Full wwPDB NMR Structure Validation Report ⓘ

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PDB ID	:	2GQK
Title	:	Solution structure of Human Ni(II)-Sco1
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Deposited on	:	2006-04-21

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	:	2.27
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.27

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		1
Ramachandran outliers		3.7%
Sidechain outliers		9.9%

Worse   *Better*

▌ Percentile relative to all structures

▯ Percentile relative to all NMR structures
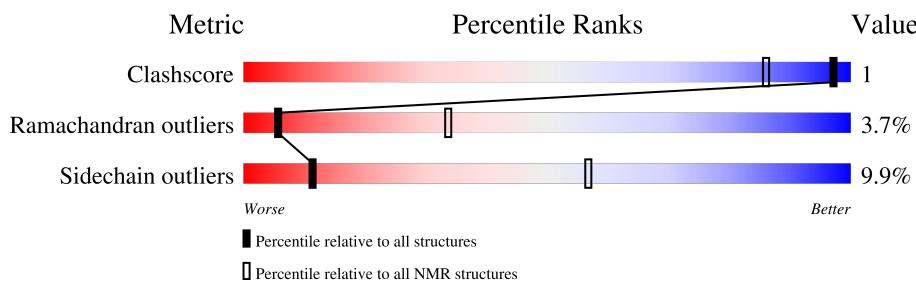
Metric	Whole archive (#Entries)	NMR archive (#Entries)
Clashscore	158937	12864
Ramachandran outliers	154571	11451
Sidechain outliers	154315	11428

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	173	81% 6% · 12%

2 Ensemble composition and analysis ⓘ

This entry contains 30 models. Model 6 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:139-A:248, A:257-A:298 (152)	0.75	6

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 7 clusters and 8 single-model clusters were found.

Cluster number	Models
1	4, 7, 10, 12, 18, 20, 23, 24
2	3, 6, 21
3	9, 15, 26
4	1, 2
5	28, 30
6	13, 17
7	27, 29
Single-model clusters	5; 8; 11; 14; 16; 19; 22; 25

3 Entry composition ⓘ

There are 2 unique types of molecules in this entry. The entry contains 2750 atoms, of which 1360 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called SCO1 protein homolog, mitochondrial.

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	173	2749	890	1360	224	270	5	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	129	SER	-	cloning artifact	UNP O75880
A	130	PHE	-	cloning artifact	UNP O75880
A	131	THR	-	cloning artifact	UNP O75880

- Molecule 2 is NICKEL (II) ION (three-letter code: NI) (formula: Ni).

Mol	Chain	Residues	Atoms	
			Total	Ni
2	A	1	1	1

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: SCO1 protein homolog, mitochondrial

Chain A:

81%   6%   ·   12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 E148 R149 K150 C169 C173 R207 K218 R231 R242 P249 K250 D251 E252 D253 E254 D255 Y256 H260 T261 I262 R298 K299 K300 S301
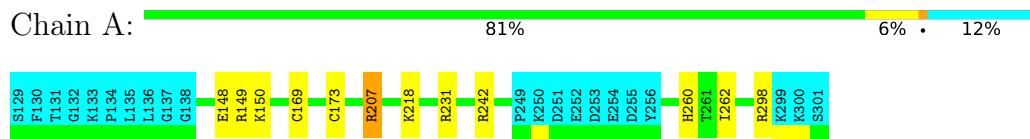
4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

- Molecule 1: SCO1 protein homolog, mitochondrial

Chain A:

74%   12%   ·   12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 E148 R149 K150 K153 C169 P170 Q182 T191 L199 I203 R207 D208 K218 E219 A240 Y241 R242 V243 P249 K250 D251 E252 D253 E254 D255 Y256 D259 L266 D270 Q279 K283 M294 R295

R298 K299 K300 S301
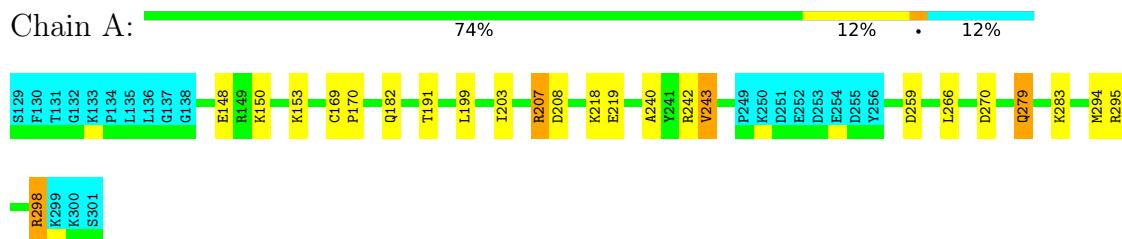
4.2.2 Score per residue for model 2

- Molecule 1: SCO1 protein homolog, mitochondrial

Chain A:

74%   13%   ·   12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 T144 R149 K150 D154 G165 F166 T167 D171 E175 Q182 R207 K218 R239 R242 V243 Y244 P249 K250 D251 E252 D253 E254 D255 Y256 I257 T261 L266 K281 R282 K283 R295 R298 K299

