WORLDWIDE wwPDB PROTEIN DATA BANK

Full wwPDB EM Validation Report (i)

Sep 8, 2025 – 12:41 PM JST

PDB ID	:	5ZET / pdb_00005zet
EMDB ID	:	EMD-6922
Title	:	M. smegmatis P/P state 50S ribosomal subunit
Authors	:	Mishra, S.; Ahmed, T.; Tyagi, A.; Shi, J.; Bhushan, S.
Deposited on	:	2018-02-28
Resolution	:	3.20 Å(reported)

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.20 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	Percentile Ranks	Value
Clashscore		18
Ramachandran outliers		1.4%
Sidechain outliers		3.9%
RNA backbone		0.40

Worse · · · *Better*

■ Percentile relative to all structures

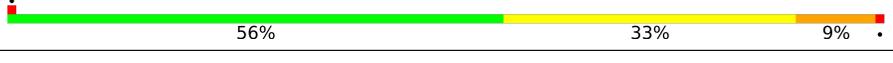▯ Percentile relative to all EM structures
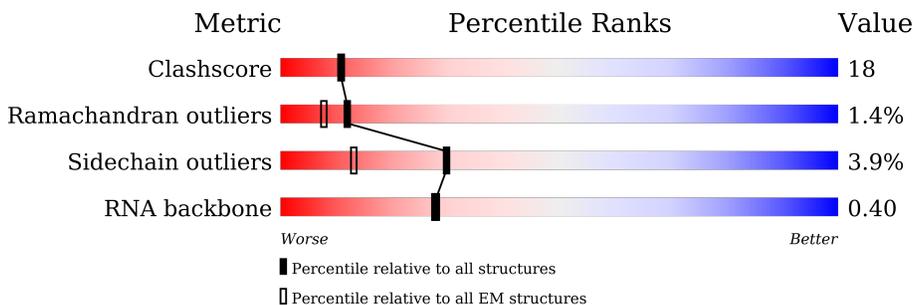
Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415
RNA backbone	6643	2191

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	C	278	56% 36% · · ·
2	D	217	81% 16% · ·
3	E	215	53% 39% · · ·
4	F	187	42% 44% 10% · ·
5	G	179	78% 21% ·
6	H	151	20% 88% 11% ·
7	I	175	41% 62% 10% 28%

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Mol	Chain	Length	Quality of chain
8	J	142	54% / 73% / 21% / 6%
9	K	147	56% / 33% / 9%
10	L	122	67% / 29%
11	M	147	78% / 21%
12	N	138	66% / 27%
13	O	199	23% / 29% / 6% / 41%
14	P	127	76% / 23%
15	Q	113	70% / 30%
16	R	129	79% / 17%
17	S	103	79% / 18%
18	T	153	50% / 20% / 25%
19	U	100	44% / 36% / 12% / 6%
20	V	105	5% / 42% / 40% / 10% / 8%
21	W	215	7% / 45% / 35% / 7% / 13%
22	X	88	58% / 27% / 6% / 7%
23	Y	64	78% / 20%
24	Z	77	51% / 26% / 5% / 18%
25	B	118	24% / 44% / 31%
26	A	3120	58% / 33% / 8%
27	1	61	5% / 70% / 25%
28	2	75	25% / 44% / 39% / 5% / 12%
29	3	57	82% / 12% / 5%
30	4	55	18% / 56% / 13% / 9%
31	5	47	49% / 40% / 6%
32	6	64	66% / 33%

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Mol	Chain	Length	Quality of chain
33	7	37	49% 　　　　　 49%
34	8	24	79% 　　　　　 17%

2 Entry composition ⓘ

There are 34 unique types of molecules in this entry. The entry contains 97374 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	C	273	Total	C	N	O	S	0	0
			2097	1290	435	368	4		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
2	D	214	Total	C	N	O	S	0	0
			1587	982	310	290	5		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
3	E	207	Total	C	N	O	S	0	0
			1553	959	292	300	2		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	F	181	Total	C	N	O	S	0	0
			1437	903	269	259	6		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
5	G	176	Total	C	N	O	S	0	0
			1348	845	249	253	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
6	H	151	Total	C	N	O	S	0	0
			1018	635	188	194	1		

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

Mol	Chain	Residues	Atoms					AltConf	Trace
7	I	126	Total 918	C 580	N 156	O 180	S 2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
8	J	133	Total 990	C 625	N 175	O 187	S 3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
9	K	147	Total 1138	C 727	N 208	O 201	S 2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
10	L	121	Total 930	C 580	N 178	O 169	S 3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
11	M	145	Total 1078	C 676	N 205	O 194	S 3	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
12	N	134	Total 1074	C 680	N 211	O 181	S 2	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
13	O	117	Total 919	C 577	N 178	O 162	S 2	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
14	P	126	Total 956	C 586	N 199	O 171	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
15	Q	113	Total 907	C 570	N 171	O 165	S 1	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
16	R	124	Total 988	C 613	N 203	O 172	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
17	S	102	Total 768	C 487	N 140	O 141	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
18	T	114	Total 873	C 543	N 171	O 159	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
19	U	94	Total 739	C 469	N 135	O 135	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
20	V	97	Total 731	C 456	N 137	O 136	S 2	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
21	W	188	Total 1407	C 869	N 251	O 287	0	0

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

Mol	Chain	Residues	Atoms				AltConf	Trace
22	X	82	Total 604	C 372	N 127	O 105	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
23	Y	63	Total 470	C 283	N 103	O 80	S 4	0	0

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

Mol	Chain	Residues	Atoms					AltConf	Trace
24	Z	63	Total 527	C 322	N 102	O 102	S 1	0	0

- Molecule 25 is a RNA chain called P-tRNAfMet.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	B	117	Total 2501	C 1116	N 462	O 806	P 117	0	0

- Molecule 26 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	A	3102	Total 66623	C 29694	N 12253	O 21574	P 3102	0	0

- Molecule 27 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				AltConf	Trace
27	1	60	Total 483	C 298	N 97	O 88	0	0

- Molecule 28 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	2	66	Total 510	C 316	N 93	O 96	S 5	0	0

- Molecule 29 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	3	54	Total 423	C 260	N 93	O 69	S 1	0	0

- Molecule 30 is a protein called 50S ribosomal protein L33 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	4	50	Total 416	C 254	N 86	O 72	S 4	0	0

- Molecule 31 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	5	45	Total 372	C 222	N 96	O 53	S 1	0	0

- Molecule 32 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms				AltConf	Trace
32	6	63	Total 502	C 302	N 115	O 85	0	0

- Molecule 33 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	7	37	Total 298	C 181	N 66	O 46	S 5	0	0

- Molecule 34 is a protein called Uncharacterized protein bL37.

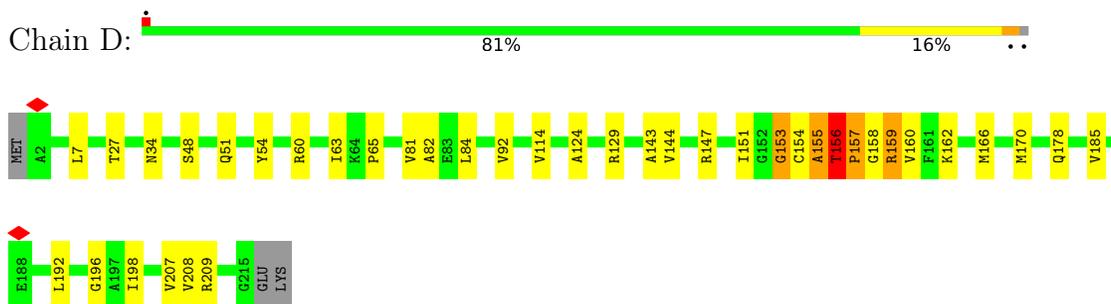| Mol	Chain	Residues	Atoms				AltConf	Trace
34	8	23	Total 189	C 111	N 50	O 28	0	0

3 Residue-property plots ⓘ

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.
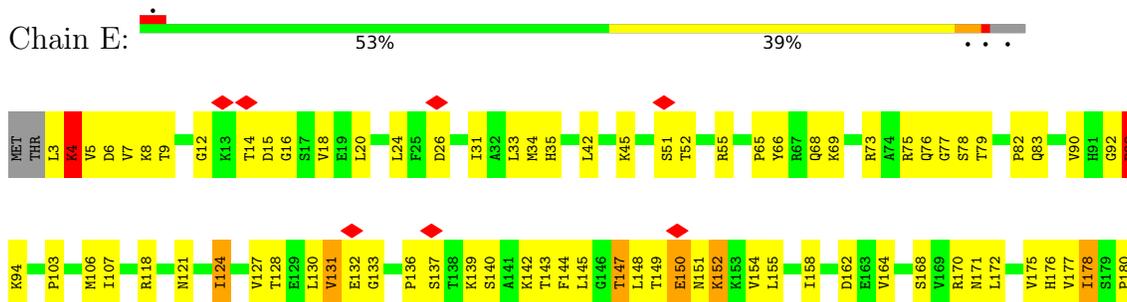
- Molecule 1: 50S ribosomal protein L2
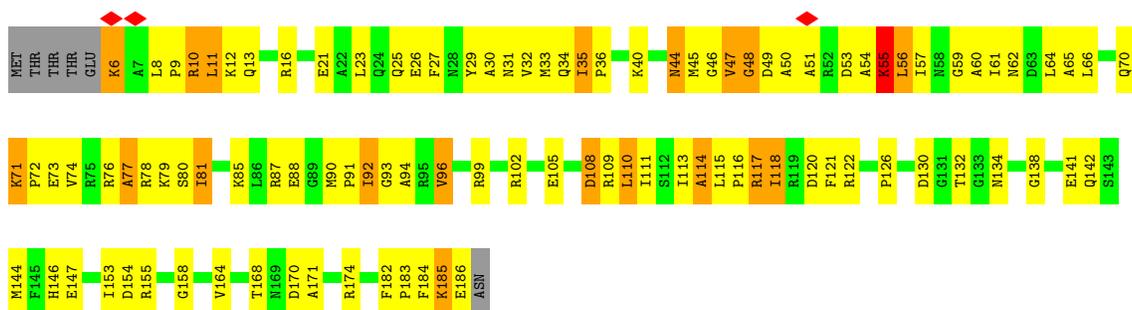
Chain C:
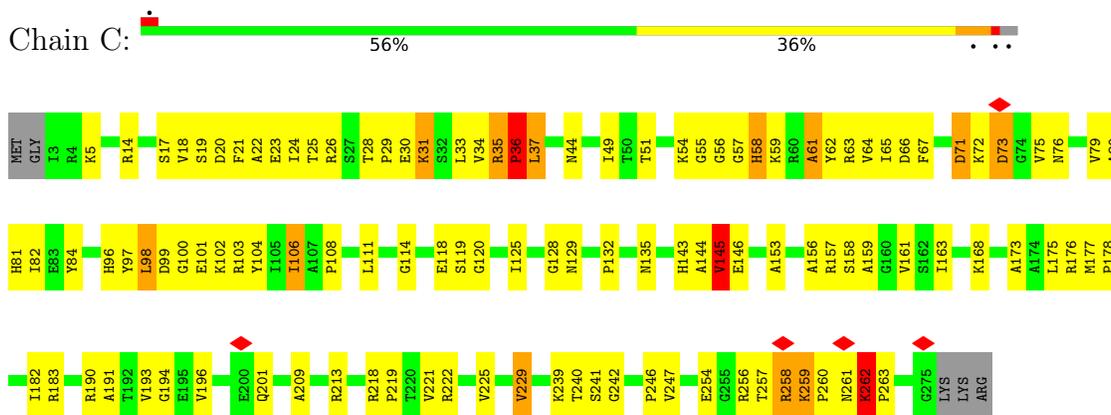
- Molecule 2: 50S ribosomal protein L3

Chain D:

- Molecule 3: 50S ribosomal protein L4

Chain E:

D181 Q182 L183 N184 T185 Y186 L189 N190 A191 D192 D193 V194 V198 E199 A200 L201 N208 S209 LYS GLU GLY ALA SER VAL

• Molecule 4: 50S ribosomal protein L5

Chain F:

42% 44% 10%

MET THR THR THR GLU K6 A7 L8 P9 R10 L11 K12 Q13 R16 E21 A22 L23 Q24 Q25 E26 F27 N28 Y29 A30 N31 V32 M33 Q34 I35 P36 K40 N44 M45 G46 V47 G48 D49 A50 A51 R52 D53 A54 K55 L56 I57 N58 G59 A60 I61 N62 D63 L64 A65 L66 Q70

K71 P72 E73 V74 R75 R76 A77 R78 K79 S80 I81 K85 L86 R87 E88 G89 M90 P91 I92 G93 A94 R95 V96 R99 R102 E105 D108 R109 L110 I111 S112 I113 A114 L115 P116 R117 I118 R119 D120 F121 R122 P126 G131 D130 T132 G133 N134 G138 E141 Q142 S143

M144 F145 H146 E147 I153 D154 R155 G158 V164 T168 N169 D170 A171 R174 F182 P183 F184 K185 E186 ASN

• Molecule 5: 50S ribosomal protein L6

Chain G:

78% 21%

MET S2 R3 I4 S13 G14 V15 D16 G21 K27 L35 E47 D48 G49 R55 R60 R61 S62 R63 S64 L65 H66 G67 L68 L76 I90 Y95 L108 G109 Y110 L115 I116 G121 E127 K131 F132 I149 R150 R151 L152 R153 R154 P155
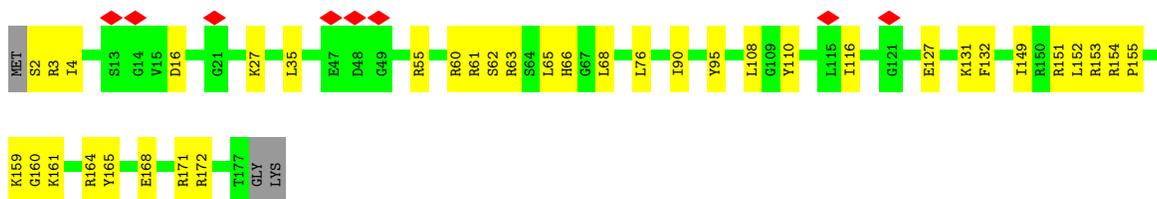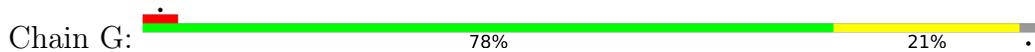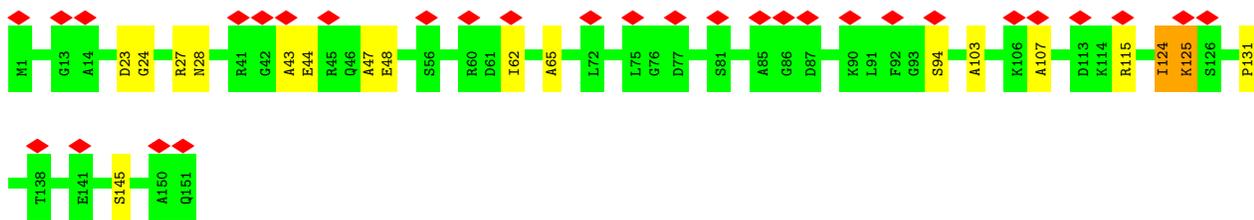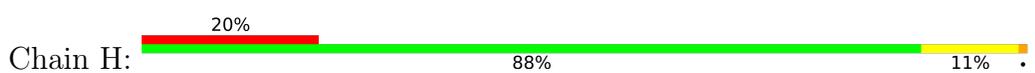
K159 G160 K161 R164 Y165 E168 R171 R172 T177 GLY LYS

• Molecule 6: 50S ribosomal protein L9

Chain H:

20% 88% 11%

M1 G13 A14 D23 G24 R27 N28 R41 G42 A43 E44 R45 Q46 A47 E48 S56 R60 D61 I62 A65 L72 L75 G76 D77 S81 A85 G86 D87 K90 L91 F92 G93 S94 A103 K106 A107 D113 K114 R115 I124 K125 S126 P131

T138 E141 S145 A150 Q151

• Molecule 7: 50S ribosomal protein L10

Chain I:

41% 62% 10% 28%

M1 A2 K3 A4 D5 K6 A7 T8 A9 V10 A11 D12 I13 A14 E15 Q16 F17 K18 A19 S20 T21 A22 T23 T26 E27 A34 N35 L36 L39 R40 R41 A42 L43 G44 D45 S46 A47 T48 Y49 T50 V51 L56 V57 A60 A61 S62 E63 A64 G65 I66 E67 G68 L69 D70 E71

L72 F73 A74 G75 P76 A80 F81 V82 K83 G84 E85 A86 V87 D88 A89 A90 K91 K94 K95 F96 A97 K98 D99 N100 L103 V104 I105 K106 Y109 M110 D111 A114 L115 S116 V117 A118 D119 K122 I123 A124 D125 L126 GLU SER ARG GLU VAL LEU LEU ALA LYS LEU ALA GLY

ALA MET LYS GLY ASN LEU SER LYS ALA ALA GLY LEU PHE ASN ALA PRO ALA SER GLN VAL ALA ARG LEU ALA ALA ALA LEU GLN GLU LYS LYS ALA GLY GLU GLU ALA ALA
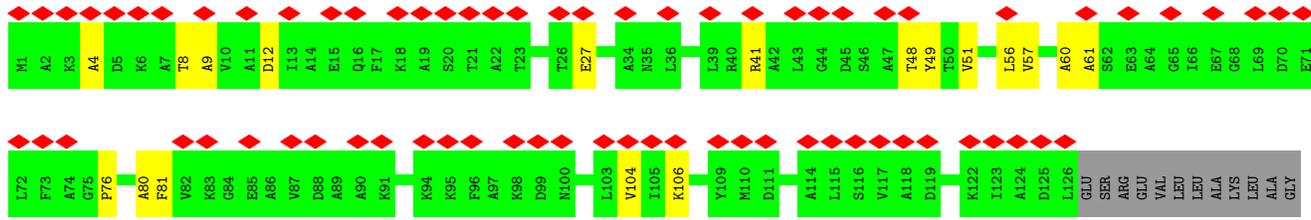
• Molecule 8: 50S ribosomal protein L11

Chain J:

54%

73% 21% 6%

MET ALA PRO LYS LYS VAL ALA GLY L10 I15 Q16 A17 G18 Q19 A20 N21 P22 A23 P24 P25 V26 G27 P28 A29 L30 G31 Q32 H33 G34 V35 N36 I37 M38 E39 F40 C41 K42 A43 Y44 N45 A46 A47 T48 E49 R52 G53 N54 V55 I56 P57 V58 E59 I60 T61 V62 Y63 E64

D65 R66 S67 F68 T69 F70 A71 P76 A77 A78 K79 L80 L81 L82 K83 A84 A85 G86 V87 Q88 K89 G90 S91 G92 E93 P94 H95 K96 T97 K98 V99 A100 K101 D105 Q106 V107 R108 E109 I110 A111 E112 T113 K114 K115 A116 D117 L118 A120 N121 D122 I123 D124 K128 I129 I130 A131
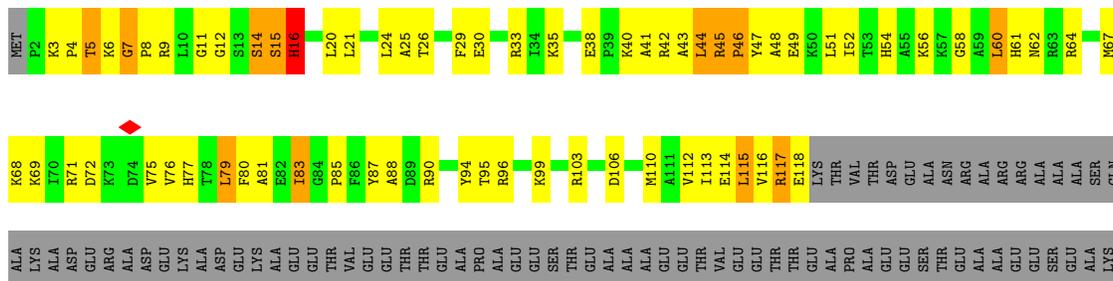
R135 G138 I139 T140 V141 E142

• Molecule 9: 50S ribosomal protein L13

Chain K:

56% 33% 9%

M1 P2 T3 Y4 T5 P6 K7 A8 G9 D10 R13 S14 W15 Y16 V17 I18 L25 G26 R27 R37 P42 T45 P46 N47 V48 D49 D52 I55 I62 S65 K68 F73 A74 Y75 R76 H77 S78 L84 R85 K86 R87 T88 E91 L92 L93 H96

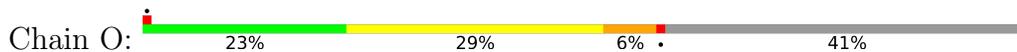P97 T98 R99 V100 M108 L109 P110 H111 N112 K113 L114 G115 R116 Q117 K121 V124 A133 A134 Q135 Q136 F140 E141 I142 K143 Q144 V145 A146 Q147

• Molecule 10: 50S ribosomal protein L14

Chain L:

67% 29%

M1 Q4 R7 L8 K9 G15 A16 K17 E18 I19 L20 C21 I22 S28 R31 I35 A41 T42 V43 K44 D45 R64 K67 E68 R69 R70 R71 A72 D73 G74 S75 Y76 I77 K78 F79 D80 A83 A84 N91 D92 P93 G103 R104 E105 L106 R107 E108 K109

K110 K113 I114 V115 E120 V121 LEU

• Molecule 11: 50S ribosomal protein L15

Chain M:

78% 21%

MET SER V3 I4 K5 L6 L9 A12 E15 R24 G30 K31 R35 K41 M49 F50 E51 I57 H58 L61 P62 K63 L64 K65 K68 Q76 V77 V78 G81 N84 G90 L98 K106 K117 L118 V122 R134 E146 L147

• Molecule 12: 50S ribosomal protein L16

Chain N:

66% 27%

M1 R10 K11 Q12 H13 H14 P15 E16 Q17 A21 S22 G23 I34 Q35 H39 I58 K59 R60 G61 W65 I68 F69 P70 P73 L74 T75 P78 A79 M83 G84 S85 P90 E91 W92 W93 V94 A95 N96 V97 K98 P99 L103 F104 Y108 P109 D110 E111
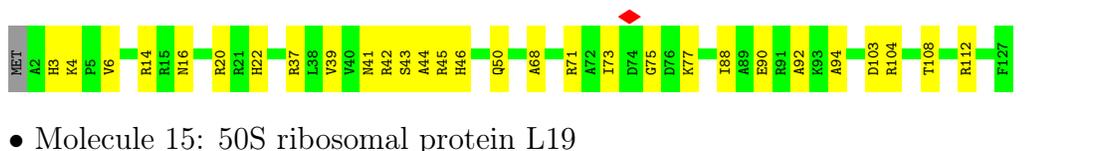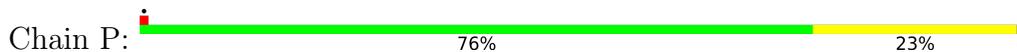
A114 R115 L118 I122 H123 K124 I127 R134 GLU GLU PHE

• Molecule 13: 50S ribosomal protein L17

Chain O:

23% 29% 6% 41%

MET P2 K3 P4 T5 K6 G7 P8 R9 L10 G11 G12 S13 S14 S15 H16 L20 L21 L24 A25 T26 F29 E30 R33 I34 K35 E38 P39 K40 A41 R42 A43 L44 R45 P46 Y47 A48 E49 K50 L51 I52 T53 H54 A55 K56 K57 G58 A59 L60 H61 N62 R63 R64 M67

K68 K69 I70 R71 D72 K73 D74 V75 V76 H77 T78 L79 F80 A81 E82 I83 G84 P85 F86 Y87 A88 D89 R90 Y94 T95 R96 K99 R103 D106 M110 A111 V112 I113 E114 L115 V116 R117 E118 LYS THR VAL THR ASP GLU ALA ASN ALA ARG ALA ALA ALA SER GLN

ALA LYS ALA ASP GLU ARG ALA ALA ASP GLU LYS ALA ASP GLU LYS ALA GLU GLU THR VAL GLU GLU THR THR GLU ALA PRO ALA GLU GLU SER THR GLU ALA ALA GLU GLU THR VAL GLU GLU THR THR GLU ALA PRO ALA GLU GLU SER THR ALA ALA GLU GLU SER GLU ALA LYS

ASP ASP THR LYS

• Molecule 14: 50S ribosomal protein L18

Chain P:

76% 23%

MET A2 H3 K4 P5 V6 R14 R15 N16 R20 R21 H22 R37 L38 V39 V40 N41 R42 S43 A44 R45 H46 Q50 A68 R71 A72 I73 D74 G75 D76 K77 I88 A89 E90 R91 A92 K93 A94 D103 R104 T108 R112 F127

• Molecule 15: 50S ribosomal protein L19

Chain Q:

70% 30%

M1 D5 Q9 R13 D14 D15 F19 H28 I32 E33 G34 S35 K36 E37 R38 V41 R48 R49 Q50 G51 S55 E56 T57 F58 T59 V60 R61 S64 E70 R71 T72 P73 P74 V75 H76 S77 I80 R88 R92 R93 L99 I109 R113

• Molecule 16: 50S ribosomal protein L20

Chain R:

79% 17%

MET A2 R6 R25 G26 R30 H41 R48 D49 R50 R53 K54 F57 R64 A68 T75 Y76 N77 E89 V90 E97 L98 A99 V100 S101 P124 S125 GLY GLU ALA ALA

• Molecule 17: 50S ribosomal protein L21

Chain S:

79% 18%

MET A2 T3 Y4 A5 I6 V7 K8 K15 V16 V22 K26 V39 D44 V58 A59 K72 H76 K77 F78 K79 H85 K86 Q92 I102 K103

• Molecule 18: 50S ribosomal protein L22

Chain T:

50% 20% 25%

MET SER THR VAL THR E6 F7 P8 S9 A10 T11 A12 K13 A14 R15 R18 D29 L30 V31 S35 V36 A39 L40 D41 R44 V54 N67 D72 T75 L76 V77 V78 V81 Y82 A83 D84 E85 R95 A96 R99 A100 F101 H109 I110 T111 V112 I113

V114 E115 S116 R117 P118 P119 LYS GLN LYS GLY ALA SER ALA ALA SER ALA ARG SER ARG ARG ALA GLN GLY SER LYS ALA ALA THR LYS SER ALA GLU THR LYS GLU GLY SER GLU

• Molecule 19: 50S ribosomal protein L23

Chain U:

44% 36% 12% 6%

MET ALA THR I4 T5 D6 P7 R8 D9 I10 I11 L12 A13 P14 K19 S20 Y21 I24 Y29 T30 F31 V32 V33 H34 P35 N38 I42 A45 I46 E47 K48 I49 V57 N58 T59 A60 R66 K67 R68 T69 R70 T71 G72 F73 G74 K75 R76 K77 S78 T79 K80

I83 V84 K91 P92 I93 D94 L95 F96 G97 ALA PRO ALA

• Molecule 20: 50S ribosomal protein L24

Chain V:

5% 42% 40% 10% 8%

M1 K2 V3 H4 V9 L10 V11 K20 G21 K22 Y27 P28 D29 R30 N31 K32 V38 I41 K42 K43 H44 T45 A46 V47 SER ALA ASN GLU ARG GLY ALA SER S56 G57 G58 I59 V60 T61 Q62 E63 V68 V71 M72 S76 D77 G78 K79 P80 T81 R82 V83 G84

Y85 R86 I87 D88 D89 E90 T91 K94 V95 R96 I97 A98 K99 T100 N101 G102 K103 D104 I105

• Molecule 21: 50S ribosomal protein L25

Chain W:

7% 45% 35% 7% 13%

MET ALA LYS THR ALA N6 I7 P8 N9 N14 K21 G22 A23 S24 R25 R28 R29 V36 L37 Y38 G39 H40 G41 T42 H46 R52 D53 F54 V57 L58 H61 G62 T63 N64 A65 T68 L69 D70 L77 A78 L79 T80 K81 A82 L83 D84 V85 H86 P87 I88

R89 R90 N91 I92 Q93 H94 A95 D96 L97 L98 V99 V100 Q101 R102 G103 E104 K105 E109 V112 L113 V114 E115 G116 D117 A118 T119 P120 G121 T122 L123 V124 T125 Q126 N129 T130 I131 E132 I133 E134 A135 E136 A137 L138 S139 I140 P141 L144 T145 V146 G150 V151 E152 A153 I157

T158 I162 S163 L164 P165 E166 G167 V168 I171 S172 D173 V179 N180 V181 A184 P185 S186 A187 E188 A189 L190 E191 E192 E193 GLY ALA GLY GLU THR GLY ALA ALA GLU ALA PRO ALA GLU GLU ALA PRO ALA GLU GLU PRO ALA GLU

• Molecule 22: 50S ribosomal protein L27

Chain X:

58%　　　27%　　　6%　　　7%

• Molecule 23: 50S ribosomal protein L28

Chain Y:

78%　　　20%
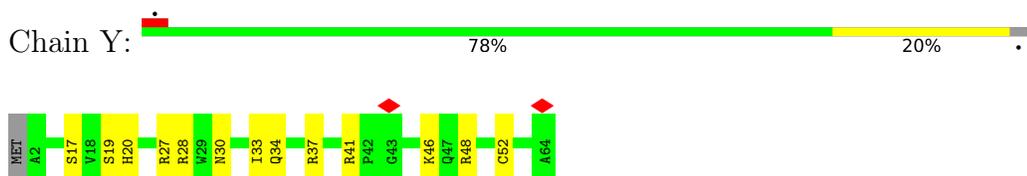
• Molecule 24: 50S ribosomal protein L29

Chain Z:

51%　　　26%　　　5%　　　18%

• Molecule 25: P-tRNAfMet

Chain B:

24%　　　44%　　　31%
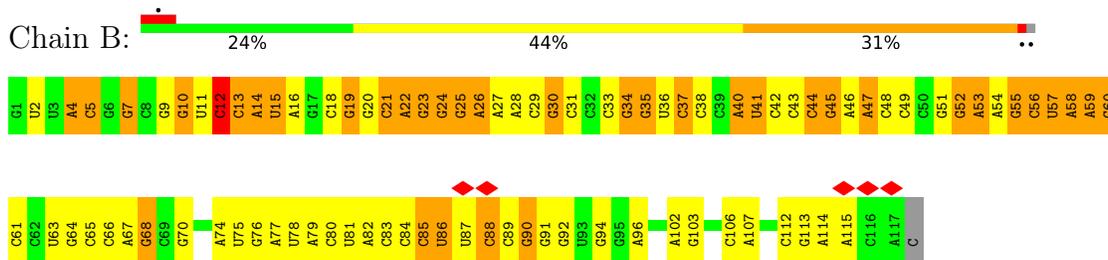
• Molecule 26: 23S rRNA

Chain A:

58%　　　33%　　　8%
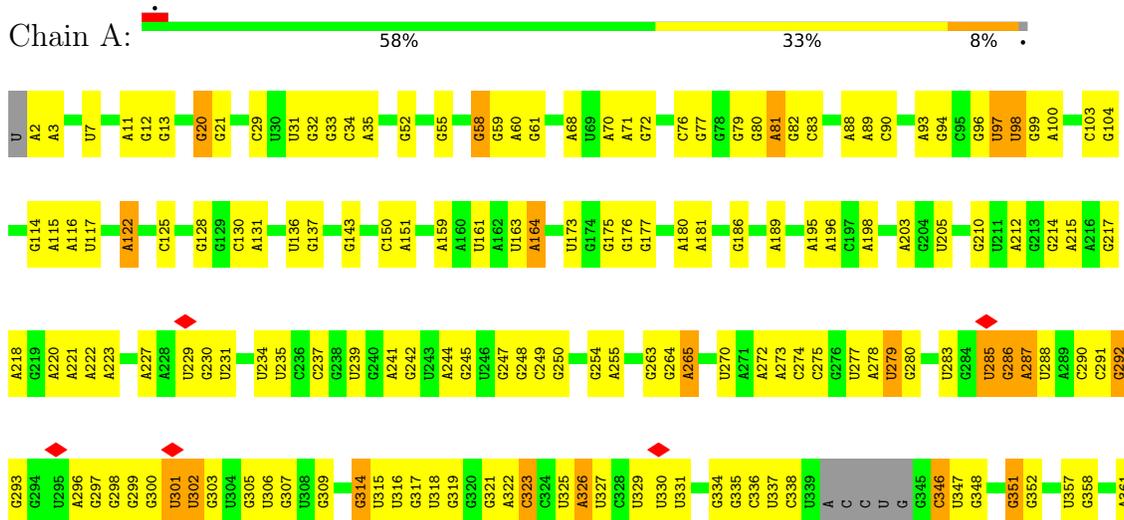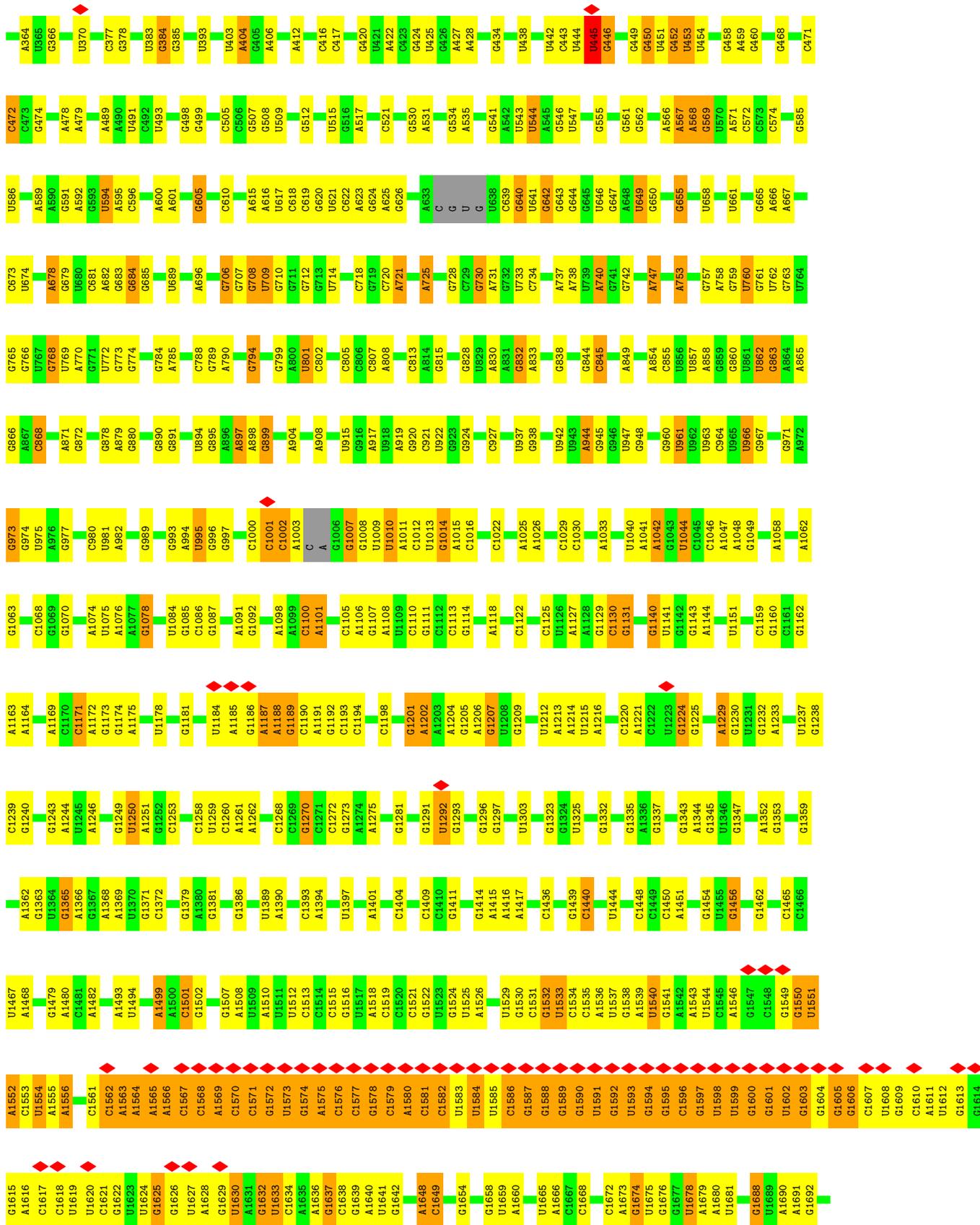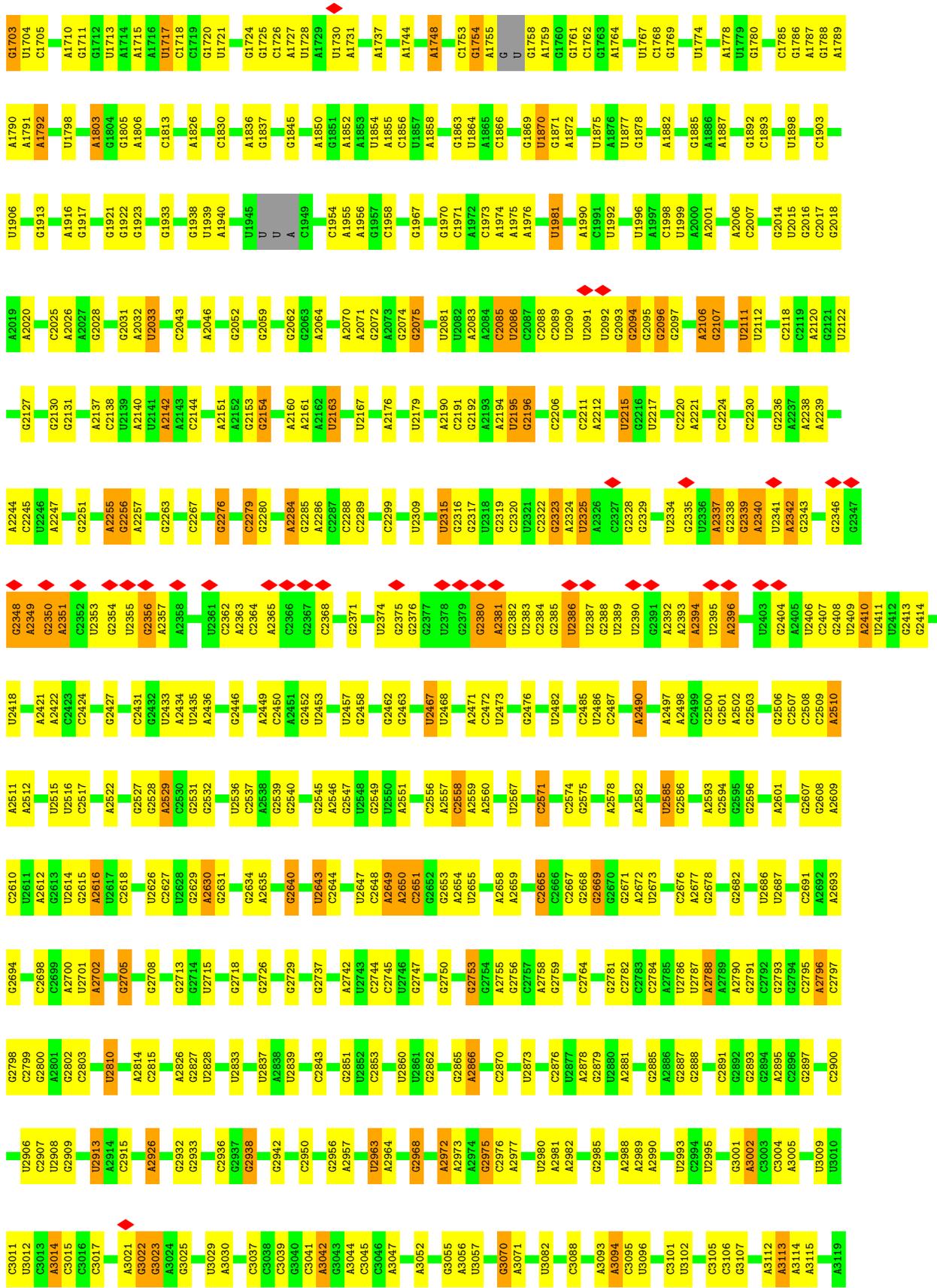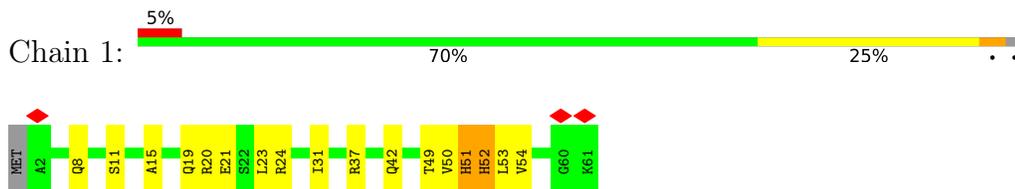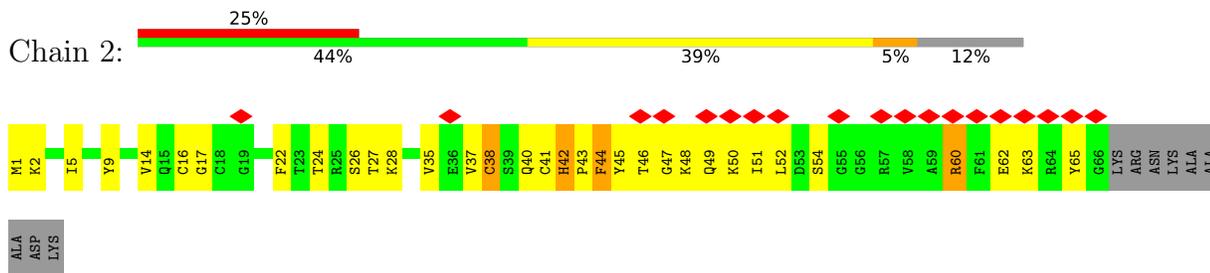
C

- Molecule 27: 50S ribosomal protein L30

Chain 1:

- Molecule 28: 50S ribosomal protein L31

Chain 2:

- Molecule 29: 50S ribosomal protein L32
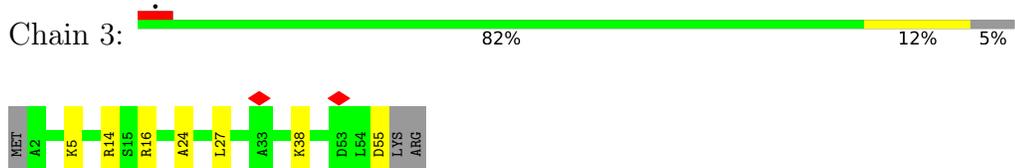
Chain 3:

- Molecule 30: 50S ribosomal protein L33 1
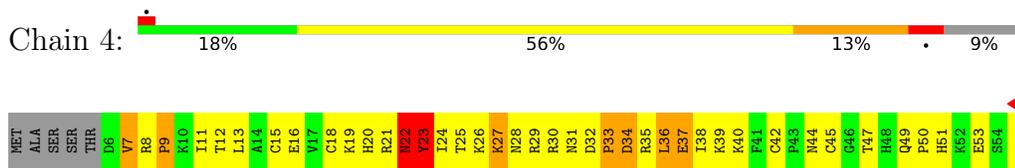
Chain 4:

- Molecule 31: 50S ribosomal protein L34
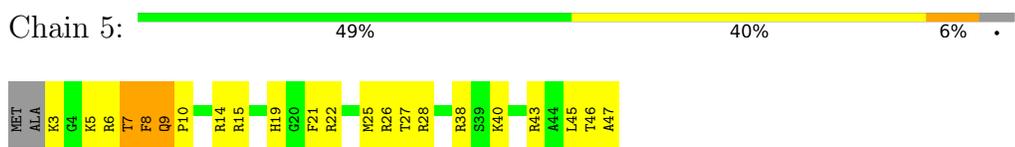
Chain 5:

- Molecule 32: 50S ribosomal protein L35

Chain 6:

- Molecule 33: 50S ribosomal protein L36

Chain 7:

49% 49% •

M1 K2 V3 K8 P9 I10 C11 C14 R15 V16 R19 H20 G21 R22 V23 M24 V25 S28 R31 Q34 R35 Q36 G37

• Molecule 34: Uncharacterized protein bL37

Chain 8:

79% 17% •

MET A2 R6 K7 K8 R9 D10 R21 A24

4 Experimental information ⓘ

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	391837	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose $(e^-/\text{Å}^2)$	1.5	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.781	Depositor
Minimum map value	-0.495	Depositor
Average map value	0.002	Depositor
Map value standard deviation	0.027	Depositor
Recommended contour level	0.05	Depositor
Map size (Å)	361.19998, 361.19998, 361.19998	wwPDB
Map dimensions	344, 344, 344	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.05, 1.05, 1.05	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$|Z|$ >5	RMSZ	#$|Z|$ >5
1	C	1.01	0/2140	1.16	14/2879 (0.5%)
2	D	0.53	0/1609	0.77	2/2165 (0.1%)
3	E	0.86	0/1576	1.06	3/2132 (0.1%)
4	F	0.63	0/1459	1.13	14/1962 (0.7%)
5	G	0.31	0/1369	0.60	0/1848
6	H	0.30	0/1027	0.69	2/1398 (0.1%)
7	I	0.22	0/925	0.56	0/1246
8	J	0.27	0/1006	0.71	0/1364
9	K	0.80	0/1165	1.21	16/1578 (1.0%)
10	L	0.89	0/938	1.12	6/1257 (0.5%)
11	M	0.49	0/1091	0.72	0/1457
12	N	0.92	0/1100	1.19	7/1482 (0.5%)
13	O	0.84	1/936 (0.1%)	1.33	16/1256 (1.3%)
14	P	0.38	0/966	0.62	0/1298
15	Q	0.46	0/921	0.70	0/1236
16	R	0.51	0/1000	0.64	0/1341
17	S	0.44	0/778	0.63	0/1048
18	T	0.95	1/887 (0.1%)	1.16	7/1204 (0.6%)
19	U	0.75	0/749	1.04	4/1006 (0.4%)
20	V	0.66	0/737	1.05	4/987 (0.4%)
21	W	0.65	1/1422 (0.1%)	1.18	9/1941 (0.5%)
22	X	0.92	0/613	1.04	1/821 (0.1%)
23	Y	0.52	0/478	0.77	0/641
24	Z	0.69	0/530	0.92	0/708
25	B	0.32	0/2797	0.55	1/4357 (0.0%)
26	A	0.48	0/74597	0.51	4/116386 (0.0%)
27	1	0.84	0/486	1.00	1/651 (0.2%)
28	2	0.40	0/520	0.84	1/698 (0.1%)
29	3	0.54	0/427	0.70	0/572
30	4	0.71	0/424	1.05	2/567 (0.4%)
31	5	0.95	0/375	1.34	4/493 (0.8%)
32	6	1.00	0/507	1.03	1/672 (0.1%)
33	7	0.85	0/302	1.02	0/401
34	8	0.46	0/191	0.75	0/247

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$|Z|$>5	RMSZ	#$|Z|$>5
All	All	0.54	3/106048 (0.0%)	0.65	119/159299 (0.1%)

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
1	C	0	4
2	D	0	2
3	E	0	5
4	F	0	1
9	K	0	1
12	N	0	1
13	O	0	1
18	T	0	1
22	X	0	2
All	All	0	18

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	W	7	ILE	C-N	6.25	1.39	1.33
18	T	117	ARG	C-N	5.74	1.40	1.33
13	O	45	ARG	C-N	5.50	1.40	1.34

All (119) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	W	62	GLY	N-CA-C	19.02	133.80	111.93
12	N	61	GLY	N-CA-C	14.65	128.50	111.36
21	W	61	HIS	CA-C-N	11.66	131.18	120.10
21	W	61	HIS	C-N-CA	11.66	131.18	120.10
4	F	117	ARG	N-CA-C	10.63	122.86	111.28
4	F	114	ALA	N-CA-C	10.38	122.59	111.28
18	T	118	PRO	N-CA-C	9.34	122.09	110.70
13	O	83	ILE	N-CA-C	8.89	118.89	110.53
9	K	10	ASP	N-CA-C	8.51	120.56	111.28
9	K	27	ARG	N-CA-C	-8.38	102.65	113.12
4	F	55	LYS	N-CA-C	8.27	120.29	111.28
18	T	118	PRO	CA-N-CD	-8.15	100.58	112.00
12	N	111	GLU	N-CA-C	7.92	119.91	111.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
31	5	8	PHE	N-CA-C	7.88	119.50	111.07
31	5	7	THR	N-CA-C	7.84	127.50	110.80
13	O	45	ARG	CA-C-N	-7.61	111.13	119.19
13	O	45	ARG	C-N-CA	-7.61	111.13	119.19
4	F	56	LEU	N-CA-C	7.48	120.38	111.33
6	H	124	ILE	CA-C-N	7.03	134.97	121.54
6	H	124	ILE	C-N-CA	7.03	134.97	121.54
28	2	54	SER	N-CA-C	6.99	119.99	110.55
18	T	118	PRO	CB-CA-C	6.92	119.36	110.92
20	V	58	GLY	N-CA-C	6.73	120.81	112.73
9	K	9	GLY	N-CA-C	6.72	120.79	112.73
30	4	22	ASN	N-CA-C	6.70	120.40	110.48
13	O	46	PRO	CA-N-CD	-6.66	102.68	112.00
10	L	108	GLU	N-CA-C	-6.65	96.64	110.80
9	K	76	ARG	N-CA-C	-6.61	98.12	108.90
4	F	54	ALA	N-CA-C	6.55	118.50	111.36
26	A	2085	C	C2'-C3'-O3'	6.40	119.10	109.50
10	L	110	LYS	N-CA-C	6.39	126.08	113.29
13	O	44	LEU	N-CA-C	-6.34	104.37	111.28
22	X	11	ARG	N-CA-C	-6.33	99.56	109.25
9	K	145	VAL	N-CA-C	6.30	116.95	107.75
9	K	7	LYS	N-CA-C	-6.21	102.34	110.53
30	4	23	TYR	N-CA-C	-6.18	98.91	109.24
18	T	31	VAL	N-CA-CB	-6.16	104.35	112.36
9	K	134	ALA	N-CA-C	-6.14	102.85	110.41
4	F	153	ILE	N-CA-CB	-6.08	106.57	112.65
13	O	16	HIS	N-CA-C	-6.08	104.65	111.28
13	O	88	ALA	CA-C-N	6.07	136.88	126.32
13	O	88	ALA	C-N-CA	6.07	136.88	126.32
27	1	52	HIS	N-CA-C	6.07	117.97	111.36
4	F	77	ALA	N-CA-C	6.05	119.39	109.76
25	B	12	C	O4'-C1'-C2'	-6.05	101.55	107.60
9	K	5	THR	CA-C-N	-6.04	113.54	119.76
9	K	5	THR	C-N-CA	-6.04	113.54	119.76
4	F	71	LYS	CA-C-N	-6.01	113.59	119.90
4	F	71	LYS	C-N-CA	-6.01	113.59	119.90
21	W	116	GLY	N-CA-C	5.98	120.48	110.56
4	F	35	ILE	CA-C-N	-5.95	114.48	120.31
4	F	35	ILE	C-N-CA	-5.95	114.48	120.31
1	C	262	LYS	CA-C-N	-5.95	114.63	120.52
1	C	262	LYS	C-N-CA	-5.95	114.63	120.52
19	U	8	ARG	N-CA-C	-5.95	106.67	114.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	6	15	ARG	CB-CG-CD	-5.88	97.77	111.30
10	L	110	LYS	CA-C-N	-5.87	113.34	123.25
10	L	110	LYS	C-N-CA	-5.87	113.34	123.25
1	C	259	LYS	CA-C-N	-5.86	114.22	120.03
1	C	259	LYS	C-N-CA	-5.86	114.22	120.03
9	K	5	THR	N-CA-C	-5.85	96.09	108.73
4	F	48	GLY	N-CA-C	-5.78	107.67	115.36
10	L	109	LYS	N-CA-C	5.78	117.83	108.41
1	C	145	VAL	CA-C-N	5.77	132.56	121.54
1	C	145	VAL	C-N-CA	5.77	132.56	121.54
9	K	136	GLN	CA-C-N	-5.74	113.84	119.76
9	K	136	GLN	C-N-CA	-5.74	113.84	119.76
12	N	59	LYS	N-CA-C	-5.74	102.80	110.55
13	O	7	GLY	CA-C-N	-5.73	114.36	120.03
13	O	7	GLY	C-N-CA	-5.73	114.36	120.03
20	V	89	ASP	N-CA-C	-5.73	105.04	111.28
21	W	173	ASP	CA-C-N	5.70	125.80	119.87
21	W	173	ASP	C-N-CA	5.70	125.80	119.87
13	O	30	GLU	N-CA-C	5.66	117.53	111.36
20	V	79	LYS	CA-C-N	-5.56	114.53	120.03
20	V	79	LYS	C-N-CA	-5.56	114.53	120.03
4	F	141	GLU	CA-C-N	5.55	132.13	121.54
4	F	141	GLU	C-N-CA	5.55	132.13	121.54
18	T	117	ARG	CA-C-N	-5.54	114.67	120.38
18	T	117	ARG	C-N-CA	-5.54	114.67	120.38
10	L	64	ARG	CB-CG-CD	-5.51	98.63	111.30
19	U	12	LEU	CA-CB-CG	5.50	135.56	116.30
12	N	61	GLY	CA-C-N	5.50	131.56	122.43
12	N	61	GLY	C-N-CA	5.50	131.56	122.43
13	O	3	LYS	CA-C-N	-5.48	114.14	119.78
13	O	3	LYS	C-N-CA	-5.48	114.14	119.78
3	E	147	THR	N-CA-C	-5.47	105.32	111.28
1	C	80	ALA	N-CA-C	-5.46	106.67	113.55
9	K	133	ALA	N-CA-C	-5.44	105.35	111.28
1	C	28	THR	CA-C-N	-5.42	114.66	120.03
1	C	28	THR	C-N-CA	-5.42	114.66	120.03
13	O	60	LEU	N-CA-C	-5.42	99.26	110.80
9	K	15	TRP	N-CA-C	5.41	117.68	110.53
21	W	89	ARG	N-CA-C	-5.37	102.25	110.14
31	5	9	GLN	CA-C-N	-5.35	114.21	119.93
31	5	9	GLN	C-N-CA	-5.35	114.21	119.93
1	C	157	ARG	CB-CG-CD	-5.32	99.07	111.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
9	K	2	PRO	CA-N-CD	-5.29	104.59	112.00
18	T	116	SER	N-CA-C	5.29	117.73	108.52
9	K	108	MET	CA-CB-CG	5.29	124.68	114.10
26	A	445	U	P-O3'-C3'	5.29	128.13	120.20
19	U	11	ILE	CA-C-N	-5.29	113.99	122.08
19	U	11	ILE	C-N-CA	-5.29	113.99	122.08
26	A	2085	C	P-O3'-C3'	5.26	128.09	120.20
2	D	156	THR	CA-C-N	-5.23	113.30	119.84
2	D	156	THR	C-N-CA	-5.23	113.30	119.84
3	E	93	PRO	CA-C-N	5.23	134.56	121.80
3	E	93	PRO	C-N-CA	5.23	134.56	121.80
26	A	2094	G	P-O3'-C3'	5.18	127.98	120.20
13	O	45	ARG	C-N-CD	5.14	146.07	125.00
1	C	98	LEU	N-CA-C	-5.11	105.79	111.36
21	W	152	GLU	N-CA-C	5.09	117.40	109.52
1	C	28	THR	N-CA-C	5.06	117.95	110.32
21	W	122	THR	N-CA-C	5.05	117.72	109.59
12	N	68	ILE	CA-C-N	-5.04	113.97	121.83
12	N	68	ILE	C-N-CA	-5.04	113.97	121.83
1	C	201	GLN	CA-C-N	5.03	131.15	121.54
1	C	201	GLN	C-N-CA	5.03	131.15	121.54
13	O	41	ALA	N-CA-C	5.02	116.76	111.28

There are no chirality outliers.

All (18) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	144	ALA	Peptide
1	C	229	VAL	Peptide
1	C	246	PRO	Peptide
1	C	61	ALA	Peptide
2	D	153	GLY	Peptide
2	D	156	THR	Peptide
3	E	131	VAL	Peptide
3	E	137	SER	Peptide
3	E	158	ILE	Peptide
3	E	162	ASP	Peptide
3	E	93	PRO	Peptide
4	F	81	ILE	Peptide
9	K	91	GLU	Peptide
12	N	78	PRO	Peptide
13	O	61	HIS	Peptide

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Mol	Chain	Res	Type	Group
18	T	95	ARG	Peptide
22	X	83	VAL	Peptide
22	X	84	ALA	Peptide

5.2   Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	C	2097	0	2147	212	0
2	D	1587	0	1629	70	0
3	E	1553	0	1587	149	0
4	F	1437	0	1463	212	0
5	G	1348	0	1399	26	0
6	H	1018	0	988	12	0
7	I	918	0	959	13	0
8	J	990	0	1021	28	0
9	K	1138	0	1174	119	0
10	L	930	0	989	58	0
11	M	1078	0	1151	46	0
12	N	1074	0	1116	67	0
13	O	919	0	959	158	0
14	P	956	0	989	41	0
15	Q	907	0	938	31	0
16	R	988	0	1038	20	0
17	S	768	0	820	48	0
18	T	873	0	909	54	0
19	U	739	0	777	123	0
20	V	731	0	782	114	0
21	W	1407	0	1423	159	0
22	X	604	0	622	56	0
23	Y	470	0	484	9	0
24	Z	527	0	537	56	0
25	B	2501	0	1269	294	0
26	A	66623	0	33514	1038	0
27	1	483	0	513	22	0
28	2	510	0	497	60	0
29	3	423	0	463	12	0
30	4	416	0	421	96	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	5	372	0	406	41	0
32	6	502	0	541	31	0
33	7	298	0	320	26	0
34	8	189	0	205	4	0
All	All	97374	0	64050	2879	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 18.

