Full wwPDB X-ray Structure Validation Report ⓘ

Oct 11, 2023 – 11:09 AM EDT

PDB ID	:	7N0W
Title	:	Rigidity of loop 1 contributes to equipotency of globular and ribbon isomers of alpha-conotoxin AusIA
Authors	:	Ho, T.N.T.; Abraham, N.; Lewis, R.J.
Deposited on	:	2021-05-26
Resolution	:	2.46 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:

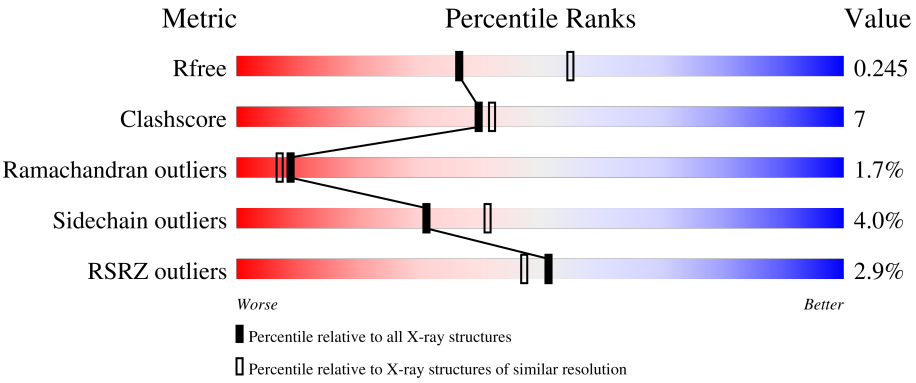
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35.1

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 2.46 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	1544 (2.48-2.44)
Clashscore	141614	1613 (2.48-2.44)
Ramachandran outliers	138981	1598 (2.48-2.44)
Sidechain outliers	138945	1598 (2.48-2.44)
RSRZ outliers	127900	1523 (2.48-2.44)

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	205	80% 19%
1	B	205	2% 84% 12%
1	C	205	4% 81% 13%
1	D	205	4% 82% 14%
1	E	205	2% 86% 13%

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Mol	Chain	Length	Quality of chain
2	G	16	12% 69% 19% 12%

2 Entry composition (i)

There are 3 unique types of molecules in this entry. The entry contains 8286 atoms, of which 0 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 Acetylcholine-binding protein.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	205	Total	C	N	O	S	0	0	0
			1636	1023	280	328	5			
1	B	203	Total	C	N	O	S	0	0	0
			1621	1013	278	325	5			
1	C	201	Total	C	N	O	S	0	0	0
			1610	1010	275	320	5			
1	D	201	Total	C	N	O	S	0	0	0
			1610	1008	275	322	5			
1	E	205	Total	C	N	O	S	0	0	0
			1636	1023	280	328	5			

- Molecule 2 is a protein called Ribbon alpha-conotoxin AusIA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	G	14	Total	C	N	O	S	0	0	0
			106	60	26	16	4			

- Molecule 3 is water.

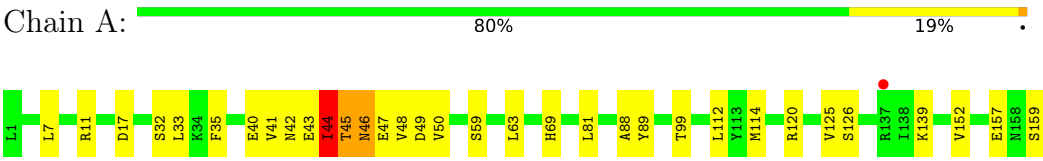
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
3	A	12	Total	O	0	0
			12	12		
3	B	19	Total	O	0	0
			19	19		
3	C	5	Total	O	0	0
			5	5		
3	D	13	Total	O	0	0
			13	13		
3	E	16	Total	O	0	0
			16	16		
3	G	2	Total	O	0	0
			2	2		

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.