4.2.3 Score per residue for model 3

• Molecule 1: SCO1 protein homolog, mitochondrial
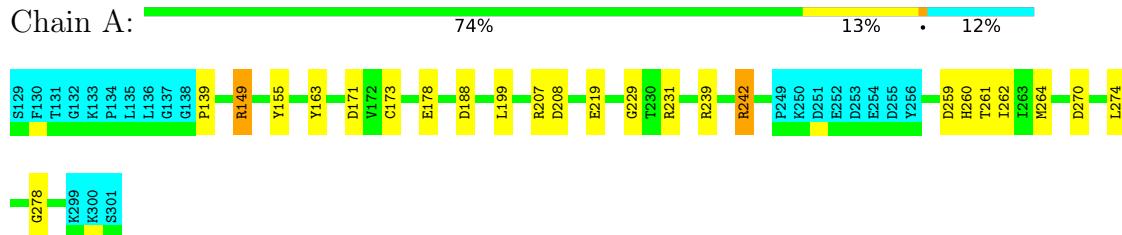
4.2.4 Score per residue for model 4

• Molecule 1: SCO1 protein homolog, mitochondrial
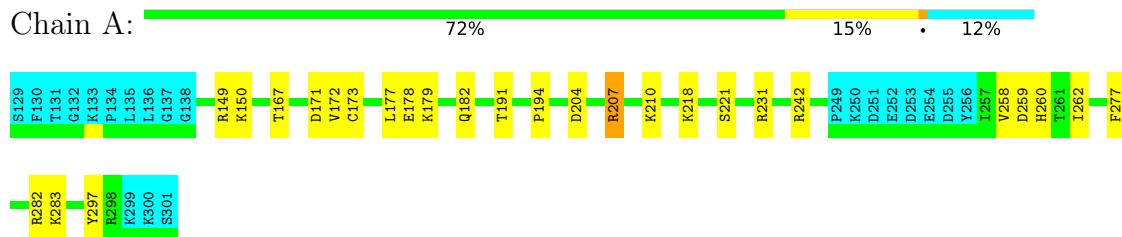
4.2.5 Score per residue for model 5

• Molecule 1: SCO1 protein homolog, mitochondrial
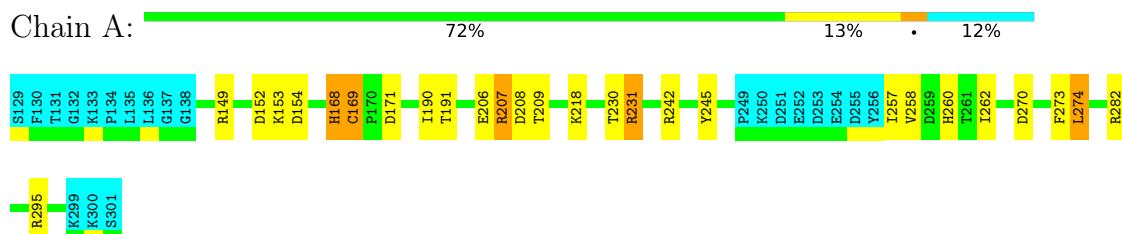
4.2.6 Score per residue for model 6 (medoid)

• Molecule 1: SCO1 protein homolog, mitochondrial

4.2.7 Score per residue for model 7

• Molecule 1: SCO1 protein homolog, mitochondrial
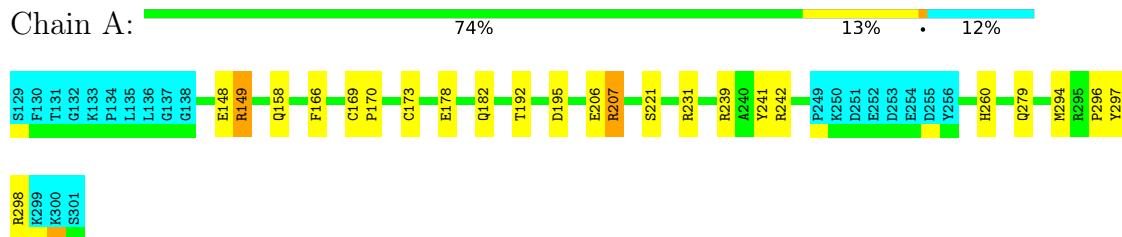
4.2.8 Score per residue for model 8

• Molecule 1: SCO1 protein homolog, mitochondrial
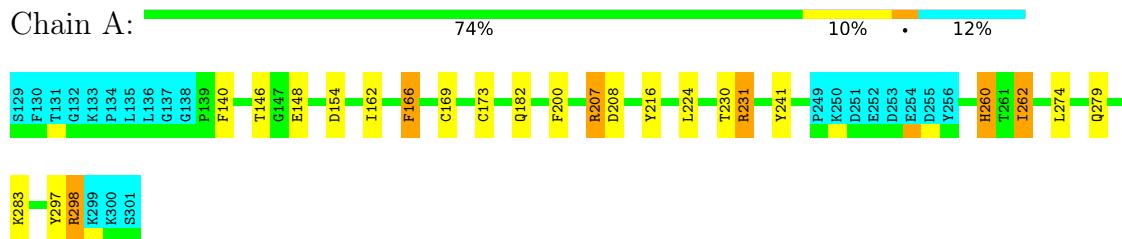
4.2.9 Score per residue for model 9

