Full wwPDB EM Validation Report (i)

Nov 27, 2022 – 01:15 AM EST

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

This is a Full wwPDB 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 (i) 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 (i)) were used in the production of this report:

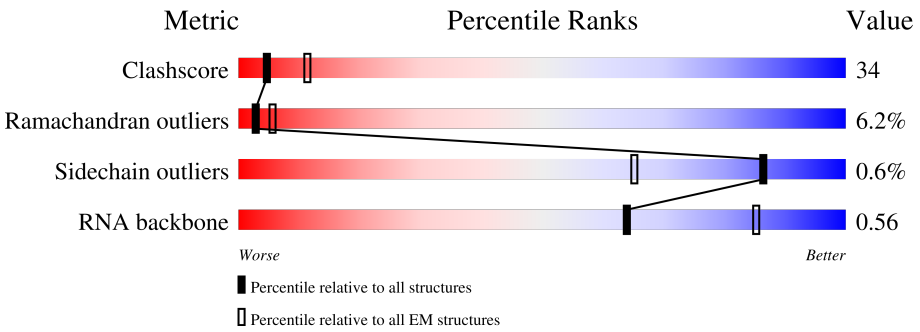
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.2

1 Overall quality at a glance (i)

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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

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 <=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% 37% 54% 9%
7	G	165	25% 21% 52% 6% 21%

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Mol	Chain	Length	Quality of chain
8	H	142	14% 27% 67% 5%
9	I	142	44% 54%
10	J	123	37% 61%
11	K	144	43% 53%
12	L	136	49% 47%
13	M	127	43% 47% 5% 6%
14	N	117	35% 63%
15	O	115	42% 56%
16	P	118	41% 56%
17	Q	103	30% 62% 8%
18	R	110	46% 50%
19	S	100	39% 51% 7%
20	T	104	25% 68% 5%
21	U	94	36% 61%
22	V	85	52% 35% 12%
23	W	78	44% 55%
24	X	63	29% 63% 8%
25	Y	59	44% 54%
26	Z	70	37% 49% 9% 6%
27	1	57	32% 58% 9%
28	2	55	47% 44% 9%
29	3	46	46% 52%
30	4	65	46% 51%
31	5	38	34% 55% 11%
32	6	241	17% 37% 49% 10%

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Mol	Chain	Length	Quality of chain
33	7	233	36% 50% 12%
34	8	206	32% 62% 5%
35	9	167	32% 54% 7% 6%
36	10	135	19% 50% 5% 26%
37	11	179	28% 53% 16%
38	12	130	41% 53% 5%
39	13	130	23% 66% 8%
40	14	103	27% 64% 5%
41	15	129	29% 54% 6% 10%
42	16	124	30% 60% 8%
43	17	118	36% 55% 5%
44	18	101	32% 61% 6%
45	19	89	42% 53%
46	20	82	27% 71%
47	21	84	37% 54% 5% 5%
48	22	75	28% 48% 11% 13%
49	23	92	25% 59% 14%
50	24	87	30% 66%
51	25	71	23% 62% 7% 8%
52	26	1539	20% 70% 10%
53	27	2903	19% 68% 12%
54	28	120	20% 70% 9%
55	29	20	15% 25% 60% 15%
56	30	76	8% 70% 21%
57	31	77	30% 66%

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Mol	Chain	Length	Quality of chain
58	32	77	12% 22% 61% 17%
59	33	750	47% 35% 48% 6% • 10%

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
			Total	C	N	O		
14	N	116	892	552	178	162	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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
			Total	C	N	O	S		
49	23	79	637	408	120	107	2	0	0

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

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

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

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

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

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

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

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

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
			Total	C	N	O	P		
54	28	120	2572	1145	471	836	120	0	0

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:

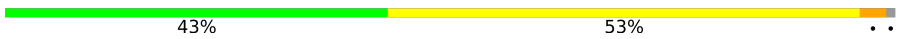
Chain	Residue	Modelled	Actual	Comment	Reference
33	-5	MET	-	expression tag	UNP P0AG20
33	-4	HIS	-	expression tag	UNP P0AG20
33	-3	HIS	-	expression tag	UNP P0AG20
33	-2	HIS	-	expression tag	UNP P0AG20
33	-1	HIS	-	expression tag	UNP P0AG20
33	0	HIS	-	expression tag	UNP P0AG20
33	1	HIS	-	expression tag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

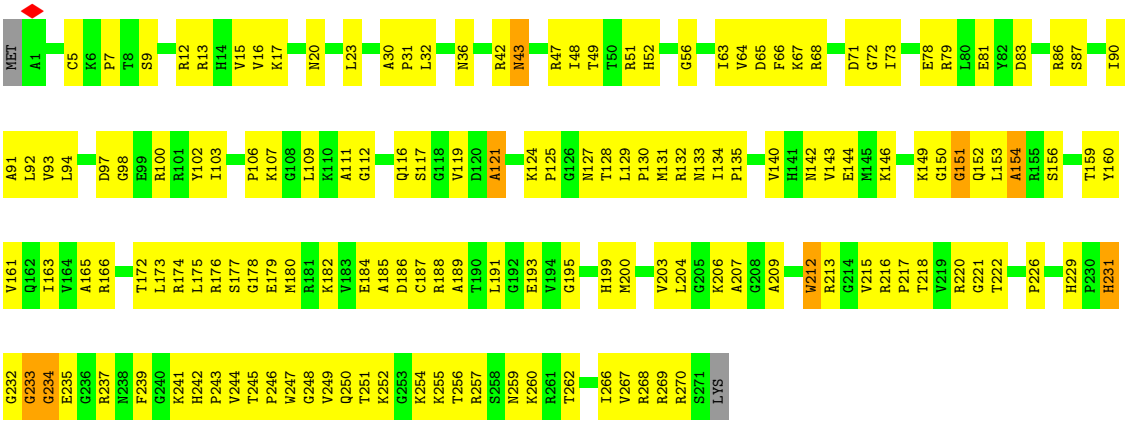
3 Residue-property plots (i)

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

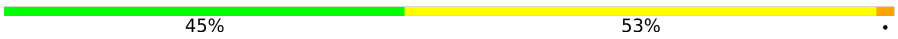
Chain A:

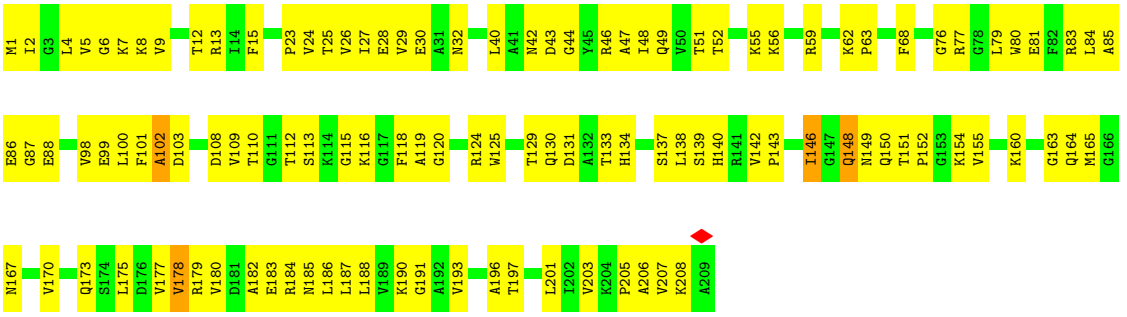




• Molecule 2: 50S ribosomal protein L3

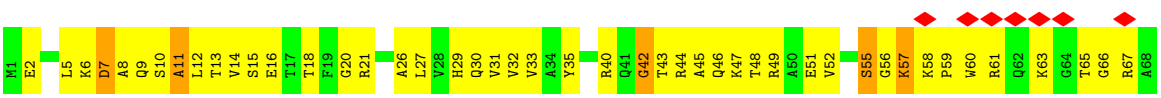
Chain B:

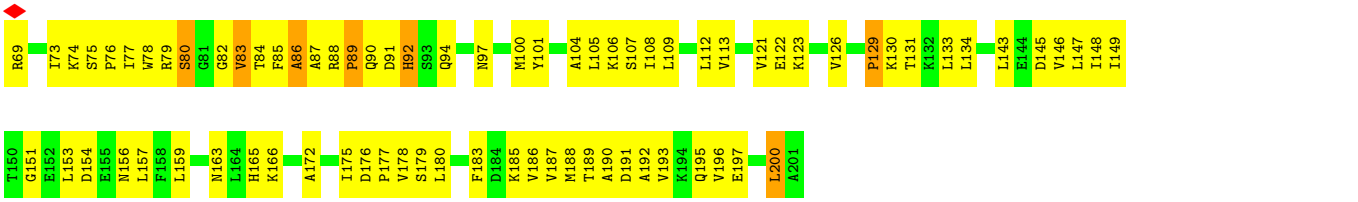




• Molecule 3: 50S ribosomal protein L4

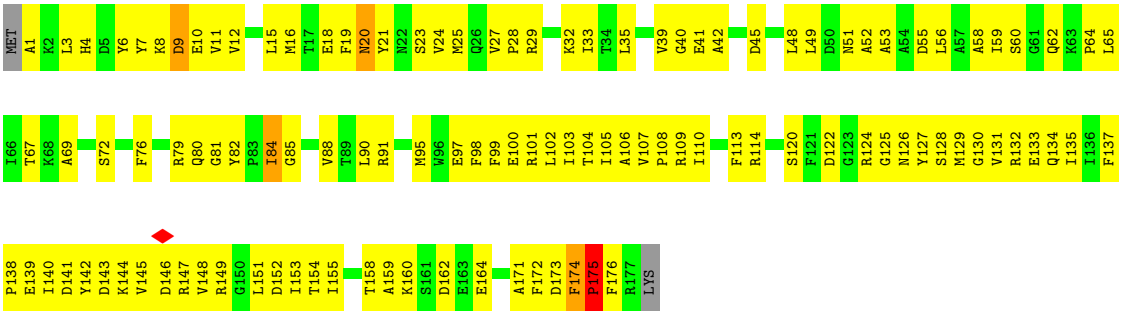
Chain C:





- Molecule 4: 50S ribosomal protein L5

Chain D:

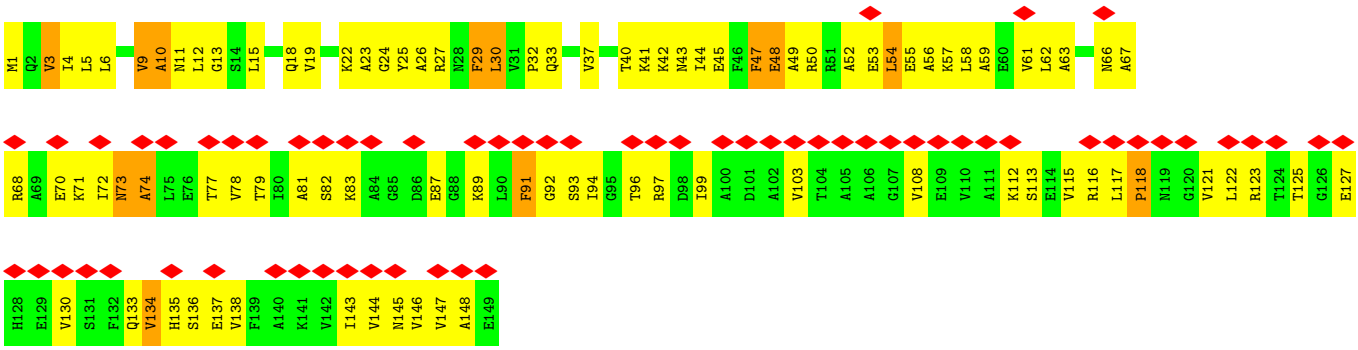


- Molecule 5: 50S ribosomal protein L6

Chain E:

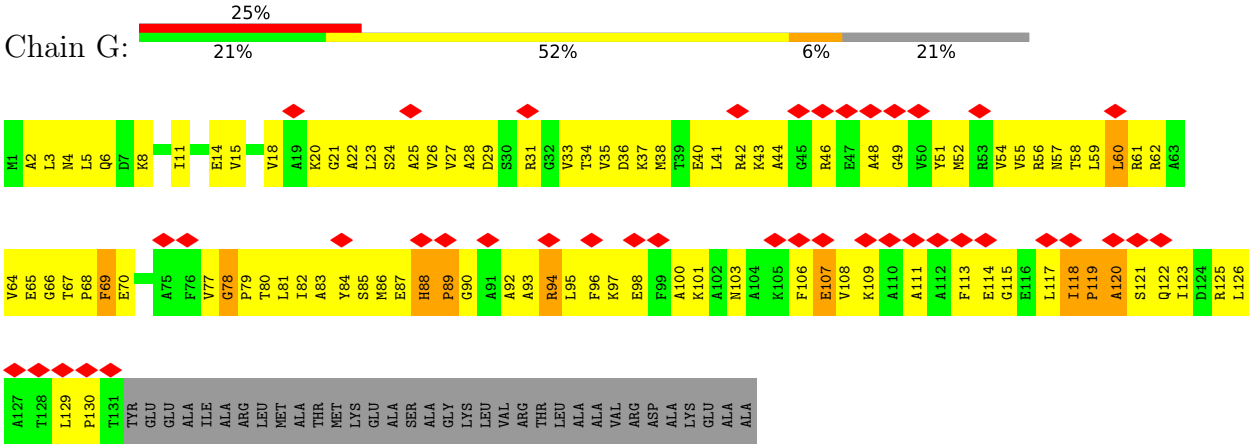
- Molecule 6: 50S ribosomal protein L9

Chain F:



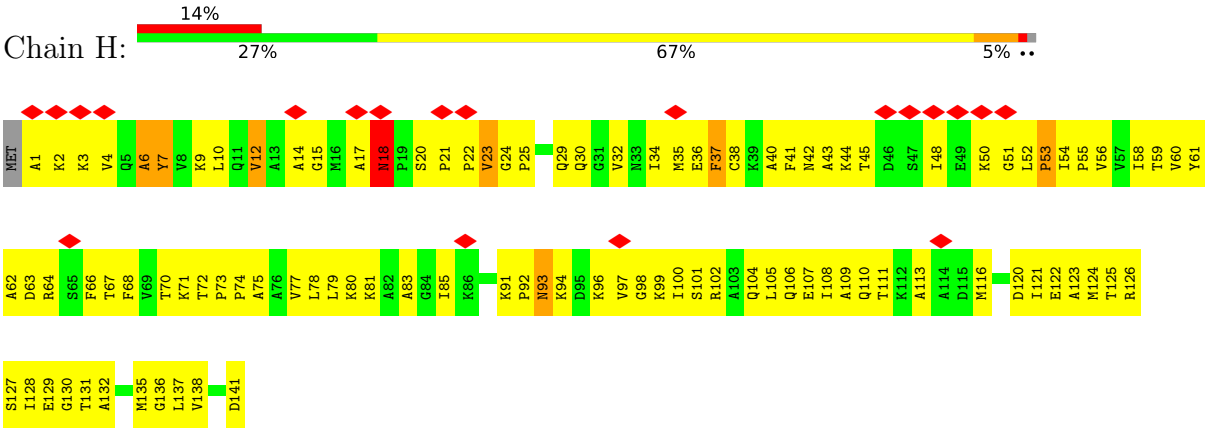
- Molecule 7: 50S ribosomal protein L10

Chain G:



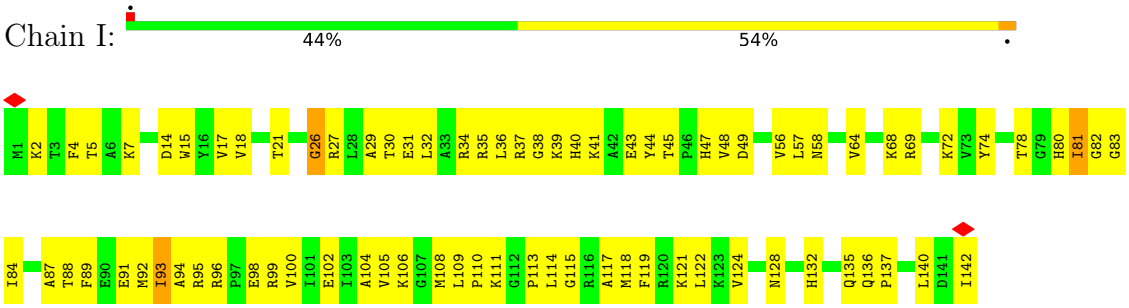
- Molecule 8: 50S ribosomal protein L11

Chain H:



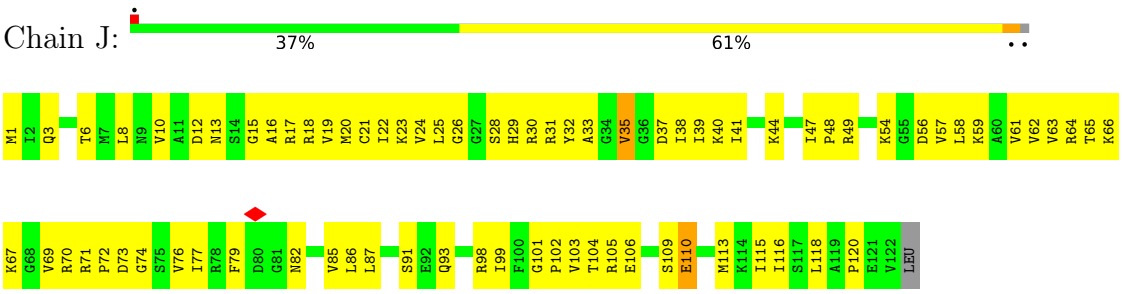
- Molecule 9: 50S ribosomal protein L13

Chain I:



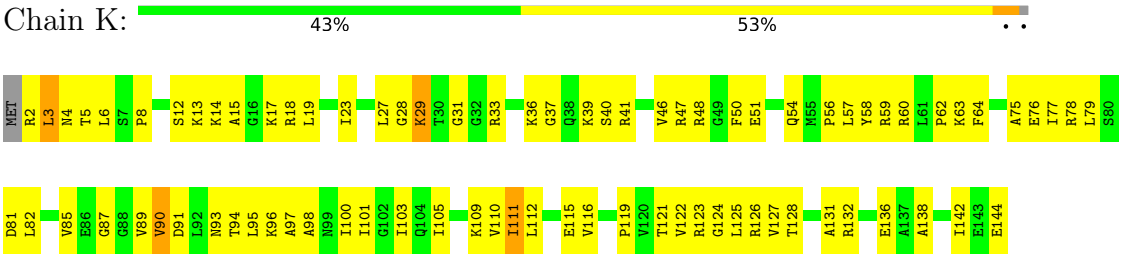
- Molecule 10: 50S ribosomal protein L14

Chain J:



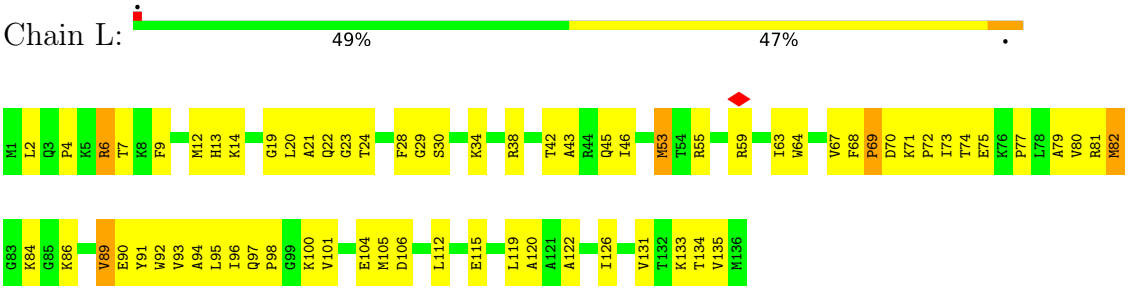
- Molecule 11: 50S ribosomal protein L15

Chain K:



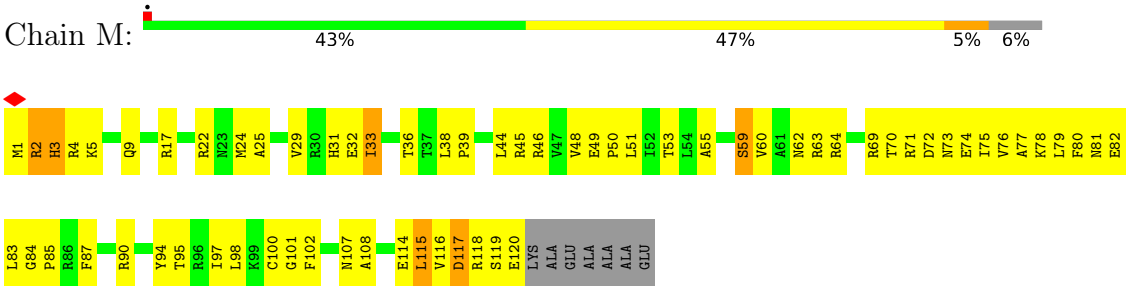
• Molecule 12: 50S ribosomal protein L16

Chain L:



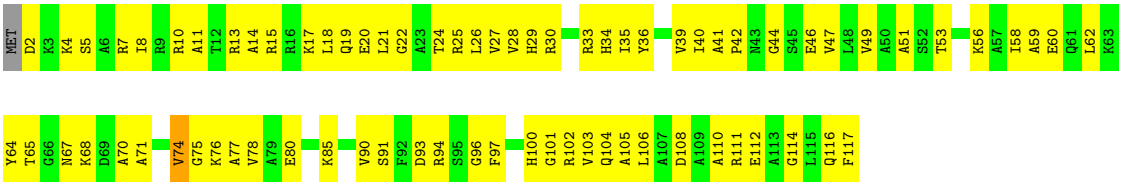
• Molecule 13: 50S ribosomal protein L17

Chain M:



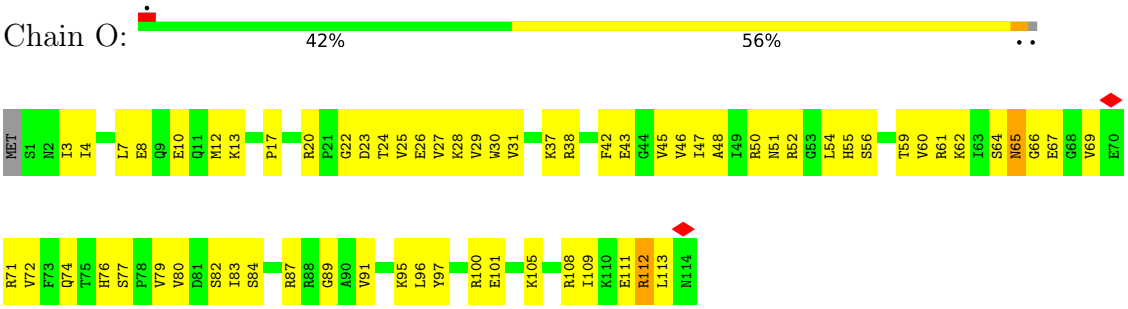
• Molecule 14: 50S ribosomal protein L18

Chain N:



• Molecule 15: 50S ribosomal protein L19

Chain O:



• Molecule 16: 50S ribosomal protein L20

Chain P: 41% 56%

MET A1 R2 V3 K4 R5 G6 R10 A11 R12 H13 K14 K15 I16 L17 K18 Q19 A20 Y23 Y24 G25 A26 R27 S28 R29 V33 A34 F35 Q36 A37 V38 I39 K40 A41 Y44 A45 Y46 R47 D48 R49 R50 Q51 R54 Q55 F56 R57 Q58 L59 W60 I61 I64 N65 A66 A67

A68 R69 Q70 I73 S74 Y75 S76 K77 F78 I79 N80 G81 K84 A85 S86 V87 E88 I89 D90 R91 K92 I93 L94 A95 D96 V99 F100 D101 K102 V103 A104 F105 V109 E110 K111 L116 A117

• Molecule 17: 50S ribosomal protein L21

Chain Q: 30% 62% 8%

M1 Y2 A3 V4 F5 Q6 S7 G8 G9 K10 Q11 V14 Q18 T19 V20 R21 L22 E23 K24 T29 G30 E31 T32 V33 E34 F35 A36 E37 V38 L39 M40 I41 A42 N43 G44 E45 E46 V47 K48 I49 G50 V51 P52 F53 V54 D55 G56 G57 V58 I59 K60 A61 E62 V63 V64 R68

K71 V72 K73 I74 V75 K76 F77 R78 R79 R80 K81 H82 Y83 R84 K85 Q86 Q87 G88 H89 R90 Q91 T94 D95 V96 K97 I98 T99 G100 I101 S102 A103

• Molecule 18: 50S ribosomal protein L22

Chain R: 46% 50%

M1 E2 T3 I4 A5 K6 H7 R8 H9 A10 K16 V17 R18 L19 V20 A21 D22 L23 I24 R25 V29 L36 T37 K41 K42 A43 A44 V45 L46 V47 K48 K49 V50 A54 I55 A56 N57 A58 E59 H60 N61 D62 G63 A64 D65 L69 K70 V71 T72 K73 V76 D77 E78

G79 P80 S81 M82 K83 R84 A89 K90 G91 R92 A93 D94 R95 S101 H102 I103 V106 V107 S108 D109 R110

• Molecule 19: 50S ribosomal protein L23

Chain S: 39% 51% 7%

M1 T2 R3 E4 E5 R6 L7 L8 K9 V10 L11 R12 A13 P14 H15 V16 S17 E18 K19 A20 S21 V31 L32 A35 K36 D37 A38 T39 K40 A41 E42 I43 K49 L50 F51 E52 V53 V57 V58 N59 T60 L61 V62 V63 K64 G65 K68 R69 R73 I74 G75 R76 R77 S78

D79 W80 K81 K82 A83 Y84 V85 K88 Q91 N92 L93 ASP PHE VAL GLY GLY ALA GLU

• Molecule 20: 50S ribosomal protein L24

Chain T: 25% 68% 5%

MET A1 R5 R6 D7 D8 E9 V10 I11 V12 L13 T14 D17 K18 G19 K20 R21 G22 K23 V24 K25 N26 V27 S30 G31 K32 V33 I34 V35 E36 G37 I38 N39 L40 V41 K42 P47 V48 N52 Q53 P54 G55 E59 K60 E61 A62 A63 I64 Q65 V66 S67 N68 V69 A70

I71 F72 N73 A74 A75 T76 G77 K78 A79 D80 R81 V82 G83 F84 R85 F86 E87 D88 G89 K90 K91 V92 R93 F94 F95 K96 S97 N98 S99 E100 T101 I102 LYS

- Molecule 21: 50S ribosomal protein L25

Chain U: 36% 61%

M1 N5 A6 E7 V8 R9 K10 E11 Q12 G13 K14 G15 A16 S17 R18 R19 L20 R21 K25 F26 I29 I30 Y31 G32 G33 K34 E35 A36 P37 L38 A39 I40 E41 L42 D43 H44 D45 K46 V47 M48 N49 M50 Q51 A52 K53 A54 E55 E59 V60 L61 V64 V65 K71 V72

