



# Full wwPDB NMR Structure Validation Report ⓘ

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PDB ID : 2KWG  
Title : Solution structure of a fully modified 2'-F/2'-OMe siRNA construct  
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Deposited on : 2010-04-09

This is a Full wwPDB NMR Structure Validation Report for a publicly released PDB entry.  
We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)  
A user guide is available at  
<http://wwpdb.org/validation/2016/NMRValidationReportHelp>  
with specific help available everywhere you see the ⓘ symbol.

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

Cyrange : Kirchner and Güntert (2011)  
NmrClust : Kelley et al. (1996)  
MolProbity : 4.02b-467  
Mogul : 1.7.1 (RC1), CSD as537be (2016)  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
RCI : v\_1n\_11\_5\_13\_A (Berjanski et al., 2005)  
PANAV : Wang et al. (2010)  
ShiftChecker : rb-20027457  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : rb-20027457

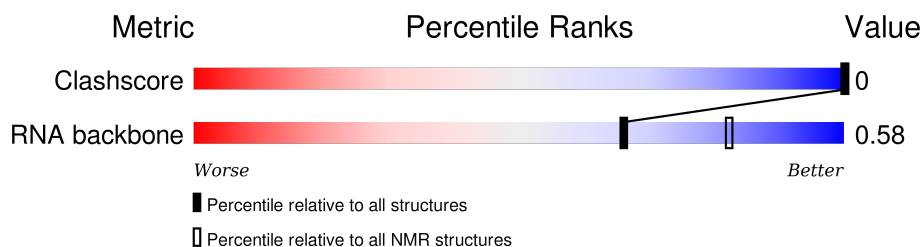
# 1 Overall quality at a glance

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	114402	11133
RNA backbone	3027	600

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  $\geq 3$ , 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	A	21	100%
2	B	21	90% 10%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA and RNA chains that are outliers for geometric criteria:

Mol	Chain	Compound	Res	Total models with violations	
				Chirality	Geometry
2	B	A2M	22	8	-
2	B	UFT	23	2	-

## 2 Ensemble composition and analysis ⓘ

This entry contains 10 models. This entry does not contain protein, therefore identification of well-defined residues and clustering analysis are not possible. All residues are included in the validation scores.

### 3 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 1373 atoms, of which 470 are hydrogens and 0 are deuteriums.

- Molecule 1 is a RNA chain called 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'.

Mol	Chain	Residues	Atoms							Trace
1	A	21	Total	C	F	H	N	O	P	0
			681	208	11	233	72	137	20	

- Molecule 2 is a RNA chain called 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'.

Mol	Chain	Residues	Atoms							Trace
2	B	21	Total	C	F	H	N	O	P	0
			692	210	10	237	75	139	21	

## 4 Residue-property plots

### 4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA and DNA 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: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

- Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  90% 10%



### 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: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

- Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  90% 10%



#### 4.2.2 Score per residue for model 2

• Molecule 1: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  100%

There are no outlier residues in this chain.


#### 4.2.3 Score per residue for model 3

• Molecule 1: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  86% 14%



#### 4.2.4 Score per residue for model 4

• Molecule 1: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  95% 5%



#### 4.2.5 Score per residue for model 5

• Molecule 1: 5'-R(\*(GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  90% 10%



#### 4.2.6 Score per residue for model 6

• Molecule 1: 5'-R(\*(GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  95% 5%



#### 4.2.7 Score per residue for model 7

• Molecule 1: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  100%

There are no outlier residues in this chain.

#### 4.2.8 Score per residue for model 8

• Molecule 1: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  90% 10%



#### 4.2.9 Score per residue for model 9

• Molecule 1: 5'-R>(\* (GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'



Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  90% 10%



#### 4.2.10 Score per residue for model 10

• Molecule 1: 5'-R(\*(GF2)P\*(OMG)P\*(GF2)P\*(OMU)P\*(AF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(AF2)P\*(OMC)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMC)P\*(UFT)P\*(OMU)P\*(CFZ)P\*(A2M)P\*(UFT)P\*(OMU)P\*(UFT))-3'

Chain A:  100%

There are no outlier residues in this chain.

• Molecule 2: 5'-R(P\*(A2M)P\*(UFT)P\*(OMG)P\*(AF2)P\*(A2M)P\*(GF2)P\*(A2M)P\*(AF2)P\*(OMU)P\*(GF2)P\*(OMU)P\*(AF2)P\*(OMU)P\*(UFT)P\*(OMU)P\*(AF2)P\*(OMC)P\*(CFZ)P\*(OMC)P\*(UFT)P\*(OMU))-3'

Chain B:  90% 10%



## 5 Refinement protocol and experimental data overview

The models were refined using the following method: *simulated annealing*.

Of the 100 calculated structures, 10 were deposited, based on the following criterion: *structures with the lowest energy*.