• Molecule 1: SCO1 protein homolog, mitochondrial
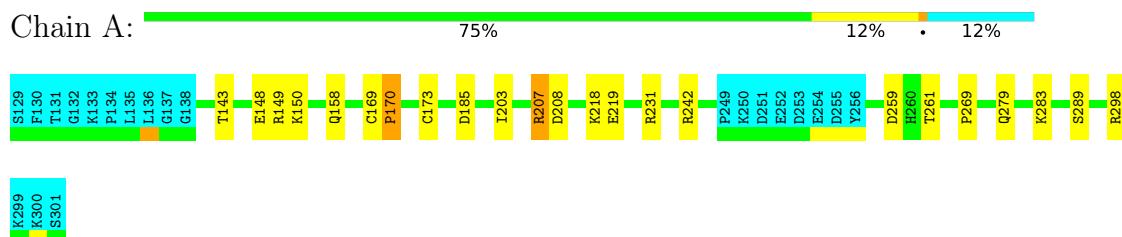
4.2.10 Score per residue for model 10

• Molecule 1: SCO1 protein homolog, mitochondrial

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 H145 E148 K153 F166 T167 H168 D171 D188 L199 F200 R207 K210 R231 R242 S246 P249 K250 D251 E252 D253 E254 D255 Y256 Q279 N280 K281 R282 R295 R298 K299 K300 S301

4.2.11 Score per residue for model 11

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 70% 16% • 12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 T143 E148 R149 K153 G157 Q158 Y163 C173 E178 D195 L196 L199 F200 I203 D204 P205 E206 R207 D208 S221 L224 G229 R239 A240 Y241 Y244 Y245 P249 K250 D251 D253 E254 D255

Y256 H260 T261 I262 L274 R282 S289 P296 K299 K300 S301
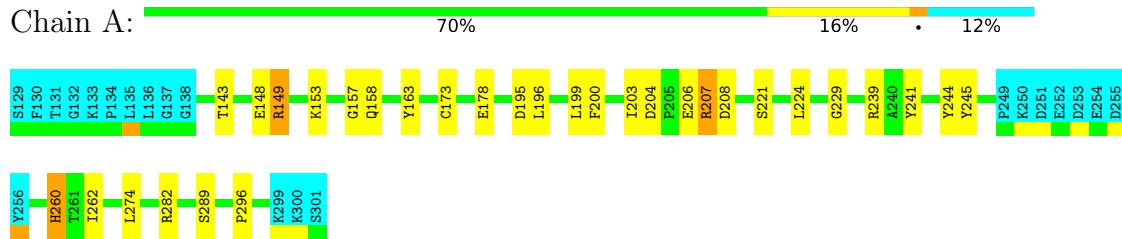
4.2.12 Score per residue for model 12

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 75% 10% • • 12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 R149 K150 T151 C173 E176 L177 R207 D208 K218 L224 R231 D235 R239 A240 P249 K250 D251 E252 D253 E254 D255 Y256 D259 H260 T261 D270 L274 N280 K281 R282 P296 Y297 R298 K299 K300

S301
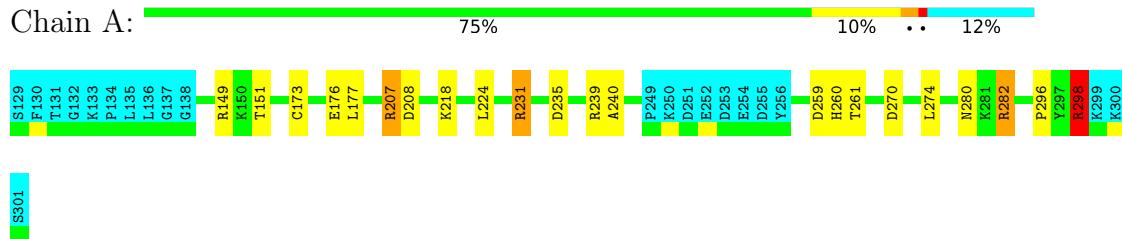
4.2.13 Score per residue for model 13

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 71% 14% • 12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 T143 T144 H145 E148 R149 D154 C169 C173 M180 D188 F200 I203 R207 D208 T209 K210 S221 R231 E232 V237 A238 R239 V243 P249 K250 D251 E252 D253 E254 D255 Y256 I257 H260 T261

I262 L274 Q279 N280 K281 R282 K283 R298 K299 K300 S301
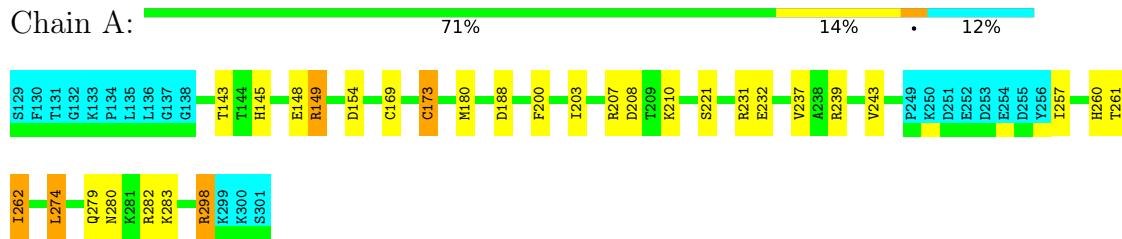
4.2.14 Score per residue for model 14

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 73% 13% •• 12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 L142 R149 K153 D154 F166 T167 H168 C169 P170 D171 V172 C173 K179 L196 P205 E206 R207 K210 Y216 V217 K218 E232 R242 V243 P249 K250 D251 E252 D253 E254 D255 Y256 H260 K281 Y297

