



Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Nov 16, 2017 – 06:38 PM 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 : unknown
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

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

MolProbity : 4.02b-467
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20030345

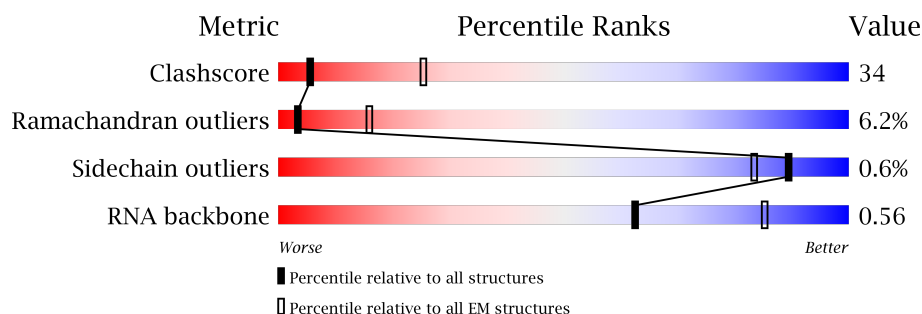
1 Overall quality at a glance

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.




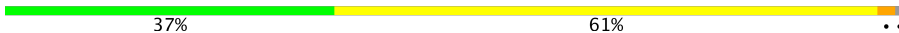
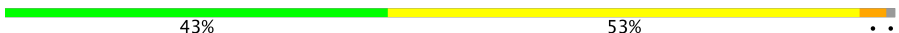


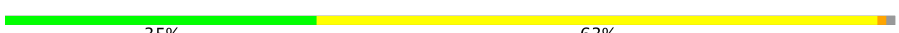
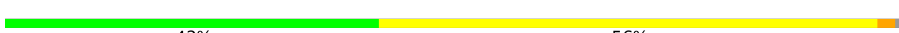




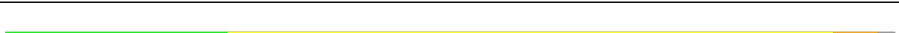













Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

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 ≥ 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% ..

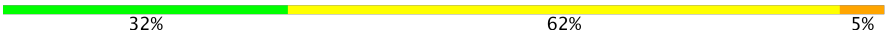


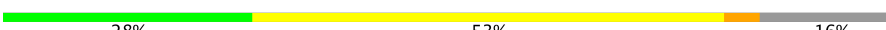
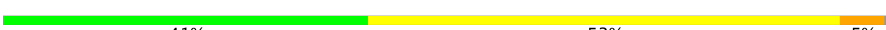
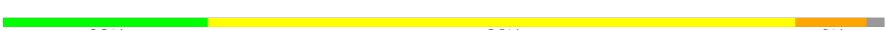




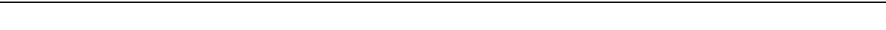

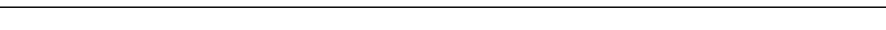
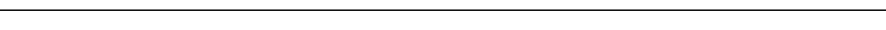

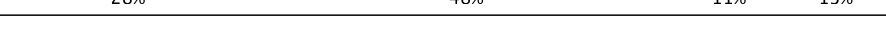








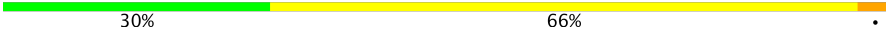
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Mol	Chain	Length	Quality of chain
9	I	142	
10	J	123	
11	K	144	
12	L	136	
13	M	127	
14	N	117	
15	O	115	
16	P	118	
17	Q	103	
18	R	110	
19	S	100	
20	T	104	
21	U	94	
22	V	85	
23	W	78	
24	X	63	
25	Y	59	
26	Z	70	
27	1	57	
28	2	55	
29	3	46	
30	4	65	
31	5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

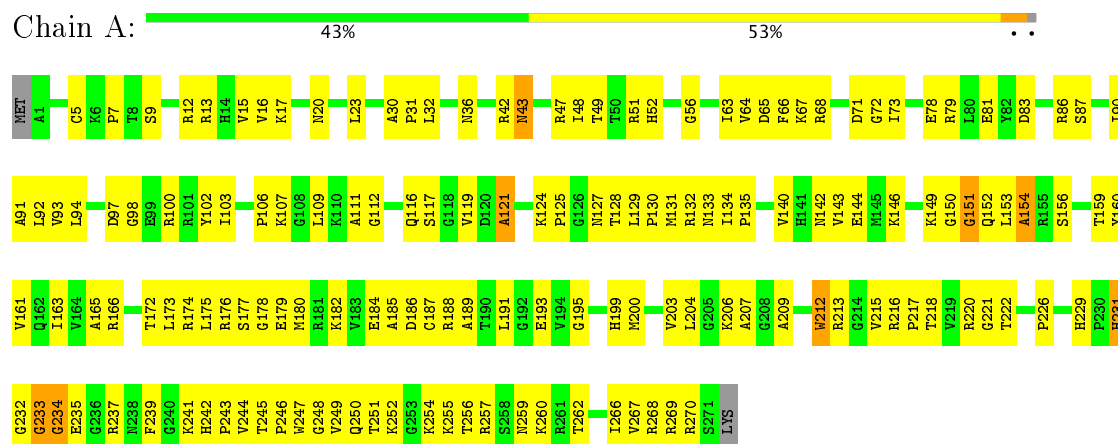
There are 7 discrepancies between the modelled and reference sequences:

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



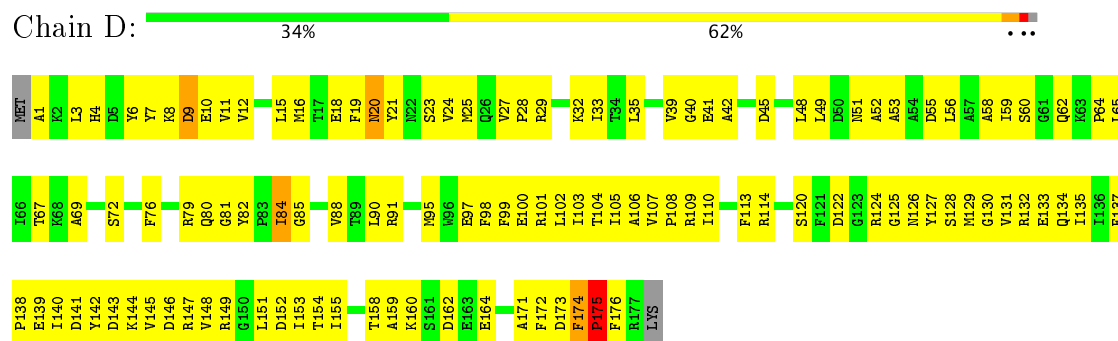
- Molecule 2: 50S ribosomal protein L3



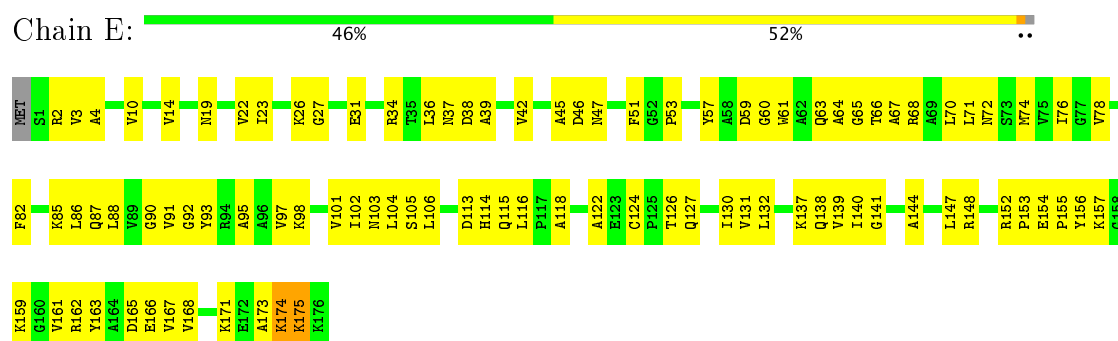
- Molecule 3: 50S ribosomal protein L4



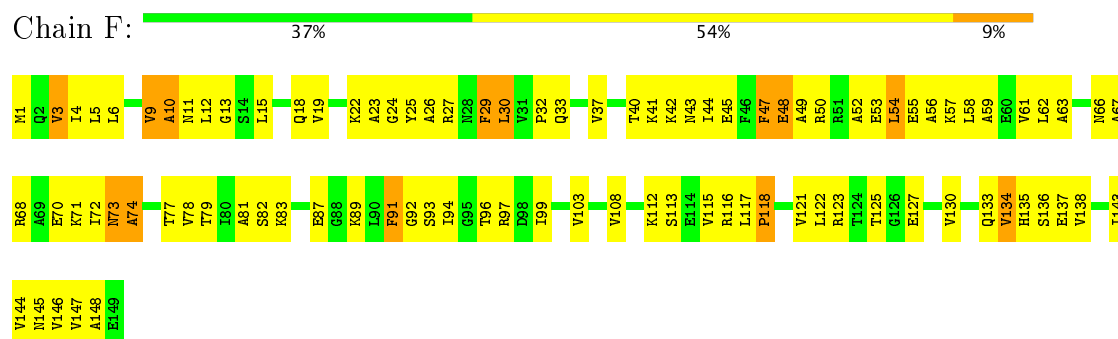
- Molecule 4: 50S ribosomal protein L5



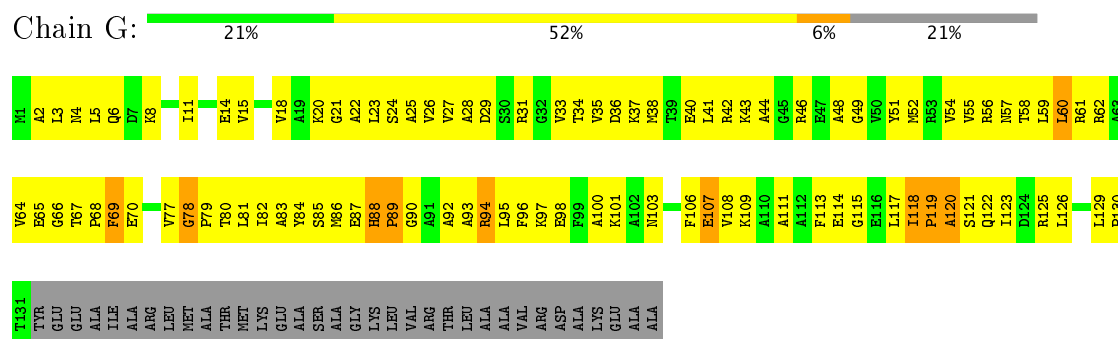
- Molecule 5: 50S ribosomal protein L6



- Molecule 6: 50S ribosomal protein L9

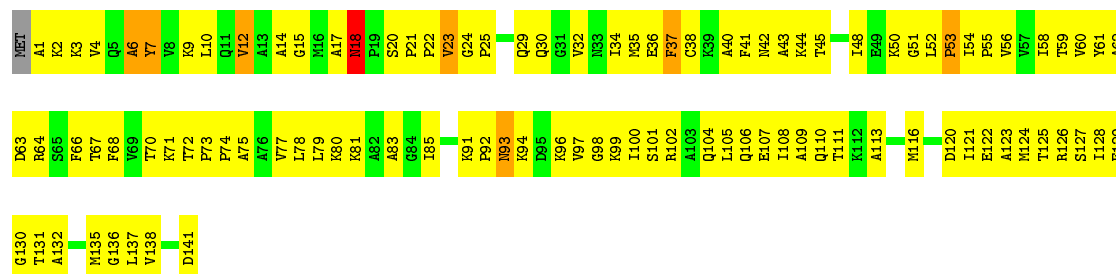


- Molecule 7: 50S ribosomal protein L10



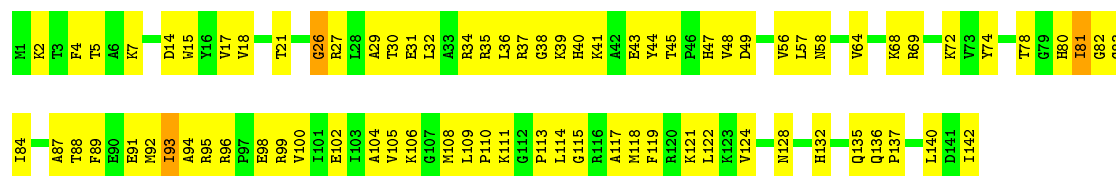
- Molecule 8: 50S ribosomal protein L11

Chain H:  27% 67% 5% ..



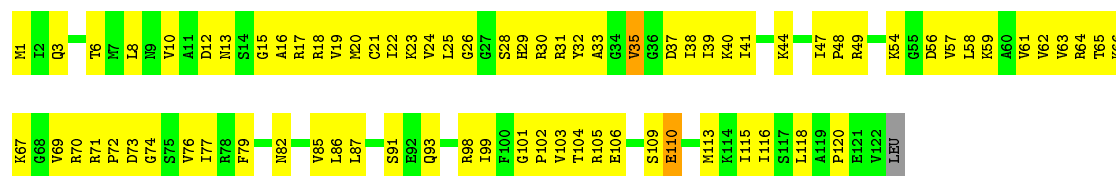
- Molecule 9: 50S ribosomal protein L13

Chain I:  44% 54% .



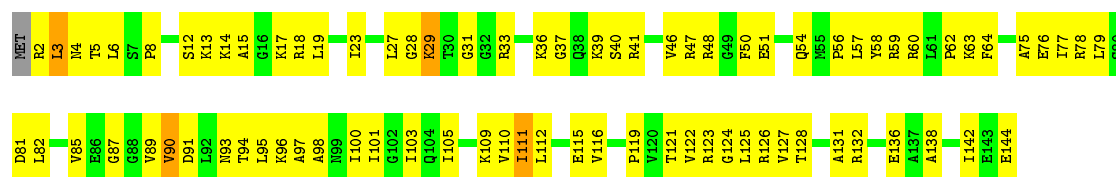
- Molecule 10: 50S ribosomal protein L14

Chain J:  37% 61% ..



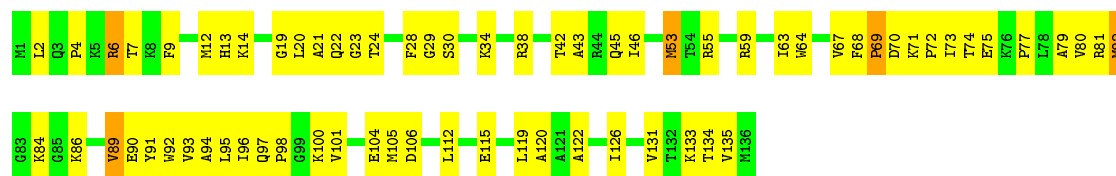
- Molecule 11: 50S ribosomal protein L15

Chain K:  43% 53% ..

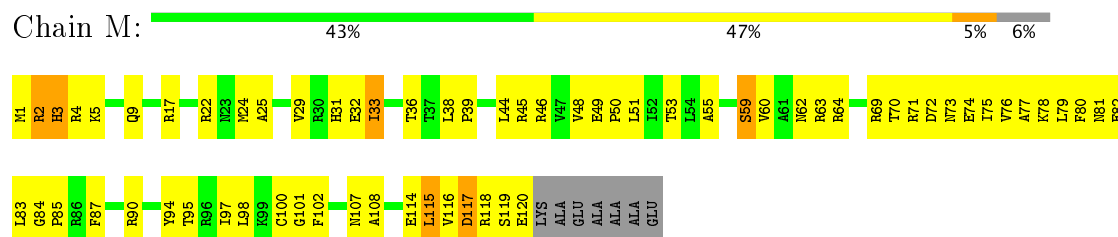


- Molecule 12: 50S ribosomal protein L16

Chain L:  49% 47% .



