Full wwPDB X-ray Structure Validation Report ⓘ

Jun 19, 2024 – 12:34 PM EDT

PDB ID	:	3WTN
Title	:	Crystal Structure of Lymnaea stagnalis Acetylcholine Binding Protein Complexed with Desnitro-imidacloprid
Authors	:	Okajima, T.; Ihara, M.; Yamashita, A.; Oda, T.; Matsuda, K.
Deposited on	:	2014-04-11
Resolution	:	2.09 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:

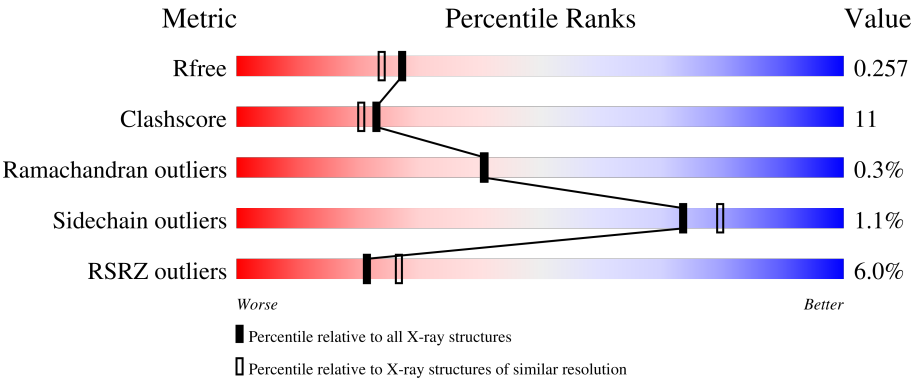
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.20.1
EDS	:	2.37.1
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.37.1

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 2.09 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	5197 (2.10-2.10)
Clashscore	141614	5710 (2.10-2.10)
Ramachandran outliers	138981	5647 (2.10-2.10)
Sidechain outliers	138945	5648 (2.10-2.10)
RSRZ outliers	127900	5083 (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	214	5% 76% 21%
1	B	214	3% 84% 13%
1	C	214	2% 82% 14%
1	D	214	6% 77% 19%
1	E	214	4% 74% 22%

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Mol	Chain	Length	Quality of chain
1	F	214	8% 66% 30%
1	G	214	6% 70% 27%
1	H	214	7% 74% 23%
1	I	214	9% 74% 23%
1	J	214	8% 68% 28%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	N2Y	C	301[B]	-	-	X	-

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 18230 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	208	Total	C	N	O	S	0	2	0
			1669	1040	284	340	5			
1	B	208	Total	C	N	O	S	0	1	0
			1660	1035	284	336	5			
1	C	208	Total	C	N	O	S	0	3	0
			1676	1044	288	339	5			
1	D	208	Total	C	N	O	S	0	1	0
			1663	1037	286	335	5			
1	E	208	Total	C	N	O	S	0	0	0
			1652	1031	282	334	5			
1	F	208	Total	C	N	O	S	0	1	0
			1663	1037	286	335	5			
1	G	208	Total	C	N	O	S	0	1	0
			1660	1035	283	337	5			
1	H	208	Total	C	N	O	S	0	2	0
			1672	1042	287	338	5			
1	I	208	Total	C	N	O	S	0	1	0
			1661	1036	283	337	5			
1	J	208	Total	C	N	O	S	0	0	0
			1652	1031	282	334	5			

There are 60 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	-3	GLU	-	expression tag	UNP P58154
A	-2	ALA	-	expression tag	UNP P58154
A	-1	GLU	-	expression tag	UNP P58154
A	0	ALA	-	expression tag	UNP P58154
A	1	ALA	-	expression tag	UNP P58154
A	66	ASP	ASN	SEE REMARK 999	UNP P58154
B	-3	GLU	-	expression tag	UNP P58154
B	-2	ALA	-	expression tag	UNP P58154
B	-1	GLU	-	expression tag	UNP P58154

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Chain	Residue	Modelled	Actual	Comment	Reference
B	0	ALA	-	expression tag	UNP P58154
B	1	ALA	-	expression tag	UNP P58154
B	66	ASP	ASN	SEE REMARK 999	UNP P58154
C	-3	GLU	-	expression tag	UNP P58154
C	-2	ALA	-	expression tag	UNP P58154
C	-1	GLU	-	expression tag	UNP P58154
C	0	ALA	-	expression tag	UNP P58154
C	1	ALA	-	expression tag	UNP P58154
C	66	ASP	ASN	SEE REMARK 999	UNP P58154
D	-3	GLU	-	expression tag	UNP P58154
D	-2	ALA	-	expression tag	UNP P58154
D	-1	GLU	-	expression tag	UNP P58154
D	0	ALA	-	expression tag	UNP P58154
D	1	ALA	-	expression tag	UNP P58154
D	66	ASP	ASN	SEE REMARK 999	UNP P58154
E	-3	GLU	-	expression tag	UNP P58154
E	-2	ALA	-	expression tag	UNP P58154
E	-1	GLU	-	expression tag	UNP P58154
E	0	ALA	-	expression tag	UNP P58154
E	1	ALA	-	expression tag	UNP P58154
E	66	ASP	ASN	SEE REMARK 999	UNP P58154
F	-3	GLU	-	expression tag	UNP P58154
F	-2	ALA	-	expression tag	UNP P58154
F	-1	GLU	-	expression tag	UNP P58154
F	0	ALA	-	expression tag	UNP P58154
F	1	ALA	-	expression tag	UNP P58154
F	66	ASP	ASN	SEE REMARK 999	UNP P58154
G	-3	GLU	-	expression tag	UNP P58154
G	-2	ALA	-	expression tag	UNP P58154
G	-1	GLU	-	expression tag	UNP P58154
G	0	ALA	-	expression tag	UNP P58154
G	1	ALA	-	expression tag	UNP P58154
G	66	ASP	ASN	SEE REMARK 999	UNP P58154
H	-3	GLU	-	expression tag	UNP P58154
H	-2	ALA	-	expression tag	UNP P58154
H	-1	GLU	-	expression tag	UNP P58154
H	0	ALA	-	expression tag	UNP P58154
H	1	ALA	-	expression tag	UNP P58154
H	66	ASP	ASN	SEE REMARK 999	UNP P58154
I	-3	GLU	-	expression tag	UNP P58154
I	-2	ALA	-	expression tag	UNP P58154
I	-1	GLU	-	expression tag	UNP P58154

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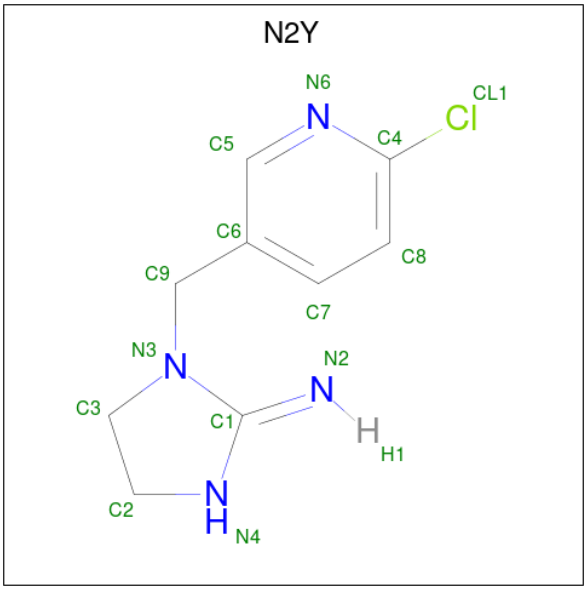
Chain	Residue	Modelled	Actual	Comment	Reference
I	0	ALA	-	expression tag	UNP P58154
I	1	ALA	-	expression tag	UNP P58154
I	66	ASP	ASN	SEE REMARK 999	UNP P58154
J	-3	GLU	-	expression tag	UNP P58154
J	-2	ALA	-	expression tag	UNP P58154
J	-1	GLU	-	expression tag	UNP P58154
J	0	ALA	-	expression tag	UNP P58154
J	1	ALA	-	expression tag	UNP P58154
J	66	ASP	ASN	SEE REMARK 999	UNP P58154

- Molecule 2 is (2Z)-1-[(6-chloropyridin-3-yl)methyl]imidazolidin-2-imine (three-letter code: N2Y) (formula: $C_9H_{11}ClN_4$).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
2	A	1	Total	C	Cl	N	0	0
			14	9	1	4		
2	B	1	Total	C	Cl	N	0	1
			28	18	2	8		
2	C	1	Total	C	Cl	N	0	1
			28	18	2	8		
2	D	1	Total	C	Cl	N	0	0
			14	9	1	4		
2	E	1	Total	C	Cl	N	0	1
			28	18	2	8		
2	F	1	Total	C	Cl	N	0	1
			28	18	2	8		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	G	1	Total C Cl N 14 9 1 4	0	0
2	H	1	Total C Cl N 28 18 2 8	0	1
2	I	1	Total C Cl N 14 9 1 4	0	0
2	J	1	Total C Cl N 14 9 1 4	0	0

- Molecule 3 is CADMIUM ION (three-letter code: CD) (formula: Cd).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	8	Total Cd 8 8	0	0
3	B	7	Total Cd 7 7	0	0
3	C	7	Total Cd 7 7	0	0
3	D	7	Total Cd 7 7	0	0
3	E	6	Total Cd 6 6	0	0
3	F	4	Total Cd 4 4	0	0
3	G	5	Total Cd 5 5	0	0
3	H	2	Total Cd 2 2	0	0
3	I	6	Total Cd 6 6	0	0
3	J	2	Total Cd 2 2	0	0

- Molecule 4 is SODIUM ION (three-letter code: NA) (formula: Na).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	B	1	Total Na 1 1	0	0
4	C	1	Total Na 1 1	0	0

- Molecule 5 is water.

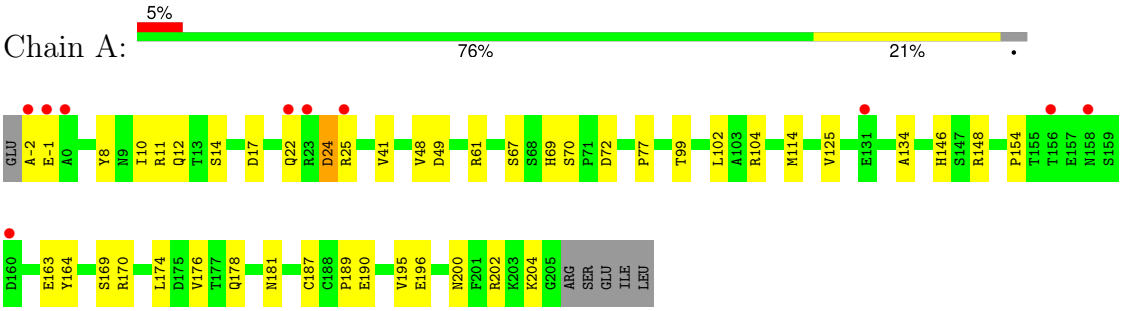
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	154	Total O 154 154	0	0
5	B	199	Total O 199 199	0	0
5	C	181	Total O 181 181	0	0
5	D	133	Total O 133 133	0	0
5	E	136	Total O 136 136	0	0
5	F	90	Total O 90 90	0	0
5	G	125	Total O 125 125	0	0
5	H	130	Total O 130 130	0	0
5	I	88	Total O 88 88	0	0
5	J	100	Total O 100 100	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.

