



Full wwPDB EM Validation Report ⓘ

Oct 5, 2024 – 11:26 AM EDT

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

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

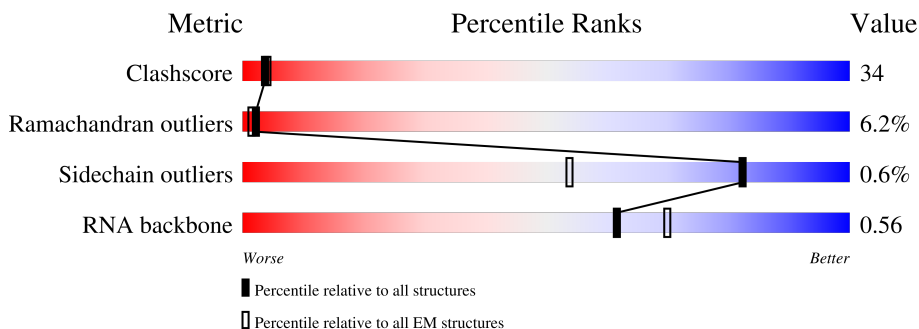
EMDB validation analysis : 0.0.1.dev113
MolProbity : 4.02b-467
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

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.



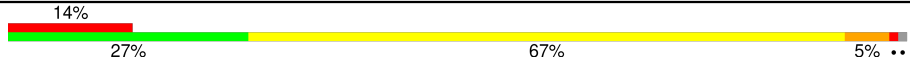


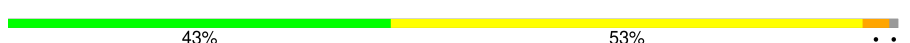

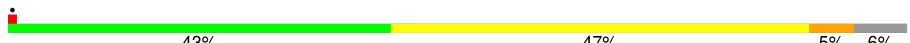

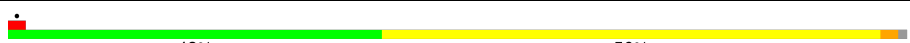
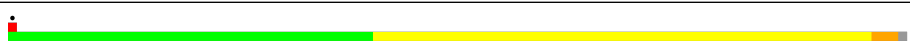
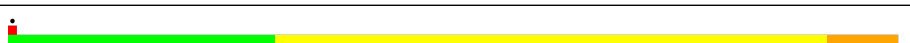
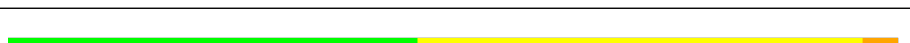
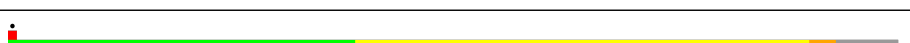

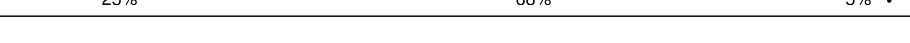
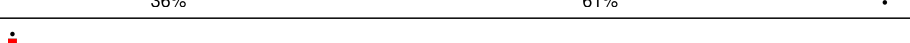
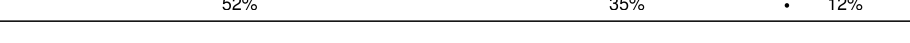
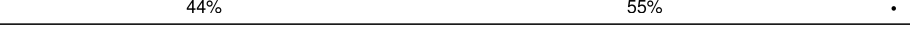
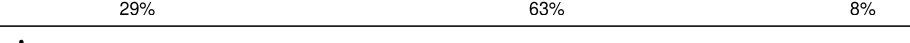


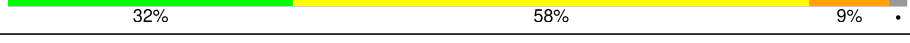



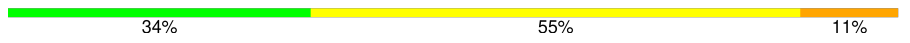
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

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	42% 54% 9%
7	G	165	25% 21% 52% 6% 21%


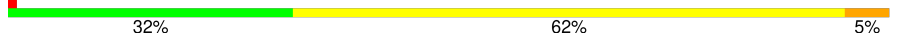



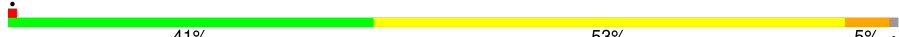
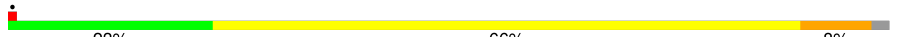
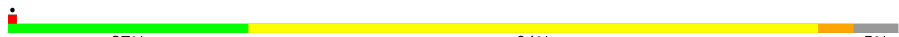
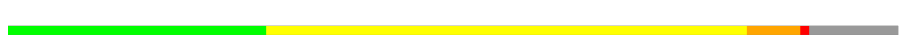

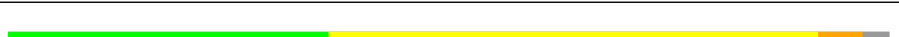
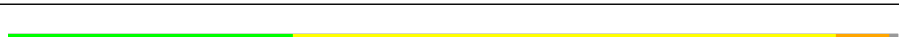

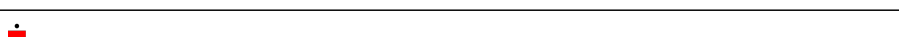
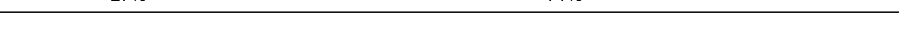
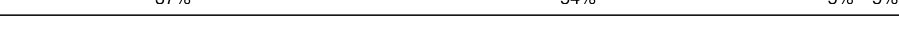
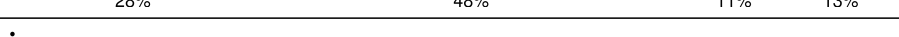


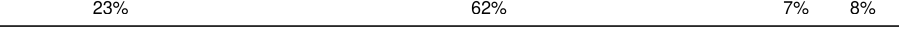

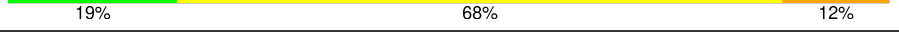
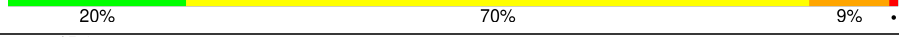


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Mol	Chain	Length	Quality of chain
8	H	142	
9	I	142	
10	J	123	
11	K	144	
12	L	136	
13	M	127	
14	N	117	
15	O	115	
16	P	118	
17	Q	103	
18	R	110	
19	S	100	
20	T	104	
21	U	94	
22	V	85	
23	W	78	
24	X	63	
25	Y	59	
26	Z	70	
27	1	57	
28	2	55	
29	3	46	
30	4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

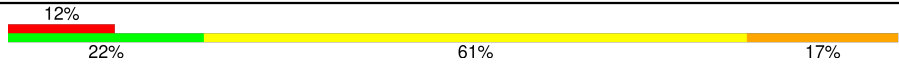

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Mol	Chain	Length	Quality of chain
33	7	233	
34	8	206	
35	9	167	
36	10	135	
37	11	179	
38	12	130	
39	13	130	
40	14	103	
41	15	129	
42	16	124	
43	17	118	
44	18	101	
45	19	89	
46	20	82	
47	21	84	
48	22	75	
49	23	92	
50	24	87	
51	25	71	
52	26	1539	
53	27	2903	
54	28	120	
55	29	20	
56	30	76	
57	31	77	

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Mol	Chain	Length	Quality of chain
58	32	77	
59	33	750	

2 Entry composition [i](#)

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
			Total	C	N	O	S		
1	A	271	2082	1288	423	364	7	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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
			Total	C	N	O	S		
35	9	157	1156	719	218	213	6	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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
			Total	C	N	O	P		
55	29	20	432	195	86	132	19	0	0

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

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

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

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

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

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

- Molecule 59 is a protein called GTP pyrophosphokinase.

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

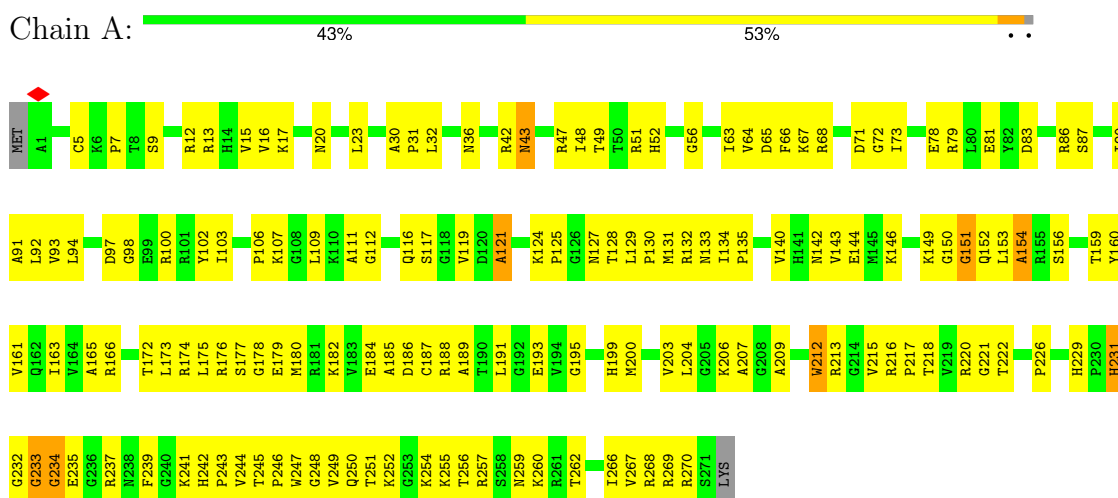
There are 7 discrepancies between the modelled and reference sequences:

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, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

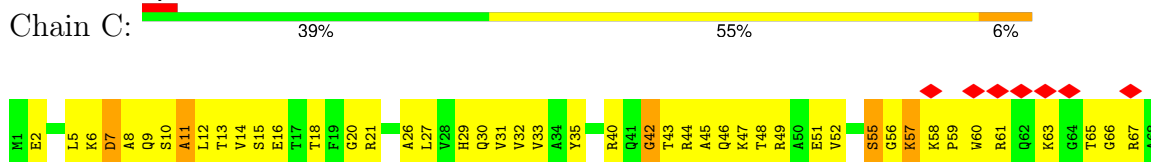
- Molecule 1: 50S ribosomal protein L2

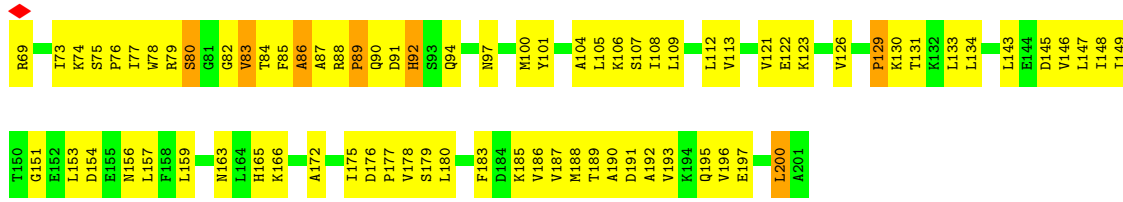


- Molecule 2: 50S ribosomal protein L3

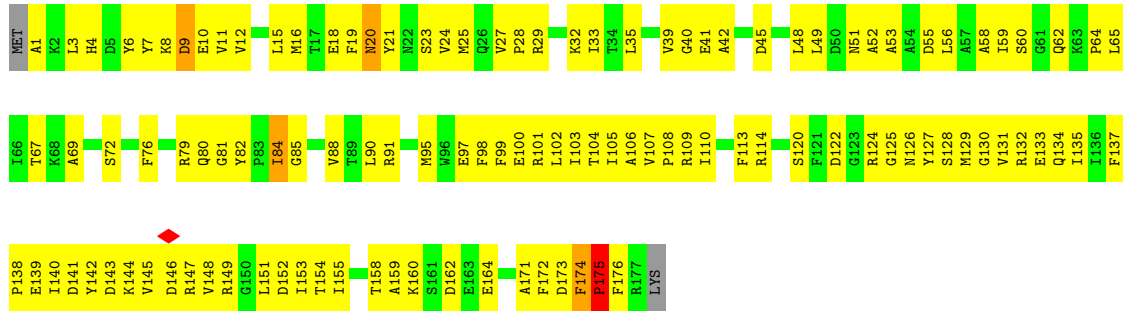


- Molecule 3: 50S ribosomal protein L4

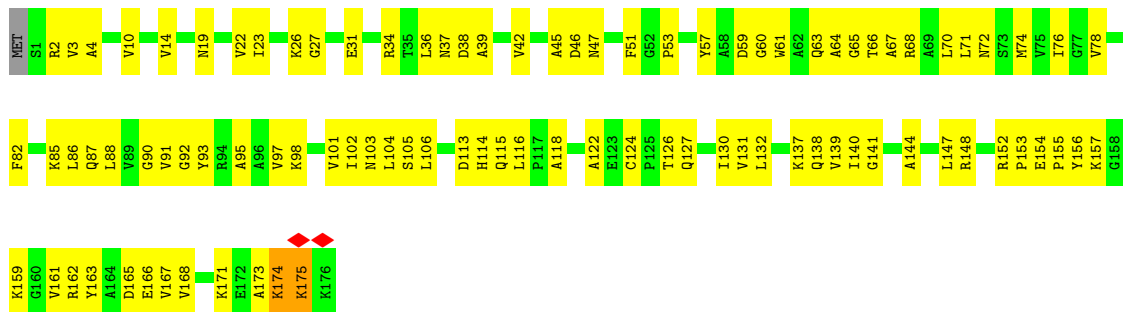




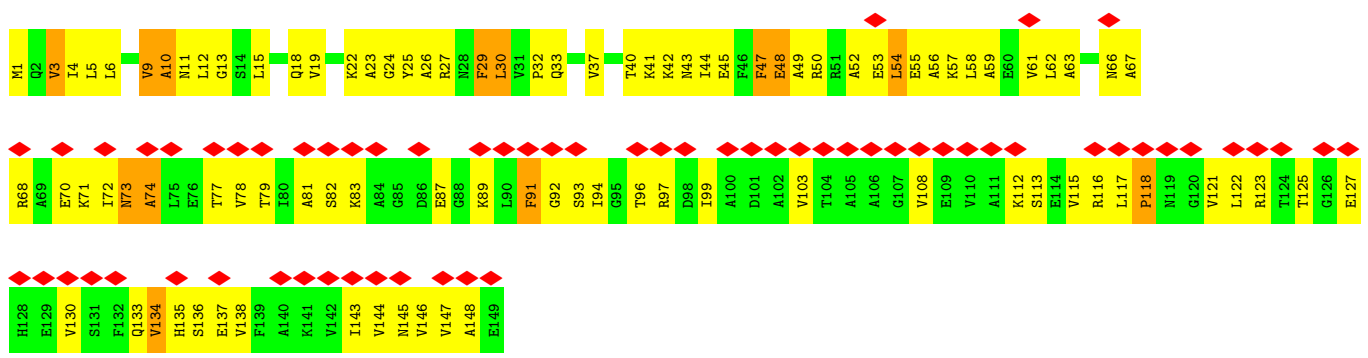
• Molecule 4: 50S ribosomal protein L5



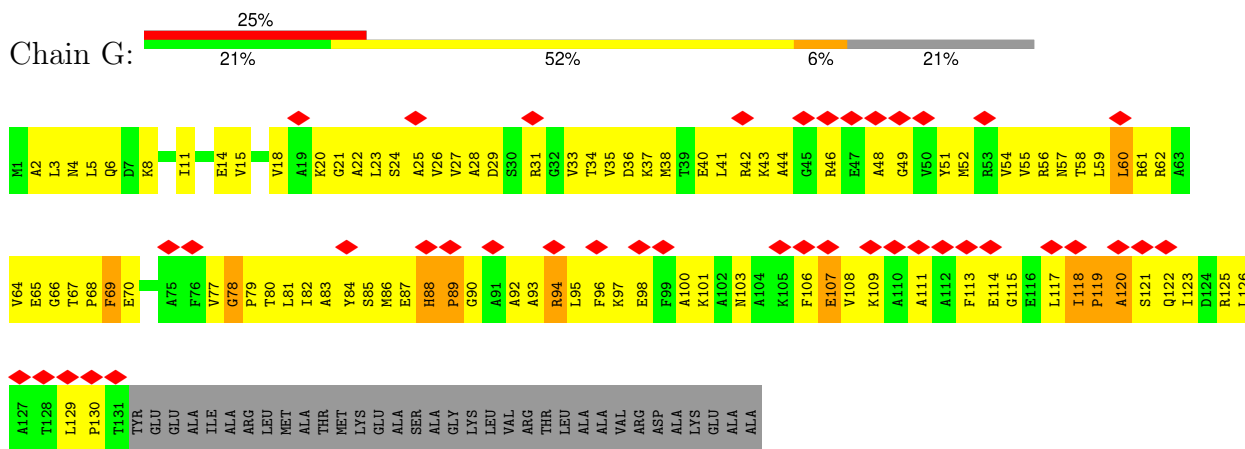
• Molecule 5: 50S ribosomal protein L6



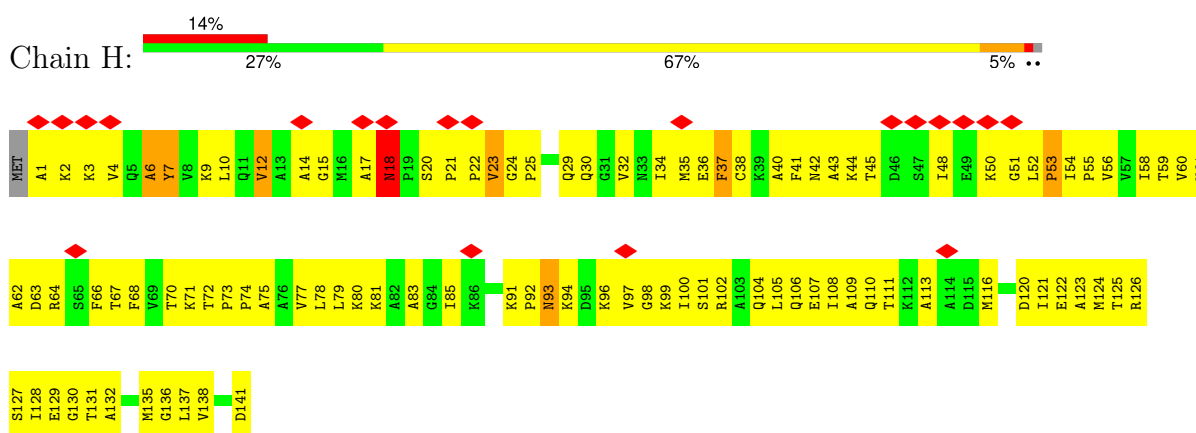
• Molecule 6: 50S ribosomal protein L9



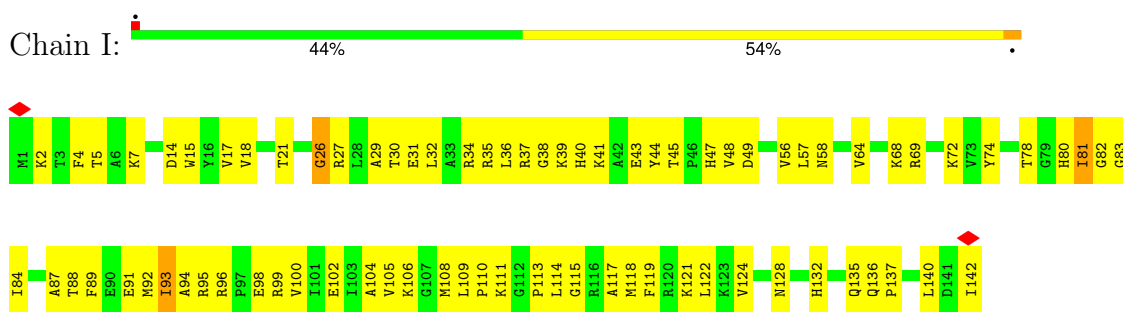
• Molecule 7: 50S ribosomal protein L10



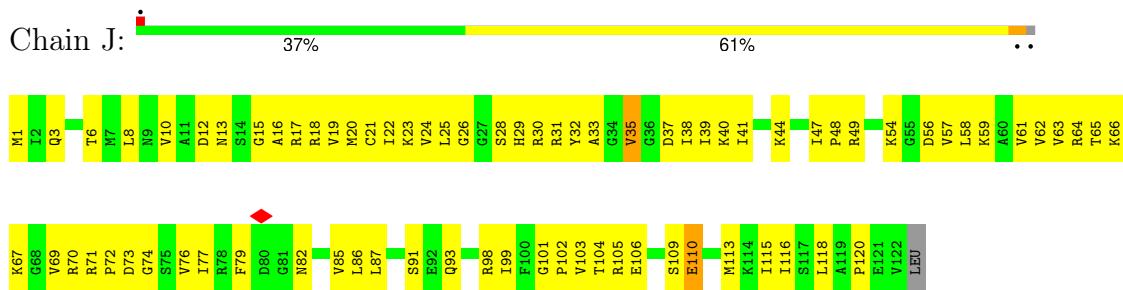
• Molecule 8: 50S ribosomal protein L11



• Molecule 9: 50S ribosomal protein L13

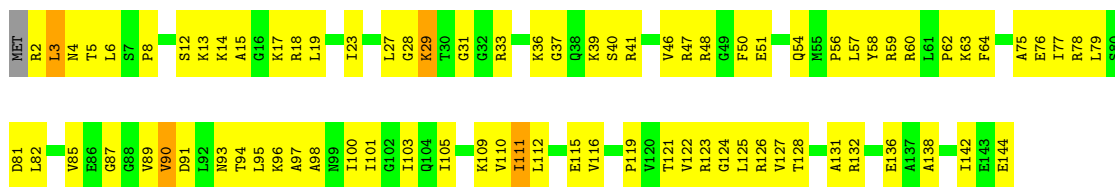


• Molecule 10: 50S ribosomal protein L14



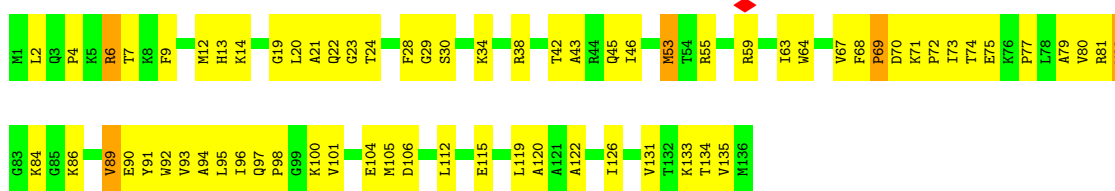
• Molecule 11: 50S ribosomal protein L15

Chain K: 



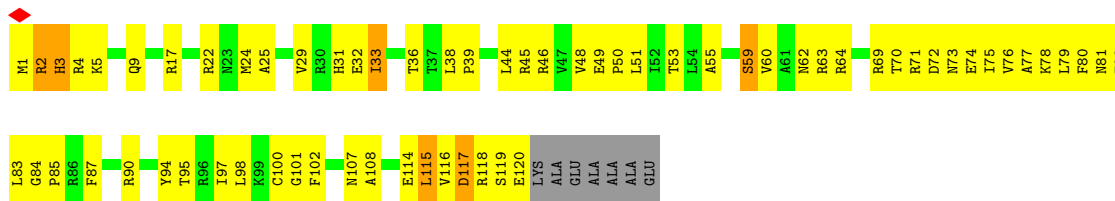
• Molecule 12: 50S ribosomal protein L16

Chain L: 



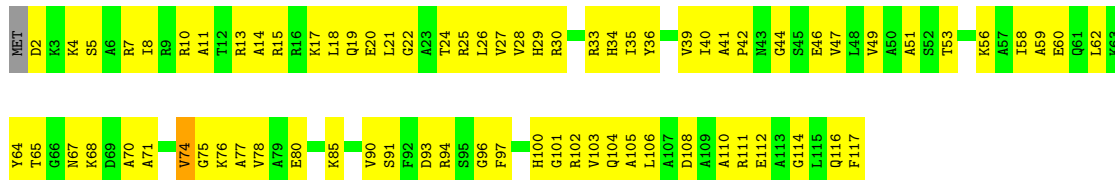
• Molecule 13: 50S ribosomal protein L17

Chain M: 



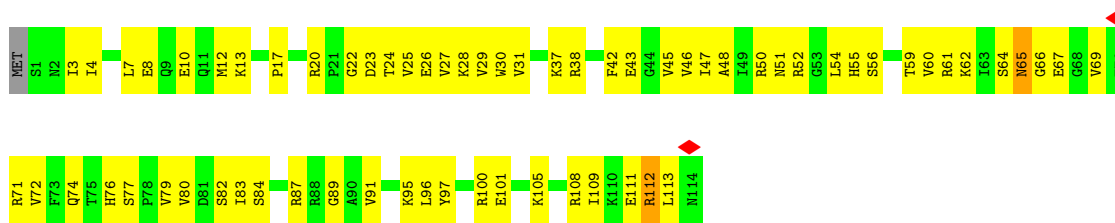
• Molecule 14: 50S ribosomal protein L18

Chain N: 

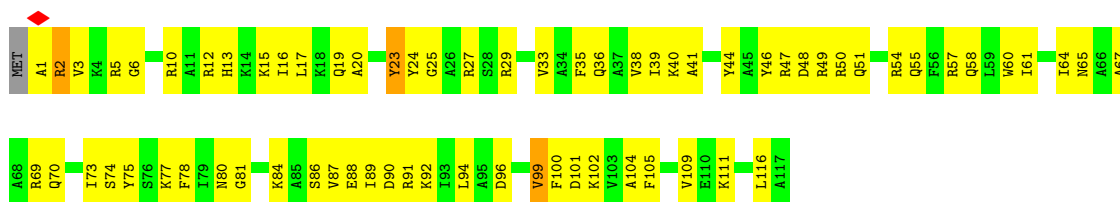


• Molecule 15: 50S ribosomal protein L19

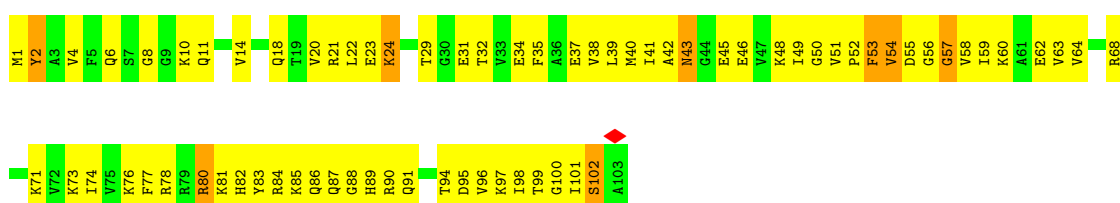
Chain O: 



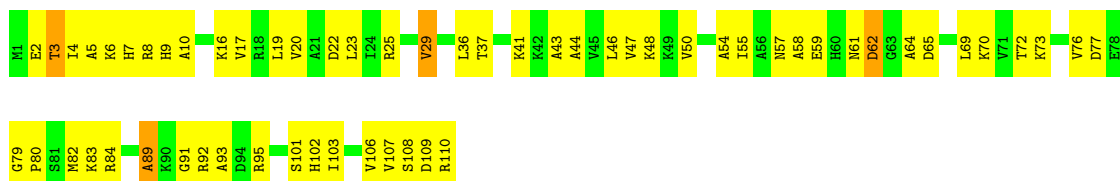
• Molecule 16: 50S ribosomal protein L20



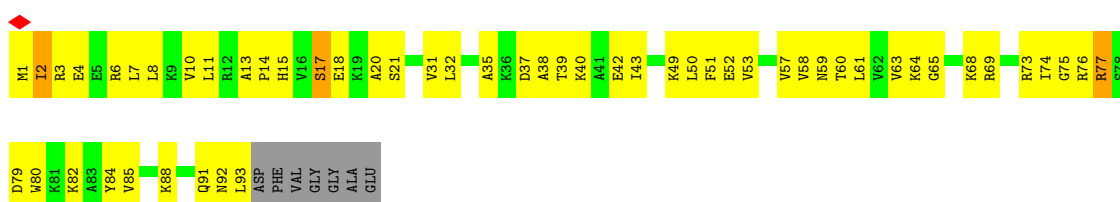
• Molecule 17: 50S ribosomal protein L21



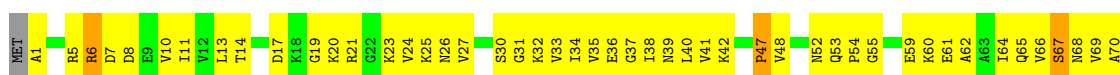
• Molecule 18: 50S ribosomal protein L22

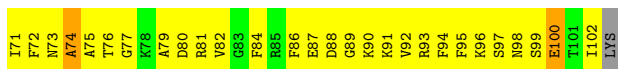


• Molecule 19: 50S ribosomal protein L23



• Molecule 20: 50S ribosomal protein L24

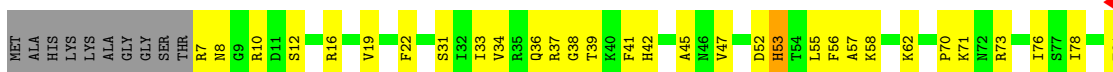




- Molecule 21: 50S ribosomal protein L25



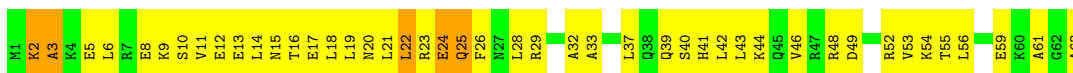
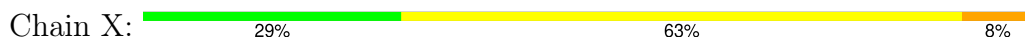
- Molecule 22: 50S ribosomal protein L27



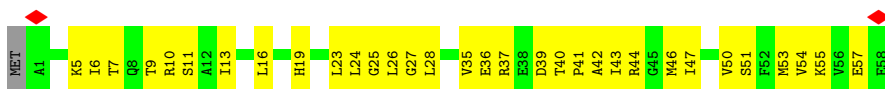
- Molecule 23: 50S ribosomal protein L28



- Molecule 24: 50S ribosomal protein L29

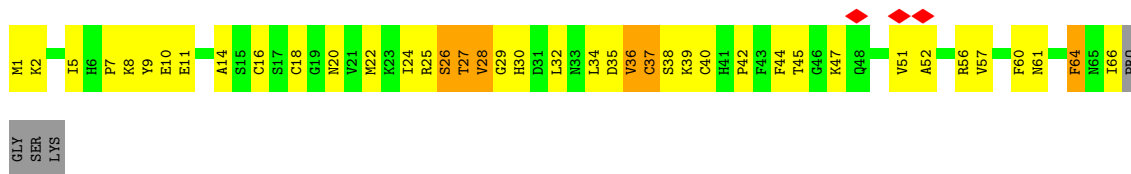


- Molecule 25: 50S ribosomal protein L30

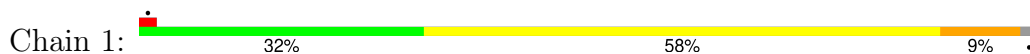


- Molecule 26: 50S ribosomal protein L31





• Molecule 27: 50S ribosomal protein L32



• Molecule 28: 50S ribosomal protein L33



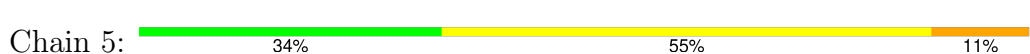
• Molecule 29: 50S ribosomal protein L34



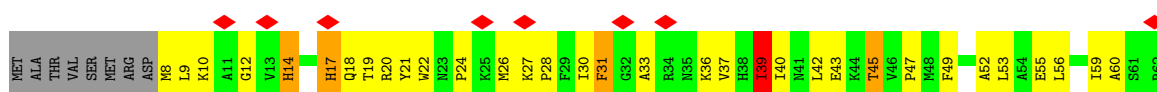
• Molecule 30: 50S ribosomal protein L35

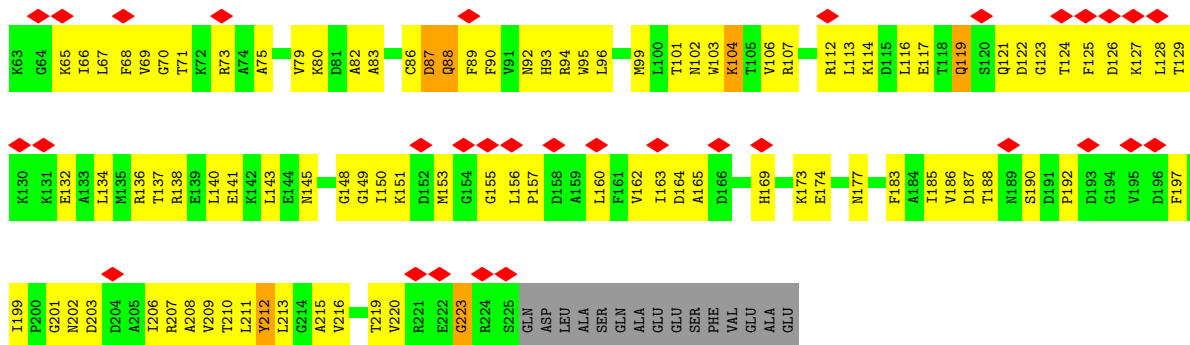


• Molecule 31: 50S ribosomal protein L36

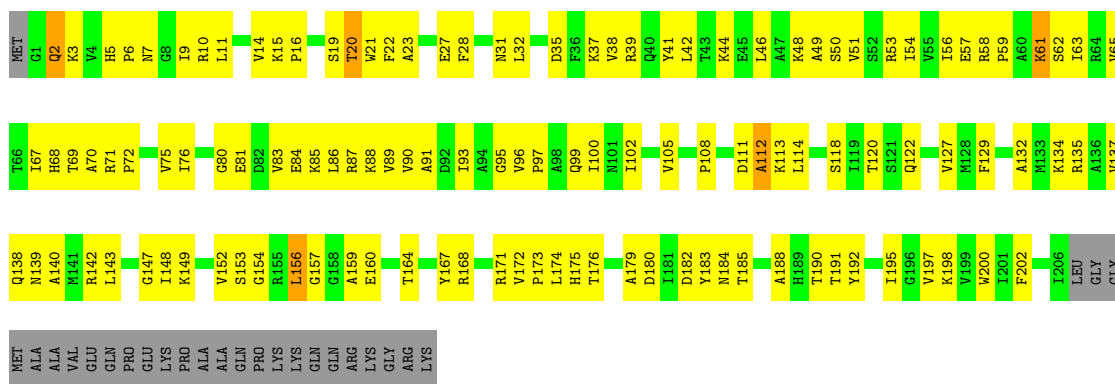


• Molecule 32: 30S ribosomal protein S2

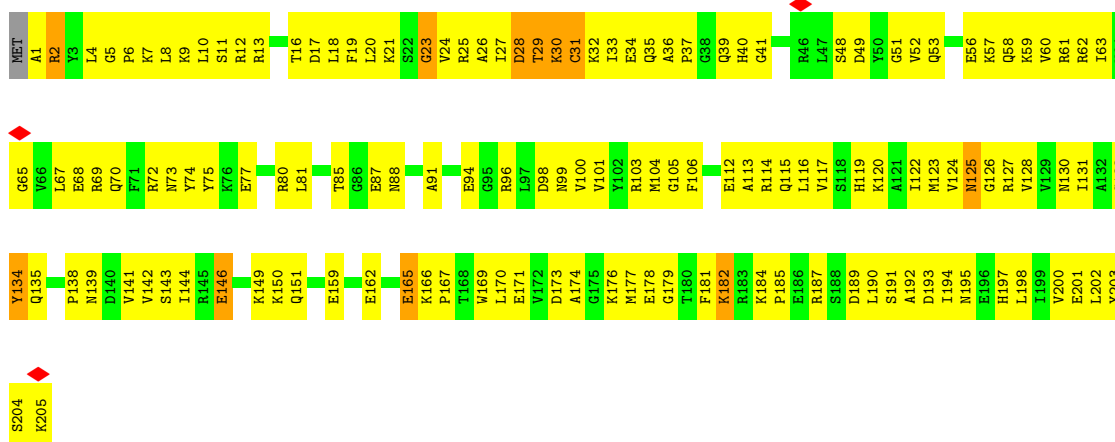




• Molecule 33: 30S ribosomal protein S3

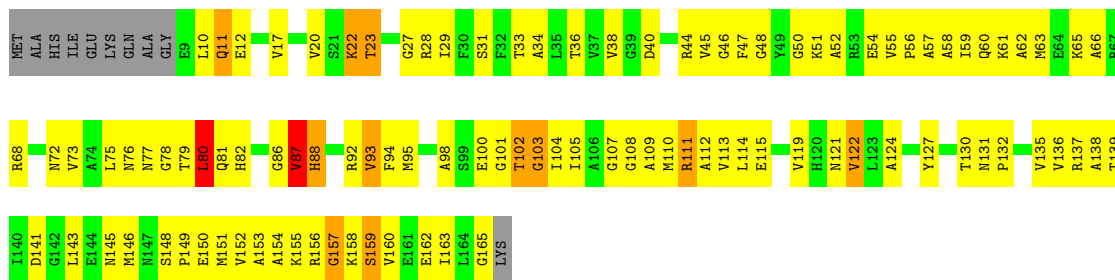


• Molecule 34: 30S ribosomal protein S4

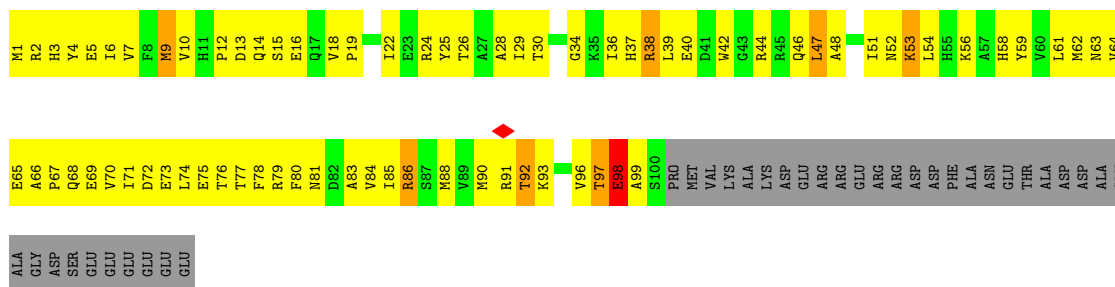
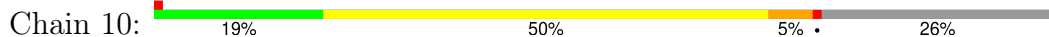


• Molecule 35: 30S ribosomal protein S5

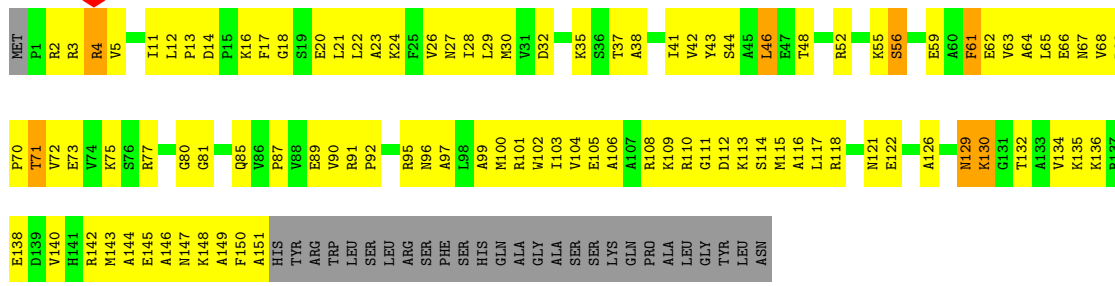




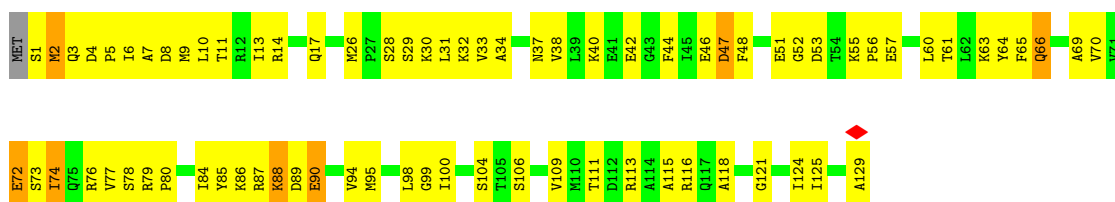
• Molecule 36: 30S ribosomal protein S6



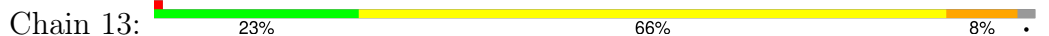
• Molecule 37: 30S ribosomal protein S7

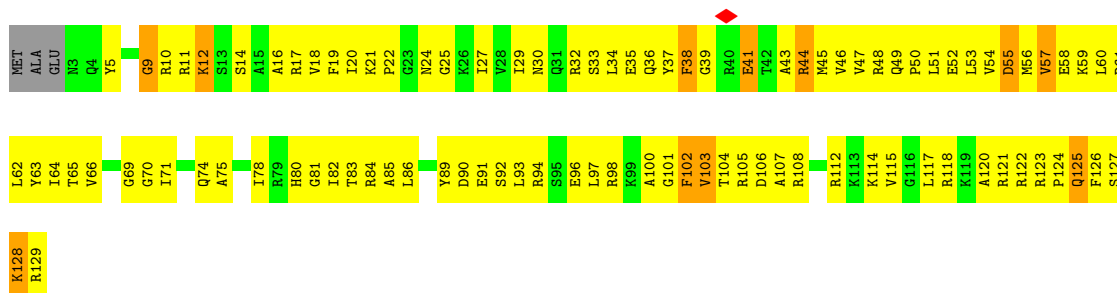


• Molecule 38: 30S ribosomal protein S8

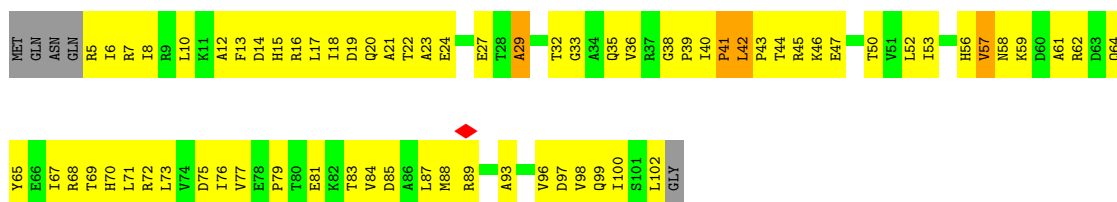
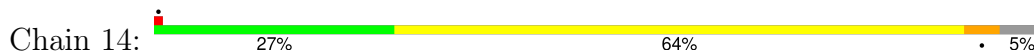


• Molecule 39: 30S ribosomal protein S9

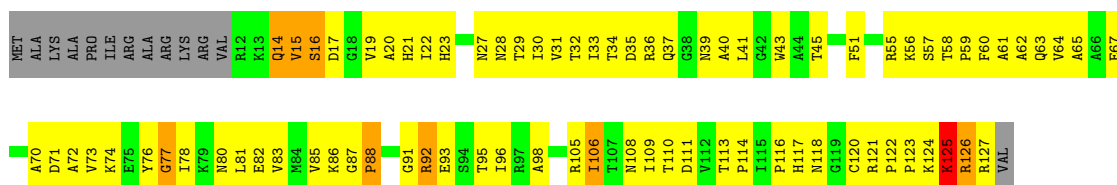




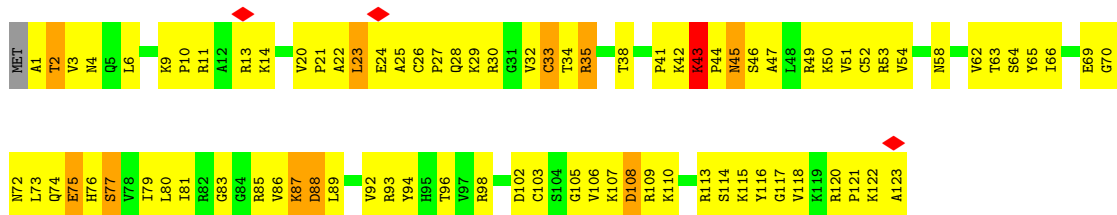
• Molecule 40: 30S ribosomal protein S10



• Molecule 41: 30S ribosomal protein S11

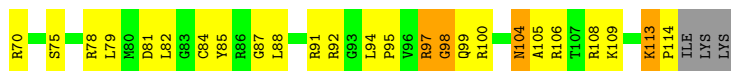


• Molecule 42: 30S ribosomal protein S12

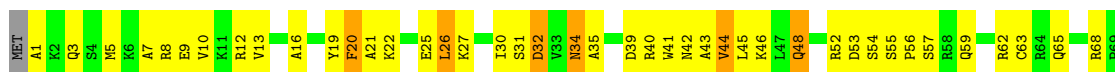
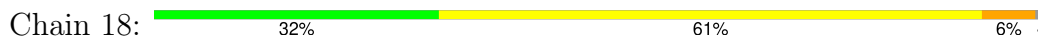


• Molecule 43: 30S ribosomal protein S13





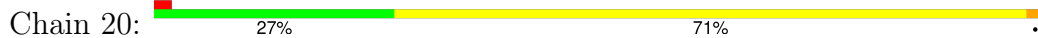
• Molecule 44: 30S ribosomal protein S14



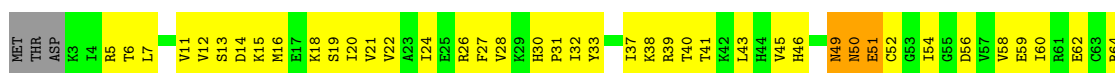
• Molecule 45: 30S ribosomal protein S15



• Molecule 46: 30S ribosomal protein S16

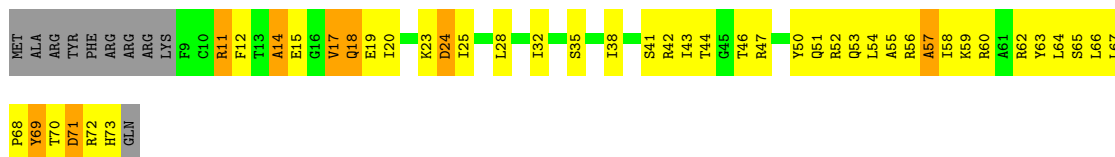


• Molecule 47: 30S ribosomal protein S17

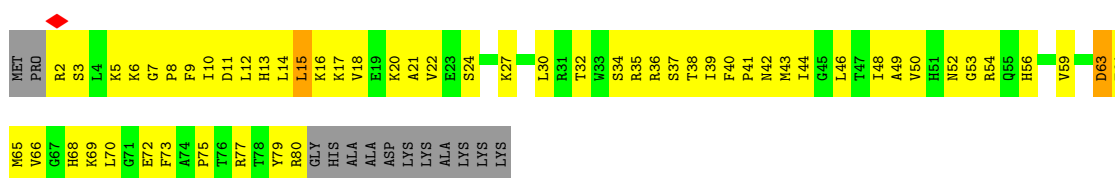


• Molecule 48: 30S ribosomal protein S18

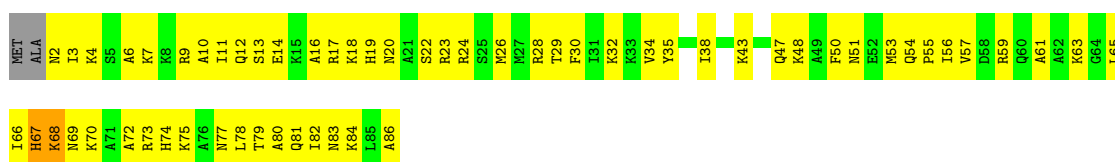




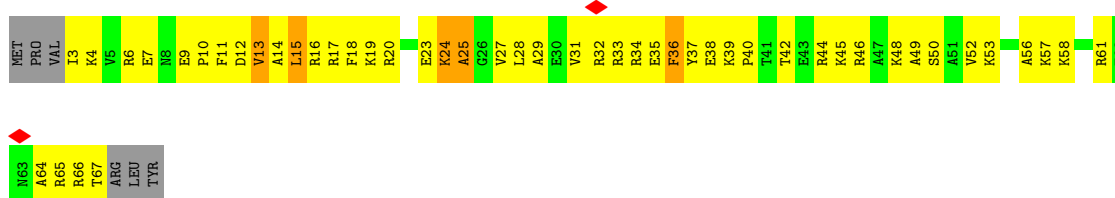
• Molecule 49: 30S ribosomal protein S19



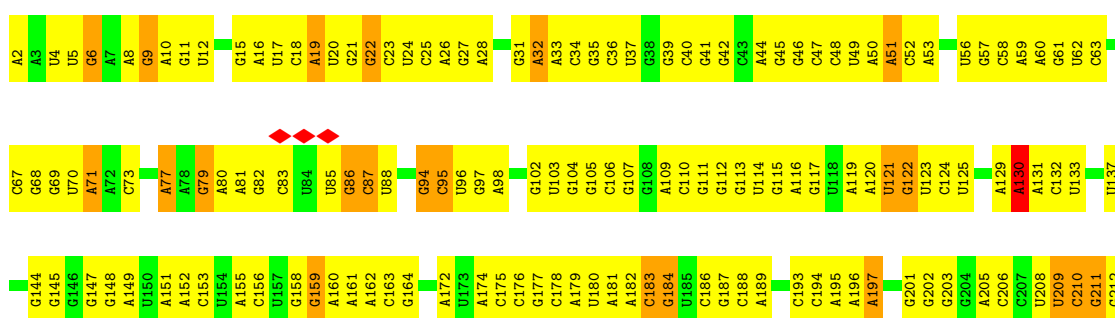
• Molecule 50: 30S ribosomal protein S20