All (2879) 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)
17:S:3:THR:CG2	17:S:102:ILE:HD13	1.26	1.66
19:U:83:ILE:HD11	26:A:1456:G:C2	1.14	1.64
26:A:1561:C:C4	26:A:1562:C:C5	1.86	1.62
26:A:1565:A:N3	26:A:1606:G:C5	1.69	1.60
17:S:58:VAL:HG23	17:S:103:LYS:CG	1.24	1.60
26:A:1561:C:C4	26:A:1562:C:H5	1.16	1.59
13:O:29:PHE:CB	13:O:79:LEU:HD12	1.29	1.54
4:F:117:ARG:NH1	4:F:146:HIS:CD2	1.72	1.54
3:E:192:ASP:HB3	11:M:5:LYS:NZ	1.21	1.53
3:E:144:PHE:CG	3:E:148:LEU:HD11	1.42	1.53
20:V:4:HIS:CE1	20:V:96:ARG:NH1	1.75	1.53
26:A:1580:A:N6	26:A:1592:G:C5	1.78	1.51
19:U:83:ILE:CD1	26:A:1456:G:C2	1.85	1.51
33:7:22:ARG:NH2	33:7:37:GLY:HA2	1.25	1.51
17:S:3:THR:CG2	17:S:102:ILE:CD1	1.83	1.51
21:W:77:LEU:HB3	21:W:100:VAL:CG2	1.40	1.48
1:C:25:THR:HG21	1:C:81:HIS:CA	1.44	1.47
17:S:3:THR:HG22	17:S:102:ILE:CD1	1.38	1.47
20:V:4:HIS:CE1	20:V:96:ARG:HH12	1.32	1.45
3:E:144:PHE:CD1	3:E:148:LEU:HD21	1.51	1.44
17:S:58:VAL:CG2	17:S:103:LYS:HG2	1.48	1.43
4:F:132:THR:CG2	14:P:6:VAL:HG21	1.48	1.43
3:E:182:GLN:NE2	26:A:706:G:H8	1.06	1.43
2:D:154:CYS:CB	26:A:2798:G:O3'	1.68	1.42
25:B:20:G:N2	25:B:63:U:H3	1.11	1.42
26:A:1580:A:N6	26:A:1592:G:C4	1.85	1.42
9:K:142:ILE:CG2	26:A:1130:C:H41	1.33	1.41
26:A:1565:A:N3	26:A:1606:G:C6	1.86	1.41
19:U:4:ILE:HD13	24:Z:58:TYR:CE1	1.57	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:V:2:LYS:HD2	20:V:83:VAL:CG1	1.52	1.39
2:D:155:ALA:CB	26:A:2796:A:C8	2.02	1.39
19:U:19:LYS:HD2	26:A:1508:A:N6	1.30	1.39
25:B:18:C:C2'	25:B:19:G:H5"	1.51	1.37
4:F:51:ALA:O	4:F:85:LYS:NZ	1.58	1.36
25:B:24:G:C5	25:B:56:C:O2	1.75	1.36
1:C:26:ARG:HD2	1:C:81:HIS:CD2	1.61	1.35
19:U:83:ILE:HD11	26:A:1456:G:N2	1.42	1.34
13:O:29:PHE:HB3	13:O:79:LEU:CD1	1.54	1.34
25:B:29:C:N3	25:B:55:G:N2	1.76	1.34
26:A:1578:G:C4	26:A:1592:G:N1	1.97	1.33
13:O:90:ARG:NH2	13:O:118:GLU:HG3	1.41	1.32
13:O:90:ARG:HH22	13:O:118:GLU:CG	1.39	1.32
19:U:4:ILE:HD13	24:Z:58:TYR:CZ	1.63	1.32
4:F:183:PRO:O	4:F:184:PHE:CD2	1.79	1.32
26:A:1580:A:C6	26:A:1592:G:C4	2.17	1.31
25:B:4:A:C2	25:B:25:G:O6	1.84	1.31
3:E:144:PHE:CE1	3:E:148:LEU:HD21	1.66	1.30
13:O:29:PHE:CG	13:O:79:LEU:HD11	1.65	1.30
25:B:24:G:N7	25:B:56:C:O2	1.64	1.29
13:O:29:PHE:CB	13:O:79:LEU:CD1	2.07	1.29
13:O:81:ALA:O	13:O:85:PRO:CD	1.79	1.29
22:X:17:ALA:CB	26:A:2485:C:OP2	1.80	1.29
9:K:142:ILE:CG2	26:A:1130:C:N4	1.94	1.28
26:A:1561:C:C5	26:A:1562:C:H5	1.49	1.28
26:A:1570:C:N4	26:A:1602:U:O2	1.66	1.28
19:U:83:ILE:HD11	26:A:1456:G:N3	1.48	1.28
26:A:1595:G:H5"	26:A:1596:C:C6	1.68	1.27
25:B:18:C:H2'	25:B:19:G:C5'	1.63	1.27
30:4:15:CYS:O	30:4:20:HIS:CB	1.82	1.27
30:4:15:CYS:O	30:4:20:HIS:HB2	1.27	1.27
26:A:1565:A:C2	26:A:1606:G:N7	2.01	1.26
2:D:154:CYS:N	26:A:2798:G:O2'	1.67	1.26
19:U:19:LYS:NZ	26:A:1508:A:H61	1.31	1.26
4:F:73:GLU:HG2	25:B:42:C:C5	1.71	1.26
4:F:183:PRO:O	4:F:184:PHE:HD2	0.92	1.26
19:U:19:LYS:CD	26:A:1508:A:N6	1.98	1.26
25:B:19:G:N2	25:B:65:C:N3	1.83	1.26
13:O:33:ARG:HD3	13:O:114:GLU:OE2	1.19	1.26
13:O:75:VAL:O	13:O:79:LEU:HB3	1.09	1.25
1:C:25:THR:CG2	1:C:81:HIS:HB3	1.66	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:O:29:PHE:CG	13:O:79:LEU:CD1	2.16	1.25
3:E:151:ASN:O	3:E:152:LYS:CG	1.83	1.25
13:O:33:ARG:CD	13:O:114:GLU:OE2	1.84	1.25
26:A:1595:G:H8	26:A:1596:C:C6	1.54	1.24
4:F:51:ALA:C	4:F:85:LYS:NZ	1.87	1.24
13:O:81:ALA:O	13:O:85:PRO:HD2	1.11	1.24
26:A:1580:A:C6	26:A:1591:U:O2	1.91	1.24
4:F:46:GLY:O	4:F:47:VAL:CG2	1.86	1.23
25:B:40:A:N6	28:2:1:MET:H2	1.37	1.23
21:W:105:LYS:HZ1	21:W:136:GLU:CD	1.46	1.23
26:A:1570:C:N4	26:A:1602:U:C2	2.07	1.23
1:C:25:THR:HG21	1:C:81:HIS:CB	1.69	1.22
17:S:58:VAL:CG2	17:S:103:LYS:CG	2.07	1.22
26:A:1561:C:N3	26:A:1562:C:C5	2.06	1.21
9:K:142:ILE:HG21	26:A:1130:C:N4	1.50	1.21
1:C:96:HIS:CE1	1:C:102:LYS:HZ3	1.57	1.21
2:D:154:CYS:HB2	26:A:2799:C:P	1.80	1.20
14:P:41:ASN:ND2	25:B:7:G:O2'	1.73	1.20
21:W:6:ASN:HB2	21:W:138:LEU:O	1.36	1.20
26:A:1565:A:C2	26:A:1606:G:C5	2.28	1.20
9:K:141:GLU:CD	9:K:143:LYS:HG2	1.66	1.20
13:O:8:PRO:HG3	26:A:1870:U:C4	1.75	1.20
3:E:144:PHE:CE1	3:E:148:LEU:CD2	2.23	1.20
10:L:7:ARG:NH2	10:L:20:LEU:HD12	1.55	1.20
14:P:50:GLN:NE2	25:B:7:G:H21	1.38	1.20
26:A:1590:G:C5	26:A:1591:U:H5	1.58	1.20
1:C:72:LYS:HG3	1:C:75:VAL:HG21	1.21	1.19
2:D:154:CYS:SG	26:A:2796:A:H5"	1.80	1.19
3:E:7:VAL:HG23	3:E:16:GLY:C	1.65	1.19
21:W:100:VAL:CG1	21:W:137:ALA:HB1	1.71	1.19
25:B:24:G:HO2'	25:B:56:C:N4	1.37	1.19
25:B:25:G:N2	25:B:114:A:N3	1.88	1.19
25:B:24:G:O2'	25:B:56:C:N4	1.74	1.19
1:C:54:LYS:HZ2	26:A:2031:G:C4'	1.55	1.19
3:E:151:ASN:O	3:E:152:LYS:HG3	1.01	1.19
8:J:96:LYS:CE	21:W:120:PRO:HB2	1.73	1.19
2:D:154:CYS:HB3	26:A:2798:G:C3'	1.72	1.18
2:D:155:ALA:CB	26:A:2796:A:N7	2.04	1.18
3:E:182:GLN:NE2	26:A:706:G:C8	1.97	1.17
26:A:1595:G:H5"	26:A:1596:C:C5	1.80	1.17
33:7:22:ARG:NH2	33:7:37:GLY:CA	2.01	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:25:THR:CG2	1:C:81:HIS:CB	2.20	1.17
21:W:105:LYS:NZ	21:W:136:GLU:CD	2.03	1.16
12:N:85:SER:OG	22:X:8:SER:HB3	1.43	1.16
2:D:154:CYS:HB3	26:A:2798:G:O3'	1.24	1.16
26:A:1580:A:N6	26:A:1591:U:C2	2.13	1.16
1:C:73:ASP:HB3	1:C:120:GLY:CA	1.76	1.16
9:K:142:ILE:HG22	26:A:1130:C:H41	1.03	1.16
21:W:6:ASN:CB	21:W:138:LEU:O	1.93	1.16
4:F:46:GLY:O	4:F:47:VAL:HG22	1.00	1.15
22:X:17:ALA:HB2	26:A:2485:C:OP2	1.34	1.15
3:E:144:PHE:CD1	3:E:148:LEU:HD11	1.80	1.15
10:L:7:ARG:HH22	10:L:20:LEU:HD12	1.00	1.15
1:C:258:ARG:HA	26:A:2015:U:H5"	1.28	1.15
13:O:9:ARG:HG2	13:O:14:SER:HB3	1.25	1.15
19:U:91:LYS:HG2	19:U:92:PRO:CD	1.77	1.15
20:V:45:THR:O	26:A:571:A:O2'	1.65	1.15
26:A:1578:G:C4	26:A:1592:G:C2	2.26	1.15
33:7:22:ARG:HH22	33:7:37:GLY:CA	1.49	1.15
2:D:155:ALA:HB3	26:A:2796:A:H8	1.08	1.14
9:K:3:THR:CG2	26:A:1113:C:O2	1.96	1.14
21:W:105:LYS:CE	21:W:136:GLU:OE2	1.96	1.14
30:4:29:ARG:HH21	30:4:34:ASP:CB	1.58	1.14
19:U:4:ILE:CD1	24:Z:58:TYR:CE1	2.31	1.14
26:A:1601:G:C2'	26:A:1602:U:H5'	1.78	1.14
28:2:41:CYS:HB3	28:2:43:PRO:HD2	1.29	1.14
2:D:154:CYS:HA	26:A:2799:C:H5'	1.17	1.13
4:F:132:THR:HG21	14:P:6:VAL:CG2	1.75	1.13
26:A:1595:G:C8	26:A:1596:C:C6	2.36	1.13
4:F:45:MET:CE	4:F:64:LEU:HD21	1.78	1.13
26:A:1595:G:C8	26:A:1596:C:H6	1.66	1.13
30:4:19:LYS:CD	30:4:44:ASN:HB2	1.77	1.13
19:U:19:LYS:CE	26:A:1508:A:H61	1.60	1.13
26:A:1590:G:C5	26:A:1591:U:C5	2.36	1.12
26:A:1595:G:C5'	26:A:1596:C:C6	2.31	1.13
17:S:3:THR:HG21	17:S:102:ILE:CD1	1.62	1.12
21:W:77:LEU:CB	21:W:100:VAL:HG23	1.79	1.12
25:B:19:G:H2'	25:B:20:G:H5'	1.32	1.12
20:V:4:HIS:CE1	20:V:96:ARG:CZ	2.33	1.12
1:C:96:HIS:CE1	1:C:102:LYS:NZ	2.16	1.11
4:F:46:GLY:C	4:F:47:VAL:HG22	1.74	1.11
9:K:25:LEU:O	26:A:1258:C:OP1	1.65	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:O:79:LEU:HG	13:O:83:ILE:HD12	1.27	1.11
26:A:1580:A:N1	26:A:1592:G:C1'	2.14	1.11
9:K:141:GLU:OE1	9:K:143:LYS:HG2	1.50	1.11
13:O:90:ARG:NH2	13:O:118:GLU:CG	2.04	1.11
14:P:42:ARG:NH1	25:B:48:C:OP1	1.83	1.11
2:D:154:CYS:CA	26:A:2799:C:H5'	1.80	1.11
25:B:4:A:H2	25:B:25:G:O6	1.24	1.11
25:B:10:G:N1	25:B:107:A:C2	2.17	1.11
25:B:58:A:C5	25:B:59:A:N7	2.19	1.11
3:E:144:PHE:CD1	3:E:148:LEU:CD2	2.31	1.11
21:W:100:VAL:CG1	21:W:137:ALA:CB	2.27	1.11
4:F:51:ALA:HB2	4:F:90:MET:HE1	1.22	1.10
21:W:101:GLN:HB3	21:W:104:GLU:HB2	1.30	1.10
13:O:90:ARG:NH2	13:O:118:GLU:CB	2.14	1.10
26:A:1601:G:H2'	26:A:1602:U:H5'	1.31	1.10
2:D:155:ALA:HB2	26:A:2796:A:C8	1.78	1.10
9:K:112:ASN:ND2	26:A:650:G:OP1	1.84	1.10
26:A:1581:C:H42	26:A:1591:U:H1'	1.14	1.10
17:S:103:LYS:HZ3	17:S:103:LYS:HA	1.06	1.10
3:E:192:ASP:CB	11:M:5:LYS:NZ	2.14	1.09
1:C:25:THR:HG23	1:C:81:HIS:HB3	1.17	1.09
21:W:9:ASN:ND2	21:W:57:VAL:HG13	1.66	1.09
24:Z:6:THR:HG22	24:Z:10:LEU:HD11	1.21	1.09
24:Z:13:LEU:HD11	24:Z:17:GLU:HB2	1.34	1.09
30:4:15:CYS:CB	30:4:20:HIS:HA	1.83	1.09
1:C:25:THR:CG2	1:C:81:HIS:CA	2.30	1.09
20:V:28:PRO:HG2	26:A:83:C:OP1	1.49	1.09
25:B:57:U:H2'	25:B:58:A:H5"	1.35	1.09
25:B:78:U:O2	26:A:977:G:O2'	1.71	1.09
26:A:1580:A:N6	26:A:1592:G:N7	1.99	1.09
1:C:26:ARG:CD	1:C:81:HIS:CD2	2.36	1.08
3:E:7:VAL:N	3:E:16:GLY:O	1.84	1.08
26:A:2510:A:P	30:4:31:ASN:OD1	2.10	1.08
30:4:19:LYS:HD2	30:4:44:ASN:HB2	1.10	1.08
25:B:40:A:N6	28:2:1:MET:N	2.01	1.08
26:A:1580:A:N6	26:A:1592:G:C8	2.07	1.08
30:4:15:CYS:HB2	30:4:20:HIS:HA	1.35	1.08
9:K:13:ARG:NH2	9:K:49:ASP:O	1.86	1.08
20:V:4:HIS:ND1	20:V:96:ARG:NH1	2.02	1.08
13:O:75:VAL:O	13:O:79:LEU:CB	2.01	1.08
17:S:59:ALA:O	17:S:103:LYS:NZ	1.87	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:W:100:VAL:HG12	21:W:137:ALA:CB	1.84	1.07
25:B:58:A:H5'	25:B:58:A:H8	1.17	1.07
1:C:30:GLU:OE1	1:C:33:LEU:HD12	1.54	1.07
4:F:73:GLU:OE1	25:B:41:U:H5	1.35	1.07
19:U:19:LYS:HZ2	26:A:1508:A:N6	1.52	1.07
26:A:1580:A:N6	26:A:1591:U:O2	1.87	1.07
2:D:155:ALA:HB3	26:A:2796:A:C8	1.81	1.07
21:W:100:VAL:HG12	21:W:137:ALA:HB2	1.37	1.07
10:L:80:ASP:OD2	15:Q:61:ARG:NH1	1.86	1.06
21:W:77:LEU:CB	21:W:100:VAL:CG2	2.33	1.06
20:V:62:GLN:HG2	20:V:63:GLU:N	1.53	1.06
26:A:1565:A:C2	26:A:1606:G:C8	2.44	1.06
4:F:132:THR:HG21	14:P:6:VAL:HG21	1.10	1.06
11:M:51:GLU:CG	32:6:57:ARG:NH1	2.19	1.06
14:P:42:ARG:HH12	25:B:48:C:P	1.77	1.06
17:S:6:ILE:O	17:S:7:VAL:HG23	1.54	1.06
3:E:144:PHE:CG	3:E:148:LEU:CD1	2.38	1.06
4:F:99:ARG:HD2	25:B:45:G:C8	1.89	1.06
21:W:37:LEU:CD1	21:W:69:LEU:CD1	2.33	1.06
1:C:55:GLY:HA3	1:C:218:ARG:CD	1.86	1.05
4:F:132:THR:HG22	14:P:6:VAL:HG21	1.37	1.05
26:A:1581:C:H42	26:A:1591:U:C1'	1.69	1.05
26:A:1608:U:H2'	26:A:1609:G:H8	1.16	1.05
26:A:1608:U:H2'	26:A:1609:G:C8	1.90	1.05
21:W:77:LEU:HB3	21:W:100:VAL:HG21	1.30	1.05
4:F:45:MET:HE3	4:F:64:LEU:CD2	1.86	1.05
4:F:183:PRO:C	4:F:184:PHE:HD2	1.63	1.05
20:V:28:PRO:CG	26:A:83:C:OP1	2.03	1.05
30:4:11:ILE:HD13	30:4:27:LYS:HG2	1.37	1.05
4:F:45:MET:HE3	4:F:64:LEU:HD21	1.34	1.05
20:V:2:LYS:CD	20:V:83:VAL:HG11	1.85	1.05
26:A:1570:C:N4	26:A:1602:U:H3	1.53	1.05
26:A:1570:C:N4	26:A:1602:U:N3	2.03	1.05
4:F:73:GLU:HG2	25:B:42:C:C6	1.91	1.04
21:W:101:GLN:O	21:W:101:GLN:NE2	1.87	1.04
21:W:102:ARG:NH2	21:W:138:LEU:HD11	1.72	1.04
26:A:1580:A:N6	26:A:1592:G:N9	2.03	1.04
26:A:1595:G:C3'	26:A:1596:C:H5'	1.87	1.04
4:F:138:GLY:HA3	26:A:2529:A:H5"	1.38	1.04
19:U:91:LYS:CG	19:U:92:PRO:HD2	1.87	1.04
26:A:1595:G:H3'	26:A:1596:C:H5'	1.07	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:150:GLU:O	3:E:193:ASP:OD2	1.75	1.04
4:F:118:ILE:H	4:F:118:ILE:HD12	1.17	1.04
19:U:19:LYS:CE	26:A:1508:A:N6	2.20	1.04
2:D:154:CYS:HB3	26:A:2798:G:C2'	1.88	1.04
4:F:49:ASP:HB2	4:F:56:LEU:HD11	1.09	1.04
26:A:1572:G:O6	26:A:1600:G:N1	1.91	1.04
1:C:54:LYS:HZ2	26:A:2031:G:H4'	1.10	1.03
9:K:141:GLU:OE2	9:K:143:LYS:CG	2.06	1.03
17:S:58:VAL:HG23	17:S:103:LYS:HG3	1.07	1.03
18:T:18:ARG:NH1	26:A:1436:C:O2'	1.92	1.03
26:A:1580:A:N6	26:A:1591:U:N3	2.06	1.03
25:B:19:G:H5'	25:B:19:G:H8	1.23	1.03
12:N:60:ARG:HH12	26:A:1193:C:H5"	1.18	1.02
25:B:10:G:N1	25:B:107:A:H2	1.52	1.02
10:L:7:ARG:HH22	10:L:20:LEU:CD1	1.72	1.02
13:O:90:ARG:HH22	13:O:118:GLU:HG3	0.87	1.02
21:W:188:GLU:O	21:W:192:GLU:OE1	1.76	1.02
25:B:60:G:O2'	25:B:61:C:H5'	1.55	1.02
26:A:1590:G:C4	26:A:1591:U:C5	2.47	1.02
21:W:100:VAL:HG11	21:W:137:ALA:HB1	1.38	1.02
9:K:141:GLU:OE2	9:K:143:LYS:HG2	1.58	1.02
19:U:5:THR:HG22	19:U:6:ASP:H	1.24	1.02
26:A:1561:C:C2	26:A:1562:C:C6	2.48	1.02
26:A:1565:A:N3	26:A:1606:G:N7	2.04	1.02
2:D:155:ALA:HB1	26:A:2796:A:N7	1.71	1.01
13:O:16:HIS:HD2	26:A:1390:A:C8	1.77	1.01
26:A:2509:C:C5	30:4:8:ARG:NH1	2.28	1.01
3:E:192:ASP:CB	11:M:5:LYS:HZ1	1.72	1.00
4:F:9:PRO:HD2	4:F:12:LYS:NZ	1.75	1.00
26:A:1563:A:N6	26:A:1607:C:H41	1.59	1.00
21:W:77:LEU:HB3	21:W:100:VAL:HG23	1.01	1.00
26:A:1564:A:H2'	26:A:1565:A:H5"	1.44	1.00
28:2:41:CYS:HB2	28:2:44:PHE:CZ	1.97	1.00
1:C:26:ARG:HD2	1:C:81:HIS:NE2	1.76	1.00
1:C:54:LYS:NZ	26:A:2031:G:O3'	1.94	1.00
25:B:58:A:C4	25:B:59:A:C8	2.49	0.99
26:A:2980:U:OP2	33:7:19:ARG:NH1	1.95	0.99
20:V:62:GLN:CG	20:V:63:GLU:H	1.75	0.99
1:C:25:THR:CG2	1:C:81:HIS:HA	1.90	0.99
10:L:8:LEU:CD1	10:L:19:ILE:HG13	1.92	0.99
20:V:2:LYS:CD	20:V:83:VAL:CG1	2.37	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:5:5:LYS:HB3	31:5:9:GLN:NE2	1.76	0.99
13:O:33:ARG:HD3	13:O:114:GLU:CD	1.86	0.99
1:C:55:GLY:HA3	1:C:218:ARG:HD2	1.43	0.99
4:F:10:ARG:HG2	4:F:10:ARG:HH11	1.27	0.99
4:F:49:ASP:HB2	4:F:56:LEU:CD1	1.93	0.99
14:P:108:THR:OG1	25:B:47:A:O2'	1.79	0.99
25:B:40:A:H61	28:2:1:MET:N	1.58	0.99
28:2:44:PHE:O	28:2:48:LYS:HG3	1.61	0.99
9:K:141:GLU:CD	9:K:143:LYS:CG	2.35	0.99
25:B:57:U:C2'	25:B:58:A:H5"	1.93	0.99
19:U:19:LYS:NZ	26:A:1508:A:N6	2.09	0.98
20:V:62:GLN:HG2	20:V:63:GLU:H	0.84	0.98
3:E:66:TYR:CD1	3:E:73:ARG:NH1	2.31	0.98
26:A:1580:A:C6	26:A:1592:G:N9	2.31	0.98
21:W:105:LYS:NZ	21:W:136:GLU:OE2	1.92	0.98
21:W:105:LYS:HE2	21:W:136:GLU:OE2	1.61	0.98
25:B:60:G:H5'	25:B:60:G:H8	1.25	0.98
26:A:1565:A:C4	26:A:1606:G:C6	2.50	0.98
30:4:15:CYS:CA	30:4:20:HIS:HA	1.93	0.98
18:T:9:SER:HB3	18:T:115:GLU:CB	1.92	0.98
31:5:8:PHE:CE2	31:5:10:PRO:HG3	1.99	0.98
30:4:19:LYS:HD2	30:4:44:ASN:CB	1.93	0.98
4:F:117:ARG:NH1	4:F:146:HIS:HD2	1.24	0.97
12:N:85:SER:OG	22:X:8:SER:CB	2.11	0.97
13:O:90:ARG:CZ	13:O:118:GLU:HG3	1.94	0.97
2:D:154:CYS:SG	26:A:2796:A:H2'	2.04	0.97
17:S:58:VAL:HG22	17:S:103:LYS:HG2	1.45	0.97
26:A:1563:A:H61	26:A:1607:C:H41	1.05	0.97
3:E:7:VAL:CG2	3:E:16:GLY:HA3	1.95	0.97
13:O:8:PRO:CG	26:A:1870:U:C5	2.48	0.97
20:V:46:ALA:HB2	26:A:571:A:O3'	1.65	0.97
1:C:54:LYS:NZ	26:A:2031:G:C4'	2.28	0.97
12:N:111:GLU:OE2	12:N:115:ARG:NE	1.97	0.97
14:P:50:GLN:NE2	25:B:7:G:N2	2.13	0.96
17:S:3:THR:CG2	17:S:102:ILE:HD11	1.93	0.96
13:O:79:LEU:HG	13:O:83:ILE:CD1	1.96	0.96
1:C:54:LYS:HZ2	26:A:2031:G:C5'	1.76	0.96
12:N:61:GLY:O	12:N:108:TYR:CE1	2.17	0.96
8:J:96:LYS:HE3	21:W:120:PRO:HB2	1.48	0.96
21:W:87:PRO:O	21:W:90:ARG:NH2	1.97	0.96
26:A:1595:G:H3'	26:A:1596:C:C5'	1.95	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:11:ILE:CD1	30:4:27:LYS:HG2	1.95	0.96
18:T:75:THR:HB	18:T:118:PRO:HD3	1.46	0.96
20:V:2:LYS:HG2	20:V:83:VAL:HB	1.47	0.96
21:W:21:LYS:NZ	25:B:80:C:H42	1.64	0.96
4:F:66:LEU:HD23	28:2:27:THR:CG2	1.95	0.95
13:O:90:ARG:HH22	13:O:118:GLU:CB	1.75	0.95
26:A:1580:A:N1	26:A:1592:G:H1'	1.78	0.95
1:C:25:THR:HG21	1:C:81:HIS:HA	0.99	0.95
1:C:256:ARG:HA	1:C:256:ARG:HE	1.28	0.95
10:L:8:LEU:HD11	10:L:19:ILE:HG13	1.47	0.95
25:B:54:A:O2'	25:B:55:G:H5'	1.64	0.95
19:U:91:LYS:HG2	19:U:92:PRO:HD2	0.96	0.95
25:B:25:G:H21	25:B:114:A:C2'	1.79	0.95
4:F:109:ARG:HG3	4:F:113:ILE:HD12	1.48	0.95
25:B:96:A:H2	26:A:977:G:N3	1.62	0.95
18:T:44:ARG:HH12	29:3:55:ASP:H	1.09	0.95
9:K:112:ASN:CG	26:A:650:G:OP1	2.08	0.95
4:F:116:PRO:HB2	28:2:37:VAL:HG11	1.48	0.95
25:B:24:G:C8	25:B:56:C:C2	2.55	0.95
10:L:8:LEU:H	10:L:8:LEU:HD12	1.32	0.94
25:B:24:G:O2'	25:B:56:C:C4	2.17	0.94
13:O:8:PRO:HG3	26:A:1870:U:C5	2.02	0.94
26:A:1551:U:H3	26:A:1619:U:H3	1.12	0.94
26:A:1570:C:C4	26:A:1602:U:O2	2.20	0.94
17:S:6:ILE:O	17:S:7:VAL:CG2	2.15	0.94
24:Z:13:LEU:HD11	24:Z:17:GLU:CB	1.95	0.94
25:B:58:A:C5	25:B:59:A:C8	2.55	0.94
26:A:1554:U:H3	26:A:1617:C:N4	1.64	0.94
11:M:51:GLU:HG2	32:6:57:ARG:NH1	1.79	0.94
3:E:9:THR:OG1	3:E:12:GLY:O	1.85	0.94
17:S:3:THR:HG21	17:S:102:ILE:HD12	1.46	0.94
18:T:18:ARG:CZ	26:A:1436:C:O2'	2.16	0.94
12:N:60:ARG:HG2	12:N:60:ARG:HH21	1.27	0.94
19:U:4:ILE:HD13	24:Z:58:TYR:OH	1.68	0.94
25:B:82:A:H2	25:B:91:G:H1	1.05	0.94
26:A:1581:C:H2'	26:A:1582:C:C6	2.03	0.94
20:V:96:ARG:HD2	20:V:105:ILE:HG23	1.50	0.93
4:F:66:LEU:HD23	28:2:27:THR:HG21	1.48	0.93
30:4:36:LEU:HD21	30:4:38:ILE:HD12	1.48	0.93
18:T:9:SER:HB3	18:T:115:GLU:HB2	1.50	0.93
2:D:154:CYS:CB	26:A:2799:C:H5'	1.97	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:49:ASP:CB	4:F:56:LEU:HD11	1.96	0.93
4:F:110:LEU:HD23	4:F:111:ILE:N	1.83	0.93
20:V:2:LYS:CG	20:V:83:VAL:HB	1.99	0.93
26:A:1595:G:OP2	26:A:1596:C:C4	2.22	0.93
4:F:44:ASN:OD1	26:A:2537:C:O4'	1.86	0.93
13:O:9:ARG:HG2	13:O:14:SER:CB	1.99	0.93
3:E:144:PHE:HD1	3:E:148:LEU:HD21	1.33	0.93
22:X:15:ASP:OD2	26:A:2487:C:N4	2.01	0.93
30:4:29:ARG:NH2	30:4:34:ASP:CB	2.31	0.92
26:A:1597:G:N3	26:A:1598:U:C6	2.37	0.92
4:F:109:ARG:HD2	4:F:147:GLU:OE2	1.69	0.92
30:4:12:THR:HG22	30:4:22:ASN:HB3	1.50	0.92
9:K:68:LYS:NZ	26:A:1140:G:O6	2.01	0.92
24:Z:9:GLU:O	24:Z:11:ARG:N	2.03	0.92
4:F:105:GLU:HG3	28:2:24:THR:HG22	1.52	0.92
17:S:58:VAL:HG23	17:S:103:LYS:HG2	0.98	0.92
22:X:64:PRO:HB3	26:A:759:G:H1	1.34	0.92
25:B:58:A:C4	25:B:59:A:H8	1.84	0.92
2:D:154:CYS:SG	26:A:2796:A:OP1	2.28	0.92
3:E:144:PHE:CD1	3:E:148:LEU:CD1	2.52	0.92
19:U:19:LYS:HD2	26:A:1508:A:H62	0.84	0.92
19:U:83:ILE:HD12	26:A:1456:G:C2	2.05	0.92
21:W:87:PRO:HA	21:W:90:ARG:HH22	1.35	0.92
4:F:73:GLU:OE1	25:B:41:U:C5	2.23	0.92
1:C:72:LYS:HG3	1:C:75:VAL:CG2	2.00	0.92
26:A:1580:A:N6	26:A:1591:U:H3	1.66	0.92
26:A:1580:A:N1	26:A:1591:U:O2	2.02	0.91
26:A:1583:U:O2	26:A:1589:G:N1	2.03	0.91
1:C:30:GLU:OE2	1:C:102:LYS:HD3	1.68	0.91
2:D:154:CYS:HB3	26:A:2798:G:O2'	1.71	0.91
2:D:156:THR:HG21	26:A:2256:G:H21	1.36	0.91
19:U:83:ILE:CD1	26:A:1456:G:N2	2.11	0.91
25:B:19:G:N2	25:B:64:G:N1	2.19	0.91
30:4:29:ARG:HH21	30:4:34:ASP:HB3	1.34	0.91
4:F:168:THR:OG1	14:P:4:LYS:O	1.89	0.91
18:T:115:GLU:OE2	18:T:117:ARG:NH1	2.04	0.91
3:E:7:VAL:HB	3:E:16:GLY:HA3	1.52	0.91
3:E:192:ASP:HB3	11:M:5:LYS:HZ3	1.33	0.91
26:A:1561:C:N3	26:A:1562:C:C6	2.39	0.91
19:U:4:ILE:CD1	24:Z:58:TYR:CZ	2.51	0.90
30:4:15:CYS:HB2	30:4:20:HIS:CA	2.01	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:W:83:LEU:CD1	21:W:92:ILE:HG23	2.01	0.90
1:C:54:LYS:NZ	26:A:2031:G:H4'	1.83	0.90
10:L:108:GLU:HG3	10:L:109:LYS:H	1.36	0.90
30:4:9:PRO:HD2	30:4:27:LYS:O	1.71	0.90
13:O:9:ARG:CG	13:O:14:SER:HB3	2.01	0.90
26:A:2086:U:H3	26:A:2096:G:H1	0.97	0.90
25:B:4:A:H2	25:B:25:G:C6	1.90	0.90
26:A:2508:C:OP1	30:4:7:VAL:HG11	1.71	0.90
13:O:29:PHE:CD1	13:O:79:LEU:HD11	2.06	0.90
30:4:29:ARG:NH2	30:4:34:ASP:HB2	1.87	0.90
25:B:96:A:C2	26:A:977:G:N3	2.39	0.90
26:A:1561:C:N4	26:A:1562:C:N4	2.19	0.90
25:B:58:A:H5'	25:B:58:A:C8	2.07	0.90
26:A:1565:A:H2'	26:A:1566:A:C8	2.05	0.90
26:A:2571:C:O2'	30:4:23:TYR:OH	1.77	0.90
26:A:1563:A:N7	26:A:1565:A:N7	2.20	0.89
1:C:256:ARG:O	26:A:2014:G:H4'	1.71	0.89
26:A:1564:A:C2'	26:A:1565:A:H5"	2.02	0.89
1:C:37:LEU:HD23	1:C:62:TYR:HB2	1.54	0.89
1:C:73:ASP:HB3	1:C:120:GLY:HA2	1.50	0.89
3:E:144:PHE:CD2	3:E:148:LEU:HD11	2.07	0.89
21:W:83:LEU:HD11	21:W:92:ILE:HD12	1.55	0.89
1:C:96:HIS:HE1	1:C:102:LYS:NZ	1.70	0.89
1:C:258:ARG:HA	26:A:2015:U:C5'	2.01	0.89
25:B:19:G:C2'	25:B:20:G:H5'	2.03	0.89
25:B:20:G:C2'	25:B:21:C:H5'	2.02	0.89
26:A:325:U:H3	26:A:450:G:H1	0.94	0.89
3:E:7:VAL:O	3:E:14:THR:HA	1.73	0.89
12:N:58:ILE:CG2	12:N:108:TYR:CE1	2.55	0.89
26:A:1597:G:N3	26:A:1598:U:C5	2.41	0.89
13:O:8:PRO:CG	26:A:1870:U:C4	2.55	0.89
20:V:42:LYS:HD2	26:A:586:U:H5"	1.53	0.88
25:B:20:G:N1	25:B:63:U:O4	2.05	0.88
25:B:24:G:C5	25:B:56:C:C2	2.61	0.88
26:A:1571:C:O2'	26:A:1572:G:H5"	1.73	0.88
25:B:19:G:H5'	25:B:19:G:C8	2.07	0.88
26:A:1561:C:C2	26:A:1562:C:H6	1.92	0.88
25:B:58:A:C6	25:B:59:A:N7	2.40	0.88
26:A:1575:A:O2'	26:A:1576:C:H5'	1.72	0.88
26:A:1597:G:C4	26:A:1598:U:H5	1.91	0.88
31:5:22:ARG:O	31:5:26:ARG:HD3	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B:29:C:H42	25:B:55:G:H1	1.18	0.88
30:4:18:CYS:SG	30:4:19:LYS:N	2.47	0.88
20:V:2:LYS:HD2	20:V:83:VAL:HG11	0.88	0.88
2:D:154:CYS:CB	26:A:2799:C:P	2.52	0.88
19:U:83:ILE:CD1	26:A:1456:G:N3	2.20	0.88
22:X:83:VAL:HG13	22:X:85:ARG:HA	1.54	0.88
26:A:1578:G:H22	26:A:1592:G:C2'	1.87	0.88
26:A:1580:A:C6	26:A:1591:U:C2	2.56	0.88
30:4:19:LYS:HB2	30:4:21:ARG:NH2	1.89	0.88
14:P:41:ASN:ND2	25:B:7:G:HO2'	1.70	0.87
25:B:25:G:H21	25:B:114:A:C1'	1.86	0.87
1:C:256:ARG:HA	1:C:256:ARG:NE	1.88	0.87
13:O:117:ARG:HD3	13:O:118:GLU:H	1.39	0.87
1:C:73:ASP:HB3	1:C:120:GLY:HA3	1.56	0.87
13:O:8:PRO:HG2	26:A:1870:U:C5	2.10	0.87
20:V:83:VAL:HG11	20:V:96:ARG:HG3	1.57	0.87
26:A:1597:G:C4	26:A:1598:U:C5	2.62	0.87
26:A:2509:C:H5	30:4:8:ARG:NH1	1.69	0.87
11:M:58:HIS:CD2	32:6:7:HIS:HE1	1.93	0.87
17:S:3:THR:HG22	17:S:102:ILE:HD11	1.51	0.87
26:A:1598:U:O4	26:A:1601:G:C6	2.28	0.87
1:C:29:PRO:CG	1:C:34:VAL:HG21	2.05	0.87
8:J:45:ASN:O	8:J:49:GLU:HB2	1.74	0.87
21:W:29:ARG:NH1	25:B:90:G:H5'	1.89	0.87
4:F:99:ARG:CD	25:B:45:G:C8	2.57	0.87
22:X:15:ASP:CG	26:A:2487:C:H41	1.83	0.87
25:B:28:A:H61	25:B:56:C:H42	1.21	0.86
26:A:1561:C:N4	26:A:1562:C:C5	2.41	0.86
3:E:150:GLU:OE1	3:E:193:ASP:OD1	1.92	0.86
28:2:41:CYS:HB3	28:2:43:PRO:CD	2.03	0.86
26:A:1578:G:H22	26:A:1592:G:H2'	1.40	0.86
26:A:1550:G:H1	26:A:1620:U:H3	0.86	0.86
4:F:74:VAL:O	25:B:41:U:O4	1.93	0.86
4:F:99:ARG:CD	25:B:45:G:H8	1.88	0.86
21:W:37:LEU:HD11	21:W:69:LEU:CD1	2.06	0.86
25:B:24:G:N7	25:B:56:C:C2	2.44	0.86
26:A:1582:C:O2'	26:A:1583:U:H5'	1.75	0.86
30:4:11:ILE:HD13	30:4:27:LYS:CG	2.06	0.86
13:O:4:PRO:HG3	26:A:3094:A:C2	2.10	0.85
20:V:29:ASP:OD1	20:V:30:ARG:N	2.09	0.85
21:W:77:LEU:HD22	21:W:100:VAL:HG21	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:1566:A:O2'	26:A:1567:C:H5'	1.75	0.85
12:N:60:ARG:O	21:W:190:LEU:HD11	1.76	0.85
20:V:4:HIS:HE1	20:V:96:ARG:NH2	1.74	0.85
3:E:7:VAL:CB	3:E:16:GLY:HA3	2.05	0.85
19:U:4:ILE:HD13	24:Z:58:TYR:HE1	1.40	0.85
26:A:1590:G:C6	26:A:1591:U:C5	2.64	0.85
18:T:6:GLU:C	18:T:8:PRO:HD3	2.01	0.85
25:B:4:A:C2	25:B:25:G:C6	2.63	0.85
3:E:68:GLN:OE1	26:A:790:A:O2'	1.94	0.85
25:B:20:G:O2'	25:B:21:C:H5'	1.77	0.85
26:A:2510:A:OP2	30:4:31:ASN:OD1	1.94	0.85
26:A:1601:G:O2'	26:A:1602:U:C5'	2.24	0.85
20:V:97:ILE:HD12	20:V:103:LYS:O	1.77	0.84
24:Z:18:LEU:HD13	24:Z:61:LEU:CD2	2.07	0.84
13:O:29:PHE:CE2	13:O:51:LEU:HD12	2.11	0.84
17:S:103:LYS:HZ3	17:S:103:LYS:CA	1.90	0.84
25:B:19:G:N2	25:B:65:C:C2	2.44	0.84
25:B:19:G:H2'	25:B:20:G:C5'	2.07	0.84
19:U:19:LYS:CD	26:A:1508:A:H61	1.78	0.84
3:E:144:PHE:CE1	3:E:148:LEU:HD22	2.09	0.84
9:K:3:THR:HG21	26:A:1113:C:O2	1.75	0.84
2:D:155:ALA:HB2	26:A:2796:A:N7	1.83	0.84
13:O:20:LEU:HD11	13:O:40:LYS:HZ2	1.41	0.84
21:W:37:LEU:HD12	21:W:69:LEU:HD11	1.59	0.84
19:U:29:TYR:CE1	19:U:93:ILE:CG2	2.60	0.84
24:Z:13:LEU:CD1	24:Z:17:GLU:HB2	2.07	0.84
1:C:55:GLY:CA	1:C:218:ARG:CD	2.54	0.84
26:A:1556:A:H61	26:A:1615:G:H1	1.26	0.84
12:N:58:ILE:HG21	12:N:108:TYR:CE1	2.13	0.84
26:A:2510:A:OP1	30:4:31:ASN:OD1	1.95	0.83
1:C:25:THR:HG22	1:C:82:ILE:N	1.92	0.83
1:C:76:ASN:O	1:C:98:LEU:CD2	2.25	0.83
8:J:96:LYS:HE2	21:W:120:PRO:HB2	1.59	0.83
13:O:96:ARG:NH2	13:O:116:VAL:HG12	1.93	0.83
21:W:37:LEU:HD12	21:W:69:LEU:CD1	2.08	0.83
3:E:90:VAL:HG11	26:A:678:A:O5'	1.77	0.83
4:F:99:ARG:HD2	25:B:45:G:H8	1.40	0.83
14:P:50:GLN:CD	25:B:7:G:H21	1.86	0.83
21:W:101:GLN:HB3	21:W:104:GLU:CB	2.08	0.83
25:B:59:A:H2'	25:B:60:G:H5'	1.59	0.83
25:B:82:A:C2	25:B:91:G:N1	2.45	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:17:ALA:CB	26:A:2485:C:P	2.66	0.83
30:4:37:GLU:O	30:4:38:ILE:HG13	1.78	0.83
4:F:105:GLU:CG	28:2:24:THR:HG22	2.07	0.83
19:U:19:LYS:HZ2	26:A:1508:A:H61	1.01	0.83
26:A:860:G:HO2'	26:A:863:G:HO2'	1.27	0.83
21:W:86:HIS:O	21:W:90:ARG:NH2	2.10	0.83
30:4:29:ARG:HH21	30:4:34:ASP:HB2	1.43	0.83
4:F:108:ASP:O	4:F:111:ILE:HG22	1.76	0.83
25:B:18:C:H2'	25:B:19:G:H5"	0.83	0.83
33:7:22:ARG:CZ	33:7:37:GLY:HA2	2.07	0.83
25:B:25:G:N2	25:B:114:A:H1'	1.94	0.83
4:F:132:THR:CG2	14:P:6:VAL:CG2	2.40	0.83
26:A:2508:C:OP1	30:4:7:VAL:CG1	2.27	0.83
2:D:154:CYS:HB2	26:A:2799:C:OP1	1.79	0.82
3:E:145:LEU:HA	3:E:148:LEU:HD12	1.58	0.82
21:W:83:LEU:CD1	21:W:92:ILE:HD12	2.09	0.82
2:D:154:CYS:H	26:A:2798:G:HO2'	1.27	0.82
22:X:83:VAL:HG12	22:X:85:ARG:HB2	1.62	0.82
3:E:14:THR:HG22	3:E:15:ASP:H	1.44	0.82
24:Z:13:LEU:O	24:Z:64:ARG:NH1	2.12	0.82
25:B:20:G:N2	25:B:63:U:N3	1.89	0.82
26:A:1580:A:N1	26:A:1592:G:N9	2.27	0.82
26:A:1595:G:H8	26:A:1596:C:C5	1.96	0.82
19:U:77:LYS:NZ	19:U:79:THR:HG22	1.93	0.82
21:W:8:PRO:HB2	21:W:68:THR:OG1	1.80	0.82
26:A:1580:A:C2	26:A:1592:G:H1'	2.14	0.82
2:D:154:CYS:SG	26:A:2796:A:C5'	2.66	0.82
4:F:118:ILE:HD11	4:F:144:MET:HE3	1.61	0.82
25:B:36:U:O2'	25:B:37:C:H5'	1.80	0.82
9:K:112:ASN:OD1	9:K:113:LYS:N	2.11	0.82
25:B:85:C:O2'	25:B:86:U:O4'	1.97	0.82
26:A:1561:C:N4	26:A:1562:C:H41	1.76	0.82
4:F:116:PRO:CB	28:2:37:VAL:HG11	2.09	0.82
24:Z:13:LEU:HD11	24:Z:17:GLU:OE1	1.79	0.82
10:L:109:LYS:HD2	10:L:110:LYS:HZ1	1.42	0.81
11:M:51:GLU:HG3	32:6:57:ARG:NH1	1.93	0.81
13:O:14:SER:O	13:O:15:SER:OG	1.96	0.81
25:B:19:G:N2	25:B:65:C:C4	2.47	0.81
12:N:60:ARG:NH1	26:A:1193:C:H5"	1.94	0.81
19:U:91:LYS:CG	19:U:92:PRO:CD	2.51	0.81
24:Z:6:THR:HG22	24:Z:10:LEU:CD1	2.09	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:1567:C:O2'	26:A:1568:C:OP2	1.96	0.81
26:A:1602:U:H2'	26:A:1603:G:C8	2.16	0.81
1:C:29:PRO:HB2	1:C:34:VAL:CG2	2.09	0.81
3:E:45:LYS:HG3	26:A:709:U:O4	1.80	0.81
4:F:45:MET:HB2	4:F:94:ALA:O	1.81	0.81
13:O:79:LEU:CG	13:O:83:ILE:HD12	2.10	0.81
17:S:103:LYS:HA	17:S:103:LYS:NZ	1.95	0.81
13:O:81:ALA:O	13:O:85:PRO:CG	2.28	0.81
1:C:54:LYS:NZ	26:A:2031:G:H5''	1.94	0.81
26:A:1566:A:N3	26:A:1605:G:C6	2.48	0.81
26:A:1582:C:C2'	26:A:1583:U:H5'	2.10	0.81
28:2:41:CYS:CB	28:2:43:PRO:HD2	2.10	0.81
26:A:1561:C:C5	26:A:1562:C:C5	2.41	0.81
30:4:21:ARG:HG3	30:4:44:ASN:OD1	1.81	0.81
25:B:21:C:H2'	25:B:22:A:O4'	1.81	0.81
3:E:51:SER:OG	26:A:35:A:H5'	1.81	0.80
26:A:1580:A:H62	26:A:1591:U:H3	1.25	0.80
9:K:113:LYS:HD2	26:A:616:A:OP1	1.81	0.80
26:A:1561:C:C2	26:A:1562:C:C5	2.68	0.80
26:A:1570:C:H42	26:A:1602:U:H3	0.80	0.80
26:A:1570:C:O2'	26:A:1571:C:H5'	1.80	0.80
9:K:26:GLY:O	26:A:1262:A:N6	2.14	0.80
19:U:19:LYS:HE3	26:A:1454:G:H5'	1.62	0.80
22:X:15:ASP:HB2	26:A:2486:U:O4	1.81	0.80
31:5:5:LYS:HB3	31:5:9:GLN:HE21	1.47	0.80
3:E:24:LEU:HD21	3:E:208:ASN:OD1	1.82	0.80
9:K:3:THR:HG23	26:A:1113:C:N3	1.97	0.80
13:O:4:PRO:HG3	26:A:3094:A:N1	1.97	0.80
13:O:33:ARG:HG3	13:O:114:GLU:CG	2.11	0.80
26:A:1561:C:C4	26:A:1562:C:C4	2.69	0.80
30:4:9:PRO:CD	30:4:27:LYS:O	2.30	0.80
1:C:56:GLY:CA	26:A:807:C:OP1	2.29	0.80
25:B:60:G:H5'	25:B:60:G:C8	2.15	0.80
1:C:30:GLU:OE1	1:C:33:LEU:CD1	2.29	0.80
21:W:40:HIS:O	21:W:42:THR:N	2.14	0.80
26:A:1561:C:N4	26:A:1562:C:C4	2.50	0.80
2:D:154:CYS:HG	26:A:2796:A:P	2.05	0.79
25:B:18:C:C2'	25:B:19:G:C5'	2.40	0.79
26:A:351:G:H1	26:A:444:U:H3	1.27	0.79
26:A:1581:C:N4	26:A:1591:U:C1'	2.45	0.79
26:A:1596:C:O2'	26:A:1597:G:O4'	2.00	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B:30:G:N1	25:B:54:A:C2	2.48	0.79
21:W:98:LEU:HD23	21:W:99:VAL:N	1.97	0.79
4:F:45:MET:CE	4:F:64:LEU:CD2	2.52	0.79
26:A:1578:G:N7	26:A:1592:G:O6	2.15	0.79
26:A:1600:G:C3'	26:A:1601:G:H5"	2.11	0.79
4:F:55:LYS:HB2	4:F:55:LYS:NZ	1.97	0.79
9:K:112:ASN:HD21	26:A:650:G:P	2.04	0.79
21:W:9:ASN:HD22	21:W:57:VAL:HG13	1.41	0.79
22:X:17:ALA:HB3	26:A:2485:C:OP2	1.82	0.79
18:T:75:THR:HB	18:T:118:PRO:CD	2.12	0.79
25:B:96:A:H2	26:A:977:G:C2	2.00	0.79
5:G:171:ARG:NH2	33:7:28:SER:O	2.16	0.79
4:F:120:ASP:OD2	4:F:122:ARG:NH1	2.16	0.79
4:F:182:PHE:CD2	4:F:184:PHE:HE2	2.01	0.79
25:B:19:G:N2	25:B:64:G:H1	1.80	0.79
1:C:54:LYS:NZ	26:A:2031:G:C5'	2.46	0.79
1:C:55:GLY:HA3	1:C:218:ARG:CG	2.13	0.79
3:E:7:VAL:CG2	3:E:16:GLY:CA	2.61	0.79
26:A:1561:C:C2'	26:A:1562:C:H5'	2.13	0.79
1:C:257:THR:HB	26:A:2014:G:O2'	1.82	0.79
2:D:154:CYS:HA	26:A:2799:C:C5'	2.07	0.79
3:E:118:ARG:HH11	11:M:3:VAL:HG13	1.48	0.79
13:O:81:ALA:C	13:O:85:PRO:HD2	2.08	0.79
26:A:1563:A:C5	26:A:1565:A:N7	2.50	0.78
3:E:8:LYS:O	3:E:127:VAL:HA	1.82	0.78
14:P:42:ARG:NH1	25:B:48:C:P	2.46	0.78
21:W:102:ARG:HH21	21:W:138:LEU:HD21	1.45	0.78
33:7:22:ARG:HD3	33:7:36:GLN:O	1.83	0.78
12:N:61:GLY:O	12:N:108:TYR:HE1	1.59	0.78
20:V:2:LYS:NZ	20:V:85:TYR:CE2	2.51	0.78
22:X:14:ARG:NH2	26:A:2503:G:N7	2.30	0.78
12:N:61:GLY:O	12:N:108:TYR:CD1	2.36	0.78
21:W:37:LEU:CD1	21:W:69:LEU:HD11	2.11	0.78
26:A:1541:G:O6	26:A:1630:U:C4	2.36	0.78
3:E:145:LEU:CA	3:E:148:LEU:HD12	1.98	0.78
12:N:134:ARG:HH21	21:W:129:ASN:HD21	1.30	0.78
13:O:42:ARG:O	13:O:45:ARG:HB3	1.83	0.78
20:V:47:VAL:C	20:V:56:SER:HA	2.09	0.78
21:W:87:PRO:CA	21:W:90:ARG:HH22	1.96	0.78
26:A:725:A:OP2	32:6:47:ARG:NH2	2.16	0.78
28:2:48:LYS:O	28:2:52:LEU:HG	1.82	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:K:13:ARG:NE	9:K:121:LYS:HZ3	1.82	0.78
19:U:29:TYR:CE1	19:U:93:ILE:HG22	2.19	0.78
26:A:1578:G:C5	26:A:1592:G:N1	2.18	0.78
2:D:154:CYS:HB2	26:A:2799:C:C5'	2.14	0.78
4:F:117:ARG:NH1	4:F:146:HIS:NE2	2.30	0.78
25:B:25:G:N2	25:B:114:A:C1'	2.47	0.78
10:L:107:ARG:NH1	15:Q:33:GLU:HG3	1.99	0.78
26:A:1541:G:O6	26:A:1630:U:C5	2.36	0.78
13:O:16:HIS:CD2	26:A:1390:A:C8	2.68	0.77
24:Z:5:THR:HG23	24:Z:6:THR:H	1.47	0.77
25:B:59:A:C2'	25:B:60:G:H5'	2.14	0.77
9:K:141:GLU:OE1	9:K:143:LYS:CG	2.27	0.77
21:W:40:HIS:O	21:W:40:HIS:ND1	2.16	0.77
30:4:36:LEU:HG	30:4:37:GLU:N	1.99	0.77
9:K:3:THR:CG2	26:A:1113:C:C2	2.66	0.77
12:N:60:ARG:NE	26:A:1194:C:OP2	2.17	0.77
19:U:77:LYS:HG3	26:A:55:G:H5"	1.66	0.77
26:A:1601:G:O2'	26:A:1602:U:H5'	1.82	0.77
28:2:44:PHE:O	28:2:48:LYS:HE3	1.84	0.77
3:E:51:SER:HB3	26:A:34:C:O2'	1.84	0.77
13:O:33:ARG:HG3	13:O:114:GLU:HG3	1.66	0.77
13:O:33:ARG:HD2	13:O:114:GLU:OE2	1.85	0.77
26:A:1595:G:H5'	26:A:1596:C:C6	2.20	0.77
10:L:92:ASP:OD2	10:L:93:PRO:HD2	1.85	0.77
19:U:7:PRO:O	19:U:49:ILE:HD11	1.84	0.77
26:A:1554:U:H3	26:A:1617:C:H42	1.31	0.77
26:A:1566:A:H1'	26:A:1605:G:H1	1.47	0.77
2:D:154:CYS:CB	26:A:2798:G:O2'	2.33	0.77
17:S:103:LYS:C	17:S:103:LYS:HD3	2.10	0.77
19:U:69:THR:OG1	19:U:73:PHE:O	2.03	0.77
3:E:107:ILE:CD1	26:A:710:G:OP1	2.33	0.77
11:M:61:LEU:CD2	32:6:24:ARG:HH11	1.96	0.77
20:V:44:HIS:HA	20:V:58:GLY:O	1.84	0.77
26:A:1563:A:N6	26:A:1607:C:N4	2.33	0.77
2:D:154:CYS:HB2	26:A:2799:C:H5'	1.67	0.77
13:O:33:ARG:NH2	13:O:114:GLU:OE2	2.16	0.77
1:C:35:ARG:HG3	1:C:36:PRO:CD	2.14	0.76
4:F:53:ASP:O	4:F:56:LEU:CD2	2.33	0.76
17:S:6:ILE:C	17:S:7:VAL:HG23	2.10	0.76
25:B:54:A:C2'	25:B:55:G:H5'	2.15	0.76
25:B:84:C:H2'	25:B:85:C:H5'	1.65	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:78:ARG:NH2	26:A:2522:A:OP1	2.19	0.76
21:W:37:LEU:CD1	21:W:69:LEU:HD13	2.15	0.76
1:C:35:ARG:HD2	1:C:36:PRO:HD3	1.66	0.76
26:A:1600:G:C2'	26:A:1601:G:H5"	2.15	0.76
30:4:15:CYS:O	30:4:20:HIS:HB3	1.80	0.76
17:S:3:THR:HG22	17:S:102:ILE:HD13	0.76	0.76
1:C:57:GLY:O	1:C:58:HIS:O	2.02	0.76
3:E:121:ASN:HD22	11:M:3:VAL:HG22	1.50	0.76
13:O:20:LEU:HD11	13:O:40:LYS:NZ	2.00	0.76
28:2:47:GLY:O	28:2:51:ILE:HG13	1.85	0.76
3:E:7:VAL:HG23	3:E:16:GLY:CA	2.15	0.76
13:O:43:ALA:C	13:O:46:PRO:HD2	2.11	0.76
20:V:4:HIS:CE1	20:V:96:ARG:NH2	2.50	0.76
26:A:802:C:H1'	31:5:7:THR:HG22	1.67	0.76
26:A:1597:G:C2	26:A:1598:U:C5	2.73	0.76
30:4:12:THR:CG2	30:4:22:ASN:HB3	2.16	0.76
11:M:63:LYS:HE3	32:6:12:LYS:HG2	1.68	0.76
11:M:51:GLU:HG2	32:6:57:ARG:CZ	2.16	0.76
16:R:50:ARG:HG2	16:R:53:ARG:HH21	1.51	0.76
4:F:182:PHE:HD2	4:F:184:PHE:HE2	1.32	0.75
8:J:44:TYR:O	8:J:48:THR:HB	1.87	0.75
13:O:95:THR:HG22	13:O:115:LEU:HD23	1.68	0.75
13:O:29:PHE:HE2	13:O:51:LEU:CD1	1.99	0.75
17:S:6:ILE:HG22	17:S:7:VAL:N	1.99	0.75
21:W:29:ARG:HH12	25:B:90:G:C5'	2.00	0.75
31:5:8:PHE:CD2	31:5:10:PRO:HG3	2.21	0.75
9:K:13:ARG:HH21	9:K:49:ASP:C	1.94	0.75
22:X:15:ASP:CB	26:A:2487:C:H41	1.98	0.75
24:Z:13:LEU:HD21	24:Z:17:GLU:C	2.11	0.75
26:A:1586:C:H3'	26:A:1587:G:H5"	1.68	0.75
30:4:15:CYS:C	30:4:20:HIS:CB	2.59	0.75
1:C:57:GLY:O	1:C:58:HIS:C	2.29	0.75
18:T:95:ARG:NH2	26:A:863:G:OP1	2.18	0.75
33:7:35:ARG:HG2	33:7:36:GLN:H	1.50	0.75
1:C:76:ASN:HB2	1:C:98:LEU:HD21	1.68	0.75
6:H:103:ALA:O	6:H:107:ALA:HB3	1.86	0.75
25:B:82:A:H2	25:B:91:G:N1	1.82	0.75
1:C:239:LYS:HE2	26:A:2196:G:OP2	1.85	0.75
9:K:96:HIS:HB3	9:K:99:ARG:HG2	1.66	0.75
18:T:41:ASP:OD2	29:3:27:LEU:HD13	1.86	0.75
24:Z:13:LEU:HD21	24:Z:17:GLU:CB	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:O:16:HIS:CD2	26:A:1390:A:C4	2.75	0.75
13:O:29:PHE:CE2	13:O:51:LEU:CD1	2.69	0.75
26:A:1601:G:O2'	26:A:1602:U:H5"	1.86	0.75
4:F:32:VAL:O	4:F:33:MET:HB2	1.86	0.74
4:F:168:THR:HG21	14:P:3:HIS:CE1	2.21	0.74
18:T:44:ARG:NH1	29:3:55:ASP:H	1.85	0.74
19:U:5:THR:HG22	19:U:6:ASP:N	2.01	0.74
20:V:86:ARG:HD3	20:V:97:ILE:HG13	1.68	0.74
20:V:96:ARG:NH2	20:V:96:ARG:HB2	2.01	0.74
26:A:1590:G:C4	26:A:1591:U:C6	2.74	0.74
24:Z:13:LEU:HD21	24:Z:17:GLU:HB3	1.68	0.74
26:A:1565:A:H2	26:A:1606:G:C8	1.98	0.74
18:T:116:SER:OG	18:T:118:PRO:HG2	1.86	0.74
27:1:51:HIS:H	27:1:51:HIS:CD2	2.03	0.74
30:4:18:CYS:HB2	30:4:45:CYS:SG	2.27	0.74
3:E:7:VAL:CG2	3:E:16:GLY:C	2.54	0.74
4:F:45:MET:CB	4:F:94:ALA:O	2.34	0.74
9:K:3:THR:HG23	26:A:1113:C:C2	2.22	0.74
21:W:83:LEU:HD11	21:W:92:ILE:HG23	1.68	0.74
21:W:87:PRO:C	21:W:90:ARG:HH22	1.95	0.74
1:C:35:ARG:HG3	1:C:36:PRO:HD2	1.68	0.74
1:C:256:ARG:CZ	1:C:258:ARG:HE	1.99	0.74
18:T:96:ALA:O	26:A:866:G:OP2	2.04	0.74
20:V:97:ILE:CD1	20:V:103:LYS:O	2.36	0.74
30:4:36:LEU:HD21	30:4:38:ILE:CD1	2.17	0.74
4:F:9:PRO:HD2	4:F:12:LYS:HZ1	1.50	0.74
22:X:15:ASP:CB	26:A:2486:U:O4	2.35	0.74
1:C:256:ARG:HD3	1:C:258:ARG:CD	2.17	0.74
26:A:2644:C:OP1	32:6:34:GLU:OE2	2.05	0.74
28:2:41:CYS:HB2	28:2:44:PHE:CE2	2.22	0.74
24:Z:18:LEU:HD13	24:Z:61:LEU:HD23	1.68	0.74
25:B:25:G:H21	25:B:114:A:H1'	1.50	0.74
25:B:84:C:C4	25:B:85:C:N3	2.55	0.74
25:B:10:G:H1	25:B:107:A:H2	0.80	0.74
25:B:28:A:H61	25:B:56:C:N4	1.85	0.74
1:C:23:GLU:O	1:C:82:ILE:HB	1.86	0.73
33:7:22:ARG:HH22	33:7:37:GLY:HA2	0.93	0.73
33:7:35:ARG:HG2	33:7:36:GLN:N	2.03	0.73
4:F:64:LEU:HB2	4:F:72:PRO:HG3	1.70	0.73
26:A:1563:A:O2'	26:A:1564:A:H5'	1.87	0.73
4:F:11:LEU:HD13	4:F:108:ASP:HB2	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:N:60:ARG:HG2	12:N:60:ARG:NH2	2.03	0.73
13:O:20:LEU:HD23	13:O:20:LEU:C	2.13	0.73
13:O:90:ARG:NH2	13:O:118:GLU:HB2	2.03	0.73
22:X:13:GLY:C	22:X:14:ARG:HG3	2.13	0.73
26:A:1563:A:H61	26:A:1607:C:N4	1.82	0.73
4:F:185:LYS:O	4:F:185:LYS:HE2	1.88	0.73
21:W:29:ARG:NH1	25:B:90:G:C5'	2.51	0.73
26:A:1561:C:H41	26:A:1562:C:H41	1.34	0.73
26:A:1703:G:H1	26:A:1726:C:H42	1.33	0.73
1:C:55:GLY:HA3	1:C:218:ARG:HG3	1.71	0.73
4:F:6:LYS:HE2	4:F:6:LYS:HA	1.70	0.73
26:A:801:U:O2'	31:5:7:THR:O	2.05	0.73
1:C:20:ASP:OD2	1:C:22:ALA:HB2	1.89	0.73
10:L:109:LYS:HD2	10:L:110:LYS:NZ	2.02	0.73
20:V:42:LYS:CD	26:A:586:U:H5"	2.18	0.73
26:A:1601:G:C2'	26:A:1602:U:C5'	2.62	0.73
15:Q:51:GLY:HA2	15:Q:56:GLU:HG3	1.71	0.73
19:U:77:LYS:HD3	19:U:79:THR:HG23	1.70	0.73
1:C:262:LYS:CE	26:A:2309:U:OP1	2.37	0.73
12:N:59:LYS:HZ3	12:N:59:LYS:HB2	1.53	0.73
3:E:151:ASN:C	3:E:152:LYS:HG3	2.06	0.72
1:C:56:GLY:HA3	26:A:807:C:OP1	1.90	0.72
20:V:86:ARG:HB3	20:V:97:ILE:CG1	2.19	0.72
13:O:79:LEU:C	13:O:79:LEU:HD23	2.15	0.72
17:S:59:ALA:H	17:S:103:LYS:HE2	1.53	0.72
25:B:24:G:N7	25:B:56:C:O2'	2.21	0.72
9:K:96:HIS:CB	9:K:99:ARG:CG	2.68	0.72
25:B:18:C:O2'	25:B:19:G:H5"	1.89	0.72
4:F:183:PRO:C	4:F:184:PHE:CD2	2.50	0.72
12:N:59:LYS:HB2	12:N:59:LYS:NZ	2.05	0.72
12:N:65:TRP:HZ3	26:A:989:G:HO2'	1.36	0.72
13:O:33:ARG:CG	13:O:114:GLU:HG2	2.19	0.72
30:4:15:CYS:HB2	30:4:20:HIS:N	2.05	0.72
1:C:55:GLY:CA	1:C:218:ARG:HD2	2.17	0.72
26:A:1561:C:H2'	26:A:1562:C:H5'	1.71	0.72
26:A:1604:G:H2'	26:A:1605:G:H5"	1.72	0.72
1:C:25:THR:HG22	1:C:82:ILE:H	1.53	0.72
3:E:14:THR:HG22	3:E:15:ASP:N	2.04	0.72
4:F:105:GLU:HG3	28:2:24:THR:CG2	2.20	0.72
10:L:8:LEU:HD12	10:L:8:LEU:N	2.03	0.72
13:O:90:ARG:NH1	13:O:118:GLU:HG3	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:1566:A:C2'	26:A:1605:G:O6	2.38	0.72
1:C:257:THR:HG22	26:A:2020:A:O2'	1.90	0.72
3:E:149:THR:C	3:E:150:GLU:HG3	2.13	0.72
4:F:74:VAL:O	25:B:41:U:C4	2.42	0.72
26:A:2363:A:H61	26:A:2374:U:H3	1.36	0.72
22:X:15:ASP:HB2	26:A:2486:U:C4	2.25	0.71
25:B:81:U:H3	25:B:92:G:H22	1.38	0.71
26:A:1581:C:N4	26:A:1591:U:H1'	1.98	0.71
22:X:26:PHE:H	22:X:29:GLN:HE21	1.38	0.71
25:B:57:U:C3'	25:B:58:A:H5"	2.20	0.71
26:A:1572:G:OP2	26:A:1594:G:OP2	2.08	0.71
31:5:6:ARG:NH1	31:5:6:ARG:HB2	2.05	0.71
3:E:24:LEU:CD2	3:E:208:ASN:OD1	2.38	0.71
4:F:44:ASN:OD1	26:A:2536:U:H2'	1.90	0.71
19:U:66:ARG:HA	19:U:75:LYS:HA	1.72	0.71
26:A:964:C:O2'	27:1:21:GLU:HG2	1.90	0.71
26:A:1600:G:OP1	26:A:1600:G:H4'	1.88	0.71
4:F:45:MET:HE3	4:F:64:LEU:CG	2.21	0.71
19:U:73:PHE:HZ	31:5:43:ARG:HH22	1.37	0.71
26:A:1600:G:H3'	26:A:1601:G:H5"	1.70	0.71
19:U:83:ILE:HD13	26:A:1456:G:C2	2.19	0.71
21:W:87:PRO:O	21:W:90:ARG:CZ	2.39	0.71
2:D:154:CYS:SG	26:A:2798:G:O3'	2.48	0.71
14:P:50:GLN:HE22	25:B:7:G:N2	1.87	0.71
26:A:279:U:H3	26:A:307:G:H1	1.39	0.71
26:A:290:C:H42	26:A:298:G:H1	1.38	0.71
3:E:143:THR:O	3:E:147:THR:OG1	2.09	0.71
13:O:16:HIS:CD2	26:A:1390:A:C5	2.78	0.71
13:O:117:ARG:HD3	13:O:118:GLU:N	2.06	0.71
21:W:21:LYS:HZ1	25:B:80:C:H42	1.37	0.71
24:Z:18:LEU:CD1	24:Z:61:LEU:CD2	2.69	0.71
1:C:54:LYS:NZ	26:A:2031:G:C3'	2.54	0.71
2:D:154:CYS:SG	26:A:2796:A:C2'	2.79	0.71
9:K:142:ILE:HG22	9:K:143:LYS:N	2.06	0.71
13:O:4:PRO:CG	26:A:3094:A:C2	2.73	0.71
20:V:96:ARG:O	20:V:97:ILE:HD13	1.91	0.71
26:A:1704:U:H3	26:A:1725:G:H1	1.39	0.70
9:K:112:ASN:ND2	26:A:650:G:P	2.64	0.70
26:A:1566:A:O2'	26:A:1605:G:O6	2.09	0.70
26:A:2075:G:HO2'	26:A:2107:G:H1	0.77	0.70
4:F:9:PRO:HD2	4:F:12:LYS:CE	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:U:68:ARG:O	19:U:69:THR:HG23	1.92	0.70
25:B:20:G:N2	25:B:63:U:C2	2.52	0.70
26:A:1554:U:N3	26:A:1617:C:N4	2.33	0.70
1:C:33:LEU:O	1:C:64:VAL:HG22	1.91	0.70
2:D:156:THR:HG21	26:A:2256:G:N2	2.05	0.70
13:O:29:PHE:CD2	13:O:79:LEU:HD11	2.24	0.70
30:4:15:CYS:CB	30:4:20:HIS:CA	2.63	0.70
2:D:156:THR:O	26:A:2795:C:O2'	2.09	0.70
20:V:42:LYS:HD3	20:V:59:ILE:HD11	1.73	0.70
25:B:19:G:C5'	25:B:19:G:H8	2.03	0.70
26:A:1580:A:C6	26:A:1592:G:N3	2.58	0.70
4:F:66:LEU:HA	28:2:27:THR:HG21	1.74	0.70
13:O:5:THR:O	13:O:6:LYS:HB3	1.92	0.70
14:P:45:ARG:NH1	25:B:52:G:N7	2.17	0.70
26:A:1578:G:N3	26:A:1592:G:N2	2.17	0.70
13:O:33:ARG:HD3	13:O:114:GLU:CG	2.21	0.70
21:W:105:LYS:HZ3	21:W:136:GLU:CD	1.99	0.70
24:Z:13:LEU:CD1	24:Z:17:GLU:OE1	2.39	0.70
26:A:802:C:O4'	31:5:7:THR:HA	1.92	0.70
26:A:1566:A:N3	26:A:1605:G:N1	2.39	0.70
1:C:25:THR:CB	1:C:81:HIS:HD1	2.03	0.70
13:O:33:ARG:CG	13:O:114:GLU:CG	2.70	0.70
2:D:154:CYS:CA	26:A:2798:G:O2'	2.39	0.69
9:K:7:LYS:O	9:K:10:ASP:OD1	2.10	0.69
13:O:29:PHE:CZ	13:O:51:LEU:HD12	2.25	0.69
13:O:33:ARG:CD	13:O:114:GLU:CG	2.70	0.69
25:B:29:C:C2	25:B:55:G:N2	2.58	0.69
25:B:60:G:H8	25:B:60:G:C5'	2.02	0.69
26:A:997:G:H1	26:A:1010:U:H3	1.40	0.69
9:K:134:ALA:C	9:K:135:GLN:HG2	2.17	0.69
26:A:1556:A:N6	26:A:1615:G:H1	1.89	0.69
27:1:19:GLN:CG	27:1:50:VAL:HG12	2.21	0.69
9:K:47:ASN:HD21	26:A:623:A:H2	1.39	0.69
13:O:90:ARG:NH2	13:O:118:GLU:HB3	2.07	0.69
21:W:77:LEU:CB	21:W:100:VAL:HG21	2.11	0.69
22:X:83:VAL:HG13	22:X:86:PRO:HD3	1.72	0.69
20:V:62:GLN:CG	20:V:63:GLU:N	2.39	0.69
24:Z:18:LEU:CD1	24:Z:61:LEU:HD23	2.22	0.69
26:A:966:U:H5'	27:1:49:THR:OG1	1.92	0.69
1:C:262:LYS:HE2	26:A:2309:U:OP1	1.93	0.69
21:W:37:LEU:HD11	21:W:69:LEU:HD12	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:38:CYS:SG	28:2:40:GLN:NE2	2.64	0.69
4:F:182:PHE:HD2	4:F:184:PHE:CE2	2.09	0.69
17:S:58:VAL:CG2	17:S:103:LYS:HG3	1.94	0.69
25:B:24:G:C4	25:B:56:C:N3	2.61	0.69
9:K:13:ARG:CZ	9:K:121:LYS:HZ3	2.06	0.69
9:K:25:LEU:HD12	9:K:26:GLY:H	1.56	0.69
30:4:18:CYS:CB	30:4:45:CYS:SG	2.81	0.69
4:F:73:GLU:CG	25:B:42:C:C6	2.73	0.69
9:K:3:THR:HG22	26:A:1113:C:O2	1.92	0.69
25:B:24:G:C6	25:B:56:C:O2	2.42	0.69
26:A:802:C:C4'	31:5:7:THR:HA	2.21	0.69
26:A:1563:A:N1	26:A:1607:C:N4	2.41	0.69
9:K:96:HIS:CB	9:K:99:ARG:HG3	2.23	0.69
30:4:15:CYS:N	30:4:20:HIS:HA	2.07	0.69
1:C:26:ARG:CD	1:C:81:HIS:CG	2.76	0.69
10:L:92:ASP:OD2	10:L:93:PRO:CD	2.41	0.69
25:B:40:A:C8	28:2:2:LYS:HE3	2.27	0.69
25:B:58:A:H8	25:B:58:A:C5'	2.02	0.69
26:A:753:A:H61	26:A:762:U:H3	1.41	0.69
26:A:1566:A:O2'	26:A:1605:G:N1	2.26	0.69
21:W:24:SER:OG	25:B:76:G:H5"	1.92	0.68
22:X:83:VAL:CG1	22:X:86:PRO:HD3	2.23	0.68
26:A:1566:A:O2'	26:A:1605:G:C6	2.37	0.68
10:L:8:LEU:CD1	10:L:19:ILE:CG1	2.71	0.68
19:U:83:ILE:CD1	26:A:1456:G:N1	2.52	0.68
20:V:46:ALA:HB1	26:A:572:C:OP1	1.94	0.68
25:B:19:G:C2	25:B:65:C:N3	2.59	0.68
26:A:2702:A:OP1	33:7:31:ARG:NH1	2.26	0.68
13:O:20:LEU:HD21	13:O:24:LEU:HD11	1.73	0.68
18:T:81:VAL:HG12	18:T:112:VAL:HG12	1.75	0.68
2:D:155:ALA:CB	26:A:2796:A:H8	1.65	0.68
21:W:64:ASN:ND2	21:W:109:GLU:O	2.27	0.68
21:W:101:GLN:CB	21:W:104:GLU:HB2	2.16	0.68
26:A:1608:U:O2'	26:A:1609:G:H5'	1.93	0.68
1:C:58:HIS:HE1	26:A:1788:G:H21	1.41	0.68
19:U:4:ILE:CD1	24:Z:58:TYR:HE1	2.00	0.68
21:W:22:GLY:HA3	25:B:92:G:OP2	1.93	0.68
25:B:40:A:H61	28:2:1:MET:H3	1.37	0.68
25:B:44:C:OP2	28:2:1:MET:N	2.27	0.68
3:E:7:VAL:HG23	3:E:16:GLY:O	1.92	0.68
9:K:4:TYR:CD2	16:R:100:VAL:HG11	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:1590:G:C4	26:A:1591:U:H5	1.97	0.68
1:C:73:ASP:OD1	1:C:73:ASP:N	2.26	0.68
13:O:9:ARG:N	13:O:9:ARG:HD2	2.09	0.68
21:W:58:LEU:O	21:W:62:GLY:HA3	1.93	0.68
26:A:1580:A:O2'	26:A:1581:C:H5"	1.94	0.68
28:2:41:CYS:C	28:2:43:PRO:HD2	2.19	0.68
4:F:47:VAL:HG21	4:F:93:GLY:N	2.09	0.68
25:B:24:G:C8	25:B:56:C:O2	2.37	0.68
1:C:76:ASN:O	1:C:98:LEU:HD22	1.92	0.68
9:K:96:HIS:HB3	9:K:99:ARG:CG	2.23	0.68
9:K:113:LYS:N	9:K:113:LYS:HD3	2.06	0.68
20:V:43:LYS:O	20:V:59:ILE:HA	1.93	0.68
22:X:19:GLN:N	22:X:19:GLN:OE1	2.26	0.68
22:X:83:VAL:HG12	22:X:85:ARG:CB	2.24	0.68
25:B:25:G:O2'	25:B:26:A:H5'	1.94	0.68
4:F:45:MET:HG2	4:F:60:ALA:HB1	1.76	0.67
4:F:120:ASP:CG	4:F:122:ARG:HH11	2.01	0.67
13:O:47:TYR:OH	13:O:69:LYS:HG2	1.92	0.67
26:A:1939:U:H3	26:A:1955:A:H62	1.40	0.67
2:D:114:VAL:HG12	2:D:208:VAL:HG12	1.74	0.67
9:K:142:ILE:O	9:K:143:LYS:HB2	1.95	0.67
25:B:83:C:H4'	27:1:52:HIS:ND1	2.08	0.67
26:A:1574:G:O6	26:A:1600:G:N7	2.27	0.67
26:A:1609:G:O2'	26:A:1610:C:H5'	1.94	0.67
30:4:11:ILE:HD13	30:4:27:LYS:CD	2.24	0.67
4:F:79:LYS:HE3	4:F:81:ILE:HG12	1.76	0.67
10:L:108:GLU:HG3	10:L:109:LYS:N	2.08	0.67
26:A:1541:G:O6	26:A:1630:U:O4	2.12	0.67
26:A:1572:G:O6	26:A:1600:G:C2	2.47	0.67
26:A:2349:A:H61	26:A:2386:U:H5'	1.58	0.67
30:4:34:ASP:OD2	30:4:35:ARG:HG2	1.95	0.67
1:C:26:ARG:HG3	1:C:81:HIS:CG	2.29	0.67
1:C:29:PRO:CB	1:C:34:VAL:HG21	2.25	0.67
9:K:25:LEU:HD12	9:K:26:GLY:N	2.10	0.67
12:N:58:ILE:HG23	12:N:108:TYR:CZ	2.30	0.67
18:T:9:SER:HB3	18:T:115:GLU:HB3	1.72	0.67
21:W:101:GLN:HE21	21:W:101:GLN:C	2.01	0.67
10:L:7:ARG:HG2	10:L:7:ARG:HH21	1.58	0.67
18:T:75:THR:O	18:T:118:PRO:HD3	1.95	0.67
26:A:1567:C:N3	26:A:1603:G:O6	2.27	0.67
26:A:1577:C:H5	26:A:1594:G:O6	1.78	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:35:ARG:NH2	1:C:35:ARG:HG2	2.09	0.67
22:X:75:ARG:HE	26:A:2558:C:N4	1.93	0.67
24:Z:18:LEU:HB3	24:Z:61:LEU:HD21	1.76	0.67
26:A:1568:C:C3'	26:A:1569:A:H8	2.06	0.67
30:4:28:ASN:OD1	30:4:31:ASN:N	2.27	0.67
1:C:25:THR:HG23	1:C:81:HIS:CB	1.98	0.67
25:B:10:G:C6	25:B:107:A:N1	2.62	0.67
26:A:747:A:N6	26:A:768:G:O2'	2.28	0.67
26:A:1540:U:H3	26:A:1632:G:H1	1.43	0.67
26:A:1592:G:O2'	26:A:1593:U:H6	1.77	0.67
1:C:22:ALA:O	1:C:23:GLU:HB2	1.94	0.67
9:K:113:LYS:HD3	9:K:113:LYS:H	1.60	0.67
9:K:142:ILE:HG22	26:A:1130:C:N4	1.78	0.67
25:B:35:G:C2	25:B:36:U:C5	2.83	0.67
3:E:144:PHE:CD1	3:E:148:LEU:CG	2.77	0.67
13:O:95:THR:HG22	13:O:115:LEU:CD2	2.25	0.67
20:V:30:ARG:O	20:V:31:ASN:HB2	1.95	0.67
25:B:20:G:H2'	25:B:21:C:H5'	1.77	0.67
3:E:107:ILE:HD11	26:A:710:G:OP1	1.95	0.67
18:T:67:ASN:ND2	26:A:574:C:O2'	2.29	0.67
19:U:9:ASP:N	19:U:9:ASP:OD1	2.25	0.67
30:4:36:LEU:HG	30:4:37:GLU:H	1.60	0.67
1:C:29:PRO:HG2	1:C:34:VAL:HG21	1.75	0.66
1:C:222:ARG:NH1	26:A:2006:A:OP2	2.28	0.66
4:F:111:ILE:HD11	4:F:182:PHE:HA	1.76	0.66
6:H:43:ALA:O	6:H:47:ALA:HB3	1.95	0.66
9:K:3:THR:HG23	26:A:1113:C:O2	1.95	0.66
22:X:76:LYS:NZ	26:A:973:G:OP1	2.27	0.66
25:B:2:U:H3	25:B:115:A:H61	1.43	0.66
26:A:1583:U:O2	26:A:1589:G:C2	2.49	0.66
10:L:109:LYS:C	10:L:110:LYS:HG3	2.17	0.66
19:U:69:THR:CG2	19:U:73:PHE:O	2.43	0.66
30:4:15:CYS:C	30:4:20:HIS:HA	2.20	0.66
1:C:56:GLY:HA2	26:A:807:C:OP1	1.95	0.66
19:U:10:ILE:HD13	19:U:10:ILE:N	2.10	0.66
4:F:32:VAL:O	4:F:33:MET:CB	2.43	0.66
26:A:1568:C:H2'	26:A:1569:A:C8	2.30	0.66
13:O:20:LEU:HD21	13:O:24:LEU:CD1	2.24	0.66
20:V:4:HIS:HE1	20:V:96:ARG:HH22	1.39	0.66
20:V:96:ARG:HG3	20:V:96:ARG:HH21	1.61	0.66
21:W:9:ASN:HD21	21:W:57:VAL:HG13	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B:85:C:H2'	25:B:86:U:H5"	1.75	0.66
26:A:1568:C:H3'	26:A:1569:A:C8	2.30	0.66
26:A:1607:C:H6	26:A:1607:C:O5'	1.78	0.66
25:B:12:C:O2'	25:B:13:C:OP2	2.11	0.66
26:A:1578:G:N2	26:A:1592:G:H2'	2.09	0.66
3:E:201:LEU:O	3:E:201:LEU:HD23	1.94	0.66
20:V:43:LYS:NZ	20:V:43:LYS:HB3	2.09	0.66
21:W:8:PRO:CB	21:W:68:THR:OG1	2.44	0.66
4:F:87:ARG:HB3	4:F:90:MET:HG3	1.78	0.66
9:K:96:HIS:HB2	9:K:99:ARG:HG3	1.77	0.66
26:A:1577:C:O2'	26:A:1578:G:H5'	1.95	0.66
1:C:100:GLY:O	26:A:1720:G:O2'	2.14	0.66
9:K:27:ARG:HH11	9:K:27:ARG:HG3	1.59	0.66
28:2:14:VAL:HB	28:2:22:PHE:HB2	1.78	0.65
26:A:1568:C:H3'	26:A:1569:A:H8	1.61	0.65
32:6:26:LYS:NZ	32:6:45:ASP:O	2.28	0.65
1:C:29:PRO:HB2	1:C:34:VAL:HG21	1.77	0.65
11:M:61:LEU:HD21	32:6:24:ARG:HH11	1.60	0.65
12:N:124:LYS:NZ	26:A:2691:C:O2	2.29	0.65
18:T:41:ASP:CG	29:3:38:LYS:HB2	2.20	0.65
26:A:1830:C:H4'	31:5:10:PRO:HD3	1.79	0.65
31:5:5:LYS:O	31:5:6:ARG:HG2	1.96	0.65
3:E:45:LYS:HG3	26:A:709:U:C4	2.31	0.65
4:F:6:LYS:HE2	4:F:6:LYS:CA	2.26	0.65
20:V:72:MET:HG2	20:V:80:PRO:HB2	1.78	0.65
25:B:70:G:H22	25:B:103:G:H1	1.43	0.65
4:F:110:LEU:HD23	4:F:111:ILE:H	1.60	0.65
21:W:102:ARG:NH2	21:W:138:LEU:HD21	2.12	0.65
1:C:35:ARG:HG2	1:C:35:ARG:HH21	1.59	0.65
2:D:144:VAL:HG22	2:D:147:ARG:HE	1.62	0.65
9:K:25:LEU:HD22	9:K:62:ILE:CD1	2.27	0.65
26:A:1563:A:H8	26:A:1563:A:OP2	1.80	0.65
31:5:6:ARG:O	31:5:7:THR:OG1	2.09	0.65
1:C:25:THR:HG1	1:C:81:HIS:CE1	2.09	0.65
4:F:45:MET:HA	4:F:45:MET:HE2	1.78	0.65
9:K:85:ARG:NH2	26:A:2866:A:OP2	2.26	0.65
9:K:116:ARG:NH2	26:A:615:A:H5"	2.12	0.65
18:T:116:SER:C	18:T:118:PRO:HD2	2.21	0.65
26:A:1573:U:H1'	26:A:1574:G:P	2.37	0.65
3:E:8:LYS:HE3	3:E:148:LEU:HD22	1.79	0.65
3:E:7:VAL:HB	3:E:16:GLY:CA	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:57:ILE:HG12	4:F:91:PRO:HB2	1.77	0.65
9:K:96:HIS:CB	9:K:99:ARG:HG2	2.25	0.65
13:O:77:HIS:CG	26:A:1674:G:H2'	2.11	0.65
20:V:2:LYS:CE	20:V:83:VAL:HG12	2.27	0.65
22:X:16:SER:O	22:X:17:ALA:HB3	1.96	0.65
21:W:77:LEU:CD2	21:W:100:VAL:HG21	2.26	0.64
4:F:46:GLY:O	4:F:47:VAL:CB	2.46	0.64
20:V:45:THR:C	26:A:571:A:O2'	2.38	0.64
25:B:79:A:H2	25:B:94:G:H1	1.42	0.64
30:4:47:THR:OG1	30:4:49:GLN:NE2	2.30	0.64
21:W:9:ASN:ND2	21:W:57:VAL:CG1	2.53	0.64
26:A:1573:U:H1'	26:A:1574:G:OP1	1.97	0.64
30:4:18:CYS:SG	30:4:19:LYS:NZ	2.70	0.64
4:F:10:ARG:HG2	4:F:10:ARG:NH1	2.05	0.64
26:A:1563:A:C6	26:A:1607:C:N4	2.65	0.64
26:A:1592:G:HO2'	26:A:1593:U:H6	1.43	0.64
3:E:107:ILE:HD11	26:A:710:G:H5"	1.79	0.64
25:B:96:A:H2	26:A:977:G:N2	1.96	0.64
1:C:108:PRO:HD2	1:C:111:LEU:HD22	1.80	0.64
20:V:99:LYS:NZ	20:V:99:LYS:HB3	2.12	0.64
26:A:1610:C:O5'	26:A:1610:C:H6	1.80	0.64
3:E:192:ASP:HB3	11:M:5:LYS:HZ1	0.81	0.64
22:X:17:ALA:HB1	26:A:2485:C:P	2.37	0.64
26:A:1565:A:C2	26:A:1606:G:C4	2.86	0.64
31:5:6:ARG:HB2	31:5:6:ARG:HH11	1.62	0.64
4:F:55:LYS:HB2	4:F:55:LYS:HZ2	1.63	0.64
13:O:29:PHE:CD2	13:O:79:LEU:CD1	2.77	0.64
19:U:75:LYS:O	26:A:61:G:H5'	1.96	0.64
25:B:29:C:N4	25:B:55:G:H1	1.94	0.64
1:C:37:LEU:HD23	1:C:62:TYR:CB	2.27	0.64
13:O:56:LYS:NZ	13:O:94:TYR:OH	2.21	0.64
1:C:256:ARG:CD	1:C:258:ARG:HD2	2.28	0.64
3:E:150:GLU:HB2	3:E:193:ASP:OD2	1.98	0.64
4:F:53:ASP:O	4:F:56:LEU:HD21	1.97	0.64
10:L:80:ASP:OD2	15:Q:61:ARG:CZ	2.46	0.64
13:O:45:ARG:NH1	26:A:3102:U:O2	2.31	0.64
2:D:48:SER:HB2	2:D:92:VAL:HG21	1.80	0.63
4:F:132:THR:HG21	14:P:6:VAL:HG22	1.77	0.63
9:K:1:MET:N	9:K:2:PRO:HD3	2.13	0.63
10:L:91:ASN:OD1	10:L:92:ASP:N	2.30	0.63
12:N:60:ARG:CZ	26:A:1194:C:P	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:V:2:LYS:NZ	20:V:85:TYR:CD2	2.62	0.63
20:V:96:ARG:HH21	20:V:96:ARG:CG	2.11	0.63
13:O:33:ARG:CD	13:O:114:GLU:CD	2.58	0.63
18:T:44:ARG:HH12	29:3:55:ASP:N	1.90	0.63
18:T:75:THR:CB	18:T:118:PRO:HG3	2.28	0.63
21:W:104:GLU:HA	21:W:104:GLU:OE1	1.98	0.63
26:A:1582:C:H2'	26:A:1583:U:H5'	1.79	0.63
1:C:25:THR:CG2	1:C:82:ILE:N	2.62	0.63
4:F:11:LEU:HD13	4:F:108:ASP:CB	2.27	0.63
11:M:76:GLN:NE2	26:A:720:C:N3	2.46	0.63
19:U:4:ILE:N	19:U:4:ILE:HD12	2.13	0.63
4:F:66:LEU:CD2	28:2:27:THR:CG2	2.73	0.63
4:F:118:ILE:HD12	4:F:118:ILE:N	2.02	0.63
20:V:89:ASP:N	20:V:89:ASP:OD1	2.31	0.63
25:B:35:G:C2	25:B:36:U:C4	2.85	0.63
3:E:149:THR:HG23	3:E:150:GLU:HG3	1.79	0.63
4:F:49:ASP:CB	4:F:56:LEU:CD1	2.65	0.63
4:F:66:LEU:CD2	28:2:27:THR:HG22	2.28	0.63
5:G:55:ARG:HD2	5:G:62:SER:HB3	1.81	0.63
19:U:5:THR:CG2	19:U:6:ASP:H	2.07	0.63
19:U:69:THR:HG21	26:A:61:G:O2'	1.98	0.63
26:A:1598:U:O4	26:A:1601:G:N1	2.31	0.63
31:5:26:ARG:HD2	31:5:26:ARG:N	2.12	0.63
1:C:240:THR:HG22	1:C:242:GLY:H	1.64	0.63
3:E:3:LEU:HD11	3:E:26:ASP:OD1	1.99	0.63
20:V:28:PRO:HG3	26:A:83:C:OP1	1.98	0.63
20:V:86:ARG:HB3	20:V:97:ILE:HG12	1.80	0.63
24:Z:48:ARG:O	24:Z:52:GLN:NE2	2.31	0.63
25:B:57:U:H2'	25:B:58:A:C5'	2.21	0.63
26:A:1581:C:C2'	26:A:1582:C:C6	2.79	0.63
26:A:1604:G:C2'	26:A:1605:G:H5"	2.28	0.63
4:F:11:LEU:HD22	4:F:108:ASP:N	2.13	0.63
3:E:52:THR:OG1	3:E:92:GLY:HA3	1.99	0.63
3:E:118:ARG:NH1	11:M:4:ILE:O	2.31	0.63
9:K:96:HIS:HB2	9:K:99:ARG:CG	2.29	0.63
13:O:26:THR:HG23	13:O:75:VAL:HG21	1.81	0.63
25:B:19:G:C6	25:B:20:G:N7	2.67	0.63
25:B:25:G:N2	25:B:114:A:C4	2.62	0.63
10:L:92:ASP:OD2	10:L:93:PRO:N	2.32	0.63
26:A:1564:A:C3'	26:A:1565:A:H5"	2.28	0.63
30:4:22:ASN:OD1	30:4:22:ASN:N	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:25:THR:HG21	1:C:81:HIS:CG	2.34	0.62
1:C:37:LEU:CD2	1:C:62:TYR:HD1	2.12	0.62
4:F:70:GLN:NE2	25:B:43:C:H4'	2.14	0.62
9:K:25:LEU:HD22	9:K:62:ILE:HD12	1.81	0.62
19:U:6:ASP:OD2	24:Z:23:ARG:HG3	1.98	0.62
25:B:82:A:N1	25:B:91:G:O6	2.32	0.62
25:B:84:C:C2'	25:B:85:C:H5'	2.28	0.62
26:A:1586:C:C3'	26:A:1587:G:H5"	2.28	0.62
28:2:38:CYS:HB2	28:2:40:GLN:NE2	2.14	0.62
31:5:38:ARG:HA	31:5:45:LEU:HD21	1.80	0.62
1:C:35:ARG:HH21	1:C:35:ARG:CG	2.12	0.62
4:F:118:ILE:HG13	4:F:144:MET:HG2	1.79	0.62
10:L:7:ARG:HH21	10:L:7:ARG:CG	2.12	0.62
19:U:29:TYR:CZ	19:U:93:ILE:HB	2.34	0.62
20:V:43:LYS:HG2	26:A:568:A:H4'	1.81	0.62
25:B:21:C:C6	25:B:21:C:H3'	2.35	0.62
26:A:1563:A:C5	26:A:1565:A:C5	2.87	0.62
26:A:1571:C:N3	26:A:1601:G:N2	2.47	0.62
30:4:15:CYS:CB	30:4:20:HIS:H	2.12	0.62
3:E:69:LYS:HE2	26:A:2668:G:OP2	1.98	0.62
5:G:154:ARG:HD2	5:G:155:PRO:HD2	1.82	0.62
25:B:40:A:H8	28:2:2:LYS:HE3	1.63	0.62
26:A:1590:G:C6	26:A:1591:U:C4	2.86	0.62
1:C:96:HIS:HE1	1:C:102:LYS:HZ2	1.45	0.62
1:C:257:THR:CG2	26:A:2020:A:O2'	2.47	0.62
19:U:29:TYR:CD1	19:U:93:ILE:HG21	2.34	0.62
19:U:60:ALA:HB2	26:A:1456:G:H4'	1.81	0.62
20:V:83:VAL:CG1	20:V:96:ARG:HG3	2.27	0.62
1:C:37:LEU:CD2	1:C:62:TYR:CD1	2.81	0.62
13:O:33:ARG:HG3	13:O:114:GLU:HG2	1.78	0.62
17:S:6:ILE:CG2	17:S:7:VAL:N	2.63	0.62
25:B:24:G:C4	25:B:56:C:C2	2.88	0.62
25:B:88:C:H2'	25:B:89:C:C5	2.35	0.62
28:2:44:PHE:O	28:2:48:LYS:CG	2.42	0.62
4:F:9:PRO:HD2	4:F:12:LYS:HZ2	1.64	0.62
13:O:11:GLY:O	13:O:12:GLY:C	2.42	0.62
25:B:21:C:H3'	25:B:21:C:H6	1.65	0.62
25:B:60:G:C2'	25:B:61:C:H5'	2.29	0.62
3:E:118:ARG:HH11	11:M:3:VAL:CG1	2.13	0.62
17:S:6:ILE:HG22	17:S:7:VAL:H	1.64	0.62
19:U:69:THR:HG23	19:U:73:PHE:O	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:1603:G:C2	26:A:1604:G:C5	2.88	0.62
26:A:1609:G:H2'	26:A:1610:C:C6	2.35	0.62
25:B:79:A:C2	25:B:94:G:N1	2.58	0.62
26:A:1122:C:H2'	26:A:1129:G:H2'	1.82	0.62
4:F:76:ARG:NH1	25:B:41:U:H3	1.98	0.62
13:O:67:MET:HG3	13:O:76:VAL:HG11	1.81	0.62
19:U:29:TYR:CE1	19:U:93:ILE:HG21	2.34	0.62
30:4:19:LYS:HD3	30:4:44:ASN:HB2	1.80	0.62
26:A:1563:A:C8	26:A:1565:A:N7	2.68	0.62
1:C:63:ARG:HH12	26:A:1788:G:P	2.22	0.61
2:D:60:ARG:NH2	26:A:3052:A:OP1	2.33	0.61
4:F:126:PRO:O	4:F:174:ARG:NH1	2.33	0.61
7:I:27:GLU:HB2	7:I:106:LYS:HE3	1.81	0.61
9:K:141:GLU:CD	9:K:143:LYS:HG3	2.25	0.61
25:B:59:A:H2'	25:B:59:A:N3	2.14	0.61
4:F:51:ALA:HB2	4:F:90:MET:CE	2.15	0.61
11:M:84:ASN:ND2	11:M:117:LYS:O	2.33	0.61
20:V:2:LYS:CD	20:V:83:VAL:HG12	2.30	0.61
30:4:11:ILE:HD13	30:4:27:LYS:HD3	1.81	0.61
30:4:19:LYS:HG3	30:4:21:ARG:HG2	1.82	0.61
1:C:256:ARG:NE	1:C:258:ARG:HE	1.97	0.61
13:O:7:GLY:O	13:O:9:ARG:NH1	2.33	0.61
25:B:19:G:C8	25:B:19:G:H3'	2.35	0.61
1:C:256:ARG:HD3	1:C:258:ARG:NE	2.14	0.61
3:E:192:ASP:CB	11:M:5:LYS:HZ3	1.96	0.61
1:C:73:ASP:CB	1:C:120:GLY:HA3	2.28	0.61
8:J:96:LYS:HE3	21:W:120:PRO:CB	2.27	0.61
10:L:107:ARG:NH1	15:Q:33:GLU:CG	2.63	0.61
11:M:51:GLU:CG	32:6:57:ARG:HH11	2.11	0.61
12:N:60:ARG:CZ	26:A:1194:C:OP2	2.48	0.61
13:O:43:ALA:CA	13:O:46:PRO:HD2	2.30	0.61
20:V:86:ARG:HD3	20:V:97:ILE:CG1	2.30	0.61
21:W:102:ARG:NH2	21:W:138:LEU:CD1	2.57	0.61
28:2:16:CYS:SG	28:2:17:GLY:N	2.74	0.61
20:V:86:ARG:CB	20:V:97:ILE:HG13	2.30	0.61
21:W:40:HIS:C	21:W:42:THR:H	2.09	0.61
4:F:45:MET:HB3	4:F:94:ALA:N	2.16	0.61
26:A:1610:C:H2'	26:A:1611:A:H8	1.65	0.61
26:A:1754:G:O6	26:A:1759:A:N1	2.33	0.61
30:4:13:LEU:O	30:4:23:TYR:N	2.34	0.61
30:4:18:CYS:HG	30:4:45:CYS:HG	1.42	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:K:110:PRO:O	9:K:115:GLY:HA3	2.01	0.61
13:O:8:PRO:HG3	26:A:1870:U:N3	2.14	0.61
4:F:77:ALA:HB2	4:F:92:ILE:HD11	1.82	0.60
19:U:57:VAL:HG22	19:U:84:VAL:HG12	1.82	0.60
19:U:68:ARG:HB2	26:A:1450:C:OP1	2.01	0.60
1:C:241:SER:OG	26:A:2127:G:OP1	2.18	0.60
26:A:2256:G:N2	26:A:2796:A:OP2	2.33	0.60
3:E:7:VAL:H	3:E:16:GLY:C	1.99	0.60
10:L:109:LYS:HG2	10:L:110:LYS:HG3	1.82	0.60
1:C:25:THR:CG2	1:C:81:HIS:CG	2.83	0.60
3:E:121:ASN:ND2	11:M:3:VAL:HG22	2.16	0.60
24:Z:18:LEU:HD13	24:Z:61:LEU:HD21	1.82	0.60
3:E:35:HIS:HE1	26:A:1359:G:O2'	1.85	0.60
3:E:121:ASN:ND2	11:M:3:VAL:CG2	2.64	0.60
3:E:155:LEU:HB3	3:E:194:VAL:HG12	1.83	0.60
8:J:129:ILE:HA	26:A:1198:C:H1'	1.84	0.60
9:K:77:HIS:CD2	9:K:78:SER:O	2.54	0.60
1:C:262:LYS:HD2	1:C:262:LYS:N	2.17	0.60
2:D:27:THR:HG21	2:D:198:ILE:HG12	1.84	0.60
8:J:57:PRO:HD3	8:J:76:PRO:HD3	1.84	0.60
11:M:61:LEU:HD22	32:6:24:ARG:HH11	1.64	0.60
13:O:43:ALA:O	13:O:46:PRO:HD2	2.02	0.60
20:V:59:ILE:O	20:V:59:ILE:HG12	2.02	0.60
26:A:808:A:O2'	26:A:1468:A:N3	2.35	0.60
19:U:4:ILE:O	19:U:4:ILE:HG22	2.01	0.60
25:B:25:G:N2	25:B:114:A:C2'	2.61	0.60
26:A:1562:C:O2'	26:A:1563:A:H5'	2.02	0.60
27:1:51:HIS:H	27:1:51:HIS:HD2	1.46	0.60
1:C:54:LYS:HZ3	26:A:2031:G:H5"	1.65	0.60
3:E:42:LEU:O	26:A:531:A:N6	2.34	0.60
3:E:186:TYR:CE1	11:M:6:LEU:HD11	2.37	0.60
8:J:111:ALA:HA	8:J:114:LYS:HB2	1.83	0.60
10:L:104:ARG:HH12	15:Q:33:GLU:HB2	1.67	0.60
20:V:99:LYS:HB3	20:V:99:LYS:HZ2	1.66	0.60
25:B:24:G:C8	25:B:56:C:H2'	2.37	0.60
26:A:2713:G:OP1	34:8:6:ARG:NH2	2.33	0.60
33:7:22:ARG:CD	33:7:36:GLN:O	2.49	0.60
5:G:63:ARG:HB3	26:A:2973:A:H4'	1.84	0.60
19:U:69:THR:C	19:U:71:THR:H	2.09	0.60
4:F:44:ASN:HD22	4:F:44:ASN:C	2.10	0.59
13:O:9:ARG:HG2	13:O:14:SER:CA	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:O:16:HIS:CD2	26:A:1390:A:N9	2.70	0.59
20:V:89:ASP:O	20:V:90:GLU:C	2.43	0.59
25:B:24:G:C2'	25:B:56:C:C4	2.85	0.59
25:B:36:U:O5'	25:B:36:U:H6	1.84	0.59
25:B:60:G:O2'	25:B:61:C:C5'	2.42	0.59
30:4:15:CYS:HB2	30:4:20:HIS:H	1.66	0.59
1:C:261:ASN:O	1:C:262:LYS:HB2	2.03	0.59
3:E:4:LYS:HD3	3:E:5:VAL:N	2.17	0.59
4:F:46:GLY:C	4:F:47:VAL:CG2	2.49	0.59
12:N:75:THR:HA	12:N:90:PRO:HA	1.84	0.59
21:W:6:ASN:O	21:W:6:ASN:ND2	2.35	0.59
21:W:36:VAL:HG21	25:B:74:A:H2	1.67	0.59
25:B:34:G:C6	25:B:44:C:C5	2.89	0.59
25:B:84:C:C4	25:B:85:C:C2	2.90	0.59
25:B:87:U:H3'	25:B:88:C:O4'	2.02	0.59
1:C:21:PHE:O	1:C:24:ILE:HG13	2.02	0.59
1:C:73:ASP:O	1:C:119:SER:O	2.19	0.59
1:C:257:THR:HG22	1:C:257:THR:O	2.01	0.59
1:C:262:LYS:HE3	26:A:2309:U:OP1	2.02	0.59
15:Q:5:ASP:O	15:Q:9:GLN:HB3	2.02	0.59
26:A:325:U:O2	26:A:450:G:N2	2.30	0.59
27:1:50:VAL:O	27:1:50:VAL:HG23	2.01	0.59
18:T:75:THR:HB	18:T:118:PRO:CG	2.32	0.59
3:E:45:LYS:CG	26:A:709:U:O4	2.49	0.59
25:B:19:G:C8	25:B:19:G:C3'	2.85	0.59
26:A:1608:U:C2	26:A:1609:G:N7	2.69	0.59
1:C:254:GLU:HG2	1:C:254:GLU:O	2.03	0.59
25:B:4:A:N3	25:B:25:G:O6	2.34	0.59
13:O:90:ARG:HH21	13:O:118:GLU:CB	2.10	0.59
18:T:82:TYR:HD2	18:T:111:THR:HB	1.68	0.59
19:U:4:ILE:CD1	24:Z:58:TYR:OH	2.46	0.59
19:U:73:PHE:HZ	31:5:43:ARG:NH2	2.01	0.59
21:W:29:ARG:HH11	25:B:90:G:H5'	1.65	0.59
26:A:285:U:H3'	26:A:286:G:H4'	1.85	0.59
1:C:37:LEU:HD21	1:C:62:TYR:HD1	1.67	0.59
3:E:107:ILE:HD12	26:A:710:G:OP1	2.02	0.59
3:E:127:VAL:O	3:E:198:VAL:HG23	2.02	0.59
12:N:60:ARG:O	21:W:190:LEU:CD1	2.51	0.59
18:T:75:THR:HB	18:T:118:PRO:HG3	1.83	0.59
20:V:2:LYS:HD2	20:V:83:VAL:CB	2.32	0.59
24:Z:18:LEU:CD1	24:Z:61:LEU:HD21	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:993:G:N2	26:A:1015:A:OP2	2.36	0.59
26:A:1552:A:N6	26:A:1616:A:OP2	2.35	0.59
11:M:68:LYS:NZ	26:A:244:A:OP1	2.36	0.59
18:T:84:ASP:OD1	26:A:20:G:N2	2.23	0.59
18:T:85:GLU:O	26:A:21:G:O2'	2.20	0.59
20:V:45:THR:C	26:A:571:A:HO2'	2.08	0.59
25:B:60:G:C2'	25:B:61:C:C5'	2.80	0.59
26:A:1604:G:H2'	26:A:1605:G:C5'	2.31	0.59
33:7:2:LYS:NZ	33:7:31:ARG:O	2.32	0.59
1:C:62:TYR:CE1	26:A:2033:U:H3'	2.38	0.59
1:C:96:HIS:CE1	1:C:102:LYS:HZ2	2.14	0.59
3:E:144:PHE:CD2	3:E:148:LEU:CD1	2.79	0.59
19:U:77:LYS:HE2	19:U:79:THR:HA	1.84	0.59
19:U:77:LYS:HZ3	19:U:79:THR:HG22	1.67	0.59
20:V:43:LYS:HB3	20:V:43:LYS:HZ3	1.68	0.59
20:V:86:ARG:CD	20:V:97:ILE:HG13	2.32	0.59
25:B:55:G:H8	25:B:55:G:O5'	1.86	0.59
26:A:1573:U:O2'	26:A:1574:G:OP1	2.17	0.59
30:4:28:ASN:CG	30:4:31:ASN:HB2	2.28	0.59
1:C:31:LYS:HE3	26:A:1648:A:O2'	2.03	0.58
4:F:70:GLN:OE1	4:F:96:VAL:HG23	2.03	0.58
15:Q:19:PHE:HA	15:Q:88:ARG:HH12	1.68	0.58
26:A:858:A:O2'	26:A:1877:U:OP1	2.20	0.58
26:A:1174:G:O2'	26:A:1221:A:N6	2.36	0.58
2:D:154:CYS:CB	26:A:2799:C:C5'	2.72	0.58
20:V:86:ARG:HB3	20:V:97:ILE:HG13	1.85	0.58
25:B:31:C:H42	25:B:51:G:H1	1.51	0.58
25:B:96:A:C2	26:A:977:G:N2	2.71	0.58
26:A:1568:C:C3'	26:A:1569:A:C8	2.86	0.58
3:E:170:ARG:NH2	26:A:422:A:O2'	2.36	0.58
13:O:52:ILE:HD12	13:O:94:TYR:HB2	1.85	0.58
17:S:72:LYS:NZ	26:A:1337:G:N7	2.51	0.58
26:A:1595:G:O5'	26:A:1596:C:OP2	2.21	0.58
12:N:58:ILE:CG2	12:N:108:TYR:CZ	2.87	0.58
20:V:96:ARG:CZ	20:V:96:ARG:HB2	2.33	0.58
21:W:6:ASN:HB3	21:W:138:LEU:O	1.96	0.58
24:Z:18:LEU:CB	24:Z:61:LEU:HD21	2.33	0.58
26:A:1187:A:H4'	26:A:1188:A:H5"	1.85	0.58
3:E:164:VAL:O	3:E:168:SER:OG	2.20	0.58
12:N:58:ILE:HG21	12:N:108:TYR:CD1	2.36	0.58
13:O:29:PHE:HB3	13:O:79:LEU:HD12	0.60	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:U:58:ASN:HD22	26:A:1456:G:H21	1.49	0.58
21:W:82:ALA:O	21:W:83:LEU:HB2	2.04	0.58
28:2:45:TYR:O	28:2:49:GLN:HG3	2.03	0.58
3:E:9:THR:HG22	3:E:128:THR:OG1	2.04	0.58
12:N:85:SER:HG	22:X:8:SER:HB3	1.64	0.58
26:A:1397:U:H3	26:A:1401:A:H62	1.50	0.58
26:A:1568:C:C2'	26:A:1569:A:C8	2.87	0.58
1:C:51:THR:HG21	1:C:54:LYS:HE3	1.86	0.58
1:C:176:ARG:HG3	1:C:182:ILE:HG12	1.86	0.58
14:P:39:VAL:HA	14:P:103:ASP:HB3	1.86	0.58
24:Z:62:ARG:O	24:Z:62:ARG:HD3	2.03	0.58
25:B:4:A:C2	25:B:26:A:N6	2.71	0.58
25:B:84:C:N4	25:B:85:C:N3	2.52	0.58
26:A:1201:G:N2	26:A:1204:A:OP2	2.34	0.58
26:A:1584:U:C5	26:A:1586:C:OP2	2.57	0.58
3:E:90:VAL:CG1	26:A:678:A:O5'	2.51	0.58
5:G:2:SER:N	26:A:2973:A:OP1	2.37	0.58
18:T:6:GLU:HG3	18:T:6:GLU:O	2.03	0.58
26:A:122:A:OP2	31:5:22:ARG:NH1	2.37	0.58
26:A:1000:C:OP2	26:A:1002:C:N4	2.36	0.58
4:F:11:LEU:HD22	4:F:108:ASP:HB3	1.85	0.58
4:F:53:ASP:O	4:F:56:LEU:HD22	2.02	0.58
13:O:16:HIS:HD2	26:A:1390:A:N9	2.02	0.58
19:U:19:LYS:CD	26:A:1508:A:H62	1.78	0.58
22:X:83:VAL:HG13	22:X:83:VAL:O	2.04	0.58
26:A:1574:G:H5"	26:A:1575:A:OP1	2.04	0.58
26:A:1584:U:C6	26:A:1586:C:OP2	2.57	0.58
10:L:76:TYR:O	15:Q:71:ARG:HD2	2.04	0.57
13:O:29:PHE:HE2	13:O:51:LEU:HD12	1.56	0.57
19:U:94:ASP:O	19:U:96:PHE:N	2.28	0.57
21:W:102:ARG:HH22	21:W:138:LEU:HD11	1.66	0.57
26:A:1703:G:H1	26:A:1726:C:N4	2.01	0.57
1:C:256:ARG:HG3	1:C:258:ARG:HD2	1.86	0.57
1:C:260:PRO:O	1:C:263:PRO:HD3	2.04	0.57
12:N:59:LYS:C	12:N:60:ARG:HG3	2.29	0.57
30:4:13:LEU:N	30:4:23:TYR:O	2.34	0.57
1:C:55:GLY:CA	1:C:218:ARG:HD3	2.33	0.57
26:A:1249:G:N2	26:A:1250:U:O4	2.35	0.57
26:A:1600:G:H3'	26:A:1601:G:C5'	2.34	0.57
9:K:15:TRP:CD1	9:K:15:TRP:H	2.23	0.57
15:Q:13:ARG:NH1	15:Q:80:ILE:O	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:T:9:SER:HB2	18:T:114:VAL:O	2.04	0.57
25:B:10:G:C2	25:B:107:A:H2	2.19	0.57
25:B:21:C:C6	25:B:21:C:C3'	2.88	0.57
3:E:144:PHE:HE1	3:E:148:LEU:CD2	2.05	0.57
12:N:134:ARG:HH21	21:W:129:ASN:ND2	2.00	0.57
14:P:50:GLN:NE2	25:B:7:G:C2	2.69	0.57
15:Q:19:PHE:O	15:Q:49:ARG:NH1	2.37	0.57
20:V:4:HIS:CG	20:V:96:ARG:NH1	2.71	0.57
25:B:14:A:OP2	25:B:70:G:O2'	2.22	0.57
4:F:23:LEU:CD2	4:F:29:TYR:OH	2.53	0.57
8:J:44:TYR:O	8:J:48:THR:CB	2.51	0.57
26:A:1518:A:HO2'	26:A:1692:G:HO2'	1.52	0.57
26:A:2508:C:OP2	30:4:8:ARG:HG3	2.04	0.57
1:C:256:ARG:HD3	1:C:258:ARG:HD2	1.85	0.57
3:E:51:SER:HB2	26:A:35:A:H4'	1.87	0.57
9:K:142:ILE:HG21	26:A:1130:C:H42	1.63	0.57
13:O:20:LEU:CD2	13:O:24:LEU:HD12	2.34	0.57
24:Z:13:LEU:CD2	24:Z:17:GLU:C	2.78	0.57
26:A:1573:U:O4	26:A:1596:C:N4	2.28	0.57
26:A:1608:U:O5'	26:A:1608:U:H6	1.87	0.57
13:O:79:LEU:HD23	13:O:80:PHE:N	2.18	0.57
26:A:1100:C:O2	34:8:21:ARG:NH2	2.37	0.57
26:A:1590:G:O2'	26:A:1591:U:O4'	2.20	0.57
26:A:1996:U:OP2	26:A:2001:A:N6	2.36	0.57
4:F:47:VAL:HG23	4:F:48:GLY:H	1.69	0.57
4:F:109:ARG:O	4:F:113:ILE:HB	2.04	0.57
5:G:95:TYR:HE2	5:G:161:LYS:HB3	1.69	0.57
13:O:20:LEU:CD1	13:O:40:LYS:NZ	2.68	0.57
13:O:24:LEU:HB3	13:O:44:LEU:HD22	1.86	0.57
25:B:24:G:N7	25:B:56:C:C2'	2.68	0.57
1:C:20:ASP:O	1:C:21:PHE:HB2	2.04	0.57
1:C:26:ARG:HG3	1:C:81:HIS:ND1	2.19	0.57
8:J:96:LYS:CE	21:W:120:PRO:CB	2.66	0.57
20:V:2:LYS:HD2	20:V:83:VAL:HG12	1.73	0.57
20:V:2:LYS:CE	20:V:85:TYR:CE2	2.88	0.57
21:W:98:LEU:HD23	21:W:98:LEU:C	2.29	0.57
26:A:1042:A:H1'	27:1:42:GLN:HE22	1.69	0.57
1:C:25:THR:OG1	1:C:81:HIS:ND1	1.92	0.56
9:K:13:ARG:CZ	9:K:121:LYS:NZ	2.68	0.56
10:L:78:LYS:HD3	15:Q:70:GLU:OE1	2.04	0.56
19:U:83:ILE:HD13	26:A:1456:G:N3	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:301:U:H5'	26:A:302:U:H4'	1.85	0.56
30:4:13:LEU:O	30:4:22:ASN:HA	2.05	0.56
3:E:75:ARG:NH1	26:A:2669:G:OP1	2.38	0.56
6:H:115:ARG:NH1	26:A:163:U:O2	2.37	0.56
8:J:30:LEU:HA	8:J:33:HIS:HD2	1.69	0.56
13:O:56:LYS:HD3	13:O:87:TYR:O	2.05	0.56
18:T:117:ARG:N	18:T:118:PRO:HD2	2.20	0.56
20:V:42:LYS:O	26:A:568:A:O2'	2.23	0.56
30:4:49:GLN:O	30:4:51:HIS:HD2	1.87	0.56
3:E:143:THR:O	3:E:147:THR:CB	2.53	0.56
4:F:64:LEU:HD11	4:F:94:ALA:O	2.05	0.56
4:F:99:ARG:HD3	25:B:45:G:H8	1.66	0.56
4:F:130:ASP:OD2	4:F:134:ASN:ND2	2.38	0.56
17:S:4:TYR:CD2	17:S:15:LYS:HE3	2.41	0.56
20:V:42:LYS:HG3	26:A:586:U:H4'	1.86	0.56
26:A:346:C:H41	26:A:445:U:H3	1.53	0.56
26:A:1530:G:H21	26:A:1805:G:H22	1.54	0.56