R298 K299 K300 S301
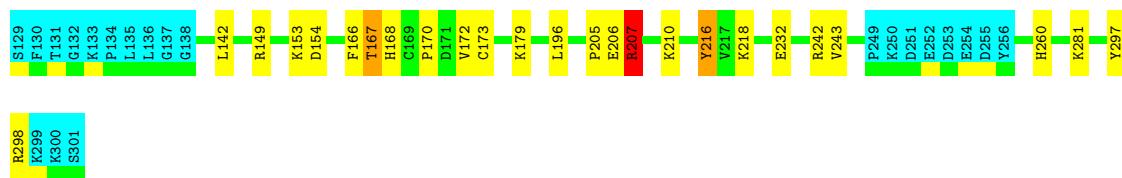
4.2.15 Score per residue for model 15

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 76% 10% · 12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 H145 K153 F166 T167 H168 C169 C173 I187 T191 T192 R207 D208 K218 R239 A240 Y241 R242 P249 K250 D251 E252 D253 E254 D255 Y256 H260 Q279 N280 K281 R295 R298 K299 K300 S301

4.2.16 Score per residue for model 16

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 75% 12% ·· 12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 E148 R149 K150 K153 L156 C173 D185 T191 T192 D195 R207 Y216 S221 G229 R239 R242 P249 K250 D251 E252 D253 E254 D255 Y256 D259 H260 N280 M294 R295 R298 K299 K300 S301
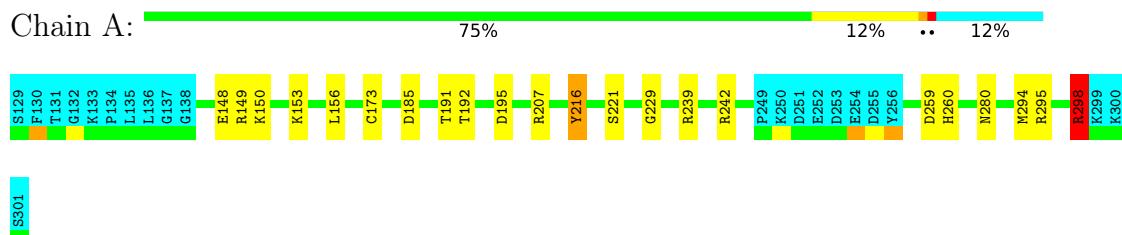
4.2.17 Score per residue for model 17

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 74% 10% ·· 12%

S129 F130 T131 G132 K133 P134 L135 L136 G137 G138 R149 Y155 Q158 C169 C173 E176 L177 E178 K179 D188 E206 R207 Y216 V217 K218 G229 R242 P249 K250 D251 E252 D253 E254 D255 Y256 I257 V258 D259 H260 T261 I262 L266 F273 R282 R295 R298 K299 K300 S301
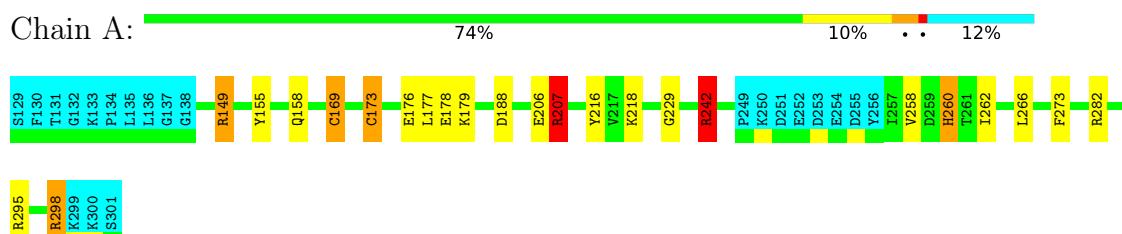
4.2.18 Score per residue for model 18

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 74% 12% ·· 12%
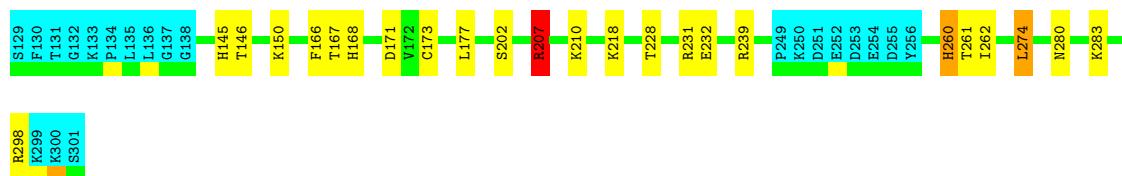
4.2.19 Score per residue for model 19

• Molecule 1: SCO1 protein homolog, mitochondrial
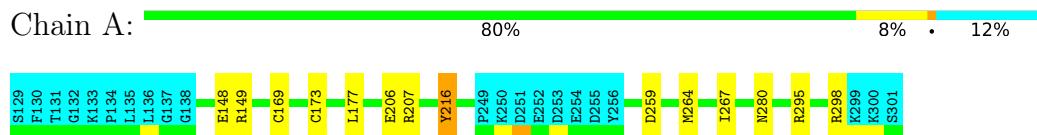
4.2.20 Score per residue for model 20