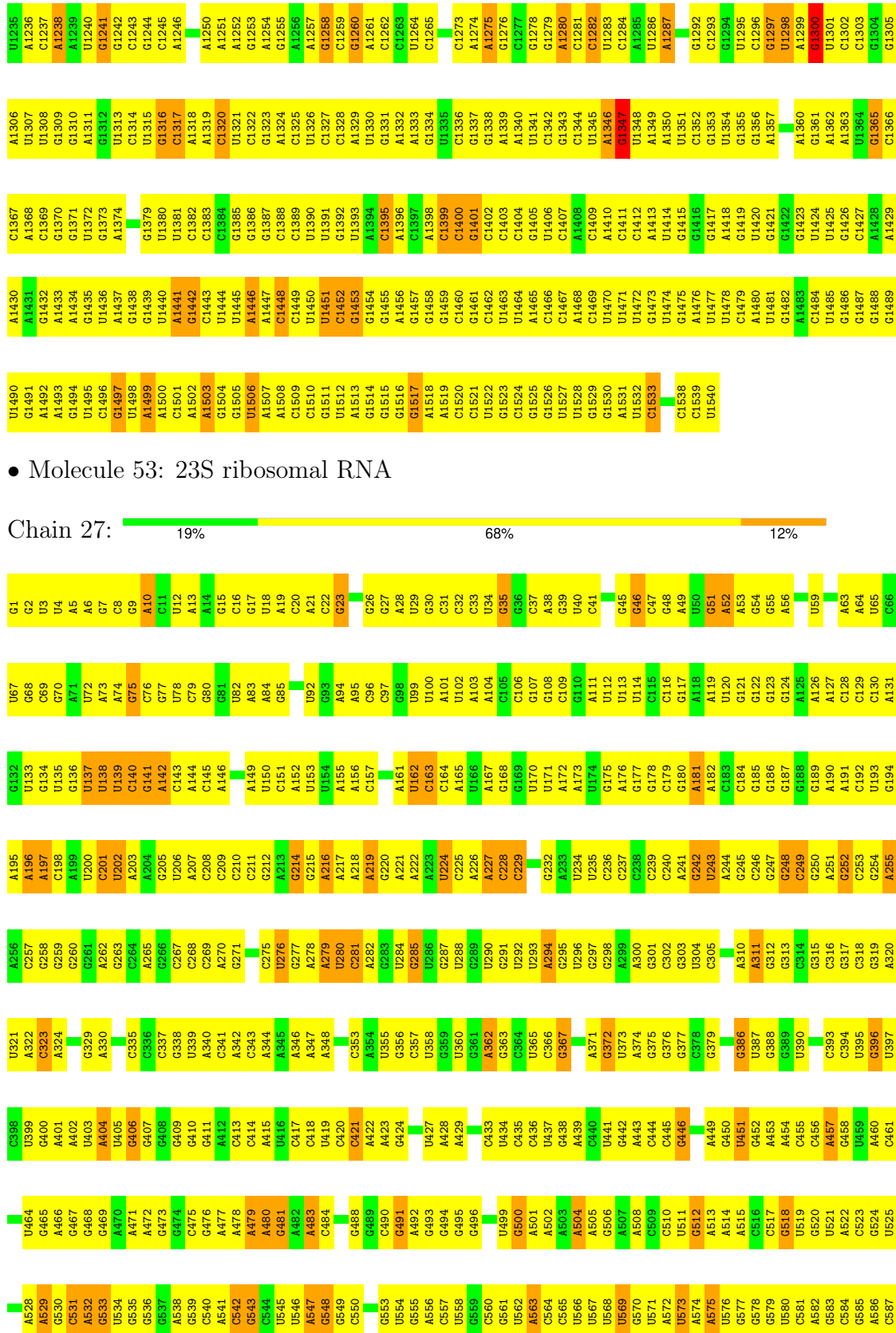
• Molecule 51: 30S ribosomal protein S21



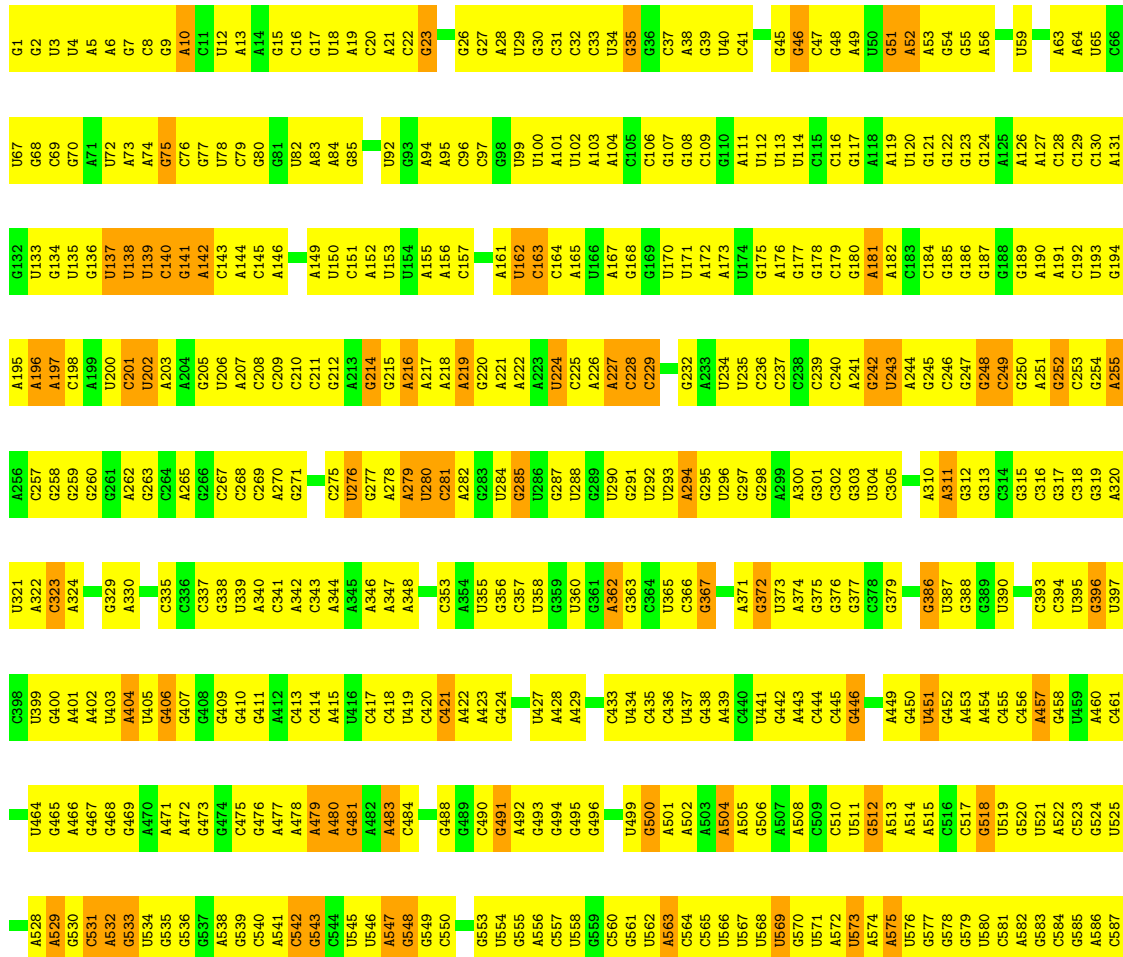
• Molecule 52: 16S ribosomal RNA



A1170	G1108	C1045	A978	U1916	C856	U788	G726	A663	U593	A466	G402	C339	A279	G213
A1171	C1109	A1046	C979	G917	C857	U789	G727	G664	U594	U467	C403	C339	C280	C214
G1174	A1110	G1047	C980	A918	G858	A790	A728	A665	A532	A468	G404	U340	G281	C215
G1175	A1111	G1048	C981	A919	G859	G791	A729	G666	A533	C341	G405	U341	A282	U216
A1180	C1112	U1049	U982	U920	A860	A792	G730	G667	U534	C342	G406	C342	U283	C217
G1181	C1113	U1050	U983	U921	G861	U793	G731	G668	A535	C343	U407	C343	U284	U218
G1182	C1114	C1051	U984	G922	C862	A794	G732	G669	C536	C344	A408	C344	C284	U219
G1183	U1115	U1052	C987	A923	U863	G795	C735	G670	G537	C345	A409	C345	C285	G220
G1184	U1116	G1053	C988	C924	A864	C796	C736	G671	G538	G346	A410	G346	C286	G221
G1185	U1117	C1054	U989	G925	C865	C797	C737	U672	A411	G347	G410	G347	U287	C222
G1186	U1118	U1055	C990	G926	U866	U798	C738	A673	G540	C352	A412	C352	U288	A223
G1187	C1119	U1056	U991	G927	G867	G799	G739	G674	G541	C353	G413	C353	U289	U224
G1190	U1120	G1057	U992	G928	C868	G800	C739	A675	G542	C354	A414	C354	C290	C225
G1191	U1121	U1058	C993	G929	C869	U801	U740	A676	U543	C355	A415	C355	U291	G226
G1192	U1122	C1059	A994	C932	U870	A802	G741	U677	G544	C356	A416	C356	G292	G227
G1193	U1123	C995	C995	G933	U871	G803	G742	U678	G545	C357	G417	C357	G293	A228
G1194	U1124	U996	A996	G934	A872	A807	A743	A679	C546	C358	A418	C358	U294	U229
G1195	U1125	U997	C997	G935	A873	C808	G744	C680	A547	C359	G419	C359	U295	G230
G1196	U1126	C1063	C998	A935	G874	C808	G745	A681	G548	C360	U420	C360	U296	U231
G1197	U1127	U1064	C999	C936	U875	G809	A746	G682	C549	C361	U421	C361	U297	G232
G1198	U1128	U1065	A1000	A937	C876	C810	A747	G683	G550	C362	U422	C362	U300	C233
G1199	U1129	U1066	C1001	G938	C877	C811	G748	U684	C490	C363	G423	C363	G299	C234
G1200	U1130	C1067	C1001	G939	A878	C812	A749	G685	G491	C364	G424	C364	A300	C235
G1201	U1131	A1067	C1001	G940	C879	C812	C750	U686	C492	C365	G425	C365	G301	A236
G1202	U1132	U1070	A1004	G941	C880	G815	U751	A687	A493	C366	U426	C366	G302	G237
G1203	U1133	C1071	U1005	G942	C881	A816	G752	G688	U555	C367	U427	C367	A303	A238
G1204	U1134	G1072	U1007	G943	C882	C817	A753	C689	C556	C368	U428	C368	U304	U239
G1205	U1135	U1073	U1008	G944	C883	C818	C754	C690	G557	C369	G429	C369	G305	G242
G1206	U1136	G1074	U1009	G945	U884	A819	G755	C691	C558	C370	U430	C370	A306	A243
G1207	U1137	U1075	U1010	G946	C885	U820	C756	U692	A498	C371	A431	C371	C307	G243
G1208	U1138	U1076	U1011	G947	C886	G821	U757	G693	A499	C372	A432	C372	C368	G244
G1209	U1139	U1077	U1012	G948	C887	U822	C758	A694	G500	C373	A433	C373	A309	A246
G1210	U1140	U1078	U1013	G949	C888	C823	A759	U695	C501	C374	A434	C374	G310	G247
G1211	U1141	G1079	U1014	G950	C889	G824	G760	A696	A502	C375	U435	C375	C311	A250
G1212	U1142	A1081	G1015	G951	C890	A825	G761	U697	C503	C376	G436	C376	G312	G251
G1213	U1143	U1082	A1016	G952	U891	C826	U762	C698	C504	C377	U437	C377	A313	G252
G1214	U1144	G1083	U1019	G953	C892	U827	G763	C699	G505	C378	U438	C378	C314	U252
G1215	U1145	U1084	U1020	G954	C893	U828	C764	G703	G506	C379	U439	C379	A315	A253
G1216	U1146	U1085	U1021	G955	C894	G829	G765	A704	C507	C380	C440	C380	G316	G254
G1217	U1147	U1086	U1022	G956	C895	G830	A766	G705	C508	C381	C441	C381	U317	G255
G1218	U1148	G1087	U1023	G957	C896	A831	A767	G706	G570	C382	G445	C382	G318	U256
G1219	U1149	U1088	G1024	G958	C897	C832	A768	A706	A383	C383	G446	C383	G319	G257
G1220	U1150	G1089	U1025	G959	C898	G833	G769	U707	A384	C384	G447	C384	G320	G258
G1221	A1151	U1090	U1026	G960	C899	U834	C770	C708	C385	C385	G448	C385	A321	G259
G1222	G1154	U1091	C1027	G961	A900	U835	G771	U709	C386	C386	A449	C386	C322	G260
G1223	A1155	U1092	U1028	G962	A901	G836	U772	G710	C387	C387	G449	C387	U323	U261
G1224	A1156	G1093	U1029	G963	G902	U837	G773	G711	C388	C388	G450	C388	G324	A262
G1225	G1157	U1094	U1030	G964	G903	C838	G776	A712	C389	C389	A451	C389	A325	A263
G1226	U1158	U1095	G1031	G965	U905	C840	A777	G713	C646	C390	A452	C390	G326	C264
G1227	U1159	C1096	G1032	G966	U906	C841	G778	G714	C647	C391	A453	C391	A327	G265
G1228	G1160	U1097	U1033	G967	A906	U835	G779	A715	C648	C392	A454	C392	C328	G266
G1229	C1161	C1098	G1034	G968	U907	U842	C779	A716	A520	C393	A455	C393	A329	G267
G1230	U1162	U1098	C1037	G969	A908	U843	A780	U717	G521	C394	G457	C394	C330	U268
G1231	A1163	G1099	U1038	G970	A909	G844	A781	A718	C522	C395	U458	C395	G331	U269
G1232	U1164	C1100	G1039	G971	C910	A845	A782	U657	A523	C396	A459	C396	G332	A270
G1233	U1165	U1101	U1040	G972	C911	G846	C783	G721	C524	C397	A460	C397	U333	C271
G1234	U1166	A1102	G1041	G973	C912	G847	A784	G722	C525	C398	G462	C398	U334	C272
G1235	U1167	C1103	U1042	G974	C913	U854	G785	U723	C526	C399	U463	C399	C335	U273
G1236	U1168	U1104	A1044	G975	A913	U854	G786	U724	C527	C400	U464	C400	A336	A274
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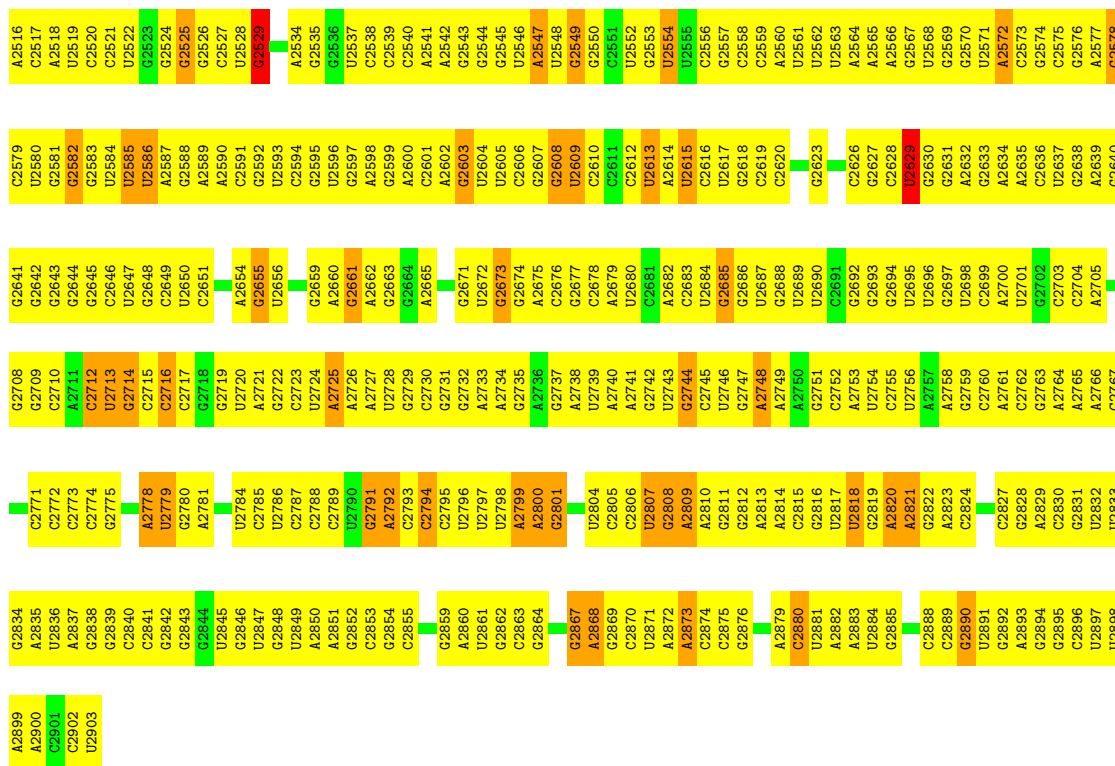


• Molecule 53: 23S ribosomal RNA

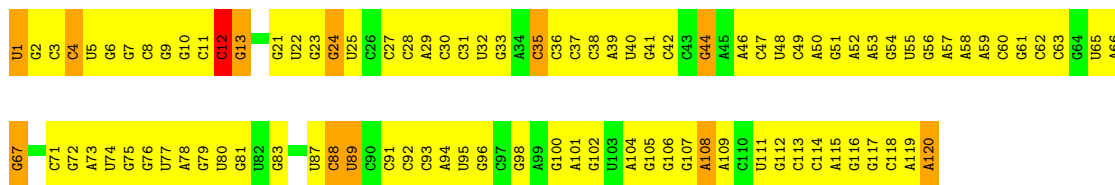
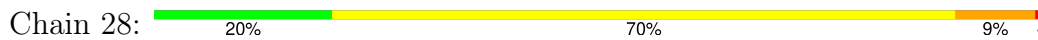


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C1498	A1434	A1367	G1295	G1106	C1045	A980	A918	U850	G786	U724	U658	A590
G1499	G1435	G1368	A1302	G1107	A1046	A981	A919	C851	C787	U725	G659	U591
G1500	G1436	G1369	G1303	A1111	G1047	C982	A920	U852	A788	G726	C660	A592
G1501	C1437	A1370	U1174	A1112	A1048	A984	C922	C853	A789	G727	A661	U593
A1502	U1438	G1371	A1175	G1113	C1049	A985	G923	C854	G792	C728	G662	U594
A1503	A1439	U1372	U1176	C1114	G1051	C986	G924	G855	A793	G729	G663	C595
A1504	U1440	A1308	G1177	G1115	C1052	A988	A925	G856	A794	A730	G664	U596
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A1506	U1442	A1375	G1179	A1119	A1054	A990	A927	G858	C796	C732	U666	U598
A1507	U1443	G1376	U1180	G1120	A1055	A991	A928	G859	C797	A733	U667	A599
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G1516	U1452	A1387	U1189	G1128	G1063	U999	A936	U871	G805	A742	A676	A608
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G1523	C1464	A1262	C1196	C1135	A1070	A1008	A943	A878	C812	A749	U615	A615
G1524	G1465	G1263	G1197	G1136	G1071	A1009	A944	G879	U813	G750	G683	A616
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G1527	U1468	G1266	C1200	G1139	G1074	U1012	C948	G882	C816	U754	U667	G622
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G1529	A1470	A1268	A1204	U1141	C1076	A1014	G950	U884	G818	A756	U668	G623
C1531	C1471	C1270	A1205	A1142	A1077	U1015	C951	A886	A819	G757	A626	A627
C1532	U1472	G1271	U1209	A1143	C1078	U1018	G954	U887	A820	C758	A627	A627
C1533	G1473	A1272	G1210	C1144	A1080	U1019	U955	C888	A821	G759	C628	G629
U1534	U1474	U1273	G1211	G1146	U1081	A1020	G956	C889	C823	G760	A631	G630
C1536	G1475	G1278	C1212	U1148	U1083	G1022	C957	C890	U824	A761	G631	A631
G1537	U1476	G1279	G1213	G1149	A1084	U1023	U958	C891	A825	U762	G632	A632
U1542	G1477	G1280	A1213	C1150	A1085	G1024	A959	A892	U826	A763	G633	A633
G1543	U1478	G1281	U1214	A1151	A1086	G1025	A960	C893	U827	C765	C634	C634
A1548	C1479	U1282	G1215	C1152	G1087	G1026	G961	U894	U828	U766	C635	C635
A1549	G1481	C1283	U1216	C1153	A1088	A1027	U962	U895	A829	U767	G636	G636
A1550	U1482	A1284	G1217	G1154	A1089	A1028	U963	A896	G830	G768	A637	A637
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			U1231		A1103			C915	U847	A783	A721	A655

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G1949	G1950	U1951	A1952	C1953	C1954	U1955	U1956	C1957	C1958	C1959	A1960	C1961	C1962	C1963	C1964	C1965	C1966	C1967	C1968	A1969	U1970	C1971	C1972	C1973	C1974	C1975	C1976	C1977	C1978	C1979	C1980	C1981	C1982	C1983	C1984	C1985	C1986	C1987	C1988	C1989	C1990	C1991	C1992	C1993	C1994	C1995	C1996	C1997	C1998	C1999	C2000	C2001	C2002	C2003	C2004	C2005	C2006	U2007	C2008										
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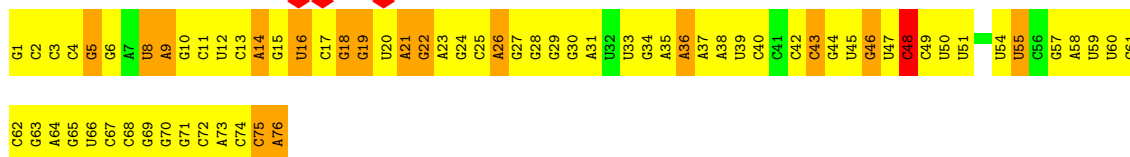
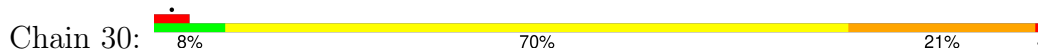
• Molecule 54: 5S ribosomal RNA



• Molecule 55: mRNA

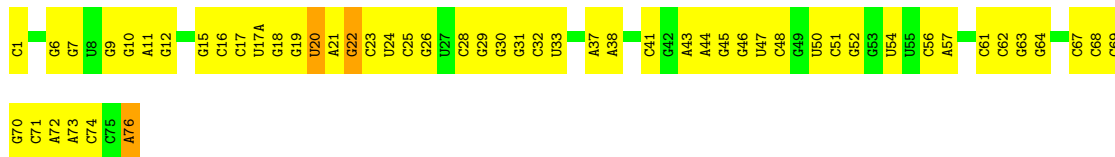


• Molecule 56: A-site tRNAPhe



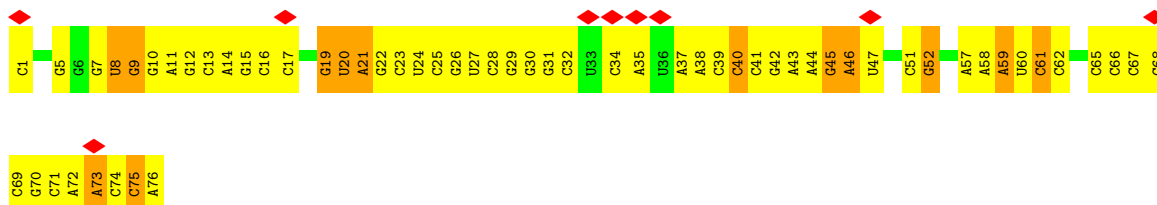
• Molecule 57: P-site tRNAfMet

Chain 31: 30% 66%



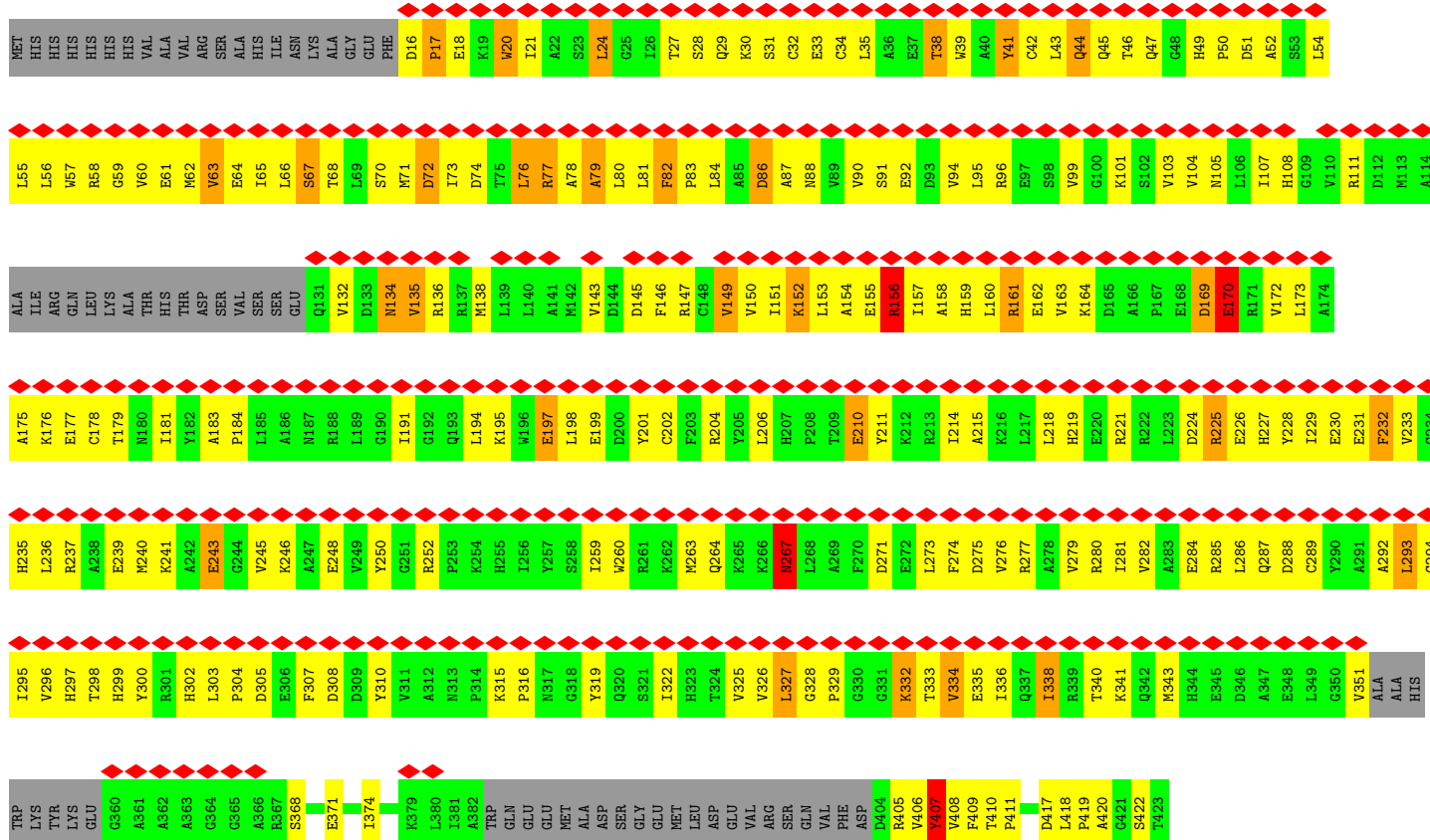
• Molecule 58: E-site tRNAfMet

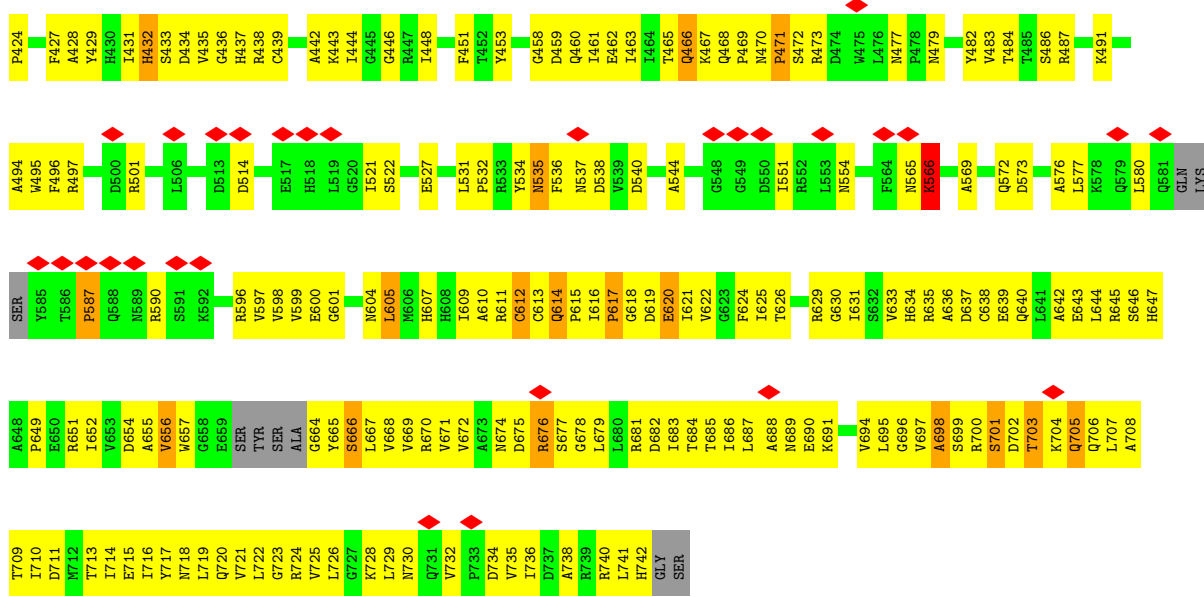
Chain 32: 12% 22% 61% 17%



• Molecule 59: GTP pyrophosphokinase

Chain 33: 35% 47% 48% 6% 10%





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
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
Maximum map value	0.503	Depositor
Minimum map value	-0.155	Depositor
Average map value	-0.006	Depositor
Map value standard deviation	0.042	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	393.6, 393.6, 393.6	wwPDB
Map dimensions	480, 480, 480	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82, 0.82, 0.82	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 >5	RMSZ	# Z >5
1	A	0.34	0/2121	0.71	0/2852
2	B	0.37	0/1586	0.70	0/2134
3	C	0.39	0/1571	0.70	0/2113
4	D	0.35	0/1434	0.62	0/1926
5	E	0.32	0/1343	0.65	0/1816
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
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
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
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%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
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
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
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%)
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 [i](#)