Q75 D76 V77 Q78 R79 H80 P81 Y82 K83 P84 K85 L86 Q87 H88 I89 D90 F91 V92 R93 A94

- Molecule 22: 50S ribosomal protein L27

Chain V: 52% 35% 12%

MET ALA HIS LYS LYS ALA GLY GLY SER THR R7 N8 G9 R10 D11 S12 R16 V19 F22 S31 I32 I33 V34 R35 Q36 R37 G38 T39 K40 F41 H42 A45 N46 V47 D52 H53 T54 L55 F56 A57 K58 K62 P70 K71 N72 R73 I76 S77 I78 E81

- Molecule 23: 50S ribosomal protein L28

Chain W: 44% 55%

MET S1 R2 V6 T7 G8 K9 R10 P11 N16 R17 S18 A23 T24 K25 R26 R27 F28 L29 P30 N31 L32 H35 R36 F37 W38 V39 E42 K43 R44 F45 V46 T47 L48 R49 A52 M55 R56 V57 I58 K61 V66 L67 A68 E69 L70 R71 A72 R73 G74 E75

K76 Y77

- Molecule 24: 50S ribosomal protein L29

Chain X: 29% 63% 8%

M1 K2 A3 K4 E5 L6 R7 E8 K9 S10 V11 E12 E13 L14 N15 T16 E17 L18 L19 N20 L21 L22 R23 E24 Q25 F26 N27 L28 R29 A32 A33 L37 Q38 Q39 S40 H41 L42 L43 K44 Q45 V46 R47 R48 D49 R52 V53 K54 T55 L56 E59 K60 A61 G62 A63

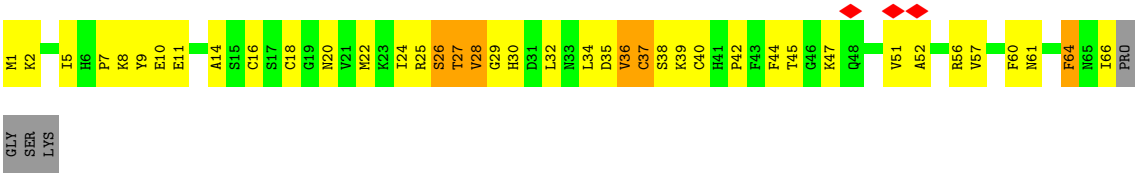
- Molecule 25: 50S ribosomal protein L30

Chain Y: 44% 54%

MET A1 K5 I6 T7 Q8 T9 R10 S11 A12 I13 L16 H19 L23 L24 G25 L26 G27 L28 V35 E36 R37 E38 D39 T40 P41 A42 I43 R44 G45 M46 I47 V50 S51 F52 M53 V54 K55 V56 E57 E58

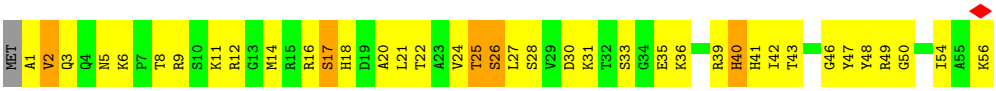
- Molecule 26: 50S ribosomal protein L31

Chain Z: 37% 49% 9% 6%



• Molecule 27: 50S ribosomal protein L32

Chain 1:



• Molecule 28: 50S ribosomal protein L33

Chain 2:

• Molecule 29: 50S ribosomal protein L34

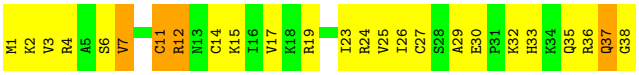
Chain 3:

• Molecule 30: 50S ribosomal protein L35

Chain 4:

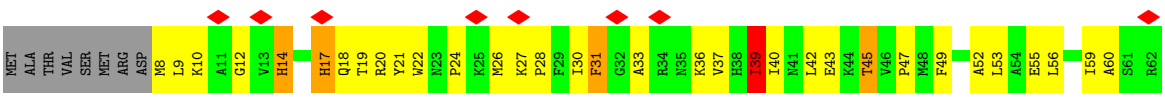
• Molecule 31: 50S ribosomal protein L36

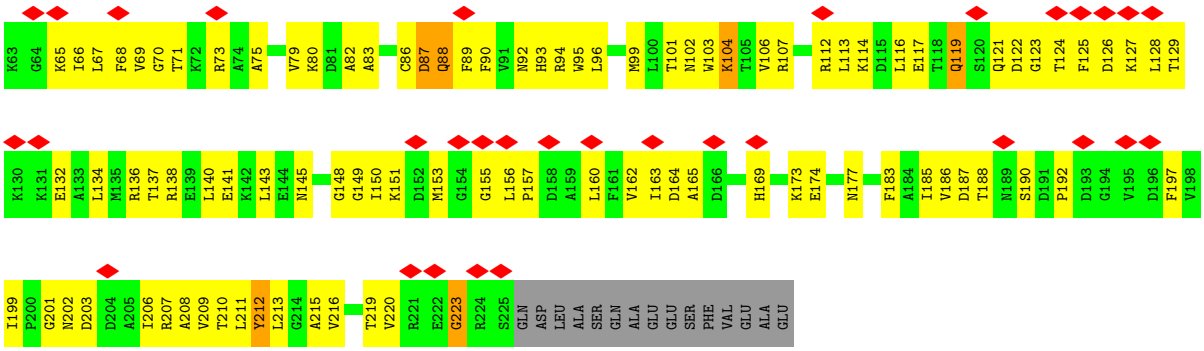
Chain 5:



• Molecule 32: 30S ribosomal protein S2

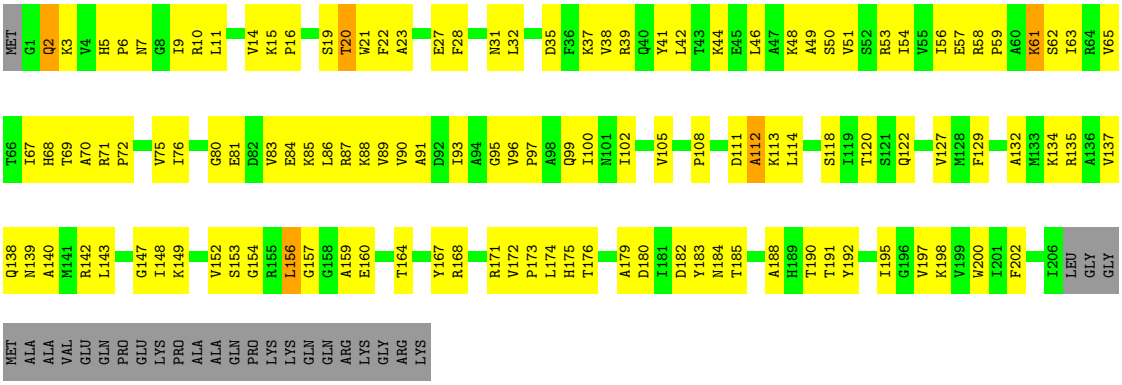
Chain 6:





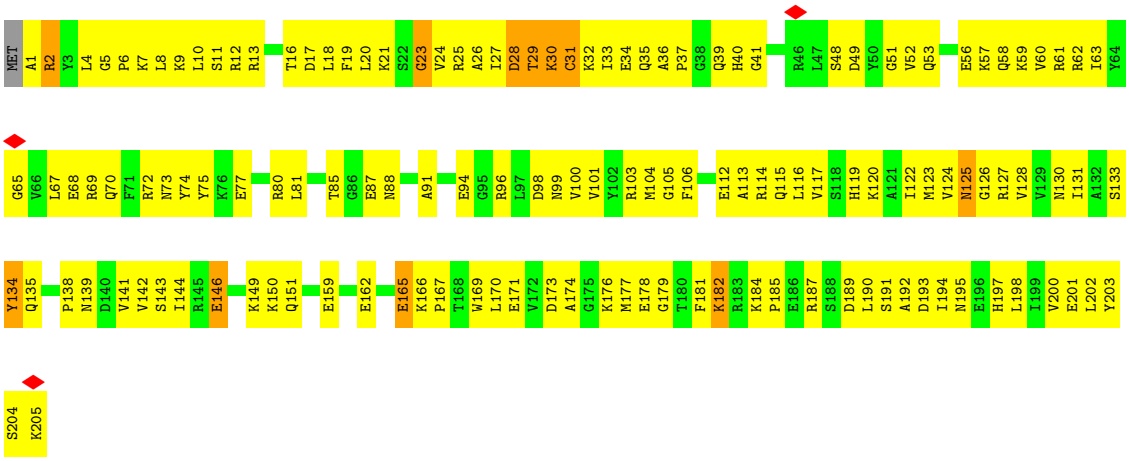
- Molecule 33: 30S ribosomal protein S3

Chain 7:



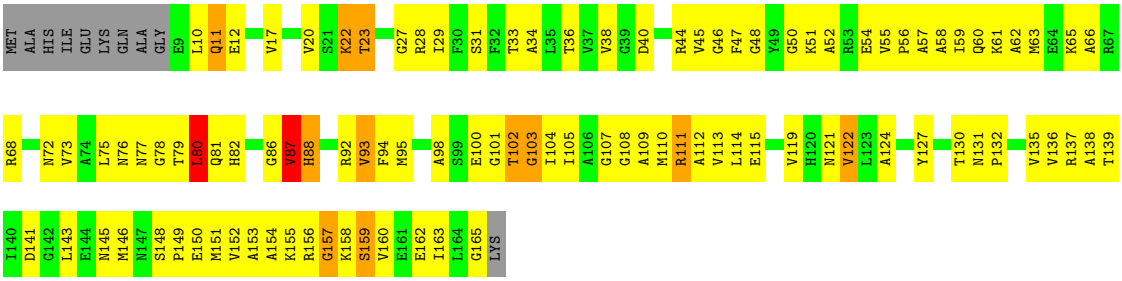
- Molecule 34: 30S ribosomal protein S4

Chain 8:



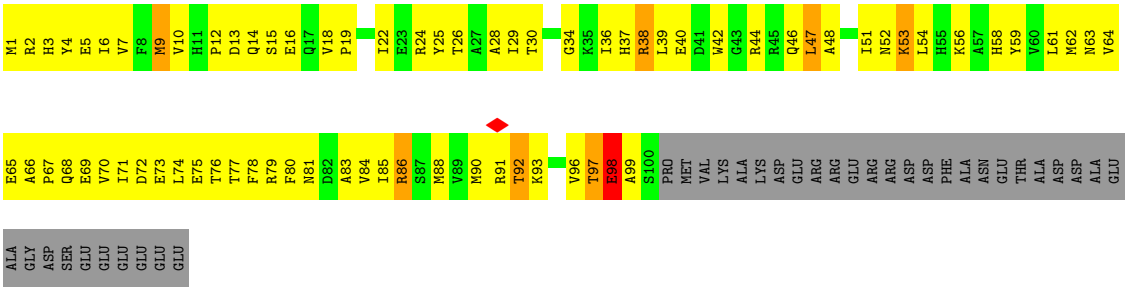
- Molecule 35: 30S ribosomal protein S5

Chain 9:



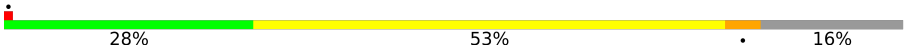
- Molecule 36: 30S ribosomal protein S6

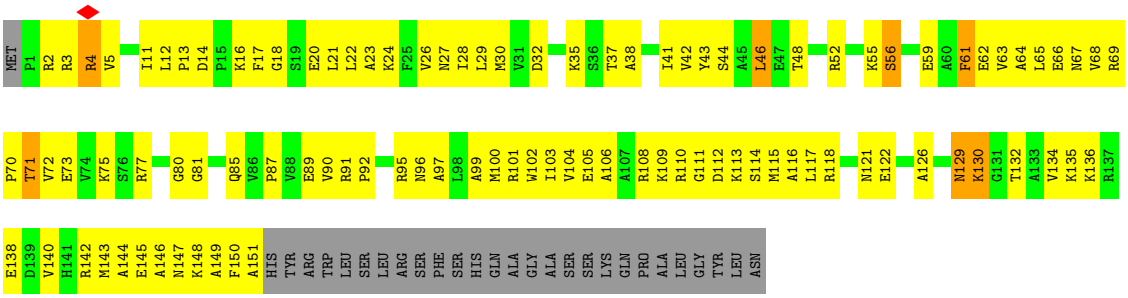
Chain 10:



- Molecule 37: 30S ribosomal protein S7

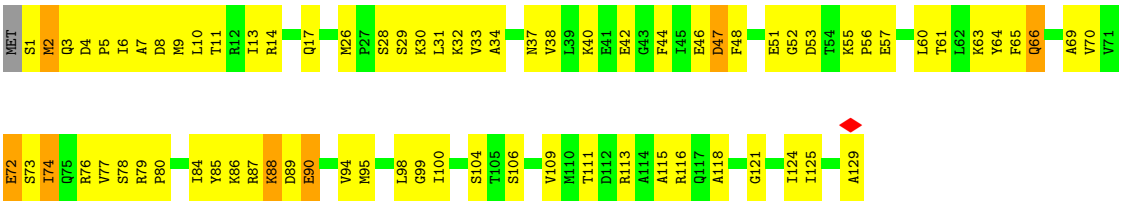
Chain 11:





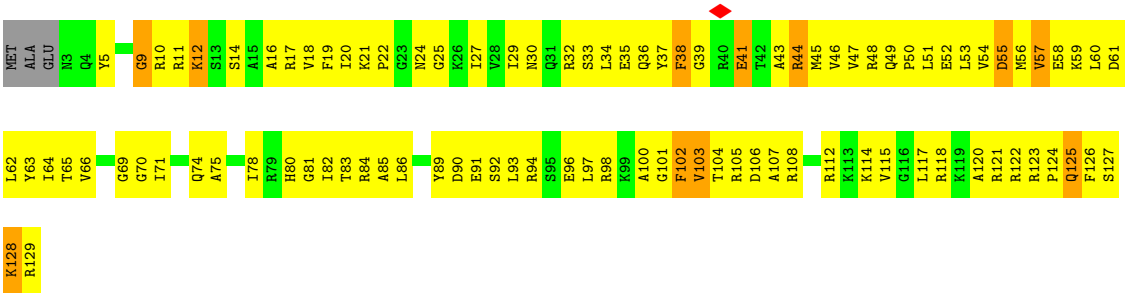
- Molecule 38: 30S ribosomal protein S8

Chain 12:



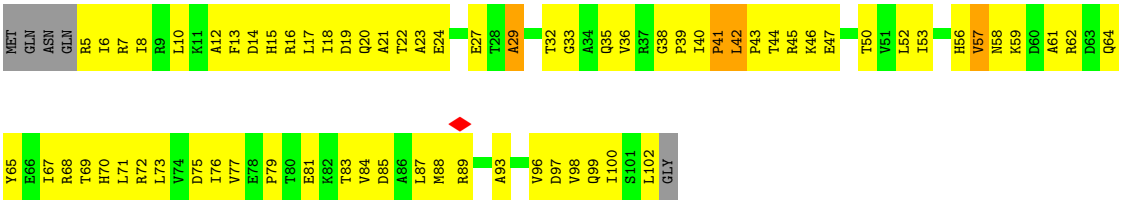
- Molecule 39: 30S ribosomal protein S9

Chain 13:



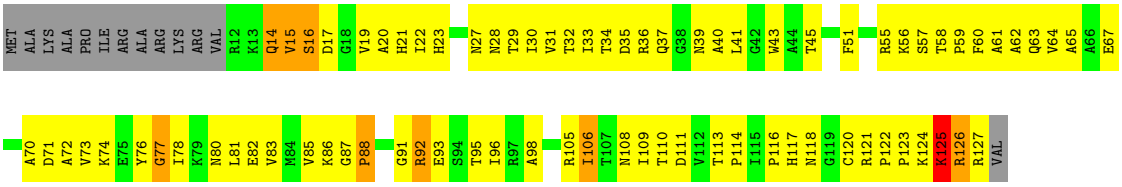
- Molecule 40: 30S ribosomal protein S10

Chain 14:



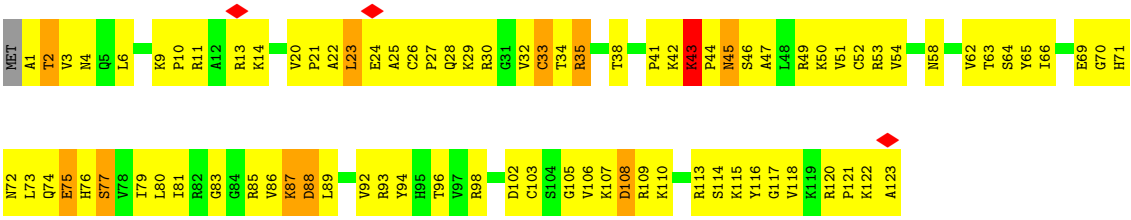
- Molecule 41: 30S ribosomal protein S11

Chain 15:



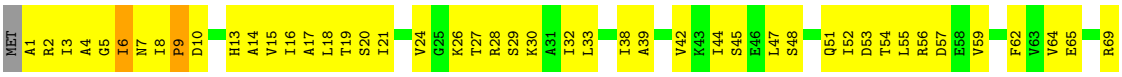
- Molecule 42: 30S ribosomal protein S12

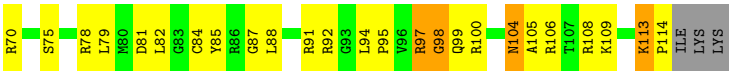
Chain 16:



- Molecule 43: 30S ribosomal protein S13

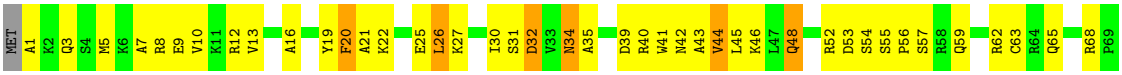
Chain 17:





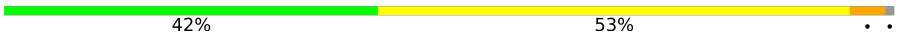
• Molecule 44: 30S ribosomal protein S14

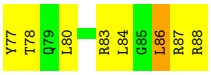
Chain 18:



• Molecule 45: 30S ribosomal protein S15

Chain 19:



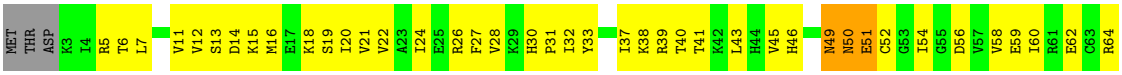


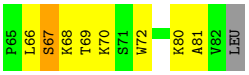
• Molecule 46: 30S ribosomal protein S16

Chain 20:

• Molecule 47: 30S ribosomal protein S17

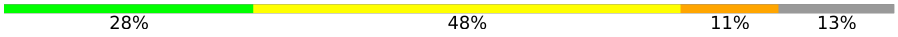
Chain 21:





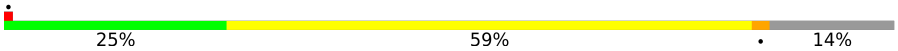
• Molecule 48: 30S ribosomal protein S18

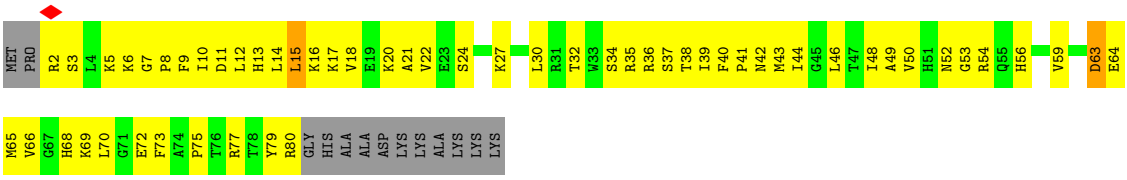
Chain 22:



• Molecule 49: 30S ribosomal protein S19

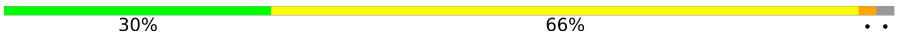
Chain 23:

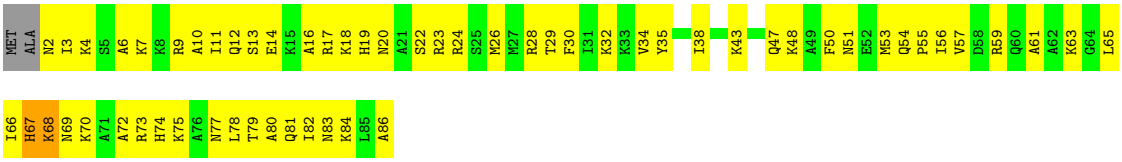




• Molecule 50: 30S ribosomal protein S20

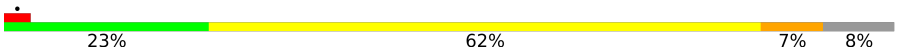
Chain 24:

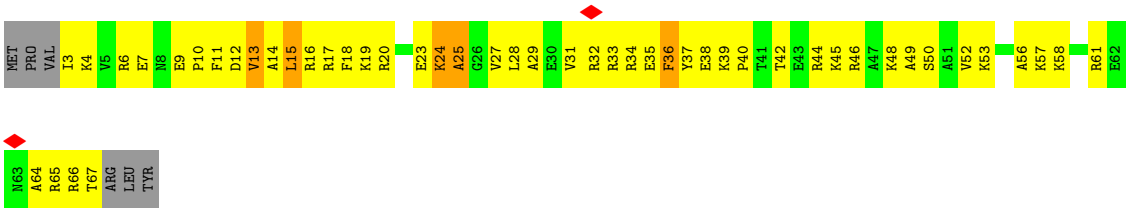




• Molecule 51: 30S ribosomal protein S21

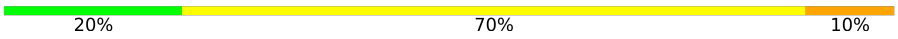
Chain 25:

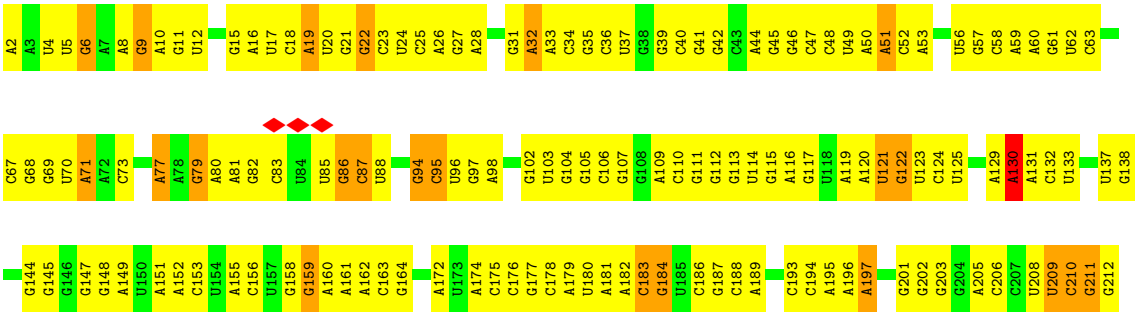




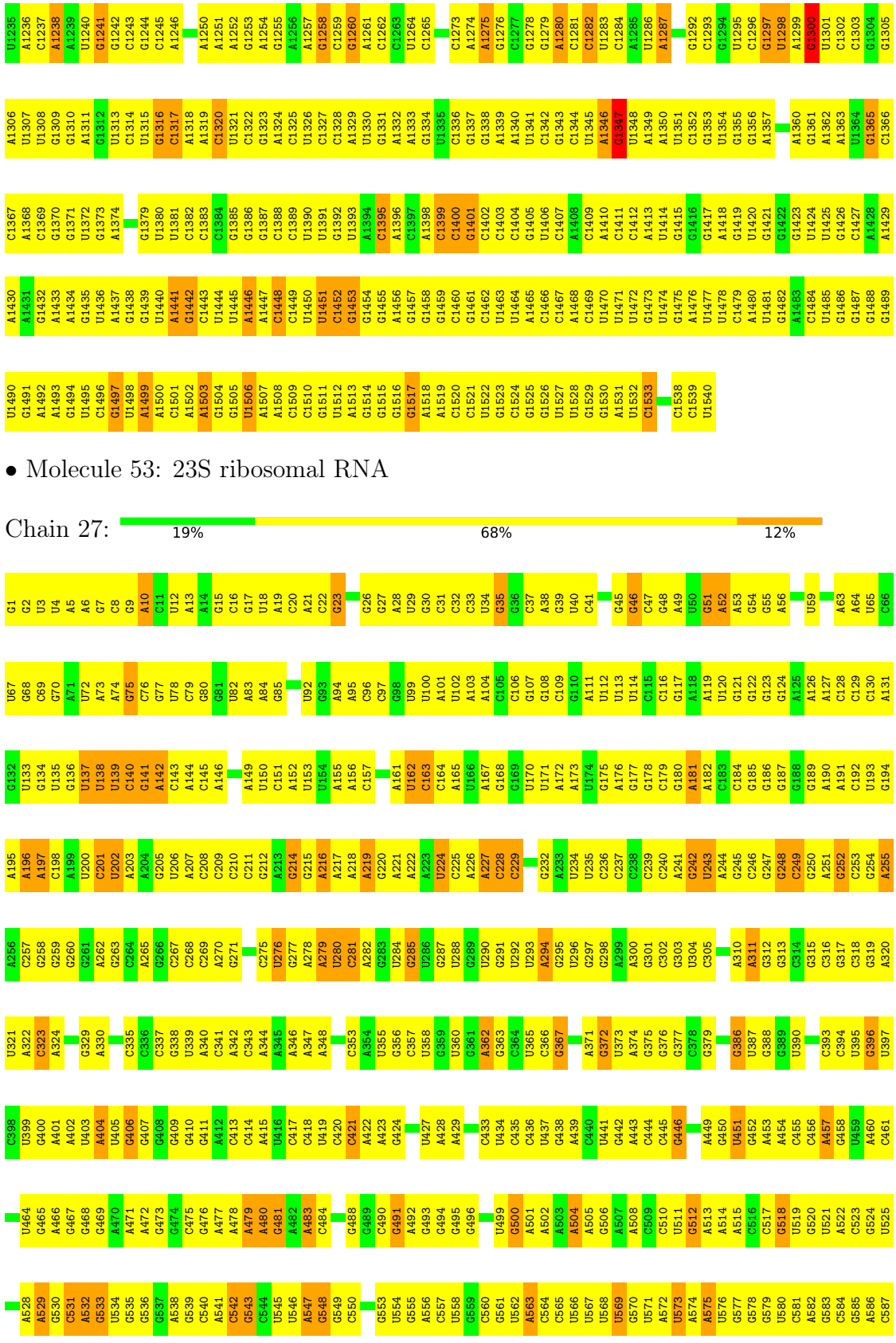
• Molecule 52: 16S ribosomal RNA

Chain 26:





WORLDWIDE
PDB
PROTEIN DATA BANK



• Molecule 53: 23S ribosomal RNA

Chain 27: 19% 68% 12%

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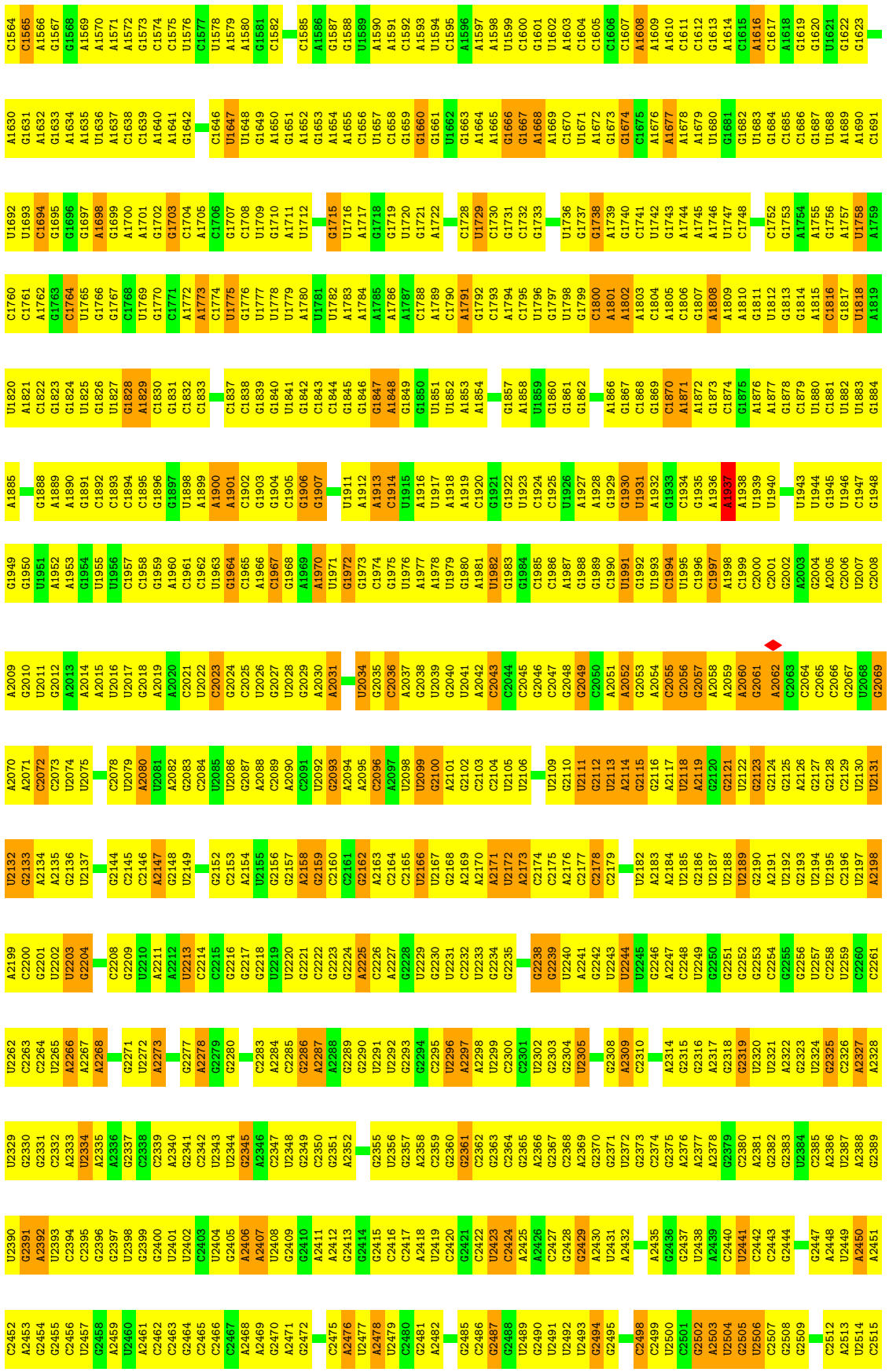
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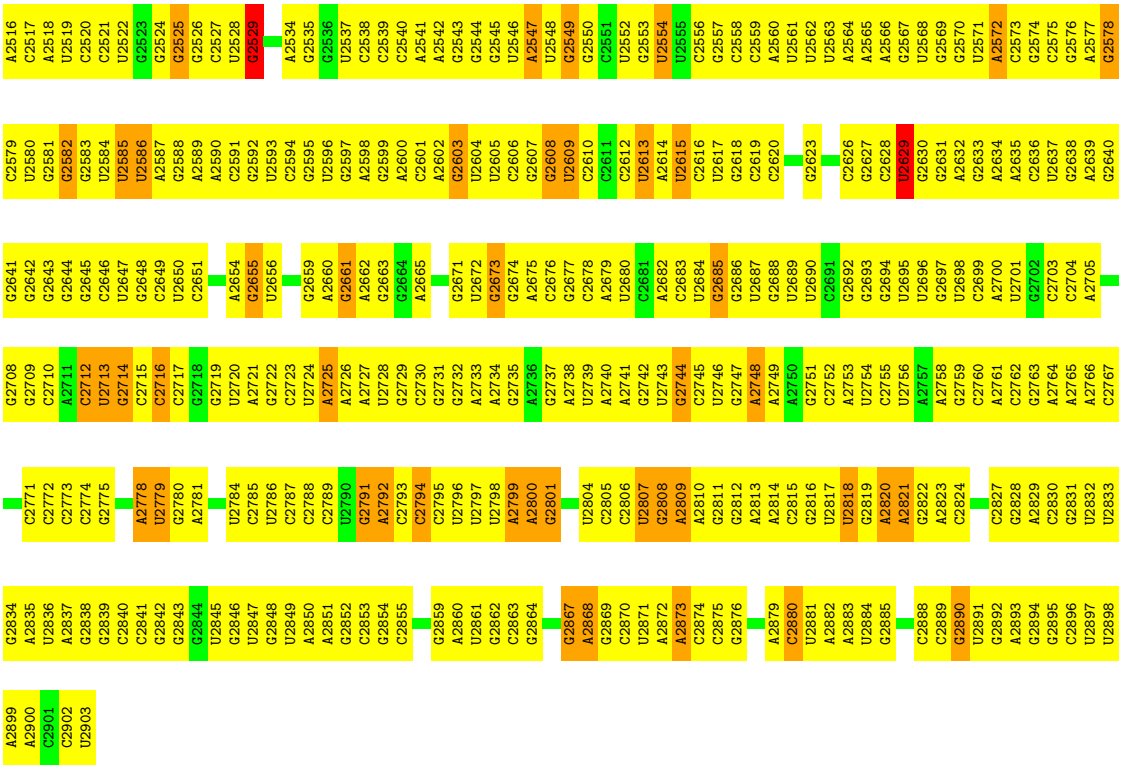

- Molecule 54: 5S ribosomal RNA

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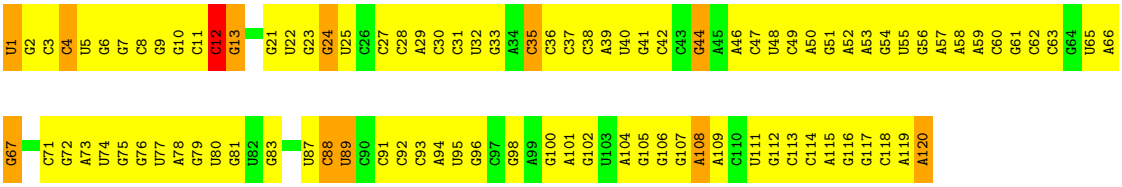

- Molecule 55: mRNA

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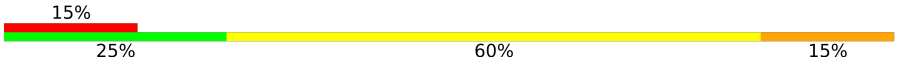
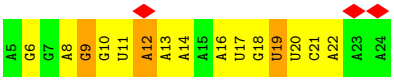
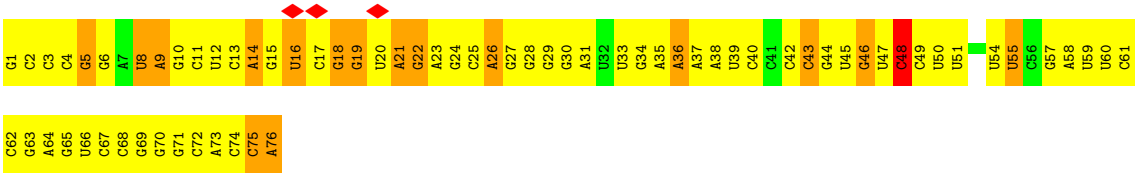




- Molecule 56: A-site tRNAPhe

Chain 30:



- Molecule 57: P-site tRNAfMet

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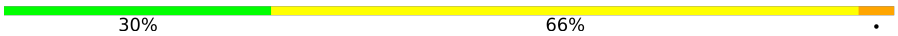
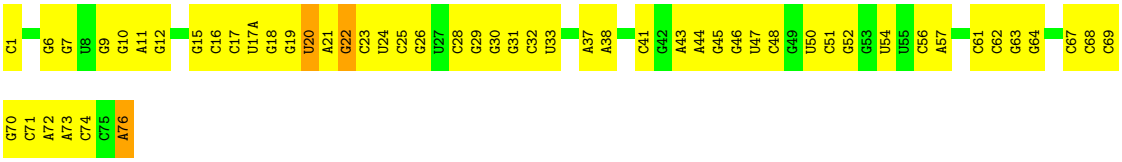
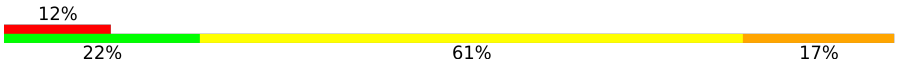
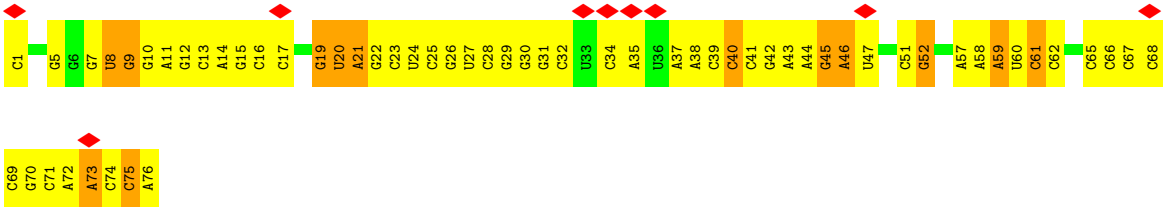




- Molecule 58: E-site tRNAfMet

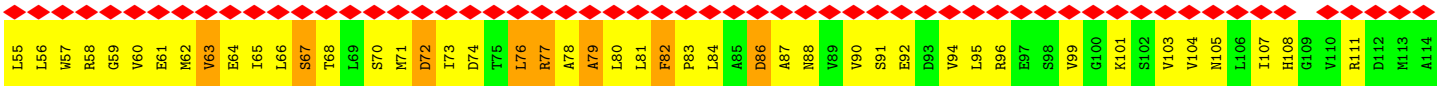
Chain 32:

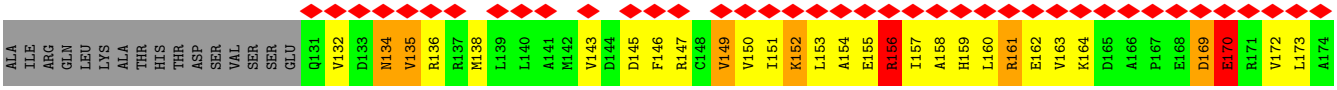


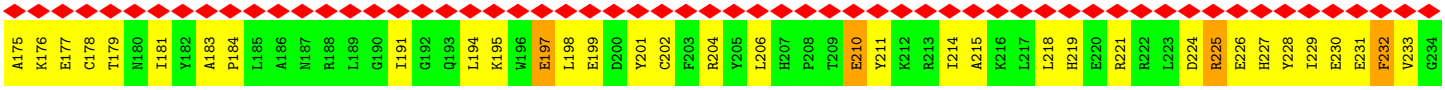


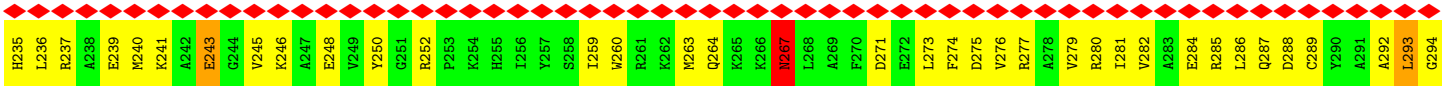
- Molecule 59: GTP pyrophosphokinase

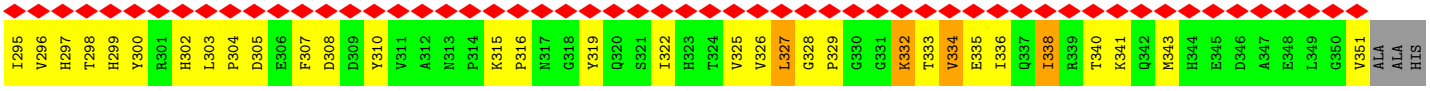
Chain 33:

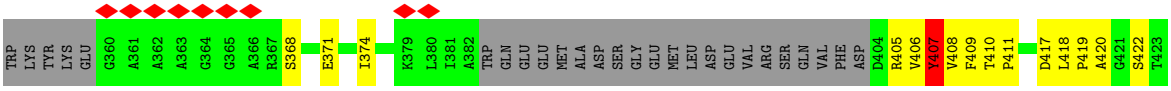


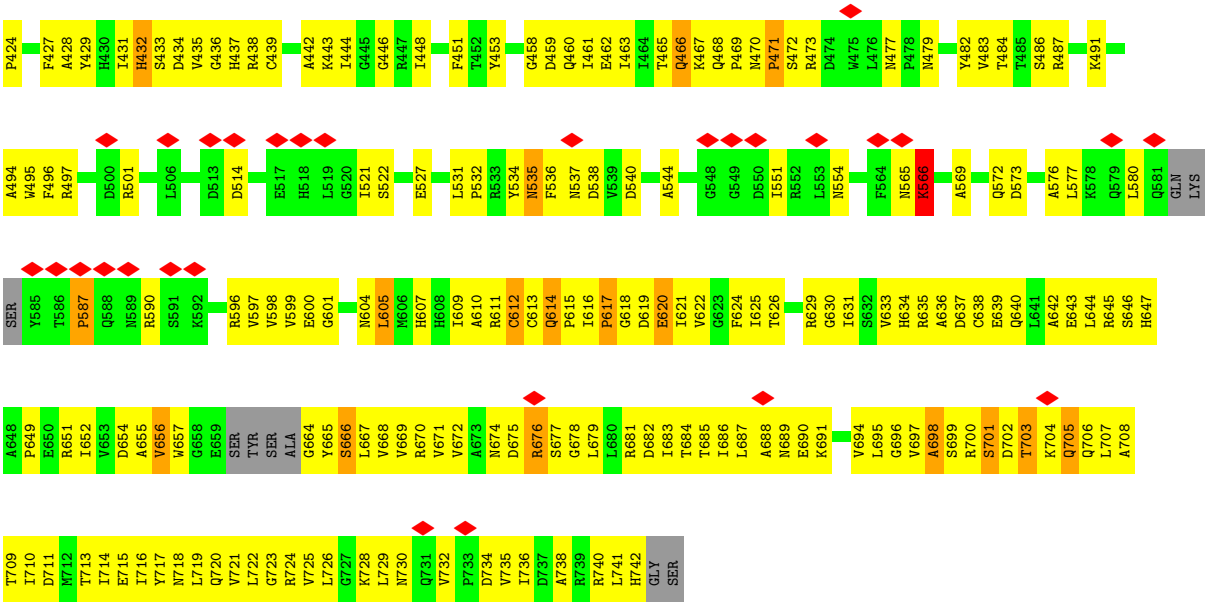








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T709 I710 D711 M712 T713 I714 E715 I716 Y717 N718 L719 Q720 V721 L722 G723 R724 V725 L726 G727 K728 L729 N730 Q731 V732 P733 D734 V735 I736 D737 A738 R739 R740 L741 H742 GLY SER

4 Experimental information (i)

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 ($e^-/Å^2$)	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 (i)

5.1 Standard geometry (i)

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(^{o})	Ideal(^{o})
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(^{o})	Ideal(^{o})
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%)	3 27
2	B	207/209 (99%)	172 (83%)	28 (14%)	7 (3%)	3 29
3	C	199/201 (99%)	147 (74%)	32 (16%)	20 (10%)	0 9
4	D	175/179 (98%)	143 (82%)	27 (15%)	5 (3%)	4 32
5	E	174/177 (98%)	149 (86%)	20 (12%)	5 (3%)	4 32
6	F	147/149 (99%)	108 (74%)	20 (14%)	19 (13%)	0 4
7	G	129/165 (78%)	93 (72%)	25 (19%)	11 (8%)	1 13
8	H	139/142 (98%)	104 (75%)	25 (18%)	10 (7%)	1 16
9	I	140/142 (99%)	120 (86%)	14 (10%)	6 (4%)	2 24
10	J	120/123 (98%)	97 (81%)	16 (13%)	7 (6%)	1 20

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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
42	16	121/124 (98%)	95 (78%)	13 (11%)	13 (11%)	0 7
43	17	112/118 (95%)	88 (79%)	14 (12%)	10 (9%)	1 12
44	18	98/101 (97%)	72 (74%)	21 (21%)	5 (5%)	2 21
45	19	86/89 (97%)	70 (81%)	11 (13%)	5 (6%)	1 20
46	20	80/82 (98%)	59 (74%)	18 (22%)	3 (4%)	3 26
47	21	78/84 (93%)	54 (69%)	19 (24%)	5 (6%)	1 18
48	22	63/75 (84%)	50 (79%)	5 (8%)	8 (13%)	0 5
49	23	77/92 (84%)	64 (83%)	11 (14%)	2 (3%)	5 34
50	24	83/87 (95%)	75 (90%)	6 (7%)	2 (2%)	6 35
51	25	63/71 (89%)	40 (64%)	19 (30%)	4 (6%)	1 19
59	33	663/750 (88%)	557 (84%)	60 (9%)	46 (7%)	1 16
All	All	6509/6970 (93%)	5226 (80%)	879 (14%)	404 (6%)	3 19

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%)	88	93
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%)	67	80
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%)	59	77
9	I	116/116 (100%)	116 (100%)	0	100	100
10	J	103/104 (99%)	102 (99%)	1 (1%)	76	85
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%)	76	85
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%)	71	83
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%)	71	83

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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%)	60	78
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%)	55	73
31	5	34/34 (100%)	34 (100%)	0	100	100
32	6	180/199 (90%)	178 (99%)	2 (1%)	73	84
33	7	170/190 (90%)	169 (99%)	1 (1%)	86	92
34	8	172/173 (99%)	172 (100%)	0	100	100
35	9	119/126 (94%)	117 (98%)	2 (2%)	60	78
36	10	87/116 (75%)	85 (98%)	2 (2%)	50	70
37	11	124/147 (84%)	123 (99%)	1 (1%)	81	88
38	12	104/105 (99%)	103 (99%)	1 (1%)	76	85
39	13	105/107 (98%)	104 (99%)	1 (1%)	76	85
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%)	35	60
45	19	76/77 (99%)	75 (99%)	1 (1%)	69	81
46	20	65/65 (100%)	65 (100%)	0	100	100
47	21	74/78 (95%)	73 (99%)	1 (1%)	67	80
48	22	56/65 (86%)	55 (98%)	1 (2%)	59	77
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%)	59	77

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	33	452/635 (71%)	449 (99%)	3 (1%)	84	90
All	All	5303/5698 (93%)	5272 (99%)	31 (1%)	86	92

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

Continued on next page...

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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

Continued on next page...

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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 monosaccharides 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.

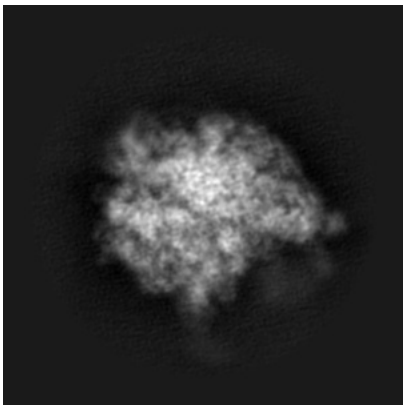
6 Map visualisation (i)

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.

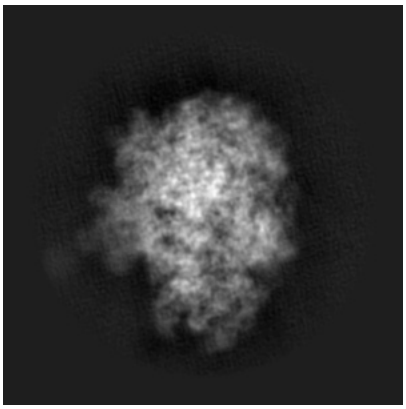
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections (i)

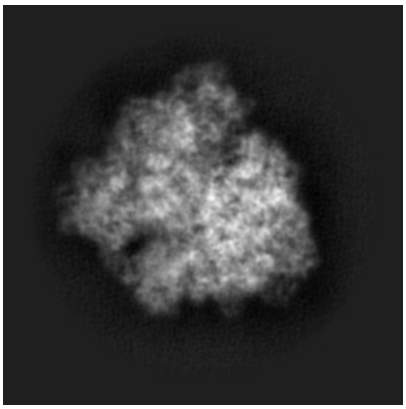
6.1.1 Primary map



X

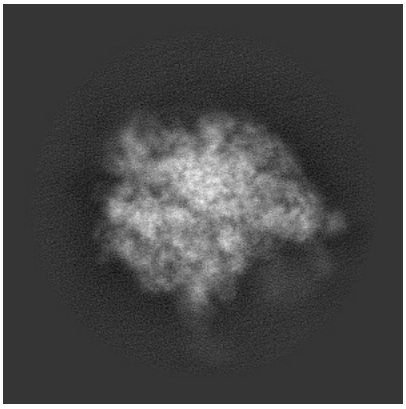


Y

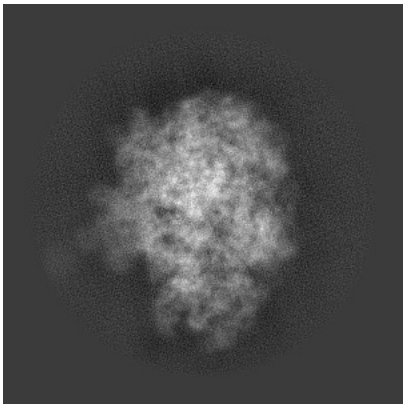


Z

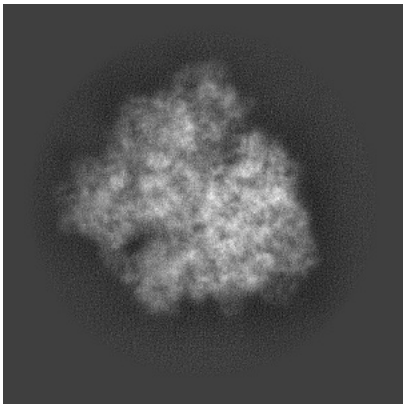
6.1.2 Raw map



X



Y

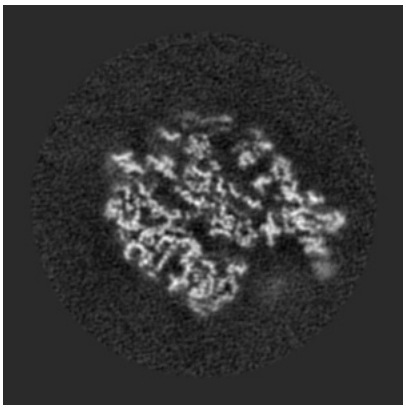


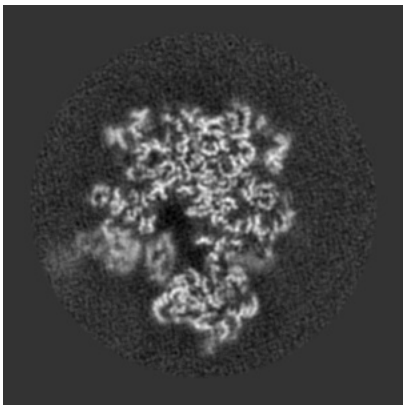
Z

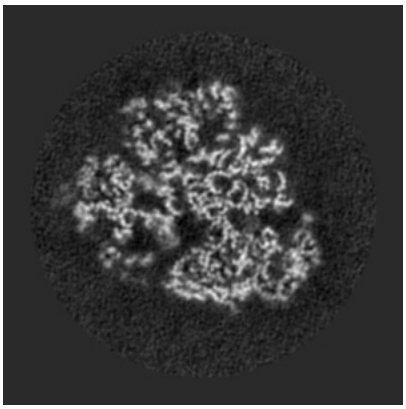
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

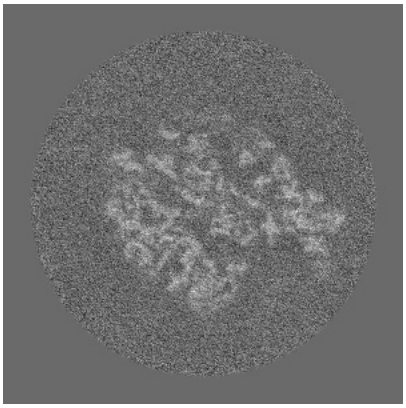
6.2.1 Primary map

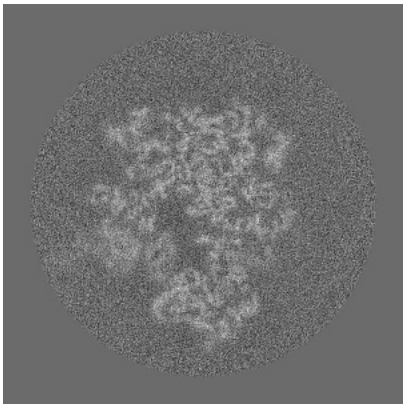

X Index: 240

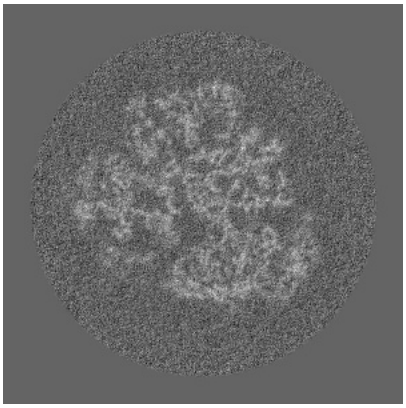

Y Index: 240


Z Index: 240

6.2.2 Raw map


X Index: 240

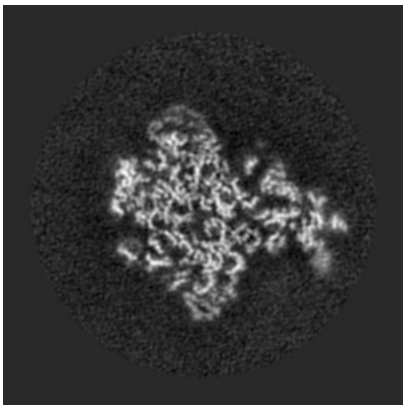

Y Index: 240

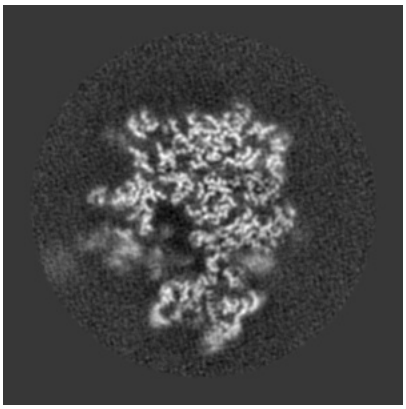

Z Index: 240

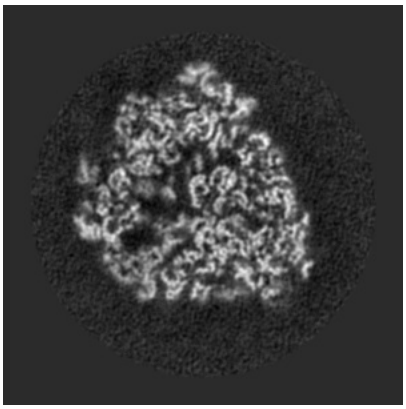
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