• Molecule 1: SCO1 protein homolog, mitochondrial
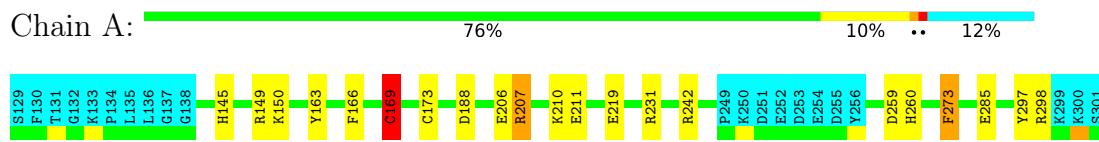
4.2.21 Score per residue for model 21

• Molecule 1: SCO1 protein homolog, mitochondrial

4.2.22 Score per residue for model 22

• Molecule 1: SCO1 protein homolog, mitochondrial
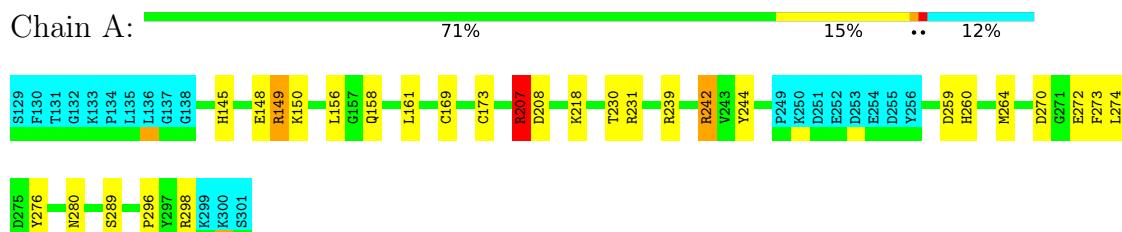
4.2.23 Score per residue for model 23

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A:
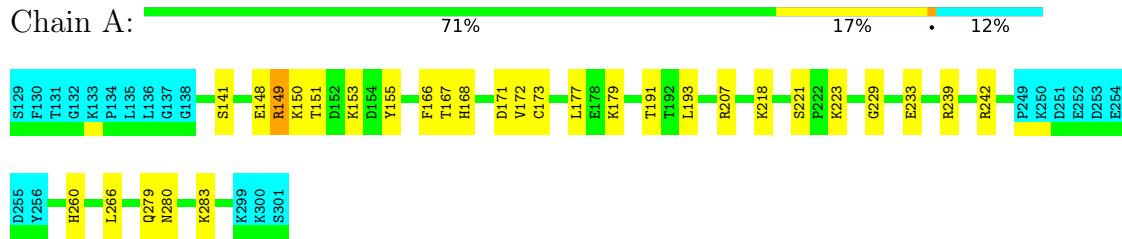
4.2.24 Score per residue for model 24

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A:
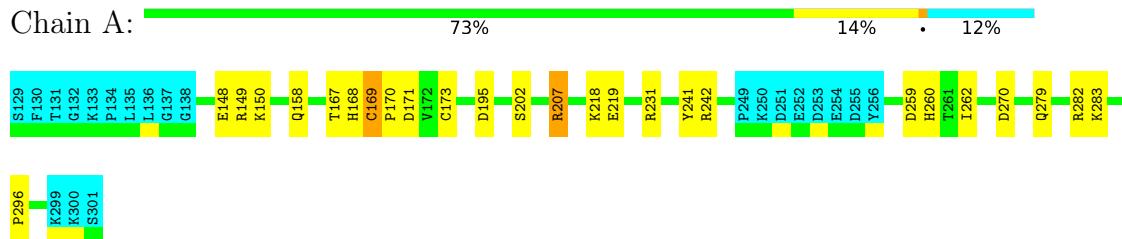

4.2.25 Score per residue for model 25

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A:
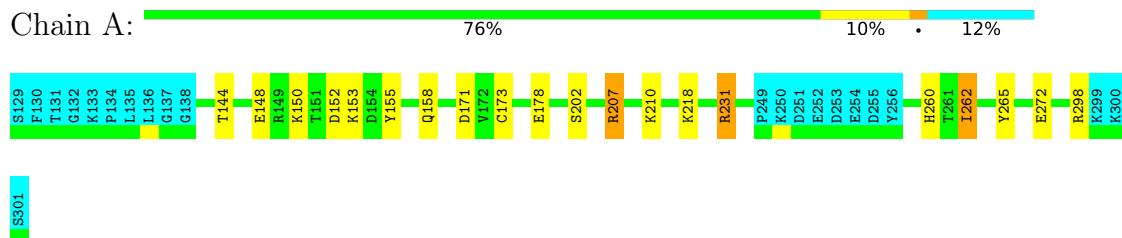
4.2.26 Score per residue for model 26

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A:
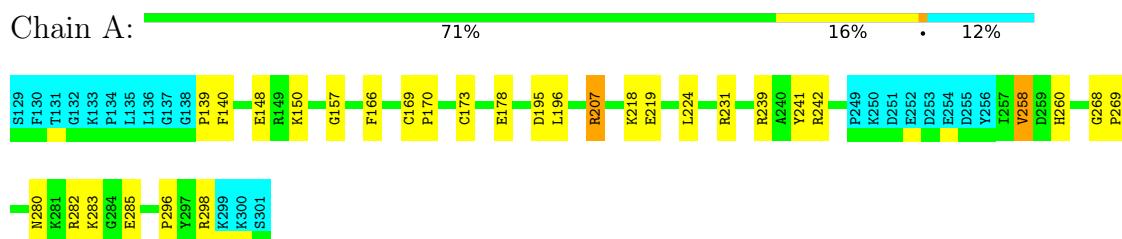
4.2.27 Score per residue for model 27