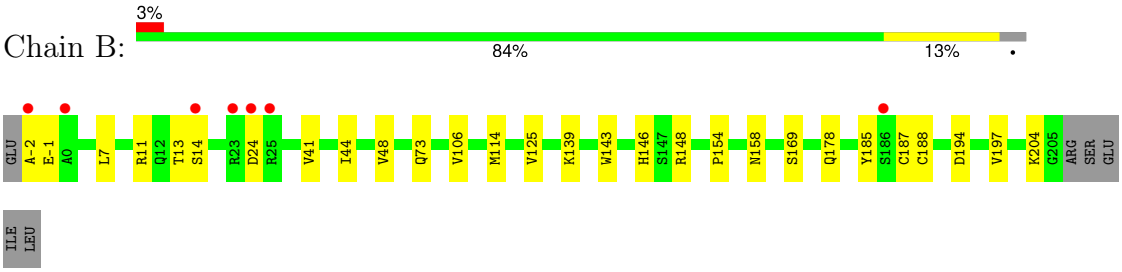
• Molecule 1: Acetylcholine-binding protein

Chain A:



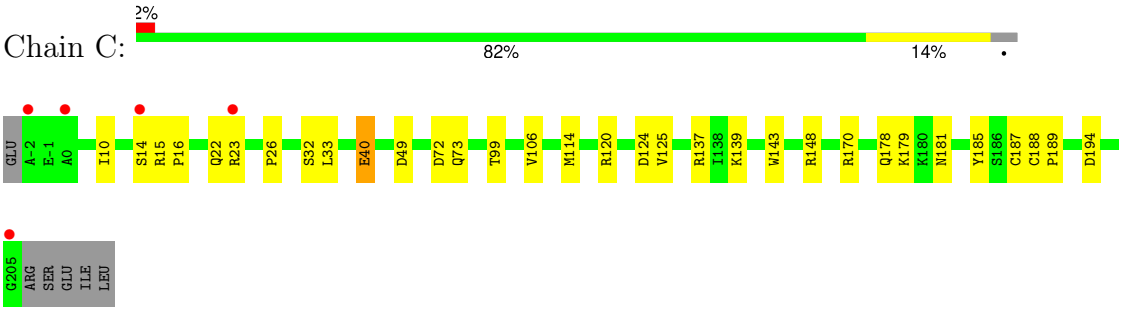
• Molecule 1: Acetylcholine-binding protein

Chain B:



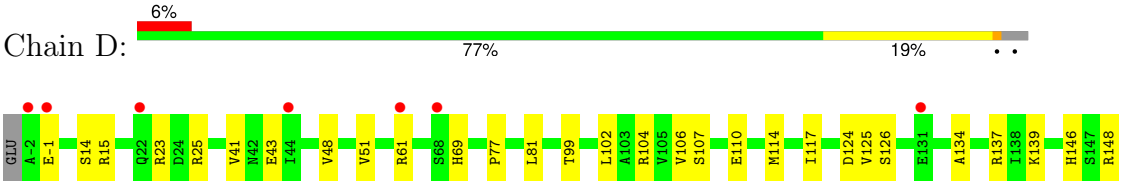
• Molecule 1: Acetylcholine-binding protein

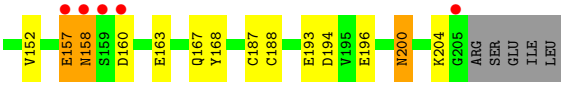
Chain C:



• Molecule 1: Acetylcholine-binding protein

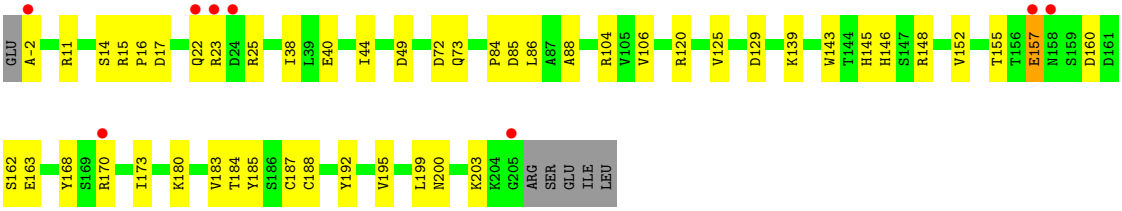
Chain D:





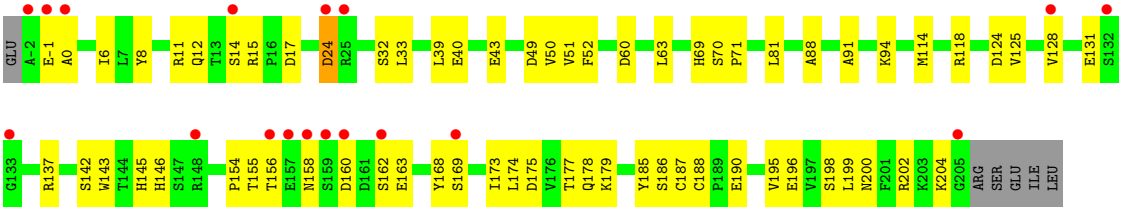
• Molecule 1: Acetylcholine-binding protein

Chain E:



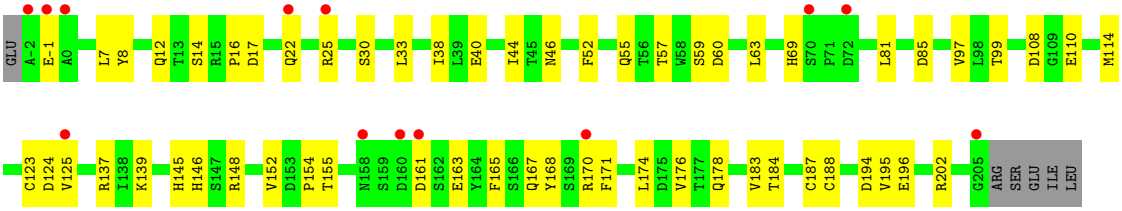
• Molecule 1: Acetylcholine-binding protein

Chain F:



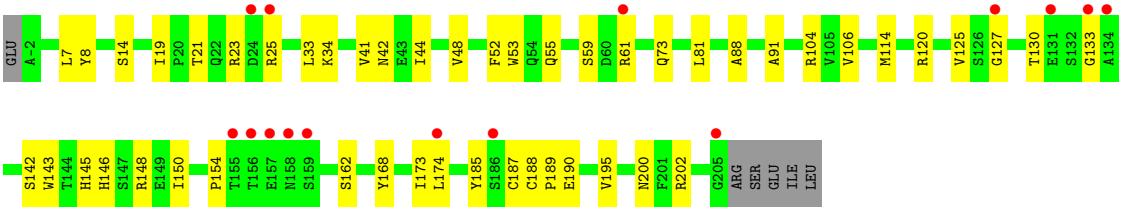
• Molecule 1: Acetylcholine-binding protein

Chain G:



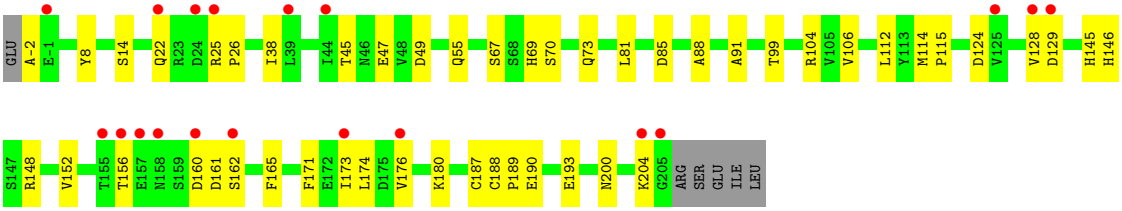
• Molecule 1: Acetylcholine-binding protein

Chain H:



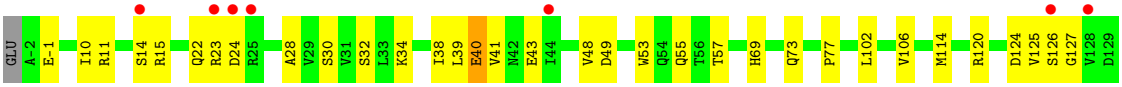
• Molecule 1: Acetylcholine-binding protein

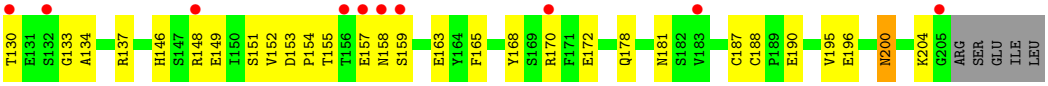
Chain I:



• Molecule 1: Acetylcholine-binding protein

Chain J:





4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	77.01Å 118.40Å 243.59Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	47.84 – 2.09 47.84 – 2.09	Depositor EDS
% Data completeness (in resolution range)	98.9 (47.84-2.09) 98.6 (47.84-2.09)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.46 (at 2.08Å)	Xtriage
Refinement program	CNS 1.2	Depositor
R, R_{free}	0.213 , 0.262 0.211 , 0.257	Depositor DCC
R_{free} test set	6567 reflections (5.01%)	wwPDB-VP
Wilson B-factor (Å^2)	31.8	Xtriage
Anisotropy	0.461	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.36 , 66.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.50$, $< L^2 > = 0.33$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.95	EDS
Total number of atoms	18230	wwPDB-VP
Average B, all atoms (Å^2)	38.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 7.98% 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

Bond lengths and bond angles in the following residue types are not validated in this section: N2Y, NA, CD

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	0.34	0/1705	0.62	0/2327
1	B	0.37	0/1696	0.65	0/2315
1	C	0.36	0/1712	0.64	0/2336
1	D	0.35	0/1699	0.64	0/2319
1	E	0.33	0/1688	0.63	0/2304
1	F	0.31	0/1699	0.60	0/2318
1	G	0.33	0/1696	0.61	0/2315
1	H	0.32	0/1708	0.63	0/2331
1	I	0.31	0/1697	0.60	0/2316
1	J	0.31	0/1688	0.58	0/2304
All	All	0.33	0/16988	0.62	0/23185

