.48
48:22:24:ASP:O	48:22:28:LEU:HD13	2.14	0.48
51:25:42:THR:O	51:25:45:LYS:HB3	2.13	0.48
52:26:1130:A:H1'	52:26:1146:A:C2	2.49	0.48
52:26:1282:C:H2'	52:26:1283:U:H6	1.78	0.48
52:26:1446:A:O2'	52:26:1447:A:H5'	2.14	0.48
52:26:542:G:O2'	52:26:543:U:H5'	2.13	0.48
52:26:598:U:H2'	52:26:599:C:C6	2.49	0.48
53:27:990:A:H1'	53:27:1156:A:C2	2.49	0.48
53:27:1219:U:H2'	53:27:1220:G:C8	2.49	0.48
53:27:1348:C:H2'	53:27:1349:C:O4'	2.14	0.48
53:27:1354:A:H2'	53:27:1355:G:O4'	2.14	0.48
53:27:1473:G:H2'	53:27:1474:U:O4'	2.14	0.48
53:27:1343:G:H1'	53:27:1597:A:H2'	1.96	0.48
53:27:1930:G:HO2'	53:27:1931:U:P	2.37	0.48
53:27:2360:G:C8	53:27:2361:G:H1'	2.49	0.48
53:27:2553:G:H2'	53:27:2554:U:O4'	2.14	0.48
5:E:2:ARG:HD3	53:27:2751:G:C4	2.49	0.48
53:27:2884:U:O2	53:27:2884:U:C3'	2.61	0.48
53:27:491:G:H3'	53:27:492:A:C8	2.49	0.48
53:27:940:G:C3'	53:27:941:A:H5''	2.43	0.48
54:28:32:U:H2'	54:28:33:G:C8	2.49	0.48
57:31:18:G:H2'	57:31:18:G:OP1	2.14	0.48
59:33:696:GLY:N	59:33:713:THR:OG1	2.46	0.48
31:5:7:VAL:HG23	31:5:7:VAL:O	2.14	0.48
2:B:130:GLN:HG3	2:B:139:SER:O	2.14	0.48
4:D:16:MET:HE2	4:D:27:VAL:HB	1.96	0.48
7:G:52:MET:HG3	7:G:86:MET:H	1.79	0.48
8:H:17:ALA:O	8:H:18:ASN:HB3	2.14	0.48
9:I:113:PRO:HG3	53:27:529:A:OP2	2.14	0.48
14:N:116:GLN:O	14:N:117:PHE:HB3	2.13	0.48
14:N:17:LYS:HZ1	53:27:2380:C:H5''	1.78	0.48
18:R:89:ALA:C	18:R:91:GLY:H	2.16	0.48
24:X:9:LYS:HZ3	24:X:11:VAL:H	1.62	0.48
26:Z:37:CYS:CB	26:Z:39:LYS:HG2	2.44	0.48
41:15:80:ASN:HB3	41:15:105:ARG:HH11	1.78	0.47
42:16:69:GLU:N	42:16:69:GLU:OE1	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:22:15:GLU:C	48:22:17:VAL:H	2.16	0.47
49:23:24:SER:HB3	49:23:27:LYS:HZ2	1.79	0.47
52:26:1081:A:H8	52:26:1081:A:OP2	1.97	0.47
52:26:112:G:O2'	52:26:113:G:H5'	2.14	0.47
52:26:119:A:H4'	52:26:120:A:C8	2.49	0.47
52:26:1330:U:H2'	52:26:1331:G:O4'	2.14	0.47
52:26:179:A:H2'	52:26:180:U:O4'	2.13	0.47
52:26:227:G:H2'	52:26:228:A:C8	2.48	0.47
52:26:755:G:O2'	52:26:756:C:H5'	2.13	0.47
52:26:880:C:O2'	52:26:881:G:H5'	2.13	0.47
53:27:1048:A:H2'	53:27:1048:A:N3	2.29	0.47
53:27:1171:G:H5''	53:27:1172:C:OP2	2.13	0.47
53:27:749:A:H4'	53:27:1271:G:N3	2.28	0.47
53:27:1506:U:H2'	53:27:1507:C:C5	2.49	0.47
53:27:1613:G:C2	53:27:1619:G:C5	3.02	0.47
53:27:2066:C:O2'	53:27:2067:G:H5'	2.14	0.47
53:27:2129:C:H2'	53:27:2130:U:H5'	1.96	0.47
53:27:224:U:O4	53:27:420:C:H5'	2.13	0.47
53:27:2314:A:H2'	53:27:2315:G:H8	1.79	0.47
53:27:2475:C:H42	53:27:2529:G:N2	2.11	0.47
53:27:1672:A:H5''	53:27:2554:U:OP1	2.14	0.47
19:S:75:GLY:HA3	53:27:64:A:O3'	2.13	0.47
53:27:759:G:H2'	53:27:760:G:H8	1.79	0.47
11:K:41:ARG:NH1	53:27:807:U:OP2	2.45	0.47
53:27:848:C:H2'	53:27:849:A:C8	2.48	0.47
53:27:859:G:O2'	53:27:860:U:O5'	2.32	0.47
53:27:888:C:H6	53:27:888:C:O5'	1.97	0.47
53:27:569:U:H5'	53:27:946:C:H1'	1.96	0.47
26:Z:1:MET:N	54:28:44:G:OP2	2.40	0.47
56:30:25:C:H2'	56:30:26:A:C1'	2.44	0.47
59:33:16:ASP:CG	59:33:17:PRO:HD2	2.34	0.47
32:6:128:LEU:HB2	32:6:132:GLU:OE1	2.14	0.47
33:7:50:SER:HB2	33:7:71:ARG:NH2	2.29	0.47
35:9:45:VAL:HG12	35:9:46:GLY:H	1.78	0.47
6:F:18:GLN:HE22	6:F:44:ILE:HD11	1.77	0.47
6:F:58:LEU:HA	6:F:61:VAL:HG22	1.95	0.47
13:M:69:ARG:O	13:M:70:THR:OG1	2.31	0.47
14:N:100:HIS:HD2	54:28:48:U:H4'	1.78	0.47
16:P:10:ARG:HH22	53:27:514:A:C5'	2.21	0.47
19:S:50:LEU:H	19:S:50:LEU:CD1	2.26	0.47
20:T:87:GLU:OE1	20:T:92:VAL:HG21	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:37:PHE:O	23:W:45:PHE:HD1	1.97	0.47
38:12:65:PHE:CD2	38:12:66:GLN:HG2	2.49	0.47
38:12:88:LYS:HG3	38:12:89:ASP:N	2.28	0.47
41:15:95:THR:HG23	41:15:96:ILE:H	1.79	0.47
51:25:17:ARG:O	51:25:19:LYS:N	2.47	0.47
51:25:58:LYS:O	51:25:61:ARG:NH2	2.48	0.47
52:26:1251:A:H2'	52:26:1252:A:C8	2.49	0.47
52:26:1511:G:O2'	52:26:1512:U:H5'	2.14	0.47
34:8:134:TYR:CD1	52:26:620:C:H4'	2.46	0.47
53:27:1335:C:H2'	53:27:1336:A:C8	2.48	0.47
53:27:1430:G:H2'	53:27:1431:A:O4'	2.15	0.47
53:27:1444:G:H2'	53:27:1445:G:H8	1.78	0.47
53:27:1688:U:H2'	53:27:1698:A:C6	2.49	0.47
1:A:269:ARG:NH2	53:27:1798:U:OP2	2.42	0.47
53:27:2129:C:C2'	53:27:2130:U:H5'	2.44	0.47
53:27:917:A:H5''	53:27:2268:A:N6	2.28	0.47
53:27:399:U:O2'	53:27:400:G:H5'	2.13	0.47
53:27:965:C:O2'	53:27:966:G:H5'	2.14	0.47
53:27:968:C:H2'	53:27:969:G:H8	1.79	0.47
57:31:20:U:H2'	57:31:21:A:H5''	1.95	0.47
58:32:39:C:H2'	58:32:40:C:C6	2.49	0.47
59:33:96:ARG:HG2	59:33:104:VAL:HB	1.96	0.47
59:33:20:TRP:HZ3	59:33:35:LEU:HB3	1.78	0.47
29:3:35:ARG:NH1	53:27:53:A:C2	2.81	0.47
59:33:63:VAL:HA	59:33:79:ALA:HB3	1.94	0.47
34:8:28:ASP:CG	34:8:29:THR:H	2.18	0.47
2:B:56:LYS:HB2	2:B:59:ARG:CG	2.44	0.47
3:C:57:LYS:C	3:C:59:PRO:HD3	2.33	0.47
3:C:5:LEU:O	3:C:7:ASP:N	2.48	0.47
6:F:78:VAL:HG12	6:F:79:THR:H	1.78	0.47
7:G:118:ILE:H	7:G:119:PRO:HD2	1.79	0.47
8:H:135:MET:HG3	8:H:137:LEU:HG	1.97	0.47
9:I:106:LYS:HB2	9:I:119:PHE:CE1	2.49	0.47
14:N:4:LYS:O	14:N:8:ILE:HG13	2.13	0.47
23:W:66:VAL:O	23:W:69:GLU:HB3	2.14	0.47
23:W:73:ARG:HG3	23:W:75:GLU:OE2	2.13	0.47
36:10:2:ARG:HD3	36:10:68:GLN:HE21	1.79	0.47
36:10:61:LEU:HD23	36:10:62:MET:N	2.29	0.47
27:1:1:ALA:O	27:1:2:VAL:HG12	2.14	0.47
41:15:63:GLN:HG3	41:15:98:ALA:CB	2.44	0.47
43:17:18:LEU:HD22	43:17:21:ILE:HD11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:22:19:GLU:HA	48:22:53:GLN:HE22	1.79	0.47
50:24:6:ALA:O	50:24:9:ARG:HG2	2.14	0.47
52:26:1130:A:H61	52:26:1144:G:H1'	1.79	0.47
52:26:1169:A:C2	52:26:1170:A:C4	3.03	0.47
52:26:296:U:H2'	52:26:297:G:C8	2.49	0.47
52:26:425:G:H2'	52:26:426:U:H5'	1.96	0.47
52:26:500:G:H2'	52:26:501:C:C6	2.49	0.47
53:27:1266:G:N2	53:27:2012:G:C4	2.81	0.47
53:27:1301:A:O2'	53:27:1302:A:H3'	2.14	0.47
53:27:1373:A:H2'	53:27:1374:G:O4'	2.14	0.47
53:27:1531:C:O5'	53:27:1531:C:H6	1.98	0.47
53:27:186:G:H2'	53:27:187:G:C8	2.45	0.47
53:27:2001:C:H2'	53:27:2002:G:C8	2.50	0.47
53:27:2183:A:H2'	53:27:2184:A:H8	1.76	0.47
53:27:2299:U:H2'	53:27:2300:C:O4'	2.14	0.47
53:27:2743:U:C3'	53:27:2744:G:H5''	2.44	0.47
53:27:2875:C:H2'	53:27:2876:G:C8	2.49	0.47
53:27:48:G:N1	53:27:178:G:C6	2.83	0.47
54:28:116:G:O2'	54:28:117:G:H5'	2.14	0.47
4:D:65:LEU:HD22	54:28:42:C:C5	2.48	0.47
59:33:226:GLU:C	59:33:229:ILE:HG12	2.33	0.47
59:33:300:TYR:CE1	59:33:329:PRO:CD	2.92	0.47
59:33:609:ILE:HG23	59:33:615:PRO:HD2	1.97	0.47
32:6:208:ALA:O	32:6:211:LEU:HB3	2.14	0.47
2:B:154:LYS:NZ	53:27:2024:G:O2'	2.47	0.47
3:C:9:GLN:O	3:C:11:ALA:N	2.43	0.47
3:C:48:THR:HA	3:C:82:GLY:O	2.14	0.47
3:C:83:VAL:O	3:C:83:VAL:HG12	2.13	0.47
7:G:100:ALA:O	7:G:103:ASN:HB3	2.14	0.47
7:G:65:GLU:OE1	53:27:1046:A:C4	2.68	0.47
8:H:116:MET:HE3	8:H:124:MET:HB3	1.95	0.47
11:K:23:ILE:N	11:K:23:ILE:HD12	2.29	0.47
24:X:61:ALA:C	24:X:63:ALA:N	2.67	0.47
39:13:37:TYR:CD2	39:13:38:PHE:HD2	2.31	0.47
40:14:13:PHE:O	40:14:70:HIS:ND1	2.47	0.47
41:15:61:ALA:O	41:15:64:VAL:HG12	2.14	0.47
44:18:7:ALA:O	44:18:10:VAL:HG12	2.14	0.47
44:18:89:ARG:NH1	44:18:89:ARG:HB2	2.29	0.47
45:19:69:LEU:CD2	45:19:77:TYR:HA	2.43	0.47
27:1:9:ARG:HA	27:1:12:ARG:HG2	1.95	0.47
52:26:1099:G:O2'	52:26:1100:C:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1192:C:H6	52:26:1192:C:O5'	1.98	0.47
52:26:1488:G:H2'	52:26:1489:G:H8	1.78	0.47
52:26:256:U:H2'	52:26:257:G:H8	1.79	0.47
52:26:333:U:H2'	52:26:334:C:C6	2.50	0.47
53:27:1130:U:H2'	53:27:1131:G:H8	1.80	0.47
53:27:811:U:O2'	53:27:1250:G:H2'	2.13	0.47
53:27:1509:A:H2'	53:27:1510:G:H8	1.79	0.47
53:27:1677:A:H2'	53:27:1678:A:O4'	2.15	0.47
53:27:170:U:H2'	53:27:171:U:C6	2.49	0.47
53:27:1869:G:H5'	53:27:1870:C:OP2	2.13	0.47
53:27:1895:C:C2	53:27:1896:G:C8	3.02	0.47
53:27:2242:G:O5'	53:27:2242:G:H8	1.98	0.47
53:27:2303:G:O2'	53:27:2304:G:H5'	2.14	0.47
53:27:250:G:C5	53:27:251:A:C5	3.02	0.47
53:27:2544:G:H2'	53:27:2545:G:C8	2.48	0.47
53:27:2766:A:C5	53:27:2767:C:C5	3.02	0.47
53:27:921:C:H2'	53:27:922:C:C6	2.48	0.47
29:3:24:THR:OG1	29:3:25:LYS:N	2.47	0.47
59:33:226:GLU:HA	59:33:229:ILE:HG12	1.97	0.47
59:33:241:LYS:CD	59:33:246:LYS:HZ3	2.28	0.47
59:33:281:ILE:O	59:33:281:ILE:HG13	2.14	0.47
59:33:315:LYS:HB2	59:33:319:TYR:HB3	1.96	0.47
59:33:81:LEU:HD22	59:33:84:LEU:HD22	1.96	0.47
34:8:5:GLY:O	34:8:7:LYS:N	2.48	0.47
2:B:119:ALA:CB	2:B:165:MET:HB2	2.44	0.47
4:D:3:LEU:O	4:D:6:TYR:HB3	2.14	0.47
14:N:28:VAL:HG12	14:N:93:ASP:O	2.15	0.47
17:Q:20:VAL:HG12	17:Q:22:LEU:HD23	1.97	0.47
18:R:29:VAL:HG21	18:R:69:LEU:CG	2.44	0.47
18:R:17:VAL:CG1	18:R:76:VAL:HG21	2.45	0.47
20:T:39:ASN:HB2	20:T:62:ALA:O	2.13	0.47
20:T:94:PHE:HB2	20:T:100:GLU:O	2.14	0.47
39:13:82:ILE:O	39:13:85:ALA:HB3	2.13	0.47
45:19:55:LEU:O	45:19:59:VAL:HG23	2.14	0.47
49:23:43:MET:HA	49:23:46:LEU:HD12	1.95	0.47
52:26:123:U:OP1	52:26:312:C:H5'	2.13	0.47
52:26:1424:U:H2'	52:26:1425:U:O4'	2.14	0.47
52:26:236:A:H2'	52:26:237:G:C8	2.48	0.47
52:26:254:G:O2'	52:26:255:G:H5'	2.14	0.47
52:26:40:C:O2'	52:26:41:G:H5'	2.14	0.47
52:26:469:C:H2'	52:26:470:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:785:G:H2'	52:26:786:G:H8	1.80	0.47
53:27:1003:G:H2'	53:27:1004:U:C6	2.50	0.47
53:27:1082:U:H3'	53:27:1083:U:H5''	1.96	0.47
53:27:819:A:OP2	53:27:1187:G:N2	2.47	0.47
53:27:1268:A:C2	53:27:1269:A:H1'	2.50	0.47
53:27:1298:C:C4	53:27:1299:G:C6	3.02	0.47
53:27:1788:C:H2'	53:27:1789:A:O4'	2.13	0.47
53:27:1988:G:H2'	53:27:1989:G:H8	1.79	0.47
1:A:260:LYS:O	53:27:2227:A:H4'	2.15	0.47
53:27:2461:A:H1'	53:27:2492:U:N3	2.29	0.47
53:27:2516:A:H2'	53:27:2517:C:C6	2.50	0.47
53:27:2516:A:O2'	53:27:2517:C:H5'	2.14	0.47
53:27:2549:G:H5''	53:27:2549:G:H8	1.80	0.47
2:B:130:GLN:HE22	53:27:2578:G:N2	2.13	0.47
53:27:2588:G:H8	53:27:2588:G:O5'	1.97	0.47
53:27:555:G:O2'	53:27:556:A:C8	2.66	0.47
53:27:55:G:H2'	53:27:56:A:H8	1.79	0.47
53:27:668:A:H2'	53:27:670:A:H62	1.79	0.47
53:27:586:A:H2	53:27:809:G:N3	2.13	0.47
53:27:957:C:O2'	53:27:958:U:H5''	2.15	0.47
54:28:46:A:H2'	54:28:47:C:O4'	2.15	0.47
56:30:33:U:H6	56:30:33:U:O5'	1.97	0.47
56:30:54:U:O5'	56:30:54:U:H6	1.98	0.47
59:33:435:VAL:CG2	59:33:465:THR:HG21	2.44	0.47
59:33:670:ARG:NH2	59:33:700:ARG:HH21	2.06	0.47
33:7:15:LYS:HD3	33:7:180:ASP:OD1	2.14	0.47
3:C:196:VAL:O	3:C:200:LEU:N	2.39	0.47
3:C:65:THR:HB	3:C:67:ARG:HG2	1.97	0.47
4:D:42:ALA:HA	4:D:45:ASP:O	2.14	0.47
8:H:54:ILE:HG23	8:H:54:ILE:O	2.14	0.47
36:10:36:ILE:HD13	36:10:39:LEU:HD12	1.97	0.47
36:10:86:ARG:CB	36:10:86:ARG:NH1	2.78	0.47
37:11:44:SER:O	37:11:48:THR:HG23	2.14	0.47
39:13:20:ILE:CD1	39:13:60:LEU:HD13	2.24	0.47
40:14:36:VAL:HA	40:14:77:VAL:HG23	1.95	0.47
46:20:40:ASN:HB3	46:20:43:ALA:HB2	1.96	0.47
49:23:39:ILE:HB	49:23:66:VAL:O	2.14	0.47
50:24:82:ILE:HG13	50:24:83:ASN:N	2.29	0.47
51:25:39:LYS:N	51:25:40:PRO:CD	2.77	0.47
52:26:122:G:O2'	52:26:123:U:H5'	2.14	0.47
52:26:355:C:H2'	52:26:356:A:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:401:C:O2'	52:26:402:G:H5'	2.14	0.47
52:26:562:U:H4'	52:26:563:A:O5'	2.14	0.47
53:27:1041:G:H2'	53:27:1042:G:H8	1.78	0.47
53:27:1056:G:H5''	53:27:1057:A:O4'	2.15	0.47
53:27:1289:C:H2'	53:27:1290:C:C6	2.48	0.47
53:27:1635:A:C2'	53:27:1636:U:H5'	2.44	0.47
53:27:1806:C:H2'	53:27:1807:G:O4'	2.15	0.47
53:27:1822:C:H2'	53:27:1823:G:H8	1.78	0.47
53:27:1847:G:O2'	53:27:1848:A:C8	2.67	0.47
1:A:241:LYS:O	53:27:1902:C:H4'	2.15	0.47
53:27:2190:G:H2'	53:27:2191:A:C8	2.49	0.47
53:27:2261:C:O2'	53:27:2262:U:H5'	2.14	0.47
53:27:2539:C:O2'	53:27:2540:C:H5'	2.14	0.47
53:27:2896:C:H2'	53:27:2897:U:H6	1.80	0.47
53:27:372:G:N2	53:27:400:G:H2'	2.30	0.47
53:27:753:A:H2'	53:27:754:U:C6	2.50	0.47
53:27:820:A:H2'	53:27:821:A:C8	2.49	0.47
59:33:101:LYS:C	59:33:104:VAL:HG12	2.34	0.47
59:33:101:LYS:HE3	59:33:105:ASN:ND2	2.25	0.47
59:33:721:VAL:O	59:33:724:ARG:HB3	2.15	0.47
33:7:46:LEU:HB3	33:7:49:ALA:CB	2.44	0.47
34:8:124:VAL:N	34:8:127:ARG:O	2.34	0.47
1:A:251:THR:O	1:A:252:LYS:HB3	2.15	0.47
3:C:148:ILE:CD1	3:C:187:VAL:HG11	2.45	0.47
4:D:127:TYR:O	4:D:154:THR:HG23	2.15	0.47
4:D:3:LEU:HD13	4:D:172:PHE:CE1	2.50	0.47
5:E:51:PHE:HZ	5:E:71:LEU:HB2	1.80	0.47
8:H:131:THR:O	8:H:135:MET:HG2	2.15	0.47
10:J:21:CYS:HB2	10:J:39:ILE:HD12	1.96	0.47
12:L:30:SER:N	12:L:105:MET:O	2.48	0.47
21:U:9:ARG:HH12	21:U:12:GLN:HB3	1.78	0.47
21:U:14:LYS:HB2	54:28:98:G:H1	1.78	0.47
21:U:64:VAL:HG12	21:U:65:VAL:N	2.28	0.47
24:X:37:LEU:HD21	24:X:40:SER:HA	1.95	0.47
36:10:3:HIS:HB2	36:10:92:THR:CA	2.43	0.47
40:14:53:ILE:HG13	44:18:84:ARG:NE	2.29	0.47
43:17:98:GLY:HA3	52:26:1322:C:H5''	1.97	0.47
47:21:58:VAL:HG22	47:21:59:GLU:N	2.28	0.47
50:24:10:ALA:O	50:24:13:SER:HB3	2.15	0.47
52:26:102:G:H2'	52:26:103:U:H6	1.80	0.47
52:26:113:G:H2'	52:26:114:U:H6	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1371:G:H2'	52:26:1372:U:O4'	2.15	0.47
52:26:15:G:C6	52:26:16:A:C5	3.03	0.47
52:26:371:A:H2'	52:26:372:C:O4'	2.14	0.47
52:26:503:C:O2'	52:26:504:C:H5'	2.15	0.47
52:26:865:A:H1'	52:26:918:A:O2'	2.14	0.47
52:26:948:C:H2'	52:26:949:A:H8	1.79	0.47
53:27:1072:C:H6	53:27:1072:C:O5'	1.97	0.47
53:27:1399:C:H2'	53:27:1400:U:C6	2.49	0.47
53:27:1551:A:H2'	53:27:1552:A:O4'	2.14	0.47
2:B:138:LEU:HA	53:27:1658:C:OP1	2.15	0.47
53:27:1789:A:C6	53:27:1790:C:C4	3.02	0.47
53:27:191:A:O2'	53:27:192:C:H5'	2.14	0.47
23:W:18:SER:CB	53:27:2080:A:H4'	2.45	0.47
53:27:2232:C:O2'	53:27:2233:U:H5'	2.15	0.47
53:27:2234:G:H2'	53:27:2235:G:O4'	2.14	0.47
53:27:2468:A:C8	53:27:2476:A:N1	2.82	0.47
53:27:2576:G:N3	53:27:2576:G:H2'	2.29	0.47
53:27:2818:U:H2'	53:27:2819:G:H8	1.79	0.47
53:27:2859:G:C6	53:27:2860:A:N6	2.83	0.47
53:27:2881:U:H2'	53:27:2882:A:O4'	2.14	0.47
53:27:524:G:H2'	53:27:525:U:O4'	2.15	0.47
53:27:553:G:H2'	53:27:554:U:O4'	2.15	0.47
53:27:603:A:H4'	53:27:604:G:O5'	2.14	0.47
11:K:111:ILE:HD11	53:27:636:G:C6	2.50	0.47
56:30:61:C:O5'	56:30:61:C:H6	1.98	0.47
58:32:61:C:H2'	58:32:62:C:H6	1.78	0.47
59:33:108:HIS:CE1	59:33:111:ARG:HH21	2.32	0.47
59:33:228:TYR:CB	59:33:277:ARG:NH2	2.78	0.47
59:33:616:ILE:CG2	59:33:667:LEU:HD12	2.42	0.47
33:7:7:ASN:O	33:7:11:LEU:HG	2.14	0.47
33:7:84:GLU:O	33:7:88:LYS:HG2	2.14	0.47
34:8:94:GLU:OE2	34:8:103:ARG:HG3	2.14	0.47
34:8:167:PRO:HB3	34:8:169:TRP:CZ2	2.50	0.47
1:A:159:THR:HG22	1:A:160:TYR:N	2.30	0.47
1:A:206:LYS:HB2	53:27:729:G:N7	2.30	0.47
4:D:103:ILE:HG13	4:D:104:THR:N	2.30	0.47
5:E:155:PRO:HG2	5:E:156:TYR:CD2	2.49	0.47
9:I:136:GLN:NE2	53:27:2899:A:H5'	2.30	0.47
9:I:15:TRP:CG	9:I:135:GLN:HB3	2.50	0.47
9:I:80:HIS:O	9:I:82:GLY:N	2.48	0.47
12:L:64:TRP:HB2	12:L:104:GLU:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:17:VAL:HA	18:R:43:ALA:HB1	1.95	0.47
23:W:10:ARG:HG3	23:W:11:PRO:CD	2.44	0.47
40:14:76:ILE:HD11	40:14:87:LEU:HD11	1.97	0.47
42:16:72:ASN:C	42:16:73:LEU:HD12	2.34	0.47
47:21:16:MET:HE2	47:21:19:SER:HB2	1.97	0.47
48:22:69:TYR:HB2	48:22:73:HIS:HE1	1.80	0.47
51:25:23:GLU:CG	51:25:24:LYS:H	2.23	0.47
52:26:1037:C:H2'	52:26:1038:C:C6	2.50	0.47
52:26:962:C:H1'	52:26:1201:A:C6	2.49	0.47
52:26:1478:U:H2'	52:26:1479:C:H6	1.80	0.47
52:26:412:A:H62	52:26:431:A:N6	2.05	0.47
52:26:439:U:H2'	52:26:440:C:C6	2.50	0.47
52:26:575:G:C6	52:26:881:G:C6	3.02	0.47
52:26:725:G:H2'	52:26:726:C:H6	1.79	0.47
52:26:974:A:H4'	52:26:975:A:O5'	2.15	0.47
8:H:130:GLY:HA3	53:27:1079:C:O2	2.15	0.47
53:27:1223:G:C6	53:27:1227:G:C6	3.03	0.47
53:27:1367:A:C2'	53:27:1368:G:H5'	2.45	0.47
53:27:1736:U:H2'	53:27:1737:G:O4'	2.14	0.47
53:27:1790:C:H3'	53:27:1828:G:H22	1.78	0.47
53:27:2051:A:H2'	53:27:2614:A:N6	2.30	0.47
53:27:2348:U:H2'	53:27:2349:G:H8	1.79	0.47
53:27:2371:G:O2'	53:27:2372:U:H5'	2.14	0.47
53:27:2469:A:H2'	53:27:2470:G:O4'	2.14	0.47
53:27:2051:A:H5'	53:27:2578:G:O5'	2.15	0.47
53:27:2649:C:H2'	53:27:2650:U:C6	2.48	0.47
53:27:291:G:O2'	53:27:292:U:H5'	2.15	0.47
53:27:37:C:H4'	53:27:451:U:OP1	2.15	0.47
53:27:481:G:H1'	53:27:506:G:N2	2.29	0.47
53:27:569:U:C4	53:27:570:G:C6	3.02	0.47
53:27:731:C:OP2	53:27:761:A:OP1	2.33	0.47
53:27:851:C:H2'	53:27:852:U:H6	1.78	0.47
53:27:858:G:H5'	53:27:859:G:OP2	2.14	0.47
53:27:946:C:H2'	53:27:947:A:H8	1.80	0.47
56:30:35:A:H2'	56:30:36:A:O4'	2.14	0.47
57:31:50:U:H3	57:31:64:G:H1	1.62	0.47
58:32:30:G:O6	58:32:40:C:N4	2.39	0.47
59:33:161:ARG:O	59:33:162:GLU:CG	2.63	0.47
59:33:210:GLU:OE1	59:33:260:TRP:HZ3	1.96	0.47
59:33:326:VAL:HG22	59:33:334:VAL:HG13	1.96	0.47
59:33:732:VAL:O	59:33:735:VAL:HB	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:96:ARG:HG3	59:33:104:VAL:HG21	1.97	0.47
11:K:62:PRO:HB2	30:4:29:ARG:NH1	2.29	0.47
32:6:65:LYS:HE2	32:6:156:LEU:O	2.14	0.47
34:8:173:ASP:HB2	34:8:178:GLU:OE1	2.15	0.47
34:8:9:LYS:O	34:8:12:ARG:HB3	2.15	0.47
3:C:45:ALA:HA	3:C:87:ALA:O	2.14	0.47
3:C:60:TRP:HZ2	3:C:69:ARG:HA	1.80	0.47
4:D:110:ILE:HB	4:D:113:PHE:HD1	1.80	0.47
4:D:3:LEU:HG	4:D:100:GLU:CG	2.42	0.47
6:F:73:ASN:O	6:F:74:ALA:O	2.33	0.47
8:H:17:ALA:O	8:H:18:ASN:CB	2.62	0.47
8:H:58:ILE:HG22	8:H:60:VAL:HG23	1.97	0.47
10:J:56:ASP:OD1	10:J:57:VAL:N	2.47	0.47
11:K:79:LEU:HD11	11:K:131:ALA:HA	1.97	0.47
12:L:75:GLU:OE1	53:27:957:C:H5'	2.15	0.47
16:P:81:GLY:O	16:P:84:LYS:HB2	2.15	0.47
26:Z:10:GLU:HA	26:Z:25:ARG:HH21	1.80	0.47
37:11:2:ARG:HA	52:26:1380:U:C4	2.49	0.47
38:12:111:THR:HG22	38:12:113:ARG:H	1.80	0.47
38:12:78:SER:OG	38:12:84:ILE:N	2.47	0.47
40:14:56:HIS:O	40:14:57:VAL:HG12	2.15	0.47
42:16:43:LYS:HB3	42:16:44:PRO:HD3	1.95	0.47
46:20:74:LEU:HA	46:20:77:GLU:HB2	1.96	0.47
52:26:1486:G:H2'	52:26:1487:G:O4'	2.14	0.47
52:26:205:A:H2'	52:26:206:C:C6	2.49	0.47
50:24:4:LYS:HZ1	52:26:331:G:C2'	2.28	0.47
52:26:493:A:H2'	52:26:494:G:C8	2.50	0.47
52:26:922:G:H2'	52:26:922:G:N3	2.30	0.47
53:27:100:U:H4'	53:27:101:A:O4'	2.15	0.47
9:I:104:ALA:HA	53:27:1139:G:OP1	2.14	0.47
53:27:991:C:H5'	53:27:1185:G:H2'	1.97	0.47
53:27:1200:C:H2'	53:27:1201:U:C6	2.49	0.47
53:27:2178:C:H2'	53:27:2179:C:C5	2.50	0.47
53:27:2295:C:H2'	53:27:2296:U:C6	2.49	0.47
53:27:2588:G:H2'	53:27:2589:A:C5'	2.45	0.47
53:27:2631:G:O2'	53:27:2632:A:H5'	2.15	0.47
53:27:2715:C:C2'	53:27:2716:C:H5''	2.44	0.47
2:B:190:LYS:HE2	53:27:2729:G:O3'	2.15	0.47
53:27:347:A:H2'	53:27:348:A:H8	1.78	0.47
53:27:697:G:C6	53:27:698:C:N4	2.83	0.47
53:27:813:U:H2'	53:27:814:C:H6	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:37:C:H2'	54:28:38:C:O4'	2.15	0.47
59:33:210:GLU:HB3	59:33:260:TRP:CE3	2.50	0.47
59:33:79:ALA:O	59:33:82:PHE:HD1	1.96	0.47
33:7:184:ASN:OD1	33:7:185:THR:N	2.47	0.47
35:9:114:LEU:HB3	35:9:119:VAL:CG2	2.44	0.47
1:A:232:GLY:O	1:A:234:GLY:N	2.47	0.47
1:A:250:GLN:NE2	1:A:251:THR:O	2.45	0.47
7:G:5:LEU:CA	7:G:8:LYS:HB2	2.42	0.47
8:H:127:SER:HA	53:27:1080:A:H1'	1.97	0.47
8:H:35:MET:HA	8:H:38:CYS:SG	2.55	0.47
8:H:80:LYS:HA	8:H:85:ILE:HG13	1.97	0.47
8:H:94:LYS:NZ	53:27:1077:A:H5'	2.29	0.47
11:K:62:PRO:CB	30:4:29:ARG:HH11	2.28	0.47
12:L:73:ILE:HG21	12:L:91:TYR:CZ	2.49	0.47
13:M:25:ALA:HB1	13:M:48:VAL:HG22	1.96	0.47
14:N:47:VAL:O	14:N:47:VAL:HG23	2.15	0.47
15:O:26:GLU:HA	15:O:43:GLU:HA	1.96	0.47
11:K:23:ILE:HB	17:Q:84:ARG:HH11	1.80	0.47
19:S:50:LEU:HD12	19:S:50:LEU:N	2.30	0.47
19:S:64:LYS:HA	19:S:79:ASP:OD1	2.15	0.47
22:V:70:PRO:HD3	54:28:12:C:H42	1.80	0.47
24:X:39:GLN:HB2	24:X:41:HIS:CE1	2.50	0.47
36:10:5:GLU:HB2	36:10:90:MET:CG	2.45	0.47
35:9:155:LYS:HG2	38:12:65:PHE:CG	2.50	0.47
42:16:38:THR:HA	42:16:49:ARG:O	2.14	0.47
43:17:7:ASN:ND2	43:17:21:ILE:H	2.11	0.47
45:19:2:LEU:CD2	45:19:7:THR:HG22	2.45	0.47
47:21:6:THR:OG1	47:21:7:LEU:N	2.47	0.47
48:22:41:SER:HB3	48:22:51:GLN:HE21	1.80	0.47
49:23:13:HIS:CE1	49:23:34:SER:HB2	2.50	0.47
52:26:1260:G:OP1	52:26:1284:C:H4'	2.15	0.47
52:26:35:G:H2'	52:26:36:C:C6	2.49	0.47
52:26:475:C:H2'	52:26:476:U:H6	1.80	0.47
52:26:533:A:O2'	52:26:534:U:H5''	2.14	0.47
52:26:606:G:H5''	52:26:607:A:H5'	1.96	0.47
52:26:893:C:H2'	52:26:894:G:C8	2.50	0.47
53:27:1192:G:O2'	53:27:1193:G:H5'	2.14	0.47
29:3:7:PRO:HG2	53:27:1309:G:H4'	1.97	0.47
53:27:1424:G:H2'	53:27:1425:G:C8	2.50	0.47
53:27:310:A:O2'	53:27:311:A:H2'	2.14	0.47
54:28:62:C:H2'	54:28:63:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:43:LEU:HG	59:33:44:GLN:NE2	2.30	0.47
31:5:1:MET:N	53:27:2526:G:H21	2.12	0.47
32:6:137:THR:O	32:6:141:GLU:HG3	2.15	0.47
34:8:21:LYS:CD	34:8:28:ASP:HA	2.43	0.47
1:A:255:LYS:HZ2	1:A:269:ARG:HE	1.63	0.47
3:C:122:GLU:HA	3:C:190:ALA:HB3	1.97	0.47
4:D:59:ILE:HD13	4:D:137:PHE:CD2	2.50	0.47
8:H:59:THR:HB	8:H:67:THR:C	2.35	0.47
16:P:91:ARG:NH1	53:27:997:G:H5''	2.30	0.47
17:Q:8:GLY:O	17:Q:10:LYS:HG2	2.15	0.47
23:W:42:GLU:HB3	23:W:44:ARG:NE	2.29	0.47
25:Y:40:THR:O	25:Y:44:ARG:HG2	2.15	0.47
37:11:16:LYS:HB2	37:11:43:TYR:CZ	2.50	0.47
39:13:101:GLY:O	39:13:103:VAL:N	2.48	0.47
41:15:67:GLU:O	41:15:70:ALA:HB3	2.14	0.47
42:16:43:LYS:HG2	42:16:44:PRO:N	2.30	0.47
50:24:3:ILE:HG23	50:24:7:LYS:NZ	2.30	0.47
52:26:174:A:H2'	52:26:175:C:H5'	1.96	0.47
52:26:333:U:H2'	52:26:334:C:H6	1.80	0.47
52:26:749:A:O2'	52:26:750:C:H5'	2.15	0.47
52:26:991:U:C4	52:26:1212:U:H4'	2.50	0.47
53:27:1077:A:C2	53:27:1088:A:H2'	2.49	0.47
53:27:1114:C:H2'	53:27:1115:G:C8	2.50	0.47
53:27:1132:U:H2'	53:27:1133:A:C8	2.50	0.47
16:P:2:ARG:HD2	53:27:1248:G:C4	2.50	0.47
53:27:1470:A:H61	53:27:1521:G:H1'	1.79	0.47
53:27:1775:U:O2'	53:27:1776:G:H5'	2.15	0.47
53:27:1998:A:H2'	53:27:1999:C:H6	1.77	0.47
53:27:2115:G:H4'	53:27:2166:U:O2	2.14	0.47
53:27:2543:G:H2'	53:27:2544:G:O4'	2.15	0.47
53:27:724:U:H2'	53:27:725:G:C8	2.50	0.47
56:30:54:U:C3'	56:30:55:U:H5''	2.44	0.47
58:32:24:U:H2'	58:32:25:C:C6	2.50	0.47
59:33:58:ARG:NH1	59:33:159:HIS:CE1	2.83	0.47
30:4:3:ILE:HG22	30:4:4:LYS:O	2.15	0.47
30:4:49:VAL:HG11	30:4:57:VAL:CG2	2.44	0.47
31:5:17:VAL:CG1	31:5:19:ARG:HG3	2.46	0.47
34:8:49:ASP:HA	34:8:52:VAL:HG22	1.96	0.47
9:I:72:LYS:NZ	9:I:74:TYR:HE1	2.11	0.47
12:L:67:VAL:HG12	12:L:100:LYS:HZ1	1.78	0.47
16:P:100:PHE:O	16:P:102:LYS:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:14:VAL:HG23	17:Q:18:GLN:HG2	1.96	0.47
17:Q:83:TYR:CE1	53:27:1187:G:H5'	2.50	0.47
21:U:35:GLU:HB2	21:U:93:ARG:CZ	2.44	0.47
22:V:45:ALA:O	22:V:47:VAL:HG23	2.16	0.47
24:X:9:LYS:HD2	24:X:10:SER:N	2.27	0.47
41:15:22:ILE:HD13	41:15:95:THR:CG2	2.45	0.46
42:16:98:ARG:HA	42:16:103:CYS:SG	2.55	0.46
42:16:6:LEU:HD11	42:16:11:ARG:HH21	1.80	0.46
44:18:99:SER:OG	52:26:1114:C:HI'	2.15	0.46
27:1:9:ARG:HA	27:1:12:ARG:CD	2.45	0.46
46:20:52:LEU:O	46:20:54:LEU:N	2.46	0.46
52:26:176:C:H3'	52:26:177:G:H21	1.79	0.46
52:26:212:G:H2'	52:26:213:G:C8	2.44	0.46
52:26:604:G:H2'	52:26:605:U:O4'	2.15	0.46
52:26:746:A:H2'	52:26:747:A:C8	2.50	0.46
32:6:20:ARG:NH1	52:26:831:A:H5'	2.30	0.46
53:27:1157:G:O2'	53:27:1158:C:H5'	2.14	0.46
53:27:1186:G:H2'	53:27:1187:G:H8	1.80	0.46
53:27:121:G:C2	53:27:131:A:C4	3.03	0.46
17:Q:90:ARG:NE	53:27:1223:G:OP2	2.47	0.46
53:27:130:C:H2'	53:27:131:A:O4'	2.15	0.46
53:27:1432:G:H2'	53:27:1433:A:H8	1.79	0.46
53:27:1444:G:H2'	53:27:1445:G:C8	2.49	0.46
53:27:1715:G:H2'	53:27:1743:G:O6	2.15	0.46
53:27:1807:G:C2'	53:27:1808:A:H5'	2.43	0.46
53:27:1911:U:H5	53:27:1918:A:HO2'	1.63	0.46
53:27:2465:C:O2'	53:27:2466:C:H5'	2.15	0.46
53:27:2812:G:H2'	53:27:2813:A:O4'	2.15	0.46
53:27:492:A:H2'	53:27:493:G:O4'	2.16	0.46
56:30:15:G:H2'	56:30:16:U:O4'	2.14	0.46
59:33:229:ILE:HG13	59:33:230:GLU:N	2.31	0.46
32:6:9:LEU:HA	32:6:14:HIS:NE2	2.29	0.46
32:6:185:ILE:HA	32:6:199:ILE:HB	1.96	0.46
34:8:98:ASP:O	34:8:101:VAL:HB	2.14	0.46
5:E:154:GLU:CD	5:E:156:TYR:HB2	2.36	0.46
5:E:173:ALA:O	5:E:174:LYS:C	2.53	0.46
5:E:19:ASN:HB3	5:E:22:VAL:HB	1.95	0.46
7:G:97:LYS:O	7:G:100:ALA:HB3	2.15	0.46
7:G:108:VAL:O	7:G:109:LYS:HB3	2.14	0.46
7:G:96:PHE:CZ	7:G:126:LEU:HB2	2.50	0.46
13:M:118:ARG:C	13:M:120:GLU:N	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:116:LYS:HA	13:M:1:MET:SD	2.55	0.46
13:M:36:THR:HA	53:27:1278:C:OP1	2.15	0.46
16:P:2:ARG:HD2	53:27:1248:G:C6	2.50	0.46
17:Q:100:GLY:O	17:Q:101:ILE:HD13	2.14	0.46
16:P:111:LYS:HD3	17:Q:48:LYS:HE2	1.95	0.46
21:U:60:VAL:C	21:U:61:LEU:HD12	2.35	0.46
23:W:36:ARG:HG3	53:27:2200:C:OP1	2.15	0.46
26:Z:9:TYR:HA	26:Z:27:THR:HB	1.96	0.46
36:10:46:GLN:CB	36:10:56:LYS:HG2	2.45	0.46
43:17:28:ARG:NE	43:17:62:PHE:HB2	2.30	0.46
44:18:83:VAL:HG13	44:18:84:ARG:N	2.30	0.46
48:22:15:GLU:C	48:22:17:VAL:N	2.67	0.46
48:22:56:ARG:O	48:22:60:ARG:HG3	2.15	0.46
51:25:64:ALA:HB3	52:26:1099:G:O2'	2.15	0.46
52:26:1292:G:H2'	52:26:1293:C:C6	2.50	0.46
52:26:1325:C:O2'	52:26:1326:U:H5'	2.16	0.46
52:26:393:A:C2	52:26:394:G:C8	3.04	0.46
53:27:1111:A:N3	53:27:1111:A:H2'	2.30	0.46
53:27:1241:A:H3'	53:27:1242:U:C6	2.50	0.46
27:1:6:LYS:HZ1	53:27:1262:A:H1'	1.79	0.46
53:27:2027:G:O2'	53:27:2028:U:H5'	2.15	0.46
53:27:2339:C:H2'	53:27:2340:A:H8	1.80	0.46
53:27:2552:U:H2'	53:27:2554:U:H5''	1.98	0.46
3:C:40:ARG:HB2	53:27:443:A:N7	2.30	0.46
53:27:734:A:C4	53:27:735:A:C8	3.02	0.46
53:27:737:C:O2'	53:27:738:G:H5'	2.15	0.46
53:27:794:A:H2'	53:27:795:C:H6	1.81	0.46
57:31:16:C:O2'	57:31:17:C:H5'	2.15	0.46
58:32:26:G:H1	58:32:44:A:H61	1.64	0.46
59:33:285:ARG:HE	59:33:287:GLN:HB3	1.80	0.46
59:33:598:VAL:HB	59:33:656:VAL:HG22	1.98	0.46
59:33:639:GLU:O	59:33:643:GLU:N	2.44	0.46
34:8:201:GLU:HA	34:8:204:SER:OG	2.14	0.46
2:B:148:GLN:N	2:B:148:GLN:OE1	2.48	0.46
3:C:130:LYS:HB2	3:C:133:LEU:CD1	2.45	0.46
4:D:175:PRO:O	4:D:176:PHE:CB	2.63	0.46
5:E:138:GLN:HG3	5:E:139:VAL:N	2.30	0.46
11:K:89:VAL:O	11:K:89:VAL:HG13	2.15	0.46
13:M:70:THR:O	13:M:71:ARG:HB2	2.15	0.46
15:O:23:ASP:O	15:O:25:VAL:HG23	2.15	0.46
16:P:65:ASN:HB2	16:P:75:TYR:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:37:GLY:HA2	20:T:40:LEU:HD11	1.97	0.46
20:T:66:VAL:O	20:T:69:VAL:HG22	2.15	0.46
21:U:87:GLN:HE21	54:28:77:U:C5'	2.28	0.46
25:Y:9:THR:HG22	25:Y:53:MET:O	2.15	0.46
37:11:106:ALA:HB1	37:11:132:THR:HB	1.96	0.46
40:14:15:HIS:HA	40:14:18:ILE:HG22	1.97	0.46
42:16:109:ARG:HA	52:26:538:G:OP1	2.15	0.46
44:18:44:VAL:C	44:18:48:GLN:HE22	2.19	0.46
48:22:23:LYS:O	48:22:25:ILE:N	2.43	0.46
48:22:28:LEU:N	48:22:28:LEU:HD12	2.30	0.46
52:26:1511:G:C5	52:26:1512:U:C4	3.03	0.46
52:26:234:C:H2'	52:26:235:C:H6	1.79	0.46
41:15:40:ALA:CB	52:26:684:U:O2	2.62	0.46
53:27:1069:A:H5'	53:27:1070:A:C8	2.50	0.46
53:27:1308:A:N7	53:27:1309:G:C5	2.84	0.46
53:27:1379:U:OP1	53:27:1379:U:C6	2.67	0.46
53:27:138:U:H5	53:27:139:U:H6	1.62	0.46
53:27:1608:A:C5	53:27:1611:C:C4	3.03	0.46
53:27:1831:G:H2'	53:27:1832:C:C6	2.51	0.46
53:27:2136:G:H5''	53:27:2137:U:H5	1.80	0.46
53:27:2297:A:N6	53:27:2319:G:H1'	2.30	0.46
53:27:2408:U:H2'	53:27:2409:G:C8	2.50	0.46
53:27:2481:G:HO2'	53:27:2482:A:H8	1.63	0.46
53:27:2737:G:H2'	53:27:2738:A:H8	1.79	0.46
53:27:338:G:H2'	53:27:339:U:H6	1.81	0.46
54:28:10:G:H2'	54:28:11:C:O4'	2.15	0.46
59:33:62:MET:HE1	59:33:82:PHE:CD1	2.49	0.46
59:33:718:ASN:HB2	59:33:721:VAL:HG23	1.97	0.46
59:33:723:GLY:HA2	59:33:726:LEU:HD12	1.96	0.46
29:3:35:ARG:HE	29:3:42:LEU:HD21	1.79	0.46
31:5:27:CYS:CB	31:5:33:HIS:HB2	2.45	0.46
34:8:52:VAL:HG23	34:8:53:GLN:N	2.29	0.46
35:9:156:ARG:CG	35:9:157:GLY:N	2.78	0.46
35:9:73:VAL:HG11	35:9:143:LEU:HB3	1.97	0.46
2:B:196:ALA:HB1	53:27:2820:A:C4	2.50	0.46
6:F:99:ILE:HD13	6:F:130:VAL:HG11	1.95	0.46
7:G:43:LYS:NZ	7:G:51:TYR:OH	2.49	0.46
7:G:81:LEU:HB2	53:27:1107:G:H4'	1.96	0.46
8:H:91:LYS:HZ3	53:27:1075:C:C2'	2.28	0.46
12:L:64:TRP:HZ3	12:L:106:ASP:HB3	1.79	0.46
13:M:59:SER:OG	13:M:60:VAL:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:86:PHE:HA	20:T:90:LYS:O	2.15	0.46
36:10:2:ARG:HB3	36:10:92:THR:HG21	1.97	0.46
37:11:48:THR:O	37:11:52:ARG:HB2	2.15	0.46
40:14:53:ILE:HG12	52:26:1060:U:H5''	1.97	0.46
41:15:63:GLN:O	41:15:67:GLU:HG3	2.15	0.46
42:16:71:HIS:ND1	42:16:71:HIS:O	2.48	0.46
45:19:25:GLU:HA	45:19:80:LEU:HD21	1.98	0.46
46:20:2:VAL:CG2	46:20:65:ALA:HA	2.46	0.46
52:26:124:C:O2'	52:26:125:U:H5'	2.14	0.46
39:13:122:ARG:NE	52:26:1350:A:OP1	2.48	0.46
52:26:1472:U:H2'	52:26:1473:G:H8	1.78	0.46
52:26:336:A:H2'	52:26:337:G:H8	1.80	0.46
52:26:370:C:H2'	52:26:371:A:C8	2.50	0.46
52:26:686:U:H2'	52:26:687:A:C8	2.51	0.46
52:26:705:G:H2'	52:26:706:A:H5'	1.96	0.46
53:27:1014:A:O2'	53:27:1015:U:H5'	2.16	0.46
53:27:135:U:O5'	53:27:135:U:H6	1.98	0.46
53:27:1448:G:H2'	53:27:1449:G:C8	2.50	0.46
53:27:1487:U:H2'	53:27:1488:C:C6	2.51	0.46
53:27:1564:C:H2'	53:27:1565:C:O4'	2.14	0.46
53:27:196:A:C8	53:27:805:G:N7	2.84	0.46
53:27:197:A:C2	53:27:198:C:H1'	2.50	0.46
53:27:2248:C:H2'	53:27:2249:U:O4'	2.15	0.46
3:C:131:THR:HG23	53:27:321:U:H5''	1.98	0.46
53:27:690:G:O2'	53:27:691:C:H5'	2.16	0.46
53:27:895:U:H2'	53:27:897:C:C5	2.51	0.46
54:28:119:A:C2'	54:28:120:A:H5''	2.45	0.46
59:33:671:VAL:HG23	59:33:738:ALA:HA	1.98	0.46
59:33:616:ILE:HG12	59:33:740:ARG:NH2	2.30	0.46
32:6:173:LYS:O	32:6:177:ASN:N	2.49	0.46
33:7:152:VAL:HG22	33:7:197:VAL:HG22	1.97	0.46
33:7:176:THR:HG23	52:26:1111:A:H2	1.80	0.46
35:9:93:VAL:HG13	35:9:110:MET:HE1	1.96	0.46
1:A:68:ARG:CB	1:A:128:THR:HG21	2.45	0.46
1:A:217:PRO:HB3	53:27:1789:A:O3'	2.15	0.46
8:H:52:LEU:HD22	8:H:81:LYS:HB2	1.97	0.46
10:J:15:GLY:O	10:J:47:ILE:HG12	2.16	0.46
11:K:126:ARG:NH1	53:27:635:C:OP2	2.49	0.46
12:L:4:PRO:HB3	12:L:68:PHE:HE2	1.79	0.46
18:R:4:ILE:HG22	18:R:106:VAL:HG13	1.97	0.46
21:U:26:PHE:CE2	21:U:44:HIS:HA	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:32:LEU:HD13	23:W:49:ARG:HH21	1.80	0.46
36:10:15:SER:OG	36:10:44:ARG:HD3	2.16	0.46
52:26:1121:U:H2'	52:26:1122:U:C6	2.51	0.46
52:26:1388:C:H2'	52:26:1389:C:H6	1.81	0.46
52:26:1496:C:H2'	52:26:1497:G:O4'	2.16	0.46
52:26:782:A:H4'	52:26:1514:G:O2'	2.16	0.46
52:26:252:U:C2	52:26:253:A:N7	2.83	0.46
52:26:876:C:H2'	52:26:877:G:H8	1.81	0.46
52:26:986:U:H2'	52:26:987:G:H8	1.81	0.46
53:27:1138:G:H2'	53:27:1139:G:O4'	2.15	0.46
53:27:1168:G:H2'	53:27:1169:A:C8	2.51	0.46
53:27:1208:C:H2'	53:27:1209:U:O4'	2.15	0.46
53:27:123:G:H2'	53:27:124:G:C8	2.50	0.46
53:27:1711:A:H2'	53:27:1712:U:C6	2.51	0.46
53:27:1721:G:H2'	53:27:1738:G:N2	2.31	0.46
53:27:1857:G:H21	53:27:1884:G:H2'	1.78	0.46
53:27:2079:U:H2'	53:27:2080:A:O4'	2.15	0.46
53:27:2327:A:H2'	53:27:2328:A:H8	1.73	0.46
53:27:2475:C:N4	53:27:2529:G:H22	2.13	0.46
53:27:2521:C:O2'	53:27:2522:U:H5'	2.16	0.46
53:27:1638:C:H5''	53:27:2710:C:H1'	1.98	0.46
53:27:422:A:H3'	53:27:423:A:H8	1.81	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	0.46
59:33:407:TYR:O	59:33:458:GLY:HA2	2.15	0.46
59:33:669:VAL:HG23	59:33:740:ARG:HA	1.97	0.46
32:6:212:TYR:O	32:6:216:VAL:HG23	2.15	0.46
34:8:181:PHE:HE1	34:8:185:PRO:HD3	1.80	0.46
1:A:91:ALA:HB3	1:A:103:ILE:HD12	1.96	0.46
1:A:144:GLU:CA	1:A:151:GLY:HA2	2.42	0.46
1:A:159:THR:O	1:A:160:TYR:HB3	2.15	0.46
2:B:178:VAL:HG12	2:B:179:ARG:N	2.30	0.46
3:C:21:ARG:HD3	3:C:107:SER:N	2.31	0.46
11:K:78:ARG:O	11:K:81:ASP:N	2.47	0.46
16:P:57:ARG:HH12	53:27:1154:G:P	2.37	0.46
23:W:39:VAL:HG11	23:W:42:GLU:HG2	1.97	0.46
36:10:86:ARG:CZ	36:10:86:ARG:HB2	2.45	0.46
37:11:28:ILE:O	37:11:104:VAL:HG21	2.15	0.46
39:13:90:ASP:CG	39:13:91:GLU:H	2.18	0.46
40:14:5:ARG:HG2	40:14:79:PRO:CG	2.46	0.46
43:17:69:ARG:HH11	43:17:69:ARG:HG2	1.81	0.46
28:2:10:LEU:HA	28:2:49:LYS:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:36:PHE:HB2	51:25:37:TYR:H	1.48	0.46
52:26:1426:G:H2'	52:26:1427:C:C6	2.51	0.46
52:26:149:A:N3	52:26:149:A:H2'	2.31	0.46
52:26:314:C:O2'	52:26:315:A:H5'	2.16	0.46
52:26:484:G:H4'	52:26:485:U:H5''	1.98	0.46
52:26:509:A:C8	52:26:509:A:H3'	2.51	0.46
52:26:543:U:H6	52:26:543:U:O5'	1.99	0.46
52:26:594:U:H2'	52:26:595:A:C8	2.50	0.46
52:26:402:G:H4'	52:26:620:C:O2	2.16	0.46
52:26:759:A:H2'	52:26:760:G:O4'	2.16	0.46
53:27:1172:C:C3'	53:27:1173:U:H5''	2.45	0.46
53:27:1777:U:H6	53:27:1777:U:O5'	1.99	0.46
53:27:1891:G:C6	53:27:1892:C:C4	3.04	0.46
53:27:1992:G:H4'	53:27:1993:U:H5''	1.97	0.46
53:27:2004:G:H2'	53:27:2005:A:O4'	2.16	0.46
53:27:226:A:H3'	53:27:227:A:H8	1.80	0.46
53:27:409:G:H2'	53:27:410:G:H8	1.79	0.46
53:27:674:G:C2	53:27:804:A:C2	3.04	0.46
53:27:971:G:C2'	53:27:972:A:H5'	2.45	0.46
57:31:68:C:H2'	57:31:69:C:C6	2.50	0.46
59:33:621:ILE:HA	59:33:635:ARG:C	2.36	0.46
33:7:93:ILE:O	33:7:93:ILE:HG22	2.15	0.46
35:9:60:GLN:HG3	35:9:61:LYS:N	2.30	0.46
1:A:262:THR:HB	53:27:1800:C:OP2	2.15	0.46
5:E:51:PHE:CE2	5:E:68:ARG:HG3	2.51	0.46
6:F:4:ILE:HD11	6:F:47:PHE:CZ	2.50	0.46
8:H:102:ARG:HA	8:H:105:LEU:HD12	1.98	0.46
9:I:110:PRO:O	9:I:115:GLY:HA3	2.15	0.46
10:J:6:THR:H	10:J:20:MET:HG3	1.81	0.46
12:L:21:ALA:HB2	12:L:97:GLN:HB2	1.97	0.46
16:P:73:ILE:HG13	16:P:77:LYS:HE3	1.97	0.46
17:Q:68:ARG:HH11	17:Q:90:ARG:HB2	1.81	0.46
21:U:79:ARG:HG2	21:U:86:LEU:HD23	1.97	0.46
36:10:13:ASP:O	36:10:16:GLU:HB3	2.15	0.46
37:11:142:ARG:HD2	58:32:41:C:O2'	2.15	0.46
51:25:9:GLU:N	51:25:10:PRO:HD2	2.30	0.46
52:26:1005:A:H2'	52:26:1006:G:C4'	2.45	0.46
52:26:1109:C:H2'	52:26:1110:A:H8	1.81	0.46
52:26:1346:A:HO2'	52:26:1348:U:H6	1.62	0.46
52:26:1420:U:H2'	52:26:1421:G:C8	2.50	0.46
52:26:279:A:H5'	52:26:281:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2001:C:H2'	53:27:2002:G:H8	1.81	0.46
53:27:2146:C:H4'	53:27:2147:A:N7	2.30	0.46
28:2:25:ASN:ND2	53:27:2285:C:OP1	2.43	0.46
53:27:2331:G:H2'	53:27:2332:C:H6	1.81	0.46
53:27:2703:C:H2'	53:27:2704:C:C6	2.51	0.46
53:27:2832:U:H1'	53:27:2834:G:C4	2.51	0.46
53:27:393:C:O2'	53:27:394:C:H5'	2.16	0.46
53:27:538:A:N6	53:27:555:G:H1'	2.31	0.46
3:C:97:ASN:ND2	53:27:606:U:H5''	2.30	0.46
53:27:630:G:N2	53:27:632:A:H3'	2.30	0.46
53:27:877:A:H1'	53:27:900:A:N6	2.31	0.46
54:28:48:U:H2'	54:28:49:C:C6	2.51	0.46
59:33:303:LEU:HD12	59:33:304:PRO:HD2	1.97	0.46
59:33:327:LEU:CD2	59:33:332:LYS:HB3	2.45	0.46
59:33:49:HIS:NE2	59:33:55:LEU:HG	2.30	0.46
59:33:38:THR:HG21	59:33:77:ARG:CG	2.46	0.46
32:6:27:LYS:HB3	32:6:28:PRO:HD3	1.97	0.46
33:7:91:ALA:O	33:7:95:GLY:N	2.49	0.46
2:B:108:ASP:OD2	2:B:206:ALA:HA	2.15	0.46
3:C:27:LEU:HD22	53:27:600:G:H4'	1.98	0.46
4:D:19:PHE:O	4:D:21:TYR:N	2.49	0.46
9:I:69:ARG:HA	9:I:89:PHE:CD2	2.51	0.46
9:I:80:HIS:O	9:I:81:ILE:C	2.54	0.46
10:J:35:VAL:HG22	10:J:69:VAL:CG1	2.46	0.46
11:K:100:ILE:HG13	11:K:101:ILE:HG23	1.98	0.46
13:M:79:LEU:O	13:M:80:PHE:HB2	2.16	0.46
15:O:71:ARG:HG2	15:O:72:VAL:O	2.16	0.46
18:R:77:ASP:OD1	18:R:102:HIS:HB2	2.16	0.46
19:S:10:VAL:HA	19:S:35:ALA:CB	2.42	0.46
21:U:31:TYR:O	21:U:93:ARG:N	2.40	0.46
25:Y:5:LYS:HB2	25:Y:57:GLU:HG2	1.98	0.46
37:11:65:LEU:CD2	37:11:69:ARG:HH21	2.28	0.46
38:12:6:ILE:O	38:12:10:LEU:HG	2.16	0.46
38:12:86:LYS:HD2	38:12:90:GLU:CG	2.44	0.46
43:17:18:LEU:HD12	43:17:33:LEU:HD11	1.98	0.46
46:20:5:ARG:NH2	46:20:23:ASP:O	2.49	0.46
50:24:67:HIS:CE1	52:26:132:C:H5''	2.50	0.46
52:26:1349:A:C3'	52:26:1350:A:H8	2.28	0.46
52:26:1351:U:H2'	52:26:1352:C:H6	1.81	0.46
52:26:971:G:C5	52:26:1365:G:H5'	2.51	0.46
52:26:1454:G:H2'	52:26:1455:G:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:576:C:OP2	52:26:577:G:H5''	2.16	0.46
52:26:62:U:H2'	52:26:63:C:H6	1.72	0.46
52:26:659:U:O2'	52:26:660:C:H5'	2.16	0.46
52:26:811:C:H4'	52:26:900:A:N6	2.31	0.46
53:27:1149:G:H2'	53:27:1150:C:C6	2.51	0.46
53:27:1429:G:H2'	53:27:1430:G:H8	1.80	0.46
53:27:1919:A:H2'	53:27:1919:A:N3	2.31	0.46
53:27:2018:G:C6	53:27:2019:A:C5	3.03	0.46
53:27:388:G:N7	53:27:390:U:H2'	2.31	0.46
53:27:614:A:H4'	53:27:616:A:N7	2.30	0.46
56:30:21:A:H2'	56:30:22:G:C8	2.51	0.46
59:33:24:LEU:HD12	59:33:24:LEU:N	2.30	0.46
59:33:432:HIS:CD2	59:33:433:SER:N	2.84	0.46
59:33:43:LEU:HA	59:33:56:LEU:CD1	2.39	0.46
29:3:34:ARG:HB3	29:3:42:LEU:HD12	1.98	0.46
30:4:15:LYS:HE2	30:4:19:GLY:HA2	1.97	0.46
34:8:119:HIS:CG	52:26:438:U:H4'	2.51	0.46
1:A:66:PHE:O	1:A:68:ARG:HG2	2.15	0.46
2:B:40:LEU:CD1	2:B:40:LEU:H	2.27	0.46
7:G:93:ALA:O	7:G:95:LEU:N	2.49	0.46
8:H:72:THR:CB	8:H:111:THR:HG22	2.46	0.46
8:H:45:THR:HG22	8:H:48:ILE:HG13	1.97	0.46
19:S:31:VAL:HG12	19:S:84:TYR:HA	1.98	0.46
19:S:63:VAL:HG21	19:S:80:TRP:CH2	2.51	0.46
23:W:37:PHE:CE2	23:W:48:LEU:HD12	2.51	0.46
45:19:55:LEU:O	45:19:58:MET:HG2	2.16	0.46
49:23:5:LYS:HB2	49:23:6:LYS:HZ3	1.81	0.46
52:26:11:G:H2'	52:26:12:U:O4'	2.15	0.46
52:26:284:C:H2'	52:26:285:C:C6	2.50	0.46
52:26:433:G:H2'	52:26:434:U:C6	2.51	0.46
52:26:541:G:H2'	52:26:542:G:O4'	2.16	0.46
52:26:784:A:H2'	52:26:785:G:H8	1.76	0.46
42:16:4:ASN:HD22	52:26:880:C:P	2.38	0.46
52:26:937:A:H2'	52:26:938:A:C8	2.49	0.46
53:27:1086:A:H4'	53:27:1103:A:C2	2.51	0.46
53:27:1255:U:C5'	53:27:1256:G:H5''	2.46	0.46
53:27:1317:G:H2'	53:27:1318:U:C6	2.51	0.46
53:27:1390:U:H6	53:27:1390:U:O5'	1.99	0.46
53:27:1494:A:C2	53:27:1579:A:H1'	2.50	0.46
53:27:1494:A:H2'	53:27:1495:A:H8	1.80	0.46
53:27:1528:A:H2'	53:27:1529:G:H5'	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1641:A:C8	53:27:1642:G:C8	3.04	0.46
53:27:1918:A:H1'	53:27:1919:A:N7	2.31	0.46
53:27:19:A:O2'	53:27:20:C:H5'	2.16	0.46
53:27:2263:C:H2'	53:27:2264:C:H6	1.81	0.46
53:27:2343:U:H2'	53:27:2344:U:C6	2.51	0.46
53:27:2489:U:H2'	53:27:2490:G:O4'	2.16	0.46
53:27:2787:C:O2'	53:27:2788:C:H5'	2.16	0.46
53:27:2867:G:O2'	53:27:2868:A:P	2.73	0.46
53:27:488:G:H1'	53:27:492:A:H61	1.80	0.46
53:27:598:U:H2'	53:27:599:A:H8	1.79	0.46
53:27:633:A:H2'	53:27:634:C:C5'	2.46	0.46
53:27:681:G:C4	53:27:682:G:C8	3.04	0.46
53:27:693:A:H2'	53:27:694:U:H6	1.78	0.46
53:27:734:A:H2'	53:27:735:A:H8	1.81	0.46
53:27:736:C:H2'	53:27:737:C:C6	2.49	0.46
53:27:893:C:HO2'	59:33:643:GLU:CD	2.19	0.46
57:31:10:G:N2	57:31:26:G:H1'	2.30	0.46
59:33:497:ARG:O	59:33:501:ARG:N	2.44	0.46
29:3:34:ARG:NH2	53:27:466:A:P	2.89	0.46
59:33:725:VAL:O	59:33:729:LEU:N	2.47	0.46
32:6:17:HIS:CG	32:6:18:GLN:H	2.33	0.46
33:7:48:LYS:HD3	33:7:48:LYS:HA	1.81	0.46
34:8:116:LEU:HB3	34:8:122:ILE:CD1	2.23	0.46
34:8:57:LYS:HD2	34:8:203:TYR:OH	2.16	0.46
2:B:56:LYS:HB2	2:B:59:ARG:HG2	1.97	0.46
7:G:18:VAL:HA	7:G:86:MET:CE	2.44	0.46
8:H:73:PRO:HA	8:H:74:PRO:HD3	1.77	0.46
9:I:38:GLY:O	9:I:44:TYR:HB2	2.15	0.46
11:K:12:SER:C	11:K:13:LYS:HD2	2.36	0.46
11:K:75:ALA:H	11:K:105:ILE:CG2	2.28	0.46
13:M:9:GLN:O	13:M:17:ARG:HD3	2.16	0.46
16:P:40:LYS:HG3	16:P:44:TYR:CE2	2.51	0.46
20:T:25:LYS:O	20:T:26:ASN:HB3	2.15	0.46
20:T:36:GLU:H	20:T:36:GLU:CD	2.20	0.46
39:13:30:ASN:O	39:13:32:ARG:N	2.47	0.46
42:16:120:ARG:HG3	42:16:121:PRO:HD2	1.97	0.46
45:19:10:ILE:HA	45:19:13:GLU:OE1	2.16	0.46
48:22:35:SER:HA	48:22:71:ASP:OD2	2.16	0.46
51:25:67:THR:HG23	52:26:1167:A:N7	2.31	0.46
52:26:1051:C:H2'	52:26:1052:U:O4'	2.15	0.46
52:26:1074:G:H2'	52:26:1075:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1387:G:H2'	52:26:1388:C:H6	1.81	0.46
52:26:1514:G:H2'	52:26:1515:G:H8	1.81	0.46
52:26:567:G:H2'	52:26:568:G:O4'	2.15	0.46
52:26:68:G:H2'	52:26:69:G:O4'	2.16	0.46
52:26:711:G:H2'	52:26:712:A:H8	1.81	0.46
53:27:1065:U:H1'	53:27:1074:G:H22	1.81	0.46
21:U:83:LYS:NZ	53:27:1119:U:OP1	2.49	0.46
53:27:1555:G:H5'	53:27:1555:G:H8	1.81	0.46
53:27:1878:G:H2'	53:27:1879:C:C6	2.51	0.46
53:27:2011:U:H2'	53:27:2012:G:O4'	2.16	0.46
53:27:2040:G:H2'	53:27:2041:U:C6	2.50	0.46
53:27:216:A:H2'	53:27:217:A:H8	1.78	0.46
53:27:2632:A:H2'	53:27:2633:G:C8	2.51	0.46
53:27:2644:G:C2'	53:27:2645:G:H5'	2.46	0.46
53:27:455:C:O2	53:27:473:G:H5'	2.16	0.46
53:27:622:G:H2'	53:27:623:C:H6	1.81	0.46
53:27:775:G:N3	53:27:777:G:C6	2.84	0.46
53:27:831:G:C6	53:27:832:U:C4	3.04	0.46
54:28:94:A:H2'	54:28:95:U:O4'	2.16	0.46
56:30:54:U:H3'	56:30:55:U:C5'	2.46	0.46
59:33:624:PHE:O	59:33:631:ILE:HG23	2.16	0.46
59:33:60:VAL:O	59:33:63:VAL:CG2	2.64	0.46
34:8:120:LYS:HB3	34:8:128:VAL:CG2	2.44	0.46
34:8:171:GLU:OE1	34:8:182:LYS:HE3	2.16	0.46
35:9:122:VAL:O	35:9:122:VAL:CG2	2.63	0.46
1:A:131:MET:HE2	1:A:187:CYS:HB2	1.98	0.46
1:A:52:HIS:HD1	53:27:1824:G:P	2.38	0.46
4:D:29:ARG:HH11	4:D:29:ARG:HG2	1.81	0.46
11:K:28:GLY:O	11:K:29:LYS:O	2.34	0.46
15:O:4:ILE:O	15:O:8:GLU:HG3	2.16	0.46
16:P:41:ALA:O	16:P:44:TYR:HB2	2.16	0.46
17:Q:14:VAL:HG23	17:Q:18:GLN:CG	2.46	0.46
23:W:26:ARG:NE	23:W:28:PHE:HE1	2.14	0.46
40:14:5:ARG:HB2	40:14:79:PRO:HD3	1.98	0.45
46:20:67:ILE:HG23	46:20:71:VAL:CB	2.39	0.45
49:23:44:ILE:HG23	49:23:63:ASP:H	1.82	0.45
50:24:26:MET:HE1	50:24:56:ILE:HD11	1.97	0.45
52:26:255:G:H2'	52:26:256:U:C6	2.51	0.45
52:26:383:A:O5'	52:26:383:A:H8	1.99	0.45
52:26:416:G:H2'	52:26:417:G:H8	1.81	0.45
52:26:965:U:H5''	52:26:966:G:OP1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:443:A:N3	53:27:1201:U:H1'	2.31	0.45
53:27:1219:U:H2'	53:27:1220:G:H8	1.81	0.45
53:27:1682:G:C4	53:27:1757:A:H1'	2.51	0.45
53:27:563:A:C6	53:27:2018:G:C5	3.04	0.45
53:27:2292:U:H2'	53:27:2293:G:C8	2.49	0.45
53:27:2386:A:H2'	53:27:2387:U:C6	2.52	0.45
12:L:45:GLN:NE2	53:27:2485:G:H5''	2.29	0.45
53:27:2544:G:C4	53:27:2545:G:C8	3.04	0.45
53:27:2564:A:H2'	53:27:2565:A:O4'	2.16	0.45
20:T:96:LYS:HD3	53:27:300:A:P	2.56	0.45
53:27:343:C:C2'	53:27:344:A:H5'	2.46	0.45
29:3:37:LYS:HE3	53:27:469:G:O6	2.16	0.45
53:27:477:A:H2'	53:27:478:A:O4'	2.16	0.45
53:27:738:G:C2	53:27:759:G:C4	3.03	0.45
53:27:780:G:H2'	53:27:782:A:N7	2.31	0.45
53:27:884:U:H2'	53:27:885:C:C6	2.50	0.45
52:26:1054:C:N3	56:30:34:G:H1'	2.31	0.45
59:33:241:LYS:HD3	59:33:246:LYS:HZ2	1.77	0.45
30:4:51:LYS:HG3	30:4:52:GLY:N	2.30	0.45
1:A:12:ARG:NH1	1:A:15:VAL:HG11	2.31	0.45