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
34:8:116:LEU:HB3	34:8:122:ILE:HD11	1.33	1.09
59:33:63:VAL:HG11	59:33:80:LEU:HG	1.34	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
53:27:742:A:H2'	53:27:743:A:C8	1.91	1.06
53:27:1869:G:H3'	53:27:1870:C:H5''	1.32	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
7:G:58:THR:HG21	7:G:82:ILE:H	1.25	1.00
53:27:1659:G:H2'	53:27:1660:G:H5''	1.43	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
4:D:139:GLU:HA	26:Z:28:VAL:HG13	1.47	0.95
7:G:88:HIS:HB3	7:G:89:PRO:HD3	1.49	0.95
9:I:27:ARG:HH22	53:27:1142:A:H4'	1.32	0.95
32:6:104:LYS:NZ	52:26:1073:U:H4'	1.82	0.94
41:15:109:ILE:HD12	51:25:16:ARG:HD2	1.49	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
59:33:62:MET:CE	59:33:79:ALA:HA	1.97	0.94
59:33:327:LEU:HA	59:33:332:LYS:HA	1.49	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
34:8:21:LYS:HE3	34:8:25:ARG:HB3	1.51	0.93
48:22:17:VAL:HG22	48:22:18:GLN:H	1.31	0.93
11:K:77:ILE:HD11	11:K:110:VAL:HG13	1.50	0.93
41:15:34:THR:HG22	41:15:40:ALA:HA	1.46	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
35:9:107:GLY:HA3	52:26:9:G:H5'	1.52	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
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
53:27:184:C:H2'	53:27:185:G:H8	1.33	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
1:A:129:LEU:HD11	1:A:134:ILE:HG13	1.51	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
40:14:57:VAL:HG22	40:14:58:ASN:H	1.35	0.91
52:26:235:C:H2'	52:26:236:A:C8	2.05	0.91
52:26:1033:G:H2'	52:26:1034:G:H4'	1.50	0.91
33:7:185:THR:HG22	33:7:198:LYS:HG2	1.53	0.91
50:24:34:VAL:HG11	50:24:78:LEU:HD21	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
52:26:828: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
52:26:1129:C:H2'	52:26:1139:G:N7	1.86	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
41:15:116:PRO:HB3	52:26:676:A:H1'	1.51	0.90
47:21:64:ARG:HD2	52:26:264:C:H4'	1.54	0.90
14:N:62:LEU:HD13	14:N:70:ALA:HA	1.53	0.90
37:11:129:ASN:HA	37:11:134:VAL:HG11	1.54	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
21:U:72:VAL:HG12	21:U:93:ARG:HA	1.52	0.88
36:10:66:ALA:HB1	36:10:67:PRO:HD2	1.56	0.88
3:C:60:TRP:HE1	3:C:69:ARG:HG3	1.37	0.88
35:9:80:LEU:HD13	35:9:122:VAL:HG11	1.54	0.88
44:18:80:ARG:HA	44:18:83:VAL:HG12	1.55	0.88
14:N:35:ILE:HG22	14:N:53:THR:HG23	1.55	0.88
53:27:596:U:H2'	53:27:597:G:C8	2.09	0.88
53:27:2553:G:H1'	53:27:2582:G:H21	1.38	0.88
59:33:96:ARG:HG2	59:33:104:VAL:HG11	1.54	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
15:O:52:ARG:HH21	53:27:2720:U:H5''	1.39	0.88
39:13:91:GLU:HA	39:13:94:ARG:HB2	1.53	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
59:33:81:LEU:HA	59:33:84:LEU:HD13	1.54	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
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
32:6:53:LEU:HD22	32:6:219:THR:HG21	1.55	0.87
52:26:664:G:N2	52:26:741:G:H1	1.71	0.87
4:D:48:LEU:HA	4:D:51:ASN:HD22	1.39	0.87
53:27:1261:C:H2'	53:27:1262:A:H5''	1.56	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
34:8:61:ARG:HH21	34:8:67:LEU:HA	1.40	0.86
53:27:1076:C:H2'	53:27:1077:A:H8	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
53:27:955:U:H5	53:27:962:G:H1	1.23	0.86
53:27:2685:G:H2'	53:27:2686:G:H8	1.41	0.86
8:H:123:ALA:HB1	53:27:1081:U:C5'	2.06	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
18:R:3:THR:HG21	18:R:58:ALA:HB2	1.55	0.86
34:8:28:ASP:O	34:8:30:LYS:N	2.07	0.86
59:33:284:GLU:OE2	59:33:341:LYS:HE2	1.74	0.86
59:33:61:GLU:O	59:33:64:GLU:HG2	1.76	0.86
9:I:108:MET:HE1	53:27:1138:G:H21	1.39	0.85
39:13:17:ARG:NH2	52:26:1129:C:H5''	1.91	0.85
53:27:2604:U:H2'	53:27:2605:U:C6	2.10	0.85
3:C:57:LYS:HE3	3:C:73:ILE:HG21	1.59	0.85
37:11:12:LEU:HD12	37:11:13:PRO:HD2	1.56	0.85
4:D:76:PHE:HE2	53:27:2310:C:H2'	1.39	0.85
59:33:197:GLU:HG2	59:33:201:TYR:CE2	2.12	0.85
1:A:124:LYS:HD2	1:A:125:PRO:HD2	1.56	0.85
59:33:74:ASP:HA	59:33:77:ARG:NH2	1.91	0.85
59:33:444:ILE:HG22	59:33:461:ILE:HD12	1.58	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
39:13:17:ARG:HH22	52:26:1129:C:H5''	1.39	0.85
46:20:20:VAL:HG23	46:20:35:ARG:HA	1.59	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
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
41:15:124:LYS:HD3	52:26:780:A:H5''	1.58	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
34:8:146:GLU:HA	34:8:149:LYS:HB2	1.59	0.84
46:20:39:PHE:HA	46:20:50:THR:HG23	1.59	0.84
53:27:581:C:H2'	53:27:582:A:C8	2.13	0.84
59:33:24:LEU:HD21	59:33:70:SER:CA	2.07	0.84
7:G:55:VAL:HA	53:27:1084:A:C5'	2.08	0.83
19:S:61:LEU:HD11	19:S:82:LYS:HE2	1.58	0.83
53:27:2162:G:H2'	53:27:2163:A:H5'	1.59	0.83
36:10:86:ARG:HD3	48:22:63:TYR:O	1.78	0.83
39:13:98:ARG:HG3	39:13:103:VAL:HG21	1.61	0.83
59:33:293:LEU:HD12	59:33:322:ILE:HG21	1.59	0.83
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
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
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
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
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
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
5:E:154:GLU:HG2	5:E:156:TYR:H	1.43	0.83
33:7:31:ASN:HD21	33:7:58:ARG:HD2	1.43	0.83
47:21:45:VAL:HG21	47:21:60:ILE:HD13	1.61	0.83
9:I:27:ARG:NH2	53:27:1142:A:H4'	1.94	0.82
24:X:21:LEU:HA	24:X:25:GLN:HB3	1.58	0.82
52:26:940:C:H2'	52:26:941:G:C8	2.14	0.82
53:27:565:C:H2'	53:27:566:U:C6	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:147:ARG:HA	59:33:150:VAL:HG12	1.60	0.82
11:K:79:LEU:HD12	11:K:112:LEU:HA	1.60	0.82
32:6:174:GLU:HA	32:6:177:ASN:HD22	1.43	0.82
52:26:695:A:H2'	52:26:696:A:C8	2.14	0.82
53:27:799:G:H5''	53:27:800:A:H2'	1.60	0.82
53:27:2453:A:H2'	53:27:2454:G:H8	1.43	0.82
15:O:59:THR:HG22	15:O:72:VAL:HG12	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
53:27:435:C:H2'	53:27:436:C:H5'	1.59	0.82
9:I:56:VAL:HB	9:I:124:VAL:HG12	1.62	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
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
34:8:149:LYS:HG2	34:8:150:LYS:H	1.43	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
8:H:4:VAL:HG13	8:H:7:TYR:HB2	1.61	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
34:8:16:THR:HG22	34:8:17:ASP:H	1.44	0.81
51:25:4:LYS:HE3	51:25:6:ARG:HB2	1.58	0.81
52:26:112:G:H21	52:26:354:G:H5'	1.45	0.81
52:26:1052:U:H2'	52:26:1200:C:H41	1.44	0.81
4:D:147:ARG:HD3	4:D:148:VAL:N	1.95	0.81
31:5:2:LYS:HB2	31:5:35:GLN:HB3	1.59	0.81
53:27:2243:U:H2'	53:27:2244:U:C6	2.12	0.81
52:26:1527:U:H2'	52:26:1528:U:C6	2.16	0.81
53:27:833:A:H2'	53:27:834:G:H8	1.46	0.81
53:27:1594:U:H2'	53:27:1595:C:C6	2.15	0.81
3:C:46:GLN:HB2	3:C:86:ALA:HB1	1.62	0.81
41:15:16:SER:HA	41:15:78:ILE:HA	1.63	0.81
52:26:920:U:H2'	52:26:921:U:C6	2.15	0.81
52:26:1033:G:C2'	52:26:1034:G:H4'	2.09	0.81
53:27:1697:G:H3'	53:27:1698:A:H5''	1.63	0.81
8:H:21:PRO:HB2	8:H:22:PRO:HD3	1.63	0.81
35:9:156:ARG:HD2	38:12:42:GLU:HG3	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:14:36:VAL:HG23	40:14:76:ILE:HA	1.61	0.81
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
4:D:35:LEU:HG	4:D:153:ILE:HG22	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
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
32:6:39:ILE:HG22	32:6:40:ILE:H	1.46	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
15:O:3:ILE:HD12	15:O:3:ILE:H	1.46	0.80
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
34:8:123:MET:HA	34:8:128:VAL:HA	1.63	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
8:H:25:PRO:O	8:H:29:GLN:HG2	1.80	0.80
39:13:83:THR:HG21	39:13:102:PHE:HB3	1.63	0.80
53:27:890:C:H2'	53:27:891:G:O4'	1.80	0.80
53:27:2092:U:H4'	53:27:2093:G:H5''	1.61	0.80
32:6:183:PHE:HB3	32:6:197:PHE:HD2	1.46	0.80
53:27:2087:G:H2'	53:27:2088:A:C8	2.16	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
59:33:409:PHE:O	59:33:460:GLN:HA	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
5:E:23:ILE:HD13	5:E:71:LEU:HD21	1.61	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
6:F:44:ILE:O	6:F:48:GLU:HG3	1.82	0.80
34:8:169:TRP:CD1	34:8:185:PRO:HG3	2.17	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
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
5:E:162:ARG:CZ	5:E:168:VAL:HG21	2.12	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
3:C:79:ARG:NH2	53:27:471:A:H5''	1.98	0.79
51:25:49:ALA:O	51:25:53:LYS:HG3	1.82	0.79
6:F:68:ARG:HA	6:F:71:LYS:HB2	1.64	0.79
34:8:103:ARG:HD2	34:8:167:PRO:HG2	1.65	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
18:R:20:VAL:HG11	18:R:44:ALA:HA	1.65	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
6:F:4:ILE:HG22	6:F:37:VAL:O	1.82	0.79
23:W:28:PHE:HE2	53:27:379:G:H21	1.31	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
53:27:355:U:H2'	53:27:356:G:C8	2.18	0.79
53:27:1825:U:H2'	53:27:1826:G:C8	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:6:96:LEU:HB2	32:6:99:MET:HB3	1.64	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
59:33:43:LEU:HA	59:33:56:LEU:HD12	1.65	0.79
1:A:200:MET:HB2	53:27:1820:U:C2	2.16	0.78
35:9:114:LEU:O	35:9:119:VAL:HG22	1.83	0.78
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
59:33:17:PRO:HG3	59:33:39:TRP:HZ2	1.46	0.78
59:33:77:ARG:NH1	59:33:103:VAL:HG21	1.98	0.78
32:6:183:PHE:HB3	32:6:197:PHE:CD2	2.18	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
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
5:E:51:PHE:CZ	5:E:68:ARG:HA	2.17	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
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
36:10:78: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:H3'	53:27:613:A:N3	1.98	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
36:10:38:ARG:HE	36:10:97:THR:HA	1.48	0.78
45:19:71:ARG:HH22	52:26:754:C:H5'	1.48	0.78
52:26:1352:C:H2'	52:26:1353:G:C8	2.19	0.78
53:27:1502:A:C2'	53:27:1503:A:H5''	2.12	0.78
59:33:611:ARG:HA	59:33:614:GLN:HE21	1.49	0.78
59:33:613:CYS:HA	59:33:742:HIS:HB3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:96:THR:HA	6:F:115:VAL:HG11	1.66	0.78
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
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
53:27:1478:G:H2'	53:27:1479:G:H8	1.47	0.78
12:L:21:ALA:HB1	12:L:100:LYS:HD3	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
19:S:7:LEU:HD13	19:S:49:LYS:HG3	1.67	0.77
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
33:7:51:VAL:HG21	33:7:54:ILE:HG23	1.66	0.77
52:26:769:G:H4'	52:26:1513:A:H4'	1.67	0.77
52:26:1356:G:H2'	52:26:1357:A:C8	2.19	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
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
53:27:59:U:O2'	53:27:73:A:H2'	1.84	0.77
53:27:609:A:H2'	53:27:610:C:O4'	1.85	0.77
53:27:1923:U:H2'	53:27:1924:C:H6	1.49	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: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
53:27:20:C:H2'	53:27:21:A:C8	2.19	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
53:27:2396:G:H2'	53:27:2397:G:H8	1.48	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
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
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)
13:M:2:ARG:HG3	13:M:5:LYS:HB2	1.65	0.77
43:17:109:LYS:HD2	52:26:1227:A:OP2	1.84	0.77
49:23:10:ILE:HG22	49:23:38:THR:H	1.49	0.77
59:33:20:TRP:CD1	59:33:64:GLU:HA	2.20	0.77
59:33:674:ASN:HD21	59:33:736:ILE:HG21	1.49	0.77
4:D:3:LEU:HG	4:D:100:GLU:HG2	1.67	0.77
42:16:98:ARG:HB2	42:16:116:TYR:HA	1.64	0.77
53:27:873:C:H2'	53:27:874:G:C8	2.20	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
21:U:9:ARG:HG2	21:U:41:GLU:HB2	1.66	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
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
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
7:G:59:LEU:C	7:G:61:ARG:H	1.89	0.77
32:6:104:LYS:HZ3	52:26:1073:U:H4'	1.46	0.77
44:18:80:ARG:HA	44:18:83:VAL:CG1	2.13	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
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
53:27:955: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
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
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
53:27:1076:C:H2'	53:27:1077:A:C8	2.20	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
58:32:7:G:H3'	58:32:8:U:H5'	1.68	0.76
14:N:51:ALA:HB3	14:N:78:VAL:HG22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:640:C:H2'	53:27:641:U:C6	2.21	0.76
53:27:1173:U:C2'	53:27:1174:U:H4'	2.16	0.76
42:16:41:PRO:HD2	42:16:46:SER:HA	1.68	0.76
53:27:873:C:H2'	53:27:874:G:H8	1.50	0.76
53:27:2082:A:H2'	53:27:2083:G:O4'	1.85	0.76
59:33:616:ILE:HG21	59:33:667:LEU:HD12	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
50:24:14:GLU:HA	50:24:17:ARG:HG2	1.67	0.76
35:9:52:ALA:HB3	35:9:58:ALA:HB2	1.68	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
32:6:39:ILE:H	32:6:39:ILE:HD12	1.48	0.76
32:6:113:LEU:HA	32:6:143:LEU:HD13	1.67	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
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
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
21:U:9:ARG:HH22	21:U:12:GLN:HA	1.52	0.75
34:8:125:ASN:HA	34:8:141:VAL:HG23	1.68	0.75
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
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
53:27:197:A:H4'	53:27:2069:G:OP2	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
53:27:2286: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
7:G:28:ALA:HA	7:G:81:LEU:HB3	1.67	0.75
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
52:26:429:U:H4'	52:26:430:A:O5'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:A:106:PRO:HG2	1:A:109:LEU:HB2	1.68	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
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
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
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
53:27:680: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
53:27:1258:U:H2'	53:27:1259:G:C8	2.22	0.75
9:I:93:ILE:HD13	9:I:100:VAL:HG21	1.68	0.74
52:26:1347:G:N2	52:26:1373:G:H2'	2.02	0.74
53:27:634:C:H2'	53:27:635:C:C6	2.21	0.74
53:27:1096:A:H3'	53:27:1097:U:H5''	1.67	0.74
14:N:7:ARG:HA	14:N:10:ARG:HH11	1.52	0.74
41:15:118:ASN:HB2	52:26:718:A:H5'	1.69	0.74
52:26:309:A:H2'	52:26:310:G:C8	2.22	0.74
52:26:317:U:H2'	52:26:318:G:H8	1.52	0.74
52:26:955:U:C1'	52:26:1227:A:H61	2.00	0.74
53:27:755:U:H2'	53:27:756:A:C8	2.22	0.74
59:33:20:TRP:HH2	59:33:76:LEU:HB3	1.50	0.74
59:33:66:LEU:CD1	59:33:79:ALA:HB2	2.17	0.74
59:33:315:LYS:HB3	59:33:316:PRO:HD2	1.68	0.74
20:T:31:GLY:O	20:T:66:VAL:HG23	1.87	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
53:27:365: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)
53:27:1903:G:H2'	53:27:1904:G:H8	1.52	0.74
59:33:279:VAL:CG1	59:33:336:ILE:HG12	2.17	0.74
7:G:58:THR:HG21	7:G:82:ILE:N	2.01	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
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
22:V:22:PHE:CD2	53:27:922:C:H1'	2.22	0.74
45:19:53:ARG:NH2	52:26:579:A:H4'	2.03	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
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
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
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
30:4:49:VAL:HG11	30:4:57:VAL:HG21	1.70	0.74
52:26:1402:C:H2'	52:26:1403:C:O4'	1.88	0.74
53:27:581:C:H2'	53:27:582:A:H8	1.51	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
11:K:110:VAL:HG21	11:K:127:VAL:HG22	1.67	0.74
16:P:55:GLN:HE22	53:27:535:G:H21	1.34	0.74
59:33:43:LEU:HG	59:33:44:GLN:CD	2.07	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
1:A:5:CYS:SG	1:A:12:ARG:HD2	2.28	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
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
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
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
59:33:20:TRP:CZ2	59:33:63:VAL:HB	2.22	0.73
59:33:153:LEU:O	59:33:157:ILE:HG23	1.88	0.73
11:K:82:LEU:HD11	11:K:90:VAL:HG21	1.70	0.73
35:9:152:VAL:HA	35:9:155:LYS:HZ1	1.51	0.73
42:16:114:SER:HB3	52:26:35:G:H21	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
52:26:1241:G:H2'	52:26:1242:G:H8	1.53	0.73
53:27:2177:C:H3'	53:27:2178:C:H5''	1.69	0.73
34:8:120:LYS:HG2	34:8:130:ASN:HD21	1.52	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
32:6:33:ALA:HB2	32:6:39:ILE:HD11	1.69	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
53:27:959:A:H2'	53:27:960:A:C8	2.24	0.73
53:27:2423:U:O2'	53:27:2425:A:H2'	1.89	0.73
1:A:140:VAL:HG12	1:A:191:LEU:HA	1.70	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
45:19:53:ARG:HH22	52:26:579:A:H4'	1.54	0.73
52:26:229:U:H2'	52:26:230:G:C8	2.22	0.73
53:27:796:C:H2'	53:27:797:G:C8	2.24	0.73
16:P:27:ARG:HA	16:P:33:VAL:HG12	1.70	0.73
24:X:3:ALA:HA	24:X:6:LEU:HD13	1.71	0.73
53:27:96:C:H2'	53:27:97:C:H6	1.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2604:U:H2'	53:27:2605:U:H6	1.53	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
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
6:F:134:VAL:HG23	6:F:135:HIS:H	1.53	0.73
15:O:105:LYS:HD2	52:26:1433:A:OP1	1.89	0.73
30:4:4:LYS:NZ	53:27:254:G:N7	2.37	0.73
39:13:16:ALA:HB2	39:13:66:VAL:HG23	1.70	0.73
39:13:41:GLU:CB	39:13:44:ARG:HH22	1.99	0.73
52:26:721:G:H4'	52:26:722:G:O4'	1.88	0.73
53:27:2493:U:C3'	53:27:2494:G:H5''	2.19	0.73
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
32:6:56:LEU:O	32:6:59:ILE:HG12	1.89	0.73
59:33:183:ALA:HB3	59:33:184:PRO:HD3	1.68	0.73
13:M:117:ASP:CG	13:M:118:ARG:H	1.90	0.72
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
4:D:114:ARG:HH11	43:17:70:ARG:HH11	1.38	0.72
52:26:784:A:H2'	52:26:785:G:C8	2.23	0.72
52:26:1007:U:H2'	52:26:1008:U:C6	2.24	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
11:K:33:ARG:HG2	11:K:40:SER:HA	1.71	0.72
11:K:39:LYS:HG2	53:27:832:U:OP1	1.89	0.72
32:6:215:ALA:O	32:6:219:THR:HG23	1.88	0.72
41:15:109:ILE:N	51:25:4:LYS:HZ3	1.85	0.72
52:26:211:G:H3'	52:26:211:G:N3	2.03	0.72
53:27:1744:A:H3'	53:27:1745:A:H8	1.54	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
59:33:96:ARG:HG2	59:33:104:VAL:CG1	2.18	0.72
59:33:408:VAL:CG1	59:33:409:PHE:N	2.52	0.72
11:K:91:ASP:HA	11:K:123:ARG:HB3	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:628:G:H2'	52:26:629:A:C8	2.24	0.72
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
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
52:26:1494:G:H5'	53:27:1913:A:C2	2.24	0.72
53:27:399:U:H2'	53:27:400:G:C8	2.25	0.72
53:27:1857:G:H1'	53:27:1885:A:N6	2.04	0.72
53:27:2432:A:H1'	58:32:75:C:O4'	1.90	0.72
53:27:2588:G:H2'	53:27:2589:A:O4'	1.90	0.72
53:27:2685:G:H2'	53:27:2686:G:C8	2.24	0.72
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
59:33:54:LEU:HB2	59:33:57:TRP:CD1	2.25	0.72
59:33:225:ARG:CD	59:33:276:VAL:HG13	2.19	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
10:J:49:ARG:HH22	52:26:1423:G:C5'	2.03	0.72
20:T:27:VAL:HG23	20:T:33:VAL:HG12	1.72	0.72
50:24:48:LYS:HA	50:24:51:ASN:HD22	1.54	0.72
52:26:21:G:H2'	52:26:22:G:C8	2.25	0.72
52:26:764:C:H2'	52:26:765:G:O4'	1.90	0.72
53:27:2537:U:H2'	53:27:2538:C:C6	2.25	0.72
59:33:411:PRO:HD3	59:33:461:ILE:O	1.89	0.72
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
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
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
1:A:146:LYS:HB2	1:A:149:LYS:HB2	1.70	0.71
3:C:77:ILE:HG13	3:C:78:TRP:HD1	1.54	0.71
20:T:17:ASP:HB3	20:T:20:LYS:CG	2.19	0.71
52:26:1011: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
53:27:16:C:H2'	53:27:17:G:H8	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:1778:U:H3'	53:27:1784:A:N6	2.04	0.71
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: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
37:11:2:ARG:HH12	52:26:932:C:N4	1.88	0.71
52:26:328:C:H4'	52:26:329:A:H5'	1.71	0.71
52:26:1157:A:H4'	52:26:1158:C:O5'	1.89	0.71
53:27:960:A:O5'	53:27:960:A:H8	1.72	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
4:D:139:GLU:HB3	26:Z:28:VAL:HG22	1.72	0.71
16:P:19:GLN:HE22	17:Q:73:LYS:HE2	1.55	0.71
32:6:113:LEU:HD13	32:6:143:LEU:HB3	1.72	0.71
39:13:114:LYS:HB2	39:13:117:LEU:HD22	1.70	0.71
51:25:46:ARG:NH1	52:26:1532:U:H5	1.88	0.71
52:26:1413:A:H2	52:26:1487:G:H22	1.38	0.71
53:27:64:A:H2'	53:27:65:U:C6	2.25	0.71
53:27:2417:C:H2'	53:27:2418:A:H8	1.54	0.71
59:33:88:ASN:HD22	59:33:90:VAL:HG13	1.54	0.71
59:33:327:LEU:HD23	59:33:332:LYS:CA	2.20	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
34:8:120:LYS:HB3	34:8:128:VAL:HG21	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
53:27:207:A:H2'	53:27:208:C:O4'	1.90	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
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
53:27:2498:C:O2'	53:27:2499:C:H5'	1.91	0.71
59:33:241:LYS:HD3	59:33:246:LYS:NZ	2.04	0.71
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
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)
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
16:P:36:GLN:O	16:P:39:ILE:HG22	1.91	0.71
16:P:54:ARG:HD3	53:27:1155:A:H5''	1.72	0.71
24:X:41:HIS:CD2	53:27:96:C:H4'	2.25	0.71
48:22:70:THR:HG23	48:22:71:ASP:N	2.03	0.71
52:26:81:A:H62	52:26:86:G:H21	1.38	0.71
52:26:1107:C:H2'	52:26:1108:G:O4'	1.91	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
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
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
32:6:31:PHE:HB2	32:6:39:ILE:HB	1.73	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
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
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
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
39:13:98:ARG:NH2	52:26:1180:A:OP2	2.24	0.71
41:15:122:PRO:HG2	51:25:34:ARG:O	1.91	0.71
42:16:81:ILE:HD13	42:16:96:THR:HA	1.72	0.71
52:26:24:U:H2'	52:26:25:C:H6	1.56	0.71
52:26:212:G:H2'	52:26:213:G:H8	1.56	0.71
52:26:1395:C:H5'	52:26:1395: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
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)
52:26:361:G:H2'	52:26:362:G:O4'	1.91	0.70
52:26:1206:G:C2	52:26:1207:G:H1'	2.26	0.70
53:27:419:U:H2'	53:27:420:C:C6	2.26	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
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
24:X:2:LYS:HD3	53:27:102:U:H1'	1.72	0.70
35:9:107:GLY:HA3	52:26:9:G:C5'	2.20	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
2:B:125:TRP:CD1	2:B:160:LYS:HB3	2.26	0.70
32:6:52:ALA:O	32:6:56:LEU:HD13	1.90	0.70
53:27:690:G:H2'	53:27:691:C:H6	1.56	0.70
53:27:1477:A:H2'	53:27:1478:G:O4'	1.91	0.70
59:33:286:LEU:HD21	59:33:343:MET:CE	2.21	0.70
59:33:293:LEU:O	59:33:296:VAL:HG22	1.90	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
34:8:131:ILE:HG21	52:26:620:C:H1'	1.73	0.70
36:10:38:ARG:NE	36:10:98:GLU:H	1.90	0.70
52:26:834:U:H2'	52:26:835:U:C6	2.27	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
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
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
59:33:82:PHE:CD1	59:33:83:PRO:HD3	2.25	0.70
59:33:225:ARG:O	59:33:229:ILE:HG23	1.92	0.70
1:A:51:ARG:HH22	53:27:1825:U:P	2.13	0.70
10:J:98:ARG:HH21	52:26:339:C:H3'	1.56	0.70
44:18:42:ASN:O	44:18:45:LEU:HB3	1.91	0.70
52:26:1301:U:H2'	52:26:1301:U:O2	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:679:C:H2'	53:27:680:C:C6	2.27	0.70
53:27:2715:C:C3'	53:27:2716:C:H5''	2.22	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
7:G:5:LEU:HA	7:G:8:LYS:HB2	1.74	0.70
52:26:1070:U:H2'	52:26:1071:C:C6	2.27	0.70
53:27:218:A:H3'	53:27:219:A:H8	1.56	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
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
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
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
18:R:29:VAL:HG21	18:R:69:LEU:HG	1.73	0.70
35:9:20:VAL:HG23	35:9:31:SER:HB3	1.73	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
8:H:20:SER:O	8:H:25:PRO:HD3	1.91	0.69
53:27:5:A:H2'	53:27:6:A:C8	2.27	0.69
53:27:197:A:H2'	53:27:198:C:O4'	1.91	0.69
53:27:878:A:H3'	53:27:879:G:H8	1.56	0.69
53:27:2638:G:H1'	53:27:2778:A:H61	1.57	0.69
53:27:2704:C:H2'	53:27:2705:A:O4'	1.91	0.69
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
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
33:7:102:ILE:HD12	33:7:102:ILE:O	1.92	0.69
34:8:7:LYS:HG2	52:26:430:A:OP2	1.92	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
59:33:74:ASP:HA	59:33:77:ARG:CZ	2.22	0.69
59:33:675:ASP:N	59:33:706:GLN:O	2.24	0.69
1:A:200:MET:HE3	52:26:773:G:H4'	1.72	0.69
8:H:56:VAL:HB	8:H:70:THR:HG22	1.75	0.69
34:8:58:GLN:O	34:8:62:ARG:HG2	1.92	0.69
42:16:117:GLY:HA2	52:26:35:G:O2'	1.92	0.69
52:26:800:G:H2'	52:26:801:U:C5	2.26	0.69
52:26:1409:C:H2'	52:26:1410:A:C8	2.27	0.69
53:27:891:G:H2'	53:27:892:A:C8	2.26	0.69
53:27:1021:A:C8	53:27:1023:U:H1'	2.27	0.69
59:33:410:THR:HB	59:33:411:PRO:HD2	1.74	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
4:D:76:PHE:CE2	53:27:2310:C:H2'	2.26	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
16:P:91:ARG:HH22	53:27:998:C:P	2.16	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
53:27:215:G:H4'	53:27:216:A:H4'	1.74	0.69
53:27:814:C:H1'	53:27:1225:G:N2	2.08	0.69
56:30:14:A:H61	56:30:21:A:H1'	1.56	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
35:9:59:ILE:O	35:9:63:MET:HG2	1.92	0.69
40:14:12:ALA:HB2	40:14:96:VAL:HG13	1.73	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
52:26:148:G:H2'	52:26:149:A:O4'	1.92	0.69
53:27:689:A:H2'	53:27:690:G:C8	2.27	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
35:9:79:THR:HG22	35:9:121:ASN:HB2	1.75	0.69
39:13:35:GLU:HA	39:13:39:GLY:HA3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:18:7:ALA:HA	44:18:10:VAL:HG12	1.73	0.69
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
3:C:189:THR:HG22	3:C:191:ASP:H	1.57	0.69
12:L:81:ARG:HD3	53:27:2251:G:OP1	1.93	0.69
19:S:10:VAL:HA	19:S:35:ALA:HB2	1.75	0.69
24:X:9:LYS:HD2	24:X:10:SER:H	1.57	0.69
24:X:17:GLU:HA	24:X:20:ASN:HD22	1.58	0.69
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
44:18:48:GLN:HG2	49:23:11:ASP:OD1	1.93	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
52:26:286:C:H2'	52:26:287:U:C6	2.27	0.69
52:26:439:U:H2'	52:26:440:C:O4'	1.90	0.69
53:27:755:U:H2'	53:27:756:A:H8	1.57	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
53:27:1825:U:H2'	53:27:1826:G:H8	1.56	0.69
53:27:2059:A:H2'	53:27:2503:A:N6	2.07	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
59:33:39:TRP:CH2	59:33:43:LEU:HD22	2.27	0.69
10:J:98:ARG:NH2	52:26:339:C:H3'	2.08	0.69
15:O:47:ILE:HD11	15:O:61:ARG:HB2	1.75	0.69
41:15:126:ARG:HB3	51:25:34:ARG:HH21	1.58	0.69
52:26:620:C:H2'	52:26:621:A:O4'	1.92	0.69
52:26:1507:A:H2'	52:26:1508:A:C8	2.28	0.69
53:27:138:U:H3'	53:27:139:U:C5'	2.23	0.69
53:27:910:A:H2'	53:27:911:A:C8	2.27	0.69
53:27:1159:U:H2'	53:27:1160:G:H8	1.58	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
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
34:8:36:ALA:HA	34:8:41:GLY:HA3	1.74	0.69
34:8:39:GLN:HG3	34:8:40:HIS:ND1	2.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
11:K:78:ARG:CZ	53:27:626:A:H2'	2.22	0.68
27:1:46:GLY:HA3	27:1:54:ILE:CG2	2.23	0.68
29:3:12:ARG:NE	29:3:44:VAL:HG21	2.08	0.68
38:12:79:ARG:HB2	38:12:80:PRO:HD2	1.74	0.68
52:26:819:A:H4'	52:26:820:U:OP2	1.92	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
53:27:939:G:H2'	53:27:940:G:H8	1.57	0.68
53:27:1019:U:H3	53:27:1142:A:H62	1.38	0.68
55:29:19:U:H2'	55:29:20:U:C6	2.28	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
34:8:167:PRO:HB2	34:8:170:LEU:HD21	1.75	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
1:A:71:ASP:O	1:A:73:ILE:N	2.27	0.68
1:A:246:PRO:HD2	1:A:247:TRP:CZ3	2.28	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
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
53:27:593:U:H2'	53:27:594:U:C6	2.29	0.68
53:27:1607:C:H4'	53:27:1608:A:O5'	1.94	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
15:O:52:ARG:NH2	53:27:2720:U:H5''	2.08	0.68
52:26:491:G:H2'	52:26:492:C:C6	2.29	0.68
53:27:1038:G:H2'	53:27:1039:A:C8	2.28	0.68
53:27:2678:C:H2'	53:27:2679:A:O4'	1.94	0.68
53:27:2884:U:O2	53:27:2884:U:H3'	1.93	0.68
7:G:4:ASN:O	7:G:8:LYS:HG3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:10:48:ALA:HB1	48:22:68:PRO:HG3	1.75	0.68
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
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
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
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
34:8:115:GLN:HE22	52:26:406:G:H21	1.40	0.68
52:26:129:A:H1'	52:26:130:A:N7	2.08	0.68
52:26:578:C:H2'	52:26:579:A:H8	1.58	0.68
53:27:319:G:H2'	53:27:320:A:O4'	1.93	0.68
53:27:1801:A:H5'	53:27:1801:A:H8	1.59	0.68
53:27:2247:A:H2'	53:27:2248:C:C6	2.29	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
27:1:49:ARG:HG2	53:27:2884:U:C6	2.29	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
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
53:27:688:U:H2'	53:27:689:A:C8	2.28	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
4:D:105:ILE:HG13	4:D:106:ALA:N	2.08	0.68
5:E:88:LEU:HB3	5:E:93:TYR:HB3	1.75	0.68
8:H:61:TYR:HE2	8:H:67:THR:HG23	1.59	0.68
9:I:80:HIS:CD2	53:27:2642:G:H5'	2.29	0.68
13:M:33:ILE:HD12	13:M:118:ARG:HH22	1.58	0.68
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:193:C:H2'	52:26:194:C:H6	1.57	0.68
52:26:943:U:H2'	52:26:944:G:H8	1.59	0.68
53:27:281:C:H2'	53:27:282:A:H8	1.58	0.68
53:27:634:C:H2'	53:27:635:C:H6	1.58	0.68
59:33:725:VAL:O	59:33:729:LEU:HG	1.94	0.68
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
23:W:9:LYS:HE2	53:27:397:U:OP2	1.93	0.68
41:15:30:ILE:CD1	41:15:45:THR:HG22	2.24	0.68
53:27:704:G:H2'	53:27:726:G:N2	2.07	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
59:33:719:LEU:HD12	59:33:720:GLN:N	2.09	0.68
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
25:Y:13:ILE:HD11	53:27:989:G:C5	2.28	0.67
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
52:26:313:A:H2'	52:26:314:C:C6	2.30	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
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
53:27:2538:C:H2'	53:27:2539:C:H6	1.58	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
16:P:10:ARG:NH2	53:27:514:A:H5'	2.10	0.67
21:U:16:ALA:HA	21:U:19:ARG:HE	1.58	0.67
51:25:50:SER:HA	51:25:53:LYS:HD2	1.77	0.67
53:27:971:G:H2'	53:27:972:A:O4'	1.93	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
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:30:ALA:HB3	1:A:31:PRO:HD3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:269:ARG:HG2	1:A:270:ARG:N	2.10	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
41:15:30:ILE:HD13	41:15:45:THR:HG22	1.77	0.67
42:16:74:GLN:O	42:16:76:HIS:N	2.28	0.67
52:26:112:G:H22	52:26:315:A:H2	1.42	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
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
53:27:1788:C:H2'	53:27:1789:A:H8	1.57	0.67
59:33:241:LYS:HG3	59:33:246:LYS:HD3	1.76	0.67
14:N:56:LYS:O	14:N:60:GLU:HG3	1.92	0.67
22:V:58:LYS:NZ	53:27:2366:A:H4'	2.10	0.67
26:Z:44:PHE:CD1	26:Z:45:THR:HG23	2.29	0.67
34:8:1:ALA:CB	34:8:67:LEU:HD11	2.24	0.67
39:13:17:ARG:HD3	52:26:1147:C:O2'	1.93	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
2:B:40:LEU:H	2:B:40:LEU:HD12	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
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
20:T:84:PHE:CE1	20:T:93:ARG:HG2	2.30	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
59:33:63:VAL:HG12	59:33:79:ALA:CB	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
52:26:810:C:H2'	52:26:811:C:H6	1.60	0.67
52:26:1305:G:HO2'	52:26:1306:A:H8	1.42	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
29:3:39:ARG:NH2	53:27:468:G:N7	2.40	0.67
33:7:80:GLY:O	33:7:84:GLU:HG3	1.95	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
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
3:C:43:THR:O	53:27:38:A:H1'	1.94	0.67
6:F:12:LEU:HD22	6:F:19:VAL:HG11	1.77	0.67
11:K:2:ARG:HG2	11:K:2:ARG:O	1.94	0.67
13:M:90:ARG:HH21	53:27:2881:U:C5'	2.05	0.67
13:M:90:ARG:NH2	53:27:2881:U:H5'	2.07	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
52:26:830:G:H2'	52:26:831:A:C8	2.29	0.67
53:27:872:U:H2'	53:27:873:C:C6	2.30	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
26:Z:20:ASN:HB2	26:Z:39:LYS:HD3	1.77	0.67
27:1:46:GLY:HA3	27:1:54:ILE:HG22	1.77	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
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
52:26:501: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
52:26:1162:C:H2'	52:26:1163:A:C8	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:598:VAL:HB	59:33:656:VAL:CG2	2.25	0.67
34:8:1:ALA:HB2	34:8:67:LEU:HD11	1.76	0.66
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
1:A:16:VAL:HB	1:A:203:VAL:HG22	1.76	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
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
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
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: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
41:15:15:VAL:HG22	41:15:16:SER:N	2.09	0.66
42:16:110:LYS:HG3	52:26:539:A:P	2.35	0.66
52:26:668:G:H2'	52:26:669:G:H8	1.60	0.66
52:26:1349:A:H3'	52:26:1350:A:H8	1.61	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
2:B:28:GLU:OE2	2:B:30:GLU:HG3	1.95	0.66
3:C:48:THR:HG22	3:C:86:ALA:HB3	1.77	0.66
3:C:57:LYS:HD3	53:27:469:G:H5'	1.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
35:9:45:VAL:HG12	35:9:46:GLY:N	2.11	0.66
36:10:86:ARG:HE	52:26:673:A:H4'	1.60	0.66
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
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
4:D:90:LEU:HD12	4:D:90:LEU:O	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
34:8:125:ASN:HD22	34:8:141:VAL:HG22	1.61	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
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
20:T:42:LYS:HD2	53:27:499:U:H5''	1.76	0.66
21:U:55:GLU:HB3	21:U:59:GLU:CD	2.15	0.66
29:3:1:MET:N	53:27:1620:G:H5'	2.10	0.66
33:7:134:LYS:O	33:7:138:GLN:HG2	1.96	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:9:LYS:HB2	53:27:1061:U:H5	1.61	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
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
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
52:26:381:C:H2'	52:26:382:A:O4'	1.95	0.66
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
53:27:962:G:H2'	53:27:963:U:O4'	1.96	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
59:33:621:ILE:HA	59:33:635:ARG:O	1.95	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
27:1:8:THR:HG23	27:1:11:LYS:N	2.09	0.66
41:15:14:GLN:HA	41:15:76:TYR:HA	1.78	0.66
52:26:765:G:H3'	52:26:812:G:H22	1.61	0.66
52:26:946:A:H2'	52:26:947:G:H8	1.58	0.66
53:27:1197:G:H2'	53:27:1198:U:C6	2.31	0.66
59:33:179:THR:HG21	59:33:206:LEU:HD12	1.77	0.66
59:33:703:THR:HG21	59:33:707:LEU:HB2	1.78	0.66
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
34:8:149:LYS:HD3	34:8:177:MET:HG3	1.78	0.65
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
52:26:950:U:H2'	52:26:951:G:H8	1.60	0.65
52:26:1463:U:H2'	52:26:1464:U:C6	2.31	0.65
53:27:1172:C:C2'	53:27:1173:U:H5''	2.24	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
32:6:206:ILE:HG13	32:6:207:ARG:N	2.11	0.65
42:16:11:ARG:HG3	52:26:562:U:H1'	1.78	0.65
52:26:555:U:H2'	52:26:556:C:C6	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
33:7:70:ALA:HA	33:7:105:VAL:HG12	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
15:O:97:TYR:HD1	15:O:100:ARG:HD2	1.62	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
38:12:88:LYS:HG3	38:12:89:ASP:H	1.60	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
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
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
4:D:130:GLY:HA3	53:27:2305:U:H5''	1.78	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:113:G:H2'	52:26:114:U:C6	2.31	0.65
52:26:484:G:C5	52:26:486:U:H1'	2.31	0.65
52:26:1159:U:H5	52:26:1182:G:H2'	1.61	0.65
53:27:813:U:H1'	53:27:1226:A:N3	2.12	0.65
53:27:2455:G:H2'	53:27:2456:C:C6	2.30	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
59:33:325:VAL:HG22	59:33:335:GLU:HG2	1.78	0.65
59:33:670:ARG:HH21	59:33:709:THR:HG21	1.61	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
16:P:2:ARG:HA	53:27:1248:G:O2'	1.96	0.65
28:2:21:THR:HG21	30:4:33:THR:HA	1.78	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
53:27:542:C:H2'	53:27:543:G:H5'	1.78	0.65
53:27:2784:U:H2'	53:27:2785:C:H6	1.60	0.65
58:32:51:C:H2'	58:32:52:G:H8	1.59	0.65
5:E:157:LYS:HD2	53:27:2659:G:OP1	1.97	0.65
30:4:1:PRO:HA	53:27:591:U:O2'	1.96	0.65
32:6:185:ILE:HG13	32:6:199:ILE:O	1.97	0.65
38:12:6: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
3:C:10:SER:O	3:C:12:LEU:N	2.29	0.65
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
38:12:95:MET:O	38:12:98:LEU:HG	1.96	0.65
52:26:505:G:OP2	52:26:535:A:H5'	1.97	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
53:27:491:G:N2	53:27:492:A:H1'	2.12	0.65
53:27:2010:G:H2'	53:27:2011:U:H6	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2112:G:H2'	53:27:2113:U:H5'	1.78	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
59:33:62:MET:HE2	59:33:82:PHE:CD1	2.31	0.65
59:33:684:THR:HA	59:33:687:LEU:HD12	1.79	0.65
1:A:180:MET:HB2	1:A:268:ARG:H	1.61	0.65
7:G:31:ARG:HG3	53:27:1054:A:H4'	1.79	0.65
13:M:63:ARG:HA	13:M:80:PHE:HE2	1.62	0.65
33:7:23:ALA:HB3	33:7:28:PHE:HD1	1.61	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
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:H6	53:27:2615:U:H5'	1.60	0.65
59:33:39:TRP:CZ3	59:33:43:LEU:HD22	2.32	0.65
1:A:47:ARG:HH21	53:27:774:G:H5''	1.62	0.65
1:A:68:ARG:HB2	1:A:128:THR:HG21	1.78	0.65
4:D:175:PRO:O	4:D:176:PHE:HB2	1.96	0.65
19:S:40:LYS:HZ1	19:S:59:ASN:HA	1.60	0.65
34:8:12:ARG:CD	34:8:37:PRO:HA	2.27	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
52:26:33:A:H2'	52:26:34:C:C6	2.32	0.65
52:26:270:A:H2'	52:26:271:C:C6	2.32	0.65
53:27:3:U:H2'	53:27:4:U:C6	2.32	0.65
35:9:122:VAL:O	35:9:122:VAL:HG23	1.97	0.64
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
10:J:30:ARG:HA	53:27:2675:A:H5'	1.80	0.64
10:J:71:ARG:HB2	10:J:73:ASP:OD1	1.97	0.64
35:9:156:ARG:O	35:9:158:LYS:N	2.31	0.64
50:24:19:HIS:O	50:24:23:ARG:HG2	1.98	0.64
52:26:678:U:H2'	52:26:679:C:O4'	1.97	0.64
52:26:1137:C:H4'	52:26:1138:G:N1	2.12	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:20:TRP:NE1	59:33:63:VAL:C	2.50	0.64
8:H:126:ARG:HE	53:27:1080:A:H5''	1.62	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
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
52:26:690:G:H2'	52:26:691:G:C8	2.32	0.64
52:26:1251:A:H2'	52:26:1252:A:O4'	1.97	0.64
53:27:18:U:H2'	53:27:19:A:C8	2.32	0.64
53:27:1794:A:H2'	53:27:1795:C:C6	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
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
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
24:X:49:ASP:O	24:X:53:VAL:HG23	1.96	0.64
35:9:131:ASN:HD21	52:26:18:C:P	2.21	0.64
52:26:600:A:H2'	52:26:601:G:C8	2.33	0.64
53:27:445: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
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
10:J:6:THR:HG23	53:27:1666:G:O3'	1.97	0.64
11:K:3:LEU:O	11:K:5:THR:N	2.29	0.64
12:L:29:GLY:CA	12:L:106:ASP:HB2	2.28	0.64
21:U:21:ARG:HA	21:U:25:LYS:O	1.98	0.64
32:6:9:LEU:HB3	32:6:12:GLY:HA2	1.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:441:U:H2'	53:27:442:G:C8	2.33	0.64
53:27:884:U:H5'	59:33:612:CYS:HB3	1.79	0.64
53:27:909:A:H2'	53:27:912:C:C5	2.33	0.64
53:27:1367:A:H2'	53:27:1368:G:H5'	1.80	0.64
53:27:1484:U:H2'	53:27:1485:U:C6	2.32	0.64
53:27:1709:U:H2'	53:27:1710:G:H8	1.60	0.64
53:27:2644:G:H3'	53:27:2645:G:H21	1.61	0.64
53:27:2671:G:H2'	53:27:2672:U:C6	2.33	0.64
56:30:13:C:C2'	56:30:14:A:H5''	2.28	0.64
59:33:77:ARG:NH1	59:33:99:VAL:CG2	2.61	0.64
14:N:13:ARG:NH2	53:27:2335:A:H5'	2.12	0.64
31:5:37:GLN:CD	53:27:1125:G:H5'	2.18	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
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
33:7:54:ILE:HG22	33:7:67:ILE:HG12	1.78	0.64
33:7:149:LYS:HG2	33:7:200:TRP:HB2	1.78	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
1:A:237:ARG:HD3	53:27:2591:C:OP1	1.98	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

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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
52:26:382:A:H2'	52:26:383:A:C8	2.32	0.64
52:26:1206:G:H2'	52:26:1207:G:O4'	1.98	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:90:ILE:C	1:A:90:ILE:HD12	2.18	0.64
2:B:52:THR:O	2:B:77:ARG:HG2	1.96	0.64
2:B:180:VAL:HG13	2:B:187:LEU:HD13	1.79	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
32:6:124:THR:HA	32:6:127:LYS:HD2	1.80	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
53:27:247: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
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
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
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
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
53:27:435:C:C2'	53:27:436:C:H5'	2.26	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
59:33:17:PRO:CB	59:33:39:TRP:CE2	2.81	0.63
3:C:47:LYS:HE3	53:27:451:U:H4'	1.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:93:ALA:HB2	53:27:1614:A:N1	2.14	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
53:27:780: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
53:27:1383:A:H2'	53:27:1384:A:C8	2.34	0.63
53:27:1508:A:H2'	53:27:1509:A:O4'	1.98	0.63
53:27:1660:G:H2'	53:27:1661:G:H8	1.62	0.63
53:27:1741:C:H2'	53:27:1742:U:C6	2.33	0.63
53:27:2693:G:H2'	53:27:2694:G:H8	1.62	0.63
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
3:C:2:GLU:HA	3:C:13:THR:HA	1.78	0.63
33:7:67:ILE:HB	33:7:102:ILE:HG22	1.80	0.63
45:19:20:ASP:HA	52:26:750:C:O2'	1.98	0.63
52:26:824:G:H2'	52:26:825:A:H8	1.63	0.63
52:26:1365:G:H2'	52:26:1366:C:O4'	1.98	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
28:2:8:ILE:HD12	28:2:50:GLU:HG3	1.80	0.63
36:10:46:GLN:HB2	36:10:56:LYS:HG2	1.80	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
52:26:1516:G:H2'	52:26:1518:A:OP2	1.98	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
59:33:232:PHE:CZ	59:33:329:PRO:HD2	2.33	0.63
59:33:240:MET:O	59:33:243:GLU:HG2	1.98	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
20:T:11:ILE:HG22	20:T:70:ALA:O	1.98	0.63
21:U:14:LYS:NZ	54:28:98:G:H22	1.96	0.63
22:V:38:GLY:HA2	53:27:2330:G:H21	1.63	0.63
26:Z:56:ARG:HH22	49:23:68:HIS:HE1	1.46	0.63
26:Z:66:ILE:HD11	44:18:41:TRP:HB2	1.79	0.63

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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
35:9:61:LYS:HE3	52:26:1073:U:P	2.38	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
52:26:1347:G:O2'	52:26:1373:G:N1	2.31	0.63
53:27:680:C:H2'	53:27:681:G:C8	2.32	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
59:33:232:PHE:HE1	59:33:329:PRO:CD	2.11	0.63
59:33:300:TYR:CZ	59:33:329:PRO:HD3	2.33	0.63
3:C:151:GLY:HA2	3:C:195:GLN:OE1	1.99	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
13:M:72:ASP:OD2	13:M:75:ILE:HG12	1.98	0.63
52:26:597:G:H2'	52:26:598:U:H5'	1.81	0.63
52:26:1287:A:C2	52:26:1353:G:H1'	2.33	0.63
53:27:1563:U:H2'	53:27:1564:C:C6	2.34	0.63
53:27:1783:A:C6	53:27:2587:A:C2	2.87	0.63
53:27:2028:U:H2'	53:27:2029:G:C8	2.33	0.63
1:A:233:GLY:HA3	53:27:2598:A:H5''	1.81	0.63
36:10:63:ASN:CB	36:10:96:VAL:HG21	2.29	0.63
41:15:111:ASP:OD1	41:15:113:THR:HG23	1.98	0.63
42:16:25:ALA:CB	52:26:554:A:H5'	2.27	0.63
47:21:68:LYS:HB2	52:26:267:C:OP1	1.99	0.63
52:26:1138:G:H3'	52:26:1138:G:N3	2.13	0.63
53:27:784:G:O2'	53:27:785:G:H5'	1.98	0.63
53:27:2291:U:O2'	53:27:2374:C:H1'	1.99	0.63
16:P:2:ARG:HD2	53:27:1248:G:C2	2.34	0.63
20:T:73:ASN:HB3	20:T:76:THR:OG1	1.99	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
52:26:707:U:H2'	52:26:708:C:C6	2.34	0.63
52:26:1033:G:C4	52:26:1034:G:H1'	2.34	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
53:27:1658:C:H2'	53:27:1659:G:C8	2.33	0.63
59:33:62:MET:CE	59:33:82:PHE:CD1	2.82	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:88:ASN:ND2	59:33:90:VAL:HG13	2.13	0.63
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
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
53:27:171:U:H2'	53:27:172:A:C8	2.33	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
53:27:1967: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
4:D:62:GLN:HE21	4:D:88:VAL:HG13	1.62	0.62
5:E:37:ASN:HD22	5:E:63:GLN:CD	2.02	0.62
8:H:1:ALA:HB1	8:H:61:TYR:CE1	2.35	0.62
8:H:72:THR:HB	8:H:111:THR:HG22	1.80	0.62
11:K:23:ILE:H	11:K:23:ILE:HD12	1.63	0.62
11:K:63:LYS:HZ3	30:4:11:LYS:HE3	1.63	0.62
13:M:114:GLU:OE2	13:M:118:ARG:HD3	1.99	0.62
33:7:39:ARG:HG3	33:7:54:ILE:HD11	1.81	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
52:26:223:A:H2'	52:26:224:U:C6	2.34	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
53:27:969:G:H2'	53:27:970: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
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
31:5:4:ARG:HB2	53:27:2466:C:OP1	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:607:A:H2'	52:26:608:A:C8	2.34	0.62
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
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
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
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
20:T:11:ILE:HD11	20:T:19:GLY:HA2	1.81	0.62
35:9:20:VAL:CG2	35:9:31:SER:HB3	2.29	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
59:33:29:GLN:HA	59:33:32:CYS:SG	2.39	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
27:1:8:THR:HG21	53:27:2021:C:OP1	1.99	0.62
40:14:73:LEU:CD2	40:14:75:ASP:HB2	2.30	0.62
52:26:188:C:H2'	52:26:189:A:O4'	1.98	0.62
52:26:990:C:H2'	52:26:991:U:O4'	1.99	0.62
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
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
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
38:12:46:GLU:O	38:12:61:THR:HB	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:795: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
53:27:2118:U:H5	53:27:2149:U:H1'	1.64	0.62
59:33:63:VAL:HG11	59:33:80:LEU:CD2	2.29	0.62
59:33:726:LEU:HA	59:33:729:LEU:HD12	1.82	0.62
3:C:57:LYS:NZ	3:C:59:PRO:HG3	2.14	0.62
33:7:32:LEU:O	33:7:35:ASP:HB3	2.00	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
53:27:216:A:H2'	53:27:217:A:C8	2.35	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
53:27:2585: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
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
34:8:94:GLU:CG	34:8:185:PRO:HG2	2.29	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
53:27:566: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
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
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
9:I:7:LYS:HE3	53:27:538:A:H5''	1.81	0.62
12:L:79:ALA:HA	53:27:2494:G:O2'	2.00	0.62
21:U:65:VAL:HG13	21:U:65:VAL:O	2.00	0.62
33:7:49:ALA:HB1	33:7:75:VAL:HG22	1.82	0.62
39:13:37:TYR:O	39:13:38:PHE:HB3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:44:ARG:HD2	52:26:723:U:P	2.40	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:N3	52:26:530:G:H2'	2.14	0.62
53:27:279:A:H2'	53:27:280:U:C5'	2.24	0.62
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
54:28:75:G:H2'	54:28:76:G:C8	2.33	0.62
59:33:42:CYS:HA	59:33:84:LEU:HD21	1.82	0.62
59:33:79:ALA:O	59:33:82:PHE:CD1	2.53	0.62
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
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
39:13:125:GLN:HE22	52:26:1342:C:H4'	1.64	0.62
43:17:13:HIS:HB2	43:17:16:ILE:HD13	1.80	0.62
43:17:24:VAL:HG23	43:17:28:ARG:HB3	1.81	0.62
44:18:32:ASP:HB2	44:18:34:ASN:HD21	1.65	0.62
49:23:39:ILE:HD12	49:23:68:HIS:O	1.99	0.62
52:26:256:U:H2'	52:26:257:G:C8	2.35	0.62
52:26:1435:G:H2'	52:26:1436:U:C6	2.34	0.62
53:27:16:C:H2'	53:27:17:G:C8	2.35	0.62
53:27:277:G:H2'	53:27:277:G:N3	2.15	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
53:27:2136:G:N3	53:27:2136:G:H2'	2.14	0.62
53:27:2470:G:H2'	53:27:2471:A:H8	1.64	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
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
28:2:37:LYS:HB2	28:2:48:TYR:CD2	2.35	0.61
34:8:2:ARG:HE	34:8:114:ARG:HD3	1.65	0.61
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
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
52:26:1347:G:H22	52:26:1373:G:H2'	1.65	0.61
53:27:78:U:H2'	53:27:79:C:C6	2.35	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
53:27:1667: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
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
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
15:O:38:ARG:CZ	52:26:345:C:H5'	2.29	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
32:6:103:TRP:CE3	32:6:156:LEU:HD21	2.36	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
52:26:291:U:O2'	52:26:292:G:H5'	2.00	0.61
52:26:801:U:H2'	52:26:802:A:C8	2.34	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
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
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
56:30:18:G:N1	56:30:55:U:H1'	2.12	0.61
59:33:96:ARG:HG2	59:33:104:VAL:CB	2.30	0.61
59:33:147:ARG:CA	59:33:150:VAL:HG12	2.29	0.61
4:D:58:ALA:O	4:D:139:GLU:HG3	1.99	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
1:A:161:VAL:HG11	1:A:173:LEU:HD13	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:7:190:THR:HG21	33:7:195:ILE:HD12	1.82	0.61
40:14:57:VAL:HG22	40:14:58:ASN:N	2.13	0.61
41:15:32:THR:HG23	41:15:43:TRP:HB3	1.81	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
52:26:1524:C:H2'	52:26:1525:G:C8	2.36	0.61
53:27:437:U:H2'	53:27:438:G:C8	2.36	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
54:28:35:C:C2'	54:28:36:C:H5'	2.29	0.61
4:D:3:LEU:HA	4:D:6:TYR:HB3	1.83	0.61
4:D:56:LEU:O	4:D:60:SER:N	2.27	0.61
8:H:2:LYS:HB2	8:H:61:TYR:HD1	1.65	0.61
17:Q:83:TYR:CZ	53:27:1187:G:H5''	2.36	0.61
26:Z:2:LYS:HB2	26:Z:5:ILE:CD1	2.30	0.61
27:1:49:ARG:HG2	53:27:2884:U:H6	1.62	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
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
53:27:696: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
53:27:1056:G:H4'	53:27:1086:A:C8	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
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
1:A:146:LYS:HB2	1:A:149:LYS:HD2	1.81	0.61
16:P:58:GLN:HE21	53:27:1009:A:H5''	1.66	0.61
41:15:17:ASP:HA	41:15:80:ASN:OD1	2.01	0.61
52:26:82:G:H2'	52:26:83:C:O4'	2.00	0.61
52:26:359:G:H5''	59:33:451:PHE:CE2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1258:G:H2'	52:26:1259:C:C6	2.36	0.61
53:27:357:C:H2'	53:27:358:U:C6	2.35	0.61
53:27:443:A:H1'	53:27:1201:U:O4'	2.00	0.61
53:27:660:C:H2'	53:27:661:A:H8	1.62	0.61
53:27:1147:A:H2'	53:27:1148:U:O4'	2.01	0.61
53:27:1474:U:H2'	53:27:1475:G:H5'	1.83	0.61
53:27:1637:A:H2'	53:27:1638:C:C6	2.36	0.61
53:27:2026:U:H2'	53:27:2027:G:O4'	2.00	0.61
53:27:2027:G:H2'	53:27:2028:U:C6	2.35	0.61
53:27:2805:C:H2'	53:27:2806:C:H6	1.64	0.61
7:G:58:THR:HG21	7:G:81:LEU:HD12	1.82	0.61
11:K:132:ARG:HH21	11:K:142:ILE:HG21	1.65	0.61
16:P:87:VAL:HG12	16:P:89:ILE:H	1.65	0.61
17:Q:81:LYS:HD2	53:27:973:A:H5''	1.81	0.61
20:T:73:ASN:O	20:T:75:ALA:N	2.34	0.61
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
40:14:85:ASP:HB3	40:14:89:ARG:HH21	1.66	0.61
42:16:42:LYS:NZ	52:26:912:C:OP1	2.34	0.61
43:17:14:ALA:HB3	43:17:33:LEU:HD21	1.83	0.61
44:18:63:CYS:HB2	44:18:79:SER:HB2	1.82	0.61
46:20:50:THR:HG22	46:20:52:LEU:CD1	2.31	0.61
52:26:487: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
52:26:994:A:N7	52:26:1216:A:H4'	2.16	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
53:27:22:C:H2'	53:27:23:G:H5''	1.83	0.61
53:27:96:C:H2'	53:27:97:C:C6	2.34	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
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
3:C:55:SER:OG	3:C:56:GLY: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