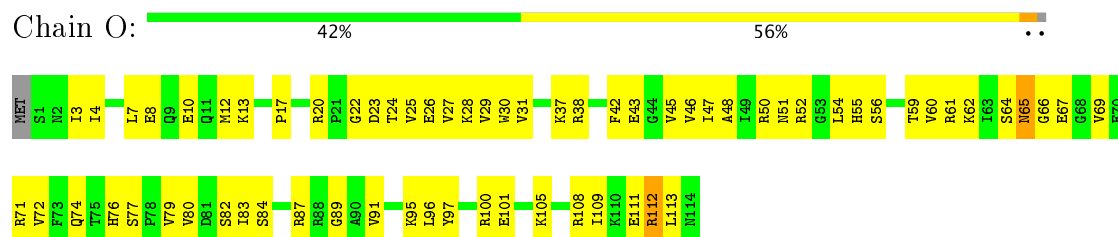
- Molecule 13: 50S ribosomal protein L17



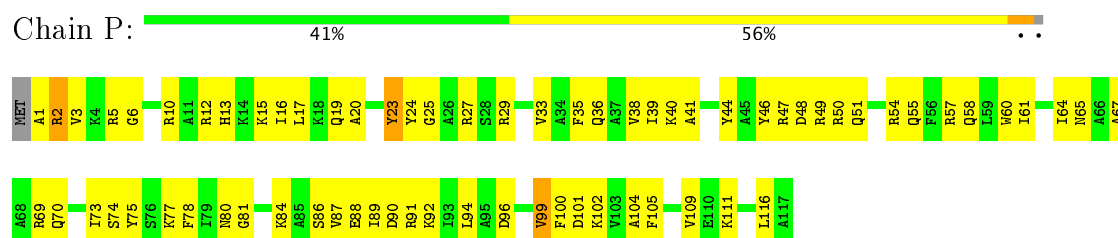
- Molecule 14: 50S ribosomal protein L18



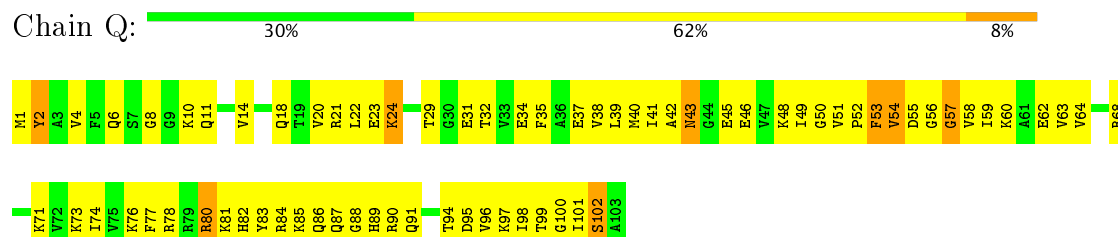
- Molecule 15: 50S ribosomal protein L19



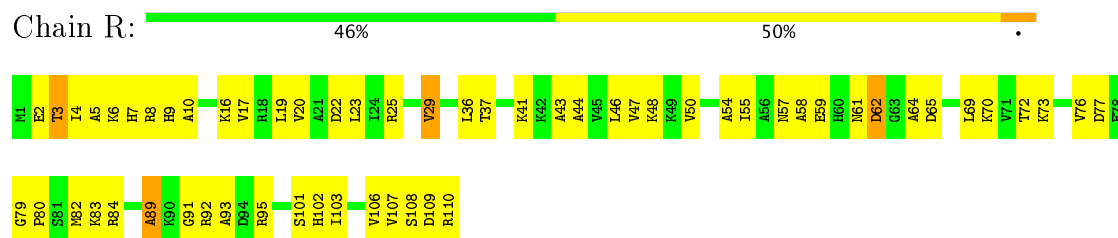
- Molecule 16: 50S ribosomal protein L20



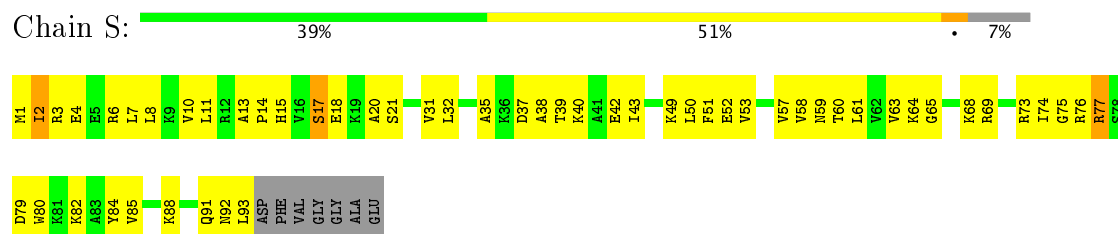
- Molecule 17: 50S ribosomal protein L21



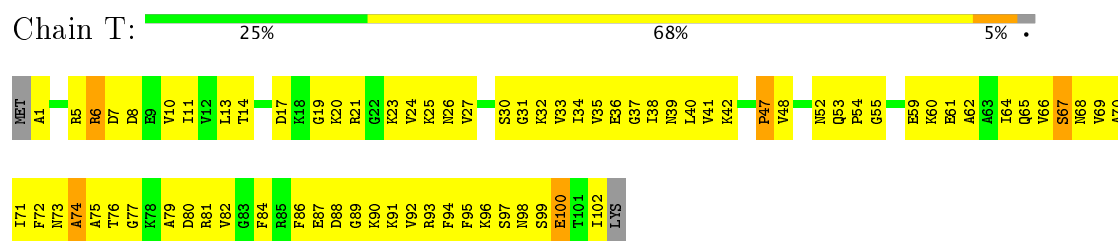
- Molecule 18: 50S ribosomal protein L22



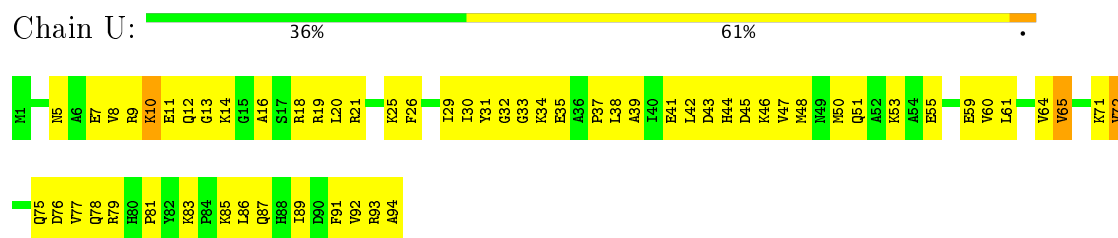
• Molecule 19: 50S ribosomal protein L23



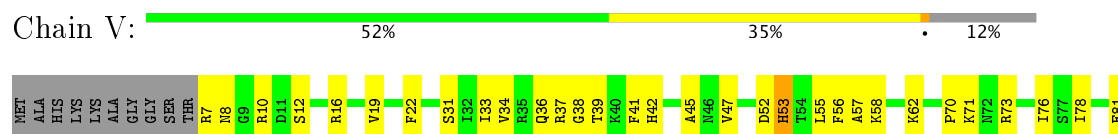
• Molecule 20: 50S ribosomal protein L24



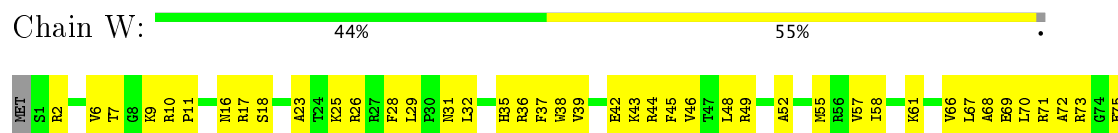
• Molecule 21: 50S ribosomal protein L25



• Molecule 22: 50S ribosomal protein L27



• Molecule 23: 50S ribosomal protein L28





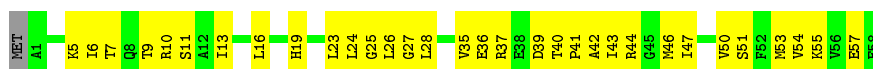
- Molecule 24: 50S ribosomal protein L29

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%



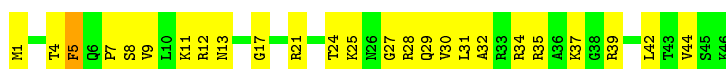
- Molecule 28: 50S ribosomal protein L33

Chain 2: 47% 44% 9%



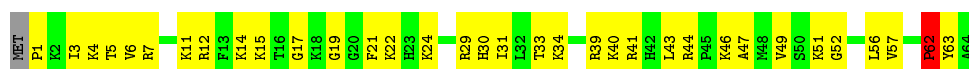
- Molecule 29: 50S ribosomal protein L34

Chain 3: 46% 52%



- Molecule 30: 50S ribosomal protein L35

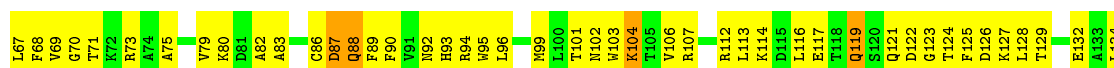
Chain 4: 46% 51%



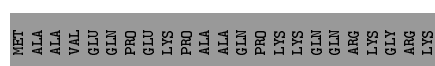
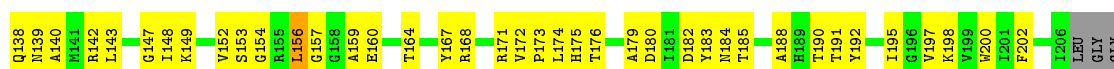
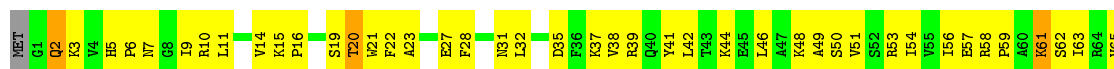
- Molecule 31: 50S ribosomal protein L36



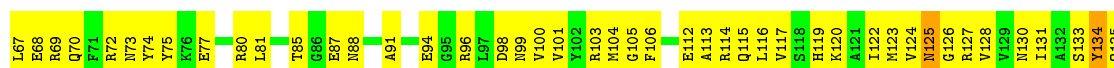
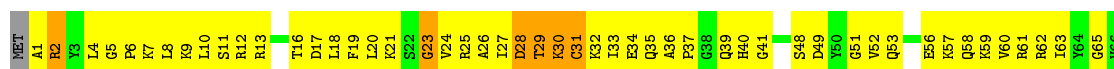
- Molecule 32: 30S ribosomal protein S2

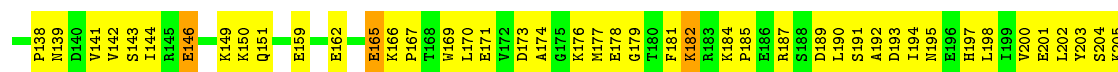


- Molecule 33: 30S ribosomal protein S3



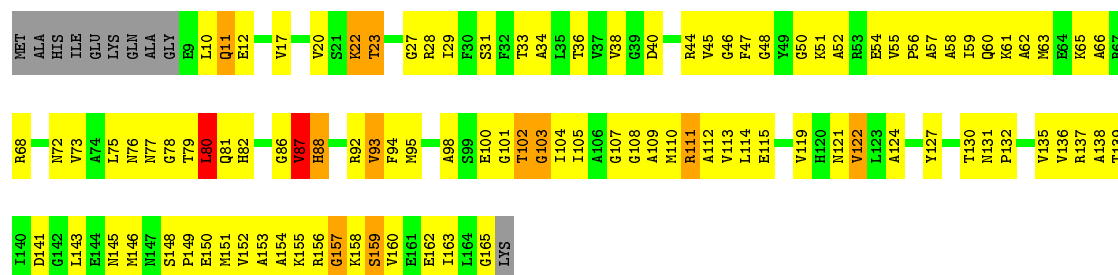
- Molecule 34: 30S ribosomal protein S4





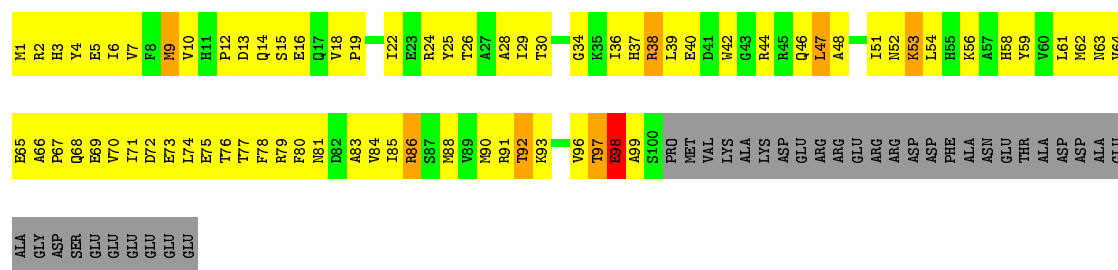
• Molecule 35: 30S ribosomal protein S5

Chain 9: 32% 54% 7% 6%



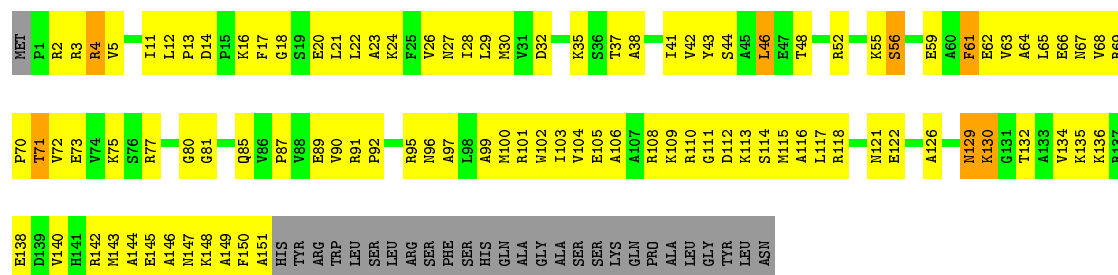
• Molecule 36: 30S ribosomal protein S6

Chain 10: 19% 50% 5% 26%



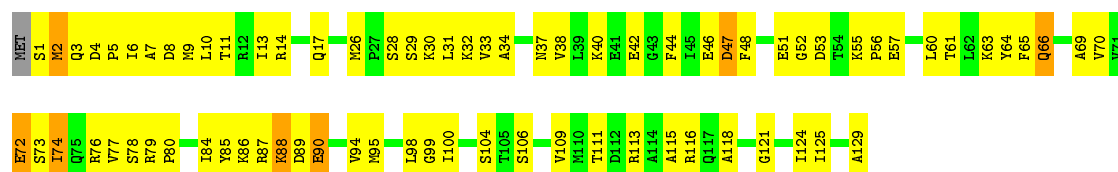
• Molecule 37: 30S ribosomal protein S7

Chain 11: 28% 53% 16%

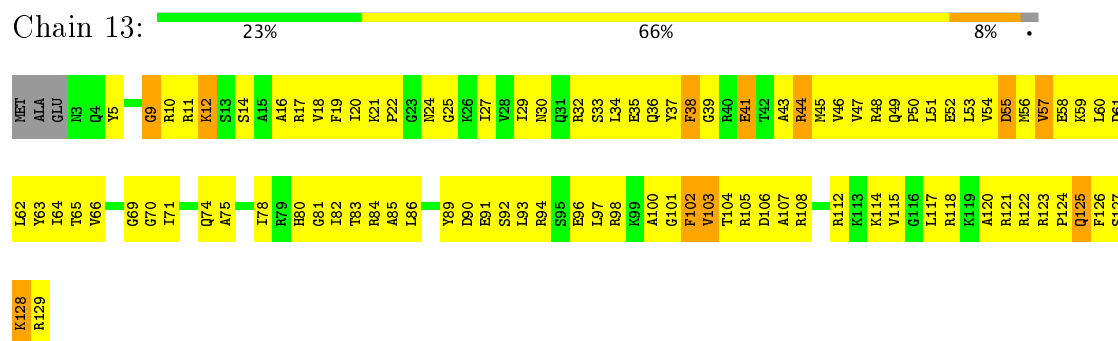


• Molecule 38: 30S ribosomal protein S8

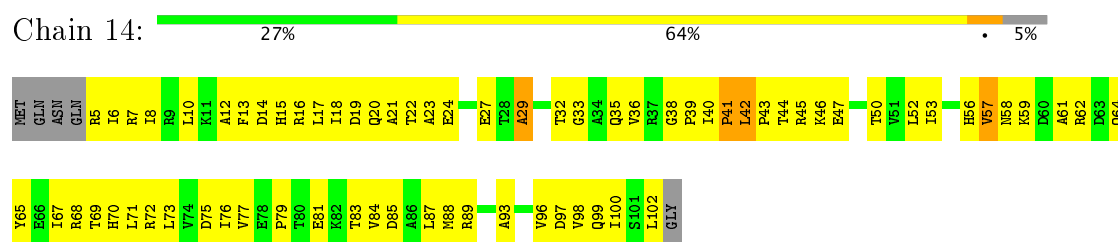
Chain 12: 41% 53% 5%



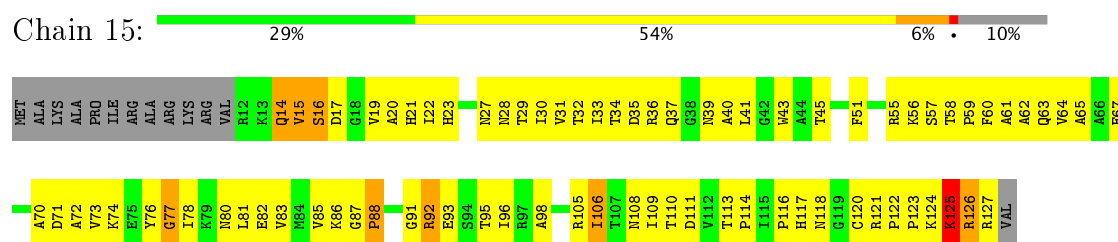
- Molecule 39: 30S ribosomal protein S9



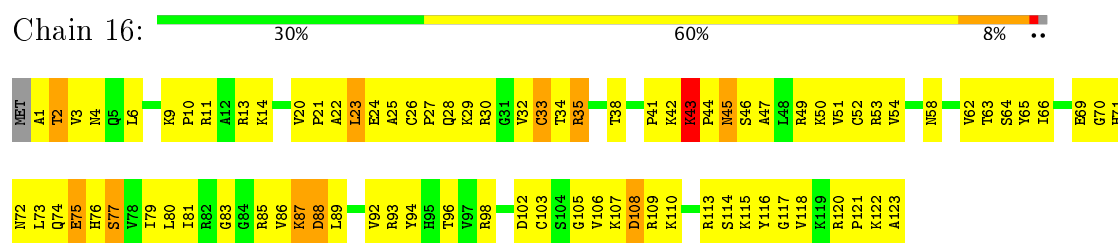
- Molecule 40: 30S ribosomal protein S10



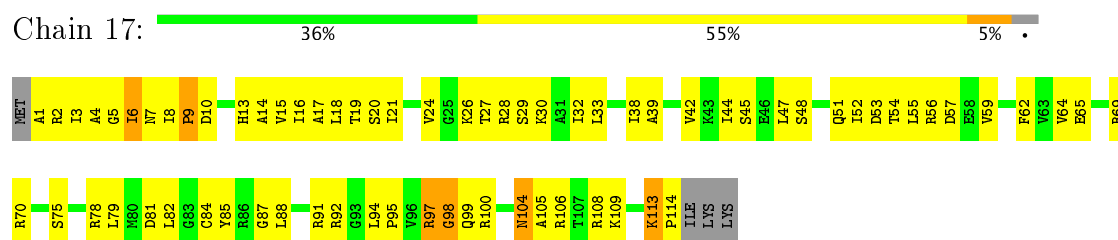
- Molecule 41: 30S ribosomal protein S11



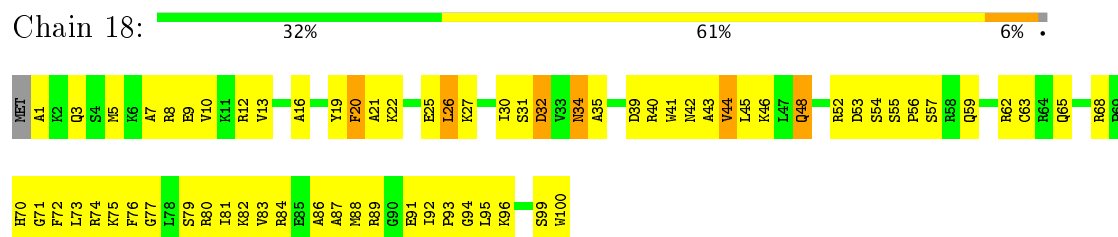
- Molecule 42: 30S ribosomal protein S12