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

Software name	Classification	Version
AMBER	structure solution	9
AMBER	refinement	9

The following table shows chemical shift validation statistics as aggregates over all chemical shift files. Detailed validation can be found in section 7 of this report.

Chemical shift file(s)	BMRB entry 16852
Number of chemical shift lists	1
Total number of shifts	231
Number of shifts mapped to atoms	0
Number of unparsed shifts	0
Number of shifts with mapping errors	231
Number of shifts with mapping warnings	0
Assignment completeness (well-defined parts)	—

No validations of the models with respect to experimental NMR restraints is performed at this time.

## 6 Model quality [i](#)

### 6.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: OMC, OMG, GF2, CFZ, OMU, UFT, A2M, AF2

There are no covalent bond-length or bond-angle outliers.

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
2	B	1.6±0.8	0.0±0.0
All	All	16	0

There are no bond-length outliers.

There are no bond-angle outliers.

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

Mol	Chain	Res	Type	Atoms	Models (Total)
2	B	22	A2M	C4',C3'	8
2	B	23	UFT	C4'	2

There are no planarity outliers.

### 6.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in 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
All	All	9030	4700	4680	-

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 -.

There are no clashes.

## 6.3 Torsion angles [i](#)

### 6.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

### 6.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

### 6.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers	Suiteness
1	A	9/21 (43%)	0±0 (0±0%)	0±0 (0±0%)	0.61±0.04
2	B	10/21 (48%)	1±1 (9±5%)	0±0 (0±0%)	0.56±0.04
All	All	190/420 (45%)	9 (5%)	0 (0%)	0.58

The overall RNA backbone suiteness is 0.58.

All unique RNA backbone outliers are listed below:

Mol	Chain	Res	Type	Models (Total)
2	B	24	OMG	8
2	B	42	OMU	1

There are no RNA pucker outliers to report.

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

42 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds for which Mogul statistics could be retrieved, the number of bonds that are observed in the model and the number of bonds that are defined in the chemical component dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length is the number of standard deviations the observed value is removed from the expected value. A bond length with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond lengths.

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
1	GF2	A	1	-	18,22,26	0.95±0.01	0±0 (0±0%)
1	OMC	A	10	1	15,22,23	1.00±0.01	0±0 (0±0%)
1	AF2	A	11	1	17,24,25	0.78±0.01	0±0 (0±0%)

Mol	Type	Chain	Res	Link	Bond lengths		
					Counts	RMSZ	#Z>2
1	OMU	A	12	1	13,22,23	0.85±0.01	0±0 (0±0%)
1	UFT	A	13	1,2	12,21,22	0.89±0.01	0±0 (0±0%)
1	OMC	A	14	1	15,22,23	1.00±0.01	0±0 (0±0%)
1	UFT	A	15	1,2	12,21,22	0.88±0.02	0±0 (0±0%)
1	OMU	A	16	1	13,22,23	0.87±0.02	0±0 (0±0%)
1	CFZ	A	17	1	14,21,22	1.05±0.01	0±0 (0±0%)
1	A2M	A	18	1,2	18,25,26	0.75±0.01	0±0 (0±0%)
1	UFT	A	19	1,2	12,21,22	0.87±0.01	0±0 (0±0%)
1	OMG	A	2	1	18,26,27	0.93±0.01	0±0 (0±0%)
1	OMU	A	20	1	13,22,23	0.89±0.02	0±0 (0±0%)
1	UFT	A	21	1	12,21,22	0.92±0.02	0±0 (0±0%)
1	GF2	A	3	1	17,25,26	0.96±0.01	0±0 (0±0%)
1	OMU	A	4	1	13,22,23	0.88±0.02	0±0 (0±0%)
1	AF2	A	5	1	17,24,25	0.77±0.01	0±0 (0±0%)
1	A2M	A	6	1,2	18,25,26	0.75±0.01	0±0 (0±0%)
1	AF2	A	7	1	17,24,25	0.77±0.01	0±0 (0±0%)
1	OMU	A	8	1	13,22,23	0.88±0.02	0±0 (0±0%)
1	AF2	A	9	1	17,24,25	0.77±0.01	0±0 (0±0%)
2	A2M	B	22	1,2	23,26,26	0.77±0.02	0±0 (0±0%)
2	UFT	B	23	1,2	12,21,22	0.95±0.02	0±0 (0±0%)
2	OMG	B	24	2	18,26,27	0.91±0.01	0±0 (0±0%)
2	AF2	B	25	2	17,24,25	0.78±0.01	0±0 (0±0%)
2	A2M	B	26	1,2	18,25,26	0.75±0.01	0±0 (0±0%)
2	GF2	B	27	2	17,25,26	0.96±0.01	0±0 (0±0%)
2	A2M	B	28	1,2	18,25,26	0.75±0.01	0±0 (0±0%)
2	AF2	B	29	2	17,24,25	0.77±0.01	0±0 (0±0%)
2	OMU	B	30	2	13,22,23	0.87±0.02	0±0 (0±0%)
2	GF2	B	31	2	17,25,26	0.94±0.01	0±0 (0±0%)
2	OMU	B	32	2	13,22,23	0.87±0.01	0±0 (0±0%)
2	AF2	B	33	2	17,24,25	0.78±0.01	0±0 (0±0%)
2	OMU	B	34	2	13,22,23	0.88±0.01	0±0 (0±0%)
2	UFT	B	35	1,2	12,21,22	0.89±0.03	0±0 (0±0%)
2	OMU	B	36	2	13,22,23	0.85±0.02	0±0 (0±0%)
2	AF2	B	37	2	17,24,25	0.78±0.01	0±0 (0±0%)
2	OMC	B	38	2	15,22,23	1.01±0.01	0±0 (0±0%)
2	CFZ	B	39	2	14,21,22	1.00±0.02	0±0 (0±0%)
2	OMC	B	40	2	15,22,23	0.93±0.02	0±0 (0±0%)
2	UFT	B	41	2	12,21,22	0.92±0.06	0±0 (0±0%)
2	OMU	B	42	2	13,22,23	0.84±0.07	0±0 (0±0%)