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 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 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	1669	0	1595	43	0
1	B	1660	0	1594	23	0
1	C	1676	0	1612	40	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	D	1663	0	1602	32	0
1	E	1652	0	1588	34	0
1	F	1663	0	1601	66	0
1	G	1660	0	1591	40	0
1	H	1672	0	1606	46	0
1	I	1661	0	1594	45	0
1	J	1652	0	1588	50	0
2	A	14	0	10	0	0
2	B	28	0	20	2	0
2	C	28	0	20	6	0
2	D	14	0	10	0	0
2	E	28	0	20	4	0
2	F	28	0	20	2	0
2	G	14	0	10	0	0
2	H	28	0	20	4	0
2	I	14	0	10	0	0
2	J	14	0	10	0	0
3	A	8	0	0	0	0
3	B	7	0	0	0	0
3	C	7	0	0	0	0
3	D	7	0	0	0	0
3	E	6	0	0	0	0
3	F	4	0	0	0	0
3	G	5	0	0	0	0
3	H	2	0	0	0	0
3	I	6	0	0	0	0
3	J	2	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
5	A	154	0	0	2	0
5	B	199	0	0	0	0
5	C	181	0	0	3	0
5	D	133	0	0	3	0
5	E	136	0	0	3	0
5	F	90	0	0	3	0
5	G	125	0	0	4	0
5	H	130	0	0	3	0
5	I	88	0	0	2	0
5	J	100	0	0	4	0
All	All	18230	0	16121	378	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 11.