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 73%   13%   •   12%
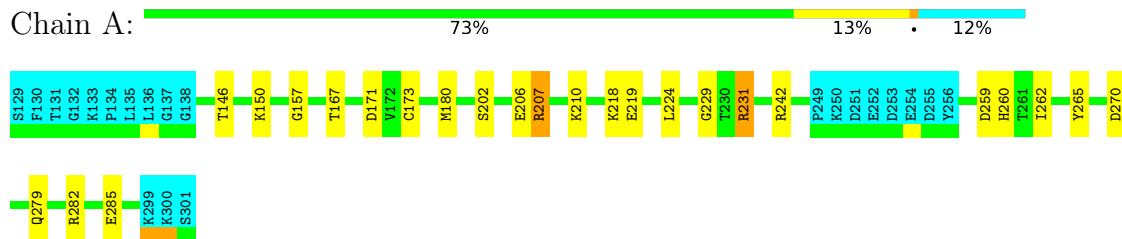
4.2.28 Score per residue for model 28

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 77%   9%   •   12%
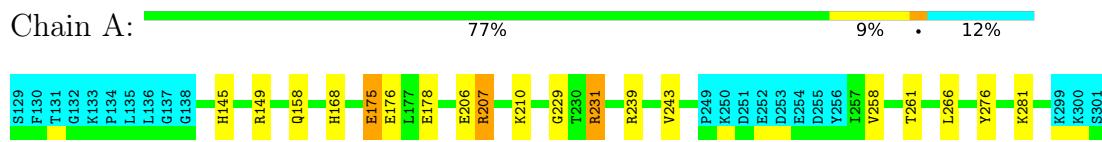
4.2.29 Score per residue for model 29

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 73%   12%   ••   12%
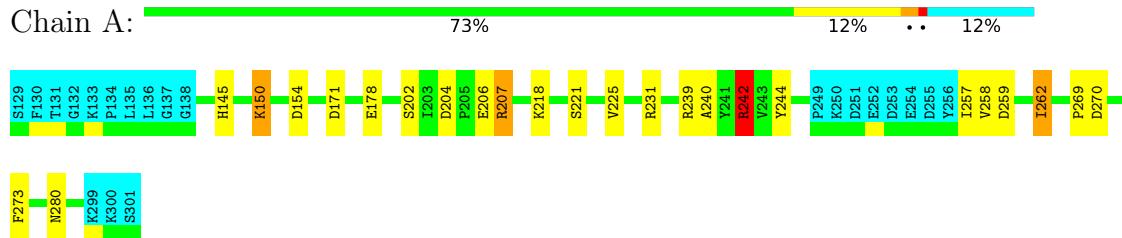
4.2.30 Score per residue for model 30

• Molecule 1: SCO1 protein homolog, mitochondrial

Chain A: 73%   12%   •   12%
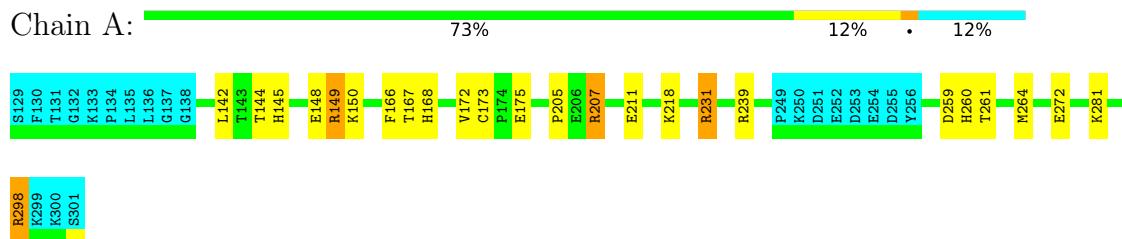
5 Refinement protocol and experimental data overview (i)

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

Of the 350 calculated structures, 30 were deposited, based on the following criterion: *target function*.

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

Software name	Classification	Version
DYANA	structure solution	1.5
Amber	refinement	8.0

No chemical shift data was provided.

6 Model quality ⓘ

6.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: NI

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	0.72±0.01	0±0/1258 (0.0± 0.0%)	1.11±0.03	5±2/1711 (0.3± 0.1%)
All	All	0.72	0/37740 (0.0%)	1.11	137/51330 (0.3%)

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	2.1±1.5
All	All	0	64

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
1	A	231	ARG	NE-CZ-NH1	10.49	125.54	120.30	28	16
1	A	207	ARG	NE-CZ-NH1	9.89	125.25	120.30	6	20
1	A	298	ARG	NE-CZ-NH2	-9.35	115.62	120.30	6	6
1	A	298	ARG	NE-CZ-NH1	8.49	124.55	120.30	10	14
1	A	231	ARG	NE-CZ-NH2	-8.47	116.06	120.30	20	9
1	A	149	ARG	NE-CZ-NH1	8.41	124.51	120.30	22	11
1	A	239	ARG	NE-CZ-NH1	7.62	124.11	120.30	16	13
1	A	282	ARG	NE-CZ-NH1	7.16	123.88	120.30	21	8
1	A	282	ARG	C-N-CA	7.12	139.49	121.70	26	1
1	A	282	ARG	NE-CZ-NH2	-7.11	116.75	120.30	10	2
1	A	207	ARG	NE-CZ-NH2	-7.08	116.76	120.30	12	5
1	A	242	ARG	NE-CZ-NH1	6.95	123.78	120.30	17	2