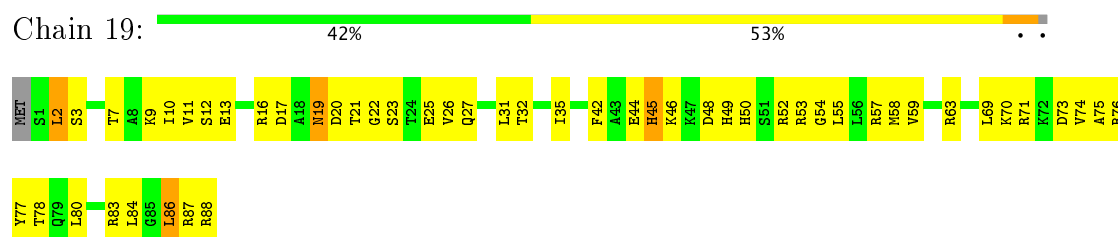
- Molecule 43: 30S ribosomal protein S13



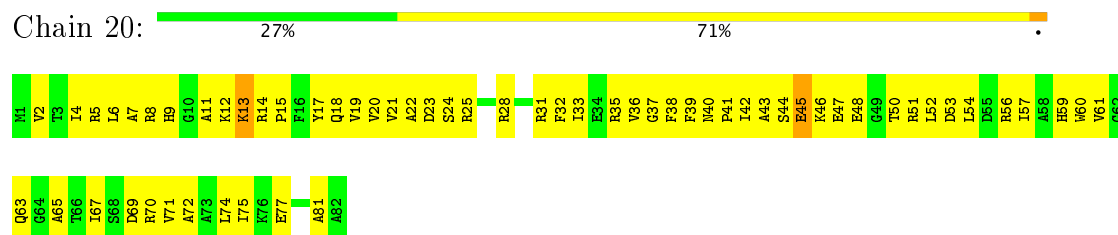
- Molecule 44: 30S ribosomal protein S14



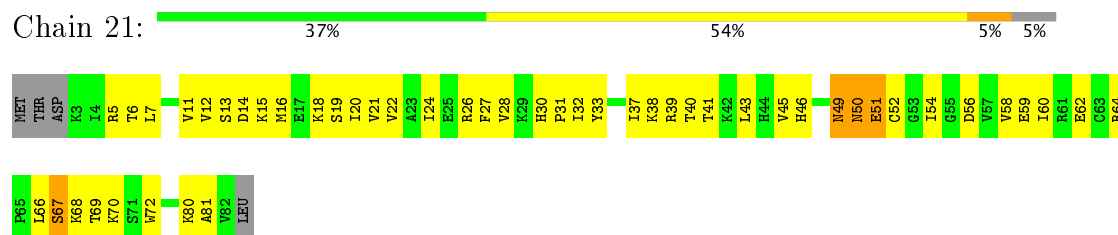
- Molecule 45: 30S ribosomal protein S15



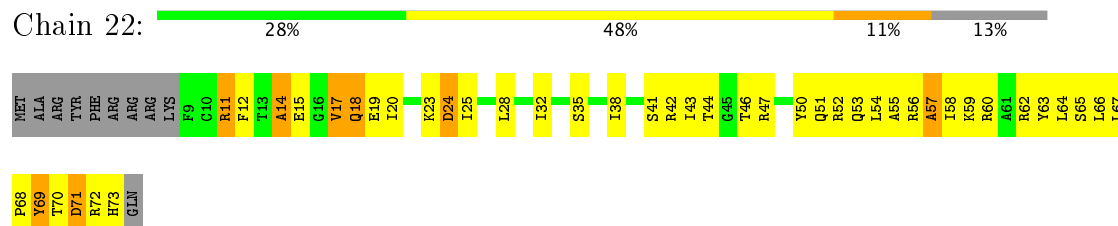
- Molecule 46: 30S ribosomal protein S16



- Molecule 47: 30S ribosomal protein S17

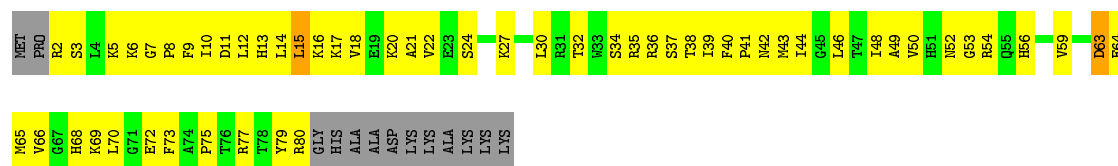


- Molecule 48: 30S ribosomal protein S18



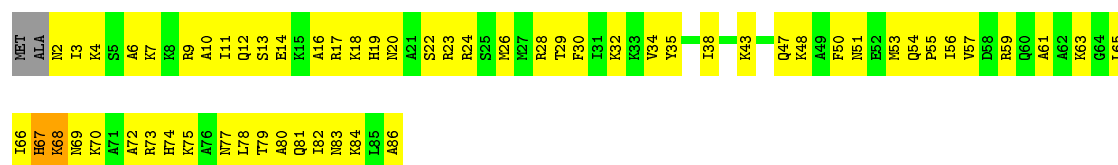
- Molecule 49: 30S ribosomal protein S19

Chain 23: 25% 59% 14%



- Molecule 50: 30S ribosomal protein S20

Chain 24: 30% 66%



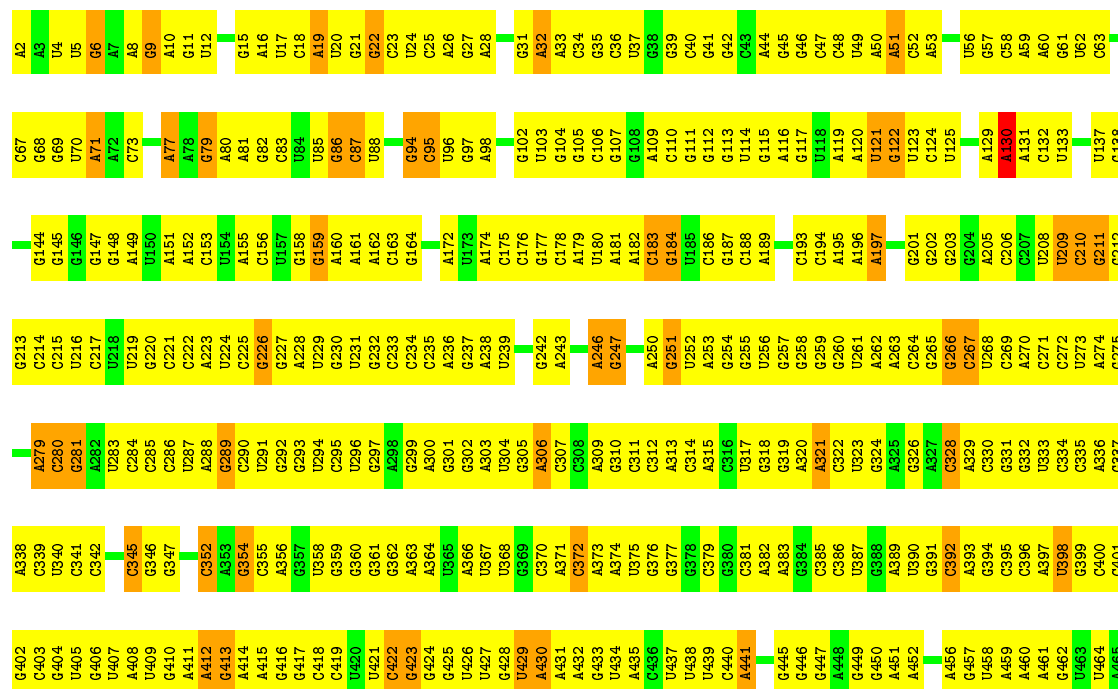
- Molecule 51: 30S ribosomal protein S21

Chain 25: 23% 62% 7% 8%

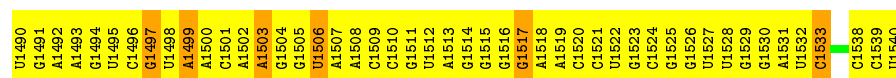


- Molecule 52: 16S ribosomal RNA

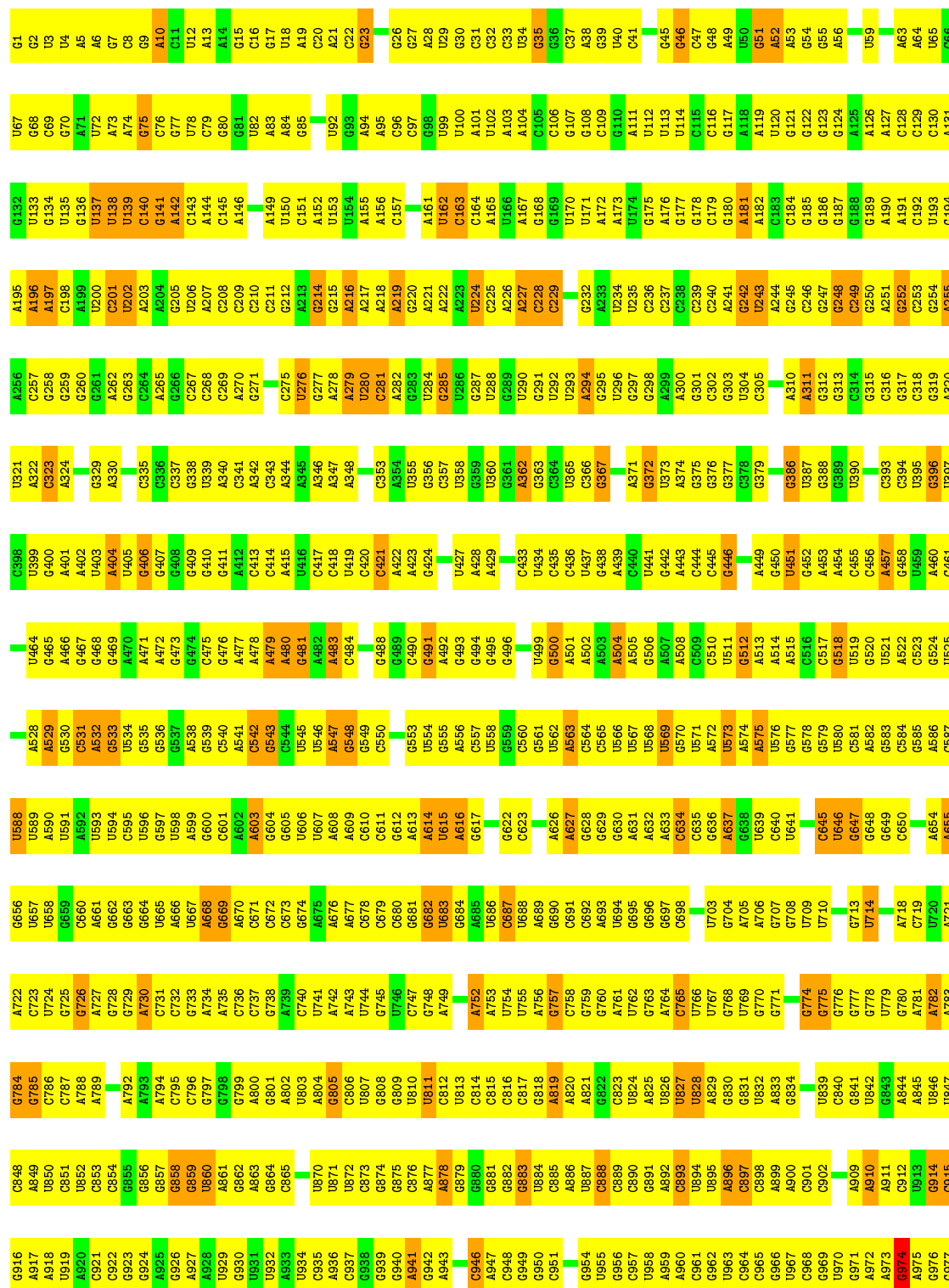
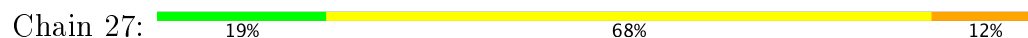
Chain 26: 20% 70% 10%



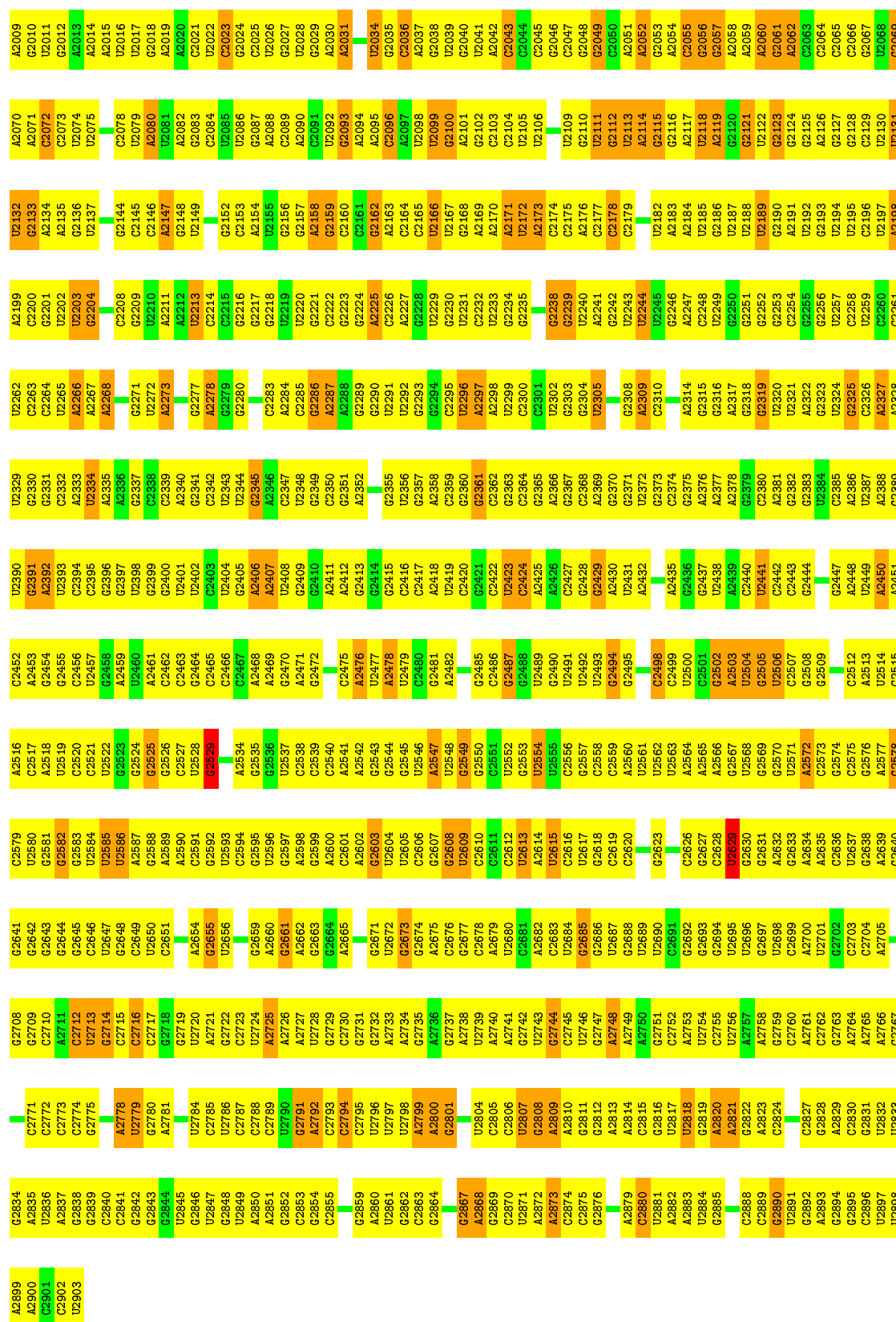
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A1432	A1369	U1308	A1237		A1110	G1047	G980	A918	G958	A790	A728	A665	A729	A532	A468
A1433	G1370	A1309	A1238	G1174	A1111	G1048	U981	A919	G959	G791	A729	G666	A596	A533	C469
A1434	G1371	G1310	A1239	G1175	C1112	U1049	U982	U920	A860	A792	G730	G667	G597	U534	C470
A1435	A1372	A1311	U1240		C1113	G1050		U921	G661	U793	G731	G668	U598	A535	U471
U1436	G1373	G1312	G1241	A1180	C1114	C1051	U986	G922	C962	A794	C732	G669	C599	C536	U472
A1437		U1313	G1242	G1181	U1115	U1052	G987	A923	U663	G795		G670	A600	G537	U473
G1438	U1314	C1314	G1243	A1182	U1116	G1053	G988	C924	A864	G796	C735	G671	G601	G538	G474
A1439	U1315	G1316	U1183	U1183	A1117	C1054	U989	G925	A865	G797	C736	U672		A539	C475
U1440	G1316	G1316	G1244	U1184	C1118	A1055	C990	G926	C966	U798	C737	A673	G604	G540	U476
A1441	C1317	A1317	A1246	G1185	C1119	U1056	U991	G927	G667	G799	C738	G674	U605	G541	C477
G1442	G1186	C1318		G1186	C1120	G1057	U992	G928	C968	G800	C739	A675	G606	G542	A478
C1443	G1187	A1319	A1260	G1187	U1121	G1058	G993	G929	G969	U801	U740	A676	A607	U543	
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U1445	C1384	U1321	A1252	G1190	U1123	U1060	G995	G933	U871	G803	G742	U678	A609	G545	G484
A1446	G1385	A1322	A1253	A1191		G1061	A996	A937	A872	A807	A743	C679	U610	A546	C485
A1447	G1386	C1322	G1253	C1192	U1126	U1062	U997	C934	A873	C808	C744	C680		A547	U486
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A1449	C1388	A1324	G1255	G1193	G1128	U1064	C999	C936	U875		A746	G682	C549	C548	C488
C1450	C1389	C1325	A1256	U1194	G1129	U1065	A1000	A937	C976	C810	A747	G683		G550	C489
U1451	U1390	U1326	A1257	G1195	C1129	G1066	C1001	A938	G877	C811	A748	U684	C617	U551	C490
C1452	C1391	C1327	G1258	A1196	A1130	A1067		G939	A878	G812	A749	G685	C618	U552	G491
U1453	U1392	C1328	A1197	A1197	G1131			C940	C879	U686		U686	U619	A553	C492
G1454	A1393	U1330	G1260	G1198	C1132	U1070	A1004	G941	C880	A815	C750	A687	C620	A554	A493
A1455	U1330	A1261	A1261	U1199	G1133	C1071	A1005	G942	G881	A816	G752	C688	A621	U555	C494
C1456	G1331	C1262	C1262	C1200	G1134		G1006		C982	C817	A753	C689	A622	C556	A495
A1457	A1332	G1263	U1264	A1201	U1135	U1072	U1007	U943	C982	G818	A753	C690	C623	C557	A496
G1458	C1333	U1264	C1265	U1202	C1136	U1073	U1008	G944	C983	C819	G755	G691	C624	G558	G497
A1459	G1334	C1265		C1203	C1137	G1074	U1009	G945	U884	A819		G692	U625	A559	A498
U1460	U1335			A1204	G1138	U1075	U1010	A946	G885	U820	C756	U692	U626	A560	A499
C1461	C1336	C1273	C1273	U1205	G1139	U1076	C1011	G947	G886	G821	U757	G693	G626	A561	C500
A1462	G1337	A1274	A1274	U1206	C1140	U1077	A1012	C948	G887	U822	C758	A694	G627	U562	C501
C1463	U1338	A1275	A1275	G1207	G1141	U1078	G1013	A949	G888	C823	A759	A696	C628	C563	A502
U1464	A1339	G1276	C1276	C1208	G1142	G1079	A1014	U950	A889	G824	G760	A696	A629	C564	C503
A1465	C1404	C1277	C1277	C1209	G1143	A1080	G1015	G951	G890	A825	G761	U697	C631	U665	C504
C1466	G1405	G1278	G1278	U1210	G1144	A1081	A1016	U952	U891	C826	U762	G698	U632	G566	G505
U1467	U1406	G1279	G1279	U1211	A1145	A1082		G953	A892	U827	G763	C699	U633	G567	C506
C1467	C1407	A1280	A1280	U1212	A1146	U1083	A1019	G954	C993	U828	C764		G633	C507	
A1468	A1408	C1281	C1281	A1213	C1147	G1084	G1020	U955	G894	G829	A765	G704	C634	G568	C507
C1469	C1409	U1282	U1282	G1214	U1148	U1085		U956	G895	G830	A766	A704	A635	C569	U508
U1470	A1410	U1283	U1283	G1215	C1149	U1086	U1023	U957	C996	A831	A767	G705	U636	G570	A509
U1471	C1411	C1284	C1284	A1216	A1150	G1087	G1024	A958	C997	G832	A768	A706	C637	U571	A510
U1472	A1412	U1285	A1285	C1217	A1151	G1088	U1025	A959	G998	G833	G769	U707	U638	A572	C511
C1473	C1413	U1286	U1286	C1218		G1089	G1026	U960	C999	U834	C770	C708		A573	U512
A1474	U1414	A1287	A1287	A1219	G1154	U1090	C1027	U961	A900	U835	G771	U709	A642	A574	C513
G1475	U1351			G1220	A1155	U1091	C1028	C962	A901	G836	U772	G710	C643	G575	C514
A1476	C1352	G1292	G1292	G1221	U1156	A1092	U1029	G963	G902	U837	G773	G711	U644	C576	G515
U1477	G1353	C1293	C1293	G1222	A1157	A1093	U1030	A964	G903	G838		A712	G645	G577	U516
A1478	A1418	U1354	G1294	C1223	C1158	G1094	C1031	U965	U904	C839	G776	G713	G646	C578	G517
C1479	G1419	G1355	U1295	C1224	U1159	U1095	G1032	G966	U905	C840	A777	G714	C647	A579	
A1480	U1420	C1356	C1296	A1225	G1160	C1096	G1033		A906	C841	G778	A715	A648	C580	A520
U1481	G1421	A1357	G1297	C1226	C1161	C1097	G1034	A969	A907	U842	C779	A716	A648	C581	G521
G1482	G1422		U1298	A1227	U1162	U1098	C1037	C970	A908	U843	A780	U717	G653		C522
A1483	C1423	A1360	U1298	C1228	A1163	G1099	U1037	G971	A909	G844	A781	A718	U657	G584	A523
C1484	U1424	G1361	G1300	C1229	A1163	C1100	C1038	C972	C910	A845	A782	G721	U658	G585	G524
U1485	U1425	A1362	U1301	C1230	U1165	A1101	G1039	G973	U911	G846	C783	G722	U659	C586	C525
G1486	G1426	A1363	C1302	G1231	G1166	A1102	U1040	A974	C912	G847	A784	G723	U659	G587	C526
U1487	U1364	U1364	C1303	U1232	A1167	C1103	G1041	A975	A913		G785	G724	C660	G588	G527
G1488	A1428	C1365	G1304	U1233	U1168	C1103		G976	A914	U854	G786	G724	G661		C528
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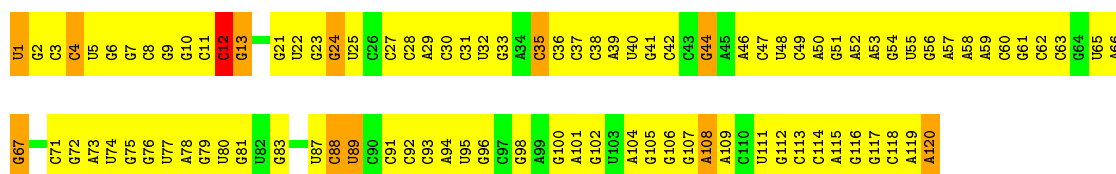