All (378) 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:17[A]:ASP:HB2	1:B:11:ARG:HH21	1.12	1.09
1:A:17[B]:ASP:HB2	1:B:11:ARG:HH21	1.13	1.03
1:E:40:GLU:HB2	1:E:49:ASP:HB2	1.48	0.94
1:E:152:VAL:HG12	1:E:195:VAL:HG23	1.56	0.87
1:A:17[B]:ASP:HB2	1:B:11:ARG:NH2	1.95	0.79
1:A:189:PRO:HG2	1:A:190[A]:GLU:OE1	1.83	0.78
1:J:127:GLY:O	1:J:130:THR:HG22	1.85	0.77
1:F:11:ARG:HH12	1:J:15:ARG:HH21	1.33	0.77
1:A:17[A]:ASP:HB2	1:B:11:ARG:NH2	1.95	0.75
1:H:59:SER:HB2	1:H:61:ARG:HH12	1.52	0.73
1:F:11:ARG:NH1	1:J:15:ARG:HH21	1.86	0.73
1:F:168:TYR:CE1	1:J:124:ASP:HB2	2.25	0.71
1:H:23:ARG:HD3	1:H:25:ARG:HH22	1.56	0.71
1:J:15:ARG:HG3	5:J:495:HOH:O	1.91	0.71
1:D:110:GLU:HG3	5:D:528:HOH:O	1.91	0.70
1:F:156:THR:HG22	1:F:158:ASN:ND2	2.07	0.69
1:G:14:SER:HA	5:G:495:HOH:O	1.92	0.69
1:F:173:ILE:HD12	1:F:199:LEU:HD11	1.75	0.68
1:J:130:THR:HG23	1:J:133:GLY:H	1.57	0.68
1:H:187:CYS:SG	1:H:188:CYS:N	2.67	0.68
1:A:187:CYS:SG	1:B:114:MET:HE1	2.34	0.68
1:H:41:VAL:HG13	1:H:48:VAL:HG12	1.74	0.67
1:I:146:HIS:HB3	1:I:190:GLU:HG3	1.76	0.67
1:A:22:GLN:OE1	1:A:61:ARG:HD3	1.94	0.67
1:C:14[B]:SER:C	1:C:16:PRO:HD3	2.15	0.67
1:D:41:VAL:HG22	1:D:48:VAL:HG23	1.74	0.67
1:F:40:GLU:HG2	1:F:49:ASP:CB	2.23	0.67
1:H:59:SER:HB2	1:H:61:ARG:NH1	2.09	0.67
1:I:152:VAL:HG22	1:I:193:GLU:HB2	1.77	0.67
1:A:148:ARG:HH21	1:A:190[A]:GLU:CG	2.08	0.66
1:F:187:CYS:SG	1:F:188:CYS:N	2.69	0.66
1:D:23:ARG:HD2	1:D:25:ARG:HH12	1.61	0.65
1:E:170:ARG:HH21	1:E:203:LYS:NZ	1.95	0.65
1:I:45:THR:HG22	1:J:170:ARG:NE	2.12	0.65
1:A:181:ASN:ND2	1:A:196:GLU:HG3	2.13	0.64
1:A:41:VAL:HG22	1:A:48:VAL:HG23	1.78	0.64
1:C:179:LYS:HE3	1:C:181:ASN:OD1	1.98	0.64
1:G:170:ARG:HD3	5:G:457:HOH:O	1.98	0.64
1:G:174:LEU:HD11	1:G:202:ARG:HG2	1.80	0.64
1:C:14[A]:SER:C	1:C:16:PRO:HD3	2.18	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:162:SER:OG	1:F:173:ILE:HB	1.99	0.63
1:F:70:SER:HB2	1:F:71:PRO:HD2	1.80	0.63
1:H:55:GLN:HG3	1:H:114:MET:HE2	1.80	0.63
1:I:187:CYS:SG	1:I:188:CYS:N	2.72	0.62
1:H:127:GLY:HA2	1:H:130:THR:HG23	1.79	0.62
1:G:146:HIS:HD2	1:G:148:ARG:H	1.46	0.62
1:B:187:CYS:SG	1:B:188:CYS:N	2.73	0.62
1:G:55:GLN:HB2	1:G:114:MET:HE3	1.81	0.62
1:E:40:GLU:HB2	1:E:49:ASP:CB	2.26	0.61
1:A:154:PRO:HG3	1:A:195:VAL:HG13	1.83	0.61
1:G:176:VAL:HG12	1:G:178:GLN:HE21	1.66	0.61
1:A:-2:ALA:HB3	1:F:24:ASP:OD1	2.01	0.61
1:F:11:ARG:HD2	5:F:457:HOH:O	2.00	0.61
1:F:11:ARG:HH12	1:J:15:ARG:NH2	1.99	0.61
1:F:14:SER:HB3	5:F:469:HOH:O	1.99	0.60
1:F:40:GLU:HG2	1:F:49:ASP:HB2	1.83	0.60
1:E:14:SER:C	1:E:16:PRO:HD3	2.22	0.59
1:F:40:GLU:HG2	1:F:49:ASP:HB3	1.84	0.59
2:H:301[B]:N2Y:C5	1:I:114:MET:HB3	2.32	0.59
1:B:146:HIS:HD2	1:B:148:ARG:H	1.50	0.59
1:I:22:GLN:HB3	1:I:25:ARG:HB3	1.83	0.59
1:A:-1:GLU:HB3	1:A:69:HIS:O	2.03	0.59
1:A:148:ARG:HH21	1:A:190[A]:GLU:HG3	1.67	0.59
1:H:14:SER:HB3	5:H:491:HOH:O	2.02	0.58
1:A:22:GLN:O	1:A:24:ASP:N	2.35	0.58
1:I:146:HIS:ND1	1:I:190:GLU:HG3	2.18	0.58
1:E:187:CYS:SG	1:E:188:CYS:N	2.76	0.58
1:C:23:ARG:HH21	1:I:69:HIS:CG	2.22	0.57
1:D:14:SER:HG	1:D:81:LEU:HA	1.69	0.57
1:E:155:THR:HG22	1:E:157:GLU:H	1.69	0.57
1:F:156:THR:HG22	1:F:158:ASN:HD21	1.67	0.57
1:F:188:CYS:HB3	1:F:190:GLU:OE2	2.04	0.57
1:H:73:GLN:HG2	1:H:106:VAL:HA	1.86	0.57
1:H:41:VAL:HG12	1:H:125:VAL:HG11	1.86	0.57
1:F:6:ILE:HD12	1:F:71:PRO:HG2	1.85	0.57
1:F:33:LEU:HD22	1:F:52:PHE:CD2	2.39	0.57
1:F:6:ILE:CD1	1:F:71:PRO:HG2	2.34	0.57
1:C:14[B]:SER:O	1:C:16:PRO:HD3	2.03	0.57
1:G:55:GLN:HB2	1:G:114:MET:CE	2.34	0.57
1:I:148:ARG:HG2	1:I:148:ARG:HH11	1.70	0.57
1:E:162:SER:OG	1:E:173:ILE:HB	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:50:VAL:HG12	1:F:51:VAL:N	2.21	0.56
1:I:73:GLN:HB3	1:I:106:VAL:HA	1.87	0.56
1:J:14:SER:HB3	5:J:479:HOH:O	2.04	0.56
1:J:159:SER:HB2	1:J:163:GLU:OE2	2.05	0.56
1:B:41:VAL:HG22	1:B:48:VAL:HG12	1.88	0.56
1:A:181:ASN:HD22	1:A:196:GLU:HG3	1.71	0.56
1:H:146:HIS:CD2	1:H:190[B]:GLU:HG2	2.40	0.56
1:B:139:LYS:HE3	1:B:194:ASP:OD2	2.06	0.56
1:G:22:GLN:HG2	1:G:25:ARG:NH1	2.21	0.56
1:F:124:ASP:HB2	1:G:168:TYR:CE1	2.41	0.56
1:A:163:GLU:HG2	1:A:164:TYR:CZ	2.41	0.56
1:A:176:VAL:HG12	1:A:178:GLN:NE2	2.21	0.56
1:D:125:VAL:HG12	1:D:125:VAL:O	2.06	0.56
1:I:171:PHE:O	1:I:204:LYS:HD2	2.05	0.56
1:C:125:VAL:HG12	1:C:125:VAL:O	2.05	0.55
1:I:146:HIS:CB	1:I:190:GLU:HG3	2.36	0.55
1:J:125:VAL:HG12	1:J:125:VAL:O	2.06	0.55
1:J:43:GLU:OE2	1:J:126:SER:HA	2.07	0.55
1:A:146:HIS:CE1	1:A:148:ARG:HB2	2.40	0.55
1:I:45:THR:HA	1:J:170:ARG:HD3	1.88	0.55
1:F:190:GLU:CD	1:F:190:GLU:H	2.11	0.55
1:H:162:SER:OG	1:H:173:ILE:HB	2.07	0.55
1:I:55:GLN:HG3	1:I:114:MET:HE2	1.89	0.55
1:A:148:ARG:HH21	1:A:190[A]:GLU:HG2	1.72	0.54
1:A:174:LEU:HD21	1:A:202:ARG:NE	2.22	0.54
1:B:185:TYR:CG	2:B:301[B]:N2Y:H3	2.42	0.54
1:B:73:GLN:HG2	1:B:106:VAL:HG22	1.88	0.54
1:I:124:ASP:HB2	1:J:168:TYR:CE1	2.42	0.54
1:B:41:VAL:HG13	1:B:125:VAL:HG11	1.90	0.54
1:H:189:PRO:HG2	1:H:190[B]:GLU:OE2	2.07	0.54
1:J:181:ASN:OD1	1:J:196:GLU:HG3	2.07	0.54
1:C:23:ARG:HD2	1:I:-2:ALA:O	2.08	0.54
1:A:148:ARG:NH2	1:A:190[A]:GLU:HG3	2.23	0.54
1:C:23:ARG:NH2	1:I:69:HIS:ND1	2.54	0.54
1:C:33:LEU:H	1:C:178:GLN:HE22	1.55	0.54
1:G:22:GLN:HG2	1:G:25:ARG:HH11	1.72	0.54
1:E:73:GLN:HG3	1:E:104:ARG:CZ	2.39	0.53
1:C:124:ASP:HB2	1:D:168:TYR:CE1	2.42	0.53
1:E:160:ASP:O	1:E:163:GLU:HB2	2.07	0.53
1:H:88:ALA:HB3	1:H:91:ALA:HB2	1.90	0.53
1:I:146:HIS:CG	1:I:190:GLU:HG3	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:I:162:SER:HB3	1:I:173:ILE:HB	1.90	0.53
1:H:154:PRO:HG3	1:H:195:VAL:HG13	1.89	0.53
1:J:10:ILE:O	1:J:14:SER:HB2	2.09	0.53
1:E:73:GLN:HG3	1:E:104:ARG:NH2	2.24	0.53
1:D:-1:GLU:HB3	1:D:69:HIS:O	2.07	0.53
1:H:73:GLN:HG2	1:H:106:VAL:HG22	1.90	0.53
1:J:55:GLN:HB2	1:J:114:MET:HE2	1.91	0.52
1:F:32:SER:HA	1:F:178:GLN:HE22	1.75	0.52
1:A:11:ARG:NH1	1:E:17:ASP:OD1	2.42	0.52
1:C:143:TRP:CE2	1:D:99:THR:HG21	2.44	0.52
1:C:14[A]:SER:O	1:C:16:PRO:HD3	2.09	0.52
1:C:120:ARG:HG3	1:C:120:ARG:HH11	1.74	0.52
1:H:33:LEU:HD22	1:H:52:PHE:CD2	2.44	0.52
1:B:169:SER:O	1:B:204:LYS:HE2	2.10	0.51
1:D:124:ASP:HB2	1:E:168:TYR:CE1	2.45	0.51
1:I:161:ASP:OD1	1:I:176:VAL:HB	2.10	0.51
1:J:187:CYS:SG	1:J:188:CYS:N	2.82	0.51
1:G:139:LYS:HE2	1:G:196:GLU:OE2	2.10	0.51
1:I:14:SER:HB3	5:I:472:HOH:O	2.09	0.51
1:H:143:TRP:CE2	1:I:99:THR:HG21	2.45	0.51
1:H:185:TYR:CG	2:H:301[B]:N2Y:H3	2.45	0.51
1:F:39:LEU:HD12	1:F:118:ARG:CZ	2.41	0.51
1:J:28:ALA:HA	1:J:151:SER:OG	2.10	0.51
1:F:137[B]:ARG:HD2	1:F:196:GLU:OE2	2.10	0.51
1:G:46:ASN:HB3	1:G:123:CYS:O	2.11	0.51
1:H:19:ILE:HG12	1:H:21:THR:HG23	1.93	0.51
1:D:23:ARG:HD2	1:D:25:ARG:HH22	1.75	0.51
1:G:124:ASP:HB2	1:H:168:TYR:CE1	2.46	0.51
1:J:146:HIS:HE1	1:J:148:ARG:HB2	1.76	0.51
1:I:190:GLU:H	1:I:190:GLU:CD	2.14	0.50
1:B:125:VAL:O	1:B:125:VAL:HG12	2.10	0.50
1:I:128:VAL:HG13	1:I:129:ASP:N	2.26	0.50
1:D:43:GLU:OE2	1:D:126:SER:HA	2.11	0.50
1:H:120:ARG:HG3	1:H:120:ARG:HH11	1.76	0.50
1:C:187:CYS:SG	1:D:114:MET:HE1	2.51	0.50
1:F:160:ASP:HB3	1:F:163:GLU:HB2	1.93	0.50
1:H:133:GLY:HA3	1:H:202:ARG:HB3	1.92	0.50
1:E:185:TYR:CG	2:E:301[A]:N2Y:H3	2.46	0.50
1:J:146:HIS:CE1	1:J:148:ARG:HB2	2.47	0.50
1:H:146:HIS:CD2	1:H:190[A]:GLU:HG2	2.46	0.49
1:J:22:GLN:O	1:J:24:ASP:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:22:GLN:NE2	1:A:61:ARG:NH1	2.60	0.49
1:C:10:ILE:O	1:C:14[B]:SER:HB3	2.12	0.49
1:G:17[B]:ASP:O	1:H:7:LEU:HD13	2.12	0.49
1:I:180:LYS:NZ	1:I:193:GLU:OE1	2.45	0.49
1:B:44:ILE:HG22	1:C:170:ARG:HD3	1.95	0.49
1:D:134:ALA:O	1:D:200:ASN:HA	2.13	0.49
1:I:112:LEU:HD11	1:I:114:MET:HE2	1.93	0.49
1:I:146:HIS:HB3	1:I:190:GLU:CG	2.41	0.49
1:B:13:THR:O	1:B:14:SER:HB3	2.13	0.49
1:E:85:ASP:OD1	1:E:145:HIS:HD2	1.96	0.49
1:G:85:ASP:OD1	1:G:145:HIS:HD2	1.96	0.49
1:E:73:GLN:HE21	1:E:106:VAL:HG22	1.78	0.49
1:F:174:LEU:HD21	1:F:202:ARG:HD3	1.94	0.49
1:D:15[A]:ARG:NH1	1:H:8:TYR:CD2	2.81	0.48
1:A:10:ILE:O	1:A:14:SER:HB2	2.13	0.48
1:J:-1:GLU:OE1	1:J:69:HIS:HB3	2.13	0.48
1:I:67:SER:HA	1:I:70:SER:OG	2.14	0.48
1:E:73:GLN:NE2	1:E:106:VAL:HG22	2.29	0.48
1:H:61:ARG:HD2	5:H:519:HOH:O	2.12	0.48
1:J:-1:GLU:HB3	1:J:69:HIS:O	2.14	0.48
1:F:146:HIS:CD2	1:F:190:GLU:HG3	2.49	0.48
1:B:154:PRO:HB3	1:B:178:GLN:HE21	1.79	0.48
1:D:137:ARG:HD3	5:D:458:HOH:O	2.14	0.48
1:F:0:ALA:HB2	1:F:69:HIS:HB2	1.95	0.48
1:F:14:SER:HG	1:F:81:LEU:HA	1.79	0.48
1:F:39:LEU:HD12	1:F:118:ARG:NE	2.28	0.48
1:F:125:VAL:HG12	1:F:125:VAL:O	2.12	0.48
1:G:33:LEU:HD22	1:G:52:PHE:CD2	2.48	0.48
1:A:176:VAL:HG12	1:A:178:GLN:HE22	1.78	0.48
1:H:41:VAL:HG12	1:H:125:VAL:CG1	2.44	0.48
1:J:172:GLU:OE2	1:J:204:LYS:HA	2.13	0.48
1:A:14:SER:HB3	5:A:516:HOH:O	2.13	0.48
