Full wwPDB X-ray Structure Validation Report ⓘ

Nov 6, 2025 – 12:08 PM EST

PDB ID	:	9YYA / pdb_00009yya
Title	:	Macrophage Migration Inhibitory Factor 1 from Necator Americanus
Authors	:	Orkwis, J.A.; Lolis, E.J.; Manjula, R.
Deposited on	:	2025-10-28
Resolution	:	2.10 Å(reported)

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

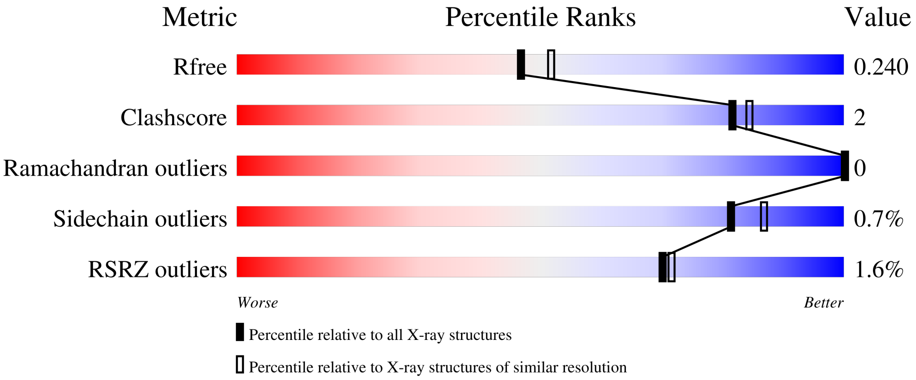
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.46

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

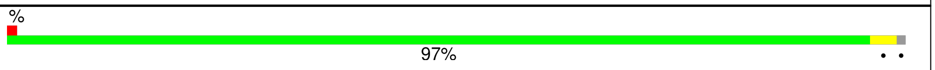
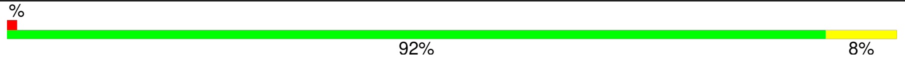
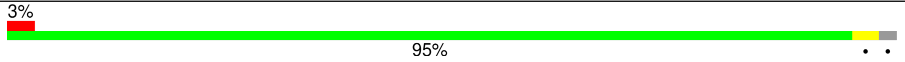
The reported resolution of this entry is 2.10 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



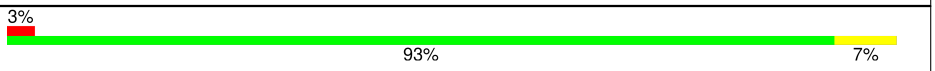
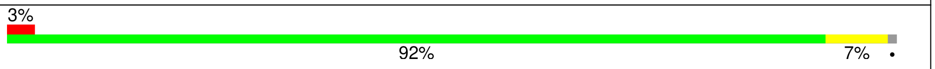
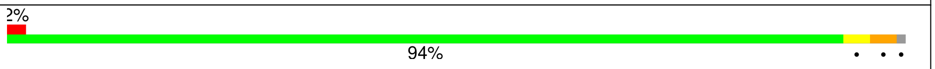
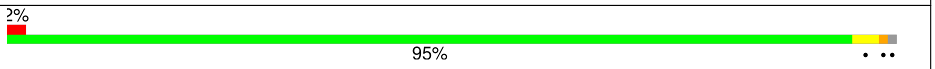
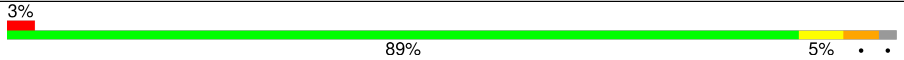
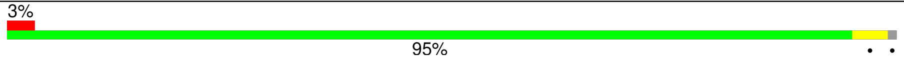
Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	6234 (2.10-2.10)
Clashscore	180529	6893 (2.10-2.10)
Ramachandran outliers	177936	6839 (2.10-2.10)
Sidechain outliers	177891	6840 (2.10-2.10)
RSRZ outliers	164620	6234 (2.10-2.10)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	118	
1	B	118	
1	C	118	
1	D	118	
1	E	118	