- Molecule 53: 23S ribosomal RNA

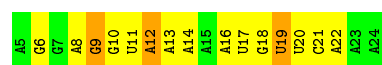


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G1950	G1888	A1821	C1761	U1693	C1565	U1497	A1433	A1366	G1300	U1105	C1044	A979
G1951	G1889	A1822	A1762	C1694	A1566	C1498	A1434	A1367	A1301	A1106	C1045	A980
A1952	A1889	G1823	G1763	G1695	G1567	C1499	G1435	G1368	C1172	G1107	C1046	A981
A1953	A1890	G1824	C1764	G1696	G1568	G1500	G1436	G1369	C1173	A1111	C1047	C982
G1954	A1891	G1825	U1765	G1697	G1569	G1501	G1437	C1370	U1174	G1112	A1048	A983
G1955	C1892	G1826	G1766	A1698	A1570	A1502	A1438	G1371	A1175	U1113	C1049	A984
G1956	C1893	G1827	G1767	G1699	A1571	A1503	A1439	U1372	G1306	G1114	A1050	C985
G1957	C1894	G1828	C1768	A1700	A1572	A1504	U1440	A1373	A1307	G1115	G1051	
C1958	C1895	A1829	U1769	A1701	G1573	A1505	G1441	G1374	A1308	G1116	C1052	A988
G1959	G1896	G1830	G1770	G1702	C1574	U1506	G1442	C1375	C1178	G1117	C1053	A989
A1960	G1897	G1831	C1771	G1703	C1575	C1507	G1443	C1376	U1180	U1119	A1054	A990
C1961	U1898	G1832	A1772	C1704	U1576	A1508	G1444	G1377	U1181	G1120	G1055	A991
C1962	A1899	G1833	A1773	A1705	C1577	A1509	G1445	A1378	U1182	G1121	G1056	C992
G1963	C1900								G1183	C1122	A1057	G993
G1964	A1901	C1837	U1774	C1706	U1578	G1510	G1446	U1379	U1184	U1129	U1058	C994
C1965	C1902	G1838	U1775	G1707	A1579	G1511	C1447		U1185	C1123	C995	C995
A1966	G1903	G1839	G1776	C1708	A1580	C1512	G1448	A1383	G1186	G1124	G1059	A996
C1967	G1904	G1840	U1777	U1709	G1581	U1513	G1449	A1384	G1187	G1125	U1060	G997
G1968	C1905	U1841	U1778	G1710	C1582	G1514	G1450	A1385	U1188	A1126	G1061	C998
A1969	G1906	U1842	U1779	A1711	G1585	A1515	C1451	C1386	U1189	A1127	G1062	U999
U1970	G1907	G1843	U1780	U1712	C1586	G1516	G1452	A1387	G1190	G1128	G1063	
G1971		C1844	U1781		G1587	C1517	A1453	G1388	G1191	U1130	U1065	G1003
G1972		G1845	U1782	G1715	G1588	G1518	C1454	G1389	G1192	G1131	U1066	U1004
G1973		A1846	A1783	U1716	U1589	G1519	G1455	U1390	G1193	U1132	A1067	C1005
C1974	A1911	G1847	A1784	A1717	A1590	U1520			A1194	A1133	G1068	C1006
G1975	A1912	C1848	G1785	G1718	A1591	G1521	C1461	U1394	G1195	A1134	A1069	C1007
U1976	A1913	G1849	U1786	U1720	A1592	A1522	C1462	A1395	C1196	C1135	A1070	A1008
A1977	C1914	G1850	A1787	G1721	A1593	U1523	G1463		G1197	G1136	G1071	A1009
U1978	U1915	U1851	G1788	G1722	A1594	A1524	G1464	C1398	G1198	G1137	C1072	A1010
U1979	U1916	U1852	A1789	A1722	C1595	C1526	U1466	U1400	U1199	G1138	A1073	G1011
U1980	A1917	C1853	C1790		A1596	G1527	U1467	G1401	C1200	G1139	G1074	U1012
A1981	U1918	U1854	G1791	C1728	U1597	U1528	U1468	U1402	U1267	C1140	C1075	C1013
G1982	A1919	A1855	A1792	U1729	A1598	A1529	A1469	A1403	A1268	A1141	C1076	A1014
U1983	C1922	G1857	C1793	C1730	U1599	G1530	U1470	C1404	C1270	A1142	A1077	U1015
G1984	U1923	A1858	A1794	G1731	A1600	C1531	G1471	U1405	G1271	A1143	U1078	U1018
C1985	C1924	U1859	C1795	C1732	G1601	A1532	C1472	U1406	A1341	A1144	C1079	U1019
C1986	C1925	G1860	U1796	G1733	U1602	C1533	C1473	G1407	A1342	C1145	A1080	A1020
A1987	U1926	G1861	U1797	U1736	A1603	U1534	U1474		G1343	C1146	U1081	A1021
G1988	A1927	G1862	G1737	G1737	C1604	A1535	G1475		G1344	A1147	U1082	G1022
G1989	U1928		U1738	G1738	C1605	C1536	U1476	U1411	C1345	U1148	U1083	U1023
U1990	A1929	A1866	A1739	A1739	G1606	G1537	A1477	U1412	G1278	G1212	A1084	G1024
U1991	G1930	G1867	G1740	G1740	C1607	U1542	G1478	A1413	A1213	C1214	A1085	G1025
G1992	U1931	C1868	C1741	C1741	A1608	G1543	G1479		A1214	A1151	A1086	G1026
U1993	A1932	G1869	U1742	U1742	A1609	U1544	C1480		G1215	C1152	G1087	G1027
C1994	C1933	C1870	G1743	G1743	A1610	A1548	U1481	C1416	C1216	G1153	A1088	A1028
U1995	U1934	A1871	A1744	A1744	C1611	A1549	G1482	G1417	U1217	G1154	A1089	A1029
C1996	G1935	G1872	A1745	A1745	G1612	C1550	A1483	A1419	G1218	A1155	A1090	A1030
C1997	A1936	G1873	U1746	U1746	G1613	A1551	U1484	A1420	U1219	A1156	G1091	G1030
A1998	A1937	C1874	U1747	U1747	A1614	A1552	U1485	G1421	G1220	G1157	C1092	G1031
C1999	U1938	G1875	C1748	C1748	C1615	A1552	U1486	G1422		C1158	G1093	A1032
C2000	U1939	A1876			A1616	U1553	U1487	C1423	G1288	U1159	U1094	U1033
C2001	U1940	G1877	C1752	C1752	C1617	G1555	C1488	G1424	C1289	U1160	A1095	G1036
C2002	G2002	C1878	G1753	G1753	A1618	C1556	C1489	G1425	C1357	G1161	A1096	G1037
A2003	U1943	G1879	A1754	A1754	G1619	U1557	A1490	G1426	U1293	G1162	U1097	G1038
G2004	U1944	G1880	G1755	G1755	G1620	U1558	G1491	A1427	U1294			A1039
A2005	G1945	C1881	G1756	G1756	U1621	G1560	G1492	C1428	C1295	A1165	C1100	G1040
C2006	U1946	U1882	A1757	G1757	G1622	C1561	C1493	G1429	G1296	G1166	U1101	C1041
U2007	C1947	U1883	U1758	U1758	G1623	U1562	G1430	C1363	C1297	C1167	C1042	G1042
C2008	G1948	G1884	A1759	A1759		U1563	A1495	A1431	G1364	G1168	A1103	

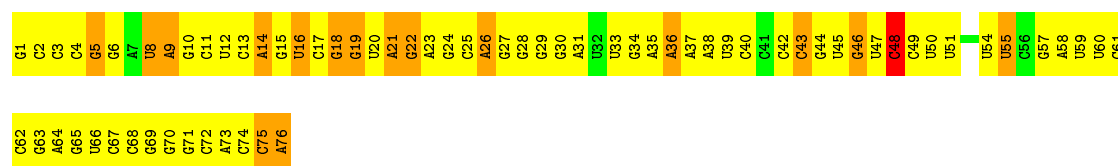
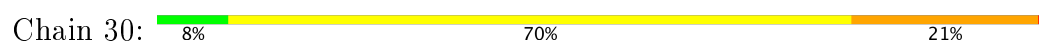




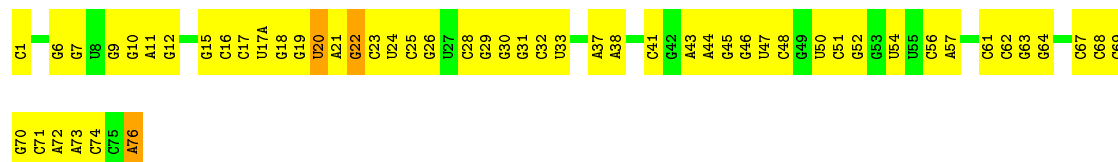
- Molecule 55: mRNA



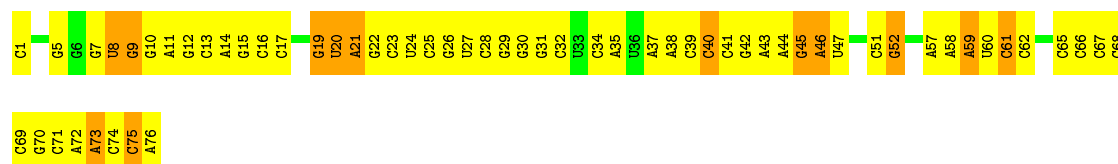
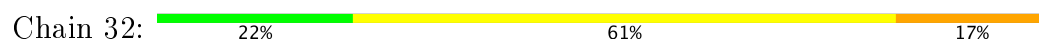
- Molecule 56: A-site tRNA^{Phe}



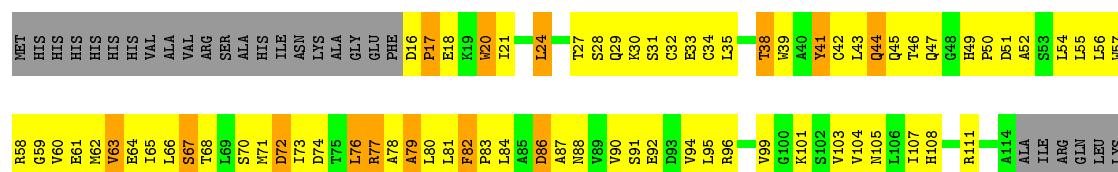
- Molecule 57: P-site tRNA^{Met}

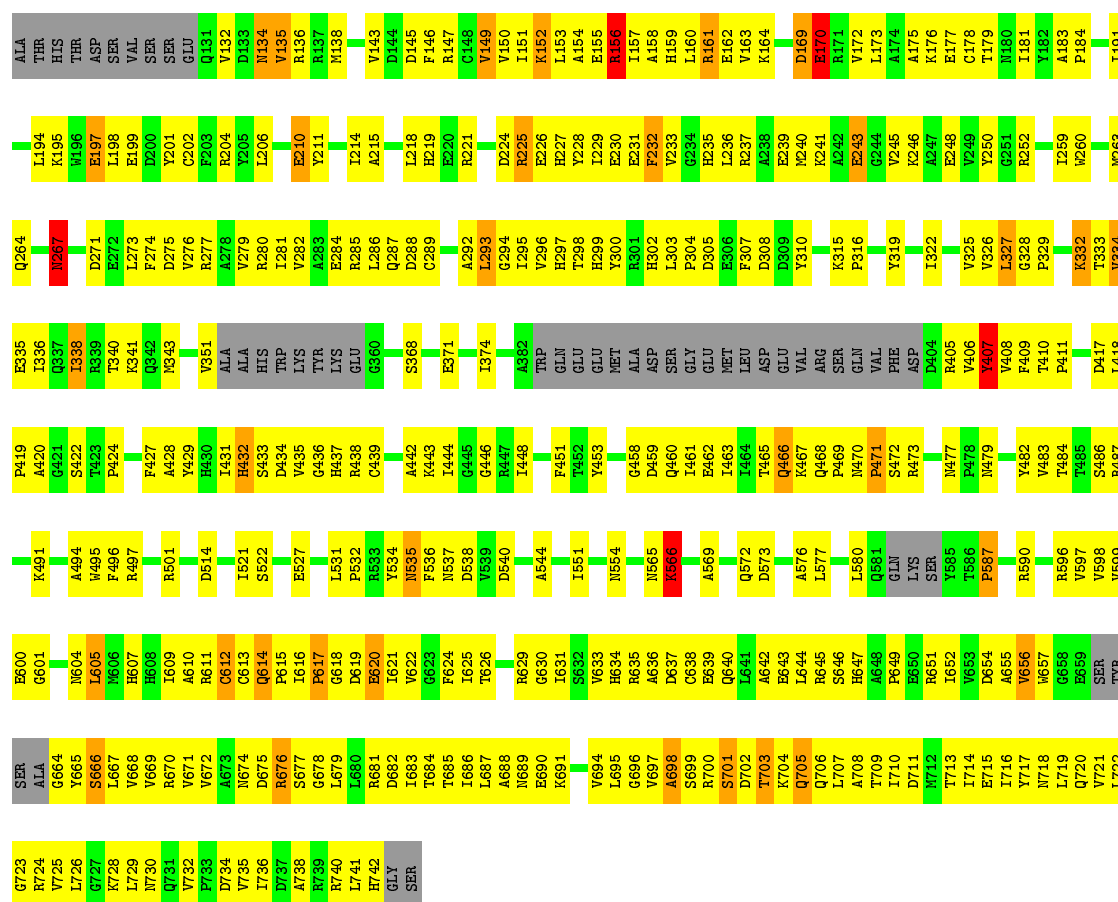


- Molecule 58: E-site tRNA^{Met}



- Molecule 59: GTP pyrophosphokinase





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
10:J:49:ARG:HH22	52:26:1423:G:H5'	1.30	0.94
53:27:742:A:H2'	53:27:743:A:H8	1.26	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
59:33:143:VAL:HG22	59:33:145:ASP:H	1.37	0.86
8:H:123:ALA:HB1	53:27:1081:U:C5'	2.06	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
53:27:2508:G:N1	53:27:2580:U:H5	1.74	0.84
53:27:2514:U:H2'	53:27:2515:C:C6	2.12	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
39:13:98:ARG:HG3	39:13:103:VAL:HG21	1.61	0.83
36:10:86:ARG:HD3	48:22:63:TYR:O	1.78	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
9:I:27:ARG:NH2	53:27:1142:A:H4'	1.94	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