3:C:40:ARG:HD2	3:C:92:HIS:CE1	2.50	0.45
7:G:96:PHE:CE1	7:G:125:ARG:HB2	2.46	0.45
7:G:54:VAL:HG22	7:G:84:TYR:HB2	1.98	0.45
8:H:56:VAL:O	8:H:56:VAL:HG13	2.15	0.45
8:H:85:ILE:HG21	8:H:97:VAL:HG23	1.98	0.45
10:J:70:ARG:HD3	53:27:2728:U:OP1	2.16	0.45
15:O:64:SER:O	15:O:65:ASN:C	2.55	0.45
16:P:102:LYS:O	16:P:105:PHE:HB3	2.15	0.45
16:P:23:TYR:HD1	53:27:533:G:H5'	1.80	0.45
19:S:2:ILE:HD11	19:S:6:ARG:HH21	1.81	0.45
42:16:49:ARG:HB2	42:16:89:LEU:HD21	1.99	0.45
42:16:73:LEU:HD23	42:16:79:ILE:HG21	1.98	0.45
47:21:56:ASP:OD1	47:21:81:ALA:HB2	2.17	0.45
52:26:10:A:H2'	52:26:11:G:H8	1.81	0.45
52:26:1488:G:H2'	52:26:1489:G:C8	2.51	0.45
52:26:1522:U:O2'	52:26:1523:G:H5'	2.16	0.45
52:26:158:G:H2'	52:26:159:G:O4'	2.16	0.45
52:26:294:U:H6	52:26:294:U:O5'	1.99	0.45
52:26:576:C:H3'	52:26:577:G:H5''	1.97	0.45
52:26:744:C:H2'	52:26:745:G:H8	1.81	0.45
52:26:868:C:H2'	52:26:869:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:901:A:H8	52:26:901:A:O5'	2.00	0.45
53:27:1300:G:N2	53:27:1634:A:C2	2.84	0.45
53:27:1505:A:H2'	53:27:1506:U:O4'	2.16	0.45
53:27:1985:C:H2'	53:27:1986:C:H6	1.80	0.45
53:27:2075:U:C4	53:27:2238:G:C6	3.04	0.45
53:27:2374:C:H2'	53:27:2375:G:C8	2.51	0.45
1:A:235:GLU:HB3	53:27:2599:G:N7	2.31	0.45
45:19:88:ARG:NE	53:27:713:G:H3'	2.30	0.45
53:27:759:G:H2'	53:27:760:G:C8	2.50	0.45
53:27:818:G:C2'	53:27:1187:G:H22	2.29	0.45
57:31:22:G:H2'	57:31:23:C:C6	2.51	0.45
58:32:14:A:H2'	58:32:15:G:O4'	2.16	0.45
59:33:101:LYS:CA	59:33:104:VAL:HG12	2.47	0.45
59:33:221:ARG:NE	59:33:224:ASP:OD2	2.49	0.45
59:33:232:PHE:O	59:33:236:LEU:HG	2.16	0.45
59:33:259:ILE:O	59:33:263:MET:HG3	2.17	0.45
59:33:27:THR:CG2	59:33:31:SER:HB2	2.45	0.45
59:33:434:ASP:OD1	59:33:435:VAL:N	2.49	0.45
30:4:22:LYS:HA	30:4:47:ALA:O	2.17	0.45
33:7:41:TYR:OH	33:7:89:VAL:HG21	2.16	0.45
35:9:132:PRO:O	35:9:136:VAL:HG23	2.16	0.45
35:9:27:GLY:H	52:26:1398:A:N6	2.14	0.45
35:9:54:GLU:HG2	35:9:56:PRO:HD2	1.99	0.45
4:D:114:ARG:HH11	43:17:70:ARG:NH1	2.09	0.45
8:H:78:LEU:HB3	8:H:108:ILE:CD1	2.47	0.45
15:O:30:TRP:CE3	15:O:37:LYS:HG2	2.52	0.45
36:10:38:ARG:NE	36:10:97:THR:HA	2.24	0.45
37:11:14:ASP:OD1	37:11:43:TYR:OH	2.28	0.45
37:11:71:THR:O	37:11:90:VAL:HG12	2.17	0.45
37:11:91:ARG:O	37:11:95:ARG:N	2.46	0.45
39:13:112:ARG:NH2	40:14:64:GLN:OE1	2.49	0.45
40:14:68:ARG:HH12	40:14:70:HIS:CE1	2.33	0.45
41:15:58:THR:CG2	41:15:59:PRO:HD2	2.45	0.45
44:18:92:ILE:HG21	44:18:95:LEU:HD22	1.99	0.45
50:24:70:LYS:HG3	50:24:73:ARG:NH2	2.32	0.45
51:25:29:ALA:HA	51:25:32:ARG:CD	2.46	0.45
52:26:1066:C:H2'	52:26:1067:A:C8	2.50	0.45
52:26:1328:C:H2'	52:26:1329:A:O4'	2.17	0.45
52:26:385:C:H2'	52:26:386:C:H6	1.80	0.45
52:26:495:A:H4'	52:26:496:A:C5'	2.46	0.45
42:16:11:ARG:CG	52:26:562:U:H1'	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:692:U:H1'	52:26:695:A:N7	2.32	0.45
52:26:962:C:O2'	52:26:963:G:H5'	2.16	0.45
53:27:1007:C:H2'	53:27:1008:A:C8	2.52	0.45
53:27:1044:C:H4'	53:27:1048:A:C1'	2.46	0.45
53:27:1133:A:H4'	53:27:1134:A:C5'	2.44	0.45
53:27:122:G:O5'	53:27:122:G:H8	1.99	0.45
53:27:1363:C:H2'	53:27:1364:G:C8	2.49	0.45
53:27:1587:G:H2'	53:27:1588:G:C8	2.51	0.45
53:27:1721:G:HO2'	53:27:1722:A:H8	1.63	0.45
1:A:207:ALA:CB	53:27:1790:C:H4'	2.45	0.45
53:27:2034:U:O2'	53:27:2035:G:H5'	2.15	0.45
53:27:2175:C:H2'	53:27:2176:A:N7	2.30	0.45
53:27:679:C:H2'	53:27:680:C:H6	1.76	0.45
53:27:72:U:O2'	53:27:73:A:H5'	2.16	0.45
53:27:770:G:H2'	53:27:771:G:H8	1.80	0.45
53:27:882:G:H2'	53:27:883:G:O4'	2.16	0.45
53:27:954:G:C6	53:27:955:U:C4	3.04	0.45
55:29:16:A:O2'	55:29:17:U:H5'	2.17	0.45
59:33:157:ILE:HG13	59:33:158:ALA:N	2.31	0.45
31:5:14:CYS:HG	31:5:27:CYS:HG	1.63	0.45
32:6:163:ILE:O	32:6:185:ILE:HG23	2.16	0.45
33:7:22:PHE:CD2	40:14:97:ASP:HB2	2.52	0.45
4:D:16:MET:CE	4:D:24:VAL:HA	2.47	0.45
5:E:27:GLY:H	5:E:78:VAL:HB	1.81	0.45
5:E:90:GLY:HA3	5:E:93:TYR:HE2	1.81	0.45
8:H:78:LEU:HB3	8:H:108:ILE:HD13	1.97	0.45
9:I:135:GLN:OE1	9:I:135:GLN:N	2.49	0.45
11:K:37:GLY:HA2	53:27:831:G:H5''	1.98	0.45
24:X:18:LEU:HD11	24:X:22:LEU:HD13	1.98	0.45
25:Y:35:VAL:HG22	25:Y:36:GLU:N	2.31	0.45
36:10:37:HIS:O	36:10:39:LEU:N	2.50	0.45
37:11:112:ASP:OD2	37:11:118:ARG:HG2	2.15	0.45
39:13:38:PHE:O	39:13:38:PHE:CG	2.69	0.45
41:15:30:ILE:HD12	41:15:45:THR:HG22	1.97	0.45
43:17:7:ASN:ND2	43:17:17:ALA:O	2.46	0.45
28:2:11:VAL:HG12	28:2:12:SER:N	2.31	0.45
47:21:30:HIS:CG	47:21:31:PRO:HD2	2.51	0.45
44:18:8:ARG:NE	52:26:1217:C:OP1	2.49	0.45
52:26:1309:G:H2'	52:26:1310:G:H8	1.80	0.45
52:26:1414:U:H2'	52:26:1415:G:C8	2.50	0.45
52:26:224:U:H2'	52:26:225:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:506:G:H2'	52:26:507:C:O4'	2.16	0.45
52:26:525:C:O5'	52:26:525:C:H6	2.00	0.45
52:26:574:A:C2	52:26:883:C:H1'	2.52	0.45
52:26:709:U:O2'	52:26:710:G:H5'	2.17	0.45
52:26:714:G:C2'	52:26:715:A:C8	2.98	0.45
52:26:828:U:H3	52:26:859:G:H1'	1.82	0.45
53:27:1259:G:C4	53:27:1260:A:C8	3.05	0.45
53:27:1317:G:H2'	53:27:1318:U:H6	1.82	0.45
53:27:1637:A:H2'	53:27:1638:C:H6	1.80	0.45
53:27:1703:G:H2'	53:27:1704:C:C6	2.52	0.45
53:27:2119:A:N6	53:27:2169:A:H61	2.14	0.45
53:27:2552:U:C5	53:27:2554:U:H5'	2.50	0.45
53:27:254:G:HO2'	53:27:255:A:H5''	1.82	0.45
53:27:2743:U:H2'	53:27:2744:G:H5''	1.98	0.45
53:27:586:A:N1	53:27:809:G:O2'	2.42	0.45
53:27:721:A:H2'	53:27:722:A:H8	1.82	0.45
53:27:730:A:OP2	53:27:731:C:OP2	2.35	0.45
55:29:13:A:H2'	55:29:14:A:H5'	1.98	0.45
30:4:41:ARG:NH1	53:27:2351:G:O6	2.49	0.45
35:9:108:GLY:O	35:9:110:MET:N	2.48	0.45
7:G:11:ILE:HD11	7:G:66:GLY:HA3	1.98	0.45
9:I:140:LEU:HG	9:I:142:ILE:HG22	1.97	0.45
10:J:48:PRO:HB2	10:J:49:ARG:NH1	2.32	0.45
12:L:20:LEU:N	12:L:20:LEU:HD12	2.31	0.45
12:L:70:ASP:OD1	12:L:70:ASP:C	2.54	0.45
17:Q:49:ILE:HG22	17:Q:53:PHE:C	2.37	0.45
19:S:17:SER:O	19:S:20:ALA:HB3	2.17	0.45
23:W:39:VAL:O	23:W:43:LYS:N	2.50	0.45
36:10:22:ILE:O	36:10:26:THR:HG22	2.16	0.45
38:12:4:ASP:CG	38:12:80:PRO:HD3	2.36	0.45
39:13:44:ARG:CZ	39:13:44:ARG:HB3	2.42	0.45
39:13:46:VAL:HA	39:13:49:GLN:HB2	1.98	0.45
39:13:16:ALA:CB	39:13:66:VAL:HA	2.46	0.45
40:14:22:THR:HG21	40:14:39:PRO:CG	2.47	0.45
43:17:15:VAL:HG23	43:17:16:ILE:H	1.81	0.45
46:20:46:LYS:CG	46:20:47:GLU:H	2.20	0.45
46:20:48:GLU:OE2	46:20:51:ARG:N	2.50	0.45
28:2:24:LYS:HZ2	28:2:26:LYS:HA	1.80	0.45
52:26:1193:G:O2'	52:26:1194:U:H5'	2.17	0.45
52:26:978:A:C5	52:26:1318:A:C6	3.05	0.45
52:26:1342:C:O2'	52:26:1343:G:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1405:G:H21	52:26:1518:A:H1'	1.82	0.45
52:26:1466:C:H2'	52:26:1467:C:O4'	2.17	0.45
52:26:1526:G:H2'	52:26:1527:U:H6	1.82	0.45
52:26:205:A:H2'	52:26:206:C:O4'	2.16	0.45
53:27:1462:C:H2'	53:27:1463:C:H6	1.82	0.45
53:27:1649:G:H2'	53:27:1650:A:C8	2.52	0.45
53:27:1842:G:H2'	53:27:1843:C:O4'	2.16	0.45
53:27:1948:G:H2'	53:27:1949:G:H8	1.80	0.45
53:27:2006:C:H5'	53:27:2049:G:OP1	2.15	0.45
53:27:2335:A:C8	53:27:2337:G:C5	3.04	0.45
53:27:242:G:O2'	53:27:243:U:P	2.75	0.45
53:27:2643:G:H2'	53:27:2644:G:H8	1.81	0.45
53:27:531:C:H5''	53:27:532:A:C2	2.52	0.45
53:27:613:A:N3	53:27:613:A:C3'	2.77	0.45
53:27:766:U:H2'	53:27:767:U:C6	2.52	0.45
53:27:783:A:N7	53:27:785:G:C8	2.84	0.45
9:I:2:LYS:HA	53:27:995:C:N4	2.32	0.45
4:D:23:SER:OG	54:28:55:U:H4'	2.16	0.45
59:33:191:ILE:CG2	59:33:194:LEU:HD13	2.47	0.45
32:6:148:GLY:HA2	32:6:151:LYS:HB2	1.99	0.45
35:9:59:ILE:HG13	35:9:60:GLN:N	2.32	0.45
1:A:163:ILE:HA	1:A:173:LEU:CD2	2.47	0.45
8:H:24:GLY:N	8:H:25:PRO:CD	2.79	0.45
11:K:85:VAL:HG22	11:K:98:ALA:HB2	1.98	0.45
12:L:20:LEU:HD23	21:U:81:PRO:CG	2.41	0.45
13:M:53:THR:OG1	53:27:2840:C:H5''	2.15	0.45
15:O:22:GLY:N	15:O:46:VAL:O	2.44	0.45
18:R:55:ILE:O	18:R:58:ALA:N	2.49	0.45
19:S:50:LEU:N	19:S:50:LEU:CD1	2.80	0.45
26:Z:7:PRO:O	26:Z:9:TYR:N	2.50	0.45
39:13:10:ARG:NH2	52:26:1149:C:OP2	2.48	0.45
40:14:59:LYS:HE3	40:14:62:ARG:NH2	2.32	0.45
41:15:127:ARG:NH1	52:26:1522:U:OP1	2.48	0.45
43:17:104:ASN:C	43:17:106:ARG:H	2.20	0.45
44:18:52:ARG:CD	52:26:1317:C:N3	2.80	0.45
49:23:13:HIS:HB2	52:26:1014:A:H5''	1.98	0.45
52:26:1129:C:H5	52:26:1139:G:HO2'	1.63	0.45
52:26:116:A:H2'	52:26:117:G:O4'	2.17	0.45
52:26:1429:A:H2'	52:26:1430:A:C8	2.52	0.45
52:26:821:G:H2'	52:26:822:U:C6	2.52	0.45
52:26:836:G:H2'	52:26:837:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:2:ARG:HD2	53:27:1248:G:N1	2.32	0.45
53:27:1372:U:O2'	53:27:1373:A:H5'	2.17	0.45
53:27:1792:G:H2'	53:27:1793:C:C6	2.51	0.45
53:27:2755:C:O5'	53:27:2755:C:H6	1.99	0.45
53:27:2827:C:H2'	53:27:2828:G:H8	1.81	0.45
53:27:2863:C:H2'	53:27:2864:G:C8	2.52	0.45
53:27:341:C:H2'	53:27:342:A:O4'	2.17	0.45
53:27:413:C:H2'	53:27:414:C:H6	1.81	0.45
53:27:562:U:N1	53:27:2036:C:H5'	2.31	0.45
53:27:664:G:H2'	53:27:665:U:C6	2.52	0.45
53:27:786:C:O2'	53:27:787:C:H5'	2.16	0.45
56:30:22:G:H2'	56:30:23:A:C8	2.50	0.45
59:33:197:GLU:CG	59:33:201:TYR:CE2	2.92	0.45
59:33:30:LYS:C	59:33:33:GLU:HG2	2.37	0.45
59:33:286:LEU:CD2	59:33:343:MET:HE1	2.46	0.45
32:6:209:VAL:HA	32:6:212:TYR:CD2	2.48	0.45
32:6:209:VAL:O	32:6:213:LEU:N	2.44	0.45
32:6:68:PHE:CE2	32:6:88:GLN:HB2	2.52	0.45
33:7:102:ILE:HD12	33:7:102:ILE:C	2.36	0.45
35:9:51:LYS:NZ	52:26:1081:A:N7	2.65	0.45
1:A:116:GLN:NE2	1:A:121:ALA:HA	2.31	0.45
1:A:176:ARG:HG2	53:27:1820:U:OP1	2.16	0.45
1:A:257:ARG:NH2	1:A:262:THR:OG1	2.50	0.45
1:A:259:ASN:O	1:A:260:LYS:HB2	2.17	0.45
2:B:46:ARG:NH2	2:B:88:GLU:O	2.49	0.45
4:D:62:GLN:HE21	4:D:88:VAL:CG1	2.29	0.45
6:F:67:ALA:CB	6:F:138:VAL:HG21	2.46	0.45
7:G:26:VAL:HG11	7:G:77:VAL:CG1	2.43	0.45
8:H:100:ILE:HD11	8:H:137:LEU:HD13	1.97	0.45
8:H:123:ALA:O	8:H:126:ARG:HB2	2.16	0.45
11:K:14:LYS:HZ1	53:27:1194:A:P	2.39	0.45
14:N:103:VAL:HG23	14:N:104:GLN:N	2.31	0.45
20:T:36:GLU:O	20:T:38:ILE:HG12	2.16	0.45
26:Z:35:ASP:CG	26:Z:36:VAL:N	2.65	0.45
37:11:114:SER:O	37:11:117:LEU:HB3	2.16	0.45
41:15:71:ASP:O	41:15:72:ALA:CB	2.65	0.45
45:19:25:GLU:HA	45:19:80:LEU:CD2	2.46	0.45
47:21:13:SER:OG	47:21:15:LYS:HG2	2.16	0.45
47:21:20:ILE:O	47:21:45:VAL:HB	2.16	0.45
50:24:17:ARG:HG3	50:24:18:LYS:H	1.82	0.45
52:26:1426:G:H2'	52:26:1427:C:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:461:A:H2'	52:26:462:G:C8	2.52	0.45
52:26:542:G:H2'	52:26:543:U:H6	1.81	0.45
52:26:597:G:C2'	52:26:598:U:H5'	2.45	0.45
52:26:605:U:H2'	52:26:606:G:O4'	2.16	0.45
53:27:1086:A:N3	53:27:1086:A:H3'	2.31	0.45
53:27:1179:G:H3'	53:27:1180:U:H4'	1.99	0.45
53:27:1882:U:H2'	53:27:1883:U:H6	1.82	0.45
53:27:1980:G:HO2'	53:27:1982:U:H6	1.62	0.45
53:27:2144:G:H21	53:27:2148:G:H1	1.64	0.45
53:27:2226:C:H3'	53:27:2227:A:C8	2.47	0.45
53:27:2322:A:O2'	53:27:2323:G:H5'	2.16	0.45
53:27:2366:A:H2'	53:27:2367:G:O4'	2.17	0.45
53:27:2441:U:O2'	53:27:2442:C:H5'	2.17	0.45
53:27:2634:A:H2'	53:27:2635:A:O4'	2.17	0.45
53:27:2676:C:H2'	53:27:2677:G:C8	2.51	0.45
53:27:35:G:H1'	53:27:454:A:C4	2.52	0.45
53:27:396:G:C6	53:27:397:U:C4	3.04	0.45
53:27:600:G:H2'	53:27:601:C:C6	2.52	0.45
53:27:588:U:O4	53:27:670:A:H1'	2.16	0.45
53:27:67:U:H2'	53:27:68:G:O4'	2.16	0.45
29:3:1:MET:HE1	53:27:752:A:OP2	2.17	0.45
56:30:15:G:H2'	56:30:16:U:C4'	2.46	0.45
52:26:1338:G:H21	57:31:41:C:H1'	1.82	0.45
59:33:276:VAL:O	59:33:276:VAL:HG22	2.16	0.45
29:3:34:ARG:CD	29:3:39:ARG:HD2	2.47	0.45
59:33:56:LEU:C	59:33:56:LEU:HD23	2.37	0.45
32:6:103:TRP:CD2	32:6:156:LEU:HD21	2.51	0.45
34:8:195:ASN:HB3	34:8:197:HIS:CD2	2.52	0.45
35:9:47:PHE:CZ	35:9:137:ARG:NH1	2.84	0.45
4:D:59:ILE:HA	4:D:139:GLU:OE2	2.17	0.45
7:G:119:PRO:CG	7:G:120:ALA:H	2.26	0.45
9:I:4:PHE:CG	9:I:5:THR:N	2.85	0.45
12:L:112:LEU:O	12:L:115:GLU:HB3	2.17	0.45
13:M:48:VAL:O	13:M:51:LEU:HB2	2.17	0.45
19:S:10:VAL:HG21	19:S:42:GLU:HG2	1.97	0.45
19:S:74:ILE:O	19:S:74:ILE:HG13	2.17	0.45
20:T:96:LYS:O	20:T:98:ASN:N	2.46	0.45
38:12:52:GLY:HA3	38:12:56:PRO:HA	1.98	0.45
40:14:29:ALA:O	40:14:33:GLY:N	2.40	0.45
41:15:124:LYS:CG	41:15:125:LYS:N	2.77	0.45
41:15:22:ILE:HG21	41:15:95:THR:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:12:SER:HA	28:2:48:TYR:CD1	2.52	0.45
52:26:1299:A:H1'	52:26:1301:U:H1'	1.98	0.45
52:26:1360:A:C2'	52:26:1361:G:H5'	2.47	0.45
52:26:151:A:H2'	52:26:152:A:C5'	2.47	0.45
52:26:152:A:H3'	52:26:153:C:C6	2.51	0.45
52:26:158:G:H2'	52:26:159:G:C8	2.51	0.45
52:26:116:A:H61	52:26:313:A:H1'	1.82	0.45
52:26:495:A:H4'	52:26:496:A:H5'	1.99	0.45
52:26:517:G:H8	52:26:517:G:OP2	1.99	0.45
51:25:44:ARG:HD2	52:26:723:U:OP1	2.16	0.45
52:26:885:G:H2'	52:26:886:G:C8	2.44	0.45
52:26:945:G:N2	52:26:1334:G:H4'	2.32	0.45
53:27:1708:C:H2'	53:27:1709:U:H6	1.81	0.45
53:27:1755:A:H2'	53:27:1756:G:H5'	1.98	0.45
53:27:179:C:H2'	53:27:180:G:O4'	2.16	0.45
53:27:1822:C:O2'	53:27:1823:G:H5'	2.17	0.45
53:27:2167:U:H5	53:27:2169:A:OP2	2.00	0.45
53:27:2373:G:H2'	53:27:2374:C:C6	2.52	0.45
53:27:2564:A:C6	53:27:2565:A:N1	2.85	0.45
53:27:2600:A:H2'	53:27:2601:C:H6	1.82	0.45
13:M:4:ARG:HA	53:27:2820:A:OP1	2.15	0.45
53:27:465:G:C6	53:27:466:A:N6	2.85	0.45
53:27:476:G:N2	53:27:478:A:H3'	2.32	0.45
54:28:114:C:H2'	54:28:115:A:H8	1.82	0.45
56:30:28:G:H2'	56:30:29:G:C8	2.52	0.45
56:30:61:C:H2'	56:30:62:C:C6	2.51	0.45
56:30:66:U:H2'	56:30:67:C:O4'	2.17	0.45
59:33:240:MET:HA	59:33:243:GLU:HG2	1.98	0.45
59:33:271:ASP:O	59:33:275:ASP:HB2	2.16	0.45
59:33:47:GLN:HE22	59:33:87:ALA:HB1	1.82	0.45
32:6:96:LEU:HD13	52:26:1103:C:H4'	1.99	0.45
2:B:119:ALA:HB3	2:B:165:MET:HB2	1.98	0.45
3:C:105:LEU:HD21	3:C:177:PRO:CG	2.47	0.45
3:C:105:LEU:O	3:C:109:LEU:HD13	2.17	0.45
5:E:144:ALA:HB1	5:E:163:TYR:HE1	1.81	0.45
7:G:54:VAL:HG11	7:G:56:ARG:NH2	2.31	0.45
8:H:15:GLY:O	8:H:42:ASN:ND2	2.50	0.45
10:J:115:ILE:O	10:J:118:LEU:N	2.45	0.45
11:K:110:VAL:CG2	11:K:127:VAL:HG22	2.43	0.45
14:N:29:HIS:CD2	14:N:30:ARG:N	2.85	0.45
14:N:11:ALA:HB2	14:N:96:GLY:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:48:ALA:CB	15:O:95:LYS:HG3	2.47	0.45
17:Q:49:ILE:HG21	17:Q:53:PHE:H	1.81	0.45
18:R:70:LYS:O	18:R:107:VAL:HG23	2.17	0.45
20:T:1:ALA:N	53:27:84:A:OP1	2.50	0.45
36:10:18:VAL:HG11	36:10:58:HIS:NE2	2.31	0.45
36:10:98:GLU:O	36:10:99:ALA:HB3	2.17	0.45
37:11:102:TRP:O	37:11:105:GLU:HB3	2.17	0.45
37:11:67:ASN:HD21	37:11:129:ASN:ND2	2.15	0.45
37:11:97:ALA:HA	37:11:100:MET:CE	2.46	0.45
46:20:69:ASP:O	46:20:72:ALA:HB3	2.17	0.45
48:22:52:ARG:O	48:22:55:ALA:HB3	2.17	0.45
48:22:72:ARG:NE	48:22:72:ARG:HA	2.31	0.45
49:23:22:VAL:HG21	49:23:42:ASN:HB2	1.98	0.45
52:26:124:C:H2'	52:26:125:U:H6	1.82	0.45
52:26:1413:A:O2'	52:26:1414:U:H5'	2.17	0.45
52:26:1450:U:O2'	52:26:1452:C:H5'	2.17	0.45
52:26:1515:G:O2'	52:26:1516:G:H5'	2.17	0.45
52:26:202:G:H2'	52:26:203:G:H8	1.80	0.45
10:J:98:ARG:HE	52:26:339:C:P	2.39	0.45
34:8:25:ARG:HB2	52:26:410:G:P	2.57	0.45
52:26:521:G:H1'	52:26:536:C:O2'	2.17	0.45
52:26:613:C:H2'	52:26:614:C:H6	1.78	0.45
52:26:739:C:H2'	52:26:740:U:O4'	2.17	0.45
52:26:798:U:H2'	52:26:799:G:O4'	2.17	0.45
52:26:955:U:O2'	52:26:956:U:H5'	2.17	0.45
53:27:1210:G:O5'	53:27:1212:G:H5'	2.16	0.45
53:27:1516:G:O2'	53:27:1517:G:H5'	2.17	0.45
53:27:1952:A:H2'	53:27:1953:A:O4'	2.17	0.45
53:27:1972:G:N3	53:27:1973:G:N7	2.65	0.45
53:27:197:A:C2'	53:27:198:C:H5'	2.46	0.45
27:1:2:VAL:HG23	53:27:2016:U:H1'	1.99	0.45
53:27:2038:G:H2'	53:27:2039:U:O4'	2.17	0.45
53:27:259:G:O2'	53:27:260:G:H5'	2.17	0.45
53:27:2638:G:HO2'	53:27:2639:A:H8	1.62	0.45
9:I:78:THR:CG2	53:27:2641:G:H5''	2.46	0.45
53:27:2817:U:H2'	53:27:2818:U:O4'	2.16	0.45
53:27:2861:U:H2'	53:27:2862:G:C8	2.51	0.45
53:27:2890:G:H8	53:27:2890:G:O5'	2.00	0.45
53:27:529:A:C4	53:27:2023:C:C5	3.05	0.45
53:27:665:U:H2'	53:27:666:A:H8	1.82	0.45
3:C:74:LYS:NZ	53:27:801:G:OP2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:31:18:G:N2	57:31:57:A:H2'	2.32	0.45
59:33:63:VAL:CG1	59:33:80:LEU:N	2.80	0.45
32:6:125:PHE:CD1	32:6:126:ASP:N	2.85	0.45
34:8:11:SER:HB3	34:8:16:THR:O	2.17	0.45
35:9:100:GLU:C	35:9:102:THR:N	2.70	0.45
4:D:102:LEU:HG	4:D:103:ILE:N	2.32	0.45
5:E:122:ALA:HA	5:E:132:LEU:HA	1.99	0.45
5:E:82:PHE:CZ	5:E:137:LYS:HB2	2.51	0.45
7:G:14:GLU:O	7:G:18:VAL:HG23	2.17	0.45
7:G:25:ALA:HB3	7:G:85:SER:HB2	1.98	0.45
9:I:81:ILE:HD11	53:27:2515:C:P	2.57	0.45
14:N:26:LEU:HB2	14:N:90:VAL:CG2	2.47	0.45
17:Q:46:GLU:OE2	17:Q:48:LYS:N	2.50	0.45
17:Q:49:ILE:O	17:Q:49:ILE:HG13	2.15	0.45
17:Q:89:HIS:ND1	17:Q:90:ARG:N	2.65	0.45
20:T:27:VAL:HG23	20:T:33:VAL:CG1	2.46	0.45
26:Z:56:ARG:HH22	49:23:68:HIS:CE1	2.31	0.45
36:10:48:ALA:HB1	48:22:68:PRO:CG	2.44	0.45
42:16:106:VAL:HG12	42:16:107:LYS:H	1.82	0.45
50:24:2:ASN:N	52:26:332:G:H5'	2.32	0.45
50:24:30:PHE:O	50:24:34:VAL:HG23	2.16	0.45
52:26:1261:A:H2	52:26:1274:A:H2	1.65	0.45
52:26:208:U:H2'	52:26:210:C:H1'	1.99	0.45
52:26:138:G:C6	52:26:226:G:C6	3.05	0.45
52:26:314:C:H2'	52:26:315:A:C8	2.52	0.45
52:26:509:A:H8	52:26:509:A:H3'	1.82	0.45
16:P:1:ALA:N	53:27:1248:G:OP1	2.50	0.45
53:27:1472:C:H2'	53:27:1473:G:H8	1.81	0.45
53:27:1669:A:C2	53:27:1994:C:H1'	2.51	0.45
53:27:1707:G:H1'	53:27:1756:G:N3	2.32	0.45
53:27:2038:G:H2'	53:27:2039:U:H6	1.82	0.45
53:27:214:G:H2'	53:27:215:G:C8	2.52	0.45
6:F:29:PHE:HB2	53:27:2198:A:N3	2.31	0.45
53:27:2367:G:H2'	53:27:2368:C:C6	2.52	0.45
53:27:2751:G:O2'	53:27:2752:C:H5'	2.17	0.45
53:27:54:G:C2	53:27:55:G:C4	3.05	0.45
53:27:709:U:H2'	53:27:710:U:H6	1.82	0.45
24:X:54:LYS:HE2	53:27:72:U:OP2	2.17	0.45
53:27:684:G:C2	53:27:794:A:C2	3.05	0.45
57:31:21:A:N6	57:31:46:G:H2'	2.30	0.45
35:9:105:ILE:HG22	52:26:8:A:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:183:GLU:CD	2:B:183:GLU:N	2.71	0.45
5:E:140:ILE:HD12	5:E:140:ILE:C	2.37	0.45
5:E:148:ARG:HA	5:E:161:VAL:CG1	2.47	0.45
5:E:66:THR:OG1	53:27:2748:A:H1'	2.17	0.45
6:F:9:VAL:O	6:F:10:ALA:C	2.55	0.45
7:G:118:ILE:HB	7:G:119:PRO:CD	2.46	0.45
7:G:42:ARG:HG2	7:G:46:ARG:NE	2.31	0.45
8:H:132:ALA:HA	8:H:137:LEU:HD12	1.99	0.45
10:J:1:MET:HG3	10:J:67:LYS:HG2	1.99	0.45
10:J:66:LYS:HD2	10:J:79:PHE:O	2.17	0.45
17:Q:11:GLN:HG2	17:Q:39:LEU:HD12	1.98	0.45
20:T:23:LYS:O	20:T:35:VAL:HG13	2.17	0.45
26:Z:61:ASN:O	26:Z:64:PHE:HB3	2.16	0.45
36:10:51:ILE:HD13	36:10:86:ARG:NH1	2.33	0.44
39:13:44:ARG:C	39:13:46:VAL:N	2.71	0.44
27:1:39:ARG:HB3	27:1:40:HIS:ND1	2.31	0.44
41:15:71:ASP:HB2	41:15:74:LYS:NZ	2.33	0.44
44:18:3:GLN:HG2	52:26:1048:G:OP1	2.17	0.44
44:18:72:PHE:CE2	44:18:74:ARG:HA	2.52	0.44
44:18:7:ALA:O	44:18:8:ARG:C	2.56	0.44
46:20:5:ARG:NH2	46:20:24:SER:HA	2.31	0.44
47:21:51:GLU:HG2	47:21:52:CYS:N	2.31	0.44
50:24:24:ARG:O	50:24:28:ARG:HG3	2.17	0.44
52:26:1443:C:H2'	52:26:1444:U:C6	2.51	0.44
47:21:26:ARG:CZ	52:26:237:G:H5''	2.46	0.44
52:26:797:C:H2'	52:26:798:U:H6	1.76	0.44
52:26:80:A:H2'	52:26:81:A:O4'	2.17	0.44
52:26:894:G:H2'	52:26:895:G:H8	1.82	0.44
52:26:997:U:O2'	52:26:998:C:H5'	2.17	0.44
53:27:1112:G:O2'	53:27:1113:U:H5'	2.17	0.44
53:27:1130:U:N3	53:27:2025:C:H5''	2.32	0.44
53:27:1166:G:H2'	53:27:1167:C:C6	2.51	0.44
53:27:1317:G:H2'	53:27:1318:U:O4'	2.18	0.44
53:27:1326:U:H4'	53:27:2011:U:O4'	2.17	0.44
53:27:1470:A:H2'	53:27:1471:G:O4'	2.16	0.44
53:27:1657:U:H2'	53:27:1658:C:O4'	2.17	0.44
53:27:1679:A:O5'	53:27:1679:A:H8	2.01	0.44
53:27:1694:C:H5''	53:27:1695:G:C5	2.52	0.44
53:27:19:A:H2'	53:27:20:C:C6	2.53	0.44
53:27:2244:U:O2	53:27:2244:U:H2'	2.16	0.44
53:27:2296:U:H4'	53:27:2297:A:O5'	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2398:U:H2'	53:27:2399:G:C8	2.51	0.44
53:27:2472:G:H8	53:27:2472:G:O5'	2.01	0.44
53:27:2538:C:H2'	53:27:2539:C:C6	2.46	0.44
53:27:2734:A:C5	53:27:2735:G:C8	3.05	0.44
30:4:22:LYS:NZ	53:27:631:A:OP2	2.50	0.44
58:32:61:C:H2'	58:32:62:C:C6	2.51	0.44
59:33:20:TRP:CD1	59:33:64:GLU:N	2.85	0.44
59:33:732:VAL:HG12	59:33:734:ASP:H	1.82	0.44
32:6:39:ILE:N	32:6:39:ILE:HD12	2.23	0.44
1:A:146:LYS:HB2	1:A:149:LYS:CB	2.44	0.44
2:B:183:GLU:OE1	2:B:183:GLU:N	2.47	0.44
3:C:91:ASP:CG	3:C:92:HIS:H	2.20	0.44
5:E:167:VAL:O	5:E:167:VAL:HG13	2.16	0.44
5:E:46:ASP:CG	5:E:47:ASN:H	2.21	0.44
11:K:63:LYS:HA	30:4:11:LYS:O	2.18	0.44
13:M:73:ASN:O	13:M:76:VAL:HB	2.17	0.44
20:T:53:GLN:N	20:T:53:GLN:OE1	2.50	0.44
26:Z:14:ALA:HB3	26:Z:22:MET:O	2.16	0.44
37:11:3:ARG:HG2	37:11:4:ARG:N	2.32	0.44
40:14:17:LEU:HD23	40:14:17:LEU:C	2.37	0.44
42:16:28:GLN:HB2	42:16:80:LEU:HD11	1.98	0.44
4:D:109:ARG:CZ	43:17:2:ARG:NH1	2.81	0.44
43:17:1:ALA:O	43:17:8:ILE:HG21	2.16	0.44
46:20:15:PRO:HB2	46:20:17:TYR:CE2	2.52	0.44
46:20:59:HIS:CE1	46:20:63:GLN:OE1	2.70	0.44
49:23:49:ALA:O	49:23:56:HIS:HD2	2.00	0.44
50:24:79:THR:HA	50:24:82:ILE:HG12	1.98	0.44
52:26:1261:A:H2	52:26:1274:A:C2	2.35	0.44
52:26:1499:A:OP2	52:26:1500:A:OP2	2.35	0.44
52:26:27:G:H2'	52:26:28:A:H8	1.81	0.44
52:26:445:G:H2'	52:26:446:G:O4'	2.17	0.44
52:26:755:G:H8	52:26:755:G:O5'	2.00	0.44
52:26:825:A:O2'	52:26:826:C:H5'	2.17	0.44
52:26:919:A:H2'	52:26:920:U:H6	1.82	0.44
37:11:2:ARG:NH2	52:26:935:A:C2	2.84	0.44
52:26:956:U:H2'	52:26:957:U:O4'	2.17	0.44
7:G:61:ARG:HD2	53:27:1046:A:C4'	2.47	0.44
8:H:135:MET:HA	53:27:1063:G:H1'	1.98	0.44
53:27:1091:G:O2'	53:27:1092:C:H5'	2.18	0.44
53:27:1173:U:H2'	53:27:1174:U:C4'	2.34	0.44
53:27:1346:G:H2'	53:27:1347:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1518:C:H2'	53:27:1519:G:H8	1.82	0.44
53:27:1679:A:O2'	53:27:1680:U:H5'	2.17	0.44
53:27:1924:C:H2'	53:27:1925:C:C6	2.53	0.44
3:C:66:GLY:CA	53:27:2060:A:H5''	2.48	0.44
53:27:250:G:H2'	53:27:251:A:C8	2.52	0.44
53:27:2561:U:H2'	53:27:2562:U:O4'	2.17	0.44
53:27:2589:A:N6	53:27:2590:A:H62	2.15	0.44
53:27:290:U:H2'	53:27:291:G:C8	2.53	0.44
53:27:492:A:H3'	53:27:493:G:H8	1.82	0.44
59:33:191:ILE:HG22	59:33:194:LEU:HD13	1.99	0.44
59:33:20:TRP:CE2	59:33:63:VAL:CB	2.93	0.44
59:33:43:LEU:CG	59:33:44:GLN:OE1	2.59	0.44
59:33:613:CYS:SG	59:33:634:HIS:C	2.95	0.44
32:6:69:VAL:CG2	32:6:160:LEU:HD11	2.47	0.44
34:8:125:ASN:HA	34:8:141:VAL:CG2	2.43	0.44
34:8:133:SER:O	34:8:135:GLN:N	2.51	0.44
34:8:187:ARG:HH22	34:8:192:ALA:HA	1.82	0.44
1:A:244:VAL:CA	1:A:251:THR:HG22	2.47	0.44
4:D:124:ARG:HB2	4:D:126:ASN:HD22	1.81	0.44
7:G:61:ARG:HG2	53:27:1046:A:H4'	1.99	0.44
7:G:88:HIS:CB	7:G:89:PRO:HD3	2.32	0.44
8:H:52:LEU:HD11	8:H:81:LYS:HD3	2.00	0.44
9:I:2:LYS:HA	53:27:995:C:C4	2.52	0.44
12:L:86:LYS:HE3	53:27:956:G:OP2	2.17	0.44
16:P:13:HIS:O	16:P:17:LEU:HD13	2.17	0.44
16:P:51:GLN:NE2	53:27:560:C:H4'	2.31	0.44
17:Q:49:ILE:HD12	17:Q:52:PRO:HA	1.98	0.44
20:T:98:ASN:ND2	20:T:100:GLU:HB2	2.32	0.44
37:11:87:PRO:HG3	37:11:148:LYS:HA	1.99	0.44
39:13:104:THR:HG22	39:13:106:ASP:H	1.82	0.44
43:17:104:ASN:O	43:17:106:ARG:N	2.51	0.44
43:17:7:ASN:HD22	43:17:21:ILE:N	2.15	0.44
47:21:7:LEU:CD2	47:21:24:ILE:HD13	2.48	0.44
49:23:24:SER:HB3	49:23:27:LYS:NZ	2.32	0.44
52:26:1198:G:H2'	52:26:1199:U:C6	2.53	0.44
52:26:123:U:O2'	52:26:124:C:H5'	2.18	0.44
52:26:182:A:H62	52:26:194:C:H42	1.64	0.44
52:26:32:A:H2'	52:26:33:A:C8	2.53	0.44
53:27:1018:U:O2'	53:27:1019:U:H5'	2.16	0.44
53:27:1663:G:O2'	53:27:1664:A:H5'	2.17	0.44
53:27:1667:G:H4'	53:27:1668:A:OP1	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:15:G:C6	53:27:16:C:C4	3.05	0.44
53:27:2018:G:O2'	53:27:2019:A:H5'	2.18	0.44
53:27:2121:G:H2'	53:27:2122:U:O4'	2.17	0.44
53:27:21:A:H2'	53:27:22:C:C6	2.53	0.44
53:27:242:G:HO2'	53:27:243:U:P	2.41	0.44
53:27:570:G:H22	53:27:2499:C:H5'	1.83	0.44
53:27:2589:A:C6	53:27:2590:A:N7	2.85	0.44
53:27:2662:A:H2'	53:27:2663:G:O4'	2.17	0.44
53:27:2682:A:H61	53:27:2728:U:H1'	1.82	0.44
53:27:2807:U:H1'	53:27:2892:G:H22	1.82	0.44
53:27:300:A:H2	53:27:319:G:N3	2.14	0.44
53:27:449:A:H2'	53:27:450:G:C8	2.52	0.44
59:33:281:ILE:HG12	59:33:338:ILE:HG13	1.99	0.44
32:6:93:HIS:O	32:6:95:TRP:N	2.51	0.44
33:7:139:ASN:O	33:7:142:ARG:HG2	2.17	0.44
34:8:21:LYS:HE2	34:8:26:ALA:O	2.17	0.44
2:B:152:PRO:O	2:B:154:LYS:HG2	2.17	0.44
2:B:15:PHE:CE2	15:O:54:LEU:HD11	2.52	0.44
3:C:101:TYR:CE2	3:C:105:LEU:HD11	2.52	0.44
6:F:50:ARG:NH1	6:F:54:LEU:HD23	2.32	0.44
6:F:96:THR:HG22	6:F:115:VAL:HB	1.98	0.44
8:H:109:ALA:O	8:H:113:ALA:N	2.50	0.44
14:N:29:HIS:HD2	14:N:97:PHE:CZ	2.35	0.44
14:N:49:VAL:CG2	14:N:85:LYS:HD2	2.48	0.44
17:Q:21:ARG:HA	17:Q:95:ASP:OD1	2.17	0.44
36:10:6:ILE:CD1	36:10:74:LEU:HD13	2.48	0.44
37:11:104:VAL:O	37:11:108:ARG:HG2	2.17	0.44
37:11:62:GLU:OE2	37:11:66:GLU:HB3	2.18	0.44
42:16:73:LEU:CD2	42:16:79:ILE:HG21	2.47	0.44
43:17:100:ARG:NH2	52:26:951:G:OP2	2.51	0.44
43:17:88:LEU:HD13	43:17:91:ARG:NH2	2.32	0.44
44:18:7:ALA:HA	44:18:10:VAL:CG1	2.44	0.44
52:26:1469:C:H3'	52:26:1470:U:H6	1.82	0.44
52:26:1511:G:H2'	52:26:1512:U:O4'	2.17	0.44
50:24:20:ASN:ND2	52:26:323:U:OP1	2.47	0.44
52:26:549:C:H2'	52:26:550:G:C8	2.52	0.44
52:26:596:A:C8	52:26:596:A:H5'	2.52	0.44
52:26:646:G:O2'	52:26:647:C:H5'	2.17	0.44
52:26:703:G:H5'	52:26:704:A:H5'	1.99	0.44
52:26:922:G:C2	52:26:923:A:C4	3.05	0.44
53:27:1368:G:C2	53:27:1369:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:175:G:O2'	53:27:176:A:H5'	2.17	0.44
2:B:129:THR:HG22	53:27:1997:C:OP2	2.16	0.44
53:27:2093:G:H2'	53:27:2094:A:H8	1.83	0.44
4:D:120:SER:HB3	53:27:2303:G:O2'	2.18	0.44
53:27:2362:C:O2'	53:27:2363:G:H5'	2.18	0.44
53:27:254:G:O2'	53:27:255:A:H5''	2.17	0.44
2:B:43:ASP:OD1	53:27:2784:U:H4'	2.16	0.44
53:27:475:C:OP1	53:27:475:C:H3'	2.18	0.44
53:27:780:G:H5''	53:27:781:A:OP1	2.17	0.44
53:27:786:C:H2'	53:27:787:C:O4'	2.17	0.44
53:27:817:C:H2'	53:27:818:G:O4'	2.17	0.44
25:Y:24:LEU:HD21	53:27:930:G:H1'	1.99	0.44
53:27:976:G:H2'	53:27:977:G:H8	1.83	0.44
54:28:4:C:H6	54:28:4:C:C5'	2.30	0.44
59:33:293:LEU:HD11	59:33:307:PHE:CZ	2.51	0.44
59:33:408:VAL:HG21	59:33:418:LEU:HD12	1.99	0.44
59:33:42:CYS:CB	59:33:84:LEU:HD11	2.47	0.44
30:4:21:PHE:O	30:4:49:VAL:HG23	2.17	0.44
1:A:7:PRO:HB3	1:A:13:ARG:HA	1.98	0.44
5:E:10:VAL:HG13	5:E:10:VAL:O	2.16	0.44
10:J:120:PRO:HB2	15:O:65:ASN:HD21	1.80	0.44
11:K:23:ILE:HG13	17:Q:82:HIS:NE2	2.33	0.44
13:M:84:GLY:N	13:M:85:PRO:HD2	2.33	0.44
20:T:39:ASN:OD1	20:T:64:ILE:HB	2.17	0.44
38:12:104:SER:OG	38:12:109:VAL:HG22	2.18	0.44
38:12:13:ILE:O	38:12:17:GLN:HG2	2.18	0.44
35:9:156:ARG:HD3	38:12:44:PHE:CD1	2.51	0.44
39:13:50:PRO:O	39:13:53:LEU:HG	2.18	0.44
41:15:62:ALA:O	41:15:65:ALA:HB3	2.18	0.44
27:1:5:ASN:N	27:1:5:ASN:OD1	2.51	0.44
43:17:85:TYR:O	43:17:88:LEU:HB3	2.18	0.44
50:24:28:ARG:HH11	50:24:28:ARG:HG2	1.83	0.44
52:26:300:A:H2'	52:26:301:G:O4'	2.18	0.44
52:26:502:A:O5'	52:26:502:A:H8	2.00	0.44
52:26:505:G:C6	52:26:535:A:C2	3.05	0.44
52:26:854:U:H2'	52:26:855:U:H6	1.81	0.44
52:26:895:G:C6	52:26:896:C:C4	3.05	0.44
52:26:955:U:H3	52:26:1225:A:N6	2.15	0.44
53:27:1020:A:O5'	53:27:1020:A:H8	1.99	0.44
53:27:1179:G:C3'	53:27:1180:U:H4'	2.48	0.44
53:27:1654:A:C2'	53:27:1655:A:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1764:C:H2'	53:27:1765:U:C6	2.52	0.44
1:A:152:GLN:HB3	53:27:1818:U:C2	2.52	0.44
53:27:1868:C:H2'	53:27:1869:G:H8	1.82	0.44
53:27:2060:A:N9	53:27:2502:G:H1'	2.33	0.44
53:27:2248:C:H3'	53:27:2249:U:C6	2.52	0.44
53:27:228:C:O2'	53:27:229:C:H5''	2.18	0.44
53:27:2328:A:O2'	53:27:2329:U:H5'	2.18	0.44
53:27:2341:G:H2'	53:27:2342:C:O4'	2.18	0.44
53:27:792:A:C6	53:27:2440:C:C6	3.06	0.44
53:27:2584:U:C3'	53:27:2585:U:H5''	2.48	0.44
53:27:2598:A:C8	53:27:2599:G:H1'	2.53	0.44
53:27:2612:C:H5''	53:27:2613:U:OP1	2.17	0.44
2:B:191:GLY:HA3	53:27:2729:G:O2'	2.18	0.44
53:27:2817:U:H2'	53:27:2818:U:C4'	2.48	0.44
53:27:2852:G:H2'	53:27:2853:C:H6	1.82	0.44
53:27:467:G:C2'	53:27:468:G:H5'	2.47	0.44
53:27:627:A:N6	53:27:637:A:O5'	2.46	0.44
53:27:696:G:H2'	53:27:697:G:C8	2.50	0.44
1:A:12:ARG:NH2	53:27:728:G:H4'	2.22	0.44
53:27:856:G:H2'	53:27:857:G:C8	2.53	0.44
53:27:884:U:O4'	59:33:640:GLN:HG2	2.16	0.44
53:27:959:A:C6	53:27:960:A:C6	3.05	0.44
56:30:49:C:H2'	56:30:50:U:C5	2.53	0.44
59:33:408:VAL:CG2	59:33:458:GLY:HA2	2.44	0.44
59:33:78:ALA:CB	59:33:151:ILE:HD13	2.47	0.44
33:7:172:VAL:HG12	33:7:174:LEU:CD1	2.48	0.44
33:7:179:ALA:HB1	33:7:202:PHE:CE1	2.53	0.44
33:7:46:LEU:HB3	33:7:49:ALA:HB3	2.00	0.44
35:9:77:ASN:OD1	35:9:78:GLY:N	2.51	0.44
1:A:146:LYS:CB	1:A:149:LYS:HB2	2.42	0.44
2:B:29:VAL:O	2:B:185:ASN:HB3	2.17	0.44
2:B:51:THR:HG21	2:B:68:PHE:HE1	1.82	0.44
3:C:46:GLN:OE1	3:C:87:ALA:N	2.50	0.44
3:C:58:LYS:HD2	3:C:58:LYS:N	2.32	0.44
6:F:103:VAL:CG1	6:F:108:VAL:HB	2.47	0.44
6:F:59:ALA:O	6:F:63:ALA:HB2	2.17	0.44
10:J:10:VAL:HG21	10:J:16:ALA:HB3	2.00	0.44
10:J:61:VAL:HG12	10:J:87:LEU:HD11	2.00	0.44
10:J:61:VAL:HG22	10:J:62:VAL:O	2.18	0.44
14:N:74:VAL:O	14:N:78:VAL:HG23	2.18	0.44
17:Q:1:MET:HA	17:Q:43:ASN:HD21	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:128:LYS:HG2	39:13:129:ARG:N	2.32	0.44
40:14:23:ALA:O	40:14:27:GLU:HB2	2.17	0.44
41:15:22:ILE:HD13	41:15:95:THR:HG21	1.99	0.44
43:17:92:ARG:O	43:17:94:LEU:HG	2.17	0.44
44:18:80:ARG:HG3	44:18:80:ARG:NH1	2.33	0.44
45:19:63:ARG:HA	45:19:63:ARG:HD2	1.79	0.44
48:22:19:GLU:N	48:22:19:GLU:OE1	2.38	0.44
48:22:23:LYS:O	48:22:25:ILE:HG23	2.18	0.44
50:24:14:GLU:C	50:24:16:ALA:N	2.71	0.44
51:25:15:LEU:CD2	51:25:17:ARG:HG3	2.47	0.44
52:26:1014:A:H2'	52:26:1015:G:O4'	2.17	0.44
52:26:1356:G:H2'	52:26:1357:A:H8	1.78	0.44
52:26:182:A:O2'	52:26:183:C:H5''	2.18	0.44
34:8:7:LYS:HG2	52:26:430:A:P	2.58	0.44
52:26:59:A:H3'	52:26:331:G:H22	1.82	0.44
52:26:666:G:H2'	52:26:667:G:C8	2.51	0.44
9:I:108:MET:CE	53:27:1006:C:H1'	2.48	0.44
31:5:37:GLN:NE2	53:27:1125:G:H5'	2.32	0.44
53:27:70:G:H5''	53:27:112:U:O2	2.17	0.44
53:27:152:A:H2'	53:27:153:U:C6	2.52	0.44
53:27:1672:A:C6	53:27:1673:G:C6	3.05	0.44
53:27:1701:A:H2'	53:27:1702:G:O4'	2.18	0.44
53:27:1715:G:O2'	53:27:1716:U:C6	2.66	0.44
53:27:2174:C:C2'	53:27:2175:C:H5'	2.47	0.44
53:27:2296:U:H5''	53:27:2297:A:OP1	2.18	0.44
30:4:5:THR:HG21	53:27:243:U:OP1	2.18	0.44
53:27:251:A:C5	53:27:252:G:H1'	2.53	0.44
53:27:2557:G:H2'	53:27:2558:C:H6	1.82	0.44
53:27:280:U:H2'	53:27:281:C:N1	2.32	0.44
53:27:2875:C:H2'	53:27:2876:G:H8	1.80	0.44
53:27:452:G:N2	53:27:457:A:O2'	2.51	0.44
53:27:532:A:N3	53:27:532:A:H2'	2.32	0.44
53:27:76:C:O2'	53:27:77:G:H5'	2.18	0.44
53:27:815:C:H2'	53:27:816:C:C6	2.48	0.44
58:32:42:G:H2'	58:32:43:A:C8	2.52	0.44
58:32:72:A:H2	58:32:73:A:N6	2.16	0.44
59:33:173:LEU:HD23	59:33:173:LEU:C	2.38	0.44
59:33:460:GLN:O	59:33:461:ILE:HD13	2.17	0.44
59:33:587:PRO:HA	59:33:590:ARG:CB	2.48	0.44
34:8:122:ILE:N	34:8:122:ILE:HD12	2.33	0.44
34:8:21:LYS:HE3	34:8:25:ARG:HE	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:52:HIS:HD2	1:A:217:PRO:O	2.00	0.44
2:B:88:GLU:OE1	2:B:88:GLU:N	2.51	0.44
10:J:79:PHE:CD1	15:O:69:VAL:HG22	2.53	0.44
17:Q:74:ILE:HG22	17:Q:87:GLN:H	1.81	0.44
20:T:25:LYS:CD	20:T:36:GLU:HB3	2.44	0.44
22:V:57:ALA:HA	22:V:78:ILE:HD11	1.99	0.44
26:Z:60:PHE:HZ	49:23:40:PHE:CD1	2.35	0.44
36:10:24:ARG:NH1	36:10:24:ARG:O	2.49	0.44
37:11:2:ARG:HH12	52:26:932:C:H41	1.62	0.44
38:12:6:ILE:HG13	38:12:7:ALA:N	2.33	0.44
42:16:113:ARG:HG3	42:16:118:VAL:HB	2.00	0.44
4:D:114:ARG:NH1	43:17:70:ARG:HD2	2.31	0.44
44:18:83:VAL:HG13	44:18:84:ARG:H	1.83	0.44
46:20:13:LYS:HZ2	52:26:392:C:H4'	1.82	0.44
48:22:11:ARG:HD2	48:22:14:ALA:HB2	1.96	0.44
40:14:53:ILE:HG12	52:26:1060:U:C5'	2.48	0.44
52:26:1143:G:H2'	52:26:1144:G:H8	1.81	0.44
52:26:1170:A:H2'	52:26:1171:A:C5'	2.47	0.44
52:26:195:A:H2'	52:26:196:A:C8	2.53	0.44
52:26:556:C:H2'	52:26:557:G:H5'	1.98	0.44
52:26:592:G:H2'	52:26:593:U:C6	2.53	0.44
52:26:711:G:O2'	52:26:712:A:H5'	2.18	0.44
36:10:4:TYR:OH	52:26:738:C:OP1	2.29	0.44
53:27:1027:A:C6	53:27:1126:A:C4	3.05	0.44
53:27:1779:U:C2'	53:27:1783:A:H62	2.30	0.44
53:27:1829:A:C2	53:27:1830:C:H1'	2.53	0.44
53:27:1857:G:H1'	53:27:1885:A:H61	1.77	0.44
53:27:2056:G:C2	53:27:2057:G:C8	3.06	0.44
53:27:2284:A:H1'	53:27:2325:G:C2	2.52	0.44
53:27:2400:G:O2'	53:27:2401:U:H5'	2.17	0.44
53:27:2549:G:O2'	53:27:2550:G:H5'	2.18	0.44
53:27:2568:U:H2'	53:27:2569:G:O4'	2.17	0.44
53:27:2822:G:O5'	53:27:2822:G:H8	2.01	0.44
53:27:449:A:H2'	53:27:450:G:H8	1.83	0.44
53:27:590:A:H2'	53:27:591:U:C6	2.52	0.44
53:27:762:U:H4'	53:27:763:G:O5'	2.18	0.44
54:28:100:G:H2'	54:28:101:A:C8	2.52	0.44
54:28:66:A:N1	54:28:107:G:H2'	2.33	0.44
54:28:80:U:H2'	54:28:81:G:H8	1.83	0.44
56:30:63:G:O2'	56:30:64:A:H5'	2.18	0.44
58:32:11:A:H2'	58:32:12:G:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:293:LEU:C	59:33:293:LEU:HD23	2.37	0.44
59:33:334:VAL:HG13	59:33:334:VAL:O	2.18	0.44
59:33:607:HIS:HA	59:33:631:ILE:O	2.16	0.44
59:33:678:GLY:HA2	59:33:681:ARG:HB3	2.00	0.44
59:33:716:ILE:HD11	59:33:721:VAL:CG1	2.48	0.44
59:33:671:VAL:CG2	59:33:735:VAL:HG13	2.47	0.44
29:3:8:SER:HB3	29:3:11:LYS:HB3	2.00	0.44
32:6:20:ARG:NH1	32:6:20:ARG:HG3	2.32	0.44
32:6:60:ALA:CB	32:6:223:GLY:HA3	2.48	0.44
35:9:151:MET:O	35:9:154:ALA:HB3	2.17	0.44
1:A:242:HIS:O	1:A:244:VAL:HG13	2.18	0.44
2:B:4:LEU:HD21	2:B:98:VAL:HA	1.98	0.44
4:D:19:PHE:CZ	4:D:164:GLU:HA	2.52	0.44
4:D:91:ARG:HA	4:D:95:MET:HB2	2.00	0.44
6:F:79:THR:CG2	6:F:147:VAL:HG23	2.47	0.44
12:L:21:ALA:CB	12:L:100:LYS:HD3	2.40	0.44
12:L:134:THR:HG22	12:L:135:VAL:N	2.32	0.44
13:M:29:VAL:HG12	13:M:78:LYS:CG	2.48	0.44
16:P:87:VAL:HG12	16:P:88:GLU:N	2.33	0.44
17:Q:68:ARG:NH1	17:Q:90:ARG:HD3	2.30	0.44
20:T:14:THR:OG1	20:T:68:ASN:ND2	2.51	0.44
20:T:96:LYS:HD3	53:27:300:A:OP2	2.18	0.44
21:U:48:MET:O	21:U:51:GLN:HG2	2.17	0.44
40:14:71:LEU:C	40:14:71:LEU:HD12	2.38	0.44
42:16:51:VAL:HG22	42:16:52:CYS:N	2.33	0.44
43:17:6:ILE:O	43:17:8:ILE:HG12	2.17	0.44
44:18:43:ALA:C	44:18:45:LEU:N	2.71	0.44
45:19:70:LYS:HB2	45:19:77:TYR:CD1	2.52	0.44
46:20:40:ASN:CG	46:20:43:ALA:HA	2.38	0.44
28:2:9:LYS:HD2	28:2:19:PHE:CG	2.52	0.44
49:23:39:ILE:HG22	49:23:40:PHE:N	2.33	0.44
49:23:5:LYS:HG3	49:23:6:LYS:H	1.83	0.44
52:26:1062:U:H2'	52:26:1063:C:C5	2.53	0.44
52:26:1361:G:H2'	52:26:1362:A:O4'	2.18	0.44
52:26:790:A:H2	52:26:1497:G:OP1	2.01	0.44
52:26:195:A:H1'	52:26:222:C:O2'	2.18	0.44
52:26:265:G:H2'	52:26:267:C:C5	2.44	0.44
52:26:290:C:O2'	52:26:291:U:H5'	2.17	0.44
52:26:408:A:H2'	52:26:409:U:O4'	2.17	0.44
38:12:87:ARG:HB3	52:26:600:A:OP1	2.17	0.44
52:26:581:G:N2	52:26:761:G:C6	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:802:A:H3'	52:26:803:G:H8	1.83	0.44
52:26:975:A:H5'	52:26:975:A:N3	2.33	0.44
53:27:1183:U:H2'	53:27:1184:U:C6	2.52	0.44
17:Q:71:LYS:NZ	53:27:1223:G:N7	2.66	0.44
3:C:78:TRP:CE2	53:27:1257:C:H4'	2.53	0.44
53:27:1406:U:H2'	53:27:1407:G:C5'	2.47	0.44
53:27:1639:C:O2'	53:27:1640:A:H5'	2.18	0.44
53:27:164:C:H2'	53:27:165:A:H5'	1.99	0.44
53:27:1891:G:C5	53:27:1892:C:C5	3.06	0.44
53:27:1934:C:O2'	53:27:1935:G:H5'	2.18	0.44
53:27:2315:G:H2'	53:27:2316:G:H8	1.83	0.44
12:L:55:ARG:NH2	53:27:2469:A:H1'	2.33	0.44
53:27:246:C:O5'	53:27:246:C:H6	2.01	0.44
53:27:376:G:C2	53:27:377:G:N7	2.86	0.44
59:33:240:MET:HB2	59:33:245:VAL:HG13	2.00	0.44
59:33:44:GLN:HA	59:33:45:GLN:HA	1.66	0.44
59:33:466:GLN:HG2	59:33:467:LYS:N	2.32	0.44
59:33:599:VAL:O	59:33:601:GLY:N	2.50	0.44
32:6:52:ALA:C	32:6:56:LEU:HD13	2.38	0.44
35:9:36:THR:HG23	35:9:62:ALA:HB3	2.00	0.44
1:A:9:SER:O	1:A:12:ARG:HB3	2.17	0.44
4:D:98:PHE:HD1	4:D:101:ARG:HH11	1.66	0.44
5:E:64:ALA:O	5:E:67:ALA:HB3	2.16	0.44
6:F:96:THR:O	6:F:115:VAL:HG21	2.18	0.44
10:J:21:CYS:HA	10:J:41:ILE:HG22	1.99	0.44
11:K:81:ASP:OD1	11:K:82:LEU:N	2.51	0.44
16:P:78:PHE:HE1	16:P:109:VAL:HA	1.81	0.44
17:Q:49:ILE:HG21	17:Q:53:PHE:N	2.33	0.44
20:T:24:VAL:HG22	20:T:35:VAL:HG22	1.98	0.44
36:10:39:LEU:O	36:10:39:LEU:HD23	2.17	0.44
42:16:21:PRO:C	42:16:23:LEU:H	2.20	0.44
44:18:5:MET:HB3	44:18:62:ARG:NH2	2.33	0.44
44:18:86:ALA:HB1	44:18:91:GLU:HB2	2.00	0.44
52:26:237:G:H2'	52:26:238:A:C8	2.53	0.44
52:26:440:C:H2'	52:26:441:A:H5''	2.00	0.44
52:26:924:C:H2'	52:26:925:G:H8	1.83	0.44
53:27:1131:G:HO2'	53:27:2026:U:H5'	1.83	0.44
11:K:18:ARG:NH1	53:27:1249:U:C2	2.86	0.44
53:27:1295:C:H2'	53:27:1296:G:H8	1.82	0.44
53:27:1957:C:H2'	53:27:1958:C:C6	2.52	0.44
53:27:2082:A:H3'	53:27:2083:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2133:G:O2'	53:27:2134:A:H8	2.01	0.44
53:27:2221:G:H2'	53:27:2222:C:H6	1.82	0.44
53:27:2360:G:H3'	53:27:2361:G:O4'	2.18	0.44
53:27:2733:A:H2'	53:27:2734:A:O4'	2.18	0.44
53:27:2845:U:H2'	53:27:2846:G:C8	2.52	0.44
53:27:628:G:O2'	53:27:629:G:H5'	2.18	0.44
53:27:799:G:H5''	53:27:800:A:C2'	2.40	0.44
53:27:859:G:H2'	53:27:916:G:O6	2.18	0.44
56:30:13:C:H2'	56:30:14:A:H5''	1.99	0.44
56:30:19:G:N3	56:30:57:G:H1'	2.33	0.44
59:33:177:GLU:O	59:33:181:ILE:HB	2.18	0.44
33:7:140:ALA:CB	33:7:148:ILE:HD12	2.48	0.44
35:9:92:ARG:CB	35:9:127:TYR:HB2	2.48	0.44
35:9:159:SER:O	35:9:162:GLU:N	2.47	0.44
1:A:83:ASP:OD2	1:A:86:ARG:NH2	2.51	0.44
4:D:39:VAL:HG12	4:D:84:ILE:O	2.18	0.44
8:H:10:LEU:O	8:H:55:PRO:HB3	2.17	0.44
8:H:20:SER:HA	8:H:24:GLY:CA	2.29	0.44
10:J:8:LEU:O	10:J:19:VAL:HG22	2.18	0.44
15:O:26:GLU:HG2	15:O:43:GLU:HB2	1.99	0.44
15:O:64:SER:O	15:O:66:GLY:N	2.51	0.44
17:Q:74:ILE:HG22	17:Q:87:GLN:HB3	1.99	0.44
26:Z:35:ASP:N	26:Z:35:ASP:OD1	2.50	0.44
37:11:42:VAL:O	37:11:46:LEU:HB2	2.18	0.43
38:12:29:SER:O	38:12:33:VAL:HG23	2.17	0.43
43:17:1:ALA:C	43:17:8:ILE:HG21	2.38	0.43
43:17:53:ASP:OD1	43:17:54:THR:N	2.50	0.43
43:17:82:LEU:HD23	43:17:84:CYS:HB3	1.99	0.43
46:20:56:ARG:O	46:20:59:HIS:HB3	2.18	0.43
46:20:74:LEU:HA	46:20:77:GLU:CB	2.48	0.43
47:21:37:ILE:HD12	47:21:37:ILE:H	1.83	0.43
52:26:1004:A:H2'	52:26:1005:A:O4'	2.18	0.43
52:26:1426:G:O2'	52:26:1427:C:H5'	2.18	0.43
52:26:210:C:H4'	52:26:211:G:C6	2.53	0.43
52:26:59:A:H1'	52:26:354:G:N2	2.33	0.43
42:16:120:ARG:HB2	52:26:37:U:H5''	2.00	0.43
52:26:424:G:H2'	52:26:425:G:C8	2.53	0.43
42:16:49:ARG:NH1	52:26:523:A:H61	2.13	0.43
52:26:786:G:H2'	52:26:787:A:O4'	2.18	0.43
52:26:869:G:H4'	52:26:872:A:C8	2.53	0.43
53:27:1029:A:O5'	53:27:1029:A:H8	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:11:ILE:HG21	53:27:1046:A:C2	2.53	0.43
53:27:108:G:C2'	53:27:109:C:H5'	2.48	0.43
53:27:1270:C:H5''	53:27:1271:G:C5'	2.46	0.43
53:27:1330:C:O2'	53:27:1331:G:H5'	2.18	0.43
53:27:1499:C:H2'	53:27:1500:G:C8	2.51	0.43
53:27:1573:G:H2'	53:27:1574:C:H5'	1.99	0.43
53:27:1993:U:H5''	53:27:1993:U:C6	2.52	0.43
53:27:242:G:C2'	53:27:243:U:OP2	2.65	0.43
53:27:2543:G:H2'	53:27:2544:G:H8	1.82	0.43
53:27:2589:A:N1	53:27:2605:U:O2	2.51	0.43
53:27:271:G:C6	53:27:367:G:C6	3.07	0.43
53:27:2723:C:H2'	53:27:2724:U:O4'	2.17	0.43
53:27:523:C:H2'	53:27:524:G:H8	1.83	0.43
53:27:523:C:H2'	53:27:524:G:C8	2.53	0.43
53:27:615:U:H5''	53:27:616:A:OP2	2.18	0.43
53:27:768:G:N2	53:27:1379:U:O2'	2.50	0.43
56:30:31:A:H2	56:30:39:U:O2	2.01	0.43
29:3:35:ARG:HH11	29:3:35:ARG:HG3	1.82	0.43
59:33:686:ILE:CD1	59:33:729:LEU:HA	2.47	0.43
32:6:69:VAL:HG21	32:6:160:LEU:HD11	1.99	0.43
33:7:135:ARG:HH11	33:7:138:GLN:HE22	1.66	0.43
1:A:154:ALA:CB	1:A:161:VAL:HG23	2.48	0.43
1:A:97:ASP:OD1	1:A:98:GLY:N	2.51	0.43
5:E:51:PHE:CE2	5:E:68:ARG:HA	2.53	0.43
6:F:56:ALA:O	6:F:59:ALA:HB3	2.18	0.43
7:G:44:ALA:HA	7:G:51:TYR:CE2	2.53	0.43
10:J:41:ILE:HG13	10:J:58:LEU:O	2.18	0.43
12:L:119:LEU:O	12:L:122:ALA:HB3	2.18	0.43
12:L:82:MET:O	12:L:84:LYS:HG2	2.17	0.43
14:N:27:VAL:HG21	14:N:40:ILE:HD12	2.00	0.43
18:R:37:THR:O	18:R:37:THR:HG22	2.17	0.43
22:V:7:ARG:CZ	22:V:8:ASN:ND2	2.81	0.43
24:X:9:LYS:HB3	24:X:12:GLU:CD	2.38	0.43
26:Z:66:ILE:HD13	44:18:41:TRP:HE3	1.83	0.43
37:11:97:ALA:HA	37:11:100:MET:HE2	2.00	0.43
35:9:156:ARG:HD3	38:12:44:PHE:CG	2.54	0.43
38:12:55:LYS:HE3	52:26:653:U:O2	2.18	0.43
39:13:118:ARG:HH22	52:26:1234:C:P	2.39	0.43
43:17:14:ALA:O	43:17:17:ALA:HB3	2.17	0.43
43:17:48:SER:HB2	43:17:51:GLN:CG	2.46	0.43
46:20:20:VAL:CG2	46:20:21:VAL:N	2.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:54:LEU:HA	46:20:57:ILE:HD12	1.99	0.43
47:21:16:MET:HE2	47:21:19:SER:CB	2.48	0.43
52:26:1295:U:H2'	52:26:1296:C:C6	2.53	0.43
52:26:1339:A:C2'	52:26:1340:A:H5'	2.48	0.43
52:26:1476:A:H2'	52:26:1477:U:O4'	2.18	0.43
52:26:201:G:H2'	52:26:202:G:H8	1.81	0.43
52:26:334:C:O2'	52:26:335:C:H5'	2.18	0.43
42:16:30:ARG:HB3	52:26:363:A:OP2	2.18	0.43
52:26:552:U:O2'	52:26:553:A:H5'	2.18	0.43
52:26:952:U:O2'	52:26:953:G:H5'	2.17	0.43
52:26:971:G:OP1	52:26:972:C:H5''	2.18	0.43
53:27:1026:G:H2'	53:27:1027:A:H8	1.84	0.43
53:27:1295:C:H2'	53:27:1296:G:C8	2.53	0.43
53:27:1328:A:H2'	53:27:1330:C:C4	2.53	0.43
53:27:1613:G:H3'	53:27:1614:A:H5''	1.99	0.43
53:27:1802:A:O2'	53:27:1803:A:H5'	2.18	0.43
53:27:2094:A:H2'	53:27:2095:A:H8	1.82	0.43
53:27:2455:G:H2'	53:27:2456:C:H6	1.79	0.43
53:27:2478:A:C2'	53:27:2479:U:H5'	2.48	0.43
53:27:2506:U:O2'	53:27:2507:C:H5'	2.18	0.43
53:27:2647:U:H2'	53:27:2648:G:H8	1.83	0.43
53:27:2654:A:N1	53:27:2665:A:H5''	2.33	0.43
53:27:2817:U:C3'	53:27:2818:U:H5''	2.49	0.43
53:27:465:G:C2	53:27:466:A:N1	2.86	0.43
53:27:514:A:H2'	53:27:515:A:H8	1.81	0.43
53:27:705:A:C2	53:27:727:A:H1'	2.53	0.43
53:27:860:U:H2'	53:27:861:A:H8	1.83	0.43
53:27:992:C:H2'	53:27:993:G:H8	1.83	0.43
54:28:21:G:H2'	54:28:22:U:O4'	2.18	0.43
56:30:8:U:OP1	56:30:49:C:H5'	2.18	0.43
58:32:40:C:H2'	58:32:41:C:H6	1.82	0.43
59:33:617:PRO:HG3	59:33:657:TRP:CE3	2.52	0.43
59:33:669:VAL:HG22	59:33:670:ARG:N	2.33	0.43
32:6:49:PHE:HB2	32:6:199:ILE:HG23	1.99	0.43