26:A:1580:A:N1	26:A:1592:G:O4'	2.38	0.56
26:A:3014:A:H62	26:A:3113:A:H2	1.53	0.56
27:1:19:GLN:HG3	27:1:50:VAL:HG12	1.87	0.56
30:4:15:CYS:CB	30:4:20:HIS:N	2.68	0.56
30:4:32:ASP:HB2	30:4:33:PRO:CD	2.35	0.56
1:C:73:ASP:CB	1:C:120:GLY:CA	2.68	0.56
24:Z:18:LEU:HD22	24:Z:57:VAL:HG13	1.86	0.56
26:A:1882:A:H61	26:A:2220:C:H42	1.52	0.56
1:C:258:ARG:HG2	1:C:259:LYS:N	2.19	0.56
13:O:44:LEU:HD23	13:O:113:ILE:HD12	1.87	0.56
19:U:60:ALA:HB2	26:A:1456:G:C4'	2.36	0.56
25:B:30:G:C6	25:B:54:A:N1	2.74	0.56
25:B:35:G:N3	25:B:35:G:H2'	2.21	0.56
26:A:995:U:O4	26:A:1014:G:N2	2.38	0.56
26:A:1563:A:N6	26:A:1565:A:C6	2.73	0.56
26:A:1601:G:H2'	26:A:1602:U:H6	1.70	0.56
26:A:1602:U:H2'	26:A:1603:G:N7	2.20	0.56
26:A:1607:C:C5	26:A:1608:U:C4	2.93	0.56
26:A:2329:G:O6	26:A:2406:U:O2	2.24	0.56
3:E:51:SER:CB	26:A:35:A:H5'	2.35	0.56
3:E:184:ASN:ND2	26:A:708:G:N2	2.54	0.56
26:A:1566:A:H2'	26:A:1605:G:O6	2.06	0.56
26:A:2747:G:HO2'	26:A:2988:A:HO2'	1.52	0.56
4:F:10:ARG:HH11	4:F:10:ARG:CG	2.09	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B:30:G:O6	25:B:54:A:N1	2.39	0.56
11:M:58:HIS:CD2	32:6:7:HIS:CE1	2.84	0.56
13:O:103:ARG:HD3	13:O:110:MET:HE3	1.88	0.56
17:S:4:TYR:CE2	17:S:15:LYS:HE3	2.41	0.56
26:A:1577:C:O2'	26:A:1578:G:O4'	2.24	0.56
30:4:12:THR:HG23	30:4:24:ILE:HG22	1.87	0.56
1:C:132:PRO:HA	1:C:190:ARG:HA	1.87	0.56
17:S:6:ILE:CG2	17:S:7:VAL:H	2.19	0.56
20:V:2:LYS:CG	20:V:83:VAL:CB	2.79	0.56
21:W:62:GLY:O	21:W:63:THR:HG23	2.05	0.56
21:W:105:LYS:HZ2	21:W:135:ALA:HA	1.71	0.56
26:A:159:A:OP2	26:A:164:A:N6	2.30	0.56
26:A:1563:A:C5	26:A:1565:A:C8	2.93	0.56
26:A:1565:A:H2'	26:A:1566:A:N7	2.21	0.56
26:A:1603:G:H2'	26:A:1604:G:C8	2.39	0.56
26:A:2086:U:O4	26:A:2096:G:O6	2.23	0.56
27:1:21:GLU:OE2	27:1:24:ARG:NH1	2.39	0.56
28:2:46:THR:O	28:2:50:LYS:HG3	2.05	0.56
30:4:28:ASN:OD1	30:4:31:ASN:HB2	2.06	0.56
4:F:171:ALA:HA	4:F:174:ARG:HD3	1.88	0.56
9:K:75:TYR:N	9:K:75:TYR:CD1	2.73	0.56
12:N:12:GLN:HG3	12:N:73:PRO:HD2	1.88	0.56
23:Y:41:ARG:NH1	26:A:164:A:O3'	2.39	0.56
26:A:137:G:H21	26:A:1524:G:H1'	1.70	0.56
26:A:640:G:O2'	26:A:642:G:OP2	2.24	0.55
26:A:2509:C:H5	30:4:8:ARG:CZ	2.20	0.55
26:A:2873:U:O4	26:A:2895:A:N1	2.38	0.55
33:7:11:CYS:SG	33:7:14:CYS:N	2.80	0.55
1:C:65:ILE:HG13	1:C:104:TYR:HB3	1.88	0.55
9:K:8:ALA:HB2	26:A:625:A:O2'	2.07	0.55
9:K:15:TRP:CD1	9:K:15:TRP:N	2.73	0.55
19:U:4:ILE:HD11	24:Z:58:TYR:CE1	2.38	0.55
19:U:59:THR:HG23	19:U:80:LYS:HE3	1.86	0.55
21:W:6:ASN:HB2	21:W:138:LEU:C	2.26	0.55
25:B:60:G:C2'	25:B:61:C:O5'	2.53	0.55
25:B:86:U:O2	25:B:88:C:H2'	2.06	0.55
26:A:1563:A:C6	26:A:1565:A:C5	2.94	0.55
26:A:1649:C:N4	26:A:1790:A:OP2	2.35	0.55
26:A:2851:G:N2	26:A:3001:G:OP2	2.36	0.55
1:C:35:ARG:CD	1:C:36:PRO:HD3	2.35	0.55
1:C:256:ARG:O	1:C:257:THR:HB	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:Q:74:PRO:HB2	15:Q:77:SER:HB2	1.87	0.55
26:A:1659:U:H2'	26:A:1660:A:H8	1.71	0.55
26:A:3017:C:N3	26:A:3025:G:O6	2.39	0.55
3:E:7:VAL:HG21	3:E:16:GLY:HA3	1.86	0.55
13:O:69:LYS:O	13:O:71:ARG:NH1	2.40	0.55
18:T:18:ARG:NH1	26:A:1436:C:C2'	2.69	0.55
25:B:19:G:C5'	25:B:19:G:C8	2.84	0.55
26:A:222:A:O2'	26:A:508:G:N3	2.40	0.55
26:A:263:G:O2'	26:A:517:A:N3	2.39	0.55
26:A:1573:U:C1'	26:A:1574:G:P	2.94	0.55
1:C:257:THR:HG23	26:A:2020:A:O3'	2.06	0.55
2:D:178:GLN:HE22	26:A:2995:U:HO2'	1.54	0.55
9:K:141:GLU:OE1	9:K:142:ILE:C	2.49	0.55
9:K:145:VAL:HG23	9:K:145:VAL:O	2.05	0.55
21:W:105:LYS:HZ3	21:W:136:GLU:CG	2.19	0.55
4:F:11:LEU:CD1	4:F:108:ASP:HB2	2.36	0.55
10:L:80:ASP:OD2	15:Q:61:ARG:NH2	2.40	0.55
13:O:81:ALA:O	13:O:85:PRO:HG2	2.05	0.55
19:U:69:THR:C	19:U:71:THR:N	2.64	0.55
20:V:10:LEU:HD23	20:V:20:LYS:HB3	1.88	0.55
21:W:40:HIS:C	21:W:42:THR:N	2.65	0.55
25:B:16:A:H2	25:B:68:G:H22	1.55	0.55
26:A:1593:U:O2	26:A:1593:U:H2'	2.07	0.55
11:M:12:ALA:HB3	11:M:15:GLU:HB2	1.87	0.55
18:T:11:THR:HG22	18:T:113:ILE:HG23	1.86	0.55
26:A:1586:C:O5'	26:A:1586:C:H6	1.89	0.55
30:4:15:CYS:C	30:4:20:HIS:CA	2.79	0.55
1:C:18:VAL:HG21	26:A:1785:C:H5"	1.88	0.55
12:N:34:ILE:HG23	12:N:104:PHE:H	1.71	0.55
26:A:1582:C:O5'	26:A:1582:C:H6	1.88	0.55
26:A:2644:C:OP1	32:6:34:GLU:HG3	2.06	0.55
1:C:256:ARG:CD	1:C:258:ARG:CD	2.85	0.55
2:D:7:LEU:HB2	2:D:34:ASN:HD21	1.71	0.55
22:X:43:THR:OG1	26:A:2560:A:N6	2.33	0.55
26:A:868:C:H5"	31:5:3:LYS:HE2	1.88	0.55
26:A:2691:C:OP1	33:7:8:LYS:NZ	2.39	0.55
6:H:23:ASP:O	6:H:27:ARG:HB3	2.07	0.55
13:O:29:PHE:HB2	13:O:79:LEU:HD12	1.68	0.55
16:R:89:GLU:OE1	17:S:8:LYS:NZ	2.37	0.55
21:W:131:ILE:HD11	21:W:162:ILE:HD12	1.87	0.55
26:A:351:G:O6	26:A:444:U:O2	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:45:MET:HE3	4:F:64:LEU:HG	1.89	0.54
12:N:22:SER:OG	12:N:23:GLY:N	2.40	0.54
13:O:94:TYR:O	13:O:116:VAL:HG22	2.07	0.54
26:A:1583:U:H2'	26:A:1584:U:C5	2.42	0.54
33:7:22:ARG:HB3	33:7:36:GLN:HB3	1.88	0.54
2:D:84:LEU:HD22	2:D:209:ARG:HD3	1.90	0.54
4:F:29:TYR:O	4:F:30:ALA:HB3	2.08	0.54
6:H:131:PRO:HA	6:H:145:SER:HA	1.89	0.54
20:V:28:PRO:CG	26:A:83:C:P	2.95	0.54
25:B:35:G:N2	25:B:36:U:C2	2.75	0.54
25:B:59:A:H2'	25:B:60:G:C8	2.42	0.54
26:A:1581:C:N4	26:A:1591:U:C6	2.76	0.54
1:C:24:ILE:HD13	1:C:84:TYR:HB2	1.88	0.54
1:C:66:ASP:OD2	1:C:103:ARG:NH1	2.41	0.54
4:F:50:ALA:O	4:F:51:ALA:HB3	2.06	0.54
4:F:118:ILE:H	4:F:118:ILE:CD1	1.96	0.54
5:G:154:ARG:NH1	26:A:2750:G:OP1	2.40	0.54
8:J:79:LYS:HD3	8:J:82:LEU:HD12	1.89	0.54
14:P:73:ILE:HG22	14:P:75:GLY:H	1.72	0.54
18:T:15:ARG:HG2	18:T:109:HIS:CD2	2.43	0.54
22:X:13:GLY:O	22:X:14:ARG:HG3	2.06	0.54
25:B:24:G:N7	25:B:56:C:H2'	2.21	0.54
25:B:57:U:C3'	25:B:58:A:C5'	2.86	0.54
26:A:1567:C:HO2'	26:A:1568:C:P	2.28	0.54
26:A:2490:A:N6	26:A:2497:A:OP2	2.39	0.54
30:4:55:ARG:HG3	30:4:55:ARG:O	2.08	0.54
1:C:35:ARG:CG	1:C:36:PRO:CD	2.85	0.54
1:C:156:ALA:HB2	1:C:163:ILE:HG13	1.89	0.54
4:F:55:LYS:HB2	4:F:55:LYS:HZ3	1.71	0.54
7:I:41:ARG:HH21	8:J:119:ASN:HA	1.72	0.54
11:M:90:GLY:HA2	11:M:122:VAL:HG22	1.90	0.54
13:O:43:ALA:HA	13:O:46:PRO:HD2	1.89	0.54
13:O:79:LEU:O	13:O:83:ILE:HG13	2.06	0.54
16:R:25:ARG:NH1	26:A:2245:C:OP1	2.41	0.54
20:V:86:ARG:NE	20:V:88:ASP:OD2	2.36	0.54
26:A:541:G:N2	26:A:546:G:OP2	2.40	0.54
26:A:737:A:N1	26:A:2593:A:O2'	2.41	0.54
26:A:1564:A:C3'	26:A:1565:A:C5'	2.86	0.54
26:A:2230:C:O2'	26:A:3044:A:N3	2.38	0.54
4:F:11:LEU:HD22	4:F:108:ASP:CA	2.37	0.54
8:J:107:VAL:O	8:J:111:ALA:HB3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:K:134:ALA:O	9:K:135:GLN:HG2	2.08	0.54
19:U:69:THR:O	19:U:71:THR:N	2.40	0.54
31:5:9:GLN:HA	31:5:9:GLN:OE1	2.07	0.54
3:E:8:LYS:NZ	3:E:148:LEU:HB3	2.23	0.54
9:K:42:PRO:HB3	16:R:68:ALA:HB2	1.89	0.54
9:K:47:ASN:ND2	26:A:649:U:O2	2.40	0.54
13:O:20:LEU:CD2	13:O:24:LEU:CD1	2.85	0.54
17:S:6:ILE:C	17:S:7:VAL:CG2	2.78	0.54
19:U:30:THR:HG23	19:U:83:ILE:HG22	1.90	0.54
20:V:28:PRO:HG3	26:A:83:C:P	2.47	0.54
25:B:60:G:H2'	25:B:61:C:C5'	2.37	0.54
26:A:1578:G:H22	26:A:1592:G:C1'	2.21	0.54
26:A:1600:G:C3'	26:A:1601:G:C5'	2.86	0.54
26:A:2755:A:N6	26:A:2885:G:O6	2.41	0.54
1:C:97:TYR:HD2	1:C:101:GLU:HG3	1.72	0.54
4:F:79:LYS:HG2	4:F:80:SER:N	2.23	0.54
9:K:13:ARG:NE	9:K:121:LYS:NZ	2.53	0.54
14:P:104:ARG:HH12	26:A:2517:C:H5"	1.72	0.54
25:B:89:C:H6	25:B:89:C:P	2.30	0.54
3:E:170:ARG:NE	26:A:404:A:OP1	2.38	0.54
4:F:114:ALA:O	4:F:118:ILE:HD11	2.08	0.54
5:G:61:ARG:NH1	26:A:2981:A:O2'	2.40	0.54
12:N:85:SER:O	26:A:2500:G:OP2	2.26	0.54
13:O:90:ARG:HH12	13:O:118:GLU:HG3	1.72	0.54
21:W:6:ASN:CG	21:W:138:LEU:O	2.51	0.54
24:Z:13:LEU:HD12	24:Z:14:THR:H	1.72	0.54
25:B:19:G:C5	25:B:20:G:N7	2.75	0.54
25:B:60:G:H2'	25:B:61:C:O5'	2.07	0.54
26:A:270:U:O2	26:A:458:G:C6	2.61	0.54
20:V:79:LYS:HG3	20:V:79:LYS:O	2.07	0.54
26:A:2862:G:O2'	26:A:3002:A:N6	2.40	0.54
2:D:159:ARG:H	2:D:159:ARG:HD2	1.73	0.54
4:F:115:LEU:HD23	4:F:183:PRO:HG2	1.89	0.54
8:J:96:LYS:NZ	21:W:120:PRO:HB2	2.22	0.54
9:K:116:ARG:HH22	26:A:615:A:H5"	1.73	0.54
9:K:141:GLU:OE2	9:K:143:LYS:CD	2.56	0.54
12:N:85:SER:OG	22:X:8:SER:OG	2.25	0.54
12:N:103:LEU:HD11	12:N:127:ILE:HD11	1.90	0.54
22:X:83:VAL:CG1	22:X:85:ARG:HA	2.34	0.54
25:B:2:U:H3	25:B:115:A:N6	2.05	0.54
26:A:1580:A:C6	26:A:1591:U:N3	2.62	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:4:15:CYS:C	30:4:20:HIS:HB3	2.29	0.54
32:6:33:LEU:HD23	32:6:36:LYS:HD2	1.89	0.54
16:R:50:ARG:O	16:R:54:LYS:NZ	2.40	0.53
18:T:6:GLU:HA	18:T:117:ARG:NH1	2.23	0.53
22:X:83:VAL:O	22:X:84:ALA:HB3	2.07	0.53
24:Z:13:LEU:CG	24:Z:17:GLU:HB2	2.38	0.53
26:A:1561:C:C6	26:A:1562:C:C5	2.95	0.53
26:A:1572:G:O6	26:A:1600:G:C6	2.61	0.53
4:F:51:ALA:C	4:F:85:LYS:HZ2	1.87	0.53
5:G:116:ILE:HD11	5:G:152:LEU:HD11	1.90	0.53
7:I:9:ALA:HA	7:I:12:ASP:HB2	1.89	0.53
13:O:76:VAL:O	13:O:80:PHE:HB2	2.08	0.53
25:B:58:A:N7	25:B:59:A:N7	2.53	0.53
25:B:60:G:C8	25:B:60:G:C5'	2.85	0.53
26:A:444:U:H5'	26:A:446:G:H4'	1.90	0.53
26:A:944:A:N7	26:A:2471:A:O2'	2.42	0.53
26:A:1583:U:H2'	26:A:1584:U:C4	2.44	0.53
26:A:2337:A:N6	26:A:2342:A:N7	2.56	0.53
4:F:45:MET:HB3	4:F:94:ALA:H	1.74	0.53
12:N:10:ARG:HG3	12:N:90:PRO:HG3	1.91	0.53
25:B:23:G:H1	25:B:60:G:H1	1.56	0.53
25:B:94:G:N3	26:A:1033:A:H4'	2.23	0.53
4:F:168:THR:CG2	14:P:3:HIS:CE1	2.91	0.53
6:H:94:SER:HA	6:H:125:LYS:HD3	1.90	0.53
19:U:96:PHE:CD2	19:U:96:PHE:C	2.86	0.53
1:C:55:GLY:CA	1:C:218:ARG:HG3	2.38	0.53
2:D:154:CYS:HB3	26:A:2798:G:HO2'	1.70	0.53
4:F:8:LEU:HD22	4:F:16:ARG:HD2	1.90	0.53
4:F:31:ASN:OD1	25:B:57:U:O4'	2.26	0.53
12:N:118:LEU:O	12:N:122:ILE:HB	2.08	0.53
19:U:92:PRO:HG2	19:U:94:ASP:OD1	2.08	0.53
21:W:87:PRO:C	21:W:90:ARG:NH2	2.60	0.53
25:B:10:G:O6	25:B:107:A:N1	2.42	0.53
26:A:828:G:H22	26:A:832:G:H5''	1.74	0.53
3:E:55:ARG:NH2	26:A:788:C:OP1	2.42	0.53
16:R:6:ARG:NH1	26:A:1366:A:OP2	2.41	0.53
26:A:270:U:O2	26:A:458:G:O6	2.27	0.53
26:A:1567:C:O2'	26:A:1568:C:P	2.66	0.53
26:A:2224:C:O2'	26:A:2913:U:OP2	2.26	0.53
26:A:2348:G:O2'	26:A:2396:A:N6	2.41	0.53
3:E:118:ARG:HH22	3:E:189:LEU:HA	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:168:THR:HG21	14:P:3:HIS:ND1	2.23	0.53
5:G:16:ASP:HB2	5:G:27:LYS:HB3	1.90	0.53
8:J:107:VAL:O	8:J:111:ALA:CB	2.56	0.53
9:K:147:GLN:HG2	26:A:1131:G:H1'	1.90	0.53
12:N:70:PRO:HA	12:N:95:ALA:HB2	1.91	0.53
20:V:9:VAL:HB	20:V:71:VAL:HB	1.90	0.53
21:W:21:LYS:NZ	25:B:80:C:N4	2.46	0.53
25:B:87:U:O2'	25:B:88:C:H4'	2.08	0.53
26:A:189:A:N3	26:A:794:G:O2'	2.37	0.53
26:A:1589:G:O5'	26:A:1589:G:H8	1.91	0.53
1:C:35:ARG:HD2	1:C:36:PRO:CD	2.37	0.53
5:G:62:SER:O	5:G:66:HIS:HB2	2.08	0.53
9:K:98:THR:HG23	9:K:124:VAL:HB	1.90	0.53
13:O:90:ARG:HH22	13:O:118:GLU:HB3	1.68	0.53
21:W:9:ASN:HD22	21:W:57:VAL:CG1	2.17	0.53
23:Y:19:SER:OG	23:Y:20:HIS:N	2.37	0.53
26:A:384:G:H2'	26:A:385:G:H8	1.72	0.53
26:A:1921:G:H2'	26:A:1922:G:H8	1.73	0.53
9:K:112:ASN:ND2	26:A:650:G:H5"	2.24	0.53
10:L:28:SER:HA	26:A:2787:U:H4'	1.90	0.53
13:O:81:ALA:C	13:O:85:PRO:CD	2.74	0.53
24:Z:44:ASN:HD21	26:A:58:G:P	2.31	0.53
26:A:1603:G:H2'	26:A:1604:G:H8	1.74	0.53
28:2:42:HIS:O	28:2:46:THR:HG23	2.08	0.53
30:4:15:CYS:O	30:4:20:HIS:CA	2.54	0.53
1:C:256:ARG:O	26:A:2014:G:C4'	2.52	0.53
1:C:257:THR:CG2	26:A:2020:A:O3'	2.57	0.53
2:D:84:LEU:HD21	2:D:207:VAL:HG11	1.90	0.53
3:E:182:GLN:CD	26:A:706:G:C8	2.83	0.53
24:Z:45:ARG:O	24:Z:49:THR:OG1	2.27	0.53
25:B:89:C:H2'	25:B:90:G:C8	2.44	0.53
26:A:2747:G:O2'	26:A:2988:A:O2'	2.27	0.53
1:C:76:ASN:C	1:C:98:LEU:CD2	2.82	0.52
1:C:98:LEU:HD22	1:C:98:LEU:N	2.24	0.52
9:K:5:THR:HG21	26:A:624:G:H4'	1.91	0.52
13:O:80:PHE:C	13:O:80:PHE:CD2	2.85	0.52
21:W:62:GLY:O	21:W:63:THR:OG1	2.26	0.52
26:A:1627:U:H2'	26:A:1628:A:H2'	1.90	0.52
20:V:4:HIS:CE1	20:V:96:ARG:HH22	2.22	0.52
25:B:11:U:O2	25:B:11:U:H2'	2.08	0.52
25:B:34:G:H8	25:B:34:G:O5'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B:82:A:N1	25:B:91:G:C6	2.77	0.52
26:A:114:G:OP2	26:A:116:A:O2'	2.26	0.52
26:A:1566:A:C1'	26:A:1605:G:H1	2.21	0.52
6:H:44:GLU:O	6:H:48:GLU:CB	2.57	0.52
7:I:4:ALA:O	7:I:8:THR:OG1	2.23	0.52
19:U:19:LYS:NZ	26:A:1508:A:N1	2.53	0.52
26:A:1044:U:O2'	27:1:24:ARG:O	2.27	0.52
26:A:1540:U:O4	26:A:1632:G:O6	2.27	0.52
26:A:1565:A:C2'	26:A:1566:A:C8	2.85	0.52
26:A:1567:C:C2'	26:A:1568:C:OP2	2.57	0.52
26:A:1570:C:C4	26:A:1602:U:C2	2.84	0.52
26:A:1600:G:O2'	26:A:1601:G:H5"	2.09	0.52
26:A:1830:C:H5'	31:5:10:PRO:HG2	1.91	0.52
26:A:2356:G:H2'	26:A:2380:G:H1	1.74	0.52
1:C:14:ARG:NH2	26:A:1913:G:N7	2.55	0.52
4:F:6:LYS:CA	4:F:6:LYS:CE	2.87	0.52
4:F:46:GLY:O	4:F:47:VAL:HG13	2.09	0.52
4:F:113:ILE:O	4:F:116:PRO:HD2	2.09	0.52
19:U:67:LYS:HZ2	19:U:67:LYS:CB	2.23	0.52
20:V:43:LYS:NZ	20:V:43:LYS:CB	2.73	0.52
20:V:99:LYS:NZ	20:V:99:LYS:CB	2.73	0.52
26:A:239:U:OP1	26:A:684:G:N2	2.42	0.52
1:C:158:SER:OG	1:C:159:ALA:N	2.34	0.52
9:K:75:TYR:HD2	9:K:86:LYS:HG2	1.73	0.52
12:N:17:GLN:HB2	12:N:39:HIS:HB2	1.91	0.52
16:R:41:HIS:HE1	26:A:655:G:H4'	1.75	0.52
26:A:1544:U:H3	26:A:1626:G:H1	1.58	0.52
26:A:1604:G:C2	26:A:1605:G:C8	2.98	0.52
1:C:262:LYS:N	1:C:263:PRO:CD	2.73	0.52
5:G:127:GLU:OE1	5:G:131:LYS:NZ	2.42	0.52
10:L:109:LYS:HB3	10:L:110:LYS:HE2	1.92	0.52
26:A:1573:U:O2'	26:A:1573:U:O2	2.27	0.52
26:A:2315:U:OP1	26:A:2422:A:O2'	2.28	0.52
30:4:8:ARG:HH21	30:4:28:ASN:HB2	1.74	0.52
33:7:35:ARG:CG	33:7:36:GLN:H	2.21	0.52
11:M:81:GLY:HA2	11:M:84:ASN:HD22	1.75	0.52
11:M:106:LYS:NZ	26:A:714:U:O2'	2.43	0.52
25:B:25:G:C2'	25:B:26:A:H5'	2.40	0.52
26:A:1078:G:O6	34:8:8:LYS:NZ	2.43	0.52
26:A:1938:G:H21	26:A:1956:A:H62	1.58	0.52
26:A:2585:U:OP1	32:6:24:ARG:NH1	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:26:ARG:CG	1:C:81:HIS:CG	2.92	0.52
13:O:75:VAL:HG12	13:O:79:LEU:HD13	1.92	0.52
27:1:51:HIS:CD2	27:1:51:HIS:N	2.74	0.52
28:2:42:HIS:N	28:2:43:PRO:CD	2.72	0.52
5:G:4:ILE:HD13	26:A:2972:A:H5'	1.91	0.52
9:K:1:MET:N	9:K:2:PRO:CD	2.73	0.52
10:L:109:LYS:CD	10:L:110:LYS:NZ	2.73	0.52
22:X:16:SER:O	22:X:17:ALA:CB	2.58	0.52
30:4:38:ILE:HG22	30:4:40:LYS:HG2	1.92	0.52
14:P:22:HIS:HE1	25:B:9:G:OP2	1.93	0.52
18:T:35:SER:HA	18:T:77:VAL:HA	1.92	0.52
26:A:1533:U:O2	26:A:1803:A:O2'	2.25	0.52
26:A:1856:C:O3'	26:A:2933:G:N2	2.43	0.52
31:5:6:ARG:CB	31:5:6:ARG:CZ	2.87	0.52
1:C:34:VAL:HG22	1:C:63:ARG:HG2	1.91	0.51
1:C:256:ARG:CG	1:C:258:ARG:HD2	2.39	0.51
9:K:75:TYR:CD2	9:K:86:LYS:HG2	2.43	0.51
10:L:8:LEU:HD13	10:L:19:ILE:CG1	2.40	0.51
13:O:117:ARG:CD	13:O:118:GLU:N	2.73	0.51
19:U:77:LYS:HZ2	19:U:79:THR:HG22	1.73	0.51
25:B:5:C:H42	25:B:112:C:H42	1.57	0.51
25:B:86:U:H2'	25:B:88:C:H1'	1.90	0.51
26:A:1171:C:H2'	26:A:1172:A:H8	1.75	0.51
28:2:44:PHE:C	28:2:48:LYS:HE3	2.35	0.51
31:5:21:PHE:O	31:5:25:MET:HG2	2.09	0.51
1:C:145:VAL:HG11	1:C:175:LEU:HD11	1.92	0.51
1:C:259:LYS:HG2	26:A:2016:G:OP1	2.09	0.51
1:C:262:LYS:N	1:C:262:LYS:CD	2.73	0.51
3:E:5:VAL:HG12	3:E:18:VAL:O	2.10	0.51
8:J:128:LYS:HG2	26:A:1198:C:H4'	1.93	0.51
9:K:14:SER:N	9:K:52:ASP:OD1	2.31	0.51
11:M:24:ARG:NH1	26:A:1365:G:OP2	2.43	0.51
22:X:17:ALA:HB1	26:A:2485:C:OP1	2.10	0.51
22:X:46:HIS:HB2	22:X:77:THR:HG22	1.91	0.51
26:A:1564:A:H3'	26:A:1565:A:C5'	2.41	0.51
26:A:1589:G:C2'	26:A:1590:G:H5'	2.40	0.51
26:A:1589:G:H2'	26:A:1590:G:H5'	1.91	0.51
26:A:2340:A:H61	26:A:2389:U:H3	1.58	0.51
33:7:16:VAL:HG22	33:7:25:VAL:HG22	1.92	0.51
1:C:62:TYR:HE1	26:A:2033:U:H3'	1.75	0.51
1:C:256:ARG:CZ	1:C:258:ARG:NE	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:E:139:LYS:HE2	3:E:142:LYS:HD2	1.92	0.51
4:F:138:GLY:HA3	26:A:2529:A:C5'	2.27	0.51
13:O:16:HIS:HD2	26:A:1390:A:N7	2.04	0.51
20:V:96:ARG:NH2	20:V:96:ARG:CB	2.72	0.51
26:A:1755:A:O2'	26:A:1758:G:N2	2.36	0.51
26:A:2571:C:OP1	30:4:40:LYS:NZ	2.36	0.51
28:2:42:HIS:N	28:2:43:PRO:HD2	2.24	0.51
1:C:209:ALA:HB2	26:A:2007:C:O2'	2.10	0.51
4:F:9:PRO:HD2	4:F:12:LYS:HE3	1.91	0.51
13:O:35:LYS:HG3	13:O:112:VAL:HG22	1.93	0.51
19:U:59:THR:CG2	19:U:80:LYS:HE3	2.39	0.51
21:W:102:ARG:HH21	21:W:138:LEU:HD11	1.70	0.51
25:B:24:G:O6	25:B:60:G:C2	2.63	0.51
26:A:1174:G:N1	26:A:1220:C:OP2	2.44	0.51
26:A:1563:A:N7	26:A:1565:A:C5	2.78	0.51
26:A:1599:U:H3'	26:A:1599:U:OP2	2.09	0.51
30:4:9:PRO:HD3	30:4:27:LYS:O	2.09	0.51
1:C:25:THR:CG2	1:C:81:HIS:C	2.83	0.51
2:D:63:ILE:HG22	2:D:65:PRO:HD2	1.93	0.51
12:N:65:TRP:HZ3	26:A:989:G:O2'	1.93	0.51
21:W:87:PRO:HA	21:W:90:ARG:NH2	2.16	0.51
26:A:1584:U:H6	26:A:1584:U:H3'	1.75	0.51
26:A:1595:G:C5'	26:A:1596:C:OP2	2.59	0.51
26:A:1940:A:N6	26:A:1954:C:O2'	2.43	0.51
26:A:2142:A:O2'	26:A:2144:C:N4	2.43	0.51
28:2:44:PHE:O	28:2:48:LYS:CE	2.55	0.51
1:C:108:PRO:HG3	1:C:128:GLY:HA2	1.91	0.51
1:C:145:VAL:HG13	1:C:191:ALA:HB2	1.93	0.51
3:E:45:LYS:CG	26:A:709:U:C4	2.94	0.51
3:E:131:VAL:HG13	3:E:140:SER:HB2	1.91	0.51
3:E:201:LEU:HD23	3:E:201:LEU:C	2.36	0.51
19:U:5:THR:O	19:U:6:ASP:HB2	2.10	0.51
20:V:72:MET:CE	26:A:383:U:H5'	2.41	0.51
21:W:83:LEU:HD11	21:W:92:ILE:CG2	2.36	0.51
26:A:1597:G:N3	26:A:1598:U:H6	2.02	0.51
26:A:1601:G:H2'	26:A:1602:U:C6	2.46	0.51
8:J:114:LYS:O	8:J:118:LEU:N	2.40	0.51
16:R:48:ARG:NH1	16:R:49:ASP:OD1	2.44	0.51
20:V:2:LYS:HE3	20:V:83:VAL:HG12	1.92	0.51
23:Y:17:SER:HB2	23:Y:27:ARG:HD2	1.91	0.51
23:Y:33:ILE:HA	23:Y:52:CYS:HA	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:601:A:N3	26:A:673:C:O2'	2.39	0.51
9:K:141:GLU:OE2	9:K:143:LYS:HG3	2.01	0.51
18:T:75:THR:CB	18:T:118:PRO:HD3	2.32	0.51
26:A:1544:U:O4	26:A:1626:G:O6	2.29	0.51
26:A:2279:C:OP1	29:3:5:LYS:NZ	2.44	0.51
26:A:2764:C:O2'	26:A:2964:A:N3	2.34	0.51
28:2:38:CYS:CB	28:2:40:GLN:NE2	2.73	0.51
28:2:43:PRO:HA	28:2:46:THR:OG1	2.09	0.51
31:5:5:LYS:HB3	31:5:9:GLN:HE22	1.67	0.51
1:C:57:GLY:C	1:C:58:HIS:O	2.54	0.51
3:E:186:TYR:O	3:E:190:ASN:HB2	2.11	0.51
11:M:78:VAL:HG21	11:M:98:LEU:HD13	1.91	0.51
11:M:134:ARG:HH22	11:M:146:GLU:HG2	1.75	0.51
13:O:29:PHE:CE2	13:O:51:LEU:HD13	2.45	0.51
25:B:80:C:O2'	26:A:1033:A:H1'	2.10	0.51
26:A:242:G:OP2	32:6:3:LYS:HE2	2.10	0.51
26:A:854:A:H1'	26:A:855:C:H5	1.75	0.51
26:A:1127:A:N3	26:A:1272:C:O2'	2.39	0.51
28:2:38:CYS:SG	28:2:40:GLN:CD	2.94	0.51
1:C:37:LEU:HD23	1:C:62:TYR:CD1	2.45	0.51
1:C:261:ASN:C	1:C:262:LYS:HD3	2.36	0.51
4:F:62:ASN:O	4:F:65:ALA:O	2.28	0.51
20:V:2:LYS:HE2	20:V:85:TYR:CE2	2.46	0.51
21:W:81:LYS:HB2	21:W:96:ASP:O	2.10	0.51
22:X:54:GLY:N	22:X:58:THR:O	2.39	0.51
26:A:277:U:H2'	26:A:278:A:C8	2.46	0.51
26:A:1323:G:O2'	26:A:1352:A:N1	2.40	0.51
26:A:1577:C:C5	26:A:1594:G:O6	2.62	0.51
26:A:1598:U:C4	26:A:1601:G:C6	2.99	0.51
1:C:61:ALA:O	1:C:63:ARG:NH2	2.44	0.50
4:F:102:ARG:NH1	28:2:9:TYR:CE1	2.78	0.50
10:L:7:ARG:NH2	10:L:7:ARG:CG	2.73	0.50
4:F:71:LYS:HG3	28:2:5:ILE:HB	1.93	0.50
5:G:65:LEU:HD12	5:G:68:LEU:HD23	1.93	0.50
16:R:98:LEU:CD2	17:S:4:TYR:OH	2.59	0.50
18:T:75:THR:O	18:T:118:PRO:CD	2.59	0.50
24:Z:62:ARG:NH2	24:Z:66:LEU:HD11	2.26	0.50
1:C:26:ARG:HD3	1:C:81:HIS:CD2	2.38	0.50
11:M:84:ASN:HD21	11:M:118:LEU:HA	1.76	0.50
15:Q:93:ARG:HH21	26:A:1971:C:H5	1.60	0.50
25:B:24:G:HO2'	25:B:56:C:H41	1.48	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B:34:G:O2'	25:B:35:G:N7	2.43	0.50
26:A:2211:C:H2'	26:A:2212:A:H8	1.76	0.50
26:A:2547:G:O6	26:A:2556:C:N3	2.44	0.50
4:F:11:LEU:HD22	4:F:108:ASP:CB	2.41	0.50
6:H:62:ILE:H	6:H:65:ALA:HB3	1.77	0.50
9:K:1:MET:H3	9:K:2:PRO:HD3	1.77	0.50
26:A:2380:G:N2	26:A:2381:A:N1	2.58	0.50
26:A:2756:G:O2'	26:A:2881:A:N1	2.40	0.50
28:2:63:LYS:O	28:2:65:TYR:HD2	1.94	0.50
10:L:31:ARG:NH2	26:A:2900:C:OP1	2.45	0.50
12:N:111:GLU:OE2	12:N:115:ARG:CD	2.59	0.50
20:V:42:LYS:HD2	26:A:586:U:C5'	2.36	0.50
26:A:1592:G:O2'	26:A:1593:U:C6	2.57	0.50
26:A:1673:A:O2'	26:A:2926:A:OP2	2.28	0.50
31:5:6:ARG:NH1	31:5:6:ARG:CB	2.72	0.50
3:E:51:SER:HB2	26:A:35:A:C4'	2.42	0.50
9:K:1:MET:CE	26:A:642:G:OP1	2.60	0.50
9:K:27:ARG:HH11	9:K:27:ARG:CG	2.25	0.50
13:O:16:HIS:CD2	26:A:1390:A:N7	2.78	0.50
25:B:34:G:C6	25:B:44:C:C6	2.99	0.50
26:A:247:G:OP2	26:A:249:C:N4	2.41	0.50
26:A:499:G:OP2	26:A:2630:A:O2'	2.27	0.50
31:5:6:ARG:C	31:5:7:THR:HG23	2.36	0.50
1:C:213:ARG:HH22	1:C:219:PRO:HD3	1.75	0.50
19:U:67:LYS:HE2	26:A:1451:A:OP2	2.10	0.50
22:X:50:ASN:HB2	22:X:80:ILE:HB	1.94	0.50
24:Z:62:ARG:HD2	24:Z:66:LEU:HD22	1.93	0.50
25:B:56:C:O2	25:B:56:C:O2'	2.22	0.50
26:A:813:C:O2'	26:A:849:A:N6	2.41	0.50
26:A:1665:U:H2'	26:A:1666:A:H8	1.77	0.50
33:7:25:VAL:HB	33:7:34:GLN:HG2	1.92	0.50
11:M:65:LYS:HD2	26:A:2640:G:H5''	1.92	0.50
26:A:1596:C:O2'	26:A:1597:G:C8	2.65	0.50
26:A:1606:G:H2'	26:A:1606:G:N3	2.27	0.50
2:D:178:GLN:NE2	26:A:2995:U:O2'	2.37	0.50
9:K:136:GLN:HA	9:K:136:GLN:OE1	2.12	0.50
18:T:7:PHE:O	18:T:7:PHE:HD1	1.95	0.50
25:B:85:C:H3'	25:B:85:C:H6	1.75	0.50
9:K:75:TYR:HB3	9:K:85:ARG:O	2.11	0.49
9:K:113:LYS:HD2	26:A:616:A:P	2.52	0.49
19:U:67:LYS:HB3	19:U:67:LYS:NZ	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:U:83:ILE:HD12	26:A:1456:G:N2	2.13	0.49
21:W:52:ARG:NH1	21:W:53:ASP:OD1	2.45	0.49
25:B:58:A:C8	25:B:58:A:C5'	2.86	0.49
26:A:1566:A:C4	26:A:1605:G:C6	3.00	0.49
1:C:34:VAL:HG22	1:C:63:ARG:CG	2.42	0.49
2:D:157:PRO:HD2	2:D:158:GLY:H	1.78	0.49
3:E:149:THR:C	3:E:150:GLU:CG	2.85	0.49
4:F:115:LEU:O	4:F:118:ILE:HD13	2.11	0.49
13:O:58:GLY:HA2	13:O:62:ASN:HB2	1.94	0.49
21:W:9:ASN:O	21:W:68:THR:N	2.30	0.49
26:A:217:G:H22	26:A:235:U:H4'	1.77	0.49
3:E:136:PRO:HB3	3:E:164:VAL:HA	1.94	0.49
4:F:78:ARG:O	4:F:88:GLU:OE1	2.30	0.49
4:F:158:GLY:HA3	26:A:2529:A:C2	2.47	0.49
7:I:27:GLU:HB3	7:I:104:VAL:HB	1.93	0.49
16:R:90:VAL:HG13	17:S:6:ILE:CD1	2.42	0.49
19:U:91:LYS:CG	19:U:92:PRO:HD3	2.40	0.49
21:W:62:GLY:HA2	21:W:65:ALA:HB2	1.95	0.49
26:A:218:A:N3	26:A:234:U:O2'	2.38	0.49
26:A:718:C:O2'	26:A:772:U:OP1	2.26	0.49
26:A:966:U:H2'	26:A:967:G:H8	1.77	0.49
26:A:1590:G:N3	26:A:1591:U:C6	2.79	0.49
28:2:60:ARG:C	28:2:60:ARG:CD	2.86	0.49
1:C:256:ARG:NH1	1:C:258:ARG:NH1	2.60	0.49
3:E:201:LEU:C	3:E:201:LEU:CD2	2.85	0.49
4:F:11:LEU:HD21	4:F:108:ASP:HA	1.95	0.49
4:F:47:VAL:HG23	4:F:48:GLY:N	2.26	0.49
18:T:13:LYS:HG2	18:T:111:THR:HG23	1.93	0.49
19:U:67:LYS:NZ	26:A:1451:A:OP2	2.45	0.49
21:W:46:HIS:HE1	25:B:74:A:O2'	1.96	0.49
21:W:81:LYS:N	21:W:96:ASP:O	2.43	0.49
26:A:2963:U:H2'	26:A:2964:A:H8	1.77	0.49
12:N:35:GLN:NE2	21:W:90:ARG:NH1	2.60	0.49
14:P:16:ASN:O	14:P:20:ARG:HB2	2.12	0.49
26:A:242:G:OP2	32:6:3:LYS:CE	2.61	0.49
26:A:280:G:H1	26:A:306:U:H3	1.60	0.49
3:E:118:ARG:HH22	3:E:189:LEU:HD23	1.77	0.49
4:F:32:VAL:CG2	25:B:55:G:H5"	2.43	0.49
4:F:147:GLU:HA	28:2:28:LYS:HD3	1.93	0.49
5:G:61:ARG:O	5:G:65:LEU:HB2	2.13	0.49
17:S:77:LYS:HD3	17:S:86:LYS:HE2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:223:A:OP2	26:A:507:G:N2	2.41	0.49
26:A:277:U:H2'	26:A:278:A:H8	1.77	0.49
26:A:403:U:O2'	26:A:422:A:N3	2.45	0.49
4:F:21:GLU:O	4:F:25:GLN:HG3	2.13	0.49
9:K:84:LEU:HD11	26:A:1250:U:H6	1.77	0.49
13:O:118:GLU:OE1	13:O:118:GLU:HA	2.11	0.49
15:Q:48:ARG:NH1	26:A:2909:G:OP1	2.43	0.49
20:V:81:THR:OG1	20:V:100:THR:HG23	2.12	0.49
26:A:567:A:H1'	26:A:568:A:H5"	1.94	0.49
26:A:1580:A:C5	26:A:1592:G:N3	2.80	0.49
1:C:256:ARG:NE	1:C:258:ARG:NE	2.60	0.49
4:F:11:LEU:CD2	4:F:108:ASP:CA	2.91	0.49
4:F:46:GLY:O	4:F:47:VAL:CG1	2.61	0.49
10:L:19:ILE:HG22	10:L:43:VAL:HA	1.95	0.49
13:O:33:ARG:CB	13:O:114:GLU:HG2	2.43	0.49
25:B:21:C:H2'	25:B:22:A:O5'	2.13	0.49
26:A:610:C:O2	26:A:646:U:O2'	2.31	0.49
26:A:1610:C:H2'	26:A:1611:A:C8	2.46	0.49
26:A:2375:G:H2'	26:A:2376:G:H8	1.77	0.49
26:A:2629:G:O2'	26:A:2635:A:N6	2.42	0.49
10:L:22:ILE:HD12	26:A:2176:A:C5	2.48	0.49
14:P:112:ARG:N	25:B:49:C:OP1	2.40	0.49
21:W:28:ARG:HH12	25:B:77:A:H5'	1.78	0.49
21:W:77:LEU:CG	21:W:100:VAL:HG21	2.43	0.49
25:B:55:G:H2'	25:B:56:C:H6	1.78	0.49
26:A:1543:A:N1	26:A:1628:A:O2'	2.44	0.49
26:A:1581:C:N4	26:A:1591:U:N1	2.61	0.49
26:A:1596:C:O2'	26:A:1597:G:C5'	2.60	0.49
31:5:21:PHE:HB2	31:5:46:THR:HG21	1.95	0.49
7:I:9:ALA:HB3	7:I:56:LEU:HD11	1.95	0.49
9:K:87:ARG:NH1	9:K:91:GLU:OE2	2.46	0.49
12:N:60:ARG:NH1	26:A:1193:C:C5'	2.71	0.49
13:O:38:GLU:O	13:O:42:ARG:HG3	2.13	0.49
19:U:33:VAL:HG11	19:U:42:ILE:HD11	1.93	0.49
19:U:67:LYS:CE	26:A:1451:A:OP2	2.61	0.49
26:A:799:G:OP1	31:5:19:HIS:HD2	1.96	0.49
26:A:1044:U:P	27:1:37:ARG:HH12	2.36	0.49
3:E:5:VAL:HG22	3:E:6:ASP:N	2.27	0.48
19:U:66:ARG:HA	19:U:75:LYS:CA	2.43	0.48
25:B:54:A:H2'	25:B:55:G:C8	2.48	0.48
26:A:805:C:O2'	26:A:895:G:OP1	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:99:ASP:O	26:A:1720:G:N2	2.23	0.48
2:D:162:LYS:HG2	26:A:2843:C:H5"	1.95	0.48
4:F:80:SER:OG	4:F:88:GLU:N	2.46	0.48
8:J:96:LYS:HE2	21:W:120:PRO:CB	2.37	0.48
10:L:19:ILE:HB	10:L:41:ALA:HB1	1.95	0.48
18:T:77:VAL:HG22	18:T:117:ARG:HG2	1.96	0.48
22:X:56:ASP:N	22:X:56:ASP:OD1	2.39	0.48
25:B:19:G:C6	25:B:20:G:C5	3.01	0.48
25:B:88:C:H3'	25:B:88:C:H6	1.79	0.48
26:A:1552:A:H1'	26:A:1618:C:H42	1.78	0.48
26:A:2509:C:C4	30:4:8:ARG:NH1	2.79	0.48
30:4:13:LEU:HA	30:4:53:GLU:HA	1.95	0.48
1:C:261:ASN:C	1:C:262:LYS:CD	2.86	0.48
3:E:144:PHE:CE1	3:E:148:LEU:CD1	2.97	0.48
4:F:8:LEU:CD2	4:F:16:ARG:HD2	2.43	0.48
17:S:16:VAL:HG12	17:S:22:VAL:HG21	1.96	0.48
20:V:76:SER:C	20:V:77:ASP:OD1	2.56	0.48
26:A:1563:A:N6	26:A:1565:A:C5	2.81	0.48
26:A:1564:A:C2'	26:A:1565:A:C5'	2.86	0.48
26:A:1564:A:H3'	26:A:1565:A:H5"	1.94	0.48
1:C:25:THR:CG2	1:C:81:HIS:ND1	2.77	0.48
3:E:6:ASP:HA	3:E:16:GLY:O	2.13	0.48
3:E:24:LEU:HD21	3:E:208:ASN:CG	2.38	0.48
3:E:180:PRO:HG3	3:E:200:ALA:HB1	1.94	0.48
4:F:46:GLY:HA3	26:A:2529:A:H61	1.79	0.48
19:U:6:ASP:OD2	24:Z:23:ARG:CG	2.60	0.48
19:U:67:LYS:CB	19:U:67:LYS:NZ	2.76	0.48
22:X:75:ARG:NH1	26:A:2557:A:OP1	2.45	0.48
24:Z:62:ARG:HH21	24:Z:66:LEU:CD1	2.26	0.48
25:B:19:G:C8	25:B:19:G:C4'	2.96	0.48
25:B:37:C:C5	25:B:38:C:C5	3.01	0.48
26:A:1590:G:C2	26:A:1591:U:C5	3.00	0.48
26:A:1637:G:O2'	26:A:1805:G:O2'	2.31	0.48
26:A:1882:A:N6	26:A:2220:C:H42	2.11	0.48
29:3:27:LEU:HB3	29:3:38:LYS:HB3	1.95	0.48
4:F:35:ILE:CG2	4:F:36:PRO:HD2	2.43	0.48
9:K:45:THR:OG1	16:R:64:ARG:NH2	2.46	0.48
10:L:8:LEU:HD12	10:L:19:ILE:O	2.14	0.48
12:N:60:ARG:NH2	12:N:60:ARG:CG	2.72	0.48
12:N:111:GLU:OE2	12:N:115:ARG:HB2	2.13	0.48
21:W:157:ILE:HB	21:W:179:VAL:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Z:13:LEU:HD21	24:Z:17:GLU:O	2.14	0.48
25:B:86:U:O2'	25:B:87:U:H2'	2.14	0.48
26:A:1569:A:O2'	26:A:1570:C:C6	2.63	0.48
2:D:129:ARG:HG2	2:D:170:MET:HB3	1.96	0.48
3:E:154:VAL:HB	3:E:175:VAL:HG23	1.95	0.48
10:L:107:ARG:HD3	10:L:115:VAL:HG11	1.94	0.48
12:N:134:ARG:HD3	21:W:129:ASN:ND2	2.29	0.48
18:T:30:LEU:HD23	29:3:24:ALA:HB2	1.95	0.48
18:T:99:ARG:HD2	26:A:862:U:O2'	2.12	0.48
21:W:6:ASN:HD22	21:W:6:ASN:C	2.22	0.48
24:Z:62:ARG:NH2	24:Z:66:LEU:CD1	2.77	0.48
26:A:1171:C:H2'	26:A:1172:A:C8	2.49	0.48
26:A:2072:G:O6	26:A:2111:U:O4	2.31	0.48
4:F:45:MET:HE2	4:F:64:LEU:HD21	1.83	0.48
5:G:132:PHE:HZ	5:G:149:ILE:HG21	1.79	0.48
13:O:14:SER:C	13:O:15:SER:HG	2.14	0.48
13:O:20:LEU:HD23	13:O:24:LEU:HD12	1.95	0.48
24:Z:48:ARG:HG3	26:A:58:G:OP1	2.13	0.48
25:B:10:G:C6	25:B:11:U:H1'	2.47	0.48
33:7:35:ARG:CG	33:7:36:GLN:N	2.73	0.48
1:C:256:ARG:NH1	1:C:258:ARG:HH11	2.12	0.48
9:K:84:LEU:HD11	26:A:1250:U:C6	2.49	0.48
9:K:112:ASN:OD1	26:A:650:G:OP1	2.31	0.48
12:N:17:GLN:NE2	26:A:1075:U:H5	2.11	0.48
26:A:351:G:N2	26:A:444:U:O4	2.40	0.48
26:A:1411:G:OP1	26:A:2933:G:O2'	2.26	0.48
26:A:1571:C:O2'	26:A:1572:G:C5'	2.54	0.48
28:2:41:CYS:CB	28:2:44:PHE:CZ	2.86	0.48
10:L:77:ILE:HG12	15:Q:71:ARG:HD3	1.96	0.48
16:R:57:PHE:HZ	26:A:623:A:H4'	1.78	0.48
16:R:98:LEU:HD21	17:S:4:TYR:OH	2.14	0.48
20:V:2:LYS:CD	20:V:83:VAL:CB	2.91	0.48
26:A:79:G:N2	26:A:100:A:OP2	2.44	0.48
26:A:681:C:H2'	26:A:682:A:H8	1.79	0.48
26:A:1885:G:O2'	26:A:2215:U:O4	2.28	0.48
26:A:2374:U:H2'	26:A:2375:G:C8	2.49	0.48
1:C:76:ASN:CB	1:C:98:LEU:HD21	2.42	0.48
4:F:9:PRO:O	4:F:13:GLN:N	2.43	0.48
7:I:48:THR:HB	7:I:81:PHE:HB2	1.96	0.48
15:Q:33:GLU:OE1	15:Q:38:ARG:NH2	2.47	0.48
20:V:97:ILE:HD12	20:V:103:LYS:C	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:W:87:PRO:O	21:W:90:ARG:NH1	2.46	0.48
26:A:81:A:N1	26:A:96:G:O2'	2.34	0.48
26:A:265:A:N1	26:A:515:U:O2'	2.41	0.48
26:A:2081:U:OP1	26:A:2634:G:O2'	2.26	0.48
26:A:2745:C:O2'	26:A:2788:A:N3	2.39	0.48
1:C:5:LYS:HD2	1:C:17:SER:HB3	1.96	0.47
1:C:59:LYS:HG3	26:A:1788:G:H4'	1.96	0.47
1:C:76:ASN:O	1:C:98:LEU:HD23	2.11	0.47
4:F:70:GLN:OE1	4:F:96:VAL:CG2	2.62	0.47
12:N:59:LYS:NZ	12:N:59:LYS:CB	2.73	0.47
13:O:116:VAL:HG23	13:O:116:VAL:O	2.13	0.47
26:A:1581:C:H2'	26:A:1582:C:C5	2.44	0.47
26:A:2163:U:OP1	26:A:2828:U:O2'	2.29	0.47
4:F:73:GLU:HB3	25:B:42:C:C6	2.48	0.47
9:K:37:ARG:NH1	26:A:1125:C:OP1	2.46	0.47
10:L:73:ASP:OD1	10:L:73:ASP:N	2.46	0.47
20:V:46:ALA:HB2	26:A:572:C:P	2.54	0.47
21:W:79:LEU:N	21:W:98:LEU:O	2.48	0.47
26:A:292:G:H2'	26:A:293:G:H8	1.79	0.47
26:A:1554:U:C4	26:A:1617:C:N4	2.82	0.47
26:A:1568:C:H2'	26:A:1569:A:N7	2.29	0.47
26:A:1578:G:N9	26:A:1592:G:N1	2.57	0.47
26:A:2800:G:O2'	26:A:2803:C:OP2	2.28	0.47
33:7:21:GLY:C	33:7:22:ARG:HG3	2.39	0.47
1:C:79:VAL:HG23	1:C:114:GLY:H	1.78	0.47
1:C:108:PRO:HA	1:C:196:VAL:HA	1.96	0.47
1:C:256:ARG:CD	1:C:258:ARG:NE	2.76	0.47
4:F:23:LEU:HD22	4:F:36:PRO:HD2	1.95	0.47
11:M:51:GLU:HG3	32:6:57:ARG:HH11	1.70	0.47
19:U:69:THR:CG2	19:U:73:PHE:C	2.87	0.47
25:B:13:C:O2'	25:B:14:A:H3'	2.14	0.47
25:B:89:C:H2'	25:B:90:G:H8	1.79	0.47
26:A:1830:C:H4'	31:5:10:PRO:CD	2.44	0.47
26:A:1830:C:C5'	31:5:10:PRO:HG2	2.43	0.47
1:C:143:HIS:ND1	1:C:194:GLY:O	2.39	0.47
1:C:178:PRO:HG2	26:A:2016:G:O6	2.14	0.47
13:O:49:GLU:OE1	13:O:94:TYR:CD2	2.67	0.47
20:V:43:LYS:O	20:V:60:VAL:N	2.47	0.47
20:V:87:ILE:HG12	20:V:94:LYS:HG3	1.96	0.47
21:W:122:THR:HG23	21:W:181:VAL:HG13	1.96	0.47
22:X:83:VAL:CG1	22:X:85:ARG:CB	2.93	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B:34:G:O6	25:B:44:C:C6	2.68	0.47
25:B:35:G:N1	25:B:36:U:C4	2.82	0.47
26:A:1551:U:O4	26:A:1619:U:O4	2.32	0.47
30:4:29:ARG:NH2	30:4:34:ASP:CG	2.72	0.47
4:F:102:ARG:NH1	28:2:9:TYR:CD1	2.82	0.47
9:K:1:MET:H2	9:K:2:PRO:CD	2.27	0.47
15:Q:55:SER:HB2	26:A:2907:C:H5'	1.97	0.47
20:V:11:VAL:HG21	20:V:38:VAL:HG11	1.96	0.47
20:V:27:TYR:HB3	20:V:30:ARG:HB2	1.96	0.47
24:Z:33:ARG:HA	24:Z:36:MET:HG2	1.95	0.47
25:B:58:A:C6	25:B:59:A:C8	2.99	0.47
25:B:59:A:C3'	25:B:60:G:H5'	2.45	0.47
26:A:103:C:H2'	26:A:104:G:H8	1.79	0.47
26:A:325:U:H2'	26:A:326:A:H8	1.79	0.47
26:A:534:G:H4'	26:A:535:A:H5'	1.97	0.47
26:A:2528:G:H22	26:A:2536:U:H3	1.62	0.47
3:E:181:ASP:OD1	3:E:181:ASP:N	2.43	0.47
25:B:4:A:C2	25:B:25:G:N1	2.82	0.47
26:A:1110:C:H2'	26:A:1111:G:H8	1.80	0.47
26:A:1588:G:H3'	26:A:1589:G:H8	1.79	0.47
1:C:67:PHE:HE1	1:C:106:ILE:HD11	1.80	0.47
1:C:262:LYS:N	1:C:263:PRO:HD3	2.30	0.47
4:F:23:LEU:HD21	4:F:29:TYR:OH	2.14	0.47
6:H:23:ASP:O	6:H:27:ARG:CB	2.62	0.47
10:L:107:ARG:HH21	10:L:115:VAL:HG11	1.80	0.47
14:P:50:GLN:NE2	25:B:7:G:N3	2.51	0.47
19:U:29:TYR:CE2	19:U:93:ILE:HB	2.50	0.47
21:W:94:HIS:CE1	25:B:75:U:O2	2.67	0.47
22:X:42:GLY:N	22:X:57:ASP:OD2	2.46	0.47
25:B:34:G:O6	25:B:44:C:H2'	2.13	0.47
26:A:451:U:H2'	26:A:452:G:C8	2.49	0.47
26:A:1414:G:N1	26:A:1858:A:OP2	2.36	0.47
26:A:1550:G:N2	26:A:1620:U:O2	2.35	0.47
26:A:1563:A:O2'	26:A:1564:A:OP2	2.28	0.47
26:A:1597:G:C4	26:A:1598:U:C6	2.96	0.47
26:A:2255:A:O2'	26:A:2678:G:N2	2.44	0.47
32:6:27:ALA:O	32:6:29:ARG:N	2.46	0.47
1:C:25:THR:CG2	1:C:81:HIS:HD1	2.28	0.47
4:F:44:ASN:C	4:F:44:ASN:ND2	2.73	0.47
4:F:115:LEU:HD23	4:F:183:PRO:CD	2.45	0.47
4:F:118:ILE:HB	4:F:121:PHE:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:I:27:GLU:HG3	7:I:76:PRO:HG2	1.97	0.47
16:R:124:PRO:HB3	26:A:1268:C:H4'	1.97	0.47
21:W:164:LEU:HD13	21:W:168:VAL:HG12	1.96	0.47
22:X:56:ASP:HA	26:A:2610:C:H4'	1.95	0.47
22:X:76:LYS:CE	26:A:973:G:OP1	2.63	0.47
26:A:1541:G:C6	26:A:1630:U:O4	2.68	0.47
26:A:1596:C:O2'	26:A:1597:G:P	2.73	0.47
30:4:35:ARG:HD3	30:4:35:ARG:HA	1.68	0.47
5:G:3:ARG:NH1	26:A:2975:G:OP2	2.43	0.47
9:K:114:LEU:HD12	26:A:650:G:H5'	1.97	0.47
12:N:74:LEU:HD22	26:A:1075:U:OP2	2.15	0.47
13:O:33:ARG:HD3	13:O:114:GLU:HG2	1.95	0.47
15:Q:1:MET:N	26:A:3096:U:O2	2.44	0.47
21:W:28:ARG:NH1	25:B:76:G:O3'	2.48	0.47
25:B:83:C:H5"	27:1:52:HIS:CE1	2.50	0.47
26:A:347:U:H2'	26:A:348:G:H8	1.80	0.47
26:A:1162:G:O2'	26:A:1229:A:N6	2.44	0.47
26:A:1596:C:O2'	26:A:1597:G:H5'	2.15	0.47
26:A:2644:C:OP1	32:6:34:GLU:CD	2.57	0.47
1:C:73:ASP:HB3	1:C:120:GLY:N	2.25	0.47
1:C:132:PRO:HD2	1:C:135:ASN:HD22	1.79	0.47
8:J:40:PHE:O	8:J:44:TYR:HB2	2.15	0.47
11:M:76:GLN:HE22	26:A:720:C:H42	1.63	0.47
15:Q:92:ARG:HG3	26:A:1970:G:H5"	1.95	0.47
20:V:31:ASN:O	20:V:68:VAL:HB	2.16	0.47
21:W:14:ASN:OD1	21:W:14:ASN:N	2.48	0.47
21:W:134:GLU:HB2	21:W:171:ILE:HD11	1.97	0.47
25:B:24:G:N9	25:B:56:C:C2	2.83	0.47
26:A:1535:C:H3'	26:A:1536:A:H8	1.79	0.47
26:A:1562:C:O2'	26:A:1563:A:OP2	2.32	0.47
26:A:1595:G:C8	26:A:1596:C:C5	2.88	0.47
26:A:1717:U:H5"	26:A:1718:C:H5	1.80	0.47
26:A:2753:G:O6	33:7:31:ARG:NH1	2.47	0.47
32:6:58:ILE:HD13	32:6:61:LEU:HD12	1.97	0.47
3:E:77:GLY:H	26:A:789:G:H5"	1.80	0.46
9:K:112:ASN:CG	9:K:113:LYS:N	2.73	0.46
13:O:14:SER:OG	26:A:2913:U:O2'	2.32	0.46
17:S:76:HIS:HE1	17:S:85:HIS:HD2	1.63	0.46
21:W:29:ARG:HH12	25:B:90:G:C4'	2.28	0.46
25:B:52:G:O2'	25:B:53:A:N7	2.45	0.46
34:8:6:ARG:O	34:8:10:ASP:HB2	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:34:GLN:NE2	25:B:57:U:O2'	2.47	0.46
8:J:106:GLN:O	8:J:110:ILE:HB	2.15	0.46
9:K:142:ILE:HG22	9:K:143:LYS:H	1.80	0.46
10:L:35:ILE:HG21	10:L:103:GLY:HA3	1.98	0.46
11:M:35:ARG:NH1	11:M:41:LYS:O	2.47	0.46
20:V:46:ALA:CB	26:A:572:C:OP1	2.62	0.46
20:V:96:ARG:NH2	20:V:96:ARG:CG	2.72	0.46
25:B:84:C:C5	25:B:85:C:C4	3.03	0.46
26:A:1588:G:H3'	26:A:1589:G:C8	2.50	0.46
30:4:18:CYS:SG	30:4:19:LYS:HG2	2.55	0.46
3:E:145:LEU:HA	3:E:148:LEU:CD1	2.38	0.46
4:F:10:ARG:NH1	4:F:10:ARG:CG	2.72	0.46
20:V:79:LYS:HE3	20:V:79:LYS:HB2	1.70	0.46
21:W:77:LEU:HD13	21:W:100:VAL:HB	1.96	0.46
23:Y:34:GLN:NE2	26:A:2453:U:O2	2.43	0.46
25:B:15:U:H3'	25:B:16:A:H8	1.79	0.46
25:B:25:G:H2'	25:B:26:A:H5'	1.97	0.46
25:B:54:A:C2'	25:B:55:G:C5'	2.91	0.46
26:A:1530:G:N2	26:A:1805:G:H1	2.13	0.46
26:A:2154:G:O2'	26:A:2192:G:O6	2.28	0.46
31:5:6:ARG:CZ	31:5:6:ARG:HB3	2.44	0.46
1:C:49:ILE:N	26:A:894:U:OP1	2.33	0.46
2:D:7:LEU:HD11	2:D:82:ALA:HB3	1.97	0.46
3:E:7:VAL:CB	3:E:16:GLY:CA	2.84	0.46
5:G:159:LYS:HA	5:G:172:ARG:HH22	1.81	0.46
6:H:124:ILE:HG22	6:H:125:LYS:H	1.81	0.46
10:L:17:LYS:HB3	10:L:45:ASP:HB3	1.96	0.46
19:U:58:ASN:HB3	26:A:1456:G:H1'	1.97	0.46
25:B:5:C:OP1	25:B:61:C:O2'	2.23	0.46
25:B:59:A:H2'	25:B:60:G:H8	1.80	0.46
26:A:334:G:H2'	26:A:335:G:C8	2.50	0.46
26:A:2515:U:H2'	26:A:2516:U:C6	2.51	0.46
2:D:34:ASN:HD21	2:D:54:TYR:HB2	1.80	0.46
2:D:156:THR:CG2	26:A:2256:G:N2	2.75	0.46
2:D:159:ARG:NH1	2:D:159:ARG:HG2	2.30	0.46
3:E:8:LYS:HZ2	3:E:148:LEU:HB3	1.81	0.46
19:U:94:ASP:OD1	19:U:94:ASP:N	2.48	0.46
26:A:1189:G:H1'	26:A:1207:G:H2'	1.96	0.46
26:A:2509:C:OP2	30:4:28:ASN:ND2	2.48	0.46
30:4:16:GLU:HA	30:4:20:HIS:HB3	1.97	0.46
4:F:76:ARG:HG2	4:F:91:PRO:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:99:ARG:HD3	25:B:45:G:H5'	1.98	0.46
14:P:43:SER:CB	25:B:28:A:OP1	2.63	0.46
16:R:90:VAL:HG13	17:S:6:ILE:HD13	1.97	0.46
21:W:36:VAL:HG22	21:W:94:HIS:CE1	2.50	0.46
22:X:76:LYS:HD3	26:A:973:G:OP1	2.16	0.46
26:A:1479:G:N2	26:A:1482:A:OP2	2.47	0.46
26:A:1612:U:H2'	26:A:1613:G:H8	1.81	0.46
3:E:131:VAL:O	3:E:133:GLY:N	2.49	0.46
3:E:208:ASN:N	3:E:208:ASN:HD22	2.13	0.46
4:F:114:ALA:HB1	4:F:144:MET:HE2	1.97	0.46
8:J:40:PHE:HZ	8:J:58:VAL:HG11	1.81	0.46
9:K:147:GLN:O	16:R:75:THR:HG21	2.16	0.46
25:B:54:A:H2'	25:B:55:G:H5'	1.93	0.46
26:A:747:A:H2	26:A:768:G:H21	1.63	0.46
26:A:1479:G:H4'	26:A:2025:C:H5	1.79	0.46
2:D:159:ARG:H	2:D:159:ARG:CD	2.28	0.46
9:K:14:SER:O	9:K:52:ASP:HB3	2.16	0.46
12:N:83:MET:HE2	12:N:83:MET:HB3	1.70	0.46
13:O:42:ARG:O	13:O:46:PRO:CD	2.63	0.46
13:O:106:ASP:OD1	13:O:106:ASP:N	2.48	0.46
16:R:77:ASN:HD22	26:A:1270:G:H21	1.64	0.46
22:X:83:VAL:O	22:X:85:ARG:HA	2.16	0.46
25:B:24:G:N9	25:B:56:C:N3	2.63	0.46
30:4:19:LYS:HD2	30:4:44:ASN:CG	2.39	0.46
4:F:64:LEU:HD12	4:F:72:PRO:CB	2.46	0.46
17:S:3:THR:CB	17:S:102:ILE:HD11	2.44	0.46
17:S:6:ILE:O	17:S:7:VAL:HG22	2.12	0.46
20:V:96:ARG:CZ	20:V:96:ARG:CB	2.94	0.46
26:A:2070:A:H2'	26:A:2071:A:C8	2.51	0.46
1:C:229:VAL:HB	26:A:899:G:O6	2.16	0.46
3:E:24:LEU:HD21	3:E:208:ASN:CB	2.46	0.46
4:F:185:LYS:HE2	4:F:185:LYS:C	2.40	0.46
7:I:49:TYR:HD1	7:I:80:ALA:HB2	1.81	0.46
14:P:43:SER:HB2	25:B:28:A:OP1	2.16	0.46
18:T:36:VAL:HG22	18:T:78:VAL:HG23	1.98	0.46
21:W:112:VAL:HG23	21:W:126:GLN:HE21	1.80	0.46
25:B:79:A:N1	25:B:94:G:O6	2.49	0.46
26:A:661:U:O2'	26:A:1101:A:N1	2.40	0.46
26:A:2394:A:O2'	26:A:2396:A:OP1	2.28	0.46
1:C:73:ASP:HA	1:C:119:SER:HB3	1.98	0.45
4:F:44:ASN:HD22	4:F:45:MET:N	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:99:ARG:HD3	25:B:45:G:O4'	2.16	0.45
10:L:75:SER:HB2	15:Q:71:ARG:HE	1.80	0.45
15:Q:58:PHE:HD1	15:Q:75:VAL:HG22	1.82	0.45
17:S:79:LYS:NZ	26:A:1108:A:N1	2.54	0.45
18:T:18:ARG:HH12	26:A:1436:C:C2'	2.28	0.45
21:W:83:LEU:HD12	21:W:92:ILE:HD12	1.95	0.45
26:A:2509:C:C5	30:4:8:ARG:CZ	2.94	0.45
1:C:37:LEU:CD2	1:C:62:TYR:HB2	2.37	0.45
3:E:150:GLU:OE1	3:E:193:ASP:CG	2.58	0.45
11:M:61:LEU:HD12	32:6:14:PHE:HZ	1.81	0.45
12:N:110:ASP:OD1	12:N:110:ASP:N	2.43	0.45
13:O:16:HIS:ND1	13:O:16:HIS:C	2.73	0.45
21:W:40:HIS:ND1	21:W:40:HIS:C	2.72	0.45
26:A:1595:G:OP2	26:A:1596:C:C5	2.68	0.45
3:E:140:SER:O	3:E:144:PHE:HB3	2.17	0.45
4:F:183:PRO:O	4:F:184:PHE:CE2	2.55	0.45
8:J:80:LEU:HD13	8:J:110:ILE:HG23	1.97	0.45
19:U:14:PRO:HA	19:U:31:PHE:HA	1.98	0.45
20:V:47:VAL:C	20:V:56:SER:CA	2.86	0.45
26:A:1040:U:H2'	26:A:1041:A:C8	2.52	0.45
1:C:58:HIS:CE1	26:A:1788:G:H21	2.28	0.45
1:C:221:VAL:HG21	26:A:897:A:C8	2.51	0.45
9:K:114:LEU:HD23	9:K:117:GLN:HE21	1.80	0.45
13:O:26:THR:CG2	13:O:75:VAL:HG21	2.46	0.45
25:B:83:C:C5'	27:1:52:HIS:CE1	2.99	0.45
26:A:273:A:H61	26:A:314:G:H1'	1.81	0.45
26:A:790:A:N3	26:A:2667:C:O2'	2.44	0.45
26:A:2059:G:H1	26:A:2122:U:H3	1.64	0.45
26:A:2288:C:H2'	26:A:2289:C:C6	2.52	0.45
26:A:2374:U:H2'	26:A:2375:G:H8	1.81	0.45
26:A:2527:G:H1	26:A:2537:C:H42	1.62	0.45
4:F:6:LYS:CE	4:F:6:LYS:N	2.80	0.45
4:F:45:MET:HE2	4:F:45:MET:CA	2.41	0.45
4:F:73:GLU:HG2	25:B:42:C:C4	2.43	0.45
4:F:154:ASP:OD1	4:F:155:ARG:N	2.48	0.45
5:G:165:TYR:HB2	5:G:168:GLU:HB2	1.98	0.45
21:W:78:ALA:HB1	21:W:97:LEU:HB3	1.99	0.45
26:A:314:G:O2'	26:A:321:G:O2'	2.35	0.45
26:A:377:C:H2'	26:A:378:G:H8	1.81	0.45
26:A:1573:U:OP1	26:A:1593:U:OP1	2.34	0.45
26:A:1754:G:C6	26:A:1759:A:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:15:ALA:HB3	27:1:20:ARG:HG3	1.98	0.45
3:E:83:GLN:H	3:E:83:GLN:HG2	1.42	0.45
9:K:76:ARG:HG2	9:K:76:ARG:O	2.17	0.45
10:L:76:TYR:HB2	15:Q:72:THR:HB	1.98	0.45
10:L:120:GLU:OE1	15:Q:64:SER:HB3	2.15	0.45
13:O:38:GLU:OE2	13:O:99:LYS:NZ	2.50	0.45
13:O:46:PRO:HG2	13:O:47:TYR:N	2.32	0.45
19:U:13:ALA:O	19:U:32:VAL:N	2.38	0.45
1:C:71:ASP:OD1	1:C:71:ASP:N	2.30	0.45
3:E:7:VAL:O	3:E:14:THR:CA	2.55	0.45
3:E:151:ASN:O	3:E:152:LYS:CB	2.57	0.45
12:N:60:ARG:NH1	26:A:1194:C:OP2	2.49	0.45
12:N:124:LYS:HD2	26:A:2708:G:H1'	1.99	0.45
17:S:76:HIS:HE1	17:S:85:HIS:CD2	2.35	0.45
19:U:77:LYS:HE2	19:U:78:SER:C	2.41	0.45
20:V:83:VAL:CG1	20:V:96:ARG:CG	2.95	0.45
26:A:286:G:N2	26:A:287:A:H62	2.14	0.45
26:A:605:G:OP2	29:3:14:ARG:NH2	2.49	0.45
26:A:857:U:H2'	26:A:858:A:C8	2.51	0.45
1:C:97:TYR:CD2	1:C:101:GLU:HG3	2.51	0.45
1:C:261:ASN:C	1:C:263:PRO:HD3	2.41	0.45
4:F:170:ASP:OD1	4:F:170:ASP:N	2.41	0.45
8:J:114:LYS:HA	8:J:117:ASP:HB3	1.99	0.45
10:L:71:ARG:NH2	10:L:105:GLU:HG3	2.32	0.45
11:M:51:GLU:OE2	32:6:57:ARG:NE	2.49	0.45
12:N:60:ARG:NE	26:A:1194:C:P	2.89	0.45
12:N:108:TYR:CD2	12:N:110:ASP:OD1	2.70	0.45
19:U:77:LYS:CE	19:U:79:THR:HG22	2.45	0.45
20:V:4:HIS:ND1	20:V:96:ARG:CZ	2.67	0.45
22:X:72:LYS:HG3	22:X:73:ARG:H	1.80	0.45
25:B:22:A:C6	25:B:23:G:O6	2.70	0.45
26:A:1550:G:O6	26:A:1620:U:O4	2.34	0.45
1:C:168:LYS:HA	1:C:173:ALA:HA	1.97	0.45
4:F:70:GLN:HE21	25:B:43:C:H4'	1.80	0.45
13:O:20:LEU:HD23	13:O:20:LEU:O	2.17	0.45
13:O:33:ARG:CD	13:O:114:GLU:HG2	2.44	0.45
14:P:88:ILE:O	14:P:92:ALA:CB	2.65	0.45
19:U:83:ILE:HD13	26:A:1456:G:C4	2.51	0.45
21:W:37:LEU:HD21	21:W:99:VAL:CG2	2.47	0.45
24:Z:5:THR:HG23	24:Z:6:THR:N	2.25	0.45
26:A:159:A:N3	26:A:2431:C:O2'	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:1379:G:OP1	29:3:16:ARG:NH2	2.47	0.45
26:A:1537:U:H2'	26:A:1538:G:H8	1.82	0.45
26:A:2375:G:H2'	26:A:2376:G:C8	2.52	0.45
3:E:9:THR:HG22	3:E:128:THR:CG2	2.47	0.45
4:F:11:LEU:CD2	4:F:108:ASP:N	2.80	0.45
12:N:39:HIS:HB3	12:N:99:PRO:HD3	1.99	0.45
13:O:9:ARG:CD	13:O:14:SER:HB3	2.47	0.45
15:Q:50:GLN:HB2	15:Q:57:THR:HG22	1.99	0.45
20:V:100:THR:O	20:V:101:ASN:HB2	2.17	0.45
21:W:38:TYR:O	21:W:38:TYR:CD1	2.69	0.45
21:W:98:LEU:C	21:W:98:LEU:CD2	2.90	0.45
21:W:124:VAL:HG12	21:W:181:VAL:HG22	1.99	0.45
26:A:249:C:OP2	26:A:2618:C:O2'	2.33	0.45
26:A:857:U:H2'	26:A:858:A:H8	1.81	0.45
26:A:1512:U:OP2	26:A:1513:C:N4	2.44	0.45
27:1:19:GLN:HG2	27:1:50:VAL:HG12	1.98	0.45
1:C:63:ARG:NH1	26:A:1788:G:OP2	2.50	0.44
2:D:60:ARG:HH22	26:A:3055:G:H5'	1.82	0.44
3:E:51:SER:OG	26:A:35:A:C5'	2.58	0.44
4:F:27:PHE:HB2	4:F:29:TYR:CE1	2.51	0.44
19:U:74:GLY:HA2	26:A:61:G:O2'	2.18	0.44
25:B:20:G:N1	25:B:63:U:C4	2.73	0.44
25:B:34:G:O2'	25:B:35:G:C5	2.70	0.44
25:B:58:A:H2'	25:B:59:A:O5'	2.17	0.44
26:A:130:C:H2'	26:A:131:A:C8	2.53	0.44
26:A:478:A:H4'	26:A:479:A:H5'	1.99	0.44
26:A:2238:A:H2'	26:A:2239:A:C8	2.53	0.44
27:1:8:GLN:HG2	27:1:31:ILE:HA	1.99	0.44
10:L:7:ARG:NH2	10:L:20:LEU:CD1	2.43	0.44
11:M:61:LEU:HD12	32:6:14:PHE:CZ	2.52	0.44
14:P:108:THR:CB	25:B:47:A:O2'	2.64	0.44
20:V:86:ARG:CB	20:V:97:ILE:CG1	2.89	0.44
22:X:83:VAL:HG13	22:X:85:ARG:CA	2.37	0.44
25:B:89:C:C5	25:B:89:C:OP2	2.70	0.44
26:A:681:C:H2'	26:A:682:A:C8	2.53	0.44
26:A:1580:A:C2	26:A:1592:G:C1'	2.87	0.44
28:2:41:CYS:CA	28:2:43:PRO:HD2	2.47	0.44
30:4:20:HIS:CD2	30:4:20:HIS:O	2.70	0.44
2:D:158:GLY:O	26:A:2276:G:N3	2.50	0.44
18:T:41:ASP:OD2	29:3:38:LYS:HB2	2.17	0.44
20:V:83:VAL:HG11	20:V:96:ARG:CG	2.39	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:V:97:ILE:HD13	20:V:103:LYS:O	2.16	0.44
26:A:944:A:C8	26:A:2472:C:H5'	2.52	0.44
26:A:1296:G:H2'	26:A:1297:G:C8	2.52	0.44
26:A:1515:C:N4	26:A:1516:G:O6	2.50	0.44
26:A:1532:G:O2'	26:A:1803:A:N1	2.48	0.44
26:A:2616:A:H5"	32:6:28:ASN:ND2	2.33	0.44
1:C:256:ARG:O	26:A:2014:G:O3'	2.34	0.44
3:E:14:THR:CG2	3:E:15:ASP:H	2.15	0.44
4:F:26:GLU:OE1	4:F:27:PHE:CE2	2.70	0.44
12:N:74:LEU:HD12	12:N:94:VAL:HG21	1.99	0.44
12:N:108:TYR:CE2	12:N:110:ASP:OD1	2.70	0.44
22:X:83:VAL:HG11	22:X:86:PRO:HD3	1.99	0.44
26:A:176:G:H3'	26:A:177:G:H8	1.83	0.44
26:A:1525:U:H2'	26:A:1526:A:H8	1.83	0.44
26:A:1576:C:O2	26:A:1577:C:C4	2.71	0.44
28:2:62:GLU:O	28:2:65:TYR:CD2	2.70	0.44
31:5:22:ARG:O	31:5:26:ARG:CD	2.58	0.44
1:C:51:THR:HG21	1:C:54:LYS:CE	2.46	0.44
2:D:154:CYS:CB	26:A:2798:G:HO2'	2.27	0.44
4:F:6:LYS:N	4:F:6:LYS:HE3	2.32	0.44
9:K:5:THR:CG2	26:A:624:G:H4'	2.47	0.44
13:O:52:ILE:HD12	13:O:94:TYR:CB	2.48	0.44
13:O:90:ARG:HH21	13:O:118:GLU:HB2	1.74	0.44
14:P:37:ARG:HD2	14:P:103:ASP:HB2	1.98	0.44
14:P:44:ALA:O	14:P:77:LYS:NZ	2.44	0.44
17:S:103:LYS:C	17:S:103:LYS:CD	2.86	0.44
19:U:74:GLY:O	26:A:61:G:O3'	2.35	0.44
26:A:1569:A:C8	26:A:1569:A:OP2	2.70	0.44
26:A:2323:G:H2'	26:A:2324:A:H8	1.83	0.44
26:A:3070:G:H4'	26:A:3071:A:H5'	1.99	0.44
30:4:19:LYS:O	30:4:20:HIS:CG	2.70	0.44
5:G:108:LEU:HD13	5:G:153:ARG:HG2	1.98	0.44
10:L:109:LYS:CD	10:L:110:LYS:HZ1	2.24	0.44
13:O:29:PHE:HE2	13:O:51:LEU:HD13	1.79	0.44
16:R:26:GLY:O	16:R:30:ARG:NH1	2.51	0.44
21:W:37:LEU:HD13	21:W:69:LEU:HD13	1.95	0.44
26:A:738:A:O2'	26:A:740:A:OP1	2.32	0.44
26:A:742:G:O2'	26:A:2575:G:OP1	2.36	0.44
26:A:947:U:H2'	26:A:948:G:C8	2.53	0.44
5:G:60:ARG:HA	5:G:63:ARG:HH21	1.82	0.44
13:O:72:ASP:O	13:O:76:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:W:102:ARG:HH21	21:W:138:LEU:CD2	2.22	0.44
26:A:947:U:H2'	26:A:948:G:H8	1.83	0.44
26:A:1562:C:O2'	26:A:1563:A:O4'	2.35	0.44
26:A:1586:C:H2'	26:A:1587:G:O4'	2.18	0.44
26:A:2339:G:H3'	26:A:2340:A:H8	1.83	0.44
30:4:19:LYS:O	30:4:21:ARG:NH2	2.51	0.44
9:K:18:ILE:HD13	9:K:18:ILE:HG21	1.80	0.44
13:O:33:ARG:HB2	13:O:114:GLU:HG2	2.00	0.44
14:P:43:SER:HB3	14:P:46:HIS:H	1.83	0.44
20:V:77:ASP:OD1	20:V:77:ASP:N	2.49	0.44
26:A:254:G:H4'	26:A:472:C:H4'	1.99	0.44
26:A:351:G:N1	26:A:444:U:N3	2.45	0.44
26:A:1159:C:H2'	26:A:1160:G:H8	1.82	0.44
28:2:41:CYS:HB2	28:2:44:PHE:HZ	1.74	0.44
30:4:15:CYS:HB3	30:4:20:HIS:H	1.81	0.44
31:5:40:LYS:O	31:5:40:LYS:HG3	2.18	0.44
4:F:120:ASP:O	4:F:122:ARG:HD3	2.17	0.44
7:I:57:VAL:HA	7:I:60:ALA:HB3	2.00	0.44
10:L:93:PRO:HD2	10:L:113:LYS:HD3	2.00	0.44
21:W:6:ASN:ND2	21:W:6:ASN:C	2.75	0.44
24:Z:48:ARG:HD2	26:A:58:G:OP1	2.18	0.44
25:B:89:C:P	25:B:89:C:C6	3.10	0.44
26:A:325:U:H2'	26:A:326:A:C8	2.52	0.44
26:A:325:U:O4	26:A:450:G:O6	2.36	0.44
26:A:569:G:O2'	26:A:594:U:O4	2.35	0.44
26:A:621:U:H2'	26:A:622:C:C6	2.53	0.44
26:A:1439:G:H3'	26:A:1440:C:H4'	2.00	0.44
26:A:1551:U:C4	26:A:1619:U:O4	2.71	0.44
26:A:1575:A:C8	26:A:1575:A:OP2	2.70	0.44
26:A:2325:U:O4	26:A:2410:A:N1	2.51	0.44
4:F:56:LEU:O	4:F:59:GLY:N	2.51	0.43
4:F:66:LEU:HD23	28:2:27:THR:HG22	1.81	0.43
10:L:4:GLN:HE22	26:A:2176:A:H61	1.66	0.43
18:T:7:PHE:N	18:T:8:PRO:CD	2.81	0.43
21:W:105:LYS:HZ3	21:W:136:GLU:HG3	1.83	0.43
25:B:27:A:H2'	25:B:28:A:H8	1.83	0.43
26:A:2:A:H2'	26:A:3:A:C8	2.52	0.43
26:A:406:A:N6	26:A:420:G:O2'	2.50	0.43
26:A:1551:U:H3'	26:A:1552:A:H8	1.83	0.43
3:E:14:THR:CG2	3:E:15:ASP:N	2.73	0.43
13:O:68:LYS:HB2	26:A:2932:G:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:W:21:LYS:HZ2	25:B:80:C:H42	1.61	0.43
24:Z:44:ASN:ND2	26:A:58:G:OP1	2.50	0.43
25:B:18:C:H2'	25:B:19:G:H5'	1.81	0.43
26:A:196:A:H2	26:A:2658:A:H62	1.66	0.43
26:A:922:U:O2'	26:A:2284:A:N1	2.48	0.43
26:A:1621:C:H2'	26:A:1622:G:H8	1.83	0.43
26:A:1668:C:O2'	26:A:1764:A:N3	2.41	0.43
26:A:1921:G:H2'	26:A:1922:G:C8	2.53	0.43
26:A:2585:U:P	32:6:24:ARG:HH12	2.36	0.43
5:G:61:ARG:O	5:G:65:LEU:CB	2.67	0.43
12:N:14:HIS:HA	12:N:15:PRO:HD2	1.80	0.43
13:O:56:LYS:CD	13:O:87:TYR:O	2.67	0.43
15:Q:49:ARG:NE	15:Q:56:GLU:OE2	2.50	0.43
17:S:26:LYS:NZ	26:A:1281:G:O3'	2.51	0.43
18:T:7:PHE:O	18:T:7:PHE:CD1	2.70	0.43
19:U:4:ILE:O	19:U:5:THR:HB	2.18	0.43
19:U:58:ASN:HB2	19:U:83:ILE:HG12	1.99	0.43
20:V:97:ILE:CD1	20:V:104:ASP:HA	2.49	0.43
23:Y:34:GLN:OE1	26:A:2452:G:N2	2.44	0.43
26:A:1381:G:O2'	26:A:2236:G:O6	2.27	0.43
26:A:1566:A:H1'	26:A:1605:G:N1	2.24	0.43
26:A:1595:G:H5'	26:A:1596:C:N1	2.32	0.43
28:2:41:CYS:O	28:2:44:PHE:CE2	2.70	0.43
2:D:151:ILE:HD11	2:D:166:MET:HE3	1.99	0.43
3:E:118:ARG:NH2	3:E:189:LEU:HA	2.34	0.43
3:E:121:ASN:ND2	11:M:3:VAL:HG23	2.33	0.43
3:E:171:ASN:ND2	3:E:171:ASN:O	2.51	0.43
4:F:40:LYS:HG2	4:F:164:VAL:HB	2.00	0.43
5:G:151:ARG:HH21	26:A:2968:G:H4'	1.84	0.43
7:I:51:VAL:N	26:A:1202:A:OP1	2.51	0.43
8:J:59:GLU:HB3	8:J:71:ALA:HB3	2.00	0.43
13:O:25:ALA:O	13:O:29:PHE:CD2	2.70	0.43
13:O:29:PHE:CZ	13:O:51:LEU:CD1	2.99	0.43
13:O:48:ALA:O	13:O:52:ILE:HG13	2.18	0.43
23:Y:48:ARG:NH2	26:A:2424:C:OP1	2.36	0.43
26:A:334:G:H2'	26:A:335:G:H8	1.84	0.43
26:A:1106:A:H3'	27:1:11:SER:HB2	2.00	0.43
26:A:1583:U:C2	26:A:1584:U:O4	2.71	0.43
26:A:1590:G:C6	26:A:1591:U:O4	2.70	0.43
26:A:1597:G:C2	26:A:1598:U:C6	3.01	0.43
26:A:1597:G:C5	26:A:1598:U:H5	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:1:23:LEU:HD11	27:1:53:LEU:HD22	2.00	0.43
2:D:27:THR:OG1	2:D:196:GLY:O	2.28	0.43
2:D:143:ALA:HB1	26:A:1875:U:H4'	2.00	0.43
9:K:1:MET:H2	9:K:2:PRO:HD3	1.80	0.43
9:K:5:THR:HG21	26:A:624:G:O3'	2.18	0.43
10:L:109:LYS:HE3	10:L:109:LYS:HB2	1.74	0.43
18:T:117:ARG:HA	18:T:117:ARG:HD2	1.78	0.43
19:U:73:PHE:CZ	31:5:43:ARG:NH2	2.80	0.43
21:W:100:VAL:HG11	21:W:137:ALA:CB	2.16	0.43
21:W:133:ILE:HD11	21:W:144:LEU:HD11	2.00	0.43
25:B:21:C:H6	25:B:21:C:C3'	2.29	0.43
26:A:1189:G:O2'	26:A:1207:G:OP2	2.35	0.43
26:A:1561:C:C3'	26:A:1562:C:H5'	2.48	0.43
26:A:1581:C:N4	26:A:1590:G:N3	2.66	0.43
26:A:1621:C:H2'	26:A:1622:G:C8	2.54	0.43
33:7:3:VAL:CG1	33:7:37:GLY:HA3	2.49	0.43
2:D:185:VAL:HG22	2:D:192:LEU:HG	2.01	0.43
3:E:77:GLY:N	26:A:789:G:H5"	2.33	0.43
3:E:124:ILE:H	3:E:124:ILE:HG13	1.48	0.43
4:F:185:LYS:O	4:F:185:LYS:HG3	2.18	0.43
12:N:111:GLU:C	12:N:111:GLU:CD	2.86	0.43
19:U:83:ILE:HD11	26:A:1456:G:H21	1.63	0.43
20:V:28:PRO:HG3	26:A:82:G:O3'	2.19	0.43
26:A:334:G:H1	26:A:347:U:H3	1.66	0.43
26:A:802:C:OP1	31:5:9:GLN:HG3	2.19	0.43
26:A:1525:U:H2'	26:A:1526:A:C8	2.53	0.43
26:A:1898:U:N3	26:A:1981:U:OP2	2.46	0.43
26:A:3022:G:H2'	26:A:3023:G:C8	2.53	0.43
3:E:103:PRO:HD2	3:E:106:MET:HE3	2.00	0.43
9:K:77:HIS:CD2	9:K:77:HIS:C	2.97	0.43
20:V:4:HIS:CD2	20:V:96:ARG:NH1	2.86	0.43
21:W:105:LYS:NZ	21:W:136:GLU:N	2.66	0.43
26:A:860:G:O2'	26:A:863:G:O2'	2.21	0.43
26:A:2693:A:N6	26:A:2705:G:O2'	2.51	0.43
30:4:19:LYS:HB2	30:4:21:ARG:CZ	2.48	0.43
5:G:35:LEU:HD13	5:G:76:LEU:HD22	2.00	0.43
11:M:49:MET:HB2	11:M:58:HIS:CE1	2.54	0.43
21:W:21:LYS:O	21:W:25:ARG:HG2	2.19	0.43
24:Z:44:ASN:O	24:Z:47:LEU:N	2.51	0.43
26:A:241:A:H61	26:A:255:A:H5"	1.83	0.43
26:A:286:G:H21	26:A:287:A:H62	1.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:895:G:O2'	26:A:898:A:N6	2.51	0.43
26:A:1118:A:OP2	26:A:1273:G:N1	2.37	0.43
26:A:1291:G:N2	26:A:1292:U:O3'	2.52	0.43
26:A:3012:U:O2'	26:A:3030:A:N3	2.39	0.43
7:I:57:VAL:O	7:I:61:ALA:N	2.51	0.43
9:K:15:TRP:H	9:K:15:TRP:HD1	1.64	0.43
9:K:15:TRP:CE3	9:K:55:ILE:HD11	2.54	0.43
10:L:67:LYS:HA	10:L:67:LYS:HD2	1.83	0.43
18:T:18:ARG:HH12	26:A:1436:C:H2'	1.84	0.43
25:B:84:C:C5	25:B:85:C:N3	2.86	0.43
26:A:1581:C:O2'	26:A:1582:C:H6	2.02	0.43
1:C:241:SER:N	26:A:2195:U:O2	2.52	0.43
4:F:9:PRO:HG2	4:F:12:LYS:HE3	2.00	0.43
4:F:146:HIS:CE1	28:2:35:VAL:HG23	2.53	0.43
18:T:35:SER:O	18:T:39:ALA:N	2.51	0.43
26:A:815:G:O2'	26:A:1850:A:N3	2.51	0.43
26:A:1567:C:O2'	26:A:1568:C:H5'	2.19	0.43
28:2:63:LYS:O	28:2:65:TYR:CD2	2.70	0.43
1:C:67:PHE:HB3	1:C:153:ALA:HB3	2.01	0.42
3:E:103:PRO:HG3	26:A:773:G:O2'	2.18	0.42
5:G:160:GLY:HA3	5:G:164:ARG:HH21	1.84	0.42
13:O:9:ARG:HG2	13:O:14:SER:HA	2.01	0.42
19:U:6:ASP:CG	24:Z:23:ARG:HG3	2.44	0.42
21:W:77:LEU:HD13	21:W:100:VAL:CB	2.49	0.42
26:A:721:A:N3	26:A:730:G:N2	2.63	0.42
26:A:832:G:H3'	26:A:833:A:H8	1.83	0.42
26:A:1573:U:C6	26:A:1573:U:OP2	2.72	0.42
26:A:2510:A:N6	30:4:25:THR:OG1	2.52	0.42
26:A:2539:G:H2'	26:A:2540:G:C8	2.54	0.42
26:A:2879:G:O2'	26:A:2888:G:O6	2.35	0.42
2:D:7:LEU:HG	2:D:207:VAL:HG22	2.01	0.42
4:F:45:MET:HB2	4:F:64:LEU:HD11	2.01	0.42
4:F:45:MET:HB3	4:F:94:ALA:O	2.15	0.42
13:O:4:PRO:HG2	26:A:3094:A:C2	2.51	0.42
20:V:99:LYS:HA	20:V:99:LYS:HD2	1.64	0.42
21:W:8:PRO:O	21:W:8:PRO:HG2	2.19	0.42
25:B:33:C:H2'	25:B:34:G:O4'	2.19	0.42
26:A:1574:G:C5'	26:A:1575:A:OP1	2.66	0.42
26:A:1665:U:H2'	26:A:1666:A:C8	2.54	0.42
26:A:2643:U:H4'	30:4:24:ILE:HD13	2.01	0.42
1:C:132:PRO:HD2	1:C:135:ASN:ND2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:F:121:PHE:CD2	4:F:121:PHE:O	2.72	0.42
9:K:65:SER:OG	26:A:1259:U:OP2	2.35	0.42
10:L:8:LEU:HD22	10:L:84:ALA:HB2	2.01	0.42
19:U:34:HIS:HA	19:U:35:PRO:HD3	1.86	0.42
24:Z:57:VAL:O	24:Z:61:LEU:HG	2.18	0.42
25:B:29:C:N4	25:B:55:G:H22	2.15	0.42
26:A:961:U:O2'	26:A:963:U:O4	2.32	0.42
26:A:1000:C:H2'	26:A:1001:C:H5"	2.00	0.42
26:A:1188:A:N7	26:A:1214:A:O2'	2.44	0.42
26:A:1601:G:C4	26:A:1602:U:C5	3.08	0.42
26:A:2814:A:H2'	26:A:2815:C:C6	2.55	0.42
10:L:108:GLU:CG	10:L:109:LYS:N	2.73	0.42
14:P:90:GLU:O	14:P:94:ALA:CB	2.68	0.42
21:W:38:TYR:CZ	21:W:96:ASP:OD2	2.65	0.42
21:W:38:TYR:OH	21:W:81:LYS:HD3	2.19	0.42
21:W:62:GLY:C	21:W:63:THR:HG23	2.44	0.42
21:W:80:THR:HG21	21:W:83:LEU:CD2	2.48	0.42
25:B:85:C:C6	25:B:85:C:C3'	3.02	0.42
25:B:85:C:O2	25:B:86:U:N3	2.52	0.42
26:A:13:G:H5"	29:3:14:ARG:HB3	2.00	0.42
26:A:760:U:H2'	26:A:761:G:C8	2.55	0.42
26:A:1174:G:H4'	26:A:1204:A:H8	1.84	0.42
26:A:1976:A:O2'	26:A:2938:G:O2'	2.32	0.42
26:A:2467:U:H2'	26:A:2468:U:C6	2.54	0.42
30:4:34:ASP:O	30:4:35:ARG:HB2	2.18	0.42
1:C:23:GLU:OE2	1:C:23:GLU:HA	2.18	0.42
2:D:51:GLN:HE21	2:D:81:VAL:HG11	1.84	0.42
3:E:76:GLN:HE22	3:E:83:GLN:NE2	2.18	0.42
9:K:73:PHE:CE1	9:K:88:THR:HG22	2.54	0.42
12:N:61:GLY:C	12:N:108:TYR:CE1	2.95	0.42
14:P:88:ILE:O	14:P:92:ALA:HB2	2.19	0.42
25:B:58:A:C8	25:B:58:A:C4'	3.02	0.42
26:A:1007:G:H2'	26:A:1008:G:H8	1.83	0.42
26:A:2482:U:O2'	26:A:2651:C:OP2	2.35	0.42
7:I:48:THR:N	7:I:81:PHE:O	2.47	0.42
13:O:67:MET:HE2	13:O:67:MET:HB3	1.80	0.42
19:U:74:GLY:HA2	26:A:61:G:H4'	2.02	0.42
20:V:89:ASP:O	20:V:91:THR:N	2.53	0.42
21:W:37:LEU:HD21	21:W:99:VAL:HG22	2.01	0.42
21:W:146:VAL:HG21	21:W:157:ILE:HG21	2.01	0.42
22:X:64:PRO:CB	26:A:759:G:H1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:83:VAL:O	22:X:83:VAL:HG22	2.19	0.42
26:A:1586:C:H2'	26:A:1587:G:C4'	2.50	0.42
26:A:1594:G:H8	26:A:1594:G:O5'	2.02	0.42
26:A:1791:A:H2'	26:A:1792:A:C8	2.54	0.42
26:A:2422:A:N1	26:A:2450:C:N4	2.64	0.42
28:2:41:CYS:O	28:2:44:PHE:CD2	2.73	0.42
28:2:62:GLU:O	28:2:65:TYR:CE2	2.73	0.42
3:E:24:LEU:HD21	3:E:208:ASN:HB3	2.01	0.42
4:F:56:LEU:N	4:F:56:LEU:HD23	2.34	0.42
4:F:64:LEU:HD12	4:F:72:PRO:HB2	2.00	0.42
12:N:108:TYR:HB3	12:N:114:ALA:HB2	2.01	0.42
16:R:97:GLU:O	16:R:101:SER:OG	2.35	0.42
19:U:77:LYS:HE2	19:U:79:THR:CA	2.49	0.42
21:W:36:VAL:HG21	25:B:74:A:C2	2.52	0.42
22:X:26:PHE:N	22:X:29:GLN:HE21	2.12	0.42
23:Y:37:ARG:HB3	23:Y:46:LYS:HD3	2.00	0.42
26:A:1690:A:H2'	26:A:1691:A:C8	2.55	0.42
1:C:125:ILE:HG23	1:C:193:VAL:HG11	2.01	0.42
3:E:3:LEU:O	3:E:4:LYS:HG3	2.20	0.42
3:E:9:THR:HG22	3:E:128:THR:HG23	2.01	0.42
18:T:7:PHE:N	18:T:8:PRO:HD3	2.34	0.42
25:B:59:A:H3'	25:B:60:G:C8	2.55	0.42
26:A:210:G:OP2	31:5:28:ARG:NH2	2.51	0.42
26:A:1586:C:O5'	26:A:1586:C:C6	2.70	0.42
26:A:2616:A:H5"	32:6:28:ASN:HD22	1.84	0.42
26:A:2665:C:OP2	26:A:2810:U:O2'	2.37	0.42
4:F:56:LEU:CD2	4:F:56:LEU:N	2.83	0.42
9:K:7:LYS:HG3	26:A:626:G:OP1	2.20	0.42
13:O:21:LEU:HD23	13:O:21:LEU:HA	1.89	0.42
19:U:45:ALA:O	19:U:49:ILE:HG12	2.20	0.42
21:W:54:PHE:HE2	21:W:92:ILE:HG21	1.84	0.42
22:X:75:ARG:NE	26:A:2558:C:N4	2.63	0.42
23:Y:28:ARG:NH1	23:Y:30:ASN:OD1	2.53	0.42
25:B:40:A:N6	28:2:1:MET:H3	1.98	0.42
26:A:1565:A:H2	26:A:1606:G:C4	2.35	0.42
31:5:15:ARG:NH1	31:5:47:ALA:HB1	2.35	0.42
1:C:37:LEU:HD23	1:C:62:TYR:CG	2.55	0.42
3:E:176:HIS:CE1	26:A:708:G:O6	2.73	0.42
3:E:189:LEU:HD13	11:M:9:LEU:HD11	2.02	0.42
12:N:21:ALA:HB2	12:N:98:LYS:HB2	2.02	0.42
15:Q:57:THR:OG1	15:Q:73:PHE:O	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:T:95:ARG:HG3	18:T:101:PHE:CD2	2.55	0.42
19:U:38:ASN:OD1	19:U:38:ASN:N	2.46	0.42
19:U:94:ASP:O	19:U:95:LEU:HB3	2.19	0.42
24:Z:48:ARG:CG	26:A:58:G:OP1	2.68	0.42
26:A:1678:U:H3	26:A:2926:A:H61	1.68	0.42
1:C:29:PRO:CB	1:C:34:VAL:CG2	2.84	0.41
1:C:177:MET:HE2	1:C:183:ARG:HB3	2.02	0.41
4:F:44:ASN:ND2	4:F:45:MET:O	2.53	0.41
20:V:30:ARG:HD2	20:V:32:LYS:HD2	2.02	0.41
20:V:72:MET:HE3	26:A:383:U:H5'	2.01	0.41
24:Z:62:ARG:HD3	24:Z:62:ARG:C	2.43	0.41
25:B:59:A:C2'	25:B:60:G:C5'	2.94	0.41
26:A:97:U:OP1	26:A:98:U:O2'	2.32	0.41
26:A:2457:U:H2'	26:A:2458:G:C8	2.55	0.41
3:E:176:HIS:HE1	26:A:708:G:O6	2.03	0.41
4:F:11:LEU:HD12	4:F:11:LEU:HA	1.88	0.41
4:F:47:VAL:HG23	4:F:92:ILE:HG22	2.02	0.41
13:O:79:LEU:C	13:O:79:LEU:CD2	2.85	0.41
20:V:2:LYS:CD	20:V:83:VAL:HB	2.49	0.41
21:W:63:THR:C	21:W:64:ASN:CG	2.87	0.41
22:X:15:ASP:CB	26:A:2487:C:N4	2.75	0.41
26:A:844:G:H5'	26:A:845:C:H5"	2.01	0.41
26:A:1567:C:C2	26:A:1603:G:O6	2.73	0.41
26:A:1882:A:H61	26:A:2220:C:N4	2.17	0.41
26:A:2364:C:H2'	26:A:2365:A:C8	2.55	0.41
26:A:2497:A:H2'	26:A:2498:A:C8	2.55	0.41
30:4:29:ARG:C	30:4:31:ASN:H	2.27	0.41
4:F:23:LEU:HD22	4:F:35:ILE:HG23	2.02	0.41
4:F:47:VAL:HG21	4:F:92:ILE:C	2.45	0.41
4:F:56:LEU:HD23	4:F:57:ILE:H	1.85	0.41
12:N:59:LYS:C	12:N:60:ARG:CG	2.90	0.41
12:N:134:ARG:HD3	21:W:129:ASN:HD21	1.85	0.41
14:P:77:LYS:HB3	14:P:112:ARG:HD3	2.01	0.41
17:S:92:GLN:HE22	26:A:1281:G:H21	1.67	0.41
21:W:118:ALA:HB1	21:W:122:THR:HG21	2.02	0.41
27:1:50:VAL:O	27:1:54:VAL:HG22	2.19	0.41
4:F:57:ILE:O	4:F:61:ILE:HG13	2.21	0.41
9:K:15:TRP:O	9:K:16:TYR:CD1	2.74	0.41
14:P:68:ALA:HA	14:P:71:ARG:HB2	2.01	0.41
26:A:150:C:H2'	26:A:151:A:C8	2.55	0.41
26:A:1243:G:OP1	33:7:22:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:2:26:SER:OG	28:2:27:THR:N	2.53	0.41
31:5:38:ARG:CA	31:5:45:LEU:HD21	2.50	0.41
32:6:48:THR:OG1	32:6:49:THR:N	2.48	0.41
1:C:98:LEU:HD22	1:C:98:LEU:H	1.84	0.41
6:H:24:GLY:O	6:H:28:ASN:HB2	2.21	0.41
8:J:90:GLY:HA2	8:J:99:VAL:HG11	2.01	0.41
9:K:1:MET:HE2	26:A:642:G:OP1	2.20	0.41
9:K:93:LEU:HG	9:K:100:VAL:HG21	2.01	0.41
25:B:27:A:H2'	25:B:28:A:C8	2.55	0.41
26:A:1499:A:O2'	26:A:1519:C:O2	2.39	0.41
26:A:1574:G:N2	26:A:1599:U:H5"	2.35	0.41
26:A:1584:U:C6	26:A:1584:U:C3'	3.03	0.41
26:A:1854:U:H2'	26:A:1855:A:H8	1.85	0.41
4:F:45:MET:CG	4:F:60:ALA:HB1	2.49	0.41
13:O:114:GLU:C	13:O:115:LEU:O	2.63	0.41
26:A:210:G:P	31:5:28:ARG:HH22	2.43	0.41
26:A:1597:G:O2'	26:A:1598:U:P	2.78	0.41
26:A:2781:G:H2'	26:A:2782:C:C6	2.56	0.41
1:C:118:GLU:O	1:C:129:ASN:HB2	2.20	0.41
3:E:155:LEU:HD11	3:E:178:ILE:HD11	2.01	0.41
8:J:16:GLN:HG2	8:J:55:VAL:HG12	2.02	0.41
10:L:9:LYS:O	10:L:83:ALA:HA	2.20	0.41
13:O:99:LYS:HE2	26:A:3037:C:H5"	2.03	0.41
19:U:83:ILE:CD1	26:A:1456:G:C4	2.97	0.41
19:U:94:ASP:C	19:U:96:PHE:H	2.21	0.41
25:B:24:G:H2'	25:B:56:C:C4	2.56	0.41
25:B:56:C:O2	25:B:56:C:C2'	2.69	0.41
25:B:96:A:C2	26:A:977:G:C2	2.91	0.41
26:A:442:U:H2'	26:A:443:C:C6	2.56	0.41
26:A:600:A:H2	26:A:674:U:H4'	1.86	0.41
26:A:1224:G:H2'	26:A:1225:G:H8	1.86	0.41
26:A:1562:C:O2'	26:A:1563:A:P	2.79	0.41
26:A:1569:A:N3	26:A:1570:C:H5	2.18	0.41
31:5:14:ARG:HH11	31:5:14:ARG:HD2	1.75	0.41
1:C:19:SER:O	1:C:21:PHE:CD2	2.74	0.41
9:K:27:ARG:CG	9:K:27:ARG:NH1	2.82	0.41
19:U:21:TYR:HA	19:U:24:ILE:HG12	2.00	0.41
21:W:37:LEU:HA	21:W:97:LEU:O	2.21	0.41
26:A:1026:A:N1	26:A:2501:G:O2'	2.49	0.41
26:A:1501:C:H2'	26:A:1502:G:C8	2.56	0.41
26:A:1551:U:O4	26:A:1618:C:N4	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:A:1576:C:O2'	26:A:1577:C:P	2.79	0.41
26:A:1633:U:H2'	26:A:1634:C:C6	2.56	0.41
33:7:24:MET:HE3	33:7:24:MET:HB2	1.77	0.41
1:C:35:ARG:CD	1:C:36:PRO:CD	2.97	0.41
1:C:161:VAL:HG13	1:C:178:PRO:HB3	2.02	0.41
4:F:10:ARG:O	4:F:13:GLN:HB3	2.21	0.41
4:F:76:ARG:HH12	25:B:41:U:H3	1.68	0.41
4:F:182:PHE:HA	4:F:183:PRO:HD3	1.90	0.41
5:G:110:TYR:HD1	26:A:2891:C:H1'	1.85	0.41
12:N:17:GLN:HB3	12:N:96:ASN:HD21	1.86	0.41
13:O:87:TYR:OH	13:O:115:LEU:HB3	2.21	0.41
14:P:14:ARG:HH21	25:B:46:A:H5"	1.86	0.41
15:Q:28:HIS:ND1	15:Q:41:VAL:HG12	2.36	0.41
19:U:69:THR:HG21	19:U:73:PHE:C	2.45	0.41
19:U:69:THR:CB	19:U:73:PHE:O	2.68	0.41
21:W:40:HIS:O	21:W:41:GLY:C	2.62	0.41
21:W:140:ILE:HA	21:W:141:PRO:HD3	1.89	0.41
22:X:15:ASP:CA	26:A:2486:U:O4	2.68	0.41
25:B:34:G:N1	25:B:44:C:C4	2.88	0.41
25:B:79:A:N1	25:B:94:G:C6	2.88	0.41
26:A:176:G:OP2	26:A:176:G:N2	2.42	0.41
26:A:658:U:O2'	26:A:924:G:OP2	2.37	0.41
26:A:683:G:H1'	32:6:2:PRO:HD2	2.02	0.41
26:A:733:U:H2'	26:A:734:C:C6	2.56	0.41
26:A:1086:C:H2'	26:A:1087:G:H8	1.86	0.41
26:A:1565:A:H2	26:A:1606:G:N9	2.19	0.41
26:A:1579:C:O2'	26:A:1580:A:P	2.79	0.41
26:A:1590:G:N1	26:A:1591:U:C5	2.89	0.41
26:A:1602:U:C2'	26:A:1603:G:C8	2.96	0.41
26:A:1627:U:H2'	26:A:1628:A:H8	1.86	0.41
26:A:1704:U:H2'	26:A:1705:C:C6	2.56	0.41
26:A:2043:C:O2'	26:A:2195:U:OP2	2.38	0.41
26:A:2096:G:H2'	26:A:2097:G:H8	1.86	0.41
26:A:2106:A:H3'	26:A:2107:G:H5"	2.02	0.41
26:A:2593:A:H2'	26:A:2594:G:H8	1.84	0.41
27:1:49:THR:HG22	27:1:50:VAL:HG13	2.03	0.41
30:4:13:LEU:HD23	30:4:53:GLU:HB3	2.02	0.41
3:E:78:SER:OG	3:E:79:THR:N	2.53	0.41
11:M:31:LYS:HE3	11:M:31:LYS:HB3	1.94	0.41
19:U:94:ASP:C	19:U:96:PHE:N	2.75	0.41
21:W:29:ARG:HH12	25:B:90:G:H4'	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:X:83:VAL:CG1	22:X:85:ARG:HB2	2.42	0.41
26:A:181:A:N3	26:A:521:C:O2'	2.47	0.41
26:A:323:C:H42	26:A:453:U:H3	1.69	0.41
26:A:1591:U:O2	26:A:1591:U:C2'	2.69	0.41
26:A:3041:C:OP2	26:A:3042:A:N6	2.50	0.41
9:K:3:THR:HG21	26:A:1113:C:C2	2.46	0.40
9:K:109:LEU:HD23	9:K:109:LEU:HA	1.87	0.40
13:O:64:ARG:NH1	26:A:1675:U:O2	2.55	0.40
15:Q:99:LEU:HD11	15:Q:109:ILE:HD11	2.02	0.40
26:A:1688:G:N2	26:A:1748:A:H1'	2.36	0.40
26:A:1761:G:H2'	26:A:1762:C:C6	2.56	0.40
26:A:2701:U:O4	33:7:10:ILE:HG12	2.21	0.40
2:D:124:ALA:HB3	2:D:129:ARG:HG3	2.02	0.40
3:E:172:LEU:HD12	3:E:172:LEU:HA	1.93	0.40
6:H:43:ALA:O	6:H:47:ALA:CB	2.68	0.40
10:L:69:ARG:HD2	10:L:69:ARG:HA	1.91	0.40
12:N:60:ARG:HB2	12:N:61:GLY:H	1.62	0.40
18:T:54:VAL:HG22	18:T:110:ILE:HD13	2.03	0.40
19:U:67:LYS:NZ	26:A:1451:A:P	2.93	0.40
26:A:76:C:O2'	26:A:428:A:N3	2.48	0.40
26:A:1624:U:O2'	26:A:1625:G:H8	2.04	0.40
26:A:2350:G:H2'	26:A:2351:A:C8	2.56	0.40
26:A:2649:A:H4'	26:A:2650:A:H5"	2.03	0.40
26:A:2686:U:H2'	26:A:2687:U:C6	2.56	0.40
30:4:39:LYS:HA	30:4:50:PRO:HA	2.03	0.40
1:C:26:ARG:HD2	1:C:81:HIS:CE1	2.49	0.40
1:C:44:ASN:OD1	1:C:44:ASN:N	2.50	0.40
1:C:54:LYS:NZ	26:A:2032:A:P	2.94	0.40
2:D:157:PRO:CD	2:D:158:GLY:H	2.34	0.40
9:K:14:SER:O	9:K:52:ASP:CG	2.65	0.40
9:K:75:TYR:H	9:K:75:TYR:HD1	1.68	0.40
15:Q:48:ARG:NE	15:Q:59:THR:OG1	2.50	0.40
17:S:6:ILE:O	17:S:39:VAL:HG13	2.21	0.40
19:U:58:ASN:HD22	26:A:1456:G:N2	2.18	0.40
19:U:71:THR:HB	26:A:544:U:C2	2.56	0.40
21:W:99:VAL:HG12	21:W:101:GLN:H	1.86	0.40
25:B:20:G:C2	25:B:63:U:N3	2.68	0.40
25:B:20:G:C6	25:B:63:U:O4	2.74	0.40
25:B:88:C:C3'	25:B:88:C:C6	3.03	0.40
26:A:937:U:H2'	26:A:938:G:C8	2.56	0.40
26:A:937:U:H2'	26:A:938:G:H8	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:153:GLY:O	2:D:155:ALA:N	2.55	0.40
3:E:4:LYS:CA	3:E:20:LEU:HD21	2.52	0.40
3:E:55:ARG:HD2	3:E:82:PRO:HD3	2.04	0.40
4:F:44:ASN:ND2	4:F:45:MET:N	2.70	0.40
13:O:96:ARG:CZ	13:O:116:VAL:HG12	2.48	0.40
18:T:6:GLU:O	18:T:7:PHE:CB	2.70	0.40
21:W:184:ALA:HA	21:W:185:PRO:HD3	1.94	0.40
26:A:845:C:OP1	26:A:1992:U:O2'	2.27	0.40
26:A:860:G:H21	26:A:865:A:H61	1.70	0.40
26:A:1805:G:H2'	26:A:1806:A:H8	1.85	0.40
26:A:1922:G:H2'	26:A:1923:G:H8	1.86	0.40
3:E:34:MET:HE3	3:E:189:LEU:HD11	2.04	0.40
4:F:35:ILE:HG23	4:F:36:PRO:HD2	2.03	0.40
9:K:134:ALA:O	9:K:135:GLN:CB	2.70	0.40
13:O:20:LEU:C	13:O:20:LEU:CD2	2.85	0.40
19:U:4:ILE:CG1	24:Z:58:TYR:HE1	2.34	0.40
25:B:79:A:H2	25:B:94:G:N1	2.10	0.40
26:A:55:G:O2'	26:A:70:A:N1	2.53	0.40
26:A:1105:C:O2'	26:A:1118:A:N3	2.44	0.40
26:A:1393:C:H2'	26:A:1394:A:H8	1.85	0.40
26:A:2176:A:N3	26:A:2784:C:O2'	2.46	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	C	271/278 (98%)	233 (86%)	33 (12%)	5 (2%)	7	35
2	D	212/217 (98%)	199 (94%)	11 (5%)	2 (1%)	14	49
3	E	205/215 (95%)	179 (87%)	20 (10%)	6 (3%)	3	24
4	F	179/187 (96%)	162 (90%)	15 (8%)	2 (1%)	12	44

