



Full wwPDB NMR Structure Validation Report ⓘ

Feb 12, 2022 – 07:49 PM EST

PDB ID : 1FNX
Title : SOLUTION STRUCTURE OF THE HUC RBD1-RBD2 COMPLEXED WITH THE AU-RICH ELEMENT
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Deposited on : 2000-08-24

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
RCI : v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV : Wang et al. (2010)
ShiftChecker : 2.26
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.26

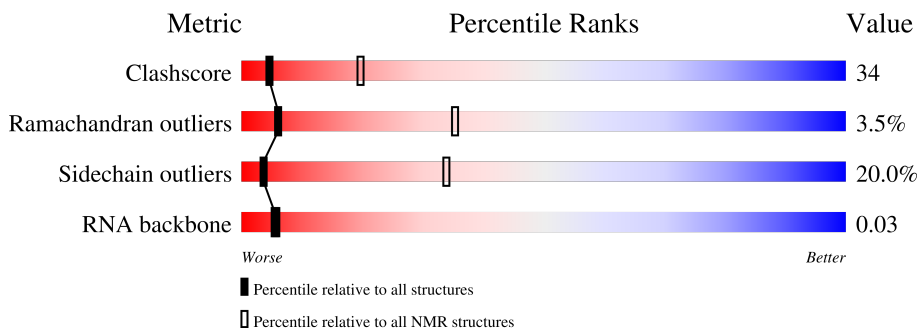
1 Overall quality at a glance

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	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 $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	R	10	
2	H	174	

2 Ensemble composition and analysis

This entry contains 21 models. Model 21 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	H:38-H:71, H:79-H:119, H:124-H:188, H:198-H:204 (147)	0.96	21

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

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

The models can be grouped into 3 clusters and 6 single-model clusters were found.

Cluster number	Models
1	1, 4, 6, 8, 9, 12, 15, 17, 19, 20, 21
2	3, 5
3	11, 18
Single-model clusters	2; 7; 10; 13; 14; 16

3 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 3022 atoms, of which 1471 are hydrogens and 0 are deuteriums.

- Molecule 1 is a RNA chain called AU-RICH RNA ELEMENT.

Mol	Chain	Residues	Atoms					Trace	
			Total	C	H	N	O		P
1	R	10	309	92	104	26	77	10	0

- Molecule 2 is a protein called HU ANTIGEN C.

Mol	Chain	Residues	Atoms					Trace	
			Total	C	H	N	O		S
2	H	174	2713	844	1367	233	264	5	0

There is a discrepancy between the modelled and reference sequences:

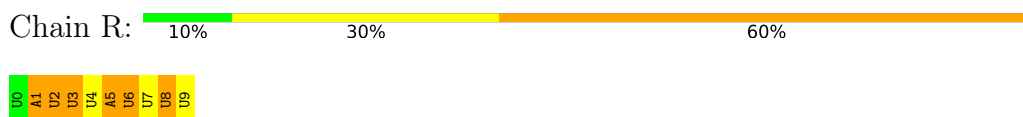
Chain	Residue	Modelled	Actual	Comment	Reference
H	35	MET	ASP	cloning artifact	UNP Q60900

4 Residue-property plots [i](#)

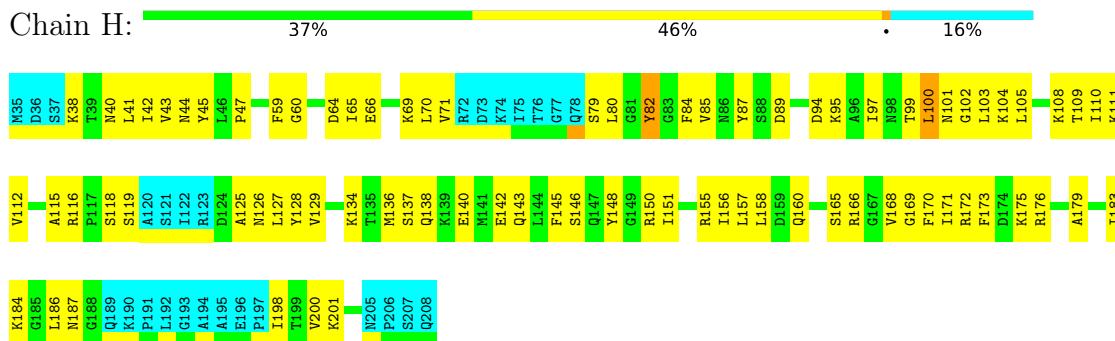
4.1 Average score per residue in the NMR ensemble

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: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C



4.2 Scores per residue for each member of the ensemble

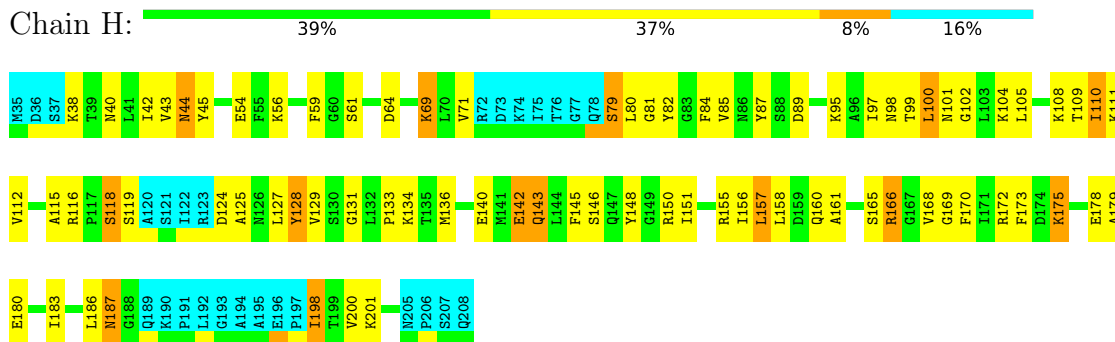
Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C

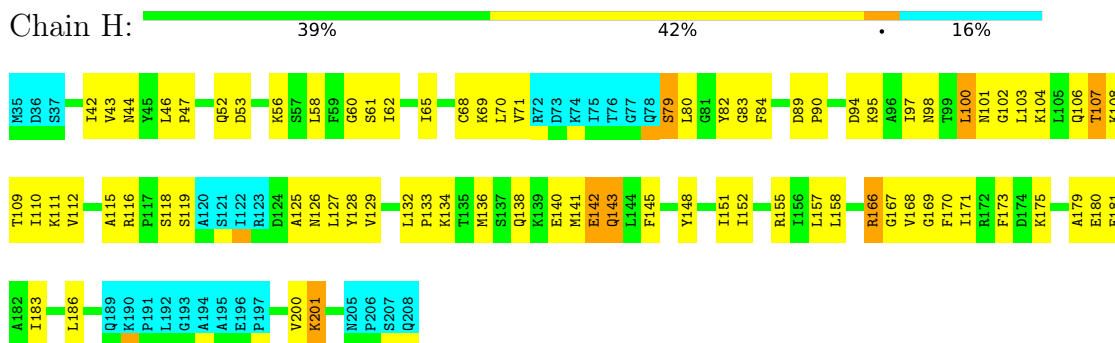


4.2.2 Score per residue for model 2

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C

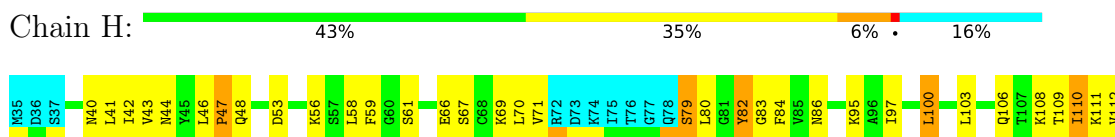


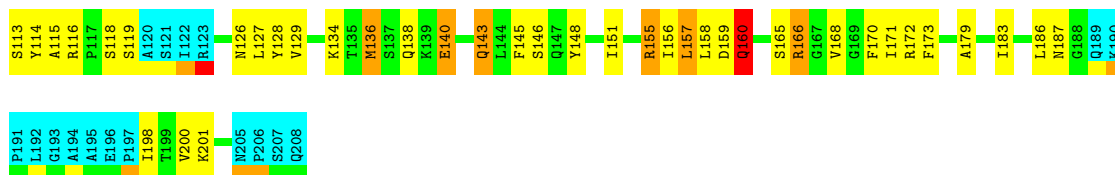
4.2.3 Score per residue for model 3

- Molecule 1: AU-RICH RNA ELEMENT



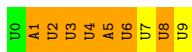
- Molecule 2: HU ANTIGEN C



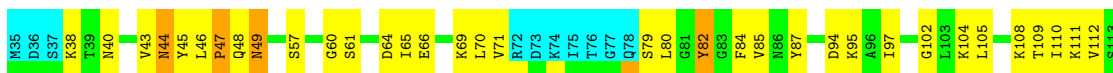


4.2.4 Score per residue for model 4

- Molecule 1: AU-RICH RNA ELEMENT

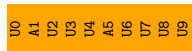


- Molecule 2: HU ANTIGEN C

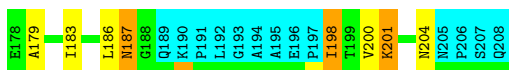
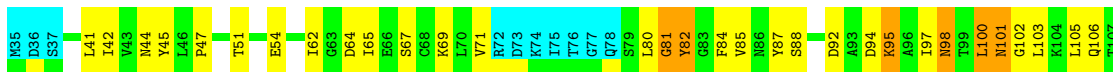


4.2.5 Score per residue for model 5

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C



4.2.6 Score per residue for model 6

- Molecule 1: AU-RICH RNA ELEMENT


Chain R:  100% 40% 50%



- Molecule 2: HU ANTIGEN C

Chain H:  40% 39% 5% 16%







4.2.7 Score per residue for model 7

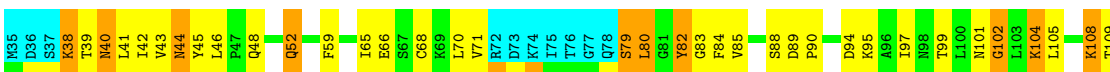
- Molecule 1: AU-RICH RNA ELEMENT

Chain R:  100% 30% 50% 100%

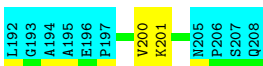


- Molecule 2: HU ANTIGEN C

Chain H:  43% 34% 7% 16%



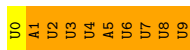




4.2.8 Score per residue for model 8

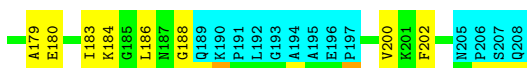
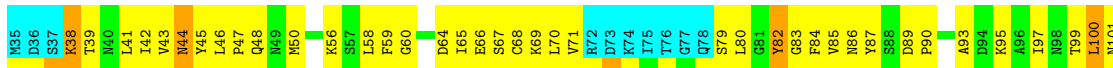
- Molecule 1: AU-RICH RNA ELEMENT

Chain R:  100% 90%



- Molecule 2: HU ANTIGEN C

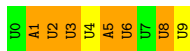
Chain H: 34% 45% 5% 16%



4.2.9 Score per residue for model 9

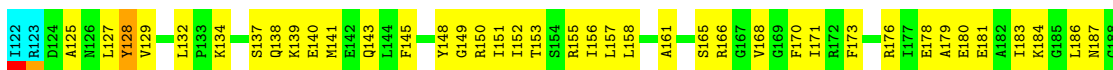
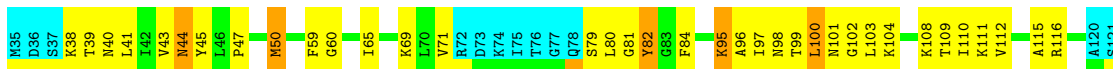
- Molecule 1: AU-RICH RNA ELEMENT

