Full wwPDB NMR Structure Validation Report ⓘ

May 7, 2024 – 02:34 pm BST

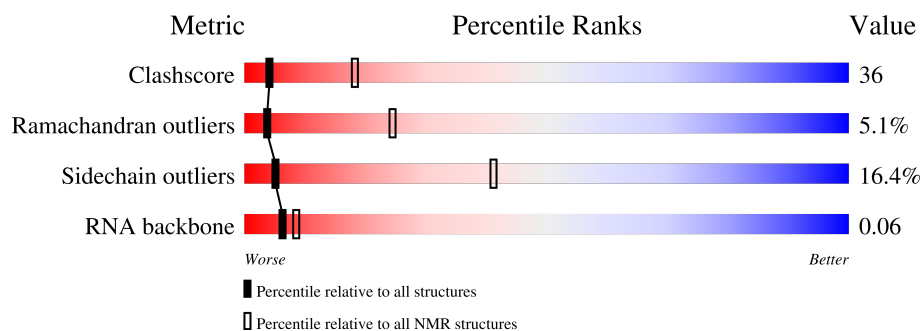|		
PDB ID	:	1DZ5
Title	:	The NMR structure of the 38KDa U1A protein-PIE RNA complex reveals the basis of cooperativity in regulation of polyadenylation by human U1A protein
Authors	:	Varani, L.; Gunderson, S.I.; Mattaj, I.W.; Kay, L.E.; Neuhaus, D.; Varani, G.
Deposited on	:	2000-02-16

1 Overall quality at a glance ⓘ

The following experimental techniques were used to determine the structure:
SOLUTION NMR

The overall completeness of chemical shifts assignment was not calculated.

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		36
Ramachandran outliers		5.1%
Sidechain outliers		16.4%
RNA backbone		0.06

Worse   *Better*

▮ Percentile relative to all structures
▯ Percentile relative to all NMR structures

Metric	Whole archive (#Entries)	NMR archive (#Entries)
Clashscore	158937	12864
Ramachandran outliers	154571	11451
Sidechain outliers	154315	11428
RNA backbone	4643	676

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for $>=3$, 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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 $<=5\%$

Mol	Chain	Length	Quality of chain
1	A	101	42% 49% 5% 5%
1	B	101	40% 50% 5% 5%
2	C	22	14% 59% 27%
2	D	22	14% 59% 27%

2 Ensemble composition and analysis ⓘ

This entry contains 13 models. The atoms present in the NMR models are not consistent. Some calculations may have failed as a result. All residues are included in the validation scores. Model 1 is the overall representative, medoid model (most similar to other models).

The following residues are included in the computation of the global validation metrics.

Well-defined (core) protein residues			
Well-defined core	Residue range (total)	Backbone RMSD (Å)	Medoid model
1	A:6-A:101, B:6-B:101 (192)	1.36	1

Ill-defined regions of proteins are excluded from the global statistics.

Ligands and non-protein polymers are included in the analysis.

NmrClust was unable to cluster the ensemble.

Error message: Inconsistent models in file

3 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 4742 atoms, of which 2182 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A.

Mol	Chain	Residues	Atoms						Trace
1	A	101	Total	C	H	N	O	S	0
			1666	524	851	143	144	4	
1	B	101	Total	C	H	N	O	S	0
			1666	524	851	143	144	4	

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	30	HIS	TYR	engineered mutation	UNP P09012
A	35	ARG	GLN	engineered mutation	UNP P09012
B	30	HIS	TYR	engineered mutation	UNP P09012
B	35	ARG	GLN	engineered mutation	UNP P09012

- Molecule 2 is a RNA chain called PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP *CP*AP*CP*CP* CP*GP*GP*AP*GP*UP*CP*UP*C)-3').

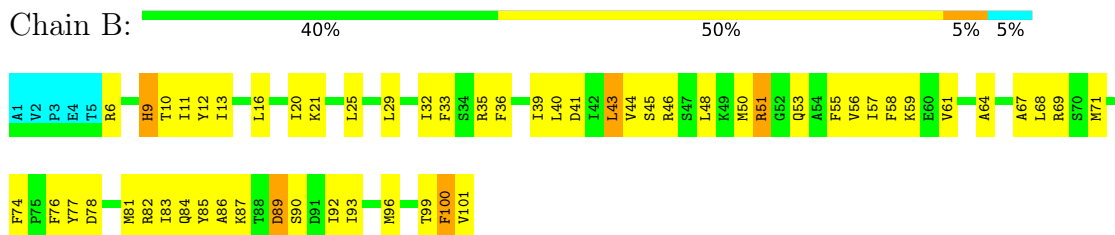| Mol	Chain	Residues	Atoms						Trace
2	C	22	Total	C	H	N	O	P	0
			705	209	240	84	151	21	
2	D	22	Total	C	H	N	O	P	0
			705	209	240	84	151	21	

4 Residue-property plots ⓘ

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A
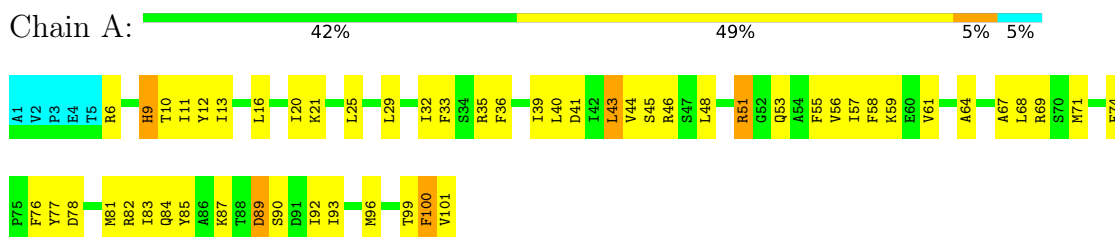
Chain A:

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B:

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C:

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D:
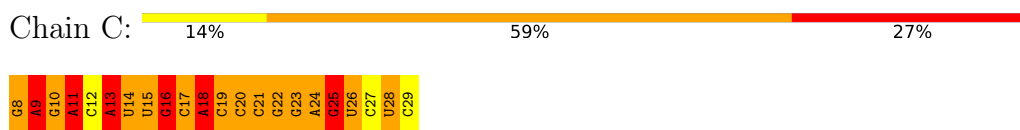
4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1 (medoid)

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A:

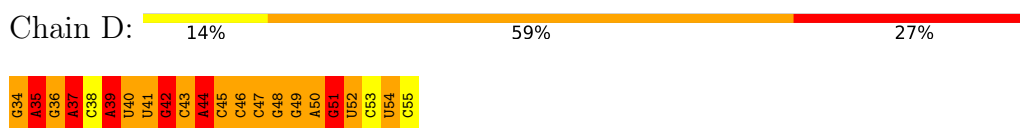

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B:

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C:

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')
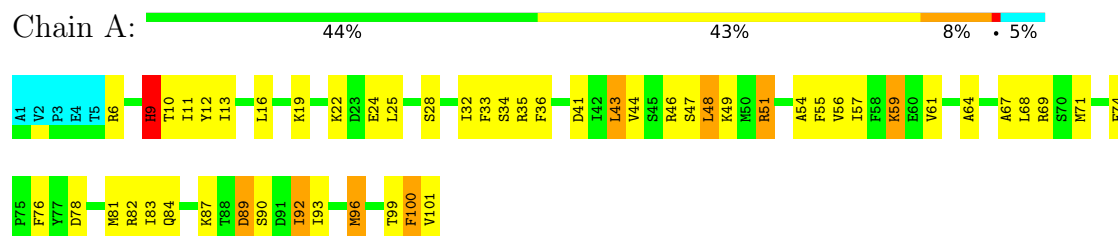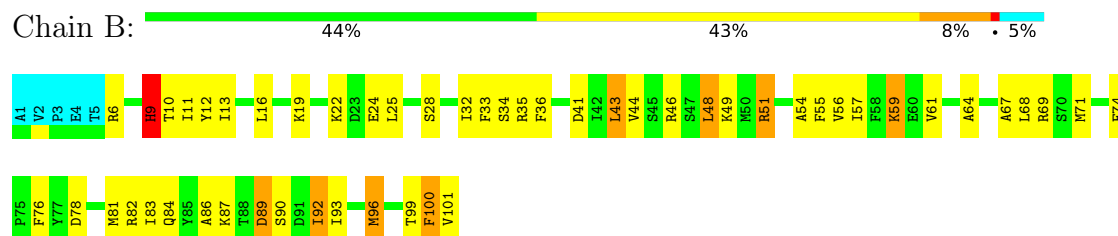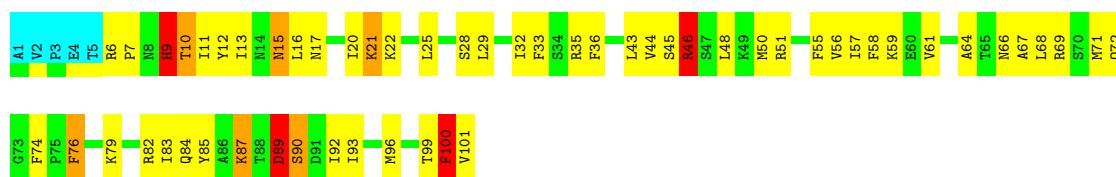
Chain D:

4.2.2 Score per residue for model 2

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A:

A1 V2 P3 E4 T5 R6 P7 N8 H9 T10 I11 Y12 I13 N14 N15 L16 N17 I20 K21 K22 L25 S28 L29 I32 F33 S34 R35 F36 L43 V44 S45 R46 S47 L48 K49 M50 R51 F55 V56 I57 F58 K59 E60 V61 A64 T65 N66 A67 L68 R69 S70 M71 Q72

G73 F74 P75 F76 K79 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 T99 F100 V101

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 38% 47% 7% • 5%
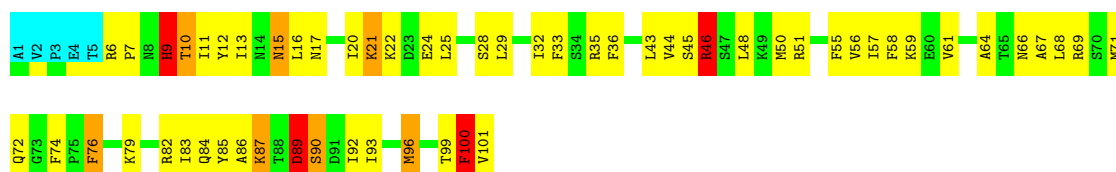
A1 V2 P3 E4 T5 R6 P7 N8 H9 T10 I11 Y12 I13 N14 N15 L16 N17 I20 K21 K22 D23 E24 L25 S28 L29 I32 F33 S34 R35 F36 L43 V44 S45 R46 S47 L48 K49 M50 R51 F55 V56 I57 F58 K59 E60 V61 A64 N66 A67 L68 R69 S70 M71

Q72 G73 F74 P75 F76 K79 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 18% 36% 45%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 C22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 18% 36% 45%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 C48 G49 A50 G51 U52 C53 U54 C55

4.2.3 Score per residue for model 3

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 41% 43% 11% • 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 L16 I20 K21 K22 D23 E24 L25 K26 K27 S28 L29 H30 A31 I32 F33 S34 R35 F36 I39 L40 L43 V44 S45 R46 S47 L48 R51 G52 Q53 A54 F55 V56 I57 F58 K59 E60 V61 A64 A67 L68 R69

S70 M71 F74 K79 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 K97 G98 T99 F100 V101
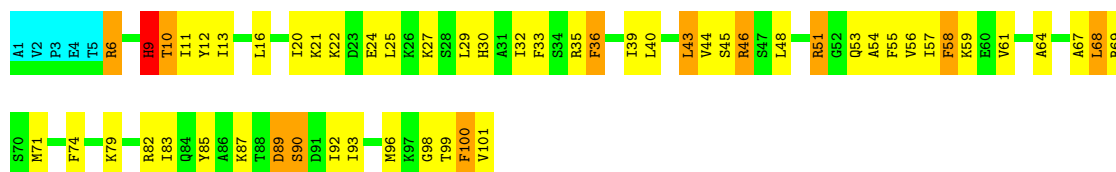
• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 42% 42% 11% • 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 L16 I20 K21 K22 D23 E24 L25 K26 K27 S28 L29 H30 A31 I32 F33 S34 R35 F36 I39 L40 L43 V44 S45 R46 S47 L48 R51 G52 Q53 A54 F55 V56 I57 F58 K59 E60 V61 A64 A67 L68 R69

S70 M71 F74 K79 R82 I83 Q84 Y85 D89 S90 D91 I92 I93 M96 K97 G98 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 18%   64%   18%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 G22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 18%   64%   18%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 G49 A50 G51 U52 C53 U54 C55

4.2.4 Score per residue for model 4

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 48%   39%   8%   • 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 L16 I20 K21 E24 L25 K26 K27 S28 L29 F33 S34 R35 F36 I39 L43 R46 S47 L48 K49 M50 R51 G52 Q53 A54 F55 V56 I57 F58 K59 A64 T65 N66 A67 L68 R69 S70 M71 F74

R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 T99 F100 V101

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 48%   40%   7%   • 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 L16 I20 K21 E24 L25 K26 K27 S28 L29 F33 S34 R35 F36 I39 L43 R46 S47 L48 K49 M50 R51 G52 Q53 A54 F55 V56 I57 F58 K59 A64 T65 N66 A67 L68 R69 S70 M71 F74

R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 5%   18%   45%   32%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 G22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 5% 18% 45% 32%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 C48 G49 A50 G51 U52 C53 U54 C55

4.2.5 Score per residue for model 5

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 50% 37% 8% 5%

A1 V2 P3 E4 T5 R6 T10 I11 Y12 I13 N14 S28 L29 H30 F33 S34 R35 F36 G37 Q38 I39 L40 L43 V44 S45 R46 S47 L48 R51 F55 V56 I57 F58 T65 N66 A67 L68 R69 S70 F74 Y77 D78 M81 R82 I83 Q84 Y85 D89 S90

D91 I92 I93 M96 K97 G98 T99 F100 V101

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 50% 37% 8% 5%

A1 V2 P3 E4 T5 R6 T10 I11 Y12 I13 N14 S28 L29 H30 F33 S34 R35 F36 G37 Q38 I39 L40 L43 V44 S45 R46 S47 L48 R51 F55 V56 I57 F58 T65 N66 A67 L68 R69 S70 F74 Y77 D78 M81 R82 I83 Q84 Y85 D89 S90

D91 I92 I93 M96 K97 G98 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 27% 32% 41%

G8 A9 C10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 G22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 27% 32% 41%

G34 A35 C36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 C48 G49 A50 G51 U52 C53 U54 C55

4.2.6 Score per residue for model 6

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 41% 45% 9% 5%

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B:

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C:

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')
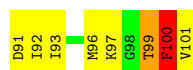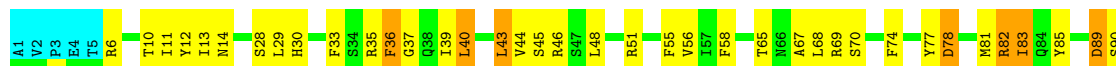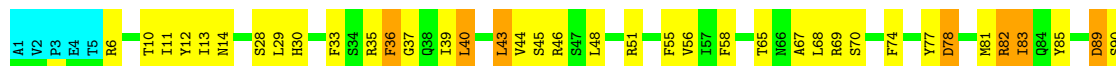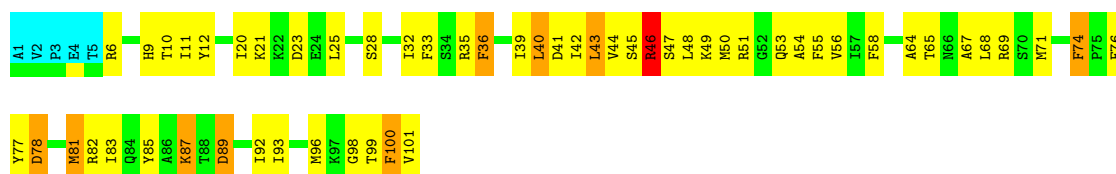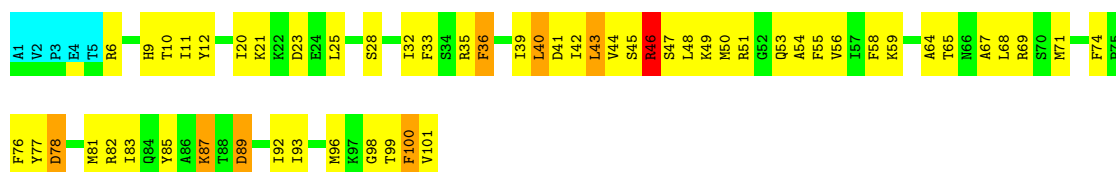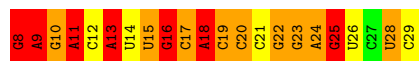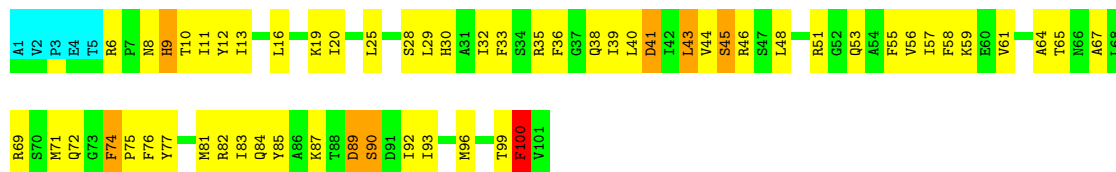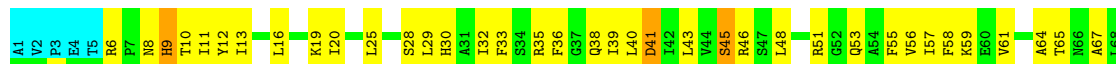
Chain D:

4.2.7 Score per residue for model 7

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A:
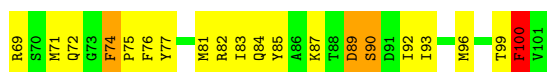

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B:

R69 S70 M71 Q72 G73 F74 P75 F76 Y77 M81 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 5%   23%   50%   23%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 C22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 5%   23%   50%   23%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 G49 A50 G51 U52 C53 U54 C55
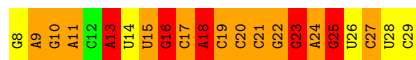
4.2.8   Score per residue for model 8

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A
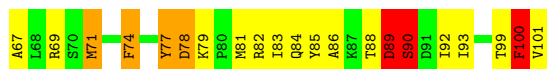
Chain A: 40%   45%   7%   ·   5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 N14 N15 L16 N17 E18 K19 I20 E24 L25 K26 K27 S28 L29 H30 A31 I32 F33 S34 R35 F36 I39 L40 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 G52 Q53 A54 F55 V56 I57 F58 K59 E60 V61 A64

A67 L68 R69 S70 M71 F74 Y77 D78 K79 P80 M81 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 T99 F100 V101

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 40%   44%   8%   ·   5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 N14 N15 L16 N17 E18 K19 I20 E24 L25 K26 K27 S28 L29 H30 A31 I32 F33 S34 R35 F36 I39 L40 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 G52 Q53 A54 F55 V56 I57 F58 K59 E60 V61 A64

A67 L68 R69 S70 M71 F74 Y77 D78 K79 P80 M81 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 5%   23%   36%   36%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 C22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 5% 23% 36% 36%

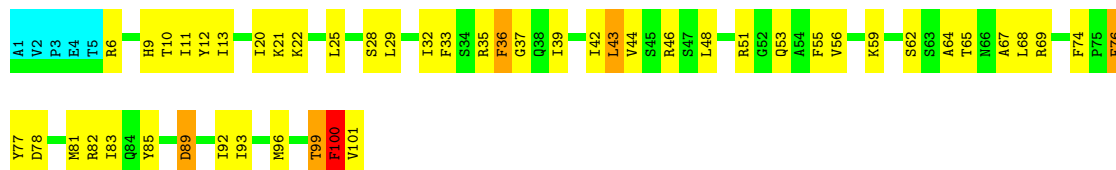G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 G49 A50 G51 U52 C53 U54 C55

4.2.9 Score per residue for model 9

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 47% 43% 5% 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 I20 K21 K22 L25 S28 L29 I32 F33 S34 R35 F36 G37 Q38 I39 I42 L43 V44 S45 R46 S47 L48 R51 G52 Q53 A54 F55 V56 K59 S62 S63 A64 T65 N66 A67 L68 R69 F74 P75 F76

Y77 D78 M81 R82 I83 Q84 Y85 D89 I92 I93 M96 T99 F100 V101

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 46% 45% 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 I20 K21 K22 D23 E24 L25 S28 L29 I32 F33 S34 R35 F36 G37 Q38 I39 I42 L43 V44 S45 R46 S47 L48 R51 G52 Q53 A54 F55 V56 K59 S62 S63 A64 T65 N66 A67 L68 R69 F74 P75

F76 Y77 D78 M81 R82 I83 Q84 Y85 D89 I92 I93 M96 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 27% 27% 45%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 G22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 27% 27% 45%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 G49 A50 G51 U52 C53 U54 C55

4.2.10 Score per residue for model 10

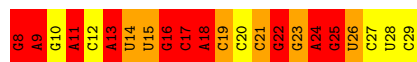• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A
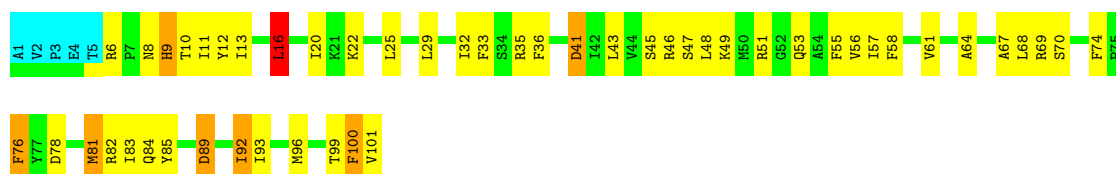
Chain A: 46% 42% 7% 5%

A1 V2 P3 E4 T5 R6 P7 N8 H9 T10 I11 Y12 I13 L16 I20 K21 K22 L25 L29 I32 F33 S34 R35 F36 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 Q52 Q53 A54 F55 V56 I57 F58 V61 A64 A67 L68 R69 S70 F74 P75

F76 Y77 D78 M81 R82 I83 Q84 Y85 D89 I92 I93 M96 T99 F100 V101

- Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 48% 39% 8% 5%

A1 V2 P3 E4 T5 R6 P7 N8 H9 T10 I11 Y12 I13 L16 I20 K21 K22 L25 L29 I32 F33 S34 R35 F36 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 Q52 Q53 V56 I57 F58 V61 A64 A67 L68 R69 S70 F74 P75 F76

Y77 D78 M81 R82 I83 Q84 Y85 D89 I92 I93 M96 T99 F100 V101

- Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 5% 18% 45% 32%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 C22 G23 A24 G25 U26 C27 U28 C29

- Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 5% 18% 45% 32%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 A49 G50 U51 C52 U53 C54 C55
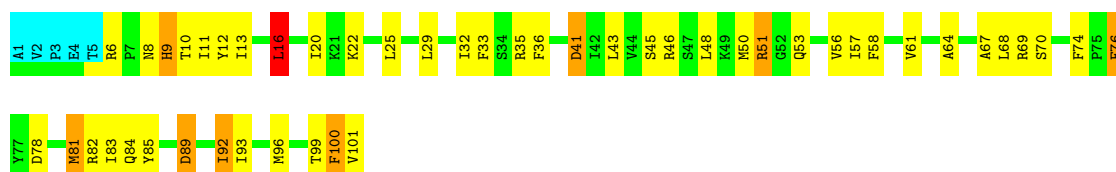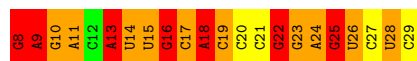
4.2.11 Score per residue for model 11

- Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 48% 38% 9% 5%

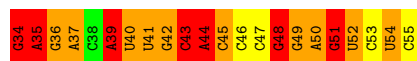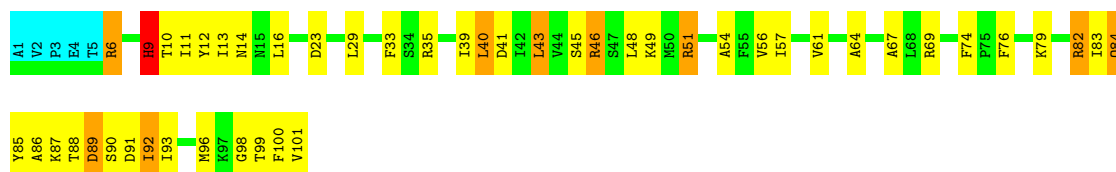A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 N14 N15 L16 D23 L29 F33 S34 R35 I39 L40 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 A54 F55 V56 I57 V61 A64 A67 L68 R69 F74 P75 F76 K79 R82 I83 Q84

Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 K97 G98 T99 F100 V101

- Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 46% 40% 9% 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 I13 N14 N15 L16 D23 L29 F33 S34 R35 F36 I39 L40 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 A54 F55 V56 I57 V61 A64 A67 L68 R69 F74 P75 F76 K79 R82 I83

Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 M96 K97 G98 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 18% 36% 45%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 G22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 18% 36% 45%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 G49 A50 G51 U52 C53 U54 C55

4.2.12 Score per residue for model 12

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 41% 40% 14% • 5%

A1 V2 P3 E4 T5 R6 P7 N8 H9 T10 I11 Y12 I13 N14 N15 L16 N17 E18 K19 I20 L25 I32 F33 S34 R35 F36 L40 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 A54 F55 V56 I57 F58 K59 E60 V61 A64 A67 L68 R69 S70 M71 F74

P75 F76 Y77 D78 M81 R82 I83 Q84 Y85 A86 D89 S90 D91 I92 I93 M96 K97 G98 T99 F100 V101

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 41% 41% 13% • 5%

A1 V2 P3 E4 T5 R6 P7 N8 H9 T10 I11 Y12 I13 N14 N15 L16 N17 E18 K19 I20 L25 I32 F33 S34 R35 F36 L40 D41 I42 L43 V44 S45 R46 S47 L48 K49 M50 R51 A54 F55 V56 I57 F58 K59 E60 V61 A64 A67 L68 R69 S70 M71 F74

P75 F76 Y77 D78 M81 R82 I83 Q84 Y85 A86 D89 S90 D91 I92 I93 M96 K97 G98 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 5% 23% 50% 23%

G8 A9 G10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 G22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 5% 23% 50% 23%

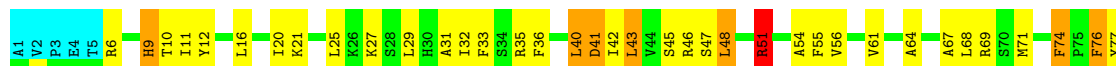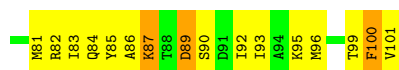G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 G49 A50 G51 U52 C53 U54 C55

4.2.13 Score per residue for model 13

• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain A: 43% 42% 10% 5%

A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 L16 I20 K21 L25 K26 K27 S28 L29 H30 A31 I32 F33 S34 R35 F36 L40 D41 I42 L43 V44 S45 R46 S47 L48 R51 A54 F55 V56 V61 A64 A67 L68 R69 S70 M71 F74 P75 F76 Y77

M81 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 A94 K95 M96 T99 F100 V101
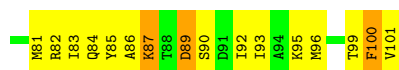
• Molecule 1: U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A

Chain B: 43% 42% 10% 5%
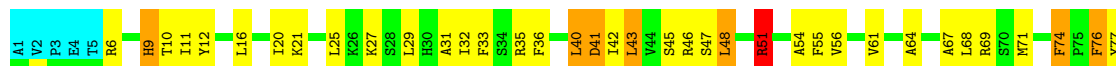
A1 V2 P3 E4 T5 R6 H9 T10 I11 Y12 L16 I20 K21 L25 K26 K27 S28 L29 H30 A31 I32 F33 S34 R35 F36 L40 D41 I42 L43 V44 S45 R46 S47 L48 R51 A54 F55 V56 V61 A64 A67 L68 R69 S70 M71 F74 P75 F76 Y77

M81 R82 I83 Q84 Y85 A86 K87 T88 D89 S90 D91 I92 I93 A94 K95 M96 T99 F100 V101

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain C: 5% 18% 45% 32%

G8 A9 C10 A11 C12 A13 U14 U15 G16 C17 A18 C19 C20 C21 G22 G23 A24 G25 U26 C27 U28 C29

• Molecule 2: PIE, RNA (5'-R(*GP*AP*GP*AP*CP*AP*UP*UP*GP*CP*AP*CP*CP* CP*G P*GP*AP*GP*UP*CP*UP*C)-3')

Chain D: 5% 18% 45% 32%

G34 A35 G36 A37 C38 A39 U40 U41 G42 C43 A44 C45 C46 C47 G48 G49 A50 G51 U52 C53 U54 C55

5 Refinement protocol and experimental data overview ⓘ

The models were refined using the following method: *RESTRAINED MOLECULAR DYNAM-ICS*.

Of the 50 calculated structures, 13 were deposited, based on the following criterion: *AGREEMENT WITH EXPERIMENTAL DATA*.

The following table shows the software used for structure solution, optimisation and refinement.

Software name	Classification	Version
X-PLOR	refinement	3.8.1
X-PLOR	structure solution	3.8.1

No chemical shift data was provided.

6 Model quality (i)

6.1 Standard geometry (i)

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#Z>5	RMSZ	#Z>5
1	A	0.97±0.00	0±0/794 (0.0± 0.0%)	0.79±0.00	0±0/1061 (0.0± 0.0%)
1	B	0.97±0.00	0±0/794 (0.0± 0.0%)	0.79±0.00	0±0/1061 (0.0± 0.0%)
2	C	1.13±0.01	0±0/519 (0.0± 0.0%)	1.94±0.01	27±1/807 (3.4± 0.1%)
2	D	1.13±0.00	0±0/519 (0.0± 0.0%)	1.94±0.01	27±1/807 (3.3± 0.2%)
All	All	1.04	0/34138 (0.0%)	1.41	701/48568 (1.4%)

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	Planarity
1	A	0.0±0.0	6.0±0.0
1	B	0.0±0.0	6.0±0.0
All	All	0	156

There are no bond-length outliers.

All unique angle outliers are listed below. They are sorted according to the Z-score of the worst occurrence in the ensemble.

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})	Models Worst	Total
2	C	10	G	N7-C8-N9	9.28	117.74	113.10	7	13
2	C	16	G	N7-C8-N9	9.28	117.74	113.10	11	13
2	D	42	G	N7-C8-N9	9.27	117.73	113.10	5	13
2	C	25	G	N7-C8-N9	9.26	117.73	113.10	10	13
2	D	48	G	N7-C8-N9	9.23	117.72	113.10	13	13
2	D	51	G	N7-C8-N9	9.22	117.71	113.10	13	13
2	C	22	G	N7-C8-N9	9.21	117.70	113.10	9	13
2	C	8	G	N7-C8-N9	9.18	117.69	113.10	10	13
2	C	23	G	N7-C8-N9	9.18	117.69	113.10	10	13
2	D	34	G	N7-C8-N9	9.16	117.68	113.10	3	13
2	D	49	G	N7-C8-N9	9.16	117.68	113.10	3	13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})	Models Worst	Total
2	D	36	G	N7-C8-N9	9.16	117.68	113.10	5	13
2	D	44	A	N7-C8-N9	7.96	117.78	113.80	11	13
2	C	18	A	N7-C8-N9	7.81	117.70	113.80	11	13
2	C	9	A	N7-C8-N9	7.61	117.61	113.80	7	13
2	D	39	A	N7-C8-N9	7.56	117.58	113.80	13	13
2	D	50	A	N7-C8-N9	7.53	117.56	113.80	9	13
2	D	37	A	N7-C8-N9	7.53	117.56	113.80	6	13
2	D	35	A	N7-C8-N9	7.52	117.56	113.80	8	13
2	C	13	A	N7-C8-N9	7.52	117.56	113.80	4	13
2	C	24	A	N7-C8-N9	7.51	117.56	113.80	11	13
2	C	11	A	N7-C8-N9	7.51	117.55	113.80	4	13
2	C	10	G	C8-N9-C4	-6.93	103.63	106.40	7	13
2	D	42	G	C8-N9-C4	-6.87	103.65	106.40	5	13
2	C	8	G	C8-N9-C4	-6.81	103.68	106.40	7	13
2	C	22	G	C8-N9-C4	-6.81	103.68	106.40	10	13
2	C	25	G	C8-N9-C4	-6.80	103.68	106.40	10	13
2	D	51	G	C8-N9-C4	-6.79	103.69	106.40	8	13
2	C	16	G	C8-N9-C4	-6.76	103.69	106.40	1	13
2	D	48	G	C8-N9-C4	-6.72	103.71	106.40	13	13
2	C	23	G	C8-N9-C4	-6.71	103.72	106.40	7	13
2	D	36	G	C8-N9-C4	-6.71	103.72	106.40	12	13
2	D	34	G	C8-N9-C4	-6.70	103.72	106.40	11	13
2	D	49	G	C8-N9-C4	-6.70	103.72	106.40	8	13
2	D	43	C	O4'-C1'-N1	6.00	113.00	108.20	8	4
2	C	17	C	O4'-C1'-N1	5.83	112.86	108.20	8	3
2	D	44	A	C8-N9-C4	-5.80	103.48	105.80	11	13
2	C	18	A	C8-N9-C4	-5.77	103.49	105.80	7	13
2	C	13	A	C8-N9-C4	-5.69	103.52	105.80	5	13
2	D	37	A	C8-N9-C4	-5.66	103.54	105.80	12	13
2	D	50	A	C8-N9-C4	-5.63	103.55	105.80	9	13
2	D	39	A	C8-N9-C4	-5.63	103.55	105.80	13	13
2	C	11	A	C8-N9-C4	-5.62	103.55	105.80	6	13
2	C	9	A	C8-N9-C4	-5.57	103.57	105.80	6	13
2	C	24	A	C8-N9-C4	-5.55	103.58	105.80	1	13
2	D	35	A	C8-N9-C4	-5.49	103.61	105.80	1	13
2	C	25	G	C5-N7-C8	-5.28	101.66	104.30	2	12
2	D	51	G	C5-N7-C8	-5.21	101.69	104.30	2	12
2	D	49	G	C5-N7-C8	-5.21	101.70	104.30	3	8
2	D	36	G	C5-N7-C8	-5.20	101.70	104.30	3	7
2	D	48	G	C5-N7-C8	-5.19	101.70	104.30	13	11
2	C	22	G	C5-N7-C8	-5.19	101.70	104.30	9	13

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})	Models Worst	Models Total
2	D	42	G	C5-N7-C8	-5.19	101.71	104.30	5	10
2	C	8	G	C5-N7-C8	-5.18	101.71	104.30	1	10
2	D	34	G	C5-N7-C8	-5.18	101.71	104.30	9	10
2	C	16	G	C5-N7-C8	-5.17	101.71	104.30	11	9
2	C	10	G	C5-N7-C8	-5.17	101.72	104.30	7	9
2	C	23	G	C5-N7-C8	-5.14	101.73	104.30	11	11

There are no chirality outliers.