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
5	G	174/179 (97%)	166 (95%)	8 (5%)	0	100	100
6	H	149/151 (99%)	139 (93%)	9 (6%)	1 (1%)	19	54
7	I	124/175 (71%)	118 (95%)	6 (5%)	0	100	100
8	J	131/142 (92%)	118 (90%)	13 (10%)	0	100	100
9	K	145/147 (99%)	133 (92%)	9 (6%)	3 (2%)	5	31
10	L	119/122 (98%)	107 (90%)	12 (10%)	0	100	100
11	M	143/147 (97%)	128 (90%)	15 (10%)	0	100	100
12	N	132/138 (96%)	113 (86%)	19 (14%)	0	100	100
13	O	115/199 (58%)	102 (89%)	10 (9%)	3 (3%)	4	27
14	P	124/127 (98%)	119 (96%)	5 (4%)	0	100	100
15	Q	111/113 (98%)	102 (92%)	9 (8%)	0	100	100
16	R	122/129 (95%)	120 (98%)	2 (2%)	0	100	100
17	S	100/103 (97%)	94 (94%)	5 (5%)	1 (1%)	13	47
18	T	112/153 (73%)	103 (92%)	6 (5%)	3 (3%)	4	26
19	U	92/100 (92%)	70 (76%)	16 (17%)	6 (6%)	1	8
20	V	93/105 (89%)	83 (89%)	8 (9%)	2 (2%)	5	30
21	W	186/215 (86%)	171 (92%)	10 (5%)	5 (3%)	4	26
22	X	80/88 (91%)	61 (76%)	13 (16%)	6 (8%)	1	6
23	Y	61/64 (95%)	57 (93%)	4 (7%)	0	100	100
24	Z	61/77 (79%)	59 (97%)	1 (2%)	1 (2%)	8	37
27	1	58/61 (95%)	53 (91%)	5 (9%)	0	100	100
28	2	64/75 (85%)	61 (95%)	2 (3%)	1 (2%)	8	37
29	3	52/57 (91%)	51 (98%)	1 (2%)	0	100	100
30	4	48/55 (87%)	37 (77%)	7 (15%)	4 (8%)	0	4
31	5	43/47 (92%)	41 (95%)	2 (5%)	0	100	100
32	6	61/64 (95%)	54 (88%)	7 (12%)	0	100	100
33	7	35/37 (95%)	34 (97%)	1 (3%)	0	100	100
34	8	21/24 (88%)	20 (95%)	1 (5%)	0	100	100
All	All	3623/3991 (91%)	3287 (91%)	285 (8%)	51 (1%)	12	40