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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
58:32:22:G:H2'	58:32:23:C:C6	2.35	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
34:8:113:ALA:O	34:8:117:VAL:HG23	2.01	0.61
39:13:74:GLN:O	39:13:78:ILE:HG13	2.01	0.61
52:26:665:A:N3	52:26:732:C:H2'	2.16	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
53:27:466:A:N3	53:27:683:U:H1'	2.15	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
53:27:708: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
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
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
27:1:28:SER:HB2	27:1:39:ARG:HD3	1.81	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
36:10:3:HIS:HB2	36:10:92:THR:HA	1.83	0.61
52:26:767:A:H2'	52:26:768:A:C8	2.36	0.61
53:27:818:G:H2'	53:27:1187:G:N2	2.16	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
59:33:65:ILE:HG12	59:33:161:ARG:HH21	1.65	0.61
59:33:204:ARG:HG3	59:33:211:TYR:CD2	2.36	0.61
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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:HD12	43:17:16:ILE:H	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
53:27:302: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
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
59:33:267:ASN:H	59:33:267:ASN:HD22	1.49	0.60
59:33:683:ILE:O	59:33:687:LEU:N	2.33	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
10:J:76:VAL:H	15:O:72:VAL:HG22	1.66	0.60
10:J:105:ARG:NH2	15:O:31:VAL:HG21	2.16	0.60
14:N:70:ALA:O	14:N:74:VAL:HG23	2.00	0.60
25:Y:16:LEU:HB2	25:Y:19:HIS:CD2	2.36	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
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
53:27:467:G:O2'	53:27:468:G:H5'	2.01	0.60
53:27:570:G:H2'	53:27:2030:A:N7	2.16	0.60
53:27:584:C:H2'	53:27:585:G:C8	2.37	0.60
53:27:1176:U:H2'	53:27:1177:G:C8	2.36	0.60
53:27:2828:G:H2'	53:27:2829:A:H8	1.64	0.60
1:A:213:ARG:NH2	53:27:1566:A:H5'	2.17	0.60
1:A:269:ARG:HH11	1:A:269:ARG:HG3	1.67	0.60
3:C:5:LEU:HD13	3:C:12:LEU:H	1.66	0.60
11:K:60:ARG:O	53:27:2393:U:H5'	2.02	0.60
16:P:80:ASN:O	16:P:84:LYS:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:55:THR:HG21	53:27:77:G:O4'	2.01	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
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
52:26:81:A:N6	52:26:86:G:H21	1.98	0.60
52:26:376:G:O2'	52:26:377:G:H5'	2.00	0.60
52:26:1211:U:H4'	52:26:1213:A:H1'	1.83	0.60
53:27:566:U:H4'	53:27:809:G:OP2	2.01	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
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
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
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
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
53:27:796:C:H2'	53:27:797:G:H8	1.65	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
13:M:64:ARG:HH22	53:27:2852:G:P	2.24	0.60
34:8:30:LYS:N	34:8:30:LYS:HD2	2.16	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
53:27:145:C:H2'	53:27:146:A:H8	1.66	0.60
53:27:215:G:C4'	53:27:216:A:H4'	2.31	0.60
53:27:418:C:H2'	53:27:419:U:C6	2.37	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1741:C:H2'	53:27:1742:U:H6	1.66	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
53:27:2619:C:O2'	53:27:2620:C:H5'	2.02	0.60
54:28:29:A:H2'	54:28:30:C:C6	2.36	0.60
58:32:45:G:H5'	58:32:46:A:OP2	2.01	0.60
6:F:42:LYS:O	6:F:45:GLU:HB3	2.01	0.60
15:O:7:LEU:HD23	15:O:7:LEU:O	2.00	0.60
15:O:101:GLU:OE1	15:O:101:GLU:N	2.33	0.60
34:8:120:LYS:CG	34:8:130:ASN:HD21	2.15	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
52:26:637:C:H2'	52:26:638:U:C6	2.36	0.60
52:26:1314:C:H2'	52:26:1315:U:C6	2.37	0.60
53:27:128:C:H2'	53:27:129:C:H6	1.67	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
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
56:30:42:C:H2'	56:30:43:C:C1'	2.31	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
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
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
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
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
59:33:61:GLU:HA	59:33:64:GLU:OE1	2.01	0.60
59:33:612:CYS:HG	59:33:634:HIS:CE1	2.14	0.60
8:H:12:VAL:O	8:H:53:PRO:HA	2.01	0.60
9:I:81:ILE:CG2	9:I:82:GLY:H	2.08	0.60
10:J:105:ARG:CZ	15:O:31:VAL:HG21	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:55:ALA:HA	13:M:80:PHE:CE1	2.36	0.60
26:Z:37:CYS:N	26:Z:40:CYS:SG	2.75	0.60
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
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
52:26:484:G:C4	52:26:486:U:H1'	2.37	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
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
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
2:B:151:THR:HB	2:B:152:PRO:HD3	1.84	0.60
5:E:153:PRO:HG3	5:E:161:VAL:O	2.02	0.60
10:J:98:ARG:NH2	52:26:340:U:OP2	2.34	0.60
16:P:24:TYR:HB3	53:27:533:G:OP1	2.01	0.60
17:Q:2:TYR:CE2	17:Q:42:ALA:HB3	2.37	0.60
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
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
52:26:271:C:H2'	52:26:272:C:H6	1.67	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
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
53:27:372:G:H2'	53:27:400:G:O6	2.02	0.60
53:27:692:C:O2'	53:27:693:A:H5'	2.02	0.60
53:27:2099:U:C3'	53:27:2100:G:H5''	2.32	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:56:PHE:CZ	53:27:2365:G:H4'	2.36	0.60
39:13:33:SER:OG	39:13:36:GLN:HG2	2.00	0.60
42:16:83:GLY:HA3	52:26:552:U:O3'	2.01	0.60
44:18:48:GLN:H	44:18:48:GLN:NE2	1.99	0.60
50:24:3:ILE:O	50:24:4:LYS:HG3	2.02	0.60
52:26:633:G:H2'	52:26:634:C:C6	2.36	0.60
52:26:1113:C:H2'	52:26:1114:C:C6	2.37	0.60
53:27:310:A:C2'	53:27:311:A:H5''	2.32	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
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
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
30:4:24:LYS:HB2	30:4:46:LYS:HE3	1.84	0.59
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
9:I:74:TYR:HB2	9:I:87:ALA:HB3	1.83	0.59
15:O:45:VAL:O	15:O:60:VAL:HA	2.01	0.59
15:O:105:LYS:HB3	15:O:108:ARG:NH2	2.18	0.59
20:T:35:VAL:HB	20:T:38:ILE:HG13	1.84	0.59
22:V:22:PHE:HD2	53:27:922:C:H1'	1.67	0.59
44:18:43:ALA:C	44:18:45:LEU:H	2.05	0.59
53:27:151:C:H2'	53:27:152:A:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:688:U:O2'	53:27:689:A:H5'	2.02	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
53:27:1777: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
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
33:7:118:SER:O	33:7:122:GLN:HG3	2.01	0.59
49:23:10:ILE:CD1	49:23:15:LEU:HB2	2.32	0.59
52:26:823:C:H2'	52:26:824:G:C8	2.36	0.59
52:26:1137:C:H4'	52:26:1138:G:C2	2.37	0.59
53:27:576:U:H2'	53:27:577:G:C8	2.37	0.59
53:27:1788:C:H2'	53:27:1789:A:C8	2.36	0.59
53:27:1827:U:C5'	53:27:1971:U:H5''	2.26	0.59
53:27:1843:C:H2'	53:27:1844:C:H6	1.66	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
57:31:21:A:H61	57:31:46:G:H2'	1.68	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
27:1:54:ILE:HG23	27:1:56:LYS:N	2.14	0.59
39:13:118:ARG:NH1	52:26:1233:G:H5'	2.18	0.59
52:26:216:U:H1'	52:26:466:A:N6	2.17	0.59
52:26:216:U:H2'	52:26:217:C:H6	1.67	0.59
52:26:815:A:H4'	52:26:817:C:C5	2.38	0.59
53:27:832:U:H2'	53:27:833:A:C8	2.37	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
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: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:7:TYR:HE1	8:H:59:THR:HG23	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:124:MET:O	8:H:128:ILE:HG12	2.02	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
34:8:21:LYS:CE	34:8:25:ARG:HB3	2.29	0.59
36:10:59:TYR:HE2	48:22:66:LEU:HD21	1.67	0.59
39:13:57:VAL:HG12	39:13:58:GLU:HG2	1.83	0.59
52:26:666:G:H2'	52:26:667:G:H8	1.66	0.59
52:26:1252:A:H2'	52:26:1253:G:O4'	2.02	0.59
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
1:A:15:VAL:HA	1:A:204:LEU:O	2.02	0.59
2:B:149:ASN:HB3	53:27:2572:A:OP2	2.03	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
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
52:26:96:U:H2'	52:26:97:G:H8	1.68	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
52:26:1163: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
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
14:N:100:HIS:CD2	54:28:48:U:H4'	2.37	0.59
18:R:82:MET:HB3	18:R:84:ARG:NH2	2.17	0.59
34:8:1:ALA:HA	34:8:67:LEU:HD21	1.85	0.59
34:8:173:ASP:OD2	34:8:176:LYS:HB3	2.03	0.59
35:9:44:ARG:HA	35:9:72:ASN:HA	1.85	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
52:26:1390:U:H2'	52:26:1391:U:C6	2.37	0.59
53:27:1931:U:H2'	53:27:1932:A:C8	2.38	0.59
53:27:2544:G:H2'	53:27:2545:G:H8	1.68	0.59
53:27:2852:G:H2'	53:27:2853:C:C6	2.38	0.59
54:28:76:G:H2'	54:28:77:U:H6	1.66	0.59
54:28:87:U:H5''	54:28:88:C:OP2	2.02	0.59
3:C:88:ARG:HG3	3:C:89:PRO:HD2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:53:PRO:HB3	5:E:64:ALA:HB2	1.84	0.59
13:M:32:GLU:HB3	13:M:115:LEU:HD11	1.85	0.59
14:N:111:ARG:NH1	53:27:2376:A:N3	2.50	0.59
26:Z:44:PHE:O	26:Z:47:LYS:HE2	2.03	0.59
27:1:2:VAL:HG22	27:1:3:GLN:O	2.01	0.59
28:2:47:ILE:HG22	28:2:48:TYR:N	2.18	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
47:21:13:SER:O	47:21:20:ILE:HG13	2.02	0.59
52:26:67:C:H2'	52:26:68:G:C8	2.38	0.59
52:26:1354:U:H2'	52:26:1355:G:C8	2.37	0.59
53:27:728:G:C2	53:27:730:A:C4	2.90	0.59
53:27:1312:U:H4'	53:27:1313:U:O5'	2.03	0.59
53:27:1826:G:H2'	53:27:1827:U:C6	2.37	0.59
53:27:1981:A:H5''	53:27:1982:U:OP2	2.02	0.59
53:27:2694:G:H2'	53:27:2695:U:C6	2.38	0.59
54:28:28:C:H2'	54:28:29:A:C8	2.37	0.59
1:A:52:HIS:CD2	1:A:218:THR:HA	2.38	0.59
1:A:91:ALA:HB3	1:A:103:ILE:CD1	2.32	0.59
1:A:257:ARG:NH1	53:27:1799:G:OP1	2.35	0.59
13:M:115:LEU:O	13:M:115:LEU:HD12	2.02	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
36:10:4:TYR:CE2	36:10:71:ILE:HG13	2.38	0.59
36:10:18:VAL:CG1	36:10:19:PRO:HD3	2.33	0.59
37:11:13:PRO:HA	37:11:20:GLU:HA	1.85	0.59
52:26:271:C:H2'	52:26:272:C:C6	2.38	0.59
52:26:1019:A:H2'	52:26:1020:G:O4'	2.01	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
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
33:7:185:THR:CG2	33:7:198:LYS:HG2	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:52:C:O2'	52:26:53:A:H5'	2.03	0.59
52:26:470:C:H2'	52:26:471:U:C6	2.38	0.59
52:26:666:G:H5'	52:26:726:C:H1'	1.85	0.59
53:27:185:G:H2'	53:27:186:G:C8	2.37	0.59
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
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
53:27:2377:A:O2'	53:27:2378:A:H5'	2.03	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
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
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
53:27:673: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
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
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
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:15:GLY:HA2	8:H:45:THR:OG1	2.03	0.58
8:H:92:PRO:HG2	53:27:1076:C:O2	2.04	0.58
8:H:101:SER:HA	8:H:141:ASP:HA	1.86	0.58
9:I:132:HIS:ND1	53:27:6:A:O2'	2.36	0.58
11:K:132:ARG:NH2	11:K:142:ILE:HG21	2.18	0.58
13:M:72:ASP:O	13:M:76:VAL:HG23	2.02	0.58
20:T:93:ARG:HB2	20:T:102:ILE:HD12	1.86	0.58
34:8:10:LEU:HD22	34:8:62:ARG:NH1	2.18	0.58
43:17:7:ASN:HD22	43:17:21:ILE:CG1	2.05	0.58
43:17:15:VAL:HG13	43:17:33:LEU:HD22	1.85	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
53:27:2194:U:H2'	53:27:2195:U:C6	2.38	0.58
53:27:2579:C:H2'	53:27:2580:U:O2	2.03	0.58
57:31:6:G:O2'	57:31:7:G:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:224:ASP:O	59:33:228:TYR:CD1	2.55	0.58
2:B:4:LEU:HG	2:B:32:ASN:HD22	1.69	0.58
3:C:159:LEU:O	53:27:321:U:H4'	2.03	0.58
5:E:98:LYS:NZ	5:E:103:ASN:HB2	2.17	0.58
7:G:114:GLU:O	7:G:122:GLN:HB3	2.02	0.58
10:J:25:LEU:HD23	10:J:26:GLY:N	2.18	0.58
17:Q:38:VAL:CG1	17:Q:57:GLY:HA3	2.33	0.58
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
52:26:197:A:C6	52:26:221:C:H4'	2.39	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
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
53:27:2112:G:H2'	53:27:2112:G:N3	2.17	0.58
53:27:2241:A:H2'	53:27:2242:G:H8	1.63	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: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
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
31:5:23:ILE:HD11	53:27:1032:A:H1'	1.86	0.58
33:7:105:VAL:HG11	33:7:114:LEU:HD11	1.86	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
53:27:144:A:H2'	53:27:145:C:C6	2.37	0.58
53:27:1096:A:C3'	53:27:1097:U:H5''	2.32	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
59:33:30:LYS:HD2	59:33:33:GLU:OE2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:79:ALA:O	59:33:82:PHE:CE1	2.56	0.58
59:33:241:LYS:HD3	59:33:246:LYS:HZ3	1.67	0.58
59:33:640:GLN:H	59:33:640:GLN:CD	2.06	0.58
2:B:146:ILE:CD1	53:27:2051:A:H4'	2.33	0.58
3:C:66:GLY:O	53:27:1255:U:N3	2.36	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
29:3:12:ARG:HE	29:3:44:VAL:HG21	1.68	0.58
33:7:176:THR:O	33:7:179:ALA:HB3	2.04	0.58
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
53:27:94:A:H2'	53:27:95:A:C8	2.38	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
53:27:1738:G:HO2'	53:27:1739:A:H8	1.51	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
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
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
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
52:26:414: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
52:26:1237:C:H4'	52:26:1334:G:N2	2.18	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:7:96:VAL:HB	33:7:97:PRO:CD	2.33	0.58
33:7:191:THR:O	52:26:1206:G:O2'	2.20	0.58
34:8:169:TRP:NE1	34:8:185:PRO:HG3	2.19	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
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
59:33:61:GLU:HA	59:33:64:GLU:CD	2.24	0.58
59:33:179:THR:HG21	59:33:206:LEU:CD1	2.34	0.58
59:33:197:GLU:HG2	59:33:201:TYR:CZ	2.39	0.58
59:33:279:VAL:HG13	59:33:336:ILE:HG23	1.85	0.58
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
34:8:53:GLN:HE22	35:9:111:ARG:NH2	2.02	0.58
34:8:146:GLU:HA	34:8:149:LYS:CB	2.32	0.58
35:9:65:LYS:HA	35:9:68:ARG:HG2	1.85	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
52:26:488: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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:76:GLU:OE1	53:27:636:G:N1	2.36	0.58
14:N:14:ALA:O	14:N:18:LEU:HB2	2.04	0.58
16:P:57:ARG:HA	16:P:60:TRP:CE3	2.39	0.58
24:X:9:LYS:NZ	24:X:10:SER:HB2	2.19	0.58
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
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
52:26:77:A:H5'	52:26:77:A:H8	1.68	0.58
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
52:26:1352:C:H2'	52:26:1353:G:H8	1.69	0.58
53:27:250:G:H2'	53:27:251:A:O4'	2.03	0.58
53:27:281:C:H2'	53:27:282:A:C8	2.38	0.58
53:27:438:G:H2'	53:27:439:A:C8	2.38	0.58
53:27:646:U:H3'	53:27:647:G:C5'	2.33	0.58
53:27:657:U:H2'	53:27:658:U:C6	2.39	0.58
53:27:2178:C:H2'	53:27:2179:C:C6	2.39	0.58
53:27:2737:G:H2'	53:27:2738:A:C8	2.38	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
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:OE1	9:I:43:GLU:N	2.35	0.58
32:6:75:ALA:O	32:6:79:VAL:HG23	2.04	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
52:26:27:G:H2'	52:26:28:A:C8	2.39	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
52:26:713: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H5'	53:27:2503:A:N3	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
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
4:D:97:GLU:HG2	26:Z:25:ARG:HB2	1.86	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
34:8:16:THR:HG22	34:8:17:ASP:N	2.18	0.57
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
52:26:552:U:H2'	52:26:553:A:H8	1.69	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
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:O2	53:27:2794:C:H2'	2.02	0.57
1:A:178:GLY:O	1:A:270:ARG:HA	2.04	0.57
1:A:209:ALA:HA	1:A:212:TRP:CE2	2.39	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
7:G:61:ARG:NH2	53:27:1045:C:O2'	2.37	0.57
16:P:47:ARG:NH2	16:P:51:GLN:OE1	2.37	0.57
32:6:90:PHE:O	32:6:149:GLY:HA3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:108:PRO:HA	33:7:114:LEU:HD12	1.85	0.57
49:23:54:ARG:HD3	52:26:958:A:C4	2.40	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
52:26:1441:A:H2'	52:26:1441:A:N3	2.18	0.57
53:27:478:A:N1	53:27:500:G:H4'	2.19	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
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
56:30:27:G:H2'	56:30:28:G:C8	2.39	0.57
59:33:39:TRP:HA	59:33:80:LEU:HD13	1.85	0.57
59:33:154:ALA:HA	59:33:157:ILE:CD1	2.34	0.57
59:33:408:VAL:HG13	59:33:409:PHE:H	1.69	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
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
43:17:7:ASN:ND2	43:17:21:ILE:N	2.52	0.57
43:17:54:THR:HA	43:17:57:ASP:HB3	1.86	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
53:27:133:U:H2'	53:27:134:G:C8	2.39	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
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
53:27:1670: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
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
4:D:139:GLU:N	4:D:139:GLU:OE1	2.37	0.57
8:H:18:ASN:H	8:H:37:PHE:HE2	1.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:24:U:H2'	52:26:25:C:C6	2.39	0.57
52:26:85:U:H5''	52:26:86:G:H5'	1.86	0.57
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
52:26:892:A:H2'	52:26:893:C:C6	2.40	0.57
52:26:1326:U:H2'	52:26:1327:C:C6	2.39	0.57
53:27:22:C:C3'	53:27:23:G:H5''	2.34	0.57
53:27:227:A:C2	53:27:2407:A:H1'	2.39	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
59:33:74:ASP:CA	59:33:77:ARG:NH2	2.66	0.57
59:33:243:GLU:CD	59:33:295:ILE:HG21	2.25	0.57
59:33:267:ASN:HD22	59:33:267:ASN:N	2.02	0.57
13:M:32:GLU:O	13:M:114:GLU:HG3	2.03	0.57
24:X:48:ARG:NH2	53:27:75:G:H4'	2.19	0.57
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
36:10:9:MET:HE1	48:22:64:LEU:HD22	1.85	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
53:27:681:G:H2'	53:27:682:G:O4'	2.04	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
59:33:239:GLU:CB	59:33:299:HIS:CE1	2.88	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
3:C:163:ASN:HB2	53:27:322:A:OP2	2.04	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:546: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
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
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
4:D:134:GLN:OE1	4:D:134:GLN:N	2.34	0.57
7:G:117:LEU:HB2	7:G:122:GLN:HE21	1.70	0.57
9:I:17:VAL:HG23	9:I:137:PRO:HB2	1.86	0.57
12:L:4:PRO:HB3	12:L:68:PHE:CE2	2.40	0.57
23:W:17:ARG:HE	23:W:23:ALA:HB2	1.70	0.57
23:W:18:SER:HB2	53:27:2080:A:H4'	1.85	0.57
24:X:61:ALA:C	24:X:63:ALA:H	2.07	0.57
28:2:47:ILE:HD12	28:2:47:ILE:H	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
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
52:26:1515:G:H2'	52:26:1516:G:H8	1.70	0.57
53:27:234:U:H2'	53:27:235:U:C6	2.40	0.57
53:27:647:G:H2'	53:27:648:G:O4'	2.04	0.57
53:27:783:A:H2'	53:27:784:G:C5'	2.35	0.57
53:27:962:G:O2'	53:27:963:U:H5'	2.04	0.57
53:27:1499:C:H2'	53:27:1500:G:H8	1.69	0.57
53:27:1609:A:H1'	53:27:1616:A:H1'	1.86	0.57
53:27:2074:U:H1'	53:27:2598:A:N3	2.20	0.57
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
3:C:29:HIS:CD2	11:K:8:PRO:HD3	2.40	0.57
11:K:111:ILE:HD11	53:27:636:G:C2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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
59:33:81:LEU:CA	59:33:84:LEU:HD13	2.33	0.57
59:33:596:ARG:HH11	59:33:665:TYR:HE2	1.53	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
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
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
52:26:1401:G:H5'	52:26:1401:G:H8	1.70	0.57
53:27:729:G:H2'	53:27:1775:U:H1'	1.86	0.57
53:27:1073:A:H3'	53:27:1074:G:C8	2.40	0.57
53:27:2194:U:H2'	53:27:2195:U:H6	1.70	0.57
53:27:2793:C:H2'	53:27:2794:C:H6	1.70	0.57
53:27:2868:A:H3'	53:27:2869:G:H8	1.70	0.57
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
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:64:VAL:O	7:G:68:PRO:HD3	2.05	0.57
7:G:117:LEU:O	7:G:117:LEU:HD23	2.05	0.57
14:N:22:GLY:O	14:N:42:PRO:HG3	2.05	0.57
15:O:38:ARG:HH21	15:O:38:ARG:HG3	1.69	0.57
29:3:27:GLY:O	29:3:30:VAL:HB	2.05	0.57
34:8:57:LYS:HZ3	34:8:61:ARG:HD3	1.69	0.57
34:8:124:VAL:HG23	34:8:142:VAL:HB	1.85	0.57
35:9:149:PRO:HG2	35:9:150:GLU:OE1	2.05	0.57
40:14:41:PRO:O	40:14:42:LEU:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:81:A:H62	52:26:86:G:N2	2.02	0.57
52:26:283:U:H2'	52:26:284:C:C6	2.40	0.57
52:26:572:A:N3	52:26:917:G:H1'	2.20	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
53:27:190:A:H3'	53:27:191:A:H8	1.69	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
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
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
53:27:2262: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
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
32:6:165:ALA:O	32:6:169:HIS:HB3	2.05	0.56
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
53:27:826:U:H5''	53:27:2428:G:O3'	2.05	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
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
10:J:76:VAL:HG12	15:O:72:VAL:CG2	2.34	0.56
28:2:22:THR:HG23	53:27:2286:G:O6	2.05	0.56
36:10:91:ARG:HG2	36:10:92:THR:N	2.20	0.56
38:12:94:VAL:HB	38:12:99:GLY:O	2.05	0.56
41:15:20:ALA:N	41:15:82:GLU:O	2.38	0.56
42:16:113:ARG:CG	42:16:118:VAL:HB	2.35	0.56
44:18:1:ALA:HB1	52:26:1049:U:H5	1.70	0.56
52:26:49:U:O2'	52:26:50:A:H2'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:219:U:H2'	52:26:220:G:H8	1.69	0.56
52:26:233:C:H2'	52:26:234:C:C6	2.41	0.56
52:26:564: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
53:27:269:C:H2'	53:27:270:A:C8	2.40	0.56
53:27:942:G:H2'	53:27:943:A:H8	1.69	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
53:27:2799:A:H2'	53:27:2800:A:H5'	1.87	0.56
59:33:24:LEU:HD22	59:33:67:SER:HA	1.87	0.56
59:33:243:GLU:OE2	59:33:295:ILE:HG21	2.05	0.56
59:33:672:VAL:HG22	59:33:709:THR:HG22	1.87	0.56
3:C:57:LYS:HG2	3:C:59:PRO:CG	2.34	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
8:H:123:ALA:CB	53:27:1081:U:H5''	2.20	0.56
12:L:14:LYS:NZ	53:27:958:U:OP2	2.38	0.56
15:O:13:LYS:HD3	15:O:76:HIS:HA	1.87	0.56
16:P:2:ARG:HB2	53:27:1248:G:C8	2.39	0.56
19:S:4:GLU:HA	19:S:7:LEU:HD12	1.86	0.56
19:S:40:LYS:HZ1	19:S:59:ASN:CA	2.18	0.56
26:Z:16:CYS:SG	26:Z:20:ASN:N	2.78	0.56
31:5:7:VAL:HG22	31:5:38:GLY:HA2	1.87	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
38:12:6:ILE:HG21	38:12:31:LEU:HD11	1.87	0.56
38:12:121:GLY:C	52:26:599:C:H4'	2.26	0.56
39:13:32:ARG:HD2	39:13:37:TYR:CD1	2.38	0.56
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
43:17:15:VAL:O	43:17:19:THR:HG23	2.04	0.56
44:18:20:PHE:C	44:18:22:LYS:H	2.06	0.56
48:22:70:THR:HG22	48:22:73:HIS:CE1	2.40	0.56
50:24:55:PRO:HB3	52:26:193:C:H4'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:257:G:H2'	52:26:258:G:H8	1.69	0.56
52:26:405:U:C3'	52:26:406:G:H5'	2.31	0.56
52:26:1220:G:H2'	52:26:1221:G:H8	1.70	0.56
52:26:1261:A:H3'	52:26:1262:C:H6	1.70	0.56
52:26:1342:C:H2'	52:26:1343:G:H8	1.71	0.56
52:26:1370:G:O2'	52:26:1371:G:H5'	2.05	0.56
53:27:449:A:H2'	53:27:450:G:O4'	2.05	0.56
53:27:662:G:H2'	53:27:663:G:H8	1.70	0.56
53:27:693:A:H2'	53:27:694:U:O4'	2.06	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
59:33:17:PRO:CG	59:33:39:TRP:CZ2	2.88	0.56
59:33:34:CYS:SG	59:33:77:ARG:HD3	2.45	0.56
59:33:96:ARG:HE	59:33:104:VAL:CG2	2.18	0.56
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
19:S:14:PRO:HA	19:S:32:LEU:HB3	1.85	0.56
31:5:30:GLU:OE2	31:5:32:LYS:HD3	2.05	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
52:26:408:A:H2'	52:26:409:U:C6	2.40	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
53:27:464:U:O2'	53:27:465:G:H5'	2.06	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:H3'	53:27:2031:A:OP2	2.04	0.56
53:27:2730:C:H2'	53:27:2731:G:H8	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:95:LEU:HD13	59:33:107:ILE:CD1	2.36	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
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
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
52:26:34:C:H2'	52:26:35:G:H8	1.69	0.56
52:26:223:A:H2'	52:26:224:U:H6	1.70	0.56
52:26:483:C:H2'	52:26:484:G:C8	2.41	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
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
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
1:A:52:HIS:NE2	1:A:218:THR:HA	2.20	0.56
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
9:I:108:MET:CE	53:27:1138:G:H21	2.14	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
34:8:125:ASN:HD22	34:8:141:VAL:CG2	2.19	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
53:27:531:C:C5	53:27:2035:G:C2	2.93	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
53:27:1062:G:OP1	53:27:1070:A:H4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1127:A:C2'	53:27:1128:G:H5''	2.35	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
59:33:622:VAL:HG12	59:33:652:ILE:HG22	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
11:K:78:ARG:NH1	53:27:626:A:H2'	2.19	0.56
13:M:49:GLU:OE2	13:M:95:THR:HG22	2.05	0.56
17:Q:34:GLU:OE1	17:Q:34:GLU:N	2.38	0.56
18:R:8:ARG:HG3	18:R:102:HIS:ND1	2.20	0.56
21:U:9:ARG:HH12	21:U:12:GLN:CB	2.19	0.56
21:U:26:PHE:HE1	21:U:89:ILE:HG13	1.70	0.56
32:6:70:GLY:HA3	32:6:79:VAL:HG21	1.86	0.56
32:6:209:VAL:HA	32:6:212:TYR:HB2	1.88	0.56
50:24:28:ARG:O	50:24:32:LYS:HG2	2.06	0.56
52:26:1034:G:N3	52:26:1034:G:H2'	2.20	0.56
52:26:1241:G:H2'	52:26:1242:G:C8	2.37	0.56
53:27:145:C:H2'	53:27:146:A:C8	2.40	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
53:27:1326:U:O2'	53:27:1327:A:H5'	2.05	0.56
53:27:1810:A:H2'	53:27:1811:G:O4'	2.06	0.56
59:33:210:GLU:CD	59:33:260:TRP:CH2	2.78	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
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
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
52:26:152: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
52:26:1057:G:H2'	52:26:1058:G:H8	1.71	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:1:27:LEU:HD21	27:1:36:LYS:HB3	1.88	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
36:10:19:PRO:HA	36:10:22:ILE:HD12	1.88	0.56
39:13:9:GLY:HA2	39:13:80:HIS:ND1	2.21	0.56
39:13:10:ARG:HG3	39:13:10:ARG:O	2.06	0.56
42:16:121:PRO:O	42:16:123:ALA:N	2.39	0.56
45:19:88:ARG:NE	53:27:714:U:OP2	2.39	0.56
46:20:13:LYS:N	46:20:13:LYS:HD2	2.21	0.56
52:26:579:A:O2'	52:26:580:C:H5'	2.05	0.56
53:27:1702:G:C3'	53:27:1703:G:H5''	2.36	0.56
53:27:1760:C:H2'	53:27:1761:C:O4'	2.06	0.56
53:27:2095:A:H2'	53:27:2096:C:C6	2.41	0.56
53:27:2643:G:C4	53:27:2644:G:C8	2.94	0.56
53:27:2650:U:H2'	53:27:2651:C:H6	1.67	0.56
53:27:2837:A:H2'	53:27:2838:G:C8	2.41	0.56
54:28:91:C:H2'	54:28:92:C:H6	1.70	0.56
59:33:27:THR:HG23	59:33:28:SER:N	2.21	0.56
59:33:34:CYS:SG	59:33:77:ARG:CD	2.94	0.56
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
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
53:27:220: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
53:27:520:G:H2'	53:27:521:U:C6	2.41	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
53:27:2649:C:H2'	53:27:2650:U:H6	1.70	0.56
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
28:2:36:LYS:HD3	53:27:2344:U:OP1	2.05	0.55
41:15:63:GLN:HG3	41:15:98:ALA:HB2	1.87	0.55
52:26:697:U:H2'	52:26:698:G:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:922:G:H3'	52:26:923:A:C8	2.41	0.55
52:26:927:G:H4'	52:26:1503:A:N7	2.21	0.55
53:27:218:A:H2	53:27:235:U:H4'	1.70	0.55
53:27:898:C:H2'	53:27:899:A:O4'	2.05	0.55
53:27:1410:G:H2'	53:27:1411:U:C6	2.40	0.55
53:27:1423:G:N2	53:27:1576:U:H1'	2.21	0.55
53:27:1451:C:H4'	53:27:1452:G:C8	2.41	0.55
53:27:1922:G:H2'	53:27:1923:U:C6	2.41	0.55
53:27:2368:C:H2'	53:27:2369:A:C8	2.41	0.55
59:33:101:LYS:HA	59:33:104:VAL:HG12	1.87	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
34:8:9:LYS:HZ3	52:26:428:G:H5''	1.69	0.55
44:18:1:ALA:HB1	52:26:1049:U:C5	2.41	0.55
44:18:20:PHE:O	44:18:21:ALA:HB3	2.06	0.55
47:21:30:HIS:CE1	47:21:31:PRO:HD2	2.41	0.55
52:26:368:U:N3	59:33:448:ILE:HG22	2.21	0.55
52:26:1283:U:H2'	52:26:1284:C:C6	2.41	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
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:305:G:H5'	52:26:306:A:OP1	2.05	0.55
52:26:579:A:H2'	52:26:580:C:H6	1.72	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
53:27:493:G:O2'	53:27:494:G:H5'	2.06	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
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
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
28:2:16:THR:OG1	28:2:41:VAL:HG11	2.07	0.55
35:9:107:GLY:HA3	52:26:9:G:C4'	2.37	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
52:26:1258:G:H2'	52:26:1259:C:H6	1.70	0.55
53:27:7:G:H2'	53:27:8:C:C6	2.41	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
59:33:92:GLU:O	59:33:96:ARG:HG3	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:54:GLN:HE22	53:27:2358:A:H61	1.55	0.55
11:K:124:GLY:H	11:K:144:GLU:HA	1.70	0.55
12:L:22:GLN:O	12:L:24:THR:N	2.39	0.55
12:L:34:LYS:HA	12:L:101:VAL:HA	1.87	0.55
25:Y:9:THR:HG22	25:Y:53:MET:C	2.27	0.55
31:5:11:CYS:SG	31:5:12:ARG:N	2.75	0.55
32:6:86:CYS:O	32:6:87:ASP:HB3	2.06	0.55
32:6:112:ARG:HH12	32:6:136:ARG:HH22	1.54	0.55
34:8:25:ARG:HB2	52:26:410:G:OP2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:76:ASN:HB2	35:9:81:GLN:OE1	2.07	0.55
36:10:4:TYR:CD2	36:10:71:ILE:HG13	2.41	0.55
42:16:110:LYS:HG3	52:26:539:A:OP1	2.06	0.55
45:19:9:LYS:O	45:19:12:SER:HB2	2.07	0.55
46:20:25:ARG:NH2	52:26:230:G:H4'	2.20	0.55
49:23:79:TYR:CG	49:23:80:ARG:N	2.75	0.55
51:25:65:ARG:HD2	52:26:1088:G:C4'	2.36	0.55
52:26:440:C:H2'	52:26:441:A:C4'	2.37	0.55
52:26:945:G:H21	52:26:1334:G:H4'	1.71	0.55
52:26:1226:C:H4'	52:26:1227:A:OP1	2.06	0.55
52:26:1354:U:H2'	52:26:1355:G:H8	1.71	0.55
53:27:84:A:C6	53:27:99:U:H5'	2.40	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
56:30:10:G:H2'	56:30:11:C:C6	2.41	0.55
59:33:71:MET:O	59:33:76:LEU:HD13	2.07	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
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
3:C:131:THR:HG21	53:27:320:A:H2'	1.89	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
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
40:14:59:LYS:HD2	52:26:972:C:O3'	2.07	0.55
51:25:13:VAL:O	51:25:13:VAL:HG13	2.06	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
52:26:1299:A:C1'	52:26:1301:U:H1'	2.37	0.55
53:27:315:G:H2'	53:27:316:C:C6	2.41	0.55
53:27:414:C:H2'	53:27:415:A:C8	2.42	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:22:ILE:HB	53:27:1952:A:C2	2.42	0.55
12:L:29:GLY:O	12:L:133:LYS:HD3	2.07	0.55
28:2:3:GLY:O	28:2:5:ARG:N	2.37	0.55
30:4:41:ARG:HA	30:4:44:ARG:HH12	1.71	0.55
34:8:34:GLU:HG2	34:8:35:GLN:N	2.22	0.55
34:8:94:GLU:HG2	34:8:185:PRO:HG2	1.88	0.55
34:8:96:ARG:O	34:8:100:VAL:HG23	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
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
52:26:1274:A:C2'	52:26:1275:A:H5''	2.37	0.55
53:27:803:U:O2'	53:27:804:A:H5'	2.06	0.55
53:27:1071:G:H1'	53:27:1089:A:H2'	1.88	0.55
53:27:1213:A:N6	53:27:1236:G:H1'	2.22	0.55
53:27:2266:A:H4'	53:27:2267:A:N3	2.22	0.55
53:27:2545:G:O2'	53:27:2546:U:H5'	2.07	0.55
53:27:2836:U:H2'	53:27:2837:A:C8	2.42	0.55
56:30:9:A:H1'	56:30:46:G:N3	2.22	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
14:N:34:HIS:NE2	54:28:27:C:OP1	2.33	0.55
20:T:10:VAL:HA	20:T:72:PHE:N	2.20	0.55
21:U:14:LYS:NZ	54:28:98:G:N2	2.54	0.55
27:1:21:LEU:HD12	27:1:22:THR:H	1.71	0.55
33:7:62:SER:HB2	33:7:99:GLN:HE21	1.71	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
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
53:27:139:U:H2'	53:27:140:C:H5	1.72	0.55
53:27:337:C:H2'	53:27:338:G:O4'	2.07	0.55
53:27:1287:A:O2'	53:27:1288:G:H5'	2.07	0.55
53:27:1526:C:H2'	53:27:1527:G:O4'	2.07	0.55
53:27:2646:C:H6	53:27:2646:C:O5'	1.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:78:GLU:OE1	1:A:100:ARG:NE	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
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
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
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
37:11:142:ARG:HD3	58:32:41:C:H4'	1.88	0.55
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
52:26:70:U:H4'	52:26:71:A:C8	2.42	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
52:26:1432:G:C2	52:26:1467:C:C5	2.94	0.55
53:27:161:A:H3'	53:27:162:U:H5''	1.87	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
53:27:1252:G:O2'	53:27:1253:A:H5''	2.07	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
56:30:68:C:H2'	56:30:69:G:C8	2.42	0.55
59:33:20:TRP:CD1	59:33:64:GLU:CA	2.90	0.55
2:B:77:ARG:O	2:B:77:ARG:HG3	2.07	0.55
3:C:44:ARG:HD2	53:27:444:C:P	2.47	0.55
14:N:33:ARG:O	14:N:34:HIS:HB2	2.07	0.55
23:W:11:PRO:HB3	23:W:29:LEU:HD23	1.88	0.55
24:X:9:LYS:NZ	24:X:11:VAL:HG23	2.19	0.55
35:9:92:ARG:HB2	35:9:127:TYR:HB2	1.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:580: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
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
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
59:33:38:THR:OG1	59:33:80:LEU:HD12	2.07	0.55
59:33:43:LEU:HD13	59:33:56:LEU:HD13	1.89	0.55
59:33:408:VAL:HA	59:33:458:GLY:CA	2.37	0.55
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
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
36:10:29:ILE:HG22	36:10:34:GLY:HA2	1.88	0.54
42:16:83:GLY:N	52:26:552:U:H4'	2.21	0.54
45:19:63:ARG:HH22	45:19:87:ARG:NH2	2.00	0.54
46:20:31:ARG:HG2	46:20:32:PHE:H	1.71	0.54
49:23:3:SER:HA	52:26:1314:C:H41	1.71	0.54
50:24:61:ALA:HB1	50:24:68:LYS:HA	1.87	0.54
52:26:81:A:H2'	52:26:82:G:H8	1.72	0.54
52:26:668:G:H2'	52:26:669:G:C8	2.41	0.54
52:26:858:G:O6	52:26:869:G:H3'	2.07	0.54
52:26:1245:C:H2'	52:26:1246:A:C8	2.42	0.54
53:27:155:A:H2'	53:27:156:A:H8	1.71	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
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
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
33:7:132:ALA:O	33:7:135:ARG:HB2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
53:27:167:A:H2'	53:27:168:G:O4'	2.06	0.54
53:27:421:C:O2	53:27:421:C:H2'	2.07	0.54
53:27:633:A:H2'	53:27:634:C:H5'	1.88	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
53:27:2162:G:H8	53:27:2162:G:H5'	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
5:E:85:LYS:HG2	5:E:131:VAL:HG22	1.90	0.54
6:F:18:GLN:NE2	6:F:44:ILE:HD11	2.22	0.54
9:I:49:ASP:OD2	9:I:121:LYS:NZ	2.39	0.54
12:L:59:ARG:HH22	59:33:736:ILE:HB	1.72	0.54
23:W:67:LEU:HD11	23:W:77:TYR:CB	2.36	0.54
26:Z:16:CYS:HB2	26:Z:36:VAL:O	2.07	0.54
34:8:12:ARG:O	34:8:37:PRO:HG3	2.08	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
52:26:45: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
27:1:31:LYS:HA	53:27:2885:G:N2	2.23	0.54
29:3:29:GLN:O	29:3:32:ALA:HB3	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
53:27:531:C:O2'	53:27:563:A:H5''	2.06	0.54
53:27:598:U:H2'	53:27:599:A:C8	2.43	0.54
53:27:917:A:H5''	53:27:2268:A:H61	1.71	0.54
53:27:2041:U:H2'	53:27:2042:A:H8	1.72	0.54
54:28:101:A:H2'	54:28:102:G:O4'	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: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
16:P:57:ARG:NH1	53:27:1154:G:OP2	2.36	0.54
17:Q:14:VAL:HG21	17:Q:98:ILE:HG13	1.89	0.54
19:S:59:ASN:ND2	53:27:1342:A:H5''	2.23	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
27:1:6:LYS:NZ	53:27:1262:A:H1'	2.23	0.54
36:10:69:GLU:O	36:10:73:GLU:HG2	2.08	0.54
39:13:51:LEU:CB	39:13:56:MET:HB2	2.37	0.54
39:13:83:THR:HG21	39:13:102:PHE:CB	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:33:A:H2'	52:26:34:C:H6	1.72	0.54
52:26:184:G:C4'	52:26:224:U:H4'	2.37	0.54
52:26:413:G:H1'	52:26:428:G:N2	2.22	0.54
52:26:596:A:H5'	52:26:596:A:H8	1.72	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
53:27:818:G:H2'	53:27:1187:G:H22	1.71	0.54
53:27:974:G:H8	53:27:990:A:H62	1.55	0.54
53:27:1191:G:H2'	53:27:1192:G:H8	1.72	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
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:207:ALA:HB1	53:27:1790:C:H4'	1.88	0.54
2:B:25:THR:HG21	2:B:193:VAL:CG2	2.37	0.54
5:E:82:PHE:CE2	5:E:137:LYS:HB2	2.43	0.54
8:H:106:GLN:O	8:H:110:GLN:HG3	2.08	0.54
9:I:136:GLN:HE21	53:27:2899:A:H5'	1.72	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
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
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
53:27:542:C:H2'	53:27:543:G:C5'	2.38	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1430:G:H2'	53:27:1431:A:C8	2.43	0.54
53:27:1935:G:H1'	53:27:1964:G:N2	2.21	0.54
53:27:2070:A:H2'	53:27:2071:A:C8	2.42	0.54
53:27:2297:A:N1	53:27:2321:U:H5	2.04	0.54
57:31:23:C:H2'	57:31:24:U:H6	1.73	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
32:6:53:LEU:HA	32:6:56:LEU:HB2	1.89	0.54
39:13:129:ARG:HH21	57:31:33:U:H3'	1.71	0.54
41:15:40:ALA:HB3	52:26:684:U:O2	2.08	0.54
41:15:92:ARG:O	41:15:95:THR:HG22	2.07	0.54
42:16:41:PRO:HG3	42:16:49:ARG:CG	2.36	0.54
43:17:7:ASN:OD1	43:17:20:SER:HB2	2.08	0.54
47:21:11:VAL:HG11	47:21:54:ILE:HA	1.89	0.54
52:26:987:G:H2'	52:26:988:G:H8	1.71	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
53:27:530:G:C4	53:27:2035:G:H4'	2.42	0.54
53:27:936:A:H2'	53:27:937:C:C6	2.43	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:H5'	53:27:1801:A:C8	2.40	0.54
53:27:1901:A:H2'	53:27:1902:C:H6	1.73	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
54:28:6:G:H2'	54:28:7:G:H8	1.71	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:8:12:ARG:NH2	34:8:31:CYS:O	2.38	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
52:26:538:G:H2'	52:26:539:A:H8	1.73	0.54
52:26:769:G:O2'	52:26:770:C:H5'	2.07	0.54
52:26:1157:A:H5'	52:26:1158:C:N1	2.23	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
59:33:63:VAL:HG21	59:33:80:LEU:HD21	1.90	0.54
59:33:134:ASN:O	59:33:135:VAL:HB	2.08	0.54
4:D:105:ILE:HB	26:Z:34:LEU:HD21	1.90	0.54
8:H:44:LYS:HG2	8:H:68:PHE:HE1	1.72	0.54
11:K:82:LEU:HD11	11:K:90:VAL:CG2	2.37	0.54
11:K:90:VAL:HG13	11:K:95:LEU:HD21	1.90	0.54
13:M:82:GLU:O	13:M:85:PRO:HG2	2.07	0.54
20:T:94:PHE:CE1	20:T:96:LYS:HA	2.43	0.54
34:8:85:THR:HA	34:8:88:ASN:ND2	2.23	0.54
34:8:167:PRO:HB2	34:8:170:LEU:CD2	2.37	0.54
35:9:156:ARG:HG2	35:9:157:GLY:N	2.22	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
52:26:846:G:H2'	52:26:847:G:H8	1.72	0.54
52:26:1090:U:H2'	52:26:1091:U:C6	2.43	0.54
53:27:176:A:O2'	53:27:177:G:H5'	2.08	0.54
53:27:217:A:H2'	53:27:218:A:O4'	2.07	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
53:27:2153:C:H2'	53:27:2154:A:H5'	1.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:A:269:ARG:NH2	53:27:1798:U:P	2.81	0.54
6:F:112:LYS:O	6:F:115:VAL:HG23	2.08	0.54
17:Q:77:PHE:HD1	17:Q:84:ARG:HG2	1.72	0.54
24:X:17:GLU:O	24:X:20:ASN:HB2	2.08	0.54
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
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
52:26:386: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
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
53:27:211:C:H2'	53:27:212:G:C8	2.43	0.54
53:27:732:C:H2'	53:27:733:G:O4'	2.08	0.54
53:27:1141:U:H4'	53:27:1142:A:O4'	2.07	0.54
53:27:1159:U:H2'	53:27:1160:G:C8	2.42	0.54
53:27:1641:A:H2'	53:27:1642:G:O4'	2.08	0.54
53:27:1793:C:O2'	53:27:1794:A:H5'	2.08	0.54
53:27:1916:A:H2'	53:27:1917:U:O4'	2.07	0.54
53:27:1937:A:O2'	53:27:1938:A:H3'	2.07	0.54
53:27:2898:U:H2'	53:27:2899:A:C8	2.43	0.54
4:D:4:HIS:NE2	4:D:8:LYS:HD3	2.23	0.53
13:M:117:ASP:CG	13:M:118:ARG:N	2.61	0.53
15:O:89:GLY:O	15:O:112:ARG:HB2	2.08	0.53
16:P:58:GLN:HE21	53:27:1009:A:C5'	2.21	0.53
19:S:58:VAL:HG12	19:S:85:VAL:HG22	1.90	0.53
23:W:52:ALA:O	23:W:55:MET:HB2	2.08	0.53
33:7:149:LYS:HA	33:7:167:TYR:O	2.08	0.53
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
42:16:65:TYR:OH	52:26:522:C:OP2	2.26	0.53
45:19:27:GLN:O	45:19:31:LEU:HG	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:263: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
52:26:1280:A:O2'	52:26:1281:C:H5'	2.08	0.53
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:O5'	56:30:6:G:H8	1.91	0.53
59:33:240:MET:HB3	59:33:295:ILE:CD1	2.38	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
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
52:26:222: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
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
53:27:9:G:H2'	53:27:2629:U:O4	2.08	0.53
53:27:534:U:H2'	53:27:535:G:C8	2.40	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
57:31:11:A:O2'	57:31:12:G:H5'	2.08	0.53
59:33:43:LEU:O	59:33:44:GLN:HB2	2.08	0.53
59:33:308:ASP:OD2	59:33:310:TYR:CZ	2.61	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:87:GLN:NE2	54:28:77:U:H4'	2.23	0.53
27:1:42:ILE:HG22	27:1:48:TYR:HB2	1.89	0.53
32:6:55:GLU:O	32:6:59:ILE:HG23	2.08	0.53
36:10:1:MET:HG2	36:10:67:PRO:HD3	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
50:24:54:GLN:HE21	52:26:193:C:H1'	1.73	0.53
52:26:1414:U:H2'	52:26:1415:G:H8	1.72	0.53
53:27:13:A:N1	53:27:525:U:H2'	2.24	0.53
53:27:100:U:H1'	53:27:101:A:C6	2.42	0.53
53:27:357:C:H2'	53:27:358:U:H6	1.73	0.53
53:27:468:G:H2'	53:27:469:G:O4'	2.09	0.53
53:27:491:G:H3'	53:27:492:A:H8	1.73	0.53
53:27:1056:G:O2'	53:27:1086:A:H1'	2.06	0.53
53:27:1758:U:C5	53:27:2696:U:H5'	2.43	0.53
53:27:2453:A:H2'	53:27:2454:G:C8	2.33	0.53
53:27:2813:A:H2'	53:27:2814:A:C8	2.43	0.53
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
17:Q:74:ILE:HG22	17:Q:87:GLN:N	2.24	0.53
17:Q:81:LYS:HE3	53:27:973:A:OP2	2.09	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
53:27:211:C:H2'	53:27:212:G:H8	1.73	0.53
53:27:254:G:C2'	53:27:255:A:H5''	2.38	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
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
53:27:2345:G:N3	53:27:2381:A:H2'	2.24	0.53
53:27:2368:C:H2'	53:27:2369:A:H8	1.73	0.53
53:27:2799:A:H1'	53:27:2801:G:O4'	2.09	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:55:GLU:HA	6:F:58:LEU:HD12	1.90	0.53
7:G:4:ASN:HD22	53:27:1046:A:H2'	1.73	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
25:Y:25:GLY:O	53:27:929:U:H1'	2.09	0.53
34:8:159:GLU:O	34:8:162:GLU:HG2	2.08	0.53
39:13:29:ILE:O	39:13:30:ASN:HB2	2.09	0.53
39:13:29:ILE:HA	39:13:64:ILE:HG13	1.91	0.53
40:14:7:ARG:NH2	52:26:1126:U:OP1	2.41	0.53
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
52:26:283: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
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
53:27:128:C:H2'	53:27:129:C:C6	2.43	0.53
53:27:236:C:H2'	53:27:237:C:H6	1.74	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
53:27:999:U:H5''	53:27:1154:G:O6	2.08	0.53
53:27:1094:U:H2'	53:27:1096:A:OP2	2.08	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
53:27:2472: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
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
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
33:7:149:LYS:HG3	33:7:200:TRP:CE3	2.44	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
52:26:149: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
52:26:1109:C:H2'	52:26:1110:A:O4'	2.08	0.53
53:27:655:A:H1'	53:27:656:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:745:G:O2'	53:27:748:G:H1'	2.08	0.53
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
54:28:66:A:H5''	54:28:67:G:OP1	2.08	0.53
59:33:47:GLN:CD	59:33:55:LEU:HD13	2.29	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
1:A:67:LYS:HG2	1:A:150:GLY:HA2	1.89	0.53
2:B:4:LEU:CD2	2:B:98:VAL:HA	2.38	0.53
6:F:135:HIS:ND1	6:F:137:GLU:HB2	2.23	0.53
22:V:16:ARG:HD3	53:27:2271:G:H5'	1.90	0.53
23:W:39:VAL:HG12	23:W:42:GLU:H	1.73	0.53
23:W:58:ILE:HD13	23:W:66:VAL:HG21	1.91	0.53
25:Y:23:LEU:HD11	25:Y:53:MET:CE	2.39	0.53
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
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
52:26:524:G:H2'	52:26:525:C:C6	2.44	0.53
52:26:1462:C:H2'	52:26:1463:U:C6	2.44	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
53:27:1127:A:O2'	53:27:1128:G:H5''	2.08	0.53
53:27:1646:C:H5''	53:27:1647:U:C5'	2.38	0.53
53:27:2113:U:H2'	53:27:2114:A:C8	2.43	0.53
53:27:2396:G:H2'	53:27:2397:G:C8	2.37	0.53
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
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
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
34:8:53:GLN:HE22	35:9:111:ARG:HH21	1.57	0.53
34:8:94:GLU:HG3	34:8:185:PRO:HG2	1.91	0.53
38:12:73:SER:O	38:12:129:ALA:N	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:379: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
53:27:1721:G:H2'	53:27:1738:G:H22	1.74	0.53
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
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
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
27:1:30:ASP:OD2	27:1:33:SER:N	2.40	0.53
34:8:56:GLU:O	34:8:59:LYS:HB3	2.09	0.53
34:8:103:ARG:HB3	34:8:170:LEU:CD2	2.39	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
38:12:106:SER:HA	52:26:642:A:C5	2.42	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
52:26:178:C:H2'	52:26:179:A:C8	2.39	0.53
52:26:735:C:H2'	52:26:736:C:H6	1.73	0.53
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
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
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
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
3:C:51:GLU:OE1	3:C:51:GLU:N	2.38	0.53
3:C:147:LEU:HD23	3:C:180:LEU:HD23	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:7:71:ARG:O	33:7:75:VAL:HG23	2.08	0.53
39:13:123:ARG:O	52:26:1343:G:H4'	2.09	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
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
59:33:43:LEU:CD2	59:33:44:GLN:HE22	2.22	0.53
59:33:210:GLU:CD	59:33:260:TRP:CZ3	2.83	0.53
6:F:25:TYR:CD1	53:27:2094:A:H5'	2.44	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
27:1:18:HIS:CD2	53:27:2046:G:H1'	2.44	0.52
33:7:156:LEU:HD12	33:7:156:LEU:O	2.09	0.52
36:10:30:THR:HA	36:10:34:GLY:H	1.74	0.52
42:16:35:ARG:HD3	42:16:53:ARG:NH2	2.24	0.52
43:17:21:ILE:HB	43:17:24:VAL:HG11	1.91	0.52
46:20:46:LYS:HD2	52:26:617:G:H5'	1.92	0.52
46:20:60:TRP:HB3	46:20:65:ALA:HB2	1.91	0.52
51:25:46:ARG:NE	52:26:1533:C:H41	2.06	0.52
52:26:155:A:H2'	52:26:156:C:C6	2.44	0.52
52:26:676:A:O2'	52:26:677:U:H5'	2.09	0.52
52:26:680:C:H2'	52:26:681:A:H8	1.73	0.52
52:26:838:G:H2'	52:26:839:C:C6	2.43	0.52
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
53:27:172:A:H2'	53:27:173:A:C8	2.44	0.52
53:27:228:C:N4	53:27:417:C:H1'	2.24	0.52
53:27:347:A:H2'	53:27:348:A:C8	2.44	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
53:27:1838: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2217:G:O2'	53:27:2218:G:H5'	2.09	0.52
53:27:2534:A:H2'	53:27:2535:G:O4'	2.10	0.52
53:27:2545:G:C2'	53:27:2546:U:H5'	2.39	0.52
53:27:2593:U:H2'	53:27:2594:C:H6	1.74	0.52
53:27:2834:G:O6	53:27:2879:A:H2'	2.09	0.52
56:30:65:G:H2'	56:30:66:U:H6	1.74	0.52
59:33:81:LEU:CD2	59:33:84:LEU:HD22	2.39	0.52
1:A:91:ALA:HB3	1:A:103:ILE:HD11	1.90	0.52
2:B:118:PHE:HB2	53:27:2823:A:OP1	2.08	0.52
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
9:I:68:LYS:HZ2	53:27:1140:C:P	2.32	0.52
12:L:73:ILE:H	12:L:89:VAL:HG13	1.73	0.52
34:8:120:LYS:HG2	34:8:130:ASN:ND2	2.21	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
52:26:181: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
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
53:27:2271:G:H2'	53:27:2272:U:C6	2.44	0.52
53:27:2357:G:N2	53:27:2359:C:H3'	2.24	0.52
53:27:2590:A:H2'	53:27:2591:C:H6	1.73	0.52
58:32:57:A:H2'	58:32:58:A:H5'	1.89	0.52
59:33:42:CYS:HB2	59:33:84:LEU:HD11	1.91	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
1:A:17:LYS:CE	53:27:1565:C:H5'	2.39	0.52
5:E:91:VAL:HG22	5:E:92:GLY:N	2.24	0.52
9:I:80:HIS:CG	53:27:2642:G:H5'	2.45	0.52
9:I:113:PRO:HD2	53:27:558:U:OP1	2.10	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
31:5:36:ARG:HG2	31:5:37:GLN:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
37:11:12:LEU:HD12	37:11:13:PRO:CD	2.34	0.52
42:16:51:VAL:HG23	42:16:64:SER:O	2.10	0.52
42:16:98:ARG:HB3	42:16:105:GLY:HA2	1.91	0.52
43:17:52:ILE:O	43:17:55:LEU:HB2	2.10	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
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
52:26:1163:A:H2'	52:26:1164:G:H8	1.74	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
53:27:1234:U:H2'	53:27:1235:G:O4'	2.09	0.52
53:27:1289:C:H2'	53:27:1290:C:H6	1.75	0.52
53:27:1700:A:H5'	53:27:1701:A:OP2	2.09	0.52
53:27:1804:C:H2'	53:27:1805:A:H8	1.74	0.52
53:27:2897:U:H2'	53:27:2898:U:C6	2.44	0.52
56:30:22:G:H2'	56:30:23:A:H8	1.74	0.52
59:33:31:SER:O	59:33:35:LEU:HD13	2.09	0.52
59:33:210:GLU:OE1	59:33:260:TRP:CZ3	2.62	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
59:33:634:HIS:CE1	59:33:638:CYS:HB3	2.45	0.52
1:A:119:VAL:HB	1:A:132:ARG:HH21	1.74	0.52
1:A:130:PRO:HA	1:A:188:ARG:HA	1.92	0.52
1:A:132:ARG:CA	1:A:166:ARG:HH22	2.22	0.52
1:A:135:PRO:HG2	36:10:80:PHE:CD1	2.44	0.52
1:A:218:THR:N	53:27:1790:C:OP1	2.34	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:O	9:I:69:ARG:HD3	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
29:3:5:PHE:CD2	29:3:7:PRO:HD3	2.45	0.52
33:7:38:VAL:O	33:7:42:LEU:HD13	2.09	0.52
33:7:171:ARG:HG2	33:7:173:PRO:HD3	1.90	0.52
34:8:77:GLU:O	34:8:81:LEU:HG	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:149:LYS:CD	34:8:177:MET:HG3	2.39	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
39:13:108:ARG:HB3	52:26:1347:G:H8	1.75	0.52
44:18:92:ILE:HD12	44:18:92:ILE:H	1.73	0.52
45:19:44:GLU:O	45:19:46:LYS:N	2.42	0.52
52:26:284:C:H2'	52:26:285:C:H6	1.75	0.52
52:26:483:C:H2'	52:26:484:G:N7	2.24	0.52
52:26:600:A:H2'	52:26:601:G:H8	1.72	0.52
53:27:190:A:H3'	53:27:191:A:C8	2.45	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
53:27:1387:A:H5'	53:27:1469:A:H1'	1.90	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
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
59:33:43:LEU:CD1	59:33:56:LEU:HD13	2.40	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
2:B:83:ARG:HD3	53:27:2637:U:OP1	2.09	0.52
4:D:72:SER:OG	4:D:79:ARG:HA	2.09	0.52
10:J:49:ARG:NH2	52:26:1423:G:H5'	2.13	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
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
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
52:26:106:C:H2'	52:26:107:G:C8	2.44	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
52:26:1023:U:H2'	52:26:1024:G:H8	1.74	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
53:27:141:G:H5''	53:27:142:A:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:666:A:H2'	53:27:667:U:H6	1.74	0.52
53:27:1314:C:H2'	53:27:1315:C:C6	2.36	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
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
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
1:A:32:LEU:O	1:A:63:ILE:HG12	2.10	0.52
1:A:165:ALA:HB3	1:A:172:THR:OG1	2.09	0.52
4:D:1:ALA:O	4:D:4:HIS:HB3	2.09	0.52
7:G:96:PHE:CD1	7:G:97:LYS:N	2.78	0.52
12:L:19:GLY:C	12:L:20:LEU:HD12	2.29	0.52
14:N:40:ILE:HD13	54:28:8:C:O2'	2.10	0.52
14:N:40:ILE:HG22	14:N:41:ALA:O	2.09	0.52
14:N:49:VAL:HG22	14:N:85:LYS:HD2	1.91	0.52
21:U:20:LEU:HD21	21:U:41:GLU:HG2	1.92	0.52
35:9:104:ILE:HA	35:9:121:ASN:O	2.09	0.52
37:11:37:THR:O	37:11:41:ILE:HG13	2.09	0.52
39:13:17:ARG:HH21	39:13:65:THR:HG21	1.74	0.52
39:13:21:LYS:HB2	39:13:61:ASP:OD1	2.10	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
42:16:27:PRO:HD2	52:26:363:A:C5	2.45	0.52
42:16:43:LYS:CB	42:16:44:PRO:CD	2.88	0.52
52:26:955:U:H3	52:26:1225:A:H61	1.56	0.52
52:26:1463:U:H2'	52:26:1464:U:C5	2.44	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
34:8:61:ARG:O	34:8:65:GLY:N	2.43	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
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
52:26:1144:G:N2	52:26:1146:A:H62	2.08	0.52
53:27:40:U:H2'	53:27:41:C:C6	2.45	0.52
53:27:140:C:H2'	53:27:141:G:C4'	2.31	0.52
53:27:1271:G:O3'	53:27:1272:A:H4'	2.09	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
56:30:39:U:H2'	56:30:40:C:C6	2.45	0.52
59:33:63:VAL:HA	59:33:79:ALA:CB	2.39	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
3:C:35:TYR:CE1	53:27:615:U:H2'	2.44	0.52
3:C:134:LEU:HD13	3:C:157:LEU:CD1	2.39	0.52
6:F:81:ALA:HA	6:F:147:VAL:O	2.10	0.52
8:H:121:ILE:HD12	8:H:122:GLU:N	2.25	0.52
16:P:36:GLN:HE21	53:27:563:A:H2'	1.72	0.52
17:Q:38:VAL:O	17:Q:53:PHE:HA	2.10	0.52
19:S:2:ILE:HG12	53:27:144:A:C5'	2.40	0.52
19:S:13:ALA:HB1	24:X:33:ALA:CB	2.40	0.52
32:6:124:THR:HG22	32:6:127:LYS:HD2	1.91	0.52
33:7:5:HIS:CG	44:18:88:MET:HB3	2.44	0.52
33:7:149:LYS:HG3	33:7:149:LYS:O	2.10	0.52
34:8:124:VAL:O	34:8:126:GLY:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:68:ARG:HH22	52:26:1075:U:P	2.32	0.52
38:12:73:SER:HB3	38:12:129:ALA:HB3	1.92	0.52
39:13:41:GLU:OE1	39:13:44:ARG:NH2	2.43	0.52
47:21:64:ARG:O	47:21:66:LEU:HG	2.09	0.52
51:25:17:ARG:O	51:25:20:ARG:HG2	2.09	0.52
52:26:287:U:H2'	52:26:288:A:H8	1.72	0.52
52:26:824:G:H2'	52:26:825:A:C8	2.45	0.52
53:27:236:C:H2'	53:27:237:C:C6	2.45	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
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
53:27:2391: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
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
59:33:35:LEU:HD11	59:33:73:ILE:CB	2.40	0.52
59:33:169:ASP:O	59:33:169:ASP:OD1	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
2:B:149:ASN:HB2	53:27:2574:G:O2'	2.09	0.52
3:C:75:SER:OG	3:C:77:ILE:HG12	2.10	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
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:O	9:I:84:ILE:HG23	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
28:2:38:PHE:HZ	28:2:43:ARG:HG3	1.73	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:1015:G:H2'	52:26:1016:A:O4'	2.10	0.52
53:27:30:G:H2'	53:27:31:C:O4'	2.10	0.52
53:27:218:A:H3'	53:27:219:A:C8	2.41	0.52
53:27:828:U:H2'	53:27:829:A:C8	2.44	0.52
53:27:828:U:C6	53:27:829:A:N7	2.78	0.52
53:27:935:C:H2'	53:27:936:A:C8	2.45	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
53:27:2508: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
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
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
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
37:11:2:ARG:HD3	52:26:1380:U:C4	2.45	0.52
38:12:88:LYS:HG2	52:26:600:A:OP1	2.10	0.52
39:13:22:PRO:HA	39:13:60:LEU:HD23	1.92	0.52
42:16:107:LYS:O	42:16:108:ASP:HB2	2.09	0.52
46:20:54:LEU:HD11	46:20:75:ILE:HG23	1.92	0.52
46:20:67:ILE:HD13	46:20:75:ILE:CD1	2.40	0.52
47:21:14:ASP:C	47:21:16:MET:N	2.63	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
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
53:27:205:G:O2'	53:27:206:U:OP2	2.28	0.52
53:27:247:G:H4'	53:27:386:G:C4	2.45	0.52
53:27:296:U:H2'	53:27:297:G:C8	2.45	0.52
53:27:569:U:H2'	53:27:570:G:C8	2.45	0.52
53:27:740:C:H2'	53:27:741:U:H6	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:1693:U:C3'	53:27:1694:C:H5'	2.37	0.52
53:27:2846:G:H2'	53:27:2847:U:O4'	2.09	0.52
54:28:35:C:H2'	54:28:36:C:C5'	2.40	0.52
56:30:20:U:O2	56:30:20:U:H2'	2.10	0.52
3:C:29:HIS:CE1	3:C:33:VAL:HG21	2.45	0.51
4:D:41:GLU:HB2	4:D:48:LEU:HD23	1.91	0.51
4:D:48:LEU:HA	4:D:51:ASN:ND2	2.17	0.51
7:G:96:PHE:CG	7:G:97:LYS:N	2.78	0.51
8:H:52:LEU:CD2	8:H:81:LYS:HB2	2.40	0.51
9:I:4:PHE:CE2	9:I:43:GLU:HB2	2.46	0.51
9:I:31:GLU:OE1	9:I:34:ARG:HD3	2.10	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
32:6:26:MET:HG2	32:6:192:PRO:HG3	1.92	0.51
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
52:26:144: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
52:26:1306:A:H62	52:26:1331:G:H1'	1.72	0.51
53:27:48:G:O3'	53:27:51:G:H5'	2.10	0.51
53:27:127:A:H5'	53:27:128:C:O4'	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
53:27:1123:C:H2'	53:27:1124:G:H8	1.75	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
36:10:75:GLU:HA	36:10:78:PHE:HD2	1.74	0.51
37:11:21:LEU:C	37:11:21:LEU:HD23	2.31	0.51
37:11:77:ARG:NH2	37:11:151:ALA:O	2.44	0.51
38:12:48:PHE:HB3	38:12:60:LEU:HD23	1.92	0.51
42:16:28:GLN:O	42:16:29:LYS:HG2	2.09	0.51
43:17:56:ARG:HA	43:17:59:VAL:HG22	1.91	0.51
48:22:68:PRO:HB3	48:22:73:HIS:CD2	2.45	0.51
52:26:132:C:H2'	52:26:133:U:C6	2.45	0.51
52:26:268:U:H2'	52:26:269:C:C6	2.45	0.51
52:26:1527:U:H2'	52:26:1528:U:H6	1.71	0.51
53:27:37:C:H2'	53:27:38:A:C8	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
59:33:20:TRP:CG	59:33:63:VAL:HG23	2.45	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:3:VAL:HG12	5:E:68:ARG:HD3	1.93	0.51
5:E:137:LYS:O	5:E:140:ILE:HG13	2.10	0.51
7:G:5:LEU:O	7:G:8:LYS:HB2	2.10	0.51
7:G:29:ASP:C	7:G:81:LEU:HD23	2.30	0.51
11:K:110:VAL:O	11:K:111:ILE:HB	2.10	0.51
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:19:HIS:O	25:Y:23:LEU:HG	2.09	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
52:26:162: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
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
53:27:64:A:H2'	53:27:65:U:H6	1.74	0.51
53:27:234:U:H2'	53:27:235:U:H6	1.76	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
53:27:697: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
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
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
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:26:GLY:HA3	53:27:1140:C:H5'	1.92	0.51
9:I:37:ARG:NH2	9:I:110:PRO:HG3	2.24	0.51
10:J:64:ARG:NE	15:O:67:GLU:OE1	2.43	0.51
10:J:76:VAL:HG12	15:O:72:VAL:HG21	1.92	0.51
11:K:111:ILE:H	11:K:128:THR:HG23	1.75	0.51
11:K:132:ARG:HG3	11:K:142:ILE:HD13	1.92	0.51
12:L:53:MET:HB2	12:L:120:ALA:HB2	1.91	0.51
13:M:2:ARG:HG2	13:M:3:HIS:N	2.26	0.51
15:O:13:LYS:HB2	15:O:76:HIS:ND1	2.25	0.51
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
42:16:113:ARG:NH2	52:26:501:C:OP1	2.43	0.51
52:26:263:A:H2'	52:26:264:C:C6	2.45	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
52:26:1208:C:H2'	52:26:1209:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:1040:A:H2	53:27:1115:G:H22	1.58	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
54:28:6:G:H2'	54:28:7:G:C8	2.45	0.51
59:33:204:ARG:HG3	59:33:211:TYR:CE2	2.46	0.51
59:33:697:VAL:O	59:33:699:SER:N	2.43	0.51
4:D: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
19:S:91:GLN:H	19:S:91:GLN:CD	2.14	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
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
52:26:174: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
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
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
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
54:28:91:C:H2'	54:28:92:C:C6	2.46	0.51
59:33:20:TRP:CZ2	59:33:76:LEU:HB3	2.45	0.51
59:33:39:TRP:N	59:33:80:LEU:HD13	2.25	0.51
59:33:95:LEU:CD1	59:33:107:ILE:HD12	2.41	0.51
59:33:327:LEU:CD2	59:33:332:LYS:CB	2.87	0.51
59:33:444:ILE:CG2	59:33:461:ILE:HD12	2.38	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:683:ILE:O	59:33:687:LEU:HG	2.11	0.51
6:F:29:PHE:O	6:F:33:GLN:HB2	2.10	0.51
10:J:40:LYS:HE3	10:J:57:VAL:CG1	2.40	0.51
11:K:64:PHE:HZ	30:4:14:LYS:HG2	1.75	0.51
12:L:67:VAL:HG12	12:L:100:LYS:HZ2	1.73	0.51
25:Y:46:MET:O	25:Y:50:VAL:HG22	2.10	0.51
26:Z:2:LYS:HB2	26:Z:5:ILE:HD11	1.92	0.51
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
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
52:26:20:U:C2'	52:26:21:G:H5'	2.41	0.51
52:26:202:G:H2'	52:26:203:G:C8	2.46	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
52:26:1471:U:O2'	52:26:1472:U:H5'	2.11	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
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
59:33:20:TRP:CZ2	59:33:76:LEU:CB	2.94	0.51
59:33:156:ARG:O	59:33:160:LEU:HG	2.10	0.51
5:E:114:HIS:CD2	5:E:147:LEU:HD21	2.46	0.51
8:H:126:ARG:NE	53:27:1080:A:H5''	2.24	0.51
11:K:109:LYS:HG2	11:K:126:ARG:HB2	1.93	0.51
12:L:20:LEU:CD2	21:U:81:PRO:HG2	2.37	0.51
20:T:84:PHE:CD1	20:T:93:ARG:HG2	2.45	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
34:8:190:LEU:HD12	34:8:190:LEU:O	2.10	0.51
38:12:77:VAL:HG11	38:12:124:ILE:HD11	1.92	0.51
39:13:30:ASN:HD21	39:13:65:THR:HA	1.76	0.51
39:13:48:ARG:HB3	39:13:52:GLU:OE2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:320:A:H2'	52:26:321:A:O4'	2.10	0.51
52:26:1346:A:H61	52:26:1374:A:H5''	1.76	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
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
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
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
59:33:20:TRP:CZ2	59:33:76:LEU:HG	2.46	0.51
59:33:35:LEU:HD11	59:33:73:ILE:CA	2.39	0.51
59:33:179:THR:HG23	59:33:202:CYS:HB3	1.92	0.51
59:33:221:ARG:CZ	59:33:273:LEU:HD11	2.40	0.51
1:A:48:ILE:HD11	1:A:51:ARG:HA	1.93	0.51
6:F:112:LYS:HE2	53:27:2220:U:H5''	1.93	0.51
7:G:59:LEU:HG	7:G:62:ARG:NH2	2.26	0.51
7:G:107:GLU:O	7:G:108:VAL:HB	2.11	0.51
22:V:42:HIS:CD2	22:V:73:ARG:HD3	2.45	0.51
26:Z:44:PHE:C	26:Z:47:LYS:HE2	2.31	0.51