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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
52:26:1052:U:H2'	52:26:1200:C:H41	1.44	0.81
52:26:112:G:H21	52:26:354:G:H5'	1.45	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
42:16:27:PRO:HG2	52:26:363:A:C2	2.17	0.79
52:26:1306:A:N6	52:26:1331:G:H1'	1.97	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
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
1:A:200:MET:HB2	53:27:1820:U:C2	2.16	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
38:12:106:SER:HA	52:26:642:A:N7	1.99	0.78
41:15:109:ILE:H	51:25:4:LYS:NZ	1.82	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
52:26:1352:C:H2'	52:26:1353:G:C8	2.19	0.78
45:19:71:ARG:HH22	52:26:754:C:H5'	1.48	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
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
8:H:9:LYS:HE2	53:27:1061:U:OP1	1.84	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)
49:23:10:ILE:HG22	49:23:38:THR:H	1.49	0.77
43:17:109:LYS:HD2	52:26:1227:A:OP2	1.84	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
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
14:N:13:ARG:HH22	53:27:2335:A:H5'	1.49	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
59:33:65:ILE:HG12	59:33:161:ARG:NH2	2.00	0.76
59:33:99:VAL:HG13	59:33:103:VAL:HB	1.67	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
53:27:20:C:H2'	53:27:21:A:H8	1.51	0.76
53:27:2060:A:H1'	53:27:2502:G:H1'	1.65	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
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
7:G:61:ARG:HD2	53:27:1046:A:O4'	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
53:27:1258: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
53:27:814:C:H1'	53:27:1225:G:H21	1.52	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
52:26:955:U:C1'	52:26:1227:A:H61	2.00	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
53:27:755:U:H2'	53:27:756:A:C8	2.22	0.74
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.68	0.74
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	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
22:V:22:PHE:CD2	53:27:922:C:H1'	2.22	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
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
16:P:55:GLN:HE22	53:27:535:G:H21	1.34	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
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
42:16:114:SER:HB3	52:26:35:G:H21	1.53	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
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
52:26:229:U:H2'	52:26:230:G:C8	2.22	0.73
45:19:53:ARG:HH22	52:26:579:A:H4'	1.54	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
16:P:10:ARG:HH22	53:27:514:A:H5'	1.53	0.73
53:27:825:A:H2'	53:27:826:U:C6	2.24	0.73
39:13:41:GLU:CB	39:13:44:ARG:HH22	1.99	0.73
39:13:16:ALA:HB2	39:13:66:VAL:HG23	1.70	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
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
30:4:4:LYS:NZ	53:27:254:G:N7	2.37	0.73
6:F:134:VAL:HG23	6:F:135:HIS:H	1.53	0.73
6:F:9:VAL:HB	6:F:13:GLY:HA3	1.70	0.73
6:F:93:SER:HB2	6:F:123:ARG:HE	1.52	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
4:D:114:ARG:HH11	43:17:70:ARG:HH11	1.38	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
59:33:20:TRP:HD1	59:33:64:GLU:HA	1.52	0.72
59:33:96:ARG:HE	59:33:104:VAL:HG21	1.52	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
32:6:215:ALA:O	32:6:219:THR:HG23	1.88	0.72
11:K:39:LYS:HG2	53:27:832:U:OP1	1.89	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
53:27:1857:G:H1'	53:27:1885:A:N6	2.04	0.72
52:26:1494:G:H5'	53:27:1913:A:C2	2.24	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
53:27:2432:A:H1'	58:32:75:C:O4'	1.90	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
10:J:49:ARG:HH22	52:26:1423:G:C5'	2.03	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
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
31:5:32:LYS:HE3	53:27:2478:A:H5'	1.70	0.72
53:27:220:G:H22	53:27:427:U:H2'	1.55	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
37:11:2:ARG:HH12	52:26:932:C:N4	1.88	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
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
1:A:207:ALA:HB2	53:27:1790:C:O2'	1.90	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
16:P:19:GLN:HE22	17:Q:73:LYS:HE2	1.55	0.71
4:D:139:GLU:HB3	26:Z:28:VAL:HG22	1.72	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
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
9:I:30:THR:HG21	53:27:1005:C:O2'	1.89	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
16:P:54:ARG:HD3	53:27:1155:A:H5''	1.72	0.71
53:27:1590:A:H2'	53:27:1591:A:C8	2.26	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
24:X:41:HIS:CD2	53:27:96:C:H4'	2.25	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
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
39:13:98:ARG:NH2	52:26:1180:A:OP2	2.24	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
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
35:9:107:GLY:HA3	52:26:9:G:C5'	2.20	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
10:J:98:ARG:HH21	52:26:339:C:H3'	1.56	0.70
1:A:51:ARG:HH22	53:27:1825:U:P	2.13	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
53:27:2704:C:H2'	53:27:2705:A:O4'	1.91	0.69
53:27:2638:G:H1'	53:27:2778:A:H61	1.57	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
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
33:7:102:ILE:HD12	33:7:102:ILE:O	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:7:LYS:HG2	52:26:430:A:OP2	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
52:26:1409:C:H2'	52:26:1410:A:C8	2.27	0.69
42:16:117:GLY:HA2	52:26:35:G:O2'	1.92	0.69
1:A:200:MET:HE3	52:26:773:G:H4'	1.72	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
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
4:D:76:PHE:CE2	53:27:2310:C:H2'	2.26	0.69
16:P:91:ARG:HH22	53:27:998:C:P	2.16	0.69
56:30:14:A:H61	56:30:21:A:H1'	1.56	0.69
15:O:24:THR:HB	15:O:87:ARG:HB2	1.73	0.69
15:O:51:ASN:O	53:27:2845:U:H5''	1.92	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:17:GLU:HA	24:X:20:ASN:HD22	1.58	0.69
24:X:9:LYS:HD2	24:X:10:SER:H	1.57	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
10:J:98:ARG:NH2	52:26:339:C:H3'	2.08	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
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
59:33:666:SER:HA	59:33:715:GLU:HA	1.74	0.68
59:33:714:ILE:HD13	59:33:716:ILE:HB	1.75	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
15:O:52:ARG:NH2	53:27:2720:U:H5"	2.08	0.68
53:27:2884:U:H3'	53:27:2884:U:O2	1.93	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
59:33:622:VAL:HA	59:33:654:ASP:HA	1.75	0.68
29:3:34:ARG:NE	29:3:39:ARG:HD2	2.08	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
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
20:T:6:ARG:N	53:27:85:G:OP1	2.25	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
9:I:80:HIS:CD2	53:27:2642:G:H5'	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:725:VAL:O	59:33:729:LEU:HG	1.94	0.68
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
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
23:W:9:LYS:HE2	53:27:397:U:OP2	1.93	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
10:J:120:PRO:HB2	15:O:65:ASN:ND2	2.09	0.68
14:N:71:ALA:HB2	14:N:102:ARG:HG2	1.76	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
52:26:1472:U:H2'	52:26:1473:G:C8	2.29	0.67
52:26:112:G:H22	52:26:315:A:H2	1.42	0.67
53:27:1788:C:H2'	53:27:1789:A:H8	1.57	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
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
9:I:78:THR:HG22	53:27:2641:G:H5''	1.77	0.67
12:L:59:ARG:NH2	59:33:736:ILE:HB	2.08	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
59:33:701:SER:HA	59:33:708:ALA:HA	1.75	0.67
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	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
59:33:20:TRP:CD1	59:33:63:VAL:HG23	2.30	0.67
59:33:95:LEU:HD13	59:33:107:ILE:HD12	1.77	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
3:C:43:THR:O	53:27:38:A:H1'	1.94	0.67
53:27:872:U:H2'	53:27:873:C:C6	2.30	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
52:26:1349:A:H3'	52:26:1350:A:H8	1.61	0.66
42:16:110:LYS:HG3	52:26:539:A:P	2.35	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)
37:11:80:GLY:HA2	55:29:11:U:O2'	1.94	0.66
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
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
44:18:81:ILE:HG21	52:26:1202:U:C2	2.31	0.66
45:19:88:ARG:HD2	53:27:714:U:C5	2.30	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
34:8:115:GLN:NE2	52:26:406:G:H21	1.94	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
34:8:87: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
41:15:14:GLN:HA	41:15:76:TYR:HA	1.78	0.66
27:1:8:THR:HG23	27:1:11:LYS:N	2.09	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
52:26:555:U:H2'	52:26:556:C:C6	2.30	0.65
42:16:11:ARG:HG3	52:26:562:U:H1'	1.78	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
59:33:325: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
59:33:58:ARG:HD3	59:33:159:HIS:CE1	2.31	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
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
9:I:110:PRO:HB3	53:27:1007:C:O3'	1.95	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
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
5:E:157:LYS:HD2	53:27:2659:G:OP1	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
59:33:35:LEU:HD11	59:33:73:ILE:HA	1.78	0.65
59:33:684:THR:HA	59:33:687:LEU:HD12	1.79	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
1:A:47:ARG:HH21	53:27:774:G:H5''	1.62	0.65
34:8:12:ARG:CD	34:8:37:PRO:HA	2.27	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
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
10:J:30:ARG:HA	53:27:2675:A:H5'	1.80	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
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
35:9:131:ASN:HD21	52:26:18:C:P	2.21	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
10:J:6:THR:HG23	53:27:1666:G:O3'	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2671:G:H2'	53:27:2672:U:C6	2.33	0.64
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
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
41:15:39:ASN:HA	52:26:683:G:H21	1.61	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
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
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
14:N:13:ARG:NH2	53:27:2335:A:H5'	2.12	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
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
12:L:75:GLU:OE2	53:27:957:C:H5'	1.98	0.64
23:W:10:ARG:HG3	23:W:11:PRO:HD2	1.80	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
53:27:1486:U:H2'	53:27:1487:U:H6	1.61	0.64
1:A:237:ARG:HD3	53:27:2591:C:OP1	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:10:LEU:HD13	34:8:62:ARG:HD2	1.79	0.64
4:D:114:ARG:HH11	43:17:70:ARG:HD2	1.62	0.64
10:J:38:ILE:HD12	10:J:38:ILE:N	2.13	0.64
17:Q:68:ARG:HH11	17:Q:90:ARG:HD3	1.62	0.64
17:Q:73:LYS:NZ	17:Q:86:GLN:HE21	1.96	0.64
26:Z:66:ILE:CD1	44:18:41:TRP:HB2	2.27	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
53:27:1341:G:C2	53:27:1398:C:H4'	2.33	0.64
53:27:1357:C:H2'	53:27:1358:G:O4'	1.98	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
43:17:106:ARG:NH1	52:26:1228:C:OP1	2.30	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
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
18:R:93:ALA:HB2	53:27:1614:A:N1	2.14	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
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
26:Z:56:ARG:HH22	49:23:68:HIS:HE1	1.46	0.63
51:25:44:ARG:NH2	52:26:722:G:OP2	2.31	0.63
52:26:1005:A:H2'	52:26:1006:G:O4'	1.98	0.63
35:9:61:LYS:HE3	52:26:1073:U:P	2.38	0.63
52:26:1347:G:O2'	52:26:1373:G:N1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:120:LYS:HE3	52:26:439:U:H5''	1.81	0.63
53:27:1174:U:O2	53:27:1174:U:H2'	1.97	0.63
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
22:V:38:GLY:HA2	53:27:2330:G:H21	1.63	0.63
53:27:680:C:H2'	53:27:681:G:C8	2.32	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	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
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
52:26:1138:G:H3'	52:26:1138:G:N3	2.13	0.63
47:21:68:LYS:HB2	52:26:267:C:OP1	1.99	0.63
42:16:25:ALA:CB	52:26:554:A:H5'	2.27	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
11:K:63:LYS:HZ3	30:4:11:LYS:HE3	1.63	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:72:THR:HB	8:H:111:THR:HG22	1.80	0.62
8:H:1:ALA:HB1	8:H:61:TYR:CE1	2.35	0.62
11:K:23:ILE:HD12	11:K:23:ILE:H	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
41:15:39:ASN:HB2	52:26:684:U:H1'	1.81	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:999:C:H2'	52:26:1000:A:H8	1.65	0.62
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
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
8:H:126:ARG:NH2	53:27:1080:A:H5''	2.11	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
27:1:8:THR:HG21	53:27:2021:C:OP1	1.99	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
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:69:ARG:HE	9:I:89:PHE:HE2	1.47	0.62
9:I:98:GLU:O	9:I:102:GLU:HG3	2.00	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
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.62
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.82	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
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
39:13:125:GLN:HE22	52:26:1342:C:H4'	1.64	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
53:27:1667:G:N2	53:27:1991:U:H3'	2.14	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
53:27:2229:U:H2'	53:27:2230:G:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:G:34:THR:OG1	53:27:1056:G:H5'	1.99	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
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.61
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	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:56:LEU:O	4:D:60:SER:N	2.27	0.61
4:D:3:LEU:HA	4:D:6:TYR:HB3	1.83	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
52:26:82: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
53:27:1147:A:H2'	53:27:1148:U:O4'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:443:A:H1'	53:27:1201:U:O4'	2.00	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
53:27:660:C:H2'	53:27:661:A:H8	1.62	0.61
52:26:359:G:H5''	59:33:451:PHE:CE2	2.36	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
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
52:26:487: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
42:16:42:LYS:NZ	52:26:912:C:OP1	2.34	0.61
52:26:994:A:N7	52:26:1216:A:H4'	2.16	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
17:Q:81:LYS:HD2	53:27:973:A:H5''	1.81	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
20:T:73:ASN:O	20:T:75:ALA:N	2.34	0.61
39:13:125:GLN:HE22	52:26:1342:C:C4'	2.13	0.61
41:15:71:ASP:O	41:15:72:ALA:HB3	2.00	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
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.61
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	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
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
2:B:146:ILE:HD11	53:27:2051:A:H4'	1.83	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
10:J:76:VAL:H	15:O:72:VAL:HG22	1.66	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
41:15:39:ASN:HA	52:26:683:G:N2	2.17	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
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:OP 2	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
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.36	0.60
10:J:105:ARG:CZ	15:O:31:VAL:HG21	2.32	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
48:22:11:ARG:HD3	48:22:47:ARG:NE	2.16	0.60
48:22:17:VAL:HG22	48:22:18:GLN:N	2.11	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
10:J:98:ARG:NH2	52:26:340:U:OP2	2.34	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
16:P:24:TYR:HB3	53:27:533:G:OP1	2.01	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
34:8:9:LYS:NZ	52:26:428:G:H5''	2.17	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
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
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
22:V:56:PHE:CZ	53:27:2365:G:H4'	2.36	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
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
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
8:H:71:LYS:HZ1	53:27:1060:U:H5''	1.66	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
22:V:16:ARG:HE	53:27:2357:G:P	2.25	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
39:13:118:ARG:NH1	52:26:1233:G:H5'	2.18	0.59
27:1:54:ILE:HG23	27:1:56:LYS:N	2.14	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
53:27:832:U:H2'	53:27:833:A:C8	2.37	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
10:J:31:ARG:NH2	53:27:2676:C:OP2	2.34	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
24:X:39:GLN:HA	53:27:95:A:O2'	2.01	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
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
3:C:63:LYS:HE2	53:27:2060:A:OP2	2.02	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
14:N:100:HIS:CD2	54:28:48:U:H4'	2.37	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
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
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
14:N:111:ARG:NH1	53:27:2376:A:N3	2.50	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
34:8:8:LEU:HB3	52:26:430:A:OP1	2.02	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
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: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
1:A:91:ALA:HB3	1:A:103:ILE:CD1	2.32	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
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
14:N:15:ARG:NH1	54:28:9:G:OP2	2.35	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
59:33:74:ASP:OD1	59:33:103:VAL:HG22	2.02	0.58
59:33:613:CYS:HG	59:33:634:HIS:CE1	2.20	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
9:I:132:HIS:ND1	53:27:6:A:O2'	2.36	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
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
3:C:159:LEU:O	53:27:321:U:H4'	2.03	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
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
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
11:K:89:VAL:HA	11:K:121:THR:HB	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:34:LYS:HE3	12:L:131:VAL:HG11	1.85	0.58
18:R:61:ASN:OD1	53:27:496:G:H1'	2.03	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
53:27:693:A:H2'	53:27:694:U:C6	2.38	0.58
53:27:894:U:H5'	59:33:643:GLU:OE2	2.03	0.58
53:27:94:A:H2'	53:27:95:A:C8	2.38	0.58
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.68	0.58
59:33:49:HIS:HB3	59:33:50:PRO:CD	2.28	0.58
59:33:86:ASP:OD1	59:33:111:ARG:HD2	2.04	0.58
33:7:176:THR:O	33:7:179:ALA:HB3	2.04	0.58
2:B:146:ILE:CD1	53:27:2051:A:H4'	2.33	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
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
13:M:49:GLU:OE1	53:27:2839:G:H4'	2.03	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
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.58
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	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
36:10:47:LEU:HB2	48:22:65:SER:OG	2.04	0.58
46:20:69:ASP:OD1	46:20:70:ARG:N	2.37	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
11:K:76:GLU:OE1	53:27:636:G:N1	2.36	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
34:8:24:VAL:C	34:8:26:ALA:H	2.07	0.58
34:8:200:VAL:HG11	35:9:102:THR:HG22	1.85	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
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
41:15:108:ASN:HA	51:25:4:LYS:NZ	2.18	0.57
42:16:43:LYS:NZ	42:16:44:PRO:HD3	2.19	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
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
34:8:16:THR:HG22	34:8:17:ASP:N	2.18	0.57
6:F:24:GLY:HA3	53:27:2092:U:H4'	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
13:M:100:CYS:O	27:1:41:HIS:HD2	1.86	0.57
16:P:49:ARG:NH2	17:Q:74:ILE:HD12	2.19	0.57
21:U:37:PRO:HG2	54:28:73:A:C2	2.38	0.57
23:W:2:ARG:HD2	23:W:29:LEU:HD22	1.86	0.57
4:D:97:GLU:HG2	26:Z:25:ARG:HB2	1.86	0.57
49:23:54:ARG:HD3	52:26:958:A:C4	2.40	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
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
39:13:118:ARG:NH2	52:26:1234:C:OP1	2.34	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
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
53:27:873:C:OP1	59:33:704:LYS:HE2	2.05	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
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
59:33:267:ASN:N	59:33:267:ASN:HD22	2.02	0.57
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	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
37:11:136:LYS:O	37:11:140:VAL:HG23	2.03	0.57
36:10:9:MET:HE1	48:22:64:LEU:HD22	1.85	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
24:X:48:ARG:NH2	53:27:75:G:H4'	2.19	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
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
3:C:29:HIS:CE1	11:K:8:PRO:HD3	2.39	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
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
41:15:125:LYS:HD2	52:26:797:C:OP1	2.03	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
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
23:W:18:SER:HB2	53:27:2080:A:H4'	1.85	0.57
53:27:234:U:H2'	53:27:235:U:C6	2.40	0.57
53:27:2074:U:H1'	53:27:2598:A:N3	2.20	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
59:33:228:TYR:HB2	59:33:277:ARG:HH21	1.69	0.57
59:33:229:ILE:HG22	59:33:277:ARG:HG3	1.87	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
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)
53:27:1998:A:H2'	53:27:1999:C:C6	2.40	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
11:K:111:ILE:HD11	53:27:636:G:C2	2.39	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
19:S:2:ILE:HG12	53:27:144:A:H5''	1.87	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
33:7:175:HIS:ND1	52:26:1108:G:H5'	2.20	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
53:27:729:G:H2'	53:27:1775:U:H1'	1.86	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
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
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
53:27:1165:A:H2'	53:27:1166:G:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
53:27:990:A:H1'	53:27:1156:A:N3	2.20	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
1:A:254:LYS:O	53:27:1797:G:H4'	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
28:2:22:THR:HG23	53:27:2286:G:O6	2.05	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:49:U:O2'	52:26:50:A:H2'	2.05	0.56
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
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
38:12:121:GLY:C	52:26:599:C:H4'	2.26	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
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
50:24:55:PRO:HB3	52:26:193:C:H4'	1.87	0.56
52:26:257:G:H2'	52:26:258:G:H8	1.69	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:40:LYS:HZ1	19:S:59:ASN:CA	2.18	0.56
19:S:4:GLU:HA	19:S:7:LEU:HD12	1.86	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
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.56
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	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
39:13:14:SER:HB2	39:13:69:GLY:HA3	1.86	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
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:26:PHE:HE1	21:U:89:ILE:HG13	1.70	0.56
21:U:9:ARG:HH12	21:U:12:GLN:CB	2.19	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
39:13:10:ARG:O	39:13:10:ARG:HG3	2.06	0.56
27:1:27:LEU:HD21	27:1:36:LYS:HB3	1.88	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
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
45:19:88:ARG:NE	53:27:714:U:OP2	2.39	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
52:26:106:C:O2	52:26:379:C:H4'	2.05	0.56
52:26:1457:G:O2'	52:26:1458:G:H5'	2.06	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
53:27:220:G:N2	53:27:427:U:H2'	2.20	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
53:27:520: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
28:2:36:LYS:HD3	53:27:2344:U:OP1	2.05	0.55
52:26:927:G:H4'	52:26:1503:A:N7	2.21	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
53:27:1410:G:H2'	53:27:1411:U:C6	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1451:C:H4'	53:27:1452:G:C8	2.41	0.55
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
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
44:18:20: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
44:18:1:ALA:HB1	52:26:1049:U:C5	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
34:8:9:LYS:HZ3	52:26:428:G:H5"	1.69	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
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:7:TYR:CE1	8:H:59:THR:HA	2.41	0.55
8:H:78:LEU:CD1	8:H:108:ILE:HG23	2.35	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
53:27:2043:C:H1'	53:27:2779:U:O4	2.06	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
53:27:2807: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
35:9:107:GLY:HA3	52:26:9:G:C4'	2.37	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
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
45:19:9:LYS:O	45:19:12:SER:HB2	2.07	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
46:20:25:ARG:NH2	52:26:230:G:H4'	2.20	0.55
52:26:440:C:H2'	52:26:441:A:C4'	2.37	0.55
42:16:110:LYS:HG3	52:26:539:A:OP1	2.06	0.55
53:27:1472:C:H2'	53:27:1473:G:C8	2.41	0.55
53:27:1790:C:H3'	53:27:1828:G:N2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:8:25:ARG:HB2	52:26:410:G:OP2	2.07	0.55
35:9:76:ASN:HB2	35:9:81:GLN:OE1	2.07	0.55
1:A:180:MET:CB	1:A:267:VAL:HB	2.35	0.55
1:A:220:ARG:HH21	53:27:1827:U:P	2.29	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
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
40:14:59:LYS:HD2	52:26:972:C:O3'	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
53:27:2075:U:H1'	53:27:2597:G:H21	1.69	0.55
53:27:2152:G:H2'	53:27:2153:C:C6	2.41	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
34:8:21:LYS:CE	34:8:25:ARG:HE	2.20	0.55
34:8:201:GLU:HG2	35:9:104:ILE:O	2.05	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
10:J:30:ARG:HB2	53:27:2674:G:O2'	2.07	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
10:J:22:ILE:HB	53:27:1952:A:C2	2.42	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
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
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
52:26:382:A:O2'	52:26:383:A:H5'	2.07	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
21:U:14:LYS:NZ	54:28:98:G:N2	2.54	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