All (51) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	C	58	HIS
1	C	145	VAL
1	C	262	LYS
3	E	94	LYS
3	E	152	LYS
4	F	47	VAL
9	K	142	ILE
18	T	7	PHE
18	T	118	PRO
21	W	41	GLY
21	W	83	LEU
24	Z	10	LEU
1	C	146	GLU
2	D	155	ALA
3	E	65	PRO
4	F	142	GLN
9	K	140	PHE
13	O	15	SER
13	O	115	LEU
19	U	68	ARG
21	W	63	THR
22	X	12	ASN
22	X	16	SER
22	X	17	ALA
1	C	36	PRO
9	K	2	PRO
19	U	70	ARG
19	U	75	LYS
21	W	85	VAL
22	X	85	ARG
30	4	34	ASP
3	E	4	LYS
3	E	93	PRO
6	H	125	LYS
13	O	60	LEU
18	T	8	PRO
19	U	6	ASP
20	V	90	GLU
20	V	101	ASN
21	W	87	PRO
22	X	84	ALA
30	4	7	VAL
2	D	157	PRO

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Mol	Chain	Res	Type
3	E	132	GLU
19	U	5	THR
17	S	7	VAL
19	U	10	ILE
22	X	83	VAL
28	2	42	HIS
30	4	33	PRO
30	4	9	PRO

