



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 21, 2023 – 12:30 pm GMT

PDB ID : 7ZMK
Title : Structure of human MFAP4 in complex with the Fab fragment of the AS0326 monoclonal antibody
Authors : Laursen, N.S.; Andersen, G.R.
Deposited on : 2022-04-19
Resolution : 3.40 Å(reported)

This is a Full wwPDB X-ray 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/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity : 4.02b-467
Xtriage (Phenix) : 1.13
EDS : 2.32.1
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.32.1

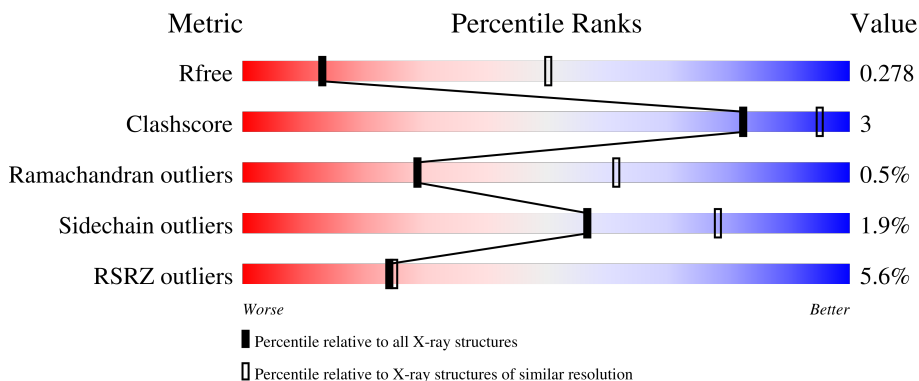
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.40 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}	130704	1026 (3.48-3.32)
Clashscore	141614	1055 (3.48-3.32)
Ramachandran outliers	138981	1038 (3.48-3.32)
Sidechain outliers	138945	1038 (3.48-3.32)
RSRZ outliers	127900	2173 (3.50-3.30)

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 $\leq 5\%$. 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	255	 78% 8% • 13%
1	D	255	 77% 8% • 14%
1	I	255	 79% 7% 14%
1	L	255	 76% 11% 13%
1	O	255	 % 81% 5% • 13%

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Mol	Chain	Length	Quality of chain
1	R	255	% 78% 8% 14%
1	U	255	3% 77% 9% 13%
1	X	255	77% 9% 14%
2	B	222	6% 96%
2	E	222	2% 94% 5%
2	G	222	6% 96%
2	J	222	2% 94% 6%
2	M	222	14% 92% 7%
2	P	222	10% 93% 7%
2	S	222	20% 94% 6%
2	V	222	10% 93% 6%
3	C	214	3% 91% 8%
3	F	214	91% 8%
3	H	214	% 94%
3	K	214	3% 92% 7%
3	N	214	10% 91% 8%
3	Q	214	6% 91% 8%
3	T	214	17% 90% 9%
3	W	214	16% 91% 8%

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 80000 atoms, of which 38984 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 Microfibril-associated glycoprotein 4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
			Total	C	H	N	O				S
1	A	221	Total 3412	C 1140	H 1636	N 294	O 335	S 7	0	0	0
1	D	220	Total 3394	C 1134	H 1626	N 293	O 334	S 7	0	0	0
1	I	219	Total 3377	C 1129	H 1618	N 291	O 332	S 7	0	0	0
1	L	221	Total 3412	C 1140	H 1636	N 294	O 335	S 7	0	0	0
1	O	221	Total 3412	C 1140	H 1636	N 294	O 335	S 7	0	0	0
1	R	219	Total 3377	C 1129	H 1618	N 291	O 332	S 7	0	0	0
1	U	221	Total 3412	C 1140	H 1636	N 294	O 335	S 7	0	0	0
1	X	220	Total 3394	C 1134	H 1626	N 293	O 334	S 7	0	0	0

- Molecule 2 is a protein called heavy chain of antibody AS0326.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
			Total	C	H	N	O				S
2	B	222	Total 3361	C 1076	H 1654	N 291	O 331	S 9	0	0	0
2	E	222	Total 3361	C 1076	H 1654	N 291	O 331	S 9	0	0	0
2	G	222	Total 3361	C 1076	H 1654	N 291	O 331	S 9	0	0	0
2	J	222	Total 3361	C 1076	H 1654	N 291	O 331	S 9	0	0	0
2	M	221	Total 3354	C 1071	H 1654	N 290	O 330	S 9	0	0	0
2	P	222	Total 3361	C 1076	H 1654	N 291	O 331	S 9	0	0	0

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
2	S	222	Total	C	H	N	O	S	0	0	0
			3361	1076	1654	291	331	9			
2	V	221	Total	C	H	N	O	S	0	0	0
			3354	1071	1654	290	330	9			

- Molecule 3 is a protein called Light chain of AS0326.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace	
3	C	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			
3	F	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			
3	H	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			
3	K	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			
3	N	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			
3	Q	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			
3	T	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			
3	W	214	Total	C	H	N	O	S	0	0	0
			3239	1033	1590	275	335	6			

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
4	A	1	Total	Ca	0	0
			1	1		
4	D	1	Total	Ca	0	0
			1	1		
4	I	1	Total	Ca	0	0
			1	1		
4	L	1	Total	Ca	0	0
			1	1		
4	O	1	Total	Ca	0	0
			1	1		
4	R	1	Total	Ca	0	0
			1	1		
4	U	1	Total	Ca	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	X	1	Total Ca 1 1	0	0


- Molecule 5 is water.

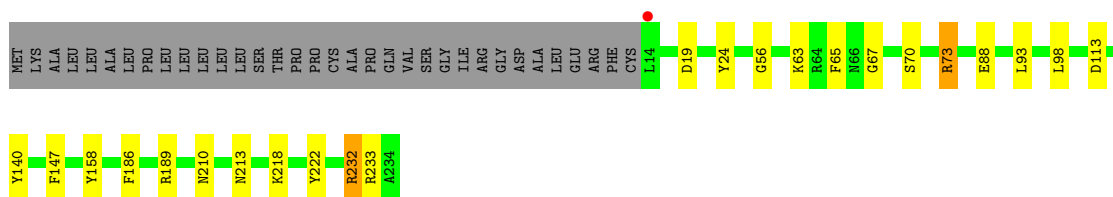
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	2	Total O 2 2	0	0
5	D	2	Total O 2 2	0	0
5	I	2	Total O 2 2	0	0
5	L	2	Total O 2 2	0	0
5	O	2	Total O 2 2	0	0
5	R	2	Total O 2 2	0	0
5	U	2	Total O 2 2	0	0
5	X	2	Total O 2 2	0	0

3 Residue-property plots [i](#)


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.