27:1:9:ARG:O	27:1:12:ARG:HG2	2.10	0.51
35:9:95:MET:HA	35:9:124:ALA:HA	1.92	0.51
42:16:66:ILE:HG12	42:16:96:THR:HG21	1.91	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
53:27:7:G:H2'	53:27:8:C:H6	1.74	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:72:ASP:OD1	59:33:74:ASP:N	2.43	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
27:1:3:GLN:HA	53:27:2615:U:C2	2.46	0.51
32:6:60:ALA:HB3	32:6:223:GLY:HA3	1.92	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
52:26:151: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
52:26:1432:G:H1'	52:26:1468:A:H62	1.74	0.51
53:27:54:G:N2	53:27:55:G:H1'	2.26	0.51
53:27:138:U:H5	53:27:139:U:C6	2.29	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
53:27:1480:C:H2'	53:27:1481:U:O4'	2.10	0.51
59:33:99:VAL:HG22	59:33:103:VAL:HG21	1.93	0.51
3:C:97:ASN:OD1	53:27:606:U:H5''	2.10	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
27:1:46:GLY:HA3	27:1:54:ILE:HG21	1.93	0.51
32:6:19:THR:OG1	32:6:20:ARG:N	2.41	0.51
33:7:35:ASP:OD1	33:7:56:ILE:HG21	2.11	0.51
33:7:148:ILE:HG12	33:7:149:LYS:N	2.26	0.51
34:8:17:ASP:CG	34:8:19:PHE:H	2.14	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
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
52:26:358: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
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
53:27:211:C:H5'	53:27:1366:A:O2'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:540:C:H2'	53:27:541:A:H8	1.75	0.51
53:27:613:A:H4'	53:27:614:A:C8	2.46	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:H2'	53:27:2134:A:N3	2.26	0.51
53:27:2329:U:H2'	53:27:2330:G:H8	1.70	0.51
53:27:2581:G:N3	53:27:2581:G:H2'	2.26	0.51
58:32:21:A:H62	58:32:47:U:H5''	1.75	0.51
59:33:305:ASP:O	59:33:305:ASP:OD1	2.29	0.51
59:33:612:CYS:SG	59:33:634:HIS:NE2	2.64	0.51
59:33:626:THR:OG1	59:33:630:GLY:O	2.29	0.51
1:A:71:ASP:HA	1:A:117:SER:OG	2.11	0.50
3:C:48:THR:O	3:C:52:VAL:HG23	2.11	0.50
5:E:165:ASP:OD1	5:E:166:GLU:N	2.45	0.50
8:H:120:ASP:O	8:H:123:ALA:HB3	2.11	0.50
10:J:76:VAL:H	15:O:72:VAL:CG2	2.24	0.50
10:J:77:ILE:HG13	15:O:71:ARG:HG3	1.93	0.50
11:K:90:VAL:HG13	11:K:95:LEU:HD11	1.93	0.50
23:W:68:ALA:HA	23:W:71:ARG:HG2	1.92	0.50
27:1:24:VAL:O	27:1:26:SER:N	2.42	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
38:12:113:ARG:HA	38:12:116:ARG:HH12	1.76	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
52:26:85:U:H5''	52:26:86:G:OP1	2.11	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
52:26:1327: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
53:27:141:G:H3'	53:27:142:A:O4'	2.10	0.50
53:27:338:G:H2'	53:27:339:U:C6	2.46	0.50
53:27:631:A:H2	53:27:2415:G:H21	1.60	0.50
53:27:983:A:H3'	53:27:984:A:H8	1.76	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
53:27:1558: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:32:43:A:H2'	58:32:44:A:H8	1.76	0.50
1:A:257:ARG:NH1	53:27:1800:C:OP1	2.43	0.50
2:B:13:ARG:HG2	15:O:55:HIS:CE1	2.46	0.50
3:C:40:ARG:HD2	3:C:92:HIS:CD2	2.45	0.50
3:C:134:LEU:HD13	3:C:157:LEU:HD11	1.93	0.50
7:G:67:THR:N	7:G:68:PRO:CD	2.74	0.50
7:G:118:ILE:HB	7:G:119:PRO:HD3	1.94	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
17:Q:101:ILE:O	17:Q:102:SER:HB2	2.12	0.50
18:R:23:LEU:HD11	27:1:21:LEU:HG	1.94	0.50
21:U:77:VAL:HG21	21:U:86:LEU:HD22	1.93	0.50
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
37:11:56:SER:HB3	37:11:59:GLU:HG2	1.92	0.50
37:11:64:ALA:HB1	37:11:126:ALA:HB3	1.92	0.50
38:12:28:SER:HB3	38:12:56:PRO:HB2	1.93	0.50
38:12:64:TYR:HD1	38:12:69:ALA:HA	1.76	0.50
39:13:126:PHE:CG	39:13:127:SER:N	2.79	0.50
49:23:68:HIS:HB3	49:23:72:GLU:OE1	2.11	0.50
51:25:31:VAL:HG22	51:25:31:VAL:O	2.11	0.50
52:26:147:G:H2'	52:26:148:G:C8	2.45	0.50
52:26:1087:G:OP1	52:26:1389:C:H4'	2.11	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
53:27:645: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
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
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
53:27:2902:C:H2'	53:27:2903:U:O4'	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
54:28:105:G:O2'	54:28:106:G:H5'	2.11	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:152:ARG:HH21	5:E:152:ARG:HG3	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
32:6:93:HIS:ND1	32:6:145:ASN:O	2.44	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
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
52:26:332: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
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
53:27:52:A:O2'	53:27:53:A:H5'	2.11	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
53:27:355: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
53:27:780:G:H3'	53:27:782:A:H62	1.75	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
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
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
27:1:14:MET:HA	53:27:15:G:O2'	2.12	0.50
33:7:72:PRO:O	33:7:76:ILE:HG12	2.12	0.50
36:10:36:ILE:HA	36:10:64:VAL:HA	1.92	0.50
41:15:27:ASN:O	41:15:56:LYS:HG2	2.11	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
52:26:1326:U:H2'	52:26:1327:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1508:A:H2'	52:26:1509:C:H6	1.77	0.50
53:27:18:U:H2'	53:27:19:A:H8	1.74	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
53:27:2580:U:C4	53:27:2581:G:N7	2.79	0.50
57:31:21:A:H2'	57:31:46:G:N1	2.26	0.50
59:33:38:THR:HG21	59:33:77:ARG:HD2	1.93	0.50
59:33:65:ILE:HD13	59:33:157:ILE:HG13	1.93	0.50
59:33:101:LYS:O	59:33:104:VAL:HG12	2.12	0.50
1:A:132:ARG:HB3	1:A:185:ALA:HB1	1.93	0.50
1:A:156:SER:HB3	1:A:159:THR:OG1	2.12	0.50
1:A:220:ARG:N	53:27:1789:A:OP1	2.41	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
23:W:29:LEU:HB2	53:27:2230:G:O3'	2.12	0.50
26:Z:22:MET:HG2	26:Z:24:ILE:HG23	1.93	0.50
38:12:106:SER:HA	52:26:642:A:C8	2.46	0.50
40:14:6:ILE:HB	40:14:76:ILE:HD12	1.93	0.50
46:20:46:LYS:HD3	52:26:617:G:H4'	1.93	0.50
52:26:922:G:H2'	52:26:923:A:C8	2.47	0.50
52:26:1310:G:O2'	52:26:1311:A:H5'	2.11	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
53:27:343: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
53:27:1257:C:H2'	53:27:1258:U:C6	2.47	0.50
53:27:2186:G:H2'	53:27:2187:U:O4'	2.11	0.50
53:27:2660:A:H2'	53:27:2661:G:O4'	2.11	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
7:G:57:ASN:OD1	7:G:57:ASN:N	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
34:8:198:LEU:HA	34:8:201:GLU:OE1	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:141:G:C5	53:27:142:A:H1'	2.47	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
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
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
56:30:58:A:H5'	56:30:60:U:O4	2.12	0.50
59:33:55:LEU:HD23	59:33:55:LEU:C	2.32	0.50
59:33:676:ARG:O	59:33:679:LEU:HD13	2.11	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
8:H:23:VAL:O	8:H:23:VAL:HG22	2.11	0.50
10:J:73:ASP:OD2	15:O:79:VAL:HG11	2.12	0.50
11:K:57:LEU:HA	11:K:60:ARG:NH1	2.26	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
34:8:59:LYS:O	34:8:63:ILE:HG13	2.12	0.50
38:12:17:GLN:NE2	38:12:69:ALA:HB1	2.27	0.50
38:12:47:ASP:OD1	38:12:48:PHE:N	2.44	0.50
39:13:50:PRO:O	39:13:54:VAL:HG22	2.12	0.50
40:14:39:PRO:HB2	40:14:72:ARG:HD2	1.94	0.50
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
52:26:431: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
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
53:27:708:G:H2'	53:27:709:U:C6	2.46	0.50
53:27:1912:A:N7	53:27:1917:U:O4	2.45	0.50
53:27:2064:C:H1'	53:27:2450:A:C5	2.47	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
53:27:2590: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2795:C:H2'	53:27:2796:U:O4'	2.12	0.50
56:30:26:A:C2'	56:30:27:G:H5'	2.42	0.50
58:32:60:U:P	58:32:61:C:H5	2.35	0.50
59:33:99:VAL:HG21	59:33:103:VAL:HG11	1.93	0.50
59:33:333:THR:O	59:33:335:GLU:N	2.45	0.50
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
27:1:3:GLN:HA	53:27:2615:U:N1	2.27	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
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
52:26:121:U:H5'	52:26:122:G:OP2	2.12	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
52:26:1206:G:C5	52:26:1207:G:C8	2.99	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
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
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
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
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
4:D:98:PHE:HA	4:D:101:ARG:CZ	2.41	0.50
8:H:45:THR:HB	8:H:48:ILE:HB	1.93	0.50
8:H:104:GLN:O	8:H:107:GLU:HG2	2.12	0.50
11:K:19:LEU:HD22	53:27:587:C:O2'	2.12	0.50
11:K:81:ASP:C	11:K:81:ASP:OD1	2.49	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:108:ARG:NE	52:26:1463:U:OP1	2.44	0.50
16:P:27:ARG:HA	16:P:33:VAL:CG1	2.42	0.50
20:T:70:ALA:HB1	20:T:79:ALA:HB1	1.94	0.50
21:U:14:LYS:HE2	54:28:98:G:N1	2.27	0.50
24:X:41:HIS:NE2	53:27:96:C:H4'	2.26	0.50
26:Z:20:ASN:HB2	26:Z:39:LYS:CE	2.41	0.50
26:Z:26:SER:OG	26:Z:28:VAL:HG23	2.12	0.50
37:11:62:GLU:HG3	37:11:66:GLU:OE2	2.12	0.50
39:13:35:GLU:H	39:13:35:GLU:CD	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
49:23:16:LYS:O	49:23:20:LYS:HG3	2.12	0.50
50:24:3:ILE:HG23	50:24:7:LYS:HZ1	1.77	0.50
50:24:38:ILE:HD11	50:24:78:LEU:HD11	1.94	0.50
51:25:34:ARG:HB2	51:25:36:PHE:CZ	2.46	0.50
52:26:60:A:N3	52:26:61:G:H1'	2.26	0.50
52:26:507:C:H5''	52:26:508:U:OP2	2.12	0.50
52:26:1369:C:H2'	52:26:1370:G:C8	2.46	0.50
53:27:322:A:H5'	53:27:340:A:H1'	1.94	0.50
53:27:878:A:H3'	53:27:879:G:C8	2.43	0.50
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
54:28:28:C:H2'	54:28:29:A:H8	1.74	0.50
56:30:74:C:H2'	59:33:432:HIS:HA	1.93	0.50
59:33:65:ILE:HD13	59:33:157:ILE:HD11	1.93	0.50
59:33:226:GLU:HA	59:33:229:ILE:CD1	2.42	0.50
59:33:444:ILE:HG13	59:33:444:ILE:O	2.12	0.50
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
32:6:40:ILE:HD12	32:6:201:GLY:HA2	1.94	0.49
44:18:71:GLY:HA2	52:26:975:A:O2'	2.11	0.49
46:20:31:ARG:NH1	52:26:310:G:O3'	2.45	0.49
49:23:30:LEU:HD13	49:23:48:ILE:HG22	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:77:ARG:HD3	52:26:1225:A:O2'	2.11	0.49
52:26:184:G:H5'	52:26:224:U:O2'	2.11	0.49
52:26:424:G:H2'	52:26:425:G:H8	1.77	0.49
52:26:789:U:O2	52:26:792:A:H2'	2.11	0.49
52:26:1385:G:O2'	52:26:1386:G:H5'	2.12	0.49
53:27:123:G:H2'	53:27:124:G:H8	1.77	0.49
53:27:226:A:H5''	53:27:257:C:O2'	2.12	0.49
53:27:262:A:C2'	53:27:263:G:H5'	2.42	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
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
53:27:2355:G:H2'	53:27:2356:U:O4'	2.12	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
1:A:52:HIS:O	1:A:215:VAL:HG23	2.12	0.49
6:F:78:VAL:O	6:F:144:VAL:HG13	2.12	0.49
8:H:130:GLY:C	53:27:1088:A:H61	2.15	0.49
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
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
37:11:41:ILE:HG23	37:11:116:ALA:HB2	1.95	0.49
39:13:129:ARG:NH2	57:31:33:U:H3'	2.27	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
52:26:913: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
52:26:1229:A:H2'	52:26:1230:C:C6	2.47	0.49
53:27:242:G:N2	53:27:254:G:H2'	2.27	0.49
53:27:530:G:N9	53:27:2035:G:H4'	2.28	0.49
53:27:1804:C:H2'	53:27:1805:A:C8	2.47	0.49
53:27:2748:A:H2'	53:27:2749:A:O4'	2.13	0.49
59:33:296:VAL:HG23	59:33:297:HIS:CD2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
31:5:37:GLN:OE1	31:5:37:GLN:HA	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
40:14:5:ARG:HG2	40:14:79:PRO:HD3	1.94	0.49
42:16:33:CYS:N	42:16:54:VAL:HG13	2.26	0.49
43:17:108:ARG:HD3	52:26:1307:U:O3'	2.11	0.49
52:26:113:G:C5	52:26:114:U:C4	3.01	0.49
52:26:663:A:H5'	52:26:836:G:OP1	2.12	0.49
52:26:961:U:OP2	52:26:1223:C:H4'	2.12	0.49
52:26:1040:U:H2'	52:26:1041:G:C8	2.47	0.49
52:26:1251:A:O2'	52:26:1370:G:H5'	2.12	0.49
52:26:1486:G:H2'	52:26:1487:G:C8	2.48	0.49
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:64:VAL:HG23	9:I:69:ARG:HB2	1.95	0.49
10:J:24:VAL:HA	10:J:39:ILE:HG22	1.94	0.49
11:K:62:PRO:HB2	30:4:29:ARG:HH11	1.78	0.49
12:L:86:LYS:HD2	53:27:956:G:OP1	2.13	0.49
13:M:90:ARG:NH2	53:27:2880:C:O3'	2.45	0.49
14:N:19:GLN:HG3	14:N:20:GLU:N	2.26	0.49
21:U:9:ARG:NH2	21:U:12:GLN:HA	2.23	0.49
26:Z:56:ARG:HG3	49:23:64:GLU:HA	1.93	0.49
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
37:11:59:GLU:O	37:11:62:GLU:HB3	2.12	0.49
37:11:110:ARG:HH22	37:11:121:ASN:C	2.16	0.49
38:12:116:ARG:NH1	38:12:116:ARG:HB2	2.27	0.49
50:24:50:PHE:HD1	50:24:78:LEU:HD23	1.78	0.49
50:24:81:GLN:O	50:24:84:LYS:HB3	2.12	0.49
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
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
53:27:80:G:O5'	53:27:346:A:H1'	2.13	0.49
53:27:123:G:H4'	53:27:1376:C:O5'	2.12	0.49
53:27:728:G:O2'	53:27:730:A:H8	1.89	0.49
53:27:1406:U:C3'	53:27:1407:G:H5''	2.42	0.49
56:30:71:G:H2'	56:30:72:C:C6	2.47	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:6:68:PHE:HE2	32:6:88:GLN:HB2	1.77	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
34:8:94:GLU:HA	34:8:99:ASN:HD22	1.77	0.49
38:12:72:GLU:N	38:12:129:ALA:O	2.45	0.49
38:12:104:SER:HA	38:12:109:VAL:HG22	1.93	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
44:18:48:GLN:HG2	49:23:11:ASP:CG	2.32	0.49
44:18:89:ARG:HB2	44:18:89:ARG:CZ	2.43	0.49
47:21:68:LYS:HD3	52:26:267:C:OP2	2.12	0.49
50:24:14:GLU:C	50:24:16:ALA:H	2.15	0.49
52:26:129:A:H1'	52:26:130:A:C8	2.47	0.49
52:26:1511:G:H2'	52:26:1512:U:C6	2.47	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
53:27:1271:G:C2	53:27:1617:C:H4'	2.47	0.49
53:27:1399:C:H2'	53:27:1400:U:H6	1.76	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
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
1:A:231:HIS:ND1	53:27:1826:G:OP1	2.39	0.49
3:C:63:LYS:HD2	3:C:69:ARG:NH1	2.27	0.49
4:D:69:ALA:N	4:D:82:TYR:O	2.38	0.49
4:D:72:SER:OG	57:31:56:C:H1'	2.13	0.49
11:K:41:ARG:HH11	53:27:806:C:H3'	1.78	0.49
12:L:6:ARG:HD2	53:27:870:U:OP1	2.13	0.49
14:N:64:TYR:CD2	54:28:51:G:H5''	2.47	0.49
18:R:3:THR:HG21	18:R:58:ALA:CB	2.35	0.49
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
38:12:74:ILE:HG23	38:12:74:ILE:O	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:783:A:H2'	53:27:784:G:C4'	2.41	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
53:27:1353:A:C5	53:27:1378:A:C6	3.01	0.49
53:27:1353:A:C8	53:27:1378:A:N6	2.81	0.49
53:27:1563:U:H2'	53:27:1564:C:C5	2.48	0.49
53:27:1786:A:H1'	53:27:1938:A:N6	2.27	0.49
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
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
59:33:41:TYR:OH	59:33:94:VAL:HG22	2.13	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
3:C:31:VAL:HG21	3:C:104:ALA:HB3	1.94	0.49
3:C:122:GLU:HA	3:C:190:ALA:CB	2.43	0.49
4:D:7:TYR:HA	4:D:11:VAL:CG2	2.43	0.49
5:E:2:ARG:HD2	53:27:2751:G:O4'	2.13	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:31:HIS:CD2	53:27:1279:G:H4'	2.48	0.49
13:M:100:CYS:SG	13:M:101:GLY:N	2.85	0.49
16:P:10:ARG:CZ	53:27:513:A:O2'	2.61	0.49
16:P:57:ARG:O	16:P:61:ILE:HG13	2.13	0.49
27:1:14:MET:SD	53:27:2045:C:H5''	2.52	0.49
29:3:13:ASN:O	29:3:17:GLY:N	2.44	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
39:13:17:ARG:CD	52:26:1147:C:O2'	2.58	0.49
40:14:53:ILE:HG23	52:26:1060:U:H4'	1.94	0.49
42:16:51:VAL:HG23	42:16:64:SER:C	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:3:ILE:O	43:17:5:GLY:N	2.45	0.49
45:19:25:GLU:HG3	45:19:80:LEU:HD22	1.95	0.49
49:23:52:ASN:CG	49:23:53:GLY:H	2.16	0.49
50:24:72:ALA:HA	50:24:75:LYS:HD3	1.93	0.49
51:25:23:GLU:O	51:25:25:ALA:N	2.46	0.49
52:26:117:G:O6	52:26:289:G:H1'	2.12	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
52:26:1147:C:H2'	52:26:1148:U:C6	2.47	0.49
52:26:1237:C:C4'	52:26:1334:G:H21	2.25	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
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
53:27:1297:C:OP1	53:27:2710:C:H4'	2.13	0.49
53:27:1439:A:H2'	53:27:1440:U:H5'	1.94	0.49
53:27:1468:U:H2'	53:27:1522:A:N6	2.27	0.49
53:27:1914:C:O2	53:27:1914:C:O4'	2.27	0.49
53:27:2848:G:O2'	53:27:2849:U:H5'	2.12	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
1:A:130:PRO:HD3	1:A:188:ARG:NH1	2.28	0.49
3:C:55:SER:N	53:27:469:G:OP1	2.45	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:CD2	8:H:7:TYR:N	2.81	0.49
9:I:98:GLU:HB2	9:I:124:VAL:HG23	1.95	0.49
13:M:46:ARG:HG2	53:27:2838:G:O3'	2.13	0.49
16:P:61:ILE:HG23	16:P:75:TYR:CZ	2.46	0.49
22:V:37:ARG:NH1	53:27:2387:U:H4'	2.27	0.49
32:6:89:PHE:CE1	32:6:153:MET:HA	2.48	0.49
35:9:45:VAL:CG1	35:9:46:GLY:N	2.76	0.49
35:9:110:MET:HG3	35:9:139:THR:HG21	1.94	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
52:26:231: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:1404:C:H2'	52:26:1405:G:C8	2.48	0.49
53:27:226:A:H2'	53:27:227:A:O4'	2.12	0.49
53:27:942:G:H2'	53:27:943:A:C8	2.46	0.49
53:27:969:G:H2'	53:27:970:U:H6	1.75	0.49
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
56:30:47:U:H2'	56:30:50:U:OP1	2.12	0.49
57:31:71:C:H2'	57:31:72:A:O4'	2.12	0.49
59:33:154:ALA:C	59:33:157:ILE:HG12	2.33	0.49
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
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
15:O:108:ARG:HE	52:26:1463:U:P	2.36	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
28:2:10:LEU:HD23	28:2:50:GLU:HA	1.93	0.49
29:3:24:THR:O	29:3:28:ARG:HG3	2.12	0.49
33:7:21:TRP:HB2	33:7:58:ARG:HB3	1.94	0.49
33:7:154:GLY:HA3	33:7:195:ILE:HA	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
39:13:98:ARG:HG3	39:13:103:VAL:CG2	2.37	0.49
40:14:72:ARG:NH2	52:26:1151:A:O2'	2.46	0.49
43:17:52:ILE:HG22	43:17:56:ARG:HH12	1.78	0.49
49:23:38:THR:HA	49:23:69:LYS:HA	1.94	0.49
51:25:37:TYR:O	51:25:37:TYR:CG	2.65	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
52:26:927:G:H4'	52:26:1503:A:C8	2.48	0.49
52:26:1139:G:H5''	52:26:1140:C:H5	1.78	0.49
52:26:1238:A:N7	52:26:1301:U:O4	2.46	0.49
52:26:1250:A:H2'	52:26:1251:A:O4'	2.12	0.49
52:26:1349:A:H3'	52:26:1350:A:C8	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1395:C:O2'	52:26:1396:A:H5'	2.13	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
53:27:744:U:H2'	53:27:745:G:O4'	2.13	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
53:27:2720:U:H2'	53:27:2721:A:O4'	2.13	0.49
58:32:60:U:H3'	58:32:61:C:H5''	1.94	0.49
59:33:20:TRP:CZ2	59:33:76:LEU:HD23	2.48	0.49
59:33:62:MET:SD	59:33:155:GLU:HB2	2.53	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
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
33:7:35:ASP:O	33:7:38:VAL:HG22	2.13	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
52:26:285: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
52:26:1037:C:H2'	52:26:1038:C:H6	1.77	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
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
54:28:12:C:O2	54:28:12:C:O4'	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:28:106:G:H2'	54:28:107:G:O4'	2.13	0.49
56:30:31:A:C2	56:30:39:U:O2	2.66	0.49
59:33:35:LEU:HD21	59:33:76:LEU:HD22	1.95	0.49
59:33:607:HIS:HB2	59:33:633:VAL:HG23	1.95	0.49
59:33:667:LEU:HD22	59:33:714:ILE:HD11	1.95	0.49
59:33:694:VAL:HA	59:33:714:ILE:HG22	1.95	0.49
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
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
36:10:97:THR:O	36:10:98:GLU:HB2	2.12	0.48
37:11:2:ARG:HA	52:26:1380:U:C5	2.48	0.48
41:15:86:LYS:HZ1	41:15:114:PRO:HD3	1.77	0.48
51:25:48:LYS:HZ2	52:26:723:U:H3'	1.78	0.48
52:26:5:U:H4'	52:26:6:G:C4	2.48	0.48
52:26:593:U:H2'	52:26:594:U:H6	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
52:26:1417:G:N2	52:26:1482:G:H2'	2.28	0.48
53:27:22:C:H3'	53:27:23:G:H5''	1.95	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
53:27:1923:U:H5''	57:31:24:U:O2'	2.12	0.48
53:27:2616:C:H2'	53:27:2617:U:H6	1.78	0.48
54:28:60:C:H2'	54:28:61:G:H8	1.78	0.48
59:33:73:ILE:HG13	59:33:74:ASP:H	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
1:A:36:ASN:HD21	53:27:1816:C:P	2.36	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
26:Z:60:PHE:CE2	49:23:41:PRO:HD3	2.48	0.48
32:6:20:ARG:HH11	32:6:20:ARG:HG3	1.78	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
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
52:26:1515:G:H2'	52:26:1516:G:C8	2.48	0.48
53:27:84:A:H4'	53:27:85:G:O5'	2.12	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
53:27:1482: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
59:33:435:VAL:HG22	59:33:465:THR:HG21	1.94	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:CD	21:U:55:GLU:H	2.16	0.48
26:Z:57:VAL:O	26:Z:60:PHE:HB3	2.13	0.48
27:1:3:GLN:HE22	27:1:6:LYS:HA	1.78	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
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
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
52:26:578: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1221:G:C4	52:26:1222:G:C8	3.01	0.48
53:27:26:G:C6	53:27:27:G:N1	2.81	0.48
53:27:239:C:H2'	53:27:240:C:O4'	2.14	0.48
53:27:284:U:H2'	53:27:285:G:C8	2.49	0.48
53:27:1438:U:O2'	53:27:1439:A:H5'	2.13	0.48
53:27:1664:A:N6	53:27:1996:C:H42	2.06	0.48
53:27:1728:C:C3'	53:27:1729:U:H5''	2.43	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
53:27:2452:C:C2	53:27:2504:U:C4	3.01	0.48
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
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
27:1:18:HIS:C	27:1:20:ALA:H	2.17	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
36:10:66:ALA:HB1	36:10:67:PRO:CD	2.35	0.48
48:22:41:SER:HB3	48:22:51:GLN:HG2	1.94	0.48
52:26:585:G:H2'	52:26:586:C:C6	2.48	0.48
52:26:1255:G:H2'	52:26:1279:G:H1	1.78	0.48
53:27:466:A:O4'	53:27:683:U:H4'	2.13	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
53:27:1023: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
58:32:9:G:O5'	58:32:46:A:N3	2.46	0.48
2:B:149:ASN:ND2	53:27:2572:A:H2'	2.29	0.48
3:C:166:LYS:NZ	53:27:1205:A:O2'	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
52:26:41: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
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
53:27:48:G:C2	53:27:178:G:C6	3.01	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
53:27:2078:C:H2'	53:27:2079:U:C6	2.49	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
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
1:A:56:GLY:HA2	1:A:212:TRP:O	2.12	0.48
1:A:131:MET:HA	1:A:134:ILE:CD1	2.34	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
29:3:1:MET:H1	53:27:1620:G:C5'	2.17	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
52:26:27: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:O2	52:26:486:U:H2'	2.12	0.48
52:26:769:G:C2	52:26:770:C:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:859:G:O6	52:26:869:G:H2'	2.14	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
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
53:27:586:A:C2	53:27:1254:A:C2	3.02	0.48
53:27:758:C:O2	53:27:758:C:H2'	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
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
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
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:177:SER:HB3	53:27:1799:G:O6	2.14	0.48
4:D:7:TYR:OH	4:D:29:ARG:HB3	2.13	0.48
12:L:43:ALA:HA	12:L:46:ILE:HD13	1.95	0.48
17:Q:59:ILE:HA	17:Q:101:ILE:HD13	1.95	0.48
31:5:36:ARG:O	31:5:37:GLN:CB	2.61	0.48
33:7:81:GLU:HG2	33:7:85:LYS:HE3	1.96	0.48
34:8:205:LYS:HE2	52:26:26:A:O2'	2.14	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
52:26:810:C:H2'	52:26:811:C:C6	2.44	0.48
52:26:1498:U:H1'	52:26:1499:A:N7	2.29	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
53:27:1065:U:H1'	53:27:1074:G:N2	2.28	0.48
53:27:1229:C:H2'	53:27:1230:A:H8	1.77	0.48
53:27:1594:U:H2'	53:27:1595:C:H6	1.72	0.48
53:27:1975:G:H2'	53:27:1976:U:O4'	2.13	0.48
53:27:2075:U:C1'	53:27:2597:G:H21	2.27	0.48
53:27:2720:U:O2'	53:27:2721:A:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:52:ALA:O	4:D:55:ASP:HB2	2.13	0.48
4:D:105:ILE:O	4:D:109:ARG:HG3	2.14	0.48
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
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
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
52:26:36:C:H2'	52:26:37:U:O4'	2.14	0.48
52:26:83:C:O5'	52:26:83:C:H6	1.97	0.48
52:26:264:C:H2'	52:26:265:G:O4'	2.13	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
52:26:865:A:H2'	52:26:866:C:O4'	2.13	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
59:33:56:LEU:O	59:33:60:VAL:HG13	2.13	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:N	59:33:267:ASN:ND2	2.62	0.48
59:33:613:CYS:O	59:33:615:PRO:N	2.46	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:H	10:J:106:GLU:CD	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
27:1:11:LYS:NZ	53:27:2616:C:H5''	2.29	0.48
33:7:69:THR:HG21	33:7:75:VAL:HG21	1.95	0.48
33:7:147:GLY:HA3	33:7:171:ARG:O	2.13	0.48
35:9:80:LEU:HD13	35:9:122:VAL:CG1	2.34	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
49:23:79:TYR:CE1	52:26:1226:C:H5'	2.49	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
52:26:1203:C:H2'	52:26:1204:A:H8	1.79	0.48
52:26:1417:G:H2'	52:26:1482:G:N2	2.29	0.48
52:26:1469:C:H2'	52:26:1470:U:O4'	2.13	0.48
53:27:227:A:C6	53:27:2407:A:H1'	2.49	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
53:27:2104:C:H2'	53:27:2105:U:O4'	2.14	0.48
53:27:2405:G:H1'	53:27:2412:A:H61	1.78	0.48
53:27:2485:G:H2'	53:27:2486:C:H6	1.78	0.48
53:27:2872:A:C2'	53:27:2873:A:H5'	2.44	0.48
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
2:B:130:GLN:HG3	2:B:139:SER:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:16:MET:HE2	4:D:27:VAL:HB	1.96	0.48
5:E:2:ARG:HD3	53:27:2751:G:C4	2.49	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:17:LYS:HZ1	53:27:2380:C:H5''	1.78	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
31:5:7:VAL:HG23	31:5:7:VAL:O	2.14	0.48
39:13:43:ALA:O	39:13:46:VAL:HG13	2.14	0.48
40:14:5:ARG:N	40:14:76:ILE:O	2.47	0.48
41:15:21:HIS:CD2	52:26:707:U:H5''	2.49	0.48
41:15:55:ARG:HA	41:15:58:THR:OG1	2.14	0.48
45:19:88:ARG:HD2	53:27:714:U:H5	1.78	0.48
48:22:17:VAL:HG13	48:22:18:GLN:HG2	1.95	0.48
48:22:24:ASP:O	48:22:28:LEU:HD13	2.14	0.48
51:25:42:THR:O	51:25:45:LYS:HB3	2.13	0.48
52:26:542: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
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
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
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
53:27:2553:G:H2'	53:27:2554:U:O4'	2.14	0.48
53:27:2884:U:O2	53:27:2884:U:C3'	2.61	0.48
54:28:32:U:H2'	54:28:33:G:C8	2.49	0.48
57:31:18:G:OP1	57:31:18:G:H2'	2.14	0.48
59:33:696:GLY:N	59:33:713:THR:OG1	2.46	0.48
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:41:ARG:NH1	53:27:807:U:OP2	2.45	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:CD1	19:S:50:LEU:H	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
23:W:37:PHE:O	23:W:45:PHE:HD1	1.97	0.47
26:Z:1:MET:N	54:28:44:G:OP2	2.40	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
41:15:80:ASN:HB3	41:15:105:ARG:HH11	1.78	0.47
42:16:69:GLU:OE1	42:16:69:GLU:N	2.46	0.47
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
52:26:112: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
52:26:179: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
52:26:1081:A:H8	52:26:1081:A:OP2	1.97	0.47
52:26:1330:U:H2'	52:26:1331:G:O4'	2.14	0.47
53:27:224:U:O4	53:27:420:C:H5'	2.13	0.47
53:27:569:U:H5'	53:27:946:C:H1'	1.96	0.47
53:27:749:A:H4'	53:27:1271:G:N3	2.28	0.47
53:27:759:G:H2'	53:27:760:G:H8	1.79	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:O5'	53:27:888:C:H6	1.97	0.47
53:27:1048:A:N3	53:27:1048:A:H2'	2.29	0.47
53:27:1171:G:H5''	53:27:1172:C:OP2	2.13	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
53:27:2314: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
56:30:25:C:H2'	56:30:26:A:C1'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:16:ASP:CG	59:33:17:PRO:HD2	2.34	0.47
1:A:269:ARG:NH2	53:27:1798:U:OP2	2.42	0.47
2:B:56:LYS:HB2	2:B:59:ARG:CG	2.44	0.47
3:C:5:LEU:O	3:C:7:ASP:N	2.48	0.47
3:C:57:LYS:C	3:C:59:PRO:HD3	2.33	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
29:3:35:ARG:NH1	53:27:53:A:C2	2.81	0.47
34:8:28:ASP:CG	34:8:29:THR:H	2.18	0.47
34:8:134:TYR:CD1	52:26:620:C:H4'	2.46	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
53:27:399:U:O2'	53:27:400:G:H5'	2.13	0.47
53:27:917:A:H5''	53:27:2268:A:N6	2.28	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
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
53:27:2129:C:C2'	53:27:2130:U:H5'	2.44	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
59:33:20: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
59:33:96:ARG:HG2	59:33:104:VAL:HB	1.96	0.47
2:B:154:LYS:NZ	53:27:2024:G:O2'	2.47	0.47
3:C:9:GLN:O	3:C:11:ALA:N	2.43	0.47
3:C:48:THR:HA	3:C:82:GLY:O	2.14	0.47
3:C:83:VAL:O	3:C:83:VAL:HG12	2.13	0.47
4:D:65:LEU:HD22	54:28:42:C:C5	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:65:GLU:OE1	53:27:1046:A:C4	2.68	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:HD12	11:K:23:ILE:N	2.29	0.47
24:X:61:ALA:C	24:X:63:ALA:N	2.67	0.47
27:1:1:ALA:O	27:1:2:VAL:HG12	2.14	0.47
32:6:208:ALA:O	32:6:211:LEU:HB3	2.14	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
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
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
52:26:296: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
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
53:27:48:G:N1	53:27:178:G:C6	2.83	0.47
53:27:186:G:H2'	53:27:187:G:C8	2.45	0.47
53:27:1266:G:N2	53:27:2012:G:C4	2.81	0.47
53:27:1301:A:O2'	53:27:1302:A:H3'	2.14	0.47
53:27:1373:A:H2'	53:27:1374:G:O4'	2.14	0.47
53:27:1531:C:O5'	53:27:1531:C:H6	1.98	0.47
53:27:2001:C:H2'	53:27:2002:G:C8	2.50	0.47
53:27:2183:A:H2'	53:27:2184:A:H8	1.76	0.47
53:27:2299:U:H2'	53:27:2300:C:O4'	2.14	0.47
53:27:2743:U:C3'	53:27:2744:G:H5''	2.44	0.47
53:27:2875:C:H2'	53:27:2876:G:C8	2.49	0.47
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
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:17:VAL:CG1	18:R:76:VAL:HG21	2.45	0.47
18:R:29:VAL:HG21	18:R:69:LEU:CG	2.44	0.47
20:T:39:ASN:HB2	20:T:62:ALA:O	2.13	0.47
20:T:94:PHE:HB2	20:T:100:GLU:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:9:ARG:HA	27:1:12:ARG:HG2	1.95	0.47
29:3:24:THR:OG1	29:3:25:LYS:N	2.47	0.47
34:8:5:GLY:O	34:8:7:LYS:N	2.48	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:HB2	44:18:89:ARG:NH1	2.29	0.47
45:19:69:LEU:CD2	45:19:77:TYR:HA	2.43	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
52:26:1099:G:O2'	52:26:1100:C:H5'	2.15	0.47
52:26:1192:C:O5'	52:26:1192:C:H6	1.98	0.47
52:26:1488:G:H2'	52:26:1489:G:H8	1.78	0.47
53:27:170:U:H2'	53:27:171:U:C6	2.49	0.47
53:27:250:G:C5	53:27:251:A: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
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
53:27:1869: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:H8	53:27:2242:G:O5'	1.98	0.47
53:27:2303:G:O2'	53:27:2304:G:H5'	2.14	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
59:33:81:LEU:HD22	59:33:84:LEU:HD22	1.96	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:HG13	59:33:281:ILE:O	2.14	0.47
59:33:315:LYS:HB2	59:33:319:TYR:HB3	1.96	0.47
1:A:260:LYS:O	53:27:2227:A:H4'	2.15	0.47
2:B:130:GLN:HE22	53:27:2578:G:N2	2.13	0.47
3:C:65:THR:HB	3:C:67:ARG:HG2	1.97	0.47
3:C:196:VAL:O	3:C:200:LEU:N	2.39	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
33:7:15:LYS:HD3	33:7:180:ASP:OD1	2.14	0.47
39:13:82:ILE:O	39:13:85:ALA:HB3	2.13	0.47
45:19:55:LEU:O	45:19:59:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:43:MET:HA	49:23:46:LEU:HD12	1.95	0.47
52:26:40:C:O2'	52:26:41:G:H5'	2.14	0.47
52:26:123:U:OP1	52:26:312:C:H5'	2.13	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
52:26:469:C:H2'	52:26:470:C:O4'	2.14	0.47
52:26:785:G:H2'	52:26:786:G:H8	1.80	0.47
52:26:1424:U:H2'	52:26:1425:U:O4'	2.14	0.47
53:27:55:G:H2'	53:27:56:A:H8	1.79	0.47
53:27:555:G:O2'	53:27:556:A:C8	2.66	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
53:27:819:A:OP2	53:27:1187:G:N2	2.47	0.47
53:27:957:C:O2'	53:27:958:U:H5''	2.15	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
53:27:1268: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:H2'	53:27:2517:C:C6	2.50	0.47
53:27:2516:A:O2'	53:27:2517:C:H5'	2.14	0.47
53:27:2549:G:H8	53:27:2549:G:H5''	1.80	0.47
53:27:2588:G:H8	53:27:2588:G:O5'	1.97	0.47
54:28:46:A:H2'	54:28:47:C:O4'	2.15	0.47
56:30:33:U:O5'	56:30:33:U:H6	1.97	0.47
56:30:54:U:H6	56:30:54:U:O5'	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
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:3:LEU:HD13	4:D:172:PHE:CE1	2.50	0.47
4:D:127:TYR:O	4:D:154:THR:HG23	2.15	0.47
5:E:51:PHE:HZ	5:E:71:LEU:HB2	1.80	0.47
8:H:131:THR:O	8:H:135:MET:HG2	2.15	0.47
10:J:21:CYS:HB2	10:J:39:ILE:HD12	1.96	0.47
12:L:30:SER:N	12:L:105:MET:O	2.48	0.47
21:U:9:ARG:HH12	21:U:12:GLN:HB3	1.78	0.47
21:U:14:LYS:HB2	54:28:98:G:H1	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:64:VAL:HG12	21:U:65:VAL:N	2.28	0.47
24:X:37:LEU:HD21	24:X:40:SER:HA	1.95	0.47
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
36:10:36:ILE:HD13	36:10:39:LEU:HD12	1.97	0.47
36:10:86:ARG:NH1	36:10:86:ARG:CB	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
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
53:27:372: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
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
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
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
2:B:138:LEU:HA	53:27:1658:C:OP1	2.15	0.47
3:C:45:ALA:HA	3:C:87:ALA:O	2.14	0.47
3:C:60:TRP:HZ2	3:C:69:ARG:HA	1.80	0.47
4:D:3:LEU:HG	4:D:100:GLU:CG	2.42	0.47
4:D:103:ILE:HG13	4:D:104:THR:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:110:ILE:HB	4:D:113:PHE:HD1	1.80	0.47
5:E:155:PRO:HG2	5:E:156:TYR:CD2	2.49	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
8:H:130:GLY:HA3	53:27:1079:C:O2	2.15	0.47
9:I:15:TRP:CG	9:I:135:GLN:HB3	2.50	0.47
9:I:80:HIS:O	9:I:82:GLY:N	2.48	0.47
9:I:136:GLN:NE2	53:27:2899:A:H5'	2.30	0.47
10:J:56:ASP:OD1	10:J:57:VAL:N	2.47	0.47
11:K:62:PRO:HB2	30:4:29:ARG:NH1	2.29	0.47
11:K:79:LEU:HD11	11:K:131:ALA:HA	1.97	0.47
11:K:111:ILE:HD11	53:27:636:G:C6	2.50	0.47
12:L:64:TRP:HB2	12:L:104:GLU:HB3	1.96	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
18:R:17:VAL:HA	18:R:43:ALA:HB1	1.95	0.47
23:W:10:ARG:HG3	23:W:11:PRO:CD	2.44	0.47
23:W:18:SER:CB	53:27:2080:A:H4'	2.45	0.47
26:Z:10:GLU:HA	26:Z:25:ARG:HH21	1.80	0.47
32:6:65:LYS:HE2	32:6:156:LEU:O	2.14	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
34:8:9:LYS:O	34:8:12:ARG:HB3	2.15	0.47
34:8:94:GLU:OE2	34:8:103:ARG:HG3	2.14	0.47
34:8:167:PRO:HB3	34:8:169:TRP:CZ2	2.50	0.47
34:8:173:ASP:HB2	34:8:178:GLU:OE1	2.15	0.47
36:10:3:HIS:HB2	36:10:92:THR:CA	2.43	0.47
40:14:53:ILE:HG13	44:18:84:ARG:NE	2.29	0.47
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
43:17:98:GLY:HA3	52:26:1322:C:H5''	1.97	0.47
47:21:16:MET:HE2	47:21:19:SER:HB2	1.97	0.47
47:21:58:VAL:HG22	47:21:59:GLU:N	2.28	0.47
48:22:69:TYR:HB2	48:22:73:HIS:HE1	1.80	0.47
50:24:10:ALA:O	50:24:13:SER:HB3	2.15	0.47
51:25:23:GLU:CG	51:25:24:LYS:H	2.23	0.47
52:26:15:G:C6	52:26:16:A:C5	3.03	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
52:26:371:A:H2'	52:26:372:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:503:C:O2'	52:26:504:C:H5'	2.15	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
52:26:865: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
52:26:962:C:H1'	52:26:1201:A:C6	2.49	0.47
52:26:974:A:H4'	52:26:975:A:O5'	2.15	0.47
52:26:1037:C:H2'	52:26:1038:C:C6	2.50	0.47
52:26:1371:G:H2'	52:26:1372:U:O4'	2.15	0.47
52:26:1478:U:H2'	52:26:1479:C:H6	1.80	0.47
53:27:37:C:H4'	53:27:451:U:OP1	2.15	0.47
53:27:191:A:O2'	53:27:192:C:H5'	2.14	0.47
53:27:291:G:O2'	53:27:292:U:H5'	2.15	0.47
53:27:481:G:H1'	53:27:506:G:N2	2.29	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
53:27:569:U:C4	53:27:570:G:C6	3.02	0.47
53:27:603:A:H4'	53:27:604:G:O5'	2.14	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
53:27:1072:C:O5'	53:27:1072:C:H6	1.97	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
53:27:1399: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
53:27:1736:U:H2'	53:27:1737:G:O4'	2.14	0.47
53:27:1789:A:C6	53:27:1790:C:C4	3.02	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
53:27:2051:A:H5'	53:27:2578:G:O5'	2.15	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
53:27:2348: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
53:27:2468:A:C8	53:27:2476:A:N1	2.82	0.47
53:27:2469:A:H2'	53:27:2470:G:O4'	2.14	0.47
53:27:2576:G:H2'	53:27:2576:G:N3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2649:C:H2'	53:27:2650:U:C6	2.48	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
56:30:35:A:H2'	56:30:36:A:O4'	2.14	0.47
56:30:61:C:O5'	56:30:61:C:H6	1.98	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
58:32:61:C:H2'	58:32:62:C:H6	1.78	0.47
59:33:96:ARG:HG3	59:33:104:VAL:HG21	1.97	0.47
59:33:108:HIS:CE1	59:33:111:ARG:HH21	2.32	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
59:33:228:TYR:CB	59:33:277:ARG:NH2	2.78	0.47
59:33:326:VAL:HG22	59:33:334:VAL:HG13	1.96	0.47
59:33:616:ILE:CG2	59:33:667:LEU:HD12	2.42	0.47
59:33:732:VAL:O	59:33:735:VAL:HB	2.15	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
2:B:190:LYS:HE2	53:27:2729:G:O3'	2.15	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
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
11:K:23:ILE:HB	17:Q:84:ARG:HH11	1.80	0.47
11:K:62:PRO:CB	30:4:29:ARG:HH11	2.28	0.47
12:L:73:ILE:HG21	12:L:91:TYR:CZ	2.49	0.47
13:M:25:ALA:HB1	13:M:48:VAL:HG22	1.96	0.47
14:N:47:VAL:O	14:N:47:VAL:HG23	2.15	0.47
15:O:26:GLU:HA	15:O:43:GLU:HA	1.96	0.47
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
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
37:11:2:ARG:HA	52:26:1380:U:C4	2.49	0.47
38:12:78:SER:OG	38:12:84:ILE:N	2.47	0.47
38:12:111:THR:HG22	38:12:113:ARG:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
52:26:1486:G:H2'	52:26:1487:G:O4'	2.14	0.47
53:27:100:U:H4'	53:27:101:A:O4'	2.15	0.47
53:27:347:A:H2'	53:27:348:A:H8	1.78	0.47
53:27:697:G:C6	53:27:698:C:N4	2.83	0.47
53:27:813:U:H2'	53:27:814:C:H6	1.78	0.47
53:27:991:C:H5'	53:27:1185:G:H2'	1.97	0.47
53:27:1200:C:H2'	53:27:1201:U:C6	2.49	0.47
53:27:2178:C:H2'	53:27:2179:C:C5	2.50	0.47
53:27:2295:C:H2'	53:27:2296:U:C6	2.49	0.47
53:27:2588:G:H2'	53:27:2589:A:C5'	2.45	0.47
53:27:2631:G:O2'	53:27:2632:A:H5'	2.15	0.47
53:27:2715:C:C2'	53:27:2716:C:H5''	2.44	0.47
54:28:37:C:H2'	54:28:38:C:O4'	2.15	0.47
59:33:79:ALA:O	59:33:82:PHE:HD1	1.96	0.47
59:33:210:GLU:HB3	59:33:260:TRP:CE3	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
29:3:7:PRO:HG2	53:27:1309:G:H4'	1.97	0.47
31:5:1:MET:N	53:27:2526:G:H21	2.12	0.47
32:6:137:THR:O	32:6:141:GLU:HG3	2.15	0.47
34:8:21:LYS:CD	34:8:28:ASP:HA	2.43	0.47
35:9:155:LYS:HG2	38:12:65:PHE:CG	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:13:HIS:CE1	49:23:34:SER:HB2	2.50	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
52:26:1260:G:OP1	52:26:1284:C:H4'	2.15	0.47
53:27:310:A:O2'	53:27:311:A:H2'	2.14	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
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
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:2:ARG:HD2	53:27:1248:G:C4	2.50	0.47
16:P:100:PHE:O	16:P:102:LYS:N	2.46	0.47
17:Q:14:VAL:HG23	17:Q:18:GLN:HG2	1.96	0.47
17:Q:83:TYR:CE1	53:27:1187:G:H5''	2.50	0.47
21:U:35:GLU:HB2	21:U:93:ARG:CZ	2.44	0.47
22:V:45:ALA:O	22:V:47:VAL:HG23	2.16	0.47
24:X:9:LYS:HD2	24:X:10:SER:N	2.27	0.47
30:4:3:ILE:HG22	30:4:4:LYS:O	2.15	0.47
30:4:49:VAL:HG11	30:4:57:VAL:CG2	2.44	0.47
31:5:17:VAL:CG1	31:5:19:ARG:HG3	2.46	0.47
34:8:49:ASP:HA	34:8:52:VAL:HG22	1.96	0.47
37:11:16:LYS:HB2	37:11:43:TYR:CZ	2.50	0.47
39:13:101:GLY:O	39:13:103:VAL:N	2.48	0.47
41:15:67:GLU:O	41:15:70:ALA:HB3	2.14	0.47
42:16:43:LYS:HG2	42:16:44:PRO:N	2.30	0.47
50:24:3:ILE:HG23	50:24:7:LYS:NZ	2.30	0.47
52:26:174:A:H2'	52:26:175:C:H5'	1.96	0.47
52:26:333:U:H2'	52:26:334:C:H6	1.80	0.47
52:26:749:A:O2'	52:26:750:C:H5'	2.15	0.47
52:26:991:U:C4	52:26:1212:U:H4'	2.50	0.47
53:27:724:U:H2'	53:27:725:G:C8	2.50	0.47
53:27:1077:A:C2	53:27:1088:A:H2'	2.49	0.47
53:27:1114:C:H2'	53:27:1115:G:C8	2.50	0.47
53:27:1132:U:H2'	53:27:1133:A:C8	2.50	0.47
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:B:116:LYS:HA	13:M:1:MET:SD	2.55	0.46
5:E:19:ASN:HB3	5:E:22:VAL:HB	1.95	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
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
7:G:108:VAL:O	7:G:109:LYS:HB3	2.14	0.46
13:M:36:THR:HA	53:27:1278:C:OP1	2.15	0.46
13:M:118:ARG:C	13:M:120:GLU:N	2.64	0.46
16:P:2:ARG:HD2	53:27:1248:G:C6	2.50	0.46
16:P:111:LYS:HD3	17:Q:48:LYS:HE2	1.95	0.46
17:Q:90:ARG:NE	53:27:1223:G:OP2	2.47	0.46
17:Q:100:GLY:O	17:Q:101:ILE:HD13	2.14	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
27:1:9:ARG:HA	27:1:12:ARG:CD	2.45	0.46
32:6:9:LEU:HA	32:6:14:HIS:NE2	2.29	0.46
32:6:20:ARG:NH1	52:26:831:A:H5'	2.30	0.46
32:6:185:ILE:HA	32:6:199:ILE:HB	1.96	0.46
34:8:98:ASP:O	34:8:101:VAL:HB	2.14	0.46
41:15:22:ILE:HD13	41:15:95:THR:CG2	2.45	0.46
42:16:6:LEU:HD11	42:16:11:ARG:HH21	1.80	0.46
42:16:98:ARG:HA	42:16:103:CYS:SG	2.55	0.46
44:18:99:SER:OG	52:26:1114:C:H1'	2.15	0.46
46:20:52:LEU:O	46:20:54:LEU:N	2.46	0.46
52:26:176:C:H3'	52:26:177:G:H21	1.79	0.46
52:26:212:G:H2'	52:26:213:G:C8	2.44	0.46
52:26:604:G:H2'	52:26:605:U:O4'	2.15	0.46
52:26:746:A:H2'	52:26:747:A:C8	2.50	0.46
53:27:121:G:C2	53:27:131:A:C4	3.03	0.46
53:27:130:C:H2'	53:27:131:A:O4'	2.15	0.46
53:27:492:A:H2'	53:27:493:G:O4'	2.16	0.46
53:27:1157:G:O2'	53:27:1158:C:H5'	2.14	0.46
53:27:1186:G:H2'	53:27:1187:G:H8	1.80	0.46
53:27:1432:G:H2'	53:27:1433:A:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:B:148:GLN:OE1	2:B:148:GLN:N	2.48	0.46
3:C:40:ARG:HB2	53:27:443:A:N7	2.30	0.46
3:C:130:LYS:HB2	3:C:133:LEU:CD1	2.45	0.46
4:D:175:PRO:O	4:D:176:PHE:CB	2.63	0.46
5:E:138:GLN:HG3	5:E:139:VAL:N	2.30	0.46
11:K:89:VAL:O	11:K:89:VAL:HG13	2.15	0.46
13:M:70:THR:O	13:M:71:ARG:HB2	2.15	0.46
15:O:23:ASP:O	15:O:25:VAL:HG23	2.15	0.46
16:P:65:ASN:HB2	16:P:75:TYR:HB2	1.97	0.46
20:T:37:GLY:HA2	20:T:40:LEU:HD11	1.97	0.46
20:T:66:VAL:O	20:T:69:VAL:HG22	2.15	0.46
21:U:87:GLN:HE21	54:28:77:U:C5'	2.28	0.46
25:Y:9:THR:HG22	25:Y:53:MET:O	2.15	0.46
27:1:6:LYS:HZ1	53:27:1262:A:H1'	1.79	0.46
34:8:201:GLU:HA	34:8:204:SER:OG	2.14	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
52:26:393:A:C2	52:26:394:G:C8	3.04	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
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
53:27:1111:A:H2'	53:27:1111:A:N3	2.30	0.46
53:27:1241:A:H3'	53:27:1242:U:C6	2.50	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
57:31:16:C:O2'	57:31:17:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:B:196:ALA:HB1	53:27:2820:A:C4	2.50	0.46
6:F:99:ILE:HD13	6:F:130:VAL:HG11	1.95	0.46
7:G:43:LYS:NZ	7:G:51:TYR:OH	2.49	0.46
7:G:81:LEU:HB2	53:27:1107:G:H4'	1.96	0.46
8:H:91:LYS:HZ3	53:27:1075:C:C2'	2.28	0.46
12:L:64:TRP:HZ3	12:L:106:ASP:HB3	1.79	0.46
13:M:59:SER:OG	13:M:60:VAL:N	2.48	0.46
20:T:86:PHE:HA	20:T:90:LYS:O	2.15	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
35:9:73:VAL:HG11	35:9:143:LEU:HB3	1.97	0.46
35:9:156:ARG:CG	35:9:157:GLY:N	2.78	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
42:16:109:ARG:HA	52:26:538:G:OP1	2.15	0.46
44:18:44:VAL:C	44:18:48:GLN:HE22	2.19	0.46
48:22:23:LYS:O	48:22:25:ILE:N	2.43	0.46
48:22:28:LEU:HD12	48:22:28:LEU:N	2.30	0.46
52:26:234:C:H2'	52:26:235:C:H6	1.79	0.46
52:26:1511:G:C5	52:26:1512:U:C4	3.03	0.46
53:27:138:U:H5	53:27:139:U:H6	1.62	0.46
53:27:338:G:H2'	53:27:339:U:H6	1.81	0.46
53:27:1069:A:H5'	53:27:1070:A:C8	2.50	0.46
53:27:1308:A:N7	53:27:1309:G:C5	2.84	0.46
53:27:1379:U:C6	53:27:1379:U:OP1	2.67	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:723:GLY:HA2	59:33:726:LEU:HD12	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
3:C:131:THR:HG23	53:27:321:U:H5''	1.98	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
23:W:32:LEU:HD13	23:W:49:ARG:HH21	1.80	0.46
32:6:173:LYS:O	32:6:177:ASN:N	2.49	0.46
33:7:152:VAL:HG22	33:7:197:VAL:HG22	1.97	0.46
33:7:176:THR:HG23	52:26:1111:A:H2	1.80	0.46
35:9:93:VAL:HG13	35:9:110:MET:HE1	1.96	0.46
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
39:13:122:ARG:NE	52:26:1350:A:OP1	2.48	0.46
40:14:53:ILE:HG12	52:26:1060:U:H5''	1.97	0.46
41:15:63:GLN:O	41:15:67:GLU:HG3	2.15	0.46
42:16:71:HIS:ND1	42:16:71:HIS:O	2.48	0.46
45:19:25:GLU:HA	45:19:80:LEU:HD21	1.98	0.46
46:20:2:VAL:CG2	46:20:65:ALA:HA	2.46	0.46
52:26:124:C:O2'	52:26:125:U:H5'	2.14	0.46
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
52:26:1472:U:H2'	52:26:1473:G:H8	1.78	0.46
53:27:135:U:O5'	53:27:135:U:H6	1.98	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
53:27:690: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
53:27:1014:A:O2'	53:27:1015:U:H5'	2.16	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
53:27:2248:C:H2'	53:27:2249:U:O4'	2.15	0.46
54:28:119:A:C2'	54:28:120:A:H5''	2.45	0.46
59:33:616:ILE:HG12	59:33:740:ARG:NH2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:671:VAL:HG23	59:33:738:ALA:HA	1.98	0.46
1:A:91:ALA:HB3	1:A:103:ILE:HD12	1.96	0.46
1:A:144:GLU:CA	1:A:151:GLY:HA2	2.42	0.46
1:A:159:THR:O	1:A:160:TYR:HB3	2.15	0.46
2:B:178:VAL:HG12	2:B:179:ARG:N	2.30	0.46
3:C:21:ARG:HD3	3:C:107:SER:N	2.31	0.46
11:K:78:ARG:O	11:K:81:ASP:N	2.47	0.46
16:P:57:ARG:HH12	53:27:1154:G:P	2.37	0.46
23:W:39:VAL:HG11	23:W:42:GLU:HG2	1.97	0.46
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
36:10:15:SER:OG	36:10:44:ARG:HD3	2.16	0.46
52:26:252:U:C2	52:26:253:A:N7	2.83	0.46
52:26:782:A:H4'	52:26:1514:G:O2'	2.16	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
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
53:27:123:G:H2'	53:27:124:G:C8	2.50	0.46
53:27:422:A:H3'	53:27:423:A: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
53:27:1638: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
53:27:2475:C:N4	53:27:2529:G:H22	2.13	0.46
53:27:2521:C:O2'	53:27:2522:U:H5'	2.16	0.46
59:33:35:LEU:HD11	59:33:73:ILE:HG22	1.98	0.46
59:33:407:TYR:O	59:33:458:GLY:HA2	2.15	0.46
59:33:669:VAL:HG23	59:33:740:ARG:HA	1.97	0.46
1:A:262:THR:HB	53:27:1800:C:OP2	2.15	0.46
5:E:51:PHE:CE2	5:E:68:ARG:HG3	2.51	0.46
6:F:4:ILE:HD11	6:F:47:PHE:CZ	2.50	0.46
8:H:102:ARG:HA	8:H:105:LEU:HD12	1.98	0.46
9:I:110:PRO:O	9:I:115:GLY:HA3	2.15	0.46
10:J:6:THR:H	10:J:20:MET:HG3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:2:10:LEU:HA	28:2:49:LYS:O	2.16	0.46
33:7:93:ILE:HG22	33:7:93:ILE:O	2.15	0.46
35:9:60:GLN:HG3	35:9:61:LYS:N	2.30	0.46
36:10:86:ARG:HB2	36:10:86:ARG:CZ	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:HG2	43:17:69:ARG:HH11	1.81	0.46
51:25:36:PHE:HB2	51:25:37:TYR:H	1.48	0.46
52:26:149:A:H2'	52:26:149:A:N3	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:O5'	52:26:543:U:H6	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
52:26:1426:G:H2'	52:26:1427:C:C6	2.51	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
53:27:1172:C:C3'	53:27:1173:U:H5''	2.45	0.46
53:27:1777:U:O5'	53:27:1777:U:H6	1.99	0.46
53:27:1891:G:C6	53:27:1892:C:C4	3.04	0.46
53:27:1992:G:H4'	53:27:1993:U:H5''	1.97	0.46
53:27:2004:G:H2'	53:27:2005:A:O4'	2.16	0.46
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
2:B:108:ASP:OD2	2:B:206:ALA:HA	2.15	0.46
3:C:27:LEU:HD22	53:27:600:G:H4'	1.98	0.46
3:C:97:ASN:ND2	53:27:606:U:H5''	2.30	0.46
4:D:19:PHE:O	4:D:21:TYR:N	2.49	0.46
9:I:69:ARG:HA	9:I:89:PHE:CD2	2.51	0.46
9:I:80:HIS:O	9:I:81:ILE:C	2.54	0.46
10:J:35:VAL:HG22	10:J:69:VAL:CG1	2.46	0.46
11:K:100:ILE:HG13	11:K:101:ILE:HG23	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:2:25:ASN:ND2	53:27:2285:C:OP1	2.43	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
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
52:26:279:A:H5'	52:26:281:G:O4'	2.15	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
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
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
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
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
54:28:48:U:H2'	54:28:49:C:C6	2.51	0.46
59:33:38:THR:HG21	59:33:77:ARG:CG	2.46	0.46
59:33:49:HIS:NE2	59:33:55:LEU:HG	2.30	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
1:A:66:PHE:O	1:A:68:ARG:HG2	2.15	0.46
2:B:40:LEU:H	2:B:40:LEU:CD1	2.27	0.46
7:G:93:ALA:O	7:G:95:LEU:N	2.49	0.46
8:H:45:THR:HG22	8:H:48:ILE:HG13	1.97	0.46
8:H:72:THR:CB	8:H:111:THR:HG22	2.46	0.46
19:S:31:VAL:HG12	19:S:84:TYR:HA	1.98	0.46
19:S:63:VAL:HG21	19:S:80:TRP:CH2	2.51	0.46
23:W:37:PHE:CE2	23:W:48:LEU:HD12	2.51	0.46
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:119:HIS:CG	52:26:438:U:H4'	2.51	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
52:26:62:U:H2'	52:26:63:C:H6	1.72	0.46
52:26:576:C:OP2	52:26:577:G:H5''	2.16	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
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
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
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:N3	53:27:1919:A:H2'	2.31	0.46
53:27:2018:G:C6	53:27:2019:A:C5	3.03	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
59:33:43:LEU:HA	59:33:56:LEU:CD1	2.39	0.46
59:33:432:HIS:CD2	59:33:433:SER:N	2.84	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
29:3:34:ARG:NH2	53:27:466:A:P	2.89	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
34:8:57:LYS:HD2	34:8:203:TYR:OH	2.16	0.46
34:8:116:LEU:HB3	34:8:122:ILE:CD1	2.23	0.46
42:16:4:ASN:HD22	52:26:880:C:P	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:19:A:O2'	53:27:20:C:H5'	2.16	0.46
53:27:488:G:H1'	53:27:492:A:H61	1.80	0.46
53:27:598:U:H2'	53:27:599:A:H8	1.79	0.46
53:27:633:A:H2'	53:27:634:C:C5'	2.46	0.46
53:27:681:G:C4	53:27:682:G:C8	3.04	0.46
53:27:693:A:H2'	53:27:694:U:H6	1.78	0.46
53:27:734:A:H2'	53:27:735:A:H8	1.81	0.46
53:27:736:C:H2'	53:27:737:C:C6	2.49	0.46
53:27:893:C:HO2'	59:33:643:GLU:CD	2.19	0.46
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:O5'	53:27:1390:U:H6	1.99	0.46
53:27:1494:A:H2'	53:27:1495:A:H8	1.80	0.46
53:27:1494:A:C2	53:27:1579:A:H1'	2.50	0.46
53:27:1528:A:H2'	53:27:1529:G:H5'	1.98	0.46
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
53:27:2263: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
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
59:33:725:VAL:O	59:33:729:LEU:N	2.47	0.46
1:A:52:HIS:HD1	53:27:1824:G:P	2.38	0.46
1:A:131:MET:HE2	1:A:187:CYS:HB2	1.98	0.46
4:D:29:ARG:HG2	4:D:29:ARG:HH11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:83:LYS:NZ	53:27:1119:U:OP1	2.49	0.46
23:W:26:ARG:NE	23:W:28:PHE:HE1	2.14	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
39:13:30:ASN:O	39:13:32:ARG:N	2.47	0.46
42:16:120:ARG:HG3	42:16:121:PRO:HD2	1.97	0.46
45:19:10:ILE:HA	45:19:13:GLU:OE1	2.16	0.46
48:22:35:SER:HA	48:22:71:ASP:OD2	2.16	0.46
51:25:67:THR:HG23	52:26:1167:A:N7	2.31	0.46
52:26:68:G:H2'	52:26:69:G:O4'	2.16	0.46
52:26:567:G:H2'	52:26:568:G:O4'	2.15	0.46
52:26:711:G:H2'	52:26:712:A:H8	1.81	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
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
53:27:216:A:H2'	53:27:217:A:H8	1.78	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
53:27:1065:U:H1'	53:27:1074:G:H22	1.81	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
53:27:2632: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
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
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:54:VAL:HG22	7:G:84:TYR:HB2	1.98	0.45
7:G:96:PHE:CE1	7:G:125:ARG:HB2	2.46	0.45
8:H:56:VAL:HG13	8:H:56:VAL:O	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
12:L:45:GLN:NE2	53:27:2485:G:H5''	2.29	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:64:SER:O	15:O:65:ASN:C	2.55	0.45
16:P:23:TYR:HD1	53:27:533:G:H5'	1.80	0.45
16:P:102:LYS:O	16:P:105:PHE:HB3	2.15	0.45
19:S:2:ILE:HD11	19:S:6:ARG:HH21	1.81	0.45
20:T:96:LYS:HD3	53:27:300:A:P	2.56	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
40:14:5:ARG:HB2	40:14:79:PRO:HD3	1.98	0.45
46:20:67:ILE:HG23	46:20:71:VAL:CB	2.39	0.45
49:23:44:ILE:HG23	49:23:63:ASP:H	1.82	0.45
50:24:26:MET:HE1	50:24:56:ILE:HD11	1.97	0.45
52:26:255:G:H2'	52:26:256:U:C6	2.51	0.45
52:26:383:A:H8	52:26:383:A:O5'	1.99	0.45
52:26:416:G:H2'	52:26:417:G:H8	1.81	0.45
52:26:965:U:H5''	52:26:966:G:OP1	2.16	0.45
52:26:1054:C:N3	56:30:34:G:H1'	2.31	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
53:27:563:A:C6	53:27:2018:G:C5	3.04	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
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
53:27:2292: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
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
59:33:241:LYS:HD3	59:33:246:LYS:HZ2	1.77	0.45
1:A:235:GLU:HB3	53:27:2599:G:N7	2.31	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
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
35:9:27: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
35:9:132:PRO:O	35:9:136:VAL:HG23	2.16	0.45
42:16:49:ARG:HB2	42:16:89:LEU:HD21	1.99	0.45
42:16:73:LEU:HD23	42:16:79:ILE:HG21	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:19:88:ARG:NE	53:27:713:G:H3'	2.30	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
52:26:158:G:H2'	52:26:159:G:O4'	2.16	0.45
52:26:294:U:O5'	52:26:294:U:H6	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
52:26:901:A:O5'	52:26:901:A:H8	2.00	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
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
53:27:1300:G:N2	53:27:1634:A:C2	2.84	0.45
53:27:1505:A:H2'	53:27:1506:U:O4'	2.16	0.45
53:27:1985:C:H2'	53:27:1986:C:H6	1.80	0.45
53:27:2075:U:C4	53:27:2238:G:C6	3.04	0.45
53:27:2374:C:H2'	53:27:2375:G:C8	2.51	0.45
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
59:33:27:THR:CG2	59:33:31:SER:HB2	2.45	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
59:33:434:ASP:OD1	59:33:435:VAL:N	2.49	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
31:5:14:CYS:HG	31:5:27:CYS:HG	1.63	0.45
32:6:163:ILE:O	32:6:185:ILE:HG23	2.16	0.45
33:7:22:PHE:CD2	40:14:97:ASP:HB2	2.52	0.45
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:11:91:ARG:O	37:11:95:ARG:N	2.46	0.45
39:13:112:ARG:NH2	40:14:64:GLN:OE1	2.49	0.45
40:14:68:ARG:HH12	40:14:70:HIS:CE1	2.33	0.45
41:15:58:THR:CG2	41:15:59:PRO:HD2	2.45	0.45
42:16:11:ARG:CG	52:26:562:U:H1'	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
52:26:385: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
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
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
53:27:72:U:O2'	53:27:73:A:H5'	2.16	0.45
53:27:122:G:O5'	53:27:122:G:H8	1.99	0.45
53:27:679:C:H2'	53:27:680:C:H6	1.76	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
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
53:27:1363: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
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
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:HD12	12:L:20:LEU:N	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
28:2:11:VAL:HG12	28:2:12:SER:N	2.31	0.45
30:4:41:ARG:NH1	53:27:2351:G:O6	2.49	0.45
35:9:108:GLY:O	35:9:110:MET:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
44:18:8:ARG:NE	52:26:1217:C:OP1	2.49	0.45
47:21:30:HIS:CG	47:21:31:PRO:HD2	2.51	0.45
52:26:224:U:H2'	52:26:225:C:H6	1.82	0.45
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
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
53:27:254:G:HO2'	53:27:255:A:H5''	1.82	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
53:27:1259:G:C4	53:27:1260:A:C8	3.05	0.45
53:27:1317:G:H2'	53:27:1318:U:H6	1.82	0.45
53:27:1637:A:H2'	53:27:1638:C:H6	1.80	0.45
53:27:1703:G:H2'	53:27:1704:C:C6	2.52	0.45
53:27:2119:A:N6	53:27:2169:A:H61	2.14	0.45
53:27:2552:U:C5	53:27:2554:U:H5'	2.50	0.45
53:27:2743:U:H2'	53:27:2744:G:H5''	1.98	0.45
55:29:13:A:H2'	55:29:14:A:H5'	1.98	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
9:I:2:LYS:HA	53:27:995:C:N4	2.32	0.45
11:K:85:VAL:HG22	11:K:98:ALA:HB2	1.98	0.45
12:L:20:LEU:HD23	21:U:81:PRO:CG	2.41	0.45
13:M:53:THR:OG1	53:27:2840:C:H5''	2.15	0.45
15:O:22:GLY:N	15:O:46:VAL:O	2.44	0.45
18:R:55:ILE:O	18:R:58:ALA:N	2.49	0.45
19:S:50:LEU:CD1	19:S:50:LEU:N	2.80	0.45
26:Z:7:PRO:O	26:Z:9:TYR:N	2.50	0.45
28:2:24:LYS:HZ2	28:2:26:LYS:HA	1.80	0.45
32:6:148:GLY:HA2	32:6:151:LYS:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:59:ILE:HG13	35:9:60:GLN:N	2.32	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
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
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
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
53:27:242:G:O2'	53:27:243:U:P	2.75	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
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
53:27:2643:G:H2'	53:27:2644:G:H8	1.81	0.45
59:33:191:ILE:CG2	59:33:194:LEU:HD13	2.47	0.45
1:A:116:GLN:NE2	1:A:121:ALA:HA	2.31	0.45
1:A:176:ARG:HG2	53:27:1820:U:OP1	2.16	0.45
1:A:257:ARG:NH2	1:A:262:THR:OG1	2.50	0.45
1:A:259:ASN:O	1:A:260:LYS:HB2	2.17	0.45
2:B:46:ARG:NH2	2:B:88:GLU:O	2.49	0.45
4:D:62:GLN:HE21	4:D:88:VAL:CG1	2.29	0.45
6:F:67:ALA:CB	6:F:138:VAL:HG21	2.46	0.45
7:G:26:VAL:HG11	7:G:77:VAL:CG1	2.43	0.45
8:H:100:ILE:HD11	8:H:137:LEU:HD13	1.97	0.45
8:H:123:ALA:O	8:H:126:ARG:HB2	2.16	0.45
11:K:14:LYS:HZ1	53:27:1194:A:P	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:103:VAL:HG23	14:N:104:GLN:N	2.31	0.45
16:P:2:ARG:HD2	53:27:1248:G:N1	2.32	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
32:6:68:PHE:CE2	32:6:88:GLN:HB2	2.52	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
33:7:102:ILE:HD12	33:7:102:ILE:C	2.36	0.45
35:9:51:LYS:NZ	52:26:1081:A:N7	2.65	0.45
39:13:10:ARG:NH2	52:26:1149:C:OP2	2.48	0.45
40:14:59:LYS:HE3	40:14:62:ARG:NH2	2.32	0.45
41:15:127:ARG:NH1	52:26:1522:U:OP1	2.48	0.45
43:17:104:ASN:C	43:17:106:ARG:H	2.20	0.45
44:18:52:ARG:CD	52:26:1317:C:N3	2.80	0.45
49:23:13:HIS:HB2	52:26:1014:A:H5'	1.98	0.45
52:26:116:A:H2'	52:26:117:G:O4'	2.17	0.45
52:26:821:G:H2'	52:26:822:U:C6	2.52	0.45
52:26:836:G:H2'	52:26:837:U:O4'	2.16	0.45
52:26:1129:C:H5	52:26:1139:G:HO2'	1.63	0.45
52:26:1429:A:H2'	52:26:1430:A:C8	2.52	0.45
53:27:341:C:H2'	53:27:342:A:O4'	2.17	0.45
53:27:413:C:H2'	53:27:414:C:H6	1.81	0.45
53:27:562:U:N1	53:27:2036:C:H5'	2.31	0.45
53:27:664:G:H2'	53:27:665:U:C6	2.52	0.45
53:27:786:C:O2'	53:27:787:C:H5'	2.16	0.45
53:27:1372:U:O2'	53:27:1373:A:H5'	2.17	0.45
53:27:1792:G:H2'	53:27:1793:C:C6	2.51	0.45
53:27:2755:C:O5'	53:27:2755:C:H6	1.99	0.45
53:27:2827:C:H2'	53:27:2828:G:H8	1.81	0.45
53:27:2863:C:H2'	53:27:2864:G:C8	2.52	0.45
56:30:22:G:H2'	56:30:23:A:C8	2.50	0.45
59:33:30:LYS:C	59:33:33:GLU:HG2	2.37	0.45
59:33:197:GLU:CG	59:33:201:TYR:CE2	2.92	0.45
59:33:286:LEU:CD2	59:33:343:MET:HE1	2.46	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:HG13	19:S:74:ILE:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:96:LYS:O	20:T:98:ASN:N	2.46	0.45
29:3:1:MET:HE1	53:27:752:A:OP2	2.17	0.45
29:3:34:ARG:CD	29:3:39:ARG:HD2	2.47	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
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
52:26:461: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
52:26:1338:G:H21	57:31:41:C:H1'	1.82	0.45
52:26:1426:G:H2'	52:26:1427:C:H6	1.82	0.45
53:27:35:G:H1'	53:27:454:A:C4	2.52	0.45
53:27:67:U:H2'	53:27:68:G:O4'	2.16	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
53:27:1086:A:H3'	53:27:1086:A:N3	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
56:30:15:G:H2'	56:30:16:U:C4'	2.46	0.45
59:33:56:LEU:HD23	59:33:56:LEU:C	2.37	0.45
59:33:276:VAL:O	59:33:276:VAL:HG22	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:11:ALA:HB2	14:N:96:GLY:N	2.32	0.45
14:N:29:HIS:CD2	14:N:30:ARG:N	2.85	0.45
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
28:2:12:SER:HA	28:2:48:TYR:CD1	2.52	0.45
32:6:96:LEU:HD13	52:26:1103:C:H4'	1.99	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
41:15:22:ILE:HG21	41:15:95:THR:HG21	1.98	0.45
41:15:124:LYS:CG	41:15:125:LYS:N	2.77	0.45
51:25:44:ARG:HD2	52:26:723:U:OP1	2.16	0.45
52:26:116:A:H61	52:26:313:A:H1'	1.82	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:OP2	52:26:517:G:H8	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
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
53:27:179:C:H2'	53:27:180:G:O4'	2.16	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
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
53:27:1822: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:30:66:U:H2'	56:30:67:C:O4'	2.17	0.45
59:33:47:GLN:HE22	59:33:87:ALA:HB1	1.82	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
3:C:74:LYS:NZ	53:27:801:G:OP2	2.50	0.45
4:D:102:LEU:HG	4:D:103:ILE:N	2.32	0.45
5:E:82:PHE:CZ	5:E:137:LYS:HB2	2.51	0.45
5:E:122:ALA:HA	5:E:132:LEU:HA	1.99	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:78:THR:CG2	53:27:2641:G:H5''	2.46	0.45
9:I:81:ILE:HD11	53:27:2515:C:P	2.57	0.45
10:J:98:ARG:HE	52:26:339:C:P	2.39	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
27:1:2:VAL:HG23	53:27:2016:U:H1'	1.99	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