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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:40:GLY:HA2	4:D:84:ILE:HD11	1.89	0.55
4:D:64:PRO:HA	4:D:88:VAL:HG22	1.88	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
53:27:2102:G:N2	53:27:2188:U:H1'	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2111:U:H2'	53:27:2113:U:OP2	2.07	0.55
53:27:2170:A:H2'	53:27:2171:A:H4'	1.88	0.55
53:27:2626:C:H2'	53:27:2627:G:O4'	2.07	0.55
3:C:44:ARG:HD2	53:27:444:C:P	2.47	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
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
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
42:16:83:GLY:N	52:26:552:U:H4'	2.21	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
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
3:C:97:ASN:CG	53:27:606:U:H5''	2.28	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
40:14:67:ILE:HG22	44:18:95:LEU:CA	2.37	0.54
43:17:16:ILE:HG12	52:26:1302:C:C5	2.42	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
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
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
12:L:59:ARG:HH22	59:33:736:ILE:HB	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:12:ARG:O	34:8:37:PRO:HG3	2.08	0.54
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
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
53:27:917:A:H5''	53:27:2268:A:H61	1.71	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
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
39:13:83:THR:HG21	39:13:102:PHE:CB	2.36	0.54
39:13:51:LEU:CB	39:13:56:MET:HB2	2.37	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
53:27:818:G:H2'	53:27:1187:G:H22	1.71	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
53:27:974: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
1:A:207:ALA:HB1	53:27:1790:C:H4'	1.88	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
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
2:B:25:THR:HG21	2:B:193:VAL:CG2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
21:U:14:LYS:HE2	54:28:98:G:C2	2.43	0.54
39:13:129:ARG:HH21	57:31:33:U:H3'	1.71	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
41:15:40:ALA:HB3	52:26:684:U:O2	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
53:27:1654:A:C1'	53:27:2823:A:H5'	2.38	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
53:27:936:A:H2'	53:27:937:C:C6	2.43	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
14:N:68:LYS:HE3	54:28:49:C:O3'	2.08	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
8:H:44:LYS:HG2	8:H:68:PHE:HE1	1.72	0.54
11:K:82:LEU:HD11	11:K:90:VAL:CG2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:D:105:ILE:HB	26:Z:34:LEU:HD21	1.90	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
1:A:269:ARG:NH2	53:27:1798:U:P	2.81	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
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
45:19:71:ARG:HH22	52:26:754:C:C5'	2.18	0.53
46:20:25:ARG:HH22	52:26:230:G:H4'	1.72	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
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
16:P:58:GLN:HE21	53:27:1009:A:C5'	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1442:U:H2'	53:27:1443:U:C6	2.43	0.53
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
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
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
10:J:98:ARG:HH22	52:26:340:U:P	2.31	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)
52:26:1414:U:H2'	52:26:1415:G:H8	1.72	0.53
50:24:54:GLN:HE21	52:26:193:C:H1'	1.73	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
53:27:13:A:N1	53:27:525:U:H2'	2.24	0.53
53:27:2453:A:H2'	53:27:2454:G:C8	2.33	0.53
53:27:1758:U:C5	53:27:2696:U:H5'	2.43	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
21:U:87:GLN:NE2	54:28:77:U:H4'	2.23	0.53
57:31:23:C:H2'	57:31:24:U:C6	2.43	0.53
59:33:96:ARG:CG	59:33:104:VAL:HG21	2.38	0.53
59:33:286:LEU:HD21	59:33:343:MET:HE3	1.89	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
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
44:18:100:TRP:HZ2	52:26:1368:A:H5''	1.74	0.53
51:25:66:ARG:CG	52:26:1099:G:H5'	2.38	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
53:27:2368:C:H2'	53:27:2369:A:H8	1.73	0.53
53:27:2345:G:N3	53:27:2381:A:H2'	2.24	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:HA	39:13:64:ILE:HG13	1.91	0.53
39:13:29:ILE:O	39:13:30:ASN:HB2	2.09	0.53
40:14:7:ARG:NH2	52:26:1126:U:OP1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:113:ARG:HG2	42:16:118:VAL:HB	1.90	0.53
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
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
4:D:97:GLU:CG	26:Z:25:ARG:HB2	2.39	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
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
53:27:655:A:H1'	53:27:656:G:C8	2.43	0.53
53:27:745:G:O2'	53:27:748:G:H1'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
23:W:57:VAL:HG22	53:27:372:G:H5'	1.91	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
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
22:V:16:ARG:HD3	53:27:2271:G:H5'	1.90	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
53:27:893:C:O2'	59:33:643:GLU:CD	2.47	0.53
58:32:21:A:H62	58:32:47:U:C5'	2.22	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
34:8:80:ARG:HH21	52:26:613:C:P	2.32	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
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
53:27:2464: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
53:27:379:G:O4'	53:27:2232: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
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
38:12:106:SER:HA	52:26:642:A:C5	2.42	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
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
23:W:9:LYS:CE	53:27:397:U:OP2	2.56	0.53
36:10:30:THR:HA	36:10:34:GLY:H	1.74	0.52
27:1:18:HIS:CD2	53:27:2046:G:H1'	2.44	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
46:20:60: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
46:20:46:LYS:HD2	52:26:617:G:H5'	1.92	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
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
53:27:228:C:N4	53:27:417:C:H1'	2.24	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
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
39:13:49:GLN:N	39:13:50:PRO:HD2	2.24	0.52
39:13:115:VAL:HG21	40:14:62:ARG:HB2	1.91	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
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
2:B:118:PHE:HB2	53:27:2823:A:OP1	2.08	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:129:THR:HG22	53:27:1997:C:P	2.49	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
1:A:17:LYS:CE	53:27:1565:C:H5'	2.39	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
53:27:2897:U:H2'	53:27:2898:U:C6	2.44	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:HB3	59:33:260:TRP:CZ3	2.43	0.52
59:33:227:HIS:O	59:33:231:GLU:HG3	2.09	0.52
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	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
5:E:91:VAL:HG22	5:E:92:GLY:N	2.24	0.52
9:I:113:PRO:HD2	53:27:558:U:OP1	2.10	0.52
9:I:80:HIS:CG	53:27:2642:G:H5'	2.45	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
37:11:2:ARG:NH1	52:26:932:C:C5	2.77	0.52
38:12:42:GLU:HG2	38:12:100:ILE:HD13	1.91	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
39:13:108:ARG:HB3	52:26:1347:G:H8	1.75	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
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:130:PRO:HA	1:A:188:ARG:HA	1.92	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
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
53:27:2331:G:H2'	53:27:2332:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:V:38:GLY:CA	53:27:2330:G:H21	2.22	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
53:27:1372:U:H1'	53:27:2214:C:O2	2.09	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
53:27:2308: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
14:N:40:ILE:HD13	54:28:8:C:O2'	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:19:GLY:C	12:L:20:LEU:HD12	2.29	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
40:14:47:GLU:HG3	52:26:1254:A:OP1	2.09	0.52
40:14:67:ILE:HG23	44:18:95:LEU:HD13	1.90	0.52
40:14:88:MET:O	40:14:89:ARG:HB2	2.10	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
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
35:9:68:ARG:HH22	52:26:1075:U:P	2.32	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2391:G:H2'	53:27:2424:C:N4	2.24	0.52
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
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
59:33:444:ILE:HG22	59:33:461:ILE:HG23	1.91	0.52
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	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
3:C:134:LEU:HD13	3:C:157:LEU:CD1	2.39	0.52
3:C:35:TYR:CE1	53:27:615:U:H2'	2.44	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
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:C6	53:27:829:A:N7	2.78	0.52
53:27:828:U:H2'	53:27:829:A:C8	2.44	0.52
53:27:935:C:H2'	53:27:936:A:C8	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:3:VAL:CG2	53:27:2751:G:H4'	2.40	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
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
37:11:2:ARG:HD3	52:26:1380:U:C4	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
53:27:2846: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
53:27:247:G:H4'	53:27:386:G:C4	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
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:48:LEU:HA	4:D:51:ASN:ND2	2.17	0.51
4:D:41:GLU:HB2	4:D:48:LEU:HD23	1.91	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
16:P:51:GLN:HE22	53:27:560:C:C4'	2.23	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
37:11:77:ARG:NH2	37:11:151:ALA:O	2.44	0.51
37:11:21:LEU:C	37:11:21:LEU:HD23	2.31	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
32:6:8:MET:CE	32:6:10:LYS:HG2	2.41	0.51
32:6:89:PHE:HB3	32:6:150:ILE:HA	1.92	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:12:THR:HG21	15:O:4:ILE:HG23	1.91	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
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
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:29:ASP:C	7:G:81:LEU:HD23	2.30	0.51
7:G:5:LEU:O	7:G:8:LYS:HB2	2.10	0.51
11:K:110:VAL:O	11:K:111:ILE:HB	2.10	0.51
14:N:68:LYS:HG3	54:28:50:A:OP1	2.11	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
2:B:188:LEU:HD11	15:O:7:LEU:HD11	1.92	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: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
10:J:64:ARG:NE	15:O:67:GLU:OE1	2.43	0.51
15:O:13:LYS:HB2	15:O:76:HIS:ND1	2.25	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
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	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
59:33:95: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
11:K:64:PHE:HZ	30:4:14:LYS:HG2	1.75	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
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
39:13:48:ARG:HB3	39:13:52:GLU:OE2	2.10	0.51
39:13:30:ASN:HD21	39:13:65:THR:HA	1.76	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
53:27:2126:A:H1'	53:27:2173:A:N6	2.26	0.51
53:27:2475:C:H42	53:27:2529:G:H22	1.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:528:A:C2	53:27:2042:A:C4	2.99	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
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	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
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
27:1:3:GLN:HA	53:27:2615:U:C2	2.46	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
50:24:54:GLN:NE2	52:26:193:C:H1'	2.25	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
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
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
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
30:4:41:ARG:HD3	53:27:2349:G:OP2	2.11	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
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
10:J:76:VAL:H	15:O:72:VAL:CG2	2.24	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
37:11:64:ALA:HB1	37:11:126:ALA:HB3	1.92	0.50
37:11:56:SER:HB3	37:11:59:GLU:HG2	1.92	0.50
18:R:23:LEU:HD11	27:1:21:LEU:HG	1.94	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
53:27:22:C:C2'	53:27:23:G:H5''	2.40	0.50
53:27:227:A:N1	53:27:2407:A:H1'	2.25	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
31:5:3:VAL:HG21	53:27:2539:C:H5'	1.93	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
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
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
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	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
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
11:K:48:ARG:HD3	53:27:666:A:H4'	1.93	0.50
21:U:9:ARG:HD3	21:U:39:ALA:HB1	1.94	0.50
21:U:53:LYS:HB3	21:U:55:GLU:OE1	2.11	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:156:SER:HB3	1:A:159:THR:OG1	2.12	0.50
1:A:132:ARG:HB3	1:A:185:ALA:HB1	1.93	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
38:12:47:ASP:OD1	38:12:48:PHE:N	2.44	0.50
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.27	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
42:16:25:ALA:O	52:26:553:A:O2'	2.30	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
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
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	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
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
7:G:55:VAL:HG12	53:27:1084:A:H5''	1.94	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
11:K:19:LEU:HD22	53:27:587:C:O2'	2.12	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
21:U:14:LYS:HE2	54:28:98:G:N1	2.27	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: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
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
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
46:20:31:ARG:NH1	52:26:310:G:O3'	2.45	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
44:18:71:GLY:HA2	52:26:975:A:O2'	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
8:H:130:GLY:C	53:27:1088:A:H61	2.15	0.49
53:27:1804:C:H2'	53:27:1805:A:C8	2.47	0.49
53:27:530:G:N9	53:27:2035:G:H4'	2.28	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
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