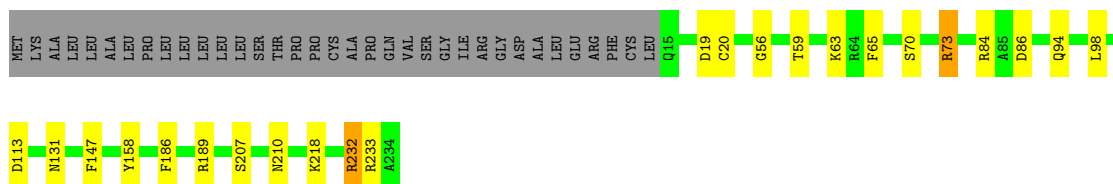
- Molecule 1: Microfibril-associated glycoprotein 4

Chain A:  78% 8% 13%




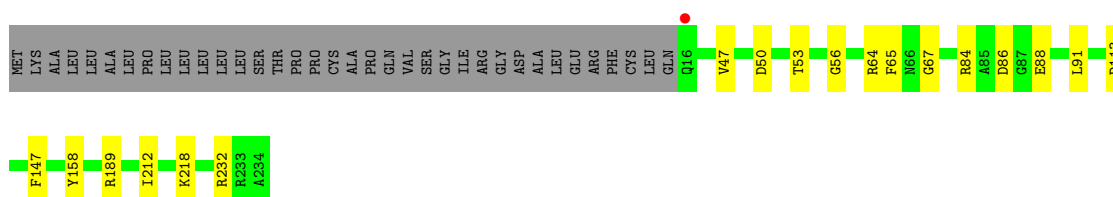
- Molecule 1: Microfibril-associated glycoprotein 4

Chain D:  77% 8% 14%



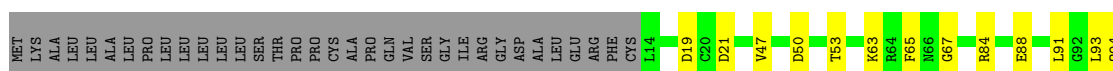
- Molecule 1: Microfibril-associated glycoprotein 4

Chain I:  79% 7% 14%



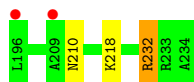
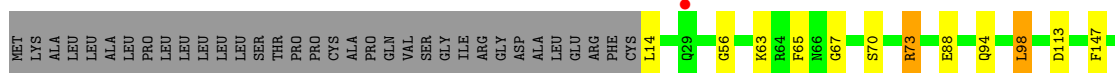
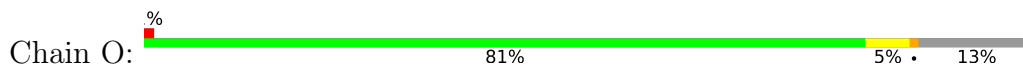
- Molecule 1: Microfibril-associated glycoprotein 4

Chain L:  76% 11% 13%

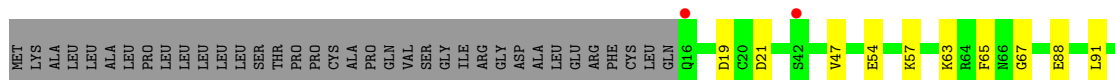
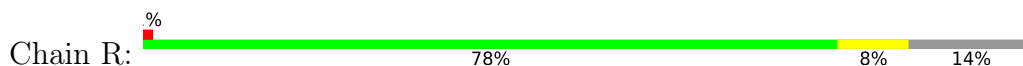




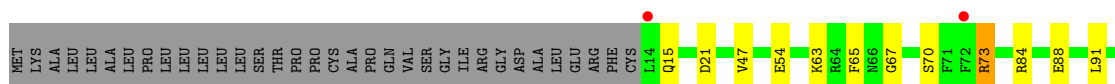
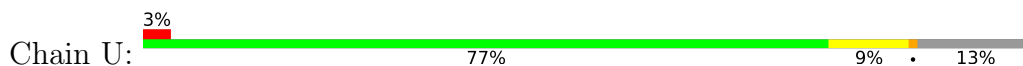
- Molecule 1: Microfibril-associated glycoprotein 4



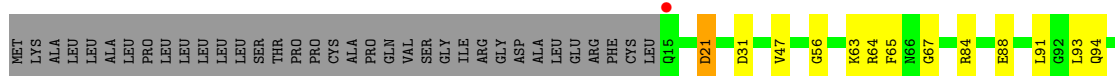
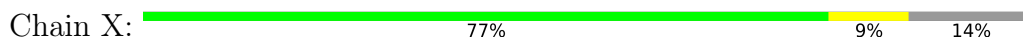
- Molecule 1: Microfibril-associated glycoprotein 4



- Molecule 1: Microfibril-associated glycoprotein 4

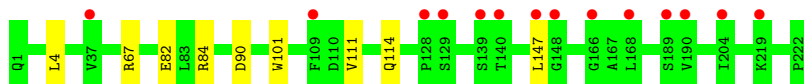


- Molecule 1: Microfibril-associated glycoprotein 4

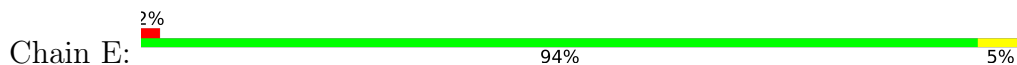


- Molecule 2: heavy chain of antibody AS0326

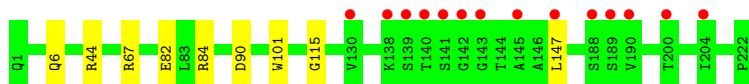




- Molecule 2: heavy chain of antibody AS0326



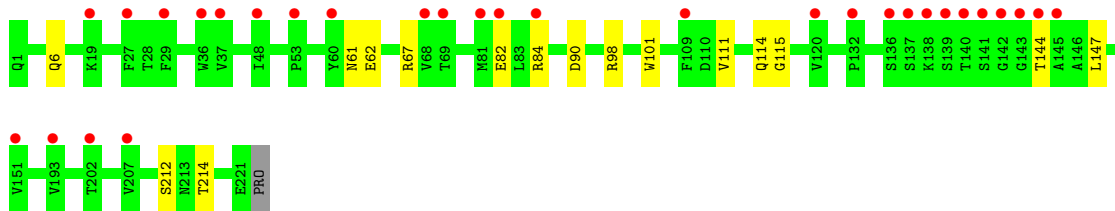
- Molecule 2: heavy chain of antibody AS0326



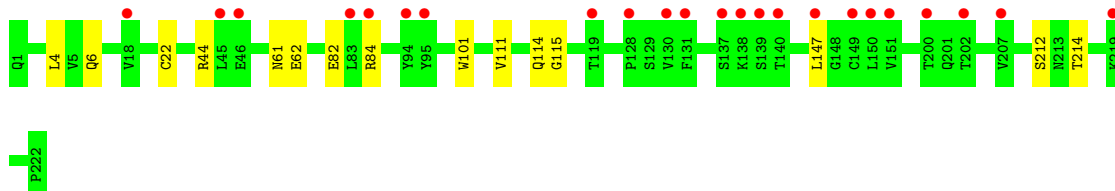
- Molecule 2: heavy chain of antibody AS0326



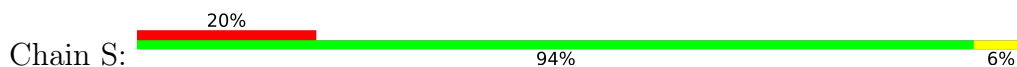
- Molecule 2: heavy chain of antibody AS0326