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
37:11:67: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
37:11:102:TRP:O	37:11:105:GLU:HB3	2.17	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
52:26:202:G:H2'	52:26:203:G:H8	1.80	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
52:26:1413:A:O2'	52:26:1414:U:H5'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:197:A:C2'	53:27:198:C:H5'	2.46	0.45
53:27:259:G:O2'	53:27:260:G:H5'	2.17	0.45
53:27:529:A:C4	53:27:2023:C:C5	3.05	0.45
53:27:665:U:H2'	53:27:666:A:H8	1.82	0.45
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
53:27:2038:G:H2'	53:27:2039:U:O4'	2.17	0.45
53:27:2638:G:HO2'	53:27:2639:A:H8	1.62	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
57:31:18:G:N2	57:31:57:A:H2'	2.32	0.45
59:33:63:VAL:CG1	59:33:80:LEU:N	2.80	0.45
2:B:183:GLU:CD	2:B:183:GLU:N	2.71	0.45
5:E:66:THR:OG1	53:27:2748:A:H1'	2.17	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
6:F:29:PHE:HB2	53:27:2198:A:N3	2.31	0.45
7:G:42:ARG:HG2	7:G:46:ARG:NE	2.31	0.45
7:G:118:ILE:HB	7:G:119:PRO:CD	2.46	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
24:X:54:LYS:HE2	53:27:72:U:OP2	2.17	0.45
26:Z:61:ASN:O	26:Z:64:PHE:HB3	2.16	0.45
35:9:105:ILE:HG22	52:26:8:A:H5'	1.99	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
52:26:138:G:C6	52:26:226:G:C6	3.05	0.45
52:26:208:U:H2'	52:26:210:C:H1'	1.99	0.45
52:26:314:C:H2'	52:26:315:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:509:A:H3'	52:26:509:A:H8	1.82	0.45
52:26:1261:A:H2	52:26:1274:A:H2	1.65	0.45
53:27:54:G:C2	53:27:55:G:C4	3.05	0.45
53:27:214:G:H2'	53:27:215:G:C8	2.52	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
53:27:1472:C:H2'	53:27:1473:G:H8	1.81	0.45
53:27:1669:A:C2	53:27:1994:C:H1'	2.51	0.45
53:27:1707:G:H1'	53:27:1756:G:N3	2.32	0.45
53:27:2038:G:H2'	53:27:2039:U:H6	1.82	0.45
53:27:2367:G:H2'	53:27:2368:C:C6	2.52	0.45
53:27:2751:G:O2'	53:27:2752:C:H5'	2.17	0.45
57:31:21:A:N6	57:31:46:G:H2'	2.30	0.45
1:A:146:LYS:HB2	1:A:149:LYS:CB	2.44	0.44
2:B:183:GLU:N	2:B:183:GLU:OE1	2.47	0.44
3:C:91:ASP:CG	3:C:92:HIS:H	2.20	0.44
5:E:46:ASP:CG	5:E:47:ASN:H	2.21	0.44
5:E:167:VAL:O	5:E:167:VAL:HG13	2.16	0.44
11:K:63:LYS:HA	30:4:11:LYS:O	2.18	0.44
13:M:73:ASN:O	13:M:76:VAL:HB	2.17	0.44
20:T:53:GLN:OE1	20:T:53:GLN:N	2.50	0.44
26:Z:14:ALA:HB3	26:Z:22:MET:O	2.16	0.44
27:1:39:ARG:HB3	27:1:40:HIS:ND1	2.31	0.44
30:4:22:LYS:NZ	53:27:631:A:OP2	2.50	0.44
32:6:39:ILE:HD12	32:6:39:ILE:N	2.23	0.44
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
41:15:71:ASP:HB2	41:15:74:LYS:NZ	2.33	0.44
44:18:3:GLN:HG2	52:26:1048:G:OP1	2.17	0.44
44:18:7:ALA:O	44:18:8:ARG:C	2.56	0.44
44:18:72:PHE:CE2	44:18:74:ARG:HA	2.52	0.44
46:20:5:ARG:NH2	46:20:24:SER:HA	2.31	0.44
47:21:26:ARG:CZ	52:26:237:G:H5''	2.46	0.44
47:21:51:GLU:HG2	47:21:52:CYS:N	2.31	0.44
50:24:24:ARG:O	50:24:28:ARG:HG3	2.17	0.44
52:26:80:A:H2'	52:26:81:A:O4'	2.17	0.44
52:26:797:C:H2'	52:26:798:U:H6	1.76	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
52:26:1443:C:H2'	52:26:1444:U:C6	2.51	0.44
53:27:19:A:H2'	53:27:20:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1112:G:O2'	53:27:1113:U:H5'	2.17	0.44
53:27:1130:U:N3	53:27:2025:C:H5''	2.32	0.44
53:27:1166:G:H2'	53:27:1167:C:C6	2.51	0.44
53:27:1317:G:H2'	53:27:1318:U:O4'	2.18	0.44
53:27:1326:U:H4'	53:27:2011:U:O4'	2.17	0.44
53:27:1470:A:H2'	53:27:1471:G:O4'	2.16	0.44
53:27:1657:U:H2'	53:27:1658:C:O4'	2.17	0.44
53:27:1679:A:H8	53:27:1679:A:O5'	2.01	0.44
53:27:1694:C:H5''	53:27:1695:G:C5	2.52	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
53:27:2398:U:H2'	53:27:2399:G:C8	2.51	0.44
53:27:2472:G:O5'	53:27:2472:G:H8	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
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
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:HD2	53:27:1046:A:C4'	2.47	0.44
7:G:61:ARG:HG2	53:27:1046:A:H4'	1.99	0.44
7:G:88:HIS:CB	7:G:89:PRO:HD3	2.32	0.44
8:H:52:LEU:HD11	8:H:81:LYS:HD3	2.00	0.44
8:H:135:MET:HA	53:27:1063:G:H1'	1.98	0.44
9:I:2:LYS:HA	53:27:995:C:C4	2.52	0.44
12:L:86:LYS:HE3	53:27:956:G:OP2	2.17	0.44
16:P:13:HIS:O	16:P:17:LEU:HD13	2.17	0.44
16:P:51:GLN:NE2	53:27:560:C:H4'	2.31	0.44
17:Q:49:ILE:HD12	17:Q:52:PRO:HA	1.98	0.44
20:T:98:ASN:ND2	20:T:100:GLU:HB2	2.32	0.44
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
37:11:2:ARG:NH2	52:26:935:A:C2	2.84	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:27: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:O5'	52:26:755:G:H8	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
52:26:956:U:H2'	52:26:957:U:O4'	2.17	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
53:27:250:G:H2'	53:27:251:A:C8	2.52	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
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
53:27:1924:C:H2'	53:27:1925:C:C6	2.53	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
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
59:33:191:ILE:HG22	59:33:194:LEU:HD13	1.99	0.44
59:33:613:CYS:SG	59:33:634:HIS:C	2.95	0.44
2:B:15:PHE:CE2	15:O:54:LEU:HD11	2.52	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:29:HIS:HD2	14:N:97:PHE:CZ	2.35	0.44
14:N:49:VAL:CG2	14:N:85:LYS:HD2	2.48	0.44
17:Q:21:ARG:HA	17:Q:95:ASP:OD1	2.17	0.44
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
37:11:87:PRO:HG3	37:11:148:LYS:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:13:104:THR:HG22	39:13:106:ASP:H	1.82	0.44
43:17:7:ASN:HD22	43:17:21:ILE:N	2.15	0.44
43:17:104:ASN:O	43:17:106:ARG:N	2.51	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
52:26:32:A:H2'	52:26:33:A:C8	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
52:26:1198:G:H2'	52:26:1199:U:C6	2.53	0.44
53:27:15:G:C6	53:27:16:C:C4	3.05	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
53:27:300: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
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
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
53:27:2589: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
59:33:281:ILE:HG12	59:33:338:ILE:HG13	1.99	0.44
1:A:7:PRO:HB3	1:A:13:ARG:HA	1.98	0.44
2:B:43:ASP:OD1	53:27:2784:U:H4'	2.16	0.44
2:B:129:THR:HG22	53:27:1997:C:OP2	2.16	0.44
4:D:120:SER:HB3	53:27:2303:G:O2'	2.18	0.44
5:E:10:VAL:HG13	5:E:10:VAL:O	2.16	0.44
10:J:120:PRO:HB2	15:O:65:ASN:HD21	1.80	0.44
11:K:23:ILE:HG13	17:Q:82:HIS:NE2	2.33	0.44
13:M:84:GLY:N	13:M:85:PRO:HD2	2.33	0.44
20:T:39:ASN:OD1	20:T:64:ILE:HB	2.17	0.44
25:Y:24:LEU:HD21	53:27:930:G:H1'	1.99	0.44
30:4:21:PHE:O	30:4:49:VAL:HG23	2.17	0.44
36:10:6:ILE:CD1	36:10:74:LEU:HD13	2.48	0.44
37:11:62:GLU:OE2	37:11:66:GLU:HB3	2.18	0.44
37:11:104:VAL:O	37:11:108:ARG:HG2	2.17	0.44
42:16:73:LEU:CD2	42:16:79:ILE:HG21	2.47	0.44
43:17:88:LEU:HD13	43:17:91:ARG:NH2	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:17:100:ARG:NH2	52:26:951:G:OP2	2.51	0.44
44:18:7:ALA:HA	44:18:10:VAL:CG1	2.44	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:H5'	52:26:596:A:C8	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
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
53:27:175:G:O2'	53:27:176:A:H5'	2.17	0.44
53:27:254:G:O2'	53:27:255:A:H5''	2.17	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
53:27:976:G:H2'	53:27:977:G:H8	1.83	0.44
53:27:1368:G:C2	53:27:1369:G:C8	3.05	0.44
53:27:2093:G:H2'	53:27:2094:A:H8	1.83	0.44
53:27:2362:C:O2'	53:27:2363:G:H5'	2.18	0.44
54:28:4:C:H6	54:28:4:C:C5'	2.30	0.44
59:33:42:CYS:CB	59:33:84:LEU:HD11	2.47	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
1:A:12:ARG:NH2	53:27:728:G:H4'	2.22	0.44
1:A:146:LYS:CB	1:A:149:LYS:HB2	2.42	0.44
1:A:152:GLN:HB3	53:27:1818:U:C2	2.52	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
2:B:191:GLY:HA3	53:27:2729:G:O2'	2.18	0.44
3:C:46:GLN:OE1	3:C:87:ALA:N	2.50	0.44
3:C:58:LYS:HD2	3:C:58:LYS:N	2.32	0.44
6:F:59:ALA:O	6:F:63:ALA:HB2	2.17	0.44
6:F:103:VAL:CG1	6:F:108:VAL:HB	2.47	0.44
10:J:10:VAL:HG21	10:J:16:ALA:HB3	2.00	0.44
10:J:61:VAL:HG12	10:J:87:LEU:HD11	2.00	0.44
10:J:61:VAL:HG22	10:J:62:VAL:O	2.18	0.44
14:N:74:VAL:O	14:N:78:VAL:HG23	2.18	0.44
17:Q:1:MET:HA	17:Q:43:ASN:HD21	1.83	0.44
27:1:5:ASN:OD1	27:1:5:ASN:N	2.51	0.44
33:7:46:LEU:HB3	33:7:49:ALA:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
35:9:77:ASN:OD1	35:9:78:GLY:N	2.51	0.44
35:9:156:ARG:HD3	38:12:44:PHE:CD1	2.51	0.44
38:12:13:ILE:O	38:12:17:GLN:HG2	2.18	0.44
38:12:104:SER:OG	38:12:109:VAL:HG22	2.18	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
43:17:85:TYR:O	43:17:88:LEU:HB3	2.18	0.44
50:24:28:ARG:HG2	50:24:28:ARG:HH11	1.83	0.44
52:26:300:A:H2'	52:26:301:G:O4'	2.18	0.44
52:26:502:A:H8	52:26:502:A:O5'	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
53:27:228:C:O2'	53:27:229:C:H5''	2.18	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
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
53:27:1020:A:H8	53:27:1020:A:O5'	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
53:27:1764:C:H2'	53:27:1765:U:C6	2.52	0.44
53:27:1868:C:H2'	53:27:1869:G:H8	1.82	0.44
53:27:2060:A:N9	53:27:2502:G:H1'	2.33	0.44
53:27:2248:C:H3'	53:27:2249:U:C6	2.52	0.44
53:27:2328: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
53:27:2584: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
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
56:30:49:C:H2'	56:30:50:U:C5	2.53	0.44
59:33:78:ALA:CB	59:33:151:ILE:HD13	2.47	0.44
59:33:408:VAL:CG2	59:33:458:GLY:HA2	2.44	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:52:HIS:HD2	1:A:217:PRO:O	2.00	0.44
2:B:88:GLU:OE1	2:B:88:GLU:N	2.51	0.44
9:I:108:MET:CE	53:27:1006:C:H1'	2.48	0.44
10:J:79:PHE:CD1	15:O:69:VAL:HG22	2.53	0.44
17:Q:74:ILE:HG22	17:Q:87:GLN:H	1.81	0.44
20:T:25:LYS:CD	20:T:36:GLU:HB3	2.44	0.44
22:V:57:ALA:HA	22:V:78:ILE:HD11	1.99	0.44
26:Z:60:PHE:HZ	49:23:40:PHE:CD1	2.35	0.44
30:4:5:THR:HG21	53:27:243:U:OP1	2.18	0.44
31:5:37:GLN:NE2	53:27:1125:G:H5'	2.32	0.44
34:8:7:LYS:HG2	52:26:430:A:P	2.58	0.44
34:8:21:LYS:HE3	34:8:25:ARG:HE	1.82	0.44
34:8:122:ILE:HD12	34:8:122:ILE:N	2.33	0.44
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:HD2	45:19:63:ARG:HA	1.79	0.44
48:22:19:GLU:OE1	48:22:19:GLU:N	2.38	0.44
48:22:23:LYS:O	48:22:25:ILE:HG23	2.18	0.44
50:24:14:GLU:C	50:24:16:ALA:N	2.71	0.44
51:25:15:LEU:CD2	51:25:17:ARG:HG3	2.47	0.44
52:26:59:A:H3'	52:26:331:G:H22	1.82	0.44
52:26:182:A:O2'	52:26:183:C:H5''	2.18	0.44
52:26:666:G:H2'	52:26:667:G:C8	2.51	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
53:27:70:G:H5''	53:27:112:U:O2	2.17	0.44
53:27:76:C:O2'	53:27:77:G:H5'	2.18	0.44
53:27:152:A:H2'	53:27:153:U:C6	2.52	0.44
53:27:251:A:C5	53:27:252:G:H1'	2.53	0.44
53:27:280:U:H2'	53:27:281:C:N1	2.32	0.44
53:27:452:G:N2	53:27:457:A:O2'	2.51	0.44
53:27:532:A:H2'	53:27:532:A:N3	2.32	0.44
53:27:815:C:H2'	53:27:816:C:C6	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2557:G:H2'	53:27:2558:C:H6	1.82	0.44
53:27:2875:C:H2'	53:27:2876:G:H8	1.80	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
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
4:D:114:ARG:NH1	43:17:70:ARG:HD2	2.31	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
29:3:8:SER:HB3	29:3:11:LYS:HB3	2.00	0.44
32:6:20:ARG:HG3	32:6:20:ARG:NH1	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
36:10:4:TYR:OH	52:26:738:C:OP1	2.29	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
40:14:53:ILE:HG12	52:26:1060:U:C5'	2.48	0.44
42:16:113:ARG:HG3	42:16:118:VAL:HB	2.00	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
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
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
53:27:449:A:H2'	53:27:450:G:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:H8	53:27:2822:G:O5'	2.01	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
54:28:100:G:H2'	54:28:101:A:C8	2.52	0.44
56:30:63:G:O2'	56:30:64:A:H5'	2.18	0.44
58:32:11:A:H2'	58:32:12:G:C8	2.52	0.44
59:33:293:LEU:HD23	59:33:293:LEU:C	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
59:33:671:VAL:CG2	59:33:735:VAL:HG13	2.47	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
1:A:9:SER:O	1:A:12:ARG:HB3	2.17	0.44
3:C:78:TRP:CE2	53:27:1257:C:H4'	2.53	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
12:L:55:ARG:NH2	53:27:2469:A:H1'	2.33	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
17:Q:71:LYS:NZ	53:27:1223:G:N7	2.66	0.44
20:T:24:VAL:HG22	20:T:35:VAL:HG22	1.98	0.44
28:2:9:LYS:HD2	28:2:19:PHE:CG	2.52	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
49:23:5:LYS:HG3	49:23:6:LYS:H	1.83	0.44
49:23:39:ILE:HG22	49:23:40:PHE:N	2.33	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
52:26:790:A:H2	52:26:1497:G:OP1	2.01	0.44
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
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
53:27:164:C:H2'	53:27:165:A:H5'	1.99	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
53:27:1183:U:H2'	53:27:1184:U:C6	2.52	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
53:27:1891: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
59:33:44:GLN:HA	59:33:45:GLN:HA	1.66	0.44
59:33:240:MET:HB2	59:33:245:VAL:HG13	2.00	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
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
11:K:18:ARG:NH1	53:27:1249:U:C2	2.86	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:OD1	26:Z:35:ASP:N	2.50	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:159:SER:O	35:9:162:GLU:N	2.47	0.44
36:10:39:LEU:O	36:10:39:LEU:HD23	2.17	0.44
42:16:21:PRO:C	42:16:23:LEU:H	2.20	0.44
44:18:5:MET:HB3	44:18:62:ARG:NH2	2.33	0.44
44:18:86:ALA:HB1	44:18:91:GLU:HB2	2.00	0.44
52:26:237:G:H2'	52:26:238:A:C8	2.53	0.44
52:26:440:C:H2'	52:26:441:A:H5''	2.00	0.44
52:26:924:C:H2'	52:26:925:G:H8	1.83	0.44
53:27:628: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
53:27:1131:G:HO2'	53:27:2026:U:H5'	1.83	0.44
53:27:1295:C:H2'	53:27:1296:G:H8	1.82	0.44
53:27:1957:C:H2'	53:27:1958:C:C6	2.52	0.44
53:27:2082:A:H3'	53:27:2083:G:H8	1.82	0.44
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
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
1:A:97:ASP:OD1	1:A:98:GLY:N	2.51	0.43
1:A:154:ALA:CB	1:A:161:VAL:HG23	2.48	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:82:MET:O	12:L:84:LYS:HG2	2.17	0.43
12:L:119:LEU:O	12:L:122:ALA:HB3	2.18	0.43
14:N:27:VAL:HG21	14:N:40:ILE:HD12	2.00	0.43
18:R:37:THR:HG22	18:R:37:THR:O	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
29:3:35:ARG:HG3	29:3:35:ARG:HH11	1.82	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
37:11:42:VAL:O	37:11:46:LEU:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:12:29:SER:O	38:12:33:VAL:HG23	2.17	0.43
42:16:49:ARG:NH1	52:26:523:A:H61	2.13	0.43
42:16:120:ARG:HB2	52:26:37:U:H5''	2.00	0.43
43:17:1:ALA:C	43:17:8:ILE:HG21	2.38	0.43
43:17:53:ASP:OD1	43:17:54:THR:N	2.50	0.43
43:17:82:LEU:HD23	43:17:84:CYS:HB3	1.99	0.43
46:20:56:ARG:O	46:20:59:HIS:HB3	2.18	0.43
46:20:74:LEU:HA	46:20:77:GLU:CB	2.48	0.43
47:21:37:ILE:HD12	47:21:37:ILE:H	1.83	0.43
52:26:59:A:H1'	52:26:354:G:N2	2.33	0.43
52:26:210:C:H4'	52:26:211:G:C6	2.53	0.43
52:26:424:G:H2'	52:26:425:G:C8	2.53	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
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
53:27:108:G:C2'	53:27:109:C:H5'	2.48	0.43
53:27:242:G:C2'	53:27:243:U:OP2	2.65	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
53:27:768:G:N2	53:27:1379:U:O2'	2.50	0.43
53:27:1029:A:O5'	53:27:1029:A:H8	2.01	0.43
53:27:1270:C:H5''	53:27:1271:G:C5'	2.46	0.43
53:27:1330:C:O2'	53:27:1331:G:H5'	2.18	0.43
53:27:1499:C:H2'	53:27:1500:G:C8	2.51	0.43
53:27:1573:G:H2'	53:27:1574:C:H5'	1.99	0.43
53:27:1993:U:H5''	53:27:1993:U:C6	2.52	0.43
53:27:2543: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
56:30:31:A:H2	56:30:39:U:O2	2.01	0.43
59:33:686:ILE:CD1	59:33:729:LEU:HA	2.47	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
6:F:72:ILE:O	6:F:73:ASN:C	2.55	0.43
6:F:116:ARG:HG3	6:F:133:GLN:CD	2.38	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:9:LYS:HB3	24:X:12:GLU:OE2	2.18	0.43
24:X:44:LYS:NZ	24:X:48:ARG:CZ	2.81	0.43
32:6:49:PHE:HB2	32:6:199:ILE:HG23	1.99	0.43
32:6:68:PHE:HB2	32:6:90:PHE:CB	2.49	0.43
32:6:90:PHE:CZ	32:6:149:GLY:HA2	2.53	0.43
33:7:38:VAL:HG23	33:7:39:ARG:N	2.33	0.43
35:9:10:LEU:O	35:9:11:GLN:O	2.36	0.43
35:9:130:THR:HG21	52:26:10:A:OP2	2.18	0.43
35:9:156:ARG:HD3	38:12:44:PHE:CG	2.54	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
42:16:30:ARG:HB3	52:26:363:A:OP2	2.18	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
47:21:16:MET:HE2	47:21:19:SER:CB	2.48	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
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:A:32:LEU:CD2	1:A:63:ILE:HD11	2.47	0.43
1:A:257:ARG:HH12	53:27:1799:G:H3'	1.84	0.43
4:D:146:ASP:OD1	4:D:146:ASP:N	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:46:GLU:HA	54:28:113:C:O2'	2.19	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
19:S:40:LYS:HG3	53:27:1599:U:OP1	2.18	0.43
21:U:26:PHE:HE2	21:U:44:HIS:HA	1.83	0.43
29:3:35:ARG:HE	29:3:42:LEU:CD2	2.31	0.43
33:7:6:PRO:HD2	33:7:183:TYR:CD2	2.53	0.43
33:7:129:PHE:CZ	33:7:156:LEU:HD13	2.53	0.43
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
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
53:27:530:G:C1'	53:27:2035:G:H4'	2.48	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1448:G:H2'	53:27:1449:G:H8	1.83	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
53:27:2059: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
54:28:111:U:H2'	54:28:112:G:C8	2.49	0.43
58:32:37:A:H2'	58:32:38:A:O4'	2.18	0.43
59:33:24:LEU:CD1	59:33:67:SER:O	2.66	0.43
59:33:161:ARG:C	59:33:162:GLU:HG2	2.37	0.43
59:33:241:LYS:CD	59:33:246:LYS:NZ	2.77	0.43
59:33:407:TYR:HA	59:33:417:ASP:HA	2.00	0.43
3:C:32:VAL:HG11	11:K:6:LEU:CD1	2.47	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
13:M:25:ALA:O	13:M:29:VAL:HG23	2.18	0.43
16:P:50:ARG:HG2	16:P:50:ARG:HH11	1.82	0.43
16:P:67:ALA:O	16:P:70:GLN:HB3	2.18	0.43
17:Q:74:ILE:HD12	17:Q:74:ILE:HA	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
33:7:153:SER:HB3	33:7:164:THR:HG22	2.00	0.43
34:8:144:ILE:HD12	34:8:144:ILE:H	1.82	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
52:26:399:G:H2'	52:26:400:C:C6	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1478:U:H2'	52:26:1479:C:C6	2.54	0.43
53:27:200:U:C6	53:27:201:C:C6	3.07	0.43
53:27:250:G:C6	53:27:251:A:C6	3.06	0.43
53:27:562:U:C6	53:27:2036:C:H5'	2.54	0.43
53:27:892:A:H2'	53:27:893:C:C6	2.53	0.43
53:27:976:G:H5'	53:27:1156:A:N6	2.34	0.43
53:27:983:A:H3'	53:27:984:A:C8	2.53	0.43
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
53:27:2524:G:H2'	53:27:2525:G:H5''	2.00	0.43
56:30:26:A:H2'	56:30:27:G:C5'	2.47	0.43
58:32:19:G:C5	58:32:57:A:C2	3.07	0.43
58:32:22:G:C8	58:32:46:A:N6	2.85	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
59:33:732:VAL:HG12	59:33:734:ASP:HB2	2.01	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
7:G:41:LEU:HD11	53:27:1084:A:OP1	2.19	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
16:P:58:GLN:HG3	53:27:1009:A:O4'	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
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
38:12:94:VAL:HG12	38:12:95:MET:HG3	1.99	0.43
43:17:8:ILE:N	43:17:9:PRO:HD3	2.33	0.43
43:17:26:LYS:O	43:17:29:SER:HB3	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:22:67:LEU:HD23	48:22:67:LEU:HA	1.82	0.43
50:24:29:THR:OG1	52:26:1458:G:OP1	2.35	0.43
52:26:70:U:O5'	52:26:70:U:H6	2.01	0.43
52:26:273:U:O5'	52:26:273:U:H6	2.00	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
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
52:26:1496:C:H2'	52:26:1497:G:C1'	2.48	0.43
53:27:297:G:H2'	53:27:298:G:O4'	2.17	0.43
53:27:818:G:C3'	53:27:1187:G:H22	2.31	0.43
53:27:819:A:C8	53:27:1189:A:C6	3.07	0.43
53:27:955:U:H2'	53:27:956:G:C8	2.54	0.43
53:27:1184:U:O2'	53:27:1185:G:H5'	2.18	0.43
53:27:1284:A:H2'	53:27:1285:A:O4'	2.18	0.43
53:27:1364:G:N2	53:27:1367:A:OP2	2.43	0.43
53:27:1494:A:H2	53:27:1579:A:C1'	2.30	0.43
53:27:1600:C:H2'	53:27:1601:G:H8	1.83	0.43
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
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
1:A:206:LYS:HE3	53:27:729:G:C8	2.53	0.43
2:B:47:ALA:HB2	2:B:83:ARG:HA	2.00	0.43
2:B:150:GLN:OE1	53:27:2572:A:N7	2.51	0.43
4:D:41:GLU:OE1	4:D:48:LEU:HD21	2.19	0.43
4:D:104:THR:O	26:Z:38:SER:HB3	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
35:9:48:GLY:O	35:9:62:ALA:HB1	2.19	0.43
35:9:103:GLY:N	35:9:121:ASN:HD22	2.15	0.43
36:10:14:GLN:OE1	36:10:14:GLN:N	2.51	0.43
37:11:148:LYS:O	37:11:150:PHE:N	2.44	0.43
41:15:35:ASP:OD2	41:15:37:GLN:HB3	2.18	0.43
41:15:123:PRO:O	51:25:34:ARG:N	2.52	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
52:26:151:A:H2'	52:26:152:A:H5'	2.01	0.43
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
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
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
53:27:972:A:C6	53:27:973:A:C6	3.06	0.43
53:27:1555:G:H5'	53:27:1555:G:C8	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
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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:1:9:ARG:HA	27:1:12:ARG:HD3	1.99	0.43
27:1:31:LYS:HD3	27:1:49:ARG:O	2.18	0.43
29:3:12:ARG:HE	29:3:44:VAL:CG2	2.31	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
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
41:15:81:LEU:HD11	41:15:106:ILE:HD12	2.00	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
52:26:238: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
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
53:27:9:G:C2	53:27:2895:G:C6	3.07	0.43
53:27:601:C:O2	53:27:605:G:H4'	2.18	0.43
53:27:610:C:H2'	53:27:611:C:C6	2.54	0.43
53:27:862:G:H2'	53:27:863:A:H8	1.84	0.43
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:2869:G:C2	53:27:2870:C:C2	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
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
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:37:ASN:ND2	5:E:63:GLN:NE2	2.67	0.43
5:E:126:THR:HG22	5:E:127:GLN:H	1.84	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
27:1:30:ASP:CG	27:1:31:LYS:N	2.72	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
36:10:91:ARG:HG2	36:10:92:THR:H	1.82	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
52:26:516:U:O2	52:26:516:U:O4'	2.35	0.43
52:26:551:U:H2'	52:26:552:U:H6	1.82	0.43
52:26:765:G:H2'	52:26:812:G:H21	1.82	0.43
52:26:861:G:O2'	52:26:862:C:H5'	2.19	0.43
52:26:897:C:H2'	52:26:898:G:H8	1.84	0.43
52:26:981:U:O4	52:26:1222:G:O6	2.36	0.43
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
52:26:1418: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
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
53:27:980:A:C6	53:27:981:A:N1	2.87	0.43
53:27:1243:C:C2	53:27:1244:A:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:2850:A:O4'	53:27:2868:A:H2	2.02	0.43
53:27:2854:G:H2'	53:27:2855:C:C6	2.54	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
59:33:61:GLU:HA	59:33:64:GLU:HG2	2.00	0.43
59:33:325:VAL:HG12	59:33:332:LYS:O	2.18	0.43
59:33:577:LEU:HA	59:33:580:LEU:CB	2.49	0.43
59:33:640:GLN:CD	59:33:640:GLN:N	2.72	0.43
59:33:668:VAL:HA	59:33:713:THR:HA	2.00	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
32:6:101:THR:HG23	52:26:1074:G:H4'	2.01	0.43
33:7:39:ARG:NH1	33:7:54:ILE:O	2.51	0.43
34:8:68:GLU:HB3	52:26:546:A:P	2.58	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
39:13:125:GLN:HB3	52:26:1233:G:P	2.59	0.43
43:17:6:ILE:O	43:17:8:ILE:N	2.52	0.43
43:17:14:ALA:HB1	43:17:33:LEU:HD21	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:21:40:THR:HG22	47:21:41:THR:N	2.33	0.43
49:23:2:ARG:O	52:26:1313:U:O4	2.37	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
52:26:1480:A:H3'	52:26:1481:U:H6	1.82	0.43
53:27:530:G:H1'	53:27:2035:G:H4'	2.01	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
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
53:27:2213:U:H5''	53:27:2214:C:OP2	2.19	0.43
53:27:2590:A:N1	53:27:2604:U:O2	2.52	0.43
53:27:2672:U:H2'	53:27:2673:G:C5'	2.23	0.43
59:33:84:LEU:HB3	59:33:90:VAL:HG21	2.01	0.43
59:33:634:HIS:HE1	59:33:638:CYS:SG	2.41	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:165:HIS:HB2	53:27:1205:A:N1	2.34	0.43
3:C:189:THR:O	3:C:192:ALA:HB3	2.19	0.43
7:G:41:LEU:HD22	53:27:1083:U:OP1	2.19	0.43
10:J:3:GLN:HB3	10:J:32:TYR:HB3	2.00	0.43
10:J:31:ARG:HB3	10:J:32:TYR:H	1.71	0.43
10:J:64:ARG:HG2	10:J:79:PHE:CE2	2.54	0.43
14:N:47:VAL:HG21	54:28:114:C:H1'	1.99	0.43
14:N:102:ARG:O	14:N:105:ALA:HB3	2.18	0.43
16:P:54:ARG:CD	53:27:1155:A:H5''	2.46	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
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
33:7:37:LYS:HA	33:7:37:LYS:HD3	1.78	0.43
33:7:157:GLY:C	33:7:159:ALA:N	2.72	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:OE1	37:11:89:GLU:N	2.47	0.43
38:12:34:ALA:O	38:12:37:ASN:HB3	2.19	0.43
42:16:52:CYS:SG	42:16:66:ILE:HD11	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:16:120:ARG:CG	42:16:121:PRO:HD2	2.49	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
52:26:70:U:H2'	52:26:94:G:N7	2.33	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
52:26:776: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
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
53:27:59:U:HO2'	53:27:73:A:H2'	1.81	0.43
53:27:116:C:H2'	53:27:117:G:C8	2.53	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
53:27:372: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
53:27:775:G:C4	53:27:794:A:C8	3.06	0.43
53:27:782:A:O5'	53:27:783:A:C2	2.72	0.43
53:27:785:G:C6	53:27:786:C:C4	3.07	0.43
53:27:785:G:H2'	53:27:786:C:C6	2.54	0.43
53:27:861: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
53:27:1266:G:H22	53:27:2012:G:C2'	2.21	0.43
53:27:1366:A:H2'	53:27:1367:A:O4'	2.19	0.43
53:27:1477:A:C4	53:27:1515:A:C6	3.06	0.43
53:27:1638:C:H1'	53:27:2698:U:O2'	2.19	0.43
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
53:27:2588:G:H2'	53:27:2589:A:C4'	2.48	0.43
53:27:2725:A:C4	53:27:2727:A:C8	3.07	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:1:18:HIS:C	27:1:20:ALA:N	2.72	0.42
29:3:4:THR:O	29:3:5:PHE:HB2	2.19	0.42
33:7:53:ARG:HG3	33:7:68:HIS:ND1	2.34	0.42
35:9:27:GLY:H	52:26:1398:A:H61	1.67	0.42
35:9:80:LEU:HB3	35:9:81:GLN:H	1.57	0.42
37:11:81:GLY:HA3	55:29:12:A:H1'	2.01	0.42
39:13:112:ARG:HD2	44:18:100:TRP:OXT	2.18	0.42
41:15:117:HIS:CD2	52:26:675:A:H1'	2.54	0.42
44:18:41:TRP:HA	44:18:44:VAL:HG22	2.01	0.42
50:24:82:ILE:HG13	50:24:83:ASN:H	1.84	0.42
51:25:15:LEU:HD23	51:25:17:ARG:HG3	2.01	0.42
51:25:23:GLU:O	51:25:24:LYS:HB2	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
52:26:123:U:H6	52:26:123:U:O5'	2.01	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
52:26:1055:A:C5	52:26:1206:G:C6	3.07	0.42
52:26:1333:A:H2'	52:26:1334:G:O4'	2.18	0.42
52:26:1340:A:H2'	52:26:1341:U:O4'	2.19	0.42
52:26:1403:C:N4	55:29:18:G:OP1	2.52	0.42
52:26:1526:G:O2'	52:26:1527:U:H5'	2.19	0.42
52:26:1531:A:O2'	52:26:1532:U:H5'	2.19	0.42
53:27:28:A:H2'	53:27:29:U:C6	2.54	0.42
53:27:202:U:N3	53:27:203:A:C2	2.86	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
53:27:1719:G:N2	53:27:1742:U:H1'	2.33	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
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
1:A:160:TYR:CB	1:A:193:GLU:HG2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:173:LEU:O	1:A:180:MET:HA	2.19	0.42
1:A:245:THR:HG21	1:A:249:VAL:HB	2.01	0.42
2:B:137:SER:C	2:B:138:LEU:HG	2.39	0.42
3:C:44:ARG:HD2	53:27:444:C:OP2	2.19	0.42
4:D:122:ASP:OD1	4:D:126:ASN:N	2.52	0.42
7:G:20:LYS:HE2	7:G:88:HIS:CD2	2.54	0.42
8:H:6:ALA:HB3	8:H:60:VAL:HB	2.00	0.42
8:H:85:ILE:HG23	8:H:98:GLY:HA3	2.01	0.42
8:H:126:ARG:CZ	53:27:1080:A:H5''	2.49	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
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
38:12:14:ARG:NH1	38:12:74:ILE:O	2.52	0.42
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
53:27:683: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
53:27:1024:G:OP2	53:27:1026:G:OP1	2.37	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:A:48:ILE:HG23	1:A:48:ILE:O	2.18	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
2:B:109:VAL:HG23	2:B:175:LEU:HD12	1.99	0.42
2:B:140:HIS:HD2	53:27:1658:C:OP2	2.03	0.42
3:C:130:LYS:HA	53:27:321:U:OP2	2.19	0.42
6:F:30:LEU:O	6:F:33:GLN:N	2.52	0.42
9:I:84:ILE:O	9:I:84:ILE:HG13	2.19	0.42
11:K:56:PRO:HD2	11:K:59:ARG:HG3	2.01	0.42
14:N:7:ARG:HA	14:N:10:ARG:NH1	2.28	0.42
14:N:21:LEU:HD23	14:N:21:LEU:HA	1.88	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
27:1:39:ARG:C	27:1:41:HIS:H	2.22	0.42
30:4:7:ARG:NH2	53:27:244:A:OP2	2.52	0.42
32:6:165:ALA:HB3	32:6:190:SER:CB	2.49	0.42
36:10:18:VAL:HG11	36:10:58:HIS:HE2	1.84	0.42
37:11:142:ARG:CD	58:32:41:C:H4'	2.49	0.42
39:13:114:LYS:HE2	52:26:1187:G:H5'	2.01	0.42
40:14:88:MET:CE	40:14:100:ILE:HD13	2.49	0.42
43:17:16:ILE:HG12	52:26:1302:C:C4	2.54	0.42
43:17:24:VAL:N	52:26:1330:U:OP1	2.51	0.42
46:20:13:LYS:HZ3	52:26:393:A:P	2.42	0.42
47:21:7:LEU:HD23	47:21:24:ILE:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:23:59:VAL:HG23	49:23:59:VAL:O	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
52:26:396:C:C3'	52:26:397:A:H5''	2.50	0.42
52:26:472:U:O2'	52:26:473:U:H5'	2.19	0.42
52:26:644:U:O2'	52:26:645:G:H5'	2.19	0.42
52:26:922:G:C3'	52:26:923:A:C8	3.02	0.42
52:26:946:A:H4'	52:26:1333:A:O2'	2.19	0.42
52:26:1206:G:C4	52:26:1207:G:C8	3.07	0.42
52:26:1306:A:H61	52:26:1331:G:H1'	1.78	0.42
52:26:1401:G:O2'	52:26:1402:C:H5'	2.19	0.42
53:27:196:A:C5	53:27:805:G:C5	3.07	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
53:27:923:G:O2'	53:27:924:G:H5'	2.19	0.42
53:27:1077:A:N1	53:27:1088:A:C2'	2.82	0.42
53:27:1111:A:C2'	53:27:1112:G:H4'	2.49	0.42
53:27:1152:C:O2'	53:27:1153:C:H5'	2.18	0.42
53:27:1340:U:O2	53:27:1340:U:O4'	2.37	0.42
53:27:1345:C:H2'	53:27:1346:G:H8	1.84	0.42
53:27:1516:G:H2'	53:27:1517:G:H8	1.84	0.42
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
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
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
1:A:245:THR:CG2	1:A:249:VAL:HB	2.50	0.42
3:C:145:ASP:OD1	3:C:166:LYS:HA	2.19	0.42
4:D:25:MET:HB3	54:28:57:A:C4	2.54	0.42
4:D:27:VAL:O	4:D:27:VAL:HG13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:2:ARG:HD2	53:27:1248:G:C5	2.54	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
21:U:92:VAL:O	21:U:94:ALA:N	2.49	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
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:HD12	48:22:38:ILE:N	2.32	0.42
48:22:54:LEU:HG	48:22:58:ILE:CD1	2.48	0.42
49:23:39:ILE:CB	49:23:66:VAL:HA	2.43	0.42
49:23:79:TYR:OH	52:26:1226:C:H4'	2.18	0.42
51:25:25:ALA:HB1	51:25:29:ALA:HB2	2.02	0.42
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
52:26:1084:G:H2'	52:26:1085:U:C5	2.55	0.42
52:26:1157:A:C5	52:26:1180:A:C6	3.08	0.42
52:26:1201:A:H4'	52:26:1203:C:OP2	2.18	0.42
52:26:1208:C:H2'	52:26:1209:C:H6	1.83	0.42
52:26:1213:A:C5	52:26:1215:G:C4	3.07	0.42
52:26:1382:C:H2'	52:26:1383:C:C6	2.46	0.42
52:26:1452:C:H4'	52:26:1453:G:N1	2.34	0.42
52:26:1487:G:O2'	52:26:1488:G:H5'	2.20	0.42
53:27:106:C:H2'	53:27:107:G:C8	2.47	0.42
53:27:780:G:H2'	53:27:782:A:C6	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
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
59:33:152:LYS:HD2	59:33:152:LYS:HA	1.76	0.42
59:33:197:GLU:CG	59:33:201:TYR:CZ	3.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:33:260:TRP:NE1	59:33:264:GLN:NE2	2.67	0.42
1:A:93:VAL:CG1	1:A:94:LEU:N	2.83	0.42
1:A:143:VAL:O	1:A:151:GLY:HA2	2.20	0.42
2:B:118:PHE:HE2	53:27:1655:A:H1'	1.84	0.42
3:C:32:VAL:HG11	11:K:6:LEU:HD12	2.00	0.42
3:C:88:ARG:CD	3:C:89:PRO:HD2	2.49	0.42
4:D:76:PHE:HE1	53:27:2308:G:C6	2.37	0.42
4:D:76:PHE:HE1	53:27:2308:G:N7	2.18	0.42
4:D:134:GLN:NE2	4:D:148:VAL:HA	2.34	0.42
8:H:1:ALA:HB1	8:H:61:TYR:HE1	1.84	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
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
48:22:59:LYS:HD3	52:26:735:C:H5'	2.01	0.42
51:25:46:ARG:NE	52:26:1533:C:N4	2.67	0.42
52:26:27:G:O2'	52:26:28:A:H5'	2.19	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
52:26:375:U:H2'	52:26:376:G:O4'	2.19	0.42
52:26:636:U:H2'	52:26:637:C:C6	2.55	0.42
52:26:705:G:H2'	52:26:706:A:C5'	2.50	0.42
52:26:889:A:H5'	52:26:891:U:H1'	2.00	0.42
52:26:978:A:C2	52:26:1319:A:O4'	2.73	0.42
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
53:27:133:U:H2'	53:27:134:G:H8	1.81	0.42
53:27:241:A:H8	53:27:241:A:OP1	2.01	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
53:27:1689:A:O2'	53:27:1690:A:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:1803:A:H2'	53:27:1804:C:O4'	2.19	0.42
53:27:1824:G:H2'	53:27:1825:U:H6	1.85	0.42
53:27:1866:A:H3'	53:27:1867:G:H8	1.85	0.42
53:27:1973:G:O2'	53:27:1974:C:H5'	2.20	0.42
53:27:2053:G:C2	53:27:2617:U:C2	3.07	0.42
53:27:2116:G:O2'	53:27:2117:A:H5'	2.20	0.42
53:27:2348:U:H2'	53:27:2349:G:C8	2.54	0.42
53:27:2494:G:O2'	53:27:2495:G:H5'	2.20	0.42
53:27:2545:G:H2'	53:27:2546:U:H5'	2.02	0.42
53:27:2683:C:H2'	53:27:2684:U:H6	1.85	0.42
56:30:75:C:H4'	59:33:431:ILE:HG23	2.02	0.42
57:31:43:A:H2'	57:31:44:A:C8	2.54	0.42
59:33:65:ILE:HD13	59:33:157:ILE:CG1	2.48	0.42
59:33:82:PHE:CD2	59:33:83:PRO:CD	2.98	0.42
59:33:428:ALA:O	59:33:431:ILE:HB	2.19	0.42
59:33:705:GLN:HB2	59:33:706:GLN:H	1.46	0.42
2:B:5:VAL:HG11	2:B:80:TRP:CD2	2.55	0.42
2:B:13:ARG:HA	2:B:24:VAL:HG22	2.00	0.42
3:C:57:LYS:HG2	3:C:59:PRO:CD	2.49	0.42
3:C:148:ILE:HA	3:C:187:VAL:CG1	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
27:1:17:SER:OG	27:1:18:HIS:N	2.53	0.42
33:7:113:LYS:HD3	33:7:184:ASN:ND2	2.35	0.42
34:8:28:ASP:OD1	34:8:28:ASP:N	2.51	0.42
34:8:88:ASN:O	34:8:91:ALA:HB3	2.19	0.42
39:13:10:ARG:O	39:13:105:ARG:NH2	2.52	0.42
39:13:24:ASN:HA	39:13:58:GLU:O	2.19	0.42
39:13:25:GLY:H	39:13:58:GLU:HA	1.83	0.42
39:13:80:HIS:CE1	39:13:84:ARG:HD2	2.55	0.42
39:13:81:GLY:O	39:13:85:ALA:HB2	2.20	0.42
42:16:3:VAL:HG13	42:16:4:ASN:N	2.34	0.42
42:16:71:HIS:HA	42:16:98:ARG:HH12	1.84	0.42
44:18:55:SER:HA	44:18:56:PRO:HD2	1.89	0.42
45:19:42:PHE:CD2	45:19:55:LEU:HD22	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:21:5:ARG:HB3	47:21:5:ARG:NH1	2.34	0.42
47:21:59:GLU:C	47:21:60:ILE:HG13	2.39	0.42
47:21:66:LEU:O	47:21:67:SER:HB3	2.19	0.42
49:23:7:GLY:O	49:23:8:PRO:C	2.58	0.42
49:23:10:ILE:HG23	49:23:40:PHE:HE2	1.84	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
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
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
53:27:1348:C:H3'	53:27:1349:C:H6	1.84	0.42
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
53:27:2638:G:N2	53:27:2775:G:H2'	2.34	0.42
53:27:2684:U:C4	53:27:2685:G:N7	2.88	0.42
59:33:77:ARG:NH1	59:33:99:VAL:HG23	2.34	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
1:A:51:ARG:NH2	53:27:1825:U:OP2	2.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:25:THR:O	27:1:27:LEU:N	2.48	0.42
38:12:31:LEU:HD12	38:12:31:LEU:C	2.40	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
52:26:505: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
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
53:27:257:C:H2'	53:27:258:G: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
53:27:966:G:H1'	53:27:2267:A:N7	2.35	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
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
53:27:2556: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
53:27:2633: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
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
59:33:24:LEU:CD2	59:33:67:SER:O	2.67	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:1:39:ARG:O	27:1:41:HIS:N	2.52	0.42
33:7:83:VAL:HG12	33:7:87:ARG:HH12	1.84	0.42
33:7:191:THR:HG23	33:7:192:TYR:CD2	2.55	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
37:11:11:ILE:HD13	37:11:24:LYS:HD3	2.00	0.42
37:11:61:PHE:CD1	37:11:61:PHE:C	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
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
52:26:124: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
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
53:27:205:G:HO2'	53:27:206:U:P	2.43	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
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
53:27:2134:A:N3	53:27:2134:A:C2'	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:H	59:33:639:GLU:CD	2.23	0.42
59:33:683:ILE:HG22	59:33:687:LEU:HG	2.02	0.42
1:A:109:LEU:HD12	1:A:109:LEU:HA	1.85	0.42
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:94:GLN:HB2	53:27:660:C:OP1	2.20	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:16:MET:HE1	4:D:27:VAL:HB	2.01	0.42
4:D:19:PHE:O	4:D:20:ASN:OD1	2.38	0.42
6:F:5:LEU:HD23	6:F:9:VAL:HG21	2.02	0.42
7:G:52:MET:O	7:G:52:MET:HG2	2.20	0.42
7:G:121:SER:HB3	7:G:126:LEU:CD2	2.50	0.42
8:H:37:PHE:O	8:H:41:PHE:HB2	2.19	0.42
8:H:99:LYS:HA	8:H:138:VAL:O	2.20	0.42
9:I:31:GLU:O	9:I:35:ARG:HG2	2.20	0.42
13:M:38:LEU:HB3	13:M:39:PRO:CD	2.45	0.42
16:P:5:ARG:HD3	53:27:1250:G:H5''	2.02	0.42
18:R:79:GLY:H	18:R:101:SER:HA	1.84	0.42
20:T:5:ARG:HG3	20:T:93:ARG:NH2	2.34	0.42
25:Y:47:ILE:O	25:Y:51:SER:N	2.53	0.42
27:1:12:ARG:NH2	27:1:16:ARG:NH1	2.67	0.42
28:2:47:ILE:CG2	28:2:48:TYR:N	2.82	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
37:11:117:LEU:HD23	37:11:121:ASN:ND2	2.33	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
52:26:1436:U:H2'	52:26:1437:A:H8	1.85	0.42
53:27:564:C:H2'	53:27:565:C:C6	2.55	0.42
53:27:1112:G:H2'	53:27:1113:U:C6	2.55	0.42
53:27:1351:C:H4'	53:27:1572:A:O4'	2.20	0.42
53:27:1412:U:H2'	53:27:1413:A:C8	2.54	0.42
53:27:2404:U:C4	53:27:2405:G:C6	3.08	0.42
53:27:2428:G:H5''	53:27:2429:G:OP1	2.19	0.42
59:33:61:GLU:HA	59:33:64:GLU:CG	2.49	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:81:GLU:CD	53:27:2636:C:H4'	2.40	0.42
2:B:99:GLU:O	2:B:100:LEU:C	2.58	0.42
2:B:115:GLY:HA2	2:B:167:ASN:HB2	2.02	0.42
2:B:197:THR:HB	53:27:2820:A:N6	2.34	0.42
3:C:2:GLU:HB2	3:C:11:ALA:O	2.20	0.42
4:D:109:ARG:NH2	4:D:138:PRO:N	2.67	0.42
5:E:114:HIS:HD2	5:E:147:LEU:HD21	1.85	0.42
6:F:30:LEU:O	6:F:33:GLN:HB3	2.20	0.42
7:G:25:ALA:HB3	7:G:85:SER:CB	2.50	0.42
8:H:36:GLU:O	8:H:40:ALA:CB	2.68	0.42
9:I:47:HIS:CB	53:27:536:G:H21	2.33	0.42
13:M:22:ARG:NH1	13:M:71:ARG:HB2	2.31	0.42
15:O:50:ARG:HH11	15:O:50:ARG:HG3	1.84	0.42
16:P:36:GLN:NE2	53:27:563:A:C2'	2.79	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:6:ARG:NH2	20:T:7:ASP:OD1	2.53	0.42
20:T:67:SER:HB3	53:27:335:C:O2	2.20	0.42
21:U:29:ILE:HD12	21:U:38:LEU:O	2.19	0.42
27:1:43:THR:HG23	27:1:47:TYR:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:12:10:LEU:O	38:12:13:ILE:HB	2.20	0.42
39:13:32:ARG:HA	39:13:36:GLN:HE21	1.85	0.42
39:13:125:GLN:NE2	39:13:126:PHE:O	2.43	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
52:26:41:G:H2'	52:26:42:G:H8	1.85	0.42
52:26:211:G:N3	52:26:211:G:C3'	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
52:26:440: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
53:27:232:G:H8	53:27:232:G:OP2	2.02	0.42
53:27:310:A:H2'	53:27:311:A:H5''	2.02	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
53:27:934:U:H2'	53:27:935:C:C6	2.54	0.42
53:27:976:G:H4'	53:27:1156:A:N7	2.35	0.42
53:27:992:C:H2'	53:27:993:G:C8	2.55	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
53:27:2573:C:H5''	53:27:2574:G:C5'	2.50	0.42
55:29:13:A:H2'	55:29:13:A:N3	2.34	0.42
59:33:54:LEU:HB2	59:33:57:TRP:HE1	1.83	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:HG21	59:33:214:ILE:HD13	1.79	0.42
59:33:293:LEU:C	59:33:296:VAL:HG22	2.39	0.42
59:33:597:VAL:HG12	59:33:598:VAL:N	2.34	0.42
1:A:175:LEU:HD23	53:27:1799:G:C2	2.54	0.41
1:A:209:ALA:HA	1:A:212:TRP:CD2	2.55	0.41
2:B:120:GLY:HA3	53:27:1655:A:O3'	2.20	0.41
7:G:81:LEU:HD13	53:27:1107:G:C5'	2.39	0.41
8:H:40:ALA:O	8:H:43:ALA:HB3	2.20	0.41
9:I:64:VAL:HG21	9:I:89:PHE:CE2	2.54	0.41
9:I:114:LEU:O	9:I:117:ALA:HB3	2.19	0.41
13:M:90:ARG:HG3	13:M:90:ARG:NH1	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:2:42:VAL:O	28:2:42:VAL:HG12	2.20	0.41
32:6:82:ALA:HB2	32:6:213:LEU:HB3	2.01	0.41
37:11:68:VAL:HG12	37:11:134:VAL:HG12	2.02	0.41
37:11:110:ARG:HH21	37:11:122:GLU:HA	1.85	0.41
38:12:115:ALA:HA	38:12:118:ALA:HB3	2.01	0.41
38:12:121:GLY:O	52:26:599:C:H4'	2.20	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
50:24:78:LEU:O	50:24:81:GLN:HB2	2.20	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
52:26:225:C:H2'	52:26:226:G:O4'	2.19	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
52:26:876:C:H2'	52:26:877:G:C8	2.55	0.41
52:26:971:G:N9	52:26:1365:G:H4'	2.35	0.41
52:26:977:A:H2'	52:26:977:A:N3	2.35	0.41
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
52:26:1497:G:H2'	52:26:1519:A:H2	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
56:30:75:C:H5'	59:33:431:ILE:O	2.20	0.41
58:32:65:C:H2'	58:32:66:C:C5	2.55	0.41
59:33:172:VAL:HG13	59:33:173:LEU:N	2.35	0.41
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:HA	4:D:25:MET:HE2	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
11:K:23:ILE:HD13	17:Q:84:ARG:NH1	2.35	0.41
13:M:107:ASN:HD22	53:27:2009:A:C4'	2.33	0.41
23:W:69:GLU:O	23:W:72:ALA:HB3	2.19	0.41
25:Y:11:SER:HB3	53:27:988:A:P	2.60	0.41
25:Y:46:MET:HG2	53:27:851:C:C4'	2.51	0.41
29:3:21:ARG:HB3	29:3:31:LEU:HD13	2.02	0.41
32:6:17:HIS:CD2	32:6:18:GLN:H	2.38	0.41
32:6:89:PHE:CG	32:6:153:MET:HE2	2.55	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
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:HG23	42:16:20:VAL:O	2.20	0.41
43:17:26:LYS:NZ	43:17:30:LYS:HE2	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:68:G:H2'	53:27:69:C:C6	2.55	0.41
53:27:116:C:O2'	53:27:117:G:H5'	2.21	0.41
53:27:611:C:H3'	53:27:612:G:C8	2.55	0.41
53:27:646:U:C4	53:27:2368:C:H1'	2.55	0.41
53:27:778:G:C6	53:27:779:U:N3	2.88	0.41
53:27:959:A:O2'	53:27:960:A:H5'	2.19	0.41
53:27:966:G:C5	53:27:967:U:C4	3.08	0.41
53:27:980:A:N7	53:27:981:A:C6	2.88	0.41
53:27:1174:U:O2	53:27:1174:U:C2'	2.65	0.41
53:27:1636:U:H2'	53:27:1637:A:C8	2.55	0.41
53:27:1731:G:C6	53:27:1733:G:C5	3.07	0.41
53:27:1829:A:H3'	53:27:1830:C:C6	2.55	0.41
53:27:1848:A:H2'	53:27:1849:G:O4'	2.19	0.41
53:27:2247:A:O2'	53:27:2248:C:H5'	2.20	0.41
53:27:2457:U:O2	53:27:2457:U:O4'	2.35	0.41
53:27:2685:G:O2'	53:27:2686:G:H5'	2.19	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
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
59:33:38:THR:CG2	59:33:77:ARG:HD2	2.49	0.41
59:33:65:ILE:HG12	59:33:161:ARG:HH22	1.83	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
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:29:ARG:N	4:D:158:THR:OG1	2.49	0.41
4:D:131:VAL:CG2	4:D:151:LEU:H	2.31	0.41
5:E:36:LEU:HG	5:E:37:ASN:N	2.36	0.41
6:F:32:PRO:HB3	23:W:38:TRP:CB	2.48	0.41
6:F:97:ARG:HG3	6:F:112:LYS:HD2	2.02	0.41
8:H:93:ASN:ND2	53:27:1077:A:O2'	2.53	0.41
10:J:63:VAL:HG11	10:J:85:VAL:HG23	2.03	0.41
10:J:74:GLY:C	15:O:74:GLN:HE21	2.24	0.41
10:J:77:ILE:N	10:J:77:ILE:HD12	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:7:6:PRO:O	33:7:9:ILE:HG22	2.21	0.41
33:7:122:GLN:O	33:7:127:VAL:HG12	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
36:10:59:TYR:CE2	48:22:66:LEU:HD21	2.52	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
52:26:61:G:C6	52:26:62:U:C4	3.08	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
52:26:757: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
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
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
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:H6	53:27:2805:C:O5'	2.04	0.41
59:33:463:ILE:HD12	59:33:463:ILE:O	2.20	0.41
2:B:8:LYS:HD2	2:B:193:VAL:HG23	2.01	0.41
2:B:149:ASN:ND2	53:27:2575:C:OP1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:76:PRO:HA	3:C:82:GLY:HA3	2.02	0.41
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
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:HA	16:P:94:LEU:HD23	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
32:6:39:ILE:H	32:6:39:ILE:CD1	2.25	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
34:8:8:LEU:CD2	34:8:31:CYS:HB2	2.51	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
46:20:20:VAL:CG2	46:20:35:ARG:HA	2.40	0.41
50:24:4:LYS:HE2	52:26:331:G:H2'	2.02	0.41
51:25:20:ARG:NH2	52:26:1538:C:O2'	2.53	0.41
52:26:23:C:O5'	52:26:23:C:H6	2.04	0.41
52:26:302:G:O2'	52:26:556:C:H5''	2.20	0.41
52:26:404:G:H2'	52:26:405:U:H6	1.82	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
52:26:926:G:C6	52:26:1505:G:C6	3.08	0.41
52:26:996:A:C6	52:26:1046:A:H4'	2.56	0.41
52:26:1057:G:C5	52:26:1058:G:C5	3.08	0.41
53:27:126:A:C6	53:27:127:A:N1	2.89	0.41
53:27:190:A:C6	53:27:191:A:C6	3.09	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
53:27:579:G:C2	53:27:1262:A:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:1061:U:O4'	53:27:1070:A:H1'	2.20	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
53:27:2078:C:H2'	53:27:2079:U:O4'	2.19	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
1:A:43:ASN:HD21	53:27:1806:C:H1'	1.85	0.41
2:B:164:GLN:NE2	53:27:2822:G:H5''	2.30	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
10:J:105:ARG:NE	15:O:31:VAL:HG21	2.34	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
13:M:102:PHE:HA	13:M:108:ALA:O	2.20	0.41
14:N:36:TYR:OH	54:28:28:C:OP1	2.32	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
29:3:11:LYS:HE3	29:3:11:LYS:HB2	1.87	0.41
30:4:39:ARG:O	30:4:43:LEU:HG	2.20	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
34:8:184:LYS:HA	34:8:185:PRO:HD3	1.93	0.41
35:9:94:PHE:CG	35:9:95:MET:N	2.87	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:HG3	42:16:49:ARG:HH11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:25:38:GLU:H	51:25:40:PRO:HD2	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
52:26:1425:U:H2'	52:26:1426:G:H8	1.85	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
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
53:27:2007:U:H4'	53:27:2824:C:H4'	2.03	0.41
53:27:2476:A:H2'	53:27:2477:U:O4'	2.20	0.41
53:27:2540:C:H2'	53:27:2541:A:O4'	2.21	0.41
53:27:2867:G:O2'	53:27:2868:A:H8	2.03	0.41
56:30:12:U:H2'	56:30:13:C:O4'	2.20	0.41
59:33:67:SER:CB	59:33:76:LEU:HD21	2.50	0.41
59:33:154:ALA:CA	59:33:157:ILE:HG12	2.50	0.41
59:33:643:GLU:O	59:33:646:SER:HB3	2.21	0.41
3:C:77:ILE:HD12	53:27:1256:G:O2'	2.20	0.41
4:D:67:THR:N	4:D:85:GLY:O	2.40	0.41
4:D:137:PHE:HA	4:D:138:PRO:HD3	1.82	0.41
11:K:62:PRO:HG2	30:4:24:LYS:HB3	2.02	0.41
17:Q:1:MET:O	17:Q:2:TYR:C	2.58	0.41
19:S:68:LYS:HD3	19:S:68:LYS:HA	1.82	0.41
21:U:32:GLY:O	21:U:93:ARG:NH1	2.52	0.41
33:7:5:HIS:HB3	44:18:88:MET:CE	2.51	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
36:10:72:ASP:O	36:10:76:THR:HG23	2.20	0.41
37:11:2:ARG:NH1	52:26:932:C:C4	2.88	0.41
40:14:8:ILE:HG23	40:14:99:GLN:O	2.21	0.41
40:14:10:LEU:CB	40:14:98:VAL:HA	2.50	0.41
46:20:59:HIS:O	46:20:63:GLN:HG3	2.20	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
52:26:102:G:H2'	52:26:103:U:C6	2.54	0.41
52:26:123:U:H2'	52:26:124:C:H6	1.81	0.41
52:26:312:C:H2'	52:26:313:A:C8	2.55	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:26:1459:G:O2'	52:26:1460:C:H5'	2.20	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:H8	53:27:1333:G:O5'	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
53:27:2743:U:H3'	53:27:2744:G:H5''	2.01	0.41
59:33:72:ASP:O	59:33:76:LEU:HD13	2.20	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
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:22:LYS:HB3	53:27:2093:G:P	2.61	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:58:LEU:HD11	10:J:86:LEU:HB3	2.02	0.41
10:J:113:MET:O	10:J:116:ILE:HG13	2.20	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: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
14:N:114:GLY:O	14:N:116:GLN:NE2	2.53	0.41
17:Q:83:TYR:OH	53:27:1187:G:H5''	2.21	0.41
17:Q:91:GLN:NE2	53:27:993:G:H1'	2.36	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
27:1:1:ALA:O	27:1:2:VAL:O	2.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:48:GLY:HA3	35:9:62:ALA:O	2.19	0.41
36:10:18:VAL:HG13	36:10:19:PRO:CD	2.51	0.41
38:12:6:ILE:HD11	38:12:76:ARG:NH2	2.36	0.41
39:13:118:ARG:HH11	52:26:1233:G:H5'	1.86	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
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
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
53:27:197:A:N6	53:27:2430:A:H2'	2.35	0.41
53:27:278:A:H2'	53:27:278:A:N3	2.35	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
53:27:1080:A:O2'	53:27:1081:U:H5'	2.20	0.41
53:27:1082:U:C4	53:27:1083:U:H1'	2.56	0.41
53:27:1146:C:H2'	53:27:1147:A:C8	2.56	0.41
53:27:1313:U:O3'	53:27:1332:G:H4'	2.21	0.41
53:27:1377:G:H8	53:27:1377:G:O5'	2.04	0.41
53:27:1667:G:O5'	53:27:1667:G:H8	2.04	0.41
53:27:2024:G:H2'	53:27:2025:C:O4'	2.20	0.41
53:27:2177:C:C3'	53:27:2178:C:H5''	2.45	0.41
53:27:2251:G:P	53:27:2251:G:H8	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
53:27:2794:C:O2	53:27:2794:C:C2'	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
57:31:68:C:H2'	57:31:69:C:H6	1.86	0.41
59:33:57:TRP:C	59:33:60:VAL:HG22	2.41	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
4:D:141:ASP:HB3	4:D:143:ASP:OD1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:69:ARG:NE	9:I:89:PHE:HE2	2.15	0.41
9:I:88:THR:OG1	9:I:91:GLU:HG3	2.20	0.41
10:J:12:ASP:C	10:J:12:ASP:OD1	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
17:Q:68:ARG:NH1	53:27:1224:U:OP2	2.54	0.41
21:U:65:VAL:O	21:U:65:VAL:CG1	2.69	0.41
37:11:85:GLN:HB2	37:11:147:ASN:HD21	1.85	0.41
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
52:26:95:C:H2'	52:26:96:U:H6	1.86	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:H6	52:26:522:C:O5'	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
52:26:1065: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
52:26:1251:A:N1	52:26:1354:U:H1'	2.36	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
52:26:1405:G:N2	52:26:1517:G:N2	2.69	0.41
53:27:267:C:H2'	53:27:268:C:H6	1.86	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
53:27:579:G:H4'	53:27:2017:U:H2'	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:955:U:H5	53:27:962:G:C6	2.35	0.41
53:27:1168:G:H2'	53:27:1169:A:H8	1.85	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
53:27:2191: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
53:27:2814: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
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
1:A:78:GLU:CD	1:A:100:ARG:HE	2.24	0.41
2:B:129:THR:HG23	2:B:130:GLN:O	2.21	0.41
3:C:66:GLY:HA2	53:27:2060:A:H5''	2.03	0.41
4:D:29:ARG:HG2	4:D:29:ARG:NH1	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
6:F:117:LEU:HA	6:F:118:PRO:HD3	1.81	0.41
7:G:52:MET:O	7:G:54:VAL:HG23	2.21	0.41
7:G:61:ARG:CD	53:27:1046:A:O4'	2.64	0.41
7:G:107:GLU:C	7:G:109:LYS:N	2.74	0.41
10:J:64:ARG:HD3	10:J:102:PRO:O	2.21	0.41
10:J:86:LEU:C	10:J:87:LEU:HD12	2.41	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
14:N:18:LEU:HD21	14:N:25:ARG:HB2	2.02	0.41
16:P:5:ARG:NH1	53:27:1251:C:C5	2.89	0.41
16:P:50:ARG:HG2	16:P:50:ARG:NH1	2.36	0.41
17:Q:1:MET:HA	17:Q:43:ASN:ND2	2.36	0.41
17:Q:43:ASN:N	17:Q:45:GLU:O	2.52	0.41
17:Q:46:GLU:CD	17:Q:46:GLU:C	2.79	0.41
19:S:92:ASN:HB3	19:S:93:LEU:H	1.42	0.41
22:V:12:SER:HB3	53:27:2261:C:C6	2.55	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:10:LEU:HD23	28:2:10:LEU:HA	1.87	0.41
29:3:8:SER:O	29:3:9:VAL:C	2.59	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
32:6:103: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
32:6:134:LEU:O	32:6:138:ARG:HB2	2.21	0.41
34:8:69:ARG:N	52:26:546:A:OP1	2.42	0.41
35:9:77:ASN:CG	35:9:78:GLY:H	2.24	0.41
36:10:9:MET:HG2	36:10:86:ARG:O	2.21	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
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
39:13:86:LEU:HD23	39:13:86:LEU:HA	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
41:15:109:ILE:CD1	51:25:16:ARG:HD2	2.35	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
46:20:46:LYS:CD	52:26:617:G:H4'	2.51	0.41
47:21:28:VAL:HG12	47:21:39:ARG:HG2	2.03	0.41
48:22:71:ASP:N	48:22:71:ASP:OD1	2.54	0.41
49:23:41:PRO:O	49:23:44:ILE:HG13	2.21	0.41
50:24:53:MET:HG3	50:24:54:GLN:N	2.33	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
52:26:104:G:C2	52:26:105:G:C5	3.09	0.41
52:26:359:G:H2'	52:26:360:G:O4'	2.21	0.41
52:26:584:G:C4	52:26:585:G:C8	3.09	0.41
52:26:819:A:H5''	52:26:819:A:H8	1.85	0.41
52:26:952:U:H2'	52:26:953:G:H8	1.85	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
52:26:1064:G:O2'	52:26:1190:G:N2	2.54	0.41
52:26:1122:U:H2'	52:26:1123:U:C6	2.56	0.41
53:27:21:A:H2'	53:27:22:C:H6	1.86	0.41
53:27:483:A:H3'	53:27:484:C:C6	2.55	0.41
53:27:493:G:C2'	53:27:494:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:573:U:O2'	53:27:574:A:H3'	2.21	0.41
53:27:857:G:H2'	53:27:858:G:C1'	2.51	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
53:27:1703:G:H2'	53:27:1704:C:H6	1.85	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
53:27:2298:A:H2'	53:27:2299:U:O4'	2.21	0.41
53:27:2319:G:H4'	53:27:2321:U:O4	2.20	0.41
53:27:2358:A:C2	53:27:2359:C:C2	3.09	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
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
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
56:30:29:G:H2'	56:30:30:G:H8	1.86	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
59:33:408:VAL:CG2	59:33:418:LEU:HD12	2.51	0.41
59:33:495:TRP:O	59:33:496:PHE:C	2.59	0.41
1:A:206:LYS:HD2	53:27:729:G:OP2	2.21	0.41
2:B:7:LYS:HB3	2:B:28:GLU:OE1	2.21	0.41
2:B:9:VAL:HG23	2:B:26:VAL:HB	2.03	0.41
2:B:51:THR:HB	2:B:79:LEU:CD2	2.47	0.41
2:B:124:ARG:NH1	2:B:163:GLY:HA3	2.35	0.41
2:B:173:GLN:NE2	53:27:2771:C:O2'	2.48	0.41
3:C:45:ALA:HB2	3:C:89:PRO:HD3	2.03	0.41
3:C:188:MET:CE	3:C:193:VAL:HA	2.50	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:1:MET:C	19:S:3:ARG:N	2.73	0.41
19:S:13:ALA:HB1	24:X:33:ALA:HB3	2.03	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
27:1:30:ASP:N	27:1:35:GLU:O	2.54	0.41
32:6:24:PRO:HG2	52:26:829:G:O4'	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
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
38:12:14:ARG:NH2	52:26:876:C:H4'	2.36	0.41
40:14:21:ALA:HA	40:14:24:GLU:OE1	2.20	0.41
40:14:42:LEU:HD23	40:14:42:LEU:HA	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
52:26:116:A:C2	52:26:117:G:H1'	2.56	0.41
52:26:147:G:H2'	52:26:148:G:H8	1.85	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
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
52:26:865:A:O5'	52:26:865:A:H8	2.04	0.41
52:26:928:G:H2'	52:26:929:G:C8	2.55	0.41
52:26:1033:G:C5	52:26:1034: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
52:26:1499:A:H2'	52:26:1500:A:H8	1.86	0.41
53:27:39:G:H2'	53:27:40:U:C6	2.56	0.41
53:27:150:U:H2'	53:27:151:C:C6	2.55	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
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
53:27:988:A:H4'	53:27:1155:A:H2	1.85	0.41
53:27:1009:A:OP2	53:27:1010:A:OP2	2.38	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
59:33:35:LEU:N	59:33:35:LEU:HD12	2.36	0.41
59:33:136:ARG:NH1	59:33:136:ARG:HG3	2.36	0.41
59:33:231:GLU:O	59:33:235:HIS:HD2	2.03	0.41
59:33:239:GLU:HB2	59:33:299:HIS:HE1	1.86	0.41
59:33:279:VAL:HG12	59:33:335:GLU:O	2.20	0.41
59:33:300:TYR:CD1	59:33:328:GLY:HA2	2.55	0.41
59:33:436:GLY:O	59:33:439:CYS:HB3	2.21	0.41
1:A:149:LYS:HG3	53:27:2204:G:H4'	2.03	0.40
2:B:15:PHE:HE2	15:O:76:HIS:HB2	1.86	0.40
2:B:55:LYS:CG	2:B:77:ARG:HA	2.49	0.40
2:B:110:THR:HA	2:B:170:VAL:O	2.20	0.40
2:B:115:GLY:O	53:27:2822:G:OP2	2.39	0.40
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
16:P:1:ALA:O	16:P:2:ARG:C	2.59	0.40
17:Q:11:GLN:OE1	17:Q:11:GLN:N	2.54	0.40
17:Q:88:GLY:O	53:27:1224:U:H4'	2.21	0.40
18:R:69:LEU:HD12	18:R:108:SER:O	2.21	0.40
21:U:51:GLN:OE1	21:U:86:LEU:HD11	2.20	0.40
27:1:31:LYS:HB3	27:1:50:GLY:N	2.36	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:HD12	34:8:202:LEU:HA	1.73	0.40
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:N	44:18:92:ILE:CD1	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
52:26:300:A:O5'	52:26:300:A:H8	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
52:26:1080:A:H8	52:26:1080:A:O5'	2.03	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
53:27:1343:G:C1'	53:27:1597:A:H2'	2.51	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
53:27:1672:A:C5'	53:27:2554:U:OP1	2.69	0.40
53:27:1722:A:N6	53:27:1738:G:H1'	2.36	0.40
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
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
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
59:33:43: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
59:33:281:ILE:CG1	59:33:338:ILE:HG23	2.49	0.40
59:33:286:LEU:HA	59:33:289:CYS:SG	2.62	0.40
1:A:209:ALA:O	1:A:213:ARG:N	2.54	0.40
1:A:216:ARG:NH1	53:27:690:G:O3'	2.53	0.40
1:A:221:GLY:HA3	53:27:1826:G:OP1	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O	12:L:126:ILE:HG13	2.21	0.40
16:P:3:VAL:HG22	53:27:1199:U:H1'	2.02	0.40
20:T:8:ASP:OD2	20:T:93:ARG:NH1	2.36	0.40
20:T:74:ALA:C	20:T:77:GLY:H	2.25	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
26:Z:56:ARG:NH2	43:17:78:ARG:HH12	2.19	0.40
27:1:11:LYS:HZ1	53:27:2616:C:H5''	1.87	0.40
35:9:141:ASP:O	35:9:145:ASN:HB2	2.21	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
41:15:108:ASN:CA	51:25:4:LYS:NZ	2.84	0.40
42:16:83:GLY:CA	52:26:552:U:H4'	2.51	0.40
42:16:114:SER:CB	52:26:35:G:H21	2.28	0.40
42:16:115:LYS:O	42:16:116:TYR:CB	2.69	0.40
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:O	48:22:32:ILE:HD12	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
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
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
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
53:27:692:C:O5'	53:27:692:C:H6	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:27:704:G:H1'	53:27:727:A:H61	1.84	0.40
53:27:1822:C:H2'	53:27:1823:G:C8	2.56	0.40
53:27:2127:G:H21	53:27:2173:A:C1'	2.34	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
1:A:68:ARG:HG3	1:A:128:THR:OG1	2.20	0.40
1:A:107:LYS:HA	1:A:195:GLY:HA2	2.03	0.40
2:B:155:VAL:HG21	53:27:2618:G:H21	1.86	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:O	4:D:32:LYS:HG3	2.21	0.40
4:D:125:GLY:CA	4:D:162:ASP:HA	2.48	0.40
5:E:14:VAL:HG22	5:E:27:GLY:HA2	2.03	0.40
5:E:152:ARG:HG3	5:E:152:ARG:NH2	2.36	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:HD3	23:W:17:ARG:HA	1.85	0.40
30:4:34:LYS:HD2	53:27:2391:G:OP2	2.21	0.40
32:6:83:ALA:O	32:6:86:CYS:HB3	2.20	0.40
34:8:13:ARG:NH2	52:26:542:G:O3'	2.54	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
40:14:41:PRO:CB	52:26:1151:A:H1'	2.50	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
47:21:5:ARG:O	47:21:6:THR:HB	2.21	0.40
47:21:58:VAL:CG2	47:21:59:GLU:N	2.84	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
53:27:78:U:H2'	53:27:79:C:H6	1.82	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
53:27:635:C:H2'	53:27:636:G:O4'	2.21	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
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
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
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
12:L:13:HIS:CE1	53:27:910:A:C4	3.10	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
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
34:8:21: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
34:8:178:GLU:CD	34:8:179:GLY:N	2.75	0.40
35:9:75:LEU:HD13	35:9:79:THR:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:9:110:MET:O	35:9:113:VAL:HG12	2.21	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
52:26:31:G:H21	52:26:46:G:H5''	1.86	0.40
52:26:112:G:C2'	52:26:113:G:H5'	2.51	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
52:26:623:C:H2'	52:26:624:C:H6	1.87	0.40
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
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
53:27:82:U:H2'	53:27:83:A:O4'	2.20	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:51:ARG:HB2	53:27:1824:G:OP1	2.21	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:HD12	10:J:41:ILE:C	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
29:3:29:GLN:NE2	53:27:210:C:OP1	2.55	0.40
31:5:25:VAL:HB	31:5:35:GLN:CG	2.52	0.40
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
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
40:14:65:TYR:CB	44:18:95:LEU:HD11	2.39	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
42:16:11:ARG:NH2	52:26:564:C:OP1	2.53	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
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
52:26:96:U:H2'	52:26:97:G:C8	2.52	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
52:26:807:A:C6	52:26:808:C:C4	3.10	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
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:H2'	53:27:1365:A:N3	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
53:27:2134:A:C5	53:27:2157:G:H4'	2.56	0.40
53:27:2144:G:N2	53:27:2148:G:H1	2.19	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
56:30:2:C:H6	56:30:2:C:O5'	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