1:A:125:VAL:HG12	1:A:125:VAL:O	2.13	0.48
1:E:-2:ALA:N	5:E:521:HOH:O	2.46	0.48
1:H:125:VAL:HG12	1:H:125:VAL:O	2.12	0.48
1:J:146:HIS:CE1	1:J:149:GLU:HG3	2.49	0.48
1:A:190[A]:GLU:OE1	1:A:190[A]:GLU:N	2.47	0.48
1:C:22:GLN:O	1:C:23:ARG:HB2	2.14	0.48
1:E:170:ARG:HH21	1:E:203:LYS:HZ3	1.62	0.48
1:F:179:LYS:HZ1	1:F:196:GLU:CD	2.17	0.48
1:D:187:CYS:SG	1:D:188:CYS:N	2.87	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:125:VAL:HG12	1:E:125:VAL:O	2.14	0.47
1:F:50:VAL:CG1	1:F:51:VAL:N	2.77	0.47
1:J:41:VAL:HG22	1:J:48:VAL:HG23	1.97	0.47
1:A:148:ARG:NH2	1:A:190[A]:GLU:CG	2.76	0.47
1:B:178:GLN:HG2	1:B:197:VAL:HG22	1.95	0.47
1:C:72:ASP:HB3	5:C:544:HOH:O	2.15	0.47
1:H:174:LEU:HB2	1:H:200:ASN:ND2	2.28	0.47
1:H:148:ARG:NH1	1:H:190[A]:GLU:HG3	2.29	0.47
1:A:174:LEU:HB2	1:A:200:ASN:ND2	2.28	0.47
1:E:22:GLN:O	1:E:23:ARG:HB2	2.15	0.47
1:H:42:ASN:OD1	1:H:44:ILE:HB	2.14	0.47
1:I:22:GLN:O	1:I:25:ARG:N	2.46	0.47
1:G:-1:GLU:HB3	1:G:69:HIS:O	2.15	0.47
1:F:146:HIS:CG	1:F:190:GLU:HG3	2.49	0.47
1:F:154:PRO:HB3	1:F:178:GLN:OE1	2.14	0.47
1:F:174:LEU:O	1:F:175:ASP:HB2	2.15	0.47
1:I:156:THR:O	1:I:156:THR:HG22	2.15	0.47
1:J:157:GLU:C	1:J:159:SER:H	2.18	0.47
1:F:174:LEU:HD11	1:F:202:ARG:HD3	1.98	0.46
1:C:10:ILE:O	1:C:14[A]:SER:HB3	2.15	0.46
1:C:178:GLN:NE2	5:C:497:HOH:O	2.48	0.46
1:G:38:ILE:HG13	1:G:165:PHE:CE1	2.51	0.46
1:A:22:GLN:HG3	1:A:25:ARG:NH2	2.30	0.46
1:I:88:ALA:HB3	1:I:91:ALA:HB2	1.97	0.46
1:B:143:TRP:CE2	1:C:99:THR:HG21	2.51	0.46
1:F:11:ARG:HH12	1:J:15:ARG:HE	1.61	0.46
1:F:177:THR:OG1	1:F:198:SER:HB2	2.16	0.46
2:C:301[B]:N2Y:C5	1:D:114:MET:HB3	2.46	0.46
1:A:114:MET:HB3	2:E:301[A]:N2Y:C5	2.46	0.46
1:C:188:CYS:HB3	1:C:189:PRO:HD2	1.96	0.46
1:D:139:LYS:HE3	1:D:194:ASP:OD2	2.16	0.46
1:H:174:LEU:HD11	1:H:202:ARG:HD3	1.96	0.46
1:J:154:PRO:HG3	1:J:195:VAL:HG13	1.97	0.46
1:H:143:TRP:CZ2	1:I:99:THR:HG21	2.51	0.46
1:C:15:ARG:NH2	1:I:8:TYR:CD2	2.84	0.45
1:C:32:SER:HA	1:C:178:GLN:HE22	1.80	0.45
1:C:137:ARG:HH11	1:C:137:ARG:HG3	1.81	0.45
1:G:125:VAL:HG12	1:G:125:VAL:O	2.16	0.45
1:E:84:PRO:HB2	1:E:86:LEU:HG	1.99	0.45
1:H:185:TYR:CD1	1:H:185:TYR:N	2.84	0.45
1:A:104:ARG:HB2	2:E:301[A]:N2Y:CL1	2.53	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:185:TYR:N	1:C:185:TYR:CD1	2.85	0.45
1:J:32:SER:OG	1:J:155:THR:HB	2.16	0.45
1:A:99:THR:HG21	1:E:143:TRP:CE2	2.51	0.45
1:F:146:HIS:HB3	1:F:190:GLU:HG3	1.98	0.45
1:C:185:TYR:CG	2:C:301[B]:N2Y:H3	2.52	0.45
1:J:30:SER:HB2	1:J:57:THR:OG1	2.17	0.45
1:J:130:THR:HG23	1:J:133:GLY:N	2.29	0.45
1:J:137:ARG:CB	1:J:137:ARG:HH11	2.30	0.45
1:E:146:HIS:HD2	1:E:148:ARG:H	1.65	0.45
1:F:43:GLU:OE1	1:F:128:VAL:HG12	2.17	0.45
1:I:85:ASP:OD1	1:I:145:HIS:HD2	2.00	0.45
1:D:152:VAL:HG23	1:D:152:VAL:O	2.16	0.45
1:D:167:GLN:O	1:D:204:LYS:NZ	2.50	0.45
1:F:137[A]:ARG:HD2	1:F:196:GLU:OE2	2.16	0.45
1:G:154:PRO:HG3	1:G:195:VAL:HG13	1.99	0.45
1:I:47:GLU:OE2	1:J:39:LEU:HD22	2.17	0.45
1:J:11:ARG:NH2	5:J:491:HOH:O	2.50	0.45
1:G:55:GLN:CB	1:G:114:MET:HE3	2.47	0.44
1:E:160:ASP:HB2	1:E:163:GLU:HB2	1.98	0.44
1:J:55:GLN:HB2	1:J:114:MET:CE	2.47	0.44
1:A:170:ARG:HD3	1:E:44:ILE:O	2.16	0.44
1:B:7:LEU:O	1:B:11:ARG:HG3	2.17	0.44
1:E:72:ASP:HB2	5:E:511:HOH:O	2.18	0.44
1:J:34:LYS:HB2	1:J:53:TRP:HB2	1.99	0.44
1:J:73:GLN:HG2	1:J:106:VAL:HA	1.99	0.44
1:A:8:TYR:O	1:A:12:GLN:HG2	2.18	0.44
1:A:134:ALA:O	1:A:200:ASN:HA	2.18	0.44
1:D:23:ARG:HD2	1:D:25:ARG:NH1	2.30	0.44
1:F:131:GLU:HG3	1:F:202:ARG:NH1	2.32	0.44
1:H:34:LYS:HB2	1:H:53:TRP:HB2	1.99	0.44
1:E:72:ASP:HB3	5:E:467:HOH:O	2.17	0.44
1:G:8:TYR:CE2	1:G:12:GLN:HG3	2.52	0.44
2:H:301[B]:N2Y:CL1	1:I:104:ARG:HB2	2.55	0.44
1:C:120:ARG:HG3	1:C:120:ARG:NH1	2.33	0.44
1:G:30:SER:HB3	1:G:155:THR:HG22	2.00	0.44
1:D:77:PRO:HA	1:D:102:LEU:HD23	2.00	0.44
1:G:170:ARG:HG3	1:G:171:PHE:CE1	2.53	0.44
1:B:-2:ALA:HA	1:F:-1:GLU:HG3	2.00	0.43
1:H:120:ARG:HG3	1:H:120:ARG:NH1	2.33	0.43
1:C:139:LYS:HE3	1:C:194:ASP:OD2	2.18	0.43
1:I:146:HIS:HE1	5:J:409:HOH:O	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:187:CYS:SG	1:G:188:CYS:N	2.91	0.43
1:G:44:ILE:HG13	5:G:471:HOH:O	2.18	0.43
1:G:152:VAL:HG21	1:G:194:ASP:HA	2.01	0.43
1:H:104:ARG:HG2	5:H:496:HOH:O	2.19	0.43
1:C:187:CYS:SG	2:C:301[B]:N2Y:H4	2.59	0.43
1:A:169:SER:O	1:A:204:LYS:HE2	2.19	0.43
1:E:192:TYR:CZ	2:E:301[B]:N2Y:H9	2.54	0.43
1:J:38:ILE:HG13	1:J:165:PHE:HE1	1.83	0.43
1:F:185:TYR:CG	2:F:301[B]:N2Y:H3	2.54	0.43
1:G:60:ASP:HB3	1:G:63:LEU:HD12	2.00	0.43
1:B:41:VAL:HG13	1:B:125:VAL:CG1	2.48	0.43
1:C:143:TRP:CZ2	1:D:99:THR:HG21	2.53	0.43
2:C:301[B]:N2Y:CL1	1:D:104:ARG:HB2	2.56	0.43
1:F:169:SER:O	1:F:204:LYS:HE2	2.19	0.43
1:I:25:ARG:HA	1:I:26:PRO:HD3	1.89	0.43
1:F:154:PRO:HG3	1:F:195:VAL:HG13	2.01	0.42
1:F:88:ALA:HB3	1:F:91:ALA:HB2	2.01	0.42
1:G:14:SER:OG	1:G:16:PRO:HD3	2.19	0.42
1:H:185:TYR:HB2	2:H:301[B]:N2Y:H3	2.02	0.42
1:H:14:SER:HG	1:H:81:LEU:HA	1.84	0.42
1:D:160:ASP:OD2	1:D:163:GLU:HB2	2.19	0.42
1:E:152:VAL:CG1	1:E:195:VAL:HG23	2.38	0.42
1:I:161:ASP:HB3	1:I:176:VAL:HG23	2.01	0.42
1:E:88:ALA:HA	1:E:139:LYS:O	2.19	0.42
1:H:55:GLN:HG3	1:H:114:MET:CE	2.49	0.42
1:H:142:SER:OG	1:H:145:HIS:HB2	2.19	0.42
1:J:134:ALA:O	1:J:200:ASN:HA	2.18	0.42
1:F:114:MET:HB2	1:F:114:MET:HE2	1.73	0.42
1:F:0:ALA:CB	1:F:69:HIS:HB2	2.49	0.42
1:B:-1:GLU:OE2	1:B:-1:GLU:HA	2.20	0.42
1:C:40:GLU:H	1:C:49:ASP:HB3	1.83	0.42
1:C:185:TYR:HB2	2:C:301[B]:N2Y:H3	2.00	0.42
1:E:38:ILE:HD11	1:E:199:LEU:HD21	2.02	0.42
1:F:32:SER:OG	1:F:155:THR:HB	2.19	0.42
1:G:22:GLN:HB3	1:G:25:ARG:HB2	2.00	0.42
1:G:108:ASP:OD2	1:G:110:GLU:HG2	2.20	0.42
1:A:67:SER:HA	1:A:70:SER:OG	2.20	0.42
1:C:187:CYS:C	1:C:188:CYS:SG	2.97	0.42
1:J:38:ILE:HG13	1:J:165:PHE:CE1	2.54	0.42
1:A:77:PRO:HA	1:A:102:LEU:HD23	2.02	0.42
1:F:0:ALA:HB3	1:F:69:HIS:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:72:ASP:HB3	5:A:483:HOH:O	2.20	0.41
1:J:120:ARG:HH11	1:J:120:ARG:HG3	1.85	0.41
1:G:59:SER:HB2	5:G:415:HOH:O	2.19	0.41
1:I:174:LEU:HB2	1:I:200:ASN:ND2	2.34	0.41
1:J:40:GLU:O	1:J:48:VAL:HA	2.20	0.41
1:F:60:ASP:HB3	1:F:63:LEU:HD12	2.02	0.41
1:F:186:SER:HG	1:G:163:GLU:CD	2.23	0.41
1:F:187:CYS:SG	2:F:301[B]:N2Y:H4	2.60	0.41
1:G:137:ARG:NH1	1:H:168:TYR:OH	2.52	0.41
1:G:161:ASP:OD1	1:G:176:VAL:HB	2.20	0.41
1:I:14:SER:HG	1:I:81:LEU:HA	1.84	0.41
1:I:115:PRO:HA	5:I:470:HOH:O	2.20	0.41
1:J:154:PRO:HG3	1:J:195:VAL:CG1	2.50	0.41
1:A:174:LEU:HD11	1:A:202:ARG:HD3	2.01	0.41
2:B:301[A]:N2Y:H11	1:C:114:MET:CE	2.51	0.41
1:C:143:TRP:NE1	2:C:301[B]:N2Y:H5	2.35	0.41
1:C:187:CYS:SG	1:C:188:CYS:N	2.93	0.41
1:H:41:VAL:CG1	1:H:125:VAL:HG13	2.50	0.41
1:H:146:HIS:CG	1:H:190[A]:GLU:HG2	2.55	0.41
1:J:146:HIS:CD2	1:J:190:GLU:HG3	2.56	0.41
1:D:51:VAL:HA	1:D:117:ILE:O	2.20	0.41
1:D:137:ARG:NE	1:D:196:GLU:OE1	2.52	0.41
1:F:174:LEU:HD21	1:F:202:ARG:CD	2.50	0.41
1:J:154:PRO:HB3	1:J:178:GLN:OE1	2.21	0.41
1:C:26:PRO:HB3	1:C:148[A]:ARG:C	2.40	0.41
1:D:14:SER:HB3	5:D:512:HOH:O	2.20	0.41
1:F:8:TYR:O	1:F:12:GLN:HG2	2.21	0.41
1:I:38:ILE:HG13	1:I:165:PHE:CE1	2.56	0.41
1:F:143:TRP:CE2	1:G:99:THR:HG21	2.56	0.41
1:D:152:VAL:HG22	1:D:193:GLU:HB2	2.03	0.41
1:G:183:VAL:HG12	1:G:184:THR:N	2.36	0.41
1:E:180:LYS:C	1:E:180:LYS:HD3	2.42	0.41
1:F:94:LYS:HB3	1:F:94:LYS:NZ	2.36	0.41
1:F:179:LYS:HG2	5:F:440:HOH:O	2.19	0.41
1:H:145:HIS:HB2	1:H:150:ILE:HD12	2.02	0.41
1:D:157:GLU:O	1:D:158:ASN:HB3	2.20	0.41
1:E:183:VAL:HG12	1:E:184:THR:N	2.36	0.41
1:F:17:ASP:O	1:G:7:LEU:HD13	2.21	0.41
1:G:30:SER:HB2	1:G:57:THR:OG1	2.21	0.41
1:J:77:PRO:HA	1:J:102:LEU:HD23	2.03	0.41
1:J:153:ASP:HA	1:J:154:PRO:HD3	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:73:GLN:HG2	1:C:106:VAL:HA	2.04	0.40
1:C:137:ARG:HD3	5:C:470:HOH:O	2.20	0.40
1:D:146:HIS:HD2	1:D:148:ARG:H	1.68	0.40
1:F:94:LYS:HE2	1:G:97:VAL:O	2.21	0.40
1:I:188:CYS:HB3	1:I:189:PRO:HD2	2.03	0.40
1:J:152:VAL:HG22	1:J:195:VAL:CG2	2.51	0.40
1:D:106:VAL:HG12	1:D:107:SER:N	2.36	0.40
1:F:14:SER:O	1:F:15:ARG:HB2	2.21	0.40
1:I:161:ASP:HB3	1:I:176:VAL:CG2	2.51	0.40
1:F:142:SER:OG	1:F:145:HIS:HB2	2.21	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	208/214 (97%)	205 (99%)	2 (1%)	1 (0%)	29 26
1	B	207/214 (97%)	198 (96%)	9 (4%)	0	100 100
1	C	209/214 (98%)	202 (97%)	7 (3%)	0	100 100
1	D	207/214 (97%)	198 (96%)	7 (3%)	2 (1%)	15 11
1	E	206/214 (96%)	201 (98%)	5 (2%)	0	100 100
1	F	207/214 (97%)	197 (95%)	10 (5%)	0	100 100
1	G	207/214 (97%)	198 (96%)	9 (4%)	0	100 100
1	H	208/214 (97%)	198 (95%)	10 (5%)	0	100 100
1	I	207/214 (97%)	198 (96%)	8 (4%)	1 (0%)	29 26
1	J	206/214 (96%)	196 (95%)	7 (3%)	3 (2%)	10 5
All	All	2072/2140 (97%)	1991 (96%)	74 (4%)	7 (0%)	41 41