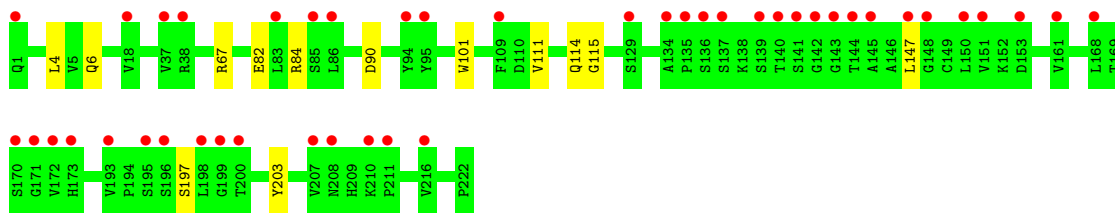


- Molecule 2: heavy chain of antibody AS0326

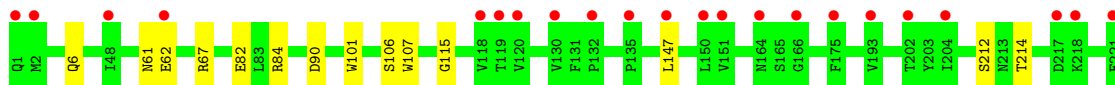


- Molecule 2: heavy chain of antibody AS0326



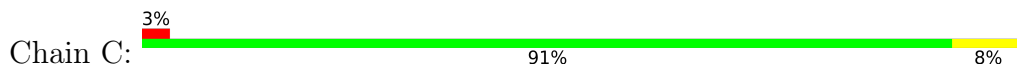


- Molecule 2: heavy chain of antibody AS0326



PRO

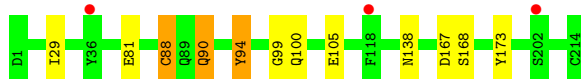
- Molecule 3: Light chain of AS0326



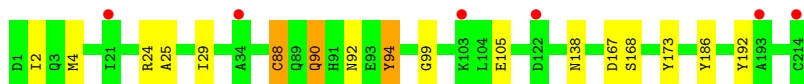
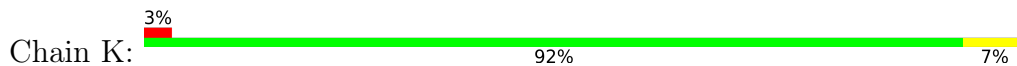
- Molecule 3: Light chain of AS0326



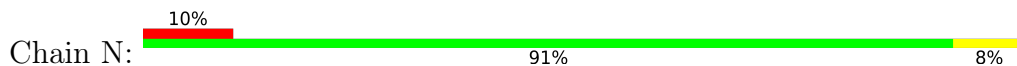
- Molecule 3: Light chain of AS0326

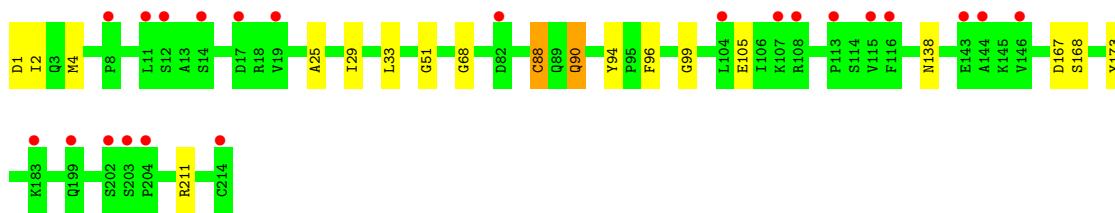


- Molecule 3: Light chain of AS0326

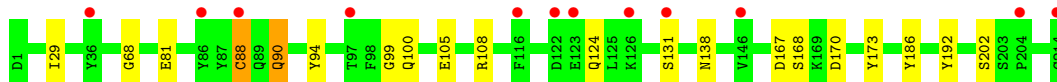
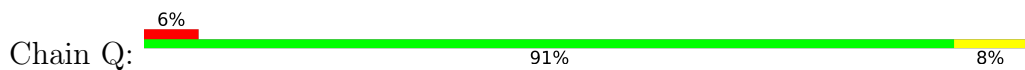


- Molecule 3: Light chain of AS0326

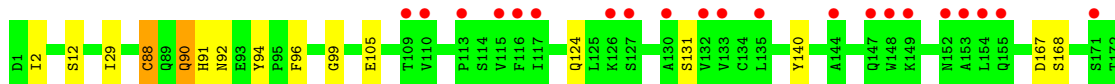
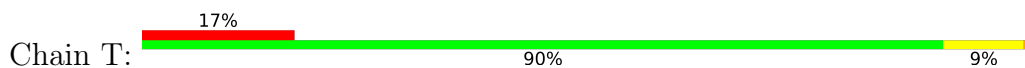




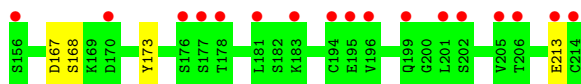
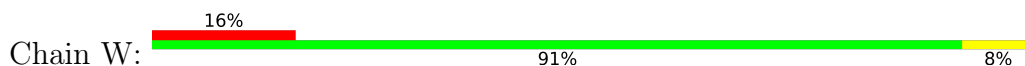
- Molecule 3: Light chain of AS0326



- Molecule 3: Light chain of AS0326



- Molecule 3: Light chain of AS0326



4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α , β , γ	317.32Å 126.60Å 187.55Å 90.00° 98.86° 90.00°	Depositor
Resolution (Å)	48.85 – 3.40 49.25 – 3.40	Depositor EDS
% Data completeness (in resolution range)	99.7 (48.85-3.40) 99.8 (49.25-3.40)	Depositor EDS
R_{merge}	0.23	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.15 (at 3.40Å)	Xtrriage
Refinement program	PHENIX 1.16_3549	Depositor
R, R_{free}	0.239 , 0.277 0.239 , 0.278	Depositor DCC
R_{free} test set	2000 reflections (1.98%)	wwPDB-VP
Wilson B-factor (Å ²)	100.8	Xtrriage
Anisotropy	0.651	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.32 , 72.2	EDS
L-test for twinning ²	$\langle L \rangle = 0.44$, $\langle L^2 \rangle = 0.27$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	80000	wwPDB-VP
Average B, all atoms (Å ²)	145.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.46% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality i

5.1 Standard geometry i

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

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	0.37	0/1830	0.67	1/2475 (0.0%)
1	D	0.37	0/1822	0.65	0/2464
1	I	0.33	0/1813	0.63	0/2452
1	L	0.37	0/1830	0.67	0/2475
1	O	0.34	0/1830	0.65	1/2475 (0.0%)
1	R	0.34	0/1813	0.64	0/2452
1	U	0.36	0/1830	0.65	1/2475 (0.0%)
1	X	0.36	0/1822	0.65	0/2464
2	B	0.31	0/1753	0.61	0/2389
2	E	0.31	0/1753	0.61	0/2389
2	G	0.30	0/1753	0.59	0/2389
2	J	0.31	0/1753	0.59	0/2389
2	M	0.30	0/1745	0.59	0/2377
2	P	0.30	0/1753	0.59	0/2389
2	S	0.29	0/1753	0.59	0/2389
2	V	0.30	0/1745	0.59	0/2377
3	C	0.33	0/1684	0.58	0/2282
3	F	0.36	0/1684	0.58	0/2282
3	H	0.31	0/1684	0.56	0/2282
3	K	0.31	0/1684	0.57	0/2282
3	N	0.31	0/1684	0.57	0/2282
3	Q	0.32	0/1684	0.57	0/2282
3	T	0.31	0/1684	0.57	0/2282
3	W	0.31	0/1684	0.56	0/2282
All	All	0.33	0/42070	0.61	3/57076 (0.0%)

There are no bond length outliers.

All (3) bond angle outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	98	LEU	CA-CB-CG	6.07	129.25	115.30
1	O	98	LEU	CA-CB-CG	5.42	127.76	115.30
1	U	98	LEU	CA-CB-CG	5.14	127.13	115.30

There are no chirality outliers.

There are no planarity outliers.

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	1776	1636	1637	9	0
1	D	1768	1626	1626	11	0
1	I	1759	1618	1618	9	0
1	L	1776	1636	1637	13	0
1	O	1776	1636	1637	7	0
1	R	1759	1618	1618	9	0
1	U	1776	1636	1637	11	0
1	X	1768	1626	1626	10	0
2	B	1707	1654	1661	4	0
2	E	1707	1654	1661	8	0
2	G	1707	1654	1661	4	0
2	J	1707	1654	1661	5	0
2	M	1700	1654	1654	7	1
2	P	1707	1654	1661	6	0
2	S	1707	1654	1661	6	0
2	V	1700	1654	1654	6	0
3	C	1649	1590	1603	13	0
3	F	1649	1590	1603	11	0
3	H	1649	1590	1603	5	0
3	K	1649	1590	1603	11	0
3	N	1649	1590	1603	12	0
3	Q	1649	1590	1603	9	1
3	T	1649	1590	1603	10	0
3	W	1649	1590	1603	13	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	A	1	0	0	0	0
4	D	1	0	0	0	0
4	I	1	0	0	0	0
4	L	1	0	0	0	0
4	O	1	0	0	0	0
4	R	1	0	0	0	0
4	U	1	0	0	0	0
4	X	1	0	0	0	0
5	A	2	0	0	0	0
5	D	2	0	0	0	0
5	I	2	0	0	0	0
5	L	2	0	0	0	0
5	O	2	0	0	0	0
5	R	2	0	0	0	0
5	U	2	0	0	0	0
5	X	2	0	0	0	0
All	All	41016	38984	39134	201	1

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 3.