In the following table, the Counts columns list the number of angles for which Mogul statistics could be retrieved, the number of angles that are observed in the model and the number of angles that are defined in the chemical component dictionary. The Link column lists molecule types,

if any, to which the group is linked. The Z score for a bond angle is the number of standard deviations the observed value is removed from the expected value. A bond angle with  $|Z| > 2$  is considered an outlier worth inspection. RMSZ is the average root-mean-square of all Z scores of the bond angles.

Mol	Type	Chain	Res	Link	Bond angles		
					Counts	RMSZ	#Z>2
1	GF2	A	1	-	14,33,40	1.17±0.06	0±0 (0±0%)
1	OMC	A	10	1	20,31,34	0.92±0.03	0±0 (0±0%)
1	AF2	A	11	1	14,35,38	1.15±0.03	0±0 (0±0%)
1	OMU	A	12	1	17,31,34	1.08±0.04	0±0 (0±0%)
1	UFT	A	13	1,2	13,30,33	1.13±0.02	0±0 (0±0%)
1	OMC	A	14	1	20,31,34	0.88±0.03	0±0 (0±0%)
1	UFT	A	15	1,2	13,30,33	1.15±0.06	0±0 (0±0%)
1	OMU	A	16	1	17,31,34	1.12±0.05	0±0 (0±0%)
1	CFZ	A	17	1	16,30,33	0.86±0.02	0±0 (0±0%)
1	A2M	A	18	1,2	18,36,39	1.13±0.04	0±0 (0±0%)
1	UFT	A	19	1,2	13,30,33	1.23±0.04	0±0 (0±0%)
1	OMG	A	2	1	18,38,41	1.15±0.06	0±0 (0±0%)
1	OMU	A	20	1	17,31,34	1.05±0.04	0±0 (0±0%)
1	UFT	A	21	1	13,30,33	1.21±0.11	0±0 (0±0%)
1	GF2	A	3	1	14,37,40	1.32±0.06	0±0 (0±0%)
1	OMU	A	4	1	17,31,34	1.17±0.06	0±0 (0±0%)
1	AF2	A	5	1	14,35,38	1.31±0.06	0±0 (0±0%)
1	A2M	A	6	1,2	18,36,39	1.08±0.07	0±0 (0±0%)
1	AF2	A	7	1	14,35,38	1.20±0.08	0±0 (0±0%)
1	OMU	A	8	1	17,31,34	1.11±0.05	0±0 (0±0%)
1	AF2	A	9	1	14,35,38	1.20±0.03	0±0 (0±0%)
2	A2M	B	22	1,2	24,39,39	1.20±0.04	0±0 (0±0%)
2	UFT	B	23	1,2	13,30,33	1.21±0.15	0±0 (0±0%)
2	OMG	B	24	2	18,38,41	1.06±0.07	0±0 (0±0%)
2	AF2	B	25	2	14,35,38	1.17±0.07	0±0 (0±0%)
2	A2M	B	26	1,2	18,36,39	1.11±0.03	0±0 (0±0%)
2	GF2	B	27	2	14,37,40	1.24±0.04	0±0 (0±0%)
2	A2M	B	28	1,2	18,36,39	1.10±0.04	0±0 (0±0%)
2	AF2	B	29	2	14,35,38	1.21±0.02	0±0 (0±0%)
2	OMU	B	30	2	17,31,34	1.14±0.06	0±0 (0±0%)
2	GF2	B	31	2	14,37,40	1.19±0.06	0±0 (0±0%)
2	OMU	B	32	2	17,31,34	1.16±0.06	0±0 (0±0%)
2	AF2	B	33	2	14,35,38	1.17±0.07	0±0 (0±0%)
2	OMU	B	34	2	17,31,34	1.09±0.01	0±0 (0±0%)
2	UFT	B	35	1,2	13,30,33	1.23±0.10	0±0 (0±0%)
2	OMU	B	36	2	17,31,34	1.10±0.02	0±0 (0±0%)
2	AF2	B	37	2	14,35,38	1.18±0.04	0±0 (0±0%)
2	OMC	B	38	2	20,31,34	0.86±0.03	0±0 (0±0%)
2	CFZ	B	39	2	16,30,33	1.09±0.08	0±0 (0±0%)