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})	Models Worst	Total
1	A	242	ARG	NE-CZ-NH2	-6.70	116.95	120.30	1	3
1	A	295	ARG	NE-CZ-NH1	6.29	123.44	120.30	17	5
1	A	295	ARG	NE-CZ-NH2	-6.18	117.21	120.30	1	2
1	A	231	ARG	CD-NE-CZ	6.13	132.18	123.60	20	3
1	A	216	TYR	CB-CG-CD2	-6.10	117.34	121.00	17	4
1	A	149	ARG	NE-CZ-NH2	-6.04	117.28	120.30	7	1
1	A	173	CYS	N-CA-CB	-5.52	100.66	110.60	17	2
1	A	171	ASP	CB-CG-OD2	5.48	123.23	118.30	2	1
1	A	207	ARG	CD-NE-CZ	5.46	131.25	123.60	6	1
1	A	298	ARG	CD-NE-CZ	5.40	131.16	123.60	17	1
1	A	167	THR	CA-CB-CG2	5.29	119.81	112.40	10	1
1	A	149	ARG	CD-NE-CZ	5.29	131.00	123.60	7	1
1	A	297	TYR	CB-CG-CD2	-5.27	117.84	121.00	20	1
1	A	269	PRO	C-N-CA	5.25	134.82	121.70	29	1
1	A	168	HIS	N-CA-CB	-5.22	101.20	110.60	15	1
1	A	242	ARG	CD-NE-CZ	5.14	130.79	123.60	29	1
1	A	273	PHE	CB-CG-CD2	-5.02	117.28	120.80	20	1

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	207	ARG	Sidechain,Peptide	8
1	A	169	CYS	Peptide	7
1	A	231	ARG	Sidechain	5
1	A	241	TYR	Sidechain	4
1	A	260	HIS	Sidechain,Peptide	4
1	A	298	ARG	Sidechain	3
1	A	170	PRO	Peptide	3
1	A	168	HIS	Sidechain,Peptide	2
1	A	153	LYS	Peptide	2
1	A	149	ARG	Sidechain	2
1	A	229	GLY	Peptide	2
1	A	295	ARG	Sidechain	2
1	A	244	TYR	Sidechain	2
1	A	203	ILE	Peptide	1
1	A	154	ASP	Peptide	1
1	A	165	GLY	Peptide	1
1	A	242	ARG	Sidechain	1
1	A	190	ILE	Peptide	1

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Mol	Chain	Res	Type	Group	Models (Total)
1	A	208	ASP	Peptide	1
1	A	157	GLY	Peptide	1
1	A	167	THR	Peptide	1
1	A	228	THR	Peptide	1
1	A	139	PRO	Peptide	1
1	A	195	ASP	Peptide	1
1	A	141	SER	Peptide	1
1	A	151	THR	Peptide	1
1	A	171	ASP	Peptide	1
1	A	282	ARG	Peptide	1
1	A	258	VAL	Peptide	1
1	A	268	GLY	Peptide	1
1	A	175	GLU	Peptide	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	A	1226	1202	1201	2±1
All	All	36810	36060	36031	46

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 1.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Models Total
1:A:173:CYS:SG	1:A:260:HIS:CE1	0.63	2.92	23	22
1:A:150:LYS:HE2	1:A:155:TYR:CE2	0.51	2.40	25	1
1:A:150:LYS:HE3	1:A:154:ASP:HB2	0.50	1.83	29	1
1:A:166:PHE:CG	1:A:167:THR:N	0.47	2.81	23	1
1:A:150:LYS:HE3	1:A:154:ASP:CB	0.46	2.40	29	1
1:A:166:PHE:H	1:A:260:HIS:CD2	0.45	2.29	26	1
1:A:232:GLU:H	1:A:232:GLU:CD	0.45	2.15	14	1
1:A:171:ASP:CG	1:A:172:VAL:H	0.45	2.15	4	2
1:A:169:CYS:SG	1:A:260:HIS:CD2	0.45	3.10	26	3
1:A:166:PHE:CZ	1:A:260:HIS:CD2	0.44	3.06	8	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Models Total
1:A:262:ILE:HD11	1:A:279:GLN:HE21	0.44	1.71	13	1
1:A:182:GLN:CB	1:A:283:LYS:HE3	0.43	2.43	8	1
1:A:243:VAL:HG22	1:A:244:TYR:H	0.43	1.74	2	1
1:A:182:GLN:C	1:A:283:LYS:HE2	0.43	2.34	4	2
1:A:182:GLN:CB	1:A:283:LYS:HE2	0.43	2.44	2	1
1:A:207:ARG:HD3	1:A:207:ARG:H	0.43	1.74	14	1
1:A:211:GLU:H	1:A:211:GLU:CD	0.42	2.18	30	1
1:A:172:VAL:HG23	1:A:260:HIS:CE1	0.42	2.50	30	1
1:A:176:GLU:HA	1:A:179:LYS:HE3	0.41	1.91	17	1
1:A:273:PHE:CG	1:A:274:LEU:N	0.41	2.88	5	1
1:A:150:LYS:HE3	1:A:155:TYR:CD2	0.41	2.51	23	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	152/173 (88%)	128±4 (84±3%)	18±4 (12±2%)	6±2 (4±1%)	6	34
All	All	4560/5190 (88%)	3842 (84%)	550 (12%)	168 (4%)	6	34