All (201) 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:A:113:ASP:OD2	1:A:218:LYS:NZ	2.01	0.93
1:D:113:ASP:OD2	1:D:218:LYS:NZ	2.01	0.93
3:K:4:MET:HA	3:K:4:MET:HE2	1.54	0.88
3:K:4:MET:CE	3:K:25:ALA:HA	2.06	0.86
1:I:113:ASP:OD2	1:I:218:LYS:NZ	2.08	0.86
1:X:113:ASP:OD2	1:X:218:LYS:NZ	2.09	0.85
3:N:4:MET:HA	3:N:4:MET:HE2	1.58	0.85
3:W:4:MET:HA	3:W:4:MET:HE2	1.56	0.85
1:U:113:ASP:OD2	1:U:218:LYS:NZ	2.09	0.85
1:O:113:ASP:OD2	1:O:218:LYS:NZ	2.09	0.83
1:R:113:ASP:OD2	1:R:218:LYS:NZ	2.12	0.83
3:T:189:HIS:O	3:T:211:ARG:NH1	2.13	0.82
1:L:113:ASP:OD2	1:L:218:LYS:NZ	2.14	0.81
3:Q:105:GLU:OE1	3:Q:173:TYR:OH	2.00	0.77
3:N:4:MET:CE	3:N:25:ALA:HA	2.15	0.77
1:I:67:GLY:N	1:I:88:GLU:OE2	2.17	0.77
3:N:105:GLU:OE1	3:N:173:TYR:OH	2.03	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:S:82:GLU:OE2	2:S:84:ARG:NH1	2.21	0.73
1:L:201:LEU:HD11	1:L:210:ASN:HD21	1.53	0.73
3:N:4:MET:HE1	3:N:25:ALA:HA	1.71	0.73
3:K:4:MET:HE1	3:K:25:ALA:HA	1.70	0.73
2:P:82:GLU:OE2	2:P:84:ARG:NH1	2.21	0.73
3:W:105:GLU:OE1	3:W:173:TYR:OH	2.06	0.72
3:K:105:GLU:OE1	3:K:173:TYR:OH	2.06	0.72
3:W:4:MET:HE1	3:W:25:ALA:HA	1.71	0.72
3:W:4:MET:CE	3:W:25:ALA:HA	2.19	0.72
2:B:82:GLU:OE2	2:B:84:ARG:NH1	2.24	0.71
3:H:105:GLU:OE1	3:H:173:TYR:OH	2.08	0.70
2:J:82:GLU:OE2	2:J:84:ARG:NH1	2.25	0.70
3:T:105:GLU:OE1	3:T:173:TYR:OH	2.10	0.70
3:F:105:GLU:OE1	3:F:173:TYR:OH	2.09	0.69
1:L:67:GLY:N	1:L:88:GLU:OE2	2.25	0.69
2:M:82:GLU:OE2	2:M:84:ARG:NH1	2.26	0.69
3:N:88:CYS:O	3:N:99:GLY:N	2.26	0.69
3:Q:88:CYS:O	3:Q:99:GLY:N	2.26	0.69
1:O:67:GLY:N	1:O:88:GLU:OE2	2.26	0.68
3:F:88:CYS:O	3:F:99:GLY:N	2.27	0.68
2:G:82:GLU:OE2	2:G:84:ARG:NH1	2.26	0.67
3:T:88:CYS:O	3:T:99:GLY:N	2.27	0.67
1:O:14:LEU:HD23	1:O:14:LEU:O	1.95	0.67
1:U:54:GLU:O	1:U:232:ARG:NH2	2.28	0.66
1:O:70:SER:O	1:O:73:ARG:NH1	2.29	0.66
1:U:207:SER:OG	1:U:210:ASN:ND2	2.29	0.65
1:A:70:SER:O	1:A:73:ARG:NH1	2.30	0.64
1:R:67:GLY:N	1:R:88:GLU:OE2	2.30	0.64
3:C:167:ASP:OD1	3:C:168:SER:N	2.31	0.64
2:V:82:GLU:OE2	2:V:84:ARG:NH1	2.31	0.63
3:K:167:ASP:OD1	3:K:168:SER:N	2.31	0.63
2:E:82:GLU:OE2	2:E:84:ARG:NH1	2.32	0.63
3:W:88:CYS:O	3:W:99:GLY:N	2.31	0.62
3:C:36:TYR:OH	3:C:89:GLN:OE1	2.07	0.62
3:C:105:GLU:OE1	3:C:173:TYR:OH	2.11	0.62
3:F:167:ASP:OD1	3:F:168:SER:N	2.34	0.61
3:H:88:CYS:O	3:H:99:GLY:N	2.33	0.61
3:K:4:MET:HE1	3:K:25:ALA:CA	2.30	0.61
2:S:197:SER:OG	2:S:203:TYR:OH	2.13	0.61
1:L:201:LEU:HD11	1:L:210:ASN:ND2	2.15	0.60
3:F:90:GLN:OE1	3:F:92:ASN:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:K:186:TYR:O	3:K:192:TYR:OH	2.19	0.60
3:F:4:MET:HE2	3:F:25:ALA:HA	1.84	0.59
3:Q:186:TYR:O	3:Q:192:TYR:OH	2.19	0.59
2:B:114:GLN:N	2:B:114:GLN:OE1	2.35	0.59
3:H:167:ASP:OD1	3:H:168:SER:N	2.35	0.59
1:D:207:SER:OG	1:D:210:ASN:ND2	2.36	0.59
1:I:158:TYR:O	1:I:189:ARG:NH1	2.36	0.59
2:P:212:SER:OG	2:P:214:THR:OG1	2.20	0.59
2:B:67:ARG:NH2	2:B:90:ASP:OD2	2.35	0.59
3:N:29:ILE:HD11	3:N:90:GLN:HG2	1.84	0.59
3:W:167:ASP:OD1	3:W:168:SER:N	2.36	0.58
3:Q:167:ASP:OD1	3:Q:168:SER:N	2.36	0.58
3:N:167:ASP:OD1	3:N:168:SER:N	2.37	0.58
1:R:54:GLU:O	1:R:232:ARG:NH2	2.33	0.58
2:J:67:ARG:NH2	2:J:90:ASP:OD2	2.37	0.58
1:X:67:GLY:N	1:X:88:GLU:OE2	2.37	0.57
3:F:36:TYR:OH	3:F:89:GLN:OE1	2.06	0.57
1:D:158:TYR:O	1:D:189:ARG:NH1	2.37	0.56
2:S:67:ARG:NH2	2:S:90:ASP:OD2	2.39	0.56
1:X:47:VAL:HG12	1:X:91:LEU:HD13	1.88	0.56
2:P:44:ARG:HG3	3:Q:100:GLN:HA	1.89	0.55
1:D:19:ASP:OD2	1:D:233:ARG:NH1	2.38	0.55
2:E:138:LYS:NZ	3:F:208:SER:O	2.36	0.55
3:C:2:ILE:HD11	3:C:93:GLU:OE1	2.07	0.54
3:T:124:GLN:OE1	3:T:131:SER:N	2.40	0.54
3:C:2:ILE:HG22	3:C:2:ILE:O	2.07	0.54
3:W:4:MET:HE1	3:W:25:ALA:CA	2.36	0.54
1:U:67:GLY:N	1:U:88:GLU:OE2	2.41	0.54
1:A:158:TYR:O	1:A:189:ARG:NH1	2.40	0.54
1:D:56:GLY:O	1:D:232:ARG:NH2	2.41	0.54
2:J:212:SER:OG	2:J:214:THR:OG1	2.26	0.54
3:N:4:MET:HE1	3:N:25:ALA:CA	2.36	0.54
2:V:106:SER:OG	2:V:107:TRP:N	2.40	0.54
1:A:19:ASP:OD2	1:A:233:ARG:NH1	2.38	0.53
1:O:14:LEU:O	1:O:14:LEU:CD2	2.57	0.53
3:C:2:ILE:HG21	3:C:90:GLN:CG	2.39	0.53
3:C:88:CYS:O	3:C:99:GLY:N	2.42	0.52
2:M:212:SER:OG	2:M:214:THR:OG1	2.27	0.52
3:W:33:LEU:O	3:W:50:SER:N	2.42	0.52
1:R:21:ASP:OD1	1:R:57:LYS:O	2.28	0.52
1:U:158:TYR:O	1:U:189:ARG:NH1	2.41	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:F:124:GLN:OE1	3:F:131:SER:N	2.42	0.52