Mol	Type	Chain	Res	Link	Bond angles		
					Counts	RMSZ	#Z>2
2	OMC	B	40	2	20,31,34	0.89±0.24	0±0 (0±0%)
2	UFT	B	41	2	13,30,33	1.14±0.22	0±0 (0±0%)
2	OMU	B	42	2	17,31,34	1.13±0.11	0±0 (0±0%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the chemical component dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
1	GF2	A	1	-	-	0±0,2,22,26	0±0,3,3,3
1	OMC	A	10	1	-	0±0,5,27,28	0±0,2,2,2
1	AF2	A	11	1	-	0±0,3,25,26	0±0,3,3,3
1	OMU	A	12	1	-	0±0,5,27,28	0±0,2,2,2
1	UFT	A	13	1,2	-	0±0,3,25,26	0±0,2,2,2
1	OMC	A	14	1	-	0±0,5,27,28	0±0,2,2,2
1	UFT	A	15	1,2	-	0±0,3,25,26	0±0,2,2,2
1	OMU	A	16	1	-	0±0,5,27,28	0±0,2,2,2
1	CFZ	A	17	1	-	0±0,3,25,26	0±0,2,2,2
1	A2M	A	18	1,2	-	0±0,5,27,28	0±0,3,3,3
1	UFT	A	19	1,2	-	0±0,3,25,26	0±0,2,2,2
1	OMG	A	2	1	-	0±0,5,27,28	0±0,3,3,3
1	OMU	A	20	1	-	0±0,5,27,28	0±0,2,2,2
1	UFT	A	21	1	-	0±0,3,25,26	0±0,2,2,2
1	GF2	A	3	1	-	0±0,3,25,26	0±0,3,3,3
1	OMU	A	4	1	-	0±0,5,27,28	0±0,2,2,2
1	AF2	A	5	1	-	0±0,3,25,26	0±0,3,3,3
1	A2M	A	6	1,2	-	0±0,5,27,28	0±0,3,3,3
1	AF2	A	7	1	-	0±0,3,25,26	0±0,3,3,3
1	OMU	A	8	1	-	0±0,5,27,28	0±0,2,2,2
1	AF2	A	9	1	-	0±0,3,25,26	0±0,3,3,3
2	A2M	B	22	1,2	2±0,2,5,5	0±0,8,28,28	0±0,3,3,3
2	UFT	B	23	1,2	-	0±0,3,25,26	0±0,2,2,2
2	OMG	B	24	2	-	0±0,5,27,28	0±0,3,3,3
2	AF2	B	25	2	-	0±0,3,25,26	0±0,3,3,3
2	A2M	B	26	1,2	-	0±0,5,27,28	0±0,3,3,3
2	GF2	B	27	2	-	0±0,3,25,26	0±0,3,3,3
2	A2M	B	28	1,2	-	0±0,5,27,28	0±0,3,3,3
2	AF2	B	29	2	-	0±0,3,25,26	0±0,3,3,3
2	OMU	B	30	2	-	0±0,5,27,28	0±0,2,2,2
2	GF2	B	31	2	-	0±0,3,25,26	0±0,3,3,3
2	OMU	B	32	2	-	0±0,5,27,28	0±0,2,2,2
2	AF2	B	33	2	-	0±0,3,25,26	0±0,3,3,3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	OMU	B	34	2	-	0±0,5,27,28	0±0,2,2,2
2	UFT	B	35	1,2	-	0±0,3,25,26	0±0,2,2,2
2	OMU	B	36	2	-	0±0,5,27,28	0±0,2,2,2
2	AF2	B	37	2	-	0±0,3,25,26	0±0,3,3,3
2	OMC	B	38	2	-	0±0,5,27,28	0±0,2,2,2
2	CFZ	B	39	2	-	0±0,3,25,26	0±0,2,2,2
2	OMC	B	40	2	-	0±0,5,27,28	0±0,2,2,2
2	UFT	B	41	2	-	0±0,3,25,26	0±0,2,2,2
2	OMU	B	42	2	-	0±0,5,27,28	0±0,2,2,2

There are no bond-length outliers.

There are no bond-angle outliers.