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
1	F	118	
1	G	118	
1	H	118	
1	I	118	
1	J	118	
1	K	118	
1	L	118	

2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 22415 atoms, of which 11347 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Macrophage migration inhibitory factor.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
1	A	117	Total C H N O S 1844 569 943 159 170 3	22	0	0
1	B	118	Total C H N O S 1861 574 952 160 172 3	22	0	0
1	C	118	Total C H N O S 1861 574 952 160 172 3	22	0	0
1	D	116	Total C H N O S 1830 565 936 158 168 3	21	0	0
1	E	118	Total C H N O S 1861 574 952 160 172 3	22	0	0
1	F	118	Total C H N O S 1861 574 952 160 172 3	22	0	0
1	G	117	Total C H N O S 1844 569 943 159 170 3	22	0	0
1	H	117	Total C H N O S 1844 569 943 159 170 3	22	0	0
1	I	118	Total C H N O S 1861 574 952 160 172 3	22	0	0
1	J	117	Total C H N O S 1844 569 943 159 170 3	22	0	0
1	K	116	Total C H N O S 1830 565 936 158 168 3	21	0	0
1	L	117	Total C H N O S 1844 569 943 159 170 3	22	0	0

- Molecule 2 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	22	Total O 22 22	0	0
2	B	30	Total O 30 30	0	0

Continued on next page...

Continued from previous page...

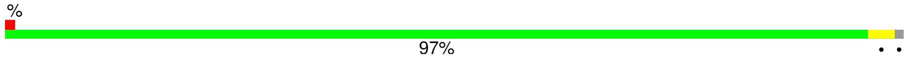
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	C	20	Total O 20 20	0	0
2	D	17	Total O 17 17	0	0
2	E	22	Total O 22 22	0	0
2	F	16	Total O 16 16	0	0
2	G	22	Total O 22 22	0	0
2	H	18	Total O 18 18	0	0
2	I	26	Total O 26 26	0	0
2	J	16	Total O 16 16	0	0
2	K	8	Total O 8 8	0	0
2	L	13	Total O 13 13	0	0

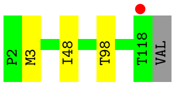
3 Residue-property plots ⓘ

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

- Molecule 1: Macrophage migration inhibitory factor

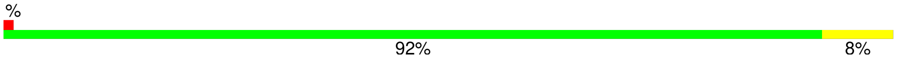
Chain A:

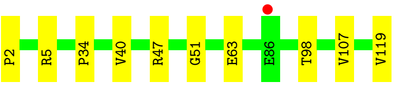




- Molecule 1: Macrophage migration inhibitory factor

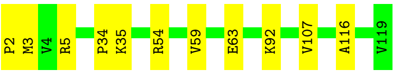
Chain B:





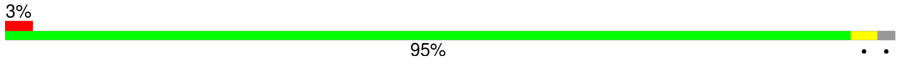
- Molecule 1: Macrophage migration inhibitory factor

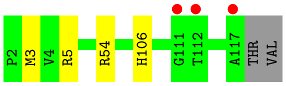
Chain C:



- Molecule 1: Macrophage migration inhibitory factor

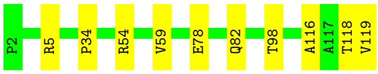
Chain D:





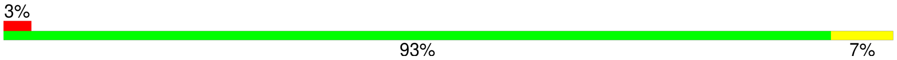
- Molecule 1: Macrophage migration inhibitory factor