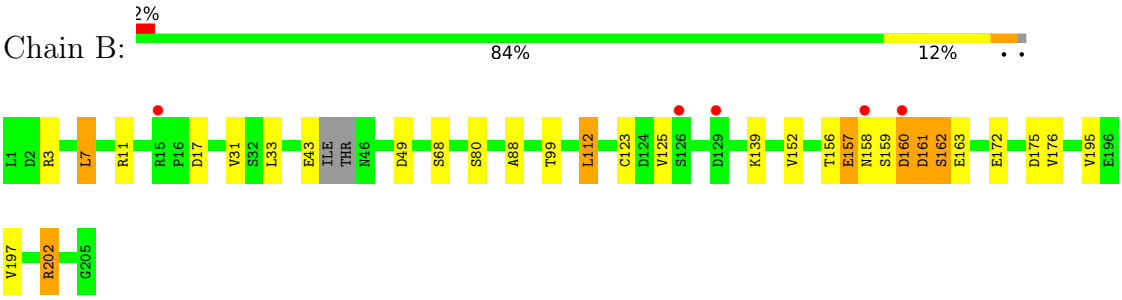
• Molecule 1: Acetylcholine-binding protein

Chain A:



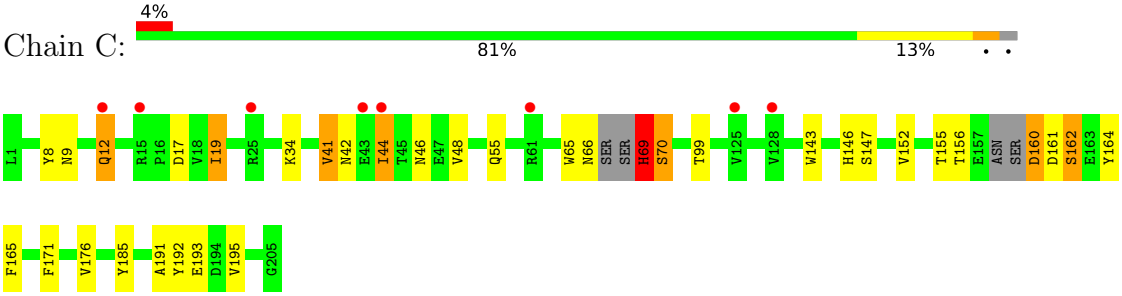
• Molecule 1: Acetylcholine-binding protein

Chain B:



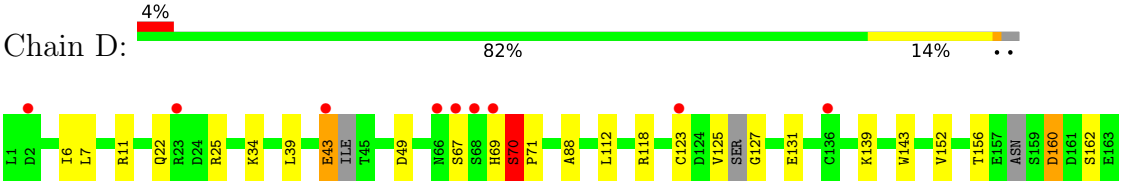
• Molecule 1: Acetylcholine-binding protein

Chain C:



• Molecule 1: Acetylcholine-binding protein

Chain D:

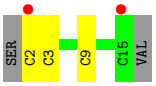


• Molecule 1: Acetylcholine-binding protein

Chain E:

• Molecule 2: Ribbon alpha-conotoxin AusIA

Chain G:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 32 2 1	Depositor
Cell constants a, b, c, α, β, γ	76.33Å 76.33Å 352.93Å 90.00° 90.00° 120.00°	Depositor
Resolution (Å)	48.30 – 2.46 48.25 – 2.46	Depositor EDS
% Data completeness (in resolution range)	98.9 (48.30-2.46) 98.9 (48.25-2.46)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	0.08	Depositor
$< I/\sigma(I) >$ [1]	1.24 (at 2.45Å)	Xtriage
Refinement program	REFMAC 5.8.0267	Depositor
R, R_{free}	0.211 , 0.240 0.217 , 0.245	Depositor DCC
R_{free} test set	1996 reflections (4.51%)	wwPDB-VP
Wilson B-factor (Å^2)	63.0	Xtriage
Anisotropy	0.164	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 41.4	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	0.024 for -h,-k,l	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	8286	wwPDB-VP
Average B, all atoms (Å^2)	75.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.08% 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	0.63	0/1672	0.89	1/2282 (0.0%)
1	B	0.64	0/1656	0.84	1/2258 (0.0%)
1	C	0.63	0/1644	0.87	0/2241
1	D	0.62	0/1643	0.87	3/2238 (0.1%)
1	E	0.70	1/1672 (0.1%)	0.87	2/2282 (0.1%)
2	G	0.65	0/109	0.85	0/147
All	All	0.65	1/8396 (0.0%)	0.87	7/11448 (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	2