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

Mol	Chain	Res	Type	Atoms	Models (Total)
2	B	22	A2M	C4'	7
2	B	22	A2M	C3'	7
2	B	23	UFT	C4'	2

There are no torsion outliers.

There are no ring outliers.

## 6.5 Carbohydrates [i](#)

There are no carbohydrates 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

The completeness of assignment taking into account all chemical shift lists is *undefined* for the well-defined parts and *undefined* for the entire structure.

### 7.1 Chemical shift list 1

File name: BMRB entry 16852

Chemical shift list name: *assigned\_chem\_shift\_list\_1*

#### 7.1.1 Bookkeeping

The following table shows the results of parsing the chemical shift list and reports the number of nuclei with statistically unusual chemical shifts.

Total number of shifts	231
Number of shifts mapped to atoms	0
Number of unparsed shifts	0
Number of shifts with mapping errors	231
Number of shifts with mapping warnings	0
Number of shift outliers (ShiftChecker)	0

The following assigned chemical shifts were not mapped to the molecules present in the coordinate file.

- Chain not found in structure. All 231 occurrences are reported below.

Chain	Res	Type	Atom	Shift Data		
				Value	Uncertainty	Ambiguity
UNMAPPED	16	FA	H3'	4.852	-1.0	1
UNMAPPED	8	MU	HM'1	3.638	-1.0	2
UNMAPPED	21	FU	H1'	5.856	-1.0	1
UNMAPPED	3	MG	HM'1	3.808	-1.0	2
UNMAPPED	14	MC	HM'1	3.671	-1.0	2
UNMAPPED	8	MU	HM'2	3.638	-1.0	2
UNMAPPED	18	MA	H2	7.409	-1.0	1
UNMAPPED	9	FA	H1'	6.366	-1.0	1
UNMAPPED	12	MU	H1'	5.78	-1.0	1
UNMAPPED	3	MG	H1'	6.007	-1.0	1
UNMAPPED	15	MU	HM'1	3.663	-1.0	2
UNMAPPED	14	FU	H6	7.88	-1.0	1
UNMAPPED	15	FU	H2'	5.131	-1.0	1
UNMAPPED	8	FA	H8	7.617	-1.0	1

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Chain	Res	Type	Atom	Shift Data		
				Value	Uncertainty	Ambiguity
UNMAPPED	6	MA	HM'3	3.728	-1.0	2
UNMAPPED	17	MC	HM'3	3.579	-1.0	2
UNMAPPED	1	MA	H8	8.697	-1.0	1
UNMAPPED	16	MU	H5	5.625	-1.0	1
UNMAPPED	2	FU	H3'	4.613	-1.0	1
UNMAPPED	15	FU	H1'	5.831	-1.0	1
UNMAPPED	19	MC	HM'3	3.639	-1.0	2
UNMAPPED	13	FU	H1'	6.013	-1.0	1
UNMAPPED	16	MU	H6	8.077	-1.0	1
UNMAPPED	1	MA	H2	7.902	-1.0	1
UNMAPPED	14	MC	H6	7.949	-1.0	1
UNMAPPED	14	MC	H1'	5.777	-1.0	1
UNMAPPED	13	MU	H1'	5.71	-1.0	1
UNMAPPED	5	FA	H2'	5.255	-1.0	1
UNMAPPED	20	FU	H5	5.562	-1.0	1
UNMAPPED	12	MU	HM'2	3.673	-1.0	2
UNMAPPED	3	FG	H1'	6.131	-1.0	1
UNMAPPED	10	MC	HM'2	3.598	-1.0	2
UNMAPPED	21	MU	HM'1	3.397	-1.0	2
UNMAPPED	19	MC	H5	5.446	-1.0	1
UNMAPPED	4	FA	H3'	4.742	-1.0	1
UNMAPPED	4	MU	H3	13.308	-1.0	1
UNMAPPED	14	FU	H1'	6.008	-1.0	1
UNMAPPED	2	MG	H1	12.485	-1.0	1
UNMAPPED	15	MU	H3	12.889	-1.0	1
UNMAPPED	10	MC	H1'	5.553	-1.0	1
UNMAPPED	2	FU	H2'	5.418	-1.0	1
UNMAPPED	4	MU	H5	5.18	-1.0	1
UNMAPPED	21	MU	H1'	5.889	-1.0	1
UNMAPPED	14	FU	H2'	5.101	-1.0	1
UNMAPPED	14	MC	HM'3	3.671	-1.0	2
UNMAPPED	2	MG	H8	7.362	-1.0	1
UNMAPPED	20	MU	HM'2	3.362	-1.0	2
UNMAPPED	5	MA	H8	7.663	-1.0	1
UNMAPPED	20	FU	H2'	4.918	-1.0	1
UNMAPPED	12	FA	H1'	6.395	-1.0	1
UNMAPPED	13	MU	HM'1	3.644	-1.0	2
UNMAPPED	21	MU	H6	7.745	-1.0	1
UNMAPPED	18	MA	H8	8.092	-1.0	1
UNMAPPED	8	FA	H1'	6.22	-1.0	1
UNMAPPED	6	MA	H8	7.778	-1.0	1