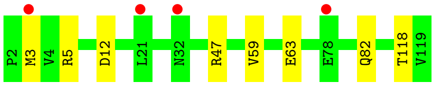
Chain E:



- Molecule 1: Macrophage migration inhibitory factor

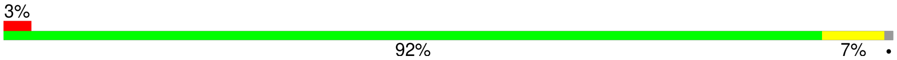
Chain F:

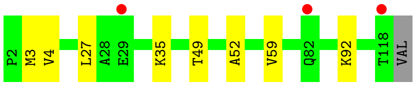




- Molecule 1: Macrophage migration inhibitory factor

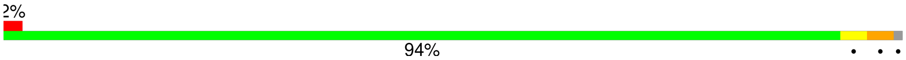
Chain G:

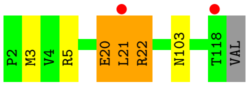




- Molecule 1: Macrophage migration inhibitory factor

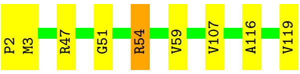
Chain H:





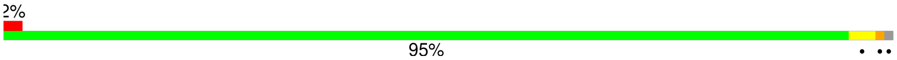
- Molecule 1: Macrophage migration inhibitory factor

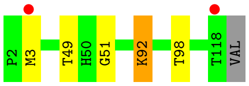
Chain I:



- Molecule 1: Macrophage migration inhibitory factor

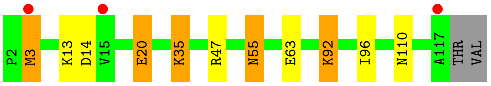
Chain J:





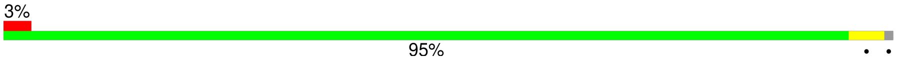
- Molecule 1: Macrophage migration inhibitory factor

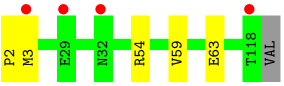
Chain K:



- Molecule 1: Macrophage migration inhibitory factor

Chain L:





4 Data and refinement statistics ⓘ

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	124.63Å 126.21Å 155.77Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	98.25 – 2.10 98.06 – 2.10	Depositor EDS
% Data completeness (in resolution range)	99.7 (98.25-2.10) 99.7 (98.06-2.10)	Depositor EDS
R_{merge}	0.15	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.72 (at 2.10Å)	Xtriage
Refinement program	REFMAC 5.8.0419	Depositor
R, R_{free}	0.198 , 0.240 0.197 , 0.240	Depositor DCC
R_{free} test set	7180 reflections (4.99%)	wwPDB-VP
Wilson B-factor (Å^2)	37.5	Xtriage
Anisotropy	0.462	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.42 , 41.7	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	0.003 for k,h,-l	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	22415	wwPDB-VP
Average B, all atoms (Å^2)	44.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.94% of the height of the origin peak. No significant pseudotranslation is detected.*

---

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	A	0.88	0/914	1.06	0/1240
1	B	0.85	0/922	1.05	1/1250 (0.1%)
1	C	0.77	0/922	0.99	0/1250
1	D	0.81	0/907	1.03	0/1230
1	E	0.79	0/922	1.09	2/1250 (0.2%)
1	F	0.78	0/922	1.03	2/1250 (0.2%)
1	G	0.80	0/914	0.99	0/1240
1	H	0.81	0/914	1.03	1/1240 (0.1%)
1	I	0.82	0/922	1.05	2/1250 (0.2%)
1	J	0.76	0/914	1.05	2/1240 (0.2%)
1	K	0.74	1/907 (0.1%)	1.05	3/1230 (0.2%)
1	L	0.77	0/914	1.00	0/1240
All	All	0.80	1/10994 (0.0%)	1.03	13/14910 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	C	0	1
1	D	0	1
1	H	0	2
1	I	0	1
1	L	0	1
All	All	0	6