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%)	2	23
2	B	207/209 (99%)	172 (83%)	28 (14%)	7 (3%)	3	24
3	C	199/201 (99%)	147 (74%)	32 (16%)	20 (10%)	0	8
4	D	175/179 (98%)	143 (82%)	27 (15%)	5 (3%)	3	27
5	E	174/177 (98%)	149 (86%)	20 (12%)	5 (3%)	3	27
6	F	147/149 (99%)	108 (74%)	20 (14%)	19 (13%)	0	4
7	G	129/165 (78%)	93 (72%)	25 (19%)	11 (8%)	0	10
8	H	139/142 (98%)	104 (75%)	25 (18%)	10 (7%)	1	13
9	I	140/142 (99%)	120 (86%)	14 (10%)	6 (4%)	2	21
10	J	120/123 (98%)	97 (81%)	16 (13%)	7 (6%)	1	17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
11	K	141/144 (98%)	110 (78%)	20 (14%)	11 (8%)	1	12
12	L	134/136 (98%)	113 (84%)	15 (11%)	6 (4%)	2	20
13	M	118/127 (93%)	91 (77%)	22 (19%)	5 (4%)	2	21
14	N	114/117 (97%)	98 (86%)	15 (13%)	1 (1%)	14	50
15	O	112/115 (97%)	93 (83%)	15 (13%)	4 (4%)	3	23
16	P	115/118 (98%)	103 (90%)	7 (6%)	5 (4%)	2	21
17	Q	101/103 (98%)	77 (76%)	16 (16%)	8 (8%)	1	12
18	R	108/110 (98%)	87 (81%)	15 (14%)	6 (6%)	1	17
19	S	91/100 (91%)	71 (78%)	16 (18%)	4 (4%)	2	20
20	T	100/104 (96%)	79 (79%)	14 (14%)	7 (7%)	1	13
21	U	92/94 (98%)	76 (83%)	11 (12%)	5 (5%)	1	18
22	V	73/85 (86%)	65 (89%)	7 (10%)	1 (1%)	9	40
23	W	75/78 (96%)	67 (89%)	6 (8%)	2 (3%)	4	28
24	X	61/63 (97%)	49 (80%)	7 (12%)	5 (8%)	1	11
25	Y	56/59 (95%)	52 (93%)	4 (7%)	0	100	100
26	Z	64/70 (91%)	47 (73%)	7 (11%)	10 (16%)	0	3
27	1	54/57 (95%)	43 (80%)	6 (11%)	5 (9%)	0	10
28	2	48/55 (87%)	41 (85%)	7 (15%)	0	100	100
29	3	44/46 (96%)	32 (73%)	11 (25%)	1 (2%)	5	31
30	4	62/65 (95%)	51 (82%)	8 (13%)	3 (5%)	2	19
31	5	36/38 (95%)	26 (72%)	5 (14%)	5 (14%)	0	3
32	6	216/241 (90%)	170 (79%)	32 (15%)	14 (6%)	1	15
33	7	204/233 (88%)	175 (86%)	22 (11%)	7 (3%)	3	24
34	8	203/206 (98%)	157 (77%)	30 (15%)	16 (8%)	1	12
35	9	155/167 (93%)	109 (70%)	33 (21%)	13 (8%)	0	10
36	10	98/135 (73%)	77 (79%)	14 (14%)	7 (7%)	1	13
37	11	149/179 (83%)	123 (83%)	14 (9%)	12 (8%)	1	11
38	12	127/130 (98%)	110 (87%)	8 (6%)	9 (7%)	1	13
39	13	125/130 (96%)	93 (74%)	19 (15%)	13 (10%)	0	7
40	14	96/103 (93%)	76 (79%)	15 (16%)	5 (5%)	1	18
41	15	114/129 (88%)	90 (79%)	13 (11%)	11 (10%)	0	9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	16	121/124 (98%)	95 (78%)	13 (11%)	13 (11%)	0	6
43	17	112/118 (95%)	88 (79%)	14 (12%)	10 (9%)	0	10
44	18	98/101 (97%)	72 (74%)	21 (21%)	5 (5%)	1	18
45	19	86/89 (97%)	70 (81%)	11 (13%)	5 (6%)	1	17
46	20	80/82 (98%)	59 (74%)	18 (22%)	3 (4%)	2	22
47	21	78/84 (93%)	54 (69%)	19 (24%)	5 (6%)	1	15
48	22	63/75 (84%)	50 (79%)	5 (8%)	8 (13%)	0	4
49	23	77/92 (84%)	64 (83%)	11 (14%)	2 (3%)	4	29
50	24	83/87 (95%)	75 (90%)	6 (7%)	2 (2%)	5	30
51	25	63/71 (89%)	40 (64%)	19 (30%)	4 (6%)	1	16
59	33	663/750 (88%)	557 (84%)	60 (9%)	46 (7%)	1	14
All	All	6509/6970 (93%)	5226 (80%)	879 (14%)	404 (6%)	2	16