5.3.2 Protein sidechains ⓘ

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

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	214/218 (98%)	204 (95%)	10 (5%)	22	55
2	D	160/163 (98%)	157 (98%)	3 (2%)	52	76
3	E	167/173 (96%)	158 (95%)	9 (5%)	18	51
4	F	150/156 (96%)	138 (92%)	12 (8%)	10	37
5	G	148/150 (99%)	147 (99%)	1 (1%)	81	92
6	H	90/116 (78%)	90 (100%)	0	100	100
7	I	89/120 (74%)	89 (100%)	0	100	100
8	J	102/108 (94%)	102 (100%)	0	100	100
9	K	120/120 (100%)	116 (97%)	4 (3%)	33	64
10	L	99/100 (99%)	98 (99%)	1 (1%)	73	87
11	M	112/114 (98%)	111 (99%)	1 (1%)	75	89
12	N	112/116 (97%)	107 (96%)	5 (4%)	23	56
13	O	96/158 (61%)	90 (94%)	6 (6%)	15	46
14	P	93/94 (99%)	93 (100%)	0	100	100
15	Q	100/100 (100%)	99 (99%)	1 (1%)	73	87
16	R	97/99 (98%)	97 (100%)	0	100	100
17	S	82/83 (99%)	81 (99%)	1 (1%)	67	85

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
18	T	90/117 (77%)	88 (98%)	2 (2%)	47	73
19	U	82/85 (96%)	71 (87%)	11 (13%)	3	15
20	V	81/86 (94%)	71 (88%)	10 (12%)	4	19
21	W	154/168 (92%)	137 (89%)	17 (11%)	5	23
22	X	59/63 (94%)	56 (95%)	3 (5%)	20	53
23	Y	50/51 (98%)	50 (100%)	0	100	100
24	Z	58/66 (88%)	55 (95%)	3 (5%)	19	52
27	1	53/54 (98%)	52 (98%)	1 (2%)	52	76
28	2	57/63 (90%)	54 (95%)	3 (5%)	19	52
29	3	43/46 (94%)	43 (100%)	0	100	100
30	4	48/52 (92%)	40 (83%)	8 (17%)	2	9
31	5	35/36 (97%)	34 (97%)	1 (3%)	37	67
32	6	53/54 (98%)	53 (100%)	0	100	100
33	7	35/35 (100%)	33 (94%)	2 (6%)	17	50
34	8	18/19 (95%)	18 (100%)	0	100	100
All	All	2947/3183 (93%)	2832 (96%)	115 (4%)	30	60

All (115) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	31	LYS
1	C	35	ARG
1	C	36	PRO
1	C	37	LEU
1	C	71	ASP
1	C	73	ASP
1	C	106	ILE
1	C	225	VAL
1	C	247	VAL
1	C	258	ARG
2	D	156	THR
2	D	159	ARG
2	D	160	VAL
3	E	4	LYS
3	E	31	ILE
3	E	33	LEU
3	E	124	ILE

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Mol	Chain	Res	Type
3	E	130	LEU
3	E	150	GLU
3	E	177	VAL
3	E	178	ILE
3	E	201	LEU
4	F	6	LYS
4	F	10	ARG
4	F	11	LEU
4	F	44	ASN
4	F	55	LYS
4	F	92	ILE
4	F	96	VAL
4	F	108	ASP
4	F	110	LEU
4	F	118	ILE
4	F	185	LYS
4	F	186	GLU
5	G	90	ILE
9	K	75	TYR
9	K	76	ARG
9	K	113	LYS
9	K	141	GLU
10	L	8	LEU
11	M	57	ILE
12	N	34	ILE
12	N	59	LYS
12	N	60	ARG
12	N	92	TRP
12	N	122	ILE
13	O	5	THR
13	O	14	SER
13	O	16	HIS
13	O	54	HIS
13	O	79	LEU
13	O	117	ARG
15	Q	32	ILE
17	S	103	LYS
18	T	6	GLU
18	T	118	PRO
19	U	9	ASP
19	U	10	ILE
19	U	12	LEU

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Mol	Chain	Res	Type
19	U	59	THR
19	U	66	ARG
19	U	67	LYS
19	U	69	THR
19	U	75	LYS
19	U	94	ASP
19	U	95	LEU
19	U	96	PHE
20	V	10	LEU
20	V	20	LYS
20	V	22	LYS
20	V	30	ARG
20	V	41	ILE
20	V	77	ASP
20	V	89	ASP
20	V	95	VAL
20	V	96	ARG
20	V	99	LYS
21	W	6	ASN
21	W	7	ILE
21	W	36	VAL
21	W	40	HIS
21	W	64	ASN
21	W	83	LEU
21	W	100	VAL
21	W	101	GLN
21	W	102	ARG
21	W	112	VAL
21	W	114	VAL
21	W	119	THR
21	W	131	ILE
21	W	139	SER
21	W	146	VAL
21	W	158	THR
21	W	172	SER
22	X	14	ARG
22	X	15	ASP
22	X	38	VAL
24	Z	5	THR
24	Z	14	THR
24	Z	47	LEU
27	1	51	HIS

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Mol	Chain	Res	Type
28	2	38	CYS
28	2	44	PHE
28	2	60	ARG
30	4	22	ASN
30	4	23	TYR
30	4	26	LYS
30	4	27	LYS
30	4	30	ARG
30	4	36	LEU
30	4	37	GLU
30	4	42	CYS
31	5	27	THR
33	7	20	HIS
33	7	36	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (87) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	38	HIS
1	C	53	HIS
1	C	58	HIS
1	C	96	HIS
1	C	130	ASN
1	C	135	ASN
1	C	205	ASN
2	D	34	ASN
2	D	80	HIS
2	D	142	GLN
3	E	35	HIS
3	E	41	GLN
3	E	83	GLN
3	E	121	ASN
3	E	184	ASN
3	E	202	ASN
4	F	28	ASN
4	F	31	ASN
4	F	34	GLN
4	F	44	ASN
4	F	134	ASN
4	F	142	GLN
4	F	146	HIS
4	F	169	ASN

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Mol	Chain	Res	Type
5	G	22	GLN
5	G	66	HIS
6	H	118	GLN
6	H	137	HIS
7	I	16	GLN
8	J	33	HIS
8	J	119	ASN
9	K	47	ASN
9	K	96	HIS
9	K	103	ASN
9	K	132	HIS
9	K	135	GLN
10	L	4	GLN
11	M	58	HIS
11	M	76	GLN
11	M	127	ASN
12	N	96	ASN
12	N	123	HIS
13	O	16	HIS
13	O	77	HIS
14	P	3	HIS
14	P	41	ASN
14	P	50	GLN
16	R	39	GLN
16	R	41	HIS
17	S	67	HIS
17	S	76	HIS
17	S	85	HIS
17	S	90	HIS
17	S	92	GLN
18	T	67	ASN
18	T	68	ASN
19	U	27	ASN
19	U	58	ASN
21	W	6	ASN
21	W	46	HIS
21	W	91	ASN
21	W	126	GLN
21	W	161	GLN
22	X	29	GLN
22	X	46	HIS
22	X	79	ASN

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Mol	Chain	Res	Type
23	Y	22	HIS
23	Y	45	ASN
24	Z	44	ASN
24	Z	52	GLN
27	1	8	GLN
27	1	42	GLN
27	1	48	ASN
27	1	51	HIS
28	2	20	HIS
28	2	40	GLN
30	4	48	HIS
30	4	49	GLN
31	5	11	ASN
31	5	19	HIS
32	6	7	HIS
32	6	28	ASN
32	6	31	HIS
32	6	35	HIS
33	7	20	HIS
33	7	34	GLN
34	8	17	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
25	B	116/118 (98%)	42 (36%)	3 (2%)
26	A	3096/3120 (99%)	788 (25%)	44 (1%)
All	All	3212/3238 (99%)	830 (25%)	47 (1%)

All (830) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
25	B	4	A
25	B	5	C
25	B	7	G
25	B	10	G
25	B	12	C
25	B	13	C
25	B	14	A
25	B	15	U
25	B	19	G

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Mol	Chain	Res	Type
25	B	21	C
25	B	22	A
25	B	23	G
25	B	24	G
25	B	25	G
25	B	26	A
25	B	30	G
25	B	34	G
25	B	35	G
25	B	37	C
25	B	40	A
25	B	41	U
25	B	44	C
25	B	45	G
25	B	47	A
25	B	52	G
25	B	53	A
25	B	55	G
25	B	56	C
25	B	57	U
25	B	58	A
25	B	59	A
25	B	60	G
25	B	66	C
25	B	67	A
25	B	68	G
25	B	85	C
25	B	86	U
25	B	88	C
25	B	90	G
25	B	102	A
25	B	106	C
25	B	113	G
26	A	7	U
26	A	11	A
26	A	12	G
26	A	20	G
26	A	29	C
26	A	31	U
26	A	32	G
26	A	33	G
26	A	52	G

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Mol	Chain	Res	Type
26	A	58	G
26	A	59	G
26	A	60	A
26	A	68	A
26	A	71	A
26	A	72	G
26	A	77	G
26	A	80	G
26	A	81	A
26	A	88	A
26	A	89	A
26	A	90	C
26	A	93	A
26	A	94	G
26	A	98	U
26	A	99	G
26	A	115	A
26	A	117	U
26	A	122	A
26	A	125	C
26	A	128	G
26	A	136	U
26	A	143	G
26	A	161	U
26	A	164	A
26	A	173	U
26	A	175	G
26	A	180	A
26	A	186	G
26	A	195	A
26	A	198	A
26	A	203	A
26	A	205	U
26	A	212	A
26	A	214	G
26	A	215	A
26	A	220	A
26	A	221	A
26	A	227	A
26	A	229	U
26	A	230	G
26	A	231	U

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Mol	Chain	Res	Type
26	A	237	C
26	A	245	G
26	A	248	G
26	A	250	G
26	A	264	G
26	A	265	A
26	A	272	A
26	A	274	C
26	A	275	C
26	A	279	U
26	A	283	U
26	A	285	U
26	A	286	G
26	A	287	A
26	A	288	U
26	A	291	C
26	A	292	G
26	A	296	A
26	A	297	G
26	A	299	G
26	A	300	G
26	A	301	U
26	A	302	U
26	A	303	G
26	A	305	G
26	A	309	G
26	A	314	G
26	A	315	U
26	A	317	G
26	A	318	U
26	A	319	G
26	A	322	A
26	A	323	C
26	A	326	A
26	A	327	U
26	A	329	U
26	A	330	U
26	A	331	U
26	A	336	C
26	A	337	U
26	A	338	C
26	A	346	C

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Mol	Chain	Res	Type
26	A	351	G
26	A	352	G
26	A	357	U
26	A	358	G
26	A	361	A
26	A	364	A
26	A	366	G
26	A	370	U
26	A	384	G
26	A	393	U
26	A	404	A
26	A	412	A
26	A	416	C
26	A	417	C
26	A	424	G
26	A	425	U
26	A	427	A
26	A	434	G
26	A	438	U
26	A	445	U
26	A	446	G
26	A	449	G
26	A	450	G
26	A	452	G
26	A	453	U
26	A	454	U
26	A	459	A
26	A	460	G
26	A	468	G
26	A	471	C
26	A	472	C
26	A	474	G
26	A	489	A
26	A	491	U
26	A	493	U
26	A	498	G
26	A	505	C
26	A	509	U
26	A	512	G
26	A	530	G
26	A	543	U
26	A	544	U

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Mol	Chain	Res	Type
26	A	547	U
26	A	555	G
26	A	561	G
26	A	562	G
26	A	566	A
26	A	567	A
26	A	568	A
26	A	569	G
26	A	585	G
26	A	589	A
26	A	591	G
26	A	592	A
26	A	594	U
26	A	595	A
26	A	596	C
26	A	605	G
26	A	617	U
26	A	618	C
26	A	619	C
26	A	620	G
26	A	639	C
26	A	640	G
26	A	641	U
26	A	642	G
26	A	643	G
26	A	644	G
26	A	647	G
26	A	649	U
26	A	655	G
26	A	665	G
26	A	666	A
26	A	667	A
26	A	678	A
26	A	679	G
26	A	684	G
26	A	685	G
26	A	689	U
26	A	696	A
26	A	706	G
26	A	707	G
26	A	708	G
26	A	709	U