Chain R: 20% 20% 60%



- Molecule 2: HU ANTIGEN C

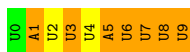
Chain H: 39% 41% 16%



4.2.10 Score per residue for model 10

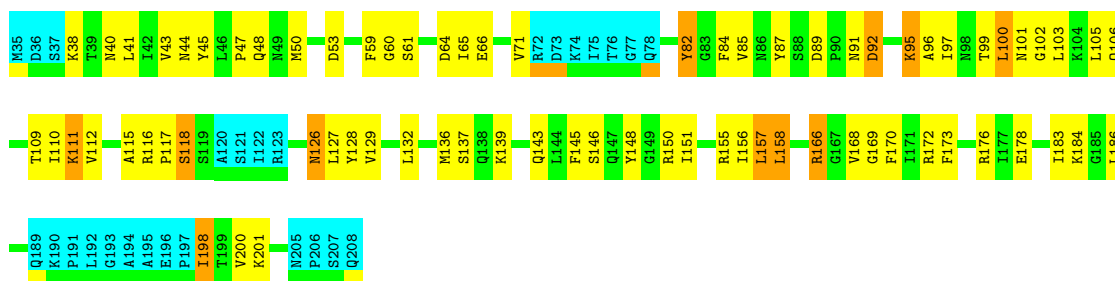
- Molecule 1: AU-RICH RNA ELEMENT

Chain R: 10% 20% 70%



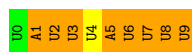
- Molecule 2: HU ANTIGEN C

Chain H: 42% 36% 6% 16%

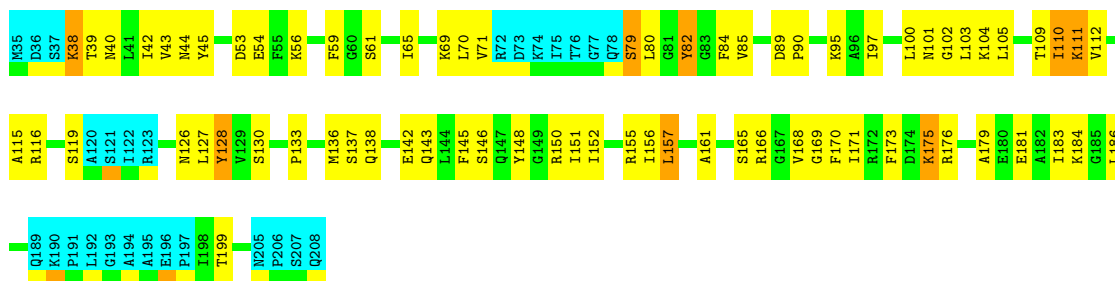


4.2.11 Score per residue for model 11

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C

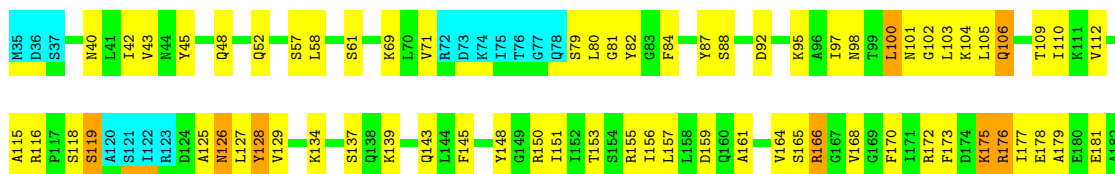


4.2.12 Score per residue for model 12

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C



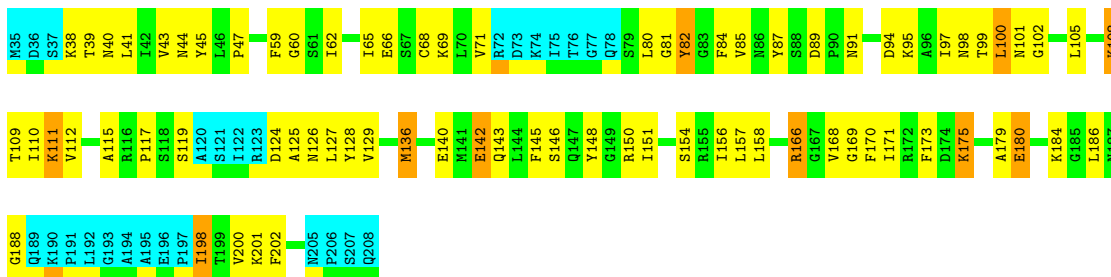


4.2.13 Score per residue for model 13

- Molecule 1: AU-RICH RNA ELEMENT

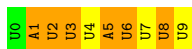


- Molecule 2: HU ANTIGEN C

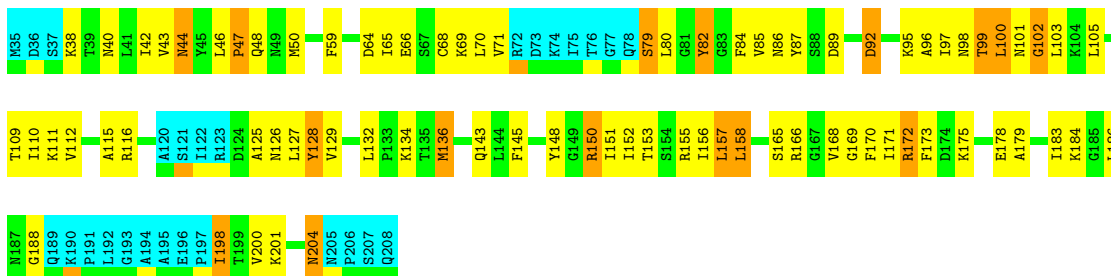


4.2.14 Score per residue for model 14

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C



4.2.15 Score per residue for model 15

- Molecule 1: AU-RICH RNA ELEMENT

Chain R:  30% 70%

U0
A1 U2 U3 U4 U5 U6 U7 U8 U9

- Molecule 2: HU ANTIGEN C

Chain H:  47% 33% 5% 16%

M85 D86 S37 K38 T39 N40 Y43 M44 Y45 F59 I65 E66 S67 C68 V71 R72 D73 K74 I75 T76 G77 Q78 S79 L80 Y82 G83 F84 V85 N86 Y87 S88 D89 P90 D94 K95 A96 I97 N98 T99 L100 N101 G102 L103 K104 L105 T109 I110 K111 V112 A115 S118

S119 A120 S121 I122 R123 D124 A125 N126 L127 Y128 V129 L132 M136 S137 Q138 K139 Q143 L144 F145 Y148 G149 R150 I151 I152 I156 L157 L158 D159 Q160 R166 G167 V168 G169 I171 R172 F173 E180 I183 L186 Q189 F191 L192 G193 A194 A195 E196 F197

V200 N205 P206 S207 Q208

4.2.16 Score per residue for model 16

- Molecule 1: AU-RICH RNA ELEMENT

Chain R:  10% 90%

U0
A1 U2 U3 U4 U5 U6 U7 U8 U9

- Molecule 2: HU ANTIGEN C

Chain H:  40% 36% 9% 16%

M85 D86 S87 K38 T39 L41 L42 V43 M44 Y45 L46 P47 M50 D53 E54 F59 G60 I65 K69 L70 V71 D73 K74 I75 T76 G77 Q78 L80 L83 G81 Y82 G83 F84 D94 K95 A96 I97 N98 T99 L100 M101 G102 L103 T107 K108 T109 I110 K111 V112 A115

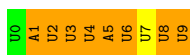
R116 S119 A120 S121 I122 R123 D124 A125 N126 L127 Y128 V129 M136 S137 Q138 K139 E140 Q143 L144 F145 Y148 G149 R150 I151 I152 T153 S154 R155 I156 L157 L158 S165 R166 G167 V168 G169 F170 I171 R172 K175 R176 I183 K184 G185 L186 N187 G188 Q189 K190 P191 L192 G193 A194

A195 E196 P197 V200 K201 F202 A203 N204 M205 P206 S207 Q208

4.2.17 Score per residue for model 17

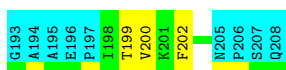
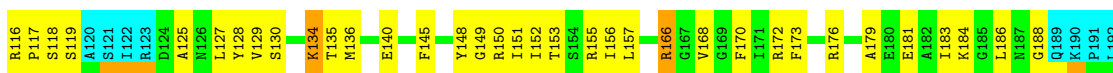
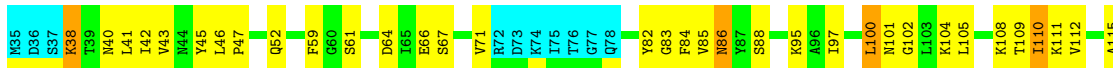
- Molecule 1: AU-RICH RNA ELEMENT