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	K	3	MET	CG-SD	5.08	1.93	1.80

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	J	92	LYS	N-CA-CB	-12.81	89.12	110.39
1	E	82	GLN	CB-CG-CD	-11.95	92.28	112.60
1	F	82	GLN	CB-CG-CD	-8.31	98.46	112.60
1	J	92	LYS	CB-CA-C	6.32	123.52	110.31
1	I	54	ARG	CB-CG-CD	6.05	125.22	111.30
1	K	92	LYS	CB-CA-C	-5.81	99.87	110.63
1	B	47	ARG	N-CA-CB	-5.79	101.85	110.24
1	H	22	ARG	NE-CZ-NH2	-5.73	114.04	119.20
1	K	47	ARG	N-CA-CB	-5.71	101.96	110.24
1	E	118	THR	CA-CB-OG1	-5.42	101.46	109.60
1	K	92	LYS	CA-CB-CG	5.21	124.52	114.10
1	I	47	ARG	N-CA-CB	-5.21	102.69	110.24
1	F	47	ARG	N-CA-CB	-5.21	102.69	110.24

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	54	ARG	Sidechain
1	D	54	ARG	Sidechain
1	H	22	ARG	Sidechain
1	H	5	ARG	Sidechain
1	I	54	ARG	Sidechain
1	L	54	ARG	Sidechain

5.2 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 the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	901	943	939	3	0
1	B	909	952	948	14	0
1	C	909	952	948	10	0
1	D	894	936	932	5	0
1	E	909	952	948	12	0
1	F	909	952	948	7	0
1	G	901	943	939	9	0
1	H	901	943	939	9	0
1	I	909	952	948	8	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	J	901	943	939	7	0
1	K	894	936	932	10	0
1	L	901	943	939	4	0
2	A	22	0	0	1	0
2	B	30	0	0	0	0
2	C	20	0	0	0	0
2	D	17	0	0	0	0
2	E	22	0	0	0	0
2	F	16	0	0	3	0
2	G	22	0	0	0	0
2	H	18	0	0	0	0
2	I	26	0	0	0	0
2	J	16	0	0	0	0
2	K	8	0	0	0	0
2	L	13	0	0	0	0
All	All	11068	11347	11299	54	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 2.