All (7) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	24	ASP
1	D	158	ASN
1	J	23	ARG
1	D	157	GLU
1	J	158	ASN
1	I	160	ASP
1	J	40	GLU

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	193/197 (98%)	192 (100%)	1 (0%)	88 92
1	B	192/197 (98%)	189 (98%)	3 (2%)	62 69
1	C	194/197 (98%)	193 (100%)	1 (0%)	88 92
1	D	192/197 (98%)	190 (99%)	2 (1%)	76 82
1	E	191/197 (97%)	184 (96%)	7 (4%)	34 35
1	F	192/197 (98%)	190 (99%)	2 (1%)	76 82
1	G	192/197 (98%)	189 (98%)	3 (2%)	62 69
1	H	193/197 (98%)	193 (100%)	0	100 100
1	I	192/197 (98%)	191 (100%)	1 (0%)	88 92
1	J	191/197 (97%)	189 (99%)	2 (1%)	76 82
All	All	1922/1970 (98%)	1900 (99%)	22 (1%)	73 79

All (22) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	49	ASP
1	B	24	ASP
1	B	158[A]	ASN
1	B	158[B]	ASN
1	C	40	GLU

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Mol	Chain	Res	Type
1	D	61	ARG
1	D	200	ASN
1	E	11	ARG
1	E	15	ARG
1	E	25	ARG
1	E	120	ARG
1	E	129	ASP
1	E	157	GLU
1	E	200	ASN
1	F	24	ASP
1	F	200	ASN
1	G	40	GLU
1	G	81	LEU
1	G	167	GLN
1	I	49	ASP
1	J	49	ASP
1	J	200	ASN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (29) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	178	GLN
1	A	200	ASN
1	B	22	GLN
1	B	101	GLN
1	B	146	HIS
1	B	178	GLN
1	C	22	GLN
1	C	146	HIS
1	C	178	GLN
1	D	146	HIS
1	D	200	ASN
1	E	12	GLN
1	E	146	HIS
1	E	178	GLN
1	E	200	ASN
1	F	158	ASN
1	F	200	ASN
1	G	12	GLN
1	G	146	HIS
1	G	178	GLN
1	G	200	ASN

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Mol	Chain	Res	Type
1	H	178	GLN
1	H	200	ASN
1	I	145	HIS
1	I	146	HIS
1	I	200	ASN
1	J	12	GLN
1	J	158	ASN
1	J	200	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

Of 71 ligands modelled in this entry, 56 are monoatomic - leaving 15 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
2	N2Y	I	301	-	13,15,15	1.83	2 (15%)	18,20,20	2.06	8 (44%)
2	N2Y	A	301	-	13,15,15	1.67	3 (23%)	18,20,20	2.03	7 (38%)
2	N2Y	D	301	-	13,15,15	1.68	3 (23%)	18,20,20	2.21	8 (44%)
2	N2Y	G	301	-	13,15,15	1.80	3 (23%)	18,20,20	1.94	7 (38%)
2	N2Y	H	301[A]	-	13,15,15	1.83	4 (30%)	18,20,20	2.18	6 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
2	N2Y	F	301[B]	-	13,15,15	1.69	3 (23%)	18,20,20	2.08	6 (33%)
2	N2Y	F	301[A]	-	13,15,15	1.81	4 (30%)	18,20,20	2.15	6 (33%)
2	N2Y	J	301	-	13,15,15	1.73	3 (23%)	18,20,20	2.15	7 (38%)
2	N2Y	H	301[B]	-	13,15,15	1.70	3 (23%)	18,20,20	2.04	6 (33%)
2	N2Y	C	301[B]	-	13,15,15	1.64	4 (30%)	18,20,20	2.07	6 (33%)
2	N2Y	C	301[A]	-	13,15,15	1.71	3 (23%)	18,20,20	2.06	6 (33%)
2	N2Y	B	301[B]	-	13,15,15	1.60	3 (23%)	18,20,20	2.08	5 (27%)
2	N2Y	B	301[A]	-	13,15,15	1.68	3 (23%)	18,20,20	2.16	8 (44%)
2	N2Y	E	301[B]	-	13,15,15	1.78	3 (23%)	18,20,20	2.28	8 (44%)
2	N2Y	E	301[A]	-	13,15,15	1.78	4 (30%)	18,20,20	2.16	6 (33%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	N2Y	I	301	-	-	0/4/14/14	0/2/2/2
2	N2Y	A	301	-	-	0/4/14/14	0/2/2/2
2	N2Y	D	301	-	-	0/4/14/14	0/2/2/2
2	N2Y	G	301	-	-	0/4/14/14	0/2/2/2
2	N2Y	H	301[A]	-	-	0/4/14/14	0/2/2/2
2	N2Y	F	301[B]	-	-	0/4/14/14	0/2/2/2
2	N2Y	F	301[A]	-	-	0/4/14/14	0/2/2/2
2	N2Y	J	301	-	-	0/4/14/14	0/2/2/2
2	N2Y	H	301[B]	-	-	0/4/14/14	0/2/2/2
2	N2Y	C	301[B]	-	-	0/4/14/14	0/2/2/2
2	N2Y	C	301[A]	-	-	0/4/14/14	0/2/2/2
2	N2Y	B	301[B]	-	-	0/4/14/14	0/2/2/2
2	N2Y	B	301[A]	-	-	0/4/14/14	0/2/2/2
2	N2Y	E	301[B]	-	-	0/4/14/14	0/2/2/2
2	N2Y	E	301[A]	-	-	0/4/14/14	0/2/2/2

All (48) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	G	301	N2Y	C1-N4	4.11	1.41	1.35
2	I	301	N2Y	C1-N4	4.04	1.41	1.35
2	J	301	N2Y	C1-N4	4.00	1.41	1.35
2	F	301[A]	N2Y	C1-N4	3.95	1.41	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	H	301[A]	N2Y	C1-N4	3.93	1.41	1.35
2	H	301[B]	N2Y	C1-N4	3.92	1.41	1.35
2	F	301[B]	N2Y	C1-N4	3.85	1.41	1.35
2	E	301[A]	N2Y	C1-N4	3.84	1.41	1.35
2	C	301[A]	N2Y	C1-N4	3.83	1.41	1.35
2	C	301[B]	N2Y	C1-N4	3.78	1.41	1.35
2	E	301[B]	N2Y	C1-N4	3.72	1.40	1.35
2	B	301[B]	N2Y	C1-N4	3.70	1.40	1.35
2	D	301	N2Y	C1-N4	3.64	1.40	1.35
2	A	301	N2Y	C1-N4	3.60	1.40	1.35
2	B	301[A]	N2Y	C1-N4	3.47	1.40	1.35
2	I	301	N2Y	C5-C6	2.52	1.44	1.38
2	G	301	N2Y	C5-C6	2.49	1.44	1.38
2	E	301[A]	N2Y	C7-C6	2.46	1.43	1.38
2	A	301	N2Y	C5-C6	2.39	1.44	1.38
2	B	301[B]	N2Y	C8-C4	2.37	1.43	1.37
2	H	301[B]	N2Y	C7-C6	2.35	1.43	1.38
2	E	301[A]	N2Y	C8-C7	2.34	1.42	1.38
2	F	301[B]	N2Y	C7-C6	2.31	1.43	1.38
2	E	301[A]	N2Y	C8-C4	2.29	1.43	1.37
2	C	301[A]	N2Y	C5-C6	2.29	1.43	1.38
2	E	301[B]	N2Y	C5-C6	2.28	1.43	1.38
2	C	301[B]	N2Y	C7-C6	2.28	1.43	1.38
2	H	301[A]	N2Y	C5-C6	2.27	1.43	1.38
2	C	301[B]	N2Y	C8-C4	2.26	1.43	1.37
2	D	301	N2Y	C9-C6	2.24	1.55	1.51
2	B	301[B]	N2Y	C7-C6	2.21	1.43	1.38
2	H	301[B]	N2Y	C8-C4	2.15	1.42	1.37
2	D	301	N2Y	C5-C6	2.15	1.43	1.38
2	F	301[A]	N2Y	C5-C6	2.15	1.43	1.38
2	J	301	N2Y	C8-C4	2.14	1.42	1.37
2	F	301[B]	N2Y	C8-C4	2.14	1.42	1.37
2	H	301[A]	N2Y	C8-C4	2.13	1.42	1.37
2	A	301	N2Y	C8-C4	2.11	1.42	1.37
2	C	301[A]	N2Y	C8-C4	2.11	1.42	1.37
2	J	301	N2Y	C5-C6	2.10	1.43	1.38
2	G	301	N2Y	C8-C4	2.09	1.42	1.37
2	B	301[A]	N2Y	C5-C6	2.08	1.43	1.38
2	B	301[A]	N2Y	C7-C6	2.07	1.43	1.38
2	E	301[B]	N2Y	C9-C6	2.07	1.55	1.51
2	F	301[A]	N2Y	C8-C4	2.04	1.42	1.37
2	C	301[B]	N2Y	C8-C7	2.02	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	F	301[A]	N2Y	C7-C6	2.01	1.42	1.38
2	H	301[A]	N2Y	C9-C6	2.00	1.55	1.51