Chain R:  10% 10% 80%



- Molecule 2: HU ANTIGEN C

Chain H: 43% 38% 16%



4.2.18 Score per residue for model 18

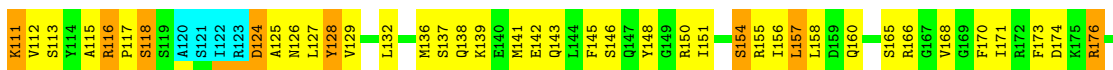
- Molecule 1: AU-RICH RNA ELEMENT

Chain R: 30% 70%



- Molecule 2: HU ANTIGEN C

Chain H: 37% 40% 7% 16%



4.2.19 Score per residue for model 19

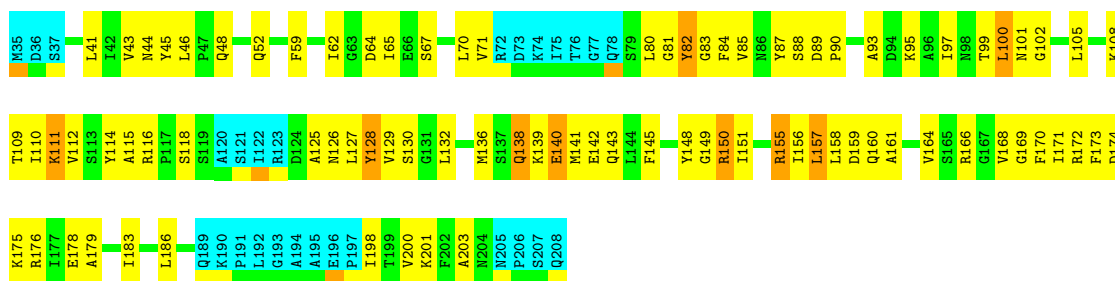
- Molecule 1: AU-RICH RNA ELEMENT

Chain R: 40% 60%



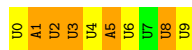
- Molecule 2: HU ANTIGEN C

Chain H: 35% 44% 5% 16%

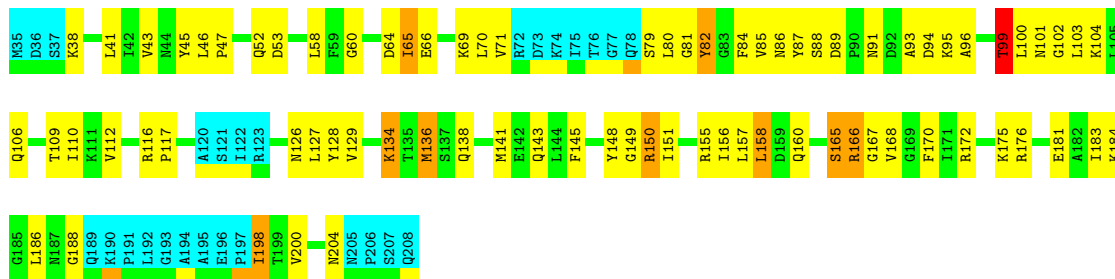


4.2.20 Score per residue for model 20

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C

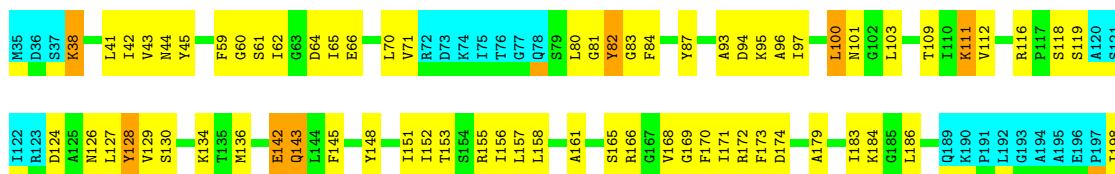


4.2.21 Score per residue for model 21 (medoid)

- Molecule 1: AU-RICH RNA ELEMENT



- Molecule 2: HU ANTIGEN C



T199	A203	P205	S207
V200	N204	P206	Q208

5 Refinement protocol and experimental data overview

The models were refined using the following method: *simulated annealing, torsion angle dynamics*.

Of the 200 calculated structures, 21 were deposited, based on the following criterion: *structures with the lowest energy. CONFORMER 21 IS THE MINIMIZED AVERAGE STRUCTURE OF CONFORMERS 1-20.*

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

Software name	Classification	Version
CNS	structure solution	0.9
CNS	refinement	0.9

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	R	0.30±0.02	0±0/226 (0.0± 0.0%)	0.72±0.02	0±0/346 (0.0± 0.0%)
2	H	0.30±0.00	0±0/1161 (0.0± 0.0%)	0.44±0.01	1±1/1564 (0.1± 0.1%)
All	All	0.30	0/29127 (0.0%)	0.50	20/40110 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	Chirality	Planarity
1	R	0.0±0.0	0.0±0.2
All	All	0	1

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(°)	Ideal(°)	Models	
								Worst	Total
2	H	128	TYR	CB-CG-CD1	6.21	124.72	121.00	12	10
2	H	128	TYR	CB-CG-CD2	-6.05	117.37	121.00	12	10

There are no chirality outliers.

All unique planar outliers are listed below.

Mol	Chain	Res	Type	Group	Models (Total)
1	R	2	U	Sidechain	1

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	R	205	104	103	32±7
2	H	1144	1163	1163	86±11
All	All	28329	26607	26586	1879

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 34.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:R:8:U:O4'	2:H:71:VAL:HG22	1.05	1.50	19	13
2:H:157:LEU:HD21	2:H:168:VAL:HB	0.97	1.37	13	10
1:R:2:U:C6	2:H:170:PHE:CZ	0.93	2.57	2	21
1:R:5:A:C2	2:H:80:LEU:HD21	0.89	2.02	5	1
1:R:5:A:N3	2:H:80:LEU:HD21	0.89	1.81	5	2
2:H:40:ASN:ND2	2:H:115:ALA:HB3	0.88	1.82	10	13
2:H:127:LEU:HD22	2:H:183:ILE:HD11	0.88	1.46	4	12
2:H:128:TYR:CE1	2:H:168:VAL:HG11	0.87	2.05	18	20
2:H:136:MET:HB3	2:H:156:ILE:HD13	0.86	1.44	13	14
2:H:105:LEU:HD11	2:H:110:ILE:HD11	0.85	1.45	11	5
1:R:5:A:N3	2:H:80:LEU:HD23	0.85	1.85	9	10
2:H:129:VAL:HG22	2:H:200:VAL:HG23	0.85	1.46	13	20
1:R:5:A:N3	2:H:80:LEU:HD11	0.85	1.87	7	3
2:H:71:VAL:HG21	2:H:82:TYR:CE2	0.83	2.08	6	4
1:R:2:U:O5'	2:H:157:LEU:HD13	0.83	1.72	20	11
1:R:1:A:H4'	2:H:157:LEU:HD21	0.82	1.49	10	4
2:H:145:PHE:HB2	2:H:151:ILE:HD11	0.82	1.49	7	19
2:H:60:GLY:HA2	2:H:65:ILE:HD11	0.82	1.51	6	1
1:R:2:U:C6	2:H:170:PHE:CE1	0.82	2.68	8	2
1:R:2:U:C6	2:H:170:PHE:CE2	0.81	2.68	18	19
2:H:43:VAL:HG22	2:H:112:VAL:HG22	0.81	1.50	1	17
2:H:127:LEU:HD11	2:H:179:ALA:HB1	0.81	1.52	5	14
2:H:157:LEU:HD22	2:H:170:PHE:CE2	0.80	2.12	20	6
1:R:5:A:C4	2:H:80:LEU:HD11	0.80	2.11	7	1
2:H:157:LEU:HD23	2:H:168:VAL:O	0.80	1.76	5	7
2:H:129:VAL:HG12	2:H:132:LEU:HD21	0.80	1.54	9	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:R:2:U:C5	2:H:170:PHE:CZ	0.79	2.70	11	21
2:H:127:LEU:HD21	2:H:183:ILE:HD11	0.78	1.55	9	8
2:H:127:LEU:HD21	2:H:179:ALA:HB1	0.78	1.53	4	3
1:R:7:U:C4	2:H:115:ALA:HB1	0.78	2.13	8	3
2:H:80:LEU:HD13	2:H:82:TYR:OH	0.78	1.79	19	7
1:R:7:U:O4	2:H:115:ALA:HB1	0.77	1.79	3	5
2:H:106:GLN:O	2:H:107:THR:HG23	0.77	1.80	2	1
2:H:43:VAL:HG22	2:H:112:VAL:HG13	0.76	1.58	7	6
1:R:1:A:C6	2:H:128:TYR:CE2	0.75	2.75	10	17
1:R:5:A:H4'	1:R:6:U:O5'	0.75	1.80	8	1
2:H:157:LEU:HD11	2:H:168:VAL:HB	0.75	1.57	14	3
1:R:2:U:H5''	1:R:4:U:O3'	0.75	1.82	16	1
2:H:145:PHE:CB	2:H:151:ILE:HD11	0.74	2.12	19	19
1:R:2:U:C5	2:H:170:PHE:CE2	0.74	2.74	8	2
2:H:129:VAL:HG13	2:H:200:VAL:HB	0.74	1.58	13	14
2:H:158:LEU:HD12	2:H:167:GLY:HA2	0.74	1.57	2	3
2:H:68:CYS:SG	2:H:85:VAL:HG22	0.74	2.22	7	1
2:H:71:VAL:HG23	2:H:84:PHE:CZ	0.73	2.18	19	12
2:H:157:LEU:HD21	2:H:170:PHE:CE2	0.73	2.18	7	1
1:R:2:U:C5	2:H:170:PHE:CE1	0.73	2.77	5	18
2:H:80:LEU:HD12	2:H:82:TYR:OH	0.73	1.82	7	2
2:H:59:PHE:CZ	2:H:100:LEU:HD22	0.73	2.19	14	8
2:H:100:LEU:HD12	2:H:103:LEU:HD11	0.73	1.59	12	4
2:H:43:VAL:HG13	2:H:112:VAL:HG22	0.72	1.59	7	5
2:H:80:LEU:HD22	2:H:82:TYR:OH	0.72	1.85	9	3
1:R:8:U:O4'	2:H:71:VAL:HG21	0.72	1.84	4	7
1:R:8:U:C6	2:H:84:PHE:CZ	0.72	2.77	19	17
2:H:125:ALA:HB3	2:H:173:PHE:O	0.71	1.84	1	14
2:H:148:TYR:CE2	2:H:186:LEU:HD21	0.71	2.21	10	3
2:H:59:PHE:CE2	2:H:100:LEU:HD13	0.71	2.20	3	8
2:H:42:ILE:HD11	2:H:82:TYR:CD2	0.71	2.20	18	5
2:H:62:ILE:HD13	2:H:100:LEU:HD11	0.71	1.63	21	2
2:H:71:VAL:HB	2:H:82:TYR:CD1	0.70	2.21	5	2
1:R:1:A:C2	2:H:128:TYR:CD2	0.70	2.79	21	21
2:H:129:VAL:HG22	2:H:200:VAL:CG2	0.70	2.15	16	19
2:H:148:TYR:CZ	2:H:186:LEU:HD21	0.70	2.21	16	12
2:H:186:LEU:O	2:H:198:ILE:HD11	0.69	1.87	3	3
2:H:145:PHE:CE2	2:H:200:VAL:HG21	0.69	2.23	21	3
2:H:157:LEU:HD21	2:H:170:PHE:CZ	0.69	2.22	7	1
1:R:1:A:C5	2:H:128:TYR:CZ	0.69	2.81	10	20
2:H:71:VAL:HB	2:H:82:TYR:CE1	0.69	2.22	13	8