2:S:114:GLN:OE1	2:S:114:GLN:N	2.42	0.52
1:D:84:ARG:NH2	1:L:138:ASP:OD1	2.40	0.52
3:K:88:CYS:O	3:K:99:GLY:N	2.41	0.51
1:D:94:GLN:O	1:D:98:LEU:HD22	2.10	0.51
1:X:158:TYR:O	1:X:189:ARG:NH1	2.42	0.51
3:Q:29:ILE:HD11	3:Q:90:GLN:O	2.11	0.51
1:U:70:SER:O	1:U:73:ARG:NH1	2.44	0.51
2:V:6:GLN:OE1	2:V:115:GLY:N	2.42	0.51
2:M:98:ARG:HB3	2:M:111:VAL:HG12	1.92	0.51
3:W:124:GLN:OE1	3:W:131:SER:N	2.44	0.51
2:M:114:GLN:N	2:M:114:GLN:OE1	2.45	0.50
3:C:4:MET:CE	3:C:25:ALA:HA	2.42	0.50
2:V:67:ARG:NH2	2:V:90:ASP:OD2	2.43	0.50
3:F:4:MET:CE	3:F:25:ALA:HA	2.41	0.50
1:I:50:ASP:OD2	1:I:53:THR:OG1	2.16	0.50
1:L:93:LEU:HD11	1:L:164:PHE:CD2	2.46	0.50
1:I:47:VAL:HG12	1:I:91:LEU:HD13	1.94	0.50
1:A:213:ASN:ND2	1:A:222:TYR:O	2.45	0.50
3:C:29:ILE:HD11	3:C:90:GLN:O	2.12	0.50
3:T:167:ASP:OD1	3:T:168:SER:N	2.45	0.50
1:I:56:GLY:O	1:I:232:ARG:NH2	2.43	0.49
1:O:56:GLY:O	1:O:232:ARG:NH2	2.45	0.49
2:G:6:GLN:OE1	2:G:115:GLY:N	2.45	0.49
1:L:94:GLN:O	1:L:98:LEU:HD22	2.13	0.49
2:S:6:GLN:OE1	2:S:115:GLY:N	2.44	0.49
1:R:47:VAL:HG12	1:R:91:LEU:HD13	1.95	0.49
2:P:6:GLN:OE1	2:P:115:GLY:N	2.43	0.49
1:R:138:ASP:OD2	1:U:84:ARG:NH2	2.45	0.48
3:K:29:ILE:HD11	3:K:90:GLN:HG2	1.95	0.48
3:T:187:GLU:O	3:T:211:ARG:NH1	2.47	0.48
1:X:56:GLY:O	1:X:232:ARG:NH2	2.46	0.48
3:Q:29:ILE:HG22	3:Q:68:GLY:O	2.12	0.48
2:E:67:ARG:NH2	2:E:90:ASP:OD2	2.46	0.48
1:U:156:LEU:HD23	1:U:214:TRP:CH2	2.48	0.47
2:G:44:ARG:HG3	3:H:100:GLN:HA	1.96	0.47
3:K:90:GLN:OE1	3:K:92:ASN:N	2.44	0.47
3:W:29:ILE:HD11	3:W:90:GLN:O	2.13	0.47
1:A:67:GLY:N	1:A:88:GLU:OE2	2.47	0.47
2:J:6:GLN:OE1	2:J:115:GLY:N	2.42	0.47
3:H:29:ILE:HD11	3:H:90:GLN:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:L:47:VAL:HG12	1:L:91:LEU:HD13	1.96	0.47
1:A:56:GLY:O	1:A:232:ARG:NH2	2.46	0.47
1:R:158:TYR:O	1:R:189:ARG:NH1	2.46	0.47
2:G:67:ARG:NH2	2:G:90:ASP:OD2	2.48	0.47
3:Q:124:GLN:OE1	3:Q:131:SER:N	2.48	0.47
2:M:6:GLN:OE1	2:M:115:GLY:N	2.47	0.46
1:X:94:GLN:O	1:X:98:LEU:HD22	2.16	0.46
1:D:70:SER:O	1:D:73:ARG:NH1	2.48	0.46
1:X:93:LEU:HD11	1:X:164:PHE:CD2	2.51	0.46
3:N:1:ASP:HB2	3:N:2:ILE:HD12	1.97	0.46
3:N:33:LEU:O	3:N:51:GLY:N	2.43	0.45
1:U:47:VAL:HG12	1:U:91:LEU:HD13	1.98	0.45
2:V:61:ASN:OD1	2:V:62:GLU:N	2.50	0.45
3:C:2:ILE:HG21	3:C:90:GLN:HG3	1.99	0.44
3:T:29:ILE:HD11	3:T:90:GLN:HG2	1.99	0.44
3:Q:108:ARG:NE	3:Q:170:ASP:O	2.50	0.44
1:L:19:ASP:OD1	1:L:21:ASP:N	2.51	0.44
3:W:4:MET:HE1	3:W:25:ALA:CB	2.47	0.44
3:W:29:ILE:HG22	3:W:68:GLY:O	2.18	0.44
3:C:29:ILE:HG22	3:C:68:GLY:O	2.18	0.43
1:L:158:TYR:O	1:L:189:ARG:NH1	2.48	0.43
1:D:86:ASP:N	1:D:86:ASP:OD1	2.52	0.43
2:J:61:ASN:OD1	2:J:62:GLU:N	2.51	0.43
1:L:50:ASP:OD2	1:L:53:THR:OG1	2.22	0.43
3:W:4:MET:HE2	3:W:4:MET:CA	2.40	0.43
1:O:94:GLN:O	1:O:98:LEU:HD22	2.19	0.42
3:K:4:MET:HE2	3:K:24:ARG:O	2.20	0.42
2:V:212:SER:OG	2:V:214:THR:OG1	2.37	0.42
1:X:64:ARG:NH1	1:X:212:ILE:HG23	2.34	0.42
1:I:64:ARG:NH1	1:I:212:ILE:HG23	2.33	0.42
1:X:21:ASP:N	1:X:21:ASP:OD1	2.53	0.42
3:T:12:SER:OG	3:T:140:TYR:OH	2.35	0.42
3:F:186:TYR:O	3:F:192:TYR:OH	2.32	0.42
3:N:29:ILE:HG22	3:N:68:GLY:O	2.19	0.42
1:D:20:CYS:CB	1:D:59:THR:HG22	2.50	0.42
1:L:21:ASP:N	1:L:21:ASP:OD1	2.52	0.42
2:S:4:LEU:HD23	2:S:111:VAL:CG1	2.50	0.42
1:A:24:TYR:HH	2:E:107:TRP:HE1	1.67	0.41
3:C:2:ILE:HD11	3:C:93:GLU:CD	2.40	0.41
1:U:94:GLN:O	1:U:98:LEU:HD22	2.20	0.41
1:U:21:ASP:N	1:U:21:ASP:OD1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4:LEU:HD23	2:E:111:VAL:HG12	2.01	0.41
2:P:4:LEU:HD23	2:P:111:VAL:CG1	2.51	0.41
1:R:94:GLN:O	1:R:98:LEU:HD22	2.20	0.41
2:M:61:ASN:OD1	2:M:62:GLU:N	2.53	0.41
2:P:61:ASN:OD1	2:P:62:GLU:N	2.54	0.41
3:N:4:MET:HE2	3:N:4:MET:CA	2.40	0.41
1:R:19:ASP:OD2	1:R:233:ARG:NH1	2.52	0.41
1:D:131:ASN:ND2	1:I:86:ASP:OD1	2.54	0.41
2:M:67:ARG:NH2	2:M:90:ASP:OD2	2.54	0.41
2:E:212:SER:OG	2:E:214:THR:OG1	2.34	0.41
3:T:90:GLN:OE1	3:T:92:ASN:N	2.53	0.41
3:C:124:GLN:OE1	3:C:131:SER:N	2.54	0.41
1:L:166:THR:HG22	1:L:167:PHE:N	2.36	0.41
3:T:186:TYR:O	3:T:192:TYR:OH	2.36	0.40
2:E:107:TRP:CZ2	3:F:94:TYR:HE2	2.39	0.40
1:X:31:ASP:N	1:X:31:ASP:OD1	2.52	0.40
1:A:93:LEU:HD12	1:A:140:TYR:HB3	2.02	0.40
2:B:4:LEU:HD23	2:B:111:VAL:HG12	2.04	0.40
2:E:114:GLN:N	2:E:114:GLN:OE1	2.55	0.40
1:I:64:ARG:NH1	1:I:212:ILE:CG2	2.85	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:144:THR:OG1	3:Q:202:SER:OG[3_555]	1.98	0.22