32:6:68:PHE:HB2	32:6:90:PHE:CB	2.49	0.43
32:6:90:PHE:CZ	32:6:149:GLY:HA2	2.53	0.43
33:7:38:VAL:HG23	33:7:39:ARG:N	2.33	0.43
35:9:10:LEU:O	35:9:11:GLN:O	2.36	0.43
35:9:130:THR:HG21	52:26:10:A:OP2	2.18	0.43
4:D:133:GLU:HB2	4:D:148:VAL:HG13	1.99	0.43
5:E:26:LYS:HB2	5:E:31:GLU:HG2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:116:ARG:HG3	6:F:133:GLN:CD	2.38	0.43
6:F:72:ILE:O	6:F:73:ASN:C	2.55	0.43
10:J:110:GLU:H	10:J:113:MET:CE	2.31	0.43
14:N:110:ALA:HB3	14:N:117:PHE:HE2	1.84	0.43
15:O:30:TRP:CZ3	15:O:37:LYS:HG2	2.52	0.43
18:R:47:VAL:O	18:R:50:VAL:HB	2.18	0.43
20:T:66:VAL:O	20:T:68:ASN:N	2.44	0.43
21:U:44:HIS:HD1	21:U:45:ASP:N	2.15	0.43
24:X:44:LYS:NZ	24:X:48:ARG:CZ	2.81	0.43
24:X:9:LYS:HB3	24:X:12:GLU:OE2	2.18	0.43
39:13:46:VAL:HG21	39:13:75:ALA:HB1	1.99	0.43
40:14:15:HIS:CG	40:14:16:ARG:N	2.86	0.43
41:15:19:VAL:HA	41:15:82:GLU:HB2	2.01	0.43
42:16:32:VAL:O	42:16:33:CYS:HB3	2.18	0.43
42:16:62:VAL:HG21	42:16:94:TYR:CE2	2.53	0.43
43:17:7:ASN:HD22	43:17:21:ILE:H	1.66	0.43
43:17:88:LEU:O	43:17:91:ARG:HB2	2.18	0.43
50:24:56:ILE:HG23	50:24:57:VAL:N	2.32	0.43
52:26:767:A:H2'	52:26:768:A:O4'	2.19	0.43
53:27:1049:C:O2'	53:27:1050:A:H5'	2.18	0.43
53:27:1161:C:H2'	53:27:1162:G:H8	1.83	0.43
53:27:1317:G:O2'	53:27:1318:U:H5'	2.18	0.43
53:27:1448:G:H2'	53:27:1449:G:H8	1.83	0.43
19:S:40:LYS:HG3	53:27:1599:U:OP1	2.18	0.43
53:27:1601:G:C6	53:27:1602:U:N3	2.87	0.43
53:27:1765:U:O2'	53:27:1766:G:H5'	2.19	0.43
53:27:530:G:C1'	53:27:2035:G:H4'	2.48	0.43
53:27:2059:A:N6	53:27:2503:A:H2'	2.33	0.43
53:27:2544:G:H1'	53:27:2646:C:H5'	1.99	0.43
53:27:622:G:O2'	53:27:623:C:H5'	2.18	0.43
53:27:664:G:C5	53:27:665:U:C4	3.07	0.43
54:28:111:U:H2'	54:28:112:G:C8	2.49	0.43
14:N:46:GLU:HA	54:28:113:C:O2'	2.19	0.43
58:32:37:A:H2'	58:32:38:A:O4'	2.18	0.43
59:33:161:ARG:C	59:33:162:GLU:HG2	2.37	0.43
59:33:241:LYS:CD	59:33:246:LYS:NZ	2.77	0.43
59:33:407:TYR:HA	59:33:417:ASP:HA	2.00	0.43
29:3:35:ARG:HE	29:3:42:LEU:CD2	2.31	0.43
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	0.43
33:7:129:PHE:CZ	33:7:156:LEU:HD13	2.53	0.43
33:7:6:PRO:HD2	33:7:183:TYR:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:70:GLN:CA	34:8:73:ASN:HD22	2.30	0.43
35:9:22:LYS:HB3	35:9:29:ILE:CG2	2.48	0.43
1:A:257:ARG:HH12	53:27:1799:G:H3'	1.84	0.43
1:A:32:LEU:CD2	1:A:63:ILE:HD11	2.47	0.43
4:D:146:ASP:N	4:D:146:ASP:OD1	2.52	0.43
7:G:18:VAL:HG12	7:G:70:GLU:HB2	1.98	0.43
7:G:58:THR:CG2	7:G:81:LEU:HD12	2.46	0.43
11:K:19:LEU:HA	11:K:27:LEU:CD1	2.48	0.43
14:N:100:HIS:CG	14:N:101:GLY:N	2.85	0.43
19:S:39:THR:OG1	19:S:42:GLU:HB2	2.18	0.43
21:U:26:PHE:HE2	21:U:44:HIS:HA	1.83	0.43
36:10:38:ARG:HD2	36:10:40:GLU:OE1	2.18	0.43
38:12:104:SER:HB2	38:12:125:ILE:HD11	1.99	0.43
41:15:43:TRP:HZ3	41:15:45:THR:HG23	1.83	0.43
46:20:12:LYS:C	46:20:14:ARG:H	2.21	0.43
46:20:14:ARG:HE	46:20:42:ILE:HD12	1.82	0.43
36:10:93:LYS:NZ	48:22:19:GLU:HG2	2.32	0.43
50:24:47:GLN:HG3	50:24:51:ASN:HD21	1.83	0.43
52:26:1016:A:H4'	52:26:1218:C:H4'	2.00	0.43
52:26:1327:C:C2	52:26:1328:C:C5	3.07	0.43
52:26:1392:G:H2'	52:26:1393:U:O4'	2.17	0.43
52:26:1450:U:H4'	52:26:1451:U:C5	2.54	0.43
52:26:1478:U:H2'	52:26:1479:C:C6	2.54	0.43
47:21:18:LYS:HE2	52:26:256:U:OP1	2.18	0.43
52:26:399:G:H2'	52:26:400:C:C6	2.54	0.43
53:27:1622:G:H2'	53:27:1623:G:C8	2.53	0.43
53:27:1936:A:C2	53:27:1945:G:C8	3.06	0.43
53:27:200:U:C6	53:27:201:C:C6	3.07	0.43
53:27:562:U:C6	53:27:2036:C:H5'	2.54	0.43
53:27:250:G:C6	53:27:251:A:C6	3.06	0.43
53:27:2524:G:H2'	53:27:2525:G:H5''	2.00	0.43
53:27:892:A:H2'	53:27:893:C:C6	2.53	0.43
53:27:976:G:H5'	53:27:1156:A:N6	2.34	0.43
53:27:983:A:H3'	53:27:984:A:C8	2.53	0.43
56:30:26:A:H2'	56:30:27:G:C5'	2.47	0.43
58:32:22:G:C8	58:32:46:A:N6	2.85	0.43
58:32:19:G:C5	58:32:57:A:C2	3.07	0.43
59:33:210:GLU:OE1	59:33:210:GLU:HA	2.17	0.43
59:33:274:PHE:HB3	59:33:333:THR:CB	2.47	0.43
59:33:279:VAL:HG13	59:33:336:ILE:HA	1.99	0.43
59:33:536:PHE:O	59:33:538:ASP:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:732:VAL:HG12	59:33:734:ASP:HB2	2.01	0.43
33:7:153:SER:HB3	33:7:164:THR:HG22	2.00	0.43
34:8:144:ILE:H	34:8:144:ILE:HD12	1.82	0.43
3:C:179:SER:HB3	3:C:183:PHE:CD2	2.53	0.43
3:C:32:VAL:HG11	11:K:6:LEU:CD1	2.47	0.43
11:K:58:TYR:O	30:4:12:ARG:NH2	2.46	0.43
13:M:25:ALA:O	13:M:29:VAL:HG23	2.18	0.43
16:P:50:ARG:HH11	16:P:50:ARG:HG2	1.82	0.43
16:P:67:ALA:O	16:P:70:GLN:HB3	2.18	0.43
17:Q:74:ILE:HA	17:Q:74:ILE:HD12	1.91	0.43
17:Q:78:ARG:HB3	17:Q:83:TYR:HB3	2.00	0.43
18:R:73:LYS:O	18:R:106:VAL:HB	2.19	0.43
18:R:17:VAL:HG12	18:R:76:VAL:HG21	2.00	0.43
21:U:61:LEU:O	21:U:71:LYS:HA	2.18	0.43
23:W:2:ARG:O	23:W:11:PRO:HD3	2.17	0.43
23:W:16:ASN:HB2	23:W:26:ARG:HD2	2.01	0.43
24:X:56:LEU:HD23	24:X:59:GLU:OE1	2.18	0.43
24:X:9:LYS:NZ	24:X:11:VAL:H	2.16	0.43
38:12:94:VAL:HG12	38:12:95:MET:HG3	1.99	0.43
43:17:26:LYS:O	43:17:29:SER:HB3	2.19	0.43
43:17:8:ILE:N	43:17:9:PRO:HD3	2.33	0.43
45:19:88:ARG:CZ	53:27:714:U:OP2	2.66	0.43
48:22:38:ILE:HD12	48:22:62:ARG:NH2	2.33	0.43
48:22:42:ARG:O	48:22:43:ILE:HD13	2.17	0.43
48:22:67:LEU:HA	48:22:67:LEU:HD23	1.82	0.43
52:26:1114:C:H2'	52:26:1115:U:C6	2.54	0.43
52:26:1143:G:H2'	52:26:1144:G:C8	2.53	0.43
50:24:29:THR:OG1	52:26:1458:G:OP1	2.35	0.43
52:26:1496:C:H2'	52:26:1497:G:C1'	2.48	0.43
52:26:273:U:O5'	52:26:273:U:H6	2.00	0.43
52:26:70:U:H6	52:26:70:U:O5'	2.01	0.43
52:26:772:U:H2'	52:26:773:G:H8	1.83	0.43
52:26:824:G:O2'	52:26:825:A:H5'	2.18	0.43
52:26:951:G:H2'	52:26:952:U:H6	1.81	0.43
16:P:58:GLN:HG3	53:27:1009:A:O4'	2.18	0.43
7:G:41:LEU:HD11	53:27:1084:A:OP1	2.19	0.43
53:27:1184:U:O2'	53:27:1185:G:H5'	2.18	0.43
53:27:1284:A:H2'	53:27:1285:A:O4'	2.18	0.43
53:27:1364:G:N2	53:27:1367:A:OP2	2.43	0.43
53:27:1494:A:H2	53:27:1579:A:C1'	2.30	0.43
53:27:1600:C:H2'	53:27:1601:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1930:G:O2'	53:27:1931:U:O5'	2.31	0.43
53:27:2259:U:C5	53:27:2427:C:N4	2.85	0.43
53:27:297:G:H2'	53:27:298:G:O4'	2.17	0.43
53:27:818:G:C3'	53:27:1187:G:H22	2.31	0.43
53:27:819:A:C8	53:27:1189:A:C6	3.07	0.43
53:27:955:U:H2'	53:27:956:G:C8	2.54	0.43
54:28:65:U:C3'	54:28:108:A:H61	2.31	0.43
56:30:15:G:H3'	56:30:16:U:C5'	2.44	0.43
57:31:30:G:O2'	57:31:31:G:H5'	2.18	0.43
58:32:60:U:H3'	58:32:61:C:C5'	2.48	0.43
59:33:172:VAL:CG2	59:33:176:LYS:HE2	2.48	0.43
59:33:281:ILE:HD13	59:33:281:ILE:HG21	1.80	0.43
59:33:534:TYR:O	59:33:535:ASN:C	2.56	0.43
59:33:676:ARG:CG	59:33:677:SER:N	2.81	0.43
31:5:25:VAL:HG21	31:5:35:GLN:HE21	1.82	0.43
33:7:153:SER:OG	33:7:164:THR:HG22	2.18	0.43
35:9:112:ALA:HA	35:9:115:GLU:HB3	1.99	0.43
3:C:65:THR:O	3:C:69:ARG:NH1	2.51	0.43
5:E:51:PHE:CE1	5:E:71:LEU:HD22	2.54	0.43
7:G:18:VAL:C	7:G:21:GLY:H	2.21	0.43
7:G:23:LEU:HD21	7:G:96:PHE:HB3	2.00	0.43
8:H:14:ALA:CB	8:H:50:LYS:HA	2.41	0.43
13:M:83:LEU:O	13:M:84:GLY:C	2.56	0.43
15:O:28:LYS:HB2	15:O:82:SER:OG	2.18	0.43
17:Q:64:VAL:HG23	17:Q:97:LYS:H	1.83	0.43
18:R:7:HIS:CE1	18:R:10:ALA:HA	2.53	0.43
19:S:18:GLU:O	19:S:21:SER:HB2	2.19	0.43
25:Y:6:ILE:HG22	25:Y:28:LEU:HD11	1.99	0.43
26:Z:28:VAL:HG12	26:Z:29:GLY:N	2.33	0.43
36:10:14:GLN:N	36:10:14:GLN:OE1	2.51	0.43
37:11:148:LYS:O	37:11:150:PHE:N	2.44	0.43
41:15:35:ASP:OD2	41:15:37:GLN:HB3	2.18	0.43
42:16:43:LYS:CE	42:16:44:PRO:HD3	2.49	0.43
45:19:2:LEU:HG	45:19:7:THR:HG22	1.99	0.43
46:20:8:ARG:NH1	46:20:9:HIS:O	2.52	0.43
41:15:123:PRO:O	51:25:34:ARG:N	2.52	0.43
51:25:46:ARG:NH1	52:26:1532:U:C5	2.76	0.43
52:26:123:U:H5''	52:26:311:C:HO2'	1.82	0.43
52:26:1346:A:N3	52:26:1346:A:H2'	2.34	0.43
52:26:1445:U:H1'	52:26:1458:G:N2	2.34	0.43
52:26:151:A:H2'	52:26:152:A:H5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:259:G:C4	52:26:260:G:C8	3.06	0.43
52:26:440:C:H2'	52:26:441:A:O4'	2.19	0.43
52:26:637:C:H2'	52:26:638:U:H6	1.81	0.43
52:26:783:C:O2'	52:26:784:A:H5'	2.18	0.43
53:27:1555:G:C8	53:27:1555:G:H5'	2.53	0.43
53:27:1574:C:H2'	53:27:1575:C:C6	2.54	0.43
53:27:1632:A:H2'	53:27:1633:G:C8	2.53	0.43
53:27:1769:U:O2'	53:27:1770:G:H5'	2.19	0.43
53:27:1999:C:O2'	53:27:2000:C:H5'	2.19	0.43
2:B:150:GLN:OE1	53:27:2572:A:N7	2.51	0.43
53:27:2838:G:C4	53:27:2839:G:C8	3.06	0.43
53:27:2880:C:H2'	53:27:2881:U:C6	2.53	0.43
53:27:374:A:H2'	53:27:375:G:O4'	2.19	0.43
53:27:428:A:H2'	53:27:429:A:O4'	2.19	0.43
53:27:519:U:H2'	53:27:520:G:C8	2.53	0.43
53:27:567:U:H2'	53:27:568:U:O4'	2.18	0.43
1:A:206:LYS:HE3	53:27:729:G:C8	2.53	0.43
53:27:972:A:C6	53:27:973:A:C6	3.06	0.43
57:31:51:C:H2'	57:31:52:G:O4'	2.18	0.43
59:33:175:ALA:O	59:33:179:THR:HG23	2.19	0.43
59:33:676:ARG:HG3	59:33:677:SER:N	2.18	0.43
59:33:681:ARG:HA	59:33:684:THR:HB	2.01	0.43
59:33:99:VAL:HG11	59:33:103:VAL:CG1	2.48	0.43
30:4:40:LYS:O	30:4:43:LEU:HB2	2.19	0.43
34:8:61:ARG:HH21	34:8:67:LEU:CA	2.21	0.43
35:9:103:GLY:N	35:9:121:ASN:HD22	2.15	0.43
35:9:48:GLY:O	35:9:62:ALA:HB1	2.19	0.43
2:B:47:ALA:HB2	2:B:83:ARG:HA	2.00	0.43
4:D:41:GLU:OE1	4:D:48:LEU:HD21	2.19	0.43
7:G:117:LEU:HB2	7:G:122:GLN:NE2	2.34	0.43
8:H:98:GLY:C	8:H:138:VAL:HB	2.39	0.43
13:M:51:LEU:HD21	13:M:69:ARG:HD2	2.01	0.43
15:O:20:ARG:HD3	15:O:112:ARG:HD2	2.00	0.43
16:P:16:ILE:HG21	16:P:35:PHE:HA	2.00	0.43
19:S:69:ARG:HA	19:S:73:ARG:O	2.18	0.43
20:T:13:LEU:N	20:T:68:ASN:O	2.46	0.43
4:D:104:THR:O	26:Z:38:SER:HB3	2.19	0.43
37:11:63:VAL:O	37:11:67:ASN:HB2	2.18	0.43
27:1:31:LYS:HD3	27:1:49:ARG:O	2.18	0.43
39:13:55:ASP:O	39:13:59:LYS:HD3	2.18	0.43
39:13:91:GLU:CA	39:13:94:ARG:HB2	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:15:81:LEU:HD11	41:15:106:ILE:HD12	2.00	0.43
27:1:9:ARG:HA	27:1:12:ARG:HD3	1.99	0.43
46:20:28:ARG:NH2	52:26:390:U:H4'	2.34	0.43
50:24:22:SER:OG	50:24:23:ARG:N	2.51	0.43
52:26:1166:G:H5''	52:26:1167:A:OP2	2.19	0.43
52:26:1325:C:H2'	52:26:1326:U:H6	1.84	0.43
52:26:1411:C:H2'	52:26:1412:C:C6	2.54	0.43
52:26:1502:A:N6	52:26:1504:G:N2	2.67	0.43
52:26:238:A:C2'	52:26:239:U:H5'	2.49	0.43
52:26:319:G:H2'	52:26:320:A:H8	1.84	0.43
52:26:395:C:H2'	52:26:396:C:C6	2.53	0.43
52:26:413:G:H1'	52:26:428:G:H22	1.82	0.43
52:26:496:A:H2'	52:26:497:G:C8	2.54	0.43
52:26:553:A:H2'	52:26:554:A:C8	2.53	0.43
53:27:1425:G:C6	53:27:1426:G:C6	3.07	0.43
53:27:1502:A:H2'	53:27:1503:A:C5'	2.34	0.43
53:27:1716:U:H2'	53:27:1717:A:C8	2.48	0.43
53:27:1876:A:H2'	53:27:1877:A:O4'	2.19	0.43
53:27:2239:G:C6	53:27:2240:U:C4	3.06	0.43
53:27:2256:G:H2'	53:27:2257:U:O4'	2.19	0.43
53:27:2287:A:C5	53:27:2289:G:C8	3.06	0.43
53:27:2447:G:C4	53:27:2500:U:C5	3.07	0.43
53:27:2519:U:C4	53:27:2542:A:C5	3.07	0.43
53:27:2579:C:O2'	53:27:2580:U:H5'	2.18	0.43
53:27:2644:G:O2'	53:27:2645:G:H5'	2.17	0.43
53:27:2869:G:C2	53:27:2870:C:C2	3.07	0.43
53:27:9:G:C2	53:27:2895:G:C6	3.07	0.43
53:27:601:C:O2	53:27:605:G:H4'	2.18	0.43
53:27:610:C:H2'	53:27:611:C:C6	2.54	0.43
53:27:862:G:H2'	53:27:863:A:H8	1.84	0.43
54:28:35:C:H2'	54:28:36:C:O4'	2.19	0.43
54:28:78:A:H2'	54:28:79:G:O4'	2.18	0.43
29:3:12:ARG:HE	29:3:44:VAL:CG2	2.31	0.43
59:33:103:VAL:O	59:33:107:ILE:HG23	2.18	0.43
59:33:233:VAL:O	59:33:237:ARG:HG3	2.17	0.43
32:6:22:TRP:HZ3	32:6:27:LYS:HA	1.83	0.43
34:8:106:PHE:CD1	34:8:144:ILE:HD11	2.53	0.43
34:8:193:ASP:OD1	34:8:194:ILE:N	2.51	0.43
35:9:55:VAL:O	35:9:58:ALA:HB3	2.19	0.43
4:D:3:LEU:CA	4:D:6:TYR:HB3	2.47	0.43
8:H:10:LEU:HD23	8:H:12:VAL:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:54:LEU:C	15:O:56:SER:H	2.22	0.43
15:O:61:ARG:HA	15:O:69:VAL:O	2.19	0.43
16:P:20:ALA:HA	16:P:23:TYR:CE2	2.53	0.43
19:S:51:PHE:C	19:S:52:GLU:HG2	2.39	0.43
20:T:80:ASP:OD2	20:T:95:PHE:HB3	2.18	0.43
36:10:91:ARG:HG2	36:10:92:THR:H	1.82	0.43
27:1:30:ASP:CG	27:1:31:LYS:N	2.72	0.43
42:16:113:ARG:CZ	42:16:120:ARG:HA	2.48	0.43
43:17:18:LEU:HD12	43:17:33:LEU:CD1	2.48	0.43
52:26:1005:A:C5	52:26:1006:G:H1'	2.54	0.43
52:26:1182:G:H5'	52:26:1183:U:OP1	2.19	0.43
52:26:1495:U:H2'	52:26:1496:C:H6	1.83	0.43
52:26:1526:G:H2'	52:26:1527:U:C6	2.54	0.43
52:26:516:U:O2	52:26:516:U:O4'	2.35	0.43
52:26:551:U:H2'	52:26:552:U:H6	1.82	0.43
52:26:765:G:H2'	52:26:812:G:H21	1.82	0.43
52:26:861:G:O2'	52:26:862:C:H5'	2.19	0.43
52:26:897:C:H2'	52:26:898:G:H8	1.84	0.43
52:26:981:U:O4	52:26:1222:G:O6	2.36	0.43
53:27:10:A:H2	53:27:2800:A:HO2'	1.67	0.43
53:27:112:U:H2'	53:27:113:U:H5'	2.00	0.43
53:27:1243:C:C2	53:27:1244:A:C8	3.07	0.43
53:27:1350:C:O2'	53:27:1351:C:H5'	2.19	0.43
53:27:1355:G:C6	53:27:1377:G:N2	2.87	0.43
53:27:1655:A:C6	53:27:1656:C:C2	3.07	0.43
53:27:1824:G:C6	53:27:1825:U:C4	3.06	0.43
52:26:1418:A:N3	53:27:1959:G:H1'	2.34	0.43
53:27:2251:G:N1	57:31:76:A:N6	2.66	0.43
53:27:2256:G:H2'	53:27:2257:U:C6	2.54	0.43
53:27:2302:U:H2'	53:27:2303:G:H8	1.82	0.43
53:27:2347:C:H2'	53:27:2348:U:C6	2.53	0.43
53:27:2588:G:C5	53:27:2589:A:C8	3.06	0.43
53:27:2730:C:O2'	53:27:2731:G:H5'	2.19	0.43
53:27:2838:G:H2'	53:27:2839:G:O4'	2.19	0.43
53:27:2854:G:H2'	53:27:2855:C:C6	2.54	0.43
53:27:2850:A:O4'	53:27:2868:A:H2	2.02	0.43
53:27:980:A:C6	53:27:981:A:N1	2.87	0.43
54:28:5:U:O2'	54:28:6:G:H5'	2.19	0.43
56:30:48:C:H5'	56:30:50:U:OP2	2.19	0.43
57:31:25:C:H2'	57:31:26:G:O4'	2.19	0.43
59:33:325:VAL:HG12	59:33:332:LYS:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:577:LEU:HA	59:33:580:LEU:CB	2.49	0.43
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	0.43
59:33:640:GLN:N	59:33:640:GLN:CD	2.72	0.43
59:33:668:VAL:HA	59:33:713:THR:HA	2.00	0.43
31:5:12:ARG:C	31:5:14:CYS:H	2.20	0.43
32:6:18:GLN:HG3	32:6:187:ASP:OD2	2.19	0.43
34:8:48:SER:O	34:8:51:GLY:N	2.49	0.43
1:A:132:ARG:HH12	6:F:92:GLY:HA2	1.83	0.43
1:A:90:ILE:HD13	1:A:102:TYR:CD1	2.54	0.43
3:C:88:ARG:HD3	3:C:89:PRO:HD2	2.00	0.43
5:E:126:THR:HG22	5:E:127:GLN:H	1.84	0.43
5:E:37:ASN:ND2	5:E:63:GLN:NE2	2.67	0.43
7:G:15:VAL:HA	7:G:18:VAL:CG2	2.49	0.43
8:H:40:ALA:HB1	8:H:68:PHE:CZ	2.53	0.43
9:I:35:ARG:HH11	9:I:40:HIS:CG	2.36	0.43
11:K:47:ARG:HG3	11:K:50:PHE:HB2	1.99	0.43
14:N:39:VAL:O	14:N:47:VAL:HA	2.17	0.43
15:O:25:VAL:CG1	15:O:26:GLU:N	2.82	0.43
16:P:73:ILE:HG21	16:P:109:VAL:HG13	2.01	0.43
17:Q:38:VAL:HG21	17:Q:41:ILE:HG13	1.99	0.43
18:R:2:GLU:OE1	18:R:108:SER:HB2	2.18	0.43
43:17:14:ALA:HB1	43:17:33:LEU:HD21	2.01	0.43
43:17:6:ILE:O	43:17:8:ILE:N	2.52	0.43
44:18:20:PHE:C	44:18:22:LYS:N	2.68	0.43
45:19:69:LEU:HG	45:19:77:TYR:HB2	2.00	0.43
47:21:40:THR:HG22	47:21:41:THR:N	2.33	0.43
32:6:101:THR:HG23	52:26:1074:G:H4'	2.01	0.43
39:13:125:GLN:HB3	52:26:1233:G:P	2.59	0.43
49:23:2:ARG:O	52:26:1313:U:O4	2.37	0.43
52:26:1480:A:H3'	52:26:1481:U:H6	1.82	0.43
34:8:68:GLU:HB3	52:26:546:A:P	2.58	0.43
52:26:585:G:O2'	52:26:879:C:H5''	2.19	0.43
52:26:888:G:H1'	52:26:909:A:H61	1.84	0.43
35:9:23:THR:HG22	52:26:922:G:O2'	2.19	0.43
53:27:813:U:O2'	53:27:1225:G:H1'	2.19	0.43
53:27:1564:C:O5'	53:27:1564:C:H6	2.02	0.43
53:27:1579:A:H2'	53:27:1580:A:H8	1.84	0.43
53:27:1656:C:H2'	53:27:1657:U:C6	2.53	0.43
53:27:1753:G:N2	53:27:1755:A:H3'	2.33	0.43
53:27:1912:A:N6	53:27:1917:U:C5	2.84	0.43
53:27:530:G:H1'	53:27:2035:G:H4'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2213:U:H5''	53:27:2214:C:OP2	2.19	0.43
53:27:2590:A:N1	53:27:2604:U:O2	2.52	0.43
53:27:2672:U:H2'	53:27:2673:G:C5'	2.23	0.43
53:27:763:G:C5	53:27:765:C:C4	3.07	0.43
53:27:853:C:O2'	53:27:854:C:H5'	2.19	0.43
59:33:634:HIS:HE1	59:33:638:CYS:SG	2.41	0.43
59:33:84:LEU:HB3	59:33:90:VAL:HG21	2.01	0.43
33:7:39:ARG:NH1	33:7:54:ILE:O	2.51	0.43
34:8:96:ARG:HB3	34:8:98:ASP:OD1	2.19	0.43
1:A:235:GLU:O	1:A:235:GLU:CD	2.57	0.43
2:B:125:TRP:CE3	2:B:160:LYS:HD2	2.53	0.43
3:C:189:THR:HG22	3:C:191:ASP:N	2.30	0.43
4:D:99:PHE:O	4:D:102:LEU:HB3	2.18	0.43
4:D:109:ARG:NH1	4:D:135:ILE:O	2.52	0.43
7:G:3:LEU:N	7:G:6:GLN:OE1	2.51	0.43
8:H:17:ALA:HB1	8:H:37:PHE:CZ	2.54	0.43
12:L:21:ALA:H	12:L:97:GLN:CB	2.31	0.43
25:Y:9:THR:HG23	25:Y:10:ARG:HG2	2.00	0.43
25:Y:40:THR:HG23	25:Y:42:ALA:N	2.34	0.43
36:10:47:LEU:HB2	36:10:48:ALA:H	1.56	0.43
37:11:32:ASP:HB3	52:26:1351:U:O4'	2.18	0.43
37:11:89:GLU:N	37:11:89:GLU:OE1	2.47	0.43
38:12:34:ALA:O	38:12:37:ASN:HB3	2.19	0.43
42:16:120:ARG:CG	42:16:121:PRO:HD2	2.49	0.43
42:16:52:CYS:SG	42:16:66:ILE:HD11	2.59	0.43
46:20:39:PHE:HD1	46:20:50:THR:HG21	1.82	0.43
52:26:1053:G:H4'	52:26:1054:C:H3'	2.01	0.43
49:23:5:LYS:CB	52:26:1313:U:OP2	2.66	0.43
52:26:1324:A:H2'	52:26:1325:C:H6	1.82	0.43
52:26:180:U:O2	52:26:195:A:N7	2.52	0.43
52:26:525:C:H2'	52:26:526:C:C6	2.53	0.43
52:26:70:U:H2'	52:26:94:G:N7	2.33	0.43
52:26:776:G:H8	52:26:776:G:O5'	2.01	0.43
52:26:856:C:O2'	52:26:857:C:H5'	2.19	0.43
52:26:981:U:H2'	52:26:982:U:H5	1.79	0.43
16:P:54:ARG:CD	53:27:1155:A:H5''	2.46	0.43
53:27:116:C:H2'	53:27:117:G:C8	2.53	0.43
53:27:1266:G:H22	53:27:2012:G:C2'	2.21	0.43
53:27:1366:A:H2'	53:27:1367:A:O4'	2.19	0.43
53:27:1477:A:C4	53:27:1515:A:C6	3.06	0.43
53:27:1877:A:H2'	53:27:1878:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1952:A:C6	53:27:1953:A:N1	2.86	0.43
53:27:195:A:H3'	53:27:196:A:H4'	2.00	0.43
53:27:208:C:H2'	53:27:209:C:C6	2.46	0.43
53:27:244:A:H2'	53:27:245:G:O4'	2.19	0.43
53:27:2588:G:H2'	53:27:2589:A:C4'	2.48	0.43
53:27:1638:C:H1'	53:27:2698:U:O2'	2.19	0.43
53:27:2725:A:C4	53:27:2727:A:C8	3.07	0.43
53:27:372:G:C2'	53:27:373:U:OP2	2.67	0.43
53:27:511:U:H2'	53:27:512:G:H5'	1.99	0.43
53:27:59:U:HO2'	53:27:73:A:H2'	1.81	0.43
53:27:782:A:O5'	53:27:783:A:C2	2.72	0.43
53:27:785:G:C6	53:27:786:C:C4	3.07	0.43
53:27:785:G:H2'	53:27:786:C:C6	2.54	0.43
53:27:775:G:C4	53:27:794:A:C8	3.06	0.43
53:27:861:A:H2'	53:27:862:G:O4'	2.18	0.43
53:27:896:A:H5'	53:27:897:C:OP2	2.19	0.43
54:28:112:G:H2'	54:28:113:C:C6	2.54	0.43
57:31:20:U:H2'	57:31:21:A:C5'	2.49	0.43
59:33:274:PHE:CE1	59:33:277:ARG:NH1	2.85	0.43
59:33:597:VAL:CG1	59:33:598:VAL:N	2.82	0.43
31:5:15:LYS:N	31:5:26:ILE:O	2.48	0.43
32:6:43:GLU:O	32:6:47:PRO:HG2	2.18	0.43
33:7:157:GLY:C	33:7:159:ALA:N	2.72	0.43
33:7:37:LYS:HA	33:7:37:LYS:HD3	1.78	0.43
2:B:184:ARG:HB3	2:B:186:LEU:HG	2.00	0.43
3:C:165:HIS:HB2	53:27:1205:A:N1	2.34	0.43
3:C:112:LEU:HD13	3:C:186:VAL:HG21	2.01	0.43
3:C:189:THR:O	3:C:192:ALA:HB3	2.19	0.43
7:G:41:LEU:HD22	53:27:1083:U:OP1	2.19	0.43
10:J:3:GLN:HB3	10:J:32:TYR:HB3	2.00	0.43
10:J:31:ARG:HB3	10:J:32:TYR:H	1.71	0.43
10:J:64:ARG:HG2	10:J:79:PHE:CE2	2.54	0.43
14:N:102:ARG:O	14:N:105:ALA:HB3	2.18	0.43
14:N:47:VAL:HG21	54:28:114:C:H1'	1.99	0.43
17:Q:24:LYS:HA	17:Q:94:THR:HG1	1.84	0.43
18:R:22:ASP:OD1	18:R:25:ARG:NH1	2.52	0.43
27:1:18:HIS:C	27:1:20:ALA:N	2.72	0.42
39:13:112:ARG:HD2	44:18:100:TRP:OXT	2.18	0.42
44:18:41:TRP:HA	44:18:44:VAL:HG22	2.01	0.42
50:24:82:ILE:HG13	50:24:83:ASN:H	1.84	0.42
51:25:15:LEU:HD23	51:25:17:ARG:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:23:GLU:O	51:25:24:LYS:HB2	2.19	0.42
52:26:1055:A:C5	52:26:1206:G:C6	3.07	0.42
52:26:123:U:O5'	52:26:123:U:H6	2.01	0.42
52:26:1333:A:H2'	52:26:1334:G:O4'	2.18	0.42
52:26:1340:A:H2'	52:26:1341:U:O4'	2.19	0.42
52:26:1403:C:N4	55:29:18:G:OP1	2.52	0.42
52:26:1526:G:O2'	52:26:1527:U:H5'	2.19	0.42
52:26:1531:A:O2'	52:26:1532:U:H5'	2.19	0.42
52:26:18:C:H2'	52:26:19:A:O4'	2.19	0.42
52:26:320:A:H2'	52:26:321:A:C8	2.54	0.42
52:26:488:C:O5'	52:26:488:C:H6	2.01	0.42
52:26:26:A:N6	52:26:558:G:H1'	2.34	0.42
41:15:117:HIS:CD2	52:26:675:A:H1'	2.54	0.42
52:26:947:G:H2'	52:26:948:C:O4'	2.19	0.42
53:27:1719:G:N2	53:27:1742:U:H1'	2.33	0.42
53:27:202:U:N3	53:27:203:A:C2	2.86	0.42
53:27:2093:G:N7	53:27:2225:A:H2'	2.33	0.42
53:27:2137:U:N3	53:27:2154:A:C2	2.87	0.42
53:27:2187:U:O2'	53:27:2188:U:H5'	2.19	0.42
53:27:2762:C:H2'	53:27:2763:G:H5'	2.01	0.42
53:27:28:A:H2'	53:27:29:U:C6	2.54	0.42
53:27:304:U:H2'	53:27:305:C:H6	1.84	0.42
53:27:703:U:H2'	53:27:704:G:O4'	2.18	0.42
53:27:975:A:C4	53:27:976:G:C8	3.07	0.42
37:11:81:GLY:HA3	55:29:12:A:H1'	2.01	0.42
57:31:15:G:N2	57:31:21:A:H1'	2.34	0.42
58:32:20:U:O2'	58:32:21:A:OP1	2.34	0.42
56:30:76:A:H2'	59:33:431:ILE:HD13	2.01	0.42
29:3:4:THR:O	29:3:5:PHE:HB2	2.19	0.42
33:7:53:ARG:HG3	33:7:68:HIS:ND1	2.34	0.42
35:9:27:GLY:H	52:26:1398:A:H61	1.67	0.42
35:9:80:LEU:HB3	35:9:81:GLN:H	1.57	0.42
1:A:229:HIS:CD2	1:A:246:PRO:HG3	2.54	0.42
1:A:257:ARG:HH21	1:A:266:ILE:HD11	1.80	0.42
2:B:146:ILE:HD12	2:B:146:ILE:H	1.83	0.42
3:C:48:THR:CG2	3:C:86:ALA:HB3	2.47	0.42
6:F:127:GLU:HA	6:F:145:ASN:HA	1.99	0.42
9:I:92:MET:SD	9:I:96:ARG:HB2	2.59	0.42
24:X:3:ALA:CA	24:X:6:LEU:HD13	2.46	0.42
25:Y:40:THR:OG1	25:Y:41:PRO:HD2	2.19	0.42
38:12:14:ARG:NH1	38:12:74:ILE:O	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:13:ARG:HD2	42:16:14:LYS:H	1.84	0.42
42:16:34:THR:HA	42:16:75:GLU:O	2.20	0.42
42:16:35:ARG:HD3	42:16:53:ARG:HH22	1.84	0.42
44:18:72:PHE:CZ	44:18:77:GLY:HA2	2.54	0.42
44:18:73:LEU:C	44:18:75:LYS:N	2.72	0.42
46:20:43:ALA:HB1	46:20:46:LYS:NZ	2.34	0.42
49:23:52:ASN:ND2	49:23:75:PRO:O	2.50	0.42
52:26:373:A:H2'	52:26:374:A:H8	1.84	0.42
52:26:46:G:N1	52:26:366:A:C2	2.87	0.42
52:26:499:A:O3'	52:26:500:G:H8	2.02	0.42
52:26:539:A:H2'	52:26:540:G:C8	2.55	0.42
52:26:621:A:H2'	52:26:622:A:O4'	2.19	0.42
52:26:886:G:N2	52:26:887:G:H1'	2.34	0.42
53:27:1024:G:OP2	53:27:1026:G:OP1	2.37	0.42
8:H:126:ARG:CZ	53:27:1080:A:H5''	2.49	0.42
53:27:1101:U:O2'	53:27:1102:C:H5'	2.18	0.42
53:27:1279:G:H2'	53:27:1280:G:O4'	2.19	0.42
53:27:1412:U:H2'	53:27:1413:A:H8	1.84	0.42
53:27:1422:G:H2'	53:27:1423:G:O4'	2.18	0.42
53:27:1574:C:H2'	53:27:1575:C:H6	1.83	0.42
53:27:1761:C:C4	53:27:1762:A:C6	3.06	0.42
53:27:1828:G:H4'	53:27:1829:A:OP1	2.18	0.42
53:27:1846:G:C2	53:27:1895:C:C2	3.07	0.42
53:27:2101:A:H2'	53:27:2102:G:O4'	2.19	0.42
53:27:2373:G:O2'	53:27:2374:C:H5'	2.18	0.42
53:27:2459:A:H2'	53:27:2459:A:N3	2.34	0.42
53:27:2521:C:H2'	53:27:2522:U:O4'	2.19	0.42
53:27:2570:G:O2'	53:27:2571:U:H5'	2.19	0.42
23:W:61:LYS:HE3	53:27:372:G:OP2	2.19	0.42
53:27:683:U:O5'	53:27:683:U:H6	2.01	0.42
53:27:889:C:O2'	53:27:890:C:H5'	2.20	0.42
53:27:915:C:H2'	53:27:916:G:O4'	2.19	0.42
56:30:9:A:H1'	56:30:46:G:N2	2.33	0.42
59:33:96:ARG:CG	59:33:104:VAL:HG11	2.38	0.42
59:33:248:GLU:HG2	59:33:250:TYR:CD2	2.54	0.42
59:33:540:ASP:O	59:33:544:ALA:N	2.52	0.42
34:8:104:MET:HB3	34:8:106:PHE:CE2	2.53	0.42
35:9:60:GLN:O	35:9:63:MET:HB2	2.19	0.42
1:A:173:LEU:O	1:A:180:MET:HA	2.19	0.42
1:A:160:TYR:CB	1:A:193:GLU:HG2	2.48	0.42
1:A:245:THR:HG21	1:A:249:VAL:HB	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:137:SER:C	2:B:138:LEU:HG	2.39	0.42
3:C:44:ARG:HD2	53:27:444:C:OP2	2.19	0.42
4:D:122:ASP:OD1	4:D:126:ASN:N	2.52	0.42
7:G:20:LYS:HE2	7:G:88:HIS:CD2	2.54	0.42
8:H:6:ALA:HB3	8:H:60:VAL:HB	2.00	0.42
8:H:85:ILE:HG23	8:H:98:GLY:HA3	2.01	0.42
11:K:77:ILE:HD11	11:K:110:VAL:CG1	2.35	0.42
12:L:2:LEU:HG	12:L:2:LEU:O	2.18	0.42
13:M:115:LEU:H	13:M:115:LEU:HG	1.60	0.42
16:P:40:LYS:HG3	16:P:44:TYR:HE2	1.83	0.42
20:T:35:VAL:O	20:T:38:ILE:HG12	2.19	0.42
20:T:98:ASN:C	20:T:100:GLU:N	2.71	0.42
21:U:11:GLU:HG2	21:U:13:GLY:H	1.83	0.42
23:W:44:ARG:HH12	23:W:46:VAL:HG22	1.84	0.42
25:Y:11:SER:HB3	53:27:988:A:OP2	2.19	0.42
36:10:18:VAL:HG11	36:10:58:HIS:HE2	1.84	0.42
39:13:114:LYS:HE2	52:26:1187:G:H5'	2.01	0.42
27:1:39:ARG:C	27:1:41:HIS:H	2.22	0.42
40:14:88:MET:CE	40:14:100:ILE:HD13	2.49	0.42
43:17:16:ILE:HG12	52:26:1302:C:C4	2.54	0.42
47:21:7:LEU:HD23	47:21:24:ILE:HD13	2.01	0.42
49:23:59:VAL:O	49:23:59:VAL:HG23	2.19	0.42
52:26:1206:G:C4	52:26:1207:G:C8	3.07	0.42
43:17:24:VAL:N	52:26:1330:U:OP1	2.51	0.42
52:26:1306:A:H61	52:26:1331:G:H1'	1.78	0.42
52:26:1401:G:O2'	52:26:1402:C:H5'	2.19	0.42
52:26:174:A:O2'	52:26:175:C:H5'	2.20	0.42
52:26:222:C:H2'	52:26:223:A:H8	1.82	0.42
52:26:232:G:O2'	52:26:233:C:H5'	2.19	0.42
46:20:13:LYS:HZ3	52:26:393:A:P	2.42	0.42
52:26:396:C:C3'	52:26:397:A:H5''	2.50	0.42
52:26:472:U:O2'	52:26:473:U:H5'	2.19	0.42
52:26:644:U:O2'	52:26:645:G:H5'	2.19	0.42
52:26:922:G:C3'	52:26:923:A:C8	3.02	0.42
52:26:946:A:H4'	52:26:1333:A:O2'	2.19	0.42
53:27:1077:A:N1	53:27:1088:A:C2'	2.82	0.42
53:27:1111:A:C2'	53:27:1112:G:H4'	2.49	0.42
53:27:1152:C:O2'	53:27:1153:C:H5'	2.18	0.42
53:27:1340:U:O2	53:27:1340:U:O4'	2.37	0.42
53:27:1345:C:H2'	53:27:1346:G:H8	1.84	0.42
53:27:1516:G:H2'	53:27:1517:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:140:HIS:HD2	53:27:1658:C:OP2	2.03	0.42
53:27:1861:G:N2	53:27:1882:U:H1'	2.33	0.42
53:27:1936:A:H2	53:27:1943:U:N3	2.17	0.42
53:27:2001:C:C2	53:27:2002:G:C8	3.07	0.42
53:27:2066:C:H2'	53:27:2067:G:C8	2.54	0.42
53:27:2083:G:C6	53:27:2084:C:C4	3.06	0.42
53:27:2412:A:H2'	53:27:2413:G:O4'	2.19	0.42
30:4:7:ARG:NH2	53:27:244:A:OP2	2.52	0.42
53:27:2675:A:C6	53:27:2676:C:C4	3.08	0.42
2:B:23:PRO:HG3	53:27:2728:U:O2'	2.20	0.42
53:27:2869:G:O2'	53:27:2870:C:H5'	2.19	0.42
53:27:500:G:H22	53:27:502:A:H3'	1.83	0.42
53:27:604:G:O2'	53:27:605:G:H5'	2.19	0.42
53:27:196:A:C5	53:27:805:G:C5	3.07	0.42
53:27:923:G:O2'	53:27:924:G:H5'	2.19	0.42
37:11:142:ARG:CD	58:32:41:C:H4'	2.49	0.42
59:33:232:PHE:HE1	59:33:329:PRO:CG	2.32	0.42
59:33:326:VAL:HG22	59:33:334:VAL:CG1	2.50	0.42
59:33:338:ILE:HD12	59:33:338:ILE:N	2.34	0.42
59:33:685:THR:O	59:33:688:ALA:HB3	2.19	0.42
32:6:165:ALA:HB3	32:6:190:SER:CB	2.49	0.42
1:A:48:ILE:O	1:A:48:ILE:HG23	2.18	0.42
2:B:109:VAL:HG23	2:B:175:LEU:HD12	1.99	0.42
2:B:40:LEU:HD12	2:B:46:ARG:HB3	2.01	0.42
3:C:130:LYS:HA	53:27:321:U:OP2	2.19	0.42
6:F:30:LEU:O	6:F:33:GLN:N	2.52	0.42
9:I:84:ILE:HG13	9:I:84:ILE:O	2.19	0.42
11:K:56:PRO:HD2	11:K:59:ARG:HG3	2.01	0.42
14:N:21:LEU:HD23	14:N:21:LEU:HA	1.88	0.42
14:N:7:ARG:HA	14:N:10:ARG:NH1	2.28	0.42
14:N:94:ARG:O	14:N:97:PHE:HB2	2.19	0.42
15:O:111:GLU:OE1	15:O:111:GLU:N	2.50	0.42
22:V:55:LEU:HD23	22:V:55:LEU:HA	1.78	0.42
24:X:16:THR:O	24:X:19:LEU:HB2	2.19	0.42
37:11:110:ARG:HH12	37:11:121:ASN:HB3	1.84	0.42
41:15:82:GLU:HA	41:15:108:ASN:OD1	2.19	0.42
48:22:38:ILE:N	48:22:38:ILE:HD12	2.32	0.42
48:22:54:LEU:HG	48:22:58:ILE:CD1	2.48	0.42
49:23:39:ILE:CB	49:23:66:VAL:HA	2.43	0.42
49:23:79:TYR:OH	52:26:1226:C:H4'	2.18	0.42
51:25:25:ALA:HB1	51:25:29:ALA:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1084:G:H2'	52:26:1085:U:C5	2.55	0.42
52:26:1157:A:C5	52:26:1180:A:C6	3.08	0.42
52:26:1201:A:H4'	52:26:1203:C:OP2	2.18	0.42
52:26:1208:C:H2'	52:26:1209:C:H6	1.83	0.42
52:26:1213:A:C5	52:26:1215:G:C4	3.07	0.42
52:26:1382:C:H2'	52:26:1383:C:C6	2.46	0.42
52:26:1452:C:H4'	52:26:1453:G:N1	2.34	0.42
52:26:1487:G:O2'	52:26:1488:G:H5'	2.20	0.42
52:26:21:G:H2'	52:26:22:G:H8	1.82	0.42
52:26:117:G:O6	52:26:289:G:C1'	2.68	0.42
52:26:516:U:O4	52:26:533:A:N7	2.52	0.42
52:26:606:G:C5'	52:26:607:A:H5'	2.50	0.42
53:27:106:C:H2'	53:27:107:G:C8	2.47	0.42
53:27:1268:A:OP1	53:27:2006:C:OP1	2.38	0.42
53:27:1279:G:C4	53:27:1280:G:C8	3.08	0.42
53:27:1425:G:H2'	53:27:1426:G:C8	2.54	0.42
53:27:1430:G:H2'	53:27:1431:A:H8	1.83	0.42
53:27:1766:G:H2'	53:27:1767:G:H8	1.83	0.42
53:27:2683:C:H2'	53:27:2684:U:C6	2.54	0.42
53:27:2830:C:H2'	53:27:2831:G:H8	1.85	0.42
53:27:780:G:H2'	53:27:782:A:C6	2.54	0.42
16:P:54:ARG:NH1	53:27:977:G:H5''	2.34	0.42
59:33:78:ALA:HB1	59:33:151:ILE:HD13	2.00	0.42
59:33:152:LYS:HA	59:33:152:LYS:HD2	1.76	0.42
59:33:197:GLU:CG	59:33:201:TYR:CZ	3.02	0.42
59:33:260:TRP:NE1	59:33:264:GLN:NE2	2.67	0.42
59:33:82:PHE:CG	59:33:83:PRO:CD	2.93	0.42
33:7:54:ILE:O	33:7:54:ILE:HG13	2.19	0.42
33:7:21:TRP:CB	33:7:58:ARG:HB3	2.50	0.42
34:8:96:ARG:HH22	34:8:114:ARG:HH12	1.68	0.42
35:9:108:GLY:O	35:9:109:ALA:HB3	2.20	0.42
1:A:245:THR:CG2	1:A:249:VAL:HB	2.50	0.42
3:C:145:ASP:OD1	3:C:166:LYS:HA	2.19	0.42
4:D:25:MET:HB3	54:28:57:A:C4	2.54	0.42
4:D:27:VAL:HG13	4:D:27:VAL:O	2.19	0.42
6:F:145:ASN:OD1	6:F:146:VAL:N	2.52	0.42
10:J:1:MET:CG	10:J:67:LYS:HG2	2.50	0.42
14:N:33:ARG:HG2	14:N:34:HIS:CD2	2.55	0.42
16:P:2:ARG:HD2	53:27:1248:G:C5	2.54	0.42
18:R:41:LYS:O	18:R:44:ALA:HB3	2.19	0.42
20:T:47:PRO:CD	20:T:55:GLY:HA2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:92:VAL:O	21:U:94:ALA:N	2.49	0.42
39:13:37:TYR:CD2	39:13:38:PHE:CD2	3.08	0.42
39:13:27:ILE:HG21	39:13:62:LEU:HD12	2.01	0.42
40:14:10:LEU:CD1	40:14:72:ARG:HB2	2.40	0.42
43:17:7:ASN:CG	43:17:20:SER:HB2	2.40	0.42
44:18:45:LEU:CD2	44:18:46:LYS:HD2	2.43	0.42
46:20:7:ALA:CB	46:20:18:GLN:HB3	2.44	0.42
48:22:59:LYS:HD3	52:26:735:C:H5'	2.01	0.42
51:25:46:ARG:NE	52:26:1533:C:N4	2.67	0.42
52:26:1111:A:H2'	52:26:1112:C:C6	2.54	0.42
52:26:1149:C:H2'	52:26:1150:A:O4'	2.19	0.42
52:26:1464:U:O5'	52:26:1464:U:H6	2.02	0.42
52:26:182:A:C2'	52:26:183:C:H5''	2.49	0.42
52:26:260:G:H2'	52:26:261:U:C6	2.55	0.42
52:26:27:G:O2'	52:26:28:A:H5'	2.19	0.42
52:26:375:U:H2'	52:26:376:G:O4'	2.19	0.42
52:26:636:U:H2'	52:26:637:C:C6	2.55	0.42
52:26:705:G:H2'	52:26:706:A:C5'	2.50	0.42
52:26:889:A:H5'	52:26:891:U:H1'	2.00	0.42
52:26:978:A:C2	52:26:1319:A:O4'	2.73	0.42
53:27:133:U:H2'	53:27:134:G:H8	1.81	0.42
53:27:1689:A:O2'	53:27:1690:A:H5'	2.20	0.42
53:27:1803:A:H2'	53:27:1804:C:O4'	2.19	0.42
53:27:1824:G:H2'	53:27:1825:U:H6	1.85	0.42
53:27:1866:A:H3'	53:27:1867:G:H8	1.85	0.42
53:27:1973:G:O2'	53:27:1974:C:H5'	2.20	0.42
53:27:2053:G:C2	53:27:2617:U:C2	3.07	0.42
53:27:2116:G:O2'	53:27:2117:A:H5'	2.20	0.42
53:27:2348:U:H2'	53:27:2349:G:C8	2.54	0.42
53:27:241:A:OP1	53:27:241:A:H8	2.01	0.42
53:27:2494:G:O2'	53:27:2495:G:H5'	2.20	0.42
53:27:2545:G:H2'	53:27:2546:U:H5'	2.02	0.42
53:27:2683:C:H2'	53:27:2684:U:H6	1.85	0.42
53:27:292:U:H2'	53:27:293:U:C6	2.55	0.42
53:27:319:G:H1	53:27:323:C:H5	1.63	0.42
53:27:768:G:H2'	53:27:769:U:C6	2.54	0.42
56:30:75:C:H4'	59:33:431:ILE:HG23	2.02	0.42
57:31:43:A:H2'	57:31:44:A:C8	2.54	0.42
59:33:428:ALA:O	59:33:431:ILE:HB	2.19	0.42
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.42
59:33:705:GLN:HB2	59:33:706:GLN:H	1.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:82:PHE:CD2	59:33:83:PRO:CD	2.98	0.42
1:A:143:VAL:O	1:A:151:GLY:HA2	2.20	0.42
1:A:93:VAL:CG1	1:A:94:LEU:N	2.83	0.42
2:B:118:PHE:HE2	53:27:1655:A:H1'	1.84	0.42
3:C:88:ARG:CD	3:C:89:PRO:HD2	2.49	0.42
4:D:134:GLN:NE2	4:D:148:VAL:HA	2.34	0.42
4:D:76:PHE:HE1	53:27:2308:G:C6	2.37	0.42
4:D:76:PHE:HE1	53:27:2308:G:N7	2.18	0.42
8:H:1:ALA:HB1	8:H:61:TYR:HE1	1.84	0.42
3:C:32:VAL:HG11	11:K:6:LEU:HD12	2.00	0.42
16:P:46:TYR:HA	16:P:49:ARG:NH2	2.34	0.42
20:T:38:ILE:HG22	20:T:39:ASN:ND2	2.33	0.42
20:T:96:LYS:O	20:T:97:SER:HB3	2.19	0.42
21:U:76:ASP:CG	21:U:77:VAL:N	2.73	0.42
22:V:31:SER:O	22:V:56:PHE:HB2	2.19	0.42
24:X:10:SER:O	24:X:13:GLU:HG2	2.20	0.42
27:1:17:SER:OG	27:1:18:HIS:N	2.53	0.42
39:13:10:ARG:O	39:13:105:ARG:NH2	2.52	0.42
39:13:25:GLY:H	39:13:58:GLU:HA	1.83	0.42
39:13:24:ASN:HA	39:13:58:GLU:O	2.19	0.42
39:13:80:HIS:CE1	39:13:84:ARG:HD2	2.55	0.42
39:13:81:GLY:O	39:13:85:ALA:HB2	2.20	0.42
42:16:3:VAL:HG13	42:16:4:ASN:N	2.34	0.42
42:16:71:HIS:HA	42:16:98:ARG:HH12	1.84	0.42
44:18:55:SER:HA	44:18:56:PRO:HD2	1.89	0.42
45:19:42:PHE:CD2	45:19:55:LEU:HD22	2.55	0.42
47:21:59:GLU:C	47:21:60:ILE:HG13	2.39	0.42
47:21:5:ARG:NH1	47:21:5:ARG:HB3	2.34	0.42
47:21:66:LEU:O	47:21:67:SER:HB3	2.19	0.42
49:23:10:ILE:HG23	49:23:40:PHE:HE2	1.84	0.42
49:23:7:GLY:O	49:23:8:PRO:C	2.58	0.42
52:26:1333:A:C4	52:26:1334:G:C8	3.08	0.42
52:26:1468:A:O2'	52:26:1469:C:H5'	2.19	0.42
52:26:288:A:H2'	52:26:289:G:H4'	2.02	0.42
52:26:553:A:N6	52:26:554:A:N6	2.67	0.42
52:26:631:C:OP1	52:26:632:U:H4'	2.20	0.42
52:26:694:A:H2'	52:26:695:A:C5'	2.49	0.42
52:26:777:A:O2'	52:26:778:G:H5'	2.19	0.42
52:26:790:A:C5	52:26:791:G:C6	3.08	0.42
52:26:897:C:H2'	52:26:898:G:C8	2.55	0.42
53:27:1348:C:H3'	53:27:1349:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1379:U:OP1	53:27:1379:U:H6	2.02	0.42
53:27:1401:G:H2'	53:27:1402:U:O4'	2.19	0.42
53:27:1823:G:O2'	53:27:1824:G:H5'	2.19	0.42
53:27:1829:A:H2'	53:27:1830:C:O4'	2.20	0.42
53:27:2093:G:C5	53:27:2225:A:C8	3.07	0.42
53:27:2126:A:H4'	53:27:2127:G:O4'	2.19	0.42
53:27:2251:G:C4	53:27:2252:G:C8	3.08	0.42
53:27:2684:U:C4	53:27:2685:G:N7	2.88	0.42
53:27:2638:G:N2	53:27:2775:G:H2'	2.34	0.42
53:27:3:U:H2'	53:27:4:U:H6	1.83	0.42
53:27:47:C:C4	53:27:48:G:N7	2.88	0.42
53:27:541:A:H2'	53:27:542:C:C6	2.55	0.42
59:33:134:ASN:O	59:33:135:VAL:CB	2.68	0.42
59:33:565:ASN:O	59:33:566:LYS:CB	2.67	0.42
59:33:77:ARG:NH1	59:33:99:VAL:HG23	2.34	0.42
33:7:113:LYS:HD3	33:7:184:ASN:ND2	2.35	0.42
34:8:28:ASP:N	34:8:28:ASP:OD1	2.51	0.42
34:8:88:ASN:O	34:8:91:ALA:HB3	2.19	0.42
2:B:13:ARG:HA	2:B:24:VAL:HG22	2.00	0.42
2:B:5:VAL:HG11	2:B:80:TRP:CD2	2.55	0.42
3:C:148:ILE:HA	3:C:187:VAL:CG1	2.49	0.42
3:C:57:LYS:HG2	3:C:59:PRO:CD	2.49	0.42
4:D:19:PHE:O	4:D:20:ASN:C	2.57	0.42
5:E:39:ALA:HA	5:E:57:TYR:CD2	2.54	0.42
11:K:96:LYS:HD3	11:K:103:ILE:HG23	2.01	0.42
17:Q:29:THR:O	17:Q:31:GLU:N	2.53	0.42
19:S:57:VAL:HG22	19:S:58:VAL:N	2.34	0.42
24:X:5:GLU:HA	24:X:8:GLU:OE1	2.20	0.42
25:Y:40:THR:CG2	25:Y:43:ILE:H	2.33	0.42
26:Z:9:TYR:HD2	26:Z:25:ARG:NH2	2.16	0.42
38:12:31:LEU:HD12	38:12:31:LEU:C	2.40	0.42
27:1:25:THR:O	27:1:27:LEU:N	2.48	0.42
39:13:43:ALA:HB1	39:13:45:MET:HG2	2.02	0.42
48:22:38:ILE:HD12	48:22:62:ARG:HH22	1.84	0.42
49:23:17:LYS:HA	49:23:20:LYS:HD3	2.00	0.42
50:24:77:ASN:O	50:24:81:GLN:HG2	2.20	0.42
52:26:110:C:H2'	52:26:111:G:O4'	2.20	0.42
52:26:114:U:H2'	52:26:115:G:C8	2.55	0.42
52:26:1497:G:H3'	52:26:1498:U:O2	2.20	0.42
52:26:1501:C:C2	52:26:1504:G:C6	3.07	0.42
42:16:120:ARG:HB2	52:26:37:U:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:505:G:P	52:26:535:A:H5'	2.59	0.42
52:26:586:C:O2	52:26:755:G:N2	2.52	0.42
52:26:678:U:O2'	52:26:679:C:H5'	2.19	0.42
52:26:721:G:O4'	52:26:722:G:C4	2.72	0.42
8:H:116:MET:SD	53:27:1059:G:H4'	2.59	0.42
53:27:1179:G:N7	53:27:1180:U:H1'	2.35	0.42
53:27:1446:C:H6	53:27:1446:C:O5'	2.03	0.42
53:27:1537:G:H3'	53:27:1537:G:N3	2.34	0.42
1:A:51:ARG:NH2	53:27:1825:U:OP2	2.40	0.42
53:27:1878:G:H2'	53:27:1879:C:O4'	2.20	0.42
53:27:2165:C:H2'	53:27:2166:U:C2	2.55	0.42
53:27:966:G:H1'	53:27:2267:A:N7	2.35	0.42
53:27:2556:C:H2'	53:27:2557:G:H5'	2.02	0.42
53:27:257:C:H2'	53:27:258:G:O4'	2.19	0.42
53:27:2588:G:C6	53:27:2607:G:C2	3.08	0.42
53:27:2633:G:H2'	53:27:2634:A:O4'	2.19	0.42
53:27:2785:C:H2'	53:27:2786:U:O4'	2.19	0.42
53:27:338:G:H3'	53:27:339:U:C6	2.54	0.42
53:27:676:A:H62	53:27:802:A:N6	2.08	0.42
53:27:804:A:H2'	53:27:806:C:N4	2.34	0.42
53:27:881:G:O2'	53:27:882:G:H5'	2.20	0.42
55:29:17:U:H2'	55:29:18:G:C8	2.55	0.42
57:31:31:G:H2'	57:31:32:C:O4'	2.20	0.42
59:33:146:PHE:O	59:33:149:VAL:HG22	2.19	0.42
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	0.42
59:33:656:VAL:HG23	59:33:657:TRP:N	2.35	0.42
2:B:101:PHE:O	2:B:102:ALA:C	2.58	0.42
3:C:40:ARG:NH1	3:C:92:HIS:NE2	2.65	0.42
5:E:103:ASN:OD1	5:E:104:LEU:N	2.53	0.42
5:E:154:GLU:HG2	5:E:155:PRO:N	2.33	0.42
6:F:57:LYS:O	6:F:61:VAL:HG22	2.20	0.42
12:L:29:GLY:HA3	12:L:106:ASP:HB2	2.01	0.42
14:N:77:ALA:HA	14:N:80:GLU:CD	2.39	0.42
16:P:60:TRP:O	16:P:64:ILE:HG13	2.19	0.42
18:R:64:ALA:O	18:R:65:ASP:HB3	2.19	0.42
37:11:11:ILE:HD13	37:11:24:LYS:HD3	2.00	0.42
37:11:61:PHE:C	37:11:61:PHE:CD1	2.92	0.42
38:12:64:TYR:CD1	38:12:69:ALA:HA	2.52	0.42
39:13:43:ALA:C	39:13:45:MET:N	2.72	0.42
39:13:51:LEU:CD1	39:13:56:MET:HB2	2.49	0.42
27:1:39:ARG:O	27:1:41:HIS:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:53:ASP:OD1	43:17:54:THR:HG23	2.20	0.42
44:18:34:ASN:HB2	44:18:35:ALA:H	1.68	0.42
48:22:20:ILE:H	48:22:53:GLN:NE2	2.18	0.42
51:25:36:PHE:CB	51:25:40:PRO:HD3	2.49	0.42
52:26:105:G:C6	52:26:106:C:C4	3.08	0.42
52:26:1084:G:H5''	52:26:1085:U:OP2	2.19	0.42
52:26:1213:A:C2	52:26:1215:G:HI'	2.54	0.42
52:26:124:C:H2'	52:26:125:U:C6	2.55	0.42
52:26:934:C:H5	52:26:1344:C:H2'	1.84	0.42
52:26:137:U:H2'	52:26:138:G:H8	1.85	0.42
52:26:389:A:H2'	52:26:390:U:H5'	2.02	0.42
52:26:516:U:C5	52:26:533:A:N6	2.87	0.42
52:26:768:A:H5'	52:26:1524:C:O2'	2.20	0.42
52:26:993:G:H2'	52:26:993:G:N3	2.35	0.42
53:27:988:A:H4'	53:27:1155:A:C2	2.55	0.42
53:27:1210:G:P	53:27:1212:G:H5'	2.60	0.42
53:27:1278:C:O2'	53:27:1279:G:H5'	2.19	0.42
53:27:1360:G:C8	53:27:1361:G:C8	3.07	0.42
53:27:1435:G:H2'	53:27:1436:G:H8	1.84	0.42
53:27:1841:U:C2	53:27:1842:G:C8	3.08	0.42
2:B:148:GLN:O	53:27:2052:A:H4'	2.20	0.42
53:27:205:G:HO2'	53:27:206:U:P	2.43	0.42
53:27:2134:A:N3	53:27:2134:A:C2'	2.83	0.42
53:27:2201:G:H2'	53:27:2202:U:O4'	2.20	0.42
53:27:2253:G:H2'	53:27:2254:C:C6	2.55	0.42
53:27:2264:C:H2'	53:27:2265:U:O4'	2.20	0.42
53:27:2520:C:O2'	53:27:2521:C:H5'	2.19	0.42
53:27:2603:G:O2'	53:27:2604:U:H5'	2.20	0.42
53:27:2824:C:H6	53:27:2824:C:O5'	2.02	0.42
53:27:510:C:H2'	53:27:511:U:C6	2.54	0.42
53:27:910:A:C6	53:27:911:A:C6	3.08	0.42
53:27:917:A:H2'	53:27:918:A:O4'	2.20	0.42
54:28:35:C:O2'	54:28:36:C:H5'	2.18	0.42
57:31:31:G:H2'	57:31:32:C:C6	2.54	0.42
59:33:18:GLU:HA	59:33:21:ILE:CD1	2.50	0.42
59:33:442:ALA:HA	59:33:462:GLU:O	2.20	0.42
59:33:639:GLU:CD	59:33:639:GLU:H	2.23	0.42
59:33:683:ILE:HG22	59:33:687:LEU:HG	2.02	0.42
11:K:51:GLU:OE2	30:4:56:LEU:HD13	2.19	0.42
33:7:191:THR:HG23	33:7:192:TYR:CD2	2.55	0.42
33:7:83:VAL:HG12	33:7:87:ARG:HH12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:60:VAL:O	34:8:63:ILE:HB	2.20	0.42
35:9:148:SER:OG	35:9:150:GLU:OE1	2.38	0.42
3:C:108:ILE:HG13	3:C:109:LEU:N	2.35	0.42
3:C:178:VAL:HG13	3:C:179:SER:N	2.34	0.42
5:E:53:PRO:HG3	5:E:61:TRP:CD2	2.55	0.42
6:F:134:VAL:HG23	6:F:138:VAL:HB	2.02	0.42
8:H:79:LEU:HD23	8:H:79:LEU:HA	1.91	0.42
12:L:38:ARG:NH1	12:L:98:PRO:HD3	2.35	0.42
18:R:7:HIS:HE1	18:R:10:ALA:HA	1.84	0.42
19:S:13:ALA:O	19:S:32:LEU:HB2	2.19	0.42
19:S:1:MET:O	19:S:3:ARG:N	2.52	0.42
20:T:52:ASN:C	20:T:54:PRO:HD3	2.40	0.42
37:11:117:LEU:HD23	37:11:121:ASN:ND2	2.33	0.42
27:1:12:ARG:NH2	27:1:16:ARG:NH1	2.67	0.42
44:18:83:VAL:O	44:18:84:ARG:C	2.58	0.42
47:21:30:HIS:HD2	47:21:33:TYR:H	1.67	0.42
28:2:47:ILE:CG2	28:2:48:TYR:N	2.82	0.42
52:26:1436:U:H2'	52:26:1437:A:H8	1.85	0.42
52:26:15:G:C4	52:26:16:A:C8	3.07	0.42
52:26:314:C:O5'	52:26:314:C:H6	2.03	0.42
52:26:341:C:H2'	52:26:342:C:C6	2.48	0.42
52:26:412:A:C2	52:26:414:A:H1'	2.55	0.42
52:26:449:G:H2'	52:26:450:G:O4'	2.20	0.42
52:26:493:A:H2'	52:26:494:G:O4'	2.20	0.42
52:26:529:G:C4'	52:26:533:A:C2	3.03	0.42
52:26:539:A:H2'	52:26:540:G:H8	1.85	0.42
52:26:552:U:H2'	52:26:553:A:C8	2.51	0.42
52:26:628:G:C2	52:26:629:A:C4	3.08	0.42
52:26:969:A:C2'	52:26:970:C:H5'	2.50	0.42
53:27:1112:G:H2'	53:27:1113:U:C6	2.55	0.42
53:27:1351:C:H4'	53:27:1572:A:O4'	2.20	0.42
53:27:1412:U:H2'	53:27:1413:A:C8	2.54	0.42
53:27:2404:U:C4	53:27:2405:G:C6	3.08	0.42
53:27:2428:G:H5''	53:27:2429:G:OP1	2.19	0.42
53:27:564:C:H2'	53:27:565:C:C6	2.55	0.42
59:33:61:GLU:HA	59:33:64:GLU:CG	2.49	0.42
32:6:80:LYS:HG3	32:6:90:PHE:CE1	2.55	0.42
35:9:156:ARG:HG3	38:12:42:GLU:O	2.20	0.42
1:A:109:LEU:HA	1:A:109:LEU:HD12	1.85	0.42
2:B:55:LYS:HG3	2:B:77:ARG:CA	2.49	0.42
3:C:97:ASN:HB3	3:C:100:MET:SD	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:27:LEU:O	3:C:30:GLN:HB3	2.19	0.42
3:C:94:GLN:HB2	53:27:660:C:OP1	2.20	0.42
4:D:9:ASP:HB2	4:D:10:GLU:OE1	2.19	0.42
4:D:19:PHE:O	4:D:20:ASN:OD1	2.38	0.42
4:D:16:MET:HE1	4:D:27:VAL:HB	2.01	0.42
6:F:5:LEU:HD23	6:F:9:VAL:HG21	2.02	0.42
7:G:121:SER:HB3	7:G:126:LEU:CD2	2.50	0.42
7:G:52:MET:O	7:G:52:MET:HG2	2.20	0.42
8:H:99:LYS:HA	8:H:138:VAL:O	2.20	0.42
8:H:37:PHE:O	8:H:41:PHE:HB2	2.19	0.42
9:I:31:GLU:O	9:I:35:ARG:HG2	2.20	0.42
13:M:38:LEU:HB3	13:M:39:PRO:CD	2.45	0.42
16:P:5:ARG:HD3	53:27:1250:G:H5''	2.02	0.42
18:R:79:GLY:H	18:R:101:SER:HA	1.84	0.42
20:T:5:ARG:HG3	20:T:93:ARG:NH2	2.34	0.42
25:Y:47:ILE:O	25:Y:51:SER:N	2.53	0.42
38:12:10:LEU:O	38:12:13:ILE:HB	2.20	0.42
39:13:125:GLN:NE2	39:13:126:PHE:O	2.43	0.42
39:13:32:ARG:HA	39:13:36:GLN:HE21	1.85	0.42
27:1:43:THR:HG23	27:1:47:TYR:O	2.20	0.42
42:16:20:VAL:C	42:16:22:ALA:H	2.24	0.42
44:18:44:VAL:O	44:18:48:GLN:NE2	2.52	0.42
46:20:70:ARG:HD2	46:20:70:ARG:HA	1.86	0.42
52:26:211:G:C3'	52:26:211:G:N3	2.79	0.42
52:26:295:C:H2'	52:26:296:U:C6	2.54	0.42
52:26:312:C:H2'	52:26:313:A:H8	1.85	0.42
52:26:41:G:H2'	52:26:42:G:H8	1.85	0.42
52:26:440:C:C3'	52:26:441:A:C5'	2.92	0.42
52:26:744:C:H2'	52:26:745:G:C8	2.54	0.42
45:19:22:GLY:O	52:26:751:U:H1'	2.20	0.42
53:27:976:G:H4'	53:27:1156:A:N7	2.35	0.42
53:27:1668:A:H5'	53:27:1669:A:C5	2.55	0.42
53:27:2175:C:H2'	53:27:2176:A:C8	2.55	0.42
53:27:232:G:H8	53:27:232:G:OP2	2.02	0.42
53:27:2573:C:H5''	53:27:2574:G:C5'	2.50	0.42
2:B:81:GLU:CD	53:27:2636:C:H4'	2.40	0.42
53:27:310:A:H2'	53:27:311:A:H5''	2.02	0.42
16:P:36:GLN:NE2	53:27:563:A:C2'	2.79	0.42
53:27:665:U:H2'	53:27:666:A:C8	2.54	0.42
53:27:671:C:H2'	53:27:672:C:C5	2.55	0.42
53:27:901:C:C4	53:27:902:C:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:934:U:H2'	53:27:935:C:C6	2.54	0.42
53:27:992:C:H2'	53:27:993:G:C8	2.55	0.42
55:29:13:A:H2'	55:29:13:A:N3	2.34	0.42
59:33:135:VAL:HA	59:33:138:MET:HB3	2.02	0.42
59:33:194:LEU:O	59:33:198:LEU:HG	2.19	0.42
59:33:214:ILE:HD13	59:33:214:ILE:HG21	1.79	0.42
59:33:293:LEU:C	59:33:296:VAL:HG22	2.39	0.42
59:33:54:LEU:HB2	59:33:57:TRP:HE1	1.83	0.42