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:85:VAL:HG11	2:H:87:TYR:CE2	0.69	2.23	18	4
1:R:4:U:H2'	1:R:4:U:O2	0.69	1.87	5	1
2:H:105:LEU:HD12	2:H:110:ILE:HD12	0.68	1.65	12	1
2:H:157:LEU:CD2	2:H:168:VAL:HB	0.68	2.19	15	15
2:H:157:LEU:HD12	2:H:166:ARG:HG3	0.68	1.63	2	2
1:R:8:U:O2'	1:R:9:U:H4'	0.68	1.87	5	1
1:R:2:U:H5'	2:H:157:LEU:HD13	0.68	1.65	13	3
2:H:71:VAL:HG23	2:H:84:PHE:CE2	0.68	2.23	2	5
2:H:127:LEU:CD2	2:H:183:ILE:HD11	0.68	2.19	5	15
1:R:7:U:C5	2:H:115:ALA:HB1	0.68	2.24	8	2
1:R:8:U:C4'	2:H:71:VAL:HG13	0.67	2.19	18	9
1:R:7:U:H2'	1:R:7:U:O2	0.67	1.89	5	1
2:H:145:PHE:CD2	2:H:186:LEU:HD13	0.67	2.25	7	3
1:R:6:U:C5	2:H:152:ILE:HG22	0.67	2.24	11	5
2:H:97:ILE:HG23	2:H:101:ASN:ND2	0.67	2.03	18	4
1:R:3:U:C2	2:H:109:THR:HB	0.67	2.25	20	15
2:H:157:LEU:HD22	2:H:170:PHE:HE2	0.67	1.46	5	3
1:R:1:A:H4'	2:H:157:LEU:HD11	0.66	1.66	2	7
2:H:128:TYR:HE1	2:H:168:VAL:HG11	0.66	1.49	19	13
1:R:8:U:C5	2:H:84:PHE:CE1	0.66	2.83	19	6
2:H:145:PHE:CE2	2:H:186:LEU:HD13	0.66	2.25	8	8
2:H:59:PHE:CE2	2:H:100:LEU:HD22	0.66	2.24	16	3
2:H:71:VAL:HG23	2:H:84:PHE:HZ	0.66	1.50	19	3
1:R:1:A:N1	2:H:204:ASN:HB3	0.65	2.06	21	5
2:H:41:LEU:CD1	2:H:97:ILE:HD11	0.65	2.21	6	2
2:H:126:ASN:HD22	2:H:203:ALA:HB2	0.65	1.51	21	1
2:H:85:VAL:HG11	2:H:87:TYR:CZ	0.65	2.27	5	9
1:R:5:A:H2'	2:H:80:LEU:O	0.64	1.92	20	2
2:H:157:LEU:HD22	2:H:157:LEU:O	0.64	1.92	14	2
2:H:42:ILE:CG2	2:H:115:ALA:HB2	0.64	2.23	1	4
2:H:97:ILE:HD12	2:H:114:TYR:CE2	0.64	2.27	3	2
2:H:52:GLN:HG3	2:H:70:LEU:HD13	0.64	1.68	7	1
2:H:128:TYR:CD1	2:H:168:VAL:HG11	0.64	2.28	7	18
2:H:71:VAL:HG23	2:H:84:PHE:HE2	0.64	1.53	2	3
2:H:42:ILE:HD11	2:H:82:TYR:HB2	0.63	1.69	5	1
2:H:40:ASN:HD22	2:H:115:ALA:HB3	0.63	1.53	14	7
1:R:8:U:C4	2:H:84:PHE:CE2	0.63	2.86	5	11
1:R:8:U:C4'	2:H:71:VAL:HG21	0.62	2.24	7	3
1:R:8:U:C6	2:H:84:PHE:CE1	0.62	2.87	3	4
2:H:157:LEU:HG	2:H:166:ARG:HB2	0.62	1.70	8	11
2:H:157:LEU:HD12	2:H:168:VAL:O	0.62	1.94	7	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:42:ILE:HD11	2:H:82:TYR:HD2	0.62	1.53	18	3
2:H:145:PHE:HB2	2:H:151:ILE:CD1	0.62	2.25	7	5
2:H:109:THR:O	2:H:109:THR:HG22	0.61	1.94	7	4
2:H:157:LEU:CD1	2:H:168:VAL:HB	0.61	2.24	14	3
1:R:8:U:H5'	2:H:82:TYR:OH	0.61	1.96	3	1
1:R:8:U:H1'	1:R:9:U:O5'	0.61	1.96	8	1
2:H:157:LEU:HD22	2:H:170:PHE:CZ	0.61	2.30	13	3
2:H:82:TYR:CD1	2:H:82:TYR:N	0.61	2.69	5	6
1:R:1:A:C2	2:H:128:TYR:CG	0.60	2.89	21	17
2:H:71:VAL:HG23	2:H:84:PHE:HE1	0.60	1.55	4	1
2:H:59:PHE:CB	2:H:65:ILE:HD11	0.60	2.26	7	1
1:R:2:U:H5'	2:H:157:LEU:CD2	0.60	2.27	7	1
1:R:3:U:C2	2:H:45:TYR:CD2	0.60	2.89	1	8
1:R:1:A:C4'	2:H:157:LEU:HD11	0.60	2.27	2	4
2:H:71:VAL:HG23	2:H:84:PHE:CE1	0.60	2.31	13	11
2:H:151:ILE:HG21	2:H:171:ILE:CG2	0.60	2.26	19	1
1:R:1:A:C4	2:H:128:TYR:CE1	0.60	2.90	7	15
1:R:9:U:OP1	2:H:71:VAL:CG2	0.59	2.50	3	2
2:H:65:ILE:HG23	2:H:85:VAL:HG13	0.59	1.74	15	5
2:H:46:LEU:HD12	2:H:70:LEU:HG	0.59	1.73	8	3
2:H:129:VAL:CG2	2:H:200:VAL:HG23	0.59	2.26	2	2
2:H:157:LEU:HD12	2:H:170:PHE:CE2	0.59	2.31	14	3
2:H:41:LEU:HD11	2:H:97:ILE:HD11	0.59	1.74	16	1
2:H:129:VAL:CG1	2:H:132:LEU:HD21	0.59	2.25	9	1
2:H:97:ILE:HD13	2:H:112:VAL:HB	0.59	1.74	2	1
1:R:2:U:O5'	2:H:157:LEU:CD1	0.59	2.50	21	8
2:H:103:LEU:HB2	2:H:110:ILE:HG22	0.59	1.73	14	1
2:H:105:LEU:CD1	2:H:110:ILE:HD11	0.59	2.27	15	5
1:R:5:A:C4	2:H:80:LEU:HD21	0.59	2.33	14	2
2:H:105:LEU:CD1	2:H:110:ILE:HD13	0.59	2.28	17	1
2:H:154:SER:HB2	2:H:171:ILE:HD13	0.59	1.74	18	4
2:H:80:LEU:HB3	2:H:82:TYR:CZ	0.58	2.33	2	3
2:H:146:SER:N	2:H:151:ILE:HD11	0.58	2.13	3	6
2:H:59:PHE:HB2	2:H:65:ILE:HD11	0.58	1.74	7	1
2:H:156:ILE:HG23	2:H:168:VAL:O	0.58	1.97	14	15
2:H:157:LEU:HD11	2:H:166:ARG:HG3	0.58	1.74	4	2
1:R:1:A:N3	2:H:128:TYR:CG	0.58	2.72	5	15
1:R:5:A:N3	2:H:80:LEU:CD2	0.58	2.67	19	3
2:H:103:LEU:HB2	2:H:110:ILE:CG2	0.58	2.28	8	4
1:R:5:A:C4	2:H:80:LEU:HD23	0.58	2.34	19	2
2:H:97:ILE:HD12	2:H:114:TYR:CZ	0.58	2.34	4	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:188:GLY:HA3	2:H:198:ILE:HG13	0.58	1.76	13	3
2:H:158:LEU:C	2:H:158:LEU:HD22	0.57	2.20	14	1
1:R:8:U:C1'	2:H:71:VAL:HG22	0.57	2.29	12	7
2:H:105:LEU:HD11	2:H:110:ILE:CG1	0.57	2.30	10	1
1:R:1:A:O5'	2:H:157:LEU:HD21	0.57	1.99	16	1
2:H:175:LYS:CE	2:H:178:GLU:HB2	0.57	2.29	4	1
1:R:6:U:O4'	2:H:44:ASN:HB3	0.57	2.00	8	4
2:H:128:TYR:CE1	2:H:168:VAL:CG1	0.57	2.88	3	13
2:H:41:LEU:HG	2:H:97:ILE:HD11	0.57	1.75	3	1
2:H:65:ILE:HG21	2:H:68:CYS:SG	0.57	2.40	7	4
2:H:94:ASP:HA	2:H:97:ILE:HD12	0.57	1.77	15	2
2:H:43:VAL:CG1	2:H:112:VAL:HG22	0.56	2.30	7	1
2:H:119:SER:O	2:H:175:LYS:NZ	0.56	2.35	13	2
2:H:65:ILE:CG2	2:H:68:CYS:SG	0.56	2.93	7	2
1:R:8:U:C5	2:H:84:PHE:CE2	0.56	2.94	4	1
2:H:96:ALA:O	2:H:100:LEU:HD12	0.56	2.00	16	3
2:H:87:TYR:CD2	2:H:93:ALA:HA	0.56	2.35	8	2
2:H:148:TYR:CE1	2:H:186:LEU:HD21	0.56	2.35	8	7
1:R:3:U:C2	2:H:45:TYR:CG	0.56	2.94	20	5
2:H:141:MET:CE	2:H:171:ILE:HD11	0.56	2.30	2	1
2:H:151:ILE:HG21	2:H:154:SER:HB3	0.56	1.76	16	1
2:H:71:VAL:HG11	2:H:82:TYR:OH	0.56	2.01	4	2
1:R:2:U:H5'	2:H:157:LEU:CD1	0.56	2.31	2	3
2:H:43:VAL:CG2	2:H:112:VAL:HG22	0.55	2.29	13	3
2:H:138:GLN:CB	2:H:155:ARG:HA	0.55	2.30	19	1
1:R:5:A:O2'	1:R:6:U:P	0.55	2.65	17	5
2:H:157:LEU:O	2:H:157:LEU:HG	0.55	2.02	2	7
2:H:103:LEU:HB3	2:H:110:ILE:HD12	0.55	1.77	5	1
2:H:151:ILE:CG2	2:H:171:ILE:HG22	0.55	2.31	19	2
2:H:92:ASP:HA	2:H:95:LYS:HG2	0.55	1.77	10	1
2:H:97:ILE:HG23	2:H:101:ASN:HD22	0.55	1.61	2	2
1:R:1:A:C4'	2:H:157:LEU:HD21	0.55	2.31	16	3
1:R:0:U:O2'	1:R:1:A:P	0.55	2.64	5	2
1:R:6:U:C5	2:H:152:ILE:CG2	0.55	2.89	8	3
2:H:47:PRO:HB2	2:H:50:MET:HB2	0.55	1.76	14	1
2:H:100:LEU:HB2	2:H:112:VAL:HG21	0.55	1.78	3	1
1:R:2:U:H4'	2:H:157:LEU:HB2	0.55	1.79	8	5
1:R:8:U:C4	2:H:84:PHE:CE1	0.54	2.95	15	3
1:R:5:A:N3	2:H:80:LEU:HA	0.54	2.17	18	1
2:H:157:LEU:HG	2:H:157:LEU:O	0.54	2.02	17	7
1:R:1:A:H5'	2:H:168:VAL:HG21	0.54	1.78	20	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:129:VAL:HG22	2:H:200:VAL:CB	0.54	2.31	21	5
1:R:1:A:C5'	2:H:157:LEU:HD11	0.54	2.32	2	4
1:R:6:U:C5	2:H:153:THR:HG23	0.54	2.38	4	1
2:H:71:VAL:CG2	2:H:84:PHE:CZ	0.54	2.91	17	11
2:H:97:ILE:O	2:H:101:ASN:HB2	0.54	2.03	9	14
2:H:71:VAL:CG1	2:H:82:TYR:CE1	0.54	2.90	5	1
1:R:2:U:O2'	1:R:3:U:H5'	0.54	2.03	6	3
2:H:157:LEU:HD12	2:H:157:LEU:H	0.54	1.63	7	1
2:H:80:LEU:HB3	2:H:82:TYR:CE2	0.54	2.38	11	1
1:R:1:A:C5	2:H:128:TYR:CE2	0.54	2.96	10	15
2:H:134:LYS:HG3	2:H:158:LEU:HD11	0.54	1.78	20	2
2:H:142:GLU:HG2	2:H:143:GLN:N	0.54	2.16	2	3
2:H:47:PRO:HD3	2:H:110:ILE:HD11	0.54	1.80	20	2
1:R:7:U:O2	1:R:7:U:C2'	0.54	2.56	5	1
2:H:100:LEU:HD23	2:H:103:LEU:CD1	0.54	2.33	6	1
2:H:80:LEU:HB3	2:H:82:TYR:CE1	0.54	2.37	8	1
2:H:47:PRO:HB2	2:H:50:MET:CB	0.54	2.33	14	1
2:H:152:ILE:O	2:H:153:THR:HG23	0.53	2.02	9	2
2:H:117:PRO:O	2:H:118:SER:CB	0.53	2.55	10	1
2:H:103:LEU:HB2	2:H:110:ILE:HB	0.53	1.80	2	4