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	E	59	SER	CB-OG	-5.71	1.34	1.42

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	E	123	CYS	CA-CB-SG	7.15	126.87	114.00
1	E	7	LEU	CA-CB-CG	6.45	130.13	115.30
1	D	7	LEU	CA-CB-CG	6.03	129.16	115.30
1	D	160	ASP	CB-CG-OD1	5.41	123.17	118.30
1	A	49	ASP	CB-CG-OD2	5.32	123.09	118.30
1	D	123	CYS	CA-CB-SG	5.09	123.16	114.00
1	B	112	LEU	CB-CG-CD1	5.07	119.61	111.00

There are no chirality outliers.

All (2) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	C	160	ASP	Peptide
1	C	69	HIS	Peptide

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	1636	0	1581	28	0
1	B	1621	0	1564	22	0
1	C	1610	0	1558	36	0
1	D	1610	0	1553	18	0
1	E	1636	0	1581	19	0
2	G	106	0	91	3	0
3	A	12	0	0	0	0
3	B	19	0	0	3	0
3	C	5	0	0	3	0
3	D	13	0	0	1	0
3	E	16	0	0	1	0
3	G	2	0	0	0	0
All	All	8286	0	7928	118	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 7.

All (118) 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:C:19:ILE:H	1:C:19:ILE:HD12	1.23	1.03
1:A:45:THR:O	1:A:45:THR:OG1	1.72	0.95
1:C:41:VAL:HG12	1:C:48:VAL:HG12	1.54	0.88
1:B:159:SER:HA	1:B:176:VAL:O	1.76	0.85
1:B:11:ARG:NH1	1:B:80:SER:OG	2.16	0.79
1:D:173:ILE:CD1	1:D:199:LEU:HD11	2.14	0.78
1:A:161:ASP:CG	1:A:176:VAL:HG22	2.05	0.76
1:C:41:VAL:HG22	1:C:171:PHE:CZ	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:17:ASP:OD2	1:D:11:ARG:NH2	2.22	0.72
1:D:173:ILE:HD13	1:D:199:LEU:HD11	1.73	0.71
1:C:41:VAL:CG2	1:C:171:PHE:CZ	2.75	0.70
1:A:45:THR:O	1:A:46:ASN:O	2.10	0.69
1:A:152:VAL:HG12	1:A:195:VAL:HG23	1.75	0.68
1:C:162:SER:N	3:C:301:HOH:O	2.26	0.68
1:B:152:VAL:HG12	1:B:195:VAL:HG23	1.75	0.67
1:C:160:ASP:N	1:C:176:VAL:H	1.93	0.67
1:A:160:ASP:O	1:A:163:GLU:HG2	1.94	0.67
1:E:49:ASP:OD1	1:E:120:ARG:HG2	1.96	0.66
1:A:44:ILE:O	1:A:45:THR:C	2.33	0.66
1:D:22:GLN:NE2	1:D:25:ARG:HB2	2.11	0.66
1:C:9:ASN:O	1:C:12:GLN:O	2.14	0.65
1:B:159:SER:CA	1:B:176:VAL:O	2.44	0.65
1:A:42:ASN:O	1:A:46:ASN:O	2.15	0.64
1:E:152:VAL:HG12	1:E:195:VAL:HG23	1.77	0.64