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Mol	Chain	Res	Type
26	A	712	G
26	A	721	A
26	A	725	A
26	A	728	G
26	A	730	G
26	A	731	A
26	A	740	A
26	A	747	A
26	A	753	A
26	A	757	G
26	A	758	A
26	A	760	U
26	A	763	G
26	A	765	G
26	A	766	G
26	A	768	G
26	A	769	U
26	A	770	A
26	A	774	G
26	A	784	G
26	A	785	A
26	A	794	G
26	A	801	U
26	A	830	A
26	A	832	G
26	A	838	G
26	A	845	C
26	A	862	U
26	A	863	G
26	A	868	C
26	A	871	A
26	A	872	G
26	A	878	G
26	A	879	A
26	A	880	G
26	A	890	G
26	A	891	G
26	A	897	A
26	A	899	G
26	A	904	A
26	A	908	A
26	A	915	U

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Mol	Chain	Res	Type
26	A	917	A
26	A	919	A
26	A	920	G
26	A	921	C
26	A	927	C
26	A	942	U
26	A	944	A
26	A	945	G
26	A	960	G
26	A	961	U
26	A	966	U
26	A	971	G
26	A	973	G
26	A	974	G
26	A	975	U
26	A	981	U
26	A	982	A
26	A	994	A
26	A	995	U
26	A	996	G
26	A	1001	C
26	A	1002	C
26	A	1003	A
26	A	1007	G
26	A	1009	U
26	A	1011	A
26	A	1012	C
26	A	1013	U
26	A	1014	G
26	A	1016	C
26	A	1022	C
26	A	1025	A
26	A	1029	C
26	A	1030	C
26	A	1042	A
26	A	1044	U
26	A	1046	C
26	A	1047	A
26	A	1048	A
26	A	1049	G
26	A	1058	A
26	A	1062	A

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Mol	Chain	Res	Type
26	A	1063	G
26	A	1068	C
26	A	1070	G
26	A	1074	A
26	A	1076	A
26	A	1078	G
26	A	1085	G
26	A	1091	A
26	A	1092	G
26	A	1098	A
26	A	1100	C
26	A	1101	A
26	A	1107	G
26	A	1114	G
26	A	1130	C
26	A	1131	G
26	A	1140	G
26	A	1141	U
26	A	1143	G
26	A	1144	A
26	A	1151	U
26	A	1163	A
26	A	1164	A
26	A	1169	A
26	A	1171	C
26	A	1173	G
26	A	1175	A
26	A	1178	U
26	A	1181	G
26	A	1184	U
26	A	1185	A
26	A	1186	G
26	A	1187	A
26	A	1188	A
26	A	1189	G
26	A	1190	C
26	A	1191	A
26	A	1192	G
26	A	1201	G
26	A	1202	A
26	A	1205	G
26	A	1206	A

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Mol	Chain	Res	Type
26	A	1207	G
26	A	1209	G
26	A	1212	U
26	A	1213	A
26	A	1215	U
26	A	1216	A
26	A	1224	G
26	A	1229	A
26	A	1230	G
26	A	1232	G
26	A	1233	A
26	A	1237	U
26	A	1238	G
26	A	1239	C
26	A	1240	G
26	A	1244	A
26	A	1246	A
26	A	1250	U
26	A	1251	A
26	A	1253	C
26	A	1260	C
26	A	1261	A
26	A	1270	G
26	A	1275	A
26	A	1292	U
26	A	1293	G
26	A	1303	U
26	A	1325	U
26	A	1332	G
26	A	1335	G
26	A	1343	G
26	A	1344	A
26	A	1345	G
26	A	1347	G
26	A	1353	G
26	A	1362	A
26	A	1363	G
26	A	1365	G
26	A	1368	A
26	A	1369	A
26	A	1371	G
26	A	1372	C

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Mol	Chain	Res	Type
26	A	1386	G
26	A	1389	U
26	A	1404	C
26	A	1409	C
26	A	1415	A
26	A	1416	A
26	A	1417	A
26	A	1440	C
26	A	1444	U
26	A	1448	C
26	A	1456	G
26	A	1462	G
26	A	1465	C
26	A	1467	U
26	A	1480	A
26	A	1493	A
26	A	1494	U
26	A	1499	A
26	A	1501	C
26	A	1507	G
26	A	1510	A
26	A	1521	C
26	A	1522	G
26	A	1529	U
26	A	1531	C
26	A	1532	G
26	A	1533	U
26	A	1534	C
26	A	1539	A
26	A	1540	U
26	A	1546	A
26	A	1549	G
26	A	1550	G
26	A	1551	U
26	A	1552	A
26	A	1553	C
26	A	1554	U
26	A	1555	A
26	A	1556	A
26	A	1562	C
26	A	1563	A
26	A	1564	A

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Mol	Chain	Res	Type
26	A	1565	A
26	A	1566	A
26	A	1567	C
26	A	1568	C
26	A	1569	A
26	A	1570	C
26	A	1571	C
26	A	1572	G
26	A	1574	G
26	A	1575	A
26	A	1576	C
26	A	1577	C
26	A	1578	G
26	A	1579	C
26	A	1580	A
26	A	1581	C
26	A	1582	C
26	A	1584	U
26	A	1585	U
26	A	1586	C
26	A	1587	G
26	A	1588	G
26	A	1589	G
26	A	1590	G
26	A	1591	U
26	A	1592	G
26	A	1593	U
26	A	1594	G
26	A	1595	G
26	A	1596	C
26	A	1597	G
26	A	1598	U
26	A	1599	U
26	A	1600	G
26	A	1601	G
26	A	1602	U
26	A	1603	G
26	A	1605	G
26	A	1606	G
26	A	1625	G
26	A	1629	G
26	A	1630	U

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Mol	Chain	Res	Type
26	A	1632	G
26	A	1633	U
26	A	1636	A
26	A	1637	G
26	A	1638	C
26	A	1639	G
26	A	1640	A
26	A	1641	U
26	A	1642	G
26	A	1648	A
26	A	1649	C
26	A	1654	G
26	A	1658	G
26	A	1672	C
26	A	1674	G
26	A	1676	G
26	A	1678	U
26	A	1679	A
26	A	1680	A
26	A	1681	U
26	A	1688	G
26	A	1703	G
26	A	1710	A
26	A	1711	G
26	A	1713	U
26	A	1715	A
26	A	1717	U
26	A	1721	U
26	A	1724	G
26	A	1727	A
26	A	1728	U
26	A	1731	A
26	A	1737	A
26	A	1744	A
26	A	1748	A
26	A	1753	C
26	A	1754	G
26	A	1767	U
26	A	1768	C
26	A	1769	G
26	A	1774	U
26	A	1778	A

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Mol	Chain	Res	Type
26	A	1780	G
26	A	1786	G
26	A	1787	A
26	A	1789	A
26	A	1792	A
26	A	1798	U
26	A	1803	A
26	A	1813	C
26	A	1826	A
26	A	1836	A
26	A	1837	G
26	A	1845	G
26	A	1852	A
26	A	1863	G
26	A	1864	U
26	A	1866	C
26	A	1869	G
26	A	1870	U
26	A	1871	G
26	A	1872	A
26	A	1878	G
26	A	1887	A
26	A	1892	G
26	A	1893	C
26	A	1903	C
26	A	1906	U
26	A	1916	A
26	A	1917	G
26	A	1933	G
26	A	1958	C
26	A	1967	G
26	A	1973	C
26	A	1974	A
26	A	1975	A
26	A	1981	U
26	A	1990	A
26	A	1998	C
26	A	1999	U
26	A	2017	C
26	A	2018	G
26	A	2026	A
26	A	2028	G

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Mol	Chain	Res	Type
26	A	2033	U
26	A	2046	A
26	A	2052	G
26	A	2062	G
26	A	2064	A
26	A	2074	G
26	A	2075	G
26	A	2083	A
26	A	2085	C
26	A	2086	U
26	A	2088	C
26	A	2089	C
26	A	2090	U
26	A	2091	U
26	A	2092	U
26	A	2093	G
26	A	2094	G
26	A	2095	G
26	A	2096	G
26	A	2106	A
26	A	2107	G
26	A	2111	U
26	A	2112	U
26	A	2118	C
26	A	2120	A
26	A	2130	G
26	A	2131	G
26	A	2137	A
26	A	2138	C
26	A	2140	A
26	A	2142	A
26	A	2151	A
26	A	2153	G
26	A	2154	G
26	A	2160	A
26	A	2161	A
26	A	2163	U
26	A	2167	U
26	A	2179	U
26	A	2190	A
26	A	2191	C
26	A	2194	A

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Mol	Chain	Res	Type
26	A	2195	U
26	A	2196	G
26	A	2206	C
26	A	2215	U
26	A	2217	U
26	A	2221	A
26	A	2244	A
26	A	2247	A
26	A	2251	G
26	A	2255	A
26	A	2256	G
26	A	2257	A
26	A	2263	G
26	A	2267	C
26	A	2276	G
26	A	2279	C
26	A	2280	G
26	A	2284	A
26	A	2285	G
26	A	2286	A
26	A	2299	C
26	A	2315	U
26	A	2316	G
26	A	2317	G
26	A	2319	G
26	A	2320	C
26	A	2322	C
26	A	2323	G
26	A	2325	U
26	A	2328	G
26	A	2334	U
26	A	2335	G
26	A	2337	A
26	A	2338	G
26	A	2339	G
26	A	2340	A
26	A	2341	U
26	A	2342	A
26	A	2343	G
26	A	2346	G
26	A	2348	G
26	A	2349	A

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Mol	Chain	Res	Type
26	A	2351	A
26	A	2353	U
26	A	2354	G
26	A	2355	U
26	A	2356	G
26	A	2357	A
26	A	2362	C
26	A	2368	C
26	A	2371	G
26	A	2380	G
26	A	2382	G
26	A	2383	U
26	A	2384	C
26	A	2385	G
26	A	2386	U
26	A	2387	U
26	A	2388	G
26	A	2390	U
26	A	2392	A
26	A	2393	A
26	A	2394	A
26	A	2395	U
26	A	2396	A
26	A	2404	G
26	A	2407	C
26	A	2408	G
26	A	2409	U
26	A	2410	A
26	A	2411	U
26	A	2413	G
26	A	2414	G
26	A	2418	U
26	A	2421	A
26	A	2427	G
26	A	2433	U
26	A	2434	A
26	A	2436	A
26	A	2446	G
26	A	2449	A
26	A	2462	G
26	A	2463	G
26	A	2467	U

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Mol	Chain	Res	Type
26	A	2473	U
26	A	2476	G
26	A	2490	A
26	A	2502	A
26	A	2506	G
26	A	2507	C
26	A	2510	A
26	A	2511	A
26	A	2512	A
26	A	2529	A
26	A	2531	G
26	A	2532	G
26	A	2545	G
26	A	2546	A
26	A	2549	G
26	A	2551	A
26	A	2558	C
26	A	2559	A
26	A	2567	U
26	A	2571	C
26	A	2574	C
26	A	2578	A
26	A	2582	A
26	A	2585	U
26	A	2586	G
26	A	2596	G
26	A	2601	A
26	A	2607	G
26	A	2608	G
26	A	2609	A
26	A	2612	A
26	A	2614	U
26	A	2615	G
26	A	2616	A
26	A	2626	U
26	A	2627	C
26	A	2630	A
26	A	2631	G
26	A	2640	G
26	A	2643	U
26	A	2647	U
26	A	2648	C

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Mol	Chain	Res	Type
26	A	2649	A
26	A	2650	A
26	A	2651	C
26	A	2653	G
26	A	2654	A
26	A	2655	U
26	A	2659	A
26	A	2665	C
26	A	2669	G
26	A	2671	G
26	A	2672	A
26	A	2673	U
26	A	2676	C
26	A	2677	A
26	A	2682	G
26	A	2694	G
26	A	2698	C
26	A	2700	A
26	A	2702	A
26	A	2705	G
26	A	2715	U
26	A	2718	G
26	A	2726	G
26	A	2729	G
26	A	2737	G
26	A	2742	A
26	A	2744	C
26	A	2753	G
26	A	2758	A
26	A	2759	G
26	A	2786	U
26	A	2788	A
26	A	2790	A
26	A	2791	G
26	A	2793	G
26	A	2796	A
26	A	2797	C
26	A	2802	G
26	A	2810	U
26	A	2826	A
26	A	2827	G
26	A	2833	U

Continued from previous page...

Mol	Chain	Res	Type
26	A	2837	U
26	A	2839	U
26	A	2853	C
26	A	2860	U
26	A	2865	G
26	A	2866	A
26	A	2870	C
26	A	2876	C
26	A	2878	A
26	A	2887	G
26	A	2893	G
26	A	2897	G
26	A	2906	U
26	A	2908	U
26	A	2913	U
26	A	2915	C
26	A	2926	A
26	A	2936	C
26	A	2938	G
26	A	2942	G
26	A	2950	C
26	A	2956	G
26	A	2957	A
26	A	2963	U
26	A	2968	G
26	A	2972	A
26	A	2975	G
26	A	2976	C
26	A	2977	A
26	A	2982	A
26	A	2985	G
26	A	2989	A
26	A	2990	A
26	A	2993	U
26	A	3002	A
26	A	3004	C
26	A	3005	A
26	A	3009	U
26	A	3011	C
26	A	3014	A
26	A	3015	C
26	A	3021	A

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Mol	Chain	Res	Type
26	A	3022	G
26	A	3023	G
26	A	3029	U
26	A	3039	C
26	A	3042	A
26	A	3045	C
26	A	3047	A
26	A	3056	A
26	A	3057	U
26	A	3070	G
26	A	3082	U
26	A	3088	C
26	A	3093	A
26	A	3094	A
26	A	3095	C
26	A	3101	C
26	A	3105	C
26	A	3106	C
26	A	3107	G
26	A	3112	A
26	A	3113	A
26	A	3114	A
26	A	3115	A

All (47) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
25	B	12	C
25	B	60	G
25	B	66	C
26	A	89	A
26	A	97	U
26	A	316	U
26	A	336	C
26	A	357	U
26	A	445	U
26	A	567	A
26	A	974	G
26	A	980	C
26	A	981	U
26	A	1002	C
26	A	1010	U

Continued from previous page...

Mol	Chain	Res	Type
26	A	1084	U
26	A	1186	G
26	A	1562	C
26	A	1563	A
26	A	1564	A
26	A	1565	A
26	A	1566	A
26	A	1567	C
26	A	1568	C
26	A	1569	A
26	A	1570	C
26	A	1571	C
26	A	1573	U
26	A	1575	A
26	A	1576	C
26	A	1577	C
26	A	1578	G
26	A	1579	C
26	A	1580	A
26	A	1581	C
26	A	1590	G
26	A	1591	U
26	A	1596	C
26	A	1597	G
26	A	1598	U
26	A	1730	U
26	A	2085	C
26	A	2088	C
26	A	2094	G
26	A	2350	G
26	A	2381	A
26	A	2435	U

5.4 Non-standard residues in protein, DNA, RNA chains ⓘ

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Map visualisation ⓘ

This section contains visualisations of the EMDB entry EMD-6922. These allow visual inspection of the internal detail of the map and identification of artifacts.

No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections ⓘ

6.1.1 Primary map

| X | Y | Z |
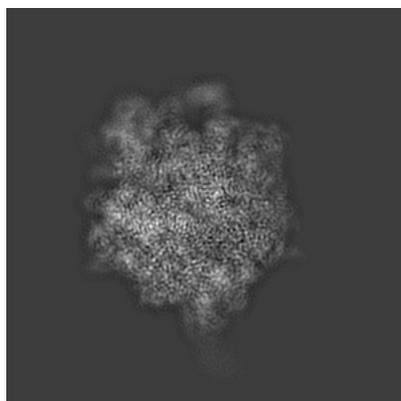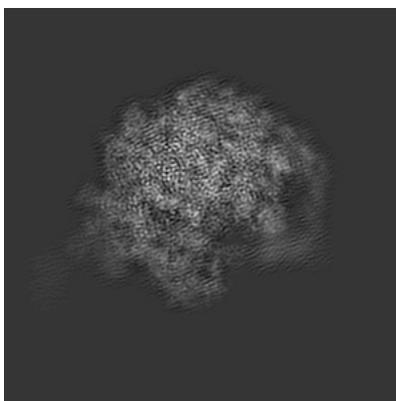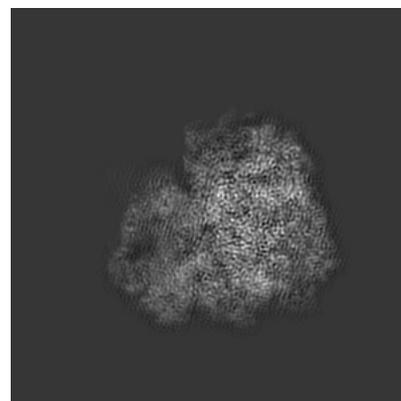
The images above show the map projected in three orthogonal directions.

6.2 Central slices ⓘ
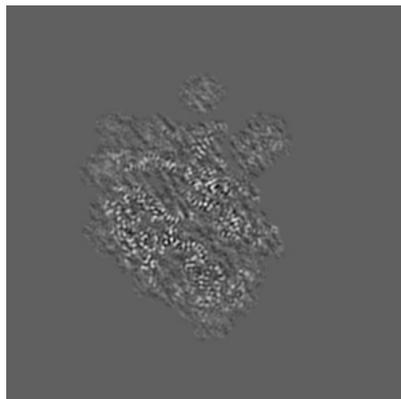
6.2.1 Primary map
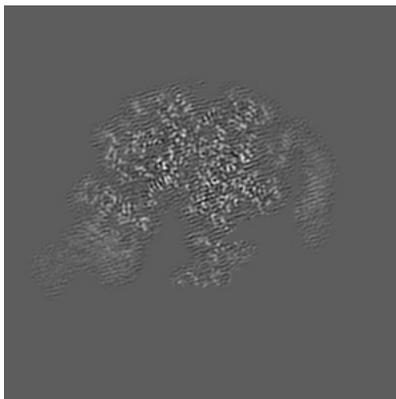
| X Index: 172 | Y Index: 172 | Z Index: 172 |
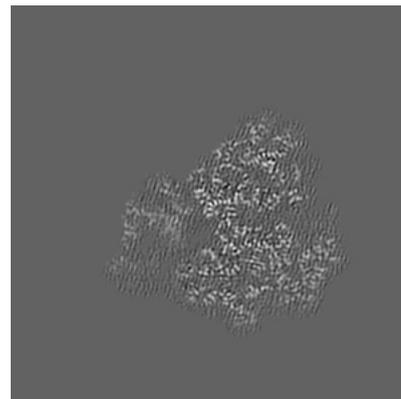
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices ⓘ
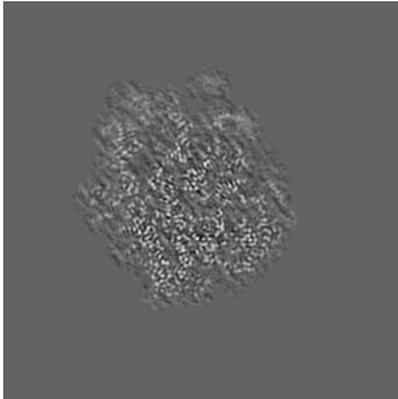
6.3.1 Primary map
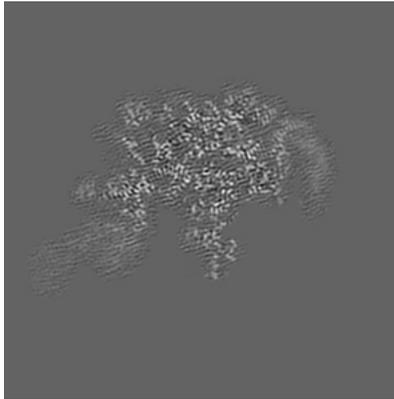
| X Index: 205 | Y Index: 181 | Z Index: 154 |
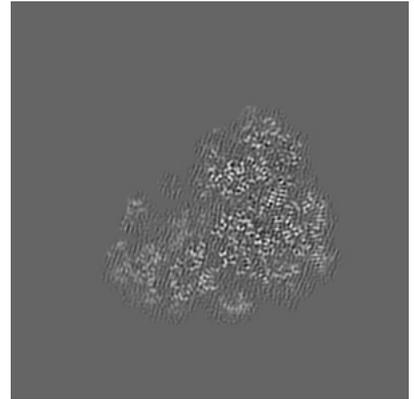
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) ⓘ

6.4.1 Primary map

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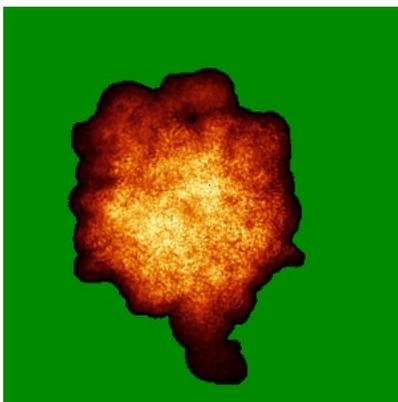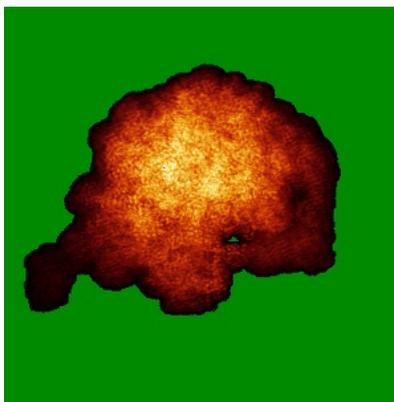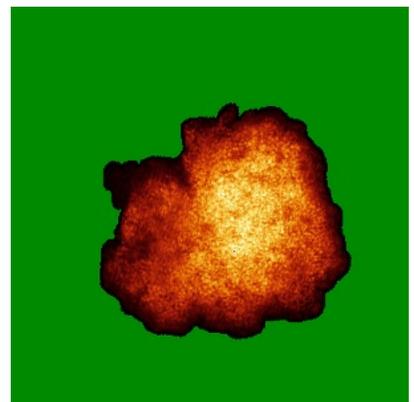
The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5　Orthogonal surface views ⓘ

6.5.1　Primary map

| X | Y | Z |

The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.6　Mask visualisation ⓘ

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

7 Map analysis ⓘ

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

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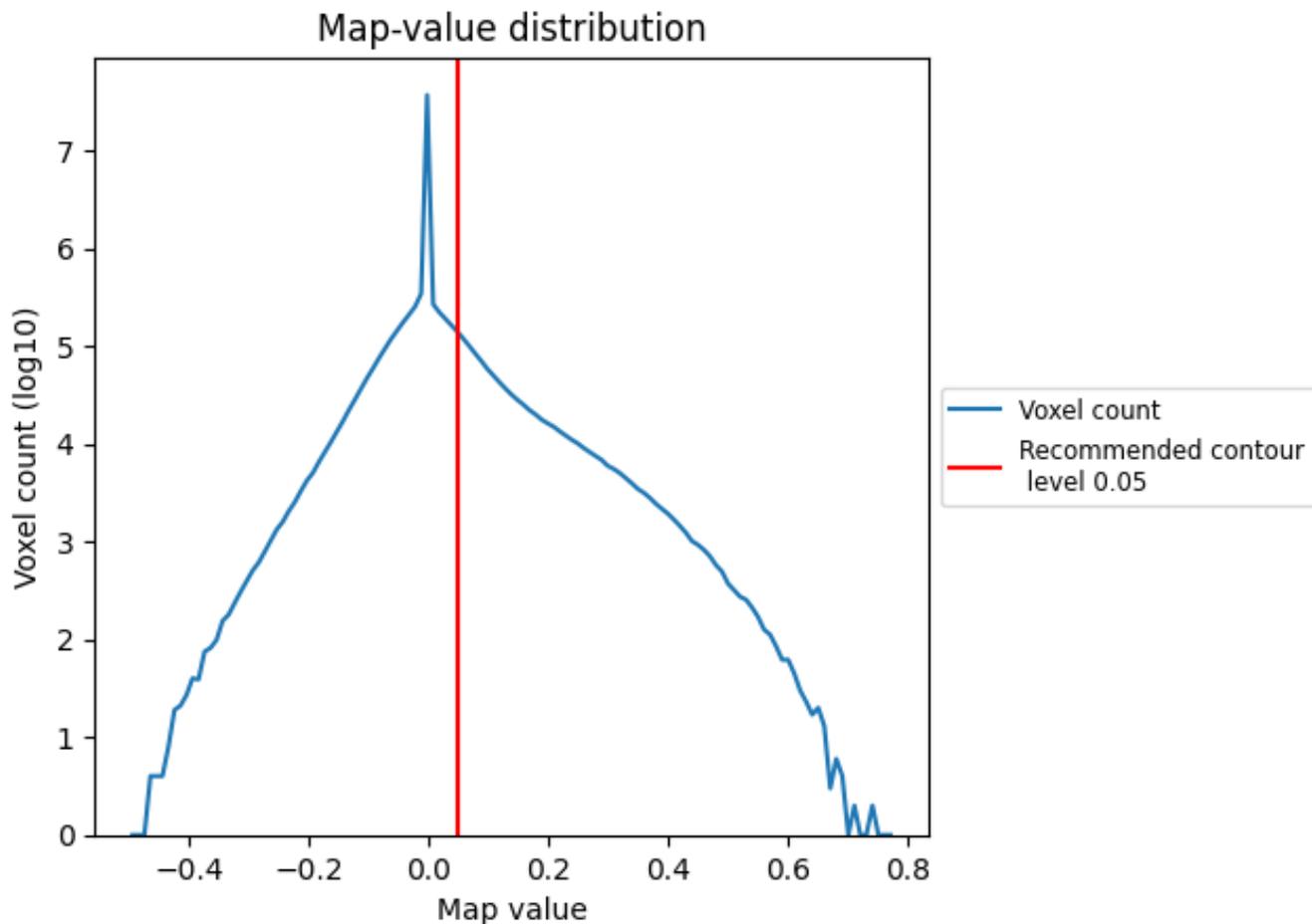
The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

7.2 Volume estimate (i)
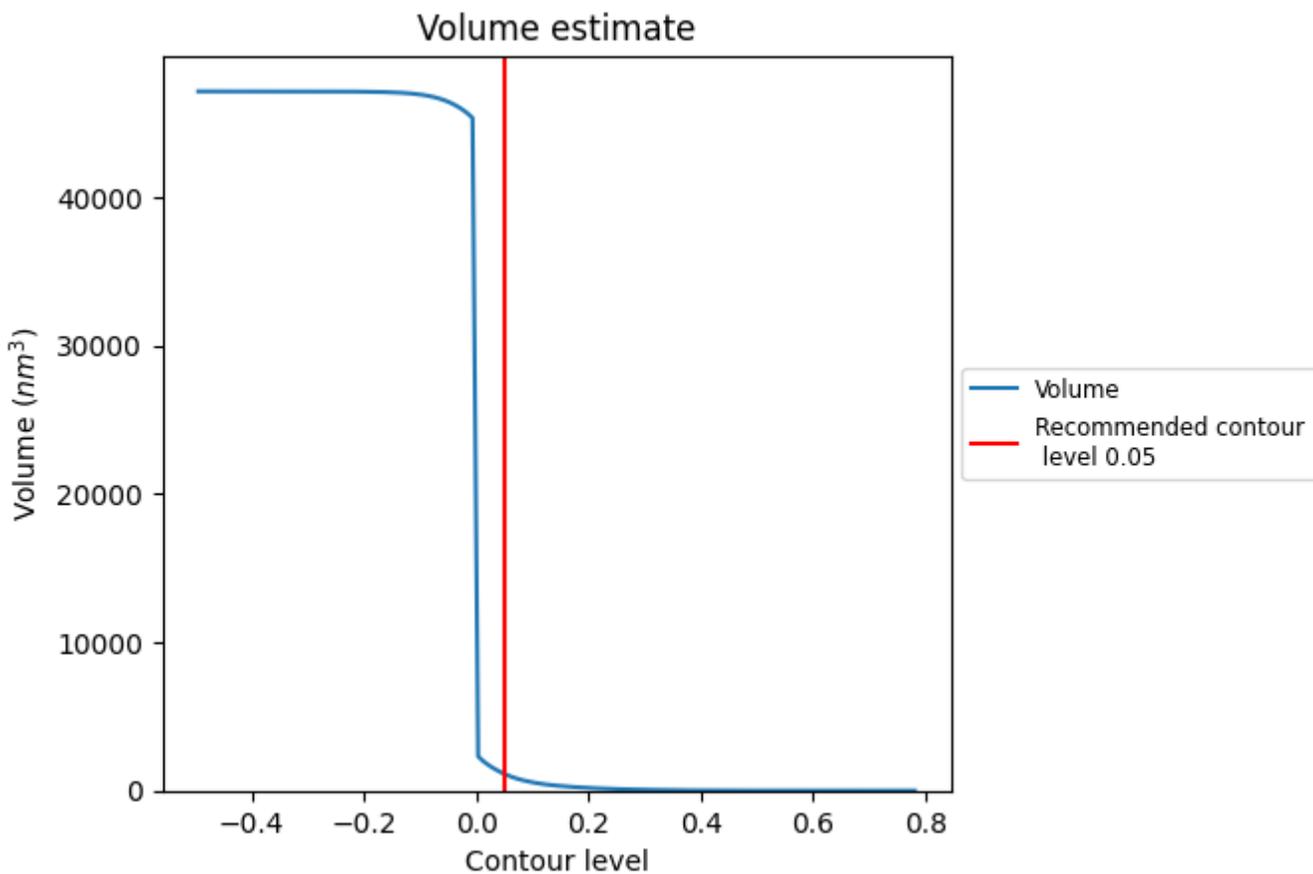
The volume at the recommended contour level is 1134 nm^3; this corresponds to an approximate mass of 1024 kDa.

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 ⓘ
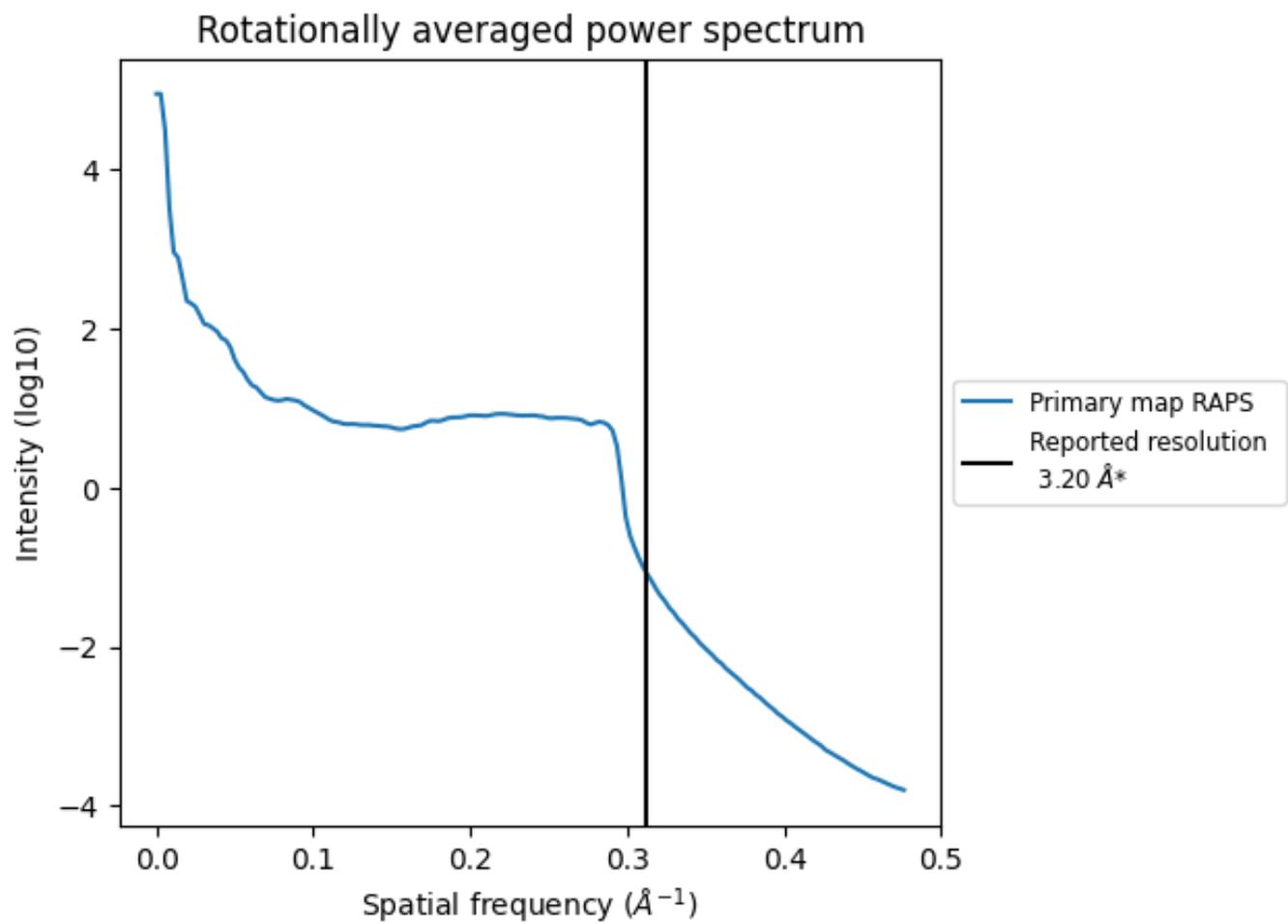
*Reported resolution corresponds to spatial frequency of 0.312 Å^{-1}

8 Fourier-Shell correlation ⓘ

This section was not generated. No FSC curve or half-maps provided.

9 Map-model fit ⓘ

This section contains information regarding the fit between EMDB map EMD-6922 and PDB model 5ZET. Per-residue inclusion information can be found in section 3 on page 10.

9.1 Map-model overlay ⓘ

X   Y   Z
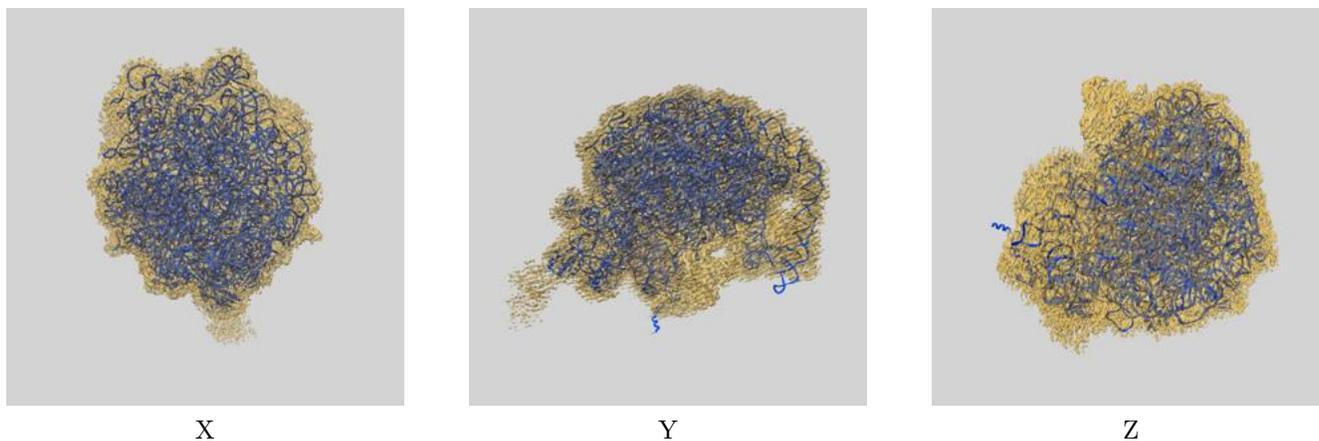
The images above show the 3D surface view of the map at the recommended contour level 0.05 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

## 9.2 Q-score mapped to coordinate model ⓘ

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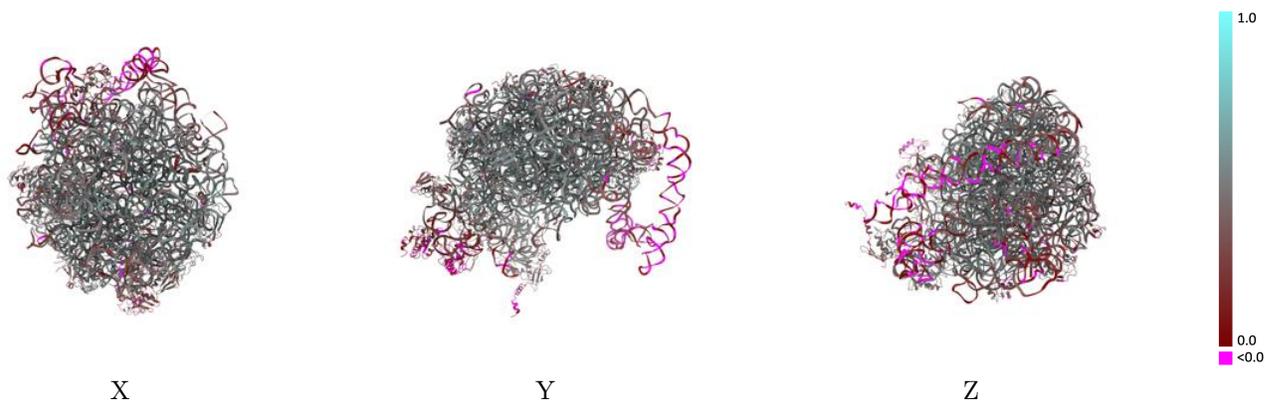
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model ⓘ

X   Y   Z
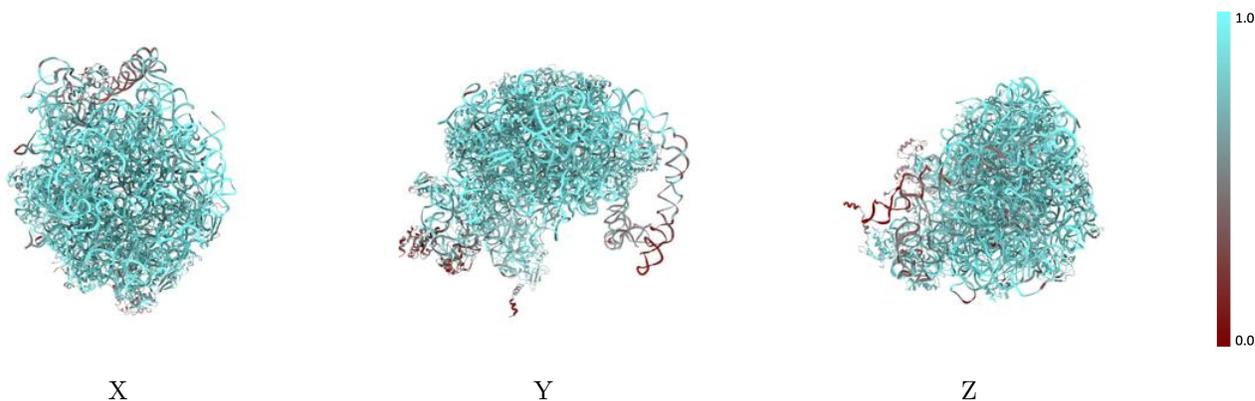
The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

9.4 Atom inclusion (i)
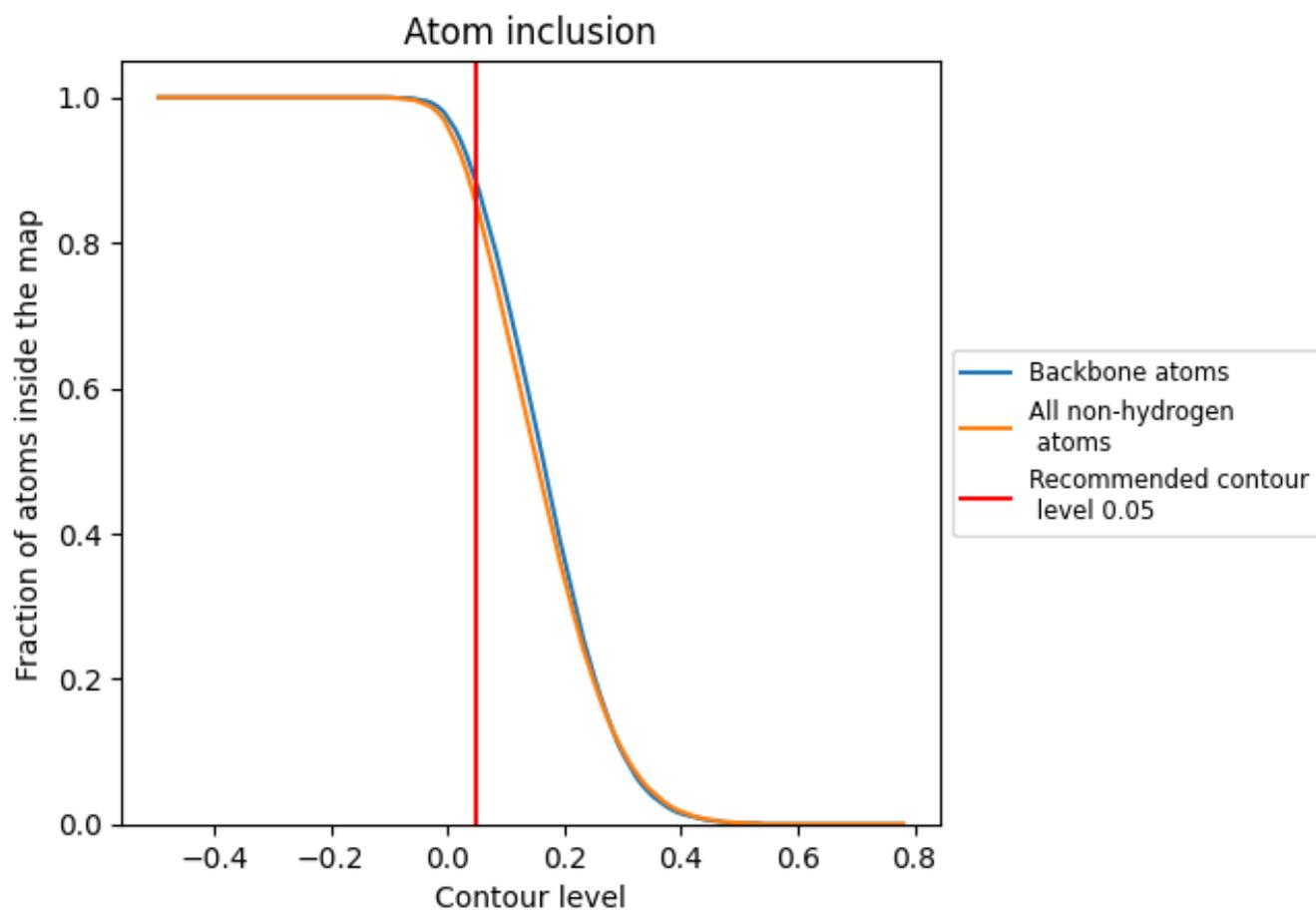
At the recommended contour level, 88% of all backbone atoms, 85% of all non-hydrogen atoms, are inside the map.

9.5   Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.8510	0.4220
1	0.8210	0.4500
2	0.5390	0.1850
3	0.8360	0.4500
4	0.8040	0.3790
5	0.8610	0.4740
6	0.8690	0.4850
7	0.8810	0.4790
8	0.7930	0.4410
A	0.8820	0.4320
B	0.8620	0.3920
C	0.8530	0.4810
D	0.8520	0.4720
E	0.8200	0.4230
F	0.7930	0.3790
G	0.7670	0.3570
H	0.6300	0.3000
I	0.3450	0.1310
J	0.3720	0.0990
K	0.8400	0.4650
L	0.8260	0.4500
M	0.8220	0.4320
N	0.8410	0.4600
O	0.8220	0.4380
P	0.8330	0.4300
Q	0.8040	0.4390
R	0.8670	0.4750
S	0.8390	0.4340
T	0.8120	0.4440
U	0.7910	0.4080
V	0.7680	0.3650
W	0.6950	0.3140
X	0.8340	0.4650
Y	0.8370	0.4520
Z	0.8180	0.4000

1.0

0.0
<0.0