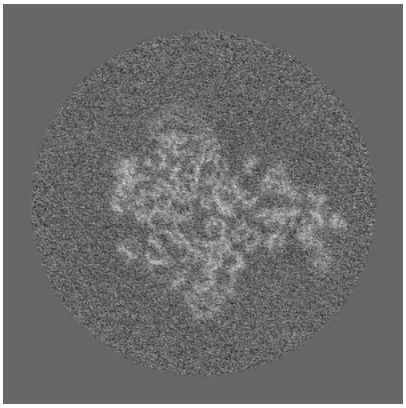
6.3.1 Primary map

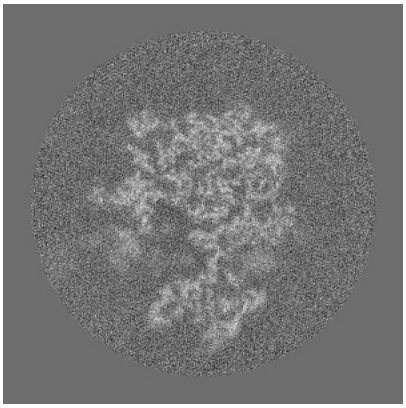

X Index: 250

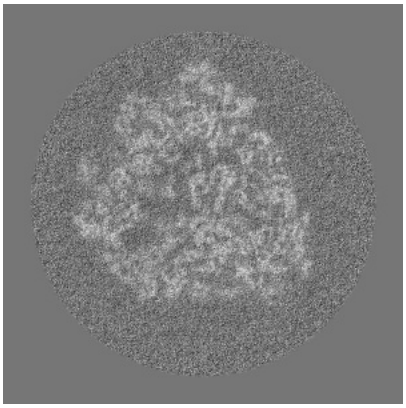

Y Index: 247


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 surface views (i)

6.4.1 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.

6.4.2 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.

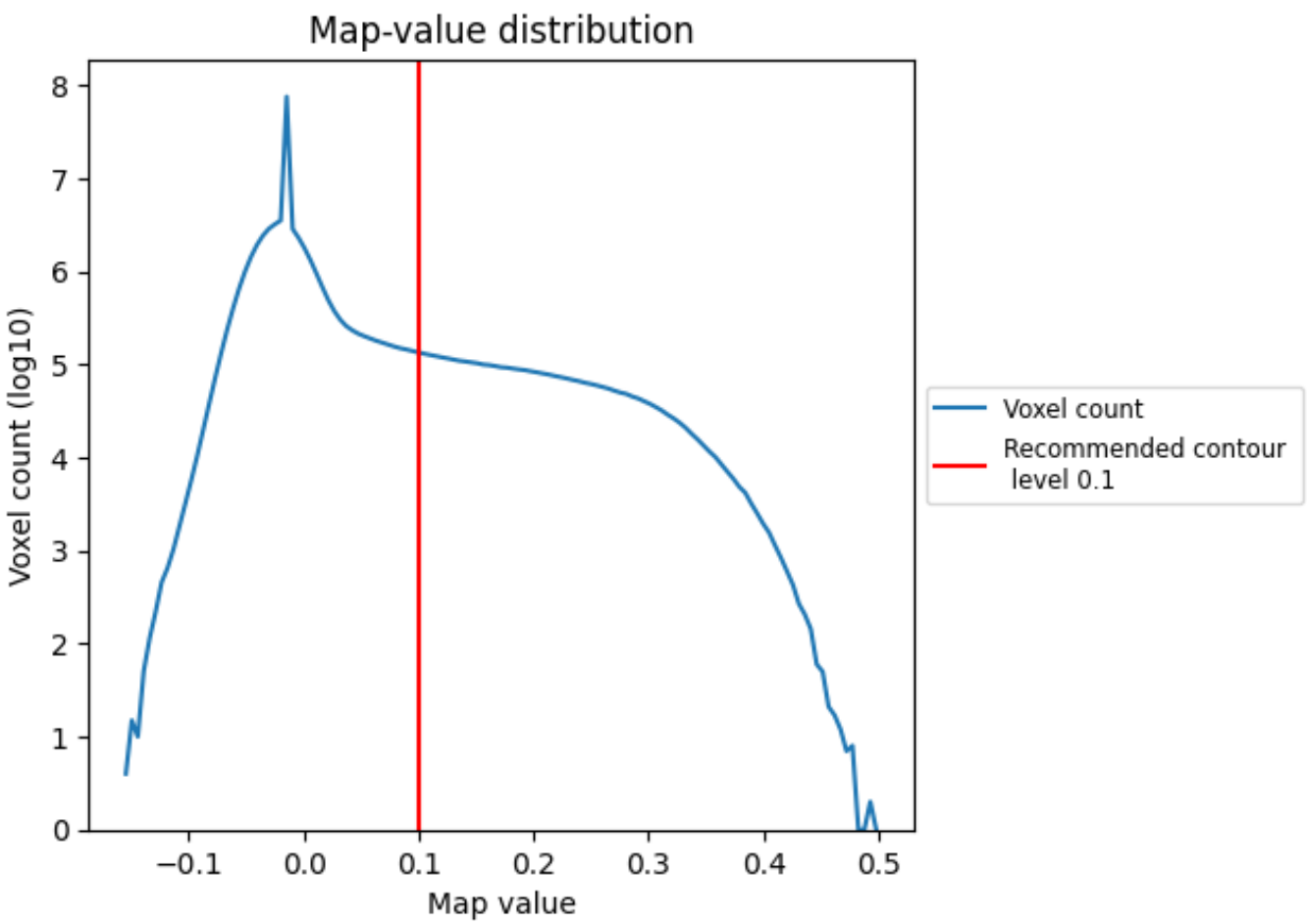
6.5 Mask visualisation (i)

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

7 Map analysis (i)

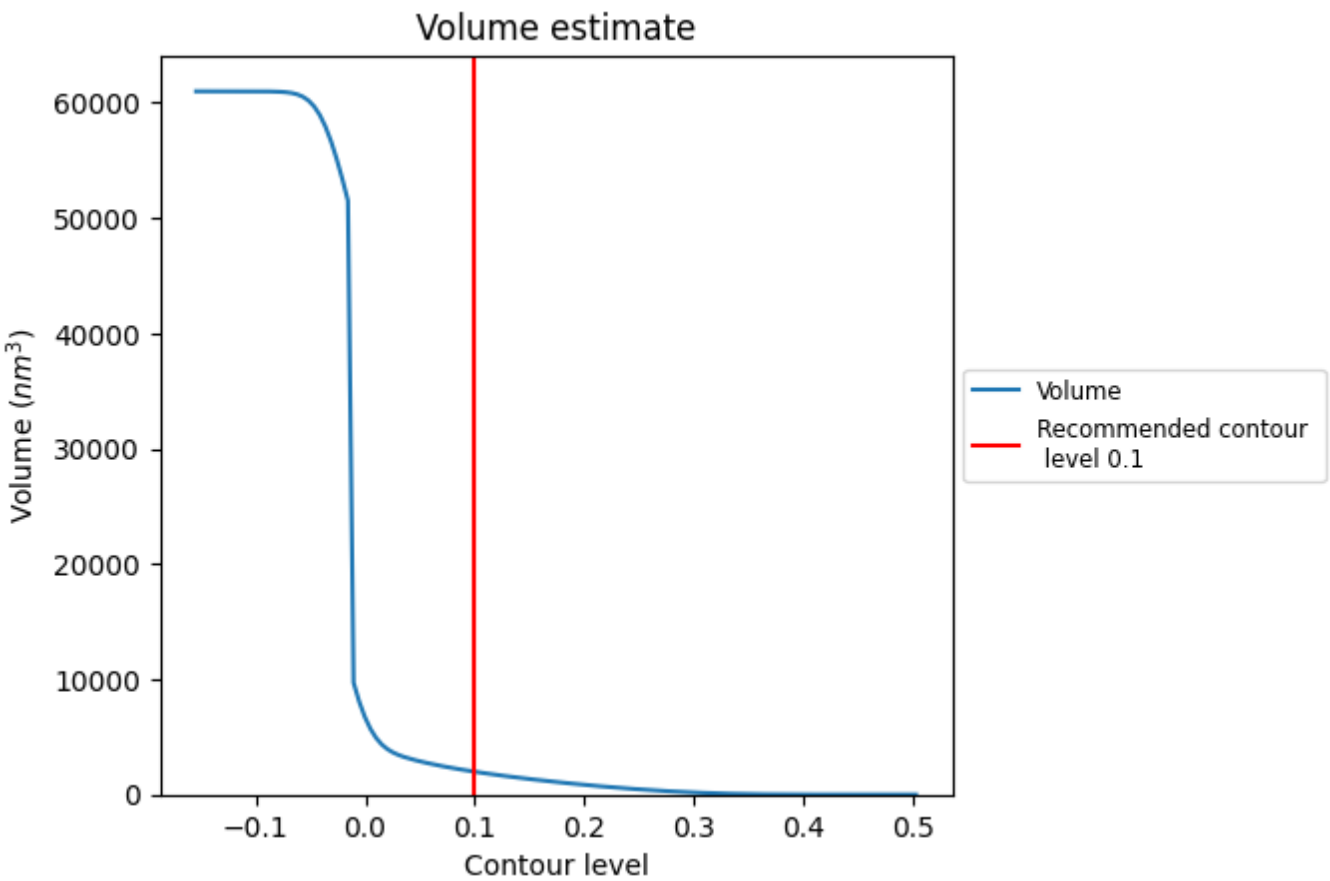
This section contains the results of statistical analysis of the map.

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.

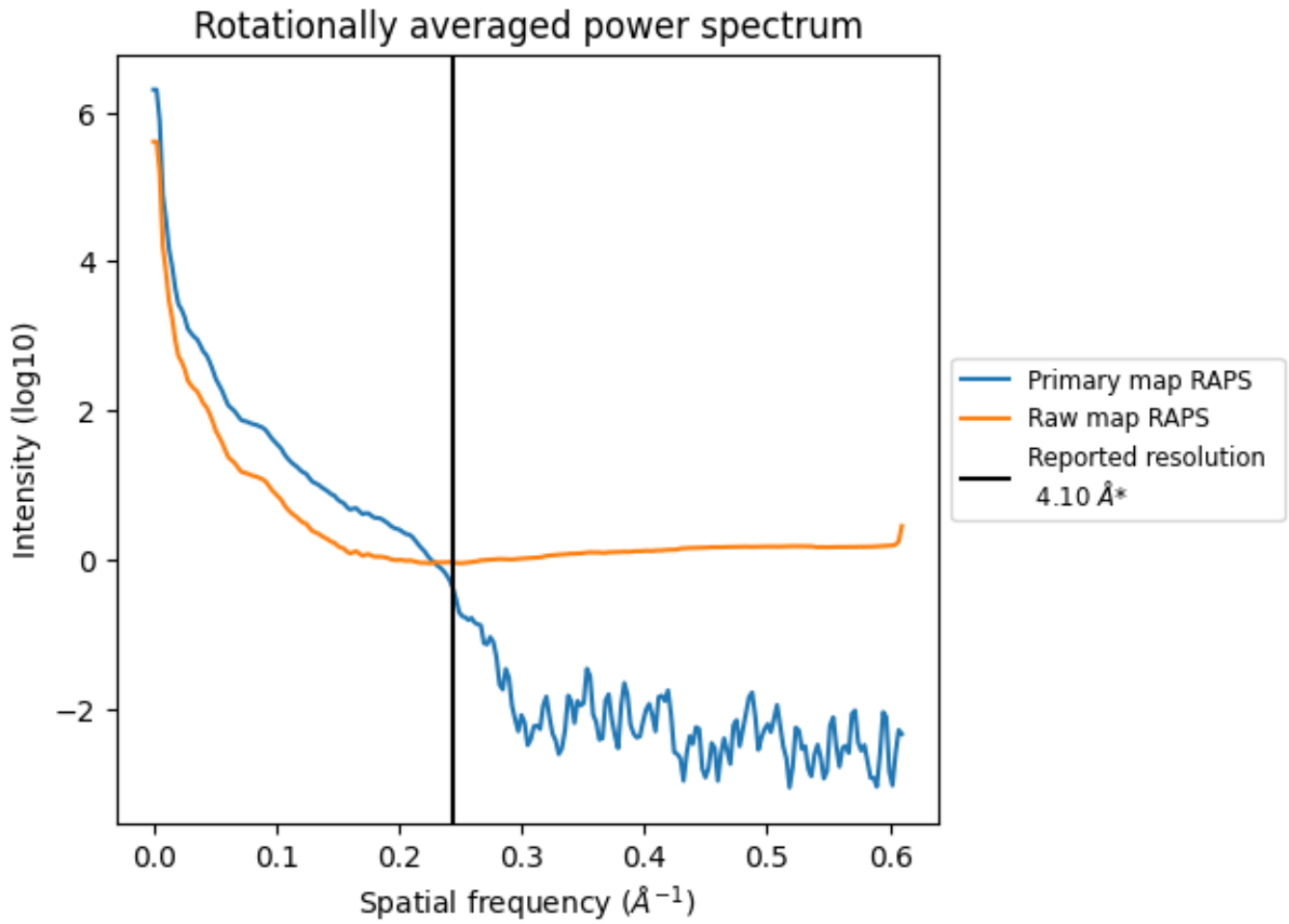
7.2 Volume estimate (i)