5.3 Torsion angles [i](#)

5.3.1 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 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	219/255 (86%)	209 (95%)	9 (4%)	1 (0%)	29 61

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	D	218/255 (86%)	209 (96%)	8 (4%)	1 (0%)	29	61
1	I	217/255 (85%)	207 (95%)	9 (4%)	1 (0%)	29	61
1	L	219/255 (86%)	211 (96%)	7 (3%)	1 (0%)	29	61
1	O	219/255 (86%)	209 (95%)	9 (4%)	1 (0%)	29	61
1	R	217/255 (85%)	208 (96%)	8 (4%)	1 (0%)	29	61
1	U	219/255 (86%)	208 (95%)	9 (4%)	2 (1%)	17	49
1	X	218/255 (86%)	208 (95%)	9 (4%)	1 (0%)	29	61
2	B	220/222 (99%)	207 (94%)	13 (6%)	0	100	100
2	E	220/222 (99%)	206 (94%)	14 (6%)	0	100	100
2	G	220/222 (99%)	206 (94%)	14 (6%)	0	100	100
2	J	220/222 (99%)	207 (94%)	13 (6%)	0	100	100
2	M	219/222 (99%)	207 (94%)	12 (6%)	0	100	100
2	P	220/222 (99%)	208 (94%)	12 (6%)	0	100	100
2	S	220/222 (99%)	209 (95%)	11 (5%)	0	100	100
2	V	219/222 (99%)	207 (94%)	12 (6%)	0	100	100
3	C	212/214 (99%)	201 (95%)	9 (4%)	2 (1%)	17	49
3	F	212/214 (99%)	201 (95%)	9 (4%)	2 (1%)	17	49
3	H	212/214 (99%)	201 (95%)	9 (4%)	2 (1%)	17	49
3	K	212/214 (99%)	201 (95%)	8 (4%)	3 (1%)	11	37
3	N	212/214 (99%)	201 (95%)	9 (4%)	2 (1%)	17	49
3	Q	212/214 (99%)	201 (95%)	10 (5%)	1 (0%)	29	61
3	T	212/214 (99%)	201 (95%)	8 (4%)	3 (1%)	11	37
3	W	212/214 (99%)	200 (94%)	10 (5%)	2 (1%)	17	49
All	All	5200/5528 (94%)	4933 (95%)	241 (5%)	26 (0%)	29	61

All (26) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	65	PHE
1	D	65	PHE
1	I	65	PHE
1	L	65	PHE
1	O	65	PHE
1	R	65	PHE

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Mol	Chain	Res	Type
1	U	15	GLN
1	U	65	PHE
3	W	213	GLU
1	X	65	PHE
3	N	96	PHE
3	N	138	ASN
3	T	96	PHE
3	C	96	PHE
3	F	138	ASN
3	H	138	ASN
3	K	138	ASN
3	Q	138	ASN
3	T	91	HIS
3	W	96	PHE
3	K	2	ILE
3	C	94	TYR
3	F	94	TYR
3	H	94	TYR
3	K	94	TYR
3	T	2	ILE

5.3.2 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 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	182/210 (87%)	176 (97%)	6 (3%)	38	66
1	D	181/210 (86%)	176 (97%)	5 (3%)	43	70
1	I	180/210 (86%)	178 (99%)	2 (1%)	73	86
1	L	182/210 (87%)	177 (97%)	5 (3%)	44	70
1	O	182/210 (87%)	177 (97%)	5 (3%)	44	70
1	R	180/210 (86%)	178 (99%)	2 (1%)	73	86
1	U	182/210 (87%)	178 (98%)	4 (2%)	52	75
1	X	181/210 (86%)	176 (97%)	5 (3%)	43	70

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	B	194/194 (100%)	192 (99%)	2 (1%)	76	88
2	E	194/194 (100%)	191 (98%)	3 (2%)	65	82
2	G	194/194 (100%)	192 (99%)	2 (1%)	76	88
2	J	194/194 (100%)	190 (98%)	4 (2%)	53	76
2	M	193/194 (100%)	191 (99%)	2 (1%)	76	88
2	P	194/194 (100%)	190 (98%)	4 (2%)	53	76
2	S	194/194 (100%)	192 (99%)	2 (1%)	76	88
2	V	193/194 (100%)	191 (99%)	2 (1%)	76	88
3	C	188/188 (100%)	185 (98%)	3 (2%)	62	81
3	F	188/188 (100%)	184 (98%)	4 (2%)	53	76
3	H	188/188 (100%)	184 (98%)	4 (2%)	53	76
3	K	188/188 (100%)	185 (98%)	3 (2%)	62	81
3	N	188/188 (100%)	184 (98%)	4 (2%)	53	76
3	Q	188/188 (100%)	184 (98%)	4 (2%)	53	76
3	T	188/188 (100%)	184 (98%)	4 (2%)	53	76
3	W	188/188 (100%)	183 (97%)	5 (3%)	44	70
All	All	4504/4736 (95%)	4418 (98%)	86 (2%)	57	78

All (86) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	63	LYS
1	A	73	ARG
1	A	147	PHE
1	A	186	PHE
1	A	210	ASN
1	A	232	ARG
2	B	101	TRP
2	B	147	LEU
3	C	81	GLU
3	C	90	GLN
3	C	94	TYR
1	D	63	LYS
1	D	73	ARG
1	D	147	PHE
1	D	186	PHE