All (54) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:2:PRO:O	1:L:3:MET:HE2	1.80	0.81
1:G:59:VAL:CG1	1:H:3:MET:HE1	2.18	0.73
1:D:106:HIS:HE1	2:F:203:HOH:O	1.77	0.67
1:K:96:ILE:HG21	1:L:3:MET:SD	2.35	0.66
1:B:98:THR:HG21	1:C:63:GLU:OE1	1.96	0.65
1:D:3:MET:SD	1:F:59:VAL:HG11	2.38	0.64
2:A:221:HOH:O	1:B:5:ARG:HD2	1.98	0.63
1:J:3:MET:SD	1:L:59:VAL:HG11	2.40	0.61
1:E:59:VAL:HG11	1:F:3:MET:SD	2.41	0.60
1:G:52:ALA:HB1	1:H:21:LEU:HD23	1.84	0.60
1:D:106:HIS:CE1	2:F:203:HOH:O	2.53	0.59
1:G:35:LYS:O	1:I:51:GLY:HA2	2.03	0.59
1:G:59:VAL:HG11	1:H:3:MET:HE1	1.85	0.58
1:B:34:PRO:HD3	1:I:116:ALA:O	2.04	0.57
1:J:98:THR:HG21	1:K:63:GLU:OE1	2.05	0.56
1:B:119:VAL:HG21	1:I:107:VAL:HG11	1.91	0.53
1:A:3:MET:SD	1:C:59:VAL:HG11	2.48	0.53
1:C:116:ALA:O	1:E:34:PRO:HG3	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	**Atom-2**	**Interatomic distance (Å)**	**Clash overlap (Å)**
1:D:5:ARG:NH1	1:E:5:ARG:HE	2.08	0.51
1:C:2:PRO:N	1:E:119:VAL:O	2.43	0.51
1:C:107:VAL:HG11	1:E:119:VAL:CG2	2.41	0.51
1:G:3:MET:SD	1:I:59:VAL:HG11	2.52	0.50
1:G:59:VAL:HG12	1:H:3:MET:HE1	1.92	0.50
1:C:107:VAL:HG11	1:E:119:VAL:HG21	1.94	0.50
1:K:55:ASN:HD22	1:K:55:ASN:N	2.10	0.49
1:E:78:GLU:CD	1:H:103:ASN:HD21	2.20	0.49
1:D:5:ARG:HE	1:F:5:ARG:NH2	2.11	0.48
1:E:98:THR:HG21	1:F:63:GLU:OE1	2.16	0.46
1:F:118:THR:O	2:F:201:HOH:O	2.21	0.45
1:A:48:ILE:HA	1:B:40:VAL:O	2.16	0.45
1:B:119:VAL:CG2	1:I:107:VAL:HG11	2.46	0.45
1:G:49:THR:HG23	1:H:20:GLU:HG3	1.98	0.45
1:J:49:THR:CG2	1:K:20:GLU:HG3	2.46	0.45
1:H:3:MET:HB2	1:H:3:MET:HE2	1.54	0.45
1:J:98:THR:CG2	1:K:3:MET:HE3	2.47	0.44
1:B:107:VAL:HG11	1:I:119:VAL:CG2	2.47	0.44
1:C:34:PRO:HD3	1:E:116:ALA:O	2.17	0.44
1:B:51:GLY:HA2	1:C:35:LYS:O	2.17	0.43
1:E:78:GLU:OE2	1:H:103:ASN:OD1	2.36	0.43
1:B:2:PRO:HA	1:B:63:GLU:O	2.18	0.43
1:G:4:VAL:HG21	1:G:27:LEU:CD1	2.49	0.43
1:B:2:PRO:N	1:I:119:VAL:O	2.50	0.42
1:J:92:LYS:HG2	1:K:110:ASN:HA	2.01	0.42
1:G:49:THR:CG2	1:H:20:GLU:HG3	2.50	0.42
1:J:49:THR:HG23	1:K:20:GLU:HG3	2.01	0.42
1:F:12:ASP:OD2	1:K:13:LYS:HE2	2.20	0.41
1:A:98:THR:HG21	1:B:63:GLU:OE1	2.20	0.41
1:B:119:VAL:O	1:I:2:PRO:N	2.53	0.41
1:B:5:ARG:NH2	1:C:5:ARG:HE	2.18	0.41
1:B:98:THR:CG2	1:C:3:MET:HE3	2.50	0.41
1:L:2:PRO:HA	1:L:63:GLU:O	2.20	0.41
1:J:51:GLY:HA2	1:K:35:LYS:O	2.21	0.41
1:E:54:ARG:NE	1:K:14:ASP:OD2	2.51	0.40
1:E:59:VAL:HG11	1:F:3:MET:CE	2.52	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 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 X-ray entries followed by that with respect to entries of similar resolution.