59:33:597:VAL:HG12	59:33:598:VAL:N	2.34	0.42
34:8:24:VAL:C	34:8:26:ALA:N	2.67	0.42
34:8:57:LYS:HE3	34:8:57:LYS:HB3	1.95	0.42
1:A:116:GLN:HE21	1:A:121:ALA:HA	1.83	0.42
1:A:243:PRO:O	1:A:250:GLN:NE2	2.53	0.42
2:B:99:GLU:O	2:B:100:LEU:C	2.58	0.42
2:B:115:GLY:HA2	2:B:167:ASN:HB2	2.02	0.42
2:B:197:THR:HB	53:27:2820:A:N6	2.34	0.42
3:C:2:GLU:HB2	3:C:11:ALA:O	2.20	0.42
4:D:109:ARG:NH2	4:D:138:PRO:N	2.67	0.42
5:E:114:HIS:HD2	5:E:147:LEU:HD21	1.85	0.42
6:F:30:LEU:O	6:F:33:GLN:HB3	2.20	0.42
7:G:25:ALA:HB3	7:G:85:SER:CB	2.50	0.42
8:H:36:GLU:O	8:H:40:ALA:CB	2.68	0.42
9:I:47:HIS:CB	53:27:536:G:H21	2.33	0.42
13:M:22:ARG:NH1	13:M:71:ARG:HB2	2.31	0.42
15:O:50:ARG:HH11	15:O:50:ARG:HG3	1.84	0.42
16:P:51:GLN:HA	16:P:54:ARG:HE	1.85	0.42
17:Q:6:GLN:HG3	17:Q:11:GLN:NE2	2.34	0.42
17:Q:73:LYS:HZ3	17:Q:86:GLN:HE21	1.65	0.42
18:R:109:ASP:OD1	18:R:110:ARG:NH2	2.48	0.42
19:S:76:ARG:HH12	19:S:79:ASP:CG	2.22	0.42
20:T:67:SER:HB3	53:27:335:C:O2	2.20	0.42
20:T:6:ARG:NH2	20:T:7:ASP:OD1	2.53	0.42
21:U:29:ILE:HD12	21:U:38:LEU:O	2.19	0.42
37:11:110:ARG:HH21	37:11:122:GLU:HA	1.85	0.41
37:11:68:VAL:HG12	37:11:134:VAL:HG12	2.02	0.41
38:12:115:ALA:HA	38:12:118:ALA:HB3	2.01	0.41
41:15:124:LYS:O	51:25:34:ARG:HD3	2.19	0.41
43:17:104:ASN:C	43:17:106:ARG:N	2.74	0.41
46:20:21:VAL:O	46:20:32:PHE:HB2	2.19	0.41
28:2:42:VAL:HG12	28:2:42:VAL:O	2.20	0.41
50:24:78:LEU:O	50:24:81:GLN:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1186:G:H2'	52:26:1187:G:H8	1.85	0.41
52:26:1305:G:H22	52:26:1331:G:H2'	1.84	0.41
52:26:971:G:N9	52:26:1365:G:H4'	2.35	0.41
52:26:1497:G:H2'	52:26:1519:A:H2	1.85	0.41
52:26:225:C:H2'	52:26:226:G:O4'	2.19	0.41
52:26:22:G:C6	52:26:23:C:C4	3.08	0.41
52:26:27:G:C6	52:26:28:A:C6	3.08	0.41
52:26:354:G:O2'	52:26:355:C:H5'	2.19	0.41
52:26:399:G:H2'	52:26:400:C:H6	1.86	0.41
52:26:425:G:H2'	52:26:426:U:C5'	2.50	0.41
52:26:437:U:H2'	52:26:438:U:H5'	2.02	0.41
38:12:121:GLY:O	52:26:599:C:H4'	2.20	0.41
52:26:876:C:H2'	52:26:877:G:C8	2.55	0.41
52:26:977:A:N3	52:26:977:A:H2'	2.35	0.41
53:27:1264:A:N7	53:27:1265:A:C5	2.88	0.41
53:27:1268:A:C2'	53:27:1269:A:H8	2.33	0.41
53:27:1465:G:H2'	53:27:1466:U:C6	2.55	0.41
2:B:120:GLY:HA3	53:27:1655:A:O3'	2.20	0.41
53:27:1838:C:C4	53:27:1899:A:C5	3.08	0.41
53:27:1858:A:N6	53:27:1884:G:O2'	2.52	0.41
53:27:2058:A:H2'	53:27:2059:A:C8	2.54	0.41
53:27:2134:A:N6	53:27:2157:G:H5'	2.34	0.41
53:27:2542:A:H4'	53:27:2543:G:H8	1.84	0.41
53:27:2583:G:H2'	53:27:2584:U:C5'	2.48	0.41
53:27:2772:C:H2'	53:27:2773:C:H6	1.84	0.41
53:27:2812:G:O2'	53:27:2813:A:H5'	2.20	0.41
53:27:2845:U:H2'	53:27:2846:G:H8	1.85	0.41
53:27:284:U:H5'	53:27:285:G:OP1	2.20	0.41
53:27:687:C:O2	53:27:687:C:H2'	2.20	0.41
53:27:737:C:H2'	53:27:738:G:O4'	2.20	0.41
53:27:740:C:H2'	53:27:741:U:C6	2.55	0.41
53:27:853:C:H2'	53:27:854:C:H6	1.85	0.41
53:27:948:C:H2'	53:27:949:G:C8	2.54	0.41
53:27:965:C:H2'	53:27:966:G:H8	1.85	0.41
56:30:75:C:H5'	59:33:431:ILE:O	2.20	0.41
58:32:65:C:H2'	58:32:66:C:C5	2.55	0.41
59:33:172:VAL:HG13	59:33:173:LEU:N	2.35	0.41
32:6:82:ALA:HB2	32:6:213:LEU:HB3	2.01	0.41
1:A:175:LEU:HD23	53:27:1799:G:C2	2.54	0.41
1:A:209:ALA:HA	1:A:212:TRP:CD2	2.55	0.41
7:G:81:LEU:HD13	53:27:1107:G:C5'	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:40:ALA:O	8:H:43:ALA:HB3	2.20	0.41
9:I:114:LEU:O	9:I:117:ALA:HB3	2.19	0.41
9:I:64:VAL:HG21	9:I:89:PHE:CE2	2.54	0.41
13:M:90:ARG:HG3	13:M:90:ARG:NH1	2.34	0.41
13:M:97:ILE:HG22	13:M:98:LEU:N	2.35	0.41
14:N:34:HIS:HA	14:N:65:THR:HB	2.02	0.41
16:P:24:TYR:CG	16:P:25:GLY:N	2.87	0.41
21:U:64:VAL:CG1	21:U:65:VAL:N	2.82	0.41
24:X:29:ARG:O	24:X:32:ALA:HB3	2.20	0.41
37:11:134:VAL:HG23	37:11:135:LYS:N	2.36	0.41
38:12:29:SER:O	38:12:32:LYS:HB2	2.20	0.41
39:13:108:ARG:HB3	52:26:1347:G:C8	2.55	0.41
42:16:20:VAL:O	42:16:20:VAL:HG23	2.20	0.41
43:17:26:LYS:NZ	43:17:30:LYS:HE2	2.35	0.41
52:26:1197:A:O2'	52:26:1198:G:H5'	2.20	0.41
52:26:1300:G:HO2'	52:26:1301:U:P	2.42	0.41
52:26:1420:U:H2'	52:26:1421:G:H8	1.85	0.41
52:26:1493:A:H2'	53:27:1913:A:N1	2.35	0.41
52:26:429:U:C1'	52:26:430:A:H5''	2.51	0.41
52:26:496:A:H2'	52:26:497:G:N7	2.35	0.41
34:8:68:GLU:HG2	52:26:545:C:H5''	2.01	0.41
52:26:662:U:H2'	52:26:663:A:C8	2.55	0.41
52:26:697:U:C2'	52:26:698:G:H5'	2.49	0.41
53:27:116:C:O2'	53:27:117:G:H5'	2.21	0.41
53:27:1174:U:C2'	53:27:1174:U:O2	2.65	0.41
53:27:1636:U:H2'	53:27:1637:A:C8	2.55	0.41
53:27:1731:G:C6	53:27:1733:G:C5	3.07	0.41
53:27:1829:A:H3'	53:27:1830:C:C6	2.55	0.41
53:27:1848:A:H2'	53:27:1849:G:O4'	2.19	0.41
53:27:2247:A:O2'	53:27:2248:C:H5'	2.20	0.41
53:27:646:U:C4	53:27:2368:C:H1'	2.55	0.41
53:27:2457:U:O4'	53:27:2457:U:O2	2.35	0.41
53:27:2685:G:O2'	53:27:2686:G:H5'	2.19	0.41
53:27:611:C:H3'	53:27:612:G:C8	2.55	0.41
53:27:68:G:H2'	53:27:69:C:C6	2.55	0.41
53:27:778:G:C6	53:27:779:U:N3	2.88	0.41
53:27:959:A:O2'	53:27:960:A:H5'	2.19	0.41
53:27:966:G:C5	53:27:967:U:C4	3.08	0.41
53:27:980:A:N7	53:27:981:A:C6	2.88	0.41
54:28:27:C:H2'	54:28:28:C:C6	2.54	0.41
54:28:88:C:C5'	54:28:89:U:OP1	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:24:G:O2'	56:30:25:C:H5'	2.20	0.41
57:31:37:A:H2'	57:31:38:A:H8	1.85	0.41
29:3:21:ARG:HB3	29:3:31:LEU:HD13	2.02	0.41
59:33:302:HIS:HE1	59:33:325:VAL:H	1.66	0.41
59:33:625:ILE:O	59:33:651:ARG:NH1	2.53	0.41
59:33:65:ILE:HG12	59:33:161:ARG:HH22	1.83	0.41
59:33:38:THR:CG2	59:33:77:ARG:HD2	2.49	0.41
32:6:89:PHE:CG	32:6:153:MET:HE2	2.55	0.41
32:6:17:HIS:CD2	32:6:18:GLN:H	2.38	0.41
33:7:59:PRO:HG2	33:7:62:SER:OG	2.20	0.41
34:8:11:SER:OG	34:8:17:ASP:HA	2.20	0.41
35:9:93:VAL:HG21	35:9:138:ALA:HB3	2.01	0.41
2:B:98:VAL:CG1	2:B:182:ALA:HA	2.46	0.41
3:C:129:PRO:HG3	3:C:156:ASN:O	2.20	0.41
4:D:15:LEU:HA	4:D:18:GLU:HB2	2.02	0.41
4:D:25:MET:HE2	4:D:25:MET:HA	2.02	0.41
4:D:33:ILE:HB	4:D:95:MET:HG3	2.02	0.41
6:F:23:ALA:O	6:F:27:ARG:HG3	2.19	0.41
6:F:62:LEU:O	6:F:66:ASN:ND2	2.53	0.41
9:I:105:VAL:O	9:I:108:MET:HB2	2.20	0.41
10:J:99:ILE:N	10:J:99:ILE:HD12	2.35	0.41
13:M:107:ASN:HD22	53:27:2009:A:C4'	2.33	0.41
11:K:23:ILE:HD13	17:Q:84:ARG:NH1	2.35	0.41
23:W:69:GLU:O	23:W:72:ALA:HB3	2.19	0.41
25:Y:11:SER:HB3	53:27:988:A:P	2.60	0.41
25:Y:46:MET:HG2	53:27:851:C:C4'	2.51	0.41
36:10:98:GLU:HB3	36:10:99:ALA:H	1.49	0.41
37:11:96:ASN:O	37:11:100:MET:HG3	2.20	0.41
40:14:17:LEU:O	40:14:20:GLN:HG2	2.20	0.41
42:16:34:THR:O	42:16:35:ARG:HB2	2.20	0.41
36:10:59:TYR:CE2	48:22:66:LEU:HD21	2.52	0.41
52:26:1339:A:H2'	52:26:1340:A:H5'	2.02	0.41
52:26:1349:A:H2'	52:26:1350:A:O4'	2.20	0.41
52:26:1434:A:O2'	52:26:1435:G:H5'	2.20	0.41
52:26:186:C:H2'	52:26:187:G:O4'	2.20	0.41
52:26:541:G:H2'	52:26:542:G:H8	1.85	0.41
52:26:61:G:C6	52:26:62:U:C4	3.08	0.41
52:26:757:U:H2'	52:26:758:C:O4'	2.21	0.41
52:26:865:A:H2'	52:26:866:C:C6	2.55	0.41
52:26:927:G:H2'	52:26:928:G:C8	2.52	0.41
53:27:818:G:H3'	53:27:1187:G:H22	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1230:A:H2'	53:27:1231:U:C6	2.55	0.41
53:27:1608:A:C8	53:27:1611:C:N4	2.88	0.41
53:27:1668:A:C4	53:27:1674:G:C8	3.09	0.41
53:27:1708:C:H2'	53:27:1709:U:C6	2.55	0.41
53:27:1710:G:H2'	53:27:1711:A:O4'	2.20	0.41
53:27:1789:A:C5	53:27:1790:C:C5	3.08	0.41
53:27:1795:C:H2'	53:27:1796:U:O4'	2.20	0.41
53:27:1831:G:H2'	53:27:1832:C:H6	1.85	0.41
53:27:1900:A:H1'	53:27:1970:A:H2'	2.03	0.41
53:27:2052:A:C4	53:27:2053:G:C8	3.08	0.41
53:27:2442:C:O2'	53:27:2443:C:H5'	2.20	0.41
53:27:2805:C:O5'	53:27:2805:C:H6	2.04	0.41
53:27:455:C:O2	53:27:472:A:H2'	2.21	0.41
53:27:628:G:C5	53:27:636:G:N2	2.88	0.41
53:27:804:A:H5''	53:27:805:G:OP1	2.20	0.41
53:27:808:G:H2'	53:27:809:G:H8	1.85	0.41
53:27:823:C:C4	53:27:824:U:C4	3.08	0.41
59:33:463:ILE:HD12	59:33:463:ILE:O	2.20	0.41
31:5:36:ARG:CG	31:5:37:GLN:N	2.82	0.41
32:6:203:ASP:N	32:6:203:ASP:OD1	2.51	0.41
33:7:122:GLN:O	33:7:127:VAL:HG12	2.21	0.41
33:7:6:PRO:O	33:7:9:ILE:HG22	2.21	0.41
34:8:138:PRO:O	34:8:139:ASN:HB2	2.20	0.41
35:9:58:ALA:O	35:9:61:LYS:HB3	2.20	0.41
1:A:143:VAL:HG22	1:A:189:ALA:HB1	2.02	0.41
2:B:27:ILE:HG22	2:B:29:VAL:CG2	2.50	0.41
4:D:131:VAL:CG2	4:D:151:LEU:H	2.31	0.41
4:D:29:ARG:N	4:D:158:THR:OG1	2.49	0.41
5:E:36:LEU:HG	5:E:37:ASN:N	2.36	0.41
6:F:32:PRO:HB3	23:W:38:TRP:CB	2.48	0.41
6:F:97:ARG:HG3	6:F:112:LYS:HD2	2.02	0.41
8:H:93:ASN:ND2	53:27:1077:A:O2'	2.53	0.41
10:J:63:VAL:HG11	10:J:85:VAL:HG23	2.03	0.41
10:J:74:GLY:C	15:O:74:GLN:HE21	2.24	0.41
10:J:77:ILE:HD12	10:J:77:ILE:N	2.35	0.41
16:P:46:TYR:CZ	16:P:50:ARG:NH2	2.88	0.41
18:R:5:ALA:CB	18:R:54:ALA:HA	2.50	0.41
23:W:35:HIS:ND1	23:W:36:ARG:O	2.53	0.41
25:Y:5:LYS:HB2	25:Y:57:GLU:CG	2.50	0.41
37:11:130:LYS:CA	37:11:134:VAL:HG21	2.50	0.41
42:16:63:THR:HG23	42:16:92:VAL:HG22	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:20:VAL:CG2	46:20:35:ARG:HA	2.40	0.41
51:25:20:ARG:NH2	52:26:1538:C:O2'	2.53	0.41
52:26:996:A:C6	52:26:1046:A:H4'	2.56	0.41
52:26:1057:G:C5	52:26:1058:G:C5	3.08	0.41
52:26:926:G:C6	52:26:1505:G:C6	3.08	0.41
52:26:23:C:H6	52:26:23:C:O5'	2.04	0.41
50:24:4:LYS:HE2	52:26:331:G:H2'	2.02	0.41
52:26:404:G:H2'	52:26:405:U:H6	1.82	0.41
52:26:302:G:O2'	52:26:556:C:H5''	2.20	0.41
52:26:560:A:H5'	52:26:566:G:N2	2.36	0.41
52:26:694:A:C2'	52:26:695:A:H5'	2.50	0.41
52:26:698:G:C4	52:26:699:C:C5	3.08	0.41
52:26:753:A:H4'	52:26:754:C:O5'	2.20	0.41
52:26:872:A:C5	52:26:874:G:C8	3.07	0.41
53:27:1061:U:O4'	53:27:1070:A:H1'	2.20	0.41
53:27:126:A:C6	53:27:127:A:N1	2.89	0.41
53:27:1788:C:O5'	53:27:1788:C:H6	2.02	0.41
53:27:1815:A:C5	53:27:1817:G:C6	3.08	0.41
53:27:1853:A:N6	53:27:1889:A:C5	2.89	0.41
53:27:190:A:C6	53:27:191:A:C6	3.09	0.41
53:27:2078:C:H2'	53:27:2079:U:O4'	2.19	0.41
53:27:217:A:H8	53:27:217:A:O5'	2.03	0.41
53:27:252:G:N2	53:27:253:C:H1'	2.36	0.41
17:Q:80:ARG:NH2	53:27:571:U:H3'	2.36	0.41
53:27:579:G:C2	53:27:1262:A:C4	3.09	0.41
53:27:593:U:H2'	53:27:594:U:H6	1.80	0.41
53:27:681:G:C2	53:27:682:G:C4	3.09	0.41
54:28:53:A:C2	54:28:54:G:N7	2.89	0.41
57:31:54:U:O5'	57:31:54:U:H6	2.03	0.41
59:33:18:GLU:O	59:33:21:ILE:CG1	2.67	0.41
59:33:221:ARG:HB3	59:33:273:LEU:HD21	2.02	0.41
59:33:604:ASN:O	59:33:605:LEU:C	2.59	0.41
59:33:684:THR:HA	59:33:687:LEU:CD1	2.49	0.41
32:6:129:THR:OG1	32:6:132:GLU:HB2	2.19	0.41
32:6:156:LEU:HA	32:6:157:PRO:HD3	1.92	0.41
32:6:39:ILE:H	32:6:39:ILE:CD1	2.25	0.41
34:8:8:LEU:CD2	34:8:31:CYS:HB2	2.51	0.41
2:B:149:ASN:ND2	53:27:2575:C:OP1	2.53	0.41
2:B:8:LYS:HD2	2:B:193:VAL:HG23	2.01	0.41
3:C:108:ILE:HG13	3:C:109:LEU:HD12	2.01	0.41
3:C:154:ASP:HB2	3:C:157:LEU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:76:PRO:HA	3:C:82:GLY:HA3	2.02	0.41
5:E:93:TYR:HE1	5:E:106:LEU:O	2.03	0.41
7:G:77:VAL:HG13	7:G:82:ILE:HD12	2.02	0.41
8:H:6:ALA:O	8:H:30:GLN:NE2	2.53	0.41
11:K:19:LEU:HA	11:K:27:LEU:HD13	2.03	0.41
13:M:63:ARG:HD2	13:M:80:PHE:CD2	2.55	0.41
14:N:41:ALA:HB3	14:N:46:GLU:HG3	2.03	0.41
16:P:57:ARG:NH1	53:27:1154:G:P	2.94	0.41
16:P:94:LEU:HD23	16:P:94:LEU:HA	1.87	0.41
20:T:81:ARG:NH2	20:T:96:LYS:HD2	2.34	0.41
24:X:21:LEU:CD2	24:X:25:GLN:HG2	2.50	0.41
24:X:25:GLN:HG3	24:X:29:ARG:HH22	1.85	0.41
26:Z:32:LEU:HG	26:Z:34:LEU:HD12	2.02	0.41
37:11:13:PRO:HB3	37:11:20:GLU:HB2	2.02	0.41
37:11:144:ALA:O	37:11:148:LYS:N	2.54	0.41
37:11:145:GLU:C	37:11:147:ASN:H	2.23	0.41
38:12:48:PHE:HB3	38:12:60:LEU:CD2	2.50	0.41
42:16:1:ALA:O	42:16:2:THR:O	2.39	0.41
42:16:49:ARG:HH11	42:16:49:ARG:HG3	1.86	0.41
44:18:16:ALA:HA	44:18:54:SER:CA	2.47	0.41
47:21:27:PHE:CE1	47:21:38:LYS:HG3	2.55	0.41
26:Z:56:ARG:CG	49:23:64:GLU:HA	2.51	0.41
51:25:38:GLU:H	51:25:40:PRO:HD2	1.85	0.41
52:26:1425:U:H2'	52:26:1426:G:H8	1.85	0.41
52:26:57:G:H2'	52:26:58:C:C6	2.56	0.41
52:26:647:C:H2'	52:26:648:A:C8	2.56	0.41
53:27:1333:G:O2'	53:27:1334:G:H5'	2.20	0.41
53:27:1491:G:O2'	53:27:1492:G:H5'	2.19	0.41
1:A:43:ASN:HD21	53:27:1806:C:H1'	1.85	0.41
53:27:1861:G:H2'	53:27:1862:G:H8	1.84	0.41
53:27:1889:A:H2'	53:27:1890:A:C8	2.55	0.41
53:27:1912:A:N7	53:27:1917:U:H5	2.19	0.41
53:27:2007:U:H4'	53:27:2824:C:H4'	2.03	0.41
53:27:2476:A:H2'	53:27:2477:U:O4'	2.20	0.41
53:27:2540:C:H2'	53:27:2541:A:O4'	2.21	0.41
2:B:164:GLN:NE2	53:27:2822:G:H5''	2.30	0.41
53:27:2867:G:O2'	53:27:2868:A:H8	2.03	0.41
53:27:483:A:H3'	53:27:484:C:H6	1.85	0.41
53:27:816:C:H2'	53:27:817:C:H6	1.84	0.41
14:N:36:TYR:OH	54:28:28:C:OP1	2.32	0.41
56:30:12:U:H2'	56:30:13:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:11:LYS:HB2	29:3:11:LYS:HE3	1.87	0.41
59:33:154:ALA:CA	59:33:157:ILE:HG12	2.50	0.41
59:33:643:GLU:O	59:33:646:SER:HB3	2.21	0.41
59:33:67:SER:CB	59:33:76:LEU:HD21	2.50	0.41
30:4:39:ARG:O	30:4:43:LEU:HG	2.20	0.41
34:8:184:LYS:HA	34:8:185:PRO:HD3	1.93	0.41
34:8:31:CYS:O	34:8:32:LYS:HB2	2.21	0.41
34:8:70:GLN:HG2	34:8:74:TYR:CE2	2.55	0.41
35:9:94:PHE:CG	35:9:95:MET:N	2.87	0.41
3:C:63:LYS:HD2	3:C:69:ARG:CZ	2.50	0.41
4:D:139:GLU:HB2	26:Z:28:VAL:HA	2.02	0.41
6:F:99:ILE:CD1	6:F:117:LEU:HD21	2.51	0.41
7:G:54:VAL:HG13	7:G:84:TYR:CD2	2.55	0.41
13:M:102:PHE:HA	13:M:108:ALA:O	2.20	0.41
13:M:24:MET:HE3	13:M:44:LEU:HB2	2.03	0.41
13:M:72:ASP:OD2	13:M:74:GLU:HB3	2.21	0.41
10:J:105:ARG:NE	15:O:31:VAL:HG21	2.34	0.41
17:Q:77:PHE:CD1	17:Q:84:ARG:HG2	2.54	0.41
19:S:76:ARG:NH1	19:S:79:ASP:OD1	2.53	0.41
36:10:72:ASP:O	36:10:76:THR:HG23	2.20	0.41
37:11:2:ARG:NH1	52:26:932:C:C4	2.88	0.41
40:14:8:ILE:HG23	40:14:99:GLN:O	2.21	0.41
40:14:10:LEU:CB	40:14:98:VAL:HA	2.50	0.41
33:7:5:HIS:HB3	44:18:88:MET:CE	2.51	0.41
46:20:59:HIS:O	46:20:63:GLN:HG3	2.20	0.41
52:26:102:G:H2'	52:26:103:U:C6	2.54	0.41
52:26:1059:C:H2'	52:26:1060:U:H6	1.85	0.41
52:26:1174:G:O2'	52:26:1175:G:H5'	2.20	0.41
52:26:123:U:H2'	52:26:124:C:H6	1.81	0.41
52:26:1459:G:O2'	52:26:1460:C:H5'	2.20	0.41
52:26:312:C:H2'	52:26:313:A:C8	2.55	0.41
52:26:44:A:H2'	52:26:45:G:O4'	2.20	0.41
52:26:86:G:H5''	52:26:87:C:O5'	2.21	0.41
53:27:1020:A:H1'	53:27:1021:A:OP2	2.21	0.41
53:27:1178:C:H2'	53:27:1180:U:N1	2.34	0.41
53:27:1333:G:O5'	53:27:1333:G:H8	2.03	0.41
53:27:1613:G:H2'	53:27:1617:C:H42	1.84	0.41
53:27:2000:C:O2'	53:27:2001:C:H5'	2.21	0.41
53:27:2053:G:H2'	53:27:2054:A:H8	1.84	0.41
53:27:2367:G:O2'	53:27:2368:C:H5'	2.20	0.41
53:27:2516:A:O5'	53:27:2516:A:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2743:U:H3'	53:27:2744:G:H5''	2.01	0.41
59:33:292:ALA:O	59:33:295:ILE:HG12	2.21	0.41
59:33:444:ILE:HG22	59:33:461:ILE:CD1	2.42	0.41
59:33:615:PRO:HB3	59:33:635:ARG:HA	2.02	0.41
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	0.41
59:33:741:LEU:HD23	59:33:742:HIS:N	2.35	0.41
11:K:62:PRO:HG2	30:4:24:LYS:HB3	2.02	0.41
33:7:65:VAL:O	33:7:100:ILE:HG13	2.19	0.41
35:9:50:GLY:N	35:9:62:ALA:HB2	2.35	0.41
3:C:77:ILE:HD12	53:27:1256:G:O2'	2.20	0.41
4:D:137:PHE:HA	4:D:138:PRO:HD3	1.82	0.41
4:D:67:THR:N	4:D:85:GLY:O	2.40	0.41
17:Q:1:MET:O	17:Q:2:TYR:C	2.58	0.41
19:S:68:LYS:HA	19:S:68:LYS:HD3	1.82	0.41
21:U:32:GLY:O	21:U:93:ARG:NH1	2.52	0.41
36:10:18:VAL:HG13	36:10:19:PRO:CD	2.51	0.41
38:12:6:ILE:HD11	38:12:76:ARG:NH2	2.36	0.41
27:1:1:ALA:O	27:1:2:VAL:O	2.39	0.41
42:16:41:PRO:CD	42:16:47:ALA:H	2.34	0.41
44:18:91:GLU:O	44:18:93:PRO:HD3	2.21	0.41
45:19:21:THR:HG23	52:26:657:U:O2	2.21	0.41
50:24:14:GLU:CA	50:24:17:ARG:HG2	2.44	0.41
39:13:118:ARG:HH11	52:26:1233:G:H5'	1.86	0.41
52:26:1259:C:C2'	52:26:1260:G:H5''	2.51	0.41
52:26:1468:A:H2'	52:26:1469:C:O4'	2.21	0.41
51:25:46:ARG:NH2	52:26:1533:C:C5	2.88	0.41
52:26:429:U:O4'	52:26:430:A:H5''	2.21	0.41
52:26:501:C:H1'	52:26:549:C:H1'	2.01	0.41
52:26:570:G:H1'	52:26:820:U:C4	2.56	0.41
52:26:922:G:C3'	52:26:923:A:H8	2.34	0.41
53:27:1080:A:O2'	53:27:1081:U:H5'	2.20	0.41
53:27:1082:U:C4	53:27:1083:U:H1'	2.56	0.41
53:27:1146:C:H2'	53:27:1147:A:C8	2.56	0.41
53:27:1313:U:O3'	53:27:1332:G:H4'	2.21	0.41
53:27:1377:G:O5'	53:27:1377:G:H8	2.04	0.41
53:27:1667:G:O5'	53:27:1667:G:H8	2.04	0.41
23:W:25:LYS:HZ3	53:27:189:G:P	2.44	0.41
53:27:2024:G:H2'	53:27:2025:C:O4'	2.20	0.41
6:F:22:LYS:HB3	53:27:2093:G:P	2.61	0.41
53:27:2177:C:C3'	53:27:2178:C:H5''	2.45	0.41
53:27:2251:G:H8	53:27:2251:G:P	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2352:A:N6	53:27:2365:G:O2'	2.54	0.41
53:27:197:A:N6	53:27:2430:A:H2'	2.35	0.41
53:27:2559:C:H2'	53:27:2560:A:C8	2.55	0.41
53:27:2563:U:H2'	53:27:2565:A:OP2	2.21	0.41
53:27:2745:C:C4	53:27:2746:U:C4	3.09	0.41
53:27:278:A:N3	53:27:278:A:H2'	2.35	0.41
53:27:2794:C:C2'	53:27:2794:C:O2	2.67	0.41
53:27:2870:C:H2'	53:27:2871:U:O4'	2.20	0.41
53:27:2896:C:H2'	53:27:2897:U:C6	2.56	0.41
53:27:840:C:H2'	53:27:841:G:O4'	2.21	0.41
53:27:862:G:H2'	53:27:863:A:C8	2.56	0.41
17:Q:91:GLN:NE2	53:27:993:G:H1'	2.36	0.41
57:31:68:C:H2'	57:31:69:C:H6	1.86	0.41
59:33:104:VAL:O	59:33:107:ILE:HG12	2.21	0.41
59:33:252:ARG:HD3	59:33:280:ARG:NH2	2.35	0.41
59:33:284:GLU:OE2	59:33:341:LYS:CE	2.58	0.41
59:33:57:TRP:C	59:33:60:VAL:HG22	2.41	0.41
29:3:5:PHE:CE2	29:3:7:PRO:HD3	2.56	0.41
31:5:7:VAL:HA	31:5:35:GLN:NE2	2.36	0.41
33:7:10:ARG:NE	33:7:179:ALA:O	2.52	0.41
33:7:28:PHE:HE2	44:18:76:PHE:CD1	2.38	0.41
34:8:103:ARG:C	34:8:105:GLY:H	2.23	0.41
34:8:123:MET:O	34:8:142:VAL:HG23	2.20	0.41
35:9:48:GLY:HA3	35:9:62:ALA:O	2.19	0.41
1:A:142:ASN:N	1:A:154:ALA:O	2.36	0.41
3:C:176:ASP:CG	3:C:179:SER:HB2	2.40	0.41
6:F:94:ILE:HD11	6:F:146:VAL:HG22	2.03	0.41
6:F:77:THR:HA	6:F:143:ILE:O	2.21	0.41
7:G:94:ARG:HA	7:G:96:PHE:CE2	2.55	0.41
10:J:113:MET:O	10:J:116:ILE:HG13	2.20	0.41
10:J:58:LEU:HD11	10:J:86:LEU:HB3	2.02	0.41
12:L:75:GLU:HB2	12:L:90:GLU:CG	2.48	0.41
13:M:22:ARG:HH11	13:M:71:ARG:CB	2.32	0.41
14:N:114:GLY:O	14:N:116:GLN:NE2	2.53	0.41
14:N:18:LEU:HD11	14:N:91:SER:CB	2.50	0.41
14:N:24:THR:OG1	14:N:90:VAL:HG12	2.21	0.41
17:Q:83:TYR:OH	53:27:1187:G:H5''	2.21	0.41
21:U:55:GLU:HB3	21:U:59:GLU:OE2	2.20	0.41
23:W:71:ARG:HG3	23:W:72:ALA:N	2.36	0.41
26:Z:36:VAL:HG23	26:Z:37:CYS:N	2.36	0.41
37:11:85:GLN:HB2	37:11:147:ASN:HD21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:79:LEU:HD22	43:17:84:CYS:SG	2.61	0.41
44:18:13:VAL:O	44:18:16:ALA:HB3	2.20	0.41
52:26:1065:U:P	52:26:1190:G:H22	2.43	0.41
52:26:1229:A:H2'	52:26:1230:C:H6	1.85	0.41
52:26:1314:C:H2'	52:26:1315:U:H6	1.84	0.41
52:26:1347:G:H22	52:26:1373:G:C2'	2.31	0.41
52:26:1251:A:N1	52:26:1354:U:H1'	2.36	0.41
52:26:1405:G:N2	52:26:1517:G:N2	2.69	0.41
52:26:163:C:H2'	52:26:164:G:O4'	2.21	0.41
52:26:374:A:C6	52:26:375:U:C4	3.09	0.41
52:26:513:C:H2'	52:26:514:C:H6	1.76	0.41
52:26:522:C:O5'	52:26:522:C:H6	2.04	0.41
52:26:565:U:C4	52:26:566:G:C5	3.08	0.41
52:26:577:G:C4	52:26:816:A:C2	3.09	0.41
52:26:599:C:O2'	52:26:600:A:H5'	2.21	0.41
52:26:762:U:H2'	52:26:763:G:H8	1.86	0.41
52:26:789:U:H2'	52:26:791:G:OP2	2.21	0.41
52:26:791:G:H8	52:26:791:G:O5'	2.03	0.41
52:26:955:U:H1'	52:26:1227:A:N6	2.25	0.41
52:26:95:C:H2'	52:26:96:U:H6	1.86	0.41
53:27:1168:G:H2'	53:27:1169:A:H8	1.85	0.41
17:Q:68:ARG:NH1	53:27:1224:U:OP2	2.54	0.41
53:27:1357:C:O2'	53:27:1358:G:H5'	2.21	0.41
53:27:1406:U:H2'	53:27:1407:G:C4'	2.50	0.41
53:27:1632:A:C6	53:27:1633:G:C6	3.09	0.41
53:27:1668:A:C5	53:27:1674:G:C5	3.09	0.41
53:27:1775:U:C2'	53:27:1776:G:H5'	2.50	0.41
53:27:1789:A:C4	53:27:1790:C:C5	3.09	0.41
53:27:579:G:H4'	53:27:2017:U:H2'	2.02	0.41
53:27:2191:A:H2'	53:27:2192:U:H6	1.81	0.41
53:27:2638:G:H22	53:27:2775:G:H2'	1.86	0.41
53:27:267:C:H2'	53:27:268:C:H6	1.86	0.41
53:27:2814:A:H2'	53:27:2815:C:H6	1.86	0.41
53:27:2889:C:C4	53:27:2890:G:C6	3.09	0.41
53:27:315:G:H2'	53:27:316:C:H6	1.82	0.41
53:27:317:G:H2'	53:27:318:C:C6	2.55	0.41
53:27:372:G:H2'	53:27:400:G:C6	2.56	0.41
53:27:517:C:H2'	53:27:518:G:O4'	2.20	0.41
53:27:706:A:C2	53:27:707:G:H1'	2.56	0.41
53:27:722:A:H2'	53:27:723:C:C6	2.56	0.41
53:27:955:U:H5	53:27:962:G:C6	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:160:LEU:HD12	59:33:198:LEU:HD23	1.97	0.41
59:33:215:ALA:O	59:33:219:HIS:ND1	2.53	0.41
59:33:292:ALA:HA	59:33:295:ILE:HG12	2.02	0.41
59:33:619:ASP:O	59:33:620:GLU:O	2.38	0.41
59:33:726:LEU:O	59:33:730:ASN:N	2.47	0.41
4:D:141:ASP:HB3	4:D:143:ASP:OD1	2.20	0.41
6:F:70:GLU:C	6:F:72:ILE:H	2.24	0.41
6:F:94:ILE:CG2	6:F:99:ILE:HG13	2.50	0.41
9:I:88:THR:OG1	9:I:91:GLU:HG3	2.20	0.41
9:I:69:ARG:NE	9:I:89:PHE:HE2	2.15	0.41
10:J:12:ASP:OD1	10:J:12:ASP:C	2.58	0.41
13:M:94:TYR:O	13:M:116:VAL:N	2.54	0.41
15:O:27:VAL:HG12	15:O:29:VAL:HG23	2.02	0.41
16:P:77:LYS:O	16:P:116:LEU:HD22	2.21	0.41
16:P:39:ILE:CG2	16:P:40:LYS:N	2.83	0.41
17:Q:58:VAL:O	17:Q:58:VAL:HG13	2.20	0.41
21:U:65:VAL:O	21:U:65:VAL:CG1	2.69	0.41
36:10:24:ARG:HH12	36:10:28:ALA:HB2	1.86	0.41
36:10:70:VAL:O	36:10:74:LEU:HG	2.20	0.41
39:13:86:LEU:HA	39:13:86:LEU:HD23	1.79	0.41
41:15:30:ILE:HD11	52:26:705:G:N2	2.35	0.41
41:15:92:ARG:HB3	41:15:93:GLU:H	1.64	0.41
42:16:9:LYS:NZ	42:16:10:PRO:O	2.54	0.41
43:17:97:ARG:HB2	43:17:99:GLN:NE2	2.35	0.41
44:18:31:SER:HA	44:18:40:ARG:HD2	2.02	0.41
45:19:19:ASN:C	45:19:21:THR:H	2.23	0.41
28:2:10:LEU:HD23	28:2:10:LEU:HA	1.87	0.41
47:21:28:VAL:HG12	47:21:39:ARG:HG2	2.03	0.41
49:23:41:PRO:O	49:23:44:ILE:HG13	2.21	0.41
41:15:109:ILE:CD1	51:25:16:ARG:HD2	2.35	0.41
52:26:1054:C:C4	56:30:34:G:H1'	2.56	0.41
52:26:1055:A:C6	52:26:1206:G:C5	3.09	0.41
52:26:1122:U:H2'	52:26:1123:U:C6	2.56	0.41
51:25:38:GLU:HB2	52:26:1526:G:OP2	2.21	0.41
52:26:44:A:C4	52:26:45:G:C8	3.08	0.41
52:26:952:U:H2'	52:26:953:G:H8	1.85	0.41
16:P:5:ARG:NH1	53:27:1251:C:C5	2.89	0.41
53:27:1703:G:H2'	53:27:1704:C:H6	1.85	0.41
53:27:2319:G:H4'	53:27:2321:U:O4	2.20	0.41
53:27:2492:U:H2'	53:27:2493:U:C6	2.55	0.41
53:27:2558:C:H2'	53:27:2559:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2674:G:C4	53:27:2675:A:C8	3.08	0.41
53:27:483:A:H3'	53:27:484:C:C6	2.55	0.41
53:27:857:G:H2'	53:27:858:G:C1'	2.51	0.41
54:28:66:A:H4'	54:28:67:G:N7	2.36	0.41
54:28:92:C:H2'	54:28:93:C:C6	2.55	0.41
58:32:46:A:H3'	58:32:46:A:C8	2.56	0.41
58:32:67:C:H2'	58:32:68:C:C5	2.55	0.41
59:33:495:TRP:O	59:33:496:PHE:C	2.59	0.41
29:3:8:SER:O	29:3:9:VAL:C	2.59	0.41
32:6:119:GLN:O	32:6:123:GLY:N	2.53	0.41
32:6:103:TRP:CZ3	32:6:156:LEU:HD21	2.56	0.41
1:A:78:GLU:CD	1:A:100:ARG:HE	2.24	0.41
3:C:66:GLY:HA2	53:27:2060:A:H5''	2.03	0.41
4:D:29:ARG:NH1	4:D:29:ARG:HG2	2.35	0.41
5:E:37:ASN:OD1	5:E:38:ASP:N	2.54	0.41
6:F:29:PHE:HB2	53:27:2198:A:C4	2.56	0.41
10:J:86:LEU:C	10:J:87:LEU:HD12	2.41	0.41
14:N:18:LEU:HD21	14:N:25:ARG:HB2	2.02	0.41
16:P:50:ARG:NH1	16:P:50:ARG:HG2	2.36	0.41
17:Q:1:MET:HA	17:Q:43:ASN:ND2	2.36	0.41
17:Q:43:ASN:N	17:Q:45:GLU:O	2.52	0.41
17:Q:46:GLU:C	17:Q:46:GLU:CD	2.79	0.41
36:10:9:MET:HG2	36:10:86:ARG:O	2.21	0.41
37:11:48:THR:HB	37:11:52:ARG:NH2	2.36	0.41
39:13:25:GLY:CA	39:13:58:GLU:HA	2.51	0.41
48:22:71:ASP:N	48:22:71:ASP:OD1	2.54	0.41
50:24:53:MET:HG3	50:24:54:GLN:N	2.33	0.41
52:26:104:G:C2	52:26:105:G:C5	3.09	0.41
52:26:1064:G:O2'	52:26:1190:G:N2	2.54	0.41
52:26:359:G:H2'	52:26:360:G:O4'	2.21	0.41
34:8:69:ARG:N	52:26:546:A:OP1	2.42	0.41
52:26:584:G:C4	52:26:585:G:C8	3.09	0.41
46:20:46:LYS:CD	52:26:617:G:H4'	2.51	0.41
52:26:819:A:H5''	52:26:819:A:H8	1.85	0.41
7:G:61:ARG:CD	53:27:1046:A:O4'	2.64	0.41
53:27:1351:C:H2'	53:27:1352:U:O4'	2.21	0.41
53:27:1660:G:C2	53:27:1661:G:N7	2.89	0.41
53:27:1826:G:H2'	53:27:1827:U:H6	1.82	0.41
53:27:1860:G:O2'	53:27:1861:G:H5'	2.20	0.41
53:27:1945:G:C6	53:27:1946:U:C4	3.08	0.41
53:27:2131:U:C5'	53:27:2132:U:H5''	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:12:SER:HB3	53:27:2261:C:C6	2.55	0.41
53:27:2298:A:H2'	53:27:2299:U:O4'	2.21	0.41
53:27:21:A:H2'	53:27:22:C:H6	1.86	0.41
53:27:2358:A:C2	53:27:2359:C:C2	3.09	0.41
53:27:2809:A:H2'	53:27:2810:A:C8	2.56	0.41
53:27:2838:G:C6	53:27:2839:G:C5	3.09	0.41
53:27:2869:G:H2'	53:27:2870:C:O4'	2.21	0.41
53:27:493:G:C2'	53:27:494:G:H5'	2.51	0.41
53:27:573:U:O2'	53:27:574:A:H3'	2.21	0.41
56:30:29:G:H2'	56:30:30:G:H8	1.86	0.41
29:3:31:LEU:O	29:3:35:ARG:HG2	2.20	0.41
59:33:408:VAL:CG2	59:33:418:LEU:HD12	2.51	0.41
30:4:62:PRO:HG2	30:4:63:TYR:CE2	2.56	0.41
32:6:134:LEU:O	32:6:138:ARG:HB2	2.21	0.41
35:9:77:ASN:CG	35:9:78:GLY:H	2.24	0.41
2:B:129:THR:HG23	2:B:130:GLN:O	2.21	0.41
6:F:117:LEU:HA	6:F:118:PRO:HD3	1.81	0.41
7:G:107:GLU:C	7:G:109:LYS:N	2.74	0.41
7:G:52:MET:O	7:G:54:VAL:HG23	2.21	0.41
10:J:64:ARG:HD3	10:J:102:PRO:O	2.21	0.41
11:K:94:THR:O	11:K:97:ALA:HB3	2.21	0.41
12:L:77:PRO:HB2	12:L:80:VAL:HG21	2.02	0.41
19:S:92:ASN:HB3	19:S:93:LEU:H	1.42	0.41
24:X:18:LEU:O	24:X:22:LEU:HB2	2.20	0.41
25:Y:44:ARG:HA	25:Y:47:ILE:HD12	2.03	0.41
36:10:86:ARG:CB	36:10:86:ARG:HH11	2.34	0.41
37:11:67:ASN:OD1	37:11:129:ASN:HB3	2.21	0.41
27:1:30:ASP:N	27:1:35:GLU:O	2.54	0.41
40:14:21:ALA:HA	40:14:24:GLU:OE1	2.20	0.41
40:14:42:LEU:HA	40:14:42:LEU:HD23	1.88	0.41
42:16:73:LEU:HD21	42:16:103:CYS:HB2	2.03	0.41
44:18:25:GLU:O	44:18:27:LYS:N	2.55	0.41
45:19:16:ARG:HB2	45:19:19:ASN:OD1	2.21	0.41
52:26:1033:G:C5	52:26:1034:G:H1'	2.56	0.41
52:26:116:A:C2	52:26:117:G:H1'	2.56	0.41
52:26:1197:A:C2'	52:26:1198:G:H5'	2.50	0.41
52:26:1315:U:H2'	52:26:1316:G:C8	2.56	0.41
52:26:147:G:H2'	52:26:148:G:H8	1.85	0.41
52:26:1499:A:H2'	52:26:1500:A:H8	1.86	0.41
52:26:242:G:H2'	52:26:243:A:H5'	2.03	0.41
52:26:338:A:H2'	52:26:339:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:425:G:O2'	52:26:426:U:H5'	2.21	0.41
52:26:446:G:C2	52:26:447:G:H1'	2.56	0.41
32:6:24:PRO:HG2	52:26:829:G:O4'	2.21	0.41
52:26:865:A:O5'	52:26:865:A:H8	2.04	0.41
38:12:14:ARG:NH2	52:26:876:C:H4'	2.36	0.41
52:26:928:G:H2'	52:26:929:G:C8	2.55	0.41
53:27:1009:A:OP2	53:27:1010:A:OP2	2.38	0.41
53:27:988:A:H4'	53:27:1155:A:H2	1.85	0.41
53:27:1301:A:C6	53:27:1303:G:C4	3.09	0.41
53:27:1385:A:C4	53:27:1386:C:C5	3.09	0.41
53:27:150:U:H2'	53:27:151:C:C6	2.55	0.41
53:27:1512:C:H2'	53:27:1513:U:O4'	2.20	0.41
53:27:1716:U:C5	53:27:1743:G:C2	3.09	0.41
53:27:1811:G:H2'	53:27:1812:U:H6	1.86	0.41
53:27:1957:C:H2'	53:27:1958:C:H6	1.86	0.41
53:27:2075:U:H1'	53:27:2597:G:N2	2.34	0.41
53:27:2302:U:H2'	53:27:2303:G:C8	2.56	0.41
53:27:2618:G:C4	53:27:2619:C:C5	3.09	0.41
2:B:173:GLN:NE2	53:27:2771:C:O2'	2.48	0.41
53:27:39:G:H2'	53:27:40:U:C6	2.56	0.41
53:27:504:A:N3	53:27:504:A:H2'	2.36	0.41
53:27:522:A:O2'	53:27:523:C:H5'	2.21	0.41
53:27:546:U:O2'	53:27:548:G:O6	2.35	0.41
1:A:206:LYS:HD2	53:27:729:G:OP2	2.21	0.41
53:27:770:G:C4	53:27:771:G:C8	3.09	0.41
53:27:941:A:H2'	53:27:942:G:C8	2.56	0.41
54:28:35:C:H6	54:28:35:C:H5'	1.86	0.41
54:28:74:U:H2'	54:28:75:G:O4'	2.21	0.41
57:31:67:C:H2'	57:31:68:C:C6	2.56	0.41
59:33:136:ARG:NH1	59:33:136:ARG:HG3	2.36	0.41
59:33:231:GLU:O	59:33:235:HIS:HD2	2.03	0.41
59:33:239:GLU:HB2	59:33:299:HIS:HE1	1.86	0.41
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	0.41
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:35:LEU:HD12	59:33:35:LEU:N	2.36	0.41
59:33:436:GLY:O	59:33:439:CYS:HB3	2.21	0.41
32:6:42:LEU:HD12	32:6:43:GLU:N	2.36	0.41
33:7:5:HIS:HE1	33:7:7:ASN:HB3	1.85	0.41
2:B:124:ARG:NH1	2:B:163:GLY:HA3	2.35	0.41
2:B:7:LYS:HB3	2:B:28:GLU:OE1	2.21	0.41
2:B:51:THR:HB	2:B:79:LEU:CD2	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:9:VAL:HG23	2:B:26:VAL:HB	2.03	0.41
3:C:188:MET:CE	3:C:193:VAL:HA	2.50	0.41
3:C:45:ALA:HB2	3:C:89:PRO:HD3	2.03	0.41
4:D:137:PHE:HB2	4:D:140:ILE:HD13	2.03	0.41
7:G:43:LYS:CA	7:G:46:ARG:HH21	2.34	0.41
7:G:97:LYS:O	7:G:101:LYS:HG2	2.21	0.41
8:H:91:LYS:HA	8:H:92:PRO:HD3	1.74	0.41
9:I:93:ILE:HG22	9:I:94:ALA:N	2.35	0.41
9:I:98:GLU:OE2	9:I:99:ARG:HG2	2.21	0.41
15:O:105:LYS:HB3	15:O:105:LYS:HE2	1.93	0.41
16:P:96:ASP:O	16:P:99:VAL:HB	2.21	0.41
19:S:1:MET:C	19:S:3:ARG:N	2.73	0.41
19:S:61:LEU:HD12	19:S:61:LEU:C	2.41	0.41
20:T:48:VAL:HG13	20:T:52:ASN:O	2.21	0.41
21:U:18:ARG:O	21:U:21:ARG:HB3	2.20	0.41
24:X:21:LEU:O	24:X:23:ARG:N	2.54	0.41
19:S:13:ALA:HB1	24:X:33:ALA:HB3	2.03	0.41
36:10:24:ARG:NH1	36:10:28:ALA:HB2	2.36	0.40
37:11:26:VAL:HG22	37:11:42:VAL:HG21	2.03	0.40
37:11:61:PHE:HE1	37:11:65:LEU:HD13	1.86	0.40
39:13:11:ARG:HA	39:13:105:ARG:NH1	2.36	0.40
39:13:64:ILE:HG13	39:13:64:ILE:O	2.22	0.40
27:1:31:LYS:HB3	27:1:50:GLY:N	2.36	0.40
44:18:35:ALA:HB1	44:18:39:ASP:HB3	2.02	0.40
44:18:68:ARG:HD2	52:26:1202:U:O4'	2.20	0.40
44:18:80:ARG:O	44:18:83:VAL:HG12	2.20	0.40
44:18:92:ILE:CD1	44:18:92:ILE:N	2.84	0.40
46:20:74:LEU:C	46:20:77:GLU:H	2.24	0.40
51:25:7:GLU:CD	51:25:14:ALA:HA	2.42	0.40
52:26:1080:A:H8	52:26:1080:A:O5'	2.03	0.40
52:26:300:A:H8	52:26:300:A:O5'	2.04	0.40
52:26:322:C:H2'	52:26:323:U:C6	2.56	0.40
52:26:403:C:O2'	52:26:404:G:H5'	2.21	0.40
52:26:456:A:H2'	52:26:457:G:O4'	2.21	0.40
52:26:900:A:C6	52:26:901:A:C6	3.09	0.40
52:26:947:G:H2'	52:26:948:C:C6	2.55	0.40
53:27:1446:C:H2'	53:27:1447:C:C6	2.56	0.40
53:27:1499:C:C2	53:27:1500:G:C8	3.09	0.40
53:27:1343:G:C1'	53:27:1597:A:H2'	2.51	0.40
53:27:1672:A:C5'	53:27:2554:U:OP1	2.69	0.40
53:27:1722:A:N6	53:27:1738:G:H1'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2067:G:C2	53:27:2444:G:C2	3.09	0.40
53:27:2089:C:H2'	53:27:2090:A:H8	1.86	0.40
53:27:2131:U:H5''	53:27:2132:U:C6	2.56	0.40
1:A:149:LYS:HG3	53:27:2204:G:H4'	2.03	0.40
53:27:2674:G:C6	53:27:2675:A:C5	3.09	0.40
53:27:2712:C:H2'	53:27:2715:C:OP1	2.21	0.40
53:27:455:C:H5''	53:27:456:C:OP2	2.21	0.40
53:27:763:G:H1'	53:27:765:C:O4'	2.21	0.40
53:27:824:U:H2'	53:27:825:A:C8	2.56	0.40
53:27:871:U:H2'	53:27:872:U:C5	2.56	0.40
53:27:978:G:H2'	53:27:979:A:H8	1.86	0.40
54:28:71:C:H2'	54:28:72:G:C8	2.56	0.40
56:30:29:G:O2'	56:30:30:G:H5'	2.21	0.40
59:33:286:LEU:HA	59:33:289:CYS:SG	2.62	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HG23	2.49	0.40
59:33:43:LEU:HD21	59:33:44:GLN:HE22	1.85	0.40
59:33:60:VAL:C	59:33:63:VAL:HG22	2.42	0.40
34:8:112:GLU:O	34:8:116:LEU:HD13	2.21	0.40
34:8:169:TRP:O	34:8:182:LYS:HD2	2.20	0.40
34:8:202:LEU:HA	34:8:202:LEU:HD12	1.73	0.40
2:B:110:THR:HA	2:B:170:VAL:O	2.20	0.40
2:B:115:GLY:O	53:27:2822:G:OP2	2.39	0.40
2:B:55:LYS:CG	2:B:77:ARG:HA	2.49	0.40
3:C:179:SER:HB3	3:C:183:PHE:HD2	1.86	0.40
4:D:3:LEU:CD2	4:D:100:GLU:HG2	2.50	0.40
4:D:132:ARG:HB2	4:D:133:GLU:OE1	2.22	0.40
8:H:120:ASP:OD2	8:H:123:ALA:HB2	2.21	0.40
11:K:125:LEU:HB3	11:K:126:ARG:H	1.69	0.40
2:B:15:PHE:HE2	15:O:76:HIS:HB2	1.86	0.40
16:P:1:ALA:O	16:P:2:ARG:C	2.59	0.40
17:Q:11:GLN:OE1	17:Q:11:GLN:N	2.54	0.40
17:Q:88:GLY:O	53:27:1224:U:H4'	2.21	0.40
18:R:69:LEU:HD12	18:R:108:SER:O	2.21	0.40
21:U:51:GLN:OE1	21:U:86:LEU:HD11	2.20	0.40
36:10:93:LYS:HZ3	48:22:19:GLU:HG2	1.87	0.40
37:11:105:GLU:HG3	37:11:109:LYS:HE3	2.02	0.40
38:12:1:SER:O	38:12:2:MET:C	2.59	0.40
39:13:39:GLY:HA2	39:13:44:ARG:CD	2.51	0.40
42:16:115:LYS:O	42:16:116:TYR:CB	2.69	0.40
26:Z:56:ARG:NH2	43:17:78:ARG:HH12	2.19	0.40
46:20:12:LYS:HA	52:26:392:C:P	2.61	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:40:ASN:HA	46:20:41:PRO:HD2	1.86	0.40
48:22:32:ILE:HD12	48:22:32:ILE:O	2.22	0.40
36:10:48:ALA:N	48:22:65:SER:O	2.54	0.40
49:23:40:PHE:O	49:23:43:MET:HB2	2.20	0.40
50:24:54:GLN:N	50:24:55:PRO:HD2	2.36	0.40
51:25:19:LYS:HA	51:25:19:LYS:HD3	1.87	0.40
41:15:108:ASN:CA	51:25:4:LYS:NZ	2.84	0.40
52:26:1259:C:C3'	52:26:1260:G:C5'	2.91	0.40
52:26:1442:G:H2'	52:26:1443:C:C6	2.56	0.40
52:26:1497:G:H21	52:26:1519:A:H1'	1.85	0.40
42:16:114:SER:CB	52:26:35:G:H21	2.28	0.40
42:16:83:GLY:CA	52:26:552:U:H4'	2.51	0.40
52:26:705:G:C2'	52:26:706:A:H5'	2.51	0.40
52:26:784:A:H4'	53:27:1837:C:OP1	2.21	0.40
52:26:980:C:C5	52:26:981:U:C2	3.10	0.40
16:P:3:VAL:HG22	53:27:1199:U:H1'	2.02	0.40
53:27:1822:C:H2'	53:27:1823:G:C8	2.56	0.40
1:A:221:GLY:HA3	53:27:1826:G:OP1	2.21	0.40
53:27:2127:G:H21	53:27:2173:A:C1'	2.34	0.40
27:1:11:LYS:HZ1	53:27:2616:C:H5''	1.87	0.40
53:27:312:G:C2	53:27:313:G:C8	3.09	0.40
53:27:323:C:H2'	53:27:1205:A:H61	1.86	0.40
53:27:548:G:C5	53:27:549:G:H1'	2.57	0.40
53:27:610:C:H2'	53:27:611:C:H6	1.86	0.40
1:A:216:ARG:NH1	53:27:690:G:O3'	2.53	0.40
53:27:692:C:O5'	53:27:692:C:H6	2.04	0.40
53:27:704:G:H1'	53:27:727:A:H61	1.84	0.40
59:33:49:HIS:CB	59:33:50:PRO:HD2	2.33	0.40
59:33:62:MET:HE3	59:33:79:ALA:CA	2.43	0.40
59:33:81:LEU:HD23	59:33:84:LEU:HD22	2.03	0.40
35:9:141:ASP:O	35:9:145:ASN:HB2	2.21	0.40
1:A:209:ALA:O	1:A:213:ARG:N	2.54	0.40
2:B:207:VAL:HG13	2:B:208:LYS:N	2.36	0.40
3:C:7:ASP:CG	3:C:8:ALA:H	2.25	0.40
3:C:97:ASN:HB3	3:C:100:MET:CG	2.50	0.40
4:D:49:LEU:O	4:D:52:ALA:HB3	2.21	0.40
7:G:34:THR:O	7:G:38:MET:HB2	2.21	0.40
8:H:7:TYR:CE1	8:H:59:THR:HG23	2.52	0.40
11:K:46:VAL:HG21	11:K:50:PHE:HD2	1.85	0.40
12:L:126:ILE:HG13	12:L:126:ILE:O	2.21	0.40
20:T:74:ALA:C	20:T:77:GLY:H	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:8:ASP:OD2	20:T:93:ARG:NH1	2.36	0.40
21:U:30:ILE:HG22	21:U:91:PHE:CB	2.48	0.40
22:V:10:ARG:HD2	53:27:2280:G:O6	2.21	0.40
25:Y:40:THR:CG2	25:Y:43:ILE:HG12	2.49	0.40
25:Y:53:MET:HG3	25:Y:54:VAL:HG13	2.01	0.40
26:Z:16:CYS:SG	26:Z:18:CYS:HB2	2.61	0.40
36:10:15:SER:O	36:10:18:VAL:HG12	2.21	0.40
37:11:69:ARG:HG3	37:11:95:ARG:HG2	2.02	0.40
39:13:90:ASP:O	39:13:93:LEU:N	2.48	0.40
41:15:40:ALA:O	52:26:684:U:O2'	2.19	0.40
41:15:85:VAL:HG22	41:15:110:THR:O	2.21	0.40
42:16:77:SER:HA	42:16:102:ASP:OD2	2.21	0.40
45:19:44:GLU:HG2	45:19:45:HIS:N	2.36	0.40
46:20:13:LYS:NZ	52:26:393:A:P	2.95	0.40
47:21:58:VAL:CG2	47:21:59:GLU:N	2.84	0.40
47:21:5:ARG:O	47:21:6:THR:HB	2.21	0.40
50:24:69:ASN:O	50:24:72:ALA:HB3	2.22	0.40
51:25:57:LYS:NZ	51:25:61:ARG:HA	2.37	0.40
40:14:41:PRO:CB	52:26:1151:A:H1'	2.50	0.40
52:26:1331:G:O2'	52:26:1332:A:C8	2.75	0.40
52:26:1370:G:C2	52:26:1371:G:C8	3.09	0.40
52:26:161:A:H2'	52:26:162:A:C8	2.56	0.40
52:26:293:G:C6	52:26:294:U:C4	3.10	0.40
52:26:422:C:H4'	52:26:423:G:C2	2.56	0.40
52:26:450:G:OP1	52:26:452:A:OP1	2.39	0.40
34:8:13:ARG:NH2	52:26:542:G:O3'	2.54	0.40
52:26:564:C:C4	52:26:565:U:C4	3.09	0.40
52:26:951:G:H2'	52:26:952:U:C6	2.55	0.40
53:27:1030:C:H2'	53:27:1031:G:C8	2.55	0.40
53:27:1173:U:C5	53:27:1174:U:H1'	2.56	0.40
53:27:1518:C:H2'	53:27:1519:G:C8	2.57	0.40
53:27:1664:A:C2	53:27:1665:A:C4	3.09	0.40
53:27:1677:A:C2	53:27:1678:A:C4	3.09	0.40
53:27:1775:U:H2'	53:27:1776:G:C5'	2.51	0.40
53:27:1824:G:H2'	53:27:1825:U:C6	2.56	0.40
30:4:34:LYS:HD2	53:27:2391:G:OP2	2.21	0.40
53:27:2545:G:N1	53:27:2546:U:O2	2.54	0.40
53:27:2569:G:O2'	53:27:2570:G:H5'	2.21	0.40
53:27:338:G:H3'	53:27:339:U:H6	1.86	0.40
53:27:483:A:H2'	53:27:484:C:O4'	2.21	0.40
53:27:563:A:C6	53:27:564:C:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:635:C:H2'	53:27:636:G:O4'	2.21	0.40
53:27:78:U:H2'	53:27:79:C:H6	1.82	0.40
54:28:83:G:C6	54:28:94:A:C6	3.10	0.40
59:33:285:ARG:CZ	59:33:288:ASP:OD1	2.70	0.40
32:6:83:ALA:O	32:6:86:CYS:HB3	2.20	0.40
1:A:107:LYS:HA	1:A:195:GLY:HA2	2.03	0.40
1:A:68:ARG:HG3	1:A:128:THR:OG1	2.20	0.40
2:B:155:VAL:HG21	53:27:2618:G:H21	1.86	0.40
4:D:125:GLY:CA	4:D:162:ASP:HA	2.48	0.40
4:D:18:GLU:C	4:D:20:ASN:H	2.24	0.40
4:D:28:PRO:HB3	4:D:159:ALA:HB2	2.03	0.40
4:D:32:LYS:HG3	4:D:32:LYS:O	2.21	0.40
5:E:152:ARG:HG3	5:E:152:ARG:NH2	2.36	0.40
5:E:14:VAL:HG22	5:E:27:GLY:HA2	2.03	0.40
8:H:34:ILE:O	8:H:37:PHE:HB3	2.21	0.40
8:H:45:THR:HA	8:H:48:ILE:CG1	2.47	0.40
9:I:98:GLU:HB2	9:I:124:VAL:CG2	2.52	0.40
14:N:56:LYS:C	14:N:58:ILE:N	2.73	0.40
16:P:60:TRP:CH2	16:P:92:LYS:HB2	2.56	0.40
18:R:107:VAL:HG13	18:R:107:VAL:O	2.21	0.40
20:T:7:ASP:O	20:T:23:LYS:HG3	2.22	0.40
20:T:66:VAL:C	20:T:68:ASN:N	2.74	0.40
20:T:87:GLU:O	20:T:89:GLY:N	2.54	0.40
23:W:17:ARG:HA	23:W:17:ARG:HD3	1.85	0.40
36:10:91:ARG:CG	36:10:92:THR:N	2.84	0.40
38:12:46:GLU:HB3	38:12:61:THR:O	2.22	0.40
39:13:50:PRO:HG2	39:13:51:LEU:HG	2.02	0.40
40:14:5:ARG:CG	40:14:79:PRO:HD3	2.51	0.40
41:15:121:ARG:CZ	51:25:35:GLU:HG2	2.52	0.40
43:17:82:LEU:HD23	43:17:84:CYS:SG	2.62	0.40
49:23:14:LEU:O	49:23:18:VAL:HG23	2.22	0.40
49:23:36:ARG:HA	52:26:1320:C:C5	2.56	0.40
50:24:66:ILE:HG22	50:24:70:LYS:HB3	2.02	0.40
50:24:77:ASN:O	50:24:80:ALA:HB3	2.22	0.40
52:26:112:G:C2'	52:26:113:G:H5'	2.51	0.40
52:26:1170:A:H2'	52:26:1171:A:H5'	2.04	0.40
52:26:1320:C:O2'	52:26:1321:U:H5'	2.20	0.40
52:26:273:U:O2'	52:26:274:A:H5'	2.21	0.40
52:26:280:C:H4'	52:26:281:G:OP2	2.21	0.40
52:26:31:G:H21	52:26:46:G:H5''	1.86	0.40
52:26:623:C:H2'	52:26:624:C:H6	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:725:G:O2'	52:26:726:C:H5'	2.21	0.40
52:26:780:A:C2	52:26:803:G:C6	3.10	0.40
52:26:908:A:H2'	52:26:909:A:H8	1.85	0.40
53:27:1036:G:C6	53:27:1120:G:C6	3.10	0.40
53:27:1082:U:H3'	53:27:1083:U:C5'	2.51	0.40
53:27:1228:G:O2'	53:27:1229:C:H5'	2.22	0.40
53:27:1252:G:C5	53:27:1253:A:N1	2.89	0.40
53:27:1360:G:C6	53:27:1372:U:C2	3.09	0.40
53:27:1417:C:H2'	53:27:1418:G:O4'	2.22	0.40
53:27:1528:A:C2'	53:27:1529:G:H5'	2.52	0.40
53:27:1608:A:H1'	53:27:1610:A:OP2	2.21	0.40
53:27:1965:C:H5''	53:27:1966:A:H2'	2.03	0.40
53:27:1988:G:H2'	53:27:1989:G:C8	2.56	0.40
53:27:2047:C:C2	53:27:2048:G:C8	3.10	0.40
53:27:2128:G:N3	53:27:2173:A:H1'	2.36	0.40
53:27:2564:A:OP1	53:27:2648:G:H4'	2.21	0.40
53:27:2703:C:H2'	53:27:2704:C:H6	1.87	0.40
53:27:2785:C:O2'	53:27:2786:U:H5'	2.21	0.40
53:27:2815:C:H2'	53:27:2816:G:H8	1.86	0.40
53:27:2860:A:H2'	53:27:2861:U:H5'	2.04	0.40
53:27:82:U:H2'	53:27:83:A:O4'	2.20	0.40
12:L:13:HIS:CE1	53:27:910:A:C4	3.10	0.40
54:28:57:A:OP2	54:28:58:A:OP2	2.39	0.40
59:33:326:VAL:CG2	59:33:334:VAL:CG1	2.99	0.40
31:5:27:CYS:SG	31:5:33:HIS:ND1	2.72	0.40
32:6:206:ILE:CG1	32:6:207:ARG:N	2.83	0.40
33:7:20:THR:HB	33:7:57:GLU:HG2	2.02	0.40
34:8:178:GLU:CD	34:8:179:GLY:N	2.75	0.40
34:8:21:LYS:O	34:8:21:LYS:HG2	2.22	0.40
34:8:21:LYS:HD2	34:8:25:ARG:HH21	1.87	0.40
35:9:110:MET:O	35:9:113:VAL:HG12	2.21	0.40
35:9:75:LEU:HD13	35:9:79:THR:O	2.22	0.40
2:B:112:THR:HG22	2:B:113:SER:O	2.22	0.40
3:C:14:VAL:HB	3:C:197:GLU:CD	2.41	0.40
6:F:117:LEU:HD23	6:F:130:VAL:HG13	2.03	0.40
8:H:21:PRO:HB2	8:H:22:PRO:CD	2.43	0.40
11:K:79:LEU:HG	11:K:111:ILE:O	2.21	0.40
14:N:67:ASN:OD1	14:N:70:ALA:N	2.49	0.40
15:O:23:ASP:HA	15:O:89:GLY:N	2.36	0.40
19:S:15:HIS:H	19:S:32:LEU:HA	1.86	0.40
23:W:29:LEU:HD12	53:27:2230:G:H5''	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:10:77:THR:O	36:10:81:ASN:N	2.55	0.40
37:11:99:ALA:O	37:11:103:ILE:HG13	2.21	0.40
40:14:88:MET:HE1	40:14:100:ILE:HG21	2.02	0.40
41:15:60:PHE:O	41:15:63:GLN:HB3	2.21	0.40
42:16:45:ASN:HD22	42:16:88:ASP:CG	2.25	0.40
43:17:52:ILE:HG22	43:17:56:ARG:NH1	2.37	0.40
44:18:16:ALA:CA	44:18:54:SER:HA	2.46	0.40
40:14:65:TYR:CB	44:18:95:LEU:HD11	2.39	0.40
45:19:44:GLU:HG2	45:19:45:HIS:CD2	2.57	0.40
51:25:32:ARG:O	51:25:33:ARG:HB3	2.22	0.40
52:26:109:A:C6	52:26:326:G:C6	3.10	0.40
52:26:336:A:O2'	52:26:337:G:H5'	2.21	0.40
42:16:11:ARG:NH2	52:26:564:C:OP1	2.53	0.40
52:26:807:A:C6	52:26:808:C:C4	3.10	0.40
52:26:96:U:H2'	52:26:97:G:C8	2.52	0.40
53:27:1100:C:H2'	53:27:1101:U:C6	2.57	0.40
53:27:1113:U:H2'	53:27:1114:C:H6	1.82	0.40
53:27:1365:A:N3	53:27:1365:A:H2'	2.37	0.40
1:A:51:ARG:HB2	53:27:1824:G:OP1	2.21	0.40
53:27:1949:G:H2'	53:27:1950:G:C8	2.56	0.40
53:27:1967:C:H3'	53:27:1968:G:H8	1.87	0.40
29:3:29:GLN:NE2	53:27:210:C:OP1	2.55	0.40
53:27:2144:G:N2	53:27:2148:G:H1	2.19	0.40
53:27:2134:A:C5	53:27:2157:G:H4'	2.56	0.40
53:27:2251:G:H2'	53:27:2252:G:H8	1.86	0.40
53:27:2386:A:O2'	53:27:2387:U:H5'	2.21	0.40
53:27:2618:G:C6	53:27:2619:C:C4	3.10	0.40
53:27:2752:C:C5	53:27:2753:A:C5	3.09	0.40
53:27:449:A:C6	53:27:450:G:C4	3.10	0.40
53:27:460:A:H2'	53:27:461:C:O4'	2.21	0.40
53:27:491:G:H2'	53:27:491:G:N3	2.37	0.40
53:27:560:C:H2'	53:27:561:G:O4'	2.21	0.40
53:27:655:A:O3'	53:27:656:G:H8	2.05	0.40
53:27:887:U:H4'	53:27:889:C:H5	1.86	0.40
53:27:962:G:C6	53:27:963:U:C4	3.09	0.40
56:30:2:C:O5'	56:30:2:C:H6	2.03	0.40
57:31:43:A:O2'	57:31:44:A:H5'	2.21	0.40
59:33:154:ALA:HA	59:33:157:ILE:CG1	2.52	0.40
59:33:281:ILE:CG1	59:33:338:ILE:HA	2.51	0.40
59:33:670:ARG:HA	59:33:710:ILE:O	2.21	0.40
31:5:25:VAL:HB	31:5:35:GLN:CG	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:162:VAL:HG12	32:6:164:ASP:H	1.87	0.40
33:7:2:GLN:HG3	33:7:3:LYS:N	2.37	0.40
34:8:197:HIS:O	34:8:200:VAL:HB	2.22	0.40
35:9:98:ALA:HB1	35:9:101:GLY:CA	2.44	0.40
3:C:15:SER:HB2	3:C:197:GLU:OE2	2.20	0.40
4:D:127:TYR:CG	4:D:128:SER:N	2.89	0.40
5:E:154:GLU:N	5:E:159:LYS:O	2.53	0.40
6:F:113:SER:O	6:F:116:ARG:NH1	2.51	0.40
8:H:83:ALA:HB1	8:H:98:GLY:CA	2.49	0.40
9:I:14:ASP:CG	9:I:15:TRP:N	2.75	0.40
10:J:41:ILE:C	10:J:41:ILE:HD12	2.42	0.40
17:Q:4:VAL:HG12	17:Q:39:LEU:HB2	2.04	0.40
20:T:98:ASN:O	20:T:100:GLU:N	2.54	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	A	269/273 (98%)	218 (81%)	41 (15%)	10 (4%)	4	32
2	B	207/209 (99%)	172 (83%)	28 (14%)	7 (3%)	4	34
3	C	199/201 (99%)	147 (74%)	32 (16%)	20 (10%)	0	11
4	D	175/179 (98%)	143 (82%)	27 (15%)	5 (3%)	5	37
5	E	174/177 (98%)	149 (86%)	20 (12%)	5 (3%)	5	37
6	F	147/149 (99%)	108 (74%)	20 (14%)	19 (13%)	0	5
7	G	129/165 (78%)	93 (72%)	25 (19%)	11 (8%)	1	14
8	H	139/142 (98%)	104 (75%)	25 (18%)	10 (7%)	1	18
9	I	140/142 (99%)	120 (86%)	14 (10%)	6 (4%)	3	29
10	J	120/123 (98%)	97 (81%)	16 (13%)	7 (6%)	2	23