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Chain	Res	Type	Atom	Shift Data		
				Value	Uncertainty	Ambiguity
UNMAPPED	4	MU	HM'1	3.673	-1.0	2
UNMAPPED	20	MU	H1'	5.667	-1.0	1
UNMAPPED	18	FC	H2'	5.056	-1.0	1
UNMAPPED	4	MU	HM'2	3.673	-1.0	2
UNMAPPED	16	MU	HM'3	3.69	-1.0	2
UNMAPPED	15	FU	H5	5.419	-1.0	1
UNMAPPED	12	FA	H2'	5.181	-1.0	1
UNMAPPED	9	FA	H2'	5.156	-1.0	1
UNMAPPED	18	MA	HM'3	3.743	-1.0	2
UNMAPPED	11	MU	HM'1	3.654	-1.0	2
UNMAPPED	1	MA	HM'3	3.803	-1.0	2
UNMAPPED	17	FC	H1'	5.812	-1.0	1
UNMAPPED	6	FG	H3'	4.516	-1.0	1
UNMAPPED	21	FU	H2'	4.984	-1.0	1
UNMAPPED	11	MU	H1'	5.67	-1.0	1
UNMAPPED	2	MG	HM'3	3.832	-1.0	2
UNMAPPED	21	FU	H6	7.67	-1.0	1
UNMAPPED	5	MA	HM'2	3.752	-1.0	2
UNMAPPED	9	MU	HM'1	3.678	-1.0	2
UNMAPPED	14	MC	H5	5.692	-1.0	1
UNMAPPED	19	FU	H1'	5.826	-1.0	1
UNMAPPED	10	FG	H1	12.478	-1.0	1
UNMAPPED	1	FG	H3'	4.688	-1.0	1
UNMAPPED	21	MU	HM'2	3.397	-1.0	2
UNMAPPED	8	MU	HM'3	3.638	-1.0	2
UNMAPPED	16	FA	H1'	6.347	-1.0	1
UNMAPPED	11	FA	H3'	4.76	-1.0	1
UNMAPPED	3	MG	HM'3	3.808	-1.0	2
UNMAPPED	10	FG	H2'	5.096	-1.0	1
UNMAPPED	12	FA	H3'	4.755	-1.0	1
UNMAPPED	8	FA	H2	7.722	-1.0	1
UNMAPPED	19	MC	H6	7.592	-1.0	1
UNMAPPED	1	FG	H2'	5.57	-1.0	1
UNMAPPED	6	MA	H1'	5.982	-1.0	1
UNMAPPED	7	FA	H1'	6.179	-1.0	1
UNMAPPED	15	MU	HM'3	3.663	-1.0	2
UNMAPPED	13	FU	H3	13.875	-1.0	1
UNMAPPED	17	MC	HM'2	3.579	-1.0	2
UNMAPPED	21	FU	H3'	4.288	-1.0	1
UNMAPPED	6	MA	HM'1	3.728	-1.0	2
UNMAPPED	16	FA	H2	7.098	-1.0	1

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Chain	Res	Type	Atom	Shift Data		
				Value	Uncertainty	Ambiguity
UNMAPPED	19	MC	HM'2	3.639	-1.0	2
UNMAPPED	11	FA	H8	8.005	-1.0	1
UNMAPPED	13	MU	H5	5.077	-1.0	1
UNMAPPED	8	FA	H2'	5.12	-1.0	1
UNMAPPED	19	MC	HM'1	3.639	-1.0	2
UNMAPPED	2	FU	H6	7.562	-1.0	1
UNMAPPED	20	MU	HM'1	3.362	-1.0	2
UNMAPPED	18	MA	H1'	6.082	-1.0	1
UNMAPPED	7	FA	H2	7.647	-1.0	1
UNMAPPED	20	FU	H6	7.59	-1.0	1
UNMAPPED	12	MU	HM'3	3.673	-1.0	2
UNMAPPED	11	MU	H5	5.235	-1.0	1
UNMAPPED	17	FC	H6	7.747	-1.0	1
UNMAPPED	10	MC	HM'3	3.598	-1.0	2
UNMAPPED	9	FA	H8	8.058	-1.0	1
UNMAPPED	7	FA	H8	7.665	-1.0	1
UNMAPPED	13	MU	HM'2	3.644	-1.0	2
UNMAPPED	7	MA	HM'1	3.77	-1.0	2
UNMAPPED	18	FC	H6	7.649	-1.0	1
UNMAPPED	14	FU	H3	13.93	-1.0	1
UNMAPPED	15	MU	H1'	5.848	-1.0	1
UNMAPPED	2	FU	H1'	5.932	-1.0	1
UNMAPPED	12	FA	H8	8.095	-1.0	1
UNMAPPED	17	MC	H5	5.243	-1.0	1
UNMAPPED	4	MU	H6	7.773	-1.0	1
UNMAPPED	3	MG	H8	7.638	-1.0	1
UNMAPPED	11	MU	H3	13.246	-1.0	1
UNMAPPED	8	MU	H5	5.066	-1.0	1
UNMAPPED	7	FA	H2'	5.026	-1.0	1
UNMAPPED	13	MU	H6	7.693	-1.0	1
UNMAPPED	18	FC	H1'	5.798	-1.0	1
UNMAPPED	1	FG	H1'	6.167	-1.0	1
UNMAPPED	3	MG	H1	11.456	-1.0	1
UNMAPPED	7	MA	H2	7.223	-1.0	1
UNMAPPED	18	MA	HM'1	3.743	-1.0	2
UNMAPPED	5	FA	H8	8.009	-1.0	1
UNMAPPED	4	FA	H1'	6.149	-1.0	1
UNMAPPED	7	MA	H8	7.69	-1.0	1
UNMAPPED	5	FA	H2	6.393	-1.0	1
UNMAPPED	4	MU	HM'3	3.673	-1.0	2
UNMAPPED	13	MU	H3	13.733	-1.0	1