1:C:146:HIS:HB3	1:C:192:TYR:CE1	2.33	0.64
1:C:19:ILE:H	1:C:19:ILE:CD1	1.94	0.64
1:A:43:GLU:HA	1:A:125:VAL:HG21	1.81	0.62
1:B:160:ASP:HB3	1:B:176:VAL:HB	1.82	0.62
1:E:41:VAL:HG13	1:E:125:VAL:HG21	1.83	0.61
1:D:152:VAL:HG12	1:D:195:VAL:HG23	1.82	0.61
1:C:66:ASN:HD21	1:C:69:HIS:N	1.99	0.61
1:B:162:SER:N	3:B:302:HOH:O	2.33	0.61
1:C:147:SER:OG	1:C:191:ALA:O	2.18	0.60
1:E:49:ASP:OD1	1:E:120:ARG:CG	2.50	0.60
1:A:11:ARG:NH2	1:C:17:ASP:OD2	2.25	0.59
1:B:156:THR:O	1:B:157:GLU:HB2	2.02	0.59
1:C:8:TYR:CE2	1:C:12:GLN:NE2	2.70	0.59
1:C:160:ASP:O	3:C:301:HOH:O	2.17	0.58
1:E:41:VAL:CG1	1:E:125:VAL:HG21	2.35	0.57
1:A:44:ILE:HG13	1:A:45:THR:HG23	1.86	0.56
1:D:6:ILE:CD1	1:D:71:PRO:HG2	2.36	0.56
1:C:152:VAL:HG12	1:C:195:VAL:HG23	1.88	0.55
1:B:159:SER:HB2	1:B:175:ASP:OD1	2.07	0.55
1:D:127:GLY:N	3:D:301:HOH:O	2.42	0.52
1:C:162:SER:CA	3:C:301:HOH:O	2.57	0.52
1:A:32:SER:HA	1:A:178:GLN:HE22	1.75	0.52
1:A:99:THR:HG21	1:C:143:TRP:CZ2	2.45	0.52
1:C:41:VAL:HG12	1:C:48:VAL:CG1	2.34	0.52
1:A:17:ASP:OD2	1:E:11:ARG:NH2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:6:ILE:HD12	1:D:71:PRO:HG2	1.91	0.52
1:A:161:ASP:OD2	1:A:176:VAL:HG22	2.10	0.51
1:B:162:SER:CA	3:B:302:HOH:O	2.57	0.51
1:B:33:LEU:HD22	1:B:197:VAL:HG21	1.91	0.51
1:A:63:LEU:HD11	1:A:81:LEU:HD22	1.93	0.51
1:E:31:VAL:HG13	1:E:195:VAL:HG21	1.93	0.51
1:C:41:VAL:HG21	1:C:171:PHE:CE2	2.46	0.51
1:B:43:GLU:HG3	1:B:125:VAL:HG23	1.93	0.50
1:C:65:TRP:O	1:C:66:ASN:CB	2.59	0.50
1:C:69:HIS:O	1:C:70:SER:HB3	2.10	0.50
1:A:161:ASP:CG	1:A:176:VAL:CG2	2.79	0.50
1:D:22:GLN:HE21	1:D:25:ARG:HB2	1.75	0.49
1:B:172:GLU:OE2	1:B:202:ARG:NH1	2.45	0.49
1:E:33:LEU:HD22	1:E:197:VAL:HG21	1.95	0.49
1:E:101:GLN:OE1	1:E:113:TYR:OH	2.28	0.49
1:B:162:SER:HA	3:B:302:HOH:O	2.13	0.48
1:C:66:ASN:OD1	1:C:69:HIS:N	2.47	0.48
1:D:34:LYS:HG2	1:D:164:TYR:CE2	2.49	0.48
1:E:129:ASP:OD1	1:E:129:ASP:N	2.45	0.48
1:D:172:GLU:OE2	1:D:202:ARG:NH1	2.46	0.48
1:B:3:ARG:O	1:B:7:LEU:HD12	2.14	0.48
1:E:130:THR:O	1:E:202:ARG:HD2	2.14	0.48