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 [i](#)

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%)	86	90
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%)	62	76
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%)	54	71
9	I	116/116 (100%)	116 (100%)	0	100	100
10	J	103/104 (99%)	102 (99%)	1 (1%)	73	81
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%)	73	81
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%)	67	79
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%)	67	79

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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%)	56	72
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%)	50	68
31	5	34/34 (100%)	34 (100%)	0	100	100
32	6	180/199 (90%)	178 (99%)	2 (1%)	70	80
33	7	170/190 (90%)	169 (99%)	1 (1%)	84	88
34	8	172/173 (99%)	172 (100%)	0	100	100
35	9	119/126 (94%)	117 (98%)	2 (2%)	56	72
36	10	87/116 (75%)	85 (98%)	2 (2%)	45	64
37	11	124/147 (84%)	123 (99%)	1 (1%)	79	84
38	12	104/105 (99%)	103 (99%)	1 (1%)	73	81
39	13	105/107 (98%)	104 (99%)	1 (1%)	73	81
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%)	30	53
45	19	76/77 (99%)	75 (99%)	1 (1%)	65	77
46	20	65/65 (100%)	65 (100%)	0	100	100
47	21	74/78 (95%)	73 (99%)	1 (1%)	62	76
48	22	56/65 (86%)	55 (98%)	1 (2%)	54	71
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%)	54	71

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	33	452/635 (71%)	449 (99%)	3 (1%)	81	86
All	All	5303/5698 (93%)	5272 (99%)	31 (1%)	82	88

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

Sometimes 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 [i](#)

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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

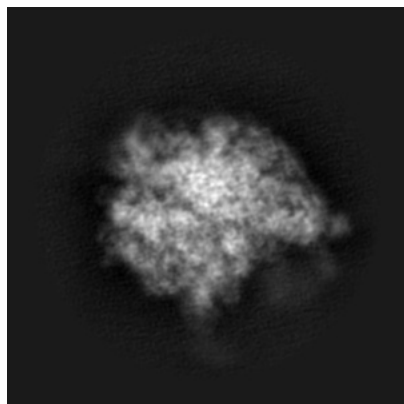
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-8280. These allow visual inspection of the internal detail of the map and identification of artifacts.

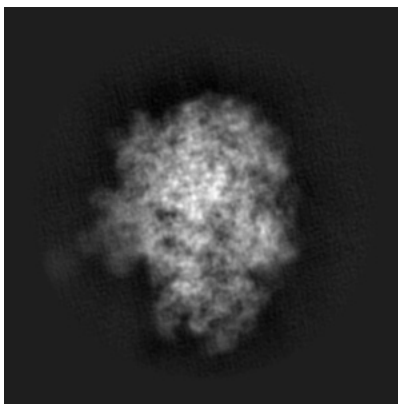
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

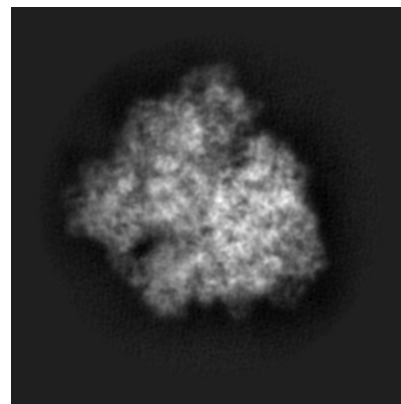
6.1.1 Primary map



X

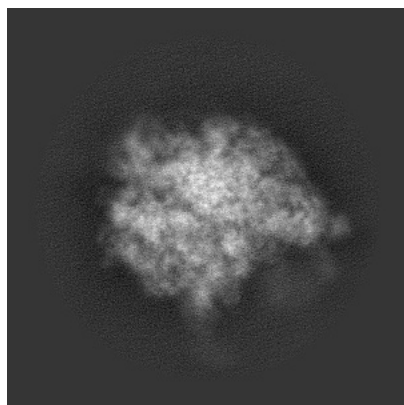


Y

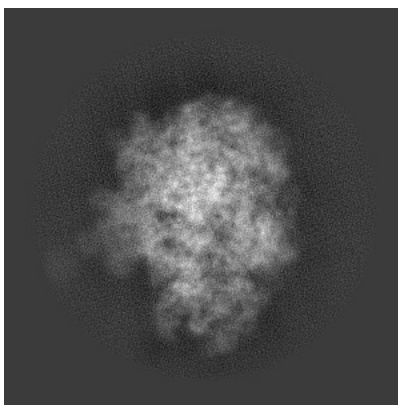


Z

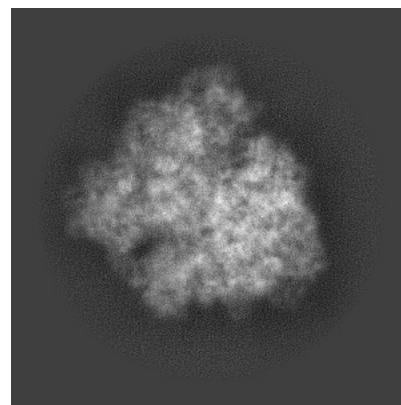
6.1.2 Raw map



X



Y

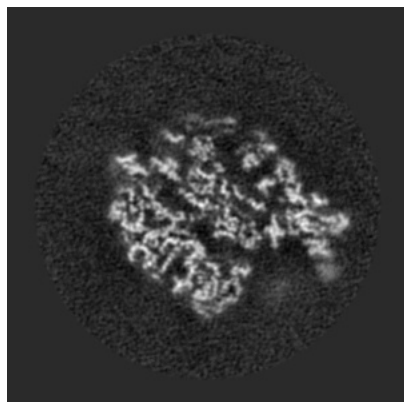


Z

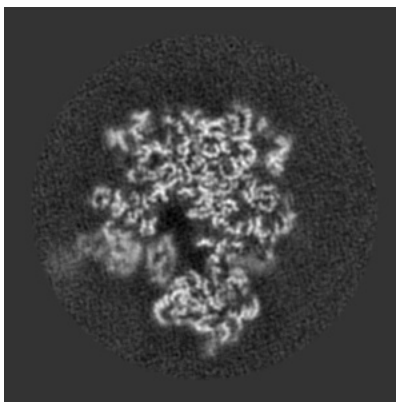
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

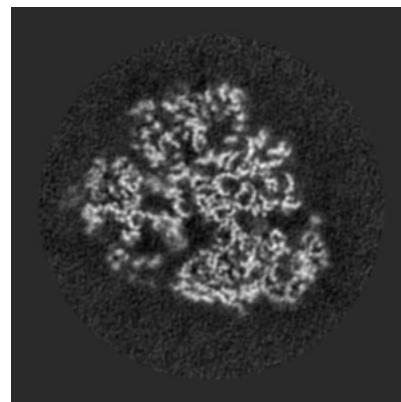
6.2.1 Primary map



X Index: 240

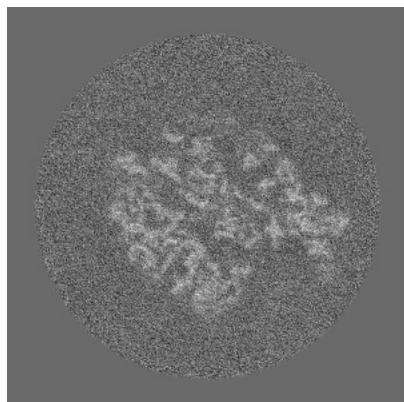


Y Index: 240

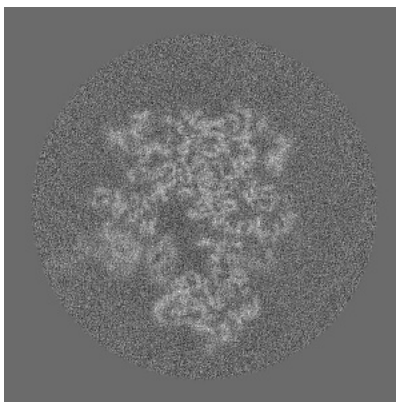


Z Index: 240

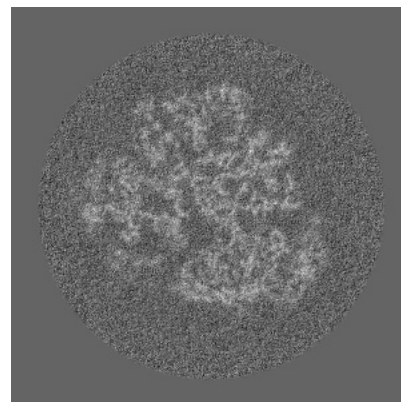
6.2.2 Raw map



X Index: 240



Y Index: 240

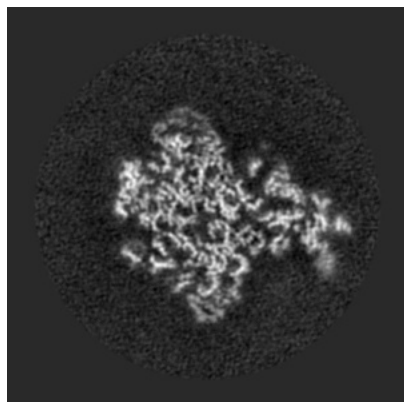


Z Index: 240

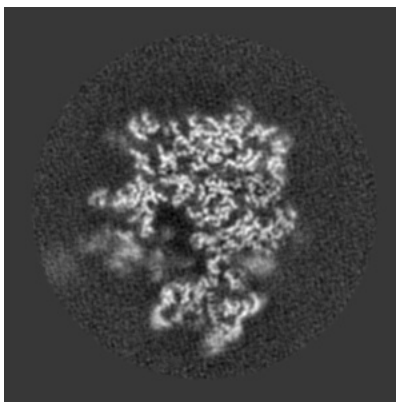
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

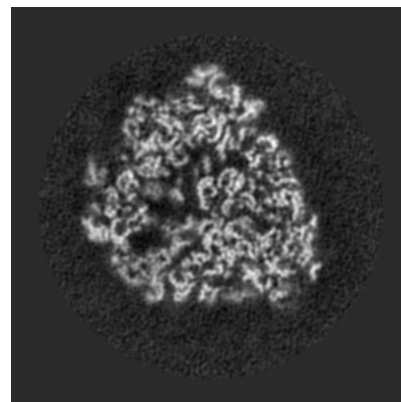
6.3.1 Primary map



X Index: 250

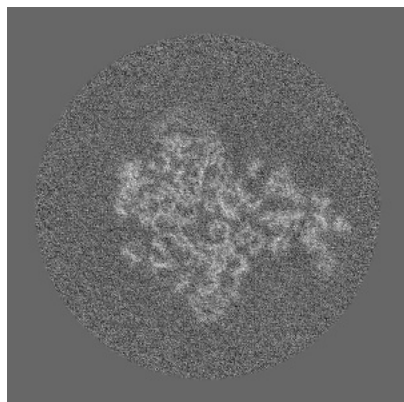


Y Index: 247

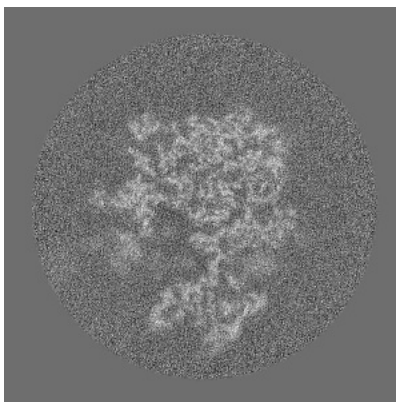


Z Index: 226

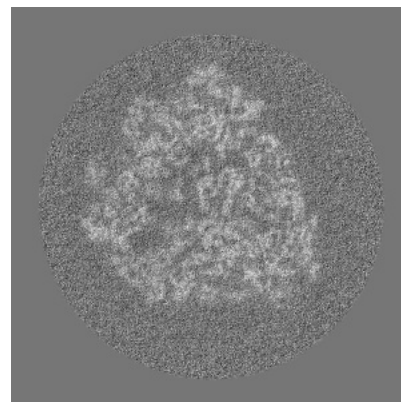
6.3.2 Raw map



X Index: 250



Y Index: 249

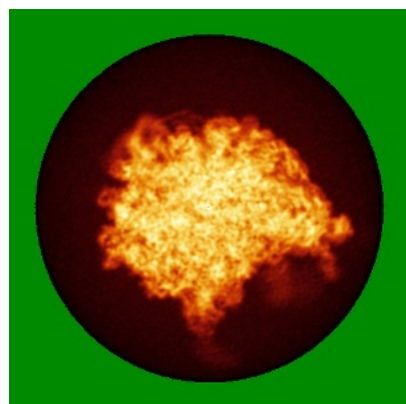


Z Index: 226

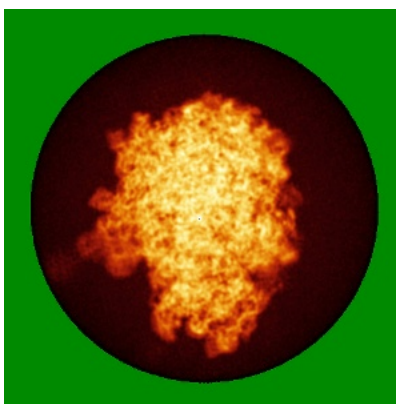
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

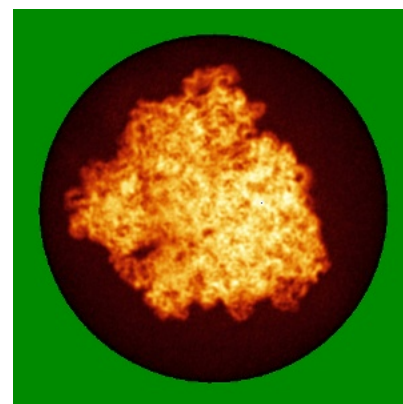
6.4.1 Primary map



X

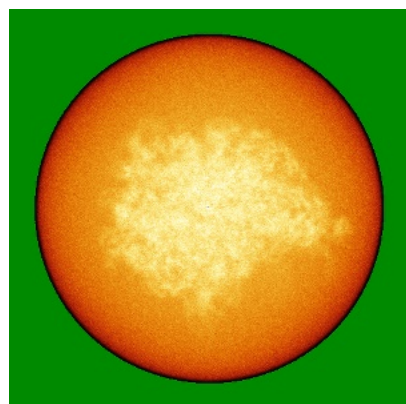


Y

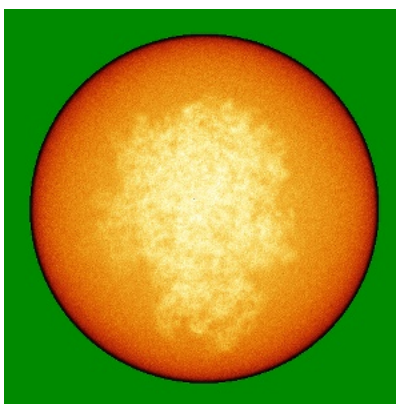


Z

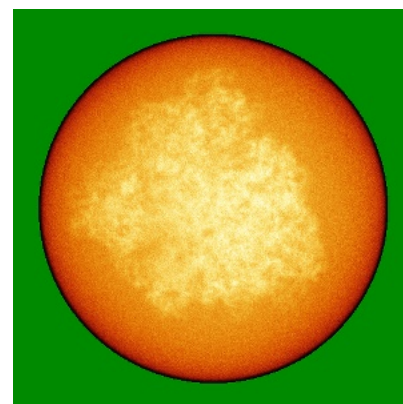
6.4.2 Raw map



X



Y

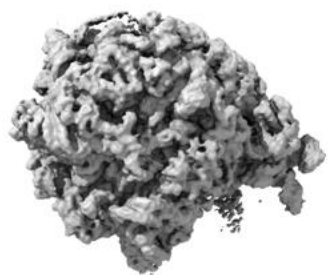


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

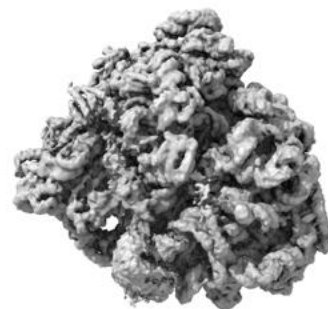
6.5.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

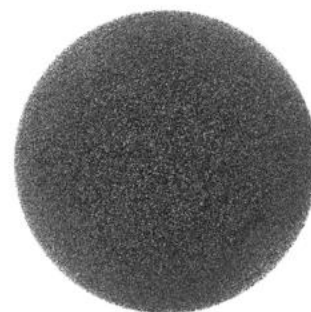
6.5.2 Raw map



X



Y



Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

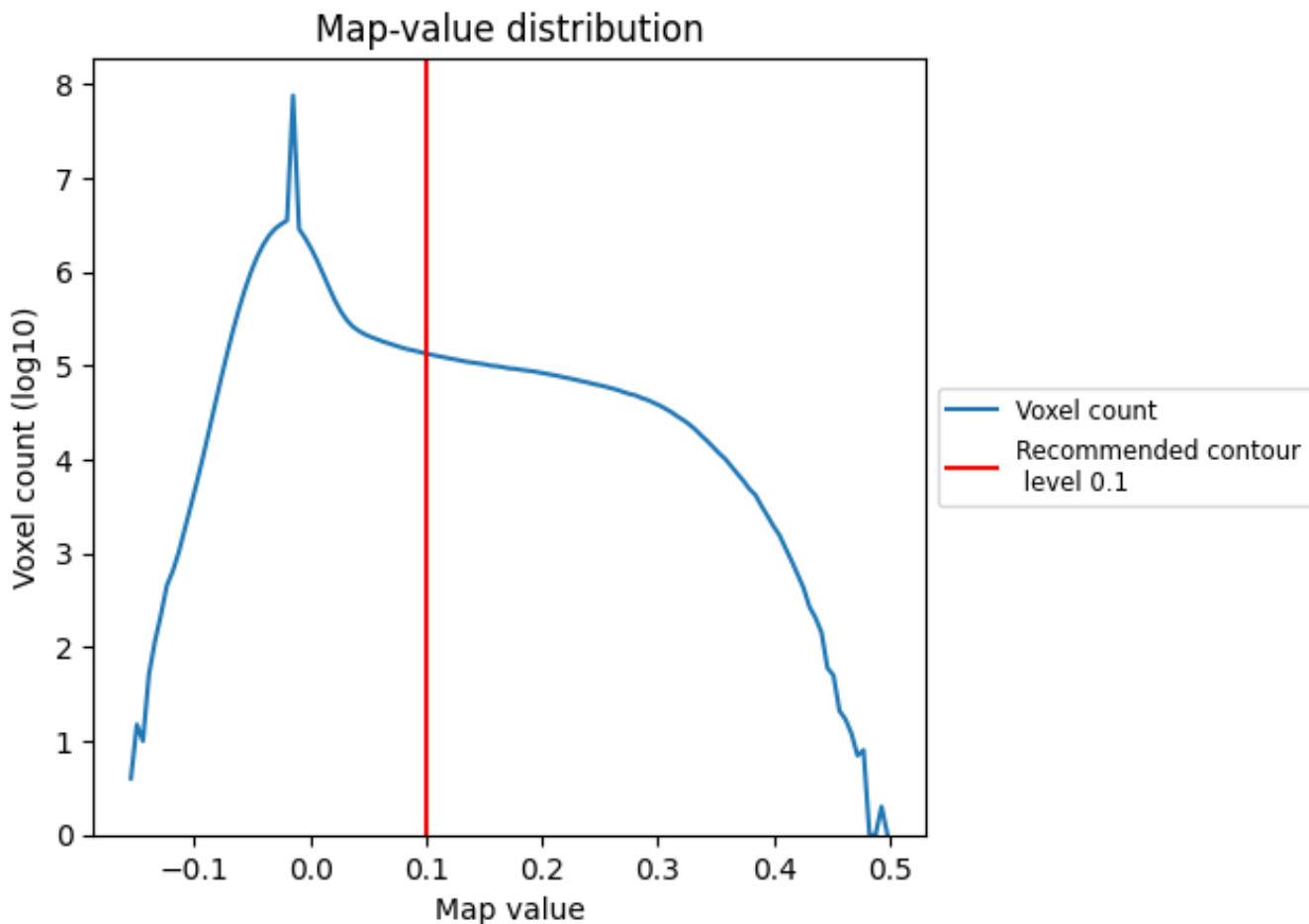
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

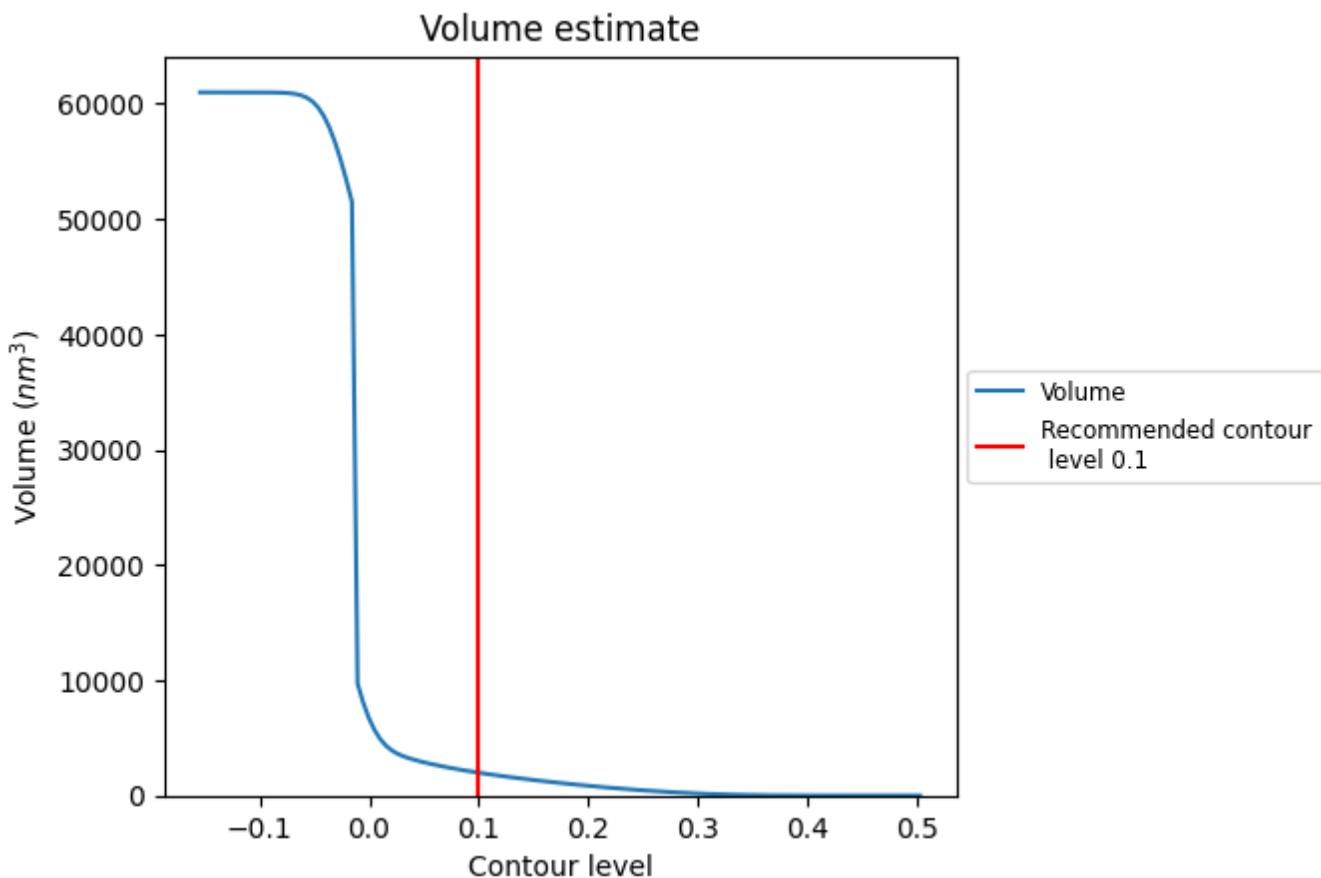
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

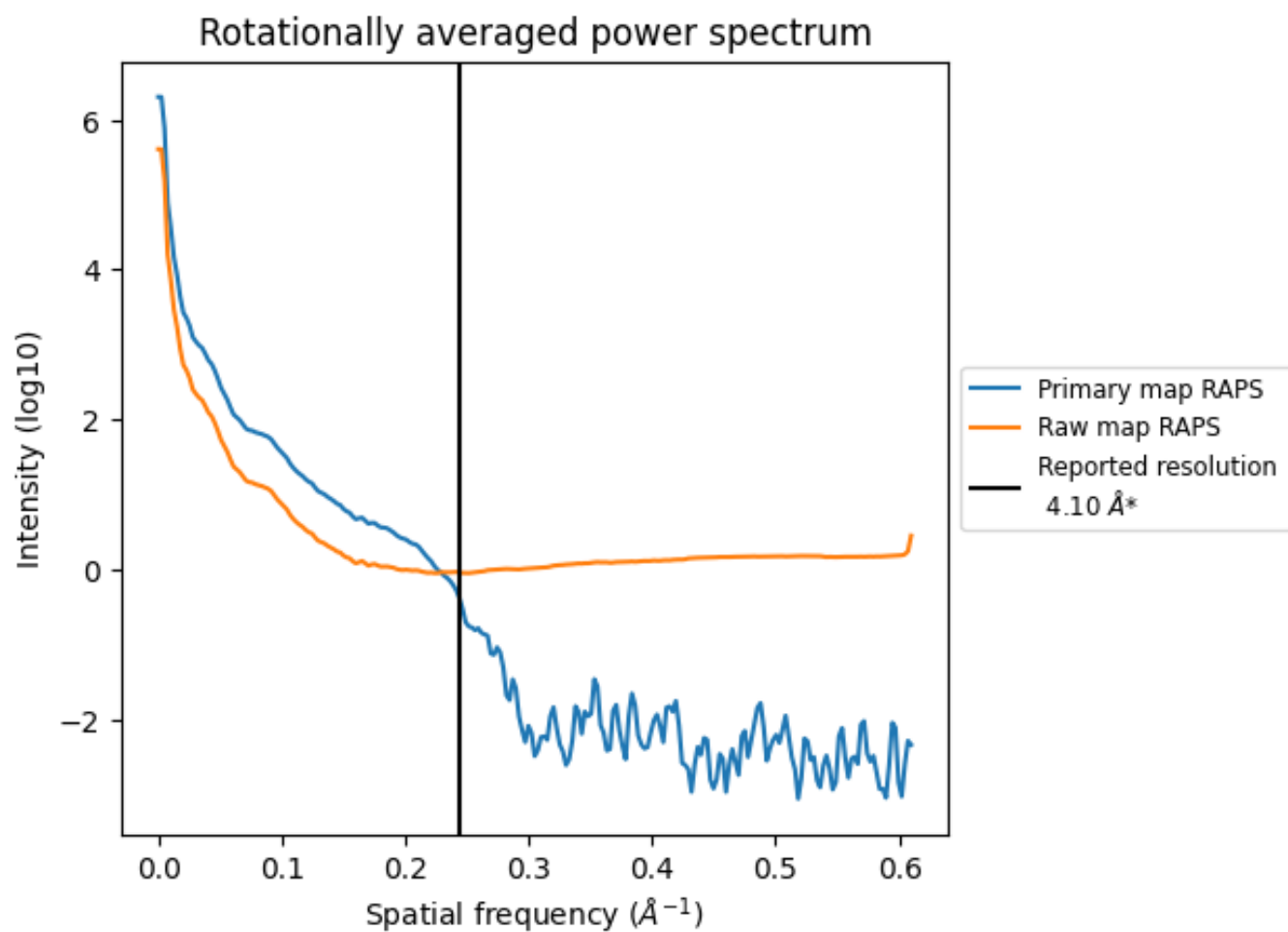
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1983 nm^3 ; this corresponds to an approximate mass of 1791 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum i

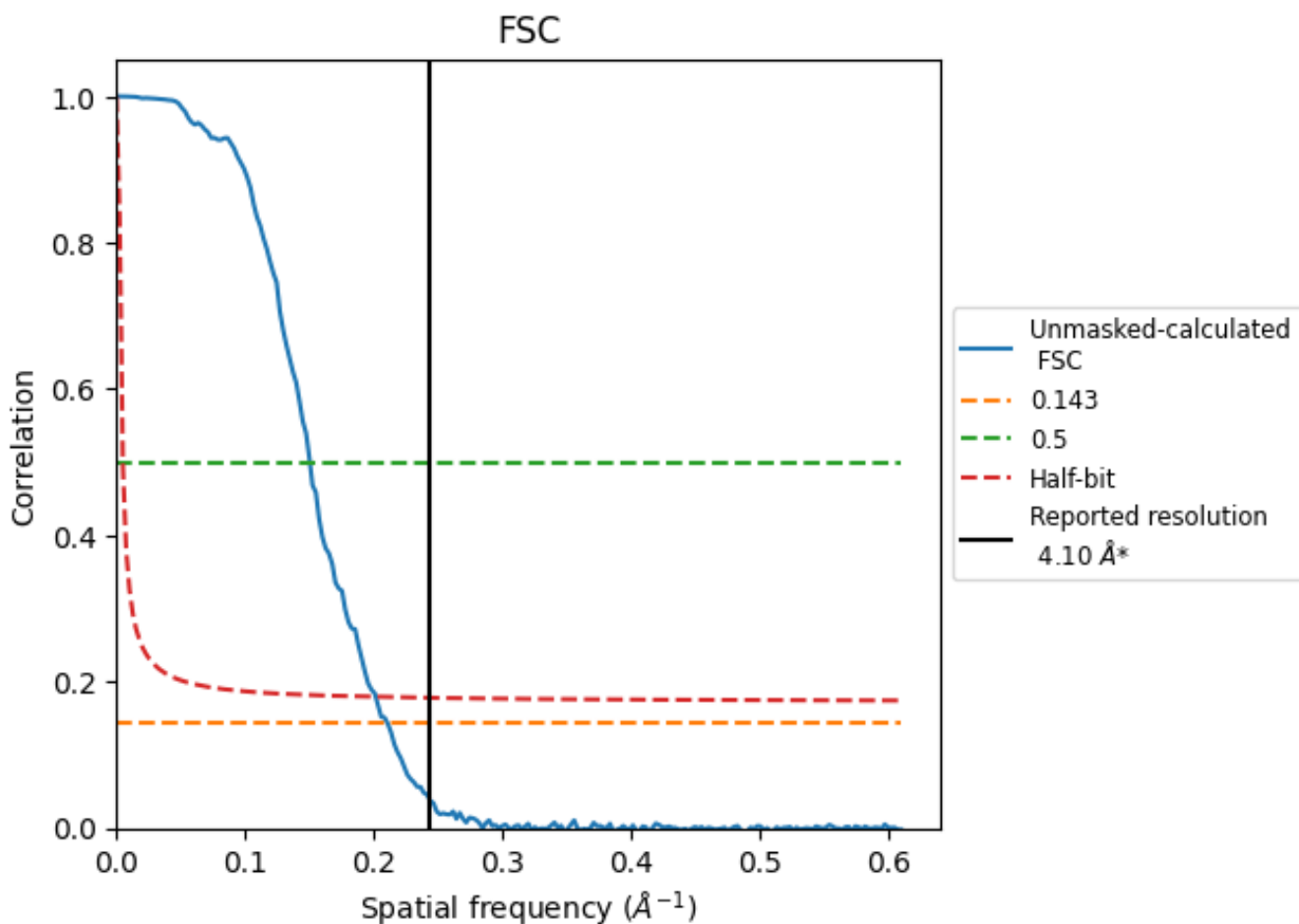


*Reported resolution corresponds to spatial frequency of 0.244 \AA^{-1}

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.244 Å⁻¹

8.2 Resolution estimates [i](#)

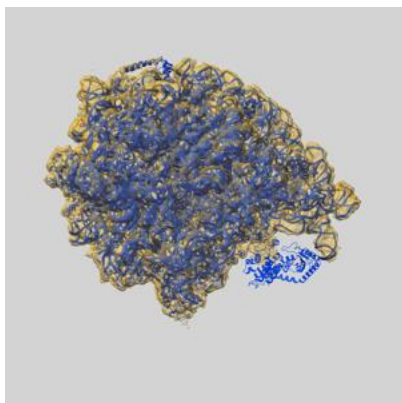
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.75	6.65	4.96

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.75 differs from the reported value 4.1 by more than 10 %

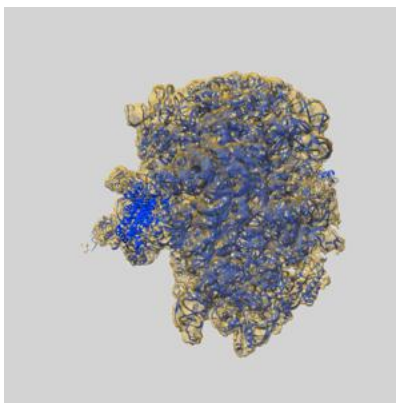
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-8280 and PDB model 5KPV. Per-residue inclusion information can be found in section 3 on page 15.

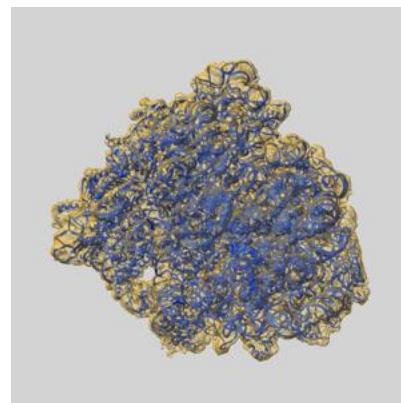
9.1 Map-model overlay [i](#)



X



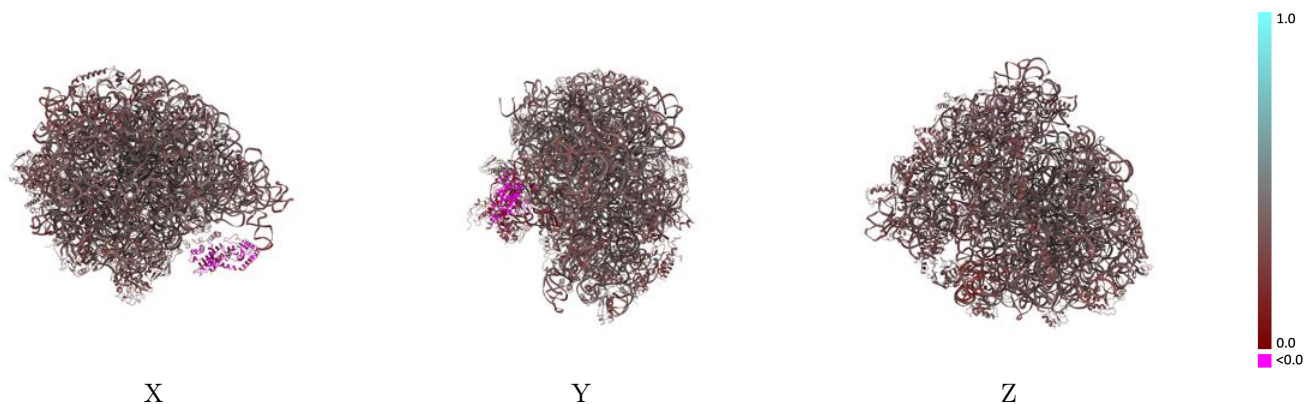
Y



Z

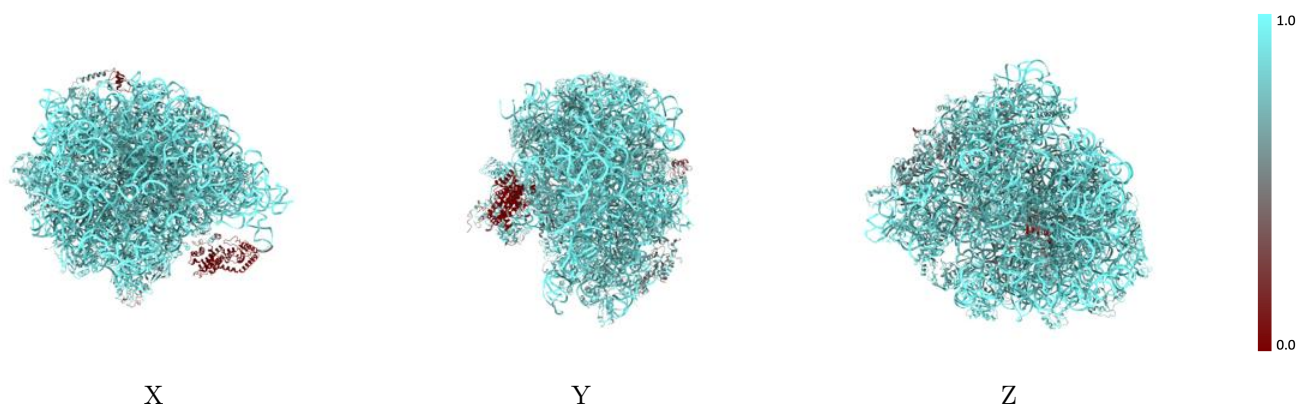
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



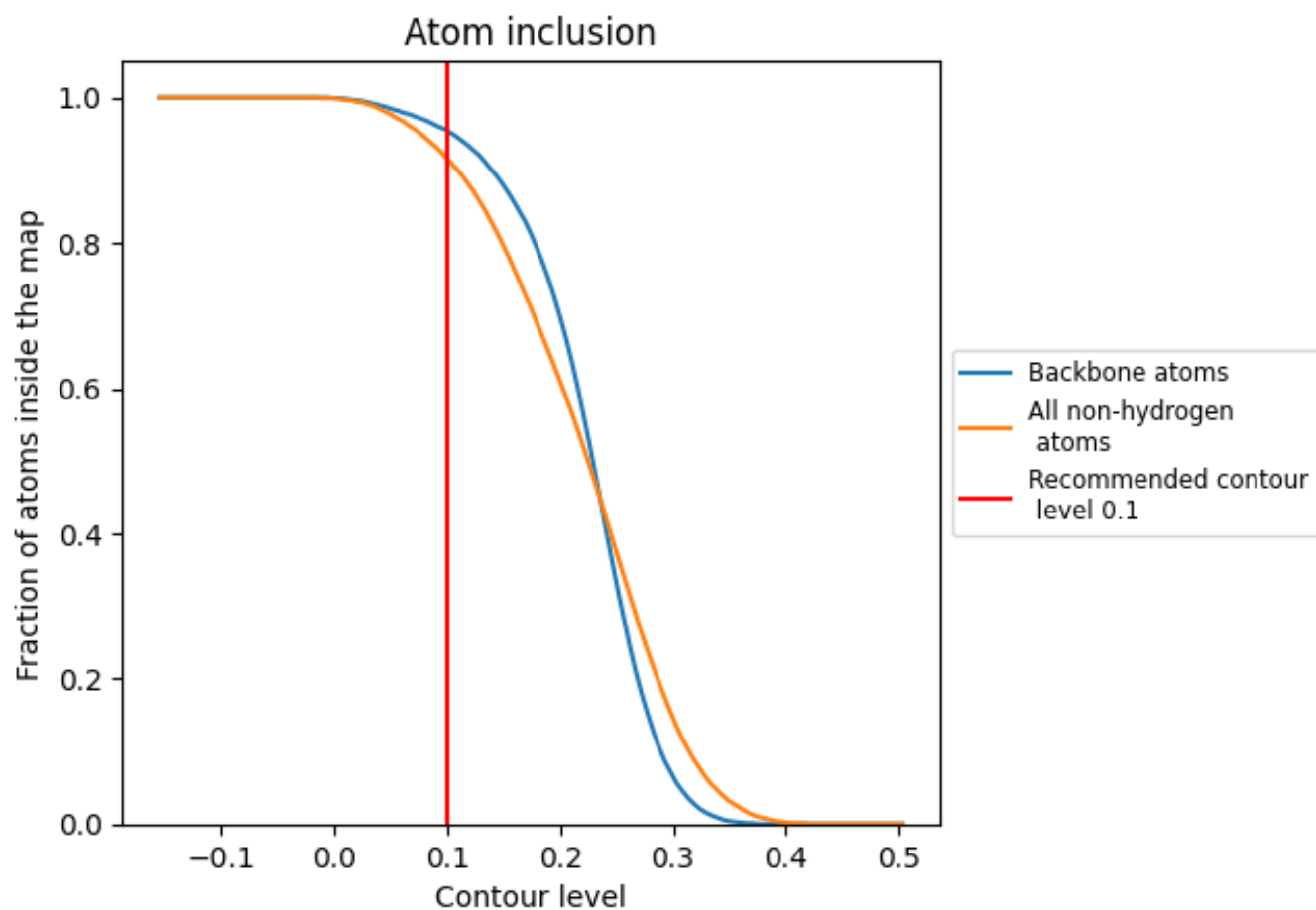
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.1).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 96% of all backbone atoms, 92% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary



















































The table lists the average atom inclusion at the recommended contour level (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9160	 0.3500
1	 0.8760	 0.3710
10	 0.8770	 0.3530
11	 0.8570	 0.3250
12	 0.8490	 0.3570
13	 0.8850	 0.3410
14	 0.7990	 0.3440
15	 0.8650	 0.3510
16	 0.7910	 0.3770
17	 0.8460	 0.3370
18	 0.8450	 0.3360
19	 0.8570	 0.3220
2	 0.7280	 0.3520
20	 0.8710	 0.3510
21	 0.8510	 0.3640
22	 0.8930	 0.3520
23	 0.8810	 0.3430
24	 0.8680	 0.3230
25	 0.7350	 0.3160
26	 0.9880	 0.3630
27	 0.9920	 0.3650
28	 0.9940	 0.3590
29	 0.7680	 0.2970
3	 0.8840	 0.3610
30	 0.8740	 0.2400
31	 0.9580	 0.3470
32	 0.7270	 0.2370
33	 0.4050	 0.1560
4	 0.8190	 0.3740
5	 0.8220	 0.3680
6	 0.5650	 0.3130
7	 0.8030	 0.3620
8	 0.8230	 0.3300
9	 0.8430	 0.3680
A	 0.8460	 0.3840



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Chain	Atom inclusion	Q-score
B	 0.8480	 0.3850
C	 0.7850	 0.3360
D	 0.8540	 0.3440
E	 0.8740	 0.3680
F	 0.4760	 0.3210
G	 0.5700	 0.2520
H	 0.7230	 0.2430
I	 0.8570	 0.3670
J	 0.8040	 0.3940
K	 0.8730	 0.3700
L	 0.8250	 0.3810
M	 0.8720	 0.3580
N	 0.8900	 0.3430
O	 0.8550	 0.3900
P	 0.8700	 0.3390
Q	 0.8810	 0.3770
R	 0.8110	 0.3610
S	 0.8660	 0.3670
T	 0.8810	 0.3540
U	 0.8790	 0.3640
V	 0.8610	 0.3790
W	 0.8590	 0.3650
X	 0.8550	 0.3070
Y	 0.8540	 0.3640
Z	 0.8360	 0.3290