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Chain	Res	Type	Atom	Shift Data		
				Value	Uncertainty	Ambiguity
UNMAPPED	15	FU	H6	7.833	-1.0	1
UNMAPPED	16	MU	HM'1	3.69	-1.0	2
UNMAPPED	15	FU	H3	14.148	-1.0	1
UNMAPPED	1	FG	H8	8.095	-1.0	1
UNMAPPED	11	FA	H2'	5.161	-1.0	1
UNMAPPED	1	MA	H2'	4.791	-1.0	1
UNMAPPED	3	FG	H1	13.086	-1.0	1
UNMAPPED	11	MU	HM'3	3.654	-1.0	2
UNMAPPED	19	FU	H5	5.096	-1.0	1
UNMAPPED	2	MG	H1'	6.033	-1.0	1
UNMAPPED	11	MU	H6	7.803	-1.0	1
UNMAPPED	10	FG	H8	7.627	-1.0	1
UNMAPPED	5	MA	H1'	6.075	-1.0	1
UNMAPPED	5	MA	HM'1	3.752	-1.0	2
UNMAPPED	6	FG	H8	6.963	-1.0	1
UNMAPPED	21	MU	H5	5.754	-1.0	1
UNMAPPED	9	MU	HM'3	3.678	-1.0	2
UNMAPPED	6	FG	H2'	5.124	-1.0	1
UNMAPPED	6	FG	H1	12.446	-1.0	1
UNMAPPED	9	FA	H3'	4.798	-1.0	1
UNMAPPED	3	MG	HM'2	3.808	-1.0	2
UNMAPPED	19	FU	H2'	4.954	-1.0	1
UNMAPPED	12	MU	HM'1	3.673	-1.0	2
UNMAPPED	1	MA	H1'	6.187	-1.0	1
UNMAPPED	7	MA	HM'2	3.77	-1.0	2
UNMAPPED	1	MA	HM'2	3.803	-1.0	2
UNMAPPED	11	FA	H2	7.363	-1.0	1
UNMAPPED	17	FC	H5	5.672	-1.0	1
UNMAPPED	15	MU	HM'2	3.663	-1.0	2
UNMAPPED	21	FU	H5	5.676	-1.0	1
UNMAPPED	7	MA	HM'3	3.77	-1.0	2
UNMAPPED	17	MC	HM'1	3.579	-1.0	2
UNMAPPED	13	FU	H5	5.535	-1.0	1
UNMAPPED	3	FG	H2'	5.114	-1.0	1
UNMAPPED	16	MU	H3	13.627	-1.0	1
UNMAPPED	6	MA	HM'2	3.728	-1.0	2
UNMAPPED	13	FU	H6	7.882	-1.0	1
UNMAPPED	5	FA	H1'	6.318	-1.0	1
UNMAPPED	13	MU	HM'3	3.644	-1.0	2
UNMAPPED	2	FU	H5	5.174	-1.0	1
UNMAPPED	17	MC	H1'	5.612	-1.0	1