All (100) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	E	301[A]	N2Y	C5-N6-C4	4.89	122.20	116.33
2	H	301[A]	N2Y	C5-N6-C4	4.82	122.12	116.33
2	F	301[A]	N2Y	C5-N6-C4	4.81	122.11	116.33
2	H	301[B]	N2Y	C5-N6-C4	4.80	122.09	116.33
2	J	301	N2Y	C5-N6-C4	4.80	122.09	116.33
2	C	301[B]	N2Y	C5-N6-C4	4.80	122.09	116.33
2	F	301[B]	N2Y	C5-N6-C4	4.79	122.09	116.33
2	B	301[A]	N2Y	C5-N6-C4	4.79	122.08	116.33
2	E	301[B]	N2Y	C5-N6-C4	4.77	122.06	116.33
2	B	301[B]	N2Y	C5-N6-C4	4.75	122.03	116.33
2	C	301[A]	N2Y	C5-N6-C4	4.67	121.94	116.33
2	D	301	N2Y	C5-N6-C4	4.66	121.92	116.33
2	I	301	N2Y	C5-N6-C4	4.55	121.80	116.33
2	D	301	N2Y	C9-N3-C1	4.55	128.94	124.87
2	A	301	N2Y	C5-N6-C4	4.44	121.67	116.33
2	E	301[B]	N2Y	C9-N3-C1	4.35	128.76	124.87
2	G	301	N2Y	C5-N6-C4	4.35	121.55	116.33
2	F	301[B]	N2Y	C9-N3-C1	4.32	128.73	124.87
2	E	301[B]	N2Y	C6-C9-N3	4.25	119.83	113.15
2	F	301[A]	N2Y	C9-N3-C1	4.22	128.65	124.87
2	J	301	N2Y	C9-N3-C1	4.09	128.53	124.87
2	E	301[A]	N2Y	C9-N3-C1	4.00	128.45	124.87
2	H	301[A]	N2Y	C9-N3-C1	3.99	128.44	124.87
2	B	301[A]	N2Y	C9-N3-C1	3.98	128.44	124.87
2	H	301[B]	N2Y	C9-N3-C1	3.93	128.39	124.87
2	C	301[B]	N2Y	C9-N3-C1	3.93	128.38	124.87
2	B	301[B]	N2Y	C6-C9-N3	3.89	119.27	113.15
2	C	301[A]	N2Y	C9-N3-C1	3.88	128.34	124.87
2	E	301[A]	N2Y	C6-C9-N3	3.86	119.22	113.15
2	B	301[A]	N2Y	C6-C9-N3	3.83	119.18	113.15
2	D	301	N2Y	C6-C9-N3	3.82	119.16	113.15
2	I	301	N2Y	C9-N3-C1	3.77	128.25	124.87
2	H	301[A]	N2Y	C6-C9-N3	3.77	119.08	113.15
2	A	301	N2Y	C9-N3-C1	3.58	128.08	124.87
2	J	301	N2Y	C6-C9-N3	3.56	118.75	113.15
2	G	301	N2Y	C9-N3-C1	3.40	127.92	124.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	B	301[B]	N2Y	C9-N3-C1	3.38	127.90	124.87
2	F	301[A]	N2Y	C6-C9-N3	3.36	118.43	113.15
2	I	301	N2Y	C6-C9-N3	3.31	118.36	113.15
2	C	301[B]	N2Y	C6-C9-N3	3.26	118.27	113.15
2	A	301	N2Y	C6-C9-N3	3.22	118.22	113.15
2	C	301[A]	N2Y	C6-C9-N3	3.17	118.14	113.15
2	G	301	N2Y	C6-C9-N3	3.07	117.99	113.15
2	C	301[B]	N2Y	C3-C2-N4	3.00	105.85	102.54
2	B	301[B]	N2Y	C3-C2-N4	2.99	105.83	102.54
2	F	301[B]	N2Y	C6-C9-N3	2.91	117.73	113.15
2	H	301[B]	N2Y	C6-C9-N3	2.89	117.69	113.15
2	A	301	N2Y	C3-C2-N4	2.83	105.66	102.54
2	C	301[A]	N2Y	C3-C2-N4	2.82	105.64	102.54
2	F	301[B]	N2Y	C3-C2-N4	2.80	105.63	102.54
2	H	301[B]	N2Y	C3-C2-N4	2.77	105.60	102.54
2	E	301[A]	N2Y	C3-C2-N4	2.77	105.60	102.54
2	H	301[A]	N2Y	C3-C2-N4	2.77	105.59	102.54
2	J	301	N2Y	C3-C2-N4	2.73	105.55	102.54
2	F	301[A]	N2Y	C3-C2-N4	2.72	105.54	102.54
2	B	301[A]	N2Y	C3-C2-N4	2.71	105.53	102.54
2	E	301[B]	N2Y	C8-C4-N6	-2.69	120.96	124.87
2	F	301[A]	N2Y	C8-C4-N6	-2.69	120.96	124.87
2	E	301[B]	N2Y	C3-C2-N4	2.66	105.48	102.54
2	H	301[A]	N2Y	C8-C4-N6	-2.63	121.06	124.87
2	D	301	N2Y	C3-C2-N4	2.61	105.42	102.54
2	J	301	N2Y	C8-C4-N6	-2.58	121.12	124.87
2	B	301[A]	N2Y	C8-C4-N6	-2.58	121.13	124.87
2	E	301[A]	N2Y	C8-C4-N6	-2.54	121.18	124.87
2	B	301[B]	N2Y	C8-C4-N6	-2.53	121.20	124.87
2	D	301	N2Y	C8-C4-N6	-2.52	121.21	124.87
2	I	301	N2Y	C8-C4-N6	-2.50	121.24	124.87
2	H	301[B]	N2Y	C8-C4-N6	-2.49	121.25	124.87
2	C	301[B]	N2Y	C8-C4-N6	-2.49	121.25	124.87
2	C	301[A]	N2Y	C8-C4-N6	-2.49	121.26	124.87
2	G	301	N2Y	C3-C2-N4	2.48	105.27	102.54
2	F	301[B]	N2Y	C8-C4-N6	-2.46	121.30	124.87
2	A	301	N2Y	C8-C4-N6	-2.41	121.38	124.87
2	I	301	N2Y	C3-C2-N4	2.41	105.19	102.54
2	G	301	N2Y	C8-C4-N6	-2.36	121.44	124.87
2	E	301[A]	N2Y	C2-C3-N3	2.23	105.98	102.99
2	E	301[B]	N2Y	CL1-C4-N6	2.20	120.09	115.98
2	D	301	N2Y	C2-C3-N3	2.19	105.94	102.99

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	F	301[B]	N2Y	C2-C3-N3	2.18	105.91	102.99
2	E	301[B]	N2Y	C2-C3-N3	2.17	105.91	102.99
2	F	301[A]	N2Y	C2-C3-N3	2.16	105.89	102.99
2	E	301[B]	N2Y	C6-C5-N6	-2.16	120.78	123.99
2	D	301	N2Y	CL1-C4-N6	2.16	120.02	115.98
2	I	301	N2Y	C2-C3-N3	2.15	105.88	102.99
2	H	301[A]	N2Y	C2-C3-N3	2.15	105.87	102.99
2	I	301	N2Y	C6-C5-N6	-2.14	120.80	123.99
2	H	301[B]	N2Y	C2-C3-N3	2.13	105.85	102.99
2	J	301	N2Y	C2-C3-N3	2.11	105.82	102.99
2	I	301	N2Y	CL1-C4-N6	2.10	119.92	115.98
2	D	301	N2Y	C6-C5-N6	-2.10	120.87	123.99
2	B	301[A]	N2Y	C6-C5-N6	-2.09	120.88	123.99
2	G	301	N2Y	C2-C3-N3	2.09	105.80	102.99
2	A	301	N2Y	C6-C5-N6	-2.07	120.92	123.99
2	C	301[A]	N2Y	C6-C5-N6	-2.05	120.94	123.99
2	J	301	N2Y	C6-C5-N6	-2.04	120.96	123.99
2	A	301	N2Y	C2-C3-N3	2.03	105.72	102.99
2	B	301[A]	N2Y	C2-C3-N3	2.03	105.71	102.99
2	B	301[A]	N2Y	CL1-C4-N6	2.02	119.76	115.98
2	C	301[B]	N2Y	C2-C3-N3	2.01	105.69	102.99
2	G	301	N2Y	C6-C5-N6	-2.00	121.01	123.99

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

7 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	F	301[B]	N2Y	2	0
2	H	301[B]	N2Y	4	0
2	C	301[B]	N2Y	6	0
2	B	301[B]	N2Y	1	0
2	B	301[A]	N2Y	1	0
2	E	301[B]	N2Y	1	0
2	E	301[A]	N2Y	3	0