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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
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
43:17:108:ARG:HD3	52:26:1307:U:O3'	2.11	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
26:Z:56:ARG:HG3	49:23:64:GLU:HA	1.93	0.49
50:24:50:PHE:HD1	50:24:78:LEU:HD23	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:24:81:GLN:O	50:24:84:LYS:HB3	2.12	0.49
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
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
53:27:80:G:O5'	53:27:346:A:H1'	2.13	0.49
53:27:728:G:O2'	53:27:730:A:H8	1.89	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
59:33:304: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
59:33:20:TRP:HZ2	59:33:76:LEU:HG	1.77	0.49
59:33:86:ASP:OD1	59:33:111:ARG:CD	2.61	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:41:LEU:HB3	53:27:1082:U:O3'	2.12	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
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
41:15:120:CYS:HB3	52:26:777:A:H2	1.78	0.49
44:18:9:GLU:O	44:18:13:VAL:HG23	2.13	0.49
44:18:89:ARG:CZ	44:18:89:ARG:HB2	2.43	0.49
47:21:68:LYS:HD3	52:26:267:C:OP2	2.12	0.49
44:18:48:GLN:HG2	49:23:11:ASP:CG	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:1511:G:H2'	52:26:1512:U:C6	2.47	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
1:A:231:HIS:ND1	53:27:1826:G:OP1	2.39	0.49
53:27:1786:A:H1'	53:27:1938:A:N6	2.27	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
12:L:6:ARG:HD2	53:27:870:U:OP1	2.13	0.49
54:28:119:A:H2'	54:28:120:A:H5''	1.94	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:72:SER:OG	57:31:56:C:H1'	2.13	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
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
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
40:14:53:ILE:HG23	52:26:1060:U:H4'	1.94	0.49
52:26:1147:C:H2'	52:26:1148:U:C6	2.47	0.49
39:13:17:ARG:CD	52:26:1147:C:O2'	2.58	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
13:M:31:HIS:CD2	53:27:1279:G:H4'	2.48	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
53:27:1297:C:OP1	53:27:2710:C:H4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:2:ARG:HD2	53:27:2751:G:O4'	2.13	0.49
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
53:27:513:A:H2'	53:27:514:A:H8	1.76	0.49
16:P:10:ARG:CZ	53:27:513:A:O2'	2.61	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
58:32:22:G:H8	58:32:46:A:H61	1.59	0.49
58:32:29:G:H2'	58:32:30:G:O4'	2.12	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:122:GLU:HA	3:C:190:ALA:CB	2.43	0.49
3:C:31:VAL:HG21	3:C:104:ALA:HB3	1.94	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
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
38:12:80:PRO:HG2	52:26:878:A:H5''	1.95	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
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
13:M:46:ARG:HG2	53:27:2838:G:O3'	2.13	0.49
3:C:55:SER:N	53:27:469:G:OP1	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
28:2:10:LEU:HD23	28:2:50:GLU:HA	1.93	0.49
49:23:38:THR:HA	49:23:69:LYS:HA	1.94	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
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
53:27:2715:C:H2'	53:27:2716:C:H5''	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:8:12:ARG:NH2	52:26:429:U:OP2	2.46	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
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
51:25:48:LYS:HZ2	52:26:723:U:H3'	1.78	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
53:27:1923:U:H5''	57:31:24:U:O2'	2.12	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
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
31:5:23:ILE:CD1	53:27:1032:A:H1'	2.42	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
41:15:117:HIS:HB3	52:26:718:A:C8	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1515:G:H2'	52:26:1516:G:C8	2.48	0.48
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
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
59:33:51:ASP:HB2	59:33:164:LYS:HD2	1.96	0.48
59:33:243:GLU:OE1	59:33:295:ILE:HG21	2.14	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
53:27:2259:U:C4	53:27:2427:C:N4	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2398:U:H2'	53:27:2399:G:H8	1.78	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
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
13:M:64:ARG:NH2	53:27:2851:A:O3'	2.47	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
1:A:177:SER:HB3	53:27:1799:G:O6	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:81:GLU:HG2	33:7:85:LYS:HE3	1.96	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
49:23:54:ARG:HB3	52:26:958:A:C2	2.48	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
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
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
46:20:70:ARG:HD3	52:26:452:A:H8	1.77	0.48
52:26:1203:C:H2'	52:26:1204:A:H8	1.79	0.48
49:23:79:TYR:CE1	52:26:1226:C:H5'	2.49	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
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
27:1:11:LYS:NZ	53:27:2616:C:H5''	2.29	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
41:15:55: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
41:15:21:HIS:CD2	52:26:707:U:H5''	2.49	0.48
53:27:1219:U:H2'	53:27:1220:G:C8	2.49	0.48
53:27:1343:G:H1'	53:27:1597:A:H2'	1.96	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
53:27:1930: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
14:N:17:LYS:HZ1	53:27:2380:C:H5''	1.78	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
53:27:990:A:H1'	53:27:1156:A:C2	2.49	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
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
53:27:1672:A:H5''	53:27:2554:U:OP1	2.14	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
53:27:569:U:H5'	53:27:946:C:H1'	1.96	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
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
19:S:75:GLY:HA3	53:27:64:A:O3'	2.13	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
29:3:35:ARG:NH1	53:27:53:A:C2	2.81	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
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
7:G:65:GLU:OE1	53:27:1046:A:C4	2.68	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
53:27:1266:G:N2	53:27:2012:G:C4	2.81	0.47
2:B:154:LYS:NZ	53:27:2024:G:O2'	2.47	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
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
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
3:C:9:GLN:O	3:C:11:ALA:N	2.43	0.47
4:D:65:LEU:HD22	54:28:42:C:C5	2.48	0.47
7:G:100:ALA:O	7:G:103:ASN:HB3	2.14	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
27:1:9:ARG:HA	27:1:12:ARG:HG2	1.95	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
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
53:27:1509: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
53:27:811:U:O2'	53:27:1250:G:H2'	2.13	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:94:PHE:HB2	20:T:100:GLU:O	2.14	0.47
20:T:39:ASN:HB2	20:T:62:ALA:O	2.13	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
52:26:1424: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
52:26:123:U:OP1	52:26:312:C:H5'	2.13	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
53:27:2461:A:H1'	53:27:2492:U:N3	2.29	0.47
53:27:2516:A:O2'	53:27:2517:C:H5'	2.14	0.47
53:27:2516:A:H2'	53:27:2517:C:C6	2.50	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
53:27:586:A:H2	53:27:809:G:N3	2.13	0.47
53:27:668:A:H2'	53:27:670:A:H62	1.79	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
1:A:260:LYS:O	53:27:2227:A:H4'	2.15	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
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
21:U:14:LYS:HB2	54:28:98:G:H1	1.78	0.47
59:33:101:LYS:HE3	59:33:105:ASN:ND2	2.25	0.47
59:33:101:LYS:C	59:33:104:VAL:HG12	2.34	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:241:LYS:O	53:27:1902:C:H4'	2.15	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:64:VAL:HG12	21:U:65:VAL:N	2.28	0.47
21:U:9:ARG:HH12	21:U:12:GLN:HB3	1.78	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
43:17:98:GLY:HA3	52:26:1322:C:H5''	1.97	0.47
40:14:53:ILE:HG13	44:18:84:ARG:NE	2.29	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
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
34:8:167:PRO:HB3	34:8:169:TRP:CZ2	2.50	0.47
34:8:94:GLU:OE2	34:8:103:ARG:HG3	2.14	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:15:TRP:CG	9:I:135:GLN:HB3	2.50	0.47
9:I:136:GLN:NE2	53:27:2899:A:H5'	2.30	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
18:R:17:VAL:HA	18:R:43:ALA:HB1	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:10:ARG:HG3	23:W:11:PRO:CD	2.44	0.47
23:W:18:SER:CB	53:27:2080:A:H4'	2.45	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:60:TRP:HZ2	3:C:69:ARG:HA	1.80	0.47
3:C:45:ALA:HA	3:C:87:ALA:O	2.14	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
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
50:24:4:LYS:HZ1	52:26:331:G:C2'	2.28	0.47
37:11:2:ARG:HA	52:26:1380:U:C4	2.49	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
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
8:H:94:LYS:NZ	53:27:1077:A:H5'	2.29	0.47
8:H:127:SER:HA	53:27:1080:A:H1'	1.97	0.47
9:I:104:ALA:HA	53:27:1139:G:OP1	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:813:U:H2'	53:27:814:C:H6	1.78	0.47
53:27:991:C:H5'	53:27:1185:G:H2'	1.97	0.47
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
11:K:62:PRO:CB	30:4:29:ARG:HH11	2.28	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: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
11:K:23:ILE:HB	17:Q:84:ARG:HH11	1.80	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
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
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
53:27:1424:G:H2'	53:27:1425:G:C8	2.50	0.47
31:5:1:MET:N	53:27:2526:G:H21	2.12	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
59:33:43:LEU:HG	59:33:44:GLN:NE2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:3:7:PRO:HG2	53:27:1309:G:H4'	1.97	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
35:9:155:LYS:HG2	38:12:65:PHE:CG	2.50	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
52:26:991:U:C4	52:26:1212:U:H4'	2.50	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
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
17:Q:83:TYR:CE1	53:27:1187:G:H5''	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
30:4:49:VAL:HG11	30:4:57:VAL:CG2	2.44	0.47
30:4:3:ILE:HG22	30:4:4:LYS:O	2.15	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)
16:P:2:ARG:HD2	53:27:1248:G:C4	2.50	0.47
17:Q:14:VAL:HG23	17:Q:18:GLN:HG2	1.96	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
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
44:18:99:SER:OG	52:26:1114:C:HI'	2.15	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
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
13:M:36:THR:HA	53:27:1278:C:OP1	2.15	0.46
53:27:130:C:H2'	53:27:131:A:O4'	2.15	0.46
53:27:121:G:C2	53:27:131:A:C4	3.03	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
32:6:185:ILE:HA	32:6:199:ILE:HB	1.96	0.46
32:6:20:ARG:NH1	52:26:831:A:H5'	2.30	0.46
32:6:9:LEU:HA	32:6:14:HIS:NE2	2.29	0.46
34:8:98:ASP:O	34:8:101:VAL:HB	2.14	0.46
2:B:116:LYS:HA	13:M:1:MET:SD	2.55	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: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
7:G:97:LYS:O	7:G:100:ALA:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:118:ARG:C	13:M:120:GLU:N	2.64	0.46
16:P:111:LYS:HD3	17:Q:48:LYS:HE2	1.95	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
17:Q:90:ARG:NE	53:27:1223:G:OP2	2.47	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
21:U:87:GLN:HE21	54:28:77:U:C5'	2.28	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:65:ASN:HB2	16:P:75:TYR:HB2	1.97	0.46
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
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
41:15:40:ALA:CB	52:26:684:U:O2	2.62	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
42:16:109:ARG:HA	52:26:538:G:OP1	2.15	0.46
53:27:1069:A:H5'	53:27:1070:A:C8	2.50	0.46
8:H:91:LYS:HZ3	53:27:1075:C:C2'	2.28	0.46
7:G:81:LEU:HB2	53:27:1107:G:H4'	1.96	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
2:B:196:ALA:HB1	53:27:2820:A:C4	2.50	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
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
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
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
40:14:53:ILE:HG12	52:26:1060:U:H5''	1.97	0.46
33:7:176:THR:HG23	52:26:1111:A:H2	1.80	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
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
53:27:1638:C:H5"	53:27:2710:C:H1'	1.98	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
53:27:2521:C:O2'	53:27:2522:U:H5'	2.16	0.46
53:27:2475:C:N4	53:27:2529:G:H22	2.13	0.46
53:27:422:A:H3'	53:27:423:A:H8	1.81	0.46
59:33:407:TYR:O	59:33:458:GLY:HA2	2.15	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	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: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
1:A:91:ALA:HB3	1:A:103:ILE:HD12	1.96	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
52:26:402:G:H4'	52:26:620:C:O2	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
52:26:759: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
1:A:262:THR:HB	53:27:1800:C:OP2	2.15	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
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:27:LEU:HD22	53:27:600:G:H4'	1.98	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
4:D:19:PHE:O	4:D:21:TYR:N	2.49	0.46
9:I:80:HIS:O	9:I:81:ILE:C	2.54	0.46
9:I:69:ARG:HA	9:I:89:PHE:CD2	2.51	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
52:26:1454:G:H2'	52:26:1455:G:H8	1.79	0.46
34:8:119:HIS:CG	52:26:438:U:H4'	2.51	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
52:26:971:G:C5	52:26:1365:G:H5'	2.51	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
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:63:VAL:HG21	19:S:80:TRP:CH2	2.51	0.46
19:S:31:VAL:HG12	19:S:84:TYR:HA	1.98	0.46
23:W:37:PHE:CE2	23:W:48:LEU:HD12	2.51	0.46
42:16:4:ASN:HD22	52:26:880:C:P	2.38	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
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
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
53:27:893:C:HO2'	59:33:643:GLU:CD	2.19	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
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
51:25:67:THR:HG23	52:26:1167:A:N7	2.31	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
59:33:60:VAL:O	59:33:63:VAL:CG2	2.64	0.46
59:33:624:PHE:O	59:33:631:ILE:HG23	2.16	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
52:26:1054:C:N3	56:30:34:G:H1'	2.31	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:965:U:H5''	52:26:966:G:OP1	2.16	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
53:27:443:A:N3	53:27:1201:U:H1'	2.31	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
59:33:241:LYS:HD3	59:33:246:LYS:HZ2	1.77	0.45
29:3:37:LYS:HE3	53:27:469:G:O6	2.16	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
42:16:73:LEU:HD23	42:16:79:ILE:HG21	1.98	0.45
42:16:49:ARG:HB2	42:16:89:LEU:HD21	1.99	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
53:27:1505:A:H2'	53:27:1506:U:O4'	2.16	0.45
53:27:1300:G:N2	53:27:1634:A:C2	2.84	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
33:7:22:PHE:CD2	40:14:97:ASP:HB2	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:11:ARG:CG	52:26:562:U:H1'	2.45	0.45
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
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
1:A:207:ALA:CB	53:27:1790:C:H4'	2.45	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
30:4:41:ARG:NH1	53:27:2351:G:O6	2.49	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
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
39:13:16:ALA:CB	39:13:66:VAL:HA	2.46	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
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
52:26:1342:C:O2'	52:26:1343:G:H5'	2.17	0.45
52:26:1405:G:H21	52:26:1518:A:H1'	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:978:A:C5	52:26:1318:A:C6	3.05	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
13:M:53:THR:OG1	53:27:2840:C:H5''	2.15	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
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
4:D:23:SER:OG	54:28:55:U:H4'	2.16	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
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
43:17:104:ASN:C	43:17:106:ARG:H	2.20	0.45
49:23:13:HIS:HB2	52:26:1014:A:H5''	1.98	0.45
35:9:51:LYS:NZ	52:26:1081:A:N7	2.65	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
44:18:52:ARG:CD	52:26:1317:C:N3	2.80	0.45
52:26:1429:A:H2'	52:26:1430:A:C8	2.52	0.45
41:15:127:ARG:NH1	52:26:1522:U:OP1	2.48	0.45
52:26:821:G:H2'	52:26:822:U:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:836:G:H2'	52:26:837:U:O4'	2.16	0.45
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
1:A:176:ARG:HG2	53:27:1820:U:OP1	2.16	0.45
53:27:562:U:N1	53:27:2036:C:H5'	2.31	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
53:27:664: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
1:A:116:GLN:NE2	1:A:121:ALA:HA	2.31	0.45
1:A:259:ASN:O	1:A:260:LYS:HB2	2.17	0.45
1:A:257:ARG:NH2	1:A:262:THR:OG1	2.50	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
52:26:1338:G:H21	57:31:41:C:H1'	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1426:G:H2'	52:26:1427:C:H6	1.82	0.45
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
53:27:588:U:O4	53:27:670:A:H1'	2.16	0.45
53:27:600:G:H2'	53:27:601:C:C6	2.52	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
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
51:25:44:ARG:HD2	52:26:723:U:OP1	2.16	0.45
32:6:96:LEU:HD13	52:26:1103:C:H4'	1.99	0.45
52:26:116:A:H61	52:26:313:A:H1'	1.82	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
52:26:495: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
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
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
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
13:M:4:ARG:HA	53:27:2820:A:OP1	2.15	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
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
53:27:529:A:C4	53:27:2023:C:C5	3.05	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
53:27:665: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
57:31:18:G:N2	57:31:57:A:H2'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:8:25:ARG:HB2	52:26:410:G:P	2.57	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
35:9:105:ILE:HG22	52:26:8:A:H5'	1.99	0.45
53:27:1472:C:H2'	53:27:1473:G:H8	1.81	0.45
53:27:1707:G:H1'	53:27:1756:G:N3	2.32	0.45
53:27:1669:A:C2	53:27:1994:C:H1'	2.51	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
5:E:66:THR:OG1	53:27:2748:A:H1'	2.17	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
53:27:684:G:C2	53:27:794:A:C2	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
57:31:21:A:N6	57:31:46:G:H2'	2.30	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
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
16:P:1:ALA:N	53:27:1248:G:OP1	2.50	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
44:18:72: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
44:18:3:GLN:HG2	52:26:1048:G:OP1	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
53:27:1166: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
53:27:1470: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
53:27:1326:U:H4'	53:27:2011:U:O4'	2.17	0.44
53:27:1130:U:N3	53:27:2025:C:H5''	2.32	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
11:K:63:LYS:HA	30:4:11:LYS:O	2.18	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
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1924:C:H2'	53:27:1925:C:C6	2.53	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
16:P:51:GLN:NE2	53:27:560:C:H4'	2.31	0.44
12:L:86:LYS:HE3	53:27:956:G:OP2	2.17	0.44
9:I:2:LYS:HA	53:27:995:C:C4	2.52	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
3:C:66:GLY:CA	53:27:2060:A:H5'	2.48	0.44
4:D:109:ARG:CZ	43:17:2:ARG:NH1	2.81	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:135:MET:HA	53:27:1063:G:H1'	1.98	0.44
8:H:52:LEU:HD11	8:H:81:LYS:HD3	2.00	0.44
16:P:13:HIS:O	16:P:17:LEU:HD13	2.17	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
53:27:2589: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
53:27:570:G:H22	53:27:2499:C:H5'	1.83	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
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:49:VAL:CG2	14:N:85:LYS:HD2	2.48	0.44
14:N:29:HIS:HD2	14:N:97:PHE:CZ	2.35	0.44
2:B:15:PHE:CE2	15:O:54:LEU:HD11	2.52	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
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
2:B:129:THR:HG22	53:27:1997:C:OP2	2.16	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
13:M:84:GLY:N	13:M:85:PRO:HD2	2.33	0.44
11:K:23:ILE:HG13	17:Q:82:HIS:NE2	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
53:27:2248: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
53:27:2060:A:N9	53:27:2502:G:H1'	2.33	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
53:27:792:A:C6	53:27:2440:C:C6	3.06	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:58:LYS:HD2	3:C:58:LYS:N	2.32	0.44
3:C:46:GLN:OE1	3:C:87:ALA:N	2.50	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:HG22	10:J:62:VAL:O	2.18	0.44
10:J:61:VAL:HG12	10:J:87:LEU:HD11	2.00	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
26:Z:60:PHE:HZ	49:23:40:PHE:CD1	2.35	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
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
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
30:4:5:THR:HG21	53:27:243:U:OP1	2.18	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)
34:8:7:LYS:HG2	52:26:430:A:P	2.58	0.44
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
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
29:3:8:SER:HB3	29:3:11:LYS:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:11:A:H2'	58:32:12:G:C8	2.52	0.44
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
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
38:12:87:ARG:HB3	52:26:600:A:OP1	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
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
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
53:27:1131:G:HO2'	53:27:2026:U:H5'	1.83	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
43:17:53: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
43:17:1:ALA:C	43:17:8:ILE:HG21	2.38	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)
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
53:27:768:G:N2	53:27:1379:U:O2'	2.50	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
53:27:2723:C:H2'	53:27:2724:U:O4'	2.17	0.43
53:27:271:G:C6	53:27:367:G:C6	3.07	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
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:11:ILE:HG21	53:27:1046:A:C2	2.53	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
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
46:20:54:LEU:HA	46:20:57:ILE:HD12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:21:16:MET:HE2	47:21:19:SER:CB	2.48	0.43
35:9:130:THR:HG21	52:26:10:A:OP2	2.18	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
35:9:156:ARG:HD3	38:12:44:PHE:CG	2.54	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
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	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
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
36:10:93:LYS:NZ	48:22:19:GLU:HG2	2.32	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
47:21:18:LYS:HE2	52:26:256:U:OP1	2.18	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
52:26:399:G:H2'	52:26:400:C:C6	2.54	0.43
53:27:976:G:H5'	53:27:1156:A:N6	2.34	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
53:27:983: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
11:K:58:TYR:O	30:4:12:ARG:NH2	2.46	0.43
3:C:32:VAL:HG11	11:K:6:LEU:CD1	2.47	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:17:VAL:HG12	18:R:76:VAL:HG21	2.00	0.43
18:R:73:LYS:O	18:R:106:VAL:HB	2.19	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:9:LYS:NZ	24:X:11:VAL:H	2.16	0.43
24:X:56:LEU:HD23	24:X:59:GLU:OE1	2.18	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
53:27:819:A:C8	53:27:1189:A:C6	3.07	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1600:C:H2'	53:27:1601:G:H8	1.83	0.43
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
53:27:955: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
41:15:123:PRO:O	51:25:34:ARG:N	2.52	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
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
59:33:99:VAL:HG11	59:33:103:VAL:CG1	2.48	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
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
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
27:1:31:LYS:HD3	27:1:49:ARG:O	2.18	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
53:27:601: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
53:27:9:G:C2	53:27:2895:G:C6	3.07	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
52:26:981:U:O4	52:26:1222:G:O6	2.36	0.43
52:26:1418:A:N3	53:27:1959:G:H1'	2.34	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
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
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
59:33:640:GLN:N	59:33:640:GLN:CD	2.72	0.43
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	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:90:ILE:HD13	1:A:102:TYR:CD1	2.54	0.43
1:A:132:ARG:HH12	6:F:92:GLY:HA2	1.83	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:813:U:O2'	53:27:1225:G:H1'	2.19	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
35:9:23:THR:HG22	52:26:922:G:O2'	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
49:23:5:LYS:CB	52:26:1313:U:OP2	2.66	0.43
52:26:1053:G:H4'	52:26:1054:C:H3'	2.01	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
3:C:165:HIS:HB2	53:27:1205:A:N1	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1877:A:H2'	53:27:1878:G:O4'	2.19	0.43
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:H2'	53:27:786:C:C6	2.54	0.43
53:27:785:G:C6	53:27:786:C:C4	3.07	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: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:31:ARG:HB3	10:J:32:TYR:H	1.71	0.43
10:J:3:GLN:HB3	10:J:32:TYR:HB3	2.00	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
41:15:117:HIS:CD2	52:26:675:A:H1'	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:15:LEU:HD23	51:25:17:ARG:HG3	2.01	0.42
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
35:9:27:GLY:H	52:26:1398:A:H61	1.67	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
52:26:26:A:N6	52:26:558:G:H1'	2.34	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
52:26:947: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
52:26:1403:C:N4	55:29:18:G:OP1	2.52	0.42
56:30:76:A:H2'	59:33:431:ILE:HD13	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
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
35:9:80: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
52:26:46:G:N1	52:26:366:A:C2	2.87	0.42
52:26:373:A:H2'	52:26:374:A:H8	1.84	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
3:C:44:ARG:HD2	53:27:444:C: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
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
23:W:61:LYS:HE3	53:27:372:G:OP2	2.19	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
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
43:17:24:VAL:N	52:26:1330:U:OP1	2.51	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
39:13:114:LYS:HE2	52:26:1187:G:H5'	2.01	0.42
52:26:1206:G:C4	52:26:1207:G:C8	3.07	0.42
43:17:16:ILE:HG12	52:26:1302:C:C4	2.54	0.42
52:26:1306:A:H61	52:26:1331:G:H1'	1.78	0.42
52:26:946:A:H4'	52:26:1333:A:O2'	2.19	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
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)
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
53:27:2869:G:O2'	53:27:2870:C:H5'	2.19	0.42
3:C:130:LYS:HA	53:27:321:U:OP2	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:140:HIS:HD2	53:27:1658:C:OP2	2.03	0.42
2:B:109:VAL:HG23	2:B:175:LEU:HD12	1.99	0.42
2:B:23:PRO:HG3	53:27:2728:U:O2'	2.20	0.42
2:B:40:LEU:HD12	2:B:46:ARG:HB3	2.01	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
51:25:25:ALA:HB1	51:25:29:ALA:HB2	2.02	0.42
52:26:1084:G:H2'	52:26:1085:U:C5	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
49:23:79:TYR:OH	52:26:1226:C:H4'	2.18	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
16:P:2:ARG:HD2	53:27:1248:G:C5	2.54	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
4:D:25:MET:HB3	54:28:57:A:C4	2.54	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
59:33:78:ALA:HB1	59:33:151:ILE:HD13	2.00	0.42
59:33:82:PHE:CG	59:33:83:PRO:CD	2.93	0.42
33:7:21:TRP:CB	33:7:58:ARG:HB3	2.50	0.42
33:7:54:ILE:O	33:7:54:ILE:HG13	2.19	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: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:54:ARG:NH1	53:27:977:G:H5''	2.34	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
39:13:27:ILE:HG21	39:13:62:LEU:HD12	2.01	0.42
39:13:37:TYR:CD2	39:13:38:PHE:CD2	3.08	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
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
51:25:46:ARG:NE	52:26:1533:C:N4	2.67	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
48:22:59:LYS:HD3	52:26:735:C:H5'	2.01	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
53:27:2116:G:O2'	53:27:2117:A:H5'	2.20	0.42
4:D:76:PHE:HE1	53:27:2308:G:C6	2.37	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
53:27:2053:G:C2	53:27:2617:U:C2	3.07	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
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
56:30:75:C:H4'	59:33:431:ILE:HG23	2.02	0.42
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:705:GLN:HB2	59:33:706:GLN:H	1.46	0.42
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: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
39:13:81:GLY:O	39:13:85:ALA:HB2	2.20	0.42
39:13:80:HIS:CE1	39:13:84:ARG:HD2	2.55	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
42:16:120:ARG:HB2	52:26:37:U:C5'	2.49	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