2:H:132:LEU:HB3	2:H:136:MET:SD	0.53	2.44	6	5
2:H:126:ASN:O	2:H:127:LEU:HD23	0.53	2.03	4	2
2:H:100:LEU:HD23	2:H:103:LEU:HD11	0.53	1.79	6	4
2:H:136:MET:CB	2:H:156:ILE:HD13	0.53	2.30	5	4
2:H:187:ASN:HA	2:H:200:VAL:HG12	0.53	1.81	6	1
2:H:42:ILE:HG21	2:H:115:ALA:HB2	0.53	1.80	11	1
2:H:157:LEU:CD2	2:H:170:PHE:CZ	0.53	2.92	11	1
1:R:1:A:H4'	2:H:157:LEU:CD1	0.53	2.33	20	9
1:R:2:U:H4'	2:H:157:LEU:CB	0.53	2.33	3	5
2:H:128:TYR:HA	2:H:170:PHE:CD2	0.53	2.38	8	1
1:R:4:U:H6	1:R:4:U:O5'	0.53	1.85	17	2
2:H:145:PHE:CZ	2:H:200:VAL:HG21	0.53	2.39	21	1
1:R:8:U:C2	2:H:84:PHE:CE2	0.53	2.97	10	2
1:R:6:U:O2	2:H:42:ILE:HG23	0.53	2.04	21	2
2:H:59:PHE:CE1	2:H:100:LEU:HD22	0.53	2.39	14	1
1:R:8:U:H4'	2:H:71:VAL:HG13	0.52	1.80	12	6
2:H:59:PHE:CD2	2:H:85:VAL:HG21	0.52	2.39	6	2
1:R:1:A:O5'	2:H:166:ARG:HG2	0.52	2.04	17	3
2:H:145:PHE:HB3	2:H:173:PHE:CZ	0.52	2.39	10	15
1:R:7:U:O2	2:H:116:ARG:HD3	0.52	2.03	5	1
2:H:125:ALA:HB1	2:H:173:PHE:HB2	0.52	1.82	9	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:R:1:A:O3'	1:R:2:U:C6	0.52	2.63	3	1
2:H:42:ILE:HB	2:H:84:PHE:CD2	0.52	2.40	21	2
1:R:1:A:C4	2:H:128:TYR:CD1	0.52	2.97	7	13
2:H:198:ILE:HG13	2:H:198:ILE:O	0.52	2.05	13	3
1:R:1:A:N1	2:H:204:ASN:HB2	0.52	2.19	14	1
1:R:1:A:C5'	2:H:157:LEU:HD21	0.52	2.35	16	1
1:R:6:U:OP2	2:H:45:TYR:CE2	0.52	2.62	11	1
2:H:44:ASN:OD1	2:H:82:TYR:CD2	0.52	2.63	19	1
1:R:8:U:C6	2:H:71:VAL:HG22	0.52	2.40	20	8
2:H:60:GLY:CA	2:H:65:ILE:HD11	0.52	2.32	6	1
2:H:126:ASN:ND2	2:H:203:ALA:HB2	0.52	2.19	21	3
2:H:118:SER:OG	2:H:119:SER:N	0.51	2.43	2	3
2:H:145:PHE:CB	2:H:171:ILE:HG21	0.51	2.35	21	2
2:H:102:GLY:HA2	2:H:111:LYS:HD2	0.51	1.80	7	1
2:H:71:VAL:CB	2:H:82:TYR:CE1	0.51	2.93	13	2
1:R:1:A:N9	2:H:128:TYR:CE1	0.51	2.79	7	3
2:H:87:TYR:CD1	2:H:92:ASP:HB3	0.51	2.40	12	2
2:H:105:LEU:HD12	2:H:110:ILE:HD13	0.51	1.82	17	2
1:R:8:U:C5	2:H:84:PHE:CZ	0.51	2.99	19	3
2:H:101:ASN:O	2:H:111:LYS:NZ	0.51	2.43	2	8
2:H:46:LEU:HD11	2:H:83:GLY:CA	0.51	2.36	8	3
2:H:128:TYR:HA	2:H:170:PHE:CD1	0.51	2.41	21	5
2:H:43:VAL:HG11	2:H:110:ILE:HD11	0.51	1.83	16	1
1:R:3:U:O2	2:H:109:THR:HB	0.51	2.05	14	6
2:H:60:GLY:HA2	2:H:65:ILE:CD1	0.51	2.36	9	8
2:H:142:GLU:HA	2:H:151:ILE:CD1	0.51	2.36	7	1
2:H:152:ILE:HB	2:H:172:ARG:HG3	0.51	1.83	14	1
1:R:8:U:OP1	2:H:71:VAL:HG11	0.51	2.06	15	1
2:H:41:LEU:HD13	2:H:114:TYR:HA	0.50	1.81	19	2
2:H:41:LEU:O	2:H:84:PHE:HA	0.50	2.06	20	8
2:H:80:LEU:HB2	2:H:82:TYR:CE1	0.50	2.41	18	1
2:H:103:LEU:HB2	2:H:110:ILE:HG23	0.50	1.83	18	1
2:H:60:GLY:HA2	2:H:65:ILE:HD13	0.50	1.83	10	1
2:H:153:THR:OG1	2:H:172:ARG:NH1	0.50	2.36	12	1
2:H:126:ASN:HB2	2:H:172:ARG:NH1	0.50	2.21	15	1
2:H:70:LEU:HA	2:H:83:GLY:HA2	0.50	1.83	21	2
2:H:183:ILE:HD13	2:H:201:LYS:HA	0.50	1.82	1	3
2:H:198:ILE:O	2:H:198:ILE:HG13	0.50	2.06	9	5
2:H:44:ASN:CG	2:H:82:TYR:HB3	0.50	2.27	10	1
1:R:0:U:O3'	1:R:1:A:H3'	0.50	2.07	18	1
2:H:153:THR:OG1	2:H:172:ARG:NE	0.50	2.39	21	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:168:VAL:CG1	2:H:169:GLY:N	0.50	2.74	7	2
1:R:7:U:H1'	1:R:8:U:OP1	0.50	2.06	3	1
1:R:8:U:C2	2:H:84:PHE:CE1	0.50	3.00	6	3
2:H:104:LYS:HA	2:H:109:THR:HA	0.50	1.84	20	3
2:H:105:LEU:HB2	2:H:108:LYS:O	0.50	2.07	18	3
2:H:116:ARG:HB3	2:H:117:PRO:HD2	0.49	1.83	20	3
2:H:157:LEU:CD1	2:H:166:ARG:HG2	0.49	2.37	20	1
2:H:137:SER:HB3	2:H:140:GLU:HG2	0.49	1.83	5	1
2:H:99:THR:HG22	2:H:100:LEU:HG	0.49	1.85	14	1
1:R:6:U:O2'	1:R:7:U:P	0.49	2.70	12	4
1:R:8:U:O4'	2:H:71:VAL:CG2	0.49	2.56	9	7
1:R:3:U:O2'	2:H:45:TYR:OH	0.49	2.30	7	1
2:H:157:LEU:HD11	2:H:166:ARG:HD2	0.49	1.83	8	1
2:H:133:PRO:HD2	2:H:136:MET:SD	0.49	2.48	7	5
2:H:151:ILE:HG12	2:H:173:PHE:CE1	0.49	2.42	12	5
2:H:100:LEU:CB	2:H:112:VAL:HG21	0.49	2.37	3	1
1:R:3:U:C2	2:H:45:TYR:CD1	0.49	3.01	10	1
2:H:116:ARG:CB	2:H:117:PRO:HD2	0.49	2.37	18	1
2:H:141:MET:HE2	2:H:171:ILE:HD11	0.49	1.82	2	1
1:R:8:U:H5	2:H:42:ILE:HD12	0.49	1.67	3	1
1:R:8:U:O4'	2:H:71:VAL:HA	0.49	2.07	5	1
2:H:134:LYS:HE2	2:H:135:THR:HG23	0.49	1.84	17	1
2:H:145:PHE:CD2	2:H:171:ILE:HG13	0.49	2.42	6	2
2:H:85:VAL:CG1	2:H:87:TYR:CZ	0.49	2.96	5	3
2:H:157:LEU:HD12	2:H:166:ARG:CG	0.49	2.38	11	2
1:R:7:U:C2'	1:R:7:U:O2	0.49	2.61	14	1
2:H:105:LEU:HD11	2:H:110:ILE:CD1	0.49	2.34	4	1
2:H:170:PHE:O	2:H:171:ILE:HD13	0.49	2.07	14	3
2:H:59:PHE:O	2:H:65:ILE:HD11	0.49	2.07	21	2
2:H:136:MET:HG3	2:H:156:ILE:CD1	0.49	2.38	21	6
2:H:157:LEU:HD21	2:H:168:VAL:CB	0.49	2.31	5	1
1:R:6:U:O2'	1:R:7:U:H6	0.49	1.91	10	1
2:H:154:SER:O	2:H:155:ARG:HB3	0.49	2.08	16	1
2:H:188:GLY:HA3	2:H:198:ILE:O	0.49	2.07	14	1
2:H:128:TYR:CD1	2:H:168:VAL:CG1	0.48	2.96	7	3
1:R:2:U:H4'	2:H:157:LEU:HB3	0.48	1.84	5	1
2:H:39:THR:O	2:H:86:ASN:HA	0.48	2.08	8	1
2:H:157:LEU:CD2	2:H:170:PHE:CE2	0.48	2.96	11	1
1:R:8:U:H4'	2:H:71:VAL:HG21	0.48	1.84	3	2
2:H:97:ILE:HG23	2:H:101:ASN:CG	0.48	2.28	5	2
2:H:47:PRO:HG2	2:H:50:MET:CB	0.48	2.38	10	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:152:ILE:HD11	2:H:174:ASP:OD1	0.48	2.08	21	1
2:H:71:VAL:CG2	2:H:84:PHE:HZ	0.48	2.21	17	8
1:R:7:U:C2	2:H:116:ARG:HD3	0.48	2.42	5	1
2:H:124:ASP:HB2	2:H:176:ARG:CG	0.48	2.38	16	1
1:R:1:A:O3'	1:R:2:U:H6	0.48	1.91	12	6
1:R:8:U:H1'	1:R:9:U:OP1	0.48	2.08	3	2
2:H:157:LEU:HG	2:H:166:ARG:CB	0.48	2.39	8	2
2:H:137:SER:HB3	2:H:140:GLU:CG	0.48	2.38	5	1
2:H:69:LYS:HB3	2:H:84:PHE:CD1	0.48	2.44	1	3
2:H:44:ASN:OD1	2:H:45:TYR:CD2	0.48	2.66	7	1
2:H:41:LEU:CG	2:H:97:ILE:HD11	0.48	2.39	3	1
2:H:129:VAL:HG22	2:H:200:VAL:HB	0.48	1.86	21	1
2:H:138:GLN:OE1	2:H:155:ARG:NH1	0.48	2.44	3	2
2:H:97:ILE:HG12	2:H:112:VAL:HG11	0.48	1.85	8	1
2:H:157:LEU:CD1	2:H:170:PHE:CE2	0.48	2.97	10	2
2:H:156:ILE:HA	2:H:169:GLY:HA2	0.48	1.85	11	6
2:H:71:VAL:CG2	2:H:82:TYR:CE2	0.48	2.93	17	2
1:R:5:A:H4'	1:R:6:U:OP1	0.47	2.09	3	3
1:R:4:U:O2'	1:R:5:A:P	0.47	2.72	8	1
2:H:180:GLU:HG3	2:H:202:PHE:CE2	0.47	2.43	13	1
2:H:43:VAL:HG12	2:H:110:ILE:HG12	0.47	1.86	14	1
2:H:115:ALA:O	2:H:116:ARG:HD2	0.47	2.09	14	1
2:H:157:LEU:HD12	2:H:166:ARG:HD3	0.47	1.85	19	1
2:H:136:MET:SD	2:H:141:MET:HG3	0.47	2.49	20	1
2:H:141:MET:SD	2:H:156:ILE:HD11	0.47	2.48	20	1
2:H:145:PHE:HE2	2:H:200:VAL:HG21	0.47	1.69	21	1
1:R:8:U:O2'	1:R:9:U:H5''	0.47	2.10	3	1
2:H:96:ALA:HB1	2:H:100:LEU:HD12	0.47	1.86	14	1
1:R:2:U:N1	2:H:170:PHE:CE2	0.47	2.82	18	10
2:H:97:ILE:O	2:H:101:ASN:N	0.47	2.47	6	3
2:H:136:MET:CG	2:H:156:ILE:HD13	0.47	2.40	8	1
1:R:1:A:H5''	2:H:157:LEU:HD11	0.47	1.87	11	2
2:H:157:LEU:HD12	2:H:166:ARG:HG2	0.47	1.86	13	2
2:H:97:ILE:O	2:H:101:ASN:CB	0.47	2.63	14	1
2:H:96:ALA:O	2:H:100:LEU:HD22	0.47	2.09	9	1
1:R:6:U:H4'	1:R:7:U:OP1	0.47	2.10	10	1
2:H:176:ARG:HG2	2:H:177:ILE:N	0.47	2.25	12	1
1:R:6:U:O2'	2:H:42:ILE:HD11	0.47	2.09	2	1
2:H:142:GLU:O	2:H:146:SER:N	0.47	2.45	6	1
2:H:100:LEU:HB2	2:H:112:VAL:CG2	0.47	2.40	8	1
2:H:105:LEU:HD11	2:H:110:ILE:HG12	0.47	1.86	10	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:129:VAL:O	2:H:168:VAL:HG13	0.47	2.10	20	2