1:A:43:GLU:HA	1:A:125:VAL:CG2	2.44	0.47
1:E:11:ARG:NH1	1:E:80:SER:OG	2.47	0.47
1:C:34:LYS:HG2	1:C:164:TYR:CE2	2.49	0.47
1:D:39:LEU:HD22	1:D:118:ARG:CZ	2.45	0.47
1:C:41:VAL:CG1	1:C:48:VAL:HG12	2.38	0.46
1:A:45:THR:O	1:A:46:ASN:C	2.53	0.46
1:B:158:ASN:O	1:B:176:VAL:O	2.33	0.46
1:C:65:TRP:CD1	1:C:66:ASN:HB2	2.50	0.46
1:E:30:SER:HG	1:E:57:THR:HG1	1.64	0.46
1:C:34:LYS:HE2	1:C:55:GLN:OE1	2.16	0.45
1:D:43:GLU:HA	1:D:125:VAL:HG11	1.98	0.45
1:C:65:TRP:O	1:C:66:ASN:HB3	2.16	0.45
1:A:112:LEU:HD21	1:A:114:MET:HB2	1.97	0.45
2:G:3:CYS:SG	2:G:3:CYS:O	2.75	0.45
1:E:31:VAL:CG1	1:E:195:VAL:HG21	2.47	0.44
1:A:33:LEU:HD22	1:A:197:VAL:HG21	1.99	0.44
1:B:99:THR:HG21	1:E:143:TRP:CZ2	2.52	0.44
1:C:147:SER:OG	1:C:193:GLU:HG3	2.17	0.44
1:A:176:VAL:O	1:A:176:VAL:HG23	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:112:LEU:C	1:A:112:LEU:HD23	2.38	0.44
1:A:7:LEU:HD11	1:A:11:ARG:NH1	2.33	0.44
1:C:192:TYR:CZ	2:G:9:CYS:HA	2.53	0.44
1:C:66:ASN:ND2	1:C:69:HIS:N	2.66	0.43
1:C:162:SER:HB2	1:C:165:PHE:HB2	2.00	0.43
1:C:152:VAL:HG12	1:C:195:VAL:CG2	2.48	0.42
1:C:99:THR:HG21	1:D:143:TRP:CE2	2.54	0.42
1:E:49:ASP:OD1	1:E:120:ARG:HG3	2.20	0.42
1:D:39:LEU:HD22	1:D:118:ARG:NH2	2.34	0.42
1:D:67:SER:HA	1:D:70:SER:HB2	2.01	0.42
1:B:31:VAL:CG1	1:B:195:VAL:HG21	2.50	0.42
1:B:152:VAL:CG1	1:B:195:VAL:HG23	2.47	0.41
1:C:42:ASN:OD1	1:C:44:ILE:HD12	2.19	0.41
1:C:185:TYR:CD2	2:G:3:CYS:HB2	2.54	0.41
1:E:88:ALA:HA	1:E:139:LYS:O	2.20	0.41
1:A:88:ALA:HA	1:A:139:LYS:O	2.20	0.41
1:D:88:ALA:HA	1:D:139:LYS:O	2.20	0.41
1:D:39:LEU:HD12	1:D:39:LEU:N	2.35	0.41
1:A:63:LEU:CD1	1:A:81:LEU:HD22	2.50	0.40
1:B:88:ALA:HA	1:B:139:LYS:O	2.20	0.40
1:B:161:ASP:C	1:B:163:GLU:H	2.25	0.40
1:E:72:ASP:HB2	3:E:315:HOH:O	2.22	0.40
1:A:41:VAL:HG22	1:A:48:VAL:HG23	2.04	0.40
1:C:69:HIS:O	1:C:69:HIS:CG	2.74	0.40
1:E:125:VAL:O	1:E:125:VAL:HG22	2.21	0.40
1:A:35:PHE:CD1	1:A:50:VAL:HG21	2.56	0.40
1:A:152:VAL:CG1	1:A:195:VAL:HG23	2.45	0.40
1:B:31:VAL:HG13	1:B:195:VAL:HG21	2.02	0.40