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	K	141/144 (98%)	110 (78%)	20 (14%)	11 (8%)	1	17
12	L	134/136 (98%)	113 (84%)	15 (11%)	6 (4%)	3	28
13	M	118/127 (93%)	91 (77%)	22 (19%)	5 (4%)	3	29
14	N	114/117 (97%)	98 (86%)	15 (13%)	1 (1%)	19	60
15	O	112/115 (97%)	93 (83%)	15 (13%)	4 (4%)	4	33
16	P	115/118 (98%)	103 (90%)	7 (6%)	5 (4%)	3	29
17	Q	101/103 (98%)	77 (76%)	16 (16%)	8 (8%)	1	16
18	R	108/110 (98%)	87 (81%)	15 (14%)	6 (6%)	2	24
19	S	91/100 (91%)	71 (78%)	16 (18%)	4 (4%)	3	28
20	T	100/104 (96%)	79 (79%)	14 (14%)	7 (7%)	1	19
21	U	92/94 (98%)	76 (83%)	11 (12%)	5 (5%)	2	25
22	V	73/85 (86%)	65 (89%)	7 (10%)	1 (1%)	12	51
23	W	75/78 (96%)	67 (89%)	6 (8%)	2 (3%)	5	39
24	X	61/63 (97%)	49 (80%)	7 (12%)	5 (8%)	1	15
25	Y	56/59 (95%)	52 (93%)	4 (7%)	0	100	100
26	Z	64/70 (91%)	47 (73%)	7 (11%)	10 (16%)	0	3
27	1	54/57 (95%)	43 (80%)	6 (11%)	5 (9%)	1	13
28	2	48/55 (87%)	41 (85%)	7 (15%)	0	100	100
29	3	44/46 (96%)	32 (73%)	11 (25%)	1 (2%)	7	42
30	4	62/65 (95%)	51 (82%)	8 (13%)	3 (5%)	2	27
31	5	36/38 (95%)	26 (72%)	5 (14%)	5 (14%)	0	4
32	6	216/241 (90%)	170 (79%)	32 (15%)	14 (6%)	1	21
33	7	204/233 (88%)	175 (86%)	22 (11%)	7 (3%)	4	34
34	8	203/206 (98%)	157 (77%)	30 (15%)	16 (8%)	1	16
35	9	155/167 (93%)	109 (70%)	33 (21%)	13 (8%)	1	15
36	10	98/135 (73%)	77 (79%)	14 (14%)	7 (7%)	1	19
37	11	149/179 (83%)	123 (83%)	14 (9%)	12 (8%)	1	16
38	12	127/130 (98%)	110 (87%)	8 (6%)	9 (7%)	1	19
39	13	125/130 (96%)	93 (74%)	19 (15%)	13 (10%)	0	10
40	14	96/103 (93%)	76 (79%)	15 (16%)	5 (5%)	2	25
41	15	114/129 (88%)	90 (79%)	13 (11%)	11 (10%)	1	12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	16	121/124 (98%)	95 (78%)	13 (11%)	13 (11%)	0	9
43	17	112/118 (95%)	88 (79%)	14 (12%)	10 (9%)	1	14
44	18	98/101 (97%)	72 (74%)	21 (21%)	5 (5%)	2	25
45	19	86/89 (97%)	70 (81%)	11 (13%)	5 (6%)	2	23
46	20	80/82 (98%)	59 (74%)	18 (22%)	3 (4%)	3	31
47	21	78/84 (93%)	54 (69%)	19 (24%)	5 (6%)	1	21
48	22	63/75 (84%)	50 (79%)	5 (8%)	8 (13%)	0	6
49	23	77/92 (84%)	64 (83%)	11 (14%)	2 (3%)	6	39
50	24	83/87 (95%)	75 (90%)	6 (7%)	2 (2%)	6	41
51	25	63/71 (89%)	40 (64%)	19 (30%)	4 (6%)	1	22
59	33	663/750 (88%)	557 (84%)	60 (9%)	46 (7%)	1	19
All	All	6509/6970 (93%)	5226 (80%)	879 (14%)	404 (6%)	3	22