All 47 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	242	ARG	14
1	A	262	ILE	10
1	A	279	GLN	7
1	A	168	HIS	7
1	A	207	ARG	7
1	A	206	GLU	7
1	A	298	ARG	6
1	A	221	SER	6
1	A	270	ASP	6
1	A	296	PRO	6
1	A	167	THR	5

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Mol	Chain	Res	Type	Models (Total)
1	A	229	GLY	5
1	A	258	VAL	5
1	A	166	PHE	5
1	A	280	ASN	5
1	A	170	PRO	4
1	A	240	ALA	4
1	A	257	ILE	4
1	A	171	ASP	4
1	A	243	VAL	3
1	A	261	THR	3
1	A	208	ASP	3
1	A	274	LEU	3
1	A	273	PHE	3
1	A	157	GLY	3
1	A	139	PRO	2
1	A	278	GLY	2
1	A	194	PRO	2
1	A	169	CYS	2
1	A	269	PRO	2
1	A	203	ILE	2
1	A	282	ARG	2
1	A	205	PRO	2
1	A	191	THR	2
1	A	148	GLU	2
1	A	272	GLU	2
1	A	209	THR	1
1	A	182	GLN	1
1	A	204	ASP	1
1	A	173	CYS	1
1	A	281	LYS	1
1	A	192	THR	1
1	A	156	LEU	1
1	A	195	ASP	1
1	A	241	TYR	1
1	A	283	LYS	1
1	A	175	GLU	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	
1	A	135/153 (88%)	122±3 (90±2%)	13±3 (10±2%)	11	57
All	All	4050/4590 (88%)	3650 (90%)	400 (10%)	11	57

All 95 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	207	ARG	23
1	A	218	LYS	20
1	A	149	ARG	16
1	A	150	LYS	15
1	A	148	GLU	14
1	A	259	ASP	13
1	A	178	GLU	11
1	A	210	LYS	9
1	A	145	HIS	9
1	A	153	LYS	8
1	A	242	ARG	8
1	A	158	GLN	8
1	A	219	GLU	7
1	A	274	LEU	7
1	A	298	ARG	7
1	A	208	ASP	6
1	A	266	LEU	6
1	A	177	LEU	6
1	A	231	ARG	6
1	A	262	ILE	6
1	A	169	CYS	6
1	A	154	ASP	5
1	A	281	LYS	5
1	A	188	ASP	5
1	A	261	THR	5
1	A	264	MET	5
1	A	297	TYR	5
1	A	195	ASP	5
1	A	224	LEU	5
1	A	283	LYS	5
1	A	280	ASN	5
1	A	202	SER	5
1	A	191	THR	4
1	A	199	LEU	4
1	A	166	PHE	4
1	A	206	GLU	4

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Mol	Chain	Res	Type	Models (Total)
1	A	143	THR	4
1	A	289	SER	4
1	A	200	PHE	4
1	A	216	TYR	4
1	A	270	ASP	3
1	A	279	GLN	3
1	A	294	MET	3
1	A	144	THR	3
1	A	163	TYR	3
1	A	171	ASP	3
1	A	167	THR	3
1	A	179	LYS	3
1	A	230	THR	3
1	A	192	THR	3
1	A	146	THR	3
1	A	196	LEU	3
1	A	285	GLU	3
1	A	243	VAL	2
1	A	175	GLU	2
1	A	155	TYR	2
1	A	204	ASP	2
1	A	277	PHE	2
1	A	152	ASP	2
1	A	245	TYR	2
1	A	260	HIS	2
1	A	272	GLU	2
1	A	239	ARG	2
1	A	140	PHE	2
1	A	173	CYS	2
1	A	185	ASP	2
1	A	176	GLU	2
1	A	180	MET	2
1	A	221	SER	2
1	A	232	GLU	2
1	A	142	LEU	2
1	A	168	HIS	2
1	A	276	TYR	2
1	A	265	TYR	2
1	A	258	VAL	1
1	A	162	ILE	1
1	A	203	ILE	1
1	A	246	SER	1

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Mol	Chain	Res	Type	Models (Total)
1	A	244	TYR	1
1	A	282	ARG	1
1	A	151	THR	1
1	A	235	ASP	1
1	A	237	VAL	1
1	A	172	VAL	1
1	A	187	ILE	1
1	A	156	LEU	1
1	A	267	ILE	1
1	A	211	GLU	1
1	A	273	PHE	1
1	A	181	ILE	1
1	A	161	LEU	1
1	A	193	LEU	1
1	A	223	LYS	1
1	A	233	GLU	1
1	A	225	VAL	1

6.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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 ⓘ

Of 1 ligands modelled in this entry, 1 is monoatomic - leaving 0 for Mogul analysis.

6.7 Other polymers ⓘ

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 (i)

No chemical shift data were provided