All unique planar outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Group	Models (Total)
1	A	6	ARG	Sidechain	13
1	A	35	ARG	Sidechain	13
1	A	46	ARG	Sidechain	13
1	A	51	ARG	Sidechain	13
1	A	69	ARG	Sidechain	13
1	A	82	ARG	Sidechain	13
1	B	6	ARG	Sidechain	13
1	B	35	ARG	Sidechain	13
1	B	46	ARG	Sidechain	13
1	B	51	ARG	Sidechain	13
1	B	69	ARG	Sidechain	13
1	B	82	ARG	Sidechain	13

6.2 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 each 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 averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	780	815	815	59±11
1	B	780	815	815	59±12
2	C	465	240	240	42±7
2	D	465	240	240	41±7
All	All	32370	27430	27430	2175

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 36.

All unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:99:THR:HG21	1:B:99:THR:HG21	1.04	1.20	9	2
1:A:101:VAL:HG11	1:B:101:VAL:HG11	1.03	1.30	8	1
1:A:101:VAL:HG13	1:B:101:VAL:HG13	0.98	1.29	2	5
1:A:11:ILE:HD12	1:A:83:ILE:HG21	0.97	1.37	8	6
1:B:11:ILE:HD12	1:B:83:ILE:HG21	0.93	1.39	4	6
1:B:11:ILE:HG23	1:B:64:ALA:HB1	0.89	1.43	3	9
1:A:11:ILE:HG23	1:A:64:ALA:HB1	0.89	1.43	3	9
1:B:43:LEU:HD22	2:C:18:A:N3	0.86	1.85	13	9
1:A:13:ILE:HD13	1:A:29:LEU:HD22	0.86	1.48	11	4
1:A:43:LEU:HD22	2:D:44:A:N3	0.85	1.85	13	9
1:B:9:HIS:CE1	1:B:93:ILE:HG21	0.85	2.07	3	12
1:A:9:HIS:CE1	1:A:93:ILE:HG21	0.84	2.07	3	12
1:A:92:ILE:HD13	1:A:93:ILE:N	0.83	1.88	1	3
1:A:92:ILE:HD12	1:A:93:ILE:N	0.83	1.88	7	9
1:B:92:ILE:HD13	1:B:93:ILE:N	0.83	1.88	1	3
1:B:92:ILE:HD12	1:B:93:ILE:N	0.83	1.88	7	9
1:B:13:ILE:HD13	1:B:29:LEU:HD22	0.82	1.48	11	4
1:B:11:ILE:HD12	1:B:83:ILE:HG23	0.80	1.54	7	3
1:A:11:ILE:HD12	1:A:83:ILE:HG23	0.80	1.54	7	3
1:B:11:ILE:HD12	1:B:83:ILE:CG2	0.80	2.06	1	9
2:D:51:G:H3'	2:D:51:G:OP1	0.79	1.78	1	5
1:B:48:LEU:HD12	2:D:51:G:O4'	0.79	1.77	12	5
1:A:48:LEU:HD12	2:C:25:G:O4'	0.79	1.77	12	5
1:B:16:LEU:HD13	1:B:25:LEU:HD21	0.79	1.54	1	3
1:A:99:THR:CG2	1:B:99:THR:HG21	0.79	2.06	9	2
1:A:11:ILE:HD12	1:A:83:ILE:CG2	0.79	2.06	1	9
1:A:11:ILE:HD13	1:A:83:ILE:HG23	0.79	1.55	3	2
2:C:25:G:H3'	2:C:25:G:OP1	0.79	1.77	1	5
1:B:11:ILE:HD13	1:B:83:ILE:HG23	0.78	1.55	3	2
1:A:99:THR:HG21	1:B:99:THR:CG2	0.78	2.06	9	2
1:A:16:LEU:HD13	1:A:25:LEU:HD21	0.78	1.54	1	3
2:C:8:G:O2'	2:C:9:A:H5'	0.78	1.78	2	9
1:A:32:ILE:HD12	1:A:76:PHE:CZ	0.78	2.14	10	2
1:A:33:PHE:CG	1:A:56:VAL:HG21	0.78	2.14	4	1
1:B:33:PHE:CG	1:B:56:VAL:HG21	0.78	2.14	4	1
1:A:11:ILE:HG21	1:A:67:ALA:HB3	0.77	1.56	12	1
1:B:32:ILE:HD12	1:B:76:PHE:CZ	0.77	2.14	10	3
1:B:9:HIS:NE2	1:B:93:ILE:HG21	0.77	1.94	4	3
1:A:9:HIS:NE2	1:A:93:ILE:HG21	0.77	1.94	4	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:D:34:G:O2'	2:D:35:A:H5'	0.77	1.79	2	9
1:A:101:VAL:CG1	1:B:101:VAL:HG11	0.77	2.08	8	1
1:A:32:ILE:HD11	1:A:76:PHE:CZ	0.76	2.16	2	1
1:B:32:ILE:HD11	1:B:76:PHE:CZ	0.76	2.16	2	1
1:A:65:THR:HG23	1:A:85:TYR:OH	0.76	1.81	4	4
1:B:65:THR:HG23	1:B:85:TYR:OH	0.75	1.81	4	4
1:A:101:VAL:HG11	1:B:101:VAL:CG1	0.75	2.08	8	1
2:C:16:G:H3'	2:C:17:C:O2	0.75	1.81	8	1
1:B:11:ILE:HG21	1:B:67:ALA:HB3	0.75	1.56	12	1
1:B:13:ILE:HG12	1:B:83:ILE:HD12	0.75	1.59	12	1
2:C:23:G:O2'	2:C:24:A:H5'	0.75	1.82	12	10
2:D:42:G:H3'	2:D:43:C:O2	0.75	1.81	8	1
1:A:13:ILE:HG12	1:A:83:ILE:HD12	0.74	1.59	12	1
2:D:49:G:O2'	2:D:50:A:H5'	0.74	1.82	12	10
1:A:10:THR:HG21	2:D:44:A:H61	0.74	1.43	6	2
1:B:43:LEU:HD21	2:C:19:C:O4'	0.73	1.83	13	4
2:C:26:U:O2'	2:C:27:C:H5'	0.73	1.83	1	4
1:A:101:VAL:HG21	1:B:101:VAL:HG21	0.73	1.59	13	1
1:A:11:ILE:CD1	1:A:83:ILE:HG21	0.73	2.11	8	4
2:C:15:U:H4'	2:C:16:G:O5'	0.73	1.83	9	1
1:B:11:ILE:CD1	1:B:83:ILE:HG21	0.73	2.12	8	4
2:D:41:U:H4'	2:D:42:G:O5'	0.73	1.83	9	1
1:A:43:LEU:HD21	2:D:45:C:O4'	0.73	1.83	13	4
1:B:10:THR:HG21	2:C:18:A:H61	0.72	1.44	6	2
1:B:10:THR:CG2	1:B:86:ALA:HB3	0.72	2.15	12	1
1:A:92:ILE:HD12	1:A:93:ILE:HD13	0.72	1.62	9	3
1:B:92:ILE:HD12	1:B:93:ILE:HD13	0.72	1.62	9	3
2:D:52:U:O2'	2:D:53:C:H5'	0.72	1.83	1	4
1:A:13:ILE:HD11	1:A:33:PHE:CE2	0.72	2.20	1	5
1:B:68:LEU:HD13	1:B:85:TYR:CE2	0.72	2.20	13	3
1:B:13:ILE:HD11	1:B:33:PHE:CE2	0.71	2.20	1	5
1:A:20:ILE:HD13	1:A:25:LEU:HD21	0.71	1.63	2	1
1:A:10:THR:CG2	1:A:86:ALA:HB3	0.71	2.15	12	1
1:A:20:ILE:HD13	1:A:25:LEU:HD11	0.71	1.61	6	2
1:A:68:LEU:HD13	1:A:85:TYR:CE2	0.71	2.20	13	3
2:D:46:C:H2'	2:D:47:C:O4'	0.71	1.86	3	9
1:B:20:ILE:HD13	1:B:25:LEU:HD11	0.71	1.61	6	2
2:C:20:C:H2'	2:C:21:C:O4'	0.70	1.87	3	8
2:C:18:A:O2'	2:C:19:C:H5'	0.70	1.86	4	2
1:B:10:THR:HG22	1:B:89:ASP:HB2	0.70	1.62	5	4
1:A:40:LEU:HD11	1:B:98:GLY:O	0.70	1.86	6	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:68:LEU:HD13	1:A:85:TYR:CD2	0.70	2.22	13	2
1:A:10:THR:HG22	1:A:89:ASP:HB2	0.70	1.62	5	4
2:D:44:A:O2'	2:D:45:C:H5'	0.69	1.86	4	2
1:B:10:THR:HG21	1:B:57:ILE:HD13	0.69	1.65	2	3
1:B:68:LEU:HD13	1:B:85:TYR:CD2	0.69	2.21	13	2
1:B:99:THR:CG2	1:B:101:VAL:HG13	0.69	2.17	10	1
1:B:8:ASN:C	1:B:61:VAL:HG22	0.69	2.08	10	3
1:A:10:THR:HG21	1:A:57:ILE:HD13	0.69	1.65	2	3
1:A:48:LEU:HD23	1:A:48:LEU:O	0.69	1.88	12	4
1:A:13:ILE:HG23	1:A:82:ARG:O	0.69	1.88	12	1
1:B:13:ILE:CD1	1:B:29:LEU:HD22	0.68	2.18	5	6
1:A:99:THR:CG2	1:A:101:VAL:HG13	0.68	2.17	10	1
1:B:13:ILE:CG1	1:B:83:ILE:HD12	0.68	2.19	12	1
1:B:20:ILE:HD13	1:B:25:LEU:HD21	0.68	1.63	2	1
1:B:13:ILE:HG23	1:B:82:ARG:O	0.68	1.88	12	1
1:A:11:ILE:HG23	1:A:64:ALA:CB	0.68	2.18	2	1
1:A:8:ASN:C	1:A:61:VAL:HG22	0.68	2.08	10	3
1:A:13:ILE:CG1	1:A:83:ILE:HD12	0.68	2.19	12	1
1:B:48:LEU:O	1:B:48:LEU:HD23	0.68	1.88	12	4
1:B:20:ILE:HD13	1:B:25:LEU:CD1	0.68	2.19	6	2
1:A:11:ILE:HD11	1:A:33:PHE:CE1	0.68	2.23	10	8
1:B:11:ILE:HD11	1:B:33:PHE:CE1	0.67	2.23	10	8
1:A:13:ILE:CD1	1:A:29:LEU:HD22	0.67	2.18	5	6
1:B:11:ILE:HG23	1:B:64:ALA:CB	0.67	2.18	2	1
1:A:98:GLY:O	1:B:40:LEU:HD11	0.67	1.89	6	1
1:A:20:ILE:HD13	1:A:25:LEU:CD1	0.67	2.19	6	2
1:A:86:ALA:HB1	2:D:44:A:N6	0.67	2.04	12	1
1:A:11:ILE:HD11	1:A:33:PHE:CE2	0.67	2.24	8	2
1:B:11:ILE:HD11	1:B:33:PHE:CE2	0.67	2.24	8	2
1:B:42:ILE:CD1	1:B:56:VAL:HG13	0.67	2.19	9	1
1:A:33:PHE:CE2	1:A:83:ILE:HD11	0.67	2.25	12	1
1:B:33:PHE:CE2	1:B:67:ALA:HB1	0.66	2.24	12	3
1:A:10:THR:HG22	1:A:89:ASP:CB	0.66	2.20	5	4
1:B:10:THR:HG22	1:B:89:ASP:CB	0.66	2.20	5	4
1:A:33:PHE:CE2	1:A:67:ALA:HB1	0.66	2.24	12	3
1:A:99:THR:OG1	1:B:40:LEU:HD21	0.66	1.90	13	1
1:B:90:SER:CB	1:B:93:ILE:HD12	0.66	2.21	8	2
2:D:38:C:H2'	2:D:39:A:O4'	0.66	1.91	2	1
1:A:42:ILE:CD1	1:A:56:VAL:HG13	0.66	2.19	9	1
2:C:12:C:H2'	2:C:13:A:O4'	0.66	1.90	2	1
1:B:20:ILE:HG21	1:B:25:LEU:HD12	0.66	1.68	10	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:33:PHE:CE2	1:B:83:ILE:HD11	0.66	2.25	12	1
1:A:90:SER:CB	1:A:93:ILE:HD12	0.65	2.21	8	2
1:B:86:ALA:HB1	2:C:18:A:N6	0.65	2.05	12	1
1:A:20:ILE:HB	1:A:25:LEU:HD13	0.65	1.68	3	2
1:A:100:PHE:CD1	1:B:99:THR:HG23	0.65	2.27	13	1
1:B:48:LEU:HD23	2:D:51:G:C8	0.65	2.27	13	4
1:A:11:ILE:HD12	1:A:12:TYR:N	0.65	2.07	3	1
1:A:47:SER:OG	2:C:24:A:H2'	0.65	1.91	6	5
1:B:11:ILE:HD13	1:B:83:ILE:CG2	0.65	2.22	3	3
1:B:41:ASP:CB	1:B:57:ILE:HD12	0.65	2.22	7	2
1:A:32:ILE:HD11	1:A:76:PHE:CE2	0.65	2.26	2	1
1:B:20:ILE:HB	1:B:25:LEU:HD13	0.65	1.68	3	2
1:B:92:ILE:CD1	1:B:93:ILE:HD13	0.64	2.22	9	6
1:A:68:LEU:HD22	1:A:85:TYR:OH	0.64	1.92	12	1
2:C:20:C:H6	2:C:20:C:O5'	0.64	1.75	6	7
1:A:11:ILE:HD13	1:A:83:ILE:CG2	0.64	2.22	3	3
1:A:8:ASN:O	1:A:61:VAL:HG13	0.64	1.93	7	1
1:B:11:ILE:HD12	1:B:12:TYR:N	0.64	2.07	3	1
1:A:41:ASP:CB	1:A:57:ILE:HD12	0.64	2.22	7	2
1:B:68:LEU:HD22	1:B:85:TYR:OH	0.64	1.92	12	1
1:B:32:ILE:HD11	1:B:76:PHE:CE2	0.64	2.26	2	1
2:D:49:G:H2'	2:D:50:A:O4'	0.64	1.93	5	1
1:A:92:ILE:CD1	1:A:93:ILE:HD13	0.64	2.22	9	6
2:D:46:C:H6	2:D:46:C:O5'	0.64	1.76	1	7
1:A:48:LEU:HD23	2:C:25:G:C8	0.64	2.27	13	4
2:D:37:A:O2'	2:D:38:C:H5'	0.64	1.93	4	2
1:B:8:ASN:O	1:B:61:VAL:HG13	0.64	1.93	7	1
1:A:16:LEU:HD13	1:A:25:LEU:CD2	0.64	2.22	1	2
1:A:40:LEU:HD21	1:B:99:THR:OG1	0.64	1.92	13	1
1:B:16:LEU:HD13	1:B:25:LEU:CD2	0.63	2.22	1	3
2:C:11:A:O2'	2:C:12:C:H5'	0.63	1.93	4	2
1:B:48:LEU:HD13	1:B:48:LEU:O	0.63	1.93	13	4
1:A:20:ILE:HG21	1:A:25:LEU:HD12	0.63	1.67	10	2
1:A:48:LEU:HD13	1:A:48:LEU:O	0.63	1.93	13	2
1:B:33:PHE:CD2	1:B:67:ALA:HB1	0.63	2.29	9	2
1:A:99:THR:HG23	1:B:100:PHE:CD1	0.63	2.28	13	1
1:B:47:SER:OG	2:D:50:A:H2'	0.63	1.94	6	4
1:A:33:PHE:CD2	1:A:67:ALA:HB1	0.63	2.29	9	2
2:C:23:G:H2'	2:C:24:A:O4'	0.63	1.93	5	1
1:B:90:SER:HB3	1:B:93:ILE:HD12	0.62	1.72	8	3
1:A:43:LEU:HD22	2:D:44:A:C2	0.62	2.30	5	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:D:47:C:H6	2:D:47:C:O5'	0.62	1.78	9	12
1:A:33:PHE:CB	1:A:56:VAL:HG11	0.62	2.25	12	3
1:B:53:GLN:OE1	2:C:16:G:H2'	0.62	1.95	6	2
2:C:29:C:H6	2:C:29:C:O5'	0.61	1.78	6	13
2:D:55:C:H6	2:D:55:C:O5'	0.61	1.78	3	13
1:A:53:GLN:OE1	2:D:42:G:H2'	0.61	1.95	6	2
1:B:41:ASP:O	1:B:57:ILE:HD12	0.61	1.95	10	1
2:D:40:U:H6	2:D:40:U:O5'	0.61	1.79	13	2
1:B:43:LEU:HD22	2:C:18:A:C2	0.61	2.30	5	2
1:A:33:PHE:CB	1:A:39:ILE:HD11	0.61	2.26	4	4
1:A:16:LEU:HD21	1:A:29:LEU:HD21	0.61	1.73	11	3
1:A:33:PHE:CE1	1:A:67:ALA:HB1	0.61	2.31	6	8
1:B:33:PHE:CB	1:B:56:VAL:HG11	0.61	2.25	12	3
1:A:41:ASP:O	1:A:57:ILE:HD12	0.61	1.95	10	1
2:C:21:C:H6	2:C:21:C:O5'	0.61	1.79	8	12
1:A:90:SER:HB3	1:A:93:ILE:HD12	0.61	1.72	8	3
1:A:68:LEU:HD13	1:A:85:TYR:CZ	0.61	2.31	12	4
2:C:14:U:H6	2:C:14:U:O5'	0.60	1.79	13	5
2:D:40:U:H4'	2:D:41:U:OP1	0.60	1.96	4	1
2:C:22:G:O2'	2:C:23:G:H5'	0.60	1.96	5	1
1:B:100:PHE:CG	1:B:100:PHE:O	0.60	2.55	10	3
1:B:33:PHE:CE1	1:B:67:ALA:HB1	0.60	2.30	11	8
1:A:68:LEU:HD22	1:A:83:ILE:CG2	0.60	2.26	3	1
1:A:33:PHE:CD1	1:A:67:ALA:HB1	0.60	2.32	10	8
1:B:68:LEU:HD13	1:B:85:TYR:CZ	0.60	2.31	12	4
1:B:68:LEU:HD22	1:B:83:ILE:CG2	0.60	2.26	3	1
1:B:33:PHE:CB	1:B:39:ILE:HD11	0.60	2.26	4	4
1:B:33:PHE:CD1	1:B:67:ALA:HB1	0.60	2.31	10	8
1:B:10:THR:HG23	1:B:11:ILE:N	0.60	2.12	2	8
2:C:26:U:H6	2:C:26:U:O5'	0.60	1.79	3	4
1:A:100:PHE:CG	1:A:100:PHE:O	0.60	2.55	10	2
1:B:16:LEU:HD21	1:B:29:LEU:HD21	0.59	1.73	11	3
1:A:99:THR:HG22	1:B:96:MET:HE1	0.59	1.74	13	1
2:D:52:U:H6	2:D:52:U:O5'	0.59	1.79	3	3
2:C:14:U:H4'	2:C:15:U:OP1	0.59	1.96	4	1
1:A:10:THR:HG21	2:D:44:A:N6	0.59	2.12	6	2
1:A:11:ILE:HD11	1:A:33:PHE:CZ	0.59	2.33	13	3
1:B:33:PHE:CG	1:B:56:VAL:HG11	0.59	2.32	2	3
1:B:48:LEU:HD12	2:D:51:G:C1'	0.59	2.28	2	1
1:A:10:THR:HA	1:A:64:ALA:HB2	0.59	1.74	13	5
2:D:48:G:O2'	2:D:49:G:H5'	0.59	1.97	5	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:B:11:ILE:HD11	1:B:33:PHE:CZ	0.59	2.33	13	3
1:A:33:PHE:CG	1:A:56:VAL:HG11	0.59	2.32	2	3
1:A:101:VAL:HG11	1:B:101:VAL:HG21	0.58	1.74	13	1
2:C:15:U:H1'	2:C:16:G:OP2	0.58	1.99	9	2
1:B:39:ILE:HD11	1:B:56:VAL:HB	0.58	1.75	7	1
1:A:16:LEU:HD12	1:A:53:GLN:C	0.58	2.19	3	1
2:D:43:C:H4'	2:D:44:A:O4'	0.58	1.99	8	1
1:A:68:LEU:HA	1:A:83:ILE:HG21	0.58	1.76	9	2
2:D:41:U:H1'	2:D:42:G:OP1	0.58	1.98	11	2
1:A:48:LEU:HD12	2:C:25:G:C1'	0.58	2.29	2	1
1:A:71:MET:HB2	1:A:83:ILE:HD11	0.58	1.76	3	2
2:C:17:C:O3'	2:C:18:A:H8	0.58	1.82	4	5
1:B:49:LYS:O	2:C:16:G:H2'	0.58	1.99	11	2
2:C:28:U:O2'	2:C:29:C:H5'	0.58	1.98	11	11
2:D:54:U:O2'	2:D:55:C:H5'	0.58	1.98	11	11
1:A:10:THR:HG23	1:A:11:ILE:N	0.57	2.12	2	8
1:A:101:VAL:HG21	1:B:101:VAL:HG11	0.57	1.74	13	1
1:A:11:ILE:HD13	1:A:83:ILE:HG21	0.57	1.77	2	1
1:B:10:THR:HA	1:B:64:ALA:HB2	0.57	1.74	13	4
1:B:16:LEU:HD12	1:B:53:GLN:C	0.57	2.19	3	1
1:A:33:PHE:HB3	1:A:39:ILE:HD12	0.57	1.76	7	1
2:C:17:C:H4'	2:C:18:A:O4'	0.57	2.00	8	1
2:C:17:C:OP2	2:C:17:C:H6	0.57	1.83	4	1
2:C:17:C:H4'	2:C:18:A:O5'	0.57	2.00	10	1
2:D:43:C:H4'	2:D:44:A:O5'	0.57	1.99	10	1
2:C:15:U:H1'	2:C:16:G:OP1	0.57	1.98	11	2
2:D:41:U:H1'	2:D:42:G:OP2	0.57	1.99	9	2
1:A:48:LEU:O	1:A:48:LEU:HD13	0.57	2.00	1	2
1:B:68:LEU:HA	1:B:83:ILE:HG21	0.57	1.76	9	2
2:D:43:C:O3'	2:D:44:A:H8	0.57	1.82	4	5
2:D:43:C:H6	2:D:43:C:OP2	0.56	1.82	4	1
1:A:49:LYS:O	2:D:42:G:H2'	0.56	2.00	11	2
1:B:11:ILE:HD13	1:B:83:ILE:HG21	0.56	1.77	2	1
1:A:68:LEU:CD2	1:A:83:ILE:HG22	0.56	2.30	3	1
1:B:71:MET:HB2	1:B:83:ILE:HD11	0.56	1.76	3	2
1:A:39:ILE:HD11	1:A:56:VAL:HB	0.56	1.76	7	1
1:A:96:MET:HE2	1:B:99:THR:OG1	0.56	1.99	12	2
1:B:33:PHE:HB3	1:B:39:ILE:HD12	0.56	1.76	7	1
1:A:99:THR:O	1:A:99:THR:HG22	0.56	1.99	12	1
1:A:41:ASP:O	1:A:42:ILE:HD13	0.56	1.99	13	1
2:D:49:G:O5'	2:D:49:G:H8	0.56	1.84	11	9