All (404) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	86	GLU
2	B	102	ALA
3	C	6	LYS
3	C	11	ALA
3	C	57	LYS
3	C	61	ARG
3	C	86	ALA
4	D	20	ASN
4	D	175	PRO
5	E	174	LYS
6	F	10	ALA
6	F	30	LEU
6	F	54	LEU
6	F	74	ALA
6	F	118	PRO
7	G	88	HIS
7	G	94	ARG
8	H	3	LYS
8	H	6	ALA
8	H	18	ASN
8	H	63	ASP
9	I	81	ILE

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Mol	Chain	Res	Type
11	K	3	LEU
11	K	4	ASN
11	K	15	ALA
11	K	29	LYS
11	K	36	LYS
15	O	65	ASN
17	Q	57	GLY
18	R	3	THR
18	R	29	VAL
19	S	77	ARG
20	T	6	ARG
21	U	65	VAL
24	X	24	GLU
26	Z	28	VAL
27	1	2	VAL
30	4	62	PRO
31	5	11	CYS
31	5	12	ARG
31	5	29	ALA
31	5	37	GLN
32	6	14	HIS
32	6	45	THR
32	6	73	ARG
32	6	87	ASP
32	6	94	ARG
32	6	122	ASP
33	7	160	GLU
34	8	23	GLY
34	8	28	ASP
34	8	29	THR
34	8	189	ASP
34	8	191	SER
35	9	11	GLN
35	9	87	VAL
35	9	122	VAL
35	9	157	GLY
36	10	38	ARG
36	10	54	LEU
36	10	92	THR
37	11	4	ARG
37	11	29	LEU
38	12	88	LYS