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)

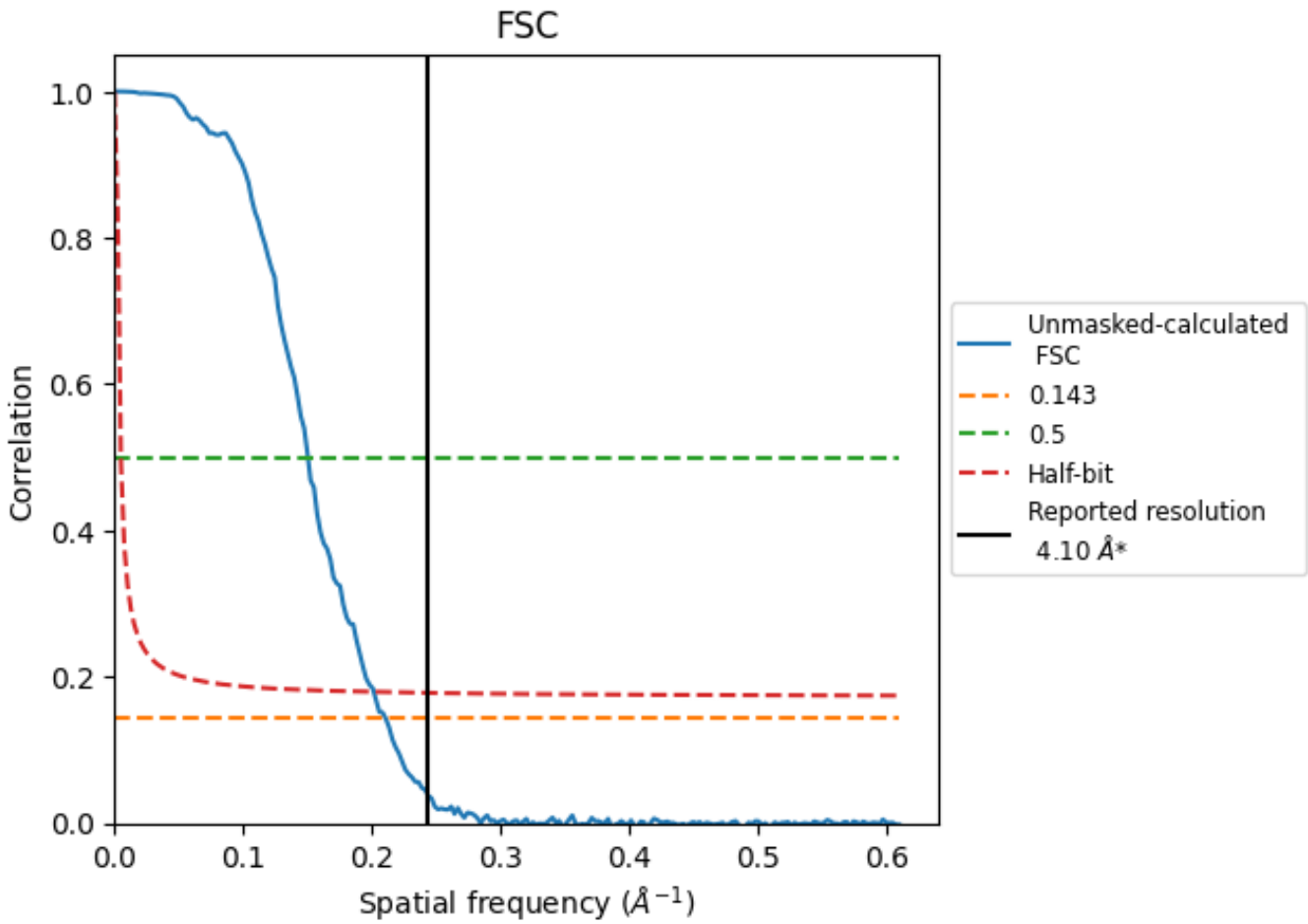


*Reported resolution corresponds to spatial frequency of 0.244 Å^{-1}

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)

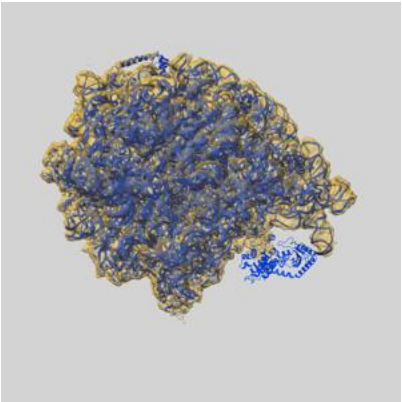
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.10	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.75	6.65	4.96

*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 %

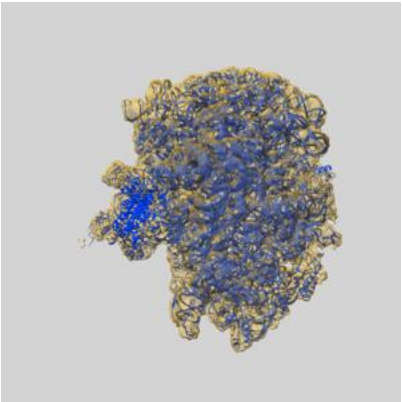
9 Map-model fit (i)

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.

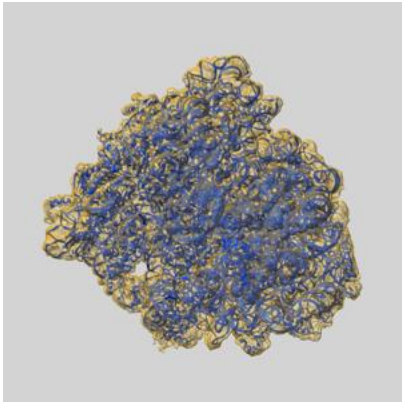
9.1 Map-model overlay (i)



X



Y



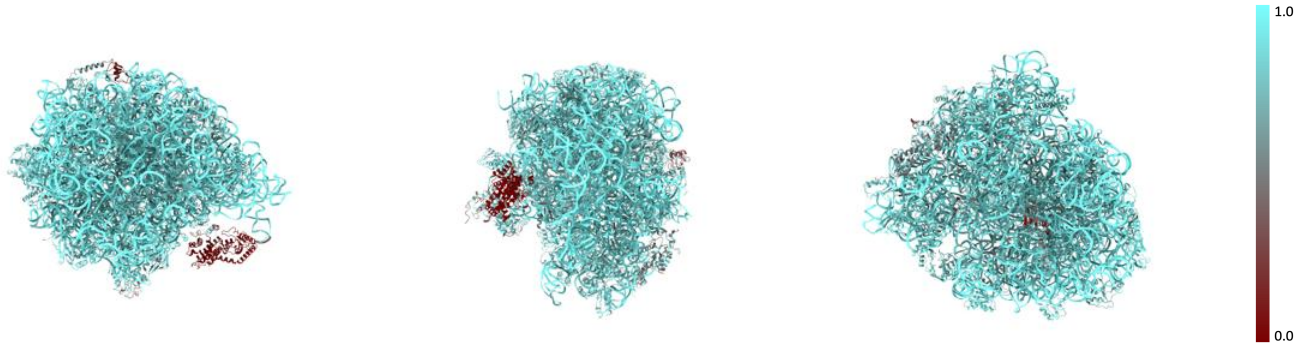
Z

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)

This section was not generated.

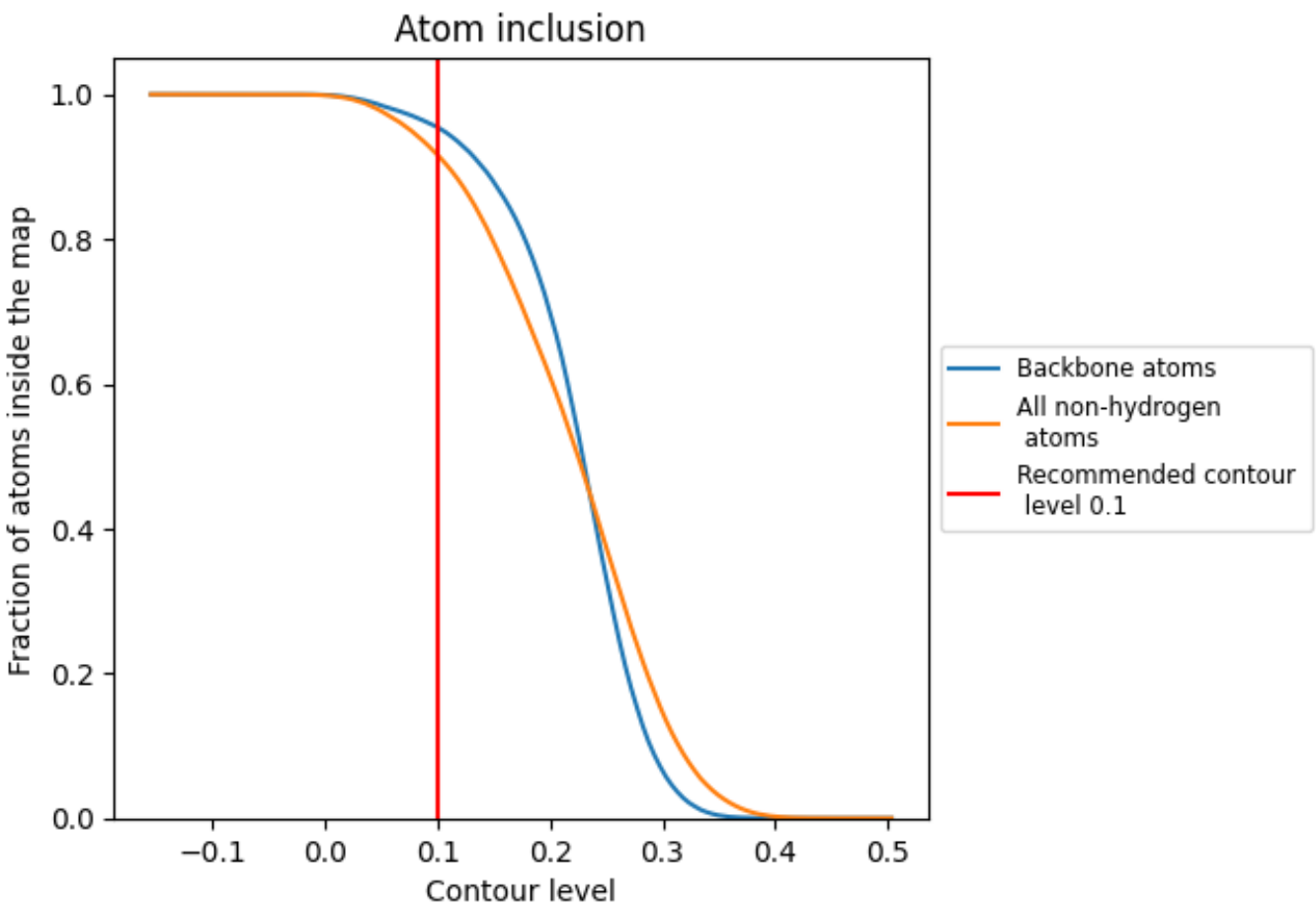
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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, 95% of all backbone atoms, 92% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary (i)

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
All	0.9164
1	0.8762
10	0.8769
11	0.8566
12	0.8490
13	0.8846
14	0.7989
15	0.8651
16	0.7915
17	0.8461
18	0.8450
19	0.8565
2	0.7282
20	0.8708
21	0.8513
22	0.8930
23	0.8808
24	0.8677
25	0.7350
26	0.9883
27	0.9921
28	0.9938
29	0.7685
3	0.8845
30	0.8743
31	0.9580
32	0.7267
33	0.4050
4	0.8187
5	0.8219
6	0.5654
7	0.8035
8	0.8233
9	0.8430
A	0.8462

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Chain	Atom inclusion
B	0.8479
C	0.7855
D	0.8543
E	0.8736
F	0.4763
G	0.5702
H	0.7231
I	0.8573
J	0.8039
K	0.8730
L	0.8253
M	0.8720
N	0.8899
O	0.8547
P	0.8700
Q	0.8808
R	0.8110
S	0.8657
T	0.8814
U	0.8794
V	0.8605
W	0.8586
X	0.8551
Y	0.8535
Z	0.8356