1:R:4:U:O2	1:R:4:U:C2'	0.47	2.57	5	1
1:R:7:U:OP1	2:H:82:TYR:CE2	0.47	2.68	13	1
2:H:96:ALA:HB1	2:H:100:LEU:CD1	0.47	2.40	14	1
2:H:165:SER:O	2:H:166:ARG:HD3	0.47	2.10	20	1
2:H:70:LEU:HD23	2:H:70:LEU:C	0.47	2.30	11	5
2:H:159:ASP:OD1	2:H:160:GLN:N	0.47	2.45	3	2
1:R:8:U:C2	2:H:84:PHE:CZ	0.47	3.02	6	4
2:H:142:GLU:HB2	2:H:154:SER:OG	0.47	2.10	6	2
1:R:5:A:N6	2:H:79:SER:O	0.47	2.48	12	1
2:H:82:TYR:HB2	2:H:84:PHE:CZ	0.46	2.45	7	1
1:R:7:U:C6	1:R:8:U:C5	0.46	3.03	19	1
2:H:46:LEU:HG	2:H:83:GLY:N	0.46	2.25	2	1
2:H:43:VAL:O	2:H:82:TYR:HA	0.46	2.09	3	2
1:R:4:U:O2	2:H:172:ARG:HB2	0.46	2.11	5	1
1:R:8:U:N1	2:H:84:PHE:CE2	0.46	2.84	8	1
2:H:183:ILE:HG23	2:H:200:VAL:O	0.46	2.11	17	2
1:R:1:A:H5''	2:H:166:ARG:HD3	0.46	1.86	5	1
1:R:2:U:C6	1:R:2:U:OP2	0.46	2.69	8	3
1:R:1:A:C5'	2:H:166:ARG:HG2	0.46	2.40	16	1
2:H:43:VAL:CG1	2:H:110:ILE:HG23	0.46	2.41	17	1
1:R:2:U:C5'	2:H:157:LEU:HD13	0.46	2.40	2	2
2:H:44:ASN:O	2:H:45:TYR:HB2	0.46	2.10	7	2
2:H:145:PHE:CE1	2:H:186:LEU:HD13	0.46	2.45	14	1
2:H:46:LEU:CD1	2:H:70:LEU:HG	0.46	2.40	4	1
2:H:38:LYS:O	2:H:39:THR:HG23	0.46	2.10	6	1
2:H:70:LEU:HD23	2:H:71:VAL:O	0.46	2.11	19	1
2:H:96:ALA:C	2:H:100:LEU:HD12	0.46	2.31	21	1
2:H:95:LYS:O	2:H:98:ASN:HB2	0.46	2.11	5	2
2:H:39:THR:O	2:H:41:LEU:HD22	0.46	2.11	7	1
1:R:2:U:H5'	2:H:157:LEU:HD12	0.46	1.88	1	2
2:H:187:ASN:HB3	2:H:200:VAL:O	0.46	2.11	4	3
2:H:41:LEU:HD22	2:H:41:LEU:N	0.46	2.25	3	3
2:H:137:SER:HB3	2:H:140:GLU:HB2	0.46	1.87	16	1
2:H:97:ILE:HG13	2:H:114:TYR:CE2	0.46	2.44	19	1
2:H:126:ASN:HB2	2:H:172:ARG:CD	0.46	2.41	3	1
2:H:42:ILE:HD11	2:H:82:TYR:CB	0.46	2.41	5	1
2:H:136:MET:HG3	2:H:156:ILE:HD13	0.46	1.87	21	2
1:R:6:U:O4'	2:H:44:ASN:HB2	0.46	2.11	3	1
1:R:2:U:P	2:H:157:LEU:HD13	0.46	2.50	20	2
2:H:69:LYS:HG3	2:H:70:LEU:N	0.46	2.26	8	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:176:ARG:HD2	2:H:202:PHE:CE2	0.46	2.46	18	1
2:H:47:PRO:O	2:H:49:ASN:N	0.46	2.45	4	1
2:H:62:ILE:HD11	2:H:100:LEU:HD21	0.45	1.88	13	4
2:H:175:LYS:HE3	2:H:178:GLU:HB2	0.45	1.88	4	1
2:H:127:LEU:O	2:H:170:PHE:HA	0.45	2.11	13	2
1:R:9:U:H5'	2:H:69:LYS:HG2	0.45	1.87	8	1
2:H:82:TYR:N	2:H:82:TYR:HD1	0.45	2.08	8	1
2:H:151:ILE:HG21	2:H:171:ILE:HG22	0.45	1.86	19	1
2:H:43:VAL:N	2:H:83:GLY:O	0.45	2.49	8	3
2:H:46:LEU:CD2	2:H:110:ILE:HD11	0.45	2.41	8	1
2:H:109:THR:O	2:H:109:THR:CG2	0.45	2.64	7	1
1:R:1:A:O5'	2:H:166:ARG:HD2	0.45	2.12	8	1
2:H:40:ASN:HD21	2:H:115:ALA:HB3	0.45	1.62	10	1
2:H:157:LEU:CD1	2:H:170:PHE:CZ	0.45	2.99	14	1
1:R:7:U:O4	2:H:115:ALA:CB	0.45	2.61	5	1
2:H:157:LEU:HD13	2:H:168:VAL:HB	0.45	1.87	7	1
2:H:172:ARG:NE	2:H:173:PHE:O	0.45	2.42	14	1
2:H:157:LEU:HD22	2:H:157:LEU:C	0.45	2.32	16	1
2:H:151:ILE:CG2	2:H:171:ILE:CG2	0.45	2.94	19	1
2:H:87:TYR:HB2	2:H:93:ALA:HB2	0.45	1.87	20	1
2:H:175:LYS:HG3	2:H:178:GLU:HB2	0.45	1.89	4	2
2:H:45:TYR:N	2:H:81:GLY:O	0.45	2.49	5	1
1:R:3:U:N3	2:H:109:THR:HG22	0.45	2.26	8	1
2:H:97:ILE:HG23	2:H:112:VAL:HB	0.45	1.86	8	1
2:H:43:VAL:CG1	2:H:110:ILE:HG22	0.45	2.40	11	2
1:R:1:A:OP2	2:H:166:ARG:HD3	0.45	2.11	11	1
2:H:157:LEU:HD23	2:H:157:LEU:H	0.45	1.70	13	2
2:H:158:LEU:HB2	2:H:165:SER:HA	0.45	1.87	16	1
1:R:7:U:H4'	2:H:82:TYR:OH	0.45	2.11	18	3
1:R:3:U:C4	2:H:45:TYR:CE2	0.45	3.04	21	2
2:H:102:GLY:N	2:H:111:LYS:HG2	0.45	2.27	14	2
2:H:89:ASP:CG	2:H:90:PRO:HD2	0.45	2.32	7	5
2:H:157:LEU:HD11	2:H:166:ARG:HG2	0.45	1.88	17	1
2:H:59:PHE:HE2	2:H:100:LEU:HD13	0.45	1.70	1	1
2:H:168:VAL:HG12	2:H:169:GLY:N	0.45	2.27	7	5
1:R:0:U:O3'	1:R:1:A:H2'	0.45	2.12	8	1
2:H:157:LEU:H	2:H:157:LEU:HD13	0.45	1.72	10	1
2:H:130:SER:OG	2:H:199:THR:HB	0.45	2.12	11	1
2:H:127:LEU:CD1	2:H:179:ALA:HB1	0.45	2.40	18	1
2:H:43:VAL:HA	2:H:112:VAL:HA	0.45	1.89	20	1
2:H:46:LEU:HD23	2:H:110:ILE:HD12	0.45	1.89	20	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:46:LEU:HD13	2:H:70:LEU:HD11	0.45	1.87	3	1
2:H:154:SER:CB	2:H:171:ILE:HD13	0.45	2.42	4	1
1:R:2:U:O4'	2:H:157:LEU:HG	0.45	2.11	16	1
2:H:129:VAL:HA	2:H:199:THR:O	0.45	2.12	17	1
2:H:151:ILE:HG12	2:H:171:ILE:CG2	0.44	2.42	7	1
2:H:181:GLU:OE2	2:H:184:LYS:NZ	0.44	2.44	9	1
2:H:46:LEU:HD23	2:H:110:ILE:HD11	0.44	1.88	14	1
1:R:5:A:H4'	1:R:6:U:OP2	0.44	2.12	4	1
2:H:101:ASN:OD1	2:H:111:LYS:NZ	0.44	2.39	6	1
2:H:127:LEU:HD21	2:H:183:ILE:CD1	0.44	2.34	9	1
2:H:97:ILE:O	2:H:101:ASN:ND2	0.44	2.49	12	1
2:H:90:PRO:HA	2:H:93:ALA:HB3	0.44	1.88	19	1
1:R:4:U:H3'	1:R:4:U:O2	0.44	2.13	4	1
1:R:8:U:H6	1:R:8:U:O5'	0.44	1.96	6	1
2:H:157:LEU:HD12	2:H:166:ARG:CB	0.44	2.42	11	1
1:R:2:U:O5'	2:H:157:LEU:HG	0.44	2.12	14	1
2:H:153:THR:OG1	2:H:172:ARG:HB3	0.44	2.12	14	1
2:H:71:VAL:HG21	2:H:82:TYR:HE2	0.44	1.69	17	1
2:H:56:LYS:O	2:H:60:GLY:N	0.44	2.47	2	1
2:H:132:LEU:HB3	2:H:136:MET:HG2	0.44	1.89	19	2
1:R:1:A:N1	2:H:204:ASN:CB	0.44	2.79	21	2
2:H:157:LEU:HD12	2:H:170:PHE:CZ	0.44	2.48	14	1
1:R:2:U:O5'	1:R:2:U:H6	0.44	1.95	18	2
2:H:151:ILE:HD13	2:H:171:ILE:HG23	0.44	1.90	18	3
2:H:162:THR:OG1	2:H:163:GLY:N	0.44	2.51	8	1
2:H:157:LEU:CD1	2:H:157:LEU:N	0.44	2.81	10	1
2:H:157:LEU:HD12	2:H:166:ARG:HE	0.44	1.73	15	1
2:H:175:LYS:HE2	2:H:178:GLU:CD	0.44	2.33	4	1
2:H:69:LYS:HB3	2:H:84:PHE:CD2	0.44	2.48	8	2
1:R:6:U:H5	2:H:152:ILE:HG22	0.44	1.70	14	3
1:R:8:U:O4'	2:H:71:VAL:HG13	0.44	2.12	18	1
2:H:141:MET:HB3	2:H:171:ILE:HD11	0.44	1.89	18	1
2:H:97:ILE:HG12	2:H:112:VAL:CG1	0.44	2.43	8	1
2:H:103:LEU:O	2:H:110:ILE:N	0.44	2.51	10	2
2:H:79:SER:OG	2:H:80:LEU:N	0.44	2.49	20	1
2:H:97:ILE:HG23	2:H:101:ASN:HB2	0.44	1.90	7	1
2:H:100:LEU:HA	2:H:103:LEU:CD1	0.44	2.43	18	1
1:R:0:U:HO2'	1:R:1:A:P	0.43	2.37	5	1
1:R:2:U:C1'	2:H:170:PHE:CE2	0.43	3.01	16	2
2:H:127:LEU:HD11	2:H:179:ALA:CB	0.43	2.40	18	1
2:H:151:ILE:HG21	2:H:171:ILE:HG23	0.43	1.89	19	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:R:6:U:OP2	2:H:45:TYR:CD1	0.43	2.71	8	1
2:H:82:TYR:CD2	2:H:84:PHE:HE1	0.43	2.31	8	1
2:H:95:LYS:HG3	2:H:96:ALA:N	0.43	2.28	10	1
2:H:149:GLY:O	2:H:150:ARG:C	0.43	2.56	20	2
2:H:68:CYS:HA	2:H:84:PHE:O	0.43	2.12	7	3
2:H:128:TYR:HE1	2:H:168:VAL:HG21	0.43	1.73	7	1
1:R:7:U:C4'	1:R:8:U:OP1	0.43	2.66	19	1
1:R:8:U:C1'	1:R:9:U:OP1	0.43	2.66	3	1
1:R:3:U:C4	2:H:45:TYR:CE1	0.43	3.06	13	1
1:R:3:U:H2'	2:H:45:TYR:CD1	0.43	2.48	16	1
2:H:110:ILE:O	2:H:110:ILE:HG23	0.43	2.12	16	1
2:H:132:LEU:HB3	2:H:136:MET:CG	0.43	2.44	19	1
2:H:45:TYR:CD1	2:H:108:LYS:HG2	0.43	2.49	7	1
2:H:47:PRO:HG2	2:H:50:MET:HB2	0.43	1.90	10	1
2:H:105:LEU:CD1	2:H:110:ILE:HG13	0.43	2.44	10	1
1:R:4:U:C5	1:R:5:A:N7	0.43	2.87	13	1
2:H:126:ASN:C	2:H:127:LEU:HD23	0.43	2.34	16	1
2:H:128:TYR:O	2:H:200:VAL:HA	0.43	2.13	1	1
2:H:103:LEU:N	2:H:110:ILE:O	0.43	2.49	20	1
2:H:142:GLU:O	2:H:146:SER:HB2	0.43	2.13	5	4
2:H:140:GLU:O	2:H:143:GLN:HG3	0.43	2.14	19	3
2:H:132:LEU:CD1	2:H:169:GLY:HA3	0.43	2.43	8	1
2:H:180:GLU:HA	2:H:183:ILE:HD12	0.43	1.91	9	1