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Mol	Chain	Res	Type
1	D	232	ARG
2	E	101	TRP
2	E	114	GLN
2	E	147	LEU
3	F	81	GLU
3	F	88	CYS
3	F	90	GLN
3	F	94	TYR
2	G	101	TRP
2	G	147	LEU
3	H	81	GLU
3	H	88	CYS
3	H	90	GLN
3	H	94	TYR
1	I	84	ARG
1	I	147	PHE
2	J	101	TRP
2	J	108	TYR
2	J	114	GLN
2	J	147	LEU
3	K	88	CYS
3	K	90	GLN
3	K	94	TYR
1	L	63	LYS
1	L	84	ARG
1	L	147	PHE
1	L	222	TYR
1	L	232	ARG
2	M	101	TRP
2	M	147	LEU
3	N	88	CYS
3	N	90	GLN
3	N	94	TYR
3	N	211	ARG
1	O	63	LYS
1	O	73	ARG
1	O	147	PHE
1	O	210	ASN
1	O	232	ARG
2	P	22	CYS
2	P	101	TRP
2	P	114	GLN

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Mol	Chain	Res	Type
2	P	147	LEU
3	Q	81	GLU
3	Q	88	CYS
3	Q	90	GLN
3	Q	94	TYR
1	R	63	LYS
1	R	147	PHE
2	S	101	TRP
2	S	147	LEU
3	T	88	CYS
3	T	90	GLN
3	T	94	TYR
3	T	211	ARG
1	U	63	LYS
1	U	73	ARG
1	U	147	PHE
1	U	186	PHE
2	V	101	TRP
2	V	147	LEU
3	W	46	LEU
3	W	81	GLU
3	W	88	CYS
3	W	90	GLN
3	W	94	TYR
1	X	21	ASP
1	X	63	LYS
1	X	84	ARG
1	X	147	PHE
1	X	210	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	D	210	ASN
1	D	213	ASN
1	U	210	ASN
1	U	213	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

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, 95th 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	221/255 (86%)	0.39	1 (0%) 91 90	65, 90, 115, 187	0
1	D	220/255 (86%)	0.37	0 100 100	77, 102, 131, 192	0
1	I	219/255 (85%)	0.26	1 (0%) 91 90	87, 122, 150, 197	0
1	L	221/255 (86%)	0.24	0 100 100	70, 91, 121, 178	0
1	O	221/255 (86%)	0.41	3 (1%) 75 74	78, 113, 156, 186	0
1	R	219/255 (85%)	0.30	2 (0%) 84 83	71, 104, 140, 176	0
1	U	221/255 (86%)	0.45	8 (3%) 42 42	79, 109, 143, 183	0
1	X	220/255 (86%)	0.24	1 (0%) 91 90	70, 93, 124, 201	0
2	B	222/222 (100%)	0.60	14 (6%) 20 21	109, 138, 182, 291	0
2	E	222/222 (100%)	0.37	5 (2%) 60 59	90, 123, 177, 262	0
2	G	222/222 (100%)	0.54	14 (6%) 20 21	87, 127, 168, 371	0
2	J	222/222 (100%)	0.18	4 (1%) 68 67	85, 126, 178, 266	0
2	M	221/222 (99%)	0.84	30 (13%) 3 3	120, 158, 197, 320	0
2	P	222/222 (100%)	0.65	23 (10%) 6 8	88, 142, 200, 343	0
2	S	222/222 (100%)	1.10	44 (19%) 1 1	101, 164, 278, 351	0
2	V	221/222 (99%)	0.65	22 (9%) 7 8	91, 160, 241, 276	0
3	C	214/214 (100%)	0.26	6 (2%) 53 51	92, 116, 176, 226	0
3	F	214/214 (100%)	0.23	1 (0%) 91 90	89, 111, 139, 174	0
3	H	214/214 (100%)	0.24	3 (1%) 75 74	88, 131, 167, 214	0
3	K	214/214 (100%)	0.34	6 (2%) 53 51	83, 128, 180, 218	0
3	N	214/214 (100%)	0.69	22 (10%) 6 8	122, 158, 198, 216	0
3	Q	214/214 (100%)	0.46	12 (5%) 24 25	95, 148, 215, 250	0
3	T	214/214 (100%)	0.92	36 (16%) 1 2	115, 184, 246, 306	0
3	W	214/214 (100%)	0.92	35 (16%) 1 2	98, 190, 249, 286	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
All	All	5248/5528 (94%)	0.49	293 (5%) 24 25	65, 126, 212, 371	0

All (293) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	M	139	SER	11.5
2	S	142	GLY	11.2
2	M	138	LYS	8.3
2	G	142	GLY	8.0
3	W	133	VAL	7.6
3	W	194	CYS	7.4
2	G	140	THR	7.3
2	M	137	SER	7.3
2	P	140	THR	7.2
2	G	139	SER	7.0
3	T	132	VAL	6.9
3	T	152	ASN	6.8
3	N	214	CYS	6.2
2	P	139	SER	6.2
2	S	199	GLY	6.1
2	S	141	SER	6.1
2	P	150	LEU	6.0
3	W	114	SER	6.0
2	G	141	SER	5.8
2	S	144	THR	5.6
2	V	118	VAL	5.6
2	S	195	SER	5.5
2	S	135	PRO	5.4
3	W	177	SER	5.2
2	S	143	GLY	5.2
3	T	180	THR	5.2
2	M	141	SER	5.2
2	S	148	GLY	5.1
2	J	139	SER	5.1
2	M	142	GLY	5.1
2	S	161	VAL	5.0
3	W	137	ASN	4.9
3	T	204	PRO	4.8
3	W	156	SER	4.8
3	K	214	CYS	4.8
3	T	149	LYS	4.8
3	W	196	VAL	4.6

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Mol	Chain	Res	Type	RSRZ
3	W	205	VAL	4.5
2	V	1	GLN	4.4
2	V	221	GLU	4.4
3	N	17	ASP	4.3
2	B	140	THR	4.3
3	T	116	PHE	4.2
2	S	210	LYS	4.2
2	J	140	THR	4.2
2	S	145	ALA	4.2
2	G	190	VAL	4.1
3	T	133	VAL	4.1
2	B	128	PRO	4.1
3	W	206	THR	4.0
3	W	146	VAL	4.0
2	G	138	LYS	4.0
2	S	173	HIS	4.0
2	S	150	LEU	4.0
1	R	16	GLN	4.0
3	Q	214	CYS	3.9
2	M	193	VAL	3.9
2	V	217	ASP	3.9
2	E	139	SER	3.9
2	M	109	PHE	3.9
2	S	134	ALA	3.9
2	M	143	GLY	3.9
3	N	202	SER	3.8
2	B	189	SER	3.8
2	G	188	SER	3.8
2	S	196	SER	3.8
2	S	137	SER	3.7
2	M	140	THR	3.7
2	S	168	LEU	3.7
2	S	200	THR	3.7
2	G	189	SER	3.7
3	T	203	SER	3.7
3	T	199	GLN	3.7
3	W	134	CYS	3.6
3	W	121	SER	3.6
2	V	130	VAL	3.6
3	N	204	PRO	3.5
3	W	178	THR	3.5
3	W	201	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
3	W	135	LEU	3.5
3	W	131	SER	3.4
2	S	37	VAL	3.4
2	S	170	SER	3.4
3	W	214	CYS	3.4
3	T	195	GLU	3.4
3	C	1	ASP	3.4
2	V	132	PRO	3.4
2	M	36	TRP	3.4
2	M	136	SER	3.4
2	M	120	VAL	3.3
2	S	208	ASN	3.3
2	S	139	SER	3.3
2	M	81	MET	3.3
2	G	145	ALA	3.3
2	S	211	PRO	3.3
1	X	15	GLN	3.3
3	T	117	ILE	3.3
2	M	53	PRO	3.3
2	M	29	PHE	3.2
3	W	199	GLN	3.2
2	B	139	SER	3.2
3	W	116	PHE	3.2
3	W	117	ILE	3.2
3	W	183	LYS	3.2
2	B	129	SER	3.2
2	M	68	VAL	3.1
1	R	42	SER	3.1
3	Q	146	VAL	3.1
2	P	131	PHE	3.1
2	P	128	PRO	3.1
3	T	113	PRO	3.1
2	J	62	GLU	3.1
2	S	94	TYR	3.0
2	S	86	LEU	3.0
2	P	149	CYS	3.0
3	N	8	PRO	3.0
2	P	200	THR	3.0
3	T	155	GLN	3.0
3	T	214	CYS	3.0
1	O	209	ALA	3.0
2	P	119	THR	3.0