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:68:LEU:CD2	1:B:83:ILE:HG22	0.56	2.30	3	1
1:A:99:THR:HG21	1:A:101:VAL:HG13	0.56	1.76	10	1
1:A:32:ILE:HD12	1:A:76:PHE:CE1	0.56	2.36	9	1
1:B:99:THR:HG22	1:B:99:THR:O	0.56	2.00	12	2
2:C:23:G:H8	2:C:23:G:O5'	0.56	1.84	11	8
1:B:99:THR:HG21	1:B:101:VAL:HG13	0.56	1.76	10	1
1:B:41:ASP:O	1:B:42:ILE:HD13	0.56	1.99	13	1
1:B:32:ILE:HG21	1:B:71:MET:SD	0.56	2.41	1	1
1:B:56:VAL:O	1:B:56:VAL:HG13	0.56	2.01	4	3
1:B:9:HIS:H	1:B:61:VAL:HG22	0.55	1.61	13	6
1:B:33:PHE:HB2	1:B:39:ILE:HD11	0.55	1.78	6	3
1:A:33:PHE:HB2	1:A:39:ILE:HD11	0.55	1.78	6	3
1:B:33:PHE:CD1	1:B:56:VAL:HG21	0.55	2.37	4	1
1:B:10:THR:HG21	2:C:18:A:N6	0.55	2.13	6	2
1:A:32:ILE:HG21	1:A:71:MET:SD	0.55	2.41	1	1
1:A:44:VAL:HG12	1:A:44:VAL:O	0.55	2.02	3	1
1:A:98:GLY:HA3	1:B:40:LEU:HD11	0.55	1.77	11	2
1:A:42:ILE:CD1	1:A:56:VAL:HG23	0.55	2.32	13	1
1:A:33:PHE:CD1	1:A:56:VAL:HG21	0.55	2.37	4	1
1:A:96:MET:HB3	1:B:99:THR:HG23	0.55	1.77	1	1
2:C:18:A:O2'	2:C:19:C:H5''	0.55	2.01	2	1
1:B:8:ASN:O	1:B:61:VAL:HG22	0.55	2.01	10	3
1:A:43:LEU:HD11	2:D:45:C:H1'	0.55	1.79	13	1
1:B:42:ILE:CD1	1:B:56:VAL:HG23	0.55	2.32	13	1
2:D:44:A:O2'	2:D:45:C:H5''	0.55	2.01	2	1
1:A:8:ASN:O	1:A:61:VAL:HG22	0.55	2.01	10	3
1:A:101:VAL:HG21	1:B:101:VAL:CG2	0.55	2.31	13	1
1:B:48:LEU:HD23	2:D:51:G:C1'	0.55	2.32	7	3
1:B:32:ILE:HD12	1:B:76:PHE:CE1	0.55	2.36	9	1
1:B:68:LEU:HD22	1:B:85:TYR:CE2	0.55	2.37	13	1
1:A:68:LEU:HD22	1:A:85:TYR:CE2	0.54	2.37	13	1
1:A:40:LEU:HD11	1:B:98:GLY:HA3	0.54	1.77	11	2
1:B:10:THR:HG23	1:B:86:ALA:HB3	0.54	1.80	12	1
1:A:9:HIS:H	1:A:61:VAL:HG22	0.54	1.63	1	6
1:A:56:VAL:O	1:A:56:VAL:HG13	0.54	2.03	5	3
2:C:24:A:N1	2:D:46:C:N3	0.54	2.56	10	2
1:A:55:PHE:CD2	2:D:44:A:C5	0.54	2.96	7	6
1:A:96:MET:HE1	1:B:99:THR:HG22	0.54	1.77	13	1
1:A:101:VAL:CG2	1:B:101:VAL:HG21	0.54	2.31	13	1
1:A:48:LEU:HD23	2:C:25:G:C1'	0.54	2.33	7	3
1:A:68:LEU:O	1:A:68:LEU:HD13	0.54	2.03	3	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:33:PHE:HE2	1:A:83:ILE:HD11	0.54	1.60	12	1
2:D:44:A:C2	2:D:45:C:N3	0.54	2.76	12	2
2:C:23:G:N2	2:C:24:A:C2	0.54	2.76	11	2
1:B:11:ILE:CG2	1:B:64:ALA:HB1	0.53	2.27	2	2
1:B:44:VAL:O	1:B:44:VAL:HG12	0.53	2.02	3	1
2:C:18:A:C2	2:C:19:C:N3	0.53	2.76	12	2
2:C:20:C:N3	2:D:50:A:N1	0.53	2.56	10	2
1:A:99:THR:HG23	1:B:96:MET:HB3	0.53	1.79	1	1
1:B:55:PHE:CD2	2:C:18:A:C5	0.53	2.96	7	6
2:D:49:G:N2	2:D:50:A:C2	0.53	2.77	11	2
2:D:40:U:O5'	2:D:40:U:H6	0.53	1.85	9	3
1:B:68:LEU:HD13	1:B:68:LEU:O	0.53	2.03	3	1
1:A:11:ILE:HG21	1:A:68:LEU:HB2	0.53	1.80	6	1
1:B:96:MET:O	1:B:99:THR:HG22	0.53	2.04	6	4
1:A:98:GLY:HA3	1:B:40:LEU:HD21	0.53	1.81	12	1
2:D:41:U:H4'	2:D:42:G:OP1	0.53	2.04	13	1
2:C:24:A:C2	2:D:46:C:N3	0.53	2.76	6	1
1:B:33:PHE:HE2	1:B:83:ILE:HD11	0.53	1.61	12	1
2:C:9:A:H8	2:C:9:A:O5'	0.53	1.87	8	6
1:A:96:MET:HE1	1:B:96:MET:HE1	0.53	1.81	13	1
1:B:20:ILE:HG21	1:B:25:LEU:CD1	0.53	2.34	10	3
2:C:15:U:H4'	2:C:16:G:OP1	0.53	2.04	13	1
1:B:13:ILE:HD12	1:B:29:LEU:HD21	0.53	1.81	2	1
2:D:44:A:C2	2:D:45:C:C2	0.53	2.97	6	5
1:B:68:LEU:HD22	1:B:83:ILE:HG22	0.52	1.81	3	1
1:A:96:MET:O	1:A:99:THR:HG22	0.52	2.03	6	4
2:C:20:C:N3	2:D:50:A:C2	0.52	2.76	6	1
2:C:18:A:C6	2:C:19:C:C5	0.52	2.97	10	1
1:B:68:LEU:HD12	1:B:83:ILE:O	0.52	2.04	12	1
1:B:48:LEU:HD13	1:B:48:LEU:C	0.52	2.25	8	7
1:A:10:THR:HG23	1:A:86:ALA:HB3	0.52	1.80	12	1
1:B:43:LEU:HD11	2:C:19:C:H1'	0.52	1.79	13	1
1:A:13:ILE:HD12	1:A:29:LEU:HD21	0.52	1.81	2	1
1:A:68:LEU:HD22	1:A:83:ILE:HG22	0.52	1.81	3	1
2:C:11:A:C2	2:C:12:C:C2	0.52	2.98	4	4
2:C:25:G:C6	2:D:39:A:N1	0.52	2.78	4	3
2:C:25:G:C6	2:D:39:A:C2	0.52	2.98	8	2
1:B:11:ILE:HG21	1:B:68:LEU:HB2	0.52	1.80	6	1
1:A:68:LEU:HD21	1:A:72:GLN:OE1	0.52	2.04	2	1
2:D:44:A:C6	2:D:45:C:C5	0.52	2.97	10	1
1:B:55:PHE:CD2	2:C:18:A:C6	0.52	2.98	13	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:55:PHE:CE2	2:D:44:A:C8	0.52	2.97	6	1
1:A:20:ILE:HG21	1:A:25:LEU:CD1	0.52	2.34	10	3
1:B:12:TYR:CE1	2:C:17:C:C5	0.52	2.98	4	5
2:C:25:G:N2	2:C:26:U:C2	0.52	2.78	12	7
2:C:18:A:C2	2:C:19:C:C2	0.52	2.98	6	5
2:D:51:G:N2	2:D:52:U:C2	0.52	2.78	1	7
1:B:28:SER:O	1:B:32:ILE:HD12	0.52	2.05	2	3
1:A:12:TYR:CE1	2:D:43:C:N3	0.52	2.78	5	2
1:B:55:PHE:CD1	2:C:18:A:C6	0.52	2.98	8	1
1:B:101:VAL:O	1:B:101:VAL:HG23	0.52	2.05	8	1
1:B:68:LEU:HD21	1:B:72:GLN:OE1	0.52	2.04	2	1
2:C:13:A:C2	2:D:51:G:C6	0.52	2.98	8	2
2:C:13:A:C2	2:D:51:G:C4	0.52	2.98	6	2
1:A:40:LEU:HD21	1:B:98:GLY:HA3	0.52	1.82	12	1
1:A:11:ILE:HD11	1:A:33:PHE:HE1	0.52	1.65	5	3
1:A:12:TYR:CE1	2:D:43:C:C5	0.52	2.97	4	5
2:C:20:C:N3	2:C:21:C:C2	0.52	2.78	3	2
2:C:26:U:C4	2:C:27:C:N4	0.52	2.78	5	10
1:A:28:SER:O	1:A:32:ILE:HD12	0.52	2.05	2	3
1:B:12:TYR:CE1	2:C:17:C:N3	0.52	2.78	5	2
1:B:55:PHE:CE2	2:C:18:A:C8	0.52	2.98	6	1
1:A:55:PHE:CD1	2:D:44:A:C6	0.52	2.98	8	1
1:B:12:TYR:CE1	1:B:55:PHE:CZ	0.52	2.98	12	1
2:D:35:A:H8	2:D:35:A:O5'	0.52	1.87	8	6
2:D:46:C:N3	2:D:47:C:C2	0.52	2.78	3	2
1:A:33:PHE:CE1	1:A:56:VAL:HG11	0.52	2.40	4	1
2:C:13:A:N1	2:D:51:G:C6	0.52	2.78	4	3
2:D:37:A:C2	2:D:38:C:C2	0.52	2.98	4	3
1:B:33:PHE:CE1	1:B:56:VAL:HG11	0.51	2.41	4	1
2:C:21:C:N4	2:D:47:C:N4	0.51	2.59	13	2
2:D:45:C:C5'	2:D:46:C:C6	0.51	2.93	9	1
2:D:34:G:N2	2:D:35:A:C4	0.51	2.79	11	1
1:A:55:PHE:CD2	2:D:44:A:C6	0.51	2.98	3	4
1:B:92:ILE:HD13	1:B:92:ILE:C	0.51	2.26	1	2
2:C:13:A:C2	2:D:51:G:C5	0.51	2.99	2	2
2:C:25:G:C5	2:D:39:A:C2	0.51	2.98	2	2
1:A:48:LEU:C	1:A:48:LEU:HD13	0.51	2.25	8	5
2:D:39:A:C2	2:D:40:U:C2	0.51	2.98	4	2
1:A:20:ILE:HG12	1:A:25:LEU:HD13	0.51	1.83	7	1
1:A:91:ASP:N	2:D:45:C:N3	0.51	2.58	11	1
2:D:43:C:H6	2:D:43:C:OP1	0.51	1.87	13	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:D:52:U:C4	2:D:53:C:N4	0.51	2.78	2	10
1:B:50:MET:HA	1:B:50:MET:HE2	0.51	1.83	4	4
2:D:36:G:C6	2:D:37:A:N6	0.51	2.79	2	1
1:A:101:VAL:O	1:A:101:VAL:HG23	0.51	2.05	8	1
1:A:101:VAL:CG2	1:B:101:VAL:HG11	0.51	2.35	13	1
1:A:92:ILE:HD13	1:A:92:ILE:C	0.51	2.26	1	2
1:A:12:TYR:CE1	1:A:55:PHE:CZ	0.51	2.98	12	1
1:A:68:LEU:HD12	1:A:83:ILE:O	0.51	2.04	12	1
1:A:101:VAL:HG11	1:B:101:VAL:CG2	0.51	2.35	13	1
1:A:44:VAL:HG22	1:A:54:ALA:CB	0.51	2.36	3	1
1:A:55:PHE:CE2	2:D:44:A:C5	0.51	2.99	12	2
1:B:55:PHE:CE2	2:C:18:A:C5	0.51	2.99	12	2
2:C:10:G:C6	2:C:11:A:N6	0.51	2.79	2	1
1:B:11:ILE:HD11	1:B:33:PHE:HE1	0.51	1.66	4	3
1:B:13:ILE:HD12	1:B:29:LEU:CD2	0.51	2.36	2	1
2:C:14:U:O2'	2:C:15:U:H5"	0.51	2.06	4	1
1:B:91:ASP:N	2:C:19:C:N3	0.51	2.59	11	1
1:A:12:TYR:CD2	2:D:43:C:C2	0.51	2.99	12	1
1:B:44:VAL:HG22	1:B:54:ALA:CB	0.51	2.36	3	1
2:C:13:A:C2	2:C:14:U:C2	0.51	2.98	4	2
2:C:19:C:C5'	2:C:20:C:C6	0.51	2.93	9	1
2:D:39:A:C5	2:D:40:U:C4	0.51	2.99	4	1
1:B:12:TYR:CD2	2:C:17:C:C2	0.50	2.99	12	1
2:D:47:C:O5'	2:D:47:C:H6	0.50	1.89	13	1
2:C:8:G:N2	2:C:9:A:C4	0.50	2.78	11	1
1:B:25:LEU:O	1:B:29:LEU:HD12	0.50	2.06	13	1
2:C:21:C:O5'	2:C:21:C:H6	0.50	1.90	13	1
2:C:23:G:C6	2:C:24:A:C6	0.50	3.00	9	10
2:D:49:G:C6	2:D:50:A:C6	0.50	3.00	4	10
1:A:9:HIS:HE1	1:A:93:ILE:HG21	0.50	1.64	11	1
1:A:11:ILE:CG1	1:A:56:VAL:HG22	0.50	2.36	7	2
1:A:27:LYS:O	1:A:31:ALA:HB3	0.50	2.07	13	2
1:A:55:PHE:CE1	2:D:44:A:C6	0.50	2.99	8	1
2:D:44:A:C6	2:D:45:C:C4	0.50	3.00	11	1
1:A:13:ILE:HD12	1:A:29:LEU:CD2	0.50	2.36	2	1
2:C:20:C:C4	2:C:21:C:C4	0.50	3.00	2	6
2:D:40:U:C2	2:D:42:G:N2	0.50	2.80	3	2
1:A:11:ILE:HG13	1:A:56:VAL:HG22	0.50	1.82	7	2
2:C:22:G:C2	2:D:48:G:C2	0.50	2.99	10	1
2:C:17:C:H6	2:C:17:C:OP1	0.50	1.89	13	1
2:C:26:U:C4	2:C:27:C:C4	0.50	3.00	11	7