2:H:129:VAL:CG1	2:H:200:VAL:HB	0.43	2.42	21	1
1:R:1:A:H4'	2:H:157:LEU:CD2	0.43	2.44	17	6
1:R:6:U:N3	2:H:113:SER:HB2	0.43	2.29	3	1
1:R:0:U:C6	1:R:0:U:OP3	0.43	2.72	5	1
1:R:9:U:OP2	2:H:71:VAL:HG13	0.43	2.13	10	1
2:H:118:SER:O	2:H:119:SER:CB	0.43	2.66	15	1
1:R:8:U:H3'	1:R:9:U:O3'	0.43	2.13	17	1
2:H:66:GLU:HB3	2:H:86:ASN:O	0.43	2.14	17	1
1:R:1:A:OP1	2:H:166:ARG:HD2	0.43	2.13	5	1
2:H:47:PRO:HG2	2:H:50:MET:HB3	0.43	1.90	14	3
1:R:0:U:H3'	1:R:0:U:O2	0.43	2.13	20	1
2:H:44:ASN:HA	2:H:82:TYR:CB	0.42	2.44	1	1
1:R:1:A:P	1:R:1:A:H3'	0.42	2.54	5	1
1:R:6:U:C2'	1:R:7:U:O5'	0.42	2.66	11	2
2:H:179:ALA:HB3	2:H:202:PHE:CZ	0.42	2.48	8	2
2:H:156:ILE:HA	2:H:168:VAL:O	0.42	2.14	16	1
1:R:3:U:N3	2:H:45:TYR:CD2	0.42	2.87	21	1
2:H:128:TYR:O	2:H:201:LYS:N	0.42	2.50	1	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:106:GLN:O	2:H:107:THR:CG2	0.42	2.62	2	1
2:H:183:ILE:HG23	2:H:201:LYS:HA	0.42	1.90	16	1
2:H:126:ASN:HB2	2:H:172:ARG:CZ	0.42	2.44	20	1
2:H:137:SER:CB	2:H:140:GLU:CD	0.42	2.88	7	1
2:H:157:LEU:HD11	2:H:170:PHE:CZ	0.42	2.49	7	1
2:H:46:LEU:HD11	2:H:83:GLY:HA3	0.42	1.90	19	1
1:R:8:U:C5	2:H:84:PHE:CD1	0.42	3.07	2	1
1:R:8:U:C5	2:H:42:ILE:HD12	0.42	2.49	3	2
2:H:166:ARG:N	2:H:166:ARG:HD2	0.42	2.29	13	1
2:H:70:LEU:HD23	2:H:71:VAL:N	0.42	2.29	20	1
1:R:5:A:N3	2:H:80:LEU:CD1	0.42	2.74	7	1
2:H:137:SER:HB3	2:H:140:GLU:CD	0.42	2.35	7	1
1:R:2:U:O4'	2:H:157:LEU:HB3	0.42	2.13	8	1
2:H:138:GLN:HB3	2:H:155:ARG:HA	0.42	1.91	19	1
1:R:1:A:O5'	2:H:157:LEU:HD11	0.42	2.14	3	1
2:H:71:VAL:CG2	2:H:84:PHE:CE2	0.42	3.02	8	2
2:H:138:GLN:HB2	2:H:155:ARG:HA	0.42	1.91	19	1
2:H:145:PHE:C	2:H:151:ILE:HD11	0.42	2.35	20	1
2:H:127:LEU:HD22	2:H:183:ILE:CD1	0.42	2.33	1	1
2:H:69:LYS:HB3	2:H:84:PHE:HD2	0.42	1.74	3	3
2:H:71:VAL:HG11	2:H:82:TYR:HE1	0.42	1.74	3	1
2:H:41:LEU:O	2:H:85:VAL:N	0.42	2.50	8	1
2:H:157:LEU:CD1	2:H:157:LEU:H	0.42	2.28	14	1
1:R:8:U:OP1	2:H:71:VAL:CG1	0.42	2.67	15	1
2:H:62:ILE:CD1	2:H:100:LEU:HD21	0.42	2.45	5	1
2:H:132:LEU:HD12	2:H:169:GLY:N	0.42	2.29	5	1
2:H:155:ARG:O	2:H:170:PHE:N	0.42	2.46	6	2
2:H:134:LYS:HD2	2:H:135:THR:N	0.42	2.30	8	1
2:H:46:LEU:O	2:H:108:LYS:NZ	0.42	2.43	16	1
2:H:96:ALA:O	2:H:99:THR:HG22	0.42	2.15	20	1
2:H:128:TYR:HA	2:H:170:PHE:HD1	0.42	1.72	21	1
2:H:157:LEU:CD1	2:H:166:ARG:HG3	0.42	2.44	9	2
2:H:71:VAL:HG11	2:H:82:TYR:CZ	0.42	2.49	6	1
2:H:158:LEU:HA	2:H:166:ARG:HG3	0.42	1.92	10	1
1:R:3:U:O2'	1:R:4:U:O5'	0.42	2.37	18	1
2:H:47:PRO:HA	2:H:108:LYS:CE	0.42	2.45	3	1
2:H:84:PHE:CD1	2:H:84:PHE:N	0.42	2.87	21	2
1:R:0:U:H4'	1:R:1:A:OP2	0.42	2.15	13	1
2:H:92:ASP:OD2	2:H:95:LYS:NZ	0.42	2.52	14	1
2:H:132:LEU:HD13	2:H:136:MET:HG2	0.42	1.90	18	1
2:H:43:VAL:O	2:H:83:GLY:N	0.41	2.47	3	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:R:5:A:OP2	2:H:172:ARG:HD2	0.41	2.15	8	1
2:H:139:LYS:NZ	2:H:142:GLU:OE1	0.41	2.51	8	1
2:H:69:LYS:HB3	2:H:84:PHE:HB2	0.41	1.91	13	2
2:H:127:LEU:HD23	2:H:127:LEU:N	0.41	2.30	16	1
2:H:101:ASN:C	2:H:111:LYS:HG2	0.41	2.35	18	1
2:H:43:VAL:HG21	2:H:59:PHE:CZ	0.41	2.50	3	1
1:R:3:U:O4	2:H:111:LYS:HE3	0.41	2.15	4	1
2:H:44:ASN:HA	2:H:82:TYR:HB3	0.41	1.92	18	2
2:H:145:PHE:HB3	2:H:171:ILE:HG21	0.41	1.91	16	1
1:R:6:U:O4'	2:H:44:ASN:CB	0.41	2.68	7	1
2:H:80:LEU:HD23	2:H:82:TYR:OH	0.41	2.15	11	1
2:H:176:ARG:HG3	2:H:177:ILE:N	0.41	2.30	5	1
2:H:136:MET:CG	2:H:156:ILE:CD1	0.41	2.98	8	1
2:H:158:LEU:HD22	2:H:158:LEU:O	0.41	2.15	14	1
1:R:7:U:O2'	1:R:8:U:H5	0.41	1.99	15	1
2:H:130:SER:N	2:H:199:THR:O	0.41	2.48	17	1
2:H:129:VAL:N	2:H:169:GLY:O	0.41	2.49	19	1
2:H:130:SER:HA	2:H:168:VAL:HG13	0.41	1.92	19	2
2:H:130:SER:CA	2:H:168:VAL:HG13	0.41	2.45	19	1
2:H:157:LEU:O	2:H:166:ARG:HB2	0.41	2.15	10	2
1:R:6:U:O2	2:H:45:TYR:CE2	0.41	2.74	5	1
2:H:157:LEU:HD12	2:H:157:LEU:N	0.41	2.29	7	1
1:R:3:U:O4	2:H:111:LYS:HD2	0.41	2.15	8	1
1:R:2:U:C4'	2:H:157:LEU:HD13	0.41	2.45	12	1
2:H:105:LEU:HD11	2:H:110:ILE:HB	0.41	1.93	14	1
1:R:5:A:C6	2:H:79:SER:O	0.41	2.74	16	1
2:H:42:ILE:N	2:H:113:SER:O	0.41	2.52	6	1
1:R:3:U:H3	2:H:109:THR:HG22	0.41	1.76	8	1
2:H:43:VAL:HG22	2:H:112:VAL:CG2	0.41	2.40	13	1
2:H:105:LEU:HG	2:H:110:ILE:HD11	0.41	1.93	13	1
2:H:109:THR:HG22	2:H:109:THR:O	0.41	2.16	16	1
2:H:104:LYS:O	2:H:104:LYS:HG2	0.41	2.16	18	1
2:H:42:ILE:HG22	2:H:115:ALA:HB2	0.41	1.92	1	1
2:H:41:LEU:HD12	2:H:114:TYR:HA	0.41	1.93	3	1
1:R:2:U:C6	1:R:2:U:O5'	0.41	2.74	6	1
2:H:83:GLY:C	2:H:84:PHE:CD1	0.41	2.93	8	1
2:H:142:GLU:O	2:H:151:ILE:HD12	0.41	2.15	11	1
2:H:159:ASP:HB3	2:H:164:VAL:N	0.41	2.31	12	2
2:H:42:ILE:HD12	2:H:84:PHE:CE2	0.41	2.50	16	1
1:R:3:U:OP1	2:H:155:ARG:HD3	0.41	2.15	21	1
1:R:1:A:C4	2:H:128:TYR:CZ	0.41	3.08	7	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:H:95:LYS:O	2:H:95:LYS:HE3	0.41	2.15	9	1
1:R:6:U:O2	2:H:42:ILE:HD13	0.41	2.16	14	1
1:R:2:U:O4'	2:H:170:PHE:CE2	0.41	2.73	16	1
2:H:93:ALA:O	2:H:97:ILE:HG12	0.41	2.16	19	1
1:R:3:U:O2	2:H:109:THR:O	0.41	2.38	5	2
2:H:51:THR:HG22	2:H:54:GLU:OE1	0.41	2.16	5	1
1:R:6:U:H5	2:H:153:THR:HG23	0.41	1.75	14	1
2:H:127:LEU:HB2	2:H:171:ILE:O	0.41	2.16	14	1
2:H:71:VAL:HG11	2:H:82:TYR:CE1	0.41	2.51	19	1
2:H:70:LEU:HG	2:H:82:TYR:O	0.41	2.15	20	1
1:R:6:U:H5''	2:H:45:TYR:CE2	0.41	2.51	21	1
2:H:129:VAL:HA	2:H:200:VAL:HA	0.41	1.92	4	1
2:H:138:GLN:OE1	2:H:155:ARG:NH2	0.41	2.51	4	2
1:R:3:U:O2	2:H:45:TYR:CD2	0.41	2.74	7	1
2:H:149:GLY:HA3	2:H:173:PHE:CE2	0.40	2.51	5	1
1:R:9:U:OP1	2:H:71:VAL:HG21	0.40	2.16	8	1
2:H:141:MET:SD	2:H:171:ILE:HD11	0.40	2.56	8	1
2:H:100:LEU:O	2:H:111:LYS:HA	0.40	2.16	11	1
2:H:102:GLY:HA2	2:H:111:LYS:HE2	0.40	1.93	14	1
1:R:7:U:C2	2:H:115:ALA:HB1	0.40	2.51	15	1
2:H:176:ARG:HG2	2:H:202:PHE:CE1	0.40	2.51	17	1
1:R:1:A:H5'	2:H:168:VAL:CG2	0.40	2.47	7	1
2:H:101:ASN:OD1	2:H:111:LYS:HE2	0.40	2.15	10	1
2:H:58:LEU:HD13	2:H:58:LEU:C	0.40	2.37	12	1
2:H:118:SER:O	2:H:119:SER:HB3	0.40	2.16	15	1
1:R:0:U:O2	1:R:0:U:H3'	0.40	2.16	16	1
2:H:46:LEU:HD12	2:H:83:GLY:N	0.40	2.31	17	1
2:H:66:GLU:O	2:H:67:SER:HB2	0.40	2.17	3	2
2:H:165:SER:O	2:H:166:ARG:NE	0.40	2.38	11	1
1:R:1:A:N1	2:H:128:TYR:CD2	0.40	2.89	12	1
1:R:6:U:C2	2:H:44:ASN:OD1	0.40	2.75	14	1
2:H:82:TYR:CE2	2:H:84:PHE:CZ	0.40	3.09	14	1
2:H:107:THR:O	2:H:108:LYS:HG3	0.40	2.16	16	1
2:H:139:LYS:NZ	2:H:140:GLU:OE2	0.40	2.45	5	1
2:H:125:ALA:HB3	2:H:173:PHE:C	0.40	2.37	6	1
2:H:157:LEU:O	2:H:157:LEU:CG	0.40	2.69	6	1
1:R:5:A:C4	2:H:80:LEU:HA	0.40	2.51	16	1
2:H:104:LYS:O	2:H:105:LEU:HG	0.40	2.17	17	1
2:H:45:TYR:CB	2:H:109:THR:O	0.40	2.69	19	1
2:H:187:ASN:OD1	2:H:201:LYS:NZ	0.40	2.52	5	1
1:R:8:U:C2	2:H:84:PHE:CD2	0.40	3.09	8	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:R:6:U:H4'	2:H:82:TYR:CE1	0.40	2.51	11	1
1:R:6:U:O2'	1:R:7:U:OP1	0.40	2.40	12	1
2:H:82:TYR:N	2:H:82:TYR:CD1	0.40	2.90	14	1
2:H:179:ALA:HB3	2:H:202:PHE:HZ	0.40	1.77	18	1
2:H:41:LEU:CD1	2:H:114:TYR:HA	0.40	2.47	19	1