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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
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
53:27:2588:G:C6	53:27:2607:G:C2	3.08	0.42
53:27:257:C:H2'	53:27:258:G:O4'	2.19	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
59:33:656:VAL:HG23	59:33:657:TRP:N	2.35	0.42
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	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
8:H:116:MET:SD	53:27:1059:G:H4'	2.59	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:H1'	2.54	0.42
52:26:124:C:H2'	52:26:125:U:C6	2.55	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
52:26:934:C:H5	52:26:1344:C:H2'	1.84	0.42
52:26:993:G:H2'	52:26:993:G:N3	2.35	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
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
53:27:988:A:H4'	53:27:1155:A:C2	2.55	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:148:GLN:O	53:27:2052:A:H4'	2.20	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
11:K:51:GLU:OE2	30:4:56:LEU:HD13	2.19	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:1:MET:O	19:S:3:ARG:N	2.52	0.42
19:S:13:ALA:O	19:S:32:LEU:HB2	2.19	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
16:P:5:ARG:HD3	53:27:1250:G:H5''	2.02	0.42
53:27:1412:U:H2'	53:27:1413:A:C8	2.54	0.42
53:27:1351:C:H4'	53:27:1572:A:O4'	2.20	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
3:C:94:GLN:HB2	53:27:660:C:OP1	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:55:LYS:HG3	2:B:77:ARG:CA	2.49	0.42
3:C:27:LEU:O	3:C:30:GLN:HB3	2.19	0.42
3:C:97:ASN:HB3	3:C:100:MET:SD	2.60	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
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
45:19:22:GLY:O	52:26:751:U:H1'	2.20	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
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: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
2:B:99:GLU:O	2:B:100:LEU:C	2.58	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
1:A:175:LEU:HD23	53:27:1799:G:C2	2.54	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
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
56:30:75:C:H5'	59:33:431:ILE:O	2.20	0.41
32:6:82:ALA:HB2	32:6:213:LEU:HB3	2.01	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
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
53:27:1174:U:C2'	53:27:1174:U:O2	2.65	0.41
53:27:116:C:O2'	53:27:117:G:H5'	2.21	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
25:Y:46:MET:HG2	53:27:851:C:C4'	2.51	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
34:8:68:GLU:HG2	52:26:545:C:H5''	2.01	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
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
8:H:93:ASN:ND2	53:27:1077:A:O2'	2.53	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
53:27:818:G:H3'	53:27:1187:G:H22	1.86	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:97:ARG:HG3	6:F:112:LYS:HD2	2.02	0.41
6:F:32:PRO:HB3	23:W:38:TRP:CB	2.48	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
52:26:1057: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
52:26:996:A:C6	52:26:1046:A:H4'	2.56	0.41
53:27:1061:U:O4'	53:27:1070:A:H1'	2.20	0.41
53:27:579:G:C2	53:27:1262:A:C4	3.09	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
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
3:C:76:PRO:HA	3:C:82:GLY:HA3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:Q:80:ARG:NH2	53:27:571:U:H3'	2.36	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
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
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
53:27:2476: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
53:27:2007:U:H4'	53:27:2824:C:H4'	2.03	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:A:43:ASN:HD21	53:27:1806:C:H1'	1.85	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
26:Z:56:ARG:CG	49:23:64:GLU:HA	2.51	0.41
36:10:72:ASP:O	36:10:76:THR:HG23	2.20	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
37:11:2:ARG:NH1	52:26:932:C:C4	2.88	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
59:33:741:LEU:HD23	59:33:742:HIS:N	2.35	0.41
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	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
27:1:1:ALA:O	27:1:2:VAL:O	2.39	0.41
38:12:6:ILE:HD11	38:12:76:ARG:NH2	2.36	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
51:25:46:ARG:NH2	52:26:1533:C:C5	2.88	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
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
17:Q:83:TYR:OH	53:27:1187:G:H5''	2.21	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
53:27:197:A:N6	53:27:2430:A:H2'	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2251:G:H8	53:27:2251:G:P	2.44	0.41
53:27:2352:A:N6	53:27:2365:G:O2'	2.54	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:77:THR:HA	6:F:143:ILE:O	2.21	0.41
6:F:94:ILE:HD11	6:F:146:VAL:HG22	2.03	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
21:U:55:GLU:HB3	21:U:59:GLU:OE2	2.20	0.41
23:W:25:LYS:HZ3	53:27:189:G:P	2.44	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:39:ILE:CG2	16:P:40:LYS:N	2.83	0.41
16:P:77:LYS:O	16:P:116:LEU:HD22	2.21	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
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
53:27:2674:G:C4	53:27:2675:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:6:103:TRP:CZ3	32:6:156:LEU:HD21	2.56	0.41
32:6:119:GLN:O	32:6:123:GLY:N	2.53	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
16:P:5:ARG:NH1	53:27:1251:C:C5	2.89	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
59:33:408:VAL:CG2	59:33:418:LEU:HD12	2.51	0.41
29:3:31:LEU:O	29:3:35:ARG:HG2	2.20	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
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	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
17:Q:88:GLY:O	53:27:1224:U:H4'	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1722:A:N6	53:27:1738:G:H1'	2.36	0.40
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
2:B:115:GLY:O	53:27:2822:G:OP2	2.39	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: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
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
36:10:48:ALA:N	48:22:65:SER:O	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:20:12:LYS:HA	52:26:392:C:P	2.61	0.40
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
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	35
2	B	207/209 (99%)	172 (83%)	28 (14%)	7 (3%)	4	37
3	C	199/201 (99%)	147 (74%)	32 (16%)	20 (10%)	1	12
4	D	175/179 (98%)	143 (82%)	27 (15%)	5 (3%)	5	40
5	E	174/177 (98%)	149 (86%)	20 (12%)	5 (3%)	5	40
6	F	147/149 (99%)	108 (74%)	20 (14%)	19 (13%)	0	6
7	G	129/165 (78%)	93 (72%)	25 (19%)	11 (8%)	1	16
8	H	139/142 (98%)	104 (75%)	25 (18%)	10 (7%)	1	20
9	I	140/142 (99%)	120 (86%)	14 (10%)	6 (4%)	3	31
10	J	120/123 (98%)	97 (81%)	16 (13%)	7 (6%)	2	25

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	K	141/144 (98%)	110 (78%)	20 (14%)	11 (8%)	1	18
12	L	134/136 (98%)	113 (84%)	15 (11%)	6 (4%)	3	30
13	M	118/127 (93%)	91 (77%)	22 (19%)	5 (4%)	3	32
14	N	114/117 (97%)	98 (86%)	15 (13%)	1 (1%)	20	62
15	O	112/115 (97%)	93 (83%)	15 (13%)	4 (4%)	4	36
16	P	115/118 (98%)	103 (90%)	7 (6%)	5 (4%)	3	31
17	Q	101/103 (98%)	77 (76%)	16 (16%)	8 (8%)	1	18
18	R	108/110 (98%)	87 (81%)	15 (14%)	6 (6%)	2	26
19	S	91/100 (91%)	71 (78%)	16 (18%)	4 (4%)	3	31
20	T	100/104 (96%)	79 (79%)	14 (14%)	7 (7%)	1	20
21	U	92/94 (98%)	76 (83%)	11 (12%)	5 (5%)	2	27
22	V	73/85 (86%)	65 (89%)	7 (10%)	1 (1%)	13	54
23	W	75/78 (96%)	67 (89%)	6 (8%)	2 (3%)	6	42
24	X	61/63 (97%)	49 (80%)	7 (12%)	5 (8%)	1	17
25	Y	56/59 (95%)	52 (93%)	4 (7%)	0	100	100
26	Z	64/70 (91%)	47 (73%)	7 (11%)	10 (16%)	0	4
27	1	54/57 (95%)	43 (80%)	6 (11%)	5 (9%)	1	15
28	2	48/55 (87%)	41 (85%)	7 (15%)	0	100	100
29	3	44/46 (96%)	32 (73%)	11 (25%)	1 (2%)	7	45
30	4	62/65 (95%)	51 (82%)	8 (13%)	3 (5%)	2	29
31	5	36/38 (95%)	26 (72%)	5 (14%)	5 (14%)	0	5
32	6	216/241 (90%)	170 (79%)	32 (15%)	14 (6%)	1	23
33	7	204/233 (88%)	175 (86%)	22 (11%)	7 (3%)	4	37
34	8	203/206 (98%)	157 (77%)	30 (15%)	16 (8%)	1	18
35	9	155/167 (93%)	109 (70%)	33 (21%)	13 (8%)	1	16
36	10	98/135 (73%)	77 (79%)	14 (14%)	7 (7%)	1	20
37	11	149/179 (83%)	123 (83%)	14 (9%)	12 (8%)	1	17
38	12	127/130 (98%)	110 (87%)	8 (6%)	9 (7%)	1	20
39	13	125/130 (96%)	93 (74%)	19 (15%)	13 (10%)	0	11
40	14	96/103 (93%)	76 (79%)	15 (16%)	5 (5%)	2	27
41	15	114/129 (88%)	90 (79%)	13 (11%)	11 (10%)	1	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	16	121/124 (98%)	95 (78%)	13 (11%)	13 (11%)	0	10
43	17	112/118 (95%)	88 (79%)	14 (12%)	10 (9%)	1	15
44	18	98/101 (97%)	72 (74%)	21 (21%)	5 (5%)	2	28
45	19	86/89 (97%)	70 (81%)	11 (13%)	5 (6%)	2	25
46	20	80/82 (98%)	59 (74%)	18 (22%)	3 (4%)	4	34
47	21	78/84 (93%)	54 (69%)	19 (24%)	5 (6%)	1	23
48	22	63/75 (84%)	50 (79%)	5 (8%)	8 (13%)	0	7
49	23	77/92 (84%)	64 (83%)	11 (14%)	2 (3%)	6	42
50	24	83/87 (95%)	75 (90%)	6 (7%)	2 (2%)	7	44
51	25	63/71 (89%)	40 (64%)	19 (30%)	4 (6%)	1	24
59	33	663/750 (88%)	557 (84%)	60 (9%)	46 (7%)	1	21
All	All	6509/6970 (93%)	5226 (80%)	879 (14%)	404 (6%)	3	24

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%)	91	96
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%)	71	87
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%)	64	85
9	I	116/116 (100%)	116 (100%)	0	100	100
10	J	103/104 (99%)	102 (99%)	1 (1%)	80	90
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%)	80	90
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%)	75	88
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%)	75	88

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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%)	66	86
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%)	60	83
31	5	34/34 (100%)	34 (100%)	0	100	100
32	6	180/199 (90%)	178 (99%)	2 (1%)	78	89
33	7	170/190 (90%)	169 (99%)	1 (1%)	89	95
34	8	172/173 (99%)	172 (100%)	0	100	100
35	9	119/126 (94%)	117 (98%)	2 (2%)	66	86
36	10	87/116 (75%)	85 (98%)	2 (2%)	56	80
37	11	124/147 (84%)	123 (99%)	1 (1%)	85	92
38	12	104/105 (99%)	103 (99%)	1 (1%)	80	90
39	13	105/107 (98%)	104 (99%)	1 (1%)	80	90
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%)	40	72
45	19	76/77 (99%)	75 (99%)	1 (1%)	73	88
46	20	65/65 (100%)	65 (100%)	0	100	100
47	21	74/78 (95%)	73 (99%)	1 (1%)	71	87
48	22	56/65 (86%)	55 (98%)	1 (2%)	64	85
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%)	64	85

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	33	452/635 (71%)	449 (99%)	3 (1%)	87	94
All	All	5303/5698 (93%)	5272 (99%)	31 (1%)	89	95

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.