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

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	208/214 (97%)	0.09	10 (4%)	30	36	21, 31, 56, 81	0
1	B	208/214 (97%)	-0.01	7 (3%)	45	51	17, 25, 48, 60	0
1	C	208/214 (97%)	-0.06	5 (2%)	59	64	19, 27, 47, 59	0
1	D	208/214 (97%)	0.21	12 (5%)	23	28	21, 32, 58, 86	0
1	E	208/214 (97%)	0.25	8 (3%)	40	46	20, 35, 59, 81	0
1	F	208/214 (97%)	0.51	18 (8%)	10	13	26, 41, 67, 89	0
1	G	208/214 (97%)	0.29	13 (6%)	20	24	21, 37, 61, 88	0
1	H	208/214 (97%)	0.35	15 (7%)	15	19	19, 40, 67, 90	1 (0%)
1	I	208/214 (97%)	0.48	19 (9%)	9	12	25, 43, 65, 88	0
1	J	208/214 (97%)	0.53	17 (8%)	11	15	25, 44, 68, 88	0
All	All	2080/2140 (97%)	0.26	124 (5%)	21	27	17, 35, 63, 90	1 (0%)

All (124) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	H	205	GLY	9.4
1	A	156	THR	7.6
1	I	205	GLY	7.1
1	F	-2	ALA	6.5
1	H	156	THR	5.9
1	I	157	GLU	5.9
1	A	23	ARG	5.3
1	I	128	VAL	5.2
1	J	157	GLU	5.1
1	E	205	GLY	5.1
1	G	205	GLY	4.9
1	G	158	ASN	4.7
1	H	158	ASN	4.6

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Mol	Chain	Res	Type	RSRZ
1	E	157	GLU	4.5
1	J	44	ILE	4.5
1	D	159	SER	4.4
1	E	158	ASN	4.3
1	B	-2	ALA	4.2
1	I	156	THR	4.2
1	F	205	GLY	4.2
1	J	23	ARG	4.2
1	A	158	ASN	4.1
1	D	205	GLY	4.0
1	H	157	GLU	3.9
1	F	159	SER	3.8
1	E	23	ARG	3.7
1	J	156	THR	3.6
1	I	162	SER	3.6
1	E	22	GLN	3.6
1	I	158	ASN	3.6
1	F	24	ASP	3.5
1	J	24	ASP	3.5
1	F	157	GLU	3.5
1	H	159	SER	3.5
1	G	-1	GLU	3.4
1	F	162	SER	3.4
1	D	160	ASP	3.4
1	H	24	ASP	3.4
1	J	158	ASN	3.3
1	A	-1	GLU	3.3
1	F	156	THR	3.3
1	E	24	ASP	3.2
1	H	174	LEU	3.2
1	J	132	SER	3.2
1	A	-2	ALA	3.1
1	I	22	GLN	3.1
1	F	160	ASP	3.1
1	D	157	GLU	3.1
1	F	-1	GLU	3.1
1	C	23	ARG	3.0
1	F	0	ALA	3.0
1	I	155	THR	3.0
1	J	170	ARG	3.0
1	H	131	GLU	2.9
1	H	155	THR	2.9

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Mol	Chain	Res	Type	RSRZ
1	G	25	ARG	2.9
1	J	25	ARG	2.9
1	D	44	ILE	2.9
1	I	24	ASP	2.9
1	D	-2	ALA	2.9
1	G	161	ASP	2.9
1	J	159	SER	2.8
1	F	158	ASN	2.8
1	H	25	ARG	2.8
1	B	24	ASP	2.7
1	C	-2	ALA	2.7
1	B	14	SER	2.7
1	J	14	SER	2.7
1	J	205	GLY	2.7
1	I	173	ILE	2.6
1	G	-2	ALA	2.6
1	G	70	SER	2.5
1	G	22	GLN	2.5
1	A	22	GLN	2.5
1	C	0	ALA	2.5
1	C	205	GLY	2.5
1	J	128	VAL	2.5
1	I	160	ASP	2.5
1	J	126	SER	2.4
1	I	125	VAL	2.4
1	A	131	GLU	2.4
1	G	72	ASP	2.4
1	B	25	ARG	2.4
1	C	14[A]	SER	2.3
1	I	39	LEU	2.3
1	D	131	GLU	2.3
1	E	170	ARG	2.3
1	F	25	ARG	2.3
1	G	0	ALA	2.3
1	I	129	ASP	2.3
1	H	186	SER	2.3
1	I	44	ILE	2.3
1	F	128	VAL	2.2
1	H	133	GLY	2.2
1	I	204	LYS	2.2
1	H	61	ARG	2.2
1	I	25	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
1	D	68	SER	2.2
1	J	183	VAL	2.1
1	B	186	SER	2.1
1	I	176	VAL	2.1
1	F	14	SER	2.1
1	F	169	SER	2.1
1	D	158	ASN	2.1
1	F	132	SER	2.1
1	J	148	ARG	2.1
1	D	-1	GLU	2.1
1	H	127	GLY	2.1
1	I	-1	GLU	2.1
1	G	125	VAL	2.1
1	A	0	ALA	2.1
1	D	61	ARG	2.1
1	E	-2	ALA	2.1
1	F	148	ARG	2.1
1	G	160	ASP	2.0
1	B	0	ALA	2.0
1	H	134	ALA	2.0
1	G	170	ARG	2.0
1	J	130	THR	2.0
1	A	25	ARG	2.0
1	A	160	ASP	2.0
1	B	23	ARG	2.0
1	D	22	GLN	2.0
1	F	133	GLY	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, 95^{th} 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	NA	B	309	1/1	0.60	0.11	52,52,52,52	0
3	CD	E	304	1/1	0.70	0.09	83,83,83,83	1
3	CD	F	303	1/1	0.76	0.16	98,98,98,98	1
3	CD	B	307	1/1	0.76	0.10	47,47,47,47	1
3	CD	A	305	1/1	0.82	0.06	91,91,91,91	0
3	CD	F	302	1/1	0.84	0.07	94,94,94,94	0
3	CD	A	307	1/1	0.86	0.07	92,92,92,92	1
3	CD	A	304	1/1	0.86	0.08	83,83,83,83	1
3	CD	A	308	1/1	0.87	0.16	55,55,55,55	1
3	CD	B	308	1/1	0.87	0.07	50,50,50,50	1
3	CD	I	303	1/1	0.87	0.08	91,91,91,91	1
3	CD	A	309	1/1	0.87	0.09	46,46,46,46	1
2	N2Y	J	301	14/14	0.88	0.12	19,32,40,40	0
2	N2Y	D	301	14/14	0.88	0.16	3,22,30,30	0
2	N2Y	E	301[A]	14/14	0.88	0.20	26,33,42,42	14
2	N2Y	E	301[B]	14/14	0.88	0.20	6,28,35,35	14
2	N2Y	G	301	14/14	0.88	0.12	12,31,37,37	0
2	N2Y	I	301	14/14	0.88	0.13	15,34,38,39	0
3	CD	B	303	1/1	0.88	0.09	83,83,83,83	0
2	N2Y	F	301[A]	14/14	0.89	0.20	7,30,37,38	14
2	N2Y	F	301[B]	14/14	0.89	0.20	34,37,48,48	14
2	N2Y	A	301	14/14	0.89	0.13	2,22,26,29	0
3	CD	F	304	1/1	0.89	0.09	58,58,58,58	1
2	N2Y	H	301[A]	14/14	0.89	0.20	16,34,40,40	14
2	N2Y	H	301[B]	14/14	0.89	0.20	34,38,49,49	14
2	N2Y	C	301[B]	14/14	0.90	0.18	28,34,45,45	14
3	CD	D	307	1/1	0.90	0.10	89,89,89,89	1
3	CD	D	308	1/1	0.90	0.06	89,89,89,89	1
3	CD	G	304	1/1	0.90	0.09	75,75,75,75	1
3	CD	G	306	1/1	0.90	0.18	48,48,48,48	1
2	N2Y	C	301[A]	14/14	0.90	0.18	1,23,31,32	14
3	CD	J	302	1/1	0.90	0.08	75,75,75,75	0
3	CD	E	305	1/1	0.90	0.11	76,76,76,76	0
3	CD	B	304	1/1	0.91	0.07	92,92,92,92	1
2	N2Y	B	301[A]	14/14	0.91	0.19	2,26,40,40	14
2	N2Y	B	301[B]	14/14	0.91	0.19	1,19,27,28	14
3	CD	D	303	1/1	0.92	0.07	84,84,84,84	1
3	CD	J	303	1/1	0.92	0.06	79,79,79,79	1
3	CD	D	304	1/1	0.92	0.09	75,75,75,75	1
4	NA	C	309	1/1	0.92	0.16	28,28,28,28	0
3	CD	A	303	1/1	0.93	0.07	74,74,74,74	1

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	CD	H	302	1/1	0.93	0.07	66,66,66,66	0
3	CD	I	302	1/1	0.93	0.07	87,87,87,87	0
3	CD	C	308	1/1	0.93	0.14	78,78,78,78	1
3	CD	E	303	1/1	0.94	0.10	69,69,69,69	0
3	CD	I	305	1/1	0.94	0.05	66,66,66,66	1
3	CD	C	304	1/1	0.94	0.07	60,60,60,60	1
3	CD	E	306	1/1	0.95	0.09	66,66,66,66	0
3	CD	G	302	1/1	0.95	0.06	79,79,79,79	1
3	CD	B	306	1/1	0.95	0.07	84,84,84,84	1
3	CD	C	307	1/1	0.95	0.07	85,85,85,85	0
3	CD	G	305	1/1	0.96	0.07	75,75,75,75	1
3	CD	H	303	1/1	0.96	0.06	76,76,76,76	1
3	CD	F	305	1/1	0.96	0.05	76,76,76,76	1
3	CD	I	306	1/1	0.97	0.10	70,70,70,70	1
3	CD	I	307	1/1	0.97	0.10	46,46,46,46	1
3	CD	C	305	1/1	0.97	0.04	65,65,65,65	0
3	CD	C	303	1/1	0.98	0.04	51,51,51,51	0
3	CD	G	303	1/1	0.98	0.07	51,51,51,51	1
3	CD	D	305	1/1	0.98	0.04	44,44,44,44	0
3	CD	A	306	1/1	0.98	0.04	68,68,68,68	1
3	CD	I	304	1/1	0.99	0.06	38,38,38,38	0
3	CD	D	306	1/1	0.99	0.04	52,52,52,52	1
3	CD	E	307	1/1	0.99	0.06	55,55,55,55	1
3	CD	C	306	1/1	0.99	0.10	33,33,33,33	0
3	CD	B	302	1/1	1.00	0.09	34,34,34,34	0
3	CD	D	302	1/1	1.00	0.12	32,32,32,32	0
3	CD	B	305	1/1	1.00	0.10	28,28,28,28	0
3	CD	E	302	1/1	1.00	0.12	26,26,26,26	0
3	CD	C	302	1/1	1.00	0.11	29,29,29,29	0
3	CD	A	302	1/1	1.00	0.11	30,30,30,30	0

6.5 Other polymers (i)

There are no such residues in this entry.