6.3 Torsion angles [i](#)

6.3.1 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 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	
2	H	147/174 (84%)	119±3 (81±2%)	23±3 (16±2%)	5±2 (4±1%)	6	35
All	All	3087/3654 (84%)	2493 (81%)	485 (16%)	109 (4%)	6	35

All 28 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
2	H	102	GLY	16
2	H	198	ILE	11
2	H	150	ARG	10
2	H	81	GLY	9
2	H	161	ALA	9
2	H	47	PRO	7
2	H	149	GLY	7
2	H	79	SER	6
2	H	99	THR	4
2	H	160	GLN	3
2	H	187	ASN	3
2	H	119	SER	3
2	H	118	SER	2
2	H	110	ILE	2
2	H	117	PRO	2
2	H	38	LYS	2
2	H	124	ASP	2

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Mol	Chain	Res	Type	Models (Total)
2	H	107	THR	1
2	H	48	GLN	1
2	H	49	ASN	1
2	H	39	THR	1
2	H	90	PRO	1
2	H	106	GLN	1
2	H	155	ARG	1
2	H	204	ASN	1
2	H	65	ILE	1
2	H	101	ASN	1
2	H	203	ALA	1

6.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all 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	
2	H	127/149 (85%)	102±4 (80±3%)	25±4 (20±3%)	4	34
All	All	2667/3129 (85%)	2134 (80%)	533 (20%)	4	34

All 70 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)
2	H	95	LYS	20
2	H	143	GLN	19
2	H	100	LEU	17
2	H	82	TYR	16
2	H	116	ARG	14
2	H	155	ARG	14
2	H	38	LYS	13
2	H	158	LEU	13
2	H	166	ARG	13
2	H	64	ASP	12
2	H	111	LYS	12
2	H	184	LYS	12
2	H	44	ASN	11
2	H	134	LYS	11

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Mol	Chain	Res	Type	Models (Total)
2	H	150	ARG	11
2	H	165	SER	11
2	H	201	LYS	11
2	H	61	SER	10
2	H	108	LYS	10
2	H	157	LEU	10
2	H	94	ASP	10
2	H	66	GLU	10
2	H	137	SER	10
2	H	104	LYS	9
2	H	140	GLU	9
2	H	160	GLN	9
2	H	175	LYS	9
2	H	176	ARG	9
2	H	98	ASN	8
2	H	142	GLU	8
2	H	53	ASP	8
2	H	126	ASN	8
2	H	139	LYS	8
2	H	69	LYS	7
2	H	89	ASP	7
2	H	99	THR	7
2	H	178	GLU	7
2	H	138	GLN	7
2	H	88	SER	7
2	H	118	SER	6
2	H	172	ARG	6
2	H	180	GLU	6
2	H	187	ASN	6
2	H	52	GLN	6
2	H	48	GLN	6
2	H	124	ASP	5
2	H	181	GLU	5
2	H	86	ASN	5
2	H	106	GLN	5
2	H	136	MET	5
2	H	39	THR	5
2	H	79	SER	5
2	H	54	GLU	4
2	H	56	LYS	4
2	H	58	LEU	4
2	H	141	MET	4

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Mol	Chain	Res	Type	Models (Total)
2	H	91	ASN	4
2	H	110	ILE	3
2	H	57	SER	3
2	H	67	SER	3
2	H	146	SER	3
2	H	40	ASN	2
2	H	204	ASN	2
2	H	92	ASP	2
2	H	119	SER	2
2	H	101	ASN	1
2	H	80	LEU	1
2	H	50	MET	1
2	H	113	SER	1
2	H	154	SER	1

6.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers	Suiteness
1	R	9/10 (90%)	8±0 (94±6%)	2±1 (19±10%)	0.03±0.03
All	All	193/210 (92%)	178 (92%)	36 (19%)	0.03

The overall RNA backbone suiteness is 0.03.

All unique RNA backbone outliers are listed below:

Mol	Chain	Res	Type	Models (Total)
1	R	4	U	21
1	R	6	U	21
1	R	8	U	21
1	R	9	U	21
1	R	1	A	20
1	R	2	U	20
1	R	5	A	20
1	R	3	U	19
1	R	7	U	15

All unique RNA pucker outliers are listed below:

Mol	Chain	Res	Type	Models (Total)
1	R	5	A	17
1	R	6	U	5

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Mol	Chain	Res	Type	Models (Total)
1	R	8	U	4
1	R	0	U	4
1	R	4	U	2
1	R	7	U	2
1	R	2	U	2

6.4 Non-standard residues in protein, DNA, RNA chains [i](#)

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

6.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.6 Ligand geometry [i](#)

There are no ligands in this entry.

6.7 Other polymers [i](#)

There are no such molecules in this entry.

6.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

7 Chemical shift validation

No chemical shift data were provided