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Mol	Chain	Res	Type
39	13	38	PHE
39	13	128	LYS
40	14	57	VAL
41	15	91	GLY
41	15	125	LYS
42	16	2	THR
42	16	43	LYS
42	16	75	GLU
43	17	104	ASN
47	21	49	ASN
47	21	51	GLU
47	21	80	LYS
50	24	68	LYS
51	25	18	PHE
59	33	72	ASP
59	33	134	ASN
59	33	135	VAL
59	33	170	GLU
59	33	470	ASN
59	33	471	PRO
59	33	472	SER
59	33	479	ASN
59	33	487	ARG
59	33	532	PRO
59	33	566	LYS
59	33	600	GLU
59	33	620	GLU
59	33	656	VAL
59	33	695	LEU
59	33	698	ALA
1	A	43	ASN
1	A	72	GLY
1	A	121	ALA
1	A	154	ALA
2	B	44	GLY
2	B	178	VAL
3	C	26	ALA
3	C	84	THR
3	C	89	PRO
3	C	153	LEU
3	C	172	ALA
3	C	200	LEU

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Mol	Chain	Res	Type
5	E	45	ALA
5	E	60	GLY
5	E	175	LYS
6	F	3	VAL
6	F	9	VAL
6	F	11	ASN
6	F	15	LEU
6	F	47	PHE
6	F	48	GLU
6	F	89	LYS
6	F	91	PHE
7	G	49	GLY
7	G	69	PHE
7	G	106	PHE
7	G	120	ALA
7	G	130	PRO
8	H	51	GLY
8	H	93	ASN
8	H	136	GLY
9	I	83	GLY
9	I	111	LYS
10	J	29	HIS
10	J	35	VAL
10	J	93	GLN
11	K	111	ILE
11	K	115	GLU
11	K	116	VAL
12	L	23	GLY
12	L	69	PRO
12	L	82	MET
13	M	59	SER
13	M	117	ASP
15	O	112	ARG
15	O	113	LEU
16	P	2	ARG
16	P	23	TYR
16	P	101	ASP
17	Q	54	VAL
17	Q	80	ARG
18	R	62	ASP
18	R	89	ALA
19	S	2	ILE