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:D:46:C:C4	2:D:47:C:C4	0.50	3.00	5	6
1:A:92:ILE:HD12	1:A:93:ILE:H	0.50	1.66	5	3
1:B:92:ILE:HD12	1:B:93:ILE:H	0.50	1.66	5	2
1:B:55:PHE:CE1	2:C:18:A:C6	0.50	2.99	8	1
1:A:25:LEU:O	1:A:29:LEU:HD12	0.50	2.06	13	1
2:D:52:U:C4	2:D:53:C:C4	0.50	3.00	11	6
2:C:13:A:C5	2:C:14:U:C4	0.50	3.00	4	1
1:A:76:PHE:CE1	1:A:77:TYR:CD1	0.50	3.00	7	1
1:B:11:ILE:HG13	1:B:56:VAL:HG22	0.50	1.82	7	2
1:B:76:PHE:CE1	1:B:77:TYR:CD1	0.50	3.00	7	1
1:A:39:ILE:HG23	1:A:56:VAL:HG23	0.50	1.83	11	1
2:C:14:U:C2	2:C:16:G:N2	0.50	2.80	3	2
2:D:40:U:O2'	2:D:41:U:H5"	0.50	2.06	4	1
2:C:18:A:C6	2:C:19:C:C4	0.50	3.00	11	1
1:A:30:HIS:HA	1:A:39:ILE:HD13	0.49	1.84	3	1
1:B:55:PHE:CE1	2:C:18:A:C5	0.49	2.99	8	1
1:B:39:ILE:HG23	1:B:56:VAL:HG23	0.49	1.83	11	1
1:B:11:ILE:CG1	1:B:56:VAL:HG22	0.49	2.36	7	2
2:C:18:A:N1	2:C:19:C:C4	0.49	2.80	11	1
1:A:40:LEU:HD23	1:A:59:LYS:HB2	0.49	1.83	12	1
1:B:92:ILE:HD13	1:B:96:MET:HE3	0.49	1.84	13	1
1:A:40:LEU:HD13	1:A:58:PHE:O	0.49	2.07	5	1
1:A:55:PHE:CE1	2:D:44:A:C5	0.49	3.00	8	1
1:B:40:LEU:HD23	1:B:59:LYS:HB2	0.49	1.83	12	1
2:C:19:C:P	2:C:20:C:C5	0.49	3.06	6	1
1:B:90:SER:N	2:C:18:A:N6	0.49	2.61	8	1
1:A:96:MET:O	1:A:100:PHE:N	0.49	2.46	13	1
1:A:99:THR:CB	1:B:99:THR:HG21	0.49	2.38	3	1
1:B:13:ILE:HD13	1:B:29:LEU:CD2	0.49	2.32	11	3
1:B:33:PHE:HD1	1:B:67:ALA:HB1	0.49	1.67	10	1
1:A:48:LEU:HD23	2:C:25:G:O4'	0.49	2.08	6	1
1:B:48:LEU:HD23	2:D:51:G:O4'	0.49	2.08	6	2
1:A:33:PHE:HB3	1:A:56:VAL:HG11	0.49	1.83	12	2
1:B:40:LEU:HD13	1:B:58:PHE:O	0.49	2.07	5	1
1:B:20:ILE:HG12	1:B:25:LEU:HD13	0.49	1.83	7	1
1:B:27:LYS:O	1:B:31:ALA:HB3	0.49	2.07	13	2
1:B:99:THR:HG23	1:B:101:VAL:HG13	0.49	1.84	10	1
2:C:23:G:C2	2:C:24:A:C2	0.49	3.01	11	1
1:A:90:SER:N	2:D:44:A:N6	0.49	2.61	8	1
2:D:44:A:N1	2:D:45:C:C4	0.49	2.81	11	1
1:B:11:ILE:HD12	1:B:11:ILE:O	0.49	2.08	12	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:D:45:C:P	2:D:46:C:C5	0.48	3.05	6	1
1:B:71:MET:CB	1:B:83:ILE:HD11	0.48	2.38	7	1
1:B:33:PHE:HB3	1:B:56:VAL:HG11	0.48	1.84	12	2
2:D:49:G:C2	2:D:50:A:C4	0.48	3.01	10	1
1:A:83:ILE:O	1:A:83:ILE:HG23	0.48	2.07	12	1
1:A:96:MET:HB2	1:B:96:MET:HE2	0.48	1.85	10	1
1:A:11:ILE:CG2	1:A:64:ALA:HB1	0.48	2.27	2	3
2:C:23:G:C2	2:C:24:A:C4	0.48	3.01	10	1
1:A:98:GLY:HA3	1:B:40:LEU:HD13	0.48	1.86	3	1
1:B:30:HIS:HA	1:B:39:ILE:HD13	0.48	1.84	3	1
2:C:10:G:O5'	2:C:10:G:H8	0.48	1.91	3	2
1:A:30:HIS:O	1:A:39:ILE:HD12	0.48	2.09	8	2
1:A:99:THR:HG22	1:A:101:VAL:HG22	0.48	1.86	6	1
1:A:13:ILE:HG13	1:A:29:LEU:HD22	0.48	1.85	10	1
2:C:18:A:C5	2:C:19:C:N4	0.48	2.81	13	1
1:A:101:VAL:HG13	1:B:101:VAL:CG1	0.48	2.21	2	1
1:A:99:THR:HG21	1:B:99:THR:CB	0.48	2.38	3	1
1:A:96:MET:HE2	1:B:96:MET:HB2	0.48	1.85	10	1
1:B:13:ILE:HG13	1:B:29:LEU:HD22	0.48	1.85	10	1
1:A:99:THR:OG1	1:B:96:MET:HE2	0.48	2.07	12	1
1:A:40:LEU:HD13	1:B:98:GLY:HA3	0.48	1.86	3	1
1:A:85:TYR:O	2:D:43:C:H5	0.48	1.92	8	1
1:B:83:ILE:O	1:B:83:ILE:HG23	0.48	2.07	12	1
2:D:44:A:C5	2:D:45:C:N4	0.48	2.81	13	1
1:B:57:ILE:HD11	2:C:18:A:N1	0.48	2.24	2	1
1:B:90:SER:OG	1:B:92:ILE:HD11	0.48	2.09	4	1
1:A:99:THR:HG23	1:A:101:VAL:HG13	0.48	1.83	10	1
1:B:11:ILE:HG22	1:B:85:TYR:CD1	0.48	2.44	11	1
1:B:96:MET:O	1:B:100:PHE:N	0.48	2.46	13	1
2:C:18:A:P	2:C:18:A:C8	0.48	3.07	10	1
2:D:41:U:C1'	2:D:42:G:P	0.48	3.02	11	2
1:A:87:LYS:HG2	2:D:43:C:N3	0.48	2.24	11	5
2:C:22:G:C6	2:D:48:G:C6	0.48	3.02	2	1
1:A:96:MET:HE2	1:B:99:THR:CB	0.48	2.38	5	2
2:D:44:A:P	2:D:44:A:C8	0.48	3.07	10	1
1:A:92:ILE:HD12	1:A:92:ILE:C	0.47	2.30	3	5
1:B:30:HIS:O	1:B:39:ILE:HD12	0.47	2.09	8	2
1:A:55:PHE:CZ	2:D:44:A:N7	0.47	2.82	8	1
2:C:18:A:O5'	2:C:18:A:C8	0.47	2.67	11	3
2:D:44:A:O5'	2:D:44:A:C8	0.47	2.67	11	3
1:A:11:ILE:HG22	1:A:85:TYR:CD1	0.47	2.44	11	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:100:PHE:O	1:A:101:VAL:HG22	0.47	2.08	13	1
1:B:100:PHE:O	1:B:101:VAL:HG22	0.47	2.08	13	1
1:B:89:ASP:CA	2:C:18:A:N6	0.47	2.78	3	4
1:A:87:LYS:CD	2:D:43:C:N3	0.47	2.77	13	2
1:B:92:ILE:HD12	1:B:92:ILE:C	0.47	2.30	3	5
1:A:13:ILE:HG21	1:A:16:LEU:HD21	0.47	1.86	7	1
2:D:51:G:HO2'	2:D:52:U:H6	0.47	1.51	10	1
2:D:49:G:C2	2:D:50:A:C2	0.47	3.02	11	1
1:A:11:ILE:C	1:A:11:ILE:HD12	0.47	2.30	12	1
1:A:43:LEU:HD21	2:D:45:C:C1'	0.47	2.38	11	1
1:A:11:ILE:HD12	1:A:11:ILE:O	0.47	2.08	12	1
1:A:89:ASP:CA	2:D:44:A:N6	0.47	2.78	3	4
1:B:87:LYS:HG2	2:C:17:C:N3	0.47	2.24	11	3
2:C:12:C:C5	2:C:13:A:N7	0.47	2.83	4	1
1:B:11:ILE:HD12	1:B:11:ILE:C	0.47	2.30	3	2
2:D:36:G:H8	2:D:36:G:O5'	0.47	1.91	3	2
1:A:90:SER:OG	1:A:92:ILE:HD11	0.47	2.09	4	1
2:D:44:A:N3	2:D:44:A:H2'	0.47	2.24	5	1
1:A:71:MET:CB	1:A:83:ILE:HD11	0.47	2.38	7	1
1:B:55:PHE:CZ	2:C:18:A:N7	0.47	2.82	8	1
1:B:10:THR:CG2	2:C:18:A:N6	0.47	2.78	9	1
1:A:68:LEU:HD12	1:A:83:ILE:HG23	0.47	1.87	12	1
2:C:25:G:C4	2:D:39:A:C2	0.47	3.01	6	1
1:A:71:MET:HB3	1:A:83:ILE:HD11	0.47	1.87	7	1
1:B:9:HIS:ND1	1:B:89:ASP:O	0.47	2.48	9	1
2:C:19:C:O5'	2:C:20:C:C5	0.47	2.68	11	2
1:B:43:LEU:HD21	2:C:19:C:C1'	0.47	2.39	11	1
1:B:96:MET:HB3	1:B:100:PHE:HB2	0.47	1.86	13	1
2:D:36:G:C6	2:D:37:A:C6	0.47	3.03	2	3
2:D:38:C:C5	2:D:39:A:N7	0.47	2.83	4	1
1:A:10:THR:CG2	2:D:44:A:N6	0.47	2.78	9	1
1:A:33:PHE:HD1	1:A:67:ALA:HB1	0.47	1.67	10	1
1:B:68:LEU:HD12	1:B:83:ILE:HG23	0.47	1.87	12	1
1:A:96:MET:HE1	1:B:96:MET:CE	0.47	2.39	13	1
1:A:96:MET:CE	1:B:96:MET:CE	0.47	2.92	13	1
1:A:10:THR:OG1	1:A:56:VAL:O	0.47	2.26	13	3
2:C:15:U:C1'	2:C:16:G:P	0.47	3.02	11	2
2:C:23:G:O5'	2:C:23:G:H8	0.47	1.92	13	1
1:A:13:ILE:HD13	1:A:29:LEU:CD2	0.47	2.39	4	3
1:B:91:ASP:CB	2:C:19:C:N3	0.47	2.78	5	1
1:B:100:PHE:CD1	1:B:101:VAL:N	0.47	2.83	9	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:100:PHE:CD1	1:A:101:VAL:N	0.47	2.83	9	1
1:B:68:LEU:HD22	1:B:85:TYR:CZ	0.47	2.46	12	2
1:A:91:ASP:CB	2:D:45:C:N3	0.46	2.78	5	1
1:B:58:PHE:CD1	1:B:58:PHE:N	0.46	2.83	5	2
2:C:18:A:N3	2:C:18:A:H2'	0.46	2.24	5	1
1:A:96:MET:HB3	1:A:100:PHE:HB2	0.46	1.86	13	1
1:B:68:LEU:HD13	1:B:85:TYR:CG	0.46	2.45	13	1
1:A:100:PHE:CB	1:B:101:VAL:HG11	0.46	2.40	2	1
1:B:87:LYS:CD	2:C:17:C:N3	0.46	2.78	13	2
2:D:45:C:O5'	2:D:46:C:C5	0.46	2.68	11	2
1:A:68:LEU:HD22	1:A:85:TYR:CZ	0.46	2.46	12	2
1:A:12:TYR:CE1	1:A:84:GLN:CB	0.46	2.99	2	2
1:B:99:THR:HG22	1:B:101:VAL:HG22	0.46	1.86	6	1
2:D:43:C:P	2:D:43:C:O4'	0.46	2.74	12	1
1:B:55:PHE:CE2	2:C:18:A:N7	0.46	2.84	5	1
1:B:58:PHE:CZ	1:B:67:ALA:CB	0.46	2.99	6	3
1:B:71:MET:HB3	1:B:83:ILE:HD11	0.46	1.87	7	1
1:A:48:LEU:HD13	1:A:48:LEU:C	0.46	2.30	6	2
1:A:57:ILE:HD11	2:D:44:A:N1	0.46	2.25	2	1
2:C:19:C:O5'	2:C:20:C:C6	0.46	2.69	3	6
1:B:99:THR:HG23	1:B:100:PHE:N	0.46	2.26	6	3
2:D:39:A:O2'	2:D:40:U:P	0.46	2.74	4	1
1:A:58:PHE:CZ	1:A:67:ALA:CB	0.46	2.99	6	3
2:C:17:C:O3'	2:C:18:A:C8	0.46	2.69	11	3
2:D:43:C:O3'	2:D:44:A:C8	0.46	2.69	11	3
2:C:13:A:C6	2:D:51:G:C6	0.46	3.03	7	1
1:A:11:ILE:HD11	1:A:33:PHE:HE2	0.46	1.70	8	1
1:B:89:ASP:N	2:C:18:A:N6	0.46	2.63	10	2
1:A:43:LEU:HD21	2:D:45:C:H1'	0.46	1.88	11	1
2:C:23:G:N1	2:C:24:A:C6	0.46	2.84	2	5
1:A:89:ASP:N	2:D:44:A:N6	0.46	2.62	10	2
2:D:49:G:N1	2:D:50:A:C6	0.46	2.84	2	5
1:B:11:ILE:CG2	1:B:68:LEU:HD23	0.46	2.41	3	1
1:A:9:HIS:ND1	1:A:89:ASP:O	0.46	2.48	9	1
1:B:68:LEU:HD12	1:B:83:ILE:HG22	0.46	1.88	6	2
2:C:19:C:OP1	2:C:20:C:C6	0.46	2.69	1	1
1:B:42:ILE:HG23	1:B:55:PHE:O	0.46	2.11	6	1
1:A:89:ASP:O	2:D:45:C:N4	0.46	2.49	11	2
1:A:50:MET:HE2	1:A:50:MET:HA	0.46	1.87	4	2
1:A:55:PHE:CE2	2:D:44:A:N7	0.46	2.83	5	1
1:A:42:ILE:HG23	1:A:55:PHE:O	0.46	2.11	6	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:B:85:TYR:O	2:C:17:C:H5	0.46	1.93	8	1
1:B:89:ASP:O	2:C:19:C:N4	0.46	2.50	11	5
2:D:45:C:O5'	2:D:46:C:C6	0.46	2.69	3	6
1:A:58:PHE:CZ	1:A:67:ALA:HB2	0.46	2.46	4	2
2:C:13:A:O2'	2:C:14:U:P	0.46	2.74	4	1
1:A:12:TYR:CE2	1:A:84:GLN:CB	0.46	2.99	10	4
1:B:13:ILE:CG2	1:B:16:LEU:HD11	0.46	2.41	8	1
1:A:10:THR:CG2	1:A:56:VAL:O	0.45	2.64	13	6
2:D:45:C:OP1	2:D:46:C:N1	0.45	2.50	4	3
1:B:12:TYR:CB	1:B:55:PHE:CD2	0.45	2.99	9	4
1:A:99:THR:CB	1:B:96:MET:HE2	0.45	2.41	5	1
1:A:76:PHE:CE1	1:A:81:MET:CE	0.45	2.99	12	2
1:A:99:THR:CB	1:B:96:MET:CE	0.45	2.94	11	1
1:A:100:PHE:O	1:A:100:PHE:CG	0.45	2.68	11	1
2:D:40:U:H2'	2:D:42:G:N2	0.45	2.26	11	1
1:A:68:LEU:HD12	1:A:83:ILE:HG22	0.45	1.88	6	2
2:C:10:G:C6	2:C:11:A:C6	0.45	3.03	2	3
1:A:71:MET:CE	1:A:74:PHE:CD2	0.45	3.00	8	4
1:A:61:VAL:HG12	1:A:65:THR:HG1	0.45	1.72	7	1
1:B:13:ILE:HG21	1:B:16:LEU:HD21	0.45	1.86	7	1
1:A:68:LEU:HD13	1:A:85:TYR:CG	0.45	2.45	13	1
1:A:96:MET:CE	1:B:99:THR:HG22	0.45	2.42	13	1
1:B:12:TYR:CE1	1:B:84:GLN:CB	0.45	2.99	2	2
1:A:58:PHE:N	1:A:58:PHE:CD1	0.45	2.83	5	1
2:D:43:C:O2	2:D:43:C:O4'	0.45	2.35	10	4
2:C:25:G:C6	2:D:39:A:C6	0.45	3.04	7	1
2:D:48:G:H8	2:D:48:G:O5'	0.45	1.94	9	1
1:A:96:MET:CE	1:B:99:THR:CB	0.45	2.94	11	1
1:A:20:ILE:CD1	1:A:77:TYR:CD1	0.45	2.99	13	1
2:D:45:C:OP1	2:D:46:C:C6	0.45	2.69	1	1
1:A:99:THR:HG22	1:B:101:VAL:HG21	0.45	1.88	2	1
2:C:24:A:O2'	2:C:25:G:H5''	0.45	2.11	2	1
1:B:10:THR:HG1	1:B:56:VAL:C	0.45	2.15	4	1
1:B:12:TYR:CE2	1:B:84:GLN:CB	0.45	3.00	11	4
1:B:20:ILE:CD1	1:B:77:TYR:CE2	0.45	3.00	8	1
2:D:49:G:N2	2:D:50:A:N3	0.45	2.64	10	1
1:B:9:HIS:HE1	1:B:93:ILE:HG21	0.45	1.63	11	1