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Mol	Chain	Res	Type	RSRZ
3	Q	88	CYS	3.0
2	P	151	VAL	2.9
2	S	207	VAL	2.9
2	S	136	SER	2.9
2	G	130	VAL	2.9
2	V	119	THR	2.9
3	W	195	GLU	2.9
2	M	19	LYS	2.9
2	M	69	THR	2.8
3	H	118	PHE	2.8
3	Q	86	TYR	2.8
3	Q	122	ASP	2.8
2	B	219	LYS	2.8
2	M	144	THR	2.8
2	V	120	VAL	2.8
2	M	60	TYR	2.8
2	E	200	THR	2.8
3	N	82	ASP	2.8
2	B	168	LEU	2.7
2	V	150	LEU	2.7
2	M	151	VAL	2.7
2	S	83	LEU	2.7
3	T	148	TRP	2.7
2	S	193	VAL	2.7
2	M	207	VAL	2.7
3	T	110	VAL	2.7
3	Q	204	PRO	2.7
2	S	198	LEU	2.7
2	J	37	VAL	2.7
2	S	216	VAL	2.7
3	N	113	PRO	2.7
2	S	95	TYR	2.6
3	T	127	SER	2.6
3	N	108	ARG	2.6
3	W	145	LYS	2.6
1	U	144	VAL	2.6
2	M	37	VAL	2.6
3	C	98	PHE	2.6
2	B	147	LEU	2.6
3	T	154	LEU	2.6
3	W	27	LYS	2.6
3	F	147	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
3	Q	36	TYR	2.6
2	P	45	LEU	2.6
3	N	199	GLN	2.5
2	P	130	VAL	2.5
2	V	202	THR	2.5
2	S	171	GLY	2.5
3	T	205	VAL	2.5
3	W	176	SER	2.5
2	M	82	GLU	2.5
2	P	46	GLU	2.5
3	Q	131	SER	2.5
3	N	143	GLU	2.5
3	N	116	PHE	2.5
2	M	48	ILE	2.5
1	U	14	LEU	2.5
2	V	164	ASN	2.5
2	V	2	MET	2.5
2	P	137	SER	2.5
3	W	113	PRO	2.4
3	N	14	SER	2.4
3	C	24	ARG	2.4
3	C	146	VAL	2.4
3	Q	116	PHE	2.4
3	W	93	GLU	2.4
2	V	193	VAL	2.4
3	T	182	SER	2.4
3	W	213	GLU	2.4
2	G	200	THR	2.4
3	T	206	THR	2.4
3	T	201	LEU	2.4
3	N	183	LYS	2.4
2	S	1	GLN	2.4
2	P	18	VAL	2.4
3	N	19	VAL	2.4
3	N	144	ALA	2.4
3	K	122	ASP	2.3
1	A	14	LEU	2.3
2	S	147	LEU	2.3
2	S	172	VAL	2.3
2	S	129	SER	2.3
2	P	207	VAL	2.3
3	T	171	SER	2.3

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Mol	Chain	Res	Type	RSRZ
2	S	151	VAL	2.3
3	Q	123	GLU	2.3
2	V	48	ILE	2.3
1	U	196	LEU	2.3
2	P	83	LEU	2.3
3	C	135	LEU	2.3
3	N	104	LEU	2.3
3	T	130	ALA	2.3
3	T	185	ASP	2.3
3	N	115	VAL	2.3
3	W	170	ASP	2.3
3	W	202	SER	2.3
2	B	166	GLY	2.3
2	V	62	GLU	2.3
2	V	218	LYS	2.3
3	T	126	LYS	2.3
3	T	135	LEU	2.3
2	E	48	ILE	2.3
2	B	204	ILE	2.3
2	M	202	THR	2.3
2	V	175	PHE	2.3
3	K	34	ALA	2.3
3	T	115	VAL	2.3
2	V	147	LEU	2.2
3	N	12	SER	2.2
3	T	144	ALA	2.2
1	U	72	PHE	2.2
2	P	95	TYR	2.2
3	W	148	TRP	2.2
2	S	18	VAL	2.2
3	K	193	ALA	2.2
3	T	192	TYR	2.2
3	W	181	LEU	2.2
2	E	195	SER	2.2
2	M	27	PHE	2.2
3	T	153	ALA	2.2
2	P	84	ARG	2.2
2	V	166	GLY	2.2
2	P	94	TYR	2.2
2	P	219	LYS	2.2
2	M	84	ARG	2.2
2	M	145	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
2	P	138	LYS	2.2
3	N	203	SER	2.2
1	U	110	ASP	2.2
1	I	16	GLN	2.1
2	B	109	PHE	2.1
3	Q	97	THR	2.1
3	N	11	LEU	2.1
2	B	37	VAL	2.1
2	S	38	ARG	2.1
3	C	100	GLN	2.1
3	H	36	TYR	2.1
2	V	135	PRO	2.1
3	W	111	ALA	2.1
3	T	109	THR	2.1
2	S	109	PHE	2.1
2	V	204	ILE	2.1
2	B	190	VAL	2.1
3	Q	126	LYS	2.1
3	W	115	VAL	2.1
2	G	147	LEU	2.1
1	U	112	GLU	2.1
3	N	107	LYS	2.1
2	S	140	THR	2.1
2	M	132	PRO	2.1
1	O	196	LEU	2.1
3	W	11	LEU	2.1
1	U	145	ALA	2.0
2	P	202	THR	2.0
2	V	151	VAL	2.0
2	B	148	GLY	2.0
2	G	143	GLY	2.0
3	H	202	SER	2.0
3	K	21	ILE	2.0
1	O	29	GLN	2.0
2	E	47	TRP	2.0
2	S	153	ASP	2.0
3	K	103	LYS	2.0
3	T	191	VAL	2.0
2	G	204	ILE	2.0
2	P	147	LEU	2.0
1	U	186	PHE	2.0
3	T	147	GLN	2.0

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Mol	Chain	Res	Type	RSRZ
2	S	85	SER	2.0
3	N	146	VAL	2.0
3	T	177	SER	2.0
3	T	190	LYS	2.0

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

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

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q < 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q < 0.9
4	CA	U	501	1/1	0.86	0.21	97,97,97,97	0
4	CA	I	501	1/1	0.95	0.17	129,129,129,129	0
4	CA	A	501	1/1	0.95	0.17	82,82,82,82	0
4	CA	O	501	1/1	0.97	0.19	97,97,97,97	0
4	CA	X	501	1/1	0.97	0.19	84,84,84,84	0
4	CA	L	501	1/1	0.98	0.20	83,83,83,83	0
4	CA	D	501	1/1	0.99	0.24	95,95,95,95	0
4	CA	R	501	1/1	0.99	0.19	111,111,111,111	0

6.5 Other polymers [i](#)

There are no such residues in this entry.