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Mol	Chain	Res	Type
19	S	88	LYS
21	U	33	GLY
22	V	53	HIS
23	W	31	ASN
24	X	2	LYS
26	Z	8	LYS
26	Z	26	SER
26	Z	27	THR
26	Z	36	VAL
27	1	26	SER
29	3	5	PHE
30	4	17	GLY
31	5	7	VAL
32	6	88	GLN
34	8	2	ARG
34	8	4	LEU
34	8	31	CYS
34	8	165	GLU
35	9	23	THR
35	9	93	VAL
35	9	102	THR
35	9	103	GLY
36	10	98	GLU
37	11	18	GLY
37	11	129	ASN
37	11	149	ALA
38	12	51	GLU
38	12	72	GLU
39	13	9	GLY
39	13	12	LYS
39	13	55	ASP
39	13	57	VAL
41	15	77	GLY
41	15	88	PRO
41	15	92	ARG
42	16	45	ASN
42	16	122	LYS
43	17	65	GLU
43	17	98	GLY
44	18	26	LEU
44	18	53	ASP
45	19	17	ASP

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Mol	Chain	Res	Type
45	19	75	ALA
48	22	11	ARG
48	22	12	PHE
48	22	14	ALA
48	22	17	VAL
48	22	71	ASP
49	23	63	ASP
51	25	13	VAL
51	25	15	LEU
59	33	468	GLN
59	33	521	ILE
59	33	522	SER
59	33	535	ASN
59	33	554	ASN
59	33	612	CYS
59	33	629	ARG
59	33	666	SER
59	33	676	ARG
59	33	703	THR
1	A	112	GLY
1	A	231	HIS
2	B	148	GLN
4	D	84	ILE
4	D	173	ASP
6	F	41	LYS
6	F	73	ASN
6	F	134	VAL
7	G	89	PRO
7	G	119	PRO
8	H	53	PRO
10	J	91	SER
12	L	53	MET
13	M	3	HIS
17	Q	55	ASP
18	R	72	THR
19	S	17	SER
20	T	74	ALA
21	U	10	LYS
21	U	34	LYS
24	X	3	ALA
24	X	22	LEU
26	Z	30	HIS

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Mol	Chain	Res	Type
27	1	25	THR
27	1	40	HIS
30	4	6	VAL
32	6	104	LYS
33	7	2	GLN
33	7	20	THR
33	7	44	LYS
33	7	112	ALA
34	8	125	ASN
34	8	146	GLU
34	8	174	ALA
34	8	182	LYS
35	9	88	HIS
35	9	111	ARG
36	10	86	ARG
37	11	71	THR
37	11	146	ALA
38	12	53	ASP
39	13	102	PHE
39	13	107	ALA
39	13	120	ALA
40	14	29	ALA
40	14	41	PRO
41	15	14	GLN
41	15	16	SER
42	16	77	SER
42	16	108	ASP
43	17	4	ALA
43	17	38	ILE
43	17	97	ARG
43	17	105	ALA
43	17	113	LYS
45	19	2	LEU
46	20	45	GLU
46	20	81	ALA
47	21	50	ASN
47	21	67	SER
48	22	18	GLN
48	22	24	ASP
49	23	15	LEU
50	24	67	HIS
51	25	24	LYS

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Mol	Chain	Res	Type
59	33	267	ASN
59	33	334	VAL
59	33	368	SER
59	33	432	HIS
59	33	466	GLN
59	33	484	THR
59	33	605	LEU
59	33	647	HIS
59	33	701	SER
1	A	233	GLY
3	C	7	ASP
3	C	55	SER
3	C	92	HIS
5	E	118	ALA
6	F	29	PHE
6	F	87	GLU
6	F	122	LEU
7	G	118	ILE
8	H	23	VAL
10	J	110	GLU
11	K	17	LYS
11	K	90	VAL
15	O	109	ILE
17	Q	24	LYS
17	Q	102	SER
20	T	67	SER
26	Z	52	ALA
27	1	17	SER
32	6	223	GLY
34	8	30	LYS
34	8	134	TYR
35	9	22	LYS
35	9	80	LEU
35	9	159	SER
36	10	53	LYS
36	10	97	THR
37	11	55	LYS
37	11	56	SER
37	11	70	PRO
38	12	2	MET
38	12	47	ASP
38	12	66	GLN

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Mol	Chain	Res	Type
38	12	74	ILE
39	13	41	GLU
39	13	71	ILE
39	13	125	GLN
40	14	93	ALA
42	16	35	ARG
42	16	87	LYS
42	16	88	ASP
45	19	45	HIS
59	33	52	ALA
59	33	482	TYR
59	33	537	ASN
59	33	614	GLN
1	A	65	ASP
2	B	133	THR
3	C	80	SER
9	I	26	GLY
12	L	6	ARG
13	M	2	ARG
13	M	33	ILE
16	P	6	GLY
17	Q	43	ASN
17	Q	53	PHE
20	T	100	GLU
23	W	6	VAL
26	Z	64	PHE
32	6	17	HIS
32	6	36	LYS
33	7	61	LYS
37	11	46	LEU
40	14	42	LEU
41	15	15	VAL
41	15	126	ARG
42	16	33	CYS
44	18	44	VAL
45	19	19	ASN
48	22	57	ALA
59	33	486	SER
59	33	514	ASP
59	33	617	PRO
1	A	234	GLY
3	C	49	ARG

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Mol	Chain	Res	Type
4	D	174	PHE
9	I	21	THR
9	I	93	ILE
12	L	89	VAL
20	T	47	PRO
20	T	88	ASP
20	T	99	SER
21	U	72	VAL
24	X	25	GLN
26	Z	42	PRO
32	6	119	GLN
32	6	212	TYR
37	11	130	LYS
38	12	30	LYS
42	16	23	LEU
44	18	20	PHE
46	20	13	LYS
59	33	44	GLN
59	33	705	GLN
3	C	42	GLY
3	C	83	VAL
18	R	80	PRO
32	6	39	ILE
39	13	103	VAL
41	15	73	VAL
42	16	70	GLY
59	33	483	VAL
3	C	129	PRO
10	J	101	GLY
10	J	103	VAL
14	N	74	VAL
41	15	106	ILE
44	18	94	GLY
3	C	113	VAL
16	P	99	VAL
26	Z	51	VAL
34	8	6	PRO
59	33	551	ILE
1	A	151	GLY
11	K	31	GLY
33	7	14	VAL
43	17	6	ILE

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Mol	Chain	Res	Type
43	17	9	PRO
2	B	146	ILE
7	G	78	GLY
8	H	12	VAL

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
1	A	216/218 (99%)	215 (100%)	1 (0%)	90	95
2	B	164/164 (100%)	164 (100%)	0	100	100
3	C	165/165 (100%)	165 (100%)	0	100	100
4	D	148/150 (99%)	146 (99%)	2 (1%)	69	85
5	E	137/138 (99%)	137 (100%)	0	100	100
6	F	114/114 (100%)	114 (100%)	0	100	100
7	G	100/123 (81%)	100 (100%)	0	100	100
8	H	109/110 (99%)	107 (98%)	2 (2%)	62	82
9	I	116/116 (100%)	116 (100%)	0	100	100
10	J	103/104 (99%)	102 (99%)	1 (1%)	78	89
11	K	102/103 (99%)	102 (100%)	0	100	100
12	L	109/109 (100%)	109 (100%)	0	100	100
13	M	100/103 (97%)	99 (99%)	1 (1%)	78	89
14	N	86/87 (99%)	86 (100%)	0	100	100
15	O	99/100 (99%)	99 (100%)	0	100	100
16	P	89/90 (99%)	89 (100%)	0	100	100
17	Q	84/84 (100%)	83 (99%)	1 (1%)	74	87
18	R	93/93 (100%)	93 (100%)	0	100	100
19	S	80/84 (95%)	80 (100%)	0	100	100
20	T	83/85 (98%)	82 (99%)	1 (1%)	74	87

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	U	78/78 (100%)	78 (100%)	0	100	100
22	V	57/63 (90%)	57 (100%)	0	100	100
23	W	67/68 (98%)	67 (100%)	0	100	100
24	X	55/55 (100%)	55 (100%)	0	100	100
25	Y	48/49 (98%)	48 (100%)	0	100	100
26	Z	59/62 (95%)	58 (98%)	1 (2%)	63	83
27	1	47/48 (98%)	47 (100%)	0	100	100
28	2	45/49 (92%)	45 (100%)	0	100	100
29	3	38/38 (100%)	38 (100%)	0	100	100
30	4	51/52 (98%)	50 (98%)	1 (2%)	58	79
31	5	34/34 (100%)	34 (100%)	0	100	100
32	6	180/199 (90%)	178 (99%)	2 (1%)	76	87
33	7	170/190 (90%)	169 (99%)	1 (1%)	87	93
34	8	172/173 (99%)	172 (100%)	0	100	100
35	9	119/126 (94%)	117 (98%)	2 (2%)	63	83
36	10	87/116 (75%)	85 (98%)	2 (2%)	53	76
37	11	124/147 (84%)	123 (99%)	1 (1%)	83	91
38	12	104/105 (99%)	103 (99%)	1 (1%)	78	89
39	13	105/107 (98%)	104 (99%)	1 (1%)	78	89
40	14	86/90 (96%)	86 (100%)	0	100	100
41	15	89/99 (90%)	89 (100%)	0	100	100
42	16	103/104 (99%)	103 (100%)	0	100	100
43	17	92/96 (96%)	92 (100%)	0	100	100
44	18	83/84 (99%)	80 (96%)	3 (4%)	38	67
45	19	76/77 (99%)	75 (99%)	1 (1%)	71	86
46	20	65/65 (100%)	65 (100%)	0	100	100
47	21	74/78 (95%)	73 (99%)	1 (1%)	69	85
48	22	56/65 (86%)	55 (98%)	1 (2%)	62	82
49	23	70/79 (89%)	70 (100%)	0	100	100
50	24	65/66 (98%)	65 (100%)	0	100	100
51	25	55/61 (90%)	54 (98%)	1 (2%)	62	82

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	33	452/635 (71%)	449 (99%)	3 (1%)	85	92
All	All	5303/5698 (93%)	5272 (99%)	31 (1%)	88	93

All (31) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	212	TRP
4	D	9	ASP
4	D	175	PRO
8	H	7	TYR
8	H	37	PHE
10	J	65	THR
13	M	115	LEU
17	Q	2	TYR
20	T	21	ARG
26	Z	37	CYS
30	4	62	PRO
32	6	21	TYR
32	6	39	ILE
33	7	156	LEU
35	9	80	LEU
35	9	87	VAL
36	10	9	MET
36	10	47	LEU
37	11	61	PHE
38	12	90	GLU
39	13	44	ARG
44	18	32	ASP
44	18	34	ASN
44	18	48	GLN
45	19	86	LEU
47	21	49	ASN
48	22	69	TYR
51	25	36	PHE
59	33	267	ASN
59	33	338	ILE
59	33	407	TYR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (128) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	36	ASN
1	A	44	ASN
1	A	89	ASN
1	A	116	GLN
1	A	199	HIS
1	A	225	ASN
1	A	238	ASN
1	A	259	ASN
2	B	32	ASN
2	B	49	GLN
2	B	130	GLN
2	B	140	HIS
2	B	150	GLN
2	B	173	GLN
3	C	24	ASN
3	C	30	GLN
3	C	41	GLN
3	C	94	GLN
3	C	156	ASN
3	C	163	ASN
4	D	51	ASN
4	D	62	GLN
4	D	80	GLN
5	E	21	GLN
5	E	44	HIS
5	E	63	GLN
5	E	114	HIS
5	E	142	GLN
6	F	2	GLN
6	F	18	GLN
6	F	43	ASN
6	F	73	ASN
6	F	128	HIS
7	G	4	ASN
7	G	88	HIS
7	G	122	GLN
8	H	33	ASN
8	H	93	ASN
9	I	40	HIS
9	I	58	ASN
11	K	54	GLN
14	N	29	HIS
14	N	100	HIS

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Mol	Chain	Res	Type
14	N	104	GLN
14	N	116	GLN
15	O	55	HIS
16	P	19	GLN
16	P	55	GLN
16	P	58	GLN
17	Q	43	ASN
17	Q	86	GLN
18	R	15	GLN
18	R	31	GLN
19	S	59	ASN
20	T	68	ASN
20	T	73	ASN
20	T	98	ASN
21	U	24	ASN
21	U	87	GLN
22	V	8	ASN
23	W	15	ASN
23	W	22	ASN
24	X	20	ASN
24	X	25	GLN
25	Y	19	HIS
29	3	29	GLN
31	5	13	ASN
31	5	35	GLN
32	6	17	HIS
32	6	41	ASN
32	6	167	HIS
32	6	177	ASN
33	7	2	GLN
33	7	18	ASN
33	7	99	GLN
33	7	138	GLN
34	8	53	GLN
34	8	70	GLN
34	8	73	ASN
34	8	88	ASN
34	8	115	GLN
34	8	125	ASN
34	8	130	ASN
34	8	139	ASN
35	9	134	ASN

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Mol	Chain	Res	Type
36	10	63	ASN
37	11	27	ASN
37	11	67	ASN
37	11	85	GLN
37	11	121	ASN
37	11	129	ASN
37	11	147	ASN
38	12	17	GLN
39	13	30	ASN
39	13	36	GLN
39	13	125	GLN
40	14	35	GLN
40	14	58	ASN
41	15	14	GLN
41	15	118	ASN
42	16	5	GLN
43	17	7	ASN
43	17	13	HIS
44	18	34	ASN
44	18	42	ASN
44	18	48	GLN
44	18	59	GLN
45	19	49	HIS
45	19	61	GLN
47	21	30	HIS
48	22	51	GLN
48	22	53	GLN
49	23	56	HIS
49	23	68	HIS
50	24	12	GLN
50	24	47	GLN
50	24	51	ASN
50	24	83	ASN
51	25	63	ASN
59	33	88	ASN
59	33	235	HIS
59	33	264	GLN
59	33	267	ASN
59	33	432	HIS
59	33	614	GLN
59	33	674	ASN
59	33	689	ASN

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Mol	Chain	Res	Type
59	33	730	ASN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
52	26	1538/1539 (99%)	205 (13%)	9 (0%)
53	27	2902/2903 (99%)	447 (15%)	24 (0%)
54	28	119/120 (99%)	14 (11%)	1 (0%)
55	29	19/20 (95%)	5 (26%)	1 (5%)
56	30	75/76 (98%)	19 (25%)	0
57	31	76/77 (98%)	8 (10%)	0
58	32	76/77 (98%)	19 (25%)	1 (1%)
All	All	4805/4812 (99%)	717 (14%)	36 (0%)

All (717) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
52	26	4	U
52	26	6	G
52	26	9	G
52	26	19	A
52	26	22	G
52	26	32	A
52	26	39	G
52	26	47	C
52	26	48	C
52	26	51	A
52	26	71	A
52	26	73	C
52	26	77	A
52	26	79	G
52	26	86	G
52	26	87	C
52	26	94	G
52	26	95	C
52	26	98	A
52	26	121	U
52	26	122	G
52	26	130	A
52	26	131	A
52	26	183	C

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Mol	Chain	Res	Type
52	26	184	G
52	26	197	A
52	26	209	U
52	26	210	C
52	26	211	G
52	26	226	G
52	26	247	G
52	26	251	G
52	26	266	G
52	26	267	C
52	26	279	A
52	26	281	G
52	26	289	G
52	26	306	A
52	26	321	A
52	26	328	C
52	26	330	C
52	26	345	C
52	26	346	G
52	26	347	G
52	26	352	C
52	26	354	G
52	26	367	U
52	26	372	C
52	26	392	C
52	26	398	U
52	26	411	A
52	26	412	A
52	26	413	G
52	26	421	U
52	26	422	C
52	26	423	G
52	26	429	U
52	26	430	A
52	26	441	A
52	26	467	U
52	26	468	A
52	26	484	G
52	26	485	U
52	26	486	U
52	26	500	G
52	26	508	U

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Mol	Chain	Res	Type
52	26	509	A
52	26	510	A
52	26	521	G
52	26	527	G
52	26	532	A
52	26	533	A
52	26	535	A
52	26	547	A
52	26	559	A
52	26	561	U
52	26	572	A
52	26	573	A
52	26	574	A
52	26	575	G
52	26	576	C
52	26	577	G
52	26	596	A
52	26	607	A
52	26	633	G
52	26	642	A
52	26	653	U
52	26	665	A
52	26	688	G
52	26	703	G
52	26	704	A
52	26	721	G
52	26	724	G
52	26	731	G
52	26	755	G
52	26	777	A
52	26	790	A
52	26	793	U
52	26	794	A
52	26	815	A
52	26	817	C
52	26	818	G
52	26	819	A
52	26	821	G
52	26	829	G
52	26	832	G
52	26	836	G
52	26	843	U

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Mol	Chain	Res	Type
52	26	846	G
52	26	873	A
52	26	902	G
52	26	926	G
52	26	934	C
52	26	935	A
52	26	960	U
52	26	961	U
52	26	966	G
52	26	969	A
52	26	971	G
52	26	975	A
52	26	976	G
52	26	977	A
52	26	992	U
52	26	993	G
52	26	994	A
52	26	1004	A
52	26	1028	C
52	26	1030	U
52	26	1031	C
52	26	1032	G
52	26	1034	G
52	26	1053	G
52	26	1054	C
52	26	1066	C
52	26	1085	U
52	26	1094	G
52	26	1095	U
52	26	1101	A
52	26	1130	A
52	26	1133	G
52	26	1136	C
52	26	1137	C
52	26	1138	G
52	26	1139	G
52	26	1154	G
52	26	1157	A
52	26	1159	U
52	26	1167	A
52	26	1168	U
52	26	1183	U

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Mol	Chain	Res	Type
52	26	1184	G
52	26	1196	A
52	26	1197	A
52	26	1201	A
52	26	1202	U
52	26	1212	U
52	26	1213	A
52	26	1225	A
52	26	1227	A
52	26	1238	A
52	26	1240	U
52	26	1241	G
52	26	1257	A
52	26	1258	G
52	26	1260	G
52	26	1275	A
52	26	1278	G
52	26	1280	A
52	26	1282	C
52	26	1286	U
52	26	1287	A
52	26	1298	U
52	26	1300	G
52	26	1303	C
52	26	1317	C
52	26	1320	C
52	26	1336	C
52	26	1346	A
52	26	1347	G
52	26	1363	A
52	26	1365	G
52	26	1381	U
52	26	1395	C
52	26	1400	C
52	26	1401	G
52	26	1419	G
52	26	1441	A
52	26	1442	G
52	26	1446	A
52	26	1448	C
52	26	1451	U
52	26	1452	C

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Mol	Chain	Res	Type
52	26	1453	G
52	26	1475	G
52	26	1492	A
52	26	1497	G
52	26	1499	A
52	26	1503	A
52	26	1506	U
52	26	1517	G
52	26	1529	G
52	26	1530	G
52	26	1533	C
52	26	1539	C
52	26	1540	U
53	27	10	A
53	27	12	U
53	27	23	G
53	27	34	U
53	27	35	G
53	27	46	G
53	27	49	A
53	27	51	G
53	27	63	A
53	27	74	A
53	27	75	G
53	27	92	U
53	27	114	U
53	27	119	A
53	27	120	U
53	27	137	U
53	27	138	U
53	27	139	U
53	27	140	C
53	27	141	G
53	27	142	A
53	27	149	A
53	27	162	U
53	27	163	C
53	27	181	A
53	27	196	A
53	27	197	A
53	27	216	A
53	27	219	A

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Mol	Chain	Res	Type
53	27	221	A
53	27	222	A
53	27	224	U
53	27	228	C
53	27	229	C
53	27	242	G
53	27	243	U
53	27	248	G
53	27	249	C
53	27	252	G
53	27	255	A
53	27	265	A
53	27	276	U
53	27	279	A
53	27	280	U
53	27	281	C
53	27	285	G
53	27	294	A
53	27	301	G
53	27	311	A
53	27	323	C
53	27	324	A
53	27	329	G
53	27	330	A
53	27	353	C
53	27	362	A
53	27	367	G
53	27	371	A
53	27	372	G
53	27	386	G
53	27	387	U
53	27	396	G
53	27	404	A
53	27	405	U
53	27	406	G
53	27	411	G
53	27	421	C
53	27	424	G
53	27	451	U
53	27	457	A
53	27	458	G
53	27	479	A

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Mol	Chain	Res	Type
53	27	480	A
53	27	481	G
53	27	483	A
53	27	491	G
53	27	504	A
53	27	505	A
53	27	508	A
53	27	518	G
53	27	529	A
53	27	531	C
53	27	532	A
53	27	533	G
53	27	542	C
53	27	543	G
53	27	545	U
53	27	547	A
53	27	548	G
53	27	563	A
53	27	569	U
53	27	573	U
53	27	575	A
53	27	588	U
53	27	603	A
53	27	614	A
53	27	615	U
53	27	616	A
53	27	627	A
53	27	634	C
53	27	637	A
53	27	645	C
53	27	646	U
53	27	647	G
53	27	654	A
53	27	655	A
53	27	668	A
53	27	669	G
53	27	682	G
53	27	686	U
53	27	687	C
53	27	695	G
53	27	714	U
53	27	730	A

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Mol	Chain	Res	Type
53	27	747	C
53	27	752	A
53	27	757	G
53	27	765	C
53	27	774	G
53	27	775	G
53	27	776	G
53	27	782	A
53	27	784	G
53	27	785	G
53	27	788	A
53	27	789	A
53	27	805	G
53	27	811	U
53	27	812	C
53	27	819	A
53	27	827	U
53	27	828	U
53	27	830	G
53	27	844	A
53	27	845	A
53	27	846	U
53	27	847	U
53	27	858	G
53	27	859	G
53	27	860	U
53	27	878	A
53	27	883	G
53	27	888	C
53	27	893	C
53	27	896	A
53	27	897	C
53	27	910	A
53	27	914	G
53	27	915	C
53	27	919	U
53	27	932	U
53	27	941	A
53	27	946	C
53	27	961	C
53	27	974	G
53	27	983	A

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Mol	Chain	Res	Type
53	27	995	C
53	27	996	A
53	27	1009	A
53	27	1012	U
53	27	1013	C
53	27	1021	A
53	27	1022	G
53	27	1033	U
53	27	1045	C
53	27	1046	A
53	27	1047	G
53	27	1053	C
53	27	1060	U
53	27	1070	A
53	27	1083	U
53	27	1088	A
53	27	1097	U
53	27	1111	A
53	27	1131	G
53	27	1132	U
53	27	1135	C
53	27	1142	A
53	27	1143	A
53	27	1144	A
53	27	1157	G
53	27	1172	C
53	27	1173	U
53	27	1174	U
53	27	1176	U
53	27	1177	G
53	27	1178	C
53	27	1180	U
53	27	1211	C
53	27	1212	G
53	27	1218	G
53	27	1238	G
53	27	1241	A
53	27	1251	C
53	27	1253	A
53	27	1256	G
53	27	1262	A
53	27	1263	U

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Mol	Chain	Res	Type
53	27	1268	A
53	27	1271	G
53	27	1272	A
53	27	1273	U
53	27	1294	U
53	27	1300	G
53	27	1301	A
53	27	1302	A
53	27	1306	C
53	27	1314	C
53	27	1321	A
53	27	1332	G
53	27	1341	G
53	27	1345	C
53	27	1365	A
53	27	1378	A
53	27	1379	U
53	27	1383	A
53	27	1395	A
53	27	1407	G
53	27	1416	G
53	27	1419	A
53	27	1420	A
53	27	1428	C
53	27	1454	C
53	27	1461	C
53	27	1482	G
53	27	1490	A
53	27	1491	G
53	27	1493	C
53	27	1497	U
53	27	1503	A
53	27	1515	A
53	27	1524	G
53	27	1533	C
53	27	1534	U
53	27	1535	A
53	27	1555	G
53	27	1560	G
53	27	1569	A
53	27	1578	U
53	27	1608	A

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Mol	Chain	Res	Type
53	27	1616	A
53	27	1647	U
53	27	1648	U
53	27	1660	G
53	27	1667	G
53	27	1668	A
53	27	1674	G
53	27	1677	A
53	27	1694	C
53	27	1698	A
53	27	1699	G
53	27	1703	G
53	27	1715	G
53	27	1729	U
53	27	1730	C
53	27	1732	C
53	27	1738	G
53	27	1758	U
53	27	1764	C
53	27	1773	A
53	27	1775	U
53	27	1780	A
53	27	1791	A
53	27	1800	C
53	27	1801	A
53	27	1802	A
53	27	1808	A
53	27	1816	C
53	27	1829	A
53	27	1848	A
53	27	1870	C
53	27	1871	A
53	27	1900	A
53	27	1901	A
53	27	1906	G
53	27	1907	G
53	27	1913	A
53	27	1914	C
53	27	1929	G
53	27	1930	G
53	27	1931	U
53	27	1937	A

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Mol	Chain	Res	Type
53	27	1940	U
53	27	1944	U
53	27	1955	U
53	27	1963	U
53	27	1967	C
53	27	1970	A
53	27	1972	G
53	27	1982	U
53	27	1991	U
53	27	1994	C
53	27	1997	C
53	27	2022	U
53	27	2023	C
53	27	2031	A
53	27	2034	U
53	27	2036	C
53	27	2043	C
53	27	2049	G
53	27	2052	A
53	27	2055	C
53	27	2056	G
53	27	2057	G
53	27	2060	A
53	27	2061	G
53	27	2062	A
53	27	2069	G
53	27	2072	C
53	27	2080	A
53	27	2093	G
53	27	2096	C
53	27	2099	U
53	27	2100	G
53	27	2110	G
53	27	2111	U
53	27	2112	G
53	27	2113	U
53	27	2114	A
53	27	2115	G
53	27	2118	U
53	27	2119	A
53	27	2123	G
53	27	2131	U

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Mol	Chain	Res	Type
53	27	2132	U
53	27	2133	G
53	27	2145	C
53	27	2147	A
53	27	2158	A
53	27	2159	G
53	27	2162	G
53	27	2166	U
53	27	2171	A
53	27	2172	U
53	27	2173	A
53	27	2178	C
53	27	2189	U
53	27	2198	A
53	27	2199	A
53	27	2203	U
53	27	2204	G
53	27	2211	A
53	27	2213	U
53	27	2225	A
53	27	2238	G
53	27	2239	G
53	27	2268	A
53	27	2273	A
53	27	2278	A
53	27	2283	C
53	27	2287	A
53	27	2297	A
53	27	2305	U
53	27	2309	A
53	27	2319	G
53	27	2320	U
53	27	2325	G
53	27	2327	A
53	27	2334	U
53	27	2345	G
53	27	2350	C
53	27	2361	G
53	27	2382	G
53	27	2383	G
53	27	2385	C
53	27	2391	G

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Mol	Chain	Res	Type
53	27	2392	A
53	27	2402	U
53	27	2406	A
53	27	2407	A
53	27	2422	C
53	27	2423	U
53	27	2424	C
53	27	2429	G
53	27	2431	U
53	27	2435	A
53	27	2441	U
53	27	2448	A
53	27	2449	U
53	27	2450	A
53	27	2476	A
53	27	2478	A
53	27	2487	G
53	27	2491	U
53	27	2494	G
53	27	2498	C
53	27	2502	G
53	27	2503	A
53	27	2505	G
53	27	2506	U
53	27	2518	A
53	27	2525	G
53	27	2529	G
53	27	2547	A
53	27	2549	G
53	27	2554	U
53	27	2566	A
53	27	2567	G
53	27	2572	A
53	27	2577	A
53	27	2578	G
53	27	2582	G
53	27	2585	U
53	27	2586	U
53	27	2602	A
53	27	2603	G
53	27	2608	G
53	27	2609	U

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Mol	Chain	Res	Type
53	27	2613	U
53	27	2615	U
53	27	2623	G
53	27	2629	U
53	27	2655	G
53	27	2673	G
53	27	2685	G
53	27	2689	U
53	27	2690	U
53	27	2712	C
53	27	2713	U
53	27	2714	G
53	27	2716	C
53	27	2722	G
53	27	2744	G
53	27	2748	A
53	27	2764	A
53	27	2765	A
53	27	2778	A
53	27	2779	U
53	27	2780	G
53	27	2791	G
53	27	2792	A
53	27	2794	C
53	27	2797	U
53	27	2798	U
53	27	2799	A
53	27	2800	A
53	27	2801	G
53	27	2809	A
53	27	2818	U
53	27	2820	A
53	27	2821	A
53	27	2833	U
53	27	2867	G
53	27	2868	A
53	27	2873	A
53	27	2880	C
53	27	2883	A
53	27	2891	U
54	28	4	C
54	28	12	C

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Mol	Chain	Res	Type
54	28	13	G
54	28	24	G
54	28	25	U
54	28	35	C
54	28	41	G
54	28	44	G
54	28	67	G
54	28	88	C
54	28	89	U
54	28	108	A
54	28	109	A
54	28	120	A
55	29	6	G
55	29	9	G
55	29	10	G
55	29	12	A
55	29	19	U
56	30	5	G
56	30	8	U
56	30	9	A
56	30	14	A
56	30	16	U
56	30	17	C
56	30	18	G
56	30	19	G
56	30	21	A
56	30	22	G
56	30	26	A
56	30	36	A
56	30	43	C
56	30	46	G
56	30	48	C
56	30	55	U
56	30	59	U
56	30	75	C
56	30	76	A
57	31	9	G
57	31	19	G
57	31	20	U
57	31	22	G
57	31	47	U
57	31	48	C

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Mol	Chain	Res	Type
57	31	61	C
57	31	76	A
58	32	5	G
58	32	8	U
58	32	9	G
58	32	13	C
58	32	16	C
58	32	19	G
58	32	20	U
58	32	21	A
58	32	34	C
58	32	35	A
58	32	46	A
58	32	52	G
58	32	59	A
58	32	61	C
58	32	69	C
58	32	73	A
58	32	74	C
58	32	75	C
58	32	76	A

All (36) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
52	26	86	G
52	26	246	A
52	26	280	C
52	26	421	U
52	26	429	U
52	26	1182	G
52	26	1297	G
52	26	1347	G
52	26	1399	C
53	27	227	A
53	27	242	G
53	27	479	A
53	27	490	C
53	27	687	C
53	27	827	U
53	27	858	G
53	27	859	G

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Mol	Chain	Res	Type
53	27	1020	A
53	27	1130	U
53	27	1378	A
53	27	1801	A
53	27	1818	U
53	27	1847	G
53	27	1930	G
53	27	2286	G
53	27	2296	U
53	27	2326	C
53	27	2391	G
53	27	2406	A
53	27	2655	G
53	27	2712	C
53	27	2808	G
53	27	2867	G
54	28	88	C
55	29	9	G
58	32	20	U

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

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

#### 5.5 Carbohydrates [i](#)

There are no 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](#)

There are no chain breaks in this entry.