1:B:89:ASP:O	2:C:18:A:N6	0.45	2.46	11	1
1:A:58:PHE:CE2	1:A:67:ALA:CB	0.45	3.00	8	2
2:C:26:U:N3	2:C:27:C:C4	0.45	2.85	11	6
1:A:20:ILE:CD1	1:A:25:LEU:HD21	0.45	2.39	2	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:11:ILE:HD12	1:A:11:ILE:C	0.45	2.30	3	1
1:B:71:MET:CE	1:B:74:PHE:CD2	0.45	3.00	13	4
2:C:19:C:C5	2:C:19:C:OP2	0.45	2.70	5	1
1:A:89:ASP:O	2:D:44:A:N6	0.45	2.46	11	1
1:B:20:ILE:CD1	1:B:77:TYR:CD1	0.45	2.99	13	1
2:D:52:U:N3	2:D:53:C:C4	0.45	2.85	13	6
1:A:12:TYR:CB	1:A:55:PHE:CD2	0.45	2.99	9	4
2:C:19:C:OP2	2:C:20:C:C6	0.45	2.70	6	1
1:A:13:ILE:CG2	1:A:16:LEU:HD11	0.45	2.41	8	1
1:B:10:THR:CG2	1:B:56:VAL:O	0.45	2.64	13	6
1:A:101:VAL:HG11	1:B:100:PHE:CB	0.45	2.41	2	1
1:A:11:ILE:CG2	1:A:68:LEU:HD23	0.45	2.41	3	1
1:B:25:LEU:HD23	1:B:44:VAL:HG11	0.45	1.88	3	1
1:A:99:THR:HG23	1:A:100:PHE:N	0.45	2.26	6	3
2:C:19:C:O3'	2:C:20:C:C5	0.45	2.70	4	2
1:B:36:PHE:N	1:B:36:PHE:CD1	0.45	2.84	6	1
1:A:55:PHE:CB	2:D:44:A:C2	0.45	3.00	7	1
1:A:20:ILE:CD1	1:A:77:TYR:CE2	0.45	3.00	8	1
2:C:22:G:H8	2:C:22:G:O5'	0.45	1.94	9	1
1:B:16:LEU:CD2	1:B:76:PHE:CE1	0.45	3.00	11	1
2:C:14:U:H2'	2:C:16:G:N2	0.45	2.26	11	1
2:C:17:C:O4'	2:C:17:C:P	0.45	2.74	12	1
1:B:55:PHE:CD1	1:B:55:PHE:N	0.45	2.85	4	2
1:B:58:PHE:CZ	1:B:67:ALA:HB2	0.45	2.46	4	2
1:B:97:LYS:O	1:B:101:VAL:HG23	0.45	2.12	5	1
2:D:37:A:H8	2:D:37:A:O5'	0.45	1.95	5	1
1:B:58:PHE:CE2	1:B:67:ALA:CB	0.45	3.00	8	2
2:C:19:C:OP1	2:D:50:A:N1	0.45	2.50	11	4
2:C:19:C:O3'	2:C:20:C:C6	0.45	2.70	9	2
2:D:45:C:OP2	2:D:46:C:C6	0.45	2.70	6	1
2:C:19:C:OP2	2:D:50:A:C2	0.45	2.70	9	1
1:B:76:PHE:CE1	1:B:81:MET:CE	0.45	2.99	10	2
2:D:40:U:O2'	2:D:41:U:P	0.44	2.75	4	1
1:A:85:TYR:O	2:D:43:C:C5	0.44	2.70	10	4
1:A:97:LYS:O	1:A:101:VAL:HG23	0.44	2.12	5	1
1:B:41:ASP:HB3	1:B:57:ILE:HD12	0.44	1.89	11	2
1:A:101:VAL:HG11	1:B:101:VAL:CB	0.44	2.42	8	1
2:C:24:A:C2	2:D:45:C:OP2	0.44	2.70	9	1
2:C:19:C:OP1	2:C:20:C:N1	0.44	2.49	4	3
2:C:19:C:O5'	2:C:19:C:H6	0.44	1.95	4	2
1:B:87:LYS:CD	2:C:17:C:C4	0.44	3.00	2	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:D:42:G:O5'	2:D:42:G:C8	0.44	2.71	4	2
1:B:11:ILE:CD1	1:B:33:PHE:CE2	0.44	2.99	9	1
1:A:99:THR:OG1	1:B:96:MET:CE	0.44	2.66	12	3
2:D:35:A:O5'	2:D:35:A:C8	0.44	2.70	3	3
2:D:40:U:O5'	2:D:40:U:C6	0.44	2.70	1	2
2:D:45:C:O3'	2:D:46:C:C6	0.44	2.70	9	2
1:A:11:ILE:CD1	1:A:33:PHE:CE2	0.44	2.99	9	1
2:D:47:C:O5'	2:D:47:C:C6	0.44	2.71	10	2
1:B:90:SER:OG	1:B:92:ILE:HD12	0.44	2.13	11	1
1:A:44:VAL:O	1:A:44:VAL:HG23	0.44	2.13	8	5
1:A:9:HIS:CB	1:A:89:ASP:CB	0.44	2.96	7	3
1:A:87:LYS:CD	2:D:43:C:C4	0.44	3.00	2	2
2:D:49:G:C6	2:D:50:A:N6	0.44	2.86	2	2
2:D:50:A:O2'	2:D:51:G:H5"	0.44	2.12	2	1
1:A:55:PHE:CD1	1:A:55:PHE:N	0.44	2.85	4	2
2:D:45:C:O3'	2:D:46:C:C5	0.44	2.70	4	2
2:C:11:A:H8	2:C:11:A:O5'	0.44	1.95	5	2
1:A:11:ILE:CG1	1:A:56:VAL:CG2	0.44	2.96	7	2
1:A:30:HIS:CD2	1:A:39:ILE:CG2	0.44	3.01	7	1
1:B:30:HIS:CD2	1:B:39:ILE:CG2	0.44	3.01	7	1
1:A:101:VAL:CB	1:B:101:VAL:HG11	0.44	2.43	8	1
2:C:19:C:OP2	2:D:50:A:N1	0.44	2.51	9	1
1:B:44:VAL:HG23	1:B:44:VAL:O	0.44	2.13	8	5
1:A:7:PRO:HB2	1:A:61:VAL:HG12	0.44	1.89	2	1
1:B:7:PRO:HB2	1:B:61:VAL:HG12	0.44	1.89	2	1
2:D:51:G:OP1	2:D:51:G:C8	0.44	2.70	2	1
1:B:44:VAL:HG22	1:B:54:ALA:HB1	0.44	1.90	3	1
2:C:13:A:O2'	2:C:14:U:C6	0.44	2.70	4	1
2:C:17:C:O2	2:C:17:C:O4'	0.44	2.35	5	4
1:B:43:LEU:HD21	2:C:19:C:H1'	0.44	1.89	11	1
1:A:92:ILE:HD13	1:A:96:MET:HE3	0.44	1.88	13	1
1:A:100:PHE:O	1:A:101:VAL:CG2	0.44	2.65	13	1
1:A:101:VAL:HG21	1:B:101:VAL:CG1	0.44	2.42	13	1
1:A:96:MET:CE	1:B:99:THR:OG1	0.44	2.66	12	3
2:D:45:C:H6	2:D:45:C:O5'	0.44	1.95	1	2
1:A:20:ILE:HG22	1:A:21:LYS:N	0.44	2.28	2	5
1:A:99:THR:CG2	1:B:101:VAL:HG21	0.44	2.43	2	1
1:A:101:VAL:HG21	1:B:99:THR:HG22	0.44	1.88	2	1
1:B:16:LEU:HD22	1:B:25:LEU:HD22	0.44	1.88	2	1
2:C:23:G:C6	2:C:24:A:N6	0.44	2.86	2	2
2:C:24:A:N1	2:D:45:C:OP1	0.44	2.50	11	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:44:VAL:HG22	1:A:54:ALA:HB1	0.44	1.90	3	1
1:B:57:ILE:HD12	1:B:90:SER:OG	0.44	2.13	3	1
2:D:44:A:C5	2:D:45:C:C4	0.44	3.06	3	1
1:A:36:PHE:CD1	1:A:36:PHE:N	0.44	2.84	6	1
1:A:41:ASP:HB3	1:A:57:ILE:HD12	0.44	1.89	7	2
1:B:11:ILE:CG1	1:B:56:VAL:CG2	0.44	2.96	7	2
2:C:24:A:N1	2:D:45:C:OP2	0.44	2.51	9	1
1:B:13:ILE:HD11	1:B:33:PHE:HE2	0.44	1.72	10	1
2:C:23:G:N2	2:C:24:A:N3	0.44	2.65	10	1
1:B:100:PHE:O	1:B:101:VAL:CG2	0.44	2.65	13	1
1:A:101:VAL:HG21	1:B:99:THR:CG2	0.44	2.43	2	1
2:D:39:A:O2'	2:D:40:U:C6	0.44	2.70	4	1
2:D:43:C:OP2	2:D:43:C:C6	0.44	2.69	4	1
2:C:21:C:O5'	2:C:21:C:C6	0.44	2.71	10	3
1:A:16:LEU:CD2	1:A:76:PHE:CE1	0.44	3.00	11	1
1:A:89:ASP:N	2:D:44:A:H61	0.44	2.11	11	1
1:A:25:LEU:HD23	1:A:54:ALA:HB2	0.44	1.89	13	1
1:A:12:TYR:O	1:A:12:TYR:CG	0.44	2.71	11	10
1:A:16:LEU:HD22	1:A:25:LEU:HD22	0.44	1.88	2	1
2:D:45:C:C5	2:D:45:C:OP2	0.44	2.70	5	1
2:D:49:G:O5'	2:D:49:G:C8	0.44	2.70	10	1
1:A:99:THR:HG22	1:B:96:MET:CE	0.44	2.41	13	1
1:B:89:ASP:CA	2:C:18:A:H61	0.44	2.26	7	3
1:B:9:HIS:CB	1:B:89:ASP:CB	0.44	2.96	7	3
2:C:15:U:C6	2:C:15:U:OP2	0.44	2.71	10	2
1:B:10:THR:OG1	1:B:56:VAL:O	0.44	2.26	13	2
2:C:18:A:N6	2:C:19:C:N4	0.44	2.66	11	1
1:A:99:THR:HG22	1:A:99:THR:O	0.44	2.13	13	1
1:A:101:VAL:HG11	1:B:100:PHE:HB3	0.43	1.89	5	2
2:C:25:G:OP1	2:C:25:G:C8	0.43	2.70	2	1
1:A:89:ASP:HA	2:D:44:A:N6	0.43	2.28	3	4
1:A:92:ILE:CD1	1:A:93:ILE:CD1	0.43	2.96	5	2
1:B:55:PHE:CB	2:C:18:A:C2	0.43	3.01	7	1
2:C:25:G:O5'	2:C:25:G:C8	0.43	2.71	8	1
2:D:51:G:O5'	2:D:51:G:C8	0.43	2.71	8	1
1:B:10:THR:CG2	2:C:18:A:H61	0.43	2.26	9	1
1:A:90:SER:OG	1:A:92:ILE:HD12	0.43	2.13	11	1
2:C:14:U:O5'	2:C:14:U:C6	0.43	2.70	1	2
2:C:14:U:O2'	2:C:15:U:P	0.43	2.75	4	1
2:D:45:C:OP1	2:D:46:C:C2	0.43	2.71	8	2
1:B:25:LEU:HD23	1:B:54:ALA:HB2	0.43	1.89	13	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:68:LEU:CD1	1:B:83:ILE:HG22	0.43	2.43	6	2
2:C:18:A:C5	2:C:19:C:C4	0.43	3.06	3	1
1:B:85:TYR:O	2:C:17:C:C5	0.43	2.71	5	4
1:B:12:TYR:O	1:B:12:TYR:CG	0.43	2.71	11	9
2:C:16:G:O5'	2:C:16:G:C8	0.43	2.71	4	2
2:C:19:C:OP1	2:C:20:C:C4	0.43	2.72	6	2
1:A:96:MET:HE2	1:B:99:THR:HB	0.43	1.91	9	1
1:B:11:ILE:HG22	1:B:85:TYR:HA	0.43	1.91	11	1
2:D:44:A:N6	2:D:45:C:N4	0.43	2.66	11	1
1:A:68:LEU:CD1	1:A:83:ILE:HG22	0.43	2.43	6	2
1:B:12:TYR:HB3	1:B:55:PHE:CD2	0.43	2.48	7	6
1:A:99:THR:O	1:A:100:PHE:CD2	0.43	2.71	2	2
1:B:20:ILE:HG22	1:B:21:LYS:N	0.43	2.28	4	5
1:B:99:THR:O	1:B:100:PHE:CD2	0.43	2.71	2	2
1:A:25:LEU:HD23	1:A:44:VAL:HG11	0.43	1.88	3	1
1:A:12:TYR:HB3	1:A:55:PHE:CD2	0.43	2.48	7	6
1:A:87:LYS:CG	2:D:43:C:C2	0.43	3.01	11	3
1:A:16:LEU:HD12	1:A:53:GLN:CA	0.43	2.43	4	1
1:B:87:LYS:CG	2:C:17:C:C2	0.43	3.01	6	3
2:C:9:A:O5'	2:C:9:A:C8	0.43	2.71	3	3
1:A:100:PHE:HB3	1:B:101:VAL:HG11	0.43	1.90	5	2
1:B:10:THR:CG2	1:B:11:ILE:N	0.43	2.82	2	2
1:B:20:ILE:CD1	1:B:25:LEU:HD21	0.43	2.39	2	1
1:B:32:ILE:CD1	1:B:76:PHE:CZ	0.43	2.98	2	2
1:B:85:TYR:O	2:C:17:C:N4	0.43	2.52	7	3
2:C:19:C:OP1	2:C:20:C:C2	0.43	2.71	8	2
1:A:99:THR:CG2	1:A:101:VAL:CG2	0.43	2.96	11	1
1:A:32:ILE:HD13	1:A:71:MET:HE2	0.43	1.90	12	1
1:A:100:PHE:C	1:A:101:VAL:HG22	0.43	2.34	13	1
1:A:57:ILE:HD12	1:A:90:SER:OG	0.43	2.13	3	1
2:D:45:C:OP1	2:D:46:C:C4	0.43	2.72	6	2
2:D:41:U:O4'	2:D:42:G:C6	0.43	2.72	8	2
2:C:25:G:HO2'	2:C:26:U:H6	0.43	1.57	10	1
1:A:96:MET:CE	1:B:96:MET:HE1	0.43	2.43	13	1
1:A:89:ASP:CA	2:D:44:A:H61	0.43	2.25	1	3
1:B:17:ASN:HB2	1:B:20:ILE:HD11	0.43	1.91	2	1
1:B:89:ASP:HA	2:C:18:A:H61	0.43	1.74	7	3
2:D:51:G:H2'	2:D:52:U:C6	0.43	2.49	11	1
1:A:96:MET:O	1:A:99:THR:N	0.43	2.52	13	1
1:B:100:PHE:C	1:B:101:VAL:HG22	0.43	2.34	13	1
1:A:44:VAL:HG12	1:A:54:ALA:CB	0.43	2.44	1	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:44:VAL:HG12	1:B:54:ALA:CB	0.43	2.44	1	1
2:D:54:U:H2'	2:D:55:C:C6	0.43	2.49	11	5
1:B:89:ASP:HA	2:C:18:A:N6	0.43	2.28	3	4
2:D:42:G:OP2	2:D:42:G:C4	0.43	2.72	12	2
2:C:18:A:O5'	2:C:18:A:H8	0.43	1.97	10	2
1:B:99:THR:CG2	1:B:101:VAL:CG2	0.43	2.96	11	1
2:C:16:G:C4	2:C:16:G:OP2	0.43	2.72	12	1
2:D:41:U:O4'	2:D:42:G:C2	0.42	2.73	13	4
1:A:85:TYR:O	2:D:43:C:N4	0.42	2.52	12	3
2:C:11:A:C2	2:C:12:C:O2	0.42	2.72	6	2
2:C:15:U:C4'	2:C:16:G:OP2	0.42	2.67	6	1
1:B:14:ASN:OD1	2:C:16:G:C8	0.42	2.72	11	1
1:A:12:TYR:CD2	2:D:43:C:N3	0.42	2.87	12	1
1:B:92:ILE:O	1:B:96:MET:HG3	0.42	2.14	13	1
2:C:15:U:O4'	2:C:16:G:C2	0.42	2.72	13	4
2:C:12:C:O2'	2:C:13:A:H5'	0.42	2.15	5	1
1:A:89:ASP:HA	2:D:44:A:H61	0.42	1.74	7	2
1:B:45:SER:OG	2:D:50:A:N6	0.42	2.53	7	3
2:C:15:U:O4'	2:C:16:G:C6	0.42	2.72	8	2
2:D:41:U:C6	2:D:41:U:OP2	0.42	2.72	10	2
1:B:12:TYR:CE1	2:C:17:C:C2	0.42	3.06	9	1
1:A:14:ASN:OD1	2:D:42:G:C8	0.42	2.72	11	1
1:A:92:ILE:O	1:A:96:MET:HG3	0.42	2.14	13	1
1:B:33:PHE:O	1:B:58:PHE:CE1	0.42	2.72	2	1
1:B:85:TYR:O	2:C:17:C:C4	0.42	2.73	11	3
1:B:99:THR:CG2	1:B:100:PHE:N	0.42	2.82	4	3
1:B:56:VAL:O	1:B:58:PHE:CE1	0.42	2.73	5	2
2:C:16:G:OP2	2:C:16:G:C4	0.42	2.72	6	1
2:C:24:A:C2	2:D:46:C:O2	0.42	2.72	10	1
2:D:44:A:O5'	2:D:44:A:H8	0.42	1.97	12	2
1:A:11:ILE:HG22	1:A:85:TYR:HA	0.42	1.90	11	1
1:B:89:ASP:N	2:C:18:A:H61	0.42	2.12	11	1
2:D:48:G:C2	2:D:49:G:C5	0.42	3.08	11	1
2:D:43:C:OP1	2:D:43:C:C6	0.42	2.71	13	1
1:A:99:THR:CG2	1:A:100:PHE:N	0.42	2.82	4	3
1:B:61:VAL:HG12	1:B:65:THR:OG1	0.42	2.15	7	1