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Chain	Res	Type	Atom	Shift Data		
				Value	Uncertainty	Ambiguity
UNMAPPED	9	FA	H2	7.083	-1.0	1
UNMAPPED	20	MU	HM'3	3.362	-1.0	2
UNMAPPED	19	MC	H1'	5.72	-1.0	1
UNMAPPED	21	MU	HM'3	3.397	-1.0	2
UNMAPPED	8	MU	H1'	5.668	-1.0	1
UNMAPPED	9	MU	H3	13.333	-1.0	1
UNMAPPED	15	MU	H6	8.078	-1.0	1
UNMAPPED	10	MC	HM'1	3.598	-1.0	2
UNMAPPED	18	FC	H5	5.415	-1.0	1
UNMAPPED	9	MU	H6	7.531	-1.0	1
UNMAPPED	15	MU	H5	5.672	-1.0	1
UNMAPPED	6	FG	H1'	5.877	-1.0	1
UNMAPPED	17	MC	H6	7.65	-1.0	1
UNMAPPED	9	MU	H5	5.025	-1.0	1
UNMAPPED	4	FA	H2'	5.217	-1.0	1
UNMAPPED	7	MA	H1'	6.027	-1.0	1
UNMAPPED	5	FA	H3'	4.825	-1.0	1
UNMAPPED	14	MC	HM'2	3.671	-1.0	2
UNMAPPED	8	MU	H3	13.1	-1.0	1
UNMAPPED	12	MU	H5	5.069	-1.0	1
UNMAPPED	14	FU	H5	5.557	-1.0	1
UNMAPPED	4	FA	H8	7.641	-1.0	1
UNMAPPED	10	MC	H5	5.244	-1.0	1
UNMAPPED	12	MU	H6	7.72	-1.0	1
UNMAPPED	11	FA	H1'	6.259	-1.0	1
UNMAPPED	10	MC	H6	7.623	-1.0	1
UNMAPPED	12	MU	H3	13.804	-1.0	1
UNMAPPED	4	FA	H2	7.038	-1.0	1
UNMAPPED	13	FU	H2'	5.188	-1.0	1
UNMAPPED	5	MA	H2	7.391	-1.0	1
UNMAPPED	17	FC	H2'	5.116	-1.0	1
UNMAPPED	12	FA	H2	7.051	-1.0	1
UNMAPPED	16	MU	HM'2	3.69	-1.0	2
UNMAPPED	3	FG	H8	7.205	-1.0	1
UNMAPPED	20	MU	H6	7.617	-1.0	1
UNMAPPED	6	MA	H2	7.104	-1.0	1
UNMAPPED	16	MU	H1'	5.877	-1.0	1
UNMAPPED	20	MU	H5	5.598	-1.0	1
UNMAPPED	1	MA	HM'1	3.803	-1.0	2
UNMAPPED	18	MA	HM'2	3.743	-1.0	2
UNMAPPED	11	MU	HM'2	3.654	-1.0	2

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Chain	Res	Type	Atom	Shift Data		
				Value	Uncertainty	Ambiguity
UNMAPPED	19	FU	H6	7.269	-1.0	1
UNMAPPED	20	FU	H1'	5.822	-1.0	1
UNMAPPED	2	MG	HM'1	3.832	-1.0	2
UNMAPPED	9	MU	H1'	5.694	-1.0	1
UNMAPPED	4	MU	H1'	5.719	-1.0	1
UNMAPPED	2	MG	HM'2	3.832	-1.0	2
UNMAPPED	10	FG	H1'	6.197	-1.0	1
UNMAPPED	5	MA	HM'3	3.752	-1.0	2
UNMAPPED	9	MU	HM'2	3.678	-1.0	2
UNMAPPED	16	FA	H2'	5.143	-1.0	1
UNMAPPED	8	MU	H6	7.591	-1.0	1
UNMAPPED	16	FA	H8	8.196	-1.0	1

### 7.1.2 Chemical shift referencing [i](#)

No chemical shift referencing corrections were calculated (not enough data).

### 7.1.3 Completeness of resonance assignments [i](#)

The following table shows the completeness of the chemical shift assignments for the well-defined regions of the structure. The overall completeness is —%, i.e. 0 atoms were assigned a chemical shift out of a possible 0. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	<sup>1</sup> H	<sup>13</sup> C	<sup>15</sup> N
Backbone	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)
Sidechain	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)
Aromatic	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)
Overall	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)

The following table shows the completeness of the chemical shift assignments for the full structure. The overall completeness is —%, i.e. 0 atoms were assigned a chemical shift out of a possible 0. 0 out of 0 assigned methyl groups (LEU and VAL) were assigned stereospecifically.

	Total	<sup>1</sup> H	<sup>13</sup> C	<sup>15</sup> N
Backbone	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)
Sidechain	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)
Aromatic	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)
Overall	0/0 (—%)	0/0 (—%)	0/0 (—%)	0/0 (—%)

#### 7.1.4 Statistically unusual chemical shifts [i](#)

There are no statistically unusual chemical shifts.

#### 7.1.5 Random Coil Index (RCI) plots [i](#)

No *random coil index* (RCI) plot could be generated from the current chemical shift list (assigned\_chem\_shift\_list\_1). RCI is only applicable to proteins.