There are no symmetry-related clashes.

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	203/205 (99%)	195 (96%)	2 (1%)	6 (3%)	4 1
1	B	199/205 (97%)	195 (98%)	1 (0%)	3 (2%)	10 9
1	C	195/205 (95%)	190 (97%)	2 (1%)	3 (2%)	10 9
1	D	193/205 (94%)	189 (98%)	1 (0%)	3 (2%)	9 8
1	E	203/205 (99%)	200 (98%)	1 (0%)	2 (1%)	15 16
2	G	12/16 (75%)	11 (92%)	1 (8%)	0	100 100
All	All	1005/1041 (96%)	980 (98%)	8 (1%)	17 (2%)	9 7

All (17) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	46	ASN
1	A	157	GLU
1	B	157	GLU
1	C	70	SER
1	D	70	SER
1	A	45	THR
1	A	159	SER
1	B	160	ASP
1	B	162	SER
1	C	162	SER
1	E	157	GLU
1	D	69	HIS
1	D	160	ASP
1	A	47	GLU
1	A	44	ILE
1	C	44	ILE
1	E	44	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	191/191 (100%)	181 (95%)	10 (5%)	23 30

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	B	189/191 (99%)	182 (96%)	7 (4%)	34 45
1	C	187/191 (98%)	179 (96%)	8 (4%)	29 38
1	D	188/191 (98%)	180 (96%)	8 (4%)	29 38
1	E	191/191 (100%)	187 (98%)	4 (2%)	53 66
2	G	12/14 (86%)	11 (92%)	1 (8%)	11 12
All	All	958/969 (99%)	920 (96%)	38 (4%)	31 41

All (38) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	40	GLU
1	A	44	ILE
1	A	59	SER
1	A	69	HIS
1	A	89	TYR
1	A	120	ARG
1	A	126	SER
1	A	160	ASP
1	A	179	LYS
1	A	202	ARG
1	B	7	LEU
1	B	49	ASP
1	B	68	SER
1	B	112	LEU
1	B	123	CYS
1	B	161	ASP
1	B	202	ARG
1	C	12	GLN
1	C	19	ILE
1	C	41	VAL
1	C	46	ASN
1	C	69	HIS
1	C	155	THR
1	C	156	THR
1	C	161	ASP
1	D	43	GLU
1	D	49	ASP
1	D	70	SER
1	D	112	LEU
1	D	131	GLU

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Mol	Chain	Res	Type
1	D	156	THR
1	D	162	SER
1	D	202	ARG
1	E	129	ASP
1	E	157	GLU
1	E	162	SER
1	E	182	SER
2	G	2	CYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (6) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	55	GLN
1	B	22	GLN
1	C	46	ASN
1	C	66	ASN
1	D	22	GLN
1	E	158	ASN

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 monosaccharides 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 (i)

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	205/205 (100%)	0.07	1 (0%) 91 92	46, 77, 128, 157	0
1	B	203/205 (99%)	0.10	5 (2%) 57 53	42, 66, 105, 149	0
1	C	201/205 (98%)	0.24	8 (3%) 38 35	50, 75, 114, 129	0
1	D	201/205 (98%)	0.31	9 (4%) 33 30	48, 72, 116, 129	0
1	E	205/205 (100%)	0.01	5 (2%) 59 54	40, 59, 120, 142	0
2	G	14/16 (87%)	1.08	2 (14%) 2 1	67, 85, 132, 157	0
All	All	1029/1041 (98%)	0.16	30 (2%) 51 47	40, 71, 120, 157	0

All (30) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	G	2	CYS	12.3
1	B	158	ASN	9.5
1	C	43	GLU	4.5
1	E	123	CYS	3.9
1	D	123	CYS	3.8
1	B	160	ASP	3.8
1	E	158	ASN	3.8
1	B	129	ASP	3.8
2	G	15	CYS	3.5
1	D	23	ARG	3.5
1	E	161	ASP	3.3
1	D	43	GLU	3.0
1	D	136	CYS	3.0
1	D	2	ASP	2.8
1	D	68	SER	2.8
1	E	205	GLY	2.8
1	E	43	GLU	2.8
1	C	128	VAL	2.7
1	D	69	HIS	2.7

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Mol	Chain	Res	Type	RSRZ
1	C	44	ILE	2.5
1	D	67	SER	2.4
1	C	61	ARG	2.4
1	C	12	GLN	2.3
1	A	137	ARG	2.3
1	C	125	VAL	2.2
1	D	66	ASN	2.2
1	B	15	ARG	2.1
1	C	25	ARG	2.1
1	C	15	ARG	2.1
1	B	126	SER	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)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.