1:B:51:ARG:O	2:C:16:G:N2	0.42	2.53	8	1
1:A:10:THR:CG2	2:D:44:A:H61	0.42	2.27	9	1
1:A:100:PHE:O	1:A:100:PHE:CD2	0.42	2.72	11	2
2:C:23:G:O6	2:C:24:A:N6	0.42	2.53	12	1
1:B:11:ILE:CG1	1:B:56:VAL:CG1	0.42	2.97	8	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:C:21:C:O2	2:D:49:G:N2	0.42	2.53	2	7
2:D:44:A:H2'	2:D:45:C:C5	0.42	2.50	2	1
1:B:92:ILE:CD1	1:B:93:ILE:CD1	0.42	2.96	5	3
1:B:20:ILE:HB	1:B:25:LEU:HD21	0.42	1.91	8	1
1:B:100:PHE:O	1:B:100:PHE:CD2	0.42	2.72	11	2
2:C:20:C:O2	2:D:50:A:C2	0.42	2.73	10	1
2:D:49:G:O6	2:D:50:A:N6	0.42	2.53	12	1
2:C:23:G:N2	2:D:47:C:O2	0.42	2.53	1	7
2:D:40:U:O2	2:D:42:G:N2	0.42	2.53	1	2
1:A:17:ASN:HB2	1:A:20:ILE:HD11	0.42	1.91	2	1
1:A:85:TYR:O	2:D:43:C:C4	0.42	2.72	11	3
1:B:44:VAL:HG12	1:B:45:SER:N	0.42	2.30	2	2
2:C:27:C:O2	2:D:37:A:C2	0.42	2.72	3	1
1:B:16:LEU:HD12	1:B:53:GLN:CA	0.42	2.43	4	1
1:A:58:PHE:CD1	1:A:58:PHE:N	0.42	2.88	6	1
2:C:22:G:C2	2:C:23:G:C5	0.42	3.08	11	1
2:C:25:G:H2'	2:C:26:U:C6	0.42	2.49	11	1
1:A:11:ILE:CG1	1:A:56:VAL:CG1	0.42	2.98	13	5
2:C:28:U:H2'	2:C:29:C:C6	0.42	2.49	11	5
2:D:38:C:O2'	2:D:39:A:H5'	0.42	2.14	5	1
2:D:41:U:C1'	2:D:42:G:OP2	0.42	2.68	9	2
1:A:61:VAL:HG12	1:A:65:THR:OG1	0.42	2.15	7	1
1:A:20:ILE:CD1	1:A:77:TYR:CD2	0.42	3.02	9	1
2:C:19:C:H5'	2:C:20:C:C6	0.42	2.50	9	1
2:D:45:C:H5'	2:D:46:C:C6	0.42	2.50	9	1
1:A:101:VAL:CG1	1:B:101:VAL:HG21	0.42	2.42	13	1
2:C:17:C:OP1	2:C:17:C:C6	0.42	2.72	13	1
1:A:33:PHE:O	1:A:58:PHE:CZ	0.42	2.72	2	1
1:B:33:PHE:O	1:B:58:PHE:CZ	0.42	2.72	2	1
2:C:18:A:H2'	2:C:18:A:OP2	0.42	2.15	2	1
1:B:57:ILE:HG22	1:B:58:PHE:N	0.42	2.30	4	2
2:D:41:U:C4'	2:D:42:G:OP2	0.42	2.67	6	1
1:B:12:TYR:CD2	2:C:17:C:N3	0.42	2.87	12	1
1:A:20:ILE:CG2	1:A:24:GLU:CB	0.42	2.98	8	3
2:D:37:A:C2	2:D:38:C:O2	0.42	2.73	3	1
1:A:56:VAL:O	1:A:58:PHE:CE1	0.42	2.73	5	2
2:D:52:U:O5'	2:D:52:U:C6	0.42	2.70	5	1
1:B:53:GLN:OE1	2:C:16:G:C8	0.42	2.73	6	3
2:C:26:U:O4	2:C:27:C:N4	0.42	2.53	10	2
1:A:13:ILE:HA	1:A:83:ILE:HG23	0.42	1.92	11	1
1:A:58:PHE:CD2	1:A:64:ALA:HA	0.42	2.50	12	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:96:MET:O	1:B:99:THR:N	0.42	2.52	13	1
1:A:44:VAL:HG12	1:A:45:SER:N	0.42	2.30	2	2
1:B:13:ILE:CD1	1:B:29:LEU:CD2	0.42	2.98	2	1
2:C:20:C:OP2	2:C:21:C:C5	0.42	2.73	2	1
1:B:99:THR:CG2	1:B:101:VAL:HG22	0.42	2.45	6	2
1:A:45:SER:OG	2:C:24:A:N6	0.42	2.52	7	2
1:B:13:ILE:HA	1:B:83:ILE:HG23	0.42	1.92	11	1
2:C:18:A:C6	2:C:19:C:N4	0.42	2.88	11	2
1:B:55:PHE:CZ	2:C:18:A:C8	0.41	3.08	5	1
1:B:76:PHE:O	1:B:77:TYR:CB	0.41	2.68	6	1
1:B:89:ASP:C	2:C:18:A:N6	0.41	2.73	8	1
1:B:20:ILE:CD1	1:B:77:TYR:CD2	0.41	3.02	9	1
2:D:52:U:O4	2:D:53:C:N4	0.41	2.53	10	2
1:A:86:ALA:HA	2:D:43:C:N3	0.41	2.30	11	2
1:B:12:TYR:O	1:B:12:TYR:CD1	0.41	2.73	11	1
2:C:15:U:C2	2:C:16:G:C6	0.41	3.08	13	1
1:B:86:ALA:HA	2:C:17:C:N3	0.41	2.30	13	3
2:C:14:U:O2	2:C:16:G:N2	0.41	2.53	1	2
1:A:33:PHE:O	1:A:58:PHE:CE1	0.41	2.72	2	1
1:A:48:LEU:HD23	1:A:48:LEU:C	0.41	2.35	2	1
1:A:87:LYS:HG3	2:D:43:C:C2	0.41	2.50	6	2
1:A:51:ARG:O	2:D:42:G:N2	0.41	2.53	8	1
1:B:12:TYR:CD1	1:B:55:PHE:CE2	0.41	3.08	12	1
2:C:10:G:O6	2:C:11:A:N6	0.41	2.53	2	1
2:D:44:A:H2'	2:D:44:A:OP2	0.41	2.15	2	1
1:A:96:MET:CE	1:B:96:MET:O	0.41	2.68	4	1
1:A:99:THR:CG2	1:A:101:VAL:HG22	0.41	2.45	6	2
1:A:13:ILE:HG22	1:A:16:LEU:HD11	0.41	1.92	8	1
1:A:89:ASP:C	2:D:44:A:N6	0.41	2.73	8	1
2:C:23:G:C2	2:D:47:C:O2	0.41	2.73	10	1
1:A:12:TYR:O	1:A:12:TYR:CD1	0.41	2.74	11	1
1:B:12:TYR:N	1:B:84:GLN:O	0.41	2.47	12	1
1:B:87:LYS:HD2	2:C:17:C:C4	0.41	2.51	2	2
2:C:21:C:O2'	2:C:22:G:H5'	0.41	2.15	2	1
1:A:55:PHE:CZ	2:D:44:A:C8	0.41	3.08	5	1
1:A:76:PHE:O	1:A:77:TYR:CB	0.41	2.68	6	1
1:A:96:MET:O	1:A:99:THR:CG2	0.41	2.69	6	1
1:A:20:ILE:HB	1:A:25:LEU:HD21	0.41	1.91	8	1
1:B:13:ILE:HG22	1:B:16:LEU:HD11	0.41	1.92	8	1
2:D:44:A:C6	2:D:45:C:N4	0.41	2.89	11	2
1:B:58:PHE:CD2	1:B:64:ALA:HA	0.41	2.50	12	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:43:LEU:HD11	2:C:19:C:C1'	0.41	2.46	13	1
1:B:55:PHE:CE1	1:B:86:ALA:HB2	0.41	2.50	8	1
1:B:20:ILE:CG2	1:B:24:GLU:CB	0.41	2.99	4	5
1:A:12:TYR:CE2	1:A:14:ASN:OD1	0.41	2.74	5	2
2:C:9:A:C6	2:C:10:G:C6	0.41	3.08	5	1
1:B:9:HIS:CE1	1:B:93:ILE:CG2	0.41	2.99	7	2
1:A:55:PHE:CE1	1:A:86:ALA:HB2	0.41	2.50	8	1
1:B:11:ILE:HD11	1:B:33:PHE:HE2	0.41	1.70	8	1
2:C:15:U:OP2	2:C:15:U:C5	0.41	2.74	10	1
1:A:12:TYR:CD1	1:A:55:PHE:CE2	0.41	3.08	12	1
2:D:41:U:C2	2:D:42:G:C6	0.41	3.08	13	1
1:B:48:LEU:HD23	1:B:48:LEU:C	0.41	2.35	2	1
2:C:18:A:H2'	2:C:19:C:C5	0.41	2.50	2	1
1:A:86:ALA:HA	2:D:43:C:C2	0.41	2.51	4	1
1:A:96:MET:O	1:B:96:MET:CE	0.41	2.68	4	1
2:D:39:A:C4'	2:D:40:U:OP1	0.41	2.69	4	1
1:B:12:TYR:CZ	2:C:17:C:C2	0.41	3.09	5	1
1:A:12:TYR:CE1	2:D:43:C:C2	0.41	3.08	9	1
1:B:9:HIS:N	1:B:61:VAL:HG22	0.41	2.31	11	1
2:D:37:A:O5'	2:D:37:A:H8	0.41	1.99	11	1
1:A:12:TYR:CE1	1:A:55:PHE:CE2	0.41	3.08	12	1
1:B:32:ILE:O	1:B:36:PHE:CE2	0.41	2.74	12	1
1:A:32:ILE:O	1:A:36:PHE:CZ	0.41	2.74	3	3
1:B:68:LEU:HD13	1:B:85:TYR:CE1	0.41	2.51	2	1
2:D:36:G:O6	2:D:37:A:N6	0.41	2.53	2	1
1:B:33:PHE:O	1:B:36:PHE:CE2	0.41	2.74	5	1
2:D:35:A:C6	2:D:36:G:C6	0.41	3.08	5	1
1:A:11:ILE:HG12	1:A:56:VAL:CG2	0.41	2.46	7	1
2:C:21:C:O2	2:D:49:G:C2	0.41	2.73	10	1
1:A:92:ILE:HD13	1:A:93:ILE:HG13	0.41	1.93	1	1
1:B:12:TYR:CE1	1:B:84:GLN:HB2	0.41	2.51	1	2
1:A:10:THR:CG2	1:A:11:ILE:N	0.41	2.83	3	2
1:A:13:ILE:CD1	1:A:29:LEU:CD2	0.41	2.98	2	1
1:B:32:ILE:O	1:B:36:PHE:CZ	0.41	2.74	3	3
2:C:12:C:C4	2:C:13:A:N7	0.41	2.88	2	1
2:D:38:C:C4	2:D:39:A:N7	0.41	2.89	2	1
2:D:47:C:O2'	2:D:48:G:H5'	0.41	2.15	2	1
1:B:10:THR:OG1	1:B:58:PHE:N	0.41	2.54	3	1
2:C:11:A:C2	2:D:53:C:O2	0.41	2.74	3	1
2:C:23:G:HO2'	2:C:24:A:H5'	0.41	1.74	3	1
1:A:51:ARG:O	2:D:42:G:C2	0.41	2.74	4	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:57:ILE:HG22	1:A:58:PHE:N	0.41	2.30	4	2
2:C:19:C:OP1	2:C:20:C:C1'	0.41	2.69	5	2
2:C:19:C:C2'	2:C:20:C:OP1	0.41	2.69	4	2
1:A:33:PHE:O	1:A:36:PHE:CE2	0.41	2.74	9	2
2:C:15:U:C1'	2:C:16:G:C6	0.41	3.04	8	1
2:D:45:C:C2'	2:D:46:C:OP1	0.41	2.69	8	1
1:A:51:ARG:O	2:D:42:G:C5	0.41	2.74	11	2
1:A:32:ILE:O	1:A:36:PHE:CE2	0.41	2.74	12	1
1:A:57:ILE:HD12	1:A:90:SER:H	0.41	1.76	12	1
1:B:12:TYR:CE1	1:B:55:PHE:CE2	0.41	3.08	12	1
1:B:57:ILE:HD12	1:B:90:SER:H	0.41	1.76	12	1
1:B:99:THR:O	1:B:99:THR:CG2	0.41	2.69	12	1
1:A:12:TYR:CE1	1:A:84:GLN:HB2	0.41	2.51	8	2
1:A:87:LYS:HD2	2:D:43:C:C4	0.41	2.51	13	2
1:B:90:SER:CB	1:B:93:ILE:CD1	0.41	2.99	2	1
1:A:12:TYR:CZ	2:D:43:C:C2	0.41	3.09	5	1
1:A:10:THR:CG2	1:A:89:ASP:HA	0.41	2.46	6	1
1:A:58:PHE:CD1	1:A:64:ALA:HA	0.41	2.51	6	1
2:C:15:U:O4'	2:C:16:G:C5	0.41	2.74	7	1
1:A:29:LEU:HD23	1:A:76:PHE:CE2	0.41	2.51	9	1
1:B:51:ARG:O	2:C:16:G:C6	0.41	2.74	10	1
1:B:51:ARG:O	2:C:16:G:C5	0.41	2.73	11	2
1:A:84:GLN:HB3	2:D:43:C:N4	0.41	2.31	12	1
1:B:86:ALA:HA	2:C:17:C:C2	0.40	2.50	4	2
1:B:9:HIS:HB3	1:B:89:ASP:CB	0.40	2.46	10	2
2:C:13:A:C4'	2:C:14:U:OP1	0.40	2.69	4	1
2:D:45:C:OP1	2:D:46:C:C1'	0.40	2.69	5	2
1:A:33:PHE:O	1:A:36:PHE:CD2	0.40	2.74	5	1
1:B:58:PHE:CD1	1:B:64:ALA:HA	0.40	2.51	6	1
1:B:87:LYS:HG3	2:C:17:C:C2	0.40	2.51	6	2
1:A:53:GLN:OE1	2:D:42:G:C8	0.40	2.73	7	2
1:B:11:ILE:HG12	1:B:56:VAL:CG2	0.40	2.46	7	1
2:D:41:U:C1'	2:D:42:G:C6	0.40	3.04	8	1
1:B:29:LEU:HD23	1:B:76:PHE:CE2	0.40	2.51	9	1
1:A:47:SER:O	1:A:49:LYS:N	0.40	2.54	10	1
1:A:96:MET:CE	1:B:99:THR:HB	0.40	2.47	11	1
1:A:99:THR:CG2	1:B:101:VAL:CG2	0.40	3.00	2	1
1:A:99:THR:N	1:B:96:MET:CE	0.40	2.84	2	1
1:A:101:VAL:CG2	1:B:99:THR:HG21	0.40	2.46	2	1
2:D:46:C:OP2	2:D:47:C:C5	0.40	2.74	2	1
2:D:40:U:C4'	2:D:41:U:OP1	0.40	2.69	4	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:B:12:TYR:CE2	1:B:14:ASN:OD1	0.40	2.74	5	1
1:B:58:PHE:O	1:B:59:LYS:CG	0.40	2.69	6	1
1:A:43:LEU:HD13	1:A:44:VAL:H	0.40	1.77	7	1
1:B:14:ASN:ND2	2:C:16:G:N7	0.40	2.69	8	1
1:B:39:ILE:HG21	1:B:42:ILE:HD11	0.40	1.94	9	1
2:C:23:G:O5'	2:C:23:G:C8	0.40	2.71	10	1
1:A:99:THR:HB	1:B:96:MET:CE	0.40	2.47	11	1
1:A:99:THR:O	1:A:99:THR:CG2	0.40	2.69	12	1
1:B:43:LEU:HD13	2:C:18:A:C2	0.40	2.52	1	1
2:C:13:A:C6	2:D:51:G:O6	0.40	2.75	2	1
1:A:74:PHE:O	1:A:81:MET:N	0.40	2.55	6	1
1:A:74:PHE:CG	1:A:75:PRO:HD2	0.40	2.52	7	1
1:B:74:PHE:CG	1:B:75:PRO:HD2	0.40	2.52	7	1
1:A:20:ILE:CB	1:A:25:LEU:HD21	0.40	2.47	8	1
1:A:39:ILE:HG21	1:A:42:ILE:HD11	0.40	1.94	9	1
1:A:32:ILE:CD1	1:A:76:PHE:CZ	0.40	3.04	13	1
1:A:100:PHE:CD1	1:A:100:PHE:O	0.40	2.74	13	1
1:B:100:PHE:CD1	1:B:100:PHE:O	0.40	2.74	13	1
1:A:10:THR:OG1	1:A:58:PHE:N	0.40	2.54	3	1
1:B:43:LEU:HD23	2:C:18:A:O2'	0.40	2.16	3	1
2:C:15:U:C2	2:C:16:G:O6	0.40	2.75	3	1
2:D:46:C:C4	2:D:47:C:N3	0.40	2.89	3	1
1:A:87:LYS:HG2	2:D:43:C:C2	0.40	2.51	4	1
2:C:15:U:C1'	2:C:16:G:OP2	0.40	2.69	6	1
1:B:36:PHE:CE1	1:B:67:ALA:HB2	0.40	2.51	11	1
1:A:101:VAL:CG2	1:B:101:VAL:CG2	0.40	2.97	13	1
1:A:43:LEU:HD13	2:D:44:A:C2	0.40	2.52	1	1
1:B:51:ARG:O	2:C:16:G:C2	0.40	2.74	4	1
1:B:33:PHE:O	1:B:36:PHE:CD2	0.40	2.74	5	1
1:B:61:VAL:HG12	1:B:65:THR:HG1	0.40	1.77	7	1
2:D:41:U:O4'	2:D:42:G:C5	0.40	2.74	7	1
1:A:16:LEU:HD21	1:A:29:LEU:CD2	0.40	2.46	8	1
1:A:9:HIS:HB3	1:A:89:ASP:CB	0.40	2.46	10	1
1:A:9:HIS:N	1:A:61:VAL:HG22	0.40	2.31	11	1
1:B:9:HIS:CD2	1:B:59:LYS:O	0.40	2.75	12	1