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	115/118 (98%)	114 (99%)	1 (1%)	0	100	100
1	B	116/118 (98%)	116 (100%)	0	0	100	100
1	C	116/118 (98%)	116 (100%)	0	0	100	100
1	D	114/118 (97%)	113 (99%)	1 (1%)	0	100	100
1	E	116/118 (98%)	116 (100%)	0	0	100	100
1	F	116/118 (98%)	116 (100%)	0	0	100	100
1	G	115/118 (98%)	115 (100%)	0	0	100	100
1	H	115/118 (98%)	115 (100%)	0	0	100	100
1	I	116/118 (98%)	116 (100%)	0	0	100	100
1	J	115/118 (98%)	115 (100%)	0	0	100	100
1	K	114/118 (97%)	114 (100%)	0	0	100	100
1	L	115/118 (98%)	115 (100%)	0	0	100	100
All	All	1383/1416 (98%)	1381 (100%)	2 (0%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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	101/102 (99%)	101 (100%)	0	100	100
1	B	102/102 (100%)	102 (100%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	C	102/102 (100%)	101 (99%)	1 (1%)	73	79
1	D	100/102 (98%)	100 (100%)	0	100	100
1	E	102/102 (100%)	102 (100%)	0	100	100
1	F	102/102 (100%)	102 (100%)	0	100	100
1	G	101/102 (99%)	100 (99%)	1 (1%)	73	79
1	H	101/102 (99%)	99 (98%)	2 (2%)	50	57
1	I	102/102 (100%)	101 (99%)	1 (1%)	73	79
1	J	101/102 (99%)	101 (100%)	0	100	100
1	K	100/102 (98%)	96 (96%)	4 (4%)	27	28
1	L	101/102 (99%)	101 (100%)	0	100	100
All	All	1215/1224 (99%)	1206 (99%)	9 (1%)	81	87

All (9) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	C	92	LYS
1	G	92	LYS
1	H	20	GLU
1	H	21	LEU
1	I	3	MET
1	K	20	GLU
1	K	35	LYS
1	K	55	ASN
1	K	92	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (7) such sidechains are listed below:

Mol	Chain	Res	Type
1	C	46	GLN
1	D	46	GLN
1	D	55	ASN
1	E	55	ASN
1	I	32	ASN
1	K	55	ASN
1	L	46	GLN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

5.6 Ligand geometry ⓘ

There are no ligands in this entry.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues ⓘ

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	A	117/118 (99%)	-0.36	1 (0%)	81	82	30, 38, 51, 64	0
1	B	118/118 (100%)	-0.46	1 (0%)	82	83	30, 36, 49, 51	0
1	C	118/118 (100%)	-0.53	0	100	100	29, 37, 50, 56	0
1	D	116/118 (98%)	-0.06	3 (2%)	57	59	30, 46, 65, 73	0
1	E	118/118 (100%)	-0.38	0	100	100	33, 40, 52, 57	0
1	F	118/118 (100%)	0.04	4 (3%)	48	50	36, 49, 67, 76	0
1	G	117/118 (99%)	-0.18	3 (2%)	57	59	34, 43, 56, 64	0
1	H	117/118 (99%)	-0.27	2 (1%)	69	70	32, 43, 58, 63	0
1	I	118/118 (100%)	-0.39	0	100	100	31, 39, 50, 54	0
1	J	117/118 (99%)	-0.13	2 (1%)	69	70	34, 47, 62, 74	0
1	K	116/118 (98%)	0.08	3 (2%)	57	59	37, 50, 65, 73	0
1	L	117/118 (99%)	-0.11	4 (3%)	48	50	34, 47, 60, 65	0
All	All	1407/1416 (99%)	-0.23	23 (1%)	70	71	29, 42, 61, 76	0

All (23) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	L	118	THR	4.9
1	G	118	THR	4.3
1	A	118	THR	3.9
1	D	117	ALA	3.6
1	L	3	MET	3.4
1	H	118	THR	3.4
1	K	117	ALA	3.0
1	J	118	THR	2.9
1	L	29	GLU	2.8
1	K	3	MET	2.7
1	J	3	MET	2.6

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	RSRZ
1	G	82	GLN	2.5
1	F	3	MET	2.5
1	L	32	ASN	2.4
1	F	21	LEU	2.3
1	G	29	GLU	2.3
1	D	112	THR	2.3
1	D	111	GLY	2.2
1	F	78	GLU	2.1
1	F	32	ASN	2.1
1	B	86	GLU	2.1
1	H	21	LEU	2.0
1	K	15	VAL	2.0

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

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

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

There are no ligands in this entry.

6.5 Other polymers ⓘ

There are no such residues in this entry.