6.3 Torsion angles ⓘ

6.3.1 Protein backbone ⓘ

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 NMR entries. The Analysed column shows the number of residues for which the backbone conformation was analysed and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	95/101 (94%)	74±3 (78±3%)	16±4 (17±4%)	5±1 (5±2%)	4	24
1	B	95/101 (94%)	74±3 (78±3%)	16±4 (17±4%)	5±1 (5±2%)	4	24
All	All	2470/2626 (94%)	1918 (78%)	426 (17%)	126 (5%)	4	24

All 40 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	89	ASP	12
1	B	89	ASP	12
1	A	100	PHE	10
1	B	100	PHE	10
1	A	59	LYS	7
1	A	78	ASP	7
1	B	59	LYS	7
1	B	78	ASP	7
1	A	9	HIS	6
1	B	9	HIS	6
1	A	54	ALA	3
1	B	54	ALA	3
1	A	46	ARG	2
1	A	71	MET	2
1	B	46	ARG	2
1	B	71	MET	2
1	A	79	LYS	2
1	B	79	LYS	2
1	A	37	GLY	2
1	B	37	GLY	2
1	A	15	ASN	1
1	B	15	ASN	1
1	A	45	SER	1
1	B	45	SER	1
1	A	19	LYS	1
1	A	38	GLN	1

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Mol	Chain	Res	Type	Models (Total)
1	B	19	LYS	1
1	B	38	GLN	1
1	A	90	SER	1
1	B	90	SER	1
1	A	62	SER	1
1	B	62	SER	1
1	A	16	LEU	1
1	B	16	LEU	1
1	A	6	ARG	1
1	B	6	ARG	1
1	A	83	ILE	1
1	A	84	GLN	1
1	B	83	ILE	1
1	B	84	GLN	1

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	86/90 (96%)	72±3 (84±4%)	14±3 (16±4%)	5	41
1	B	86/90 (96%)	72±3 (84±4%)	14±3 (16±4%)	5	41
All	All	2236/2340 (96%)	1870 (84%)	366 (16%)	5	41

All 104 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	43	LEU	13
1	A	74	PHE	13
1	B	43	LEU	13
1	B	74	PHE	13
1	A	36	PHE	10
1	A	100	PHE	10
1	B	36	PHE	10
1	B	100	PHE	10
1	A	9	HIS	9
1	A	81	MET	9

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Mol	Chain	Res	Type	Models (Total)
1	B	9	HIS	9
1	B	81	MET	9
1	A	90	SER	8
1	B	90	SER	8
1	A	41	ASP	7
1	B	41	ASP	7
1	A	76	PHE	6
1	B	76	PHE	6
1	A	40	LEU	6
1	A	45	SER	6
1	B	40	LEU	6
1	B	45	SER	6
1	A	22	LYS	5
1	B	22	LYS	5
1	A	87	LYS	5
1	B	87	LYS	5
1	A	51	ARG	4
1	B	51	ARG	4
1	A	46	ARG	4
1	B	46	ARG	4
1	A	78	ASP	4
1	B	78	ASP	4
1	A	28	SER	3
1	A	92	ILE	3
1	A	96	MET	3
1	B	28	SER	3
1	B	92	ILE	3
1	B	96	MET	3
1	A	89	ASP	3
1	B	89	ASP	3
1	A	50	MET	3
1	A	53	GLN	3
1	B	50	MET	3
1	B	53	GLN	3
1	A	48	LEU	2
1	A	49	LYS	2
1	B	48	LEU	2
1	B	49	LYS	2
1	A	10	THR	2
1	A	15	ASN	2
1	A	21	LYS	2
1	A	79	LYS	2

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Mol	Chain	Res	Type	Models (Total)
1	B	10	THR	2
1	B	15	ASN	2
1	B	21	LYS	2
1	B	79	LYS	2
1	A	6	ARG	2
1	A	27	LYS	2
1	B	6	ARG	2
1	B	27	LYS	2
1	A	71	MET	2
1	B	71	MET	2
1	A	70	SER	2
1	A	77	TYR	2
1	A	82	ARG	2
1	A	99	THR	2
1	B	70	SER	2
1	B	77	TYR	2
1	B	82	ARG	2
1	B	99	THR	2
1	A	23	ASP	2
1	B	23	ASP	2
1	A	18	GLU	2
1	A	88	THR	2
1	B	18	GLU	2
1	B	88	THR	2
1	A	19	LYS	1
1	A	24	GLU	1
1	A	34	SER	1
1	A	59	LYS	1
1	B	19	LYS	1
1	B	24	GLU	1
1	B	34	SER	1
1	B	59	LYS	1
1	A	66	ASN	1
1	B	66	ASN	1
1	A	58	PHE	1
1	A	68	LEU	1
1	B	58	PHE	1
1	B	68	LEU	1
1	A	91	ASP	1
1	B	91	ASP	1
1	A	83	ILE	1
1	B	83	ILE	1

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Mol	Chain	Res	Type	Models (Total)
1	A	72	GLN	1
1	B	72	GLN	1
1	A	55	PHE	1
1	B	55	PHE	1
1	A	16	LEU	1
1	B	16	LEU	1
1	A	84	GLN	1
1	B	84	GLN	1
1	A	95	LYS	1
1	B	95	LYS	1

6.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers	Suiteness
2	C	21/22 (95%)	14±1 (67±6%)	4±1 (19±5%)	0.06±0.02
2	D	21/22 (95%)	14±1 (67±6%)	4±1 (19±5%)	0.06±0.02
All	All	566/572 (99%)	368 (65%)	104 (18%)	0.06

The overall RNA backbone suiteness is 0.06.

All unique RNA backbone outliers are listed below:

Mol	Chain	Res	Type	Models (Total)
2	C	11	A	13
2	C	16	G	13
2	C	17	C	13
2	C	18	A	13
2	D	37	A	13
2	D	42	G	13
2	D	43	C	13
2	D	44	A	13
2	C	14	U	12
2	C	25	G	12
2	D	40	U	12
2	D	51	G	12
2	C	10	G	11
2	C	20	C	11
2	D	36	G	11
2	D	46	C	11
2	C	19	C	11
2	D	45	C	11
2	C	13	A	10

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Mol	Chain	Res	Type	Models (Total)
2	C	21	C	10
2	D	39	A	10
2	D	47	C	10
2	C	22	G	9
2	D	48	G	9
2	C	9	A	9
2	D	35	A	9
2	C	26	U	8
2	C	28	U	8
2	D	52	U	8
2	D	54	U	8
2	C	15	U	8
2	D	41	U	8
2	C	23	G	5
2	D	49	G	5
2	C	24	A	4
2	D	50	A	4
2	C	27	C	4
2	D	53	C	4

All unique RNA pucker outliers are listed below:

Mol	Chain	Res	Type	Models (Total)
2	C	17	C	13
2	D	43	C	13
2	C	16	G	11
2	D	42	G	11
2	C	8	G	10
2	D	34	G	10
2	C	18	A	5
2	D	44	A	5
2	C	13	A	4
2	D	39	A	4
2	C	14	U	4
2	D	40	U	4
2	C	15	U	4
2	D	41	U	4
2	C	25	G	1
2	D	51	G	1

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

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

6.5 Carbohydrates ⓘ

There are no monosaccharides in this entry.

6.6 Ligand geometry ⓘ

There are no ligands in this entry.

6.7 Other polymers ⓘ

There are no such molecules in this entry.

6.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

7   Chemical shift validation (i)

No chemical shift data were provided